THIS DOCUMENT IS IMPORTANT AND REQUIRES YOUR IMMEDIATE ATTENTION. If you are in any doubt about the contents of this document and the action you should take, you are recommended to seek your own advice immediately from a person who is duly authorised under the Financial Services and Markets Act 2000 (as amended) ("FSMA") who specialises in advising on the acquisition of shares and other securities.

Application will be made for the whole of the issued and to be issued ordinary share capital of Bushveld Minerals Limited to be admitted to trading on AIM. It is expected that Admission will become effective and that dealings in the Enlarged Issued Share Capital on AIM will commence on 21 December 2017.

AIM is a market designed primarily for emerging or smaller companies to which a higher investment risk tends to be attached than to larger or more established companies. AIM securities are not admitted to the official list of the United Kingdom Listing Authority ("Official List").

A prospective investor should be aware of the risks of investing in such companies and should make the decision to invest only after careful consideration and, if appropriate, consultation with an independent financial adviser.

Each AIM company is required pursuant to the AIM Rules for Companies to have a nominated adviser. The nominated adviser is required to make a declaration to the London Stock Exchange on Admission in the form set out in Schedule Two to the AIM Rules for Nominated Advisers.

The London Stock Exchange has not itself examined or approved the contents of this document.

The whole text of this document should be read. Your particular attention is drawn to the Risk Factors set out in Part II of this document. The whole of this document should be read in light of those risk factors. The rules of AIM are less demanding than those of the Official List.

Neither the UK Listing Authority nor London Stock Exchange plc has examined or approved the contents of this document. It is emphasised that no application is being made for admission of the Ordinary Shares to the Official List. The Ordinary Shares are not dealt on any regulated market and no application has been or is being made for the Ordinary Shares to be admitted to any such exchange.

This document, which comprises an admission document required by the AIM Rules for Companies has been drawn up in accordance with the AIM Rules for Companies. This document does not contain an offer of transferable securities to the public within the meaning of section 102B of the FSMA and does not constitute, and is not required to constitute a prospectus for the purposes of section 85(1) of the FSMA.

BUSHVELD MINERALS LIMITED

(Incorporated and registered in Guernsey with registered number 54506)

BUSHVELD MINERALS

PROPOSED ACQUISITION OF 55 PER CENT. OF THE ISSUED SHARE CAPITAL OF BUSHVELD VAMETCO

ADMISSION OF THE ENLARGED ISSUED SHARE CAPITAL TO TRADING ON AIM

AND

NOTICE OF GENERAL MEETING

Nominated Adviser and Broker

SP ANGEL
YOUR BRIDGE TO A BETTER BUSINESS

SP Angel Corporate Finance LLP

The Consideration Shares will, on issue, rank *pari passu* with the Ordinary Shares and will rank in full for all dividends and other distributions declared, paid or made after the issue in respect of Ordinary Shares.

SP Angel Corporate Finance LLP is authorised and regulated in the United Kingdom by the FCA and is acting as Nominated Adviser and Broker for the purposes of the AIM Rules for Companies exclusively for the Company and no one else in connection with the matters described herein and will not be responsible to any other person for providing the protections afforded to customers of SP Angel Corporate Finance LLP, or for advising any other person on the contents of this document or any matter referred to herein. The responsibilities of SP Angel Corporate Finance LLP, as Nominated Adviser, are owed solely to the London Stock Exchange and are not owed to the Company or to any Director or Shareholder or to any other subsequent purchaser of any of the Ordinary Shares and accordingly no duty of care is accepted in relation to them. No representation or warranty, express or implied, is made by SP Angel Corporate Finance LLP as to, and no liability whatsoever is accepted by SP Angel Corporate Finance LLP in respect of, any of the contents of this document (without limiting the statutory rights of any person to whom this document is issued).

Notice convening a General Meeting of the Company to be held at 18-20 Le Pollet, St Peter Port, Guernsey GY1 1WH on 20 December 2017 at 10.00 a.m. is set out at the end of this document. A Form of Proxy accompanies this document. To be valid, the Form of Proxy accompanying this document must be completed and returned so as to be received at the offices of the Company's registrars, Link Asset Services at The Registry, 34 Beckenham Road, Beckenham, Kent BR3 4TU not later than 10.00 a.m. on 18 December 2017. The completion and depositing of a Form of Proxy will not preclude Shareholders from attending and voting in person at the General Meeting should they wish to do so.

Shareholders who hold their shares through CREST and who wish to appoint a proxy or proxies for the General Meeting or any adjournment(s) by using the CREST electronic proxy appointment service may do so by using the CREST proxy voting service in accordance with the procedures set out in the CREST manual. CREST personal members or other CREST sponsored members, and those CREST members who have appointed a voting service provider, should refer to that CREST sponsor or voting service provider(s), who will be able to take the appropriate action on their behalf.

Copies of this document will be available free of charge during normal business hours on any weekday (except Saturdays, Sundays and public holidays) at the offices of SP Angel Corporate Finance LLP, Prince Frederick House, 35-39 Maddox Street, London W1S 2PP from the date of this document and for a period of at least one month from Admission.

The Ordinary Shares have not been, nor will they be, registered under the US Securities Act of 1933 (as amended) or under any applicable securities laws of any state of the United States, Canada, the Republic of South Africa, Republic of Ireland or Japan. The Ordinary Shares may not be offered or sold or delivered, directly or indirectly, in or into the United States of America, Canada, Australia, the Republic of South Africa, Republic of Ireland or Japan. This document must not be mailed or otherwise distributed or sent to or into the United States of America, Canada, the Republic of South Africa, Republic of Ireland or Japan. This document does not constitute an offer for, or the solicitation of an offer to subscribe for, any of the Ordinary Shares, in respect of any person in any jurisdiction to whom it is unlawful to make such an offer or solicitation in such jurisdiction. Any failure to comply with these restrictions may constitute a violation of the securities laws of any such jurisdiction.

No person is authorised, in connection with the Admission, to give any information or make any representation other than as contained in this document and, if given or made, such information or representation must not be relied upon as having been authorised by the Company or its respective directors or professional advisers. No Ordinary Shares have been marketed to, nor are any available for purchase in whole or in part by, the public in the United Kingdom or elsewhere in connection with the Admission. This document does not constitute an offer to sell or an invitation to any such person to subscribe for or purchase any Ordinary Shares.

The distribution of this document in certain jurisdictions may be restricted by law. No action has been taken by the Company or by SP Angel Corporate Finance LLP that would permit a public offer of Ordinary Shares or possession or distribution of this document where action for that purpose is required. Persons into whose possession this document comes should inform themselves about, and observe any such restrictions. Any failure to comply with these restrictions may constitute a violation of the securities laws of any such jurisdiction.

Holding Ordinary Shares may have implications for overseas shareholders under the laws of the relevant overseas jurisdictions. Overseas shareholders should inform themselves about and observe any applicable legal requirements. It is the responsibility of each overseas shareholder to satisfy himself as to the full observance of the laws of the relevant jurisdiction in connection therewith, including the obtaining of any governmental, exchange control or other consents which may be required, or the compliance with other necessary formalities which are required to be observed and the payment of any issue, transfer or other taxes due in such jurisdiction.

FORWARD LOOKING STATEMENTS

Certain statements in this document are "forward looking statements." These forward looking statements are not based on historical facts but rather on management's expectations regarding the Company's future growth, results of operations, performance, future capital and other expenditures (including the amount, nature and sources of funding thereof), competitive advantages, planned exploration and development drilling activity and the results of such drilling activity, business prospects and opportunities. Such forward looking statements reflect management's current beliefs and assumptions and are based on information currently available to management. Forward looking statements involve significant known and unknown risks and uncertainties. A number of factors could cause actual results to differ materially from the results discussed in the forward looking statements including risks associated with vulnerability to general economic market and business conditions, competition, environmental and other regulatory changes, the results of exploration and development drilling and related activities, actions by governmental authorities, the availability of capital markets, reliance on key personnel, uninsured and underinsured losses and other factors, many of which are beyond the control of the Company. Although the forward looking statements contained in this document are based upon what management believes to be reasonable assumptions the Company cannot assure investors that actual results will be consistent with these forward looking statements.

CONTENTS

ADMISSION STATISTICS

Number of Ordinary Shares in issue as at the date of this document*	808,612,897
Number of Warrants in issue as at the date of this document	29,101,365
Number of Consideration Shares being issued pursuant to the Acquisition	54,766,364
Consideration Shares as a percentage of the Enlarged Issued Share Capital	6.34%
Number of Ordinary Shares in issue on Admission	863,379,261
International Security Identification Number ("ISIN")	GG00B4TM3943
LEI Number	213800GX3IGYRET8ZE57
Tradeable Instrument Display Mnemonic	BMN

*including 670,000 Ordinary Shares held in Treasury

EXPECTED TIMETABLE OF PRINCIPAL EVENTS

Publication of this document	30 November 2017
Latest time and date for receipt of Form of Proxy	10.00 a.m. on 18 December 2017
General Meeting	10.00 a.m. on 20 December 2017
Completion of the Acquisition, issue of the Consideration Shares, and Admission to trading becomes effective and commencement of dealings of Ordinary Shares	21 December 2017

Note: All references to times in this timetable are to London times and each of the times and dates are indicative only and may be subject to change. Any such change will be notified by an announcement on a regulatory information service.

DIRECTORS, COMPANY SECRETARY AND ADVISERS

Directors	Ian Watson	*Non-Executive Chairman*
	Fortune Mojapelo	*Chief Executive Officer*
	Geoff Sproule	*Chief Financial Officer*
	Anthony Viljoen	*Non-Executive Director*
	Jeremy Friedlander	*Non-Executive Director*
Company Secretary	**Oak Trust (Guernsey) Limited**	
Registered Office	18-20 Le Pollet St Peter Port Guernsey GY1 1WH	
Nominated Adviser and Broker	**SP Angel Corporate Finance LLP** Prince Frederick House 35-39 Maddox Street London W1S 2PP UK	
Auditors	**RSM UK Audit LLP** 25 Farringdon Street London EC4A 4AB UK	
Reporting Accountants	**RSM Corporate Finance LLP** 25 Farringdon Street London EC4A 4AB UK	
Solicitors to the Company *as to English law*	**Gowling WLG (UK) LLP** 4 More London Riverside London SE1 2AU UK	
Solicitors to the Company *as to Guernsey law*	**Carey Olsen** Carey House Les Banques St Peter Port Guernsey GY1 4BZ	
Solicitors to the Company *as to South African Law*	**ENSafrica** 150 West Street Sandton Johannesburg 2196 South Africa	
Solicitors to the Company *as to Madagascan Law*	**John W Ffooks & Co** Immeuble Assist – 1st Floor Ivandry Antananarivo 101 Madagascar	

Solicitors to the Company ***as to British Virgin Islands Law***	**Carey Olsen** Rodus Building PO Box 3093 Road Town Tortola, VG1110 British Virgin Islands
Solicitors to the Company ***as to US Law (Connecticut)***	**Troutman Sanders LLP** 875 Third Avenue New York, NY 10022 USA
Solicitors to the Company ***as to Mauritian Law***	**ENSafrica (Mauritius)** 19 Church Street Port Louis Mauritius
Solicitors to the Nominated Adviser and Broker	**Fieldfisher LLP** Riverbank House 2 Swan Lane London EC4R 3TT UK
Competent Person in relation to the Vametco and Mokopane Licences	**The MSA Group** Henley House Greenacres Office Park Cnr Victory & Rustenburg Roads Victory Park 2195 Johannesburg South Africa
Competent Person in relation to the Madagascan Licences	**Sumsare Consulting** P.O. Box 647 Witbank 1035 Johannesburg South Africa
Financial Public Relations	**Blytheweigh** 4-5 Castle Court London EC3V 9DL UK
Registrars	**Link Asset Services Limited** 34 Beckenham Road Beckenham Kent BR3 4TU UK
Website from Admission	www.bushveldminerals.com

DEFINITIONS

The following words and expressions apply throughout this document unless the context requires otherwise:

"**Acquisition**"	the acquisition by the Company of 55 per cent. of the issued share capital of Bushveld Vametco pursuant to the Acquisition Agreement, following completion of which the Company will own 100 per cent. of the issued share capital of Bushveld Vametco
"**Acquisition Agreement**"	the conditional agreement dated 30 November 2017 between (1) the Seller and (2) the Company relating to the Acquisition, which is conditional, *inter alia*, on the passing of the Acquisition Resolution at the GM, further details of which are set out in paragraph 9.1 of Part VIII
"**Acquisition Resolution**"	the resolution numbered 1 in the Notice to be proposed at the General Meeting to approve the Acquisition and the issue of the Consideration
"**Admission**"	admission of the Enlarged Issued Share Capital to trading on AIM and such admission becoming effective in accordance with Rule 6 of the AIM Rules for Companies
"**Admission Agreement**"	the conditional agreement dated 30 November 2017 to be entered into between SP Angel (1), the Company (2) and the Directors (3) described in paragraph 9.8 of Part VIII of this document
"**Admission Document**"	this document
"**AfriTin**"	AfriTin Mining Limited a non-cellular company incorporated under the Law and registered in Guernsey with registered number 63974
"**AfriTin Admission**"	the admission of the entire issued share capital of AfriTin to AIM, which became effective on 9 November 2017
"**AfriTin Group**"	AfriTin and its subsidiaries from time to time
"**AfriTin Shares**"	ordinary shares of no par value in AfriTin
"**AfriTin Notes**"	the AfriTin £1,000,000 unsecured convertible loan notes 2017
"**AIM**"	the market of that name operated by the London Stock Exchange
"**AIM Rules for Companies**"	the AIM Rules for Companies published by the London Stock Exchange, as amended from time to time
"**AIM Rules for Nominated Advisers**"	the AIM Rules for Nominated Advisers published by the London Stock Exchange, as amended from time to time
"**AIM Standard**"	an internationally recognised standard that is acceptable under the following codes and/or organisations: Mineral resources and reserves – CIM, IMMM, JORC, Russian, SAMREC and SME;
"**Applicable Employees**"	as defined in the AIM Rules for Companies;
"**Articles**"	the articles of incorporation of the Company
"**Atlas**"	Atlas Special Opportunities, LLC an exempted Company registered in the Cayman Islands

"**Atlas Capital**"	Atlas Capital Markets, an exempted Company registered in the Cayman Islands being a company holding more than 50 per cent. of Atlas
"**Audit Committee**"	the audit committee of the Board
"**Authority Resolutions**"	the resolutions numbered 2 and 3 in the Notice to be proposed at the General Meeting to grant the Directors authority to issue new Ordinary Shares otherwise than on a pre-emptive basis
"**Brits**"	the Brits Vanadium Project, further details of which are set out in paragraph 7.2 of Part 1 of this document
"**Bushveld**" or the "**Company**"	Bushveld Minerals Limited, a non-cellular company incorporated in Guernsey with registered number 54506
"**Bushveld Complex**"	the region of Limpopo Province of South Africa in which the Group's vanadium projects are located
"**Bushveld Energy**"	Bushveld Energy Limited, a company registered in Mauritius with registered number 132882 C2/GBL
"**Bushveld Retained Interest Shares**"	the 12,801,204 AfriTin Shares issued to Bushveld pursuant to the Demerger Agreement
"**Bushveld Resources**"	Bushveld Resources Limited, a non-cellular company incorporated in Guernsey with registered number 48984
"**Bushveld Vametco**"	Bushveld Vametco Limited, a non-cellular company incorporated in Guernsey with registered number 61764
"**Consideration Shares**"	the 54,766,364 new Ordinary Shares to be issued to the Seller pursuant to the Acquisition Agreement
"**Consideration Share Price**"	the price equal to 100 per cent. of the average volume weighted average price of the Ordinary Shares as published by Bloomberg for the 20 day trading period ending on the date of the Acquisition Agreement, converted in to US$ using the exchange rate of £ to US$ published by the Financial Times on the date immediately prior to the publication of this document
"**Convertible Bonds**"	up to £8,000,000 7.5 per cent. Convertible Bonds due 2019, created pursuant to the Convertible Bond Subscription Agreement and evidenced by the Convertible Bond Certificate
"**Convertible Bond Certificate**"	a bond certificate executed by the Company on 22 September 2017 (as amended by the Convertible Bond Certificate Amendment Deed), evidencing the issue of the Convertible Bonds further details of which are set out in paragraphs 9.6 of Part VIII
"**Convertible Bond Certificate Amendment Deed**"	a deed entered into between the Company and Atlas on 7 November 2017 amending the Convertible Bond Certificate, further details of which are set out in paragraphs 9.6 of Part VIII
"**Convertible Bond Warrants**"	up to 11,257,309 warrants each to subscribe for one Ordinary Share created pursuant to the Convertible Bond Warrant Instrument (as amended) at an exercise price of £0.142 at any time up to and including 22 September 2020

"**Convertible Bond Subscription Agreement**"	a subscription Agreement dated 15 September 2017 (as amended by the Convertible Bond Subscription Amendment Deed), between the Company (1) and Atlas (2), further details of which are set out in paragraph 9.4 of Part VIII
"**Convertible Bond Subscription Amendment Deed**"	a deed entered into between the Company (1) and Atlas (2) and Atlas Capital (3) on 7 November 2017 amending the Convertible Bond Subscription Agreement, further details of which are set out in paragraphs 9.4 of Part VIII
"**Convertible Bond Warrant Instrument**"	the warrant instrument executed by the Company on 22 September 2017 (and amended by the Convertible Bond Warrant Amendment Deed), pursuant to which the Convertible Bond Warrants are created, further details of which are set out in paragraphs 9.5 of Part VIII
"**Convertible Bond Warrant Amendment Deed**"	a deed entered into between the Company and Atlas on 7 November 2017 amending the Convertible Bond Warrant Instrument, further details of which are set out in paragraphs 9.5 of Part VIII
"**CREST**"	the electronic systems for the holding and transfer of shares in dematerialised form operated by Euroclear
"**CREST Regulations**"	the Uncertificated Securities (Guernsey) Regulations, 2009 (GSI 2009 No. 48) (as amended from time to time)
"**Demerger**"	the demerger of Greenhills Resources from the Group pursuant to the Demerger Agreement, details of which were set out in the October Circular
"**Demerger Agreement**"	the conditional agreement dated 2 October 2017 between AfriTin (1) and the Company (2) pursuant to which AfriTin acquired the entire issued share capital of Greenhills Resources from the Company, further details of which are set out in paragraph 9.2 of Part VIII this document
"**Demerger Resolution**"	the resolution of the Shareholders passed on 20 October 2017 putting into effect the Sub-division and approving the Demerger
"**Demerger Shares**"	the 72,540,161 AfriTin Shares issued to the Shareholders pursuant to the Demerger Agreement
"**Directors**" or "**Board**"	the directors of the Company whose names appear on page 6 of this document and "Director" shall mean any one of them
"**Disclosure and Transparency Rules**"	the Disclosure and Transparency Rules made by the FCA under Part VI the Financial Services and Markets Act 2000
"**EBITDA**"	Earnings before interest, taxation, depreciation and amortisation
"**Enlarged Issued Share Capital**"	the issued share capital of the Company following Admission, including the Existing Ordinary Shares and the Consideration Shares
"**Enlarged Group**"	the Group including, from Admission, Bushveld Vametco and its subsidiaries from time to time
"**Euroclear**"	Euroclear UK & Ireland Limited

“**European Union**” or “**EU**”	has the meaning given to it in Article 299(1) of the Establishing the European Economic Community Treaty as amended by, among others, the Treaty on European Unity (the Maastricht Treaty), the Treaty of Amsterdam and the Treaty of Lisbon
“**Evraz Group**”	Evraz Group S.A., a company incorporated in Luxembourg, with its registered office at 13 Avenue Monterey, L-2163, Luxembourg
“**Existing Ordinary Shares**” or “**Existing Issued Share Capital**”	the 808,612,897 Ordinary Shares in issue at the date of this document
“**FCA**”	the Financial Conduct Authority of the United Kingdom
“**FCA Rules**”	the FCA Handbook of Rules and Guidance
“**Form of Proxy**”	the form of proxy which is enclosed with this document for use by holders of Existing Ordinary Shares in connection with the General Meeting
“**FSMA**”	the Financial Services and Markets Act 2000 (as amended)
“**GM**” or “**General Meeting**”	the general meeting of the Company, convened for 10.00 a.m. on 20 December 2017, and any adjournment thereof, notice of which is set out at the end of this document
“**Greenhills Resources**”	Greenhills Resources Limited, a non-cellular company incorporated in Guernsey with registered number 52682
“**Group**”	the Company and its subsidiaries from time to time
“**HDSA**”	Historically Disadvantaged South Africans
“**HMRC**”	Her Majesty’s Revenue & Customs
“**IFRS**”	International Financial Reporting Standards as adopted by the European Union
“**Imaloto Power Project Limited**”	Imaloto Power Project Limited, a Mauritian Company with registered number 109739 C1/GBL
“**Law**”	the Companies (Guernsey), Law 2008 (as amended)
“**Lemur Holdings**”	Lemur Holdings Limited, a company incorporated in Mauritius with registered number 140097 C2/GBL
“**Lock In Agreements**”	the lock-in agreements each dated 30 November 2017 entered into by the Company (1), SP Angel (2) and the Directors (3), further details of which are set out in paragraph 9.9 of Part VIII of this document
“**London Stock Exchange**”	London Stock Exchange plc
“**Madagascar Competent Person**”	Sumsare Consulting, details of which are set out on page 7
“**Management Shares**”	up to 26,285,237 new Ordinary Shares proposed to be issued to certain Directors and senior employees of the Company on the recommendation of the Remuneration Committee, such issues to take place in or around January 2018
“**MAR**”	The EU Market Abuse Regulation (No. 596/2014)

"**Mokopane Competent Person**"	The MSA Group, details of which are set out on page 7
"**Mokopane Vanadium Project**"	The Mokopane Fe-V-Ti project, located in the Northern Limb of the Bushveld Complex further details of which are set out in Part X of this document
"**MPRDA**"	Mineral and Petroleum Resources Development Act, No. 28 of 2002, as amended of the Republic of South Africa
"**Notice**"	the notice of GM set out at the end of this document
"**October Circular**"	the circular published by the Company on 2 October 2017 containing details of the Sub-division and the Demerger
"**Official List**"	the official list of the UKLA
"**Ordinary Shares**"	ordinary shares of 1 penny each in the capital of the Company
"**Proposals**"	together the Acquisition and Admission
"**Prospectus Rules**"	the Prospectus Rules made by the FCA pursuant to sections 73(A)(1) and (4) of FSMA
"**QCA Guidelines**"	Corporate Governance Code for Small and Mid-Size Quoted Companies 2013 published by the Quoted Companies Alliance
"**Redeemable Shares**"	806,856,897 redeemable shares of no par value each in the capital of the Company, created upon the Sub-division
"**Register**"	the register of members of the Company
"**Regulatory Information Service**" or "**RIS**"	one of the regulatory information services authorised by the London Stock Exchange to receive, process and disseminate regulatory information in respect of AIM quoted companies
"**Remuneration Committee**"	the remuneration committee of the Board
"**Resolutions**"	together the Acquisition Resolution and the Authority Resolutions
"**Rule 9**"	Rule 9 of the Takeover Code
"**Seller**" or "**Yellow Dragon**"	Yellow Dragon Holdings Limited
"**Seller OMA**"	an orderly market agreement dated 30 November 2017 between the Company (1), SP Angel (2) and the Seller (3)
"**Shareholder**"	a holder of Ordinary Shares
"**Share Dealing Policy**"	the policy on share dealings adopted by the Company as more particularly described in paragraph 13 of Part I
"**SMC Group**"	SMC and its subsidiaries, the Vametco Group
"**Sojitz**"	Sojitz Corporation, the holder of a 21.2 per cent. economic interest in Strategic Minerals Corporation
"**SP Angel**"	SP Angel Corporate Finance LLP, nominated adviser and broker to the Company
"**South Africa**" or "**RSA**"	The Republic of South Africa

"**Strategic Minerals Corporation**" or "**SMC**"	Strategic Minerals Corporation, a company incorporated under the laws of the State of Connecticut, USA with company number 0180426
"**Sub-division**"	the sub-division of the issued ordinary shares of 1 penny each in the capital of the Company in to one Ordinary Share and one Redeemable Share
"**Takeover Code**"	the City Code on Takeovers and Mergers (as published by the Panel)
"**Panel**"	the UK Panel on Takeovers and Mergers
"**United Kingdom**" or "**UK**"	the United Kingdom of Great Britain and Northern Ireland
"**UK Listing Authority**" or "**UKLA**"	the United Kingdom Listing Authority, being the Financial Conduct Authority acting in its capacity as the competent authority for the purposes of the Financial Services and Markets Act 2000
"**US Dollar**", "**USD,**" "**$**" and "**Dollars**"	lawful currency for the time being of the United States of America
"**Vametco**"	The Vametco Vanadium Project, further details of which are set out in paragraph 3 of Part 1 and Part IX of this document
"**Vametco Alloys**"	Bushveld Vametco Alloys (Pty) Limited, a private company incorporated in the Republic of South Africa with company number 2005/003145/07
"**Vametco Competent Person**"	The MSA Group, details of which are set out on page 7
"**Vametco Holdings**"	Bushveld Vametco Holdings (Pty) Limited, a private company incorporated in the Republic of South Africa with company number 2007/0012893/07
"**Vametco Group**"	Vametco Holdings, and its subsidiaries, Vametco Alloys and Vametco Properties (Pty) Limited
"**Warrantholder(s)**"	holder(s) of Warrants
"**Warrants**"	the 29,101,365 warrants each to subscribe for one Ordinary Share outstanding as at 29 November 2017, being the latest practicable date prior to publication of this document, further details of which are set out in paragraph 4 of Part VIII
"**Wogen**"	Wogen Resources Limited, a company incorporated in England and Wales with company number 02071596
"**£**" and "**p**"	United Kingdom pounds and pence sterling, respectively

All references to times in this document are to London time unless otherwise stated. References to the singular shall include references to the plural, where applicable, and vice versa.

GLOSSARY OF TECHNICAL TERMS

Archean	The oldest rocks of the Precambrian era, older than about 2,500 million years
amsl	above mean sea level
anorthosite	Intrusive igneous rock characterized by a predominance of plagioclase feldspar (90 – 100%), and a minimal mafic component
apatite	Apatite is the principal phosphate mineral, Ca5(PO4)3(F,Cl,OH) and used in the manufacture of fertilizer
basement	The igneous and metamorphic crust of the earth, underlying sedimentary deposits
Bushveld Complex	A large igneous intrusion within the Earth's crust in northern South Africa, which has been tilted and eroded and now outcrops around what appears to be the edge of a great geological basin, the Transvaal Basin. Hosts some of the world's largest platinum, chrome, and vanadium deposits
diamond drilling	Method of obtaining cylindrical core of rock by drilling with a diamond set or diamond impregnated bit
Dip and dip direction	The dip direction is the azimuth of the direction of the dip as projected to the horizontal, which is 90° off the strike angle
dyke	A tabular body of intrusive igneous rock, crosscutting the host strata at an oblique angle
fault	A fracture or fracture zone, along which displacement of opposing sides has occurred
felsic	Light coloured rocks containing an abundance of feldspars and quartz
gabbro	Belongs to a group of dark, coarse-grained, intrusive mafic igneous rocks chemically equivalent to basalt. Clinopyroxene is the dominant mafic mineral
ha	Hectare = 10,000 m^2
imaging	Computer processing of data to enhance particular features
Indicated Mineral Resource	An Indicated Mineral Resource is that part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed. (CIM definition)

Inferred Mineral Resource	An Inferred Mineral Resource is that part of a mineral resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. (CIM definition)
joints	Regular planar fractures or fracture sets in massive rocks, usually created by unloading, along which no relative displacement has occurred
LoM	Life of Mine
Ma	Million years
Mafic	Descriptive of rocks composed dominantly of magnesium and iron rock-forming silicates
Measured Mineral Resource	A Measured Mineral Resource is that part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics are so well established that they can be estimated with confidence sufficient to allow appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity. (CIM definition)
metamorphism	Alteration of rock and changes in mineral composition, most generally due to increase in pressure and/or temperature
MML	main magnetite layer
MML-HW	main magnetite layer hanging wall
mtV	metric tonnes vanadium
MVO	modified vanadium oxide
MW	mega watt
MWh	mega watt hour
norite	Belongs to a group of dark, coarse-grained, intrusive mafic igneous rocks chemically equivalent to basalt. Orthopyroxene is the dominant mafic mineral
pfs	pre-feasibility study
PPA	power purchasing agreement
pyroxenite	An ultramafic igneous rock consisting essentially of minerals of the pyroxene group
Rebar	Reinforcing bar used as a tension device in reinforced concrete
replicate sampling	Sampling programme initiated to validate previous sampling results

RoM	run of mine
Rustenburg Layered Suite	The layered mafic portion of the Bushveld Complex. Lithologies vary from largely ultramafic peridotite, chromitite, harzburgite, and bronzitite in the lower sections to mafic norite, anorthosite, gabbro, and magnetite toward the top
satellite positioning system (global positioning system GPS)	An instrument used to locate or navigate, which relies on three or more satellites of known position to identify the operator's location
stratigraphic drillhole	A drillhole completed to determine the nature of rocks, rather than to identify mineral deposits, frequently applied for research or in the early stages of petroleum exploration
strike	Horizontal direction or trend of a geological structure
Tpa	tonnes per annum
Transvaal Supergroup	The Transvaal Supergroup consists of 2.65 – 2.05 Ga clastic, pelitic and chemical sediments with minor lava flows that surface in the Transvaal Basin which circumscribes the Bushveld Complex
VRFBs	vanadium based redox flow batteries

PART I

LETTER FROM THE CHAIRMAN

BUSHVELD MINERALS LIMITED

(Incorporated and registered in Guernsey No. 54506)

Directors:
Ian Watson *(Non-Executive Chairman)*
Fortune Mojapelo *(Chief Executive Director)*
Geoffrey Sproule *(Finance Director)*
Anthony Viljoen *(Non-Executive Director)*
Jeremy Friedlander *(Non-Executive Director)*

Registered Office:
18-20 Le Pollet
St Peter Port
Guernsey
GY1 1WH

30 November 2017

To the Shareholders and for information only to the Warrantholders

Dear Shareholder,

Acquisition of 55 per cent. of the issued share capital of Bushveld Vametco
Notice of General Meeting
and
Admission to trading on AIM

1 Introduction and background

The Company announced earlier today that it had entered into a conditional agreement to acquire 55 per cent. of the issued share capital of Bushveld Vametco (being all of the ordinary shares in Bushveld Vametco not currently owned by the Group) from the Seller. Following the Acquisition (assuming it is approved by Shareholders at the GM), the Company will hold 100 per cent. of the issued share capital of Bushveld Vametco and, through Bushveld Vametco, will own a 78.8 per cent. economic interests in Strategic Minerals Corporation. Strategic Minerals Corporation, in turn holds 75 per cent. of Vametco Holdings, which has a 100 per cent. interest in the Vametco vanadium mine, a high quality, low cost mine and plant with a trademark vanadium product and a global vanadium customer base.

The initial consideration for the Acquisition is US$11.1 million which will be satisfied through the issue of the Consideration Shares and US$4.5 million in cash by the Company to the Seller. In addition, there will be two deferred payments of US$0.6 million each (following publication of the Vametco Holdings accounts for the years ended 31 December 2018 and 2019), and a further payment calculated by reference to the EBITDA of Vametco Holdings in 2020 (following publication of the Vametco Holdings accounts for the year ended 31 December 2020). Further details of the Acquisition Agreement are set out in paragraph 5 of this Part I and paragraph 9.1 of Part VIII.

The Acquisition constitutes a reverse takeover under the AIM Rules for Companies. As a result, the Company is seeking Shareholder approval for the Acquisition at the General Meeting, notice of which is set out at the end of this document.

The Company is also seeking to refresh its Shareholder authority for the issue of Ordinary Shares on a non pre-emptive basis, having used up a substantial amount of its current authority since the Company's annual general meeting.

The Company was incorporated on 5 January 2012 and was admitted to trading on AIM on 26 March 2012 as a mineral development company focused on exploring and developing mineral projects on the Bushveld Complex in South Africa. In November 2013, the Company announced its focus on developing a vanadium platform. In April 2014, the Company completed a scoping study on the Mokopane Vanadium Project followed by a prefeasibility study in February 2016. On 6 April 2017, the Company, together with Yellow Dragon, acquired, through Bushveld Vametco, a 78.8 per cent. economic interest in Strategic Minerals

Corporation, the ultimate holding company of the primary vanadium mining and processing company, Vametco Alloys, from the Evraz Group for US$16.466 million.

This acquisition was in line with the Company's stated strategy to develop a significant, vertically integrated vanadium platform and accelerated Bushveld's path to production by several years. The acquisition was further aligned with the Company's aspirations in the global energy storage space by providing capacity for potential electrolyte manufacturing.

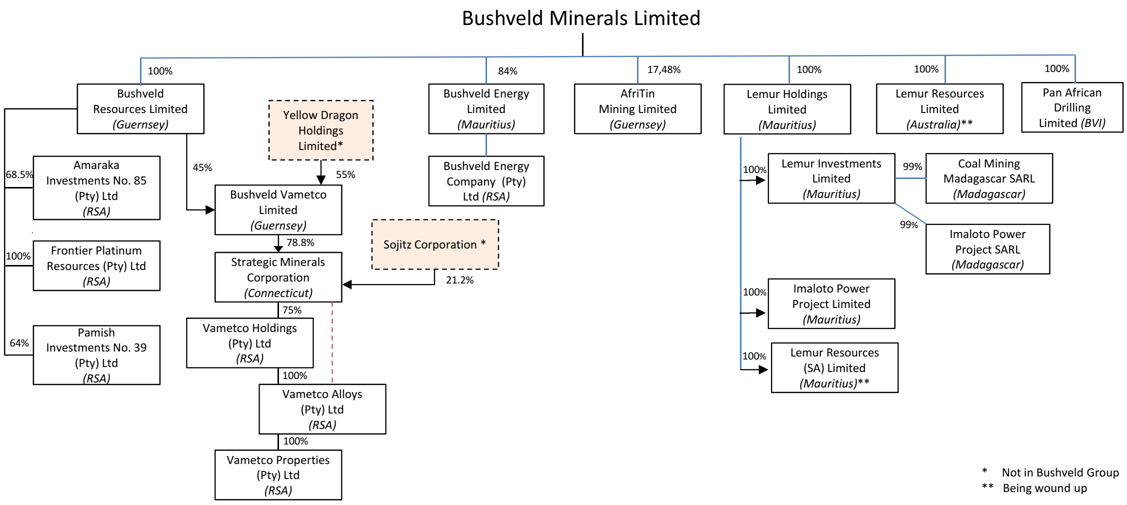
Bushveld Vametco has been the beneficiary of higher vanadium prices in 2017, enabling it to repay external acquisition debt. The proposed Acquisition announced today represents a continuation of the Company's strategy of building a vertically integrated vanadium platform and will, if approved, increase the Company's indirect interest in Vametco Holdings from 26.6 per cent. to 59.1 per cent.

The Acquisition Resolution will be proposed at the General Meeting to approve the Acquisition and effect the Proposals.

As a consequence of the Acquisition constituting a reverse takeover under the AIM Rules for Companies, the Company is required to apply for re-admission of the Enlarged Group to trading on AIM. It is expected that Admission will take place on 21 December 2017.

2 Group Structure Chart

The Group's corporate structure is as follows:



Note: Lemur Resources Limited has conditionally acquired Sable Platinum Mining Limited's shares in three companies: (i) Great 1 Line Invest (Pty) Ltd, (ii) Gemsbok Magnetite (Pty) Ltd and (iii) Caber Trade & Invest 1 (Pty) Ltd, the transaction being conditional on receipt of Section 11 approval. Application for Section 11 approvals have been made in the name of Bushveld Resources Limited.

Strategic Minerals Corporation is to sell 1 per cent. of its shareholding in Vametco Holdings to Business Venture Investments No. 973 (Pty) Ltd in due course.

Vametco Holdings (Pty) Ltd has all ordinary voting shares in the Vametco Alloys (Pty) Ltd. Strategic Minerals Corporation holds all preference shares in Vametco Alloys (Pty) Ltd.

The Group's mineral assets are owned by the following key subsidiaries:

- Bushveld Resources, a Guernsey incorporated non-cellular company, which is a wholly owned intermediate holding company of the Group.
- Bushveld Vametco, a Guernsey incorporated non-cellular company, which following Admission will be a wholly owned subsidiary of Bushveld Resources. Bushveld Vametco, through its 78.8 per cent. interest in the subsidiary, SMC, a Connecticut incorporated company, has a 75 per cent. interest in Vametco Holdings, a South African incorporated company, which is the holder of a mining right (NW 30/5/1/2/2/08 MR) for the vanadium operations at Vametco. The remaining 25 per cent. interest in Vametco Holdings is owned by two groups representing community-based trusts and interests. The remaining 21.2 per cent. interest in SMC is held by Sojitz, a multinational trading company which is exclusively responsible for sales of vanadium in Japan for Vametco Holdings.

- Pamish Investments 39 (Pty) Limited, a South African incorporated company, which is the holder of prospecting right 95PR. Prospecting right 95PR is one of two prospecting rights pertaining to the Mokopane vanadium project. Pamish Investments 39 (Pty) Limited is 64 per cent. owned by Bushveld Resources. Amaraka Investments No. 85, a 68.5 per cent. subsidiary of Bushveld Resources, is currently in negotiations with the owner of the other prospecting right pertaining to the Mokopane vanadium project, PR 438, for its transfer, which is conditional on Section 11 of the MPRDA, and for its renewal with the Department of Mineral Resources.
- The licences for the Brits Vanadium Project will be registered in the name of Bushveld Resources conditional on Section 11 approval of the MPRDA. They are currently held by Great 1 Line Invest (Pty) Limited and Gemsbok Magnitite (Pty) Ltd, subsidiaries of Sable Platinum Mining Limited which have been conditionally acquired by Lemur Resources Limited.
- Lemur Holdings, a Mauritian incorporated company, is a wholly owned subsidiary of the Company, which through its wholly owned Mauritian subsidiary, Lemur Investments Limited, owns a 99 per cent interest in Coal Mining Madagascar SARL, a Madagascan incorporated company, which holds exploitation permit no.4578, exploration permits no. 31808, 31892 and 12653 and is being transferred exploration permits no.3196, 26904 and 27163. These licences pertain to the Imaloto Coal project.

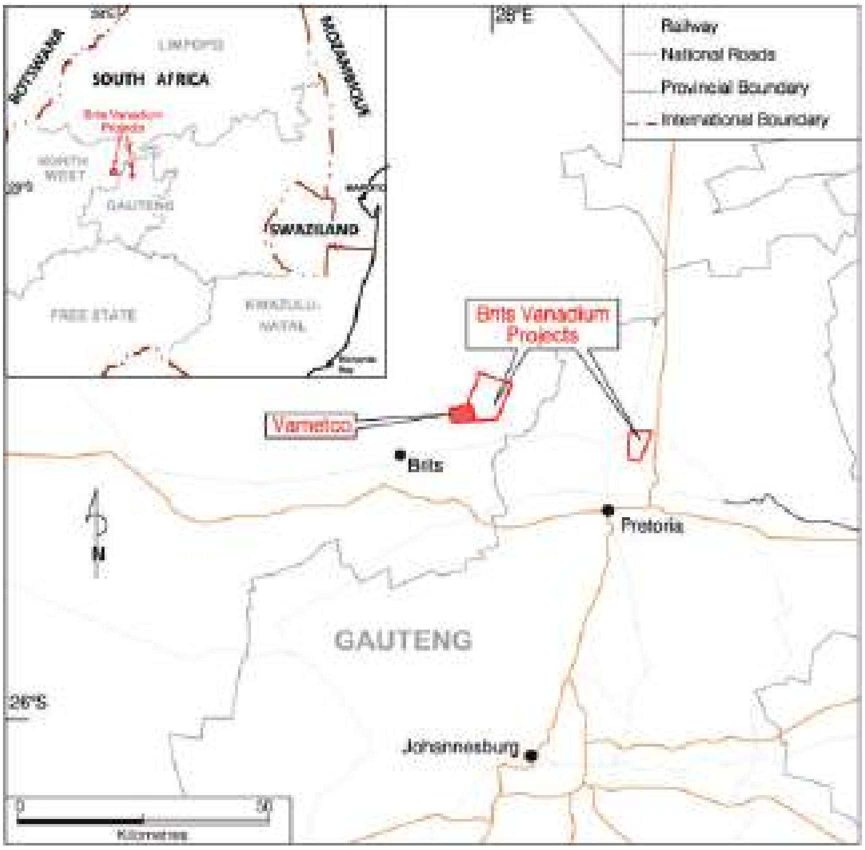
The following section is extracted without material changes from the Vametco Competent Person's Report (excluding the paragraph on financial performance of the SMC Group).

3 Information on Vametco Alloys

3.1 *Introduction*

The Vametco Mine is situated about 6.5 km northeast of the town of Madibeng, (formerly known as Brits). The mine is an operational open cast vanadium mine, located in the Bojanala Platinum District within the North West Province of the Republic of South Africa. The operations are near Mmakau and Rankothea villages, approximately 500 m to the south and west of the operations respectively. Additional prospecting and mining rights in the area are held by Bushveld, namely the Brits vanadium project.

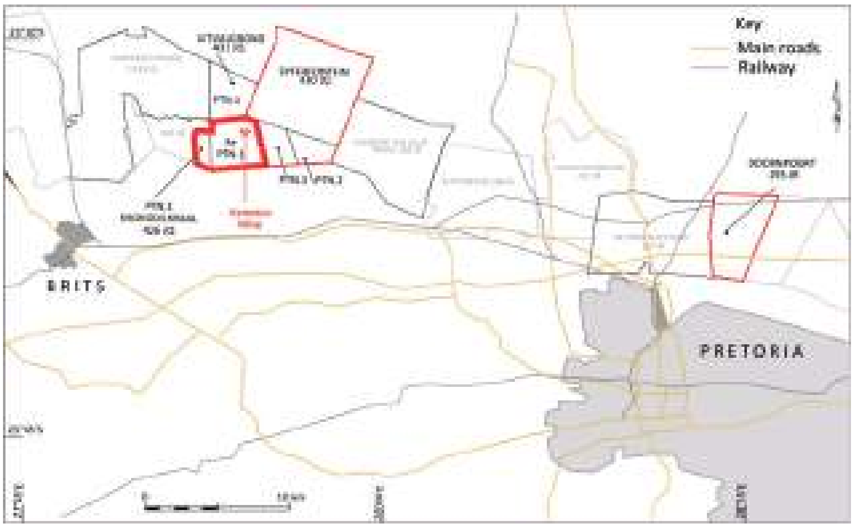
Fig 1: Location of the Vametco Mine and additional exploration properties



3.2 ***Legal Landowners and Mining Right***

The property where mining operations take place, is represented by two portions of farms. Portion 1 of the farm Krokodilkraal 426JQ and the rest of Portion 1 of Uitvalgrond farm 431JQ (Figure 2).

Fig 2: Boundary lines of the Vametco Operations (bold) and other licences



These farms are owned by Historically Disadvantaged South Africans and have been since 1912. Vametco Holdings had long-term lease agreements in place with the registered landowners and co-owners until the conversion of the old order mining right to the new order mining right was executed during April 2013. The parties are currently in negotiations to secure surface lease agreements which will be retrospectively implemented to April 2013.

A new order mining right is held by Vametco Holdings for the vanadium operations. The converted mining right replaced the old order mining right held by Vametco Holdings which is 75 per cent. owned by SMC and 25 per cent. owned by two groups representing community based trusts and interests. The new mining right is valid for a period of 25 years with an expiry date of 23 April 2038.

3.3 ***Summary of Mineral Tenure***

Asset	*Holder*	*Direct Interest(1)*	*Status*	*License Expiry date*	*License Area*	*Comments*
Vametco	Vametco Holdings(1)	100%	Operating	23 April 2038	1549 Ha	NW 30/5/1/2/2/08 MR

(1) Bushveld Minerals has a 26.595 per cent. net attributable indirect interest in Vametco Holdings (Pty) Limited. On completion of the proposed Acquisition, Bushveld Mineral's net attributable indirect interest will increase to 59.1 per cent.

Royalties are payable for the duration of the mining right, as per Section 25 (2) (g) of Mineral and Petroleum Resources Development Act,

The Mineral and Petroleum Resources Royalty Act (2008) (Royalty Act) requires a royalty fee be paid to the National Revenue Fund in respect to the transfer of mineral resources extracted from within the Republic. According to Schedule 2 of the Royalty Act, vanadium > 1 per cent. V_2O_5 equivalent and less than 2 per cent. calcium (CaO) and silica (SiO2) bearing gangue minerals is classified as an unrefined mineral resource.

3.4 ***Accessibility, Physiography, Climate, Local Resources and Infrastructure***

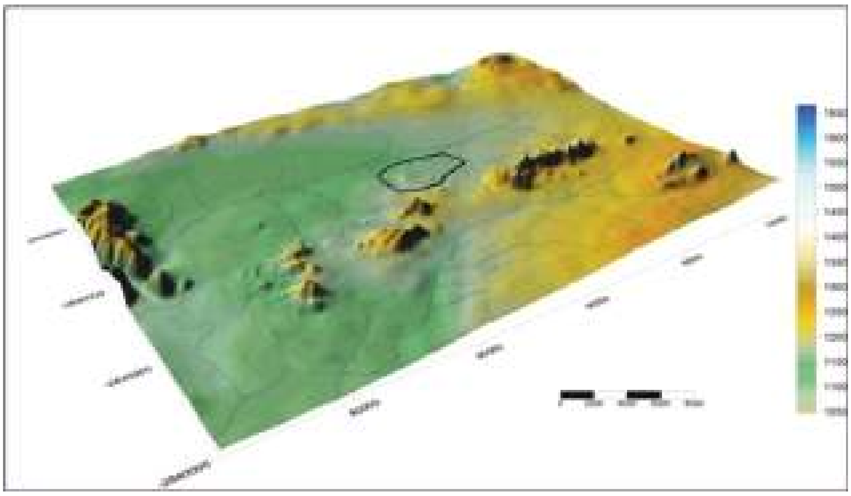
The operation is near urban developments of variable sizes. From the capital city of Pretoria, the N4 national road runs to the west past Madibeng. A provincial road splits off from the N4 and continues into Madibeng. The mine can be accessed by gravel road from Madibeng/Lethlabile or the road leading out of Mothutlung-Krokodilkraal, which passes the southwestern corner of the property. The roads are predominantly tarred and undergo regular maintenance.

The area that the mine operates within is characterised by hot temperatures accompanied by summer rainfall, from mid-October to mid-February. Sunny weather is often followed by afternoon thunderstorms. Temperatures in summer may range between 25 to 35 degrees Celsius (°C). During the winter months, May to July, much cooler temperatures occur, ranging between 15 to 24 degrees Celsius (°C) during the day, and single digit temperatures in the early morning and evening.

Recent rainfall data from the rainfall weather stations near the operating sites is available; however, rainfall is also recorded at the operating sites. The highest rainfall averages in a year are between October and March (approximately 91 per cent.), while about 9 per cent. of rainfall is recorded from April to September.

The topography of the operations is flat, at an altitude of 1,157 m amsl. A gentle decline exists, trending towards the Rosespruit River, from south to north with a gradient of 1:100. The Rosespruit River flows from east to west. The Swartkoppies hills are prominent to the south of the operations and reach elevation of 1,405 m amsl. A smaller range of hills to the north of the operations occur and reach an altitude of 1,234 m amsl.

Fig 3: Topography of Area Surrounding the Mine Operations



3.5 ***Geological Setting***

Vanadium mineralisation occurs in vanadium-bearing titaniferous magnetite-rich layers that make up part of the Upper Zone of the Rustenburg Layered Suite of the Bushveld Complex. The magnetite-rich layers are concordant, continuous along strike and down-dip, although thickness variability occurs.

The Bushveld Complex intruded Pretoria Group meta-sedimentary rocks of the Transvaal Supergroup approximately 2,060 million years ago. The layered sequence of mafic rocks, known as the Rustenburg Layered Suite, comprises five distinct zones.

- Marginal Zone,
- Lower Zone,
- Critical Zone,
- Main Zone, and
- Upper Zone.

The Upper Zone is identified by the occurrence of cumulus magnetite above the Main Zone. Both the Main Zone and the Upper Zone of the Rustenburg Layered Suite occur on the Mining Right. The layers are east-west striking and north dipping, with an average dip of 19°. The lithologies associated with the Main Zone are gabbro, norite, and locally anorthosite and pyroxenite layers. The lithologies in the Upper Zone, that occurs on the northern part of the property, includes magnetite–bearing gabbro, norite, diorite and some anorthosite and magnetite layers.

3.6 ***Ownership History***

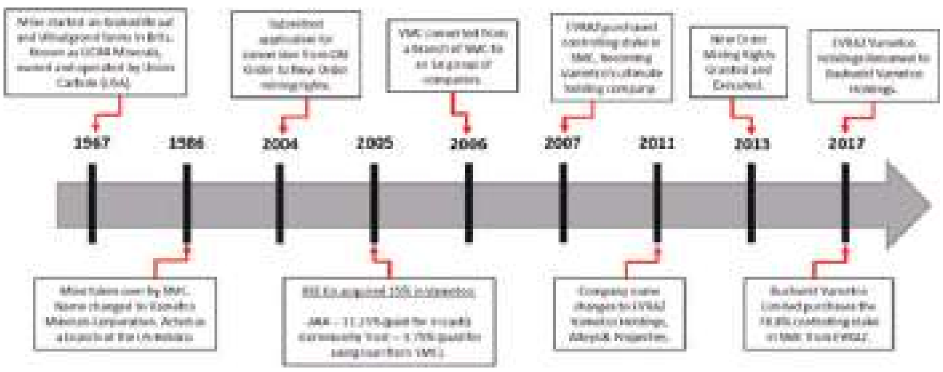
Vametco Holdings, owned and operated by Union Carbide (USA), commenced Vanadium mining operations in 1967. Mining took place on the farms Krokodilkraal and Uitvalgrond Portion 1. The properties were leased from the legal landowners. The landowners are a group of HDSAs, who engaged in formal lease agreements with Vametco in 1988 for a period of 25 years.

Union Carbide was acquired by SMC in 1986 and was renamed Vametco Minerals Corporation. Vametco Minerals Corporation was a fully owned American subsidiary of SMC until November 2006, when it was converted to a South African company under the name Vametco Holdings.

Vametco Holdings is majority owned by SMC (75 per cent.) as well as two Business Venture Investment Groups: 15 per cent. by Business Venture Investments No. 973 and 10 per cent. by Business Venture Investments No. 833. These Groups represent a BEE Strategic Partner and co-owner interests. SMC was formerly a subsidiary of EVRAZ plc and in 2017 Bushveld Vametco purchased the 78.8 per cent. economic interest in SMC and renamed EVRAZ Vametco Holdings (Pty) Limited to Vametco Holdings. It is planned that the relative shareholding of SMC and Business Venture Investments No. 973 will be amended to 74 per cent. and 16 per cent., respectively, in order to increase the BEE shareholding in the Project to 26 per cent. in line with the MPRDA.

Set out below is a chart showing the ownership history of Vametco from 1967 to the present day:

Fig 4: Ownership history of Vametco



Exploration activities took place from 1960 to 1982 by Union Carbide. Historical exploration activities are summarized in Figure 5 below.

Fig 5: Summary of Exploration Activities

Year	*Drilling Method*	*No. of Holes*	*Purpose*
Mid 1960s	Diamond	9	Assess the vanadium magnetite potential
1970	Diamond	6	Follow-up drilling to the earlier drilling campaign
1975-1976	Diamond	16	Outline the vanadium magnetite deposit and
	Percussion	28	operational drilling for Open Pit Mining
1982	Diamond	16	Testing correlation between calcium and fracturing
2006	Diamond	6	Verify seam down-dip continuity of the magnetite rich layers

Six diamond drillholes were drilled by Vametco in 2006 to verify seam down-dip continuity of the magnetite-rich layers. The data from cores recovered from this drilling campaign, in addition to records of historical drilling, were used for the Mineral Resource Estimate.

3.7 ***Mineral Resource Estimates***

The Mineral Resources presented herein have an effective date of 6 October 2017. The Mineral Resource estimate incorporates drilling data from holes completed by Union Carbide Exploration from the mid 1960's until 1982 as well as from holes completed by Vametco in 2006.

Of the 52 diamond drillholes in the database, 14 of the holes were not used for grade estimation as the V_2O_5 grades were found to be whole rock analyses rather than V_2O_5 grades of magnetite. A total of 6 intersections of the Upper Seam, 12 for the Intermediate Seam and 31 for the Lower Seam were used to estimate the grade of the Mineral Resource.

Mineral Resource Estimate for Vametco Mine as at 6 October 2017

	Gross				*Net (26.6 %)*			
Category	*Tonnes (millions)*	*Magnetite (%)*	*V_2O_5 % contained in magnetite*	*Total V (tonnes)*	*Tonnes (millions)*	*Magnetite (%)*	*V_2O_5 % contained in magnetite*	*Total V Attributable to BML (26.6%)*
				Upper Seam				
Inferred	11.8	37.86	1.70	75,947	3.14	37.86	1.70	20,202
				Intermediate Seam				
Inferred	21.6	30.45	1.87	122,994	5.75	30.45	1.87	32,716
				Lower Seam				
Indicated	61.5	27.23	2.01	336,604	16.36	27.23	2.01	89,537
Inferred	47.4	29.75	1.99	280,620	12.61	29.75	1.99	74,645
Total	108.9	28.33	2.00	617,224	28.97	28.33	2.00	164,182
				Total Mineral Resource				
Indicated	61.5	27.23	2.01	336,604	16.36	27.23	2.01	89,537
Inferred	80.9	31.12	1.92	479,561	21.50	31.18	1.92	127,563
Total	142.4	29.44	1.96	816,165	37.86	27.47	1.96	217,100

Notes: All tabulated data has been rounded therefore minor computational errors may occur.
The Mineral Resources are total in-situ Mineral Resources for the Project.
Bushveld Mineral Limited attributable share @ 26.6 per cent.
Mineral Resources which are not Ore Reserves have no demonstrated economic viability.
Mineral Resources are inclusive of Ore Reserves.

3.8 *Ore Reserves*

Ore Reserves are declared for open pits inside the LoM pit design (the optimised pit shell in this instance). Ore tonnes and grades are reported as Run of Mine tonnes after modifying factors for mining losses and dilution have been applied as expected to be delivered to the concentrator (i.e. before beneficiation plant recoveries have been applied). Ore Reserves are declared for in-situ tonnes in the pits and exclude any stockpiles.

Ore Reserve Statement for Vametco Mine as at 6 October 2017

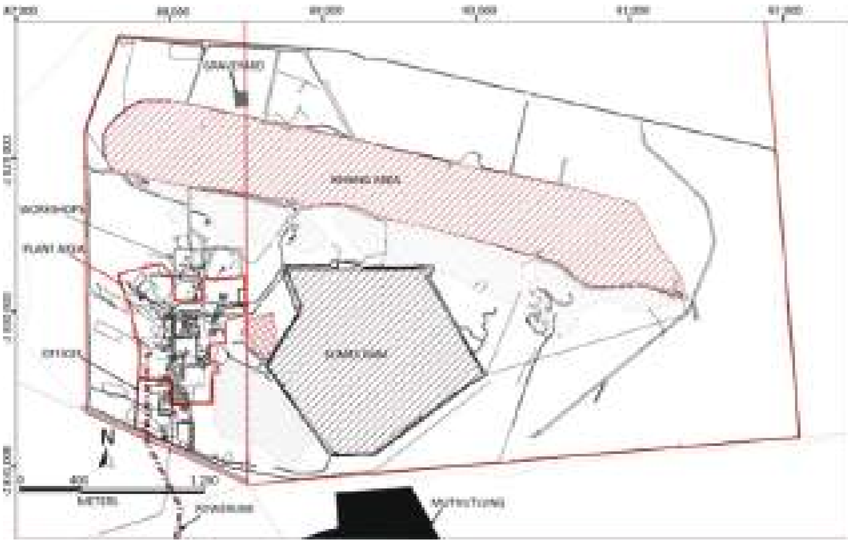
	Gross				*Net (26.6%)*			
Category	*Tonnes (millions)*	*Magnetite %*	*V_2O_5 % contained in magnetite*	*Contained Metal Total V_2O_5 (tonnes)*	*Tonnes (millions)*	*Magnetite %*	*V_2O_5 % contained in magnetite*	*Contained Metal Total V_2O_5 (tonnes)*
				Lower Seam				
Probable	26.12	26.79	1.96	137,152	6.95	26.79	1.96	36,482
Total	26.12	26.79	1.96	137,152	6.95	26.79	1.96	36,482

Note 1: All tonnages reported are on a dry basis.

Note 2: There are no Measured Mineral Resources classified at Vametco Mine and therefore no Mineral Resources were converted into Proved Ore Reserves.

3.9 ***Mine – Infrastructure***

Fig 6: Layout of Infrastructure within Mining Area



The mine has been operational since the 1970's, therefore the infrastructure in the area is well established:

- The administrative offices, change houses, plant and workshops are all located to the south-western part of the property, close to the entrance
- Electricity is provided by a 22 kV power line that crosses the property on the southern side. This power line supplies enough electricity required to sustain the daily operations of the mine
- The plant on the mine and other facilities are supplied water that is sourced from six boreholes and a canal
- An agricultural aqueduct from Hartebeespoort Dam passes 500 m from the north-western corner of the property

The mine uses of a combination of strip- and open pit mining techniques for ore extraction. The following key infrastructure exist on the mine:

- All production haul roads – in-pit as well as connecting mining pits with beneficiation facilities
- Beneficiation plant
- Workshops, fuel storage, stores and office buildings
- High tension power distribution
- Waste dumps and ore stockpile facilities
- Process water dams and slimes deposition facilities
- Security

3.10 ***Mining Methodology***

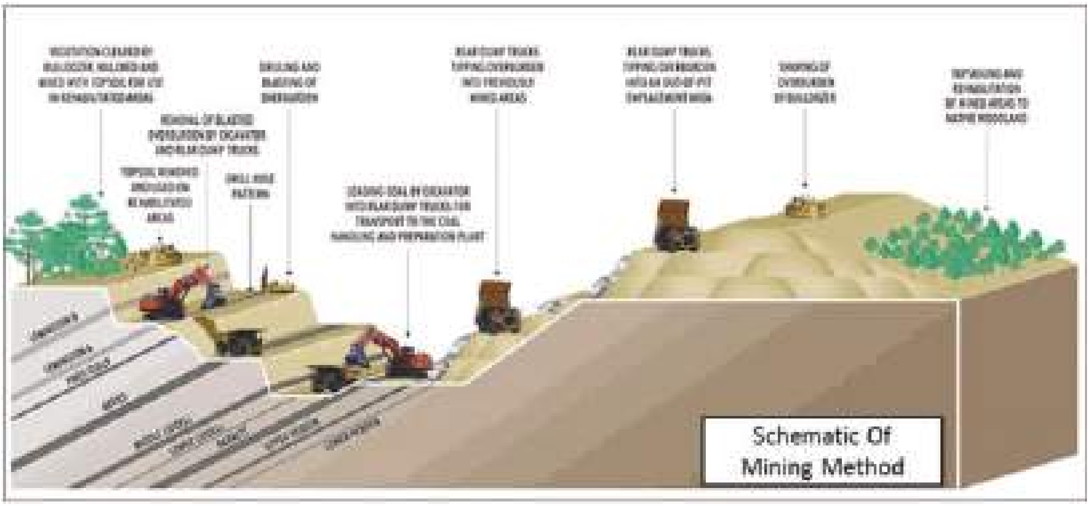
Figure 6 shows the general layout plan for the Vametco mine with the general position of the open pit/mining area shown. Mining has been taking place at the current site since 1967. Also, shown in the general layout plan are the plant and stockpile areas as well as other surface infrastructure.

Vanadium-bearing magnetite is mined from the Bushveld Igneous Complex. The open pit has a strike of about 3.5 km in an east-west direction and the ore bodies (upper, middle and lower seams) dip at 17° to the north.

Prior to mining in a particular area all vegetation cover and useable soil is removed and placed on a separate soil stockpile. Waste rock and ore are blasted at irregular intervals and removed to waste rock dumps or the primary crusher, respectively. Material is loaded onto 20 or 40-ton haul trucks using hydraulic shovels and front-end loaders. The current mining capacity at Vametco is 2.54 million tonnes per annum, of which about 1.33 million tonnes is ore and the rest overburden/waste (these figures are based on the 2015 actuals).

Figure 7 illustrates the general open cast mining method principles that are applied at Vametco. Due to the stratified nature of the ore deposit, Vametco utilises a combination of strip mining and open pit mining. For current mining activities, the possibility of concurrent backfilling is being investigated in order to determine the most effective method/sequence. It will make most sense to start with backfilling in areas where the pit has been mined to the final high-wall and for this reason the western portion of the pit would probably be backfilled first (as it is adjacent to the graveyard area, which might be kept in position if an agreement to move it cannot be reached).

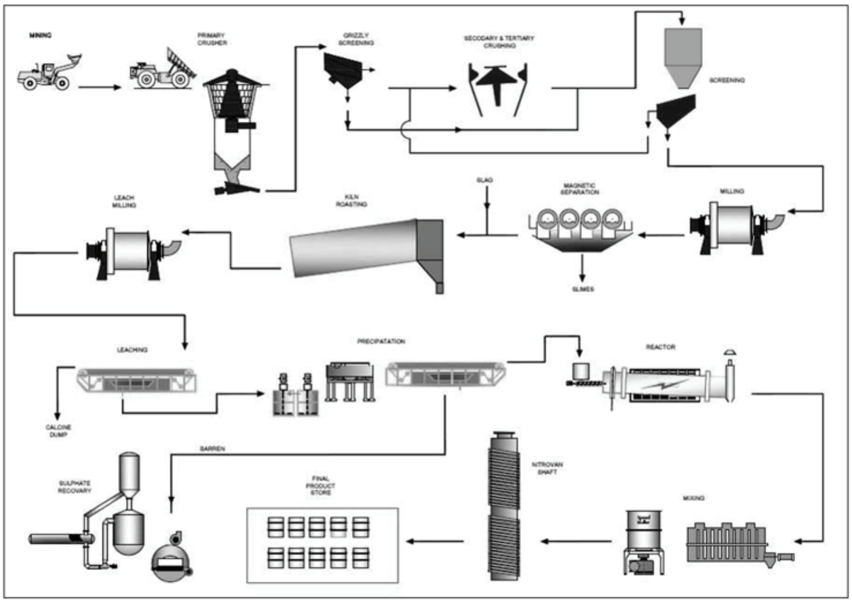
Fig 7: Schematic of the Mining Method at Vametco Mine



The open pit mining approach can be typified as bench mining where faces are opened up in one area through overburden and waste stripping. The exposed ore is mined and transported to the plant by a fleet of trucks and shovels. In order to get the optimal long-term plan for Vametco, an optimization study (pit limit analysis) was done to generate different pit shells in order to choose the pit shell that will render the best value over the LoM (further details of the optimization study are contained within the competent person's report on Vametco).

3.11 ***Recovery Methods – Metallurgy***

Fig 8: Overview of the Beneficiation Process



The primary crusher reduces the size of large boulders to a maximum size of 150 mm, the ore is screened (Grizzly), the oversize is +40 mm to -150 mm in size, and goes to the 150 mm stockpile (Coarse Stockpile). This ore is fed to the secondary crusher circuit. The undersize of the Grizzly goes to the Screens in the Screen house together with the undersize from the Secondary Crushers.

The secondary crushers reduce the size of the >38 mm to <150 mm ore, fed from the coarse stockpile to a maximum size of < 38 mm. The Secondary Crusher product is fed to the Screen house where it is combined with Grizzly U/F. The -13 mm ore is screened out by the polydeck screens and the >13 mm to –38 mm size is returned to the tertiary crushers.

Post the tertiary crusher, crushed ore is again fed to the polydeck screens in the screen house. The undersize of the polydeck screens are fed to the <$^{3}/_{8}$ inch stockpile or the Ball Mill Feed Silo's. In the event of the ball mill silo's being full then the ore is deposited onto the <$^{3}/_{8}$ inch (-13 mm) stockpile.

In the Milling Section, the <13 mm ore is reduced in size to 90 per cent. <150 um in a wet ball milling process. The finely ground ore is then fed to magnetic separators where the magnetic portion is separated from the gangue material. The first concentrate from the magnetic separators are fed to the secondary mill where it is further grinded down and finally separated in a magnetic separator. The concentrated magnetite is then fed to the roasting section and the gangue material is deposited on the slimes dams where the water is recovered and recycled in the concentrate plant.

Weighed amounts of magnetite, sodium sulphate and sodium carbonate are mixed and fed to the pulverised coal fired rotary kiln. The mixture is roasted at approximately 1250 degrees Celsius, rendering the vanadium water-soluble. Kiln off-gases are scrubbed in a wet venturi scrubber prior to release to atmosphere. The solids in the scrubber liquor are settled in a thickener, dewatered over a belt filter and returned to the kiln feed. The thickener overflow is returned to the venturi scrubbing circuit.

The kiln discharge solids are wet milled, water leached and washed in a counter current process over large belt filters.

The magnetite tailings are disposed of on the tailings dump. Aluminium sulphate and flocculent is used to desilicate and clarify product liquor referred to as pregnant (preg.) solution. The pregnant solution (the principal components of which are sodium vanadate) is pH adjusted with sulphuric acid before being pumped to the precipitation section.

Vanadium in the pregnant solution is precipitated with ammonium sulphate to form ammonium metavanadate ("**AMV**"). AMV is then dried in a rotary calciner at a temperature that will not drive the ammonium ions off.

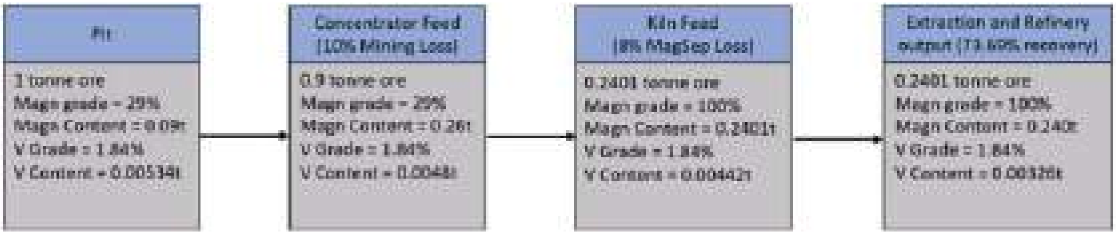
The dried AMV is then forwarded to the MVO section for conversion. The vanadium depleted solution referred to as barren solution is pumped to the sulphate recovery plant (SRP). The function of the MVO section is to reduce the AMV to modified vanadium oxide (MVO). The MVO is drummed and sealed when cool to prevent re-oxidation.

The product is black in colour with some variation to brown. MVO is the feedstock for the products manufactured at Vametco i.e. Nitrovan® and Ferro-Vanadium.

The MVO is mixed with the required quantity of carbon in the mix plant to produce the various grades of Nitrovan®, i.e. Nitrovan® 12 per cent. and 16 per cent. Under controlled conditions, nitrogen is purged into the furnace to substitute the carbon and dependant on the quantity of carbon this results in the required grades of Nitrovan®. Vanadium in these products is in the reduced state with a minute quantity tied to oxygen. Elements are in a solid solution state.

Figure 9 shows the process that 1 tonne of ore goes through during beneficiation.

Fig 9: One tonne of ore going through processing plant



3.12 ***Production History***

Vametco has the ability to produce product via the processing of vanadium containing magnetite or vanadium containing slag. It has enjoyed a steady production profile in recent years focused on the trademark vanadium nitrite product, Nitrovan®. The latter is sold worldwide to steel mills where it is used as a micro-alloying additive to strengthen (mainly construction) steel.

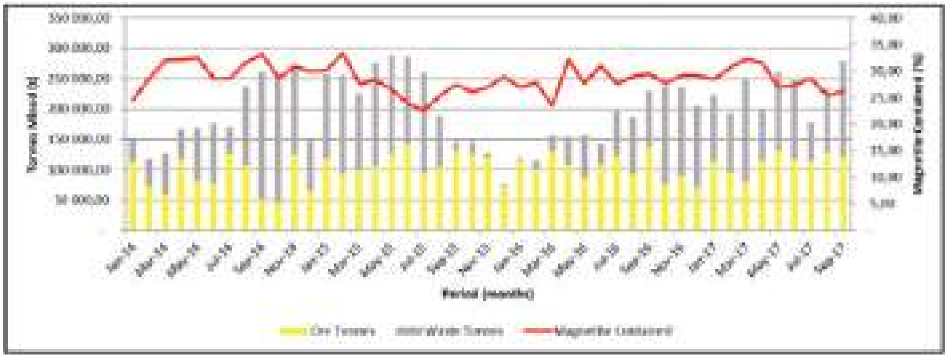
Historically the mining operating philosophy was adjusted on the basis of availability of vanadium containing slag. A constraint on slag supply in mid-2016 led to maximisation of mined throughput, yielding consistent magnetite based production.

The limited availability and higher cost of slag based feedstock further allowed Vametco to initiate various debottlenecking initiatives at relatively low cost, maximising the magnetite production volumes.

Accordingly, Phase I of the ore beneficiation expansion capital project was successfully commissioned in September 2017. This has expanded capacity from 2,800 mtV to 3,035 mtV. It is intended that Phase 2 of the ore beneficiation project will be commissioned towards the end of Q2 2018, raising capacity further to 3,750 mtV. The final phase should see capacity increase to over 5,000 mtV by the end of 2019 (*see Development Strategy*).

Both Figure 10 and Figure 11 depict actual production from a mining and final product perspective from January 2014 to September 2017, respectively.

Fig 10: Vametco – Actual Mining Production (2014 – Sept 2017)



Near term, the mining operating philosophy in 2018 is to increase waste stripping during elevated price environments, ensuring sufficient ore is available at all times for the processing plant in any subsequent low pricing periods.

Fig 11: Vametco Actual Plant Production (2014 – 2017 Sep)

Figure 11 depicts historical Magnetite and Nitrovan® equivalent production volumes. The Nitrovan® production volumes are relatively constant around 250 mtV per month, ensuring a sustainable supply to Vametco's customers, the balance being MVO shipped for FeV conversion.

Vametco Mine has demonstrated its capabilities in achieving production targets, both from a mining and beneficiation perspective.

3.13 ***Financial Performance of SMC Group***

£'000	*FY 2014 Audited*	*FY 2015 Audited*	*FY 2016 Audited*	*H1 2017 Unaudited*
Revenue	33,167	32,666	38,460	26,436
No. of tonnes sold	1,884	2,340	2,810	1,342
Gross Profit	9,616	5,453	7,709	8,528
Gross Margin	29%	17%	20%	32%
Operating Profit	4,315	847	687	4,669
Total comprehensive profit/loss	6,279	(268)	(1,176)	3,477
Net Assets	34,474	31,423	31,999	33,782

Revenue primarily relates to the sale of two vanadium products, modified vanadium oxide and Nitrovan®. Sales volumes in mtV have increased by over 20 per cent. from FY 2014 to FY 2016. Revenues fell though in FY 2015 despite an increase in number of tonnes sold, primarily due to a fall in prices. In FY 2016, the average selling price of vanadium increased by 27 per cent. which resulted in a 17 per cent increase in sales and a 41 per cent. increase in gross profit.

Products are predominantly exported. Evraz was historically responsibly for sales globally (excluding South Africa, Japan, China and Korea). Sojitz, a 21.2 per cent. minority economic interest in SMC, is responsible for sales into Japan, China and Korea. Customer contracts were directly with Evraz who received a 5 per cent. Fee. Following the acquisition of the SMC Group by Bushveld Vametco, an agreement was entered into with Wogen to provide the sales and marketing services previously provided by Evraz. Sales in South Africa are made directly by the Vametco Group.

3.14 ***Development Strategy***

Vametco's development strategy comprises three elements:

(a) raising production capacity to increase sales;

(b) diversification of its production base to enhance the product range and broaden client customer reach;

(c) Downstream manufacturing development to maximise the beneficiation dividend.

Capacity has recently been raised to 3,035 mtV per annum and two further phases of expansion will increase this to 3,750 mtV per annum and to over 5,000 mtV per annum. The latter is anticipated to be reached by the end of 2019. The Company is exploring ways to expand its product portfolio to include other vanadium products in addition to Nitrovan®. Finally, the Company intends to leverage its integrated platform for development of downstream operations by manufacturing value added vanadium products

3.15 ***Net Present Value***

MSA has undertaken a discounted cash flow (DCF) analysis/valuation of Vametco. The valuation is based upon a LOM of 50 years, which includes the Indicated and Inferred Mineral Resources, and extends beyond the current converted mining right (which is valid until 2038). Furthermore, consistent with the development strategy, production is increased over a three year period to achieve consistent output of 4,920 mtV per annum from 2020 onwards. The long-term FeV price is set at US$30/kg. On the basis of a 10 per cent. real discount rate, Vametco has a NPV of US$211 million.

4 Overview of the Vanadium Market

The vanadium market is characterised by a robust and growing demand profile and a constrained and concentrated supply. Vanadium supply has seen significant reductions in the past 24 months resulting in a significant structural deficit projected to continue for the foreseeable future. This structural deficit has resulted in vanadium prices increasing from a low of US$13.55/kgV in January 2016 to US$23.60/kgV in December 2016. The price improvement has been maintained in 2017, with prices as of the end of October at US$34.13/kgV. of the average market price (Metal Bulletin mid) for 2016 was US$17.30/kgV, which rose to an average market price of US$27.53/kgV for the first 9 months of 2017.

On the demand front, approximately 90 per cent. of usage is in the steel industry, where growing intensity of use is anticipated, driven primarily by greater enforcement of construction standards in China, requiring higher vanadium-bearing rebar. Growth is also forecast in non-ferrous alloys (consuming 4.5 per cent. of vanadium output) and the chemical industry (consuming 3.5 per cent.). Looking ahead, the most significant driver of vanadium demand is expected to come from the energy storage sector. Industry estimates envisage vanadium flow batteries' share of vanadium consumption growing from approximately 1 per cent. in 2014, to 3 per cent. in 2016 and potentially up to approximately 20 per cent. by 2030.

Vanadium supply, on the other hand, is significantly constrained. The closure of the Evraz Highveld steel and vanadium plant and subsequent provisional liquidation of the Mapochs mine, as well as the suspension of operations at Vanchem in 2016, removed more than 10 per cent. of vanadium supply from the market and left the Vametco mine and Glencore's Rhovan operation as the only South African producers of vanadium, significantly contributing to the current global strain in vanadium feedstock.

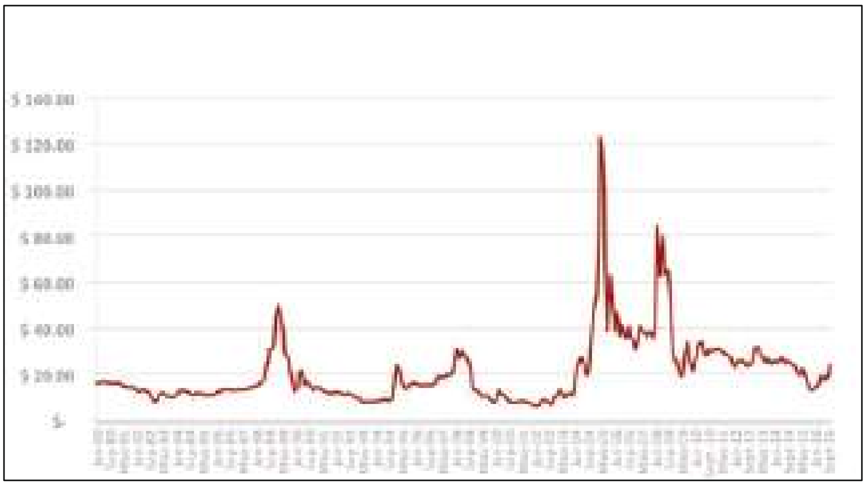
China is the largest producer of vanadium in the world. The bulk of the supply feedstock in China comes from steel plants that process low-grade vanadium-bearing magnetite ores to produce steel and a vanadium slag which is then further processed through a process similar to the primary production processes (salt roast and leach operations). This source of vanadium is significantly constrained due to:

- High input costs as a result of mining and processing low-grade captive ores, relative to the higher-quality and low-cost seaborne haematite ores;

- Steel plants that have to be designed for extraction of titanium and vanadium, resulting in operating costs that are significantly higher than simple blast furnace operations processing haematite ore; and
- No leverage on steel prices as a consequence of the small share of steel production that the high-cost vanadium and titanium bearing magnetite ore processing steel plants have.

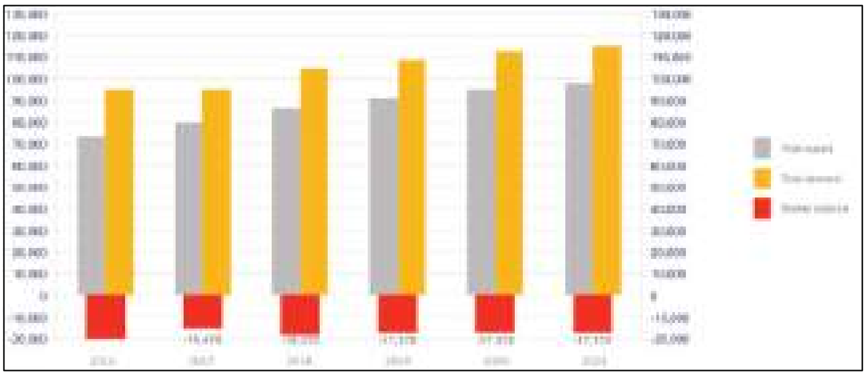
As a consequence, these plants are under enormous economic pressure, with some resorting to blending their ores with cheaper and higher-quality hematite ores (that contain no vanadium) resulting in further supply reductions. New sources of supply require higher vanadium prices to be sustained. Furthermore, few projects have the requisite vanadium grade to operate economically as primary vanadium operations, while the option to develop them as steel or pig iron producers with a vanadium slag by-product carries large and often prohibitive capital costs. Nonetheless, persistently higher vanadium prices will likely provide an incentive for some suppliers to start producing vanadium, notably stone coal miners in China which host sedimentary style vanadium deposits. These operations, though, pose substantial environmental challenges, which impinge on their feasibility of bringing additional supply onto the market.

Ferro-Vanadium Price Chart



Source: Metal Bulletin, basis mid-point US$/kgV

Vanadium Market Deficit



Source: Roskill, TTP Squared, Bushveld analysis

5 Principal Terms of the Acquisition

On 30 November 2017, the Company entered into the Acquisition Agreement, pursuant to which it conditionally agreed to acquire all of the ordinary shares in Bushveld Vametco not currently owned by the Group from the Seller for a purchase price of US$11.1 million to be satisfied on Admission by (i) a cash payment of US$4.5 million and (ii) the issue of the Consideration Shares by the Company to the Seller, credited as fully paid, at the Consideration Share Price. In addition, there will be (i) two deferred payments of US$600,000 each, payable following publication of the accounts for Vametco Holdings for respectively the years ending 31 December 2018 and 31 December 2019 and (ii) a further payment to be made on publication of the Vametco Holdings accounts for the year ended 31 December 2020 ("**2020 Accounts**") to be calculated by reference to the EBITDA of Vametco Holdings for the period covered by the 2020 Accounts. The Consideration Shares will represent 6.34 per cent. of the Enlarged Issued Share Capital and will be issued credited fully paid.

Pursuant to the Acquisition Agreement the Seller has also agreed to enter into the Seller OMA.

Completion of the Acquisition Agreement is conditional on *inter alia* the passing of the Acquisition Resolution by Shareholders at the General Meeting, and Admission. Further details of the Acquisition Agreement are set out in paragraph 9.1 of Part VIII of this document.

6 Reasons for the Acquisition

The Acquisition will increase the Company's indirect interest in Vametco Holdings from 26.6 per cent. to 59.1 per cent. The Directors believe that the Acquisition will benefit the Company and its shareholders for the following reasons:

- Increased exposure to vanadium, a commodity with a robust and growing demand profile amid a constrained and concentrated supply environment resulting in a sustained structural deficit with no significant new supply anticipated in the near future;
- Bushveld will own a majority shareholding in a high grade, low-cost open-cast and simple mining proposition with access to brownfield processing infrastructure that is being acquired for considerably less than its replacement cost;
- Vametco enjoys a significant c.3.5 per cent. share of the global vanadium market;
- The production base has the potential to expand within 3 years to over 5,000 mtV per annum, supported by one of the largest primary vanadium resource base in the world (under the ownership of Bushveld);
- Vametco has the potential to diversify its product range beyond its Nitrovan® product; and
- The Acquisition is further aligned with the Company's aspirations in the global energy storage space by providing capacity for potential electrolyte manufacturing.

7 Information on the Company's other projects

Vanadium

Through Bushveld Resources, the Group is developing a significant low-cost integrated vanadium mining and processing platform. In addition to the Vametco vanadium project as described in paragraph 3 of this Part I, the Group's vanadium resource base comprises interests in:

- The Mokopane Vanadium Project in Limpopo Province, with a 298 Mt Mineral Resource reported according to JORC guidelines.
- The Brits Vanadium Project in Brits, North West Province, which contains strike extensions of the Vametco mine and whose Mineral Resource quantum is yet to be determined;

Together, the three deposits constitute one of the largest primary vanadium resource base globally, with a 439.6 Mt JORC-compliant Mineral Resource, including 54.62 Mt of JORC-compliant ore reserves (26.12 Mt at Vametco Mine, 28.5 Mt at the Mokopane Vanadium project). The vanadium grades are some of the highest primary grades in the world with as much as 2.01 per cent. V_2O_5 (in magnetite). These high-grade deposits are located on the Bushveld Complex, which is host to one of the world's largest primary vanadium resources.

7.1 ***Mokopane Vanadium Project***

The Mokopane Vanadium Project is a key part of Bushveld's vanadium strategy. The project comprises one of the world's largest primary vanadium resources as well as high in-situ (1.4 per cent.) and in-concentrate (1.60-1.75 per cent.) V_2O_5 grades.

The project is located on the central portion of the northern limb of the Bushveld Complex, the second largest host of vanadium resources in the world. The project is in the Mokopane District of Limpopo Province, approximately 65km west of Polokwane.

The Mokopane Vanadium Project has a prospecting right (LP95PR), which incorporates five farms, these being Vogelstruisfontein 765 LR, Vriesland 781 LR, Vliegekraal 783 LR, Schoonoord 786 LR and Bellevue 808 LR. The Project's prospecting right covers several minerals including iron ore, vanadium, titanium and phosphorus. An application for a Mining Right was lodged in March 2015 and is currently still being processed by South Africa's Department of Minerals Resources. In September 2016, Bushveld was granted an Integrated Environmental Authorisation by the South African Mineral Resources Department in terms of section 24 L of the National Environmental Management Act (Act 107 of 1998) for the project.

The Environmental Impact Assessment was compiled as part of the Mining Right Application submitted on 12 March 2015. The next step in the application process is the approval of the Company's mine works programme and social and labour plan which will pave the way for the granting of the Mining Right. A water use plan will need to be applied for and the Company is engaging authorities to secure sufficient water for mining and will apply for a water use licence once they have clarity around water supply.

The Mokopane Vanadium Project deposit consists of a series of layered mineralised units along a 5.5 km long north-south strike at a dip of between 18° to 22° to the west. The Project comprises three stratigraphically adjacent and parallel titano-magnetite layers namely the Main Magnetite Layer, the Main Magnetite Layer Hanging Wall layer and the AB Zone. The project has JORC Code-compliant combined Ore Reserves and Indicated and Inferred Mineral Resources of 297.2 Mt (JORC), hosted by the three titano-magnetite layers – the MML, the MML-HW and the AB Zone, with vanadium in magnetite grades ranging from 1.6 per cent. to over 2 per cent. V_2O_5.

A PFS on the Mokopane Vanadium Project was completed and published in January 2016. The PFS was premised on only the MML resource being mined and processed through a primary salt roast and leach process to produce over 99 per cent. purity V_2O_5. The project economics are attractive: a base case operation of 1.0Mtpa of run-of-mine, producing 672,000tpa of V_2O_5 concentrate with an average V_2O_5 grade of 1.75 per cent., which is then processed through a primary salt roast and leach process to produce 9,525tpa of a >99 per cent. purity V_2O_5 product. The study yielded a pre-tax NPV of US$418 million and a pre-tax IRR of 24 per cent. after a capital expenditure of US$298 million.

Bushveld believes the Mokopane Vanadium Project is robust enough to advance to a bankable feasibility study. The Company continues to evaluate the potential to bring the asset into production in the most cost-efficient manner possible. The intention remains to develop the project alongside the Company's broader vanadium portfolio.

7.2 *Brits Vanadium Project*

The Company entered into definitive legal agreements to acquire the Brits Vanadium Project which, comprises prospecting rights on several farms adjacent to Vametco.

The project includes a mining right under application for vanadium and hosts high-grade vanadium mineralisation in several magnetite layers. The mineralisation is outcropping and a continuation of the Vametco deposit strike with similar or higher vanadium grades. The project offers a potential extension of Vametco's life of mine and potentially presents cheaper near-surface ore for the Vametco plant for the Vametco plant. Historical drilling shows in-magnetite grades of as much as 2.6 per cent. V_2O_5.

The Company is in the process of securing regulatory approval in terms of section 11 of the Mineral and Petroleum Resources Development Act for change of control in respect of the subsidiaries acquired from Sable Metals & Mining Limited. Following approval, Bushveld intends to commence with activities to delineate the project's extensive shallow resource.

7.3 *Bushveld Energy*

Bushveld Energy, an 84 per cent. subsidiary of Bushveld, was established to participate in the large and growing global energy storage market through vanadium-based utility-scale batteries. In 2014, Bushveld identified the utility-scale energy storage applications of vanadium based redox flow batteries as presenting a significant commercial proposition as well as supporting and diversifying the demand profile for vanadium.

The energy storage market is fast growing and forecast to reach US$350 billion by 2030. Of this market, VRFBs are well positioned to take a significant share of the stationary energy storage market, on account of certain features that give VRFBs an edge in large-scale, stationary and long duration energy storage applications.

Key to Bushveld Energy capturing this market opportunity is overcoming two hurdles in the development of VRFBs – security of supply and stability of vanadium costs:

- **Security of supply:** A 1GWh VRFB system requires approximately 5,000 tonnes of vanadium-in-electrolyte – more than 6 per cent. of current annual global vanadium consumption. With industry experts forecasting as much as 34GWh in energy storage requirements by 2025, a mere 10 per cent. market share of this industry for the VRFBs would require more than 15,000 mtV, equivalent to approximately 19 per cent. of 2016's total global vanadium production. To date, the amount of vanadium deployed into VRFBs is growing exponentially. Accordingly, the ability to guarantee supply of vanadium for VRFBs will be key to the success of these systems. Bushveld can mitigate this risk through its large, high-grade, low-cost resource base and scalable processing capacity.
- **Stability of vanadium costs:** Vanadium makes up 30-40 per cent. of the cost of a VRFB system. Sustainable adoption of VRFBs thus depends on the relative and absolute vanadium price. Bushveld can insulate VRFBs from price volatility, as it is a low-cost producer with significant production capacity and can guarantee supply at fixed prices for a longer period.

Bushveld believes that the key to capturing this opportunity lies in a vertically integrated vanadium business model that provides both upstream and downstream enablers for the success of VRFBs in the global energy storage industry:

- **Upstream:** Bushveld Energy's efforts are focused on solving the security of supply and cost of vanadium input into VRFBs through Bushveld's upstream vanadium mining and processing operations.
- **Downstream:** Bushveld Energy will provide market development capacity to secure megawatt scale opportunities for energy storage, localisation of vanadium input costs through further beneficiation into vanadium electrolyte, VRFB assembly and ultimately VRFB manufacturing in South Africa.

Partnerships are an important part of Bushveld Minerals' model and to date the company has two strategic partnerships.

UniEnergy Technologies LLC ("UET") – Bushveld Energy signed a non-binding MoU with UET in February 2016 (as amended in November 2016), a U.S based manufacturer of turn-key, large and medium-scale energy storage systems for utility, micro-grid, commercial and industrial, and other applications. The MoU with UET provides a platform for collaboration with a credible technology partner that not only has a strong track record in the technology development of vanadium redox flow battery (VRFBs) but is also a commercial manufacturer of quality VRFB systems. The collaboration between Bushveld Energy and UET will foster significant commercial opportunities in the energy storage on the African continent.

Industrial Development Corporation – In June 2016, Bushveld Energy signed a Co-cooperation Agreement with the Industrial Development Corporation of South Africa Limited ("**IDC**"), a national development finance institution. The partnership is focused on jointly determining the economic viability of vanadium redox flow batteries for use and manufacture in South Africa. As a leading primary VRFB producer and exporter, South Africa serves as the logical base for VRFB manufacturing.

The IDC has committed ZAR14 billion in support of renewable energy projects in the past five years and it has prioritised energy storage as one of the eight most attractive new industries in terms of financial and developmental returns. The IDC also has important stakeholder linkages with the South African government, regulators and utilities and other key players that are necessary to provide a catalytic stimulus for the energy storage industry as they have for the renewable industry to date.

As part of the cooperation agreement signed between Bushveld Energy and the IDC, the parties have completed two important studies in respect of VRFBs: a study for the market potential of VRFBs and vanadium electrolyte, and a techno-economic study of vanadium electrolyte in South Africa.

Based on the findings and recommendations of the techno-economic study, both Bushveld Energy and the IDC have decided to pursue this opportunity further by:

- Studying possible locations within South Africa for the electrolyte production facility;
- Building a bankable financial model for the processing facility;
- Identifying potential South African and international partners to jointly develop and operate the facility

In addition, optimal sites for a large-scale VRFB demonstration system of multiple megawatt hours are being developed in South Africa. Bushveld Energy's management and advisory team combines technical expertise, business acumen and mineral beneficiation experience.

7.4 ***Tin***

The principal tin assets of the Group were the Mokopane Tin Project and the Zaaiplaat Tin Tailings Project, located in South Africa, and the Uis Tin Project in Namibia. In accordance with the Group's strategy, the Company announced the Demerger of these assets into AfriTin, a Guernsey incorporated company specifically established for this purpose. AfriTin was admitted to AIM on 9 November 2017 and raised £3.5 million through an equity placing with a further £1.0 million raised from the AfriTin Notes, bringing the total raised to £4.5 million. The Demerger resulted in the Demerger Shares being issued to Bushveld Shareholders and the Bushveld Retained Interest Shares being issued to the Company. On AfriTin's admission to trading on AIM, the Demerger Shares and the Bushveld Retained Interest Shares represented respectively 24.39 per cent. and 4.30 per cent. respectively of the issued share capital of AfriTin. In addition, upon AfriTin's admission, the Company converted the AfriTin Notes held by it into 26,373,626 AfriTin Shares and subscribed for a further 12,820,512 AfriTin Shares, bringing its aggregate holding in AfriTin to 51,995,342 AfriTin Shares, representing 17.48 per cent. of the issued share capital of AfriTin on AfriTin Admission.

7.5 ***Coal & Power***

Through Lemur Holdings, the Group is developing an integrated thermal coal mining and IPP asset in Madagascar. The Company's strategy for the development of the Imaloto coal project involves securing an independent power producer licence and a power purchase agreement for a thermal coal fired power station next to the coal mine, thereby providing a captive market for the Imaloto project run-of-mine coal. On 23 November 2017, Lemur Holdings reported that it had signed a binding power purchase agreement with the Madagascar state-owned utility Jiro sy Rano Malagasy (JIRAMA). A power purchase agreement with a national utility is a pre-requisite for the development of an independent power project.

In addition, Lemur Holdings' subsidiary, Imaloto Power Project Limited signed a Memorandum of Understanding with Sinohydro Corporation Limited, a subsidiary of Power China Limited in March 2017 for the development of a 45-60MW thermal coal power plant located on or around the Imaloto Coal Field in Madagascar. The MoU provides a sound framework for cooperation between Lemur Holdings and Power China, which is a global leader in the design, supply, construction, and maintenance of technology and services for the power sector, including thermal power plants, and has extensive experience investing in and developing large-scale power projects in Africa. It further provides for Power China funding the Bankable Feasibility Study for the power project, which will provide a comprehensive feasibility study report, which shall consider the commercial, legal, operating, social, environmental and technical factors affecting the facility and the 200kms, 132kV single circuit transmission line to run from Imaloto to Tulear, such that it could reasonably serve as the basis for a final investment decision to be made by both debt and equity providers to finance the power project on a limited recourse project finance basis. Since the signing of the MoU, Lemur Holdings has led a delegation to Madagascar intended, among other things, to help identify the optimal site for the power plant. Meanwhile, Lemur Holdings has also engaged the services of Advisian Advisory, as the owner's engineer, to represent Lemur Holdings in the Group's engagement with Sinohydro, Jirama (the Madagascar national power utility) and external funders for the project, to undertake several studies that form a part of the Bankable Feasibility Study for the power project and to ensure that all environmental studies are done to internationally accepted standards.

The development of the Imaloto project, including the mine and the power plant, will see the region receiving new infrastructure and stable energy access. The design and location of the project are such that it would immediately increase the country's power supply by 15 per cent. and be able to scale up to supply more power to new electricity users in the region in the longer term.

8 Strategy of the Enlarged Group

Bushveld has operated a commodity-focused platform strategy since 2014. This led to the adoption of a clear model for long-term growth and the development of three independent platforms: Bushveld Vanadium, Greenhills Resources and Lemur Holdings.

Four key pillars have guided the subsequent development of the Company's projects:

- Identifying commodities with a positive market outlook;
- Developing assets with low cost curve positioning;
- Executing a visible path to production and, thus cash flow generation; and
- Scalability.

Vanadium was prioritised as the flagship platform. The Company's vision in vanadium is to build a significant, low cost, vertically integrated platform that comprises:

- One of the largest high-grade primary vanadium resource bases in the world, as well as the leading primary vanadium production source;
- A low cost position on the production cost curve, leveraging the high in-situ and in-magnetite V_2O_5 grades, the open-cast mining proposition of Bushveld's deposits as well as access to low cost brownfield processing infrastructure; and
- Development of downstream operations beyond production of end-use vanadium products to include development and deployment of vanadium applications in industries such as the energy storage market, where Bushveld intends to manufacture vanadium electrolyte and to build vanadium redox flow batteries.

Leveraging the strong technical skills within Bushveld will advance the vision; combining over 100 years of vanadium industry experience, the Vametco team has in-depth knowledge of vanadium mining, processing and marketing.

9 Directors, Senior Management and Employees

As at the date of this document the Board consists of Ian Watson, Fortune Mojapelo, Anthony Viljoen, Geoff Sproule and Jeremy Friedlander. Details of the Directors and Senior Management are set out below.

Directors

Ian Clyde Watson (aged 74), *Non-Executive Chairman*

Ian Watson is the Non-Executive Chairman of Bushveld. He is a qualified mining engineer with over 45 years' experience of the mining industry, which started with Goldfields South Africa. Ian served as Mine Manager of Northern Platinum in 1986 where he led the start-up of the Northam Platinum mine, including underground mine design, pioneering the use of hydropower, installation of metallurgical plants and ultimately brining the mine into production in 1992. He has served in executive and non-executive roles in the mining sector including Platmin. Ian is a professional engineer registered with Engineering Council of South Africa (ECSA). He is also a member of the S.A. Institute of Mining and Metallurgy (SAIMM). Ian obtained a national Diploma of Mining from the Witwatersrand Technical College, South Africa in 1968.

Fortune Tsepo Mojapelo (aged 41), *Chief Executive Officer*

Fortune Mojapelo is the founder and chief executive of Bushveld. He is a mining entrepreneur with a strong track record in resource exploration and development. He is a co-founder and director of VM Investment (Pty) Ltd, a principal investments and advisory company focusing on developing mining projects in Africa, alongside Anthony Viljoen.

Fortune has played a leading role in the origination, establishment and project development of several junior mining companies in Africa including New Kush Exploration and Mining (Gold in South Sudan), Greenhills Resources (Tin), Bushveld Resources (Vanadium), New Horizon Minerals (Iron Ore), Bushveld Platinum Limited (PGMS), and Eagle Resources Limited (Uranium).

His corporate career started at McKinsey & Company where as a strategy consultant he worked on advising clients on corporate strategy and organisational development.

Geoffrey Norman Sproule (aged 75), ***Finance Director***

Geoff Sproule is the finance director of Bushveld. He is a chartered accountant with more than 40 years' experience in various financial management roles. He is a former partner of Deloitte and Touche, South Africa.

Anthony Richard Viljoen (aged 40), ***Non-Executive Director***

Anthony Viljoen is a mining entrepreneur and co-founder and director of VM investment (Pty) Ltd, a principal investment and advisory company focused mining projects in Africa, alongside Fortune Mojapelo.

He is the CEO of AfriTin. Anthony has been responsible for the establishment or project development of a number of junior mining companies across Africa, including New Kush Exploration and Mining (Gold, South Sudan), Coal of Madagascar and Eagle Resources Limited (Uranium).

Prior to getting involved with the mining industry, Anthony spent several years in investment banking and has previously worked at Deutsche Bank, Barclays Capital (London) and Loita Capital Partners, a pan African investment banking firm. Anthony has a post graduate diploma of finance, banking and investment management.

Jeremy Ian Friedlander (aged 63), ***Non-Executive Director***

Jeremy is a qualified attorney. He joined Old Mutual as a legal advisor and in 1993 established McCreedy Friedlander, which became one of the premier property companies/agents in South Africa and negotiated an association with Savills. In 1998, he listed McCreedy Friedlander as part of a financial services group on the JSE and shortly afterwards relocated to London. More recently Jeremy was a director of Onslow Resources. He is business development director of a number of Avana Companies involved in Uranium, Coal, Gold and Gas and industrial minerals.

The Company intends to appoint a new independent non-executive director by 31 January 2018.

Senior Management

Mikhail Nikomarov (aged 37), ***CEO Bushveld Energy***

Mikhail is the founder and a minority shareholder of Bushveld Energy. He has strategic and operational experience across four continents and eight African countries. Prior to Bushveld Energy, Mikhail spent six and a half years with McKinsey & Company in Moscow and Johannesburg as an advisor for national governments, utilities and manufacturers on strategy and policy, and also led operational turnarounds in the energy sector. He worked as a banker in the USA and has a deep knowledge of mid-cap funding and has published work on national competitiveness and trade and co-authored McKinsey & Company's 2015 "Brighter Africa" report on the power sector.

Mikhail holds an MBA from INSEAD from France, an Economics Diploma from the London School of Economics in the UK and two BA degrees in History and in Economics from the University of Massachusetts in the USA.

Prince Nyati (aged 40), ***CEO Lemur Holdings***

Prince has over 15 years' experience in Energy and Mining with a particular focus on Project Development and Mergers & Acquisitions. He has worked in several countries including Zambia, South Africa, India, Singapore and the USA under Shell Oil, Total Petrochemicals, Eskom, Tata Power and Oreport. As Group Head of Tata Power, Prince evaluated over 100 coal assets and over 50 power opportunities in 30 countries. He served on the Board of Directors at Cennergi and the Tsitsikamma and Amakhala Wind Projects. He has led the development of numerous infrastructure projects in sub-Saharan Africa and facilitated transactions worth approximately $1.5 billion in Zambia and South Africa.

Prince holds a BA from the University of Zambia and an MBA in Corporate Finance from the University of Houston.

Chika Edeh (aged 31), *Head of Investor Relations*

Ms Chika Edeh has been appointed as Head of Investor Relations. Prior to joining Bushveld Minerals, Chika spent six years at BHP Billiton in London and Melbourne, working in Corporate Finance, Tax and Investor Relations. Prior to BHP Billiton, Chika worked for Barclays within the Private Banking division. Chika holds a Master's in Finance and Investments from Cass Business School, a Master's in Chemical Process Engineering and a Bachelor's in Chemistry from University College London.

Vametco Management

Malcolm Curror (Chem. Eng) (aged 46), *Chief Executive Officer*

Malcolm has been Chief Executive of Vametco since April 2011. He has over 22 years' experience in primary vanadium mining and processing.

Malcolm is a former General Works Manager for Xstrata Vanadium's Rhovan Integrated Vanadium Operations in South Africa. Malcolm also held a range of other senior management positions within Xstrata as Production Manager and Operations Manager at Rhovan, Vanitech and Lydenburg prior to joining Bushveld Vametco.

As CEO of Bushveld Vametco, he is now the president of Vanitech for the second term running.

Lyndon Williams (Met. Eng) (aged 58), *Chief Operations Officer*

Lyndon has been Chief Operating Officer of Vametco since April 2017. Prior to this since August 2011, he was the Vametco General Manager. He has held a range of roles with Highveld Steel & Vanadium including Metallurgist, Superintendent of Vantra, Assistant Manager Steel Plant, Manager of Vanchem, Manager Steelmaking, Manager Ironmaking, Works Manager Steel and Vanadium, and global Vanadium sales and marketing. Lyndon is a qualified Metallurgical Engineer with over 35 years; experience in the extraction of vanadium as well as vanadium slag production and processing.

Tania Mostert (Cert. Acc.) (aged 40), *Chief Financial Officer*

Tania has been CFO of Vametco since April 2011 with overall responsibility for financial & management accounting and procurement. Tania previously worked within the financial and internal audit functions of Highveld Steel & Vanadium. Tania is a Certified Professional Accountant with over 21 years' experience in Management and Financial Accounting.

William Steinberg (M Eng Metallurgy) (aged 35), *Works Manager*

William has been works manager of Vametco since March 2012 and has over 10 years' experience in iron, steel and vanadium processing and management. Prior to this, he has held various operational management positions (including project manager, production manager) at Highveld Steel & Vanadium. William holds a master's degree in metallurgical engineering from the University of Pretoria, with a thesis in EAF control. He also has a diploma in organisational management from the Moscow School of Business.

Employees

Vametco Holdings has approximately 340 employees. The Company has approximately 16 employees (excluding Non-executive Directors).

10 Current trading, prospects and significant trends

Since 31 August 2017, Bushveld has raised £8.0 million of unsecured convertible bonds from Atlas Capital Market and Atlas Special Opportunities. The first tranche of £4.5 million was issued on 22 September 2017. The notice of drawdown of the second tranche of £3.5 million will be given on publication of this document. The proceeds of these drawdowns will, in part, be used to fund the cash consideration due to the Seller.

On 2 October 2017, Bushveld Minerals announced its plans to de-merge its tin platform, Greenhills Resources Limited, and admit it separately to trading on AIM. Shareholders approved the Demerger on 20 October 2017 and, AfriTin was admitted to AIM on 9 November 2017 and raised £3.5 million through an equity placing with a further £1.0 million raised from the AfriTin Notes, bringing the total raised to £4.5 million. To demonstrate Bushveld's continuing support in the now independent tin platform, the Company has retained a 17.48 per cent. shareholding in AfriTin. A further 24.39% of the issued share capital of AfriTin

Mining was distributed to Bushveld shareholders on the register as at the close of business on 8 November 2017.

On 17 November 2017, Lemur Holdings announced it had completed an open market request for proposals process in October 2017 for all studies and services to complete the Bankable Feasibility Study for the Imaloto Power Project in Madagascar and appointed an owners engineer for the project. On 21 November 2017, Bushveld Energy announced, together with its partners, the deployment of its first vanadium redox flow battery in South Africa. The system will be deployed with Eskom, the South African national power utility. On 23 November 2017, Lemur Holdings reported that it had signed a binding power purchase agreement wtih the Madagascar state-owned utility Jiro sy Rano Malagasy (JIRAMA). A power purchase agreement with a national utility is a pre-requisite for the development of an independent power project.

Since 30 June 2017, Vametco reported a strong third quarter performance, supported by rising Vanadium prices which traded at an average US$39.4/Kg. These prices were 46.1 per cent. higher than achieved in previous quarter. Revenue was 29.0 per cent. higher at ZAR 744.3m and EBITDA was 69.3 per cent higher at 90. ZAR in the third quarter compared the previous quarter. Prices have remained at these levels in the current quarter and trading remains buoyant.

11 Admission to AIM, Dealings and CREST

Application will be made to the London Stock Exchange for the Enlarged Issued Share Capital to be admitted to trading on AIM. It is expected that Admission will take place, and dealings in the Enlarged Issued Share Capital on AIM will commence, on 21 December 2017.

CREST is a paperless settlement procedure enabling securities to be evidenced otherwise than by a certificate and transferred otherwise than by a written instrument in accordance with the CREST Regulations. The Articles permit the holding and transfer of Ordinary Shares to be evidenced in uncertificated form in accordance with the CREST Regulations. The Existing Ordinary Shares can already be transferred by means of the CREST system.

12 Lock-in and orderly market arrangements

In compliance with the AIM Rules for Companies, the Directors have, pursuant to the Lock In Agreements, agreed not to, and to procure that their respective related parties will not, dispose of any interests in Ordinary Shares held by them (if any), as defined in the AIM Rules for Companies, for 12 months following Admission and for the following 12 month period ("**Orderly Market Period**"), not to, and to procure that their related parties will not, dispose of any interest in Ordinary Shares held by them (if any) unless such disposals are effected through the Company's broker or in the agreed manner so as to ensure an orderly market in the Ordinary Shares.

Pursuant to the Seller OMA, Yellow Dragon has agreed to enter into an orderly market agreement for a period of 12 months from Admission in respect of all the Ordinary Shares held by it on Admission (including the Consideration Shares).

The restrictions on the disposal of Ordinary Shares contained in the Lock In Agreements and the Seller OMA In do not apply in certain circumstances. Further details of the Lock In Agreements and the Seller OMA can be found in paragraph 9.9 of Part VIII of this document.

13 Corporate governance

The Directors recognise the importance of sound corporate governance. The Board intends to continue, following Admission, so far as is practicable for a company of its size, to follow the QCA Corporate Governance Guidelines for AIM companies.

The Board will continue to meet regularly and is responsible for formulating, reviewing and approving the Group's strategy, budgets, performance, major capital expenditure and corporate actions. On Admission, the Company will have in place an audit committee and a remuneration committee with formally delegated rules and responsibilities.

Audit Committee

The Audit Committee's overall responsibilities are to ensure sound implementation of financial practices throughout the Group and include ensuring that sufficient financial controls are in place to protect the assets and to ensure the integrity of the financial information, reviewing the interim and annual financial statements, reviewing all aspects of the audit programme and provision of non-audit services by the auditors, ensuring the appropriate financial reporting procedures are properly maintained and reported on and meeting with the Company's auditors and reviewing their reports and accounts and the Company's internal controls. The Audit Committee comprises Ian Watson and Jeremy Friedlander and is chaired by Ian Watson.

Remuneration Committee

The Remuneration Committee reviews the performance of the executive directors and makes recommendations to the Board on matters relating to their remuneration and terms of service. The Remuneration Committee also makes recommendations to the Board on proposals for the granting of share options and other equity incentives pursuant to any employee share option scheme or equity incentive plans in operation from time to time. The Remuneration Committee will continue to meet as and when necessary. In exercising this role, the members of the Remuneration Committee shall have regard to the recommendations put forward in the QCA Guidelines and, where appropriate, the UK Corporate Governance Code guidelines. The Remuneration Committee comprises Ian Watson and Jeremy Friedlander and is chaired by Ian Watson.

Nominations Committee

In view of the size of the Board, the responsibility for proposing and considering candidates for appointment to the Board has been retained by the Board.

Disclosure Committee

The Disclosure Committee oversees the implementation of the governance and procedures associated with the assessment, control and disclosure of inside information in relation to the Company, in order to ensure compliance with its legal and regulatory obligations under MAR, the AIM Rules for Companies and the Criminal Justice Act 1993. The Disclosure Committee comprises Jeremy Friedlander, Fortune Mojapelo and Ian Watson and is chaired by Ian Watson.

Share Dealing Policy

The Company has adopted a share dealing policy for directors' and other relevant employees' of the Company dealings in Ordinary Shares, which is appropriate for a company whose shares are trading on AIM, and which complies with MAR, and the Board will take all reasonable steps to ensure compliance by the directors and any other relevant employees.

Anti-Bribery Policy

The Company has in place an anti-corruption and bribery policy (the "**Bribery Policy**"). The Bribery Policy applies to all directors and employees of the Group (and on Admission the Enlarged Group) and generally sets out their responsibilities in observing and upholding a zero tolerance position on bribery and corruption as well as providing guidance to those working for the Group (and on Admission the Enlarged Group) on how to recognise and deal with bribery and corruption issues and the potential consequences. The Bribery Policy details a zero tolerance approach which must be communicated to all contractors and business partners in all business dealings.

AIM Rules Compliance Policy

The Company has in place an AIM Rules Compliance policy. The AIM Rules compliance policy is designed to ensure that the Directors and the Company comply with the AIM Rules at all times.

14 Dividend Policy

The Company has not paid any dividends since its incorporation. The Board intends to devote the Company's cash reserves to financing the development of the Enlarged Group in the short to medium term and intends in the longer term to commence the payment of dividends only when the Board considers it commercially prudent to do so, having regard to the Company's future development and working capital requirements.

15 Regulatory rights and obligations

Disclosure and Transparency Rules

Shareholders are required pursuant to DTR 5, to notify the Company when they acquire or dispose of a major proportion of their voting rights (either as Shareholder or through their direct or indirect holding or certain financial instruments, or a combination of such holdings) of the Company equal to or in excess of 3 per cent. of the nominal value of that share capital (and every 1 per cent. thereafter).

The Takeover Code

As the Company is a Guernsey incorporated company and its Ordinary Shares have been, and will be admitted to trading on AIM, it is subject to the provisions of the Takeover Code. The Takeover Code is based upon a set of 'General Principles' (which are essentially statements of standards of commercial behaviour) and has been designed to ensure:

- that Shareholders are treated fairly and are not denied an opportunity to decide on the merits of a takeover; and
- that Shareholders of the same class are afforded equivalent treatment by an offeror.

The Takeover Code also provides an orderly framework within which takeovers are conducted. In addition, it is designed to promote, in conjunction with other regulatory regimes, the integrity of the financial markets.

Mandatory Offers

Under the Takeover Code, if an acquisition of shares were to increase the aggregate holding of the acquirer and its concert parties to shares carrying 30 per cent. of more of the voting rights in the Company, the acquirer and, depending on the circumstances, its concert parties, would be required (except with the consent of the Panel) to make a cash offer for the outstanding shares in the Company at a price not less than the highest price paid for the shares by the acquirer or its concert parties during the previous 12 months. This requirement would also be triggered by any acquisition of shares by a person holding (together with its concert parties) shares carrying between 30 and 50 per cent. of the voting rights in the Company if the effect of such acquisition were to increase that person's percentage of the voting rights.

16 Taxation

Your attention is drawn to the taxation section contained in paragraph 10 of Part VIII of this document. These details are, however, intended only as a general guide to the current tax position under UK and Guernsey taxation law. If you are in any doubt as to your tax position, or are subject to tax in jurisdictions other than the UK or Guernsey you are strongly advised to consult your own independent financial adviser immediately.

17 Risk Factors & further information

Your attention is drawn to the Risk Factors set out in Part II of this document. Prospective investors should, in addition to all other information set out in this document, carefully consider the risks described in those sections before making a decision of whether to invest in the Company.

Your attention is drawn to Parts II to IX to this document which provides additional information on the Company and the matters described in this Part I.

18 General Meeting

A notice convening the General Meeting is set out on pages 553 to 555 of this document, which is to be held at 18–20 Le Pollet, St Peter Port, Guernsey GY1 1WH at 10.00 a.m. on 20 December 2017, for the purpose of considering, and if thought fit, passing the Resolutions which seek to do the following:

- approve the Acquisition and authorise the Directors to issue the Consideration Shares for the purposes of the Acquisition; and

- authorise the Directors to issue, grant rights to subscribe for, or convert any securities into up to 287,793,087 new Ordinary Shares in the Company, being approximately one third of the Enlarged Issued Share Capital, and to disapply pre-emption rights for up to 100,000,000 new Ordinary Shares, being approximately 11.6 per cent. of the Enlarged Issued Share Capital, having used up a substantial amount of its existing authorities through the issue of the Convertible Bonds and Convertible Bond Warrants.

The Acquisition Resolution will be proposed as an ordinary resolution (Resolution 1). The Authority Resolutions will be proposed as an ordinary resolution (Resolution 2) and as a special resolution (Resolution 3). An ordinary resolution, in order to be passed, requires the approval of a simple majority of those voting in person or on a proxy or on a poll, and a special resolution requires the approval of 75 per cent. of those voting in person or on a poll by proxy.

It is a condition to completion of the Acquisition that the Acquisition Resolution is approved by Shareholders.

19 Action to be taken

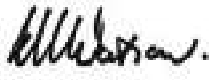
Enclosed with this document you will find the Form of Proxy for use by Shareholders in connection with the General Meeting. Whether or not you intend to be present at the General Meeting, Shareholders are asked to complete, sign and return the Form of Proxy to the Registrar as soon as possible but in any event so as to arrive no later than 10.00 a.m. on 20 December 2017. The completion and return of a Form of Proxy will not preclude Shareholders from attending at the General Meeting and voting in person should they wish to do so. Accordingly, whether or not Shareholders intend to attend the General Meeting, they are urged to complete and return the Form of Proxy as soon as possible.

Shareholders who hold their shares through CREST and who wish to appoint a proxy or proxies for the General Meeting or any adjournment(s) by using the CREST electronic proxy appointment service may do so by using the CREST proxy voting service in accordance with the procedures set out in the CREST manual. CREST personal members or other CREST sponsored members, and those CREST members who have appointed a voting service provider, should refer to that CREST sponsor or voting service provider(s), who will be able to take the appropriate action on their behalf.

20 Recommendation

The Directors unanimously recommend that Shareholders vote in favour of the Resolutions to be proposed at the General Meeting, as they intend to do so in respect of their own beneficial shareholdings amounting to, in aggregate, 13,366,667 Existing Ordinary Shares representing 1.65 per cent. of the Existing Issued Share Capital.

Yours faithfully,



Ian Watson
Non-Executive Chairman

PART II

RISK FACTORS

AN INVESTMENT IN THE COMPANY IS SPECULATIVE AND INVOLVES A HIGH DEGREE OF RISK AND SHOULD ONLY BE MADE BY THOSE WITH THE NECESSARY EXPERTISE TO APPRAISE THE INVESTMENT.

Mineral exploration and development is a speculative activity that involves a high degree of financial risk. Prospective investors should carefully consider all the information in this document including the risks described below. The risks and uncertainties described below are the material risk factors facing the Group which are currently known to the Directors and should be read in conjunction with the other information contained in this document.

Additional risks and uncertainties not presently known or currently deemed immaterial may also have a material adverse effect on the Company's business, results of operations or financial condition. If any or a combination of the following risks materialise, the Company's business, financial condition, operational performance and share price could be materially and adversely affected to the detriment of the Company and its Shareholders. No inference ought to be drawn as to the order in which the following risk factors are presented as to their relative importance or potential effect. The risks are not presented in any order of priority.

No representation is or can be made as to the future performance of the Company and there can be no assurance that the Company will achieve its objectives.

1. Risks Relating to the Group and its business

Significance of the Vametco Mine

The Group's profitability and cashflow in the near term will depend to a significant extent on the Vametco Mine located in the Bushveld Complex of the Limpopo District of the Republic of South Africa. The Group is currently dependent upon the Vametco Mine for future revenue and profits as it currently produces all of the Group's products for sale. Planned production of Vanadium may not be achieved, or may be achieved at lower levels than envisaged, as a result of unforeseen operational problems, machinery malfunction or other disruptions resulting in reduced, or in extremis, no production at site. Further operating costs may increase in the future resulting in reduced operating profitability or losses. There is no assurance the Group will be able to continue to operate the mine profitability which would materially adversely affect the Company's financial condition and prospects.

Exploration and development risks

Mineral exploration and development involves a high degree of risk. Few properties which are explored are ultimately developed into producing mines. Success in exploration and increasing mineral resources is the result of a number of factors, including the level of geological and technical expertise, the quality of land available for exploration, the quality of management, the availability of capital, the market price for the commodity being sought and various other factors. If mineralisation is discovered, it may take several years of drilling and development until production is possible, during which time the economic feasibility of a project may change. The economics of developing mineral properties are affected by many factors including the cost of operations, variations of the grade of ore mined, processing and benefication, fluctuations in the price of minerals produced, fluctuations in exchange rates, costs of development, infrastructure and processing equipment and such other factors as government regulations, including regulations relating to royalties, allowable production, importing and exporting of minerals and environmental protection. As a result of these uncertainties, there can be no assurance that mineral exploration and development of the Group's exploration projects will result in profitable commercial operations.

Title Risk

On Admission, the Group's principal mining projects are the Vametco vanadium mine, the Mokopane Vanadium Project, the Brits Vanadium Project and the Imaloto Coal and Power Project. Any adverse development affecting the exploration rights and licences of these projects could have a material and adverse effect on the Group and could materially affect its future financial performance, profitability, cash position and future production and operations.

While the Group has attempted to diligently investigate the title to, and rights and interests in the concessions held by the Group and, to the best of its knowledge, such title and interest are in good standing, this should not be construed as a guarantee of the same. Any exploration rights and licences may be subject to undetected defects, or disputes with the government issuing the licence. If a defect does exist it is possible that the Group may lose all or part of its interest in those of the concessions to which the defect relates.

Section 11 consent required

Whilst Lemur Resources Limited has conditionally agreed to acquire an interest in three Companies, all incorporated in South Africa, Great 1 Line Invest (Pty) Limited, Gemsbok Magnetite (Pty) Limited and Caber Trade & Invest (Pty) Limited, and has agreed that these interests will be transferred to Bushveld Resources, this is dependent on Section 11 approval under MPRDA being granted. In the event that consent has not been ranted within 4 years from the date of the agreement to acquire the interest (being 3 November 2015) then the agreement shall lapse (unless the parties agree to extend the time for the condition to be satisfied). Whilst the Company does not anticipate any issues, there is no guarantee that this consent will be forthcoming in the short term, or even at all. In addition, the HDSA shareholders in Gemsbok Magnetite (Pty) Limited have exercised tag along rights and also agreed to sell their shares in this company, meaning that a new HDSA partner is required to hold 26 per cent. Jaxson 650 (Pty) Limited has agreed in principle to do this but that transfer is not yet complete and the Group may be in breach of HDSA requirements should the transfer not be finalised.

Licence application by Caber Trade & Invest 1 (Proprietary) Limited ("Caber Trade") in respect of vanadium and iron over the farm Syferfontein 430 JQ and Portion 2 of the farm Uitvalgrond 431 JQ

The above application by has been delayed due to a dispute arising with representatives of the community following the failure by a community entity representative to carry out his obligations to transfer the related prospecting rights to Caber Trade in accordance with the terms of an acquisition agreement. There is no clarity as to whether representative concerned is entitled to represent the community, and until this is clarified, the application cannot proceed. The Company cannot guarantee that the dispute will be resolved and the application granted in the short term or at all.

Dispute between Amaraka Investments 85 Limited ("Amaraka") and Afro Multi Minerals Proprietary Limited ("AMM")

AMM is the holder of a prospecting right (DMR Ref: LP 30/5/1/1/2/438PR) granted in terms of section 17(1) of the MPRDA in respect of PGMs including (but not limited to) gold, cobalt, copper, nickel, iron ore, vanadium, plutonium, phosphate and all minerals that may be found to be intimately associated with the latter over the farm Malokong 784 LR in the Limpopo province. This prospecting right was executed and commenced on 7 March 2007 and was in force for a period of 4 years ending on 6 March 2011. AMM submitted an application to renew the prospecting right on 3 March 2011. It has been agreed that AMM will transfer its rights in the prospecting licence to Amaraka, a 68.5 per cent. subsidiary of Bushveld Resources which is currently in dispute and has been the subject of legal proceedings (now withdrawn) instituted by AMM. The parties are making efforts to resolve the dispute without further recourse to litigation, but pending such resolution, Bushveld Resources is unable to take advantage of any shareholder agreement in Amaraka, and in addition there can be no guarantee that these efforts will be successful, or if they are, what the terms of settlement will be. In the interim, the renewal and transfer of the prospecting licence will be put on hold.

Commodity prices

The future profitability and viability of the Group's operations will be dependent upon the market price of the projects and products, in particular vanadium, able to be sold by the Group. Mineral prices fluctuate widely and are affected by numerous factors beyond the control of the Company. General economic factors as well as the world supply of mineral commodities, the stability of exchange rates and political developments can all cause significant fluctuations in prices. The price of mineral commodities has fluctuated widely in recent years and future price declines could cause commercial production to be impracticable, thereby having a material adverse effect on the Group's business, financial condition and results of operations. In particular, the Chinese market has been a key driver of global materials demand and pricing over the past decade. A slowing in China's economic growth resulting in Chinese vanadium producers increasing their exports of vanadium has the potential to adversely impact the price for Vanadium. Moreover, reserve estimates and feasibility studies using different commodity prices than the prevailing market price could result in material write-downs of the Group's investment in its assets, the availability of debt and equity finance being curtailed and even a reassessment of the feasibility of mining projects which could result in putting a mining project on care and maintenance and slowing down operations until a change in the commodity prices. Prolonged, subdued commodity prices would have a material adverse effect on the Group's operations and financial position.

Exchange Rates

Bushveld Minerals' assets, earnings and cash flows are affected by a wide variety of currencies. The US dollar is the currency in which the majority of the Group's sales are determined however the Company's share price and reported financial results are in Sterling. Operating costs are influenced by the currencies of those countries where the Group operates. The US dollar, the South African Rand, the Malagasy Ariary and Sterling are the most important currencies affecting the Group's operating costs. Fluctuations in the exchange rates of relevant currencies may impact on Bushveld Minerals' financial results. The Group does not currently intend to enter into any hedging arrangements with respect to foreign currency.

Estimates of mineral reserves and resources

The estimating of mineral reserves and mineral resources is a subjective process and the estimates of mineral reserves and resources for development projects are, to a large extent, based on the interpretation of geological data obtained from drill holes and other sampling techniques and feasibility studies which derive estimates of costs based upon anticipated tonnage and grades of ores to be mined and processed, the configuration of the ore body, expected recovery rates from the ore, estimated operating costs, anticipated climatic conditions and other factors.

Any mineral resource estimates referred to in this document are historic estimates only and no assurance can be given that any particular grade, stripping ratio or grade of minerals will in fact be realised or that an identified reserve or resource will ever qualify as a commercially mineable (or viable) deposit which can be legally and economically exploited. Market fluctuations in the price of base metals may also render mineral reserves uneconomical. As a result of these uncertainties, there can be no assurance that the Group's exploration programmes will result in profitable sale of projects or ultimately commercial mining operations.

There is significant uncertainty in any reserve or resource estimate and the actual deposits encountered and the economic viability of mining a deposit may differ materially from the Company's estimates. The exploration of mineral rights is speculative in nature and is frequently unsuccessful. The Group may be unable to successfully discover and exploit new projects or reserves to replace those they are selling or mining to ensure their on-going viability.

Estimated mineral reserves or mineral resources may have to be recalculated based on changes in metals prices, further exploration or development activity or actual production experience. This could have a material adverse effect on estimates of the volume or grade of mineralisation, estimated recovery rates or other important factors that influence reserve or resource estimates. Market price fluctuations for base metals, increased production costs or reduced recovery rates, or other factors may render any mineral reserves of the Group uneconomical or unprofitable to develop at a particular site or sites.

Resource data is not indicative of future results of operations. If the Group's actual minerals resources are less than current estimates, the Group's results of operation and financial condition may be materially impaired.

Environmental regulation

Mining operations have inherent risks and liabilities associated with damage to the environment and the disposal of waste products occurring as a result of mineral exploration and production. Environmental and safety legislation and regulation (e.g. in relation to reclamation, disposal of waste products, pollution and protection of the environment, protection of wildlife and otherwise relating to environmental protection) is frequently changing and is generally becoming more restrictive with additional standards than those currently in effect, a heightened degree of responsibility for companies and their directors and employees and more stringent enforcement of existing laws and regulations. Future changes could impose significant costs and burdens on the Group (the extent of which cannot be predicted) both in terms of compliance and potential penalties, liabilities and remediation. Breach of any environmental obligations could result in penalties and civil liabilities and/or suspension of operations, any of which could adversely affect the Group. Further, approval is required for land clearing and for ground disturbing activities. Delays in obtaining such approvals could result in the delay to anticipated exploration programmes or mining activities.

There may also be unforeseen environmental liabilities resulting from mining activities, which may be costly to remedy. If the Group is unable to fully remedy an environmental problem, it may be required to stop or suspend operations or enter into interim compliance measures pending completion of the required remedy. The potential exposure may be significant and could have a material adverse effect on the Group. The Group has not purchased insurance for environmental risks (including potential liability for pollution or other hazards as a result of the disposal of waste products occurring from exploration and production) as it is not generally available at a price which the Group regards as reasonable.

Under South African law, there is a requirement to provide for the restoration of the mine area once mining operations cease (currently expected to be in 2037 at the Vametco mine) to a condition specified in the environment plan document approved by the South African government. This provision must be supported, in part, by cash deposits. As at 30 June 2017 the SMC Group held cash deposits of £3.6 million in relation to this provision. The liability is assessed annually by a professional independent consultant, discounted by the Directors to its present value. As at 30 June 2017, the total audited provision made in accordance with the terms of the licence, was approximately £4.7 million, with the difference between the cash deposits and the total provision being bridged by an insurance policy. Discussions with the government of the Republic of South Africa relating to the condition that the mine must be restored to are ongoing as the condition specified in the environment plan document is considered by the Directors to be open to interpretation. The actual cash requirement in respect of the environmental rehabilitation provision may therefore be materially different, depending on the outcome of discussions with the South African government, and this may significantly reduce the cash resources available to the Enlarged Group. However, the Directors are of the opinion that the working capital available to the Company and the Enlarged Group will be sufficient for its present requirements, that is for at least twelve months from the date of Admission.

Water Use Licence

The Group has obtained an environmental report on the open pit magnetite mine and concentrator, near Mokopane, Limpopo, in October 2015 which has noted that the Group will need, in order to develop the mine, a Water Use Licence, which at the present time the Group does not have. Work on this project is not expected to start until 2019, and the Group may apply for a licence in the meantime, but there can still be no guarantee that the licence will be granted in time, as such applications may take up to 3 and cannot be guaranteed. Operating without a required Water Use Licence is a criminal offence, and may result in a fine of between R120,000 and R600,000 and/or a period of imprisonment being imposed by a criminal court and may result in a directive ordering the cessation of the relevant all water uses on site.

Ground water contamination issues

A Monitoring Report was issued to Vametco Holdings in May 2017 which has highlighted a range of minor and significant groundwater contamination on the Vametco Holdings site, located on portion 1 of the farm Krokodilkraal 426 JQ and the remaining extent of portion 1 of the farm Uitvalgrond 431 JQ. Although the conclusion reached in the report is not conclusive, there is prima facie evidence of non-compliance with the duty of care set out in National Water Act, 1998, section 19 of which Section 19 for a duty of care towards water resources in South Africa, and requires any persons who has caused significant contamination to take reasonable measures to prevent any such pollution from occurring, continuing or recurring. The failure to take reasonable measures may result in a directive from the DWS ordering certain measures to remedy the pollution, at the cost of Vametco Holdings. The failure to take reasonable measures may also result in a fine of between R120,000 and R600,000 and/or imprisonment being imposed by a criminal court.

Operating risks

The activities of the Group are subject to all of the hazards and risks normally incidental to exploring and developing natural resource projects. These risks and uncertainties include, but are not limited to, environmental hazards, industrial accidents, labour disputes, encountering unusual or unexpected geologic formations or other geological or grade problems, unanticipated challenges in metallurgical characteristics and mineral recovery, encountering unanticipated ground or water conditions, cave-ins, pit wall failures, flooding, rock bursts, periodic interruptions due to inclement or hazardous weather conditions and other acts of God or unfavourable operating conditions and losses. Should any of these risks and hazards affect the Group's exploration, development or mining activities, it may cause the cost of production to increase to a point where it would no longer be economic to produce mineral resources from the Group's properties, require the Group to write-down the carrying value of one or more mineral projects, cause delays or a stoppage of mining and processing, result in the destruction of mineral properties or processing facilities, cause death or personal injury and related legal liability; any and all of which may have a material adverse effect on the Company.

It is not always possible to fully insure against such risks as a result of high premiums or other reasons (including those in respect of past mining activities for which the Company was not responsible). Should such liabilities arise, they could reduce or eliminate any future profitability, result in increasing costs or the loss of its assets and a decline in the value of the Ordinary Shares.

Competition

The mineral industry is competitive in all of its phases. The Group's prospects will depend not only on its ability to develop the properties on which it currently has exploration and production rights, but also on its ability to select and acquire exploration and development rights on suitable mineral properties which produce or are capable of producing. The Group faces strong competition from other mining companies in connection with the acquisition of such mineral properties, as well as for the recruitment and retention of qualified employees. Larger companies, in particular, may have access to greater financial resources, operational experience and technical capabilities than the Group which may give them a competitive advantage. There is no assurance that the Group will continue to be able to compete successfully in acquiring exploration and development rights on such properties or to recruit and retain key staff in the face of such competition.

BEE Partnership

Broad Based Black Economic Empowerment ("**BBBEE**") is a core tenet of the South African Government's initiative to address the economic exclusion of previously disadvantaged South Africans by encouraging the redistribution of wealth and opportunities to such persons. As part of this initiative, the BBBEE Act of 2003, which became effective in April 2004, aims to facilitate BBBEE by: promoting economic transformation to 34 allow meaningful participation by black people in the economy; changing the racial composition of ownership and management structures in enterprises; promoting investment programmes that lead to BBBEE; enabling access to economic activities, infrastructure and skills for black women and rural and local communities; increasing the extent to which workers, communities and co-operatives own and manage enterprises; and promoting access to finance for black economic empowerment. The Codes of Good Practice (the "**Codes**"), issued by the Department of Trade and Industry, cover concepts such as the measurement of ownership and management control, preferential procurement, employment equity, skills development, enterprise development and socio economic development. The Codes intend to encourage both public and private enterprises, through the issuing of licenses (e.g. water, emissions and waste licenses), concessions, sale of assets and preferential procurement, to implement appropriate BBBEE initiatives. As the BBBEE Act of 2003, the Codes and other policy measures designed to implement the goals of BBBEE are subject to multiple interpretations by multiple branches of the South African Government, there can be no assurance that Group's South African operations will be viewed by the executive or judicial branches of the South African Government as remaining in compliance with the requirements established by the Codes. Any future non-compliance or accusation of noncompliance could result in the imposition of administrative sanctions, which could materially and adversely affect the Group's South African business, results of operations and future prospects.

The minority interests in each of the Vametco Vanadium Project, the Mokopane Vanadium Project and the Brits Vanadium Project are held by BEE Partners. These minority interests must continue to be held by BEE Partners in accordance with BEE, which is implemented by the terms of the prospecting rights. There can be no guarantee that the BEE Partners will retain their BEE status, in which case the Group would be obliged to find alternative BEE investors and agree a transfer of the existing interest of the relevant BEE Partner.

Under South African mining regulatory framework it is a requirement that a minimum of 25 per cent. of the shares in companies holding interests in mining rights in South Africa is held by HDSA, which is not so in the case of all of the Group companies holding interests in South Africa, and specifically not the case for Bushveld Vametco, of which 76 per cent. is held by Strategic Minerals Corporation and 24 per cent. by

HDSA. There is an additional risk that, assuming the 2017 Mining Charter is implemented the proportion to be held by HDSA will increase from 26 per cent. to 30 per cent. This represents a risk to the Group as increasing the non-controlling interest to 30 per cent. would result in a reduced holding for the Group and thus lower profits to distribute to the shareholders of the Bushveld Group. In order to comply the Group companies concerned will need to transfer 1 per cent. of their interest to HDSA.

Unionisation

The Group's operations may be affected by labour-related problems in the future, such as union demands and litigation for pay rises and increased benefits. There can be no assurance that work stoppages or other labour-related developments (including the introduction of new labour regulations) will not adversely affect the results of operations or the financial condition of the Group. Approximately 80 per cent. of the workforce at the Vametco vanadium mine are members of the Association of Mine Workers and Construction Union ("**AMCU**"). In September and October 2013, six weeks of industrial action was taken by staff resulting in closure of the mine. Management believe that labour relations have improved with, a three year pay deal with members of the AMCU being agreed with the period 01 July 2016 to 30 June 2019. This should provide labour stability for the business during this period however there is the risk that existing labour agreements may not prevent strikes or work stoppages in the future, and any strike or other work stoppage could have an adverse effect on the operations and financial results of the Group.

Plant Shutdowns

The Vametco plant is subject to shutdowns as a result of planned annual shutdowns, planned maintenance shutdowns, unplanned shutdown as a result of equipment and plant failure and industrial action. The number of idle days has significantly reduced from 2014 as a result of an increase in regular maintenance reducing the number of idle days caused by unplanned shutdowns. In addition, the 3 year labour agreement with AMCU significantly mitigates the risk of plant shutdowns due to industrial action. There is a risk that the number of idle days will increase in the future. During periods of idle time, Vametco gains no benefit from the owning of equipment or the costs of having employees thereby reducing the mine's revenues, profitability and operating cashflows.

Surface Rights

In April 2013, Vametco Holdings' old order mining right was converted to a new order mining right ("**NOMR**") and executed accordingly. Under the converted NOMR, Vametco Holdings was eligible as the tenant in-situ to apply for the right of access to the lands under the NOMR. However, Vametco Holdings still needed to negotiate with the owners of the land to agree the surface lease terms as the mineral and surface lease agreements with the co-owners of both the Krokodilkraal and Uitvalground communities under the old order mining rights were terminated. As the Vametco mine is located within an area known as the Homelands, with two landowning groups having an interest, there is not considered to be one individual owner with whom negotiations can commence. Various internal leadership struggles and litigation cases have hampered progress to finalise these agreements. Management has endeavoured to find the appropriate contact with whom to negotiate and these negotiations have commenced. Following the issuance of the NOMR in 2013, the management of Vametco Holdings has been providing for the lease payments (calculated on a basis for royalties accrued to communities historically) as the management team believe that it is likely to be on similar or lower terms. Whilst Vametco Holdings has begun payments to the Uitvalgrond community, no payments have been made to the Krokodilkraal community.

Valuations have been presented by the landowners and Vametco Holdings and negotiations are on-going. As long as payments for royalties (accrued prior to April 2013) and surface rights remain unpaid, there is a reputational risk to the Group if balances are not settled in an appropriate and timely manner. Further, there is potential that the amounts provided for are understated given that there is no guarantee that the landowners will not demand higher rates than are currently being accrued. Royalties, in respect of amounts due for the use of the land upon which Vametco's mine and plant are situated prior to April 2013, and a surface lease provision are provided for in the accounts based on legal advice and the Directors' best estimate of the expenditure to settle the obligation to the landowners. Vametco Holdings has set aside R46 million cash to pay the royalties and the surface lease expense. Further, management believe that the cash outflow risk may be mitigated as amounts owing to the Krokodilkraal community may be offset against the transfer of an additional 1 per cent. to increase the communities' total holding from 15 per cent. to 16 per cent. (to meet the BEE requirement of 26 per cent. ownership). The total amount of the required future cash outflow in respect of royalties and surface rights may be materially different once the negotiations with the landowners are concluded. The timing of any cash outflow is also currently unknown. Any cash outflow in respect of surface rights may significantly reduce the cash resources available to the Enlarged Group. However the Directors are of the opinion that the working capital available to the Company and the Enlarged Group will be sufficient for its present requirements, that is for at least twelve months from the date of Admission.

Customer concentration

The top 10 customers accounted for 34 per cent., 35 per cent., 27 per cent. and 48 per cent. of revenue for Vametco in FY2014, 2015, 2016 and YTD2017. Whilst no individual customer accounted for over 10 per cent. of sales, three customers accounted for over 5 per cent. of sales with Tata Steel accounting for 8.6 per cent. of sales. Whilst Tata Steel has been a customer of Vametco for over 35 years, there is no contract in place with Tata Steel with individual purchase orders placed for each sale and for each entity of the Tate Steel group, including Tata Steel UK. The management of Vametco plan to negotiate a contract in the near term.

Operational Targets

The operational targets of the Group will be subject to the completion of planned operational goals on time and according to budget, and are dependent on the effective support of personnel, systems, procedures and controls. Any failure of these may result in delays in the achievement of operational targets with a consequent material adverse impact on the business, operations and financial performance of the Group. It is, therefore, possible that exploration and mining activity levels might fluctuate. Unscheduled interruptions in the Group's operations due to mechanical or other failures or industrial relations related issues or problems or issues with the supply of goods or services could have a serious impact on the financial performance of those operations.

Operating History

Despite the operating history of some of its wholly and partly owned subsidiaries, certain mineral properties owned by the Group are relatively early stage exploration projects and the Group's shareholding in the Vametco mine has only recently been acquired. There can be no assurance that the Company will operate profitably or provide a return on investment.

Reliance on strategic relationships

In conducting its business, the Group will rely on continuing existing strategic relationships and forming new ones with other entities in the vanadium industry and South Africa and also certain regulatory and governmental departments. While the Group has no reason to believe otherwise, there can be no assurance that its existing relationships will continue to be maintained or that new ones will be successfully formed.

Dependence on key personnel and management risks

The Group relies heavily on a small number of key individuals, in particular the Directors, the Company's senior management, and the management team of Vametco to maintain important relationships with governmental, regulatory and local communities in the Republic of South Africa and Madagascar. The loss of a key individual could have an adverse effect on the future of the Group's business. The Group's future success will also depend in large part upon its ability to attract and retain highly skilled personnel. There can be no assurance that the Group will be successful in attracting and retaining such personnel. Although the Company has entered into service agreements and employment contracts with its key personnel to secure their services, the agreements are subject to notice periods and the Company cannot guarantee retention.

Risks associated with the need to maintain an effective system of internal controls

The Group faces risks frequently encountered by developing companies such as under-capitalisation, cash shortages and limited resources. In particular, its future growth and prospects will depend on its ability to manage growth and to continue to maintain, expand and improve operational, financial and management information systems on a timely basis, whilst at the same time maintaining effective cost controls. Any damage to, failure of or inability to maintain, expand and upgrade effective operational, financial and management information systems and internal controls in line with the Group's growth could have a material adverse effect on the Group's business, financial condition and results of operations.

Joint Ventures

The Group may enter into joint venture arrangements with regards future exploration, development and production properties (including potentially the Group's concessions). There is a risk any future joint venture partner does not meet its obligations and the Group may therefore suffer additional costs or other losses. It is also possible that the interests of the Group or future joint venture partners are not aligned resulting in project delays or additional costs and losses. The Group may have minority interests in the companies, partnerships and ventures in which it invests and may be unable to exercise control over the operations of such companies.

Potential adverse media coverage

The Group's activities involve the exploration and the exploitation of mineral and other natural resources within the areas covered by the Group's mining and exploration licences. There is a risk that environmental, indigenous or human rights groups may criticise the Group given that mining and natural resource exploitation has historically been associated with significant detriment to the natural environment and indigenous populations. Further, the public perception of the Group may be prejudiced by the actions of an unrelated company over which the Group has no influence or control, and the Group's financial position may be adversely affected as a consequence.

Net Assets Shortfall

The Group's Madagascan subsidiaries Coal Mining Madagascar SARL and Imaloto Power Project SARL are each showing that their net assets have fallen below half of the registered share capital, as a result of cumulative losses. Applicable company law in Madagascar requires that should this situation arise then within 4 months of the approval of the accounts showing the deficit, the shareholders should be consulted on the advisability of calling for a premature winding up on the company in question. The Board intends to take steps to rectify the position following Admission by passing the necessary shareholder resolutions, which may include *inter alia* reduction of the relevant company's share capital, approving the continuation of the business in spite of losses.

Madagascan Moratorium Period

Due to the political crisis that affected Madagascar during the period 2009-2013, the Madagascan Mining Ministry ("**BCMM**") has only been operating a limited service and is not currently receiving any applications for new permits in respect of new projects. It is however receiving and processing any applications for transfer, transformation and renewal. Before issuing the transferred/transformed/renewed permits, the BCMM must obtain the approval of the Minister in charge of Mines (by way of a ministerial order) in respect of each type of application. In short, three main conditions must be satisfied in order for the transferred/transformed/renewed permits to be valid:

- the obtaining of the ministerial order duly signed by the Minister in charge of Mines;
- the updated transferred/transformed/renewed permit duly signed by the managing director of BCMM; and
- the continued payment of mining fees.

In practice, the obtaining of the ministerial order usually takes time (from months to years). From a strict legal point of view, no work can be carried out before the obtaining of the ministerial order and the transferred/transformed/renewed permit. In all cases, the transfer/transformation/renewal/extension processes are administration formalities, which providing relevant application protocol has been followed and the annual administration fees paid, will in almost all cases always be approved.

The papers relating to the transfer of the 26904 Permit and the 27163 Permit into the name of Coal Mining Madagascar SARL ("**CMM**") were duly filed at the BCMM. The issuance of the new permits in the name of CMM is an administrative formality that should be approved providing that CMM continues to pay the respective administrative fees. However and despite the fact that these said permits are recorded in the name of CMM in BCMM's register, CMM is not entitled to carry out any exploration/exploitation activities until the completion of the transfer/transformation procedure and the obtainment of the said permits in its name.

Similarly the papers relating to the renewal of the 31808 Permit, the 31892 Permit and the 12653 Permit were duly filed at the BCMM, and the same conditions apply to these applications. The renewal application is an administrative formality, which should be approved providing that CMM continues to pay the respective administrative fees. Although CMM can decide to carry on or to stop the exploration activities awaiting the issuance of the renewed permits, it must continue to pay the administration fees. CMM must also obtain an environmental authorisation (for 31808 Permit) and an environmental permit (for 31892 Permit) in order to be able to undertake full exploration activities. In the normal course of business and based on the Mining Code, a decision granting the renewal must be issued within 30 days from the submission of the renewal application at the BCMM. Due to the current moratorium period, almost all mining companies that are waiting for renewal decisions have stopped their activities pending the issuance of the renewed permits, which may take from months to years.

The dossier relating to the application for the transfer of the 3196 Permit to CMM and its transformation into an exploitation permit was duly filed at the BCMM. The application is an administrative formality, which should be approved providing that CMM continues to pay the administrative fees. CMM is not entitled to carry out any exploration/exploitation activities until the completion of the transfer/transformation procedure and the obtainment of the permit in its name.

Risks relating to Africa

General

The Group principally operates in the Republic of South Africa and Madagascar. African economies in general are emerging markets and as such are different from those in more developed countries in many respects including economic structure, government, level of development, growth rates and foreign exchange controls. The Group's activities may be adversely affected in varying degrees by changes in economic, political, judicial, administrative, taxation or other regulatory factors as well as other unforeseen matters, including, but not limited to, labour unrest, civil disorder, war or sabotage, fires, floods, explosions or other catastrophes, epidemics or quarantine restrictions. By virtue of this, investors in emerging markets should be aware that these markets are subject to greater risk than more developed markets.

Investors should also note that emerging economies are subject to rapid change and that the information set out in this document may become outdated relatively quickly. Accordingly, investors should exercise particular care in evaluating the risks involved and must decide for themselves whether, in light of those risks, an investment in the Company is appropriate. Generally, investment in emerging markets is only suitable for sophisticated investors who fully appreciate the significance of the risks involved and investors are urged to consult with their own legal and financial advisers before making an investment in the Ordinary Shares.

Government regulation, mining licences and permits

The Group's operating activities are subject to laws and regulations governing expropriation of property, health and worker safety, employment standards, waste disposal, protection of the environment, mine development, land and water use, prospecting, mineral production, exports, taxes, labour standards, occupational health standards, toxic wastes, the protection of endangered and protected species and other matters. While the Directors believe that the Group is in substantial compliance with all material current laws and regulations affecting its activities and the Company has made every effort to ensure it has robust commercial activities covering its activities, future changes in applicable laws, regulations, agreements or changes in their enforcement or regulatory interpretation could result in changes in legal requirements or in the terms of existing permits and agreements applicable to the Group or its properties, which could have a material adverse impact on the Group's current operations or planned development projects. Where required, obtaining necessary permits and licences can be a complex, time consuming process and the Group cannot assure whether any necessary permits will be obtainable on acceptable terms, in a timely manner or at all. There is also the possibility that the terms of any licence the Company holds (including any favourable tax provisions) may be changed.

The costs and delays associated with obtaining necessary permits and complying with these permits and applicable laws and regulations could stop or materially delay or restrict the Group from proceeding with any future exploration or development of its mining projects. Any failure to comply with applicable laws and regulations or permits, even if inadvertent, could result in interruption or closure of exploration, development or mining operations or material fines, penalties or other liabilities.

Legal systems

The Republic of South Africa and Madagascar and other jurisdictions in which the Group might operate in the future may have less developed legal systems than more established economies which could result in risks such as (i) effective legal redress in the courts of such jurisdictions, whether in respect of a breach of law or regulation, or in an ownership dispute, being more difficult to obtain; (ii) a higher degree of discretion on the part of governmental authorities; (iii) the lack of judicial or administrative guidance on interpreting applicable rules and regulations; (iv) inconsistencies or conflicts between and within various laws, regulations, decrees, orders and resolutions; or (v) relative inexperience of the judiciary and courts in such matters. In certain jurisdictions the commitment of local business people, government officials and agencies and the judicial system to abide by legal requirements and negotiated agreements may be more uncertain, creating particular concerns with respect to the Group's licences and agreements for business. These may be susceptible to revision or cancellation and legal redress may be uncertain or delayed. There can be no assurance that joint ventures, licences, licence applications or other legal arrangements will not be adversely affected by the actions of government authorities or others and the effectiveness of and enforcement of such arrangements in these jurisdictions cannot be assured.

Litigation risks

Legal proceedings may arise from time to time in the course of the Group's business. There have been a number of cases where the rights and privileges of mining exploration and production companies have been the subject of litigation. The Directors cannot preclude that such litigation may not be brought against the Company in the future from time to time or that it may not be subject to any other form of litigation.

Due to the relatively undeveloped legal systems in some of the jurisdictions in which the Company may invest, the Company may find it difficult, impossible or very costly to enforce the rights it may have under agreements it may enter into.

Foreign investment risk

The Group conducts its exploration in the Republic of South Africa and Madagascar. The Group has received the cooperation and support for its operations from the governments of these countries in which it operates thus far. However, whilst the Directors have no reason to doubt that the support for the ongoing exploration and exploitation of mining costs by foreign investors will continue, the future support and co-operations of the indigenous governments is uncertain. There can be no assurance that future political and economic conditions in the Republic of South Africa and Madagascar will not result in these governments adopting different policies in relation to foreign development and ownership over rights to explore and exploit mineral reserves. Any such changes in policy may result in changes in laws affecting foreign ownership of mineral interests, property assets, taxation, rates of exchange, imposition of additional fees, repatriation of income, royalties, return of capital and land access and labour relations, any of which may affect the Group's ability to undertake operations, secure joint venture partners and development activities in respect of the manner currently contemplated. If at any stage the Group cannot pursue its strategy because of such factors, the Group's financial condition and forward projections would be materially adversely affected.

Infrastructure

Development and exploration activities depend on adequate infrastructure, including but not exhausted to rail, power sources and water supply. The Group's inability to secure adequate rail capacity, power and water resources, as well as other events outside of its control, such as unusual weather, sabotage, government or other interference in the maintenance or provision of such infrastructure, could adversely affect the Group's operations and financial condition.

Electricity

Electricity supply and distribution in South Africa is principally conducted by Eskom. South African electricity supply is under pressure and demand is greater than supply. If the Company is unable to source sufficient electricity to mine its projects to the extent envisaged in this document it may need to apply to the South African Government for a licence to generate its own electricity through binding a proper plant.

This may involve extra cost, senior managerial resource and delays to develop and expand its projects.

Downgrading of debt rating

Any adverse revision to the prevailing credit rating for domestic and international debt by international rating agencies of any country in which the Group operates may adversely impact the Company's ability to raise future project financing and the interest rates and other commercial terms at which such additional financing may be available. This could have an adverse effect on the Group's financial performance and its ability to obtain financing to fund its growth on favourable terms, or at all.

Risk of crime and corruption

Countries in Africa generally experience high levels of criminal activity and governmental and business corruption. Exploration and mining companies operating in certain areas of Africa may be particular targets of criminal actions. Criminal or corrupt action against the Group could have a material adverse effect on the Group's business, operations, financial performance, cash flow and future prospects. In addition, the fear of criminal or corrupt actions against the Group could have an adverse effect on the ability of the Group to adequately staff and/or manage its operations or could substantially increase the costs of doing so.

The Group is subject to anti-corruption and anti-bribery legislation and regulations, including the UK Bribery Act and other laws and regulations that prohibit companies and their intermediaries from making improper payments or offers of payments to foreign governments and their officials and political parties, or others for the purpose of obtaining or retaining business and other benefits.

By doing business in the Republic of South Africa, Madagascar and other jurisdictions in Africa, the Group could face, directly or indirectly, corrupt demands by officials, militant groups or private entities.

Consequently, the Group faces the risk that one or more of its employees, agents, intermediaries or consultants may make or receive unauthorised payments given that such persons may not always be subject to its control.

Although the Company has policies and procedures designed to ensure that the Group itself, employees, agents, intermediaries and consultants comply with the UK Bribery Act and other anti-corruption legislation, there is no assurance that such policies or procedures will work effectively all of the time or protect the Group against liability under any such legislation for actions taken by its agents, employees, intermediaries and consultants with respect to its business.

If the Group is not in compliance with the UK Bribery Act or other laws governing the conduct of business with indigenous governments and entities (including local laws), the Group or its Directors may be subject to criminal and civil penalties and other remedial measures.

Furthermore, any remediation measures taken in response to potential or alleged violations of the UK Bribery Act or other anti-corruption or anti-bribery laws, including any necessary changes or enhancements to the Company's procedures, policies and controls and potential personnel changes and/or disciplinary actions, may result in increased compliance costs.

Any such findings, or any alleged or actual involvement in corrupt practices or other illegal activities by the Group or its commercial partners or anyone with whom it conducts business could damage its reputation and its ability to do business, including by affecting its rights and title to assets or by the loss of key personnel, and together with any increased compliance costs, could adversely affect its business, operations, financial performance, cash flow and future prospects.

General Investor Risks

Suitability, share price volatility and liquidity

A prospective investor should consider with care whether an investment in the Company is suitable for him in light of his personal circumstances and the financial resources available to him. An investment in the Company is only suitable for investors capable of evaluating the risks and merits of such investment and who have sufficient resources to bear any loss which may result from the investment. Prospective investors should therefore consult an independent financial adviser authorised under the FSMA (if before investing in the United Kingdom) or, if not, another appropriately authorised independent adviser who specialises in advising on the acquisition of shares and other securities.

Investment in the Company should not be regarded as short-term in nature. There can be no guarantee that any appreciation in the value of the Company's assets or investments will occur or that the investment objectives of the Company will be achieved. Investors may not get back the full amount initially invested.

The price of shares and the income derived from them can go down as well as up. Past performance is not necessarily a guide to the future. There is also the possibility that the market value of an investment in the Company may not reflect the true underlying value of the Company.

Changes in economic and other market conditions including, for example, interest rates, rates of inflation, industry conditions, competition, political and diplomatic events and trends, tax laws, natural disasters, terrorist attacks, political unrest and other factors can substantially and adversely affect an investment in the Ordinary Shares and the Company's prospects, regardless of operating performance.

Notwithstanding the fact that the Company has made an application for the Ordinary Shares to be admitted to trading on AIM, this should not be taken as implying that the application will be successful or that there will be a "liquid" market in the Ordinary Shares. The market for shares in smaller public companies is less liquid than for larger public companies. Therefore, an investment in the Company may be difficult to realise. The Ordinary Shares will not be listed on the Official List. Investments in shares traded on AIM carry a higher degree of risk than investments in shares quoted on the Premium segment of the Official List.

The Company cannot predict the effects on the price of the Ordinary Shares if a liquid and active market for the Ordinary Shares does not develop. If a liquid market does not develop, relatively small sales may have a significant negative impact on the price of the Ordinary Shares and sales of a significant number of Ordinary Shares may be difficult to execute at a stable price and could materially adversely affect the market price of the Ordinary Shares. Shareholders accordingly may not be able to realise their investment at the market price on Admission. The market for shares in smaller public companies is less liquid than for larger public companies.

The Ordinary Shares will not be listed on the Premium segment of the Official List. Investments in shares traded on AIM carry a higher degree of risk than investments in shares quoted on the Premium segment of the Official List. The rules of AIM are less stringent than those of the Official List. Further, neither the London Stock Exchange, the UKLA nor the FSMA has examined or approved the contents of this Document.

Even if the Company's application for the Ordinary Shares to be admitted to trading on AIM is successful, the Company cannot assure investors that the Ordinary Shares will always be traded on AIM. If they fail to remain traded, certain investors may decide to sell their Ordinary Shares, which could have an adverse impact on the Ordinary Share price. Additionally, if in the future the Company decides to obtain a listing on another exchange in addition to AIM, the level of liquidity of the Ordinary Shares traded on AIM could decline.

Stock markets in general may experience extreme price fluctuations. Fluctuations in the price of the Ordinary Shares may not be correlated in a predictable way to the Company's performance or operating results. Sales of substantial amounts of Ordinary Shares following Admission, or the perception that these sales could occur, could materially adversely affect the market price of the Ordinary Shares available for sale compared to the demand to buy Ordinary Shares. Such sales may also make it more difficult for the Company to sell or issue equity securities in the future at a time and price that is deemed appropriate.

The following non-exhaustive factors (among others), some of which are beyond the control of the Company, could cause the price of the Ordinary Shares in the public market to fluctuate significantly:

(a) changes in law or regulations, including mining legislation, tax laws, or new interpretations or applications of laws and regulations, that are applicable to the Group's business;

(b) departure of Directors or senior management;

(c) changes in the Group's financial performance and prospects and changes in the financial performance and prospects of companies engaged in businesses that are similar to the Group's business;

(d) sales of the Company's Ordinary Shares by Shareholders;

(e) general economic trends and other external factors, including those resulting from war, incidents of terrorism, civil unrest, natural disasters or responses to such events;

(f) speculation in the press or investment community regarding the Group's business, or factors or events that may directly or indirectly affect its business or investments; and

(g) further issuance of Ordinary Shares by the Company.

Securities markets in general have experienced extreme volatility that has often been unrelated to the operating performance of particular companies or partnerships. Any broad market fluctuations may adversely affect the trading price of the Ordinary Shares.

Guernsey Law

The Company is a Guernsey company limited by shares incorporated in Guernsey on 5 January 2012 under the Companies Law. There are a number of differences between the Company and that of a public limited company incorporated in England and Wales under the 2006 Act and set out below is a description of the principal relevant differences.

(i) Pre-emption rights: Companies Law does not provide any statutory pre-emption rights. The Articles therefore include equivalent provisions, as summarised in paragraph 5 of Part VIII of this Document. The Authority Resolution will be proposed at the General Meeting pursuant to the Articles granting the Directors authority to issue new Ordinary Shares non pre-emptively.

(ii) Disclosure of interests in shares: under the Companies Law, shareholders are not obliged to disclose their interests in a company in the same way as shareholders of certain public companies incorporated in the United Kingdom are required to do. In particular, the Transparency Obligations Directive (Disclosure and Transparency Rules) Instrument 2006 ("DTR") introduced by the FSA do not apply.

The Articles incorporate provisions equivalent to those contained in the DTRs, but may be amended by a resolution of the Shareholders in accordance with the Articles. The inclusion of these provisions in the Articles will not necessarily ensure compliance with Rule 17 of the AIM Rules for Companies.

Tax residency

The Company will initially be managed and controlled from South Africa and is initially anticipated to be considered to be resident in Guernsey for tax purposes. However, the location of the management and control of the Company may change in the future and/or may be questioned by applicable tax authorities, either of which may affect the Company's tax residency and therefore the Company's tax position.

Holding company structure and restrictions on dividends

The Company's operating results and its financial condition are dependent on the trading performance of members of the Group. The Company's operating cashflow, cash and financial position and its ability to pay dividends will depend on the level of distributions, received from the Company's subsidiaries and in particular from Vametco Holdings. Members of the Group may from time to time be subject to restrictions on their ability to make distributions to the Company, as a result of factors such as restrictive covenants contained within loan agreements, foreign exchange limitations, regulatory, fiscal or other restrictions. There can be no assurance that such restrictions will not have a material adverse effect on the Group's business, operating results and financial condition.

Market perception

Market perception of mining exploration and production companies may change which could impact on the value of investors' holdings and impact on the ability of the Company to raise further funds by the issue of further shares or other securities in the Company.

Dilution of Shareholders' interests

The Company may need to raise substantial additional funds in the future to finance its activities, investments and/or acquisitions. Future vanadium prices, mining and geological success, revenues, taxes, capital and operating expenditure, and interest and exchange rates will all be factors which will have an impact on the amount of additional capital required. Failure to obtain sufficient financing for the Group's activities and future projects may result in delay and indefinite postponement of exploration, development or production of the Group's properties or even loss of a property interest. There can be no assurance that additional finance will be available when needed or, if available, the terms of the financing might not be favourable to the Group and might involve substantial dilution to Shareholders.

If additional funds are raised through the issuance of new equity or equity-linked securities of the Company other than on a *pro rata* basis to existing Shareholders, the percentage ownership of the Shareholders may be significantly reduced, Shareholders may experience subsequent dilution and/or such securities may have preferred rights, options and pre-emption rights senior to the Ordinary Shares.

