MINERAL RESOURCE ESTIMATE FOR THE XAUDUM IRON PROJECT (BLOCK 1), REPUBLIC OF BOTSWANA

REPORT PREPARED UNDER THE GUIDELINES OF NATIONAL INSTRUMENT 43-101 AND ACCOMPANYING DOCUMENTS 43-101.F1 AND 43-101.CP.

Prepared for

GCWIHABA RESOURCES (PTY) LTD

Authored By:
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Report Prepared by

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UK05835

Qualified Person: Howard Baker, FAusIMM(CP)
Effective Date of Report: 29 August 2014

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EXECUTIVE SUMMARY
MINERAL RESOURCE ESTIMATE FOR THE XAUDUM IRON PROJECT (BLOCK 1), REPUBLIC OF BOTSWANA

1 EXECUTIVE SUMMARY

1.1 Background

SRK Consulting (UK) Limited (“SRK”) is an associate company of the international group holding company, SRK Consulting (Global) Limited (the “SRK Group”). SRK has been requested by Gcwihaba Resources (Pty) Ltd (“Gcwihaba”, the “Company” or the “Client”) to prepare a maiden Mineral Resource estimate (“MRE”) on the block 1 area of the Xaudum Iron project (“Xaudum” or the “Project”) located in the Ngamiland region of the North-West District of the Republic of Botswana (“Botswana”).

Gcwihaba is wholly owned by Tsodilo Resources Ltd (“Tsodilo”), which is a TSX-V listed exploration and development company with diamond, base metals, Uranium and iron projects in Botswana.

This Technical Report serves as an independent report prepared by the Qualified Person (“QP”), Howard Baker, as defined by National Instrument 43-101 (“NI 43-101”) and the companion policy 43-101CP. The definitions of Measured, Indicated and Inferred Resources as used in this report, conform to the definitions and guidelines of the CIM (Canadian Institute of Mining, Metallurgy and Petroleum) Definition Standards for Mineral Resources and Mineral Reserves, May 2014. The QP undertook a site visit to the Project between 6 and 12 February 2014.

1.2 Location

The town of Shakawe is within the Project licence boundaries. It is located 250 km northwest (straight line) of the town of Maun, and 800 km northwest of the International Airport in Gaborone. The route from Maun comprises well-maintained tarmac roads. The terrain is characterised by semi-arid savannah grassland with generally flat topography at an approximate elevation of 1,000 masl.

1.3 Project Description and Ownership

Gcwihaba has 100% ownership of the Prospecting Licences PL 386/2008 and PL 387/2008, which together cover the entirety of the Xaudum Project. The Licences were initially granted to Gcwihaba on 01 October 2008, and were subsequently renewed (first renewal) on 01 January 2012 and are valid until 31 December 2014 whereby a second renewal will be applied for. The PL 386/2008 licence area covers 570 km^2, and PL 387/2008 licence area covers 964.9 km^2.

1.4 Data Quality

The data used in the estimation and the associated quality control quality assurance (“QAQC”) data was compiled by SRK. It is the opinion of SRK that the results of the blanks, certified reference material (standards), and the results of the laboratory duplicates show that a reasonable level of confidence can be attributed to drill samples analysed subsequent to October 2013 and used in the MRE. A lower degree of confidence can be attributed to samples extracted prior to October 2013 due to the lack of external QAQC data and the assaying methodology.

1.5 Geology and Mineralisation

The local geology comprises a sedimentary succession (part of the Neoproterozoic age Katangan Supergroup, ca. 750 - 560 Ma) metamorphosed to amphibolite grade, as well as various intrusives and granitic basement; these lithologies can broadly be correlated with those in the Zambian-Congolese Copperbelt. The mineralisation is located within the Xaudum Iron Formation (“XIF”), which is the contained within the Grand Conglomerate unit.

The XIF has been identified as a Rapitan style BIF of Neoproterozoic age. Neoproterozoic BIF formations have been proposed to have formed during or in the immediate aftermath of the so called Neoproterozoic “Snowball Earth”.

1.6 Geological Model

The Block 1 Xaudum geological model covers a portion approximately 8.5 km in length, which is part of a larger 40 km strike length magnetic anomaly. It comprises folded and faulted magnetite-bearing XIF units with a thin oxidised cap. Gcwihaba has created a geological model based on the high resolution ground magnetic geophysical survey data logging and geodomaining, mineralogy, assay data and magnetic susceptibility results enabling the hanging wall and footwall contacts of the banded magnetite (geodomain MBA) units, magnetite bearing diamictite (DIM) units and magnetite-garnet schist (MGS) units to be modelled and 3-D solids to be created. In addition, internal metasedimentary waste zones (garnet schists (GST) and diamictite (DIA)) were created within the XIF and oxidised cap.

In total, three major MBA units and three major DIM units in addition to their oxidised counterparts (MBW and DMW) were created, along with pods of MBA, DIM, MGS, GST and DIA.

1.7 Mineral Resource Estimate

A 5 m composite file was used in a geostatistical study (variography) that enabled Ordinary Kriging (“OK”) to be used as the main interpolation method for the major geodomains. The interpolation used an elliptical search following the predominant dip and dip direction of the geodomains. An Inverse-distance weighted (“IDW^3”) methodology was used for the other geodomains.

The interpolated block model was validated through visual checks and a comparison of the mean input composite and output model grades. SRK is confident that the interpolated block grades are a reasonable reflection of the available sample data.

1.8 Mineral Resource Statement

The Mineral Resource statement (“MRS”) generated by SRK has been restricted to all material falling within an optimised pit shell representing a metal price of USD 1.5 / dmtu for magnetite concentrate along with above a cut-off grade of 12% Fe. Processing costs, mining costs slope angles, mining recoveries and revenue assumptions were also used to demonstrate economic viability. The material within the optimised pit shell represents the material which SRK considers has reasonable prospect for eventual economic extraction potential based on the optimisation analysis undertaken.

Table ES 1 shows the resulting MRS for Xaudum. The statement has been classified in accordance with the Guidelines of NI 43-101 and accompanying documents 43-101.F1 and 43-101.CP, by the Qualified Person, Mr Howard Baker (FAusIMM(CP)). Mr Baker is an independent consultant with no relationship to a Gcwihaba employee and has never been employed by Gcwihaba. The Mineral Resource Statement has an effective date of 29 August 2014.

The quantity and grade of reported Inferred Mineral Resources in this estimation are uncertain in nature and there has been insufficient exploration to define these Inferred Mineral Resources as an Indicated or Measured Mineral Resource; and it is uncertain if further exploration will result in upgrading them to an Indicated or Measured Mineral Resource category.

In total, SRK has derived an Inferred Mineral Resource of 441 Mt grading 29.4% Fe, 41.0% SiO_2, 6.1% Al_2O_3 and 0.3% P.

The Mineral Resource estimate has not been affected by any known environmental, permitting, legal, title, taxation, socio-political, marketing or other relevant issues.

Table ES 1: Mineral Resource Statement for Xaudum Block 1

Geodomain	Resource Category	Tonnes (Mt)	Fe %	SiO_2 %	Al_2O_3 %	P %
MBA	Measured	-	-	-	-	-
	Indicated	-	-	-	-	-
	Meas. + Ind.	**-**	**-**	**-**	**-**	**-**
	Inferred	236	35.6	34.0	4.0	0.3
DIM	Measured	-	-	-	-	-
	Indicated	-	-	-	-	-
	Meas. + Ind.	**-**	**-**	**-**	**-**	**-**
	Inferred	148	20.9	51.0	9.1	0.2
MBW	Measured	-	-	-	-	-
	Indicated	-	-	-	-	-
	Meas. + Ind.	**-**	**-**	**-**	**-**	**-**
	Inferred	21	34.3	35.4	4.4	0.2
DMW	Measured	-	-	-	-	-
	Indicated	-	-	-	-	-
	Meas. + Ind.	**-**	**-**	**-**	**-**	**-**
	Inferred	29	20.5	49.5	8.2	0.2
MGS	Measured	-	-	-	-	-
	Indicated	-	-	-	-	-
	Meas. + Ind.	**-**	**-**	**-**	**-**	**-**
	Inferred	7	22.1	50.8	8.9	0.2
TOTAL	Measured	-	-	-	-	-
	Indicated	-	-	-	-	-
	Meas. + Ind.	**-**	**-**	**-**	**-**	**-**
	Inferred	441	29.4	41.0	6.1	0.3

Notes: (1) Mineral Resources which are not Mineral Reserves have no demonstrated economic viability

(2) The effective date of the Mineral Resource is 29 August 2014

(3) The Mineral Resource estimate for Xaudum was constrained within lithological and grade based solids and within a Lerchs-Grossman optimised pit shell defined by the following assumptions; metal price of USD 1.5 / dmtu; slope angles of 26º, 45º and 50° in the sand, calcrete / oxide and fresh material; a mining recovery of 95.0%; a mining dilution of 5.0%; a base case mining cost of USD 2.20 / t ore and an incremental mine operating costs of USD 0.05 / t / 10 m; process operating costs of USD 5.00 / t ore; iron processing recoveries of 78.1% (MBA); 54.0% (DIM); 46.3% (MBW); 53.6% (DMW); 23.7% (MGS); G&A costs of USD 5.00 / t / ore; transport costs of USD 5 / t concentrate.

(4) The Mineral Resources were reported within the optimised pit shell and above 12% Fe cut-off grade.

(5) Mineral Resources at Xaudum have been classified according to the “CIM Standards on Mineral Resources and Reserves: Definitions and Guidelines (May 2014)” by Howard Baker (FAusIMM(CP)), an independent Qualified Person as defined in NI 43-101.

1.9 Davis Tube Recovery Testwork

To date, 15 Davis Tube Recovery tests have been conducted on mineralised composited samples from Xaudum. The testwork results were positive and proved that reasonable iron recoveries can be achieved from low, medium and high grade samples with mainly premium quality products being produced. Further testwork is recommended which is aimed at better understanding of the variability of response with depth and across the entire Project area.

The results of the DTR testwork are shown in Table ES-2. The average mass recoveries by geodomain are shown, along with the estimated concentrate tonnages and grades based on the tonnages from the MRS and the DTR concentrate grades (using a P80 of 80 µm).

Table ES 2: Davis Tube Recovery testwork summary (P80 = 80 Microns): mass recoveries and estimated concentrate tonnage and grade by geodomain

Geo domain	MRS Tonnes (Mt)	Mass Recovery	Concentrate Tonnes (Mt)	Fe % concentrate	SiO2 % concentrate	Al2O3 % concentrate	P % concentrate
MBA	236.0	45.5	107.4	67.9	3.8	0.5	0.08
DIM	148.0	17.9	26.5	66.4	4.9	0.6	0.06
MBW	21.0	25.4	5.3	66.4	4.0	0.0	0.05
DMW	29.0	21.6	6.3	67.7	2.8	0.2	0.02
MGS	7.0	10.7	0.7	63.2	9.0	2.1	0.16
TOTAL	**441.0**	**33.2**	**146.2**	**67.2**	**4.2**	**0.5**	**0.07**

1.10 Exploration Potential

SRK recognises that there is potential to increase the Mineral Resource currently reported by further exploration along strike and in separate exploration block areas.

Infill drilling, re-assaying and further DTR testwork to confirm the viability of the DIM and MGS material may result in upgrading the Inferred into Indicated and / or Measured Mineral Resources.

1.11 Conclusions and Recommendations

It is the opinion of SRK that the quantity and quality of available data is sufficient to generate a Mineral Resource estimate with Inferred Mineral Resources and that the Mineral Resource Statement has been classified in accordance with the Guidelines of NI 43-101.

SRK recommends that Gcwihaba continue to explore with a focus on the MBA material type. It has been shown in the pit optimisation that the DIM, DMW and MGS units are all marginal to sub-economic and would only supplement MBA material during mining.

SRK also recommends that in order to continue to increase the Mineral Resource classification from an Inferred to Indicated category in the Block 1 area, further drilling is required. A drill spacing of 200 m along strike is recommended with a minimum of two inclined drillholes per section.

1.12 Work Programme Going Forward

Exploration activities are understood to be continuing within the Licence area in the Block 2 area from August 2014. The key objectives are to test the magnetic anomalies inside the Block 2 area in order to expand the current Mineral Resource base identified herein.

SRK understands that the exploration budgets have been put in place to facilitate the on-going exploration and development programme, with a forecasted expenditure of approximately USD 3.8 million for the drill programme, along with structural geology study, Mineral Resource estimate, mineralogical and metallurgical testwork. The exploration is due to commence in August 2014 and take 8 months to complete.

The currently planned 800 x 100 m drilling grid, suggested by SRK prior to undertaking this MRE, may prove to be too wide to allow for the generation of Inferred Mineral Resources if a similar geological and mineralogical complexity is found in the Block 2 area; a tighter grid may therefore be necessary.

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MINERAL RESOURCE ESTIMATE FOR THE XAUDUM IRON PROJECT (BLOCK 1), REPUBLIC OF BOTSWANA

1 INTRODUCTION

1.1 Background

SRK Consulting (UK) Limited ("SRK") is an associate company of the international group holding company, SRK Consulting (Global) Limited (the "SRK Group"). SRK has been requested by Gcwihaba Resources (Pty) Ltd ("Gcwihaba", the "Company" or the "Client") to prepare a maiden Mineral Resource estimate ("MRE") on the Block 1 area of the Xaudum Iron Project ("Xaudum" or the "Project") located in the Ngamiland region of the North-West District of the Republic of Botswana ("Botswana").

Gcwihaba is wholly owned by Tsodilo Resources Ltd ("Tsodilo"), which is a TSX-V listed exploration and development company with diamond, base metals, uranium and iron projects in Botswana.

This Technical Report serves as an independent report prepared by the Qualified Person ("QPs") as defined by National Instrument 43-101 ("NI 43-101") and the companion policy 43-101CP. The QP is responsible for the specific sections as summarised in Table 1-1.

The definitions of Measured, Indicated and Inferred Resources, as well as Reserves, as used in this report, conform to the definitions and guidelines of the CIM (Canadian Institute of Mining, Metallurgy and Petroleum) Definition Standards for Mineral Resources and Mineral Reserves, May 2014.

The data used for the MRE, including drillhole databases and topographic surveys, was provided by Gcwihaba.

The geological units in the project area are Neoproterozoic (0.55 – 0.8 Ga) in age and the main focus of the Project is a Rapitan-type magnetite banded iron formation ("BIF") and associated weathered products, along with a magnetite schist unit. The BIF occurs within the Grand Conglomerate unit within the Katangan sedimentary sequence, which extends from Zambia in the east through Angola and Botswana to Namibia in the west.

The deposit at Xaudum occurs within a magnetic anomaly with a strike length of some 40 km. The current drilling utilised in this MRE is contained within the Block 1 exploration area of prospecting licence area PL386/2008 covering anomalies that strike over 8 km in a predominant north-south orientation. Modern exploration drilling commenced in 2008 and is currently on-going.

This report summarises the exploration and technical work undertaken at Xaudum since inception and describes the methodology employed by Gcwihaba and SRK to produce an independent MRE which has been prepared under the guidelines of NI 43-101 and accompanying documents 43-101.F1 and 43-101.CP.

SRK is not an insider, associate or affiliate of Gcwihaba, and neither SRK nor any affiliate has acted as advisor to Gcwihaba or its affiliates in connection with the Project. The results of the technical review by SRK is not dependent on any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings.

This report includes technical information, which requires subsequent calculations to derive sub-totals, totals and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, SRK does not consider them to be material.

This report is intended to be read as a whole, and sections should not be read or relied upon out of context. The report contains expressions of the professional opinion of the Qualified Person based upon information available at the time of preparation.

1.2 Qualifications of Consultants

SRK is an associate company of the SRK Group. The SRK Group comprises over 1,500 professional staff in 50 offices in 23 countries on 6 continents, offering expertise in a wide range of engineering disciplines. The SRK Group’s independence is ensured by the fact that it holds no equity in any project. This permits the SRK Group to provide its clients with conflict-free and objective recommendations on crucial judgment issues. The SRK Group has a demonstrated track record in undertaking independent assessments of resources and reserves, project evaluations and audits, mineral expert reports, independent valuation reports and independent feasibility evaluations to bankable standards on behalf of exploration and mining companies and financial institutions worldwide. The SRK Group has also worked with a large number of major international mining companies and their projects, providing mining industry consultancy service inputs. SRK also has specific experience in commissions of this nature.

SRK’s contribution to this Technical Report has been prepared based on input of a team of consultants sourced from SRK’s office in the UK. These consultants are specialists in the fields of geology and resource and reserve estimation and classification and mineral processing.

SRK has a significant amount of experience undertaking Mineral Resource estimates and, in addition, has worked on numerous iron deposits in West, Central and Southern Africa.

The site visit and inspection of the sample preparation facilities were undertaken by Howard Baker, Principal Geologist with SRK, who is a Qualified Person as defined in NI 43-101. Mr Baker undertook a site visit to the Project in February 2014; during which all available data was acquired and the drilling activities observed. All individuals responsible for this report have extensive experience in the mining industry and are members in good standing of appropriate professional institutions.

1.3 Report Authors

A listing of the Qualified Persons (QP) responsible for this report, together with the sections for which they are responsible, is given in Table 1-1. Mr Baker, being Independent of Gcwihaba, assumes overall responsibility for all items in the technical report whilst Dr Alistair Jeffcoate, being a full time employee of Tsodilo Resources Ltd and not being independent of the issuer was the lead contributor for the sections shown in Table 1-1. Mr Baker was assisted by Mr Ben Lepley, Consultant (Resource Geology), also of SRK Consulting (UK) Ltd.

Table 1-1: Qualified Persons who prepared or contributed to this Technical Report

Qualified Persons Responsible For The Preparation and Signing Of This Technical Report						
Qualified Person	**Position**	**Employer**	**Independent of Issuer?**	**Date of Site Visit**	**Professional Designation**	**Sections of Report**
Mr H Baker	Principal Consultant (Resource Geology)	SRK Consulting (UK) Limited	Yes	6 and 12 February 2014.	MSc, FAusIMM (CP)	All
Dr Alistair Jeffcoate	Chief Geologist Project Manager	Tsodilo Resource Ltd.	No	Based in Botswana	PhD, FGS, MAusIMM (CP)	3-12 and 22-25

Personal inspection of the Project were undertaken by QP Mr H Baker who covered all the aspects of the project, including inspections of the exploration Project, camp and core shed.

The Report is intended to be read as a whole, and sections should not be read or relied upon out of context. The Report contains the expression of the professional opinions of the QPs based upon information available at the time of preparation.

The QP Certificate for Mr Baker is located in Section 27 and for Mr Jeffcoate in Appendix B.

2 RELIANCE ON OTHER EXPERTS

With respect to mineral tenure and licence agreements (see Section 3 of this report), the Qualified Person has relied on a licence status document from the Republic of Botswana Department of Mines, dated 21 February 2014, which confirms the good standing of the Prospecting Licence agreements.

Information contained within the report is based on previous reports and data provided by Gcwihaba, along with communications with Gcwihaba staff. Mr Jeffcoat acted as the lead contributor from Gcwihaba. The reports utilised are referenced throughout the report and are listed in section 26.

3 PROJECT DESCRIPTION AND LOCATION

The Project is located within Northern Botswana as shown in Figure 3-1. The locations of the Prospecting Licences covering the Project currently owned by Gcwihaba are shown in Figure 3-2. The location of the exploration 'Blocks' where the recent and current Gcwihaba exploration has taken place are shown in Figure 3-3. This MRE is concerned only with exploration Block 1 only.

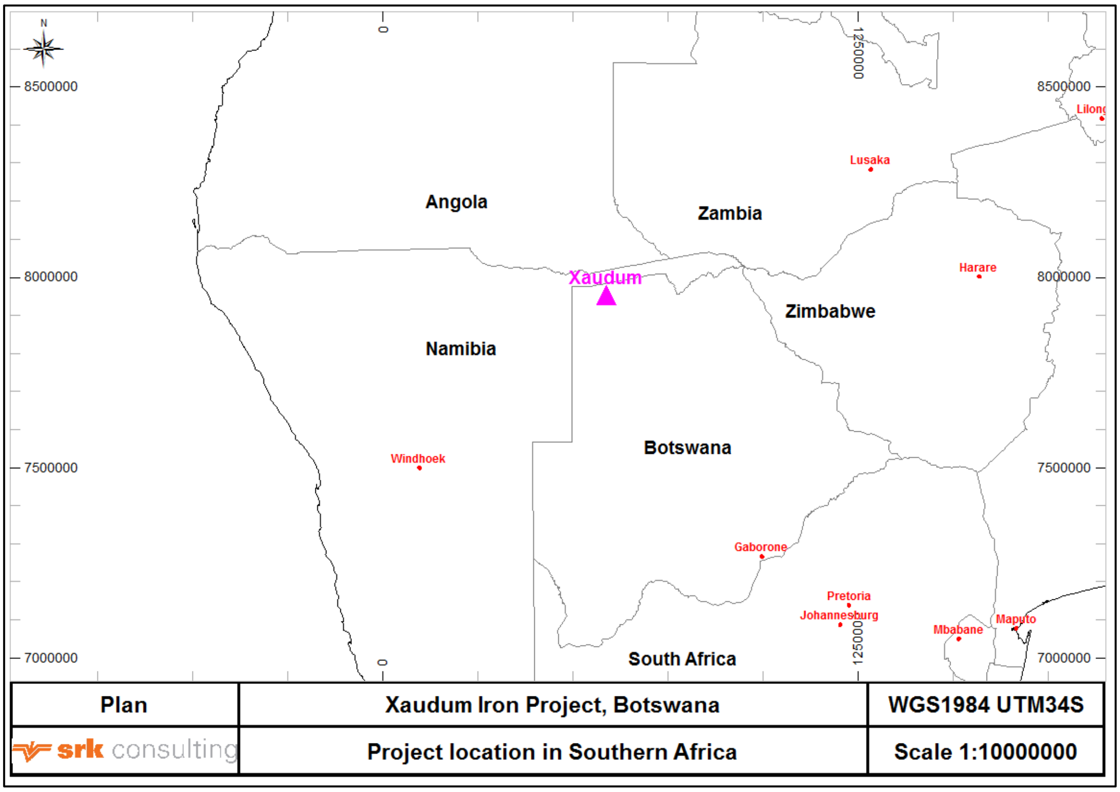


Figure 3-1: Xaudum location Map, Southern Africa (Source: SRK, 2014)

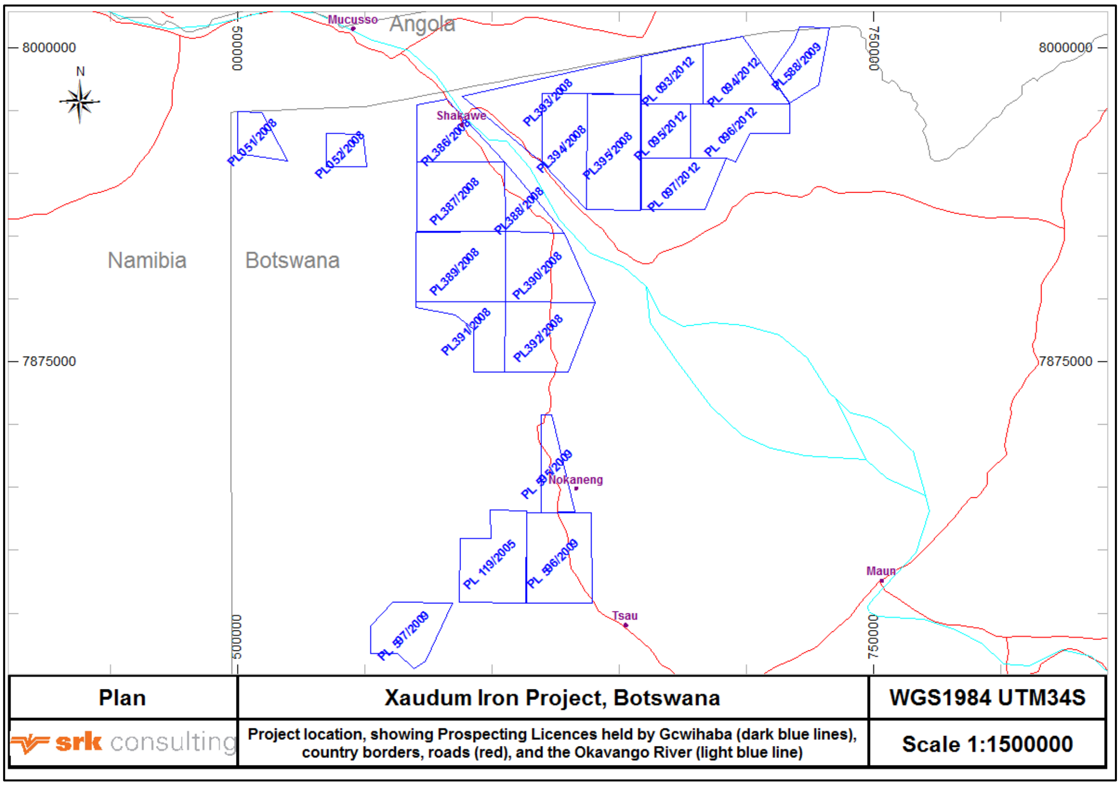


Figure 3-2: Location Map showing Prospecting Licences currently owned by Gcwihaba (Source: SRK, 2014)

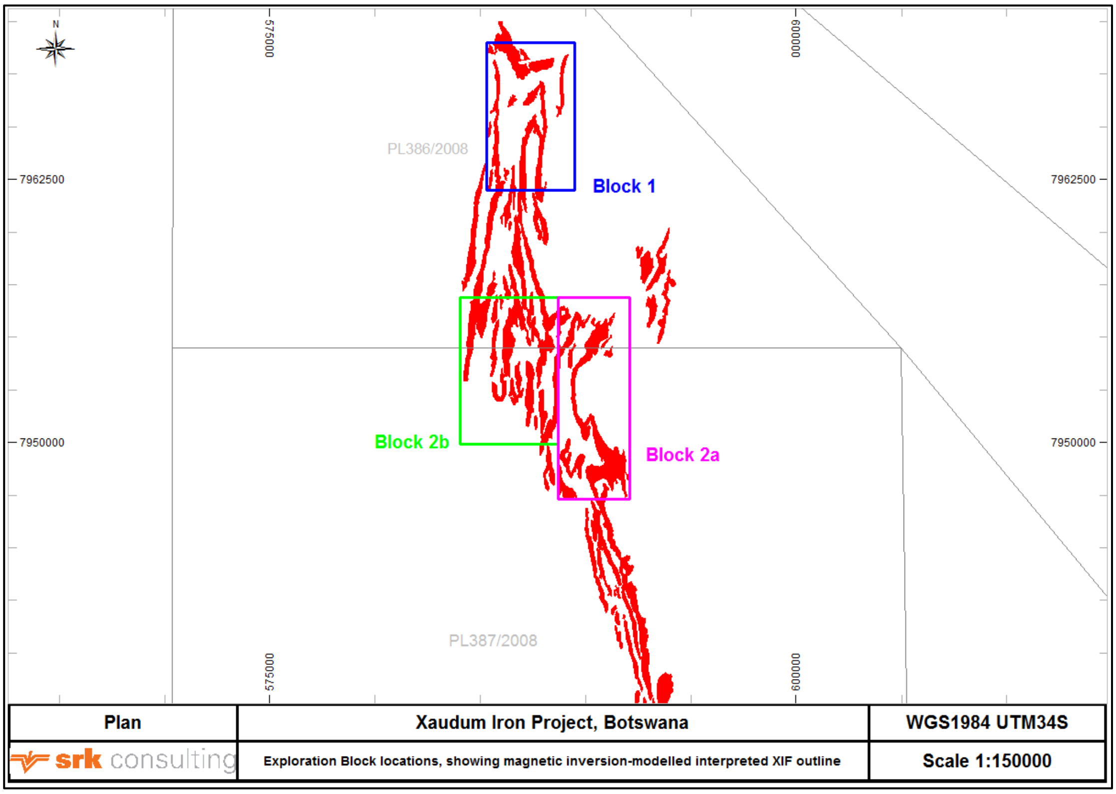


Figure 3-3: Location Map showing Prospecting Licences and exploration 'Blocks' (Source: SRK, 2014)

3.1 Project Description and Ownership

Gcwihaba currently owns the rights to explore for metals in the Project area. Gcwihaba is an operating company wholly owned by holding company Tsodilo Resources Bermuda Ltd, which is in-turn wholly owned by TSX-V listed Tsodilo Resources Ltd ("Tsodilo", TSX-V code TSD).

The Project area described within this technical document is covered by 2 of the 22 Prospecting Licences ("PL") owned by Gcwihaba: PL 386/2008 and PL 387/2008, granted on 1 January 2012. A PL entitles the holder to explore the surface and subsurface for 'metals', described in section 3.2.

First Quantum Minerals Ltd. ("FQM", TSX code FM) completed a memorandum of understanding and Earn-In Option Agreement with Tsodilo Resources Ltd., its wholly-owned subsidiary Gcwihaba Resources (Pty) Ltd., and FQM's wholly owned subsidiary Faloxia (Proprietary) Limited ("FQM Subco"). The definitive Earn-In Option Agreement acquired the right to earn up to a 70% interest in metals prospecting licences in Botswana granted to Gcwihaba insofar as they cover base, precious and platinum group metals and rare earth minerals by meeting certain funding and other obligations. The interests that may be earned by FQM specifically exclude any rights to iron held by Gcwihaba. In conclusion, although FQM has no equity rights to the Xaudum Project, FQM's equity investment has enabled Tsodilo (and Gcwihaba) to accelerate the exploration and evaluation of the Project.

Figure 3-2 shows the location of the PLs owned by Gcwihaba. The coordinates (WGS1984-UTM34S)) of the two PLs containing the current MRE are listed in Table 3-1. The PL 386/2008 licence area covers 570 km^2, and PL 387/2008 licence area covers 964.9 km^2.

Table 3-1: Xaudum Prospecting Licences PL 386/2008 and PL 387/2008 perimeter (WGS84 UTM43S coordinates)

PL	Pillars	Easting	Northing
PL386/2008	1	605,000	7,954,495
PL386/2008	2	570,368	7,954,495
PL386/2008	3	570,448	7,977,383
PL386/2008	4	582,361	7,979,543
PL386/2008	5	605,000	7,954,495
PL386/2008	6	605,000	7,954,495
PL387/2008	1	605,410	7,926,796
PL387/2008	2	570,367	7,926,800
PL387/2008	3	570,367	7,945,000
PL387/2008	4	570,368	7,954,495
PL387/2008	5	605,000	7,954,495
PL387/2008	6	605,410	7,926,796
PL387/2008	7	605,410	7,926,796

Figure 3-4 shows the Prospecting Licence PL386/2008 in relation to the Mineral Resource pit shell as defined by SRK. They clearly show the reported Mineral Resources fall within the Licence boundary; the resource pit does not represent the final engineered pit, it is a shell to constrain the resources based on an optimistic Fe price, as described in section 13.17.

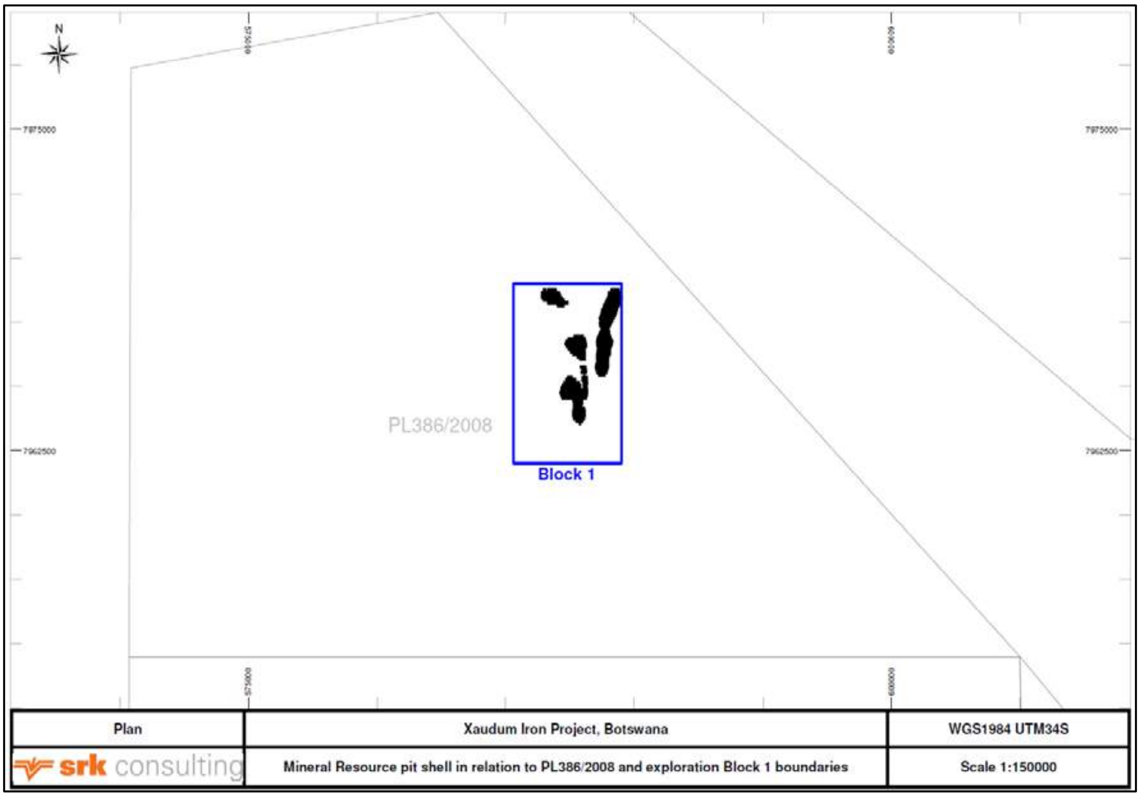


Figure 3-4: Prospecting Licence PL 386/2008 with resource pit shell (Source SRK, 2014)

3.2 Licence Agreements

Prospecting Licences ("PL"s) are issued under the Botswana Mines and Minerals Act, dated September 1999. PLs are issued for an initial period of three years; thereafter the holder must apply for a Renewal to the PLs. No more than two renewals of two years (maximum) will be granted.

At the end of the maximum seven years under the PL, the holder must apply for a 'Retention Licence' should the holder wish to continue developing the project. A retention licence shall be granted if either a positive Feasibility Study has been completed, and if the prospecting programme highlighted in the PL application has been completed. It can be renewed no more than once for a maximum period of three years. Thereafter a Mining Licence is required in order to continue to develop the project.

The two PLs containing the Mineral Resource described within are currently on their first renewal, and are due to expire on 31 December 2014 and Gcwihaba is entitled to apply for the second and last renewal for a period of two years if required. At the end of the last renewal period of the Licence, Gcwihaba must apply for a Retention Licence and submit a Feasibility Study. In order to be granted a Mining Licence, the applicant must have a sizeable deposit and have undertaken an environmental and social impact study. A Mining Licence must be renewed every twenty-five years or until exhaustion of the resources.

3.3 Additional Permits and Payments

PLs are issued subject to payment of a yearly grant fee of BWP 5/ km^2 or part therefore subject to a maximum of BWP 1000. There is an additional annual minimum expenditure of BWP 100,000.

Given the current exploration status of the Licence, SRK is not aware of any other royalties, back-in-rights, payments or any other agreements associated with the Project. In addition, SRK is not aware of any environmental liabilities associated with the Project.

4 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

4.1 Botswana

Botswana is a land-locked country situated in southern Africa, bordering Namibia to the west and north, South Africa to the south, Zimbabwe to the east. The country centres on the approximate location of latitude: 21°53′ south and longitude: 23°48′ east, with a surface area of approximately 581,730 km^2. The country is mainly classified as tableland, with notable geographic features including the Kalahari Desert in the southwest and west, the Okavango Delta in the northwest (adjacent to the property location) and the Makgadikgadi Salt Pans in the northeast.

4.2 International Access

International access into surrounding countries is possible via roads; there are no rail links to the project area from neighbouring countries although multiple rail links enter Botswana from neighbouring countries.

The main international airport is located in Gaborone (800 km from Shakawe in the Project area) with secondary international airports located at Maun (250 km from Shakawe), Kasane (360 km from Shakawe) and Francistown (670 km from Shakawe). A number of airlines operate flights between Maun and Gaborone and major African cities including Johannesburg, Cape Town, Luanda and Nairobi. Connecting flights to Europe can be made from Johannesburg, Nairobi and Cape Town.

4.3 Regional and Local Access

The Project area is located to the west of the town of Shakawe (on the Project boundary), on the road which runs from the B8 highway (Zambia – Walvis Bay, Namibia). The terrain is flat-lying, savannah grasslands, with the wetlands of the Okavango Delta to the east of the Project area.

Due to the tourism associated with the Okavango Delta, domestic charter flights are frequently available from Shakawe airport to Gaborone or Maun. Driving from Maun to Shakawe involves a 3 to 4 hour drive (380 km) by car on well-maintained tar roads.

4.4 Physiography and Climate

Botswana is generally classified as having a semi-arid climate due to the short rainy season. However, the relatively high altitude of the country in general and its continental situation gives it a subtropical climate.

The terrain in the vicinity of the Project is characterised by savannah grassland, which is generally flat-lying at an average elevation of between 950 and 1,050 m. The Tsodilo Hills in the southern part of the Gcwihaba PLs are a collection of small hills. They contain four main peaks; the largest of which, “Male”, being Botswana’s highest point at 1,400 m.

Gcwihaba has conducted exploration throughout the year, with no problems encountered due to inclement weather. It is anticipated that a mining operation in such an environment would not suffer from lost production due to surface water ingress into the mine workings. That said, detailed hydrological studies should mitigate such risks and it is the opinion of SRK that such risks are not material to the Project.

4.5 Regional Infrastructure and Local Resources

Botswana has a large coal mining industry which provides most of the country’s electricity. Despite this supply, the country is still not self-sufficient and currently demand is outstripping supply, causing power shortages throughout the country. There is access to mains electricity to the Project area from the town of Shakawe.

As the country is land-locked, the nearest port is Walvis Bay, Namibia, 900 km (direct) to the west. Currently, there is no rail link from northern Botswana to Namibia, however, there are plans to extend railways and roads into Botswana in order to service the area.

Mobile / cell phone networks and internet providers are available in the area.

Existing business infrastructure has developed in Botswana associated with tourism and the country’s most significant exports, including coal and diamonds.

4.6 Surface Rights

For the purposes of the Mineral Resource estimate, all rights to the Project are covered by the Prospecting Licences (“PL”s) as described in section 3. No additional licences are required at this stage of development of Xaudum.

5 HISTORY

Tsodilo, through Gcwihaba, was the first company to own a Prospecting Licence covering the Xaudum property in 2008. Prior to 2008, base metal exploration (in the form of soil sampling) in the area was conducted by the Government of Botswana, in addition to small-scale local quarrying of calcrete.

5.1 Historic Quarrying

A calcrete quarry lies inside the Block 1 area where the Xaudum Iron Formation (“XIF”) sub-cropped near to surface, shallowly buried below the sand and calcrete. It is believed the calcrete and limited weathered iron formation rocks were used for aggregate materials for small-scale construction. Iron was not smelted from the now outcropping XIF.

SRK visited the quarry site during the site visit in February 2014.

5.2 Previous Mapping and Surface Sampling

Between 1997 and 1999 a regional Ngamiland geochemical spoil sampling program was conducted by Botswana’s Department of Geological Surveys (“DGS”). This soil sampling geochemistry data was completed on a general sampling grid of 500 m (X) by 1000 m (Y). The following elements were analysed (probably using inductively-coupled plasma (“ICP”) analysis): Ag, Al, Ca, Cd, Co, Cr, Cu, K, mg, Mn, Na, Ni, Pb, and Zn. No details regarding the assaying methodology or quality control measures have been provided.

This data, along with the aeromagnetic geophysical survey (described below) was used by Gcwihaba to help define the base metal targets and thus helped with the decision to apply for the Metal (Base and Precious, PGM, and REE) licenses. The results of the assays have had no direct influence on exploration for iron, and have not been used for this MRE.

5.3 Previous Geophysical Surveys

5.4 Gravity Surveys

A gravity survey was carried out by the DGS between 1972 and 1973, which gave an overall density of 37 gravity stations per 100 km^2 for the entire country of Botswana. Most of the data were obtained along the available tracks with an accuracy of: ±1 km in latitude, ±5 m in altitude, and ±0.05 mGal in gravity measurement. Inaccessibility issues, particularly in the north of the country, meant that there were gaps in the survey.

A second gravity survey was conducted by Poseidon Geophysics between 1998 and 1999 which aimed to fill gaps in data coverage from the earlier 1972 to 1973 survey. Improvements in data quality associated with precise positioning using differential GPS have led to significant improvements in the quality of gravity data coverage. A total of 4,003 gravity stations on a 7.5 km grid were established with an accuracy of better than ±10 m in position, ±0.15 m in altitude, and ±0.03 mGal in gravity measurement.

5.5 Magnetic (airborne)

Regional aeromagnetic geophysical surveys over the district of Ngamiland were completed through a contractor by DGS in 2001. The survey was flown at a line spacing of 250 m and along a line sampling of approximately 8.1 m at a mean terrain clearance of 80 m. A split Cesium Scintrex VIW2321-CS with a resolution of 0.001 nanotesla (nT) was used for data acquisition. A post processing global positioning system (“GPS”) mode was used for all flight recoveries. The necessary corrections were completed before the data was interpolated onto a 62.5 m grid using the bi-directional spline gridding available in the Geosoft Oasis Montaj software package.

Analysis of the data suggested a very strong north striking magnetic belt, approximately 40 km along strike and 10 km in width in the Xaudum area. A structure and lineament map, showing the basement fabric, was generated as a result of the survey. Gcwihaba utilised the magnetic data to assist with defining Prospecting Licence boundaries.

5.6 Versatile Time-Domain Electromagnetics (“VTEM”)

Geotech (Pty) Ltd was contracted by DGS in 2007 to undertake an airborne time domain electromagnetic survey using their Versatile Time-domain Electromagnetic (“VTEM”) system. This system is a helicopter-borne electromagnetic platform that employs a time domain configuration consisting of a towed coincident transmitter and receiver loops. The receiver sits at the centre of 4-turn transmitter coil with a diameter of 26 m. The current repletion rate was 25 Hz with a nominal current of 206 amperes. A radar altimeter system located at the belly of the helicopter recorded the ground clearance. Position information was collected using differential GPS. Data was collected at a line spacing of 2,000 m and along the line sampling interval of 2.5 m at an average ground clearance of 50 m. Thirty-four logarithmically spaced time gates ranging from 21 μs to 7828 μs were used to record the signal during the system’s off-time.

Processing of the data was performed in-house and all the lines processed in the area totalled 1,545 km. The inversion method called the Laterally Constraint Inversion (“LCI”) was used to identify conductors and the S-transform technique used to recover conductive depth images (“CDI”s) obtained along each profile by stitching results from individual stations.

6 GEOLOGICAL SETTING AND MINERALISATION

Sections of the following geological descriptions are taken from the following geological papers, press releases and internal reports: Beukes (2012), De Wit (2009), De Wit (2011), De Wit (2012), Godfroid & Goswell (2012), Hitzman (2012), Jeffcoate (2014), and Tsodilo Resources Ltd (2014).

6.1 Regional Geology and Tectonics

The geology of the region comprises a thick late Neoproterozoic sequence of sediments, the Katanga Supergroup (ca. 750 - 560 Ma), consisting of metamorphosed (up to amphibolite grade, with local kyanite) and deformed diamictites, sandstones, silts and substantial carbonates, each interbedded with intermittent banded ironstone formation (“BIF”). These metasediments overlie with profound unconformity a complex granitoid Archaean-Proterozoic basement. The top of the sediment sequence must be younger than 541 Ma, as they are intruded by metamorphosed mafic sills of that age. The sediments were severely deformed and tectonically displaced in the Southern African (Damaran-Lufilian-Zmabezi) orogeny between 750 Ma and 540 Ma, as demonstrated by intense local cleavages, and shear zones separating suspected granite gneiss slices, as well as large scale overturning observed within the core sequences. The Project is within a geological region that forms a Neoproterozoic suture zone between the Kalahari and Central African Shields; the general geological setting is shown in Figure 6-1.

