



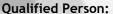
## Caledonia Mining Corporation Plc

Updated NI 43-101 Mineral Resource Report on the Maligreen Gold Project, Zimbabwe





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#### Prepared by Minxcon (Pty) Ltd

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## DATE AND SIGNATURE PAGE

This Report titled "Updated NI 43-101 Mineral Resource Report on the Maligreen Gold Project, Zimbabwe - Mineral Resource Report" was prepared on behalf of Caledonia Mining Corporation Plc. The Report is compliant with National Instrument 43-101 and Form 43-101 F1. The effective date of this Report is 30 September 2022.

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

**U ENGELMANN** 

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DIRECTOR, MINXCON (PTY) LTD

Mayelmann

Signed at Little Falls, Gauteng, South Africa, on 3 November 2022.



#### CERTIFICATE of QUALIFIED PERSON - U Engelmann

- I, Uwe Engelmann, do hereby certify that:-
- I am a Director of Minxcon (Pty) Ltd Suite 5, Coldstream Office Park,
   Coldstream Street,
   Little Falls, Roodepoort, South Africa
- 2. I graduated with a BSc Honours (Geology) degree from the University of the Witwatersrand in 1991.
- 3. I have more than 24 years' experience in the mining and exploration industry. This includes eight years as an Ore Resource Manager at the Randfontein Estates Projects on the West Rand. I have completed a number of assessments and technical reports pertaining to various commodities, including gold, using approaches described by the National Instrument 43-101 (Standards of Disclosure for Mineral Projects), Form 43-101F1 and the Companion Policy Document 43-101CP ("NI 43-101").
- 4. I am affiliated with the following professional associations which meet all the attributes of a Professional Association or a Self-Regulatory Professional Association, as applicable (as those terms are defined in NI 43-101):-

Class	Professional Society	Year of Registration
Fellow	Geological Society of South Africa (FGSSA No. 966310)	2010
Professional	South African Council for Natural Scientific Professions (Pr.Sci.Nat. Reg. No.	2008
Natural Scientist	400058/08)	2008

- 5. I am responsible for all Items of the technical report titled "Updated NI 43-101 Mineral Resource Report on the Maligreen Gold Project, Zimbabwe" prepared for Caledonia Mining Corporation Plc with an effective date of 30 September 2022 ("the Report").
- 6. I have read the definition of "Qualified Person" set out in NI 43-101 and certify that by reason of my education, affiliation with professional associations and past relevant work experience, I fulfil the requirements to be a Qualified Person for the purposes of the Report.
- 7. I have read NI 43-101 and the Report has been prepared in compliance with it.
- 8. As of the effective date, to the best of my knowledge, information and belief, the Report contains all scientific and technical information required to be disclosed to make the Report not misleading.
- 9. I am independent of Caledonia Mining Corporation Plc as such term is defined in Section 1.5 of NI 43-101. My compensation, employment or contractual relationship with the Commissioning Entity is not contingent on any aspect of the Report.
- 10. My previous involvement in the subject property entails a limited desktop study in 2019 and a previous NI 43-101 in 2021.
- 11. I undertook a personal inspection of the subject property on 12 October 2021.

Signed at Little Falls, Roodepoort on 3 November 2022.

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## INFORMATION RISK

This Report was prepared by Minxcon (Pty) Ltd ("Minxcon"). In the preparation of the Report, Minxcon utilised information relating to operational methods and expectations provided to them by various sources. Where possible, Minxcon 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 NI 43-101 and Form 43-101 F1. Minxcon and its directors accept no liability for any losses arising from reliance upon the information presented in this Report. The authors of this report are 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 Minxcon 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

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

Unit	Definition	
%	Per cent	
/	Per	
± or ~	Approximately	
0	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	
koz	Kilo ounces (1,000 oz)	
m	Metre	
m <sup>2</sup>	Square metres	
$m^3$	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/m³	Tonnes per cubic metre	
х	By / Multiplied by	

## Computation

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



## 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
NI 43-101	National Instrument 43-101, Form 43-101 F1 and the Companion Policy Document 43-101CP
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
SGS	SGS Zimlab (Pty) Ltd
SoR	Slope of Regression
The 2021 Report	Caledonia Mining Corporation Plc, NI 43-101 Mineral Resource Report on the Maligreen Gold Project, Zimbabwe - Mineral Resource Report. Prepared by Minxcon (Pty) Ltd. Effective date 31 August 2021.
this Report	Caledonia Mining Corporation Plc, Updated NI 43-101 Mineral Resource Report on the Maligreen Gold Project, Zimbabwe - Mineral Resource Report. Prepared by Minxcon (Pty) Ltd. Effective date 30 September 2022.
UTM	Universal Transverse Mercator
ZMDC	Zimbabwe Mining Development Corporation



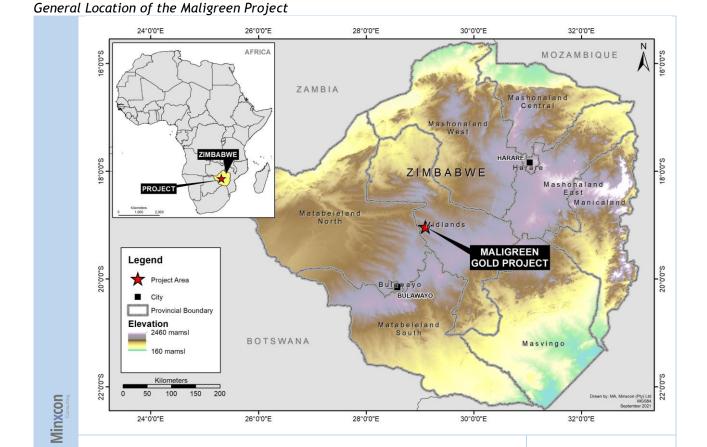
## ITEM 1 - EXECUTIVE SUMMARY

Minxcon (Pty) Ltd was commissioned by Caledonia Mining Corporation Plc to update the previous independent National Instrument 43-101 Technical Report on behalf of Caledonia Holdings Zimbabwe (Pvt) Ltd, on the Maligreen Gold Project (or Maligreen or the Project), situated in the Silobela area, Midlands Province, Zimbabwe.

The Report is prepared in compliance with the National Instrument 43-101, Form 43-101 F1 and the Companion Policy Document 43-101CP. This Report follows the guidelines as prescribed by NI 43-101. Only terms as defined by The Canadian Institute of Mining, Metallurgy and Petroleum (or CIM) have been utilised in this Report. The Mineral Resources have been estimated in conformity with the accepted CIM *Estimation of Mineral Resources and Mineral Reserves Best Practices Guidelines* (2019) and are reported in accordance with the Canadian Securities Administrators' NI 43-101. The purpose of this Report is to present the updated Mineral Resources of the Project after the completion of the re-sampling exercise completed by Caledonia on the available historical core. Maligreen is an advanced exploration project with historical mining, and this Report is thus presented as a Mineral Resource report.

## Item 1 (a) - PROPERTY DESCRIPTION

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



**General Location of the Maligreen Project** 

September 2022

## Item 1 (b) - OWNERSHIP OF THE PROPERTY

The Project is held under a portfolio of 41 adjacent mining claims 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. The claims are all up to date, with next inspections due in 2023.

The claims are held in the name of Caledonia Holdings Zimbabwe (Pvt) Ltd. Caledonia Holdings Zimbabwe (Pvt) Ltd is a 100% held indirect subsidiary of Caledonia Mining Corporation Plc through Greenstone Management Services Holdings Limited.

#### Item 1 (c) - GEOLOGY AND MINERAL DEPOSIT

The Maligreen gold deposit occurs in a north-easterly 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 SE of the mine. The Maligreen deposit is hosted in rocks assigned to the Maliyami Formation of the Upper Bulawayan Group. The regional structural trend around Maligreen is NE, parallel to the contact between the greenstone pile and the Shangani granite-gneiss terrain to the southeast.

## Item 1 (d) - Overview of the Project Geology

The country rocks at Maligreen consists 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.

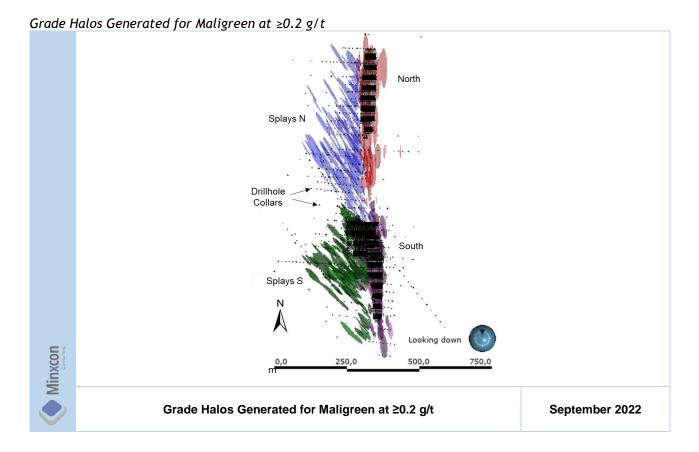
Gold mineralisation at Maligreen Project is generally associated with pyrite. Both stockwork and breccia pipe-type mineralisation have been recognized. The breccia type is very limited and consists of rock fragments cemented with silicates and ore minerals. Geological, petrological and structural studies suggest that the Maligreen gold deposit is a partially reworked porphyry style gold deposit. There is evidence of an early exhalative mineralisation within the Pyroclastic Unit. 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 1 (e) - LOCAL PROPERTY GEOLOGY

Based on previous work done on the deposit, as well as a detailed analysis of all the data available. 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 northeast 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 Indicator Interpolant function within Leapfrog was utilised to generate a grade halo showing all grades  $\ge 0.2$  g/t. This is believed to best represent the available data as well as enable an accurate representation of what is available for consideration in the mine plan.





## Item 1 (f) - STATUS OF EXPLORATION

No exploration activities are currently taking place at Maligreen other than the recently completed resampling exercise which allowed for the Mineral Resource upgrade.

## Item 1 (g) - MINERAL RESOURCE ESTIMATES

An ordinary kriged estimation was performed on the Maligreen deposit. With the re-sampling exercise completed by Caledonia the Mineral Resource now has measured, indicated and inferred categories. The Mineral Resources reported at surface, which are all resources <220 m from surface and underground (>220 m from surface) are shown below.

Surface Mineral Resource for Maligreen Gold Mine as at 30 September 2022

Demain	Mineral Resource Category	Tonnes (Less Geological Losses)	Gold Grade	Gold Content
Domain	Mineral Resource Category	Mt	g/t	koz
	Measured	0.30	0.87	8.3
NI a willa	Indicated	3.01	1.38	133.1
North	Total Measured and Indicated	3.30	1.33	141.4
	Inferred	1.01	1.09	35.5
	Measured	1.35	2.70	117.2
Courth	Indicated	0.75	4.17	101.9
South	Total Measured and Indicated	2.10	3.23	218.2
	Inferred	0.49	6.05	95.3
	Indicated	1.68	0.80	43.1
SplayNW	Total Measured and Indicated	1.68	0.80	43.1
	Inferred	2.08	0.81	54.0
	Indicated	0.85	1.15	31.4
SplaySW	Total Measured and Indicated	0.85	1.15	31.4
	Inferred	1.00	1.37	44.0
Total Measured and Indicated		7.94	1.70	434.1
Total Inferr	ed	4.58	1.55	228.8



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.
- Columns may not add up due to rounding.
- 4. Mineral Resources are stated as inclusive of Mineral Reserves.
- 5. Mineral Resources are reported as total Mineral Resources and are not attributed.

Underground Mineral Resource for Maligreen Gold Mine as at 30 September 2022

Domain	Mineral Becauses Category	Tonnes (Less Geological Losses)	Gold Grade	Gold Content
Domain	Mineral Resource Category	Mt	g/t	koz
	Indicated	0.09	2.88	8.2
North	Total Measured and Indicated	0.09	2.88	8.2
	Inferred	1.13	2.42	87.7
	Indicated	0.00	12.57	0.0
South	Total Measured and Indicated	0.00	12.57	0.0
	Inferred	0.33	8.69	93.5
SplayNW	Inferred	0.13	2.51	10.3
SplaySW	Inferred	0.00	1.58	0.0
Total Measured and Indicated		0.09	2.89	8.2
Total Inferred		1.59	3.75	191.5

#### 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 stated as inclusive of Mineral Reserves.
- 5. Mineral Resources are reported as total Mineral Resources and are not attributed.

Total Mineral Resource for Maligreen Gold Mine as at 30 September 2022

Domain	Mineral Resource Category	Tonnes (Less Geological Losses)	Gold Grade	Gold Content
Domain	Willieral Resource Category	Mt	g/t	koz
	Measured	0.30	0.87	8.3
North	Indicated	3.09	1.42	141.3
NOITH	Total Measured and Indicated	3.39	1.37	149.6
	Inferred	2.14	1.79	123.2
	Measured	1.35	2.70	117.2
South	Indicated	0.75	4.17	101.0
South	Total Measured and Indicated	2.10	3.23	218.2
	Inferred	0.82	7.12	188.8
	Indicated	1.68	0.80	43.1
SplayNW	Total Measured and Indicated	1.68	0.80	43.1
	Inferred	2.21	0.91	64.3
	Indicated	0.85	1.15	31.4
SplaySW	Total Measured and Indicated	0.85	1.15	31.4
	Inferred	1.00	1.37	44.0
<b>Total Meas</b>	ured and Indicated	8.03	1.71	442.3
Total Inferr	ed	6.17	2.12	420.3

#### 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 stated as inclusive of Mineral Reserves.
- 5. Mineral Resources are reported as total Mineral Resources and are not attributed.

#### Item 1 (h) - DEVELOPMENT AND OPERATIONS

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.



## Item 1 (i) - QUALIFIED PERSON'S CONCLUSIONS AND RECOMMENDATIONS

#### I. CONCLUSIONS

Sufficient data is available to define a weathering profile, lithological model, as well as estimate a Mineral Resource for the Maligreen Deposit. With the re-sampling exercise of the historical core completed by Caledonia, the previous inferred Mineral Resource can now be declared as a measured, indicated and inferred Mineral Resource with the improved confidence in the database.

The new 2022 revised model utilised grade trends determined in Seequent Leapfrog Geo software as well as the structural geological interpretations and mapping by Professor Dirks. 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 was achievable with the confirmatory exercise.

The Maligreen Project lends itself to open pit mining with low grade stockpiling with the possibility of underground mining beneath the open pit. Additional drilling is required to test the down dip extension of the project and improve the underground potential and for more Mineral Resource upgrade.

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

#### II. RECOMMENDATIONS

With the upgrade of the Mineral Resource to measured and indicated Mineral Resources a concept study or feasibility study would now be required to investigate the possible conversion of the Mineral Resource to Mineral Reserves.

Additional exploration is recommended to fully understand the strike extension and depth extension potential. 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

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

Minxcon (Pty) Ltd ("Minxcon") was commissioned by Caledonia Mining Corporation Plc ("Caledonia" or "the Company") to update the previous independent National Instrument 43-101 Technical Report (this "Report") on behalf of Caledonia Holdings Zimbabwe (Pvt) Ltd ("Caledonia Zimbabwe"), on the Maligreen Gold Project ("Maligreen" or the "Project"), situated in the Silobela area, Midlands Province, Zimbabwe.

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

Minxcon was commissioned to prepare a technical report on the Project in compliance with the National Instrument 43-101, Form 43-101 F1 and the Companion Policy Document 43-101CP (collectively "NI 43-101"). This Report follows the guidelines as prescribed by NI 43-101. Only terms as defined by The Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") have been utilised in this Report. The Mineral Resources have been estimated in conformity with the accepted CIM *Estimation of Mineral Resources and Mineral Reserves Best Practices Guidelines* (2019) and are reported in accordance with the Canadian Securities Administrators' NI 43-101.

Minxcon previously completed a report titled NI 43-101 Mineral Resource Report on the Maligreen Gold Project, Zimbabwe for Caledonia, with Minxcon reference number M2021-041a, effective date 31 August 2021 and issue date 2 November 2021 ("the 2021 Report"). The purpose of this Report is to present the updated Mineral Resources of the Project after the confirmatory re-sampling exercise recently completed by Caledonia. Maligreen is an advanced exploration project with historical mining, and this Report is thus presented as a Mineral Resource report.

The scope of work to complete the NI 43-101 technical report is as follows:-

- review and collate the re-sampling database from the available historical core;
- review the re-sampling QAQC data;
- do a statistical analysis of the re-sampling data;
- update the Mineral Resource classification; and
- compile a NI 43-101 report.

The effective date of this Report is 30 September 2022.

#### Item 2 (c) - Sources of Information and Data Contained in the Report

In the compilation of this Report, Minxcon utilised information as provided by the Client. This includes internal company reports, historical reports and information, technical correspondence and maps and the recent re-sampling database as received from the Client.

Additional information was sourced from those references listed in Item 27 and is duly referenced in the text where appropriate.

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

The Qualified Person ("QP", as such term is defined by the NI 43-101 Standards of Disclosure for Mineral Projects) for this Report 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. It was during this site visit that a confirmatory re-sampling exercise was discussed to upgrade the Mineral Resource.

Figure 1 shows some of the buildings that are available as potential offices for exploration and eventual mining operations.

