On behalf of:

IDM International Pty Ltd

Independent Technical Assessment and Valuation Report for Mankayan Copper-Gold project, Philippines

Effective Date: 27 December 2022

Job Code: PH-CSL-IMD01

Document Information Page

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Effective Date	27 December 2022

Versions / Status	FINAL

Copies	IDM International	(1)

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Sahara

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1 SUMMARY

1.1 Introduction

IDM International Pty Ltd (IDM) has commissioned E2M Limited (Sahara), to compile an Independent Technical Assessment and Valuation Report (ITAV) for the Mankayan Copper-Gold project (“Mankayan project” or “Guinaoang project” or “project”), located in the Philippines.

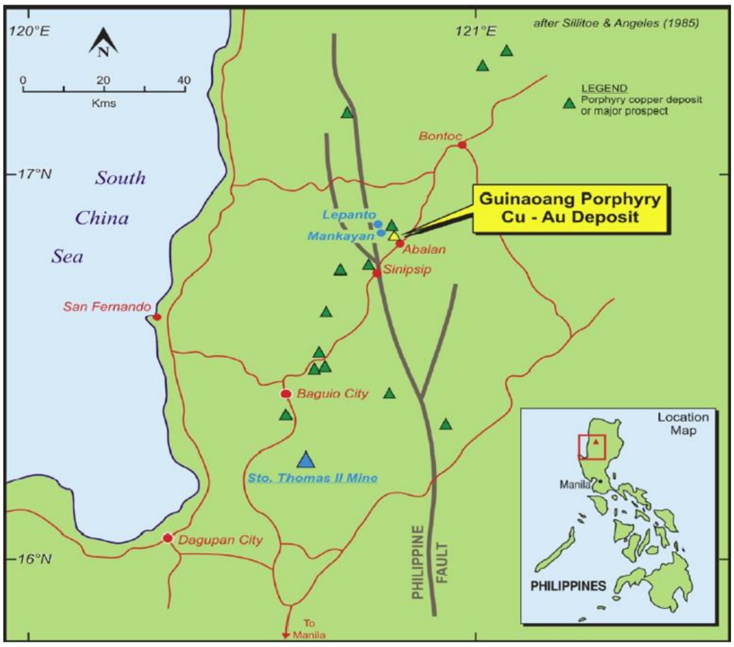
BDO Corporate Finance (WA) Pty Ltd (BDO) has been engaged by IDM to prepare an Independent Experts Report (IER) for inclusion in a Notice of Meeting seeking shareholder approval for the exchange of Bezant Resources Plc's 27.5% interest in IDM Mankayan Pty Ltd for 19,381,054 shares in IDM International, representing an interest of greater than 20% in IDM International (Proposed Transaction).Sahara was instructed by BDO to prepare an independent technical assessment and valuation opinion of IDM’s Mankayan Project. This report is to be included in BDO’s IER as an appendix

This ITAV is prepared applying the guidelines and principles of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves—the 2012 JORC Code, the Australasian Code for Public Reporting of Technical Assessments and Valuations of Mineral Assets - the 2015 VALMIN Code and the rules and guidelines issued by such bodies as ASIC and ASX pertaining to Independent Expert Reports.

1.2 Location

The project is located about 6km southeast of the towns of Mankayan and Lepanto, in the municipality of Mankayan, Benguet Province, Island of Luzon, Republic of the Philippines. The mining lease is centred at approximately 16°50’ North latitude and 120°49’ East longitude. (Figure below).

Figure 1.2_1
Project Location Plan (Source – Derisk, 2020)

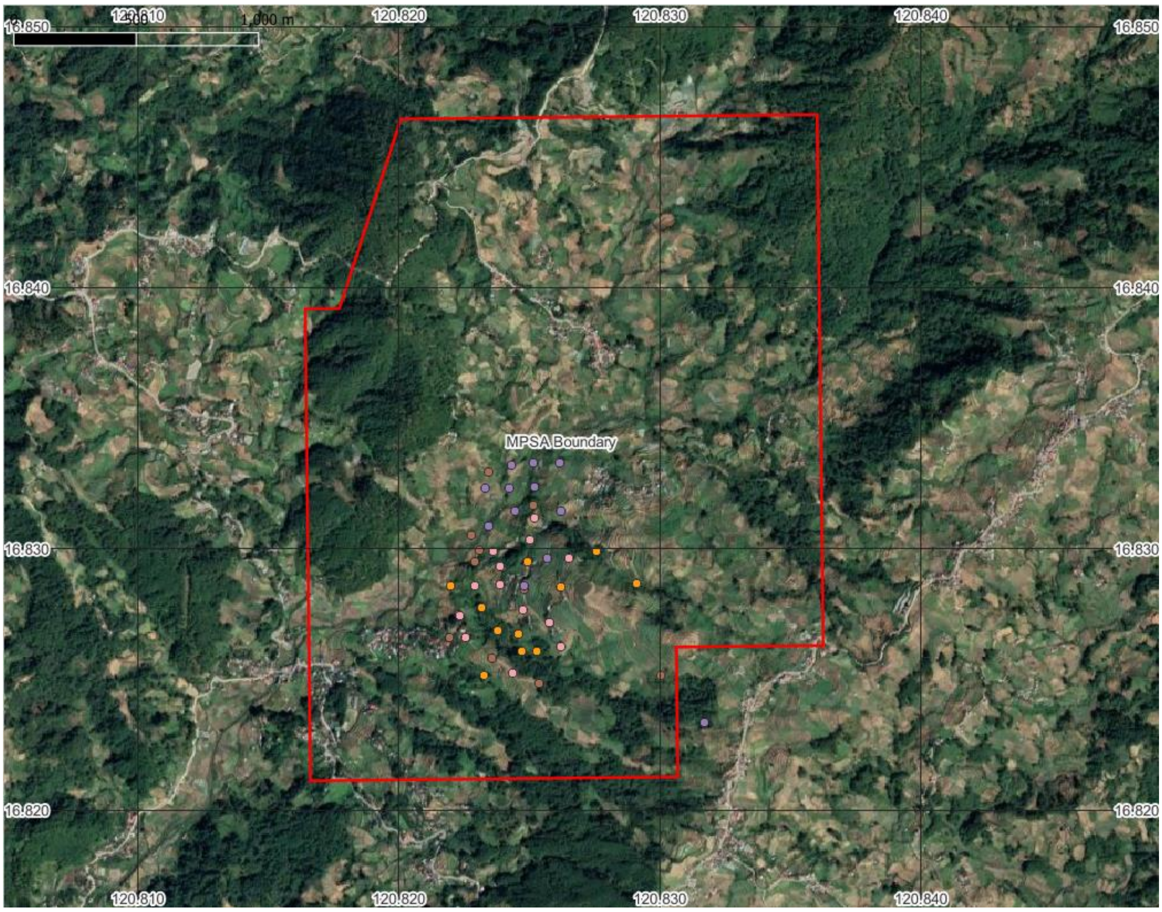


1.3 Ownership and Permitting

The project ownership is currently 40% IDM, 17.6% Bezant Resources, 6.4% ManagementCo and 36% for local Philippine shareholders. There is no government free carry.

The Project is held under a Mineral Production Sharing Agreement (MPSA) 057-96-CAR, totalling 534ha, and was renewed to Crescent Mining Development Corporation Mineral Production Sharing Agreement (No. 057-96-CAR) or MPSA for a second 25-year term with effect from 12 November 2021.

Figure 1.3_1
Permit Map – MPSA 057-96-CAR (Source – IDM, 2022)



1.4 Exploration History

There is a long history of exploration at the project, with numerous companies involved over more than 50 years. Since its discovery in the 1970's, the project has undergone several changes of ownership and has been the subject of five major drilling campaigns. A total of 54,908m of drilling has been completed across the Guinaoang project prior to IDM involvement.

IDM have drilled two diamond holes in 2022 for Geotechnical and metallurgical testwork in preparation for the Pre-feasibility Study (PFS) underway.

There have been significant periods of inactivity between the various exploration programs. The table below summarises the historical exploration drilling completed.

Table 1.4_1
IDM Permit - Summary of Exploration Work Prior to 2007 by Ghana Manganese Company

Date	Company	Summary of Work
1971 – 1973	Mankayan Mineral Development Company (MMDC)	11 drillholes for 7,861.80m
1980 – 1982	Tirad Minerals Incorporated (TMI) in a joint venture with the Hercules Mineral and Oil Company (HMOC)	14 drillholes for 9,467.59m
1983 – 1984	Gold Fields Asia Limited (GFAL)	16 drillholes for 15,783.68m
1996 - 1997	Crescent Mining and Development Corporation (CMDC) in a joint venture with Pacific Falkon Resources Corporation (PFRC)	11 drillholes for 11,796.76m
2007 - 2009	Bezant Resources PLC (Bezant) under an option agreement with CMDC	10 drillholes for 10,800.20m
2011 - 2014	Gold Fields Netherlands Services BV (Gold Fields) under an option agreement with Bezant	1 drillhole for 1,491.00m
2014 - 2020	Bezant	Nil
2022	IDP International	2 holes drilled and PFS underway

1.5 Geology and Mineralisation

The Mankayan mineral district is in northern Luzon, Philippines and hosts several significant Cu-Au deposits and prospects of various types within an area of around 25 km^2.

These include:

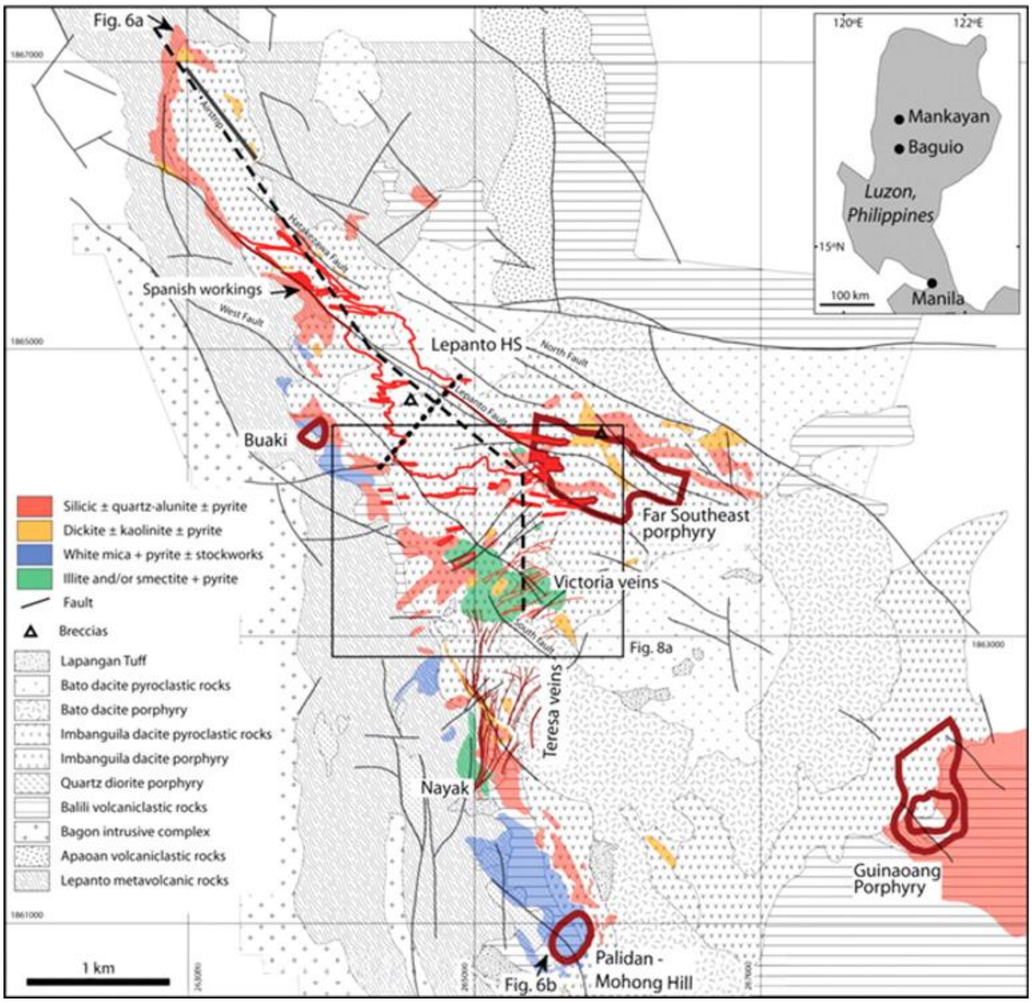
- Far Southeast porphyry Cu-Au deposit,
- Lepanto high-sulphidation epithermal Cu-Au deposit,
- Victoria intermediate-sulphidation epithermal Au-Ag vein deposit,
- Teresa epithermal Au-Ag vein deposit,
- Guinaoang porphyry Cu-Au deposit, and
- Buaki and Palidan porphyry Cu-Au prospects.

The Far Southeast Project (FSE) is located approximately 4km NW of the project. This is a Joint Venture between Gold Fields Ltd (Gold Fields) and Far Southeast Gold Resources Inc. The historical Inferred Mineral Resource for the FSE deposit, first declared in August 2012, is 891.7Mt at 0.7g/t gold and 0.5% copper for **19.8Moz of gold and 9,921Mlb of copper**, has been maintained for current Goldfield's reporting. (Source - https://www.goldfields.com)

The main geological units represented in the region include:

- Basement composed of late Cretaceous to middle Miocene metavolcanic and volcaniclastic rocks.
- Miocene (12 to 13Ma) tonalitic Bagon intrusive complex.
- Pliocene (~2.2 to 1.8Ma) Imbanguila dacite porphyry and pyroclastic rocks.
- Post-mineralisation cover rocks, including the ~1.2 to 1.0Ma Bato dacite porphyry and pyroclastic rocks and the ~0.02Ma Lapangan tuff.

Figure 1.5_1
Geology of the Mankayan district (Source: Chang et al. 2011)



The Guinaoang deposit is associated with a Pliocene stock complex that is composed largely of quartz diorite porphyry rocks. Two distinct phases of igneous intrusions have been identified:

- Hornblende quartz diorite porphyry (QDP), also described as the syn-mineral quartz diorite porphyry.

- A later quartz diorite porphyry body (IQD) that has intruded the QDP body in the southern part of the project area, also described as the intra-mineral quartz diorite porphyry.

The QDP and IQD intrusives both host copper and gold mineralisation. The most important host for the copper mineralisation is the QDP, with IQD containing lower grade mineralisation. The immediate volcanic host rocks surrounding the plutonic rocks are also mineralised in proximity to the diorites

Figure 1.5_2
Mineralization in hole BRC60 from 851m to 854m averaging 1.06g/t Au and 0.78% Cu (Source Tuesley, 2021)

1.6 Metallurgical Testwork

A defined program of comminution testwork was carried out by Ammtec Ltd (Ammtec) in 2009.

Three samples of about 10 kg of drillcore from each of the inclined boreholes (BC57 and BC58) were used in the work. For each borehole, the first two samples were representative of the upper zones in the porphyry whilst the third sample was representative of the deeper bulk of the orebody.

Bezant consultants concluded the lithology of the two deepest samples is representative of the major part of the Guinaoang porphyry. The other samples represent relatively small portions located in the outer margin of the porphyry where it contacts the country rock.

Excellent results were obtained from the two deepest samples. The testwork results indicate that copper and gold recoveries of about 94% and 74% respectively can be anticipated whilst producing a saleable concentrate with a grade in excess of 30% copper.

IDM has completed two drillholes in 2022, which have been sampled and sent for comprehensive metallurgical testwork in preparation for the PFS. Results are pending at the time of this report.

1.7 Resource Estimation

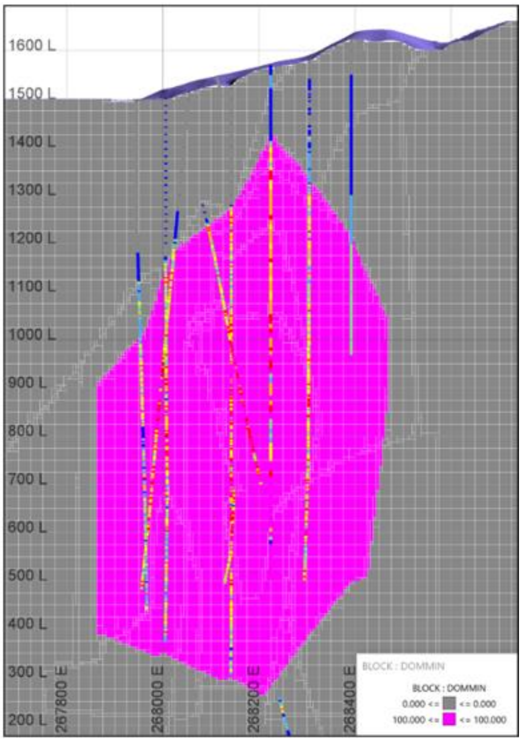
In September 2020, Derisk Geomining Consultants (Derisk) undertook a Mineral Resource Estimate (MRE) update for the Guinaoang deposit, based on all drilling completed up to 2013. (Following a prior MRE by Snowden's Consulting (Snowdens) in 2009)

The Mineral Resource estimate was prepared by John Horton and Michele Pilkington (Associate Principal geologists for Derisk) using guidelines compliant with the Joint Ore Reserves Committee of Australasia (JORC) reporting code. All work was carried out using Vulcan software.

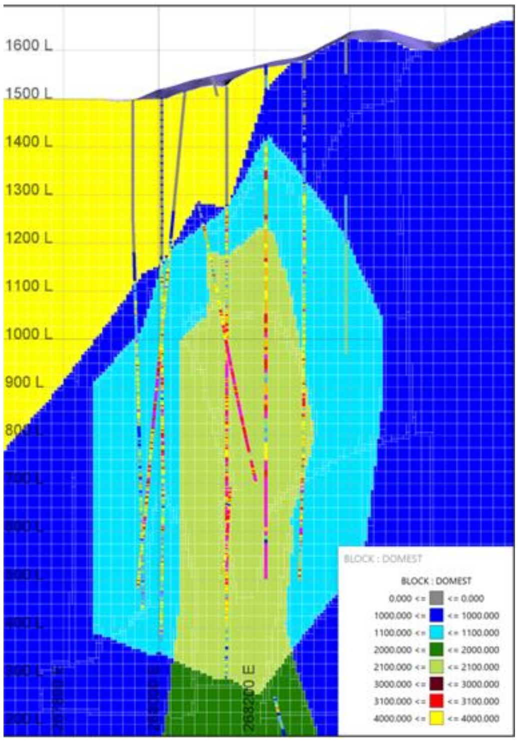
For the 2020 estimate, Derisk has not used alteration domains to influence estimation. Domains to control the grade estimation process were built using combinations of the lithology and mineralisation interpretations as highlighted in the figure below.

Figure 1.7_1
East-west cross section at 1861990 mN (Source Derisk, 2020)

Mineralisation Domain



Estimation Domain



Based on an assessment of all contributing factors, Derisk concludes that there are reasonable prospects for eventual economic extraction. The Mineral Resource estimate for Guinaoang is reported at a cut-off criterion of 0.25% CuEq and is summarised in the table below.

Sahara is not aware of any non-technical issues such as environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that are likely to prevent the reporting of a Mineral Resource for Guinaoang.

Table 1.7_1
Mineral Resource Estimate (cut-off 0.25% CuEq)

Resource Category	Mt	CuEq (%)	Cu (%)	Au (g/t)	Ag (g/t)	Cu (Mt)	Au (Moz)	Ag (Moz)
Measured	-	-	-	-	-	-	-	-
Indicated	638	0.68	0.37	0.40	0.9	2.3	8.2	18
Inferred	155	0.52	0.29	0.30	0.5	0.5	1.5	3
TOTAL	**793**	**0.65**	**0.35**	**0.38**	**0.8**	**2.8**	**9.7**	**20**

Note: 1. Totals may not add due to rounding effects.

2. CuEq calculation assumes metal prices of USD 2.80/lb Cu, USD 1,800/oz Au, and recoveries of 90% for Cu and 75% for Au.

3. CuEq (%) =

$$\text{CuEq (\%)} = \frac{(\text{Cu\% x Cu price per lb x 2,204.6 x Cu recovery}) + (\text{Au g/t x Au price per oz/31.1035 x Au recovery})}{(\text{Cu price per lb x 2,204.6})}$$

= Cu% + 0.78 x Au g/t

1.8 Mining Option Studies

A Scoping Study was undertaken in 2014, but Sahara consider is not current given changes in commodity prices and costs over the last 8 years.

Mining Plus Consultants (Mining Plus) undertook updated alternative mining options for the Mankayan project in 2019 (Prior to the updated MRE in 2020). The options defined by Mining Plus were designed with the goal of reducing the start-up cost while improving the project's overall value. The options are based on the work undertaken in the 2014 Scoping Study Update and evaluated using the parameters developed in that study.

Block caving (BC) mass mining methods are very low cost, but very inflexible in the geometry of ore that they can mine. Because of this, they typically have high planned dilutions or low planned recoveries relative to stoping methods where there is far greater flexibility to mine only the desired mineralisation. They are also long mine life, so the time discounting of future revenues is significant and it becomes very important to mine higher value material early.