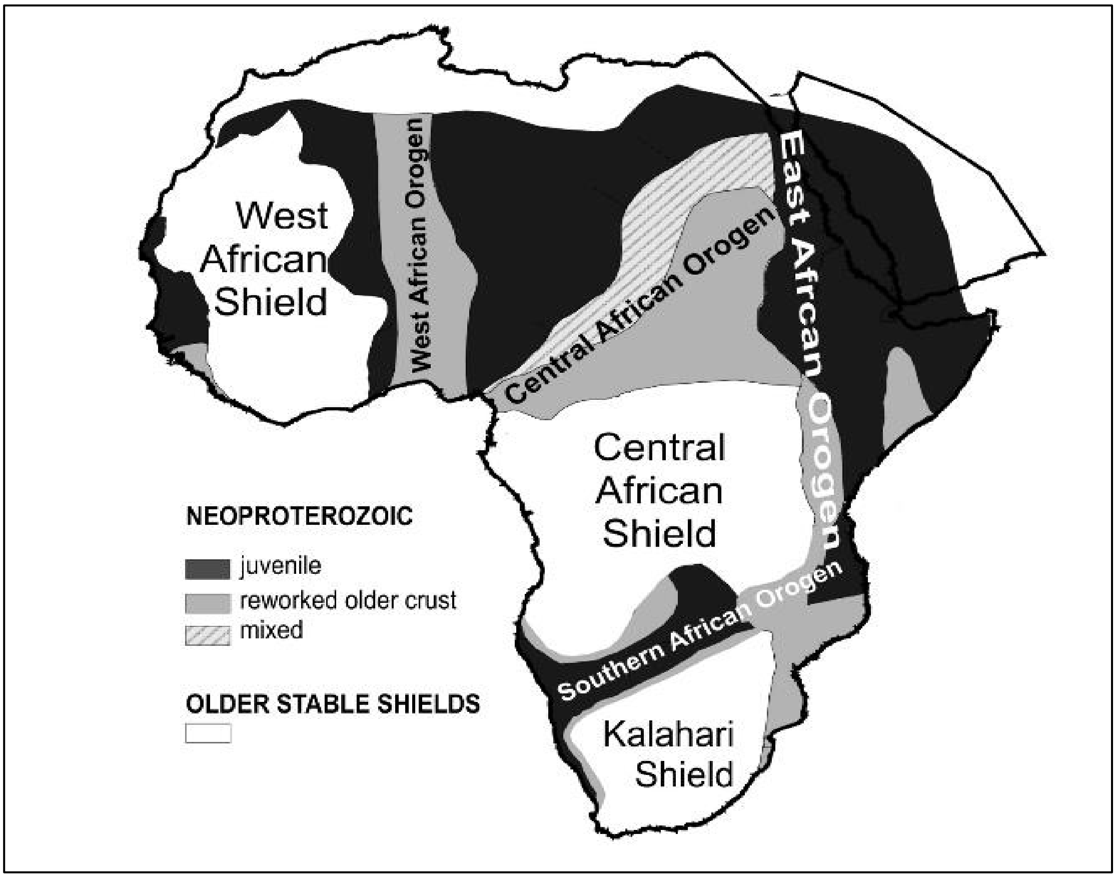


Figure 6-1: Major African tectonic terranes (Source: De Wit, 2009).

The basement rocks of the area recognised to date are Neoarchaean to Palaeoproterozoic age (ca. 2.6 and 2.0 Ga, respectively). However, detrital zircons in the Neoproterozoic succession indicate also that older and younger granitic basement (ca 2.7 and 1.0 Ga) also contributed as a source terrain for the sediments. The diamictites have detrital zircons of 754 Ma, which are likely related to widespread rhyolite volcanics preserved in Namibia (Naauwpoort-Okakuya Formations in the Otavi Fold Belt of the Summas Mountains that have yielded ages of 747 -759 Ma). Thus, by inference, the Tsodilo diamictites are likely equivalents of the Chuos diamictites and thus equivalents of the global Sturtian Glaciation event.

The entire Tsodilo sequence is intruded by a complex set of gabbro-mafic sills and dykes, which display in places distinct hydrothermal alteration along the contacts of the sediments, displaying ‘skarn-like’ metasomatic reactions (coarse garnet, quartz-epidote-rutile-magnetite-sulphides). These intrusions are early Cambrian in age (ca. 540 Ma).

This general geochronology and lithostratigraphic sequence resembles closest those from the Lufilian Arc in Zambia, especially the Kalumbila sequence as reported by Steven and Armstrong (2003).

The Project area sits in between two well-established mining districts in Zambia-DRC and Namibia; these districts are related to the Lufilian Arc and the Damaran Belt, respectively. De Wit (2009) suggests a north-easterly continuation of the ophiolites of the Matchless Amphibolite Belt (“MAB”) within the Damaran Belt extends into the Project area through trans-current shearing. The ophiolites may represent the source of metals associated with metalliferous deposits in the area. Figure 6-2, Figure 6-3 and Figure 6-4 show the interpretation by De Wit (2009), with the MAB extension (“MABE”) in Botswana shown between Namibia and Angola-Zambia.

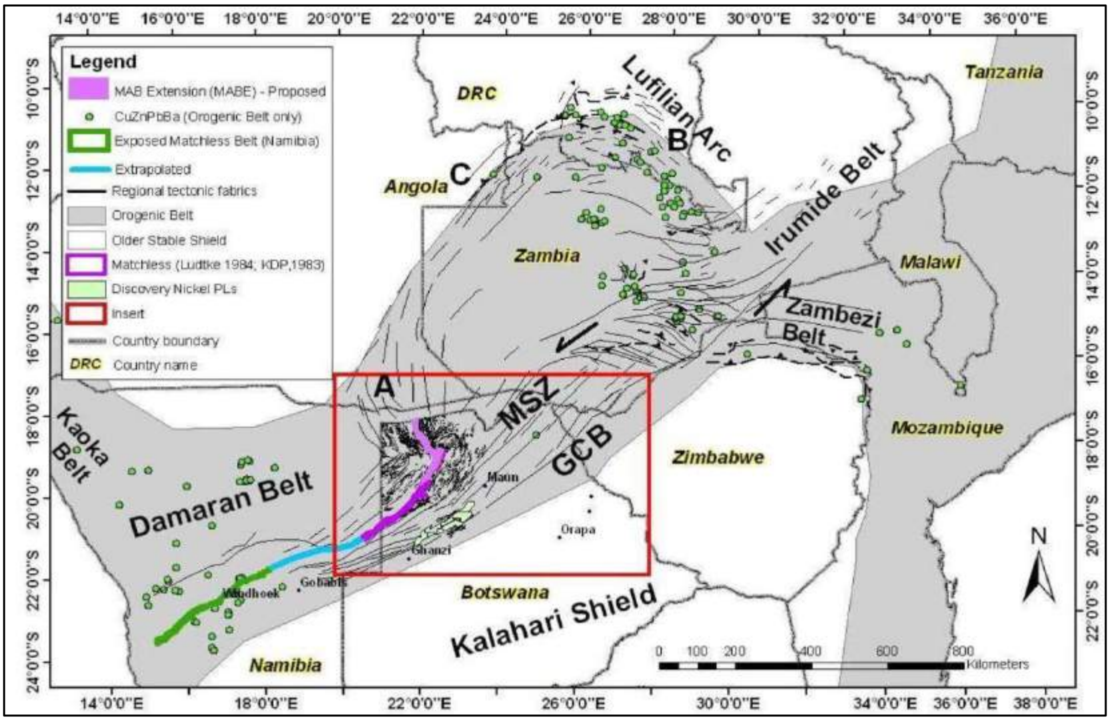


Figure 6-2: Southern African Orogeny tectonic map*. Red insert - Figure 6-3 (Source: De Wit, 2009).

**MSZ = Mewmbeshi Shear Zone; GCB = Ghanzi-Chobe Belt; MAB = Matchless Amphibolite Belt.*

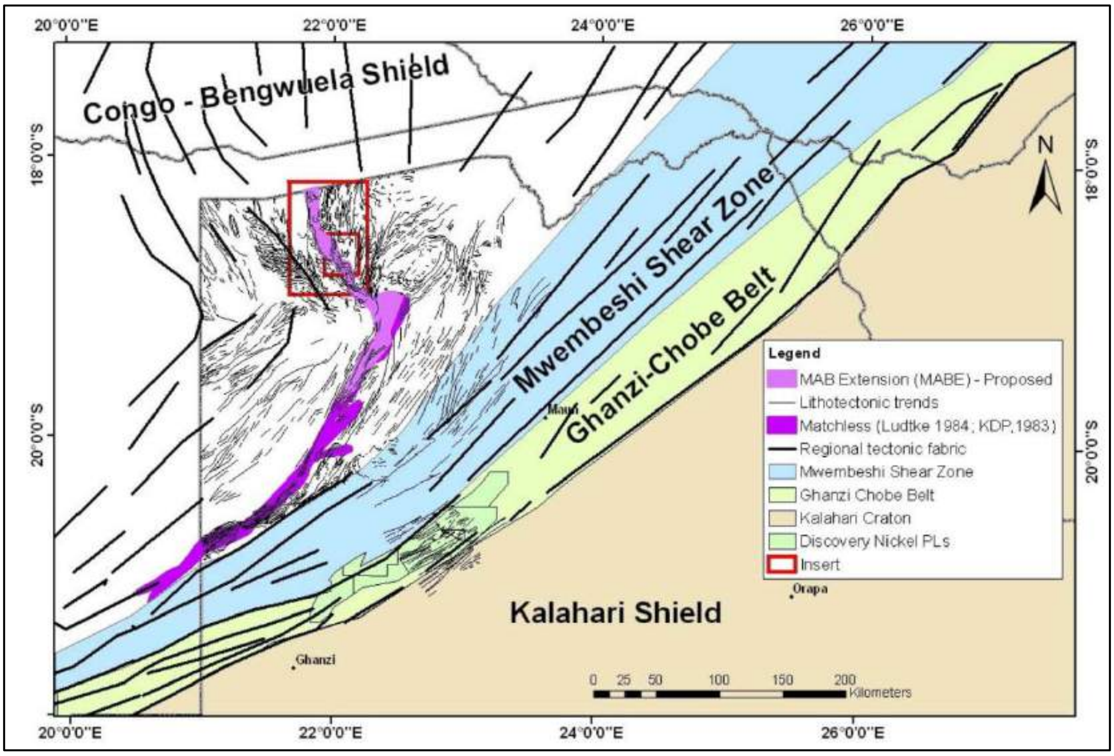


Figure 6-3: **Southern African Orogeny tectonic map zoomed from Figure 6-2* (Source: De Wit, 2009).**

**Red inserts not shown in this report*

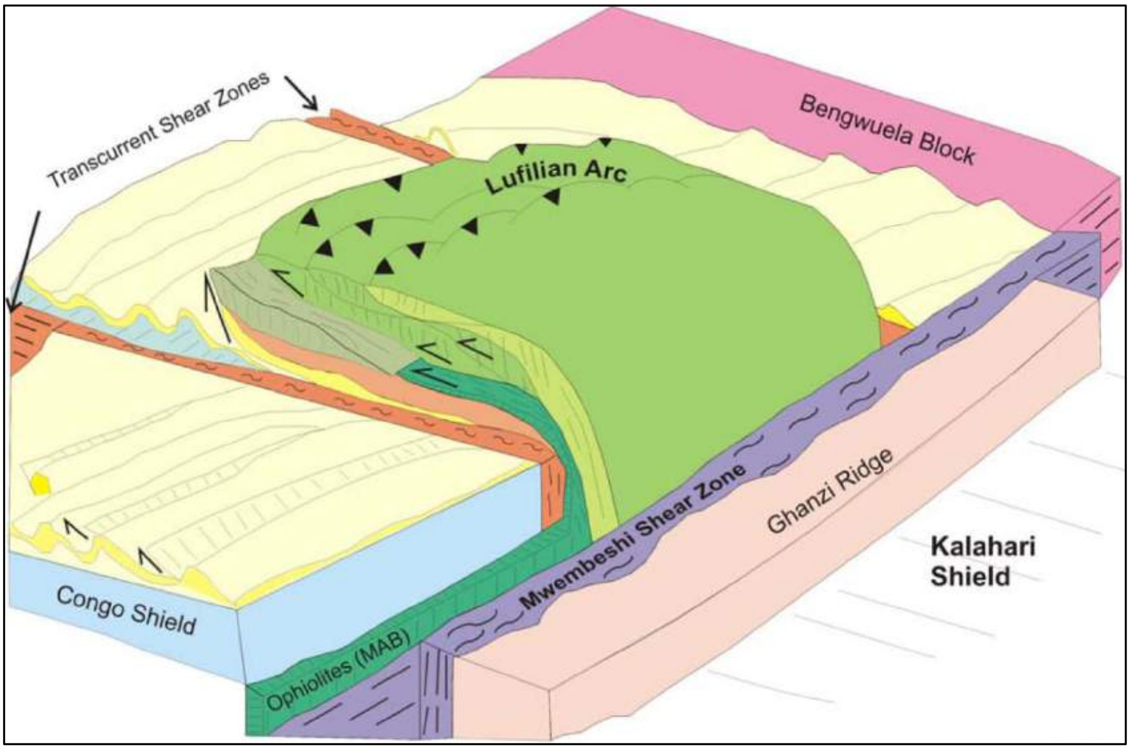


Figure 6-4: **Schematic 3D interpretation of orogenic belt between the Archaean Kalahari and Congo Shields (Source: De Wit, 2009).**

6.2 Local Geology and Deposit Stratigraphy

The local geology comprises a sedimentary succession (part of the Katangan Supergroup) metamorphosed to amphibolite grade, as well as various intrusives and granitic basement; these lithologies can broadly be correlated with those in the Zambian-Congolese Copperbelt. The XIF is contained within the Grand Conglomerate unit. Figure 6-5 to Figure 6-7 illustrate the general stratigraphy of the Tsodilo licence areas.

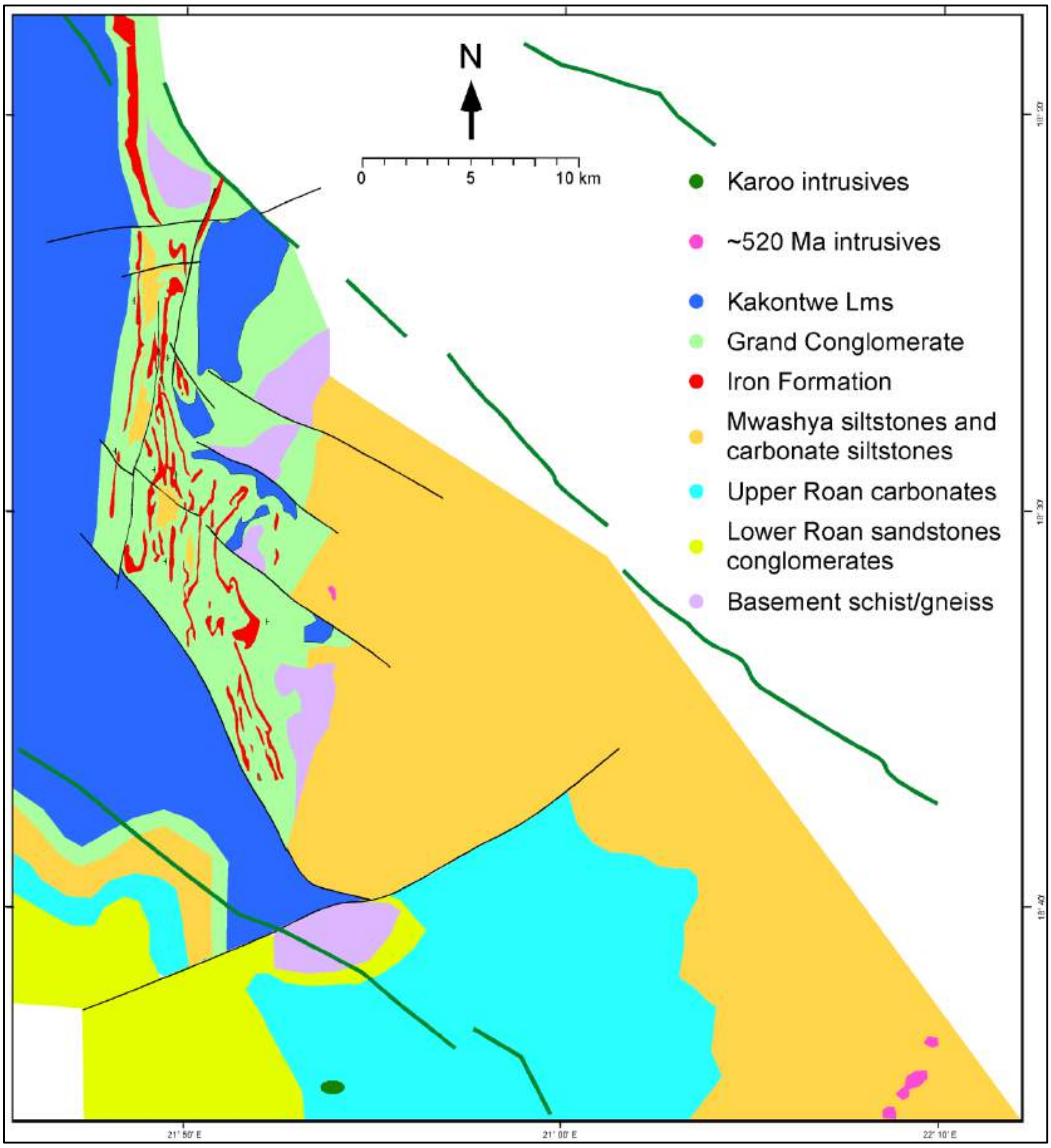


Figure 6-5: **Local geology map showing main stratigraphic units and faults* (Hitzman, 2012).**

**Note: blank area to the northeast depicts the Okavango Delta.*

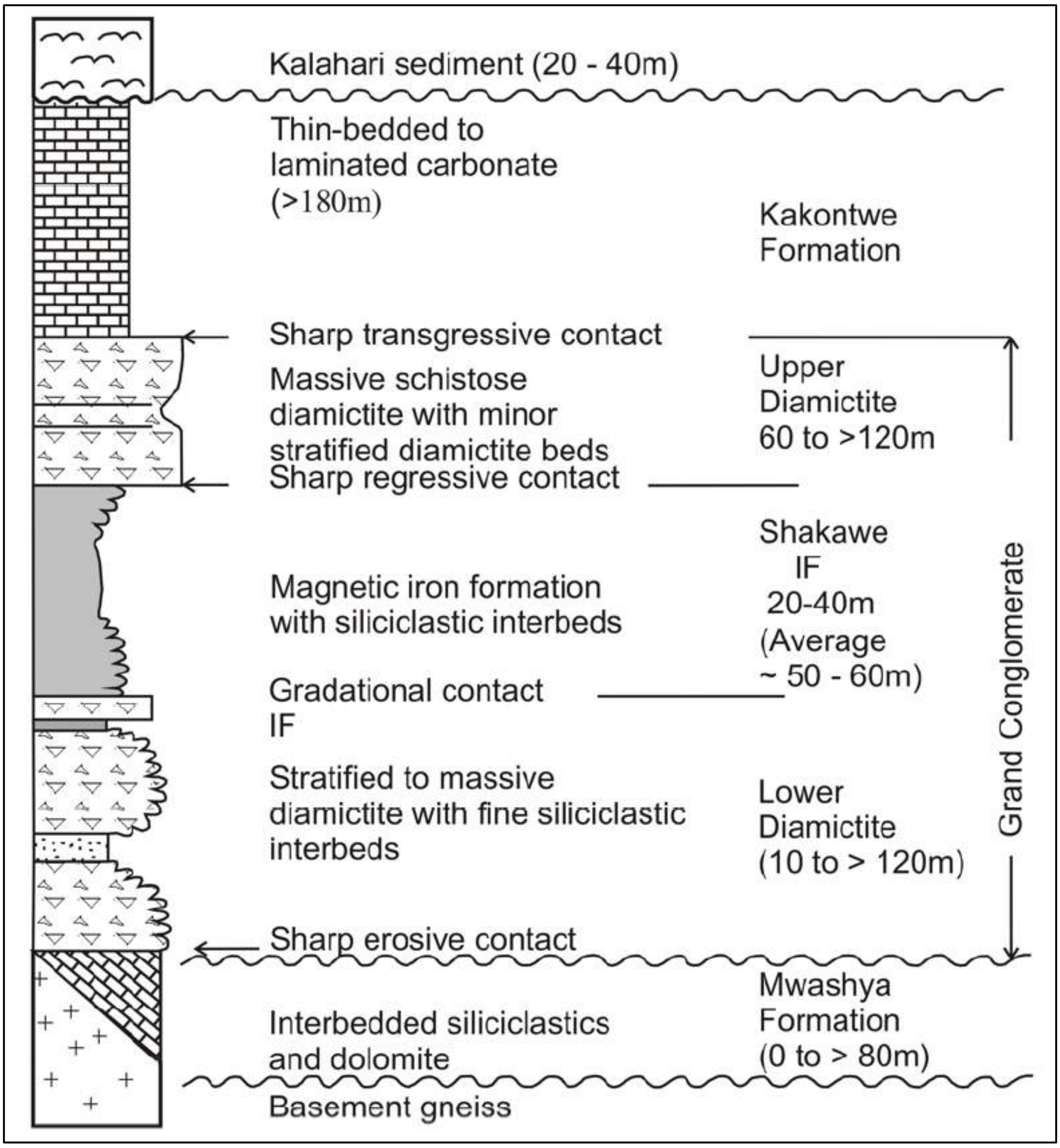


Figure 6-6: **Stratigraphic column in Shakawe area * (Source: Beukes, 2012)**

**Note: IF = Xaudum / Shakawe Iron Formation*

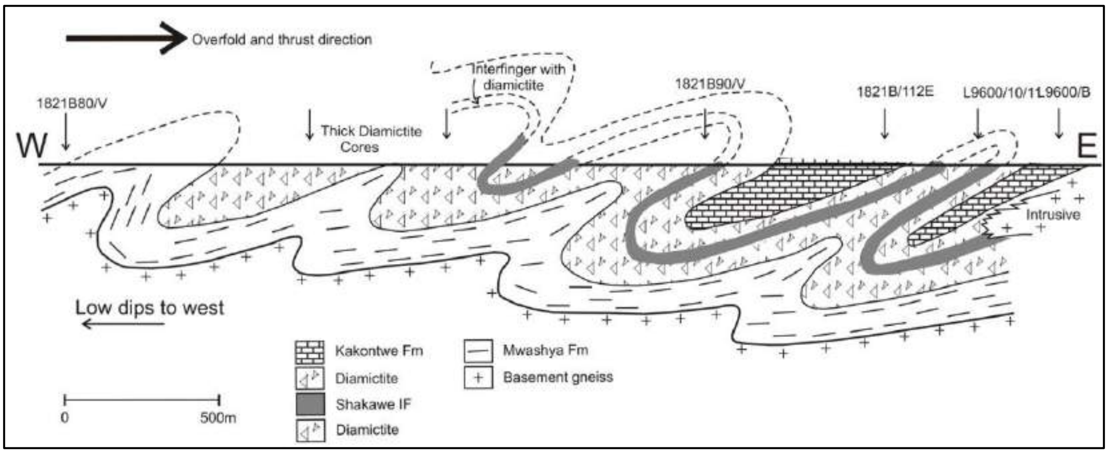


Figure 6-7: **Geological cross-section in Shakawe area* (Source: Beukes, 2012)**

**Note: Shakawe IF = Xaudum / Shakawe Iron Formation*

A more detailed lithostratigraphic column, describing each of the units, was devised by Godfroid & Goswell (2013), as shown in Figure 6-8.

Figure 6-9 shows a stratigraphic comparison between DRC-Zambian Copperbelts and the XIF. It reflects the similar stratigraphic successions observed throughout the region, and illustrates the potential for multiple metalliferous deposits to be identified along strike with future exploration.

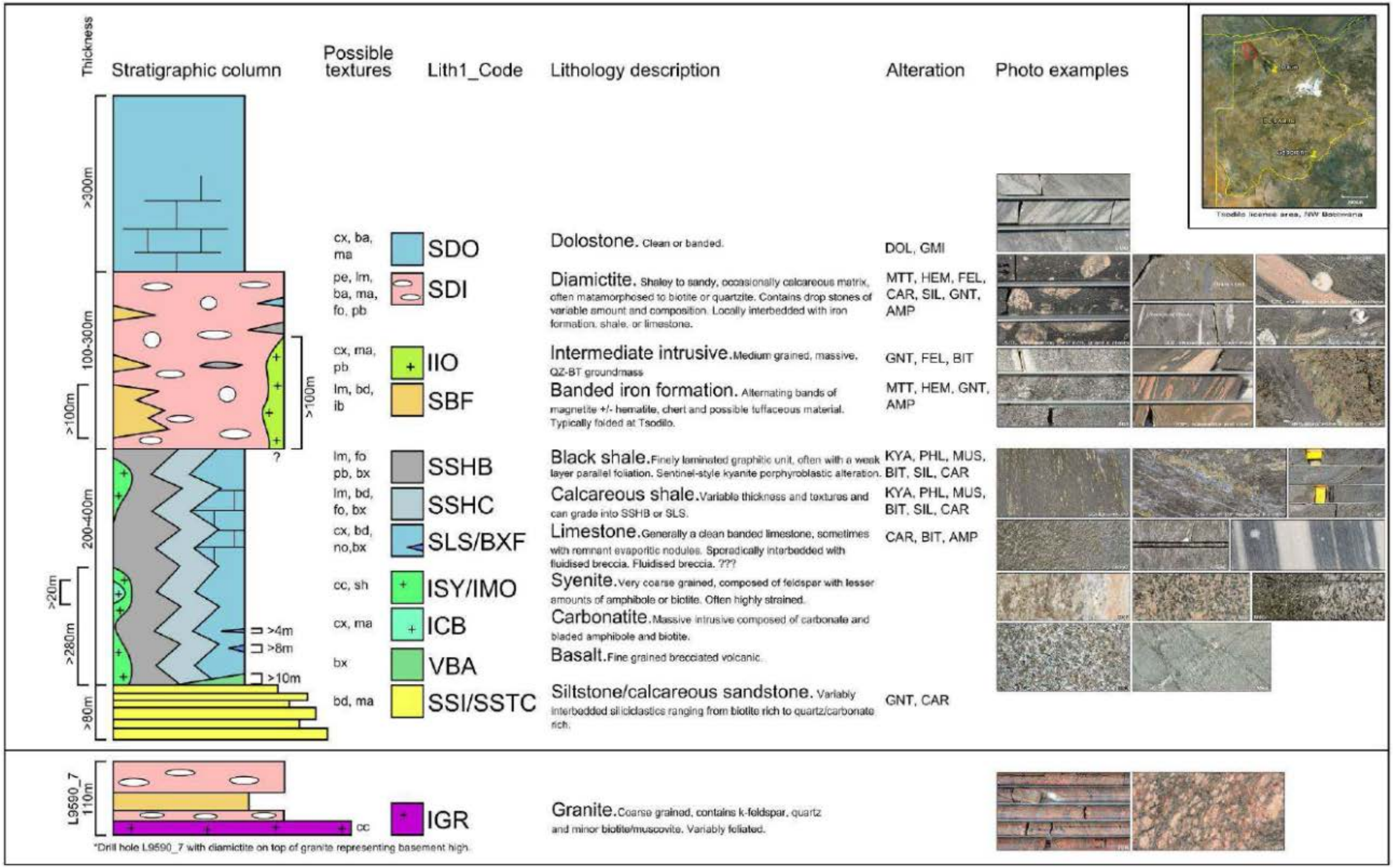
The basin depositional regime appears to be controlled by two main sedimentary inputs and a minor secondary sedimentary input (inference based on current meta-sediments (amphibolite grade) and other similar age and style deposits, Jeffcoate 2014:

a. Major - Fe mineral precipitation in the basin (along with assumed precursory jasperlite silicate precipitation) which is the presumed origin of the Fe minerals that makes up the high magnetite component of these post metamorphic mineralised units.

b. Major - a shaly to sandy pelitic sediment input into the basin, which is presumably dominated by terrigenous sediment, which is derived from the erosion of the hinterland proximal to the depositional basin. Where the high degree of terrigenous material comes from the large amounts of erosion as a result of the glacial activity during this time. The drop stone clasts are grouped within this input.

c. Minor – a shaly calcareous sedimentary material, which presumably is a mixture of terrigenous sediments and calcareous material from the marine environment.

The degree of Fe mineralisation is mainly controlled by the Fe input into the basin, and the concentration of Fe minerals that can be diluted somewhat by the degree of contribution from the terrigenous-pelitic sedimentary input.



Possible textures	Lith1_Code	Lithology description	Alteration
cx, ba, ma	SDO	**Dolostone.** Clean or banded.	DOL, GMI
pe, lm, ba, ma, fo, pb	SDI	**Diamictite.** Shaley to sandy, occasionally calcareous matrix, often matamorphosed to biotite or quartzite. Contains drop stones of variable amount and composition. Locally interbedded with iron formation, shale, or limestone.	MTT, HEM, FEL, CAR, SIL, GNT, AMP
cx, ma, pb	IIO	**Intermediate intrusive.** Medium grained, massive, QZ-BT groundmass	GNT, FEL, BIT
lm, bd, ib	SBF	**Banded iron formation.** Alternating bands of magnetite +/- hematite, chert and possible tuffaceous material. Typically folded at Tsodilo.	MTT, HEM, GNT, AMP
lm, fo pb, bx	SSHB	**Black shale.** Finely laminated graphitic unit, often with a weak layer parallel foliation. Sentinel-style kyanite porphyroblastic alteration.	KYA, PHL, MUS, BIT, SIL, CAR
lm, bd, fo, bx	SSHC	**Calcareous shale.** Variable thickness and textures and can grade into SSHB or SLS.	KYA, PHL, MUS, BIT, SIL, CAR
cx, bd, no,bx	SLS/BXF	**Limestone.** Generally a clean banded limestone, sometimes with remnant evaporitic nodules. Sporadically interbedded with fluidised breccia. Fluidised breccia. ???	CAR, BIT, AMP
cc, sh	ISY/IMO	**Syenite.** Very coarse grained, composed of feldspar with lesser amounts of amphibole or biotite. Often highly strained.	
cx, ma	ICB	**Carbonatite.** Massive intrusive composed of carbonate and bladed amphibole and biotite.	
bx	VBA	**Basalt.** Fine grained brecciated volcanic.	
bd, ma	SSI/SSTC	**Siltstone/calcareous sandstone.** Variably interbedded siliciclastics ranging from biotite rich to quartz/carbonate rich.	GNT, CAR
cc	IGR	**Granite.** Coarse grained, contains k-feldspar, quartz and minor biotite/muscovite. Variably foliated.	

*Drill hole L9590_7 with diamictite on top of granite representing basement high.

Figure 6-8: Lithostratigraphic column of the Project area (Source: Godfroid & Goswell, 2013).

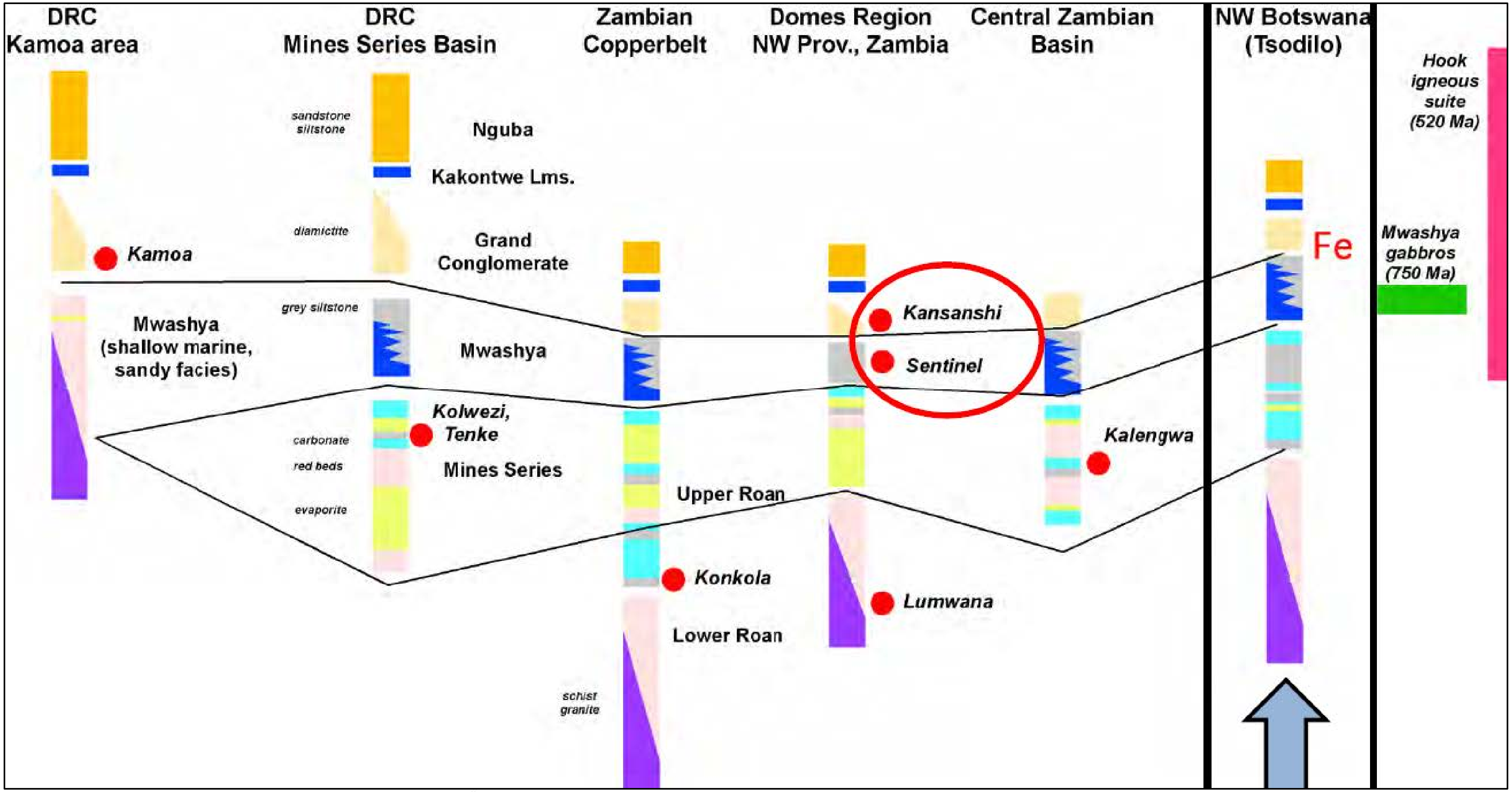


Figure 6-9: Stratigraphic horizon comparison between DRC-Zambian Copperbelts and Xaudum (Tsodilo) (Source: Hitzman, 2012)

6.3 Mineralisation

The XIF geodomains occur within and assume ‘Grand Conglomerate’ equivalent diamictite horizon, which is referred to as a diamictite schist (geodomain DIA). These diamictites, which are interpreted as the Grand Conglomerate equivalents, are a glacial origin marker horizon within the Neoproterozoic of the region.

Drilling to date has confirmed that the XIF is comprised of two major and one minor mineralised fresh material type (geodomains), along with two weathered material types:

a. Magnetite banded (banded iron formation (“BIF”)) material (Figure 6-10). This material is coded as MBA (for magnetite banded) when fresh. MBA is generally well banded with dark (magnetite rich) bands and light (quartz and silicate rich) bands. It is suggested that the MBA geodomain generally formed from a cherty-shaley BIF which was subsequently regionally metamorphosed and recrystallized to amphibolite facies.

b. Weathered magnetite banded material, coded MBW, represents near surface partially weathered MBA material (Figure 6-11). Clay development is limited and the material is not observed to be “sticky” with clays.

c. Magnetite schist, also termed magnetite diamictite schist (Figure 6-12), coded DIM (for diamictite magnetic). DIM has a very similar appearance to the un-mineralised diamictite (coded DIA), however, the DIA is non-magnetic (Figure 6-13). DIM is generally a well-foliated schist with a high percentage of magnetite. There is no obvious segregation of magnetite as seen in MBA, so whilst it does not have a classic BIF form, it is still an iron formation material. The genetic origin is suggested as a ferruginous, silty to sandy shale or semi-pelitic sediment with varying contents of Ca and Mg, which has been metamorphosed to amphibolite facies. The leucocratic felsic clasts are believed to represent pebbles, indicating a glacial origin and so have been termed diamictites.

d. Weathered magnetite schist, coded DMW, represents near surface partially weathered DIM material. The magnetite is variably oxidised to haematite (martite) and goethite but not fully decomposed. As with MBW, clay development is limited.

e. Minor unit – magnetite garnet schist, coded MGS. Magnetite and Garnet are the dominant minerals, however, abundance is quite variable. MGS can have a sub-banded to sub-foliated nature, and can appear similar to MBA when magnetite is dominant. The genetic origin is suggested as an iron-rich calcareous (±Mg) shaly semi-pelagic sediment, which has been metamorphosed to amphibolite facies.

Figure 6-10: Banded magnetite - geodomain MBA (Source: SRK site visit, 2014).

Figure 6-11: Weathered Banded magnetite - geodomain MBW (Source: SRK site visit, 2014).

Figure 6-12: Diamictite Magnetite Schist - geodomain DIM (Source: SRK site visit, 2014).

Figure 6-13: Diamictite Schist - geodomain DIA (Source: SRK site visit, 2014).

Geodomains MBA, DIM, and MGS are magnetic, although MBA is significantly magnetic and can be considered a high grade magnetite domain. DIM appears to have a widespread distribution in certain areas but is rare and not seen in other areas where MBA is more dominant. DIM can also be interlayered with both MBA and MGS. In the south of the currently explored areas, DIM dominates over MBA. DIM is therefore considered a significant exploration target with it being widespread through the XIF, albeit a lower grade when compared to the MBA.

All XIF geodomains are believed to represent metamorphosed chemical sediments that have been highly deformed, resulting in strong and well developed banding in the MBA and a foliation within the DIM and MGS. The magnetite mineralisation is more disseminated within the DIM and MGS in comparison to the banded nature of MBA.

In some locations, the MBA and MGS appear to alternate within larger zones of DIM. This interlayering is suggested to represent original sedimentary layering within the mineralisation zone. This variation is possibly due to local facies changes within the depositional basin. Deformation, folding and potential thrusting have contributed to the variable nature and distribution of the mineralisation. Defining detailed stratigraphy at a local scale and true thicknesses of the XIF mineralisation is therefore complicated, particularly at this relatively early stage of resource drilling. The course grain-size nature of the MBA and DIM make this material favourable to magnetic separation and concentration.

6.4 Petrographic and Mineralogical Studies

Due to the complex geology and mineralogy of the XIF, a large number of petrographic and mineralogical studies have been undertaken on the XIF to date. The aim of the studies has been to understand how the mineralisation styles were formed and the relationship to each other. The understanding of the mineralisation, and the creation of the geodomains described above, has been based on these studies along with the assaying and magnetic susceptibility measurements.

6.5 Structural Geology

Several geological and structural logging and interpretation programs have been completed on the Project to date. Three of the most recent reports are discussed below.

6.6 Colorado School of Mines Structural Geological Analysis (Nelson 2012)

A report on the structural geology of the Xaudum Project was undertaken by Colorado School of Mines (Nelson, 2012). The results of the study are described below.

Structural logging of cores was undertaken in the northern portion of the licence area. This consisted of observation and description of various core-scale structures as well as construction of dip logs in vertical drillholes. This analysis indicates that the structure of the prospect area is very complex and likely developed by both early extensional tectonism during basin formation, as well as during subsequent poly-phase syn-metamorphic deformation likely formed during crustal shortening tectonism. During the crustal shortening tectonism, two principal deformation events (D1 and D2) are recorded in the structures, and likely formed during a progressive deformation event rather than during two deformation events separated by a large time interval.

Based on 2011 logging (Hitzman, 2011) and the structural logging of 2012 (Nelson, 2012), a series of maps were produced to show the distribution of three structural features in core: high versus low dip domains, folded domains, and stratigraphically overturned domains. These maps show that high-dip domains, folded domains, and overturned sections all are concentrated along the eastern magnetic anomaly just west of the proposed palaeo-normal fault. This is consistent with strong deformation having developed in the hanging wall of this normal fault when it was inverted (reactivated) as a reverse fault. In this model, the footwall acted as a buttress against which strong folding occurred and resulting in a steeply dipping iron formation section (Figure 6-14).

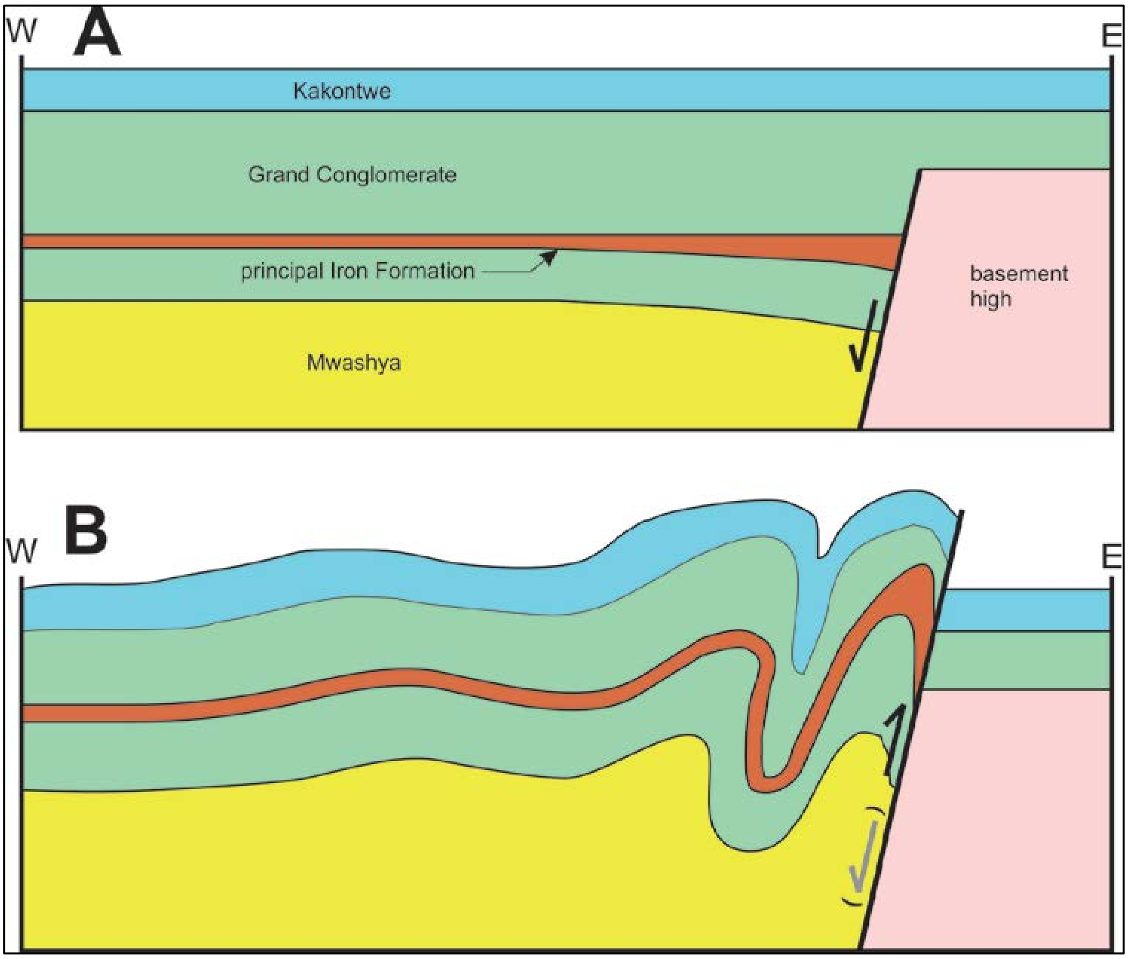


Figure 6-14: Schematic cross-section of northern XIF geological structure* (Source: Nelson, 2012)

**Note: Cross sections showing schematic structural model before (A) and after (B) Lufilian crustal shortening deformation (Neoproterozoic). Stratigraphic thickness are only schematic and not to scale. Note that reverse faults associated with folding are not shown. Approximate line of section passes through drillhole 1821B112v.*

6.7 Colorado School of Mines Section 1821 B115 Interpretation (Hitzman 2013)

A structural logging and interpretation exercise was undertaken by Colorado School of Mines (Hitzman, 2013). The results of the study are described below.