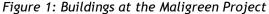
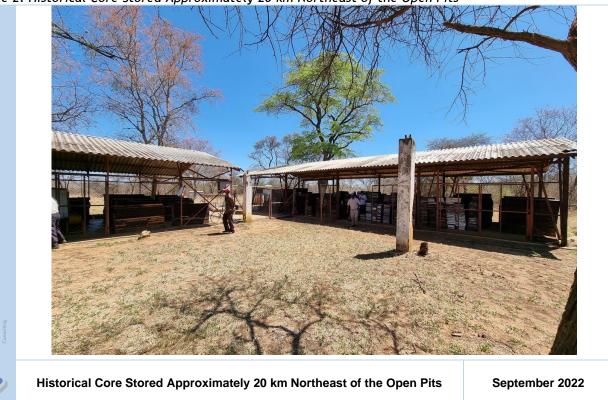




Figure 2 shows the core yard, located approximately 20 km north of the Maligreen open pits, that houses some of the historical core. The bulk of this core has been relogged, resampled in the period January to September 2022 and relocated to the Maligreen premises. This exercise was conducted to verify the historical database to increase the confidence and improve the Mineral Resource classification.







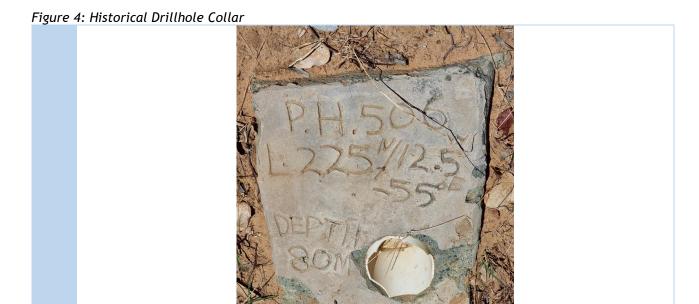
The previous open pit material was treated by means of heap leaching and Figure 3 shows the old heap leach pad.

Figure 3: Historical Heap Leach Pad



Some of the collar positions were also verified while in the field; Figure 4 shows a typical collar marker.





**Historical Drillhole Collar** 

September 2022

Figure 5 depicts the main south Maligreen pit looking in a north-easterly direction. The foreground is the shallower splay area (splay S domain in the geological model) with the background being the deeper main north-south trending shear (south domain in the geological model).







Figure 6 shows the deeper main South Pit looking south. This domain is a wider, more stockwork, mineralised zone with higher grade than the splay south domain which has a lower grade and more dispersed mineralisation associated in numerous NW striking narrow shears or veins. Figure 7 shows the stockwork mineralisation that was observed in the main south shear or South Pit.

Figure 8 clearly shows the NW striking veins extending from the main south shear striking in a N/S direction. These observations on the ground, as per the Dirks structural report (Figure 17), have reinforced the geological domaining (Figure 21) that was utilised in the geological modelling and estimation process as depicted in. These two main shear / mineralisation directions (N/S and NW/SE) are also observed in the active artisanal mining inspected.

Figure 9 shows a sample (sample number 437403) with in a mylonitic zone with a grade of 1.79 g/t, from drillhole MG93, located in the main north domain along the main N/S shear. This intersection, logged as a quartz sericite, intersects the depth extension of the sulphide mineralisation in the northern domain highlighting the potential of possible deeper underground mining opportunities. The mineralisation was observed to be associated with disseminated pyrite within the foliation of the mylonite.



Figure 6: Maligreen South Pit (Looking South)

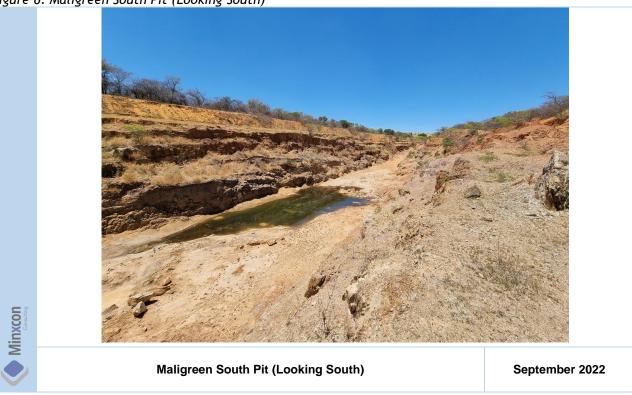
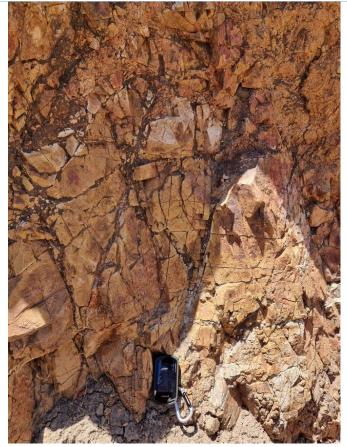


Figure 7: Stockwork Observed in the Main South Pit

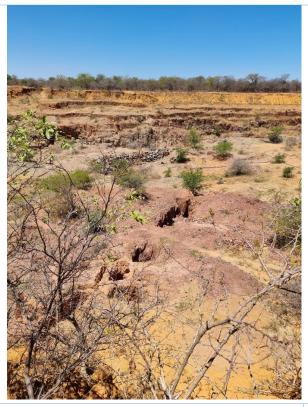


Stockwork Observed in the Main South Pit

September 2022



Figure 8: Maligreen South Pit, Looking East, showing the NW Splays (foreground) Extending from the Main North-South Shear (distance)



Maligreen South Pit, Looking East, showing the NW Splays (foreground) Extending from the Main North-South Shear (distance)

September 2022

Figure 9: Historical Maligreen Core (Drillhole MG93 from 359.45 m to 360.49 m)



Historical Maligreen Core (Drillhole MG93 from 359.45 m to 360.49 m)

September 2022



## ITEM 3 - RELIANCE ON OTHER EXPERTS

Minxcon has accepted information supplied by Caledonia regarding the permits and licences as valid and complete.

Minxcon has relied on a 2001 structural report by one Professor Dirks to guide the modelling of the geological domains, which has subsequently been confirmed on the site visit.



## ITEM 4 - PROPERTY DESCRIPTION AND LOCATION

## Item 4 (a) - AREA OF THE PROPERTY

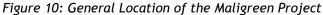
Maligreen is a gold exploration project situated on the Nkayi-Silobela Greenstone Belt ("NSGB") that has historically been exploited via open pit mining. The Mineral Resource occurs within a claims area covering a total of 550 ha.

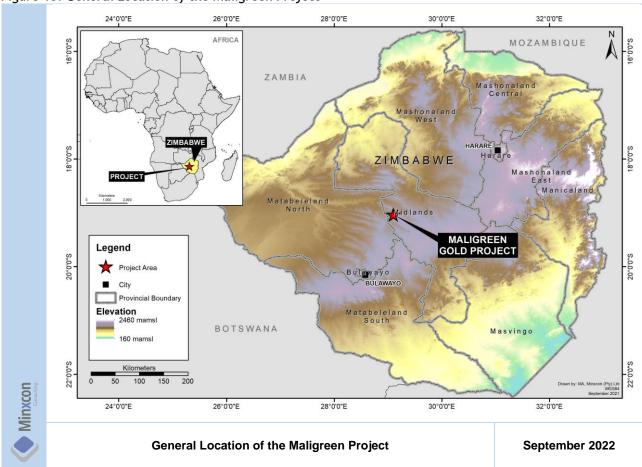
#### Item 4 (b) - LOCATION OF THE PROPERTY

As illustrated in Figure 10, 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 west of the Project along the Kwekwe-Lupane Highway.

The Project is centred on the following coordinates:-

Latitude 19°1'51"S
 Longitude 29°6'5"E





## Item 4 (c) - MINERAL DEPOSIT TENURE

#### I. ZIMBABWE'S MINING INDUSTRY

The issuing and control of mineral rights in Zimbabwe is regulated by the Mines and Minerals Act (Chapter 21:05) of 1961 ("MMA"), administered by the Provincial Mining Director of the regional mining district. The Mineral Resources are vested in the State through the President of Zimbabwe.



The Government of Zimbabwe does not participate in managing the projects of local or foreign firms in the private sector. Presently, government participation in mining is through Zimbabwe Mining Development Corporation ("ZMDC") and through the Minerals Marketing Corporation of Zimbabwe ("MMCZ"). The ZMDC was formed in 1982 for government to participate in the mining sector and to save companies that were being threatened to close. It is active in exploration, mining and giving assistance to cooperatives and small-scale miners.

The MMCZ was formed in 1992 and is responsible for marketing all the country's minerals and metal products except gold and silver which are sold through the Reserve Bank. It finances its operations by a commission charge of 0.875% on sales conducted for its clients.

#### II. MINING TITLES

In Zimbabwe, mining and mine development may be conducted with a mining claim, mining lease, Special Mining Lease and Special Grant. A mining claim covers a small area, thus usually several claims are grouped to form a block of claims. The claim confers on the holder the exclusive right to mine the Mineral Resource for which the claim was registered. Mining claims are dependent on the claim holder applying to the Provincial Mining Director for and obtaining an inspection certificate on an annual basis; failure to do so results in the forfeiture of the relevant claim.

A block of claims may be transformed into a Mining Lease for simplicity of administration.

#### III. MALIGREEN CLAIMS

The Project is held under a portfolio of 41 adjacent mining claims 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 was previously issued for copper. A conversion application to convert Claim AMT 97 to gold was accepted and registered on 5 August 2022 by the office of the Provincial Mining Director, Gweru.

The claims are all up to date, with next inspections due in 2023.

The claims are listed in Table 1 and illustrated in Figure 11.

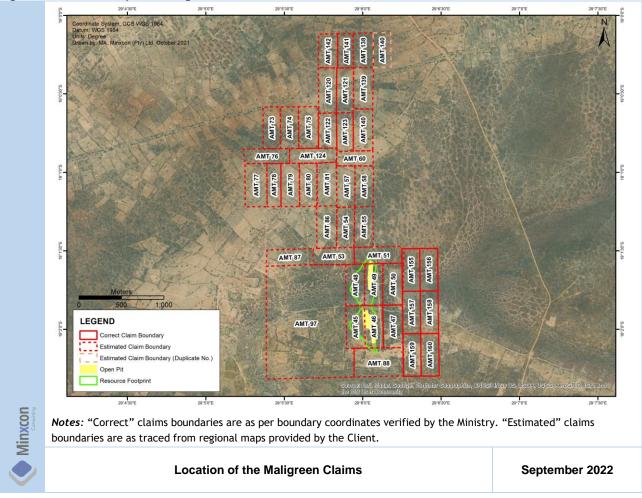


Table 1: Maligreen Claims

Table 1: Maligreen Claims							
No.	Claim No.	Claim Name	Area ha	Туре	Date of Registration	Next Inspection Date	Mining District
1	22041	AMT 138	10	Gold	16-Jan-97	16-Jan-23	Midlands
2	22042	AMT 139	10	Gold	16-Jan-97	16-Jan-23	Midlands
3	22043	AMT 140	10	Gold	16-Jan-97	16-Jan-23	Midlands
4	22044	AMT 141	10	Gold	16-Jan-97	16-Jan-23	Midlands
5	21871	AMT 45	10	Gold	23-May-96	23-May-23	Midlands
6	21872	AMT 46	10	Gold	23-May-96	23-May-23	Midlands
7	21873	AMT 47	10	Gold	23-May-96	23-May-23	Midlands
8	21874	AMT 48	10	Gold	23-May-96	23-May-23	Midlands
9	21875	AMT 49	10	Gold	23-May-96	23-May-23	Midlands
10	21876	AMT 50	10	Gold	23-May-96	23-May-23	Midlands
11	21877	AMT 51	10	Gold	23-May-96	23-May-23	Midlands
12	21923	AMT 53	10	Gold	26-Jul-96	26-Jul-23	Midlands
13	21924	AMT 54	10	Gold	26-Jul-96	26-Jul-23	Midlands
14	21925	AMT 55	10	Gold	26-Jul-96	26-Jul-23	Midlands
15	21927	AMT 57	10	Gold	26-Jul-96	26-Jul-23	Midlands
16	21928	AMT 58	10	Gold	26-Jul-96	26-Jul-23	Midlands
17	21930	AMT 60	10	Gold	26-Jul-96	26-Jul-23	Midlands
18	23213	AMT 155	10	Gold	09-Aug-00	09-Aug-23	Midlands
19	23214	AMT 156	10	Gold	09-Aug-00	09-Aug-23	Midlands
20	23215	AMT 157	10	Gold	09-Aug-00	09-Aug-23	Midlands
21	23216	AMT 158	10	Gold	09-Aug-00	09-Aug-23	Midlands
22	23217	AMT 159	10	Gold	09-Aug-00	09-Aug-23	Midlands
23	23218	AMT 160	10	Gold	09-Aug-00	09-Aug-23	Midlands
24	21994	AMT 73	10	Gold	31-Oct-96	31-Oct-23	Midlands
25	21995	AMT 74	10	Gold	21-Oct-96	31-Oct-23	Midlands
26	21996	AMT 75	10	Gold	21-Oct-96	31-Oct-23	Midlands
27	21997	AMT 76	10	Gold	31-Oct-96	31-Oct-23	Midlands
28	21998	AMT 77	10	Gold	31-Oct-96	31-Oct-23	Midlands
29	21999	AMT 78	10	Gold	31-Oct-96	31-Oct-23	Midlands
30	22000	AMT 79	10	Gold	31-Oct-96	31-Oct-23	Midlands
31	22001	AMT 80	10	Gold	31-Oct-96	31-Oct-23	Midlands
32	22002	AMT 81	10	Gold	31-Oct-96	31-Oct-23	Midlands
33	22007	AMT 86	10	Gold	31-Oct-96	31-Oct-23	Midlands
34	22008	AMT 87	10	Gold	31-Oct-96	31-Oct-23	Midlands
35	22009	AMT 88	10	Gold	31-Oct-96	31-Oct-23	Midlands
36	11219BM	AMT 97	150	Gold	31-Oct-96; conversion to gold registered 5-Aug-22	31-Oct-23	Midlands
37	22012	AMT 120	10	Gold	16-Dec-96	16-Dec-23	Midlands
38	22013	AMT 121	10	Gold	16-Dec-99	16-Dec-23	Midlands
39	22014	AMT 122	10	Gold	16-Dec-96	16-Dec-23	Midlands
40	22015	AMT 123	10	Gold	16-Dec-96	16-Dec-23	Midlands
41	22016	AMT 124	10	Gold	16-Dec-96	16-Dec-23	Midlands
	Totals		550				



Figure 11: Location of the Maligreen Claims



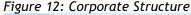
Minxcon has had sight of the following issued by the Zimbabwean Ministry of Mines and is satisfied with all validity and security of tenure:-

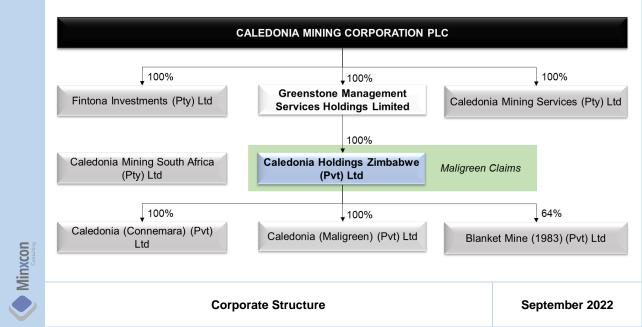
- most recent inspection certificates;
- transfer letter and Certificates of Registration After Transfer for change of each claims registered holding entity from Maligreen Mining Company (Pvt) Ltd ("MMC") to Caledonia Zimbabwe dated 3 November 2021; and
- accepted and registered conversion document for Claim AMT 97.

#### Item 4 (d) - Issuer's Title to/Interest in the Property

The claims are all held in the name of Caledonia Holdings Zimbabwe (Pvt) Ltd, which is a 100% held indirect subsidiary of Caledonia through Greenstone Management Services Holdings Limited, as illustrated in Figure 12.







A Tribute Agreement is in place with Silobela Youth in Mining Syndicate for the claims listed in Table 1 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

## Item 4 (e) - ROYALTIES AND PAYMENTS

Mining royalties are charged in terms of the Mines and Minerals Act (Chapter 21:05). The royalties are collectable from all the minerals or mineral-bearing products obtained from any mining location and disposed of by a miner or on his behalf. Maligreen is not in production and is not subject to these government royalties.

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.

## Item 4 (f) - Environmental Liabilities

Operating mines in Zimbabwe are required to set aside money as part of the closure plan and fulfilment of the provisions of the MMA and Environmental Management Act (Chapter 20:27) No. 13/2002 ("EM Act"). The Ministry of Mines is working on amendments to the MMA in which there will be conditions for protection of the environment through the Safety, Health and Rehabilitation Fund.

As far as Minxcon is aware, no statutory instrument has been gazetted implementing an environmental fund as yet, thus so no fees are currently due. Liabilities have not yet been calculated or budgeted for and are not currently due.

## Item 4 (g) - PERMITS TO CONDUCT WORK

Minxcon is not aware of further permits required or under application to undertake exploration activities at the claims.



## Item 4 (h) - OTHER SIGNIFICANT FACTORS AND RISKS

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

Minxcon is not aware of any significant factors or risks prevalent to the Project that may affect access or operations.



# ITEM 5 - ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

## Item 5 (a) - TOPOGRAPHY, ELEVATION AND VEGETATION

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

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, well represented with msasa, mupfuti and mopane trees (Trashliev, 2007).

#### Item 5 (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.

#### Item 5 (c) - Proximity to Population Centres and Nature of Transport

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.

The location of Maligreen in relation to the above-mentioned towns is illustrated in Figure 13.



