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## Caledonia Mining Corporation Plc

### S-K 1300 Technical Report Summary on the Maligreen Gold Project, Zimbabwe

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## DATE AND SIGNATURE PAGE

This Report titled "S-K 1300 Technical Report Summary on the Maligreen Gold Project, Zimbabwe - Mineral Resource Report" was prepared for Caledonia Mining Corporation Plc. The Report is compiled in accordance with the United States Securities and Exchange Commission Part 229 Standard Instructions for Filing Forms Regulation S-K subpart 1300. The effective date of this Report is 31 December 2021.

The Qualified Person ("QP") responsible for this Report is Mr. Uwe Engelmann and signed:-



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**U ENGELMANN**

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DIRECTOR, MINXCON (PTY) LTD

Signed at Little Falls, Gauteng, South Africa, on 22 April 2022.

## INFORMATION RISK

This Report was prepared by Uwe Engelmann (the “QP”) of Minxcon (Pty) Ltd (“Minxcon”). In the preparation of the Report, the QP utilised information relating to operational methods and expectations provided to them by various sources. Where possible, the QP has verified this information from independent sources after making due enquiry of all material issues that are required in order to comply with the requirements of the United States Securities and Exchange Commission Part 229 Standard Instructions for Filing Forms Regulation S-K subpart 1300. The QP is not qualified to provide extensive commentary on legal issues associated with rights to the mineral properties and relied on the information provided to them by the issuer. No warranty or guarantee, be it express or implied, is made by the authors with respect to the completeness or accuracy of the legal aspects of this document.

## OPERATIONAL RISKS

The business of mining and mineral exploration, development and production by their nature contain significant operational risks. The business depends upon, amongst other things, successful prospecting programmes and competent management. Profitability and asset values can be affected by unforeseen changes in operating circumstances and technical issues.

## POLITICAL AND ECONOMIC RISK

Factors such as political and industrial disruption, currency fluctuation and interest rates could have an impact on future operations, and potential revenue streams can also be affected by these factors. The majority of these factors are, and will be, beyond the control of any operating entity.

## FORWARD LOOKING STATEMENTS

Certain statements contained in this document other than statements of historical fact, contain forward-looking statements regarding the operations, economic performance or financial condition, including, without limitation, those concerning the economic outlook for the mining industry, expectations regarding commodity prices, exchange rates, production, cash costs and other operating results, growth prospects and the outlook of operations, including the completion and commencement of commercial operations of specific production projects, its liquidity and capital resources and expenditure, and the outcome and consequences of any pending litigation or enforcement proceedings.

Although the QP believes that the expectations reflected in such forward-looking statements are reasonable, no assurance can be given that such expectations will prove to be correct. Accordingly, results may differ materially from those set out in the forward-looking statements as a result of, among other factors, changes in economic and market conditions, changes in the regulatory environment and other State actions, success of business and operating initiatives, fluctuations in commodity prices and exchange rates, and business and potential risk management.



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## LIST OF UNITS AND ABBREVIATIONS

**Units:** The following units were used in this Report, and are in metric terms:-

Unit	Definition
%	Per cent
/	Per
± or ~	Approximately
°	Degrees
°C	Degrees Celsius
cm	Centimetre
g	Grammes
g/t	Grammes per tonne
ha	Hectares
kg	Kilogram (1,000 g)
km	Kilometre (1,000 m)
km <sup>2</sup>	Square kilometres

Unit	Definition
koz	Kilo ounces (1,000 oz)
m	Metre
m <sup>2</sup>	Square metres
m <sup>3</sup>	Cubic metres
mbs	Metres below sea level
mm	Millimetre
Mt	Million tonnes (1,000,000 t)
oz	Troy Ounces
ppb	Parts per billion
t	Tonne
t/m <sup>3</sup>	Tonnes per cubic metre
x	By / Multiplied by

**Computation:** It is noted that throughout the Report, tables may not compute due to rounding.

**Abbreviations:** The following abbreviations were used in this Report:-

Abbreviation	Description
AAS	Atomic Absorption Spectrophotometry
BIOX®	Biological Oxidation
Caledonia or the Company	Caledonia Mining Corporation Plc
Caledonia Zimbabwe	Caledonia Holdings Zimbabwe (Pvt) Ltd
CIDA	Canadian International Development Agency
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
Cluff	Cluff Mineral Resources Limited
DIBK	Di-Isobutyl-Ketone
DMS	Digital Mining Services
EM Act	Environmental Management Act (Chapter 20:27) No. 13/2002
FP	Feldspar Porphyry
Geosearch	Geosearch (Pty) Ltd
HLEM	horizontal loop electromagnetic
IP	Induced Polarisation
KNA	Kriging Neighbourhood Analysis
Maligreen or the Project	Maligreen Gold Project
Mintek	Mintek Analytical Services Division
Mintek	Mintek Analytical Services Division
Minxcon	Minxcon (Pty) Ltd
MMA	Mines and Minerals Act (Chapter 21:05) of 1961
MMC	Maligreen Mining Company (Pvt) Ltd
MMCZ	Minerals Marketing Corporation of Zimbabwe
NSGB	Nkayi-Silobela Greenstone Belt
Pan African	Pan African (Pvt) Ltd
QAQC	Quality Assurance and Quality Control
QEP	Quartz-Eye-Porphyry
QP	Qualified Person
QSZ	Quartz-Sericite-Zone
RC	Reverse Circulation
Reunion	Reunion Mining (Zimbabwe) Limited
SADCA	Southern African Development Community Cooperation in Accreditation
Sale Agreement	Agreement of Sale between Caledonia Zimbabwe and Maligreen Mining Company (Pvt) Ltd dated 22 September 2021 to acquire the claims
SANAS	South African National Accreditation System
SEC	Securities and Exchange Commission
SGS	SGS Zimlab (Pty) Ltd
S-K 1300	United States Securities and Exchange Commission Part 229 Standard Instructions for Filing Forms Regulation S-K subpart 1300
SoR	Slope of Regression
TRS	Technical Report Summary
UTM	Universal Transverse Mercator
ZMDC	Zimbabwe Mining Development Corporation

## ITEM 1 - EXECUTIVE SUMMARY

Maligreen is a gold exploration project situated on the Nkayi-Silobela Greenstone Belt that has historically been exploited via open pit mining. The Project is located in central Zimbabwe, approximately 73 km due west-southwest of Kwekwe, Midlands Province. Zimbabwe's capital city, Harare, lies 235 km northeast of Maligreen. The town of Nkayi lies 25 km west of the Project along the Kwekwe-Lupane Highway.

The Project Area was historically explored and limited exploitation of the orebody from two open pits was done from 2000 to 2002. The operation is currently on care and maintenance. No further exploration or development work has been undertaken at the site.

The Mineral Resource occurs within a claims area covering a total of 550 ha. The Project is held under a portfolio of 41 adjacent mining claims in the Midlands Mining District.

The Maligreen gold deposit occurs in a northeast trending section of greenstone near the convergence (triple junction) of the Midlands, Bubi and Silobela greenstone belts. The Maligreen deposit is hosted in rocks assigned to the Maliyami Formation of the Upper Bulawayan Group. The regional structural trend around Maligreen is northeast, parallel to the contact between the greenstone pile and the Shangani granite-gneiss terrain to the southeast.

The country rocks consist of metamorphosed andesitic pyroclastics (grading from lapilli tuff to agglomerate), intermediate lavas (dacite/andesite) and mafic lavas (basalt/gabbro). The pyroclastics are interbedded with quartz-eye-porphyry (or QEP) and intruded by feldspar porphyry (or FP) dykes. Andesitic volcanics are porphyritic and amygdaloidal in places. A mafic (or marker) dyke has intruded along the contact between pyroclastics and dacitic volcanics, within a broad shear zone. The strongly altered and sheared zone known as the quartz-sericite-zone (or QSZ), forms the core of deformation and alteration at Maligreen.

Gold mineralisation at Maligreen is generally associated with pyrite. Both stockwork and breccia pipe-type mineralisation have been recognised. A dominant north-south orientation is observed hosting mineralisation. These north-south mineralised trends are what has been mined in the existing surface pits. Additional mineralisation is seen trending northwest from these pits, in what has been termed the splays. Mineralisation at Maligreen is hosted by multiple lithologies, with specific lithologies dominant in different structural domains.

An ordinary kriged estimation was performed on the Maligreen deposit. Owing to the lack of confidence in the data, an Inferred Mineral Resource only was defined. The Mineral Resources reported at surface, which are all resources <220 m from surface and underground (>220 m from surface) are shown below. No Mineral Reserves are stated.

*Surface Inferred Mineral Resource for Maligreen Gold Mine as at 31 December 2021*

Mineral Resource Category	Domain	Tonnes (Less Geological Loss)	Gold Grade	Gold Content
		Mt	g/t	koz
Inferred	North	4.42	1.27	181.3
	South	2.71	3.70	323.0
	SplayN	4.31	0.84	116.8
	SplayS	2.18	1.29	90.8
<b>Total Inferred</b>		<b>13.62</b>	<b>1.63</b>	<b>711.9</b>

**Notes:**

1. Mineral Resource Cut-off of 0.4 g/t Au applied.
2. A gold price of USD1,800/oz was used for the cut-offs.
3. Columns may not add up due to rounding.
4. Mineral Resources are reported as total Mineral Resources and 100% attributable to Caledonia.



*Underground Inferred Mineral Resource for Maligreen Gold Mine as at 31 December 2021*

Mineral Resource Category	Domain	Tonnes (Less Geological Loss)	Gold Grade	Gold Content
		Mt	g/t	koz
Inferred	North	1.32	2.45	104.2
	South	0.40	8.21	106.3
	SplayN	0.21	2.30	15.3
	SplayS	0.04	1.91	2.3
<b>Total Inferred</b>		<b>1.97</b>	<b>3.60</b>	<b>228.1</b>

**Notes:**

1. Mineral Resource Cut-off of 1.5 g/t Au applied.
2. A gold price of USD1,800/oz was used for the cut-offs.
3. Columns may not add up due to rounding.
4. Mineral Resources are reported as total Mineral Resources and 100% attributable to Caledonia.

*Total Inferred Mineral Resource for Maligreen Gold Mine as at 31 December 2021*

Mineral Resource Category	Domain	Tonnes (Less Geological Loss)	Gold Grade	Gold Content
		Mt	g/t	koz
Inferred	North	5.75	1.55	285.5
	South	3.12	4.29	429.3
	SplayN	4.51	0.91	132.1
	SplayS	2.22	1.31	93.1
<b>Total Inferred</b>		<b>15.59</b>	<b>1.88</b>	<b>940.0</b>

**Notes:**

1. Mineral Resource Cut-off of 0.4 g/t Au for surface and 1.5 g/t Au for underground applied.
2. A gold price of USD1,800/oz was used for the cut-offs.
3. Columns may not add up due to rounding.
4. Mineral Resources are reported as total Mineral Resources and 100% attributable to Caledonia.

Sufficient data is available to define a weathering profile, lithological model, as well as estimate a Mineral Resource for the Maligreen Deposit. Lack of QAQC during sampling and low confidence in the data due to the historical nature means that an Inferred Mineral Resource only can be defined.

The model utilises grade trends determined in Seequent Leapfrog Geo software as well as structural geological interpretations and mapping. This has resulted in a fairly robust geological model on which to base the revised Mineral Resource estimation. Based on this new revised model and the quantity of historical drillhole data available, the conversion from Inferred to Measured and Indicated Mineral Resource should be fairly cost effective. It is estimated that the budget required for this conversion is between USD1.5 million and USD2 million. This translates into a low USD/oz "discovery" or conversion rate, to Measured and Indicated Mineral Resources, estimated to be in the region of USD3/oz to USD5/oz.

The Maligreen Project lends itself to open pit mining with low grade stockpiling with the possibility of underground mining beneath the open pit.

Limited historical metallurgical testwork suggests that the ore is not that refractory with metal recovery rates above 80%.

To take the Maligreen Project up the value curve and closer to operational status it is recommended that the Mineral Resource be converted from the Inferred category to a Measured and Indicated Mineral Resource. It is therefore recommended that the infill confirmatory drilling programme along with a detailed QAQC

programme is perused to increase the confidence in the database and enable the definition of at least an Indicated Mineral Resource.

In addition to this the historical core that is available in the core yard be catalogued (possibly relogged) and resampled to verify the historical drillhole database grades.

Additional exploration is recommended to fully understand what the strike extension and depth extension potential is. This would be a combination of geophysics, possibly soil geochemical surveys (depending on the Kalahari surface cover), trenching and drilling.

Further, it is recommended to undertake Independent metallurgical testwork.

## ITEM 2 - INTRODUCTION

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### Item 2 (a) - ISSUER RECEIVING THE REPORT; AUTHOR

Minxcon (Pty) Ltd ("Minxcon") was commissioned by Caledonia Mining Corporation Plc ("Caledonia" or "the Company") to compile Technical Report Summary ("TRS") on the Maligreen Gold Project ("Maligreen" or the "Project"), situated in the Silobela area, Midlands Province, Zimbabwe.

The author of this TRS is Uwe Engelmann who is a Qualified Person ("QP"). Mr. Engelmann was responsible for all Sections of this TRS.

### Item 2 (b) - TERMS OF REFERENCE AND PURPOSE OF THE REPORT

Minxcon was commissioned to prepare the TRS on the Project in accordance with the United States Securities and Exchange Commission Part 229 Standard Instructions for Filing Forms Regulation S-K subpart 1300 ("S-K 1300"). This TRS follows the guidelines as prescribed by S-K 1300, and only such terms as defined in §229.1300 have been utilised. The TRS is structured in accordance with the format prescribed in §229.601(b)(96). This TRS constitutes an initial assessment under S-K 1300.

The purpose of this TRS is to present the Mineral Resources of the Project as at the Company financial year end 31 December 2021. Maligreen is an advanced exploration project with historical mining. The Mineral Resources were initially estimated at the effective date of 31 August 2021. No significant developments material to the exploration project and Mineral Resources occurred in the period to 31 December 2021; thus, the estimates are considered as valid as at the date of 31 December 2021, *i.e.*, the date of this TRS.

No TRS has previously been filed by Caledonia for the Maligreen Project in terms of S-K 1300.

### Item 2 (c) - SOURCES OF INFORMATION AND DATA CONTAINED IN THE TECHNICAL REPORT SUMMARY

In the compilation of this Report, the QP utilised information as provided by the Client. This includes internal company reports, historical reports and information, technical correspondence and maps, as received from the Client. Additional information was sourced from those references listed in Item 24 and is duly referenced in the text where appropriate.

### Item 2 (d) - QUALIFIED PERSONS' PERSONAL INSPECTION OF THE PROPERTY

The QP, as such term is defined S-K 1300, is Mr U. Engelmann. A site visit to Maligreen was undertaken by Mr Engelmann on 12 October 2021. He was accompanied by Ms Janet Hobkirk, Mr Wilbert Mugomo and Mr Lovemore Mauled from Caledonia. During the site visit, the available infrastructure, historical heap leach pad and open pits were inspected. The location of some of the historical drillholes were confirmed and the surface geology in the open pits was observed and confirmed the geological model constructed.

## ITEM 3 - PROPERTY DESCRIPTION

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### Item 3 (a) - AREA OF THE PROPERTY

Maligreen is a gold exploration project situated on the Nkayi-Silobela Greenstone Belt ("NSGB") that has historically been exploited via open pit mining. The Mineral Resource occurs within a claims area covering a total of 550 ha.

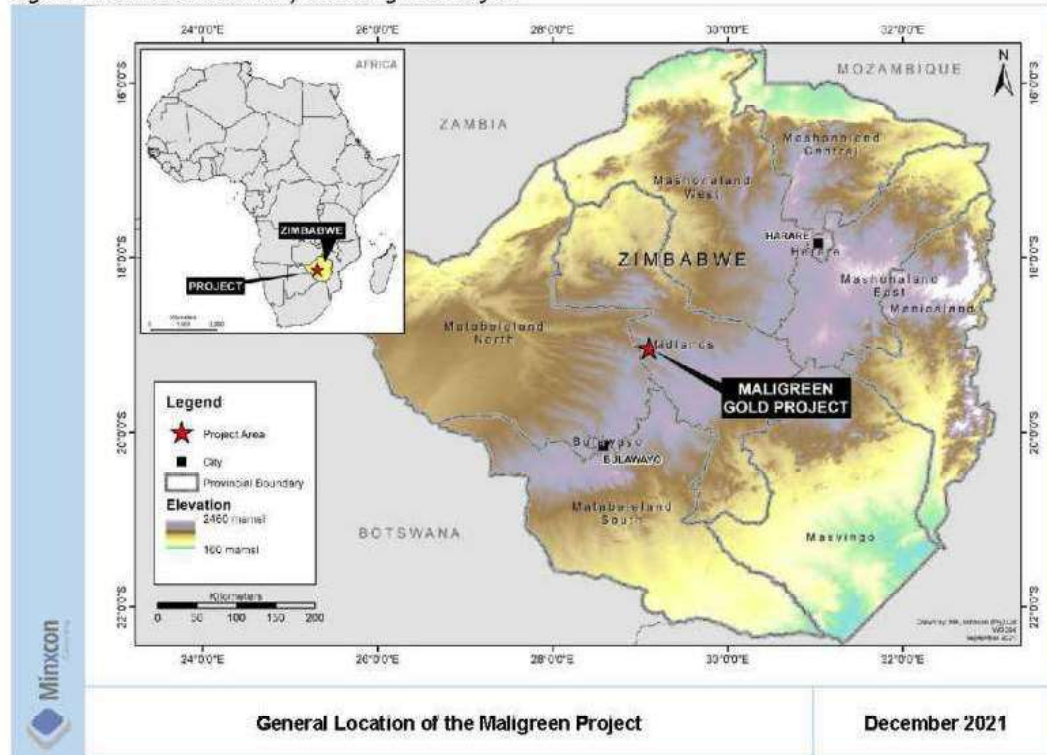
### Item 3 (b) - LOCATION OF THE PROPERTY

As illustrated in Figure 1, the Project is located in central Zimbabwe, approximately 73 km west-southwest of Kwekwe, Midlands Province. Zimbabwe's capital city Harare lies 235 km northeast of Maligreen. Nkayi



Town lies 25 km west of the Project along the Kwekwe-Lupane Highway. The Project is centred on the coordinates (WGS84 system) 19° 1'51"S, 29° 6'5"E.