Hitzman (2013) structurally logged holes along the 1821 B115 and 1821 B118 section lines, which were chosen as they were considered to show a complete stratigraphy and provide a critical understanding of the geometry and geology of the XIF.

Sectional interpretation showed a sub-vertically dipping XIF unit in the centre of the section, which becomes a folded syncline towards the west and with depth. The XIF appears to thin towards the west, with a true thickness of approximately 20 – 25 m in the centre and thinning to 2 m in the west. The dramatic thinning may account for the weakened geophysical signals towards the west. The variable thickness is thought to be a primary structure, associated with a major syn-sedimentary normal fault to the east (as shown in Figure 6-14).

6.8 SRK Structural Review 2014

In order to assist with the exploration program and Mineral Resource estimate, SRK undertook a high-level internal (unpublished) desktop study of Xaudum's structural geology in January 2014. SRK highlighted additional logging requirements and recommend that a detailed local scale structural study be undertaken in future updates to the geological model.

6.9 Weathering

Shallow chemical weathering affects the lithologies directly under the Kalahari Sand cover. The weathering is non-pervasive and results in a rusty coating of the XIF, rather than material decomposition. The weathering alters magnetite into haematite and other iron oxides locally, potentially affecting the geometallurgy and processing of the material when mined. However, the average vertical depth of weathering varies between 0 and 60 m in the Block 1 area, and averages approximately 17 m; it is not considered a material volume of material when compared to the fresh material.

7 DEPOSIT TYPES

The XIF has been identified as a Rapitan style BIF of Neoproterozoic age. Neoproterozoic BIF formations have been proposed to have formed during or in the immediate aftermath of the so called Neoproterozoic “Snowball Earth” state at that time (considered to be around 0.5-0.8 Ga in age). Other examples of Neoproterozoic BIF include the Rapitan Group in northwest Canada; the Yudnamutara Subgroup, Braemar Iron Formation, Australia; the Chuos Formation, Namibia; and the Jacadigo Group, Brazil, Urucum district.

8 EXPLORATION

8.1 Introduction

This section briefly describes the nature of the exploration data available for the Project. With the exception of the ground geophysical survey, exploration activities have been through drilling methods. The historic base metal (not iron) geochemical sampling and geophysical surveys are described in section 5, however, the potential for iron mineralisation in the area was previously unknown prior to exploration by Gcwihaba / Tsodilo.

A description of the sampling methods, sample quality and the samples collected is set out in section 10 of this report, on sample preparation, analyses and security.

All available and valid exploration data as at July 2014 has been used to generate this maiden Mineral Resource estimate for the Project, which is fully disclosed in section 13.

8.2 Geochemical Surface Sampling

Within Gcwihaba's PLs, FQM has conducted surface sampling in the Kalahari Sand overburden material in order to identify targets for copper mineralisation. The results of this surface sampling have not been utilised for this MRE.

8.3 Geophysical Surveys

8.4 Magnetic (ground)

The Company undertook an in-house ground magnetic survey beginning in 2008, surveying at 100 m gridline spacing north-south in the lower dogleg prospect (separate to the XIF). These survey parameters were changed in 2010 to 50 m gridline spacing, at approximately 5 m station spacing in an east-west direction to cut across the strike of the anomaly when the survey shifted to the north XIF. Three Cesium Vapor magnetometers were used as a roving unit to collect data along survey lines, whilst a stationary Proton Precession magnetometer was used as a base to correct for diurnal changes. This campaign is still on-going and to date, 15,573 line kilometres are completed, covering a total area of 480 km^2. Interpretation of the iron formation was completed in-house and Figure 8-1 shows the transformed to the pole image of the Total Magnetic Intensity ("TMI") data.

These ground magnetic results were inversion modelled (2nd vertical derivative intensity signal), creating 3D surfaces of potential magnetic susceptibility. These surfaces, shown in Figure 8-2, are used on cross section for drillhole planning purposes and interpretation validation.

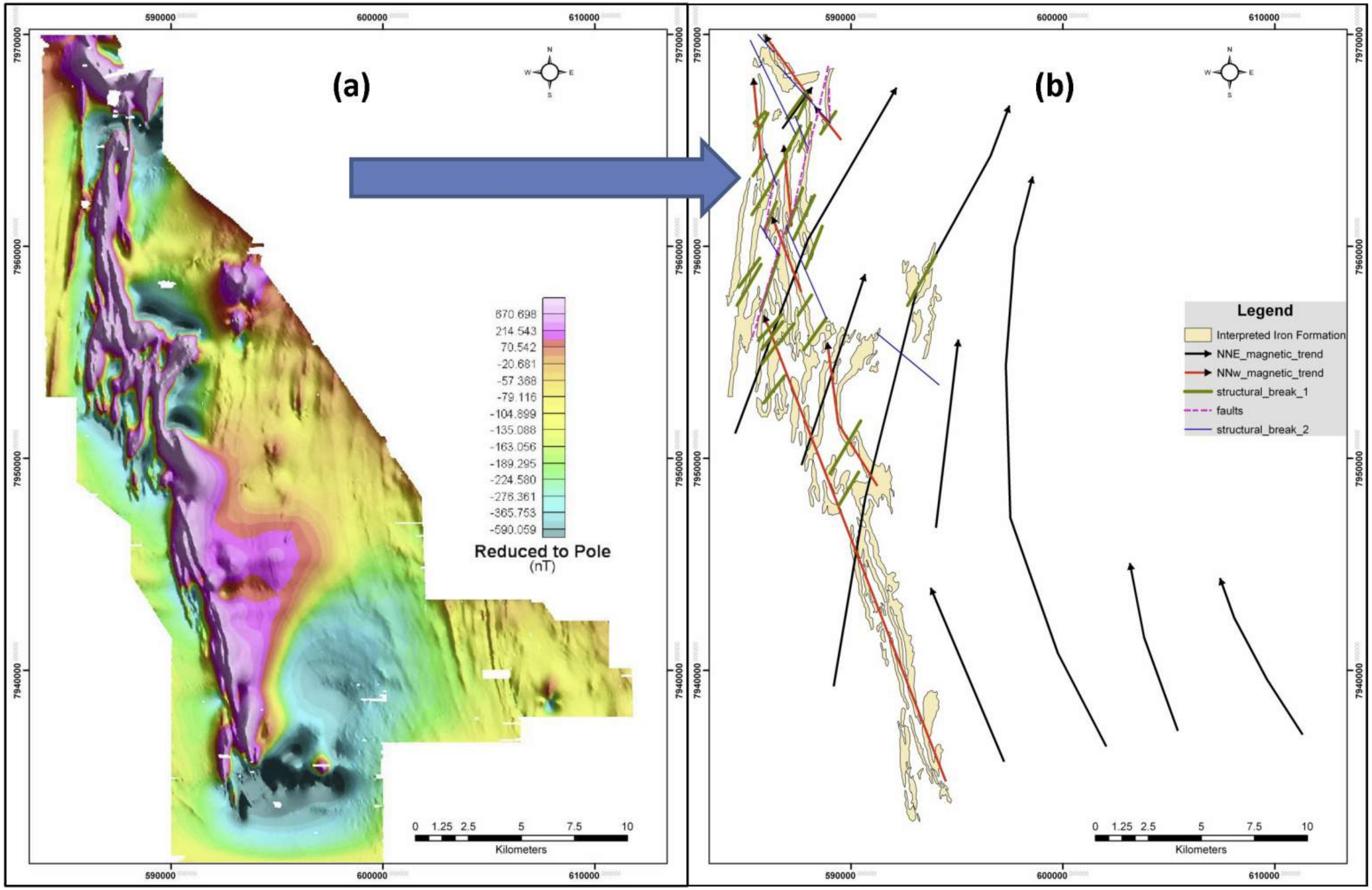


Figure 8-1: (a) Reduced to Pole data and (b) interpreted iron formation outline, with interpreted magnetic trends (Source: Tsodilo, 2008)

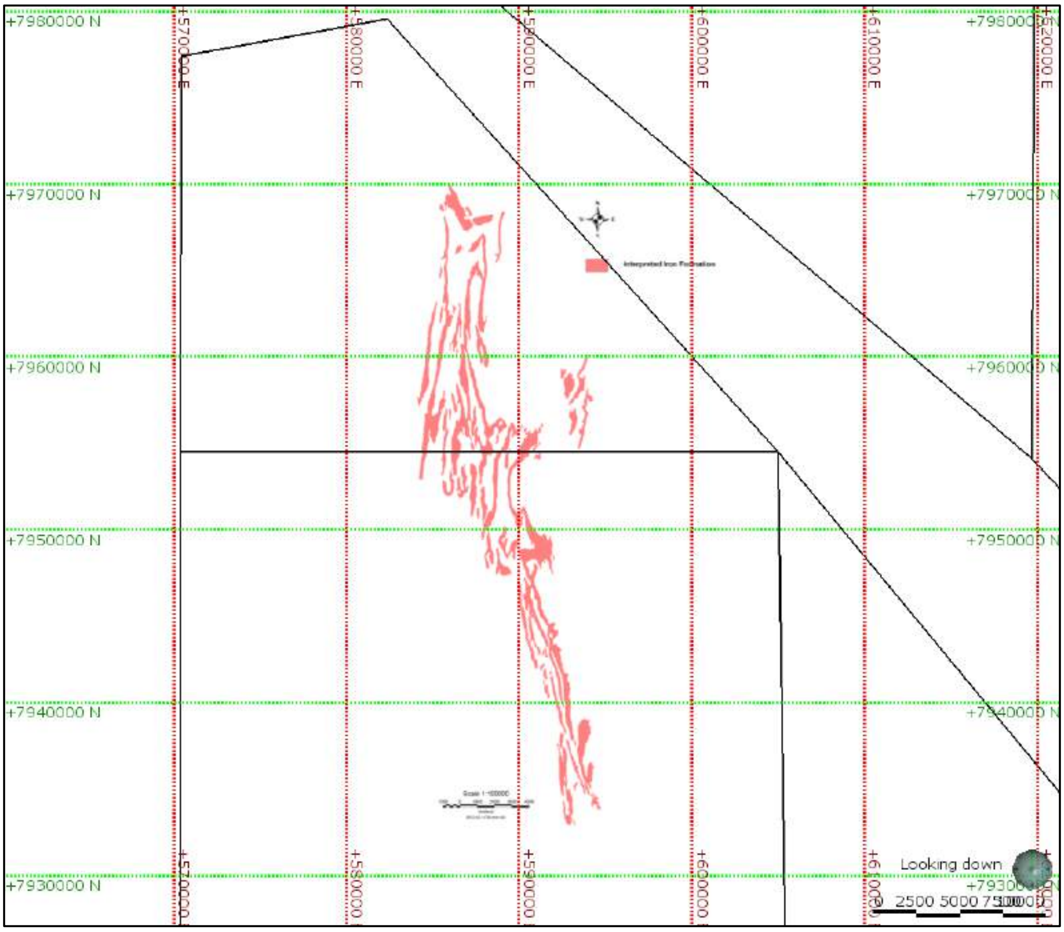


Figure 8-2: **Ground magnetics inversion-modelled interpreted XIF outline within PL386/2008 (top) and PL387/2008 (bottom) (Source: SRK, 2014)**

8.5 FQM Surveys

FQM commissioned Spectrum Air Ltd ("Spectrum") to conduct airborne electromagnetic ("EM"), magnetic and radiometric surveys to be flown over all of Gcwihaba metal PLs in the Xaudum regional area in late 2013. The survey was conducted over three blocks with a gridline spacing of 1,000 m, plus other areas were surveyed at 500 m and 200 m at a higher resolution. Xaudum infill (covering the Block 1 and 2 areas) was surveyed with 200 m gridlines, and Xaudum 13a and 13b were surveyed with 500 m gridlines. In total the surveying covered 11,713 line kilometres.

A large number of good lithological conductors trending over considerable distances were detected under the Kalahari sediments and interpreted for conductance, dip, depth etc. This information was used for regional geological mapping and for planning detailed surveys. Some major structures, conductive metasediments, possible basement areas and thick pre-Kalahari channels were detected in this regional survey.

Figure 8-3 shows the EM Block at 1,000 m grid EM data in relation to Gcwihaba's PLs and the Xaudum Block 1 and 2 areas. Figure 8-4 shows the 200 m Xaudum infill grid EM data in relation to Gcwihaba's PLs and the Block 1 and 2 areas. The magnetic intensity surveys show similar general signatures to the EM results, however, different structures can be identified. The more detailed ground magnetic survey was the primary tool for exploration planning.

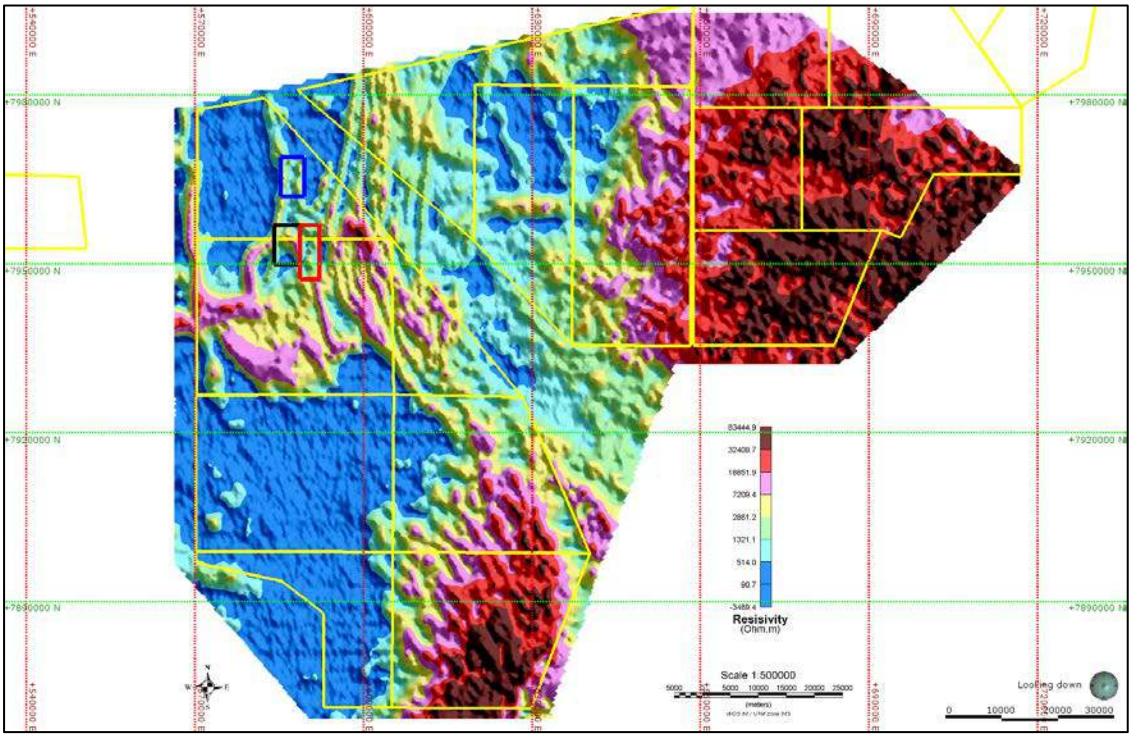


Figure 8-3: **Xaudum Block EMZ7 survey data, showing Gcwihaba's PLs (yellow) along with Block 1 (blue) and Block 2 (a: red; b: black) areas (Source: EM FQM Survey, 2014)**

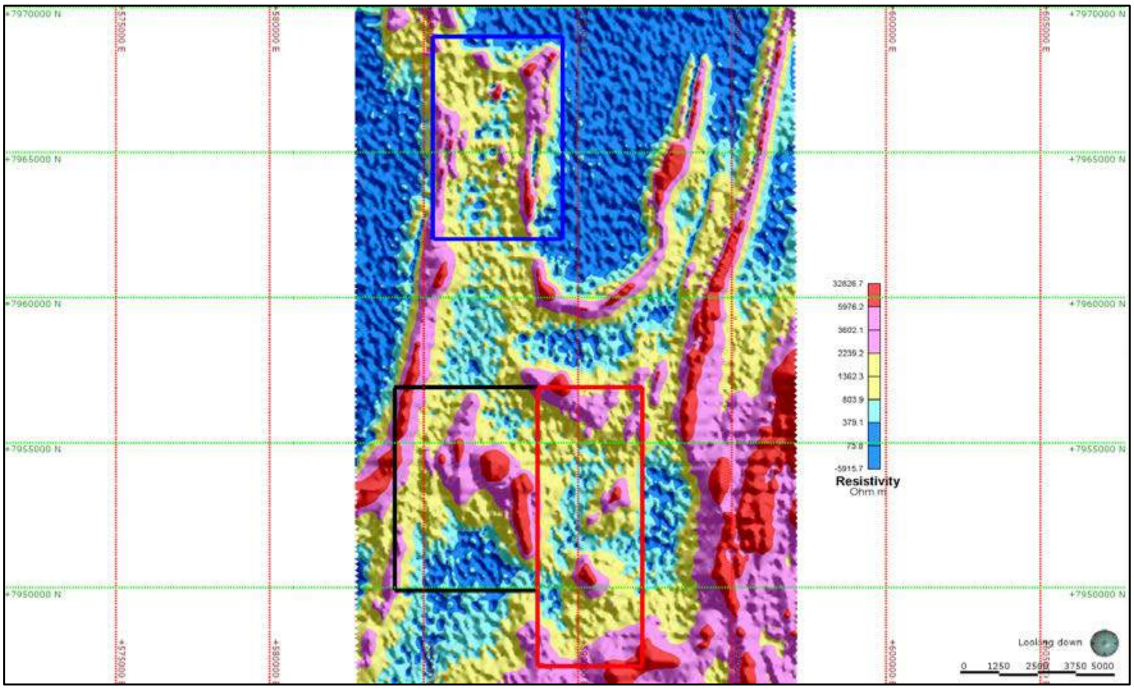


Figure 8-4: **Xaudum Infill EMZ7 survey data, showing Gcwihaba's PLs along with Block 1 (blue) and Block 2 (a: red; b: black) areas (Source: EM FQM Survey, 2014)**

In addition to the surveys above, FQM has commissioned a gravity survey to be conducted on 500 m gridline spacing in the Xaudum Block area. The aim is to discover hidden dome structures which can be correlated to sediment-hosted copper deposits. This data will be available for Gcwihaba.

9 DRILLING

9.1 Introduction

Gcwihaba began iron and base metals exploration drilling in 2008 and has continued to drill with drilling currently on-going in 2014. In addition, First Quantum Minerals Ltd (“FQM”) has also conducted two drilling programs in 2013 / 2014.

No drilling for iron was conducted prior to 2008. Prior to 2008 the companies drilling was focused on diamond exploration through the Tsodilo subsidiary Newdico.

9.2 Gcwihaba Drilling

The drilling conducted to date has utilised two Atlas Copco Christensen CT14 truck-mounted drill rigs owned by Tsodilo (Figure 9-1). Core was initially HQ and NQ technology, however around late 2011 all core extracted used NQ wireline technology, with a core diameter of 47.6 mm. An example of the quality of the NQ drill core can be seen in Figure 9-2.

A total of 157 drillholes totalling 31,149 m has been completed by Tsodilo / Gcwihaba within the Block 1 area to date. These holes have been used by Gcwihaba to create the geological model and SRK to produce the MRE.

Figure 9-1: Atlas Copco CT-14 drill rig (Source: SRK site visit, 2014).

Figure 9-2: Example of drill core and core boxes (Source: SRK site visit, 2014).

9.3 Collar Surveying

The on-site logging geologist is responsible to ensure that all holes are correctly positioned and all collars are correctly and clearly labelled. Collar surveying is completed using a differential global positioning system (“DGPS”), with an accuracy of ±15 cm.

9.4 Down-hole Surveying

A Reflex Gyro down-hole surveying instrument (“Reflex”) is used for down-hole deviation measurements; one measurement is made every 5 m. Reflex provides accurate directional data (azimuth and dip) and is suitable for both magnetic and non-magnetic environments. Reflex consists of a sealed probe, housing a sensor package with three digital micro-gyros and three accelerometers and electronics, and a rechargeable battery pack. The instrument is controlled from a field computer, running the Reflex Gyro Software. Communication is via Bluetooth.

9.5 Core Orientation

A Reflex ACT II core orientation device is used during drilling and allows a bottom of core marker to be drawn on the core after core extrusion from the inner-tube. Measurements are made for the entire length of all holes. An image of the core orientation process is shown in Figure 9-3.

Figure 9-3: Drill core orientation marking (Source: SRK site visit, 2014).

9.6 FQM Drilling

In addition to Gcwihaba drilling, two drilling campaigns were conducted in Gcwihaba's Prospecting Licences in 2014 by FQM. The Stratigraphic Section Line drilling program was designed to specifically test deeper areas of the equivalent 'Katangan Supergroup' in the area using one section line of deep diamond drillholes ("DDH"). The Kalahari Geochemistry drilling program is on-going and was designed to geochemically sample the Kalahari Group sediments and specifically the interface of the Kalahari Group sediments and the bedrock with reverse circulation drillholes ("RCH") and some Sonic drill holes. However, due to recovery difficulties in these two types of drilling the program switched to shallow DD holes for the KGP drilling due to improved recovery. All FQM drilling has utilised Titan Drilling as their contractor.

9.7 FQM Stratigraphic Section Line Drilling Program

This program was designed to develop a geological model at greater depths across the project region. The Stratigraphic Section Line program was completed in early 2014 and comprised 8 holes totalling 5,817 m.

The results of this drilling have been utilised by Gcwihaba for geological interpretation only, and have not been used for grade estimation.

9.8 FQM Kalahari Geochemistry Drilling Program

The Kalahari Geochemistry drilling program has sampled the Kalahari Group sediments, in particular the interface between the weathered bedrock and the overlying Kalahari cover sediments. The program aimed to sample 2 m intervals (composites) from the overburden to test for hydromorphic dispersion of metals from bedrock mineralisation. The program comprised over 222 drillholes totalling 13,689 m as of July 2014, including diamond (193) and reverse circulation (24) drillholes, all sonic holes drilled as mentioned above were re-drilled as diamond DD holes due to poor recovery and are not included here.

The results of the Kalahari drilling program have not been utilised by Gcwihaba or SRK to produce this MRE. The results have mainly been utilised by FQM for copper exploration purposes.

9.9 Summary of drillhole location

Figure 9-4 shows the locations of all holes drilled by Gcwihaba within the Xaudum Block 1 area. Additional holes have been drilled by Gcwihaba outside of the Block 1 area, however, these areas are not considered to have been drilled to a sufficient density to include in this maiden MRE.

The drillhole spacing is generally 400 m along strike by 50 m along section line, with an area of the northern MBA 3 unit drilled to 200 m by 25 m.

9.10 Representative Cross-sections

The figures below (Figure 9-5 to Figure 9-9) show cross-sections through the Block 1 area of the Xaudum Project with drillholes and wireframes created by Gcwihaba.

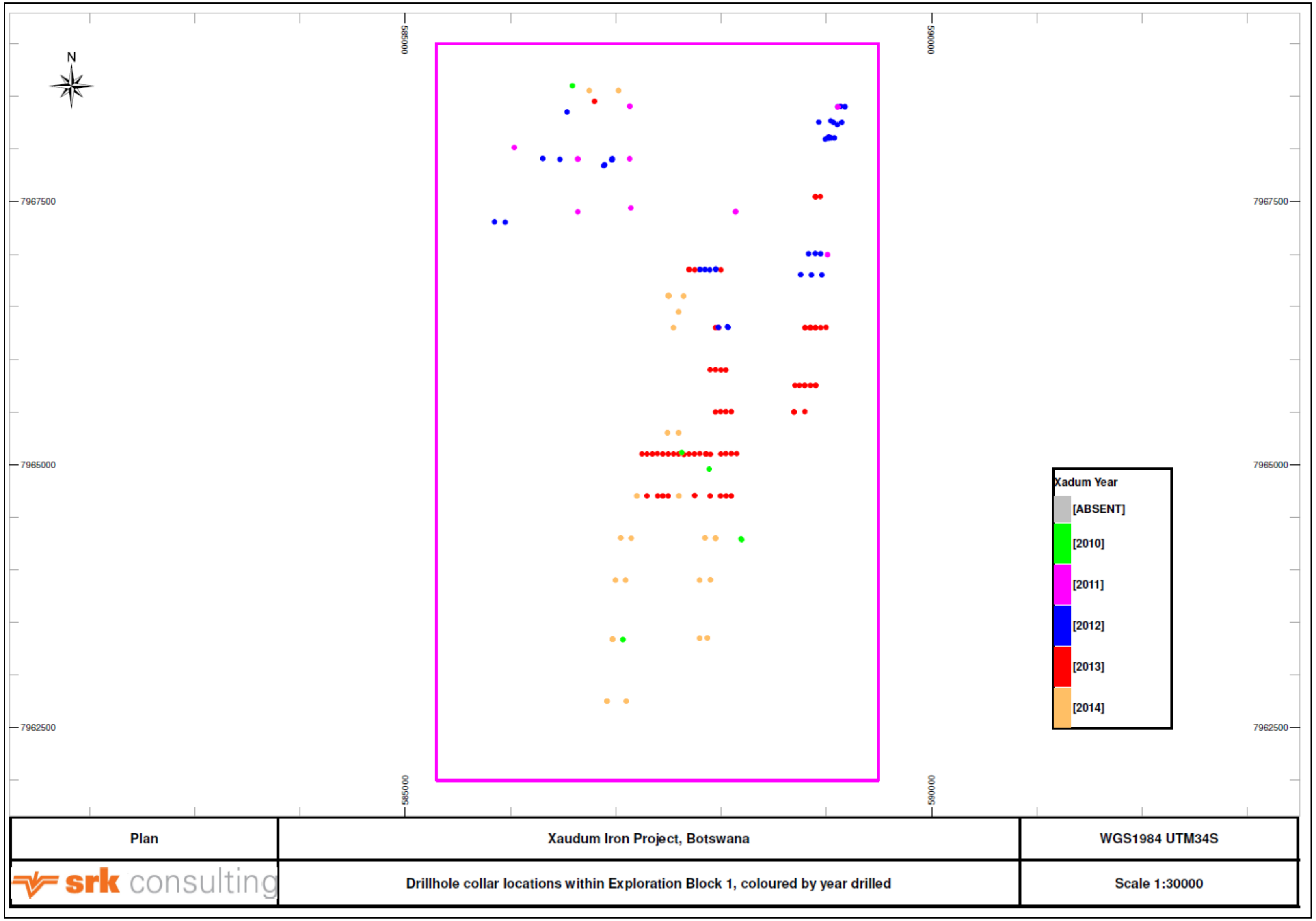


Figure 9-4: **Drillhole collar locations within Xaudum Block 1 (Source: SRK, 2014)**

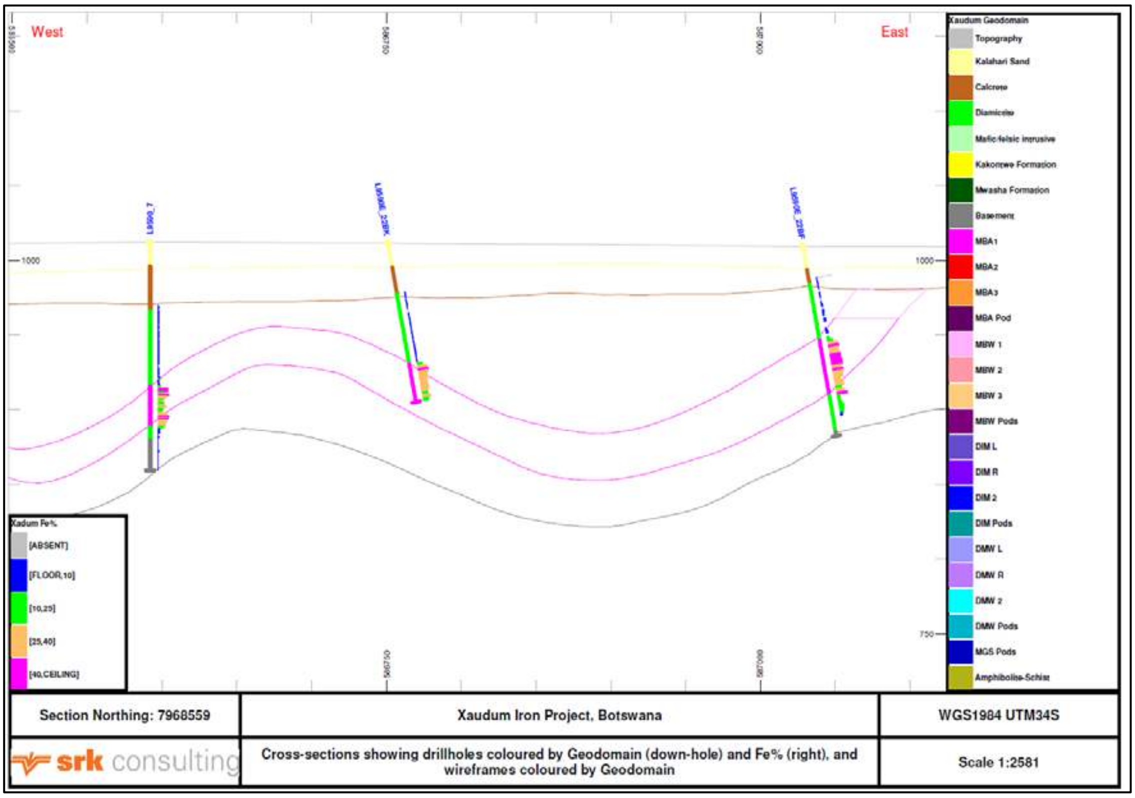


Figure 9-5: Cross-section L9590 (Source: SRK, 2014)

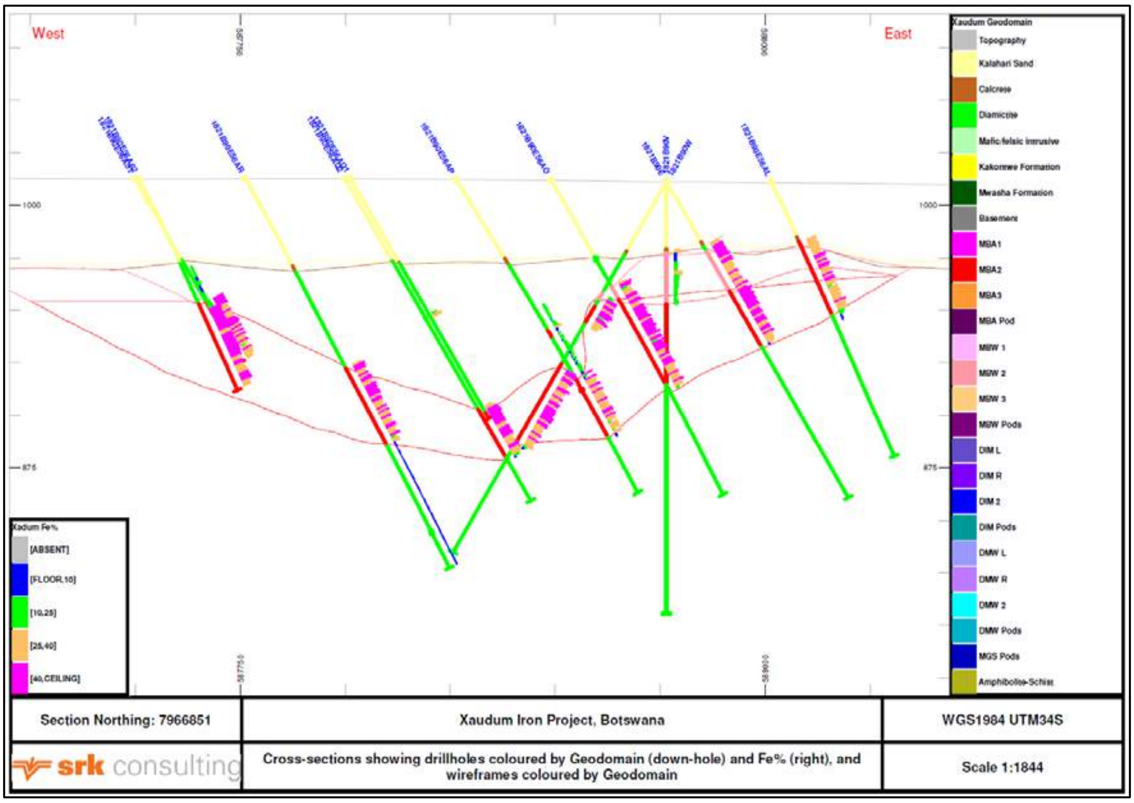


Figure 9-6: Cross-section 1821B90 (Source: SRK, 2014)

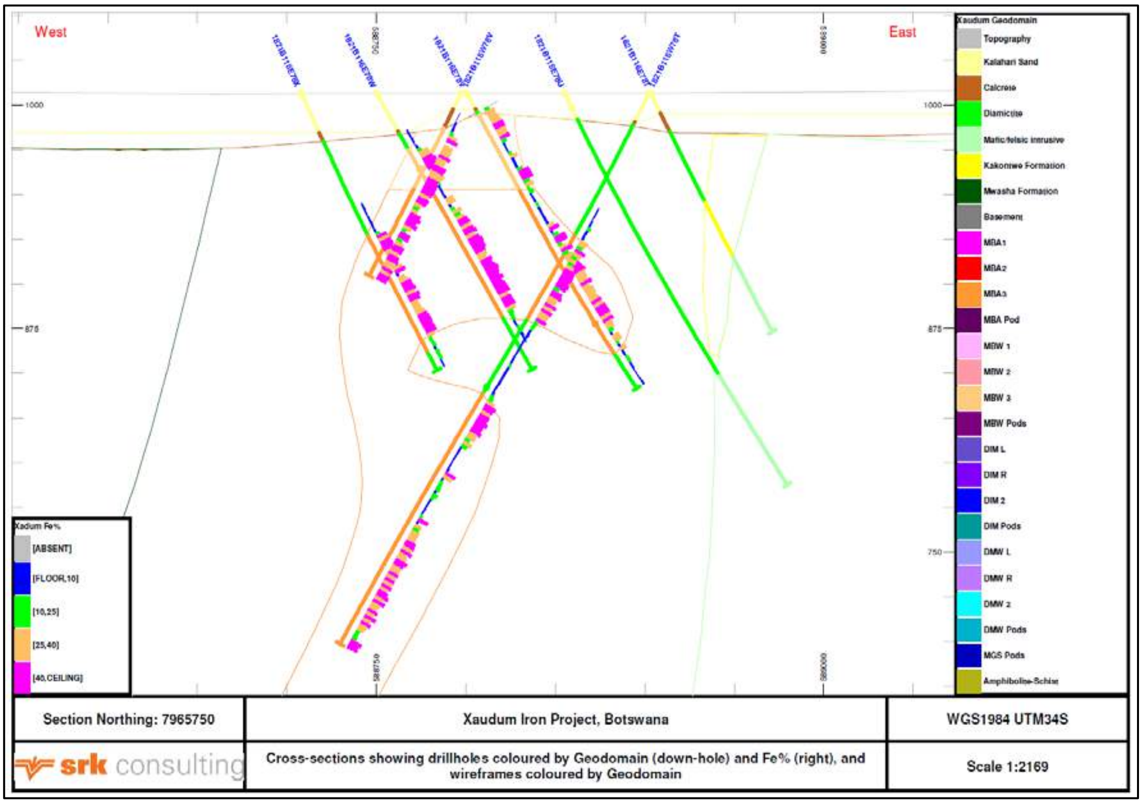


Figure 9-7: Cross-section 1821B116 (Source: SRK, 2014)

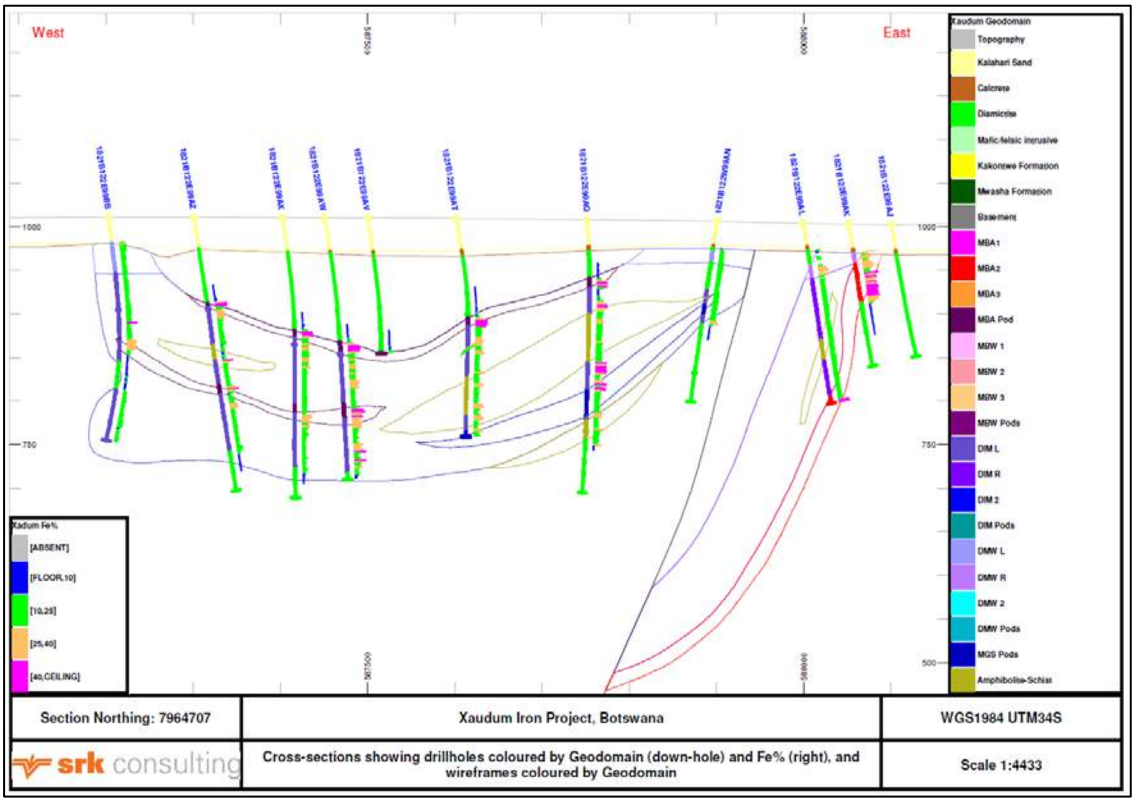


Figure 9-8: Cross-section 1821B122 (Source: SRK, 2014)

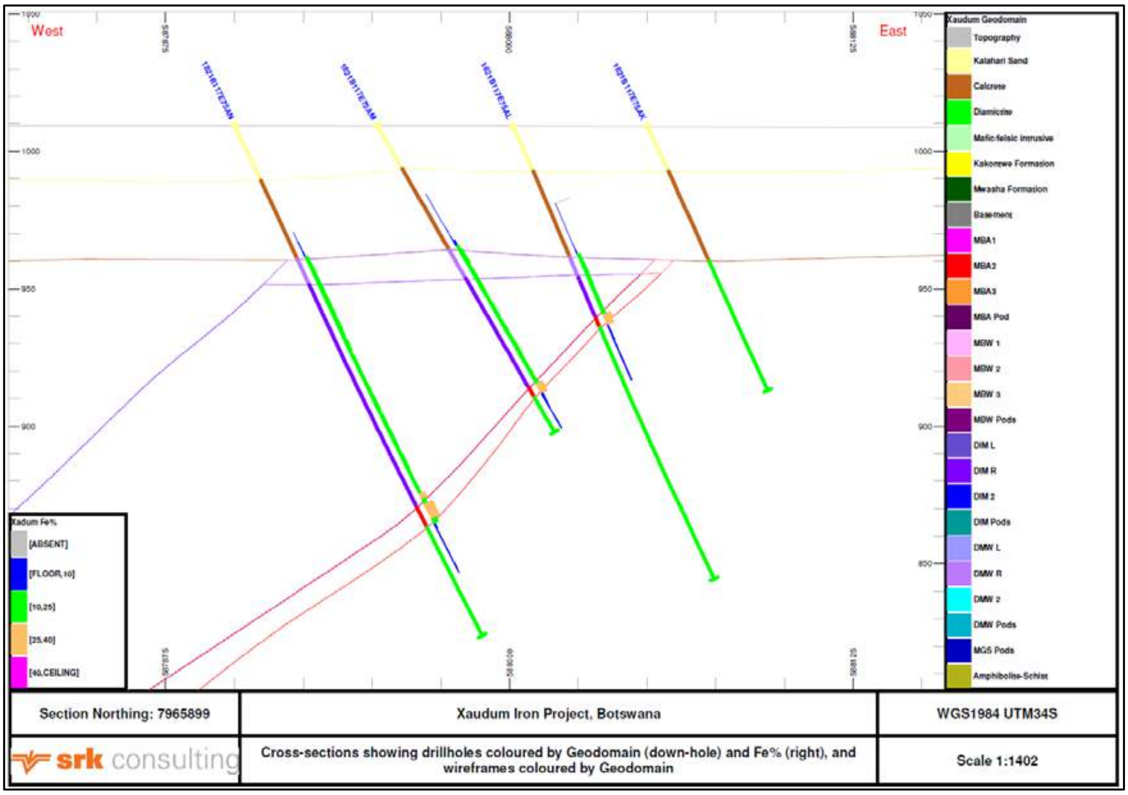


Figure 9-9: Cross-section 1821B117 (Source: SRK, 2014)

9.11 Summary of Drilling Results

A total of 9,221 assays have been analysed in the Block 1 area, which amounts to 13,824 m of samples. Core recovery (detailed in section 10.30) is generally found to be good to very good throughout all material types. In general, SRK considers the core recovery data typical for the type of deposit under study with no material impact on the Project.

Gcwihaba has delineated three separate magnetite-banded (MBA) zones (along with associated weathered MBW), three separate magnetic diamictite (DIM) zones (along with associated weathered DMW), seven MBA pods, one DIM pod, three magnetite schist (MGS) pods, eight garnet schist (GST) pods, one diamictite (DIA) pod, along with other waste lithology units. Mineralisation has been delineated over a strike length of 8.5 km to date based on drilling and geophysical magnetic interpretation.

The MBA 1 zone in the northwest of Block 1 comprises an open W-shaped fold with a north-south fold axis, and with generally low angle dips between 50 and 500 m below the topography. The unit shows a reasonably consistent true thickness of between 10 – 40 m. It has not been closed off in any direction, however, the current interpretation shows it bounded to the east (and potentially to the west) by faulting. The overlying weathered unit (MBW 1) has not been intercepted by drilling to date but is modelled to provide consistency between units.

The MBA 2 zone in the centre of Block 1 comprises a folded unit with varying dip and strike which is interpreted as pinching-out as it grades into the adjacent DIM R unit. The unit varies in true thickness between 5 – 60 m. The overlying weathered unit (MBW 2) varies in thickness between 0 – 25 m. The drilling and geophysical magnetic interpretation appears to show it has been closed off along strike but not at depth.