The Directors intend that the Company should be able to issue new Ordinary Shares as consideration for further acquisitions and/or raise additional working capital for the Company as required. Insofar as such new Ordinary Shares are not offered first to existing Shareholders, then their interests in the Company will be diluted.

Warrants

As detailed in paragraph 4 of Part VIII of this document, the Company has granted the Warrants to certain parties. The Company may, in the future, issue further warrants to subscribe for Ordinary Shares. The exercise of any such warrants would result in a dilution of the shareholdings of other investors.

Forward looking statements

Certain statements within this document, including those contained in Part I of this document, constitute forward looking statements. Such forward looking statements involve unknown risks, uncertainties and other factors which may cause the actual results, achievements or performance of the Group to be materially different from any future results, achievements or performance expressed or implied by such forward looking statements. Such risks and other factors include, but are not limited to, general economic and business conditions, changes in government regulation, currency fluctuations, the Group's ability to develop their existing or new resources, competition, changes in development plans and the other risks described in this Part II. Given these uncertainties, prospective investors are cautioned not to place any undue reliance on such forward looking statements.

There can be no assurance that the results and events contemplated by the forward looking statements contained in this document will, in fact, occur. These forward looking statements are correct only as at the date of this document. The Company will not undertake any obligation to release publicly any revisions to these forward looking statements to reflect events, circumstances or unanticipated events occurring after the date of this document except as required by law or by regulatory authority.

The risks noted above do not necessarily comprise all those faced by the Company and are not intended to be presented in any assumed order of priority.

There may be special risks if an investor holds Ordinary Shares in certain jurisdictions. At this time, the Company does not intend to make accommodations regarding its financial information to assist any holders with their tax obligations.

The investment described in this document is speculative and may not be suitable for all recipients of this document. Potential investors are accordingly advised to consult a person authorised under the FSMA who specialises in advising in investments of this kind before making any investment decisions. A prospective investor should consider carefully whether an investment in the Company is suitable in the light of his personal circumstances and the financial resources available to him.

PART III

MINING REGULATORY FRAMEWORK IN SOUTH AFRICA

1 The primary legislation governing prospecting rights, mining rights and mining permits (“**Mining Titles**”) in South Africa is the MPRDA. The MPRDA came into force on 1 May 2004 and replaced the Minerals Act, 1991. The MPRDA is not a “Mining Code” because it does not codify mining law in RSA. As such, and although the MPRDA is the starting point, the common law remains applicable.

2 Under the MPRDA, applicants can apply for prospecting rights for the exploration of minerals and mining permits and mining rights for exploitation of minerals. Prospecting rights are granted for a period of up to 5 (five) years with a right to renew the prospecting right for a period up to 3 (three) years. Mining permits are granted for a period not exceeding 2 (two) years and for an area less than 5 (five) hectares in extent. Mining rights are granted for a period up to 30 (thirty) years with a right to renew the mining right with no limit on the number of times it can be renewed, assuming that the holder can justify that it can continue mining operations.

3 Under the MPRDA, rights are granted to entities by the State on a “first come, first served” basis in terms of an application system. Applicants are to meet certain requirements set out in the MPRDA, and on meeting such requirements, the Minister must grant the right. A failure to grant a right is an administrative action that is capable of internal review before the Department of Mineral Resources, the government body that implements the MPRDA and regulates the mining industry. After an internal review, a judicial review process is available to aggrieved applicants.

4 Mining titles granted in terms of the MPRDA are registered at the MPTRO. Section 5 of the MPRDA states that a prospecting right or a mining right which has been registered at the MPTRO is considered to be a limited real right in respect of the mineral and land to which such right relates. The holder of a mining right has ownership of the mineral resources once the minerals have been severed from the land, which is enforceable against all third parties.

5 Powers to grant Prospecting and Mining Rights

5.1 Sections 17 and 23 of the MPRDA give the Minister Powers to grant Prospecting and Mining Rights respectively. Section 103(1) of the MPRDA gives the Minister Powers to delegate her powers.

5.2 On 12 May 2004 and in terms of section 103(1) the Minister delegated her powers to grant prospecting rights to the DDG and his powers to grant mining rights to the Director-General of the DMR (“**DG**”) subject to, amongst others, the condition that powers so delegated may not be further delegated without the Minister’s consent. No such consent to any such further delegation exists.

6 Details of the process required to renew prospecting rights or conversion into mining rights

6.1 In terms of section 18 of the MPRDA, any holder of a prospecting right who wishes to apply to the Minister for the renewal of a prospecting right must lodge the application at the office of the Regional Manager in whose region the land is situated; in the prescribed manner; and together with the prescribed non-refundable application fee.

6.2 An application for renewal of a prospecting right must:

6.2.1 state the reasons and period for which the renewal is required;

6.2.2 be accompanied by a detailed report reflecting the prospecting results, the interpretation thereof and the prospecting expenditure incurred;

6.2.3 be accompanied by a report reflecting the extent of compliance with the conditions of the environmental authorisation;

6.2.4 include a detailed prospecting work programme for the renewal period; and

6.2.5 a certificate issued by the Council for Geoscience that all prospecting information as prescribed has been submitted.

6.3 The Minister must grant the renewal of a prospecting right if the application complies with section 18(1) and (2) and the holder of the prospecting right has complied with the:

6.3.1 terms and conditions of the prospecting right and is not in contravention of any relevant provision of the MPRDA;

6.3.2 prospecting work programme; and

6.3.3 compliance with the conditions of the environmental authorisation.

6.4 A prospecting right in respect of which an application for renewal has been lodged remains in force despite its stated expiry date until such time as such application has been granted or refused.

6.5 Section 19(2) of the MPRDA provides as follows:

(1) Rights and obligations of holder of prospecting right.—(1) In addition to the rights referred to in section 5, the holder of a prospecting right has:

(a) subject to section 18, the exclusive right to apply for and be granted a renewal of the prospecting right in respect of the mineral and prospecting area in question;

(b) subject to subsection (2), the exclusive right to apply for and be granted a mining right in respect of the mineral and prospecting area in question; and

(c) subject to the permission referred to in section 20, the exclusive right to remove and dispose of any mineral to which such right relates and which is found during the course of prospecting.

(2) The holder of a prospecting right must:

(a) lodge such right for registration at the Mineral and Petroleum Titles Registration Office within 60 days after the right has become effective; Para. (a) substituted by s. 15 (a) of Act No. 49 of 2008. Wording of Sections

(b) commence with prospecting activities within 120 days from the date on which the prospecting right becomes effective in terms of section 17 (5) or such an extended period as the Minister may authorise;

(c) continuously and actively conduct prospecting operations in accordance with the prospecting work programme;

(d) comply with the terms and conditions of the prospecting right, relevant provisions of this Act and any other relevant law;

(e) comply with the conditions of the environmental authorisation;

(f) pay the prescribed prospecting fees to the State; and

(g) subject to section 20 and in terms of any relevant law, pay the State royalties in respect of any mineral removed and disposed of during the course of prospecting operations.

(h) submit progress reports and data of prospecting operations to the Regional Manager within 30 days from the date of submission thereof to the Council for Geoscience."

6.6 Section 20 of the MPRDA provides as follows:

"Permission to remove and dispose of minerals.—(1) Subject to subsection (2), the holder of a prospecting right may only remove and dispose for his or her own account any mineral found by such holder in the course of prospecting operations conducted pursuant to such prospecting right in such quantities as may be required to conduct tests on it or to identify or analyse it.

(2) The holder of a prospecting right must obtain the Minister's written permission to remove and dispose for such holder's own account of diamonds and bulk samples of any other minerals found by such holder in the course of prospecting operations."

7 Application for mining rights

7.1 In terms of section 22 of the MPRDA any person who wishes to apply to the Minister for a mining right must simultaneously apply for an environmental authorisation and must lodge the application:

7.1.1. at the office of the Regional Manager in whose region the land is situated;

7.1.2. in the prescribed manner; and

7.1.3. together with the prescribed non-refundable application fee.

7.2 The Regional Manager of the DMR must accept an application for a mining right if the prescribed requirements are met, no other person holds a prospecting right, mining right, mining permit or retention permit for the same mineral and land and no prior application for a prospecting right, mining right or mining permit or retention permit, has been accepted for the same mineral and land and which remains to be granted or refused.

7.3 If the application does not comply with the requirements of this section, the Regional Manager must notify the applicant in writing within 14 (fourteen) days of the receipt of the application.

7.4 If the Regional Manager accepts the application, the Regional Manager must, within 14 (fourteen) days from the date of acceptance, notify the applicant in writing:

7.4.1 to submit the relevant environmental reports, as required in terms of Chapter 5 of the National Environmental Management Act, 1998, within 180 (one hundred and eighty) days from the date of the notice; and

7.4.2 to consult in the prescribed manner with the landowner, lawful occupier and any interested and affected party and include the result of the consultation in the relevant environmental reports.

7.4.3 The Regional Manager must, within 14 (fourteen) days of receipt of the environmental reports and results of the consultation forward the application to the Minister for consideration.

8. Granting and duration of a Mining Right

8.1 The Minister must grant a mining right, in terms of section 23(1) of the MPRDA, if:

8.1.1 the mineral can be mined optimally in accordance with the MWP;

8.1.2 the applicant has access to financial resources and has the technical ability to conduct the proposed mining operation optimally;

8.1.3 the financing plan is compatible with the intended mining operation and the duration thereof;

8.1.4 the mining will not result in unacceptable pollution, ecological degradation or damage to the environment and an environmental authorisation is issued;

8.1.5 the applicant has provided for the prescribed SLP;

8.1.6 the applicant has the ability to comply with the relevant provisions of the Mine Health and Safety Act, 1996;

8.1.7 the applicant is not in contravention of any provision of the MPRDA;

8.1.8 the granting of such right will further the objects referred to in section 2(d) and (f) and in accordance with the charter contemplated in section 100 and the prescribed SLP; and

8.1.9 if the application relates to the land occupied by a community, the Minister may impose such conditions as are necessary to promote the rights and interests of the community, including conditions requiring the participation of the community.

8.2 In terms of section 23(2) of the MPRDA, the Minister may, having regard to the nature of the mineral in question, take into consideration the provisions of section 26.

8.3 The Minister must refuse to grant a mining right if the application does not meet all the requirements referred in section 23 (1) of the MPRDA as listed in paragraph 8.1 above.

8.4 Should the Minister refuse to grant a mining right, she must, within 60 (sixty) days of the decision, in writing notify the applicant of the decision and the reasons.

8.5 A mining right granted in terms of section 23 comes into effect on the effective date. The effective date is defined in section 1 of the MPRDA as the day on which the mining right is executed. In terms of section 5(1) of the MPRDA the holder of a mining right which has been registered with the MPTRO is the holder of a limited real right.

In terms of section 23(6) of the MPRDA, a mining right is valid for the period specified in the right, which period may not exceed 30 (thirty) years. In terms of section 24 of the MPRDA, any holder of a mining right who wishes to apply to the Minister for the renewal of a mining right must lodge the application in the prescribed manner.

9 Amendment and/or variation of rights, permits, programmes and plans

Section 102 of the MPRDA provides as follows:

"a reconnaissance permission, prospecting right, mining right, mining permit, retention permit, technical corporation permit, reconnaissance permit, exploration right, production right, prospecting work programme, exploration work programme, production work programme, mining work programme environmental management programme or an environmental authorisation issued in terms of the National Environmental Management Act, 1998, as the case may be, may not be amended or varied (including by extension of the area covered by it or by the additional of minerals or a shares or seams, mineralised bodies or strata, which are not at the time the subject thereof) without the written consent of the Minister".

10 Payment of royalties

State royalties for mining titles is governed by the Mineral and Petroleum Resources Royalty Act, 2008 ("**Royalty Act**"). Section 2 thereof provides that "a person must pay a royalty for the benefit of the National Revenue Fund in respect of the transfer of a mineral resource extracted from within the Republic."

Any person holding a prospecting right or mining right; retention permit; exploration right; mining permit or production permit; or a lease or sublease in respect of such a right; or any person who has recovered a mineral or petroleum resource in South Africa is subject to a levy in terms of the Royalty Act. The royalty in respect of refined minerals is calculated by dividing earnings before interest and taxes ("**EBIT**") by the product of 12.5 times gross revenue of refined mineral resources calculated as a percentage, plus an additional 0.5 per cent. EBIT refers to taxable mining income (with certain exceptions, such as no deduction for interest payable and foreign exchange losses) before assessed losses, but after capital expenditure. A maximum royalty limit of 5 per cent. of revenue applies to refined minerals.

11 Protection of Ownership of Mining Assets and Relevant Licenses

While the MPRDA does not expressly provide for the protection of ownership of mining assets, section 25 of the RSA Constitution protects the right to property, including mine assets. To this extent, section 25 provides that no one may be deprived of property except in terms of a law of general application, and no law may permit arbitrary deprivation of property. Property may, however, be expropriated only in terms of a law of general application for a public purpose or in the public interest; and subject to compensation. Therefore, although the South African government (including the Minister of Mineral Resources) is empowered to expropriate land and rights in land, provision is made for payment of compensation.

Security and continuity of tenure are listed in section 2(g) as among the objects of the MPRDA. Continuity is preserved from prospecting to mining in that the holder of a prospecting right has the exclusive right to apply for and be granted a mining right.

Continuity is further achieved during applications for renewals in that a prospecting right or mining right in respect of which an application for renewal has been lodged remains in force until the application has been granted or refused. Furthermore, security of tenure and continuity is assured by provisions in the MPRDA to the effect that an application for a right will not be accepted if another person holds a prospecting right, mining right, mining permit or retention permit for the mineral and land in respect which such application is made.

12 Enforceability of relevant mining legislation in protecting ownership

In regards to enforceability of relevant mining legislation in protecting ownership mining assets and relevant licenses, the relevant provisions for the suspension or cancellation of rights, permits and permissions conform to international requirements in specifying the criteria for suspension and cancellation and in requiring notice and affording an opportunity to remedy.

In this regard, and in the event of a non-compliance by the holder of a right, the DMR will issue a compliance notice (or directive) in terms of section 93 of the MPRDA ordering a holder to take immediate rectifying steps or suspend or terminate mining operations.

In the event that a holder continues with the non-compliant action the Minister may give written notice to the holder in terms of section 47 of the MPRDA indicating its intention to cancel or suspend the right and afford the holder a reasonable opportunity to show why the right, permit or permission should not be suspended or cancelled. Only once the Minister has afforded a holder with the reasonable opportunity may a right be cancelled or suspended.

13 Access to Land

Section 5 of the MPRDA prescribes that a right holder may access the land to which their right relates, together with their employees, and erect machinery, equipment or structures as is necessary to conduct operations in terms of the right. Further the right holder may conduct any activity on the land necessary to effectively mine in terms of the right including the use of water subject to the National Water Act, 1998.

In terms of section 5A of the MPRDA a right holder is not entitled to mine on the land without first providing the landowner (where the right holder is not the landowner) with 21 (twenty one) days' notice before the commencement of operations.

14 Mining Charter

Section 2(d) of the MPRDA states that the objects of the MPRDA are to substantially and meaningfully expand opportunities for historically disadvantaged South Africans ("**HDSAs**") to enter into and actively participate in the mineral and petroleum industries and to benefit from the exploitation of the nation's mineral and petroleum resources. Without adherence to section 2(d) of the MPRDA, no person may be granted a mining title in South Africa to mine from the heritage of the nation.

Section 100(2)(a) of the MPRDA is the empowering provision in terms of which the Minister was required to develop the Mining Charter. It provides that:

"To ensure the attainment of Government's objectives of redressing historical, social and economic inequalities as stated in the Constitution, the Minister must within six months from the date on which this Act takes effect develop a broad-based socio-economic empowerment Charter that will set the framework, targets and time-table for effecting the entry of historically disadvantaged South Africans into the mining industry, and allow such South Africans to benefit from the exploitation of mining and mineral resources."

The language of section 100(2)(a) clearly reflects that the Mining Charter is meant to set the framework targets and timetable for effecting entry of HDSAs into the mining industry and impose justiciable obligations on holders of mining titles.

The Minister, representing Government and representatives of the Mining Industry and the representatives of the trade unions signed a charter in 2002. On 13 August 2004, this charter was gazetted as the charter contemplated in s100(2)(a) of the MPRDA and the Mining Industry and all stakeholders accept it as such (the "**Original Charter**").

Mining right holders were initially required to comply with Original Mining Charter for effecting entry of HDSAs into the mining industry. Specifically, each mining company was required to achieve 15 per cent. (fifteen percent) HDSA ownership of mining assets within 5 (five) years of the Original Charter coming into effect and a 26 per cent. (twenty-six percent) HDSA ownership of mining assets within 10 (ten) years of the Original Charter coming into force.

On 20 September 2010, the amendment of the Broad Based Socio Economic Empowerment Charter for the South African Mining and Minerals Industry was published under Notice 838 of Government Gazette 33573 purportedly in terms of section 100(2)(a) of the MPRDA (the "**2010 Charter**").

15 The 2010 Mining Charter

Empowerment requirements for Prospecting Rights

A holder of a prospecting right is not obliged to comply with the empowerment requirements of the mining charter, unless the Minister expressly requires the applicant to do so in terms of section 17(4).

This is different to the grant of mining rights, where the applicant must show upfront, in relation to every mineral that the applicant is empowered and complies with the requirements of the mining charter.

Empowerment requirements for Mining Rights under the 2010 Mining Charter

In terms of section 23 of the MPRDA, the Minister cannot grant mining rights if the applicants do not provide information that enables the Minister to be satisfied that the granting or conversion of such rights will give effect to the section 2(d), and accordingly, the charter.

The 2010 Mining Charter imposes a minimum of 26 per cent. (twenty-six percent) HDSA equity ownership to enable meaningful economic participation. The Minister will not grant a mining right if this shareholding does not exist.

In 2015, the Chamber of Mines of South Africa ("**Chamber**") instituted legal proceedings in regard to parts of the Original Charter and the 2010 Charter. The Chamber and the DMR exchanged papers in this matter but the matter was not heard in court. In 2016, the Minister published a draft version of the third Mining Charter. The Chamber directed its efforts to negotiating with the DMR on the third Mining Charter in an attempt to settle the litigation.

On 15 June 2017, the Minister gazetted the Broad-Based Black Socio-Economic Empowerment Charter for the South African Mining and Minerals Industry, 2017 (the "**2017 Charter**"), which came into effect on the same day.

The Chamber has launched an urgent application to interdict the implementation of the 2017 Charter and further to review and set it aside. The urgent application has not been heard in the High Court. The DMR has filed papers in the High Court. The urgent application was due to be heard in court on 14 September 2017. However, the Minister and the Chamber reached an agreement on 13 September 2017 wherein the Minister undertook to suspend the 2017 Charter pending the outcome of review application, which is set to be heard on 13 and 14 December 2017. This undertaking was noted by the High Court of South Africa, Gauteng Division, Pretoria on 14 September 2017.

On Friday, 14 July 2017 the Chamber reported that the Minister had given it a written undertaking that the 2017 Charter was not to be implemented by the Minister pending the outcome of the court application. Until then, the 2017 Charter will not be implemented and for the time being, existing holders are not required to implement any aspect of the 2017 Charter.

In the event that the South African Courts uphold the 2017 Charter in its current form, then existing holders will need to comply with the requirements stipulated therein. In regard to ownership, procurement and employment equity, the 2017 Charter provides:

2017 MINING CHARTER

Ownership Requirements	New Prospecting Right Applications	New prospecting rights may be applied for by only majority Black-owned entities (50 per cent. + 1 vote Black person shareholding), thus holders must be black owned companies in order to successfully apply for prospecting right;
	New Mining Right Applications	New mining rights to be granted only to entities that are 30 per cent. Black-owned in prescribed categories of shareholders. The new 30 per cent. Black ownership requirement must be distributed as follows: 8 per cent. to an employee share ownership plan; 8 per cent. to mine communities in the form a community trust and 14 per cent. to Black entrepreneurs (defined to mean Black-owned companies or Black persons).
	Exiting Prospecting Rights	An existing holder will need to top up its Black Person shareholding within 12 months of the coming into effect of the 2017 Charter by 4 per cent. in order to achieve 30 per cent.
	Existing Mining Rights	An existing holder will need to top up its Black Person shareholding within 12 months of the coming into effect of the 2017 Charter by 4 per cent. in order to achieve 30 per cent.
Procurement		70 per cent. of total spend on mining goods to be sourced from prescribed categories of South African-based companies, as follows: A minimum of 21 per cent. of total mining goods (previously understood as capital goods and consumer goods) procurement spend must be set aside for sourcing "South African manufactured goods" (goods where at least 60 per cent. of the value added during the assembly and/or manufacturing of the product is realised within the borders of South Africa) from "Black-owned companies (50 per cent. +1 vote shareholding or similar interest controlled by Black persons). A minimum of 5 per cent. of total mining goods procurement spend must be set aside for sourcing South African manufactured goods from Black-owned companies which are owned and controlled 50 per cent. + 1 vote by female Black persons and/or youth (between of 18 and 35 years). A minimum of 44 per cent. of total mining goods procurement spend must be set aside for sourcing South African manufactured goods from BEE-compliant manufacturing companies (defined as companies that manufacture goods, that have a minimum B-BBEE level 4 on the Department of Trade and Industry B-BBEE Codes and that are 26 per cent. Black-owned). 80 per cent. of total spend on services to be sourced from prescribed categories of South African-based companies A minimum of 65 per cent. of total spend on services must be sourced from black-owned companies. A minimum of 10 per cent. of total spend on services must be sourced from black-owned companies owned and controlled 50 per cent. + 1 vote by female Black persons. A minimum of 5 per cent. of total spend on services must be sourced from Black-owned companies owned and controlled 50 per cent. + 1 vote by youth.

Employment Equity	The board and executive/top management of a holder must be composed of a minimum of 50 per cent. Black persons with exercisable voting rights, 25 per cent. of which must be female. The senior management of a holder must be composed of a minimum of 60 per cent. Black persons, of which 30 per cent. must be female. The middle management of a holder must be composed of a minimum of 75 per cent. Black persons, of which 38 per cent. must be female. The junior management of a holder must be composed of a minimum of 88 per cent. Black persons, of which 44 per cent. must be female. A minimum of 3 per cent. of the holder's employees must constitute employees with disabilities, reflective of national and/or provincial demographics. Core and critical skill positions (high-level technical skills across all organisational levels within both production and operational parts of the holder's value chain) must be 60 per cent. held by Black persons.
NEMA	NEMA is the overarching legislation giving effect to the environmental right protected in section 24 of the RSA Constitution, and which provides the underlying framework and principles underpinning the coordinated and integrated management of environmental activities. In terms of NEMA, an environmental authorisations is required in order to commence a listed activity. These activities are currently listed in GNR 983-985 of 8 December, 2014 ("**NEMA Listed Activities**"). The commencement of a NEMA Listed Activity without an environmental authorisation may be rectified via a section 24G application under NEMA for authorisation, however, such application will be subject to payment of an administrative penalty. Depending on the anticipated severity of the impact of undertaking a NEMA Listed Activity, the application process will require either a basic assessment report ("**BAR**") or a scoping and environmental impact assessment report ("**S&EIR**") to be prepared as part of the application for an environmental authorisation. An activity requiring a mining right is considered to have a more severe environmental impact and requires an S&EIR prior to commencement. This listed activity was previously listed in the listing notices published prior to 2014, however it was never brought into effect. As a result there was legal debate about the applicability of NEMA Listed Activities to mining and related activities and whether activities which were incidental to mining triggered other related NEMA Listed Activities. Previously the approval of an Environmental Management Programme ("**EMPr**") served a relatively similar function under the MPRDA. Clarity has since been brought about by virtue of a number of amendments to NEMA and the MPRDA, as well as the NEMA Listed Activities and it is clear that as of 8 December, 2014, an environmental authorisations is required for the commencement of any activity which requires a mining right or the commencement of any activity which requires a prospecting right. The issue of an environmental authorisations is a condition prior to the grant of a prospecting or mining right.

The DMR is the responsible authority for the issuing of an environmental authorisation, however the Department of Environmental Affairs remains the appeal authority in respect of any appeals to the issue of an environmental authorisation. Applicants are also required to follow stringent requirements in the public participation process to enable consultation with all interested and affected parties.

As part of its application for an environmental authorisations the applicant must demonstrate that it has complied with the prescribed financial provisioning requirements in terms of section 24P of NEMA. This means that the holder must set provisioning rehabilitation of the mining activities for concurrent rehabilitation, rehabilitation upon closure and the costs of managing latent and residual post closure impacts. Moreover every holder of a mining right must assess his or her environmental liability on an annual basis and must increase his or her financial provision to the satisfaction of the Minister for Mineral Resources. The holder must also submit an audit report to the Minister on the adequacy of the financial provision from an independent auditor. New regulations published in November 2015 now specify new procedures for how financial provision is to be made, audited and reviewed. Existing mines are also required to comply with the financial provision requirement, and are required to substantively review and align their financial provision in accordance with these regulations during the relevant transitional period, the long-stop date of which expires on 20 February, 2017. These regulations have brought about a number of changes and clarifications to the previous legal regime, and they are likely to substantially increase the required quantum of financial provision set aside by existing operations as well as the financial vehicles historically used by mining companies to put up these provisions. This is due to the qualification that latent or residual environmental impacts which may become known in the future now include the pumping and treatment of polluted or extraneous water.

Lastly, NEMA imposes a statutory obligation on every person who has caused or is likely to cause significant contamination to take reasonable measures in relation thereto. This duty applies retrospectively to contamination caused prior to 1998. A failure to comply with this duty as well as the requirement for an environmental authorisation can result in significant fines of up to ZAR10 million and/or 10 (ten) years imprisonment being imposed. Directives or compliance notices can also be issued under NEMA for the temporary or permanent shut down of facilities at a mining operation or the entire mining operation. Directors and certain employees can also be held criminally liable for environmental offences in their personal capacity under NEMA.

PART IV

Financial Information on Bushveld Minerals Limited

In accordance with AIM Rule 28, the London Stock Exchange has authorised the omission of financial information required by section 20.1 of Annex I of the Prospectus Rules from this document. The annual report and accounts for Bushveld Minerals Limited for the three years ended 28 February 2017, 29 February 2016 and 28 February 2015 and the interim accounts for the 6 months ended 31 August 2017 can be accessed on the Company's website at www.bushveldminerals.com/financial-reports/

PART V

Accountant's Report and Historical Financial Information on Strategic Minerals Corporation

Section A – Accountant's Report

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The Directors
Bushvelds Minerals Limited
18-20 Le Pollet
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Guernsey
GY1 1WH

30 November 2017

Dear Sirs,

Strategic Minerals Corporation and its subsidiary undertakings (the "SMC Group")

We report on the consolidated historical financial information of the SMC Group set out in Section B of this Part V of the Admission Document dated 30 November 2017 ("Admission Document") of Bushveld Minerals Limited (the "Company"). This historical financial information has been prepared for inclusion in the Admission Document on the basis of the consolidated accounting policies set out at Note 3 to the consolidated historical financial information. This report is required by paragraph 20.1 of Annex I of Appendix 3.1.1 of the Prospectus Rules as applied by part (a) of Schedule Two to the AIM Rules for Companies and is given for the purpose of complying with that paragraph and for no other purpose.

Save for any responsibility arising under paragraph 20.1 of Annex I of Appendix 3.1.1 of the Prospectus Rules as applied by part (a) of Schedule Two to the AIM Rules for Companies to any person as and to the extent there provided, to the fullest extent permitted by law, we do not accept or assume responsibility and will not accept any liability to any other person for any loss suffered by any such other person as a result of, arising out of, or in connection with this report or our statement, required by and given solely for the purposes of complying with paragraph 20.1 of Annex I of Appendix 3.1.1 of the Prospectus Rules as applied by part (a) of Schedule Two to the AIM Rules for Companies or consenting to its inclusion in the Admission Document.

Responsibilities

The Directors of the Company are responsible for preparing the consolidated historical financial information in accordance with International Financial Reporting Standards as adopted by the European Union.

It is our responsibility to form an opinion on the historical financial information and to report our opinion to you.

Basis of opinion

We conducted our work in accordance with Standards for Investment Reporting issued by the Financial Reporting Council in the United Kingdom. Our work included an assessment of evidence relevant to the amounts and disclosures in the consolidated historical financial information. It also included an assessment of significant estimates and judgments made by those responsible for the preparation of the consolidated financial information and whether the accounting policies are appropriate to the entity's circumstances, consistently applied and adequately disclosed.

We planned and performed our work so as to obtain all the information and explanations we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the consolidated historical financial information is free from material misstatement whether caused by fraud or other irregularity or error.

Our work has not been carried out in accordance with auditing or other standards and practices general accepted in any jurisdiction other than the United Kingdom and accordingly should not be relied upon as if it has been carried out in accordance with those other standards and practices.

Opinion

In our opinion, the historical financial information gives, for the purposes of the Admission Document, a true and fair view of the state of affairs of the SMC Group as at the dates stated and of its results, cash flows and changes in equity for the periods then ended in accordance with International Financial Reporting Standards as adopted by the European Union.

Declaration

For the purposes of part (a) of Schedule Two to the AIM Rules for Companies we are responsible for this report as part of the Admission Document and declare that we have taken all reasonable care to ensure that the information contained in this report is, to the best of our knowledge, in accordance with the facts and contains no omission likely to affect its import. This declaration is included in the Admission Document in compliance with item 1.2 of Annex I and item 1.2 of Annex III of Appendix 3.1.1 of the Prospectus Rules as applied by part (a) of Schedule Two to the AIM Rules for Companies.

Yours faithfully

RSM Corporate Finance LLP

Regulated by the Institute of Chartered Accountants in England and Wales

RSM Corporate Finance LLP is a limited liability partnership registered in England and Wales, registered no. OC325347. A list of the names of members is open to inspection at the registered office 25 Farringdon Street London EC4A 4AB.

Section B – Historical Financial Information on Strategic Minerals Corporation

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

For the three years ended 31 December 2016

	Note	*31 Dec 2016* £	*31 Dec 2015* £	*31 Dec 2014* £
Revenue	4	38 460 284	32 665 554	33 166 964
Cost of sales	5	(30 751 588)	(27 212 379)	(23 551 143)
Gross profit		7 708 696	5 453 175	9 615 821
Other operating income		324 310	1 637 389	2 027 863
Selling and distribution costs		(1 442 134)	(1 296 236)	(1 126 254)
Administrative expenses		(3 612 988)	(3 368 997)	(4 058 068)
Other operating expenses		(1 783 523)	(955 361)	(705 379)
Idle plant costs		(507 316)	(622 921)	(1 439 322)
Operating profit	6	687 045	847 049	4 314 661
Finance Income	7	287 933	232 171	245 302
Finance Costs	8	(585 351)	(495 115)	(69 879)
Exchange Gain/(Loss)		394 316	(835 830)	(267 291)
Profit/(loss) before taxation		783 943	(251 725)	4 222 793
Income tax (expense)/credit	9	(1 614 501)	434 790	1 947 627
(Loss)/profit for the year		(830 558)	183 065	6 170 420
Net other comprehensive (loss)/income to be reclassified to profit or loss in subsequent periods		(379 206)	91 917	–
Net other comprehensive income/(loss) not to be reclassified to profit or loss in subsequent periods		33 850	(542 701)	109 567
Other comprehensive income for the year, net of tax		(345 356)	(450 784)	109,567
Total comprehensive (loss)/profit for the year, net of tax		(1 175 914)	(267 719)	6 279 987
Attributable to:				
Owners of the parent		(1 989 154)	(227 998)	6 125 071
Non-controlling interest		813 240	(39 721)	154 916

All results relate to continuing activities.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 31 December 2014, 2015 and 2016

	Note	31 Dec 2016	31 Dec 2015	31 Dec 2014
		£	£	£
Assets				
Non-current assets				
Property, plant and equipment	10	8 246 346	6 119 506	8 379 262
Residential properties	11	2 458 804	2 237 254	2 736 590
Deferred tax asset	12	10 249 870	9 471 844	8 165 206
Total non-current assets		20 955 020	17 828 604	19 281 058
Current assets				
Inventories	13	10 793 723	9 022 609	10 089 361
Trade and other receivables	14	11 364 861	13 692 099	14 233 772
Restricted investment	15	3 111 941	1 847 345	1 922 223
Income tax receivable	16	239 071	–	–
Cash and cash equivalents	17	4 827 975	2 560 675	4 442 413
Total current assets		30 337 571	27 122 728	30 687 769
Total assets		51 292 591	44 951 332	49 968 827
Equity and liabilities				
Current liabilities				
Income tax payable	16	57 487	233 950	611 747
Trade and other payables	18	6 999 353	5 245 576	6 565 082
Surface lease provisions	19	2 189 889	1 147 029	902 921
Total current liabilities		9 246 729	6 626 555	8 079 750
Non-current liabilities				
Deferred tax liability	12	–	83 316	571 033
Post-retirement medical liability	20	1 770 589	1 315 687	992 372
Environmental rehabilitation liability	21	4 597 205	3 135 030	3 725 015
Dividend Payable	22	3 534 278	2 258 772	2 031 843
Other provisions		144 482	108 712	94 424
Total non-current liabilities		10 046 554	6 901 517	7 414 687
Equity				
Issued capital		26 491 291	26 491 291	26 491 291
Foreign Exchange Translation Reserve		6 972 882	5 452 411	7 129 930
Reserves		(5 709 090)	(2 979 766)	(2 097 608)
Equity attributable to owners of parent		27 710 083	28 963 936	31 523 613
Non-controlling interests		4 289 225	2 459 324	2 950 777
Total equity		31 999 308	31 423 260	34 474 390
Total equity and liabilities		51 292 591	44 951 332	49 968 827

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the three years ended 31 December 2016

	Attributable to the owners of the parent					
	Share capital £	*Reserves* £	*Foreign exchange translation reserve* £	*Total* £	*Non–controlling interests* £	*Total equity* £
At 1 January 2014	26 491 291	(7 578 939)	–	18 912 351	2 923 498	21 835 850
Total comprehensive income for the year	–	6 015 504	–	6 015 504	154 916	6 170 420
Dividend declared	–	(643 740)	–	(643 740)	–	(643 740)
Foreign exchange rate movements	–	–	7 129 930	7 129 930	(127 637)	7 002 293
Other comprehensive income	–	109 567	–	109 567	–	109 567
At 31 December 2014	26 491 291	(2 097 608)	7 129 930	31 523 613	2 950 777	34 474 390
Total comprehensive income for the year	–	222 786	–	222 786	(39 721)	183 065
Dividend declared	–	(654 160)	–	(654 160)	–	(654 160)
Foreign exchange rate movements	–	–	(1 677 519)	(1 677 519)	(451 732)	(2 129 251)
Other comprehensive (expense)	–	(450 784)	–	(450 784)	–	(450 784)
At 31 December 2015	26 491 291	(2 979 766)	5 452 411	28 963 936	2 459 324	31 423 260
Total comprehensive loss for the year	–	(1 643 798)	–	(1 643 798)	813 240	(830 558)
Dividend paid	–	(740 170)	–	(740 170)	–	(740 170)
Foreign exchange rate movements	–	–	1 475 471	1 475 4741	1 016 661	2 492 132
Other comprehensive (expense)	–	(345 356)	–	(345 356)	–	(345 356)
At 31 December 2016	26 491 291	(5 709 090)	6 927 882	27 710 083	4 289 225	31 999 308

CONSOLIDATED STATEMENT OF CASH FLOWS

For the three years ended 31 December 2016

	Note	*31 Dec 2016* £	*31 Dec 2015* £	*31 Dec 2014* £
Operating activities				
Cash generated from operations	25.1	10 785 176	94 674	(998 782)
Income tax paid		(7 882 763)	(216 234)	(1 077 343)
Cash flows from/(used in) operating activities		2 902 413	(121 560)	(2 076 125)
Investing activities				
Interest received		287 933	232 171	245 302
Purchase of property, plant and equipment	10	(1 207 701)	(427 536)	(565 389)
(Increase) in restricted investment		(569 276)	(350 696)	(403 077)
Cash flows used in investing activities		(1 489 044)	(546 061)	(723 165)
Financing activities				
Interest paid		(109 880)	(230 581)	257 078
Cash flows from financing activities		(109 880)	(230 581)	257 078
Net increase/(decrease) in cash and cash equivalents		1 303 489	(898 202)	(2 542 212)
Cash and cash equivalents at the beginning of the financial year		2 560 675	4 442 413	7 307 253
Effects of foreign exchange rate movements		963 811	(983 536)	(322 628)
Cash and cash equivalents at the end of the financial year		4 827 975	2 560 675	4 442 413

NOTES TO THE CONSOLIDATED HISTORICAL FINANCIAL INFORMATION

For the three years ended 31 December 2016

1. Corporate information and principal activities

Strategic Minerals Corporation ("SMC"), a company incorporated under the laws of Connecticut, USA, owns a 75 per cent. controlling equity interest in Vametco Holdings (Proprietary) Limited, which is the ultimate holding company of Vametco Alloys (Proprietary) Limited ("Vametco Alloys") (together the "SMC Group"). Vametco Alloys is principally involved in the mining, processing and distribution of Vanadium products from its operations in Brits, South Africa.

As at 31 December 2016, the SMC Group comprised:

Company	*Equity holding and voting rights*	*Country of incorporation*	*Nature of activities*
Strategic Minerals Corporation	N/A	USA	Ultimate holding company
Vametco Holdings (Proprietary) Limited	75%	South Africa	Holding company
Vametco Alloys (Proprietary) Limited	100%	South Africa	Mining, processing and distribution of vanadium products
Vametco Properties (Proprietary) Limited	100%	South Africa	Property holding company

Vametco Holdings (Proprietary) Limited directly holds 100 per cent. of the issued share capital of Vametco Alloys Proprietary Limited and indirectly holds 100 per cent. of Vametco Properties Proprietary Limited.

This historical financial information ("Historical Financial Information") is presented in Pound Sterling (£) being the presentational currency of Bushveld Minerals Limited.

2. Adoption of new and revised standards

Accounting standards adopted during the year

New standards, amendments to published standards and interpretations to existing standards effective in 2016, with their dates of adoption adopted by the SMC Group and brief description:

Annual Improvements to IFRSs 2014–2016 Cycle*	1 January 2017 & 1 January 2018	The improvements in this Amendment clarify the requirements of IFRSs and eliminate inconsistencies within and between Standards, including clarification of the scope of IFRS 12.
Amendments to IAS 12: Recognition of Deferred Tax Assets for Unrealised Losses*	1 January 2017	Clarifies deferred tax on unrealised losses generated by debt instruments carried at fair value.
Amendments to IAS 7: Disclosure Initiative*	1 January 2017	The amendments clarify and improve information provided to users of financial statements about changes in liabilities arising from financing activities.

* not yet endorsed by the EU

Following the adoption of these standards there has been no change to the SMC Group accounting policies and there has been no material impact on the financial statements of the SMC Group.

Accounting standards and interpretations not applied

Standards, amendments and interpretations to existing standards that are not yet effective and have not been early adopted by the SMC Group:

Amendments to IFRS 2: Classification and Measurement of Share-based Payment Transactions*	1 January 2018	Amendments to provide requirements on the accounting for the effects of vesting and non-vesting conditions on the measurement of cash-settled share-based payments, share-based payment transactions with a net settlement feature for withholding tax obligations, and a modification to the terms and conditions of a share-based payment that changes the classification of the transaction from cash-settled to equity-settled.
IFRIC 22 Foreign Currency Transactions and Advance Consideration*	1 January 2018	Provides requirements about which exchange rate to use in reporting foreign currency transactions (such as revenue transactions) when payment is made or received in advance.
IFRS 9 Financial Instruments	1 January 2018	Replacement to IAS 39 and is built on a logical, single classification and measurement approach for financial assets which reflects both the business model in which they are operated and their cash flow characteristics. Also addresses the so-called 'own credit' issue and includes an improved hedge accounting model to better link the economics of risk management with its accounting treatment. It is a change from incurred to expected loss model.
IFRS 15 Revenue from Contracts with Customers (IFRS 15 clarifications not EU–endorsed)	1 January 2018	Introduces requirements for companies to recognise revenue to depict the transfer of goods or services to customers in amounts that reflect the consideration to which the company expects to be entitled in exchange for those goods or services. Also results in enhanced disclosure about revenue and provides or improves guidance for transactions that were not previously addressed comprehensively and for multiple-element arrangements.

* not yet endorsed by the EU

The Directors anticipate that the adoption of these Standards and Interpretations in future periods will have no material impact on the financial statements of the SMC Group, subject to any future business combinations.

IFRS 16 Leases*	1 January 2019	The new standard recognises a leased asset and a lease liability for almost all leases and requires them to be accounted for in a consistent manner. This introduces a single lessee accounting model and eliminates the previous distinction between an operating lease and a finance lease.

The Directors are in the process of reviewing the impact of that the adoption of this Standard will have in future periods.

3. Significant accounting policies

Going concern

In preparing the Historical Financial Information, the Directors have considered the current financial position of the SMC Group and the likely future cash flows for the period to 12 months from the date of the Admission Document. In developing these forecasts the Directors have made assumptions based upon their view of the current and future economic conditions that will prevail over the forecast period.

On the basis of the above projections, the Directors are confident that the SMC Group has sufficient working capital to honour all of its obligations to creditors as and when they fall due. Accordingly, the Directors continue to adopt the going concern basis in preparing the Historical Financial Information.

Basis of preparation

These financial statements have been prepared in accordance with International Financial Reporting Standards, International Accounting Standards and Interpretations (collectively "IFRS") issued by the International Accounting Standards Board ("IASB") as adopted by the European Union ("adopted IFRS"), and are in accordance with IFRS as issued by the IASB.

The Historical Financial Information has been prepared under the historical cost basis. Historical cost is generally based on the fair value of the consideration given in exchange for the assets. The principal accounting policies are set out below and have been applied consistently throughout the three years.

Basis of consolidation

Subsidiaries

Subsidiaries are all entities (including structured entities) over which the SMC Group has control. The SMC Group controls an entity when the SMC Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the SMC Group. They are deconsolidated from the date that control ceases.

The SMC Group applies the acquisition method to account for business combinations. The consideration transferred for the acquisition of a subsidiary is the fair values of the assets transferred, the liabilities incurred to the former owners of the acquiree and the equity interests issued by the SMC Group. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The SMC Group recognises any non-controlling interest in the acquiree on an acquisition-by-acquisition basis, either at fair value or at the non-controlling interest's proportionate share of the recognised amounts of acquiree's identifiable net assets.

Acquisition-related costs are expensed as incurred.

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is re-measured to fair value at the acquisition date; any gains or losses arising from such re-measurement are recognised in profit or loss.

Any contingent consideration to be transferred by the SMC Group is recognised at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration that is deemed to be an asset or liability is recognised in accordance with IAS 39 either in profit or loss or as a change to other comprehensive income. Contingent consideration that is classified as equity is not re-measured, and its subsequent settlement is accounted for within equity.

Inter-company transactions, balances and unrealised gains on transactions between SMC Group companies are eliminated. Unrealised losses are also eliminated. When necessary amounts reported by subsidiaries have been adjusted to conform with the SMC Group's accounting policies.

Non-controlling interests

Non-controlling interests in subsidiaries are identified separately from the SMC Group's equity therein. Those interests of non-controlling shareholders that present ownership interests entitling their holders to a proportionate share of the net assets upon liquidation are initially measured at fair value. Subsequent to acquisition, the carrying amount of non-controlling interests is the amount of those interests at initial recognition plus the non-controlling interests' share of subsequent changes in equity. Total comprehensive income is attributed to non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Foreign currencies

Functional and presentational currency

The individual financial statements of each Group company are prepared in the currency of the primary economic environment in which they operate (its functional currency). The Historical Financial Information is presented in Pounds Sterling, the functional and presentational currency of Bushveld Minerals Limited.

Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the income statement. Foreign exchange gains and losses that relate to borrowings and cash and cash equivalents are presented in the income statement within 'finance income or costs'. All other foreign exchange gains and losses are presented in the income statement.

SMC Group companies

The results and financial position of all the SMC Group entities (none of which has the currency of a hyper-inflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

a) assets and liabilities for each balance sheet presented are translated at the closing rate at the date of that balance sheet;

b) income and expenses for each income statement are translated at average exchange rates (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the rate on the dates of the transactions); and

c) all resulting exchange differences are recognised in other comprehensive income.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate. Exchange differences arising are recognised in other comprehensive income.

Use of estimates and judgements

The preparation of the financial statements in conformity with IFRS requires management to make judgements, estimates and assumptions that affect the reported amounts of assets, liabilities and contingent liabilities at the date of the financial statements and reported amounts of revenues and expenses during the reporting period.

Estimates and assumptions are continuously evaluated and are based on management's experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

However, actual outcomes can differ from these estimates. In particular, information about significant areas of estimation uncertainty considered by management in preparing the financial statements is described below:

i. *Decommissioning and rehabilitation obligations*

   Estimating the future costs of environmental and rehabilitation obligations is complex and requires management to make estimates and judgements as most of the obligations will be fulfilled in the future and contracts and laws are often not clear regarding what is required. The resulting provisions are further influenced by changing technologies, political, environmental, safety, business and statutory considerations. In line with the closure objectives in the current approved Environmental Management Programme, no provision is required for full backfill of the open pit operations.

ii. *Asset lives and residual values*

Property, plant and equipment are depreciated over its useful life taking into account residual values, where appropriate. The actual lives of the assets and residual values are assessed annually and may vary depending on a number of factors. In reassessing asset lives, factors such as technological innovation, product life cycles and maintenance programmes are taken into account. Residual value assessments consider issues such as future market conditions, the remaining life of the asset and projected disposal values.

iii. *Post-retirement employee benefits*

Post-retirement medical aid liabilities are provided for certain existing employees. Actuarial valuations are performed annually by an independent third party and are based on assumptions which include employee turnover, mortality rates, the discount rate, health care inflation costs and rates of increase in costs.

iv. *Revaluation of residential properties*

The SMC Group carries its residential properties at fair value, with changes in fair value being recognised in the statement of profit or loss. The SMC Group engaged an independent valuation specialist to assess fair value as at year-end for residential properties. For residential properties, it measures land and buildings at revalued amounts with changes in fair value being recognised in the statement of comprehensive income. Land and buildings were valued by reference to market-based evidence, using comparable prices adjusted for specific market factors such as nature, location and condition of the property. The key assumptions used to determine the fair value of the residential properties are provided in note 11.

v. *Surface rights provision*

The SMC Group has provided for surface lease costs that would accrue to the owners of the land on which the mine is built. The quantum of the amounts due post implementation of the Minerals and Petroleum Resources Royalties Act 2008 ("MPRDA") and the granting of the new order mining right to Vametco Holdings (Proprietary) Limited is somewhat uncertain, and needs to be negotiated with such owners. The SMC Group has conservatively accrued for possible costs in this regard, but the actual obligation may be materially different when negotiations with the relevant parties are completed. The timing surrounding the actual payment of the liability is uncertain.

vi. *Deferred tax assets*

The SMC Group has recognised deferred tax assets which include the recognition of deferred tax assets in relation to trading losses. Management consider that the recoverability of these assets is more certain than not, however, the ability to utilise these deferred tax assets in the future is not guaranteed.

Revenue recognition

Revenue is measured at the fair value of the consideration received or receivable and represents amounts receivable for goods provided in the normal course of business, net of discounts, rebates and value added tax.

Revenue from the sale of product is recognised when the significant risks and rewards of ownership of the product have transferred to the buyer, costs can be measured reliably and receipt of the future economic benefits is probable. Significant risks and rewards of ownership pass when the title has passed to the customer and the goods have been delivered to a contractually agreed location.

Interest and dividend income

Interest income is recorded in the statement of comprehensive income using the effective interest rate. Dividend income is recognised at the time when the dividend can be measured reliably and the right to receive the payment is established.

Inventories

Inventories are valued at the lower of cost or estimated net realisable value. Cost is determined on the following basis:

- Raw materials: weighted average cost
- Consumable stores: weighted average cost
- Work in progress: weighted average cost
- Finished product: weighted average cost

The cost of finished product and work in progress comprise raw materials, direct labour, other direct costs, and related production overheads (based on normal operating capacity), but excludes borrowing costs. Net realisable value is the estimated selling price in the ordinary course of business, less costs of completion and selling expenses.

Leases

The determination of whether an arrangement is, or contains a lease is based on the substance of the arrangement at inception date of whether the fulfilment of the arrangement is dependent on the use of a specific asset or assets or the arrangement conveys a right to use the asset.

Leases of property, plant and equipment where the SMC Group assumes substantially all the benefits and risk of ownership are classified as finance leases. Finance leases are capitalised at the inception of the lease at the fair value of the leased property, or if lower, at the present value of the minimum lease payments. Each payment is allocated between the liability and the finance charges so as to achieve a constant rate on the finance balance outstanding. The corresponding finance lease obligation, net of finance charges, is included in long-term payables.

The interest element is charged to the statement of comprehensive income over the lease period. The property, plant and equipment acquired under finance leases are depreciated over the useful life of the asset, unless there is no reasonable certainty that the Company will obtain ownership by the end of the lease term, in which case the asset is depreciated over the shorter of the estimated useful life of the asset and the lease term.

Leases where a significant portion of the risks and reward of ownership is retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentive received from the lessor) are charged to the statement of comprehensive income on straight line basis over the period of the lease.

Taxation

i. *Current income tax*

Current income tax relating to items recognised directly in equity is recognised in equity and not in the statement of comprehensive income. Management periodically evaluates positions taken in the tax returns with regards to situations in which applicable tax regulations are subject to interpretation and establishes provisions where appropriate. Current income tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the taxation authorities. Taxation is provided at rates applicable in the Republic of South Africa which has been enacted or substantially enacted by the statement of financial position date.

ii. *Deferred income tax*

Deferred taxation is provided using the liability method on all temporary differences at the statement of financial position date between the tax bases of assets and liabilities and their carrying values for financial reporting purposes.

Deferred tax liabilities are recognised for all taxable temporary differences except:

- where the deferred income tax liability arises from the initial recognition of goodwill or an asset or liability that in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor the taxable profit or loss; and

- in respect of taxable temporary differences associated with investments in subsidiaries, associates and interest in joint ventures, where timing of the reversal of the temporary differences can be controlled and it is probable that the timing differences will not reverse in the foreseeable future.

Deferred income tax assets are recognised for all deductible temporary differences, carry forward of unused tax credits and unused tax losses, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilised except:

- where the deferred income tax asset arises from the initial recognition of an asset or liability that in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor the taxable profit or loss; and
- in respect of deductible temporary differences associated with investments in subsidiaries, associates and interest in joint ventures, deferred tax assets are recognised only to the extent that it is probable that the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilised.

Deferred income tax assets and liabilities are offset, if legally enforceable rights exist to set off current tax assets against current income tax liabilities and the deferred income taxes relates to the same taxable entity and the same taxation authority.

Deferred income tax relating to items recognised directly in equity is recognised in equity and not in the income statement.

The carrying amount of deferred income tax assets is reviewed at each statement of financial position date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred income tax asset to be utilised. Unrecognised deferred income tax assets are reassessed at each statement of financial position date and are recognised to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be recovered.

Deferred income tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the statement of financial position date.

iii. *Dividends tax*

Dividends tax is provided in respect of dividend payments and is recognised as a withholding tax.

iv. *Value added tax (VAT)*

Revenues, expenses and assets are recognised net of the amount of VAT except:

- where the VAT incurred on a purchase of assets or services is not recoverable from the taxation authority, in which case the VAT is recognised as part of the cost of acquisition of the asset or as part of the expense item as applicable; and
- receivables and payables that are stated with the amount of VAT included.

The net amount of VAT recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the statement of financial position.

Property, plant and equipment

Property, plant and equipment are stated at historical cost less accumulated depreciation, except for residential properties which are carried at fair value. Depreciation is calculated on the straight-line method to write off the cost of each asset (less residual value) over its estimated useful life as follows:

- Buildings and other improvements: 20 – 25 years
- Plant and machinery: 15 – 20 years
- Motor vehicles, furniture and equipment: 4 – 10 years
- Decommissioning asset: Life of mine

Repairs and maintenance are generally charged against income during the financial period in which they are incurred. However, renovations are capitalised and included in the carrying amount of the asset when it is probable that future economic benefits will flow to the SMC Group. Major renovations are depreciated over the remaining useful life of the related asset.

An item of property, plant and equipment is derecognised upon disposal or when no future benefits are expected from its use or disposal. Any gain or loss arising from the de-recognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the income statement in the year the asset is derecognised.

Impairment of non-financial assets

The SMC Group assesses at each reporting date whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the SMC Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs to sell and its value in use and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or SMC Groups of assets. Where the carrying amount of an asset exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs to sell, an appropriate valuation model is used.

These calculations are corroborated by valuation multiples, quoted share prices for publicly traded subsidiaries or other available fair value indicators. Impairment losses are recognised in the statement of comprehensive income in those expense categories consistent with the function of the impaired asset.

For assets excluding goodwill, an assessment is made at each reporting date as to whether there is any indication that previously recognised impairment losses may no longer exist or may have decreased. If such indication exists, the SMC Group estimates the asset's or cash-generating unit's recoverable amount. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, nor exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the statement of comprehensive income unless the asset is carried at revalued amount, in which case the reversal is treated as a revaluation increase.

Financial instruments

Financial Assets

Initial recognition

All financial assets are initially measured at the fair value of the consideration given, including transaction costs, except for financial assets classified as at fair value through profit or loss.

Investments and other financial assets

Financial instruments recognised on the statement of financial position include cash and cash equivalents, trade and other receivables, restricted investments and inter-company payables and receivables.

Restricted investment

Restricted investment comprises of short-term deposits with an original maturity of three months or less and an investment in an investment fund. These funds are dedicated towards future rehabilitation expenditure on the mine property.

Cash and cash equivalents

Cash and cash equivalents comprise cash at bank and in hand and short-term deposits with an original maturity of three months or less. Cash and cash equivalents are measured at amortised cost.

For the purposes of the cash flow statement, cash and cash equivalents consist of cash and cash equivalents as defined above, net of outstanding bank overdrafts.

Trade and other receivables and inter-company receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. After initial measurement, loans and receivables are subsequently carried at amortised cost using the effective interest method less any allowance for impairment.

Amortised cost is calculated taking into account any discount or premium on acquisition and includes fees that are an integral part of the effective interest rate and transaction costs. Gains and losses are recognised in the statement of comprehensive income when the loans and receivables are derecognised or impaired, as well as through the amortisation process.

Financial liabilities

Initial recognition

All financial liabilities are initially recognised at the fair value of the consideration received, net of transaction costs, except for financial liabilities classified as at fair value through profit or loss.

Trade and other payables and inter-company payables and redeemable preference shares

After initial recognition, payables are subsequently measured at amortised cost using the effective interest method. Gains and losses are recognised in the statement of comprehensive income when the liabilities are derecognised as well as through the amortisation process.

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include derivatives, financial liabilities held-for-trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Gains or losses are recognised in profit of loss when the liabilities are derecognised as well as through the amortisation process.

Impairment of financial assets

The SMC Group assesses at each reporting date whether there is any objective evidence that a financial asset or a SMC Group of financial assets is impaired. A financial asset or a SMC Group of financial assets is deemed to be impaired if, and only if, there is objective evidence of impairment as a result of one or more events that has occurred after the initial recognition of the asset (an incurred 'loss event') and that loss event has an impact on the estimated future cash flows of the financial asset or the SMC Group of financial assets that can be reliably estimated.

Evidence of impairment may include indications that the debtors or a SMC Group of debtors is experiencing significant financial difficulty, default or delinquency in interest or principal payments, the probability that they will enter bankruptcy or other financial reorganisation and where observable data indicate that there is a measurable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults.

For amounts carried at amortised cost, SMC first assesses individually whether objective evidence of impairment exists individually for financial assets that are individually significant, or collectively for financial assets that are not individually significant. If SMC determines that no objective evidence of impairment exists for an individually assessed financial asset, whether significant or not, it includes the asset in a SMC Group of financial assets with similar credit risk characteristics and collectively assesses them for impairment. Assets that are individually assessed for impairment and for which an impairment loss is, or continues to be, recognised are not included in a collective assessment of impairment.

If there is objective evidence that an impairment loss has been incurred, the amount of the loss is measured as the difference between the carrying amount and the present value of estimated future cash flows (excluding future expected credit losses that have not yet been incurred). The carrying amount of the asset is reduced through the use of an allowance account and the amount of the loss is recognised in the statement of comprehensive income. Interest income continues to be accrued on the reduced carrying amount based on the original effective interest rate of the asset.

Financial assets together with the associated allowance are written off when there is no realistic prospect of future recovery and all collateral has been realised or has been transferred to the SMC Group. If, in a subsequent year, the amount of the estimated impairment loss increases or decreases because of an event occurring after the impairment was recognised, the previously recognised impairment loss is increased or reduced by adjusting the allowance account. If a future write-off is later recovered, the recovery is recognised in the statement of comprehensive income. The present value of the estimated future cash flows is discounted at the financial asset's original effective interest rate.

De-recognition of financial instruments

A financial asset (or, where applicable a part of a financial asset or part of a SMC Group of similar financial assets) is derecognised when:

- the rights to receive cash flows from the asset have expired; or
- the SMC Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) SMC has transferred substantially all the risks and rewards of the asset, or (b) SMC has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires.

Provisions

General

Provisions are recognised when the SMC Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. Where the SMC Group expects some or all of a provision to be reimbursed, for example under an insurance contract, the reimbursement is recognised as a separate asset but only when the reimbursement is virtually certain. The expense relating to any provision is presented in the statement material, provisions are discounted using a current pre-tax rate that reflects, where appropriate, the risks specific to the liability. Where discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

i. Surface rights provision

The SMC Group has provided for surface lease costs that would accrue to the owners of the land on which the mine is built. The quantum of the amounts due post implementation of the MPRDA and the granting of the new order mining right to Vametco Holdings (Proprietary) Limited is somewhat uncertain, and needs to be negotiated with such owners.

The SMC Group has conservatively accrued for possible costs in this regard, but the actual obligation may be materially different when negotiations with the relevant parties are completed. The timing surrounding the actual payment of the liability is also uncertain.

ii. Environmental rehabilitation liability

The SMC Group is exposed to environmental liabilities relating to its operations. Full provision for the cost of environmental and other remedial work such as reclamation costs, close down and restoration costs and pollution control is made based on the estimated cost as per the Environmental Management Program Report. Annual increases in the provisions relating to change in the net present value of the provision and inflationary increases are shown separately in the statement of comprehensive income as a finance cost.

Changes in estimates of the provision are accounted for in the year the change in estimate occurs, and is charged to either the statement of comprehensive income or the decommissioning asset in Property, plant and equipment, depending on the nature of the liability.

iii. Post-retirement medical liability

The liability in respect of the defined benefit medical plan is the present value of the defined benefit obligation at the reporting date together with adjustments for actuarial gains/losses. Any actuarial gains or losses are accounted for in Other Comprehensive Income. The defined benefit obligation is calculated annually by independent actuaries using the projected unit of credit method.

iv. Provident fund contributions

The SMC Group's contributions to the defined contribution plan are charged to the statement of comprehensive income in the year to which they relate.

Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessary takes a substantial period of time to get ready for its intended use or sale, are capitalised as part of the cost of the respective asset. All other borrowing costs are recognised as an expense when incurred. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

Restricted Investment

The restricted investment cannot be utilised for any day-to-day operations, but is ring-fenced for use against potential future environmental rehabilitation liabilities.

4. Revenue

	31 Dec 2016	*31 Dec 2015*	*31 Dec 2014*
	£	£	£
Revenue comprises the invoiced amount of Vanadium products supplied to customers, net of value added tax	38 460 284	32 665 554	33 166 964

There is no single customer who contributed more than 10 per cent. of revenue in the years ended 31 December 2014, 31 December 2015 and 31 December 2016.

5. Cost of sales

Cost of sales includes direct material, energy and labour costs, plus indirect costs that can be directly attributed to generating revenue, such as depreciation of assets and movements in the value of finished goods and work in progress.

	31 Dec 2016	*31 Dec 2015*	*31 Dec 2014*
	£	£	£
Materials	12 801 591	12 868 625	12 352 427
Staff costs	6 898 424	6 450 078	6 675 575
Energy and services	7 464 377	6 469 690	7 071 317
Depreciation	991 867	791 705	825 324
Idle plant costs	(507 316)	(622 921)	(1 439 323)
Movements in finished goods/work in process	1 909 476	(574 147)	(3 422 158)
Other	1 193 169	1 829 349	1 487 981
Total cost of sales	30 751 588	27 212 379	23 551 143
Gross margin	*20%*	*17%*	*29%*

6. Expenses by nature

	31 Dec 2016 £	*31 Dec 2015* £	*31 Dec 2014* £
The profit/(loss) for the year has been arrived at after charging:			
Auditors' remuneration	30 365	32 512	32 940
Depreciation	1 320 269	746 982	936 808
Directors emoluments (as executives)	555 257	266 394	241 562
Technical fees	–	13 237	12 108
Foreign exchange loss/(gain)	394 316	(835 830)	(267 291)
Employee benefit expense	10 704 218	9 760 355	10 220 316
– salaries	2 850 391	2 416 787	2 636 327
– wages	6 895 848	6 450 078	6 675 575
– defined contribution plan expense	957 978	893 490	908 414

7. Finance income

	31 Dec 2016 £	*31 Dec 2015* £	*31 Dec 2014* £
Bank deposits	74 714	127 956	168 323
Rehabilitation bank deposit	213 229	104 215	76 979
Total	287 933	232 171	245 302

8. Finance expense

	31 Dec 2016 £	*31 Dec 2015* £	*31 Dec 2014* £
Interest on outstanding loans	206 169	143 633	87 124
Carrying costs	3 818	5 807	7 607
SARS	–	–	15 092
Unwinding of interest	271 017	246 758	–
Interest on outstanding royalties	104 347	98 917	(39 944)
Total	585 351	495 115	69 879

9. Taxation

The major components of income tax expense for the three years ended 31 December 2016 were as follows:

	31 Dec 2016 £	*31 Dec 2015* £	*31 Dec 2014* £
South Africa Normal Tax			
Current income tax:			
– Current income tax charge	384 172	450 788	1 272 281
– Adjustments in respect of previous year	9 329	(13 623)	149 400
– Interest paid/(received)	–	(8 652)	–
Deferred taxation			
– Origination/reversal of temporary differences	(235 394)	(257 634)	(496 532)
	158 107	170 878	925 149
USA Normal Tax			
Current income tax:			
– Current income tax charge – State	21 466	10 467	607
– Current income tax charge – Federal	20 463	333 052	22 353
– BOP taxes	–	–	151 800
Deferred taxation			
– Deferred income tax charge – State	1 879 292	(23 550)	(1 693 481)
– Deferred income tax charge – Federal	(464 827)	(925 637)	(1 354 055)
	1 456 394	(605 668)	(2 872 776)
Total: South Africa and USA	1 614 501	(434 790)	(1 947 627)

Tax reconciliation

Tax rate reconciliation – South Africa	*2016* %	*2015* %	*2014* %
Standard rate of taxation applied	28.00	28.00	28.00
Adjusted for:			
Total Non-temporary differences	15.15	(0.89)	(1.87)
Current tax – Prior year	(1.67)	(0.88)	12.93
Preference share dividend	(87.61)	(14.00)	58.91
Deferred tax – Prior year	–	(1.46)	(22.95)
Through OCI – PRMA adjustment	–	–	(1.82)
Effective rate	(46.13)	10.77	73.20

In the USA, SMC's financial statements contain certain deferred tax assets which have arisen primarily as a result of tax benefits associated with historical losses before income taxes as well as net deferred income tax assets resulting from other temporary differences for certain accrued liabilities and reserves, employee benefits, currency translation adjustments, and depreciation. The SMC Group records a valuation allowance against its net deferred tax assets when it determines that, based on the weight of the available evidence, it is more likely than not that its net deferred tax assets will not be realized.

10. Property, plant and equipment

Cost	*Buildings and other improvements GBP*	*Plant and machinery GBP*	*Motor vehicles, furniture and equipment GBP*	*Decommis-sioning asset GBP*	*Assets under construction GBP*	*Total GBP*
At 1 January 2014	1 295 724	14 585 893	970 370	1 647 654	284 242	18 783 884
Additions	–	–	–	52 149	513 240	565 389
Disposals	–	(100 090)	–	–	–	(100 090)
Assets under construction capitalised	26 574	248 864	31 265	–	(306 703)	–
At 31 December 2014	1 322 298	14 734 668	1 001 635	1 699 803	490 780	19 249 183
Additions	–	–	–	13 938	413 598	427 536
Disposals	(5 557)	(265 055)	–	–	–	(270 612)
Exchange rate movements	(292 752)	(3 262 208)	(221 759)	(376 331)	(108 657)	(4 261 707)
Assets under construction capitalised	81 288	526 943	–	–	(608 230)	–
At 31 December 2015	1 105 276	11 734 348	779 876	1 337 410	187 491	15 144 401
Additions	–	–	–	(17 976)	1 225 677	1 207 701
Disposals	(500 155)	(5 216 366)	(586 649)	(4 311)	–	(6 307 481)
Exchange rate movements	416 013	4 416 675	293 537	503 386	70 569	5 700 180
Assets under construction capitalised	–	1 399 452	84 285	–	(1 483 736)	–
At 31 December 2016	1 021 134	12 334 108	571 049	1 818 509	–	15 744 800

Depreciation	*Buildings and other improvements GBP*	*Plant and machinery GBP*	*Motor vehicles, furniture and equipment GBP*	*Decomm-issioning asset GBP*	*Assets under construction GBP*	*Total GBP*
At 1 January 2014	815 860	8 038 722	745 795	397 942	–	9 998 319
Depreciation charge for the year	38 699	747 483	94 023	56 603	–	936 808
Disposals	–	(65 205)	–	–	–	(65 205)
At 31 December 2014	854 559	8 721 000	839 818	454 545	–	10 869 922
Depreciation charge for the year	34 051	613 916	54 311	44 705	–	746 982
Exchange rate movements	(189 197)	(1 930 801)	(185 933)	(100 635)	–	(2 406 565)
Disposals	(4 879)	(180 563)	–	–	–	(185 443)
At 31 December 2015	694 534	7 223 551	708 196	398 614	–	9 024 895
Depreciation charge for the year	55 443	1 104 320	99 831	60 675	–	1 320 269
Exchange rate movements	261 415	2 718 862	266 557	150 034	–	3 396 868
Disposals	(498 229)	(5 154 390)	(586 649)	(4 311)	–	(6 243 578)
At 31 December 2016	513 162	5 892 343	487 936	605 012	–	7 498 454
Net book value						
At 31 December 2014	467 739	6 013 668	161 817	1 245 258	490 780	8 379 262
At 31 December 2015	410 742	4 510 797	71 680	938 796	187 491	6 119 506
At 31 December 2016	507 972	6 441 765	83 113	1 213 497	–	8 246 346

Depreciation expense is charged to cost of sales (year ended 31 December 2014: £825 324, year ended 31 December 2015: £791 705 and year ended 31 December 2016: £991 867, with the remainder of the expense included within administrative expenses.

11. Residential properties

	31 Dec 2016 £	31 Dec 2015 £	31 Dec 2014 £
Land and buildings at fair value	2 458 804	2 237 254	2 736 590

The fair value of the residential property can be reconciled as follows:

	31 Dec 2016 £	31 Dec 2015 £	31 Dec 2014 £
Fair value at the beginning of the year	2 237 254	2 736 590	2 573 290
Exchange rate movements	842 077	(605 872)	–
(Decrease)/increase in fair value	(620 527)	106 536	163 300
Fair value at the end of the year	2 458 804	2 237 254	2 736 590

Land and buildings comprise residential housing in Brits and Elandsrand, North West Province.

Residential properties are stated at fair value, which has been determined based on valuations performed by Mr P.W. van der Merwe, an accredited independent valuer, as at 31 December 2016, 2015 and 2014. Mr P.W. van der Merwe is a Professional Associated Valuer with registration number 4647. The fair value represents the amount at which the assets could be exchanged between a knowledgeable, willing buyer and a knowledgeable, willing seller in an arms-length transaction.

The following table analyses the non-financial assets carried at fair value, by valuation method. The different levels have been defined as follows:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1);
- Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices) (Level 2); and
- Inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs) (Level 3).

	Fair value measurements at 31 December using	
	Significant other observable inputs (Level2) £	*Total* £
31 December 2016		
Residential property – South Africa	2 458 804	2 458 804
31 December 2015		
Residential property – South Africa	2 237 254	2 237 254
31 December 2014		
Residential property – South Africa	2 736 590	2 736 590

Level 2 fair values of residential properties have been derived using the following valuation techniques and key inputs were used in the valuation of the residential properties:

i. Physical inspection of each property;

ii. Consultations with estate agencies to discuss current sales market trends; and

iii. Comparative sales reports for locations where properties are situated were obtained from the Deeds office.

There are no level 1 or level 3 assets during 2014, 2015 or 2016.

12. Deferred Taxation

Deferred tax asset – South Africa	*31 Dec 2016* £	*31 Dec 2015* £	*31 Dec 2014* £
As at 1 January	(83 316)	(571 033)	(1 087 188)
Previous year adjustment	–	18 853	264 430
Transfer from income statement	451 088	196 146	230 709
Exchange rate movements	(31 359)	126 425	–
Revaluation through OCI	(15 510)	146 294	21 016
As at 31 December	320 903	(83 316)	(571 033)

Reconciled as follows:	*31 Dec 2016* £	*31 Dec 2015* £	*31 Dec 2014* £
Fixed assets	(1 778 560)	(1 378 070)	(1 824 446)
Provisions	2 639 616	1 752 758	1 921 727
Prepayments	(43 201)	(29 087)	(33 975)
Unrealised foreign exchange	50 155	94 813	–
Residential properties	(547 107)	(523 729)	(634 340)
As at 31 December	320 903	(83 316)	(571 033)

Deferred tax asset – USA	*31 Dec 2016* £	*31 Dec 2015* £	*31 Dec 2014* £
As at 1 January	11 412 746	8 555 358	–
Accrued liabilities and reserves	553 449	(250 914)	1 023 547
Employee benefits	34 946	97 803	294 189
Inventory	21 130	(88 360)	378 519
Tax credits	317 766	343 995	4 153 410
Net operating loss carried forward	(829 767)	911 924	1 128 476
Foreign currency translation adjustment	(6 954 064)	718 857	4 822 264
Other	(102 400)	(38 447)	1 602 269
Depreciation	43 886	109 944	(414 569)
Foreign source income	(222 680)	(169 300)	(644)
Valuation allowance	5 653 954	(719 017)	(4 822 256)
As at 31 December	9 928 966	9 471 844	8 165 206

Reconciled as follows:	*31 Dec 2016* £	*31 Dec 2015* £	*31 Dec 2014* £
Accrued liabilities and reserves	1 543 317	821 541	1 023 547
Employee benefits	524 192	406 049	294 189
Inventory	392 534	308 247	378 519
Tax credits	5 975 783	4 695 869	4 153 410
Net operating loss carried forward	1 693 667	2 094 323	1 128 476
Foreign currency translation adjustment	210	5 771 537	4 822 264
Other	1 874 086	1 640 384	1 602 269
Depreciation	(347 023)	(324 435)	(414 569)
Foreign source income	(427 480)	(169 974)	(644)
Valuation allowance	(1 300 320)	(5 771 697)	(4 822 256)
As at 31 December	9 928 966	9 471 844	8 165 206
Deferred Tax Asset Total: South Africa and USA	10 249 870	9 471 844	8 165 206
Deferred Tax Liability Total: South Africa and USA	–	83 316	571 033

13. Inventories

	31 Dec 2016 £	31 Dec 2015 £	31 Dec 2014 £
Finished goods	4 758 333	3 255 755	2 721 040
Work in progress	1 855 877	3 182 720	4 932 550
Raw materials	795 989	483 209	471 155
Consumable stores	3 383 524	2 100 924	1 964 616
Total	10 793 723	9 022 609	10 089 361

The amount of write-down of inventories due to net realisable value provision requirement is £ nil (2015 and 2014: £ nil).

14. Trade and other receivables

	31 Dec 2016 £	31 Dec 2015 £	31 Dec 2014 £
Trade receivables – RSA*	7 003 029	5 094 152	6 127 672
Other receivables – RSA	713 230	435 528	587 138
Other receivables – USA	3 494 315	8 058 535	7 397 623
Prepaid expenses – RSA	154 287	103 884	121 339
Total	11 364 861	13 692 099	14 233 772

South African trade receivables are non-interest bearing and are generally on 15 – 90 day terms. There were no indicators of impairment at the year end.

* The ageing of RSA trade receivables is as follows:

	31 Dec 2016 £	31 Dec 2015 £	31 Dec 2014 £
Not past due	1 995 193	965 142	1 835 644
Past due 1-30 days	126 048	77 470	314 394
Past due 31-90 days	–	–	110 865
Past due over 91 days**	4 881 788	4 051 540	3 866 769
Total	7 003 029	5 094 152	6 127 672

** At 31 December 2016, Vametco Alloys had 1 customer (2015: 1 customer and 2014: 1 customer) that owed £4 555 258 (2015: £4 051 495 and 2014: £4 146 597) and accounted for approximately 62.0 per cent. (2015: 71.9 per cent. and 2014: 56.6 per cent.) of South African trade and other receivables. This customer was Evraz Stratcor, Inc. ("ESI"), a subsidiary of Evraz Group, S.A.

ESI and Vametco Alloys entered into a contract for ESI to sell Nitrovan, produced by Vametco Alloys, in the USA. The Nitrovan is held on consignment in USA warehouses until released to final customer. Net sales are recorded by Vametco Alloys at gross sales less 5 per cent. commission due to ESI at the time of release to final customer. All port and warehousing costs incurred by ESI are invoiced to Vametco Alloys. The amounts due by ESI to SMC at 31 December 2016 amounted to £3 494 315 (2015: £8 058 534 and 2014: £7 397 623) and accounted for 100 per cent. (2015: 100 per cent. and 2014: 100 per cent.) of USA other receivables.

The directors consider that the carrying amount of trade and other receivables approximates to their fair value.

15. Restricted investment

Rehabilitation trust fund	31 Dec 2016 £	31 Dec 2015 £	31 Dec 2014 £
As at 1 January	1 307 885	1 595 909	1 519 146
Contributions	–	–	–
Exchange rate movements	492 273	(353 329)	–
Income	117 654	65 305	76 762
As at 31 December	1 917 812	1 307 885	1 595 909
Rehabilitation insurance fund			
As at 1 January	539 460	326 314	–
Contributions	441 343	302 025	364 548
Exchange rate movements	203 047	(72 245)	–
Expense	10 279	(16 635)	(38 234)
As at 31 December	1 194 129	539 460	326 314
Total Restricted investment	3 111 941	1 847 345	1 922 223

The restricted investment consists of £1 917 812 (2015: £1 307 885 and 2014: £1 595 909) paid to Investec Bank Limited and £1 194 1229 (2015: £539 460 and 2014: £326 314) paid to Guardrisk Insurance Company Ltd, to enable Guardrisk Insurance Company Ltd to issue a guarantee to the Department of Mineral Resources for the mine's environmental rehabilitation obligation. The insurance company deposited this balance in a Money Market account and interest at a rate of 6.00 per cent. is earned on the net credit balance.

The guarantee is valid for three years, commencing on 1 April 2015 and the funds are only available if the agreement is terminated with a three months' notice period.

16. Income tax (receivable)/payable

South Africa	31 Dec 2016 £	31 Dec 2015 £	31 Dec 2014 £
As at 1 January	191 628	518 062	(192 569)
Income statement charge (excluding deferred taxation)	463 623	357 598	1 417 691
Exchange rate movements	72 127	(114 697)	–
Dividend tax	–	–	296 187
Taxation paid	(966 448)	(569 335)	(1 003 247)
Income tax (receivable)/payable	(239 071)	191 628	518 062

United States of America	31 Dec 2016 £	31 Dec 2015 £	31 Dec 2014 £
As at 1 January	42 322	93 684	161
Income statement charge (excluding deferred taxation)	46 037	354 200	185 278
Exchange rate movements	8 671	4 477	–
Income tax paid	(39 544)	(410 039)	(91 754)
Income tax payable	57 487	42 322	93 685
Total Income Tax Payable	57 487	233 950	611 747
Total Income Tax Receivable	239 071	–	–

17. Cash and cash equivalents

	31 Dec 2016 £	*31 Dec 2015* £	*31 Dec 2014* £
Cash and cash equivalents – ZAR	4 231 256	2 018 163	3 851 799
Cash and cash equivalents – USD	596 719	542 512	590 614
Cash and cash equivalents – Total	4 827 975	2 560 675	4 442 413

Cash and cash equivalents (which are presented as a single class of assets on the face of the Statement of Financial Position) comprise cash at bank and other short-term highly liquid investments with an original maturity of three months or less. The directors consider that the carrying amount of cash and cash equivalents approximates their fair value.

18. Trade and other payables

	31 Dec 2016 £	*31 Dec 2015* £	*31 Dec 2014* £
Trade payables	2 610 473	1 404 460	2 507 446
Other payables	777 042	599 979	881 425
Royalties	1 168 676	1 279 612	1 537 451
Related party payables	1 618 367	1 331 912	498 730
Accruals	824 795	629 613	1 140 030
Total	6 999 353	5 245 576	6 565 082

Trade and other payables principally comprise amounts outstanding for trade purchases and on-going costs. The average credit year taken for trade purchases is between 30 and 60 days.

The SMC Group has financial risk management policies in place to ensure that all payables are paid within the pre-arranged credit terms. No interest has been charged by any suppliers because of overdue payment of invoices during the three years. The directors consider that the carrying amount of trade and other payables approximates to their fair value.

19. Surface lease provisions

	31 Dec 2016 £	*31 Dec 2015* £	*31 Dec 2014* £
As at 1 January	1 147 029	902 921	348 021
Additional provision	611 132	444 012	570 266
Exchange rate movements	431 728	(199 904)	(15 366)
Utilised during the year	–	–	–
As at 31 December	2 189 889	1 147 029	902 921

The provision is based on management's best estimate of the expenditure required to settle the obligation for surface lease rentals to Co-owners, after finalisation of the surface lease agreements. The timing surrounding the actual payment of this liability is uncertain.

20. Post-retirement medical liability

The following tables summarise the components of the net benefit expense recognised in the statement of comprehensive income and the amounts recognised in the statement of financial position.

Net benefit expense (recognised in cost of sales)	*31 Dec 2016* £	*31 Dec 2015* £	*31 Dec 2014* £
Interest cost	156 160	58 613	81 121
Employee benefit payments	(141 075)	(144 604)	(107 216)
Net benefit expense/(income)	15 085	(85 991)	(26 095)

Benefit liability			
Present value of unfunded obligation	1 810 896	772 665	1 018 745
Sub-total included in profit or loss	15 085	(85 991)	(26 095)
Interest cost	156 160	58 613	81 121
Employee benefit payments	(141 075)	(144 604)	(107 216)
Actuarial changes arising from changes in financial assumption	(55 392)	629 013	(278)
Liability recognised in statement of financial position	1 770 589	1 315 687	992 372

The benefit comprises medical aid subsidies provided to qualifying retired employees. Actuarial valuations are made annually and the most recent valuation was made on 31 December 2016. Pension contributions are made to an umbrella fund called the Corporate Selection Retirement Fund which is administered by Liberty Corporate Benefits.

	2016	*2015*	*2014*
Discount rate	9.10%	9.00%	7.90%
Health care cost inflation	8.60%	8.80%	7.70%
Average retirement age	77.1 years	76.4 years	75.8 years

A one percentage point change in the assumed rate of healthcare costs would have the following effect on the present value of the unfunded obligation: Plus 1 per cent. – GBP 1.93 million; Less 1 per cent. – GBP 1.63 million.

A one percentage point change in the assumed interest rate would have the following effect on the present value of the unfunded obligation: Plus 1 per cent. – GBP 0.17 million; Less 1 per cent. – GBP 0.14 million.

21. Environmental rehabilitation liability

	31 Dec 2016 £	*31 Dec 2015* £	*31 Dec 2014* £
As at 1 January	3 135 030	3 725 015	3 631 268
Unwinding of discount	319 311	205 922	245 836
Arising during the year through SOFP	(17 976)	13 938	52 149
Exchange rate movements	1 179 990	(824 706)	–
Arising during the year through SOPL	(19 150)	14 861	(204 238)
As at 31 December	4 597 205	3 135 030	3 725 015

Provision for future environmental rehabilitation costs are made on a progressive basis. Estimates are based on costs that are regularly reviewed and adjusted as appropriate for new circumstances.

Vametco Alloys makes full provision for the future cost of rehabilitating mine sites and related production facilities on a discounted basis at the time of developing the mine and installing and using those facilities.

The rehabilitation provision represents the present value of rehabilitation costs relating to mine sites, which are expected to be incurred up to 2037, which is when the producing mine properties are expected to cease operations. These provisions have been created based on the SMC Group's internal estimates. Assumptions based on the current economic environment have been made, which management believes are a reasonable basis upon changes to the assumptions. However, actual rehabilitation costs will ultimately depend upon future market prices for the necessary rehabilitation works required that will reflect market conditions at the relevant time. Furthermore, the timing of rehabilitation is likely to depend on when the mines cease to produce at economically viable rates. This, in turn, will depend upon future vanadium prices, which are inherently uncertain.

The discount rate used in the calculation of the provision as at 31 December 2016 equalled 7.4 per cent. (2015: 7.1 per cent. and 2014: 6.8 per cent.).

22. Dividend Payable

	31 Dec 2016	*31 Dec 2015*	*31 Dec 2014*
	£	£	£
Dividends payable	3 534 278	2 258 772	2 031 843

Dividends payable represents amounts payable to Evraz Group S.A. ("Evraz") and Sojitz Noble Alloys Corporation ("Sojitz USA"), the two shareholders of SMC.

SMC has three classes of common stock in issue:

- Class A common stock has no par value and shareholders have no voting rights, but are eligible for cash dividends. 972,832 shares were authorised (31 December 2016, 2015 and 2014), with 97,047 shares issued to Evraz (31 December 2016, 2015 and 2014).
- Class B common stock has no par value and shareholders have voting rights, but are not eligible for cash dividends. 1,000 shares were authorised (31 December 2016, 2015 and 2014), with 100 shares issued to Evraz (31 December 2016, 2015 and 2014).
- Class C common stock has no par value and shareholders have no voting rights, but are eligible for cash dividends. 26,168 shares were authorised and issued to Sojitz USA (31 December 2016, 2015 and 2014)

The dividends due and payable to Evraz at the end of each financial year were as follows:

- 2014: US$ 2 156 310 (£1 388 103)
- 2015: US$ 1 348 810 (£909 772)
- 2016: US$ 1 348 810 (£1 096 178)

Holders of Class C common stock are entitled to receive semi-annual dividends of $19.11 per share and other dividends on the same basis as Class A common stock. The dividends due and payable to Sojitz USA at the end of each financial year were as follows:

- 2014: US$ 1 000 000 (£643 740)
- 2015: US$ 2 000 000 (£1 349 000)
- 2016: US$ 3 000 000 (£2 438 100)

23. Contingent liabilities

As required by the Minerals and Petroleum Resources Development Act of South Africa, a guarantee amounting to £4 356 806 before tax and £3 136 900 after tax (2015: £3 206 197 before tax and £2 308 462 after tax) was issued in favour of the Department of Mineral Resources for the unscheduled closure of the mine. This guarantee was issued on condition that a portion be deposited in cash with Guardrisk Insurance Company Ltd with restricted use by Vametco Alloys, as per the below:

The restricted cash disclosed as a current asset consists of £1 917 812 (2015: £1 307 885 and 2014: £1 595 909) paid to Investec Bank Limited and £1 194 1229 (2015: £539 460 and 2014: £326 314) paid to Guardrisk Insurance Company Ltd, to enable Guardrisk Insurance Company Ltd to issue a guarantee to the Department of Mineral Resources for the mine's environmental rehabilitation obligation. The insurance company deposited this balance in a Money Market account and interest at a rate of 6.00 per cent. is earned on the net credit balance.

The guarantee is valid for three years, commencing on 1 April 2015 and the funds are only available if the agreement is terminated with a three months' notice period.

24. Capital commitments

	31 Dec 2016 £	*31 Dec 2015* £	*31 Dec 2014* £
Authorised and contracted for	–	57 485	101 699
Total	–	57 485	101 699

25. Notes to the cash flow statement

25.1 *Cash generated from operations*

	31 Dec 2016 £	*31 Dec 2015* £	*31 Dec 2014* £
(Loss)/profit before taxation	783 942	(251 725)	4 222 792
Adjustments for:			
Finance income	(287 933)	(232 171)	(245 302)
Finance expense	585 352	495 116	69 880
Exchange gains	1 074 019	(940 732)	(1 424 788)
Exchange losses	(394 316)	835 829	267 290
Depreciation	1 320 269	746 982	936 809
Loss on disposal of assets	63 903	85 169	34 884
Movement in provisions	418 525	(40 260)	648 807
Operating profit before working capital changes	3 563 761	698 208	4 510 372
Net movement in working capital			
(Increase)/Decrease in inventories	1 624 894	(1 167 001)	(3 930 789)
Decrease/(Increase) in accounts receivable	6 098 780	(618 345)	(1 226 095)
Increase/(Decrease) in accounts payable	(502 259)	1 181 812	(352 270)
Cash generated from operations	10 785 176	94 674	(998 782)

26. Financial instruments

Financial Risk Factors

The SMC Group's activities expose it to a variety of financial risks: market risk (foreign exchange risk, cash flow interest rate risk and price risk), credit risk and liquidity risk.

26.1 *Foreign exchange risk*

The SMC Group operates internationally and is exposed to foreign exchange risk resulting from international sales that are conducted in US dollar terms. Foreign currency transactions are translated into the measurement currency using the exchange rate prevailing at the dates of the transaction. Foreign exchange gains and losses resulting from the settlement of such transactions, and from the translation of monetary assets and liabilities denominated in foreign currencies, are recognised in the income statement, except when deferred in equity as qualifying cash flow hedges. There were no open forward exchange contracts at year-end.

Total foreign sales during the year amounted to £36 080 110 (2015: £30 163 342 and 2014: £28 043 518). The average rate of exchange that was utilised for all 2016 international sales was R19.760/£ (2015: R19.264/£ and 2014: R17.923/£).

Had the Rand strengthened/weakened by 10 per cent. during the year sales would have decreased/increased by £3 608 011 (2015: £3 016 334 and 2014: £2 804 352). This would have had an after-tax decrease/increase on net income of £2 597 768 (2015: £2 171 761 and 2014: £2 019 133).

Accounts receivable at year end includes foreign debtors amounting to £6 076 209 (2015: £4 972 610 and 2014: £5 997 914). The rate of exchange that was utilised for the conversion of these debtors was R17.973/£ (2015: R23.084/£ and 2014: R16.771/£

Had the Rand strengthened/weakened by 10 per cent. during the year the amount owing by these debtors would have decreased/increased by £607 621 (2015: £497 261 and 2014: £599 791) thus reducing/increasing total assets by the same amount.

26.2 ***Price risk***

The SMC Group's exposure to commodity price risk is dependent on the fluctuating price of the various commodities that it mines and sells.

The average market price of each of the following commodities was:

	2016 *$/Kg V*	*2015* *$/Kg V*	*2014* *$/Kg V*
Nitrovan	17.81	18.22	25.96

If the average price of each of these commodities increased/decreased by 10 per cent. the total sales related to each of these commodities would have increased/decreased as follows:

	2016 *GBP*	*2016* *GBP*	*2015* *GBP*	*2015* *GBP*	*2014* *GBP*	*2014* *GBP*
	Effect on Sales	After tax effect on Net Income	Effect on Sales	After tax effect on Net Income	Effect on Sales	After tax effect on Net Income
Nitrovan	3 704 301	2 597 768	3 139 507	2 107 266	2 971 575	2 139 534

26.3 ***Interest rate risk***

As the SMC Group has no significant interest-bearing assets, the SMC Group's income and operating cash flows are substantially independent of changes in market interest rates.

As part of the process of managing the SMC Group's interest rate risk, interest rate characteristics of new borrowings and the re-financing of existing borrowings are positioned according to expected movements in interest rates.

26.4 ***Credit risk***

The SMC Group trades only with recognised creditworthy third parties.

It is the SMC Group's policy that all suppliers who wish to trade on credit terms are subject to credit verification procedures. Credit risk arises from credit exposure to customers, including outstanding receivables and committed transactions. We have a contract with our agents and as such do not have credit limits for overseas customers. Our local customers are all on 30-day terms except Cape Gate who is on 60 days.

Trade account receivables comprise a limited customer base. Ongoing credit evaluation of the financial position of customers is performed and granting of credit is approved by directors. At year end the SMC Group did not consider there to be any significant concentration of credit risk.

In addition, receivable balances are monitored on an ongoing basis with the result that the SMC Group's exposure to bad debts is not significant.

26.5 ***Liquidity risk***

Prudent liquidity risk management implies maintaining sufficient cash and cash equivalents and the availability of funding through an adequate amount of committed credit facilities.

The SMC Group has minimised its liquidity risk by ensuring that it has adequate banking facilities and reserve borrowing capacity.

26.6 ***Capital management***

The primary objective of the SMC Group's capital management is to ensure that it maintains a positive cash balance in order to support its business and maximise shareholders value. We also attempt to maintain healthy working relationships with critical suppliers.

The SMC Group manages its capital and makes adjustments to it, in light of changes in economic conditions and production requirements. To maintain or adjust the capital, the SMC Group may adjust the dividend payment to shareholders or redeem preference share premium. Capital projects to increase the asset base may also be brought forward or postponed depending on the capital position.

No changes were made in the objectives, policies or processes during the years ended 31 December 2016 and 31 December 2015 and 31 December 2014.

26.7 ***Fair Value***

The directors are of the opinion that the book value of financial instruments approximates fair value. The carrying value less impairment provision of trade receivables and payables are assumed to approximate their fair values.

The SMC Group used the following hierarchy for determining and disclosing the fair value of financial instruments which are measured at fair value by valuation technique:

Level 1: Quoted (unadjusted) market prices in active markets for identical assets or liabilities.

Level 2: Other techniques for which all inputs which have a significant effect on the recorded fair value are observable, either directly or indirectly.

Level 3: Techniques which use inputs that have a significant effect on the recorded fair value that are not based on observable market data.

There have been no transfers between fair value levels during the current financial year.

Financial liabilities (GBP)

	2016 Carrying amount and Fair Value	*2015 Carrying amount and Fair Value*	*2014 Carrying amount and Fair Value*
Trade and other payables*	6 999 353	5 245 576	6 565 082

Financial assets (GBP)

	2016 Carrying amount and Fair Value	*2015 Carrying amount and Fair Value*	*2014 Carrying amount and Fair Value*
Trade and other receivables*	11 210 577	13 588 215	14 112 000
Restricted investment*	3 111 941	1 847 345	1 922 223
Cash and cash equivalents*	4 827 975	2 560 675	4 442 413

* Management assessed that the fair values of cash and cash equivalents, restricted investment, trade and other receivables and trade and other payables, approximate their varying amounts largely due to the short-term maturities of these instruments.

27. Share capital

SMC has three classes of common stock in issue:

- Class A common stock has no par value and shareholders have no voting rights, but are eligible for cash dividends. 972,832 shares were authorised (31 December 2016, 2015 and 2014), with 97,047 shares issued to Evraz (31 December 2016, 2015 and 2014).
- Class B common stock has no par value and shareholders have voting rights, but are not eligible for cash dividends. 1,000 shares were authorised (31 December 2016, 2015 and 2014), with 100 shares issued to Evraz (31 December 2016, 2015 and 2014).
- Class C common stock has no par value and shareholders have no voting rights, but are eligible for cash dividends. 26,168 shares were authorised and issued to Sojitz USA (31 December 2016, 2015 and 2014)

28. Related party transactions

Sojitz is a 21.2 per cent. shareholder in Strategic Minerals Corporation and acts as agent in respect of all international sales. The ultimate parent of the SMC Group for the three years ended 31 December 2016 was EVRAZ Group S.A., incorporated in Luxembourg with transactions entered into with Evraz Stratcor Inc and its subsidiaries Evraz Highveld Steel & Vanadium Ltd and East Metals AG.

Details of material related party transactions entered into during the year as summarised below:

2016

	Sales GBP	*Purchases GBP*	*Marketing & commission GBP*	*Service fees GBP*	*Net amounts owed to/ (owed by) at Year end GBP*
EVRAZ Stratcor Inc.	(17 985 574)	–	–	–	(5 080 937)
Sojitz	(2 414 451)	–	36 217	–	179 126
EVRAZ Highveld Steel and Vanadium Limited	–	–	–	18 153	12 942
East Metals AG	(15 680 320)	–	330 907	2 927	(432 281)

2015

	Sales GBP	*Purchases GBP*	*Marketing & commission GBP*	*Service fees GBP*	*Net amounts owed to/ (owed by) at year end GBP*
EVRAZ Stratcor Inc.	(13 069 355)	–	–	–	(3 598 175)
Sojitz	(4 616 944)	–	69 254	–	360 737
EVRAZ Highveld Steel and Vanadium Limited	–	–	–	55 099	–
East Metals AG	(12 477 608)	–	205 923	22 722	(647 258)

2014

	Sales GBP	Purchases GBP	Marketing & commission GBP	Service fees GBP	Net amounts owed to/ (owed by) at year end GBP
EVRAZ Stratcor Inc.	–	–	–	–	(3 180 927)
Sojitz	(3 947 981)	–	59 220	–	–
EVRAZ Highveld Steel and Vanadium Limited	(1 746 003)	–	–	90 250	(37 953)
East Metals AG	(12 064 448)	–	236 574	26 159	(1 687 515)

Remuneration of key management personnel (all in GBP)

2016

	Salary, bonuses, performance related payments	Expense allowance	Pension scheme contributions	Share options	Total
Key Management	480 524	–	74 731	–	555 255

2015

	Salary, bonuses, performance related payments	Expense allowance	Pension scheme contributions	Share options	Total
Key management	486 789	–	58 825	–	545 614

2014

	Salary, bonuses, performance related payments	Expense allowance	Pension scheme contributions	Share options	Total
Key management	453 885	3 926	60 135		517 946

29. Post balance sheet events

On 6 April 2017, Bushveld Vametco Limited (at that time, a 45 per cent. owned associate company of Bushveld Minerals Limited) completed the acquisition of Evraz's 78.8 per cent. economic interest in Strategic Minerals Corporation, for US$ 16.466 million.

Change in ownership

Subject to approval of the resolution to be proposed as resolution 1 at the general meeting of Bushveld Minerals Limited to be held on 20 December 2017, and in accordance with a conditional acquisition agreement dated 30 November 2017, Bushveld Minerals Limited will acquire 55 per cent. of the issued share capital of Bushveld Vametco (being all of the ordinary shares in Bushveld Vametco not currently owned by Bushveld Minerals), the parent company of Strategic Minerals Corporation from Yellow Dragon Holdings Limited. Following the acquisition, Bushveld Minerals Limited will hold 100 per cent. of the issued share capital of Bushveld Vametco and, through Bushveld Vametco, will own a 78.8 per cent. economic interest in Strategic Minerals Corporation. Strategic Minerals Corporation, in turn holds 75 per cent. of Vametco Holdings, which has a 100 per cent. interest in the Vametco vanadium mine.

The initial consideration for the Acquisition is US$11.1 million which will be satisfied through the issue of the consideration shares and US$4.5 million in cash by Bushveld Minerals Limited to Yellow Dragon Holdings Limited. In addition, there will be two deferred payments of US$0.6 million each (following publication of the Vametco Holdings accounts for the years ended 31 December 2018 and 2019), and a further payment calculated by reference to the EBITDA of Vametco Holdings in 2020 (following publication of the Vametco Holdings accounts for the year ended 31 December 2020).

PART VI

Unaudited Interim Financial Information on Strategic Minerals Corporation

UNAUDITED CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

For the interim periods ended 30 June 2016 and 2017

	30 Jun 2017	*30 Jun 2016*
	£	£
	(unaudited)	*(unaudited)*
Revenue	26 435 543	16 080 903
Cost of sales	(17 907 770)	(13 644 393)
Gross profit	8 527 773	2 436 510
Other operating income	169 353	179 882
Selling and distribution costs	(1 300 679)	(670 734)
Administrative expenses	(1 508 188)	(1 507 958)
Other operating expenses	(1 003 687)	(771 604)
Idle plant costs	(215 802)	(348 822)
Operating profit	4 668 770	(682 726)
Finance Income	202 690	77 491
Finance Costs	(177 237)	(141 281)
Exchange Gain	141 390	137 405
Profit/(Loss) before taxation	4 835 612	(609 111)
Income tax (expense)/credit	(1 358 301)	168 049
Total comprehensive profit/(loss) for the period, net of tax	3 477 311	(441 062)
Attributable to:		
Owners of the parent	3 040 128	(431 776)
Non-controlling interest	437 183	(9 285)

All results relate to continuing activities.

UNAUDITED CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 30 June 2016 and 2017

	Note	30 Jun 2017 £ (unaudited)	31 Dec 2016 £ (audited)	30 Jun 2016 £ (unaudited)
Assets				
Non-current assets				
Property, plant and equipment	4	7 537 510	8 246 346	7 415 766
Residential properties		2 430 316	2 458 804	2 610 969
Deferred tax asset		9 389 754	10 249 870	10 480 816
Total non-current assets		19 357 580	20 955 020	20 507 551
Current assets				
Inventories		11 877 439	10 793 723	8 455 105
Trade and other receivables	5	16 252 952	11 364 861	11 560 540
Restricted investment	6	3 601 190	3 111 941	2 198 832
Income tax receivable		–	239 071	572 071
Cash and cash equivalents		2 377 304	4 827 975	2 719 953
Total current assets		34 108 885	30 337 571	25 506 500
Total assets		53 466 465	51 292 591	46 014 051
Equity and liabilities				
Current liabilities				
Trade and other payables	7	6 076 799	6 999 353	6 341 012
Surface lease provisions	8	2 466 542	2 189 889	1 597 720
Income tax payable		857 563	57 487	46 270
Total current liabilities		9 400 904	9 246 729	7 985 002
Non-current liabilities				
Deferred tax liability		–	–	97 233
Post-retirement medical liability	9	1 734 382	1 770 589	1 491 593
Environmental rehabilitation liability	10	4 673 814	4 597 205	3 797 917
Dividend Payable	11	3 738 287	3 534 278	2 872 559
Other provisions		137 062	144 481	120 292
Total non-current liabilities		10 283 545	10 046 553	8 379 595
Equity				
Issued capital		26 491 291	26 491 291	26 491 291
Foreign Exchange Translation Reserve		7 029 112	8 843 456	5 958 672
Reserves		(4 394 476)	(7 624 663)	(5 642 362)
Equity attributable to owners of parent		29 125 927	27 710 083	26 807 600
Non-controlling interests		4 656 089	4 289 225	2 841 855
Total equity		33 782 016	31 999 308	29 649 455
Total equity and liabilities		53 466 465	51 292 591	46 014 051

UNAUDITED CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the interim periods ended 30 June 2016 and 2017

	Share capital £	*Reserves* £	*Foreign exchange translation reserve* £	*Total* £	*Non–controlling interests* £	*Total equity* £
At 1 January 2016	26 491 291	(362 116)	763 285	26 892 459	2 459 324	29 351 783
(Loss) for the period	–	(431 776)	–	(431 776)	(9 285)	(441 062)
Foreign exchange rate movements	–	(4 848 470)	5 195 387	346 917	391 816	738 733
Other comprehensive income	–	–	–	–	–	–
At 30 June 2016	26 491 291	(5 642 362)	5 958 672	26 807 600	2 841 855	29 649 454
At 1 January 2017	26 491 291	(3 114 554)	(4 510 109)	18 866 628	4 289 225	23 155 853
Profit for the period	–	3 040 128	–	3 040 128	437 183	3 477 311
Foreign exchange rate movements	–	(4 320 050)	11 539 221	7 219 171	(70 319)	7 148 852
Other comprehensive income	–	–	–	–	–	–
At 30 June 2017	26 491 291	(4 394 476)	7 029 112	29 125 927	4 656 089	33 782 016

UNAUDITED CONSOLIDATED STATEMENT OF CASH FLOWS

For the interim periods ended 30 June 2016 and 2017

	Note	*30 Jun 2017*	*30 Jun 2016*
		£	£
Operating activities			
Cash (used in)/generated from operations	12.1	(1 076 180)	3 622 982
Income tax paid	12.2	(303 345)	(627 661)
Cash flows (used in)/from operating activities		(1 379 525)	2 995 321
Investing activities			
Interest received		202 690	77 491
Purchase of property, plant and equipment		(230 891)	(684 142)
Increase in restricted investment		(489 249)	(351 487)
Cash flows used in investing activities		(517 450)	(958 138)
Financing activities			
Interest paid		(177 237)	(141 281)
Cash flows from financing activities		(177 237)	(141 281)
Net (decrease)/increase in cash and cash equivalents		(2 074 212)	1 895 902
Cash and cash equivalents at beginning of the period		4 827 975	2 560 675
Effects of foreign exchange rate movements		376 358	(1 736 624)
Cash and cash equivalents at the end of the period		2 377 304	2 719 953

NOTES TO THE UNAUDITED CONSOLIDATED INTERIM FINANCIAL INFORMATION

For the interim periods ended 30 June 2016 and 2017

1. Corporate information and principal activities

Strategic Minerals Corporation ("SMC"), a company incorporated under the laws of Connecticut, USA, owns a 75 per cent. controlling equity interest in Vametco Holdings (Proprietary) Limited, which is the ultimate holding company of Vametco Alloys (Proprietary) Limited ("Vametco Alloys") (together the "SMC Group"). Vametco Alloys is principally involved in the mining, processing and distribution of Vanadium products from its operations in Brits, South Africa.

As at 30 June 2017, the SMC Group comprised:

Company	*Equity holding and voting rights*	*Country of incorporation*	*Nature of activities*
Strategic Minerals Corporation	N/A	USA	Ultimate holding company
Vametco Holdings (Proprietary) Limited	75%	South Africa	Holding company
Vametco Alloys (Proprietary) Limited	75%	South Africa	Mining, processing and distribution of vanadium products
Vametco Properties (Proprietary) Limited	75%	South Africa	Property holding company

EVRAZ Vametco Holdings (Proprietary) Limited directly holds 100 per cent. of the issued share capital of Vametco Alloys Proprietary Limited and indirectly holds 100 per cent. of Vametco Properties Proprietary Limited.

The unaudited interim financial information is presented in Pound Sterling (£) because that is the currency the ultimate parent company, Bushveld Minerals Limited, presents its financial information on the AIM market in the United Kingdom.

2. Basis of preparation

This unaudited interim financial information has been prepared in accordance with the recognition and measurement principles of International Financial Reporting Standards ("IFRS") as adopted by the EU that are expected to be applicable to the financial statements for the year ended 28 February 2018 and on the basis of the accounting policies to be used in those financial statements.

This interim financial information does not include all the information required for full annual financial statements and accordingly, whilst the interim financial information has been prepared in accordance with the recognition and measurement principles of IFRS, it cannot be construed as being in full compliance with IFRS. The financial information contained in this announcement does not constitute statutory accounts as defined by the Companies (Guernsey) Law 2008.

3. Significant accounting policies

Use of estimates and judgements

The preparation of the financial statements in conformity with IFRS requires management to make judgements, estimates and assumptions that affect the reported amounts of assets, liabilities and contingent liabilities at the date of the financial statements and reported amounts of revenues and expenses during the reporting period. Estimates and assumptions are continuously evaluated and are based on management's experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

However, actual outcomes can differ from these estimates. In particular, information about significant areas of estimation uncertainty considered by management in preparing the financial statements is described below:

i. *Decommissioning and rehabilitation obligations*

Estimating the future costs of environmental and rehabilitation obligations is complex and requires management to make estimates and judgements as most of the obligations will be fulfilled in the future and contracts and laws are often not clear regarding what is required. The resulting provisions are further influenced by changing technologies, political, environmental, safety, business and statutory considerations. In line with the closure objectives in the current approved Environmental Management Programme, no provision is required for full backfill of the open pit operations.

ii. *Asset lives and residual values*

Property, plant and equipment are depreciated over its useful life taking into account residual values, where appropriate. The actual lives of the assets and residual values are assessed annually and may vary depending on a number of factors. In reassessing asset lives, factors such as technological innovation, product life cycles and maintenance programmes are taken into account. Residual value assessments consider issues such as future market conditions, the remaining life of the asset and projected disposal values.

iii. *Post-retirement employee benefits*

Post-retirement medical aid liabilities are provided for certain existing employees. Actuarial valuations are performed annually by an independent third party and are based on assumptions which include employee turnover, mortality rates, the discount rate, health care inflation costs and rates of increase in costs.

iv. *Revaluation of residential properties*

The SMC Group carries its investment properties at fair value, with changes in fair value being recognised in the statement of profit or loss. The SMC Group engaged an independent valuation specialist to assess fair value as at year-end for investment properties. For investment properties, it measures land and buildings at revalued amounts with changes in fair value being recognised in the statement of comprehensive income. Land and buildings were valued by reference to market-based evidence, using comparable prices adjusted for specific market factors such as nature, location and condition of the property.

v. *Surface rights liabilities*

The SMC Group has provided for surface lease costs that would accrue to the owners of the land on which the mine is built. The quantum of the amounts due post implementation of the Minerals and Petroleum Resources Royalties Act 2008 ("MPRDA") and the granting of the new order mining right to the Company is somewhat uncertain, and need to be negotiated with such owners. The SMC Group has conservatively accrued for possible costs in this regard, but the actual obligation may be materially different when negotiations with the relevant parties are completed. The timing surrounding the actual payment of the liability is uncertain.

Inventories

Inventories are valued at the lower of cost or estimated net realisable value. Cost is determined on the following basis:

- Raw materials: weighted average cost
- Consumable stores: weighted average cost
- Work in progress: weighted average cost
- Finished product: weighted average cost

The cost of finished product and work in progress comprise raw materials, direct labour, other direct costs, and related production overheads (based on normal operating capacity), but excludes borrowing costs. Net realisable value is the estimated selling price in the ordinary course of business, less costs of completion and selling expenses.

Property, plant and equipment

Property, plant and equipment are stated at historical cost less accumulated depreciation, except for residential properties which are carried at fair value. Depreciation is calculated on the straight-line method to write off the cost of each asset (less residual value) over its estimated useful life as follows:

● Buildings and other improvements:	20 – 25 years
● Plant and machinery:	15 – 20 years
● Motor vehicles, furniture and equipment:	4 – 10 years
● Decommissioning asset:	Life of mine

Repairs and maintenance are generally charged against income during the financial period in which they are incurred. However, renovations are capitalised and included in the carrying amount of the asset when it is probable that future economic benefits will flow to the SMC Group. Major renovations are depreciated over the remaining useful life of the related asset.

An item of property, plant and equipment is derecognised upon disposal or when no future benefits are expected from its use or disposal. Any gain or loss arising from the de-recognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the income statement in the year the asset is derecognised.

Provisions

General

Provisions are recognised when the SMC Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. Where the SMC Group expects some or all of a provision to be reimbursed, for example under an insurance contract, the reimbursement is recognised as a separate asset but only when the reimbursement is virtually certain. The expense relating to any provision is presented in the statement material, provisions are discounted using a current pre-tax rate that reflects, where appropriate, the risks specific to the liability. Where discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

i. *Surface rights liability*

The SMC Group has provided for surface lease costs that would accrue to the owners of the land on which the mine is built. The quantum of the amounts due post implementation of the MPRDA and the granting of the new order mining right to Vametco Holdings (Proprietary) Limited is somewhat uncertain, and needs to be negotiated with such owners.

The SMC Group has conservatively accrued for possible costs in this regard, but the actual obligation may be materially different when negotiations with the relevant parties are completed. The timing surrounding the actual payment of the liability is also uncertain.

ii. *Environmental rehabilitation liability*

The SMC Group is exposed to environmental liabilities relating to its operations. Full provision for the cost of environmental and other remedial work such as reclamation costs, close down and restoration costs and pollution control is made based on the estimated cost as per the Environmental Management Program Report. Annual increases in the provisions relating to change in the net present value of the provision and inflationary increases are shown separately in the statement of comprehensive income as a finance cost. Changes in estimates of the provision are accounted for in the year the change in estimate occurs, and is charged to either the statement of comprehensive income or the decommissioning asset in Property, plant and equipment, depending on the nature of the liability.

iii. *Post-retirement medical liability*

The liability in respect of the defined benefit medical plan is the present value of the defined benefit obligation at the reporting date together with adjustments for actuarial gains/losses. Any actuarial gains or losses are accounted for in Other Comprehensive Income. The defined benefit obligation is calculated annually by independent actuaries using the projected unit of credit method.

iv. *Provident fund contributions*

The SMC Group's contributions to the defined contribution plan are charged to the statement of comprehensive income in the year to which they relate.

4. Property, plant and equipment

Cost	*Buildings and other improvements GBP*	*Plant and machinery GBP*	*Motor vehicles, furniture and equipment GBP*	*Decommi-ssioning asset GBP*	*Assets under construction GBP*	*Total GBP*
At 1 January 2016	1 105 276	11 734 348	779 876	1 337 410	187 491	15 144 401
Additions	–	–	–	–	684 142	684 142
Disposals	–	–	–	–	–	–
Exchange rate movements	184 627	1 960 124	130 272	223 403	31 319	2 529 745
Assets under construction capitalised	–	–	–	–	–	–
At 30 June 2016	1 289 903	13 694 472	910 148	1 560 813	902 951	18 358 288
Additions	–	–	–	(17 976)	541 535	523 559
Disposals	(500 155)	(5 216 366)	(586 649)	(4 311)	–	(6 307 481)
Exchange rate movements	231 386	2 456 550	163 265	279 983	39 251	3 170 434
Assets under construction capitalised	–	1 399 452	84 285	–	(1 483 736)	–
At 31 December 2016	1 021 134	12 334 108	571 049	1 818 509	–	15 744 800
Additions	–	–	–	–	230 891	230 891
Disposals	–	–	–	–	–	–
Exchange rate movements	(11 831)	(142 903)	(6 616)	(21 069)	–	(182 419)
Assets under construction capitalised	–	–	–	–	–	–
At 30 June 2017	1 009 303	12 191 205	564 433	1 797 440	230 891	15 793 271

Depreciation	*Buildings and other improvements GBP*	*Plant and machinery GBP*	*Motor vehicles, furniture and equipment GBP*	*Decommi-ssioning asset GBP*	*Assets under construction GBP*	*Total GBP*
At 1 January 2016	694 534	7 223 551	708 196	398 614	–	9 024 895
Depreciation charge for the period	23 781	365 481	20 832	–	–	410 093
Exchange rate movements	116 016	1 206 634	118 298	66 585	–	1 507 533
Disposals	–	–	–	–	–	–
At 30 June 2016	834 331	8 795 665	847 326	465 200	–	10 942 522
Depreciation charge for the period	31 662	738 839	79 000	60 675	–	910 176
Exchange rate movements	145 399	1 512 228	148 259	83 449	–	1 889 334
Disposals	(498 229)	(5 154 390)	(586 649)	(4 311)	–	(6 243 578)
At 31 December 2016	513 162	5 892 343	487 936	605 012	–	7 498 454
Depreciation charge for the period	27 853	808 787	7 545	–	–	844 185
Exchange rate movements	(5 945)	(68 269)	(5 653)	(7 010)	–	(86 877)
Disposals	–	–	–	–	–	–
At 30 June 2017	535 070	6 632 862	489 827	598 003	–	8 255 761
Net book value						
At 30 June 2016	455 572	4 898 807	62 822	1 095 614	902 951	7 415 766
At 31 December 2016	507 972	6 441 765	83 113	1 213 497	–	8 246 346
At 30 June 2017	474 233	5 558 343	74 606	1 199 437	230 891	7 537 510

Depreciation expense is charged to cost of sales (period ended 30 June 2016: £410 093 and period ended 30 June 2017: £844 185).

5. Trade and other receivables

	30 Jun 2017 £ (unaudited)	31 Dec 2016 £ (audited)	30 Jun 2016 £ (unaudited)
Trade and other receivables – RSA	12 876 102	7 870 546	7 737 540
Trade and other receivables – USA	3 376 851	3 494 315	3 823 000
Total	16 252 952	11 364 861	11 560 540

6. Restricted investment

	30 Jun 2017 £ (unaudited)	31 Dec 2016 £ (audited)	30 Jun 2016 £ (unaudited)
Rehabilitation trust fund			
As at 1 January	1 917 812	1 307 885	1 307 885
Contributions	–	–	–
Exchange rate movements	(22 220)	492 273	218 471
Income	92 020	117 654	45 431
As at 30 June	1 987 613	1 917 812	1 571 787
Rehabilitation insurance fund			
As at 1 January	1 194 129	539 460	539 460
Contributions	461 572	441 343	21 739
Exchange rate movements	(13 835)	203 047	90 112
Expense	(28 289)	10 279	(24 267)
As at 30 June	1 613 577	1 194 129	627 044
Total Restricted investment	3 601 190	3 111 941	2 198 832

The restricted investment consists of £1 987 613 (30 June 2016: £1 571 787) paid to Investec Bank Limited and £1 613 577 (30 June 2016: £627 044) paid to Guardrisk Insurance Company Ltd, to enable Guardrisk Insurance Company Ltd to issue a guarantee to the Department of Mineral Resources for the mine's environmental rehabilitation obligation. The insurance company deposited this balance in a Money Market account and interest at a rate of 6.00 per cent. is earned on the net credit balance.

The guarantee is valid for three years, commencing on 1 April 2015 and the funds are only available if the agreement is terminated with a three months' notice period.

7. Trade and other payables

	30 Jun 2017 £ (unaudited)	31 Dec 2016 £ (audited)	30 Jun 2016 £ (unaudited)
Trade payables	3 193 476	2 610 473	2 284 504
Other payables	461 989	777 042	710 740
Royalties	1 023 665	1 168 676	1 547 943
Related party payables	523 852	1 618 367	1 262 296
Accruals	873 816	824 796	535 530
Total	6 076 799	6 999 353	6 341 012

8. Surface lease provisions

	30 Jun 2017 £ (unaudited)	31 Dec 2016 £ (audited)	30 Jun 2016 £ (unaudited)
As at 1 January	2 189 889	1 147 029	1 147 029
Additional provision	302 026	611 132	259 090
Exchange rate movements	(25 372)	431 728	191 602
Utilised during the year	–	–	–
As at 30 June	2 466 542	2 189 889	1 597 720

The provision is based on management's best estimate of the expenditure required to settle the obligation for surface lease rentals to Co-owners, after finalisation of the surface lease agreements. The timing surrounding the actual payment of this liability is uncertain.

9. Post-retirement medical liability

The following tables summarise the components of the net benefit expense recognised in the statement of comprehensive income and the amounts recognised in the statement of financial position.

Net benefit expense (recognised in cost of sales)

	30 Jun 2017 £ (unaudited)	31 Dec 2016 £ (audited)	30 Jun 2016 £ (unaudited)
Interest cost	62 257	156 160	58 405
Employee benefit payments	(77 950)	(141 075)	(102 273)
Net benefit expense/(income)	(15 693)	15 085	(43 868)
Benefit liability			
Present value of unfunded obligation	1 750 075	1 810 896	1 535 461
Sub-total included in profit or loss	(15 693)	15 085	(43 868)
Interest cost	62 257	156 160	58 405
Employee benefit payments	(77 950)	(141 075)	(102 273)
Actuarial changes arising from changes in financial assumption	–	(55 392)	–
Liability recognised in statement of financial position	1 734 382	1 770 589	1 491 593

The benefit comprises medical aid subsidies provided to qualifying retired employees. Actuarial valuations are made annually and the most recent valuation was made on 31 December 2016.

10. Environmental rehabilitation liability

	30 Jun 2017 £ (unaudited)	31 Dec 2016 £ (audited)	30 Jun 2016 £ (unaudited)
As at 1 January	4 597 205	3 135 030	3 135 030
Unwinding of discount	129 872	319 311	139 206
Arising during the year through SOFP	–	(17 976)	–
Exchange rate movements	–	1 179 990	–
Arising during the year through SOPL	(53 263)	(19 150)	523 681
As at 30 June	4 673 814	4 597 205	3 797 917

Provision for future environmental rehabilitation costs are made on a progressive basis. Estimates are based on costs that are regularly reviewed and adjusted as appropriate for new circumstances.

Vametco Alloys makes full provision for the future cost of rehabilitating mine sites and related production facilities on a discounted basis at the time of developing the mine and installing and using those facilities.

The rehabilitation provision represents the present value of rehabilitation costs relating to mine sites, which are expected to be incurred up to 2037, which is when the producing mine properties are expected to cease operations. These provisions have been created based on the SMC Group's internal estimates. Assumptions based on the current economic environment have been made, which management believes are a reasonable basis upon changes to the assumptions. However, actual rehabilitation costs will ultimately depend upon future market prices for the necessary rehabilitation works required that will reflect market conditions at the relevant time. Furthermore, the timing of rehabilitation is likely to depend on when the mines cease to produce at economically viable rates. This, in turn, will depend upon future vanadium prices, which are inherently uncertain.

11. Dividend Payable

	30 Jun 2017	*31 Dec 2016*	*30 Jun 2016*
	£	£	£
	(unaudited)	*(audited)*	*(unaudited)*
Total dividends payable	3 738 287	3 534 278	2 872 559

Dividends payable represents amounts payable to Evraz Group S.A. ("Evraz") and Sojitz Noble Alloys Corporation ("Sojitz USA"), the two shareholders of SMC.

SMC has three classes of common stock in issue:

- Class A common stock has no par value and shareholders have no voting rights, but are eligible for cash dividends. 972,832 shares were authorised (30 June 2016 and 2017), with 97,047 shares issued to Evraz (30 June 2016 and 2017).
- Class B common stock has no par value and shareholders have voting rights, but are not eligible for cash dividends. 1,000 shares were authorised (30 June 2016 and 2017), with 100 shares issued to Evraz (30 June 2016 and 2017).
- Class C common stock has no par value and shareholders have no voting rights, but are eligible for cash dividends. 26,168 shares were authorised and issued to Sojitz USA (30 June 2016 and 2017)

The dividends due and payable to Evraz at the end of each period were as follows:

- 30 June 2016: US$ 1 348 810 (£1 006 684)
- 31 December 2016: US$ 1 348 810 (£1 096 178)
- 30 June 2017: US$ 1 348 810 (£1 039 892)

Holders of Class C common stock are entitled to receive semi-annual dividends of $19.11 per share. The dividends due and payable to Sojitz USA at the end of each period were as follows:

- 30 June 2016: US$ 2 500 000 (£1 865 875)
- 31 December 2016: US$ 3 000 000 (£2 438 100)
- 30 June 2017: US$ 3 500 000 (£2 698 395)

12. Notes to the cash flow statement

12.1 *Cash generated from operations*

	30 Jun 2017 £ (unaudited)	30 Jun 2016 £ (unaudited)
(Loss)/profit before taxation	4 835 612	(609 111)
Adjustments for:		
Depreciation	844 185	410 093
Interest received	(202 690)	(77 491)
Finance costs	177 237	141 281
Profit on sale of assets	–	–
Increase/(Decrease) in provisions	325 674	356 607
Increase in post-retirement benefit liability	(36 207)	175 906
Increase in environmental liability	(76 609)	(662 887)
Fair value adjustment	–	–
Operating profit before working capital changes	5 867 202	(265 602)
Net movement in working capital	(6 943 382)	3 888 584
(Increase)/ Decrease in inventories	(1 083 716)	567 505
Decrease/(Increase) in accounts receivable	(4 888 091)	2 131 559
Increase/(Decrease) in accounts payable	(971 575)	1 189 520
Cash generated from operations	(1 076 180)	3 622 982

12.2 *Income taxation paid*

	30 Jun 2017 £ (unaudited)	30 Jun 2016 £ (unaudited)
South Africa		
Amounts unpaid at beginning of year	239 071	(191 628)
Income statement charge	(1 358 301)	168 049
Movement in deferred taxation	–	–
Effect of foreign exchange rates	(2 770)	(32 010)
Amounts payable at end of year	818 655	(572 071)
Income tax paid	(303 345)	(627 661)

13. Share capital

SMC has three classes of common stock in issue:

- Class A common stock has no par value and shareholders have no voting rights, but are eligible for cash dividends. 972,832 shares were authorised (30 June 2016 and 2017), with 97,047 shares issued to Evraz (30 June 2016 and 2017).
- Class B common stock has no par value and shareholders have voting rights, but are not eligible for cash dividends. 1,000 shares were authorised (30 June 2016 and 2017), with 100 shares issued to Evraz (30 June 2016 and 2017).
- Class C common stock has no par value and shareholders have no voting rights, but are eligible for cash dividends. 26,168 shares were authorised and issued to Sojitz USA (30 June 2016 and 2017).

14. Post balance sheet events

Change in ownership

Subject to approval of the resolution to be proposed as resolution 1 at the general meeting of Bushveld Minerals Limited to be held on 20 December 2017, and in accordance with a conditional acquisition agreement dated 30 November 2017, Bushveld Minerals Limited will acquire 55 per cent. of the issued share capital of Bushveld Vametco (being all of the ordinary shares in Bushveld Vametco not currently owned by Bushveld Minerals), the parent company of Strategic Minerals Corporation from Yellow Dragon Holdings Limited. Following the acquisition, Bushveld Minerals Limited will hold 100 per cent. of the issued share capital of Bushveld Vametco and, through Bushveld Vametco, will own a 78.8 per cent. economic interest in Strategic Minerals Corporation. Strategic Minerals Corporation, in turn holds 75 per cent. of Vametco Holdings, which has a 100 per cent. interest in the Vametco vanadium mine.

The initial consideration for the Acquisition is US$11.1 million which will be satisfied through the issue of the consideration shares and US$4.5 million in cash by Bushveld Minerals Limited to Yellow Dragon Holdings Limited. In addition, there will be two deferred payments of US$0.6 million each (following publication of the Vametco Holdings accounts for the years ended 31 December 2018 and 2019), and a further payment calculated by reference to the EBITDA of Vametco Holdings in 2020 (following publication of the Vametco Holdings accounts for the year ended 31 December 2020).

Part VII

Accountant's Report and Historical Financial Information on Bushveld Vametco Limited

Section A – Accountant's Report

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The Directors
Bushvelds Minerals Limited
18-20 Le Pollet
St Peter Port
Guernsey
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30 November 2017

Dear Sirs,

Bushveld Vametco Limited ("BVL")

We report on the historical financial information of BVL set out in Section B of this Part VII of the Admission Document dated 30 November 2017 ("Admission Document") of Bushveld Minerals Limited (the "Company"). This historical financial information has been prepared for inclusion in the Admission Document on the basis of the accounting policies set out at Note 3 to the historical financial information. This report is required by paragraph 20.1 of Annex I of Appendix 3.1.1 of the Prospectus Rules as applied by part (a) of Schedule Two to the AIM Rules for Companies and is given for the purpose of complying with that paragraph and for no other purpose.

Save for any responsibility arising under paragraph 20.1 of Annex I of Appendix 3.1.1 of the Prospectus Rules as applied by part (a) of Schedule Two to the AIM Rules for Companies to any person as and to the extent there provided, to the fullest extent permitted by law, we do not accept or assume responsibility and will not accept any liability to any other person for any loss suffered by any such other person as a result of, arising out of, or in connection with this report or our statement, required by and given solely for the purposes of complying with paragraph 20.1 of Annex I of Appendix 3.1.1 of the Prospectus Rules as applied by part (a) of Schedule Two to the AIM Rules for Companies, or consenting to its inclusion in the Admission Document.

Responsibilities

The Directors of the Company are responsible for preparing the historical financial information in accordance with International Financial Reporting Standards as adopted by the European Union.

It is our responsibility to form an opinion on the historical financial information and to report our opinion to you.

Basis of opinion

We conducted our work in accordance with Standards for Investment Reporting issued by the Financial Reporting Council in the United Kingdom. Our work included an assessment of evidence relevant to the amounts and disclosures in the historical financial information. It also included an assessment of significant estimates and judgments made by those responsible for the preparation of the financial information and whether the accounting policies are appropriate to the entity's circumstances, consistently applied and adequately disclosed.

We planned and performed our work so as to obtain all the information and explanations we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the historical financial information is free from material misstatement whether caused by fraud or other irregularity or error.

Our work has not been carried out in accordance with auditing or other standards and practices general accepted in any jurisdiction other than the United Kingdom and accordingly should not be relied upon as if it has been carried out in accordance with those other standards and practices.

Opinion

In our opinion, the historical financial information gives, for the purposes of the Admission Document, a true and fair view of the state of affairs of BVL as at the date stated and of its results, cash flows and changes in equity for the period then ended in accordance with International Financial Reporting Standards as adopted by the European Union.

Declaration

For the purposes of part (a) of Schedule Two to the AIM Rules for Companies we are responsible for this report as part of the Admission Document and declare that we have taken all reasonable care to ensure that the information contained in this report is, to the best of our knowledge, in accordance with the facts and contains no omission likely to affect its import. This declaration is included in the Admission Document in compliance with item 1.2 of Annex I and item 1.2 of Annex III of Appendix 3.1.1 of the Prospectus Rules as applied by part (a) of Schedule Two to the AIM Rules for Companies.

Yours faithfully

RSM Corporate Finance LLP

Regulated by the Institute of Chartered Accountants in England and Wales

RSM Corporate Finance LLP is a limited liability partnership registered in England and Wales, registered no. OC325347. A list of the names of members is open to inspection at the registered office 25 Farringdon Street London EC4A 4AB

Section B – Historical Financial Information on Bushveld Vametco Limited

STATEMENT OF COMPREHENSIVE INCOME

For the period ended 28 February 2017

	Period from 22 March 2016 to 28 Feb 2017
	£
Revenue	–
Cost of sales	–
Gross profit	–
Other operating income	–
Finance Income	–
Finance Costs	–
Exchange Gain	–
Profit before taxation	–
Income tax expense	–
Profit for the period attributable to the equity owner of the company	
Other comprehensive income, net of tax	–
Total comprehensive profit for the period, attributable to the equity owner of the company	–

STATEMENT OF FINANCIAL POSITION

As at 28 February 2017

	Note	28 Feb 2017 £
Assets		
Current assets		
Trade and other receivables	4	1 329 639
Total current assets		1 329 639
Total assets		1 329 639
Equity and liabilities		
Current liabilities		
Borrowings	5	1 329 539
Total current liabilities		1 329 539
Equity		
Issued capital	6	100
Reserves		–
Equity attributable to owners of company parent		100
Total equity and liabilities		1 329 639

STATEMENT OF CHANGES IN EQUITY

For the period ended 28 February 2017

	Attributable to owners of the parent company				
	Share capital £	*Reserves* £	*Total* £	*Non–controlling interests* £	*Total equity* £
At 22 March 2016	–	–	–	–	–
Profit for the period	–	–	–	–	–
Other comprehensive income, net of tax	–	–	–	–	–
Transactions with owners recognised directly in equity					
Share issuance	100	–	100	–	100
At 28 February 2017	100	–	100	–	100

STATEMENT OF CASH FLOWS

For the period ended 28 February 2017

	28 Feb 2017 £
Profit before tax	–
Operating activities	
Cash generated from operations	–
Finance and investment income received	–
Finance charges paid	–
Income tax paid	–
Cash flows from operating activities	–
Investing activities	
Exclusivity fee paid	(1 329 639)
Cash flows from investing activities	1 329 639
Financing activities	
Short-term borrowings raised	1 329 539
Share capital issued	100
Cash flows from financing activities	(1 329 639)
Net increase/(decrease) in cash and cash equivalents	–
Cash and cash equivalents at the beginning of the financial year	–
Effects of foreign exchange rate movements	–
Cash and cash equivalents at the end of the financial period	–

NOTES TO THE CONSOLIDATED HISTORICAL FINANCIAL INFORMATION

For the interim periods ended 30 June 2016 and 2017

1. Corporate information and principal activities

Bushveld Vametco Limited ("BVL") was incorporated and domiciled in Guernsey on 22 March 2016. The principal activity of BVL during the period ended 28 February 2017 was to act as a holding company for an acquisition to be made after the period end. Subsequent to the period end, on 6 April 2017, BVL acquired a 78.8 per cent. controlling equity interest in Strategic Minerals Corporation ("SMC"), a company incorporated under the laws of Connecticut, USA. SMC owns a 75 per cent. controlling equity interest in Evraz Vametco Holdings (Proprietary) Limited, which is the ultimate holding company of Evraz Vametco Alloys (Proprietary) Limited ("Vametco Alloys"). Vametco Alloys is principally involved in the mining, processing and distribution of Vanadium products from its operations in Brits, South Africa, and is the ultimate holding company of Vametco Properties (Proprietary) Limited.

2. Adoption of new and revised standards

Accounting standards adopted during the year

New standards, amendments to published standards and interpretations to existing standards effective in 2016, with their dates of adoption adopted by BVL and a brief description:

Annual Improvements to IFRSs 2014–2016 Cycle*	1 January 2017 & 1 January 2018	The improvements in this Amendment clarify the requirements of IFRSs and eliminate inconsistencies within and between Standards, including clarification of the scope of IFRS 12.
Amendments to IAS 12: Recognition of Deferred Tax Assets for Unrealised Losses*	1 January 2017	Clarifies deferred tax on unrealised losses generated by debt instruments carried at fair value.
Amendments to IAS 7: Disclosure Initiative*	1 January 2017	The amendments clarify and improve information provided to users of financial statements about changes in liabilities arising from financing activities.

* not yet endorsed by the EU

Following the adoption of these standards there has been no change to the BVL accounting policies and there has been no material impact on the financial statements of BVL.

Accounting standards and interpretations not applied

Standards, amendments and interpretations to existing standards that are not yet effective and have not been early adopted by BVL:

Amendments to IFRS 2: Classification and Measurement of Share-based Payment Transactions*	1 January 2018	Amendments to provide requirements on the accounting for the effects of vesting and non-vesting conditions on the measurement of cash-settled share-based payments, share-based payment transactions with a net settlement feature for withholding tax obligations, and a modification to the terms and conditions of a share-based payment that changes the classification of the transaction from cash-settled to equity-settled.
IFRIC 22 Foreign Currency Transactions and Advance Consideration*	1 January 2018	Provides requirements about which exchange rate to use in reporting foreign currency transactions (such as revenue transactions) when payment is made or received in advance.

IFRS 9 Financial Instruments	1 January 2018	Replacement to IAS 39 and is built on a logical, single classification and measurement approach for financial assets which reflects both the business model in which they are operated and their cash flow characteristics. Also addresses the so called 'own credit' issue and includes an improved hedge accounting model to better link the economics of risk management with its accounting treatment. It is a change from incurred to expected loss model.
IFRS 15 Revenue from Contracts with Customers (IFRS 15 clarifications not EU-endorsed)	1 January 2018	Introduces requirements for companies to recognise revenue to depict the transfer of goods or services to customers in amounts that reflect the consideration to which the company expects to be entitled in exchange for those goods or services. Also results in enhanced disclosure about revenue and provides or improves guidance for transactions that were not previously addressed comprehensively and for multiple element arrangements.
IFRS 16 Leases*	1 January 2019	The new standard recognises a leased asset and a lease liability for almost all leases and requires them to be accounted for in a consistent manner. This introduces a single lessee accounting model and eliminates the previous distinction between an operating lease and a finance lease.

* not yet endorsed by the EU

The Directors anticipate that the adoption of these Standards and Interpretations in future periods will have no material impact on the financial statements of BVL, subject to any future business combinations.

3. Significant accounting policies

Basis of accounting

These financial statements have been prepared in accordance with International Financial Reporting Standards, International Accounting Standards and Interpretations (collectively "IFRS") issued by the International Accounting Standards Board ("IASB") as adopted by the European Union ("adopted IFRS"), and are in accordance with IFRS as issued by the IASB.

The financial statements have been prepared under the historical cost basis, except for the revaluation of financial instruments. Historical cost is generally based on the fair value of the consideration given in exchange for the assets. The principal accounting policies are set out below and have been applied consistently throughout the period.

Basis of preparation

Foreign currencies

Functional and presentational currency

The individual financial statements of BVL is prepared in the currency of the primary economic environment in which they operate (its functional currency). For the purpose of the financial statements, the results and financial position of BVL are expressed in Pound Sterling, which is the functional currency of the ultimate parent company, Bushveld Minerals Limited, and the presentation currency for the financial statements.

Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are re-measured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the income statement. Foreign exchange gains and losses that relate to borrowings and cash and cash equivalents are presented in the income statement within 'finance income or costs'. All other foreign exchange gains and losses are presented in the income statement.

Finance income

Interest revenue is recognised when it is probable that economic benefits will flow to BVL and the amount of revenue can be measured reliably. Interest revenue is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount on initial recognition.

Taxation

The tax expense represents the sum of the tax currently payable and deferred tax.

The tax charge is based on taxable profit for the year. BVL's liability for current tax is calculated by using tax rates that have been enacted or substantively enacted by the reporting date.

Deferred tax is the tax expected to be payable or recoverable on differences between the carrying amount of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit, and is accounted for using the "balance sheet liability" method.

Deferred tax liabilities are recognised for all taxable temporary differences and deferred tax assets are recognised to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilised. Deferred tax is calculated at the tax rates that are expected to apply to the year when the asset is realised or the liability is settled based upon rates enacted and substantively enacted at the reporting date. Deferred tax is charged or credited to profit or loss, except when it relates to items credited or charged to other comprehensive income, in which case the deferred tax is also dealt with in other comprehensive income.

Financial assets and liabilities

Financial assets and financial liabilities are recognised in BVL's balance sheet when BVL becomes a party to the contractual provisions of the instrument. Financial instruments are classified into specified categories dependent upon the nature and purpose of the instruments and are determined at the time of initial recognition. All financial assets are recognised as loans and receivables or available for sale investments and all financial liabilities are recognised as other financial liabilities.

Trade and other receivables

Trade and other receivables are stated initially at the fair value of the consideration receivable less any impairment. Impairment provisions are recognised when there is objective evidence that BVL will be unable to collect all of the amounts due under the terms of the receivable, the amount of such a provision being the difference between the carrying amount and the present value of the future expected cash flows associated with the impaired receivable.

Trade and other receivables are subsequently measured at amortised cost, less any impairment.

Cash and cash equivalents

Cash and cash equivalents comprise cash at hand and deposits on a term of not greater than three months.

Financial liabilities and equity

Financial liabilities (including loans and advances due to related parties) and equity instruments are classified according to the substance of the contractual arrangements entered into. An equity instrument is any contract that evidences a residual interest in the assets of BVL after deducting all of its liabilities. When the terms of a financial liability are negotiated with the creditor and settlement occurs through the issue of BVL's equity instruments, the equity instruments are measured at fair value and treated as consideration for the extinguishment of the liability. Any difference between the carrying amount of the liability and the fair value of the equity instruments issued is recognised in profit or loss.

Use of estimates and judgements

In the application of BVL's accounting policies, the directors are required to make judgements, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

Estimates and judgements are continually evaluated. Revisions to accounting estimates are recognised in the year in which the estimates are revised if the revision affects only that year, or in the year of revision and in future years if the revision affects both current and future years.

4. Trade and other receivables

	28 Feb 2017 £
Prepayments – Represents the exclusivity fee cash payments to Evraz of US$ 1,646,000	1 329 639

The directors consider that the carrying amount of trade and other receivables approximates to their fair value.

5. Borrowings

	28 Feb 2017 £
Loan from Bushveld Minerals Limited	1 329 539

The loan from the parent company is unsecured, interest-free and has no fixed term of repayment.

6. Share capital

Issued share capital consists of:

	28 Feb 2017 £
100 fully paid ordinary shares of GBP 1.00 each	100

7. Taxation

The tax expense represents the sum of the tax currently payable and deferred tax.

Factors affecting tax for the period:

	28 Feb 2017 £
The tax assessed for the period at the Guernsey corporation tax charge rate of 0%, as explained below:	
Loss before taxation	–
Loss before taxation multiplied by Guernsey corporation tax rate of 0%	–
Effects of:	
Non-deductible expenses	–
Tax for the period	–

8. Financial instruments

Financial Risk Factors

BVL's activities expose it to a variety of financial risks: market risk (foreign exchange risk, cash flow interest rate risk), credit risk and liquidity risk.

8.1 *Foreign exchange risk*

Foreign currency transactions are translated into the measurement currency using the exchange rate prevailing at the dates of the transaction. Foreign exchange gains and losses resulting from the settlement of such transactions, and from the translation of monetary assets and liabilities denominated in foreign currencies, are recognised in the income statement, except when deferred in equity as qualifying cash flow hedges. There were no open forward exchange contracts at year-end.

8.2 *Interest rate risk*

As BVL has no significant interest-bearing assets, BVL's income and operating cash flows are substantially independent of changes in market interest rates.

As part of the process of managing BVL's interest rate risk, interest rate characteristics of new borrowings and the re-financing of existing borrowings are positioned according to expected movements in interest rates.

8.3 *Liquidity risk*

Prudent liquidity risk management implies maintaining sufficient cash and cash equivalents and the availability of funding through an adequate amount of committed credit facilities. BVL has minimised its liquidity risk by ensuring that it has no external borrowings at year end.

8.4 *Fair Value*

The directors are of the opinion that the book value of financial instruments approximates fair value. The carrying value less impairment provision of trade receivables and payables are assumed to approximate their fair values.

Financial liabilities (GBP) – other liabilities at amortised cost

	28 Feb 2017 Carrying amount and Fair Value
Short-term borrowings*	1 329 539

* Management assessed that the fair values of short-term borrowings approximate their carrying amounts largely due to the short-term maturities of these instruments.

9. Related party transactions

During the period under review BVL obtained an unsecured, interest-free loan from its parent company, Bushveld Minerals Limited, to enable it to pay the exclusivity fee cash payments of US$ 1,646,000 to Evraz Group S.A.. The loan has no fixed term of repayment.

10. Post Balance Sheet Events

Investment in Strategic Minerals Corporation

Following the announcement on 25 July 2016 of BVL's execution of a Share Purchase Agreement ("SPA") with Evraz Company S.A. for the conditional purchase of Evraz's 78.8 per cent. economic interest in SMC, which owns the producing Vametco Alloys vanadium mine and plant in South Africa (the "Acquisition"), BVL completed the Acquisition on schedule on 6 April 2017. The total consideration was US$ 16 466 000 payable to Evraz Group S.A. and resulted in the ownership of 78.8 per cent. equity interest in SMC and its subsidiaries. As yet, the Directors have not yet finalised the accounting treatment of this acquisition under IFRS 3.

The investment is in line with Bushveld's stated strategy to develop a significant, vertically integrated vanadium platform and accelerate the path to production by several years.

Deal structure

BVL financed the US$16.466 million investment as follows:

- Exclusivity fee cash payments to Evraz of US$1.646 million ($500,000 on 30 March 2016, $500,000 on 13 May 2016 and $646,000 on 22 July 2016);
- Bridge loan facility of US$11.0 million from The Barak Fund SPC Limited received on 30 March 2017;
- A US$3.0 million facility from the Financing and Sales and Marketing Agreement with Wogen Resources Limited on 30 March 2017; and
- A cash contribution of US$820,000 from the Company and Yellow Dragon Holdings.

On 15 June 2017, BVL announced it had fully settled the US$11.0 million Barak Fund SPC Limited bridge loan plus US$ 961,010 in fees and interest to complete payment of all outstanding obligations in terms of the bridge loan facility agreement.

Change in ownership

Subject to approval of the resolution to be proposed as resolution 1 at the general meeting of Bushveld Minerals Limited to be held on 20 December 2017, and in accordance with a conditional acquisition agreement dated 30 November 2017, Bushveld Minerals Limited will acquire 55 per cent. of the issued share capital of Bushveld Vametco (being all of the ordinary shares in Bushveld Vametco not currently owned by the Group) from Yellow Dragon Holdings Limited. Following the acquisition, Bushveld Minerals Limited will hold 100 per cent. of the issued share capital of Bushveld Vametco and, through Bushveld Vametco, will own a 78.8 per cent. economic interest in Strategic Minerals Corporation. Strategic Minerals Corporation, in turn holds 75 per cent. of Vametco Holdings, which has a 100 per cent. interest in the Vametco vanadium mine.

The initial consideration for the Acquisition is US$11.1 million which will be satisfied through the issue of the consideration shares and US$4.5 million in cash by Bushveld Minerals Limited to Yellow Dragon Holdings Limited. In addition, there will be two deferred payments of US$0.6 million each (following publication of the Vametco Holdings accounts for the years ended 31 December 2018 and 2019), and a further payment calculated by reference to the EBITDA of Vametco Holdings in 2020 (following publication of the Vametco Holdings accounts for the year ended 31 December 2020).

PART VIII

Additional Information

1 RESPONSIBILITY

1.1 The Directors of the Company, whose names appear on page 6 of this document, and the Company accept responsibility, collectively and individually, for the information contained in this document. To the best of the knowledge and belief of the Directors and the Company (having taken all reasonable care to ensure such is the case) the information contained in this document is in accordance with the facts and contains no omission likely to affect the import of such information.

1.2 RSM Corporate Finance LLP accepts responsibility for its reports set out in Part V and VII of this document. To the best of the knowledge of RSM Corporate Finance LLP (who has taken all reasonable care to ensure that such is the case), the information contained in such report is in accordance with the facts and does not omit anything likely to affect the import of such information.

1.3 The Vametco Competent Person accepts responsibility for its report set out in Part IX of this document. To the best of the knowledge of the Vametco Competent Person (who has taken all reasonable care to ensure that such is the case), the information contained in such report is in accordance with the facts and does not omit anything likely to affect the import of such information.

1.4 The Mokopane Competent Person accepts responsibility for its report set out in Part X of this document. To the best of the knowledge of the Mokopane Competent Person (who has taken all reasonable care to ensure that such is the case), the information contained in such report is in accordance with the facts and does not omit anything likely to affect the import of such information.

1.5 The Madagascar Competent Person accepts responsibility for its reports set out in Part XI of this document. To the best of the knowledge of the Madagascar Competent Person (who has taken all reasonable care to ensure that such is the case), the information contained in such reports is in accordance with the facts and does not omit anything likely to affect the import of such information.

2 THE COMPANY AND ITS SUBSIDIARIES

2.1 The Company was incorporated and registered in Guernsey under the Law on 5 January 2012 under the name of Bushveld Minerals Limited with registered number 54506 as a non cellular company with limited liability under the Law, which is the principal legislation (together with the regulations made thereunder) under which the Company operates.

2.2 The registered office of the Company is at 18-20 Le Pollet, St Peter Port, Guernsey GY1 1WH.

2.3 The principal place of business of the Company is at Illovo Edge Office Park, Building 3, 2nd Floor, Corner Harries and Fricker Road, Illovo, South Africa where the telephone number is +27 11 268 6555.

2.4 The ISIN for the Ordinary Shares is GG00B4TM3943.

2.5 On Admission, the Company will have the following subsidiaries:

Name	*Country of Incorporation*	*Percentage Interest*
Bushveld Resources Limited	Guernsey	100
Bushveld Energy Limited	Mauritius	84
Lemur Holdings Limited	Mauritius	100
Lemur Resources Limited*	Australia	100
Pan African Drilling Limited	B.V.I	100

* Lemur Resources Limited is in the process of being wound up and has conditionally agreed to acquire an interest in three Companies, all incorporated in South Africa, Great 1 Line Invest (Pty) Limited, Gemsbok Magnetite (Pty) Limited and Caber Trade & Invest 1 (Pty) Limited. Shortly following Admission it is intended that Lemur Resources Limited will transfer these interests to Bushveld Resources Limited and will enter into a solvent liquidation.

2.6 Bushveld Resources has the following wholly owned subsidiaries:

Name	*Country of Incorporation*	*Percentage Interest*
Amaraka Investments No 85 (Pty) Limited	South Africa	68.5
Frontier Platinum Resources (Pty) Limited	South Africa	100
Pamish Investments No.39 (Pty) Limited	South Africa	64

2.7 Bushveld Energy Limited has one wholly owned subsidiary, being Bushveld Energy Company (Pty) Ltd, a company registered in South Africa.

2.8 Bushveld Vametco holds 78.8 per cent. of Strategic Minerals Corporation, representing 75 per cent. of the voting rights. Strategic Minerals Corporation's Issued share capital as at the date of this document is as follows:

Stockholder	*Class of Common Stock*	*Number of Shares*
Bushveld Vametco	Class A[1]	97,047.25
Bushveld Vametco	Class B[2]	75
Sojitz Noble Alloys Corporation	Class B[2]	25
Sojitz Noble Alloys Corporation	Class C[3]	26,167.75

1 Class A Common Stock is non-voting stock and carries no entitlement to any payments of dividends or other distributions from SMC unless at such time all dividends previously or then due (including any interest accrued thereon) have been paid to holders of Class C Common Stock.

2 Class B Common Stock has unlimited voting rights, but only carries entitlement to dividends or other distributions from the CMC upon dissolution of the CMC.

3 Class C Common Stock is non-voting stock and carries the entitlement to receive dividends and other distributions from the CMC on the same basis as holders of Class A Common Stock and to receive semi-annual fixed cumulative dividends payable in cash on 1 January and 1 July in each year of a sum equivalent to $19.1075 per share.

2.9 Strategic Minerals Corporation holds 75 per cent. of Vametco Holdings.

2.10 Bushveld Vametco Holdings holds 100 per cent. of the ordinary shares in issue of Bushveld Vametco Alloys (Pty) Limited, incorporated in South Africa. Bushveld Vametco Alloys (Pty) Limited also has preference shares in issue, 100 per cent. of which are held by Strategic Minerals Corporation.

2.11 Bushveld Vametco Alloys (Pty) Limited has one wholly owned subsidiary, Bushveld Vametco Properties (Pty) Limited, incorporated in South Africa.

2.12 Lemur Holdings has the following wholly owned subsidiaries:

Name	*Country of Incorporation*
Lemur Investments Limited	Mauritius
Imaloto Power Project Limited	Mauritius
Lemur Resources (SA) Limited**	Mauritius

** It is intended that Lemur Resources (SA) Limited be wound up shortly after Admission.

2.13 Lemur Investments Limited holds 99 per cent. of Coal Mining Madagascar SARL and Imaloto Power Project SARL both incorporated in Madagascar.

3 SHARE CAPITAL

3.1 The Company has no authorised share capital and has the ability to issue an unlimited number of shares, subject to the Articles.

3.2 The Ordinary Shares have been created pursuant to the Law and are in registered form.

3.3 As at 28 February 2017 there were 696,214,271 Ordinary Shares in issue, all of which were fully paid.

3.4 During the period covered by the historical financial information incorporated by reference in Part IV of this document the following changes in share capital have taken place:

(i) 6 March 2014: 1,500,000 ordinary shares of 1 pence each were issued at a price of 5 pence per share following the exercise of warrants;

(ii) 19 March 2014: 1,000,000 ordinary shares of 1 pence each were issued at a price of 5 pence per share following the exercise of warrants;

(iii) 1 April 2014: 50,000,000 ordinary shares of 1 pence each were issued at 5.7 pence per share by way of a private subscription;

(iv) 2 April 2014: 500,000 ordinary shares of 1 pence each were issued at a price of 5 pence per share following the exercise of warrants;

(v) 29 August 2014: 8,000,000 ordinary shares of 1 pence each were issued at a price of 4.2 pence per share to acquire Lemur Resources shares;

(vi) 30 October 2014: 16,666,667 ordinary shares of 1 pence each were issued at 3 pence per share by way of a private placing;

(vii) 27 February 2015: 4,166,667 ordinary shares of 1 pence each were issued at 2.2 pence per share to directors of the Company in lieu of bonuses earned from March 2012 to February 2014 and 2,500,000 ordinary shares of 1 pence each were issued at 2.2 pence per share in lieu of advisory services provided to the Company;

(viii) 9 October 2015: 375,000 ordinary shares of 1 pence each were repurchased and held in treasury by the Company at 3.526 pence per share;

(ix) 16 October 2015: 195,000 ordinary shares of 1 pence each were repurchased and held in treasury by the Company at 3.376 pence per share;

(x) 2 November 2015: 150,000 ordinary shares of 1 pence each were repurchased and held in treasury by the Company at 3.28 pence per share;

(xi) 9 November 2015: 200,000 ordinary shares of 1 pence each were repurchased and held in treasury by the Company at 3.1573 pence per share;

(xii) 13 November 2015: 300,000 ordinary shares of 1 pence each were repurchased and held in treasury by the Company at 3.0918 pence per share;

(xiii) 20 November 2015: 200,000 ordinary shares of 1 pence each were repurchased and held in treasury by the Company at 2.85 pence per share;

(xiv) 3 December 2015: 250,000 ordinary shares of 1 pence each were repurchased and held in treasury by the Company at 2.99 pence per share;

(xv) 16-18 February 2016: 1,000,000 ordinary shares of 1 pence each were disposed of out of treasury at 2.6 pence per share;

(xvi) 9 June 2016: 98,333,334 ordinary shares of 1 pence each were issued at 1.8 pence per share by way of a private placing and subscription;

(xvii) 20 June 2016: 7,000,000 ordinary shares of 1 pence each were issued at 1.8 pence per share to acquire Sable Investment’s shares;

(xviii) 25 August 2016: 38,666,668 new ordinary shares of 1 pence each were issued at a price of 1.5 pence by way of a private placing;

(xix) 21 October 2016: 53,571,430 ordinary shares of 1 pence each were issued at a price of 1.4 pence by way of a private placing;

(xx) 18 January 2017: 7,021,511 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(xxi) 24 January 2017: 2,537,224 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(xxii) 31 January 2017: 2,066,666 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(xxiii) 14 February 2017: 463,333 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(xxiv) 22 February 2017: 216,667 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

3.5 Since 28 February 2017 the following changes in share capital have taken place:

(i) 9 March 2017: 9,306,278 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(ii) 9 March 2017: 3,866,667 ordinary shares of 1 pence each were issued at a price of 1.5 pence per share and 4,833,333 ordinary shares of 1 pence each were issued at a price of 1.8 pence per share, in each case following the exercise of warrants;

(iii) 16 March 2017: 1,000,000 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(iv) 17 March 2017: 5,357,143 ordinary shares of 1 pence each were issued at a price of 2.8 pence per share following the exercise of warrants;

(v) 13-22 March 2017: 3,642,221 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share, in each case following the exercise of warrants;

(vi) 23 March 2017: 5,449,790 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(vii) 23 March 2017: 1,000,000 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(viii) 28 March 2017: 3,071,111 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(ix) 29 March 2017: 2,355,556 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(x) 31 March 2017: 315,767 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(xi) 4 April 2017: 1,008,333 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(xii) 11 April 2017: 25,000,000 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(xiii) 27 April 2017: 166,667 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(xiv) 4 May 2017: 165,000 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(xv) 12 May 2017: 166,667 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(xvi) 24 May 2017: 900,000 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(xvii) 7 June 2017: 1,696,667 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(xviii) 28 June 2017: 41,000,000 ordinary shares of 1 pence each were issued at a price of 1.6 pence per share following the UIS transaction;

(xix) 17 July 2017: 166,667 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(xx) 23 September 2017: 55,556 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(xxi) 13 October 2017: 540,540 ordinary shares of 1 pence each were issued at a price of 9.3 pence per share following a convertible bond issue;

(xxii) 24 October 2017: 200,000 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(xxiii) 26 October 2017: 48,663 ordinary shares of 1 pence each were issued at a price of 2.4 pence per share following the exercise of warrants;

(xxiv) 9 November 2017: the Sub-division took effect as part of the Demerger;

(xxv) 9 November 2017 the share capital of the Company was reduced by way of the redemption (and subsequent cancellation) of the Redeemable Shares pursuant to the Demerger;

(xxvi) 15 November 2017: 434,000 ordinary shares of 1 pence each were issued at a price of 6.8 pence per share following the exercise of warrants; and

(xxvii) 15 November 2017: 652,000 ordinary shares of 1 pence each were issued at a price of 4.5 pence per share following the exercise of warrants.

3.6 As at 24 November 2017, being the last practical dates prior to the publication of this document, there are 670,000 Ordinary Shares held in treasury.

3.7 At the last annual general meeting of the Company held on 12 September 2017 resolutions were passed granting the Directors general and unconditional authority pursuant to the Articles to issue (or grant rights to subscribe for, or to convert any security into) up to 250 million shares and that the provisions of the Articles requiring such shares to be offered on a pre-emptive basis to all Shareholders be excluded. The authority is to expire at the conclusion of the next annual general meeting of the Company.

3.8 At the GM, resolutions of the Company are being proposed to do the following:

(i) approve the Acquisition and authorise the Directors to issue the Consideration Shares for the purposes of the Acquisition; and

(ii) authorise the Directors to issue, grant rights to subscribe for, or to convert any securities into up to 287,793,087 new Ordinary Shares in the Company, being approximately one third of the Enlarged Issued Share Capital, and to disapply pre-emption rights for up to 100 million new Ordinary Shares, being approximately 11.6 per cent. of the Enlarged Issued Share Capital, having used up a substantial amount of its existing authorities through the issue of Convertible Bonds and Convertible Bond Warrants.

3.9 As at the date of this document there are 808,612,897 Ordinary Shares in issue (including 670,000 treasury shares), all of which are fully paid and on Admission there are expected to be 863,379,261 Ordinary Shares in issue (including the Consideration Shares), all of which will be fully paid.

3.10 Save for the issue of the Consideration Shares and the Management Shares, any Ordinary Shares arising on exercise of any Warrants, and any Ordinary Shares arising on conversion of the Convertible Bonds no capital of the Company is proposed to be issued as at the date of this document.

3.11 No Ordinary Shares are under option or agreed to be put under option.

3.12 Save in respect of the Convertible Bonds, the second tranche of which the Company intends to draw down on publication of this document, as at the date of this Document there are no, and at Admission there will not be, any convertible securities in issue in the Company.

3.13 As at the date of this Document there are no, and at Admission there will not be, any shares which do not represent capital.

3.14 As at the date of this Document there are no, and at Admission there will not be, any shares in the Company held by or on behalf of the Company itself or by subsidiaries of the Company.

3.15 There are no takeover bids by third parties in respect of the Company's shares which have occurred since incorporation of the Company.

3.16 Share capital reconciliation:

	As at 28 February 2017	*As at 29 February 2016*
Issued Ordinary Shares	696,214,271	486,337,438

3.17 During the period covered by the historical financial information, save as has been disclosed in paragraph 3.4, no Ordinary Shares have been issued for assets other than cash.

3.18 On Admission, holders of Existing Ordinary Shares will suffer an immediate dilution of 6.34 per cent. of their interest in the Company by issue of the Consideration Shares.

4 Outstanding Warrants

4.1 In addition to the Convertible Bond Warrants, the Company currently has the following 29,101,365 outstanding warrants each to subscribe for 1 Ordinary Share:

No of Warrants outstanding	*Exercise Price (pence)*	*Lapse Date*
3,039,473	7.90	26 March 2019
4,052,631	9.90	28 May 2018
15,000	2.40	7 June 2018
464,657	2.40	24 August 2018
15,197,368	6.90	31 March 2020
6,332,236	14.20	22 September 2020

4.2 It is intended that upon drawdown of the second tranche under the Convertible Bond Subscription Agreement, the Company will grant a further 4,925,073 warrants exercisable at 14.20 pence to Atlas which would lapse of 22 September 2020. It is anticipated that drawdown will occur on publication of this document.

5 Constitutional documents and other relevant laws and regulations

5.1 ***Objects***

Section 31 of the Companies Act provides that the objects of a company are unrestricted unless any restrictions are set out in the Articles. The Articles do not contain any restrictions on the objects of the Company.

5.2 ***Articles of Incorporation***

The Articles contain, *inter alia*, provisions to the following effect:

(i) *Voting rights*

Subject to paragraph (ii) below, and to any special rights or restrictions as to voting upon which any shares may for the time being be held, on a show of hands every member who is present in person or by proxy shall have one vote. On a poll every member present in person or by proxy shall have one vote for every Ordinary Share held by him. A proxy need not be a member of the Company. A member of the Company shall not be entitled, in respect of any shares held by him, to vote (either personally or by proxy) at any general meeting of the Company unless all amounts payable by him in respect of that share in the Company have been paid or credited as having been paid.

(ii) *Variation of rights*

All or any of the rights, privileges or conditions attached to any class of shares in issue may only be varied either with the consent in writing of the holders of seventy five per cent. in value of the issued shares of that class (excluding treasury shares) or with the sanction of a special resolution passed at a separate general meeting of the holders of the shares of that class.

(iii) *Alteration of capital*

The Company may by ordinary resolution, *inter alia*, consolidate and divide all or any of its share capital into shares of a larger amounts and sub-divide all or any of its shares into shares of a smaller amounts.

(iv) *Transfer of shares*

A member may transfer all or any of his shares (1) in the case of certificated shares by transfer in writing in any usual or common form or in any other form acceptable to the Directors and (2) in the case of uncertificated shares, in the manner provided for in the rules and procedures of the operator of the relevant system and in accordance with and subject to the CREST Regulations. The instrument of transfer of a certificated share shall be signed by or on behalf of the transferor and, if the share is not fully paid, by or on behalf of the transferee.

The Board may, in its absolute discretion and without assigning any reason, decline to register any transfer of any certificated share unless it is:

(i) in respect of a share which is fully paid up;

(ii) in respect of a share in which the Company has no lien;

(iii) in respect of only one class of share;

(iv) in favour of a single transferee or not more than four joint transferees;

(v) duly stamped (if so required); and

(vi) delivered for registration to the registered office of the Company (or such other place as the Board may from time to time determine) accompanied by the relevant share certificate(s) and such other evidence as the Board may reasonably require to show the right of the transferor to make the transfer.

(v) *Dividends and Distributions*

(i) Subject to the Law, the Directors may if authorised by an ordinary resolution authorise dividends and distributions to be paid to Shareholders. If any share is issued on terms providing that it shall rank for dividend or distribution as from a particular date, such share shall rank for dividend or distribution accordingly.