Figure 1: General Location of the Maligreen Project



### Item 3 (c) - MINERAL DEPOSIT TENURE

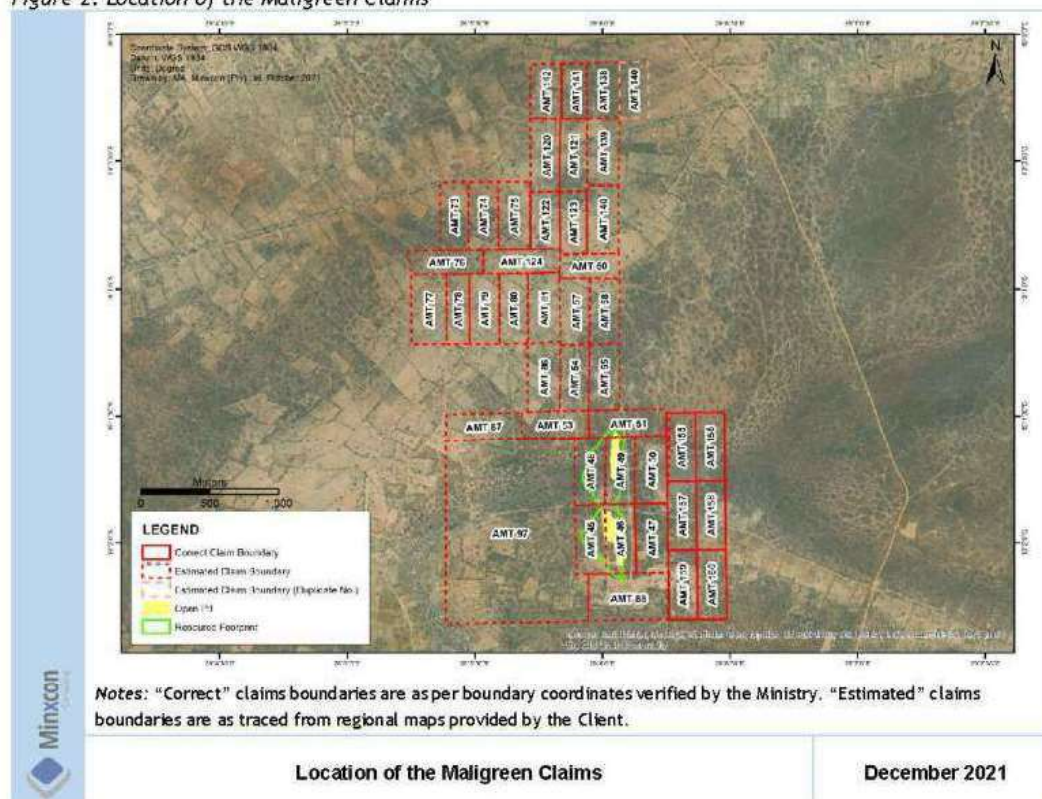
The Project is held under a portfolio of 41 adjacent mining claims (Figure 2) in the Midlands Mining District. Of these, 40 encompass an area of 10 ha each and are issued for gold. Claim AMT 97 (claim number 11219BM) encompasses 150 ha and is issued for copper. This latter claim has not been the focus of exploration to date. Should future exploration reveal substantial gold mineralisation, application will be made to include gold ore in the claim. The claims are all up to date, with next inspections due in 2022.

The claims are all held in the name of Maligreen Mining Company (Pvt) Ltd ("MMC"). Caledonia Zimbabwe entered into an Agreement of Sale ("Sale Agreement") with MMC on 22 September 2021 to acquire the claims. The process to transfer the claims into the name of Caledonia Zimbabwe is underway. Caledonia Zimbabwe is a 100% held indirect subsidiary of Caledonia through Greenstone Management Services Holdings Limited.

Annual payments are required to be made for each claim to government authorities in order to maintain validity.

The QP is not aware of further permits required to undertake exploration activities at the claims.

Figure 2: Location of the Maligreen Claims



The QP is not aware of any material violations or fines associated with the property.

### Item 3 (d) - ROYALTIES AND PAYMENTS

Mining royalties are charged in terms of the Mines and Minerals Act (Chapter 21:05). Maligreen is not in production and is not subject to these government royalties.

A Tribute Agreement is in place with Silobela Youth in Mining Syndicate for the claims from 1 October 2020 to 30 September 2023. In terms of this Tribute Agreement, Silobela Youth in Mining Syndicate may undertake mining activities over the claims. In terms of the Tribute Agreement, Silobela Youth in Mining Syndicate must pay to the Grantor (now Caledonia Zimbabwe through the Sale Agreement) 5% of the value of minerals mined or a rental amount. The Syndicate is mining as per the Tribute Agreement with royalty payment made as per the agreement to MCC.

Payments are due annually to the Provincial Mining Director in order to keep the claims registered.

Operating mines in Zimbabwe are required to set aside money as part of the closure plan and fulfilment of the provisions of the Mines and Minerals Act (Chapter 21:05) of 1961 ("MMA") and Environmental Management Act (Chapter 20:27) No. 13/2002 ("EM Act"). As far as the QP is aware, no statutory instrument has been gazetted implementing an environmental fund as yet, thus so no fees are currently due. Environmental liabilities have not yet been calculated or budgeted for and are not currently due.



### **Item 3 (e) - OTHER SIGNIFICANT FACTORS AND RISKS**

The QP is not aware of any significant factors or risks prevalent to the Project that may affect access, title, or the right or ability to perform work on the property.

## **ITEM 4 - ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

### **Item 4 (a) - TOPOGRAPHY, ELEVATION AND VEGETATION**

The topography at the Maligreen Project Area is flat with an even elevation of some 1,212 m above mean sea level. The northwest flowing Shangani River is located some 11 km due west of the Maligreen Project Area. The area is rural with scattered farming landholdings. The current land use at the claims includes previous mining operation, scattered subsistence farming and some villages and settlements. The area is largely bushveld and wooded.

### **Item 4 (b) - ACCESS TO THE PROPERTY**

The Maligreen Project area is accessible by car via the Kwekwe-Lupane Road, approximately 80 km west of Kwekwe. From this road, the Mahlathini Road can be taken southwards for some 3.8 km, from which point a westwards gravel road provides direct access to the Project Area after 1.8 km. The journey from Kwekwe takes approximately 2 hours by car.

Maligreen lies immediately south of the Kwekwe-Lupane Road that connects the mining town of Kwekwe in the east and Lupane and the A8 national road in the west. The Project Area can be accessed from Kwekwe via this road and through Silobela Town over 91 km by car. The Kwekwe-Lupane Road is currently being upgraded. Silobela lies 22 km east-northeast by road from the Project Area.

Kwekwe Town hosts an aerodrome, schools, medical services and a hospital, accommodation, shops, religious facilities, museums, and mining services. An airport is also available at Nkayi, as is accommodation, a district hospital and limited shops.

### **Item 4 (c) - CLIMATE AND LENGTH OF OPERATING SEASON**

The climate in Kwekwe is hot and semi-arid, classified as *BSh* type (extremely hot summers and warm to cool winters, with minimal precipitation) by the Köppen climate classification system. According to climate-data.org, annual temperatures average 21°C. October is the hottest month of the year at an average temperature of 24°C, while July is the coldest month averaging 16°C. Annual rainfall averages 640 mm, falling mainly in December with little to no precipitation occurring in August. Relative humidity peaks in January at 66%, and is lowest in September at 32%.

No appreciable exploration downtime is expected owing to unfavourable climatic or weather conditions. Activities can be conducted year-round.

### **Item 4 (d) - INFRASTRUCTURE**

Infrastructure on site is minimal. There are two open pits, namely North Pit and South Pit, that were historically mined, as well as the heap leach pad and possible elution room that serviced the operations. An office block is occupied and maintains the care and maintenance of the historic operation. A basic process plant is erected and utilised by the Syndicate for their mining activities. All required infrastructure for exploration activities is in place.

## ITEM 5 - HISTORY

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### Item 5 (a) - PRIOR OWNERSHIP

The Maligreen deposit was discovered by Reunion Mining (Zimbabwe) Limited ("Reunion") in October 1995 over a number of Exclusive Prospecting Orders. The property was purchased by Cluff Mineral Resources Limited ("Cluff") in April 1998. In December 1999, Pan African (Pvt) Ltd ("Pan African") entered into an agreement with Cluff to acquire a 50% interest in the Project. The acquisition was completed in April 2000 and a new joint-venture company MMC was registered (Trashliev, 2007).

The Sale Agreement between MMC and Caledonia Zimbabwe was entered into on 22 September 2021.

### Item 5 (b) - HISTORICAL EXPLORATION AND DEVELOPMENT

As described by Trashliev (2007), four years of integrated regional geochemical and geophysical exploration led to the discovery of the Maligreen mineralisation by Reunion in 1995. A north-south, 3.3 km long geochemical signature along structural targets was identified.

For the next two and a half years, Reunion drilled 107 diamond drillholes over 28,272 m and 526 percussion drillholes over 29,110 m, the results of which were utilised to define a gold Mineral Resource. Only the southern 1 km of the geochemical anomaly has been drilled. Limited geochemical data is however available. The area has been mapped and geological data relogged.

No further exploration work was undertaken under Cluff ownership, but the company did revise the Mineral Resources to quantify the potential and guide mine planning.

Work commenced in January 2000 under MMC ownership to develop two open pits (North Pit and South Pit;) to exploit the orebody. A crushing, sizing and floatation plant was also constructed. Pan African completed 35 reverse circulation ("RC") drillholes over 1,038 m to guide mine planning at North Pit. The first bullion was poured in July 2000.

All available data for the Project Area was consolidated in 2003 and all 107 diamond drillholes were relogged.

The upper oxide horizon was mined to its base via the North Pit and South Pit. Some 22.5 koz of gold was recovered from August 2000 to September 2002 by heap leaching. Mining ceased in September 2002, but the reason for this is uncertain. It is however assumed that they were targeting the oxides only. The operation is currently on care and maintenance.

## ITEM 6 - GEOLOGICAL SETTING, MINERALISATION AND DEPOSIT

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### Item 6 (a) - REGIONAL GEOLOGY

The Maligreen gold deposit occurs in a northeast-trending section of greenstone near the convergence (triple junction) of the Midlands, Bubi and Silobela greenstone belts. The Shangani granite-gneiss terrain occurs to the southeast of the Project.

Although the Project Area and its immediate surroundings are covered by a thin layer (0-40 m) of surface deposits that include Kalahari sands, the position of the mine within the regional stratigraphy and structure can be deduced from aeromagnetic data linked to outcrops SW and NE of the mine. On this basis it is assumed that the Maligreen deposit is hosted in rocks assigned to the Maliyami Formation of the Upper Bulawayan Group (Harrison, 1981).

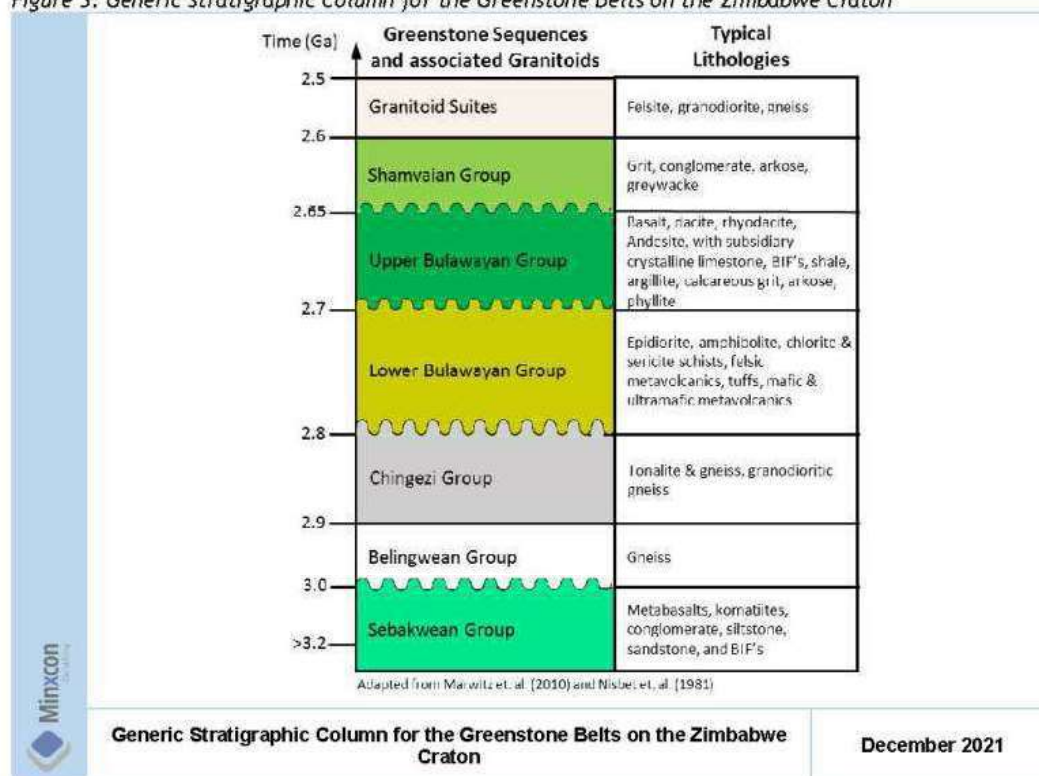


Maliyami Formation rocks comprise andesitic lava flows that are locally amygdaloidal or porphyritic, and interbedded with basalt, volcanoclastic rocks (tuff, agglomerate, ignimbrite), felsic volcanic material and porphyry intrusions, as well as phyllitic rocks and chert. All units have been intruded by metadolerite and gabbro bodies (Harrison, 1981). To the southeast the Maliyami Formation rocks are assumed to stratigraphically overlie older rocks belonging to the Upper Bulawayan Group (Leo Hurst Formation andesitic and dacitic flows; Ntobe Formation basalt) and Lower Bulawayan and Sebakwean Groups (dacite and serpentinite). Contacts between most units are strongly sheared. The greenstone pile in the Maligreen area was intruded by a number of tonalitic bodies with narrow contact metamorphic aureoles, assigned to the Sesombi Suite.

The regional structural trend around Maligreen is northeast, parallel to the contact between the greenstone pile and the Shangani granite-gneiss terrain to the southeast. Two major northeast trending shear zones have been described to the southeast of the Project using Landsat TM data (Campbell and Pitfield, 1994). These shears are positioned near formational contacts between the Leo Hurst and Ntobe Formations (the Leo Hurst shear zone) and the Ntobe Formation and Lower Bulawayan rocks respectively. They have been interpreted as large dextral shear systems and linked to the Munyati Shear Zone in the Midlands Greenstone Belt (Campbell and Pitfield, 1994).

A stratigraphic column depicting the regional lithological units is provided in Figure 3.

Figure 3: Generic Stratigraphic Column for the Greenstone Belts on the Zimbabwe Craton



Numerous small gold workings occur in the area around Maligreen. Larger mines (>500 kg production) include the Jena Group of mines to the north-northeast of Maligreen and the Turtle Mine and associated reefs to the northwest.

#### **Item 6 (b) - LOCAL AND PROPERTY GEOLOGY**

The country rocks at Maligreen consist of metamorphosed andesitic pyroclastics (grading from lapilli tuff to agglomerate), intermediate lavas (dacite/andesite) and mafic lavas (basalt/gabbro). The pyroclastics are interbedded with quartz-eye-porphyry ("QEP") and intruded by feldspar porphyry ("FP") dykes. Andesitic volcanics are porphyritic and amygdaloidal in places. A mafic ("marker") dyke has intruded along the contact between pyroclastics and dacitic volcanics, within a broad shear zone. The strongly altered and sheared zone known as the quartz-sericite-zone ("QSZ"), forms the core of deformation and alteration at Maligreen (Mtetwa, 2007).

The andesitic-dacitic lava is a fine to medium grained, grey green rock. Amygdaloidal and porphyroidal textures are found in places. Quartz-porphyry is characterised by sparse, whitish calcite (after feldspar) amygdales with rectangular (feldspar pseudomorph) shape, in fine grained siliceous matrix. Pyroclastics grade from very fine grained, grey green lapilli tuff to coarse grained agglomerates with large, usually felsic, bombs up to a few centimetres across. The bombs are often amygdaloidal. Quartz and carbonate veining is common. QEP is massive, brittle, grey green (seldom pink) rock with siliceous matrix and spheroidal quartz porphyroblasts, usually 2-3 mm across. It is sericitised and deformed into strongly developed S-C fabric and mineralised in places pressure shadows around the quartz porphyroblasts often indicate the sense of movement during deformation. QSZ is a strongly deformed and intensely altered unit composed of white quartz with yellow sericite and/or green chlorite bands usually forming S-C fabric along the chlorite/sericite bands. When the chlorite rather than sericite is dominant, it is called the quartz-chlorite-zone. Fuchsite and epidote are sometimes present.

The mafic dyke has a green medium grained matrix with dark green hornblende phenocrysts up to 5mm across. It has chilled margins and is found within or on the margin of the QSZ. The FP is pale grey to pink felsic unit with white subhedral to euhedral feldspar phenocrysts up to 5mm across. It is often intensely sheared, altered (sericite after feldspar) and mineralised. The FP in the main shear zone, to the north, has QSZ xenoliths in it, suggesting that it is post Phase 1 deformation. In addition, the FP is often found unshaped within the QSZ. The same applies to the mafic dyke. Basalt is fine grained green to dark green and fairly brittle. It has black magnetite rich patches which are very magnetic. Patchy siliceous and epidote alteration associated with specks of pyrite is common. Dolerite is medium to coarse grained rock with a pale green matrix and dark green hornblende phenocrysts. It is weak to strongly magnetic. The gabbro has very pale green matrix with large dark green phenocrysts which give it a coarse-grained texture. Minor sericite alteration is found in places. Kalahari sands, Karoo sediments and black hydromorphic clays 3m to 7m thick cover the Maligreen deposit.