The MBA 3 zone in the northeast of Block 1 comprises a gently folded unit with general north-south strike with varying steep dips to the east and west. The unit varies in true thickness between 30 – 120 m, with wider zones near-surface which may represent the hinge zone of an unproven fold. The overlying weathered unit (MBW 3) varies in thickness between 0 – 45 m. The drilling and geophysical magnetic interpretation appears to show it has been closed off along strike but not at depth, and there may be a second limb to the east.

The DIM L zone in the south of Block 1 comprises an open fold unit with a north-south fold axis plunging to the south. The unit varies in true thickness between 80 – 200 m, with wider zones near-surface in the hinge zone of the fold. The overlying weathered unit (DMW L) varies in thickness between 0 – 55 m. The unit is bounded to the east by faulting and the DIM R unit. The drilling and geophysical magnetic interpretation appears to show a continuation along strike to the south and it has not been closed at depth. This unit also contains pods of MBA, GST, DIA and MGS material.

The DIM R zone in the centre of Block 1 comprises a north-south striking unit with a reasonably consistent dip towards the west shallowing towards the north. The unit varies in true thickness between 10 – 100 m, with a pinch-out where it grades into the MBA 2 unit towards the north. To the south it is faulted against the DIM L unit. The overlying weathered unit (DMW R) varies in thickness between 0 – 40 m. The drilling and geophysical magnetic interpretation may show a continuation along strike to the south and it has not been closed at depth.

The DIM 2 zone in the west of Block 1 comprises a north-south striking unit which is based on one drillhole intercept and geophysics, and so it is currently open in all directions.

Pods of mineralised material (MGS, MBA, DIM) have been interpreted throughout the MBA and DIM units. These have been limited to a minimum thickness of 5 m and are up to 30 m in thickness.

Internal waste zones (GST and DIA) have been interpreted throughout the MBA and DIM units. These have been limited to a minimum thickness of 5 m and are up to 40 m in thickness.

10 SAMPLE PREPARATION, ANALYSES & SECURITY

Sampling is carried out by Gcwihaba Project geologists and SRK considers these methodologies to be consistent with industry best practice. Sample preparation and analysis is currently carried out by ALS Minerals laboratory (Johannesburg). From 2010 to 2012, Set Point laboratory (South Africa) was also used for sample preparation and analysis.

Gcwihaba has put in place logical logging and sampling protocol documents in order to guide the on-site staff through the technical process. This aims to ensure a consistent methodology for the process of submitting the samples for external laboratory analysis. The logging, sampling and analysis protocol flowsheet is shown in Table 10-1, with the chain of custody responsible parties highlighted:

Table 10-1: Xaudum sampling chain of custody

Stage	Responsible Persons
Core extracted from drillhole	Gcwihaba drill team supervised by drill foreman and rig geologist
Core marked up with orientation lines	Gcwihaba drill team and core markers supervised by drill foreman and rig
Clean core of mud or drilling fluid	Gcwihaba drill team
Core placed in labelled boxes (drillhole ID, box number, depth from and to), with depth and core loss markers inserted	Gcwihaba drill team and core markers supervised by drill foreman and rig geologist
Core transported to temporary storage in Shakawe.	Gcwihaba drivers
Brief geological log occasionally undertaken to aid geological cross-sections and direct drilling	Gcwihaba rig geologist
Core transported to Maun core storage / logging facility	Gcwihaba drivers
Clean core of mud or drilling fluid	Gcwihaba drill team
Speed geology log (pick-out major structures / contacts).	Gcwihaba project geologist (Maun)
Magnetic susceptibility (“Magsus”) readings	Gcwihaba Maun core tech team, supervised by project geologist and chief geologist
Handheld XRF (Niton) readings.	Gcwihaba project geologist supervised by chief geologist
Core photographs (wet and dry)	Gcwihaba Maun core tech team, supervised by project geologist and chief geologist
Density measurements	Gcwihaba Maun core tech team, supervised by project geologist and chief geologist
Core cutting	Gcwihaba Maun core techs supervised by project geologist and chief geologist
Halved Core transported to Johannesburg:	Gcwihaba via a transport company
Sample preparation after splitting	ALS Minerals, Johannesburg
Assaying	ALS Minerals, Johannesburg
Databasing and data QAQC	Gcwihaba chief geologist and database manager

10.1 Sampling and Logging

10.2 Geological Core Logging

The Logging Geologist is responsible to ensure that all collars are correctly and clearly labelled, as well as ensuring all core is marked up correctly. The Project Geologist and Logging Geologist are jointly responsible for the accurate and detailed logging of the core, which includes recording: drillhole number, date drilled and completed, number of trays used, project name, date logged, start and end of hole depth and name of the logger. The Chief Geologist is responsible for ensuring the methods and work practices are adhered to and the quality of the data collected and recorded is to the required standard.

The detailed logging is completed by the logging geologist in the Maun hangar, less detailed logging however is often performed by the rig geologist on the drill site in Shakawe where a quick understanding of the lithology is required for sectional geology understanding. When detail logging is completed in the Maun hanger, the handheld XRF machine is available to assist the geologist in identifying the lithology and mineralogy. The core logging sheet contains: depth, lithology, texture, material type percentages, lithology comments (alteration, colour, weathering), and structural symbols and comments. The depth interval in the logging sheet is in 2 m, which matches the sampling interval.

FQM Re-logging

In order for FQM to understand their copper exploration project, their geologists have re-logged approximately 35,000 m of diamond core previously logged by Gcwihaba geologists to place it in context of the Zambian Copper Belt ‘Katangan’ lithologies and in context with FQM in-house logging protocols.

10.3 Geotechnical Core Logging

Geotechnical logging is performed to determine the structural and physical properties of the different lithology types. Logging is completed alongside geological logging by recording the core run length, core loss, total core recovery, solid core recovery, rock quality design (“RQD”), material strength and fracture count. The following measurements are made:

- Total Core Recovery (“TCR”): the percentage of solid drill core recovered regardless of quality or length, measured relative to the length of the total core run.
- Solid Core Recovered (“SCR”): the percentage of solid drill core, regardless of length, recovered at full diameter, measured relative to the length of the total core run.
- Rock Quality Designation (“RQD”): the percentage of solid drill core, greater than 100 mm length, recovered at full diameter, measured relative to the length of the total core run. RQD varies from 0% for completely broken core to 100% for core in solid sticks.
- Fracture Count: The number of fractures per interval is used to calculate the fracture frequency and is expressed as fractures per metre. Only naturally occurring fractures or breaks are counted in this measurement.

- Material strength: the field strength of all intact recovered materials, from transported and residual soils through to fresh rock is recorded using the codes detailed in the logging card. The classification system is based on the ISRM standard for estimation of rock strength. Where a material is comprised of materials with different strengths, the strength of the weaker material should be recorded to give a conservative estimate of material strength.

10.4 Structural Core Logging

Structural logging is completed on whole core using the orientation line drawn at the drill rig. The analysis is undertaken during the core logging process using an EZY-Logger Goniometer (Figure 10-1) by measuring the alpha and beta angles, as described below:

- Alpha: The angle between the core axis and the maximum dip vector of the discontinuity (0-90˚).
- Beta: The angle between the bottom of core reference line and the maximum dip vector of the discontinuity (lower apex) clockwise looking down the core (0 - 360˚).

The structural measurements are converted into true dip and dip direction for use in geological modelling.

Figure 10-1: Structural core logging using EZY-Logger Goniometer (Source: SRK site visit, 2014)

10.5 Magnetic susceptibility

Magnetic susceptibility (“Magsus”) readings are recorded on site using a Kappameter, a pocket susceptibility meter model KT-6 manufactured by SatisGeo, s.r.o. Readings are taken every 20 cm (although initially this was every 50 cm before it was decided to increase the sampling frequency of the magnetic susceptibility measurements) along the uncut NQ core. The intervals are measured using a nylon tape measure and marked by a permanent marker. The on-screen susceptibility readings which are recorded in SI units are multiplied a factor of 10^{-3}. Repeat readings are taken after every 14 m as a quality assurance (“QA”) measure. Where core loss is noted, it is recorded on the sheets in the comment section as core loss (“CL”). In addition, magnetic readings greater than 1000 x 10^{-3} SI are recorded as 999. After validation, the susceptibility data is input in the drillhole database. Figure 10-2 shows a field technician measuring Magsus with a Kappameter.

Figure 10-2: Magnetic susceptibility measurement at the drill rig (SRK site visit, 2014)

10.6 Niton handheld XRF

If the logging geologists identified any mineralised intervals of interest in the core, the Niton handheld XRF machine (Niton XL2 analyser) can be used to record a quick preliminary geochemical analysis. Any anomalous readings or readings of note can be recorded on the logging sheet and core sent for further assay testing. The handheld analyser is positioned on the core of interest and three readings are taken from the same position to derive an average result.

10.7 Consolidated dry bulk density measurements

Density measurements are taken on the same half core 2 m samples that are sampled and sent for assay, directly before sample preparation. The density of a sample is measured using the Archimedean method of weighing dry and weighing submerged in water, as shown in Figure 10-3.

The method for density measurement is to weigh the core dry in air (dry mass, or weight in air = Wa) and then weigh the core completely submerged under fresh water (weight in water = Ww) hanging off the hook in the orange sack in the bucket without touching the bottom of the bucket. All data is collected manually and noted in the data sheet. A high resolution industrial balance (A&D GF-K series) that is capable of measuring up to 10 kg at a resolution of 0.01 g is used to take the measurements of the core. The density is calculated using the Archimedean principle, as follows: Density = Wa/(Wa-Ww)

After every sample ending in 35, a repeat measurement is made after at least one hour has elapsed since the original, in order to check for repeatability and consistency. All duplicate assay samples (quarter core) are measured for density (both quarters) in order to indicate the external reproducibility (precision) of the duplication method and sampling method.

The density measurements are supplemented with QAQC check samples to ensure the precision and accuracy of the density measurements taken. These check samples include two natural rock standards - DENSTD1 and DENSTD2 - which are two grab samples taken from the quarry out crop of BIF in Shakawe, as well as two test weights - Test Weight 10 kg and Test Weight 5 Kg - these test weights act as un-natural standards but are treated the same as the natural standards. The test weights are measured on the upper and lower scale out of water (lower scale meaning the hanging scale) at the start and end of the day and recorded at the top of the density measurement sheet. The standards, both natural and un-natural, are measured once every 20 normal sample density measurements as a set.

The samples are then re-bagged, the label is added and sealed and placed in large rice sack for shipment to the laboratory for sample preparation and assaying.

Figure 10-3: Density measurement equipment (Source: Gcwihaba protocols, 2014)

10.8 Weathered density measurements

A thin weathered horizon exists throughout the Xaudum area, which has caused degradation of the generally competent lithologies. Density experiments were undertaken in order to test the level of porosity and permeability of the oxidised (weathered) mineralised rock (geodomains MBW and DMW). The aim was to test if the density is significantly higher when filled with water when immersed, as opposed to the porosity being filled with air and closed to the immersion water, i.e. wrapped in plastic cling-film wrap. To test for systematic error (bias) a control set of very fresh material, which has zero or insignificant porosity and permeability, was treated exactly the same as weathered material.

The results showed a negligible difference in relative densities (when the bias for using cling-film methodology is taken into account) between the cling film and standard methodologies. It was therefore considered unnecessary to undertake cling-film method density measurements on weathered material. Given the immaterial quantities of weathered material compared to fresh material, and the negligible differences observed in the test, SRK consider this appropriate.

10.9 Core photography

Core and core blocks are placed in core boxes by the driller. Upon receipt in the core shed, the drill core is cleaned or washed, if required, and core blocks are checked by Gcwihaba staff. The core is then photographed wet and dry outside in good light ensuring a constant angle and distance from the camera. An example of the core photography is shown in Figure 10-4.

Figure 10-4: Example core photograph (Source: SRK site visit, 2014)

10.10 Sample Preparation

10.11 Core sawing and bagging - Gcwihaba

Once the core is logged, the logging geologist selects the interval of core that will be sampled and sent for assay. For Xaudum, this is on a 2 m basis and will be based on the logging intervals, i.e. even 2 m intervals. The mineralisation is sampled in its entirety, plus 20 m of waste either side of the mineralised core is also sampled for reference. This helps to account for variation along the ore-waste contact zone, plus to help with waste rock characterisation, and define the relationship the ore has with the surrounding rock.

The core is laid out in order of depth, and the geologist indicates to the sampling team the start end depth that requires sampling. The core is then cut in half through the centre of the foliation apexes, and not through the down-hole orientation marker line. The core should be cut to the even 2 m markers (and multiples thereof). Once halved, the core is returned to the core trays in its original position for sampling, and the tray returned to the floor in the way it was originally laid out. The alignment of the core saw blade is checked on a weekly basis using the blade alignment tool.

The samples are then broken into pieces using a rubber mallet and placed into sterile, unused plastic sample bags with tags placed inside and outside the bags, sample numbers inscribed on the bag and a plastic zip tie used to seal the bag, as shown in Figure 10-5.

Figure 10-5: Half-core samples bagged and tagged by Gcwihaba (Source: SRK site visit, 2014)

10.12 Sample preparation - ALS Minerals

SRK did not visit the ALS Minerals (Johannesburg) (“ALS”) facility during the Qualified Person’s site visit due to the location in Johannesburg. The laboratory was last visited by Xaudum staff in August 2013, who found the conditions to be extremely clean and tidy and well organised in terms sample process flow and sample tracking. SRK has reviewed the laboratory memo produced by Xaudum describing the procedures, as described below:

Sample Receipt

The samples are collected at the ALS delivery yard, these are then checked against Gcwihaba dispatch notes and any discrepancies are notified and the issue is resolved prior to commencing preparation. The samples are logged onto the system and a Job Number and PO number assigned to the batches. The samples are labelled and barcoded with this Job Number so the material tracked around the lab using the barcodes and a scanning system.

Weighing and Drying

Once the sample is logged into the tracking system, it is then weighed and compared to the sample weights sent by the client to make sure that there is no sample loss or gain for chain of custody reasons and sample assurance purposes.

The sample is then dried at 110ºC in one of the large ovens, and the post-drying weight also measured and recorded.

Crushing and Pulverising

The samples are crushed to 70% passing the 2 mm (Tyler 9 mesh, US Std. No 10) screen using a Byod Jaw Crusher. The sample is then split to a 250 g sample which is then sent for pulverising, and the rest is kept for storage as coarse reject.

The sample is pulverised in an Essa LM2 Pulverizing Mill station. These pulverise the sample to a pulp that passes at an 85% pass rate of a -75 µm screen size (Tyler 200 mesh, US Std. No. 200). The entire pulped sample (250 g) is then sent for assay.

10.13 Sample preparation – Set Point

The Set Point laboratory was used for assaying from August 2012 to February 2013. ALS was used prior to August 2012 and after February 2013. Gcwihaba considered the quality at Set Point to be lower than that of ALS, therefore Gcwihaba decided to utilise only ALS and in particular their iron ore XRF protocols in order to improve consistency and quality.

The following describes the Set Point procedure for preparation of pulp samples for analysis (Code P403).

After drying, the ½ core produced by Gcwihaba is crushed using a jaw crusher (terminator) to a particle size <15 mm. The resulting chips are further crushed in a Rhino crusher to a fineness of 80% <2.8 mm. The total mass of sample crushed is screened at 2.8 mm to check crushing efficiency. Samples are split using a Jones riffle splitter. The split to be analysed is placed into a new sample bag with a clearly marked label. The remainder of the sample (coarse reject) is returned to the original sample bag and returned to Gcwihaba.

The split for analysis is milled to achieve a fineness of 90% less than 106 µm (or a fineness of 80 % passing 75 µm). After milling, the contents of the bowl is emptied onto a brown paper sheet or clean sample dish then transferred into its sample bag.

At least one out of every 10 samples passing through the Rhino crusher is screened at 2.8 mm to check that 80% of the material passes (the entire sample is screened and this is performed before any further sample manipulation such as splitting). At least one out of every 10 samples of every batch is screened at 75 µm or 106 µm, whichever is applicable, to check that 80% of the material passes. The % loss for samples screened should be <2%.

10.14 Analytical Procedures

10.15 ALS Chemex Accreditation

ALS Chemex South Africa (Pty) Ltd laboratory (Johannesburg) was accredited by the South African National Accreditation System (“SANAS”) for specific analysis methods, including the ICP ME-MS61 and ME-XRF21u methods, in May 2013 (current expiry April 2018). The facility is accredited in accordance with the recognised International Standard ISO/IEC 17025:2005. The accreditation demonstrates technical competency for a defined scope and the operation of a laboratory quality management system.

10.16 ALS Minerals - XRF

An industry standard fused bead X-ray fluorescence spectroscopy (“XRF”) assay method (ALS code ME-XRF21u) for analysis is used on the pulped samples. This method uses a lithium borate fusion technique and is a robust method that is commonly used for iron projects.

Bead Creation

To create the bead, 0.66 g of pulp sample is fused with a 12:22 ratio lithium metaborate to lithium tetraborate flux which also includes an oxidizing agent (Lithium Nitrate). These are fused in a platinum crucible at 1,050ºC (global standard temperature) in an Automatic Fusion Apparatus (Modu Temp) for 20 minutes for 6 samples. The molten sample is the poured from the platinum crucible into a platinum mould, the mould is then kept hot and slowly air cooled from below, so the fused bead cools slowly and anneals evenly. The fused bead is then collected and labelled ready for analysis.

Analysis

The fused beads are placed into the Pan Analytical fast simultaneous fixed channel XRF machine, which has the advantage over the older style classic sequential XRF machine of being able to measure multiple elements simultaneously faster (around 1 minute for each sample) and with lower detection limits.

The full suite of elements is measured for each sample along with the laboratory’s own Certified Reference Materials (“CRM”s). If these internal CRMs do not pass the acceptable limits the whole batch is re-analysed. In addition, if the results total assay comes back with a result outside of the tight 99-101% pass limits the whole batch is re-analysed to see if there is a good reason for this fail or if it was an error in the analysis (there are occasionally good reasons for a sample to fail the total assay calculation, such as very high sulphide contents although this is very rare). Samples are processed in batches of 25 – 50 (including laboratory QAQC samples). Each batch of 50 samples includes approximately 30 original samples, 4 duplicates (every 10th sample), 15 CRMs and 1 blank.

The suite of elements is with upper and lower detection limits is shown below in Appendix A.

10.17 ALS Minerals - ICP

Prior to mid-2012, the ALS Minerals ICP method ME-MS61 was utilised as the main assaying method. The maximum Fe Total% value reported using this method is 50%, and therefore an over-limit method, ME-OG62 ICP AES, is automatically utilised in the event of a sample exceeding 50%. In addition, a third ICP method – ME-ICP81 – has been utilised to analyse for SiO_2, which is not reported using the ME-MS61 method.

ME-MS61 and ME-ICP81

The ME-MS61 method is designed to test for trace levels of multi-elements using conventional inductively coupled plasma-atomic emission spectrometry (“ICP-AES”) analysis. A prepared sample (0.25 g) is digested with perchloric, nitric, hydrofluoric and hydrochloric acids. The residue is topped up with dilute hydrochloric acid and the resulting solution is analysed by ICP-AES. Results are corrected for spectral inter-element interferences.

The ME-ICP81 method has subsequently been replaced by the ME-MS81 method by ALS.

Gcwihaba utilised ME-ICP81 only for SiO_2 analysis until 2013, and using a sample prepared by sodium peroxide fusion and analysed using ICP-AES as above.

As for the XRF methodology, the full suite of elements is measured for each sample along with the laboratory's own QAQC samples. If these samples do not pass the acceptable limits the whole batch is re-analysed.

The suite of elements is with upper and lower detection limits is shown in Appendix A. Only Si is analysed using the ME-ICP81 method.

ME-OG62

The ME-OG62 method is designed to test for 'ore grade' levels of multi-elements using conventional ICP-AES analysis. A prepared sample (0.25 g) is digested with nitric, perchloric, hydrofluoric, and hydrochloric acids, and then evaporated to incipient dryness. Hydrochloric acid and de-ionized water is added for further digestion, and the sample is heated for an additional allotted time. The sample is cooled to room temperature and transferred to a volumetric flask (100 ml). The resulting solution is diluted to volume with de-ionized water, homogenized and the solution is analysed by ICP-AES or by atomic absorption spectrometry.

Assays for the evaluation of 'ores' and high-grade materials are optimised for accuracy and precision at high concentrations. Ultra high concentration samples (> 15 -20%) may require the use of methods such as titrimetric and gravimetric analysis, in order to achieve maximum accuracy.

As for the XRF and ME-MS61 methodologies, the full suite of elements is measured for each sample along with the laboratory's own QAQC samples. If these samples do not pass the acceptable limits the whole batch is re-analysed.

The suite of elements upper and lower detection limits is shown in Appendix A.

10.18 ALS - Loss on ignition

At ALS, loss on ignition ("LOI") is determined using the thermal decomposition OA-GRA05 method. A prepared sample (1.0 g) is placed in an oven at 1,000°C for one hour, cooled and then weighed. The percent loss on ignition is calculated from the difference in weight.

10.19 Set Point - Accreditation

From August 2012 to February 2013, Set Point laboratory (South Africa) was utilised as an additional assaying laboratory for the Xaudum samples. In total, approximately 12% of the assay database was assayed at Set Point (10% by XRF, 2% by ICP).

Set Point was also accredited by SANAS for specific analysis methods, including the XRF M451 method, in July 2013 (current expiry July 2018). The facility is accredited in accordance with the recognised International Standard ISO/IEC 17025:2005. The accreditation demonstrates technical competency for a defined scope and the operation of a laboratory quality management system.

10.20 Set Point - XRF

The following describes the fused disc XRF method M451.

An ignited sample mass of 1.1 g is fused with 9.9 g flux and fused in a clean platinum dish. The fusion melt is poured into a clean platinum mould and allowed to solidify. The solidified disc is labelled and then analysed by calibrated XRF spectrometer using a “silicate” program. The exact “silicate” program used will depend on the sample matrix of the sample analysed. For example, samples containing greater than 35% Fe_2O_3, the “Si-Fe” program is used and for samples containing greater than 2% TiO_2, the “Si-Ti” program is used. The Si-Fe and Si-Ti are separate programs which have been calibrated with standards of that particular matrix so that greater accuracy may be achieved at these levels.

As at ALS, the full suite of elements is measured for each sample along with the laboratory’s own QAQC samples. If these samples do not pass the acceptable limits the whole batch is re-analysed. Each batch of 30 to 40 samples includes at least 1 duplicate and 1 CRM.

The suite of elements upper and lower detection limits is shown in Appendix A.

10.21 Set Point - ICP

The following describes the four acid digest - inductively coupled plasma – optical emission spectrometry method (“ICP-OES”) 4AD ICP-OES. This method has not been accredited by Sanas.

1 g of pulp material is digested using a combination of four acids (HNO_3, HF, $HClO_4$ and HCl) and made up to a volume of 50 ml. The resulting solutions are analysed for metals by the ICP-OES method.

As with the XRF method, the full suite of elements is measured for each sample along with the laboratory’s own QAQC samples. If these samples do not pass the acceptable limits the whole batch is re-analysed. Each batch of 30 to 40 samples includes at least 1 duplicate, 1 blank and 1 CRM.

The suite of elements upper and lower detection limits is shown in Appendix A.

10.22 Set Point - Loss on ignition

At Set Point, LOI is determined using the following methodology. A sample is weighed in a ceramic crucible, ignited for two hours in a muffle furnace set at 1,000ºC and then weighed again. LOI is calculated as the percentage of change in weight when comparing the sample before and after ignition.

10.23 Quality Assurance and Quality Control (QA/QC) Procedures

10.24 Gcwihaba QA/QC protocols

‘Blind’ (inserted by customer, not laboratory) assaying quality assurance and quality control (“QA/QC”) procedures were introduced from the beginning of the recent drill programmes in October 2013, with the protocol incorporating the use of blanks, duplicates and certified reference material (“CRM”) each inserted into the sample stream at an insertion rate of 1 in 20 (5%), totalling 3 in 20 (15%) combined. No samples were duplicated at a check (umpire) laboratory. In total, 65% of drill samples were assayed prior to the induction of blind QAQC sampling.

Blanks

The blank material is sourced from non-magnetic sand from Shakawe. A sand sample from a dry river channel was collected from the road side in the Shakawe area. Approximately 500 kg of sand was collected in a large bag by shovel. The sand was spilt into 2.5 kg bags and stored on a pallet in the Maun core storage hanger ready for insertion into the sample stream one in every 20 Primary samples. This sand blank is labelled 'Blank 1'.

Blank 1 is inserted one in every 20 samples.

Certified Reference Materials

The CRMs were purchased from Geostats Pty ("Geostats"), and are inserted into the sample stream as STD 1 (GIOP-95), STD 2 (GIOP-104), and STD 3 (GIOP-126). These standards are to be inserted once every 20 samples.

The CRM details are shown in Table 10-2, with material type, certified values, standard deviations and upper and lower limits for acceptable assay results. Geostats recommends that acceptable limits of ±3 standard deviation ("SD") should be utilised for pass/fail and for grounds for re-assay by the laboratory.

Table 10-2: CRM certified Fe% values

CRM	Material Type	Certified Fe Total Value (%)	Standard Deviation	Lower Limit (-3SD)	Upper Limit (+3SD)
GIOP-95	Magnetite pulp. Yilgarn, Australia	24.22	0.064	24.03	24.41
GIOP104	Magnetite pulp. Yilgarn, Australia	29.83	0.154	29.37	30.29
GIOP-126	Magnetite pulp. Pilbara, Australia	49.61	0.1	49.31	49.91

Quarter Core Duplicates

Quarter core duplicates are taken one in every 20 samples, where the following sample will be a duplicate of the number listed.

When analysing the results, Gcwihaba accept a duplicate versus original X=Y R^2 of greater than 0.98 for Fe; if results fall outside of this, then the Chief geologist is informed and re-assaying of specific batches may be required.

10.25 SRK QA/QC Analysis

SRK undertook an analysis of the QA/QC data provided by Gcwihaba. This includes blanks, CRM standards and duplicates as described above.

10.26 CRM Standards

Figure 10-6 to Figure 10-8 show the %Fe assays of the CRM samples GIOP-95, GIOP-104 and GIOP-126. In total, 264 CRM samples were submitted for analysis, this represents an insertion rate of 6%.

Of the 91 GIOP-95 CRM standards, 90 are shown to be within three standard deviations (tolerance limits recommended by Geostats) providing a robust correlation with the expected grade. The sample mean indicates good correlation with the expected value over analysis of the global population. SRK therefore has a high level of confidence in the lower grade results in the database.

All of the 86 GIOP-104 CRM standards are shown to be within three standard deviations providing a robust correlation with the expected grade. Again, the sample mean indicates good correlation with the expected value over analysis of the global population. SRK therefore has a high level of confidence in the moderate grade results in the database.

Of the 87 GIOP-126 CRM standards, 73 are shown to be within three standard deviations providing a reasonable correlation with the expected grade. The sample mean indicates reasonable correlation with the expected value, with a slight low bias seen. It is noted there is a significant negative bias in the more recent sample returns, along with a slight negative drift with time, which may suggest under-estimation of Fe% within this grade range. This problem was highlighted by Gcwihaba and brought to the attention of the ALS laboratory and Geostats. The issue is caused by GIOP-126 having a significantly higher LOI compared to the two other CRMs. It was suggested that for GIOP-126 only the data should be normalised to LOI values before comparing to the Geostats certified values. A further complication to this was that the LOI technique at ALS, although considered fit for purpose, uses a lower precision furnace compared to the more precise Thermogravimetric Analyzer LOI technique used to ascertain the Geotstats certified values. It was suggested by Geostats that Gcwihaba use the certified LOI value instead of the measured LOI value in order to normalise the reported grades. The normalised Fe% values are plotted on Figure 10-9, showing a tighter scatter, a lack of drift, an average value close to the certified mean, and four samples outside the tolerance limits. SRK agrees that this is an acceptable course of action and as a result, has a reasonable level of confidence in the higher grade data.

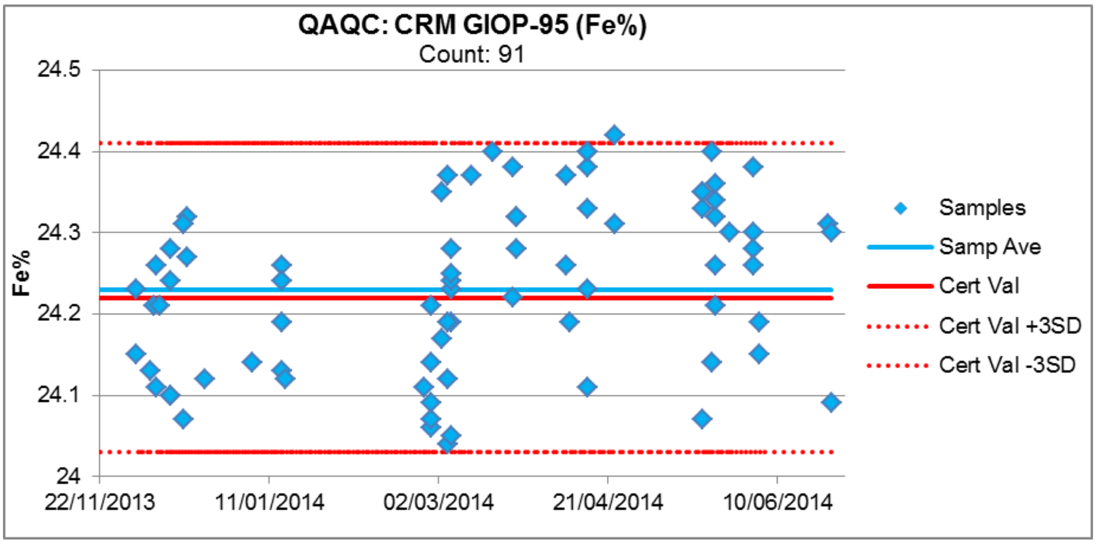


Figure 10-6: GIOP 95 Fe analysis

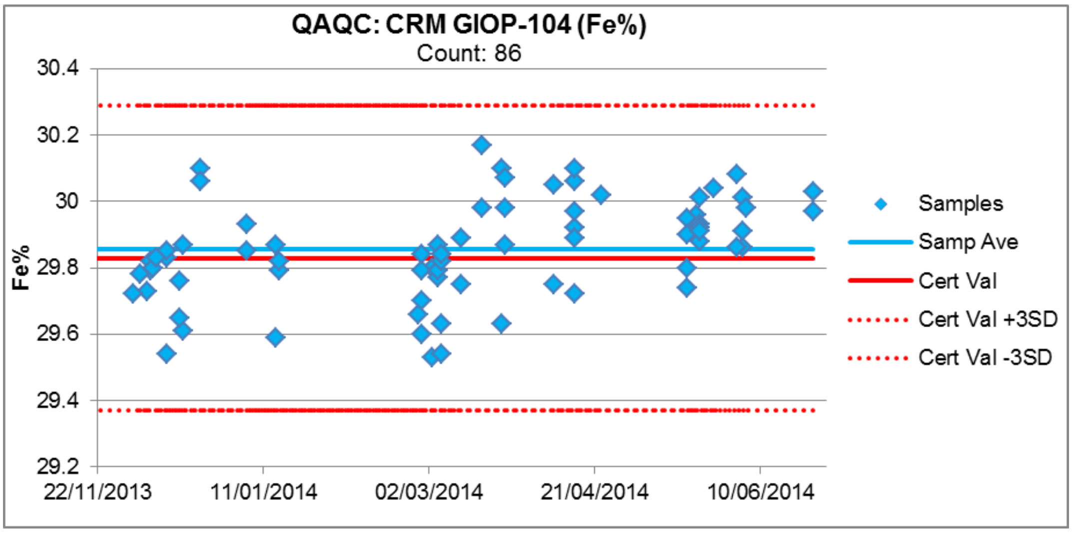


Figure 10-7: **GIOP 104 Fe analysis**

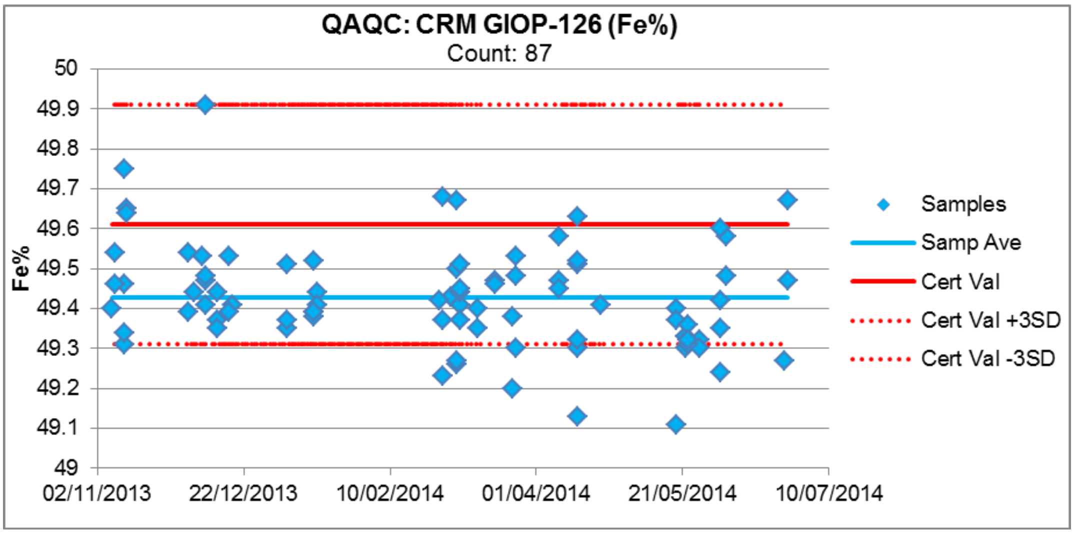


Figure 10-8: **GIOP 126 Fe analysis**

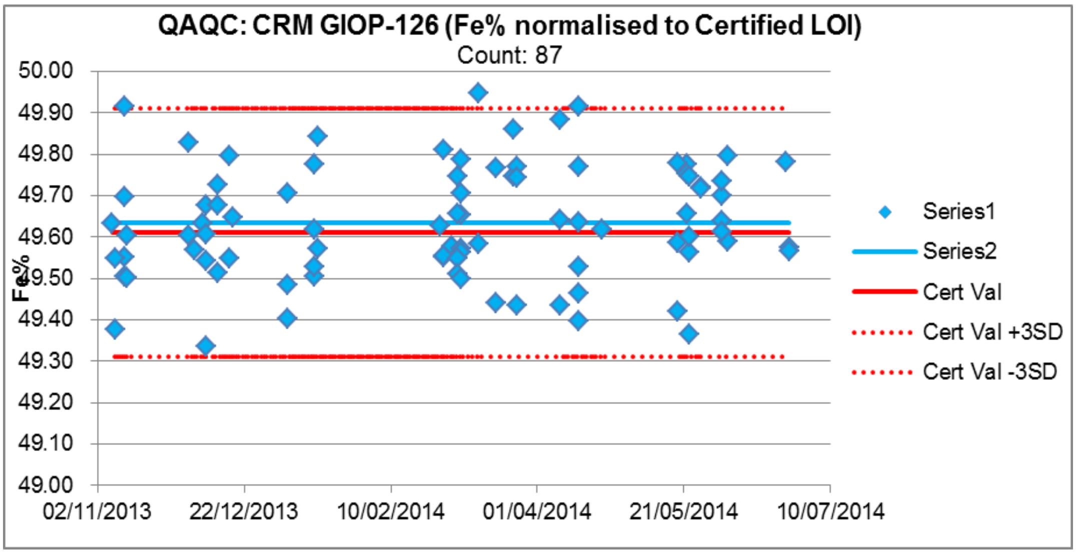


Figure 10-9: **GIOP 126 Fe normalised to certified LOI values analysis**

Summary - Standards

CRM standards were introduced into the sample stream in October 2013. Prior to this, no blind QAQC samples were utilised by the Company. In-house laboratory QAQC samples were analysed along with the Xaudum samples at ALS and Set Point, however, they are not considered unbiased. Therefore, SRK has a lower degree of confidence in all assays analysed prior to the insertion of blind QAQC samples.

For the late 2013 samples onwards, the CRM assays are generally acceptable. The low and medium grade CRMs show robust results, however, the high grade CRM does show slight cause for concern with a negative drift in grade. This was accounted for by normalising the values to the certified LOI values.

10.27 Blanks

Figure 10-10 shows the Fe% results of the field blanks. In total, 275 blank samples were submitted for analysis, this represents an insertion rate of 7% (from October 2013 onwards). The Fe% grade ranges from below detection limit to 0.7% showing that no issues with contamination were identified.

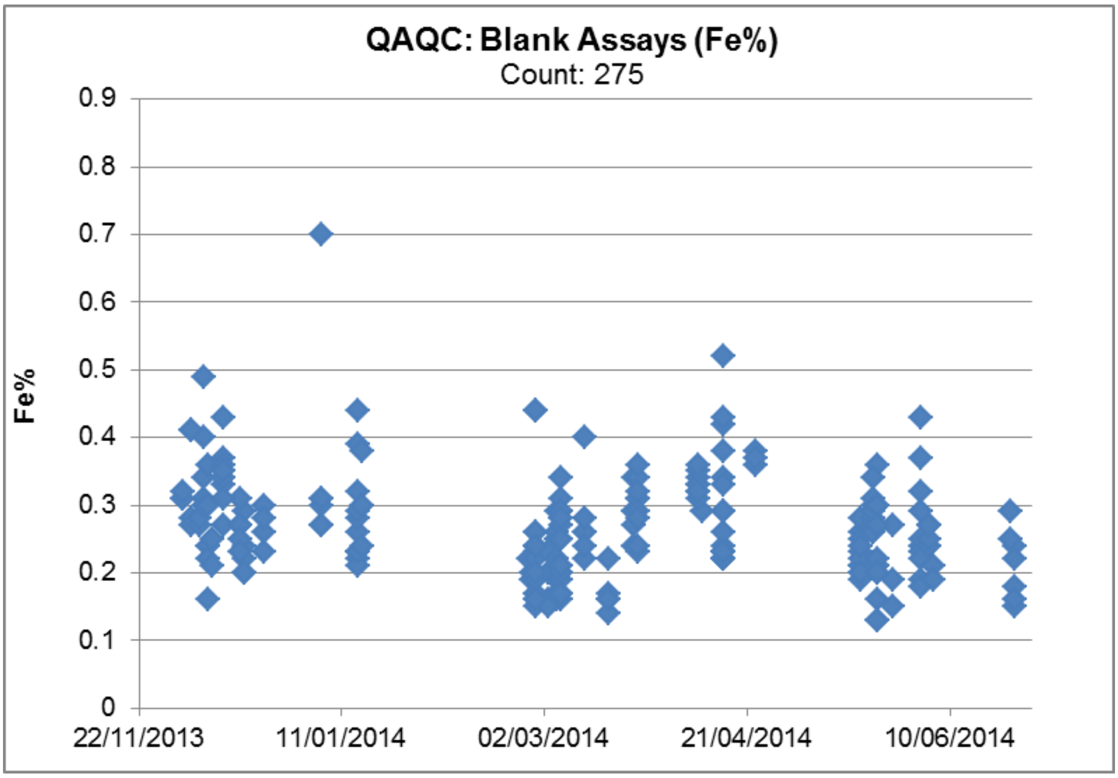


Figure 10-10: Field blanks – %Fe Total Assays

Summary – Blanks

No contamination issues were identified from the results of the blank QAQC assays analysis.

10.28 Duplicates

Figure 10-11 shows the Fe% results of the re-assayed duplicates. In total, 277 duplicate samples were submitted for analysis, this represents an insertion rate of 7% (from October 2013 onwards).

The duplicate samples show a strong correlation to the original sample, with a correlation coefficient of >0.99. SRK is therefore confident in the repeatability of the sample preparation and analysis of these samples.

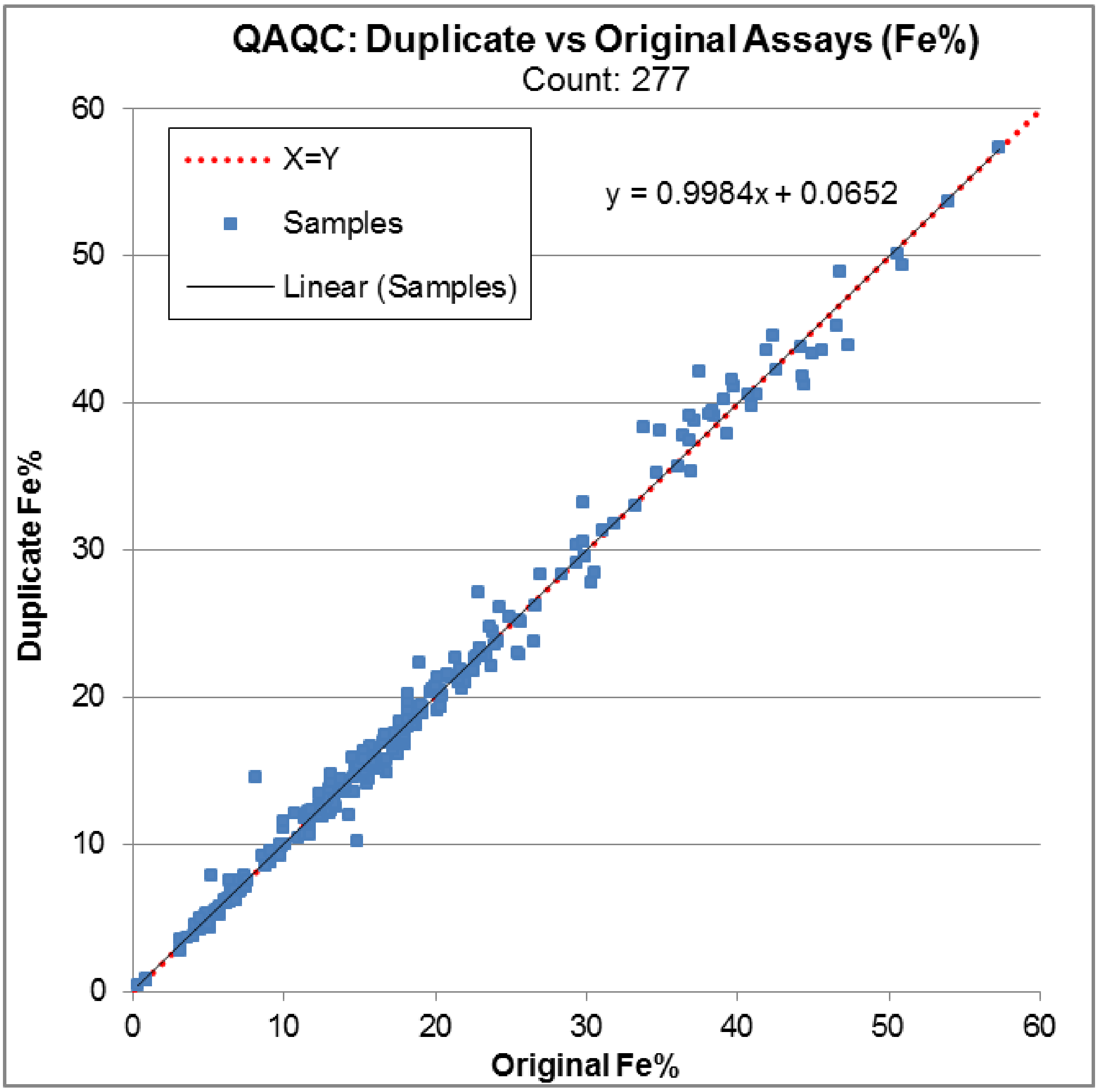


Figure 10-11: Duplicate vs Original Fe Assays

10.29 QA/QC Summary

Overall, SRK considers that the results of the QAQC analysis show that the data analysed at ALS since October 2013 is suitable for use in the Mineral Resource estimate. Samples analysed prior to October 2013 did not contain any ‘blind’ QAQC samples inserted by Gcwihaba. SRK therefore has a lower confidence in this data, which may be reflected in the Mineral Resource classification.