Sublevel caving (SLC) mass mining methods have similar characteristics to block caves, but they are more flexible in their geometry. This flexibility comes at a much higher mining cost.

In total, eleven options were investigated with four options chosen to be representative of the range. Key metrics for these four representative options are shown in the table below. These options are:

- Option 3 - High production rate, high rate of return, high start-up cost 2 lift block cave (BC), where the full footprint of the BC is undercut to enable a high production rate
- Option 4 - Medium production rate, with 4 BC footprints in 2 lifts. Each footprint is sized to meet the required production rate, with the first footprint in each lift located in the highest grade
- Option 8 - Staged production rate, starting at 6Mtpa for a small high-grade BC, before mining 3 larger footprints at a production rate of 12Mtpa
- Option 9 - Low production rate, starting with a 6Mtpa low capex high opex sublevel cave (SLC) before mining 3 BC footprints. (This option could also be ramped up to 12Mtpa for the mining of the 3 BC footprints).

Figure 1.8_1
Summary of 4 Mining Options defined by Mining Plus (Source: Mining Plus, 2019)

	Option	3	4	8	9
	Description	24Mtpa 2 BC footprints over 2 lifts	12Mtpa 4 BC footprints over 2 lifts	6Mtpa small BC followed by 3 12Mtpa BC	6Mtpa SLC followed by 3 6Mtpa BC
IRR before tax	Cu $3/lb Au $1,250/oz	28%	26%	21%	14%
Average Cost per t	USD/t	$19.1	$19.1	$19.7	$19.9
First Footprint Start-up Cost	USD	$1,402m	$896m	$633m	$529m
First 5 years of production	Tonnes	92 M	54 M	29 M	28 M
	Cu (%)	0.45	0.46	0.48	0.41
	Au (g/t)	0.51	0.54	0.62	0.45
	CuEq (%)	0.70	0.72	0.77	0.62
Total production	Tonnes	333 M	316 M	315 M	302 M
	Cu (%)	0.42	0.43	0.42	0.41
	Au (g/t)	0.46	0.47	0.46	0.45
	CuEq (%)	0.63	0.65	0.64	0.63
Mine Life	Years	23	34	38	58
Time to First Production		5	5	5	4.2
NPV before tax, 8.5% discount rate*	Cu $3/lb Au $1,250/oz	$1,505m	$1,121m	$750m	$326m

*The NPV used is for comparative purposes only, as full financial analysis has not been undertaken for this study.

Sahara note that the Mining studies have utilised commodity pricing and operational costs from the 2011 Scoping Study. These values are indicative and not current and will require updating for the PFS study underway.

Various conceptual scenarios for accessing and extracting the underground mineralisation have also been assessed. The investigations covered vertical shaft access, ventilation, cooling and the surface infrastructure required to support the mining operation at a mining rate of 12 Mtpa as determined by the Scoping Study in 2011. This study considered two vertical shafts and a second option of 1 vertical shaft and 1 decline.

A third untested option is that Gold Fields were considering a 7km long tunnel from Guellong valley starting at ~ 700 to 800RL which would access the high grade of the deposit at a similar level and remove any development declines through 400m vertical of sterile cover from surface. Sahara consider this would present significant savings in Capex and Opex along with providing a relatively low inhabited region for required infrastructure. This option should be assessed in any PFS

1.9 Conclusions

The Mankayan Mining Permit covers an area of 543ha. This is located in an exceptionally fertile Cu-Au region of the Philippines.

Sahara consider the Mankayan Cu-Au project a pre-development project where significant Mineral Resources have been identified and their extent estimated (possibly incompletely), but where a decision to proceed with development has not been made.

Scoping level Studies completed in 2014 are now out of date, given changes in costs and commodity prices, although the project has sufficient information to undertake a prefeasibility study which has been commissioned and currently underway by IDM.

1.10 Recommendations

A Prefeasibility study has been commenced and with this will cover all limitations in work to date.

Sahara make the specific recommendations that have been highlighted within each section of this technical report.

1.11 Valuation

Sahara has undertaken a Valuation of the Mankayan Cu-Au project which is related to the technical report on the subject with Effective date of 27 December 2022.

On the basis of exploration completed and the effectiveness of the exploration along with the market and logistical factors

- The Resource multiplier has been discounted by Sahara given the apparent ESG risks in the Philippines. This is highlighted by the Gold Fields FSE project which has not progressed since 2013. Sahara also note one company's poor ESG performance does not reflect the Philippines mining industry.
- The project has had well over US$20M spent of well-executed and staged exploration (if it was to be completed using today's costs).
- Sahara has not considered any potential Merger and Acquisition opportunities which logically exist with the FSE project located only 4km away.
- The Mankayan project has excellent exploration potential to expand current Mineral Resources

A summary of the project valuations is provided in Table 1.11_1 below.

Table 1.11_1
Mankayan Copper-Gold project Valuation Summary (27 December)

Ownership	Equity Interest	Valuation (Million US$)		
		Low US$ (Million)	Preferred US$ (Million)	High US$ (Million)
Mankayan Project	**100%**	25.7	51.4	77.2
IDM	**40%**	10.3	20.6	30.9

**Appropriate rounding has been applied to the total*

Sahara have elected to use the Resource Multiplier method which is supported by the other methods utilised.

The value of the Mankayan Cu-Au project on a 100% ownership basis is considered to lie in a range from **US$25.7 million** to **US$77.2 million**, within which range Sahara has selected a preferred value of **US$51.4 million**.

The value of the current IDM 40% equity interest in the Mankayan Cu-Au project is considered to lie in a range from **US$10.3 million** to **US$30.9 million**, within which range Sahara has selected a preferred value of **US$20.6 million**

2 Introduction

IDM has commissioned Sahara to compile an ITAV for the Mankayan Copper-Gold project, located in the Philippines.

BDO Corporate Finance (WA) Pty Ltd (BDO) has been engaged by IDM to prepare an Independent Experts Report (IER) for inclusion in a Notice of Meeting seeking shareholder approval for the exchange of Bezant Resources Plc's 27.5% interest in IDM Mankayan Pty Ltd for 19,381,054 shares in IDM International, representing an interest of greater than 20% in IDM International (Proposed Transaction). Sahara was instructed by BDO to prepare an independent technical assessment and valuation opinion of IDM's Mankayan Project. This report is to be included in BDO's IER as an appendix

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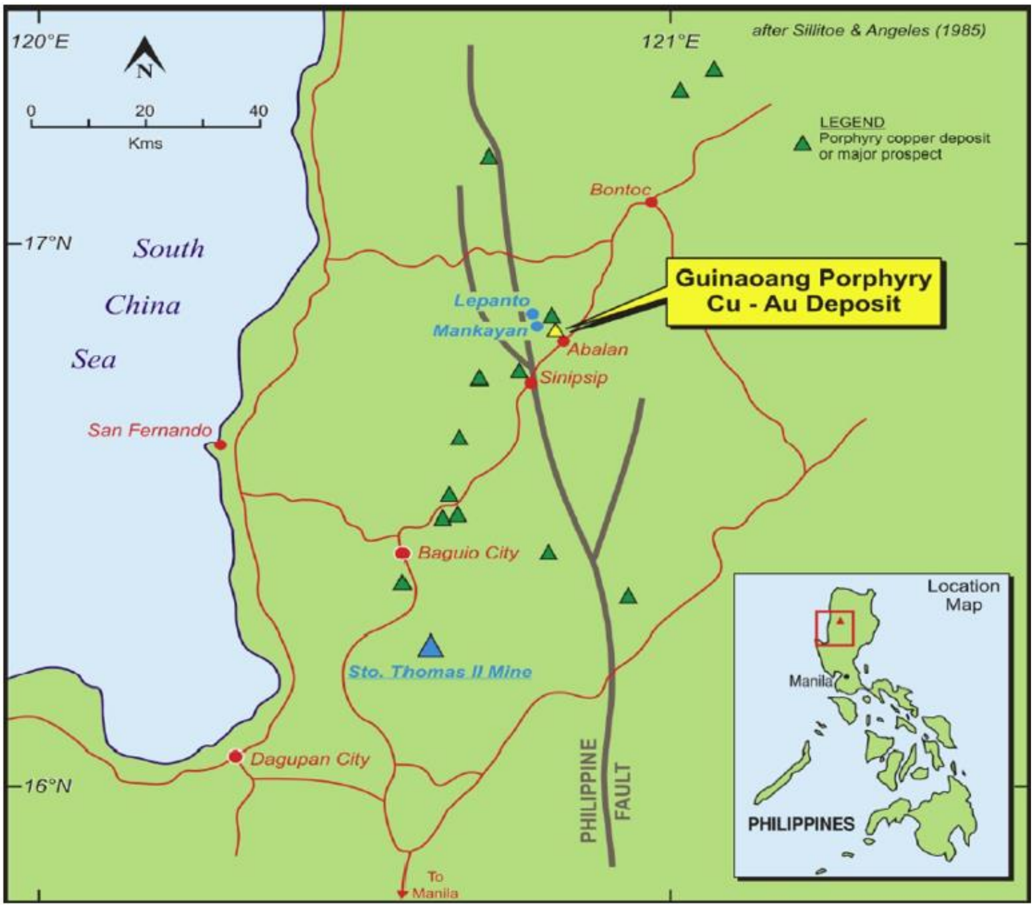
Figure 2_1
Project Location Plan (Source – Derisk, 2020)



2.1 Forward Looking Information

This report prepared by Sahara will form part of BDO's IER which will assist the IDM shareholders in deciding whether or not to approve the Proposed Transaction.

The statements and opinions contained in this report are given in good faith and in the belief, they are not false or misleading. The conclusions are based on the effective date of this report and could alter over time depending on exploration results, mineral prices, and other relevant market factors.

This report contains "forward-looking information" within the meaning of applicable Australian securities legislation. Forward-looking information includes, but is not limited to, statements related to the capital and operating costs of the IDM projects, the price assumptions with respect to commodity prices, production rates, the economic feasibility and development of the IDM projects and other activities, events, or developments which IDM expects or anticipates will or may occur in the future. Forward-looking information is often identified by the use of words such as "plans", "planning", "planned", "expects" or "looking forward", "does not expect", "continues", "scheduled", "estimates", "forecasts", "intends", "potential", "anticipates", "does not anticipate", or "belief", or describes a "goal", or variation of such words and phrases or state certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved.

Forward-looking information is based on several factors and assumptions made by the authors and management, which are considered reasonable at the time such information is made, and forward-looking information involves known and unknown risks, uncertainties and other factors which may cause the actual results, performance, or achievements to be materially different from those expressed or implied by the forward-looking information. Such factors include, among others, obtaining all necessary financing, permits to explore and develop the project; successful definition and confirmation based on further studies and additional exploration work of an economic mineral resource base at the project.

Although IDM has attempted to identify important factors which could cause actual actions, events, or results to differ materially from those described in forward-looking information, there may be other factors which cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance forward-looking information will prove to be accurate. The forward-looking statements contained herein are presented for the purposes of assisting investors in understanding IDM’s plan, objectives and goals and may not be appropriate for other purposes. Accordingly, readers should not place undue reliance on forward-looking information. IDM and the authors do not undertake to update any forward-looking information, except in accordance with applicable securities laws.

2.2 Principal Sources of Information

The information in this report relating to Exploration Results is based on, and fairly represents, information and supporting documentation compiled by Mr Beau Nicholls (Sahara Principal Consultant).

Site visits were undertaken by Max Tuesley (Associate Principal Geologist of Sahara and Member of AusIMM) who visited the Project in August 2020 and again in September 2021. Mr Tuesley inspected the general site conditions and local infrastructure, several drilling sites, drilling records and documentation, and a selection of diamond drill core stored at the site core shed. In addition to the site visit completed, the author relied on information provided by IDM, along with discussions with IDM technical personnel and on information obtained from publicly available sources. Sahara consider this site visit current as limited work has been completed since this 2021 site visit.

The author has made enquiries to establish the completeness and authenticity of the information provided and identified. The author has taken all appropriate steps in his professional judgement, to ensure the work, information, or advice contained in this report is sound and the author does not disclaim any responsibility for this report.

Additional information relied upon during the completion of the technical work have been listed in the references section of this ITAV.

This report contains statements attributable to third parties. These statements are made or based upon statements made in previous technical reports which are publicly available from either government departments or the ASX. The authors of these previous reports have not consented to the statements' use in this report, and these statements are included in accordance with ASIC Corporations (Consents to Statements) Instrument 2016/72.

2.3 Qualifications and Experience

The “Competent person” (as defined in JORC 2012) for this report is Mr Beau Nicholls (Sahara Principal Consultant).

Mr Nicholls is a Principal Consultant for Sahara with more than 25 years’ experience in the exploration and mining sector. Mr Nicholls is a registered Fellow of the Australian Institute of Geoscientists (FAIG) and is responsible for all sections of this report.

The Competent person of this report does not have any material interest in IDM or related entities or interests. His relationship with IDM is solely one of professional association between client and independent consultant. This report is prepared in return for fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this report.

2.4 Competent Persons Statement

The information in this report relating to Exploration Results is based on information compiled by Mr Nicholls, a Competent Persons who is a Member of the Australian Institute of Geoscientists. Mr Nicholls is a Principal Consultant for Sahara. Mr Nicholls has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activities being undertaken to qualify as a Competent Person defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Nicholls consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

2.5 Units of Measurements and Currency

Metric units are used throughout this report unless noted otherwise. Currency is United States dollars ("US$").

2.6 Abbreviations

A full listing of abbreviations used in this report is provided in Table 2.6_1 below.

Table 2.6_1
List of Abbreviations

	Description		Description
$	United States of America dollars	LREO	Light rare earth oxides
“	Inches	M	million
µ	microns	m	metres
3D	three dimensional	Ma	thousand years
4WD	four-wheel drive	Mg	Magnesium
AAS	atomic absorption spectrometry	ml	millilitre
Au	Gold	mm	millimetres
bcm	bank cubic metres	Mtpa	million tonnes per annum
CC	correlation coefficient	N (Y)	northing
CFC	CFC Amazonia	Nb	niobium
Cr	Chromium	Ni	Nickel
IDM	IDM International Pty Ltd	NPV	net present value
Co	Cobalt	NQ_2	Size of diamond drill rod/bit/core
CRM	certified reference material or certified standard	ºC	degrees centigrade
Cu	Copper	OK	Ordinary Kriging
CV	coefficient of variation	P_{80} -75µ	80% passing 75 microns
DDH	diamond drill hole	Pd	palladium
DTM	digital terrain model	ppb	parts per billion
E (X)	Easting	ppm	parts per million
EDM	electronic distance measuring	psi	pounds per square inch
Fe	Iron	PVC	poly vinyl chloride
G	Gram	QC	quality control
g/m^3	grams per cubic metre	QQ	quantile-quantile
g/t	grams per tonne of gold	RC	reverse circulation
HARD	Half the absolute relative difference	REO	rare earth oxide
HDPE	High density polyethylene	RL (Z)	reduced level
HQ_2	Size of diamond drill rod/bit/core	ROM	run of mine
Hr	Hours	RQD	rock quality designation
HRD	Half relative difference	SD	standard deviation
HREO	Heavy rare earth oxides	SG	Specific gravity
ICP-AES	inductivity coupled plasma atomic emission spectroscopy	Si	silica
ICP-MS	inductivity coupled plasma mass spectroscopy	SMU	selective mining unit
ISO	International Standards Organisation	Sn	Tin
kg	Kilogram	t	tonnes
kg/t	kilogram per tonne	t/m^3	tonnes per cubic metre
km	Kilometres	Ta	tantalum
km^2	square kilometres	tpa	tonnes per annum
kW	Kilowatts	TREO	Total rare earth oxide
kWhr/t	kilowatt hours per tonne	UC	Uniform conditioning
l/hr/m^2	litres per hour per square metre	w:o	waste to ore ratio

3 Reliance on Other Experts

The authors have relied on legal documents provided by IDM pertaining to the title of the permits. Sahara has not independently verified the title and ownership aspects of the permits.

4 Property Description and Location

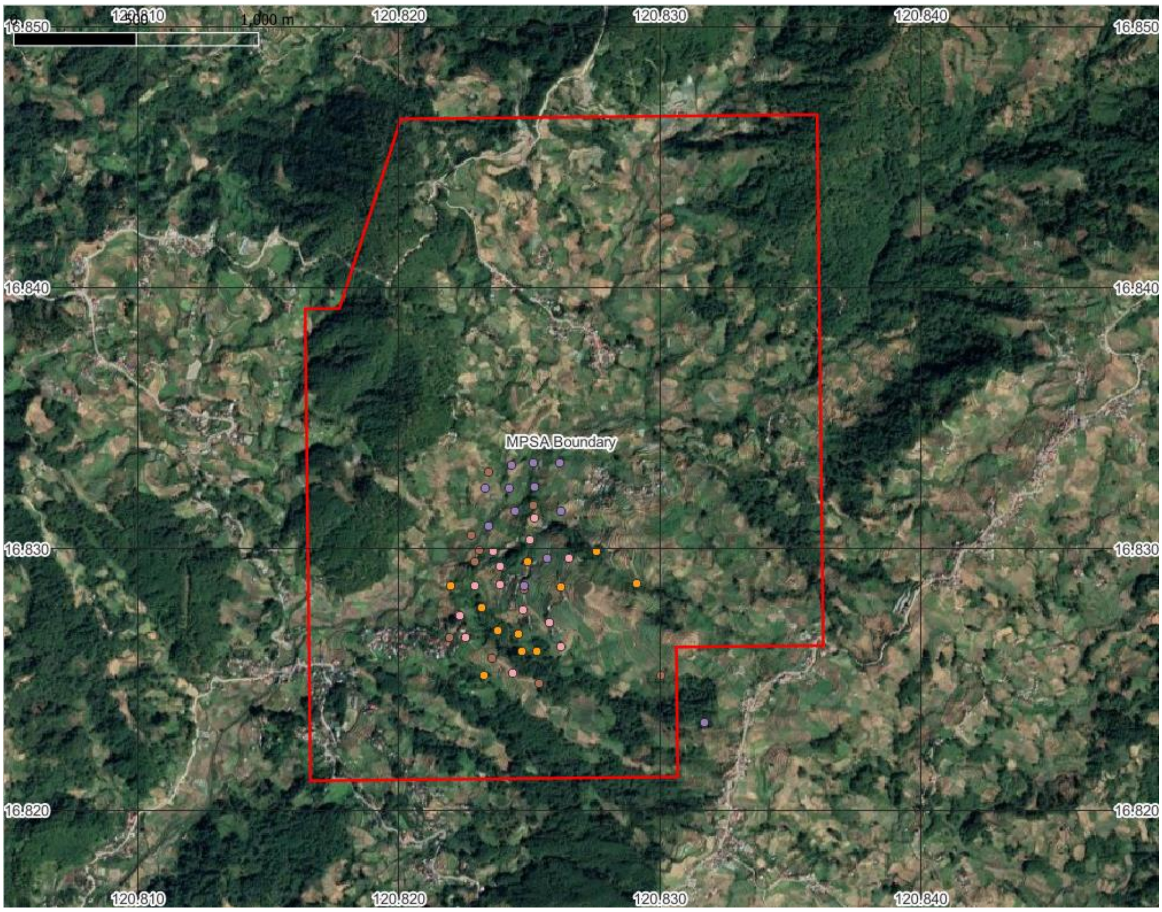
The project is located about 6 km southeast of the towns of Mankayan and Lepanto, in the municipality of Mankayan, Benguet Province, Island of Luzon, Republic of the Philippines. The mining lease is centred at approximately 16°50’ North latitude and 120°49’ East longitude. (Figure 2_1 above).

4.1 Company Details and Tenement Status

The Mankayan project is held under Mineral Production Sharing Agreement (MPSA) 057-96-CAR, totalling 534ha, granted initially on 11 December 1996 for a period of 25 years. In March 2022, the Mines and Geosciences Bureau (MGB) of the Department of Environment and Natural Resources of the Philippines government has renewed Crescent Mining Development Corporation Mineral Production Sharing Agreement (No. 057-96-CAR) or MPSA for a second 25-year term with effect from 12 November 2021.

Minimum exploration expenditure and annual rentals are not defined under the MPSA agreement, but there is a requirement to assign 10% of the exploration budget to Community and Environmental development.