The low-grade greenschist facies metamorphism of the country rock is marked by the assemblage of chlorite-epidote-actinolite-plagioclase. Three different types of alteration are recognised. The first type of alteration is observed in the intensely sericitised and silicified QSZ and is related to the phase 1 deformation. Epidote and minor fuchsite are also present. Low temperature Na-micas (illite and paragonite) were picked up by Pima spectral analysis. The second type of alteration (related to phase 2 deformation) is found in gold mineralised zones, which are also intensely sericitised and silicified. Other alteration minerals present are carbonate, tourmaline, chlorite and leucosene. Fuchsite and epidote are seldom present. The Pima spectral analysis on core from diamond drill hole MG45 suggests that gold mineralisation is associated with K-mica (muscovite) introduced by "high" temperature hydrothermal fluids. The third type of alteration is pervasive silicification and carbonatization of the country rock. It has a bleaching effect on the wall rocks, forming a



broad envelope to mineralisation (Mtetwa, 2007). The alteration minerals are usually associated with shear zones and pyrite mineralisation.

The deposit lies in a major north-south structure interpreted from the aeromagnetic data and observed in the core as the 50 m wide QSZ. This dominant structure (phase 1 deformation) is usually barren of gold. Narrow shears splay-off the QSZ (phase 2) deformation and are associated with gold mineralisation. A NW oblique trend appears to belong to phase 2 deformation as it has brittle fractures and hosts grey sulphide with gold mineralisation. Silicified ENE trending faults are barren of gold and are probably post mineralisation.

Detailed mapping and structural measurements were taken by Professor Paul Dirks (2001).

The calculated stress field indicates that during the formation of the shear zones;

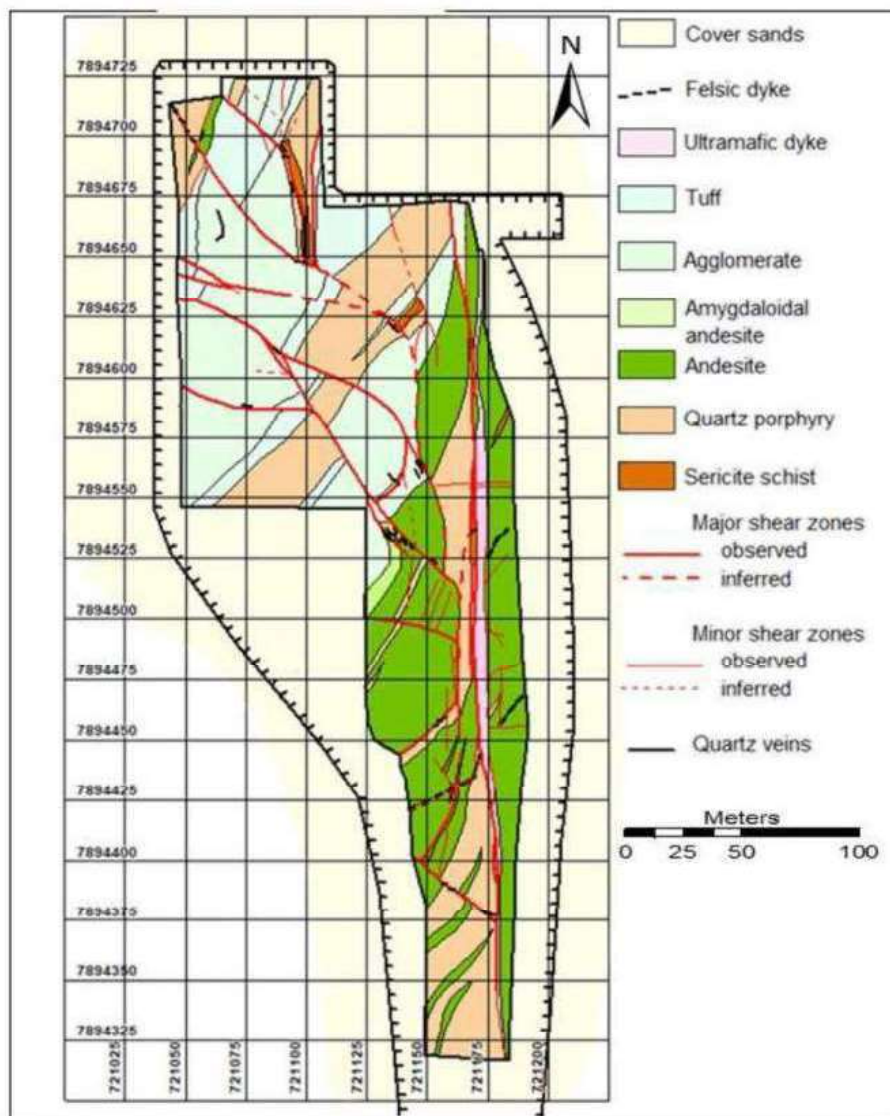
- WNW and NW trending sinistral shears formed within a tensional field,
- NE trending dextral shears formed in a compressional field,
- N trending sinistral shears formed close to the boundary of the compressional and tensional fields.

This suggests that maximum fluid infiltration can be expected along the NW and WNW trending shears, and especially along the intersections of WNW, NW and N trending shears. The intensity of infiltration is partly dependent on the fluid pressure at the time of mineralisation.

The widest zones of wall rock alteration in the South Pit occur in areas where NW, WNW and N shear zones merge into each other. Where such zones coincide with quartz porphyry rock, extensive stock works of quartz-sulphide veinlets have developed within the porphyry. This is especially the case along the massive porphyry exposed at the bottom of the South Pit (Figure 4).



Figure 4: Local Geology of the Maligreen South Area



Source: Dirks, 2001

Local Geology of the Maligreen South Area

December 2021

N-S trending shears away from intersections with NW trending shears, and SW trending shears parallel to S1 show less alteration and are not associated with significant mineralisation although a narrow mineralised zone can be traced along the main N-trending shear zone to the N of the pit.

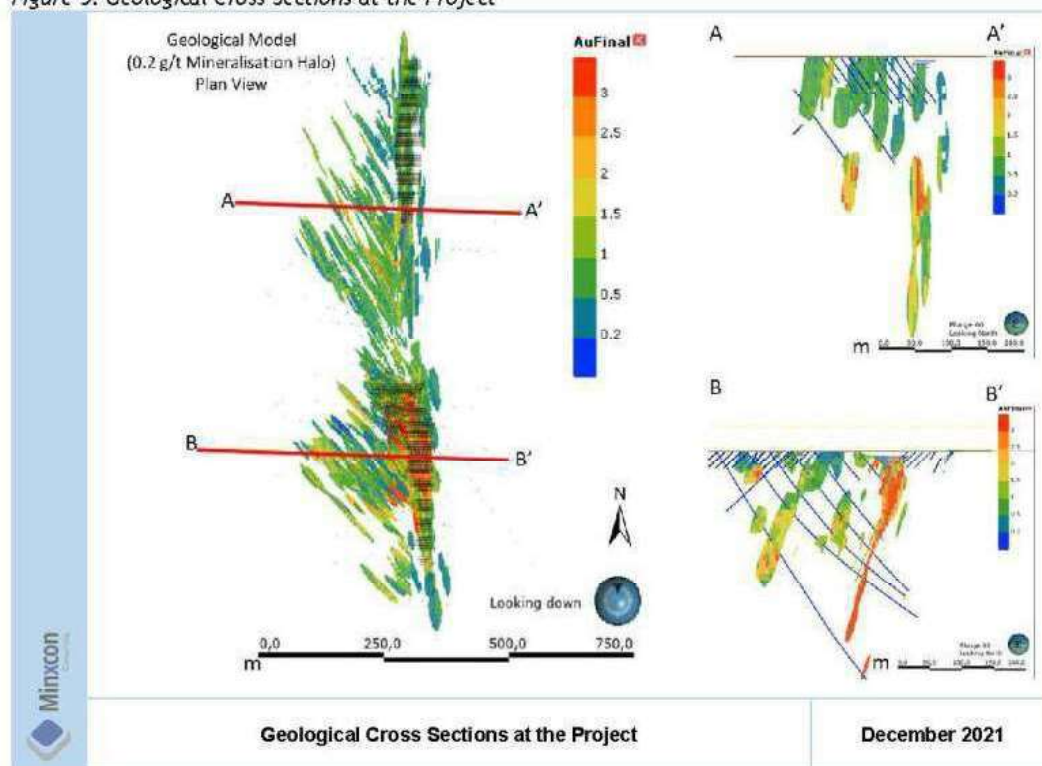
It is clear that the main zones of fluid infiltration occur along the intersection points of N-, NW- and WNW-trending shears within a sinistral shear system. Within such a system, these areas are clearly dilatant allowing more effective fluid impregnation. The intersection lineation between the three shear zone sets plunges steeply to the south. This orientation is near parallel to the L1 mineral lineation, this suggests that the mineralisation plunges steeply S to SSW.

Where fault intersections coincide with quartz porphyry rocks, better mineralisation occurs. This appears to happen because, the porphyry undergoes extensive, stock-work like fracturing with associated sulphide impregnation, a feature not observed to be as well developed in other lithologies. All quartz porphyries in the South Pit contain S1 and therefore were emplaced before gold was introduced along the younger brittle-ductile shear zones. A direct genetic relationship between the porphyries and mineralisation is therefore not expected.

The feldspar porphyry observed in drill core below the N-pit intruded after the development of D1 and before or during the mineralising events in an N-S trend and may have a genetic relationship with the gold. The same may be true for the mafic dyke that has intruded into the main shear zone after D1, but before shearing associated with mineralisation, which locally affects the dyke.

Figure 5 shows a schematic cross section of the geology at the Project.

Figure 5: Geological Cross Sections at the Project



### **Item 6 (c) - MINERALISATION**

Gold mineralisation at Maligreen is generally associated with pyrite. Pyrite occurs mainly in association with argillic and quartz-sericite hydrothermal alteration and occasionally with propylitic and mylonitic style of hydrothermal alteration. Although the pyrite content increases towards the ore channel, gold and pyrite are not sympathetically related. Both stockwork and breccia pipe-type mineralisation have been recognised. The breccia type is very limited and consists of rock fragments cemented with silicates and ore minerals.

Pyrite generally occurs as fracture filling, or as vein, veinlets, and dissemination. Dissemination of pyrite with visible fractures and healed micro cracks implies that some of the mineralisation is a result of wall rock alteration by permeating fluids.

Based on the textural appearance, early clean pyrite and late “dirty” pyrite are the two dominant pyrite at Maligreen Project. The dirty pyrite is most likely “contaminated” by abundant magnetite due to the superimposed deep argillic alteration. However, the black colour could also be a result of the presence of molybdenite, arsenopyrite or sphalerite. Nevertheless, it is believed that the dirty pyrite is a result of late supergene enrichment due to the pervasive argillic alteration marked by the introduction of clay and magnetite (Mtetwa, 2007).

The relative proportion of dirty pyrite and clean pyrite varies significantly, but total pyrite content within the ore zones can reach 20-25%. Pyritized zones within the pyroclastic unit show clean pyrite as veins and veinlets which are always parallel to the bedding of the bedded tuff. Some of them are auriferous but generally do not show extreme grades. This could represent the formation of an early exhalative mineralisation (Mtetwa, 2007).

The possible mechanism for the Maligreen gold deposition is likely a fluid flow, aided and abetted by high level rhyolitic intrusions, and redistributed through permeable secondary shear zones due to late dextral duplex-like segmentation.

### **Item 6 (d) - GEOLOGICAL MODEL**

A structural model was defined to delineate separate structural domains and enable the separation of these zones for evaluation.

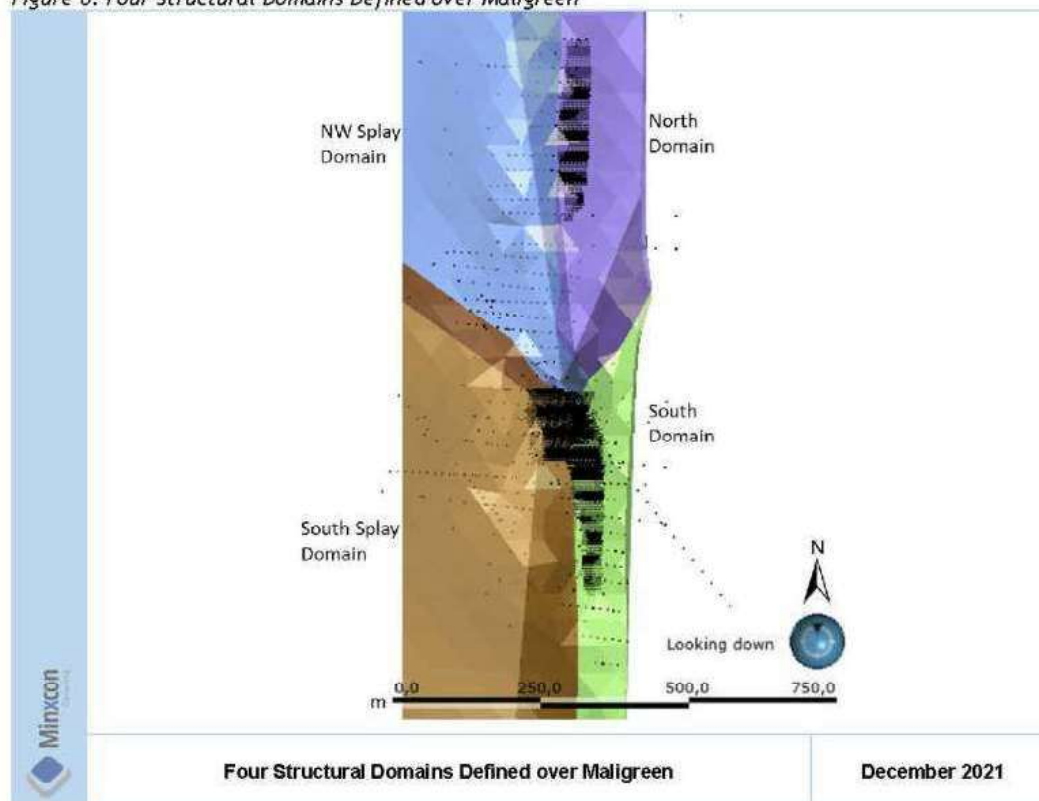
#### **I. STRUCTURAL BOUNDARY CONSTRUCTION**

The work done by Dirks (2001) considered primarily the southern area and southern pit, making use of mapping as well as stereonet to summarise the structure over Maligreen. Observation and trends seen in the data does seem to coincide well with the observation seen by Dirks (2001).

The major structures identified were digitised and utilised as a guide in the orientation of the orebody trends. In addition, major structures aligning with those observed by Dirks (2001) were utilised as structural domain boundaries enabling the division of the project area into four distinct domains that were characterised by the trend of mineralisation (Figure 6).



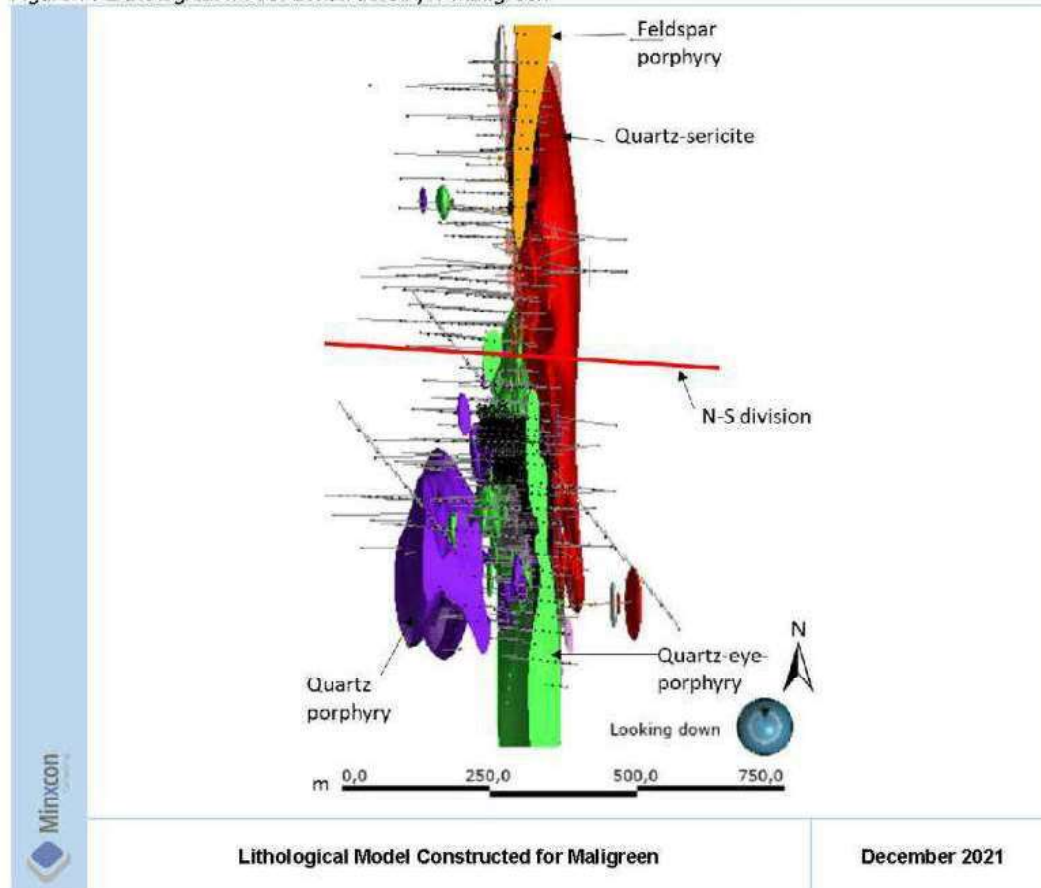
Figure 6: Four Structural Domains Defined over Maligreen



## II. LITHOLOGICAL MODEL

A basic lithological model was constructed in Leapfrog Geo to assess what lithologies may host mineralisation and the association of these lithologies within the various structural domains. Previous authors have described the porphyry occurring to the southwest of the deposit as the primary heat source to channel mineralising fluids, with a quartz-sericite occurring along a north-south orientated shear zone as a pathway for these fluids. The primary lithologies as recorded in drillhole logs were utilised to construct a geological model (Figure 7).