(ii) Subject to the Law, the Directors may, if authorised by an ordinary resolution, offer Shareholders the option of receiving any dividend in the form of a scrip dividend, in the form of fully paid bonus shares, or in any other form as the Directors may determine.

(iii) All unclaimed dividends may be invested or otherwise made use of by the Directors for the benefit of the Company until claimed. All dividends or distribution unclaimed for a period of 12 years from the date on which such dividend or distribution was declared shall, if the Directors so resolve, be forfeited and shall revert to the Company.

(iv) There is no fixed date on which an entitlement to dividend arises.

(v) There are no dividend restrictions attaching to the Ordinary Shares, provided they are fully paid up. Payments of dividends may be made by electronic transfer or by cheque or warrant.

(vi) *Suspension of rights*

The Directors may by notice in writing require a Shareholder to disclose to the Company the identity of any person other than the Shareholder (an "**Interested Party**") who has any interest (whether direct or indirect) in the shares held by the Shareholder.

If a Shareholder, or any other person appearing to be interested in shares held by that Shareholder, has been issued with such a notice and has failed, in relation to any shares (the "**default shares**"), to give the Company the information thereby required within the prescribed period from the service of the notice, the following sanctions shall apply unless the Board otherwise determines:

(i) the Shareholder shall not be entitled in respect of the default shares to be present or to vote (either in person or by proxy) at any general meeting or at any separate meeting of the holders of any class of shares or on any poll or to exercise any other right conferred by membership in relation to any such meeting or poll; and

(ii) where the default shares represent at least 0.25 per cent. of the number of shares in issue of the class concerned:

(A) any dividend, or part thereof or other monies which would otherwise be payable on or in respect of the shares shall be withheld by the Company, which shall not have any obligation to pay interest on it, and the Shareholder shall not be entitled to elect, in the case of a scrip dividend, to receive shares instead of that dividend; and

(B) no transfer, other than an approved transfer, of any of the default shares held by the member shall be registered.

(vii) *Return of capital*

Subject to any preferred, deferred or other special rights, or subject to such conditions or restrictions to which any shares in the capital of the Company may be issued, on a winding-up or other return of capital, the holders of Ordinary Shares are entitled to share in any surplus assets *pro rata* to their holdings of Ordinary Shares. A liquidator may, with the sanction of a special resolution of the Company and any other sanction required by the Law, divide amongst the members in specie or in kind the whole or any part of the assets of the Company (whether or not the assets shall consist of property of one kind or shall consist of property of different kinds), those assets to be set at such value as he deems fair. A liquidator may also vest the whole or any part of the assets of the Company in trustees on trusts for the benefit of the members as the liquidator shall think fit.

(viii) *Issue of shares*

The Directors only have the authority to issue, or grant rights to subscribe for or to convert any security into, shares to the extent that they are so authorised by ordinary resolution from time to time. The Directors may issue shares or grant rights to subscribe for or to convert any security into shares after authorisation has expired if the shares are issued or the rights are granted, in pursuance of an offer or agreement made by the Company before the authorisation expired and the authorisation allowed the Company to make an offer or agreement which would or might require shares to be issued, or rights to be granted, after the authorisation had expired.

The Company may issue shares which are to be redeemed or are liable to be redeemed at the option of the Company or the Shareholders. Subject to the provisions of the Law and the rights of holders of any class of shares, the Company may purchase its own shares, including redeemable shares, and the board may determine the terms, conditions and manner of such redemption.

(ix) *Pre-emption rights*

There are no rights of pre-emption under the Articles in respect of transfers of issued Ordinary Shares.

Unless the Company has by special resolution resolved otherwise (and subject to certain exceptions set out in the Articles), the Company may not issue equity securities for cash to any person unless:

1. it has made an offer to each person who holds Ordinary Shares in the Company to issue to him on the same or more favourable terms a proportion of those securities which is as nearly as practicable equal to the proportion of the total issued Ordinary Shares represented by the Ordinary Shares held by such holder; and

2. the period during which any such offer may be accepted has expired or the Company has received notice of the acceptance or refusal of every offer so made.

(x) *General meetings*

An annual general meeting of the Company shall be held in each calendar year within a period of not more than 6 months after the accounting reference date at such time and place as may be determined by the Directors. All annual general meetings will be held in Guernsey unless the Directors say otherwise.

The Directors may convene a general meeting whenever they think fit. General meetings shall also be convened on a requisition of the members of the Company as provided for by the Law or, if the Directors fail to convene a general meeting within twenty one days from the date of the deposit of the requisition, a meeting may be convened by such requisitionists as provided by the Law.

Twenty one clear days' notice in respect of an annual general meeting and fourteen clear days' notice in respect of every other general meeting shall be given to all members (other than those who, under the provisions of the Articles or otherwise, are not entitled to receive notices from the Company) and to the Directors and the auditors for the time being of the Company, but the accidental omission to give such notice to, or the non-receipt of such notice by, any member or Director or the auditors shall not invalidate any resolution passed or any proceeding at such meeting.

Every notice shall specify the place, the day and the time of the meeting and the general nature of the business of the meeting. In the case of a meeting convened for passing a special resolution, waiver resolution or unanimous resolution the notice shall also specify the intention to propose the resolution as a special resolution, waiver resolution or unanimous resolution as the case may be, and specify the text of any proposed special resolution, waiver resolution or unanimous resolution. The notice shall also state with reasonable prominence that a member entitled to attend and vote at the meeting, may appoint a proxy to attend, speak and vote on a poll instead of him and that the proxy need not also be a member.

For the purpose of determining which persons are entitled to attend and vote at any general meeting and how many votes such persons may cast, the Company may specify in the relevant notice of general meeting a time, not more than forty eight hours (excluding any days which are not business days) before the time fixed for the meeting, by which a person must be entered on the register of members in order to have the right to attend and vote at the meeting.

No business shall be transacted unless the requisite quorum is present when the meeting proceeds to business. Two members present in person or by proxy shall be a quorum. If within half an hour from the time appointed for the general meeting a quorum is not present, if convened on the requisition of the members the meeting shall be dissolved. In any other case the meeting shall be adjourned to the same day in the next week at the same time and place. At any such adjourned meeting, those members present in person or by proxy shall be a quorum.

(xi) *Directors*

The business and affairs of the Company shall be managed by the Directors, who may exercise all such powers of the Company as are not by any statute or by the Articles required to be exercised by the Company in general meeting and for such purposes the Directors may establish any local board or agency for managing any of the affairs of the Company, either in the United Kingdom or elsewhere, and may appoint any persons to be members of such local boards, or to be managers or agents.

Subject to the Articles, the Directors may meet together for the despatch of business, adjourn and otherwise regulate their meetings as they think fit. The quorum necessary for the transaction of the business is two unless otherwise resolved by the Directors. A meeting of the Directors at which a quorum is present shall be competent to exercise all powers and discretions for the time being exercisable by the Directors.

A Director shall not vote or be counted in the quorum on any resolution of the Board or any committee of the Board concerning his own appointment (including fixing or varying the terms of his appointment or its termination) as the holder of any office or place of profit with the Company or any company in which the Company is interested.

A Director who is in any way, directly or indirectly, interested in a proposed transaction or arrangement with the Company, or in a transaction or arrangement that has been entered into by the Company, must declare the nature and extent of his interest to the Directors. The declaration must be made at a meeting of the Board, or by written notice, or by general notice, in accordance with the Law and the Articles.

A Director who has, or can have, an interest, direct or indirect, that conflicts, or may possibly conflict, with the interests of the Company (including, without limitation, in relation to the exploitation of property, information or opportunity, whether or not the Company could take advantage of it) must declare the nature and extent of his interest to the Board as soon as reasonably practicable. Provided a Director has disclosed the nature and extent of his interest a Director may be party to any transaction or arrangement with the Company and may continue to act for the Company. A Director shall not be liable, by reason of his office, to account to the Company for any benefit resulting from such conflict situation.

Save as provided in the Articles, a Director shall not vote on, or be counted in the quorum in relation to, any resolution of the Board or of a committee of the Board concerning any contract, arrangement, transaction or any other proposal whatsoever to which the Company is or is to be a party and in which he has an interest which (together with any interest of any person connected with him) is to his knowledge a material interest otherwise than by virtue of his interests in shares or debentures or other securities of or otherwise in or through the Company, unless the resolution concerns any of the following matters:

(i) a contract or arrangement for giving to the Director security or a guarantee or indemnity in respect of:

(ii) money lent by him or obligations undertaken by him or by any other person at the request of or for the benefit of the Company or any of its subsidiaries; or

(iii) a debt or obligation of the Company or any of its subsidiaries for which he himself has assumed responsibility in whole or part under a guarantee or indemnity or by the giving of security;

(iv) where the Company or any of its subsidiary undertakings is offering securities in which offer the Director is, or may be, entitled to participate as a holder of securities or in the underwriting or sub underwriting of which the director is to participate;

(v) relating to another company in which he and any persons connected to him do not to his knowledge hold an interest in shares representing one per cent. or more of any class of the equity share capital or of the voting rights in that company;

(vi) relating to a pension, superannuation or similar scheme or retirement, death or disability benefits scheme or employees' share scheme which does not award him any privilege or benefit not awarded to the employees to whom the scheme relates; or

(vii) concerning insurance which the Company proposes to maintain or purchase for the benefit of Directors or the benefit of persons including Directors.

The Directors shall have power at any time and from time to time to appoint any person to be a Director, either to fill a casual vacancy or as an addition to the existing Directors. Any Director so appointed shall hold office only until the next following annual general meeting and shall then be eligible for re-election. The Company in general meeting may by ordinary resolution appoint any person to be a Director either to fill a casual vacancy or as an additional Director, and may remove any Director.

Subject to the provisions of the Articles, at every annual general meeting of the Company one third of the Directors who are subject to retirement by rotation or, if their number is not a multiple of three, then the number nearest to but not exceeding one-third, shall retire from office.

The Directors of the Company (other than alternate Directors) shall be paid such remuneration (by way of fee) for their services as may be determined by the Directors or any committee of the Directors formed for the purpose of determining Directors' fees. The remuneration shall be deemed to accrue from day to day. The Directors shall also be entitled to be repaid all travelling, hotel and other expenses of travelling to and from board meetings, committee meetings, general meetings, or otherwise incurred while engaged on the business of the Company. The ordinary aggregate fees of all the Directors payable under the provisions of these Articles shall not exceed £500,000 or such higher amount as the Company may, from time to time by ordinary resolution, determine.

Subject to the provisions of the Law every Director, secretary or other officer of the Company (other than an auditor) is entitled to be indemnified against all losses or liabilities incurred whether in connection with any proven or alleged negligence, default, breach of duty or breach of trust by him or otherwise, in relation to the Company, or any associated company or trustee of a pension scheme.

Unless and until otherwise determined by ordinary resolution of the Company, the number of Directors shall be not less than two nor more than eight. There is no age limit nor any share qualification for Directors.

(xii) *Disclosure of interests in shares*

The Disclosure and Transparency Rules do not apply to the Company but provisions similar to Chapter 5 thereof are incorporated into the Articles, and accordingly the voteholder and issuer notification rules set out in DTR5 apply to the Company and each holder of Shares in the Company.

5.3 ***Other relevant laws and regulations***

(a) Takeovers

(i) The Company is subject to Takeover Code and the Panel has statutory powers to enforce the Takeover Code. Under Rule 9 of the Takeover Code, a person who acquires, whether by a single transaction or by a series of transactions over a period of time, shares which (taken with shares held or acquired or acquired by persons acting in concert with him) carry 30 per cent. or more of the voting rights of a company, such person is normally required to make a general offer to all shareholders of that company at not less than the highest price paid by him or them or any persons acting in concert during the offer period and in the 12 months prior to its commencement.

(ii) Pursuant to Part XVIII of the Law, where a takeover offer (being an offer within the meaning of section 337 of the Law) has been accepted by shareholders comprising not less than 90 per cent. in value of the shares affected by the offer, the offeror may give a compulsory acquisition notice to any dissenting shareholder who has not accepted the offer, stating that he wishes to acquire the shares held by that dissenting shareholder, and thereafter will be entitled to so acquire those shares on the same terms as the general offer.

(iii) Other than the protections afforded to Shareholders in the Company under the Takeover Code (as described above) there are no controls in place to ensure that any shareholder having a controlling interest in the Company does not abuse that interest.

(iv) Neither the Directors or the Company are aware of any arrangements in place which may result in a change of control of the Company.

(b) *Disclosure and Transparency Rules*

As noted in 5.2 (xii) above, the Disclosure and Transparency Rules do not apply to the Company but similar provisions have been incorporated in the Articles.

6 Directors' and other interests

6.1 The interests of the Directors (including the interests of their spouses and infant children and the interests of any of their related parties (as defined in the AIM Rules for Companies), all of which are beneficial, in the issued share capital of the Company, as at 29 November 2017, being the latest practicable date prior to publication of this document, and as they are expected to be immediately following Admission are as follows:

	On 29 November 2017		*On Admission*	
Name	*Ordinary Shares*	*per cent.*	*Ordinary Shares*	*per cent.*
Ian Watson	540,000	0.07	540,000	0.06
Fortune Mojapelo	5,580,000*	0.69	5,580,000*	0.65
Anthony Viljoen	5,746,667*	0.71	5,746,667*	0.67
Geoff Sproule	1,500,000	0.19	1,500,000	0.17
Jeremy Friedlander	–	–	–	–

* Fortune Mojapelo and Anthony Viljoen collectively own 8,160,000 shares through their joint partnership in VM Investment Company (Pty) Limited

6.2 Save as disclosed in paragraph 6.1 above, none of the Directors has any interests in the share capital or loan capital of the Company or any of its subsidiaries nor does any related party of the Directors (within the meaning of sections 820 to 825 of the Companies Act) have any such interests, whether beneficial or non-beneficial.

6.3 In addition to their directorships in the Company, the Directors have held the following directorships and/or been a partner in the following partnerships within the five years prior to the date of this document:

Director	*Current Directorships/Partnerships*	*Past Directorships/Partnerships*
Ian Watson	Broadway Homeowners Association (Proprietary) Limited Bushveld Energy Company (Pty) Ltd Bushveld Minerals Limited Bushveld Resources Limited Bushveld Vametco Limited Galaxy Gold Group Services (Pty) Ltd Greenhills Resources Limited Jaxson 651 (Pty) Ltd Shaft Sinkers (Pty) Ltd Strategic Minerals Corporation	Black Mountain Mineral Development Company (Pty) Limited Cardisat Investments (Pty) Ltd Erand Trust Galaxy Gold Reefs (Pty) Ltd Galaxy Gold Mining (Pty) Ltd Hillson Drilling (Pty) Ltd New Wits Limited Tsumeb Limited
Fortune Mojapelo	Amaraka Investments No 65 (Pty) Ltd Amaraka Investments No 69 (Pty) Ltd Amaraka Investments No 70 (Pty) Ltd Amaraka Investments No 72 (Pty) Ltd Amaraka Investments No 83 (Pty) Ltd Amaraka Investments No 85 (Pty) Ltd Bushveld Energy Company (Pty) Ltd Bushveld Minerals Limited Bushveld Resources Limited Bushveld Vametco Alloys (Pty) Ltd Bushveld Vametco Holdings (Pty) Ltd Bushveld Vametco Limited Canton Trading 193 (Pty) Ltd Copper Mountain Trading 10 (Pty) Ltd Eagle Uranium SA (Pty) Ltd Emmanuel Sports Foundation (Pty) Ltd Frontier Platinum Resources (Pty) Ltd Greenhills Resources Limited Jaxson 651 (Pty) Ltd Jaxson 641 (Pty) Ltd Kopela Kunana Mining and Processing (Pty) Ltd Kuseni (RF) (Pty) Ltd Kuseni Group (Pty) Ltd Kuseni Holdings (Pty) Ltd Kuseni Mogs SPV 2 (Pty) Ltd Kuseni Mogs SPV (Pty) Ltd Lemur Resources Limited Metalloy Resources Investments (Pty) Ltd Mokopane Tin Company (Pty) Ltd Moputso Investments No 71 (Pty) Ltd Moputso Investments No 72 (Pty) Ltd Moputso Investments No 75 (Pty) Ltd MRT Group (Pty) Ltd Newshelf 1135 (Pty) Ltd Nimag (Pty) Ltd Oxyros 276 (Pty) Ltd Pamish Investments No 39 (Pty) Ltd Pamish Investments No 49 (Pty) Ltd Pamish Investments No 59 (Pty) Ltd	Business Venture Investments No 1864 (Pty) Ltd Business Venture Investments No 1865 (Pty) Ltd Business Venture Investments No 1879 (Pty) Ltd Business Venture Investments No 1894 (Pty) Ltd Business Venture Investments No 1895 (Pty) Ltd Future Indefinite Investments 157 (Pty) Ltd Gulube Marketing (Pty) Ltd Lemur Resources (Pty) Ltd Micromatica 388 (Pty) Ltd New Order Investments 52 (Pty) Ltd

Director	*Current Directorships/Partnerships*	*Past Directorships/Partnerships*
Fortune Mojapelo	Pamish Investments No 61 (Pty) Ltd Pamish Investments No 63 (Pty) Ltd Pamish Investments No 64 (Pty) Ltd Pamish Investments No 65 (Pty) Ltd Pamish Investments No 69 (Pty) Ltd Pamish Investments No 70 (Pty) Ltd Pamish Investments No 71 (Pty) Ltd Renetype (Pty) Ltd Something More Trading (Pty) Limited Strategic Minerals Corporation VM Investment Company (Pty) Ltd Woman Unlimited Ministries (Pty) Ltd	
Anthony Viljoen	AfriTin Mining Limited Amaraka Investments No 65 (Pty) Ltd Amaraka Investments No 69 (Pty) Ltd Amaraka Investments No 70 (Pty) Ltd Amaraka Investments No 72 (Pty) Ltd Amaraka Investments No 83 (Pty) Ltd Amaraka Investments No 85 (Pty) Ltd Bushveld Minerals Limited Bushveld Resources Limited Bushveld Vametco Alloys (Pty) Ltd Bushveld Vametco Holdings (Pty) Ltd Canton Trading 193 (Pty) Ltd Copper Mountain Trading 10 (Pty) Ltd Eagle Uranium SA (Pty) Ltd Frontier Platinum Resources (Pty) Ltd Greenhills Resources Limited Imaloto Power Project Limited Jaxson 641 (Pty) Ltd Joerg Foundry (Pty) Ltd Kopela Kunana Mining and Processing (Pty) Ltd Lemur Investments Limited Lemur Resources Limited Metalloy Products (Pty) Ltd Metalloy Resources Investments (Pty) Ltd Mokopane Tin Company (Pty) Ltd Moputso Investments No 71 (Pty) Ltd Moputso Investments No 72 (Pty) Ltd Moputso Investments No 75 (Pty) Ltd MRT Group (Pty) Ltd Newshelf 1135 (Pty) Ltd Nimag (Pty) Ltd Pamish Investments No 39 (Pty) Ltd Pamish Investments No 49 (Pty) Ltd Pamish Investments No 59 (Pty) Ltd Pamish Investments No 61 (Pty) Ltd Pamish Investments No 63 (Pty) Ltd Pamish Investments No 64 (Pty) Ltd Pamish Investments No 65 (Pty) Ltd Pamish Investments No 69 (Pty) Ltd Pamish Investments No 70 (Pty) Ltd Pamish Investments No 71 (Pty) Ltd	Gulube Marketing (Pty) Ltd

Director	*Current Directorships/Partnerships*	*Past Directorships/Partnerships*
Anthony Viljoen (continued)	Pan African Drilling Limited Renetype (Pty) Ltd Rustenburg Engineers and Foundry (Pty) Ltd Something More Trading (Pty) Ltd VM Investment Company (Pty) Ltd	
Geoff Sproule	Bushveld Minerals Limited Bushveld Resources Limited Greenhills Resources Limited J H Isaacs Group Holdings (Pty) Ltd Market Street Nominees Fourteen (Pty) Ltd Mokopane Tin Company (Pty) Ltd Parmid (Pty) Ltd Renetype (Pty) Ltd	None
Jeremy Friedlander	Bushveld Minerals Limited Bushveld Vametco Limited International Resorts Management Limited Roeburn Capital Ltd	Wilton's Music Hall

6.4 Mr Watson is a former director of Tsumeb Corporation Ltd which was placed into provisional liquidation in March 1988. In March 2000 a scheme of compromise was entered into and the total estimated shortfall to creditors was ZAR 50 million.

6.5 Mr Ian Watson, was a director of Shaft Sinkers Holdings plc, when it entered into creditors voluntary liquidation on 18 June 2015. No liquidator accounts have been published to date.

6.6 Save as disclosed in paragraph 6.4 and 6.5 of this Part VIII, no Director:

(i) has any unspent convictions in relation to indictable offences; or

(ii) has been bankrupt or the subject of an individual voluntary arrangement, or has had a receiver appointed to any asset of such director; or

(iii) has been a director of any company which, while he or she was a director or within 12 months after he or she ceased to be a director, had a receiver appointed or went into compulsory liquidation, creditors voluntary liquidation, administration or company voluntary arrangement, or made any composition or arrangement with its credits generally or with any class of its creditors; or

(iv) has been a partner of any partnership which, while he or she was a partner or within 12 months after he or she ceased to be a partner, went into compulsory liquidation, administration or partnership voluntary arrangement, or had a receiver appointed to any partnership asset; or

(v) has had any public criticism by statutory or regulatory authorities (including recognised professional bodies); or

(vi) has been disqualified by a court from acting as a director of a company or from acting in the management or conduct of the affairs of any company.

6.7 Save as disclosed in paragraph 6.1 above, and as set out below, the Directors are not aware of any person who, directly or indirectly, had an interest in 3 per cent. or more of the voting rights of the Company which is notifiable to the Company under the Disclosure and Transparency Rules as at as at 29 November 2017, being the latest practicable date prior to publication of this document, and immediately following Admission:

	Pre-Admission		*Post-Admission*	
Shareholder	*No.*	*%*	*No.*	*%*
Hargreaves Lansdown Asset Management	126,797,413	15.72	126,797,413	14.69
Acacia Resources Limited	85,598,644	10.61	85,598,644	9.91
Halifax Share Dealing	85,416,796	10.59	85,416,796	9.89
TD Direct Investing	58,073,632	7.20	58,073,632	6.73
Jose Roy Hernandez Borromeo	37,969,130	4.71	37,969,130	4.40
Selftrade - Talos Securities	31,409,484	3.89	31,409,484	3.64
Mr Nicholas John Mallett	31,000,000	3.84	31,000,000	3.59
Barclays Wealth and Investment Management (UK)	30,279,467	3.75	30,279,467	3.51
Interactive Investor Sharedealing	28,622,422	3.55	28,622,422	3.32
A J Bell Securities	25,819,266	3.20	25,819,266	2.99
Yellow Dragon Holdings Limited	25,000,000	3.10	79,766,364	9.24
Share Centre	24,771,273	3.07	24,771,273	2.87

6.8 No shareholder in the Company has any different voting rights from other Shareholders.

6.9 No Director or any member of a Director's family has a related financial product referenced to the Ordinary Shares.

7 Directors' service agreements and terms of office

7.1 *Fortune Mojapelo*

On 20 March 2012, Fortune Mojapelo entered into a service agreement with the Company under the terms of which he agreed to act as the Chief Executive Officer for a basic salary of £100,000 per annum, such salary to be reviewed annually. The service agreement shall be terminable by either party giving to the other not less than 6 months' written notice. Mr Mojapelo may also be entitled to a bonus at the absolute discretion of the Company's remuneration committee. In addition, the service agreement contains detailed provisions relating to confidentiality, intellectual property and various post-termination restrictions, including a restriction for 6 months prohibiting him from being engaged in a business which competes with the business of the Company and restrictions for 6 months prohibiting him from soliciting or dealing with any customers or clients, or soliciting any key business suppliers, employees or consultants. Upon termination, no benefits (other than those accruing during the notice period) will be due to the director.

7.2 *Geoff Sproule*

On 20 March 2012, Geoff Sproule entered into a service agreement with the Company under the terms of which he agreed to act as the Chief Financial Officer for a basic salary of £90,000 per annum, such salary to be reviewed annually. The service agreement shall be terminable by either party giving to the other not less than 6 months' written notice. Mr Sproule may also be entitled to a bonus at the absolute discretion of the Company's remuneration committee. In addition, the service agreement contains detailed provisions relating to confidentiality, intellectual property and various post-termination restrictions, including a restriction for 6 months prohibiting him from being engaged in a business which competes with the business of the Company and restrictions for 6 months prohibiting him from soliciting or dealing with any customers or clients, or soliciting any key business suppliers, employees or consultants. Upon termination, no benefits (other than those accruing during the notice period) will be due to the director.

7.3 ***Ian Watson***

The services of Ian Watson as non-executive director are provided under a terms of letter of appointment between him and the Company dated 24 November 2017 subject to termination upon at least 3 months' notice, at an initial fee of £40,000 per annum.

7.4 ***Anthony Viljoen***

The services of Anthony Viljoen as non-executive director are provided under a terms of letter of appointment between him and the Company dated 24 November 2017 subject to termination upon at least 3 months' notice, at an initial fee of £25,000 per annum.

7.5 ***Jeremy Friedlander***

The services of Jeremy Friedlander as non-executive director are provided under a terms of letter of appointment between him and the Company dated 24 November 2017 subject to termination upon at least 3 months' notice, at an initial fee of £25,000 per annum.

7.6 Save as set out in paragraphs 7.1 to 7.5 above, there are no service agreements in existence between any of the Directors and the Company or any of its subsidiaries providing for benefits upon termination of employment.

8 Related Party Transactions

8.1 Save for any arrangements summarised in this paragraph, no member of the Group or the Enlarged Group has been a party to any related party transaction (as that term is defined in the AIM Rules for Companies) since 1 March 2014.

(i) VM Investments is a related party due to two of the Executive Directors (Fortune Mojapelo and Anthony Viljoen) of Bushveld Minerals Limited being majority shareholders of VM Investments. At 28 February 2015, the Group owed VM Investments Ltd £25,949 (2014: £7,387). During the financial year 2015, VM Investments charged the Group £101,275 (2014: £115,475) for office accommodation and other office services.

(ii) VM Investments is a related party due to two of the Executive Directors (Fortune Mojapelo and Anthony Viljoen) of Bushveld Minerals Limited being majority shareholders of VM Investments. At 29 February 2016, the Group owed VM Investments Ltd £26,134 (2015: £25,949). During the financial year 2016, VM Investments charged the Group £67,047 (2015: £101,275) for office accommodation and other office services.

(iii) VM Investments is a related party due to two of the Executive Directors (Fortune Mojapelo and Anthony Viljoen) of Bushveld Minerals Limited being majority shareholders of VM Investments. At 28 February 2017, the Group owed VM Investments Ltd £39,712 (2016: £26,134). During the financial year 2017, VM Investments charged the Group £nil (2016: £67,047) for office accommodation and other office services.

9 Material contracts

The following contracts, not being contracts entered into in the ordinary course of business, have been entered into by the Company and/or its subsidiaries during the two years preceding the date of this document and are or may be material:

The Company

9.1 ***Acquisition Agreement***

On 30 November 2017, the Company entered into the Acquisition Agreement, pursuant to which it conditionally agreed to acquire all of the ordinary shares in Bushveld Vametco not currently owned by the Group from the Seller for a purchase price of:

(i) US$11.1 million to be satisfied on Admission ("**Initial Consideration**") by (i) a cash payment of US$4.5 million and (ii) the issue of the Consideration Shares by the Company to the Seller, credited as fully paid, at the Consideration Share Price

(ii) two deferred payments of US$600,000 each, payable following publication of the accounts for Vametco Holdings for respectively the years ending 31 December 2018 and 31 December 2019; and

(iii) a payment to be made on the publication of the accounts for Vametco Holdings for the period ending on 31 December 2020 ("**2020 Accounts**") a sum calculated as follows:

(4.5 x EBITDA as shown in the 2020 Accounts) x 5.91 per cent.

Pursuant to the Acquisition Agreement the Seller has also agreed to enter into the Seller OMA.

Completion of the Acquisition Agreement is conditional on:

(i) the execution by Seller of the Seller OMA;

(ii) the passing of the Acquisition Resolution at the GM; and

(iii) Admission.

In the event that the calculation of the Consideration Share Price is such that the number of Consideration Shares to be issued pursuant to the Acquisition Agreement would result in Seller holding in excess of 9.4 per cent. of the Enlarged Issued Share Capital (the "**Seller Share Threshold**"), the number of Consideration Shares shall be reduced such that the holding of Seller of Ordinary Shares is below the Seller Share Threshold, and the balance of the Initial Consideration not satisfied by the issue of the Consideration Shares (as adjusted) shall be settled in cash on Completion.

The Acquisition Agreement contains limited warranties from the Seller as to capacity and title.

9.2 ***Demerger Agreement***

The Demerger Agreement dated 2 October 2017, pursuant to which Bushveld transferred the entire issued share capital of Greenhills Resources to AfriTin in consideration of the issue of the Demerger Shares and the Bushveld Retained Interest Shares. The Demerger Agreement is subject to a number of conditions, the final one of which was satisfied on 9 November 2017 with the Admission of AfriTin to trading on AIM, and the Demerger Shares and the Bushveld Retained Interest Shares were issued on 9 November 2017. Each of the Company and AfriTin have agreed to indemnify the other and their group companies for any liabilities the other may incur that relate to their respective group including in relation to any guarantee or undertaking provided to the other's group, which were released following completion of the Demerger Agreement. Each party has also provided warranties as to capacity and authority in relation to its entry into the agreement.

The Demerger Agreement also contains (*inter alia*):

(i) the right for the AfriTin to acquire any rights the Company may acquire in certain prospecting rights in relation to a proposed joint venture with Lerama Resources (Pty) Limited ("**Lerama**") in regards to any interests in prospecting rights that Lerama has, or may obtain in licences LP428PR and LP10922PR;

(ii) obligations on AfriTin to honour the provisions of the Warrants; and

(iii) certain ongoing transitional services to be provided by the Company to AfriTin.

Pursuant to the Demerger Agreement each Shareholder was issued one new AfriTin Share for each Ordinary Share held by that Shareholder.

9.3 ***The Demerger Amendment Agreement***

The Demerger Agreement was amended by way of a deed of variation dated 8 November 2017 between the Company (1) and AfriTin (2) such that the ratio of new AfriTin Shares to be issued pursuant to the Demerger be varied from 1 AfriTin Share for every Ordinary Share held on the Demerger Record Date (as defined in the October Circular) to 0.0899 AfriTin Shares for every Ordinary Share held on the Demerger Record Date.

9.4 ***Convertible Bond Subscription Agreement***

A subscription agreement dated 15 September 2017 between the Company as issuer (1), Atlas as Subscriber (2) and Atlas Capital (3) relating to the issue of up to £8,000,000 7.5 per cent. convertible bonds with Warrants attached and a maturity date of two years from the date of issuance (which was 22 September 2017). The convertible bonds will be issued at 98 per cent. of face value in two tranches, the first tranche of 180 Convertible Bonds with a principal aggregate amount of £4,500,000 (the "**First Tranche**") and the second tranche of 140 convertible bonds with a principal aggregate amount of £3,500,000 (the "**Second Tranche**"). The second tranche may be issued at the discretion of the Company after a cool down period of forty Business Days since the subscription of the first tranche.

The proceeds of the issue of the convertible bonds and the issue of the warrants shall be applied towards financing the Company's general corporate purposes.

Subject to limited exceptions, Atlas agrees not to convert more than 25 per cent. ("**Conversion Percentage**") of the Convertible Bonds outstanding every period of three (3) calendar months (i) from 1 January to 31 March; (ii) from 1 April to 30 June; (iii) from 1 July to 30 September; and (iv) from 1 October to 31 December (each such period a "**Quarter**").

The Convertible Bond Subscription Agreement was amended by way of the Convertible Bond Subscription Amendment Deed such that (i) if Atlas has not converted the entire Conversion Percentage in any Quarter it may carry forward the unconverted Conversion Percentage; and (ii) Atlas shall not sell more than 25 per cent. of Ordinary Shares issued as a result form a conversion of the convertible bonds in any Quarter.

9.5 ***Convertible Bond Warrant Instrument***

A Warrant Instrument relating to the issue of 11,257,309 Warrants to subscribe for Ordinary Shares in the Company between the Company (1) and Atlas (2) dated 22 September 2017 relating to the issue of a total of 6,332,236 warrants over Ordinary Shares as part of the First Tranche and, should the Company elect to issue the Second Tranche, the issue of a further 4,925,073 warrants. The warrants are freely transferable, have a three year term, a strike price of 14.2p and are exercisable at any time (in which case one warrant equals one warrant share).

The Convertible Bond Warrant Instrument was amended by the Convertible Bond Warrant Amendment Deed in order to provide for a fair adjustment to the rights of Atlas as warrantholder following the Demerger and the numbers of warrant and the exercise price shown above reflect these amendments.

9.6 ***Convertible Bond Certificate***

A convertible bond certificate issued by the Company on 22 September 2017 relating to the issue of 180 convertible bonds with a principal aggregate amount of £4,500,000.

The convertible bonds are convertible into Ordinary Shares at a price equal to the average of five days volume weighted average price (as published by Bloomberg) determined over the ten trading days immediately prior to receipt of a conversion notice by the Company from Atlas.

Atlas has agreed not to convert more than 25 per cent. of the convertible bonds outstanding during every period of three calendar months (i) from 1 October to 31 December; (ii) from 1 January to 31 March; (iii) from 1 April to 30 June; and (iv) from 1 July to 30 September, subject to certain exceptions, and agrees not to short sell and/or borrow BMN ordinary shares at any point during the twenty-four month period from the date of issuance of the First Tranche.

The Company has the option to redeem the convertible bonds prior to the maturity date at 105 per cent. of the face value of the outstanding convertible bonds to be redeemed. If a material change of ownership (being the acquisition of ownership of, or voting control or direction over, more than 50 per cent. of the issued and outstanding shares of the Company) occurs, or certain events of default occur, Atlas has the right to request redemption of all or part of the outstanding amount at 105 per cent. of the face value of the outstanding convertible bonds to be redeemed.

On the maturity date, any unconverted convertible bonds will be converted into ordinary shares, with such number of ordinary shares determined by dividing the principal amount of the unconverted convertible bonds by the average of the lowest three days volume weighted average price (as published by Bloomberg) during the period of fifteen consecutive trading days prior to the maturity date.

Subject to limited exceptions, Atlas agrees not to convert more than 25 per cent. ("**Conversion Percentage**") of the Convertible Bonds outstanding every period of three (3) calendar months (i) from 1 January to 31 March; (ii) from 1 April to 30 June; (iii) from 1 July to 30 September; and (iv) from 1 October to 31 December (each such period a "**Quarter**").

The Convertible Bond Certificate was amended by way of a deed of variation dated 7 November 2017 between Atlas (1) and the Company (2) such that (i) if Atlas has not converted the entire Conversion Percentage in any Quarter it may carry forward the unconverted Conversion Percentage; and (ii) Atlas shall not sell more than 25 per cent. of Ordinary Shares issued as a result form a conversion of the convertible bonds in any Quarter.

9.7 ***SP Angel Nominated Adviser and Broker Agreement***

A nominated adviser and broker agreement dated 14 December 2016 (and amended to 30 August 2017) between the Company (1) and SP Angel as nominated adviser and broker (2) pursuant to which the Company has appointed SP Angel to act as nominated adviser and broker to the Company for an initial period of 12 months commencing on the date of Admission. The Company has agreed to pay to SP Angel an annual retainer of £25,000 to act as nominated adviser and a further £25,000 to act as broker. The agreement contains a customary indemnity from the Company in favour of SP Angel and its representatives.

9.8 ***Admission Agreement***

An admission agreement dated 30 November 2017 between the Company (1), the Directors (2) and SP Angel (3) pursuant to which SP Angel has agreed to act as the nominated adviser and broker to the Company for the proposes of Admission and to assist the Company with the Admission process. The agreement is conditional, *inter alia*, upon Admission taking place on or before 31 December 2017 or such later date as SP Angel and the Company may agree but in any event not later than 8 January 2017. The Company will pay to SP Angel a corporate finance fee of £125,000. The agreement provides for the Company to pay all expenses of and incidental to the application for Admission, including the fees and costs of other professional advisers, all costs relating thereto, including printing, advertising and distribution charges, the fees of the Registrars and the fees payable to the London Stock Exchange.

The agreement contains customary indemnities given by the Company in favour of SP Angel and customary warranties given by the Company and the Directors in favour of SP Angel as to the accuracy of information contained in this document and other matters relating to the Group and its business.

SP Angel may terminate the agreement in specified circumstances prior to Admission, principally in the event of a material breach of the agreement or any of the warranties contained in it, or where any event of omission relating to the Group is, or will be in the opinion of SP Angel (as the case may be), material in the context of the Admission, or where any change of national or international, financial, monetary, economic, political or market conditions is, or will be in the opinion of SP Angel, materially adverse to the Company or Admission.

9.9 ***Lock In Agreements and the Seller OMA***

(i) Lock In Agreements all dated 30 November 2017 and made between the Company (1) SP Angel (2) and respectively each of the Directors (3). Each Director has agreed, pursuant to his respective Lock In Agreement, conditionally on Admission with SP Angel and the Company not to dispose of any interest in Ordinary Shares for a period of 12 months from the date of Admission, except in limited circumstances, or with the prior written consent of SP Angel and the Company.

The Lock In Agreements also each also contains orderly market provisions ("**Orderly Market Arrangements**") which apply for a further period of 12 months after expiry of the lock-in period ("**Orderly Market Period**"). During the Orderly Market Period the Director will only dispose of any interest in, Ordinary Shares with the prior written consent of SP Angel or the broker for the time being of the Company if it is not SP Angel (the "**Replacement Broker**") and then through SP Angel or the Replacement Broker (as the case may be) in such manner as they may reasonably require so as to ensure an orderly market in the Ordinary Shares, provided that:

(i) SP Angel or the Replacement Broker shall only charge reasonable commissions on an execution only basis and provide best execution; and

(ii) if SP Angel or the Replacement Broker is unable to make the disposal within 5 business days of having been requested so to do, Director shall be entitled to effect the disposal through such other broker as he shall, in his absolute discretion, decide.

The lock-in and orderly market provisions will not apply in the following circumstances ("**Exceptions**"):

(i) in acceptance of a general offer made to shareholders of the Company to acquire all the issued Ordinary Shares (other than any Ordinary Shares which are already owned by the person making such offer and any other person acting in concert with him);

(ii) pursuant to an intervening court order; or

(iii) by the personal representatives after the death of the Locked In Person

(ii) The Seller OMA dated 30 November 2017 and made between Company (1) SP Angel (2) and Yellow Dragon contains the same Orderly Market Arrangements as the Lock In Agreements, which shall apply in respect of all Ordinary Shares held by Yellow Dragon on Admission (including the Consideration Shares) for a period of 12 months following Admission. The Seller OMA is conditional upon Admission and is subject to the same Exceptions as contained in the Lock In Agreements.

9.10 ***AfriTin Convertible Loan Notes***

By way of a letter of subscription dated 2 October 2017 the Company subscribed for £720,000 convertible loan notes in AfriTin ("**AfriTin Notes**"). The instrument pursuant to which the AfriTin Notes were constituted provided that AfriTin Notes are non interest bearing and were to be automatically converted to new AfriTin Shares on AfriTin Admission at a price of £0.0273. On AfriTin Admission the AfriTin Notes were converted and the Company was issued with 26,373,626 new AfriTin Shares.

9.11 ***Warrant Deeds***

(i) By way of a warrant instrument dated 31 March 2017 the Company granted to Wogen Resources Limited ("**Wogen**") 15 million warrants each to subscribe, at any time during the 3 years following the date of grant, for one Ordinary Share at an exercise price of 7 pence, all of which are outstanding. The warrant instrument includes adjustment provisions which were triggered by the Demerger such that the number of warrants was adjusted to 15,197,368 and the exercise price adjusted to 6.9 pence. The warrant instrument includes customary anti dilution protection.

(ii) The Convertible Warrant Instrument, details of which are set out in paragraph 9.5 of this Part VIII. Following the Demerger the number of warrants was adjusted to 11,257,309 and the exercise price adjusted to 14.2 pence from 11,111,111 warrants at 14.4 pence.

(iii) By way of a warrant deed dated 26 March 2014 the Company granted to Darwin Strategic Limited ("**Darwin**") 3 million warrants each to subscribe, at any time in the 5 year period following the date of grant, for one Ordinary Share at an exercise price of 8 pence, all of which remain outstanding. Following the Demerger the warrants were adjusted such that the number of warrants is now 3,039,473 and the exercise price 7.9 pence. The warrant deed includes customary anti dilution protection.

(iv) By way of a warrant deed dated 28 May 2015 the Company granted to Darwin 4 million warrants each to subscribe, at any time in the 3 year period following the date of grant, for one Ordinary Share at an exercise price of 10 pence, of which all remain outstanding. The warrant deed includes customary anti dilution protection.

(v) On 7 June 2016 the Company executed a warrant instrument creating 24,166,667 warrants each to subscribe, at any time during the 2 years following date of grant (being 7 June 2016), for one Ordinary Share at an exercise price of 2.4 pence, of which 15,000 remain outstanding. The warrant instrument includes customary anti dilution protection.

(vi) By way of a warrant deed dated 7 June 2016 the Company granted to Beaufort Securities Limited ("**BFS**") 652,000 warrants each to subscribe, at any time in the 4 year period following the date of grant, for one Ordinary Share at an exercise price of 4.6 pence, all of which have been exercised. The warrant deed includes customary anti dilution protection and following the Demerger the exercise price was adjusted to 4.5 pence.

(vii) By way of a warrant deed dated 7 June 2016 the Company granted to BFS 4,833,333 warrants each to subscribe, at any time in the 5 year period following the date of grant, for one Ordinary Share at an exercise price of 1.8 pence, all of which have been exercised. The warrant deed includes customary anti dilution protection.

(viii) By way of a warrant deed dated 7 June 2016 the Company granted to BFS 434,000 warrants each to subscribe, at any time in the 4 year period following the date of grant, for one Ordinary Share at an exercise price of 6.9 pence, all of which have been exercised. The warrant deed includes customary anti dilution protection and following the Demerger the exercise price has been adjusted 4.5 pence.

(ix) On 24 August 2016 the Company executed a warrant instrument creating 19,333,334 warrants each to subscribe, at any time during the 2 years following date of grant (being 24 August 2016), for one Ordinary Share at an exercise price of 2.4 pence, of which 464,657 remain outstanding. The warrant instrument includes customary anti dilution protection.

(x) On 21 October 2016 the Company executed a warrant instrument creating 5,357,143 warrants each to subscribe, at any time during the 3 years following date of grant (being 21 October 2016), for one Ordinary Share at an exercise price of 2.8 pence, all of which have been exercised. The warrant instrument included customary anti dilution protection.

(xi) By way of a warrant deed dated 21 October the Company granted to BFS 5,357,143 warrants each to subscribe, at any time in the 3 year period following the date of grant, for one Ordinary Share at an exercise price of 2.8 pence, all of which have been exercised. The warrant deed included customary anti dilution protection.

Bushveld Vametco

9.12 ***Share Purchase Agreement***

Evraz Group and BVL entered into a share purchase agreement on 5 May 2016, as amended on 17 June 2016 and 15 July 2016 pursuant to which Evraz Group agreed to sell and BVL agreed to purchase, subject to the satisfaction of certain conditions, Evraz Group's shareholding in Strategic Minerals Corporation (the "**Share Sale**"). On 22 July 2016, Evraz Group and BVL entered into a deed of amendment and restatement to the original share purchase agreement which was further amended by a deed of amendment on 31 March 2017 (the "**SPA**"). Pursuant to the SPA, Evraz Group agreed to sell and BVL agreed to purchase Evraz Group's entire shareholding in SMC, comprised of 97,047.25 shares of SMC's class A common stock and 75 shares of Strategic Minerals Corporation's class B common stock (the "**Sale Shares**"), together with the right to receive from Strategic Minerals Corporation the unpaid portion of a dividend declared in September 2014 in respect of the Class A common stock (US$1,419,800). The SPA, which contains customary warranties, is conditional on satisfaction of conditions precedent prior to 31 March 2017, with completion to take place on the fifth business day following the date on which all of the conditions precedent were fulfilled or waived (being 6 April 2017) ("**Completion**"). Each of Evraz Group and BVL confirmed in respective letters addressed to the other and dated 31 March 2017 (being the long stop date under the SPA) that all of the conditions precedent had been satisfied or waived and the Share Sale was therefore deemed to have completed on 6 April 2017.

Pursuant to the SPA, Bushveld Vametco paid to Evraz Group an aggregate of US$16,466,000, and is also bound to pay an earn out from 1 January 2018 to 31 December 2025, to be paid annually in arrears on 30 June and not to exceed US$5 million in aggregate and US$1.5 million per annum (the "**Earn Out**"). In the event that the weighted average benchmark price for Ferro-vanadium as quoted in the London Metal's Bulletin (the "**Prevailing Price**") is equal to or is greater than US$23.00 per Kg in a financial year (the "**Trigger Price**"), the additional annual revenue ascribed to Vametco Alloys as a result of the Prevailing Price being above the Trigger Price shall, having been adjusted to provide for the payment of State and Community royalties, be multiplied by the Earn Out Percentage and paid by Bushveld to Evraz Group.

The Earn Out Percentage is calculated as follows:

Earn Out Percentage = 1 * (1 - prevailing South African corporate tax rate (per cent.)) * (1 — prevailing South African withholding tax rate (per cent.), if applicable) * (percentage effective shareholding in Vametco Alloys shares owned by the Company (per cent.)) * (1 — tax payable by the Company as a result of ordinary dividends received from Vametco Alloys (per cent.)) * (Percentage of the Company ordinary shares owned by the Purchaser (per cent.)) * 15 per cent.

Strategic Minerals Corporation

9.13 ***Shareholders' Agreement***

A Shareholders Agreement Among Class B Shareholders of Strategic Minerals Corporation, dated 22 July 1998 (the "**Original Agreement**"), as amended by on 6 April 2017 by an agreement executed by Bushveld Vametco, whereby Bushveld Vametco became a party to the Original Agreement (together, with the Original Agreement, the "**Shareholders Agreement**"). The Shareholders Agreement was originally entered into by the holders of Class B Common Stock as of 22 July 1998. Based upon the stock transfer records of the Company, Bushveld and Sojitz are the only holders of Class B Common Stock (each, a "**Class B Shareholder**"), and thus the only parties to the Shareholders Agreement as at the date of this document. The Shareholder Agreement includes a general prohibition on all transfer of Common Stock held by a Class B Shareholder, save that a Class B Shareholder is permitted to transfer any of its Common Stock to another Class B Shareholder and Sojitz is permitted, with the consent of Strategic Minerals Corporation SMC, to transfer any of its Common Stock to an entity directly or indirectly owned by Nissho Iwai Corporation (a "**Nissho Company**"). The Shareholders Agreement also contains pre-emption rights.

In addition, until such time as Sojitz transfers any of its Common Shares to anyone other than a Nissho Company, Sojitz shall have the right to nominate twenty five percent (25 per cent.) of the members of the Board. Only current or former employees of Sojitz or a Nissho Company may be elected to the Board. The Shareholders Agreement provides that one of the Sojitz nominees would be deemed its representative, shall be resident and part-time at Strategic Minerals Corporation's main office and that Strategic Minerals Corporation will provide office space and administrative assistance to such person. Each Sojitz nominated director is entitled to receive $15,000 per year for his or her service on the Board. There are certain matters corporate matters requiring consent of Sojitz.

Vametco Holdings

9.14 ***Change in ownership of Vametco Holdings Black Economic Empowerment partners***

Sale of Shares Agreement, dated 15 February 2016, entered into between Bushveld Minerals Limited ("**BML**"), Firefly Investments 184 Proprietary Limited ("**Firefly**"), Marble Gold 208 Proprietary Limited ('**Marble Gold**"), Avacap Proprietary Limited ("**Avacap**"), Lupenyo Investments 110 Proprietary Limited ("**Lupenyo**"), Oakleaf Investments Holdings 116 Proprietary Limited ("**Oakleaf Investments 116**"), Oakleaf Investments Holdings 115 Proprietary Limited ("**Oakleaf Investments 115**") and Jaxson 640 Proprietary Ltd ("**Jaxson 640**").

In terms of this agreement, the purchaser, being Jaxson 640 acquires the entire issued share capital in and all claims against each of Oakleaf Investments 115 and Marble Gold (the "**Avacap Interests**") from the sellers, being each of Firefly, Avacap, Lupenyo and Oakleaf Investments 116 in their capacity as strategic black economic empowerment partners of Bushveld Vametco Holdings Proprietary Limited.

As consideration for the Avacap Interests, Jaxson 640 paid:

- the sellers an amount of R5 000 000 (five million rand) representing the aggregate purchase price for the Avacap Interests;
- Avacap an amount of R2 416 056.36 (two million four hundred and sixteen thousand, fifty six rand and thirty six cents), representing the shareholder loan advanced by Avacap to Firefly, plus any interest which has accrued ton such shareholder loan at the fulfilment date, being the date that the conditions precedent contained in the agreement are fulfilled or waived (as the case may be); and
- the sellers R1 000 000 (one million rand) as an additional premium in respect of the acquisition of the Avacap Interests.

BML agreed to conclude a deed of settlement and assignment agreement with Gingko Trading Proprietary Limited ("**Gingko**") pursuant to which *inter alia*:

- all amounts due to Gingko under the funding agreements concluded between Oakleaf Investments 115 and Gingko ("**Gingko Funding Agreements**") shall be paid by BML to Gingko as a full and final settlement of all liabilities owed by Oakleaf Investments 115 to Gingko; and
- the rights and obligations under the Gingko Funding Agreements are assumed by BML as the new funder.
- The sellers waived any of the rights that they may have in respect of the Avacap Interests, including any option rights or rights of pre-emption (whether such rights arise out of any existing shareholders agreement, memorandum of incorporation or any other agreement).

Each of the sellers gave Jaxson 640 comprehensive but customary warranties in respect of the Avacap Interests.

The parties to sale of shares agreement entered into a revival and amendment agreement dated 5 May 2017, where the parties agree to, *inter alia*, revive the sale of shares agreement (to the extent that such revival is required) and to record an agreement that all conditions precedent contemplated in clause 2 of the sale of shares agreement have to the extent required, been fulfilled or waived by the parties (as the case may be).

Bushveld Resources

9.15 ***Shareholders' Agreement between Afro Multi Minerals Proprietary Limited ("AMM"), Pamish Investments No 63 Limited ("Pamish 63") and Bushveld Resources***

By way of a shareholders' agreement dated 13 May 2011 between AMM (1), Pamish 63 (2), Amaraka (3) and Bushveld Resources (4), Bushveld Resources agreed to provide up to Rand 14 million funding to Amaraka in exchange for a 55 per cent. shareholding in Amaraka, and AMM and Pamish 63 therefore having respectively 31 per cent. and 14 per cent. AMM transferred into Amaraka its rights held over the Farm 784, Registration Division LR, Limpopo Province in December 2010 for Amaraka to carry out mining operations in respect thereof.

9.16 ***Share Sale and Purchase Agreement***

By way of share sale and purchase agreement dated 15 March 2012 between Pamish 63 (1) and Bushveld Resources (2), Pamish 63 sold its 13.5 per cent. holding in Amaraka to Bushveld Resources for a consideration of Rand 1 million resulting in AMM holding 31.5 per cent. and Bushveld Resources holding 68.5 per cent.

9.17 ***Shareholders' Agreement***

A shareholders' agreement dated 18 June 2008 and amended on 13 March 2012 between Bushveld Resources (1), Pamish Investments No 39 (Pty) Ltd ("**Pamish 39**") (2) and Izingwe Capital Proprietary Limited ("**Izingwe**") (3) pursuant to which Bushveld Resources and Izingwe agree to establish

Pamish 39 and to hold shares as to 64 per cent. and 36 per cent. respectively. Under the agreement the prospecting right held by Izingwe was transferred to Pamish 39. The agreement contains customary pre-emption right in connection with the transfer of shares and also drag and tag rights. There are also provisions for forced sale of shares in certain circumstances, including a change of control of a party. It also provides that for as long as Izingwe is a shareholder it shall remain an HDSA entity.

Lemur Resources Limited

9.18 ***Conditional Share Acquisition Agreement***

A conditional share acquisition agreement dated 3 November 2015 between Sable Platinum Mining Limited ("**Sable Platinum**") (1) and Lemur Resources Limited ("**Lemur**") (2), Great 1 Line Invest (Proprietary) Limited ("**Great Line**") (3), Gemsbok Magnetite (Proprietary) Limited ("**Gemsbok**") (4), Caber Trade & Invest 1 (Proprietary) Limited ("**Caber**") (5) and Sable Metals & Minerals Limited ("**Sable Metals**") (6) pursuant to which Lemur acquired from Sable Platinum the entire issued share capital of each of Gemsbok, Cable and Sable Metals (together the "Sable Subsidiaries") for an aggregate consideration of US$600,000. The agreement is conditional, *inter alia* on receipt approval pursuant to of section 11 of the South African Mineral and Petroleum Resources Development Act in respect of the change in control of the Sable Subsidiaries with the period of 4 years following execution of the agreement.

Lemur Holdings

9.19 ***Power Purchase Agreement***

A Power Purchase Agreement ("**PPA**") was entered into between the national electricity provider of Madagascar ("**Jirama**") as customer and Imatolo Power Project SARL ("**IPP**") as supplier on 22 November 2017. The PPA is in respect of the purchase by Jirama of a guaranteed capacity of ten Megawatts (10 MW) and electricity from IPP. The PPA will come into effect when (i) IPP's concession agreement is effective (i.e. upon the issuance of the decree approving the concession) and (ii) upon the signature of the PPA by Jirama and IPP. The PPA is a fixed term agreement of thirty (30) years and is not automatically renewable. The PPA is governed by Madagascar Law. Jirama and IPP have agreed that in the event that the sum of the actual monthly electricity is less than the contracted electricity, Jirama is obliged to pay all the contracted electricity. However, if IPP is unable to provide the contracted electricity, IPP is required to pay Jirama a penalty corresponding to the electricity not supplied. In the event that the sum of the actual monthly electricity is greater than the contracted electricity, Jirama is required to pay IPP the surplus. The PPA may be terminated if IPP's facilities are not commissioned by 30 December 2021. However, if the failure is due to a delay in the signing of the concession agreement, the parties shall take the necessary measures to remedy the situation. Each of Jirama and IPP are entitled to terminate the PPA in case of serious breaches and if the defaulting party is unable to remedy the breach after a formal notice delivered by the non-defaulting party. The PPA may also be terminated in the event of an early winding-up or liquidation of Jirama or IPP.

9.20 ***Service Agreement***

A service agreement dated 21 November 2013 between Coal Mining Madagascar ("**CMM**") (1) and Richfield Investor Services pursuant to which CMM appoints Richfield Investor Services and Thomas Cushman to be CMM's authorised representative in Madagascar. The agreement has expired and has not been renewed, but has continued in place on a uniformalised basis. CMM pays Richfield Investor Services Euro 10,000 per annum in consideration of the services provided.

9.21 ***Share Sale Agreement***

A share sale agreement between Lemur Resources SA Limited (1) and Greenhills Resources (2) dated 18 September 2017 pursuant to which Lemur Resources SA Limited sold to Greenhills Resources the entire issued share capital of Pamish Investments No 71 Proprietary Limited for a consideration of one Rand.

10 Taxation

United Kingdom taxation

The following information is intended as a general guide only and is provided in summary form based on legislation and published HMRC practice as it exists at the present time. The information relates to the tax position of Shareholders in the capital of the Company that are resident in the United Kingdom for tax purposes, holding shares as investments. The statements below do not constitute advice to any Shareholder on their personal tax position, and may not apply to certain classes of Shareholders such as dealers in securities, persons who have acquired their Ordinary Shares by reason of any office or employment, insurance companies or collective investment schemes.

The summary is not exhaustive and does not generally consider tax reliefs and exemptions. Any person who is in any doubt about their tax position, or who is subject to taxation in any jurisdiction other than that of the UK, should consult their own professional advisers without delay.

Investors should note that tax law and interpretation can change and that in particular the levels and basis of and reliefs from taxation may change (possibly with retrospective effect). Any person who is in any doubt as to their tax position or who is resident for tax purposes outside the UK should consult their professional advisors immediately.

The Company

The Directors intend to conduct the affairs of the Company so that it does not become resident in the UK for UK tax purposes and does not become subject to UK tax on its profits as a result of carrying on a trade in the UK. On that basis, the Company is not expected to be subject to UK corporation tax or income tax, other than in respect of certain types of UK source income, which may be received subject to deduction of income tax at source.

The Directors do not consider the Company to be an 'offshore fund' for UK tax purposes with respect to the Ordinary Shares. If the Company were to be treated as an 'offshore fund' for UK tax purposes, gains on disposals of Ordinary Shares may be taxable to Shareholders as income, not capital gains. The statements below assume that the Company is not an 'offshore fund'.

(I) *Taxation of dividends*

UK resident individual Shareholders

Under current UK tax rules, specific rates of tax apply to dividend income. As of 1 April 2016, the notional dividend tax credit system was abolished. Instead, there is now a nil rate of tax (the "**nil rate band**") for the first £5,000 of dividend income received by an individual Shareholder who is resident for tax purposes in the UK in any tax year. It was announced in the Spring Budget 2017 that the nil rate band will reduce to £2,000 from 6 April 2018. However, this change has not yet been substantially enacted by law. Dividend income in excess of the nil rate band (taking account of any other dividend income received by the Shareholder in the same tax year) will be taxed at the following rates: 7.5 per cent. (to the extent that it falls below the threshold for higher rate income tax); 32.5 per cent. (to the extent that it falls above the threshold for higher rate income tax and is below the additional rate band); and 38.1 per cent. (to the extent that it is within the additional rate). For the purposes of determining which of the taxable bands dividend income falls into, dividend income is treated as the highest part of a Shareholder's income. In addition, dividends within the nil rate band which would (if there was no nil rate band) have fallen within the basic or higher rate bands will use up those bands respectively for the purposes of determining whether the threshold for higher rate or additional rate income tax is exceeded.

UK resident corporate Shareholders

A UK resident corporate Shareholder which is a "small" company (for the purpose of United Kingdom taxation of dividends) will be subject to UK corporation tax on dividends paid by the Company on the Shares.

A UK resident corporate Shareholder that is not a "small" company will be liable to UK corporation tax unless the dividend falls within one of the exempt classes set out in Part 9A of the Corporation Tax Act 2009. It is anticipated that dividends should fall within one of such exempt classes (subject to anti-avoidance rules and provided all conditions are met).

If the conditions for exemption are not, or cease to be, satisfied, or such a Shareholder elects for an otherwise exempt dividend to be taxable, the Shareholder will be subject to UK corporation tax on dividends received from the Company at 19 per cent. (17 per cent. from 1 April 2020).

Shareholders within the charge to UK corporation tax are advised to consult their independent professional tax advisers to determine whether dividends received will be subject to UK corporation tax.

Other shareholders

The annual tax-free dividend allowance of £5,000 available to individuals will not be available to UK resident trustees of a discretionary trust. From 6 April 2016, UK resident trustees of a discretionary trust in receipt of dividends are liable to income tax at a rate of 38.1 per cent., which mirrors the dividend additional rate.

Non-UK resident shareholders may be subject to tax on dividend income under any law to which that person is subject outside the UK. Non-UK resident shareholders should consult their own tax advisers with regard to their liability to taxation in respect of the cash dividend.

(m) *Taxation of chargeable gains*

Any gains on transfers or disposals of Ordinary Shares (including a disposal on a winding-up of the Company) by UK resident Shareholders or Shareholders who carry on a trade in the UK through a permanent establishment with which their investment in the Company is connected may, depending on their circumstances, give rise to a liability to UK tax on capital gains. Non-UK resident shareholders should consult their own tax advisers with regard to their liability to taxation in respect of capital gains.

UK resident individual Shareholders

UK resident Shareholders who are individuals (or otherwise not within the charge to UK corporation tax) and who are basic rate taxpayers are currently subject to tax on their chargeable gains at a flat rate of 10 per cent. Individuals who are higher or additional rate taxpayers are currently subject to tax on their chargeable gains at a flat rate of 20 per cent.

No indexation allowance will be available to such Shareholders. However, they may be entitled to an annual exemption from capital gains to the extent this has not been used against other gains, and any other tax reliefs available such as existing capital losses.

For trustees and personal representatives of deceased persons, capital gains tax on gains in excess of the current annual exempt amount will be charged at a flat rate of 20 per cent.

Shareholders who are individuals and who are temporarily non-resident in the UK may, under anti-avoidance legislation, still be liable to UK tax on any capital gain realised (subject to any available exemption or relief).

UK resident corporate Shareholders

Shareholders within the charge to UK corporation tax may be subject to corporation tax on chargeable gains arising on a disposal of Ordinary Shares, depending on the circumstances and subject to any available exemption or relief. Indexation allowance may apply to reduce any chargeable gain arising on disposal of the Ordinary Shares.

Corporation tax is charged on chargeable gains at the rate applicable to that company at the date of disposal. Such tax would be applied at one the relevant corporation tax rates already stated above, depending on the timing of the disposal.

(n) *Stamp Duty and SDRT*

The following comments are intended as a guide to the general UK stamp duty and SDRT position and do not relate to person such as market markers, brokers, dealers, intermediaries and persons connected with depository arrangements or clearance services to whom special rules apply.

No stamp duty or SDRT should be payable on the issue of Ordinary Shares.

AIM qualifies as a recognised growth market for the purposes of the UK stamp duty and SDRT legislation. Therefore, for so long as the Ordinary Shares are admitted to trading on AIM and are not listed on any other market (and being admitted to trading on AIM will not constitute a listing for these purposes) no charge to UK stamp duty or SDRT should arise on their subsequent transfer.

If the Ordinary Shares do not qualify for this exemption their transfer on sale will be subject to stamp duty (ordinarily payable by the purchaser and generally at the rate of 0.5 per cent. of the consideration given subject to a de minimis limit) save in respect of shares held in a clearance service or in a depositary receipt arrangement in respect of which other provisions may apply.

Shareholders and prospective investors should consult their own professional advisers on whether an investment in an AIM security is suitable for them. Companies whose shares trade on AIM are deemed to be unlisted for the purposes of certain areas of UK taxation.

Guernsey taxation

The following information is intended as a general guide only and is provided in summary form based on legislation and published Guernsey tax authority practice as it exists at the present time. The information relates to the tax position of Shareholders in the capital of the Company that are resident in Guernsey or elsewhere for tax purposes, holding shares as investments. The statements below do not constitute advice to any Shareholder on their personal tax position, and may not apply to certain classes of Shareholders such as dealers in securities, persons who have acquired their Ordinary Shares by reason of any office or employment, insurance companies or collective investment schemes.

The summary is not exhaustive and does not generally consider tax reliefs and exemptions. Any person who is in any doubt about their tax position, or who is subject to taxation in any jurisdiction other than that of Guernsey, should consult their own professional advisers without delay.

Investors should note that tax law and interpretation can change and that in particular the levels and basis of and reliefs from taxation may change (possibly with retrospective effect).

The Company

The Company is resident for tax purposes in Guernsey and is subject to the company standard rate of income tax in Guernsey, currently charged at the rate of 0 per cent. The Company will be taxed at the company standard rate of income tax provided the income of the Company does not include income arising from:

- certain types of banking business;
- the provision of custody services when carried on by an institution or business that carries on certain types of banking business;
- trading activities regulated by the Guernsey Competition and Regulatory Authority;
- the importation and/or supply of gas or hydrocarbon oil in Guernsey;
- large retail business carried on in Guernsey where the company has taxable profits arising or accruing from which in any year of charge exceed £500,000;
- the ownership of land and buildings situate in Guernsey;
- the carrying on of regulated activities within the meaning of the Regulation of Fiduciaries, Administration Businesses and Company Directors, etc. (Bailiwick of Guernsey) Law, 2000, as amended, by a licensed fiduciary within the meaning of that law;
- the provision to an unconnected third party of any administrative, secretarial or clerical services in relation to a controlled investment (within the meaning of the Protection of Investors (Bailiwick of Guernsey) Law, 1987, as amended);
- the carrying on of insurance business which is domestic business within the meaning of the Insurance Business (Bailiwick of Guernsey) Law, 2002, as amended, by a licensed insurer within the meaning of that law;
- the carrying on of business as an insurance manager or as an insurance intermediary within the meaning of the Insurance Managers and Insurance Intermediaries (Bailiwick of Guernsey) Law, 2002, as amended, by a licensed insurance manager or intermediary within the meaning of that law; or
- from 1 January 2018, the provision of investment management services to certain clients.

It is not intended that the income of the Company will be derived from any of those sources.

Guernsey currently does not levy taxes upon capital, inheritances, capital gains, gifts, sales or turnover. No stamp duty is chargeable in Guernsey on the issue, transfer or redemption of Ordinary Shares.

Shareholders

A Shareholder who is resident in Guernsey (which includes Alderney and Herm) for Guernsey tax purposes, will incur Guernsey income tax at the applicable rate on distributions paid to that Guernsey resident shareholder by the Company. The Company is responsible for the deduction of tax from distributions and the accounting of that tax to the Director of Income Tax in Guernsey in respect of distributions paid by the Company to such Guernsey resident Shareholder.

The Company's distributions can be paid to a Shareholder who is not resident in Guernsey (which includes Alderney and Herm) for tax purposes without deduction of Guernsey income tax, provided such distributions by the Company are not to be taken into account in computing the profits of any permanent establishment in Guernsey through which such Shareholder carries on business in Guernsey.

As already referred to above, Guernsey currently does not levy taxes upon capital, inheritances, capital gains, gifts, sales or turnover, nor are there any estate duties (save for registration fees and ad valorem duty for a Guernsey Grant of Representation where the deceased dies leaving assets in Guernsey which require presentation of such a Grant).

No stamp duty is chargeable in Guernsey on the issue, transfer or redemption of Ordinary Shares.

Tax Information Reporting

Guernsey has enacted legislation that implements both FATCA and the common reporting standard ("**CRS**"), that obliges certain entities that are classified as "foreign financial institutions" ("**FFIs**") for FATCA purposes and/or "financial institutions" ("**FIs**") for CRS purposes, to carry out diligence and reporting in relation to certain shareholders. Whilst the Company is not expected to be a FFI for FATCA purposes or a FI for CRS purposes, there can be no guarantee in this regard.

11 Premises

The Group's principal establishment (which is leasehold and are used for offices) is as follows:

Property	*Tenure*	*Lease expiry date*	*Annual rent (unless otherwise stated)*	*Approx. square footage*
2nd Floor, Building 3, Illovo edge	Leasehold	31 January 2019	£85,000	380m^2

12 Working Capital

In the opinion of the Directors, having made due and careful enquiry, the working capital available to the Company and the Enlarged Group, will be sufficient for its present requirements, that is for at least twelve months from the date of Admission.

13 Litigation

13.1 Caber Trade & Invest 1 (Proprietary) Limited ("**Caber**") is in dispute with the local HDSA entity in connection with mining right application (DMR ref: NW 30/5/1/2/2/10004MR) in respect of vanadium and iron over the farm Syferfontein 430 JQ and Portion 2 of the farm Uitvalgrond 431 JQ situated in district of Brits in the North West province. Caber states that the HDSA has failed in a contractual obligation to transfer the rights in DMR ref: NW 30/5/1/2/2/10004MR to Caber. Legal proceedings have not been issued and the parties are negotiating in an attempt to settle matters amicably.

13.2 Coal Mining Madagascar SARL ("**CMM**") was involved in litigation against an individual named Rahajasoamampionona ("**Claimant**") in connection with the ownership of Exploitation Permit no.4578. The litigation has lasted for almost ten years but settled by way of a settlement agreement under which the Claimant accepted that CMM is the owner of the permit. The agreement has been registered with the tax authority and filed with the civil court. The court order confirming the validity and enforceability of the settlement agreement is expected by the end of this year.

13.3 Save as described in this paragraph 13 there are no, and during the 12 month period prior to the date of this document there have not been any, governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened of which the Company is aware) which may have, or have had in the recent past, significant effects on the Company's or the Group's financial position or profitability.

14 General

14.1 There are no patents or other intellectual property rights, licences or particular contracts which are of fundamental importance to the Company's business.

14.2 Save as set out in Part II and Parts IX to XI of this document the Directors are not aware of any environmental issues that may affect the Group's business or utilisation of its tangible fixed assets.

14.3 Save as set out in this Document there are no investments in progress which are significant or any future investments upon which the Company or its management team have already made firm commitments.

14.4 The expenses of Admission are estimated to be £745,000, excluding VAT and are payable by the Company.

14.5 Except for fees payable to the professional advisers whose names are set out on pages 6 and 7 of this document or payments to trade suppliers, no person has received any fees, securities in the Company or other benefit to a value of £10,000 or more, whether directly or indirectly, from the Company within the 12 months preceding the application for Admission, or has entered into any contractual arrangement to receive from the Company, directly or indirectly, any such fees, securities or other benefit on or after Admission.

14.6 Payments made to government or regulatory authorities or similar bodies with regard to the acquisition of or maintenance of the Group's assets relate to royalties paid by the Group to the South African Revenue Service from since April 2017 amount to R12,473,633.57.

14.7 Save as disclosed in this document, there has been no significant change in the financial or trading position of the Group since 31 August 2017, the date to which unaudited interim financial information has been published.

14.8 Save as disclosed in this document, there has been no significant change in the financial or trading position of BVL since 28 February 2017, the date to which historical financial information has been presented in Part VII of this document.

14.9 Save as disclosed in this document, there has been no significant change in the financial or trading position of SMC since 30 June 2017, the date to which unaudited interim financial information has been presented in Part VI of this document.

14.10 With the exception of any arrangements disclosed in paragraph 8 of this Part VIII no member of the Group is, nor has been, a party to any transactions with related parties which were material to the Group.

14.11 Where information has been sourced from a third party, the Company confirms that this information has been accurately reproduced and as far as the Company is aware and is able to ascertain from the information published by that third party, no facts have been omitted which would render the reproduced information inaccurate or misleading.

14.12 RSM UK Audit LLP, Chartered Accountants of 25 Farringdon Street, London EC4V 4AB, were auditors of the Company for the period relating to the accounts referred to in Part IV of this document. RSM UK Audit LLP are a member of the Institute of Chartered Accountants of Scotland.

14.13 RSM Corporate Finance LLP has given and has not withdrawn its written consent to the inclusion in this document of its Accountants' Reports set out in Section A Part V and Section A of Part VII of this document in the form and context in which they appear and has authorised its Accountants' Reports for the purposes of the AIM Rules.

14.14 SP Angel has given and not withdrawn its written consent to the issue of this document and the references to them in the form and context in which such references are included.

14.15 The Vametco Competent Person has given and not withdrawn its written consent to the issue of this document and the references to them in the form and context in which such references are included.

14.16 The Madagascar Competent Person has given and not withdrawn its written consent to the issue of this document and the references to them in the form and context in which such references are included.

14.17 The Mokopane Competent Person has given and not withdrawn its written consent to the issue of this document and the references to them in the form and context in which such references are included.

14.18 There are not, in respect of any member of the Enlarged Group, any significant recent trends in production, sales and inventory, and costs and selling prices since the end of the last financial year to the date of this Document.

14.19 There are not, in respect of any member of the Enlarged Group, any known trends, uncertainties, demands, commitments or events that are reasonably likely to have a material effect on the Enlarged Group's prospects for at least the current financial year of the Company.

14.20 In relation to Vametco, Vametco has paid a total of RAND 12,473,633.57 to the RSA government since April 2017 with respect to the maintenance of its mining assets.

15 Availability of Document

Copies of this document will be available free of charge to the public at the registered office of SP Angel at Prince Frederick House 4th Floor, 35-39 Maddox Street, London, W1S 2PP during normal business hours on any weekday (Saturdays and public holidays excepted) until the date falling one month after the date of Admission.

Dated 30 November 2017

PART IX

Competent Person's Report on Vametco

THE MSA GROUP

Specialist Consultants to the Mining Industry

Bushveld Minerals Limited
Vametco Mine and Associated Exploration Properties
North West & Gauteng Provinces, Republic of South Africa

Independent Competent Person's Report

Prepared by The MSA Group (Pty) Ltd for:
Bushveld Minerals Limited and
SP Angel Corporate Finance LLP

Prepared By:

Philip Mostert	Pr. Sci. Nat; MGSSA
Jeremy Witley	Pr. Sci. Nat; FGSSA

Effective Date: 18 October 2017
Report Date: 15 November 2017

MSA Project No.: J3727

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Directors: EJ Barnard, KD Scott, NN Buthelezi, M Majola

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IMPORTANT NOTICE

This report was prepared as a Competent Person's Report for Bushveld Mineral Limited and SP Angel Corporate Finance LLP by The MSA Group (Pty) Ltd ("MSA"), South Africa. The quality of information, conclusions and estimates contained herein is consistent with the level of effort involved in MSA's services, based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended for use by Bushveld Mineral Limited and SP Angel Corporate Finance LLP subject to the terms and conditions of its contract with MSA. Except for the purposes legislated under the AIM Rules and Guidance Notes for AIM Companies and additional requirements of AIM, a market of the London Stock Exchange Group plc, any other uses of this report by any third party is at that party's sole risk.

Executive Summary

Introduction

The MSA Group (Pty) Ltd ("MSA") has been appointed by Bushveld Minerals Limited ("BML" or "The Company") to provide an independent Competent Person's Report ("CPR") on the Company's vanadium mine property (Bushveld Vametco Holdings (Pty) Ltd ("Vametco") located in the North-West Province of the Republic of South Africa, in which the Company holds, or has the right to, a 26.6 % indirect interest. The Company also holds interests in additional vanadium exploration properties adjacent to or near the mine in North West and Gauteng provinces, or other indirect interests in terms of Joint Venture Agreements with third parties.

BML is a mineral exploration and development company listed on the Alternative Investment Market ("AIM) market of the London Stock Exchange. MSA understands that BML is currently seeking to acquire 55 % of the issued share capital of Vametco from Yellow Dragon Holdings (the "Acquisition"). Following the Acquisition, the Company's indirect interest in Vametco will increase to 59.1 %.

MSA is acting as BML's Competent Person as defined by the rules of the London Stock Exchange, governing the admission of securities to AIM (the "AIM Rules") and the Guidance Note for Mining, Oil and Gas Companies of the London Stock Exchange dated June 2009 ("AIM Guidance Notes") in relation to the proposed Acquisition.

MSA understands that this CPR will be included as part of an AIM admission document to be published by Bushveld Minerals Limited (the "Admission Document").

The CPR has been prepared:

- in accordance with the AIM Note for Mining and Oil & Gas Companies (2009) published by the London Stock Exchange;
- in compliance with and to the extent required by the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012) published by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and Minerals Council of Australia (the "JORC Code"); and
- in respect of the valuation of reserves, the Australasian Code for the Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Export Reports (2015 Edition) (the "VALMIN Code"). For the purposes of the AIM Rules for Companies, MSA is responsible for this CPR as part of an Admission Document and declares that it has taken all reasonable care to ensure that the information contained in this CPR is, to the best of its knowledge, in accordance with the facts and contains no omission likely to affect its import. MSA consents to the inclusion of this CPR, and reference to any part of this CPR, in the Admission Document.

This report replaces the previous Competent Person's Report completed by VBKOM (Pty) Ltd ("VBKOM"), dated 13 April 2016. No additional geological information or drillholes were added since then, although a number of historical drillholes with assay information that was determined to be incorrect have been removed from the statistical calculation of the Mineral Resource and Ore

Reserve estimates, and thus there are changes in the Mineral Resources and Ore Reserves reported relative to previous estimates.

A site visit was conducted on 31 August 2017 by Mr Philip Mostert and Mr Jeremy Witley, as part of the high-level due diligence review of the geology and Vanadium Resources and Reserves.

Neither MSA nor any of its employees and associates employed in the preparation of this report has have any beneficial interest in the assets of Vametco Bushveld Minerals or any of its subsidiaries or any of its business partners.

The Mineral Resource estimate has been completed under the supervision of Mr J. Witley who is a professional geologist with more than 25 years' experience in base and precious metals exploration and mining as well as Mineral Resource evaluation and reporting. He is Principal Resource Consultant for MSA, is registered with SACNASP and is a Fellow of the GSSA.

The Competent Person ("CP") with overall responsibility for reporting of Ore Reserves and Valuation is Philip Mostert Pr. Sci. Nat, BSc Hons (Geology), MGSSA, who is a full time Principal Consultant at The MSA Group. Mr Mostert is a geologist with 14 years' experience in the mining industry.

Project

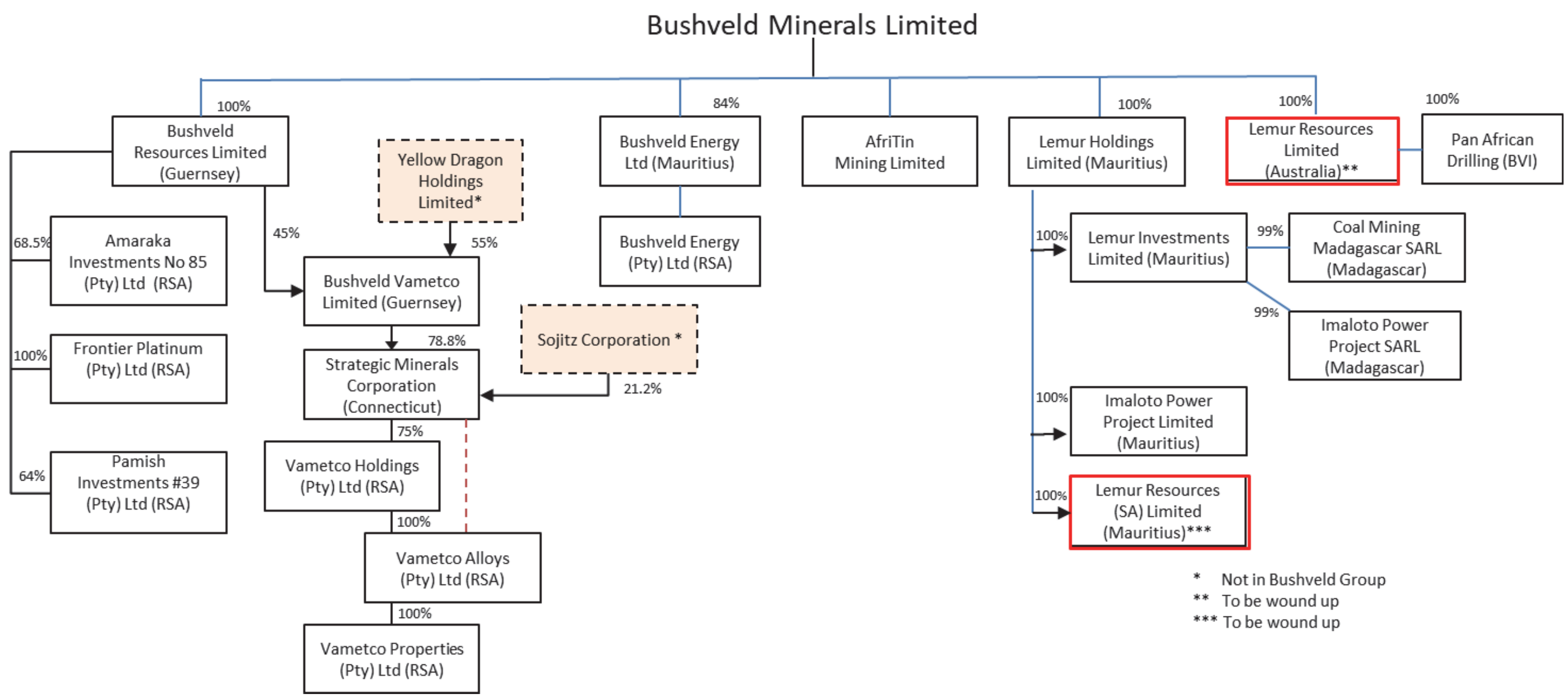
Vametco's mining operations recover vanadium from vanadium-bearing magnetite-rich layers. The Vametco Mine is situated about 6.5 km northeast of the town of Madibeng, (formerly known as Brits). The mine is an operational opencast vanadium mine, located in the Bojanala Platinum District within the North West Province of the Republic of South Africa. The operations are near Mmakau and Rankothea villages, approximately 500 m to the south and west of the operations respectively. Additional prospecting and mining rights in the area are held by Bushveld Minerals Limited.

Ownership & Mineral Tenure

Current operations are on parts of the farms "Krokodilkraal" and "Uitvalgrond". These farms are owned by Historically Disadvantaged South Africans (HDSA's) and have been since 1912. Vametco has long-term lease agreements in place with the registered landowners and co-owners.

A new order mining right (No: NW 30/5/1/2/2/08 MR) is held by Vametco Holdings (Pty) Ltd, for the vanadium operations. The converted mining right replaced the old order mining right held by Vametco which ownership consists of 75 % Strategic Minerals Corporation, 15 % Business Venture Investment Group no 973 and 10 % Business Venture Investment Group no 1833, representing community based trusts and interests. Bushveld Minerals Limited also holds 75 % of prospecting right 10142 PR (on farm Doornpoort 295 JR), 65 % of prospecting right 11124 PR (on Portion 3 of Uitvalgrond) and 100 % of mining right NW10004MR (which has been suspended pending resolution of matters with the community). Mining right No: 59/2013 is valid for a period of 25 years and has an expiry date of 23 April 2038. The ownership structure is depicted in Figure 1 below.

Figure 1
Ownership Structure



Note: *Lemur Resources Limited has conditionally acquired Sable Platinum Mining Limited's shares in three companies: (i) Great 1 Line Invest (Pty) Ltd, (ii) Gemsbok Magnetite (Pty) Ltd and (iii) Caber Trade & Invest 1 (Pty), the transaction being conditional on receipt of section 11 approval. Application for section 11 approvals have been made in the name of Bushveld Resources Limited.*

Following the completion of the Acquisition, Bushveld Minerals Limited's interest in Bushveld Vametco Limited will increase to 100 %, and accordingly its net attributable interest in Vametco Holdings will increase to 59.1 %.

Accessibility, Physiography, Climate, Local Resources and Infrastructure

From the capital city of Pretoria, the N4 national road runs to the west past Madibeng. The R511 provincial road splits off from the N4 and continues into Madibeng. A provincial road runs from the eastern side of Madibeng to the intersection where the Vametco road gives access to the mine. Another gravel road from the Madibeng/Lethlabile tar road also gives access to the mine.

The mine can be accessed by a gravel road from the tar toad connecting Madibeng to Lethlabile or the road leading out of Mothutlung-Rankothea, which passes the southwestern corner of the Property.

The topography of the operations is flat, at an altitude of 1,157 m amsl. A gentle decline exists, trending towards the Rosespruit River, from south to north with a gradient of 1:100. The Rosespruit River flows from east to west. The Swartkoppies hills are prominent to the south of the operations and reach elevation of 1,405 m amsl. A smaller range of hills to the north of the operations occur and reach an altitude of 1,234 m amsl.

The area that the mine operates within is characterised by hot temperatures accompanied by summer rainfall, from mid-October to mid-February. Sunny weather is often followed by afternoon thunderstorms. Temperatures in summer may range between 25 – 35 degrees Celsius ("˚C"). During the winter months, May to July, much cooler temperatures occur, ranging between 15 to 24 ˚C during the day, and single digit temperatures in the early morning and evening.

Recent rainfall data from the rainfall weather stations near the operating sites is available; however, rainfall is also recorded at the operating sites. The highest rainfall averages within a year are between October and March (approximately 91 %), while about 9 % of rainfall is recorded from April to September.

Geological Setting

Vanadium mineralisation occurs in vanadium-bearing titaniferous magnetite-rich layers that make up part of the Upper Zone of the Rustenburg Layered Suite of the Bushveld Complex. The magnetite-rich layers are concordant, continuous along strike and down-dip, although thickness variability occurs.

The Bushveld Complex intruded Pretoria Group meta-sedimentary rocks of the Transvaal Supergroup approximately 2,060 million years ago. The layered sequence of mafic rocks, known as the Rustenburg Layered Suite, comprises five distinct zones.

- Marginal Zone,
- Lower Zone,
- Critical Zone,
- Main Zone, and

- Upper Zone.

The Upper Zone is identified by the occurrence of cumulus magnetite above the Main Zone.

Both the Main Zone and the Upper Zone of the Rustenburg Layered Suite occur on the Mining Right. The layers are east-west striking and north dipping, with an average dip of 19°. The lithologies associated with the Main Zone are gabbro, norite, and locally anorthosite and pyroxenite layers. The lithologies in the Upper Zone, that occurs on the northern part of the Property, includes magnetite–bearing gabbro, norite, diorite and some anorthosite and magnetite layers.

Exploration

Six diamond drillholes were drilled by Vametco in 2006 to verify seam down-dip continuity of the magnetite-rich layers. The data from cores recovered from this drilling campaign, in addition to records of historical drilling, were used for the Mineral Resource Estimate.

No QAQC was completed for assaying outside of the QAQC protocols used routinely by the laboratory.

Historical exploration activities are summarised in Table 1 below.

Table 1
Summary of Historical Drilling Activities at Vametco

Year	Drilling Method	No. of Holes	Purpose
Mid 1960's	Diamond Drilling	9	Assess the vanadium magnetite potential
1970	Diamond Drilling	6	Follow-up drilling to the earlier drilling campaign
1975-1976	Diamond Drilling Percussion Drilling	16 28	Outline the vanadium magnetite deposit and operational drilling for open pit mining
1982	Diamond Drilling	16	Testing correlation between calcium and fracturing
2006	Diamond Drilling	6	Verify seam down-dip continuity of the magnetite-rich layers

Mineral Resource Estimates

The Mineral Resources presented herein have an effective date of 06 October 2017. The Mineral Resource estimate incorporates drilling data from holes completed by Union Carbide Exploration from the mid 1960's until 1982 as well as from holes completed by Vametco in 2006.

The Mineral Resource was prepared in accordance with the guidelines of the 2012 Edition of the JORC Code. To the best of the CP's knowledge there are currently no title, legal, taxation, marketing, permitting, socio-economic or other relevant issues that may materially affect the Mineral Resource described in this report.

The Mineral Resource estimate was conducted using Datamine Studio RM software, together with Microsoft Excel ™ and JMP for data analysis, and Leapfrog Geo for geological modelling. The

Mineral Resource estimate was completed by Mrs Kaylan Bartlett, a Mineral Resource Consultant for MSA under the guidance and supervision of Mr Jeremy Witley, a Principal Resource Consultant for MSA.

Magnetites, contained in three magnetite-rich layers, are the source of vanadium within the deposit. The layers are stratiform and defined by the presence of significant magnetite content (>20%). Three dimensional models of the magnetite-rich layers were constructed by defining the top and bottom contacts and then creating models of the surfaces using Leapfrog Geo software.

Of the 52 diamond drillholes in the database, 14 of the holes were not used for grade estimation as the V_2O_5 grades were found to be whole rock analyses rather than V_2O_5 grades of magnetite. A total of 6 intersections of the Upper Seam, 12 for the Intermediate Seam and 31 for the Lower Seam were used to estimate the grade of the Mineral Resource.

Attributes were estimated into the individual mineralised zones using the 2 m composite drillhole sample data for each seam. Inverse distance to the power of two was used to estimate the grades into parent cells. There were no SG data available. An average density of 3.3 t/m^3 was provided by Vametco, which was assigned to the seams for the tonnage estimate.

The search ellipse used for estimation was based on indicative variogram modelling. A search of 200 m by 200 m by 10 m was used to select the sample composites for block estimation. The minimum number of composites required for a block to be estimated is 6 while a maximum of 12 composites was used. These criteria were applied to the Upper, Intermediate and Lower Seam. If a block was not estimated from the initial search ellipse, the ellipse size was doubled. Should a block still not be estimated, a larger search ellipse was used by expanding the search by ten times the original search ellipse extent. The Mineral Resources were estimated and reported in accordance with the 2012 edition of the JORC Code and have an effective date of 06 October 2017 (Table 2).

The Mineral Resource dips at approximately 19° to the northeast and strikes from northwest to southeast. The Upper Seam Mineral Resource extends for approximately 1,570 m along strike and approximately 210 m in the dip direction. The Intermediate Seam Mineral Resource extends for approximately 2,290 m along strike and approximately 350 m in the dip direction. The Lower Seam Mineral Resource extends for approximately 3,540 m along strike and approximately 430 m in the dip direction. The Mineral Resource estimate is limited to 125 m below surface, which is 5 m deeper than that used for the mining study. The mineralisation is open down-dip. The Upper Seam Mineral Resource Estimate is on average 10.7 m thick, the Intermediate Seam 8.9 m and the Lower Seam 30.5 m.

Table 2

Vametco Upper, Intermediate and Lower Seam Mineral Resources, 06 October 2017

Category	Gross				Net (26.6 %)			
	Tonnes (millions)	Magnetite (%)	V_2O_5 % contained in magnetite	Total V (tonnes)	Tonnes (millions)	Magnetite (%)	V_2O_5 % contained in magnetite	Total V Attributable to BML (26.6 %)
Upper Seam								
Inferred	11.8	37.86	1.70	75,947	3.14	37.86	1.70	20,202
Intermediate Seam								
Inferred	21.6	30.45	1.87	122,994	5.75	30.45	1.87	32,716
Lower Seam								
Indicated	61.5	27.23	2.01	336,604	16.36	27.23	2.01	89,537
Inferred	47.4	29.75	1.99	280,620	12.61	29.75	1.99	74,645
Total	**108.9**	**28.33**	**2.00**	**617,224**	**28.97**	**28.33**	**2.00**	**164,182**
Total Mineral Resource								
Indicated	61.5	27.23	2.01	336,604	16.36	27.23	2.01	89,537
Inferred	80.9	31.12	1.92	479,561	21.50	31.18	1.92	127,563
Total	**142.4**	**29.44**	**1.96**	**816,165**	**37.86**	**27.47**	**1.96**	**217,100**

Notes: *All tabulated data has been rounded therefore minor computational errors may occur.*
The Mineral Resources are total in-situ Mineral Resources for the Project.
Bushveld Mineral Limited attributable share @ 26.6 %
Mineral Resources which are not Ore Reserves have no demonstrated economic viability.
Mineral Resources are inclusive of Ore Reserves.

Ore Reserves

Ore Reserves are declared for open pits inside the Life of Mine ("LOM") pit design (the optimised pit shell in this instance). Ore tonnes and grades are reported as Run of Mine ("ROM") tonnes after modifying factors for mining losses and dilution have been applied as expected to be delivered to the concentrator (i.e. before beneficiation plant recoveries have been applied). Ore Reserves are declared for in-situ tonnes in the pits and exclude any stockpiles.

All tonnages reported are on a dry basis.

There are no Measured Mineral Resources classified at Vametco Mine and therefore no Mineral Resources were converted into Proven Ore Reserves (Table 3).

Table 3
Vametco Upper, Intermediate and Lower magnetite seams Ore Reserves, 16 October 2017

		Gross				Net (26.6 %)			
Mineralised Layer	**Reserve Category**	**Tonnage (Mt)**	**Percentage Magnetics**	**Percentage V_2O_5 in magnetics**	**Contained Metal Total V (tonnes)**	**Tonnage (Mt)**	**Percentage Magnetics**	**Percentage V_2O_5 in magnetics**	**Contained Metal Total V (tonnes)**
Upper Seam (US)	Proven	-	-	-	-	-	-		-
	Probable	-	-	-	-	-	-		-
	Total	**-**	**-**	**-**	**-**	**-**	**-**		**-**
Intermediate Seams (IS)	Proven	-	-	-	-	-	-		-
	Probable	-	-	-	-	-	-		-
	Total	**-**	**-**	**-**	**-**	**-**	**-**		**-**
Lower Seams	Proven	-	-	-	-	-	-		-
	Probable	26.12	26.79	1.96	137,152	6.95	26.79	1.96	36,482
	Total	**26.12**	**26.79**	**1.96**	**137,152**	**6.95**	**26.79**	**1.96**	**36,482**

Valuation Summary

MSA took into consideration the AIM Rules and with specific reference to the AIM June 2009 - Note for Mining and Oil & Gas Companies, which prescribes a valuation based on NPV (post-tax) at a discount rate of 10 % ("NPV10"). MSA thus considers the results of the Income approach to be most applicable. On a NPV10 basis Vametco is valued at US$ 211 million. MSA then estimates a Value of US$ 56.1 million for BML's 26.6 % interest in the Vametco.

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1 INTRODUCTION

1.1 Scope of Work

The MSA Group (Pty) Ltd ("MSA") has been appointed by Bushveld Minerals Limited ("BML" or "The Company") to provide an independent Competent Person's Report ("CPR") on Bushveld Vametco Holdings (Pty) Ltd ("Vametco") vanadium mine mineral asset located in the North-West Province of the Republic of South Africa, in which the Company holds, or has the right to, a 26.6 % indirect interest. The Company also holds interests in additional vanadium exploration properties adjacent to or near the mine in North West and Gauteng provinces, or other indirect interests in terms of Joint Venture Agreements with third parties. Collectively these mineral assets are termed "the Properties".

BML is a mineral exploration and development company listed on the Alternative Investment Market ("AIM") of the London Stock Exchange. MSA understands that BML is currently seeking to acquire 55 % of the issued share capital of Vametco from Yellow Dragon Holdings (the "Acquisition"). Following the Acquisition, the Company's indirect interest in Vametco will increase to 59.1 %.

MSA is acting as BML's Competent Person as defined by the rules of the London Stock Exchange, governing the admission of securities to AIM (the "AIM Rules") and the Guidance Note for Mining, Oil and Gas Companies of the London Stock Exchange dated June 2009 ("AIM Guidance Notes") in relation to the proposed Acquisition.

MSA understands that this CPR will be included as part of an AIM admission document to be published by Bushveld Minerals Limited (the "Admission Document").

The CPR has been prepared:

- in accordance with the AIM Note for Mining and Oil & Gas Companies (2009) published by the London Stock Exchange; and
- in compliance with and to the extent required by the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012) published by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and Minerals Council of Australia (the "JORC Code").

This report replaces the previous Competent Person's Report, completed by VBKOM, dated 13 April 2016. No additional geological information or drillholes were added since then, and the geological model was not changed. A number of historical drillholes which were determined to have incorrect assay information were removed from the database used to calculate the Mineral Resources and Ore Reserves, and there have been changes to these.

1.2 Declarations

MSA will be paid a fee for the preparation of this Report in accordance with normal consulting practice. MSA's remuneration is not linked to Vametco's operations or any of the projects owned by Bushveld Minerals Limited. Neither MSA nor any of its employees and associates employed in the preparation of this CPR has any pecuniary or beneficial interest in Vametco or Bushveld Minerals Limited. MSA considers itself to be independent.

The CPR was peer reviewed internally to MSA, by suitably qualified geologists and mining engineers.

1.3 Consent

MSA consents to the issuing of this report in the form and content in which it is to be included in documentation distributed to the directors of Bushveld Minerals, and in the Admission Document. Neither the whole nor any part of this report nor any reference thereto may be included in any other document without the prior written consent of MSA as to the form and context in which it appears.

1.4 Principal Sources of Information

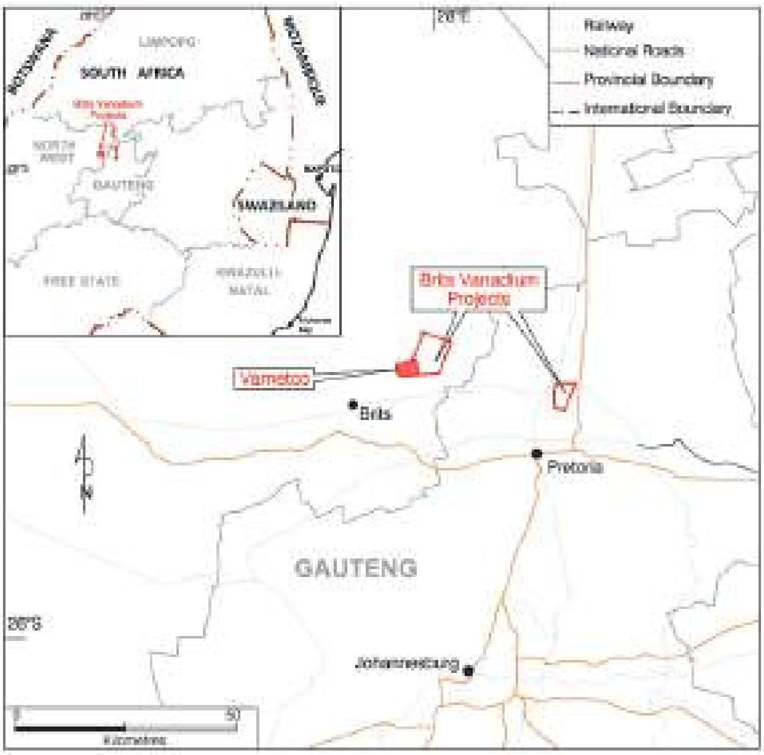
The principal source of information is a previous competent person's report (VBKOM 2016) undertaken by Brendan Botha and Wynand Botes, Principal Consultants from VBKOM (Pty) Ltd. All information used to complete the VBKOM 2016 report was provided by Vametco to VBKOM. MSA reviewed the data presented and assessed it in terms of the JORC Code (as revised in 2012). MSA could not verify all third-party information as some of the work completed for the Vametco Mine pre-dates the appointment of MSA. MSA has also based its review of the Properties on information provided by Bushveld Minerals Limited. A site visit was conducted on 31 August 2017 by Messrs Philip Mostert and Jeremy Witley of the MSA Group. The authors have endeavoured, by making all reasonable enquiries, to confirm the authenticity and completeness of the technical data upon which the Independent Technical Report is based. A final draft of the report was also provided to Bushveld Minerals Limited, along with a written request to identify any material errors or omissions prior to lodgement.

2 PROPERTY DESCRIPTION AND LOCATION

2.1 Location

The Vametco Mine is situated about 6.5 km northeast of the town of Madibeng (formerly known as Brits). The mine is an operational opencast vanadium mine, located in the Bojanala Platinum District within the North-West Province of the Republic of South Africa. The operations are near Mmakau and Rankothea villages, which are approximately 500 m to the south and west of the operations respectively. The additional exploration properties are located adjacent to or near to the mine, as depicted in Figure 2-1.

Figure 2-1
Location of the Vametco Mine and additional exploration properties



The Property where mining operations take place, is represented by two portions of farms: Portion 1 of the farm Krokodilkraal 426JQ and the Rest of Portion 1 of Uitvalgrond farm 431JQ, as shown in Figure 2-2. A valid Mining Right exists for the Property, which is 1507.74 ha in size (Table 2-1).

Figure 2-2
Boundary lines of the Vametco Operations (bold) and other licences

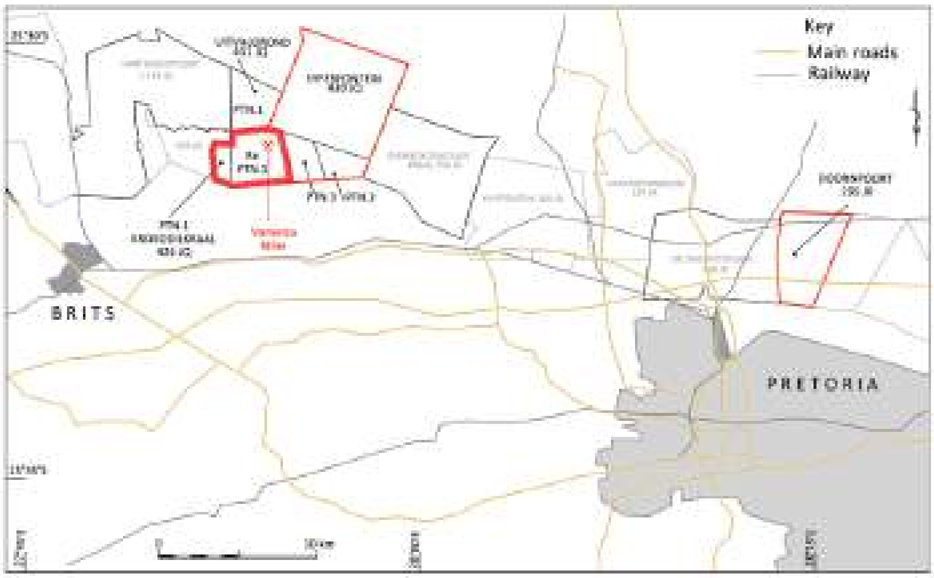


Table 2-1 **Vametco Mine Property Coordinates (WGS84 LO29)**		
ID	**Y-Coordinates**	**X-Coordinates**
A	-88,500.35	+2,827,573.16
B	-90,954.98	+2,827,243.69
C	-91,839.74	+2,827,530.57
D	-92,117.33	+2,830,810.63
E	-88,518.93	+2,831,115.17
H	-87,464.74	+2,830,653.22
I	-87,455.21	+2,828,822.81
J	-87,675.54	+2,828,211.86
K	-88,503.96	+2,828,262.36
Back to A	-88,500.35	+2,827,573.16

2.2 Country Profile

The Republic of South Africa ("South Africa") is located on the southern tip of Africa with a land surface area of 1.2 million km^2. South Africa is the second largest economy in Africa with the key economic sectors being mining services and transport, energy, manufacturing, tourism and agriculture.

South Africa has a constitutional multiparty democracy with three levels, namely local, provincial and national government. The current ruling party is the African National Congress with the Democratic Alliance as the official opposition. Legislation regarding mineral rights and tenure is also well established.

The country has an excellent transportation infrastructure with regards to rail, road and air transportation facilities (international and domestic). There is also very well-developed telecommunication infrastructure through the country with easy accessible internet in most cities and towns.

2.3 Mineral Tenure, Permitting, rights and Agreements

2.3.1 Legal Landowners

Current operations are on parts of the farms "Krokodilkraal" and "Uitvalgrond". These farms are owned by Historically Disadvantaged South Africans (HDSAs) and have been since 1912. Vametco had long-term lease agreements in place with the registered landowners and co-owners listed in Table 2-2 until the conversion of the Old Order Mining Right to the New Order Mining Right was executed during April 2013. The parties are currently in negotiations to secure surface lease agreements which will be retrospectively implemented to April 2013.

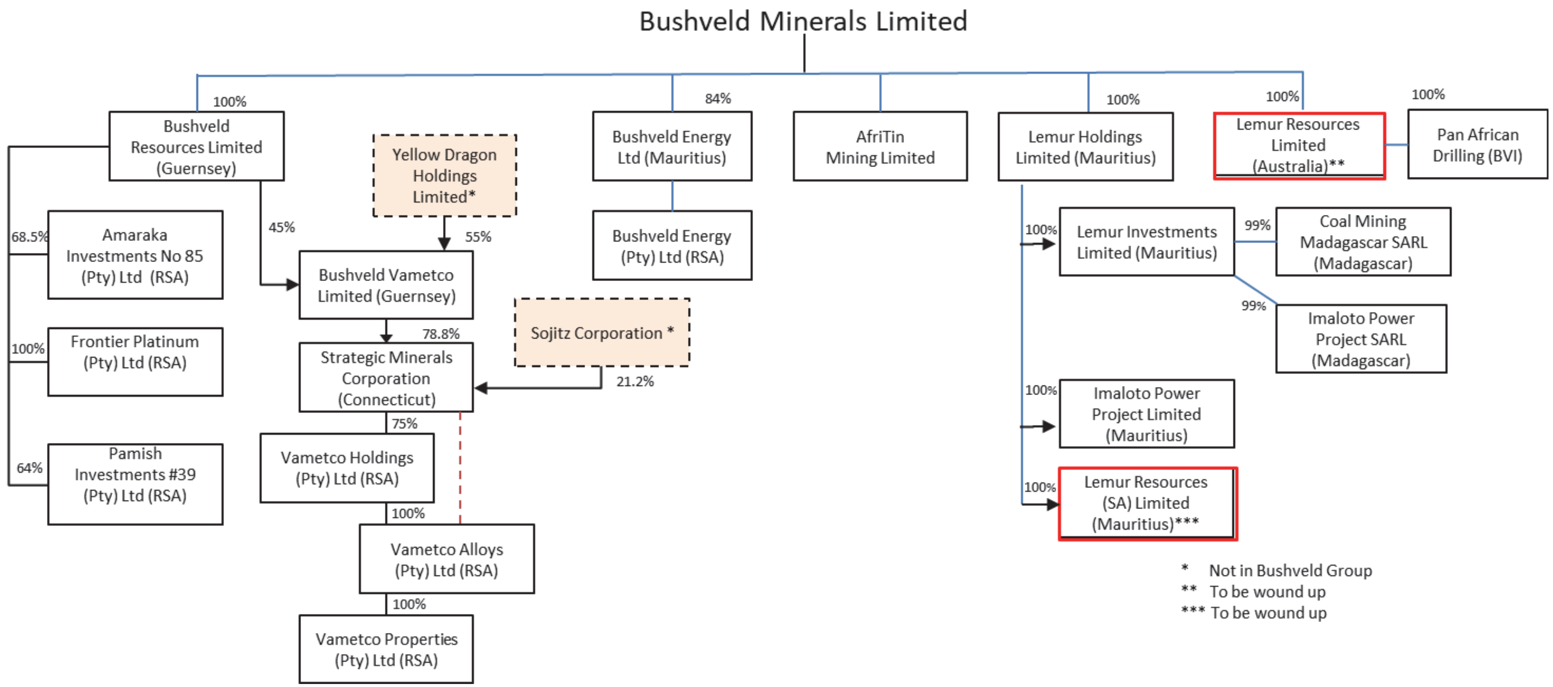
Table 2-2
Registered Landowners of the Properties

Property	Area (ha)	Registered Land Owners and Co-owners
Krokodilkraal (462JQ)	272.1358	Co-Owners: c/o Fabricius & Engelbrecht Attorneys 102 Amos Street Colbyn Pretoria
Uitvalgrond (431JQ)	1235.6069	Co-Owners: c/o Sixabela Incorporated P.O. Box 12520 Hatfield 0028

2.3.2 Mining Right

A new order mining right (No: NW 30/5/1/2/2/08 MR) is held by Vametco Holdings (Pty) Ltd, for the vanadium operations. The converted mining right replaced the old order mining right held by Vametco which consists of 75 % Strategic Minerals Corporation, 15 % Business Venture Investment Group no 973 and 10 % Business Venture Investment Group no 1833, representing community based trusts and co-operations. The mining right is valid for a period of 25 years and has an expiry date of 23 April 2038. The ownership structure is depicted in Figure 2-3. Bushveld Minerals Limited also holds 75 % of prospecting right 10142 PR (on farm Doornpoort 295 JR), 65 % of prospecting right 11124 PR (on Portion 3 of Uitvalgrond) and 100 % of mining right NW10004MR (on farm Uitvalgrond Portion 2 and Syferfontein 430 J). NW10004MR has been suspended pending resolution of outstanding issues of the community (Table 2-3).

Figure 2-3
Vametco Ownership Structure



Note: *Lemur Resources Limited has conditionally acquired Sable Platinum Mining Limited's shares in three companies: (i) Great 1 Line Invest (Pty) Ltd, (ii) Gemsbok Magnetite (Pty) Ltd and (iii) Caber Trade & Invest 1 (Pty), the transaction being conditional on receipt of section 11 approval. Application for section 11 approvals have been made in the name of Bushveld Resources Limited.*

Following the completion of the Acquisition, Bushveld Minerals Limited's interest in Bushveld Vametco Limited will increase to 100 %.

Table 2-3
Registered Landowners of the Properties

Asset	Holder	Interest	Status	License Expiry date	License Area	Comments
Vametco, South Africa	Vametco Holdings (Pty) Ltd[1]	100 %	Operating	23 April 2038	1549 Ha	NW 30/5/1/2/2/08 MR
Brits Vanadium Project, Doornpoort 295 JR,[2]	Gemsbok Platinum (Pty) Ltd	100 %	Exploration	12 November 2018	2779.6455 Ha	Prospecting Right 10142 PR for vanadium, iron and rutile
Brits Vanadium Project, Portion 3 of Uitvalgrond	Great 1 Line Invest (Pty) Ltd	100 %	Exploration	3 November 2019	801.17 Ha	Prospecting Right 11124 PR
Brits Vanadium Project, Uitvalgrond Portion 2 and Syferfontein 430 J	Caber Trade	100 %	Exploration	N/A Until outstanding issues have been resolved	7549 Ha	NW10004MR has been suspended pending resolution of outstanding issues of the community.

[1] Bushveld Minerals has a 26.595 % net attributable interest in Vametco Holdings (Pty) Limited. On completion of the proposed Acquisition, Bushveld Mineral's net attributable interest will increase to 59.1%.

[2] Lemur Resources Limited has conditionally acquired Sable Platinum Mining Limited's shares in three companies: (i) Great 1 Line Invest (Pty) Ltd, (ii) Gemsbok Magnetite (Pty) Ltd and (iii) Caber Trade & Invest 1 (Pty), the transaction being conditional on receipt of section 11 approval. Application for section 11 approvals have been made in the name of Bushveld Resources Limited. Once Section 11 approval is received, Bushveld Resources will own 74% of Gemsbok, 65 % of Great 1 Line Invest (Pty) Limited and 100 % of Caber Trade

2.3.3 Servitude Rights

Vametco holds servitude rights over the water line that leads to the plant. Eskom has servitude rights for the power line, which crosses the Property.

2.4 Royalties and Liabilities

2.4.1 Mineral and Petroleum Resources Royalty Act (2008)

Royalties are payable for the duration of the mining right, as per Section 25 (2) (g) of Mineral and Petroleum Resources Development Act ("MPRDA"),

The Mineral and Petroleum Resources Royalty Act (2008) ("Royalty Act") requires a royalty fee be paid to the National Revenue Fund in respect to the transfer of mineral resources extracted from within the Republic. According to Schedule 2 of the Royalty Act, vanadium >1 % V_2O_5 equivalent and <2 % calcium ("CaO") and silica ("SiO_2") bearing gangue minerals is classified as an unrefined mineral resource.

The royalty payable for an unrefined mineral resource is calculated as follows:

- 0.5 + [earnings before interest and taxes / (gross sales in respect of unrefined mineral resource x 9)] x 100.

The royalty is required bi-annually with the deficit between forecast sales and actual sales payable in a third payment.

3 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

3.1 Accessibility

The operation is near urban developments of variable sizes. The roads are predominantly tarred and undergo regular maintenance. The mine can be accessed by gravel road from Madibeng/Lethlabile or the road leading out of Mothutlung-Krokodilkraal, which passes the southwestern corner of the Property.

From the capital city Pretoria, the N4 national road runs to the west past Madibeng. The R511 provincial road splits off from the N4 and continues into Madibeng. A provincial road runs from the eastern side of Madibeng to the intersection where the Vametco road gives access to the mine. Another gravel road from Madibeng/Lethlabile tar road also gives access to the mine. The major routes in the area are described in more detail in Table 3-1.

Table 3-1
Access Roads Leading to the Vametco Mine

Road	Jurisdiction	Road Function	Road Surfacing	Typical Width of Road
K16	North West Dept. of Transport, Roads and Community Safety	Provincial class 3 road with collector-distributor function. Connects Lethlabile with Madibeng and Rosslyn. The K16 is oriented in a north-south direction.	Tar	Single carriageway
Vametco Road	Madibeng Local Municipality	Municipal road that provides mine access. The Vametco road is oriented in an east-west direction. Connects Rankothea village with Madibeng and carries very low traffic volumes (approximately 60 - 150 vehicles per hour)	Tarred for 170 m from K16, gravel for the remainder of the section	Single carriageway
Mothutlung Road	Madibeng Local Municipality	Municipal road that connects Rankothea village and Mothutlung. The Mothutlung road runs in a north-south direction and carries relatively low traffic volumes (approximately 100 – 150 vehicles per hour)	Tarred	Single carriageway

3.2 Climate and Physiography

The area that the mine operates within is characterised by hot temperatures accompanied by summer rainfall, from mid-October to mid-February. Sunny weather is often followed by afternoon thunderstorms. Temperatures in summer may range between 25 – 35 degrees Celsius (˚C). During the winter months, May to July, much cooler temperatures occur, ranging between 15 to 24 ˚C during the day, and single digit temperatures in the early morning and evening.

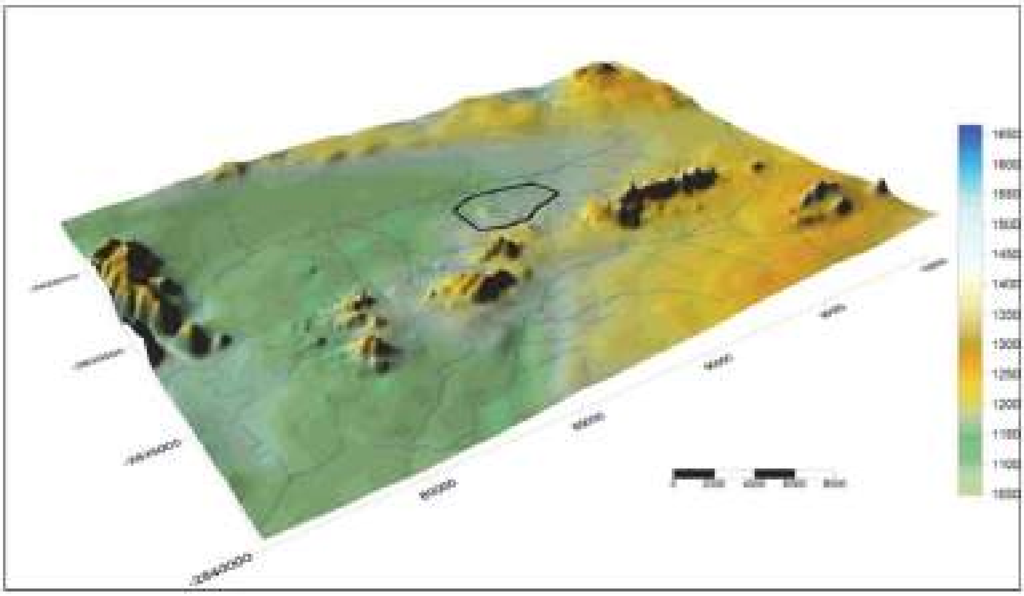
Recent rainfall data from the rainfall weather stations near the operating sites is available; however, rainfall is also recorded at the operating sites. The highest rainfall averages in a year are between October and March (approximately 91 %), while about 9 % of rainfall is recorded from April to September. Table 3-2 shows the monthly distribution of rainfall for the area.

Table 3-2
Average Monthly Rainfall for the Vametco Area

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
%	21.7	14.3	14.7	2.8	1.5	2.05	-	0.95	1.2	7.9	17	15.8	100
Mean	138	91	93.7	18.7	9.63	13.1	-	6.04	7.8	50	109	100	637

The topography of the operations is flat, at an altitude of 1,157 m amsl. A gentle decline exists, trending towards the Rosespruit River, from south to north with a gradient of 1:100. The Rosespruit River flows from east to west. The Swartkoppies hills are prominent to the south of the operations and reach elevation of 1,405 m amsl. A smaller range of hills to the north of the operations occur and reach an altitude of 1,234 m amsl. Figure 3-1 indicates the regional topography.

Figure 3-1
Topography of Area Surrounding the Mine Operations



Source: *VBKOM (2016)*

3.3 Proximity to Population Centres and Nature of Transport

The closest populated area to the Vametco operation is about 500 m from the boundary of the Property and falls within in the Madibeng Local Municipality, which in turn, falls under the administrative jurisdiction of the Bojanala Platinum District Municipality in South Africa's North-West Province. It also falls under the Brits ("Madibeng") Magisterial District, which comprises part of the greater North West Magisterial Districts.

The closest urban area is Madibeng, approximately 6.5 km from the operations. Other villages within a 5 km radius are listed below:

- Mothutlung;
- Krokodilkraal / Rankothea;
- Uitvalgrond / Rabokala;
- Damonsville;
- Mothutlung-A;
- Moumong;
- Ramolapong;
- Tshwara;
- Lerulaneng; and
- Ga-Rankuwa.

The co-owners of Krokodilkraal and Uitvalgrond are the legal landowners of the respective farms and are considered as primary Affected Stakeholders as well as Focus Groups in the Public Participation Programme. The other communities are also recognised as Interested and Affected Parties and were all engaged during the Public Participation Programme.

3.4 General Infrastructure

The mine has been operational since the 1970s, therefore the infrastructure in the area is well established:

- the administrative offices, change houses, plant and workshops are all located to the south-western part of the Property, close to the entrance;
- electricity is provided by a 22 kV power line that crosses the Property on the southern side. This power line supplies enough electricity required to sustain the daily operations of the mine;
- the plant on the mine and other facilities are supplied water that is sourced from six boreholes and a canal; and
- an agricultural aquaduct from Hartebeestpoort Dam passes 500 m from the north-western corner of the Property.

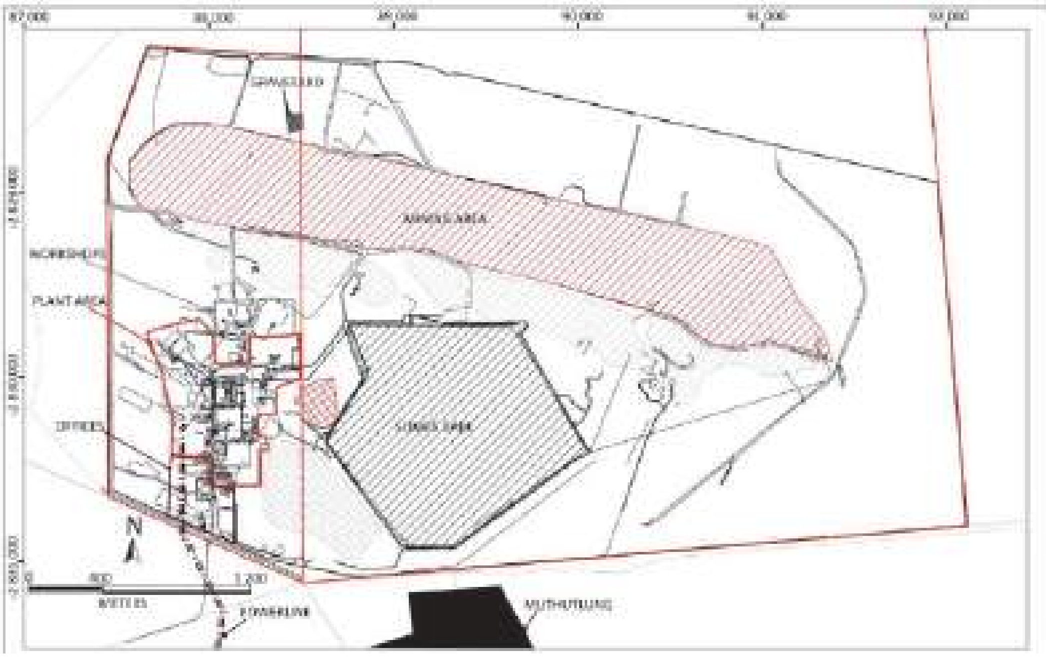
3.5 Mining Infrastructure

The infrastructure at the Vametco Mine is well established. The mine uses of a combination of strip- and open pit mining techniques for ore extraction.

The following key infrastructure exist on the mine:

- all production haul roads – in-pit as well as connecting mining pits with beneficiation facilities;
- beneficiation plant;
- workshops, fuel storage, stores and office buildings;
- high tension power distribution;
- waste dumps and ore stockpile facilities;
- process water dams and slimes deposition facilities; and
- security.

Figure 3-2
Layout of Infrastructure within Mining Area



Source: *VBKOM (2016)*

4 HISTORY

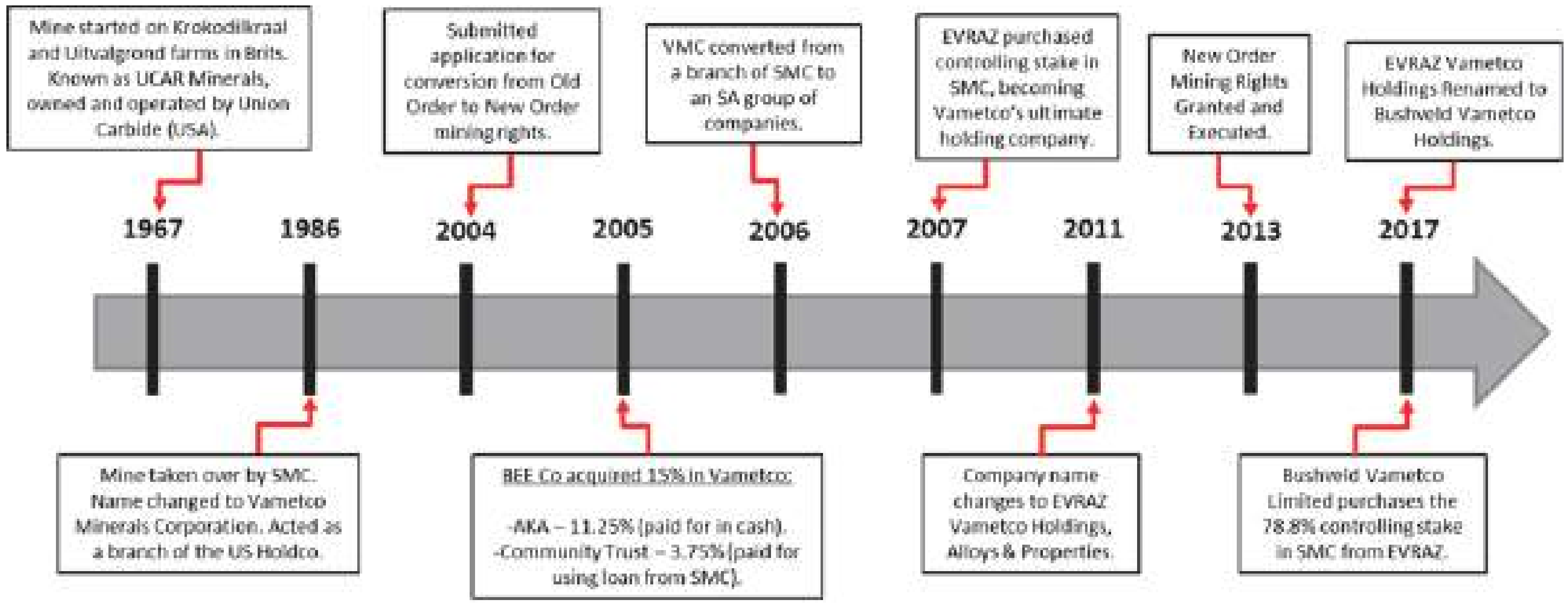
4.1 Previous Ownership

Vametco, owned and operated by Union Carbide (USA), commenced Vanadium mining operations in 1967. Mining took place on the farms Krokodilkraal and Uitvalgrond Portion 1. The properties were leased from the legal landowners. The landowners are a group of Historically Disadvantaged South Africans ("HDSAs"), who engaged in formal lease agreements with Vametco in 1988 for a period of 25 years.

Union Carbide was acquired by Strategic Minerals Corporation ("SMC") in 1986 and was renamed Vametco Minerals Corporation ("VMC"). Vametco Minerals Corporation was a fully owned American subsidiary of SMC until November 2006, when it was converted to a South African Company under the name Vametco Holdings (Pty) Ltd.

Vametco Holdings was majority owned by SMC (75 %) as well as two Business Venture Investment Groups: 15 % by number 973 and 10 % by number 1833. These Groups represent a BEE Strategic Partner and co-owner interests. SMC was a subsidiary of EVRAZ plc, who since 2007, has had a controlling stake in SMC. The name officially changed to EVRAZ Vametco Holdings, Alloys and Properties in 2011. In 2017 Bushveld Vametco Limited purchased the 78.8 % controlling stake in SMC and renamed EVRAZ Vametco Holdings to Bushveld Vametco Holdings. It is planned that the relative shareholding of SMC and Business Venture Investments No 973 will be amended to 74 % and 16 %, respectively, in order to increase the BEE shareholding in the Project to 26 % in line with the Mineral and Petroleum Resources Development Act. Figure 4-1 illustrates the history of the mine.

Figure 4-1
History of Vametco Ownership Structure



***Source**: VBKOM (2016)*

4.2 Previous Exploration and / or Development

Exploration activities took place from 1960 to1982 by Union Carbide. In 2006, 6 diamond drillholes were drilled by Vametco. Historical exploration activities are summarised in Table 4-1.

Table 4-1
Summary of Exploration Activities

Year	Drilling Method	No. of Holes	Purpose
Mid 1960s	Diamond	9	Assess the vanadium magnetite potential
1970	Diamond	6	Follow-up drilling to the earlier drilling campaign
1975-1976	Diamond	16	Outline the vanadium magnetite deposit and operational drilling for Open Pit Mining
	Percussion	28	
1982	Diamond	16	Testing correlation between calcium and fracturing
2006	Diamond	6	Verify seam down-dip continuity of the magnetite rich layers

Mineral Resource estimates considered all diamond core drilling results. Quality assurance/quality control ("QA/QC") outside of the laboratory internal controls was not completed for the historical drilling. However, information from mining operations, which took place from the 1970's, indicate a strong correlation between actual mined vanadium values and values determined from drilling. Due to the correlation, the results are considered acceptable to use in Mineral Resource estimation.

4.3 Previous Mineral Resource Estimates

The previous Mineral Resource Estimate ("MRE") was completed by VBKOM in April 2016. The results of the MRE are summarised in Table 4-2.

Table 4-2
Mineral Resource Estimate for the Vametco Mine as at 31 December 2015

Mineralised Layer	Resource Category	Tonnage (Mt)	% Magnetics	% V in magnetics	% V_2O_5 in magnetics	SiO_2 (%)	CaO (%)
Upper Seam (US)	Measured	-	-	-	-	-	-
	Indicated	-	-	-	-	-	-
	Measured and Indicated	-	-	-	-	-	-
	Inferred	8.45	23.56	0.59	0.71	1.34	0.31
	Total	**8.45**	**23.56**	**0.59**	**0.71**	**1.34**	**0.31**
Intermediate Seam (IS)	Measured	-	-	-	-	-	-
	Indicated	0.37	28.30	1.69	3.02	1.64	0.33
	Measured and Indicated	0.37	28.30	1.69	3.02	1.64	0.33
	Inferred	19.56	34.12	1.46	2.34	1.64	0.33
	Total	**19.94**	**34.01**	**1.46**	**2.35**	**1.64**	**0.33**
Lower Seam (LS)	Measured	-	-	-	-	-	-
	Indicated	34.80	29.64	1.62	2.48	3.72	0.53
	Measured and Indicated	34.80	29.64	1.62	2.48	3.72	0.53
	Inferred	75.43	29.09	1.50	2.02	3.12	0.52
	Total	**110.23**	**29.26**	**1.54**	**2.17**	**3.31**	**0.52**
Total	Measured	-	-	-	-	-	-
	Indicated	35.17	29.63	1.62	2.49	3.70	0.53
	Measured and Indicated	35.17	29.63	1.62	2.49	3.70	0.53
	Inferred	103.45	29.59	1.42	1.97	2.69	0.47
	Total	**138.62**	**29.60**	**1.47**	**2.10**	**2.95**	**0.48**

Source: *VBKOM (2016)*

4.4 Previous Ore/ Mineral Reserve Estimates

The previous Vametco Mine Reserve Report was completed by VBKOM in April of 2016. This report was completed in accordance with the SAMREC Code. The Ore Reserve estimates are shown in Table 4-3.

Table 4-3
Vametco Ore Reserve Statement – VBKOM, effective date: 31 December 2015

Mineralised Layer	Reserve Category	Tonnage (Mt)	% Magnetics	% V in magnetics	% V_2O_5 in magnetics	SiO_2 (%)	CaO (%)
Upper Seam (US)	Proved	-	-	-	-	-	-
	Probable	-	-	-	-	-	-
	Total	0	0	-	-	-	-
Intermediate Seams (IS)	Proven	-	-	-	-	-	-
	Probable	0.35	28.41	1.72	3.08	0	0
	Total	0.35	28.41	1.72	3.08	0	0
Lower Seams	Proven	-	-	-	-	-	-
	Probable	26.42	29.78	1.63	2.54	3.61	0.5
	Total	26.42	29.78	1.63	2.54	3.61	0.5
Total	Proven	-	-	-	-	-	-
	Probable	26.77	29.76	1.63	2.55	3.56	0.49
	Total	26.77	29.76	1.63	2.55	3.56	0.49

Source: *VBKOM (2016)*

4.5 Previous Production

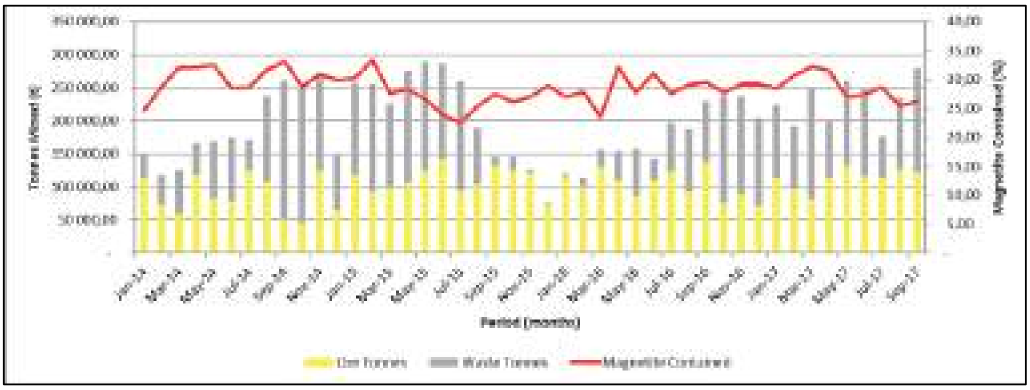
Vametco has the ability to produce vanadium contained final products either through the processing of its vanadium containing magnetite or vanadium containing slag originating from Evraz Steel Mills.

Historically the mining operating philosophy has been adjusted based on the availability of vanadium containing slag. Towards Q2 2016, slag supply had been constrained due to various reasons by Evraz requiring the maximisation of ore mining which has yielded fairly consistent magnetite production barring the maintenance shutdowns in September/October 2016 and March 2017.

With the poor availability and high cost of slag units, it necessitated the operation to initiate various debottlenecking initiatives at relatively low cost, maximising the magnetite production volumes in an attempt to sustain the final product volumes without the slag contribution. To this effect during April 2017, phase 1 of the ore beneficiation expansion capital project had been approved successfully commissioned in September 2017. Phase 2 of the ore beneficiation project will be commissioned towards end of Q2 2018.

Both Figure 4-2 and Figure 4-3 depicts actual production from a mining and final product perspective from January 2014 to September 2017, respectively.

Figure 4-2
Vametco Mining Actual Production (2014 - 2017 Sep)



Source: *Vametco (2017)*

Historically with the availability of slag, waste stripping was not prioritised which resulted in limited ore being exposed. During the twelve months period commencing July 2014 waste stripping had been increased in an attempt to have more ore exposed. This initiative paid off during the periods of low pricing and the non-availability of slag reducing mining costs while maximising magnetite production.

The current mining operating philosophy in 2018 is to increase the waste stripping during elevated price environments ensuring sufficient ore is available at all times for the processing plant in low pricing periods.

Figure 4-3
Vametco Actual Plant Production (2014 - 2017 Sep)

Source: *Vametco (2017)*

Figure 4-3 depicts historical Magnetite and Nitrovan® equivalent production volumes. During the toll processing of slag, Modified Vanadium Oxide ("MVO") volumes were despatched to Evraz for conversion to FeV. The Nitrovan® production volumes are relatively constant on average around 250 tV per month ensuring a sustainable supply to Vametco's customers, the balance being MVO shipped for FeV conversion.

In closure, Vametco Mine has demonstrated its capabilities in achieving production targets, both from a mining and beneficiation point of view.

5 GEOLOGICAL SETTING AND MINERALISATION

5.1 Regional Geology

Vanadium mineralisation occurs within vanadium-bearing titaniferous magnetite-rich layers that occur within the Upper Zone of the Rustenburg Layered Suite of the Bushveld Complex. The magnetite-rich layers are concordant, continuous along strike and down-dip, but vary in thickness.

The Bushveld Complex intruded Pretoria Group meta-sedimentary rocks of the Transvaal Supergroup approximately 2,060 million years ago. The mafic rocks, known as the Rustenburg Layered Suite, comprise five distinct zones:

- Marginal Zone;
- Lower Zone;
- Critical Zone;
- Main Zone; and
- Upper zone.

The base of the Upper Zone is identified by the first occurrence of cumulus magnetite. The Upper Zone has been divided into three different sub-zones, namely:

- Subzone A - at the base;
- Subzone B - cumulus Fe-rich olivine appears; and
- Subzone C - where apatite appears as an additional cumulus phase.

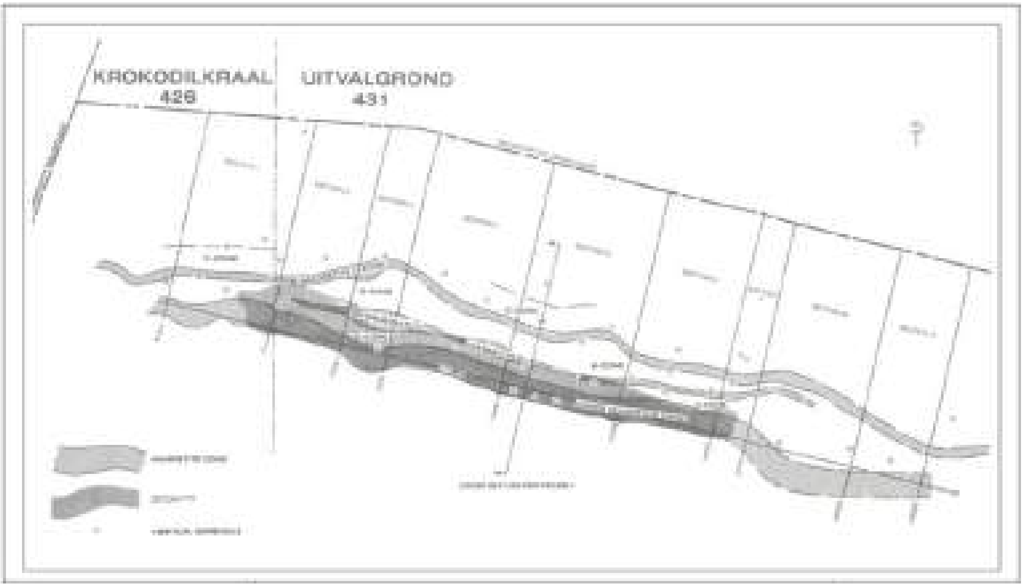
A total of 25 layers of cumulus magnetite exist within the Upper Zone. The fourth layer, known as the Main Magnetite layer, is the most prominent. The magnetite-rich layers vary considerably in thickness, as well as concentrations of magnetite, vanadium pentoxide and titanium dioxide. The highest vanadium contents occur in the lowermost layers, which are characterised by grades of around 1.6 % V_2O_5. This concentration decreases to about 0.25 % higher up in the stratigraphy. The titanium content varies and has an inverse relationship to the vanadium content. Titanium contents vary from about 11 % in the lowest layer to about 18 % TiO_2 in the top layer. Most of the vanadium is present in the magnetite grains, where it substitutes for trivalent iron.

5.2 Local Geology

Both the Main Zone and the Upper Zone occur on the Mining Right. The mafic layers are east-west striking and north dipping, with an average dip of 19°. The lithologies associated with the Main Zone are gabbro, norite, and locally anorthosite and pyroxenite bands. The lithologies in the Upper Zone, that occurs on the northern part of the Property, includes magnetite–bearing gabbro, norite, diorite and some anorthosite and magnetite layers.

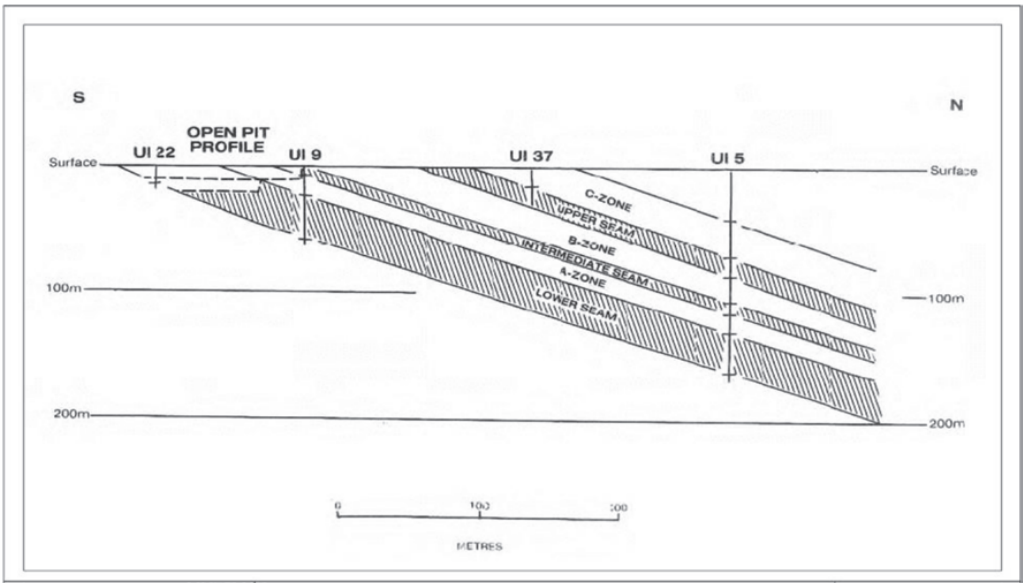
A geological map of the Mineral Rights area is provided in Figure 5-1 and a schematic cross section through the mineralised stratigraphy is provided in Figure 5-2.

Figure 5-1
Geological Map of the Mineral Rights



Source: *VBKOM (2016)*

Figure 5-2
Cross Section through the stratigraphy of the magnetite-rich seams at Vametco



Source: *VBKOM (2016)*

5.2.1 Vanadium Mineralisation

Vanadium-rich magnetite bearing layers occur at the base of the Upper Zone and have a cumulative thickness of over 125 m. According to the magnetite content, the layers of magnetite-bearing rocks have been classified into five major units, then further subdivided into 22 seams. The local stratigraphy with corresponding thicknesses and grade is provided in Table 5-1.

Table 5-1
Thickness and Magnetic Content of the Interpreted Vanadium-Rich Magnetite Layers

Seam Zone	Seam Sub-division	Thickness Range (m)	Magnetics Range (%)
C-Zone	C-2	10.23-12.7	25-38
	C-1	12.0-23.2	14-19
Upper Seam (US)	US-4	1.5-4.3	26-54
	US-3	2.4-4.8	11-19
	US-2	4.2-6.1	33-44
	US-1	1.8-3.8	72-89
B-Zone	B	21.0-51.4	1-4
Intermediate Seam (IS)	INT-3	0.6-8.9	32-48
	INT-2	1.2-5.8	8-21
	INT-1	1.2-3.7	30-48
A-Zone	A-4	1.2-4.0	12-23
	A-3	2.7-7.9	1-7
	A-2	3.0-12.8	10-16
	A-1	7.0-15.5	14-20
Lower Seam (LS)	LS-8	1.5-9.0	18-27
	LS-7	7.0-13.7	33-42
	LS-6	1.8-7.0	21-30
	LS-5	3.0-6.7	7-22
	LS-4	2.6-5.3	25-46
	LS-3	0.8-2.4	46-78
	LS-2	1.5-3.7	23-38
	LS-1	0.9-1.5	64-96

Source: *VBKOM (2016)*

At Vametco the Seam Sub-division was simplified to the Seam Zones for ease of reference and mine planning. All Mineral Resource estimates are based on the Seam Zones.

5.2.2 Geological Models

The long history of mining platinum group elements and chrome from the Bushveld Complex has led to thorough understanding of the geology. The origin of the concordant magnetite layers is a subject of debate with the currently most widely accepted theory being as follows:

- introduction of magma to the magma chamber resetting the crystallisation phase;
- decrease in the magma chamber pressure;
- settling and sorting of crystals through gravity; and
- change in oxygen content of the chamber.

Although their genesis is not fully understood, the occurrence of these magnetite layers in the same stratigraphic units is well documented throughout the Bushveld Complex.

5.2.3 Nature of Deposits on the Property

The magnetite layers are continuous over large distances. The layers strike in an east-west direction for 3.3 km and dip northwards at 19° within the Project area. The lower layers have been intersected at a depth of 270 m down dip, which equates to 830 m down-dip on the plane of mineralisation.

Layer thicknesses are variable. The range of thicknesses for each layer is shown in Table 5-2.

Table 5-2
Layer Thicknesses of Mineralised Layers

Magnetite Layer	Minimum thickness (m)	Maximum thickness (m)	Average thickness (m)
Upper Seam	8.20	13.62	10.91
Intermediate Seam	5.18	16.00	10.89
Lower Seam	1.22	51.58	26.40

Source: *VBKOM (2016)*

6 EXPLORATION

The following sections pertaining to exploration have been sourced from the 2016 VBKOM Competent Persons Report (VBKOM, 2016) and modified where appropriate. The information was verified through discussions with the previous Competent Persons.

6.1 Drilling

Six diamond drillholes were drilled by Vametco in 2006 to verify seam down-dip continuity of the magnetite-rich layers. The data from cores recovered from this drilling campaign, in addition to records of historical diamond drilling, were used for the Mineral Resource Estimate.

Diamond drilling extracts a continuous cylinder of core by cutting the rock with a diamond impregnated drilling head with a central opening. The cut core is pushed up through the opening into a core barrel through the downward force of the diamond drill rig. Once the core barrel is filled, the core is extracted via a wireline or manual extraction by removing each rod manually up to the core barrel. The core is then placed into core trays for storage and processing.

6.1.1 Logging

The core was logged according to lithology and mineralogy It is not known if the logging was performed in accordance to a standardised format and code sheet. The logging was quantitative and cores were not photographed. The complete drilled intersection was logged.

6.1.2 Orientation of Data in Relation to Geological Structure

All drillholes were drilled vertically. The vanadium-rich magnetite-gabbro layers dip at an average of 19° to the north. The drilling intersected the various magnetite layers at an angle, but, given the thickness of the magnetite layers and reasonably high intersection angle, the angle of intersection will not introduce any bias in the estimation.

6.2 Sampling and Assaying

Sampling of the magnetite layers was carried out continuously through the magnetite-rich zones. The majority of the cores were samples at 0.3 m intervals, although this was not always consistent with some holes being sampled at 0.5 m intervals and in some cases more irregular intervals that honoured the geology and intensity of magnetite mineralisation.

The core was split longitudinally in half. The half core samples were then bagged and numbered before being dispatched to the laboratory while the other half remained in the core tray.

The exploration processes were not in accordance with modern day best practice in that no QAQC samples were inserted in the field. Once at the laboratory, the samples were assayed. Typical analyses include:

- percentage of magnetic material by Davis Tube test;
- percentage vanadium pentoxide (V_2O_5) in the magnetic material;
- the percentage of the calcium content in the magnetic material; and
- the percentage of the silica content in the magnetic material.

6.3 Database Management

All drilling information was captured and validated on a Microsoft Excel ™ spreadsheet. Information includes the collar position of the drillhole, drillhole number, logging geologist and depth intervals of various lithologies. The samples taken from the various magnetite layers were captured onto a second Microsoft Excel ™ sheet. The data was then saved on a central computer network for future access.

6.4 QA/QC Analyses

No QAQC results are available for historical drilling programs. Although formal QAQC process do not exist, historical mining grades correlate with grades measured from drillhole intersections in areas that have already been mined. If a sampled intersection did not correlate with the typical mining grade, the sample was flagged for corrective action.

6.5 Location of Data

When mining operations began in 1967, many companies used their own local grid systems, or they made use of the Clark 1880 coordinate system. Most of drillhole collars were surveyed in Clark 1880. The survey was performed with a theodolite referenced from a fixed survey beacon. These coordinates can easily be transformed to WGS 84 LO 29, which is the grid system that is currently being used at the mine.

The collars of 2006 drilling programme were surveyed with a Digital Global Positioning System ("DGPS") with a "real time" repeater from a fixed survey beacon. The six drillholes were surveyed in WGS 84 LO 29.

The topographic survey used in the Mineral Resource Estimate was performed by onsite surveyors and contractors and is an accumulation of surveys completed over the last 30 years using either a theodolite or DGPS. The survey used for the Mineral Resource Estimate is as at 19 April 2017.

The survey methods applied are sufficient to spatially locate topography and drillholes for use in Mineral Resource estimation to a reasonable level of confidence.

6.6 Data Verification, Audits and Reviews

The data has not been verified through an external audit or review process.

7 MINERAL RESOURCE ESTIMATES

The Mineral Resources presented herein have an effective date of 06 October 2017. The Mineral Resource estimate incorporates drilling data from holes completed by Union Carbide Exploration from the mid 1960's until 1982, as well as from holes completed by EVRAZ Vametco in 2006.

The Mineral Resource was prepared in accordance with the guidelines of the 2012 Edition of the JORC Code. To the best of the CP's knowledge there are currently no title, legal, taxation, marketing, permitting, socio-economic or other relevant issues that may materially affect the Mineral Resource described in this report.

The Mineral Resource estimate was conducted using Datamine Studio RM software, together with Microsoft Excel ™ and JMP for data analysis, and Leapfrog Geo for geological modelling. The Mineral Resource estimate was completed by Mrs Kaylan Bartlett, a Mineral Resource Consultant for MSA under the guidance and supervision of Mr Jeremy Witley, a Principal Resource Consultant for MSA.

7.1 Input Data

The database provided by BML for the Mineral Resource estimate consists of information from diamond drillholes ("DD"), and includes information for:

- collar surveys;
- sampling and assay data;
- geology logs, containing rock type and seam name; and
- a digital terrain model (DTM) dated 19 April 2017.

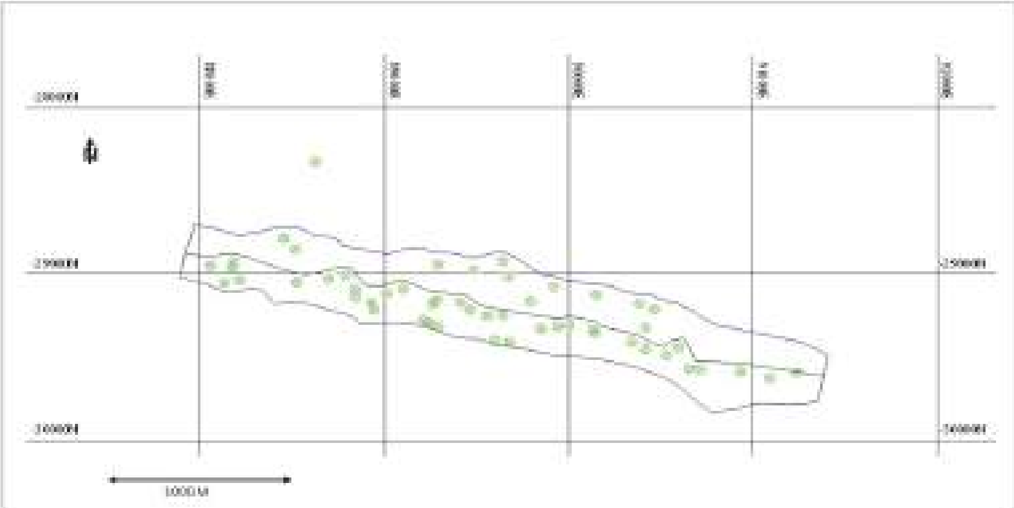
No density data were provided.

The drillhole data were provided in a Microsoft Access database. A summary of the drillhole data in the access database provided to MSA is shown in Table 7-1. The drillhole spacing used at Vametco is not based on a fixed grid pattern.

Table 7-1
Summary of the drillhole data provided to MSA

Drillhole name	Max depth (m)	Drillhole collar coordinates (m) WGS84 LO29		
		X	Y	Z
KO1	41.65	88178.7	-28961.7	1148.0
KO2	21.70	88130.7	-29052.5	1148.9
KO3	20.20	88215.6	-29036.7	1149.7
KR10	49.71	88184.1	-28927.7	1146.4
KR7	128.56	88457.0	-28781.0	1149.7
KR9	43.82	88059.3	-28947.5	1145.8
UI10	43.27	90414.8	-29450.1	1156.2
UI13	45.05	89263.1	-29181.8	1152.2
UI14	46.96	89851.3	-29328.5	1156.5
UI15	57.54	90655.2	-29567.0	1156.3
UI16	59.89	90143.2	-29354.7	1156.4
UI17	46.94	91091.2	-29622.6	1158.9
UI19	5.49	89242.0	-29294.0	1163.1
UI2	127.80	90463.1	-29210.1	1148.9
UI20	5.79	89292.5	-29312.5	1153.2
UI21	6.40	89214.0	-29277.0	1152.4
UI23	8.23	89599.3	-29394.3	1155.9
UI24	8.84	89679.1	-29409.6	1156.8
UI25	63.74	89414.8	-29170.7	1152.0
UI26	70.76	90003.7	-29305.1	1156.4
UI27	67.40	90595.6	-29440.6	1155.2
UI28	59.47	90928.7	-29585.9	1157.8
UI29	67.10	91235.3	-29590.9	1159.6
UI30	68.01	89102.5	-29087.1	1151.9
UI31	68.01	88791.1	-29005.8	1151.0
UI32	83.26	88516.9	-28849.4	1146.5
UI44	50.93	89792.8	-29163.4	1154.1
UI46	19.82	90416.1	-29322.7	1154.6
UI5	163.36	89642.2	-28921.9	1151.3
UI6	270.20	88627.1	-28321.3	1143.2
UI7	32.16	88526.0	-29048.1	1151.3
UI8	37.03	88944.9	-29214.6	1154.4
UI9	56.50	89558.6	-29249.1	1153.7
UO1	50.50	88702.4	-29026.7	1152.1
UO10	59.60	89012.6	-29115.3	1152.9
UO11	50.60	89466.6	-29213.9	1151.7
UO12	52.90	90342.3	-29407.1	1156.2
UO13	62.90	90715.4	-29570.4	1156.5
UO2	85.69	88842.0	-29092.1	1154.3
UO3	28.88	88929.0	-29170.9	1134.5
UO4	71.33	89283.8	-29156.6	1148.1
UO5	67.75	89643.0	-29246.5	1152.9
UO6	76.90	89940.8	-29314.6	1156.1
UO7	65.20	90131.8	-29334.7	1156.1
UO8	47.80	90531.0	-29486.4	1155.8
UO9	26.94	88842.4	-29138.8	1134.6
VA1	127.88	89289.5	-28943.8	1150.7
VA2	141.12	89486.0	-28976.3	1151.0
VA3	137.80	89675.5	-29013.6	1152.3
VA4	137.75	89918.1	-29076.3	1149.0
VA5	133.55	90147.8	-29124.5	1153.2
VA6	133.19	90382.0	-29176.1	1154.5

Figure 7-1
Drillhole Localities within the Vametco Mining Right Area.



Source: *VBKOM (2016)*

The KO, KR, UI and UO series holes were drilled by Union Carbide Exploration from the mid 1960's until 1982. The VA series holes (VA1 to VA6) were drilled by EVRAZ Vametco in 2006.

The holes were drilled downwards through the magnetite layers. Not all the layers were intersected in each hole, some of the holes being collared within the footwall of the Upper and Intermediate Seams or some stopping before the Lower Seam was reached. The drillholes were drilled vertically or inclined downwards between 46° and 58° in a south-westerly direction. The drillholes intersected the mineralised zones at a spacing of between approximately 50 m and 300 m on the plane of mineralisation.

7.2 Exploratory Analysis of the Raw Data

The data provided by BML consist of sampling and logging data from 52 DD holes. The following attributes are of direct relevance to the estimate:

- vanadium pentoxide ("V_2O_5"), calcium oxide ("CaO"), and silicon dioxide ("SiO_2") assays, and magnetite content (Mag) in percent. The magnetite content is the result of Davies Tube tests. All assays were assumed to be the assays of the Davies Tube concentrate; and
- seam names – Upper ("US"), Intermediate ("IS") and Lower Seam ("LS").

V_2O_5 mineralisation is known to occur within continuous layers of magnetite-rich gabbro in the Upper Zone. Drilling intersected magnetite mineralisation in all the holes drilled along 3.1 km of strike of the 4.7 km mining license area. The maximum depth of the intersections of the Upper, Intermediate and Lower Seams is at approximately 60 m, 100 m and 150 m below surface respectively. The average drillhole spacing is 200 m by 150 m.

One hole (UI16) was drilled 490 m to the northeast of the main drilling area, intersecting the Lower Seam. It is expected that the Upper and Intermediate Seams should be intersected in UI16, but these were not logged or sampled. All other holes intersected Upper and Intermediate Seams where expected.

The Upper Seam drilled thickness is between 6.78 m and 13.62 m with an average thickness of 10.70 m. This zone is generally the highest magnetite content and lowest V_2O_5 grade within the magnetite.

The Intermediate Seam drilled thickness is between 5.18 m and 15.10 m with an average thickness of 8.97 m. The magnetite content and V_2O_5 grade of the magnetite is generally between that of the Upper and Lower Seam.

The Lower Seam intersection drilled thickness is between 3.96 m and 51.57 m with an average thickness of 30.58 m. This zone is the thickest of the three magnetite layers and has the highest V_2O_5 magnetite grade.

7.2.1 Validation of the data

The validation process consisted of:

- examining the sample assay, collar survey and geology data to ensure that the data are complete for all drillholes;
- examining the de-surveyed data in three dimensions to check for spatial errors;
- examining the assay data to ascertain whether they are within expected ranges; and
- checks for "From-To" errors, to ensure that the sample data do not overlap one another or that there are no unexplained gaps between samples.

The data validation exercise revealed the following:

- as at the effective date of this report there were no outstanding drilling data;
- no SG measurements were supplied;
- there were no unresolved errors relating to missing intervals and overlaps in the drillhole logging data;
- no default values were found;
- the position where sampling of the core commenced and ended for each layer was based on the occurrence of significant magnetite concentration – greater than approximately 20 %. Within the individual layers, zones of low-grade are apparent. The low-grade zones were analysed for magnetite content but were not always assayed for V_2O_5, SiO_2 or CaO unless the magnetite was greater than approximately 20 %;
- examination of the drillhole data in three dimensions shows that the collar coordinates of the drillholes plot in their expected positions; and
- high-grade assays were checked, and none were found that are outside of expected limits for the style of mineralisation at the Project.

A further check was made by comparing the V_2O_5 assays with the magnetite content, as it is expected that the grade should not vary considerably in the magnetite concentrate between holes within an individual layer. Two populations of data were found, one with a positive linear relationship between V_2O_5 grade and magnetite content and another where the V_2O_5 grade is more or less constant. It was concluded that the V_2O_5 assays in the database are a mixture of whole rock and concentrate assays. The two populations were discriminated and the whole rock assay data was removed from the estimation data. The holes excluded from the estimate are all the UI holes up to and including UI25 (UI02, UI05 to UI10, UI13 to UI17, UI19 to UI21 and UI23 to UI25) and KR9. The positions of these holes were examined and they were found to be in close proximity to the holes that were accepted and so no impact on the overall drilling grid occurred.

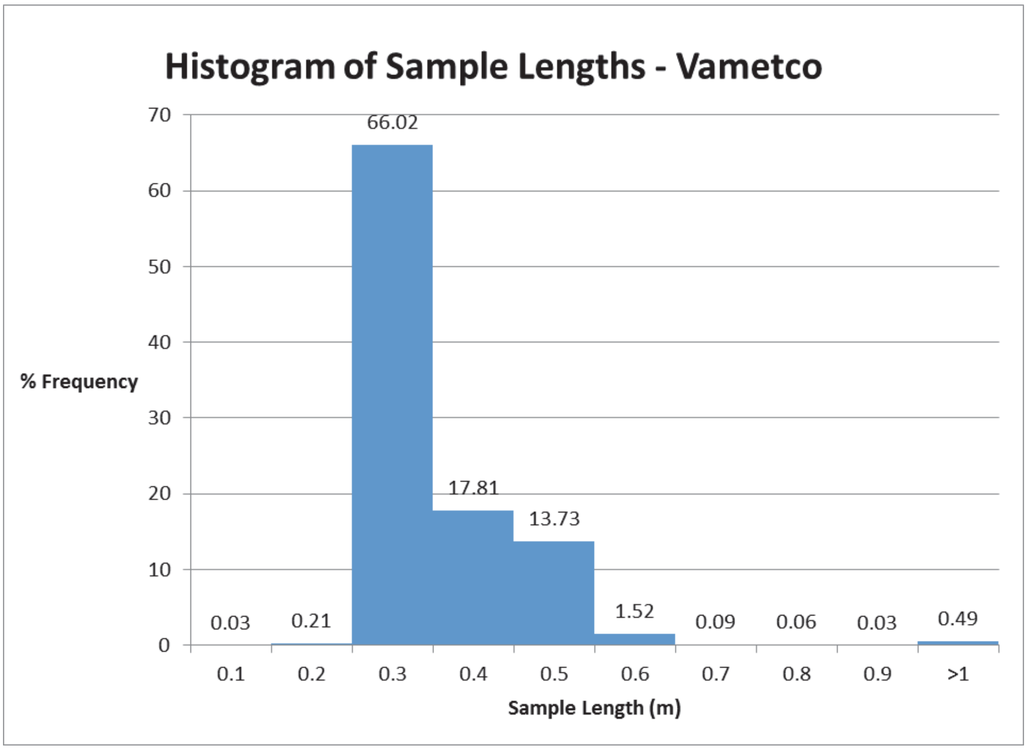
The un-assayed data within the models were left as null values rather than zero values, as the estimate is for the grade in magnetite and the values are relatively constant. This allows for estimation into the un-assayed data using the surrounding assay data. Assigning a zero value would bias the estimate.