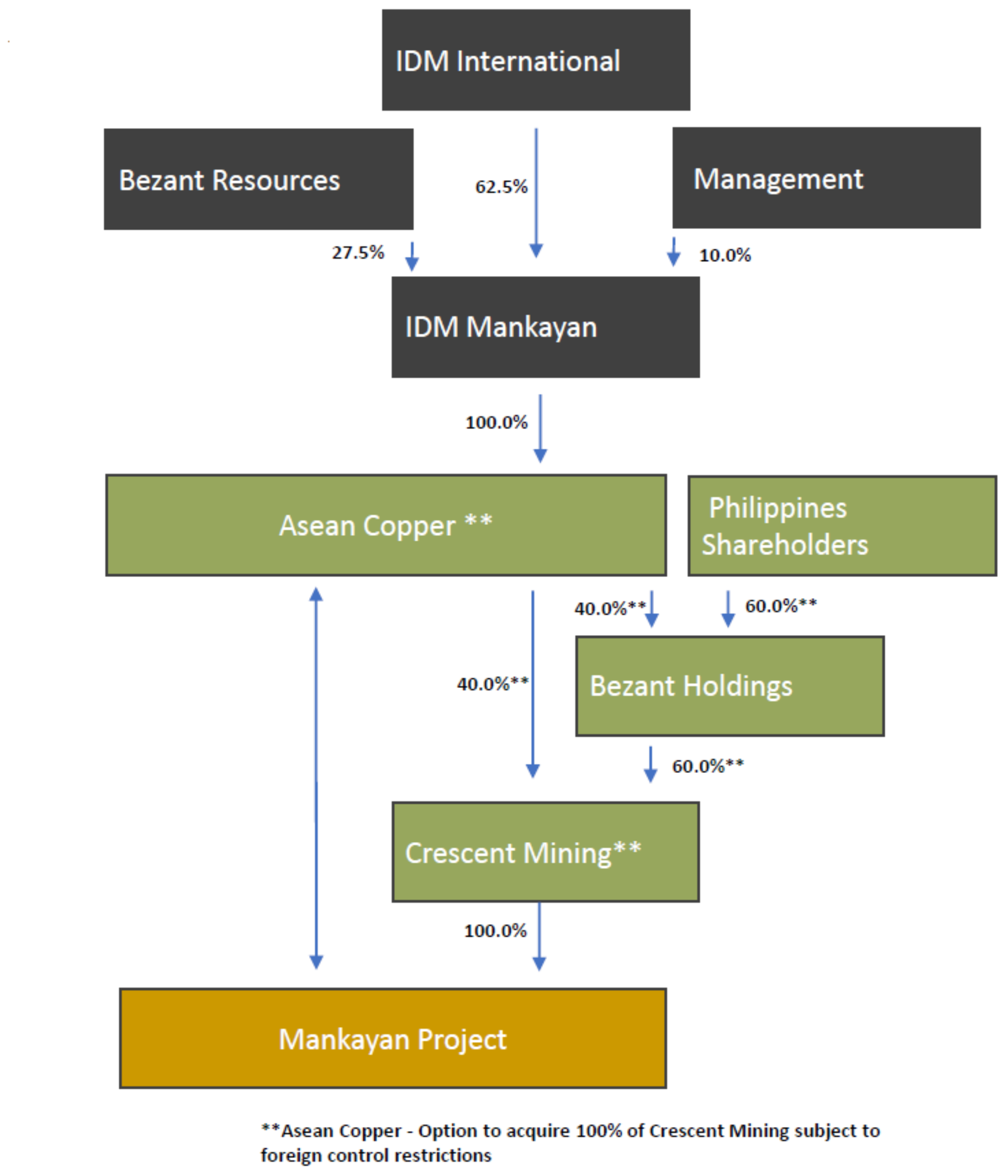
Figure 4.1_1
Permit Map – MPSA 057-96-CAR (Source – IDM, 2022)



4.2 Ownership Structure

IDM has currently 40% ownership of the Mankayan project under the structure highlighted in the figure below. Sahara has not independently verified this and has relied on IDM legal advisors.

Figure 4.2_1
Ownership Structure (Source – IDM, 2022)



4.3 Royalties and Agreements

Sahara is not aware of any Royalties and other agreements that will be detrimental to the development of the project.

4.4 Environmental Liabilities

Sahara is unaware of any existing environmental liabilities surrounding the project.

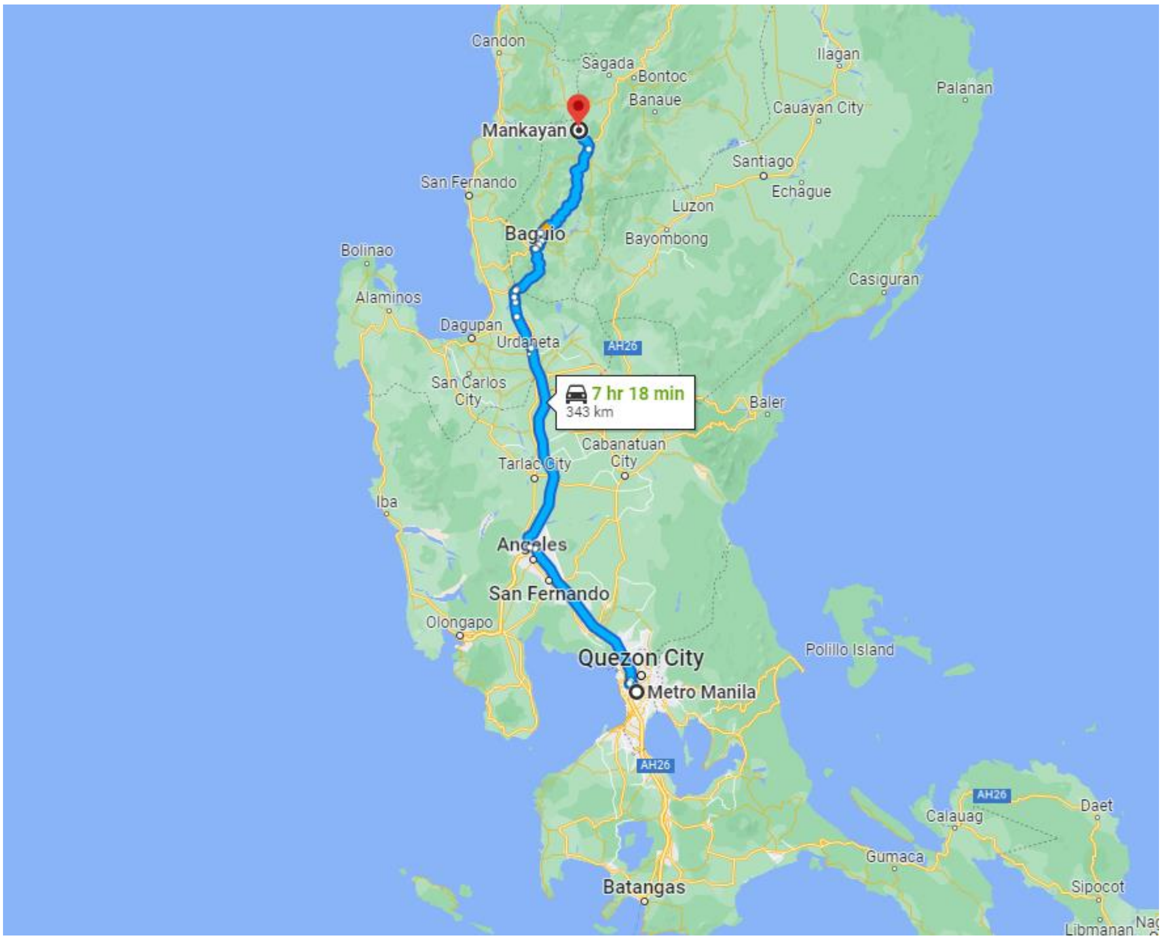
Sahara

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Project Access

The Project area is easily accessible by land from Manila to Baguio City via the Northern Luzon Expressway (NLEX) and Subic-Clark-Tarlac Expressway (SCTEX), approximately 250km. Access from Baguio City to Abatan is via the Halsema Highway, approximately 85km. From Abatan, the site is reached via a 5km partly sealed road (Abatan-Cervantes Road) to Guinaoang site. The Project can also be reached by air from Manila to a private airstrip at Lepanto Mine and then 11.5km by road to the property (Figure 5.1_1).

Figure 5.1_1
Access (Source: Google Maps, 2022)



5.2 Physiography and Climate

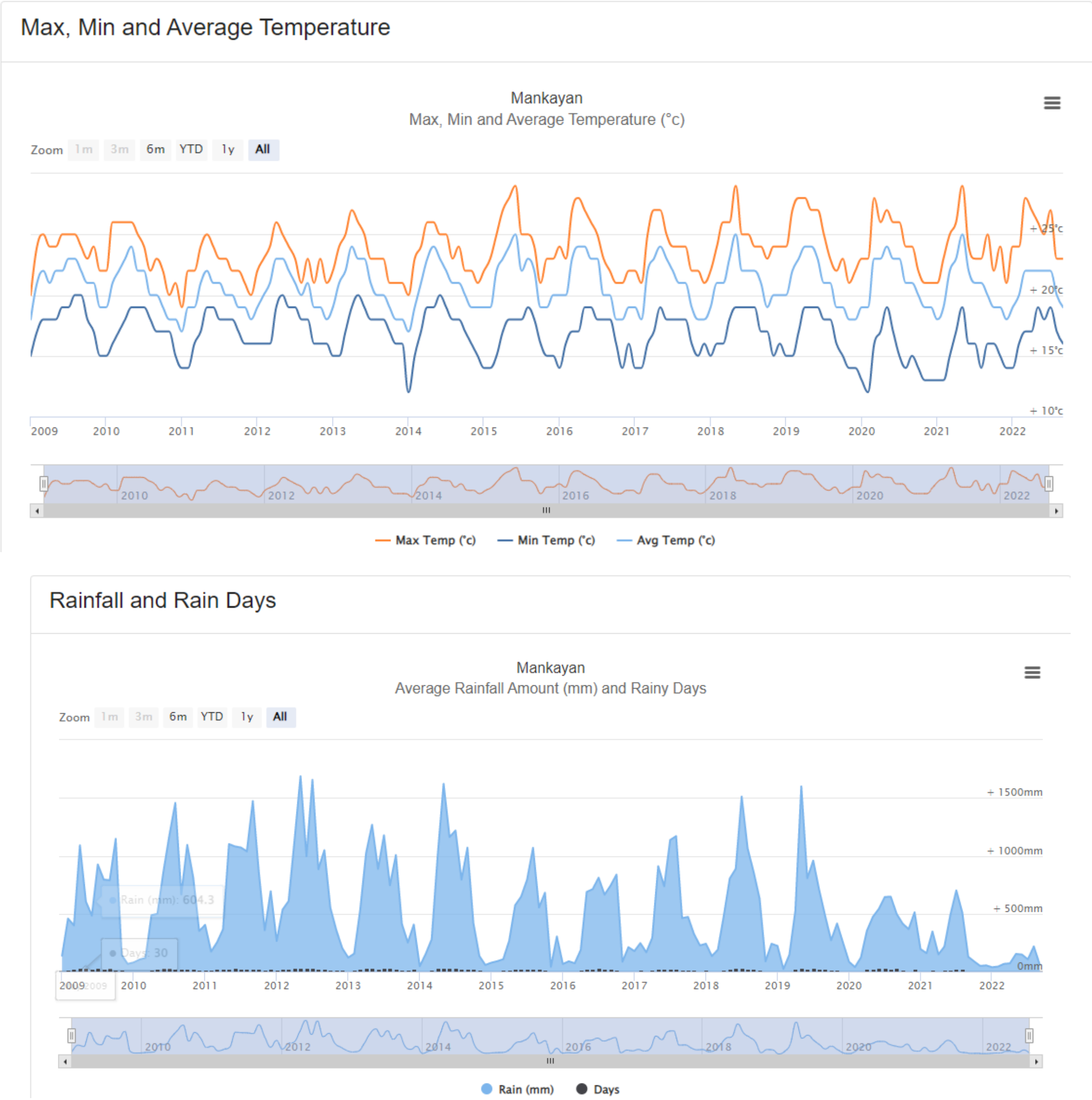
The Project sits in a valley along the Suyoc River at elevations ranging from 1,490m to 1,750m above sea level. The region consists of forest areas and populated areas where agriculture is the dominant land use, including terraced vegetable gardens (Figure 5.2_1).

Figure 5.2_1
Physiography (Source: IDM, 2022)

The climate is wet-and-dry tropical, with well-defined monsoonal rainy seasons. The main rainy season is between May – July. The region has relatively uniform maximum and minimum annual temperatures. The average daily temperatures vary between 20°C and 30°C.

Figure 5.2_2

Mankayan Annual Temperature and Rainfall – Climate (Source: WorldWeatherOnline.com)



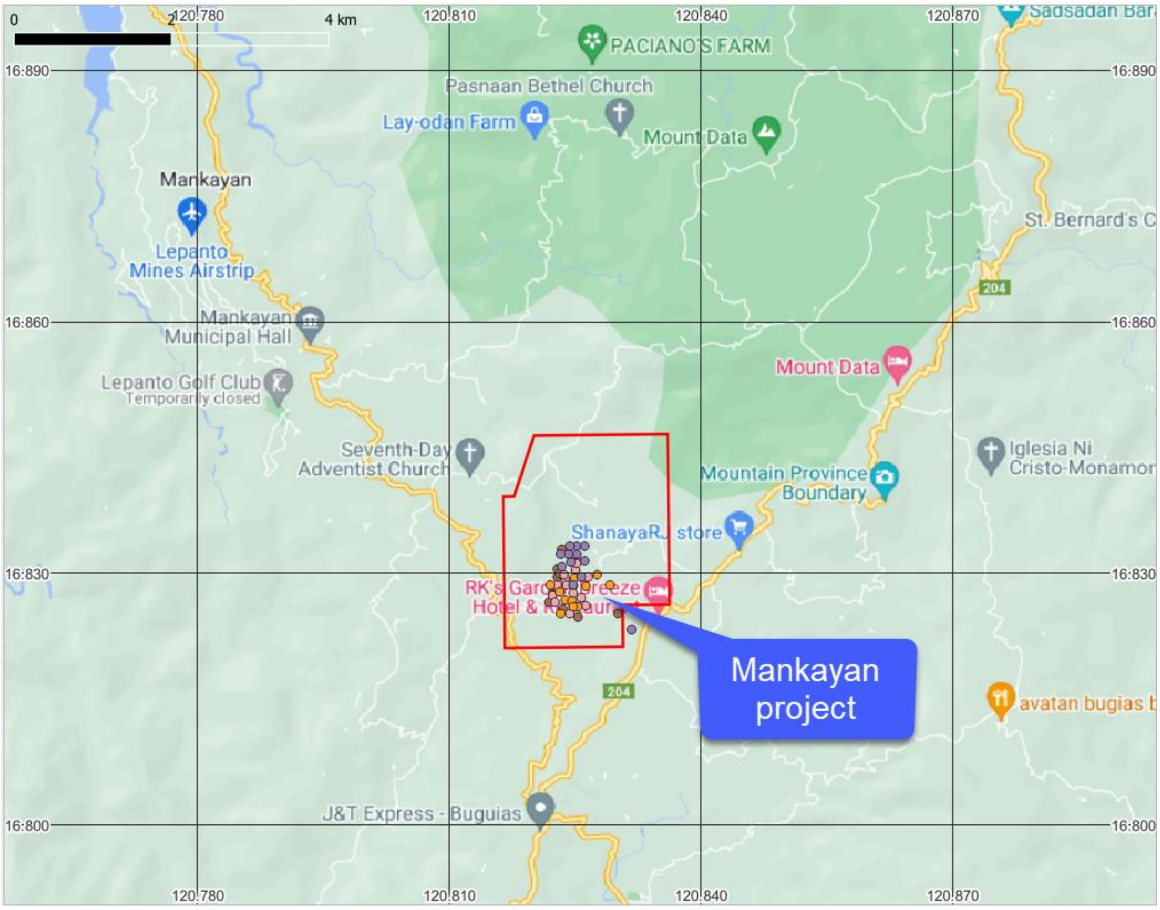
5.3 Local Infrastructure and Services

The town of Mankayan has a population of around 37,233 according the 2020 census. The municipality is known as a mining town, being the location of several mines, including the Lepanto Consolidated Mining Company (Lepanto).

Lepanto was established in 1936. Lepanto is a Filipino primary gold producer. The Lepanto mines are located in Mankayan, Benguet where the company has about a thousand employees. Lepanto presently operates the Victoria and Teresa deposits, from which it has reportedly produced over 1.2 million ounces of gold (Source https://www.lepantomining.com/)

The region has grid power, local fuel supply, accommodation, hospitals an airstrip along with an experienced locally available workforce.

Figure 5.3_1
Local Infrastructure and Services (Source - Sahara 2019)



6 History

6.1 Historical Exploration

There is a long history of exploration at Guinaoang, with numerous companies involved over nearly 50 years. Since its discovery in the 1970's, the Guinaoang deposit has undergone several changes of ownership and has been the subject of five major drilling campaigns. There have been significant periods of inactivity between the various exploration programs.

Table 6.1_1
IDM Permit - Summary of Exploration Work Prior to 2007 by Ghana Manganese Company

Date	Company	Summary of Work
1971 – 1973	Mankayan Mineral Development Company (MMDC)	11 drillholes for 7,861.80m
1980 – 1982	Tirad Minerals Incorporated (TMI) in a joint venture with the Hercules Mineral and Oil Company (HMOC)	14 drillholes for 9,467.59m
1983 – 1984	Gold Fields Asia Limited (GFAL)	16 drillholes for 15,783.68m
1996 - 1997	Crescent Mining and Development Corporation (CMDC) in a joint venture with Pacific Falkon Resources Corporation (PFRC)	11 drillholes for 11,796.76m
2007 - 2009	Bezant Resources PLC (Bezant) under an option agreement with CMDC	10 drillholes for 10,800.20m
2011 - 2014	Gold Fields Netherlands Services BV (Gold Fields) under an option agreement with Bezant	1 drillhole for 1,491.00m
2014 - 2020	Bezant	Nil
2022	IDP International	Commenced drilling and Prefeasibility Study

The Guinaoang area was initially targeted for exploration on the concept that it was the site of the intersection of two structural features – a northeast continuation of the Suyoc vein system and the southeast extension of the Lepanto Fault. The area is largely concealed by post-mineralisation rock and shallow-level advanced argillic alteration (quartz-alunite).

The advanced argillic alteration was initially drilled in the 1970s by MMDC, a Filipino company exploring the area for Lepanto-like mineralisation along the southeast extrapolation of the Lepanto fault. This is the principal host to about 70% of the Lepanto deposit. MMDC completed 11 drillholes (MMD prefix), with the last drillhole (MMD-011) intersecting 171m @ 1g/t Au and 0.77% Cu at the end of the hole. This is considered as the discovery hole.

From 1980 to 1982, TMI in a joint venture with HMOC drilled 14 drillholes (THM prefix). Initially this drilling was not considered successful, however during subsequent relogging it was recognised that high-sulphidation sulphides overprinted sericitic alteration, and that chalcopyrite was present at greater depths.

From 1983 to 1984 GFAL had an operating agreement with TMI. The area was mapped by GFAL and the earlier drillholes were relogged. GFAL took the initial decision to drill test the area for a porphyry target based on a small outcrop of intermediate argillic alteration beneath hypogene quartz-alunite alteration. Drilling intersected porphyry stockwork from 200m depth and subsequently GFAL drilled 12 holes (TGF prefix) and deepened six of the THM-prefix drillholes. GFAL outlined a body of 500Mt at a grade of 0.4% Cu and 0.4 g/t Au. The mineralisation is largely hosted by an altered quartz diorite intrusion 200 to 1,000m below surface.

TMI was granted a mining lease contract (MLC number 395) in 1984 but undertook no further significant work on the project.

In 1996 and 1997 CMDC, in a joint venture with PFRC, drilled 11 drillholes (PFC prefix) under MPSA No. 057-96-CAR. A ten-year hiatus in exploration followed the PFRC drilling campaign due to a combination of the Asian Financial Crisis and the Bre-X scandal in 1997.

From September 2007 to January 2009, Bezant as part of an option agreement with CMDC drilled a further ten drillholes along the full strike length of the Guinaoang deposit. From 2011 to 2014, Gold Fields under an option agreement with Bezant completed some work, including one drillhole and re-assaying of previous drillholes, but allowed the option to lapse.

6.2 Historical Resource Estimates

Snowden's undertook a resource estimate in 2009 which is pre- JORC 2012. This historical MRE has been superseded by the Derisk MRE in 2020. A summary of the reported MRE by Snowden's is presented in the table below.

Sahara has not reviewed this MRE by Snowden's but notes it reported ~ 15% more tonnes than the Derisk MRE in 2020.

Table 6.2_1
Snowden's MRE 2009 (Source Snowden's, 2009)

Class	DOMEST	2009 Model			
		Mt	**Cu (%)**	**Au (g/t)**	**BD (t/m^3)**
Indicated	1100	42	0.5	0.4	2.60
	2100	178	0.5	0.5	2.57
	3100	2	0.5	1.0	2.59
	Subtotal	222	0.49	0.52	2.58
Inferred	1100	18	0.4	0.4	2.60
	2100	14	0.4	0.6	2.57
	3100	4	0.4	0.5	2.59
	Subtotal	36	0.44	0.48	2.59
Total	1100	60	0.47	0.44	2.60
	2100	193	0.49	0.53	2.57
	3100	6	0.50	1.00	2.59
	Total	**258**	**0.48**	**0.52**	**2.58**

6.3 Historical Mining

The Lepanto enargite Au deposit was mined for Cu and Au at the start of the Ming dynasty (14th Century). The Cantabria-Filipino company was the first to conduct large-scale mining in 1865, with at least 1,100 t of Cu produced during a 10-year period. The underground mining activity dates from 1936, when the Lepanto Consolidated Mining Co. commenced mining until the Japanese took over production and Mitsui produced 11,000t of Cu during the early 1940s. Lepanto Consolidated Mining Co. resumed mining in 1948. To 1996, 36.3Mt of ore was mined at an average grade of 2.9% Cu, 3.4g/t Au, and 14g/t Ag, producing 0.74Mt Cu, 92t Au, and 393t Ag. The Lepanto mine closed in 1996 with a remaining reserve of 4.4Mt at 1.76% Cu and 2.4g/t Au (Chang et al, 2011).