Figure 7: Lithological Model Constructed for Maligreen



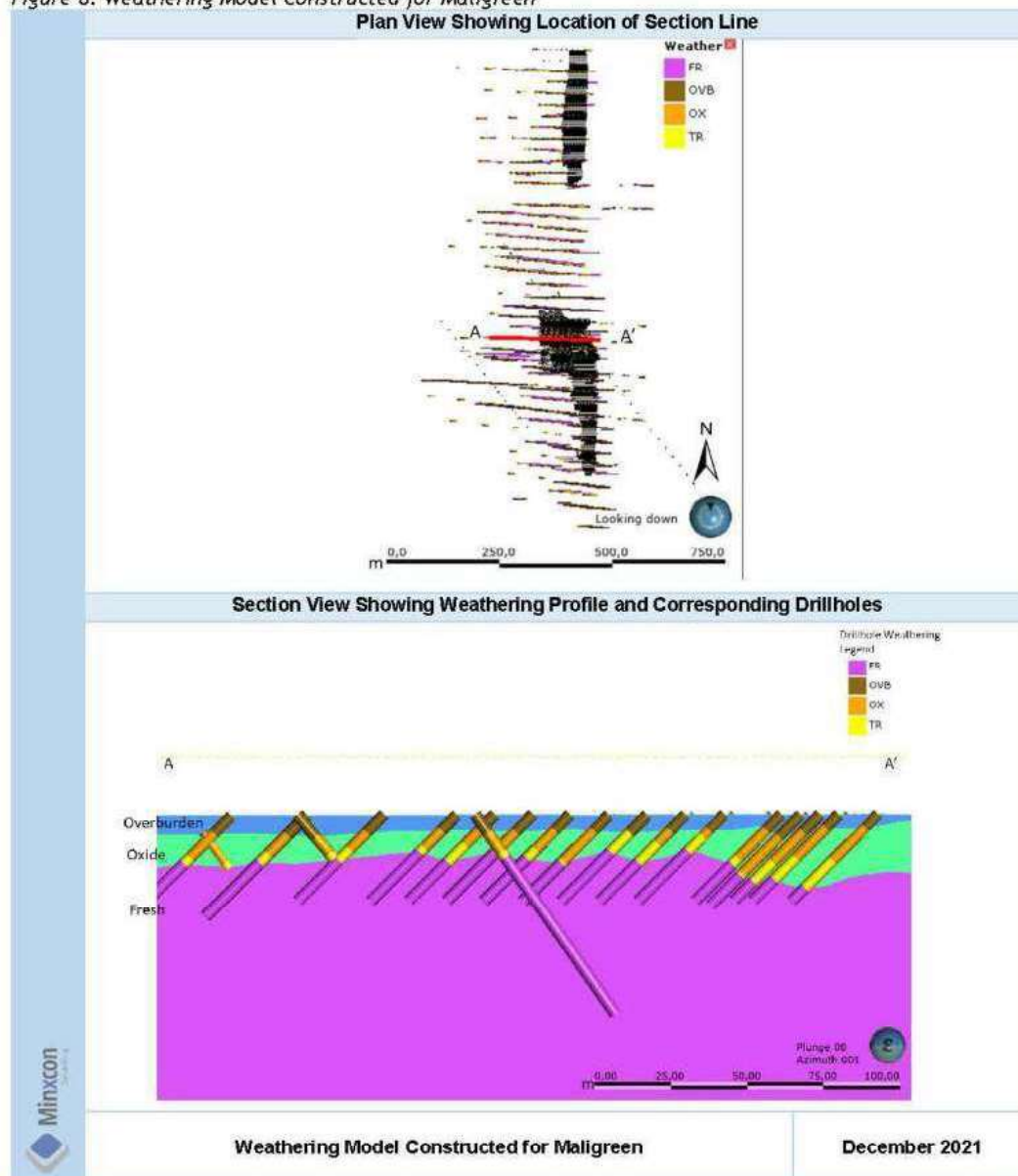
The Quartz-eye porphyry is the host of mineralisation in the south, and as the mineralisation thickens to the south, reduced mineralisation and grade is seen, this is also visual when modelled (Figure 7). To the north, the feldspar porphyry dykes are the main host to mineralisation. In the south, grade drops off as the mineralisation thickens. To the west, into the splay north and splay south domains, the primary host rocks are andesite, agglomerate, tuff, basalt and dolerite. For the north and south domains, mineralisation is also seen in multiple host rocks aside from the main porphyries.

### III. WEATHERING MODEL

As part of the modelling, the data available for the weathering degree of the rock was utilised to establish a weathering profile (Figure 8). The Kalahari sand, and top of sulphide zone can be established by available information. A transitional zone may be possible between the oxide and sulphide zones, however this is poorly defined and previous workers have combined the oxide and transitional data together. For Maligreen the oxide and transitional zones are combined. In addition, splitting up into oxide and transitional zones does decrease the samples available per domain for estimation, not allowing for the creation of variograms in some domains. The geological model generated for the weathering profile was utilised to populate the densities into the block model, as density measurements have been specified per weathering zone.



Figure 8: Weathering Model Constructed for Maligreen



#### IV. MINERALISATION HALO CONSTRUCTION

Due to mineralisation not being hosted by individual lithologies, grade halos were utilised to model the mineralisation observed at Maligreen. An Indicator Interpolant Numeric Function in Leapfrog Geo was utilised to delineate the mineralisation at Maligreen. As observed with the lithological model, the four structural domains can be characterised by distinct host lithologies (Figure 9), as well as distinct orientations of mineralisation. The constructed grade halos can be seen in Figure 9.

Various setups and orientations were tested during the generation of the grade halos to get the result to best reflect the data. The structural orientations were guided by the work by Dirks (2001) as well as the trends that were obtained directly from the data, allowing the delineation of a north trending north and south domain, as well as two northwest trending Splay domains (Figure 9). Sections through the Maligreen grade halos are shown in Figure 10.

Figure 9: Grade Halos per Domain (left) Compared to Lithological Model (Right) Constructed for Maligreen

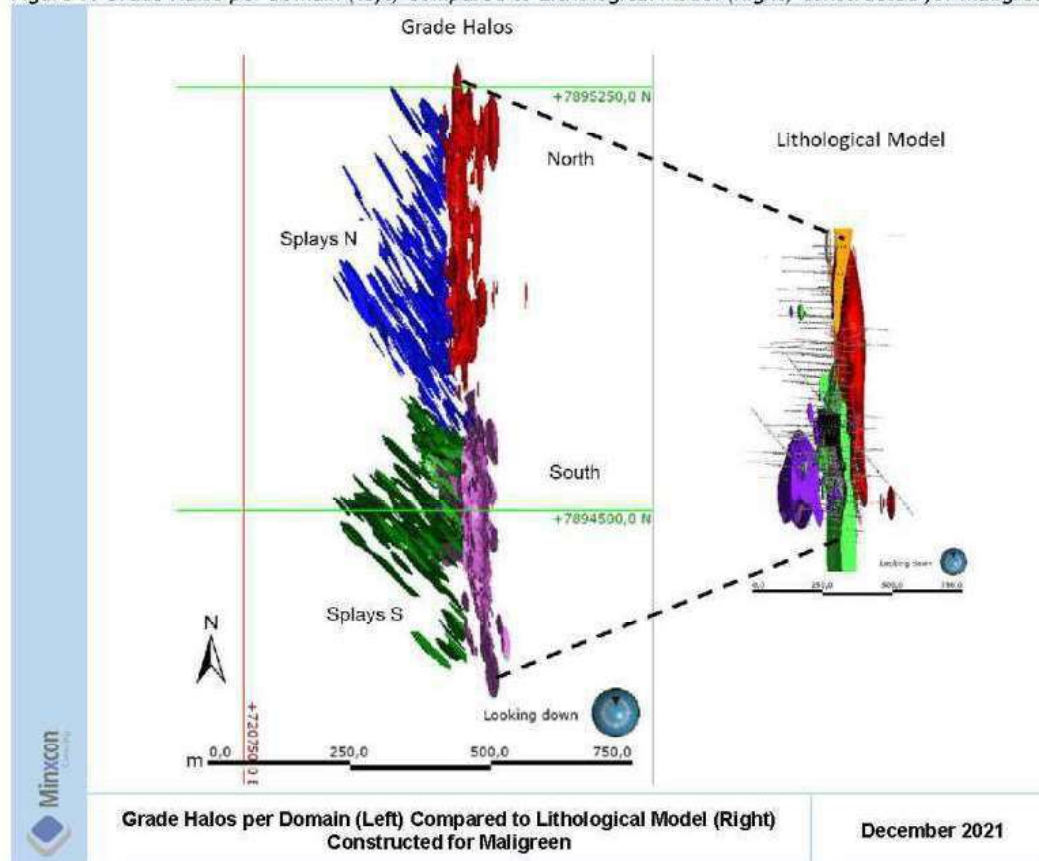
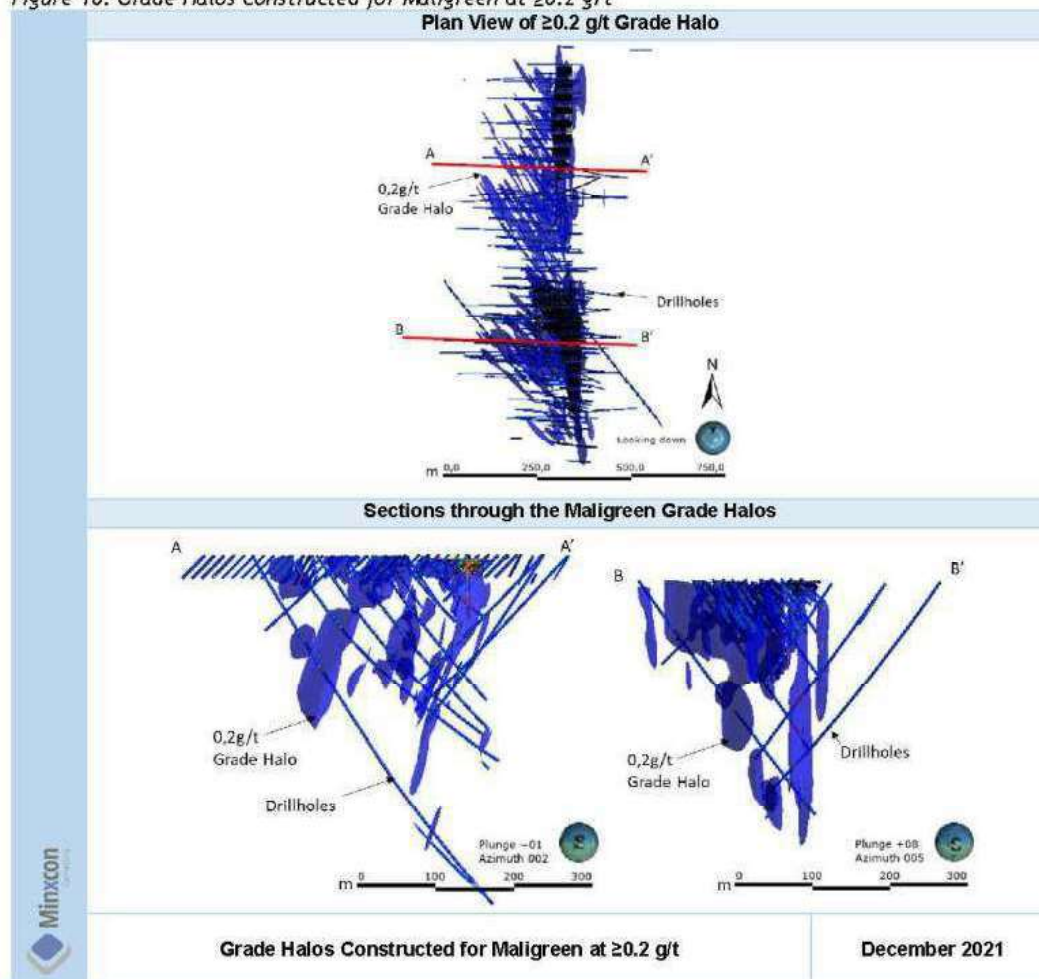


Figure 10: Grade Halos Constructed for Maligreen at  $\geq 0.2$  g/t



Previous versions of the geological model were available for comparison, during the construction of the grade halos, all other models were consulted to confirm trends and view change in interpretation. When viewing the previous versions, it was apparent that there were vast differences in interpretation between the different versions, particularly into the splay domains. The original 1998 model shows the closest correlation with the amount of mineralisation and grade that is seen by the 2021 grade halos, although it has been interpreted in 2021 that the splays are more continuous, in line with the directions seen in the work by Dirks (2004). In all images the 2021 geological model is shown semi-transparent for ease of comparison.



## ITEM 7 - EXPLORATION

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### Item 7 (a) - NON-DRILLING WORK

#### I. PROCEDURES AND PARAMETERS

##### Regional Surveys

Regional aeromagnetic and ground geophysics surveys were conducted prior to discovery of the target.

Geodass (Pty) Ltd of South Africa flew a helicopter-borne survey over the sand-covered areas at a line spacing of 150 m and a mean flight height of 80 m. The first derivative maps of the Canadian International Development Agency ("CIDA") and Geodass survey were linked together to enable regional interpretation. The geological data derived from the detailed aeromagnetic surveys became the basis for ground exploration.

Ground magnetics was utilised to identify aeromagnetic anomalies on the ground. The horizontal loop electromagnetic ("HLEM") and induced polarisation ("IP") methods were utilised on selected areas in search of massive and disseminated sulphides. During this programme, several drilling targets were generated.

##### Surveys Leading to Discovery

More localised ground magnetic, electromagnetic and induced polarisation ("IP") surveys were undertaken the led to the discovery of the Maligreen target.

Total field magnetic readings were recorded on a 50 m x 12.5 m grid to map out geology and structures. This was also used to locate aeromagnetic anomalies on the ground (Reunion, 1998).

The horizontal Loop Electromagnetic survey was carried out at a line spacing of 100 m and readings at 25 m interval. Two frequencies of 444 Hz and 1,777 Hz readings were recorded with an Apex MaxMin II instrument at 150 m coil separation. Numerous weak conductors trending north and northeast were identified as shear zones.

A 7.5 kW IPC7 Scintrex Transmitter and an IPR10A receiver were utilised to survey lines at 100 m intervals for the IP survey. A pole-dipole array was utilised at a dipole spacing of 50 m, n = 1 to 4. A long formational, high apparent chargeability zone was defined trending east - west, south of Maligreen gold soil anomalies. The anomaly splays onto the south zone of the Maligreen deposit.

##### Surveys Post-Discovery

Once the Maligreen target was identified, targeted ground magnetic, electromagnetic and surveys were undertaken.

Total ground magnetic field readings were recorded over the entire 8 km long grid, at 5 m intervals on lines 25 m apart over lines 0 to 1400N and at 5 m line intervals elsewhere. A base station method was used to correct for diurnal variation. The most intense magnetic anomalies in the north zone are due to magnetite rich basalts. Lying just west of the south zone (L275N) is an east-west orientated weaker magnetic anomaly due to a porphyritic andesite (Quartz Porphyry), (Mtetwa, 2007).

Geophysics GPR (Pvt) Ltd undertook the electromagnetic HLEM surveys and coverage is over 2.4 km of the base line (line 0 to 2400N) and extends 400 m west and 300 m east of the base line. A Max-Min II HLEM unit

was used at a 150 m coil separation and readings were recorded at frequencies of 444 Hz and 1777 Hz at 12.5 m station intervals.

IP surveys were carried out at a line spacing of 50 m over the Maligreen deposit and 100 m over the rest of the grid. A 25 m pole-dipole array was used for  $n=1$  to 6. The IP response is generally weak to moderate and follows the known mineralisation as well as the main zone. Resistivity highs coincide with the quartz-sericite zone and the quartz-eye-porphyrries intersected in the drillholes.

## **II. SAMPLING METHODS AND SAMPLE QUALITY**

Exposed areas were explored by systematic -20 mesh bottle roll soil gold geochemistry on a grid of 400 m x 50 m. Additional zinc and copper assays were carried out on selected areas.

### **Regional Spiral Concentrate**

A large 40 kg to 50 kg soil samples which were collected on a grid of 400 m x 50 m g were panned and spiral concentrated. Fire assay followed by atomic absorption spectrometric reading was carried out on the residual heavy minerals to enhance gold anomalies in sand cover areas.

### **Soil Geochemistry - Leading to Discovery**

A bottle roll gold in soil sampling survey was carried out on a grid of 100 m x 25 m over the spiral concentrate anomaly. Three distinct anomalies emerged, representing the Maligreen deposit, Mkhomo (east of Maligreen deposit) and Khozi targets (southeast of Maligreen deposit). Khozi is the most intense anomaly, followed by Mkhomo, then Maligreen. Maligreen deposit is the weakest due to thicker Kalahari sand cover.

### **Pitting - Leading to Discovery**

Pitting was carried out to verify selected geophysics and gold in soil anomalies. The best assay was 2.64 g/t Au in altered and gossanous quartz-eye-porphyry at the bottom of a pit. This is located about 150 m south and on strike with the Maligreen main zone.