7.2.2 Statistics of the Sample Data

A total of 3,792 sample assays occur in the database for the Project, of which 3,268 were used for grade estimation once the whole rock assays were excluded.

A histogram of the accepted sample lengths is presented in Figure 7-2. 65 % of the sample lengths are 0.3 m or less. No relationship between sample length and V_2O_5 grade is apparent.

Figure 7-2
Histogram of the accepted sample length data



7.2.3 Statistics of the Assay Data

7.2.3.1 Univariate Analysis

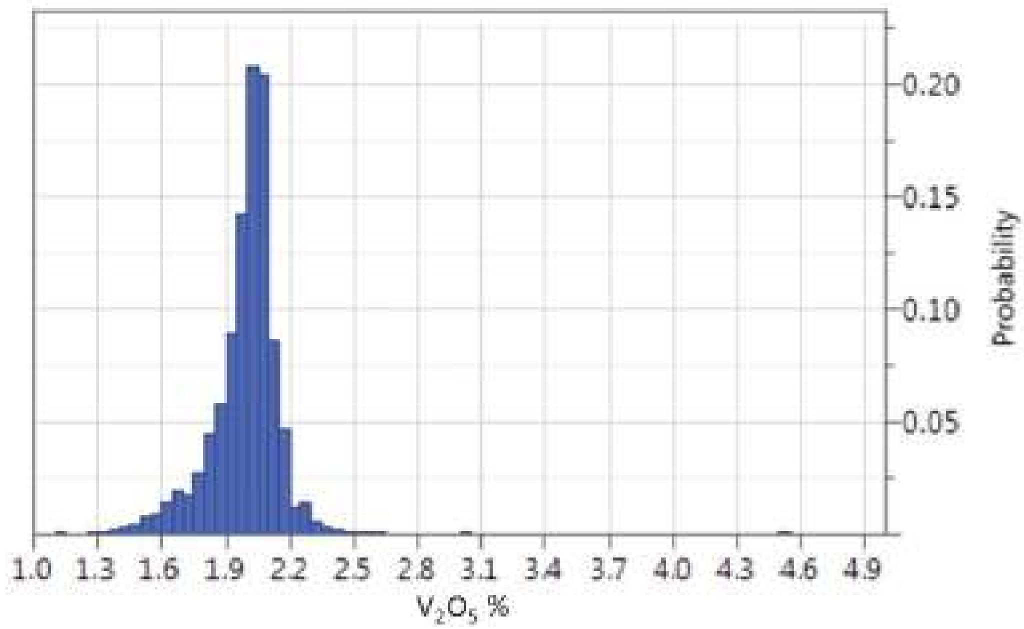
A summary of the assay data statistics for the raw data at Vametco is shown in Table 7-2.

Table 7-2
Summary of the raw validated sample assay data at Vametco (length-weighted)

Variable	Number of assays	Mean value (%)	Minimum value (%)	Maximum value (%)
Mag	3,268	28.06	0.05	95.30
V_2O_5	2,601	1.98	1.11	4.50
SiO_2	1,805	3.10	0.14	13.88
CaO	1,805	0.49	0.05	4.06

The V_2O_5 assay data were examined in order to understand the general grade distribution. The data distribution is close to bell shaped with a slight negative skew (Figure 7-3).

Figure 7-3
Histogram for V_2O_5 grade data



7.2.3.2 Bivariate Analysis

Scatterplots were constructed that compare the grades of each variable with one another in order to understand any relationships that may exist in the data that should be preserved in the Mineral

Resource estimate. A weak linear relationship between SiO_2 and CaO grade was observed, with the grade of SiO_2 increasing with increasing grade of CaO.

7.2.4 Summary of the Exploratory Analysis of the Raw Dataset

- Most sample lengths are 0.30 m or less.
- The host rock to the vanadium mineralisation is magnetite-rich gabbro contained within three layers or seams.
- The occurrence of magnetite was defined by the sampling that represents the top and bottom of each magnetite-rich seam.
- Low grade zones defined by low magnetite content were not assayed.
- No SG values were supplied.

7.3 Geological Modelling

7.3.1 Topography

A high-resolution digital terrain model ("DTM") of the topography was supplied to MSA by Bushveld-Vametco for the mine area (Figure 7-4). This includes a recent open pit survey (19 April 2017), which allowed for the reporting of the remaining Mineral Resource.

Figure 7-4
Isometric view of the DTM supplied – approximate view from above

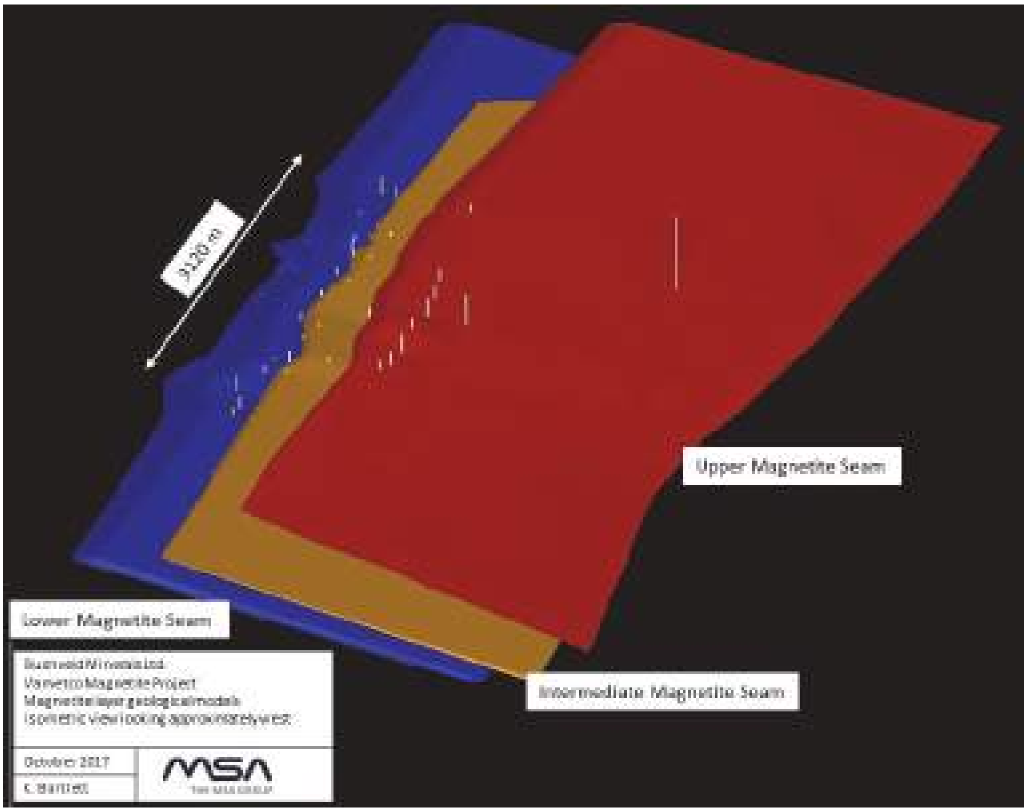
7.3.2 Mineralised Zones

The geological model was based on information obtained from the cores of 52 DD holes.

A simplified geological model of three magnetite layers was modelled based on the sampling and logging of the drillholes (Figure 7-5). Internal waste zones were not separately defined.

Figure 7-5

Isometric view of the magnetite layers geological model, looking to the northwest



No faults have been modelled within the deposit.

Mining has occurred on the Lower Seam along most of the defined strike length near surface. The northing and easting extents of these open pit workings are well defined through the DTM topography provided by BML. The extent of the open pit mining was removed from the grade block model to account for depletion.

7.3.3 Oxidation/Weathering Surfaces

No overburden/weathering horizon has been modelled. Most of the near surface material has been mined.

7.4 Statistical Analysis of the Composite Data

The data within each magnetite layer were composited to 2 m lengths and summary statistics were compiled for each mineralised zone (Table 7-3).

Table 7-3
Summary statistics of the 2 m composite assay data

Variable	Number of composites	Min (%)	Max (%)	Mean (%)	CV	Skewness
Upper Seam						
Mag	32	0.75	87.95	38.57	0.87	0.76
V_2O_5	29	1.46	2.37	1.72	0.13	1.73
CaO	29	0.08	1.39	0.44	1.08	1.31
SiO_2	29	0.47	5.38	2.09	0.80	1.05
Intermediate Seam						
Mag	55	12.70	58.35	30.92	0.56	0.39
V_2O_5	55	1.39	2.16	1.86	0.11	-0.35
CaO	34	0.15	3.31	0.46	1.58	5.05
SiO_2	34	1.10	7.98	2.11	0.82	3.46
Lower Seam						
Mag	470	0.40	70.25	27.36	0.72	0.64
V_2O_5	420	1.53	2.40	2.01	0.07	-0.47
CaO	318	0.11	3.74	0.55	1.29	3.57
SiO_2	318	0.84	13.34	3.41	0.80	2.27

The statistical analysis revealed:

- most of the data are in the Lower Seam;
- the Upper and Intermediate Seams have the highest magnetite concentration;
- the average V_2O_5 grade of the magnetite increases from the Upper Seam to the Lower Seam;
- the majority of the histograms are positively skewed, except for V_2O_5 in the Intermediate Seam and V_2O_5 in the Lower Seam which are negatively skewed;
- the coefficient of variation ("CV") is low for magnetite content (0.56 and 0.87), V_2O_5 (0.07 and 0.13) and SiO_2 (0.80 and 0.82) grade; and
- the CV for CaO is the highest - between 1.08 and 1.58.

7.4.1 Cutting and Capping

The log probability plots and histograms of the composite data were examined for outlier values that have a low probability of re-occurrence. Histograms of those seams and attributes that have outlier data are presented in Figure 7-6 to Figure 7-8. The threshold values applied to the Upper, Intermediate and Lower Seams for the capping are displayed in Table 7-4.

Figure 7-6

Histogram and cumulative frequency plot of the Upper Seam V2O5 data

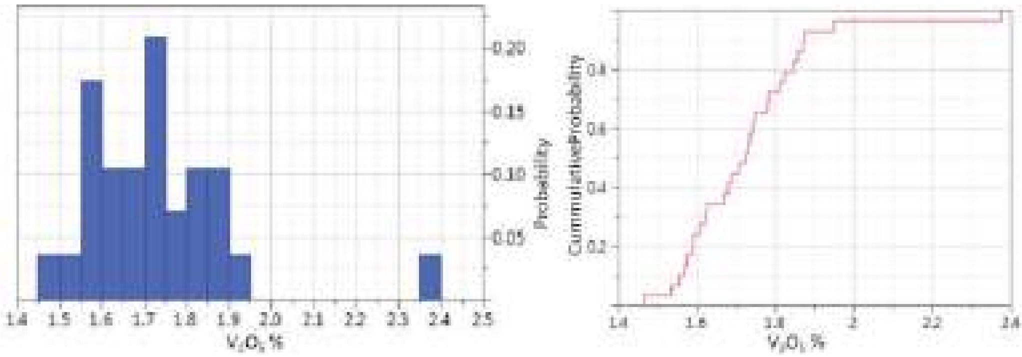


Figure 7-7

Histogram and cumulative frequency plot of the Intermediate Seam CaO and SiO_2 data

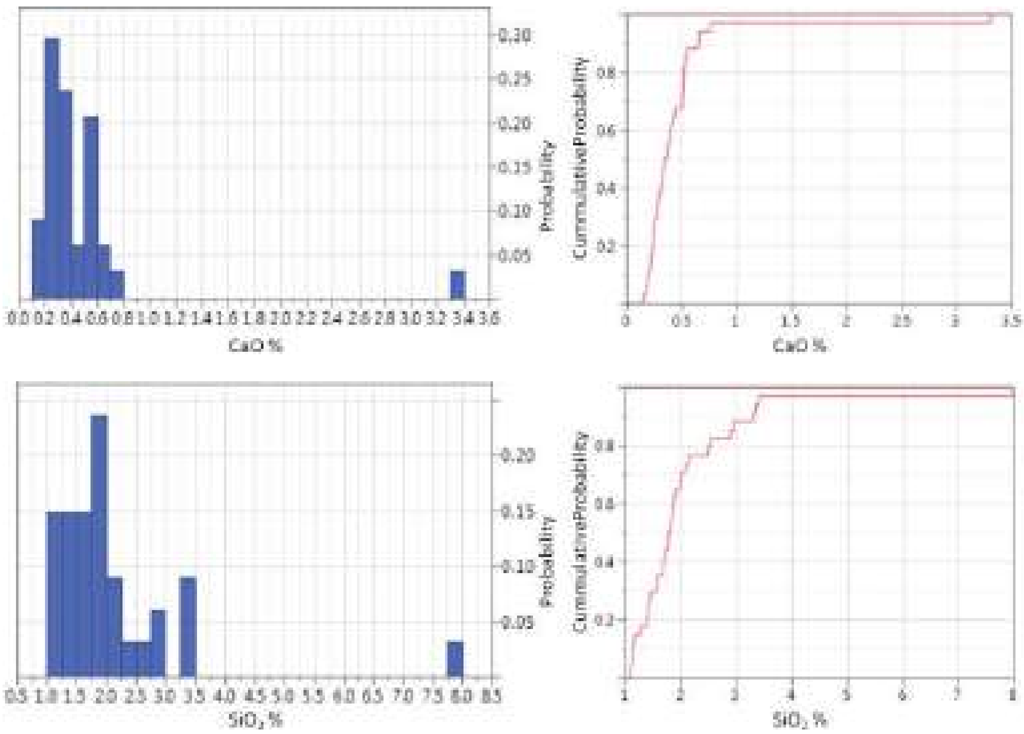


Figure 7-8

Histogram and cumulative frequency plot of the Lower Seam CaO and SiO_2 data

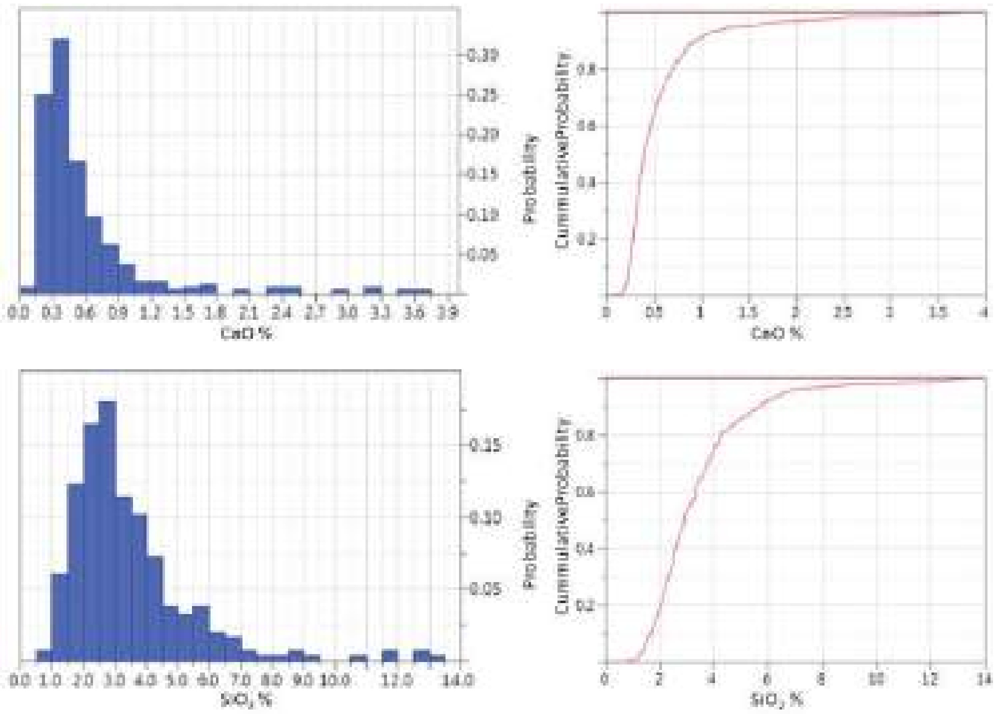


Table 7-4

Summary statistics of the 2 m composite assay data before and after capping

Variable	Uncapped Composites		Capping threshold	Number of composite capped	Capped composites	
	Mean (%)	CV			Mean (%)	CV
Upper Seam						
V_2O_5	1.72	0.13	1.95	1	1.71	0.10
Intermediate Seam						
CaO	0.46	1.58	0.77	1	0.39	0.60
SiO_2	2.11	0.82	3.42	1	1.97	0.51
Lower Seam						
CaO	0.55	1.29	1.80	10	0.52	0.98
SiO_2	3.41	0.80	7.50	11	3.30	0.66

7.5 Geostatistical Analysis

7.5.1 Semi-variograms

Variograms were modelled for V_2O_5 that show poor structure. However, an indicative range of 210 m was modelled in the plane of mineralisation. The variograms would benefit from additional data.

7.6 Block Modelling

The block model prototype parameters are shown in Table 7-5. A small block size of 20 mX by 20 mY by 5 mZ was used relative to the drillhole spacing as the mineralisation dips at 19° and a larger block size would not retain the layering within the seam without rotating the block model. The cells were split to a minimum sub-cell of 5 mX by 5 mY by 1 mZ in order to fill the wireframe model boundaries accurately.

Table 7-5
Block model prototype parameters for Vametco

Block size (m)			Model origin			Number of cells		
X	Y	Z	X	Y	Z	X	Y	Z
20	20	5	86,310	-30,750	800	325	200	80

Block models were created by filling within the geological model for the Upper, Intermediate and Lower Seams. The model volume above the topography was removed after grade estimation was complete.

7.6.1 Validation of the Block Model Volumes with the Wireframe Volumes

The volume of the block model was validated by comparing it to the volume of the wireframe (Table 7-6).

Table 7-6
Volume validation comparison of wireframes and block models

	Geological model wireframe	Block model	Percentage difference
Upper Seam	15,096,460	15,095,925	0.003
Intermediate Seam	34,023,929	34,018,675	0.015
Lower Seam	119,605,508	119,745,450	0.117

The model volumes compare well with the corresponding wireframe volumes and are thus acceptable for use in estimation.

7.7 Estimation

Of the 52 holes in the database, 14 of the holes were not used for grade estimation as the V_2O_5 grades were found to be whole rock analyses rather than V_2O_5 grades of magnetite. A total of six intersections of the Upper Seam, 12 for the Intermediate Seam and 31 for the Lower Seam were used to estimate the grade of the Mineral Resource.

Attributes were estimated into the individual mineralised zones using the 2 m composite drillhole sample data for each seam. Inverse distance to the power of two was used to estimate the grades into parent cells. There were no SG data available. An average density of 3.3 t/m^3 was provided by Vametco, which was assigned to the seams for the tonnage estimate.

The search ellipse used for estimation was similar to the indicative variogram range. A search of 200 m by 200 m by 10 m was used to select the sample composites for block estimation. The minimum number of composites required for a block to be estimated is 6 while a maximum of 12 composites was used. These criteria were applied to the Upper, Intermediate and Lower Seam. If a block was not estimated from the initial search ellipse, the ellipse size was doubled. Should a block still not be estimated, a larger search ellipse was used by expanding the search by ten times the original search ellipse extent. The percentage of cells filled by each search is shown in Table 7-7.

Table 7-7
Search volume grade estimation summary for Vametco

	Blocks filled within each search volume as a percent		
	First search volume	Second search volume	Third search volume
Upper Seam	10.53	44.78	44.69
Intermediate Seam	17.20	30.10	52.70
Lower Seam	35.32	32.18	32.50

7.7.1 Validation of the Estimates

The models were validated by:

- visual examination of the input data against the block model estimates; and
- comparison of the input data statistics against the model statistics.

The block model was examined visually in sections to ensure that the drillhole grades were locally well represented by the model. The model validated well against the data and identified internal low-grade stratiform zones as expected in the layered style of deposit at Vametco. Examples of sections showing the block model and drillholes shaded by percent magnetite content are shown in Figure 7-9 and for V_2O_5 in magnetite in Figure 7-10.

Figure 7-9
Sections through block models and drillhole data illustrating correlation between model and data – percent magnetite

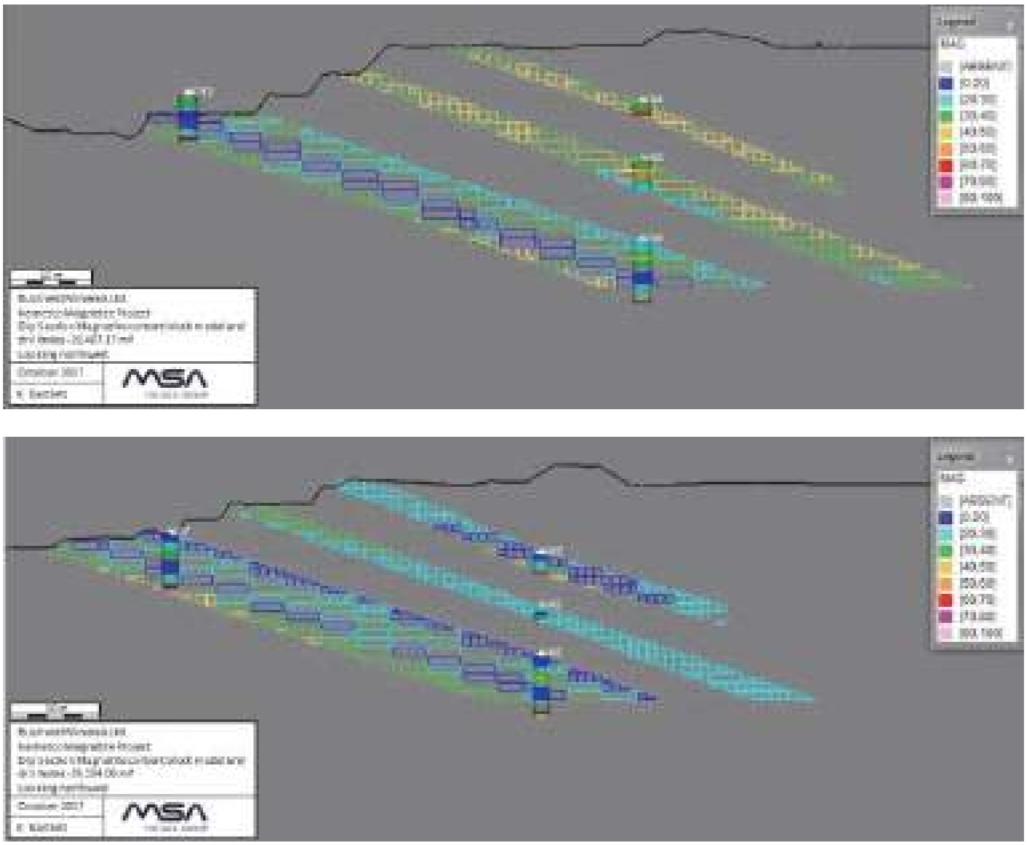
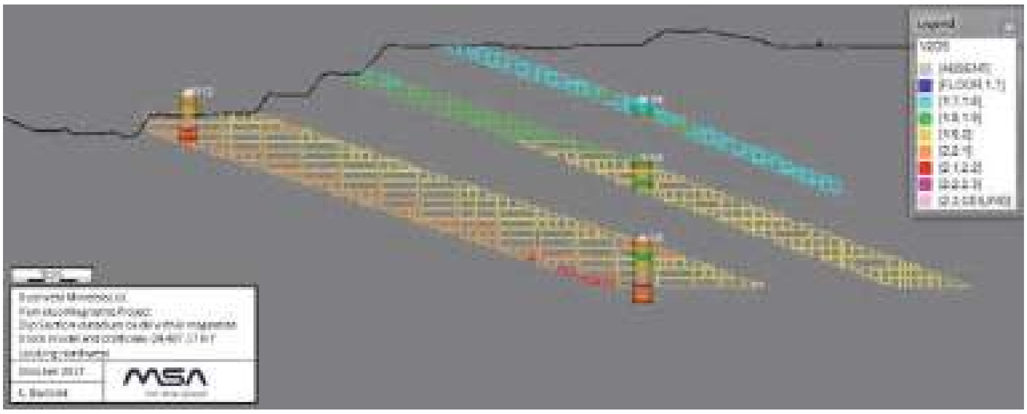
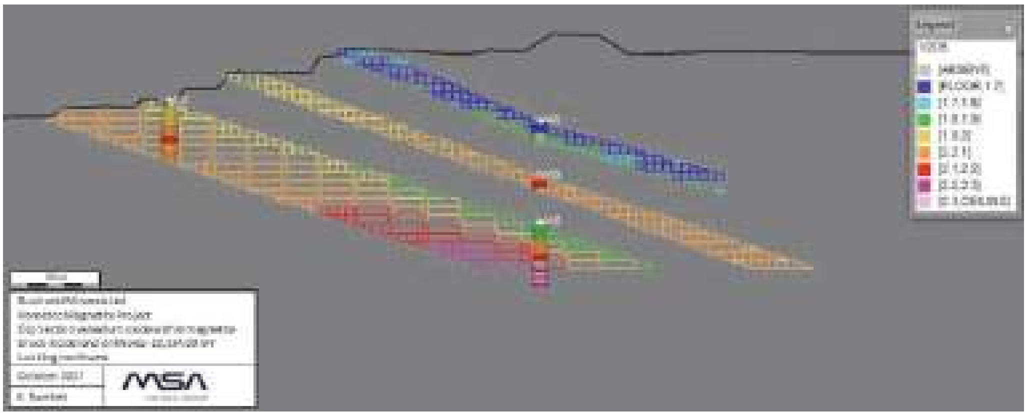


Figure 7-10
Sections through block models and drillhole data illustrating correlation between model and data – V_2O_5 grade (%) of magnetite





The mean composite grades of the drillholes were compared with the model grades (Table 7-8). The model and the data averages compare well for most areas and attributes, the comparison being influenced by the irregular drilling and the extrapolation.

Table 7-8
Comparison between drillhole and model data values

Variable	Mean model (%)	Mean 2 m composite data with top cap (%)
Upper Seam		
Mag	37.83	38.57
V_2O_5	1.70	1.71
CaO	0.45	0.44
SiO_2	2.10	2.09
Intermediate Seam		
Mag	30.61	30.92
V_2O_5	1.87	1.86
CaO	0.39	0.39
SiO_2	1.95	1.97
Lower Seam		
Mag	27.99	27.37
V_2O_5	2.00	2.01
CaO	0.50	0.52
SiO_2	3.38	3.30

7.8 Mineral Resource Classification

Classification of the Vametco Mineral Resource was based on confidence in the data, confidence in the geological model, geological continuity and the spacing of drilling data. The main considerations in the classification of the Vametco Mineral Resource are as follows:

- all of the data that inform the Mineral Resource have been collected by Union Carbide Exploration and EVRAZ Vametco. These data have been validated and erroneous data were removed. There are no external QAQC data for the assays, but otherwise the data appear to have been collected using reasonable practices in place at the time;
- the interpretation of the geological framework of the mineralisation as three magnetite layers gently dipping to the northeast at approximately 19° with V_2O_5 mineralisation within the magnetite layer is sound, having been confirmed by mining;
- the extent of the mineralisation along strike away from the drillholes is uncertain and potential exists for faulting at the pit limits;
- pit optimisation carried out for the Ore Reserve conversion indicates an economic pit depth of 120 m; and.
- the drillhole spacing is on average 200 m in dip by 150 m in strike for the Lower Seam. The drillhole spacing confirms the geological continuity of all three seams, although the Upper Seam is only informed by a single strike line of six drillholes and so up- and down-dip continuity is assumed rather than verified.

In consideration of the aforementioned points, the Vametco Mineral Resource was classified as follows:

- the Upper Seam was classified as Inferred as there are only six holes that intersect mineralisation in a single line. The estimates were extrapolated 100 m down dip from the drillholes and 250 m along strike given that strike continuity has been confirmed and down-dip continuity is assumed;
- the Intermediate Seam was classified as Inferred. The estimate is informed by 12 holes, but the mineralisation is more erratic than the Lower Seam. The estimates were extrapolated by 250 m along strike and to the 125 m vertical limit below surface; and
- the well drilled portions of the Lower Seam were classified as Indicated Resources up to a distance of 125 m from the drillhole grid. The remainder of the model to the 125 m depth extent was classified as Inferred Resources up until the strike limits of the open-pit.

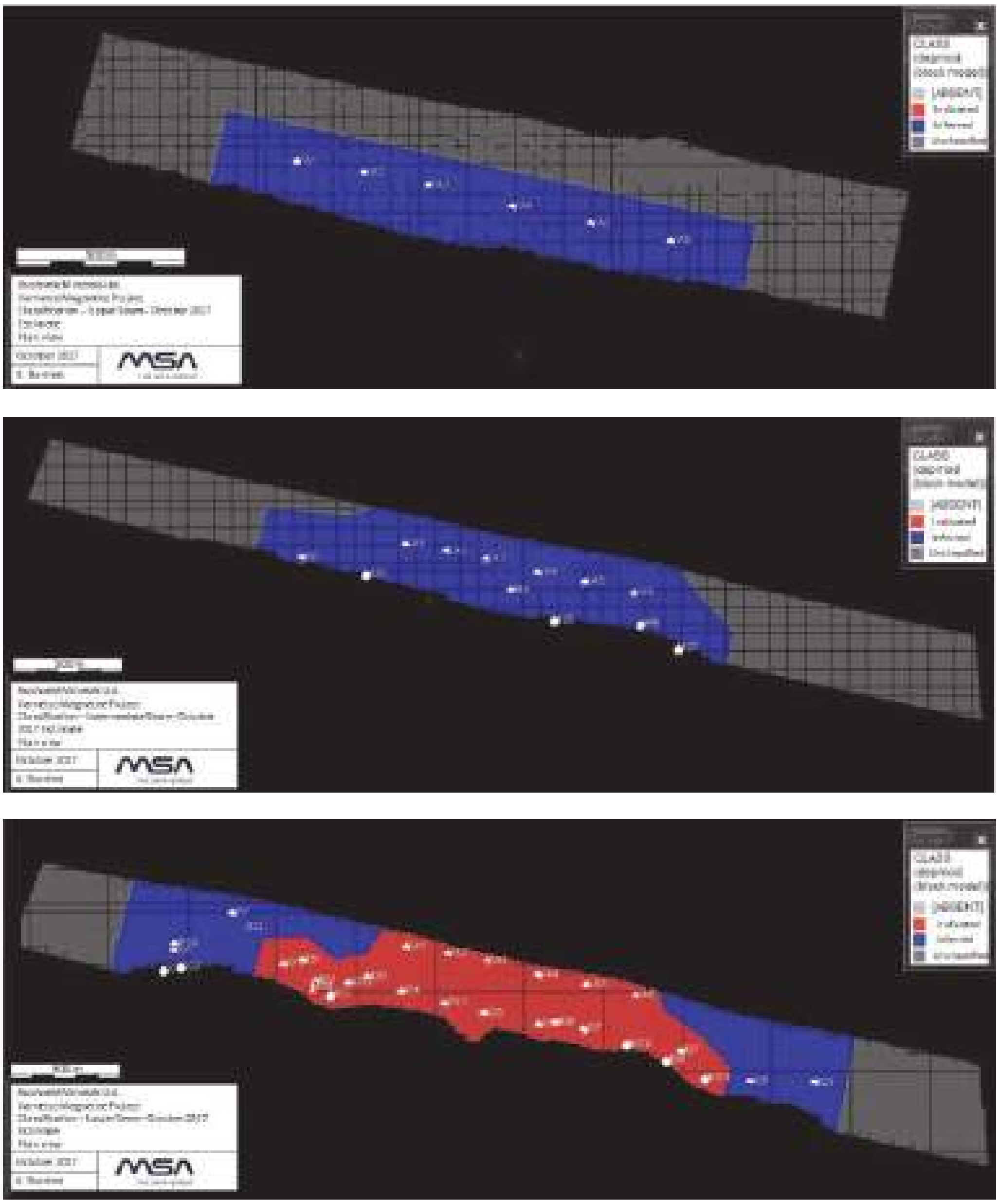
The classified areas are shown in Figure 7-11 for the Upper, Intermediate and Lower Seams.

To the best of the CP's knowledge there are no environmental, permitting, legal, tax, socio-political, marketing or other relevant issues which may materially affect the Mineral Resource estimate as reported in this Competent Persons Report.

The Mineral Resource will be affected by further infill and exploration drilling which may result in increases or decreases in subsequent Mineral Resource estimates. Inferred Mineral Resources are considered to be low confidence estimates that may change significantly with additional data. It cannot be assumed that all or part of an Inferred Mineral Resource will necessarily be upgraded to an Indicated Mineral Resource as a result of continued exploration. The Mineral Resource may also be affected by subsequent assessments of mining, environmental, processing, permitting, taxation, socio-economic and other factors.

Figure 7-11

Plan view of the classification of Vametco Upper, Intermediate and Lower seams (models shown after mining depletion)



Note: *Drillhole intersection positions shown in white. North is to the top of the figures.*

7.9 Mineral Resource Statement

The Mineral Resource estimate has been completed under the supervision of Mr J. C. Witley who is a professional geologist with more than 25 years' experience in base and precious metals exploration and mining as well as Mineral Resource evaluation and reporting. He is a Principal Resource Consultant for MSA, is registered with SACNASP and is a Fellow of the GSSA. Mr Witley has the appropriate relevant qualifications, experience, competence and independence to be considered a "Competent Person" under the definitions provided in the 2012 Edition of the JORC Code.

The Mineral Resource estimate as at 06 October 2017 is presented in Table 7-9. In the CP's opinion, the Mineral Resource reported herein has reasonable prospects for eventual economic extraction, given that it is an operating mine and associated processing facility with a market for the vanadium product. An open-pit optimisation exercise has been completed by VBKOM Consultants for the purposes of estimating Ore Reserves to a depth of 120 m. The Mineral Resource was prepared in accordance with the guidelines of the 2012 Edition of the JORC Code. The Mineral Resource is classified into the Indicated and Inferred categories as shown in Table 7-9.

The Mineral Resource dips at approximately 19° to the northeast and strikes from northwest to southeast. The Upper Seam Mineral Resource extends for approximately 1,570 m along strike and approximately 210 m in the dip direction. The Intermediate Seam Mineral Resource extends for approximately 2,290 m along strike and approximately 350 m in the dip direction. The Lower Seam Mineral Resource extends for approximately 3,540 m along strike and approximately 430 m in the dip direction. The Mineral Resource estimate is limited to 125 m below surface, which is 5 m deeper than that used for the mining study. The mineralisation is open down-dip. The Upper Seam Mineral Resource Estimate is on average 10.7 m thick, the Intermediate Seam 8.9 m and the Lower Seam 30.5 m.

Table 7-9
Vametco Upper, Intermediate and Lower Seam Mineral Resources, 06 October 2017

Category	Gross				Net (26.6 %)			
	Tonnes (millions)	Magnetite (%)	V_2O_5 % contained in magnetite	Total V (tonnes)	Tonnes (millions)	Magnetite (%)	V_2O_5 % contained in magnetite	Total V tonnes attributable to BML (26.6 %)
Upper Seam								
Inferred	11.8	37.86	1.70	75,947	3.14	37.86	1.70	20,202
Intermediate Seam								
Inferred	21.6	30.45	1.87	122,994	5.75	30.45	1.87	32,716
Lower Seam								
Indicated	61.5	27.23	2.01	336,604	16.36	27.23	2.01	89,537
Inferred	47.4	29.75	1.99	280,620	12.61	29.75	1.99	74,645
Total	**108.9**	**28.33**	**2.00**	**617,224**	**28.97**	**28.33**	**2.00**	**164,182**
Total Mineral Resource								
Indicated	61.5	27.23	2.01	336,604	16.36	27.23	2.01	89,537
Inferred	80.9	31.12	1.92	479,561	21.50	31.12	1.92	127,563
Total	**142.4**	**29.44**	**1.96**	**816,165**	**37.86**	**29.44**	**1.96**	**217,100**

Notes: *All tabulated data has been rounded therefore minor computational errors may occur.*
The Mineral Resources are total in-situ Mineral Resources for the Project.
Bushveld Mineral Limited attributable share @ 26.6 %
Mineral Resources which are not Ore Reserves have no demonstrated economic viability.
Mineral Resources are inclusive of Ore Reserves.

Table 7-10 indicates the attributable Mineral Resources in the event that the acquisition as mentioned in Section 2.3.2 materialises in the form proposed.

Table 7-10
Vametco Upper, Intermediate and Lower Seam Mineral Resources, 06 October 2017
(Indicative post Yellow Dragon Holdings acquisition)

Category	Gross				Net (59.1 %)			
	Tonnes (millions)	Magnetite %	V_2O_5 % contained in magnetite	Total V (tonnes)	Tonnes (millions)	Magnetite %	V_2O_5 % contained in magnetite	Total V Attributable to BML (59.1 %)
Upper Seam								
Inferred	11.8	37.86	1.70	75,947	6.97	37.86	1.70	44,885
Intermediate Seam								
Inferred	21.6	30.45	1.87	122,994	12.77	30.45	1.87	72,689
Lower Seam								
Indicated	61.5	27.23	2.01	336,604	36.35	27.23	2.01	198,933
Inferred	47.4	29.75	1.99	280,620	28.01	29.75	1.99	165,846
Total	**109.0**	**28.33**	**2.00**	**617,594**	**64.42**	**28.33**	**2.00**	**364,998**
Total Mineral Resource								
Indicated	61.5	27.23	2.01	336,604	36.35	27.23	2.01	198,933
Inferred	80.9	31.12	1.92	479,562	47.81	31.12	1.92	285,678
Total	**142.4**	**29.44**	**1.96**	**816,166**	**84.16**	**29.44**	**1.96**	**485,614**

7.10 Assessment of reporting criteria

Criteria for assessing this Mineral Resource estimate are presented in Appendix 3, which includes the relevant aspects of Table 1 of the JORC code (2012).

8 ORE RESERVE ESTIMATES

8.1 Estimation and Modelling Techniques

Conversion of the mineable tonnes in situ (MTIS) resources to reserve was based on a process which considered the following:

- MSA completed an update on the geological block model and reported on mineral resources contained with this updated geology in 2017 (this report). This model has been reviewed by MSA internally and found to be acceptable in order to apply modifying factors and to estimate Ore Reserves;
- the Life of Mine ("LOM") plan and assumptions as developed by the Vametco Team and reviewed by MSA; and
- the discounted cash flow ("DCF") model developed during the 2016 LOM Option Analysis process at Vametco. The high-level production plan developed during the aforementioned process was incorporated into the DCF model.

Key decisions made in the Mineral Resource modelling that have an impact on the Ore Reserve modelling are:

- all Mineral Resources are modelled at 100 % "recovery", undiluted and grades as percentage;
- minor differences occur between optimisation results and totals reported from block models, which are not material and considered acceptable in MSA's view; and
- tonnages are modelled in metric units utilising volumes and densities; while grades in percent.

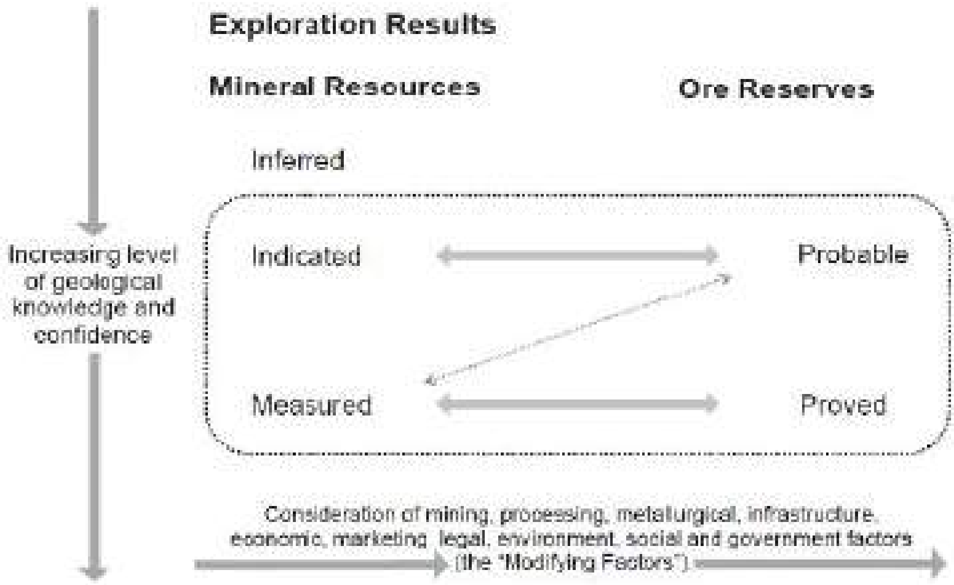
The following methodology was followed for an approved LOM plan at Vametco:

- MSA performed pit optimisations based on the input parameters as discussed in Section 8 of this report. This approach has been reviewed by MSA internally found it to be sufficient and appropriate;
- the pit optimisations were performed with a real long term vanadium price of US$ 28.5/kg V at an exchange rate of ZAR 13.50 to the US$;
- the LOM optimisation outputs were used to report the Ore Reserves from (because of the conservative slope angles used (which provide sufficiently for the haul roads in the pit), this is an appropriate approach; and
- the Ore Reserve was depleted with mining that occurred up to 31 September 2017, by using the regular surveyed topography.

8.2 Ore Reserve Classification Criteria

The basis of classification of Ore Reserves and confidence categories are based on the guidelines as provided in the JORC guidelines for estimation and classification of Ore Reserves and can be summarised as indicated in Figure 8-1.

Figure 8-1
Mineral Resource to Ore Reserve Category Conversion



For Ore Reserve estimation, the MSA Competent Person performed an independent review of:

- Mineral Resource Models as depleted until 31 September 2017;
- mine planning methodology;
- previous reports (which were not reported according to any reporting code);
- actual operational performance measured against budgets for 2015 and 2016; and
- appropriateness of application of modifying factors – mining, processing, metallurgical, infrastructure, economic, marketing, tenure, environmental, social license to operate as well as governmental factors

Vametco has a successful track record of operating Vametco Mine over the past five years, which MSA reviewed.

The mining methods utilised as well as the recovery rates are clearly understood and quantified. The confidence from the Mineral Resource classification was used to classify the Ore Reserves. This classification was based on sound technical, economic and other business assumptions as presented in the LOM plan.

The Ore Reserves reported states the Competent Person's view of the Vametco deposits. Ore Reserves cannot be declared for all Mineral Resources.

There are no Measured Mineral Resources classified at Vametco mine and therefore no Resources were translated into Proved Ore Reserves. The Indicated Mineral Resources were translated into Ore Reserves by application of modifying factors.

8.3 Ore Reserve Statement

Ore Reserves are declared for open pits inside the Life of Mine pit design (the optimised pit shell in this instance). Ore tonnes and grades are reported as Run of Mine ("ROM") tonnes after modifying factors for mining losses and dilution have been applied as expected to be delivered to the concentrator (i.e. before beneficiation plant recoveries have been applied). Ore Reserves are declared for in-situ tonnes in the pits and exclude any stockpiles.

All tonnages reported are on a dry basis.

There are no Measured Mineral Resources classified at Vametco Mine and therefore no Mineral Resources were converted into Proved Ore Reserves.

Ore Reserves are reported in total and not discounted for ownership. Attributable value should be calculated on an ownership basis.

Table 8-1 is the MSA Ore Reserve Statement for Vametco as at 16 October 2017.

Table 7-10
Vametco Upper, Intermediate and Lower Seam Mineral Resources, 06 October 2017
(Indicative post Yellow Dragon Holdings acquisition)

Category	Gross				Net (59.1 %)			
	Tonnes (millions)	Magnetite %	V_2O_5 % contained in magnetite	Total V (tonnes)	Tonnes (millions)	Magnetite %	V_2O_5 % contained in magnetite	Total V Attributable to BML (59.1 %)
Upper Seam								
Inferred	11.8	37.86	1.70	75,947	6.97	37.86	1.70	44,885
Intermediate Seam								
Inferred	21.6	30.45	1.87	122,994	12.77	30.45	1.87	72,689
Lower Seam								
Indicated	61.5	27.23	2.01	336,604	36.35	27.23	2.01	198,933
Inferred	47.4	29.75	1.99	280,620	28.01	29.75	1.99	165,846
Total	**108.9**	**28.33**	**2.00**	**617,224**	**64.42**	**28.33**	**2.00**	**364,779**
Total Mineral Resource								
Indicated	61.5	27.23	2.01	336,604	36.35	27.23	2.01	198,933
Inferred	80.9	31.12	1.92	479,561	47.81	31.12	1.92	283,420
Total	**142.4**	**29.44**	**1.96**	**816,165**	**84.16**	**29.44**	**1.96**	**482,353**

Notes:

1. Figures reported are based on 100 % of Ore Reserve
2. Reporting is prepared on an inclusive basis – Ore Reserves reported are included in Mineral Resources reported and should not be seen as additional tonnes
3. Ore Reserve tonnes and grades are reported on dry ROM (plant feed) basis after mining modifying factors have been applied but before beneficiation down-stream recoveries/losses have been applied
4. Reporting was prepared on block models developed by MSA in 2017
5. Rounding of figures may cause computational discrepancies

Table 8-2 indicates the attributable Ore Reserves in the event that the acquisition as mentioned in Section 2.3.2 materialises in the form proposed.

Table 8-2

Vametco Upper, Intermediate and Lower magnetite seams Ore Reserves, 16 October 2017 (Indicative post Yellow Dragon Holdings acquisition)

		Gross				Net (59.1 %)			
Mineralised Layer	**Reserve Category**	**Tonnage (Mt)**	**Percentage Magnetics**	**Percentage V_2O_5 in magnetics**	**Contained Metal Total V (tonnes)**	**Tonnage (Mt)**	**Percentage Magnetics**	**Percentage V_2O_5 in magnetics**	**Contained Metal Total V (tonnes)**
Upper Seam (US)	Proven	-	-	-	-	-	-		-
	Probable	-	-	-	-	-	-		-
	Total	**-**	**-**	**-**	**-**	**-**	**-**		**-**
Intermediate Seams (IS)	Proven	-	-	-	-	-	-		-
	Probable	-	-	-	-	-	-		-
	Total	**-**	**-**	**-**	**-**	**-**	**-**		**-**
Lower Seams	Proven	-	-	-	-	-	-		-
	Probable	26.12	26.79	1.96	137,152	15.44	26.79	1.96	81.057
	Total	**26.12**	**26.79**	**1.96**	**137,152**	**15.44**	**26.79**	**1.96**	**81,057**

9 MINING METHODS

9.1 Geotechnical and Geohydrology

The output of the geotechnical report (dated November 2005, by IndiRoc – now known as Middindi) provided the high wall slope angles which were applied to the optimised pit shell, which forms the basis of the work for the Ore Reserve portion of this CPR. The soft soil/ weathered material has a design slope angle of 50°, this excludes the ramp width (considering haul roads in a detailed design of 20 m in width, this angle was reduced to 35°). The first bench was assumed to be in this kind of material and will result in a conservative first bench angle. For the purpose of the detailed designs, a 75° batter angle was assumed which resulted in a 6 m berm for the first bench. With the same batter angle, the overall design angle for the pit is 65°, excluding haul ramps and provides for a 2 m berm (where haul roads were introduced into the pit design, the effect will be that of a decreased overall pit gradient and therefore this angle was reduced to 54°). The footwall of the pit will be the bottom contact of the ore, which is on average 19°. For the work to evaluate the mine economically and complete the CPR, no detailed pit designs were created, but sufficient conservatism was applied to the abovementioned angles. This conservative approach of the overall slope angles, applied to the optimised pit shells also makes sufficient provision for the following:

- bench height for all the benches is 10 m; and
- haul roads with a width of 20 m and a gradient of 1:12.5 (which is 4.574°). Secondary access roads with a width of 15 m and a gradient of 1:12.5.

Table 9-1 and Figure 9-1 indicate the geotechnical slope angles as well as an existing bench.

Table 9-1
Geotechnical Slope Angles

	Overall Slope Angle	Batter Angle	Berm	Overall Slope Angle Applied to the Optimised Pit
First Bench	50°	75°	6 m	35°
Remaining Benches	65°	75°	2 m	54°
Bench height	10 m	-	-	
Haul Roads	20 m	1:12.5	-	
Secondary Roads	15 m	1:12.5	-	

Figure 9-1
Photograph of Typical Existing Bench at Vametco Mine

There are currently no issues related to dewatering at the Vametco Mine.

9.2 Mine Design and Schedule

9.2.1 Cut-offs Applied

Due to the economic factors and the orebody dipping at 19° to the north, the depth of the ore becomes uneconomical (with the current input parameters applied) before it reaches the northern lease boundary of the Property. There is a graveyard on the north-western end of the Property that is currently excluded from all Ore Reserve calculations, but investigations and negotiations are underway with members of the community in order to explore the option of relocating these graves. The largest current Waste Rock Dumps ("WRDs") are located to the south of the pit and will not be a constraint to any of the mining activities going forward, as the orebody dips to the north and mining will also take place in a northerly direction. There are some small WRDs to the north of the pit, but these are very small and also pose no constraints to any of the mining activities in future (they will be moved as and when required, with mining activities progressing north).

The positioning of major infrastructure on the mine is not causing any constraints to the open pit operation either.

No environmental constraints impact the open pit development.

Vanadium-bearing rock is classified as mineralized material and there are three main seams in which mineralized material is present (Upper Seam (US), Intermediate Seam (IS) and Lower Seam (LS). All the mineralised material is treated on site and classified as ore (traditionally the IS and LS has been the main focus at Vametco mine.

An economic cut-off grade is applied to identify the reserves of the various seams. The cut-off grade is defined as the grade at which the income derived from the metal extracted from a block of ore is equal to the cost of processing the ore and selling the product.

The general formula applied for an economic optimisation is indicated in the equation below, which includes the General & Administration ("G&A") costs:

$$COG = \frac{mindil\ x\ (proc_{cost} + G\&A_{cost})}{(\mathrm{met_{rec}} x\ (price - selling_{cost})) - elem\_proc\_cost}$$

Where:

- COG: cut-off grade;
- mindil: mining dilution;
- proc_cost: processing cost (plant processing cost associated with the primary crusher tonnes)
- G&A_cost: General and Administrative costs (sometimes referred to as a portion of the fixed costs);
- met_rec: metal recovery;
- price: metal price;
- selling_cost: cost of selling the product (realisation cost) and duties; and
- elem_proc_cost: element processing cost (plant processing cost associated with the metal content of the plant feed)

With the inclusion of the G&A cost, this cut-off grade does not indicate the marginal cut-off grade, but a slightly raised cut-off grade in comparison to the marginal COG.

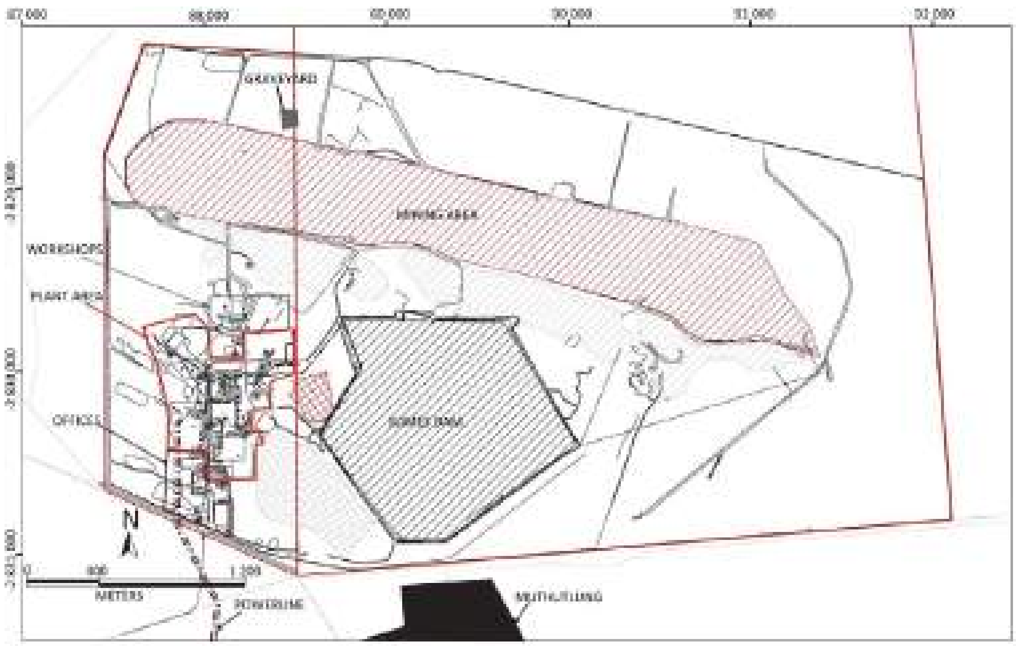
For a Vanadium (Nitrovan) price of ZAR 456 000 /t (US$ 28.5 /kg), the marginal economic cut-off grade for the ROM will be 0.164 % V_2O_5 (which is much lower than the average grade that will go to the plant and also lower than the current input grade at Vametco Mine). It is important to understand that this is the grade that will be economical for the break-even point, at the current price and cost inputs.

9.2.2 Mining Method

Figure 9-2 shows the general layout plan for the Vametco mine with the general position of the open pit / mining area shown (the long-term plan outline of the open pit will differ from this figure as a geological loss pillar will be left in position, dividing the pit into an eastern and western section). Mining has been taking place at the current site since 1967. Also, clearly seen in the general layout plan are the plant and stockpile areas as well as other surface infrastructure.

Figure 9-2

General Layout Plan



Vanadium bearing magnetite is mined from the Bushveld Igneous Complex. The open pit has a strike of about 3.5 km in an east-west direction and the ore bodies (upper, middle and lower seams) dip at 19° to the north.

Prior to mining in a particular area all vegetation cover and useable soil is removed and placed on a separate soil stockpile. Waste rock and ore are blasted at irregular intervals and removed to waste rock dumps or the primary crusher, respectively (Figure 9-2). Material is loaded onto 20 or 40-tonne haul trucks using hydraulic shovels and front-end loaders. The current mining capacity at Vametco is 2.54 million tonnes per annum, of which about 1.33 million tonnes is ore and the rest overburden or waste (these figures are based on the 2016 actuals). Due to the stratified nature of the ore deposit, Vametco utilises a combination of strip mining and open pit mining. For current mining activities, the possibility of concurrent backfilling is being investigated in order to determine the most effective method/ sequence. It will make most sense to start with backfilling in areas where the pit has been mined to the final high-wall and for this reason the western portion of the pit would probably be backfilled first (as it is adjacent to the graveyard area, which might be kept in position if an agreement to move it cannot be reached).

The open pit mining approach can be typified as bench mining where faces are opened up in one area through overburden and waste stripping. The exposed ore is mined and transported to the plant by a fleet of trucks and shovels. In order to get the optimal long-term plan for Vametco, an optimisation study (pit limit analysis) was done to generate different pit shells in order to choose the pit shell that will render the best value over the LOM.

Mining can take place profitably for a total of 118 years (based on current assumptions). The LOM was therefore finalised on 50 years since only a very small increase in NPV is achieved from year 50 to year 118 (due to the effect of discounting). The LOM plan includes Indicated and Inferred Mineral Resources and extends beyond the current converted mining right (which is valid until 2038). For the LOM there are two main Pushbacks (PB) mined, i.e. PB1 and PB2:

- PB1: The Indicated Mineral Resources are included as part of the LOM plan (which are the tonnes stated in the Ore Reserves); and
- PB2: The Indicated and Inferred Mineral Resources are included as part of the LOM plan (potential upside of 83Mt that can be added to the Ore Reserves – if further exploration drilling is done effectively. Inferred Mineral Resources are not included as part of the Ore Reserves.

9.2.3 Optimisation and Modifying Factors

Open pit optimisation, using the Lerch-Grossman algorithm within the Whittle software, is used to define the economic portion of the ore body at Vametco. The pit optimisation input parameters are listed in Table 9-2 below.

Table 9-2
Pit Optimisation Input Parameters

Parameter	Unit	Value
Mining cost	ZAR/tonne mined	53.50
Processing cost	ZAR/t processed	321.36
Selling cost	ZAR/t V (Nitrovan) sold	11,219
G&A	ZAR/t processed	44.37
Selling Price	US$/kg V	28.5
Exchange Rate	ZAR/US$	13.5
Selling Price	ZAR/ Tonne V	384,750
Mining recovery	%	85
Mining dilution	%	5
Overall processing recovery (crushing to final product)	%	67.79

The mining recovery and mining dilution factors were established through reconciliations performed on planned versus actual data from the previous years. In fact, the mining recoveries have already been accounted for in the processing recovery, which means that the 15 % mining loss (mining recovery of 85 %) and the 5 % dilution included in the optimisation process, is a more conservative approach and will make the model more robust.

A minimum mining width of 50 m will be applied to the detailed pit designs and should be aimed for in practice. Although it is restrictive, this should be achievable with the mining method and equipment used, specifically the 40 t ADT fleet.

The overall processing recovery breakdown is shown in Table 9-3.

Table 9-3 Overall Processing Recovery		
Recoveries	**Unit**	**Value**
Crushing and Milling	%	92.00
Roasting	%	85.00
Leaching	%	94.00
Precipitation	%	96.50
Dry AMV	%	99.00
MVO	%	98.50
Overall Recovery (Kiln-MVO)	%	69.87 (V_2O_5)
Mix	%	98.50
Nitrovan	%	98.50
Overall processing recovery (crushing to final product)	%	67.79 (V)

9.2.4 Infrastructure Requirements

The existing mining operation is well established and no new major infrastructure is planned. Mining equipment maintenance workshops, fuel supply, offices, electricity reticulation and pumping infrastructure are adequate for the scale of mining operations. Haul roads, electricity supply, pipes and pumping infrastructure are moved / replaced from time to time according to the mine development plan. Although critical, this does not pose any big risk to the sustainability of the mining operation due to the proven track record.

9.2.5 Plant Expansion Plans

Phase 1

The plant expansion plan includes upgrading the screening and magnetic separation capacity at the concentrate section. The aim of this phase is to increase the milling facility to run on optimal feed rates without compromising on magnetite quality. High SiO_2 in the kiln feed results in higher raw material consumption as well as lower recovery and/or ring formation. The plant output should then be improved to 3035 t NitroVan equivalent per year. This expansion phase is operational effective September 2017.

Phase 2

This phase of the expansion plan is focussed on upgrades to the crushing circuit and installation of an additional ball mill. This phase will be aimed to change the plant bottleneck from the concentrate section back to the kiln. Orders for critical equipment have been placed. The plant capacity after this phase should have increased to 3750 t NitroVan equivalent per year and should be operational by end June 2018.

Phase 3

The last phase of the expansion will be focussed on upgrading the kiln feed and discharge equipment in order to produce to at its maximum mechanical capacity. Further evaporative capacity will need to be increased to cater for the additional evaporative capacity required with the increased production volumes. The production capacity will be 5078 t NitroVan equivalent per year and it is planned to have this phase in operation by end of 2019.

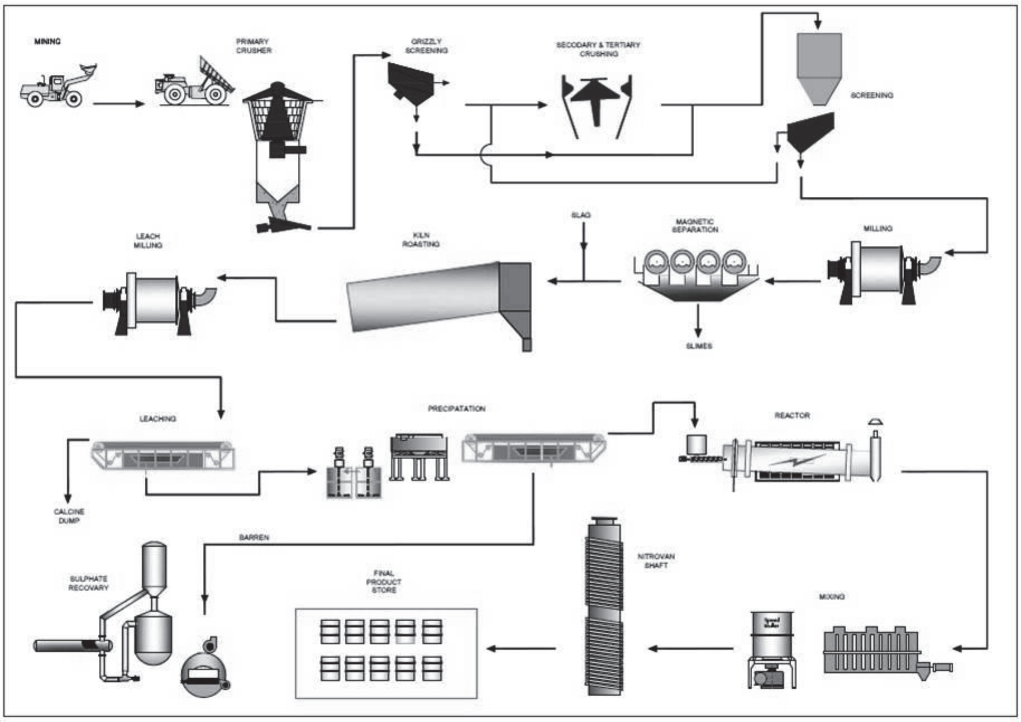
10 RECOVERY METHODS

10.1 Metallurgy

10.1.1 Process Design

Figure 10-1 gives an overview of the beneficiation process in use at Vametco.

Figure 10-1
Overview of the Beneficiation Process



10.1.1.1 Crushing Section

The primary crusher reduces the size of large boulders to a maximum size of 150 mm. The ore is screened (Grizzly), with the +40 mm to -150 mm fraction, placed on the 150 mm stockpile (Coarse Stockpile). This is fed to the secondary crusher circuit. The undersize of the Grizzly goes to the Screens in the Screen house together with the undersize from the Secondary Crushers.

The secondary crushers reduce the size of the +38 mm to -150 mm ore, fed from the coarse stockpile to a maximum size of 38 mm. The Secondary Crusher product is fed to the Screen house where it is combined with Grizzly U/F. The -13 mm ore is screened out by the polydeck screens and the +13 mm to – 38 mm size is returned to the tertiary crushers.

Post the tertiary crusher, crushed ore is again fed to the polydeck screens in the screen house. The undersize of the polydeck screens are fed to the < ⅜ inch stockpile or the Ball Mill Feed Silo's. In the event of the ball mill silo's being full then the ore is deposited onto the <⅜ inch (-13 mm) stockpile.

10.1.1.2 *Milling and Concentrator Section*

In the milling section the <13 mm ore is reduced in size to 90 % <150 µm in a wet ball-milling process. The finely ground ore is then fed to magnetic separators where the magnetic portion is separated from the gangue material. The first concentrate from the magnetic separators are fed to the secondary mill where it is further grinded down and finally separated in a magnetic separator. The concentrated magnetite is then fed to the roasting section and the gangue material is deposited on the slimes dams where the water is recovered and recycled in the concentrate plant.

10.1.1.3 *Roasting Section*

Weighed amounts of magnetite, sodium sulphate and sodium carbonate are mixed and fed to the pulverised coal fired rotary kiln. The mixture is roasted at approximately 1250 °C, rendering the vanadium water-soluble. Kiln off-gases are scrubbed in a wet venturi scrubber prior to release to atmosphere. The solids in the scrubber liquor are settled in a thickener, dewatered over a belt filter and returned to the kiln feed. The thickener overflow is returned to the venturi scrubbing circuit.

10.1.1.4 *Leach Section*

The kiln discharge solids are wet-milled, water-leached and washed in a counter current process over large belt filters.

The magnetite tailings are disposed of on the tailings dump. Aluminium sulphate and flocculent is used to desilicate and clarify product liquor referred to as pregnant (preg) solution. The pregnant solution (the principal components of which are sodium vanadate) is pH adjusted with sulphuric acid before being pumped to the precipitation section.

10.1.1.5 *Precipitation and MVO Section*

Vanadium in the pregnant solution is precipitated with ammonium sulphate to form ammonium metavanadate ("AMV"). AMV is then dried in a rotary calciner at a temperature that will not drive the ammonium ions off. The dried AMV is then forwarded to the MVO section for conversion. The vanadium depleted solution referred to as barren solution is pumped to the sulphate recovery plant (SRP). The function of the MVO section is to reduce the AMV to modified vanadium oxide (MVO). The MVO is drummed and sealed when cool to prevent re-oxidation.

The product is black in colour with some variation to brown. MVO is the feed stock for the products manufactured at Vametco i.e. Nitrovan® and Ferro-Vanadium.

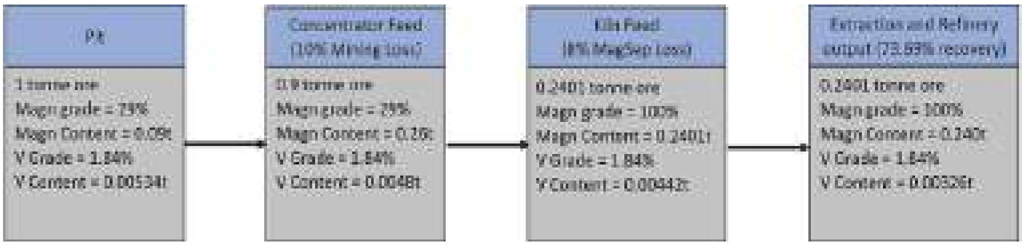
10.1.1.6 *Nitrovan Furnaces*

The MVO is mixed with the required quantity of carbon in the mix plant to produce the various grades of Nitrovan®, i.e. Nitrovan 12 % and 16 %. Under controlled conditions, nitrogen is purged into the furnace to substitute the carbon and dependant on the quantity of carbon this results in the required grades of Nitrovan®. Vanadium in these products is in the reduced state with a minute quantity tied to oxygen. Elements are in a solid solution state.

Figure 10-2 shows the process that one tonne of ore goes through during beneficiation.

Figure 10-2

One tonne of ore going through processing plant



11 PROJECT INFRASTRUCTURE

Infrastructure for the Vametco Mine is well established, as the mine has been in operation from the mid-1970s.

11.1 Water

Water for the operations are pumped via pipelines from a canal from the Hartebeestpoort Irrigation Scheme and abstracted from six (6) boreholes at a rate of 1.76 l/s. This is sufficient for the current operations. Water from the canal is pumped directly to the pumphouse for use in the plant, while water from the boreholes are pumped first to a reservoir close to the boreholes and then to a reservoir close to the plant via pipelines.

The Integrated Water Use Licence (IWUL), which was submitted in 2001, has been approved during 2017 and requires ongoing results of water monitoring.

11.2 Electricity

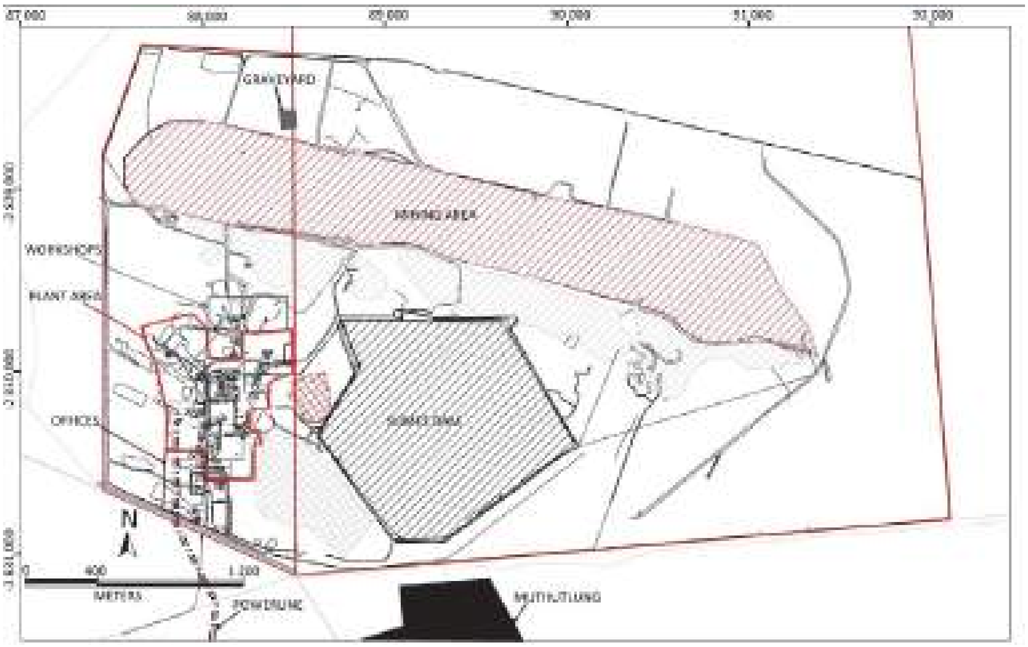
A 22 kV overhead Eskom line enters the Property from the south and connects to the mine's substation. The electricity supply is sufficient for the current operations.

11.3 Accommodation

All employees are privately housed in Brits, or a number of the rural settlements around the operation, with no housing or compound provided on the Property.

Refer to Figure 11-1 for the location of the infrastructure discussed in the sections above.

Figure 11-1
Infrastructure Location and Mining Licence Boundaries



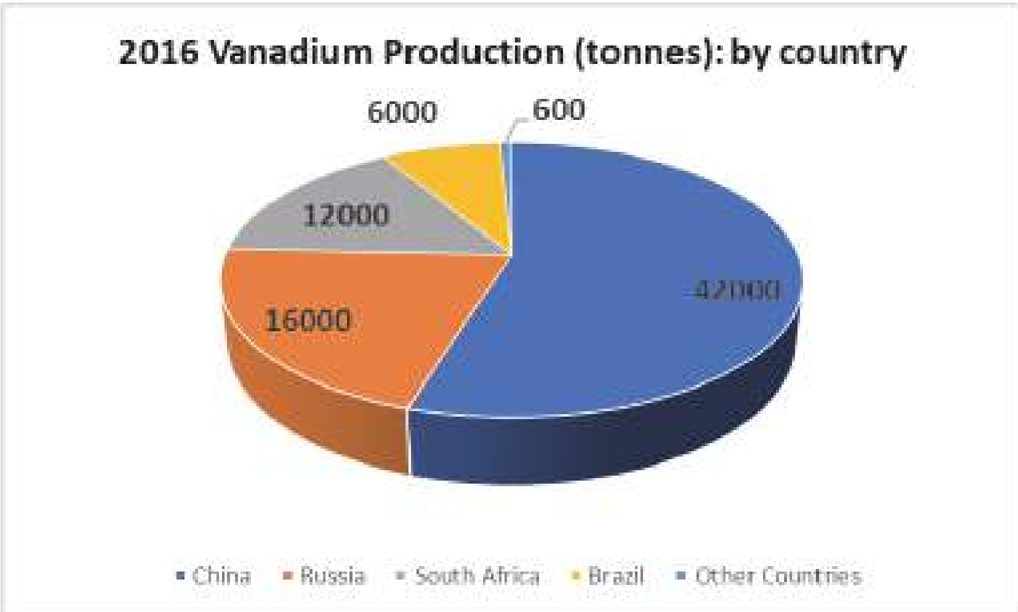
12 MARKET STUDIES AND CONTRACTS

12.1 Global Vanadium Market Overview

Vanadium is a silvery-grey transition metal. The metal is not found in nature, but can be separated from about 65 minerals, including carnotite, roscoelite, vanadinite, mottramite and patronite. Secondary sources of vanadium include steelmaking slag, spent catalysts and oil and coal residues. Vanadium is also a by-product of uranium.

According a recent report by the US Geological Survey, mine produced vanadium in 2016 totalled 76,600 t, down from 79,400 t in 2015. This drop in vanadium production is mostly attributed to economic growth in China being significantly lower than anticipated. Mine vanadium production in 2016 was mainly from four countries namely: China, South Africa, Russia and Brazil (Figure 12-1).

Figure 12-1
2016 Vanadium Production (tonne) Per Country



In terms of characteristics, vanadium has good structural strength and is ductile. It is harder than most metals and steels, corrosion resistant, and remains stable against alkalis, along with sulfuric and hydrochloric acids. It oxidizes at about 660 ˚C, becoming vanadium pentoxide, or V_2O_5. These qualities make vanadium useful for a variety of important applications, with the main one being alloys like ferrovanadium. Ferrovanadium is an alloy of iron and vanadium that is used in the production of steel and other alloys. Vanadium market demand is therefore directly related to steel demand. Vanadium is also used in Chemical and Titanium production. Figure 12-2 shows a proportional breakdown of vanadium consumption for 2016 per industry. Figure 12-3 shows worldwide vanadium consumption compared to steel production.

Figure 12-2
Percentage Vanadium Consumption by Industry

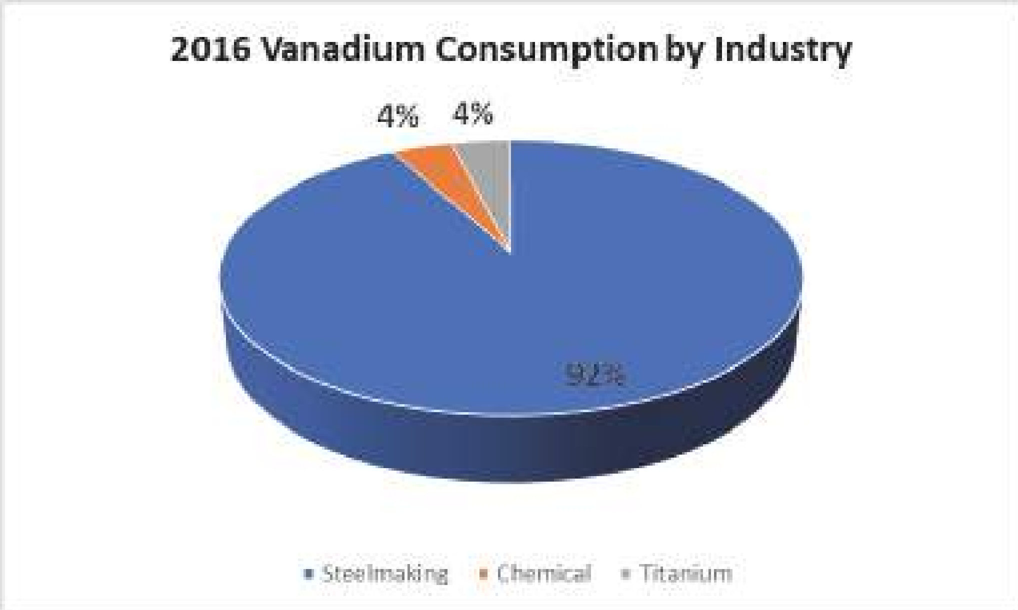
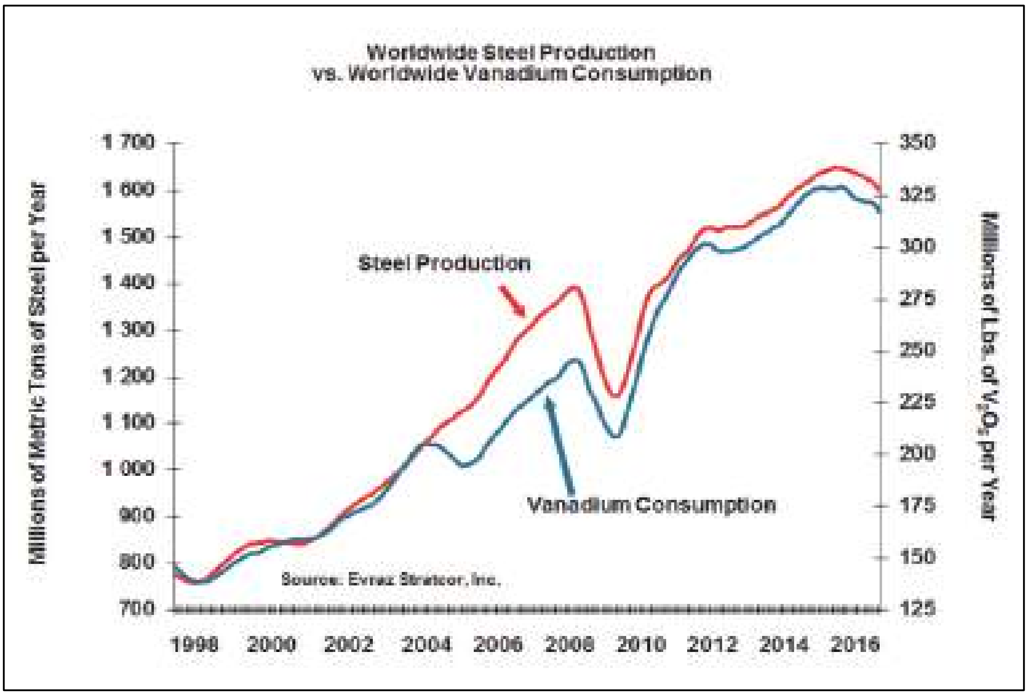
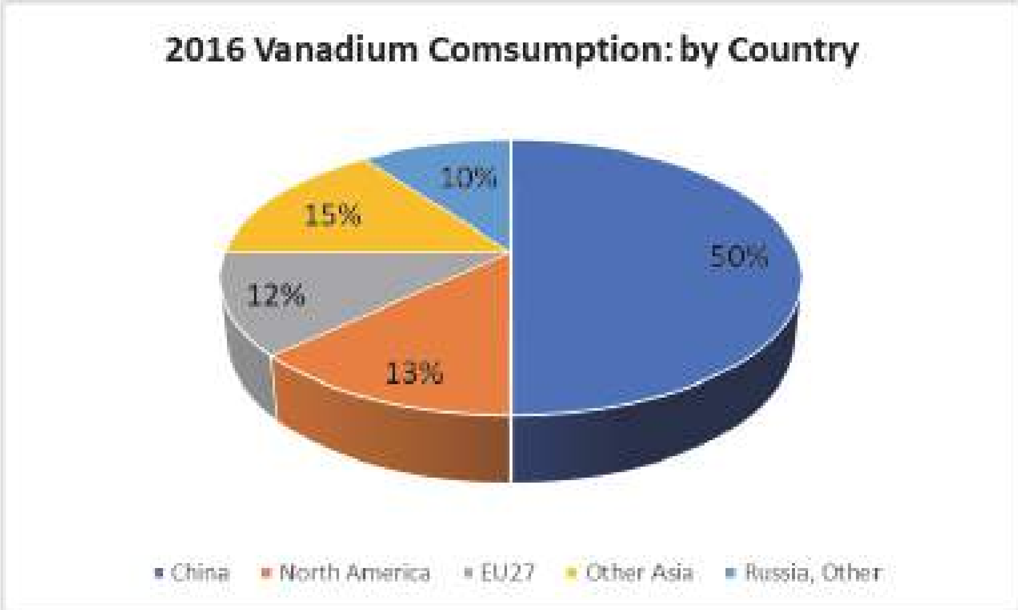


Figure 12-3
Worldwide Steel Production vs. Vanadium Consumption



Even with the drop in the Chinese steel demand from previous years, China is still a large steel consuming country, and consumes a lot of vanadium. Some other large vanadium consuming countries (regions) include North America and Russia. Figure 12-4 shows a proportional breakdown of vanadium consumption for 2016 per country.

Figure 12-4
Percentage Vanadium Consumption by Country



The use of vanadium in batteries may be a potential growth market for vanadium. Vanadium redox batteries ("VRBs") have been proposed as a potential solution for grid energy storage associated with renewable energy. To date, around 95 % of storage capacity is based on pumped-storage hydroelectricity. Given the size of the market, even a small increase in the use of VRBs in this market would amount to a significant additional demand for vanadium. A number of technological challenges have to be overcome for the solution to become economic, the outlook for demand for vanadium from this sector is thus still uncertain.

12.2 Vametco Long-term Vanadium Price Forecast

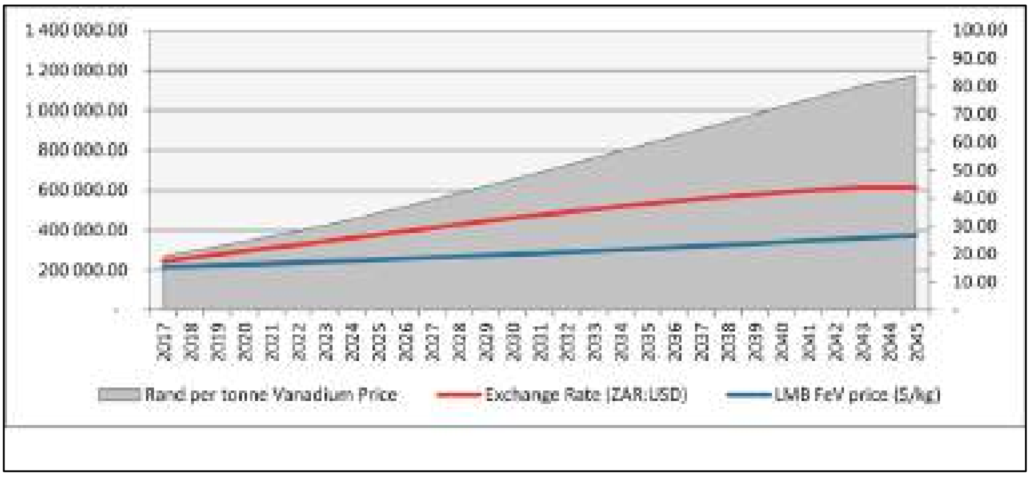
Historical vanadium prices were received from the client for 2010 to 2016 (Table 12-1) as well as a long term price and exchange rate forecast.

Table 12-1
Historical Vanadium Prices and Exchange Rate

	Unit	2010	2011	2012	2013	2014	2015	2016	2017 YTD Sept
Exchange Rate	R/US$	7.32	7.26	8.21	9.65	10.85	12.75	14.71	13.17
LMB FeV price	US$/kg V	30.06	28.75	25.00	27.71	25.53	18.59	17.30	27.53
ZAR Vanadium Price	R/t V	219,944	208,583	267,207	267,237	276,963	237,066	254,483	362,570

Figure 12-5 shows Vametco's long term view on Vanadium prices in Rand per tonne value based on forecasted prices and exchange rates.

Figure 12-5
Vametco View on Vanadium Prices



12.3 MSA Independent Observations

In the current volatile commodity price environment, MSA holds the view that it is near impossible to predict commodity prices with any degree of accuracy and that the long-term trends should guide decisions. Prices are no longer purely driven by supply and demand of the physical commodities but also by financial investment vehicles where fund managers – specifically of large retirement funds and the like, have a great influence on commodity prices. Although vanadium prices have generally been trending downward since 2010, a recent upswing in price has taken place since early 2017. The use of vanadium in batteries may be a potential growth market for vanadium, but due to technological challenges, the impact on the demand for vanadium is still uncertain. Vametco's long term view on prices shows a gradual upturn up to 2045.

The financial analyses were done on a vanadium price of 30.0 US$/kg V which is above the long-term average, but lower than the current price of 40-45 US$/kg V.

13 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

13.1 Environmental Studies

A historical ground water pollution plume is present for which ongoing water monitoring and the liner specifications of the old barren (scrubber) dam are required in support of the IWUL application. Possible design modifications may be required should the barren dam's liner not comply with the required standards.

According to the EMPr, no potential exists for the generation of Acid Mine Drainage from the waste disposal facilities or from the mining activities.

Due to the nature and extent of the Vametco operations, several other Environmental Authorizations as provided for in legislation other than the MPRDA, are required for various activities. These activities include inter alia:

- Listed Activities in terms of the National Environmental Management Act ("NEMA") as listed in Regulations GNR 544, GNR 545 and GNR 546;
- Listed Waste Management Activities in terms of the National Environmental Management Waste Act ("NEMWA") as listed in Regulation GNR 718;
- Listed Air Emissions Activities in terms of the National Environmental Management Air Quality Act ("NEMAQA") as listed in Regulation GNR 248; and
- Water Uses as defined in section 21 of the National Water Act ("NWA") as well as Mine Water Management activities as provided for in Regulation GN 704.

According to the existing EMPr, no new listed activities or water uses are relevant.

As far as these authorisations for the existing status quo is concerned, Vametco has submitted and will submit applications to the various Competent Authorities on an on-going basis, as is / was required to fulfil their obligations in this regard.

13.2 Legal and Permitting

13.2.1 Mineral and Petroleum Resources Development Act, 28 of 2008 (MPRDA)

Vametco was granted its New Order Mining Right ("NOMR") on 24 April 2013, on the following farms:

- Krokodilkraal (426JQ); and
- Uitvalgrond Portion 1(431JQ).

The Mining Right is valid for 25 years from 24 April 2013 to 23 April 2038.

Vametco is in possession of an approved Environmental Management Programme ("EMPr") in terms of Section 39 of the MPRDA. It is dated 1998, and an amended EMPR has been submitted to the DMR and is in the process of approval.

13.2.2 National Environmental Management Act, 109 of 1998 (NEMA)

From the available documentation, it is clear that applications for all authorisations were made or in the process of being made. It is assumed that all licences and permits are in place at Vametco in terms of NEMA and the operation continues to meet all its regulatory obligations while during operations.

13.2.3 National Water Act, 36 of 1998 (NWA)

In terms of the NWA, an application for an integrated water use licence was submitted in 2011and approved during June 2017.

13.2.4 National Environmental Management Waste Act, 59 of 2008 (NEMWA)

All licences and permits are in place at Vametco in terms of NEMWA and the operation continues to meet all its regulatory obligations while during operations.

13.3 Taxation

Bushveld Vametco Holdings is subject to:

- South Africa's Taxation laws. All Tax returns are up to date. Company tax in South Africa is 28% after all capital expenditure is recovered in the year it is incurred;
- South Africa's Value Added Tax ("VAT") legislation. Vametco Alloys is VAT registered;
- Royalties are payable to the state in terms of the Mineral and Petroleum Resources Royalty Act 28 of 2008. Section 5.1 on the Converted Mining Right, registered on 18 June 2013, determines that Royalties are payable to the state throughout the duration of the mining right. Royalty is calculated using the formula prescribed in the Royalty Bill for unrefined mineral resources. The Royalty Rate is capped at 7 % for unrefined resources. It is assumed that all Royalty returns are up to date at the time of this report;
- Section 14.1 of the Lease Agreement determined that Vametco would pay a royalty of 2 % (two per cent) of total turnover from minerals sales to the Co-Owners until royalties payable to the state becomes effective. Royalties have been payable to the state for the duration of the Converted Mining Right (24 April 2014 – 23 April 2038). Vametco is thus no longer obliged to pay royalties to the Co-Owners in terms of turnover from minerals sales; and
- according to Section 15 of the Lease Agreement, accrued royalties totalling R 4.7 million plus interest will become payable on termination of the Mineral Lease. A portion of the accrued royalties (R 2,056,036) have been paid in advance between December 1995 and December 2004.

13.4 Social and Community Impact

A Social and Labour Plan ("SLP") is in place for the Vametco operations. It covers the following focus areas:

- Human Resources Development Programme;
- Local Economic Development Programme; and
- Programme for Managing Downscaling and Retrenchments.

As part of the SLP, action plans are in place to assist the community in promoting economic growth and improve quality of life. Local Economic Development ("LED") Project plans are developed in five year increments and continually reviewed in line with the SLP.

The updated 2012 SLP made note of two projects:

- upgrading of the Mothotlung-Ga-Rankothea road in conjunction with the Madibeng Local Municipality to address the growing infrastructure requirements of the community. The upgrade was recently completed; and
- community infrastructure development, with specific focus on the upgrading of two schools and two clinics in the Uitvalgrond area.

13.5 Mine Closure

The EIA of 2012 conducted by JMA Consulting describes the process for mine closure. Decommissioning and closure of the facility will occur once the financial viability of the mine and the plant is compromised. This phase will commence with a determination of the future land use for the site, which will decide the closure objectives to be achieved. The main areas of focus are listed below (the full detail of the mine closure process can be seen in the mentioned document):

- rehabilitation of the Open Pit;
- rehabilitation of the Haul and Inpit Roads;
- rehabilitation of the Waste Rock Dumps;
- rehabilitation of the Magnetite Dump;
- rehabilitation of the Sand Tailings Dump;
- rehabilitation of the Slimes Dam;
- rehabilitation of the Plant area and Buildings;
- rehabilitation of the Scrubber Dam;
- rehabilitation of the Small Barren Dam;
- rehabilitation of the Large Barren Dam;
- rehabilitation of the Final Outlet (Turf) Dam; and
- rehabilitation of the Storm Water (Environmental) Dam.

14 CAPITAL AND OPERATING COSTS

14.1 Mining Schedule

Hindsight developed a financial model (discounted cashflow analysis) in Microsoft Excel ™ to evaluate the ongoing viability of the Project. MSA reviewed the model and adjusted the costs and product price assumptions to 2017 values.

A pit optimisation study of the Indicated Mineral Resource, which is classified as Ore Reserve according to the JORC code, was conducted by MSA and a Mining Schedule developed for the optimised pit. The resulting schedule includes product tonnes for a total of 26 years. Mining volumes from this schedule was used as input for the financial model.

Table 14-1 shows a breakdown of the mining tonnes. Note that only the first 10 years of the LOM is included here for the purpose of illustration, while the total LOM applied in the Financial Model is 26 years.

Table 14-1
Mining Schedule

Mining Volumes	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Ore Mined	1,313,572	1,495,000	1,845,000	2,495,000	2,495,000	2,495,000	2,495,000	2,495,000	2,495,000	2,495,000
Waste Material Mined	1,970,358	2,990,000	3,690,000	2,495,000	2,495,000	2,495,000	2,495,000	2,495,000	2,495,000	2,495,000
Total Material Mined	3,283,931	4,485,000	5,535,000	4,990,000	4,990,000	4,990,000	4,990,000	4,990,000	4,990,000	4,990,000
Product Tonnes (V)	2,671	3,040	3,752	5,073	5,073	5,073	5,073	5,073	5,073	5,073

14.2 Capital

The Capital Plan for 2016 to 2034 was received from the Client and used as the input for capital cost in the financial model. The Client's Capital Plan makes provision for sustaining and legal compliance capital as shown in Table 14-2. No loan payments or interest is added, as the client will finance all capital expenditures.

14.3 Operating Costs

A summary of actual costs for existing Cost Centres during 2016 were received from the Client and used as input for Operating Costs in the Financial Model. Different operating cost rates for relevant mining volumes were applied, for example, to calculate the total Mining Cost for a specific period, the Mining Cost Rate was multiplied with the total mined tonnes for that year, while the Selling Cost Rate was multiplied with the total product tonnes for the year to calculate the total Selling Cost. Section 14.2.2 of the Lease Agreement established in 2008, states that the Co-owners are entitled to compensation as provided for in section 54(3) of the MPRDA for the surface right usage.

No costs for Co-owners compensation in terms of surface right usage are included in the financial model. For the purpose of a standard comparison, Table 14-3 shows the Operating Cost Rates, based on ZAR/kg basis, for the first 10 years of the LOM.

Figure 14-1 shows the breakdown of operating costs per year, in percentages for the first 10 years of the LOM.

Figure 14-1
The Percentage Split of Operational Costs

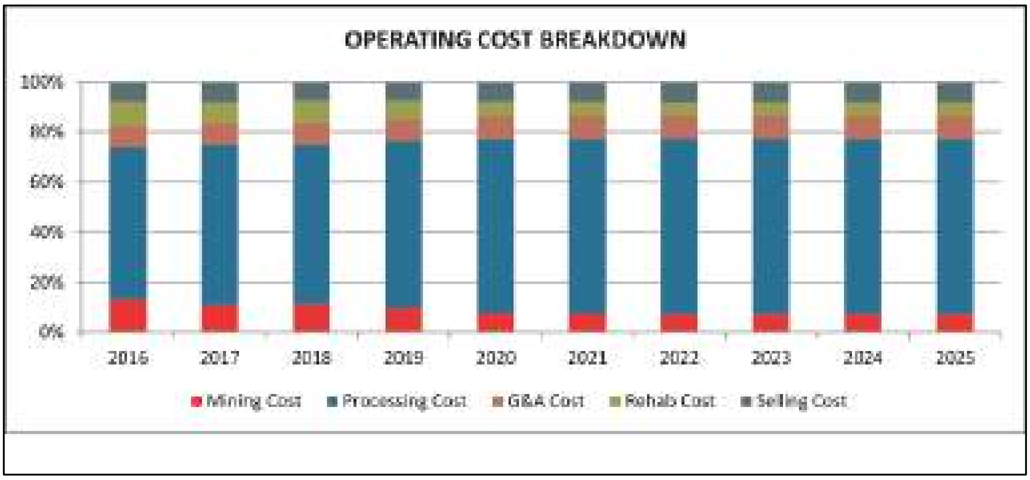


Table 14-2
Capital Plan

Capex (ZARm)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Special Environmental Spend	10.0	45.0	45.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debottlenecking & Expansion	9.0	32.0	173.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ongoing CAPEX	10.88	33.00	33.00	33.00	40.26	40.26	40.26	40.26	40.25	40.25	40.25	40.25	40.24	40.24	40.24	40.24	40.24	40.23	40.23

Notes: *Ongoing CAPEX calculated as 3.50 % of Operating Cost from 2021*

Table 14-3
Product Equivalent Operating Cost Rates

ZAR/Period Equivalent Operating Cost Rate	Unit	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Mining	ZAR/ROM t	71,81	72,08	65,47	50,75	50,75	50,75	50,75	50,75	50,75	50,75
Processing	ZAR/kg V	34,96	32,77	30,84	29,85	29,85	29,85	29,85	29,85	29,85	29,85
Admin, Corporate & Other	ZAR/kg V	37,90	30,34	26,01	21,19	21,18	21,17	21,16	21,15	21,13	21,12
Logistics	ZAR/kg V	9,08	9,17	9,17	9,17	9,17	9,17	9,17	9,17	9,17	9,17
Sales Commission	ZAR/kg V	17,34	16,31	16,31	16,31	16,31	16,31	16,31	16,31	16,31	16,31
Total Operating Costs	**ZAR/kg V**	**265,59**	**266,10**	**250,19**	**233,76**	**233,75**	**233,74**	**233,72**	**233,71**	**233,70**	**233,69**

14.4 Royalties

The Financial Modal makes provision for Royalties payable to the state in terms of the Mineral and Petroleum Resources Royalty Act 28 of 2008. Section 5.1 on the Converted Mining Right, registered on 18 June 2013, determines that Royalties are payable to the state throughout the duration of the mining right.

An annual royalty amount was received from the Client based on royalty payments to the state and Co-owners in 2016. The financial model however calculates royalties payable to the state using the formula below, as prescribed in the Royalty Bill for unrefined mineral resources. The Royalty Rate is capped at 7 % for unrefined resources.

1. $Royalties = Gross\ Sales \times Royalty\ Rate$

2. $Royalty\ Rate = 0.5 + [EBIT \div (Gross\ Sales \times 9)] \times 100$

No royalties to Co-owners are included in the financial model.

15 MINERAL ASSET VALUATION METHODOLOGY

The generally accepted valuation approaches that may be used to derive a value for a mineral asset are summarised in Table 15-1.

Table 15-1
Valuation approaches

	Approach
Market based	
Income based	
Cost based	

Of these, the market approach is the only direct measurement of market value and is generally one of the preferred approaches. All the other methods determine a value based on technical analysis of some aspects of the subject property. Such a technical value then has to be adjusted by a competent valuer ("Practitioner" in VALMIN 2015) to reflect an estimated Market Value.

The most appropriate application of the various methods depends on careful consideration of several factors and the VALMIN Code 2015 states that:

"A Practitioner must make use of Valuation Methods that are suitable for the Mineral Assets under consideration. Selection of an appropriate Valuation Method will depend on such factors as the:

- *nature of the Valuation;*
- *development status of the Mineral Assets, and*
- *extent and reliability of available information."*

The VALMIN Code 2015 classifies the level of asset development according to the following categories:

"Exploration Projects" are assets where mineralisation and a Mineral Resource may or may not have been identified

"Pre-Development Projects" refers to properties where Mineral Resources have been estimated (possibly incompletely) but where a decision to proceed with development has not been made. Properties at the early assessment stage, properties for which a decision has been made not to proceed with development, properties on care and maintenance and properties held on retention titles are included in this category if Mineral Resources have been estimated, even if no further valuation, technical assessment or advanced exploration is being undertaken.

"Development Projects" are properties for which a decision has been made to proceed with construction and/or production, but which have not been commissioned or are not operating at design levels.

"Production Projects" refers to mineral properties which have been commissioned and are in production.

The various recognised valuation techniques attempt to provide the most accurate estimate of the asset value in each of these categories of project maturity. In some instances, a particular mineral property or project may include assets that logically fall under more than one of these categories.

A guide to the use of the different approaches is summarised in Table 15-2.

Table 15-2
Valuation approaches

Valuation Approach	Exploration Projects	Pre-development Projects	Development Projects	Production Projects
Market	Yes	Yes	Yes	Yes
Income	No	In some cases	Yes	Yes
Cost	Yes	In some cases	No	No

The valuation must reflect the perceived "market value", which is described in the VALMIN Code 2015 as *"means the estimated amount of money (or the cash equivalent of some other consideration) for which the Mineral Asset should exchange on the date of Valuation between a willing buyer and a willing seller in an arm's length transaction after appropriate marketing wherein the parties each acted knowledgeably, prudently and without compulsion"*.

Pre-development, Development and Mining Projects should have Measured, and Indicated Resources estimated, with technical parameters known or reasonably determinable with regard to mining and mineral processing. In such cases, a technical value of the asset can be derived with a reasonable degree of confidence by compiling a discounted cash flow ("DCF") and determining the net present value ("NPV").

Where Mineral Resources are classified in only the Inferred category, reflecting a lower level of confidence and understanding, the application of mining parameters is not practicable and in most cases it would be inappropriate to value such Resources by applying the DCF/NPV approach. The argument also applies to a mineral asset where economic viability cannot be readily demonstrated for a Resource assigned to a higher confidence category (e.g. a feasibility study that shows marginal or sub-economic financial returns). In these instances, it is frequently appropriate to adopt the In Situ Resource (or "Yardstick") method of technical valuation for such assets. The In Situ Resource technique involves application of a heavy discount to the value of the total in-situ metal contained within the Resource. The discount is usually taken as a range of a certain fraction (or percentage) of the spot metal price as at the valuation date. The actual range varies for different commodities, being typically between 2 % and 4.5 % for gold and diamonds, and between 0.5 % and 3 % for base metals (including platinum group elements), but may also vary substantially in response to a range of additional factors such as physiography, infrastructure and the proximity of a suitable processing facility. The depth (and hence cost) of a potential mining operation on the asset is also a determining factor.

In the case of Exploration Areas, and to a lesser extent Advanced Exploration Areas, the assets have "hidden" potential that has a speculative effect on their value. The valuation of Exploration Areas is therefore to a significant extent dependent on the informed, professional opinion of the valuer. Taking into account and comparing results from more than one valuation technique is likely to lead to a more confident range of values.

The VALMIN Code 2015 also proposes that an evaluation of the risks likely to apply to the assets under consideration should be included, analysing the uncertainties inherent in the assumptions made and the effects they may have on the valuation. Such risks and uncertainties may include:

- geology of mineral deposits and the dependant estimates of grade, Resources and Reserves;
- geological prospectivity and the possibility that further exploration may fail to demonstrate any economic mineralisation;
- ore processing and the variability of metallurgical parameters such as recovery rates, process plant availability and the ability of new processes to be financed and to live up to expectations;
- construction, including unforeseen foundation conditions, weather and industrial disputes, all of which may affect both capital costs and completion date;
- production of marketable commodities in terms of quality and price; and
- "country risk" involving social, political, environmental, cultural and security factors which cannot be controlled by project operators.

The Market Value usually comprises two components: the underlying or "technical value" of the assets and a premium or discount relating to market, strategic and other considerations. The Market Value is therefore likely to fluctuate with time.

Regardless of the technical application of various valuation methods and guidelines, the valuer should strive to adequately reflect the carefully considered risks and potentials of the various projects in the valuation ranges and the preferred values, with the overriding objective of determining the Market Value.

15.1 Construction of Discounted Cashflow Financial Models

The Property which MSA reviewed fell into the operating mines category and all had a financial model representative of the workings of the operation. The income approach is considered appropriate for valuing mineral properties of this nature. The cash flow methodology values a property on the basis of discounted cashflow financial modelling and in general these cashflows will cover the life of the operation.

MSA reviewed and checked the models for structural errors and robustness using auditing software and in general checked the integrity of the flow of data from model sheets to each other. However, where errors were found these were corrected to ensure the models functioned as designed. MSA was reasonably satisfied that the technical inputs were captured correctly and that the integrity of the models could be relied upon.

MSA updated some of the input parameters which are highlighted elsewhere in this report. Recommendations regarding some of these inputs were reviewed, and MSA is satisfied that they fairly reflect the state of the economic situation of South Africa and current status of the South African industry.

The values for the mineral assets so derived are considered by MSA to be fair based on the projected Resources or Reserves to be mined, which do not necessarily equal the total Resources or Reserves of each property.

16 VALUATION OF THE VAMETCO MINERAL ASSETS

16.1 Discounted Cashflow Analysis

16.1.1 Principal Sources of Information

The principal source of information in this section of the report is an Excel spreadsheet detailing the operations of the Project. The spreadsheet was provided by Ken Greeves, Hindsight, dated 7 September 2017.

16.1.2 Introduction

The financial evaluation has been performed in real terms and has been undertaken on an after-tax, un-leveraged, real rate of return basis. The inflate/deflate methodology has been incorporated in order that the quantum and timing of tax and royalty payments is correct

The base date for the NPV and IRR calculations for the financial model is 16 October 2017. All production, costs and revenues are based on financial years and all cash inflows and outflows are assumed to occur at the start of each year, i.e. 1st January of each year.

16.1.3 Review of Cash Flow Forecast

The spreadsheet model was checked for formula consistency and for the correct flow-through of data between the various sections of the spreadsheet. A few errors were found and corrected.

The input parameters were also reviewed and a number of changes made as outlined below.

16.1.4 Changes made to the Model

Foreign Exchange Rate

A foreign exchange rate of ZAR 13.50 : US$ 1.00 was implemented. Over the last 6 months, the rand has averaged ZAR 13.25 to the US$ but the general consensus of investment analysts is that the Rand will remain stable provided that the political situation does not change. Investec Bank is forecasting ZAR 13.47 to the US$ in 12 months' time. Rand Merchant Bank has forecast a rate of ZAR 13.97 to the US$ in the next 12 months.

The exchange rate was allowed to change according to the purchasing power parity ("PPP") between the two currencies. The inflation rate for South Africa is forecast to be 6 % per annum and the US inflation is forecast to be 2.5 % per annum giving a PPP of 3.41 % per annum.

Discount Rate

The valuation must comply with the AIM rules of using a real discount rate of 10 %. The NPVs will be in real terms determined after the inflate/deflate methodology has been implemented. With a South African inflation rate estimated at 6 % per annum, a 10 % discount rate equates to a 16.71 % nominal discount rate.

Other

Other inputs covering tax and royalties were checked and found to be correct. All other inputs are considered to be acceptable.

16.1.5 Methodology Applied

The costs and revenues were originally in 2016 money terms. These costs and revenues have been adjusted to mid-2017 money terms by applying appropriate escalation factors. Inflation is applied from 2017 onwards and then deflated back to 2017, thus preserving the mid-2016 money terms.

16.1.6 Results of Financial Model

Table 16-1
Base Case Variables

Discount rate (real)	10.0 %
ZAR:US$ Exchange Rate	ZAR 13.50 : US$ 1.00
Average price per tonne V	US$ 30.00
Life of Mine	26 years

Table 16-2
Summary of selected financial inputs and corresponding results (Real)– post tax valuation

Item	ZAR	US$
Post Tax Valuation		
Capital investment	3.03 billion	225 million
Earnings before Tax and Royalty	20.67 billion	1.53 billion
Post-tax NPV @ 10 % (real discount rate)	2.85 billion	211 million

Table 16-2 shows the NPVs in real terms at various discount rates based on the assumptions and inputs as outlined above.

Table 16-3
NPVs of the Vametco

Discount rate (real)	NPV (ZAR million)	NPV (US$ million)
0.0 %	10,147.5	751.6
5.0 %	4,843.8	358.7
8.5 %	3189.7	236.2
10.0 %	2,848.5	211.0
12.5 %	2,141.4	158.6
15.0 %	1,727.0	127.9
20.0 %	1,192.0	88.2

16.1.7 Sensitivity Analysis

The sensitivity chart, Figure 16-1 below, shows the real NPV @ 10 % variation for the Base Case due to changes in revenue, capital and operating costs, holding all other inputs constant. The Project is most sensitive to the vanadium prices and more sensitive to Opex than Capex.

Figure 16-1
NPV @ 10 % (Real) Sensitivity Analysis

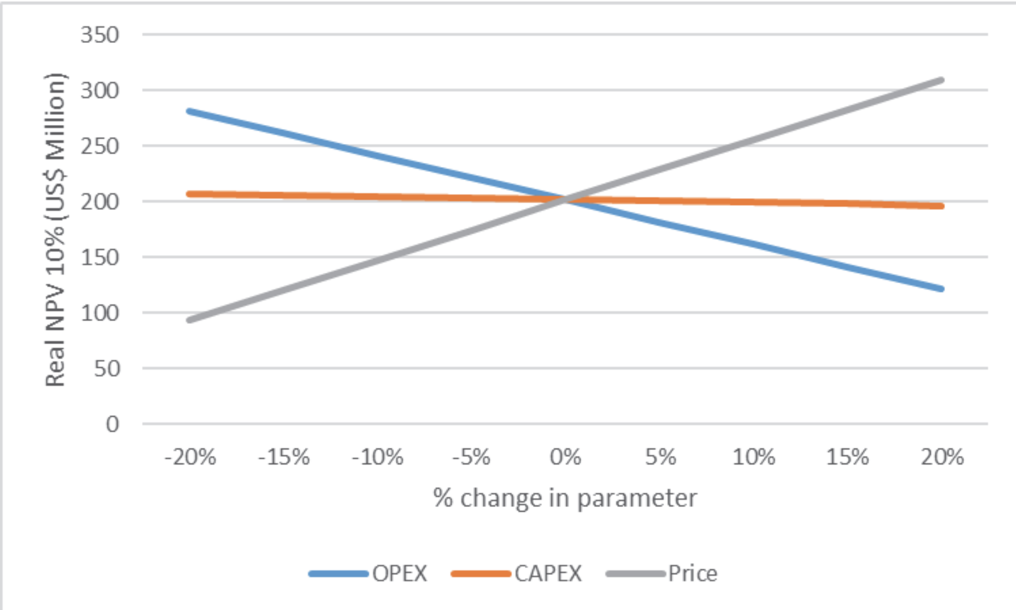
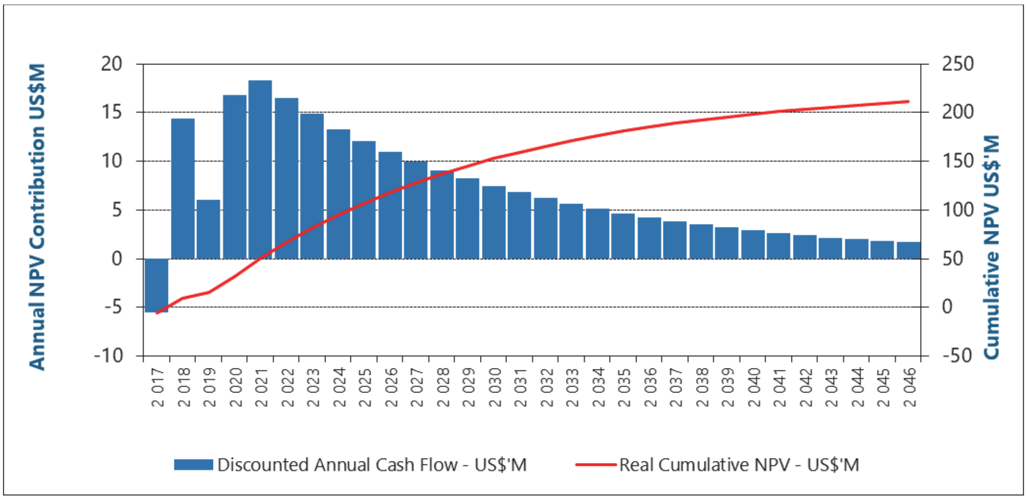


Figure 16-2
Annual Cash Flow (Real)



16.1.8 Valuation Summary

MSA took into consideration the AIM Rules and with specific reference to the AIM June 2009 - Note for Mining and Oil & Gas Companies, which prescribes a valuation based on NPV (post-tax) at a discount rate of 10 % ("NPV10"). MSA thus considers the results of the Income approach to be most applicable. On a NPV10 basis Vametco is valued at US$ 211 million. MSA then estimates on the same basis a Value of US$ 56.1 million for BML's 26.6 % interest in the Vametco.

17 OTHER RELEVANT DATA AND INFORMATION

17.1 Recent Production Performance

Table 17-1
Recent Production and Financial Performance

Description	2015 Performance	2016 Performance
Production Performance	The annual maintenance shutdown, budgeted for September 2015 was postponed to quarter 1 of 2016 to save costs in the declining price environment.	Record volumes of NV produced from magnetite due to improved operating efficiencies.
	Actual NV production of 2419 t V was 146mtV lower than the budget of 2565 t V.	NV Production of 2856 t V was 17 % higher than the budget of 2448 t V.
	Total tolling volumes of 331 t V were 539 t V below budget due to suspension of the EHSV Slag tolling agreement pursuant to EHSV filing for business rescue in April 2015.	
Financial Performance	Revenues were positively affected by the weakening of the Rand against the US$ in 2015. The actual average exchange rate of US$/ZAR 12.75 was 21 % weaker than the budget of US$/ZAR 10.50.	Sales Revenue was positively affected by: • The weak ZAR/US$ exchange rate – December 2016 YTD average exchange rate of US$/ZAR 14.10, was 14 % weaker than the budget of US$/ZAR 12.85. • Higher than budget sales prices Actual w.a. selling prices for Dec was 13 % higher than budget (Actual: US$ 17.13 /kg V vs. Budget: US$ 15.18 /kg V). LMB prices were 13 % higher than the budget price of US$ 16.27, whilst RN prices were 14 % higher than the budget price of US$ 17.93 /kg V.
	Average Ryan's Notes prices were 16 % below budget levels (Actual US$ 20.28 /kg V vs. Budget US$ 24.18 /kg V) whilst LMB prices were 14 % lower than the budget (Actual US$ 18.53 /kg V vs. Budget US$ 21.57 /kg V), due to perceived high inventory levels of Vanadium products in the market;	NV volume var.: Nitrovan sales volumes were 372 t V higher than the budget (Actual: 2 810 t V vs Budget: 2 438 t V), mainly due to higher sales in RSA, USA and RoW.
	NV Sales revenue was positively affected by more Vametco-owned NV being available for sale on the market, following the decision to only toll-convert MVO from Vanadium Slag starting from the 2nd half of 2014 onwards.	Actual cash on hand at 31 December 2016 was ZAR 14 million higher than the budget of ZAR 57 million. The increase in cash was mainly attributable to higher than budget EBITDA (Actual: ZAR 48 million vs. Budget – ZAR 73 million) due to weaker ZAR/US$ exchange rates and higher than budget sales prices.
	294 t V of Vametco-owned MVO was sold to Nikom in 2015 following the suspension of the slag conversion agreement from June 2015 onwards.	

17.2 Risk Assessments

Vametco follows a mature risk management approach. A risk matrix is held and updated regularly.

The following top 16 risks that were identified for the vanadium operations are listed in Table 17-2.

Table 17-2
Risk Assessment

	Risk Area and Description	Residual Risk Rating	Mitigating Actions in addition to Internal Controls
1.	Political - Stakeholder Management	High	Actively ensure stakeholder management is applied on a consistent basis. Investigate opportunities of LED business opportunities from the communities.
2.	LT Supply / Demand - Global Industry cyclinity	High	Dedicated NV Sales strategy implementation.
3.	Operational - Information Management - Infrastructure	Low	Various infrastructure expansion projects initiated. Projects initiated to replace current legacy software systems.
4.	Cost - Cost position vs. competitors	Moderate	Maintain a low operating cost environment.
5.	Operational - Environmental Compliance (Operational Responsibility)	High	Longer term Emissions Reduction Strategy / Air Quality Management plan - new plant standards by 2020. Kiln emission reduction upgrade (SO2 and dust reduction) and NV fugitive dust emission reduction. Ground water abstraction scheme implemented to reduce impacted ground water plume.
6.	Operational - Business Continuity	Low	
7.	Operational - Sourcing and Supply of Raw Materials and Energy	Moderate	Implement procedures to enter into supply agreements for applicable raw materials, commencing during 2016. Multiple raw material suppliers counter the risk of non-delivery and *force majeure* conditions.
8.	HR - Leadership in key functional roles	Moderate	Cross training. Management plans are being developed to support business.
9.	External Compliance - Labour law	Moderate	
10.	Reputational - Corporate / Social Responsibility	Moderate	Actively managed by management and stakeholders on a daily basis.
11.	Operational - Fraud and Ethics	Low	Security department established to support principals. Any instance of or lack of commitment to sound governance and ethical principles are dealt with accordingly. Function of Internal Audit.
12.	Operational - Maintenance Risk	Moderate	Constant revision of procedures to ensure all maintenance items have been identified and all maintenance is conducted in accordance with specification requirements.
13.	Political - Nationalisation of assets (mines)	High	Achievement in terms of deliverable required by New Order Mining Rights.
14.	Financial - Currency risk; Exchange Rate Risk	Moderate	Risk mitigated due to production in ZAR and sales in USD

	Risk Area and Description	Residual Risk Rating	Mitigating Actions in addition to Internal Controls
15.	Operational - Health and Safety	Moderate	Programs are implemented to ensure 360 degree coverage (including noise, dust and gas at identified sites). Qualified and competent technical trainers or training mechanisms used to improve the competency levels of employees.
16.	Cost - Cost Inflation Management	Low	Internal controls are continuously being assessed for effectiveness. Implementation of new ERP system.

18 INTERPRETATION AND CONCLUSIONS

The geology of the area is well understood with magnetite mineralisation being visually observed in the core and measured by Davis Tube tests.

No QAQC protocols were implemented during any of the drilling campaigns undertaken by the various owners of the mine. This detracts some of the confidence in the Mineral Resource estimate. This said there is at least a good correlation between drillhole data and mined out sections.

The geological model consists of three zones of layers of magnetite-rich gabbros dipping at approximately 19° to the north as aligned with observations made during the open pit-mining. Inverse distance square was used to estimate the various variables into the block model. This method is acceptable due to low variability and long-range continuity of the layers. Validation of the block model through visual inspection and comparative statistics shows that the interpolated values correlate well with the original drillhole data.

Vametco Mine has been operating since 1967. The mining method and plant process is very well understood and has delivered tangible result since mining started. The input factors in to the financial model are well known and are based on actual cost and income generated by the mine. All other modifying factors that has an influence on the operations viability is well understood and is being managed in a pro-active manner.

It is the opinion of the CP that all inputs and modifying factors is of the level that Ore Reserves can be estimated. The Ore Reserves are estimated by the use of pitshells generated from the pit optimisation studies that were undertaken.

Due to the factors listed above, there is high confidence in the Ore Reserves as presented in the CPR.

19 REFERENCES

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Vametco Holdings (Pty) Ltd, September 2011. Social and Labour Plan

Geologix, April 2006, Resource_Estimation_Report_2006

VBKOM (Pty) Ltd, April 2016. Independent Competent Person's Report for Vametco Mine operated by EVRAZ Vametco in the North West Province, Republic of South Africa

VBKOM Consulting Engineers (Pty) Ltd, November 2011, Vametco Reserve Report v3

Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012)

Australasian Code for Public Reporting of Technical Assessments and Valuations of Mineral Assets (2015)

APPENDIX 1: Glossary of Technical Terms

Glossary of Technical Terms

Archaean	The oldest rocks of the Precambrian era, older than about 2,500 million years.
basement	The igneous and metamorphic crust of the earth, underlying sedimentary deposits.
diamond drilling	Method of obtaining cylindrical core of rock by drilling with a diamond set or diamond impregnated bit.
dyke	A tabular body of intrusive igneous rock, crosscutting the host strata at an oblique angle.
fault	A fracture or fracture zone, along which displacement of opposing sides has occurred.
felsic	Light coloured rocks containing an abundance of feldspars and quartz.
imaging	Computer processing of data to enhance particular features.
joints	Regular planar fractures or fracture sets in massive rocks, usually created by unloading, along which no relative displacement has occurred.
Ma	Million years.
mafic	Descriptive of rocks composed dominantly of magnesium and iron rock-forming silicates.
metamorphism	Alteration of rock and changes in mineral composition, most generally due to increase in pressure and/or temperature.
replicate sampling	Sampling programme initiated to validate previous sampling results.
satellite positioning system (global positioning system GPS)	An instrument used to locate or navigate, which relies on three or more satellites of known position to identify the operator's location.
stratigraphic drillhole	A drillhole completed to determine the nature of rocks, rather than to identify mineral deposits, frequently applied for research or in the early stages of petroleum exploration.
strike	Horizontal direction or trend of a geological structure.

Appendix 2 Summary of Drillholes

Appendix 1
Summary of the drillhole data provided to MSA

Drillhole Name	Dip	Azimuth	Max Depth (m)	Drillhole Collar Coordinates (m) WGS84 LO29		
				X	Y	Z
KO1	-90	0	41.65	88178.7	-28961.7	1148.0
KO2	-90	0	21.70	88130.7	-29052.5	1148.9
KO3	-90	0	20.20	88215.6	-29036.7	1149.7
KR10	-90	0	49.71	88184.1	-28927.7	1146.4
KR7	-90	0	128.56	88457.0	-28781.0	1149.7
KR9	-90	0	43.82	88059.3	-28947.5	1145.8
UI10	-90	0	43.27	90414.8	-29450.1	1156.2
UI13	-90	0	45.05	89263.1	-29181.8	1152.2
UI14	-90	0	46.96	89851.3	-29328.5	1156.5
UI15	-90	0	57.54	90655.2	-29567.0	1156.3
UI16	-90	0	59.89	90143.2	-29354.7	1156.4
UI17	-90	0	46.94	91091.2	-29622.6	1158.9
UI19	-90	0	5.49	89242.0	-29294.0	1163.1
UI2	-90	0	127.80	90463.1	-29210.1	1148.9
UI20	-90	0	5.79	89292.5	-29312.5	1153.2
UI21	-90	0	6.40	89214.0	-29277.0	1152.4
UI23	-90	0	8.23	89599.3	-29394.3	1155.9
UI24	-90	0	8.84	89679.1	-29409.6	1156.8
UI25	-90	0	63.74	89414.8	-29170.7	1152.0
UI26	-90	0	70.76	90003.7	-29305.1	1156.4
UI27	-90	0	67.40	90595.6	-29440.6	1155.2
UI28	-90	0	59.47	90928.7	-29585.9	1157.8
UI29	-90	0	67.10	91235.3	-29590.9	1159.6
UI30	-90	0	68.01	89102.5	-29087.1	1151.9
UI31	-90	0	68.01	88791.1	-29005.8	1151.0
UI32	-90	0	83.26	88516.9	-28849.4	1146.5
UI44	-90	0	50.93	89792.8	-29163.4	1154.1
UI46	-90	0	19.82	90416.1	-29322.7	1154.6
UI5	-90	0	163.36	89642.2	-28921.9	1151.3
UI6	-90	0	270.20	88627.1	-28321.3	1143.2
UI7	-90	0	32.16	88526.0	-29048.1	1151.3
UI8	-90	0	37.03	88944.9	-29214.6	1154.4
UI9	-90	0	56.50	89558.6	-29249.1	1153.7
UO1	-90	0	50.50	88702.4	-29026.7	1152.1
UO10	-90	0	59.60	89012.6	-29115.3	1152.9
UO11	-90	0	50.60	89466.6	-29213.9	1151.7
UO12	-90	0	52.90	90342.3	-29407.1	1156.2
UO13	-90	0	62.90	90715.4	-29570.4	1156.5
UO2	-57.17	128	85.69	88842.0	-29092.1	1154.3
UO3	-90	0	28.88	88929.0	-29170.9	1134.5
UO4	-46.25	274	71.33	89283.8	-29156.6	1148.1
UO5	-49.52	135	67.75	89643.0	-29246.5	1152.9
UO6	-50.19	273	76.90	89940.8	-29314.6	1156.1
UO7	-90	0	65.20	90131.8	-29334.7	1156.1
UO8	-90	0	47.80	90531.0	-29486.4	1155.8
UO9	-90	0	26.94	88842.4	-29138.8	1134.6
VA1	-90	0	127.88	89289.5	-28943.8	1150.7
VA2	-90	0	141.12	89486.0	-28976.3	1151.0
VA3	-90	0	137.80	89675.5	-29013.6	1152.3
VA4	-90	0	137.75	89918.1	-29076.3	1149.0
VA5	-90	0	133.55	90147.8	-29124.5	1153.2
VA6	-90	0	133.19	90382.0	-29176.1	1154.5

Appendix 3 Table 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• The mineralisation was sampled using diamond cored drillholes. A total of 52 holes were drilled vertically or inclined downwards between 46° and 58° in a south-westerly direction. All 52 drillholes were used for the geological model and 38 were used for the Upper, Intermediate and Lower Seam grade estimate. 14 drillholes were excluded as the assays were of whole rock and not of magnetite concentrate. The positions of these excluded holes were examined and they were found to be in close proximity to the holes that were accepted and so no impact on the overall drilling grid occurred. • The position where sampling of the core commenced and ended for each layer was based on the occurrence of significant magnetite concentration; greater that approximately 20 %. Low grade zones (magnetite concentration < 20 %) were identified and analysed for magnetite content but were not always assayed for V_2O_5, SiO_2, CaO. • 65 % of all samples taken were equal to or less than 0.30 m in length. The intervals were varied to respect geological boundaries.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Only diamond drillhole core data was collected. Holes were drilled vertically or inclined downwards between 46° and 58° in a south-westerly direction. No drillhole cores were orientated.

Criteria	JORC Code explanation	Commentary
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• No core recovery data was captured. Core recovery in Upper Zone gabbros is typically good.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All core has been logged for lithology and seam unit. • All data are stored in a relational drillhole database (Microsoft Access). • All cores were logged from the top of intersected magnetite-rich gabbro to the base of the intersected magnetite-rich gabbro. The total length of core in the 52 drillholes used for the geological model is 3,503.87 m and the total length of core in the 38 drillholes used for the estimate is 2,374.86 m.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• MSA has assumed that half cores were taken as is standard practice in the area. However, this has not been verified. • The disseminated and layered style of mineralisation is not sensitive to core sizes. The sample length is generally shorter than required, but samples were composited into longer lengths during estimation.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Davies Tube was used to determine the magnetite content. Assays of the magnetite content were carried out for V_2O_5, SiO_2 and CaO. • The samples for 14 holes were found to have been assayed using total rock, rather than Davies Tube concentrate assays, and were not used for estimation. • QAQC was not performed on any of the historical drilling. However, mining operations indicate that actual mined vanadium values are consistent with those determined from drilling.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• No verification work of significant intersections has been completed. • No twin holes have been drilled. • All data is stored in a Microsoft Access database. • No statistical adjustments to data have been applied.
Location of data points	• *Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• All of the drillhole collars have been surveyed. • All holes were drilled vertically or inclined downwards between 46° and 58° in a southwesterly direction. The depths ranged between 5 m and 271 m. No down-hole surveys were conducted and all holes were assumed as being as collared for their entire length. • The grid system for the Project is UTM WGS84, LO29. • The high-resolution topography DTM was supplied to MSA by Bushveld Vametco for the mine area. This includes a recent open pit survey (19 April 2017), which allowed for the reporting of the remaining Mineral Resource.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The drillholes were spaced at an average of 150 m apart on strike and 200 m on dip. • The drillhole spacing is sufficient to assume and/or confirm geological and grade continuity for this type of mineralisation. • Samples have been composited according to geology, i.e. within the width of manually coded data per Upper, Intermediate and Lower Seams. Samples were composited to 2 m length intervals.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• -based bias had been identified in the data. Holes were predominantly drilled vertically, with some inclined between -46° and -58°, and intersect mineralisation at angles of between 50° and 85°. • No orientation
Sample security	• *The measures taken to ensure sample security.*	• Unknown.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits were carried out. The data were reviewed as part of the estimation exercise. It was identified that the V_2O_5 assays were either whole rock or magnetite concentrate and the whole rock assays were removed.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• Exploration was conducted on one Mining Right, No: 59/2013, which consists of portions of the farms Krokodilkraal and Uitvalgrond. • The mining right is valid for a period of 25 years and has an expiry date of 23 April 2038.

Criteria	JORC Code explanation	Commentary
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The KO, KR, UI and UO series holes were drilled by Union Carbide Exploration from the mid 1960's until 1982. • The VA series holes (VA1 to VA6) were drilled by EVRAZ Vametco in 2006.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The deposit occurs within the Rustenburg Layered Suite of the Bushveld Complex, which is a layered mafic intrusion. Magnetite- rich gabbro occurs in layers in the Upper Zone. Locally these are known as the Upper Seam, Intermediate Seam and Lower Seam. • Mineralisation occurs in the form of vanadiferous magnetite rich layers.
Drillhole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:* – *easting and northing of the drillhole collar* – *elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar* – *dip and azimuth of the hole* – *down hole length and interception depth* – *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• Refer to Appendix 1. • The majority of the drillholes are orientated vertically. Some are inclined between - 46° and - 58°. • Intersection thicknesses described for the Mineral Resource.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• N/A – Exploration results not reported.

Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• Holes are predominantly drilled vertically with some inclined between -46° and -58°and intersect mineralisation at angles of between 50° and 85°. • Mineralisation widths are modelled for the Mineral Resource estimate and near constant dip of 19° was found.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.*	• Plans and maps are contained within the report.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• Not applicable.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• There is no other exploration information considered material to this estimate.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• MSA is unaware of any further work.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary

Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*
	• *Data validation procedures used.*
		• The database is managed by Vametco. No drilling has been carried out since 2006 and MSA is unaware of what database procedures were used.
		• The validation process consisted of:
		  • Examining the sample assay, collar survey and geology data to ensure that the data were complete for all drillholes,
		  • examining the de-surveyed data in three dimensions to check for spatial errors,
		  • examining the assay data to ascertain whether they were within expected ranges,
		  • checks for "From-To" errors, to ensure that the sample data did not overlap one another or that there were no unexplained gaps between samples',
		  • statistical checks to validate the generations of data.

Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• A site visit was undertaken by Mr P. Mostert and Mr J.C. Witley of MSA on 31 August 2017. • The mineralisation was observed in the open-pit mine and the processing facilities were inspected.

Criteria	JORC Code explanation	Commentary
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The confidence in the geological interpretation of the Upper, Intermediate and Lower Seam is considered good. Bushveld Complex layered deposits are highly continuous. • Diamond drilling data was used. No other data, such as geophysics was available. • Minor faults and dykes occur as well as local slumps in the layering. There were insufficient data to model the detailed geology, however the interpretation on a scale of several hundred metres is robust. • No alternative interpretations exist other than the well understood local stratigraphy, which has been confirmed by nearly 50 years of mining. • The three magnetite-rich layers intersected in drillhole core are clearly discernible. The Mineral Resource is interpreted to occur as three regular tabular concordant magnetite-rich gabbro layers, dipping 19° to the northeast. The magnetite-rich layers are host to V_2O_5 mineralisation. • The three magnetite layers (Upper, Intermediate and Lower Seams) were modelled using the Davies Tube magnetite concentrate grade. The modelled layers have an average thickness of approximately 10.7 m, 8.9 m and 30.5 m for the Upper, Intermediate and Lower seams respectively.

Criteria	JORC Code explanation	Commentary
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The area defined as the Upper Seam Mineral Resource extends approximately 1,570 m in the strike direction and for approximately 210 m in the dip direction. The Upper Seam Mineral Resource, is on average 10.7 m thick, although varies from approximately 6 m to 14 m. • The area defined as the Intermediate Seam Mineral Resource extends approximately 2,290 m in the strike direction and for approximately 350 m in the dip direction. The Intermediate Seam Mineral Resource, is on average 8.9 m thick but is variable - between approximately 5 m and 15 m thick. • The area defined as the Lower Seam Mineral Resource extends approximately 3,540 m in the strike direction and for approximately 430 m in the dip direction. The Lower Seam Mineral Resource, is on average 30.5 m thick, although can be as wide as 50 m in areas. • The mineralisation has been demonstrated by a drillhole to continue at depth, although this estimate has been constrained to 125 m below surface.

Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.*	• Grade estimation was completed using inverse distance to the power of 2 using Datamine Studio RM software. There were insufficient data to calculate reliable variograms. Data were composited to 2 m lengths. Top caps were applied. A search ellipse of 200 m x 200 m x 10 m was used for the estimation of the Upper, Intermediate and Lower Seams. A minimum of 6 and a maximum of 12, 2 m composites were required for an estimate. • No bi-product recoveries were considered. SiO_2 and CaO were estimated as deleterious elements. • Grade estimates are for Davies Tube concentrates determined on each sample. • The block model dimensions are 20 mX x 20 mY x 5 mZ for the Upper, Intermediate and Lower Seams (3D model). • No SMU was considered • Correlations between SiO_2 and CaO were observed in the drilling and the relationship in the model was checked. • The HW and FW contacts for the three seams were used as hard contacts for estimation. • The block model was compared to drillhole data visually and statistically. The average grade of the model compares to that of the input data within close limits. • Log probability plots and histograms of the composite data were examined for outlier values that have a low probability of re-occurrence. • For the Upper Seam a capping threshold of 1.95 % V_2O_5 in magnetite concentrate was used. • For the Intermediate Seam a capping threshold of 0.77 % CaO and 3.42 % SiO_2 in magnetite concentrate was used. • For the Lower Seam a capping threshold of 1.80 % CaO and 7.5 % SiO_2 in magnetite concentrate was used. • Mining operations indicate that actual mined vanadium values are consistent with those

Criteria	JORC Code explanation	Commentary
		determined in the Mineral Resource estimate.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages were estimated on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The Mineral Resource has been reported for the total mineralisation within each layer. Mining is typically non-selective and all magnetite mineralisation within each of the layers is considered for processing.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• Mining is by open-pit methods.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Vametco is an established operation producing specialist Vanadium products using established processing facilities.

Criteria	JORC Code explanation	Commentary
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• No environmental impediments are currently known. The mining licence has been maintained.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• An average density of 3.3 t/m^3 was provided by Vametco, which was assigned to the seams for the tonnage estimate. No density measurements were available but in MSA's experience the average density applied is reasonable.

Criteria	JORC Code explanation	Commentary
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• Classification has been based on the following parameters: • quality of the data that informs the Mineral Resource as supplied by Union Carbide Exploration and EVRAZ Vametco, • the confidence of the interpretation of the geological framework of the mineralisation, • the confidence of the extent of the mineralisation along strike, • the pit optimisation carried out for the Ore Reserve conversion which indicated an economic pit depth of 120 m, • the drillhole spacing at an average of 200 m by 150 m that confirms the geological continuity of all three seams. • The Upper Seam was classified as Inferred as there are only six holes that intersect mineralisation in a single line. The estimates were extrapolated 100 m down dip from the drillholes and 250 m along strike given that strike continuity has been confirmed and down-dip continuity is assumed • The Intermediate Seam was classified as Inferred. The estimate is informed by 12 holes, but the mineralisation is more erratic than the Lower Seam. The estimates were extrapolated by 250 m along strike and to the 125 m vertical limit below surface. • The well drilled portions of the Lower Seam were classified as Indicated Resources up to a distance of 125 m from the drillhole grid. The remainder of the model to the 125 m depth extent was classified as Inferred Resource up until the strike limits of the open-pit. • The Mineral Resource estimate reflects the Competent Person's view of the deposit, however there are concerns on the reliability of the data, particularly the lack of QAQC and density measurements, which to a certain extent have been mitigated by long mining history.

Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No reviews have taken place outside of MSA's internal review process.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The confidence in the grade estimate is high, the data having low variance and the estimate being closely aligned with the input data. • Mining operations indicate that actual mined vanadium values are consistent with those determined in the Mineral Resource.

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• The 6 October 2017 Mineral Resource estimate is the basis of the Ore Reserve Estimate • The Mineral Resource estimate reported is inclusive of the Ore Reserve estimate
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• A site visit was undertaken by Mr P. Mostert and Mr J.C. Witley of MSA on 31 August 2017. • The mineralisation was observed in the open-pit mine and the processing facilities were inspected.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• The Vametco mine is an operating mine since 1967
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• For a Vanadium (Nitrovan) price of R 456 000 /t (US$ 28. 5/kg), the Marginal Economic cut-off grade for the ROM will be 0.164 % (which is much lower than the average grade that will go to the plant and also lower than the current input grade at Vametco Mine).

Criteria	JORC Code explanation	Commentary
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	• The open pit has a strike of about 3.5 km in an east-west direction and the ore bodies (upper, middle and lower seams) dip at 19^0 to the north. • Due to the stratified nature of the ore deposit, Vametco utilises a combination of strip mining and open pit mining. For current mining activities, the possibility of concurrent backfilling is being investigated in order to determine the most effective method/ sequence • The mining recovery and mining dilution factors were established through reconciliations performed on planned versus actual data from the previous years. In fact, the mining recoveries have already been accounted for in the Processing recovery, which means that the 15 % losses (mining recovery of 85 %) and the 5 % dilution included in the optimisation process, is a more conservative approach and will make the model more robust. • A minimum mining width of 50 m will be applied to the detailed pit designs and should be aimed for in practise. Although it is restrictive, this should be achievable with the mining method and equipment, specifically the 40 t ADT fleet, used. • All Indicated and inferred material has been included into the LOM production schedule at for Vametco and quality / grades are continually tested/ confirmed with the actual data of the mining operation.

Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	• Existing operating plant, with well understood recovery and operational factors

Criteria	JORC Code explanation	Commentary
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• A historical ground water pollution plume is present for which ongoing water monitoring and the liner specifications of the old barren (scrubber) dam are required in support of the IWUL application. Possible design modifications may be required should the barren dam's liner not comply with the required standards. • According to the EMPr, no potential exists for the generation of Acid Mine Drainage from the waste disposal facilities or from the mining activities. • Due to the nature and extent of the Vametco operations, several other Environmental Authorizations as provided for in legislation other than the MPRDA, are required for various activities. These activities include inter alia: • Listed Activities in terms of the National Environmental Management Act (NEMA) as listed in Regulations GNR 544, GNR 545 and GNR 546 • Listed Waste Management Activities in terms of the National Environmental Management Waste Act (NEMWA) as listed in Regulation GNR 718 • Listed Air Emissions Activities in terms of the National Environmental Management Air Quality Act (NEMAQA) as listed in Regulation GNR 248 • Water Uses as defined in section 21 of the National Water Act (NWA) as well as Mine Water Management activities as provided for in Regulation GN 704. • According to the existing EMPr, no new listed activities or water uses are relevant. • As far as these authorisations for the existing status quo is concerned, Vametco has submitted and will submit applications to the various Competent Authorities on an on-going basis, as is / was required to fulfil their obligations in this regard. •

Criteria	JORC Code explanation	Commentary
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• Infrastructure for the Vametco Mine is well established, as the mine has been in operation from the mid 1970's. • Water for the operations are pumped via pipelines from a canal from the Hartebeespoort Irrigation Scheme and abstracted from six (6) boreholes at a rate of 1.76 l/s. This is sufficient for the current operations. Water from the canal is pumped directly to the pumphouse for use in the plant, while water from the boreholes are pumped first to a reservoir close to the boreholes and then to a reservoir close to the plant via pipelines. • The Integrated Water Use Licence (IWUL), which was submitted in 2001, has been approved during 2017 and requires ongoing results of water monitoring. • A 22kV overhead Eskom line enters the Property from the south and connects to the mine's substation. The electricity supply is sufficient for the current operations.

Criteria	JORC Code explanation	Commentary
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• A summary of historical costs for 2016 for existing Cost Centres were received from the Client and used as input for Operating Costs in the Financial Model. Different operating cost rates for relevant mining volumes were applied, for example, to calculate the total Mining Cost for a specific period, the Mining Cost Rate was multiplied with the total mined tonnes for that year, while the Selling Cost Rate was multiplied with the total product tonnes for the year to calculate the total Selling Cost. • The Capital Plan for 2016 to 2034 was received from the Client and used as the input for Capital Cost in the Financial Model. The Client's Capital Plan makes provision for Sustaining and Legal Compliance Capital • An annual royalty amount was received from the Client based on royalty payments to the state and Co-owners in 2016. The financial model however calculates royalties payable to the state using the formula below, as prescribed in the Royalty Bill for unrefined mineral resources. The Royalty Rate is capped at 7 % for unrefined resources. – 1. $Royalties = Gross\ Sales \times Royalty\ Rate$ – 2. $Royalty\ Rate = 0.5 + [EBIT \div (Gross\ Sales \times 9)] \times 100$ • No Royalties to Co-owners is included in the financial model.
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *the derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• Revenue based on recent actual revenues.

Criteria	JORC Code explanation	Commentary
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• In the current volatile commodity price environment, MSA holds the view that it is near impossible to predict commodity prices with any degree of accuracy and that the long term trends should guide decisions. Prices are no longer purely driven by supply and demand of the physical commodities but also by financial investment vehicles where fund managers – specifically of large retirement funds and the like, have a great influence on commodity prices. Although vanadium prices have generally been trending downward since 2010, a recent upswing in price has taken place since early 2017. The use of vanadium in batteries may be a potential growth market for vanadium, but due to technological challenges, the impact on the demand for vanadium is still uncertain. Vametco's long term view on prices shows a gradual upturn up to 2045.
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• Economic analysis using NPV not undertaken in this update. Economic viability demonstrate by the operating mine being profitable.

Criteria	JORC Code explanation	Commentary
Social	• *The status of agreements with key stakeholders and matters leading to social license to operate.*	• A Social and Labour Plan (SLP) is in place for the Vametco operations. It covers the following focus areas: • Human Resources Development Programme • Local Economic Development Programme • Programme for Managing Downscaling and Retrenchments • As part of the SLP, action plans are in place to assist the community in promoting economic growth and improve quality of life. LED (Local Economic Development) Project plans are developed in five year increments and continually reviewed in line with the SLP. • The updated 2012 SLP made note of two projects: • Upgrading of the Mothotlung-Ga-Rankotia road in conjunction with the Madibeng Local Municipality to address the growing infrastructure requirements of the community • community infrastructure development, with specific focus on the upgrading of two schools and two clinics in the Uitvalgrond area.

Criteria	JORC Code explanation	Commentary
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• A new order mining right (No: NW 30/5/1/2/2/08 MR) is held by Vametco Holdings (Pty) Ltd, for the vanadium operations. The converted mining right replaced the old order mining right held by Vametco which consists of 75 % Strategic Minerals Corporation, 15 % Business Venture Investment Group no 973 and 10 % Business Venture Investment Group no 1833, representing community based trusts and co-operations. The mining right is valid for a period of 25 years and has an expiry date of 23 April 2038. The ownership structure is depicted in Figure 2 3. Bushveld Minerals Limited also holds 75 % of prospecting right 10142 PR (on farm Doornpoort 295 JR), 65 % of prospecting right 11124 PR (on Portion 3 of Uitvalgrond) and 100 % of NW10004MR (on farm Uitvalgrond Portion 2 and Syferfontein 430 J). NW10004MR has been suspended pending resolution of outstanding issues of the community.

Criteria	JORC Code explanation	Commentary
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• Ore Reserves are declared for open pits inclusive of Mineral Resources inside the LOM pit design (the optimised pit shell in this instance). Ore tonnes are reported as Run of Mine ("ROM") tonnes after mining modifying factors for mining losses and dilution have been applied and metal content before beneficiation plant recoveries have been applied. Ore Reserves are declared for in-situ tonnes in the pits and exclude any stockpiles. • All tonnages reported are on an air-dry basis. • There are no Measured Mineral Resources classified at Vametco Mine and therefore no resources were translated into Proved Ore Reserves. All Indicated Mineral Resources were considered for Probable Ore Reserves with none discounted to Ore Inventory. • Ore Reserves are reported in total and not discounted for ownership. Attributable value should be calculated on an ownership basis.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• The Project was previously reviewed by VBKOM. • No adverse findings were recorded.

Criteria	JORC Code explanation	Commentary

Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.*
	• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*
	• *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.*
	• *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*
		• For Ore Reserve estimation, the MSA Competent Person performed an independent review of:
		  • Mineral Resource Models as depleted until 31 September 2017;
		  • Mine Planning methodology;
		  • Previous reports (which were not reported according to any reporting code);
		  • Actual operational performance measured against budgets for 2015 and 2016; and
		  • Appropriateness of application of modifying factors – mining, processing, metallurgical, infrastructure, economic, marketing, tenure, environmental, social license to operate as well as governmental factors
		• Vametco has a successful track record of operating Vametco Mine over the past 4 years, which MSA reviewed.
		• The mining methods utilised as well as the recovery rates are clearly understood and quantified. The confidence from the Mineral Resource classification was used to classify the Ore Reserves. This classification was based on sound technical, economic and other business assumptions as presented in the LOM plan.
		• The Ore Reserves reported states the Competent Persons view of the Vametco deposits. Ore Reserves cannot be declared for all Mineral Resources.
		• There are no Measured Mineral Resources classified at Vametco mine and therefore no resources were translated into Proved Ore Reserves. The Indicated Mineral Resources were translated into Probable Ore Reserves by application of modifying factors.

PART X

Competent Person's Report on the Mokopane Vanadium Project

THE MSA GROUP

Specialist Consultants to the Mining Industry

JORC Competent Person's Report and Mineral Resource Estimate for the Mokopane Fe-V-Ti Project, Limpopo Province, South Africa

Prepared by The MSA Group (Pty) Ltd for:

Bushveld Minerals Limited

SP Angel Corporate Finance LLP **(as Nominated Advisors)**

Effective Date: **15 October 2017**

Report Date: **28 October 2017**

Competent Persons:

Friedrich J. Reichhardt	Principal Consulting Geologist	Pr.Sci.Nat., FGSSA, MGSG
Jeremy Witley	Principal Resource Consultant	Pr.Sci.Nat., FGSSA

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Terms of Reference

This Competent Persons Report ("CPR") was requested by Bushveld Minerals Limited ("BML") on BML's Mokopane Fe-V-Ti Project. The CPR has been prepared by The MSA Group (Pty) Limited ("MSA"), South Africa in connection with BML's application for re-admission to the Alternative Investment Market ("AIM") of the London Stock Exchange.

The specific instructions to MSA were to deliver a CPR on BML's material assets and liabilities with respect to the Mokopane Fe-V-Ti Project in accordance with:

- *the AIM Note for Mining and Oil & Gas Companies (2009) published by the London Stock Exchange*
- *the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012) published by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and Minerals Council of Australia (JORC Code)*

The quality of information, conclusions and estimates contained in this CPR is consistent with the level of effort involved in MSA's services, based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. Except for the purposes legislated under the London Stock Exchange (AIM), any other uses of this report by any third party is at that party's sole risk.

Neither MSA, nor the authors of the Report, have or have previously had any material interest in BML or the mineral properties in which BML has an interest. MSA's relationship with BML is solely one of professional association between client and independent consultant. The Report is prepared in return for professional fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the findings of the Report or the successful admission to the London Stock Exchange.

MSA accepts responsibility for the CPR and the authors have endeavoured, by making all reasonable enquiries, to confirm the authenticity and completeness of the technical data upon which the Report is based. A final draft of the Report was provided to BML, along with a written request to identify any material errors or omissions prior to finalisation.

The Consent Forms for the Competent Persons and The MSA Group are included as Appendix 2. MSA is not aware of any material changes since the effective date of the CPR.

Normative References

Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (2012). http://www.jorc.org/docs/jorc_code2012.pdf

London Stock Exchange (2009). AIM Note for Mining and Oil & Gas Companies. http://www.londonstockexchange.com/companies-and-advisors/aim/aim/aim.htm

1 EXECUTIVE SUMMARY

1.1 Purpose of Report

For the purpose of re-admission to the Alternative Investment Market ("AIM") of the London Stock Exchange, The MSA Group ("MSA") was commissioned by Bushveld Minerals Limited ("BML") to provide a consolidated Competent Person's Report ("CPR") incorporating all of the Mineral Resource Estimates ("MRE") for BML's Mokopane Fe-V-Ti project (the "Project"). The Project is located in the Northern Limb of the Bushveld Complex in the Limpopo Province of South Africa.

This report includes the most recent results of BML's exploration drill programme in 2014/2015 which investigated vanadiferous titano-magnetite ("VTM") mineralisation approximately 100 m stratigraphically below the Main Magnetite Layer ("MML"). The report also incorporates the drilling results from 2013/2014, previously compiled by MSA in a CPR dated 30 April 2015, the results from the 2012/2013 drilling activities, reported by MSA in a CPR dated 12 April 2013, and the results from the 2010 to 2011 exploration campaign, which MSA reported in a CPR dated 25 November 2011.

MRE updates were completed by MSA for BML since 2013 from diamond drilling campaigns for the MML and its hanging wall mineralisation, for the Ti-magnetite-rich N-Q Zone from the adjacent farms Schoonoord 786LR and Bellevue 808LR and for the Phosphate Zone immediately above the P-Q Zone. These Mineral Resources are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code"), 2012 Edition.

1.2 Mineral Tenure

Mineral tenure in South Africa is governed by the regulations of the Mineral & Petroleum Resources Development Act, 2002 ("MPRDA"). The following Prospecting Rights ("PR") were granted in terms of Section 16 of the MPRDA and constitute the Project Area (Table 1-1):

- **95PR,** covering the farms Vriesland 781LR, Vliegekraal 783LR, Vogelstruisfontein 765LR, Schoonoord 786LR and Bellevue 808LR, was granted for iron ore, vanadium, titanium and all minerals that may be found in intimate association with the latter, as well as nickel, copper, cobalt, chrome, platinum group metals and gold. Phosphate ore was added in February 2014
- **438PR,** covering the farm Malokong 784LR, was granted for iron ore, titanium ore, copper ore, nickel, cobalt and platinum group metals

The Prospecting Right for 95PR expired on 15 March 2015 and Pamish exercised the exclusive right in Section 19(1)(b) of the MPRDA and submitted on 13 March 2015 an application for a Mining Right in terms of Section 23 of the MPRDA with reference number LP30/5/1/2/2/10102MR. The Department of Mineral Resources ("DMR") has acknowledged receipt of the Mining Right application which remains pending with the DMR.

Table 1-1 Summary Table of BML's Assets						
Asset	**License Holder**	**BML's Interest**	**Status**	**License expiry date**	**License area**	**Comments**
Mokopane Fe-V-Ti Project (Prospecting Right 95PR) in South Africa	Pamish Investments No 39 (Pty) Ltd ("Pamish")	64 %	Exploration	Prospecting Right (95PR) expired 15 March 2015; Pamish submitted application for Mining Right on 13 March 2015 which remains pending with DMR	10072.7949 ha	Mineral Resource established from core drilling, core sampling and assaying
Mokopane Fe-V-Ti Project (Prospecting Right 483PR) in South Africa	Afro Multi Minerals (Pty) Ltd ("AMM")	68.5%	Exploration	Prospecting Right (438PR) expired 6 March 2011; AMM submitted renewal application for a 3 year period on 3 March 2011; PR remains valid until application is granted or refused by DMR	1863.9378 ha	Mineral Resource established from core drilling, core sampling and assaying

The status of tenements is based on information and copies of documents provided by BML, which includes a legal opinion confirming that Pamish remains the PR holder for 95PR beyond the expiry date (15 March 2015) of Prospecting Right 95PR and during the processing period of the Mining Right application, submitted on 13 March 2015, until such time as the Right may be granted or refused by the Department of Mineral Resources ("DMR"). MSA has not independently verified, nor is it qualified to verify, the legal status of the Prospecting Rights and assumes that the Mokopane project will prove lawfully accessible for further exploration.

The Prospecting Rights for the Project are held under two licences (see Table 1-1) and specific agreements and other issues are briefly listed below:

- A Strategic Association Agreement between BML's wholly owned holding company, Bushveld Resources Limited ("BRL") and Izingwe Capital (Pty) Ltd created Pamish Investments No 39 (Pty) Ltd to which the Prospecting Right LP95PR has been transferred in terms of Section 11 of the Mineral and Petroleum Resources Development Act, Act 28 of 2002 (MPRDA)
- A Strategic Investment Agreement between Afro Multi Minerals (Pty) Ltd, Pamish Investments No. 63 (Pty) Ltd, Amaraka Investments No. 85 (Pty) Ltd and BRL, based on which BRL acquired a 68.5% equity interest in Amaraka Investments No. 85 (Pty) Ltd. Prospecting right LP438PR is currently under renewal application, after which transfer to Amaraka from Afro Multi Minerals in terms of Section 11 of the MPRDA is planned
- BRL has been cited in early 2013 as the third respondent in court proceedings instituted by Afro Multi Minerals (Pty) Limited ("AMM"), the holder of Prospecting Right 438 ("438PR") that covers the farm Malokong 784 LR, which forms part of BRL's licence area; No further developments in this regard since 2013

Whilst MSA made sufficient inquiry about the legal status of these Rights, this does not constitute a legal opinion. However, MSA is satisfied that the Rights and the corporate structure presented is a fair reflection of the current holdings.

1.3 Location

The Mokopane Project is situated approximately 65 km west of Polokwane and 45 km north-northwest of Mokopane in the Mokopane District, Limpopo Province, South Africa.

The Project is located in the central portion of the Northern Limb of the Bushveld Complex ("BC") and has been established on a group of six adjacent farms namely Vogelstruisfontein 765LR, Malokong 784LR, Vliegekraal 783LR, Vriesland 781LR, Schoonoord 786LR and Bellevue 808LR.

1.4 Geology

The Project Area is situated within the Northern Limb of the BC and covers the upper portion of the Main Zone ("MZ") and the entire Upper Zone ("UZ") of the Rustenburg Layered Suite ("RLS"). The UZ is approximately 1,250 m thick and dips gently (15° to 25°) to the west. The UZ is characterised by the presence of vanadiferous titano-magnetite ("VTM") layers hosted predominantly by VTM-enriched gabbro, gabbronorite, leuconorite, anorthosite and olivine diorite. The VTM layers include disseminated, semi-massive and massive VTM intervals of variable thicknesses and variable proportions of oxide (Ti-magnetite) and silicate minerals (feldspar, pyroxene and olivine).

The RLS is the world's largest and economically most important layered complex and is known for the remarkable geological and geochemical continuity of the magmatic stratigraphy. In common with other layered intrusions, such as the Great Dyke in Zimbabwe (Wilson, 1997), Molopo Farms Complex in Botswana (Reichhardt, 1994) and the Stillwater Complex in the USA (Irvine *et al*., 1983), the intrusive ultramafic to mafic magma has undergone a differentiation process which has resulted in the formation of magnesium-, chromium-, nickel- and precious metal-rich units in the lower portion of the RLS with iron-, titanium-, vanadium- and phosphorus-rich layers in the upper portion.

The UZ consists of numerous cyclic units of alternating and well-layered rocks and is subdivided into three Subzones based on the presence of modal olivine in rocks of Subzone B and modal apatite in Subzone C. The rocks of the RLS show remarkable continuity and individual layers can generally be traced along strike for tens of kilometres.

Since 2010, exploration has focussed on the Main Magnetite Layer ("MML") and the stratigraphically higher semi-massive to massive Ti-magnetite layers N, O, P and Q. The P and Q VTM layers together with their enclosing gabbroic host rocks, which can contain considerable quantities of disseminated VTM, have been collectively termed the "P-Q Zone". The P-Q Zone is referred to as "N-Q Zone" when the stratigraphically lower N and O layers are included. The massive but generally thin (<0.5 m) N and O layers occur approximately 15 m below the base of the P-Q Zone. The N-Q stratigraphy is shown in Table 1-2 with the P-Q layers

Table 1-2
Stratigraphic codes and descriptions on the N-Q Zone

Strat Code	Layer Name	Average Thickness	Description
Q3	Upper "low-grade" zone	13 m	Upper Q-Ti-magnetite zone, generally semi-massive Ti-magnetite. Contains significant internal waste in places
Q2	Lower "high-grade" zone	12 m	Lower Q-Ti-magnetite zone, generally massive ore
Q1	Basal disseminated zone	3.5 m	Basal zone, disseminated Ti-magnetite below the massive Q2 horizon
PQPART	Parting between the P and Q Ti-magnetites	4 m	Barren zone of gabbronorite separating the P and Q Ti-magnetite layers
PMAG	P - Ti-magnetite	3 m	P-Ti-magnetite zone, generally massive, but with some internal waste and often containing more sulphides than the Q horizon
PFWDISS	P - Ti-magnetite disseminated footwall mineralisation	15 m	A zone of disseminated mineralisation in the footwall to the more massive P-Ti-magnetite, lower grade but nonetheless significant
PQFW	P-Q footwall	15 m	Barren gabbronorite footwall below the disseminated footwall
OMAG	O - Ti-magnetite	0.3 m	Narrow Ti-magnetite marker band
OFW	O - Ti-magnetite footwall	1.5 m	Barren zone between the N and O Ti-magnetites
NMAG	N - Ti-magnetite	0.4 m	Narrow Ti-magnetite marker band

The MML mineralised zone occurs near the base of the UZ and consists of an upper VTM-rich interval ("MAG3") which is separated from a lower VTM-rich interval ("MAG4") by a VTM-poorer leucogabbronorite "parting". The MML was intersected during the 2010 to 2013 campaign in 13 vertical drillholes, VL2, VL3, VL5, VL8, VL11, VL12, VL13, VK5, VK20, VK22, VK23, MW1 and MW3, and has an average true thickness of 9.8 m, including the VTM-poor parting, and dips between 18° and 24° to the west. The MAG3 ranges between 2.59 m and 7.65 m and averages 4.09 m in true thickness. The MAG4 ranges between 2.48 m and 6.30 m and averages 3.59 m in true thickness. The parting ranges from 0.93 m to 4.06 m and averages 2.16 m in true thickness.

The N-Q Zone occurs near the top of the UZ and comprises high-grade, VTM-rich intervals alternating with gabbroic layers with variable amounts of disseminated VTM (<10% to >50%). A total of 10 distinct stratigraphic units within the N-Q Zone can be correlated between drillholes. These 10 units are correlated on the basis of their relative thicknesses, textural features and Ti-magnetite abundance. Although together these layers determine the overall VTM and hence Fe content of the N-Q Zone, each of the 10 layers has its specific Ti-magnetite content.

During the 2010 to 2014 drilling campaigns, the N to Q layers and the interlayered VTM-enriched units comprising the N-Q Zone were intersected in 19 drillholes as fresh, unweathered material. In addition, weathered portions (shallower than 30 m vertically) of the N-Q Zone were intersected in a further 20 drillholes. Sampling of stratigraphic drillhole BV-1, drilled by the Council of Geoscience ("CGS") in 1991, provided a further N-Q Zone intersection. The entire N-Q Zone has a downhole thickness ranging from approximately 58 m to 95 m with an average true thickness of approximately 55 m after correction for an average dip of 20°.

During the 2014 to 2015 drill campaign BML also investigated the so-called "AB Zone" which represents the stratigraphically lowest accumulation of abundant vanadiferous titanomagnetite and occurs approximately 100 metres below the MML near the base of the UZ. The AB Zone has been subdivided into three layers defined by geological logging and V_2O_5 grade, and consists of a relatively higher-grade upper and lower layer of strongly disseminated VTM, separated by a lower-grade parting. The layers of the AB Zone have an average dip of 21° to the west with a combined average true thickness of approximately 9.3 metres.

1.5 Previous Work

Prior to BML's systematic drilling programmes, the Project Area had not been explored for its Ti-magnetite potential but was covered by a regional geochemical soil sampling and geological mapping campaign by the CGS. The latter work was published in 1985 at 1:250,000 scale as the 2328 Pietersburg Geological Series map. The soil sampling was conducted at 1 km intervals and the samples were analysed by XRF and ICP-MS for over 40 elements including Fe_2O_3, V, TiO_2, Cu and Ni. Significant vanadium and titanium anomalies occur and generally coincide with areas mapped as the UZ.

A regional aeromagnetic and radiometric survey was conducted in the 1990's and processed by the CGS. The data show northerly-trending magnetic zones which have been correlated with the two most prominent VTM-rich stratigraphic units, namely the Main Magnetite Group and the N-Q Zone comprising the N, O, P and Q Ti-magnetite layers.

A stratigraphic drillhole BV-1 was drilled by the CGS in 1991 on the farm Bellevue 808LR, approximately 2 km south-west of the Project Area. The 2,950 m deep hole covered the entire Upper Zone stratigraphy and intersected 32 discrete layers of VTM-rich rocks (>20% opaque minerals) ranging in thickness between 7 cm and 13 m (Ashwal *et al.*, 2005). Most prominent are the uppermost semi-massive Ti-magnetite layer (Q layer) which has a thickness of 13 m and an approximately 8 m thick vanadium-rich layer with variable Ti-magnetite content. The latter is some 175 m above the base of the UZ and can be correlated with the MML. The occurrence of the two most prominent Ti-magnetite layers in drillhole BV-1 at depths of approximately 600 m and 1,400 m illustrates the remarkable spatial continuity of these layers.

The N-Q Layers in the Project Area had not been identified prior to BML's exploration activities. The MML is only partially portrayed on the maps existing at the time interpreted from exposures in isolated outcrops. No historic Mineral Resource Estimates had been carried out in the Project Area.

1.6 Previous Mineral Resource Estimates

1.6.1 2010 and 2011

A total of 4,234.06 m were drilled in 17 diamond drillholes during the 2010-2011 drilling campaigns on the farms Vliegekraal and Vriesland. This included four drillholes totalling 902.02 m on the MML and 10 drillholes totalling 2,583.77 m on the P-Q Zone. The stratigraphically lower N and O layers were excluded from the Mineral Resource Estimate ("MRE").