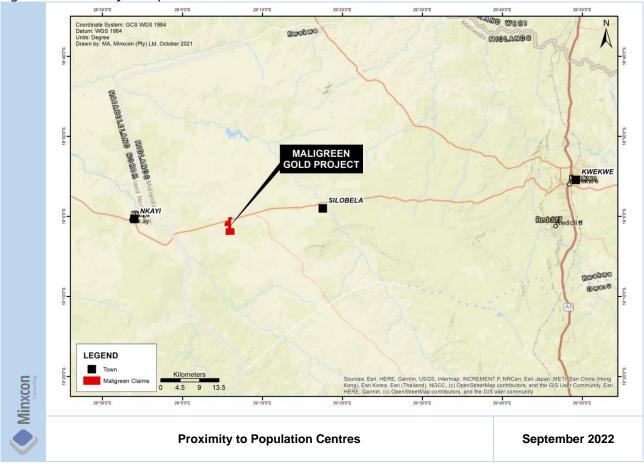


Figure 13: Proximity to Population Centres

#### Item 5 (d) - CLIMATE AND LENGTH OF OPERATING SEASON

The climate in Kwekwe is hot and semi-arid, classified as *BSh* type by the Köppen climate classification system. *BSh* is characterised by a hot to extremely hot summers and warm to cool winters, with minimal precipitation.

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%.

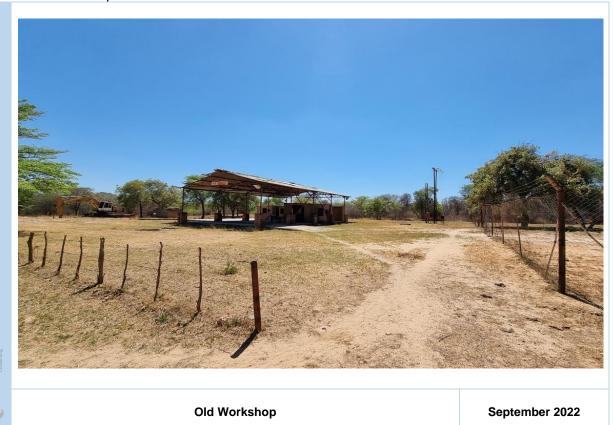
No appreciable exploration downtime is expected owing to unfavourable climatic or weather conditions. Activities can be conducted year-round.

#### Item 5 (e) - INFRASTRUCTURE

Infrastructure on site is minimal (Figure 1 and Figure 14). There are two open pits, namely North Pit and South Pit (Figure 5 and Figure 6), that were historically mined, as well as the heap leach pad and possible elution room (Figure 3) 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.



Figure 14: Old Workshop





## ITEM 6 - HISTORY

#### Item 6 (a) - Prior Ownership and Ownership Changes

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 claims were then held in the name of MMC. Caledonia Zimbabwe entered into an Agreement of Sale ("Sale Agreement") with MMC on 22 September 2021 to acquire the claims. The transfer process into the name of Caledonia Zimbabwe was completed on 3 November 2021.

## Item 6 (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; Figure 5 and Figure 6) 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.

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 (c) - HISTORICAL MINERAL RESOURCE ESTIMATES

Mineral Resources were estimated in 1998 by Reunion, in 2007 by Pan African and in 2012 by Digital Mining Services ("DMS"). These are reported variably and not considered compliant with any mineral reporting codes. The block models for each of the estimates was made available to Minxcon. From these, the Mineral Resources were rereported out at 0.4 g/t cut-off, for comparison purposes, and are presented in Table 2, Table 3 and Table 4. These were a combination of Measured, Indicated and Inferred Mineral Resources.

Table 2: Historical Mineral Resources as per Reunion Block Model (1998) at 0.4 g/t Cut-off

Orebody	Tonnes	Gold Grade	Gold Content	Density
	Mt	g/t	koz	t/m³
South	2.18	3.60	252.5	2.81
North	3.02	2.12	205.5	2.84
SplayS	0.64	2.59	53.4	2.83
SplayN	0.73	1.95	45.9	2.83
Total	6.57	2.64	557.3	2.83



Table 3: Historical Mineral Resources as per Pan African Block Model (2007) at 0.4 g/t Cut-off

Orebody	Tonnes	Gold Grade	Gold Content	Density
	Mt	g/t	koz	t/m³
South	2.46	6.07	480.7	2.74
North	2.66	3.61	308.5	2.67
SplayS	0.63	3.25	65.9	2.74
SplayN	ı	1	1	•
Total	5.75	4.62	855.1	2.71

Table 4: Historical Mineral Resources as per DMS Block Model (2012) at 0.4 g/t Cut-off

			, , ,	
Orebody	Tonnes	Gold Grade	Gold Content	Density
	Mt	g/t	koz	t/m³
South	1.43	5.21	240.1	2.82
North	1.81	2.95	172.0	2.82
SplayS	0.44	2.41	34.4	2.82
SplayN	0.60	3.16	60.9	2.82
Total	4.29	3.68	507.4	2.82

#### Item 6 (d) - HISTORICAL MINERAL RESERVE ESTIMATES

Various estimates have been presented as Mineral Reserves. As at 31 December 2003, Pan African estimated 0.16 Mt of Proved Mineral Reserves at 3.74 g/t for 19.3 koz of gold, and 0.42 Mt of Probable Mineral Reserves at 6.20 g/t for 83.8 koz gold.

## Item 6 (e) - HISTORICAL PRODUCTION

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.

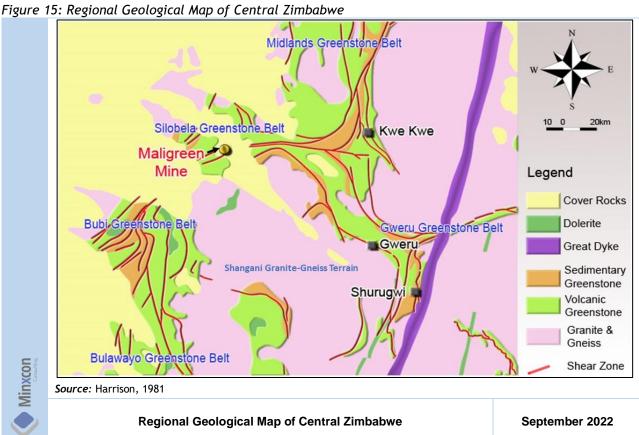


# ITEM 7 - GEOLOGICAL SETTING AND MINERALISATION

## Item 7 (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 (Figure 15). 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).



Regional Geological Map of Central Zimbabwe

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Maliyami Formation rocks comprise andesitic lava flows that are locally amygdaloidal or porphyritic, and interbedded with basalt, volcaniclastic 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

Minxcon—

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).

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 7 (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 5 mm 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 5 mm 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 unsheared 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 gained 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 3 m to 7 m thick cover the Maligreen deposit.



#### METAMORPHISM

The low-grade greenschist facies metamorphism of the country rock is marked by the assemblage of chlorite-epidote-actinolite-plagioclase.

#### I. STRUCTURE

Structural interpretation of the Maligreen deposit was done with the assistance of Professor Tom Blenkinsop of the University of Zimbabwe Geology Department (Mtetwa, 2007).

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 since 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).

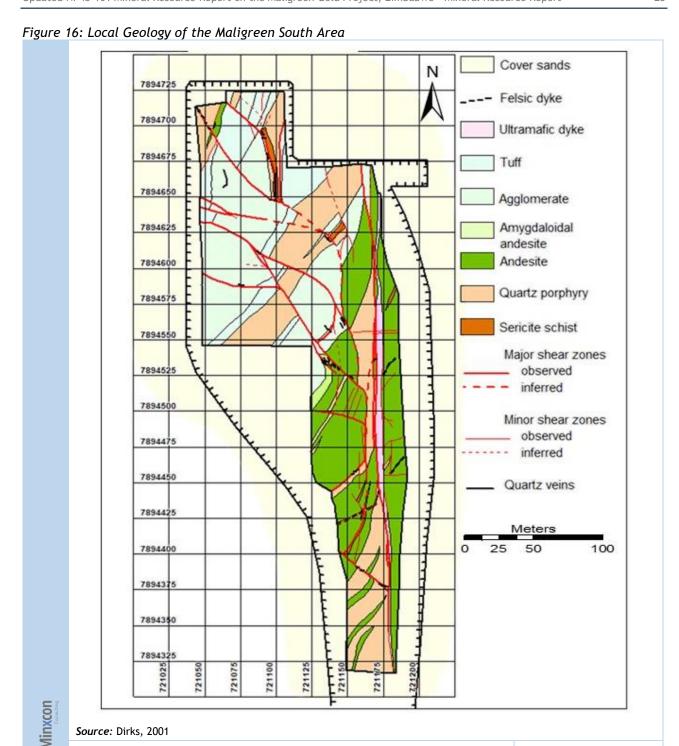
The calculated stress field indicates that during the formation of the shear zones;

- 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 16).





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.

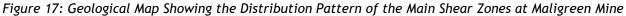
Local Geology of the Maligreen South Area

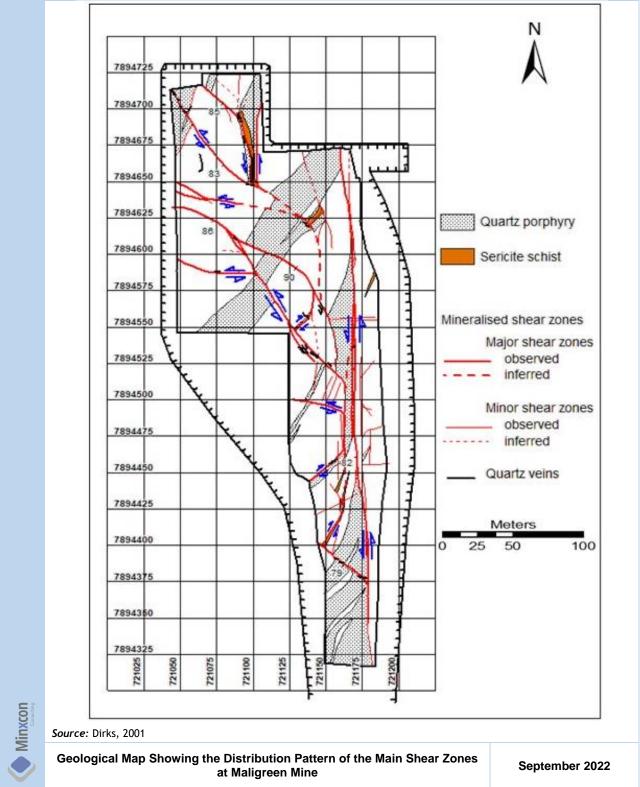
It is clear that the main zones of fluid infiltration occur along the intersection points of N-, NW- and WNW-trending shears within a sinistral shear system. Within such a system, these areas are clearly dilatant allowing more effective fluid impregnation. The intersection lineation between the three shear zone sets



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plunges steeply to the south (Figure 17). 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 brittleductile 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.

### II. ALTERATION

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 leucoxene. 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.

## Item 7 (c) - MINERALISATION

Gold mineralisation at Maligreen Project 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 8 - DEPOSIT TYPES

## Item 8 (a) - MINERAL DEPOSITS BEING INVESTIGATED

As part of this study, the total extents of the Maligreen Project area are being investigated. The data is focussed along known mineralisation and the geological model and resource definition considers the extents of all known mineralisation.

## Item 8 (b) - GEOLOGICAL MODEL

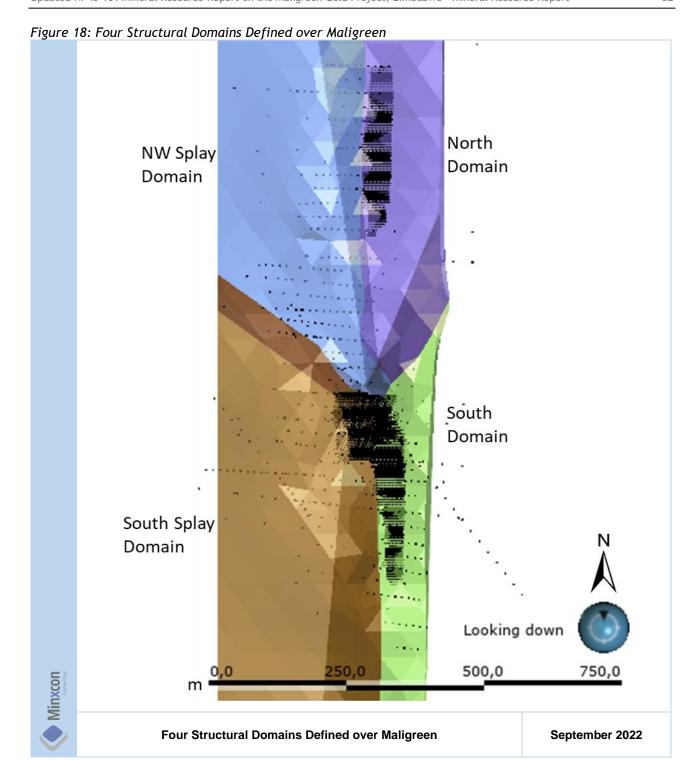
A structural model was defined to delineate separate structural domains and enable the separation of these zones for evaluation.

### 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 stereonets 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) (Figure 17).

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 18).

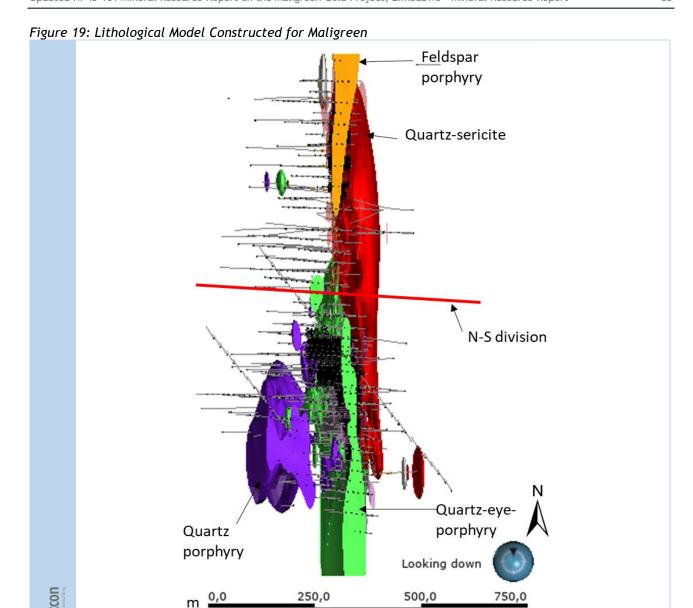




## II. LITHOLOGICAL MODEL

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 19).





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 19). 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 (Table 5). The mineralised lithologies are shown for each domain, with the primary host lithologies per domain highlighted in red (Table 5).

**Lithological Model Constructed for Maligreen** 



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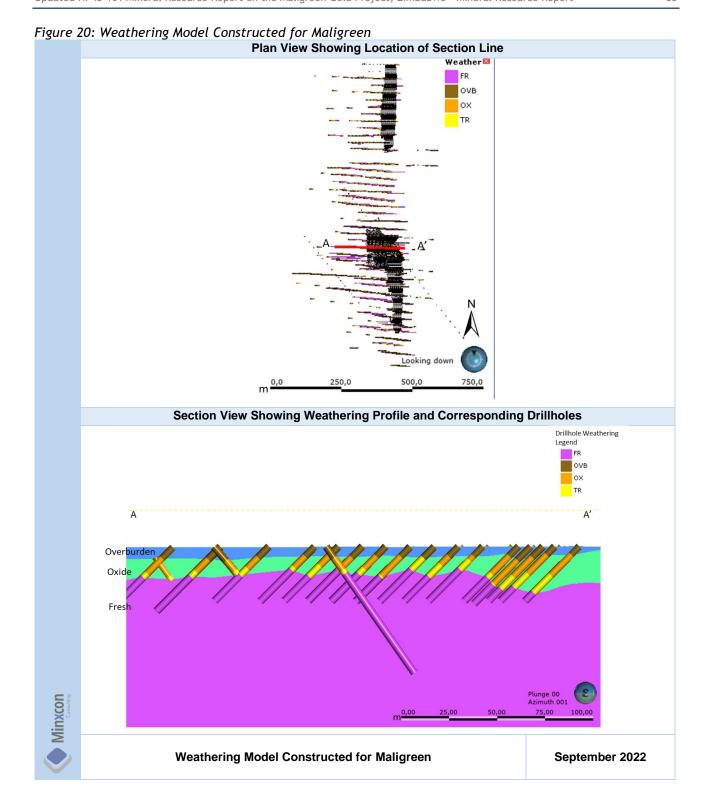
Table 5: Descriptive Statistics per Host Rock Lithology

Name	Domain	Count	Mean	StdDev	Median	Maximum
North	QSZ	135	4.46	5.51	3.15	32
North	FP	259	1.46	2.68	0.68	24
North	Basalt	67	1.32	2.98	0.26	15
North	Agglomerate	47	1.84	7.91	0.28	44
North	Andesite	23	1.22	1.99	0.47	8
North	QEP	27	5.80	10.29	0.58	30
North	Vein	17	1.12	0.71	1.10	3
SplayNorth	Dolerite	130	1.60	4.54	0.08	30
SplayNorth	Agglomerate	102	1.28	2.42	0.23	11
SplayNorth	Andesite	211	1.17	3.00	0.31	27
SplayNorth	FP	2	1.32	0.76	1.76	2
SplayNorth	Basalt	182	1.09	1.86	0.25	13
SplayNorth	Vein	38	2.72	4.30	1.79	27
South	QEP	907	5.28	10.40	0.83	75
South	Tuff	501	7.40	17.54	0.28	94
South	Agglomerate	150	4.31	12.50	0.15	99
South	Andesite	96	10.49	23.28	0.37	94
South	QSZ	225	0.98	1.46	0.35	13
South	Vein	32	15.75	30.67	4.08	131
SplaySouth	Agglomerate	183	5.75	17.45	0.27	98
SplaySouth	Tuff	195	3.13	9.48	0.10	60
SplaySouth	Andesite	125	2.10	5.44	0.11	41
SplaySouth	Sill	154	1.28	3.78	0.11	31
SplaySouth	Vein	36	1.91	3.82	0.18	17

### 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 20). 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.





### 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 21), as well as distinct orientations of mineralisation. The constructed grade halos can be seen in Figure 21.