### **Trenching - Post Discovery**

Four trenches were dug using a mechanised digger. These trenches were dug to establish the orientation of the mineralisation and investigate the underlying geology. Gossanous zones were exposed in these trenches; however, trenching was abandoned due to sandy walls starting to collapse.

### **Pitting - Post Discovery**

Initially, limited pitting was carried out to investigate geology and mineralisation and later for geochemical research and bulk oxide sampling. The pit was dug to a depth of 14.5 m deep in the south and 8 m deep in the north to investigate, collect and test the oxide orebodies.

### **High Sensitivity Soil Geochemistry - Post Discovery**

A "high sensitivity" soil sampling technique was developed by Reunion specifically to test for gold mineralisation beneath Karoo/Kalahari sediments. The technique involves deflation layer sampling and sieving to -53 micron, followed by gold extraction by aqua regia digestion. The gold is concentrated by Di-Isobutyl-Ketone ("DIBK") and analysed by graphite furnace to ppb level. Sampling was done at 100 m by 25 m centres. The soil anomaly closely defines the Maligreen main gold mineralisation, peaking at 1,300 ppb.



The anomalous “high sensitivity” gold geochemistry trend stretches for 3.3 km, with several parallels and cross cutting trends. The gold anomaly amplitude fades to the north due to increasing overburden thickness and probable leaching of gold in the weathered horizon. Trial profile soil sampling at 10 m interval, to resolve individual gold zones within the broader grid anomalies, has limited success in optimising the drilling (Reunion, 1998).

### Pit Floor Sampling

Below is an extract from Pit Floor Sampling Procedure followed during Pit Sampling:-

- A base line is established in the area by the survey department. The line is orientated northwest - southeast direction, which is parallel to the strike of the orebodies. The rip lines are perpendicular to the base line and are fixed on the Universal Transverse Mercator (“UTM”) coordinate system.
- The rip lines are spaced 5 m apart across the strike of the orebody.
- Sample spacing along each rip line is 1 m. Each sample is a 1 m long channel.
- The rip lines are now accurately marked on the floor of the pit with paint or lime.
- The line is cleaned of all rubble and rubbish leaving uncontaminated in-situ weathered bedrock in a long zone about 30 to 40 centimetres wide.
- The samples are marked accurately at 1 metre intervals in preparation for channel sampling.
- New sample bags are appropriately labelled and placed on the corresponding channel ready to receive the sample. A sample ticket is also placed in the bag in case the markings are rubbed off the outside of the bag.
- The actual channel sampling is carried out using a hammer, chisel and catch pan. A channel cut 5 cm wide and 2 cm to 3 cm deep will be representative and generate about 2 kg to 3 kg of sample. All sampling equipment is cleaned between each sample.
- The channels in the oxide zones are no longer dug by an excavator. All rip line sampling is carried as above.

### III. SAMPLE DATA

Data pertaining to soil geochemistry was not available at the time of reporting.

### IV. RESULTS AND INTERPRETATION OF EXPLORATION INFORMATION

#### Geochemical Research - Post Discovery

After a successful application of the “high sensitivity” soil geochemistry, Dr Charles Okujeni (then of the University of Zimbabwe, Geology Department) was contracted to research the nature and causes of anomalous concentrations of gold in soil anomalies over the Karoo and Kalahari sediments covering Maligreen and surrounding areas. The area of study was about 11 km x 10 km and covers Maligreen deposit. Soil and pit profile, percussion drill chip and diamond drill core were logged and analysed, thereafter it was concluded that Anomalous gold in the Kalahari sands was introduced by the laterisation of the Karoo sandstone enriched with gold in the ferruginised zone followed by degradation and homogenisation of this old lateritic surface with the Kalahari sand deposited later. The gold is associated with Fe-Mn oxides and hydroxides and secondly, the gold is enriched in the “stone line” near surface and can be sampled by drilling shallow holes into it. The -32-micron fraction (compared -63 micron) enhances gold anomalies due to the removal of coarse Aeolian quartz (Mtetwa, 2007).



## Item 7 (b) - DRILLING

### I. TYPE AND EXTENT OF DRILLING

Between 1995 and 1998, three types of drilling were undertaken on behalf of Reunion at Maligreen, namely percussion, RC and diamond drilling.

Percussion drilling was conducted in two phases. In August 1995, the initial percussion drilling phase was undertaken by Drillwell (Pvt) Ltd. A total of 369 drillholes totalling 15,385 m were drilled during the initial phase. These drillholes were drilled at an inclination of  $-45^{\circ}$  to a depth of between 40 m and 50 m.

An additional 231 percussion drillholes totalling 17,299 m were drilled during phase 2 percussion drilling. Drilling was undertaken by Resource Drilling (Pty) Ltd. The percussion drillholes were drilled with a 6.5-inch hammer to a depth of approximately 24 m and then reduced to 4.5-inch hammer thereafter till the end of drillhole. During this phase, R.A. Longstaff (Pty) Ltd drilled seven RC drillholes totalling 815 m. The RC drillholes were drilled to a depth between 110 m and 175 m towards the  $104.5^{\circ}$  magnetic bearing. An attempt to drill RC drillholes to a depth of 200 m was unsuccessful and three RC drillholes were utilised to pre-collar diamond drillholes, but this was abandoned due to expensive delays in setting up a diamond drill rig over the RC drillhole. Details pertaining to the diameter of the RC drillholes was not available at the time of reporting. A total a total 607 percussion and RC drillholes totalling 33,499 m were drilled between 1 August 1995 and 21 November 1997.

Diamond drilling at Maligreen Project were conducted in three phases. The first diamond drilling phase was drilled by R.A. Longstaff (Pty) Ltd. A total of 23 drillholes totalling 3,851.83 m were drilled during the first phase of diamond drilling. R.A. Longstaff (Pty) Ltd drilled conventional TBW core size (42 mm), using Sullivan 22HW drill rig. All drillholes were drilled towards the west at  $-45^{\circ}$  dip.

During phase 2 diamond drilling, a total of 57 diamond drillholes totalling 18,076.92 m and two deflections totalling 119.60 m were drilled using BQ core size diameter (36.4 mm). Additional three diamond drillholes totalling 237.06 m were drilled during this phase and this drillholes were collared with HQ core size (63.5 mm) and the NQ core size (47.6 mm) to the end of drillhole.

A total of 18 diamond drillholes totalling 5,119.52 m and one deflection totalling 48.62 m were drilled using BQ core size diameter during phase 3 diamond drilling. Additional six diamond drillholes totalling 410.31 m were drilled and these drillholes were collared with HQ core size and then NQ core size to the end of drillhole. Six more drillholes totalling 1,230 m were drilled and these drillholes were drilled with NQ3 (45 mm) and NQ core size diameter (five drillholes). A grand total of 113 diamond drillholes totalling 28,925.64 m and three deflections totalling 168.22 m were drilled between 1 October 1995 and 10 February 1998. Phase 2 and phase 3 diamond drillholes were drilled by Geosearch (Pty) Ltd ("Geosearch").

Between 21 and 30 March 2001, Drillwell Partnership was commissioned by Pan African to undertake RC drilling programme at Maligreen Project. During this period, a total of 19 RC drillholes totalling 558 m were drilled. The depth of the drillholes varied from 20 m to 36 m. All drillholes were angled from  $-45^{\circ}$  to  $-90^{\circ}$  and drilled on an azimuth of either  $90^{\circ}$  or  $270^{\circ}$ .

The second RC drilling phase commenced on the 22 May 2001 and was completed on the 30 May 2001. During this period, a total of 16 RC drillholes totalling 480 m, averaging 30 m each were drilled. During this phase, all drillholes were drilled by Drillwell Partnership. Details pertaining to the RC diameter was not available at the time of reporting. Table 1 below presents a summary table of all the drilling campaigns at Maligreen Project.

Table 1: Summary of Drilling Campaigns at Maligreen Project

Type	Phase	Year	Contractor	Core Size	No. of Drillholes	Metres Drilled m	No. of Deflections	Metres Drilled m
Percussion	1	1995 - 1997	Drill Well	-	369	15,385.00	-	-
Percussion	2	1995 - 1997	Source	-	231	17,299.00	-	-
RC	2	1995 - 1997	RA Longstaff	-	7	815.00	-	-
Diamond	1	1995 - 1998	RA Longstaff	TBW	23	3,851.83	-	-
Diamond	2	1995 - 1998	Geosearch	BQ	57	18,076.92	2	119.60
Diamond	2	1995 - 1998	Geosearch	HQ, NQ	3	237.06	-	-
Diamond	3	1995 - 1998	Geosearch	RQ	18	5,119.52	1	48.62
Diamond	3	1995 - 1998	Geosearch	HQ, NQ	6	410.31	-	-
Diamond	3	1995 - 1998	Geosearch	NQ3, NQ	6	1,230.00	-	-
RC	1	2001	Drillwell Partnership	-	19	558.00	-	-
RC	2	2001	Drillwell Partnership	-	16	480.00	-	-
<b>Total Percussion Drillholes</b>					<b>600</b>	<b>32,684.00</b>	-	-
<b>Total RC Drillholes</b>					<b>42</b>	<b>1,853.00</b>	-	-
<b>Total Diamond Drillholes</b>					<b>113</b>	<b>28,925.64</b>	-	-
<b>Total Drillholes</b>					<b>755</b>	<b>63,462.64</b>	<b>3</b>	<b>168.22</b>

Between 1995 and 1998 drilling, drillhole collars were surveyed by qualified contractor, Advanced Positioning Systems using a differential global positioning system. The accuracy of the differential GPS is within 5 cm. RC drillholes drilled in 2001 were surveyed, however details pertaining to the collar survey instrument was not available at the time of reporting.

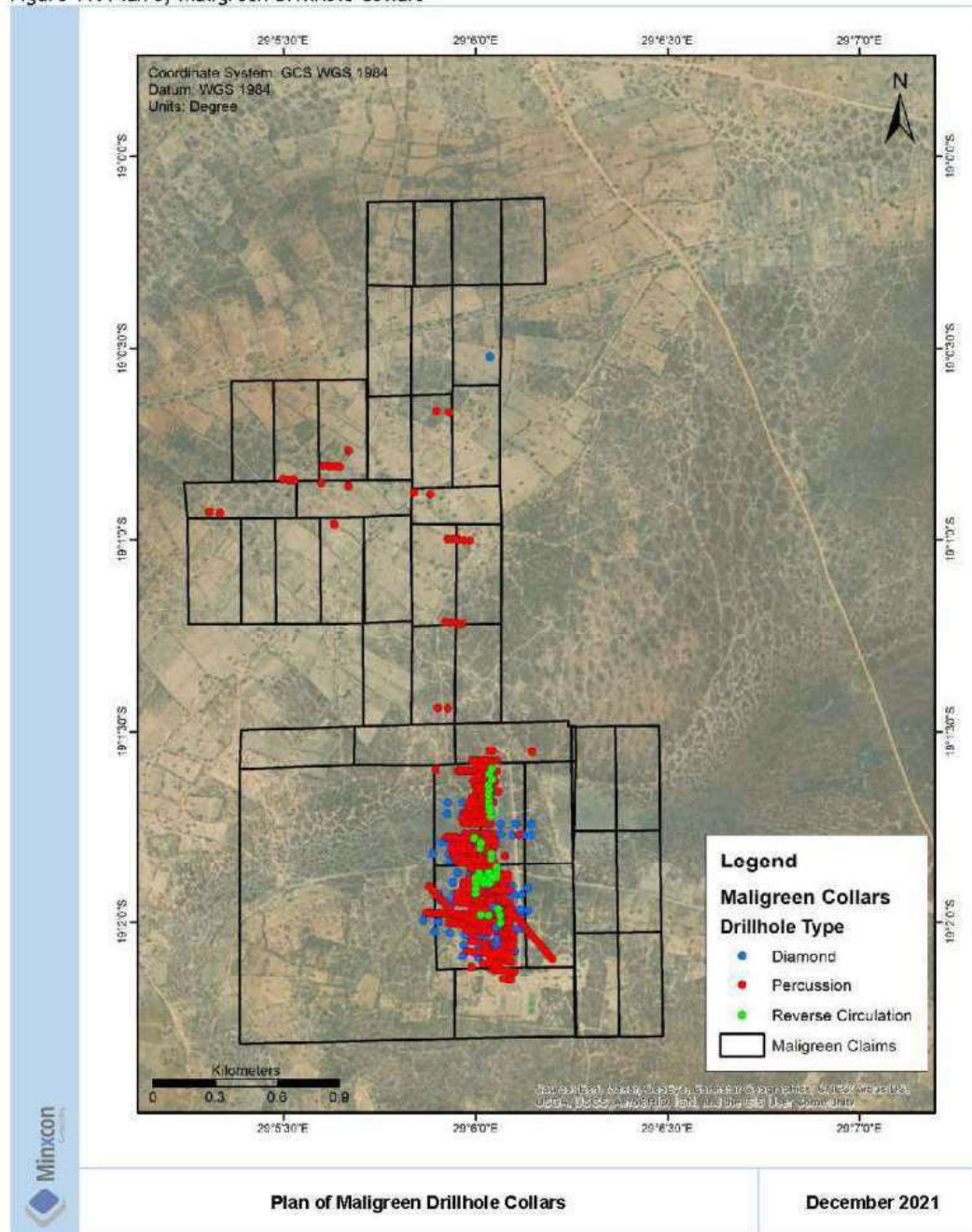
R.A. Longstaff (Pty) Ltd surveyed diamond drillhole MG1 to MG25 (excluding MG23) on completion and at 50 m interval using acid bottle. Geosearch also downhole surveyed their drillhole on completion at 50 m interval using a Sperry-Sun instrument. However, due to severe deflections in some drillholes, it was decided to survey the drillholes as they were being drilled.

BPB Wireline Services Ltd was commissioned to undertake downhole survey on selected drillholes. BPB Wireline Services Ltd utilised a "verticality" in conjunction with a "dipmeter" probe to survey the trace of drillholes. The verticality measures the orientation of the drillholes and the dipmeter measures the orientation of the plane (foliation and shears) within the hole. A total of 27 percussion drillholes within the main mineralised zones were selected for survey. All RC drillholes were surveyed as they were long and deflected significantly. Most of the percussion drillholes were drilled to an average depth of 40 m and were quite straight, so only few drillholes were selected for survey. All diamond drillholes were resurveyed by BPB Wireline Services Ltd, except for those that were found to be blocked. These surveys were more accurate since the readings were taken at 10 cm interval (Reunion, 1998).

A plan view of the drilling distribution by drilling type is provided in Figure 11.



Figure 11: Plan of Maligreen Drillhole Collars



## II. FACTORS INFLUENCING THE ACCURACY OF RESULTS

Owing to unavailability of the drillhole recovery data, the QP could not assess the drillhole recoveries. Beside drillhole recoveries and quality assurance and quality control (“QAQC”) data, the QP is not aware of



any drilling or sampling factors that could materially impact the accuracy and reliability of the exploration results with respect to percussion, RC and diamond drilling. The QP however downgraded the Mineral Resource classification to Inferred due to the lack of QAQC data and the historical nature of the data. Confirmatory drilling is recommended to improve the confidence in the drilling data.

### **III. EXPLORATION PROPERTIES - DRILL HOLE DETAILS**

This section is not applicable to the Maligreen Project as it is an advanced exploration property with extensive drilling data within the limits of the project area (755 drillholes) to declare the Mineral Resource estimation. Table 1 summaries the number of percussion, RC and diamond drillholes that were drilled within the limits of the Maligreen Project. Table 1 also presents the number and type of the drillholes drilled per company as well as the year in which the respective drilling metres were drilled.

#### **Item 7 (c) - HYDROGEOLOGY**

No hydrogeological investigations have been undertaken for the subject property.

#### **Item 7 (d) - GEOTECHNICAL**

No geotechnical investigations have been undertaken for the subject property.

### **ITEM 8 - SAMPLE PREPARATION, ANALYSES AND SECURITY**

The sampling information has been sourced from the Reunion Mining report (1998) and pertains to the Reunion Mining period.

#### **Item 8 (a) SAMPLE HANDLING PRIOR TO DISPATCH**

##### **I. 1995 - 1998 PERCUSSION, RC AND DIAMOND DRILLING**

RC samples were collected at 1 m interval through a cyclone into a 280 mm by 480 mm, 100-micron thick polyweave bags. The chip samples from each drilled 1 m interval were thoroughly mixed by hand. A riffle splitter or cone and quartering was used to split the samples into three 2 kg, and another portion of the mixed samples was washed, and handful placed in a compartmentalised wooden box on a metre basis for logging purpose. On the completion of the hole, one of the three 2 kg sample collected from each metre drilled was dispatched to a laboratory for analysis and the rest was stored for future reference. A geologist logged the washed chips for overburden thickness, depth of weathering, alteration, lithology, and mineralisation. The chips were stored in their compartmentalised wooden boxes for future reference. The project geologist would then re-examine the chips to verify the logging and to digitise the geology for the Surpac database.

During diamond drilling, drill core was logged as it was drilled. Diamond drill core logging included overburden thickness, depth of weathering, lithology, lineation, contacts, degree of shearing, alteration, and mineralisation. Geotechnical logging was also carried out on selected drillholes. Geotechnical logging included RQD, fracture analysis, matrix type, weathering, hardness, joint fracture condition, in-filling type, and joint wall alteration. Mineralised or altered drill core was cut in half using a diamond saw. During the initial diamond drilling phase, sampling intervals were up to 1 m and reflected the style of mineralisation as well as the lithological boundaries. During the second phase, sample intervals were standardised to 1 m interval without crossing lithological boundaries. The samples were placed in a sample plastic bag with a unique sample number for each sample and the dispatched to the laboratory for analysis. Field duplicates were taken every sixth sample by quartering the sample. On completion of the drillhole, the project

geologist would then re-examine the core to check the geological logging and to capture the geology in the Surpac database.