The results from these 17 drillholes together with information about the Project were presented in a report entitled "JORC Competent Person's Report and MRE for the Mokopane Fe-V-Ti Project covering the farms Vriesland 781LR, Vliegekraal 783LR, Malokong 784LR and Vogelstruisfontein 765LR near Mokopane, Limpopo Province, South Africa", dated 25 November 2011. The following Mineral Resources were reported for the MML (Table 1-3) and the P-Q Zone (Table 1-4 and 1-5) in November 2011 using the guidelines of the 2004 Edition of the JORC Code. A 35% Fe_2O_3 cut-off was used for the P-Q Zone and a 40% cut-off for the higher grade

Table 1-3 MML Inferred Mineral Resources, <100 m depth at 40% Fe_2O_3 cut-off, as at 25 Nov 2011									
Cut Off Fe_2O_3%	**Million Tonnes**	**Density t/m^3**	**Fe %**	**Fe_2O_3 %**	**$*P_2O_5$ %**	**TiO_2 %**	**V_2O_5 %**	**$*SiO_2$ %**	**$*Al_2O_3$ %**
40	66.21	3.83	37.1	53.1	0.01	9.2	1.24	17.9	11.1

Table 1-4 P-Q Zone Indicated Mineral Resources, <200 m depth at 35% Fe_2O_3 cut-off, as at 25 Nov 2011									
Cut Off Fe_2O_3%	**Million Tonnes**	**Density t/m^3**	**Fe %**	**Fe_2O_3 %**	**$*P_2O_5$ %**	**TiO_2 %**	**V_2O_5 %**	**$*SiO_2$ %**	**$*Al_2O_3$ %**
35	260.20	3.70	32.4	46.3	0.05	11.3	0.18	24.4	10.2

Table 1-5 P-Q Zone Inferred Mineral Resources, <400 m depth at 35% Fe_2O_3 cut-off, as at 25 Nov 2011									
Cut Off Fe_2O_3%	**Million Tonnes**	**Density t/m^3**	**Fe %**	**Fe_2O_3 %**	**$*P_2O_5$ %**	**TiO_2 %**	**V_2O_5 %**	**$*SiO_2$ %**	**$*Al_2O_3$ %**
35	307.23	3.75	31.9	45.7	0.05	11.5	0.19	23.4	10.2

*= Included for informative purposes only, no value will be derived from these materials; No geological losses applied

1.6.2 2012

1.6.2.1 General

In terms of the JORC code (2012), Mineral Resource estimates may include not only mineralisation that has the potential to be economically viable using currently practised mining and extraction technology, but also mineralisation that in the opinion of the Competent Person has reasonable potential to become economically viable with advances in mining and extraction technology within the foreseeable future. Mineralisation within both the MML and N-Q Zones at the Mokopane Project appears to be fairly continuous to depths well below those currently considered to be of economic viability. Cognisance has been taken of the substantial mineralisation that is likely to be present at depth; and depth cut-offs have been imposed based on simplistic bulk stripping ratios that, while considerably beyond the limits of current commercial mining practice, might conceivably become viable in the future. The estimates do not, however, take any account of the additional costs that might prove to be associated with the extraction of saleable metals from the mineralogically complex Ti-magnetite material (relative to more conventional iron ore deposits), irrespective of the metallurgical test work that has been undertaken to date.

A total of 51 drillholes totalling 3,489.45 m were drilled during 2012 on the farms Vliegekraal, Vriesland and Malokong to increase the level of confidence in the MML and P-Q / N-Q Zone.

The results of the 2012 drilling campaign were summarised in a report entitled "JORC Competent Person's Report and MRE for the Mokopane Fe-V-Ti Project, Limpopo Province, South Africa", dated 12 April 2013.

1.6.2.2 MML

During 2012, 13 drillholes totalling 927.49 m were drilled, of which nine intersected the MML, one hole was stopped approximately 100 m above the MML and three holes were drilled into the footwall to the MML.

For the March 2013 MRE, the MML was subdivided into the two semi-massive to massive VTM layers, namely MAG3 and MAG4 and the VTM-poor, feldspar-rich parting (the "Parting") between MAG3 and MAG4. The Parting has a low abundance of VTM, ranging between 5% and 30%, whereas MAG3 and MAG4 contain between 35% and 90% VTM. As the Parting has average Fe_2O_3 grades below 30% it was not regarded as a Mineral Resource.

The drilling increased the confidence of the shallow mineralisation such that an Indicated Mineral Resource was declared for the MML from surface to a vertical depth of 120 m. The Mineral Resource for the MML on the farms Vriesland and Vliegekraal (Table 1-6) was reported at a cut-off-grade of 40% Fe_2O_3 and was prepared in accordance with the guidelines of the 2012 Edition of the JORC Code. The grades and tonnages for the Parting are shown in Table 1-7.

Table 1-6
MML Indicated Mineral Resource, <120 m vertical depth, as at 20 March 2013

Layer Name	Thickness m	Tonnes million	Density t/m^3	Fe %	Fe_2O_3 %	Fe Metal Tonnes million	TiO_2 %	V_2O_5 %	*SiO_2 %	*Al_2O_3 %	*P_2O_5 %	*S %
MAG3	4.09	27.50	4.08	45.5	65.1	12.51	10.0	1.50	10.6	7.8	0.01	0.12
MAG4	3.59	24.31	4.00	43.9	62.7	10.66	9.3	1.46	11.8	8.9	0.01	0.24
Total	**7.68**	**51.81**	**4.04**	**44.7**	**64.0**	**23.17**	**9.7**	**1.48**	**11.2**	**8.3**	**0.01**	**0.18**

Note: Mineral Resource is reported at a 40% Fe_2O_3 cut-off; No geological losses applied
*= Included for informative purposes only, no value will be derived from these materials

Table 1-7
Grade and Tonnage* for MML Parting, <120 m vertical depth, as at 20 March 2013

Layer Name	Thickness m	Tonnes million	Density t/m^3	Fe %	Fe_2O_3 %	TiO_2 %	V_2O_5 %	SiO_2 %	Al_2O_3 %	P_2O_5 %	S %
PARTING	2.16	11.43	3.16	20.9	29.9	3.5	0.58	34.5	19.0	0.01	0.17

*= The MML Parting does not constitute a Mineral Resource as the mineralisation is below the cut-off-grade of 40% Fe_2O_3

1.6.2.3 N-Q Zone

BML considers the weathered and oxidised, near-surface mineralisation of the N-Q Zone as potentially "free-dig" material with possible advantages in the beneficiation process. In order to quantify the grade and volume of the weathered mineralisation and to obtain material for metallurgical test work, five fence lines totalling 33 drillholes for 1,036.57 m were drilled into the weathered portion of the N-Q Zone. Of these 33 drillholes, 13 intersected the P-Q Zone, while 20 holes intersected the weathered hanging wall and footwall succession including the N and O layers. A further five drillholes totalling 1,525.39 m were drilled in order to extend the strike length of the N-Q Zone and to increase the level of confidence in the geological and grade continuity.

The shallow drilling on the farm Vliegekraal during 2012 increased the confidence of the near-surface mineralisation in terms of the subcrop position, thickness of the weathering profile and the respective grades of the individual layers constituting the N-Q Zone. Mineral Resources were estimated for the N-Q Zone on the farms Vliegekraal and Malokong using the lithological and assay information of all drillholes drilled during the combined 2010 to 2012 field campaigns.

Indicated Mineral Resources for the farms Vliegekraal and Malokong were declared individually for the weathered N-Q Zone (Table 1-8) and for the combined weathered and unweathered N-Q Zone to a depth of 200 m below surface (Table 1-9). Mineral Resources of the N-Q Zone between 200 m and 400 m below surface are classified as Inferred Resources (Table 1-10) in accordance with the guidelines of the 2012 JORC Code.

Table 1-8
N-Q Zone (Weathered) Indicated Mineral Resources, as at 8 March 2013

Layer Name	Tonnes million	Density t/m^3	Fe %	Fe_2O_3 %	Fe Metal Tonnes million	TiO_2 %	V_2O_5 %	*SiO_2 %	*Al_2O_3 %	*P_2O_5 %	*S %
Q3	10.20	3.47	33.0	47.2	3.37	9.4	0.12	23.2	9.0	0.05	0.17
Q2	8.83	3.77	40.2	57.5	3.55	13.5	0.23	14.5	6.9	0.02	0.10
Q1	4.47	3.40	30.2	43.2	1.35	7.9	0.23	25.8	10.5	0.02	0.11
PMAG	4.42	3.41	31.5	45.1	1.39	8.4	0.27	23.3	11.0	0.03	0.25
PFWDISS**	10.38	3.29	27.5	39.3	2.85	6.0	0.22	30.4	12.5	0.03	0.09
OMAG**	0.69	3.80	34.2	48.9	0.24	9.7	0.43	22.3	9.8	0.01	0.13
NMAG	0.69	4.39	48.2	68.9	0.33	15.5	0.47	8.2	5.6	0.04	0.13

*= Included for informative purposes only, no value will be derived from these materials; No geological losses applied
**= Layer reported at a 35% Fe_2O_3 cut-off

A cut-off grade of 35% Fe_2O_3 was applied to the PFWDISS and OMAG layers, which both contain significant portions below the cut-off grade. The massive to semi-massive Ti-magnetite layers (Q3, Q2, Q1, PMAG, NMAG) contain mineralisation in excess of 40% Fe_2O_3 and it was considered that they could potentially be mined as composite units or, in the case of OMAG and NMAG as individual high grade layers. The layers PQPART, PQFW and OFW were not declared as Mineral Resource as the estimated Fe_2O_3 grades are less than 35% and were thus regarded as waste.

Table 1-9
N-Q Zone (Weathered+Unweathered) Indicated Mineral Resources, <200 m depth, as at 8 Mar 2013

Layer Name	Tonnes million	Density t/m^3	Fe %	Fe_2O_3 %	Fe Metal Tonnes million	TiO_2 %	V_2O_5 %	*SiO_2 %	*Al_2O_3 %	*P_2O_5 %	*S %
Q3	138.63	3.61	31.7	45.4	43.99	10.2	0.13	25.2	9.9	0.06	0.40
Q2	81.17	4.01	41.9	59.9	34.00	15.2	0.28	12.6	6.5	0.02	0.27
Q1	26.36	3.59	32.5	46.6	8.58	10.5	0.28	22.3	9.9	0.02	0.27
PMAG	34.44	3.62	32.4	46.3	11.15	10.1	0.29	21.3	10.5	0.03	0.80
PFWDISS**	67.28	3.38	26.9	38.5	18.13	7.1	0.22	30.1	12.8	0.03	0.33
OMAG**	2.63	4.00	37.2	53.2	0.98	11.1	0.49	18.5	7.9	0.01	0.12
NMAG	4.58	4.41	48.7	69.6	2.23	16.0	0.56	6.9	5.3	0.03	0.11

*= Included for informative purposes only, no value will be derived from these materials; No geological losses applied
**= Layer reported at a 35% Fe_2O_3 cut-off

Table 1-10
N-Q Zone (Unweathered) Inferred Mineral Resources, 200 m to 400 m depth, as at 8 March 2013

Layer Name	Tonnes million	Density t/m^3	Fe %	Fe_2O_3 %	Fe Metal Tonnes million	TiO_2 %	V_2O_5 %	*SiO_2 %	*Al_2O_3 %	*P_2O_5 %	*S %
Q3	139.03	3.59	30.2	43.3	42.05	8.8	0.09	28.3	10.3	0.13	0.61
Q2	92.64	3.99	40.2	57.5	37.27	14.1	0.23	15.3	7.6	0.02	0.55
Q1	23.42	3.64	32.7	46.8	7.66	10.8	0.27	22.2	10.6	0.02	0.36
PMAG	38.28	3.58	30.6	43.7	11.70	9.8	0.26	23.5	11.5	0.04	0.74
PFWDISS**	76.51	3.37	26.8	38.3	20.49	6.9	0.21	30.2	12.8	0.03	0.43
OMAG**	1.87	3.77	32.4	46.3	0.61	9.5	0.40	23.1	10.4	0.02	0.10
NMAG	7.22	4.32	46.3	66.2	3.34	15.6	0.49	8.3	5.8	0.02	0.14

*= Included for informative purposes only, no value will be derived from these materials; No geological losses applied
**= Layer reported at a 35% Fe_2O_3 cut-off

1.7 Recent Work and Current Mineral Resource Estimates (2013 to 2015)

1.7.1 Metallurgical Test Work

Metallurgical test work at SGS laboratories in Johannesburg ("SGS") has shown that the weathered material is friable and the Ti-magnetite appears to be visually similar to the unweathered mineralisation while the gangue feldspars and pyroxenes are partly altered to secondary hydrous silicates. Scrubbing was therefore identified as a potential step for the upgrading of weathered material and a reduction in undesirable contaminants was achieved during the test work with SiO_2 grades being reduced by more than 2% for both the massive and disseminated samples. Davis Tube tests were also carried out on the samples to establish whether Ti-magnetite recovery in the weathered material is similar to the fresh material. Ti-magnetite recoveries for the weathered mineralisation compared favourably with those for the fresh material, with the test work indicating recoveries of 80% to 85% to be possible for the massive material, and 60% to 65% for the disseminated material.
Further Davis Tube test work was carried out by SGS in 2014 to test whether samples with disseminated VTM and therefore relatively low in-situ V_2O_5 concentrations can be upgraded to a VTM concentrate with grades in excess of 1.5% V_2O_5. The tests were conducted on two samples from the MML hanging wall mineralisation with head grades of 0.3% and 0.6% V_2O_5 and the resulting VTM concentrate assayed 1.54% and 1.61% V_2O_5 respectively. MSA considers these results critical in order to classify VTM mineralised units with ≥0.3% V_2O_5 as Mineral Resource.

1.7.2 Mineral Resource Estimates (2014)

Since November 2013 and the subsequent bench scale metallurgical test work (see 1.7.1) the primary focus on the Mokopane Project shifted to vanadium, as opposed to iron. As a result, the MRE presented for the MML and MML Hanging Wall was reported according to a vanadium cut-off grade of ≥0.3% V_2O_5 rather than Fe_2O_3 which was used in previous MREs for the MML.

The following Sections present the three MREs that have been conducted by MSA during 2014. These are the current Mineral Resource estimates for the Project.

1.7.2.1 MML and MML Hanging Wall

The MRE was based on additional sampling and assay data from the MML Hanging Wall ("MML HW") succession collected from the 17 drillholes drilled on the MML between 2010 and 2012.

The MML HW was subdivided into fourteen continuous layers defined by geological logging and VTM content and consists of alternating layers of relatively high-grade semi-massive to massive VTM, lower-grade gabbronorite and barren anorthosite. The main target horizons were the VTM layers, particularly those averaging ≥0.30% V_2O_5. These fourteen layers of the MML HW package are conformable with the MML and have a combined average true thickness of approximately 72 m.

The MML HW Mineral Resource forms part of the MML project and it is expected that the MML HW will be co-extracted with the MML. Although grades are generally lower in the MML HW layers relative to the MML, the cost of mining the MML HW is expected to be minimal as much of the mining cost will be attributed to the stripping of MML HW required to access the MML.

Reasonable Prospects for Eventual Economic Extraction for the MML HW VTM layers are dependent on its co-extraction with the MML, and it is unlikely that the MML HW VTM layers could be extracted economically as a standalone project.

The Mineral Resource for the MML and MML HW on the farms Vriesland and Vliegekraal is presented in Table 1-11.

Table 1-11
MML and MML HW Mineral Resources at a 0.30% V_2O_5 cut-off, ≤120 m depth, as at 15 October 2017

Layer Name	Mineral Resource Category	Width m	Tonnes Mt[1]	Density t/m^3	V_2O_5 %	Fe %	Fe_2O_3 %	TiO_2 %	*SiO_2 %	*Al_2O_3 %	*P_2O_5 %	*S %	V_2O_5 Kt[2]	Fe Mt[1]
UG-C	Inferred	4.04	31.8	3.48	0.64	25.7	36.7	5.9	30.2	15.4	0.01	0.12	202.8	8.2
UG-A	Inferred	1.64	12.7	3.31	0.59	23.2	33.1	5.3	32.5	17.5	0.01	0.01	75.6	3.0
UMG1	Inferred	3.24	25.5	3.30	0.59	22.9	32.7	5.4	32.6	17.6	0.01	0.01	150.4	5.8
UMG2	Inferred	2.03	15.7	3.40	0.69	25.9	37.0	6.2	29.4	16.7	0.01	0.01	107.7	4.1
MAG1 HW GAB**	Inferred	17.53	72.3	3.02	0.31	13.1	18.8	2.9	42.0	21.9	0.01	0.12	223.3	9.5
MAG1	Inferred	1.31	12.0	3.96	1.07	40.0	57.1	9.7	15.6	10.8	0.01	0.06	128.7	4.8
MAG2	Inferred	1.10	9.2	3.57	0.83	30.2	43.1	7.2	25.1	15.1	0.01	0.06	76.3	2.8
MML HW	Inferred	5.89	42.3	3.01	0.32	13.4	19.2	2.5	42.2	21.6	0.02	0.11	136.0	5.7
Total	**Inferred**	36.77	221.5	3.21	0.50	19.8	28.3	4.4	35.7	18.9	0.01	0.08	1,100.8	43.8
MAG3	Indicated	4.09	27.5	4.08	1.50	45.5	65.1	10.0	10.6	7.8	0.01	0.12	412.5	12.5
PART	Indicated	2.16	11.4	3.16	0.58	20.9	29.9	3.5	34.5	19.0	0.01	0.17	66.3	2.4
MAG4	Indicated	3.59	24.3	4.00	1.46	43.9	62.7	9.3	11.8	8.9	0.01	0.24	354.9	10.7
Total	**Indicated**	9.84	63.2	3.85	1.32	40.4	57.8	8.6	15.4	10.2	0.01	0.18	833.7	25.6
Total Mineral Resources[3]		**46.61**	**284.8**	**3.33**	**0.68**	**24.4**	**34.8**	**5.4**	**31.2**	**17.0**	**0.01**	**0.10**	**1,934.5**	**69.4**

[1]Mt = million tonnes, [2]Kt = thousand tonnes, [3] = Rounding may cause computational errors; No geological losses applied
* = Included for informative purposes only, no value will be derived from these materials
**A 0.30% V_2O_5 cut-off has been applied laterally across this layer such that only material >0.30% V_2O_5% is included in the tonnage listed in this Table

A further 37 diamond drillholes totalling 2,416.33 metres were drilled in 2014/2015 targeting the MML and MML HW. However, sampling and assaying of these holes had not been completed at the time of compiling this CPR.

1.7.2.2 P-Q Zone

Following the granting of Prospecting Rights for the adjacent farms Schoonoord 786LR and Bellevue 808LR, MSA conducted a MRE on these two farms using geological and assay data from four diamond holes. A total of 585.61 m were drilled on the N-Q Zone in three diamond holes on Schoonoord 786 LR and sampling of BV-1, drilled on Bellevue 808LR by the CGS in 1991, provided a further N-Q Zone intersection. Due to the low VTM content in the approximately 15 m thick footwall unit of the P-Q Zone and the narrow thickness (<0.5 m) of the N and O layers it was decided to limit the MRE to the stratigraphic interval of the P-Q Zone only.

The P-Q Zone is contiguous on the two farms Schoonoord and Bellevue, but is separated from the P-Q Zone on the farms Vliegekraal and Malokong by a prominent hill to the north. This topographic feature consists of a thick diabase sill and the area is excluded from the MRE.

An Inferred Mineral Resource was declared for the P-Q Zone on the farms Schoonoord 786LR and Bellevue 808LR to a vertical depth limited to 300 m. The Mineral Resource was limited in extent along strike and dip due to the presence of a diabase ridge to the west of the P-Q Zone. Due to the high stripping ratio created by the ridge it forms a natural barrier in terms of reasonable prospects for eventual economic extraction of the P-Q Zone in an opencast scenario. The Mineral Resources for the farms Schoonoord 786LR and Bellevue 808LR are presented in Table 1-12 and have been prepared in accordance with the guidelines of the 2012 Edition of the JORC Code. The stratigraphic codes and descriptions of the layers comprising the P-Q Zone are shown in Table 1-2.

Table 1-12
P-Q Zone Inferred Mineral Resource, surface to 300 m vertical depth at a 35% Fe_2O_3 cut-off for the farms Schoonoord 786LR and Bellevue 808LR, as at 15 October 2017

Layer Name	Quantity million tonnes	Density t/m³	Fe %	Fe_2O_3 %	Fe Metal million tonnes	TiO_2 %	V_2O_5 %	*SiO_2 %	*Al_2O_3 %	*P_2O_5 %	*S %
Q3	75.3	3.77	34.3	49.1	25.82	10.5	0.10	23.0	9.4	0.28	0.55
Q2	85.5	4.14	42.6	60.9	36.40	14.9	0.26	13.1	6.9	0.03	0.50
Q1	13.1	3.82	36.4	52.1	4.76	12.2	0.30	19.1	9.8	0.03	0.46
PMAG	19.7	3.52	27.6	39.5	5.45	8.3	0.23	29.1	12.4	0.06	1.00
PFWDISS	27.3	3.45	27.8	39.8	7.60	8.0	0.22	28.3	12.9	0.06	0.55
[1]TOTAL	**220.8**	**3.85**	**36.2**	**51.9**	**80.03**	**11.8**	**0.20**	**20.1**	**9.2**	**0.12**	**0.57**

* = Included for informative purposes only, no value will be derived from these materials; [1]Total = Rounding may cause computational errors; No geological losses applied

1.7.2.3 Phosphate Zone

Phosphate enrichment, due to the abundance of apatite, has been observed in a thick stratigraphic interval above the upper most layer (Q3) of the P-Q Zone. The apatite mineralisation is separated from the Q3 layer by an approximately 5 m thick lower grade zone including the Hanging Wall Marker ("HWM") at the base (Table 1-13). The host to the phosphate mineralisation is gabbronorite containing variable amounts of disseminated VTM.

Table 1-13
Stratigraphic codes and descriptions on the Phosphate Zone (highlighted) above the P-Q Zone

Strat Code	Layer Name*	Average Thickness	Description
	Lower Phosphate Rich Zone	40 m	Magnetite gabbro-norite and gabbro-norite, rich in apatite. Defined by P_2O_5 grades greater than 2.5%, Contains granitic veins and occasional diabase sills,
	Phosphate Poor Zone	4.5 m	Magnetite gabbro and magnetite gabbro-norite. Increases from <0.5% P_2O_5 to 2.5% P_2O_5 upwards.
HWM	Hanging wall Marker	0.75 m	Magnetite gabbro and magnetite gabbro-norite. P_2O_5 generally less than 1% but greater in places.
Q3	Upper "low-grade" zone	13 m	Upper Q-Ti-magnetite zone, generally semi-massive Ti-magnetite. Contains significant internal waste in places
Q2	Lower "high-grade" zone	12 m	Lower Q-Ti-magnetite zone, generally massive ore
Q1	Basal disseminated zone	3.5 m	Basal zone, disseminated Ti-magnetite below the massive Q2 horizon
PQPART	Parting between the P and Q Ti-magnetites	4 m	Barren zone of gabbronorite separating the P and Q Ti-magnetite layers

Consistent with the parameters for the MRE of the P-Q Zone, the Phosphate Zone for the northern farms (Vliegekraal 783LR and Malokong 784LR) was extrapolated to 400 m below surface, whereas a vertical depth of 300 m has been considered for the southern area (Schoonoord 786LR and Bellevue 808LR) due to the diabase ridge forming a natural barrier to the west. The area overlain by a thick diabase sill, which forms a prominent hill at the junction of the three farms Vliegekraal 783LR, Vriesland 781LR and Schoonoord 786LR was excluded from the MRE.

A cut-off grade of 3% P_2O_5 was used to report the mineralisation. The estimated blocks selected above this P_2O_5 concentration threshold form a cohesive zone of mineralisation. A summary of the Inferred Mineral Resource estimates for the individual farms is presented in Table 1-14.

The Mineral Resource forms part of BML's VTM project and it is expected that the phosphate will be co-extracted with the VTM. Therefore the Phosphate Mineral Resource is incremental in nature. The costs of mining the apatite-rich zone is expected to be minimal as much of the costs of mining will be attributed to the hanging wall waste stripping required in order to access the VTM immediately underlying the phosphate mineralisation. Some mining costs will apply, together with the costs of milling and concentrating the apatite.

Table 1-14
Inferred Mineral Resource of Phosphate Zone at a 3% P_2O_5 cut-off, as at 15 October 2017

Farm	Tonnes millions	P_2O_5 %	Fe_2O_3 %	*S %	*SiO_2 %	*CaO %	Density t/m^3
Vliegekraal	330.0	3.6	32.1	0.39	34.0	9.1	3.30
Malokong	1.8	3.2	35.5	0.37	35.4	8.6	3.27
Schoonoord	104.9	3.6	34.1	0.40	33.0	8.8	3.37
Bellevue	5.0	3.6	34.4	0.41	33.3	8.9	3.36
[1]TOTAL	**441.6**	**3.6**	**32.6**	**0.39**	**33.7**	**9.0**	**3.32**

* = Included for informative purposes only, no value will be derived from these materials; [1]Total = Rounding may cause computational errors
No geological losses applied

Phosphate deposits fall into the category of industrial minerals in terms of the JORC Code (2012). Despite the relatively low grade of the mineralisation, BML has conducted high level test-work that demonstrates that the phosphate within the Project Area can be upgraded to a saleable product, i.e. an apatite concentrate. It is assumed by BML that this product could be absorbed into the local fertiliser market, although no detailed marketing studies have been carried out to verify this assumption.

1.7.3 Mineral Resource Estimates (2015)

1.7.3.1 AB Zone

The AB Zone occurs stratigraphically approximately 100 m below the MML and consists of two mineralised intervals with strongly disseminated VTM and may contain one or two narrow layers (<40 cm) of semi-massive to massive VTM mineralisation.

Relatively few drillhole intersections are available on the AB Zone, and coupled with generally gradual and irregular contacts and a lack of distinct lithological marker horizons, the AB Zone has been classified as an Inferred Mineral Resource. As with the MML, the AB Zone Mineral Resource is reported to a vertical depth of 120 m below surface. The Mineral Resource is reported per layer at a cut-off-grade of 0.30% V_2O_5 and has been prepared in accordance with the guidelines of the JORC Code (Table 1-15).

Table 1-15
AB Zone Mineral Resource at 0.3% V_2O_5 cut-off, ≤120 m vertical depth, as at 15 October 2017

Layer	Mineral Resource	Tonnes	Thickness	Density	V_2O_5	Fe_2O_3	TiO_2	P_2O_5*	SiO_2*	Al_2O_3*	S*	V_2O_5
Name	Category	[1]Mt	m	t/m^3	%	%	%	%	%	%	%	[2]Kt
AB Upper	Inferred	2.7	1.93	3.29	0.89	34.7	5.4	0.01	30.3	17.1	0.06	24.3
AB Parting	Inferred	3.7	2.86	3.07	0.48	20.9	3.0	0.01	40.0	19.7	0.01	17.9
AB Lower	Inferred	6.0	4.51	3.21	0.75	29.1	4.3	0.01	34.6	18.6	0.01	45.1
[3]Total	**Inferred**	**12.5**	**9.30**	**3.18**	**0.70**	**27.9**	**4.2**	**0.01**	**35.3**	**18.6**	**0.02**	**87.3**

[1]Mt = million tonnes, [2]Kt = thousand tonnes; [3]Total = Rounding may cause computational errors; No geological losses applied
*Included for informative purposes only, no value will be derived from these materials

The total Mineral Resource and the net Mineral Resource directly attributable to BML are summarised in Table 1-16 for the Phosphate Zone (for P_2O_5), N-Q and P-Q Zone (for Fe), MML HW, MML and AB Zone (all for V_2O_5 and Fe).

Table 1-16
Summary of Mineral Resource Estimate by Status, as at 15 October 2017

	Category	Gross (100%)					Net Attributable (64%)				
Mineralised layer / unit	Mineral Resource per asset	Tonnes (million)	Grade* (%)	Total Contained Metal (million tonnes) V_2O_5	Fe	P_2O_5	Tonnes (million)	Grade* (%)	Total Contained Metal (million tonnes) V_2O_5	Fe	P_2O_5
Phosphate Zone[1]	Measured	-	-	-	-	-	-	-	-	-	-
	Indicated	-	-	-	-	-	-	-	-	-	-
	Inferred	441.6	3.6	-	-	15.9	282.6	3.6	-	-	10.2

	Category	Gross (100%)					Net Attributable (64%)				
Mineralised layer / unit	**Mineral Resource per asset**	**Tonnes (million)**	**Grade* (%)**	**Total Contained Metal (million tonnes)**			**Tonnes (million)**	**Grade* (%)**	**Total Contained Metal (million tonnes)**		
				V_2O_5	**Fe**	**P_2O_5**			**V_2O_5**	**Fe**	**P_2O_5**
N-Q Zone[2] 0-200 m	Measured	-	-	-	-	-	-	-	-	-	-
	Indicated	355.1	33.5	-	119.1	-	227.3	33.5	-	76.2	-
	Inferred	-	-	-	-	-	-	-	-	-	-
N-Q Zone[2] 200-400 m	Measured	-	-	-	-	-	-	-	-	-	-
	Indicated	-	-	-	-	-	-	-	-	-	-
	Inferred	379.0	32.5	-	123.1	-	242.5	32.5	-	78.8	-
P-Q Zone[3] 0-300 m	Measured	-	-	-	-	-	-	-	-	-	-
	Indicated	-	-	-	-	-	-	-	-	-	-
	Inferred	220.8	36.2	-	80.0	-	141.3	36.2	-	51.2	-
MML HW[4]	Measured	-	-	-	-	-	-	-	-	-	-
	Indicated	-	-	-	-	-	-	-	-	-	-
	Inferred	221.5	0.5	1.10	43.8	-	141.8	0.5	0.7	28.0	-
MML[4]	Measured	-	-	-	-	-	-	-	-	-	-
	Indicated	63.2	1.32	0.83	25.6	-	39.8	1.32	0.52	16.4	-
	Inferred	-	-	-	-	-	-	-	-	-	-
AB Zone[5]	Measured	-	-	-	-	-	-	-	-	-	-
	Indicated	-	-	-	-	-	-	-	-	-	-
	Inferred	12.5	0.7	0.09	2.4	-	8.0	0.7	0.06	1.6	-
Phosphate Zone[1]	**Total Inferred**	**441.6**	**3.6**	**-**	**-**	**15.9**	**282.6**	**3.6**	**-**	**-**	**10.2**
N-Q or P-Q Zone[1]	**Total Indicated and Inferred**	**954.9**	**33.7**	**-**	**322.2**	**-**	**611.1**	**33.7**	**-**	**206.2**	**-**
MML HW and MML and AB Zone	**Total Indicated and Inferred**	**297.2**	**0.68**	**2.02**	**71.8**	**-**	**189.6**	**0.68**	**1.29**	**46.0**	**-**

Note: ** = quoted grade is P_2O_5 for Phosphate Zone, Fe for the N-Q and P-Q Zones and V_2O_5 for the MML, MML HW and AB Zone*
[1] = for the farms Malokong, Vliegekraal, Schoonoord and Bellevue
[2] = for the farms Malokong and Vliegekraal
[3] = for the farms Schoonoord and Bellevue
[4] = for the farms Vriesland and Vliegekraal
[5] = for the farm Vriesland
Rounding may cause computational error; No geological losses applied

1.8 Recommendations

Trenching, rather than drilling, is recommended in order to expose and sample in-situ weathered material of the MML and N-Q Zone for detailed ore characterisation test work and bulk density measurements.

The current fence line spacing of 500 m to 600 m along strike for the MML, MML HW and P-Q Zone should be halved, to potentially increase the level of confidence in the Mineral Resources to “Measured”. The in-fill drilling can be limited to the most prospective portion of the license area and to depths of 120 m for the MML and 200 m for the P-Q Zone, respectively. The wide spacing (>1,000 m) of boreholes along strike of the AB Zone should also be halved to potentially increase the level of confidence to “Indicated”.

Sampling intervals for the MML can be increased in future sampling programmes to at least one metre, instead of the current 50 centimetres, provided that the geological contacts are honoured.

Multi-element analyses should be carried out on samples from selected drillholes to determine concentration levels of all potentially beneficial and deleterious elements in the Phosphate Zone.

A budget has been proposed by BML in order to increase the confidence level of the Mineral Resource classifications for MML, MML HW and the AB Zone. MSA has reviewed the proposed budget in South African Rand ("ZAR") and considers the expenditure adequate to finance the activities as outlined in Table 1-17.

Table 1-17
Planned Budget for Mokopane Project

	ZAR
Exploration programme (24 months)	
Infill core drilling on MML, MML HW and AB Zone	2,300,000
Assaying of infill boreholes	400,000
Mineral Resource Estimate on MML, MML HW and AB Zone	900,000
Subtotal	**3,600,000**
Contingency (10%)	360,000
Grand Total	**3,960,000**

Note: Above expenditure excludes Corporate and Administration costs

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2 INTRODUCTION

In August 2017, The MSA Group ("MSA") was commissioned by Bushveld Minerals Limited ("BML") for the purpose of re-admission to the Alternative Investment Market ("AIM") of the London Stock Exchange to provide a consolidated Competent Person's Report ("CPR") incorporating all of the Mineral Resource Estimates ("MRE") for BML's Mokopane Fe-V-Ti project (the "Project"). The Project is located in the Northern Limb of the Bushveld Complex in the Limpopo Province of South Africa.

This report includes the most recent results of BML's exploration drill programme in 2014/2015 which investigated vanadiferous titano-magnetite ("VTM") mineralisation approximately 100 m stratigraphically below the Main Magnetite Layer ("MML"). The report also incorporates the drilling results from 2013/2014, previously compiled by MSA in a CPR dated 30 April 2015, the results from the 2012/2013 drilling activities, reported by MSA in a CPR dated 12 April 2013, and the results from the 2010 to 2011 exploration campaign, which MSA reported in a CPR dated 25 November 2011.

Several MRE updates were completed by MSA for BML since 2013 from diamond drilling campaigns for the AB Zone, the MML and its hanging wall mineralisation, for the Ti-magnetite-rich N-Q Zone from the adjacent farms Schoonoord 786LR and Bellevue 808LR and for the Phosphate Zone immediately above the P-Q Zone. These Mineral Resources are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code"), 2012 Edition.

The Mokopane project is considered to represent an "Exploration Project" which is inherently speculative in nature. The Project has evolved on the basis of a systematic exploration programme since 2009 and MSA considers that the property is sufficiently prospective, subject to varying degrees of exploration risk, to warrant further work and associated expenditure for a full assessment of its economic potential.

MSA has based its review on information provided by BML and its associate consultants together with technical reports by Government agencies and other relevant published and unpublished data.

Site visits and inspection of BML's core handling and storage facilities at Mokopane were undertaken by Dr Frieder Reichhardt on 12 May 2011, 16 August 2012 and on 11 March 2015, the latter visit together with Anton Geldenhuys. The visits included examination of drill cores and an inspection of the Mokopane field office facilities.

The Project Area containing the mineralisation is characterised by flat topography and the continuous soil cover prevents an inspection of geological exposures.

2.1 Scope of Work

MSA was commissioned by BML to provide an updated CPR on the Mokopane Fe-V-Ti Project by consolidating all previously reported MREs for the AB Zone, MML, MML HW, P-Q Zone and the Phosphate Zone. The MML HW and the Phosphate Zone occur stratigraphically immediately above the MML and the P-Q Zone respectively and their classification as Mineral Resources are subject to the co-extraction with the underlying semi-massive to massive VTM mineralisation.

The report collates and documents general and project-specific data and information pertaining to BML's mineral deposits, describes the quality and results of the work undertaken by BML to date, and makes recommendations to advance the Mokopane Project from its current level of a Pre-feasibility Study to a Definitive Feasibility Study.

The metric system is used for all weight, height and distance measurements and monetary figures expressed in this report are in South African Rand ("ZAR"), unless stated otherwise. A glossary of technical terms and abbreviations is presented in Appendix 1. The consent forms for the authors and MSA are included as Appendix 2.

2.2 Principal Sources of Information

Information and data for the two Prospecting Rights ("PR") granted by South Africa's Department of Mineral Resources ("DMR"), are derived from the following:

- Records of historical exploration conducted by the Council for Geoscience (CGS),
- Summary report prepared by consultant Peter Cheshire for Frontier Platinum Resources (Pty) Ltd ("Frontier", wholly owned by BRL), and
- Ongoing fieldwork over the permit area carried out by BML on behalf of the current PR holders, Pamish Investments No.39 (Pty) Ltd ("Pamish") and Afro Multi Minerals (Pty) Ltd ("AMM").

A list of the principal sources of information is included in Section 19.

MSA has endeavoured, by making all reasonable enquiries, to confirm the authenticity and completeness of the technical data upon which this CPR is based. A final draft of the report was provided to BML, along with a written request to identify any material errors or omissions prior to issuing the final report.

The Mineral Resource estimates have been prepared on information available up to and including 15 October 2017.

2.3 Qualifications, Experience and Independence

This report has been compiled by Dr Frieder Reichhardt, who is a professional geologist with over 25 years' experience. He has been involved in the design, execution and management of exploration programmes and public reporting on various mineral deposit types and commodities and has the appropriate relevant qualifications, experience, competence and independence to be considered a "Competent Person" under the definitions provided in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("JORC Code"). Dr Reichhardt is a Principal Consulting Geologist with MSA, a Member of the German Geological Society ("DGGV"), is registered with the South African Council for Natural Scientific Professions ("SACNASP") and is a Fellow of the Geological Society of South Africa ("GSSA").

Mineral Resource estimations have been carried out by MSA's Mineral Resource consultants, either directly by Mr Jeremy Witley or by Mr Sifiso Siwela and Mr Anton Geldenhuys under the supervision of Mr Jeremy Witley. Mr Witley is a professional geologist with more than 25 years' experience in base and precious metals exploration and mining as well as Mineral Resource evaluation and reporting. He is Principal Resource Consultant for MSA, is registered with SACNASP and is a Fellow of the GSSA. Mr Witley has the appropriate relevant qualifications, experience, competence and independence to be considered a "Competent Person" under the definitions provided in the 2012 Edition of the JORC Code.

MSA is an exploration and Mineral Resource consulting and contracting firm, which has been providing services and advice to the international mineral industry and financial institutions since 1983. Neither MSA, nor the authors of this report, have or had previously any material interest in BML or in the mineral properties which are the subject of this CPR. Our relationship with BML is solely one of professional association between client and independent consultant. This report is prepared in return for professional fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this report.

3 RELIANCE ON OTHER EXPERTS

Information and data for this CPR was sourced from:

- Mr Peter Cheshire, Geological Consultant to BML during 2010 and 2011
- Geological and geotechnical staff employed by BML
- Mr Jan Rabe, metallurgical advisor to BML
- Dr Johan Nel metallurgical engineer for Hatch Goba, South Africa
- South Africa's national Mineral Research organization Mintek in Johannesburg
- Exxaro Research and Development, South Africa
- Council for Geosciences (CGS) in Pretoria, South Africa
- Set Point Laboratories, Genalysis Laboratory and SGS Laboratory in South Africa

Public domain information referenced in this report is listed in Section 19.

MSA has not independently verified, nor is it qualified to verify, the legal status of the Mokopane Project Prospecting Rights. The present status of tenements listed in this report is based on information and copies of documents provided by BML, and the report has been prepared on the assumption that the tenements will prove lawfully accessible for evaluation.

No warranty or guarantee, be it express or implied, is made by MSA with respect to the completeness or accuracy of the legal, license tenure or environmental aspects of this document. MSA does not undertake or accept any responsibility or liability in respect of these parts of this document, or any errors in or omissions from it, whether arising from negligence or any other basis in law whatsoever.

MSA is satisfied that the geological and geochemical information supplied by BML for the individual mineralised layers or units is of sufficient quality to be used in the estimation of Mineral Resources.

4 PROPERTY DESCRIPTION AND LOCATION

4.1 Location of the Prospecting Area

The Mokopane vanadiferous Ti-magnetite Project (the "Project Area") is situated approximately 65 km west of Polokwane and 45 km north-northwest of Mokopane in the Mokopane District, Limpopo Province, South Africa (Figure 4-1).

The Project Area is located in the central portion of the Northern Limb of the Bushveld Complex (Figure 4-2) and comprises a group of six adjacent farms namely Vogelstruisfontein 765LR, Malokong 784LR, Vliegekraal 783LR, Vriesland 781LR, Schoonoord 786LR and Bellevue 808LR.

Figure 4-1
Location of Project Area (MSA, 2015)

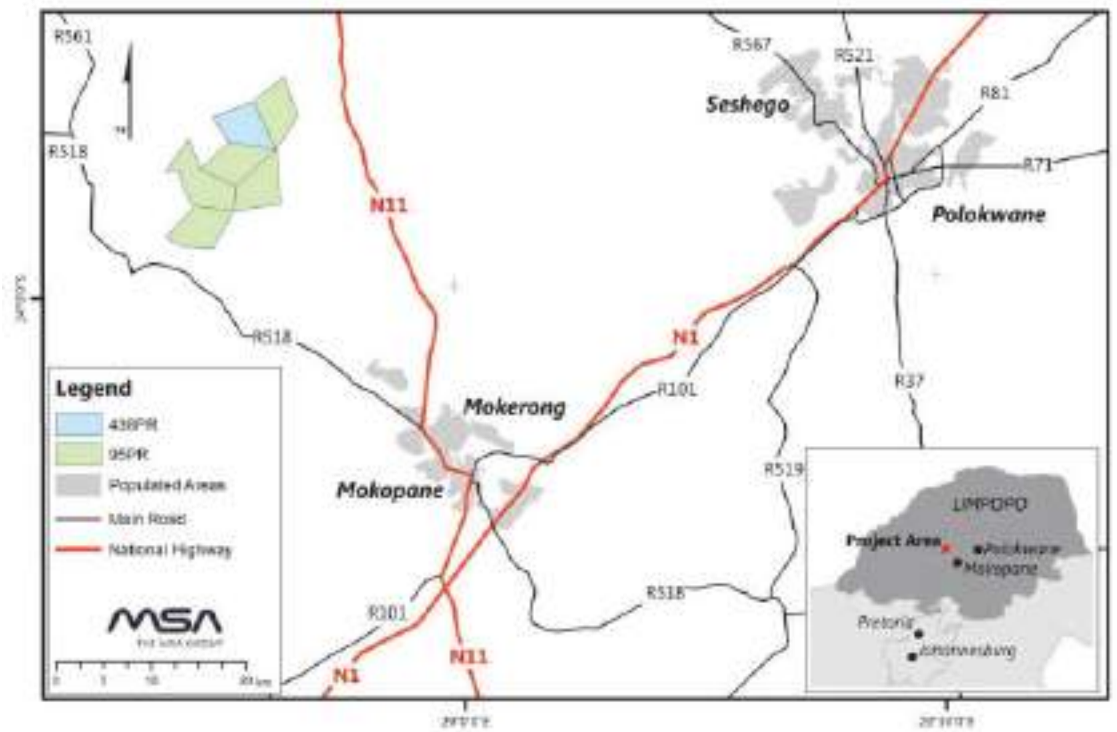
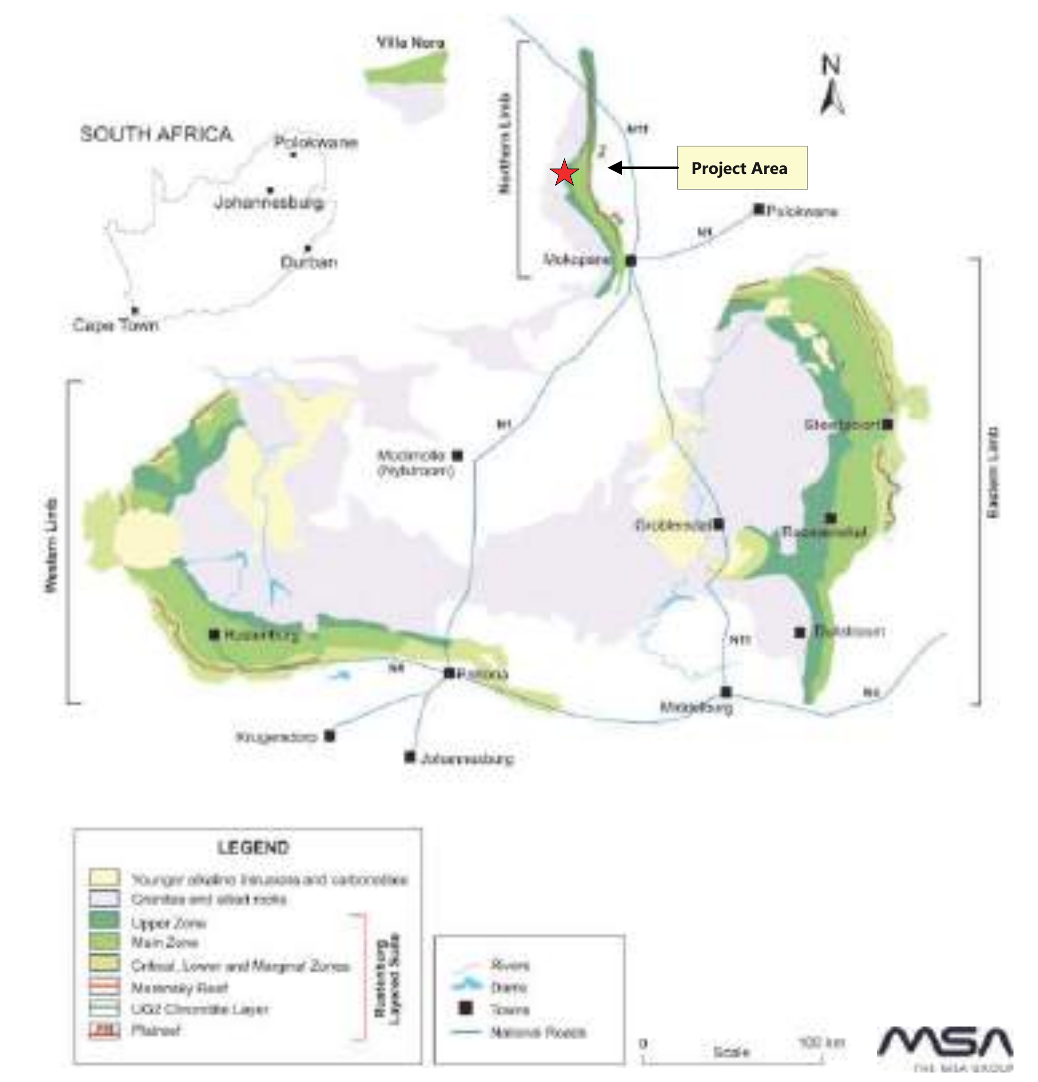


Figure 4-2
Location of the Project Area in the Northern Limb of the Bushveld Complex (MSA, 2015)



The Project Area consists of two Prospecting Rights 95PR and 438PR comprising the following six farms (Figure 4-3):

- 95PR: Vogelstruisfontein 765LR, Vriesland 781LR, Vliegekraal 783LR, Schoonoord 786LR and Bellevue 808LR – 10072.7949 ha
- 438PR: Malokong 784LR – 1863.9378 ha

The six farms cover a total area of 11936.7327 ha. The coordinates of the corner points of the individual farms are given in Table 4–1 as registered with the Deeds Office in Pretoria. The farms are located on the Government 1:50,000 topo-cadastral Sheets 2328DD and 2328DC published by the Chief Directorate, Survey and Mapping.

Table 4-1

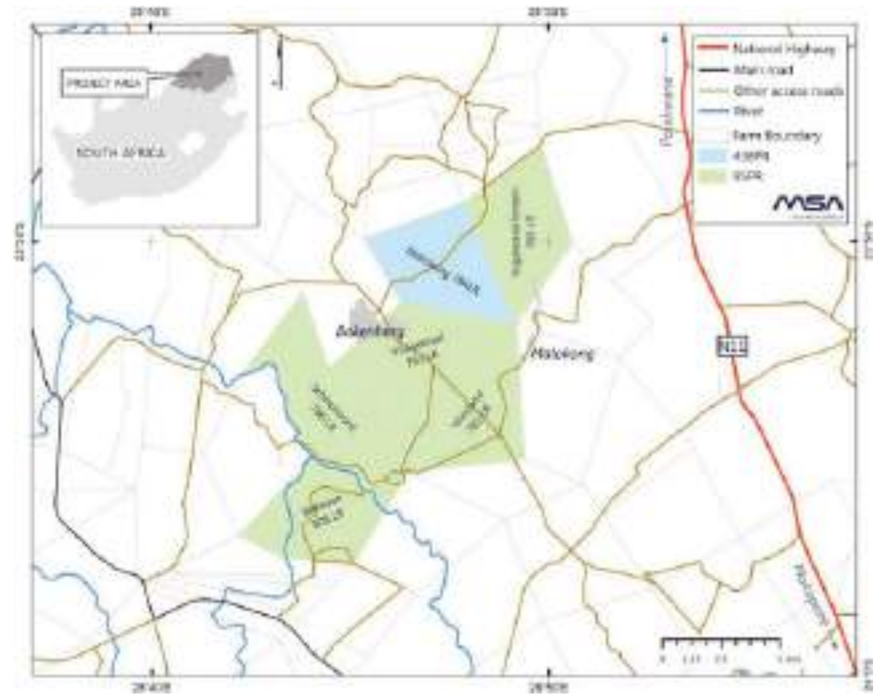
Coordinates of the corner points of the six farms (MSA, 2015)

Farm Name (corner point)	Latitude (South)	Longitude (East)
Vriesland (NW)	264411230	22699.18
Vriesland (NE)	2640372.59	18353.36
Vriesland (SE)	2646118.61	18004.64
Vriesland (SW)	2646658.43	22964.70
Vliegekraal (NW)	2639433.52	23275.20
Vliegekraal (NE)	2640372.59	18353.36
Vliegekraal (SE)	2644112.30	22699.18
Vliegekraal (SW)	2642255.74	26364.14
Malokong (NW)	2636729.21	24872.02
Malokong (NE)	2635214.37	20574.98
Malokong (SE)	2640372.17	18355.43
Malokong (SW)	2639433.34	23253.23
Vogelstruisfontein (W)	2635204.49	20592.83
Vogelstruisfontein (N)	2632743.98	17312.38
Vogelstruisfontein (E)	2636929.69	15961.82
Vogelstruisfontein (S)	2640372.59	18353.36
Schoonoord (N)	2638978.87	27468.95
Schoonoord (NE)	2642255.74	26364.14
Schoonoord (E)	2644112.30	22699.18
Schoonoord (SE)	2646658.43	22964.70
Schoonoord (SW)	2646073.74	27039.51
Schoonoord (NW)	2642501.54	30049.50
Bellevue (NW)	2646063.18	27113.07
Bellevue (NE)	2646658.43	22964.70
Bellevue (SE)	2650556.90	25315.86
Bellevue (S)	2650254.10	28388.42
Bellevue (SW)	2649324.43	30201.20

Note: South African National Coordinate system, central meridian LO29° with WGS84 ellipsoid and Hartbeeshoek Datum

Figure 4-3

Location of the six farms comprising the Project Area (MSA, 2015)



4.2 Mineral Rights over the Project Area and Agreements

Mineral tenure in South Africa is governed by the regulations of the Mineral & Petroleum Resources Development Act, 2002 ("MPRDA"). The following Prospecting Rights ("PR") were granted in terms of Section 16 of the MPRDA and constitute the Project Area (Table 4-2):

- **95PR,** covering the farms Vriesland 781LR, Vliegekraal 783LR, Vogelstruisfontein 765LR, Schoonoord 786LR and Bellevue 808LR was granted for iron ore, vanadium, titanium and all minerals that may be found in intimate association with the latter, as well as nickel, copper, cobalt, chrome, platinum group metals and gold; Phosphate ore was added in February 2014
- **438PR,** covering the farm Malokong 784LR, was granted for iron ore, titanium ore, copper ore, nickel, cobalt and platinum group metals

Table 4-2
Details of the Prospecting Rights pertaining to the Mokopane Project

Company	BRL Interest (%)	Farm Names	Minerals	Area (ha)	PR No.	Status
Pamish Investments No 39 (Pty) Ltd ("Pamish")	64%	Vogelstruisfontein 765LR, Vriesland 781LR, Vliegekraal 783 LR, Schoonoord 786 LR and Bellevue 808 LR (the latter two farms were added in February 2014)	Iron Ore, Vanadium, Titanium and all minerals that may be found in intimate association with the latter, Platinum Group Metals, Gold, Cobalt, Copper, Nickel and Chrome; Phosphate Ore was added in February 2014	10072.7949	95PR	Prospecting Right was renewed on 30 May 2011 for 3 years; Prospecting Right expired on 15 March 2015 and Pamish submitted an application for a Mining Right on 13 March 2015; An application to include the two additional farms Schoonoord 786 LR and Bellevue 808 LR, was approved in January 2013, executed on 19 February 2014 and registered with the Title Deeds office on 27 October 2014
Afro Multi Minerals (Pty) Ltd ("AAM")	68.5%	Malokong 784 LR	Iron Ore, Titanium Ore, Copper Ore, Cobalt, Nickel, and Platinum Group Metals	1863.9378	438PR	A renewal application for 3 years was submitted on 3 March 2011; an application to transfer the Prospecting Right in terms of Section 11 of the MPRDA is planned to be submitted upon approval of renewal

The status of tenements is based on information and copies of documents provided by BML, which includes a legal opinion confirming that Pamish remains the PR holder for 95PR beyond the expiry date (15 March 2015) and during the processing period of the Mining Right application, submitted on 13 March 2015, until such time as the Right is either granted or refused by the Department of Mineral Resources ("DMR"). Likewise, Afro Multi Minerals (Pty) Limited remain the holder of 438PR beyond the expiry date (6 March 2011) until the renewal application has either been granted or refused by the DMR.

Specific agreements and other issues for the two Prospecting Rights are briefly listed below:

- A Strategic Association Agreement between BML's wholly owned holding company, Bushveld Resources Limited ("BRL"), and Izingwe Capital (Pty) Ltd, created Pamish Investments No 39 (Pty) Limited to which the Prospecting Right LP95PR has been transferred in terms of Section 11 of the Mineral and Petroleum Resources Development Act, Act 28 of 2002 (MPRDA)

- A Strategic Investment Agreement between Afro Multi Minerals (Pty) Ltd, Pamish Investments No. 63 (Pty) Ltd, Amaraka Investments No. 85 (Pty) Ltd and BRL, based on which BRL acquired a 68.5% equity interest in Amaraka Investments No. 85 (Pty) Ltd. Prospecting Right LP438PR is currently under renewal application, after which transfer to Amaraka from Afro Multi Minerals in terms of Section 11 of the MPRDA is planned
- BRL has been cited in early 2013 as the third respondent in court proceedings instituted by Afro Multi Minerals (Pty) Limited ("AMM"), the holder of PR 438 covering the farm Malokong 784 LR, which forms part of BRL's licence areas. No further developments in this regard since 2013

Prospecting Right 95PR was initially granted for a period of 5 years to Izingwe Capital (Pty) Ltd ("Izingwe") on 19 November 2005 and transferred to Pamish in terms of Section 11 of the MPRDA. The approval of a Section 11 transfer was granted on 27 July 2009 and a renewal for a further three year period in terms of Section 18 of the MPRDA was executed on the 16th of March 2012. A section 102 amendment to the PR, adding the farms Schoonoord and Bellevue, as well as the additional mineral Phosphate Rock, was granted on the 19th of February 2014. The PR expired on the 15th of March, 2015, and a Mining Right application was submitted to the DMR on the 13th of March, 2015.

Prospecting Right 438PR was granted on 7 March 2007 for an initial period of 4 years to Afro Multi Minerals (Pty) Ltd ("AMM"). On 3 March 2011 AMM submitted a renewal application in terms of Section 18 for a further period of 3 years, which is currently under consideration by the DMR. A Section 11 application to transfer the Prospecting Right to Pamish is planned but can only be submitted to the DMR after the Section 18 has been granted. MSA has been provided by BML with a legal opinion confirming that, despite the considerable delay in processing the renewal application, AAM remains the PR holder of 438PR.

MSA has not independently verified, nor is it qualified to verify, the legal status of the Prospecting Rights. However, MSA is satisfied that the Rights and the corporate structure presented is a fair reflection of the current holdings and will prove lawfully accessible for further exploration.

4.3 Surface Rights

The surface rights to the six farms belong to the Langa Bakenberg community and the Department of Land Affairs. The land is currently used for grazing livestock and limited arable farming. Consultation with interested and affected parties has been conducted in accordance with Section 16(4) of the MPRDA and is adequate for the level of current exploration activities.

There was a temporary stoppage of drill activities in early 2015 due to disagreements with the community but the issue has since been resolved. BML has been consulting with the affected communities and the tribal authority as part of the public participation process required for the Mining Right application. Public meetings with the community were held from 28 September 2015 to 1 October 2015 and comments and issues raised by interested and affected parties ("I&AP") were adequately addressed and no objections were received.

4.4 Mineral Resource

The Mineral Resource is vanadiferous Ti-magnetite ("VTM") which occurs as multiple massive to semi-massive layers and in disseminated form in the gabbroic rocks of the Upper Zone of the Northern Limb of the Bushveld Complex. Phosphate mineralisation in the form of disseminated apatite occurs above the P-Q Zone and prospects for an economic extraction are dependent on its co-extraction with the Ti-magnetite mineralisation of the P-Q Zone.

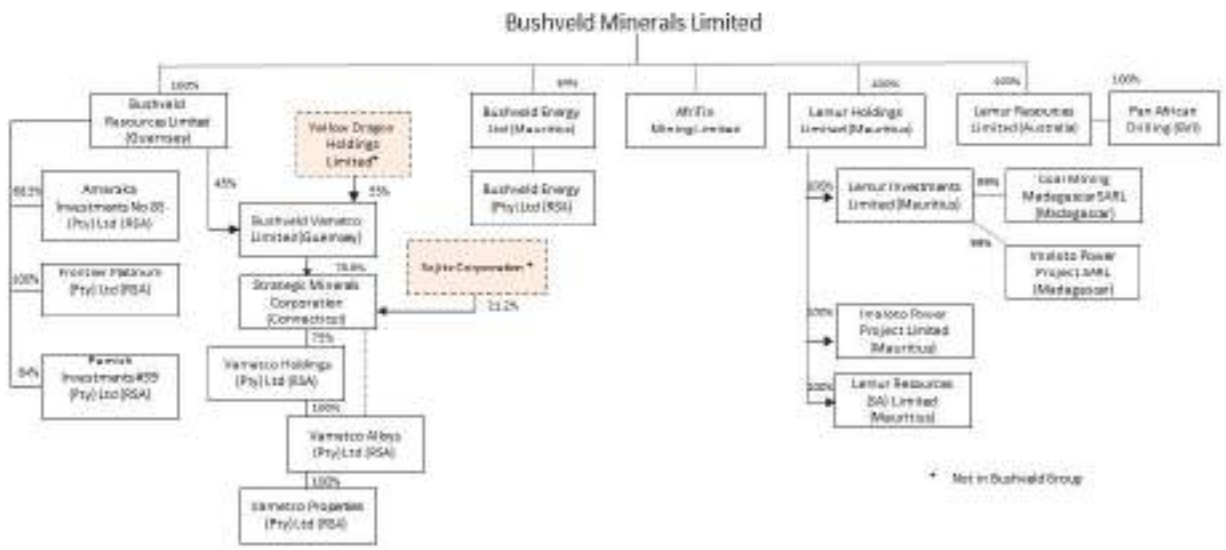
No historical Mineral Resource estimates, other than those previously conducted by MSA, or mining of the mineralisation underlying the Project Area had been conducted.

4.5 Issuer's Interest

The holding structure of the Mokopane Project, as of the effective date of this report, is shown in Figure 4-4.

Figure 4-4

Corporate Structure in the Mokopane Project (BML, 2017)



Lemur Resources Limited has conditionally acquired Sable Platinum Mining Limited's shares in three companies: (i) Great 1 Line Invest (Pty) Ltd, (ii) Gemsbok Magnetite (Pty) Ltd and (iii) Caber Trade & Invest 1 (Pty), the transaction being conditional on receipt of Section 11 approval.

Application for Section 11 approvals have been made in the name of Bushveld Resources Limited.

Strategic Minerals Corporation is to sell 1% of its shareholding in Vametco Holdings to BVI 1973 in due course.

Vametco Holdings has all ordinary voting shares in the Vametco Alloys. Strategic Minerals Corporation holds all preference shares in Vametco Alloys.

Pamish Investments #39 (Pty) Ltd = 36% held by Izingwe Capital (Pty) Ltd
Amaraka Investments No. 85 Limited = 31.5% held by Afro Multi Minerals (Pty) Limited
Vametco Holdings (Pty) Limited = 25% held by Business Venture Partners No. 973 (Pty) Ltd and 10% held by Business Ventures Partners No. 1833 (Pty) Ltd
Bushveld Energy Limited = 16% held by Mikhail Nikomarov
Coal Mining Madagascar ASRL = 1% held by David Rasoamahenina
Imaloto Power Project Limited = 1% held by Dale Hanna

4.6 Royalties

MSA is not aware of any existing or future royalty agreements pertaining to the Mokopane Project, in addition to those due to the state.

4.7 Environmental Liabilities

The authors are not qualified to provide comment on environmental issues associated with the Mokopane Project. No guarantee, be it express or implied, is made by MSA with respect to the completeness or accuracy of the environmental aspects of this document. MSA does not undertake or accept any responsibility or liability in any way whatsoever to any person or entity in respect of this part of this document, or any errors in or omissions from it, whether arising from negligence or any other basis in law whatsoever

An Environmental Management Plan (EMP) was submitted in 2004 by the then Prospecting Rights holder, Izingwe, and approved by the DMR with respect to the farms Vriesland 781LR, Vliegekraal 783LR and Vogelstruisfontein 765LR. The original EMP was submitted by Pamish and approved by the DMR as part of the PR renewal application. The farms Schoonoord 786LR and Bellevue 808LR were incorporated in February 2014 into 95PR and the submitted EMP was approved by the DMR.

An EMP pertaining to the farm Malokong 784LR (438PR) was submitted by AMM and approved by the DMR in 2005. The exploration activities on 438PR are currently compliant with the approved EMP, which does not need to be amended at this stage. MSA is not aware of any existing environmental liabilities on the two PR areas.

A financial provision for rehabilitation of ZAR 3,000 for 95PR and ZAR 10,000 for 438PR has been paid to the DMR in February 2005 and June 2007 respectively.

An environmental compliance report for 95PR was submitted to the DMR in August 2010 and a compliance audit was conducted by the DMR in October 2010. Additional site inspections were carried out in November 2011 and in early 2013. No areas of non-compliance were identified in the approved EMP.

The DMR carried out site inspections on 438PR in November 2010 and January 2014. No environmental compliance issues were identified by the DMR. At that stage AMM's exploration programme consisted exclusively of data review and desk-top studies and no invasive field activities had been conducted.

An Integrated Environmental Management ("IEM") authorisation was granted for the planned mining activities on 95PR by the DMR on 13 September 2016. This authorisation details the environmental requirements set out in the EMP for future mining.

A Mine Works Program ("MWP") and Social and Labour Plan ("SLP") were submitted by BML on 13 March 2015 as part of the Mining Rights application and are expected to be approved by the DMR together with the Mining Rights.

BML has engaged a mine closure specialist who estimated the total environmental rehabilitation cost to be ZAR 154,840,434 and the DMR has requested an upfront amount of ZAR 77,420,217 as part of the pending execution of Mining Rights. The payment will be secured in form of a financial guarantee from an insurer which BML plans to finalise after a community trust structure has been set up. The latter is a DMR requirement for the granting of Mining Rights.

4.8 Permits

From information provided by BML, MSA accepts that all necessary permits to carry out the proposed exploration (for 438PR) and mining activities (for 95PR) have either been obtained, or such as an Integrated Water Use License ("IWUL") for 95PR are expected to be obtained without undue difficulty. To MSA's knowledge, there are no environmental impediments to the project continuing to the mining stage

4.9 Project Risks

The legal proceedings between BRL and AMM regarding the dispute over ownership terms of PR438 could affect BRL's overall Project Area. MSA shares the view expressed in BRL's that PR438, which remains to be renewed and transferred to BRL, through Amaraka, in terms of Section 11 of the MPRDA, is not considered material in the exploration and development strategy of BRL.

Disputes with the community over financial compensation or possible requests for a direct stake in the project need to be anticipated and will have to be addressed to gain the long term support of the affected communities and local and provincial government.

The planned Definitive Feasibility Study needs to demonstrate the financial viability of extracting and beneficiating the targeted VTM mineralisation to a saleable product for a realistic range of steel, vanadium and titanium market conditions.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The Project Area lies approximately 45 km north-northwest of the town Mokopane in the magisterial districts of Mokopane and Mokerong 2 of the Limpopo Province, Republic of South Africa. Primary access is via a tarred road linking Mokopane and the village of Bakenberg and secondarily through a tarred road (main access to Malokong and Vogelstruisfontein farms) connecting with the N11 to Mokopane (Figure 4-3). This access is enhanced by a good network of secondary gravel roads and tracks that exist within the area.

5.2 Climate and Physiography

The Project Area is at an elevation of about 1,000 m above sea level and has a semi-arid climate. Temperatures typically range between 15°C and 30°C in the warmer months (September to March) and between 5°C and 22°C in the cooler months (April to August). The area has a dry climate with a summer rainy season and a pronounced dry spell during winter. Average annual rainfall is 495 mm, with December and January being the wettest months and July the driest.

5.3 Physiography

The general area is characterised by flat lying to gently sloping ground punctuated by a series of northerly trending hills in the east and the higher plateau of Bushveld granite and diabase-capped hills to the west. Drainage is from NNE to SSE via the seasonal Borobela River and its weak tributary network.

The area is classified as vegetation zone SVcb 20, Makhado Sweet Bushveld (Mucina and Rutherford, 2006). The hill areas are bush covered and flat lying areas support a mixture of bush and cultivated fields. Soil cover varies from thin brown residual soils with bedrock outcrop in the east, thick (>5 m) residual and transported "black turf" soils along the broad valley of the Borobela River in the central portions and red residual soils in the west.

Land use is dominated by traditional grazing with summer dryland subsistence agriculture and is generally in a degraded condition.

5.4 Local Resources and Infrastructure

The Project Area is located approximately 260 km NNE of Johannesburg and is easily accessible through a tarred road network. The closest railway link is at Mokopane, which is on the line connecting Polokwane (65 km east of the Project Area) to Johannesburg and other major centres.

Water resources include groundwater and a weak river network of which the seasonal Borobela River forms the major river within the Project Area. The Borobela River is occasionally in flood during November to February. The ground water table in the greater area is on average 20 m below surface (Schutte, 1980).

Electricity can be accessed through the parastatal power supply company Eskom.

The region has a long history of mining going back to 1926 when mining of the Platreef for platinum group metals ("PGM") started. The large-scale Platreef opencast Mogalakwena Mine is situated approximately 10 km to the south-east of the Project Area and has been operated by Anglo American Platinum since 1993. The Boikgantsho Platreef project, jointly owned by Atlatsa Resources and Anglo American Platinum, is at the feasibility stage and is located 10 km north-east of the Project Area.

6 HISTORY

The Northern Limb of the BC has a strike length of about 110 km and has been explored and mined for its PGM-rich Platreef for many decades. The massive and disseminated Ti-magnetite layers, although well documented from the Eastern and Western Bushveld Limbs, received relatively little attention. The first detailed investigations were carried out in the 1970s and included mapping, ground geophysics, trenching and limited drilling in the area immediately south of the Mokopane Project.

The early work in the 1970s and subsequent exploration in the past decade in the Northern Limb focussed mainly on the MML because of its high vanadium content (±1.6% V_2O_5). A similar vanadium grade in the MML has been mined at the Mapochs Mine in the Eastern Bushveld since the 1950s. The MML is processed at the Steelworks (EVRAZ-owned Highveld Steel & Vanadium) at Emalahleni (formerly known as Witbank) into vanadium, pig iron and steel products.

The exceptional increase in iron ore prices from 2008 to 2013 prompted a shift towards exploring various other Ti-magnetite layers, i.e. the P-Q Zone as a potential source for pig iron rather than vanadium.

6.1 Early Work

The Project Area has not been previously explored for its VTM potential but was covered by a regional geochemical soil sampling and mapping programme by the CGS. The latter was published in 1985 at 1:250,000 scale as the 2328 Pietersburg Geological Series map. The soil sampling was conducted at 1 km intervals and the samples were analysed by XRF and ICP-MS for over 40 elements including Fe_2O_3, V, TiO_2, Cu and Ni. Significant vanadium and titanium anomalies occur and generally coincide with areas mapped as UZ of the BC.

A regional aeromagnetic and radiometric survey was conducted in the 1990s and processed by the CGS. The data shows prominent northerly-trending magnetic anomalies which have been correlated with the two most prominent VTM-rich stratigraphic units, namely the MML and adjacent VTM layers and the N-Q Zone comprising the N, O, P and Q Ti-magnetite layers.

A stratigraphic hole BV-1 was drilled by the CGS in 1991 on the farm Bellevue 808LR, some 2 km south-west of the Project Area. The 2,950 m deep hole covered the entire Upper Zone stratigraphy and intersected 32 discrete layers of VTM-rich rocks (>20% opaque minerals) ranging in thickness between 7 cm and 13 m (Ashwal *et al.*, 2005).

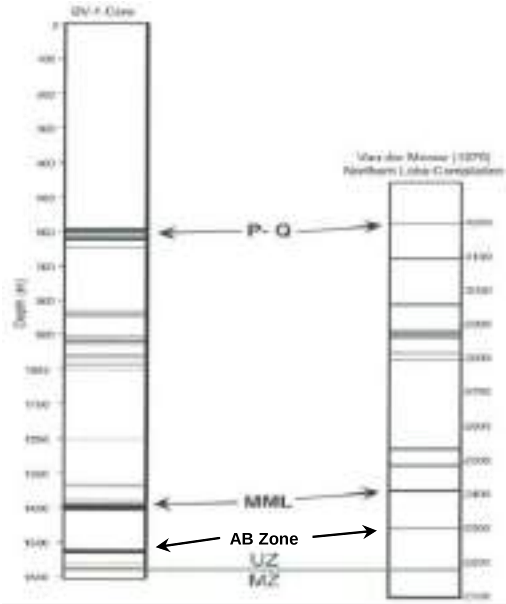
Figure 6-1 shows the correlation of the layers in BV-1 with the 20 Ti-magnetite layers identified by Van der Merwe (1978) during his regional mapping of the Northern Limb. Most prominent are the uppermost semi-massive Ti-magnetite layer (Q layer) which has a thickness of 13 m and an approximately 8 m thick vanadium-rich layer with variable Ti-magnetite content. The latter is some 175 m above the base of the UZ and can be correlated with the MML. The occurrence of the two most prominent Ti-magnetite layers in drillhole BV-1 at depths of approximately 600 m and 1,400 m illustrates the remarkable spatial continuity of these layers.

The P-Q Zone in the Project Area had not been identified prior to BML's exploration activities and the MML is only partially portrayed on existing maps and exposed in isolated outcrops.

No Mineral Resource Estimates had been carried out for the Project Area prior to those conducted by MSA.

Figure 6-1

Correlation of VTM layers between drillhole BV-1 and surface mapping (Van der Merwe, 1978)



Note: The P-Q Layers do not generally outcrop and are therefore difficult to identify during field mapping
Upper Zone (UZ) – Main Zone (MZ) boundary shown with a green line

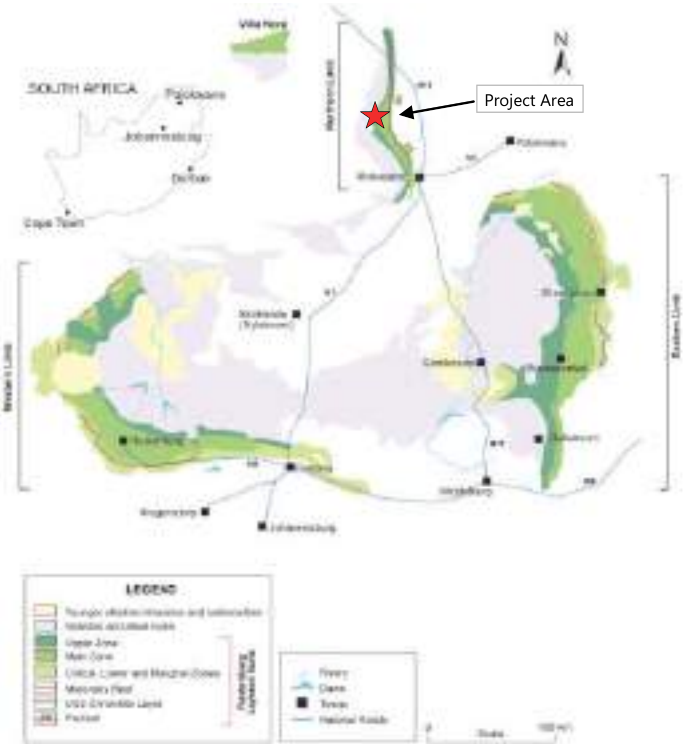
7 GEOLOGICAL SETTING AND MINERALISATION

7.1 Regional Geology

The Project Area is situated within the Northern Limb of the Bushveld Complex ("BC"), which is dated at 2,055 Million years ("Ma") and lies within the north-central Kaapvaal Craton. The BC occurs as a series of interconnected intrusives comprising an ultramafic-mafic succession of layered rocks known as the Rustenburg Layered Suite ("RLS"), a series of quasi-contemporaneous granitic rocks (Lebowa Granite Suite) and felsic extrusive rocks (Rooiberg Group). The ultramafic-mafic layered rocks of the RLS are located in three main arcuate areas referred to as the Eastern, Western and Northern Limbs (Figure 7-1), which vary in thickness from less than 5 km to a maximum of 8 km.

Figure 7-1

Geological map of the Bushveld Complex showing location of the 3 Limbs (after Kinnaird, 2004)



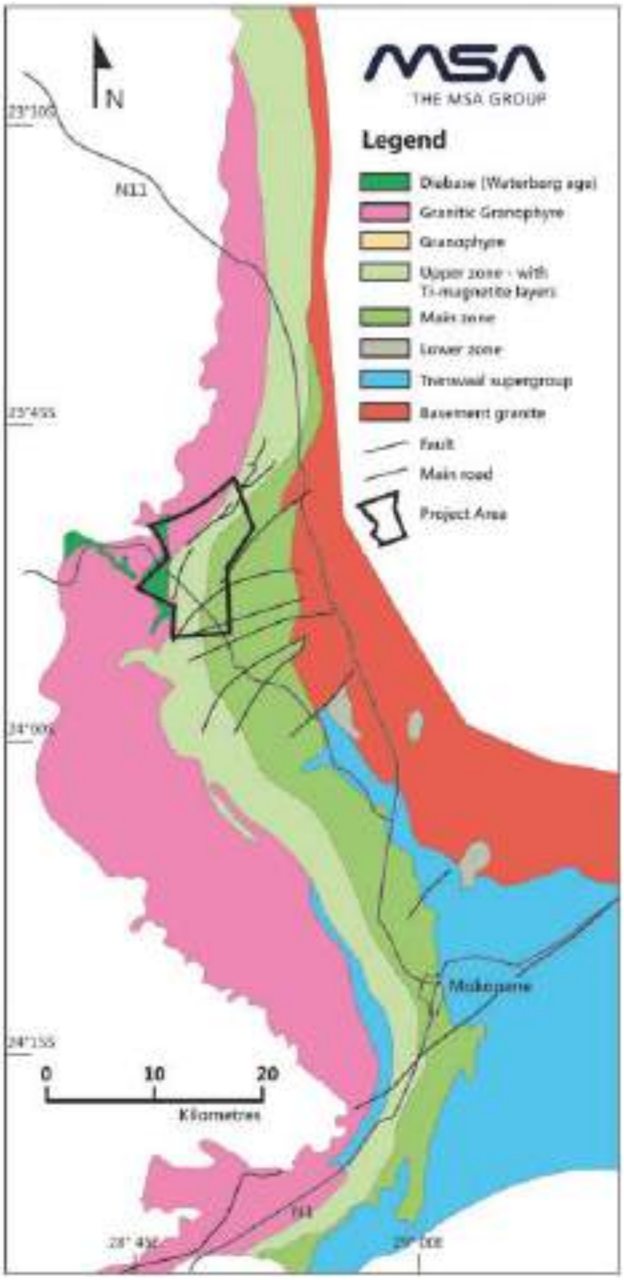
The RLS is stratigraphically divided into five zones:

- Marginal Zone, dominated by norites
- Lower Zone ("LZ"), consisting of an alternating series of dunite and harzburgite
- Critical Zone ("CZ"), comprising cyclic units of chromitite, pyroxenite, norite and anorthosite. The Lower Group chromitite layer LG6 and the Middle Group chromitite layer MG1 and/or MG2 are mined for their chromite content while the Upper Group chromitite layer UG2 and the Merensky Reef are exploited for platinum group metals ("PGM")
- Main Zone ("MZ"), containing gabbro norite, anorthosite and minor pyroxenite
- Upper Zone ("UZ"), dominated by gabbroic rocks with intercalated anorthosite and magnetite-rich layers

The Project Area is underlain by the uppermost portion of the MZ and the entire UZ. The UZ is approximately 1,250 m thick and dips gently at 15° to 25° to the west. The UZ is characterised by the pervasive occurrence of vanadiferous titano-magnetite ("VTM") present in disseminated form in highly variable amounts (1% to >20%) and as semi-massive and massive layers (>90%) of variable thicknesses.

Figure 7-2

Geological map of the Northern Limb showing the Project Area (MSA, 2015)



The ultramafic and mafic rocks of the RLS in the Project Area lie on Archaean basement granite and gneiss to the east and are overlain by Bushveld granite sills (Lebowa Granite Suite) and younger post-Bushveld Waterberg Group and Quaternary cover rocks to the west (Figure 7-2).

The Upper Zone consists of numerous cyclic units of alternating and well-layered rocks and is subdivided into three Subzones (Table 7-1) based on the presence of modal olivine in rocks of Subzone B and modal apatite in Subzone C. The rocks show remarkable continuity and individual layers can generally be traced along strike for tens of kilometres.

Table 7-1

Generalised stratigraphic sequence of the Northern Limb of the Bushveld Complex (SACS, 1996)

Suite	Zone	Subzone	Unit
Lebowa Granite Suite			Nebo Granite (Mn)
Rustenburg Layered Suite	Upper Zone	Subzone C	Molendraai Magnetite Gabbro (Vmo)
		Subzone B	
		Subzone A	
	Main Zone	Upper Subzone	Mapela Gabbronorite (Vm)
		Lower Subzone	
	Critical Zone	Upper Subzone	Grasvally Norite-Anorthosite (Vro)
		Lower Subzone	
	Lower Zone	Upper Pyroxenite Subzone	Zoetveld Subsuite (Vz)
		Harzburgite Subzone	
		Lower Pyroxenite Subzone	

A comparison between drillhole BV-1 on the farm Bellevue and the sequence intersected in drillholes on the farms Vliegekraal and Vriesland also shows very good down-dip continuity (Section 7.3.1).

7.2 Correlation of Ti-Magnetite Layers

The variable and gradational nature of VTM abundance within individual layers and across their upper and lower contacts creates obvious ambiguities when comparing the widths of individual layers between drillholes unless a cut-off for the amount of VTM is consistently applied and reported. This has not been done by previous workers and it must be noted that visual estimates of total VTM content are inherently unreliable.

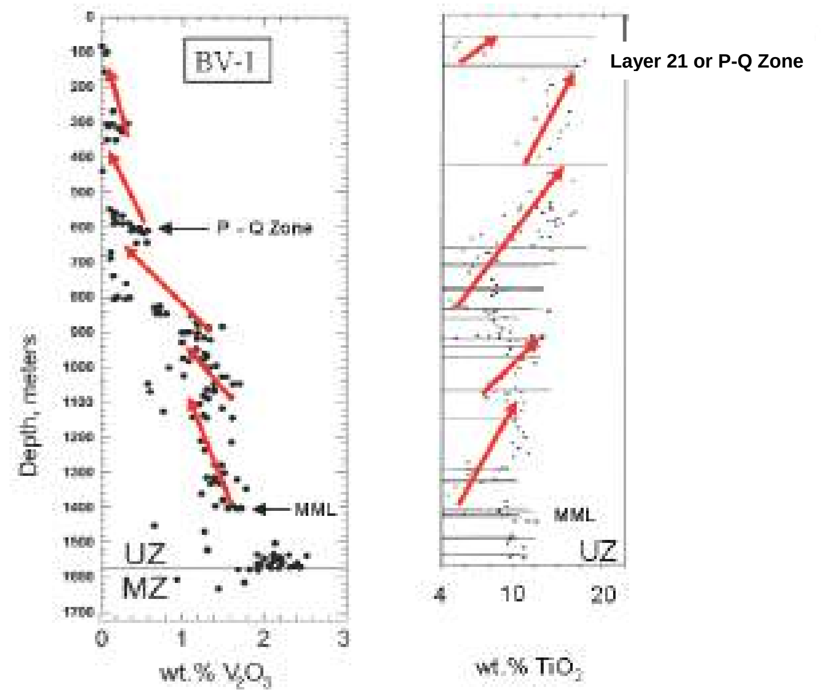
A definitive correlation of individual VTM layers is further compromised by the fact that virtually all layers are composite units. The layers invariably contain relatively VTM-poor (<30%) sections, or partings, and have mostly gradational hanging wall contacts with sharp footwall contacts which have resulted in rather arbitrary definitions of the thicknesses of the various VTM layers. The latter features prompted Molyneux (1970, 1974) and von Gruenewaldt (1973) to conclude that VTM layers in the Eastern Limb show considerable variation in thickness and Ti-magnetite concentration both vertically and along strike.

By convention, VTM-rich layers in the Eastern Limb are simply referred to by their order of stratigraphic occurrence (Layer 1 to 21). Barnes and co-workers (2004), who referred to the layers intersected in drillhole BV-1 by letters A to R, did not attempt a direct correlation between the VTM layers of the Northern Limb with those of the Eastern and Western Limbs.

It is important to note that VTM shows a decrease in V_2O_5 and simultaneous increase in TiO_2 (Figure 7-3) in a cyclical manner from the base to the top of the UZ. This antipathetic behaviour of V and Ti has been well documented (Klemm *et al*., 1985; Cawthorn and Molyneux, 1986; Ashwal *et al*., 2005) and the TiO_2 and V_2O_5 ratios can be used to broadly identify and correlate individual groups of VTM layers.

Figure 7-3

V_2O_3 and TiO_2 content of Ti-magnetite in the UZ from BV-1 and from Eastern Bushveld Limb



Note: Data for BV-1 is from Ashwal *et al*., 2005 and for the Eastern Bushveld from Klemm *et al*., 1985

V_2O_3 has been determined by electron microprobe analysis of Ti-magnetite grains and the vanadium concentrations are not comparable with whole rock vanadium contents. Solid lines in the TiO_2 plot indicate position and TiO_2 content of VTM layers

Layer 21 in the Eastern Limb and the P and Q Layers in the Northern Limb occur at equivalent stratigraphic positions. The massive portions of Layer 21 and the P and Q Layers have the highest TiO_2 content (18% to 22%) and the lowest V_2O_5 concentrations (0.1% to 0.3%) of all VTM layers of the UZ. Layer 21 and Layer Q attain thicknesses well in excess of 10 m and consist of massive to semi-massive VTM units with relatively sharp basal contacts with the intercalated feldspar-rich intervals.

Similarities in the position, chemical composition and overall appearance between the vanadium-rich MML in the Eastern Limb (e.g. at Mapochs Mine) and the Main Group VTM layers in the Northern Limb (Schutte, 1980) strongly suggest that these layers are stratigraphic equivalents, despite their considerable geographic separation (>150 km).

7.3 Local Geology

7.3.1 General

The Upper Zone of the RLS in the Project Area consists of gabbronorite, gabbro, Ti-magnetite gabbro (ferrogabbro), olivine-diorite, anorthosite and minor norite and contains intervals of disseminated, semi-massive and massive vanadiferous Ti-magnetite ("VTM"). These VTM-rich intercalations vary in thickness and VTM content and occur at irregular intervals in the lower half of Subzone A, the lower and upper third of Subzone B and are virtually absent in the apatite-bearing ferro-diorite of Subzone C (Table 7-2).

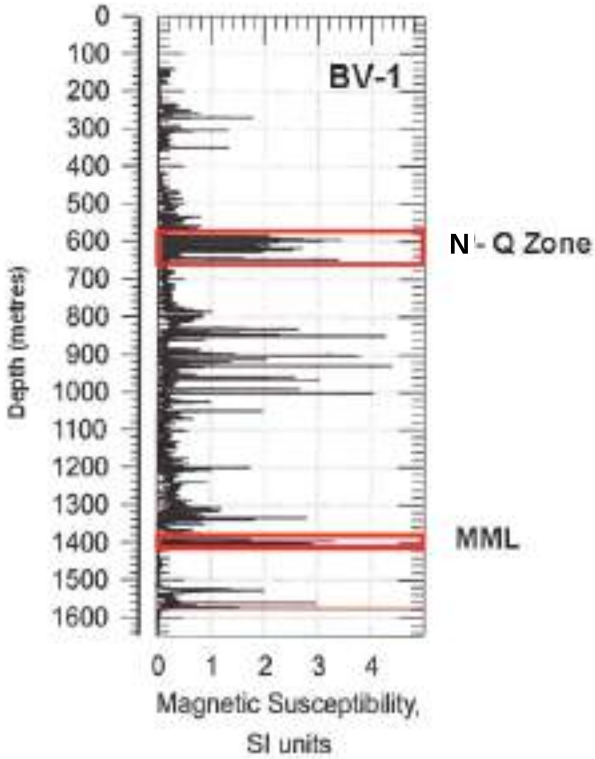
Table 7-2

Nomenclature and correlation of Ti-magnetite Layers in the Upper Zone (after Cheshire, 2011)

Upper Zone Statigraphic Unit	Bellevue Farm Borehole BV-1			General Mining / VanMag Mozambique Farm Ref Boreholes BH M7 and BH M8			BML Drilling 2010 and 2011 on Vliegekraal & Vriesland Farms Ref. Boreholes VK1, VK2, VK3, VL2, VL3	
	Ti-Magnetite Layers (Massive) Numbering A - R after Barnes et al. (2004)	Thickness m	Distance HW contact above Upper/Main Zone Contact m	Ore Unit	Ore Subunits	Thickness m	Ti-Magnetite Layers and units	Thickness m
Subzone C	R	0.83	1271	No Data	No Data	No Data	R	0.4
	Apatite-bearing ferro-diorite							
Subzone B	P-Q HW Disseminated Zone		1011		P – Q Zone		P-Q HW Disseminated Zone	20 - 44 m
	Q	13.03	985				Q	12 - 20 m
	Magnetite gabbro middling	7.22	972				Magnetite gabbro middling	
	P	0.60	965				P	
	P-Q FW Disseminated Zone		949				P-Q FW Disseminated Zone	8 - 17 m
	N and O	0.46	932				N and O	0.5
	M	0.07	745				M	3.1
	L	0.70	726				L	1.1
	K	0.14	675				K	Not intersected
	J	0.18	673				J	Not intersected
	I	0.50	646				I	0.5
	H	0.29	574				H	0.3
Subzone A	G	0.05	527				G	Not intersected
	Magnetite gabbro and F	34.0	274	Upper Magnetite Group	Top Zone	18.7	F	1.0
					Ferrogabbro middling		Magnetite gabbro middling	16.6
					Mid Zone		Unnamed magnetite layer	0.4
					Ferrogabbro middling		Magnetite gabbro middling	3.6
	E	0.05			Bottom Zone		E	0.2
	Magnetite gabbro and anorthosite	45.0	239	Ferrogabbro and anorthosite		46	Magnetite gabbro and anorthosite	71.9
	Magnetite gabbro and D	17.40	196	Main Magnetite Group	Upper Marker	1.1	Upper Marker	1.5
					Ferrogabbro	6.7	Ferrogabbro	8.2
					Lower Marker	<1	Lower Marker	1.2
					Ferrogabbro	6.3	Ferrogabbro	5.8
	Main Magnetite Layer (magnetite layers B & C and anothositic middling)	6.40	179	MML	Main Magnetite Layer (2 magnetite layers with anothositic middling)	7.5	Main Magnetite Layer (2 magnetite layers with anothositic middling)	7.42 - 8.24
	Anorthosite and magnetite gabbro	158.2	173	Ferrogabbro and anorthosite		120	Anothosite and magnetite gabbro	No Data
				Lower Magnetite Group	Magnetite anorthosite	20		
	A	0.30	14				Not intersected	Not intersected

The stratigraphic position of the individual VTM layers is shown in Figure 6-1 and their thicknesses are given in Table 7-2. The variable VTM content in the Upper Zone ("UZ") is probably best documented by the magnetic intensity of the various rocks. Figure 7-4 shows the magnetic susceptibility variations in the UZ and highlights the particularly high VTM concentrations associated with the semi-massive to massive Main Magnetite Layer ("MML") and the P-Q Layers within the P-Q Zone. The P-Q Zone is referred to as "N-Q Zone" when the stratigraphically lower and narrow (<0.5 m) N and O layers are included.

Figure 7-4
Magnetic susceptibility vs depth of the UZ in drillhole BV-1 (after Ashwal *et al.*, 2005)



Note: Magnetic susceptibility measurements were collected every 2 cm on the Bellevue BV-1 drill core

7.3.2 P-Q Ti-Magnetite Layers

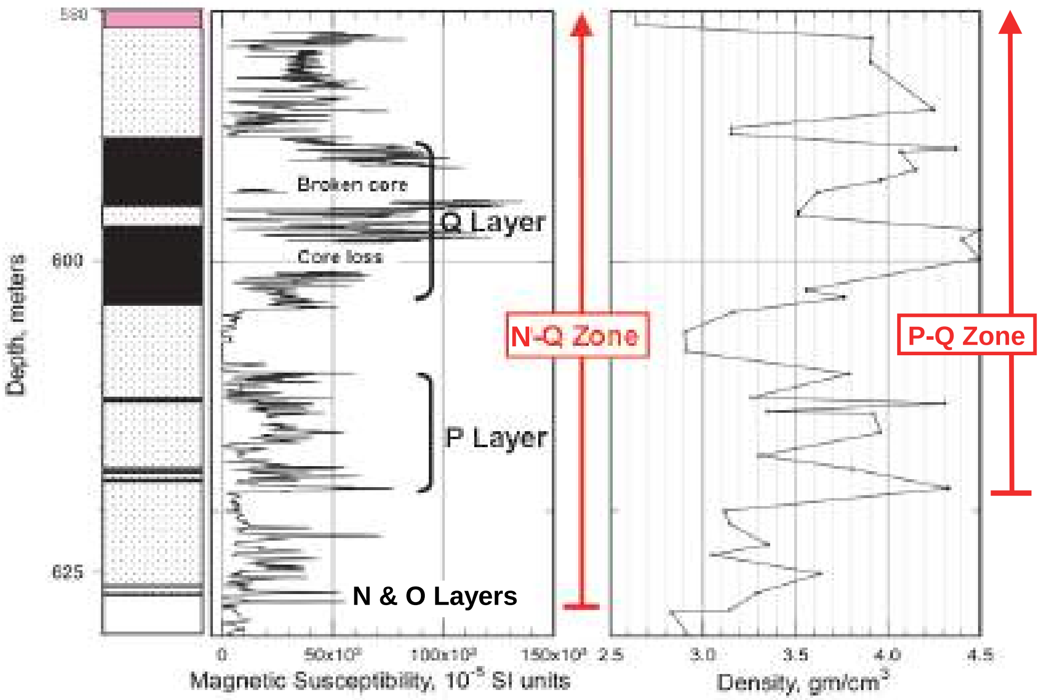
This approximately 25 m thick VTM-rich interval was intersected in BV-1 and consists of the two semi-massive to massive VTM layers P and Q which are separated by an approximately 7 m thick "parting" of Ti-magnetite gabbro and anorthosite. The generally narrow (<0.5 m) N and O layers occur approximately 15 m below the base of the disseminated portion of the P layer. Magnetic susceptibility and density measurements on BV-1 drill core were conducted by Ashwal and co-workers (2005; Figure 7-5). The semi-massive to massive P and Q Layers show high magnetic susceptibility values with considerable internal fluctuations in their VTM content. They generally have gradual contacts with footwall and hanging wall rocks, as illustrated in Figure 7-5.

The P-Q Layers in the Project Area occur in the wide, soil-covered plains between the Main Zone lithologies forming a range of hills to the east and the Nebo granite plateau to the west and are therefore not easily recognised in the field other than by the presence of a distinctive reddish-brown soil cover containing abundant Ti-magnetite. This could explain why this prominent group of VTM layers has not been recorded in the Project Area and why the overall width has been grossly underestimated by previous workers (e.g. Van der Merwe, 1978).

The P-Q Layers have been intersected in 18 drillholes in the Project Area and range in apparent thickness from 15 m to 27 m including the generally VTM-poor parting between the two layers. The footwall and hanging wall lithologies of the P-Q Layers do contain considerable amounts of disseminated Ti-magnetite and including the N and O layers the total thickness of the wider N-Q interval (the N-Q Zone) ranges between 58 m and 95 m. This zone constitutes the uppermost and dominant VTM mineralised entity in the UZ and Mineral Resources have been estimated for the P-Q Zone, the wider N-Q Zone and the immediately overlying Phosphate Zone in this report.

Figure 7-5

Magnetic susceptibility and density in drillhole BV-1 for N-Q and P-Q Zone (Ashwal *et al.*, 2005)



Note: Magnetic susceptibility measurements were collected every 2 cm on the Bellevue BV-1 drill core. Density measurements were made at depth intervals of 1.7 m using core lengths of about 15 cm

Black: Ti-magnetite-rich layers; White stippled: Ti- magnetite gabbro, Ti-magnetite leucogabbronorite; White: anorthosite and leuconorite; Pink: Granitic sill or dyke (top of profile)

Note: The uppermost portion of the N-Q and P-Q Zone is not shown due to the occurrence of a granitic sill or dyke

7.3.3 Main Ti-Magnetite Group

This group of VTM layers in the lower portion of the Upper Zone was first investigated by Ruighoek Chrome Mines (Pty) Ltd south of the Mokopane Project between 1969 and 1970. During 1979 and 1980, the State-owned Mining Corporation completed geological mapping, magnetic surveys, and drilling over the five contiguous farms Gezond, Commandodrift, Molendraai, Mozambique (Portion 2) and Inhambane bordering the Mokopane Project to the south.

The results were summarised and published by Schutte (1980) who grouped the VTM layers in the 250 m thick, basal portion of the Upper Zone into a Lower, Main and Upper Group, according to their relative stratigraphic position. The latter two groups include several near-massive layers (75 to 88 weight percent Ti-magnetite) while the Lower Group consists of a 18 m to 25 m thick succession of predominantly feldspar-rich rocks which contain between 10% and 50% disseminated Ti-magnetite. Schutte (1980) described the Main Magnetite Group as consisting of two semi-massive to massive VTM layers (MAG3 and MAG4) with a feldspar-rich parting which are collectively referred to as the Main Magnetite Layer ("MML"), and two marker VTM layers, approximately 7 m ("MAG2") and 14 m ("MAG1") above the MML.

Schutte (1980) primarily investigated the vanadium potential of the VTM layers in the basal portion of the UZ and concluded that the five farms along the 16 km strike length could host in excess of 400 million tonnes of VTM-rich material containing approximately 6.5 million tonnes of V_2O_5. Schutte's calculations do not constitute a Mineral Resource and represent the total estimated amount of Ti-magnetite "concentrate" potentially extractable from the Main Magnetite Group layers (MAG1 to MAG4) to a depth of 80 m and the Lower Magnetite Group to a depth of 200 m below surface.

Trenching, bulk sampling and further drilling was conducted in the past 15 years and Vanadium and Magnetite Exploration and Development Co (SA) (Pty) Limited ("VanMag") hold Mining Rights over the five farms to the south of the Project Area.

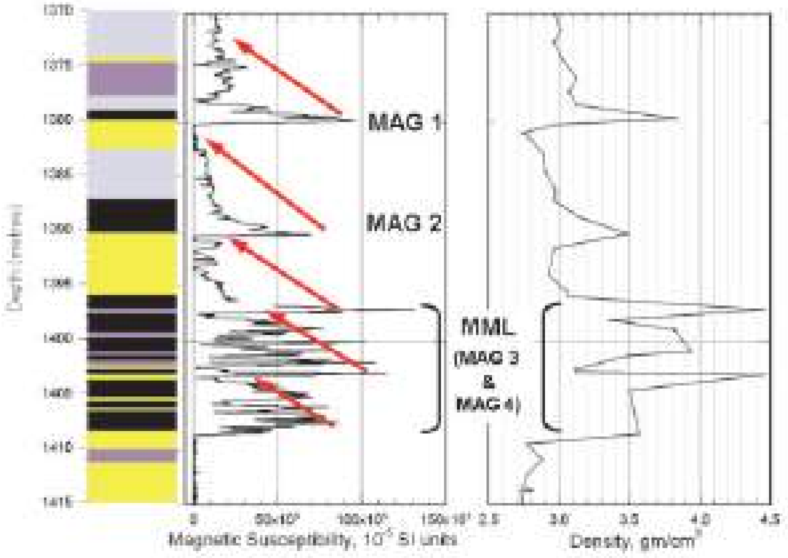
Drillhole BV-1 intersected a virtually identical Main Magnetite Group to those described by Schutte (1980). Magnetic susceptibility and density measurements across the four VTM layers (MAG1 to MAG4) of the Main Group in drillhole BV-1 were conducted by Ashwal *et al*. (2005). Figure 7-6 illustrates the variable VTM content (expressed as magnetic susceptibility) within the MML together with the cyclical pattern of high magnetic susceptibility with sharp contacts at the base of MAG4, MAG2 and MAG1 overlying footwall anorthosite characterised by low magnetic susceptibility ("MS"). A steady upwards decline in the MS from the base of the major Ti-magnetite layers is clearly evident and indicates a gradual upwards decrease in the amount of Ti-magnetite in each of the Ti-magnetite layers, which form the base of individual cyclic units.

The fact that drillhole BV-1 intersected the Main Magnetite Group layers at a vertical depth of approximately 1,400 m highlights the down-dip continuity of the VTM layers. The thickness of the MML in BV-1 is approximately 10 m, which is comparable to the MML intersections in the 17 holes in the up-dip portion of the Project Area, which have an average thickness of approximately 9.8 m. The similarities in the stratigraphic position and overall appearance between the vanadium-rich Main Magnetite Layer in the Eastern Limb and the similarly vanadium-enriched MML in the Northern Limb, strongly suggest that these two layers are stratigraphic equivalents, despite their considerable geographic separation (>150 km) and substantial differences in their thicknesses, i.e. approximately 2 metres in the Eastern Limb versus 6 to 9 metres in the Northern Limb.

The stratigraphic package overlying the MML is referred to by BML as the MML Hanging Wall ("MML HW"). Mineral Resource estimates were conducted individually for the MML and the MML HW.

Figure 7-6

Magnetic susceptibility and density in BV-1 for Main Ti-Magnetite Group (after Ashwal et *al*., 2005)



Note: Main Ti-Magnetite Group comprises MAG1, MAG2, MAG3 and MAG4 (MAG3 and MAG4 form the MML)

Magnetic susceptibility measurements were collected every 2 cm on the Bellevue BV-1 drill core. Density measurements were made at depth intervals of 1.7 m using core lengths of about 15 cm.

Black: Ti-magnetite-rich layers; Dark grey: Ti-magnetite gabbro and gabbronorite; Light grey: Ti-magnetite leuconorite and leucogabbro; Yellow: Anorthosite

7.3.4 Structure

The Northern Limb of the Bushveld Complex outcrops over an area approximately 120 km long and up to 15 km wide (Figure 7-2). The Lower and Critical Zones are only exposed at the southern portion of the Northern Limb while the volumetrically more substantial Main and Upper Zones occur along the entire length of the Limb which transgresses along its eastern flank from sediments of the Proterozoic Transvaal Supergroup in the south to Archaean granitic basement rocks in the north (Van der Merwe, 1978; Cawthorn *et al*., 1986).

The VTM layers are conformable with the pseudo-stratification (magmatic layering) of the predominantly gabbroic rocks of the Main and Upper Zones and are postulated to extend down dip for several kilometres. The apparent dip of the strata ranges from 15° to 25° W, which corresponds well with the mean dip of 17.5° W reported from hole BV-1 drilled in 1991 on the farm Bellevue (Ashwal *et al*., 2005).

7.3.4.1 <u>Faulting</u>

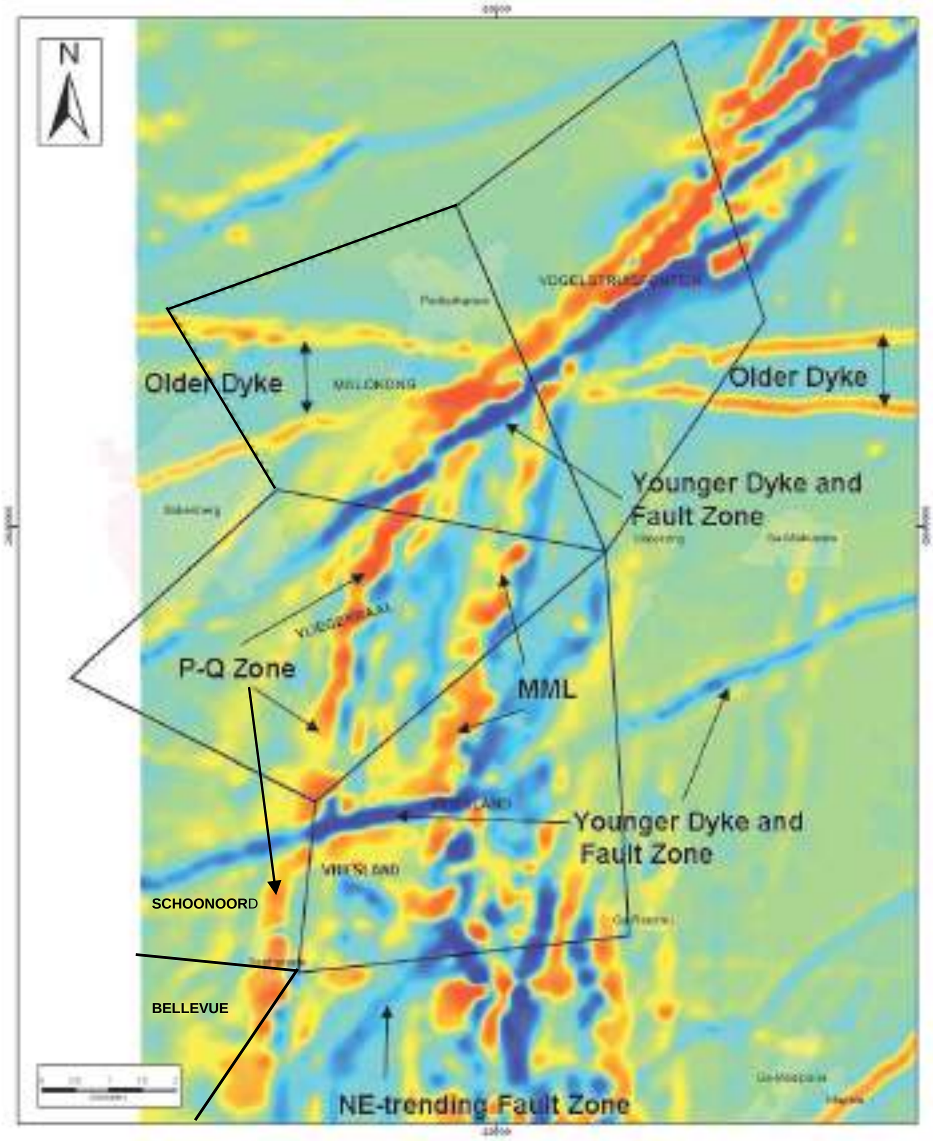
Fault zones rarely outcrop but displacement of strata can be interpreted from aeromagnetic data (Figure 7-7) supported directly in some cases with evidence of displaced geological units encountered during mapping (Cheshire, 2011). Fault zones are often intruded by Late-Bushveld red granitic dykes, providing supporting field evidence for the occurrence and position of faults.

Faulting in the area is characterised by major regional and subordinate local to semi-regional fault sets (Cheshire, 2011):

- Major regional NE-SW to ENE-WSW striking sub-vertical fault zones with a right lateral sense of horizontal displacement (up to 2,600 m)
- Local to semi-regional ENE-WSW to E-W striking sub-vertical fault zones with both right and left lateral sense of horizontal displacement (up to 1,400 m)

Figure 7-7

Regional aeromagnetic map with interpreted structural features (after CGS, 1995)



Note: P-Q Zone and MML have a strong positive (red colours) magnetic signature; Younger, Karoo-aged dykes have negative (blue colours) signature; Faults and fault zones usually form positive magnetic anomalies

7.3.4.2 Dolerite and Granite Intrusions

The regional aeromagnetic image shows that the Project Area is intruded by two dolerite dyke sets. An earlier E-W trending dyke set (positive magnetic signature) is crosscut by a later ENE-WSW trending (negative signature) dyke set (Figure 7-7).

Late-stage red-coloured granitic Bushveld dykes, pegmatites and quartz veins intrude the area with a general NNE-SSW strike and a sub-vertical dip. Granitic dykes can have a thickness of more than 50 m and preferentially occupy NNE-SSW brittle fault zones (Cheshire, 2011).

7.4 Property Geology

7.4.1 General

The gabbronorite and anorthosite rocks of the Main Zone are well exposed in the hilly terrain and the adjacent thin residual soils within the eastern portions of the farms Vogelstruisfontein and Vriesland. A prominent troctolite unit, well documented from the Bellevue BV-1 stratigraphic drillhole, outcrops on surface as a 200 m wide ridge in the eastern part of Vogelstruisfontein and can be traced southwards for tens of kilometres (Figure 7-8).

The Ti-magnetite-rich rocks of the Upper Zone in the central portion of the Project Area are generally not exposed due to between 3 m and 10 m of soil cover. Sparse outcrop of Ti-magnetite can be found along certain drainage courses, although magnetite float and fine debris is often present on surface. The position of sub-cropping Ti-magnetite layers is usually marked by a diagnostic reddish-brown soil which contains abundant weathered Ti-magnetite (haematite) grains (Figure 7-9).

A massive, medium-grained, post-Bushveld diabase sill and red-coloured Bushveld Nebo granite rocks outcrop in hilly terrain on the western portion of Vliegekraal, eastern Schoonoord and the northern part of Vogelstruisfontein farms, respectively. The diabase sill forms prominent flat-topped hills and is more than 100 m thick on Vliegekraal and Schoonoord farms with shallow westerly dips of up to 20°.

The geological map shown in Figure 7-8 is based on geological field mapping, aeromagnetic and core drilling data. The aeromagnetic data was particularly useful in locating the approximate position of the major Ti-magnetite layers and in constraining the location of structural features and dolerite intrusions.

Figure 7-8

Geological map based on surface mapping and aeromagnetic data (after BML, 2014)

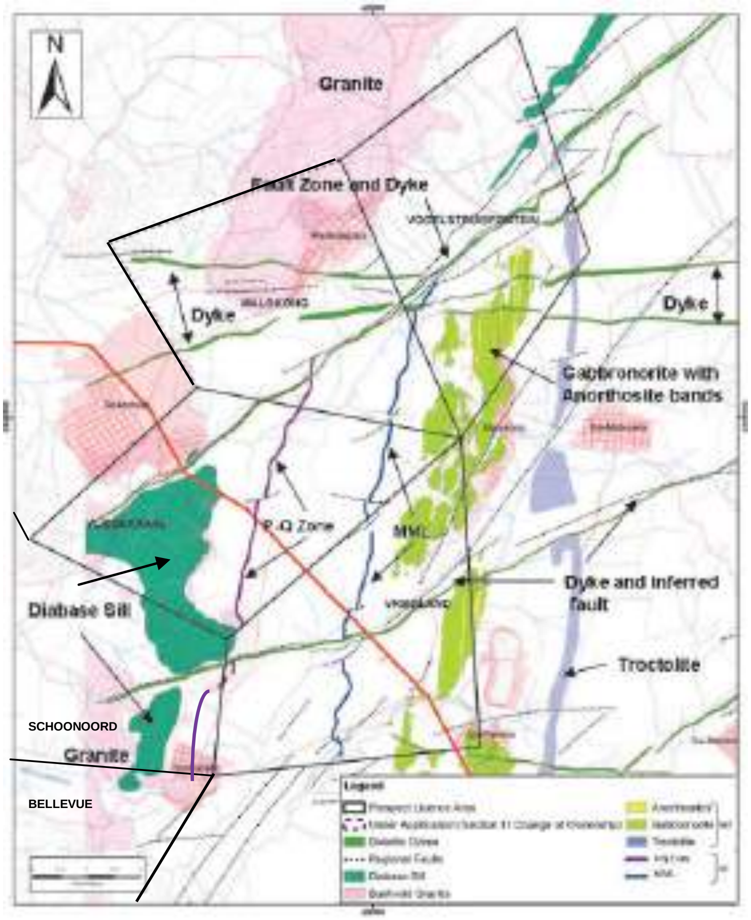


Figure 7-9

Development of reddish-brown soil over sub-cropping Ti-magnetite layer (BML, 2011)

Note: On farm Vliegekraal looking east towards a ridge of Main Zone gabbronorite and anorthosite

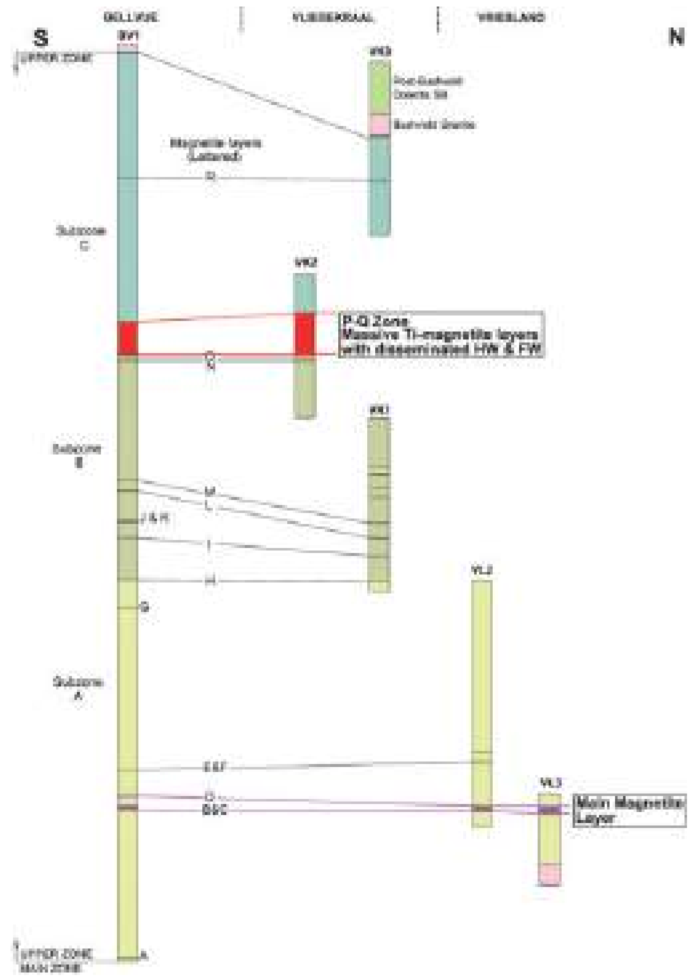
The stratigraphic succession of cyclic magmatic units and Ti-magnetite-rich zones were established in the stratigraphic hole BV-1. The succession was confirmed and adopted by BML to define the geological sequence encountered during mapping and exploration drilling in the Project Area where Upper Zone lithologies are generally not, or only poorly, exposed. The detailed descriptions of two stratiform zones of VTM mineralisation and associated semi-massive VTM layers are therefore based entirely on drillhole intersections (Sections 7.4.1.1 and 7.4.1.2). The two significant VTM mineralised zones intersected are:

- Main Ti-magnetite Layer ("MML") and MML Hanging Wall ("MML HW")
- P and Q Ti-magnetites (P-Q Layers) and disseminated foot- and hanging-wall (P-Q Zone)

A stratigraphic correlation of prominent Ti-magnetite layers in hole BV-1 with various holes drilled by BML is schematically shown in Figure 7-10.

Figure 7-10

Stratigraphic correlation between hole BV-1 and BML drillholes (BML, 2011)

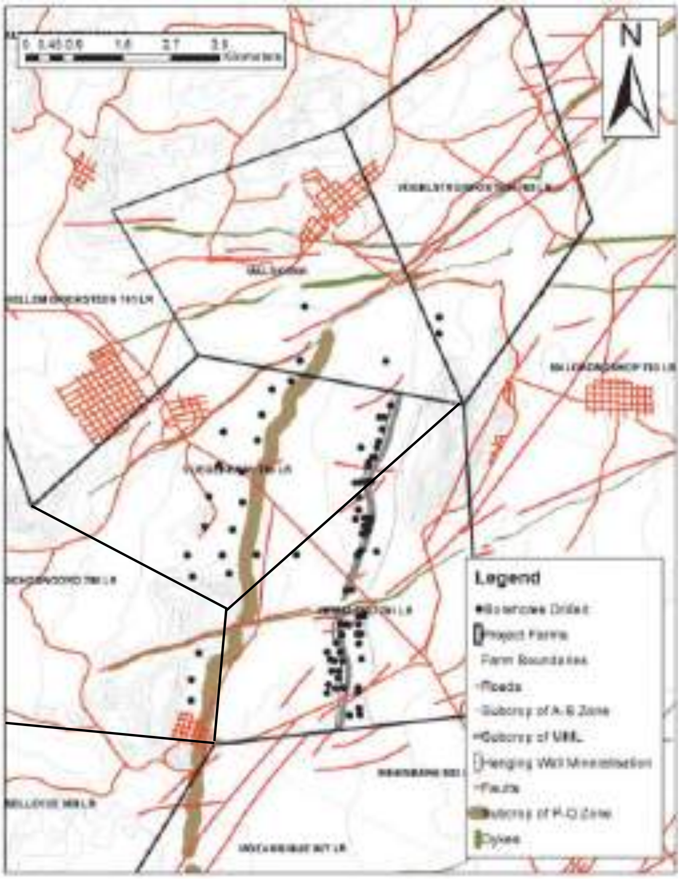


7.4.2 Main Ti-Magnetite Layer (MML)

The MML mineralised zone occurs near the base of the Upper Zone and consists of an upper VTM-rich interval (MAG3) which is separated from the lower VTM-rich interval (MAG4) by a VTM-poorer leucogabbronorite parting (Figure 7-12), similar to that intersection in BV-1 (Figure 7-6). The MML was intersected in 17 vertical drillholes in the Project Area and ranges in drilled thickness from 7.9 m to 11.3 m. The average true thickness of the MML is 9.8 m. The position of the holes in relation to the AB Zone (east of MML), MML and P-Q Zone is shown in Figure 7-11.

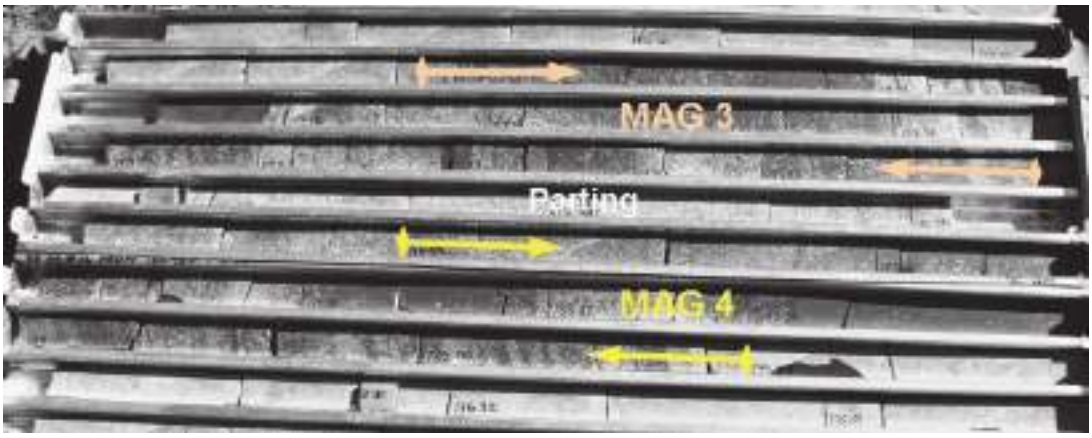
The MAG3 and MAG4 are composite layers, each consisting of bands of VTM-rich to massive VTM intervals alternating with VTM-poor sections. MAG3 and MAG4 are invariably separated by a VTM-poor "parting" (Figure 7-12) which has a thickness of about 2.3 m while the drilled thickness for the entire MML package (MAG3, MAG4 and parting) is in the order of 8 m to 11 m.

Figure 7-11
Position of 121 diamond holes drilled by BML in the Project Area (BML, 2015)



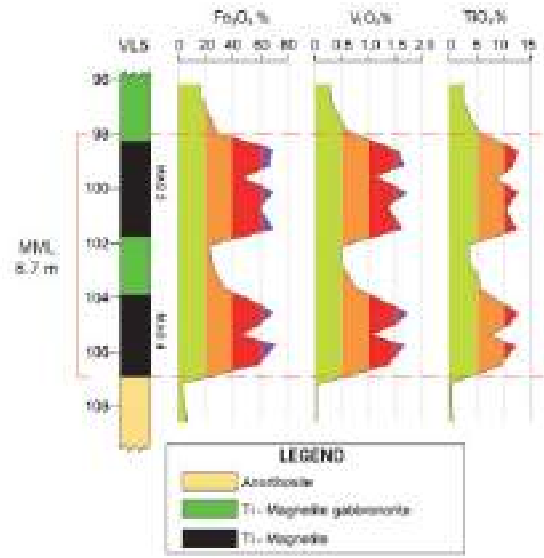
The entire MML package has an average vanadium content of approximately 1.3% V_2O_5 and the massive VTM bands MAG3 and MAG4 average approximately 1.5% V_2O_5. These values compare favourably with the reported V_2O_5 grades from the Mapochs Mine in the Eastern Limb (see Section 6). A geological log and compositional variation of Fe_2O_3, TiO_2 and V_2O_5 through the MML are shown in Figure 7-13 for drillhole VL5.

Figure 7-12
Example of MML (MAG3 - Parting - MAG4 from drillhole VK5 (126 m – 135.4 m) (MSA, 2011)



Note: The Main Magnetite Layer (MML) comprises the semi-massive to massive MAG3 (upper) and MAG4 (lower) layers and the VTM-poor leucogabbronorite parting. The base of each arrow indicates top and bottom contacts and drill core sampling intervals of the MAG3 and MAG4 layers. Core diameter is 4.8 cm

Figure 7-13
Fe_2O_3, TiO_2 and V_2O_5 profile through MML in drillhole VL5 (98.2 m – 106.9 m) (BML, 2011)



Note: Above element concentrations were assayed from continuous ±50 cm long drill core samples. The 8.7 m is the apparent thickness in the drillhole and not corrected for dip

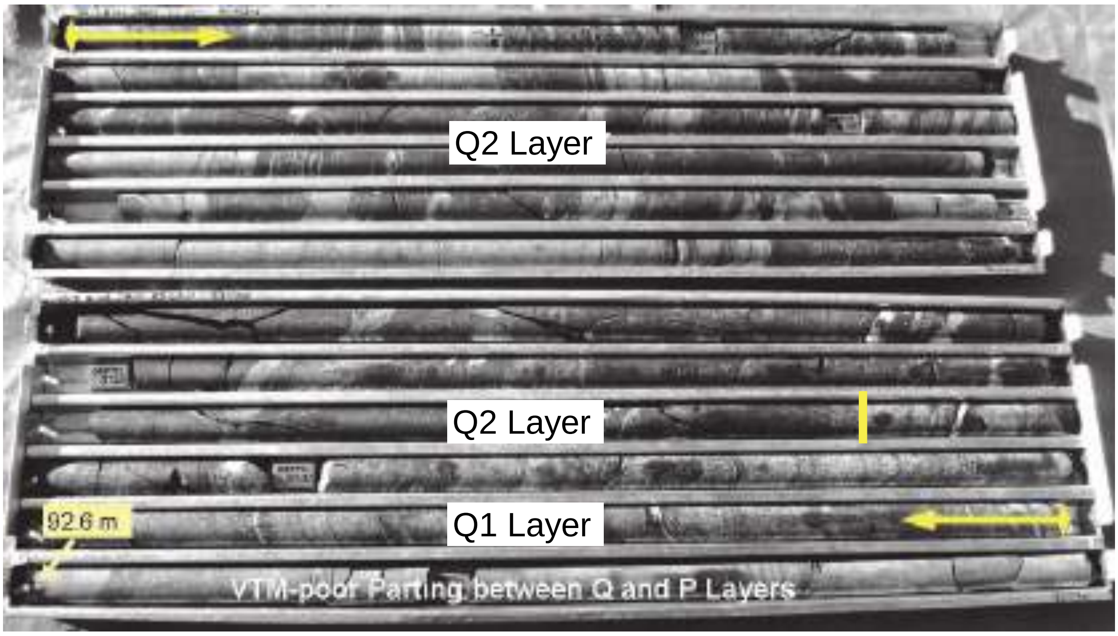
Isolated to weakly disseminated sulphides (1% to 2% visible sulphide) occur throughout the MML and are usually more evident in the leucogabbronorite partings and towards the base of the MML. Average Ni and Cu concentrations within the MML are generally below 1,000 ppm (<0.1%) and PGM values are below 50 ppb. Phosphorus-bearing minerals, e.g. apatite, were not observed; this was geochemically confirmed by P_2O_5 concentrations of <100 ppm (<0.01% P_2O_5).

At distances of approximately 7 m and 14 m above the top of MML, two characteristic marker Ti-magnetite layers, MAG2 and MAG1 respectively, occur within VTM-poor anorthosite and leucogabbro (Figure 7-6). MAG2 ranges from 0.9 m to 1.35 m and has an average true thickness of 1.10 m, while MAG1 ranges from 1.08 m to 1.64 m and has an average true thickness of 1.31 m. The two layers contain an estimated 65% to 80% Ti-magnetite and are useful stratigraphic and geological markers to the MML. Although these marker layers contain less vanadium (0.8% to 1.1% V_2O_5 with an average of about 1% V_2O_5) compared to the main layers MAG3 and MAG4, they may be economically exploitable together with other VTM-enriched hanging wall units after being exposed during deeper open cast extraction of the MML.

7.4.3 N-Q Ti-Magnetites (N-Q Layers) and disseminated foot- and hanging wall (N-Q Zone)

The N-Q Zone occurs near the top of the Upper Zone and includes the two leucogabbronorite-hosted VTM-rich layers P and Q which are commonly separated by a leucogabbronorite parting with a low VTM content (Figure 7-14). VTM-enriched gabbros and norites with up to 50% disseminated Ti-magnetite occur in the footwall and hanging wall sequence of the P-Q layers and together with the P-Q Layers and the N and O layers, form the N-Q Zone. The 15 cm to 40 cm thick, semi-massive to massive N and O Layers occur between 15 m to 20 m below the base of the P Layer from which they are separated by gabbroic rocks with highly variable VTM content (Figure 7-16).

Figure 7-14
Example of the Q1 and Q2 Layer in drillhole VK7 (76.5 m – 92.6 m) (BML, 2011)



Note: An approximately 7 m thick VTM-poor leucogabbronorite parting from a depth of 92.6 m separates the approximately 16 m thick Q Layer (apparent thickness) from the underlying P layer (not shown). The base of the yellow arrows indicate the top and bottom contacts of the Q2 and Q1 layer respectively, and the yellow bar shows the base of the Q2 Layer. Core diameter is 4.8 cm

The P and Q layers consist of high-grade VTM-rich intervals alternating with relatively narrow bands of gabbronorite with variable amounts of VTM (<10% to >50%). Individual VTM-rich and VTM-poor "sub-layers" within the P and Q Layers are difficult to correlate between drillholes, and their relative abundance determines the overall VTM abundance and hence the Fe, Ti and V contents of the P and Q layers. The complexity of the relationship between VTM-rich and VTM-poor "sub-layers" is illustrated in Figure 7-15 which shows that the internal contacts can be gradational or sharp.

Figure 7-15

Close–up of VTM-rich and VTM-poor banding in the Q2 layer in VK2 (121.5 – 127.5 m) (BML, 2011)

VTM-rich (up to 100% VTM) and VTM-poor (<20% VTM) bands vary in thickness from <1 cm to >50 cm. Core diameter is 4.8 cm

The footwall and hanging wall sequence of the P-Q Layers consist of VTM-enriched gabbros and gabbronorites, which have visually estimated abundance of VTM ranging between 35% and 65%. Poorly mineralised intervals with less than 10% VTM occur sporadically within the footwall and hanging wall sequence but their apparent thickness is generally less than five metres. The interval between the N and O layers and the immediate hanging wall of the O layer is generally VTM-poor (Figure 7-16). Thin intervals (<50 cm) with semi-massive to massive VTM layers occur occasionally within 5 m to 10 m above and below the P-Q Layer but cannot be correlated between drillholes.

Despite mineralogical variations on a broader scale, BML has established a detailed stratigraphic section for the N-Q Zone which has been used for the logging of all drillholes drilled during 2012. The 10 holes drilled between 2010 and 2011 were re-logged in order to conform to the 2012 nomenclature. Individual layers are defined by their specific texture, mineralogy and Ti-magnetite abundance. A total of six distinct stratigraphic units are identified in the P-Q Zone and an additional four units in the footwall interval including the N and O layers (Figure 7-16). These 10 stratigraphic units (known as the N-Q Zone) have thicknesses that remain fairly constant along strike and down-dip and they are also identifiable in the BV-1 drillhole core. Collectively these layers determine the overall VTM abundance and hence the Fe content of the N-Q Zone. Seven of the ten stratigraphic units are well mineralised while the remaining three units are generally VTM-poor intervals. A summary of the stratigraphic codes, thicknesses and descriptions of the N-Q layers is shown in Table 7-3.

Figure 7-16

Schematic representation of N-Q Zone (BML, 2012)

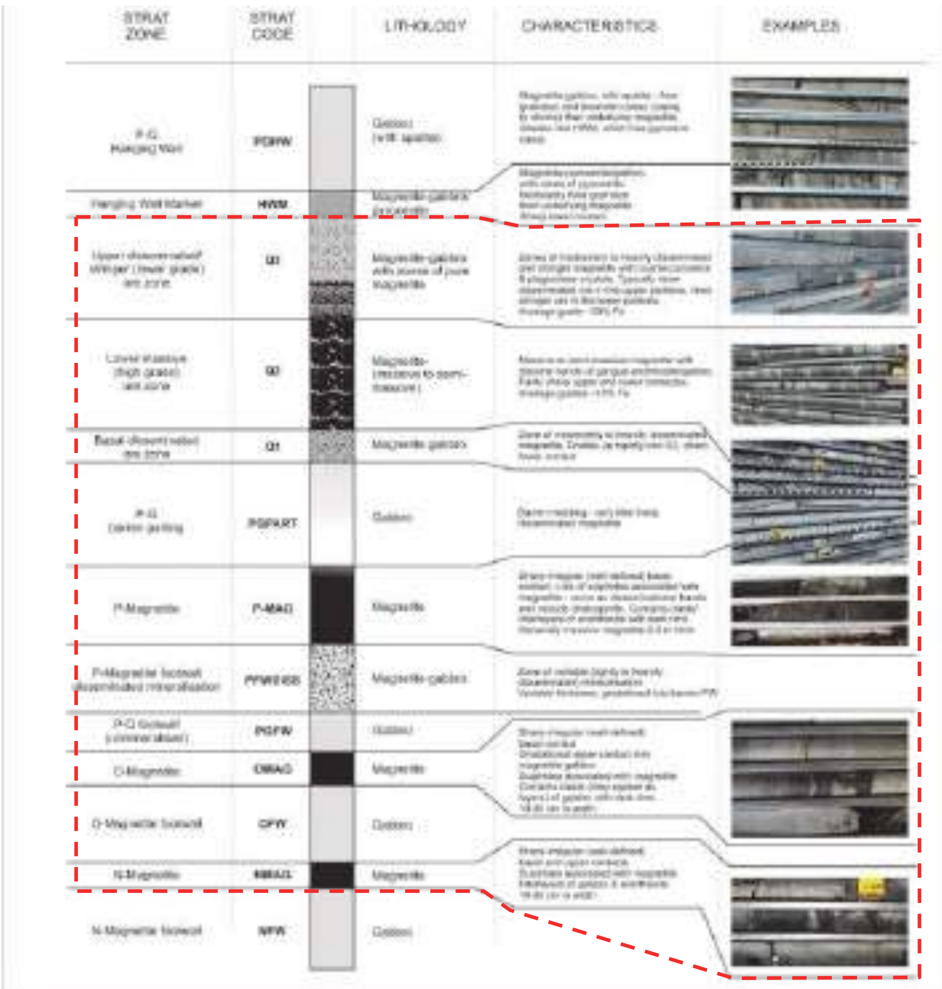


Table 7-3 **Stratigraphic units within the N-Q Zone** (BML and MSA, 2014)				
Strat Code	**Layer Name**	**Range of Thickness**	**Average Thickness**	**Description**
Q3	Upper "low-grade" zone	0.6 to 26.4 m	12.2 m	Upper Q-Ti-magnetite zone, generally semi-massive Ti-magnetite. Contains significant internal waste in places
Q2	Lower "high-grade" zone	5.5 to 14.0 m	11.3 m	Lower Q-Ti-magnetite zone, generally massive ore
Q1	Basal disseminated zone	1.7 to 4.0 m	3.3 m	Basal zone, disseminated Ti-magnetite below the massive Q2 horizon
PQPART	Parting between the P and Q Ti-magnetites	1.2 to 6.5 m	3.8 m	Barren zone of gabbronorite separating the P and Q Ti-magnetite layers
PMAG	P - Ti-magnetite	0.6 to 9.0 m	2.8 m	P-Ti-magnetite zone, generally massive, but with some internal waste and often containing more sulphides than the Q horizon
PFWDISS	P - Ti-magnetite disseminated footwall mineralisation	3.7 to 19.0 m	14.1 m	A zone of disseminated mineralisation in the footwall to the more massive P-Ti-magnetite, lower grade but nonetheless significant
PQFW	P-Q footwall	3.4 to 36.1 m	14.1 m	Barren gabbronorite footwall below the disseminated footwall
OMAG	O - Ti-magnetite	0.1 to 1.2 m	0.3 m	Narrow Ti-magnetite marker band
OFW	O - Ti-magnetite footwall	1.5 to 15.1 m	11.3 m	Barren zone between the N and O Ti-magnetites
NMAG	N - Ti-magnetite	0.1 to 3.0 m	0.5 m	Narrow Ti-magnetite marker band

Note: Above thicknesses are true thicknesses as determined from the Mineral Resource block model

BML intersected the N-Q Zone in 18 deep holes with drilled thicknesses between 58 and 95 m and an average drilled thickness of approximately 78 m. The MRE in Section 14 are estimated for each individual mineralised stratigraphic unit within the N-Q Zone and include drillhole BV-1 drilled by the CGS in 1991.

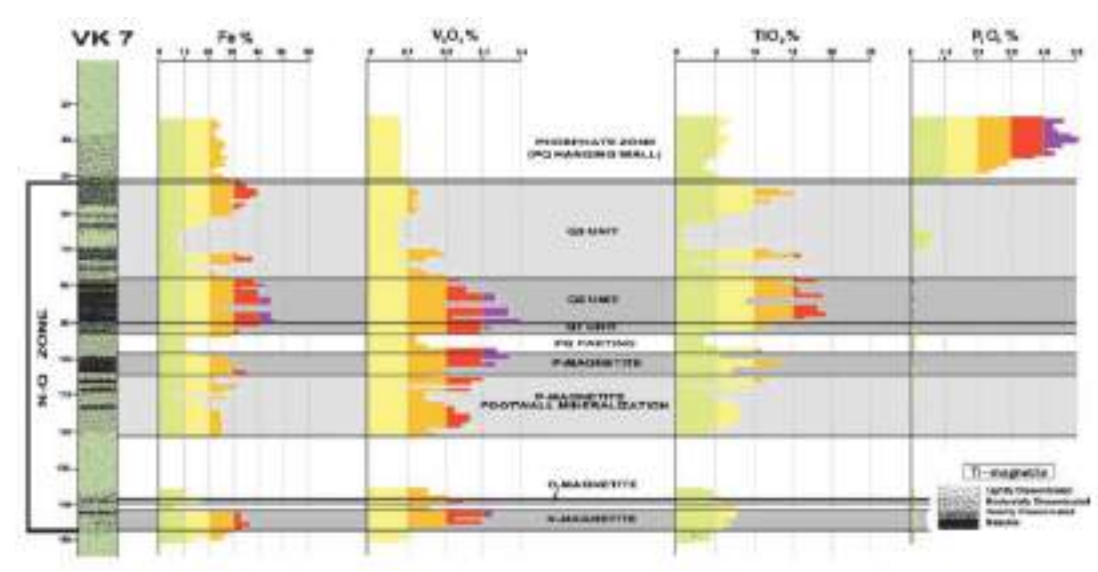
The sulphide content in the P-Q Zone varies between trace (<0.5% visible sulphide) and moderately disseminated (2% to 5% visible sulphide) with rare occurrences of semi-massive bands or stringers which are generally less than a few centimetres wide and appear to be restricted to the base of the P Layer (PMAG).

Phosphorus-bearing minerals appear to be generally rare, or absent in the P-Q Zone except for a 6 m to 9 m wide, VTM-poor leucocratic interval which was only observed in two drillholes VK2 and VK16. This interval occurs within the Q3 unit and has average P_2O_5 concentrations of 0.5% and 0.7% for VK2 and VK16 respectively. Apatite-bearing rocks with P_2O_5 concentrations of between 1% and 5% occur immediately above the P-Q Zone and are a common feature in the overlying uppermost portion of the Upper Zone (Ashwal *et al.*, 2005).

A geological log and compositional variations of Fe_2O_3, V_2O_5, TiO_2 and P_2O_5 through the N-Q Zone are shown in Figure 7-17 for drillhole VK7, which intersected a particularly thick N-Q Zone. The N and O Layers in drillhole VK7 are at hole depths of approximately 143 m and 139 m respectively.

Figure 7-17

Fe_2O_3, TiO_2 and V_2O_5 profile through the N-Q Zone in drillhole VK7 (52 m – 147 m) (BML, 2013)



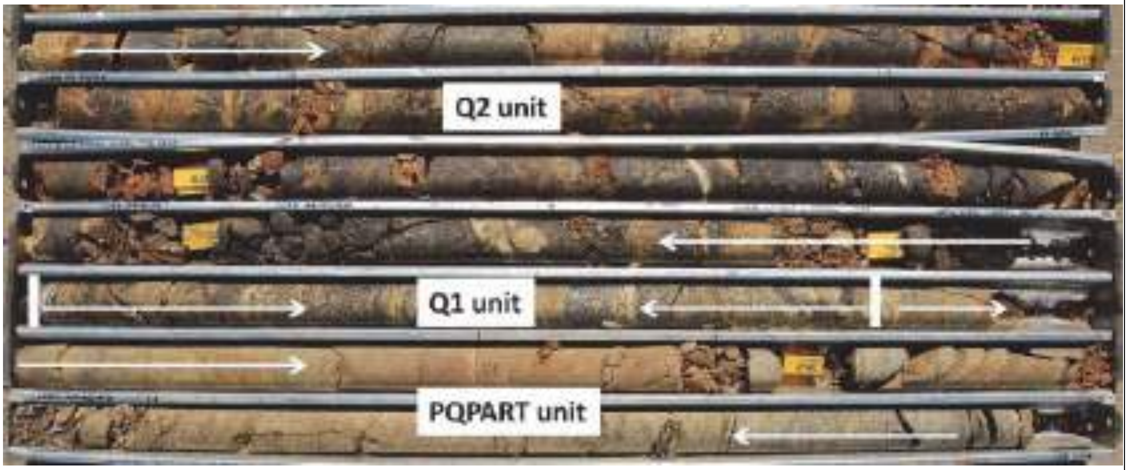
Note: Above element concentrations were assayed from continuous 0.5 m to 1.0 m long drillhole core samples. The displayed thicknesses of the individual units are drillhole lengths and are not corrected for dip angle

7.4.3.1 P-Q Zone in the weathered profile

A total of 15 holes were drilled between 2010 and 2013 in order to intersect the P-Q Zone well below the weathered zone. In order to evaluate the characteristics of the P-Q Zone in the weathered horizon (shallower than 30 m depth), 33 shallow holes were drilled on five east-west orientated lines which were 500 m apart in a north-south direction. The holes on each line were drilled at close intervals starting at the inferred subcrop position of the footwall of the P-Q Zone. Of these 33 drillholes, totalling 1,038.07 metres, 13 holes intersected stratigraphic portions of the P-Q Zone and eight holes intersected the weathered footwall interval to the P-Q Zone containing the N and O Layers. A further 11 holes were drilled in the hanging wall portion of the N-Q Zone and did not intersect Ti-magnetite mineralisation. The drill cores of four holes were used for metallurgical test work. The various stratigraphic layers of the P-Q Zone were observed in the 13 holes that intersected weathered portions of the P-Q Zone. Primary magmatic textures remain identifiable in the weathered material as illustrated in Figure 7-18.

Figure 7-18

Stratigraphic units Q2, Q1 and PQPART in weathered zone in VKW11 (13.5 m – 20.5 m) (BML, 2013)

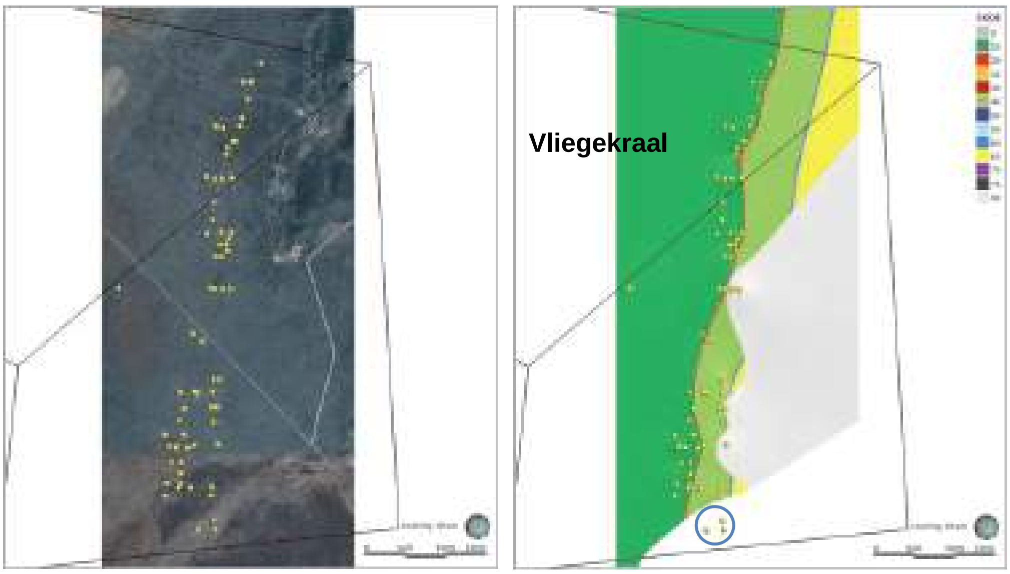


7.4.3.2 *AB Zone*

The AB Zone mineralisation is based on borehole intersections from 13 diamond drill holes, drilled up to and including 2015 on Vriesland and Vliegekraal (Figure 7-19). Three of these drillholes also intersected the MML which occurs approximately 100 m stratigraphically above the AB Zone.

Figure 7-19

Imagery of the farms Vriesland and Vliegekraal (MSA, 2015)



Left: Satellite image for the farms Vliegekraal and Vriesland with drillhole collar positions (yellow)
Right: Geological interpretation of the MML (red) and AB Zone (blue)

The AB Zone represents the lowermost accumulation of abundant VTM and has been subdivided into three layers defined by geological logging and V_2O_5 grade. The mineralisation consists of a relatively higher-grade upper and lower unit of strongly disseminated VTM, separated by a lower-grade parting. The mineralised units may contain one or two narrow layers (<40 cm) of semi-massive to massive VTM and have an average dip of 21° to the west with a combined average true thickness of approximately 9.3 m.

Several drillholes were located to intersect the MML and underlying AB Zone but were terminated before the AB Zone was reached. These holes also guided the geological modelling of the AB Zone due to the layers' conformable nature. The drilling of holes that exclusively targeted the AB Zone was confined to the south-central portion of Vriesland. However, the three southernmost drillholes (AB05, VL37 and VL38) on Vriesland intersected an 18 m to 20 m thick VTM mineralised package with a gradual upwards increase in VTM and pervasive sulphides that, without additional drilling, cannot be unambiguously correlated with the AB Zone in the south-central portion of Vriesland. The position of these three holes is marked with a blue circle in Figure 7-19 and the holes have been excluded from the geological model and therefore from the Mineral Resource.

7.4.4 Structure

Three sets of regional fault zones transect the Project Area (Figure 7-8):

- A NE-SW striking fault zone crosses the central part of Vogelstruisfontein, the south-central portion of Malokong and the northern part of Vliegekraal. This regional structure is partly intruded by a doleritic dyke and separates the NE-SW trending UZ lithologies north of the fault from the roughly northerly striking Upper and Main Zone stratigraphy to the south of the fault. The fault structure is responsible for the abrupt truncation of the layered stratigraphy of the Upper and Main Zone rock units and their displacement to the northeast such that the MML abuts against the northern edge of the MZ troctolite layer on Vogelstruisfontein. This indicates an apparent vertical displacement of 1,400 m (downthrown to the NW) and an apparent horizontal displacement (right lateral) of 2,600 m (Cheshire, 2011). The general paucity of outcrop in the faulted area on Vogelstruisfontein does not allow for an assessment of the position and the extent of displacement of the UZ lithologies, including the Ti-magnetite layers, without further drilling.
- A NE-SW striking fault zone across Vriesland is inferred from a left lateral horizontal displacement of the MZ troctolite unit to the east of the Project Area (Cheshire, 2011). The effect of the latter structure and possible associated splays on the UZ lithologies cannot be quantified without further drilling due to the poor outcrop conditions, although the aeromagnetic data do not indicate a large displacement on the P-Q Zone and the MML.
- An ENE-WSW striking fault zone crosses the central part of Vriesland and has been intruded in part by a doleritic dyke with a distinct magnetically negative signature, usually diagnostic for Karoo-aged dolerites (Figure 7-7). The fault resulted in a right lateral displacement of the diabase sill outcrop near the western boundary of Vriesland although limited displacement is evident for the P-Q Zone and the MML. The southern portion of Vriesland appears to be affected by block faulting as a result of the intersection of the regional NE-SW and ENE-WSW fault zones. Block faulting is generally linked to normal faults and the resulting structural blocks can differ slightly in their orientation and dip and usually have a strike extent of several hundred metres to several kilometres. Structural compartments are a common feature along the entire strike length of the Northern Limb (Schutte, 1980; Van der Merwe, 1978).

8 DEPOSIT TYPES AND MINERALISATION

The Project is situated within the UZ of the Northern Limb of the Bushveld Complex ("BC") and targets several vanadiferous Ti-magnetite (VTM) Layers and VTM-enriched footwall and hanging wall rocks. Exploration has focussed on the semi-massive to massive MML and the P, Q, N and O Layers. The latter are enclosed by gabbroic rocks which may contain considerable quantities of medium- to coarse-grained disseminated Ti-magnetite.

The BC is the world's largest and economically most important layered complex and is known for the remarkable geological and geochemical continuity of the magmatic stratigraphy and of individual units and layers which can frequently be traced for tens of kilometres along strike. In common with other layered intrusions such as the Great Dyke in Zimbabwe (Wilson, 1997), Molopo Farms Complex in Botswana (Reichhardt, 1994) and the Stillwater Complex in the USA (Irvine et al., 1983) the intrusive mafic to ultramafic magma has undergone a differentiation process which has resulted in the formation of magnesium-, chromium-, nickel- and precious metal-rich units in the lower part of the complex with iron-, titanium-, vanadium- and phosphorus-rich layers in the upper portion of the intrusion.

Gentle tilting due to tectonic processes and subsequent erosion has caused the entire stratigraphic sequence to be exposed on surface in the form of shallow westerly dipping units and layers.

The targeted MML occurs close to the base of the UZ and forms an 8 m to 10 m thick Ti-magnetite layer with high vanadium concentrations. The N, O, P and Q Ti-magnetite layers and associated Ti-magnetite-rich gabbroic rocks constitute the N-Q Zone which has an average true thickness of about 73 m. The N-Q Zone has notably lower vanadium but higher titanium concentrations compared to the MML and occurs stratigraphically near the top of the approximately 1,250 m thick Upper Zone. The gabbroic rocks immediately overlying the N-Q Zone contain variable amounts of disseminated apatite and the P_2O_5 content of this approximately 40 m thick succession (the "Phosphate Zone") has been the subject of a Mineral Resource estimate at a 3% P_2O_5 cut-off.

Known styles of mineralisation in the Northern Limb of the Bushveld Complex and in the Project Area are summarised below:

- Vanadium-titanium-magnetite (VTM) mineralisation associated with the titaniferous and vanadiferous magnetite layers and Ti-magnetite-rich units of the Upper Zone which sub-outcrop in the licence area
- Platinum group element, copper-nickel (PGE-Cu-Ni) mineralisation sporadically recorded in the Main Zone and lower part of Upper Zone rocks which sub-outcrop in the licence area
- Platinum group element, copper-nickel (PGE-Cu-Ni) mineralisation occurring near the base of the Bushveld Complex, known as the Platreef. The Platreef would be expected to underlie the licence area at depths in excess of 1,000 m
- Apatite mineralisation is associated with the strongly fractionated gabbroic rocks of Subzone C of the UZ. Phosphorus concentrations ranging between 3% and 7% P_2O_5 have been documented for certain well mineralised units in Subzone C (Honour, 2014)

Disseminated VTM occurs as an accessory mineral throughout the Upper Zone. Stratigraphic horizons with high concentrations of VTM are collectively referred to as Ti-magnetite layers even though the amount of VTM varies considerably within individual layers and from layer to layer.

Virtually all layers are composite units and invariably contain relatively VTM-poor (<30%) sections, or partings, and have either gradational or sharp contacts with the surrounding rocks. The footwall contacts of the VTM layers tend to be reasonably sharp. VTM concentrations rarely exceed 90%, and only over short intervals, within certain layers. The complex nature of VTM distribution in an individual layer is shown in Figure 7-15.

Vanadium in Ti-magnetite layers is exclusively hosted in "solid solution" within the Ti-magnetite grains while titanium occurs partly within magnetite ("solid solution") and also as small, discrete grains of ilmenite commonly along the Ti-magnetite grain boundaries. Whole-rock vanadium concentrations are highest in the lowermost Ti-magnetite layers (±1.5% V_2O_5) and decrease gradually upwards to less than 0.4% V_2O_5. Titanium shows the opposite trend and increases from about 10% to 12% TiO_2 in the lowermost layers to concentrations in excess of 20% TiO_2 in the uppermost layers of the Upper Zone (Klemm *et al.*, 1985).

Total iron oxide (expressed as Fe_2O_3) in Ti-magnetite decreases from about 76% near the base of the Upper Zone to values of about 70% in the uppermost VTM layers. Similarly, Al_2O_3 in Ti-magnetite decreases with stratigraphic height from approximately 6% in the lower layers to about 4% Al_2O_3 in VTM layers near the top of the Upper Zone (Klemm *et al.*, 1985).

Phosphorus occurs exclusively in apatite and the total whole-rock P_2O_5 content is a function of the modal abundance of apatite which fluctuates systematically in numerous magmatic cyclic units throughout Subzone C of the UZ.

9 EXPLORATION

9.1 Exploration approach and methodology

The current exploration programme was subdivided into seven phases and was undertaken between August 2009 and March 2015. The programme followed a phased and results driven approach, which is standard practice for early stage exploration projects:

- **Phase 1** – Desktop Information Review (August 2009 – January 2010)

Development of a geological and mineralisation model using published and unpublished geological, geochemical, geophysical, remote sensing and exploration data sourced from the CGS and other geological institutions, publications and private companies.

- **Phase 2** – Surface Field Investigation (September 2009 – April 2010)

Establishment of the geological setting and presence of surface mineralisation and identification of potential targets for further testing by geological mapping, soil sampling, air photo interpretation, rock chip sampling and interpretation of the data.

The laboratory analysis from a chip sample from an outcropping Ti-magnetite layer on the south-eastern farm boundary of Vogelstruisfontein confirmed that the latter layer is the MML. The MML is characterised by high vanadium and relatively low titanium concentrations compared to other Ti-magnetite layers in the Upper Zone (see Section 7.2).

Table 9-1
Assay results from a rock chip sample on Vogelstruisfontein

Easting Lo29 WGS84	Northing Lo29 WGS84	Fe_2O_3 %	V_2O_5 %	TiO_2 %	Cu ppm	Ni ppm	Cr ppm
-16396	-2636184	71.9	1.52	13.6	509	609	1,900

- **Phase 3** – Initial Target Testing (May 2010 – November 2010)

Diamond drilling was undertaken on selected geological and geophysical targets to investigate the presence of massive and disseminated Ti-magnetite mineralisation. A total of six holes with a total length of 1,582.25 m were drilled and provided an indication of type and width of Ti-magnetite mineralisation along an east-west section covering virtually the entire Upper Zone stratigraphy.

Of the six holes, VL2, VL3, VK1, VK2 and VK3 were drilled along an east-west profile (Figure 7-11) while VL4 was drilled about 1 km north of the latter line of holes. Holes VL2 provided a deep (±400 m), and hole VL3 a shallow (±30 m) intersection of the MML while VK2 intersected the base of the P-Q Zone at a depth of 157 m. VL4 was located in the footwall of the MML.

VK1 and VK3 were drilled as stratigraphic holes in the hanging wall and footwall of the P-Q Zone to confirm that no further Ti-magnetite layers and/or VTM-enriched zones of potential economic interest occur between the MML and the P-Q Zone and above the P-Q Zone. As established in the stratigraphic CGS drillhole BV-1, drillholes VK1 and VK3 intersected Ti-magnetite gabbros and several generally narrow Ti-magnetite layers. The stratigraphic intervals intersected in VK1 and VK3 are not material to this report and the drillholes are therefore excluded.

- **Phase 4** – Target Drilling (March 2011 – August 2011)

Diamond drilling during Phase 4 consisted of nine holes targeting the P-Q Layers and the footwall and hanging wall sequence with disseminated VTM mineralisation and two holes targeting the MML with a total drill length of 2,651.82 m for the 11 holes. Of the nine P-Q drillholes, six were drilled at regular intervals of 500 m to 600 m along strike to delineate the lateral continuity of the P-Q Zone at relatively shallow depths, while three drillholes were spaced at horizontal distances of 1,000 m to 1,200 m to establish the down-dip continuity of the P-Q Zone. Two further holes SN1 and SN2 with a total metreage of 410.14 m were drilled on the farm Schoonoord. The two holes intersected the P-Q Zone and were logged but not sampled or assayed at the time.

The two MML holes (VL5 and VK5) were spaced approximately 2,000 m apart to document the lateral continuity of the latter mineralisation beyond the position of the MML established during the 2010 drilling campaign.

All 11 drillholes drilled on the farm Vliegekraal during the 2011 drill programme intersected the targeted VTM mineralisation and the results were used together with the three drillholes from the initial 2010 drill campaign for the Mineral Resource estimate conducted by MSA in November 2011.

- **Phase 5** – Infill and Strike Extension Drilling (May 2012 – November 2012)

During 2012, a further 51 diamond holes totalling 3,490.95 m were drilled on the farms Vliegekraal, Vriesland and Malokong.

Of these, 13 holes totalling 927.49 m were drilled on the MML, of which nine holes intersected mineralisation while three holes were drilled into the footwall to the MML. One shallow hole was drilled into the hanging wall of the MML. These drillholes were spaced at regular intervals of approximately 600 m along strike and four holes were positioned to obtain intersections further down dip.

Five drillholes totalling 1,525.39 m were drilled to obtain deep intersections of the N-Q Zone. The holes were sited at intervals of approximately 500 m along strike.

A total of 33 holes, totalling 1,038.07metres, were drilled on five lines with a nominal strike spacing of 500 m with the aim of intersecting the weathered portion of the P-Q Zone. Of these 33 drillholes, 13 holes intersected portions of the weathered P-Q Zone, while nine holes were drilled in the footwall of the P-Q-Zone and intersected the stratigraphically lower interval containing the N and O Layers. An entire fence line with 11 holes (VKW12 to VKW22) was positioned too far to the west and intersected the weathered hanging wall sequence of the P-Q Zone. Only drillhole VKW31, positioned further east, intersected the targeted Ti-magnetite mineralisation of the P-Q Zone.

- **Phase 6** – Strike Extension Drilling and Additional Core Sampling (March 2013 - March 2014)

During this period one hole SN03 was drilled on Schoonoord 2012 with a metreage of 175.47 m to extend the strike length of the P-Q Zone southwards.

Sampling and assaying of the MML Hanging Wall package was conducted on existing core from 11 holes. Similarly, the core of 19 existing drillholes including BV-1 were sampled and assayed for phosphorus and other major elements and the results were used for the MRE on the Phosphate Zone above the P-Q Zone.

- **Phase 7** – In-fill drilling MML and MML HW and A-B Zone (January 2014 – March 2015)

In the first half of 2014, seven holes (AB1 to AB7) were drilled targeting the A-B Zone and between November 2014 and February 2015 a further 43 drillholes were completed from which 11 holes targeted the A-B Zone and 32 holes the MML and MML HW.

MSA has used the geological logging of holes with A-B Zone intersections for the Mineral Resource modelling. BML advised MSA that the sampling and assaying of the 32 holes drilled in 2014 and 2015 on the MML and MML HW was not completed by 28 October, 2017.

9.2 Geophysical Surveys

The CGS carried out a semi-regional aeromagnetic survey in the late 1990s and the results were used by BML to constrain the approximate position of the highly magnetic Ti-magnetite layers and to identify structural features (see Section 7.3.4).

A ground magnetic survey was conducted by the Mining Corporation Limited ("MCL", a South African government company) and published by the Geological Survey of South Africa (Schutte, 1980) in the form of hand-contoured magnetic intensity maps. The data were used together with the aeromagnetic survey to locate the sub-outcropping Ti-magnetite layers and to guide the initial diamond drill programme in 2010.

In 2013 a high resolution airborne magnetic survey was completed over the Project Area by South African geophysical service provider GyroLAG. The results were used to guide the recent in-fill drill programme on the MML and the siting of drillholes on the A-B Zone.

10 DRILLING

10.1 Drilling Methods

Diamond core drilling during the initial exploration phase in 2010 (Section 9.1) was conducted by Drillcorp Africa (Pty) Ltd ("Drillcorp"). All six holes were drilled vertically with an NQ core size diameter of 47.5 mm to depths of between 148 m and 427 m. A Longyear 44 rig with a standard 6 m long core barrel was used for the drilling.

The target drilling during 2011 consisted of 11 vertical holes which were also drilled by Drillcorp. The holes were drilled with a NQ core diameter and ranged in depth from 150 m to 435 m. Removable HQ-sized casing was inserted to depths of 5 m to 8 m to protect the hole from collapsing while drilling through the unconsolidated soil and weathered bedrock. Table 10-1 lists the 19 holes drilled in 2010 and 2011 from which 17 were used for the MRE in 2011.

Table 10-1
Summary of holes drilled from the 2010 and 2011 exploration campaigns

Drillhole ID	Farm	Easting Lo29 WGS84	Northing Lo29 WGS84	Elevation amsl (m)	Depth of Hole (m)	Ti-magnetite intersected	Year drilled
VK1	Vliegekraal	-22187.00	-2643158.00	1024.00	300.36	Strat hole*	2010
VK2	Vliegekraal	-22820.23	-2643172.30	1030.45	250.08	P-Q Zone	2010
VK3	Vliegekraal	-23749.00	-2643176.00	1016.00	299.91	Strat hole*	2010
VK4	Vliegekraal	-21898.75	-2640075.64	1010.13	224.38	P-Q Zone	2011
VK5	Vliegekraal	-20252.53	-2641159.00	1023.14	166.10	MML	2011
VK6	Vliegekraal	-22462.00	-2641623.35	1007.23	214.99	P-Q Zone	2011
VK7	Vliegekraal	-22630.56	-2642694.38	1019.04	150.00	P-Q Zone	2011
VK8	Vliegekraal	-22455.19	-2642170.17	1011.46	150.07	P-Q Zone	2011
VK10	Vliegekraal	-22088.30	-2640549.92	1007.54	211.05	P-Q Zone	2011
VK12	Vliegekraal	-23074.10	-2642074.81	1009.79	356.84	P-Q Zone	2011
VK13	Vliegekraal	-23473.49	-2643174.08	1020.49	391.55	P-Q Zone	2011
VK14	Vliegekraal	-22171.25	-2641035.28	1007.83	200.15	P-Q Zone	2011
VK15	Vliegekraal	-22799.75	-2640865.89	1003.35	434.66	P-Q Zone	2011
VL2	Vriesland	-21445.92	-2643156.63	1012.36	427.25	MML	2010
VL3	Vriesland	-20323.08	-2643160.33	1015.99	156.65	MML	2010
VL4	Vriesland	-19948.00	-2642158.00	1029.00	148.00	Strat hole*	2010
VL5	Vriesland	-20825.45	-2645113.59	1004.15	152.02	MML	2011
SN1**	Schoonoord	-23256.48	-2644990.54	1042.63	210.14	P-Q Zone	2011
SN2**	Schoonoord	-23393.98	-2645477.86	1025.63	200.00	P-Q Zone	2011
Total: 19 drillholes					4644.20		

Strat hole*: hole drilled as part of the initial stratigraphic drill campaign
SN1 and SN2**: drillhole not used for MRE conducted in 2011

In 2012, Drillcorp completed five drillholes targeting deeper portions of the P-Q Zone. The five holes were drilled with a NQ core diameter and ranged in depth from 150 m to 427 m. Of the 13 holes drilled on the MML, 10 holes were drilled by Drillcorp with a NQ core diameter, and the remaining three shallow holes (MW1, MW2 and MW3) were drilled by Diabor (Pty) Ltd ("Diabor") using a NWD4/TNW core diameter. The 18 holes drilled in 2012 are listed in Table 10-2.