Lepanto suspended its Enargite operations in 1996 and in 1997 commenced its Victoria gold operations. Lepanto presently operates the Victoria and Teresa deposits, from which it has produced over 1.2 million ounces of gold. (Source - https://www.lepantomining.com/)

No historical mining has been undertaken on the Guinaoang deposit.

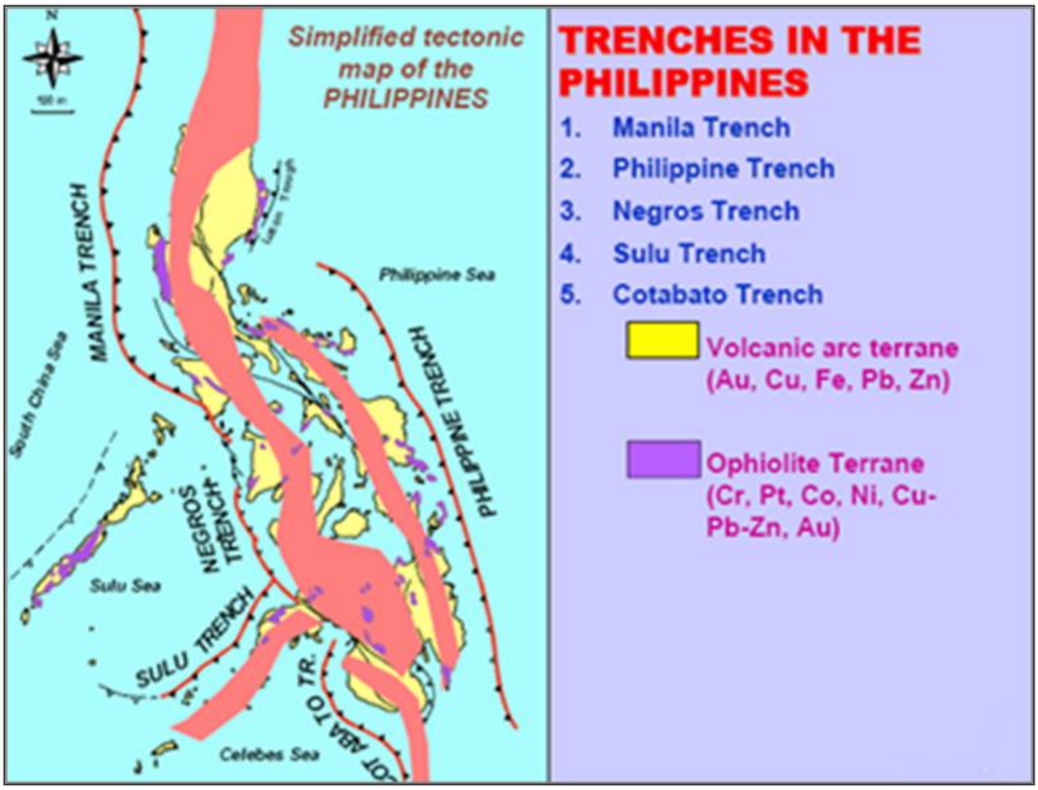
7 Geological Setting and Mineralization

7.1 Regional Geology

The Philippine archipelago is located midway along a chain of islands that run along the eastern margin of continental Asia from Japan in the north to Indonesia in the south. This chain of islands is an island arc system that formed along the margin of the Asiatic, Sundaland and Philippine Sea tectonic plates (Figure below). Subduction is now taking place in the Manila, Philippine, Negros and Cotabato Trenches (Mitchell et al, 1985).

Figure 7.1_1

Philippines Regional Geology **(Source: Philippines Mines and Geosciences Bureau - https://mgb.gov.ph/)**



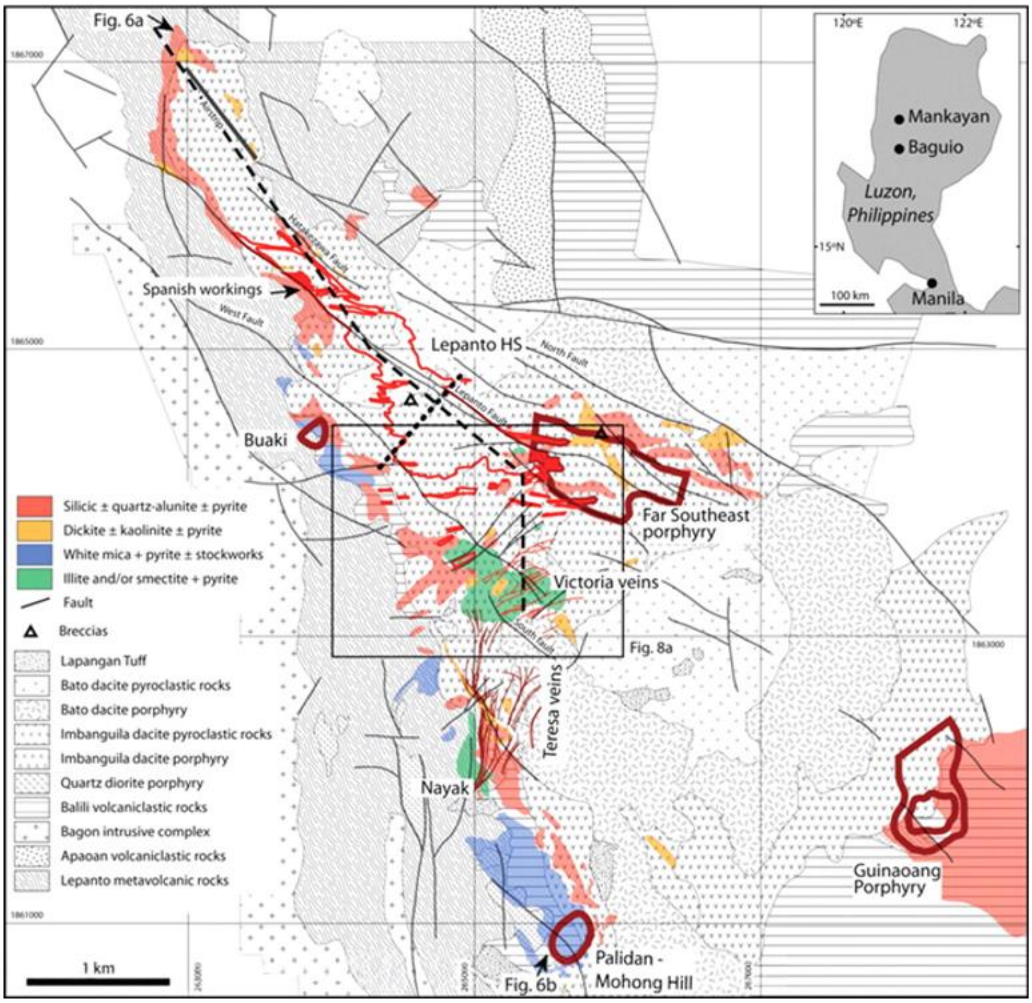
The morphology of the archipelago consists of roughly parallel linear ridges alternating with basins and troughs, following the trend of the adjacent trenches. The islands were formed during the late Mesozoic and Cenozoic and are composed of a complex agglomeration of continental margin fragments, obducted ophiolite sequences, volcanics and igneous intrusions. The intervening basins are composed of thick sequences of sedimentary deposits.

The main geologic units represented in the region include:

- Basement composed of late Cretaceous to middle Miocene metavolcanic and volcaniclastic rocks.
- Miocene (12 to 13 Ma) tonalitic Bagon intrusive complex.
- Pliocene (~2.2 to 1.8 Ma) Imbanguila dacite porphyry and pyroclastic rocks.
- Post-mineralisation cover rocks, including the ~1.2 to 1.0 Ma Bato dacite porphyry and pyroclastic rocks and the ~0.02 Ma Lapangan tuff.

Figure 7.1_2

Geology of the Mankayan district (Source: Chang et al. 2011)



Extensive advanced argillic alteration crops out for approximately 7km along the unconformity between the basement rocks and the Imbanguila dacite formation and consists of quartz-alunite ± pyrophyllite or diaspore, with local zones of silicic alteration and a halo of dickite ± kaolinite. The alteration and its sub-horizontal geometry indicate that it is a lithocap or coalesced lithocap.

The northwest-striking portion is approximately 4 km long and hosts the Lepanto enargite Au ore deposit, also controlled by the Lepanto fault. The Lepanto epithermal deposit is related to the underlying Far Southeast porphyry. The quartz-alunite alteration halo of Lepanto is contemporaneous with the ~1.4 Ma potassic alteration of the porphyry. There are also silicic-advanced argillic alteration patches approximately 600m above the Far Southeast orebody at the present surface, interpreted to be perched alteration. There is no systematic mineralogical or textural zoning in the Lepanto lithocap that indicates direction to the intrusive source. Most surface samples of the lithocap contain less than 50 ppb Au, despite many being less than a few hundred metres from underground Cu-Au mineral deposits.

7.2 Project Geology

Angeles (2009) described the geology of the Guinaoang area as being associated with a Pliocene stock complex that is composed largely of quartz diorite porphyry rocks. Two distinct phases of igneous intrusions have been identified:

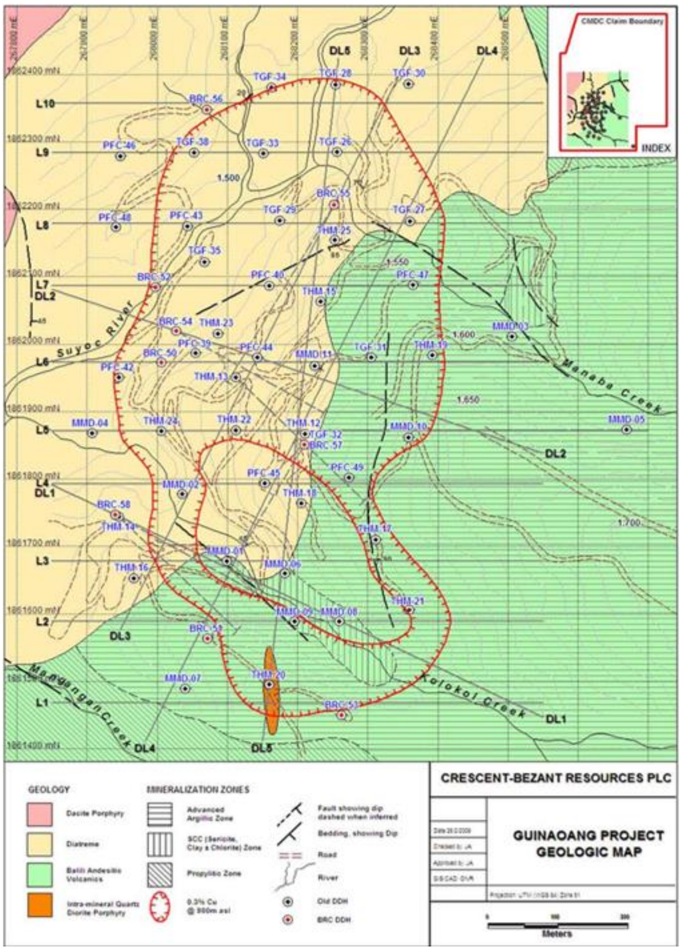
- Hornblende quartz diorite porphyry (QDP), also described as the syn-mineral quartz diorite porphyry.
- A later quartz diorite porphyry body (IQD) that has intruded the QDP body in the southern part of the project area, also described as the intra-mineral quartz diorite porphyry.

Both quartz diorite intrusives have cut through a basement of early Mesozoic biotite–quartz schists and a thick sequence of middle to late Mesozoic andesitic volcanics and minor calcareous rocks. The dip of the basement schists and the unconformably overlying andesitic volcanics are essentially sub-horizontal.

The intrusive bodies strike north-south, are sub-vertical, and are open at depth. In plan view, the intrusives occupy an area that is approximately 400 m wide and 900 m long. Surface outcrop of the quartz diorite intrusives is limited to a small exposure of IQD at the southern end of the deposit. Most of the plutonic bodies are located 400 m or more below the topographic surface.

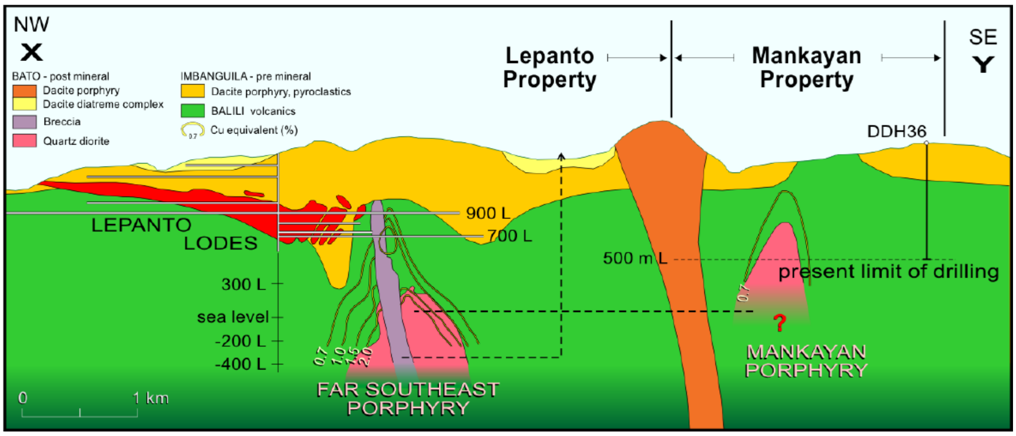
The upper western fringe of the deposit has been cut by a post-mineralisation diatreme complex (DIA). The DIA sequence dips at approximately 60° to the northwest. The surface geology is shown in the figure below, which also displays alteration zones and drillhole collars, indicating the diorites are buried except for one small area

Figure 7.2_1
Project Geology – Guinaoang deposit (Source: Angeles, 2009 Data)



The image below shows a similar schematic that relates the Mankayan porphyry which is located within 4km of the Far Southeast Porphyry and then the Lepanto lodes.

Figure 7.2_2
Mankayan Regional System (Source -IDM, 2022)



7.3 Mineralization

Porphyry copper deposits are associated with orogenic belts. The Guinaoang deposit is related to Island Arc porphyry emplacement. The subduction environment results in magmatism and porphyry deposits that are the result of hydrous magmas being emplaced at relatively shallow depths (<2 km). The Philippines has numerous similar deposits located in clusters along the Luzon, Visayas and Mindanao orogenic belts.

At Guinaoang the QDP and IQD intrusives both host copper and gold mineralisation. The most important host for the copper mineralisation is the QDP, with IQD containing lower grade mineralisation. The immediate volcanic host rocks surrounding the plutonic rocks are also mineralised in proximity to the diorites.

Angeles (2009) identified six alteration-mineralisation types starting from the core of the QDP and IQD rocks and moving outward into the surrounding volcanics rocks:

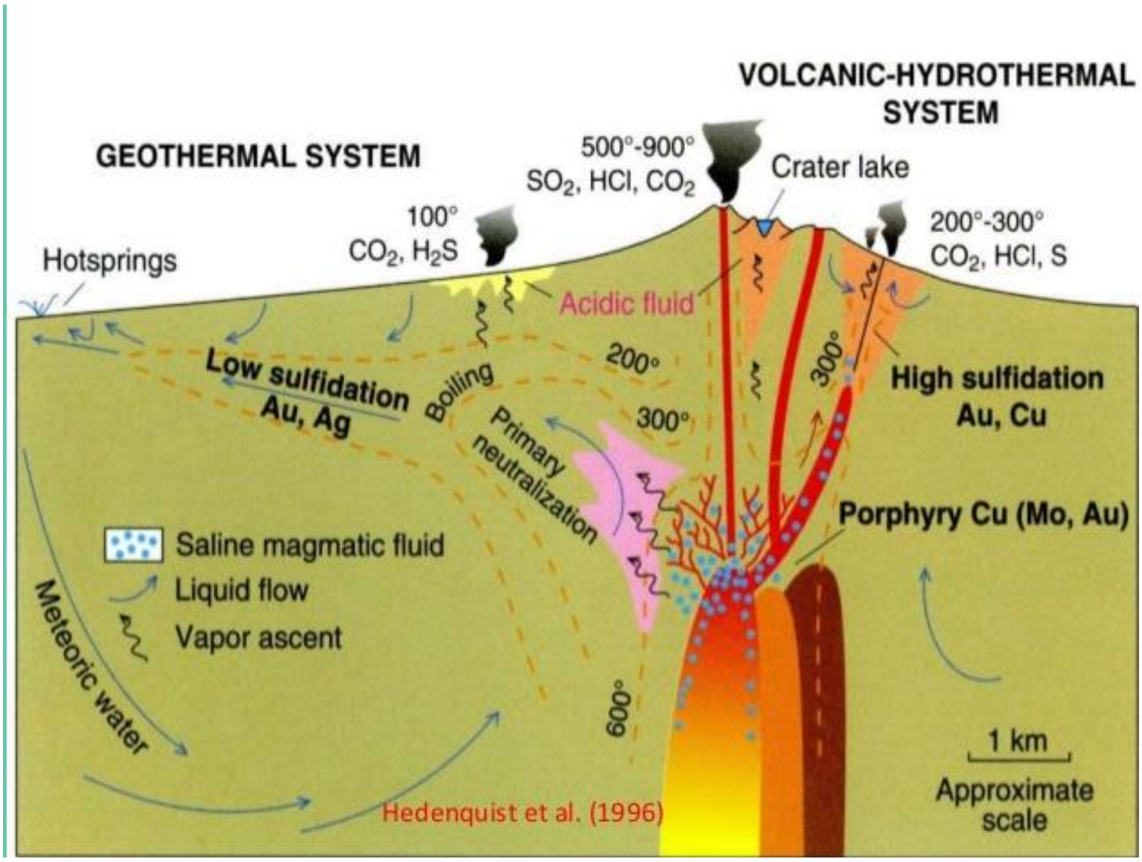
- Inner potassic zone (POT). This resulted from early prograde high temperature alteration and typically consists of orthoclase, quartz, secondary biotite, magnetite, and anhydrite. This alteration domain is usually only weakly mineralised.
- In calcareous units, calc-silicate minerals (SKN) with garnet, pyroxene and epidote are dominant instead of potassic alteration. On a local scale, calc-silicate rocks are volumetrically insignificant and not material to the resource estimate.
- Sericite-chlorite-clay (SCC) alteration overprinted most of the earlier POT and SKN alteration types. The main non-sulphide minerals include phengite, chlorite, smectite, magnetite, specularite, quartz, gypsum, and anhydrite. Sulphide minerals make up 1% to 4% of the rock and consist mainly of chalcopyrite with trace amounts of bornite, pyrite, chalcocite, molybdenite and galena.
- Sericite alteration (ISO) overprints the POT and SCC alteration types and is most evident in the middle and upper parts of the QDP. The ISO non-sulphide mineral assemblage typically consists of quartz, sericite, anhydrite, and calcite. The sulphide minerals consist principally of pyrite (5 to 15%) and lesser amounts of chalcopyrite, bornite, covellite and chalcocite. Trace amounts of molybdenite, galena and sphalerite also occur.
- Late-stage argillic alteration (AA) has formed an extensive irregular shaped cap at the top of the mineralised envelope overprinting mostly volcanic rocks. This alteration type is characterised by clays, quartz, and alunite. Sulphide minerals consist mainly of pyrite and enargite with lesser amounts of chalcocite, covellite, bornite and chalcopyrite. Trace amounts of luzonite, digenite and molybdenite also occur. Pyrite makes up between 6% to 30% of the rock mass.
- Propylitic zone (PRO). This barren zone forms an outer halo to the potassic zone, with a mineral assemblage typically of chlorite, epidote, carbonates, and pyrite. The figure below shows some mineralised core photos from hole BRC60.

Figure 7.3_1
Mineralization in hole BRC60 from 851m to 854m averaging 1.06g/t Au and 0.78% Cu (Source Tuesley, 2021)

8 Deposit types

Porphyry copper–gold deposits are large volume, low-grade disseminations formed by precipitation of copper and gold (plus molybdenum) from fluids of magmatic origin. These deposits form at shallow crustal levels (mostly <5 km depth) in association with variably large magmatic reservoirs emplaced at 10–15 km depth feeding the shallower porphyritic fingers, which are the focus of the mineralisation1. Large magmatic reservoirs are in turn fed by deep (mid-to-lower crustal) magma accumulation zones. The figure below shows a schematic cross section of a typical porphyry in a volcanic hydrothermal system.