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 21). The setup parameters employed in the creation of these domains is shown in Table 6. Sections through the Maligreen grade halos are shown in Figure 22.

Figure 21: Grade Halos per Domain (left) Compared to Lithological Model (Right) Constructed for Maligreen

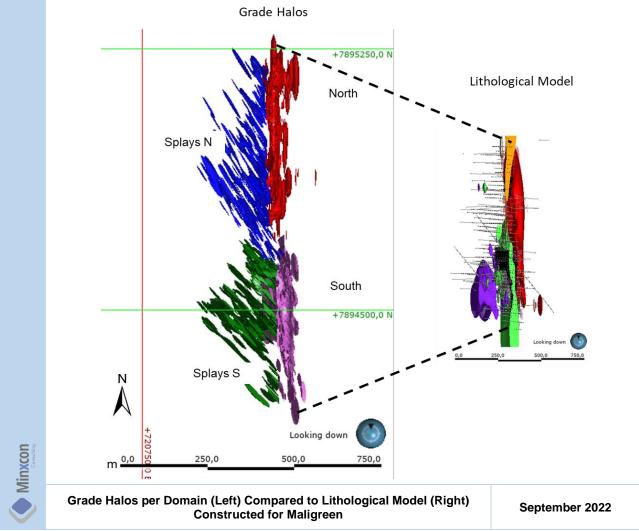
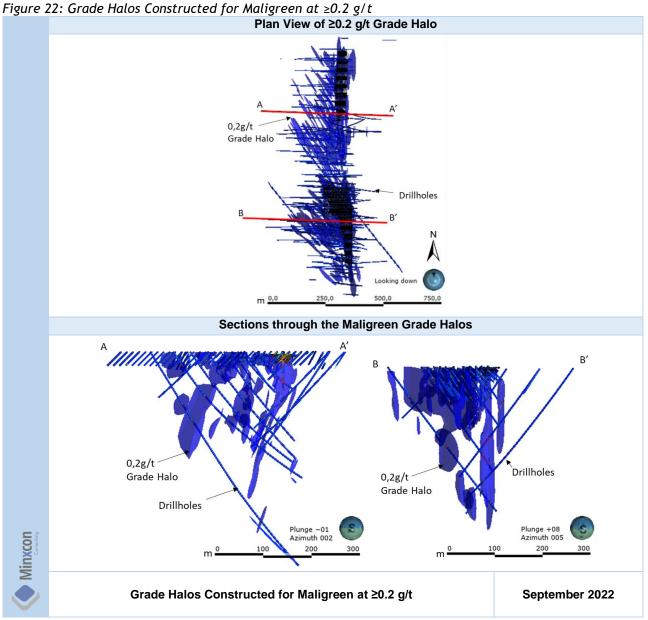




Table 6: Indicator Function Settings Used in Leapfrog Geo

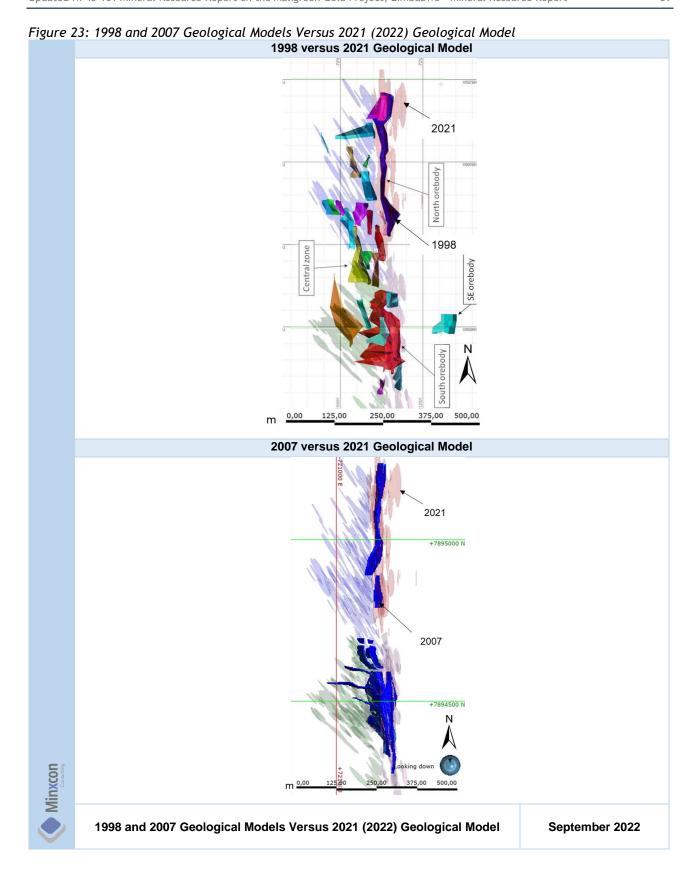
	Orebody	North Domain	South Domain	North Splay Domain	South Splay Domain
Item	Composite	1 m	1 m	1 m	1 m
	Cut-off	0.2	0.2	0.2	0.2
Interpolant settings	Interpolant Range	100	132	100	100
	Type	Spheroidal	Spheroidal	Spheroidal	Spheroidal
Settings	Drift	None	None	None	None
	Dip	88.8	72.6	88.2	78.8
Orientation	Dip-azimuth	271	267.9	58	225.6
	Pitch	136.9	136.9	37	153.6
Ellipsoid ratios	Max length	7	7	7	7
	Int Length	5	5	7	7
	Min length	1	1	1	1
Settings	Exact Clipping	у	у	у	у
	Resolution	10	10	10	10
	IsoValue	0.2	0.2	0.2	0.2





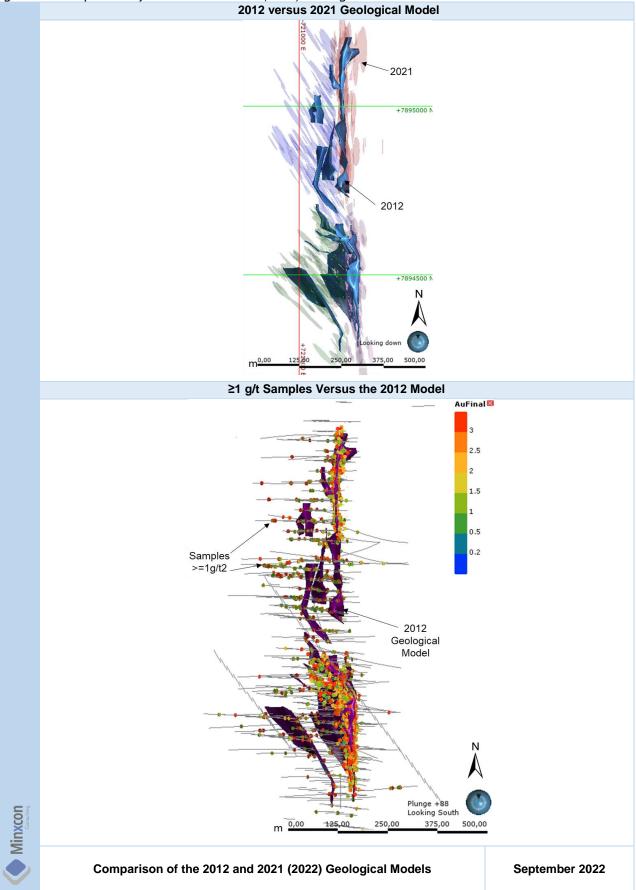
Previous versions of the geological model were available for comparison, during the construction of the grade halos, all other models were consulted to confirm trends and view change in interpretation. When viewing the previous versions, it was apparent that there were vast differences in interpretation between the different versions, particularly into the splay domains. The geological model and grade halos as reported in 2021 have not been modified and are current. 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). The previous models are compared to the 2021 update in Figure 23 and Figure 24. In addition, all samples >1 g/t are shown in Figure 24, this shows there is still high grade in the splay areas that was not captured by the previous versions of the models. In all images the 2021 geological model (current as at 2022 date of this Report as well) is shown semi-transparent for ease of comparison.













## ITEM 9 - EXPLORATION

Exploration and drilling work have been confined to that undertaken historically by Reunion in the period 1991 to 1997. The historical exploration data described below has been extracted from a Reunion report (1998) but the datasets are not available (only drilling information is available).

## Item 9 (a) - SURVEY PROCEDURES AND PARAMETERS

#### I. REGIONAL AEROMAGNETIC

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.

### II. REGIONAL GROUND GEOPHYSICS

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.

### III. GROUND MAGNETICS - LEADING TO DISCOVERY

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).

#### IV. ELECTROMAGNETIC SURVEY - LEADING TO DISCOVERY

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.

## V. IP SURVEY - LEADING TO DISCOVERY

A 7.5 kW IPC7 Scintrex Transmitter and an IPR10A receiver were utilised to survey lines at 100 m intervals. 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.

### VI. GROUND MAGNETICS - POST DISCOVERY

Total 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).

#### VII. ELECTROMAGNETIC SURVEY - POST DISCOVERY

Geophysics GPR (Private) Limited undertook the 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 1,777 Hz at 12.5 m station intervals.

### VIII. INDUCED POLARISATION SURVEY - POST DISCOVERY

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-porphyries intersected in the drillholes.

## Item 9 (b) - 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.

#### I. REGIONAL SPIRAL CONCENTRATE

A large 40 kg to 50 kg soil samples which were collected on a grid of  $400 \text{ m} \times 50 \text{ m}$  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.

### II. 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.

#### III. 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.

### IV. TRENCHING - POST DISCOVERY

Four trenches were dug using a mechanised digger, this trenches we 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.

## V. 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.

## VI. 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  $100 \text{ m} \times 25 \text{ m}$  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).

### VII. 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.

## Item 9 (c) - SAMPLE DATA

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

## Item 9 (d) - RESULTS AND INTERPRETATION OF EXPLORATION INFORMATION

### I. 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 10 - DRILLING

The drilling information is sourced from the Reunion report (1998) and pertains to the Reunion period.

## Item 10 (a) - Type and Extent of Drilling

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

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° 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° 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° 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° to -90° and drilled on an azimuth of either 90° or 270°.

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 7 below presents a summary table of all the drilling campaigns at Maligreen Project.

Table 7: Summary of Drilling Campaigns at Maligreen Project

Туре	Phase	Year	Contractor	Core Size	No. of	Metres Drilled	No. of	Metres Drilled
Type	1 Huse	i cai	Oomiraotor	OOI C OIZC	Drillholes	m	Deflections	m
Percussion	1	1995 - 1997	Drill Well	-	369	15,385.00	ı	-
Percussion	2	1995 - 1997	Source	-	231	17,299.00	ı	=
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	BQ	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	-	-
Total Percussion Drillholes			600	32,684.00	-	-		
Total RC Drillholes				42	1,853.00	-	-	
Total Diamond Drillholes				113	28,925.64	-	-	
Total Drillho	Total Drillholes				755	63,462.64	3	168.22

Between 1995 and 1998 drilling, drillhole collars were survey 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).

## Item 10 (b) - FACTORS INFLUENCING THE ACCURACY OF RESULTS

Owing to unavailability of the drillhole recovery data, Minxcon could not assess the drillhole recoveries. Beside drillhole recoveries and quality assurance and quality control ("QAQC") data, Minxcon 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. In 2021, Minxcon downgraded the Mineral Resource classification to Inferred due to the lack of QAQC data and the historical nature of the data. On recommendation by Minxcon, Caledonia re-sampled and re-assayed the historical core that was discovered in a core yard. This confirmatory exercise, in early 2022, has allowed for the upgrade of the Mineral Resource to measured and indicated in this Mineral Resource update. During this exercise it was evident that the core was in good condition and the core recovery also appears good.



# Item 10 (c) - 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 7 above summaries the number of percussion, RC and diamond drillholes that were drilled within the limits of the Maligreen Project. Table 7 above 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 11 - SAMPLE PREPARATION, ANALYSES AND SECURITY

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

## Item 11 (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 11 (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  $\mu$ m 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 HNO3 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 11 (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 programme.

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. All the QAQC graphs were compiled by Minxcon from the historical data.

A total of 2,382 chip and core duplicate samples were analysed for gold at SGS laboratory. Figure 25 below presents the initial duplicate repeat QAQC graph (RMZ1). 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.

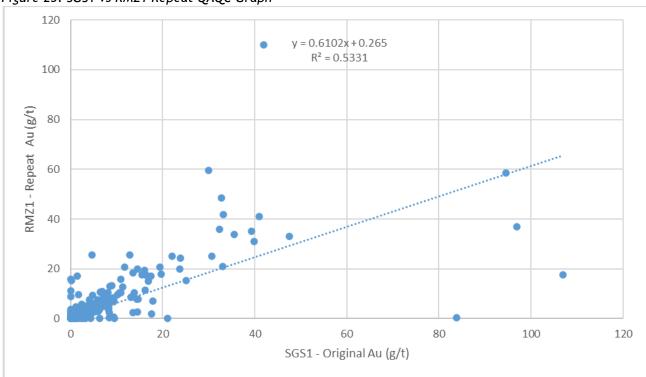


Figure 25: SGS1 vs RMZ1 Repeat QAQC Graph



0 0

10

20

30

40

Figure 26 presents the second duplicate repeat QAQC graph (RMZ2). The results of the second duplicate repeats (475 samples) show average correlation with correlation coefficient of 0.7763. The average original gold assay was 8% higher than the average second repeat gold assay.

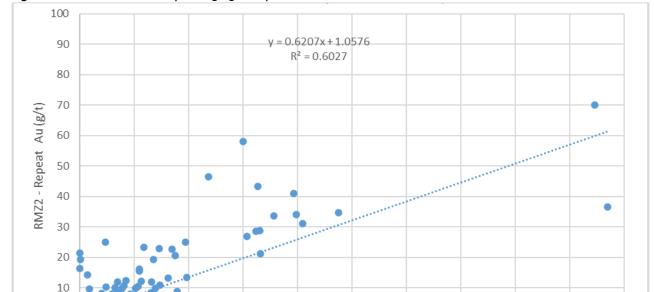


Figure 26: SGS1 vs RMZ2 Repeat QAQC Graph

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).

50

SGS1 - Original Au (g/t)

60

70

80

90

100

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. Figure 27 to Figure 35 presents the repeat QAQC graphs of the control samples.

A total of 93 CMG1 standard samples were analysed for gold at SGS laboratory. Figure 27 below presents the initial CMG1 standard repeat QAQC graph. 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.



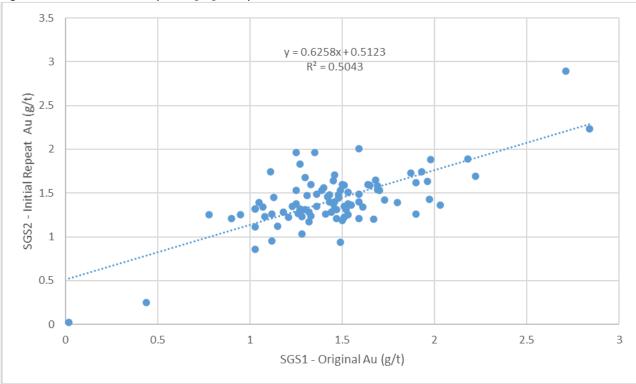


Figure 27: Initial CMG1 Repeat QAQC Graph

Figure 28 presents the second CMG1 repeat QAQC graph. 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. Figure 29 presents the initial CMG2 standard repeat QAQC graph. 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.



Figure 28: CMG1 Second Repeat QAQC Graphs

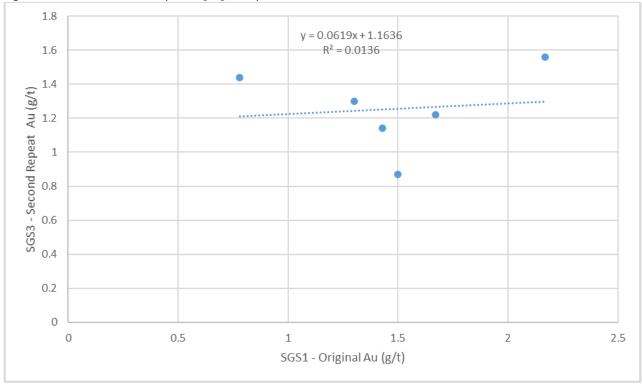


Figure 29: CMG2 Repeat QAQC Graph

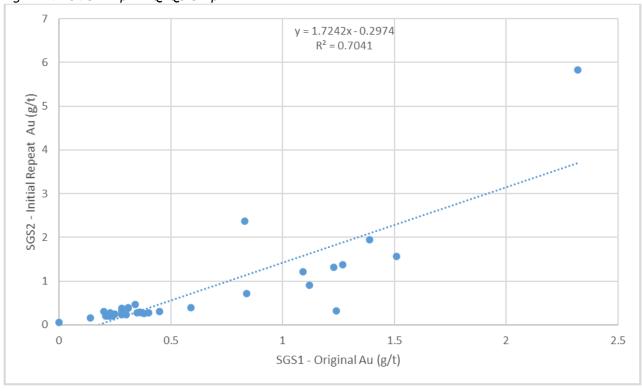


Figure 30 presents the second CMG2 repeat QAQC graph. The average original CMG2 gold assay was 82% lower than the average second CMG2 repeat gold assay.