A summary of the QAQC sample insertion rate since October 2013 compared to the Xaudum drillhole samples is shown in Table 10-3.

Table 10-3: Summary of QAQC Insertion Rate

Reference sample	Total number	Insertion rate (%)
Standards	264	6%
Blanks	275	7%
¼ core Duplicates	277	7%
TOTAL QAQC SAMPLES	**816**	**20%**
TOTAL NON QAQC SAMPLES	**4090**	

10.30 Core Recovery Analysis

Core recovery is recorded for all 2013 and 2014 drillholes, and is generally found to be high, averaging 96.6% overall. In the unweathered material, geodomain MBA averages 98.6%, geodomain DIM averages 99.6%, geodomain DIA averages 97.1% and geodomain GST averages 99.4%. The weathered material shows a decrease in recovery, as expected: MBW averages 82.7% and DMW averages 84.9% (based on few recovery calculations). In general, SRK considers the overall core recovery data typical for the type of deposit under study with no material impact on the project.

11 DATA VERIFICATION

Qualified Person Howard Baker (FAusIMM(CP)) has verified that the data provided by Gcwihaba appears to be correct and viable for use in a MRE. This involved viewing a selection of recent drillholes at the core shed to check the quality of the logging, along with cross-checking assay certificates against the database and producing a comparison of different assay methods.

11.1 Data Received

SRK was provided with the following list of documents and files to assist with the MRE:

- Drillhole data:
  - Drillhole database, including collar coordinates, down-hole survey measurements, elemental / oxide assay data, lithological logging data, magnetic susceptibility readings;
  - Density measurements.
- Mineralogy and petrology analysis.
- Davis Tube recovery testwork data; and
- QA/QC data to accompany the assay data.
- Topographic survey.
- Geological maps.
- Geophysical survey data and maps.

11.2 Database Validation

Gcwihaba is responsible for maintaining the drillhole database and has overall control of integrity and validation. All data is stored on site in an access database. Additional exploration information within the Gcwihaba Prospecting Licences is provided by FQM and inserted into the Gcwihaba database.

SRK compared the database provided by Gcwihaba to the original assay sheets provided by the laboratories. A minor number of issues were identified and communicated to Gcwihaba staff, who subsequently fixed these errors.

11.3 QAQC

The QAQC measures that Gcwihaba has put in place are discussed in the previous section. It is the opinion of SRK that, although issues have been highlighted, the procedures adopted have led to a reliable assay dataset. SRK therefore has a reasonable level of confidence in the quality of the data being sufficient for use in a MRE, which has been produced in compliance with generally accepted CIM “Estimation of Mineral Resource and Mineral Reserves Best Practices” guidelines.

11.4 ICP vs XRF

The two different assaying methodologies, ICP and XRF, have been used in approximately equal measure throughout the drillhole sampling program between 2008 and 2014. From late-2013 onwards, only XRF has been used as it was considered by Gcwihaba to be the more appropriate methodology. SRK agrees that for iron ore projects of this type, XRF produces the highest quality results.

In order to ascertain whether or not the ICP and XRF data are compatible for use together in the MRE, SRK has compared the two datasets.

11.5 ALS comparison

Figure 11-1 shows the ALS intra-laboratory Fe% assay comparison where samples have been analysed using both methods. The left chart compares the XRF method (ME-XRF21u) to the main ICP method (ME-MS61) and the right chart compares the XRF and over-limit method (ME-OG62). The MS61 results capped at 50% are the results in the OG62 comparison. As can be seen, the majority of samples show reasonable to good correlation, particularly for lower grade and the over-limit results. Between 25 - 50%, there is a higher degree of scatter, with the XRF showing a slight higher-grade bias.

Figure 11-2 shows quantile-quantile (“Q-Q”) plots comparing ALS XRF and ICP assay datasets in the drillhole file generated by SRK. The left chart compares all data in the drillhole file, showing a large deviations from the X=Y axis, particularly for lower grades. SRK also compared the same data within each wireframed geodomain. Zone 103 (geodomain MBA3 unit), provides the best comparison with the largest number of samples and an almost even number of XRF and ICP assays. It shows a reasonable correlation between the two datasets but with a slight high-grade bias towards XRF, as was shown in Figure 11-1.

In general, SRK is satisfied that the two datasets show adequate correlation to be used simultaneously in the grade estimation.

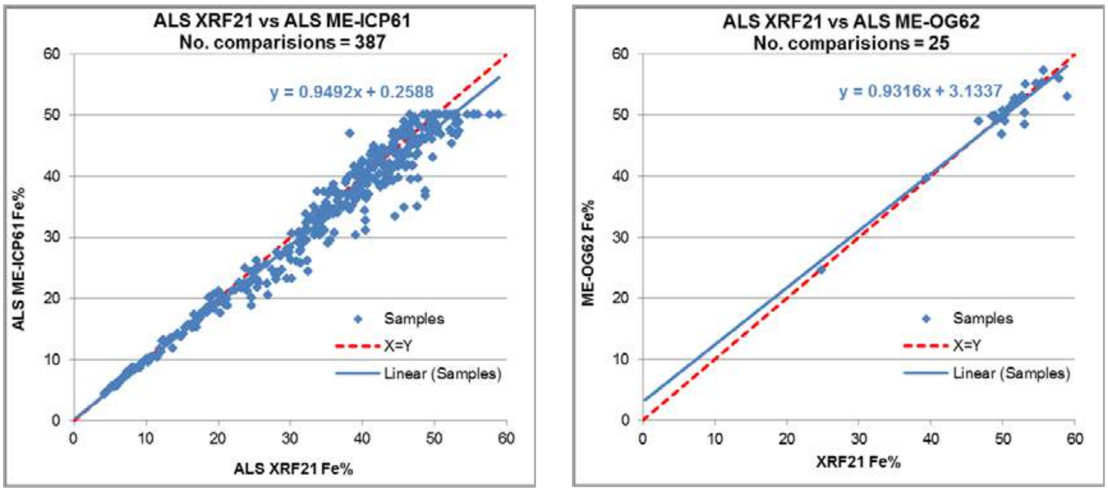
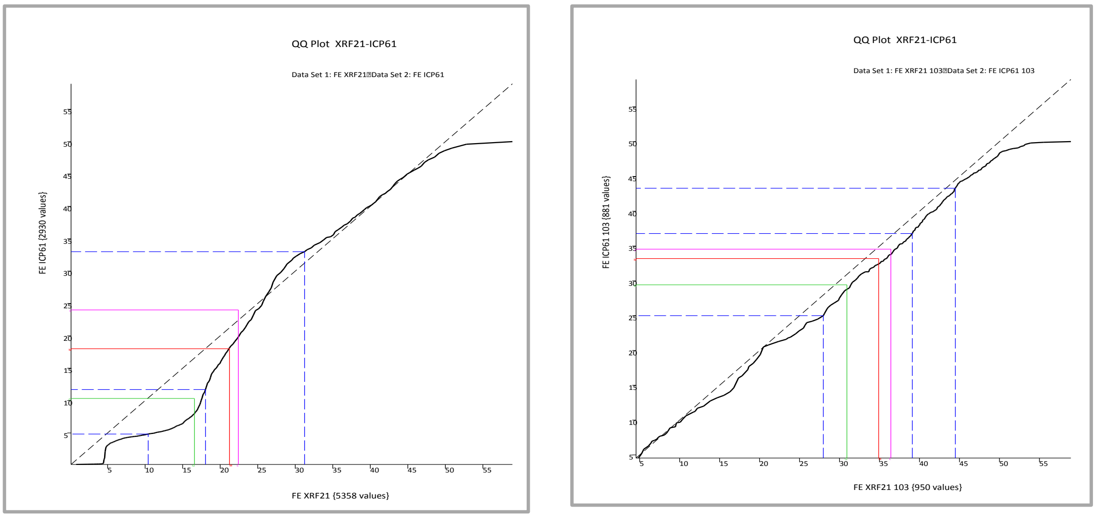


Figure 11-1: XRF vs ICP comparisons for XRF21u vs MS61 (left) and XRF21u vs OG62 (right)



XRF21 vs ICP61

XRF21 vs ICP61 – Zone 103 (MBA3)

Figure 11-2: Q-Q plots comparing Fe% data analysed by XRF vs ICP at ALS Chemex

11.6 Set Point comparison

Figure 11-3 shows the same comparison for the Set Point data. As can be seen, the two datasets show a low correlation with the ICP results consistently showing a higher-grade bias. The ICP methodology utilised is not accredited, and so can be considered the lower quality data.

SRK recommends that the ICP data from Set Point is not used for grade estimation. This affected only one hole in the Block 1 area used to generate the MRE. The section containing this drillhole contained a number of other drillholes containing grade assayed by XRF methodology.

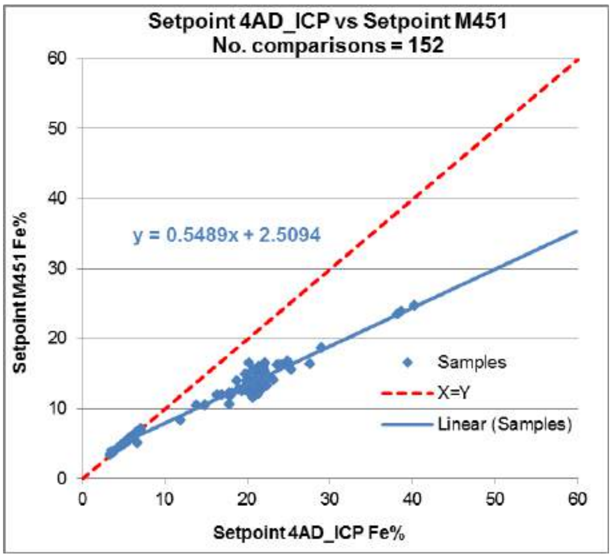


Figure 11-3: **Set Point XRF vs ICP Fe% comparisons for M451 vs 4AD-ICP**

11.7 Topographic Survey

The topographic surface provided by Gcwihaba was created by interpolating a surface based on DGPS drillhole collar coordinates measured in the field. Previously, a topographic surface based on Shuttle Radar Topography Mission ("SRTM") was utilised by the Company, but it was found to show considerable height differences to the higher resolution DGPS coordinates.

SRK recommends that a high resolution topographic survey is produced or purchased for the Xaudum area as the Project develops further and more precise measurements are required.

11.8 Collar Coordinates

The DGPS collar surveys are considered to be measured to a high resolution. At present, a number of holes are yet to be surveyed with DGPS equipment, and so these collar coordinates have been pressed on to the DGPS topographic surface.

SRK agrees that due to the lack of high quality topographic survey data, this is the most appropriate course of action.

11.9 QP Comment on Data Quality

SRK is confident that the quality of the majority of data provided by Gcwihaba is reasonable and it is suitable for use in producing an MRE. The collar, down-hole survey and interval files have been reviewed and validated by SRK and Gcwihaba.

12 MINERAL PROCESSING AND METALLURGICAL TESTING

The following section describes and discusses the metallurgical testwork that has been conducted on the Xaudum mineralisation to date.

12.1 Magnetite BIF Testwork Summary

Preliminary magnetic concentrate sizing testwork using the Davis Tube Recovery (“DTR”) method has been carried out on 15 composite samples to date, with an additional two QAQC samples (one duplicate of composite 6, and one standard (DTR171110)). The testwork was conducted at the ALS Iron Ore Technical Centre in Perth, Australia. The testwork has been conducted on the following samples:

- Non-mineralised diamictite schist (geodomain DIA) – 1 sample;
- Low grade magnetic diamictite schist (DIM) – 5 samples;
- Weathered magnetic diamictite schist (DMW) – 1 sample;
- Low grade magnetite garnet schist (MGS) – 2 samples.
- High grade banded magnetite (MBA) – 5 samples; and
- Weathered banded magnetite (MBW) – 1 sample.

The locations of the drillholes used for creating the composite samples for DTR testwork are shown in Figure 12-1.

The composites comprised 8 - 10 m of continuous core from 11 different drillholes. The samples were taken from coarse reject material not used for assaying. Each composite was ground to 5 different sizing fractions and the P80s (P80 is the grind size at which 80% of the material passes the screen) were calculated for each size fraction. The head (DTR input), concentrate (DTR output), and tails (material left over after concentration) fractions were chemically assayed using XRF. In addition, %Magnetics were calculated using Magnasat technology, which uses a magnetic susceptibility measurement calibrated to a sample with known magnetic content. The resultant %Magnetics represents all magnetic and para-magnetic material in the sample, which, for the case of Xaudum, is almost entirely magnetite.

Table 12-1 and Figure 12-2 to Figure 12-4 present the results of the DTR testwork for composites where a sample was recovered. Table 12-1 shows the results averaged for each geodomain. There were two samples which did not produce a concentrate, one DIM and the DIA sample, after DTR analysis due to the low magnetic Fe content, which are not included in the analysis.

The results show that the general trend of the data is to produce good quality concentrate grades at all grind sizes between 50 to 100 microns for all units.

The highest recoveries match with the high grade MBA geodomain, as expected. There is a linear relationship between MBA and DIM, with the lower grade DIM showing a lower %mass recovery (and %Fe recovery). The MGS and MBW geodomains show a different trend, indicating the presence of non-magnetic minerals with an associated low mass recovery and Fe recovery. Again, this is expected due to the high %Fe total content of almandine garnet in the MGS, and goethite and limonite in the MBW. The high percentage of garnets creates an issue for the DTR testwork due to inclusions of magnetite within the garnet.

The resulting concentrate specifications indicate a high grade Fe% and low impurity levels coupled with moderate grinding. The concentrate %Fe Total grade ranges from 65 – 70%, apart from one MGS sample which produces a lower grade concentrate with 61% Fe Total. Other major elemental oxides not reported here such as S, MgO, CaO, K_2O, Na_2O, TiO_2 and MnO are also significantly reduced to low levels during the concentration process.

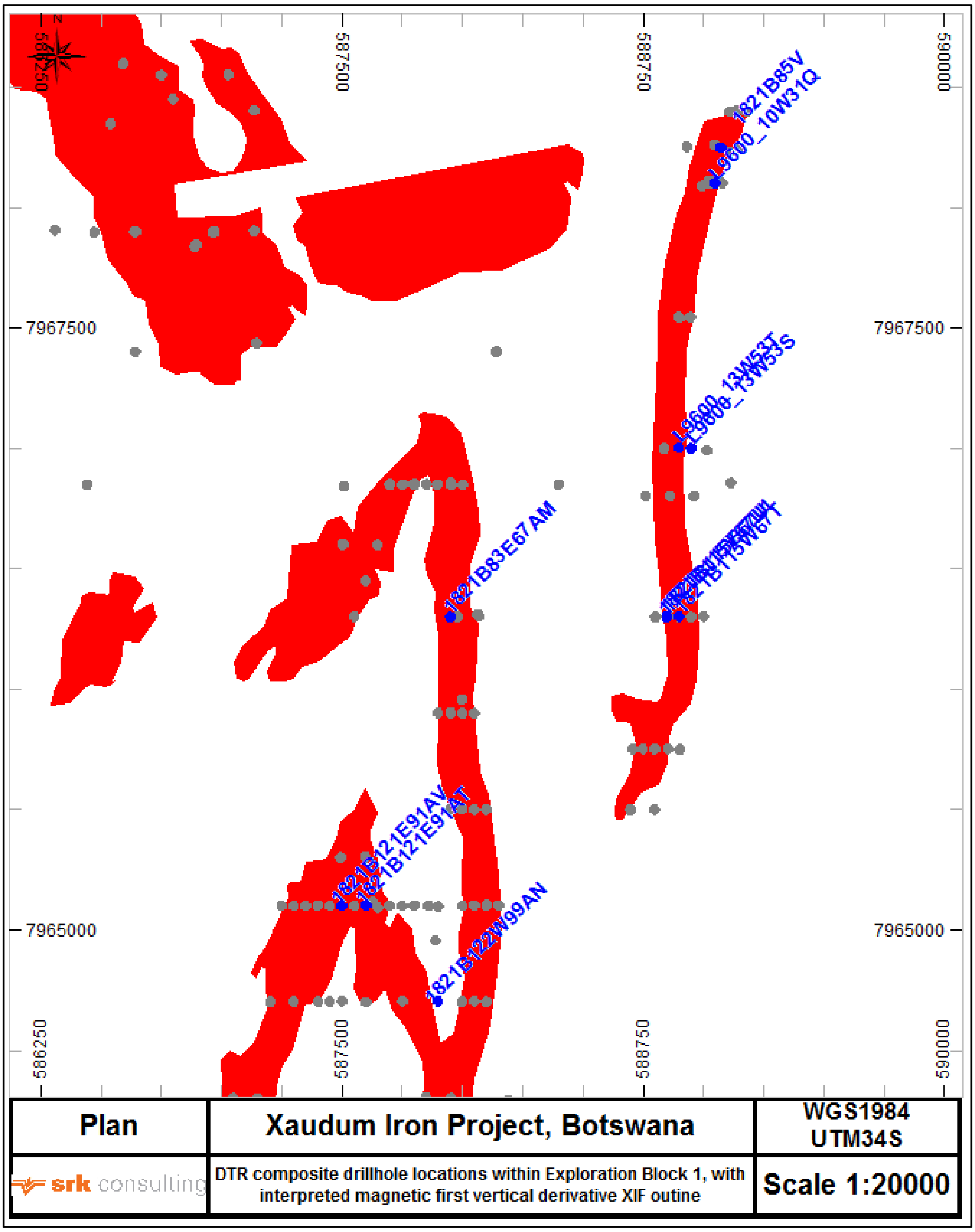


Figure 12-1: Location of DTR drillhole composite samples in the Project area* (Source: SRK, 2014)

**Note: holes 1821B115V67U and 1821B115V67U1 are drilled in the same location adjacent to hole 1821B115W67T (right).*

Table 12-1: Davis Tube Recovery results summary by geodomain

Geo-domain	Feed		Grind	Magnetic Concentrate					
	Fe	Magnetics*	P_{80}	Mass Rec.	Fe Rec.	Fe	SiO_2	Al_2O_3	P
	(%)	(%)	(microns)	(%)	(%)	(%)	(%)	(%)	(%)
DIM	20.49	9.25	50	16.7	50.8	68.6	2.5	0.4	0.04
			60	17.1	51.8	67.9	3.3	0.5	0.05
			70	17.5	53.0	67.1	4.1	0.5	0.05
			80	17.9	54.0	66.4	4.9	0.6	0.06
			90	18.4	54.9	65.5	5.8	0.7	0.07
			100	19.2	56.1	64.5	7.1	0.8	0.09
MBA	39.39	51.47	50	43.3	75.5	69.6	2.3	0.4	0.05
			60	44.1	76.4	69.0	2.8	0.4	0.06
			70	44.8	77.3	68.5	3.3	0.4	0.07
			80	45.5	78.1	67.9	3.8	0.5	0.08
			90	45.8	78.2	67.1	4.5	0.5	0.09
			100	46.1	76.6	65.9	5.7	0.6	0.08
MGS	24.35	11.17	50	9.2	21.8	66.2	5.4	1.5	0.09
			60	9.7	23.0	65.2	6.5	1.7	0.11
			70	10.2	23.1	64.2	7.8	1.9	0.14
			80	10.7	23.7	63.2	9.0	2.1	0.16
			90	11.2	24.0	62.1	10.3	2.3	0.17
			100	11.6	25.1	60.9	11.7	2.6	0.17
MBW	37.50	5.20	50	15.5	28.5	69.0	2.4	0.0	0.03
			60	19.0	34.5	68.6	2.8	0.0	0.04
			70	22.3	40.7	67.2	3.4	0.0	0.04
			80	25.4	46.3	66.8	3.6	0.0	0.05
			90	27.4	49.5	66.4	4.0	0.0	0.05
			100	27.5	49.0	65.9	4.5	0.0	0.05
DMW	27.90	8.50	50	17.6	43.6	69.0	1.5	0.2	0.01
			60	18.0	47.0	68.7	1.8	0.2	0.02
			70	20.3	50.5	68.4	2.2	0.2	0.02
			80	21.6	53.6	68.0	2.5	0.2	0.02
			90	22.8	56.5	67.7	2.8	0.2	0.02
			100	23.7	58.8	67.2	3.3	0.2	0.02

**Note: %Magnetics calculated using the magnetic susceptibility (Magsus) measurement from ALS. %Magnetics = (Magsus x 0.0143) + 0.644.*

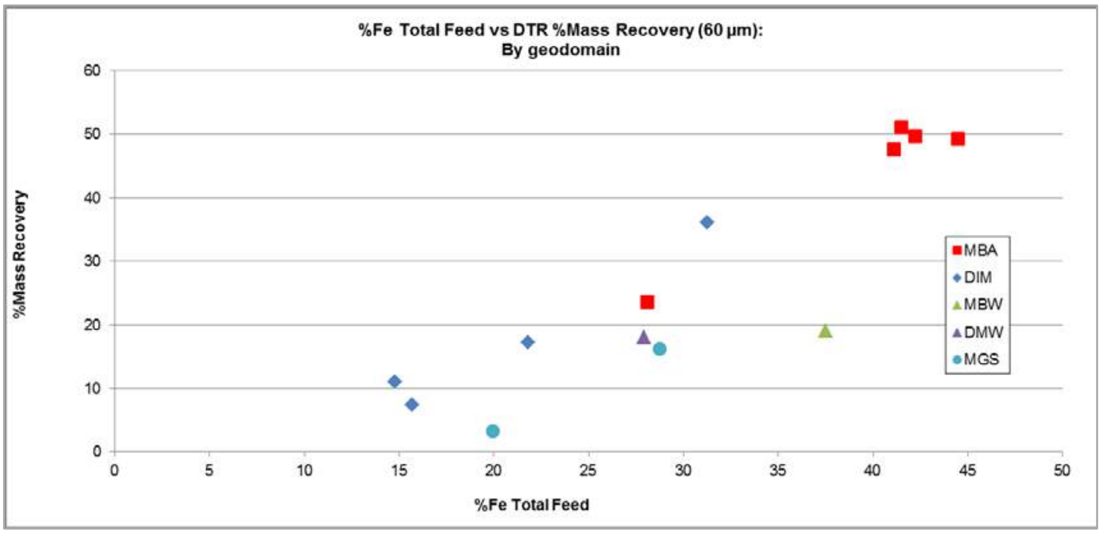


Figure 12-2: %Fe Total feed grade vs DTR %Mass recovery by geodomain

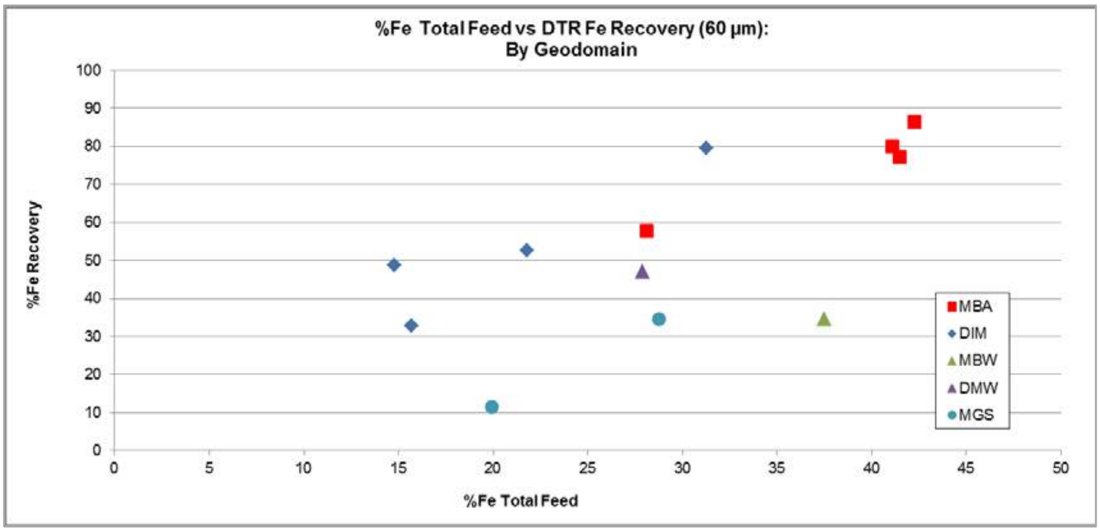


Figure 12-3: %Fe Total feed grade vs DTR %Fe recovery by geodomain

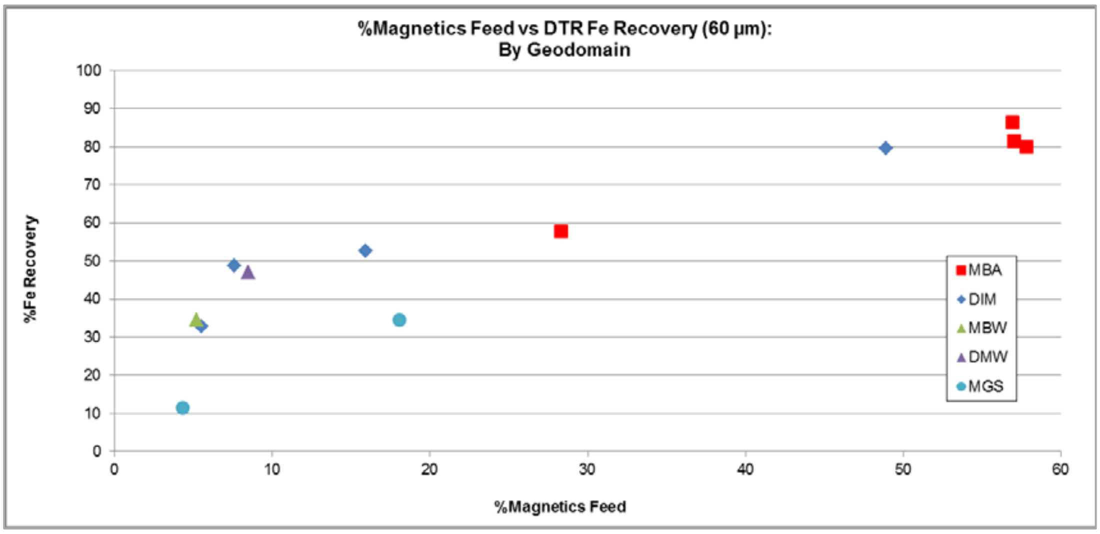


Figure 12-4: %Magnetics feed grade vs DTR %Fe recovery by geodomain

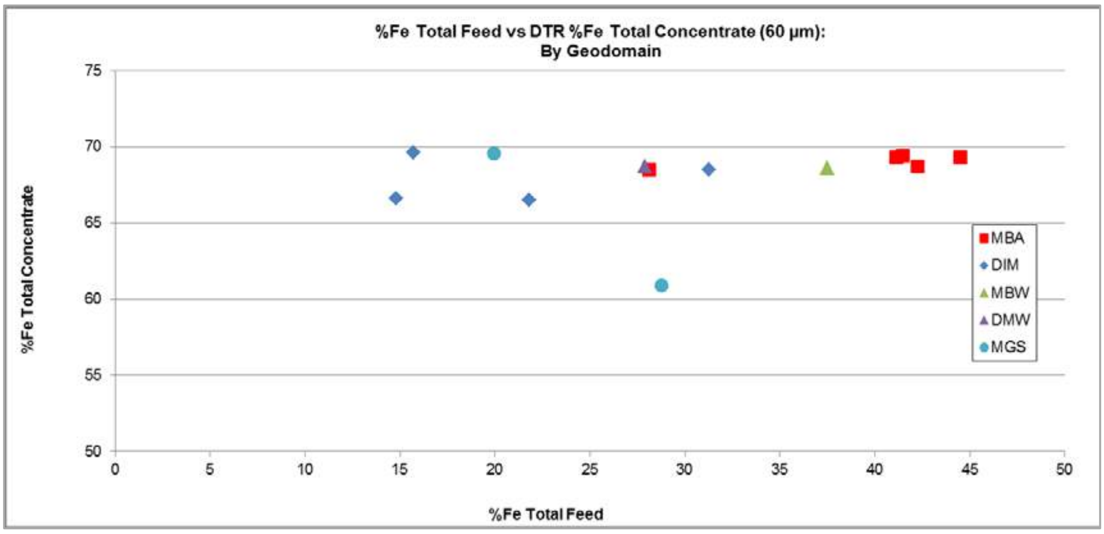


Figure 12-5: **%Fe Total feed grade vs DTR %Fe Total concentrate grade by geodomain**

12.2 QP Comment

The DTR testwork results are positive and prove that reasonable iron recoveries can be achieved from low, medium and high grade samples with mainly premium quality products produced. Further testwork is recommended which is aimed at better understanding of the variability of response with depth and across the entire Project area.

13 MINERAL RESOURCE ESTIMATE

13.1 Deposit modelling

The following section describes the methodology undertaken for modelling of the Project.

13.2 Geodomain Units

Geodomain units were created by grouping together zones of the dominant logged lithology along with mineralogy, magnetic susceptibility and Fe grades. The main reason for using the geodomains (instead of purely Fe grade or lithology) was to ensure that Fe contained within garnets is correctly delineated and domained separately to magnetite (+martite). This resulted in geologically continuous units which are confirmed by logging, geophysics and assay data.

Figure 13-1 shows the MBA and DIM wireframes within the Block 1 area (not showing the MBA or DIM pods). Table 13-1 shows the geodomain and geozone codes used for the MRE developed for the Xaudum Block 1 area. This includes mineralised and non-mineralised units. The numeric geozone codes are used to assist with data manipulation in Datamine Studio 3.

Table 13-1: Geodomains and assigned Geozone Codes

Geodomain	Geozone	Description	Predicted Fe Grade
Mineralised Units			
MBA 1	101	BIF (MBA) unit in the northwest of Block 1	25 – 40%
MBA 2	102	MBA unit in the centre of Block 1	25 – 40%
MBA 3	103	MBA unit in the northwest of Block 1	25 – 40%
MBA Pods	104	MBA pods within DIM units	25 – 40%
MBW 1	111	Weathered counterpart of MBA 1	25 – 40%
MBW 2	112	Weathered counterpart of MBA 2	25 – 40%
MBW 3	113	Weathered counterpart of MBA 3	25 – 40%
MBW Pods	114	Weathered counterpart of MBA Pods	25 – 40%
DIM L	201	Magnetic diamictite (DIM) unit in the south of Block 1	10 – 25%
DIM R	202	DIM unit in the centre of Block 1	10 – 25%
DIM 2	203	DIM unit in the west of Block 1	10 – 25%
DIM Pods	204	DIM pods within MBA units	10 – 25%
DMW L	211	Weathered counterpart of DIM L	10 – 25%
DMW R	212	Weathered counterpart of DIM R	10 – 25%
DMW 2	213	Weathered counterpart of DIM 2	10 – 25%
DMW Pods	214	Weathered counterpart of DIM Pods	10 – 25%
MGS	301	Pods of magnetite-garnet schist (MGS)	15 – 30%
Non-mineralised Units			
GST	401	Pods of non-mineralised garnet schist (GST)	0 – 10%
SAK	10	Kalahari sands	-
CAC	20	Calcrete	-
DIA	30	Diamictite	-
MINFIN	40	Mafic and felsic intrusives	-
KAT	50	Kakontwe Formation (carbonates)	-
MWF	60	Mwasha Formation (carbonates, phyllites)	-
BAS	70	Generic basement	-

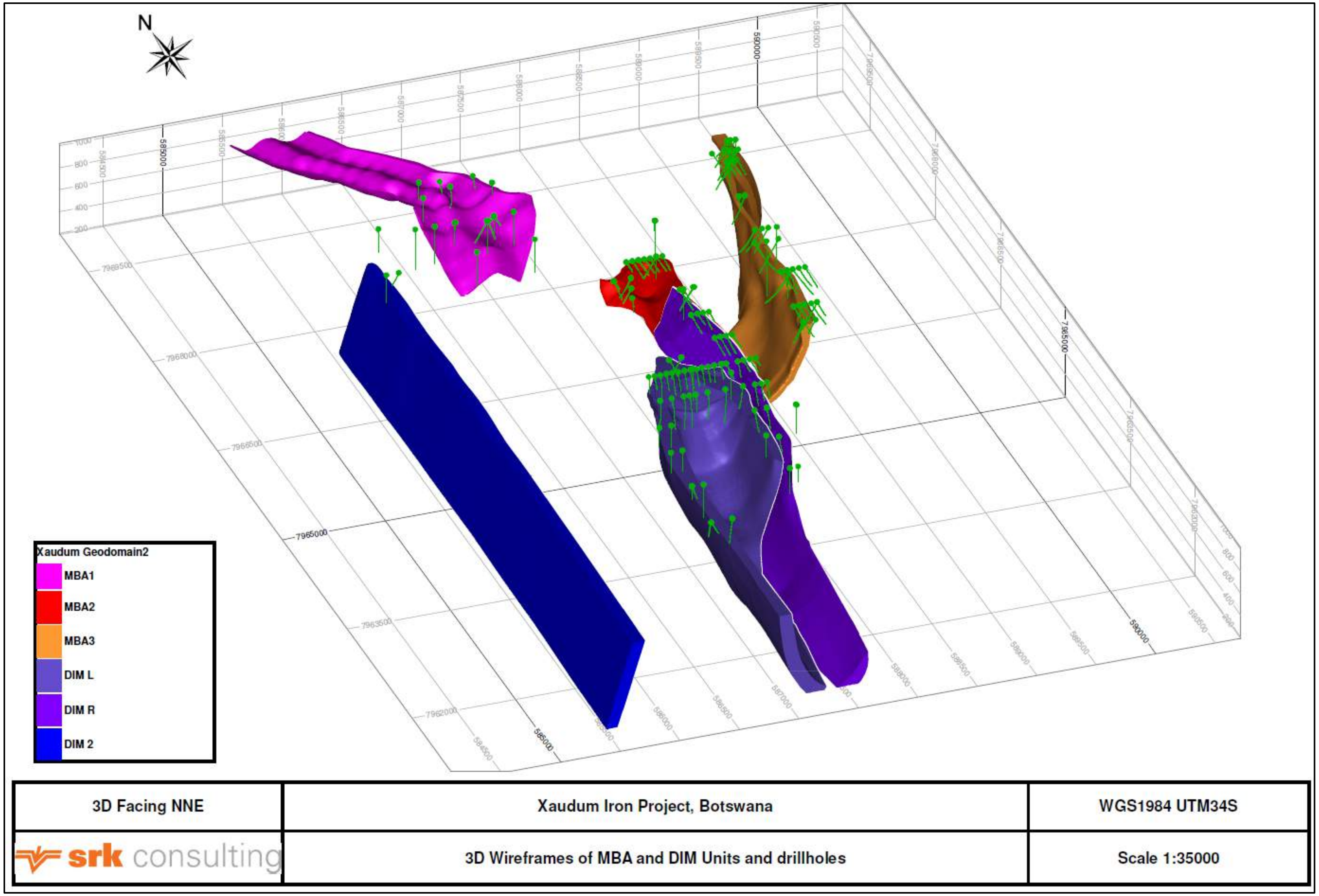


Figure 13-1: MBA and DIM wireframe units and drillholes – looking NNE (Source: SRK, 2014)

13.3 Block Model Creation

An empty block model was generated using the solid wireframes created with the DGPS topography being used to limit the block model extents. Figure 13-2 and Figure 13-3 show the coded block model and coded drillhole file created for the Project and coloured by geodomain. In total, the mineralisation modelled has a strike length of some 8.5 km.

The mineralised zones along with pods of geodomain GST within the DIM units were extracted from the block model to estimate grades into. No grade estimates were undertaken for the waste zones (other than the internal waste pods).

After completion of the geological domaining and wireframe generation, the drillhole file was coded to incorporate the corresponding geozones. This enabled a statistical analysis of each zone to be undertaken.

The total volume of the MBA and MBW zones equals 216 Mm^3, the volume of DIM and DMW zones equals 1,183 Mm^3, the volume of MGS pods equals 5 Mm^3, and the volume of GST pods equals 12 Mm^3. The deepest drillhole to date has proved the continuation of mineralisation to a depth of 510 m below the surface.

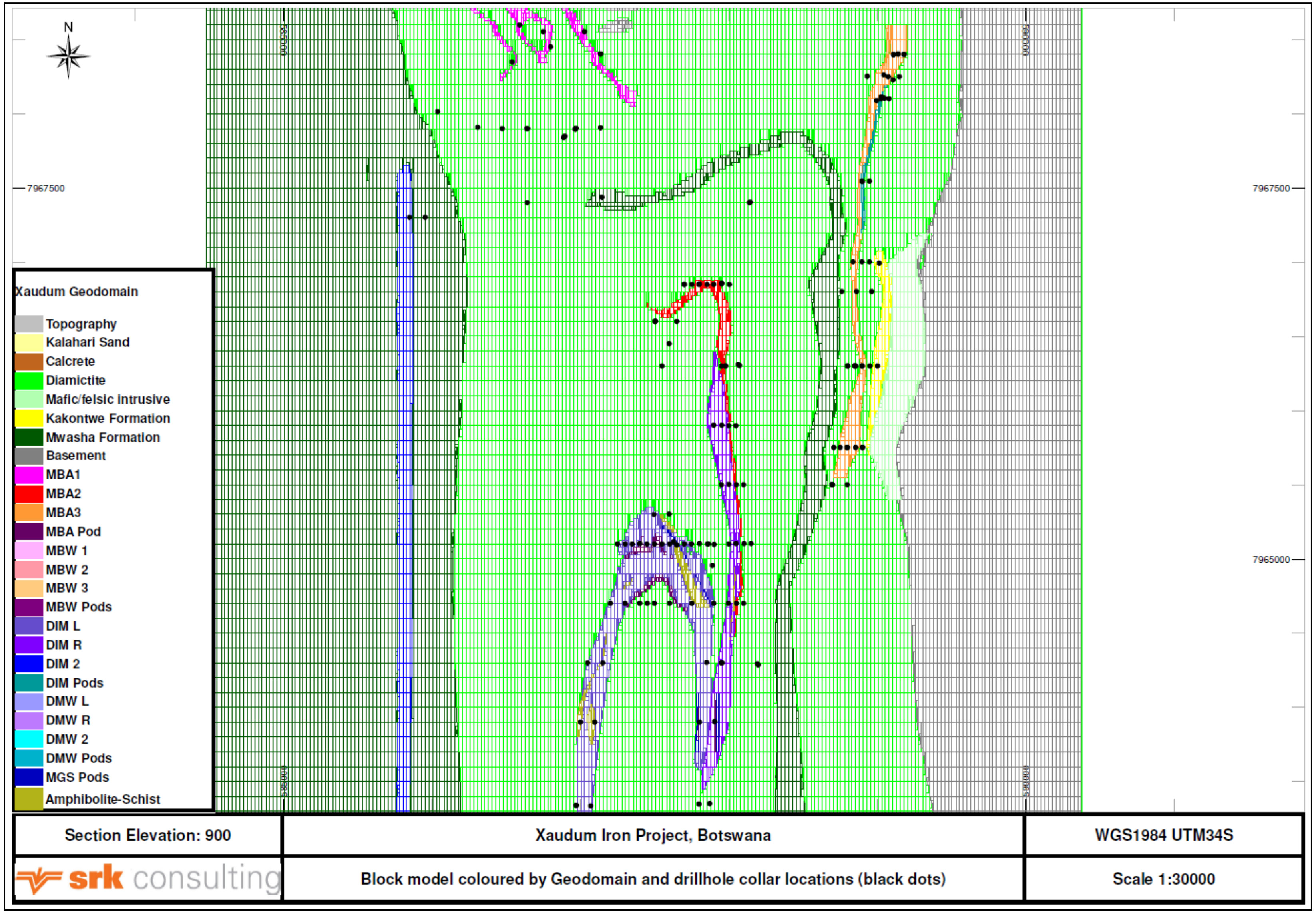


Figure 13-2: Plan view (900 m RL) of empty block model and drillhole collars (Source: SRK, 2014)

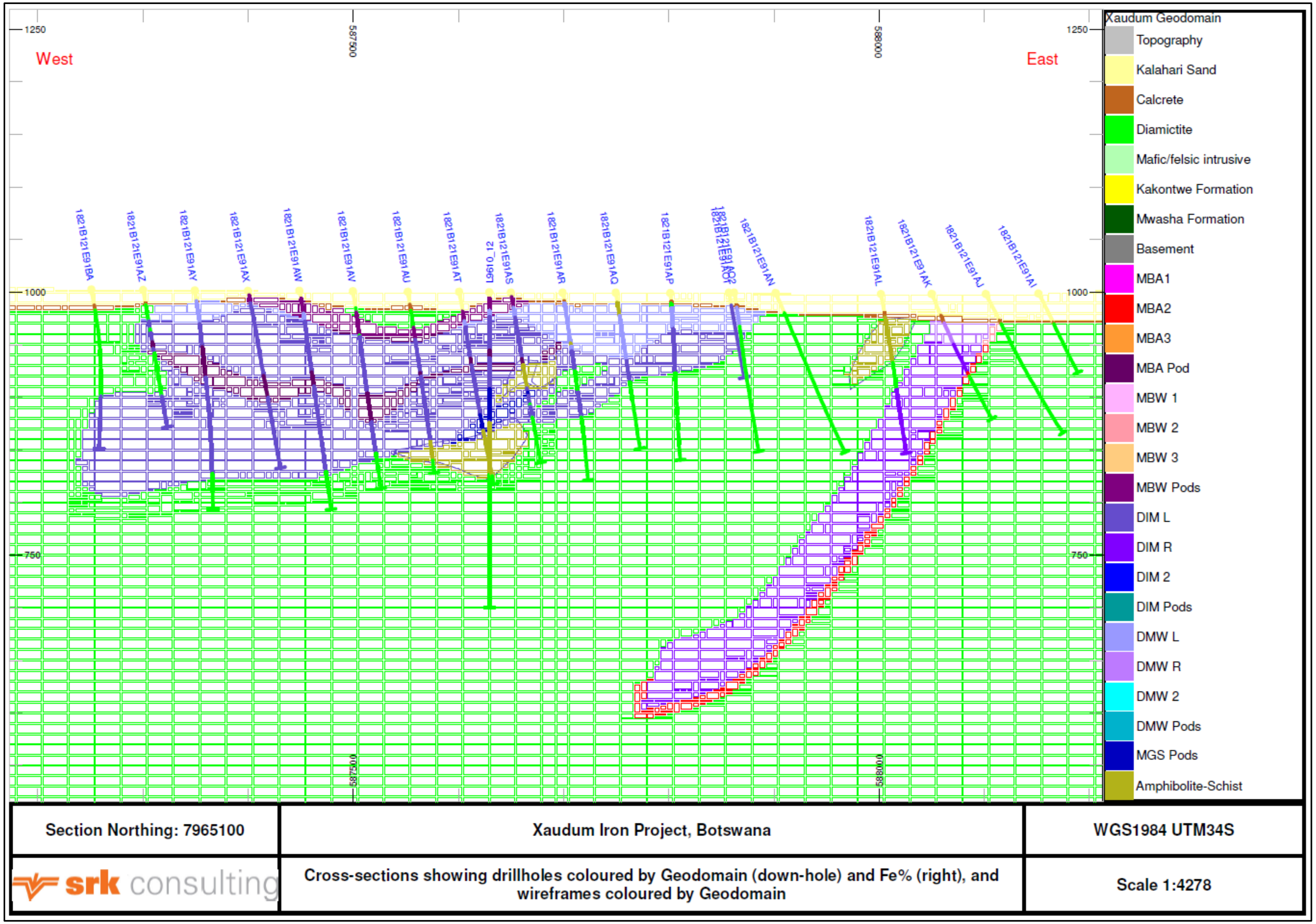


Figure 13-3: **Section 1821B121 of empty block model and drillhole collars (Source: SRK, 2014)**

13.4 Statistical Analysis

13.5 Introduction

This section presents the results of the statistical studies undertaken on all the available assay and density data sets to determine their suitability for the estimation process and to derive appropriate estimation zones.