Figure 8_1
Porphyry Copper System (Source -Hedenquist et al, 1996)



9 Exploration and Drilling

Since its discovery in the early 1970's, the Guinaoang deposit has undergone several changes of ownership and has been the subject of six separate drilling campaigns. Sahara has not identified any geochemistry or geophysical surveys undertaken across the project. A total of 56 drill holes (54,908.1m) were drilled across the Guinaoang project prior to IDM involvement.

Table 9_1
IDM Permit - Summary of Drilling Completed

Implementation Period	Drill Type	Company	Holes Drilled	Meters (m) Completed
1972	RC	MMDC	11	7,861.8
1981	RC	TMI/HMOC	13	11,512.8
1983	DD	GFAL/TMI	11	11,586.2
1996	RC	CMDC/PFRC	10	11,656.7
2007	RC	Bezant	10	10,799.6
2013	DD	Bezant/Gold Fields	1	1,491.0
2022	DD	IDM International	2	1,950
Total				**56,858.1**

The discovery hole MMD-11 was targeted on outcropping advanced argillic altered Balili Volcanics as shown in the figure below from Angeles, 2009.

Figure 9_1
Discovery hole MMD-11 and outcrop (Source: Angeles, 2009)

The figures below show a picture of the CT-20 Drill rig used to complete BRC60 on behalf of Gold Fields in 2013 and the current rig being utilised by IDM in the PFS work.

Figure 9_2
CT-20 Drill rig used to complete BRC60 (1,491m depth) for Gold Fields Philippines Holdings BV in 2013 (Source: IDM archives)

Figure 9_3
IDM Drilling 2022 - Major Drilling rig CDH-061 (Source: IDM, 2022)

9.1 Historical Drilling Procedures

This section applies to drilling information available prior to IDM. Angeles (2009) reportedly recovered the available drill core for relogging and resampling. Bezant (BRC drilling) was intact and available whereas earlier drilling (mostly PFC drillholes) had deteriorated. Angeles (2009) compiled the geological records and notes for the data sources for drilling earlier than PFC prefix drillholes. PFC logs were derived from PFC original descriptive logs and BRC drill core was relogged.

Though the previous logs are of variable quality and processes, the current database is essentially compiled by the one geologist and provides a reasonable basis for analysis. Angeles (2009) notes:

- Only BRC holes have digital core photographs, though these are variable quality.
- Only PFC and BRC holes have geotechnical logs including core recoveries, with BRC holes logged geotechnically using Snowden procedures.
- Only BRC holes have bulk density measurements. These were taken for each assay interval where the core was not in a fault/shattered zone.
- Only PFC and BRC holes have geological logs.
- The original ½ core split assays are available for all PFC and BRC holes, except PFC-49.
- Intact coarse rejects of THM, TGF and PFC holes stored were re-assayed. Fourteen holes were resampled including THM-15, 20, 26, TGF-29 to 33, 35, 36, 38, PFC-44, 46 to 49 samples.
- Also, ¼ core splits of five PFC holes were assayed i.e. PFC-29, 40, 44, 45, 47.
- BRC sampling and resampling included QA/QC, using CDMC standards, blanks, and duplicates.
- Assaying was predominantly at McPhar Laboratory (McPhar) in Manila.

Only BRC and most of the PFC holes have original downhole surveys by Reflex and Topari instruments, respectively. Five holes (THM-18, THM-22, THM-25, TGF-26 & TGF-35) were re-entered by CMDC using the same Reflex instrument but the downhole survey did not reach the base of drilling. No borehole surveys are available for holes MMD-01 to MMD-11, THM-12 to THM-17, THM-19 to THM-21, THM-23, THM-24, TGF-27 to TGF-34, TGF-38, PFC-40, and PFC-43.

For QA/QC, CDMC standards, blanks and duplicates were inserted in BRC batches. The same was done for the coarse rejects and ¼ core split for the THM, TGF and PFC holes. McPhar has internal standards, replicates and blanks for all batches submitted to them for analysis for all holes. However, the pertinent QA/QC data for MMD, THM, TGF and PFC are irretrievable since McPhar keeps data only for five years.

Drillhole Collar and Downhole Surveys

Almost all of the MMD, THM, TGF and PFC drillhole collars were re-surveyed by CMDC/PFRC using the WGS 84 coordinate system. The Bezant drillhole collars were surveyed using a handheld global positioning system (GPS) unit.

Downhole survey measurements were collected for the BRC- and PFC-series holes using single shot Reflex and Topari instruments. Some earlier drillholes were resurveyed by CMDC/PFRC using the same instruments but this was largely restricted to the upper open portion of the drillholes.

There is little reliable downhole azimuth survey information available as only about half the drilling has any downhole survey measurements, and the magnetite associated with the various alteration stages will affect the azimuth readings in both instruments used. Snowden (2009) noted they made manual database corrections to anomalous downhole azimuth values.

The lack of downhole survey measurements is a concern given that the drilling involves holes that are on average ~1,000m deep. As such, some hole deviation would be expected. Most drillholes are vertical and drilling is regularly spaced. Potential cross over of drilling is limited to just a few inclined drillholes. Sahara considers this lack of accurate downhole surveys can be an issue if a high grade mining approach is adopted, which will require additional confirmatory drilling prior to mining.

Drill Core Sample Recovery

Core recovery data is only available for PFC and BRC drilling. Recoveries are high at over 96% on average. Angeles (2009) reported slightly lower but similar high recoveries for earlier drilling campaigns.

9.2 IDM Drilling Procedures

IDM Drilling for the PFS has been completed. Two diamond drill holes were drilled in 2022 for 1,950m. These 2 holes were drilled primarily for Geotechnical and Metallurgical testwork for the current IDM PFS.

Drilling commenced on CDH-061 on May 24, 2022 utilising a Boart Longyear LF-90D track mounted rig from Major Drilling. CDH-061 is collared at: 268353mE, 1861986mN with an azimuth of 253.50 and inclination of 72.50. This site is approximately 29m away and 40m higher in elevation from the original site, which is adjacent to a house. The hole was completed on July 12, 2022 and finished at 950m.

CDH-062A is collared at 268527E, 1861930N with an azimuth of 257.20 and inclination of -72.70 and a target depth of 1,030m. Drilling commenced on July 21, 2022, and was completed on September 8, 2022 after reaching the target depth of 1,000m.

Metallurgical testwork planned for these holes is covered in the Metallurgy section

9.2.1 Geotechnical work by IDM

UCS and TRI Tests

From the IDM drilling, a total of twenty-one (21) samples from CDH-062A have been selected for Unconfirmed Compressive Strength ("UCS") and triaxial (TRI) tests. These samples were sent via to Trilab on October 28, 2022.

No results were available at time of this report.

Stress Tests

Austhai Geophysics conducted ATV and FWS surveys on both drill holes prior to Solexperts doing HF tests. ATV/FWS survey post HF tests was conducted only at CDH-062A.

Solexperts equipment undertook HF tests and were able to make 11 readings with Solexperts advising that a single HF test will be enough to get stress data.

10 Sample Preparation, Analyses and Security

The following procedures were used for Diamond Core samples utilised in the 2020 MRE and PFS drilling completed by IDM in 2022. IDM has not been sampled for MRE purposes.

10.1 Diamond Core Sampling

After geological logging, the drill core was sampled on site as follows:

- The MMD, and THM series core was sampled by splitting it with a chisel and sledgehammer against an iron block.
- The TGF, PFC and BRC core was all sampled by cutting it with a diamond saw.

Sampling was most commonly undertaken on 3 m downhole lengths over all programs but without adjustment for lithology.

10.2 Laboratory Preparation and Analysis

10.2.1 MMDC and TMI/HMOC Campaigns (1971-1982)

No documentation for the sampling and sample preparation procedures is available for the first two drilling campaigns at Guinaoang.

Sahara notes that drillholes MMD-01 to MMD-09 and MMD0-10 to a depth of 275 m are sampled on largely 50 m intervals. The sampling method is unknown but could be a filleting type of sample taken from the outer edge of the core to achieve such long sample lengths. Sahara considers these wide sample results are likely to be a low-quality with poor precision.

No documentation is available for the analytical procedures used by MMDC.

10.2.2 GFAL/TMI, CMDC/PFRC, and Bezant Campaigns (1983-2013)

After core splitting on-site, all samples except for drillholes (BRC-50 to BRC-54) were prepared on-site by:

- Oven drying (gas-fired) for 5 to 7 hours.
- Jaw crushing of the entire sample to minus 10 mm.
- Riffle split to produce a 1 kg split.
- Pulverised the 1 kg sub-sample to minus 106 micron using a ring mill or disk pulveriser.
- Collected a 250 g pulp split for analysis (TGF and PFC) and a 150 g pulp split for BRC.

Both coarse and pulps rejects were stored on-site.

Sample analysis was undertaken by McPhar as follows:

- For the campaigns by THI/HMOC, GFAL/TMI and Bezant, McPhar used a two-acid digest (HCl/HNO_3) on a 0.25 g pulp sub-sample, then analysis by atomic absorption spectrometry (AAS). Gold analysis was by a lead fire assay (30 g sample) with an AAS finish.
- For the campaigns by CMDC/PFRC, McPhar used a three-acid digest ($HCl/HNO_3/HClO_4$) on a 1 g pulp sub-sample, then analysis by AAS. Gold analysis was by a lead fire assay (30 g sample) with an AAS finish.

10.2.3 Unsampled Drill Core Intervals

Desktop database checking by Sahara has identified there are several drillholes that contain substantial intervals that have not been sampled.

These holes appear to have potential for mineralisation and it is unclear to Sahara why they were not systematically sampled.

10.2.4 IDM (2022)

The two IDM Diamond Core holes have not been sampled for MRE purposes as they were drilled primarily for Geotechnical and Metallurgical information in the current PFS study.

11 Data Verification

11.1 QUALITY ASSURANCE QUALITY CONTROL

Drilling has taken place at the Project over nearly fifty years, and quality control and quality assurance (QA/QC) data and records are inconsistent and incomplete.

11.2 Standards and Blanks

As part of the Bezant drilling programs certified reference materials (CRMs) were inserted into sample batches, although it is unclear from the documentation how frequently the CRMs were included. Bezant also inserted CRMs into a program undertaken of coarse reject re-assays from previous drilling campaigns.

Three CRMs sourced from Ore Research and Exploration Pty Ltd (OREAS) were used ranging from 410 ppm Cu and 67 ppb Au to 7,440 ppm Cu and 841 ppb Au. Derisk noted in 2020, that standard OREAS 44P is composed of oxidised sediments and lateritic ores. Given that the Guinaoang deposit is essentially unoxidised the results for this CRM should be viewed with caution as the assaying procedure in the laboratory would have been optimised for fresh samples, rather than for oxidised samples.

Snowden (2009) reviewed the CRM data and generated new control charts for the results, with the chart for CRM 52Pb showing good accuracy.

Sahara considers that the Bezant results indicate that the analytical accuracy is acceptable with the majority of results being within the industry-accepted range of within three times the standard deviation of the CRM.

Sahara also not that over 70% of the drilling (prior Bezant in 2007) does not have any CRM data available. Unless there is available core for sampling then twin holes may be required to validate the accuracy of analytical results prior to Bezant. Spatial reviews have not highlighted any apparent bias as presented in further sections.

11.3 Duplicates

A combination of coarse reject duplicates and pulp duplicates were used by Bezant to assess the precision of the BRC and PFC holes. Angeles (2009) reported that for the Bezant holes, duplicate samples were only collected for samples in the grade range of 0.1% Cu to 0.3% Cu.

11.3.1 Pulp Duplicates (Bezant 2007 to 2009)

For the Bezant drilling, a total of 195 pulp duplicate samples were available. The pulp duplicate samples for copper showed very good precision with 90% of the duplicate samples having a precision of better than 5% HARD.

For gold, the precision is reasonable with 90% of samples having a precision of better than 24% HARD, however the pulp duplicate samples are on average approximately 10% higher in grade compared to the original samples. Snowden (2009) noted that this bias may be linked to the pulp sub-sampling practices where the pulp is rolled in canvas four times and then quartered, which may promote segregation of denser particles and cause the bias shown in the results.

11.3.2 Field Duplicates (Bezant 2007 to 2009)

A total of 44 coarse reject duplicate samples are available for the Bezant drilling (BRC prefix holes). The duplicate samples showed that for copper, there is no grade bias present and that

90% of the duplicate samples have a precision of better than 6% half absolute relative difference (HARD), indicating very good precision. For gold, the coarse reject duplicate samples showed reasonable precision with 90% of samples having a precision of better than 23% HARD and similarly showed no evidence of any systematic grade bias and composites from all other drillholes within the mineralised zone.

11.3.3 Comparison of Different Drill Core Sizes

Angeles (2009) completed a qualitative assessment of the effect that changes in drill core diameter may have on assay quality. He evaluated the difference in assays immediately above and below a core size change where the samples were in the same lithology. There is no documentation on the actual core size change, but Sahara assumes the changes were from HQ to NQ size and from NQ to BQ size core.

Angeles (2009) identified 30 pairs of measurements across core size changes and compared the mean of up to 30m either side of the change, averaging 18 m for all 30 pairs. Angeles summarised that there were no significant differences in assay data for different core sizes.

11.3.4 1996 to 1997 PFC Duplicates

A total of 289 duplicate samples were available for the PFC series of drillholes from 1996 to 1997. These appear to be coarse reject duplicate samples, although the type of duplicate sample collected is not clear from the Angeles report, which used the term “field duplicates”. The checks completed by Snowden (2009) suggested that no bias exists in either the copper or gold assays. The precision of the copper assays is excellent, with 90% of samples with a precision of better than 4% HARD. For gold, the precision is also good with 90% of samples showing a precision of better than 17% HARD.

11.3.5 Coarse Rejects Re-assays of THM and TGF Drillholes

Angeles (2009) summarised 1,043 re-assays of coarse reject samples derived from the THM and TGF series holes. The analysis indicated that a reasonable level of precision was attained for these drillholes, however this data has not been located by Sahara. Angeles reported that most drillhole batches reported a precision of better than 10% i.e. less than 10%, but three drillhole batches reported greater than 10%.

11.3.6 Blanks (Bezant)

Two certified commercial blank samples (pulps) were purchased from OREAS (OREAS 22P and OREAS 22b). These two standards were employed during the 2007 to 2009 Bezant drilling campaign. All blank samples are within acceptable tolerances (most are below detection limits) for both copper and gold, indicating that contamination within the analysis laboratory was minimal. These samples do not check contamination in sample preparation because they are pulps.

11.3.7 MMD Drillhole Spatial comparison by Snowden’s (2009)

Given that no QA/QC data is available for the earliest drilling at the Guinaoang deposit i.e. the MMD series of drillholes. To assess the general correlation of MMD series drilling with other drilling campaigns, Snowden (2009) completed a comparison between assays from the MMD drillholes and other surrounding drillholes using a Q-Q plot. The MMD holes are predominantly located in the southern portion of the deposit and the comparison was limited to this area and within the mineralised zone only.

Snowden's Q-Q plots comparing the copper and gold MMDC series results with the surrounding drilling indicate that while there are some differences, there is no evidence for a systematic significant bias between the two sets of data.

11.3.8 QA/QC Conclusions

Sahara concludes that QA/QC checks of the available data only assess in detail drilling by Bezant from 2007. This means that prior drilling which is ~70% of the drilling has no, or unreported QAQC checks in place to determine the precision and accuracy.

Bezant QAQC was acceptable with no serious deficiencies in the assay data that could represent a critical flaw in the data inputs used to compile the Derisk mineral resource estimate in 2020.

Prior drilling has been checked by spatial checks by Snowden's in 2009 (Given no available QAQC data prior to 2007) and have determined there is no evidence for a systematic significant bias between the two sets of data

Sahara concludes that historical drilling prior to Bezant in 2007, will require appropriate twinning or infill validation drilling to advance to a Bankable Feasibility level and provide this confidence in analytical accuracy of historical drilling.

Sahara recommends that for future drilling programs the following QAQC should be implemented:

- All blank samples, standard samples and duplicate samples should be submitted at a pre-determined rate of at least 1 in 20.

11.4 Bulk Density

Angeles (2009) described and summarised the bulk density determinations undertaken in 2009 on 2,431 samples. No older data is available. These were measured using an Archimedes method to determine drill core bulk density using the following approach:

A representative 10cm to 15 cm length of core was cut.

The sample was weighed in air and then in water.

No attempt was made to seal the core prior to immersing it in water.

Density was calculated using the formula: $M_1 / (M_1 - M_2)$ where:

- M_1 = dry core sample weight in air
- M_2 = core sample weight in water

Angeles (2009) noted that the BRC drillhole samples were not oven dried and not sealed. There are no available moisture content data collected from the laboratory to understand or estimate the moisture content of the core samples. This method will result in the following biases, all of which will result in potential overstatement of the dry bulk density:

In addition, the procedure described by Angeles (2009) indicated the scales used was a small luggage hangar type with relatively low expected precision. There is also no indication of any accuracy or calibration checks on the scales. Since the majority of the data is rounded to a level of 0.05 or 0.1 it is not appropriate to apply or quote density values to a seemingly higher order of accuracy. The density data is also biased due to moisture and there is no available data to try and correct these issues.

Given the depth from surface and fresh nature of the core samples and similarity of measured bulk densities to unaltered silicates with a density of 2.7 t/m^3 to 2.8 t/m^3, the data suggest moisture content is minimal.

Final bulk densities used are within recorded densities for similar rocks but Sahara considers significant additional density checks are required to increase confidence as ~2000 samples represent less than 3% of the meters drilled.

11.5 Survey Control

Topography was surveyed using a manual theodolite method and a local government reference station for reference. This survey was used to compile a set of 5 m contour strings across the project area. No other details are known. The deposit is largely buried and topography accuracy at the current time is not considered critical.

Mr Tuesley completed a site visit in July 2020 and again in September 2021 and was able locate historical drill collars in the field and confirmed the accuracy of collar surveys with a handheld GPS to acceptable limits.

12 Mineral Processing and Metallurgical Testing

12.1 Gold Fields testwork (1984)

The 1984 Gold Fields Asia Limited (Gold Fields) document, “Preliminary Ore Reserve Estimation of the Guinaong Porphyry Copper-Gold Deposit”. Section 3.5 of this document summarises the ore classification work and metallurgical testwork conducted by Gold Fields.

Gold Fields identified the following three main ore types at the Mankayan Project:

1. Low-pyrite chalcopyrite ore, comprising 60.45% volume of the ore zone. This ore type occurs in sericite-clay-chlorite alteration.
2. High pyrite bornite chalcopyrite ore, comprising 35.65% volume of the ore zone. This ore type is confined to the white sericitic alteration.
3. High-pyrite enargite ore, comprising 3.9% of the volume of the ore zone, and occurring in the extreme upper portion of the porphyry system. This ore type is confined to the quartz-alunite facies of the advanced argillic alteration.

Gold Fields reported good recoveries of copper and gold were achieved on ore types 1 and 2. Copper recoveries ranged from 84.7% to 94.2% whilst gold recoveries ranged from 67.5% to 76.7%.

On ore type 3, the copper recovery achieved was about 80% whilst the gold recovery was about 32%. However, concentrates produced from this ore type contained high levels of arsenic and would have been difficult to sell. Gold Fields concluded that selective mining of ore types 1 and 2 would be necessary to avoid contamination with ore type 3.

12.2 AMMTEC Testwork (2009)

A defined program of comminution testwork was carried out by Ammtec Ltd (Ammtec) in 2009.

A summary of the test work conducted included the following:

- Head assays
- Flotation testwork
- Mineralogy (XRD).

The testwork was controlled by Mr Evan Kirby of Metallurgical Management Services (MMS) on behalf of Bezant Resources PLC. Graeme Stewart supervised the program on behalf of AMMTEC.

Three samples of about 10 kg of drillcore from each of the inclined boreholes (BC57 and BC58) were used in the work. For each borehole, the first two samples were representative of the upper zones in the porphyry whilst the third sample was representative of the deeper bulk of the orebody. The alteration lithologies of the three samples were as follows:

- Upper sample: advanced argillic;
- Mid sample: intense sericitic overprint;
- Deepest sample: sericite chlorite clay.