## II. 2001 RC DRILLING PROGRAMME

Samples were collected every 1 m from a cyclone down the drillhole. At the end of each metre, the drillhole was quickly blown out before the next sample was drilled, this was done to minimise sample contamination from one sample to the other. The samples were collected in 50 kg poly-sacs through a cyclone. Approximately 15 kg to 30 kg of sample was achieved from each metre drilled depending on the dryness and rock type encountered. More sample weight was recovered in fresh sulphide ore. Each one metre sample was riffle split in the field to approximately a quarter to an eighth of the original volume of the sample. Sample was then packed into a plastic bag and then sent to laboratory. A portion of the sample was washed in water using a flour strainer and examined with a geological hand lens (10x loupe). The RC chip logging included rock type, alteration, structure, and mineralisation.

### Item 8 (b) - SAMPLE PREPARATION AND ANALYSIS PROCEDURES

Drilling at Maligreen Project was conducted in four phases or campaigns and during the first three campaigns (1995 - 1998 Percussion, RC and diamond Drilling by Reunion), samples were analysed for gold by fire assay with atomic absorption spectrometer at the primary SGS Zimlab (Pty) Ltd ("SGS"). SGS's accreditation status is unknown. SGS is located at Unit 4 Steven Drive, Msasa, Harare, Zimbabwe. Mintek Analytical Services Division ("Mintek") and Gencor Process Research (then trading as Billiton Process Research) laboratories in Johannesburg, South Africa were utilised to check the SGS assay results. Gencor Process Research's accreditation status is unknown. Mintek is located at 200 Malibongwe Drive, Randburg, South Africa. Mintek is South African National Accreditation System ("SANAS") accredited testing laboratory (facility accreditation number: T0042), and the laboratory operates a quality system according to the ISO/IEC 17025:2017.

Sample preparation at SGS laboratory was as follows:-

- The entire sample received was dried and crushed in a jaw crusher to 6 mm.
- 500 g of the above crush was split out and pulverised to -75 µm in a C1000 labtechnics homogenising mill.
- 30 g of pulverised material was mixed with appropriate flux containing litharge, soda ash, borax and a reducing agent (usually flour). Silver is added as a co-collector.
- The fluxed sample was fused at 1,050° C for approximately 45 minutes, until the melt was still, and then poured into conical steel moulds.
- The elemental lead containing the precious metal cools at the bottom of the mould, while other constituents form a boro-silicate glass or slag, which may be easily removed after cooling.
- The lead "button" is cleaned of remains of slag and placed in a cupellation muffle at 950° C where lead is absorbed into a cupel, leaving a silver/gold prill or doré.
- At SGS Zimlab, this prill is digested with Aqua Regia (3:1 HCL/HNO3) and gold in the solution determined by atomic absorption spectrometry (Reunion, 1998).

The +6 mm coarse crushed and pulverised diamond drill core samples from significant intersection returned from SGS as well as additional quartered core from the remaining half core were dispatched to Glencore Process Research. A total of 315 core samples were dispatched to Glencore Process Research for metallurgical test works, however prior to the metallurgical test work, all samples were fire assayed for gold.

Sample preparation at Glencore Process Research was as follows:-





- On arrival to the laboratory, samples were emptied into metal pans and dried overnight at 105°C (at 50°C if sulphur analyses were required)
- Samples were milled in LM-2 mills (made by Labtechnics, Australia) to nominal -75-micron fraction.
- Sample was spread, matted and a 50 g dip sample removed for fire assay with a gravimetric finish. 10% duplicates as well as standard material (as checks) were incorporated.
- The sample was mixed in a handheld mixer, placed in a No. 4 crucible with 205 g flux, adjusted for matrix, and 0.2 mg silver added as a carrier and fused for 40 minutes at a temperature of 1,050°C.
- The fluid fusion was poured into an iron mould, cooled, inverted and the lead button (approximately 50 g - 60 g) was removed and cleaned by hammering. The lead button was placed in a pre-armed cupel (made from magnesite) in a muffle set at 960°C - 980°C.
- After cupellation, the prill remaining was flattened, and the silver removed by HNO<sub>3</sub> leaching in a porcelain crucible.
- After decantation of the leach solution, the remainder of the prill consisting of gold only was dried, annealed and weighed
- The mass recovered was reconciled with the original mass and reported as g/t Au (Reunion, 1998).

During the 2001 RC drilling campaign, samples were collected and dispatched to non-accredited Pan African Laboratory located in Kwekwe. At Pan African Laboratory, the samples are dried before being pulverised in an old disc pulveriser. To obtain a maximum benefit of the digestion, pulverised sample should be 90% passing -75µm, but a sieve analysis of selected samples showed that material from Kwekwe sample preparation seldom reach 90% and could be as bad as 34% passing -75µm. A 20 g subsample of pulverised sample was the split off and dissolved in an aqua regia followed by atomic absorption spectrophotometry ("AAS") aspiration. A total of 122 duplicate samples were assayed at non-accredited Antech Laboratory (during the time of drilling) over the two drilling programmes (Mawson, 2001). Antech Laboratory is located at 6 KM PEG, Mvuma Road, Kwekwe, Zimbabwe. Antech Laboratory is a Southern African Development Community Cooperation in Accreditation ("SADCA") accredited testing laboratory (facility accreditation number TEST-5 0030), and the laboratory operates a quality system according to the ISO/IEC 17025:2017. Note that Antech laboratory's original date of accreditation is 1 December 2017.

## Item 8 (c) - QUALITY ASSURANCE AND QUALITY CONTROL

### I. 1995 - 1998 QAQC PROGRAMME

Limited data is available pertaining to the QAQC undertaken during 1995-1998 and 2001 drilling programmes.

A total of 47,790 percussion, RC and diamond drillhole samples including checks, controls and repeats were assayed. The QAQC protocol which was implemented during 1995 - 1998 drilling programme was that, routinely, one in 25 percussion samples and one in every six diamond drill core samples were duplicate samples. The core duplicates were produced by means of quartering the drill core. The duplicate samples were given a separate ticket number and submitted for assay to SGS. The duplicate repeats are known as RMZ1. RMZ2 were the laboratory repeats on the RMZ1 samples.

A total of 2,382 chip and core duplicate samples were analysed for gold at SGS laboratory. The results of the initial duplicate repeats show poor correlation with correlation coefficient ("R") of 0.7301. The average original gold assay was 10% higher than the average repeat gold assay. The results of the second duplicate repeats (475 samples) showed average correlation with correlation coefficient of 0.7763. The average original gold assay was 8% higher than the average second repeat gold assay.

The following are additional applicable procedures and results of the 1995-1998 QAQC programme:-





- Four control/standard samples were locally prepared from compositing of percussion samples from various mineralised drillhole, usually several hundred kilograms. The whole sample was mixed thoroughly in drums, placed on a concrete surface, and then mixed again by hand. 20, approximately 2 kg, representative samples were collected and dispatched for fire assay with AA finish, to determine the average grade of the control sample. Once the assay value of the control sample was known, it was then given a number and could then be used. Five control samples (CMG1 - CMG4) and fifth one known as "control" were utilised during the sampling. The "control" sample was a composite of CMG1 to CMG4 controls (Reunion, 1998).
- The control samples were place one in every 35 percussion samples and no control samples were inserted in the diamond core samples. The control samples were bagged and ticketed and submitted to SGS Zimlab along with the percussion drill sample.
- The standard value and the standard deviation of the control samples was not available at the time of reporting.
- A total of 93 CMG1 standard samples were analysed for gold at SGS laboratory. The results of the initial standard repeats show average correlation with correlation coefficient of 0.7101. The average original CMG1 gold assay was 2% higher than the average initial CMG1 repeat gold assay.
- There was no correlation between the original CMG1 and second CMG1 repeat assay ( $R = 0.1166$ ). The average original CMG1 gold assay was 15% higher than the average second CMG1 repeat gold assay.
- A total of 33 CMG2 standard samples were analysed for gold at SGS laboratory. The results of the initial standard repeats show average correlation with correlation coefficient of 0.8391. The average original CMG2 gold assay was 22% lower than the average initial CMG2 repeat gold assay.
- The average original CMG2 gold assay was 82% lower than the average second CMG2 repeat gold assay.
- A total of 16 CMG3 standard samples were analysed for gold at SGS laboratory. The results of the initial standard repeats show average correlation with correlation coefficient of 0.8600. The average original CMG3 gold assay was 7% higher than the average initial CMG3 repeat gold assay.
- The results of the initial CMG4 standard repeats shows average correlation with correlation coefficient of 0.8081. The average original CMG4 gold assay was 2% lower than the average initial CMG4 repeat gold assay.
- There was no correlation between the original CMG4 and second CMG4 repeat assay ( $R = 0.3831$ ). The average original CMG4 gold assay was 4% lower than the average second CMG4 repeat gold assay.
- The results of the initial control standard repeat show good correlation with  $R$  of 0.9506. The average original control gold assay was 9% higher than the average initial control repeat gold assay. There was no correlation between the original control and second control repeat assay ( $R = 0.4621$ ). The average original control gold assay was 24% higher than the average second control repeat gold assay.
- Laboratory repeats were done at SGS when the laboratory was not satisfied with an assay value, especially anomalous assay value  $> 0.5$  g/t two assay repeats were done to obtain a satisfactory assay result.
- The results of the initial sample repeats show reasonable correlation with  $R$  of 0.9082. The average original gold assay was 3% higher than the average initial sample repeat gold assay. A total of 5,877 samples were repeated.
- A total of 1,247 samples were re-assayed for the second time. The results of the second sample repeat show average correlation with correlation coefficient of 0.8258. The average original sample gold assay was 11% higher than the average second sample repeat gold assay.

- A total of 38 significant gold intersections were submitted to Mintek for check assay. Of these 38 samples, five samples were RC chips, and 38 samples were diamond drill core samples. However, data pertaining to the umpire samples submitted to Mintek were not available at the time of reporting, hence the QP could not generate the umpire QAQC graph for Mintek.
- The +6 mm coarse crushed and pulverised diamond drill core samples from significant intersection returned from SGS as well as additional quartered core from the remaining half core were dispatched to Glencore Process Research. A total of 315 core samples were dispatched to Glencore Process Research for metallurgical test works, however prior to the metallurgical test works, all samples were fire assayed for gold. The umpire samples presented average correlation with correlation R of 0.7972. The average gold assay grade at SGS laboratory was 6% lower than the average gold grade at Glencore Process Research.

## II. 2001 DRILLING

No blanks nor standards were submitted for assay during the 2001 drilling programme. During this phase, the QAQC procedure was differed from the 1995-1998 QAQC procedure: the first assayed sample was reported and then the duplicate was requested from the pulp split. A total of 122 duplicate samples were assayed over the two drilling programmes.

High grade oxide and sulphide RC chip samples were selected for umpire samples and dispatched to Antech laboratory for gold analysis by fire assay. A total of 52 high grade pulp samples were submitted for umpire samples at the Antech Laboratory. The umpire samples presented a good correlation with R of 0.9336. The average gold assay grade at Kwekwe laboratory was 8% lower than the average gold grade at Antech laboratory.

### Item 8 (d) - ADEQUACY OF SAMPLE PREPARATION

This section sets out the opinion of the QP regarding the adequacy of sample preparation, security, and analytical procedures. The repeat QAQC graphs shows that there generally was poor correlation between the original assays and the repeat assay, this is assumed to have been due to sampling preparation procedure and the use of different analytical methods at the primary laboratory and umpire laboratory. During 2001 drilling, aqua-regia was utilised at the primary Kwekwe laboratory and fire assay with AAS finish was utilised at the Antech laboratory.

The limited QAQC data available has highlighted shortcomings in the QAQC procedure and concerns about the accuracy of the analysis. Generally, the original assays returned higher grades than the umpire samples (approximately 10% higher). The QAQC concerns contribute to the Mineral Resource only declared as an Inferred category. A confirmatory drilling programme is necessary to improve the confidence of the historical drilling assay results to improve the Mineral Resource classification to either an Indicated or Measured Mineral Resource.

It is further recommended to re-assay the historical core that is available in the core yard after it has been catalogued and photographed and possibly relogged. This would also assist in improving the confidence in the historical database.

## ITEM 9 - DATA VERIFICATION

### Item 9 (a) - DATA VERIFICATION PROCEDURES

The various data types were compared to each other to determine if the datatypes were comparable and could be used for geological modelling or resource estimation. Percentile-percentile and quantile-quantile

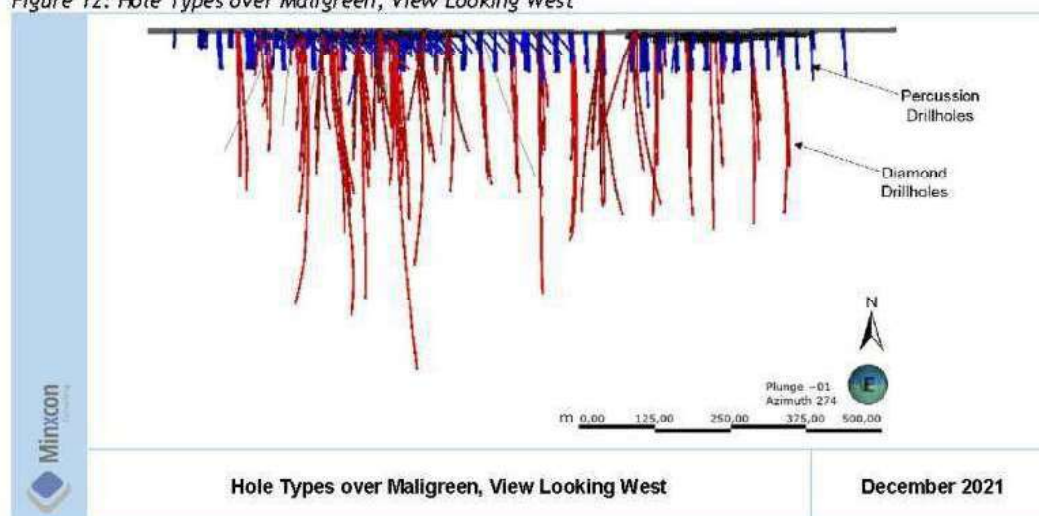


plots were generated to compare the datasets. Utilising data from multiple data sources could result in issues such as sample support, differences in sampling and analytical procedures and varying quality of sample and analytical procedures, all which could introduce conditional bias to the estimate. The PP and QQ plots will be able to show if these data sources display similar data distributions. Due to the minor RC component in the database, only percussion and diamond drillholes were compared. The plots show that the percussion and diamond drillholes are comparable, with slightly higher grades seen in the percussion holes. Percussion and diamond drillholes were utilised for geological modelling and Mineral Resource estimation. A visual inspection of the data bases and holes of both sources plotting within the same areas does also reveal that grades of the two data types are comparable.

It is also noted that the percussion holes are shallow holes (<80 m on average), while diamond drillholes are deeper and account for informing the bulk of the deposit (Figure 12). The areas informed by percussion drillholes are also informed by diamond drillholes. For future work where a higher Mineral Resource Category is pursued (Measured, Indicated), an exercise can be performed to separate areas based on density of the difference hole types, and their relative confidence as an input into Mineral Resource Category definition.

The RC holes drilled as part of the 2001 campaign were not available digitally at the time of compiling the database and creating a geological model. Viewing the collars only shows that these holes cover the areas that are already well informed by existing drilling. These holes were also not included in either the 2007 or 2012 geological models or Mineral Resource estimation.

Figure 12: Hole Types over Maligreen, View Looking West



#### Item 9 (b) - LIMITATIONS ON/FAILURE TO CONDUCT DATA VERIFICATION

There are limitations to the QAQC performed during the drilling campaigns and concerns with respect to the results of the QAQC. QAQC procedures generally are a combination of blanks, CRMs and duplicates to verify the precision and accuracy of the sampling procedures and laboratory processes. In the case of the Maligreen Project not all these QAQC sample types were included and the ones that were did not show good correlation or the information was not available. This is one of the reasons that the data was deemed of sufficient quality for an Inferred Mineral Resource classification only.



The QP completed data verification in terms of overlaps, gaps and location as much as possible. Any errors observed were rectified.

#### Item 9 (c) - ADEQUACY OF DATA

The data supplied is sufficient to generate a geological model. The percussion and diamond drillholes are of a sufficient quality and quantity to run a resource estimate over the project area. However due to the lack of QAQC and the use of the percussion drillholes, a maximum of Inferred Mineral Resource will be defined over the Project Area.

### ITEM 10 - MINERAL PROCESSING AND METALLURGICAL TESTING

#### Item 10 (a) - NATURE AND EXTENT OF TESTING AND ANALYTICAL PROCEDURES

Historically, laboratory flotation tests were done, by Billiton Laboratories located in Springs, South Africa, (details of accreditation are unknown), on drill core sample. The goal was to show that the ore can produce a sulphide concentrate from which gold can be extracted with cyanide leaching after biological oxidation.

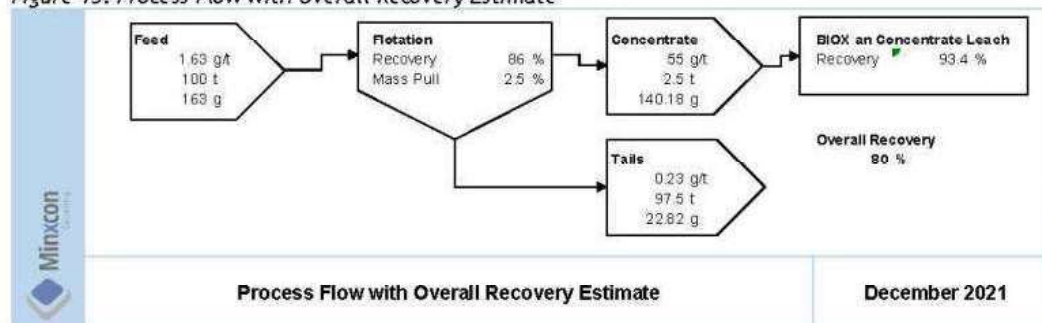
Testwork started with crushing and preparation of composites. Diagnostic leach was done to determine the gold deportment. Flotation tests were done to determine optimal conditions, and the optimal conditions were used in a bulk flotation concentrate test. This bulk concentrate was analysed and was also used for Biological oxidation ("BIOX®") tests. The flotation tailings were leached with cyanide.