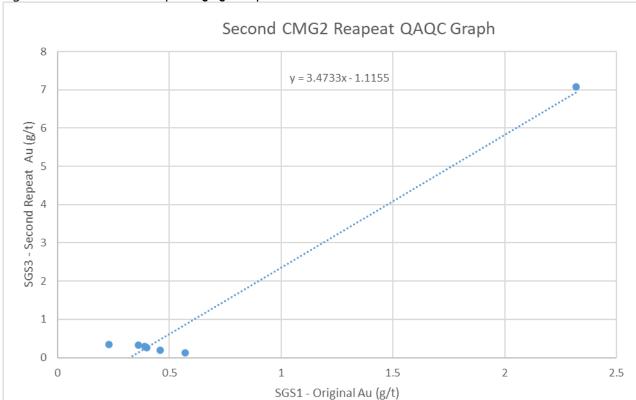


Figure 30: Second CMG2 Repeat QAQC Graph

A total of 16 CMG3 standard samples were analysed for gold at SGS laboratory. Figure 31 presents the initial CMG3 standard repeat QAQC graph. 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.

Figure 32 presents the initial CMG4 standard repeat QAQC graph. 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.

Figure 33 presents the second CMG4 repeat QAQC graph. 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.



Figure 31: Initial CMG3 Repeat QAQC Graph

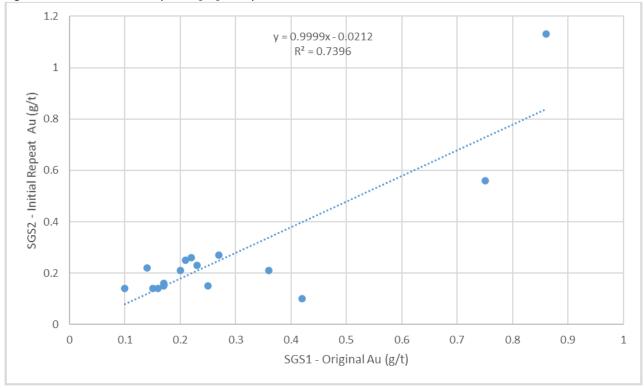
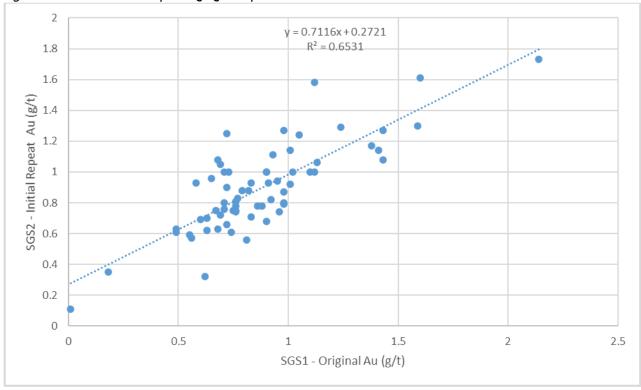
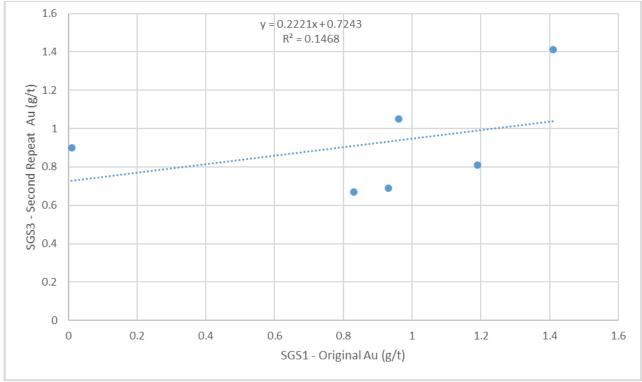


Figure 32: Initial CMG4 Repeat QAQC Graph









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. Figure 34 below presents the initial control repeat QAQC graph.

Figure 34: Initial Control Repeat QAQC Graph

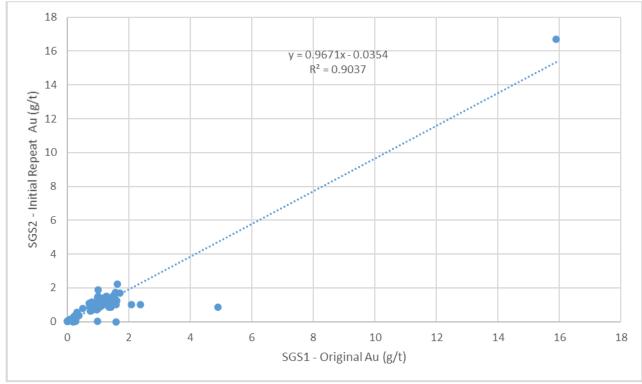
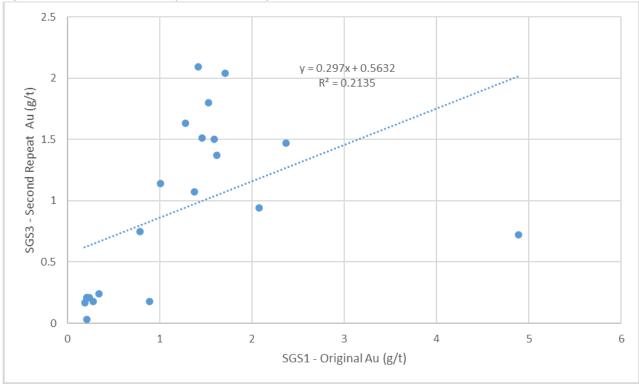




Figure 35 below presents the second control repeat QAQC graph. There was no correlation between the original control and second control repeat assay (R = 0.4621). The average original control gold assay was 24% higher than the average second control repeat gold assay.

Figure 35: Control Second Repeat QAQC Graph

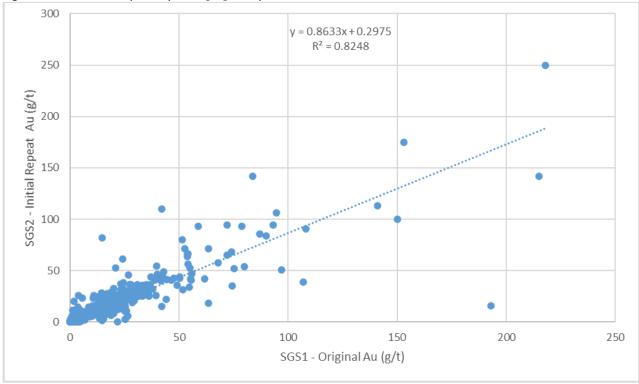


Laboratory repeats were done at SGS when the laboratory was not satisfied with an assay value, especially anomalous assay value > 0.5 g/t two assay repeats were done to obtain a satisfactory assay result. These two repeats were reported as SGS2 (Figure 36) for the initial repeat and SGS3 (Figure 37) for the second repeat.

Figure 36 below presents the initial sample repeat QAQC graph. 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.

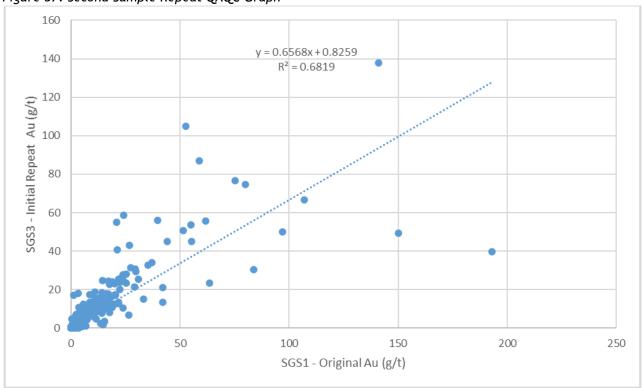






A total of 1,247 samples were re-assayed for the second time. Figure 37 below presents the second sample repeat QAQC graph. The results of the second sample repeat show average correlation with correlation coefficient of 0.8258. The average original sample gold assay was 11% higher than the average second sample repeat gold assay.

Figure 37: Second Sample Repeat QAQC Graph





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 Minxcon 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 form 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. Figure 38 presents the umpire samples analysis at the Glencor Process Research. 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 Glencor Process Research.

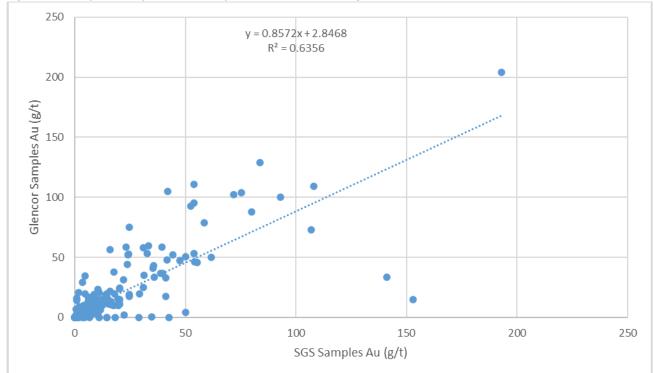


Figure 38: Umpire Sample QAQC Graph - 1995-1998 Drilling

#### II. 2001 DRILLING

No blanks nor standards were submitted for assay during the 2001 drilling programme. During this phase, the QAQC procedure was different form 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. Data pertaining to the duplicate samples were not available at the time of reporting, hence Minxcon could not generate the duplicate QAQC graph.

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 (Figure 39).



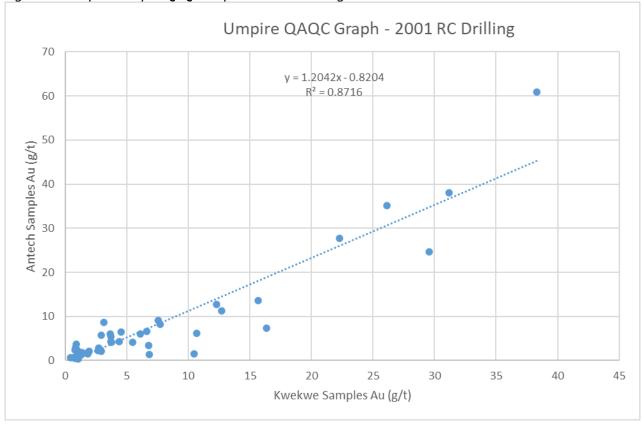


Figure 39: Umpire Sample QAQC Graph -2001 RC Drilling

### III. 2022 Re-SAMPLING PROGRAMME QAQC

Caledonia geologists re-sampled the historical half core located in the core yard. The half core was quartered, and the samples were taken in the same intervals as the historical logging and sample intervals so that the sample correlation would be as close as possible. The samples were given unique identification numbers and bagged with QAQC samples also being inserted into the sample sequence. The QAQC samples were inserted so that every 14 samples would contain a blank, duplicate and a CRM (certified reference material). In addition to this for every drillhole the first and last sample was also a blank sample. There was a high grade, medium and low grade CRM.

The samples were submitted to the Antech laboratory in Kwekwe, which is an accredited laboratory. 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. Antech laboratory's original date of accreditation is 1 December 2017.

Table 8 is a summary of the African Mineral Standards "AMIS" reference material used in the re-sampling exercise.



Table 8: Summary of the Certified Reference Material used in the Re-sampling Exercise

CRM ID	Expected Value	2SD Maximum	2SD Minimum	
CKIVI ID	(g/t)	(g/t)	(g/t)	
AMIS_0519	1.61	1.71	1.51	
AMIS_0523	0.078	0.098	0.058	
AMIS_0559	12.01	12.829	11.191	
AMIS_0605	0.783	0.893	0.673	
AMIS_0719	0.897	0.968	0.826	
AMIS_0720	1.19	1.285	1.095	
AMIS_0724	2.38	2.62	2.14	
AMIS_0748	1.38	1.58	1.18	
AMIS_0777	0.068	0.082	0.054	
AMIS_0577	0.00			
AMIS_0793	0.00			

The results of the QAQC reference material samples are shown in Table 9. There is an overall pass rate of 74% with one or two reference materials such as AMISO519, AMISO559 and AMISO777 not performing well. The reason for this is not clear. The protocol was however that if a batch QAQC failed, the batch would be re-assayed and the re-assayed result and original result were averaged.

Table 9: Summary of the Reference Material Results for the Re-sampling Exercise

CRM		# of Samples		
	Total	6		
AMIS_0519	Failed	4	67%	
	Passed	2	33%	
	Total	173		
AMIS_0523	Failed	29	17%	
	Passed	144	83%	
	Total	8		
AMIS_0559	Failed	5	63%	
	Passed	3	38%	
	Total	36		
AMIS_0605	Failed	2	6%	
	Passed	34	94%	
	Total	27		
AMIS_0719	Failed	6	22%	
	Passed	21	78%	
	Total	1		
AMIS_0720	Failed	0	0%	
	Passed	1	100%	
	Total	17		
AMIS_0724	Failed	4	24%	
	Passed	13	76%	
	Total	18		
AMIS_0748	Failed	0	0%	
	Passed	18	100%	
	Total	90		
AMIS_0777	Failed	46	51%	
	Passed	44	49%	
	Total	376		
Grand Total	Failed	96	26%	
	Passed	280	74%	

472 blank QAQC samples were inserted into the sample sequence with a 96% pass rate below the three times the detection limit of 0.06 g/t.

Figure 40 shows the correlation of the 228 duplicate samples inserted into the re-sampling sampling sequence. The duplicate samples have a 94% correlation.



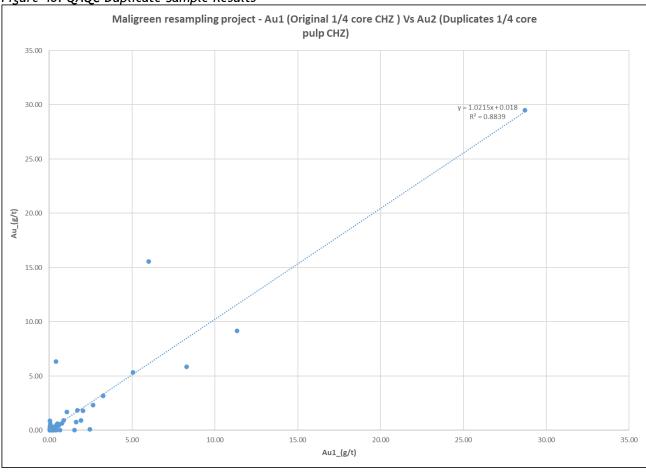


Figure 40: QAQC Duplicate Sample Results

Based on the overall results of the QAQC for the re-sampling exercise (Table 10) the QP deems the QAQC of the confirmatory re-sampling exercise to be acceptable.

Table 10: Summary of the Total QAQC Samples of the Re-Sampling Exercise

Sample Type	# Samples	% Pass / Correlation
CRM	376	74% passed
Blanks	472	96% passed
Duplicates	228	94% correlation
Total		1,076

The QAQC samples for the results received for this update is 738 for the 2,572 re-sampled samples. This equates to 22% QAQC samples.

## Item 11 (d) - ADEQUACY OF SAMPLE PREPARATION

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, aquaregia 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 contributed to the Mineral Resource only being declared as an Inferred category in the previous Mineral Resource of November 2021.



In November 2021 it was recommended to re-assay the historical core that was 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.

The re-sampling and re-assaying exercise was completed in 2022 which has resulted in the upgrade of the Mineral Resource classification.



# ITEM 12 - DATA VERIFICATION

## Item 12 (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 (Figure 41). 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 worth noting 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 42). 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.

P-P plot for percent ranks of DD versusu PH Q-Q plot for percentile of DD versus PH 0.90 0.80 0.70 0.25 45 Line ₹ 0.60 표 0.20 0.50 0.15 0.40 0.10 0.30 0.05 0.20 0.00 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00

Figure 41: QQ and PP Plots for Diamond and Percussion Drillholes

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.



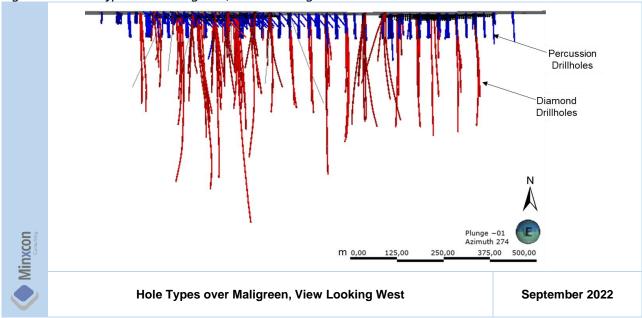


Figure 42: Hole Types over Maligreen, View Looking West

# Item 12 (b) - LIMITATIONS ON/FAILURE TO CONDUCT DATA VERIFICATION

There were limitations to the QAQC performed during the drilling campaigns and concerns with respect to the results of the QAQC. This was one of the reasons that, in November 2021, the data was deemed of sufficient quality for an Inferred Mineral Resource classification only. A confirmatory exercise was therefore recommended in November 2021 to re-sample and re-assay the available historical core. This was undertaken by Caledonia and the methodology and results of the re-sampling exercise are detailed below.

## I. 2022 RE-SAMPLING AND RE-ASSAYING EXERCISE

Caledonia geologists re-sampled the historical half core located in the core yard. The half core was logged and then quartered, and the samples were taken in the same intervals as the historical logging and sample intervals so that the sample correlation would be as close as possible.

Of the 107 diamond drillholes in the database 49 drillholes were re-sampled. Not all the re-assay results had been received by the time of writing this CPR. However, 33 of the 49 drillholes assay data was complete with the remaining being partially received. Figure 43 shows the distribution of the samples received to date. It is evident from this figure that the distribution of the confirmatory re-sampling exercise is spread throughout the resource. A total of 1,132 sample results of the 3,704 samples were still outstanding.