Figure 12.2_1 Head grade of 6 samples tested (Ammtec, 2009)				
	HEAD ASSAYS			
Sample Identity	Copper (ppm)	Gold (ppm)	Arsenic (ppm)	Sulphur (%)
6154	3355	0.43	54	7.60
6155	5345	0.41	67	7.21
6156	4184	0.79	<10	4.64
6157	3214	0.44	35	4.00
6158	5295	0.47	42	11.3
619	4000	0.65	<10	2.18

Results from the work are summarised in the tables below

Rougher Flotation Testwork

Flotation testwork was completed at a primary grind size of 80% passing 75 µm. A copper selective thionocarbamate collector (A3894) was used to give the following flotation performance:

Figure 12.2_2 Rougher Flotation Testwork (Ammtec, 2009)								
Float Test No	Sample Identity	Wt (%)	COMBINED ROUGHER CONCENTRATE					
			Copper		Gold		Sulphur	
			%	% Dist'n	ppm	% Dist'n	%	% Dist'n
GS3708	6154	11.8	2.31	90.4	3.24	79.1	31.1	51.1
GS3709	6155	14.4	3.33	96.5	2.73	83.3	28.5	57.4
GS3708	6156	4.58	9.00	97.3	13.7	81.3	31.7	34.9
GS3711	6157	12.9	2.08	90.9	3.05	82.6	24.9	89.4
GS3712	6158	17.8	2.50	93.3	2.30	80.2	34.2	54.2
GS3713	6159	2.50	15.7	97.4	17.9	82.6	28.8	35.4

Cleaner Flotation Testwork

Cleaner flotation response is provided in the table that follows:

Figure 12.2_3
Cleaner Flotation Testwork (Ammtec, 2009)

Float Test No	Sample Identity	Wt (%)	COMBINED ROUGHER CONCENTRATE					
			Copper		Gold		Sulphur	
			%	% Dist'n	ppm	% Dist'n	%	% Dist'n
GS4007	6154	1.74	13.2	77.6	12.7	52.9	25.4	6.92
GS4008	6155	1.78	21.4	80.9	10.6	47.7	34.4	10.2
GS4009	6156	1.37	26.4	91.1	34.9	65.9	34.0	12.1
GS4090	6157	2.39	15.0	79.3	15.0	60.6	36.6	11.2
GS3959	6158	1.31	24.6	68.3	6.71	17.2	29.5	3.83
GS4011	6159	1.20	29.9	93.7	32.3	69.5	33.9	18.8

Bulk Composite

The flotation performance of the composite floated as a bulk sample is presented below:

Figure 12.2_4
Bulk Composite (Ammtec, 2009)

Test No	Sample	COMBINED RECLEANER CONCENTRATE						
		Wt (%)	Copper		Gold		Sulphur	
			%	% Dist'n	ppm	% Dist'n	%	% Dist'n
GS4103	Composite	1.27	26.9	79.4	28.2	59.6	35.6	9.62

Ammtec concluded that Individual and composite flotation testwork, from the six samples tested, showed a copper concentrate of suitable grade could be achieved at a modest recovery.

The composite tested on a bulk scale, achieved a copper concentrate assaying 26.9% copper at a recovery of 79.4%. Gold recovery was 59.6% into this concentrate.

Samples 6154 and 6157 proved difficult to upgrade. Ammtec recommended that further testwork be completed on (mineralogically) similar samples.

Gold also appears to be associated with the sulphide (pyrite) gangue minerals.

Cyanidation of this concentrate did not yield high gold recovery.

Ammtec recommended further testwork is required to determine possible alternative extraction methods.

12.3 MMS Consultants Review of AAMTEC work

MMS consultants concluded the lithology of the two deepest samples is representative of the major part of the Mankayan porphyry. The other samples represent relatively small portions located in the outer margin of the porphyry where it contacts the country rock.

Excellent results were obtained from the two deepest samples. The testwork results indicate that copper and gold recoveries of about 94% and 74% respectively can be anticipated whilst producing a saleable concentrate with a grade more than 30% copper.

Acceptable results were obtained on the upper and mid samples representing the outer margin of the porphyry. However, recoveries and concentrate grades were more variable and lower than those achieved on the deepest samples. Further testwork to optimise flotation conditions for this outer margin material is expected to be able to improve both copper and gold recovery.

A bulk flotation test (rougher, cleaner, re-cleaner) was performed on a composite of all individual samples to produce a larger sample of concentrate for further evaluation.

Semi quantitative X-Ray Diffraction analysis of the bulk concentrate indicated that its composition was 73% chalcopyrite, 25% pyrite and 2% quartz. Multi element analysis showed that all impurity elements were below penalty levels commonly quoted by smelters. Of particular interest was that cadmium and mercury were exceptionally low levels by industry standards.

Sahara notes that the MMS conclusions appear to not reflect the AMTEC testwork accurately.

12.4 IDM Metallurgical Testwork

With completion of the two Diamond Core holes completed by IDM in 2022, IDM have engaged Marius Philips (Stantec Consulting) to review the logs of CDH-061 and CDH-062A, and adjoining drill holes and recommend sample intervals for metallurgical testing. The plan is to get representative samples from the three (3) identified ore types: low pyrite-chalcopyrite in sericite-clay-chlorite alteration (60%), high pyrite-bornite-chalcopyrite in sericite alteration (36%) and pyrite-enargite in quartz-argillic alteration (4%).

The metallurgical characterisation samples have been selected to represent the main mineralization types with the SCC mineralization interpreted to be equivalent to the historically defined Ore Type 1, the ISO mineralization interpreted to be equivalent to the historically defined Ore Type 2 and the AA mineralization interpreted to be equivalent to the historically defined Ore Type 3.

In the light of the recent visit of Doug Kirwin who stressed that the deposit has a higher-grade core based on BRC-060 assays (342m @ 1.01 g/t Au and 0,60 % Cu), it was decided to take samples from this higher-grade zone for metallurgical testing. As such, the enargite zone will no longer be sampled.

The metallurgical comminution samples have been selected to represent the dominant lithology types hosting the mineralisation of interest, as it is the host rock/lithology type that will determine the physical comminution properties of the deposit. As per the metallurgical characterisation samples, the metallurgical comminution samples were selected to cover the anticipated copper and gold grade range, however, continuous core intervals (~18m) were selected to provide the requisite comminution sample mass.

A total of 76 samples have been cut and packed in 10 plastic tubs ready for shipment to ALS Perth.

No results have been received at the time of this report.

13 Mineral Resource Estimates

13.1 Summary

In September 2020, Derisk undertook a Mineral Resource estimate (MRE) update for the Guinaoang deposit, based on all drilling completed up to 2013. (Following a prior MRE by Snowden's in 2009)

The Mineral Resource estimate was prepared by John Horton and Michele Pilkington (Associate Principal geologists for Derisk) using guidelines compliant with the Joint Ore Reserves Committee of Australasia (JORC) reporting code. All work was carried out using Vulcan software.

This section is a summary of the work completed for the MRE by Derisk. Additional detailed statistics can be located in the MRE report by Derisk

The process used by Derisk to prepare the 2020 Guinaoang Mineral Resource estimate comprised the following steps:

- Digital and hardcopy drillhole data were extracted from a master database then imported into Microsoft Access software for checking and validation.
- Digital topographic survey data was reviewed and imported into the Vulcan software package.
- Data validation checks were completed, focused on sampling/analysis data. Once source data was checked, modifications were applied to the master data sets accordingly, particularly in the treatment of missing/non-sampled assay data.
- Three-dimensional interpretations of lithology and alteration zones created by Snowden were checked in Vulcan, with minor edits made.
- Three-dimensional interpretations of a nominal 0.2% Cu grade envelope created by Snowden were checked in Vulcan, with minor changes made to reflect new data and the inclusion of some peripheral drillholes previously excluded. Also, some adjustments were made to include areas of higher gold content, but lower copper content inside the grade envelope.
- Statistical analysis of drillhole assay data was completed and used to establish the optimum composite sample length.
- Drillhole composites were generated for copper, gold, and silver, followed by composite statistics and a variogram analysis of the drillhole data.
- A three-dimensional block model was created in Vulcan with a parent size of 25 m in each direction, with sub-celling of parent blocks into cubes 6.25 m in dimension.
- Estimation search parameters were developed for each lithology within the grade envelope, and estimates were generated using the OK method.
- Block model validation comprised visual checking of block grades against composite values and other statistical checks.
- Assignment of the Mineral Resource classification was completed, considering the confidence in the geological interpretation of the mineralisation, drillhole spacing, sample density, assessments of the integrity and robustness of the sample database, and estimation quality.
- Grade-tonnes curves were produced to illustrate the sensitivity of the estimate to different cut-off criteria.
- Criteria to support the reasonable prospects for eventual economic extraction were assessed and an appropriate cut-off criterion was selected for reporting Mineral Resources.

13.2 Geology and Mineralisation Domains

Geological domains were not reinterpreted and remain largely unchanged from the work completed by Snowden in 2009. The lithology types were grouped into four domains as highlighted in the figure below:

- Balili volcanics with minor biotite-quartz schist – assigned DOMLITH = 1000.
- QDP intrusive – DOMLITH = 2000.
- IQD intrusive – DOMLITH = 3000.
- Diatreme complex – DOMLITH = 4000.

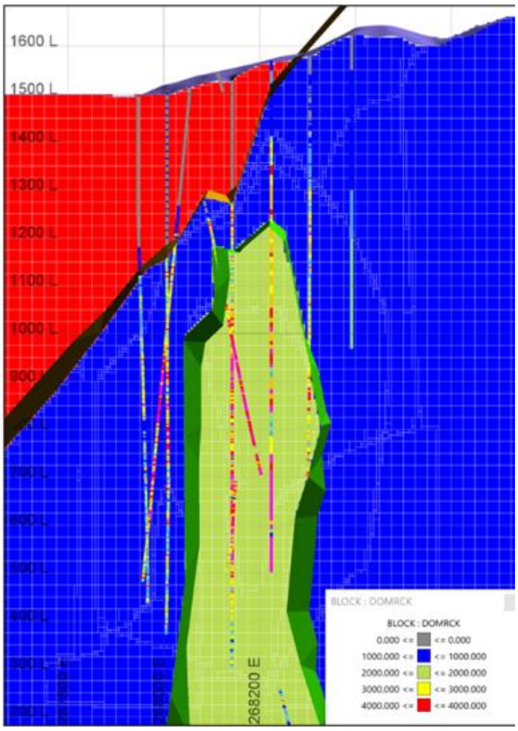
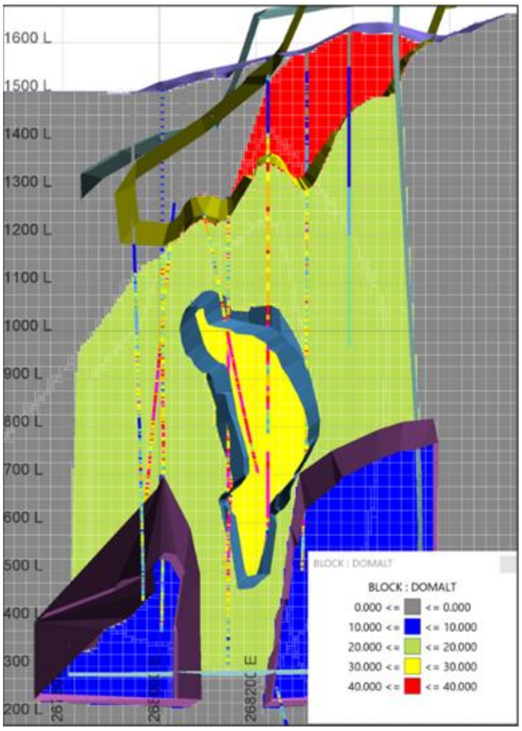
There is insufficient data to map and interpret the basement schist. The soil/oxidation profile was not modelled as the deposit is buried and not directly relevant to the anticipated underground extraction.

The four main alteration types identified at Guinaoang in the immediate deposit area include:

- Inner potassic zone (POT) – assigned DOMALT = 10.
- Retrograde sericite-chlorite-clay alteration zone (SCC) – DOMALT = 20.
- Retrograde sericite alteration zone (ISO) – DOMALT = 30.
- Late-stage argillic alteration zone (AA) – DOMALT = 40.

Calc-silicate and propylitic alteration are not volumetrically significant in terms of the copper and gold mineralisation and as such were not defined in the resource model.

The figure below illustrates a cross section through the Project illustrating the lithology interpretation and domains, and the alteration domains.

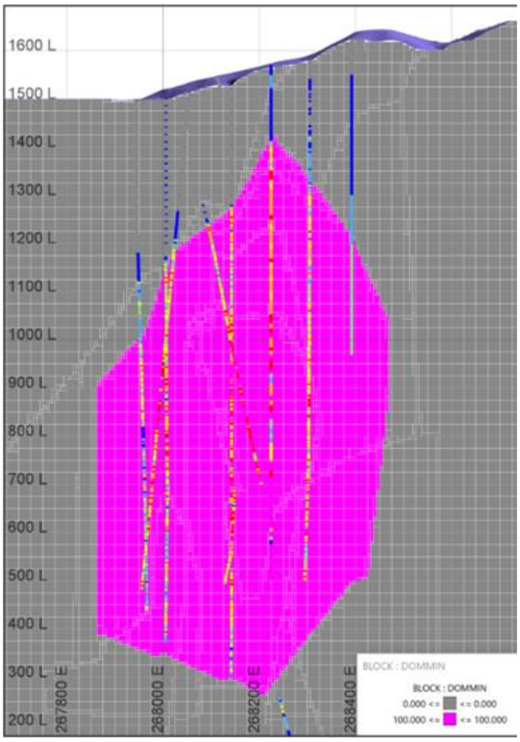
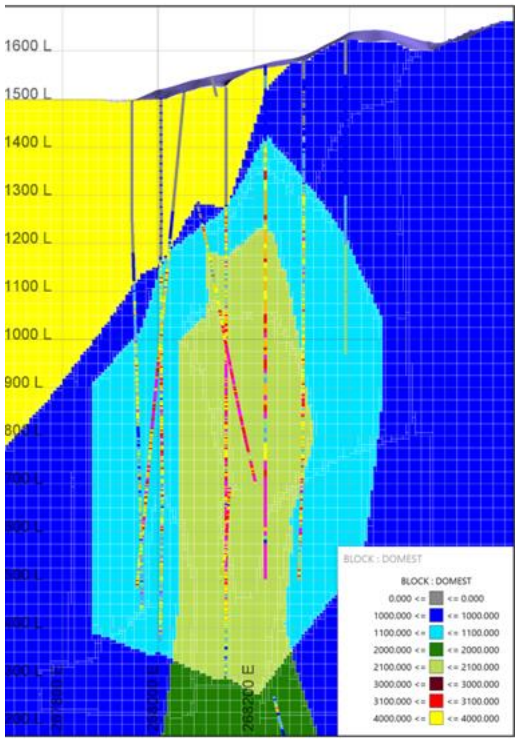
Figure 13.2_1 **East-west cross section at 1861990 mN (Derisk, 2020)**	
Lithology Domain	**Alteration Domain**
	

13.3 Estimation Domains

The primary control is lithological with the bulk of the mineralisation (both tonnage and grade) being hosted within the syn-mineral intrusive (QDP). The surrounding volcanics and the intra-mineral intrusive (IQD) contain both significantly lower copper grades and mineralised volumes (tonnes).

For the 2020 estimate, Derisk has not used alteration domains to influence estimation. Domains to control the grade estimation process (DOMEST) were built using combinations of the lithology and mineralisation interpretations as highlighted in the figure below.

Figure 13.3_1
East-west cross section at 1861990 mN (Source Derisk, 2020)

Mineralisation Domain	Estimation Domain
	

13.4 Density Determination

Derisk reviewed the bulk density (BD) statistics by the revised estimation domains used for the 2020 resource estimate as highlighted in the table below. After removing outliers the following BD was used.

Table 13.4_1
Bulk Density used in MRE (Derisk, 2020)

DOMEST	Samples	Min	Max	Mean	Median	CoV	Filtered Mean		
							<3.3	**>=2 & <=3**	**>2 & <3**
1000	330	1.67	4.00	2.57	2.60	0.14	2.57	2.57	2.57
1100	964	1.75	5.00	2.59	2.60	1.34	2.56	2.56	2.56
2000	0								
2100	189	1.80	4.33	2.66	2.67	0.87	2.59	2.63	2.59
3000	225	1.67	4.00	2.52	2.50	0.31	2.53	2.52	2.53
3100	158	1.67	5.50	2.70	2.67	2.18	2.59	2.60	2.59
4000	174	1.80	3.71	2.39	2.33	0.81	2.41	2.40	2.41
Total	**2,040**	**1.67**	**5.50**	**2.58**	**2.60**	**1.33**	**2.55**	**2.55**	**2.55**

13.5 Block Model

The block model was established with 25m cubic blocks with sub-blocking down to 6.25m as summarised in the table below.

Table 13.5_1
Block Model definition (Derisk, 2020)

Parameter	Easting	Northing	RL
Origin	267650	1861300	150
Extent	268750	1862700	1750
Size	1,100	1,400	1,600
Block Size	25	25	25
Sub-Block Size	6.25	6.25	6.25

13.5.1 Estimation Method and Parameters

Derisk reported that copper, gold, and silver grades were estimated using OK (parent cell estimation) with hard domain boundaries and these were constrained to within the copper mineralisation envelope. A single search ellipse was used to estimate each metal. The search ellipse ranges are based on the 100m general drill spacing and the axis rotations were derived from the variogram modelling. Variogram parameters are summarised in the table below.

Table 13.5.1_1
Variogram model parameters

Element	Nugget	C1	R1 Vert	R1 N-S	R1 E-W	C2	R2 Vert	R2 N-S	R2 E-W	C3	R3 Vert	R3 N-S	R3 E-W
Cu	0.2	0.3	30	30	30	0.15	360	30	30	0.35	360	270	270
Au	0.1	0.2	20	20	20	0.20	390	20	20	0.50	390	200	200
Ag	0.3	0.3	30	30	30	0.40	400	200	200	-	-	-	-

13.5.2 Estimation Results

Derisk produced a number of sections and plans of the copper, gold and silver block model estimates as shown in the figures below.

Figure 13.5.2_1
Section 1861790 mN displaying block model grades (Source Derisk, 2020)

Cu **Au** **Ag**

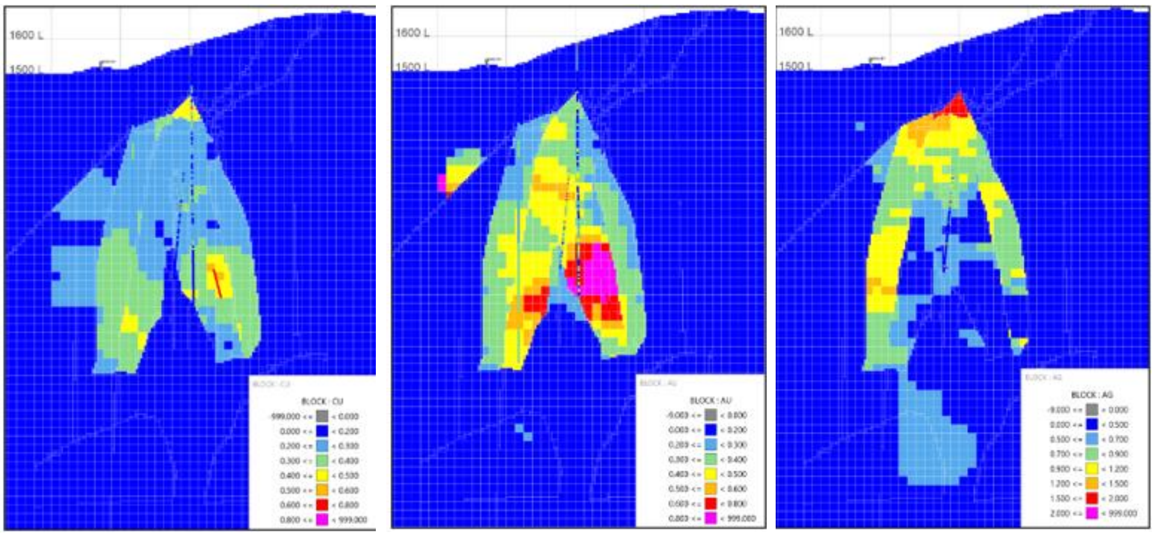
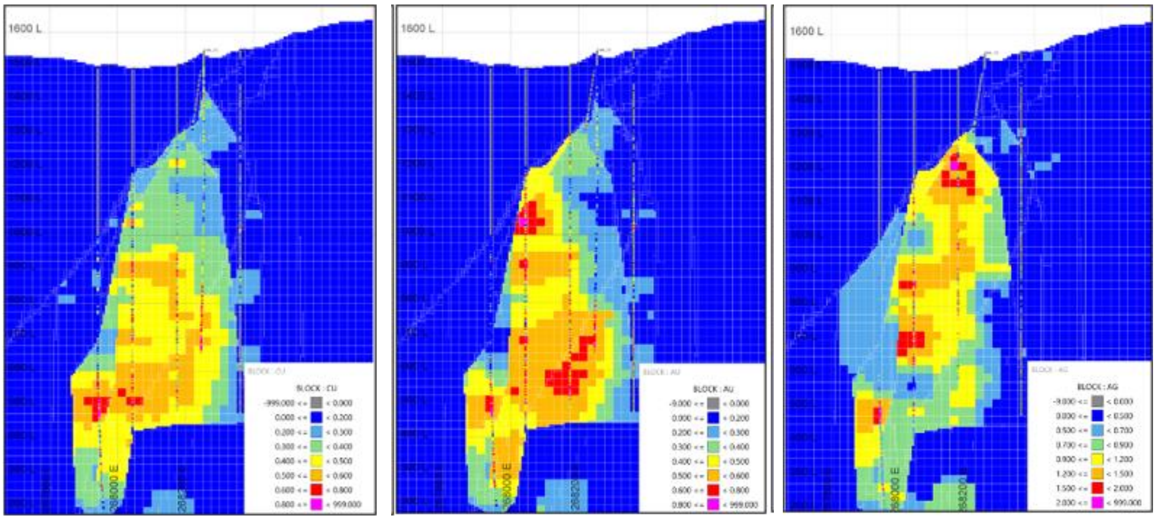


Figure 13.5.2_2
Section 1861790 mN displaying block model grades. (Source Derisk, 2020)

Cu	Au	Ag



The MRE was validated using:

- A visual comparison of block grade estimates and the drillhole data.
- A comparison of the average sample, composite, nearest neighbour (NN) estimates and OK block estimate grade distributions for each estimation

The Mineral Resource Classification was determined as following:

- Indicated Mineral Resource was assigned to blocks if drilled to a nominal 100 m spacing (CLASSDIST <110 m) and if the block estimate was determined predominantly from assayed sample intervals (CUPROP <0.8)
- Inferred Mineral Resource if otherwise in the mineralisation envelope.