Table 10-2
Summary of holes drilled on the MML and P-Q Zone from the 2012 exploration campaign

Drillhole ID	Farm	Easting Lo29 WGS84	Northing Lo29 WGS84	Elevation amsl (m)	Depth of Hole (m)	Ti-magnetite intersected	Year drilled
MAL2	Malokong	-21391.89	-2639552.79	1018.88	156.63	P-Q Zone	2012
VK16	Vliegekraal	-22696.57	-2643506.82	1046.54	150.09	P-Q Zone	2012
VK17	Vliegekraal	-23193.32	-2642651.75	1026.06	402.32	P-Q Zone	2012
VK18	Vliegekraal	-22926.64	-2641434.62	1004.19	427.27	P-Q Zone	2012
VK19	Vliegekraal	-23339.66	-2643568.22	1055.11	389.08	P-Q Zone	2012
MW01	Vriesland	-20264.89	-2643166.90	1015.44	14.00	MML	2012
MW02	Vliegekraal	-20161.13	-2641172.71	1023.07	25.20	-	2012
MW03	Vriesland	-20526.71	-2645099.00	1004.86	20.00	MML	2012
VK20	Vliegekraal	19915.53	-2640610.33	1026.67	81.82	MML	2012
VK21	Vliegekraal	-20057.91	-2641793.14	1023.12	102.83	-	2012
VK22	Vliegekraal	-20264.93	-2641807.70	1020.38	99.95	MML	2012
VK23	Vliegekraal	-20364.74	-2641779.12	1019.29	150.82	MML	2012
VL8	Vriesland	-20185.52	-2642469.31	1019.52	88.21	MML	2012
VL9	Vriesland	-20422.76	-2643812.30	1011.21	93.61	-	2012
VL10	Vriesland	-20517.40	-2644439.92	1007.41	58.80	-	2012
VL11	Vriesland	-20693.84	-2644443.28	1005.82	51.85	MML	2012
VL12	Vriesland	-20881.61	-2645724.41	1001.56	99.94	MML	2012
VL13	Vriesland	-20541.46	-2643719.45	1010.48	40.46	MML	2012
Total: 18 drillholes					2452.88		

The 33 holes targeting the weathered N-Q Zone during 2012 were either drilled by Diabor using a NWD4/TNW core barrel, or by Drillcorp using an HQ3 core barrel.

A total of eight holes on a single fence line were collared too far to the east in the footwall of the P-Q Zone and only intersected the N and O layers and their respective hanging wall package. On a further E-W fence line 11 holes were collared too far to the west in the hanging wall of the P-Q Zone. The 11 holes were stopped as they had reached fresh rock before intersecting the P-Q Zone. The 2012 drilling on the weathered N-Q Zone is summarised in Table 10-3.

Table 10-3
Summary of holes drilled on the weathered N-Q Zone from the 2012 exploration campaign

Drillhole ID	Farm	Easting Lo29 WGS84	Northing Lo29 WGS84	Elevation amsl (m)	Depth of Hole (m)	Ti-Magnetite intersected	Year drilled
VKW1	Vliegekraal	-22230.60	-2642712.31	1015.53	14.14	N and O*	2012
VKW2	Vliegekraal	-22238.92	-2642712.78	1015.68	15.00	N and O*	2012
VKW3	Vliegekraal	-22249.13	-2642713.24	1015.73	15.00	N and O*	2012
VKW4	Vliegekraal	-22260.65	-2642713.29	1015.83	15.00	N and O*	2012
VKW5	Vliegekraal	-22272.38	-2642713.36	1015.86	15.00	N and O*	2012
VKW6	Vliegekraal	-22280.29	-2642713.54	1015.89	15.00	N and O*	2012
VKW7	Vliegekraal	-22290.32	-2642714.28	1016.00	20.00	N and O*	2012
VKW8	Vliegekraal	-22301.85	-2642713.73	1016.11	25.00	N and O*	2012
VKW9	Vliegekraal	-22318.02	-2642712.54	1016.16	35.00	N-Q Zone	2012
VKW10	Vliegekraal	-22351.69	-2642711.06	1016.39	40.00	N-Q Zone	2012
VKW11	Vliegekraal	-22411.11	-2642712.62	1016.69	60.40	N-Q Zone	2012
VKW11.2	Vliegekraal	-22549.41	-2642716.03	1017.65	100.00	N-Q Zone	2012
VKW12	Vliegekraal	-21789.93	-2640545.01	1010.22	15.10	-	2012
VKW13	Vliegekraal	-21799.98	-2640546.18	1010.18	15.00	-	2012
VKW14	Vliegekraal	-21809.39	-2640547.02	1010.00	15.00	-	2012
VKW15	Vliegekraal	-21818.16	-2640546.29	1009.92	15.00	-	2012
VKW16	Vliegekraal	-21828.85	-2640545.89	1009.70	15.00	-	2012
VKW17	Vliegekraal	-21840.77	-2640547.45	1009.64	20.40	-	2012
VKW18	Vliegekraal	-21849.46	-2640545.80	1009.51	25.00	-	2012
VKW19	Vliegekraal	-21859.85	-2640546.10	1009.29	25.00	-	2012
VKW20	Vliegekraal	-21877.72	-2640547.62	1009.12	35.00	-	2012
VKW21	Vliegekraal	-21910.37	-2640547.62	1008.62	45.00	-	2012
VKW22	Vliegekraal	-21696.25	-2640548.00	1007.85	20.00	-	2012
VKW23	Vliegekraal	-21905.55	-2641033.33	1010.21	20.00	N-Q Zone	2012
VKW24	Vliegekraal	-21945.11	-2641034.23	1010.11	49.80	N-Q Zone	2012
VKW25	Vliegekraal	-21977.69	-2641036.79	1009.53	82.46	N-Q Zone	2012
VKW26	Vliegekraal	-22133.08	-2641620.53	1007.35	50.05	N-Q Zone	2012
VKW27	Vliegekraal	-22163.42	-2641625.07	1007.24	20.00	N-Q Zone	2012
VKW28	Vliegekraal	-22195.30	-2641621.43	1007.28	49.13	N-Q Zone	2012
VKW29	Vliegekraal	-22310.38	-2642169.00	1009.82	50.00	N-Q Zone	2012
VKW30	Vliegekraal	-22242.56	-2642168.48	1009.39	50.59	N-Q Zone	2012
VKW31	Vliegekraal	-22178.63	-2642167.60	1008.95	30.00	N-Q Zone*	2012
VKW32	Vliegekraal	-21762.19	-2640545.65	1010.71	21.00	N-Q Zone	2012
Total: 43 drillholes					2486.04		

N and O* = hole only intersected the footwall to the P-Q Zone containing the N and O Layers

Hole SN03 drilled by Diabor using a NWD4/TNW core diameter during 2013 is shown in Table 10-4 together with hole BV-1 drilled in 1991 by the CGS. Exploration activities during 2013 focussed on sampling and assaying additional stratigraphic intervals such as the MML Hanging Wall package and the Phosphate Zone above the P-Q Zone on holes drilled during the 2010 to 2012 campaigns.

Table 10-4
Summary of SN03 drilled on the P-Q Zone during 2013 and CGS drillhole BV-1

Drillhole ID	Farm	Easting Lo29 WGS84	Northing Lo29 WGS84	Elevation amsl (m)	Depth of Hole (m)	Ti-magnetite intersected	Year drilled
SN03	Schoonoord	-23401.75	-2645873.57	1021.18	175.47	P-Q Zone	2013
BV-1*	Bellevue	-24959.82	-2646545.70	979.43	2949.50	N-Q Zone & MML	1991

BV-1* was drilled by the CGS in 1991 on the farm Bellevue

In the first half of 2014, seven drillholes (AB1 to AB7) targeted the A-B Zone. Only AB4 and AB5 intersected the A-B Zone (AB1 to AB3 failed) and AB6 and AB7 were stopped after intersecting the MML. All seven holes (Table 10-5) were drilled by Diabor with a NWD4/TNW core diameter.

Between November 2014 and March 2015 a further 43 drillholes were completed from which 11 holes targeted the A-B Zone and 32 holes the MML and MML HW (Table 10-5). All but four of the 43 holes intersected the targeted mineralisation and were drilled by Diabor with a NWD4/TNW core diameter. MSA used the geological and assay data from the 11 holes with A-B Zone intersections for the Mineral Resource modelling. BML informed MSA that the sampling and assaying of the boreholes drilled to intersect the MML and MML HW in 2014 and 2015 has not yet been completed.

The collar positions of drillholes with MML, MML HW, P-Q Zone and Phosphate Zone intersections drilled from 2010 to 2015 were surveyed by a registered professional land surveyor using a real-time differential GPS and a base station. The coordinates and elevations are shown in Table 10-1 to Table 10-5, together with the drillhole depths and the intersected VTM mineralisation. The collar coordinates and elevations for stratigraphic holes VK1, VK3 and VL4 were determined with a handheld Garmin GPS and the accuracy is considered to be in the order of 5 m. These drillholes were not used in the Mineral Resource estimate (Section 14).

The drillhole sites were rehabilitated and the position of the collars permanently marked with a cement beacon on which the hole number was engraved (Figure 10-1).

Figure 10-1
Example of rehabilitated drillhole site (VK6) with cement beacon (MSA, 2012)

Table 10-5
Summary of holes on the MML, MML HW and AB Zone from the 2014/15 exploration campaign

Drillhole ID	Farm	Easting Lo29 WGS84	Northing Lo29 WGS84	Elevation amsl (m)	Depth of Hole (m)	Ti-Magnetite intersected	Year drilled
AB01	Vriesland	-20166.12	-2643166.48	1035.87	200.35	-	2014
AB02	Vriesland	-20076.97	-2643167.75	1036.46	150.57	-	2014
AB03	Vriesland	-20232.00	-2645085.34	1007.90	201.45	-	2014
AB04	Vriesland	-20482.43	-2644450.04	1009.26	149.35	MML, AB Zone	2014
AB05	Vriesland	-20476.39	-2646142.87	1003.19	150.85	MML, AB Zone	2014
AB06	Vriesland	-20743.85	-2645124.09	1005.03	131.90	MML	2014
AB07	Vriesland	-20601.08	-2645134.17	1006.01	110.40	MML	2014
VL14	Vriesland	-20285.88	-2644292.01	1010.04	78.23	AB Zone	2014
VL15	Vriesland	-20311.30	-2644629.01	1007.97	78.60	AB Zone	2014
VL16	Vriesland	-20287.55	-2644813.54	1007.37	63.65	AB Zone	2014
VL17	Vriesland	-20206.08	-2644290.14	1010.58	47.00	AB Zone	2014
VL18	Vriesland	-20243.93	-2644631.30	1008.45	51.00	AB Zone	2014
VL22	Vriesland	-20303.24	-2645625.14	1004.89	53.88	AB Zone	2014
VL23	Vriesland	-20316.86	-2645716.20	1004.49	81.22	AB Zone	2015
VL31	Vriesland	-20297.72	-2644440.59	1009.01	78.63	AB Zone	2014
VL37	Vriesland	-20282.75	-2646023.73	1002.77	46.42	AB Zone	2014
VL38	Vriesland	-20268.55	-2646139.46	1002.10	33.58	AB Zone	2014
VL39	Vriesland	-20855.61	-2645576.22	1002.18	97.03	MML	2014
VL40	Vriesland	-20694.67	-2645573.89	1002.98	32.43	MML	2015
VL41	Vriesland	-20800.30	-2645311.87	1002.87	96.09	MML	2014
VL42	Vriesland	-20678.91	-2645311.12	1003.50	48.21	MML	2015
VL44	Vriesland	-20878.02	-2644970.87	1002.93	125.8	MML	2014
VL45	Vriesland	-20645.01	-2644969.39	1004.39	59.52	MML	2015
VL46	Vriesland	-20707.44	-2644793.86	1004.45	63.60	MML	2015
VL47*	Vriesland	-20640	-2644644		10.70	-	2015
VL51	Vriesland	-20250.24	-2642770.69	1017.32	52.70	MML	2015
VL52	Vriesland	-20182.05	-2642769.39	1017.93	39.77	MML	2014
VL53	Vriesland	-20201.59	-2642622.09	1018.51	55.95	MML	2014
VL54	Vriesland	-20127.07	-2642618.95	1019.27	33.00	MML	2014
VL55	Vriesland	-20362.05	-2642484.19	1017.86	136.55	MML	2014
VL56	Vriesland	-20066.59	-2642471.80	1020.89	33.67	MML	2014
VL58	Vriesland	-20295.52	-2642311.99	1019.18	130.95	MML	2014
VL66	Vriesland	-20116.75	-2642695.76	1019.15	16.65	MML	2015
VL67	Vriesland	-20099.49	-2642551.66	1020.20	34.70	MML	2015
VL70*	Vriesland	-20284	-2642087		13.50	-	2015
VL80	Vriesland	-20689.17	-2645450.19	1003.24	43.73	MML	2015
VL81	Vriesland	-20565.84	-2645626.28	1003.48	167.45	MML, AB Zone	2015
VSF11**	Vogelstruisfontein	-18805	-2639038		15.00	-	2014
VSF12**	Vogelstruisfontein	-18799	-2638736		4.19	-	2014
MAL03***	Malokong	-19795.57	-2639556.85	1027.17	130.30	MML	2013
VK25	Vliegekraal	-21910.37	-2640547.62	1008.62	45.00	MML	2014
VK29	Vliegekraal	-21696.25	-2640548.00	1007.85	20.00	MML	2014
VK30	Vliegekraal	-21905.55	-2641033.33	1010.21	20.00	MML	2014
VK31	Vliegekraal	-21945.11	-2641034.23	1010.11	49.80	MML	2014
VK32	Vliegekraal	-21977.69	-2641036.79	1009.53	82.46	MML	2015
VK33	Vliegekraal	-22133.08	-2641620.53	1007.35	50.05	MML	2015
VK39	Vliegekraal	-22163.42	-2641625.07	1007.24	20.00	MML	2015
VK43	Vliegekraal	-22195.30	-2641621.43	1007.28	49.13	MML	2015
VK45	Vliegekraal	-22310.38	-2642169.00	1009.82	50.00	MML	2015
VK48	Vliegekraal	-19702.42	-2640376.29	1028.75	45.90	MML	2014
Total: 50 drillholes					3580.91		

* = Holes were stopped due to community issues; Collar position determined with handheld GPS
** = Holes targeted a linear magnetic anomaly but were stopped before intersecting VTM mineralisation; collar with handheld GPS
*** = Hole was drilled in 2013 but not previously reported

10.2 Core Recovery and Geotech logging

The core recoveries in the poorly consolidated overburden (3 m to 5 m) were relatively low (5% to 70%) but generally above 90% in the weathered and unweathered rocks. Core losses and core recovery percentages were recorded for the length of each drillhole in geotechnical log sheets together with the rock hardness, degree of weathering and the number of fractures for each drill run. The hand written log sheets were captured digitally at the Mokopane field office into the Maxwell LogChief database and the data was then captured in the Maxwell DataShed database hosted at MSA's offices in Johannesburg.

10.3 Density Measurements

No bulk density measurements were conducted. The specific gravity was determined on all drill core samples with a gas pycnometer by Set Point Laboratory in Johannesburg, South Africa.

10.4 Downhole Geophysical Logging

No downhole geophysical logging was carried out. Downhole orientation surveys were carried out using a Reflex EZ-track on most deep drillholes i.e. VK10, VK12, VK13, VK14, VK15, VK16, VK17 and VK18. Drillhole VK19 could not be surveyed as the hole collar had collapsed and VK13 had also collapsed below the collar at a depth of 36 m depth.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

Sampling of the drillholes was undertaken after geotechnical logging, metre marking, geological logging and photographing of the core was completed. All core measuring, core cutting, sampling, bagging and despatch procedures were completed at the Mokopane exploration premises under the full time supervision of a qualified geologist. The cores were placed in suitable metal trays and transported on a daily basis from the drill site to the Mokopane core yard with a pickup truck (Figure 11-1). Geological core logging followed a comprehensive protocol and the level of detail is appropriate and fully compliant with standard industry practice.

Figure 11-1

Drill core transported in a pickup truck (BML, 2011)

11.1 Sampling Approach

The objectives of core sampling were to provide suitable samples for laboratory analyses of the selected mineralised zones identified during logging. A primary concern was to be able to relate assay data with the geological layering and the relative abundance of the Ti-magnetite mineralisation which often varied on a decimetre scale. The following sampling approach and protocol was adopted by BML:

- Sample lengths in poorly-layered homogenous zones were kept at a 0.5 m or 1.0 m interval
- Sample lengths in well-layered zones or zones with variable lithologies were matched to lithological contacts and varied between 0.25 m and 1.0 m
- Half core (NQ or NWD4 core size) was sampled for geochemical analyses

11.2 Sampling Procedure

Drill core sampling was based on industry standard sampling methodology. The following protocols were used by BML at the Mokopane exploration office (Figure 11-2) for the individual stages of core sampling:

Core Marking and Cutting

- Core sections aligned to maintain core continuity, dip of layering identified and core metre-marked with a black waterproof pen
- Individual sampling zone identified by the geologist
- Median (longitudinal) cut line marked along the core axis with a blue waterproof wax pencil or black permanent marker perpendicular to the dip of layering
- Sampling intervals defined by the geologist and marked with a blue waterproof wax pencil across the core (cross cut lines)
- The cross cut lines marked with "from – to" depths on the outside of the core using a blue waterproof wax pencil
- Core cut along the median line and cross cut lines using a diamond core saw
- Sampling of core
- Marking of remaining half core in core trays with "from - to" depths

Figure 11-2
Core logging and core marking facilities (BML, 2011)

Bagging, Ticketing and Sampling

- Pre-numbered ticket book with tear-off triplicate sample ticket numbers is prepared by geologist with "from - to" depths and a brief description of sample against each number in ticket book. Ticket book preparation includes inclusion of QA/QC samples (Figure 11-3)

- Plastic sample bags prepared and laid out in numerical order with a sample number ticket placed inside bag, a second ticket stapled on the outside of the bag and sample number written on outside of bag with a permanent marker pen
- Core samples and QA/QC samples added to sample bags
- Final check for correct sample labelling and numbering by geologist
- Plastic sample bags sealed – triple folding of top of bags and stapling
- Sample bags placed into large polypropylene ("PP") woven sacks and sealed with cable ties for despatch to the laboratory. Each sack has project name, batch number, number of samples and range of sample numbers in permanent marker pen written on outside of sack

Figure 11-3
Sampling utensils; ticket book and Certified Reference Material (CRM) in inset (BML, 2011)

Documentation and Sample Delivery to Laboratory – Chain-of-Custody

- Sample details – drillhole number, "from – to" depths, sample width, sample number, brief description are recorded in the project Sample Ledger
- Sample numbers, analyses requirements, date of delivery, person responsible for delivery are recorded in a Sample Submission Sheet which has a specific submission sheet number
- Samples delivered to Set Point Laboratory in Mokopane, about 800 m from the exploration premises, along with Sample Submission Sheet
- Set Point Laboratory checks the sample labelling and sample condition and issues a Sample Reception Record with a specific job number emailed to BML confirming the sample details and analyses requirements
- BML maintains a Sample Submission Summary sheet which matches the details of the laboratory Sample Reception Record

11.3 Sample Preparation

Core samples were delivered to the Set Point Laboratory ("SPL") at Mokopane along with BML's Sample Submission Sheet. Initial sample preparation was undertaken at SPL's Mokopane laboratory facilities while the analytical process was conducted at SPL's laboratory in Johannesburg. Sample preparation was carried out in a dust-controlled area with extractor systems in the crushing area.

SPL is an ISO 17025 accredited, independent analytical laboratory specialising in geochemical exploration analyses. SPL uses the following procedures and protocols for sample preparation:

- Checking of received samples
    - Correct samples are present
    - Samples labelled clearly
    - Sample bags in good condition, no spillage or leaking
    - Moisture content of samples noted
    - Client notified if any problems present
    - If above criteria are met then a Sample Reception Record is generated with a specific job number, date, sample details and analyses requirements which is emailed to client
- Samples dried at 110°C if required. SPL has a separate "Report for Drying of Samples"
- Samples weighed and recorded
- Samples crushed in jaw crusher and crushed material placed in new labelled plastic bag. Jaw crusher cleaned after every sample with crushed quartz and compressed air
- Coarse crushed material is further crushed in a Rhino Crusher to >80% <2.8mm
- Sample material split in a Jones Riffle Splitter. Split to be analysed placed in a new labelled bag. Remainder of sample material returned to original bag and stored for 3 months or returned to BML as Coarse Reject Split. Splitter and trays cleaned with compressed air. SPL has a separate protocol titled "Procedure for Splitting of Samples"
- Sample split to be analysed milled in a Labtech Essa LM2 mill for 5 minutes to achieve >90% <106µm. Equipment is cleaned with water and compressed air
- Milled sample is emptied into a tray or onto a paper sheet and returned to sample bag
- Aliquot for assay taken from milled sample bag and samples are repacked. SPL has a separate protocol titled "Procedure for Repacking of Samples"
- Sample aliquots are despatched to SPL in Isando, Johannesburg for sample analyses three times per week using laboratory drivers and vehicles
- Performance of the Rhino crusher and mill is monitored and results of screening is reported and made available to the client on request. SPL has a separate protocol titled "Procedure for Screening of Samples"

11.4 Sample Analysis

Sample aliquots were dispatched from SPL's Mokopane facilities to SPL in Isando, Johannesburg for sample analyses.

Samples from the three holes VK2, VL2 and VL3 drilled during the 2010 campaign were analysed for Fe_2O_3, TiO_2, V_2O_5, P_2O_5, Cu and Ni.

Samples from the 13 holes drilled in 2011 were analysed for Fe_2O_3, TiO_2, V_2O_5, P_2O_5 and Cu and also for Al_2O_3, SiO_2, CaO and MgO.

Samples from the 2012 and 2013 drilling campaign, from hole BV-1 and the additional samples collected from MML HW and the Phosphate Zone from 2010 and 2011 drillholes were analysed for Fe_2O_3, TiO_2, V_2O_5, P_2O_5, Al_2O_3, SiO_2, CaO, K_2O, MgO, Ni, Cu and S.

Specific Gravity (SG) measurements were conducted on all samples from the 2011 to 2013 drilling campaigns and were subsequently determined for the three drillholes drilled in 2010. Sulphur (S) for the samples from the 2010 and 2011 drilling was only determined for drillholes VK10, VK13, VL2 and VL3.

SPL used the following analytical methods since the start of the campaign in 2010:

- Fe_2O_3, TiO_2, V_2O_5, P_2O_5, Al_2O_3, SiO_2, CaO, K_2O and MgO were analysed on a fused glass disk with an X-ray fluorescence spectrometer ("XRF")
- Cu, Ni were analysed by Inductively Coupled Plasma ("ICP") after an aqua regia digestion
- S was analysed with a LECO induction furnace
- SG measurements were determined on pulverised material with a gas pycnometer

SPL is an accredited facility under the South African National Accreditation System ("SANAS") in accordance with the recognised international standard ISO/IEC 17025:2005. Table 11-1 shows the analytical techniques and the accredited range of concentrations.

Table 11-1
SPL accreditation details for the various analytical methods

Element	Method Code	Description	Detection Limit	Accreditation Range
Fe_2O_3	M451	XRF fused disk	0.06%	0.1 – 52%
V_2O_5	M451	XRF fused disk	0.23%	0.23 – 10%
TiO_2	M451	XRF fused disk	0.03%	0.09 – 32.8%
SiO_2	M451	XRF fused disk	0.82%	11.2 – 99.8%
Al_2O_3	M451	XRF fused disk	0.20%	0.8 – 58.8%
CaO	M451	XRF fused disk	0.06%	0.14 – 65.3%
MgO	M451	XRF fused disk	0.30%	0.3 – 43%
P_2O_5	M451	XRF fused disk	0.02%	0.07 – 11.9%
Cu	M445	Aqua Regia digest with ICP finish	10 ppm	10 – 10 000 ppm
Ni	M445	Aqua Regia digest with ICP finish	10 ppm	10 – 10 000 ppm
S	522	LECO	Not accredited	
SG	805	Gas pycnometer	Not accredited	

SPL reported the analytical results in MS Office Excel spread sheet format and forwarded the assay certificates in Adobe pdf format by electronic mail.

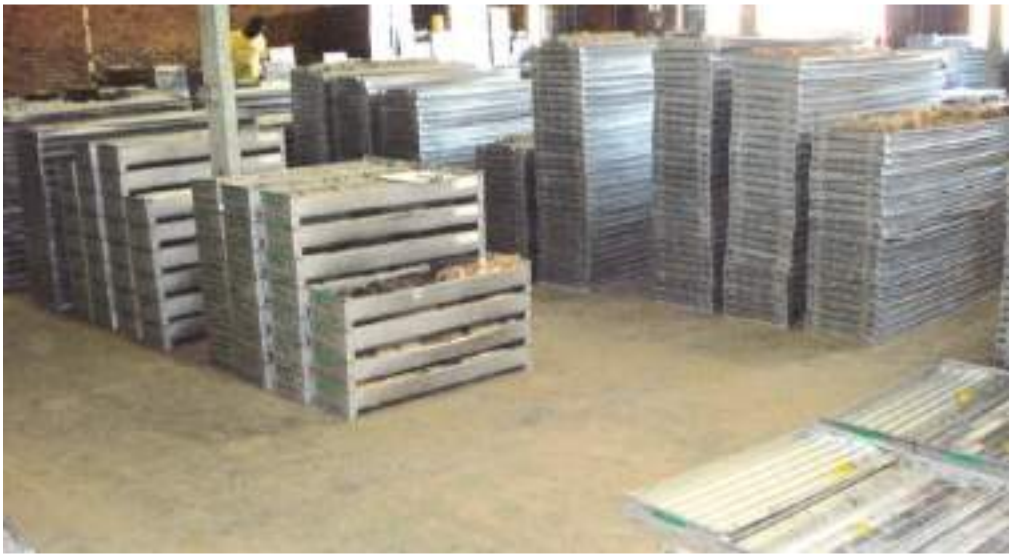
SPL's spread sheet with sample numbers and assay results were merged with the sample records from BML's Sample Ledger which include the drillhole number, sample "from – to" depth, sample width and sample number details. The combined data were then electronically stored for each drillhole in a "Sample Analyses Sheet" and captured in the Maxwell DataShed database, hosted by MSA in Johannesburg.

11.5 Sample Security

All drill cores were stored in stackable core trays inside the Mokopane field office (Figure 11-4), which was locked when work was not in progress. Sample pulps and coarse rejects were collected from SPL after the analyses were completed and were also stored in the field office (Figure 11-5). Only BML office and field staff had access to the rented premises which are in a relatively secure area of Mokopane.

The individual sample pulps for each drillhole are kept in large plastic bags which were well labelled and sealed with cable ties. The coarse rejects were stored in labelled and sealed PP sacks.

Figure 11-4
Core storage at Mokopane field office (MSA, 2015)



Complete chain-of-custody documentation exists from the submission of the core samples to SPL's Mokopane sample preparation facilities to the receipt of the pulverised sub-samples by SPL analytical laboratory in Johannesburg and the return of excess coarse-crushed and pulp material to BML's office facilities in Mokopane.

Figure 11-5
Sample pulp and coarse rejects storage at Mokopane field office (BML, 2011)

11.6 Quality Assurance and Quality Control

Appropriate quality assurance and quality control ("QA/QC") monitoring is a critical aspect of the sampling and assaying process in any exploration programme. Monitoring the quality of laboratory analyses is fundamental to ensuring the highest degree of confidence in the analytical data and providing the necessary confidence to make informed decisions when interpreting all the available information. Quality assurance ("QA") may be defined as information collected to demonstrate that the data used further in the project are valid. Quality control ("QC") comprises procedures designed to maintain a desired level of quality in the assay database. Effectively applied, QC leads to identification and corrections of errors or changes in procedures that improve overall data quality. Appropriate documentation of QC measures and regular scrutiny of quality control data are important as a safeguard for project data and form the basis for the quality assurance program implemented during exploration.

In order to ensure quality standards are met and maintained, planning and implementation of a range of external quality control measures is required. Such measures are essential for minimising uncertainty and improving the integrity of the assay database and are aimed to provide:

- An integrity check on the reliability of the data
- Quantification of accuracy and precision
- Confidence in the sample and assay database
- The necessary documentation to support database validation

Certified reference material ("CRM"), quartz blanks and duplicate samples were randomly inserted into the 2011 to 2014 batches prior to submission to SPL. Samples from three holes

VK2 (139 samples), VK4 (135 samples) and VK5 (181 samples), drilled during the initial exploration campaign in 2010, were submitted to SPL before a full suite of CRMs were routinely inserted.

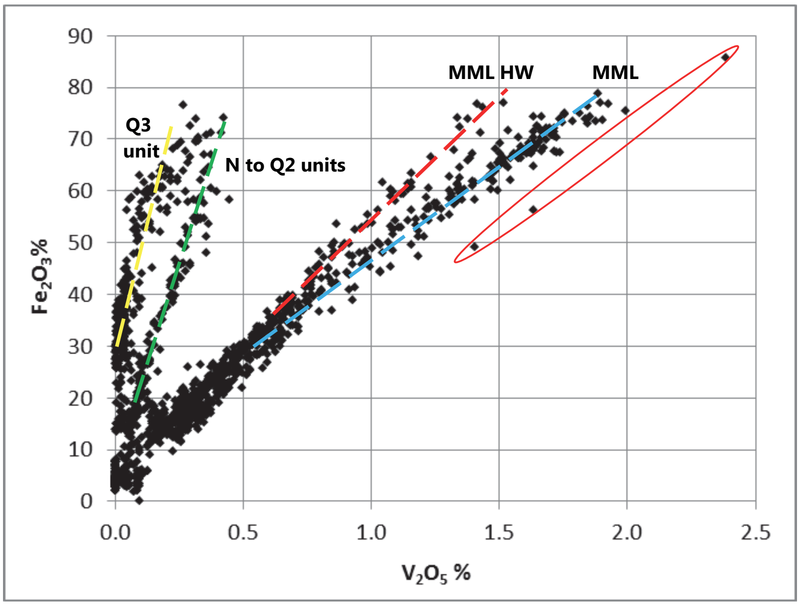
The control samples were inserted as part of a continuous sample number sequence and the laboratories were unaware which samples were QAQC samples and what their composition was. This allowed for monitoring of the sample preparation procedure as well as monitoring the accuracy and precision of analyses.

Based on industry best practice, CRMs and quartz blanks were inserted into batches at a frequency of approximately 5% of the routine samples. Excess coarse crushed material and drill core duplicates were submitted to SPL to test the repeatability of the original assay results at a rate representing 5% of all routine samples. QAQC samples therefore constituted 15% of all samples analysed.

Additional tests were performed to assess the consistency of the assay results. The V_2O_5 versus Fe_2O_3 concentrations and Fe_2O_3 + TiO_2 versus SG generally follow tightly constrained trends as shown in the X-Y plots in Figure 11-6 and Figure 11-7. These plots display 1639 samples from 21 drillholes with MML and MML HW analyses including four holes with assay data from the P-Q Zone. The results show the expected compositional patterns and a very good overall data integrity has therefore been achieved.

Figure 11-6

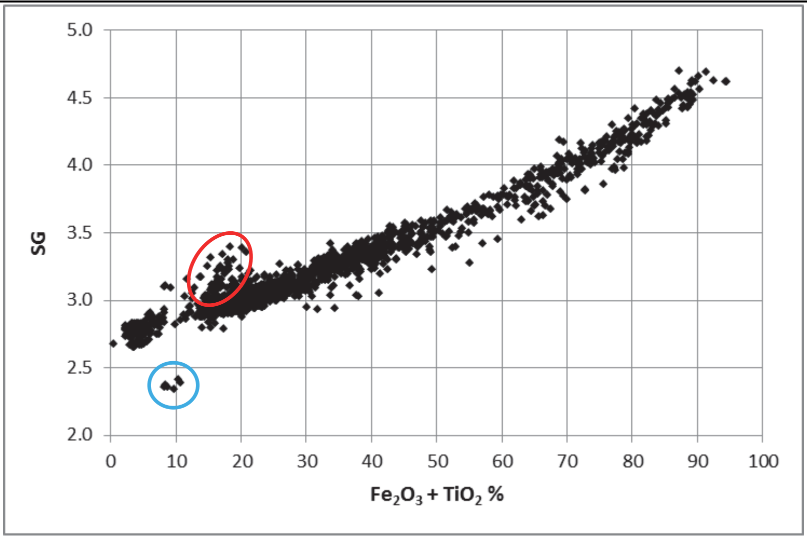
V_2O_5 vs Fe_2O_3 plot to confirm data integrity and consistency (MSA, 2015)



Note: samples in red ellipsoid are from 3 narrow units within the MML which are unusually depleted in TiO_2; Chemical modifications are generally very localised and have been observed at various depths in other parts of the Northern Limb

Figure 11-7

Fe_2O_3 and TiO_2 vs SG plot to confirm data integrity and consistency (MSA, 2015)



Note: Samples in the blue circle are from strongly weathered surface material (generally 0 m to 3 m deep and occasionally up to 6 m). SG determination by gas pycnometry is not a suitable method to determine the in-situ density due to the porous nature of the weathered material

Sample cluster circled in red represents pyroxene-rich lithologies that have a higher SG compared to non-mineralised norite or gabbro

CRM, blank and duplicate sample compositions were plotted to evaluate the acceptability of the individual batches. Failures did occur, mostly relating to errors in the reporting of SG values and several cases of sample number switches were suspected. On request by MSA, SPL examined the anomalous assays and re-analysed the failed samples. However, due to a considerable sample mix-up in two of the 10 batches for duplicate analyses, it was decided to exclude 16 sample pairs from the QC exercise because the integrity of the re-numbered duplicate sample material was in doubt. All other suspected sample switches and SG failures were confirmed and the re-determined SG and re-assay results produced acceptable values. No further action was taken or required.

As an additional QA/QC measure, BML has adopted a set of documented standard operating procedures ("SOP"). These protocols cover all aspects of the exploration programme and are designed to ensure best practice and, ultimately, integrity of data. A detailed assessment for all control samples submitted in batches from the MML and P-Q Zone up to March, 2013 has been presented in the report "JORC Competent Person's Report and Mineral Resource Estimate for the Fe-V-Ti Project, Limpopo Province, South Africa", dated 12 April, 2013. The results for the additional QA/QC samples used for the updated P-Q Zone, the Phosphate Zone and the MML HW are discussed below.

11.6.1 Blanks

A total of 235 blank samples were submitted to monitor inadvertent contamination of samples. Washed river sand was used for 115 blank samples during 2010 and 2011, 67 AMIS0108 and 53 AMIS0305 certified blanks were inserted in the 2012 to 2014 drilling campaigns. The results for

Fe_2O_3, V_2O_5 and P_2O_5 are plotted in control charts. Based on a background value of 1% Fe_2O_3 and a warning limit of 5% Fe_2O_3, all 115 river sand blanks, all 67 AMIS0108 and all 53 AMIS0305 (warning limit of 0.35% Fe_2O_3) blanks pass the tests (Figure 11-8). V_2O_5 has background values of approximately 0.01% (river sand and AMIS108) and 0.016% (AMIS0305) and a warning limit of 0.05% and 0.08% V_2O_5, respectively. Figure 11-10 shows that all but two samples reported below the warning limits for P_2O_5 which is set at 0.05% for river sand and AMIS0105 and 0.08% for AMIS0305, respectively.

Figure 11-8

Control Chart for River sand, AMIS0108 and AMIS0305 Blank Samples for Fe_2O_3 (MSA, 2015)

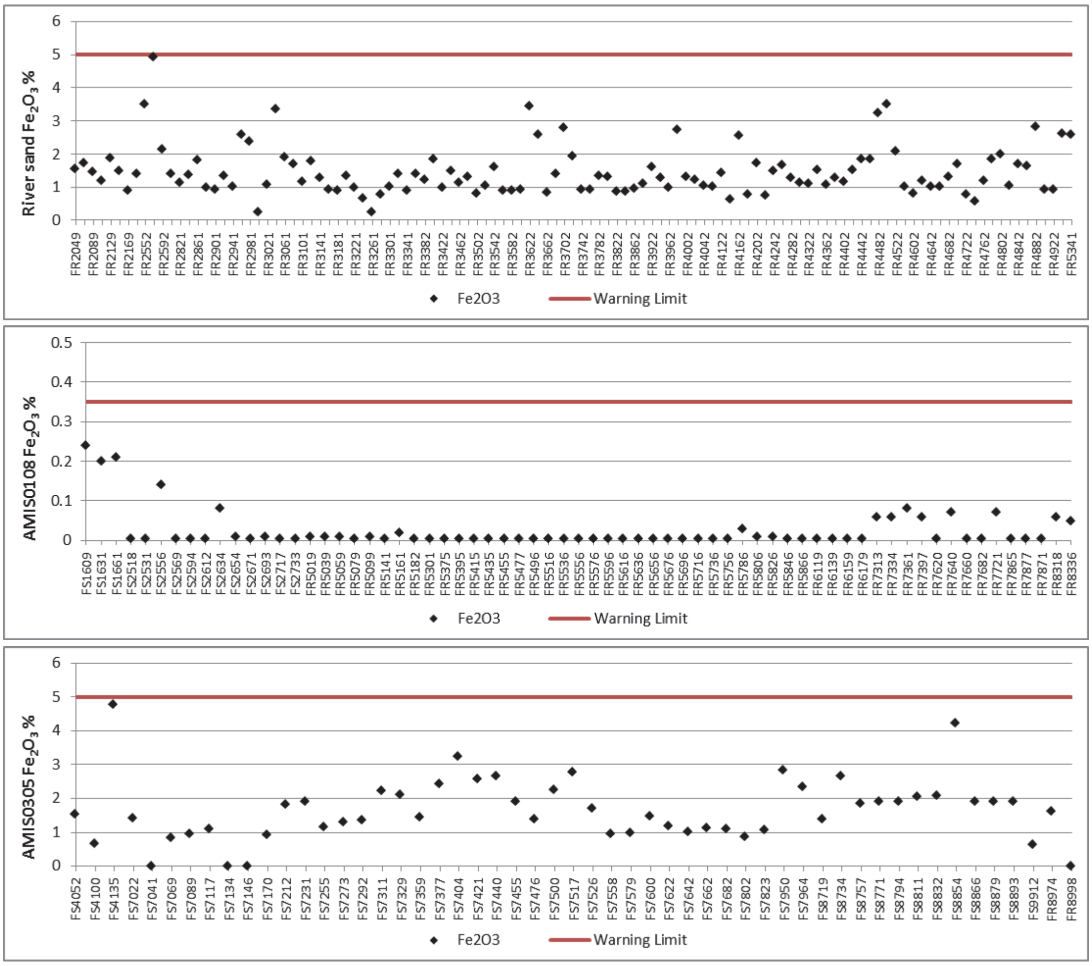


Figure 11-9

Control Chart for Blank Samples for V_2O_5 (MSA, 2015)

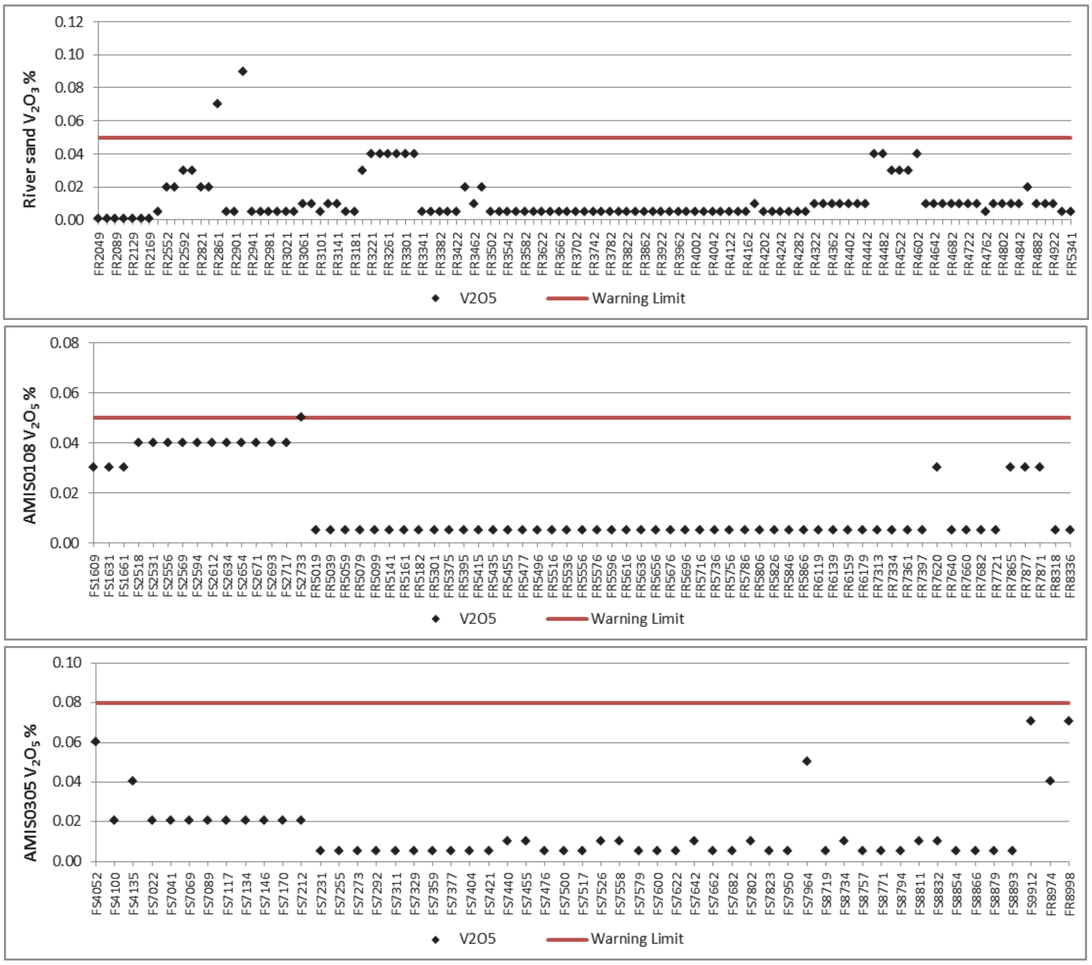


Figure 11-10

Control Chart for Blank River Sand Samples for P_2O_5 (MSA, 2015)

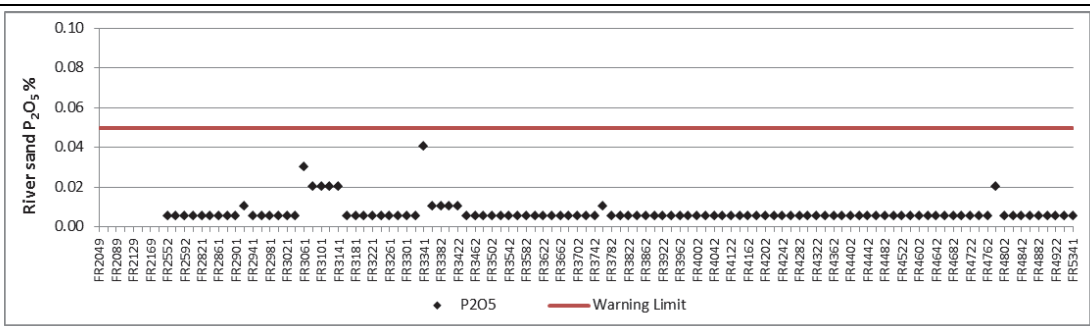
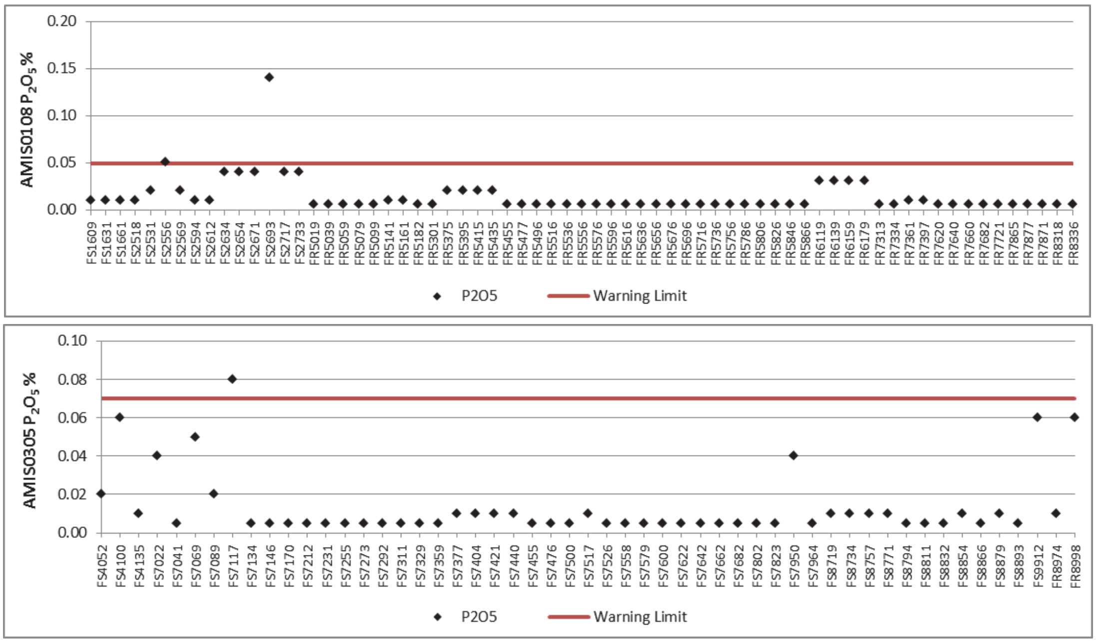


Figure 11-10

Control Chart for Blank CRM Samples for P_2O_5 (MSA, 2015)



11.6.2 Duplicates

Field duplicates taken during the 2010 and 2011 sampling campaign were created by the splitting of excess coarse-crushed drill core material and quartered drill core. Pulp duplicates between 2012 and 2014 were created by the splitting of excess pulp material which was re-bagged and re-submitted with new sample numbers to SPL. A total of 230 duplicate samples were submitted and analysed by SPL as 10 individual batches rather than inserted into the normal sample stream. The objective of the duplicate samples is to monitor sample preparation and analytical precision.

Results for field duplicate sample pairs are shown in Figure 11-11 to Figure 11-15 for Fe_2O_3, TiO_2, V_2O_5 and P_2O_5 by fused disk XRF analyses and SG by gas pycnometry. The duplicate-original sample pairs are generally within the ±10% limits with occasional exceptions and a good reproducibility was thus achieved by SPL for XRF analyses. A total of 16 sample pairs from two of the 10 batches were excluded from this exercise due to an obvious mix-up of sample material during the re-bagging and re-numbering procedure of the original sample pulps.

TiO_2 shows a systematic negative bias (under-reporting) in the repeat analyses at concentrations between 0% and 14% TiO_2 when compared to the original analyses (Figure 11-12). SPL confirmed in writing that the calibration setting on the XRF was changed in May 2012 which is causing the discrepancies in element concentration between batches analysed before and after this date. SPL could not clarify which of the two sets of analyses are more accurate and because the difference only exceeds 20% below values of about 7% TiO_2 no further action was taken. TiO_2 concentrations below 7% will have to be verified as part of the metallurgical test work.

P_2O_5 in Figure 11-14 shows that repeat analyses exceeded the original assay results at values above 1% P_2O_5. The difference is generally less than 10% and therefore not considered to be material to the overall results. The slight scatter at moderate Fe_2O_3 and at low V_2O_5 and P_2O_5 concentrations are not considered to be material and acceptable for use in the MRE.

Figure 11-11
Scatter Plot of 214 Field Duplicate Sample Pairs for Fe_2O_3 (MSA, 2015)

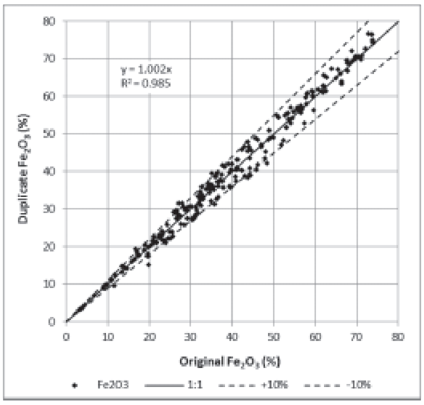


Figure 11-12
Scatter Plot of 214 Field Duplicate Sample Pairs for TiO_2 (MSA, 2015)

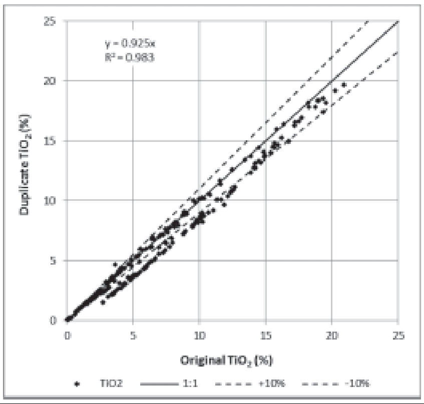


Figure 11-13
Scatter Plot of 214 Field Duplicate Sample Pairs for V_2O_5 (MSA, 2015)

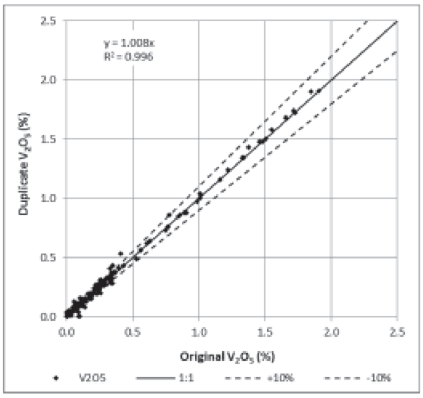


Figure 11-14

Scatter Plot of 214 Field Duplicate Sample Pairs for P_2O_5 (MSA, 2015)

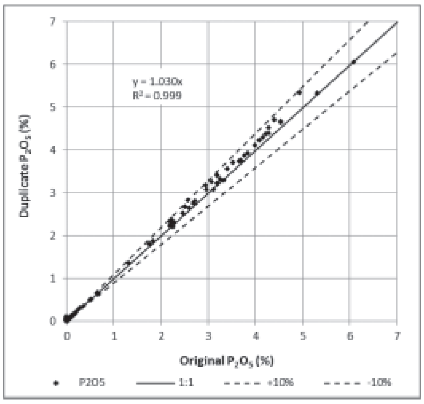
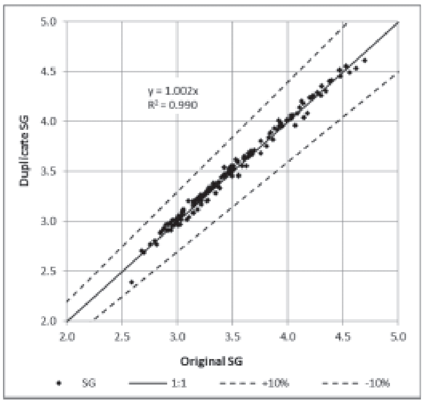


Figure 11-15

Scatter Plot of 144 Field Duplicate Sample Pairs for SG (MSA, 2015)



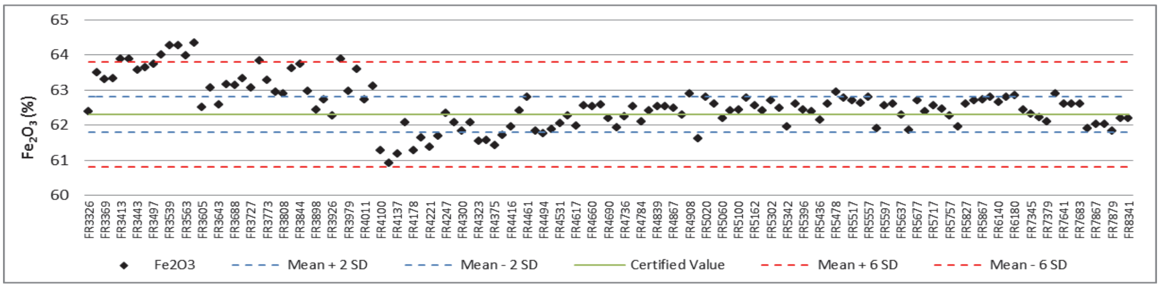
11.6.3 Standards

African Mineral Standards (AMIS) in Johannesburg, South Africa manufactures AMIS0129 and AMIS0346 which were used as CRMs during the 2010 to 2014 sampling campaign, in order to monitor the accuracy of Fe_2O_3, TiO_2, V_2O_5 in the laboratory. The performance of 129 randomly inserted AMIS0129 and 47 AMIS0346 is shown in the control charts for Fe_2O_3, TiO_2 and V_2O_5 in Figure 11-16 to Figure 11-25. Results indicate that the analytical accuracy for TiO_2 (Figure 11-17) and V_2O_5 (Figure 11-18) is almost exclusively within 2 standard deviations of the certified mean.

Fe_2O_3 over-reported by up to 2% Fe_2O_3 (Figure 11-16) in six batches submitted during 2011 with samples from drillholes VK7, VK8, VK10 and VK14. An under-reporting of Fe_2O_3 by up to 1.4% is observed in two batches from the 2011 assay campaign with samples from drillholes VK12 and VK13. The relatively poor accuracy for Fe_2O_3 in several batches analysed during 2011 is not considered to be material and acceptable for use in the MRE.

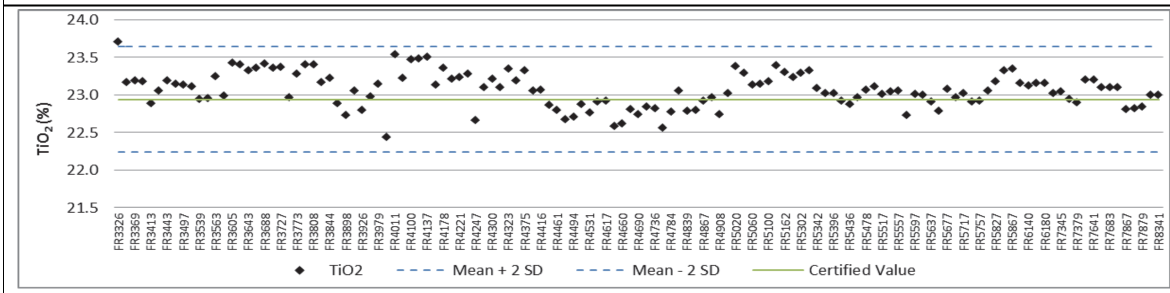
Fe_2O_3, TiO_2 and V_2O_5 concentrations for all 47 AMIS0346 reported within 2 standard deviations f the certified mean (Figure 11-19 to Figure 11-21). AMIS0129 was replaced by AMIS with AMIS0346 in late 2012. The Certificates of Analysis for AMIS0129 and AMIS0346 are listed in Appendix 3.

Figure 11-16
Control Chart for Reference Material AMIS0129 for Fe_2O_3 (MSA, 2015)



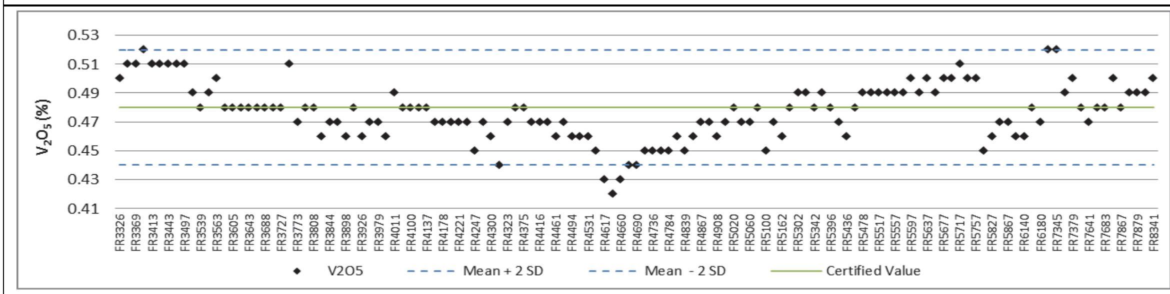
Note: Every second sample number of the 129 AMIS0129 samples is shown on the X-axis

Figure 11-17
Control Chart for Reference Material AMIS0129 for TiO_2 (MSA, 2015)



Note: Every second sample number of the 129 AMIS0129 samples is shown on the X-axis

Figure 11-18
Control Chart for Reference Material AMIS0129 for V_2O_5 (MSA, 2015)



Note: Every second sample number of the 129 AMIS0129 samples is shown on the X-axis

Figure 11-19
Control Chart for Reference Material AMIS0346 for Fe_2O_3 (MSA, 2015)

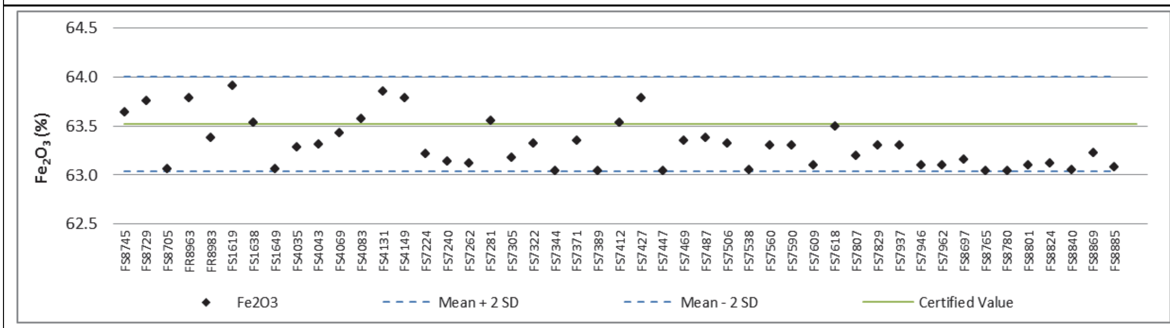


Figure 11-20
Control Chart for Reference Material AMIS0346 for TiO_2 (MSA, 2015)

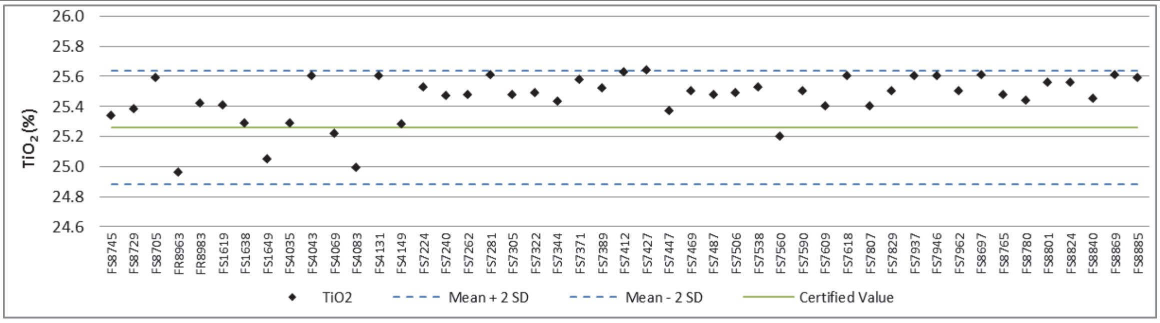
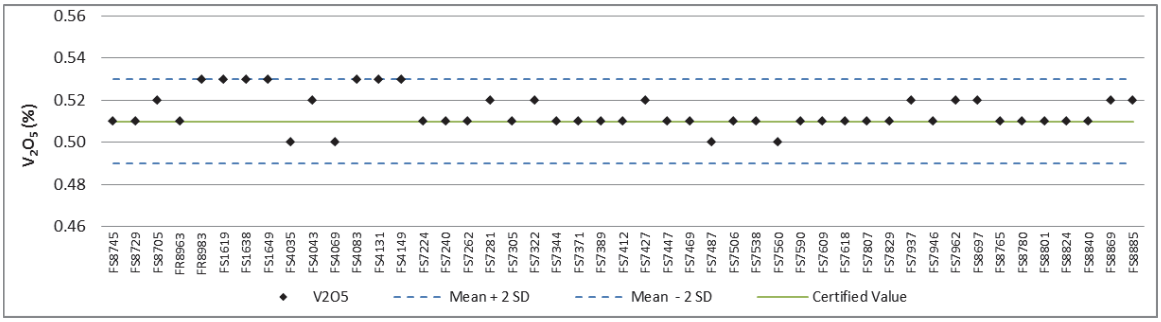
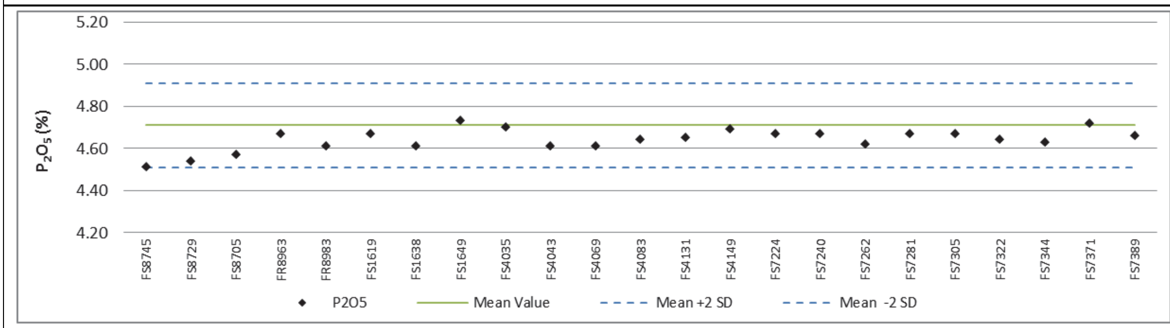


Figure 11-21
Control Chart for Reference Material AMIS0346 for V_2O_5 (MSA, 2015)



Due to the lack of suitable Phosphate standards, BML crushed and milled apatite-rich drill core from the Phosphate Zone and submitted this material to five laboratories in South Africa (UIS Analytical Services, University of Johannesburg, SGS, Scientific Services and Intertek-Genalysis) for round-robin analyses. The homogenised material was analysed by the five laboratories which determined P_2O_5 and other major elements concentrations for a total of 9 samples including two repeat analyses. The results were used to determine the arithmetic mean and 2 standard deviation of the sample. 23 sub-samples of this internal reference material were subsequently inserted into three batches with core samples from the Phosphate Zone to SPL, who acted as the primary laboratory for all routine samples. Figure 11-22 shows the performance of P_2O_5 for this internal standard which BML named Phos-1. All results fall within the calculated 2SD limits.

Figure 11-22
Control Chart for Reference Material Phos-1 for P_2O_5 (MSA, 2015)



11.6.4 Inter-Laboratory Comparison

A selection of 200 samples, representing in excess of 5% of the samples submitted to SPL, was submitted to Genalysis in Johannesburg, South Africa during 2010 and 2011 and to SGS in Johannesburg between 2012 and 2014 for umpire analyses. The objective of this exercise was a check on the primary laboratory, SPL, for the elements Fe_2O_3, TiO_2, V_2O_5, P_2O_5, Al_2O_3, SiO_2, CaO, MgO, S and specific gravity ("SG"). SGS and Genalysis Johannesburg are independent commercial laboratories and accredited in accordance with ISO/IEC 17025:2005, but full accreditation for the XRF analytical method was still pending for the Genalysis Johannesburg laboratory at the time (2010 and 2011) of sample submission to Genalysis.

Genalysis and SGS used lithium borate fusion followed by standard XRF analyses. Genalysis reports wider ranges for several elements (Table 11-2) compared to the accredited ranges of SPL (Table 11-1) and SGS (Table 11-3).

Table 11-2
Genalysis Laboratory details for the various analytical methods

Element	Method Code	Description	Detection Limit	Quoted Range
Fe_2O_3	FB1/XRF10	XRF fused disk	0.01%	0.01 – 100%
V_2O_5	FB1/XRF10	XRF fused disk	0.005%	0.005 – 10%
TiO_2	FB1/XRF10	XRF fused disk	0.01%	0.01 – 100%
SiO_2	FB1/XRF10	XRF fused disk	0.01%	0.01 – 100%
Al_2O_3	FB1/XRF10	XRF fused disk	0.01%	0.01 – 100%
CaO	FB1/XRF10	XRF fused disk	0.01%	0.01 – 100%
MgO	FB1/XRF10	XRF fused disk	0.01%	0.01 – 100%
P_2O_5	FB1/XRF10	XRF fused disk	0.002%	0.002 – 100%
S	FB1/XRF10	XRF fused disk	0.001%	0.001 – 40%
SG	SG/PYCN	Gas pycnometer	Accredited	

Note: Accreditation for XRF method and range of individual element concentrations were pending in 2010/2011

Table 11-3
SGS Laboratory accreditation details for the various analytical methods

Element	Method Code	Description	Detection Limit	Quoted Range
Fe_2O_3	XRF79C	XRF fused disk	0.01%	0.01 – 100%
V_2O_5	XRF79C	XRF fused disk	0.01%	0.01 – 100%
TiO_2	XRF79C	XRF fused disk	0.01%	0.01 – 100%
SiO_2	XRF79C	XRF fused disk	0.05%	0.05 – 100%
Al_2O_3	XRF79C	XRF fused disk	0.05%	0.05 – 100%
CaO	XRF79C	XRF fused disk	0.01%	0.01 – 100%
MgO	XRF79C	XRF fused disk	0.05%	0.05 – 100%
P_2O_5	XRF79C	XRF fused disk	0.01%	0.01 – 10%
Cu	XRF75G	XRF pressed pellet	10 ppm	10 – 5,000 ppm
Ni	XRF75G	XRF pressed pellet	10 ppm	10 – 5,000 ppm
S	CSA06V	Leco	0.01%	0.01 – 100%
SG	PHY03V	Gas pycnometer	Accredited	

A total of 200 samples, excluding CRMs and blanks, were analysed by Genalysis (2010-2011) and SGS (2012-2014) by XRF and the SG for each sample was determined by gas pycnometry. The results between the primary and umpire laboratories agree closely for Fe_2O_3 (coefficient of correlation, with R^2 of 0.976) for TiO_2 (R^2 of 0.983), for V_2O_5 (R^2 of 0.982), for P_2O_5 (R^2 of 0.999) and SG (R^2 of 0.998) and are shown in Figure 11-23 to Figure 11-27. The majority of the results lie within ±10% of a 1:1 line.

Suspect results for seven sample pairs were excluded from the scatter plots because it was not possible to establish whether the sample material was swapped by BML or by the primary or umpire laboratories. Results reported in 2011 by the umpire lab (Genalysis) for a batch of 151 samples were rejected by MSA due to apparent sample switches during the preparation of fusion disks. The entire batch was re-analysed on newly prepared fusion disks and the revised results are included in Figure 11-23 to Figure 11-27.

TiO_2 shows two opposing trends (Figure 11-24): the sample pairs from 2010 and 2011 display a systematic negative bias (under-reporting and below the 1:1 line) by the umpire lab (Genalysis) while the 2012 sample pairs (SPL vs SGS) fall above the 1:1 line at concentrations between 0% and 14% TiO_2. SPL confirmed in writing that the calibration setting on the XRF was changed in May 2012 which is most likely causing the discrepancies in TiO_2 concentration between SPL and SGS. Similar discrepancies for TiO_2 were observed in the field duplicates carried out by SPL.

A noteworthy feature is the slight but systematic under-reporting by SPL compared to Genalysis for P_2O_5 concentrations above 0.5% (Figure 11-26). A slight over-reporting by Genalysis was also observed for the higher grade internal standard Phos-1 (see 11.6.3) where P_2O_5 analyses by Genalysis reported above the arithmetic mean compared to the other four laboratories.

A total of 12 umpire pairs had considerable discrepancies in the SG values (all other elements were acceptable) and SPL was asked to repeat the SG measurements on the original pulp material. All 12 re-determined SG results were acceptable and no further action was required.

The bias at high P_2O_5 values and the scatter of V_2O_5 and P_2O_5 at low concentrations are not considered to be material and the results of the routine samples are acceptable for use in the MRE.

Figure 11-23
Scatter Plot of 193 Inter-Laboratory Umpire Pairs for Fe_2O_3 (MSA, 2015)

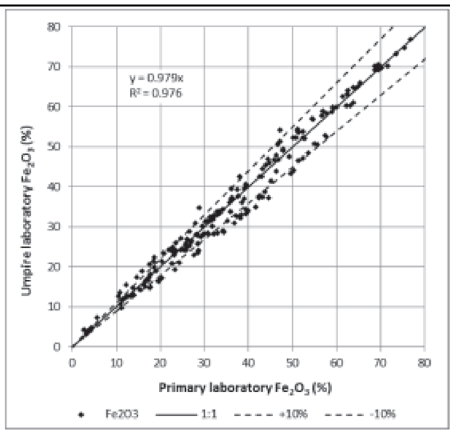


Figure 11-24

Scatter Plot of 193 Inter-Laboratory Umpire Pairs for TiO_2 (MSA, 2015)

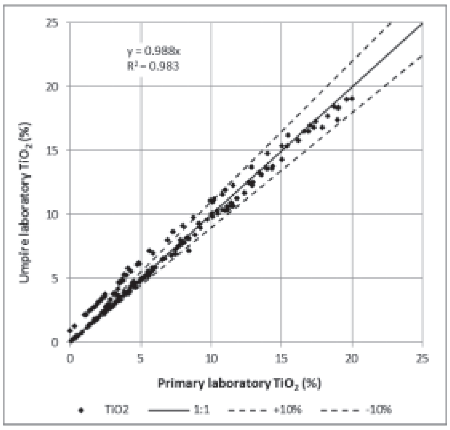


Figure 11-25

Scatter Plot of 193 Inter-Laboratory Umpire Pairs for V_2O_5 (MSA, 2015)

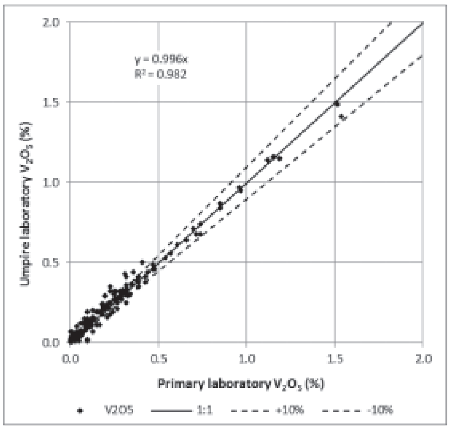


Figure 11-26

Scatter Plot of 193 Inter-Laboratory Umpire Pairs for P_2O_5 (MSA, 2015)

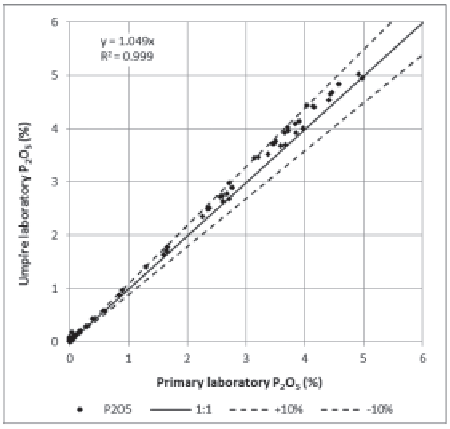
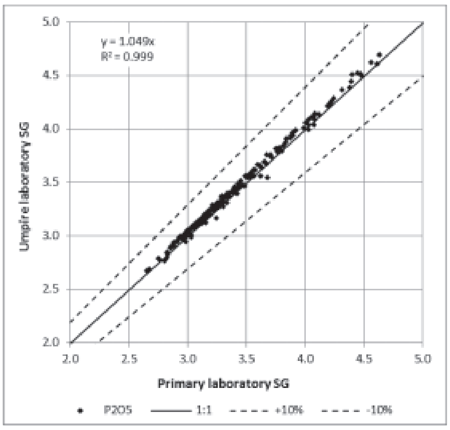


Figure 11-27

Scatter Plot of 193 Inter-Laboratory Umpire Pairs for SG (MSA, 2015)



11.7 Adequacy of Sample Preparation, Security and Analytical Procedures

All aspects of core handling, marking, logging, cutting, bagging, labelling and submission to SPL's sample preparation facilities at Mokopane were covered by well-designed protocols to ensure that all routine activities were conducted with maximum consistency.

Drill core handling and storage as well as core sampling and excess pulp storage were all conducted in a safe and secure manner. A point of concern is that the pulps and coarse rejects from the 2010 drilling were discarded, but BML has since undertaken to store all excess sample material at their Mokopane premises.

The analytical results from the primary and the umpire laboratories agree reasonably well and therefore validate the element concentrations and SGs obtained from the primary laboratory.

The current procedure to sample thin lithological layers resulted in very variable sample lengths (0.25 cm to 1 m) and it is suggested that a standard sample length of one metre is adopted for future sampling. Discretion can be used when sampling the MML and the P-Q layers but the considerable thickness of these well-mineralised layers can be adequately sampled with one metre intervals, while honouring the lithological contacts. The generally VTM-poor parting between the MAG3 and MAG4 of the MML, portions of the MML HW and the VTM-poor interval within the P-Q package could be sampled at two metre intervals.

MSA is of the opinion that the sampling and analytical procedures and number of QA/QC samples inserted into the sample stream are appropriate for the type of the deposit and for the analytical technique used. The vast majority of the CRMs and all quartz blanks show acceptable performance for Fe_2O_3, TiO_2 and V_2O_5 over the period of the sampling campaign and most field duplicate samples reported to within 10% of x=y slope on a scatter plot. The discrepancy for TiO_2 in the duplicate and umpire samples has been caused by a change by SPL in the calibration setting on the XRF. TiO_2 values below 7% will need to be verified as part of the planned metallurgical test work.

Based on these results, it is concluded that the sampling and assay data from the drilling campaigns are acceptable for use in a Mineral Resource estimation.

12 DATA VERIFICATION

Verification activities were conducted at the MSA office and during three site visits to the Mokopane Project between 2011 and 2015 and included:

- Inspection of the drilling programme
- Review of core handling and core sampling procedures
- Review of drillhole data collection protocols and QA/QC systems
- Checks of the database against the original drillhole logs
- Checks of database against original assay certificates
- Examination of database used for Mineral Resource estimation

MSA undertook audits on the database and all identified errors were addressed by BML's database manager. The integrity of the Maxwell DataShed database has been declared as an accurate representation of the original data collected.

The assay database displays industry standard levels of precision and accuracy through the adoption of a stringent QA/QC program and therefore meets the requirements for use in Mineral Resource estimation.

The results for 16 duplicate and seven umpire laboratory pairs were quarantined in the database due to suspected handling errors during the re-bagging and re-numbering of the pulp material. This procedure is not required for drill core samples and the relatively high percentage of failures (±5%) should therefore not be regarded as a measure for the overall quality and integrity of the sampling procedures for routine drill core samples.

The observed discrepancies for titanium concentrations below 7% TiO_2 between the primary and umpire laboratories should be verified and validated as part of the planned metallurgical test work. It should be noted however that values below 7% TiO_2 are not common in the targeted mineralisation.

MSA has verified the data disclosed in this report that applies to logging and sampling methodologies, sample preparation, analytical methods and QA/QC methodologies implemented by BML.

Overall it is concluded that all exploration activities have been conducted and recorded in an appropriate manner and that all analytical issues have been identified and suitable remedial action taken. Industry standard practices have been followed and the quality of the database meets JORC Code standards and best practice guidelines.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

A metallurgical test work programme was undertaken under the supervision of Mr Jan Rabe (Senior Process Engineer at PESCO) on behalf of BML during 2012-2013 that focussed on both extractive metallurgy and pyro-metallurgy. Extractive metallurgical studies (to evaluate potential concentrate grades and Ti-magnetite recoveries) were undertaken at SGS Laboratories ("SGS") in Johannesburg, South Africa, and were guided by the Mineral Resource model. Pyro-metallurgical studies (to test the potential for pre-reduction of concentrate products, as well as evaluate metal and slag compositions), have been undertaken at Mintek ("Mintek") in Johannesburg, South Africa, on Ti-magnetite products produced at SGS Laboratories.

Pyro-metallurgical modelling on non-fluxed smelting of concentrate from P-Q Zone material and hydro-metallurgical test work on the MML was conducted during 2014. The modelling by Exxaro Research and Development, South Africa ("Exxaro") under the supervision of Hatch Goba, South Africa ("Hatch") showed that the P-Q material can be expected to produce pig iron and a slag containing approximately 60% TiO_2.

Hydro-metallurgical work was conducted by Mintek to test the possible recoveries of V_2O_5 from MML concentrate via the salt-roast route.

13.1 Extractive Metallurgy

Of the five mineralised stratigraphic units identified within the P-Q Zone (PFWDISS, PMAG, Q1, Q2 and Q3), the Q2 and Q3 units make up the bulk of the Mineral Resource, are the thickest and most consistent zones of mineralisation and have the lowest sulphur contents. Hence, metallurgical testwork was focused on these two units. The Q2 unit is the highest-grade layer in the deposit, and consists largely of massive Ti-magnetite, with gangue minerals generally found in discrete bands. In contrast, the Q3 zone has a lower grade, and the Ti-magnetite and gangue minerals are intergrown, forming a disseminated style of mineralisation. Hence, extractive metallurgy has been done on two distinct types, namely the massive Ti-magnetite of the Q2 unit and the disseminated Ti-magnetite of the Q3 unit.

The mineralisation dips at an angle of approximately 20° W, hence both the massive and disseminated zones subcrop beneath soil close to the surface. Material occurring closer to the surface has been subjected to weathering, with associated alteration to the textural properties. Additional extractive tests have been carried out on both disseminated and massive mineralisation in the weathered zone. The drillhole intersections sampled for the metallurgical testwork programme are summarised in the Table 13-1:

Table 13-1
Drillholes sampled for the metallurgical testwork programme (Rabe, 2013)

WEATHERED MINERALISATION				
	Disseminated sample		Massive sample	
Drillhole	From (m)	To (m)	From (m)	To (m)
VKW24	-	-	3.5	15
VKW25	3	8	-	-
VKW27	3	9	-	-
VKW28	19	21	-	-
UNWEATHERED MINERALISATION				
	Disseminated sample		Massive sample	
Drillhole	From (m)	To (m)	From (m)	To (m)
VK08	59.70	70.56	70.56	81.00
VK06	110.00	126.50	126.50	136.74
VK10	111.35	127.26	127.26	137.15
VK14	77.50	88.96	88.96	100.38

All samples were subjected to Davis Tube tests to determine concentrate grades and iron and titanium recoveries. Owing to the relatively low grade of vanadium in the samples, vanadium recoveries are imprecise and have not been reported. For all Davis Tube tests, five topsizes were used; 80% passing 500 µm, 212 µm, 106 µm, 75 µm, 53 µm and 38 µm. Of these, the 80% passing 500 µm was determined to be the optimal size, as grinding to smaller sizes yielded no benefit with regards to product grade during testing.

For the 80% passing 500 µm size fraction, massive samples (both fresh and weathered) gave iron recoveries of >85%, with product grades shown in Table 13-2:

Table 13-2
Product grades for massive Ti-magnetite at a 80% <500 µm grind (Rabe, 2013)

MASSIVE SAMPLE									
	Fe Total	TiO_2	V_2O_5	SiO_2	Al_2O_3	CaO	MgO	Na_2O	P_2O_5
	%	%	%	%	%	%	%	%	%
Fresh	54.76	18.50	0.39	1.17	2.80	0.11	0.97	0.08	<0.01
Weathered	53.00	19.40	0.11	2.09	2.90	0.15	0.71	0.05	0.00

For the 80% passing 500 µm size fraction, disseminated samples (both fresh and weathered) gave iron recoveries of >60%, with product grades shown in Table 13-3

Table 13-3
Product grades for disseminated Ti-magnetite at a 80% <500 µm grind (Rabe, 2013)

DISSEMINATED SAMPLE									
	Fe Total	TiO_2	V_2O_5	SiO_2	Al_2O_3	CaO	MgO	Na_2O	P_2O_5
	%	%	%	%	%	%	%	%	%
Fresh	55.11	17.80	0.25	1.78	2.87	0.19	0.84	0.09	<0.01
Weathered	51.50	17.40	0.20	4.63	3.81	0.73	0.92	0.17	0.01

These results show that although iron recoveries are lower for the disseminated zone (possibly owing to the fact that there may be more silicate-hosted iron present in pyroxenes within this zone), total iron concentrations of between 51% and 55% Fe are possible in the products produced.

In addition, the sample of the massive fresh material was crushed to sizes of -6mm and -12 mm, and the sub 1 mm fractions were screened out. These samples underwent Heavy Liquid Separation ("HLS") tests at densities of 2.96 t/m^3 and 3.6 t/m^3 using combinations of tetra-bromo-ethane ("TBE") and ferrosilicon ("FeSi"). This test produced the following samples:

- Material with SG higher than 3.6 t/m^3
- Material with SG between 2.95 t/m^3 and 3.6 t/m^3
- Material with SG lower than 2.95 t/m^3

The floats and sinks of each fraction were then dried, weighed and sub-sampled, with the sub-sample pulverised and submitted for analysis. HLS tests were used to assess the suitability of the mineralisation to processing by dense media separation ("DMS"), a separation process based on the difference in density of gangue (silicates) and valuable mineral particles (Ti-magnetite) respectively.

The HLS tests show that for both a 6 mm and 12 mm topsize, iron recoveries exceed 85 %, and the difference between the 12 mm and 6 mm top sizes' behaviour when separated by HLS is fairly small, with a grade benefit of roughly one percent at the 6 mm top size compared to the 12 mm top size. Based on these results DMS appears to have a high potential to produce an acceptable product grade at a fairly coarse top size, or to form a pre-concentration stage in the Ti-magnetite recovery process.

Table 13-4

HLS test results for 12>1 mm and 6>1 mm samples (Rabe, 2013)

TOP SIZE	Fe	TiO_2	SiO_2	Al_2O_3	CaO	MgO
	%	%	%	%	%	%
	PRODUCT GRADES (@ 3.6 t/m^3)					
12 mm	48.9	18.5	5.9	3.3	0.96	1.73
6 mm	50.1	19.0	4.7	2.9	0.75	1.65
	PRODUCT RECOVERIES (@3.6 t/m^3)					
12 mm	89	92	35	42	32	60
6 mm	86	89	28	37	24	55

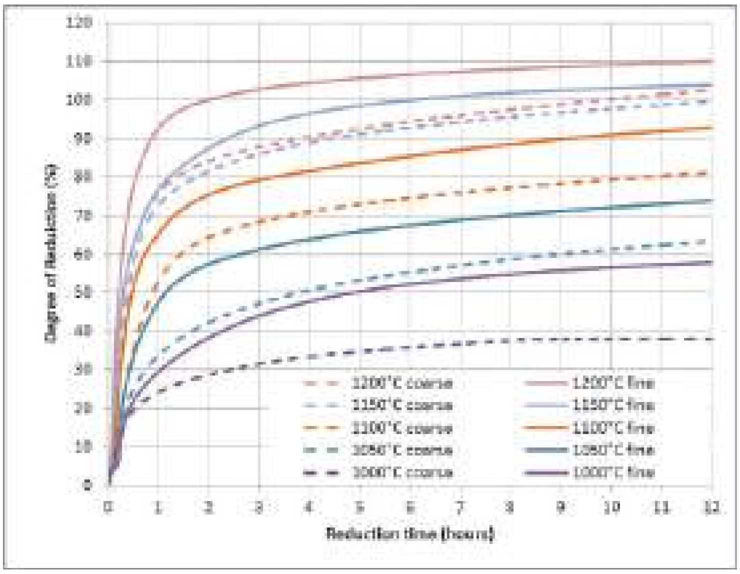
The extractive metallurgy results show that for massive mineralisation, significant upgrading of the iron grade could be achieved at a fairly coarse top size though DMS. The DMS product may be an acceptable saleable product, or could form the feed to further processing (i.e. magnetic separation). For both massive and disseminated mineralisation, the test work indicted that further upgrading to concentrate grades of 51-55% Fe (with a lowering of SiO_2 to <2%) can be achieved through magnetic separation on both the weathered and unweathered material.

13.2 Pyro-metallurgy

BML approached Mintek to undertake pre-reduction tests on Ti-magnetite concentrate samples from the P-Q Zone. This involves low temperature (solid state) reduction to produce a metallised product without melting the ore. Tests were run at temperatures of 1,000 °C, 1,050 °C, 1,100 °C, 1,150 °C and 1,200 °C on each of the samples, and the degree of reduction ("DOR") was calculated by comparing actual mass loss of the sample with the theoretical mass loss, assuming all iron as Ti-magnetite. Both fine (-45 µm) and coarse (-6 mm) products were tested.

The results of the pre-reduction for both the fine and coarse products show that temperatures of at least 1,150 °C are required for >90% reduction to take place. For the coarse concentrate, ~90% reduction occurs after ~4 hours at 1,150 °C, whilst for the fine concentrate, ~90% reduction occurs after ~2.5 hours (Figure 13-1).

Figure 13-1
Degree of reduction as a function of time for the fine and coarse samples (Rabe, 2013)



Modelling by Exxaro in 2014 showed that non-fluxed smelting of VTM concentrate from the P-Q Zone can be expected to produce pig iron and a slag containing approximately 60% TiO_2. According to Exxaro this material should be amenable to further upgrading.

13.3 Hydro-metallurgy

Laboratory-scale salt-roasting and leaching tests on concentrates from the MML were conducted by Mintek in 2014 as part of a Scoping Study completed by BML in July 2014. Vanadium extraction tests were done using sodium sulphate salt ($NaSO_4$) and sodium carbonate salt ($NaCO_3$) extraction processes. The $NaSO_4$ route at 1200 °C resulted in vanadium recoveries of up to 79% while $NaCO_3$ roast produced recoveries of up to 86%. Mintek predicted an overall vanadium recovery of 74% in the plant, including downstream precipitation of the vanadate salt solution.

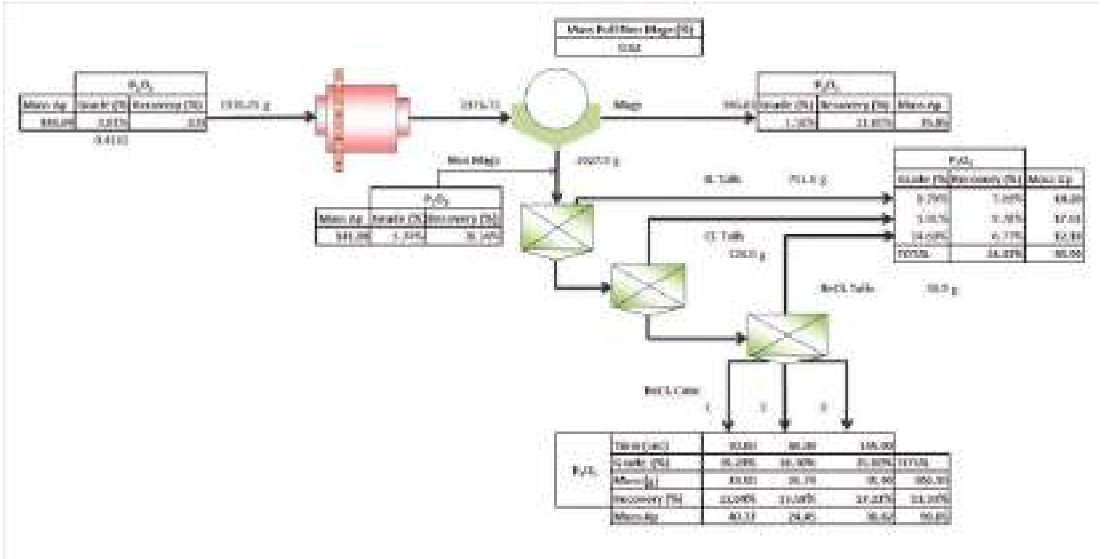
13.4 Other Metallurgical Work

Following initial test work in 2014 by SGS laboratories, Johannesburg ("SGS") using a Davis Tube setup, subsequent tests were undertaken by SGS with Low-intensity Magnetic Separation ("LIMS") to assess the VTM recovery. This work was specifically done for the MML HW material which generally contains disseminated VTM resulting in substantially lower whole rock V_2O_5 concentrations compared to the massive portions of the MML. The LIMS tests showed that a sample with a 0.3% V_2O_5 whole rock content can be upgraded to a VTM concentrate with a grade of approximately 1.5% V_2O_5.

Furthermore, test work was done in 2014 by SGS to assess the beneficiation of phosphate mineralisation within the hanging wall succession of the P-Q Zone. The processing route involved milling and magnetic separation which resulted in an increase in the head grade from 3.8% P_2O_5 to 5.7% P_2O_5 and an apatite recovery of 78%. This pre-concentrate was then subjected to three-stage flotation (rougher, cleaner and re-cleaner) which produced apatite concentrates ranging between 36% and 39% P_2O_5 with an apatite recovery of 68% and an overall recovery of apatite for this process of approximately 53% (Figure 13-2).

Figure 13-2

Flow Sheet for recovery of apatite (P_2O_5) for Phosphate Zone (SGS, 2014)



14 MINERAL RESOURCE ESTIMATES

14.1 Previous Mineral Resource Estimate

14.1.1 MML

The MRE on the MML was originally undertaken in November 2011 on data from four diamond drillholes. The MML was modelled as a single composite unit comprising the MAG3 and MAG4 layers and the VTM-poor parting between the MAG3 and MAG4 Layers, which have the highest Fe_2O_3 grade. Mineral Resource estimations were undertaken on the MML down to a depth of 100 m below surface, at a 40% Fe_2O_3 cut-off.

The results for the MRE from November 2011 on the farms Vliegekraal 783LR and Vriesland 781LR are shown in Table 14-1 for the Inferred Mineral Resources. The Mineral Resource was reported in accordance with the 2004 Edition of the JORC Code.

Table 14-1

MML Inferred Mineral Resource, <100 m deep, as at 25 November 2011

Cut off Fe_2O_3%	Tonnes million	Density t/m^3	Fe %	Fe_2O_3 %	TiO_2 %	V_2O_5 %	SiO_2 %	Al_2O_3 %	P_2O_5 %
40	66.21	3.83	37.1	53.1	9.2	1.24	17.9	11.1	0.01

Note: No geological losses applied

The 20 March 2013 MRE for the MML included drillhole data from 13 additional shallow diamond drill holes, which reduced the average spacing along strike to 600 m for the MML. This drilling assisted in increasing the confidence of the MML from Inferred to Indicated.

Only two drillholes intersected the MML within the weathered profile and the data was therefore insufficient to calculate separate Mineral Resources for the weathered and unweathered portions of the MML. The depth of weathering of the MML ranges between 12 m and 30 m and was visually determined from the drillhole intersections as part of the core logging procedures.

The lithostratigraphic sub-division and correlation developed by BML was applied to define the MAG3 and MAG4 layers. The VTM-poor parting was defined by the base of the MAG3, which is usually characterised by an abrupt decrease in Fe_2O_3 content to below 35%, and by the top of the MAG4, which is accompanied by a sudden downwards increase in Fe_2O_3 content to above 60%. The VTM-poor parting was excluded from the Mineral Resource and the MAG3 and MAG4 were modelled and reported separately.

The composite MML including the parting has an average true thickness of 9.8 m. The MAG3 ranges between 2.59 m and 7.65 m and averages 4.09 m in true thickness. The MAG4 ranges between 2.48 m and 6.30 m and averages 3.59 m in true thickness. The parting ranges from 0.93 m to 4.06 m and averages 2.16 m in true thickness. The interpretation from the aeromagnetic survey correlates reasonably well with the modelled sub-crop position of the Ti-magnetite layers. These show continuity along strike with some off-sets due to possible faulting.

No cut-off grade was applied to the to the massive to semi-massive MAG3 and MAG4 Ti-magnetite layers as these contain mineralisation in excess of 40% Fe_2O_3 and can potentially be mined as individual layers. The VTM-poor parting was not considered a Mineral Resource as the average Fe_2O_3 content in the parting is less than the cut-off grade of 40%, and the parting was therefore regarded as waste.

No geological loss factor was applied to the MRE due to the wide spacing of drillholes and insufficient geological information on the potential presence of dykes, faults and other disruptive structural elements.

The following Indicated Mineral Resources were declared for the MML down to a vertical depth of 120 m (Table 14-2). These Mineral Resources were prepared in accordance with the guidelines of the 2012 Edition of the JORC Code.

Table 14-2
Combined MML Indicated Mineral Resource, <120 m deep, as at 20 March 2013

Layer Name	Thickness (m)	Tonnes million	Density t/m^3	Fe %	Fe_2O_3 %	Fe Metal Tonnes million	TiO_2 %	V_2O_5 %	SiO_2 %	Al_2O_3 %	P_2O_5 %	S %
MAG3	4.09	27.50	4.08	45.5	65.1	12.51	10.0	1.50	10.6	7.8	0.01	0.01
MAG4	3.59	24.31	4.00	43.9	62.7	10.66	9.3	1.46	11.8	8.9	0.01	0.01
Total	**7.68**	**51.81**	**4.04**	**44.7**	**64.0**	**23.17**	**9.7**	**1.48**	**11.2**	**8.3**	**0.01**	**0.01**

Note: No geological losses applied

Grades and tonnages were calculated for the MML parting and are shown in Table 14-3.

Table 14-3
Grades and tonnages for MML parting, <120 m deep, as at 20 March 2013

Layer Name	Thickness (m)	Tonnes million	Density t/m^3	Fe %	Fe_2O_3 %	TiO_2 %	V_2O_5 %	SiO_2 %	Al_2O_3 %	P_2O_5 %	S %
MAG3	4.09	27.50	4.08	45.5	65.1	10.0	1.50	10.6	7.8	0.01	0.01
MAG4	3.59	24.31	4.00	43.9	62.7	9.3	1.46	11.8	8.9	0.01	0.01
Total	**7.68**	**51.81**	**4.04**	**44.7**	**64.0**	**9.7**	**1.48**	**11.2**	**8.3**	**0.01**	**0.01**

Note: No geological losses applied

14.1.2 P-Q Zone

The Mineral Resource Estimate on the P-Q Zone was originally undertaken in November 2011. The P-Q Zone was modelled as a single composite unit comprising the semi-massive to massive P and Q layers, the VTM-poor parting between these two layers and the footwall of the P and hanging wall to the Q layers. The individual units have variable VTM concentrations and were modelled at a 35% Fe_2O_3 cut-off to a vertical depth of 400 m below surface.

The results for the P-Q Zone from November 2011 on the farm Vliegekraal 783LR are shown in Table 14-4 and Table 14-5 for Indicated (surface to 200 m) and Inferred (200 m to 400 m)

Mineral Resources. The Mineral Resource was reported in accordance with the 2004 edition of the JORC Code.

Table 14-4
P-Q Zone Indicated Mineral Resource, <200 m depth at 35% Fe_2O_3 cut-off, as at 25 Nov 2011

Cut Off Fe_2O_3%	Tonnes million	Density t/m^3	Fe %	Fe_2O_3 %	P_2O_5 %	TiO_2 %	V_2O_5 %	SiO_2 %	Al_2O_3 %
35	260.20	3.70	32.4	46.3	0.05	11.3	0.18	24.4	10.2

Note: No geological losses applied

Table 14-5
P-Q Zone Inferred Mineral Resource, <400 m depth at 35% Fe_2O_3 cut-off, as at 25 Nov 2011

Cut Off Fe_2O_3%	Tonnes million	Density t/m^3	Fe %	Fe_2O_3 %	P_2O_5 %	TiO_2 %	V_2O_5 %	SiO_2 %	Al_2O_3 %
35	307.23	3.75	31.9	45.7	0.05	11.5	0.19	23.4	10.2

Note: No geological losses applied

A Mineral Resource update was carried out in December 2012 to include the results from five drillholes which extended the P-Q Zone northwards onto the farm Malokong 784LR and slightly southwards on Vliegekraal and provided a better definition of the P-Q Zone at depth through the drilling of three deep in-fill holes on the farm Vliegekraal. The additional drilling increased the combined Indicated and Inferred Resource by approximately 107 million tonnes. The Indicated and Inferred Mineral Resource for the P-Q Zone to vertical depths of 200 m and 200 m to 400 m below surface are presented in Table 14-6 and Table 14-7 respectively. These Mineral Resources were prepared in accordance with the guidelines of the 2012 Edition of the JORCC Code.

Table 14-6
P-Q Zone Indicated Mineral Resource, <200 m depth at 35% Fe_2O_3 cut-off, as at 3 Dec 2012

Cut Off Fe_2O_3%	Tonnes million	Density t/m^3	Fe %	Fe_2O_3 %	Fe Metal Tonnes million	TiO_2 %	V_2O_5 %	SiO_2 %	Al_2O_3 %	P_2O_5 %	S %
35	350.01	3.65	31.2	44.6	109.06	9.8	0.18	27.2	10.7	0.07	0.54

Note: No geological losses applied

Table 14-7
P-Q Zone Inferred Mineral Resource, 200 to 400 m depth at 35% Fe_2O_3 cut-off, as at 3 Dec 2012

Cut Off Fe_2O_3%	Tonnes million	Density t/m^3	Fe %	Fe_2O_3 %	Fe Metal Tonnes million	TiO_2 %	V_2O_5 %	SiO_2 %	Al_2O_3 %	P_2O_5 %	S %
35	324.62	3.59	30.4	43.5	98.58	9.2	0.16	26.6	11.3	0.06	0.56

Note: No geological losses applied

14.1.3 N-Q Zone

The December 2012 MRE for the P-Q Zone was revised in February 2013 to include the stratigraphic interval with the two narrow Ti-magnetite layers N and O below the P-Q Zone. Most importantly, the newly defined N-Q Zone was sub-divided into 10 individual stratigraphic units or layers, based on BML's detailed petrographic studies and logging.

The 10 layers (NMAG to Q3), comprising the N-Q Zone, were modelled individually and reported in an updated MRE, dated 13 February 2013. The results for the latter MRE on the farms Vliegekraal 783LR and Malokong 784LR are shown in Table 14-8 for the Indicated Mineral Resource while the Inferred Mineral Resource is shown in Table 14-9.

A cut-off grade of 35% Fe_2O_3 was applied. Portions of the PFWDISS and OMAG layer block model estimates are below 35% Fe_2O_3 and therefore areas of below cut-off grade occur. All of the block estimates for the massive to semi-massive magnetite layers (Q3, Q2, Q1, PMAG, NMAG) are greater than 40% Fe_2O_3 and therefore no mineralisation is below the cut-off grade in these layers. All of the PQPART, PQFW and OFW layer block model estimates are less than 35% Fe_2O_3 and are therefore not reported as a Mineral Resource. These Mineral Resources were prepared in accordance with the guidelines of the 2012 Edition of the JORC Code.

Table 14-8
N-Q Layers Indicated Mineral Resource <200 m depth, as at 12 February 2013

Layer Name	Tonnes million	Density t/m^3	Fe %	Fe_2O_3 %	Fe Metal Tonnes million	TiO_2 %	V_2O_5 %	SiO_2 %	Al_2O_3 %	P_2O_5 %	S %
Q3	157.15	3.62	31.5	45.0	49.44	9.5	0.11	26.7	10.0	0.07	0.60
Q2	89.19	4.07	42.1	60.2	37.52	15.3	0.27	12.8	6.8	0.02	0.54
Q1	24.87	3.68	33.2	47.5	8.26	11.5	0.29	21.3	9.9	0.03	0.51
PMAG	40.14	3.66	32.0	45.8	12.85	10.3	0.28	22.0	10.9	0.04	0.94
PFWDISS*	65.72	3.42	27.3	39.0	17.92	7.6	0.22	29.7	12.9	0.03	0.47
OMAG*	1.86	4.04	37.5	53.7	0.70	11.4	0.49	17.9	7.6	0.01	0.12
NMAG	4.72	4.41	48.3	69.0	2.28	16.1	0.55	6.8	5.3	0.02	0.12

*Layer reported at a 35% Fe_2O_3 cut-off; no geological losses applied

Table 14-9
N-Q Layers Inferred Mineral Resource, 200 m to 400 m depth, as at 12 February 2013

Layer Name	Tonnes million	Density t/m^3	Fe %	Fe_2O_3 %	Fe Metal Tonnes million	TiO_2 %	V_2O_5 %	SiO_2 %	Al_2O_3 %	P_2O_5 %	S %
Q3	143.84	3.57	30.2	43.3	43.49	8.8	0.09	28.3	10.3	0.13	0.62
Q2	94.76	3.99	40.3	57.6	38.14	14.1	0.24	15.3	7.6	0.02	0.61
Q1	23.70	3.67	33.2	47.5	7.87	11.3	0.27	21.6	10.5	0.02	0.52
PMAG	38.41	3.58	30.5	43.6	11.71	9.9	0.27	23.4	11.5	0.04	0.83
PFWDISS*	73.88	3.37	26.8	38.3	19.78	6.9	0.21	30.2	12.8	0.03	0.43
OMAG*	2.04	3.80	32.9	47.1	0.67	9.7	0.40	22.5	10.1	0.02	0.11
NMAG	7.22	4.32	46.2	66.1	3.34	15.6	0.49	8.3	5.9	0.02	0.14

*Layer reported at a 35% Fe_2O_3 cut-off; no geological losses applied

The data from 29 additional shallow drillholes targeting the weathered portion of the N-Q Zone assisted in constraining the sub-outcrop positions of the N-Q Zone and to distinguish between weathered and non-weathered portions. These results were used in March 2013 for a MRE for the weathered N-Q Zone covering the farms Vliegekraal 783LR and Malokong 784LR over the drill-confirmed strike length.

The MRE update was conducted on 2,284 samples representing 1,347.10 m of drill core from 27 drillholes and necessitated a remodelling of the entire N-Q Zone that was previously declared in the MRE from 13 February 2013.

No geological losses were applied for the MRE as geological features such as dykes, faults and other disruptive phenomena are poorly-defined at present due to the wide spacing of the drillholes along strike.

A cut-off grade of 35% Fe_2O_3 was applied. Portions of the PFWDISS and OMAG layer block model estimates are below 35% Fe_2O_3 and therefore areas of below cut-off grade occur. All of the block estimates for the massive to semi-massive magnetite layers (Q3, Q2, Q1, PMAG, NMAG) are greater than 40% Fe_2O_3 and therefore no mineralisation is below the cut-off grade in these layers. All of the PQPART, PQFW and OFW layer block model estimates are less than 35% Fe_2O_3 and are therefore not reported as a Mineral Resource.

The Indicated Mineral Resource for the weathered portions of the individual layers comprising the N-Q Zone are presented in Table 14-10, while Table 14-11 shows the combined weathered and unweathered Indicated Mineral Resource down to a vertical depth of 200 m below surface.

Any Mineral Resource occurring at a vertical depth of greater than 200 m below surface has been categorised as Inferred, due to the lower confidence in its potential for economic extraction in the absence of any detailed mining, metallurgical and financial study. The Inferred Mineral Resource for the N-Q Zone from 200 m to 400 m below surface is presented in Table 14-12.

This Mineral Resources was prepared in accordance with the guidelines of the 2012 Edition of the JORC Code.

Table 14-10
N-Q Zone (Weathered) Indicated Mineral Resource, as at 8 March 2013

Layer Name	Tonnes million	Density t/m^3	Fe %	Fe_2O_3 %	Fe Metal Tonnes million	TiO_2 %	V_2O_5 %	SiO_2 %	Al_2O_3 %	P_2O_5 %	S %
Q3	10.20	3.47	33.0	47.2	3.37	9.4	0.12	23.2	9.0	0.05	0.17
Q2	8.83	3.77	40.2	57.5	3.55	13.5	0.23	14.5	6.9	0.02	0.10
Q1	4.47	3.40	30.2	43.2	1.35	7.9	0.23	25.8	10.5	0.02	0.11
PMAG	4.42	3.41	31.5	45.1	1.39	8.4	0.27	23.3	11.0	0.03	0.25
PFWDISS*	10.38	3.29	27.5	39.3	2.85	6.0	0.22	30.4	12.5	0.03	0.09
OMAG*	0.69	3.80	34.2	48.9	0.24	9.7	0.43	22.3	9.8	0.01	0.13
NMAG	0.69	4.39	48.2	68.9	0.33	15.5	0.47	8.2	5.6	0.04	0.13

*Layer reported at a 35% Fe_2O_3 cut-off; no geological losses applied

Table 14-11 N-Q Zone (Weathered+Unweathered) Indicated Mineral Resource <200 m depth, as at 8 Mar 2013											
Layer Name	Tonnes million	Density t/m^3	Fe %	Fe_2O_3 %	Fe Metal Tonnes million	TiO_2 %	V_2O_5 %	SiO_2 %	Al_2O_3 %	P_2O_5 %	S %
Q3	138.63	3.61	31.7	45.4	43.99	10.2	0.13	25.2	9.9	0.06	0.40
Q2	81.17	4.01	41.9	59.9	34.00	15.2	0.28	12.6	6.5	0.02	0.27
Q1	26.36	3.59	32.5	46.6	8.58	10.5	0.28	22.3	9.9	0.02	0.27
PMAG	34.44	3.62	32.4	46.3	11.15	10.1	0.29	21.3	10.5	0.03	0.80
PFWDISS*	67.28	3.38	26.9	38.5	18.13	7.1	0.22	30.1	12.8	0.03	0.33
OMAG*	2.63	4.00	37.2	53.2	0.98	11.1	0.49	18.5	7.9	0.01	0.12
NMAG	4.58	4.41	48.7	69.6	2.23	16.0	0.56	6.9	5.3	0.03	0.11

*Layer reported at a 35% Fe_2O_3 cut-off; no geological losses applied

Table 14-12 N-Q Zone (Unweathered) Inferred Mineral Resource, 200 m to 400 m depth, as at 8 Mar 2013											
Layer Name	Tonnes million	Density t/m^3	Fe %	Fe_2O_3 %	Fe Metal Tonnes million	TiO_2 %	V_2O_5 %	SiO_2 %	Al_2O_3 %	P_2O_5 %	S %
Q3	139.03	3.59	30.2	43.3	42.05	8.8	0.09	28.3	10.3	0.13	0.61
Q2	92.64	3.99	40.2	57.5	37.27	14.1	0.23	15.3	7.6	0.02	0.55
Q1	23.42	3.64	32.7	46.8	7.66	10.8	0.27	22.2	10.6	0.02	0.36
PMAG	38.28	3.58	30.6	43.7	11.70	9.8	0.26	23.5	11.5	0.04	0.74
PFWDISS*	76.51	3.37	26.8	38.3	20.49	6.9	0.21	30.2	12.8	0.03	0.43
OMAG*	1.87	3.77	32.4	46.3	0.61	9.5	0.40	23.1	10.4	0.02	0.10
NMAG	7.22	4.32	46.3	66.2	3.34	15.6	0.49	8.3	5.8	0.02	0.14

*Layer reported at a 35% Fe_2O_3 cut-off; no geological losses applied

14.2 Current Mineral Resource Estimate for P-Q Zone for Schoonoord and Bellevue

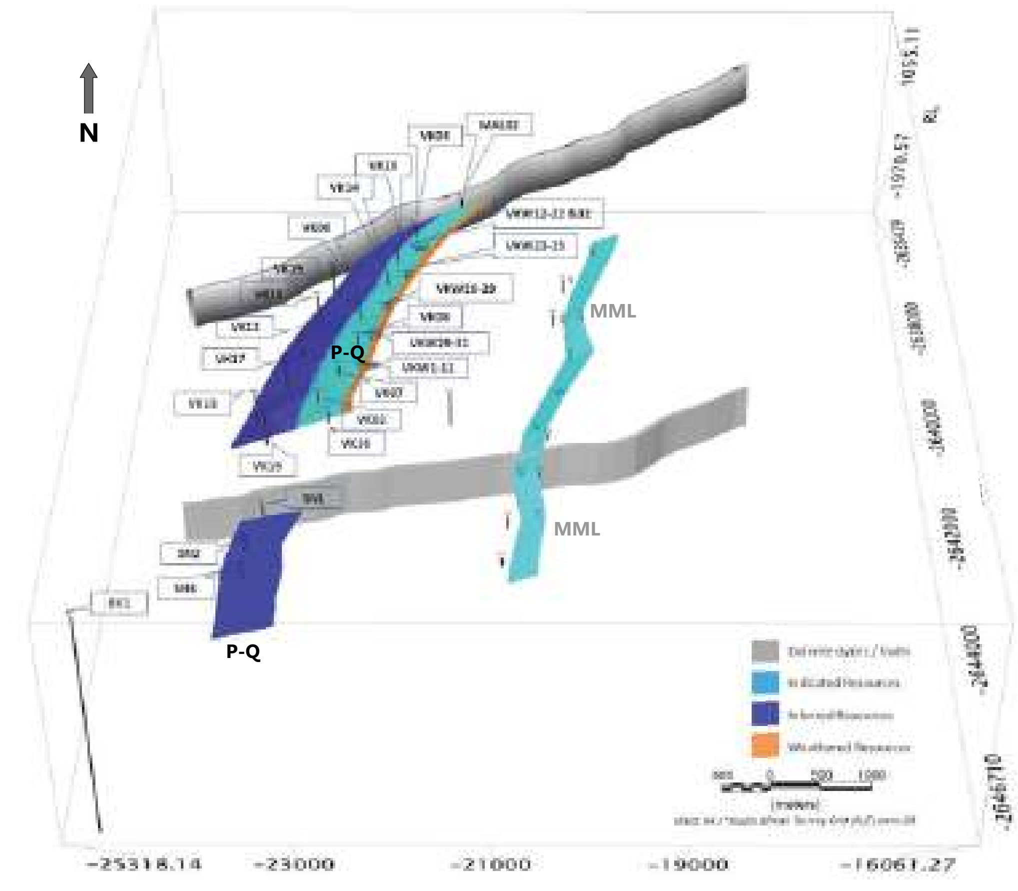
The adjacent farms Schoonoord 786LR and Bellevue 808LR were added to the original Project Area in 2013 and the inclusion of additional data from four drillholes prompted a further MRE update for the P-Q Zone. On BML's request, the N and O layers and the approximately 15 m thick VTM-poor gabbroic package separating these two layers from the base of the P-Q Zone were excluded from the MRE update.

14.2.1 Database

The principal sources of information for this MRE include geological and geochemical data generated from drilling campaigns between 2010 and 2013 and hole BV-1, drilled in 1991 by the CGS on Bellevue (Figure 14-1). The MRE was conducted on 31 drillholes including the four holes on Schoonoord and Bellevue which added 326 samples, representing 233.69 m of core material. Drill core was sampled at variable lengths ranging from 50 cm to 200 cm.

Figure 14-1

Isometric view of drillhole collars and Mineral Resources of P-Q Zone (MSA, 2015)



Specific gravity ("SG") for each sample was determined by gas pycnometry on the pulverised sample material at SPL, Johannesburg. The specific gravity measurements have been checked against the Fe_2O_3 assay results and show good correlation (Figure 11-7). Core recoveries within the P-Q Zone are generally in excess of 95%.

The topographic model was derived from the drillhole collar elevations and topographical contours.

The overburden soil horizon ranges in depth from 3 m to 5 m and the top 5 m were excluded from the Mineral Resource.

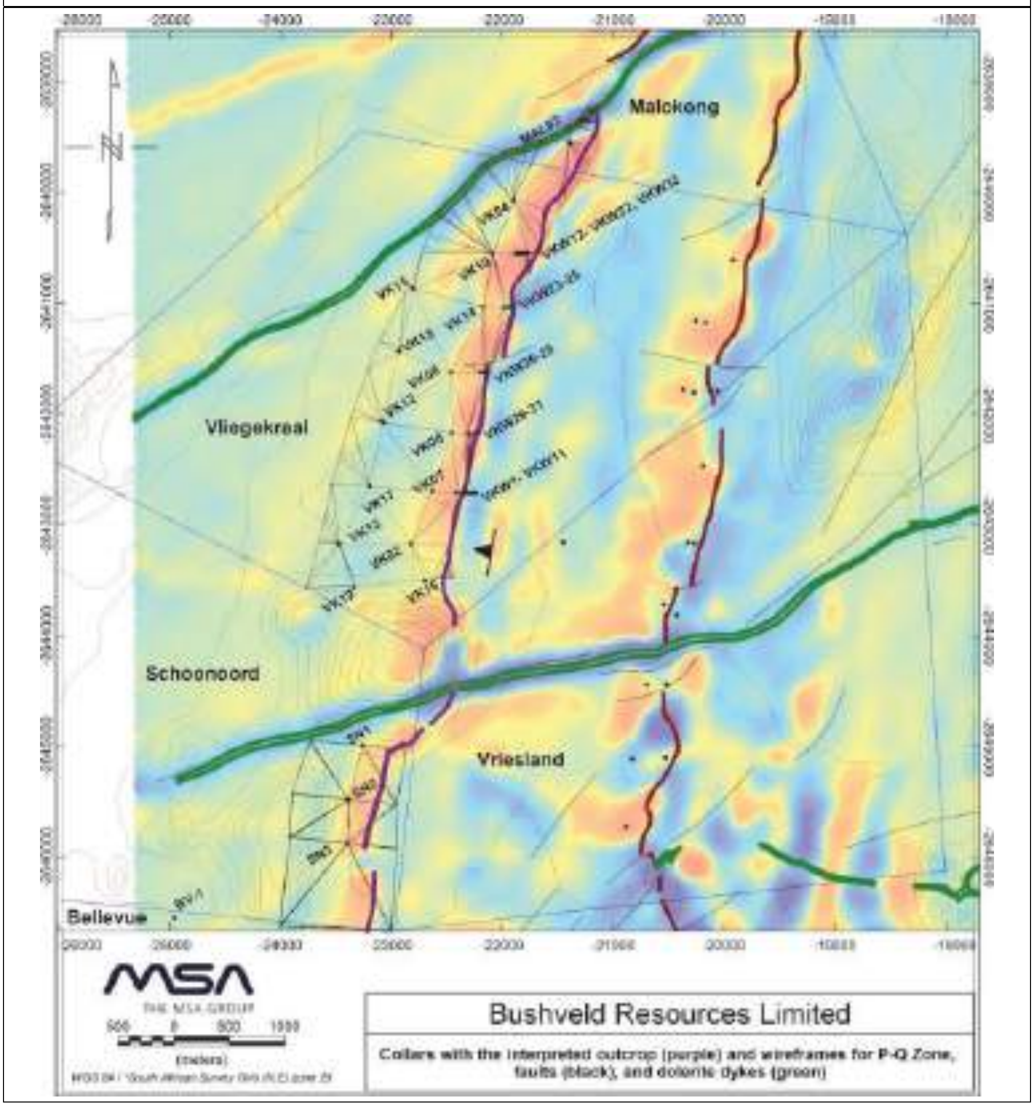
14.2.2 Geological Interpretation and Modelling

Datamine Studio 3 was used to construct the geological model (wireframes) based on geochemical data and lithostratigraphic information from the geological logging. The modelled surfaces were extrapolated to a vertical depth of 400 m below surface, but only the portion to a vertical depth of 300 m has been considered in the MRE due to the proximity to a ridge to the west of the inferred sub-outcrop position of the P-Q Zone. The ridge consists of a diabase sill. A diabase sill also forms a prominent hill at the junction of the three farms Vliegekraal 783LR, Vriesland 781LR and Schoonoord 786LR. The area occupied by the hill was excluded from the MRE (Figure 14-2). The ridge forms a natural barrier to the west and the high stripping ratio required would be in conflict with reasonable prospects for eventual economic extraction of the P-Q Zone in an opencast mine scenario.

The dimensions of the parent block model are 100 m (easting or X) by 100 m (northing or Y) by 5 m (Z dimension or height). The six P-Q layer wireframes were used to generate the various block models. Sub-celling of the parent blocks was then applied in the XY plane in order to achieve optimal block model fitting into the wireframes. This resulted in a minimum of 5 m (X) by 5 m (Y) with exact fitting for the Z sub-blocks.

Figure 14-2

Wireframes relative to interpreted outcrop position of P-Q Zone (MSA, 2015)



14.2.3 Grade Estimation

Statistical analysis was undertaken on the P-Q Zone, utilising drillhole data within the respective wireframes. Owing to the large drillhole separation along strike, lateral variography did not yield meaningful results. Inverse distance weighting, to the power of 2 (IDW-2), was used for the grade estimation. The search ellipses were rotated in order to match the dip angle (±20°) and westerly dip direction of the wireframes.

Estimates using a search volume of 800 m (X) by 800 m (Y) by 20 m (Z) and a minimum number of two composited samples were considered for classification as Inferred Mineral Resource. The Mineral Resource was constrained to a maximum vertical depth of 300 m below surface.

14.2.4 Mineral Resource Tabulation

No geological losses were applied for the P-Q layers. Occurrences of dykes, faults and other disruptive geological features within the P-Q layers are poorly-defined due to the wide spacing of the drillholes.

A cut-off grade of 35% Fe_2O_3 was applied to the PFWDISS and PMAG layers because the average Fe_2O_3 concentration in these layers is below 40% Fe_2O_3 and the two layers therefore contain significant portions below the cut-off grade of 35% Fe_2O_3. No cut-offs were applied to the massive to semi-massive Ti-magnetite layers (Q3, Q2 and Q1) as these layers contain mineralisation in excess of 40% Fe_2O_3 and can potentially be mined as a composite unit. For the purpose of Mineral Resource reporting, the PQPART layer (between PMAG and Q1) was not declared as part of the Mineral Resource. The average Fe_2O_3 content in this layer is less than 35%, and the PQPART is therefore regarded as waste.

The diabase hill at the boundary between the farms Schoonoord and Bellevue resulted in an approximately 1,200 m wide gap in the modelling of the P-Q Zone over the entire Project Area and the Mineral Resource is therefore only presented for the farms Schoonoord and Bellevue and not combined with the MRE for the farms Vliegekraal and Malokong.

The Mineral Resource was prepared in accordance with the guidelines of the 2012 Edition of the JORC Code and was separated, on request by BML, into intervals of between surface and 200 m vertical depth (Table 14-13), surface and 300 m vertical depth (Table 14-14) and vertical depths of 200 m to 300 m in Table 14-15.

Table 14-13
P-Q Zone Inferred Mineral Resource, surface to 300 m vertical depth at a 35% Fe_2O_3 cut-off for the farms Schoonoord 786LR and Bellevue 808LR, as at 15 October 2017

Layer Name	Quantity million tonnes	Density t/m^3	Fe %	Fe_2O_3 %	Fe Metal million tonnes	TiO_2 %	V_2O_5 %	SiO_2 %	Al_2O_3 %	P_2O_5 %	S %
Q3	75.3	3.77	34.3	49.1	25.82	10.5	0.10	23.0	9.4	0.28	0.55
Q2	85.5	4.14	42.6	60.9	36.40	14.9	0.26	13.1	6.9	0.03	0.50
Q1	13.1	3.82	36.4	52.1	4.76	12.2	0.30	19.1	9.8	0.03	0.46
PMAG	19.7	3.52	27.6	39.5	5.45	8.3	0.23	29.1	12.4	0.06	1.00
PFWDISS*	27.3	3.45	27.8	39.8	7.60	8.0	0.22	28.3	12.9	0.06	0.55
[1]TOTAL	**220.8**	**3.85**	**36.2**	**51.9**	**80.03**	**11.8**	**0.20**	**20.1**	**9.2**	**0.12**	**0.57**

*Layer reported at a 35% Fe_2O_3 cut-off; no geological losses applied

Table 14-14
P-Q Zone Inferred Mineral Resource, surface to 200 m vertical depth at a 35% Fe_2O_3 cut-off for the farms Schoonoord 786LR and Bellevue 808LR, as at 15 October 2017

Layer Name	Quantity million tonnes	Density t/m^3	Fe %	Fe_2O_3 %	Fe Metal million tonnes	TiO_2 %	V_2O_5 %	SiO_2 %	Al_2O_3 %	P_2O_5 %	S %
Q3	47.0	3.78	34.6	49.5	16.27	10.6	0.11	22.8	9.3	0.20	0.55
Q2	54.8	4.15	42.8	61.2	23.46	15.0	0.26	12.9	6.8	0.03	0.49
Q1	8.4	3.82	36.4	52.1	3.07	12.1	0.30	19.2	9.7	0.03	0.47
PMAG	12.9	3.52	27.6	39.5	3.56	8.2	0.22	29.4	12.3	0.07	1.01
PFWDISS*	18.9	3.46	28.1	40.3	5.31	8.0	0.22	28.1	12.8	0.06	0.55
[1]TOTAL	**142.0**	**3.86**	**36.4**	**52.1**	**51.68**	**11.8**	**0.20**	**20.1**	**9.1**	**0.09**	**0.56**

*Layer reported at a 35% Fe_2O_3 cut-off; no geological losses applied

Table 14-15
P-Q Zone Inferred Mineral Resource, 200 m to 300 m vertical depth at a 35% Fe_2O_3 cut-off for the farms Schoonoord 786LR and Bellevue 808LR, as at 15 October 2017

Layer Name	Quantity million tonnes	Density t/m^3	Fe %	Fe_2O_3 %	Fe Metal million tonnes	TiO_2 %	V_2O_5 %	SiO_2 %	Al_2O_3 %	P_2O_5 %	S %
Q3	28.3	3.75	33.8	48.4	9.55	10.3	0.08	23.3	9.6	0.41	0.55
Q2	30.6	4.12	42.2	60.4	12.94	14.7	0.26	13.5	7.1	0.03	0.52
Q1	4.6	3.82	36.4	52.1	1.69	12.4	0.30	18.9	10.0	0.03	0.44
PMAG	6.8	3.52	27.6	39.5	1.89	8.5	0.25	28.5	12.6	0.04	0.98
PFWDISS*	8.4	3.43	27.1	38.7	2.29	8.0	0.22	28.7	13.1	0.06	0.55
[1]TOTAL	**78.8**	**3.85**	**35.8**	**51.5**	**28.36**	**11.8**	**0.19**	**20.3**	**9.3**	**0.17**	**0.57**

* = Layer reported at a 35% Fe_2O_3 cut-off; no geological losses applied
[1]Total = All tabulated data has been rounded and as a result minor computational errors may occur

14.2.5 Checklist of Assessment and Reporting Criteria

Criteria for assessing this MRE are presented in Table 14-16, which include the relevant aspects of Table 1 of the JORC code (2012).

Table 14-16
Checklist of assessment and reporting criteria for P-Q Zone

Criteria	Comment/Description
Drilling techniques	NQ diameter vertical diamond drillholes
Logging	All drillholes were geologically logged by qualified geologists. The logging was of an appropriate standard for resource estimation
Drill sample recovery	Recoveries are documented in drillhole logs for all drillholes. The average recovery in the mineralised zone was in excess of 95%
Sampling methods	Core samples were collected continuously through the mineralised zone with an average sample length ranging from 50 cm to 200 cm. MSA observed that the routine sampling methods were of a high standard and suitable for evaluation purposes
Quality of assay data and laboratory tests	The assay database displays industry standard levels of precision and accuracy and meets the requirements for use in a Mineral Resource estimate. Verification of sample assay data was carried out by means of inserting approximately 4% CRMs, 7% blanks and 8% field duplicates into the sample stream adhering to a stringent QA/QC protocol. Failures of six duplicates and one CRM due to sample number mix-ups were resolved by re-submission and analysis by the laboratory
Verification of sampling and assaying	Verification of assay data was performed at a second laboratory for approximately 8% of the total samples analysed at the original laboratory. Failures of four samples due to sample number mix-ups were addressed and samples re-submitted to the laboratory for analyses.
Location of data points	All of the drillhole collars have been surveyed by a qualified surveyor. Selected drillhole collars have been observed by MSA in the field. Vertical holes drilled to 200 m below surface were not surveyed down-the-hole but were accepted as being vertical for their entire length given that deviation is minimal at such shallow depths
Tonnage factors (in situ bulk densities)	An acceptable number of specific gravity measurements were gathered for the mineral resource estimation
Data density and distribution	The deep drillholes were spaced at an average of 500 m apart, which is sufficient to assume geological and grade continuity for this type of mineralisation but insufficient for grade continuity to be confirmed. The three drillholes on Schoonoord were spaced approximately 500 m apart on strike
Database integrity	Data were provided in a DataShed database and MSA has checked the integrity of the database and considers that the database is an accurate representation of the original data collected
Dimensions	The Mineral Resource for the P-Q Layers on Schoonoord and Bellevue occurs over a north to south strike length of approximately 1,700 m and east to west breadth of 940 m. It averages 30 m in true thickness and dips at an average of 20 degrees to the west. The Mineral Resource occurs from surface and its thickness has been constrained by lithostratigraphic contacts
Geological interpretation	The Mineral Resource is a shallow dipping package of layers that is typical for this style of mineralisation in the Bushveld Complex. This has been confirmed by diamond drilling

Criteria	Comment/Description
Domains	The Project Area is composed of one contiguous block for the P-Q Zone
Compositing	Drillhole samples were composited to the entire intersection for each of the Q3, Q2, Q1, PMAG and PFWDISS layers for use in grade estimation
Statistics and variography	There were insufficient data to calculate reliable variograms. Variance of the data within the individual layers is low
Top or bottom cuts for grades	Due to the lack of outlier values in the dataset, the data were not modified by bottom or top cuts
Data clustering	Drillholes were drilled along strike
Block size	Grades were estimated into a 100 m N by 100 m E by 5 m RL three dimensional block model. The block model was split into sub cells of 5 mE by 5 mN with exact fitting for the RL in order to accurately represent the volume of the mineralised body
Grade estimation	Grades were estimated using inverse-distance weighting to the power of 2. Grades were interpolated by sample composites for the respective layers, selected within a search ellipse of 800 m by 800 m by 20 m, with the long axis orientated in the plane of the mineralisation
Mineral Resource Classification	The classification incorporated the confidence in the quality of the drillhole data, the data distribution, and consideration of reasonable prospects for eventual economic extraction. All blocks down to a vertical depth of 300 m below surface have been classified as Inferred due to the limited amount of data. The Mineral Resource is constrained at depth largely due to uncertainty on the potential for economic extraction beyond these depths
Cut-off grades	The Mineral Resource has been reported using a base case cut-off grade of 35% Fe_2O_3 for the semi-massive to disseminated layer PFWDISS
Mining Cuts	No mining cuts have been applied
Metallurgical factors or assumptions	Metallurgical studies have been undertaken on the respective layers of the N-Q Zone to the north
Audits and reviews	The following audit and review work was completed by MSA: • a review of the database • a review of drillhole data collection protocols and QA/QC procedures • two site-based reviews of the drillhole data and a site visit to the Project Area • QA/QC check conducted by MSA

14.3 Current Mineral Resource Estimate for the Phosphate Zone

The P-Q zone consists of six individual stratigraphic layers with variable Ti-magnetite enrichment. Phosphorus concentrations, hosted exclusively by apatite, generally increase gradually over several metres in the immediate hanging wall succession of the P-Q Zone. The subdivision into three distinct units of the stratigraphic interval hosting the phosphorus mineralisation is shown in Table 14-17.

Table 14-17 Stratigraphic units of the Phosphate Zone and underlying P-Q Zone (MSA, 2014)			
Strat Code	**Layer Name***	**Average Thickness**	**Description**
	Lower Phosphate Rich Zone	40 m	Magnetite gabbro-norite and gabbro-norite, rich in apatite. Defined by P_2O_5 grades greater than 2.5%, May contains granitic veins and occasional diabase sills
	Phosphate Poor Zone	4.5 m	Magnetite gabbro and magnetite gabbro-norite. Increases from <0.5% P_2O_5 to 2.5% P_2O_5 upwards
HWM	Hanging Wall Marker	0.75 m	Magnetite gabbro and magnetite gabbro-norite. P_2O_5 generally less than 1% but greater in places
Q3	Upper "low-grade" zone	13 m	Upper Q-Ti-magnetite zone, generally semi-massive Ti-magnetite. Contains significant internal waste in places
Q2	Lower "high-grade" zone	12 m	Lower Q-Ti-magnetite zone, generally massive ore
Q1	Basal disseminated zone	3.5 m	Basal zone, disseminated Ti-magnetite below the massive Q2 horizon
PQPART	Parting between the P and Q Ti-magnetites	4 m	Barren zone of gabbronorite separating the P and Q Ti-magnetite layers
PMAG	"P" - Ti-magnetite	3 m	P-Ti-magnetite zone, generally massive, but with some internal waste and often containing more sulphides than the Q horizon
PFWDISS	"P" - Ti-magnetite disseminated footwall mineralisation	15 m	A zone of disseminated mineralisation in the footwall to the more massive P-Ti-magnetite, lower grade but nonetheless significant

* Shaded cells in the Table indicate the zone for which the MRE for the Phosphate Zone applies

14.3.1 Database

The input database for the modelling of the phosphate-rich zone consisted of diamond drill core from 19 holes. One drillhole (VK02) was excluded from this estimate due to missing data and disruption of the typical stratigraphic layering by a disruptive feature that is not yet fully understood. Drill core was sampled at variable lengths, mostly at 1 m lengths although nominal intervals of 0.5 m and 2.0 m were used for some of the holes. The sample lengths were modified to honour geological features.

Specific gravity for each sample was determined by gas pycnometry on the pulverised sample material at SPL in Johannesburg. The specific gravity measurements were checked against the Fe_2O_3 assay results and show a good correlation (Figure 11-7). Core recoveries within the modelled zone are generally in excess of 95%, although areas of poorer recovery can occur in the weathered zone.

The topography model was derived from the drillhole collar elevations and topographical contours.

The overburden soil horizon, which ranges in depth from 3 m to 5 m, was excluded from the estimation to a constant depth of 5 m. A weathered surface was modelled based on the geological core logging, although it is currently uncertain whether weathering affects the phosphate mineralisation.

14.3.2 Geological Interpretation and Modelling

The wireframes were constructed in Datamine Studio 3 by using geochemical data and lithostratigraphic information from the geological logging. The top-most contact of the P-Q Zone (Q3) was taken as the base for the Phosphate Zone estimate. The top of the Phosphate Zone was taken as the position where the P_2O_5 grade decreased to below 2.5%, this being a sharp break in the P_2O_5 grade profile upwards through the drillhole. A single layer was modelled for the phosphate enriched zone.

Consistent with the P-Q Zone MRE on the VTM, the modelled surface for the northern farms (Vliegekraal and Malokong) were extrapolated to 400 m below surface, but only the portion to a vertical depth of 300 m has been considered in the southern area (Schoonoord and Bellevue) due to the topographic feature to the west of the inferred sub-outcrop position of the P-Q Zone. Similar to the P-Q Zone, an approximately 1,200 m long strike section, overlain by a thick diabase sill forming a prominent hill at the boundary of the farms Vliegekraal and Schoonoord, was excluded from this estimate.

The dimensions of the parent block model are 100 mY (northing) by 20 mX (easting) by 4 mZ (height), a relatively short distance being used in the X direction to account for the dip of the mineralised zone so that the modelling is able to replicate the strata-form nature of the mineralisation. Sub-celling of the parent blocks to 25 mN by 5m X by 1m Z was then applied in order to achieve optimal block model fitting into the wireframes.

14.3.3 Grade Estimation

Exploratory data analysis was undertaken on the raw data within the defined phosphate-rich zone, this being taken as the interval from the base of HWM to the position where the P_2O_5 grade decreased to below 2.5%.

Statistical analysis was conducted on the Phosphate Zone after compositing the data to 1 metre lengths using length and density weighting. Owing to the large drillhole separation along strike, lateral variography did not yield meaningful results. Inverse distance weighting to the power of 2 (IDW-2), was used for the grade estimation. The search ellipses were rotated in order to match the dip angle (±20°) and westerly dip direction of the wireframes.

Estimates used a search volume of 800 m (X) by 800 m (Y) by 10 m (Z) to source a minimum number of 10 composited samples. Where enough composites could not be sourced in this search volume, the search was progressively expanded to ensure sufficient samples for a reasonable estimate were sourced. A dynamic search was used that locally alters the direction of the search ellipse according to the wireframe dip and strike.

14.3.4 Mineral Resource Tabulation

The Mineral Resource has been constrained in the same way as for the P-Q Zone VTM MRE to a vertical depth limited to 400 m below surface in the northern farms and 300 m in the southern farms. A geological loss of 10% was applied due to occurrences of dykes, sills, granitic veins and other disruptive geological features, these being more prevalent in the phosphate zone than in the P-Q zone. Consistent with the VTM estimate, the mineralisation was limited in extent along strike and dip due to the presence of the ridge to the west of the P-Q Zone. Due to the high stripping ratio created by the ridge, it forms a natural barrier in terms of viable extraction in an opencast mine scenario.

A cut-off grade of 3% P_2O_5 was used to report the mineralisation. The estimated blocks selected above this grade threshold form a cohesive zone of mineralisation.

The Mineral Resource was classified as an Inferred Mineral Resource. Layered magmatic Bushveld deposits have excellent geological continuity; however the drillholes are too widely spaced to allow for local grade estimates.

A summary of the tonnage and grade estimates per farm is presented in Table 14-18. The estimates have been broken down into weathered and fresh in a number of depth intervals in Table 14-19. Figure 14-3 shows the grade vs tonnage curve for the Phosphate Zone.

Table 14-18
Phosphate Zone Mineral Resource at a 3% P_2O_5 cut-off for the farms Vliegekraal 783LR, Malokong 784LR Schoonoord 786LR and Bellevue 808LR, as at 15 October 2017

Farm	Tonnes millions	P_2O_5 %	Fe_2O_3 %	*S %	*SiO_2 %	*CaO %	Density t/m^3
Vliegekraal	330.0	3.6	32.1	0.39	34.0	9.1	3.30
Malokong	1.8	3.2	35.5	0.37	35.4	8.6	3.27
Schoonoord	104.9	3.6	34.1	0.40	33.0	8.8	3.37
Bellevue	5.0	3.6	34.4	0.41	33.3	8.9	3.36
[1]**TOTAL**	441.6	3.6	32.6	0.39	33.7	9.0	3.32

* = Included for informative purposes only, no value will be derived from these materials; no geological losses applied
[1]Total = All tabulated data has been rounded and as a result minor computational errors may occur

14.3.5 Assessment of Reasonable Prospects for Eventual Economic Extraction (RPEEE)

The Mineral Resource forms part of BML's VTM project and it is expected that the phosphate will be co-extracted with the VTM. Therefore the Phosphate Mineral Resource is incremental in nature. The costs of mining the apatite-rich zone is expected to be minimal as much of the costs of mining will be attributed to the hanging wall waste stripping required in order to access the VTM immediately underlying the phosphate mineralisation. Some mining costs will apply, together with the costs of milling and concentrating the apatite.

The value of Phosphate Rock Concentrate (Bulk, FOB Morocco, Q1 2015, 31-33% P_2O_5) is between USD125 and USD130 per tonne (Profercy Phosphates and NPKs). Bench scale metallurgical studies carried out by BML indicate that a P_2O_5 grade of approximately 38% can be achieved using magnetic separation followed by flotation.

Figure 14-4 compares the grade and tonnage of the in-situ Mineral Resource and the grade and tonnage of the expected product with that of other apatite deposits, either in production or advanced exploration. Despite the relatively low in-situ grade of the P-Q hanging wall Phosphate Zone, the upgraded product is within the upper quartile of the peer group.

Reasonable prospects for eventual economic extraction for the phosphate rock are dependent on its co-extraction with the VTM and it is less likely that the Phosphate Zone could potentially be extracted economically as a single commodity phosphate venture.

Phosphate deposits fall into the category of industrial minerals in terms of the JORC Code (2012). Despite the relatively low grade of the mineralisation, BML has conducted high level test-work that demonstrates that the phosphate within the Project Area can be upgraded to a saleable product, i.e. an apatite concentrate. It is assumed by BML that this product could be absorbed into the local fertiliser market, although no detailed marketing studies have been carried out to verify this assumption.

Table 14-19

Phosphate Zone Mineral Resource by depth and weathering state at a 3% P_2O_5 cut-off for the farms Vliegekraal 783LR, Malokong 784LR Schoonoord 786LR and Bellevue 808LR, as at 15 October 2017

Weathering State	Depth Interval	Farm	Tonnes millions	P_2O_5 %	Fe_2O_3 %	*S %	*SiO_2 %	*CaO %	Density t/m^3
Weathered	0-200	Bellevue	0.4	3.7	36.2	0.41	31.6	8.9	3.39
Fresh	0-200	Bellevue	3.1	3.6	34.2	0.41	33.4	8.9	3.36
All	0-200	Bellevue	3.5	3.6	34.5	0.41	33.2	8.9	3.36
Fresh	200-300	Bellevue	1.4	3.6	34.1	0.41	33.4	9.0	3.36
Total All	**Total**	**Bellevue**	**5.0**	**3.6**	**34.4**	**0.41**	**33.3**	**8.9**	**3.36**
Weathered	0-200	Schoonoord	11.7	3.5	33.9	0.40	33.2	8.8	3.37
Fresh	0-200	Schoonoord	68.7	3.6	34.2	0.41	32.9	8.8	3.37
All	0-200	Schoonoord	80.5	3.6	34.2	0.41	32.9	8.8	3.37
Fresh	200-300	Schoonoord	24.4	3.6	33.9	0.40	33.2	8.8	3.37
Total All	**Total**	**Schoonoord**	**104.9**	**3.6**	**34.1**	**0.40**	**33.0**	**8.8**	**3.37**
Weathered	0-200	Malokong	0.6	3.2	35.6	0.38	35.5	8.7	3.27
Fresh	0-200	Malokong	1.1	3.2	35.6	0.37	35.5	8.7	3.27
All	0-200	Malokong	1.7	3.2	35.6	0.38	35.5	8.7	3.27
Fresh	200-400	Malokong	0.1	3.1	33.6	0.35	34.8	8.4	3.29
Total All	**Total**	**Malokong**	**1.8**	**3.2**	**35.5**	**0.37**	**35.4**	**8.6**	**3.27**
Weathered	0-200	Vliegekraal	18.0	3.7	30.8	0.27	35.2	9.1	3.29
Fresh	0-200	Vliegekraal	126.9	3.6	31.5	0.34	34.5	9.0	3.31
All	0-200	Vliegekraal	144.9	3.6	31.4	0.33	34.6	9.0	3.30
Fresh	200-400	Vliegekraal	185.0	3.6	32.6	0.43	33.5	9.2	3.30
Total All	**Total**	**Vliegekraal**	**330.0**	**3.6**	**32.1**	**0.39**	**34.0**	**9.1**	**3.30**
Weathered	0-200	All Farms	30.7	3.6	32.2	0.32	34.4	8.9	3.32
Fresh	0-200	All Farms	199.8	3.6	32.5	0.36	34.0	9.0	3.33
All	0-200	All Farms	230.6	3.6	32.4	0.36	34.0	9.0	3.33
Fresh	0-400	All Farms	211.0	3.6	32.7	0.43	33.4	9.1	3.31
Total All	**Total**	**All Farms**	**441.6**	**3.6**	**32.6**	**0.39**	**33.7**	**9.0**	**3.32**

* = Included for informative purposes only, no value will be derived from these materials; no geological losses applied

All tabulated data has been rounded and as a result minor computational errors may occur

Figure 14-3

Grade Tonnage Curve for Total Phosphate Zone (MSA, 2014)

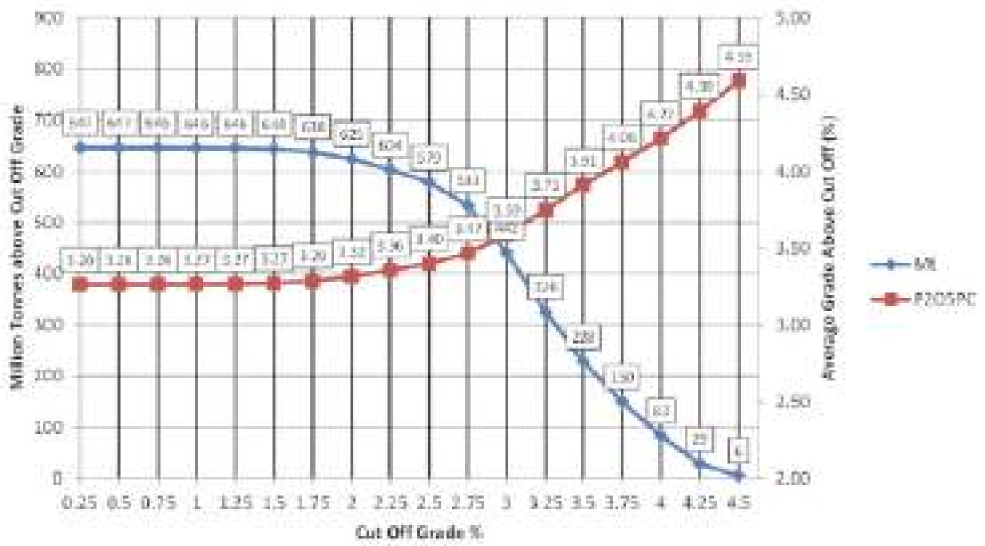
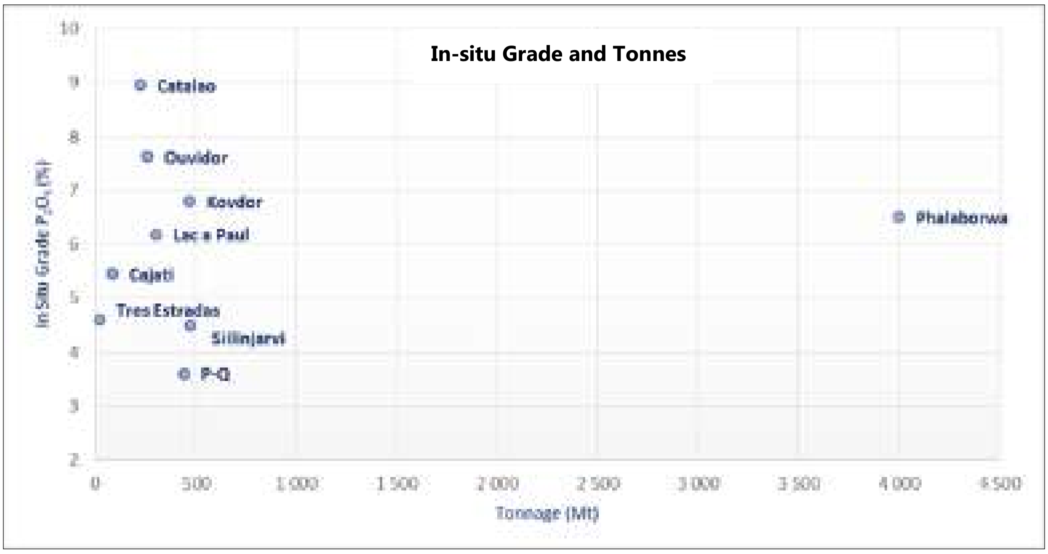
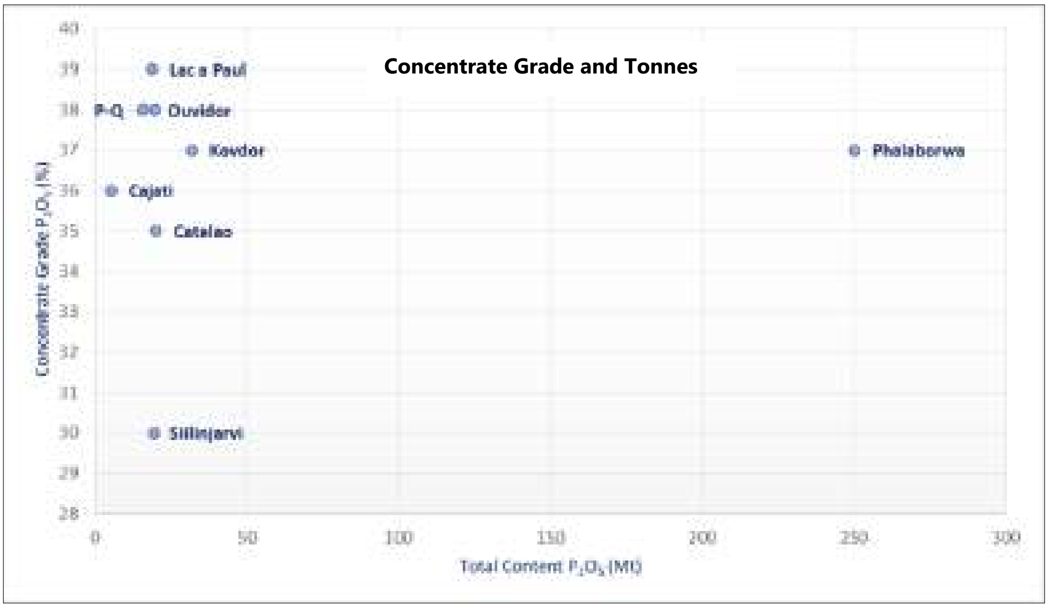


Figure 14-4
Comparison of BML's Phosphate Mineral Resource with Mineral Resources of other phosphate operations or advanced exploration projects





Note: BML's Phosphate Zone is shown as P-Q

14.3.6 Checklist of Assessment and Reporting Criteria for Phosphate Zone

Criteria for assessing this estimate are presented in the following table

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)		
Criteria	**JORC Code explanation**	**Commentary**
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling* • *Include reference to measures taken to ensure sample representivity and the calibration of any measurement tools or systems used* • *Aspects of the determination of mineralisation that are Material to the Public Report* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information*	• The mineralisation was sampled using NQ size diamond cored holes. A total of 19 holes were drilled vertically. Only diamond drill core was used to sample the mineralisation • Core was logged for lithology, weathering state and structure. Core was half-split or quarter-split and sampled following BML protocols and QAQC procedures as per standard industry practice • The cores were sampled continuously through the zone mostly on nominal 1 m intervals, although this did vary to 0.5 m or 2.0 m. The nominal intervals were varied in order to respect geological boundaries • Samples were dried and then crushed to greater than 80% less than 2.8 mm, milled to greater than 90% less than 106 µm and analysed on a fused glass disk with an X-ray fluorescence spectrometer (XRF)
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc*	• Only diamond drill core predominantly NQ size. Holes were drilled vertically and core was not oriented
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed* • *Measures taken to maximise sample recovery and ensure representative nature of the samples* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material*	• Core recoveries were logged. Overall core recoveries are 95%, although lower recoveries occur in the weathered zone
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining and metallurgical studies* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography* • *The total length and percentage of the relevant intersections logged*	• All core has been logged for lithology, mineralisation, structure and weathering • All data is stored in a relational drillhole database (Maxwell) • All cores were logged from surface to the end of hole. The total length of core in the 19 holes used for the estimate is 7,645.31 m

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)		
Criteria	**JORC Code explanation**	**Commentary**
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique* • *Quality control procedures adopted for all sub-sampling stages to maximise representativity of samples* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling* • *Whether sample sizes are appropriate to the grain size of the material being sampled*	• All cores were cut in half using purpose built core saws on-site. Half or quarter NQ size core was collected for sampling, ensuring that the same side of the core was consistently sampled • Samples were prepared at Set Point laboratories and crushed to greater than 80% less than 2.8 mm, split with a Jones Riffle Splitter and 600 g subsamples were pulverised to greater than 90% less than 106 µm. Regular sizing checks were undertaken and reported • Sample sizes are appropriate to the grain size of the material being sampled
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established*	• Analytical procedures are industry standard and appropriate for the type of mineralisation and level of confidence for tonnage and grade estimation; The assaying technique is a whole rock analysis • All quality control measures are based on industry standard operating procedures which were followed during the sampling and assaying campaign. CRMs, blanks and duplicates were inserted at an appropriate frequency and the results showed acceptable levels of precision and accuracy. Isolated cases of sample number mix-ups were observed for duplicate analyses and adequately resolved by re-submitting original material and requesting re-analyses. No analytical bias was observed for samples submitted to a secondary (umpire) laboratory and the results confirm the assay data obtained from the primary laboratory
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel* • *The use of twinned holes* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data*	• No verification work has been completed • No twin holes have been drilled • Data entry and verification into the database was undertaken by MSA following an established protocol. All data is stored in a digital database and regularly backed-up • No statistical adjustments to data have been applied

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)		
Criteria	**JORC Code explanation**	**Commentary**
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation* • *Specification of the grid system used* • *Quality and adequacy of topographic control*	• All of the drillhole collars have been surveyed by a qualified surveyor • A number of drillhole collars have been observed by MSA in the field • Vertical holes drilled to 200 m below surface were not surveyed down-the-hole but were accepted as being vertical for their entire length given that deviation is minimal at such shallow depths • The grid system for the project is SA National Coordinate System Central Meridian LO29 with WGS84 Hartbeeshoek Datum • The topography model was derived from the drillhole collar elevations and topographical contours from government survey maps
Data spacing and distribution	• *Data spacing for reporting of Exploration Results* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied* • *Whether sample compositing has been applied*	• The drillholes were spaced at an average of 500 m apart on dip and strike • The drillhole spacing is sufficient to assume geological and grade continuity for this type of mineralisation but insufficient for grade continuity to be confirmed • Samples have been composited to 1 m
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material*	• Holes are predominantly drilled vertically and intersect mineralisation at angles of between 70° and 80° • No orientation based bias had been identified in the data to this point
Sample security	• *The measures taken to ensure sample security*	• Appropriate chain-of-custody procedures were followed to ensure sample security
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data*	• The original assay certificates were used for the project database and sampling procedures were reviewed and are considered adequate

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area*	• Exploration in the Project Area was conducted on two Prospecting Rights (PR), 95PR and 438PR, which consist of the farms Vriesland 781LR, Vliegekraal 783LR, Vogelstruisfontein 765LR, Malokong 784LR, Schoonoord 786LR and Bellevue 808LR • The application to include the latter two farms in PR 95PR was granted on 19 February 2013 by the Department of Mineral Resources (DMR) and the Notarial Deed was executed on 19 February 2014 • The author is not aware of any impediments to obtain a licence to operate in the area
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties*	• All exploration activities were conducted by BML geological and technical staff. All analytical work was performed by independent and accredited laboratories
Geology	• *Deposit type, geological setting and style of mineralisation*	• Mineralisation occurs in the form of disseminated apatite hosted by a layered, gabbroic sequence which crystallised from a fractionated magma
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* – *easting and northing of the drill hole collar* – *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* – *dip and azimuth of the hole* – *down hole length and interception depth* – *hole length* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case*	• see Section 10

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated*	• Not applicable • Not applicable
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known')*	• Holes were predominantly drilled vertically and intersected mineralisation at angles of between 70° and 80°
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views*	• Plans and maps are contained within this report (Figure 14-1)
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results*	• Not applicable
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances*	• There is no other exploration information considered material to this estimate

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling)* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive*	• No further drilling is planned in the immediate future

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in Section 1, and where relevant in Section 2, also apply to this Section.)		
Criteria	**JORC Code explanation**	**Commentary**
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes* • *Data validation procedures used*	• The database is managed by MSA • Data were loaded into Maxwell Datashed and validated upon upload using database validation rules and visual inspection of data
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits* • *If no site visits have been undertaken indicate why this is the case*	• Site visits were undertaken by Dr Frieder Reichhardt on 12 May, 2011 and 16 August, 2012. All exploration activities were reviewed and recommendations were made to ensure compliance with the JORC Code
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit* • *Nature of the data used and of any assumptions made* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation* • *The factors affecting continuity both of grade and geology*	• The confidence in the geological interpretation of the phosphate mineralisation is considered good. Bushveld layered deposits are highly continuous • The location of major faults, dykes and sills are known • No alternative interpretations exist other than the well understood local stratigraphy
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The phosphate mineralisation in the Northern Area has been defined over a north to south strike length of approximately 4.4 km and east to west breadth of 1.3 km. In the Southern Area, the phosphate mineralisation has been defined over a north to south strike length of approximately 1.7 km and east to west breadth of 0.9 km. The defined phosphate zone averages 40 m in true thickness and dips at an average of 20 degrees to the west

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in Section 1, and where relevant in Section 2, also apply to this Section.)		
Criteria	**JORC Code explanation**	**Commentary**
		• The mineralisation has been shown to continue at depth although this estimate has been constrained to 400 m in the Northern Area and 300 m in the Southern Area
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data* • *The assumptions made regarding recovery of by-products* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation)* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed* • *Any assumptions behind modelling of selective mining units* • *Any assumptions about correlation between variables* • *Description of how the geological interpretation was used to control the resource estimates* • *Discussion of basis for using or not using grade cutting or capping* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available*	• Grade estimation was completed using inverse distance squared using CAE Studio 3 software. There were insufficient data to calculate reliable variograms. Variance of the data is low. Data was composited to one metre. Top cuts were not applied, there being no statistical outliers. A maximum of 6 samples were allowed per hole for the estimate and octants were not used. The search area was designed so that two holes along strike and down dip could be selected • No previous estimates have been conducted • No bi-product recoveries were considered • Sulphur was estimated • Block models or 100 mN by 20 mE by 4 mRL were constructed • No SMU was considered • Bi-variate analysis was carried out to determine relationships between the attributes of interest. Relationships between correlated elements were preserved by aligning estimation parameters for related elements • The top of the distinctive Q3 layer was used as the base of the phosphate zone estimate. There is a natural cut-off grade around 2.5% P_2O_5, which was used for the top contact of the model • The block model was compared to drillhole data visually and statistically. The average grade of the model compares to that of the input data within close limits. The deposit is undeveloped so no reconciliation data were available
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content*	• Tonnages were estimated on a dry basis

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in Section 1, and where relevant in Section 2, also apply to this Section.)		
Criteria	**JORC Code explanation**	**Commentary**
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied*	• The mineralisation has been reported using a base case cut-off grade of 3% P_2O_5. At this stage there is no economic basis for this cut off. The estimated blocks selected above this grade threshold form a cohesive zone of mineralisation
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made*	• It has been assumed that the mineralisation will be extracted by open-pit methods given its considerable thickness and proximity to surface • The phosphate mineralisation occurs in the immediate hanging wall to the vanadiferous titano-magnetite ("VTM") Mineral Resource. It is assumed that the phosphate rock will be co-extracted with the VTM and that the incremental cost of mining will be small, the phosphate rock being mined in order to access the VTM • Reasonable Prospects for Eventual Economic Extraction of the phosphate rock are dependent on its co-extraction with the VTM and it is less likely that the Phosphate Zone could potentially be extracted economically as a single commodity phosphate venture
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made*	• Bench scale test-work indicated that a concentrate of approximately 38% could be produced using magnetic separation followed by flotation
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the assumptions made*	• No environmental impediments are currently known. An environmental impact assessment has been compiled as part of the Mining Right application submitted on 13 March 2015

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in Section 1, and where relevant in Section 2, also apply to this Section.)		
Criteria	**JORC Code explanation**	**Commentary**
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials*	• Specific gravity (SG) has been determined for all of the samples assayed for P_2O_5 • SG for each sample was determined by gas pycnometry on the pulverised sample material at Set Point Laboratories in Johannesburg. The specific gravity measurements have been checked against the Fe_2O_3 assay results and show a good correlation • A density model was generated using inverse distance squared interpolation and used for the tonnage estimation
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data)* • *Whether the result appropriately reflects the Competent Person's view of the deposit*	• The Mineral Resource has been classified as Inferred Mineral Resources. Layered magmatic Bushveld deposits have excellent geological continuity; however the drillholes are too widely spaced to allow for local grade estimates • The Mineral Resource estimate reflects the Competent Person's view of the deposit
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates*	• No reviews have taken place outside of MSA's internal review process
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available*	• The confidence in the global grade estimate is high, the data having low variance and the estimate being closely aligned with the input data • There are insufficient data in order to provide for local estimates • There are no production data with which to verify the estimates

14.4 Current Mineral Resource Estimate for MML and MML Hanging Wall

Previously reported MREs for the MML were based on either Fe_2O_3 or Fe cut-offs. A shift in the primary focus for the Mokopane Project from iron to vanadium has resulted in this MRE being reported on a V_2O_5 cut-off. The cut-off value of 0.30% V_2O_5 was determined from metallurgical studies undertaken by BML during 2014 (Section 13.4). The current MRE for the MML HW includes the previous grade and tonnage estimation for the MML (March, 2013) and although these estimates are unchanged, the reporting criteria thereof have now been updated to reflect a vanadium cut-off.

14.4.1 Database

The current MRE for the MML HW is based on data from 17 diamond holes drilled between 2010 and 2012 (Figure 14-1). All drilling initially targeted the MML and resulted in Indicated Mineral Resource reported on the MML in March 2013. The drilling intersected varying portions of the HW, depending on the depth of the MML intersection, i.e. the deeper the MML intersection, the more complete the drilled HW package. Due to the relatively sparse spacing of data in the MML HW, any of these layers that were above the grade cut-off criteria of 0.30% V_2O_5 were classified as Inferred Mineral Resource.

The data for the MRE was generated from a DataShed database which is hosted and managed by MSA. Of the 17 drillholes targeting the MML only 13 holes were used for the MRE of the MML HW because three holes (VL09, VL10, VK21) were drilled in the footwall of the MML and drillhole MW2 intersected an interval of uncertain stratigraphic position. The preferred sample lengths in the data are 0.50 m and 1.00 m.