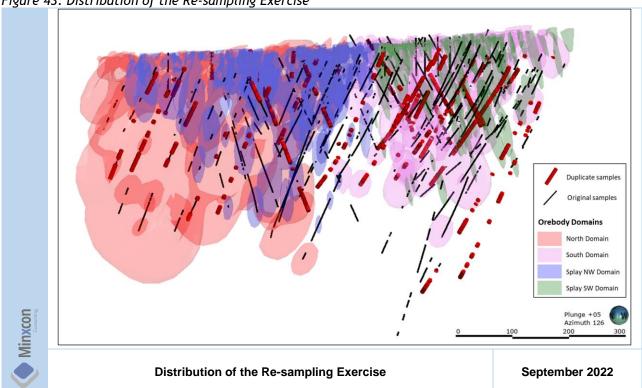


Figure 43: Distribution of the Re-sampling Exercise

Table 11 shows the percentage of diamond drillhole samples within the mineralisation wireframes that have been re-sampled and re-assayed for the confirmatory exercise. Therefore, a total of 14% of the samples informing the resource model and estimation have been re-assayed.

Table 11: Summary of Diamond Drillhole Samples per Domain within the Mineralisation Wireframes

Domain	Original DD Sample	Duplicate Sample Count	Percentage Duplicate
North	923	147	16%
South	2,045	222	11%
Splay NW	3,227	521	16%
Splay SW	1,230	120	10%
Total	7,425	1,010	14%

The total sampling database, including percussion and bench drill samples, is 68,686 samples (includes samples outside of the mineralisation wireframes). The total duplicate samples received to date is 2,572 samples which equates to 3.74% of the total database.

The mean of all the samples for the original samples and the re-sampling exercise is the same at 0.68 g/t and for the samples excluding the below detection limit samples are also the same at 2.08 g/t.

The correlation coefficient for all the samples is 79% (Figure 44) and for the samples above detection limit is 78%. For this type of gold deposit with a high nugget effect a correlation coefficient of 79% is deemed to be a good result.

The HARD plot (Figure 45) indicates that the 60% of the samples are within 20%.



Figure 44: Scatter Plot of all the Samples

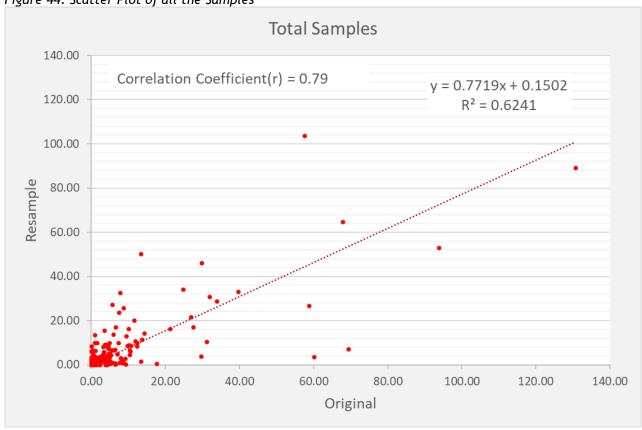
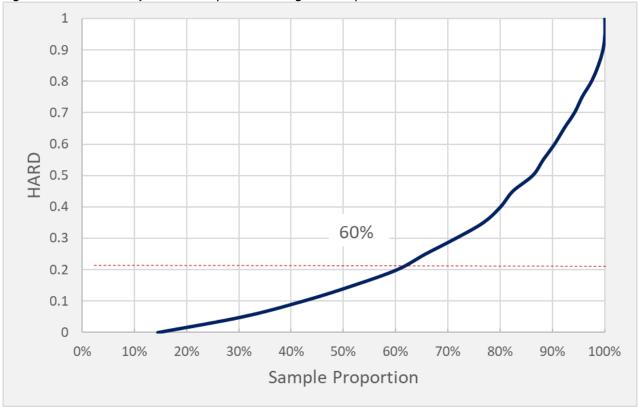


Figure 45: HARD Plot of all the Samples Excluding the Samples below Detection Limit





# Item 12 (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. The confirmatory resampling exercise has increased the confidence in the drillhole database so that Measured and Indicated Mineral Resources can now be declared. The QP is satisfied that the historical database is of sufficient quality to declare a Measured and Indicated Mineral Resource.



# ITEM 13 - MINERAL PROCESSING AND METALLURGICAL TESTING

# Item 13 (a) - NATURE AND EXTENT OF TESTING AND ANALYTICAL PROCEDURES

Historically, laboratory floatation tests were done 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. Floatation tests were done to determine optimal conditions, and the optimal conditions were used in a bulk floatation concentrate test. This bulk concentrate was analysed and was also used for BIOX tests. The floatation tailings were leached with cyanide.

The diagnostic leach tests showed that a significant portion of the gold is locked in sulphide minerals as seen in Figure 46.

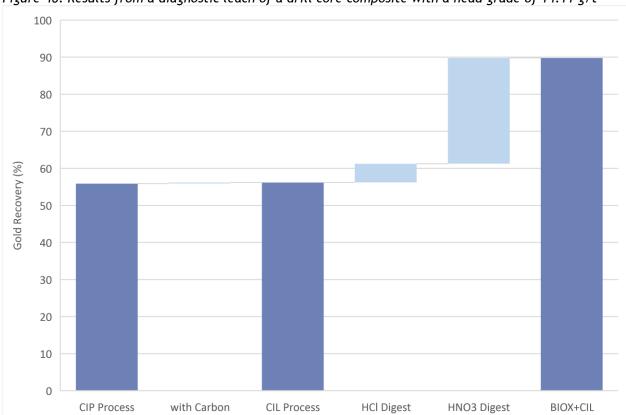


Figure 46: Results from a diagnostic leach of a drill core composite with a head grade of 14.11 g/t

Flotation produced a gold recovery of 95% for a range of 6 g/t to 14 g/t. The floatation concentrate grade was 55 g/t to 75 g/t.

Biological oxidation ("BIOX®") of the concentrate was done over a period of 20 days to produce the extraction seen in Figure 47. The extraction achieved was as high as 98%, but a good extraction of 94% was already achieved after 7 days.



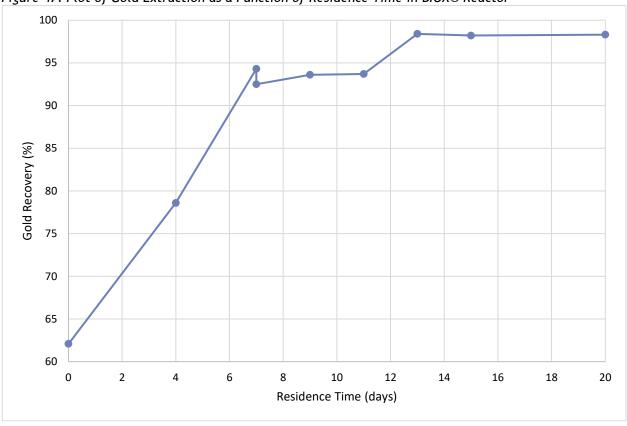


Figure 47: Plot of Gold Extraction as a Function of Residence Time in BIOX® Reactor

# Item 13 (b) - Basis of Assumptions Regarding Recovery Estimates

The 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 48.

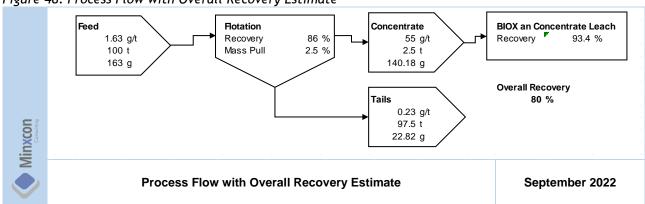


Figure 48: Process Flow with Overall Recovery Estimate

# Item 13 (c) - REPRESENTATIVENESS OF SAMPLES

Samples used in the floatation 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.



# Item 13 (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.



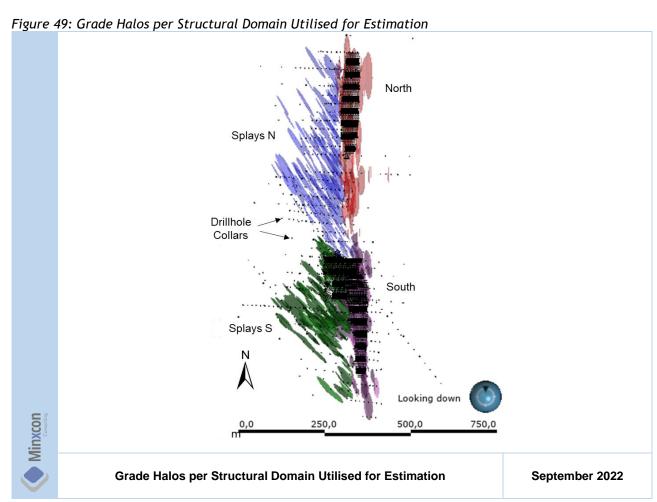
## ITEM 14 - MINERAL RESOURCE ESTIMATES

## Item 14 (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 49), 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.



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. The statistics of length per domain is shown in Table 12.



Table 12: Length Statistics per Domain

Domain	Count	Mean	Standard Deviation	Minimum	Maximum	
	Count	m	Standard Deviation	m	m	
North	2,285	0.97	0.29	0.01	2.2	
South	3,220	0.51	0.44	0.01	2.17	
SplayN	2,691	0.95	0.27	0.01	4.38	
SplayS	2,405	0.66	0.44	0.01	2.21	

The statistics of the uncomposited dataset versus composited datasets are shown in Table 13 and Table 14. Compositing has had a minimal effect on the domain statistics.

Table 13: Uncomposited Domain Statistics

Orebody	Valid Samples	Minimum	Maximum	Average	Std. Dev	
	valid Salliples	g/t	g/t	g/t	Sia. Dev	
North	3,114	0	67.89	1.22	3.31	
South	3,722	0	164	3.51	9.87	
SplayNW	2,734	0	234	1.22	6.46	
SplaySW	3,014	0	97.65	1.47	5.85	

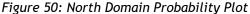
Table 14: Composited Domain Statistics

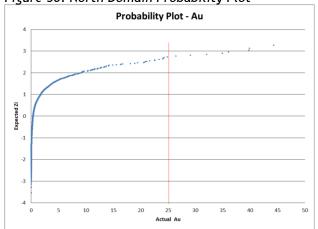
Orebody	Valid Samples	Minimum	Maximum	Average	Std. Dev	
		g/t	g/t	g/t	Sta. Dev	
North	3,089	0	67.89	1.21	3.19	
South	2,141	0	94.4	3.48	9.15	
SplayNW	2,625	0	234	1.20	6.37	
SplaySW	2,203	0	97.65	1.46	5.48	

## 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, all domains are shown from Figure 50 to Figure 53, with the results in Table 15. 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.





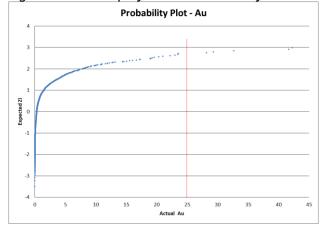


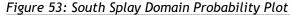
Probability Plot - Au

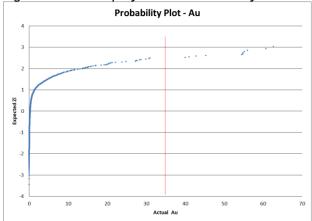
Probability Plot - Au

Probability Plot - Au

Figure 52: North Splay Domain Probability Plot







The capping values applied per domain is shown in Table 15.

Table 15: Capping Values Applied

Orobody	Variography Top Cap and Kriging Top Cut			
Orebody	g/t			
North	25			
South	55			
North Splays	25			
South Splays	35			

# iv. Geostatistical Analysis and Variography

All variography was carried out in Leapfrog Edge. All Variography parameters are summarised in Table 16. Variography for all domains is seen in Figure 54 to Figure 57.

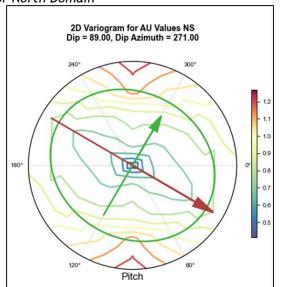


Table 16: Variogram Parameters

Orebody	Dip	Dip Azimuth	Pitch	Nugget	Nugget: Sill %	Major Direction (1 <sup>st</sup> Structure)	Semi_major direction (1 <sup>st</sup>	Minor (1 <sup>st</sup> Structure)	C1	Major (2 <sup>nd</sup> Structure)	Semi_MAjor (2 <sup>nd</sup> Structure)	Minor (2 <sup>nd</sup> Structure)	C 2
	0	0	0			m	m	m		m	m	m	
North	88.8	271	30	0.6434	49%	23.18	17.19	13	0.1451	98.18	83.85	17.78	0.1471
South	72.6	26	144	0.5018	30%	59.63	38.62	15.95	0.3975	144.8	69.02	42.22	0.0869
North													
Splay	88.2	58	148	0.9628	61%	38.86	22.95	36.21	0.029	219.7	161	39.92	0.0112
South													
Splay	78.8	225	30	0.8468	48%	33.74	33.86	17	0.1287	108.1	72.26	64	0.0244



Figure 54: Variogram Contours and Variography for North Domain



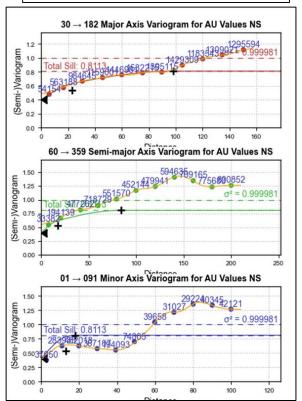
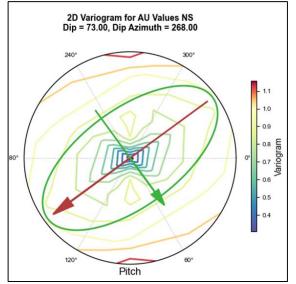
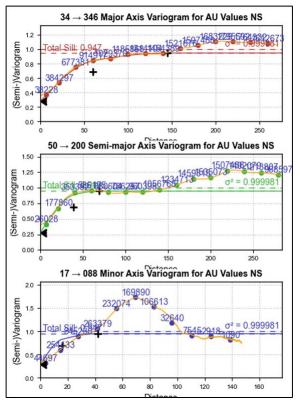
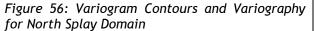


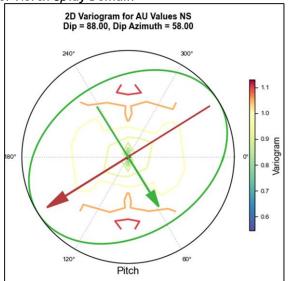
Figure 55: Variogram Contours and Variography for South Domain











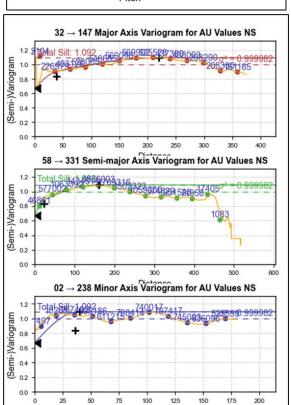
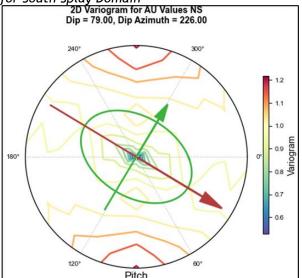
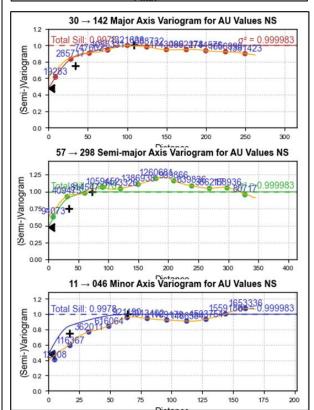


Figure 57: Variogram Contours and Variography for South Splay Domain

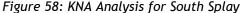


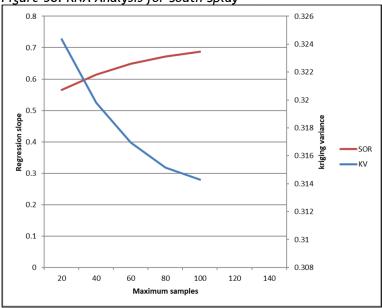


# v. Kriging Neighbourhood Analysis

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 KNA generated for the south splay domain is shown for reference (Figure 58). 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.







The estimation parameters utilised are shown in Table 17. 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.

Table 17: Estimation Parameters Utilised

Search Range	Domain	North	South	South Splay	North Splay	
	Capping	25	55	35	25	
	Variogram Log					
	Dip	89	73	79	88	
	Azimuth	271	268	226	58	
	Pitch	30	144	152	148	
	Range Max	98	145	124	220	
Svol1	Range Int	84	69	43	161	
	Range Min	18	42	50	40	
	Min Samples	18	18	18	18	
	Max Samples	40	60	60	40	
	Min Drillholes	6	6	6	6	
	Estimation Method	OK	OK	OK	OK	
	Block Discretisation	5x5x2	5x5x2	5x5x2	5x5x2	
	SVOL2 1.5 X SVOL1					
	Estimation Method	OK	OK	OK	OK	
Svol2	Min Samples	9	9	9	9	
	Max Samples	30	30	30	30	
	Min Drillholes	3	3	3	3	
	SVOL3		2	2 x SVOL1		
	Estimation Method	OK	OK	OK	OK	
Svol3	Min Samples	6	6	6	6	
	Max Samples	30	30	30	30	
	Min Drillholes	2	2	2	2	
	SVOL4		to ext	ents of domain		
	Estimation Method	OK	OK	OK	OK	
Svol4	Min Samples	6	6	6	6	
	Max Samples	20	30	20	30	
	Min Drillholes	2	2	2	2	



## vi. Grade Estimation

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

## vii. Bulk Density

In 2021 density measurements were available for the different weathering zones. Minxcon utilised the same densities utilised during 1998 and 2012. It must also be 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 18).