13.6 Copper Equivalent

Derisk reported that gold is present in a ratio of approximately 1:1.1 to copper grade and displays some vertical zoning where gold ratios and potential credits might change over the deposit. Derisk has adopted a metal equivalent calculation to incorporate the potential importance of gold to the cut-off determination.

The table below provides the assumptions used to develop the copper equivalent (CuEq) calculation used by Derisk. The silver grades at Guinaoang will contribute a minor proportion of revenue and have been ignored in the CuEq calculation. Recoveries have been assigned based on the assumption that mineralisation will be processed in a conventional flotation circuit that will recover both copper and gold to a concentrate product. Preliminary metallurgical testwork on samples from Guinaoang in 2010 generated recoveries of 94% for copper and 74% for gold.

Table 13.6_1
Assumptions used to calculate a CuEQ (Source Derisk, 2020)

Input	Assumed Price (USD)	Assumed metallurgical Recovery (%)
Cu	2.80 per pound (lb)	90
Au	1,800 per troy ounce (oz)	75

The formula to calculate CuEq is as follows:

$$CuEq\% = \frac{(Cu\% \times Cu\ price\ per\ lb \times 2{,}204.6 \times Cu\ recovery) + (Au\ in\ g/t \times Au\ price\ per\ oz/31.1035 \times Au\ recovery)}{(Cu\ price\ per\ lb \times 2{,}204.6 \times Cu\ recovery)}$$

$$= Cu\% + 0.78 \times Au\ g/t$$

13.7 Mineral Resource Statement

The table below summarises the Mineral Resource Estimate at a range of cut-off criterion from 0.0% CuEq to 1.0% CuEq.

Table 13.7_1
Mineral Resource grade and tonnes estimate at different CuEq cut-off criterion
(Source – Derisk, 2020)

Cut-off (CuEq%)	Mt	CuEq (%)	Cu (%)	Au (g/t)	Ag (g/t)	Cu (Mt)	Au (Moz)	Ag (Moz)
0.0	805	0.64	0.35	0.38	0.8	5.2	9.7	20
0.1	804	0.64	0.35	0.38	0.8	5.2	9.7	20
0.2	800	0.64	0.35	0.38	0.8	5.2	9.7	20
0.3	781	0.65	0.35	0.38	0.8	5.1	9.7	20
0.4	731	0.67	0.36	0.40	0.8	4.9	9.4	19
0.5	604	0.72	0.38	0.43	0.8	4.4	8.4	16
0.6	439	0.78	0.41	0.48	0.9	3.4	6.7	13
0.7	280	0.86	0.45	0.53	0.9	2.4	4.8	8
0.8	170	0.93	0.48	0.58	0.9	1.6	3.2	5
0.9	92	1.01	0.51	0.64	0.9	0.9	1.9	3
1.0	38	1.10	0.54	0.72	0.9	0.4	0.9	1

Derisk reviewed the Mineral Resource estimate in the context that there must be reasonable prospects for eventual economic extraction. Whilst no detailed technical studies have been completed to date at Guinaoang, scoping studies have been completed and based on the available information, mining will be by bulk underground mining methods, such as block or panel caving. Processing requirements are likely to be similar to nearby porphyry copper-gold deposits i.e. crushing, grinding, flotation and drying to produce a copper-gold concentrate. Similar styles of mineralisation and mining/processing methods occur in the Philippines and elsewhere.

In assessing an appropriate cut-off criterion for reporting of the Mineral Resource, scoping studies completed for the Project in 2014 and updated in 2018 suggest a mining cut-off of 0.20 to 0.23 CuEq% is feasible for a large block caving operation at site. Derisk also considered the public reporting used by other companies with large greenfield copper deposits. Examples referred to by Derisk included:

- Alpala deposit in Ecuador, held by SolGold PLC. A cut-off criterion of 0.21% CuEq has been used to report the Mineral Resource, which is planned to be mined by bulk underground mining methods.
- Cortadera deposit in Chile, held by Hot Chili Limited. A cut-off criterion of 0.25% CuEq has been used to report the Mineral Resource, which is planned to be mined by a combination of open pit and underground mining methods.
- Winu deposit in Australia, held by Rio Tinto. A cut-off criterion of 0.40% CuEq has been used to report the Mineral Resource, which is planned to be mined as an open pit operation.
- King-king deposit in Philippines, held by St Augustine Gold. A cut-off criterion of 0.30% CuEq has been used to report the oxide Mineral Resource, and a cut-off criterion of 0.15% CuEq has

been used to report the sulphide Mineral Resource. The deposit is planned to be mined as an open pit operation.

Based on an assessment of all contributing factors, Derisk concludes that the factors documented in the preceding paragraphs demonstrate that there are reasonable prospects for eventual economic extraction. The Mineral Resource estimate for Guinaoang is reported at a cut-off criterion of 0.25% CuEq and is summarised in the table below.

Sahara is not aware of any non-technical issues such as environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that are likely to prevent the reporting of a Mineral Resource for Guinaoang.

Table **13.7_2**
Mineral Resource Estimate (cut-off 0.25% CuEq)

Resource Category	**Mt**	**CuEq (%)**	**Cu (%)**	**Au (g/t)**	**Ag (g/t)**	**Cu (Mt)**	**Au (Moz)**	**Ag (Moz)**
Measured	-	-	-	-	-	-	-	-
Indicated	638	0.68	0.37	0.40	0.9	2.3	8.2	18
Inferred	155	0.52	0.29	0.30	0.5	0.5	1.5	3
TOTAL	**793**	**0.65**	**0.35**	**0.38**	**0.8**	**2.8**	**9.7**	**20**

Note: 1. Totals may not add due to rounding effects.

2. CuEq calculation assumes metal prices of USD 2.80/lb Cu, USD 1,800/oz Au, and recoveries of 90% for Cu and 75% for Au.

3. CuEq (%) = (Cu% x Cu price per lb x 2,204.6 x Cu recovery) + (Au g/t x Au price per oz/31.1035 x Au recovery)

(Cu price per lb x 2,204.6)

= Cu% + 0.78 x Au g/t

Sahara highlight some risks identified in the review of the Derisk MRE and ongoing development

- Risks
  - There have been multiple drilling campaigns over a 50-year period, and a substantial proportion of drill core from the older campaigns has been lost.
  - There is a lack of downhole survey data for many drillholes. Whilst many of the drillholes without downhole surveys were vertical, it is quite likely that holes deviated over a length of 1,000 m or more.
  - There is no core orientation data to help define vein orientations.
  - Sample intervals up to 50m in length in some historical holes are very poor practice as 50m intervals cannot be representatively sampled and assayed.
  - Much of the QA/QC data associated with the earlier drilling campaigns has been lost.
  - Domaining used to control the estimation of economic grades is based on a copper grade envelope that is relatively simplistic. Alteration is likely to have a strong influence on mineralisation tenor and both copper and gold distribution, however alteration has not been used to develop mineralisation domains.
  - Bulk Density samples are limited to less than 3% of the drilling meters. Tonnage is just as important as grade. Methodology used did not account for sealing the core

    - Geotechnical studies are limited to minimal drillholes.
- Upside and Opportunities
    - Some of the core from the earlier drilling campaigns was analysed using methods resulting in incomplete digestion and may have understated the copper grade slightly.
    - Large sample intervals (10+m upto 50m) appear to underestimate grade trends
    - There are opportunities to model and estimate a higher-grade core to the mineralisation with additional infill drilling.
    - Mineralisation is open in most directions including high grade trends.

Sahara

14 Mineral Reserve Estimates

No recent Mineral Reserves have been completed for this project. Prior “reserves” reported by Mining Plus are out of date.

15 Mining Option Study

A scoping Study was completed by TWP in 2011 and updated by GHD in 2014. Mining Plus has undertaken additional desktop reviews since 2014. Sahara has summarised the latest information available from these historical studies, which refer back to the 2011 study.

15.1 Mining Plus 2019

Mining Plus undertook updated alternative mining options for the Mankayan project in 2019. (Prior to the updated MRE in 2020) The options defined by Mining Plus were designed with the goal of reducing the start-up cost while improving the project's overall value. The options are based on the work undertaken in the 2014 Scoping Study Update and evaluated using the parameters developed in that study.

This study has identified a broad range of mining options that can be used to mine the deposit. Relative to the previous study these options:

- Focus on higher grade.
- Focus on mining higher grade early.
- Have reduced start-up costs.
- Account for the effect of offsite costs on revenue streams.
- Have better or equivalent returns on investment than previous studies.
- Collectively demonstrate the flexibility of the deposit to be mined by a wider range of strategies.

Block caving (BC) mass mining methods are very low cost, but very inflexible in the geometry of ore that they can mine. Because of this, they typically have high planned dilutions or low planned recoveries relative to stoping methods where there is far greater flexibility to mine only the desired mineralisation. They are also long mine life, so the time discounting of future revenues is significant and it becomes very important to mine higher value material early.

Sublevel caving (SLC) mass mining methods have similar characteristics to block caves, but they are more flexible in their geometry. This flexibility comes at a much higher mining cost.

In total, eleven options were investigated with four options chosen to be representative of the range. Key metrics for these four representative options are shown in the table below. These options are:

- Option 3 - High production rate, high rate of return, high start-up cost 2 lift block cave (BC), where the full footprint of the BC is undercut to enable a high production rate
- Option 4 - Medium production rate, with 4 BC footprints in 2 lifts. Each footprint is sized to meet the required production rate, with the first footprint in each lift located in the highest grade
- Option 8 - Staged production rate, starting at 6Mtpa for a small high-grade BC, before mining 3 larger footprints at a production rate of 12Mtpa
- Option 9 - Low production rate, starting with a 6Mtpa low capex high opex sublevel cave (SLC) before mining 3 BC footprints. (this option could also be ramped up to 12Mtpa for the mining of the 3 BC footprints).

Figure 15.1_1
Summary of 4 Mining Options defined by Mining Plus (Source: Mining Plus, 2019)

	Option	3	4	8	9
	Description	24Mtpa 2 BC footprints over 2 lifts	12Mtpa 4 BC footprints over 2 lifts	6Mtpa small BC followed by 3 12Mtpa BC	6Mtpa SLC followed by 3 6Mtpa BC
IRR before tax	Cu $3/lb Au $1,250/oz	28%	26%	21%	14%
Average Cost per t	USD/t	$19.1	$19.1	$19.7	$19.9
First Footprint Start-up Cost	USD	$1,402m	$896m	$633m	$529m
First 5 years of production	Tonnes	92 M	54 M	29 M	28 M
	Cu (%)	0.45	0.46	0.48	0.41
	Au (g/t)	0.51	0.54	0.62	0.45
	CuEq (%)	0.70	0.72	0.77	0.62
Total production	Tonnes	333 M	316 M	315 M	302 M
	Cu (%)	0.42	0.43	0.42	0.41
	Au (g/t)	0.46	0.47	0.46	0.45
	CuEq (%)	0.63	0.65	0.64	0.63
Mine Life	Years	23	34	38	58
Time to First Production		5	5	5	4.2
NPV before tax, 8.5% discount rate*	Cu $3/lb Au $1,250/oz	$1,505m	$1,121m	$750m	$326m

*The NPV used is for comparative purposes only, as full financial analysis has not been undertaken for this study.

Sahara note that the Mining studies have utilised commodity pricing and operational costs from the 2011 Scoping Study. These values are indicative and not current and will require updating for the PFS study underway.

The general trend is that the higher production rate options (higher start-up costs) return higher rates of return and discounted cashflows, due to the reduced effect of time discounting over a shorter mine life. Other points of note in the Table above include:

- Option 3 and 4 have very similar cost per tonne, due to the higher start-up cost of 3 being offset by the sharing of fixed production costs over a larger tonnage.
- The options target higher grade first, which can be seen in the comparison between the grade of the first 5 years and the total production. The lower production rate cases can be more selective, so consequently return a higher grade in the first 5 year.
- Option 9 (SLC) has a lower first 5 year grade than the BC options. This is due to it being a top-down method (so starts in lower grade) and the higher dilution of the method, with each level being mined next to the dilution from the level above. This effect is mitigated by the greater selectivity of the SLC footprint.

- Option 9 (SLC) has a lower time till first production because mining starts at the top and advances downwards (as opposed to the BC which is bottom up).
- Although it is not explicitly modelled in this study the SLC is less sensitive to geotechnical parameters than the BC, due to the rock being broken by drill and blast, rather than breaking due to the action of caving. This drill and blast control of breaking comes at a considerably higher mining cost.

Mining Plus recommended that the options identified in this high level study, guide the mining method selection section of a future prefeasibility study. The accuracy of the values in Table above (while suitable for comparison between the cases) will need to be updated in future studies, due to the cost data being based on the 2010 Concept Study.

16 Recovery Methods

16.1 TWP 2011 Scoping Study

From the 2011 Scoping study completed by TWP on behalf of Bezant Resources Plc (Bezant) the following processing facility is based on the concept mine design with an annual mine production rate of 12 Mtpa. A simple block flow diagram was conceptualised supported by an order of magnitude and operating cost estimate.

The metallurgical testwork, vendor data and estimates form the basis of design. In order to develop a process flow diagram based on the block flow diagram and properly size equipment, further metallurgical test work was recommended in the prefeasibility study phase.

The concentrator flowsheet was based on Australian and international experience of proven operations, with high-throughput copper-gold ore treatment. The single processing line incorporates two-stage milling in closed circuit with cyclones, flash flotation cells and dedicated flash cleaner cells. A pebble crusher operates in closed circuit with the primary mill.

Mill cyclone overflow gravitates to rougher and scavenger flotation. Rougher concentrates are reground before cleaning. Scavenger and cleaner scavenger tails are thickened before discharge to the tailings storage facility. Copper and a portion of the gold are recovered by froth flotation to a copper sulphide concentrate, that is then sold to international or local smelters.

The remaining gold is recovered on site as bullion, by gravity concentration of the flash flotation concentrate.

Concentrator operating costs were based on an estimate of consumables such as mill liners, steel balls, flotation reagents, water and electrical power. Flotation reagent cost estimates allow for the use of modern high-technology selective copper/gold collectors. Cyanide is not used in any part of the process.

The concentrate recoveries were estimated to be at 94% copper and 74% gold. The smelting recoveries were estimated at 96% for copper and gold.

Bezant Resources in 2011 confirmed that the preliminary figures needed to be confirmed during the pre-feasibility study.

17 Project Infrastructure

17.1 TWP 2011 Scoping Study

TWP investigated various conceptual scenarios for accessing and extracting the underground ore body. The investigations covered vertical shaft access, ventilation, cooling and the surface infrastructure required to support the mining operation at a mining rate of 12 Mtpa as determined by the Mining Concept Study.

The investigations highlighted the requirement for two vertical shaft systems for the ventilation, cooling and rock hoisting. In considering the block caving mining method and the requirement to undertake primary crushing underground, consideration was given in the concept design to the likely size and mass of the underground crusher components. It was determined the crusher components exceed the rock winder hoisting capacity therefore a decline ramp was included in the design.

The early development of the decline ramp has additional advantages namely:

- The ramp can serve as a second means of egress from the underground mine, thus the ventilation shaft would not need to be equipped to convey personnel.
- The ramp can be used for exploration drilling, early development and or early underground access while the vertical shafts were being considered.

A trade off study is required on the sinking methodology of blind sink versus ream and sliping via the decline ramp, or a combination of these as this is likely to present a time and cost saving benefit which could offset the cost of developing the decline ramp. Furthermore, there is a tradeoff required to consider sinking the shafts to approximately the 800m depth to access the first block cave cut and then to later deepen the shafts to approximately 1400m depth for the second block cave cut, as an alternative to sinking both shafts to final depth. These scenarios are likely to present the biggest impact on the financial viability of the project.

The up cast ventilation shaft is designed to be equipped with a brattice wall in order to split the down cast ventilation from the upcast ventilation requirements in the shaft. Approximately one third of the total ventilation air volume required underground via the ventilation shaft is required to supplement the downcast hoisting shaft with additional fresh air, as the upcast velocities are much higher than the main shaft down cast velocities.

Primary air extraction fans will be located on top of the upcast segment of the ventilation shaft to draw the used air out of the mine. The mine is considered a hot mine at depths close to the second lift and therefore, large refrigeration units will be required to access the second block cave. The mine would then need to be equipped with bulk air coolers on surface to pre-cool the intake air.

TWD concluded that a pre-feasibility is required to undertake further trade off studies to evaluate the potential cost savings of totally eliminating the access ramp versus equipping the ventilation shaft with a second outlet winder of sufficient capacity to accommodate slinging the crusher components down the shaft.

GHD in 2014 undertook additional desktop reviews with Mining Plus undertaking various desktop reviews since 2014.

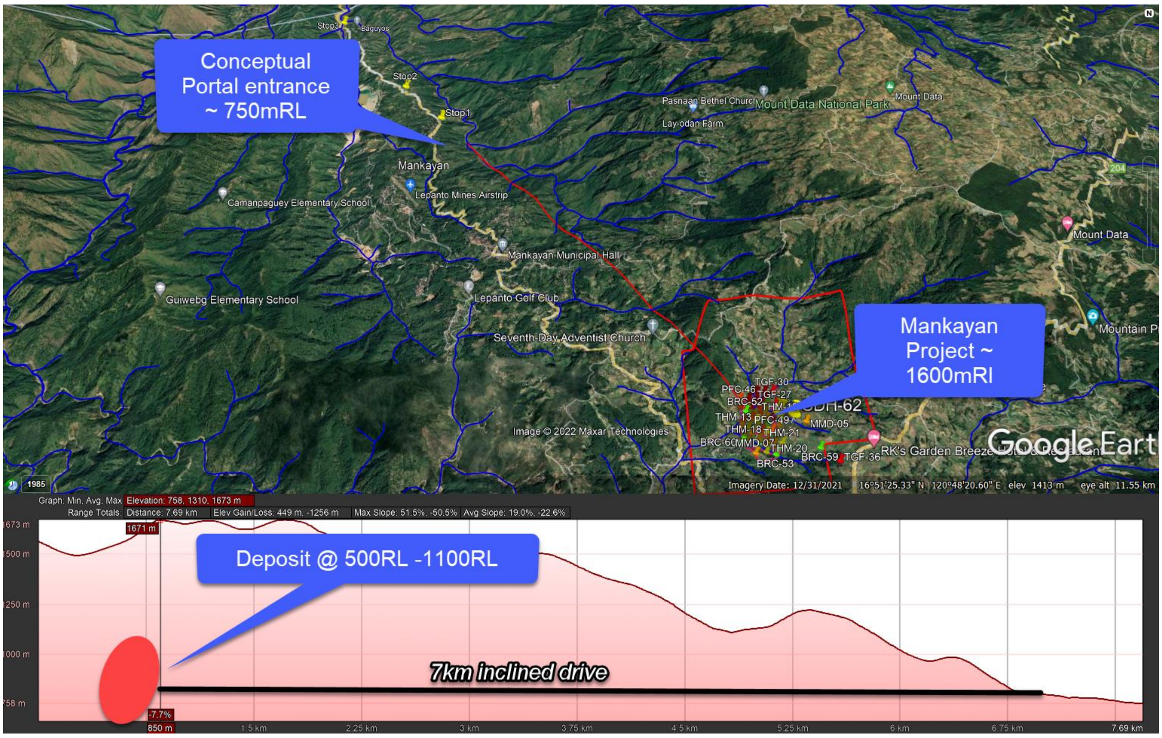
17.2 Inclined Drive concept (Gellong Valley)

IDM technical management have discussed a potential large capital and operational saving approach to developing the project (Mineralisation starts ~ 400m below surface) rather than surface declines and shafts as proposed in the 2011 scoping study which proposed a decline through 400m of sterile cover.

Sahara reviewed the comprehensive datapack provided by IDM, and have identified only one reference to this conceptual idea.

Anecdotal discussion from “coreshed technicians” that Gold Fields were considering a 7km long tunnel from Guellong valley starting at ~ 700 to 800RL which would access the high grade of the deposit at a similar level and remove any development declines through 400m vertical of sterile cover from surface. Sahara consider this would present significant savings in Capex and Opex as presented in the figure below.