13.6 Available Data

The samples analysed typically comprise either 1 m or 2 m sample intervals. A total of 9,221 Fe assays are available for use in the modelling and MRE process in the Block 1 area, for a total of 13,824 m of sampled drill intercepts.

13.7 Data Validation

All available data has been validated through the production of histograms and scatterplots. All data was validated by Gcwihaba during the geological modelling and SRK during the MRE process.

13.8 Raw Statistics

The geodomain coding described above groups together similar zones based principally on mineralogy. Table 13-2 shows the Fe, SiO_2, Al_2O_3, Mn and P statistics for the estimated geodomains.

Table 13-2: Raw statistics by geodomain

Geodomain	Geozone	Mean Fe%	Mean SiO_2%	Mean Al_2O_3%	Mean Mn%	Mean P%
MBA 1	**101**	33.60	35.19	4.03	0.44	0.26
MBA 2	**102**	37.31	33.43	2.80	1.29	0.26
MBA 3	**103**	35.08	33.77	4.38	0.79	0.29
MBA Pods	**104**	35.12	38.88	4.22	0.28	0.33
MBW 2	**112**	29.60	39.79	8.65	0.33	0.16
MBW 3	**113**	33.67	34.88	3.53	0.90	0.26
MBW Pods	**114**	37.15	32.41	1.38	0.45	0.27
DIM L	**201**	19.61	51.75	9.17	0.11	0.25
DIM R	**202**	16.78	54.76	10.39	0.13	0.17
DIM 2	**203**	18.99	53.22	9.40	0.07	0.27
DIM Pods	**204**	14.59	47.71	10.42	2.38	0.20
DMW L	**211**	22.58	48.25	7.78	0.10	0.21
DMW R	**212**	16.10	54.07	9.50	0.24	0.15
DMW 2	**213**	20.53	51.50	9.18	0.07	0.31
DMW Pods	**214**	18.44	47.20	6.98	1.62	0.18
MGS	**301**	25.50	48.35	7.73	0.16	0.29
GST	**401**	15.55	56.02	10.70	0.14	0.20

13.9 Compositing

Data compositing is undertaken to reduce the inherent variability that exists within the population and to generate samples more appropriate to the scale of the mining operation envisaged. It is also necessary for the estimation process, as all samples are assumed to be of equal weighting, and should therefore be of equal length.

It is common practice to select a composite length that is half of the block height (10 m blocks in this instance, so 5 m composites), being designed around the anticipated bench height.

13.10 Composite Length Analysis

The estimation process assumes an equivalent weighting per composite. It is therefore necessary to discard or ignore remnant composites that are generated in the down-hole compositing process to avoid a bias in the estimation. Based on the results of a composite length analysis, a 3 m cut off was determined. The analysis shows that discarding lengths of <3 m had the least effect on the statistical mean of the key element fields. It was therefore decided to remove all samples from the 5 m composite file with a length <3 m; this resulted in 6% of samples with an average grade of 24% Fe being removed.

13.11 Composite Statistics

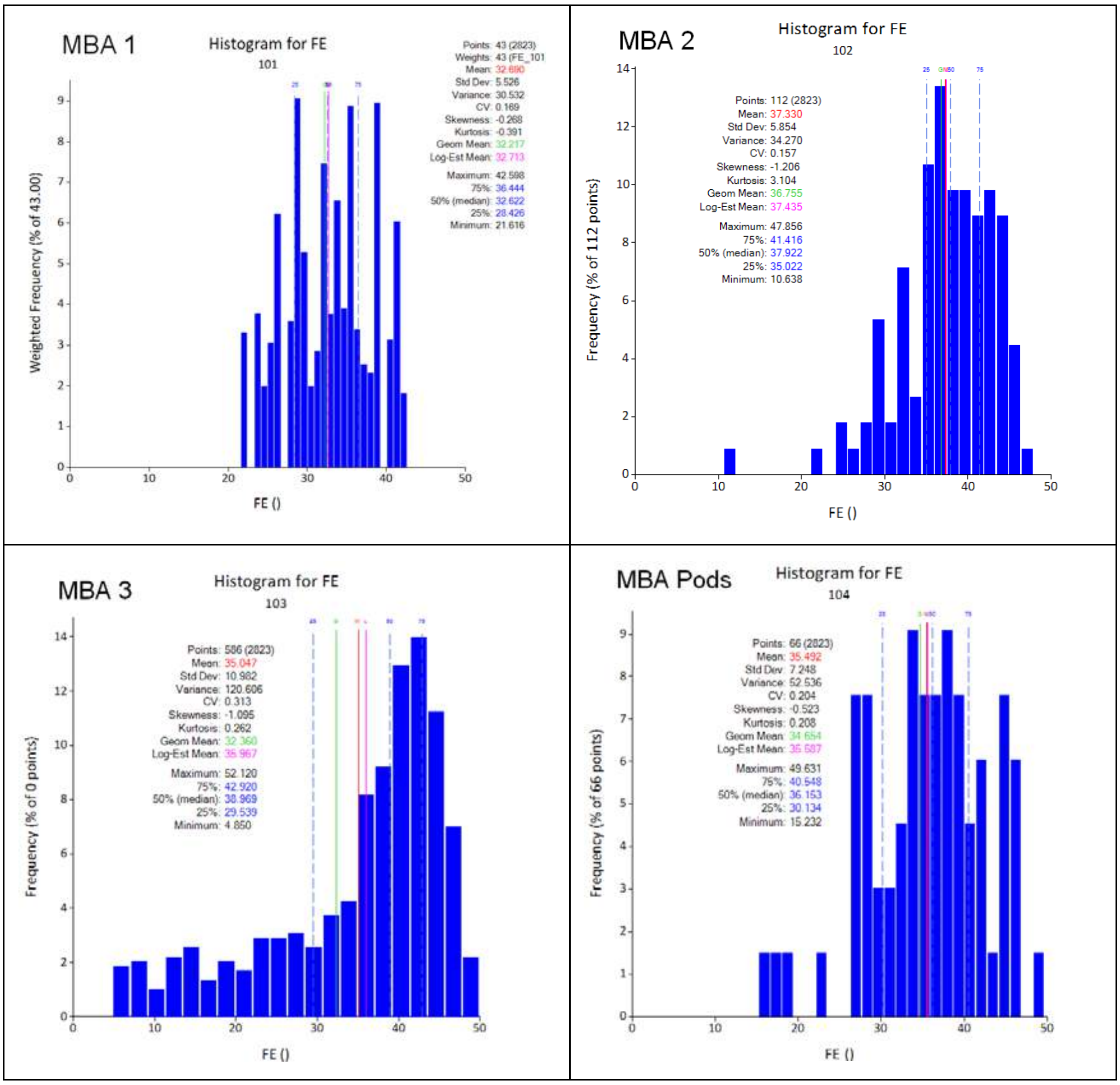
Table 13-3 shows the composite statistics for Fe, SiO_2, Al_2O_3, Mn and P within all estimated geodomains. The MBA geodomains show mean Fe values of 33.2%, 37.0%, 35.0%, and 35.4% for geodomains MBA 1 (101), MBA 2 (102), MBA 3 (103) and MBA Pods (104), respectively. The DIM geodomains show mean Fe values of 19.6%, 16.8%, 19.0% and 14.8% for geodomains DIM L (201), DIM R (202), DIM 2 (203) and DIM Pods (204) respectively. The coefficient of variation (CoV = standard deviation / mean) for all geodomains is low (<0.5), indicating relatively homogenous and therefore well-domained geodomains.

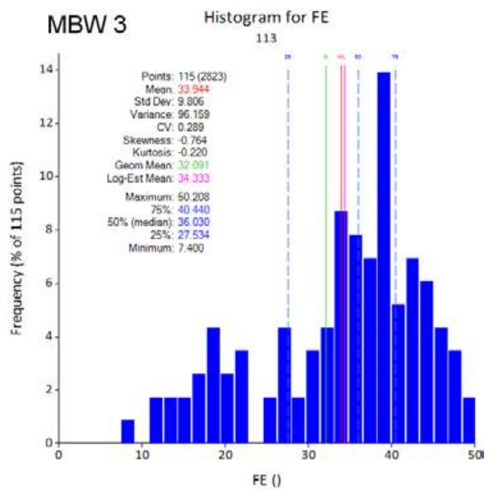
Table 13-3: Declustered Composite Statistics by geodomain

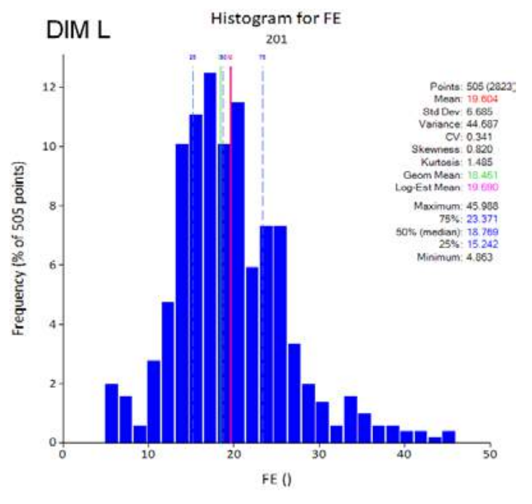
Geodomain	Geo zone	No. Samp	Mean Fe%	CoV Fe	Mean SiO_2%	Mean Al_2O_3%	Mean Mn%	Mean P%
MBA 1	101	43	33.18	0.17	35.78	4.11	0.45	0.26
MBA 2	102	112	37.03	0.17	33.32	2.78	1.30	0.26
MBA 3	103	586	34.99	0.31	33.75	4.35	0.77	0.29
MBA Pods	104	66	35.35	0.20	38.65	4.19	0.29	0.34
MBW 2	112	12	30.84	0.38	39.26	8.23	0.33	0.17
MBW 3	113	115	33.60	0.28	35.03	3.60	0.97	0.26
MBW Pods	114	17	37.16	0.12	31.86	1.32	0.48	0.27
DIM L	201	505	19.55	0.34	51.81	9.20	0.11	0.25
DIM R	202	160	16.77	0.15	54.78	10.39	0.13	0.16
DIM 2	203	16	18.99	0.07	53.22	9.40	0.07	0.27
DIM Pods	204	38	14.80	0.32	47.55	10.43	2.33	0.20
DMW L	211	68	22.21	0.31	48.49	7.88	0.10	0.21
DMW R	212	48	17.01	0.31	53.48	9.24	0.26	0.16
DMW 2	213	1	20.59	-	51.40	9.17	0.07	0.31
DMW Pods	214	11	17.40	0.50	48.32	7.44	1.58	0.18
MGS	301	36	25.48	0.28	48.45	7.72	0.15	0.29
GST	401	120	15.46	0.43	56.05	10.73	0.15	0.19

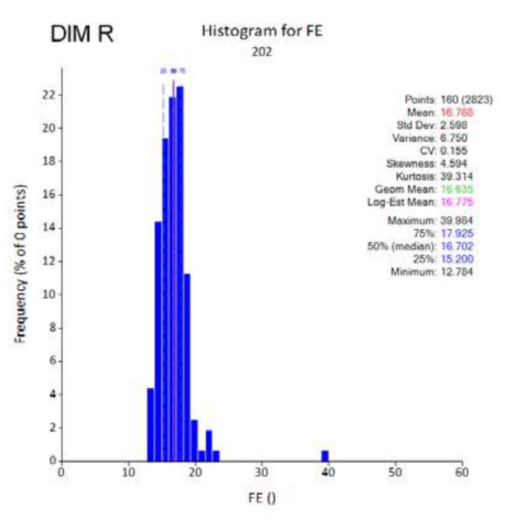
Figure 13-4 shows the Fe histograms plot for largest geodomains. The histograms show that many geodomains are currently lacking in samples and have reasonably poor distributions as a result. The larger geodomains, for example MBA 3 (103) and DIM L (201) show reasonable populations. With further sampling it may be possible to improve domaining or divide the geodomains into sub-domains where several populations are apparent. For example, the low grade tail (negative skew) in MBA 3 (103) may be a distinct population which could be domained separately. At present it does not look possible to physically sub-domain these units using wireframing. Some further wireframing of MBA pods in the DIM unit may be possible.

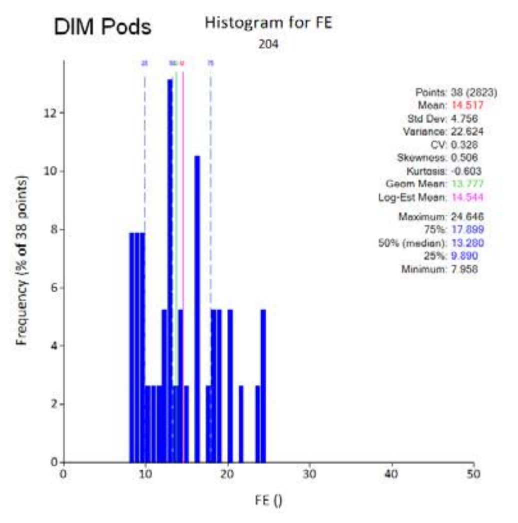
Based on the statistical review, SRK believes the domaining at this stage of the Project is reasonable and allows for resource estimation into the delineated geodomains using hard boundaries.

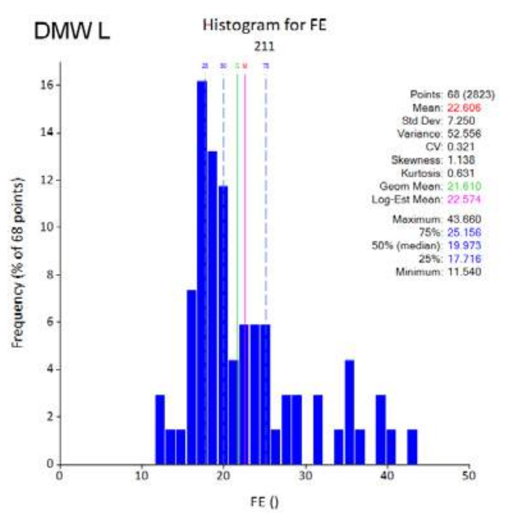


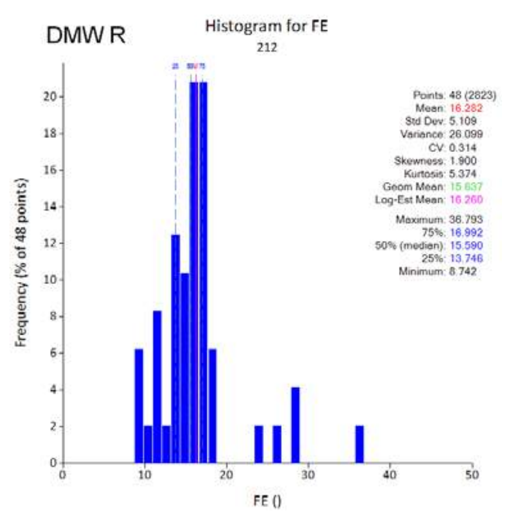

MBW 3
Histogram for FE
113
Points: 115 (2823)
Mean: 33.944
Std Dev: 9.806
Variance: 96.159
CV: 0.289
Skewness: -0.764
Kurtosis: -0.220
Geom Mean: 32.091
Log-Est Mean: 34.333
Maximum: 50.208
75%: 40.440
50% (median): 36.030
25%: 27.534
Minimum: 7.400
Frequency (% of 115 points)
0
2
4
6
8
10
12
14
0
10
20
30
40
50
FE ()


DIM L
Histogram for FE
201
Points: 505 (2823)
Mean: 19.604
Std Dev: 6.685
Variance: 44.687
CV: 0.341
Skewness: 0.820
Kurtosis: 1.485
Geom Mean: 18.451
Log-Est Mean: 19.690
Maximum: 45.988
75%: 23.371
50% (median): 18.789
25%: 15.242
Minimum: 4.863
Frequency (% of 505 points)
0
2
4
6
8
10
12
0
10
20
30
40
50
FE ()


DIM R
Histogram for FE
202
Points: 160 (2823)
Mean: 16.788
Std Dev: 2.598
Variance: 6.750
CV: 0.155
Skewness: 4.594
Kurtosis: 39.314
Geom Mean: 16.635
Log-Est Mean: 16.775
Maximum: 39.984
75%: 17.925
50% (median): 16.702
25%: 15.200
Minimum: 12.784
Frequency (% of 0 points)
0
2
4
6
8
10
12
14
16
18
20
22
0
10
20
30
40
50
60
FE ()


DIM Pods
Histogram for FE
204
Points: 38 (2823)
Mean: 14.517
Std Dev: 4.756
Variance: 22.624
CV: 0.328
Skewness: 0.506
Kurtosis: -0.603
Geom Mean: 13.777
Log-Est Mean: 14.544
Maximum: 24.646
75%: 17.899
50% (median): 13.280
25%: 9.890
Minimum: 7.958
Frequency (% of 38 points)
0
2
4
6
8
10
12
0
10
20
30
40
50
FE ()


DMW L
Histogram for FE
211
Points: 68 (2823)
Mean: 22.606
Std Dev: 7.250
Variance: 52.556
CV: 0.321
Skewness: 1.138
Kurtosis: 0.631
Geom Mean: 21.610
Log-Est Mean: 22.574
Maximum: 43.660
75%: 25.156
50% (median): 19.973
25%: 17.716
Minimum: 11.540
Frequency (% of 68 points)
0
2
4
6
8
10
12
14
16
0
10
20
30
40
50
FE ()


DMW R
Histogram for FE
212
Points: 48 (2823)
Mean: 16.282
Std Dev: 5.109
Variance: 26.099
CV: 0.314
Skewness: 1.900
Kurtosis: 5.374
Geom Mean: 15.637
Log-Est Mean: 16.260
Maximum: 36.793
75%: 16.992
50% (median): 15.590
25%: 13.746
Minimum: 8.742
Frequency (% of 48 points)
0
2
4
6
8
10
12
14
16
18
20
0
10
20
30
40
50
FE ()

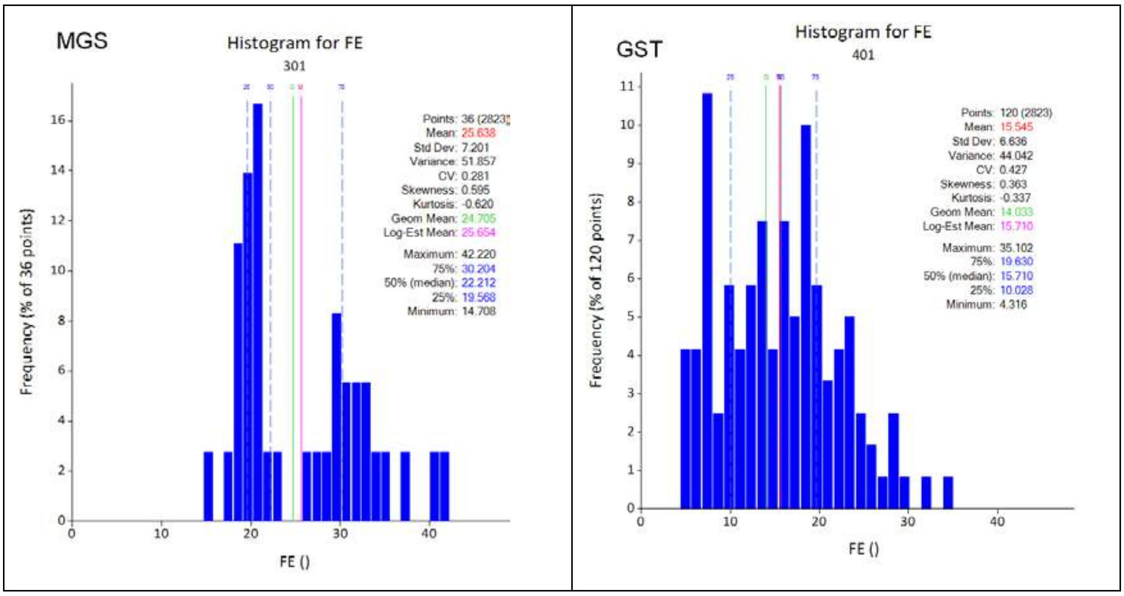


Figure 13-4: Non-declustered Histograms and Statistics for Main Geodomains (3 digit number = geozone)

13.12 Density Analysis

Bulk density measurements have been undertaken for all material types for the Project. In total, the database contains 2,885 samples which have been analysed for in situ bulk density.

Figure 13-5 and Figure 13-6 show the relationship between Fe grade and density for samples within the combined MBA and DIM geodomains, respectively. A strong correlation is shown and therefore a trend line can be fitted to the data distribution. Similar correlations were plotted for MBW, DMW, MGS and GST geodomains. The regression formulas derived from each trend line are used to calculate bulk density in the geological model.

Table 13-4 shows the average density values determined for each estimated material type. Average densities were also applied to the waste geodomains that were not estimated in order for the pit optimisation to calculate waste tonnages.

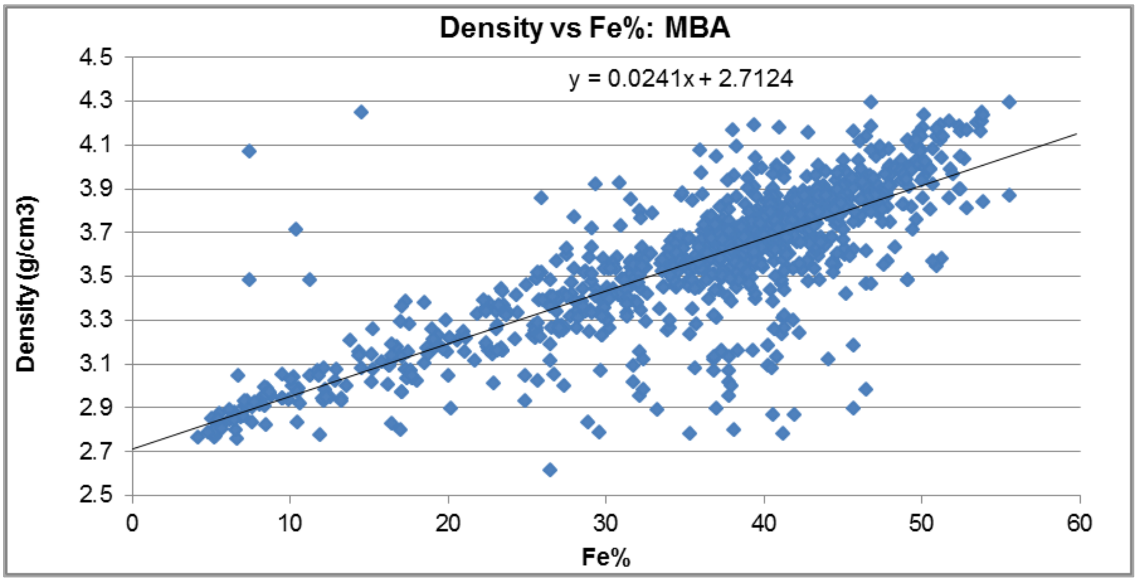


Figure 13-5: Fe vs Density within Fresh MBA geodomains

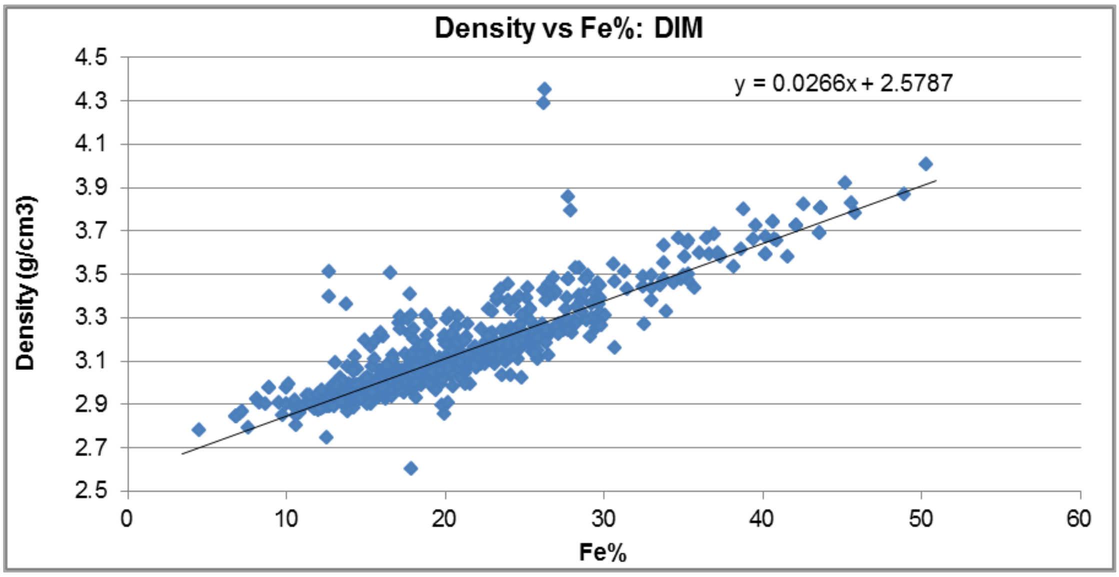


Figure 13-6: Fe vs Density within Fresh DIM geodomains

Table 13-4: Average Density Statistics

Geodomain	Average Density (g/cm^3)
MBA 1	3.4
MBA 2	3.5
MBA 3	3.6
MBA Pods	3.5
MBW 2	3.2
MBW 3	3.3
MBW Pods	3.3
DIM L	3.1
DIM R	3.0
DIM 2	3.0
DIM Pods	3.0
DMW L	3.1
DMW R	2.9
DMW 2	3.1
DMW Pods	2.7
MGS	3.3
GST	3.3

13.13 Geostatistical study

13.14 Introduction

For the geostatistical study, due to the large distances between geodomains, they were each treated as independent zones on which to undertake the geostatistical study. The drillhole database, flagged by modelled geodomain, was imported into the Snowden Supervisor software for the geostatistical analysis. Of the geodomains, only MBA 3 and DIM L produced reasonable semi-variograms which were used to estimate the other MBA and DIM geodomains.

For the MBA 3 and DIM L, directional experimental semi-variograms were produced for Fe only. The semi-variograms were produced using a 5 m lag in the down-hole direction to allow the nugget to be determined. Semi-variograms to define the directional ranges were produced using a 100 to 200 m lag along strike, and 25 to 50 m down-dip and across-strike.

Figure 13-7 and Figure 13-8 shows the raw and modelled semi-variograms produced for the two geodomains. The variograms show reasonable structure, allowing reliable variogram models to be produced. The nugget and ranges provide an appropriate level of confidence in terms of both the short scale and longer range grade continuity.

The results of the variography are shown below:

- MBA 3: Nugget effect 5%; with three additional structures. Total ranges: along strike 675 m; down-dip 100 m; across-strike 80 m.
- DIM L: Nugget effect 5%; with two additional structures. Total ranges: along strike 275 m; down-dip 210 m; across-strike 275 m.

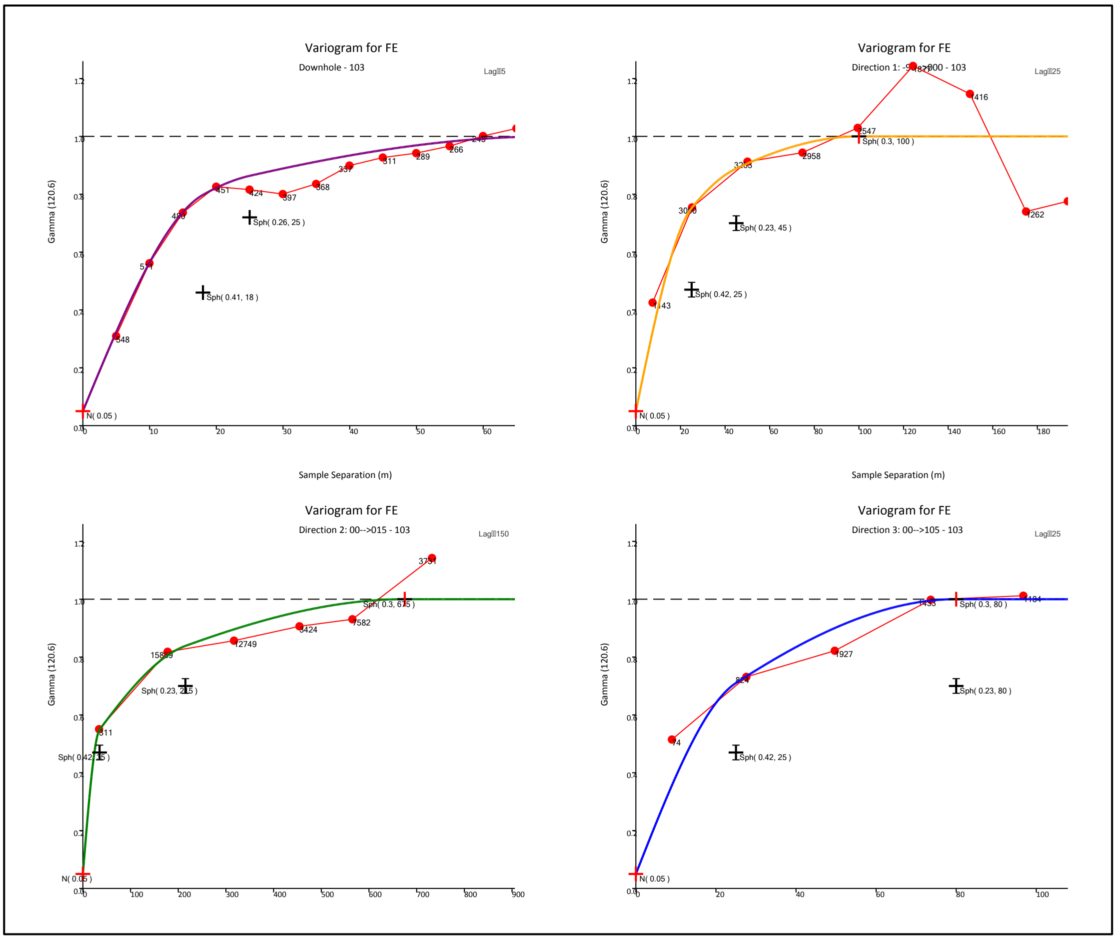


Figure 13-7: Semi-Variograms and models for Geodomain MBA 3 (geozone 103)

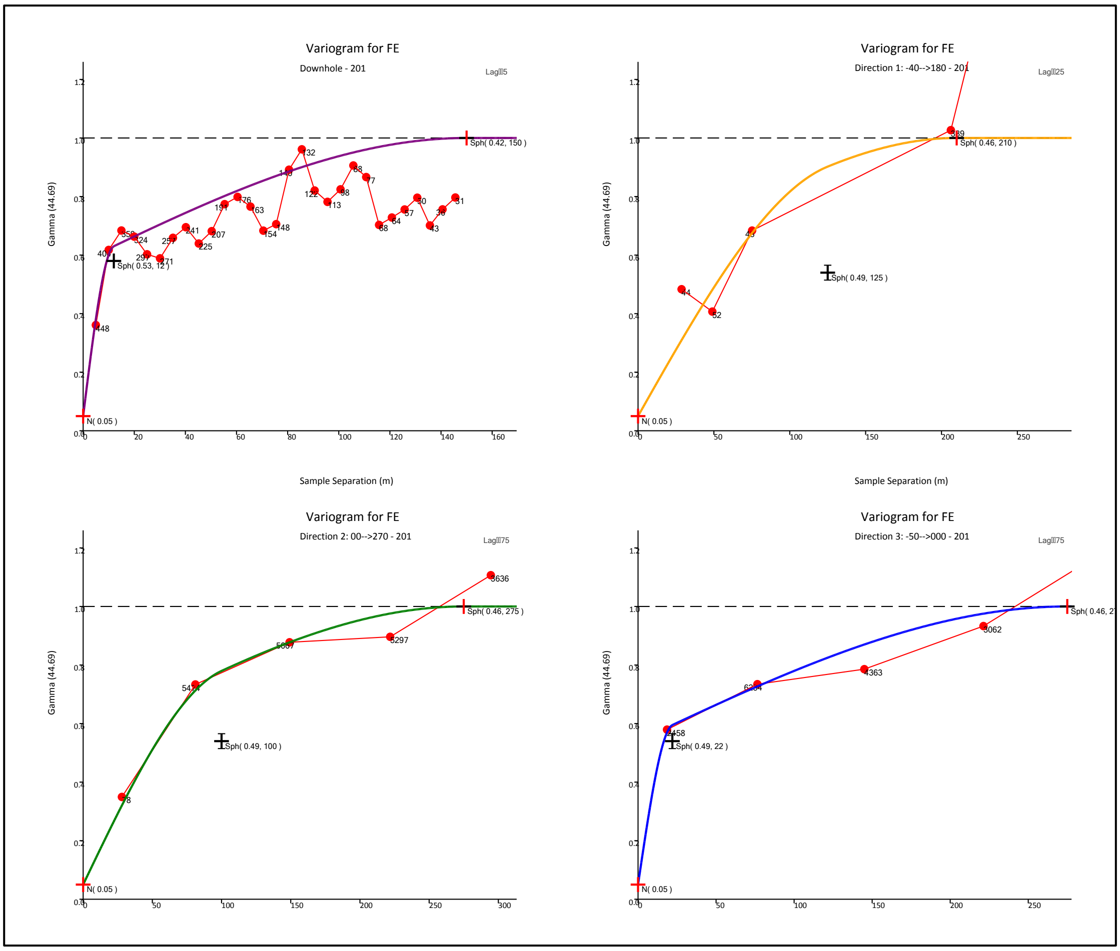


Figure 13-8: Semi-Variograms and models for Geodomain DIM L (geozone 201)

13.14.1 Summary

The variogram models produced allowed the generation of suitably reliable interpolation parameters for the fresh MBA and DIM material.

The results of the variography are used in the interpolation to assign the appropriate weighting to the sample pairs utilised to calculate the block model grade.

The total ranges modelled are often used to help define the optimum search parameters and the search ellipse radii dimensions used in the interpolation. Ideally, sample pairs that fall within the range of the variogram (where a strong covariance exists between the sample pairs) should be utilised if the data allows. In this case, due to the generally large distances between samples, particularly along strike, it was decided that a standard search ellipse would be used to allow for an adequate number of samples to be selected by the search volume.

The results of variography suggest that Ordinary Kriging (“OK”) is an appropriate interpolation technique for the MBA and DIM geodomains. The other geodomains, MBW, DMW, MGS and GST were all estimated using inverse-distanced cubed (“IDW^3”) due to the current lack of sampling not allowing for reasonable variograms to be produced.

13.14.2 Interpolation Parameters

Table 13-5 shows the final search ellipse dimensions and sample numbers used for the first pass interpolation. Traditional dips and dip directions of the ellipse are not shown due to the use of dynamic anisotropy in the interpolation (Section: 13.15.2).

When the data density increases, a detailed study can be undertaken in order to optimise the search neighbourhood. A quantitative kriging neighbourhood analysis (“QKNA”) will allow for the search ellipse dimensions, minimum and maximum number of samples along with block size and discretisation points to be optimised.

Table 13-5: Interpolation Parameters

Geodomain	Ellipse Ranges			Min Samples	Max Samples	Max Samples per DH
	Along Strike	Down-dip	Across-Strike			
MBA 1	500	200	20	6	12	3
MBA 2&3, DIM L,R&2	500	100	20	6	12	3
MBA and DIM Pods	500	100	10	6	12	3
MBW and DMW	500	100	10	6	12	3
MGS and GST Pods	500	100	10	6	12	3

13.15 Resource Estimation

13.15.1 Interpolation

A single block model was created using block sizes of 100 mY by 25 mX by 10 mZ.

The MBA and DIM units were extrapolated to the 200 m RL level, being approximately 800 m below the topography RL. This was undertaken to test the down dip potential of the deposit through the optimisation process.

Table 13-6 summarises the block model parameters.

Table 13-6: Block Model Framework

ORIGIN		NUMBER OF BLOCKS		BLOCK SIZE (M)	
X	584480	X	236	X	25
Y	7961300	Y	85	Y	100
Z	200	Z	100	Z	10

Grades of Fe, Al_2O_3, SiO_2, Mn, P, S, CaO, LOI, MgO, K_2O, and TiO_2, were interpolated into the model using OK (MBA and DIM) and IDW^3 (other geodomains) and interpolation parameters as given in Table 13-5.

13.15.2 Search Ellipse Parameters and Dynamic Anisotropy

In order to provide a continuous estimation and honour the geological structure and gentle strike and dip orientation changes, it was decided to use dynamic anisotropy in the estimation process. Dynamic anisotropy uses angle data generated from the mineralisation wireframe to assign dip and dip direction to every block in the model. The search ellipse is rotated upon estimation of the block by honouring the associated dip and dip direction of that block.

Three estimation runs have been undertaken. The first pass used the parameters determined above. The second run doubled the search ellipse and the final run multiplied the first pass search by 10 and reduced the minimum number of samples required to 3. The final pass was designed to estimate any blocks not estimated in the first two passes.

Prior to the interpolation, the dynamic anisotropy angles were validated in Datamine Studio 3 to ensure that the correct dip, dip direction and search radii were applied. The block model coloured by dip and dip direction are shown in Figure 13-9 and Figure 13-10. The search ellipses rotated to match the dip and strike of the mineralisation are shown in Figure 13-11.

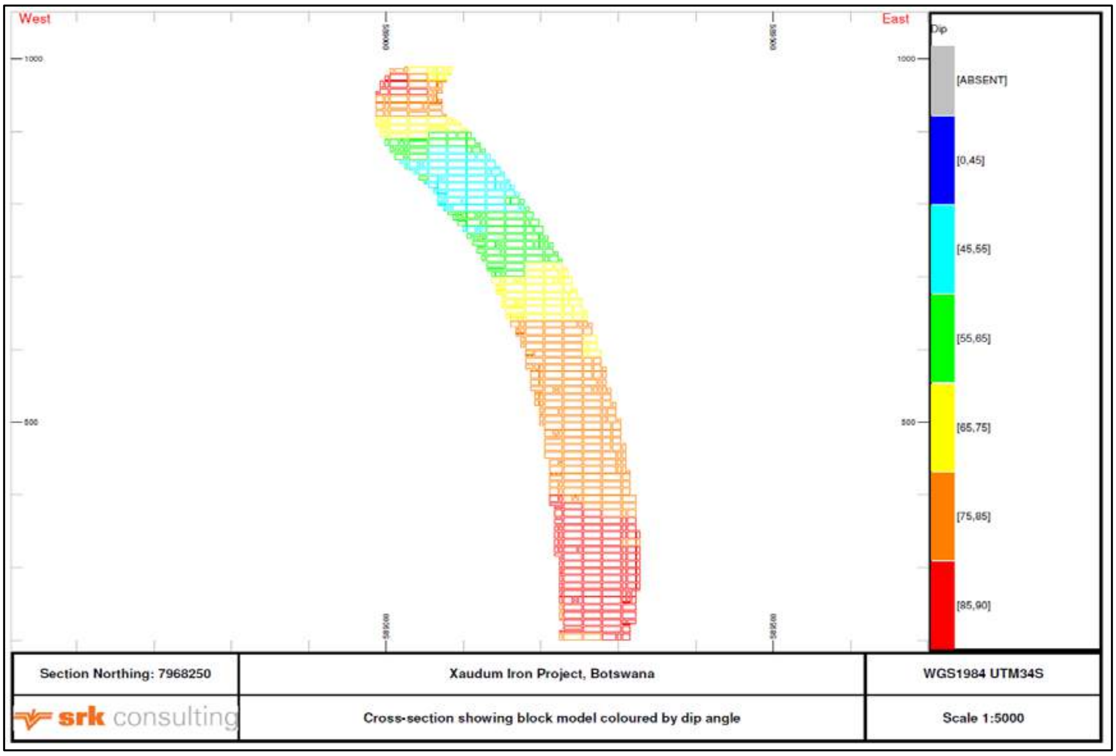


Figure 13-9: Block Model Coloured by Dip (Source: SRK, 2014)

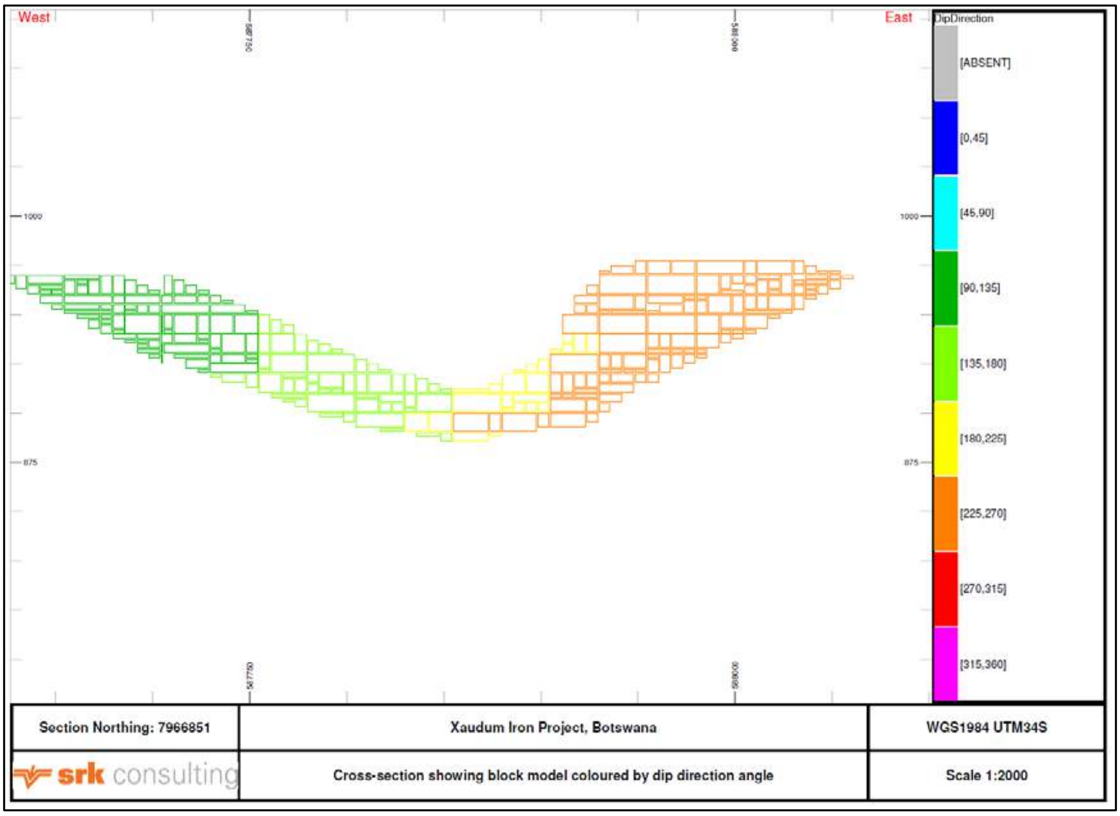


Figure 13-10: Block Model Coloured by Dip Direction (Source: SRK, 2014)

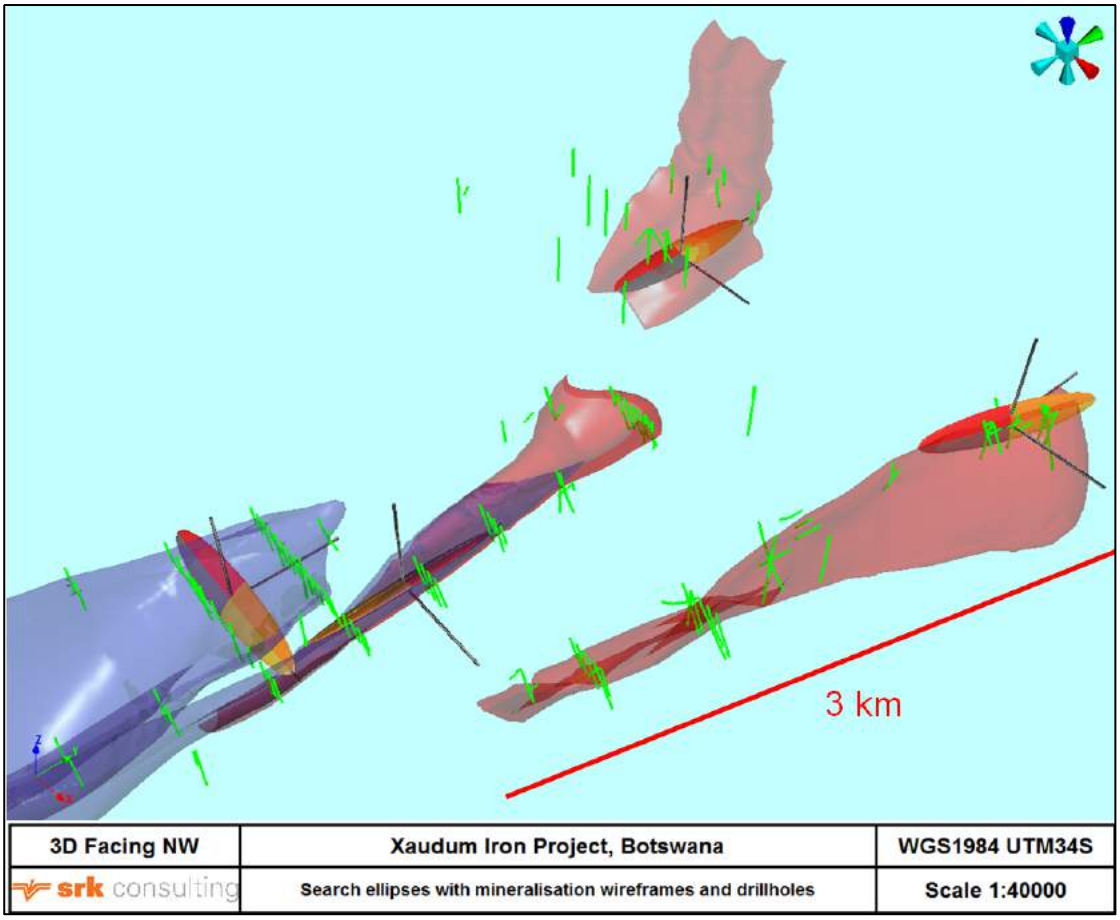


Figure 13-11: Search ellipses aligned to dip and strike with mineralisation wireframes and drillholes (Source: SRK, 2014)

13.15.3QKNA

SRK did not run a QKNA as discussed above, however, the slope of regression and kriging variance were both recorded in the block model to provide a quantification of the quality of the block estimate. The block model coloured by slope of regression values is shown in Figure 13-12. It shows that the MBA material in general was a higher quality estimate due to the longer ranges in the semi-variogram. The DIM values are particularly low as the ranges were often shorter than the drillhole spacing.