The diagnostic leach tests showed that a significant portion of the gold is locked in sulphide minerals. Flotation produced a gold recovery of 95% for a range of 6 g/t to 14 g/t. The flotation concentrate grade was 55 g/t to 75 g/t. BIOX® of the concentrate was done over a period of 20 days to produce the extraction. The extraction achieved was as high as 98%, but a good extraction of 94% was already achieved after 7 days.

#### Item 10 (b) - BASIS OF ASSUMPTIONS REGARDING RECOVERY ESTIMATES

The Mineral Resource grade is lower than those tested during the flotation tests, and although no loss of recovery was seen from 14 g/t to 6 g/t, the 1.63 g/t of the resource may well give lower flotation recoveries. A flotation recovery of 86% was therefore assumed. The average recovery for the two data points at 7 days residence time was used for the BIOX® recovery. This combination would give an overall recovery of 80% as seen in Figure 13.

Figure 13: Process Flow with Overall Recovery Estimate



#### Item 10 (c) - REPRESENTATIVENESS OF SAMPLES AND ADEQUACY OF DATA

Samples used in the flotation testwork came from 348 drill core samples which was crushed and assayed. The drill core samples were combined into 22 kg composites which was used for further testwork. The drill

cores are deemed to be representative of the orebody. Good practises were followed in the sample preparation and splitting process.

The data procedures and analyses carried out are considered adequate for the determination of Mineral Resources as presented in this TRS.

#### Item 10 (d) - DELETERIOUS ELEMENTS FOR EXTRACTION

No pre-robbing effect was seen during the diagnostic leach tests. Arsenic present in the ore was sufficiently oxidised in the BIOX® process to a stable ferric arsenate precipitate.

### ITEM 11 - MINERAL RESOURCE ESTIMATES

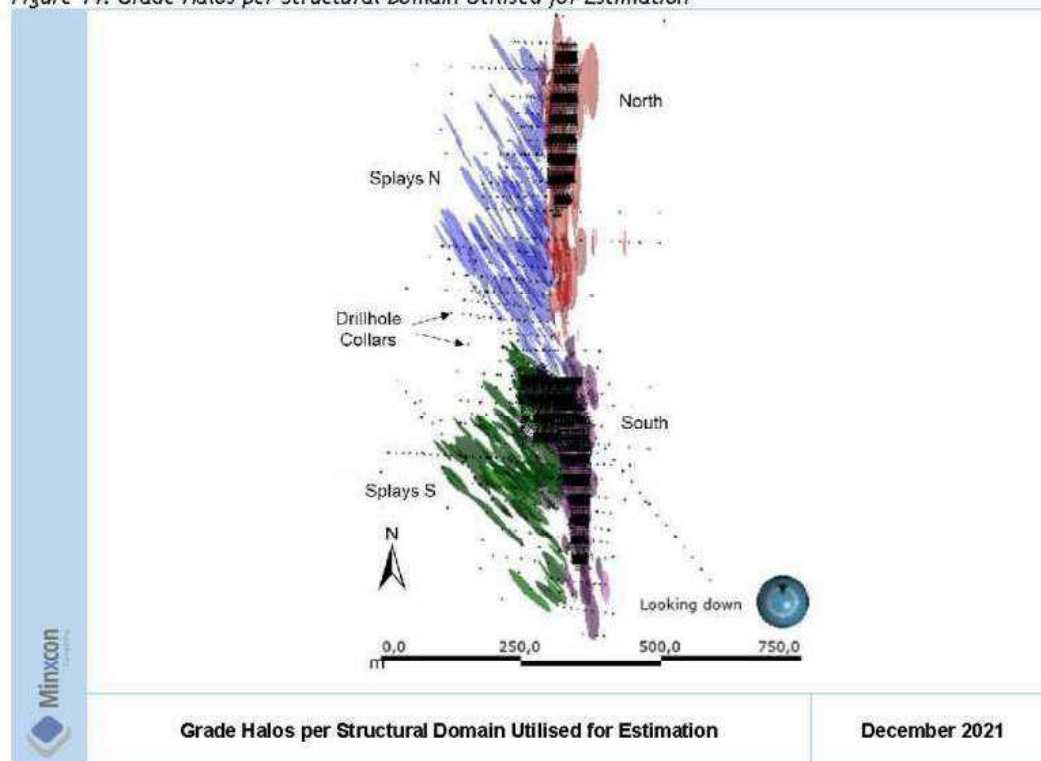
#### Item 11 (a) - ASSUMPTIONS, PARAMETERS AND METHODS USED FOR RESOURCE ESTIMATES

##### I. MINERAL RESOURCE ESTIMATION PROCEDURES

##### i. Domain and Data

The structural domains as defined under geological modelling (Figure 14), were utilised as geostatistical domains. These four domains were utilised with hard boundaries. Due to the comparable data distribution of the two datasets, both percussion and diamond drillholes were used.

Figure 14: Grade Halos per Structural Domain Utilised for Estimation





The weathering profile was also tested to assess its usefulness in defining additional domains and estimating each weathering zone per structural domain separately. Testing of sampling statistics and variography revealed little to no change in the statistics, however there were resulting poorer variogram ranges and decreased quality of estimation when utilising the weathering domains. This is likely the result of decreased samples available per domain, and disrupted continuity brought about by additional domains being utilised. The weathering zones were thus not used for defining geostatistical domains.

*ii. Data Compositing and Statistical Analysis*

All samples were composited to 1 m as it was the most common sample length. Compositing has had a minimal effect on the domain statistics.

*iii. Outlier Analysis*

Outlier analysis or capping is carried out during the variography and kriging stage to limit the influence that the ultra-high grades may have on the estimation of the surrounding areas. Top cuts were applied during the variography stage to prevent the excessive variances of the anomalously high grade from skewing the distribution away from the representative variance of the data distribution. Probability plots were utilised to identify anomalous grade values. Leapfrog Edge applied a top cut to estimation and a top cap for variography. For this estimation the same value was utilised for both. In addition, cutting curves are utilised as a test for the value applied for capping / cutting to check the effect the applied sample would have on the total metal within the dataset.

*iv. Geostatistical Analysis and Variography*

All variography was carried out in Leapfrog Edge.

*v. Kriging Neighbourhood Analysis*

Kriging neighbourhood analysis ("KNA") was undertaken to assess the optimal parameters for estimation in each of the separate domains. Different scenarios of minimum and maximum samples were run and the results plotted to define the estimation parameters for which the highest quality result can be kriged, this quality is measured by Slope of Regression ("SoR"), and kriging variance. The block sizes utilised for parent cell estimation were 5 m in x, 10 m in y and 10 m in z. This block size was chosen based on the requirements to enable an accurate representation of the data. The smaller block size in x was chosen to capture the variability in the shortest orientation of the orebodies. Sub-celling to 1 m was performed on the block models.

At lower search volumes, more samples are available (typically mining areas) a higher minimum and maximum can be used, while further from the well informed, the minimum and maximum samples will decrease to ensure more weighting is applied to nearby samples. An ordinary krig was employed for all estimates. The distance from samples and search volume used to inform the block model is reflected in the Mineral Resource classification.

*vi. Grade Estimation*

Ordinary kriging was run for all domains for all search volumes.

*vii. Bulk Density*

Density measurements were available for the different weathering zones. The QP utilised the same densities utilised during 1998 and 2012. It is noted that despite transitional and oxide being differentiated, oxide and transitional was often combined and considered together in previous estimates. For the 2021 estimate, due



to high variability in the data separating oxide and transitional, both were considered together with a single density (Table 2).

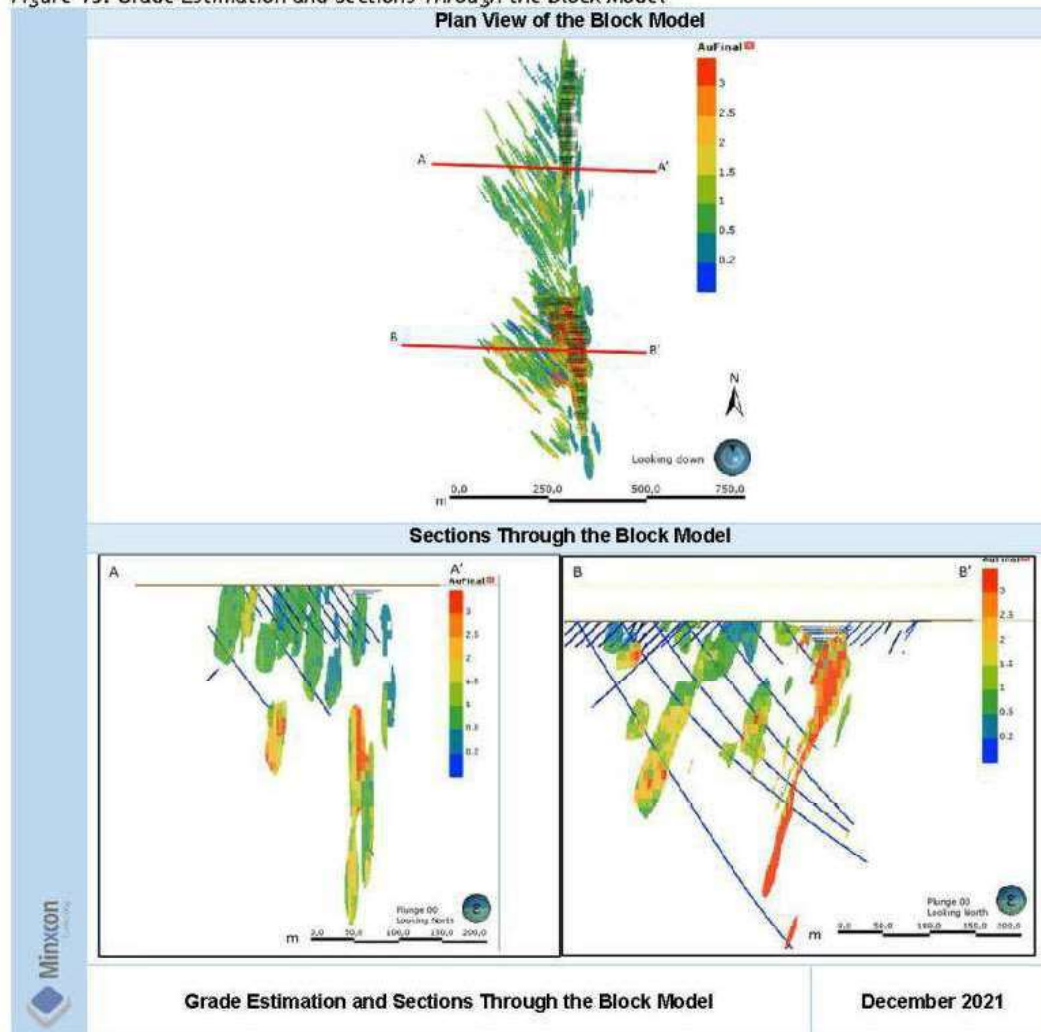
*Table 2: Densities Utilised for Maligreen Mineral Resource Estimation*

Model	Kalahari Sand	Oxide	Transitional	Sulphide
Reunion 1998	1.6	2.44	2.67	2.86
PAM 2007	Unknown	2.33	2.33	Main - 2.74 - Main FW and HW reefs
				Propylite - 2.82 - Middle reef in altered basalts
				Rhyolite - 2.64 - North Reef
				Splays - 2.74 - Silicified mylonitic shear zones
DMS 2012	1.6	2.44	2.67	2.86
Minxcon 2021	1.6		2.44	2.86

#### *viii. Estimation Results*

The estimation results were compared visually to the data to confirm continuity between the data and model. All images shown are of the un-depleted models with no additional filters applied. The estimates are shown in Figure 15 and reflect the data well. The highest grades are seen in the southern domain with limited continuity of grade down dip. The northern domain has a slightly lower grade, but the mineralisation is open down dip. The splays have slightly lower grade than the southern domain but locally show high grades.

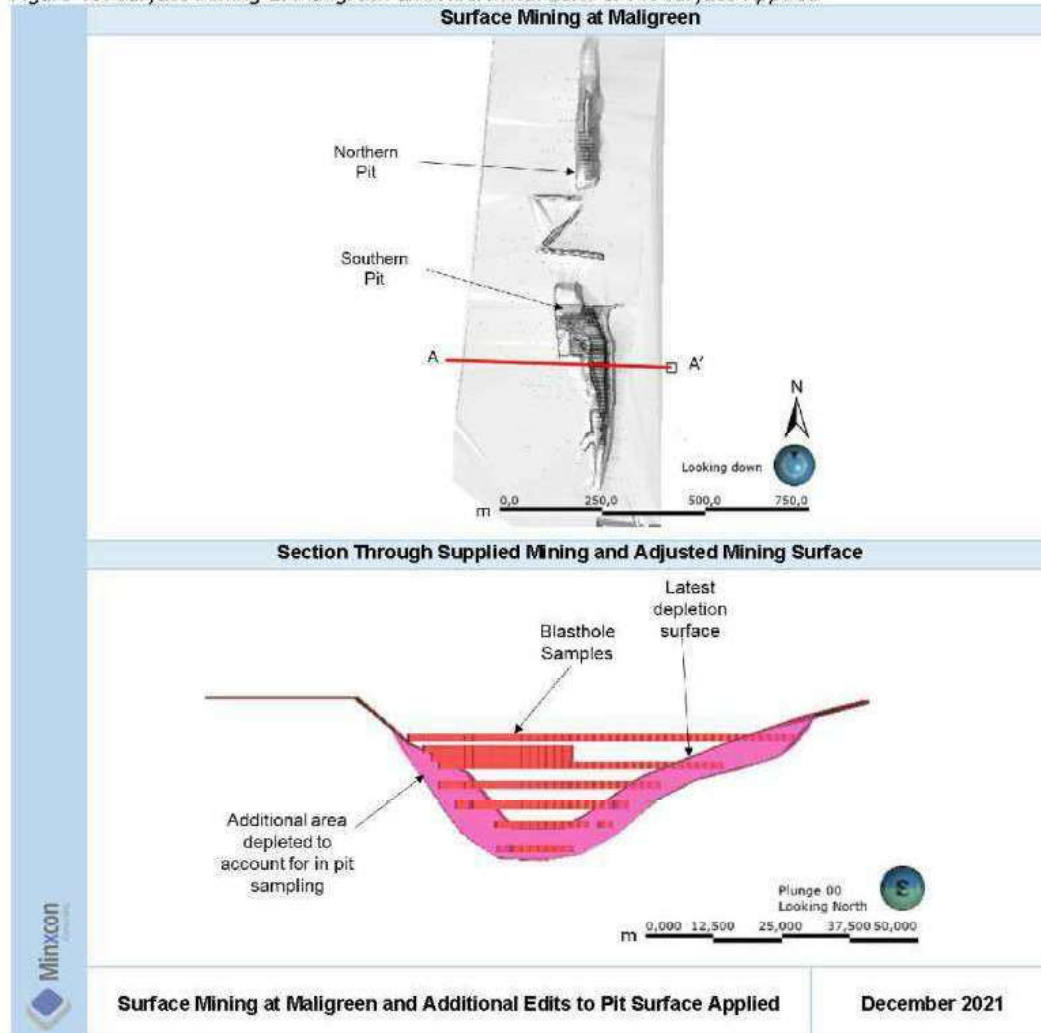
Figure 15: Grade Estimation and Sections Through the Block Model



ix. Mining Depletions

Surface mining has taken place over Maligreen in a separate northern and southern pit (Figure 16). It was observed that some blasthole samples occur outside the pit and correspond with the deepest sampled portion of mining. This indicated that additional mining took place since the last survey as represented by the blasthole samples. Additional depletions were edited to include these sampled areas. It is not believed that an elevation error has occurred with the blasthole samples as even with a translation to match the pit floor, the extent of sampling is larger than the depletion surface, this is also seen in Figure 16.

**Figure 16: Surface Mining at Maligreen and Additional Edits to Pit Surface Applied**  
**Surface Mining at Maligreen**



x. *Block Model Validation*

Visual validation of data versus estimation was conducted to confirm accuracy of estimate applied. In addition, swath plots were conducted to compare the data to the estimate. Swaths take the grade average within a redefined grid moving in X (west to east), Y (north to south) and Z (to depth). The swaths compare well to data showing best correlation moving north to south, with some smoothing relative to data.

The estimate shows some smoothing relative to data, this may be due to the swaths being taken oblique to the direction of the domain and not representing the direction of continuity.

The data compares very well to the estimate for the north domain - the data is very dense in the north domain and the samples used in the estimate are limited to reduce smearing, thus the estimate reflects the data locally very well.



The north splay domain shows good correlation to the data with some smoothing evident. As with the north splay, this may be due to the swaths being taken oblique to the domain's orientation.

## II. INITIAL ASSESSMENT

The QP undertook an initial assessment of the mineralised body to determine the reasonable prospects of eventual economic extraction ("RPEEE"). A pit optimisation analysis was undertaken.

The open pit cut-off grade applied to the Mineral Resource is 0.4 g/t which is a cut-off assuming that the upper Mineral Resource will be mined by means of open pit mining methodology. From the Mineral Resource pit optimisation runs the depth cut-off for the open pit resource is 220 m (Figure 17). For reporting an underground Mineral Resource, a 1.5 g/t cut-off was utilised for the remaining Mineral Resource below the pit. The cut-off parameters used for the cut-off calculation and the resource pit shell are shown in Table 3. The QP generally uses the 90<sup>th</sup> percentile of the historical real term gold price since 1980 which currently is USD1,650/oz. However, in this case the QP used USD1,800/oz as it was the gold spot price at the time of reporting. The mining and operating costs used are costs benchmarked against similar operations.