Table 18: Densities Utilised for Maligreen Mineral Resource Estimation

Model	Kalahari Sand	Oxide	Transitional	Sulphide
Wodei	t/m³	t/m³	t/m³	t/m³
Reunion 1998	1.6	2.44	2.67	2.86
	Unknown	2.33	2.33	Main - 2.74 - Main FW and HW reefs
PAM 2007			Propylite - 2.82 - Middle reef in	
PAIVI 2007				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
Minxcon 2022			2.57	2.65

In 2022 during the re-sampling exercise Caledonia also did bulk density measurements on the historical core. They utilised a water displacement method for determining the density of rock samples. This entails measuring the weight of the dry sample as well as the amount of water displaced by that sample in a beaker filled with one litre of water; after the sample is fully submerged. The density is then calculated using the formula in Equation 1.

Equation 1: Density Formula

$$Density = \frac{Mass}{\Delta Volume}$$

Therefore: Density of sample =  $\frac{\text{Dry mass (Density sample mass in grams)}}{\text{Final volume}}$ 

Density measurements for 6 269 samples were made available to Minxcon for review. Densities range between 1.32 t/m³ and 4.48 t/m³, with a mean density of 2.98 t/m³. Lithologies that host gold grade within the orebody wireframes are tuffs, quartz veins, quartz porphyry, quartz eye porphyry, quart sericite and quartz sericite schists. The known densities of these rock types are typically lower than the average density measured for the total dataset. Probability plots and a review of typical rock densities were used to define a top (3.0 t/m³) and bottom cut (2.0 t/m³) that was applied to the density data. The density data filtered by orebody domain was utilised to calculate the average density for the fresh zone (2.65 t/m³). Due to the limited amount of data, the average density of the North Domain was used for the oxidised zone (2.57 t/m³). The methodology employed by Caledonia to measure densities requires a more detailed review. Specifically, the accuracy of the method applied to measure and read-off the amount of water displaced in the water beaker should be assessed. A change in the methodology based on the hydrostatic weighing of samples (dry and wet weight of a sample) may provide more meaningful results.

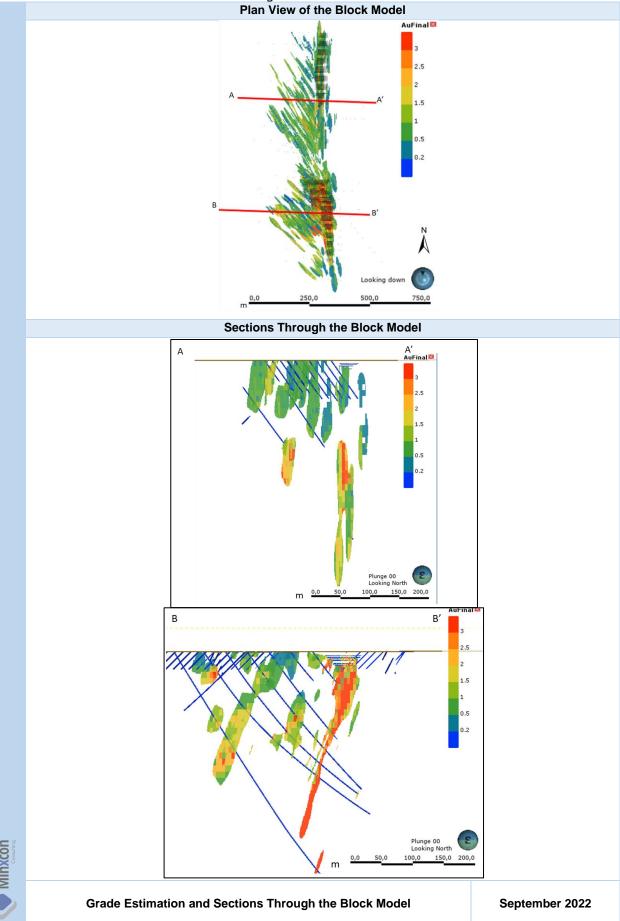


## viii. Estimation Results

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 59 and reflect the data well. The highest grades are seen in the southern domain with limited continuity of grade downdip. 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.

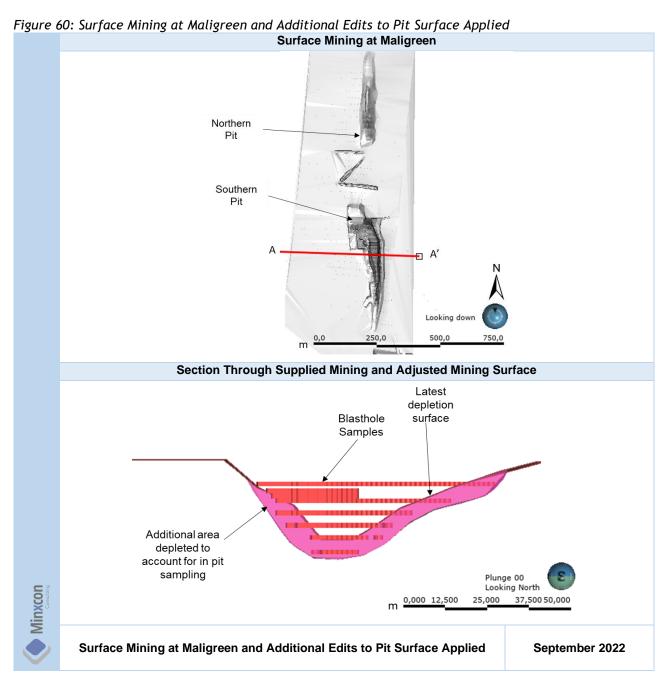


Figure 59: Grade Estimation and Sections Through the Block Model



## ix. Mining Depletions

Surface mining has taken place over Maligreen in a separate northern and southern pit (Figure 60). 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 60.

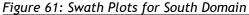


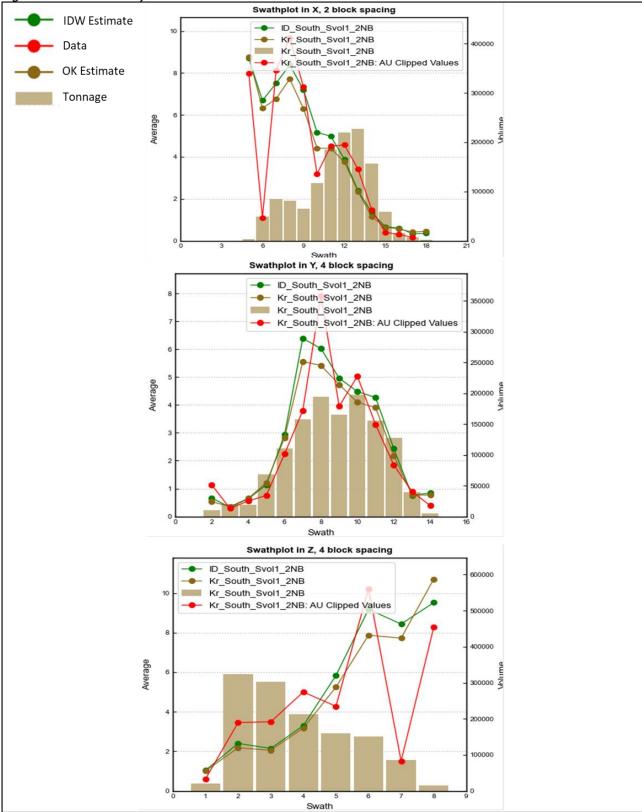
## x. Block Model Validation

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



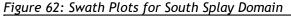
well to data in Figure 61 showing best correlation moving north to south, with some smoothing relative to data.

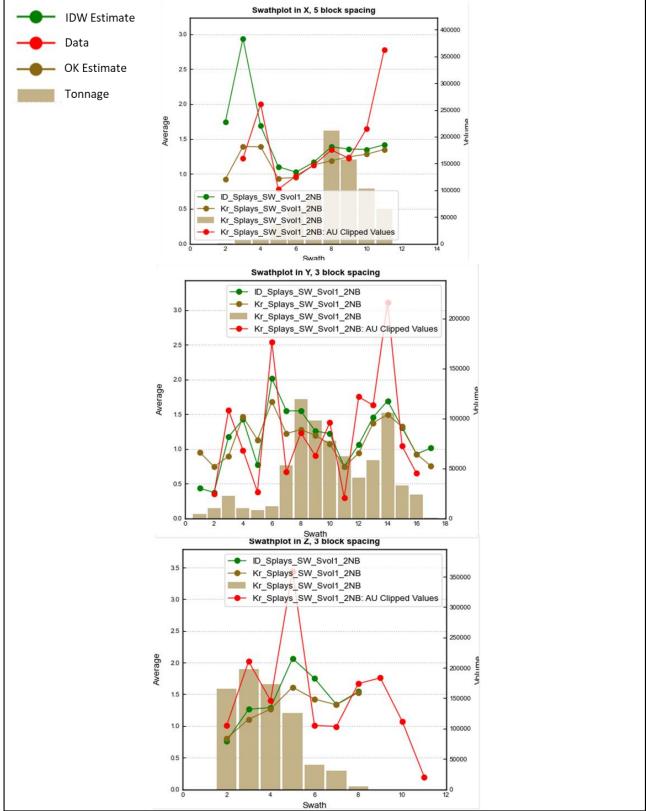






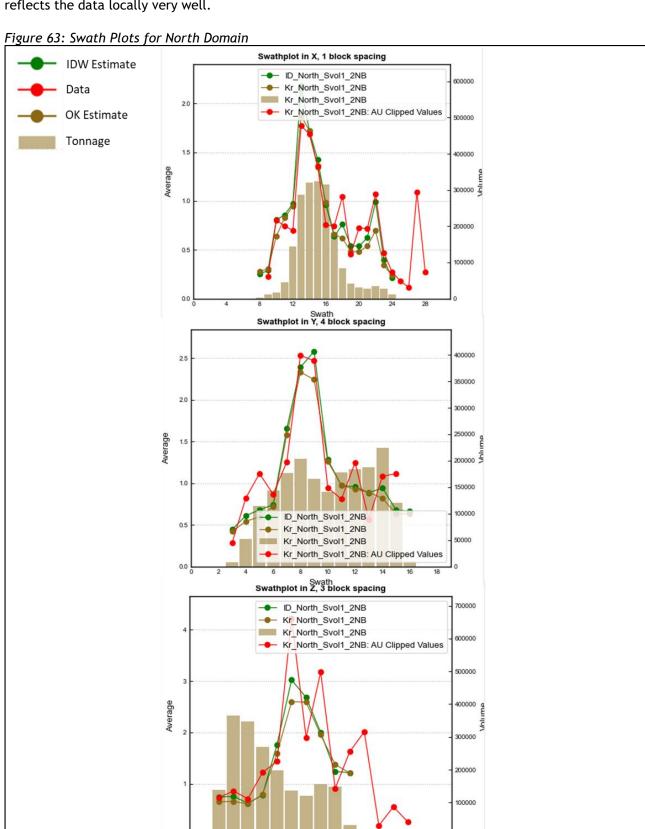
In Figure 62, the estimate shows some smoothing relative to data, this may be due to the swaths being taken oblique to the direction of the domain and not representing the direction of continuity.





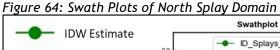


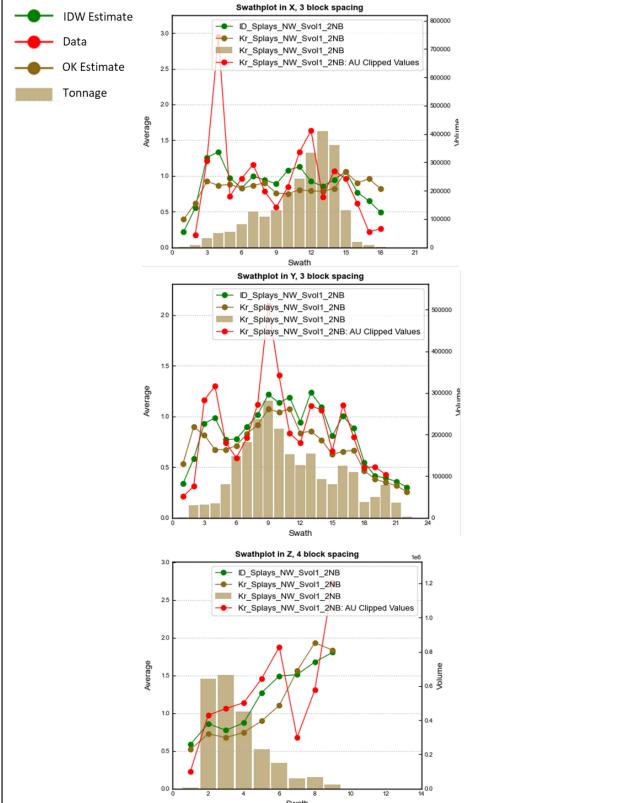
The data compares very well to the estimate for the north domain Figure 63, the data is very dense in the north domain and the samples used in the estimate are limited to reduce smearing, thus the estimate reflects the data locally very well.





The north splay domain shows good correlation to the data with some smoothing evident Figure 64, as with the north splay, this may be due to the swaths being taken oblique to the domain's orientation.







## xi. Cut-off Parameters and Reasonable Prospects of Eventual Economic Extraction

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 65). 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 19. Minxcon 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 Minxcon used USD1,800/oz as this was the approximate average for the last year. The mining and operating costs used are costs benchmarked against similar operations.

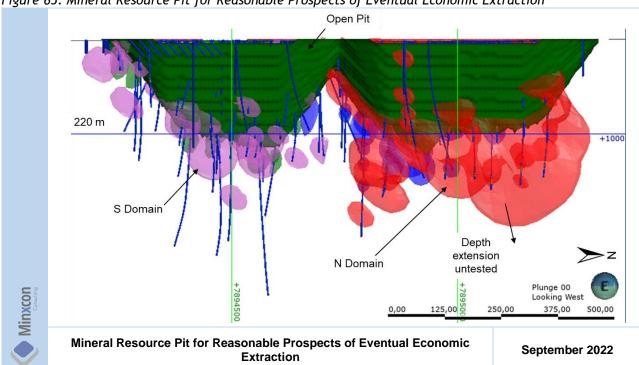


Figure 65: Mineral Resource Pit for Reasonable Prospects of Eventual Economic Extraction

Table 19: Cut-off Parameters

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

## II. MINERAL RESOURCE CLASSIFICATION

The previous NI 43-101 (2021) downgraded the Mineral Resource to an Inferred category due to the lack of QAQC data. The recent confirmatory exercise of the grade of the drillhole database has resulted in the improved confidence in the database and has allowed for the upgrade of the Mineral Resource classification from Inferred to Measured and Indicated Mineral Resource. The Mineral Resource classification criteria are



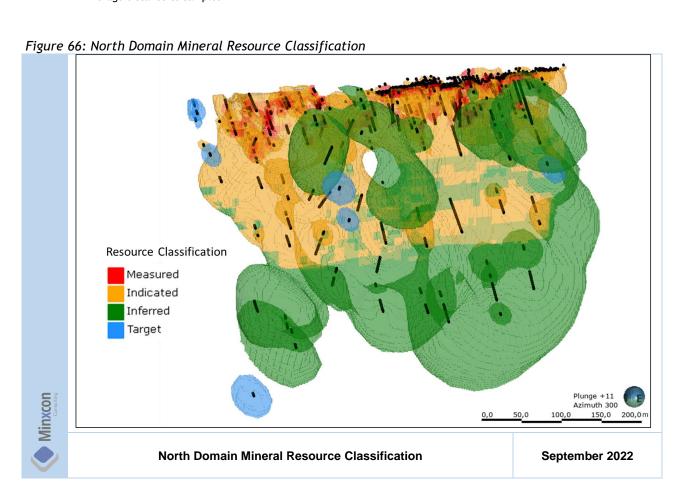
shown in Table 20. No Measured Mineral Resource has been classified for the two splay domains due to the lower confidence in these two domains. Mineralisation wireframes (halos) that are informed by a single drillhole have also been downgrade from Inferred Mineral Resource to Exploration Target due to the lower confidence in continuity in these halos. Figure 66 to Figure 69 show the Mineral Resource classification for the four domains.