If the drillhole spacing is increased, a QKNA can be run in order to use these geostatistical tools to assist with optimising the search parameters and in helping to assign appropriate Mineral Resource classification categories.

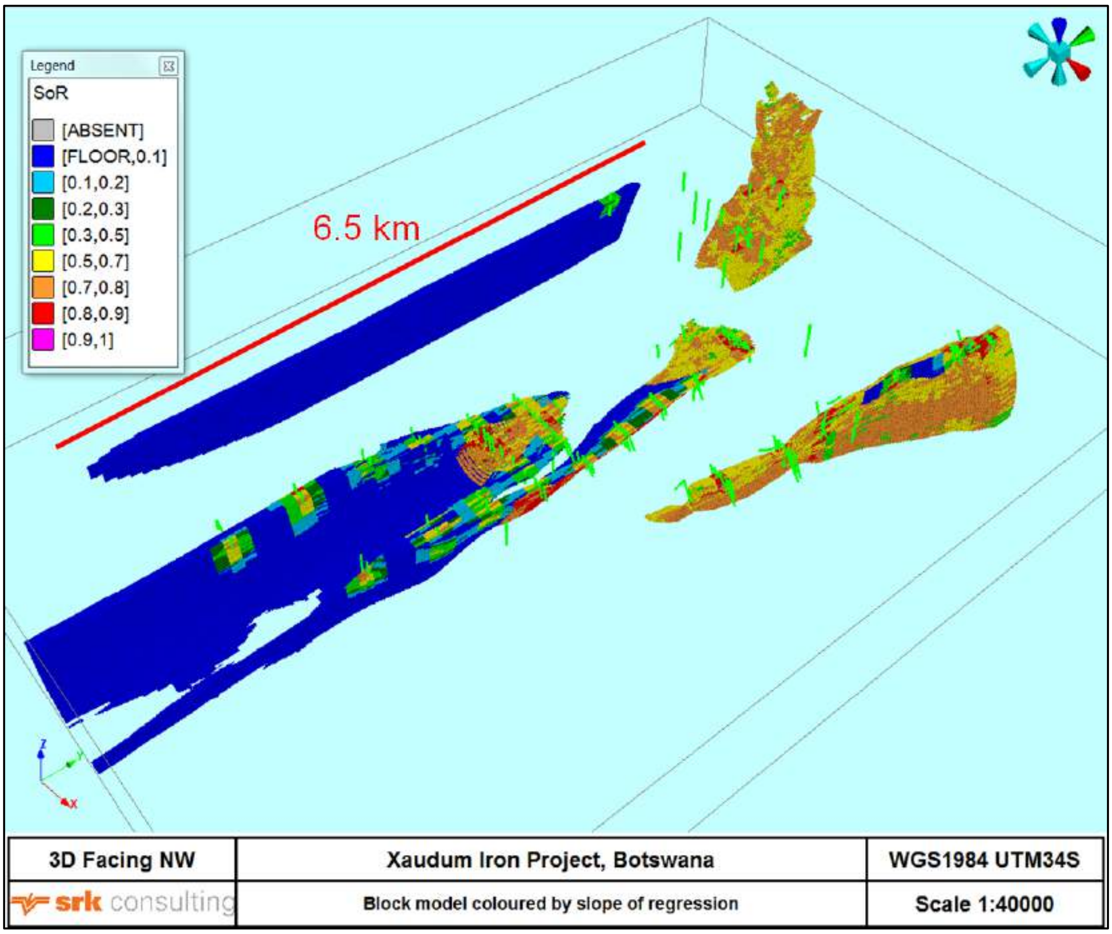


Figure 13-12: Block model coloured by slope of regression (SRK, 2014)

13.15.4Block Model Validation

The block model has been validated using the following techniques:

- visual inspection of block grades in plan and section and comparison with drillhole grades;
- comparison of global mean block grades and sample grades within mineralised geodomains; and
- Validation (swath) plots comparing grades by northing, easting and elevation.
- Small-block estimate to check the dynamic anisotropy has worked and the angles provided by the wireframes have been utilised.

Visual Validation

Figure 13-13 and Figure 13-14 show examples of the visual validation checks and highlight the correspondence between the block Fe grades and the sample Fe grades. The grades can also be seen to follow the orientation of the wireframe.

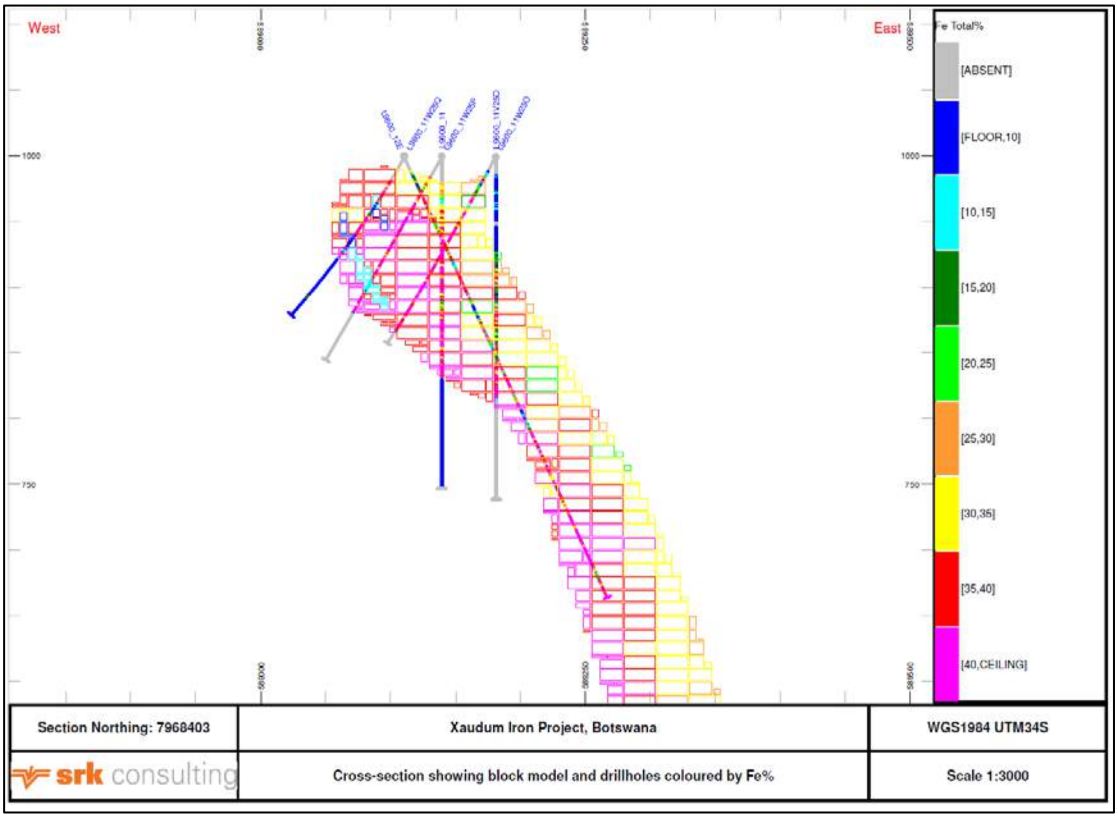


Figure 13-13: Cross Section Showing Visual Validation of Block Grades and Sample Grades (MBA 3) (Source: SRK, 2014)

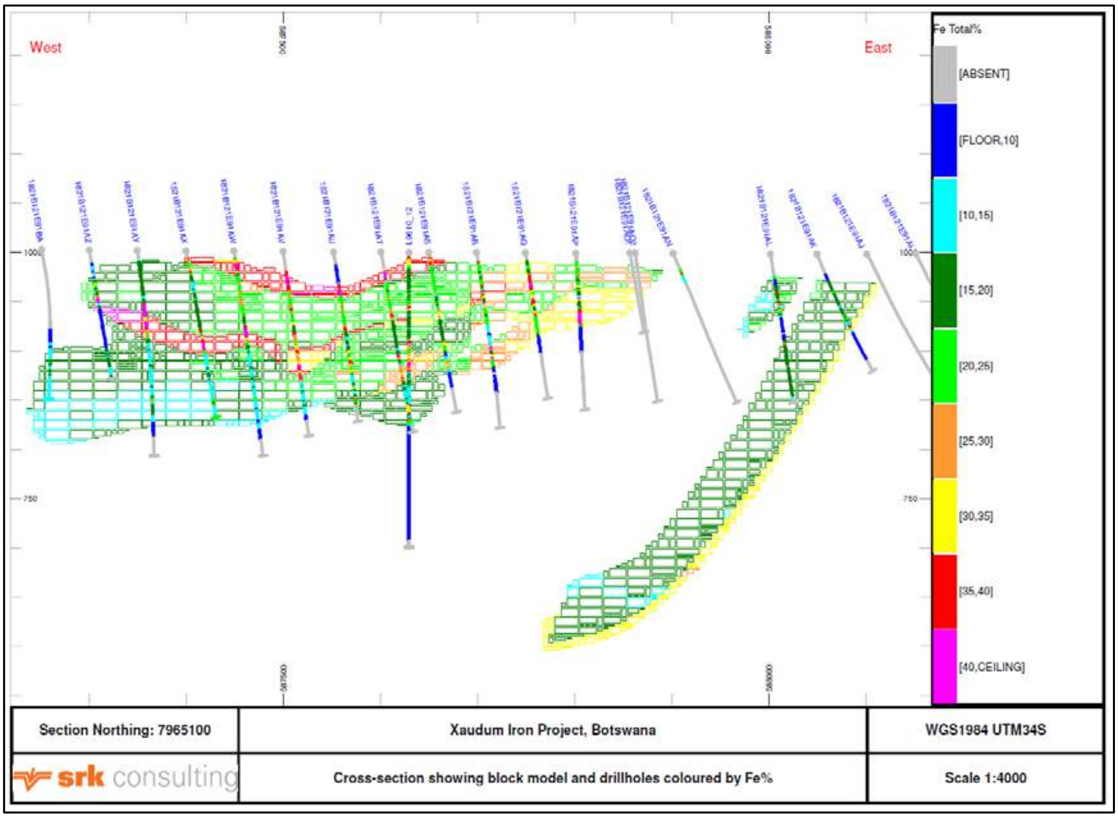


Figure 13-14: Cross Section Showing Visual Validation of Block Grades and Sample Grades (DIM L) (Source: SRK, 2014)

Global mean grade comparison

The global block means have been compared with the sample means for all estimated grades. Table 13-7 shows the results of the major elements in the two largest geodomains, with the declustered composite statistics compared to the blocks estimated in search volume 1.

Whilst there are some discrepancies in percentage terms, these all relate to cases where the values themselves are low. Certainly, the absolute differences for the main elements are very low and, overall, SRK is confident that the interpolated grades are a reasonable reflection of the available sample data.

Table 13-7: Comparison of Block and Sample Mean Grades in Search Volume 1

Geodomain	Field	Composite Mean Grade (%)	Block Mean Grade (%)	Difference	Absolute % Difference
MBA 3	Fe	34.99	35.74	0.75	2%
	SiO_2	33.75	33.62	-0.12	0%
	Al_2O_3	4.35	4.43	0.08	2%
	P	0.29	0.29	0.00	0%
DIM L	Fe	19.55	20.34	0.79	4%
	SiO_2	51.81	51.67	-0.13	0%
	Al_2O_3	9.20	9.03	-0.17	-2%
	P	0.25	0.27	0.02	6%

Validation Plots

As part of the validation process, the block model and input samples that fall within defined sectional or elevation criteria were compared and the results displayed graphically to check for visual discrepancies between grades.

Whilst this process does not truly replicate the samples used in the estimation of each block, the process of sectional validation quickly highlights areas of concern within the model and enables a more thorough and quantifiable check to be undertaken in specific areas of the model. Each graph also shows the number of samples available for the estimation. This provides information relating to the support of the blocks in the model. Only those blocks estimated within search volume one were compared, as this represents the estimated data using the optimum sample criteria.

Figure 13-15 and Figure 13-16 show the Fe validation slices through geodomains MBA 3 and DIM L. They show generally good correlation to the sample data, with a smoothing effect on the outliers in the sample data.

SRK is confident that the block model grades reconcile reasonably to the composite sample grades.

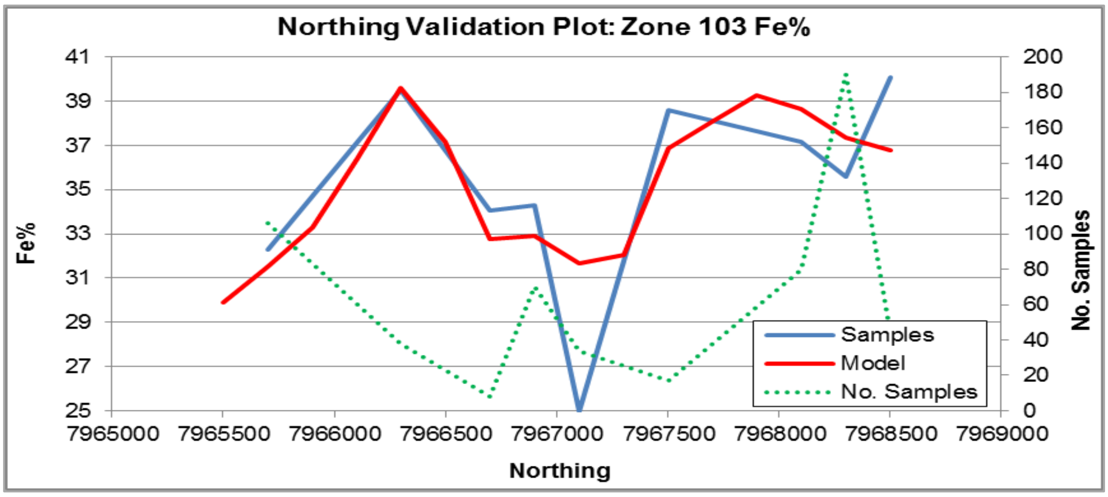


Figure 13-15: Validation Plot for Fe% grades in MBA 3 (103)

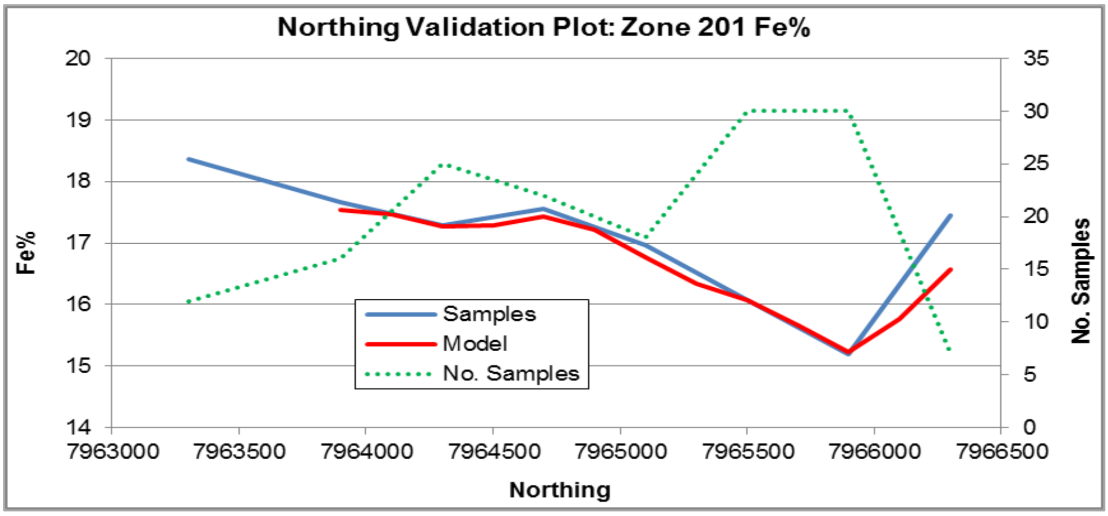


Figure 13-16: Validation Plot for Fe% grades in DIM L (201)

13.16 Mineral Resource Classification

The definitions given in the following section are taken from the 2014 Canadian Institute of Mining Standing Committee on Reserve Definitions' guidelines on Mineral Resources and Reserves, to comply with NI 43-101.

13.16.1 CIM Definitions

Mineral Resource

Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. An Inferred Mineral Resource has a lower level of confidence than that applied to an Indicated Mineral Resource. An Indicated Mineral Resource has a higher level of confidence than an Inferred Mineral Resource but has a lower level of confidence than a Measured Mineral Resource.

A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction.

The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.

Material of economic interest refers to diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals.

The term Mineral Resource covers mineralisation and natural material of intrinsic economic interest which has been identified and estimated through exploration and sampling and within which Mineral Reserves may subsequently be defined by the consideration and application of Modifying Factors. The phrase 'reasonable prospects for eventual economic extraction' implies a judgment by the Qualified Person in respect of the technical and economic factors likely to influence the prospect of economic extraction. The Qualified Person should consider and clearly state the basis for determining that the material has reasonable prospects for eventual economic extraction. Assumptions should include estimates of cut-off grade and geological continuity at the selected cut-off, metallurgical recovery, smelter payments, commodity price or product value, mining and processing method and mining, processing and general and administrative costs. The Qualified Person should state if the assessment is based on any direct evidence and testing.

Interpretation of the word 'eventual' in this context may vary depending on the commodity or mineral involved. For example, for some coal, iron, potash deposits and other bulk minerals or commodities, it may be reasonable to envisage 'eventual economic extraction' as covering time periods in excess of 50 years. However, for many gold deposits, application of the concept would normally be restricted to perhaps 10 to 15 years, and frequently to much shorter periods of time.

Inferred Mineral Resource

An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity.

An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

An Inferred Mineral Resource is based on limited information and sampling gathered through appropriate sampling techniques from locations such as outcrops, trenches, pits, workings and drillholes. Inferred Mineral Resources must not be included in the economic analysis, production schedules, or estimated mine life in publicly disclosed Pre-Feasibility or Feasibility Studies, or in the Life of Mine plans and cash flow models of developed mines. Inferred Mineral Resources can only be used in economic studies as provided under NI 43-101.

There may be circumstances, where appropriate sampling, testing, and other measurements are sufficient to demonstrate data integrity, geological and grade/quality continuity of a Measured or Indicated Mineral Resource, however, quality assurance and quality control, or other information may not meet all industry norms for the disclosure of an Indicated or Measured Mineral Resource. Under these circumstances, it may be reasonable for the Qualified Person to report an Inferred Mineral Resource if the Qualified Person has taken steps to verify the information meets the requirements of an Inferred Mineral Resource.

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 are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.

Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation.

An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

Mineralisation may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralisation. The Qualified Person must recognize the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource estimate is of sufficient quality to support a Pre-Feasibility Study which can serve as the basis for major development decisions.

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 estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.

Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation.

A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

Mineralisation or other natural material of economic interest may be classified as a Measured Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such that the tonnage and grade or quality of the mineralisation can be estimated to within close limits and that variation from the estimate would not significantly affect potential economic viability of the deposit. This category requires a high level of confidence in, and understanding of, the geology and controls of the mineral deposit.

13.16.2 Xaudum Classification

Introduction

To classify the mineralisation at Xaudum, the following key indicators were used:

- Geological complexity;
- Quantity and quality of the data used in the estimation (e.g. QAQC, ICP vs XRF);
- Results of the geostatistical analysis (variography); and
- Quality of the estimated block model.

Geological Complexity

The Xaudum Iron Formation (“XIF”) is modelled as numerous bodies of magnetite-bearing banded iron formation (“BIF”) that are coincident with a regional magnetic anomaly. The several areas outlined within the Block 1 area to date appear to be non-continuous and divided by faulting. Greater structural complexity (folding and faulting) has been interpreted in the northern MBA 1 unit along with the southern DIM L unit and central part of the MBA 2 unit, which requires a tighter drilling grid to better define and correlate the model in this area.

The deposits have been domained by a combination of mineralogy, grade, magnetic susceptibility and lithological characteristics. At depth, the mineralisation is defined as fresh BIF and interbedded (dominantly) by metasedimentary units, which co-exist in a variably continuous sequence.

The overlying weathered zones comprise partially oxidised material with thicknesses ranging from 0 to 60 m.

The continuity of the grade in the geodomains delineated appears relatively high, although some of the units currently contain multiple populations of Fe (and P) data which may be possible to domain separately with increased sampling.

Overall, the mineralised areas identified in Block 1 at Xaudum are of a moderate geological complexity due to the varying mineralogy. The mineralisation hanging wall and footwall contacts are generally sharp and well-defined. Complexities in the geology arise in the internal metasediments and multiple mineralised domains containing varying levels of Fe bound in silicates. As such, and based on the current level of data supporting the geological model, the associated risk relating to the geological continuation is considered moderate.

Quality of the data used in the estimation

Gcwihaba has conducted what is considered to be industry best practice in relation to the QAQC checks and has developed a systematic process of sample preparation at the facilities on site and the ALS preparation laboratory at Johannesburg, with a regular system of standards, duplicates and blanks being inserted into the sample stream. However, systematic blind QAQC was not inserted into the sampling stream prior to October 2013, with approximately 65% of samples being assayed without blind QAQC.

Validation checks of standards are broadly within acceptable reporting limits and duplicate field samples show a strong correlation to the original sample. Blank samples show no issues with contamination.

Prior to October 2013, a mixture of ICP and XRF analysis methods was used for the assaying. The two methods were compared and showed a reasonable correlation for the ALS Chemex results. However, the Set Point laboratory used prior to 2013 showed a large bias between the two methods and as a result the Set Point ICP assay grades were not utilised in this MRE.

Core recovery in the fresh geodomains is very high although this is seen to drop within the oxidised geodomains.

Based on the current quality of data supporting the geological model, the associated risk relating to the data quality is considered moderate to low.

Results of the geostatistical analysis and quality of the estimated block model

The data used in the geostatistical analysis resulted in suitably reliable down-hole variograms that allowed the nugget variance to be fixed with reasonable directional semi-variograms being developed for the MBA 3 and DIM L geodomains. The other geodomains did not allow for reasonable semi-variograms to be produced. As a result, the MBA geodomains all utilised the MBA 3 semi-variogram, and the DIM geodomains utilised the DIM L semi-variogram. Ordinary kriging ("OK") was undertaken in the MBA and DIM geodomains, and inverse-distance weighting cubed ("IDW^3") was undertaken in the MBW, DMW, MGS and GST geodomains.

The validation tools utilised for the Project show that the input data used to estimate the model is replicated to a reasonable level in the estimation. The block model grades are smoothed around the input composites and the mean grades of the block model and composites are comparable for all modelled geodomains.

Based on the results of the geostatistics and interpolated block model, the associated risk relating to the quality of the variography and estimated block model is considered moderate.

Classification

Based on the analysis above, the Project has been classified as containing Inferred Mineral Resources in the MBA, DIM, MBW, DMW and MGS geodomains. The Inferred Mineral Resources as designated by solid wireframes have been limited to the areas that estimated in run one of the estimation; the wireframes were not extrapolated more than 100 m down-dip and 200 m along-strike of the last drillhole intersection.

Figure 13-17 shows an example of a section through the classified model with Figure 13-18 showing the full classified model.

To determine the final Mineral Resource Statement, in compliance with NI 43-101, the resulting blocks have been subjected to a pit optimisation exercise to determine the proportion of the material defined that has a reasonable prospect of economic extraction. This exercise is not intended to generate a Mineral Reserve and is purely used to assist in determining the possible down dip extent of the Mineral Resource.

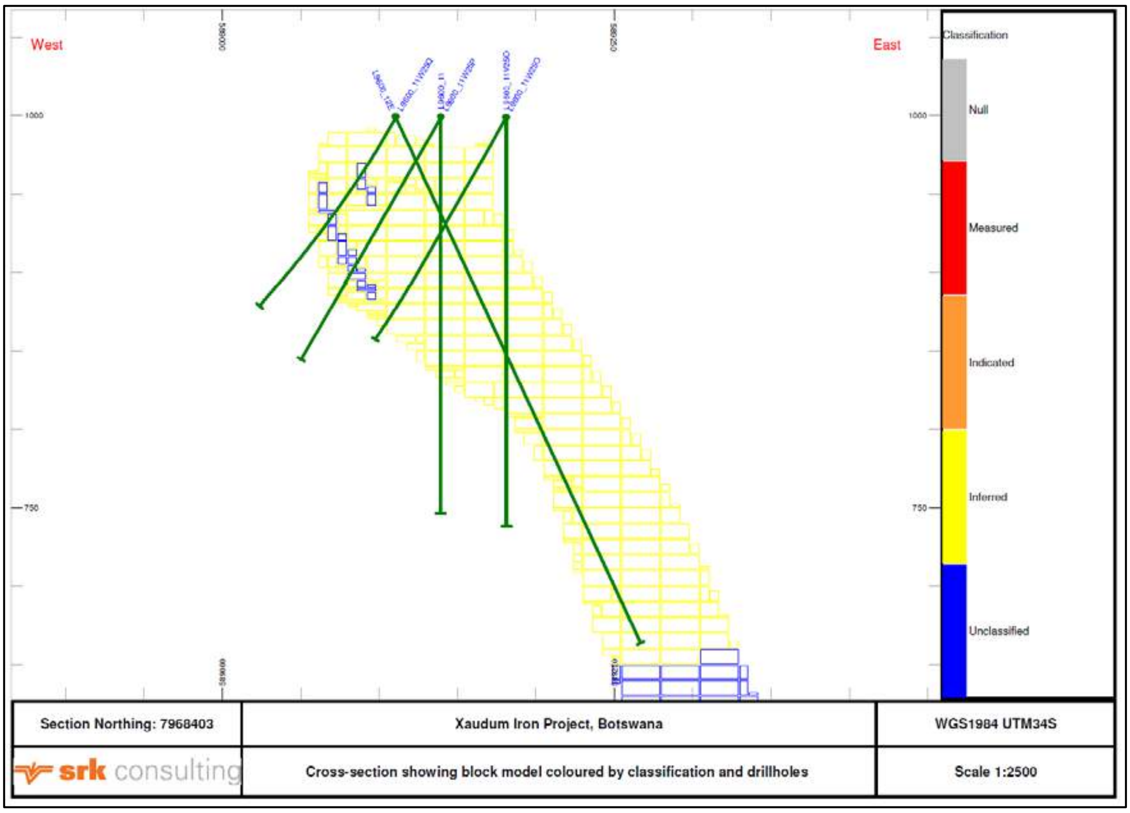


Figure 13-17: Section through Classified Model – Yellow = Inferred, Blue = Unclassified (Source: SRK, 2014)

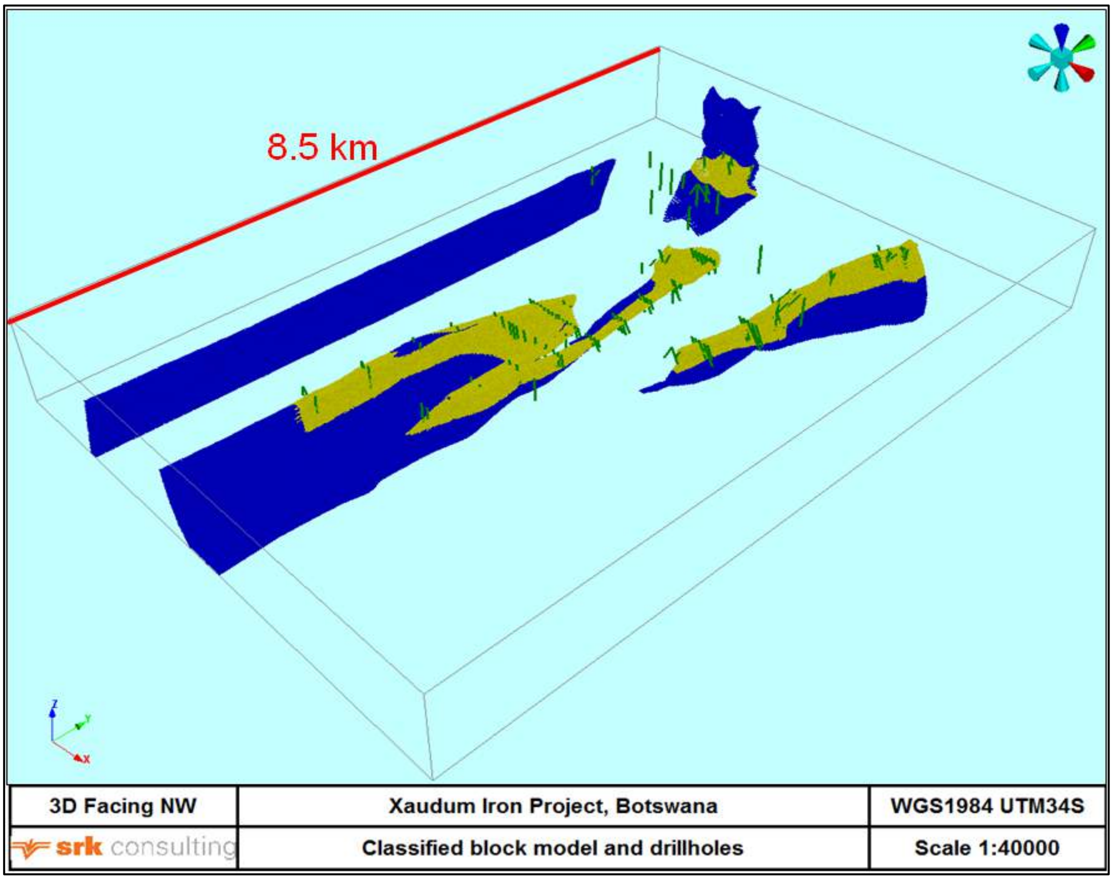


Figure 13-18: Classified Block Model Yellow = Inferred, Blue = Unclassified (Source: SRK, 2014)

13.17 Pit Optimisation Parameters

The pit optimisation requires the input of reasonable processing and mining cost parameters in addition to appropriate pit slope angles and processing recoveries. These are described in the following sections.

13.17.1 Optimisation Scenarios

Several optimisation scenarios were analysed as part of this work, including:

- Base case optimisation (Fe = USD 1.5 / dmtu, Inferred material only;
- All-in case which included unclassified material;
- Range of sensitivities for Fe price from USD 0.56 / dmtu to USD 2/ dmtu.

13.17.2 Geotechnical Parameters

Geotechnical parameters were provided in the form of RQD values from drillhole logging, the deposit has been divided into geotechnical zones and each block has been assigned a GZONE code. These codes are:

- GZONE 1 = Kalahari sand - 26°;
- GZONE 2 = Calcrete - 45°;
- GZONE 3 = Oxidised material MBW and DMW - 45°; and
- GZONE 4 = Fresh material - 50°.

13.17.3 Mining Parameters

The following mining parameters were used in the optimisation.

- Base Mining Cost (at reference RL): USD 2.20/ t ore.
- Incremental mining cost per bench (below reference elevation 1010 m): USD 0.05/t/10 m
- Mining Recovery: 95%
- Mining Dilution: 5%

13.17.4 Processing Parameters

Five processing streams were assumed, these being the MBA, DIM, MBW, DMW and MGS material types. Fe Recoveries were determined from the Davis Tube metallurgical testwork by averaging each geodomain type, as described in Table 12-1. A concentrate grade of 67% has been assumed.

Transport costs are assumed to be constant for all process streams, as it is assumed that the same transport mechanism and infrastructure will be used (slurry pipe line). SRK has estimated the transport cost at USD 5 /t concentrate.

General and administration costs are estimated at USD 5/ t ore.

13.17.5 Economic Parameters

The following economic parameters were used in the optimisation:

- Fe Price: USD 1.5 / dmtu;
- Royalty: 3%.

13.18 Mineral Resource Statement

The Mineral Resource Statement generated by SRK has been restricted to all classified material falling within the optimised pit shell representing a metal price of USD 1.5/dmtu for magnetite concentrate and through the application of the parameters outlined in section 13.17. In addition, a cut-off grade of 12% Fe, calculated from the pit optimisation study, has been used in conjunction with the resource pit shell. This represents the material which SRK considers has reasonable prospect for eventual economic extraction potential based on the above pit optimisation analysis. Table 13-8 shows the resulting Mineral Resource statement for Xaudum.

The statement has been classified by a Qualified Person, Howard Baker (FAusIMM(CP)) in accordance with the Guidelines of NI 43-101 and accompanying documents 43-101.F1 and 43-101.CP. It has an effective date of 29 August 2014. Mineral Resources that are not Mineral Reserves have no demonstrated economic viability. SRK and Gcwihaba are not aware of any factors (environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors) that have materially affected the Mineral Resource estimate. The Xaudum deposit is a greenfield site and therefore is not affected by any mining, metallurgical or infrastructure factors.

The quantity and grade of reported Inferred Mineral Resources in this estimation are uncertain in nature and there has been insufficient exploration to define these Inferred Mineral Resources as an Indicated or Measured Mineral Resource; and it is uncertain if further exploration will result in upgrading them to an Indicated or Measured Mineral Resource category.

In total, SRK has derived an Inferred Mineral Resource of 441 Mt grading 29.4% Fe, 41.0% SiO_2, 6.1% Al_2O_3 and 0.3% P.

The Inferred material contains 236 Mt of MBA grading 35.6% Fe, 34.0% SiO_2, 4.0% Al_2O_3 and 0.3% P, 148 Mt of DIM, grading 20.9% Fe, 51.0% SiO_2, 9.1% Al_2O_3 and 0.2% P, 21 Mt of MBW grading 34.3% Fe, 35.4% SiO_2, 4.4% Al_2O_3 and 0.2% P, 29 Mt of DMW grading 20.5% Fe, 49.5% SiO_2, 8.2% Al_2O_3 and 0.2% P, and 7 Mt of MGS grading 22.1% Fe, 50.8% SiO_2, 8.9% Al_2O_3, and 0.2% P.

Table 13-8: Mineral Resource Statement for Xaudum Block 1

Geodomain	Resource Category	Tonnes (Mt)	Fe %	SiO_2 %	Al_2O_3 %	P %
MBA	Measured	-	-	-	-	-
	Indicated	-	-	-	-	-
	Meas. + Ind.	**-**	**-**	**-**	**-**	**-**
	Inferred	236	35.6	34.0	4.0	0.3
DIM	Measured	-	-	-	-	-
	Indicated	-	-	-	-	-
	Meas. + Ind.	**-**	**-**	**-**	**-**	**-**
	Inferred	148	20.9	51.0	9.1	0.2
MBW	Measured	-	-	-	-	-
	Indicated	-	-	-	-	-
	Meas. + Ind.	**-**	**-**	**-**	**-**	**-**
	Inferred	21	34.3	35.4	4.4	0.2
DMW	Measured	-	-	-	-	-
	Indicated	-	-	-	-	-
	Meas. + Ind.	**-**	**-**	**-**	**-**	**-**
	Inferred	29	20.5	49.5	8.2	0.2
MGS	Measured	-	-	-	-	-
	Indicated	-	-	-	-	-
	Meas. + Ind.	**-**	**-**	**-**	**-**	**-**
	Inferred	7	22.1	50.8	8.9	0.2
TOTAL	Measured	-	-	-	-	-
	Indicated	-	-	-	-	-
	Meas. + Ind.	**-**	**-**	**-**	**-**	**-**
	Inferred	441	29.4	41.0	6.1	0.3

Notes:(1) Mineral Resources which are not Mineral Reserves have no demonstrated economic viability

(2) The effective date of the Mineral Resource is 29 August 2014.

(3) The Mineral Resource estimate for Xaudum was constrained within lithological and grade based solids and within a Lerchs-Grossman optimised pit shell defined by the following assumptions; metal price of USD 1.5 / dmtu; slope angles of 26º, 45º and 50° in the sand, calcrete / oxide and fresh material; a mining recovery of 95.0%; a mining dilution of 5.0%; a base case mining cost of USD 2.20 / t ore and an incremental mine operating costs of USD 0.05 / t / 10 m; process operating costs of USD 5.00 / t ore; iron processing recoveries of 78.1% (MBA); 54.0% (DIM); 46.3% (MBW); 53.6% (DMW); 23.7% (MGS); G&A costs of USD 5.00 / t / ore; transport costs of USD 5 / t concentrate.

(4) The Mineral Resources were reported within the optimised pit shell and above 12% Fe cut-off grade.

(5) Mineral Resources at Xaudum have been classified according to the “CIM Standards on Mineral Resources and Reserves: Definitions and Guidelines (May 2014)” by Howard Baker (FAusIMM(CP)), an independent Qualified Person as defined in NI 43-101.

Figure 13-19 shows the classified block model (Inferred blocks only) within the optimised pit shell generated using a metal price of USD 1.5 / dmtu. It shows that the pit shell does not extend to the base of the outlined Inferred Resources in most areas.

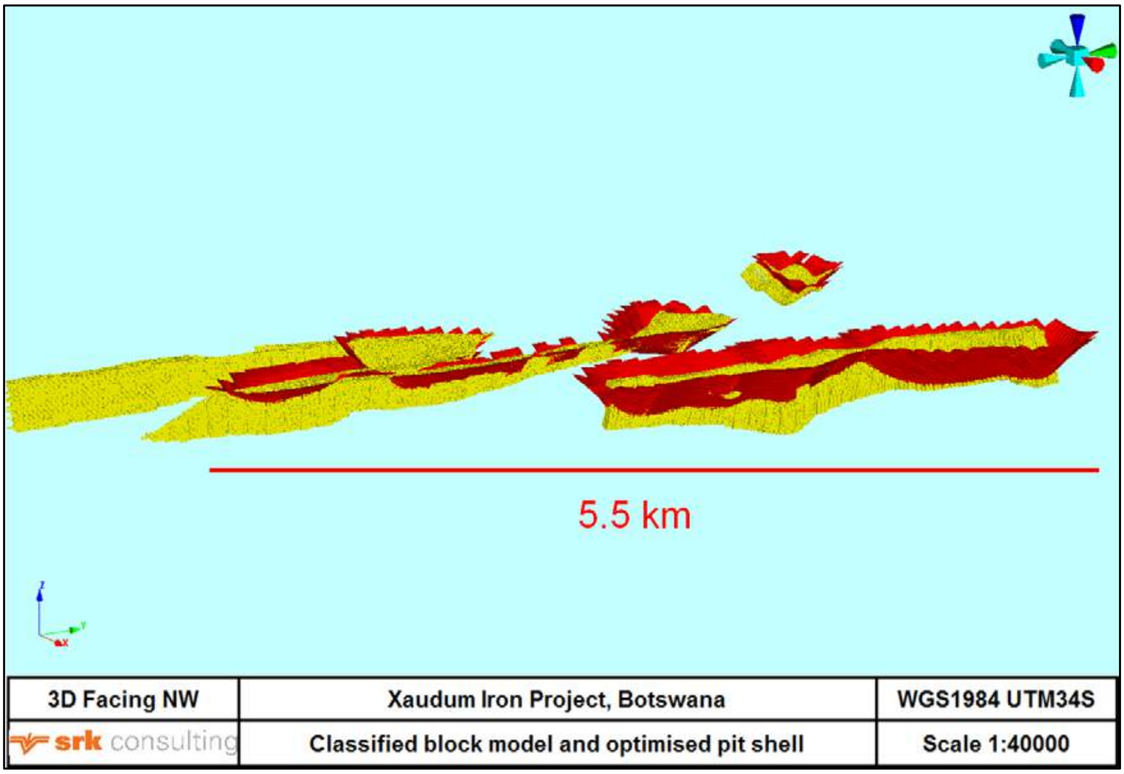


Figure 13-19: Optimisation Pit Shell (Based on a Metal Price of USD 1.5/dmtu) and Classified Block Model (Inferred material only) (Source SRK, 2014)

13.19 Strip Ratio

The calculated strip ratio from the pit optimisation is 2.2 (mineralisation to waste) with a total waste tonnage of 971 Mt.

13.20 Grade Tonnage Curves

The grade – tonnage curve for all Inferred material within the resource pit shell and above 12% Fe is shown in Figure 13-20. The curve shows the relationship between the modelled tonnage and grade at increasing Fe cut-offs.

The grade – tonnage curve shows a steadily decreasing tonnage with an associated steadily increasing Fe grade from above a 15% Fe cut off. Steps in the grade profile are observed representing the different geodomains and associated Fe grade populations within the model.