SG measurements on pulp material from all HW layers were conducted by gas pycnometry at SPL in Johannesburg. The SG measurements correlate well with the Fe_2O_3 +TiO_2 assay results (Figure 11-7) and therefore confirm the integrity of the SG determinations.

Core recoveries were generally good in the modelled horizons. The length weighted average core recovery within the MML was on average in excess of 98% and in the MML HW recovery was 97%.

Only three drillholes intersected weathered MML, therefore data were insufficient to calculate a separate Mineral Resource for the weathered and unweathered portions of the MML. The depth of weathering of the MML+HW ranges between 12 m and 30 m below surface and was visually determined from the drillhole intersections as part of the core logging procedures. The depth of the overburden in the drillhole intersections range from 3 m to 5 m and this soil horizon was excluded from the MML+HW Mineral Resource.

A topographic surface was constructed from the drillhole collar elevations and topographic contours. The drill collar elevations compare well with the digitised contours from the 1:50,000 scale South Africa topographic sheet '2328DD Limburg'.

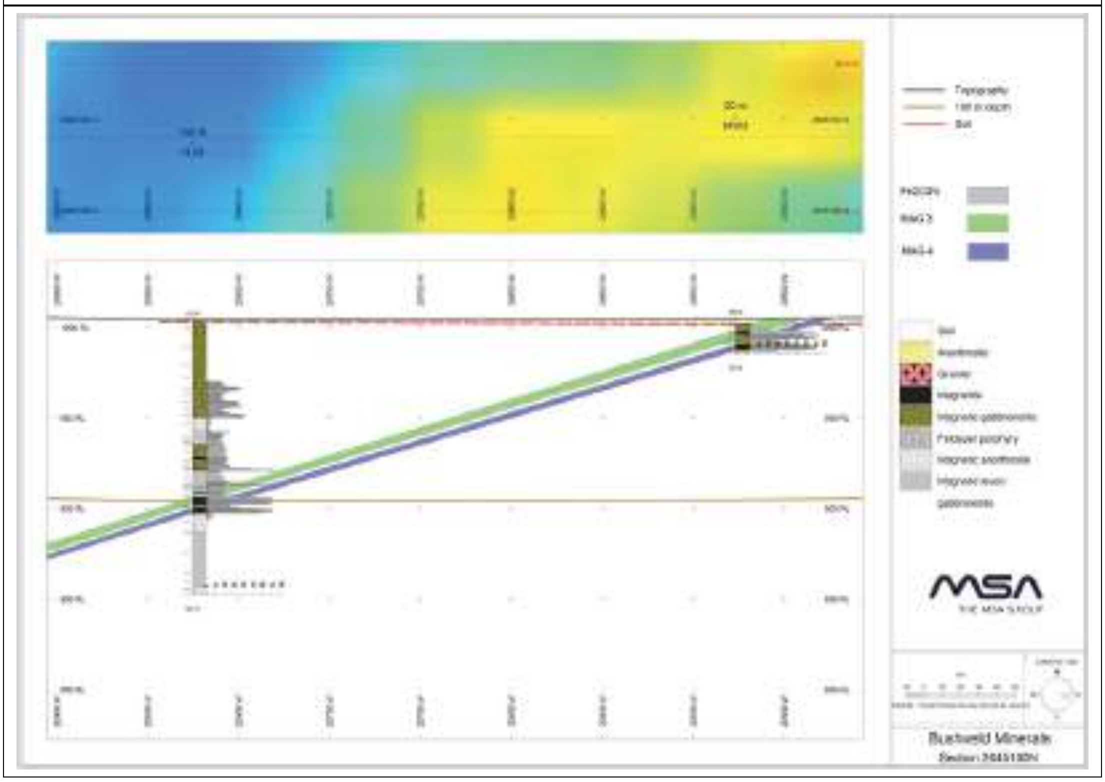
14.4.2 Geological Interpretation and Modelling

Datamine Studio 3 was utilised for the three-dimensional geological modelling.

The MML consists of two massive to semi-massive Ti-magnetite layers separated by a parting with low concentrations of disseminated Ti-magnetite. The lithostratigraphic sub-division and correlation developed by BML was applied to define the MAG3 and MAG4 layers. The VTM-poor Parting occurs between the MAG3 and MAG4 layers. The footwall of the MAG3 is usually characterised by an abrupt decrease in Fe_2O_3 content to below 35% and the top of the MAG4 is defined by a sudden increase in Fe_2O_3 content to above 60% (Figure 14-5). MAG3, MAG4 and the Parting are modelled and reported separately within the MML. The composite MML (including the Parting) has an average true thickness of 9.84 m. The MAG3 ranges between 2.59 m and 7.65 m and averages 4.09 m in true thickness. The MAG4 ranges between 2.48 m and 6.30 m and averages 3.59 m in true thickness.

Figure 14-5

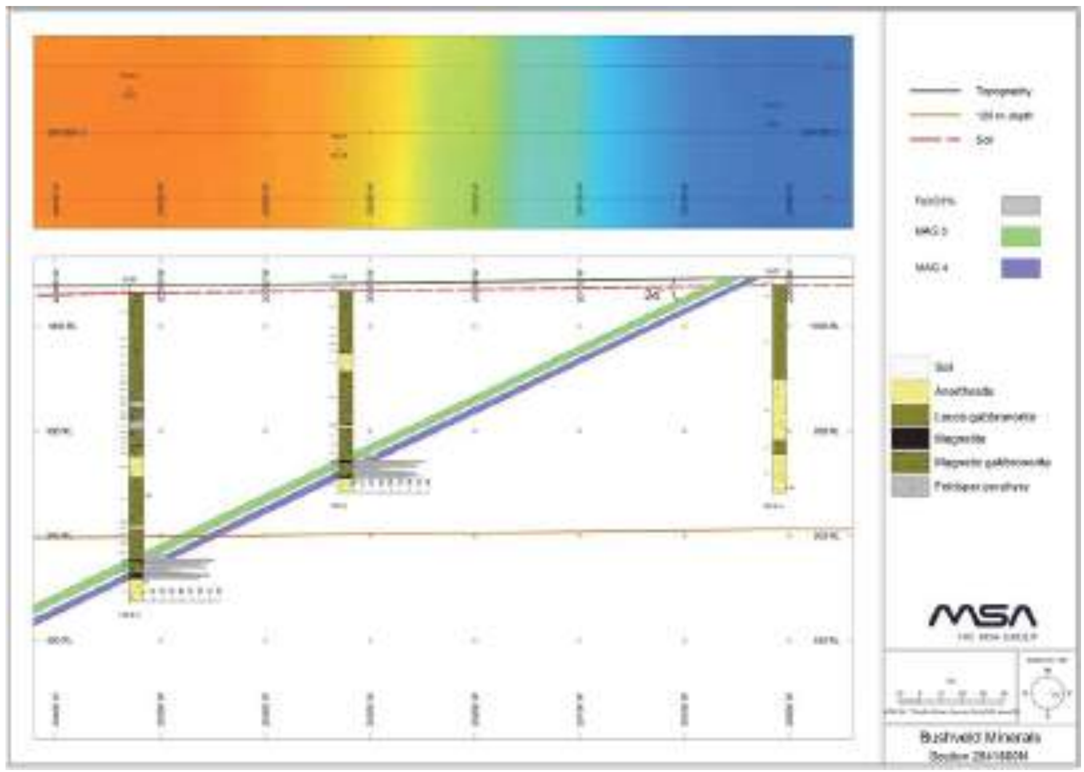
Section Line -2645100N showing geochemical and stratigraphic profile (MSA, 2014)



Note: Profile shows colour gridded airborne magnetic data

The interpretation from the aeromagnetic survey correlates reasonably well with the modelled sub-crop position of the Ti-magnetite layers. These layers show continuity along strike with some off-sets due to possible faulting. Figure 14-6 is a dip section along -2641800N that shows the MML with a dip of 24°, which is steeper than the previously inferred dip of 18° used in the initial MRE from November 2011. VK21 did not intersect the MML as planned due to this change in dip. The steeper dip resulted in a decrease in MML tonnage compared to the Mineral Resource estimated in November 2011. Figure 14-7 shows an isometric view of the MML wireframes and Figure 14-8 shows a plan view.

Figure 14-6
Section Line -2641800N showing geochemical and stratigraphic profile (MSA, 2014)



Note: Profile shows colour gridded airborne magnetic data

Figure 14-7
Isometric view of drillhole collars and Mineral Resources of MML (MSA, 2015)

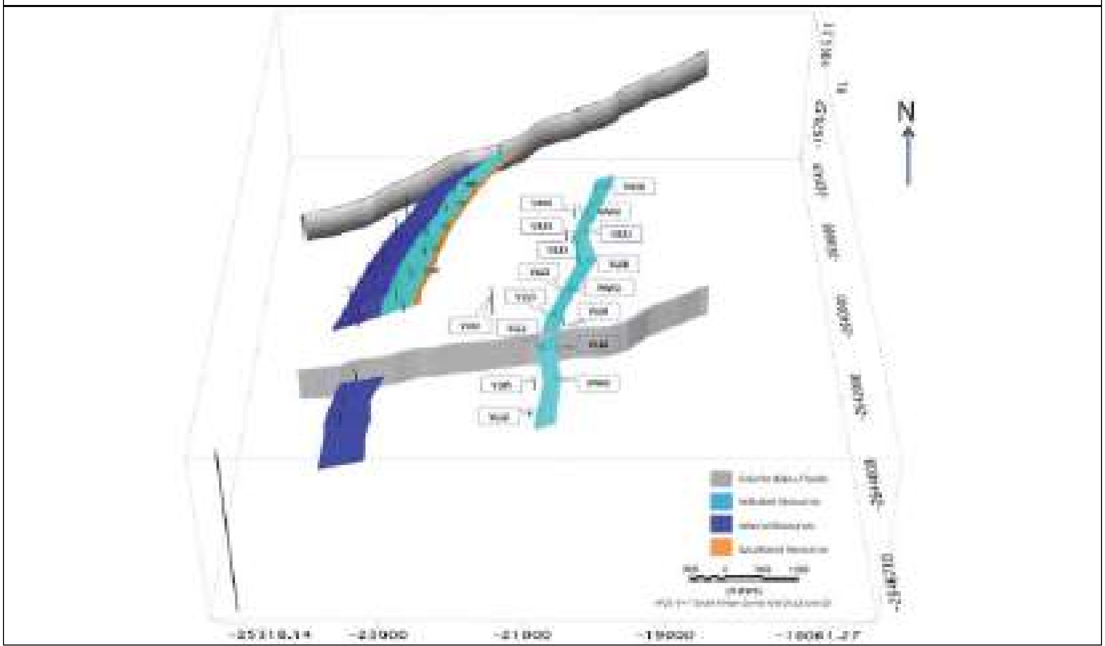
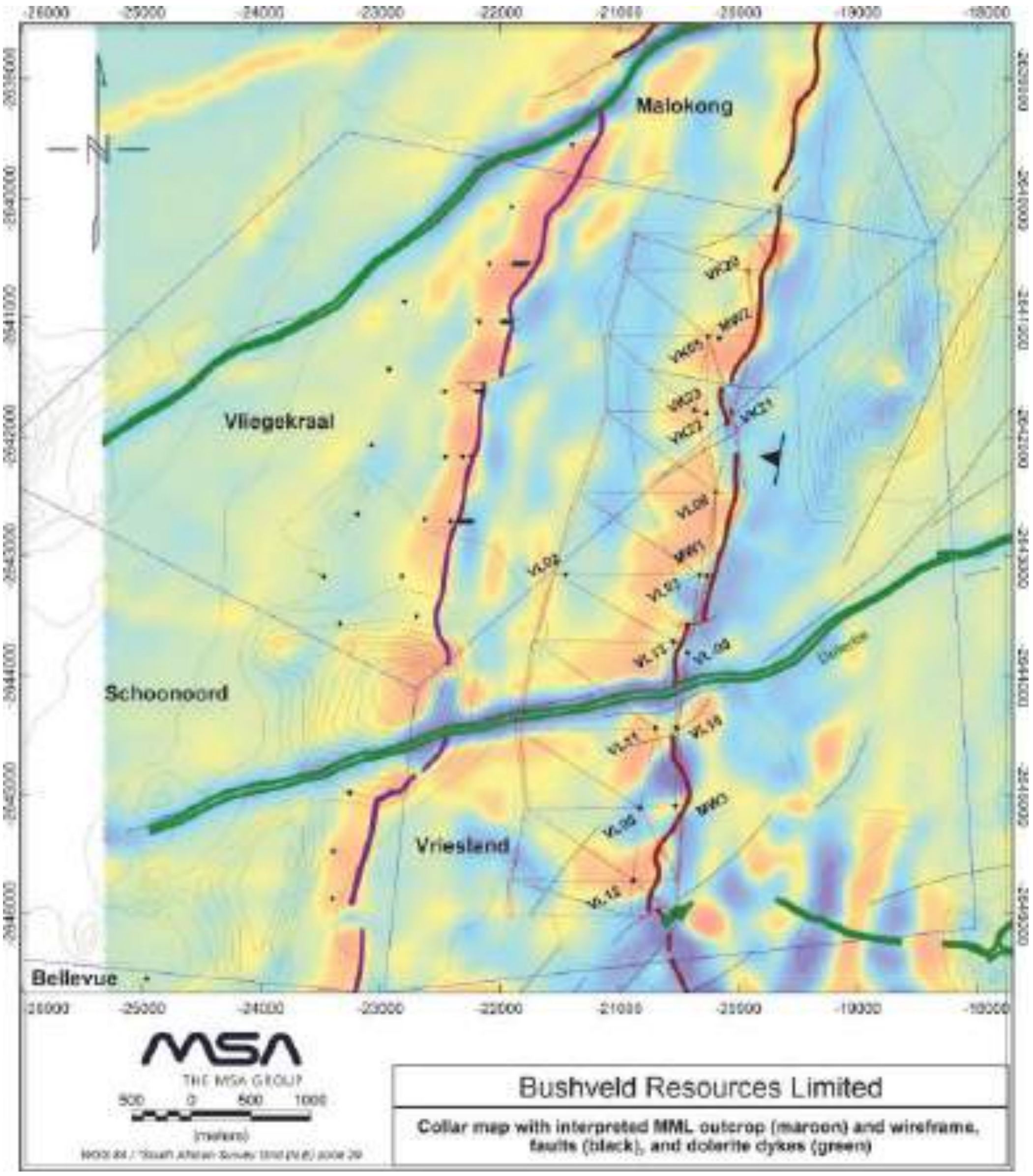


Figure 14-8
Wireframes relative to interpreted outcrop position of MML (MSA, 2015)



Wireframes representing the 14 modelled HW layers were constructed based on geological logging and Fe_2O_3 and V_2O_5 grade transitions. The layers alternate between relatively high-grade semi-massive to massive VTM, lower-grade gabbro norite and barren anorthosite. Dip is between 18° and 24° to the west and the combined average true thickness of the MML HW layers is approximately 72 m.

The individual layers were manually coded into the de-surveyed drillhole data in Datamine. As a first pass, the STRAT and LITH fields were used to define the top contact of the MML and other lithologically distinct HW layers, following which Fe_2O_3 and V_2O_5 grade transitions were used to further refine the contacts of these identified layers, as well as to identify other layers with discrete grade profiles. The output was fifteen geological contacts, from the MML top contact to the top contact of the layer termed UG-C (modelling Layer 0). The layers were numbered for modelling purposes and correspond to the stratigraphic nomenclature used for Mineral Resource reporting (Table 14-20). West-east sections depicting the fourteen layers were then interpreted from these contacts. Wireframes were created by joining these sections across the extent of the relevant properties for all layers. Care was taken to ensure that the layers did not overlap and a final visual inspection of the wireframes validated the interpretation.

It should be noted that only those drillholes with relatively deep MML intersections intersected all fourteen MML HW layers. As some of the drillholes targeted the MML at shallow depths, the layers higher up in the sequence are less well drilled than those lower in the sequence closer to the MML. This is illustrated in Table 14-21.

Table 14-20
MML HW layers (MSA, 2014)

Geological Identifier	Modelling Code (SCODE)
UG-C	(L)0
UG-B	(L)1
UG-A	(L)2
UMG HW	(L)3
UMG1	(L)4
UMG PARTING	(L)5
UMG2	(L)6
MAG1 HW ANO	(L)7
MAG1 HW GAB	(L)8
MAG1	(L)10
MAG2 HW ANO	(L)15
MAG2 HW GAB	(L)16
MAG2	(L)20
MML HW	(L)25

Table 14-21
Number of Intersections of MML HW layers per drillhole (MSA, 2014)

BHID	COLLAR			Modelling Code (SCODE)													
	X	Y	Z	25	20	16	15	10	8	7	6	5	4	3	2	1	0
MW1	-20265	-2643167	1015	2	0	0	0	0	0	0	0	0	0	0	0	0	0
MW3	-20527	-2645099	1005	2	0	0	0	0	0	0	0	0	0	0	0	0	0
VK20	-19916	-2640610	1027	1	1	1	1	1	1	1	1	1	1	2	0	0	0
VK22	-20265	-2641808	1020	1	1	1	1	1	1	1	1	1	1	1	1	1	1
VK05	-20253	-2641159	1023	1	1	1	1	1	1	1	1	1	1	1	1	1	1
VK23	-20365	-2641779	1019	1	1	1	1	1	1	1	1	1	1	1	1	1	1
VL11	-20694	-2644443	1006	1	1	1	1	1	1	2	0	0	0	0	0	0	0
VL12	-20882	-2645724	1002	1	1	1	1	1	1	1	1	1	1	1	1	1	1
VL13	-20541	-2643719	1010	1	1	1	1	1	2	0	0	0	0	0	0	0	0
VL02	-21446	-2643157	1012	1	1	1	1	1	1	1	1	1	1	1	1	1	1
VL03	-20323	-2643160	1016	2	0	0	0	0	0	0	0	0	0	0	0	0	0
VL05	-20825	-2645114	1004	1	1	1	1	1	1	1	1	1	1	1	1	1	2
VL08	-20186	-2642469	1020	1	1	1	1	1	1	1	1	1	2	0	0	0	0

Note: 0 = no intersection; 1 = complete intersection; 2 = truncated intersection

The wireframes representing the MML HW layers were initially extended above the surface topography and extrapolated approximately 350 m beyond the deepest drillhole intersection (Figure 14-9). These surfaces were then truncated at the interpreted base of the soil horizon and 120 m vertically below surface as was done for the previous MML MRE (Figure 14-10).

Figure 14-9
W-E section, showing the 15 surfaces representing 14 layers in the MML HW (MSA, 2014)

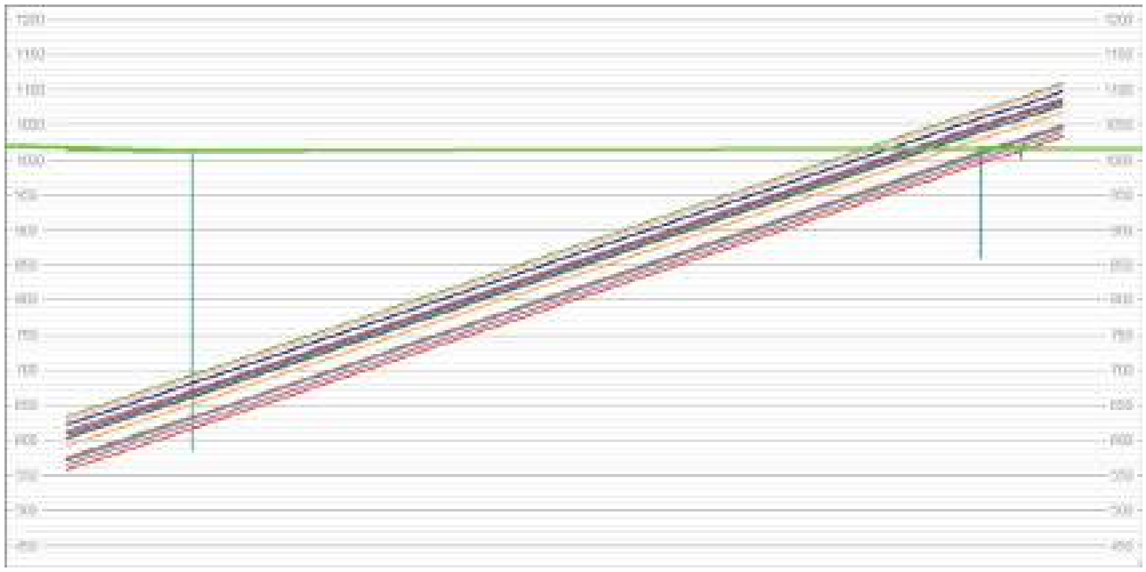
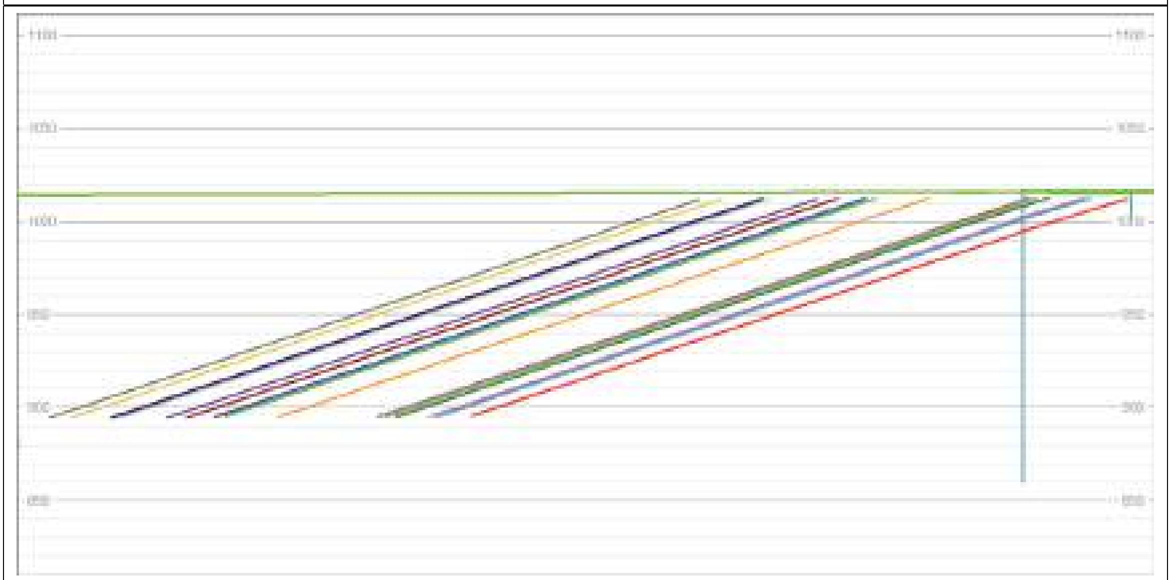


Figure 14-10
W-E section, 14 MML HW layers truncated by soil and at 120 m vertical depth (MSA, 2014)



14.4.3 Grade Estimation

Data within the fourteen layers were composited within each layer (SCODE field in Datamine). Average values of the relevant variables within these layers are presented in Table 14-22. The VTM-rich layers are generally those with Fe_2O_3>30% (V_2O_5>0.5%) while the VTM-barren layers (anorthosite) are those with Fe_2O_3<10% (V_2O_5<0.15%). VTM-poor gabbronorite layers generally have Fe_2O_3 grades of 16-20% Fe_2O_3 (V_2O_5<0.3%).

The grades within each of the layers are fairly consistent for all included composites which is a common occurrence for these type of layers in the BC. The drilled lengths of the intersections of each layer are also generally consistent across the property.

Table 14-22
MML HW average composite values by layer (MSA, 2014)

Layer	SCODE	n	Length m	SG g/cm^3	Fe_2O_3 %	TiO_2 %	V_2O_5 %	P_2O_5 %	SiO_2 %	Al_2O_3 %	S %	Ni ppm	Cu ppm
UG-C	0	5	4.27	3.50	37.4	6.0	0.65	0.01	29.8	15.2	0.05	128	301
UG-B	1	5	8.14	3.08	16.8	1.8	0.19	0.02	47.1	16.0	0.13	370	1152
UG-A	2	6	1.71	3.32	33.1	5.3	0.59	0.01	32.6	17.6	0.01	89	32
UMG HW	3	6	6.84	3.10	18.6	2.2	0.23	0.01	45.0	17.2	0.01	159	22
UMG1	4	6	3.47	3.30	32.6	5.3	0.59	0.01	32.7	17.6	0.06	86	24
UMG PARTING	5	7	4.73	3.05	18.2	2.4	0.25	0.01	44.4	19.6	0.01	156	24
UMG2	6	8	2.13	3.40	36.9	6.2	0.68	0.01	29.6	16.8	0.01	77	29
MAG1 HW	7	8	8.74	2.81	4.2	0.4	0.03	0.04	52.7	25.0	0.01	200	39
MAG1 HW	8	8	19.35	3.02	18.5	2.8	0.30	0.01	42.1	22.1	0.02	11	43
MAG1	10	9	1.37	3.95	56.7	9.6	1.06	0.01	15.9	11.0	0.13	136	485
MAG2 HW	15	10	1.98	2.86	9.3	1.2	0.12	0.03	49.0	24.3	0.06	361	255
MAG2 HW	16	10	5.87	3.00	17.2	2.6	0.28	0.01	43.3	22.4	0.09	74	385
MAG2	20	10	1.17	3.57	43.2	7.2	0.83	0.01	25.1	15.1	0.09	116	394
MML HW	25	10	6.20	3.01	19.1	2.5	0.32	0.02	42.2	21.7	0.06	265	239
MAG3	30	13	4.36	4.07	64.4	10.1	1.47	0.01	10.9	7.9	0.11	582	789
PARTING	35	13	2.31	3.18	30.2	4.0	0.61	0.01	34.0	18.5	0.16	409	1027
MAG4	40	13	3.82	3.98	62.1	9.5	1.43	0.01	12.0	9.0	0.21	712	1294

Experimental variograms were calculated in Datamine for all variables on all layers. The elements investigated included Al_2O_3, CaO, Fe_2O_3, MgO, P_2O_5, S, SiO_2, TiO_2, V_2O_5, Cu and Ni, Length and Core Recovery as well as SG. The paucity of input data resulted in unrepresentative variograms that could not provide for robust variogram models. Variograms were therefore not used in the estimation.

14.4.3.1 MML Layers

The MML layers were estimated into a 3D block model in Datamine. The prototype of this model is shown in Table 14-23. The block models were not rotated. The parent block model was 100 m (easting or X) by 100 m (northing or Y) by 10 m (for the Z height), the block height being in excess of the mineralisation thickness such that a single cell for each layer existed in this direction. The MAG3 and MAG4 wireframes were used to generate the block models. Sub-celling of the parent cells was subsequently applied in the XY plane in order to achieve optimal block model fitting into the wireframes. This resulted in a minimum of 5 m (X) x 5 m (Y) and 0.2 m (Z) sub-blocks.

Table 14-23 **Block model prototype dimensions for MML Layers** (MSA, 2014)					
Origin			**Block size**		
X	**Y**	**Z**	**X**	**Y**	**Z**
-22,300	-2,646,200	500	100	100	10

Samples were composited to the complete thickness of each layer such that one composite occurred for each layer per drillhole. Inverse distance to the power of two was used for the estimation. A minimum of two and a maximum of ten sample composites were utilised for the estimate within each MML layer. Drilling information was constrained by the wireframes, such that only data from the specific layers were used to estimate each layer.

A search ellipse was generated to include at least two composites at 600 m spacing in an estimate. Grades were then interpolated from composites within the respective layers and selected within a search ellipse of 800 m by 800 m by 50 m. The search ellipse was rotated in order to match the dip and dip direction of the wireframes. This was clockwise by 10° around the Z axis (strike) and 20° around the Y axis (dip).

Due to the paucity of SG data from the 2010/2011 drilling campaign, a multiplier of up to 4 was used for the search radii in order to populate all blocks with SG estimates.

14.4.3.2 MML HW Layers

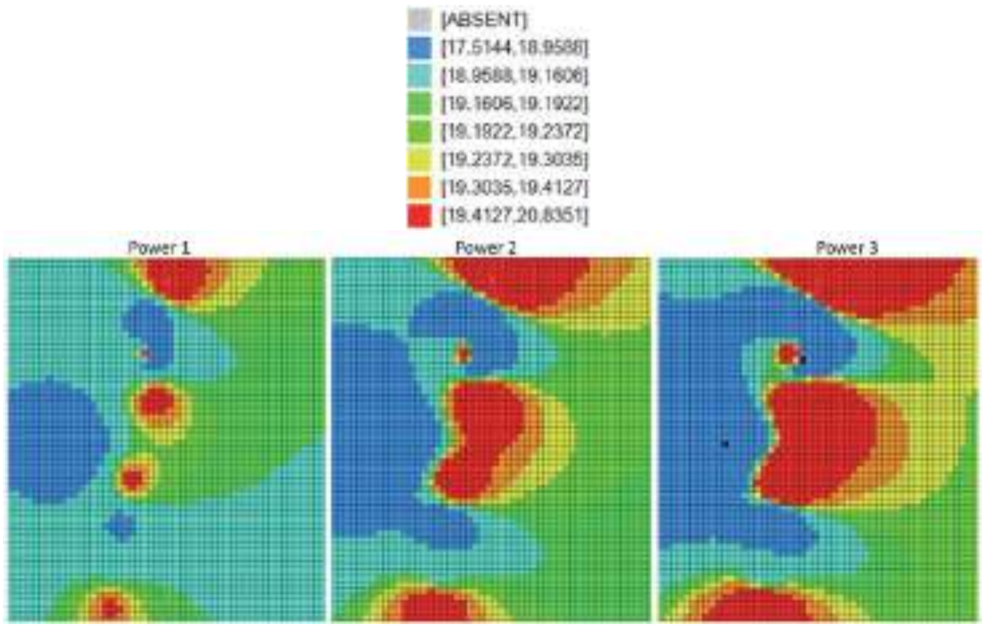
Due to the narrow nature of the MML HW layers relative to the strike length, it was decided to conduct grade, layer thickness and SG estimation in two-dimensional space. This was necessitated by the overly intricate model that would be required for true three-dimensional estimation in this case. The block model prototype dimensions are listed in Table 14-24.

The parent cell/block is 100 m (easting or X) by 100 m (northing or Y) by 1 m (for the Z height) and no sub-celling routines were applied. All data was assigned an elevation of zero to coincide with the block model.

Table 14-24 **Block model prototype dimensions for MML HW Layers** (MSA, 2014)								
Origin			**Block size**			**Number of cells**		
X	**Y**	**Z**	**X**	**Y**	**Z**	**X**	**Y**	**Z**
-27,500	-2,647,500	-0.5	100	100	1	100	100	1

Samples were composited to the complete thickness of each layer such that one composite occurred for each layer per drillhole. In the absence of adequately defined variograms, inverse distance weighting to the power of 1 was used for the estimation for all variables. An investigation into the value assigned to the power revealed that the use of a power of 2 or 3 yielded abrupt changes from high to low grade which does not necessarily agree with the geological view that grade changes are gradual over distance. The higher powers also resulted in larger very high-grade and very low grade areas relative to the use of lower powers, which give a higher degree of smoothing to the estimate (Figure 14-11). Higher smoothing is considered appropriate for the few data that inform the model, which are insufficient in number to produce accurate local estimates.

Figure 14-11
Investigation into the use of the inverse distance estimator using Fe_2O_3 grade (MSA, 2013)



A global-type estimate was conducted such that all data was used to estimate any block in the model i.e. a maximum of 20 samples with a search range of 10,000 m. Considering that only up to 13 data points are available over the strike length of approximately 6,500 m, accurate local estimates cannot be made. The block model estimates for all MML HW layers are shown in Table 14-25.

Table 14-25
Block model estimates for all layers (MSA, 2014)

Layer	SCODE	Width m*	Density t/m^3	Fe_2O_3 %	V_2O_5 %	TiO_2 %	P_2O_5 %	SiO_2 %	Al_2O_3 %	S %
UG-C	0	4.04	3.48	36.7	0.64	5.9	0.01	30.2	15.4	0.12
UG-B	1	7.80	3.08	16.7	0.19	1.8	0.02	47.1	16.2	0.01
UG-A	2	1.64	3.31	33.1	0.59	5.3	0.01	32.5	17.5	0.01
UMG HW	3	6.40	3.09	18.4	0.23	2.2	0.01	45.2	17.1	0.06
UMG1	4	3.24	3.30	32.7	0.59	5.4	0.01	32.6	17.6	0.01
UMG PARTING	5	4.43	3.05	18.1	0.25	2.4	0.01	44.5	19.7	0.01
UMG2	6	2.03	3.40	37.0	0.69	6.2	0.01	29.4	16.7	0.01
MAG1 HW ANO	7	8.18	2.81	4.2	0.03	0.4	0.03	52.7	25.0	0.02
MAG1 HW GAB	8	18.41	3.01	18.4	0.30	2.8	0.01	42.1	22.1	0.12
MAG1	10	1.31	3.96	57.1	1.07	9.7	0.01	15.6	10.8	0.06
MAG2 HW ANO	15	1.86	2.86	9.6	0.12	1.3	0.03	48.7	24.2	0.09
MAG2 HW GAB	16	5.54	3.01	17.4	0.28	2.6	0.02	43.2	22.3	0.09
MAG2	20	1.10	3.57	43.1	0.83	7.2	0.01	25.1	15.1	0.06
MML HW	25	5.89	3.01	19.2	0.32	2.5	0.02	42.2	21.6	0.11

* Width is corrected based on the apparent length logged in the drillhole and the dip of the MML HW layers

Averages of the composite data and global block model estimates for grade and SG are presented in Table 14-26. There is good agreement between the block model estimates and those of the composites. The only significant discrepancies between the drillhole data and the model are for V_2O_5 in the MAG1 HW ANO and the MAG2 HW ANO. These differences appear large in relative terms but the absolute difference is less than 0.01% V_2O_5. Neither of these two layers form part of the Mineral Resource as the grade is below the cut-off grade.

Table 14-26
Average values of composites vs. estimated model blocks for all layers (MSA, 2014)

Layer	SCODE	Composites Fe_2O_3%	Block Model Fe_2O_3%	Difference %	Composites V_2O_5%	Block Model V_2O_5%	Difference %
UG-C	0	37.4	36.7	-1.89	0.65	0.64	-2.12
UG-B	1	16.8	16.7	-0.37	0.19	0.19	1.62
UG-A	2	33.1	33.1	0.23	0.59	0.59	-0.04
UMG HW	3	18.6	18.4	-1.08	0.23	0.23	-1.61
UMG1	4	32.6	32.7	0.48	0.59	0.59	0.55
UMG PARTING	5	18.2	18.1	-0.53	0.25	0.25	0.03
UMG2	6	36.9	37.0	0.49	0.68	0.69	0.67
MAG1 HW ANO	7	4.2	4.2	-0.76	0.028	0.026	-6.76
MAG1 HW GAB	8	18.5	18.4	-0.07	0.30	0.30	0.45
MAG1	10	56.7	57.1	0.71	1.06	1.07	0.77
MAG2 HW ANO	15	9.3	9.6	3.19	0.118	0.124	5.12
MAG2 HW GAB	16	17.2	17.4	0.67	0.28	0.28	0.69
MAG2	20	43.2	43.1	-0.18	0.83	0.83	-0.37
MML HW	25	19.1	19.2	0.51	0.32	0.32	0.90
Layer	**SCODE**	**Composites Al_2O_3%**	**Block Model Al_2O_3%**	**Difference %**	**Composites Density**	**Block Model Density**	**Difference %**
UG-C	0	15.2	15.4	1.27	3.50	3.48	-0.73
UG-B	1	16.0	16.2	1.04	3.08	3.08	-0.15
UG-A	2	17.6	17.5	-0.33	3.32	3.31	-0.07
UMG HW	3	17.2	17.1	-0.60	3.10	3.09	-0.08
UMG1	4	17.6	17.6	-0.28	3.30	3.30	-0.02
UMG PARTING	5	19.6	19.7	0.23	3.05	3.05	-0.20
UMG2	6	16.8	16.7	-0.36	3.40	3.40	0.05
MAG1 HW ANO	7	25.0	25.0	0.12	2.81	2.81	-0.03
MAG1 HW GAB	8	22.1	22.1	-0.06	3.02	3.01	-0.06
MAG1	10	11.0	10.8	-1.36	3.95	3.96	0.34
MAG2 HW ANO	15	24.3	24.2	-0.35	2.86	2.86	0.16
MAG2 HW GAB	16	22.4	22.3	-0.26	3.00	3.01	0.11
MAG2	20	15.1	15.1	0.07	3.57	3.57	-0.21
MML HW	25	21.7	21.6	-0.28	3.01	3.01	-0.03

14.4.4 Mineral Resource Classification

Given the low grade variability and high geological continuity of the MML and the MML HW, MSA considered that a drillhole spacing of 600 m or less could be applied to delineate Indicated Mineral Resource and greater than 600 m for Inferred Mineral Resource, assuming that there are no other complications that add to the uncertainty in the estimate.

As a result of the geological continuity and drillhole spacing within the MML, it was classified as Indicated Mineral Resource. With the relatively sparse drillhole spacing within the MML HW layers and global nature of the estimate, the MML HW VTM Mineral Resource was classified as Inferred. A 2% geological loss factor has been applied to the MML Indicated Mineral Resource in order to account for faulting. No geological losses have been applied to the MML HW Inferred Mineral Resource as this thick package is less sensitive to the effects of faulting.

A cut-off of 0.30% V_2O_5 has been applied on a per layer basis. Layers below 0.30% V_2O_5 are therefore regarded as waste and were not included in the Mineral Resource tabulation.

The Indicated and Inferred Mineral Resources are declared for the MML and MML HW VTM layers respectively to a vertical depth of 120 m (Table 14-27) for the farms Vriesland and Vliegekraal. This Mineral Resource has been prepared in accordance with the guidelines of the 2012 Edition of the JORC Code.

Table 14-27
Mineral Resource of MML and MML HW at a 0.30% V_2O_5 cut-off, ≤120 m vertical depth, as at 15 October 2017

Layer	Mineral Resource	Width	Tonnes	Density	V_2O_5	Fe	Fe_2O_3	TiO_2	SiO_2*	Al_2O_3*	P_2O_5*	S*	V_2O_5	Fe
Name	Category	m	Mt[1]	t/m^3	%	%	%	%	%	%	%	%	Kt[2]	Mt[1]
UG-C	Inferred	4.04	31.8	3.48	0.64	25.7	36.7	5.9	30.2	15.4	0.01	0.12	202.8	8.2
UG-A	Inferred	1.64	12.7	3.31	0.59	23.2	33.1	5.3	32.5	17.5	0.01	0.01	75.6	3.0
UMG1	Inferred	3.24	25.5	3.30	0.59	22.9	32.7	5.4	32.6	17.6	0.01	0.01	150.4	5.8
UMG2	Inferred	2.03	15.7	3.40	0.69	25.9	37.0	6.2	29.4	16.7	0.01	0.01	107.7	4.1
MAG1 HW GAB**	Inferred	17.53	72.3	3.02	0.31	13.1	18.8	2.9	42.0	21.9	0.01	0.12	223.3	9.5
MAG1	Inferred	1.31	12.0	3.96	1.07	40.0	57.1	9.7	15.6	10.8	0.01	0.06	128.7	4.8
MAG2	Inferred	1.10	9.2	3.57	0.83	30.2	43.1	7.2	25.1	15.1	0.01	0.06	76.3	2.8
MML HW	Inferred	5.89	42.3	3.01	0.32	13.4	19.2	2.5	42.2	21.6	0.02	0.11	136.0	5.7
Total	**Inferred**	36.77	221.5	3.21	0.50	19.8	28.3	4.4	35.7	18.9	0.01	0.08	1,100.	43.8
MAG3	Indicated	4.09	27.5	4.08	1.50	45.5	65.1	10.0	10.6	7.8	0.01	0.12	412.5	12.5
PART	Indicated	2.16	11.4	3.16	0.58	20.9	29.9	3.5	34.5	19.0	0.01	0.17	66.3	2.4
MAG4	Indicated	3.59	24.3	4.00	1.46	43.9	62.7	9.3	11.8	8.9	0.01	0.24	354.9	10.7
Total	**Indicated**	9.84	63.2	3.85	1.32	40.4	57.8	8.6	15.4	10.2	0.01	0.18	833.7	25.6
Total Mineral Resources[3]		**46.61**	**284.8**	**3.33**	**0.68**	**24.4**	**34.8**	**5.4**	**31.2**	**17.0**	**0.01**	**0.10**	**1,934.5**	**69.4**

[1]Mt = million tonnes, [2]Kt = thousand tonnes, [3] = Rounding may cause computational errors; No geological losses applied

*Included for informative purposes only, no value will be derived from these materials;

**A 0.30% V_2O_5 cut-off has been applied laterally across this layer such that only material >0.30% V_2O_5% is included in the tonnage listed in this Table

14.4.5 Assessment of Reasonable Prospects for Eventual Economic Extraction (RPEEE)

The high grades and strong continuity of the MML layers ensure that expectations for reasonable prospects for eventual economic extraction are met in the shallow areas. MSA has restricted the Mineral Resource to a vertical depth of less than 120 m below surface as, despite the high MML grades, the absence of detailed mining, metallurgical and financial studies does not lend confidence to RPEEE deeper than this. In MSA's assessment, theoretical stripping ratios for the MML were calculated to a vertical depth of 120 m.

The MML HW forms part of the MML project and it is expected that the MML HW VTM layers will be co-extracted with the MML and as such the MML HW Mineral Resource is incremental in nature. The cost of mining the MML HW is expected to be minimal as much of the mining cost will be attributed to stripping of the MML HW required to access the MML. Some mining costs will however apply, together with the costs of milling and concentrating the VTM layers of the MML HW.

RPEEE for the MML HW VTM layers are dependent on its co-extraction with the MML, and it is unlikely that the MML HW VTM layers could be extracted economically as a standalone project. In this regard, the MML HW Mineral Resource is reported together with the MML Mineral Resource and should not be reported as a separate entity.

14.4.6 Checklist of Assessment and Reporting Criteria

Criteria for assessing the validity of data used in the Mineral Resource estimation are presented in the following table and include the relevant aspects of Table 1 of the JORC Code, 2012 Edition.

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections)		
Criteria	**JORC Code explanation**	**Commentary**
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used* • *Aspects of the determination of mineralisation that are Material to the Public Report* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information*	• The mineralisation was sampled using NQ size diamond cored holes. A total of 17 holes were drilled vertically from which 13 were used for the MML HW model and estimate. Only diamond drill core was used to sample the mineralisation • Core was logged for lithology, weathering state and structure. Core was half-split or quarter-split and sampled following BML protocols and QA/QC procedures as per standard industry practice • The cores were sampled continuously through the MML and MML HW mostly on 0.5 m or 1.2 m intervals. The intervals were varied in order to respect geological boundaries • Samples were dried and then crushed to more than 80% <2.8 mm, milled to greater than 90% <106 µm and analysed on a fused glass disk with an X-ray fluorescence spectrometer ("XRF")
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc)*	• Only diamond drill core predominantly NQ size. Holes were drilled vertically and core was not oriented
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed* • *Measures taken to maximise sample recovery and ensure representative nature of the samples* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material*	• Core recoveries were logged. Excluding the 3 m of soil, core recoveries are generally in excess of 97% for MML and MML HW with the lower recoveries occurring in the weathered material close to surface
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography*	• All core has been logged for lithology, mineralisation, structure and weathering • All data is stored in a relational drillhole database (Maxwell DataShed) • All cores were logged from surface to the end of hole. The total length of core in the drillholes used for the estimate is 1,822.26 m

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections)		
Criteria	**JORC Code explanation**	**Commentary**
	• *The total length and percentage of the relevant intersections logged*	
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling* • *Whether sample sizes are appropriate to the grain size of the material being sampled*	• All cores were cut in half using purpose built core saws on-site. Half or quarter NQ size core was collected for sampling, ensuring that the same side of the core was consistently sampled • Samples were prepared at Set Point laboratories and crushed to more than 80% < 2.8 mm. Followed by splitting with a Jones Riffle Splitter and 600 g subsamples were pulverised (> 90% <106 µm). Regular sizing checks were undertaken and reported • Sample sizes are appropriate to the grain size of the material being sampled
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established*	• Analytical procedures are industry standard and appropriate for the type of mineralisation and level of confidence for tonnage and grade estimation. The assaying technique is a whole rock analysis • All quality control measures are based on industry standard operating procedures which were followed during the sampling and assaying campaign. CRMs, blanks and duplicates were inserted at an appropriate frequency and the results showed acceptable levels of precision and accuracy. No analytical bias was observed for samples submitted to a secondary (umpire) laboratory and the results confirm the assay data obtained from the primary laboratory
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel* • *The use of twinned holes* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols*	• No verification work of significant intersections has been completed • No twin holes have been drilled • Data entry and verification into the database was undertaken by MSA following an established protocol. All data is stored in a digital database and regularly backed-up

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections)		
Criteria	**JORC Code explanation**	**Commentary**
	• *Discuss any adjustment to assay data*	• No statistical adjustments to data have been applied
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation* • *Specification of the grid system used* • *Quality and adequacy of topographic control*	• All of the drillhole collars have been surveyed by a qualified surveyor • A number of drillhole collars have been observed by MSA in the field. • All holes were drilled vertically. The depths ranged between 14 m and 166 m except VL02 which was drilled to a depth of 427 m. No down-the-hole surveys were conducted and all holes were accepted as being vertical for their entire length • The grid system for the project is SA Coordinate System Central Meridian LO29 with WGS84, Hartbeeshoek Datum • The topography model was derived from the drillhole collar elevations and topographical contours from government survey maps
Data spacing and distribution	• *Data spacing for reporting of Exploration Results* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied* • *Whether sample compositing has been applied*	• The drillholes were spaced at an average of 600 m apart on strike and from 50 m to 370 m on dip (along the drilling fence) • The drillhole spacing is sufficient to assume geological and grade continuity for this type of mineralisation but insufficient for grade continuity to be confirmed • Samples have been composited according to geology i.e. to the width of manually coded data per MML or MML HW layer
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material*	• Holes are predominantly drilled vertically and intersect mineralisation at angles of between 65° and 75° • No orientation-based bias had been identified in the data
Sample security	• *The measures taken to ensure sample security*	• Appropriate chain-of-custody procedures were followed to ensure sample security
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data*	• The original assay certificates were used for the project database and sampling procedures were reviewed and are considered adequate

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section)		
Criteria	**JORC Code explanation**	**Commentary**
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area*	• Exploration in the Project Area was conducted on two Prospecting Rights (PR), 95PR and 438PR, which consist of the farms Vriesland 781LR, Vliegekraal 783LR, Vogelstruisfontein 765LR, Malokong 784LR, Schoonoord 786LR and Bellevue 808LR • The application to include the latter two farms in PR 95PR was granted on 19 February 2013 by the Department of Mineral Resources (DMR) and the Notarial Deed was executed on 19 February 2014 • The author is not aware of any impediments to obtain a licence to operate in the area
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties*	• All exploration activities were conducted by BML geological and technical staff. All analytical work was performed by independent and accredited laboratories
Geology	• *Deposit type, geological setting and style of mineralisation*	• The deposit is a layered mafic intrusion • Mineralisation occurs in the form of vanadiferous titaniferous-magnetite layers
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* – *easting and northing of the drill hole collar* – *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* – *dip and azimuth of the hole* – *down hole length and interception depth* – *hole length* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case*	• Refer to Section 10 • All drillholes are orientated vertically • Up to 17 layers (3 MML layers and 14 MML HW layers) can be intersected per drillhole and therefore information regarding the intersection depth has not been supplied
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated*	• Not applicable

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section)		
Criteria	**JORC Code explanation**	**Commentary**
Data aggregation methods	• *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail* • *The assumptions used for any reporting of metal equivalent values should be clearly stated*	• Not applicable
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known')*	• Holes were drilled vertically and intersected mineralisation at angles of between 65° and 75°
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views*	• Plans and maps are contained within this report
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results*	• Not applicable
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances*	• There is no other exploration information considered material to this estimate
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling)* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive*	• Infill drilling has been conducted in 2014 and 2015 but the core has not been sampled and assayed by 31 March 2015

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in Section 1, and where relevant in Section 2, also apply to this Section)		
Criteria	**JORC Code explanation**	**Commentary**
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes* • *Data validation procedures used*	• The database is managed by MSA • Data were loaded into Datashed and validated upon upload using database validation rules and visual inspection of data
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits* • *If no site visits have been undertaken indicate why this is the case*	• Site visits were undertaken by Dr Frieder Reichhardt on 12 May 2011 and 16 August 2012. All exploration activities were reviewed and recommendations were made to ensure compliance with the JORC Code
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit* • *Nature of the data used and of any assumptions made* • *The effect, if any, of alternative interpretations on Mineral Resource estimation* • *The use of geology in guiding and controlling Mineral Resource estimation* • *The factors affecting continuity both of grade and geology*	• The confidence in the geological interpretation of the MML and MML HW is considered good. Bushveld Complex layered deposits are highly continuous • The location of major faults, dykes and sills in the area are known • No alternative interpretations exist other than the well understood local stratigraphy
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource*	• The MML and MML HW mineralisation has been defined over a north to south strike length of approximately 6.5 km and east to west breadth of approximately 360 m. The overall MML + MML HW package has a stratigraphic thickness of about 82 m but only selected layers within this package are reported as Mineral Resource • The mineralisation has been shown to continue at depth although this estimate has been constrained to 120 m vertical depth
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data*	• Grade estimation was completed using inverse distance to the power of 2 for the MML layers, and power of 1 for the MML HW layers, using Datamine Studio 3 software. There were insufficient data to calculate reliable variograms. Data was composited to coincide with the thickness of the intersection. Top cuts were not applied. A constrained search ellipse of 800 m x 800 m was used for the estimation of the MML layers (MAG3, Parting, MAG4). Due to fewer available data, all data was considered for estimation of the MML HW layers as the estimate is global in nature. The search area was designed such that all composites could be selected

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in Section 1, and where relevant in Section 2, also apply to this Section)		
Criteria	**JORC Code explanation**	**Commentary**
	• *The assumptions made regarding recovery of by-products* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation)* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed* • *Any assumptions behind modelling of selective mining units* • *Any assumptions about correlation between variables* • *Description of how the geological interpretation was used to control the resource estimates* • *Discussion of basis for using or not using grade cutting or capping* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available*	• Previous estimates were conducted and reported on a composite MML only • No bi-product recoveries were considered • P_2O_5, SiO_2, Al_2O_3 and S are also estimated • The block model dimensions are 100 m x 100 m x 10 m in XYZ respectively for the MML (3D model), and 100 m x 100 m x 1 m in XYZ respectively for the MML HW layers (2D model) • No SMU was considered • Correlations between Fe_2O_3, V_2O_5 and SG were observed and used for check purposes • The top contact of the MML layer was used as the base of the MML HW estimate. Fourteen layers were interpreted above the MML based on geological logging and Fe_2O_3 grade transitions • The block model was compared to drillhole data visually and statistically. The average grade of the model compares to that of the input data within close limits. The deposit is undeveloped so no mining reconciliation data were available
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content*	• Tonnages were estimated on a dry basis
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied*	• The mineralisation has been reported using a cut-off grade of 0.3% V_2O_5. Material with similar grade (and up to 0.7% V_2O_5) has been subject to metallurgical test work in order to investigate the likely recoveries and associated concentrate grades derived from this material. A high-level financial study has shown that material above a 0.3% V_2O_5 cut-off can be mined economically at the Mokopane Project
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made*	• It has been assumed that the MML and MML HW mineralisation will be extracted by open-pit methods given its considerable thickness and proximity to surface • The MML HW mineralisation occurs in the immediate hanging wall of the MML Mineral Resource. It is assumed that the VTM layers of the MML HW will be co-extracted with the MML, and that the incremental cost of mining will be small, the MML HW being mined in order to access the MML i.e. the main target horizon

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in Section 1, and where relevant in Section 2, also apply to this Section)		
Criteria	**JORC Code explanation**	**Commentary**
		• Reasonable prospects for eventual economic extraction of the MML HW VTM layers are dependent on its co-extraction with the MML and it is less likely that the MML HW VTM layers could potentially be extracted economically as a standalone project
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made*	• Both Davis tube and low-intensity magnetic separation ("LIMS") test work has been carried out on material of various grades. Both methods show good recoveries and associated concentrate grades. LIMS is generally a better representation of large scale processing
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made*	• No environmental impediments are currently known. An environmental impact assessment has been compiled as part of the Mining Right application submitted on 13 March 2015
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials*	• Specific gravity (SG) has been determined for all of the samples assayed for Fe_2O_3 and V_2O_5 • SG for each sample was determined by gas pycnometry on the pulverised sample material at Set Point Laboratories in Johannesburg. The specific gravity measurements have been checked against the Fe_2O_3 assay results and show a good correlation • A density model was generated using inverse distance squared interpolation and used for the tonnage estimation

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in Section 1, and where relevant in Section 2, also apply to this Section)		
Criteria	**JORC Code explanation**	**Commentary**
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data)* • *Whether the result appropriately reflects the Competent Person's view of the deposit*	• The MML portion of the Mineral Resource has been classified as Indicated based on the available data, data quality and geological continuity. The MML HW portion of the Mineral Resource has been classified as Inferred. Layered magmatic Bushveld deposits have excellent geological continuity; however the drillholes are too widely spaced to allow for reliable local grade estimates and the global nature of the MML HW estimate warrant the Inferred classification • The Mineral Resource estimate reflects the Competent Person's view of the deposit
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No reviews have taken place outside of MSA's internal review process.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available*	• The confidence in the global grade estimate is high, the data having low variance and the estimate being closely aligned with the input data • There are insufficient data in order to provide for local estimates • There are no production data with which to verify the estimates

14.5 Current Mineral Resource Estimate for AB Zone

The data for the AB Zone was generated from a DataShed database and MSA considers that the database is an accurate representation of the original data collected. The data were collected by qualified BML geologists.

14.5.1 Database

The database comprises collar, lithology, survey, sampling and assay data which were subjected to QC checks and validations. The data collection was done in accordance with BML's standard operating procedure ("SOP"). Thirteen drillholes intersected VTM mineralisation, three of which (AB05, VL37 and VL38) intersected a VTM-enriched package that differs in his physical and geochemical properties from the other 10 holes of the AB Zone. The Thirteen drillholes total 1,079.86 metres of drill core.

Additional tests were performed to assess the consistency of the assay results. The Fe_2O_3+TiO_2 versus SG and the Fe_2O_3+TiO_2 versus V_2O_5 concentrations generally follow reasonably well constrained trends as shown in the scatterplots in Figure 14-12 and Figure 14-13. The results show the expected compositional patterns and a very good overall data integrity has therefore been achieved.

Figure 14-12

SG vs Fe_2O_3 + TiO_2 scatterplot, n=451 (MSA, 2015)

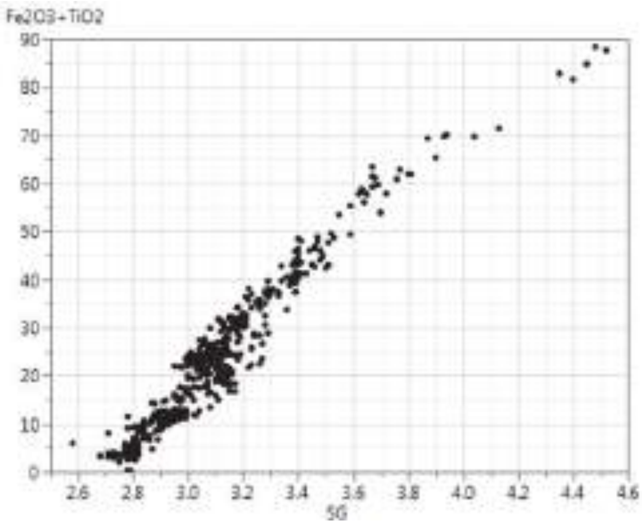
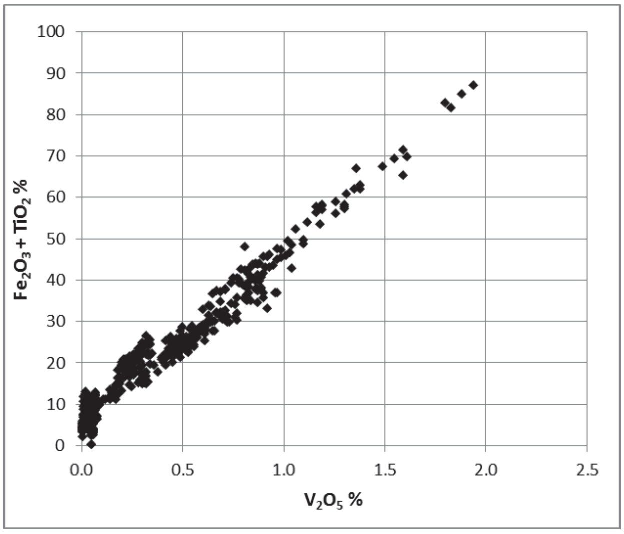


Figure 14-13

V_2O_5 vs Fe_2O_3 + TiO_2 scatterplot, n=451 (MSA, 2015)



14.5.1.1 Exploratory Data Analysis

Data within the AB Zone were composited within each of the three layers. Average values of the relevant variables within these layers are presented in Table 14-28. The VTM-rich layers are generally those with V_2O_5>0.5%.

The grades within each of the layers are fairly consistent for all included composites. This is a common occurrence for this type of layers in the Bushveld Complex. The drilled lengths of the intersections of each layer are also generally consistent across the property.

Table 14-28

AB Zone average composite values by layers (length-weighted)

Layer	CODE	n	Density t/m³	Fe_2O_3 %	TiO_2 %	V_2O_5 %	P_2O_5 %	SiO_2 %	Al_2O_3 %	S %
AB Upper	50	9	3.30	34.4	5.31	0.88	0.01	30.6	17.2	0.062
AB Parting	55	9	3.08	21.2	3.06	0.49	0.01	39.8	19.5	0.009
AB Lower	60	9	3.21	29.1	4.31	0.75	0.01	34.5	18.5	0.011

14.5.1.2 Variography

Experimental variograms were calculated in Datamine for all variables on all layers. The lack of input data resulted in unrepresentative variograms that were difficult to model. The application of variograms for estimation was therefore abandoned.

14.5.2 Geological Interpretation and Modelling

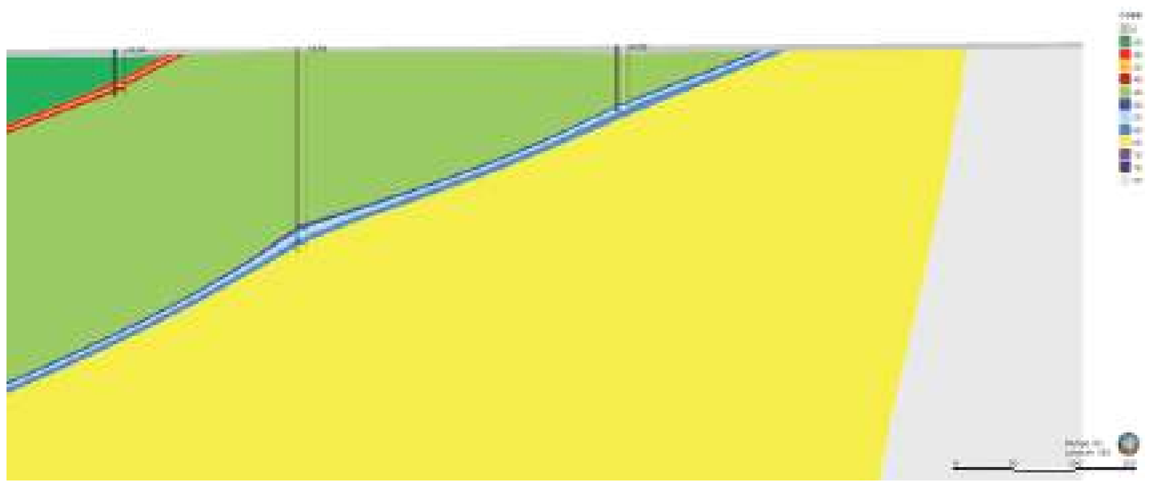
Leapfrog Geo 2.2.0 and Datamine Studio 3.22.173.0 were utilised for the three-dimensional geological modelling.

The individual layers were manually coded into the de-surveyed drillhole data in Datamine. As a first pass, the STRAT field was used to define the contacts of the layers, following which V_2O_5 grade transitions were used to further refine the AB Zone layers based on a 0.5% cut-off. The layers were numbered for modelling purposes (in the CODE field in Leapfrog and Datamine) and correspond to the following stratigraphic nomenclature for the modelled layers:

- Surface topography
- Soil (CODE=0)
- MML hanging wall (CODE=25)
- MAG3 (CODE=30)
- MML Parting (CODE=35)
- MAG4 (CODE=40)
- MML footwall (CODE=45)
- AB Upper (CODE=50)
- AB Parting (CODE=55)
- AB Lower (CODE=60)
- AB footwall (CODE=65)
- Unknown (CODE=99)

The coding was used within Leapfrog to geologically model conformable layers (from CODE=25 down to CODE=65), an unconformable "Unknown" unit (CODE=99), and a soil layer (CODE=0) (Figure 14-14).

Figure 14-14
Section view (looking north) of modelled layers based on drillhole coding (MSA, 2015)



14.5.3 Grade Estimation

A 3D block model was created such that the wireframes created in leapfrog were filled with blocks in Datamine. The block model prototype dimensions are listed in Table 14-29.

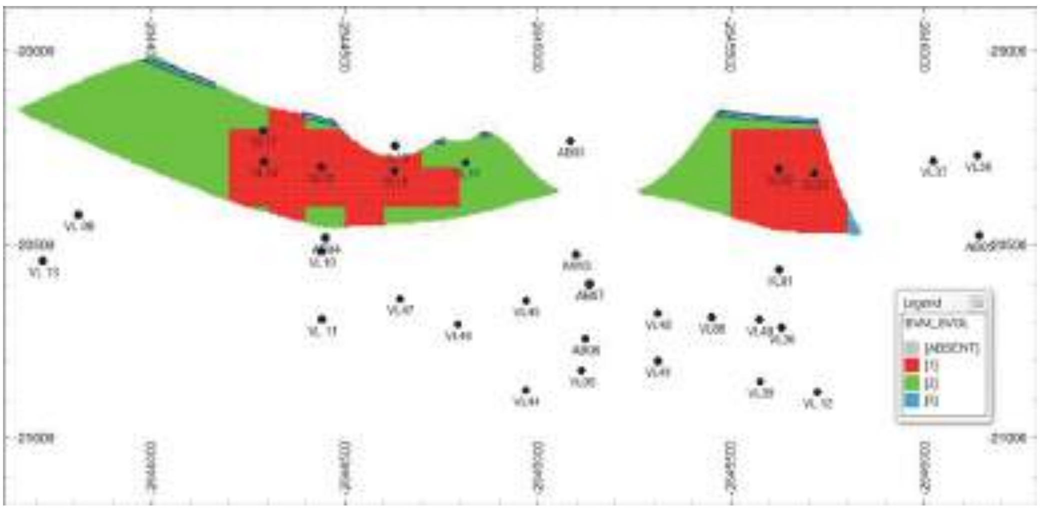
Table 14-29
Block model prototype dimensions

Origin			Block size			Number of cells			Number of sub-cells			Resol
X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z	Z
-22,000	-2,646,700	-200	100	100	1,400	35	85	1	20	20	1	0

The parent block size is 100 m (easting or X) by 100 m (northing or Y) by the vertical thickness of the layer (for the Z height). A sub-celling routine was applied such that the X and Y dimensions of the block were split into 20 equal size blocks i.e. 5 m x 5 m to fit within the wireframe and honour the geological contacts.

In the absence of adequately defined variograms, inverse distance weighting to the power of two was used for the estimation of all variables. A search volume was created such that each blocked used a 500 m radius to locate composites for estimation. A minimum of three composites were required for a block to be estimated. If three composites could not be located within the search volume, a second search volume was applied with a 1,000 m radius, with the requirement of locating four composites for estimation. A final search volume of 1,500 m was applied if required, although only a small portion of the model was estimated using the third search volume (Figure 14-15).

Figure 14-15
AB Zone block model with the search volumes used for estimation, north to the left (MSA, 2015)



14.5.4 Assessment of Reasonable Prospects for Eventual Economic Extraction (RPEEE)

The high vanadium tenor of the Ti-magnetite grains and their relatively large grain size should ensure that the AB Zone has a reasonable prospect for an economically viable open cast operation despite the lower abundance of VTM compared to the MML and MML HW mineralisation. Relevant metallurgical test work has been conducted by BML on 10 samples and the initial results have shown that a relatively clean concentrate can be produced from the AB Zone VTM mineralisation.

14.5.5 Mineral Resource Classification

Due to the relatively low number (= 10) of intersections in the AB Zone, the global nature of the estimate, and the geological uncertainty with regards to drillholes that did not intersect the AB Zone, the Mineral Resource was classified as Inferred.

14.5.6 Mineral Resource Statement

No geological losses have been applied to the reported Mineral Resource.

A cut-off of 0.3% V_2O_5 has been applied on a per layer basis.

The Inferred Mineral Resource is declared for the AB Zone layers to a vertical depth of 120 m (Table 14-30). These Mineral Resources have been prepared in accordance with the guidelines of the 2012 Edition of the JORC Code.

MSA are unaware of any material factors which could detrimentally affect the Mineral Resource reported herein.

Table 14-30
AB Zone Mineral Resource at 0.3% V_2O_5 cut-off, ≤120 m vertical depth, as at 15 October 2017

Layer	Mineral Resource Category	Tonnes	Thickness	Density	V_2O_5	Fe_2O_3	TiO_2	P_2O_5*	SiO_2*	Al_2O_3*	S*	V_2O_5
Name		[1]Mt	m	t/m³	%	%	%	%	%	%	%	[2]Kt
AB Upper	Inferred	2.7	1.93	3.29	0.89	34.7	5.4	0.01	30.3	17.1	0.06	24.3
AB Parting	Inferred	3.7	2.86	3.07	0.48	20.9	3.0	0.01	40.0	19.7	0.01	17.9
AB Lower	Inferred	6.0	4.51	3.21	0.75	29.1	4.3	0.01	34.6	18.6	0.01	45.1
[3]Total	**Inferred**	**12.5**	**9.30**	**3.18**	**0.70**	**27.9**	**4.2**	**0.01**	**35.3**	**18.6**	**0.02**	**87.3**

[1]Mt = million tonnes, [2]Kt = thousand tonnes; [3]Total = Rounding may cause computational errors; No geological losses applied
*Included for informative purposes only, no value will be derived from these materials

14.5.7 Checklist of Assessment and Reporting Criteria

Criteria for assessing the validity of data used in the MRE are presented in the following table and include all aspects of Table 1 of the JORC Code, 2012 Edition.

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)		
Criteria	**JORC Code explanation**	**Commentary**
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• The mineralisation was sampled using NQ size diamond cored drillholes. A total of 13 holes were drilled vertically. Only diamond drill core was used to sample the mineralisation. • Core was logged for lithology, weathering state and structure. Core was half-split or quarter-split and sampled following BML protocols and QAQC procedures as per standard industry practice. • The cores were sampled continuously through the AB Zone mostly at 1.0 m intervals. The intervals were varied where necessary in order to honour geological boundaries. • Samples were dried and then crushed to more than 80% at < 2.8 mm, milled to greater than 90% at <106 µm and analysed on a fused glass disk with an X-ray fluorescence spectrometer (XRF).
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Only diamond drill core of NQ size. Holes were drilled vertically and core was not oriented.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Core recoveries were calculated with overall >97% in the mineralised AB Zone.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All core has been logged for lithology, mineralisation, structure and weathering. • All data is stored in a relational borehole database (DataShed). • All cores were logged from surface to the end of hole. The total length of core in the 13 drillholes used for the geological model and Mineral Resource estimate is 1,079.86 metres.

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)		
Criteria	**JORC Code explanation**	**Commentary**
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to grain size of material sampled.*	• All cores were cut in half using purpose built core saws on-site. Half or quarter NQ size core was collected for sampling, ensuring that the same side of the core was consistently sampled. • Samples were prepared at Set Point laboratories and crushed to more than 80% at <2.8 mm. Followed by splitting with a Jones Riffle Splitter and 600 g subsamples were pulverised (> 90% at <106 µm). Regular sizing checks were undertaken and reported. • Sample sizes are appropriate to the grain size of the material being sampled.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• Analytical procedures are industry standard and appropriate for the type of mineralisation and level of confidence for tonnage and grade estimation. The assaying technique is a whole rock analysis. • All quality control measures are based on industry standard operating procedures which were followed during the sampling and assaying campaign. CRMs, blanks and duplicates were inserted at an appropriate frequency and the results showed acceptable levels of precision and accuracy. No analytical bias was observed for samples submitted to a secondary (umpire) laboratory and the results confirm the assay data obtained from the primary laboratory.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• No verification work of significant intersections has been completed • No twin holes have been drilled • Data entry and verification into the database was undertaken by MSA following an established protocol. All data is stored in a digital database and regularly backed-up. • No statistical adjustments to data have been applied.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• All of the drillhole collars have been surveyed by a qualified surveyor. • No drillhole collars were been observed by MSA in the field. • All drillholes were drilled vertical. The depths ranged from 4 m to 200 m. No down-the-hole surveys were conducted and all holes were accepted as being vertical for their entire length. • The grid system for the project is UTM WGS84, LO29. • The topography model was derived from the borehole collar elevations.

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)		
Criteria	**JORC Code explanation**	**Commentary**
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The drillholes were spaced between 100 m and 1,000 m apart on strike and from 80 m to 250 m on dip. • The drillhole spacing is sufficient to assume geological and grade continuity for this type of mineralisation but insufficient for grade continuity to be confirmed. • Samples have been composited according to geology i.e. to the width of manually coded data per AB Zone layer.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Holes are drilled vertically and intersect mineralisation at angles of between 65° and 75°. • No orientation based bias had been identified in the data to this point
Sample security	• *The measures taken to ensure sample security.*	• Appropriate chain-of-custody procedures were followed to ensure sample security.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The original assay certificates were used for the project database and sampling procedures were reviewed and are considered adequate.

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• Exploration in the Project Area was conducted on two Prospecting Rights (PR), 95PR and 438PR, which consist of the farms Vriesland 781LR, Vliegekraal 783LR, Vogelstruisfontein 765LR, Malokong 784LR, Schoonoord 786LR and Bellevue 808LR. • The application to include Schoonoord 786LR and Bellevue 808LR in PR 95PR was granted on 19 February 2013 by the Department of Mineral Resources (DMR) and the Notarial Deed was executed on 19 February 2014. • The author is not aware of any impediments to obtain a licence to operate in the area.

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• All exploration activities were conducted by BML geological and technical staff. All analytical work was performed by independent and accredited laboratories.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The deposit is a layered mafic intrusion. • Mineralisation occurs in the form of vanadiferous titaniferous-magnetite layers.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* – *easting and northing of the drill hole collar* – *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* – *dip and azimuth of the hole* – *down hole length and interception depth* – *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• Refer to Table 10-5. • All drillholes are orientated vertically. • Up to 3 layers can be intersected per drillhole and therefore this information regarding the intersection depth has not been supplied.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Not applicable

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)		
Criteria	**JORC Code explanation**	**Commentary**
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• Holes were predominantly drilled vertically and intersected mineralisation at angles of between 65° and 75°.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Plans and maps are contained within the report.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• Not applicable.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• There is no other exploration information considered material to this estimate.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• No further drilling is planned in the immediate future.

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in Section 1, and where relevant in Section 2, also apply to this Section.)		
Criteria	**JORC Code explanation**	**Commentary**
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• The database is managed by MSA. • Data were loaded into Datashed and validated upon upload using database validation rules and visual inspection of data.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• A site visit was undertaken by Dr Frieder Reichhardt and Mr Anton Geldenhuys on 11 March 2015 to view the AB Zone core and sampling thereof.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The confidence in the geological interpretation of the AB Zone is considered reasonable based on the available data. Some issues exist regarding drillholes that were expected to intersect the AB Zone but did not i.e. AB01, AB02 and AB03 • Drillholes AB05, VL37 and VL38 intersected VTM mineralisation which is geochemically (gradual upward increase in vanadium and pervasive occurrence of sulphides) and physically (18-20 m wide) different to the AB Zone in the other holes and a possible correlation will require additional drilling • The location of major faults, dykes and sills in the area are known. • No alternative interpretations exist other than the reasonably understood local stratigraphy.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The AB Zone mineralisation has been defined over a north to south strike length of approximately 2.2 km and east to west breadth of approximately 270 m. The overall AB Zone has a stratigraphic thickness of about 9.3 m. All layers within this package are reported as Mineral Resources. • The mineralisation has been shown to continue at depth although this estimate has been constrained to 120 m vertical depth.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	• Grade estimation was completed using inverse distance to the power of 2 using CAE Studio 3 software. There were insufficient data to calculate reliable variograms. Data was composited to coincide with the geological contacts. Top cuts were not applied. All data was considered for estimation as the estimate is global in nature. The search volume was designed such that sufficient composites could be selected for estimation.

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in Section 1, and where relevant in Section 2, also apply to this Section.)		
Criteria	**JORC Code explanation**	**Commentary**
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• No previous estimates have been conducted. • No bi-product recoveries were considered. • P_2O_5, SiO_2, Al_2O_3 and S are also estimated. • The parent block dimensions are 100 m x 100 m x 1,400 m in XYZ respectively, with sub-blocking 20 times in the X and Y direction, with an exact fill in the Z direction. • No SMU was considered • Correlations between Fe_2O_3, V_2O_5 and SG were observed and used for check purposes. • The block model was compared to drillhole data visually and statistically. The average grade of the model compares to that of the input data within close limits. The deposit is undeveloped so no reconciliation data were available.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages were estimated on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The mineralisation has been reported using a cut-off grade of 0.3% V_2O_5. At this stage there is no economic basis for this cut off apart from it being a reasonable cut-off to apply for this type of deposit considering the recoveries and marketable product.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• It has been assumed that the AB Zone mineralisation will be extracted by open-pit methods given its considerable thickness. • The AB Zone mineralisation occurs in the MML footwall. A separate pit (from the MML pit) would be required to mine the AB Zone down to 120 m or less. • Reasonable Prospects for Eventual Economic Extraction of the AB Zone VTM layers are dependent on the overall costing of mining and metallurgical processing to create a clean VTM concentrate.

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in Section 1, and where relevant in Section 2, also apply to this Section.)		
Criteria	**JORC Code explanation**	**Commentary**
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Bench scale test-work (Davis Tube) was done on AB Zone drill core material with disseminated VTM to establish the recovery percentages.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the assumptions made.*	• No environmental impediments are currently known. An environmental impact assessment has been compiled as part of the Mining Right application submitted on 13 March 2015.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Specific gravity (SG) has been determined for all of the assayed samples. • SG for each sample was determined by gas pycnometry on the pulverised sample material at Set Point Laboratories in Johannesburg. The specific gravity measurements have been checked against the Fe_2O_3+TiO_2 assay results and show a good correlation. • A density model was generated using inverse distance squared interpolation and used for the tonnage estimation.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The Mineral Resource has been classified as Inferred Mineral Resources. Layered magmatic Bushveld deposits have excellent geological continuity; however relatively few drillhole intersections were available and are too widely spaced to allow for reliable local grade estimates. Some issues exist regarding the geological continuity as some drillholes that were expected to intersect the AB Zone did not. • The Mineral Resource estimate reflects the Competent Person's view of the deposit.

Section 3 Estimation and Reporting of Mineral Resources (Criteria listed in Section 1, and where relevant in Section 2, also apply to this Section.)		
Criteria	**JORC Code explanation**	**Commentary**
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No reviews have taken place outside of MSA's internal review process.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The confidence in the global grade estimate is high, the data having low variance and the estimate being closely aligned with the input data. • There are insufficient data in order to provide for local estimates. • There are no production data with which to verify the estimates.

15 ADJACENT PROPERTIES

Considerable work on Ti-magnetite layers was carried out on five contiguous farms immediately south of the Project Area by Mining Corporation Ltd ("MCL") during 1979 and 1980. MCL completed geological mapping, magnetic surveys, trenching and drilling over the mineralised strike distance of approximately 16 km. The deposit is referred to as the VanMag project and was acquired by Continental Capital Ltd ("CCL") in 2007.

Sixteen diamond drill holes totalling 2,141 m and 158 percussion holes totalling 2,687 m were drilled by MCL. The results were summarised in 1980 by Schutte in a Report for the Geological Survey of South Africa. The Schutte report does not describe or include any metallurgical or techno-economic results.

CEI Africa (Pty) Ltd ("CEI") acquired the VanMag project in 2013 and has since conduced considerable exploration activities. The results for the work undertaken by CCL and CEI are not in the public domain.

16 OTHER RELEVANT DATA AND INFORMATION

The regional NE-SW-trending dyke and fault zone crossing the farms Malokong and Vogelstruisfontein are responsible for significant structural disturbances, which according to BML, were found to compromise the northerly continuity of the VTM mineralisation. A decision was taken by BML that the mineralisation to the north of the fault zone on the farms Malokong and Vogelstruisfontein would not be investigated further during the current exploration phase. According to information provided by BML, seven holes were drilled and completed in 2010/11 on Vogelstruisfontein and one drillhole on Malokong. MSA has not been provided with the location nor geological and structural information with respect to the latter drillholes as they are still of a reconnaissance nature.

A Pre-Feasibility Study ("PFS") was completed on the Mokopane Project in January 2016. The PFS focused on developing the Project through mining of the Main Magnetite Layer using an open pit mining method, crushing and milling the ore on site, concentrating Ti-magnetite using magnetic separation and beneficiating this concentrate in a salt roast plant to produce vanadium pentoxide (V_2O_5) flakes. An Ore Reserve was estimated and reported according to the guidelines of the JORC Code (2012) using modifying factors applied to the MML Mineral Resource. A total of 28.5 Mt of MML mineralisation was estimated as mineable, to be depleted at a rate of 952,000 tonnes per annum over a period of 30 years. Probable Ore Reserves were estimated as shown in Table 16-1.

Table 16-1
Probable Ore Reserves for Mokopane Project

Orebody	True Thickness (m)	SG (t/m^3)	Tonnes (million)	V_2O_5 (%)
MML Upper (MAG3)	4.09	4.08	15,342	1.43
MML Lower (MAG4)	3.59	4.00	13,154	1.39
Total / Average*	**7.68**	**4.04***	**28,496**	**1.41***

* denotes average

The financial evaluation of the project gave a Pre-Tax NPV of US$ 418.04 million and a Pre-Tax IRR of 24.80%. However, some of the economic parameters such as the ZAR/US$ exchange rate and the vanadium price have changed significantly since the PFS was published, and as the results of the PFS are almost two years out of date, the NPV, IRR and Ore Reserves should be recalculated using updated techno-economic parameters.

17 INTERPRETATION AND CONCLUSIONS

17.1 General

The drilling, core sampling and assay programme conducted by BML has been critically reviewed and no material issues which could impact on the various Mineral Resource estimates have been identified.

The interpretation from the aeromagnetic survey correlates reasonably well with the modelled sub-crop position of the Ti-magnetite layers. These show continuity along strike, with some off-sets due to possible faulting.

Good lateral and downhole continuity of the Ti-magnetite and Phosphorus mineralisation has been observed and sampling intervals can be increased in future drillhole sampling programmes to one metre or more.

Core recoveries in the mineralised intersections were generally above 90%.

17.2 P-Q Zone

In addition to the 19 holes intersecting the P-Q Zone well below the weathering profile, a further 33 shallow holes were drilled on the farm Vliegekraal 783LR, to define the spatial distribution of the weathered and unweathered Ti-magnetite mineralisation. The drillholes increased the confidence and continuity of the outcrop of the P-Q Zone and were utilised for a Mineral Resource estimate which was split into a northern and southern sector due to the presence of a topographic feature. Westerly dips of 18° to 22° and an average true width of 55 m have been calculated for the P-Q Zone.

The P-Q Zone forms the upper portion of the stratigraphically wider N-Q Zone which has been subdivided on textural and mineralogical criteria into 10 layers. These differ considerably in their abundance of Ti-magnetite from massive to semi-massive, to layers with disseminated mineralisation ranging from less than 5% to more than 30%. The extension of the P-Q Zone to include the stratigraphically lower Ti-magnetite layers N and O has only marginally added to the Mineral Resource base due to the generally low VTM concentrations in this approximately 17 m thick interval. It was therefore agreed with BML to limit the current Mineral Resource to the P-Q Zone only.

The northernmost part of the P-Q Zone is truncated by a north-east trending, sub-vertical dolerite dyke near drillhole MAL02 on the farm Malokong which reduces the size of the Mineral Resource slightly at depth on this farm.

The P-Q Zone is categorised as an Indicated Mineral Resource down to a vertical depth of 200 m, including the weathered portion. From depths of 200 m to 400 m, the P-Q Zone is classified as an Inferred Mineral Resource.

17.3 Phosphate Zone

Phosphorus concentrations, hosted exclusively by apatite, generally increase gradually over several metres in the immediate hanging wall succession of the P-Q Zone and form an approximately 45 m thick zone based on a cut-off grade of 3% P_2O_5. The estimated Mineral Resource blocks selected above this grade threshold form a cohesive zone of mineralisation but, like the P-Q Zone, are also split into a northern and southern sector by a prominent hill of diabase at the boundary between the farms Vliegekraal and Schoonoord.

The Inferred Mineral Resource for the Phosphate Zone is reported in conjunction with the Mineral Resource of the underlying P-Q Zone as these form part of the same project. The economic viability of extracting value from the Phosphate Zone is dependent on the extraction of the P-Q Zone.

17.4 MML and MML HW

A total of 17 diamond drill holes were used to model and estimate the three individual layers of the MML and the 14 MML HW layers on the farms Vliegekraal 783LR and Vriesland 781LR in order to define a Mineral Resource. An average true width of approximately 82 m has been estimated for the combined MML + MML HW package, although only those layers averaging ≥0.3% V_2O_5 are reported as Indicated or Inferred Mineral Resource. The Inferred MML HW Mineral Resource is reported in conjunction with the Indicated MML Mineral Resource as these form part of the same project. The economic viability of extracting value from the MML HW is dependent on the extraction of the MML.

An average true width of 9.8 m and westerly dips of 18° to 24° have been calculated for the combined MML which includes the VTM-poor parting.

The MML can generally be categorised as an Indicated Mineral Resource down to a vertical depth of 120 m below surface. The prospects for eventual economic extraction are limiting factors to declare any Mineral Resource for the MML beyond a depth of 120 m.

17.5 AB Zone

The AB Zone represents the lowermost accumulation of abundant VTM and has been subdivided into three layers defined by geological logging and V_2O_5 grade. The mineralised units may contain one or two narrow layers (<40 cm) of semi-massive to massive VTM and have an average dip of 21° to the west with a combined average true thickness of approximately 9.3 m.

The AB Zone was intersected in 13 diamond drill holes from which the three southernmost holes (AB05, VL37 and VL38) on Vriesland intersected an 18 m to 20 m thick VTM mineralised package with a gradual upwards increase in VTM and pervasive sulphides that, without additional drilling, cannot be unambiguously correlated with the AB Zone in the south-central portion of Vriesland.

The AB Zone has been classified as an Inferred Mineral Resource due to the limited number of drillhole intersections, the generally gradual and irregular contacts and the lack of distinct lithological marker horizons. The Mineral Resource is reported to a vertical depth of 120 m below surface and is reported per layer at a cut-off-grade of 0.30% V_2O_5.

18 RECOMMENDATIONS

Trenching, rather than drilling is recommended in order to expose and sample in-situ weathered material of the N-Q Zone and MML + HW for detailed ore characterisation test work and bulk density measurements.

The current fence line spacing of 500 m to 600 m along strike for the MML, MML HW and P-Q Zone should be halved, to potentially increase the level of confidence in the Mineral Resource to "Measured". The infill drilling can be limited to the most prospective portion of the license area and to depths of 120 m for the MML and 200 m for the P-Q Zone respectively. It is recommended for the MML + HW to site the drill collars in such a way that all the VTM layers of the HW VTM mineralisation are intersected in each infill drillhole.

The MML + HW and the P-Q Zone can potentially be extended northwards into the farms Malokong and Vogelstruisfontein through a reconnaissance drilling programme in conjunction with ground geophysical surveys.

Sampling intervals for the MML + HW can be increased in future sampling programmes to at least one metre, instead of the current 50 cm, provided that the geological contacts are honoured.

Multi-element analyses should be carried out on samples from selected drillholes to determine concentration levels of all potentially beneficial and deleterious elements in the Phosphate Zone.

Due to the observed differences in TiO_2 values in duplicate samples of the primary lab and between the primary and umpire lab, it is recommended to verify and validate TiO_2 values below 7% as part of the metallurgical test work.

18.1 Scope and Budget for future Exploration Activities

A budget has been proposed by BML for infill core drilling in order to increase the confidence level of the Mineral Resource classifications for MML, MML HW and the AB Zone. MSA has reviewed the proposed budget in South African Rand ("ZAR") and considers the expenditure adequate to finance the activities as outlined in Table 18-1.

Table 18-1
Planned Budget for Mokopane Project

	ZAR
Exploration programme (24 months)	
Infill core drilling on MML, MML HW and AB Zone	2,300,000
Assaying of infill boreholes	400,000
Measured Mineral Resource Estimate on MML, MML HW and AB Zone	900,000
Subtotal	**3,600,000**
Contingency (10%)	360,000
Grand Total	**3,960,000**

Note: Above expenditure excludes Corporate and Administration costs

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20 DATE AND SIGNATURE PAGE

The undersigned, Frieder Johannes Reichhardt, compiled Sections 1 to 13 inclusive and Sections 15 to 19 of this technical report, titled "JORC Competent Person's Report and Mineral Resource Estimate for the Mokopane Fe-V-Ti Project, Limpopo Province, South Africa", with an effective date of 15 October 2017 in support of the public disclosure of technical aspects of the Mokopane Property.

Signed,

....

Frieder Johannes Reichhardt

28 October 2017

The undersigned, Jeremy Witley, compiled Section 14 and contributed to Sections 1 and 19 of this technical report, titled "JORC Competent Person's Report and Mineral Resource Estimate for the Mokopane Fe-V-Ti Project, Limpopo Province, South Africa", with an effective date of 15 October 2017, in support of the public disclosure of technical aspects of the Mokopane Property.

Signed,

....

Jeremy Witley

28 October 2017

APPENDIX 1:

Glossary of Technical Terms

Glossary of Technical Terms

aeromagnetic survey	Surveys flown by helicopter or fixed wing aircraft to measure the magnetic susceptibility of rocks at or near the earth's surface
amsl	Above mean sea level; refers to the elevation of any object, relative to the average sea level datum
anorthosite	Intrusive igneous rock characterized by a predominance of plagioclase feldspar (90–100%), and a minimal mafic component
apatite	Apatite is the principal phosphate mineral, $Ca_5(PO_4)_3(F,Cl,OH)$ and used in the manufacture of fertilizer
Archaean	The oldest rocks of the Precambrian era, older than about 2,500 Ma
basalt	A common volcanic rock, dark and fine grained, relatively low in silica. May form very extensive lava flows.
basement	The igneous and metamorphic crust of the earth, underlying sedimentary deposits
bedrock	The first hard and solid rock underlying soil or unconsolidated overburden
breccia	A coarse grained rock made up of large angular fragments, sometimes of various rock types
carbonate	A rock, usually of sedimentary origin, composed primarily of calcium, magnesium or iron and CO_3. Essential component of limestones and marbles
core drilling	Method of obtaining cylindrical core of rock by drilling with a diamond set or diamond impregnated bit
chromite	An oxide of chromium, $(Mg,Fe)Cr_2O_4$
craton	Large, and usually ancient, stable mass of the earth's crust comprised of various crustal blocks amalgamated by tectonic processes. A cratonic nucleus is an older, core region embedded within a larger craton
diamond drilling	synonymous with *core drilling*
Dip and dip direction	The dip direction is the azimuth of the direction of the dip as projected to the horizontal, which is 90° off the strike angle
dyke	A vertical or near vertical sheet of igneous rock, the widths of which may range from centimetres to hundreds of meters
EIA	Environmental Impact Assessment
eluvium	Sediment derived from the physical and/or chemical decomposition of the underlying bedrock

EMP	Environmental Management Plan
facies	The sum of the lithological (and palaeontological) characters of a particular rock
fault	A fracture or fracture zone, along which displacement of opposing sides has occurred
feldspar	A rock-forming, light-coloured mineral belonging to the family of silicate minerals which occur in igneous rocks; ($KAlSi_3O_8$ – $NaAlSi_3O_8$ – $CaAl_2Si_2O_8$)
Ga	Giga years (1 Ga = 1,000 million years)
gabbro	Belongs to a group of dark, coarse-grained, intrusive mafic igneous rocks chemically equivalent to basalt. Clinopyroxene is the dominant mafic mineral
gabbronorite	Belongs to a group of dark, coarse-grained, intrusive mafic igneous rocks chemically equivalent to basalt. Clinopyroxene and orthopyroxene are the dominant mafic mineral
geophysical surveys	Instrumental surveys measuring small variations in the earth's magnetic field, gravity field or electrical conductivity (in addition to some other properties) related to local variations in rock type. Magnetic and some electrical methods can be carried out from an aircraft
gneiss	A coarse-grained, banded, high grade metamorphic rock
gravity survey	A geophysical survey technique which detects variations in the earth's gravity field due to variations in the specific gravity of the underlying rock
GPS	Global Positioning System. A satellite based navigation system able to give real time positions to approx ±5 m in X and Y using simple hand held instruments
ha	Hectare = 10 000 m^2
ilmenite	An iron, magnesium and titanium oxide ($(Fe,Mg)TiO_3$)
Indicated Mineral Resource	An Indicated Mineral Resource is that part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed. (CIM definition)

Inferred Mineral Resource	An Inferred Mineral Resource is that part of a mineral resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. (CIM definition)
intrusion	Liquid rock (magma) that forms below the surface of earth and slowly cools into a solid rock mass
joints	Regular planar fractures or fracture sets in massive rocks, usually created by unloading, along which no relative displacement has occurred
Layered Complex	A body of igneous rock which exhibits vertical layering or differences in composition and texture and shows evidence of fractional crystallisation. Ideally, the stratigraphic sequence of an ultramafic-mafic intrusive complex consists of ultramafic peridotites and pyroxenites toward the base with more mafic norites, gabbros and anorthosites in the upper layers
lineament	A significant linear feature of the earth's crust
Ma	Million years
mafic	Descriptive of rocks composed dominantly of magnesium and iron rock-forming silicates
magmatic	Rock formed from crystallization of molten magma; an igneous rock
magnetic survey	A geophysical survey which measures variations in the earth's magnetic field caused by differences in the magnetic susceptibilities of underlying rock. Kimberlite may be detected by this method, as its susceptibility may be higher or lower than surrounding rock types
magnetic susceptibility	A dimensionless constant that indicates the degree of magnetisation of a material in response to an applied magnetic field

Measured Mineral Resource	A Measured Mineral Resource is that part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics are so well established that they can be estimated with confidence sufficient to allow appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity. (CIM definition)
metamorphism	Alteration of rock and changes in mineral composition, most generally due to increase in pressure and/or temperature
norite	Belongs to a group of dark, coarse-grained, intrusive mafic igneous rocks chemically equivalent to basalt. Orthopyroxene is the dominant mafic mineral
olivine	A dark-coloured magnesium iron silicate with the formula $(Mg,Fe)_2SiO_4$
Palaeozoic	An era of geologic time between the Late Precambrian and the Mesozoic era, 545 Ma to 251 Ma ago
petrography	The description and classification of rocks
Percussion drilling	Drilling by means of an air hammer which breaks the rock into chips which are brought to surface by air circulation
PGE	Platinum Group Elements
plagioclase	A rock-forming, light-coloured mineral belonging to the family of silicate minerals which occur in igneous rocks; ($NaAlSi_3O_8$ – $CaAl_2Si_2O_8$)
Precambrian	Pertaining to all rocks formed before Cambrian time (older than 545 Ma)
Proterozoic	An era of geological time spanning the period from 2 500 Ma to 545 Ma before present
ppm	Parts per million. Measure used to describe very low concentrations of a particular element in a rock
PR	Prospecting Right
pyroxene (ortho- and clino-)	Important dark-coloured rock-forming silicate mineral, occurring in both orthorhombic, orthopyroxene $(Mg,Fe)_2Si_2O_6$ and monoclinic, clinopyroxene form $Ca(Mg,Fe)\ Si_2O_6$

RC drilling	Reverse circulation drilling. A percussion drilling technique in which the sample is brought to surface by air and/or water through the centre of the drill pipe
SG or RD (relative density)	Specific gravity (SG) is the ratio of the density of a rock or any other substance to the density of a reference substance (normally water which has a relative density or specific gravity of 1). SG is a dimensionless unit
spinel	A group of oxide minerals of various compositions, $(Mg,Fe,Mn)(Al,Fe,Cr)_2O_4$, commonly occurring as an accessory in basic igneous rocks
strike	Horizontal direction or trend of a geological structure
thickness (apparent and true thickness)	The thickness of a tabular formation as determined by drillhole intercepts. The apparent thickness will always be greater than the true thickness if the drillhole intersects the tabular body at any direction and angle other than perpendicular to the surface of the body. An intersection perpendicular (at a 90° angle) to the tabular body will provide the true thickness of this formation
Ti-magnetite	An iron oxide minerals (Fe_2O_3) of the spinel group with a high titanium content (generally in excess of 5% TiO_2)
tonne	A metric tonne, 1,000 kg
tectonic	Pertaining to the forces involved in, or the resulting structures of, movement in the earth's crust
Transvaal Supergroup	The Transvaal Supergroup consists of 2.65–2.05 Ga clastic, pelitic and chemical sediments with minor lava flows that surface in the Transvaal Basin which circumscribes the Bushveld Complex
troctolite	Mafic intrusive rock consisting of olivine, plagioclase and minor pyroxene
ultramafic	Igneous rocks consisting essentially of ferromagnesian minerals with trace quartz and feldspar.
variography	In spatial statistics, a process of graphing statistics which relate to the variance of the difference in value between pairs of samples to the distance between them. Allows the weighting of a sample value in terms of its distance from the point where an estimate of sample value is required
VTM	Vanadiferous and titaniferous magnetite; vanadium and titanium occur in the magnetite crystal structure as "solid solution"

vanadium	A chemical element with the symbol V and atomic number 23. It is a hard, silvery gray, ductile and malleable transition metal
Waterberg Group	The Waterberg Group consists of 2.0–1.8 Ga old clastic and minor pelitic sediments

APPENDIX 2:

Competent Person's Consent Form

The MSA Group Consent Form

THE MSA GROUP

Specialist Consultants to the Mining Industry

The MSA Group (Pty) Ltd
Registration No: 2000/002800/07
Tel: +27 (0)11 880 4209 Fax: +27 (0)11 880 2184
email: info@msagroupservices.com
Henley House, Greenacres Office Park
Cnr Victory and Rustenburg Roads, Victory Park, 2195
PO Box 81356, Parkhurst, 2120, South Africa
Directors: BJ Burnand, KD Scott, NN Buthelezi, SZ Majola

Competent Person's Consent Form

Pursuant to the Financial Conduct Authority's Listing Rules and Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

Report name

JORC Competent Person's Report and Mineral Resource Estimate for the Mokopane Fe-V-Ti Project, Limpopo Province, South Africa

(*Insert name or heading of Report to be publicly released*) ('Report')

The MSA Group (Pty) Ltd

(Insert name of company releasing the Report)

Mokopane Fe-V-Ti Project

(Insert name of the deposit to which the Report refers)

If there is insufficient space, complete the following sheet and sign it in the same manner as this original sheet.

28 October 2017

(Date of Report)

THE MSA GROUP

Specialist Consultants to the Mining Industry

The MSA Group (Pty) Ltd
Registration No: 2000/002800/07
Tel: +27 (0)11 880 4209 Fax: +27 (0)11 880 2184
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Cnr Victory and Rustenburg Roads, Victory Park, 2195
PO Box 81356, Parkhurst, 2120, South Africa
Directors: BI Burnand, KD Scott, NN Buthelezi, SZ Majola

Statement

I,

Friedrich Johannes Reichhardt

(Insert full name(s))

confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having over 30 years' experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am Professional Geologist registered with the South African Council for Natural Scientific Professions (SACNASP), a 'Recognised Professional Organisation' (RPO) included in a list promulgated by ASX from time to time.
- I have reviewed the Report to which this Consent Statement applies.

I am a Principal Consultant working for

The MSA Group (Pty) Ltd

(Insert company name)

and have been engaged by

Bushveld Minerals Limited

(Insert company name)

to prepare the documentation for

Mokopane Fe-V-Ti Project

(Insert deposit name)

on which the Report is based, for the period ended

15 October 2017

(Insert date of Resource/Reserve statement)

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating Fe-V-Ti Resources.

THE MSA GROUP

Specialist Consultants to the Mining Industry

The MSA Group (Pty) Ltd
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PO Box 81356, Parkhurst, 2120, South Africa
Directors: BJ Burnand, KD Scott, NN Buthelezi, SZ Majola

Consent

I consent to the release of the Report and this Consent Statement by the directors of:

Bushveld Minerals Limited

(Insert reporting company name)

	28 October 2017
Signature of Competent Person:	Date:
South African Council for Natural Scientific Professions	400048/04
Professional Membership: *(insert organisation name)*	Membership Number:
	Craig Blane, Johannesburg, South Africa
Signature of Witness:	Print Witness Name and Residence: (eg town/suburb)

THE MSA GROUP

Specialist Consultants to the Mining Industry

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Directors: BI Burnand, KD Scott, NN Buthelezi, SZ Majola

Competent Person's Consent Form

Pursuant to the Financial Conduct Authority's Listing Rules and Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

Report name

JORC Competent Person's Report and Mineral Resource Estimate for the Mokopane Fe-V-Ti Project, Limpopo Province, South Africa

(*Insert name or heading of Report to be publicly released*) ('Report')

The MSA Group (Pty) Ltd

(*Insert name of company releasing the Report)*

Mokopane Fe-V-Ti Project

(Insert name of the deposit to which the Report refers)

If there is insufficient space, complete the following sheet and sign it in the same manner as this original sheet.

28 October 2017

(Date of Report)

THE MSA GROUP

Specialist Consultants to the Mining Industry

The MSA Group (Pty) Ltd
Registration No: 2000/002800/07
Tel: +27 (0)11 880 4209 Fax: +27 (0)11 880 2184
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Cnr Victory and Rustenburg Roads, Victory Park, 2195
PO Box 81356, Parkhurst, 2120, South Africa
Directors: BI Burnand, KD Scott, NN Buthelezi, SZ Majola

Statement

I,

Jeremy Witley

(Insert full name(s))

confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having 35 years' experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am Professional Geologist registered with the South African Council for Natural Scientific Professions (SACNASP), a 'Recognised Professional Organisation' (RPO) included in a list promulgated by ASX from time to time.
- I have reviewed the Report to which this Consent Statement applies.

I am a Principal Mineral Resource Consultant working for

The MSA Group (Pty) Ltd

(Insert company name)

and have been engaged by

Bushveld Minerals Limited

(Insert company name)

to prepare the documentation for

Mokopane Fe-V-Ti Project

(Insert deposit name)

on which the Report is based, for the period ended

15 October 2017

(Insert date of Resource/Reserve statement)

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Diamond Resources.

The MSA Group (Pty) Ltd
Registration No: 2000/002800/07
Tel: +27 (0)11 880 4209 Fax: +27 (0)11 880 2184
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Cnr Victory and Rustenburg Roads, Victory Park, 2195
PO Box 81356, Parkhurst, 2120, South Africa
Directors: BI Burnand, KD Scott, NN Buthelezi, SZ Majola

Consent

I consent to the release of the Report and this Consent Statement by the directors of:

Bushveld Minerals Limited

(Insert reporting company name)

	28 October 2017
Signature of Competent Person:	Date:
South African Council for Natural Scientific Professions	400181/05
Professional Membership: *(insert organisation name)*	Membership Number:
	Craig Blane, Johannesburg, South Africa
Signature of Witness:	Print Witness Name and Residence: (eg town/suburb)

THE MSA GROUP

Specialist Consultants to the Mining Industry

The MSA Group (Pty) Ltd
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PO Box 81356, Parkhurst, 2120, South Africa
Directors: BI Burnand, KD Scott, NN Buthelezi, SZ Majola

Johannesburg, 28 October 2017

TO WHOM IT MAY CONCERN

For the purposes of Prospectus Rule 5.5.3R(2)(f) The MSA Group accepts responsibility for the information contained in Part 18, 'Competent Person's Report' of the Prospectus and those other sections of the Prospectus which include references to information in Part 18.

The MSA Group declares that to the best of its knowledge and belief, having taken all reasonable care to ensure that such is the case, the information contained therein is in accordance with the facts and does not omit anything likely to affect the importance of such information.

Kind Regards,

Dr Frieder Reichhardt
Principal Consulting Geologist
The MSA Group (Pty) Ltd.
Tel: +27 (0)11 880 4209
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Email: friederr@msagroupservices.com

APPENDIX 3:

Certificates of CRM AMIS0129 and AMIS0346

PART XI

Competent Person's Report on the Madagascan Assets

Sumsare Consulting CC **2009/123359/23**
P.O. Box 647, Witbank, 1035. Office No.: +27 (0) 13 692 6702
Mobile No.: +27 (0) 82 781 4066 Office Fax.: +27 (0) 13 697 5021
E-mail: johan@sumsare.com

30 November 2017

The Directors
Bushveld Minerals Limited
18-20 Le Pollet
St Peters Port
Guernsey
GY1 1WH

and

The Partners
S.P. Angel Corporate Finance LLP
Prince Frederick House
35-39 Maddox Street
London
W1S 2PP

Dear Sirs,

Sumsare Consulting CC ("Sumsare") has been appointed by Bushveld Minerals Limited ("BML" or the "Company") to prepare a Competent Person's Report ("CPR") on the Company's Imaloto Coal Deposit in Madagascar, quantifying the in-situ coal resource contained within the Company's Mining and Prospecting Rights in accordance with the requirements of AIM (a market operated by The London Stock Exchange plc) for a competent person's report ("CPR"). At present, the Company holds one mining permit (no. 4578) and four prospecting permits (no.'s 3196, 12653, 26904 and 27163).

Sumsare understands that this CPR will be included as part of an AIM admission document to be published by BML ("**Admission Document**") and is prepared in accordance with the AIM Rules for Companies dated May 2014 and the Guidance Note for Mining, Oil and Gas Companies dated June 2009 issued by AIM.

The CPR has been prepared in compliance with and to the extent required by the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012) published by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and Minerals Council of Australia (the "**JORC Code**").

An original CPR, was produced by the MSA Group in December 2010, based on the results of the first phase of drilling (Phase 1). A second CPR, dated 24 January 2013, was completed by Sumsare, which included drilling information from Phases 1, 2 and 3. A third report, dated 18 March 2013, was produced by Sumsare which included the drilling information from Phases 1, 2, 3 and 4. No new drilling or analytical information was gathered during the period prior to the release of this report. The latest document, dated 23 October 2017, is an update of the previous report and includes an update in terms of JORC (2012).

Summary Table of the Company's Assets – Imaloto Coal Deposit

*Asset**	*Holder*	*BMN Interest*	*Status*	*License Expiry*	*License Area*	*Comments*
1. 4578	Coal Mining Madagascar SARL	99%	Mining Right	28/11/2045	25 km^2	159 Boreholes completed and an initial resource has been quantified.
2. 12653	Coal Mining Madagascar SARL	99%	Prospecting Right	10/02/2014	25 km^2	
3. 3196	Coal Mining Madagascar SARL	99%	Prospecting Right	06/11/2013	18.75 km^2	
4. 27163	Coal Mining Madagascar SARL	99%	Prospecting Right	27/10/2012	6.25 m^2	
5. 26904	Coal Mining Madagascar SARL	99%	Prospecting Right	27/10/2012	6.25 km^2	

Summary of Reserves and Resources by status

Category	*Gross*			*Net attributable (99%)*			*Operator*
		Raw Coal Quality (ADB)			*Raw Coal Quality (ADB)*		
	Tonnes (Mt)	*Ash (%)*	*CV (MJ/kg)*	*Tonnes (Mt)*	*Ash (%)*	*CV (MJ/kg)*	
Coal Resources per asset							
Measured	91.613	32.5	19.62	90.697	32.5	19.62	Coal Mining Madagascar SARL
Indicated	31.497	35.7	18.14	31.182	35.7	18.14	
Inferred	12.627	34.4	18.80	12.501	34.4	18.80	
Sub-Total	135.737	33.4	19.20	134.380	33.4	19.20	
Total	135.737	33.4	19.20	134.380	33.4	19.20	

Source: F. J. Erasmus

Johan Erasmus was contracted as an external independent consultant, and was present on site on the following dates during the exploration programme:

Date from	*Date to*	*No. of Days*	*Activities Carried Out*
31 Aug 2011	9 Sep 2011	10	Site visit and drilling verification
17 Nov 2011	27 Nov 2011	10	Site visit and drilling verification
26 May 2012	6 Jun 2012	12	Site visit, logging and sampling checks
23 Jun 2012	30 Jun 2012	7	logging and sampling checks, drilling verification

Qualifications

Sumsare is an independent consultancy specializing in professional technical consultancy services to the mining and metals sector.

Johan Erasmus is a Competent Person as defined by the JORC Code 2012 Edition, having at least five years' experience that is relevant to the style of mineralisation and type of deposit described in the CPR, and to the activity for which he is accepting responsibility for. He has overall responsibility for reporting of Ore Reserves and Valuation. He graduated with a degree in Science (B.Sc. (Geology and Chemistry)) from the University of Port Elizabeth in 1989. In addition, he obtained an Honours degree in Science (B.Sc. Hons. (Geology)) from the University of Port Elizabeth in 1990. Mr Erasmus is a registered member of the South African Council for Natural Scientific Professions (SACNASP), registration number 400052/96. He has worked as a geologist for a total of 26 years since graduating from university.

Basis of Opinion

Sumsare has reviewed the information contained elsewhere within the Admission Document which relates to information contained in the CPR (specifically in Part I of the Admission Document) and can confirm that the information presented is accurate, balanced, complete and not inconsistent with the CPR.

Sumsare have reviewed Part I in the Admission Document and confirm that information that has been extracted from the CPR has been extracted directly from the CPR and presented in a manner which is not misleading and provides a balanced view of the CPR.

Sumsare are responsible for this covering letter and the CPR that forms part of the Admission Document and declare that it has taken all reasonable care to ensure that the information contained herein, to the best of our knowledge, is in accordance with the facts and contains no omission likely to affect its import. In preparing this CPR, Sumsare has used reasonable skill and reasonable care to be expected of a consultant carrying out an independent evaluation and assessment.

Sumsare confirms that there has been no material change of circumstances or available information since the CPR was compiled and that it is not aware of any significant matters arising from its evaluation that is not covered by the CPR which might be of a material nature with respect to the proposed Admission Document. The effective date of the Report is 23 October 2017.

Sumsare also confirm that where any information contained in the CPR has been provided by a third party, such information has been accurately reproduced and, so far as we are aware and are able to ascertain from the information published by that third party, no facts have been omitted which would render the reproduced information inaccurate or misleading.

Declaration

Sumsare will receive a fee for the preparation of this report in accordance with normal professional consulting practice. This fee is not contingent on the outcome of the Admission and Sumsare will receive no other benefit for the preparation of this report. Sumsare does not have any pecuniary or other interests that could reasonably be regarded as capable of affecting its ability to provide an unbiased opinion in relation to the Assets and the projections and assumptions included in the various technical studies completed by the Company, opined upon by Sumsare and reported herein.

Neither Sumsare, nor the Competent Person who is responsible for authoring this CPR, nor any Directors of Sumsare have at the date of this report, nor have had within the previous two years, any shareholding in the Company. Consequently, Sumsare and the Competent Person consider themselves to be independent of the Company.

Consent

Sumsare, hereby consents to the issue by the Company of the Admission Document with the inclusion of the CPR, for which we accept responsibility, in the Admission Document, and the inclusion in the Admission Document of the references to the CPR and to our name in the form and context in which they appear in the Admission Document.

Yours faithfully
Sumsare Consulting CC

JORC Competent Person's Report and Mineral Resource Estimate for the Imaloto Coal Deposit in Madagascar

View towards Benenitra across the Imaloto River

Prepared for Bushveld Minerals Limited and
SP Angel Corporate Finance LLP

Location: Imaloto, North-east of Beninitra, in Madagascar.

Qualified Person: Johan Erasmus (B.Sc. (Hons), Pr. Sci. Nat. 400052/96)
Sumsare Consulting Limited

23 Nov 2017

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JORC Competent Person's Report and Resource Statement for the Imaloto Coal Deposit in Madagascar

1. Summary

This report is a JORC 2012 review of the previously issued report called “An Updated Resource Statement of the Imaloto Coal Deposit in Madagascar in terms of the JORC Reporting Code” and dated 18 March 2013. In terms of the new 2012 guidelines, clauses 5, 9, 19, 27, 35, 37 and 51 were reviewed and checked for reporting compliance. There has been no new activity on the ground and all the material assumptions and technical parameters underpinning the estimates in this review continue to apply and have not materially changed. The form and context in which the competent person’s findings are presented have not been materially modified. The required Table 1 with completed sections 1, 2 and 3 is attached as Appendix 1 to this report.

The gross tonnage in-situ that has been calculated for Permits No. 4578, 3196 and 12653 comes to 135.737 Million tons (GTIS). Of this, 91.613 Million tons are contained within Blocks 1, 3, 3A, 4, 4A and 5, at a measured resource confidence level.

The property that has been explored and investigated in this project is known as the Imaloto Coalfield and its centre is situated 15 km northeast of the town of Benenitra in the south-west of Madagascar. In a straight line, the Imaloto Project is situated 158 km from the coastal city of Tulear, on a bearing of 92^{o} (east) clockwise from north. See Figure 1 below for the general locality of the site.

The Mining (No. 4578) and Prospecting (No’s 3196, 12653, 26904 and 27163) Permits which regulate the right to prospect on this property, were issued to Coal Mining Madagascar S.A.R.L (CMM) on the 29th of November 2005, 7th of November 2008, 11th of February 2009 and 27 October 2007 for the last two respectively.

99% of CMM is owned by Lemur Investments Limited (LIL) a Mauritian subsidiary owned 100% by Lemur Resources Limited, with the remaining 1% being held by Mr. Daniel Rasoamaheinia, (a Madagascan citizen) as required by Madagascan law.

Asset*	Holder	Interest	Status	License Expiry	License Area	Comments
1. 4578	Lemur Resources	99%	Mining Right	28/11/2045	25 km^2	159 Boreholes completed and an initial resource has been quantified.
2. 12653	Lemur Resources	99%	Prospecting Right	10/02/2014	25 km^2	
3. 3196	Lemur Resources	99%	Prospecting Right	06/11/2013	18.75 km^2	
4. 27163	Lemur Resources	99%	Prospecting Right	27/10/2012	6.25 km^2	
5. 26904	Lemur Resources	99%	Prospecting Right	27/10/2012	6.25 km^2	

The area covered by the rights, encloses 81.25 km^2, two-thirds of which is underlain by Karoo Sequence sediments. The strata underlying the rights area contain Permian Age sediments of the Coal Measures Formation of the Sakoa Group. The strata in this sub-basin dips to the north, and is faulted into discrete structural blocks. The faulting has a north-south orientation. The sedimentary package thickens to the north, with the sandstones, mudstones and siltstones of the Red Series and the Vohitolia Limestone Formations sequentially overlying the Coal Measures Formation.

The coal bearing sediments rests conformably on diamictites of the Glacial Series, and the basement consists of gneisses, schists and granites of Pre-Cambrian age. The Imaloto Coalfield is situated in the northernmost part of the Morondava coal basin, and the stratigraphy as documented in this exploration programme generally corresponds with the sequence stratigraphy as described in the literature.

Figure 1: General Locality of the Project Area.

The coal measure stratigraphy as encountered during the exploration programme undertaken for this study includes from the base upwards the following seams;

- The Main Seam Lower Split,
- The Main Seam,
- The Upper Seam,
- The Top Seam,
- The Surface Seam.

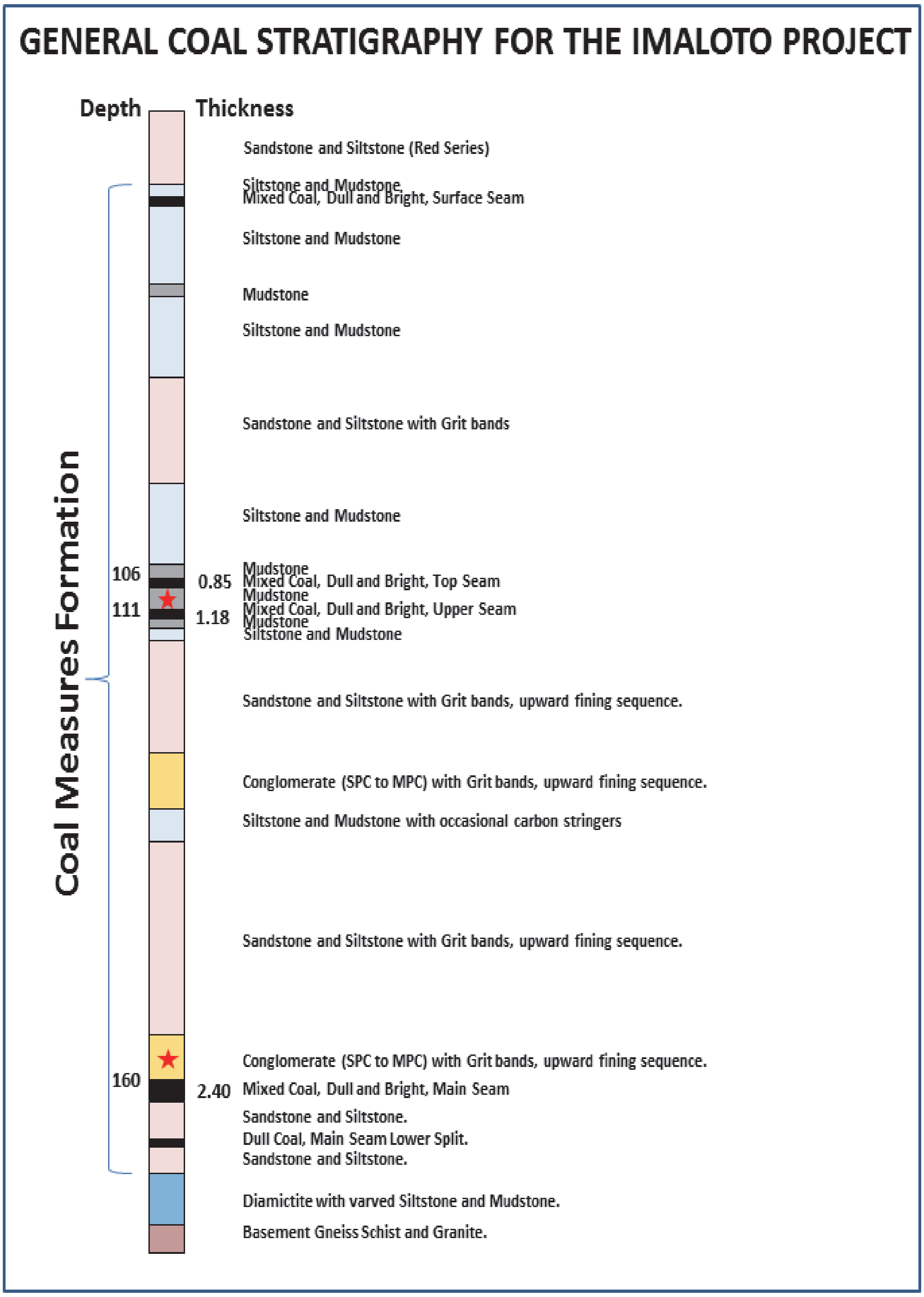

Figure 2: A General Log Showing the Coal Stratigraphic Sequence.

The main emphasis of this exploration programme at the outset was to focus on the Main Seam, which, based on the drilling completed in 2009, is known to be of economic significance. The Main Seam Lower Split occurs on average 11.5 m below the Main Seam. The Surface Seam occurs on average 40 m above the Top Seam. These two seams are on average less than 30 cm in thickness and hence are not considered to be economically significant. Two important marker horizons that were used for the purpose of correlation and structural interpretation, are the small to medium sized pebble conglomerate that occur immediately above the Main Seam, and the mudstone and carbonaceous rocks that constitute the Top and Upper Seam package.

The Phase 1 exploration programme commenced after the final granting of all the Mining and Prospecting Rights by the 11th of February 2009. The initial planning of the first phase of exploration called for 36 boreholes spaced on a 1 km grid over the whole area underlain by Permian Age sediments. Drilling was managed in-house and the company's drill rigs were manned by Indonesian operators.

The subsequent 2nd and 3rd phases of exploration were again managed in-house and included the drilling of an additional 74 boreholes. Drilling started in August 2011, and was concluded at the end of August 2012.

The 4th and final phase was completed during December 2012, and included the drilling of 25 additional infill boreholes, as well as the drilling of 8 boreholes to confirm the structural aspects of the project. In addition, 15 boreholes were drilled to the east of the Imaloto River, into the shallow remnant of Karoo Age sediments.

In order to facilitate the exploration CMM established a tented camp on the western bank of the Imaloto River. This property was equipped as an exploration base and all the field activity, logging of core and sampling of core was managed from this base camp.

The estimated coal resource contained in 3 main horizons amounts to a gross tonnage in situ (GTIS) of 135.737 Million tons (Mt), of this 91.613 Mt is considered to be at a measured status with the balance of 31.497 Mt and 12.627 Mt at indicated and inferred levels of confidence respectively. Table 1 on page 7 contains a summary of the resource.

This resource presents an opportunity to establish a mining operation. The drilling results from the programme indicates discrete fault bounded blocks that vary between 335 ha and 813 ha in size. These blocks have the potential to form economic underground business units. The block geometry is illustrated in Figure 3 below.

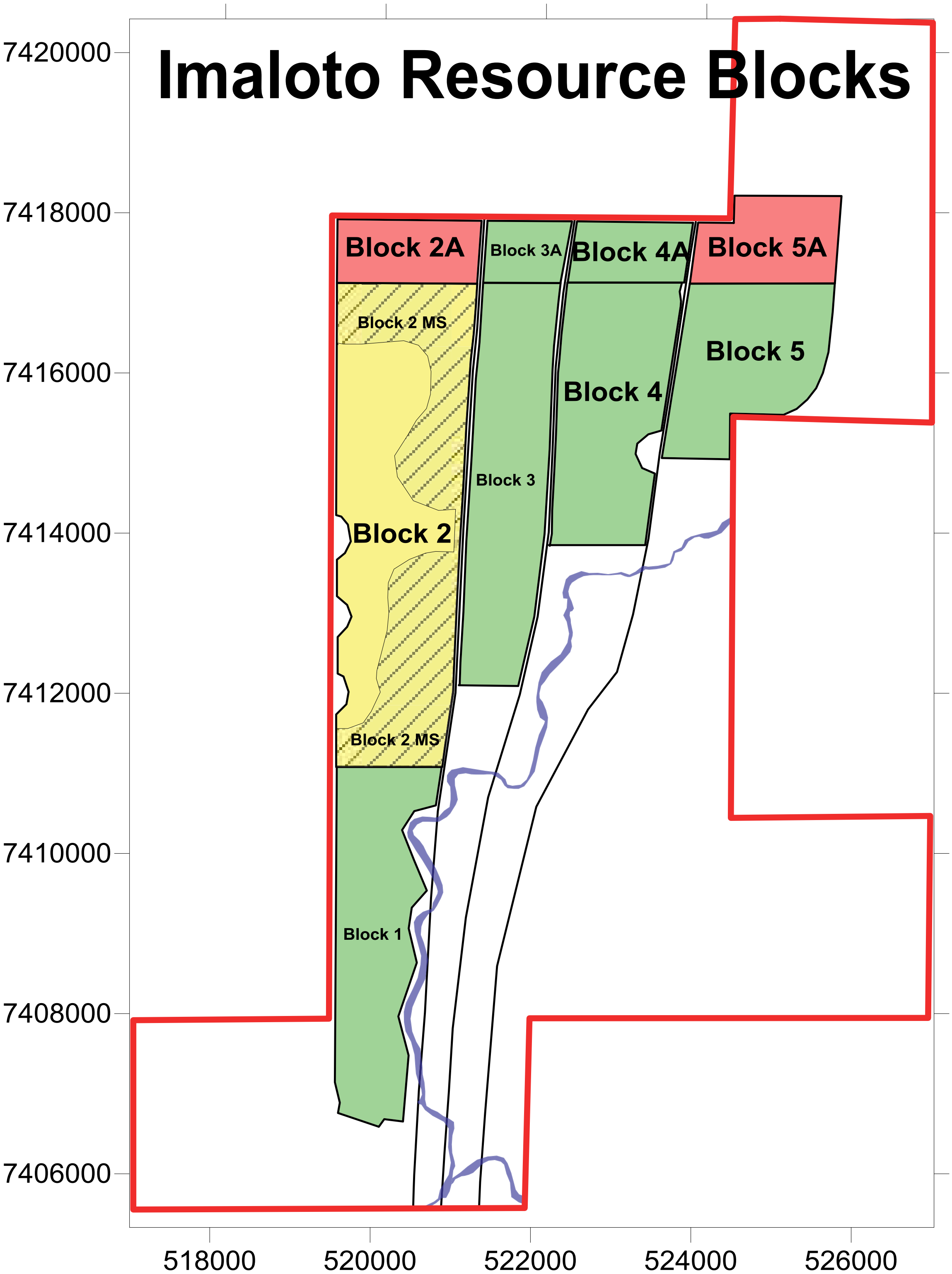

Figure 3: Resource Blocks for the Imaloto Coal Project.

Category	Gross			Net attributable (99 %)			Operator
	Tonnes (Mt)	Raw Coal Quality (ADB)		Tonnes (Mt)	Raw Coal Quality (ADB)		
		Ash (%)	CV (MJ/kg)		Ash (%)	CV (MJ/kg)	
Coal Resources per asset							Lemur Resources Pty (Ltd).
Measured	91.613	32.5	19.62	90.697	32.5	19.62	
Indicated	31.497	35.7	18.14	31.182	35.7	18.14	
Inferred	12.627	34.4	18.80	12.501	34.4	18.80	
Sub-Total	135.737	33.4	19.20	134.380	33.4	19.20	
Total	135.737	33.4	19.20	134.380	33.4	19.20	

COAL RESOURCE - Imaloto - Lemur Resources - as @ 23 Oct 2017.												
Block	Commodity	Seam	Ply	Thick (m)	Area (m^2)	Volume (m^3)	Density	GTIS	Drill Grid	Resource Category	Geological Loss	TTIS
1	Coal	Main	Main	1.35	3940874	5320180	1.468	7.810	331	Measured	10	7.029
Total								7.810				7.029
2	Coal	Top	Top	0.98	6999660	6849535	1.509	10.336	519	Indicated	15	8.786
2	Coal	Upper	Upper	1.12	6999660	7839424	1.622	12.716	519	Indicated	15	10.808
2	Coal	Main	Main	1.90	2959047	5630147	1.500	8.445	519	Indicated	15	7.178
Total								31.497				26.772
3	Coal	Top	Top	0.88	4273073	3760304	1.539	5.787	371	Measured	10	5.208
3	Coal	Upper	Upper	1.07	4273073	4572188	1.590	7.270	371	Measured	10	6.543
3	Coal	Main	Main	2.85	4272813	12176950	1.467	17.864	371	Measured	10	16.077
Total								30.920				27.828
4	Coal	Top	Top	0.83	3761367	3121935	1.580	4.933	373	Measured	10	4.439
4	Coal	Upper	Upper	1.31	3761367	4927391	1.608	7.923	373	Measured	10	7.131
4	Coal	Main	Main	2.94	3357197	9863333	1.514	14.933	353	Measured	10	13.440
Total								27.789				25.010
5	Coal	Top	Top	0.72	3052761	2827001	1.598	4.518	424	Measured	12	3.975
5	Coal	Upper	Upper	1.12	2802195	3138458	1.590	4.990	406	Measured	12	4.391
Total								9.508				8.367
2A	Coal	Top	Top	0.50	1397766	698883	1.509	1.055	1182	Inferred	20	0.844
2A	Coal	Upper	Upper	0.75	1397766	1048325	1.622	1.700	1182	Inferred	20	1.360
2A	Coal	Main	Main	1.98	1397766	2767577	1.500	4.151	1182	Inferred	20	3.321
Total								6.906				5.525
3A	Coal	Top	Top	0.79	777559	614271	1.555	0.955	441	Measured	12	0.841
3A	Coal	Upper	Upper	0.80	777559	622047	1.631	1.015	441	Measured	12	0.893
3A	Coal	Main	Main	3.98	777559	3094683	1.510	4.673	441	Measured	12	4.112
Total								6.643				5.846
4A	Coal	Top	Top	0.87	1092459	950440	1.581	1.503	370	Measured	10	1.352
4A	Coal	Upper	Upper	1.06	1092459	1158007	1.620	1.876	370	Measured	10	1.688
4A	Coal	Main	Main	3.38	1092459	3692513	1.507	5.565	370	Measured	10	5.008
Total								8.943				8.049
5A	Coal	Top	Top	0.75	1795637	1346728	1.598	2.152	1340	Inferred	20	1.722
5A	Coal	Upper	Upper	1.25	1795637	2244546	1.590	3.569	1340	Inferred	20	2.855
Total								5.721				4.577
Gross Indicated Tonnage in Situ								31.497	Total Indicated Tonnage in Situ			26.772
Gross Measured Tonnage in Situ								91.613	Total Measured Tonnage in Situ			82.129
Gross Inferred Tonnage in Situ								12.627	Total Inferred Tonnage in Situ			10.102
Gross Total Tonnage in Situ								135.737	Total Tonnage in Situ			119.003
Gross Top Seam Tonnage in Situ								31.238	Total Top Seam Tonnage in Situ			27.167
Gross Upper Seam Tonnage In Situ								41.058	Total Upper Seam Tonnage In Situ			35.670
Gross Main Seam Tonnage In Situ								63.441	Total Main Seam Tonnage In Situ			56.166
Gross Main Seam Inferred Tonnage								4.151				3.321
Gross Main Seam Indicated Tonnage								8.445				7.178
Gross Main Seam Measured Tonnage								50.844				45.666

Table 1: The Coal Resource Classification for the Imaloto Coal Project.

The resource has been investigated for quality, and a summary of the main quality characteristics from the three main coal seams are shown in Tables 2, 3 and 4 below.

The Main Seam is anticipated to return a good quality raw feed for power generation with a CV of 22.62 MJ/kg (ADB), an Ash content of 23.9 %, and an elevated Total Sulphur value of 1.85 %.

If the Main seam is to be considered for a 5 600 kcal/kg NAR product, the cut-point density of 1.500 ton/m^3 will result in a product with an Ash content of 16.5 %, Volatiles at 30.7 %, Total Sulphur at 0.92 % and a theoretical Yield of 67.4 %.

Main Seam - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
80401	F1.35	5.1	12.2	34.2	48.5	0.98	27.27	17.7	41.4	6310	6070
132987	F1.40	5.0	13.9	32.9	48.2	0.95	26.64	38.0	40.6	6164	5924
191942	F1.50	5.1	16.5	30.7	47.8	0.92	25.62	67.4	39.1	5930	5689
92073	F1.60	5.0	18.4	29.6	47.0	0.95	24.89	81.5	38.6	5759	5518
40557	F1.70	5.0	19.6	29.0	46.4	0.99	24.43	87.7	38.5	5650	5409
21871	F1.80	4.9	20.5	28.7	45.9	1.03	24.11	91.1	38.5	5572	5331
12977	F1.90	4.9	21.1	28.5	45.5	1.07	23.87	93.0	38.5	5516	5275
45410	S1.90	4.7	23.9	27.9	43.4	1.87	22.78	100.0	39.1	5254	5013
31442	-0.5 Raw	4.8	23.8	23.7	37.8	1.48	19.38		33.2	4474	4231
684628	Raw	4.7	23.9	27.7	43.2	1.85	22.62		38.9	5219	4977

Combined results from one-hundred-and-forty-one samples out of one-hundred-and-fourteen boreholes.

Table 2: The Weighted Average Coal Quality for the Main Seam.

The Top Seam is anticipated to return a raw feed for power generation with a CV of 20.27 MJ/kg (ADB), an Ash content of 30.2 %, and an elevated Total Sulphur value of 2.14 %.

If the Top Seam is to be considered for a 5 600 kcal/kg NAR product, the cut-point density of 1.400 ton/m^3 will result in a product with and Ash content of 13.7 %, Volatiles at 34.3 %, Total Sulphur at 0.98 % and a theoretical Yield of 31.1 %.

Top Seam - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
18702	F1.35	5.7	11.2	35.1	48.0	0.96	27.22	17.3	42.3	6341	6101
22288	F1.40	5.5	13.7	34.3	46.6	0.98	26.37	31.1	42.4	6130	5889
40180	F1.50	5.3	18.7	32.1	43.9	1.01	24.64	56.0	42.3	5716	5475
31634	F1.60	5.1	22.2	30.6	42.1	1.09	23.40	75.6	42.1	5418	5177
9746	F1.70	5.0	23.5	30.1	41.4	1.15	22.97	81.6	42.2	5315	5074
4415	F1.80	5.0	24.2	29.9	40.9	1.18	22.71	84.3	42.2	5252	5011
4615	F1.90	5.0	25.1	29.5	40.4	1.21	22.36	87.2	42.3	5171	4929
20666	S1.90	4.7	30.2	28.0	37.0	2.17	20.40	100.0	43.0	4704	4462
9534	-0.5 Raw	4.9	30.2	24.9	33.9	1.65	18.08		38.3	4180	3936
170943	Raw	4.7	30.2	27.8	36.9	2.14	20.27		42.8	4675	4432

Combined results from seventy-four samples out of seventy-four boreholes.

Table 3: The Weighted Average Coal Quality for the Top Seam.

Upper Seam - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
11820	F1.35	5.4	12.5	34.8	47.3	1.03	26.83	7.9	42.4	6233.6	5993.0
36170	F1.40	5.2	15.7	33.7	45.4	1.01	25.64	22.8	42.7	5944.5	5703.9
72838	F1.50	5.1	20.0	32.0	42.9	1.10	24.12	52.9	42.7	5586.5	5345.5
31120	F1.60	5.0	22.1	31.1	41.8	1.14	23.43	65.7	42.7	5420.2	5179.0
15814	F1.70	4.9	23.7	30.5	40.9	1.17	22.88	72.2	42.7	5290.2	5048.9
10087	F1.80	4.9	25.0	30.0	40.2	1.18	22.43	76.4	42.7	5181.7	4940.3
8167	F1.90	4.8	26.3	29.5	39.4	1.19	21.95	79.8	42.8	5068.9	4827.3
49077	S1.90	4.5	35.3	26.2	34.0	1.82	18.62	100.0	43.6	4282.9	4040.2
15222	-0.5 Raw	4.5	37.2	23.5	31.6	1.40	16.73		40.4	3850.3	3606.8
257720	Raw	4.5	35.4	26.1	33.9	1.79	18.51		43.4	4257.4	4014.7

Combined results from eighty-one samples out of seventy-nine boreholes.

Table 4: The Weighted Average Coal Quality for the Upper Seam.

The Upper Seam is anticipated to return a raw feed for power generation with a CV of 18.51 MJ/kg (ADB), an Ash content of 35.4 %, and an elevated Total Sulphur value of 1.79 %. If the Upper Seam is to be considered for a 5 600 kcal/kg NAR product, the cut-point density of 1.400 ton/m^3 will result in a product with and Ash content of 15.7 %, Volatiles at 33.7 %, Total Sulphur at 1.01 % and a theoretical Yield of 22.8 %.

2. Introduction

This report is prepared for Bushveld Minerals Limited and SP Angel Corporate Finance Limited, by Johan Erasmus of Sumsare Consulting cc.

The report is prepared to quantify the updated in-situ coal resource contained in the Permian age sediments underlying the Mining and Prospecting Rights as listed in Figure 4 below.

Information was sourced from the known scientific literature that has been published historically notably by the Geological Survey of Madagascar. In addition a Competent Person's report and Resource Statement (Dated December 2010) was produced by MSA for Lemur Resources. This report was based on the results of the first phase of drilling in 2009. Reference is made to this report for a lot of the background information in this Resource Statement. A second report dated 24 January 2013 was produced by Sumsare Consulting which included the drilling information from Phases 1, 2 and 3. A third report dated 18 March 2013 was produced by Sumsare Consulting which included the drilling information from Phases 1, 2, 3 and 4. This document is an update of the previous report and includes an update in terms of the new JORC 2012 guidelines. No new drilling or analytical information was gathered during the period prior to the release of this report. In terms of the new 2012 guidelines, clauses 5, 9, 19, 27, 35, 37 and 51 were reviewed and checked for reporting compliance. There has been no new activity on the ground and all the material assumptions and technical parameters underpinning the estimates in this review continue to apply and have not materially changed. The form and context in which the competent person's findings are presented have not been materially modified. The required Table 1 with completed sections 1, 2 and 3 is attached as Appendix 1 to this report.

CMM has acquired data by drilling and analysing core samples from 159 boreholes that have been drilled on the property between March 2009 and the end of December 2012. The logged data from these boreholes were interpreted by geologists in the employment of CMM (Moses Ndansi, and

Jacques Bablon). External oversight was provided by Jan Du Toit and Derrick Ndlovu with independent external oversight provided by Johan Erasmus (Pr. Sci. Nat. 400052/96 (SACNASP)).

The stratigraphy is clearly defined with well-developed marker horizons. In addition the coal measures are contained in a much more clastic environment than for instance the Waterberg deposits in South Africa. Correlation is very easy and wire-line logging is not required for the delineation of coal seams or sampling horizons in this basin.

3. Reliance on Other Experts

Down-hole wire-line logging of 17 boreholes was completed by Nic Grech-Gumbo of VMI (Pty) Ltd.

The collar survey was contracted to a Madagascan company known as Mada Topo and the surveying of borehole collars was undertaken by Christian Randrianavony.

The Spatial survey of a random selection of boreholes was undertaken by Ken Rice of Borehole Surveys, and all 13 of the boreholes surveyed by him were plumb. No significant deviation off the vertical was observed, with all the surveyed holes ranging from -89º to -88.94º from the horizontal.

A DTM (Digital Terrain Model) was produced from satellite imagery and ground control points by Haila Hamdan from AAM Pty. Ltd.

Johan Erasmus was contracted as an external independent consultant, and was present on site on the following dates during the exploration programme;

- 31 Aug 2011 to 09 Sept 2011, 10 Days, site visit, drilling verification,
- 17 Nov to 27 Nov 2011, 10 Days, site visit, drilling verification,
- 26 May 2012 to 06 Jun 2012, 12 Days, site visit, logging and sampling checks,
- 23 Jun to 30 Jun 2012, 7 Days, logging and sampling checks, drilling verification.

Drilling and recovery of core on this site is verified by him. He witnessed the drilling first-hand on site, and also witnessed the sampling and dispatching of samples from the exploration camp in Imaloto via Tulear, to the coal laboratory (M&L Inspectorate) in Middelburg in South Africa.

Coal analyses were performed on 290 samples at the Middelburg Laboratory of M&L Inspectorate. The contact persons are Celia Barbosa and Claudine Soobramoney.

Indemnity and Disclaimer

The findings, results, observations, conclusions and recommendations given in this report are based on the author's best scientific and professional knowledge as well as available information. The report is based on survey and assessment techniques which are limited by time and budgetary constraints relevant to the type and level of investigation undertaken and the author reserve the right to modify aspects of the report including the recommendations if and when new information may become available from on-going research or further work in this field, or pertaining to this investigation.

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4. Property Description and Location

The Imaloto project is located in south-western Madagascar, 150 km east of the coastal city of Tulear. The closest town, Benenitra, is located roughly 15 km south-west of the exploration camp, close to the south-western corner of the licence area. The mining and prospecting rights are aligned mainly along the south-flowing Imaloto River valley until its confluence with the larger, west-flowing Onilahy River, which in turn enters the Indian Ocean a few kilometres south of the city of Tulear.

Access to the Project site is from Tulear along the paved road to Antananarivo (Route 7) for 70 km as far as the town of Andranovory; then by rural dirt roads for about 150 km to Benenitra; and finally by dirt track for the last 15 km to the site itself. Typical current travel time in the dry season is about seven hours. As far as Benenitra, all but one of the major rivers is crossed by sturdy, high-level, bridges; and a single river requires to be forded in the last section. In the rainy season, the track from Benenitra to site can be expected to be impassable for much of the time; and even the road from Benenitra to Andranovory will be subject to periodic closure.

CMM is a Madagascan-registered company that holds numerous exploration licences covering the Imaloto coal field in the greater Sakoa basin of south-western Madagascar. 99% of CMM is owned by Lemur Investments Limited (LIL) a Mauritian subsidiary owned 100% by Lemur Resources Limited, with the remaining 1% being held by Mr. Daniel Rasoamaheinia, (a Madagascan citizen) as required by Madagascan law.

The present report is focussed on a group of 13 blocks in the southern part of the total area under licence and in which all the exploration to date has been conducted. These blocks are held under five separate licences, as summarised in Figure 4 below. Four of the blocks are held under a *Permis d'Exploitation* (Mining Licence) (No.4578), which is valid until 2045 with the remaining nine blocks under four *Permis de Recherche* (Exploration Licences Nos. 3196,12653, 26904 and 27163), valid until November 2013, February 2014, October 2012 and October 2012 respectively. These rights are granted to exploit or explore for numerous commodities including coal. The coordinate pairs for these five Rights areas are shown in Figure 4 below. The Survey system and projection is WGS 84 and UTM. The area that is underlain by the Mining and Exploration Permits cover 81.25 km^2.
Although four of the exploration licences have expired due to a moratorium resulting in no liceces being renewed being in force, the licences remain valid as long as the holder remains up to date with its registration fees.

Due to the political crisis that affected Madagascar during the period 2009-2013, the Bureau du Cadastre Minier de Madagascar ("BCMM" or "Mining Registry") has only been operating a limited service. BCMM does not currently receive any application for new permits in respect of new projects until further decision is taken by its management or the Minister in charge of Mines.

However, BCMM receives and processes any application for transfer, transformation (e.g. transformation of a PR into a PE) and renewal. Before issuing the transferred/transformed/renewed permits, the BCMM must obtain the approval of the Minister in charge of Mines (by way of a ministerial order) in respect of each type of application. In short, three main conditions must be satisfied in order for the transferred/transformed/renewed permits to be valid:

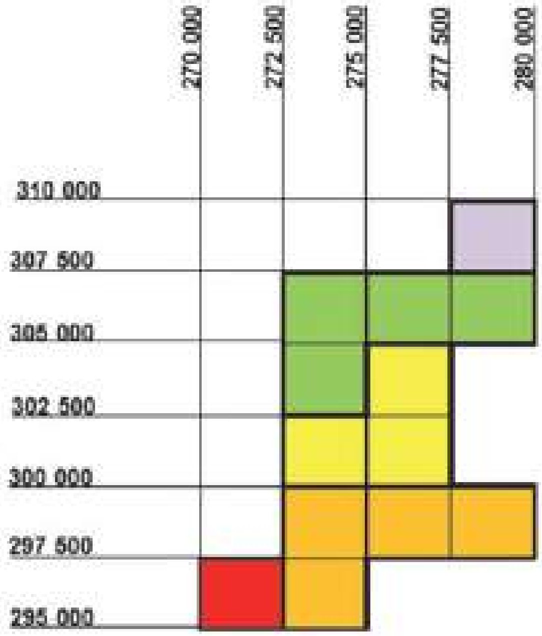
- the obtaining of the ministerial order duly signed by the Minister in charge of Mines;
- the updated transferred/transformed/renewed Permits duly signed by the managing director of BCMM; and
- the continued payment of mining fees.

In practice, the obtaining of the ministerial order usually takes time (from months to years). From a strict legal point of view, no work can be carried out before the obtaining of the ministerial order and the transferred/transformed/renewed permits.
In all cases, the transfer/transformation/renewal/extension processes are administration formalities, which providing relevant application protocol has been followed and the annual administration fees paid will in almost all cases always be approved.

The dossiers relating to the transfer of the 26904 Permit and the 27163 Permit into the name of CMM were duly filed at the BCMM. The issuance of the new permits in the name of CMM is an administrative formality that should be approved providing that CMM continues to pay the respective administrative fees. However and despite the fact that these said permits are recorded in the name of CMM in BCMM's register, as per the BCMM Search Results, CMM is not entitled to carry out any exploration/exploitation activities until the completion of the transfer/transformation procedure and the obtainment of the said permits in its name.

The dossiers relating to the renewal of the 31808 Permit, the 31892 Permit and the 12653 Permit were duly filed at the BCMM. The renewal application is an administrative formality, which should be approved providing that CMM continues to pay the respective administrative fees. Although CMM can decide to carry on or to stop the exploration activities awaiting the issuance of the renewed permits, it must continue to pay the administration fees. CMM must also obtain an environmental authorisation (for 31808 Permit) and an environmental permit (for 31892 Permit) in order to be able to undertake full exploration activities. In the normal course of business and based on the Mining Code, a decision granting the renewal must be issued within 30 days from the submission of the renewal application at the BCMM. Due to the current Moratorium Period, almost all mining companies that are waiting for renewal decisions have stopped their activities pending the issuance of the renewed permits, which may take from months to years.

The dossier relating to the application for the transfer of the 3196 Permit to CMM and its transformation into an exploitation permit was duly filed at the BCMM. The application is an administrative formality, which should be approved providing that CMM continues to pay the administrative fees. Please note that CMM is not entitled to carry out any exploration/exploitation activities until the completion of the transfer/transformation procedure and the obtainment of the permit in its name. CMM is entitled to carry out exploitation activities under the 4578 Permit. We understand that CMM is up to date in respect of all administrative fees and therefore would expect that renewal and transfer applications would be processed once the moratorium is lifted.



Permit No.	Right	Issued	Expires	Area (km^2)
4578	Mining	29/11/2005	28/11/2045	25.00
3196	Exploration	07/11/2008	06/11/2013	18.75
12653	Exploration	11/02/2009	10/02/2014	25.00
27163	Exploration	27/10/2007	27/10/2012	6.25
[illegible]	Exploration	27/10/2007	27/10/2012	6.25
				81.25

Figure 4: The Mining and Exploration footprint as issued by the Department of Mines and Mining Development.

5. Drilling

Core drilling was the only drill technique used during this exploration programme. The rigs used were Boart Longyear LF 70's. All the rigs are trailer mounted with hydraulic outriggers. Boreholes were started with PQ sized equipment. Holes were cased off inside stable formation from where drilling progressed with HQ sized equipment. The Rigs are owned by Pan African Drilling Limited, a British Virgin Island subsidiary which is 100% owned by Lemur Resources Limited. The rigs are manned by Indonesian operators and Malagasy assistants. Initially HQ (III) sized equipment was used, due to concerns about core recovery in a fault-bounded graben. After seeing the integrity of the coal seams and the lateral continuity of the coal measures, a trial was performed with normal HQ equipment (cost saving) and it proved to be successful.

Drilling occurred in four phases from March 2009 until October 2009 (Phase 1), Aug to Dec 2011 (Phase 2), April 2012 to August 2012 (Phase 3) and August 2012 to December 2012 (Phase 4). Drilling recoveries were generally good. Where recoveries were below 97% in the coal seams, or below 95% in the rest of the sequence, a re-drill was enforced. Apart from three boreholes that were re-drilled, the measured recoveries were acceptable and within the required standard. The location of the boreholes is shown in Figure 4, and the coordinates are listed in Table 5. 159 boreholes were drilled and the total length of drilling came to 19 572 m. The average depth per hole came to 123 m. The maximum individual depth drilled was on borehole PTT01 at 437.3 m. IM 244 at 389.5 m, IM 215 at 383.5 m as well as IM 242 at 371.5 m were also deeper than the norm. The intervals shown on the borehole logs are as per the core measurements.

Sample lengths were as per logged measurements. No correction was made for true thickness. Gradients on the coal seams are very slight (1^{o} – 3^{o}), and the volume model uses elevations to generate top and bottom grid surfaces, before calculating the space contained within. Apparent and true thicknesses in this instance will hence not have a bearing on the volume calculation.

The seams were sampled as units, which were defined by high resolution sampling during the first phase of drilling. Once all the results were received from the laboratory, it was possible to analyse the results and to consider potential products that may be realized from this deposit.

Quality and Potential Products

The potential products were determined from the quality dataset for the second, third and fourth phases of this exploration programme. The reason for excluding the dataset from the first phase was due to the sampling procedure that was performed on the coal intersections during the first phase of exploration. The core was split and only half core samples were submitted for analyses. This introduced a small bias in the dataset, and although not statistically significant, the Total Sulphur % was overstated in the first phase dataset. In view of this I have excluded the laboratory results from the first phase of drilling from the potential product simulation.

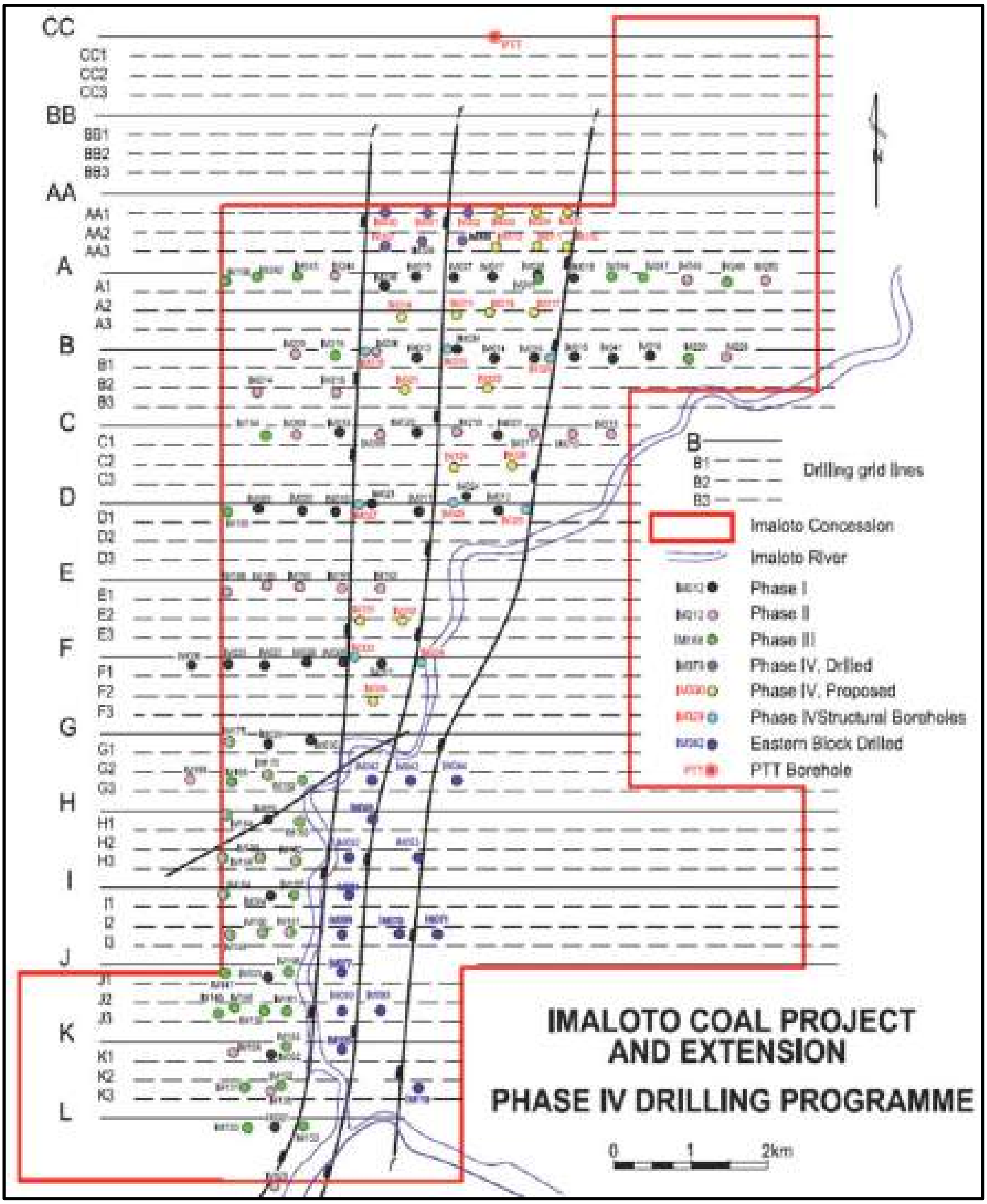


Figure 5: Borehole Collar Positions for the Exploration Programme as completed by CMM.

BH ID	Y	X	Z	E.O.H.
IM 001	520 002.687	7 406 004.182	295.201	65.5
IM 002	519 987.541	7 406 995.520	290.995	58.5
IM 003	519 998.177	7 407 999.702	304.809	68.5
IM 004	520 019.216	7 408 982.469	318.583	62.5
IM 005	520 003.330	7 409 994.067	305.181	92.5
IM 006	519 047.047	7 411 977.518	336.272	141.4
IM 007	519 986.019	7 411 976.984	316.250	143.5
IM 008	521 020.949	7 412 001.281	314.752	161.5
IM 009	519 995.957	7 413 997.153	336.563	182.5
IM 010	520 991.462	7 414 010.455	320.271	245.5
IM 011	522 001.971	7 413 992.397	318.346	125.5
IM 012	523 005.977	7 413 996.781	321.070	50.5
IM 013	521 995.086	7 415 970.115	338.152	206.5
IM 014	522 997.133	7 415 997.681	338.543	143.5
IM 015	524 013.178	7 416 003.184	325.410	143.5
IM 016	525 001.656	7 416 001.361	322.916	134.5
IM 017	523 007.505	7 417 000.384	337.758	164.5
IM 018	524 020.062	7 416 998.045	320.960	167.5
IM 019	521 998.044	7 416 989.065	338.495	251.5
IM 020	520 532.431	7 414 014.563	322.810	194.5
IM 021	521 423.231	7 414 080.764	322.521	155.5
IM 022	522 003.123	7 415 000.890	336.710	167.5
IM 023	522 994.149	7 414 995.726	362.176	116.5
IM 024	522 613.351	7 414 175.405	346.019	65.5
IM 025	519 515.924	7 411 982.893	333.707	122.5
IM 026	520 516.492	7 412 004.928	316.498	158.5
IM 027	521 481.715	7 411 999.657	318.288	71.5
IM 029	520 008.998	7 410 994.118	289.399	80.5
IM 030	520 525.950	7 411 000.431	288.314	98.5
IM 032	521 001.663	7 414 998.669	331.004	263.5
IM 034	522 529.173	7 416 084.335	348.507	125.5
IM 035	523 505.177	7 415 989.760	328.570	128.5
IM 036	521 603.475	7 416 861.827	348.524	281.5
IM 037	522 495.927	7 416 998.068	333.480	137.5
IM 038	523 499.099	7 416 995.146	326.049	149.5
IM 041	524 503.900	7 415 979.894	314.549	113.5
IM 129	519 970.117	7 405 333.159	293.276	38.4
IM 130	519 769.801	7 405 993.603	296.537	68.4
IM 131	519 748.584	7 406 507.883	296.020	47.4
IM 135	519 993.052	7 406 491.345	297.448	38.3
IM 135B	520 003.052	7 406 501.345	297.748	59.0
IM 138	519 502.909	7 407 000.858	311.653	30.4
IM 139	519 988.435	7 407 490.525	301.669	38.5
IM 139B	519 998.435	7 407 500.525	301.969	62.4
IM 145	519 398.085	7 407 483.649	322.327	35.5
IM 147	519 477.964	7 407 997.615	324.946	65.5
IM 148	519 610.638	7 407 537.444	320.208	47.4
IM 149	519 527.144	7 408 484.004	315.322	38.3
IM 149B	519 537.144	7 408 494.004	315.622	65.5
IM 150	519 960.026	7 408 506.933	304.807	26.3
IM 150B	519 970.026	7 408 516.933	305.107	41.5
IM 151	520 309.400	7 408 517.469	308.531	52.0
IM 151B	520 319.400	7 408 527.469	308.831	68.6
IM 152	520 197.455	7 406 520.819	290.065	77.5
IM 153	520 499.680	7 406 000.686	280.348	29.4
IM 154	519 463.006	7 409 003.997	335.975	38.5
IM 154B	519 473.006	7 409 013.997	336.275	65.5
IM 155	520 283.903	7 407 038.923	287.768	68.4
IM 156	520 289.367	7 408 001.500	290.763	65.3
IM 157	520 369.863	7 409 003.064	304.267	61.5
IM 158	519 461.251	7 409 480.060	329.936	30.8
IM 158B	519 471.251	7 409 490.060	330.236	74.5
IM 159	519 931.490	7 409 488.320	307.166	39.2
IM 159B	519 941.490	7 409 498.320	307.466	71.5
IM 160	520 392.708	7 409 449.539	296.167	29.7
IM 160B	520 402.708	7 409 459.539	296.467	52.3
IM 161	520 285.820	7 407 493.157	291.872	64.3
IM 162	520 487.333	7 410 499.259	284.825	82.6
IM 163	520 460.006	7 409 966.823	290.939	74.5
IM 164	519 498.857	7 410 044.758	323.851	26.4
IM 164B	519 508.857	7 410 054.758	324.151	56.4
IM 168	518 998.050	7 410 587.683	346.514	55.4
IM 169	519 486.659	7 410 474.189	331.217	65.1
IM 170	520 044.524	7 410 581.713	288.790	41.3
IM 170B	520 054.524	7 410 591.713	289.090	68.4
IM 175	519 504.849	7 410 985.873	316.636	35.3
IM 175B	519 514.849	7 410 995.873	316.936	59.4
IM 188	519 506.019	7 412 953.641	332.782	136.0
IM 189	519 996.733	7 412 978.371	324.437	119.4
IM 190	520 514.857	7 413 006.889	312.293	147.5
IM 191	521 002.040	7 412 999.368	317.192	197.3
IM 192	521 507.077	7 412 992.651	341.717	137.3

BH ID	Y	X	Z	E.O.H.
IM 193	519 512.614	7 413 953.053	364.148	191.5
IM 194	520 021.765	7 415 012.523	381.393	47.5
IM 194B	520 031.765	7 415 022.523	381.693	238.6
IM 198	519 493.765	7 417 003.248	452.919	341.5
IM 208	520 490.124	7 414 977.712	333.029	212.4
IM 209	521 502.224	7 415 001.164	329.602	182.4
IM 210	522 500.828	7 415 019.570	342.841	89.4
IM 211	523 493.828	7 415 002.416	344.619	98.4
IM 212	523 998.001	7 415 000.785	332.953	107.4
IM 213	524 496.707	7 415 003.242	308.753	86.3
IM 214	520 000.215	7 415 496.138	344.177	182.1
IM 215	520 996.928	7 416 037.373	434.096	383.5
IM 216	521 004.755	7 415 511.402	341.669	269.5
IM 225	520 495.673	7 416 006.711	352.405	245.5
IM 226	521 503.888	7 416 008.452	342.363	229.7
IM 228	525 996.877	7 416 004.853	345.569	158.2
IM 229	525 512.695	7 416 061.028	323.833	90.8
IM 229B	525 418.106	7 416 003.424	320.673	152.4
IM 242	519 933.987	7 416 978.166	435.232	371.5
IM 243	520 459.994	7 417 126.739	417.202	356.4
IM 244	521 012.442	7 417 006.251	412.561	389.5
IM 245	523 480.015	7 416 993.559	326.625	155.5
IM 246	524 570.028	7 416 963.908	321.515	134.7
IM 246B	524 511.205	7 417 022.141	323.123	146.4
IM 247	525 026.606	7 417 000.403	319.988	146.3
IM 248	525 485.208	7 417 001.556	327.743	164.1
IM 249	526 000.382	7 417 000.027	341.461	174.9
IM 250	526 502.468	7 417 007.818	345.649	137.4
IM042	521290.435	7410778.126	309.604	33.8
IM043	521760.061	7410616.186	312.802	24.7
IM044	522318.753	7410429.955	314.963	20.4
IM045	521274.241	7410049.397	308.054	36.7
IM052	521031.332	7409490.704	306.967	26.6
IM053	521727.673	7409458.316	310.364	26.6
IM061	520974.653	7408972.497	308.039	15.1
IM069	520909.877	7408486.677	307.810	24.7
IM070	521444.278	7408454.289	308.576	24.7
IM071	521857.225	7408438.095	309.489	15.7
IM077	520853.198	7407984.663	305.236	18.7
IM090	520877.489	7407474.553	302.786	45.6
IM093	521249.950	7407466.456	304.798	12.7
IM105	520861.295	7407045.412	300.683	23.2
IM119	521751.964	7406486.720	304.409	21.6
PTT01	523476.623	7420057.279	385.260	437.3
IM300	521662.897	7417790.121	383.591	371.6
IM301	522262.074	7417790.121	352.369	284.3
IM302	522723.603	7417806.315	353.569	242.4
IM303	523063.677	7417806.315	348.569	239.4
IM304	523452.332	7417798.218	345.569	183.3
IM305	523938.152	7417814.412	342.569	207.3
IM307	521654.800	7417280.011	382.569	308.5
IM308	522221.589	7417369.078	343.569	269.3
IM309	522666.924	7417369.078	341.569	209.4
IM310	523079.871	7417352.884	345.569	191.5
IM311	523517.108	7417369.078	343.569	164.5
IM312	523897.667	7417336.690	338.569	185.5
IM314	521832.934	7416486.505	346.450	218.5
IM315	522464.499	7416535.087	340.265	128.5
IM316	522926.028	7416535.087	336.629	136.0
IM317	523549.496	7416559.378	330.330	139.7
IM318	521363.308	7416008.783	352.612	320.0
IM319	522399.723	7416073.559	345.722	166.4
IM320	523679.048	7415935.910	329.685	123.7
IM321	521841.031	7415547.254	341.772	194.5
IM322	522869.349	7415539.157	340.175	114.7
IM323	521403.793	7414567.518	333.260	22.4
IM324	521946.292	7414551.324	334.408	128.4
IM325	522496.887	7414551.324	338.454	66.7
IM326	523298.489	7414518.936	337.465	78.7
IM327	521266.144	7414081.699	324.931	239.1
IM328	522351.141	7414162.669	335.564	53.0
IM329	523395.653	7414000.729	330.427	20.4
IM331	521209.465	7412672.822	324.347	98.9
IM332	521768.158	7412648.531	327.699	81.8
IM333	521136.592	7412049.354	316.176	89.3
IM334	521922.001	7412122.227	321.590	29.6
IM335	521387.599	7411498.758	316.090	38.5
Phase 1				5039.9
Phase 2				3780.7
Phase 3				4597.3
Phase 4				6153.7
Total				19571.6

Table 5: Borehole Collar Positions and End of Hole Depths for the Exploration Programme as Completed by CMM.