Figure 17: Mineral Resource Pit for Reasonable Prospects of Eventual Economic Extraction

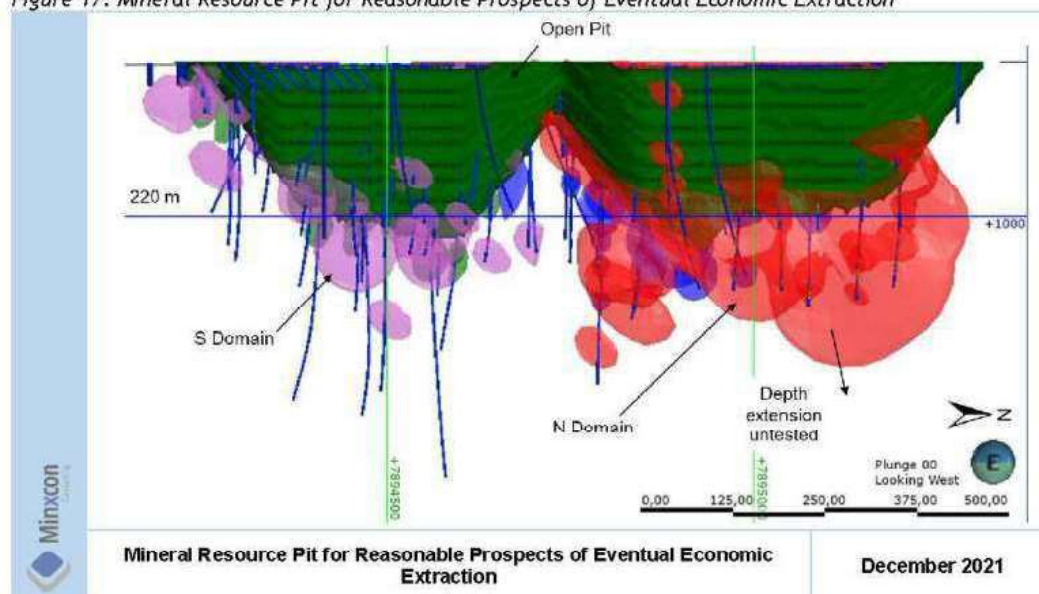


Table 3: Cut-off Parameters

	Parameter	Unit	Value
Mining (open pit)	Mine Cost	USD/t	2.18
	Mining Recovery	%	100
	Mining Dilution	%	0
	Slop Angle	degrees	55
Plant	Processing Cost	USD/t	20.5
	Plant Recovery - Au	%	80
Financial	Metal Price - Au	USD/g	57.87
	Metal Price - Au	USD/oz	1,800

All Mineral Resources have been stated as either surface (limited to 220 m depth) or underground mining resources at specific cut-off grades of 0.4 g/t and 1.5 g/t respectively. The QP thus deems the total Mineral Resource as stated in this TRS to have RPEEE.

### III. MINERAL RESOURCE CLASSIFICATION

For the Maligreen project, due to the lack of QAQC data there is a decreased confidence in the data. For this reason, the historical nature of the data and the fact that percussion drillholes were utilised, only Inferred Mineral Resources are defined over Maligreen. An assessment of the sample spacing as well as outputs that reflect the quality of the estimate reveals that it is possible that Measured and Indicated Mineral Resources can be defined for Maligreen with an increase in the confidence in the data. Therefore, the confirmatory drilling programme and the re-assay programme of the historical core is recommended. Mineral Resources have been reported separately as Inferred Mineral Resource categories. Inferred Mineral Resources have been reported separately and have not been incorporated with the Measured and Indicated Mineral Resources

### IV. MINERAL RESOURCE STATEMENT

The Mineral Resources have been depleted by means of the topography and mining voids. Discounts applied to the Mineral Resources include geological losses of 15% for Inferred Mineral Resources to account for geological, data as well as estimation uncertainty. The gold content conversion calculations utilise a conversion of 1 kg = 32.15076 oz and all tonnages are reported in metric tonnes. Inferred Mineral Resources have a low level of confidence and while it would be reasonable to expect that the majority of Inferred Mineral Resources would upgrade to Indicated Mineral Resources with continued exploration, due to the uncertainty of Inferred Mineral Resources, it should not be assumed that such upgrading will occur.

The Mineral Resources are declared as *in situ*, and as the portion of the Mineral Resource that is potentially mineable from open pit as well as from underground, as part of the reasonable prospects for eventual economic extraction. An optimised pit was generated to evaluate the depth to which surface mining can occur. Based on this analysis a depth of 220 m was defined as the level to which surface mining can occur and is reported at a 0.4 g/t cut-off (Table 4). Below this all Mineral Resources are declared as underground, with a 1.5 g/t cut-off (Table 5). No Mineral Reserves have been estimated for the Project.

Table 4: Surface Inferred Mineral Resource for Maligreen Gold Mine as at 31 December 2021

Mineral Resource Category	Domain	Tonnes (Less Geological Loss) Mt	Gold Grade g/t	Gold Content koz
Inferred	North	4.42	1.27	181.3
	South	2.71	3.70	323.0
	SplayN	4.31	0.84	116.8
	SplayS	2.18	1.29	90.8
<b>Total Inferred</b>		<b>13.62</b>	<b>1.63</b>	<b>711.9</b>

Notes:

1. Mineral Resource Cut-off of 0.4 g/t Au applied.
2. A gold price of USD1,800/oz was used for the cut-offs.
3. Columns may not add up due to rounding.
4. Mineral Resources are reported as total Mineral Resources and 100% attributable to Caledonia.

Table 5: Underground Inferred Mineral Resource for Maligreen Gold Mine as at 31 December 2021

Mineral Resource Category	Domain	Tonnes (Less Geological Loss) Mt	Gold Grade g/t	Gold Content koz
Inferred	North	1.32	2.45	104.2
	South	0.40	8.21	106.3
	SplayN	0.21	2.30	15.3
	SplayS	0.04	1.91	2.3
<b>Total Inferred</b>		<b>1.97</b>	<b>3.60</b>	<b>228.1</b>

Notes:

1. Mineral Resource Cut-off of 1.5 g/t Au applied.
2. A gold price of USD1,800/oz was used for the cut-offs.
3. Columns may not add up due to rounding.
4. Mineral Resources are reported as total Mineral Resources and 100% attributable to Caledonia.



The combined surface and underground Mineral Resource is shown in Table 6, this shown at 0.4 g/t and 1.5 g/t for surface and underground respectively.

**Table 6: Total Inferred Mineral Resource for Maligreen Gold Mine as at 31 December 2021**

Mineral Resource Category	Domain	Tonnes (Less Geological Loss) Mt	Gold Grade g/t	Gold Content koz
Inferred	North	5.75	1.55	285.5
	South	3.12	4.29	429.3
	SplayN	4.51	0.91	132.1
	SplayS	2.22	1.31	93.1
<b>Total Inferred</b>		<b>15.59</b>	<b>1.88</b>	<b>940.0</b>

Notes:

1. Mineral Resource Cut-off of 0.4 g/t Au for surface and 1.5 g/t Au for underground applied.
2. A gold price of USD1,800/oz was used for the cut-offs.
3. Columns may not add up due to rounding.
4. Mineral Resources are reported as total Mineral Resources and 100% attributable to Caledonia.

A weathering profile was defined for Maligreen that separated oxide and fresh portions of the orebody. This is represented in Table 7.

**Table 7: Total Inferred Mineral Resource Separated by Weathering Zone for Maligreen Gold Mine as at 31 December 2021**

Weathering Zone	Domain	Tonnes (Less Geological Loss) Mt	Gold Grade g/t	Gold Content koz
Oxide	North	0.24	0.80	6.1
	South	0.07	1.55	3.3
	SplayN	0.39	0.81	10.2
	SplayS	0.16	0.99	5.0
<b>Total Oxide</b>		<b>0.85</b>	<b>0.90</b>	<b>24.6</b>
Fresh	North	5.51	1.58	279.4
	South	3.05	4.34	426.0
	SplayN	4.12	0.92	122.0
	SplayS	2.06	1.33	88.1
<b>Total Fresh</b>		<b>14.74</b>	<b>1.93</b>	<b>915.5</b>
<b>Total Inferred</b>		<b>15.59</b>	<b>1.88</b>	<b>940.0</b>

Notes:

1. Mineral Resource Cut-off of 0.4 g/t Au for surface and 1.5 g/t Au for underground applied.
2. A gold price of USD1,800/oz was used for the cut-offs.
3. Columns may not add up due to rounding.
4. Mineral Resources are reported as total Mineral Resources and 100% attributable to Caledonia.

A table summarising the content and grade for various cut-offs is shown in Table 8.

**Table 8: Total Mineral Resources at Maligreen for Various Cut-offs**

Cut-off g/t	Tonnes Mt	Gold Grade g/t	Gold Content koz
-	20.68	1.57	1,041.1
0.20	20.64	1.57	1,041.0
0.40	17.85	1.76	1,012.7
0.60	14.46	2.06	958.4
0.80	11.50	2.41	892.6
1.00	9.24	2.79	827.2
1.20	7.59	3.15	769.5
1.40	6.30	3.53	715.2
1.60	5.23	3.95	664.2
1.80	4.38	4.39	617.7
2.00	3.78	4.78	581.0
2.20	3.33	5.15	550.7

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#### **Item 11 (b) - INDIVIDUAL GRADE OF METALS**

Mineral Resources for gold have been estimated for the Maligreen Mine. No other metals or minerals have been estimated for the Project.

#### **Item 11 (c) - FACTORS AFFECTING MINERAL RESOURCE ESTIMATES**

It is the QP's view that based upon the information provided to Minxcon by Caledonia, no undue material risks pertaining to metallurgical, environmental, permitting, legal, title, taxation, socio-economic, marketing, political, and other relevant issues are applicable to the Mineral Resource estimates as at 31 December 2021. The QP's opinion is that all issues relating to all relevant technical and economic factors likely to influence the prospect of economic extraction can be resolved with further work.

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### **ITEM 12 - MINERAL RESERVE ESTIMATES**

Mineral Reserve estimation has not been conducted as yet.

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### **ITEM 13 - MINING METHODS**

The Project is currently still in exploration phase. No advanced technical studies investigating potential extraction methods have been undertaken as yet.

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### **ITEM 14 - PROCESSING AND RECOVERY METHODS**

This TRS is presented as a Mineral Resource report; thus, recovery methods are not described.

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### **ITEM 15 - INFRASTRUCTURE**

This TRS is presented as a Mineral Resource report. Infrastructure requirements for project development have not been assessed.

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### **ITEM 16 - MARKET STUDIES**

Market studies and contracts are not required to be investigated and presented in a Mineral Resource report.

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### **ITEM 17 - ENVIRONMENTAL STUDIES, PERMITTING AND PLANS, NEGOTIATIONS, OR AGREEMENTS WITH LOCAL INDIVIDUALS OR GROUPS**

To the knowledge of the Client, there have been no environmental or social studies conducted over the property. An environmental consultant has been engaged by Caledonia.

Should development activities for mining commence, communities north of North Pit will need to be resettled elsewhere, as they are currently within the claims area.

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### **ITEM 18 - CAPITAL AND OPERATING COSTS**

No advanced technical studies that describe project development and capital and operating costs have been undertaken as yet.



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## ITEM 19 - ECONOMIC ANALYSIS

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An economic analysis has not been undertaken at the stage of the Project.

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## ITEM 20 - ADJACENT PROPERTIES

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A number of gold deposits and historic mines occur in the vicinity of Maligreen. All deposits occur as shear-zone hosted deposits.

The Peace-Turtle Mine claims, worked by illegal miners, occur immediately northwest of the Maligreen claims and are owned by the Silobela Community Development Trust. No further public technical information is available for these areas.

The operational underground Jena Mine, held under Jena Mines (Pvt) Ltd acquired in 2020 by Kuvimba Mining House, occurs some 12 km due northeast of Maligreen. Jena is the largest gold producer in the region and is comprised of a number of shafts including Termite, Stump, Wankie, Lion and Lioness. According to ZMDC (2018), the mine can treat 450 tonnes per day of ore, extracted through underhand benching long hole open stoping and shrink stoping. The Sunday Mail (2016) reports that Jena hosts 546 kt ore at a grade of 4.2 g/t gold. Kuvimba Mining House has commenced plant and underground mine expansion optimisation and exploration to a depth of 500 m. Production will be ramped up from 8 ktpm to 30 ktpm over 24 months (NewZimbabwe, 2021).

The QP has relied on the information as is presented by the referenced sources. Verification has been limited to that data which is made available publicly and has been limited to cross-referencing information presented by the individual sources.

Although the deposits occur as similar styles, the mineralisation on surrounding properties is not necessarily indicative of mineralisation or extractive potential at Maligreen. The QP has been unable to verify the information and it is not necessarily indicative of the mineralization on the Maligreen property.

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## ITEM 21 - OTHER RELEVANT DATA AND INFORMATION

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### Item 21 (a) - UPSIDE POTENTIAL

There is additional upside to the Maligreen deposit that is currently not fully covered by the existing drillhole database. The following drilling programmes can be pursued to explore the upside potential at Maligreen:-

1. target extensions to the northwest of the splays;
2. target extensions to the main north-south domains; and
3. target additional northern areas outside the existing defined Mineral Resources.

The extensions of the north splays have untested extensions to the northwest (along strike and down dip), and the southern splays have drillholes that suggest a lack of continuation of mineralisation down dip. A section through the northern area suggests that mineralisation continues to depth as well.

Other authors discussing Maligreen have observed that to the north and south of the currently modelled orebodies, the mineralisation does not continue. This is assigned to the fact that the QEP to the south and the FP to the north both thicken to the outer extents of the domain, with a drop off in mineralisation and grade continuity with the thickening of these porphyries. It must also be noted that the north and south domains have the same extents in the previous as well as updated ore shells.

For this reason, limited continuity is expected to the immediate north and south of the existing domains. In addition, the extents of the southern domain at depth does not show continuity due to drill holes at depth showing a drop off in grade. However, drillholes in the northern domain suggest the orebody is open to depth as the last drillhole intersections show good mineralisation and grade continuity. Drilling can thus also be planned to target the downdip extension primarily to the north domain.

Further continuity has not been proven along strike to the north and south of the current resource. However, the existing drillhole database to the north has not been drilled on the same trends seen to the south; additional targeted drilling on the same trends along with mapping to target similar lithologies as seen in Maligreen to the south would aid in identifying continuity.

## ITEM 22 - INTERPRETATION AND CONCLUSIONS

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Sufficient data is available to define a geological model and Mineral Resource over Maligreen. Due to limited QAQC and confidence in data, an Inferred Mineral Resource is defined. Due to data density and quality of estimate, a Measured and Indicated Resource could be defined with an increase in data confidence. Ore grade halos have been generated at a 0.2 g/t cut-off and are believed to be an accurate representation of the grade and geological continuity over Maligreen. Based on the available data, a weathering profile and lithological model can also be defined.

## ITEM 23 - RECOMMENDATIONS

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It is recommended that an infill drilling programme, along with a detailed QAQC programme is followed to prove the existing drillhole database that is currently lacking QAQC data and reduces the confidence that can be assigned to the Resource.

In addition to the confirmatory drilling programme, it is recommended that the available historical core located in the core yard be catalogued, possibly relogged, photographed and then re-sampled to help verify the historical grades in the current database.

It is further recommended that additional drilling campaigns are perused to delineate downdip and along strike continuity of the orebody.

Independent metallurgical testwork is also recommended.

It is estimated that the confirmatory drilling programme and re-sampling exercise would require a budget between USD1.5 million to USD2 million.

## ITEM 24 - REFERENCES

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- Climate-data.org (2021). Climate Kwekwe (Zimbabwe). Accessed on 11 October 2021 via <https://en.climate-data.org/africa/zimbabwe/midlands-province/kwekwe-25753/>.
- Dirks (2001). Structural geological mapping of the Maligreen Gold mine, and a review of the existing 3-D block model. SRK Zimbabwe, Compiled for Pan-African Mining Pvt. Ltd. November 2001. 38 pp.
- Harrison, N.M. (1981). Explanation of the geological map of the Vungu and Gwelo river valleys, Gwelo, Que Que and Bubi districts. Zim Geol. Surv. short report 48.
- Mtetwa, K. (2007). A Review of the Maligreen Gold Project. Digital Mining Services, Compiled for Pan-African Mining Pvt. Ltd. December 2007. 43 pp.

- NewZimbabwe (2021). Jena Mine Injects US\$6m For Expansion. Article published on 16 July 2021. Accessed on 11 October 2021 via <https://www.newzimbabwe.com/jena-mine-injects-us6m-for-expansion/>.
- The Sunday Mail (2016). ZMDC's Gold Mining Dream. Article published on 6 March 2016. Accessed on 11 October 2021 via <https://www.sundaymail.co.zw/zmdcs-gold-mining-dream>.
- The Zimbabwe Mining Development Corporation (2018). Gold Mining. Accessed on 11 October 2021 via <https://zmdc.co.zw/operations/gold-mining>.
- Reunion Mining (Zimbabwe) Limited. (1998). Maligreen Gold Project Report, Part One, Volume 1. Geology and Exploration Text.
- Trashliev, V.S. (2003). Pan African Mining (Pvt) Ltd. Maligreen Mine, Overview of the Geology Metallogeny, Structure and Revised Resource Estimate.
- Trashliev, V.S. (2007). Pan African Mining (Pvt) Ltd, Overview of the Maligreen Deposit. Internal report. April 2007. 11 pp.

## ITEM 25 - RELIANCE ON INFORMATION PROVIDED BY THE REGISTRANT

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The QP has accepted information supplied by Caledonia regarding the permits and licences as valid and complete, which is included in Item 3 of this TRS. The QP considers such reliance reasonable because the information constitutes legal and environmental matters outside the expertise of the QP.