The individual grade-tonnage curves for each geodomain are also shown in Figure 13-21 to Figure 13-25

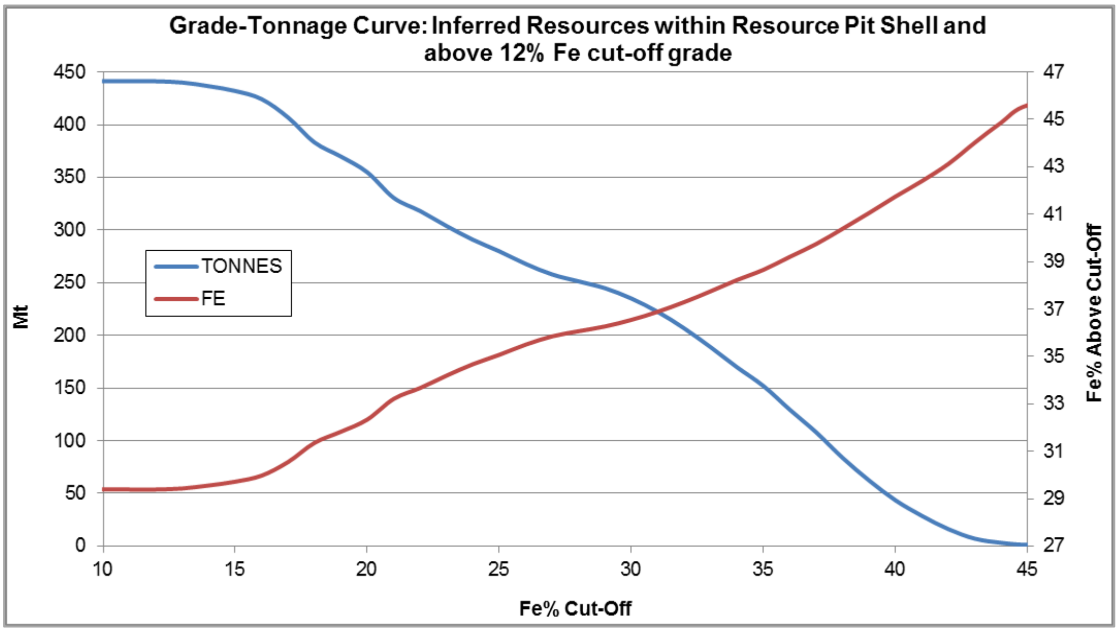


Figure 13-20: Grade Tonnage Curve for all Inferred material above pit shell and above 12% Fe cut-off grade (Source: SRK, 2014)

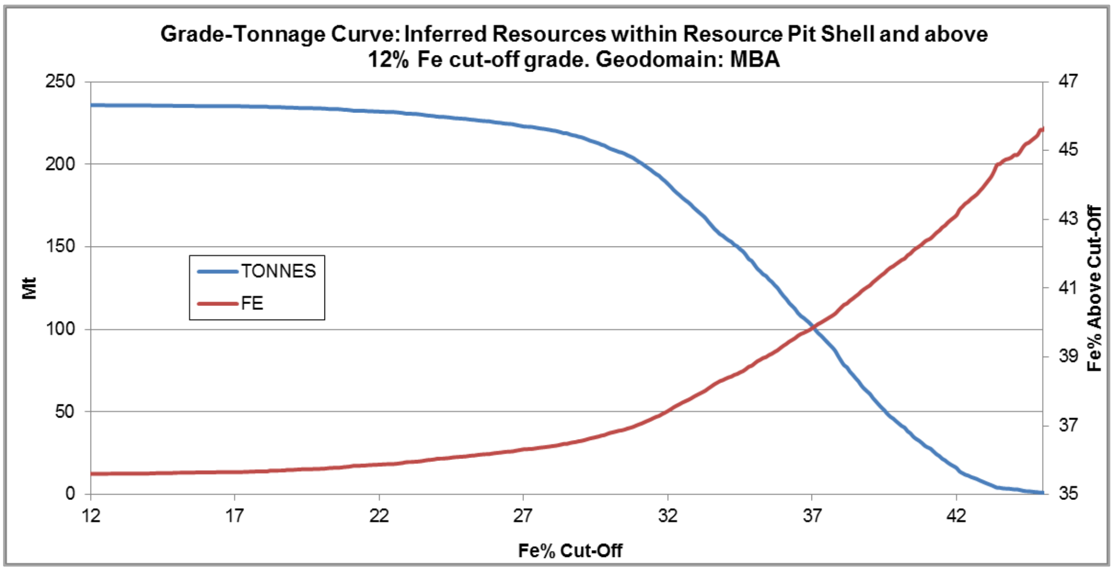


Figure 13-21: Grade Tonnage Curve for geodomain MBA Inferred material above pit shell and above 12% Fe cut-off grade (Source: SRK, 2014)

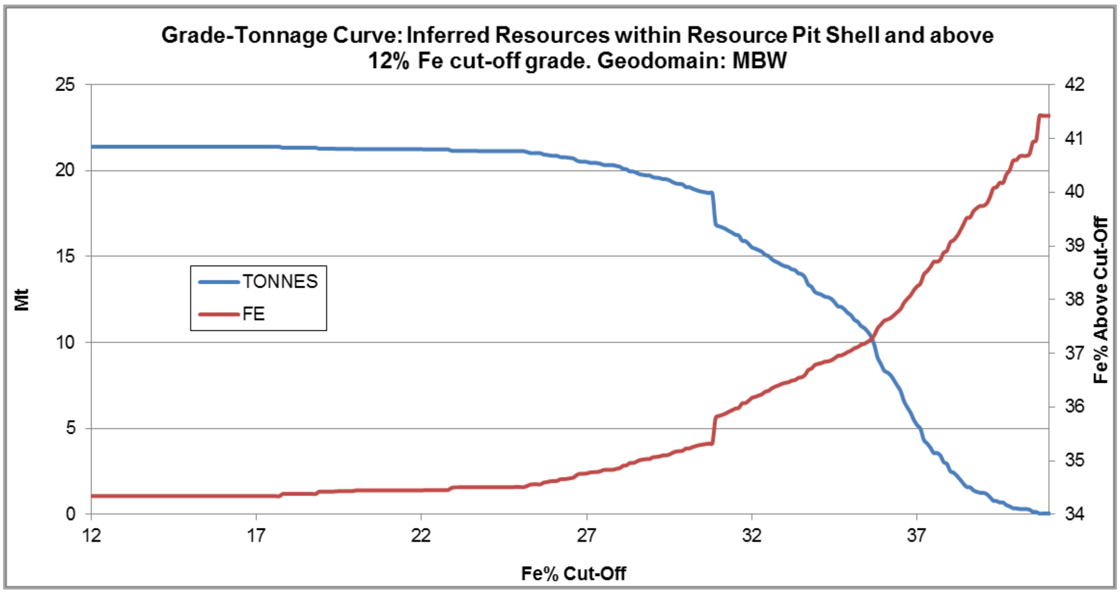


Figure 13-22: Grade Tonnage Curve for geodomain MBW Inferred material above pit shell and above 12% Fe cut-off grade (Source: SRK, 2014)

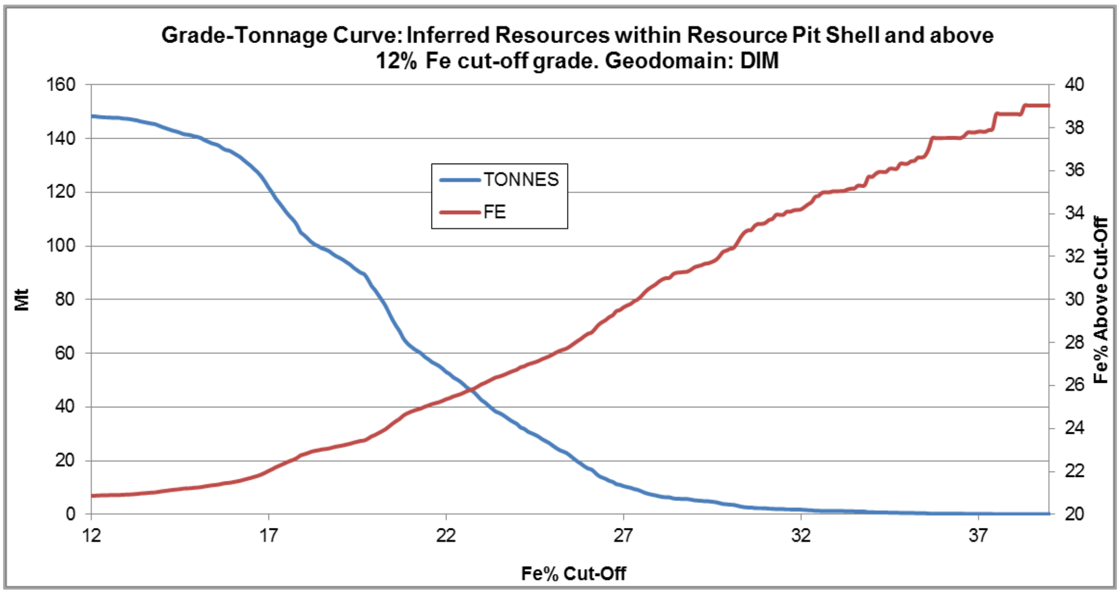


Figure 13-23: Grade Tonnage Curve for geodomain DIM Inferred material above pit shell and above 12% Fe cut-off grade (Source: SRK, 2014)

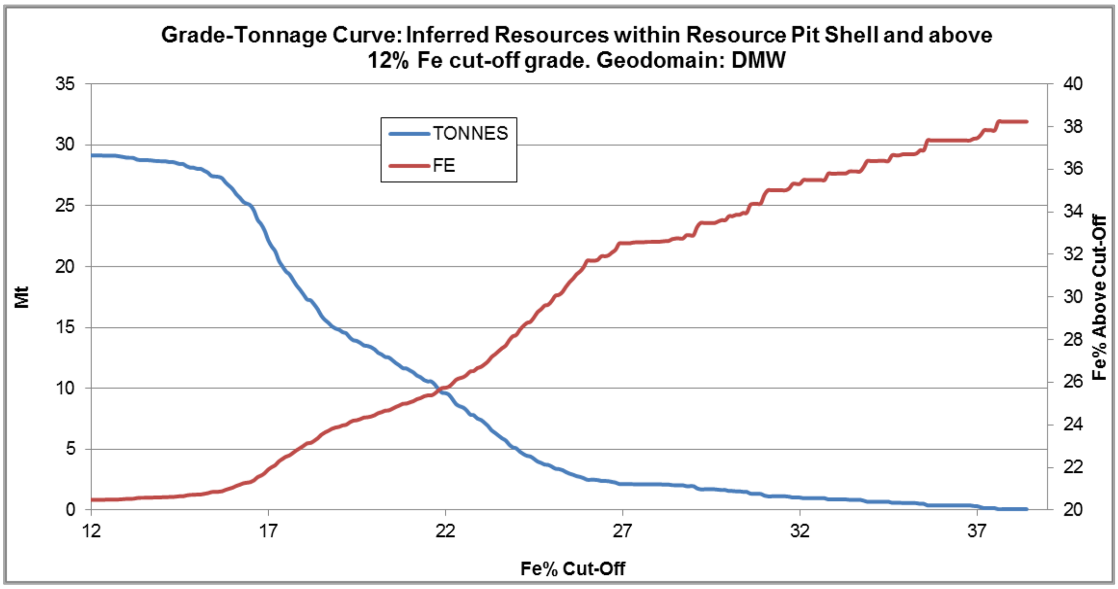


Figure 13-24: Grade Tonnage Curve for geodomain DMW Inferred material above pit shell and above 12% Fe cut-off grade (Source: SRK, 2014)

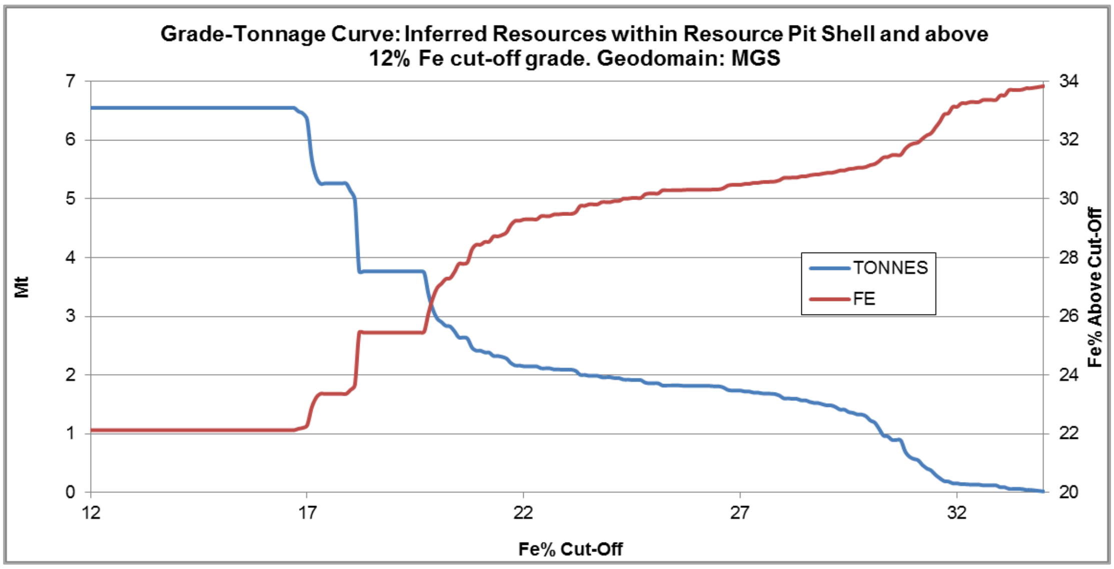


Figure 13-25: Grade Tonnage Curve for geodomain MGS Inferred material above pit shell and above 12% Fe cut-off grade (Source: SRK, 2014)

13.21 Resource Potential

SRK recognises little potential to increase the depth of Mineral Resource currently reported by further exploration down-dip beneath the base of the optimised pit shell. The pit does not reach the base of the delineated Inferred material in most areas, and so further exploration is unlikely to lower the pit base materially. The MBA 3 unit may be driven further down with increased exploration down-dip, however, due to the sub-vertical nature of the mineralisation, the strip ratio would increase dramatically.

Exploration along strike, particularly in the under-explored MBA 1 unit may increase the size of the Mineral Resource along strike. The DIM material towards the south is also currently open along strike, however, the low grade nature of the material here (in conjunction with the low Fe recoveries associated with DIM) does not make it a meaningful exploration target with a limited depth extent to the optimised pit shell.

SRK recognises the potential for conversion within the Mineral Resource statement from the Inferred category to Indicated and or Measured Classification. On-going drill programmes and further metallurgical testwork are recommended to assist in the upgrade of the Mineral Resources, particularly in the MBA material.

In addition to the Inferred Mineral Resource determined in the Block 1 area, the magnetic anomaly map shown in Figure 25-1 highlights a number of additional targets that may have the potential to host additional resources. The current exploration programme (Section 25.1) aims to target this mineralisation potential.

14 MINERAL RESERVE ESTIMATES

No Mineral Reserve Estimate has been prepared for the Project at this time.

15 MINING METHODS

This item is not applicable for this level of study and stage of the project.

16 RECOVERY METHODS

This item is not applicable for this level of study and stage of the project.

17 PROJECT INFRASTRUCTURE

This item is not applicable for this level of study and stage of the project.

18 MARKET STUDIES AND CONTRACTS

This item is not applicable for this level of study and stage of the project.

19 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

Hydro-geochemistry sampling and analysis of water samples collected from the Kalahari Geochemistry program drillholes is on-going. Hydro-geochemistry is a relatively new exploration technique which works on the premise that groundwater will equilibrate with oxidizing mineralisation at the Kalahari bedrock interface and for large scale anomalies. If this technique works, these larger anomalies or ‘footprints’ may be easier to see than small metal anomalies from other exploration techniques, such as vegetation sampling or sediment sampling.

An unpublished preliminary flora, fauna and archaeological study has been completed for the majority of the PL 386/2008 and 387/2008 prospecting licences. The study was completed by Biotrack Botswana (Pty) Ltd in July 2013. The results were used to guide the Gcwihaba and FQM drilling programmes.

No other environmental or social impact studies have been conducted by Gcwihaba to date.

20 CAPITAL AND OPERATING COSTS

This item is not applicable for this level of study and stage of the project.

21 ECONOMIC ANALYSIS

This item is not applicable for this level of study and stage of the project.

22 ADJACENT PROPERTIES

Gcwihaba’s Prospecting Licences (“PL”s) are adjacent to the Okavango Delta and panhandle towards the east, southeast and south, and several other operating companies to the west and southwest. Figure 22-1 shows the location of the PLs surrounding the Gcwihaba PLs hosting the currently XIF exploration (PL 386/2008 and PL 387/2008). In addition to the metals licences shown, there are several diamond PLs in the Ngamiland region of northwest Botswana.

There are currently no operating mines in the surrounding areas.

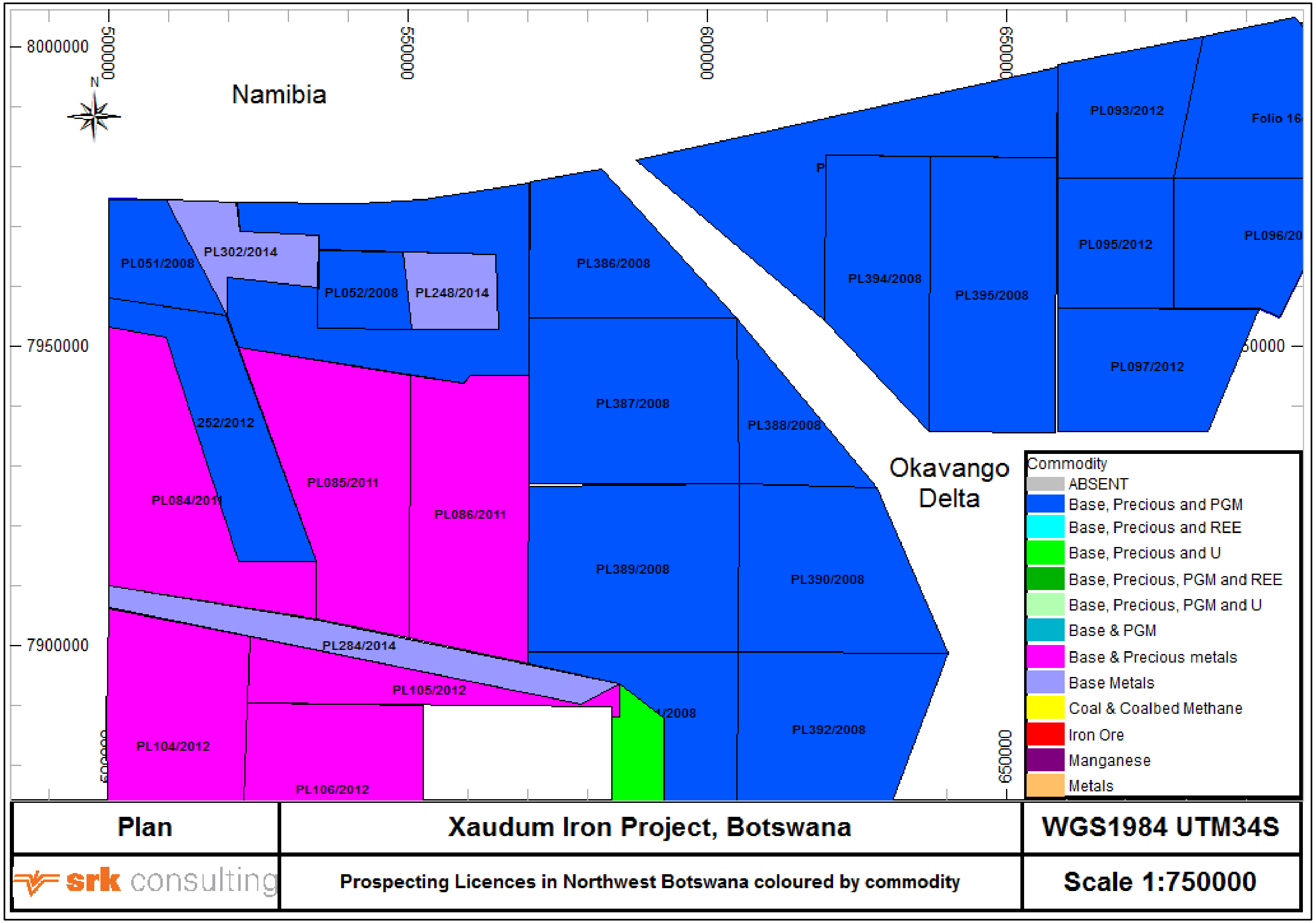


Figure 22-1: Prospecting Licences in Northwest Botswana (Source: licence data – Gcwihaba, 2013; image – SRK, 2014)

23 OTHER RELEVANT DATA & INFORMATION

23.1 Block Model Variables

Table 23-1: Block Model Variables

Variable	Description
GEODOM	Geodomain
GEOZONE	Geozone codes – numeric codes based on geodomain
Al_2O_3	% Al_2O_3 estimate
CaO	%CaO estimate
Fe	%Fe Total estimate
K_2O	%K_2O estimate
MgO	%MgO estimate
Mn	%Mn estimate
P	%P estimate
S	%S estimate
SiO_2	%SiO_2 estimate
TiO_2	%TiO_2 estimate
LOI	%LOI estimate
FE_NS	Number of Samples used to estimate block grade in the Fe estimate
FE_SV	Search Ellipse used to estimate block grade in the Fe estimate
FE_SL	Slope of regression for Fe grades estimated using Ordinary Kriging
FE_KV	Kriging variance for Fe grades estimated using Ordinary Kriging
VOLUME	Block Volume
DENSITY	Block density
TONNES	Block tonnes
CLASS	Classification code. 1=Measured, 2=Indicated, 3=Inferred, 4=Potential (Unclassified)
OPTI	Pit optimisation code. 1 = within resource pit shell. 0 = below resource pit shell. This should be used in conjunction with the CLASS code to report Mineral Resources.
RESOURCE	Resource reporting code. 1 = Inferred material within pit and above a cut-off grade of 12% Fe; 0 = all other material.

24 INTERPRETATION AND CONCLUSIONS

The primary aim of this report was to generate a Mineral Resource estimate for the Project using all available and valid data as at July 2013. Qualified Person Howard Baker (FAusIMM(CP)) believes the aim has been achieved and that the Project has met the original objectives.

It is the opinion of SRK that the quantity and quality of available data is sufficient to generate Inferred Mineral Resources and that the Mineral Resource statement has been classified in accordance with the Guidelines of NI 43-101 and accompanying documents 43-101.F1 and 43-101.CP. It has an effective date of 29 August 2014.

In total, SRK has derived an Inferred Mineral Resource of 441 Mt grading 29.4% Fe, 41.0% SiO_2, 6.1% Al_2O_3 and 0.3% P.

The Inferred material contains 236 Mt of MBA grading 35.6% Fe, 34.0% SiO_2, 4.0% Al_2O_3 and 0.3% P, 148 Mt of DIM, grading 20.9% Fe, 51.0% SiO_2, 9.1% Al_2O_3 and 0.2% P, 21 Mt of MBW grading 34.3% Fe, 35.4% SiO_2, 4.4% Al_2O_3 and 0.2% P, 29 Mt of DMW grading 20.5% Fe, 49.5% SiO_2, 8.2% Al_2O_3 and 0.2% P, and 7 Mt of MGS grading 22.1% Fe, 50.8% SiO_2, 8.9% Al_2O_3, and 0.2% P.

The Mineral Resource Statement generated by SRK has been restricted to all classified material falling within the optimised pit shell representing a metal price of USD 1.5 / dmtu for magnetite concentrate and above a cut-off grade of 12% Fe. This represents the material which SRK considers has reasonable prospect for eventual economic extraction potential.

25 RECOMMENDATIONS

As a result of the pit optimisation, it is clear that the DIM, DMW and MGS units are marginally economic using the optimisation parameters noted above. This is a result of a combination of the low Fe grades and the low Fe recoveries from the DTR analysis. It is therefore recommended that future exploration attempts to focus on the MBA material. If the MBA Mineral Resource can be increased, this may improve the economic viability of the lower grade DIM, DMW and MGS mineralisation.

In view of this, SRK recommends that a study is undertaken to attempt to differentiate between the geophysical signatures of the MBA and the other material types. If the different material types prove to have differing geophysical signatures, it would be possible to focus the drilling more effectively.

25.1 Planned Exploration

The previous exploration program, mainly comprising diamond drilling, was completed in May 2014. The drilling was completed on a grid of approximately 400 m along strike by 50 m on section (across strike) to 600 m by 100 m, with an area of the northern MBA 3 unit drilled to 200 m by 25 m.

The next phase of exploration will be confined to the Block 2 area, which straddles Prospecting Licences PL 386/2008 and PL 387/2008. SRK previously suggested increasing the general drill spacing to an 800 m along strike by 100 m to 250 m across strike depending on the width of the magnetic signature as long as it is supported by a strong ground magnetic anomaly, which is the case with Block 2. Figure 25-1 shows the location of the planned drilling.

A drill plan was compiled for the greater Block 2 area, with 148 holes planned to cover an area of approximately 75.5 km^2 (length 9,800 m, width 7,700 m). All holes are planned to a depth of 200 m, totalling 29,600 m of drilling for the 148 holes. The drill plan is split into two areas, Block 2a and Block 2b, along a general natural divide in the structure of the mineralisation (indicated from the magnetic surveying). Drilling will comprise 63 drillholes, totalling 12,600 m in Block 2a, and 85 holes totalling 17,000 m in Block 2b.

The Block 2a drilling program was initiated in August 2014 and is scheduled to run for the next 8 to 12 months, based on current drilling rates. On completion of the Block 2a exploration, a maiden Mineral Resource estimate and Technical Report will be completed for this area by an independent consultant after in house modelling. Block 2b will follow-on from the Block 2a drilling and will run for approximately 10 months. Upon completion, the MRE and technical report will be updated. In total, it is estimated that Block 2 will take approximately 1.5 years to complete, including two MRE Technical Reports.

Table 25-1 below shows the proposed exploration budget for Block 2 prepared by Gcwihaba.

Table 25-1: Block 2 drill plan exploration budget

Block 2a Exploration Budget	
Item	**Cost (USD)**
Cost per metre	112.90
Drilling Budget	1,422,540.00
Assay cost per sample including sample preparation	26
Number of samples estimated at 65% at 2 m samples	4,095.00
Sampling and Assay Budget	106,470.00
NI 43-101 MRE Technical Report for Block 2a, independent consultant	50,000.00
Sub-Total For Block 2a	**1,579,010.00**
Block 2b Exploration Budget	
Item	**Cost (USD)**
Cost per metre	112.90
Drilling Budget	1,919,300.00
Assay cost per sample including sample preparation	26
Number of samples estimated at 65% of drillhole, 2 m samples	5,525.00
Sampling and Assay Budget	143,650.00
NI 43-101 MRE Technical Report for Block 2b, independent consultant	50,000.00
Sub-Total For Block 2b	**2,112,950.00**
Other Costs	
Item	**Cost (USD)**
Metallurgical test work	20,000.00
Mineralogical analysis	10,000.00
Structural Study	15,000.00
Ancillary costs	50,000.00
Total Exploration Budget for Block 2 (USD)	**3,786,960.00**

Note: a 65% sampling rate per drillhole, estimated from mineralised drillhole average.

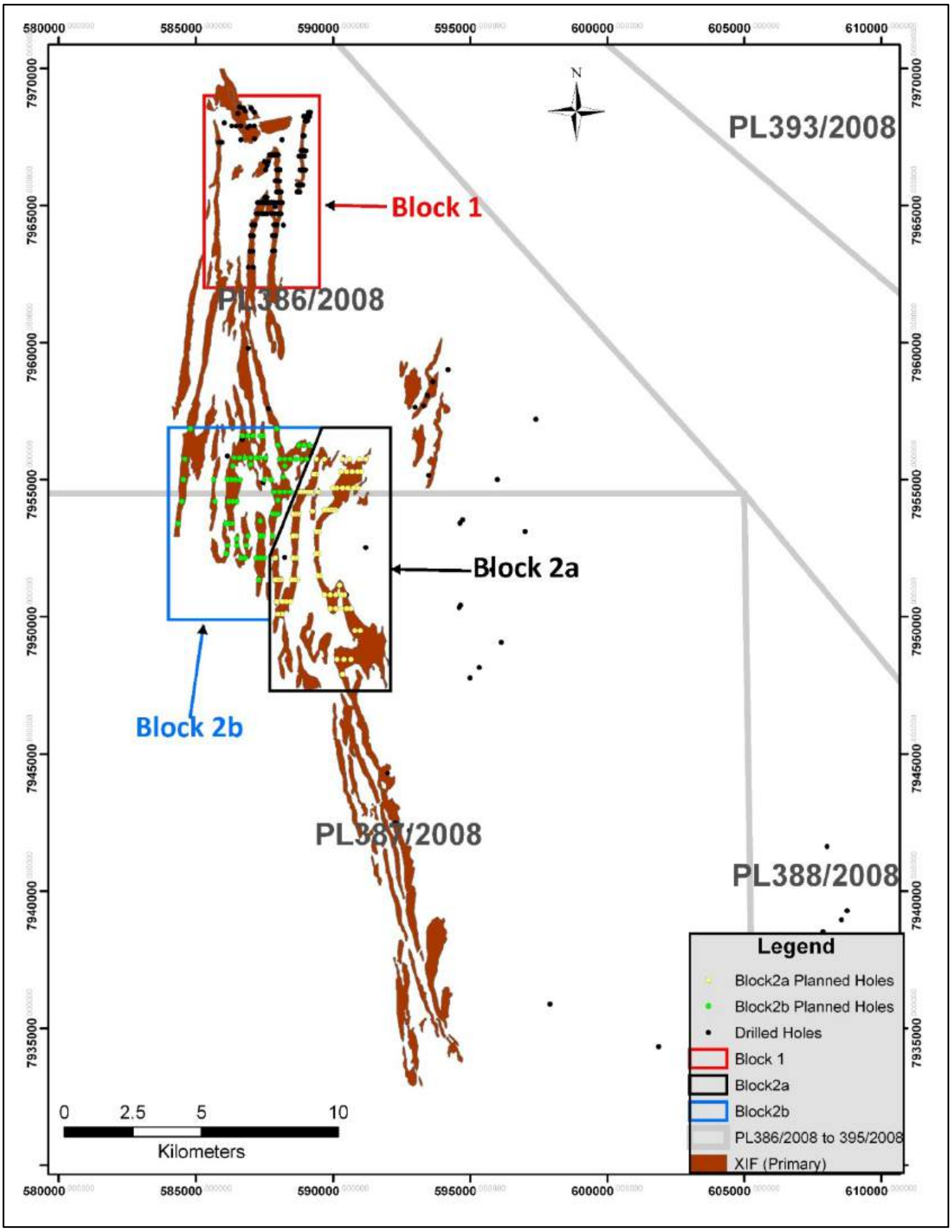


Figure 25-1: Location of planned and completed Gcwihaba drillholes with the 2nd verticle derivative magnetic signature (Source: Gcwihaba, 2014)

25.1.1 QP Comment on Exploration Plan

SRK agrees that the exploration plan and budget suggested looks appropriate testing mineralisation at Block 2. However, it is not guaranteed that the exploration will result in classified Mineral Resources compliant to CIM definitions and guidelines (2014). SRK previously suggested that a drill spacing of 800 x 100 m should be adequate to define Inferred Mineral Resources, however, if the geological and mineralogical complexity of the Block 2 area is found to be similar to Block 1, then a tighter drilling grid than 800 x 100 m may be required. As a result, it may be necessary to reduce the area of suggested exploration in order to increase the drill spacing. This will be an iterative process once drilling commences and the complexity of the geology and mineralogy is understood.

SRK also recommends that drilling is conducted in the Block 1 area to confirm and extend the Mineral Resource statement. SRK believes that infill drilling to <200 m drilling gates, along with re-assaying of the historic ICP assayed samples is required in order to delineate Indicated or Measured resources. The drill spacing in the northern end of the MBA 3 unit is likely dense enough (150 x 50 m) to delineate Indicated Resources in this area, however, all drilling here was conducted prior to the insertion of blind QAQC sampling and the majority of the samples was assayed using ICP methods, which are considered less appropriate than XRF methods. SRK recommends re-assaying one hole (entire hole) on each section (3 sections: L9600_10, 1821B85, L9600_11W) using XRF in order to verify the ICP results and provide greater confidence in the data.

It is also recommended that Satmagan or equivalent magnetic Fe readings (such as Magnasat) are tested and implemented on all future samples in order to assign a %magnetics to each assay interval. This will assist with the geodomaining and provide useful information determining Fe contained within silicates (e.g. garnet) compared to magnetite.

26 REFERENCES

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For and on behalf of SRK Consulting (UK) Limited

Howard Baker,
Principal Consultant (Resource Geology),
SRK Consulting (UK) Limited

Ben Lepley
Consultant (Resource Geology),
SRK Consulting (UK) Limited

27 CERTIFICATE

To accompany the report dated 29 August 2014 entitled “Mineral Resource Estimate for the Xaudum Iron Project (Block 1), Republic Of Botswana” (the “Technical Report”).

I, **Howard Baker**, MSc, FAusIMM(CP) hereby certify that:

1. I am a Principal Resource Geologist with SRK Consulting (UK) Ltd, 5th Floor, Churchill House, Churchill Way, Cardiff CF10 2HH, Wales, United Kingdom;
2. This certificate applies to the Technical Report for Gcwihaba Resources (Pty) Ltd with the effective date of 29 August 2014;
3. I graduated with a degree in Applied Geology from Oxford Brookes University in 1994. In addition, I have obtained a Masters degree (MSc) in Mineral Resources from Cardiff University, UK in 1995;
4. I am a Chartered Professional Fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM(CP));
5. I have worked as a geologist for a total of 20 years since my graduation from university;
6. I have not received, nor do I expect to receive, any interest, directly or indirectly, in the Project or securities in Gcwihaba Resources (Pty) Ltd
7. I have read National Instrument 43-101, Form 43-101F1 and the Technical Report and by reason of my education and past relevant work experience, I fulfil the requirements to be a “Qualified Person” for the purposes of National Instrument 43-101. This Technical Report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1;
8. I, as a Qualified Person, an independent of the issuer as defined in Section 1.5 of National Instrument 43-101;
9. I am the author and take responsibility for all Sections of the accompanying Technical Report;
10. I took part in the site visit of the project site at Xaudum in February 2014 (4 days) as part of this Technical Report;
11. As at the effective date of this Technical Report, to the best of my knowledge, information and belief, for Sections 1 through 13 inclusive and 22 through 26 inclusive of this Independent Technical Report contains all scientific and technical information that is required to be disclosed to make the for Sections 1 through 13 inclusive and 22 through 26 inclusive of the Technical Report not misleading;
12. I consent to the filing of the technical report with any stock exchange and other regulatory authority and any publication for regulatory purposes, including electronic publication in the public company files on their websites accessible to the public of extracts from the technical report.

Dated 29 August 2014.

This signature has been scanned. The author has given permission to its use for this particular document. The original signature is held on file

Howard Baker, MSc, FAusIMM(CP)

Glossary

Al_2O_3	Aluminium oxide (Alumina) %
CaO	Calcium oxide %
Fe	Total Iron %
K_2O	Potassium oxide %
LOI	Loss on ignition %
MgO	Magnesium oxide %
Mn	Manganese %
P	Phosphorous %
S	Sulphur %
SiO_2	Silicon dioxide (Silica) %
TiO_2	Titanium dioxide %

Abbreviations

CIM	Canadian Institute of Mining, Metallurgy and Petroleum
NI 43-101	National Instrument 43-101 Standards of Disclosure for Mineral Projects (including Form 43-101F1 Technical Report table of contents and Companion Policy 43-101CP)
Dmtu	Dry metric tonnes unit. The Fe selling price is usually quoted in US Cents / dmtu, which is used to reflect the price at different concentrate grades. Each dmtu represents 1% of Fe grade, so a product with a concentrate grade of 67% would represent a selling price = 67 x dmtu.

Units

Mt	Million metric tonnes
Ktpa	Thousand tonnes per annum
Mtpa	Million tonnes per annum
SEK	Swedish Kronor
MSEK	Million Swedish Kronor
USD	US Dollars ($)
MUSD	Million US Dollars ($)
%	Percentage
ppm	Parts per million
mL	Millilitres
µm	Micrometres / microns
Gal	One Gal is a unit of acceleration, defined as 1 cm/second^2.
mGal	Milligal - 1000th of a Gal
µs	Microsecond - 1000th of a second
Hz	Hertz
BWP	Botswana Pula (currency). 1 BWP = 0.1129 USD (18/07/2014)
USD	US dollar ($)
Ma	Million years ago
Ga	Billion years ago

TECHNICAL APPENDICES

APPENDIX A

A ASSAYING LABORATORY DETECTION LIMITS

ALS Chemex: XRF (ME-XRF21u) detection limits

Element	Symbol	Units	Lower Limit	Upper Limit
Aluminum	Al_2O_3	%	0.01	100
Arsenic	As	%	0.001	1.5
Barium	Ba	%	0.001	10
Calcium	CaO	%	0.01	40
Chlorine	Cl	%	0.001	6
Cobalt	Co	%	0.001	5
Chromium	Cr_2O_3	%	0.001	10
Copper	Cu	%	0.001	1.5
Iron	Fe	%	0.01	75
Potassium	K_2O	%	0.01	6.3
Magnesium	MgO	%	0.01	40
Manganese	Mn	%	0.001	25
Sodium	Na_2O	%	0.005	8
Nickel	Ni	%	0.001	8
Phosphorus	P	%	0.001	10
Lead	Pb	%	0.001	2
Sulphur	S	%	0.001	5
Silicon	SiO_2	%	0.05	100
Tin	Sn	%	0.001	1.5
Strontium	Sr	%	0.001	1.5
Titanium	TiO_2	%	0.01	30
Vanadium	V	%	0.001	5
Zinc	Zn	%	0.001	1.5
Zirconium	Zr	%	0.001	1

ALS Chemex ICP (ME-MS61 and ME-ICP81) detection limits

Element	Symbol	Units	Lower Limit	Upper Limit
Silver	Ag	ppm	0.5	100
Aluminium	Al	%	0.01	50
Arsenic	As	ppm	5	10,000
Barium	Ba	ppm	10	10,000
Beryllium	Be	ppm	0.5	1,000
Bismuth	Bi	ppm	2	10,000
Calcium	Ca	%	0.01	50
Cadmium	Cd	ppm	0.5	500
Cobalt	Co	ppm	1	10,000
Chromium	Cr	ppm	1	10,000
Copper	Cu	ppm	1	10,000
Iron	Fe	%	0.01	50
Gallium	Ga	ppm	10	10,000
Potassium	K	%	0.01	10
Lanthanum	La	ppm	10	10,000
Magnesium	Mg	%	0.01	50
Manganese	Mn	ppm	5	100,000
Molybdenum	Mo	ppm	1	10,000
Sodium	Na	%	0.01	10
Nickel	Ni	ppm	1	10,000
Phosphorus	P	ppm	10	10,000
Lead	Pb	ppm	2	10,000
Sulphur	S	%	0.01	10
Antimony	Sb	ppm	5	10,000
Scandium	Sc	ppm	1	10,000
Strontium	Sr	ppm	1	10,000
Thorium	Th	ppm	20	10,000
Titanium	Ti	%	0.01	10
Thallium	Tl	ppm	10	10,000
Uranium	U	ppm	10	10,000
Vanadium	V	ppm	1	10,000
Tungsten	W	ppm	10	10,000
Zinc	Zn	ppm	2	10,000
Silicon*	Si	%	0.2	100

**Note: ME-ICP81 method*

ALS Chemex ICP (ME-OG62) detection limits

Element	Symbol	Units	Lower Limit	Upper Limit
Silver	Ag	ppm	1	1,500
Arsenic	As	%	0.01	30
Bismuth	Bi	%	0.01	30
Cadmium	Cd	%	0.0001	10
Cobalt	Co	%	0.001	20
Chromium	Cr	%	0.002	30
Copper	Cu	%	0.001	40
Iron	Fe	%	0.01	100
Manganese	Mn	%	0.01	50
Molybdenum	Mo	%	0.001	10
Nickel	Ni	%	0.001	30
Lead	Pb	%	0.001	20
Zinc	Zn	%	0.001	30

Set Point XRF (M451) detection limits

Analyte	Symbol	Units	Lower Limit	Upper Limit
Ferric oxide	Fe_2O_3	%	0.06	95.10
Manganese oxide	MnO	%	0.02	63.50
Chromium (III) oxide	Cr_2O_3	%	0.07	3.47
Vanadium (V) oxide	V_2O_5	%	0.23	10.00
Titanium dioxide	TiO_2	%	0.03	32.80
Calcium oxide	CaO	%	0.06	65.30
Potassium oxide	K_2O	%	0.17	11.20
Phosphorous pentoxide	P_2O_5	%	0.02	21.20
Silicon dioxide	SiO_2	%	0.82	99.80
Aluminium (III) oxide	Al_2O_3	%	0.2	58.80
Magnesium oxide	MgO	%	0.3	43.00

Set Point ICP (4AD ICP-OES) detection limits

Element	Symbol	Units	Lower Limit	Upper Limit
Silver	Ag	ppm	3	100
Aluminium	Al	%	0.01	10
Arsenic	As	ppm	2	1,000
Barium	Ba	ppm	2	10,000
Beryllium	Be	ppm	2.5	500
Bismuth	Bi	ppm	15	10,000
Calcium	Ca	%	0.01	10
Cadmium	Cd	ppm	2.5	1,000
Cobalt	Co	ppm	10	10,000
Chromium	Cr	ppm	10	1,000
Copper	Cu	ppm	10	1,000
Iron	Fe	10%	0.01	10
Potassium	K	10%	0.01	10
Lithium	Li	ppm	5	1,000
Magnesium	Mg	%	0.01	10
Manganese	Mn	%	0.01	10
Molybdenum	Mo	ppm	2.5	10,000
Sodium	Na	%	0.01	10
Niobium	Nb	ppm	5	1,000
Nickel	Ni	ppm	10	10,000
Phosphorous	P	%	0.01	10
Lead	Pb	ppm	10	10,000
Sulphur	S	%	0.01	10
Antimony	Sb	ppm	5	1,000
Selenium	Se	ppm	5	1,000
Tin	Sn	ppm	10	1,000
Strontium	Sr	ppm	1	10,000
Tantalum	Ta	ppm	5	1,000
Thorium	Th	ppm	10	1,000
Titanium	Ti	%	0.01	10
Uranium	U	ppm	10	1,000
Vanadium	V	ppm	5	10,000
Zinc	Zn	ppm	10	10,000
Zirconium	Zr	ppm	2	10,000

APPENDIX B

B QP CERTIFICATE (NON-SRK)

To accompany the report dated 29 August 2014 entitled “Mineral Resource Estimate for the Xaudum Iron Project (Block 1), Republic Of Botswana” (the “Technical Report”).

I, **Alistair Jeffcoate**, PhD, MAusIMM(CP) hereby certify that:

1. I am a Chief Geologist Project Manager with Tsodilo Resources Ltd, TD Canada Trust Tower, 161 Bay Street, Box 508, Toronto, Ontario M5J 2S1. Canada;
2. This certificate applies to the Technical Report for Gcwihaba Resources (Pty) Ltd with the effective date of 29 August 2014;
3. I graduated with an MSci degree in Geology from Royal Holloway, University of London in 2001. In addition, I have obtained a PhD in Geochemistry from University of Bristol, UK in 2005;
4. I am a Chartered Professional Member of the Australasian Institute of Mining and Metallurgy (MAusIMM(CP)), and a Fellow of the Geological Survey (FGS);
5. I have worked as a geologist for a total of 9 years since the end of my PhD;
6. I am currently a full time employee of Tsodilo Resources Ltd, who wholly own Gcwihaba Resources (Pty) Ltd;
7. I have read National Instrument 43-101, Form 43-101F1 and the Technical Report and by reason of my education and past relevant work experience, I fulfil the requirements to be a “Qualified Person” for the purposes of National Instrument 43-101. This Technical Report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1;
8. I, as a Qualified Person, as defined in Section 1.5 of National Instrument 43-101. I am not independent of the issuer;
9. I as Chief Geologist for Tsodilo Resources take responsibility for co-authoring Sections 3 through 13 inclusive, and 22 through 25 inclusive of the accompanying Technical Report;
10. As Chief Geologist for Tsodilo Resources I live and work full time in Botswana, and take responsibility for the technical operations and all geological activities ensuring the CIM exploration best practices are adhered to;
11. As at the effective date of this Technical Report, to the best of my knowledge, information and belief, I assisted in co-author Sections 3 through 13 inclusive, 19, and 22 through 25 inclusive of this Independent Technical Report contains all scientific and technical information that is required to be disclosed to make the for Sections 1 through 13 inclusive, and 22 through 25 inclusive of the Technical Report not misleading;
12. I consent to the filing of the technical report with any stock exchange and other regulatory authority and any publication for regulatory purposes, including electronic publication in the public company files on their websites accessible to the public of extracts from the technical report.

Dated 29 August 2014.

A. Jeffcoate

Alistair Jeffcoate, PhD, FGS, MAusIMM (CP)