Table 20: Mineral Resource Classification Criteria

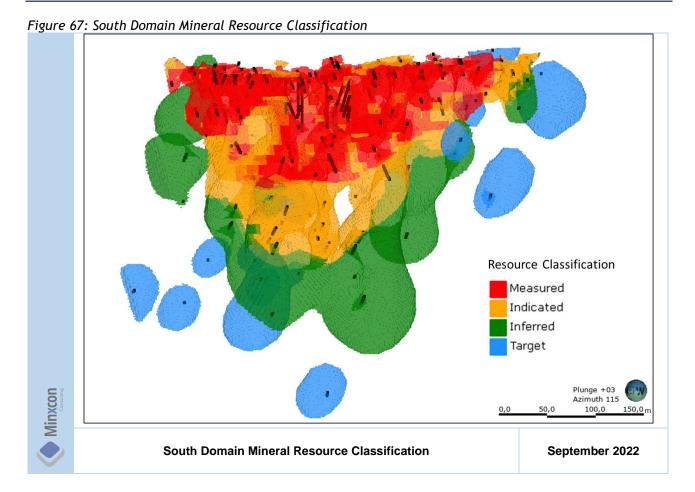
Domain	Mineral Resource Category	Classification Criteria
	Measured	Within SVOL1: MinD≤20 and NS≥40 and SoR≥0.8
North	Indicated	Within SVOL1 or SVOL2: MinD≤40 and NS≥20
	Inferred	Within SVOL1, SVOL2 or SVOL3
	Measured	Within SVOL1: MinD≤20 and NS≥60 and SoR≥0.8
South	Indicated	Within SVOL1 or SVOL2: MinD≤40 and NS≥40
	Inferred	Within SVOL1, SVOL2 or SVOL3
	Measured	Within SVOL1: MinD≤20 and NS≥40 and SoR≥0.8
SplayNW	Indicated	Within SVOL1 or SVOL2: MinD≤40 and NS≥20 and AvD≤60
	Inferred	Within SVOL1, SVOL2 or SVOL3
	Measured	Within SVOL1: MinD≤20 and NS≥50 and SoR≥0.8
SplaySW	Indicated	Within SVOL1 or SVOL2: MinD≤40 and NS≥40
	Inferred	Within SVOL1, SVOL2 or SVOL3

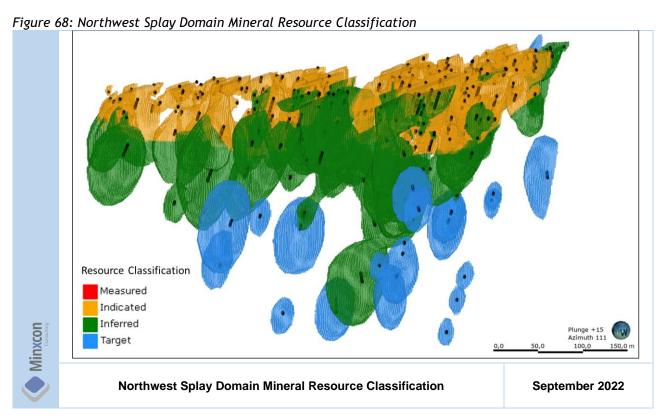
#### Notes:

- SVOL1 = variogram range
- SVOL2 = 1.5x variogram range
- SVOL3 = 2x variogram range
- MinD = Minimum distance to samples
- NS = Number of samples
- SoR = Slope of regression
- AvD = Average distance to samples

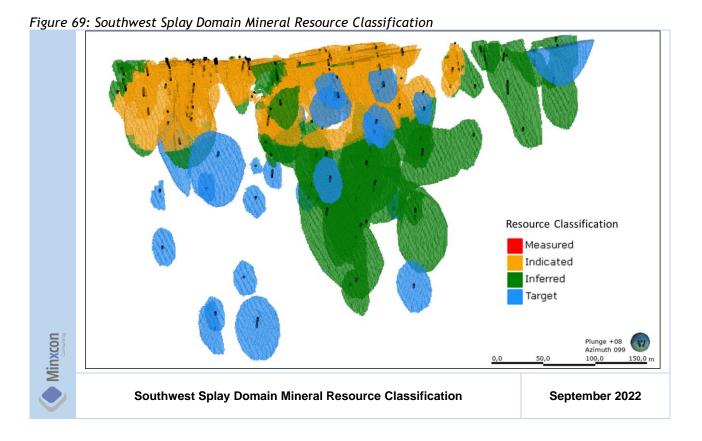












## III. MINERAL RESOURCE STATEMENT

The Mineral Resources have been depleted by means of the topography and mining voids. Discounts applied to the Mineral Resources include geological losses of 5% for Measured, 10% for Indicated and 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 the portion of the 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 could 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 21). Below this all resources are declared as underground, with a 1.5 g/t cut-off (Table 22).



Table 21: Surface Mineral Resource for Maligreen Gold Mine as at 30 September 2022

Domein	Minaral Bassinas Catarani	Tonnes (Less Geological Losses)	Gold Grade	Gold Content
Domain	Mineral Resource Category	Mt	g/t	koz
	Measured	0.30	0.87	8.3
North	Indicated	3.01	1.38	133.1
NOTH	Total Measured and Indicated	3.30	1.33	141.4
	Inferred	1.01	1.09	35.5
	Measured	1.35	2.70	117.2
South	Indicated	0.75	4.17	101.9
South	Total Measured and Indicated	2.10	3.23	218.2
	Inferred	0.49	6.05	95.3
	Indicated	1.68	0.80	43.1
SplayNW	Total Measured and Indicated	1.68	0.80	43.1
	Inferred	2.08	0.81	54.0
	Indicated	0.85	1.15	31.4
SplaySW	Total Measured and Indicated	0.85	1.15	31.4
	Inferred	1.00	1.37	44.0
Total Meas	sured and Indicated	7.94	1.70	434.1
Total Inferi	red	4.58	1.55	228.8

#### 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 stated as inclusive of Mineral Reserves.
- 5. Mineral Resources are reported as total Mineral Resources and are not attributed.

Table 22: Underground Mineral Resource for Maligreen Gold Mine as at 30 September 2022

Domain	Mineral Pessures Category	Tonnes (Less Geological Losses)	Gold Grade	Gold Content	
Domain	Mineral Resource Category	Mt	g/t	koz	
North	Indicated	0.09	2.88	8.2	
	Total Measured and Indicated	0.09	2.88	8.2	
	Inferred	1.13	2.42	87.7	
	Indicated	0.00	12.57	0.0	
South	Total Measured and Indicated	0.00	12.57	0.0	
	Inferred	0.33	8.69	93.5	
SplayNW	Inferred	0.13	2.51	10.3	
SplaySW	Inferred	0.00	1.58	0.0	
Total Measured and Indicated		0.09	2.89	8.2	
Total Inferred		1.59	3.75	191.5	

## 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 stated as inclusive of Mineral Reserves.
- 5. Mineral Resources are reported as total Mineral Resources and are not attributed.

The combined surface and underground Mineral Resource is shown in Table 23, this shown at 0.4 g/t and 1.5 g/t for surface and underground respectively.



Table 23: Total Mineral Resource for Maligreen Gold Mine as at 30 September 2022

Domain	Mineral Beautype Cetegory	Tonnes (Less Geological Losses)	Gold Grade	Gold Content	
Domain	Mineral Resource Category	Mt	g/t	koz	
North	Measured	0.30	0.87	8.3	
	Indicated	3.09	1.42	141.3	
	Total Measured and Indicated	3.39	1.37	149.6	
	Inferred	2.14	1.79	123.2	
	Measured	1.35	2.70	117.2	
South	Indicated	0.75	4.17	101.0	
South	Total Measured and Indicated	2.10	3.23	218.2	
	Inferred	0.82	7.12	188.8	
	Indicated	1.68	0.80	43.1	
SplayNW	Total Measured and Indicated	1.68	0.80	43.1	
	Inferred	2.21	0.91	64.3	
	Indicated	0.85	1.15	31.4	
SplaySW	Total Measured and Indicated	0.85	1.15	31.4	
	Inferred	1.00	1.37	44.0	
Total Measured and Indicated		8.03	1.71	442.3	
Total Inferred		6.17	2.12	420.3	

#### 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 stated as inclusive of Mineral Reserves.
- 5. Mineral Resources are reported as total Mineral Resources and are not attributed.

A weathering profile was defined for Maligreen that separated oxide and fresh portions of the orebody. This is represented in Table 24.

Table 24: Total Mineral Resource Separated by Weathering Zone for Maligreen Gold Mine as at 30 September 2022

Weathered	Domain	Tonnes (Less Geological Losses)	Gold Grade	Gold Content	
Zone	Domain	Mt	g/t	koz	
	North	0.27	0.80	7.0	
	South	0.07	1.70	3.7	
Oxide	SplayNW	0.43	0.81	11.2	
	SplaySW	0.14	0.92	4.2	
	Total Oxide	0.91	0.89	26.0	
	North	5.26	1.57	265.8	
	South	2.86	4.39	403.3	
Fresh	SplayNW	3.46	0.86	96.3	
	SplaySW	1.71	1.30	71.2	
	Total Fresh	13.29	1.96	836.6	
Grand Total		14.19	1.89	862.6	

## 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 stated as inclusive of Mineral Reserves.
- 5. Mineral Resources are reported as total Mineral Resources and are not attributed.

A grade tonnage curve is shown in Figure 70, this is done utilising the same filters as in reporting (Table 23), with depletions applied, including surface and underground Resources. A table summarising the content and grade for various cut-offs is shown in Table 25.



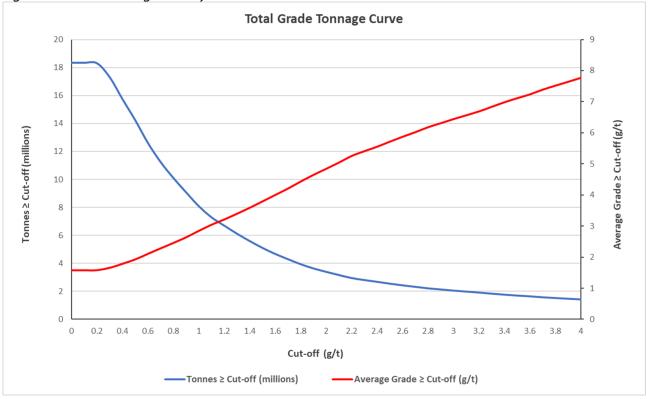


Figure 70: Grade Tonnage Curve for the Total Resource

Table 25: Total Mineral Resources at Maligreen for Various Cut-offs

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Cut-off	Cut-off Tonnes		Gold Content		
g/t	Mt	g/t	koz		
-	18.34	1.58	928.9		
0.20	18.30	1.58	928.7		
0.40	15.73	1.79	902.8		
0.60	12.59	2.11	852.1		
0.80	10.09	2.46	796.3		
1.00	8.07	2.85	738.0		
1.20	6.68	3.21	689.4		
1.40	5.58	3.59	643.5		
1.60	4.66	4.00	599.3		
1.80	3.92	4.43	559.1		
2.00	3.38	4.84	525.9		
2.20	2.94	5.25	496.1		

# IV. MINERAL RESOURCE RECONCILIATION

The overall Total Mineral Resource (including inferred) reduced from 940 koz in 2021 to 863 koz in 2022. This decrease is as a result of the following factors:-

- · Slight changes in grade due to weighting
- Changes in tonnage due to:
  - o Changes in bulk density
    - Oxide changed from 2.44 to 2.57
    - Fresh changed from 2.86 to 2.65
  - o Inferred Mineral Resource associated with single drillhole downgrade to Exploration Target.
  - Geological losses changed from 15% inferred (total) to 5% for measured, 10% for Indicated and 15% for Inferred.



The most significant change is that there are now Measured and Indicated Mineral Resources. The largest variance was for the open pit resource which now has 434 koz M&I and 229 koz of Inferred where it previously (November 2021) had 712 koz of Inferred only.

The underground Mineral Resources are still predominantly inferred as there is less drilling at depth and hence additional drilling is required to upgrade the underground Mineral Resource to Indicated Mineral Resources.

Table 26 shows the detailed variance.

Table 26: Mineral Resource Reconciliation - 2021 vs 2022

		Tonnes (Mt)		Au g/t			Au (Koz)			
Domain	Mineral Resource Category	2021	2022	% Change 2021 vs 2022	2021	2022	% Change 2021 vs 2022	2021	2022	% Change 2021 vs 2022
	Measured	0	0.30	100%		0.87	100%	0	8	100%
North	Indicated	0	3.09	100%		1.42	100%	0	141	100%
NOTH	Total Measured and Indicated	0	3.39	100%		1.37	100%	0	150	100%
	Inferred	5.75	2.14	-63%	1.55	1.79	16%	286	123	-57%
	Measured	0	1.35	100%		2.70	100%	0	117	100%
South	Indicated	0	0.75	100%		4.17	100%	0	101	100%
South	Total Measured and Indicated	0	2.10	100%		3.23	100%	0	218	100%
	Inferred	3.12	0.82	-74%	4.29	7.12	66%	429	189	-56%
SplayNW	Indicated	0	1.68	100%		0.80	100%	0	43	100%
	Total Measured and Indicated	0	1.68	100%		0.80	100%	0	43	100%
	Inferred	4.51	2.21	-51%	0.91	0.91	-1%	132	64	-51%
SplaySW	Indicated	0	0.85	100%		1.15	100%	0	31	100%
	Total Measured and Indicated	0	0.85	100%		1.15	100%	0	31	100%
	Inferred	2.22	1.00	-55%	1.31	1.37	5%	93	44	-53%
Total Measured and Indicated		0	8.03	100%		1.71	100%	0	442	100%
Total Inferred		15.59	6.17	-60%	1.88	2.12	13%	940	420	-55%

## Item 14 (b) - DISCLOSURE REQUIREMENTS FOR RESOURCES

All Mineral Resources have been categorised and reported in compliance with the definitions embodied in the CIM Definition Standards on Mineral Resources and Mineral Reserves (6 May 2019). As per CIM specifications, 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.

## Item 14 (c) - 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 14 (d) - 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 30 September 2022.



## ITEM 15 - MINERAL RESERVE ESTIMATES

This Report is presented as a Mineral Resource report. Mineral Reserve estimation has not been conducted as yet.

# ITEM 16 - MINING METHODS

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

## ITEM 17 - RECOVERY METHODS

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

## ITEM 18 - PROJECT INFRASTRUCTURE

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

## ITEM 19 - MARKET STUDIES AND CONTRACTS

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

# ITEM 20 - ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

This Report is presented as a Mineral Resource report; thus, environmental and social studies, permitting and impact are not described.

# ITEM 21 - CAPITAL AND OPERATING COSTS

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

# ITEM 22 - ECONOMIC ANALYSIS

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



## ITEM 23 - ADJACENT PROPERTIES

## Item 23 (a) - Public Domain Information

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).

# Item 23 (b) - Sources of Information

All information as used in this Section is sourced from public sources as follows:-

- NewZimbabwe (2021);
- ZMDC (2021); and
- The Sunday Mail (2016).

## Item 23 (c) - Verification of Information

Minxcon has relied on the information as is presented by the above 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.

# Item 23 (d) - APPLICABILITY OF ADJACENT PROPERTY'S MINERAL DEPOSIT TO PROJECT

Although the deposits occur as similar styles, the mineralisation on surrounding properties is not necessarily indicative of mineralisation or extractive potential at Maligreen.

## Item 23 (e) - HISTORICAL ESTIMATES OF MINERAL RESOURCES OR MINERAL RESERVES

No public disclosures of Mineral Resources or Mineral Reserves for the Jena or Peace-Turtle claims have been identified.



## ITEM 24 - OTHER RELEVANT DATA AND INFORMATION

## Item 24 (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 (Figure 71).



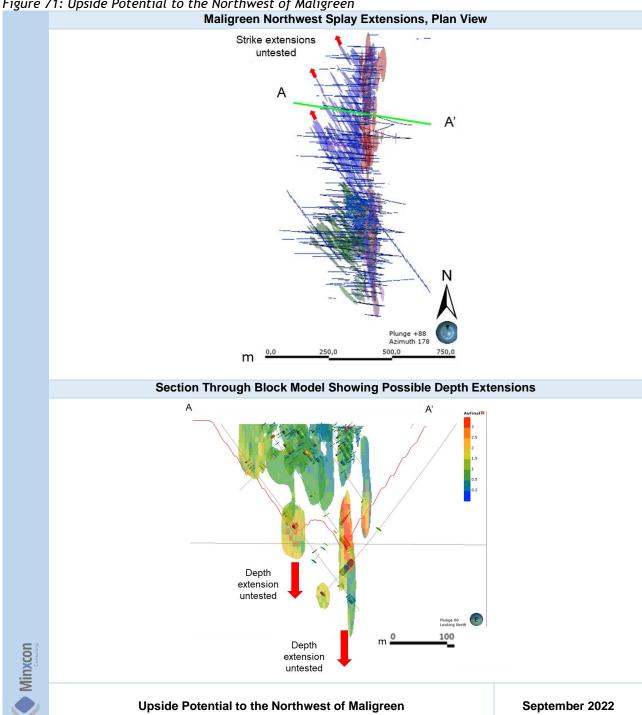


Figure 71: Upside Potential to the Northwest of Maligreen

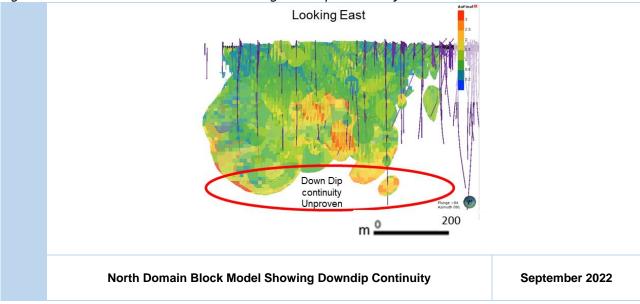
Other authors discussing Maligreen have observed that to the north and south of the currently modelled orebodies, the mineralisation does not continue. This is assigned to the fact that the QEP to the south and the FP to the north both thicken to the outer extents of the domain, with a drop off in mineralisation 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 do suggest the orebody is open to



depth as the last drillhole intersections do show good mineralisation and grade continuity. Drilling can thus also be planned to target the downdip extension primarily to the north domain (Figure 72).

Figure 72: North Domain Block Model Showing Downdip Continuity



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 help identity continuity.



## ITEM 25 - INTERPRETATION AND CONCLUSIONS

Sufficient data is available to define a geological model and Mineral Resource over Maligreen. The recent confirmatory re-sampling exercise completed by Caledonia has allowed for the upgrade of the Mineral Resource from an Inferred Mineral Resource to Measured and Indicated Mineral Resources. 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 and grade continuity over Maligreen. Based on the available data, a weathering profile and lithological model can also be defined.

The bulk density of the mineralised lithologies is still a concern and requires further investigation. The bulk density work conducted on the recent re-sampling samples is inconclusive and the data seems erroneous. Minxcon have used the data to the best of their ability to represent the bulk density the most accurate way. This has also taken into consideration the expected bulk density of the lithologies associated with the mineralisation.



# ITEM 26 - RECOMMENDATIONS

It is recommended that the bulk density work be re-done using a different methodology that allows for more accurate measurements. This can be completed on the available core. This will allow for more accurate bulk density figures for future Mineral Resource estimation and study work.

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

Independent metallurgical testwork is also recommended.



## ITEM 27 - REFERENCES

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