Potential Main Seam Products

Summarised below in Tables 6, 7 and 8 are the updated potential products that can be expected from beneficiation of the Main Seam. The influence of fines and the organic efficiency of the plant were not modelled in this simulation. The cumulative wash table for the Main Seam is shown in Table 9.

A single stage process which involves washing at a density of 1.500 ton/m^3 will generate a primary product with an Ash % of 16.5 and a Calorific Value of 5 689 kcal/kg (NAR). The discard will have an Ash content of 39.1 % and a calorific Value of 3 627 kcal/kg (NAR). The yields would be 67.4 % and 32.6 % respectively.

Products based on b/hole data for a single stage wash - Wash @ RD 1.500 for a primary product and discard.											
Main Seam Products, (Air-dried Base)									Calculated		
Item	Wash	Moist	Ash	Vol	F.C.	S	Gross C.V.	Yield	DAVF	GAR	NAR
	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
Primary	1.5	5.1	16.5	30.7	47.8	0.92	25.62	67.4	39.1	5930	5689
Discard	>1.5	4.1	39.1	22.2	34.5	3.84	16.89	32.6	39.1	3870	3627
Fines generation and beneficiation, and plant efficiency excluded from this simulation											

Table 6: Potential Products for the Main Seam with a Single Stage Wash.

In a double stage process in which the 1st stage involves de-stoning at a density of 1.900 ton/m^3, followed by a second stage that involves a wash of the de-stoned product at a density of 1.500 ton/m^3, one will be able to generate a primary product with an Ash % of 16.5 and a Calorific Value of 5 689 kcal/kg (NAR). The middling product will have an Ash content of 33.4 % and a Calorific Value of 4 189 kcal/kg (NAR). The discard qualities of this process are listed on the bottom line in Table 7.

Products based on b/hole data for a double stage wash - Destone @ RD 1.900, Split the destoned product @ RD 1.500 for primary and middling products.											
Main Seam Products, (Air-dried Base)									Calculated		
Item	Wash	Moist	Ash	Vol	F.C.	S	Gross C.V.	Yield	DAVF	GAR	NAR
	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
Destoned at 1.900	1.9	4.9	21.1	28.5	45.5	1.07	23.87	93.0	38.5	5516	5275
Primary	1.5	5.1	16.5	30.7	47.8	0.92	25.62	67.4	39.1	5930	5689
Middling	1.5 - 1.9	4.5	33.4	22.6	39.5	1.46	19.26	25.6	36.4	4431	4189
Discard	>1.9	2.5	60.4	20.9	16.2	12.61	8.16	7.0	56.3	1838	1591
Fines generation and beneficiation, and plant efficiency excluded from this simulation											

Table 7: Potential Products for the Main Seam with a Double Stage Wash.

If the Main Seam is considered as a potential raw product, the qualities as listed in Table 8 below may be expected.

Products based on b/hole data for a Raw Product - Fines added back to product.											
Main Seam Products, (Air-dried Base)									Calculated		
Item	Wash	Moist	Ash	Vol	F.C.	S	Gross C.V.	Yield	DAVF	GAR	NAR
	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
Raw Product	Raw	4.7	23.9	27.7	43.2	1.85	22.62	100.0	38.9	5219	4977
Fines added back to Raw Product, Dilution/Contamination excluded.											

Table 8: Potential Raw Product for the Main Seam with Fines Added Back.

Main Seam - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
80401	F1.35	5.1	12.2	34.2	48.5	0.98	27.27	17.7	41.4	6310	6070
132987	F1.40	5.0	13.9	32.9	48.2	0.95	26.64	38.0	40.6	6164	5924
191942	F1.50	5.1	16.5	30.7	47.8	0.92	25.62	67.4	39.1	5930	5689
92073	F1.60	5.0	18.4	29.6	47.0	0.95	24.89	81.5	38.6	5759	5518
40557	F1.70	5.0	19.6	29.0	46.4	0.99	24.43	87.7	38.5	5650	5409
21871	F1.80	4.9	20.5	28.7	45.9	1.03	24.11	91.1	38.5	5572	5331
12977	F1.90	4.9	21.1	28.5	45.5	1.07	23.87	93.0	38.5	5516	5275
45410	S1.90	4.7	23.9	27.9	43.4	1.87	22.78	100.0	39.1	5254	5013
31442	-0.5 Raw	4.8	23.8	23.7	37.8	1.48	19.38		33.2	4474	4231
684628	Raw	4.7	23.9	27.7	43.2	1.85	22.62		38.9	5219	4977

Combined results from one-hundred-and-forty-one samples out of one-hundred-and-fourteen boreholes.

Table 9: Cumulative Wash Table for the Main Seam.

Potential Top Seam Products

Summarised below in Tables 10, 11 and 12 are listed the potential products that can be expected from beneficiation of the Top Seam. The influence of fines and the organic efficiency of the plant were not modelled in this simulation. If the Top Seam is considered as a potential raw product, the qualities as listed in Table 10 below may be expected.

Products based on b/hole data for a Raw Product - Fines added back to product.											
Top Seam Products, (Air-dried Base)									Calculated		
Item	Wash	Moist	Ash	Vol	F.C.	S	Gross C.V.	Yield	DAVF	GAR	NAR
	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
Raw Product	Raw	4.7	30.2	27.8	36.9	2.14	20.27	100.0	42.8	4675	4432
Fines added back to Raw Product, Dilution/Contamination excluded.											

Table 10: Potential Raw Product for the Top Seam with Fines Added Back.

A single stage process which involves washing at a density of 1.500 ton/m^3 will generate a primary product with an Ash % of 18.7 and a Calorific Value of 5 475 kcal/kg (NAR). The discard will have an Ash content of 45.0 % and a Calorific Value of 3 192 kcal/kg (NAR). The yields would be 56.0 % and 44.0 % respectively.

Products based on b/hole data for a single stage wash - Wash @ RD 1.500 for a primary product and discard.											
Top Seam Products, (Air-dried Base)									Calculated		
Item	Wash	Moist	Ash	Vol	F.C.	S	Gross C.V.	Yield	DAVF	GAR	NAR
	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
Primary	1.5	5.3	18.7	32.1	43.9	1.01	24.64	56.0	42.3	5716	5475
Discard	>1.5	4.0	45.0	22.7	28.3	3.64	15.01	44.0	44.5	3436	3192
Fines generation and beneficiation, and plant efficiency excluded from this simulation											

Table 11: Potential Products for the Top Seam with a Single Stage Wash.

From a double stage process in which the 1st stage involves de-stoning at a density of 1.900 ton/m^3, followed by a second stage that involves a wash of the de-stoned product at a density of 1.500 ton/m^3, one will be able to generate a primary product with an Ash % of 18.7 and a Calorific Value of 5 475 kcal/kg (NAR). The middling product will have an Ash content of 36.7 % and a Calorific Value of 3 959 kcal/kg (NAR). The discard qualities of this process are listed on the bottom line in Table 12.

Products based on b/hole data for a double stage wash - Destone @ RD 1.900, Split the destoned product @ RD 1.500 for primary and middling products.											
Top Seam Products, (Air-dried Base)									Calculated		
Item	Wash	Moist	Ash	Vol	F.C.	S	Gross C.V.	Yield	DAVF	GAR	NAR
	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
Destoned at 1.900	1.9	5.0	25.1	29.5	40.4	1.21	22.36	87.2	42.3	5171	4929
Primary	1.5	5.3	18.7	32.1	43.9	1.01	24.64	56.0	42.3	5716	5475
Middling	1.5 - 1.9	4.4	36.7	24.9	34.0	1.58	18.28	31.2	42.3	4201	3959
Discard	>1.9	2.9	65.1	17.5	14.4	8.66	7.03	12.8	54.9	1591	1343
Fines generation and beneficiation, and plant efficiency excluded from this simulation											

Table 12: Potential Products for the Top Seam with a Double Stage Wash.

Top Seam - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
18702	F1.35	5.7	11.2	35.1	48.0	0.96	27.22	17.3	42.3	6341	6101
22288	F1.40	5.5	13.7	34.3	46.6	0.98	26.37	31.1	42.4	6130	5889
40180	F1.50	5.3	18.7	32.1	43.9	1.01	24.64	56.0	42.3	5716	5475
31634	F1.60	5.1	22.2	30.6	42.1	1.09	23.40	75.6	42.1	5418	5177
9746	F1.70	5.0	23.5	30.1	41.4	1.15	22.97	81.6	42.2	5315	5074
4415	F1.80	5.0	24.2	29.9	40.9	1.18	22.71	84.3	42.2	5252	5011
4615	F1.90	5.0	25.1	29.5	40.4	1.21	22.36	87.2	42.3	5171	4929
20666	S1.90	4.7	30.2	28.0	37.0	2.17	20.40	100.0	43.0	4704	4462
9534	-0.5 Raw	4.9	30.2	24.9	33.9	1.65	18.08		38.3	4180	3936
170943	Raw	4.7	30.2	27.8	36.9	2.14	20.27		42.8	4675	4432

Combined results from seventy-four samples out of seventy-four boreholes.

Table 13: Cumulative Wash Table for the Top Seam.

Potential Upper Seam Products

Summarised below in Tables 14, 15 and 16 are listed the potential products that can be expected from beneficiation of the Upper Seam. The influence of fines and the organic efficiency of the plant were not modelled in this simulation. If the Upper Seam is considered as a potential raw product, the qualities as listed in Table 14 below may be expected.

Products based on b/hole data for a Raw Product - Fines added back to product.											
Upper Seam Products, (Air-dried Base)									Calculated		
Item	Wash	Moist	Ash	Vol	F.C.	S	Gross C.V.	Yield	DAVF	GAR	NAR
	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
Raw Product	Raw	4.5	35.4	26.1	33.9	1.79	18.51	100.0	43.4	4257	4015
Fines added back to Raw Product, Dilution/Contamination excluded.											

Table 14: Potential Raw Product for the Upper Seam with Fines Added Back.

A single stage process which involves washing at a density of 1.500 ton/m^3 will generate a primary product with an Ash % of 20.0 and a Calorific Value of 5 345 kcal/kg (NAR). The discard will have an Ash content of 52.5 % and a Calorific Value of 2 596 kcal/kg (NAR). The yields would be 52.9 % and 47.1 % respectively.

Products based on b/hole data for a single stage wash - Wash @ RD 1.500 for a primary product and discard.											
Upper Seam Products, (Air-dried Base)									Calculated		
Item	Wash	Moist	Ash	Vol	F.C.	S	Gross C.V.	Yield	DAVF	GAR	NAR
	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
Primary	1.5	5.1	20.0	32.0	42.9	1.10	24.12	52.9	42.7	5587	5345
Discard	>1.5	3.7	52.5	19.8	24.0	2.62	12.45	47.1	45.2	2841	2596
Fines generation and beneficiation, and plant efficiency excluded from this simulation											

Table 15: Potential Products for the Upper Seam with a Single Stage Wash.

From a double stage process in which the 1st stage involves de-stoning at a density of 1.900 ton/m^3, followed by a second stage that involves a wash of the de-stoned product at a density of 1.500 ton/m^3, one will be able to generate a primary product with an Ash % of 20.0 and a Calorific Value of 5

345 kcal/kg (NAR). The middling product will have an Ash content of 38.6 % and a Calorific Value of 3 819 kcal/kg (NAR). The discard qualities of this process are listed on the bottom line in Table 16.

Products based on b/hole data for a double stage wash - Destone @ RD 1.900, Split the destoned product @ RD 1.500 for primary and middling products.											
Upper Seam Products, (Air-dried Base)									Calculated		
Item	Wash	Moist	Ash	Vol	F.C.	S	Gross C.V.	Yield	DAVF	GAR	NAR
	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
Destoned at 1.900	1.9	4.8	26.3	29.5	39.4	1.19	21.95	79.8	42.8	5069	4827
Primary	1.5	5.1	20.0	32.0	42.9	1.10	24.12	52.9	42.7	5587	5345
Middling	1.5 - 1.9	4.3	38.6	24.6	32.5	1.36	17.69	26.9	43.1	4062	3819
Discard	>1.9	3.0	70.9	13.4	12.7	4.29	5.49	20.2	51.3	1244	996
Fines generation and beneficiation, and plant efficiency excluded from this simulation											

Table 16: Potential Products for the Upper Seam with a Double Stage Wash.

Upper Seam - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
11820	F1.35	5.4	12.5	34.8	47.3	1.03	26.83	7.9	42.4	6233.6	5993.0
36170	F1.40	5.2	15.7	33.7	45.4	1.01	25.64	22.8	42.7	5944.5	5703.9
72838	F1.50	5.1	20.0	32.0	42.9	1.10	24.12	52.9	42.7	5586.5	5345.5
31120	F1.60	5.0	22.1	31.1	41.8	1.14	23.43	65.7	42.7	5420.2	5179.0
15814	F1.70	4.9	23.7	30.5	40.9	1.17	22.88	72.2	42.7	5290.2	5048.9
10087	F1.80	4.9	25.0	30.0	40.2	1.18	22.43	76.4	42.7	5181.7	4940.3
8167	F1.90	4.8	26.3	29.5	39.4	1.19	21.95	79.8	42.8	5068.9	4827.3
49077	S1.90	4.5	35.3	26.2	34.0	1.82	18.62	100.0	43.6	4282.9	4040.2
15222	-0.5 Raw	4.5	37.2	23.5	31.6	1.40	16.73		40.4	3850.3	3606.8
257720	Raw	4.5	35.4	26.1	33.9	1.79	18.51		43.4	4257.4	4014.7
Combined results from eighty-one samples out of seventy-nine boreholes.											

Table 17: Cumulative Wash Table for the Upper Seam.

6. Mineral Resource Estimate

Modeling

The geological model used for the resource estimation was created in Surfer (Version 10.7.972), a modeling package developed and distributed by Golden Software in Colorado.

Surfer is essentially a contour programme that has the capability to calculate volumes between surfaces. The data that is used to create the surfaces are read from spread-sheets or databases, and in this instance I used Excel. The dataset was populated with the lithological and quality data and then interrogated by the software for the required outcomes

Borehole identification, the survey data and then the seam interval data is loaded into a dataset. Parameters controlling the modelling operation (such as interpolator selection, conformable relationships, limits and faults) are defined and maintained in the model framework. Surfer has a function called blanking, which is use to confine grid files to specific areas. This function is used to isolated resource blocks when volumes are calculated between surfaces. The gridding method used was the inverse of distance squared. For this sample spacing Kriging is not appropriate.

A uniform grid with nodes is generated for each surface. Given the drilling spacing, the grid cell size is set at 50 m x 50 m. It is pointless to grid to a smaller size given that the average borehole spacing across the whole area came to 423 m^2. Block 1 has the highest number of boreholes per area, at an average grid of 331 m^2. Once a volume has been calculated a weighted average density is applied to the volume and a tonnage is determined.

Key conformable sequences

The model contains the seam intervals MSL Split, MS, US and TS. Figure 7 shows the modelled area within the total project area. For each of the seams a roof and floor surface was generated i.e. MS Floor.

The lowermost surface that was created is the MSL Split Floor, and the uppermost surface created was the TOPO (Topography).

Model limits

The model is limited by the extent of borehole data, the base of the weathered horizon, the natural sub-outcrop of seams in the extreme south (IM 001, 027, 129, 130, 152, 153), and east (IM 228, 249, 250), the internal fault boundaries that determines Block geometry as well as the limits of the lease areas.

Borehole Survey

The total number of boreholes used to create the Imaloto Coal Project model is 159 (Figure 5). All boreholes drilled were accurately surveyed. The Data Terrain Model was used as a check for the borehole collars.

Topography

A contour plan was plotted at 5 metre intervals and an accuracy check (by observation) was done with the Government issued topo-cadastral maps for the area. The general slope and contour trends agree with the observed topography.

Density

Density data was taken from the raw density determination by the laboratory. The standard used is AS 1038:26-2005. The apparent relative density is calculated using the Archimedes Principle. The material is weighed in air and then the same material is weighed in water. The formula used to calculate the density is: Apparent Relative Density = (Mass in Air/(Mass in Air – Mass in Water))* Relative Density of Water. The density data was weighted for sample mass and were calculated per seam per resource block. Densities are listed in the Resource statement below. The weighted raw density for the whole of the Main Seam in the Imaloto Coal Project comes to 1.465 ton/m^3. The Top Seam is of higher density at 1.544 ton/m^3, and the Upper Seam is the most dense at 1.593 ton/m^3. The calculated densities per resource block per seam are listed in Table 19 below.

Borehole Lithology

A general check was done on the lithological data captured, to verify that the descriptions are consistent with the environment of the deposit and the basement, i.e. the standard lithological coding was used correctly. The random wire-line logs were used for depth checks, total thickness checks and RD checks, i.e., does the geophysical log verify the logger's lithological log and the qualities per sample.

Samples and Qualities

The following validation is done on the quality data before loading:

- Σ Proximate analyses = 100%
- Are there missing samples i.e. not sampled at all or analyses missing?
- Do overlapping samples exist?
- Validation of all values present in a sample
- Is the quality of the sample representative of the lithology description?

The quality data was composited in Excel, and the qualities per seam and per block was calculated by weighted average. All qualities were weighted for sample fraction mass and yield.

Model Validation

The model was validated by plotting floor elevation and thickness contours as well as quality contours and checking the contour plots for bull's eyes. Cross-sections were drawn through most of the boreholes to evaluate all seam correlations and borehole coordinates. Crosschecks were done using the original log of boreholes for lithology and qualities. Postings of data from boreholes against a backdrop of grid model contours also helped to determine whether the model was honoring the borehole data.

Resource Delineation and Classification.

The classification of reserves and resources are compiled in accordance with the JORC Code dated 2012. A summary of the classification of resources and reserves according to the JORC Definition Standards is shown in Figure 6 below. This summary is used by many resource codes and essentially indicates the increasing level of confidence in coal resources as the level of knowledge increases.

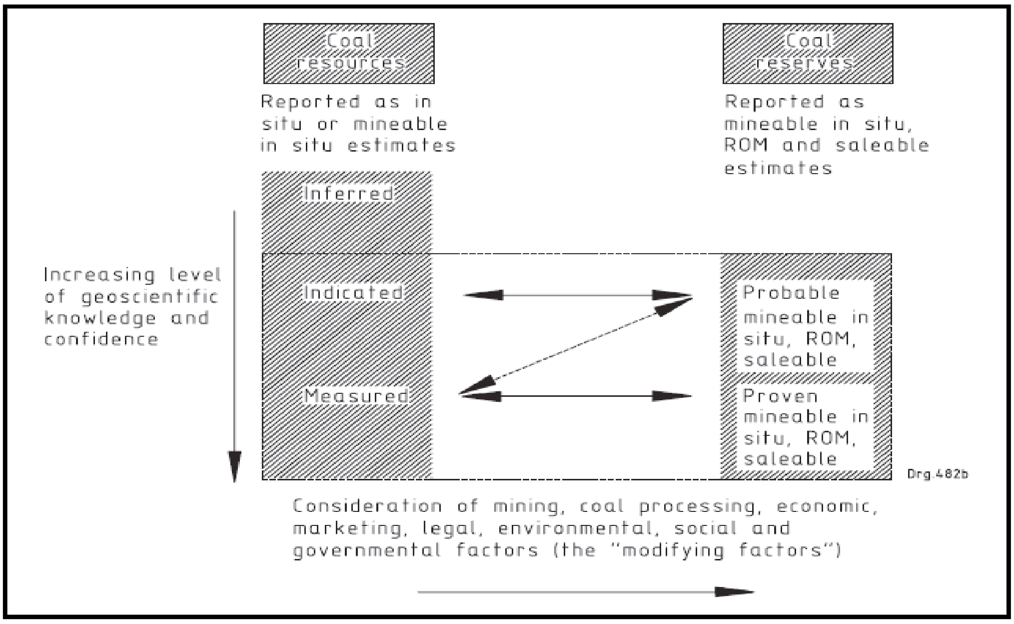


Figure 6: Resource and Reserve Classification as per JORC Definition Standards.

The JORC standard makes it clear that a resource statement need to reflect the resource confidence in the physical tonnage declared as well as in the quality associated with that resource. In the case of the Imaloto Coal Project, we are fortunate to have a project that has quality data for every physical sample point where a coal seam/seams was/were intersected, and that the sample densities for both categories will be identical. No historical data was previously generated to be available to be used in the evaluation of this project. The historical confidence levels as used for Australian funded coal projects are summarized in Table 18 below. This confidence model evolved over the past decade, and will be applicable in the case of this project.

Resource - Reserve Category	Drilled Grid	Required Level of Detail	Confidence Level
Measured Resource	< 500 m^2	Detailed geological exploration.	Moderate - High
Indicated Resource	1 000 m^2 - 500 m^2	Geological exploration.	Moderate
Inferred Resource	4 000 m^2 – 1 000 m^2	Geological exploration.	Low
Speculative	> 4000 m^2	Reconnaissance	Very Low

Table 18: JORC Confidence Levels in terms of Drilling Density.

The geological resource blocks were defined according to the structural fault boundaries as well as the various lease boundaries. Nine blocks were identified and are shown in Figure 7. The drilling densities were determined from the amount of boreholes per resource block. The proviso is that this borehole distribution should be evenly distributed across the block. In the case of Blocks 1, 2, 3, 3A, 4, 4A and 5 this is true. In the case of Blocks 2A and 5A the distribution of boreholes is shown to be non-existent. With the search radii of the boreholes in the northern part of Block 2 and in the west of Block 3A increased to beyond the block limits (Max. 800 m), one is able to describe an inferred resource for Block 2A. Similarly for Block 5A, an inferred estimate is calculated from the boreholes in close proximity to the block boundary. The seam thickness cut-off that was applied was 0.5 m for the Top and Upper Seams, and 1.4 m for the Main Seam. For Block 1 the Main Seam cut-off was reduced to 1.0 m, since the open-cast potential of this block will need to be investigated during the scoping phase of this project.

Block 1 is 394 ha in extent and contains only the Main Seam. The average depth below surface for the Main Seam Roof is 30.3 m (57.9 m max. and 13.98 m min.) It is bounded in the south by the coal seam sub-outcrop and on the eastern edge by the Imaloto River. The western boundary consists of an 80 m wide barrier inside the lease boundary. The northern boundary with Block 2 follows the 60 m depth to the roof of the Main Seam contour. Given the average borehole grid of 331 m^2, this resource is classified as measured.

Block 2 is intersected by 26 boreholes and is 699 ha in size, which results in an average borehole spacing of 519 m^2. Hence its classification as an indicated resource. Its western and northern boundaries are formed by an 80 m wide barrier pillar inside the lease boundary. The eastern boundary is formed by an 80 m wide structural pillar that follows the fault that separates Blocks 2 and 3. The Main Seam resource in Block 2 is limited to a minimum thickness of 1.40 m. Hence the footprint of the Main Seam in Block 2 includes only 296 ha. (The hatched area of Block 2 in Figure 7).

The confidence level for Block 2A is inferred, with no boreholes within the limits of the area, but with 6 boreholes drilled in close proximity to its boundary. The information from these boreholes were used to estimate a tonnage for this block. This block forms the deepest part of the resource and is 140 ha in size.

The confidence level for Block 3 is measured due to an average drilling grid of 371 m^2. This block is 427 ha in size and is bounded in the north by the southern edge of Block 3A. The east and west edges are defined by 80 m wide structural pillars that coincides with the faults that separates Block 3 from Blocks 2 and 4. The southern edge of this block is defined by the sub-outcrop of the coal measures as seen in borehole IM 027.

The confidence level for Block 3A is measured due to an average drilling grid of 441 m2. This block is 78 ha in size and is bounded in the north by an 80 m wide barrier pillar on the inside of the lease boundary. The east and west edges are defined by 80 m wide structural pillars that coincides with the faults that separates Block 3 from Blocks 2 and 4. The southern edge of this block is defined by the northern limit of Block 3.

Block 4 is classified as a measured resource, with an average drilling grid of 373 m^2. This block is 376 ha in size and is bounded in the north by the southern edge of Block 4A. The east and west edges are defined by 80 m wide structural pillars that coincides with the faults that separates Block 4 from Blocks 3 and 5. The southern edge of this block is defined by the Imaloto River and the sub-outcrop of the coal measures as seen in boreholes IM 012 and 024.

Block 4A is classified as a measured resource, with an average drilling grid of 370 m2. This block is 109 ha in size and is bounded in the north by an 80 m wide barrier pillar on the inside of the lease boundary. The east and west edges are defined by 80 m wide structural pillars that coincides with the faults that separates Block 4 from Blocks 3 and 5. The southern edge of this block is defined by the northern boundary of Block 4.

Block 5 is classified as a measured resource, with an average drilling grid of 424 m^2. This block is 305 ha in size and is bounded in the north-west by an 80 m wide barrier pillar on the inside of the lease boundary. The eastern edge is defined by the sub-outcrop of coal measures as seen in IM 228, 249 and 250. There is no Main Seam developed in this block.

The confidence level for Block 5A is inferred, with no boreholes within the limits of the area, but with 8 boreholes drilled in close proximity to its boundary. The information from these boreholes was used to estimate a tonnage for this block. This block forms the shallowest part of the resource and is 179 ha in size. There is no Main Seam developed in this block.

Geological Loss

Geological loss is assigned on a sliding scale according to the level of confidence in the resource estimation. Essentially it is a measure of drilling density and reduced possible variability in seam geometry. The following geological losses were applied per resource category:

- Measured Resource: 10 to 12 % geological loss
- Indicated Resource: 15 % geological loss
- Inferred Resource: 20% geological loss

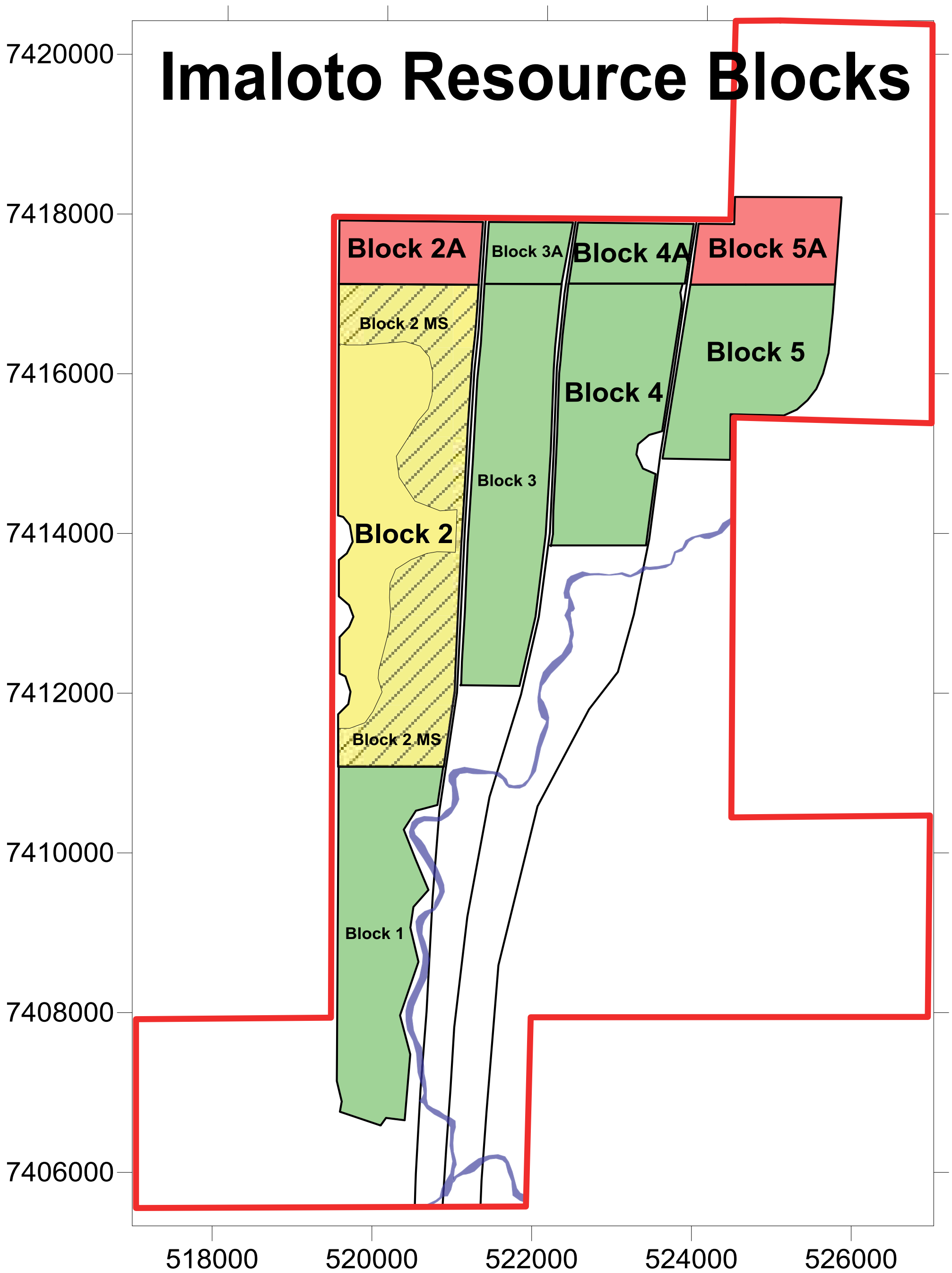


Figure 7: Resource Blocks for the Imaloto Coal Project.

Resource Statement

Category	Gross			Net attributable (99 %)			Operator
	Tonnes (Mt)	Raw Coal Quality (ADB)		Tonnes (Mt)	Raw Coal Quality (ADB)		
		Ash (%)	CV (MJ/kg)		Ash (%)	CV (MJ/kg)	
Coal Resources per asset							Lemur Resources Pty (Ltd).
Measured	91.613	32.5	19.62	90.697	32.5	19.62	
Indicated	31.497	35.7	18.14	31.182	35.7	18.14	
Inferred	12.627	34.4	18.80	12.501	34.4	18.80	
Sub-Total	135.737	33.4	19.20	134.380	33.4	19.20	
Total	135.737	33.4	19.20	134.380	33.4	19.20	

Coal resources within the defined resource blocks are estimated and classified from the geological, structural and coal quality model. Resource category classification and the reporting of tons and quality per category are in accordance with the drilling density and are indicated by colour in Figure 7. Green denotes a measured resource. Yellow signifies an indicated resource and red indicates an inferred resource. Tons are reported on a Gross Tons in Situ (GTIS) Base. See Table 19 below for the Resource Statement. Coal qualities are reported as cumulative wash tables per block per seam (These are listed in Tables 20 to 37). All qualities are reported on an Air Dried Uncontaminated Base. The gross tonnage in situ (GTIS) amounts to 135.737 Million tons. 91.613 Mt is located in Blocks 1, 3, 3A, 4, 4A and 5 at a measured status, while 31.497 Mt and 12.627 Mt are at indicated and inferred status levels respectively.

COAL RESOURCE - Imaloto - Lemur Resources - as @ 23 Oct 2017.												
Block	**Commodity**	**Seam**	**Ply**	**Thick (m)**	**Area (m^2)**	**Volume (m^3)**	**Density**	**GTIS**	**Drill Grid**	**Resource Category**	**Geological Loss**	**TTIS**
1	Coal	Main	Main	1.35	3940874	5320180	1.468	7.810	331	Measured	10	7.029
Total								**7.810**				**7.029**
2	Coal	Top	Top	0.98	6999660	6849535	1.509	10.336	519	Indicated	15	8.786
2	Coal	Upper	Upper	1.12	6999660	7839424	1.622	12.716	519	Indicated	15	10.808
2	Coal	Main	Main	1.90	2959047	5630147	1.500	8.445	519	Indicated	15	7.178
Total								**31.497**				**26.772**
3	Coal	Top	Top	0.88	4273073	3760304	1.539	5.787	371	Measured	10	5.208
3	Coal	Upper	Upper	1.07	4273073	4572188	1.590	7.270	371	Measured	10	6.543
3	Coal	Main	Main	2.85	4272813	12176950	1.467	17.864	371	Measured	10	16.077
Total								**30.920**				**27.828**
4	Coal	Top	Top	0.83	3761367	3121935	1.580	4.933	373	Measured	10	4.439
4	Coal	Upper	Upper	1.31	3761367	4927391	1.608	7.923	373	Measured	10	7.131
4	Coal	Main	Main	2.94	3357197	9863333	1.514	14.933	353	Measured	10	13.440
Total								**27.789**				**25.010**
5	Coal	Top	Top	0.72	3052761	2827001	1.598	4.518	424	Measured	12	3.975
5	Coal	Upper	Upper	1.12	2802195	3138458	1.590	4.990	406	Measured	12	4.391
Total								**9.508**				**8.367**
2A	Coal	Top	Top	0.50	1397766	698883	1.509	1.055	1182	Inferred	20	0.844
2A	Coal	Upper	Upper	0.75	1397766	1048325	1.622	1.700	1182	Inferred	20	1.360
2A	Coal	Main	Main	1.98	1397766	2767577	1.500	4.151	1182	Inferred	20	3.321
Total								**6.906**				**5.525**
3A	Coal	Top	Top	0.79	777559	614271	1.555	0.955	441	Measured	12	0.841
3A	Coal	Upper	Upper	0.80	777559	622047	1.631	1.015	441	Measured	12	0.893
3A	Coal	Main	Main	3.98	777559	3094683	1.510	4.673	441	Measured	12	4.112
Total								**6.643**				**5.846**
4A	Coal	Top	Top	0.87	1092459	950440	1.581	1.503	370	Measured	10	1.352
4A	Coal	Upper	Upper	1.06	1092459	1158007	1.620	1.876	370	Measured	10	1.688
4A	Coal	Main	Main	3.38	1092459	3692513	1.507	5.565	370	Measured	10	5.008
Total								**8.943**				**8.049**
5A	Coal	Top	Top	0.75	1795637	1346728	1.598	2.152	1340	Inferred	20	1.722
5A	Coal	Upper	Upper	1.25	1795637	2244546	1.590	3.569	1340	Inferred	20	2.855
Total								**5.721**				**4.577**
Gross Indicated Tonnage in Situ								**31.497**	**Total Indicated Tonnage in Situ**			**26.772**
Gross Measured Tonnage in Situ								**91.613**	**Total Measured Tonnage in Situ**			**82.129**
Gross Inferred Tonnage in Situ								**12.627**	**Total Inferred Tonnage in Situ**			**10.102**
Gross Total Tonnage in Situ								**135.737**	**Total Tonnage in Situ**			**119.003**
Gross Top Seam Tonnage in Situ								**31.238**	**Total Top Seam Tonnage in Situ**			**27.167**
Gross Upper Seam Tonnage In Situ								**41.058**	**Total Upper Seam Tonnage In Situ**			**35.670**
Gross Main Seam Tonnage In Situ								**63.441**	**Total Main Seam Tonnage In Situ**			**56.166**
Gross Main Seam Inferred Tonnage								**4.151**				**3.321**
Gross Main Seam Indicated Tonnage								**8.445**				**7.178**
Gross Main Seam Measured Tonnage								**50.844**				**45.666**

Table 19: Resource Statement of the Coal Resource for the Imaloto Coal Project.

Main Seam - Block 1 - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample Mass	Wash R.D.	Moisture %	Ash %	Volatile %	F.C. %	Sulphur %	Gross C.V. MJ/kg	Yield %	DAVF	GAR kcal/kg @ 8% TM	NAR kcal/kg @ 8% TM
24494	F1.35	5.3	12.2	34.9	47.6	1.06	27.58	22.4	42.3	6401	6161
42808	F1.40	5.4	14.7	32.8	47.1	1.03	26.55	45.1	41.1	6166	5925
53831	F1.50	5.4	17.6	30.3	46.6	0.98	25.30	72.1	39.4	5876	5635
23034	F1.60	5.3	19.8	29.2	45.7	0.98	24.42	83.4	38.9	5666	5425
9141	F1.70	5.2	21.8	28.7	44.3	0.96	23.70	88.0	39.4	5492	5251
4782	F1.80	5.4	22.6	28.3	43.8	1.07	23.43	89.0	39.2	5440	5198
3125	F1.90	5.4	22.4	28.2	44.0	1.04	23.52	91.7	39.0	5463	5221
11796	S1.90	5.1	25.2	28.0	41.7	1.77	22.26	100.0	40.2	5155	4914
10200	< 0.5	5.3	27.5	25.8	41.3	1.78	20.92		38.5	4853	4611
183211	Raw	5.1	25.3	27.9	41.7	1.77	22.19		40.1	5139	4897

Combined results from forty samples out of forty boreholes

Table 20: Cumulative Wash Table for the Main Seam – Block 1.

For Block 1 the Main Seam will produce a 5635 kcal/kg (NAR) product with values of 17.6 %, 0.98 % and 30.3 % for Ash, Total Sulphur and Volatile content respectively. This product will have a theoretical yield of 72.1 %.

Main Seam - Block 2 - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
16064	F1.35	5.7	12.1	33.6	48.5	1.01	27.12	21.4	40.9	6321	6080
27060	F1.40	5.8	13.7	32.4	48.0	0.93	26.53	41.1	40.3	6189	5948
27009	F1.50	5.8	16.4	30.2	47.6	0.93	25.54	60.1	38.8	5956	5714
20529	F1.60	5.8	18.7	28.2	47.3	0.91	24.59	75.2	37.4	5737	5495
12026	F1.70	5.7	20.6	27.2	46.6	0.88	23.77	83.9	36.8	5538	5296
5642	F1.80	5.7	22.2	26.3	45.8	0.92	23.22	87.8	36.5	5411	5169
2063	F1.90	5.3	24.4	26.1	44.2	0.97	22.79	90.6	37.2	5289	5047
12090	S1.90	5.2	27.4	25.5	41.9	1.97	21.06	100.0	37.8	4883	4640
6964	< 0.5	5.3	26.5	25.1	43.2	1.73	21.09		36.8	4890	4648
129447	Raw	5.2	27.3	25.5	42.0	1.96	21.06		37.7	4883	4641

Combined results from twenty-eight samples out of twenty-six boreholes

Table 21: Cumulative Wash Table for the Main Seam – Block 2.

For Block 2 the Main Seam will produce a 5714 kcal/kg (NAR) product with values of 16.4 %, 0.93 % and 30.2 % for Ash, Total Sulphur and Volatile content respectively. This product will have a theoretical yield of 60.1 %.

Main Seam - Block 3 - Cumulative Results (Air-dried Base) as @ 17 March 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
27656	F1.35	5.3	11.6	33.5	49.6	1.12	27.40	22.5	40.3	6357	6117
47276	F1.40	5.3	13.3	32.2	49.3	1.01	26.86	42.4	39.5	6229	5989
56457	F1.50	5.3	15.6	29.7	49.4	1.05	25.98	68.5	37.5	6027	5786
31714	F1.60	5.2	18.0	28.5	48.3	1.10	25.19	81.5	37.1	5841	5600
14030	F1.70	5.3	18.8	28.2	47.8	1.17	24.74	86.0	37.1	5737	5496
7438	F1.80	5.2	20.1	27.6	47.0	1.30	24.08	89.1	37.0	5582	5341
1696	F1.90	5.3	19.5	28.0	47.1	1.15	24.52	93.9	37.3	5689	5448
15416	S1.90	4.9	24.0	26.8	44.3	2.15	22.64	100.0	37.7	5231	4990
9820	< 0.5	4.9	23.6	26.9	44.6	1.81	22.69		37.6	5246	5004
211503	Raw	4.9	24.0	26.8	44.3	2.13	22.64		37.7	5232	4991

Combined results from thirty-six samples out of twenty-seven boreholes

Table 22: Cumulative Wash Table for the Main Seam – Block 3.

For Block 3 the Main Seam will produce a 5600 kcal/kg (NAR) product with values of 18.0 %, 1.10 % and 28.5 % for Ash, Total Sulphur and Volatile content respectively. This product will have a theoretical yield of 81.5 %.

Main Seam Block 3A - Cumulative Results (Air-dried Base) as @ 17 March 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
7607	F1.35	4.4	11.4	35.2	49.0	0.91	28.20	16.9	41.8	6479	6240
12846	F1.40	4.3	13.3	33.8	48.6	0.91	27.51	36.7	41.0	6317	6078
19451	F1.50	4.4	16.0	31.3	48.3	0.86	26.33	67.6	39.3	6054	5814
7965	F1.60	4.5	18.3	29.8	47.5	1.00	25.71	79.2	38.5	5914	5674
4867	F1.70	4.5	19.4	29.1	47.0	1.00	25.05	87.2	38.3	5761	5521
2498	F1.80	4.3	20.7	28.7	46.2	0.98	24.51	91.6	38.3	5630	5390
973	F1.90	4.5	20.3	29.0	46.2	0.89	24.53	93.9	38.6	5642	5402
4556	S1.90	4.4	23.4	27.6	44.7	2.63	23.50	100.0	38.2	5400	5159
3380	< 0.5	4.2	25.1	27.2	43.5	1.88	22.84		38.5	5239	4998
64143	Raw	4.4	23.5	27.6	44.6	2.59	23.46		38.2	5391	5150

Combined results from eight samples out of five boreholes

Table 23: Cumulative Wash Table for the Main Seam – Block 3A.

For Block 3A the Main Seam will produce a 5674 kcal/kg (NAR) product with values of 18.4 %, 1.00 % and 29.8 % for Ash, Total Sulphur and Volatile content respectively. This product will have a theoretical yield of 79.2 %.

Main Seam - Block 4 - Cumulative Results (Air-dried Base) as @ 17 March 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
16849	F1.35	4.4	12.9	34.4	48.4	1.01	27.06	16.8	41.6	6219	5979
33280	F1.40	4.4	14.8	32.7	48.1	0.99	26.37	33.8	40.5	6061	5821
54164	F1.50	4.5	17.8	30.7	47.0	0.96	25.19	61.9	39.5	5792	5552
30566	F1.60	4.3	20.7	29.5	45.5	1.01	24.18	74.5	39.3	5553	5312
15164	F1.70	4.3	22.4	28.9	44.4	1.10	23.45	82.9	39.4	5387	5146
8991	F1.80	4.3	24.2	28.3	43.2	1.17	22.79	87.9	39.6	5230	4989
2945	F1.90	4.0	27.4	28.3	40.3	0.98	22.05	89.5	41.3	5047	4806
18987	S1.90	4.0	30.7	26.4	38.9	2.12	20.30	100.0	40.4	4648	4406
7486	< 0.5	4.1	28.4	27.2	40.2	1.65	21.03		40.4	4818	4577
188432	Raw	4.0	30.6	26.4	38.9	2.10	20.34		40.4	4657	4415

Combined results from thirty-three samples out of twenty-three boreholes

Table 24: Cumulative Wash Table for the Main Seam – Block 4.

For Block 4 the Main Seam will produce a 5552 kcal/kg (NAR) product with values of 17.8 %, 0.96 % and 30.7 % for Ash, Total Sulphur and Volatile content respectively. This product will have a theoretical yield of 61.9 %.

Main Seam Block 4A - Cumulative Results (Air-dried Base) as @ 17 March 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
14586	F1.35	4.6	12.9	35.0	47.6	1.03	27.19	22.0	42.4	6263	6024
24546	F1.40	4.6	14.7	33.8	46.9	1.00	26.55	41.6	41.9	6114	5875
37124	F1.50	4.4	17.8	32.0	45.8	0.95	25.49	64.1	41.1	5861	5621
20948	F1.60	4.3	21.0	30.8	44.0	0.97	24.38	75.1	41.2	5595	5355
10528	F1.70	4.2	23.1	30.2	42.6	0.97	23.64	83.2	41.5	5419	5178
5649	F1.80	4.2	24.3	29.5	42.0	1.02	23.19	88.7	41.3	5317	5077
2428	F1.90	4.2	25.5	29.1	41.2	0.99	22.76	90.5	41.4	5219	4979
9486	S1.90	4.1	28.3	27.9	39.7	1.90	21.53	100.0	41.2	4931	4690
6512	< 0.5	4.2	25.5	28.2	42.1	1.46	22.28		40.2	5108	4867
131807	Raw	4.1	28.2	27.9	39.8	1.87	21.57		41.2	4941	4699

Combined results from eighteen samples out of eleven boreholes

Table 25: Cumulative Wash Table for the Main Seam – Block 4A.

For Block 4A the Main Seam will produce a 5621 kcal/kg (NAR) product with values of 17.8 %, 0.95 % and 32.0 % for Ash, Total Sulphur and Volatile content respectively. This product will have a theoretical yield of 64.1 %.

Top Seam - Block 2 - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
6245	F1.35	5.9	12.4	34.8	47.7	0.98	26.76	19.1	42.6	6251	6009
8458	F1.40	6.0	14.4	34.0	47.8	0.95	26.13	33.2	42.7	6105	5863
13784	F1.50	5.7	19.5	31.8	44.5	1.02	24.39	59.8	42.5	5685	5443
9639	F1.60	5.6	22.9	30.3	41.4	1.10	23.26	77.1	42.4	5417	5175
2983	F1.70	5.3	24.4	30.1	40.5	1.17	22.62	80.6	42.8	5249	5007
1243	F1.80	5.5	24.6	29.7	40.0	1.24	22.59	85.7	42.4	5250	5008
1089	F1.90	5.3	24.9	30.0	42.7	1.28	22.77	88.2	43.0	5285	5043
7237	S1.90	4.9	32.3	27.1	35.5	2.13	19.53	100.0	43.1	4513	4271
3067	< 0.5	5.1	30.8	27.3	37.1	2.05	17.57		42.5	4067	3823
53745	Raw	4.9	32.2	27.1	62.8	2.13	19.41		43.1	4488	4245

Combined results from twenty-one samples out of twenty-one boreholes

Table 26: Cumulative Wash Table for the Top Seam – Block 2.

Top Seam - Block 3 - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
7102	F1.35	5.8	11.5	35.0	47.6	1.26	27.21	20.1	42.4	6348	6107
7672	F1.40	5.7	14.4	33.9	45.9	1.21	26.25	30.3	42.5	6119	5877
13002	F1.50	5.5	19.1	31.8	43.6	1.32	24.64	54.0	42.2	5730	5489
11139	F1.60	5.3	23.1	30.2	41.4	1.42	23.29	71.6	42.2	5401	5160
3947	F1.70	5.2	23.7	29.8	41.3	1.52	22.89	75.9	41.9	5304	5063
1403	F1.80	5.3	24.5	29.4	40.8	1.59	22.52	79.3	41.9	5224	4982
885	F1.90	5.6	25.6	29.4	39.4	1.44	22.43	88.6	42.7	5218	4975
11619	S1.90	4.9	40.4	23.7	31.0	2.33	16.40	100.0	43.3	3790	3546
3430	< 0.5	5.6	36.8	24.9	32.6	2.07	16.13		43.3	3757	3512
60199	Raw	4.9	40.2	23.8	31.1	2.32	16.39		43.3	3788	3544

Combined results from twenty-four samples out of twenty-four boreholes

Table 27: Cumulative Wash Table for the Top Seam – Block 3.

Top Seam - Block 3A - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
1830	F1.35	5.5	10.2	36.5	47.8	1.54	27.93	20.9	43.3	6495	6254
1635	F1.40	5.5	12.4	35.3	46.9	1.37	27.11	32.9	42.9	6304	6063
3759	F1.50	5.2	18.0	32.6	44.1	1.36	25.11	59.1	42.5	5823	5582
3006	F1.60	5.1	21.7	30.9	42.2	1.50	23.66	79.1	42.3	5480	5239
853	F1.70	5.2	23.0	30.3	41.6	1.51	23.20	85.5	42.2	5374	5133
366	F1.80	5.0	23.6	30.1	41.3	1.72	22.90	85.9	42.2	5297	5056
294	F1.90	5.1	24.6	30.0	40.3	1.34	22.61	91.7	42.7	5236	4995
1604	S1.90	4.5	31.4	27.3	36.7	3.33	19.67	100.0	42.7	4527	4285
880	< 0.5	4.6	33.0	25.8	36.7	2.00	19.43		41.2	4474	4231
14227	Raw	4.5	31.5	27.3	36.7	3.26	19.66		42.6	4524	4282

Combined results from five samples out of five boreholes

Table 28: Cumulative Wash Table for the Top Seam – Block 3A.

Top Seam Block 4 - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
7947	F1.35	5.3	10.8	35.3	48.6	1.14	27.63	16.1	42.1	6412	6172
8591	F1.40	5.2	13.8	33.9	47.1	1.08	26.47	29.0	41.9	6133	5893
16786	F1.50	5.1	18.5	31.9	44.5	1.13	24.77	51.8	41.8	5734	5493
13657	F1.60	5.0	22.1	30.2	42.8	1.20	23.53	70.3	41.3	5439	5198
5059	F1.70	4.9	23.3	29.7	42.1	1.28	23.05	72.9	41.4	5327	5086
2590	F1.80	4.9	24.6	29.2	41.3	1.30	22.59	76.7	41.4	5220	4979
1650	F1.90	4.7	26.2	28.4	40.7	0.93	22.37	81.7	41.1	5159	4917
14564	S1.90	4.6	39.1	24.5	31.9	2.04	17.13	100.0	43.4	3945	3702
3394	< 0.5	4.4	36.2	25.1	34.3	1.70	19.18		42.3	4412	4169
74238	Raw	4.6	38.9	24.5	32.0	2.02	17.24		43.3	3970	3727

Combined results from twenty-four samples out of twenty-four boreholes

Table 29: Cumulative Wash Table for the Top Seam – Block 4.

Top Seam - Block 4A - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
5014	F1.35	4.9	11.3	35.3	48.5	1.01	27.35	19.1	42.1	6320	6080
5657	F1.40	4.8	14.1	34.5	46.6	0.99	26.41	31.4	42.5	6096	5856
11378	F1.50	4.7	19.0	32.3	44.0	1.00	24.73	59.7	42.3	5701	5460
7657	F1.60	4.7	22.5	30.6	42.1	1.10	23.53	75.8	42.1	5424	5184
2897	F1.70	4.5	24.3	30.1	41.1	1.17	22.90	78.7	42.2	5269	5028
1269	F1.80	4.4	25.5	29.8	40.4	1.24	22.49	82.7	42.4	5165	4924
924	F1.90	4.4	25.5	29.7	40.5	1.14	22.67	88.5	42.3	5209	4968
6851	S1.90	4.5	43.7	22.8	29.1	1.97	15.63	100.0	43.9	3595	3351
2210	< 0.5	4.0	34.4	25.6	36.0	1.41	18.72		41.6	4288	4045
43857	Raw	4.5	43.2	22.9	29.5	1.94	15.79		43.8	3632	3389

Combined results from thirteen samples out of thirteen boreholes

Table 30: Cumulative Wash Table for the Top Seam – Block 4A.

Top Seam - Block 5- Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
3981	F1.35	5.3	10.5	35.5	48.8	0.99	27.86	14.4	42.1	6464	6224
4514	F1.40	5.1	13.4	34.3	47.1	0.90	26.76	26.7	42.1	6196	5956
7901	F1.50	4.9	18.6	32.2	44.3	1.01	25.07	48.0	42.1	5792	5551
6070	F1.60	4.9	21.9	30.9	42.3	0.99	23.87	63.4	42.2	5518	5277
3289	F1.70	4.9	23.9	30.1	41.2	1.07	23.10	71.6	42.2	5336	5095
1760	F1.80	4.8	25.3	29.5	40.4	0.94	22.60	76.3	42.2	5218	4976
1216	F1.90	4.6	27.3	28.9	39.2	0.84	22.28	77.1	42.4	5132	4891
7907	S1.90	4.3	35.3	26.9	33.4	1.72	18.85	100.0	44.6	4330	4087
2005	< 0.5	4.1	35.8	26.2	33.9	1.37	20.56		43.6	4711	4469
38643	Raw	4.3	35.3	26.9	33.4	1.70	18.94		44.6	4350	4107

Combined results from eleven samples out of eleven boreholes

Table 31: Cumulative Wash Table for the Top Seam – Block 5.

Upper Seam - Block 2 - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
3566	F1.35	5.7	14.6	33.5	46.2	1.39	25.93	8.6	42.0	6042	5800
10742	F1.40	5.8	17.5	32.9	43.7	1.24	24.92	22.1	43.0	5814	5572
24499	F1.50	5.7	21.4	31.8	41.1	1.33	23.64	52.5	43.6	5507	5265
10633	F1.60	5.6	23.4	30.7	40.3	1.40	22.90	62.8	43.3	5331	5089
5530	F1.70	5.4	25.3	30.0	39.4	1.48	22.24	68.4	43.3	5165	4923
3423	F1.80	5.2	26.8	28.8	39.2	1.52	21.55	72.9	42.3	4995	4753
1600	F1.90	5.4	26.8	29.4	38.4	1.51	21.90	78.3	43.3	5085	4843
22235	S1.90	4.3	44.5	22.6	28.6	1.80	15.07	100.0	44.2	3461	3217
5100	< 0.5	4.7	39.0	24.4	31.9	1.77	16.67		43.3	3843	3600
87328	Raw	4.3	44.1	22.7	28.8	1.80	15.17		44.1	3483	3239

Combined results from twenty-three samples out of twenty-three boreholes

Table 32: Cumulative Wash Table for the Upper Seam – Block 2.

Upper Seam - Block 3 - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
4799	F1.35	5.4	12.5	32.9	49.3	1.29	26.80	11.5	40.0	6223	5982
13809	F1.40	5.5	16.4	32.6	45.5	1.18	25.35	25.6	41.7	5894	5653
23732	F1.50	5.3	20.6	31.0	43.1	1.30	23.89	55.5	41.9	5545	5304
10173	F1.60	5.2	22.2	30.2	42.4	1.41	23.33	64.5	41.6	5407	5165
4705	F1.70	5.0	23.4	29.8	41.8	1.39	22.90	68.9	41.6	5295	5054
2849	F1.80	4.9	24.6	29.1	41.5	1.41	22.39	73.1	41.2	5171	4929
1054	F1.90	5.5	25.4	29.4	39.7	1.39	22.31	77.7	42.6	5187	4944
24614	S1.90	4.0	44.4	22.7	28.9	1.85	14.99	100.0	44.0	3432	3188
5393	< 0.5	4.4	41.0	22.8	31.8	1.64	16.16		41.7	3715	3472
91128	Raw	4.1	44.2	22.7	29.0	1.83	15.05		43.8	3448	3204

Combined results from twenty-six samples out of twenty-four boreholes

Table 33: Cumulative Wash Table for the Upper Seam – Block 3.

Upper Seam - Block 3A - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
1805	F1.35	4.5	11.8	32.2	51.5	1.23	27.16	14.5	38.4	6249	6010
2892	F1.40	4.9	15.1	33.3	46.7	1.26	26.16	24.4	41.7	6042	5802
6241	F1.50	4.8	19.7	30.7	44.8	1.34	24.52	54.6	40.6	5657	5416
2329	F1.60	4.5	21.8	29.5	44.2	1.51	23.64	65.8	40.0	5440	5199
981	F1.70	4.4	22.8	29.2	43.6	1.53	23.28	68.4	40.1	5351	5110
673	F1.80	4.3	24.0	29.0	42.7	1.58	22.84	71.6	40.5	5246	5005
447	F1.90	4.7	25.1	30.4	39.8	1.32	22.83	70.9	43.4	5265	5024
6496	S1.90	3.8	42.1	24.0	30.1	1.66	15.77	100.0	44.4	3604	3360
1750	< 0.5	3.8	36.3	23.6	36.4	1.52	18.20		39.3	4156	3913
23614	Raw	3.8	41.7	24.0	30.4	1.65	15.91		44.1	3635	3391

Combined results from seven samples out of six boreholes

Table 34: Cumulative Wash Table for the Upper Seam – Block 3A.

Upper Seam - Block 4 - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
16699	F1.35	5.3	12.5	33.9	48.3	1.25	26.90	11.8	41.2	6239	5999
47410	F1.40	5.2	15.9	33.3	45.6	1.12	25.68	25.2	42.3	5952	5711
90377	F1.50	5.1	20.1	31.8	42.9	1.16	24.22	53.3	42.6	5609	5368
41607	F1.60	5.0	22.1	31.0	41.9	1.24	23.47	63.5	42.5	5428	5187
21485	F1.70	4.9	23.9	30.1	41.1	1.24	22.86	69.9	42.3	5280	5039
14054	F1.80	4.7	25.8	29.4	40.2	1.25	22.24	74.2	42.2	5127	4885
8294	F1.90	4.8	27.1	29.2	39.0	1.12	21.91	79.1	42.8	5056	4815
76277	S1.90	4.1	40.6	24.2	31.0	1.82	16.56	100.0	43.8	3797	3554
19040	< 0.5	4.5	39.1	23.9	32.4	1.48	16.97		42.5	3905	3662
335243	Raw	4.2	40.6	24.2	31.1	1.80	16.59		43.7	3803	3560

Combined results from twenty-five samples out of twenty-four boreholes

Table 35: Cumulative Wash Table for the Upper Seam – Block 4.

Upper Seam - Block 4A - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
3426	F1.35	4.7	13.3	34.1	47.9	1.27	26.71	11.7	41.6	6157	5917
7789	F1.40	4.7	15.5	33.4	46.4	1.10	25.83	24.8	41.8	5956	5716
14662	F1.50	4.7	19.4	32.1	43.8	1.00	24.53	50.1	42.3	5654	5414
7250	F1.60	4.5	22.0	31.0	42.5	1.08	23.66	62.7	42.1	5446	5205
4518	F1.70	4.5	23.8	30.2	41.5	1.04	23.04	70.4	42.1	5299	5058
2958	F1.80	4.4	25.9	29.3	40.5	1.06	22.31	73.7	41.9	5125	4884
2001	F1.90	4.4	27.8	28.9	38.9	1.08	21.71	78.4	42.6	4990	4749
11967	S1.90	3.9	37.6	25.3	33.2	2.03	17.90	100.0	43.2	4093	3850
2936	< 0.5	4.0	40.0	22.9	33.1	1.23	17.35		40.9	3971	3728
57507	Raw	3.9	37.8	25.1	33.2	1.99	17.87		43.1	4086	3843

Combined results from twelve samples out of twelve boreholes

Table 36: Cumulative Wash Table for the Upper Seam – Block 4A.

Upper Seam - Block 5 - Cumulative Results (Air-dried Base) as @ 17 Mar 2013									Calculated		
Sample	Wash	Moisture	Ash	Volatile	F.C.	Sulphur	Gross C.V.	Yield	DAVF	GAR	NAR
Mass	R.D.	%	%	%	%	%	MJ/kg	%		kcal/kg @ 8% TM	kcal/kg @ 8% TM
3365	F1.35	5.4	11.5	34.6	48.5	1.27	27.50	11.7	41.6	6388	6148
9157	F1.40	5.2	15.1	33.8	45.8	1.12	26.21	25.9	42.5	6077	5836
15321	F1.50	5.1	19.1	32.3	43.4	1.10	24.72	49.4	42.7	5725	5484
9110	F1.60	5.0	21.2	31.5	42.3	1.19	23.91	60.7	42.7	5529	5288
4627	F1.70	4.9	23.4	30.3	41.4	1.11	23.15	65.8	42.3	5347	5106
3614	F1.80	4.7	26.1	29.2	40.0	1.11	22.32	70.3	42.2	5145	4903
1978	F1.90	4.7	28.3	28.1	38.9	0.92	21.68	73.9	42.0	5000	4759
15338	S1.90	4.2	38.2	25.1	32.5	2.08	17.66	100.0	43.6	4052	3809
3991	< 0.5	4.2	38.5	24.8	32.5	1.82	17.16		43.2	3934	3691
66501	Raw	4.2	38.2	25.1	32.5	2.07	17.63		43.6	4045	3802

Combined results from fourteen samples out of thirteen boreholes

Table 37: Cumulative Wash Table for the Upper Seam – Block 5.

Resource Reconciliation

The first resource estimate for this project was prepared by MSA in a report dated Dec 2010. The resource was classified as inferred with the tonnages as shown in Table 38 below. Subsequent to the completion of the 2nd and 3rd phases of the drilling programme, Sumsare Consulting (SC) produced a resource report (Jan 2013), with the tonnages also shown in Table 38 below.

With the completion of 4th and final phase of drilling, Sumsare Consulting produced an updated report with the latest quantities shown in Table 38. This document is a review of the previous report, using the JORC 2012 guideline as a template. There has been no material changes in either the tonnages or qualities previously disclosed. The MSA Resource as determined in the CPR dated December 2010, showed a total inferred resource of 170.600 Million tons (GTIS). The SC (Jan 2013) report showed a resource of 137.288 Million tons (GTIS). The latest updated SC (Mar 2013) report, indicate a resource of 135.737 Million tons (GTIS). This tonnage is current and still applicable to this JORC 2012 review as produced by SC (Oct 2017).

The previous reconciliation is presented in the report dated March 2013. The present reconciliation has a zero variance since there have been no material change in or addition to the underlying data that supports the findings of the previous report.

See Table 38 below for the comparison per seam.

Comparison of Tonnages per seam (GTIS, Mt)						
Seam	MSA	SC Jan 2013	SC Mar 2013	SC Jul 2014	SC Oct 2017	Variance
Main	73.8	63.073	63.441	63.441	63.441	0
Upper	69.7	43.083	41.058	41.058	41.058	0
Top	27.1	31.132	31.238	31.238	31.238	0
Total	**170.6**	**137.288**	**135.737**	**135.737**	**135.737**	**0**

Table 38: Comparison of the SC GTIS Resource (Mar 2013) with the SC GTIS Resource JORC 2012 review (Jul 2014).

In Closure

The Imaloto River drains the lease area from the north-east to the south-west. The current resource is situated to the west of the Imaloto River. The mining of Block 1 will have to consider the impact of the Imaloto River on the coal resource. Options may be to design cut layouts that avoid the river and its riparian zone. The resource blocks have been designated well clear of this river.

Permitting that would be required would include an EIA and Rehabilitation and Closure Plans. Although not formalized in the mining legislation, various forms of Rural Social Projects would be expected from an operator.

The remaining two Prospecting Permits will have to be converted to a Mining Right if mining is to be considered. The general area is populated by local Malagasy people who live in informal villages throughout the valley. The resettlement of people will have to be considered in the event of this project becoming a mining operation.

The formal employment of people in this part of the country is effectively zero, and a project of this magnitude will dramatically change the socio-economic environment in the area. Should this project progress to a production stage, a lot of labour would be available, although the skill levels for technical positions will be low.

In Madagascar, the political situation is in a state of flux and it is difficult to make predictions in terms of its stability.

7. Interpretation and Conclusions

A total of 135.737 Million tons (GTIS) is estimated, of which 91.613 Mt has been drilled to a measured resource level. This deposit is situated in a remote part of Madagascar, and is roughly 205 km by road from the closest port at Tulear.

The Imaloto River drains across the property, and is a potential source of water. Road infrastructure is limited to a very poor quality dirt road (135 km), which joins up with the Tulear – Antanarivo road, (70 km paved). There is no power grid in close proximity to the project area. The resource identified in Block 1 is relatively shallow, and the depth to the top of coal varies from 14 m to 60 m. The total coal package is hosted within three seams of which the Main Seam will be the primary resource.

The Main Seam in Blocks 1, 2, 3, 3A, 4 and 4A has the potential to yield a 5500 Kcal/Kg GAR export product and a power station middlings. The quality modelling that was done on the respective seams shows that the Main Seam is capable of producing a very high total (Export and Middling) theoretical yield, in excess of 90 %.

The rest of the seams will yield lower at between 79 % and 86 % on an uncontaminated base.

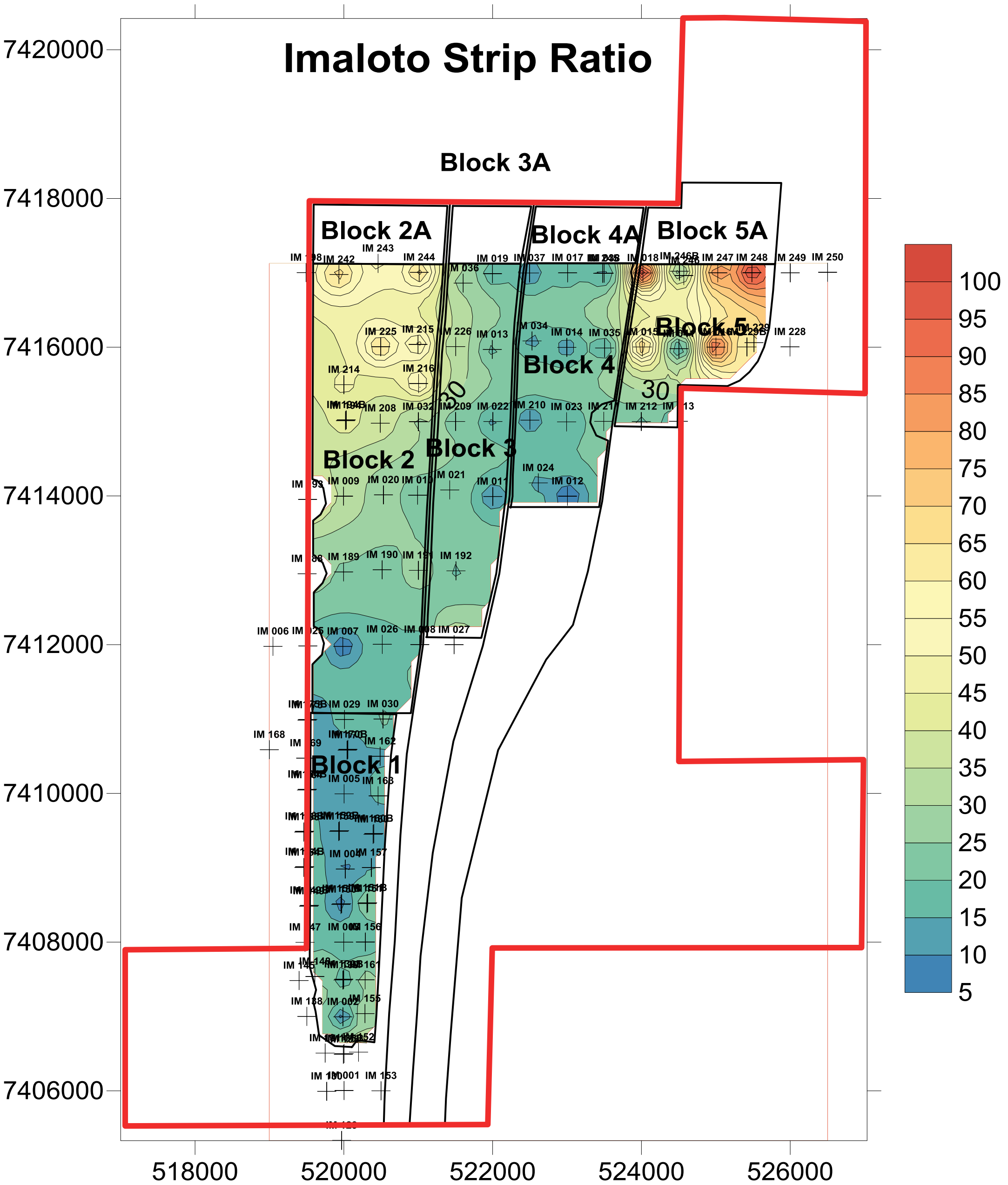


Figure 10: Cumulative Strip Ratio for the Imaloto Coal Project.

Blocks 2, 3 and 3A are the deepest with the Main Seam on average 161, 143 and 153 m below surface respectively. Block 4 has the Main Seam on average at 97 m below surface. No Main Seam is developed in Block 5, and in Block 1, only the Main seam is present at an average depth below surface of 31 m.

The structural features of the Imaloto Coal Project are shown in Figure 11 below.

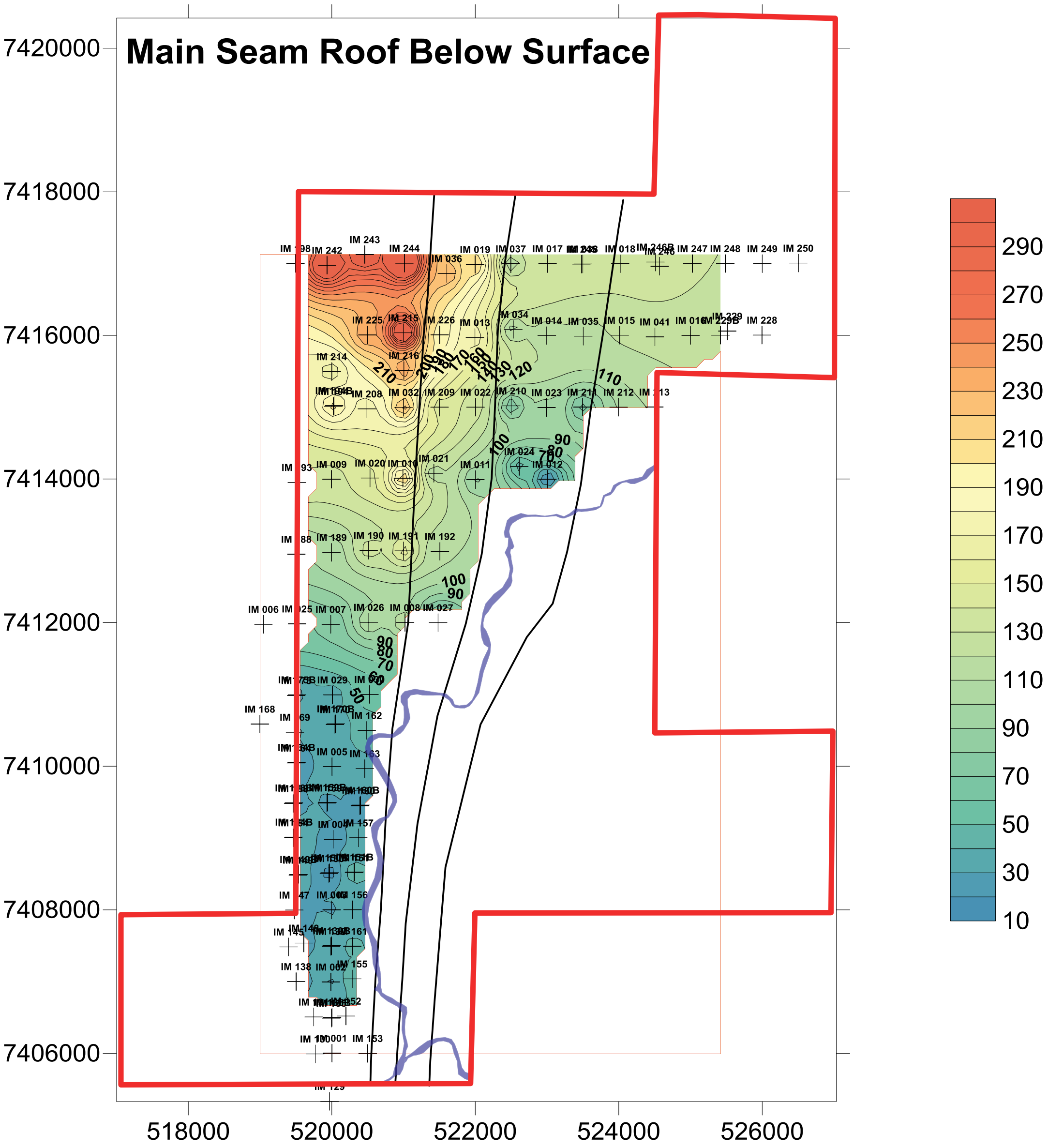


Figure 11: The Geological Structure for the Imaloto Coal Project.

The deposit is characterised by downthrown blocks to the west. Block 1 is very level and dips to the north at less than 1º. The relative displacement between Blocks 2 and 3 vary between 30 and 40 m. Block 2 dips to the north at 1º. Block 3 dips to the west of north-west at 2º. The vertical separation between blocks 3 and 4 is also 30 m. The strata in Block 4 dip to the north at less than 1º. The relative elevation difference between Blocks 4 and 5 is estimated to be 25 m.

The spatial distribution of Main Seam that is split between resources at less than 100m in depth (Blocks S1, S2 and S3) and resources more than 100m deep (Blocks D1, D2, D3, 2A, 3A and 4A) is shown in Figure 12 below. It is clear that the southern parts are shallower and the northern areas are deeper.

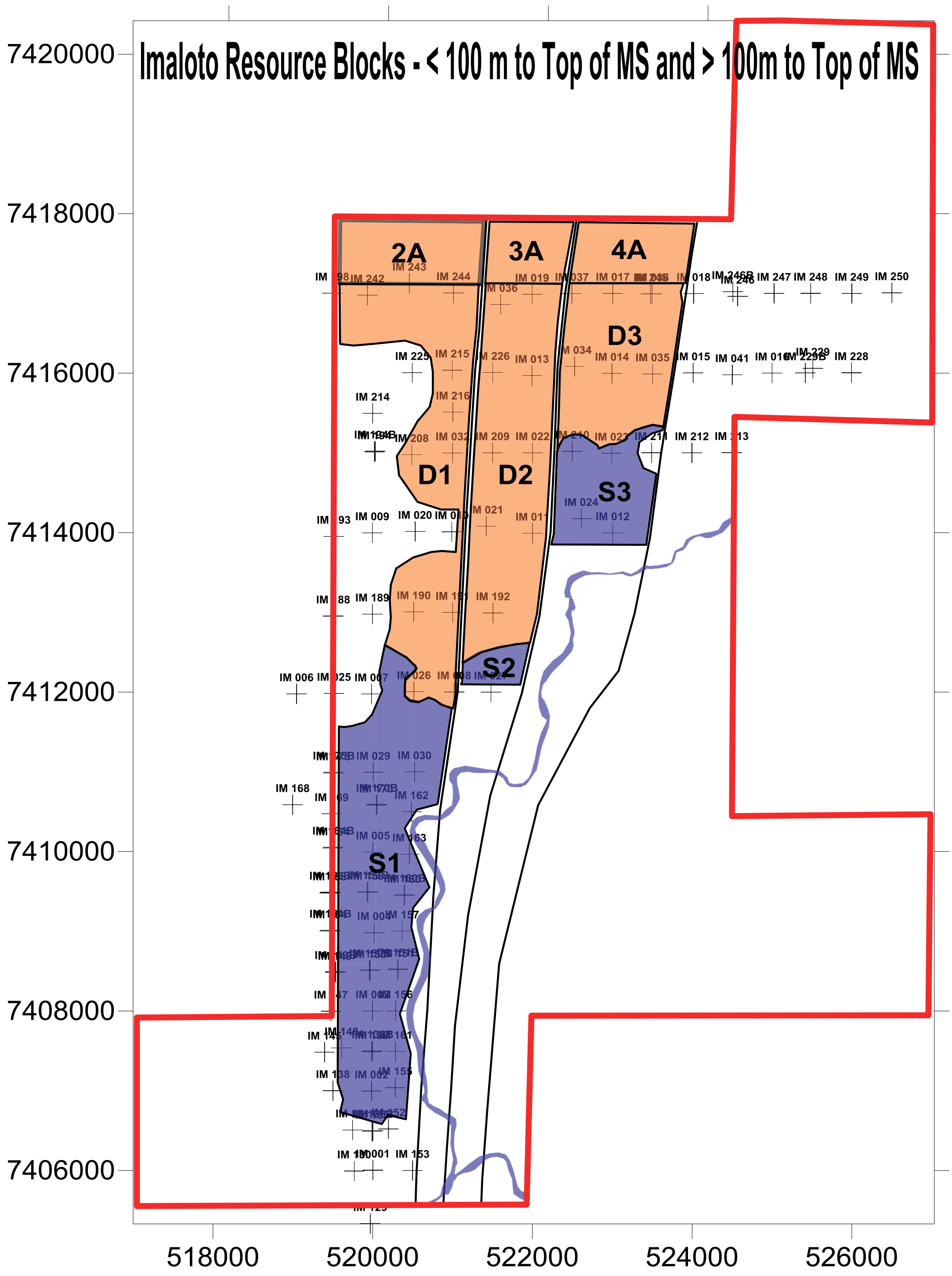


Figure 12: The Main Seam Resource < and > 100m below surface.

The GTIS tonnage for the Main Seam, when viewed as relatively shallow (< 100 m below surface) and relatively deep (> 100 m below surface), is shown in Table 39 below.

Main Seam < 100 m Deep and > 100 m Deep - Imaloto - Lemur Resources							
Block	Seam	Ply	Thick (m)	Area (m^2)	Volume (m^3)	Density	GTIS
< 100 M DEEP							
S1	Main	Main	1.87	4319173	8069151	1.468	11.846
S2	Main	Main	2.77	164660	456225	1.467	0.669
S3	Main	Main	3.06	1380615	4225454	1.514	6.397
Total							18.912
> 100 M DEEP							
D1	Main	Main	2.63	2971252	7814393	1.500	11.722
D2	Main	Main	2.92	4182813	12213814	1.467	17.918
D3	Main	Main	3.03	3117197	9445107	1.514	14.300
2A	Main	Main	1.98	1397766	2767577	1.500	4.151
3A	Main	Main	3.98	777559	3094683	1.510	4.673
4A	Main	Main	3.38	1092459	3692513	1.507	5.565
Total							43.939
Gross Main Seam Tonnage In Situ							62.851

Table 39: The Main Seam Resource < and > 100m below surface (GTIS).

8. Recommendations

The potential for mining by opencast method needs to be investigated. Future work should focus on the development of the Main Seam of Blocks 1, 3 and 4.

A metallurgical study should be commissioned. This report touches on aspects of metallurgy, but an in depth view of the coal wash-ability and product potential is needed. Petrographic analyses should be commissioned and there is sufficient remnant material at the laboratory to do this test-work.

The types of Sulphur need to be analysed for. The presence of nodular pyrite was noted during the logging of the core samples, and having the types of sulphur data would assist in the design of an IPP plant at a later stage. There is sufficient residue sample to do this on selected boreholes.

The residue sample should be combined per block, and analysed for ash constituent, ultimate and petrographic parameters. This data will be needed by metallurgists, process engineers and coal marketers.

High level mine planning and scoping needs to be considered for Blocks 1, 2, 3 and 4.

The results achieved to date shows sufficient potential to warrant further development of this deposit.

9. References

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Wadley, R., Hall, M., (2010): Imaloto Coal Project: South-west Madagascar, Competent Person's Report and Resource Statement, (MSA Project Number J2065), Unpublished Report.

Appendix 1: JORC TABLE 1

JORC TABLE 1 (2012)

SECTION 1 SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• A Diamond drill rig was used to produce HQ sized core with an average diameter of 62 mm. The drilling programme consisted of four phases. The recovered core during the 1st phase of drilling was split with a chisel by a trained technician. During the 2nd, 3rd and 4th phases of drilling, full core samples were taken. The site geologist determined the sample interval which is governed by the lithological boundaries of the coal seams. Seams less than 30 cm in thickness were not sampled for full float analysis, since too little sample material will be present below this thickness. The maximum sample width is dictated by the seam thickness. In total 159 DD cored boreholes have been completed. • At a random float sequence, 100 % of both standards and duplicates were repeated at the laboratory. All the samples were labelled with a unique sequential number. A sample ledger is kept with all samples recorded. • The standards are supplied by the SABS (South African Bureau of Standards). • Instruments at the coal laboratory (M&L Bureau Veritas, Middelburg, Mpumalanga, South Africa) are calibrated on a set weekly frequency. We were supplied with the calibration certificates for the scales, ovens and bomb calorimeters.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	• The core drilling was completed with two Boart-Longyear LF 70 drilling rigs. The drilling equipment was HQ sized. Initial core recoveries with triple tube equipment were very good, and the core recovery was subsequently changed to single tube with excellent core recovery results. • Drilling was planned to be vertical, and the borehole azimuth was surveyed at roughly half borehole depth and at full depth for 13 random boreholes. This work was completed by Ken Rice of Borehole Surveys from South Africa. The maximum deviation from vertical was measured at 1.1º. • Final borehole collar positions were surveyed post drilling with a differential GPS survey instrument, by

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Criteria	JORC Code explanation	Commentary
		Christian Randriananovy, an independent external surveyor employed by Mada Topo of Madagascar. • Nic Grech-Gumbo of VMI in South-Africa performed downhole density measurements of 17 random boreholes, and correlation with the commensurate manually logged data was absolute. • The core was not oriented.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Core recovery measurements were recorded for every borehole. These were very good with an average of 98.4 % of all core recovered. The maximum core loss per hole was 4.7 % in one borehole. The minimum core loss achieved was 0.5 % in two boreholes. • Some sample bias was detected as a result of core splitting during the 1st phase of drilling. The Total Sulphur % during the 1st phase was overstated and hence this dataset was excluded from the potential product simulation. During the subsequent phases of drilling, full core sampling was performed.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• All the boreholes drilled were logged in full and sampled by the site geologists. • All the logged information which includes depth, lithology, coal quality properties, collar survey and geologist are recorded in a strip-log which is generated from the field logging sheets. • The analytical samples were dispatched to the laboratory for analyses. The results have all been received. • All the residue sample have been retained by the laboratory and is in storage. • All the core is recorded in sequence in digital photograph format.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are*	• Full core sampling was performed from drill phase 2 onwards. Duplicates were generated by the laboratory for a random float per each wash-table. Residue sample is retained in storage at the laboratory. • Sample preparation was done by M&L Bureau Veritas in Middelburg, Mpumalanga (South-Africa). • Upon collecting the core from the field, the site geologist would measure the core recoveries to confirm that minimal material was lost during the drilling process. Next the geologist would log the lithologies, and delineate the sample horisons based on the field correlation of the stratigraphy. Once the core had been marked up, a photograph of every tray was taken. The samples were then described and bagged (full core samples for phases 2, 3 and 4) and tagged for delivery to the office in Tulear. The camp was serviced by a weekly supply run from Tulear, and hence the longest time delay before delivery to Tulear was a maximum of 7 days. • In Tulear, the samples were kept in a fridge until a sufficiently large batch (roughly 20 samples) was ready to be shipped to South-Africa. The samples were

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Criteria	JORC Code explanation	Commentary
	appropriate to the grain size of the material being sampled.	shipped from Tulear in Madagascar to South-Africa by DHL. The clearance through customs was usually achieved within 3 days. • The samples were submitted to M & L Inspectorate in Middelburg, South-Africa for analyses. M&L is an independent coal laboratory situated in Middelburg in South Africa. CMM and Badger Mining and Consulting / Sumsare Consulting have no vested interest in the laboratory. The relationship is purely commercial. M&L is SANAS 17025 accredited and performs analyses to ASTM, ISO, SABS and Australian standards. • After sample preparation which involved crushing all material down to a top-size of 15 mm, the sample is homogenised and split in half. One half is bagged and sent to storage. The remaining half is screened for the -0.5 mm sized material (fines). A raw Proximity, Calorific Value and Total Sulphur content is determined for the fines. The coarse material (> 0.5 mm and < 15 mm) is then floated for various densities. Each float is then milled to 212 micron. Essentially the laboratory was requested to determine the raw sample density as well as to perform Proximate, Calorific Value and Total Sulphur content analyses on nine float fractions and 1 sink fraction. In addition the client requested Crucible Swelling Index determinations on the floats 1.250, 1.300, 1.350 and 1.400. Hardgroves Grindability Indeces were requested, but will be done on combined samples due to the mass of material needed to complete this analyses. • The sample procedure standards followed are SANAS (SABS) accredited and are listed below: • SANS 5929 (Inherent Moisture %), ISO 562 (Volatile Content %), ISO 1171 (Ash Determination), ASTM D4239 (Total Sulphur %), ISO 1928 (Gross Calorific Value (MJ/kg)), ISO 501 (Free Swelling Index), By Difference (Fixed Carbon %), ISO 7936 (Float and Sink), AS 1038:26-2005 (Apparent Relative Density), ISO 18283 (Sample Preparation, Par. 8). • QC measures include the generation of duplicate samples (100% of samples) and standards (100% of samples) as part of the internal controls at M&L Bureau Veritas. • The smallest core sample dimension is 62 mm. The preparation for sampling includes crushing the core down to 15 mm sized fragments. The coal is tested for heat value on a milled size of – 212 micron. Sample size hence will not influence the outcome of the analyses.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and*	• The laboratory uses an external standard (SABS CCS 008) in addition to the generated duplicates inserted by M&L Bureau Veritas. • The samples have been analysed by M&L Bureau Veritas, with sample preparation and analysis done in Middelburg South-Africa. Sampling procedures are listed above and includes drying, crushing, splitting, milling and floating. Excess material is retained at the laboratory in storage. • The detection limits are deemed sufficient for the purpose of resource estimation. • The laboratory participates in a quarterly round robin of

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	model, reading times, calibrations factors applied and their derivation, etc. • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	75 laboratories. From the period Apr 2009 until April 2013, M&L Bureau Veritas has consistently achieved absolute Z-scores of less than 2. • All the duplicate analyses were within a 10% deviation. • An umpire laboratory have not been used, but residue material is available should duplicate analyses be required. • Handheld instruments were not used in the assessment of quality parameters.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• The field geologists are in the employment of Lemur Resources, and external oversight is established with the contracting of Badger Mining and Exploration (Pty.) Ltd., a South-African consulting company. Badger is supplying a project geologist as well as an external Competent Person. • All the exploration drilling in the Imaloto tenement by Lemur Resources is on previously unexplored areas. There are no historical boreholes to be twinned. The twinning of some first phase boreholes was done by Core Drilling in 10 instances as a correlation exercise. The correlation is absolute, with no significant variances detected • The primary data is kept in the company office in Tulear under the custodianship of the site geologist. The project geologist has a duplicate dataset at his office in South-Africa, and the company has a dataset in the South-African as well as Australian offices. • Assay data has not been adjusted, and is released to the market as it is received from the laboratory.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• A hand-held GPS was used to site the drill holes (xy horizontal error of 5 metres) and reported using WGS 1984 grid and UTM 38 datum. • Once completed the final collar positions were surveyed using an independent surveyor with a differential GPS, x, y and z (Leica ATX 1230 GNSS instrument). The grid is WGS 1984 and the datum is UTM 38. • Topographic control is good due to the DTM survey that was completed by AAM Pty. Ltd, by Haila Hamdan.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The spacing of the 159 DD drilled boreholes was at varying grids from 331 m^2 (Block 1) to 1340 m^2 (Block 5A). • As per the JORC Code, the Australian Guidelines for the Estimating and Reporting of Inventory Coal, Coal Resources and Coal Reserves (Ed. 2003) as prepared by the Coalfields Council of New South Wales and the Queensland Mining Council, have been used to classify this coal resource. The data spacing and distribution is deemed sufficient to establish geological and quality continuity that varies from an Inferred to Measured resource base. • Sample compositing for the DD programme was not applied. In reporting the potential seam products, the sample results were composited per seam.

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Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• From the contoured data of the correlated borehole information, the regional seam dips vary between 1º and 3º. The sampling thicknesses were reported as measured along the core intersection. The calculation of volume and tonnage is based on modelled roof and floor grids and hence apparent and true thicknesses will not have a bearing on volume / tonnage. • Surface mapping based on satellite imagery as well as ground mapping confirmed the structural blocks as separated by north-south striking faulting. The relative seam elevations per block were determined by the drilling results. • The structural elements have not introduced an analytical bias on the deposit. The sedimentary geometry does indicate better qualities towards the central and deeper parts of the depositional basin, as is normal for coal deposits.
Sample security	• *The measures taken to ensure sample security.*	• The samples were sealed at the logging and sampling site at the field office north of Beninitra in Madagascar. Sealed samples were shipped by company vehicle to Tulear in Madagascar, from where the courier (DHL) shipped the sealed samples to M&L in Middelburg, South-Africa via Antanarivo and Johannesburg. • The residue material is kept at the laboratory in storage.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The sampling technique during the 1st phase of drilling involved split core analyses. A small bias in the Total Sulphur % (higher) and CV values (lower) was detected during the split core phase. During all the subsequent phases of drilling, full core sampling was applied.

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SECTION 2 REPORTING OF EXPLORATION RESULTS

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.*	• The Mining (No. 4578) and Prospecting (No's 3196, 12653, 26904 and 27163) Permits which regulates the right to prospect on this property, was issued to Coal Mining Madagascar S.A.R.L (CMM) on the 29th of November 2005, 7th of November 2008, 11th of February 2009 and 27 October 2007 for the last two respectively. • 99% of CMM is owned by Lemur Investments Limited (LIL) a Mauritian subsidiary owned 100% by Lemur Resources Limited, with the remaining 1% being held by Mr. Daniel Rasoamaheinia, (a Madagascan citizen) as required by Madagascan law. • The area covered by the rights, encloses 81.25 km2, and is situated to the north of the confluence of the Imaloto and Onilahy Rivers in southern Madagascar. • The area is rural, with wilderness areas and subsistence farming occurring on the PL. Some artisanal gemstone mining is active on the banks of the Imaloto River. • At this stage the tenure is intact, and we have no reason to believe that tenure is threatened.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• No drilling exploration for coal has been done by other parties in this area. Some gemstone diggings on the banks of the Imaloto River are present in the prospect area. • The Imaloto field was not subjected to any detailed historical exploration. "It was reported in 1984 that the Imaloto area could be prospective for open-pit mining because of known coal outcrops in the area and the fact that the coal-bearing formation was shallower and less steeply-dipping at Imaloto than at Sakoa. In 1985, some of the coal outcrops were trenched and sampled at the edges of the Imaloto basin, and were found to be weathered and of variable thickness (reports have shown seven sample sites where the coal thickness varied from 0.2 metre to 2.0 metres)". • During 2009 an old adit into the Main Seam close to CMM borehole IM005 was investigated. Presumably, it dates to the programme undertaken in the mid 1980's.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Imaloto Coal Project is hosted in a sequence of Permian Age sediments, which is typical of the Gondwana Coals. The depositional basin is flat with bedding gradients between 1º and 3º. The deposit is centred around a depositional axis that dips to the north at 3º. The dominant structural elements consist of north-south striking faults with displacements of between 20 and 40 metres, which compartmentalises the deposit into discrete resource blocks. The faults throw down to the west. The topography rises in a northerly direction.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* o *easting and northing of the*	• The drill hole information is supplied in Figures 1 and 2. • No information has been excluded.

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Criteria	JORC Code explanation	Commentary
	drill hole collar o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• The Seam Qualities quoted were calculated per block per seam. The samples were weighted for sample mass per float. • The coal data was checked on Dry Ash Free Volatile limits and all samples were found to be in specification. The Raw Ash-CV sample relationships for all seams shows a correlation coefficient of > 0.900. No truncations have been applied, and no sample data have been omitted.
Relationship between mineralization widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• The coal seam thickness was recorded as per the measured intersection of core recovered (down hole length). The seam intersections were plumb. The seam gradients for this deposit is low (1^{o} to 3^{o}), and the volume of coal is calculated as the space between a roof grid and a floor grid per seam. There is hence not a complication with true and apparent thicknesses of the coal seams.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate*	• Figure 1 shows the distribution of the DD boreholes. • Figure 3 shows the sectional views.

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Criteria	JORC Code explanation	Commentary
	sectional views.	
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• All the analytical results are listed in Annexure 1 below.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• The drilling results confirmed the surface mapping that was done for this area. A bulk sample has not been taken. Large diameter core metallurgical testing has not been done. The indications are that the Main Seam will have a strong roof, and that the deeper parts of the deposit could be mined by underground methods. The floor of the Main Seam is softer and would form part of a grade control management system in the case of future mining. • The seam lithology is well defined and the roof and floor contacts for the Main Seam are clearly correlated. Horison control during mining would be easily managed. • Analyses were done on full seam sampling, and hence all the internal dilution of the seam is accounted for in the quality wash-tables for all the seams.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• The work required to establish a resource is complete. The exploration programme was completed at the end of December 2012. The extent of the deposit has been determined and the coal limits have been established for this deposit. • The area to the north of Blocks 2A, 3A and 4A will contain coal measures. This is an area that is at present not part of Lemur Resources' tenements, and it may hold potential for future expansion of the resource.

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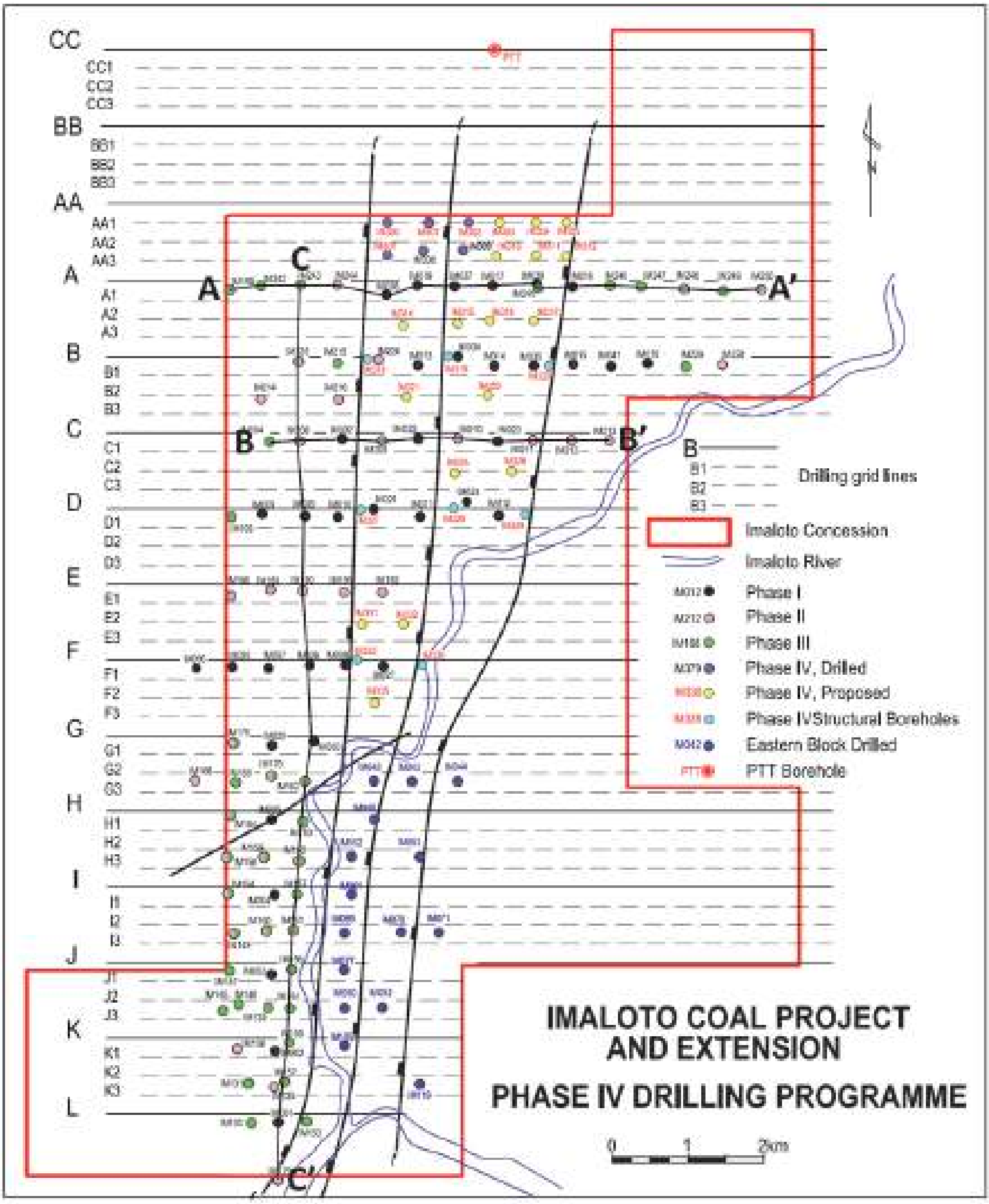

Figure 1: Borehole Collar Positions for the Exploration Programme as completed by CMM.

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BH ID	Y	X	Z	E.O.H.
IM 001	520 002.687	7 406 004.182	295.201	65.5
IM 002	519 987.541	7 406 995.520	290.995	58.5
IM 003	519 998.177	7 407 999.702	304.809	68.5
IM 004	520 019.216	7 408 982.469	318.583	62.5
IM 005	520 003.330	7 409 994.067	305.181	92.5
IM 006	519 047.047	7 411 977.518	336.272	141.4
IM 007	519 986.019	7 411 976.984	316.250	143.5
IM 008	521 020.949	7 412 001.281	314.752	161.5
IM 009	519 995.957	7 413 997.153	336.563	182.5
IM 010	520 991.462	7 414 010.455	320.271	245.5
IM 011	522 001.971	7 413 992.397	318.346	125.5
IM 012	523 005.977	7 413 996.781	321.070	50.5
IM 013	521 995.086	7 415 970.115	338.152	206.5
IM 014	522 997.133	7 415 997.681	338.543	143.5
IM 015	524 013.178	7 416 003.184	325.410	143.5
IM 016	525 001.656	7 416 001.361	322.916	134.5
IM 017	523 007.505	7 417 000.384	337.758	164.5
IM 018	524 020.062	7 416 998.045	320.960	167.5
IM 019	521 998.044	7 416 989.065	338.495	251.5
IM 020	520 532.431	7 414 014.563	322.810	194.5
IM 021	521 423.231	7 414 080.764	322.521	155.5
IM 022	522 003.123	7 415 000.890	336.710	167.5
IM 023	522 994.149	7 414 995.726	362.176	116.5
IM 024	522 613.351	7 414 175.405	346.019	65.5
IM 025	519 515.924	7 411 982.893	333.707	122.5
IM 026	520 516.492	7 412 004.928	316.498	158.5
IM 027	521 481.715	7 411 999.657	318.288	71.5
IM 029	520 008.998	7 410 994.118	289.399	80.5
IM 030	520 525.950	7 411 000.431	288.314	98.5
IM 032	521 001.663	7 414 998.669	331.004	263.5
IM 034	522 529.173	7 416 084.335	348.507	125.5
IM 035	523 505.177	7 415 989.760	328.570	128.5
IM 036	521 603.475	7 416 861.827	348.524	281.5
IM 037	522 495.927	7 416 998.068	333.480	137.5
IM 038	523 499.099	7 416 995.146	326.049	149.5
IM 041	524 503.900	7 415 979.894	314.549	113.5
IM 129	519 970.117	7 405 333.159	293.276	38.4
IM 130	519 769.801	7 405 993.603	296.537	68.4
IM 131	519 748.584	7 406 507.883	296.020	47.4
IM 135	519 993.052	7 406 491.345	297.448	38.3
IM 135B	520 003.052	7 406 501.345	297.748	59.0
IM 138	519 502.909	7 407 000.858	311.653	30.4
IM 139	519 988.435	7 407 490.525	301.669	38.5
IM 139B	519 998.435	7 407 500.525	301.969	62.4
IM 145	519 398.085	7 407 483.649	322.327	35.5
IM 147	519 477.964	7 407 997.615	324.946	65.5
IM 148	519 610.638	7 407 537.444	320.208	47.4
IM 149	519 527.144	7 408 484.004	315.322	38.3
IM 149B	519 537.144	7 408 494.004	315.622	65.5
IM 150	519 960.026	7 408 506.933	304.807	26.3
IM 150B	519 970.026	7 408 516.933	305.107	41.5
IM 151	520 309.400	7 408 517.469	308.531	52.0
IM 151B	520 319.400	7 408 527.469	308.831	68.6
IM 152	520 197.455	7 406 520.819	290.065	77.5
IM 153	520 499.680	7 406 000.686	280.348	29.4
IM 154	519 463.006	7 409 003.997	335.975	38.5
IM 154B	519 473.006	7 409 013.997	336.275	65.5
IM 155	520 283.903	7 407 038.923	287.768	68.4
IM 156	520 289.367	7 408 001.500	290.763	65.3
IM 157	520 369.863	7 409 003.064	304.267	61.5
IM 158	519 461.251	7 409 480.060	329.936	30.8
IM 158B	519 471.251	7 409 490.060	330.236	74.5
IM 159	519 931.490	7 409 488.320	307.166	39.2
IM 159B	519 941.490	7 409 498.320	307.466	71.5
IM 160	520 392.708	7 409 449.539	296.167	29.7
IM 160B	520 402.708	7 409 459.539	296.467	52.3
IM 161	520 285.820	7 407 493.157	291.872	64.3
IM 162	520 487.333	7 410 499.259	284.825	82.6
IM 163	520 460.006	7 409 966.823	290.939	74.5
IM 164	519 498.857	7 410 044.758	323.851	26.4
IM 164B	519 508.857	7 410 054.758	324.151	56.4
IM 168	518 998.050	7 410 587.683	346.514	55.4
IM 169	519 486.659	7 410 474.189	331.217	65.1
IM 170	520 044.524	7 410 581.713	288.790	41.3
IM 170B	520 054.524	7 410 591.713	289.090	68.4
IM 175	519 504.849	7 410 985.873	316.636	35.3
IM 175B	519 514.849	7 410 995.873	316.936	59.4
IM 188	519 506.019	7 412 953.641	332.782	136.0
IM 189	519 996.733	7 412 978.371	324.437	119.4
IM 190	520 514.857	7 413 006.889	312.293	147.5
IM 191	521 002.040	7 412 999.368	317.192	197.3
IM 192	521 507.077	7 412 992.651	341.717	137.3

BH ID	Y	X	Z	E.O.H.
IM 193	519 512.614	7 413 953.053	364.148	191.5
IM 194	520 021.765	7 415 012.523	381.393	47.5
IM 194B	520 031.765	7 415 022.523	381.693	238.6
IM 198	519 493.765	7 417 003.248	452.919	341.5
IM 208	520 490.124	7 414 977.712	333.029	212.4
IM 209	521 502.224	7 415 001.164	329.602	182.4
IM 210	522 500.828	7 415 019.570	342.841	89.4
IM 211	523 493.828	7 415 002.416	344.619	98.4
IM 212	523 998.001	7 415 000.785	332.953	107.4
IM 213	524 496.707	7 415 003.242	308.753	86.3
IM 214	520 000.215	7 415 496.138	344.177	182.1
IM 215	520 996.928	7 416 037.373	434.096	383.5
IM 216	521 004.755	7 415 511.402	341.669	269.5
IM 225	520 495.673	7 416 006.711	352.405	245.5
IM 226	521 503.888	7 416 008.452	342.363	229.7
IM 228	525 996.877	7 416 004.853	345.569	158.2
IM 229	525 512.695	7 416 061.028	323.833	90.8
IM 229B	525 418.106	7 416 003.424	320.673	152.4
IM 242	519 933.987	7 416 978.166	435.232	371.5
IM 243	520 459.994	7 417 126.739	417.202	356.4
IM 244	521 012.442	7 417 006.251	412.561	389.5
IM 245	523 480.015	7 416 993.559	326.625	155.5
IM 246	524 570.028	7 416 963.908	321.515	134.7
IM 246B	524 511.205	7 417 022.141	323.123	146.4
IM 247	525 026.606	7 417 000.403	319.988	146.3
IM 248	525 485.208	7 417 001.556	327.743	164.1
IM 249	526 000.382	7 417 000.027	341.461	174.9
IM 250	526 502.468	7 417 007.818	345.649	137.4
IM042	521290.435	7410778.126	309.604	33.8
IM043	521760.061	7410616.186	312.802	24.7
IM044	522318.753	7410429.955	314.963	20.4
IM045	521274.241	7410049.397	308.054	36.7
IM052	521031.332	7409490.704	306.967	26.6
IM053	521727.673	7409458.316	310.364	26.6
IM061	520974.653	7408972.497	308.039	15.1
IM069	520909.877	7408486.677	307.810	24.7
IM070	521444.278	7408454.289	308.576	24.7
IM071	521857.225	7408438.095	309.489	15.7
IM077	520853.198	7407984.663	305.236	18.7
IM090	520877.489	7407474.553	302.786	45.6
IM093	521249.950	7407466.456	304.798	12.7
IM105	520861.295	7407045.412	300.683	23.2
IM119	521751.964	7406486.720	304.409	21.6
PTT01	523476.623	7420057.279	385.260	437.3
IM300	521662.897	7417790.121	383.591	371.6
IM301	522262.074	7417790.121	352.369	284.3
IM302	522723.603	7417806.315	353.569	242.4
IM303	523063.677	7417806.315	348.569	239.4
IM304	523452.332	7417798.218	345.569	183.3
IM305	523938.152	7417814.412	342.569	207.3
IM307	521654.800	7417280.011	382.569	308.5
IM308	522221.589	7417369.078	343.569	269.3
IM309	522666.924	7417369.078	341.569	209.4
IM310	523079.871	7417352.884	345.569	191.5
IM311	523517.108	7417369.078	343.569	164.5
IM312	523897.667	7417336.690	338.569	185.5
IM314	521832.934	7416486.505	346.450	218.5
IM315	522464.499	7416535.087	340.265	128.5
IM316	522926.028	7416535.087	336.629	136.0
IM317	523549.496	7416559.378	330.330	139.7
IM318	521363.308	7416008.783	352.612	320.0
IM319	522399.723	7416073.559	345.722	166.4
IM320	523679.048	7415935.910	329.685	123.7
IM321	521841.031	7415547.254	341.772	194.5
IM322	522869.349	7415539.157	340.175	114.7
IM323	521403.793	7414567.518	333.260	22.4
IM324	521946.292	7414551.324	334.408	128.4
IM325	522496.887	7414551.324	338.454	66.7
IM326	523298.489	7414518.936	337.465	78.7
IM327	521266.144	7414081.699	324.931	239.1
IM328	522351.141	7414162.669	335.564	53.0
IM329	523395.653	7414000.729	330.427	20.4
IM331	521209.465	7412672.822	324.347	98.9
IM332	521768.158	7412648.531	327.699	81.8
IM333	521136.592	7412049.354	316.176	89.3
IM334	521922.001	7412122.227	321.590	29.6
IM335	521387.599	7411498.758	316.090	38.5
Phase 1				5039.9
Phase 2				3780.7
Phase 3				4597.3
Phase 4				6153.7
Total				19571.6

Figure 2: A summary of all the borehole collar and depth data.

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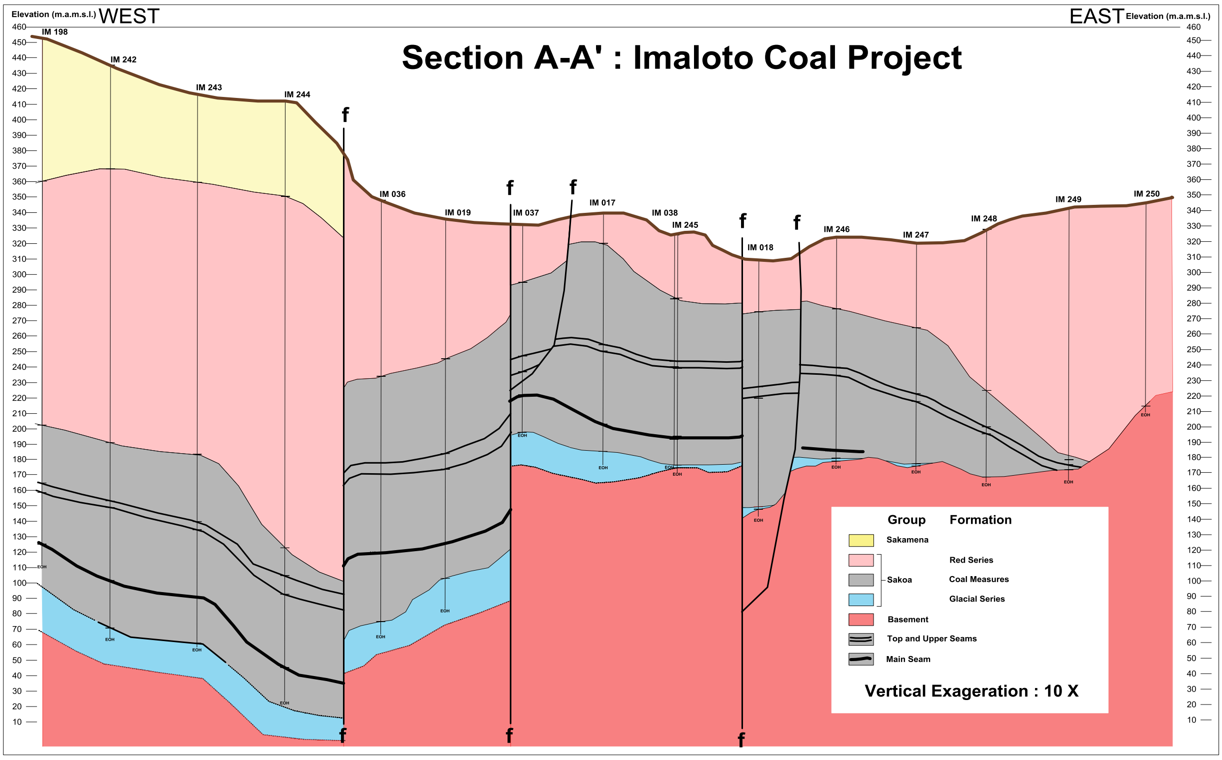

Figure 3A: East-West Cross-section for the Imaloto Coal Project.

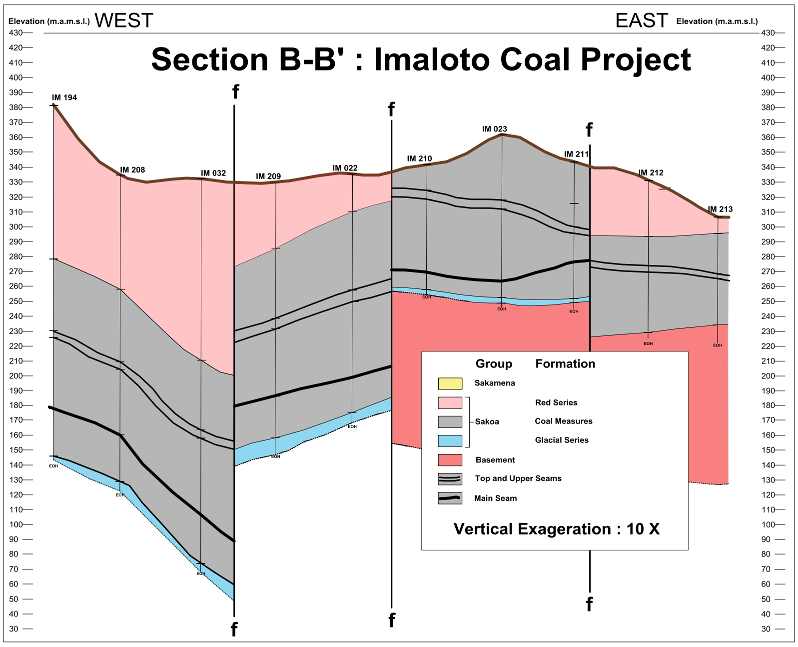

Figure 3B: East-West Cross-section for the Imaloto Coal Project.

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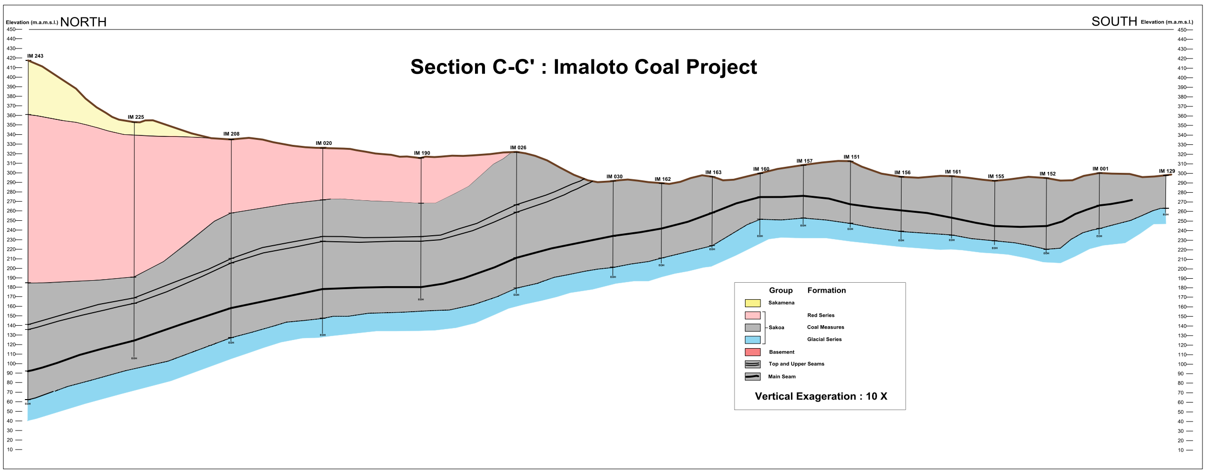

Figure 3C: North-South Cross-section for the Imaloto Coal Project.

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COAL RESOURCE - Imaloto - Lemur Resources - as @ 23 Oct 2017.												
Block	**Commodity**	**Seam**	**Ply**	**Thick (m)**	**Area (m^2)**	**Volume (m^3)**	**Density**	**GTIS**	**Drill Grid**	**Resource Category**	**Geological Loss**	**TTIS**
1	Coal	Main	Main	1.35	3940874	5320180	1.468	7.810	331	Measured	10	7.029
Total								**7.810**				**7.029**
2	Coal	Top	Top	0.98	6999660	6849535	1.509	10.336	519	Indicated	15	8.786
2	Coal	Upper	Upper	1.12	6999660	7839424	1.622	12.716	519	Indicated	15	10.808
2	Coal	Main	Main	1.90	2959047	5630147	1.500	8.445	519	Indicated	15	7.178
Total								**31.497**				**26.772**
3	Coal	Top	Top	0.88	4273073	3760304	1.539	5.787	371	Measured	10	5.208
3	Coal	Upper	Upper	1.07	4273073	4572188	1.590	7.270	371	Measured	10	6.543
3	Coal	Main	Main	2.85	4272813	12176950	1.467	17.864	371	Measured	10	16.077
Total								**30.920**				**27.828**
4	Coal	Top	Top	0.83	3761367	3121935	1.580	4.933	373	Measured	10	4.439
4	Coal	Upper	Upper	1.31	3761367	4927391	1.608	7.923	373	Measured	10	7.131
4	Coal	Main	Main	2.94	3357197	9863333	1.514	14.933	353	Measured	10	13.440
Total								**27.789**				**25.010**
5	Coal	Top	Top	0.72	3052761	2827001	1.598	4.518	424	Measured	12	3.975
5	Coal	Upper	Upper	1.12	2802195	3138458	1.590	4.990	406	Measured	12	4.391
Total								**9.508**				**8.367**
2A	Coal	Top	Top	0.50	1397766	698883	1.509	1.055	1182	Inferred	20	0.844
2A	Coal	Upper	Upper	0.75	1397766	1048325	1.622	1.700	1182	Inferred	20	1.360
2A	Coal	Main	Main	1.98	1397766	2767577	1.500	4.151	1182	Inferred	20	3.321
Total								**6.906**				**5.525**
3A	Coal	Top	Top	0.79	777559	614271	1.555	0.955	441	Measured	12	0.841
3A	Coal	Upper	Upper	0.80	777559	622047	1.631	1.015	441	Measured	12	0.893
3A	Coal	Main	Main	3.98	777559	3094683	1.510	4.673	441	Measured	12	4.112
Total								**6.643**				**5.846**
4A	Coal	Top	Top	0.87	1092459	950440	1.581	1.503	370	Measured	10	1.352
4A	Coal	Upper	Upper	1.06	1092459	1158007	1.620	1.876	370	Measured	10	1.688
4A	Coal	Main	Main	3.38	1092459	3692513	1.507	5.565	370	Measured	10	5.008
Total								**8.943**				**8.049**
5A	Coal	Top	Top	0.75	1795637	1346728	1.598	2.152	1340	Inferred	20	1.722
5A	Coal	Upper	Upper	1.25	1795637	2244546	1.590	3.569	1340	Inferred	20	2.855
Total								**5.721**				**4.577**
Gross Indicated Tonnage in Situ								**31.497**	**Total Indicated Tonnage in Situ**			**26.772**
Gross Measured Tonnage in Situ								**91.613**	**Total Measured Tonnage in Situ**			**82.129**
Gross Inferred Tonnage in Situ								**12.627**	**Total Inferred Tonnage in Situ**			**10.102**
Gross Total Tonnage in Situ								**135.737**	**Total Tonnage in Situ**			**119.003**
Gross Top Seam Tonnage in Situ								**31.238**	**Total Top Seam Tonnage in Situ**			**27.167**
Gross Upper Seam Tonnage In Situ								**41.058**	**Total Upper Seam Tonnage In Situ**			**35.670**
Gross Main Seam Tonnage In Situ								**63.441**	**Total Main Seam Tonnage In Situ**			**56.166**
Gross Main Seam Inferred Tonnage								**4.151**				**3.321**
Gross Main Seam Indicated Tonnage								**8.445**				**7.178**
Gross Main Seam Measured Tonnage								**50.844**				**45.666**

Figure 4: Resource Statement and Classification for the Imaloto Coal Project.

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SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

Criteria	JORC Code explanation	Commentary
Database Integrity	• *Measures taken to ensure that data has not been corrupted by ,for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data was copied from the electronic field logs into the database. Each individual electronic field log was checked against the manual field log for transcription or keying errors. • The database was updated as soon as new logged data became available. • The following validation is done on the quality data before loading: - Each individual float proximate analyses need to add up to 100 % (Check lab results for hard coding). - The cumulative yield needs to add up to 100 % for all floats and the sink fraction (Check lab results for hard coding). - Are there missing samples i.e. not sampled at all or analyses missing? - Do overlapping samples exist? - Validation of all values present in a sample - Is the quality of the sample representative of the lithology description? • The quality data was composited in Excel, and the qualities per seam and per block was calculated by weighted average. All qualities were weighted for sample fraction mass.
Site Visits	• *Comments on any site visits undertaken by the Competent person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case*	• The competent person was present on site on the following dates during the exploration programme; - 31 Aug 2011 to 09 Sept 2011, 10 Days, site visit, drilling verification, - 17 Nov to 27 Nov 2011, 10 Days, site visit, drilling verification, - 26 May 2012 to 06 Jun 2012, 12 Days, site visit, logging and sampling checks, - 23 Jun to 30 Jun 2012, 7 Days, logging and sampling checks, drilling verification.
Geological interpretation	• *Confidence in the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on mineral resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity of both grade and geology.*	• Field mapping was completed by VMI for the duration of the project. Karoo sediments of Permian age were correctly identified. • Drilling of the Permian sediments intersected discrete coal seams namely the Main, Upper and Top Seams. A lower split to the Main Seam is present but it is thin and erratic in thickness and distribution. The geological environment is confirmed for Gondwana type coal measures. • Manual field logs were converted to electronic logs in Excel. The laboratory data was supplied in csv and Excel format. • The Ash-CV correlation for all the seams displayed no outliers with a correlation of > 0.900, and hence the coal is assumed to be largely humic and subject to beneficiation by a density process. • The resource tonnage is calculated from a volume in space to which a density is applied. There is no alternative method of coal resource calculation. • The sedimentology of the deposit is easily correlated with the coal measures hosted in the Coal Measures Formation .The Coal Measures Formation is overlain by

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Criteria	JORC Code explanation	Commentary
		the Red Series sediments. The coal bearing sediments rests conformably on diamictites of the Glacial Series, and the basement consists of gneisses, schists and granites of Pre-Cambrian age. • Both the Main Seam as well as the Upper and Top seams have characteristic roof and floor conditions. The roof of the Main Seam serves as prominent marker well-defined coarse grained sandstone to small pebble conglomerate). The Upper and Top Seams are contained within a consistent mudstone marker package. • The geological continuity is affected by structure. Three north-south trending faults are interpreted across the resource. These faults all throw down to the west with displacements of between 20 and 40 m. The resource is compartmentalised into nine structural blocks. • Grade continuity is normal and the absence of igneous intrusive rocks thus far indicates that no devolatilised zones are to be expected. In terms of the depositional environment, the edges of the coal sub-outcrop can normally be expected to show slightly elevated raw ash values and reduced CV's as is seen in the data. Also seams are thinner towards the edges of the depositional basin.
	• *The extent and variability of the Mineral resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The resource is divided into ten distinct blocks. The coal seams are orientated as flat layers within the sedimentary sequence. • Block 1 contains only the Main Seam at an average thickness of 1.35 m. The top and upper seams have been removed naturally by weathering. The block is 4434 m long and an average of 889 m wide. The average Main Seam depth below surface is 30 m and ranges from 14 m to 58 m. • Block 2 contains the Upper and Top Seams at 1.12 and 0.98 metres thick respectively, and is 6049 metres long and an average of 1157 metres wide. • Block 2MS contains the Main Seam and is 6049 metres long and an average of 489 m wide. The Main Seam in this block is on average 1.90 metres thick. The average Main Seam depth below surface is 160 m and ranges from 35 m to 363 m. • Block 2A contains the Upper, Top and Main Seams at 0.50, 0.75 and 1.98 metres thick respectively, and is 757 metres long and an average of 1846 metres wide. The average Main Seam depth below surface is 311 m and ranges from 260 m to 380 m. • Block 3 contains the Upper, Top and Main Seams at 0.88, 1.07 and 2.85 metres thick respectively, and is 5016 metres long and an average of 852 metres wide. The average Main Seam depth below surface is 133 m and ranges from 51 m to 240 m. • Block 3A contains the Upper, Top and Main Seams at 0.79, 0.80 and 3.98 metres thick respectively, and is 757 metres long and an average of 1027 metres wide. The average Main Seam depth below surface is 253 m and ranges from 231 m to 278 m. • Block 4 contains the Upper, Top and Main Seams at 0.83, 1.31 and 2.94 metres thick respectively, and is 3279 metres long and an average of 1024 metres wide. The

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Criteria	JORC Code explanation	Commentary
		average Main Seam depth below surface is 116 m and ranges from 19 m to 134 m. • Block 4A contains the Upper, Top and Main Seams at 0.87, 1.06 and 3.38 metres thick respectively, and is 757 metres long and an average of 1443 metres wide. The average Main Seam depth below surface is 177 m and ranges from 146 m to 209 m. • Block 5 contains the Upper and Top Seams at 0.72 and 1.12 metres thick respectively, and is 2192 metres long and an average of 1393 metres wide. There is no Main Seam developed in Block 5. • Block 5A contains the Upper and Top Seams at 0.72 and 1.12 metres thick respectively, and is 1101 metres long and an average of 1631 metres wide. There is no Main Seam developed in Block 5A.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters, and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and / or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding the recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance.* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind the modelling of selective mining units.* • *Any assumptions about the correlation between variables.* • *Description of how geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or*	• The resource estimate was completed with the aid of software and concurrent manual checks. • The geological model used for the resource estimation was created in Surfer (Version 10.7.972), a modelling program developed and distributed by Golden Software in Colorado. • Surfer is essentially a contour programme that has the capability to calculate volumes between surfaces. The data that is used to create the surfaces are read from spread-sheets or databases, and in this instance I used Excel. The dataset was populated with the lithological and quality data and then interrogated by the software for the required outcomes. • Borehole identification, the survey data and then the seam interval data is loaded into a dataset. Parameters controlling the modelling operation (such as interpolator selection, conformable relationships, limits and faults) are defined and maintained in the model framework. Surfer has a function called blanking, which is use to confine grid files to specific areas. This function is used to isolated resource blocks when volumes are calculated between surfaces. The gridding method used was the inverse of distance squared. For this sample spacing Kriging is not appropriate. No samples were excluded since no extreme spreads or variances in quality per seam were observed. • A uniform grid with nodes is generated for each surface. Given the drilling spacing, the grid cell size is set at 50 m x 50 m. It is pointless to grid to a smaller size given that the average borehole spacing across the whole area came to 423 m^2. Block 1 has the highest number of boreholes per area, at an average grid of 331 m^2. Once a block volume has been calculated a weighted average block density is applied to the volume and a block tonnage is determined. This is repeated for every seam per resource block. • A previous resource estimate, based on 36 boreholes (end of phase 1 drilling), was completed by MSA at the end of December 2010. This report was used to compare the results of the latest resource estimate and differences could be explained. There is no prior or present production of coal within the boundaries of the project site. • No assumptions have been made with respect to the

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Criteria	JORC Code explanation	Commentary
	capping. • *The process of validation, the checking process used, the comparison of model data to drill hole data, and the use of reconciliation data if available.*	recovery of by-products. • The estimation of deleterious elements for coal usually includes an estimation of the impact of roof and floor contamination on product yield. This is a factor applied to reserve statements, and hence is not applied here. In seam dilution by lenses of carbonaceous shale is included in the analytical results since full core full seam intersections were submitted for analysis. Selective sampling was not applied. • Block model interpolation was not done. Once a reserve estimate is completed, a block model will be used to schedule monthly and annual production qualities and tonnages. • Selective mining was not considered. The geometry of this deposit will not allow for practical selective mining within a seam. • The quality variable between raw Ash % and CV indicates a constant correlation with $R^2 > 0.900$. The beneficiation of these coals by a density process is assumed, as confirmed by the laboratory data. • The structural elements of this project will be instrumental in the mine layout of this project. The resource estimate is hence reported in tonnages and qualities per discrete geological structural block. • Quality capping or cutting was not applied, since the laboratory data did not display the need for filtering. All the data was checked for a lower DAFV limit, and no devolatilised coal was observed. • Validation: The model was validated by plotting floor elevation and thickness contours as well as quality contours and checking the contour plots for bull's eyes. Cross-sections were drawn through most of the boreholes to evaluate all seam correlations and borehole coordinates. Crosschecks were done using the original log of boreholes for lithology and qualities. Postings of data from boreholes against a backdrop of grid model contours also helped to determine whether the model was honouring the borehole data. - Model limits: The model is limited by the extent of borehole data, the base of the weathered horizon, the natural sub-outcrop of seams in the extreme south (IM 001, 027, 129, 130, 152, 153), and east (IM 228, 249, 250), the internal fault boundaries that determines Block geometry as well as the limits of the lease areas. - Borehole Survey: The total number of boreholes used to create the Imaloto Coal Project model is 159 (Figure 1). All boreholes drilled were accurately surveyed. The Data Terrain Model was used as a check for the borehole collars. - Topography: A contour plan was plotted at 5 metre intervals and an accuracy check (by observation) was done with the Government issued topo-cadastral maps for the area. The general slope and contour trends agree with the observed topography. - Density: Density data was taken from the raw density determination by the laboratory. The density data was weighted for sample mass and were calculated per seam per resource block. Densities are listed in the

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Criteria	JORC Code explanation	Commentary
		Resource statement below. The weighted raw density for the whole of the Main Seam in the Imaloto Coal Project comes to 1.465 ton/m³. The Top Seam is more dense at 1.544 ton/m³, and the Upper Seam is the most dense at 1.593 ton/m³. The calculated densities per resource block per seam are listed in Figure 4. - Borehole Lithology: A general check was done on the lithological data captured, to verify that the descriptions are consistent with the environment of the deposit and the basement, i.e. the standard lithological coding was used correctly. The random wire-line logs were used for depth checks, total thickness checks and RD checks, i.e., does the geophysical log verify the logger's lithological log and the qualities per sample.
	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• The tonnages are based on an Air-Dry Basis (ADB). Upon receipt of the samples the laboratory exposes the sample to ambient temperatures not exceeding 30 ºC, in order to remove the surface moisture. All analyses are then performed on the core excluding the surface moisture on this Air-Dry Basis (ADB). • The Inherent Moisture is determined by placing the air dried coal sample in an oven at between 105 and 110 ºC, and calculating the subsequent loss in mass.
Cut-off parameters	• *The basis of the adopted cut-off grades or quality parameters applied.*	• The cut-off parameters are two-fold; quality and physical. • Seam quality parameters for coal may be market driven and is complicated by the improvement of for instance some forms of Sulphur, by the beneficiation process. In general the first quality cut-off applied to in-situ bituminous coals is the Dry Ash Free Volatile content. This should be above 28 %, and in the case of Imaloto, all the laboratory results exceeded this limit comfortably. • The physical cut-of limits for the seams are: - Main Seam Block 1: 1.0 m (potential opencast mining in the shallowest part of the resource), - Main Seam Blocks 2, 2A, 3, 3A, 4 and 4A: 1.40 m (Underground mining height limit in the deeper parts of the resource). - Top and Upper Seams Blocks 2, 2A, 3, 3A, 4, 4A, 5, 5A: 0.50 m (not considered for conversion to reserves at this stage).
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this*	• This is a resource estimate and as such a mine plan has not been superimposed on the data. • A scoping exercise was completed with the data at hand and the indications are that the Main Seam for Block 1 may be conducive to opencast mining. The mining thickness cut-off of the Main Seam will be determined by the economic strip ratio, but for the purpose of the Main Seam in Block 1, a resource cut-off thickness of 1.0 m was used. • The preferred extraction of the Main Seam from Blocks 2, 2A, 3, 3A, 4 and 4A appears to be by underground methods, and based on the behaviour of Gondwana coals and the underground coal mining conditions experienced in southern Africa, a resource cut-off thickness of 1.40 m was used.

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Criteria	JORC Code explanation	Commentary
	should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• At the moment the resource status implies that metallurgical discount factors have not been applied to any of the forecasted yields. Typical borehole factors will range between 0.92 and 0.98, while organic efficiencies for coal processing plants usually range between 0.95 and 0.98. Total moisture contents usually comes to 8% for nut and pea sized product materials, while finer product materials may have total moisture contents as high as 16%. These will be applied once the resource is taken up to reserve base for pre-feasibility and higher level studies.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• In terms of the Imaloto River, the resource blocks were delineated to exclude the drainage channel of this river. • No other environmental factors have been considered in terms of the resource at this stage of the project.
Bulk density	• *Whether assumed or determined. If assumed the basis for the assumptions. If determined the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk materials must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.),*	• A bulk sample has not yet been taken and hence a bulk density has not yet been determined. • The apparent relative density was determined from the core submitted to the laboratory. The standard used is AS 1038 : 26-2005. These results were used to determine the in-situ density of this coal deposit. • The weighted raw density for the whole of the Main Seam in the Imaloto Coal Project comes to 1.465 ton/m^3. The Top Seam is more dense at 1.544 ton/m^3, and the Upper Seam is the most dense at 1.593 ton/m^3. The calculated densities per resource block per seam are listed in Figure 4.

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	moisture and differences between rocks and alteration zones within the deposit. • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	
Classification	• *The basis of the classification of the Mineral Resource into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/ grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data.* • *Whether the results appropriately reflects the Competent Person's view of the deposit.*	• The JORC standard makes it clear that a resource statement need to reflect the resource confidence in the physical tonnage declared as well as in the quality associated with that resource. In the case of the Imaloto Coal Project, we are fortunate to have a project that has quality data for every physical sample point where a coal seam/seams was/were intersected, and that the sample densities for both categories will be identical. No historical data was previously generated to be available to be used in the evaluation of this project. • The defined confidence levels as used for Australian funded coal projects are provided by the Coalfields Geology Council of New South Wales and the Queensland Mining Council: - "Inferred Coal Resources may be estimated using data from points of observation up to 4 km apart." - "Indicated Coal Resources may be estimated using data obtained from points of observation normally less than 1 km apart." - "Measured Coal Resources may be estimated using data obtained from points of observation normally less than 500 m apart." • Block 1 is 394 ha in extent and contains only the Main Seam. The average depth below surface for the Main Seam Roof is 30 m (58 m max. and 14 m min.) It is bounded in the south by the coal seam sub-outcrop and on the eastern edge by the Imaloto River. The western boundary consists of an 80 m wide barrier inside the lease boundary. The northern boundary with Block 2 follows the 60 m depth to the roof of the Main Seam contour. Given the average borehole grid of 331 m2, this resource is classified as measured. • Block 2 is intersected by 26 boreholes and is 699 ha in size, which results in an average borehole spacing of 519 m2. Hence its classification as an indicated resource. Its western and northern boundaries are formed by an 80 m wide barrier pillar inside the lease boundary. The eastern boundary is formed by an 80 m wide structural pillar that follows the fault that separates Blocks 2 and 3. The Main Seam resource in Block 2 is limited to a minimum thickness of 1.40 m. Hence the footprint of the Main Seam in Block 2 includes only 296 ha. (The hatched area of Block 2). • The confidence level for Block 2A is inferred, with no boreholes within the limits of the area, but with 6 boreholes drilled in close proximity to its boundary. The information from these boreholes was used to estimate a tonnage for this block. This block forms the deepest part of the resource and is 140 ha in size. • The confidence level for Block 3 is measured due to an average drilling grid of 371 m2. This block is 427 ha in size and is bounded in the north by the southern edge of

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		Block 3A. The east and west edges are defined by 80 m wide structural pillars that coincides with the faults that separates Block 3 from Blocks 2 and 4. The southern edge of this block is defined by the sub-outcrop of the coal measures as seen in borehole IM 027. • The confidence level for Block 3A is measured due to an average drilling grid of 441 m2. This block is 78 ha in size and is bounded in the north by an 80 m wide barrier pillar on the inside of the lease boundary. The east and west edges are defined by 80 m wide structural pillars that coincides with the faults that separates Block 3 from Blocks 2 and 4. The southern edge of this block is defined by the northern limit of Block 3. • Block 4 is classified as a measured resource, with an average drilling grid of 373 m2. This block is 376 ha in size and is bounded in the north by the southern edge of Block 4A. The east and west edges are defined by 80 m wide structural pillars that coincides with the faults that separates Block 4 from Blocks 3 and 5. The southern edge of this block is defined by the Imaloto River and the sub-outcrop of the coal measures as seen in boreholes IM 012 and 024. • Block 4A is classified as a measured resource, with an average drilling grid of 370 m2. This block is 109 ha in size and is bounded in the north by an 80 m wide barrier pillar on the inside of the lease boundary. The east and west edges are defined by 80 m wide structural pillars that coincides with the faults that separates Block 4 from Blocks 3 and 5. The southern edge of this block is defined by the northern boundary of Block 4. • Block 5 is classified as a measured resource, with an average drilling grid of 424 m2. This block is 305 ha in size and is bounded in the north-west by an 80 m wide barrier pillar on the inside of the lease boundary. The eastern edge is defined by the sub-outcrop of coal measures as seen in IM 228, 249 and 250. There is no Main Seam developed in this block. • The confidence level for Block 5A is inferred, with no boreholes within the limits of the area, but with 8 boreholes drilled in close proximity to its boundary. The information from these boreholes was used to estimate a tonnage for this block. This block forms the shallowest part of the resource and is 179 ha in size. There is no Main Seam developed in this block. • The Competent Person views the results as a fair reflection of the content of this coal deposit.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates*	• The results of this estimate have not yet been reviewed or audited by a third party.
Discussion of relative accuracy / confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example the application of statistical or geostatistical procedures to quantify the relative accuracy*	• The tonnages are reported to Gross Tons In Situ (GTIS) level. The increasingly dense points of observation, reduces the geological uncertainty when tonnages from inferred through indicated to measured levels are calculated. The geological loss factors to be applied when moving the statement from resource to reserve are as follows: - Inferred; Geological loss of 20 %. - Indicated; Geological loss of 15 %. - Measured; Geological loss of 10 %.

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	of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. • *The statement should specify whether it relates to global or local estimates, and if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data where available.*	• The geological loss factors quoted above should be applied to the GTIS tonnages as well as a mining loss factor which is typically 5%, when taking the resource to a reserve status, where feed to plant tonnages are calculated as ROM to an as delivered base (ASD). Also included will be contamination and moisture as added during the mining process. • Empirical data to populate the above mentioned factors with historical numbers does exist, and initial models will be sensibly populated once the project is in production. These will then be calibrated with real data from production reconciliations.

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Appendix 2: List of Acronyms

List of Acronyms

adb (or ADB)	Air dry basis
adc (or ADC)	Air dry, contaminated
aduc (or ADUC)	Air dry, uncontaminated
AIG	Australian Institute of Geoscientists
ASX	Australian Securities Exchange
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
CMMI	Council of Mining and Metallurgical Institutions
CRIRSCO	Committee for Mineral Reserves International Reporting Standards
CV	Calorific value
CVVM	Calorific value of volatiles
DAFV	Dry Ash Free Volatiles
db (or DB)	Dry basis
DTF	Drop Tube Furnace
DME	Department of Minerals and Energy
E	Activation energy (kJ/mol)
EIA	Environmental Impact Assessment
EMPlan	Environmental Management Plan
EMProgramme	Environmental Management Programme
ESKOM	South Africa's state-owned electrical power utility company
Er	Energy ratio
FOB	Free on Board
g/cc	Grams per cubic centimetre
GTIS	Gross Tonnes in situ
GAD	Gross as delivered
GAR	Gross as received
HIV	Heat in volatiles (%)
ha	Hectares (1 ha = 10,000 m2)
ICMM	International Council on Mining and Metals
IRR	Internal Rate of Return
ISO	International Standards Organisation

JORC	Joint Ore Reserves Committee
JORC Code	Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves
Kcal/kg	Kilocalories per kilogram
Ma	Million annum (years)
MA	Mineral Area
m.a.m.s.l.	metres above mean sea level
MPRDA	Mineral and Petroleum Resources Development Act (Act 28 of 2002)
MJ/kg	Megajoules per kilogram
MTISReserve	Mineable tonnes in situ reserve, as defined by SANS10320:2004
MTISResource	Mineable tonnes in situ resource, as defined by SANS10320:2004
Mt	Million tonnes
Mtpa	Million tonnes per annum
NAR	Net as Received
NAEN	The Russian Society of Subsoil Use Experts
NPV	Net Present Value
NRO	National Reporting Organisations
NZX	New Zealand Stock Exchange
PERC	Pan European Reserves and Resources Reporting Committee
RPO	Recognized Professional Organisation
Ptn	Portion
RE	Remaining Extent
ROM (adc)	Run of mine tonnes (air dry, contaminated)
ROM (aduc)	Run of mine tonnes (air dry, uncontaminated)
ROM (as del)	Run of mine tonnes (as delivered)
SABS	South African Bureau of Standards
SAMCODES	South African Mineral Codes
SAMREC Code	South African Code for the Reporting of Coal Resources and Coal Reserves
SANS 10320	South African National Standard 10320:2004 – South African guide to the systematic evaluation of coal resources and coal reserves
SME	Society for Mining, Metallurgy and Exploration (USA)
The AusIMM	The Australian Institute of Mining and Metallurgy

T&S	Truck and Shovel
TTIS	Total Tonnes in situ
VALMIN Code	Code and Guidelines for Technical Assessment and /or Valuation of Mineral and Petroleum Assets and Mineral and Petroleum Securities for Independent Expert Reports
VMDTF	Volatiles by DTF

Appendix 3: Main Assumptions

Appendix 3: Main Assumptions and Estimation Parameters for the Imaloto Coal Resource

- The Imaloto project is located in south-western Madagascar, 150 km east of the coastal city of Tulear. The closest town, Benenitra, is located roughly 15 km south-west of the exploration camp, close to the south-western corner of the licence area. The mining and prospecting rights are aligned mainly along the south-flowing Imaloto River valley until its confluence with the larger, west-flowing Onilahy River, which in turn enters the Indian Ocean a few kilometres south of the city of Tulear.

- The coal deposit is developed in Permian Age sediments, and the bulk of the resource is contained within 3 Seams; the Main Seam, the Top Seam and the Upper Seam. The depositional geometry is of a valley that dips to the north at 1 to 3º. This valley overlies Glacial Series sediments that were deposited on a floor of Proterozoic crystalline basement.

- The main structural elements are faults (extensional tectonics between Madagascar and East Africa) which displace the strata in sequentially deeper blocks to the west. The relative displacements vary from 40 to 25 m. The dips on the fault planes are assumed to be in excess of 80º to the west.

- The Top and Upper Seams are absent in the southern part of the project, due to the effect of weathering. Towards the north, the surface topography is elevated and it contains the younger overlying Red Series Formation and Sakamena Group sediments.

- The coal resource is estimated on the basis of 159 boreholes that were drilled between February 2009 and December 2012. A total of 19 572 m was drilled in this exploration programme. Since the resource orientation is near horizontal, all the drilling was planned to be plumb at -90º. A random check on borehole orientation showed the audited holes to vary between -89.0º and 88.94º.

- All the boreholes were drilled with 2 similarly equipped Boart-Longyear LF 70 rigs. These rigs are the property of Lemur Resources and are staffed by Indonesian operators. All the drilling was cored diamond drilling, and was drilled in HQ size. This produced a recovered core of 63.5 mm in diameter. This size produces a sample mass of 4.75 kg of coal per running meter at a default density of 1.500 ton/m^3.

- All the drilled boreholes were surveyed after the completion of drilling by Mada Topo, a Madagascan survey company. All the coordinates were supplied in WGS 84 and UTM 38 S format. All the collar elevations were reported as meters above mean sea level.

- During the first phase of the project (first 36 boreholes), sampling was detailed and included the sampling of non-coal roof and floor sediments. The core was split in half, and sent to the laboratory for analyses and the remaining half was retained on site. The balance of the boreholes (124) was sampled as full core with lithological contacts as sample boundaries. The minimum seam width for sampling is 30 cm. All the residue material is in the custody of the laboratory for future analyses.

- The Laboratory used for sample analyses is M&L Inspectorate in Middelburg, South Africa. The samples were bagged and tagged in the field, and taken by road to Tulear in Madagascar. From Tulear, the samples were shipped by DHL to Johannesburg (air freight).

- The following analyses were requested as a standard on all samples;
    - Sample Preparation
    - Apparent Relative Density (AS 1038 :26-2005)
    - Screening out < 0.5 mm, ISO 1953
    - Sink and Float Analyses, ISO 7936
    - Sulphur % Content per float and final sink, C030-402-W (Based on ASTM:D4239)

- Moisture % Content per float and final sink, C030-403-W (Based on SANS 5925)
- Volatile % Content per float and final sink, C030-404-W (Based on ISO 562)
- Ash % Content per float and final sink, C030-401-W (Based on ISO 1171)
- Free Swelling Index per float below 1.400 t/m^3, ISO 540
- Gross CV(MJ/kg) per float and final sink, C030-405-W (Based on ISO 1928)

- Quality assurance is integrated in the laboratory by the use of unmarked standard samples at a frequency of one in ten. All residue sample material is retained for future analysis.

- As received densities as determined by the laboratory was used to calculate the densities per seam per block.

- All the drilled boreholes were used in the physical modelling of the resource. The average drilling density comes to 424 m^2 for the total deposit. The drilling density varies between 331 m^2 (Block 1) to 1340 m^2 (Block 5A). The deepest hole is PTT01 at 437.3 m. The shallowest hole is IM150 at 26.3 m. The average drilling depth for the complete set of boreholes is 123 m.

- A gridded surface is generated for the roof and floor of each individual seam per resource block. The modelling algorithm used is Inverse distance squared. The lateral continuity of the grid surface is limited by a blanking file. Blanking file boundaries are fixed by structure, seam thickness limits, physical boundaries (river course, weathering, sub-outcrop), and lease limits. The seam thickness limits are 0.5 m for the Top and Upper Seams, and 1.4 m for the Main Seam. For Block 1 the Main seam cut-off is 1.0 m due to the relatively shallow geometry. It is assumed that MSA also included this thinner Block 1 Main Seam within their declared resource when their modelling footprint is considered.

- Geological loss is assigned on a sliding scale according to the level of confidence in the resource estimation. Essentially it is a measure of drilling density and reduced potential variability in seam geometry. The following geological losses were applied per resource category;
  - Measured Resource: 10 to 12 % geological loss
  - Indicated Resource: 15 % geological loss
  - Inferred Resource: 20% geological loss

- The qualities were calculated per seam per block from the wash-tables that is supplied by the laboratory. The average qualities are weighted for sample mass.

- The reconciled tonnage variance with the MSA report dated Dec 2010, is largely due to a density difference as used on the Upper Seam;
  - MSA Upper Seam density 1.76 ton/m^3 - SC Upper Seam density 1.615 ton/m^3, variance 26.617 Mt.

- The MSA Report did not specify the base to which it reported, and given that the MSA tons are being described as having had a geological loss applied, the actual loss is not tabulated. The resource confidence assigned to the 170.600 Mt as reported by MSA is inferred. Given that the comparison was complicated by a lack of definition in the MSA report, SC accepted the MSA tonnage as at a GTIS base and compared it with the most recent GTIS based tonnage for the Imaloto Project.

- All the resource tonnages quoted by SC are as at 23 October 2017.

- The JORC compliant coal resource is tabulated below. All tonnes are in millions.

Category	Gross			Net attributable (99 %)			Operator
	Tonnes (Mt)	Raw Coal Quality (ADB)		Tonnes (Mt)	Raw Coal Quality (ADB)		
		Ash (%)	CV (MJ/kg)		Ash (%)	CV (MJ/kg)	
Coal Resources per asset							
Measured	91.613	32.5	19.62	90.697	32.5	19.62	
Indicated	31.497	35.7	18.14	31.182	35.7	18.14	Lemur Resources Pty (Ltd).
Inferred	12.627	34.4	18.80	12.501	34.4	18.80	
Sub-Total	135.737	33.4	19.20	134.380	33.4	19.20	
Total	135.737	33.4	19.20	134.380	33.4	19.20	

COAL RESOURCE - Imaloto - Lemur Resources - as @ 23 Oct 2017.												
Block	**Commodity**	**Seam**	**Ply**	**Thick (m)**	**Area (m^2)**	**Volume (m^3)**	**Density**	**GTIS**	**Drill Grid**	**Resource Category**	**Geological Loss**	**TTIS**
1	Coal	Main	Main	1.35	3940874	5320180	1.468	7.810	331	Measured	10	7.029
Total								**7.810**				**7.029**
2	Coal	Top	Top	0.98	6999660	6849535	1.509	10.336	519	Indicated	15	8.786
2	Coal	Upper	Upper	1.12	6999660	7839424	1.622	12.716	519	Indicated	15	10.808
2	Coal	Main	Main	1.90	2959047	5630147	1.500	8.445	519	Indicated	15	7.178
Total								**31.497**				**26.772**
3	Coal	Top	Top	0.88	4273073	3760304	1.539	5.787	371	Measured	10	5.208
3	Coal	Upper	Upper	1.07	4273073	4572188	1.590	7.270	371	Measured	10	6.543
3	Coal	Main	Main	2.85	4272813	12176950	1.467	17.864	371	Measured	10	16.077
Total								**30.920**				**27.828**
4	Coal	Top	Top	0.83	3761367	3121935	1.580	4.933	373	Measured	10	4.439
4	Coal	Upper	Upper	1.31	3761367	4927391	1.608	7.923	373	Measured	10	7.131
4	Coal	Main	Main	2.94	3357197	9863333	1.514	14.933	353	Measured	10	13.440
Total								**27.789**				**25.010**
5	Coal	Top	Top	0.72	3052761	2827001	1.598	4.518	424	Measured	12	3.975
5	Coal	Upper	Upper	1.12	2802195	3138458	1.590	4.990	406	Measured	12	4.391
Total								**9.508**				**8.367**
2A	Coal	Top	Top	0.50	1397766	698883	1.509	1.055	1182	Inferred	20	0.844
2A	Coal	Upper	Upper	0.75	1397766	1048325	1.622	1.700	1182	Inferred	20	1.360
2A	Coal	Main	Main	1.98	1397766	2767577	1.500	4.151	1182	Inferred	20	3.321
Total								**6.906**				**5.525**
3A	Coal	Top	Top	0.79	777559	614271	1.555	0.955	441	Measured	12	0.841
3A	Coal	Upper	Upper	0.80	777559	622047	1.631	1.015	441	Measured	12	0.893
3A	Coal	Main	Main	3.98	777559	3094683	1.510	4.673	441	Measured	12	4.112
Total								**6.643**				**5.846**
4A	Coal	Top	Top	0.87	1092459	950440	1.581	1.503	370	Measured	10	1.352
4A	Coal	Upper	Upper	1.06	1092459	1158007	1.620	1.876	370	Measured	10	1.688
4A	Coal	Main	Main	3.38	1092459	3692513	1.507	5.565	370	Measured	10	5.008
Total								**8.943**				**8.049**
5A	Coal	Top	Top	0.75	1795637	1346728	1.598	2.152	1340	Inferred	20	1.722
5A	Coal	Upper	Upper	1.25	1795637	2244546	1.590	3.569	1340	Inferred	20	2.855
Total								**5.721**				**4.577**
Gross Indicated Tonnage in Situ								**31.497**	**Total Indicated Tonnage in Situ**			**26.772**
Gross Measured Tonnage in Situ								**91.613**	**Total Measured Tonnage in Situ**			**82.129**
Gross Inferred Tonnage in Situ								**12.627**	**Total Inferred Tonnage in Situ**			**10.102**
Gross Total Tonnage in Situ								**135.737**	**Total Tonnage in Situ**			**119.003**
Gross Top Seam Tonnage in Situ								**31.238**	**Total Top Seam Tonnage in Situ**			**27.167**
Gross Upper Seam Tonnage In Situ								**41.058**	**Total Upper Seam Tonnage In Situ**			**35.670**
Gross Main Seam Tonnage In Situ								**63.441**	**Total Main Seam Tonnage In Situ**			**56.166**
Gross Main Seam Inferred Tonnage								**4.151**				**3.321**
Gross Main Seam Indicated Tonnage								**8.445**				**7.178**
Gross Main Seam Measured Tonnage								**50.844**				**45.666**

Bushveld Minerals Limited

(incorporated and registered in Guernsey with registered number 54506)

NOTICE OF GENERAL MEETING

NOTICE IS HEREBY GIVEN that a General Meeting of Bushveld Minerals Limited (the "**Company**") will be held at 18-20 Le Pollet, St Peter Port, Guernsey GY1 1WH on 20 December 2017 at 10.00 a.m., for the purpose of considering and, if thought fit, passing the following resolutions which will be proposed as two ordinary resolutions and one special resolution:

Terms used in this notice shall have the same meanings as defined in the admission document published by the Company on 30 November 2017 ("**Admission Document**"), unless the context requires otherwise.

ORDINARY RESOLUTIONS

THAT:

1. the Acquisition pursuant to the terms of the Acquisition Agreement be approved and the Directors be and are hereby authorised to exercise all powers of the Company to issue the Consideration Shares in accordance with the provisions of the Acquisition Agreement in accordance with Article 8.3 of the Articles, provided that any shares to be issued under such authority shall be issued upon Admission;

2. the Directors of the Company be and are hereby authorised to exercise all powers of the Company to issue, grant rights to subscribe for, or to convert any securities into, up to 287,793,087 shares (together "**Equity Securities**") in the capital of the Company being approximately one third of the Enlarged Issued Share Capital in accordance with Article 8.3 of the Articles such authority to expire at the end of the AGM of the Company to be held in 2018 or, if earlier, at the close of business on the date falling 15 months from the date of the passing of this Resolution (unless previously renewed, revoked or varied by the Company by ordinary resolution), but, in each case, during this period the Company may make offers, and enter into agreements, which would, or might, require Equity Securities to be issued or granted after the authority given to the Directors of the Company pursuant to this Resolution ends and the Directors of the Company may issue or grant Equity Securities under any such offer or agreement as if the authority given to the Directors of the Company pursuant to this Resolution had not ended. This Resolution is in substitution for all unexercised authorities previously granted to the Directors of the Company to issue or grant Equity Securities (the "**Share Issue**"); and

SPECIAL RESOLUTION

3. if Resolution 2 (being the proposed ordinary resolution of the Company numbered 2 in this notice of EGM) is passed, the Directors of the Company be and they are hereby authorised to exercise all powers of the Company to issue or grant Equity Securities in the capital of the Company pursuant to the issue or grant referred to in Resolution 2 as if the pre-emption rights contained in Article 9.9 of the Articles did not apply to such issue or grant provided that:

   (A) the maximum aggregate number of Equity Securities that may be issued or granted under this authority is 100,000,000 shares, being approximately 11.6 per cent. of the Enlarged Issued Share Capital; and

   (B) the authority hereby conferred shall expire at the end of the AGM of the Company to be held in 2018 or, if earlier, at the close of business on the date falling 15 months from the date of the passing of this Resolution (unless previously renewed, revoked or varied by the Company by special resolution) save that the Company may before such expiry make an offer or agreement which would or might require Equity Securities to be issued or granted after such expiry and the Directors may issue or grant Equity Securities in pursuance of such an offer or agreement as if the authority conferred by the above resolution had not expired. This Resolution is in substitution for all unexercised authorities previously granted to the Directors of the Company to issue or grant Equity Securities in the capital of the Company as if the pre-emption rights contained in Article 9.9 of the Articles did not apply to such issue or grant.

Registered Office: *By order of the Board:*

18-20 Le Pollet
St Peter Port
Guernsey
GY1 1WH

30 November 2017

Explanatory Notes:

Entitlement to attend and vote

1. The Company specifies that only those members registered on the Company's register of members at:
   - close of business on 18 December 2017; or
   - if this Meeting is adjourned, at close of business on the day two business days prior to the adjourned meeting, shall be entitled to attend and vote at the Meeting.

Appointment of proxies

2. If you are a member of the Company at the time set out in note 1 above, you are entitled to appoint a proxy to exercise all or any of your rights to attend, speak and vote at the Meeting and you should have received a Form of Proxy with this notice of meeting. You can only appoint a proxy using the procedures set out in these notes and the notes to the Form of Proxy.
3. A proxy does not need to be a member of the Company but must attend the Meeting to represent you. Details of how to appoint the Chairman of the Meeting or another person as your proxy using the Form of Proxy are set out in the notes to the Form of Proxy. If you wish your proxy to speak on your behalf at the Meeting you will need to appoint your own choice of proxy (not the Chairman) and give your instructions directly to them.
4. You may appoint more than one proxy provided each proxy is appointed to exercise rights attached to different shares. To appoint more than one proxy please refer to the notes on the Form of Proxy.
5. CREST members who wish to appoint a proxy or proxies through the CREST electronic proxy appointment service may do so for the General Meeting by using the procedures described in the CREST Manual. CREST Personal Members or other CREST sponsored members, and those CREST members who have appointed (a) voting service provider(s), should refer to their CREST sponsor or voting service provider(s), who will be able to take the appropriate action on their behalf. In order to be valid the appropriate CREST Proxy Instruction must be transmitted so as to be received by the Company's agent by the latest time(s) for receipt of proxy appointments specified in the Notice.

Appointment of proxy using hard copy proxy form

6. The notes to the Form of Proxy explain how to direct your proxy how to vote on the resolutions or withhold their vote. To appoint a proxy using the hard-copy Form of Proxy, the Form of Proxy must be:
   - completed and signed;
   - sent or delivered to the Company's registrar, Link Asset Services, PXS, 34 Beckenham Road, Beckenham, Kent BR3 4TU; and
   - received by the Company's registrar, Link Asset Services, PXS, 34 Beckenham Road, Beckenham, Kent BR3 4TU no later than 10.00 a.m. on 18 December 2017 or, if this Meeting is adjourned, not less than 48 hours before the time of the holding of the adjourned Meeting.
7. In the case of a member which is a company, the proxy form must be executed under its common seal or signed on its behalf by an officer of the company or an attorney for the company.
8. Any power of attorney or any other authority under which the Form of Proxy is signed (or a duly certified copy of such power or authority) must be included with the Form of Proxy.
9. Please note that communications regarding the matters set out in this Notice of General Meeting will not be accepted in electronic form, other than as specified in the enclosed Form of Proxy.

Appointment of proxy by joint members

10. In the case of joint holders, where more than one of the joint holders purports to appoint a proxy, only the appointment submitted by the most senior holder will be accepted. Seniority is determined by the order in which the names of the joint holders appear in the Company's register of members in respect of the joint holding (the first-named being the most senior).

Changing proxy instructions

11. To change your proxy instructions simply submit a new proxy appointment using the methods set out above.
12. Where you have appointed a proxy using the hard-copy Form of Proxy and would like to change the instructions using another hard-copy Form of Proxy, please contact the Company's registrar, Link Asset Services, PXS, 34 Beckenham Road, Beckenham, Kent BR3 4TU.
13. If you submit more than one valid proxy appointment, the appointment received last before the latest time for the receipt of proxies will take precedence.

Termination of proxy appointments

14. In order to revoke a proxy instruction you will need to inform the Company by sending a signed hard copy notice clearly stating your intention to revoke your proxy appointment to the Company's registrar, Link Asset Services, PXS, 34 Beckenham Road, Beckenham, Kent BR3 4TU.
15. In the case of a member which is a Company, the revocation notice must be executed under its common seal or signed on its behalf by an officer of the Company or an attorney for the Company.
16. Any power of attorney or any other authority under which the revocation notice is signed (or a duly certified copy of such power or authority) must be included with the revocation notice.

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