Figure 17.2_1
Inclined Drive Concept (Source: Sahara, 2022)



This option has some challenges listed below but requires further investigation during the PFS

- Requires geotechnical assessment
- Legal issues as appears to pass other permit holder’s land
- A viable TSF and plant position around the portal position.
- Presents an opportunity to combine infrastructure with the Far Southeast Porphyry (which appears to be along strike of this proposed inclined drive)

18 Market Studies and Contracts

These are being undertaken as part of the current PFS.

19 Environmental Studies, Permitting's and Social or Community Impact

These are being undertaken as part of the current PFS.

20 Capital and Operating Costs

These are being undertaken as part of the current PFS.

21 Economic Analysis

Scoping level studies from 2011 are not current. These are being undertaken as part of the current PFS.

22 Adjacent Properties

The Mankayan mineral district is located in northern Luzon, Philippines and hosts several significant deposits and prospects of various types within an area of around 25 km^2. These include

- Far Southeast porphyry Cu-Au deposit,
- Lepanto high-sulphidation epithermal Cu-Au deposit,
- Victoria intermediate-sulphidation epithermal Au-Ag vein deposit,
- Teresa epithermal Au-Ag vein deposit,
- Guinaoang porphyry Cu-Au deposit, and
- Buaki and Palidan porphyry Cu-Au prospects.

All formed in a period of about 2 million years, from approximately 3 Ma (Chang et al, 2011).

The Far Southeast Project (FSE) is located 4km from the Mankayan project, in the well-known mining district of Mankayan in the Cordillera region of Northern Luzon, approximately 250km north of Manila.

The project is held by Far Southeast Gold Resources Inc. (FSGRI), a JV company of Lepanto Consolidated Mining Company (LCMC) and Gold Fields. To date, Gold Fields has acquired 40% of FSGRI for payments of US$230M and has the option to acquire a further 20% by paying an additional US$110M and incurring initial development costs totalling US$165M.

The FSE copper-gold porphyry is a deeply concealed deposit associated with a Pleistocene diorite-dacite intrusion complex intruded into Eocene basaltic country rocks. The intrusion complex is cross-cut by several phreatomagmatic breccia pipes which are pre-, syn- and post-mineralisation. The mineralisation is mostly hosted in the intrusion complex and to a lesser extent the basaltic country rocks and is characterised by disseminated sulphides and multi-phase sulphide bearing quartz and quartz-anhydrite vein sets and stock works.

The historical Inferred Mineral Resource for the FSE deposit, first declared in August 2012, is 891.7Mt at 0.7g/t gold and 0.5% copper for 19.8Moz of gold and 9,921Mlb of copper. (Source - https://www.Gold Fields.com)

Figure 22_1
Far Southeast Project MRE (Source: Gold Fields, 2022)

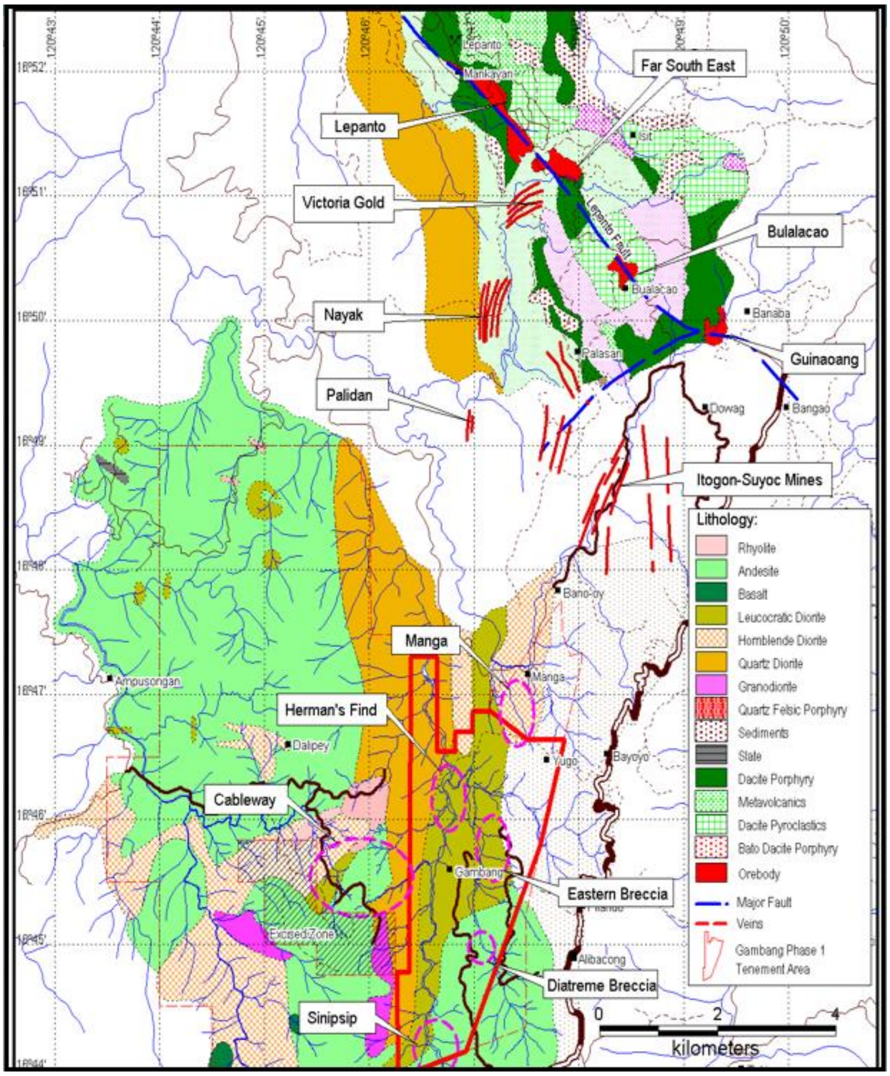
Resource classification	Tonnes (Mt)	Grade (Au g/t)	Metal (Au Moz)	Grade (Cu %)	Metal (Cu Mlb)
Inferred	891.7	0.7	19.8	0.5	9,921
Total	**891.7**	**0.7**	**19.8**	**0.5**	**9,921**

FSE Mineral Resources effective from and unchanged since 31 August 2012

Notes:

- *These Mineral Resources are not Mineral Reserves as an assessment to a minimum of a PFS is required*
- *There has been no further technical work or economic assessments in 2018 to update previous input or commodity prices*
- *The Mineral Resource is reported in accordance with the SAMREC Code*
- *The Mineral Resource is reported within an optimised underground bulk mining shell that is derived using scoping study mining, processing and cost parameters, and commodity prices of US$1,650/oz gold and US$8,600/t copper. All Inferred Resource material within the shell is reported*
- *The Mineral Resource is reported without dilution and ore loss parameters*
- *Rounding-off of figures may result in minor computational discrepancies. Where this happens, it is not deemed significant*
- *LCMC holds a 60% interest, while Gold Fields holds a 40% interest in the FSE. Attributable metal is 11.9Moz gold and 5,953Mlb copper to Lepanto and 7.9Moz gold and 3,968Mlb copper to Gold Fields*

Figure 22_2
Adjacent projects (Source: IDM, 2022)



23 Conclusions

The Mankayan Mining Permit covers an area of 543ha. This is located in an exceptionally fertile Cu-Au region of the Philippines.

Sahara consider the Mankayan Cu-Au project a pre-development project where significant Mineral Resources have been identified and their extent estimated (possibly incompletely), but where a decision to proceed with development has not been made.

Scoping level Studies completed in 2014 are now out of date, given changes in costs and commodity prices, although the project has sufficient information to undertake a prefeasibility study which has been commissioned and currently underway by IDM.

24 Recommendations

A Prefeasibility study has been commenced and with this will cover all limitations in work to date

Sahara make the specific recommendations that have been highlighted within each section of this technical report

25 References

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26 Technical Valuation Background

Sahara has undertaken a Valuation of the Mankayan Cu-Au project which is related to the technical report on the subject with effective date of 27 December 2022. Methodology is detailed in the following sections.

26.1 Valuation Methods

There are numerous recognised methods used in valuing "mineral assets". The most appropriate application of these various methods depends on several factors, including the level of maturity of the mineral asset, and the quantity and type of information available in relation to any particular asset.

A Valuation Report requires at least 2 Valuation approaches to be undertaken as defined in table below.

Table 26.1_1
Appropriate Valuation Approach (Source- Valmin 2015 Section 8.3 Table 1)

Valuation approach	Exploration Projects	Pre-development Projects	Development Projects	Production Projects
Income	No	In some cases	Yes	Yes
Market	Yes	Yes	Yes	Yes
Cost	Yes	In some cases	No	No

The Valmin Code 2015, which is binding upon "Experts" and "Specialists" involved in the valuation of mineral assets and mineral securities, defines the level of asset maturity under the following categories:

- **Early-stage Exploration Projects** – Tenure holdings where mineralization may or may not have been identified, but where Mineral Resources have not been identified
- **Advanced Exploration Projects** – Tenure holdings where considerable exploration has been undertaken and specific targets identified that warrant further detailed evaluation, usually by drill testing, trenching or some other form of detailed geological sampling. A Mineral Resource estimate may or may not have been made, but sufficient work will have been undertaken on at least one prospect to provide both a good understanding of the type of mineralization present and encouragement that further work will elevate one or more of the prospects to the Mineral Resources category;
- **Pre-Development Projects** – Tenure holdings where Mineral Resources have been identified and their extent estimated (possibly incompletely), but where a decision to proceed with development has not been made. Properties at the early assessment stage, properties for which a decision has been made not to proceed with development, properties on care and maintenance and properties held on retention titles are included in this category if Mineral Resources have been identified, even if no further work is being undertaken
- **Development Projects** – Tenure holdings for which a decision has been made to proceed with construction or production or both, but which are not yet commissioned or operating at design levels. Economic viability of Development Projects will be proven by at least a Pre-Feasibility Study.

- **Production Projects** – Tenure holdings – particularly mines, wellfields and processing plants – that have been commissioned and are in production.

The VALMIN Code primarily uses the terms Market Value and Technical Value, although circumstance may require the use of alternative definitions.

Technical Value is an assessment of a Mineral Asset's future net economic benefit at the Valuation Date under a set of assumptions deemed most appropriate by a Practitioner, excluding any premium or discount to account for market considerations.

Income

The Discounted Cash Flow (DCF) /Net Present Value (NPV) Method

The DCF valuation method recognises the time value of money, it is most suitable for Development Projects, where detailed studies have been completed to justify input assumptions and Production Projects, where there is actual historical data to justify input assumptions. Less commonly the DCF methodology is applied to Pre-Development Projects.

The DCF valuation method provides a means of relating the magnitude of expected future cash profits to the magnitude of the initial cash investment required to purchase a mineral asset or to develop it for commercial production. The DCF valuation method determines:

- The NPV of a stream of expected future cash revenues and costs
- The internal rate of return (IRR) that the expected cash flows will yield on a given cash investment.

The DCF valuation method is a forward-looking methodology, requiring that forecasts be made of technical and economic conditions which will prevail in the future. All future predictions are inherently uncertain. The level of uncertainty reduces as the quality of the data available to project future rates of production and future costs, increases.

It is important to understand certain fundamental attributes of the mining industry in undertaking a DCF such as:

- An Ore Reserve and in some cases Mineral Resource is the basis of any mineral development.
- Costs are determined by the number of tonnes mined and processed, while revenues are determined by the number of tonnes, pounds or ounces of metal produced. The two are related by the recovered grade of the ore.
- Profit is typically more sensitive to changes in revenue that to changes in costs.
- The commodity price is a principal determinant of revenue but is also the factor with the greatest level of financial risk.

The most significant factors, which must be considered in a DCF valuation of a mineral asset is the reliability of the Mineral Resource and Ore Reserve, particularly with respect to recovered grade, the price at which the product is sold and the risk of not maintaining the projected level of commodity price.

Key inputs into the DCF valuation method for a mineral asset valuation are:

- Life-of-mine planning assumptions.
- Capital cost estimates – can be the initial cost of constructing the project and/or the ongoing cost of sustaining the productive life of the operation.

- Operating cost estimates - costs incurred both on-site in producing the commodity which is shipped from the property, and off site, in the transportation and downstream processing of that commodity into saleable end products.
- Revenue estimates – revenue in the mining context is the product of the following factors:
    - The tonnage of ore mined and processed
    - The grade of the ore
    - The metallurgical recovery
    - The price of the saleable commodity.
- Taxation and royalty payments.
- Discount rate – represents the risk adjusted rate of interest expected to be yielded by an investment in the mineral asset.

The Income Approach is not appropriate for properties without Mineral Resources. It should be employed only where enough reliable data are available to provide realistic inputs to a financial model, preferably based on studies at or exceeding a prefeasibility level.

Market Value is the estimated amount (or the cash equivalent of some other consideration) for which the Mineral Asset should exchange on the date of Valuation between a willing buyer and a willing seller in an arm's length transaction after appropriate marketing where the parties had each acted knowledgeably, prudently and without compulsion.

Market Value may be higher or lower than Technical Value. A Public Report should take such factors into account, stating the results of the principal Valuation Method(s) used and disclosing the amount of and reasons for the difference between the Market Value and Technical Value.

Regardless of the valuation techniques adopted, the consideration must reflect the perceived "market value", which is described in prior sections of the Valmin Code as "the estimated amount of money, or the cash equivalent of some other consideration for which, in the opinion of the Expert reached in accordance with the provisions of the Valmin Code, the mineral asset or security should change hands on the Valuation Date between a willing buyer and a willing seller in an 'arm's length' transaction, wherein each party had acted knowledgeably, prudently and without compulsion".

In the case of Pre-development, Development and Mining Projects, where Measured and Indicated Resources have been estimated and mining and processing considerations are known or can be reasonably determined, valuations can be derived with a reasonable degree of confidence by compiling a discounted cashflow (DCF) and determining the net present value (NPV).

Where mineral resources remain in the Inferred category, reflecting a lower perceived level of technical confidence, the application of mining parameters is inappropriate, and their economic value can therefore not be demonstrated using the more conventional DCF/NPV approach. A similar situation may apply where economic viability cannot be readily demonstrated for a resource assigned to a higher confidence category. In these instances, it is frequently appropriate to adopt the In-situ Resource (or "Yardstick") method of valuation for these assets. Typically, a range from 0.4% to 3% of the current spot price is used for base metals and platinum group metals, whereas for gold and diamonds a range of 2% to 5% of the current spot price is used, and typically much lower factors are applied for bulk commodities.

The chosen percentage is based upon the valuer's risk assessment of the assigned Mineral Resource category, the commodity's likely extraction and treatment costs, availability/proximity of transport and other infrastructure (particularly a suitable processing facility), physiography and maturity of the mineral field, as well as the depth of the potential mining operation.

This method is best used as a non-corroborative check on the order of magnitude of values derived using other valuation methods that are likely to better reflect project-specific criteria.

Cost

In the case of Exploration Areas, and to a lesser extent Advanced Exploration Areas, the potential is speculative compared to projects where mineral resources have been estimated. The valuation of Exploration Areas is dependent, to a large extent, on the informed, professional opinion of the valuer.

Where useful previous and committed future exploration expenditure is known or can be reasonably estimated, the Multiple of Exploration Expenditure ("MEE") method is considered to represent one of the more appropriate valuation techniques. This method involves assigning a premium or discount to the relevant effective Expenditure Base ("EB"), represented by past and future committed expenditure, through application of a Prospectivity Enhancement Multiplier ("PEM"). This factor directly relates to the success or failure of exploration completed to date, and to an assessment of the future potential of the asset. The method is based on the premise that a "grass roots" project commences with a nominal value that increases with positive exploration results from increasing exploration expenditure. Conversely, where exploration results are consistently negative, exploration expenditure will decrease along with the value.

Other valuation methods can be adopted to assist in confirming conclusions drawn from the MEE approach. Where sale transactions relating to mineral assets that are comparable in terms of location, timing and commodity, and where the terms of the sale are suitably "arm's length" in accordance with the Valmin Code, such transactions may be used as a guide to, or a means of, valuation.

Where a joint venture agreement has been negotiated as an "arm's length" transaction, the Joint Venture Terms valuation method may be applied. In a typical staged earn-in agreement, the value assigned to each of the various stages can be combined to reflect the total, 100% equity, value, as follows:

$$V_{100} = V_{Stage\ 1} + V_{Stage\ 2} + \ldots\ldots$$

The value of equity assigned to an entity buying into the project, the farminor, at any earn-in stage of a joint venture can be considered as the sum of the value liquid assets transferred to the seller, or farminee, in cash or shares, plus the value of future exploration expenditure. Commonly, an agreement may stipulate a minimum expenditure that must be met by the farminor prior to allowing withdrawal from the agreement, and these funds are thus committed, as distinct from the notional expenditure to successful completion of the earn-in stage. In calculating the value of an agreement that includes future expenditure, it is considered appropriate to discount (usually at a rate of 10% per annum) that expenditure by applying the discount rate to the mid-point of the term of the earn-in phase. A probability range is also usually applied to each earn-in stage to reflect the degree of confidence that the full expenditure specified to completion of any stage will occur and, consequently, each equity position achieved.

The value assigned to the second and any subsequent earn-in stages will always involve discounted funds and is likely to require exponentially increasing speculation as to the likelihood that each subsequent stage of the agreement will be completed. Correspondingly, in applying the Joint Venture Terms approach to staged earn-in agreements, it is regarded as most correct to consider only the first stage as the basis for estimating cash value equivalence at the time of the deal. Sahara adheres to this guideline by adopting the end of the initial earn-in period for valuation purposes.

The total project value of the initial earn-in period can be estimated by assigning a 100% value, based on the deemed *equity of the farminor, as follows:*

$$V_{100} = \frac{100}{D}\left[CP + \left(CE * \frac{1}{(1+I)^{\frac{t}{2}}}\right) + \left(EE * \frac{1}{(1+I)^{\frac{t}{2}}} * P\right)\right]$$

where:

V_{100}	=	*Value of 100% equity in the project ($)*
D	=	*Deemed equity of the farminor (%)*
CP	=	*Cash equivalent of initial payments of cash and/or stock ($)*
CE	=	*Cash equivalent of committed, but future, exploration expenditure and payments of cash and/or stock ($)*
EE	=	*Uncommitted, notional exploration expenditure proposed in the agreement and/or uncommitted future cash payments ($)*
I	=	*Discount rate (% per annum)*
t	=	*Term of the Stage (years)*
P	=	*Probability factor between 0 and 1, assigned by the valuer, and reflecting the likelihood that the Stage will proceed to completion.*

27 Valuation of the Mankayan Copper-Gold project

Valuation of Mineral Assets is not an exact science, and a number of approaches are possible – each with varying positives and negatives. While valuation is a subjective exercise, there are several generally accepted procedures for establishing the value of Mineral Assets. Sahara consider that, wherever possible, inputs from a range of methods should be assessed to inform the conclusions about the Market Value of Mineral Assets.

The valuation is always presented as a range, with the preferred value identified. The preferred value need not be the median value and is determined by the Practitioner based on their experience and professional judgement.

In valuing the exploration potential associated with the Mankayan Cu-Au project, Sahara has elected to apply the Multiple of Exploration Expenditure method along with comparing yardstick and market transactions to confirm the estimated market value.

27.1 Previous Valuations

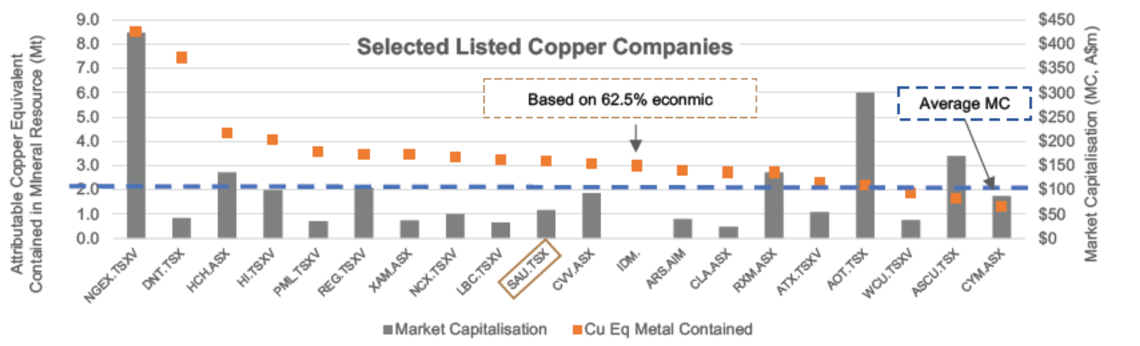
Sahara has not identified any prior valuations completed to Valmin 2005 guidelines.

27.2 Market Approach

In the current market, the perceived market value of similar assets in Philippines is difficult to determine given the limited number of comparable Cu-Au projects with market transactions being completed recently in Philippines and available to the public domain.

The following figure is a recent study in May 2022 by Terra Studios, which highlights a selection of pre-production companies and the average value per tonne of the contained Copper Equivalent in the stated Mineral Resource or "Resource Multiplier". This Resource Multiplier is on average ~ A$29/t (~US$19/t) CuEq for 19 projects of Pre-development status internationally.

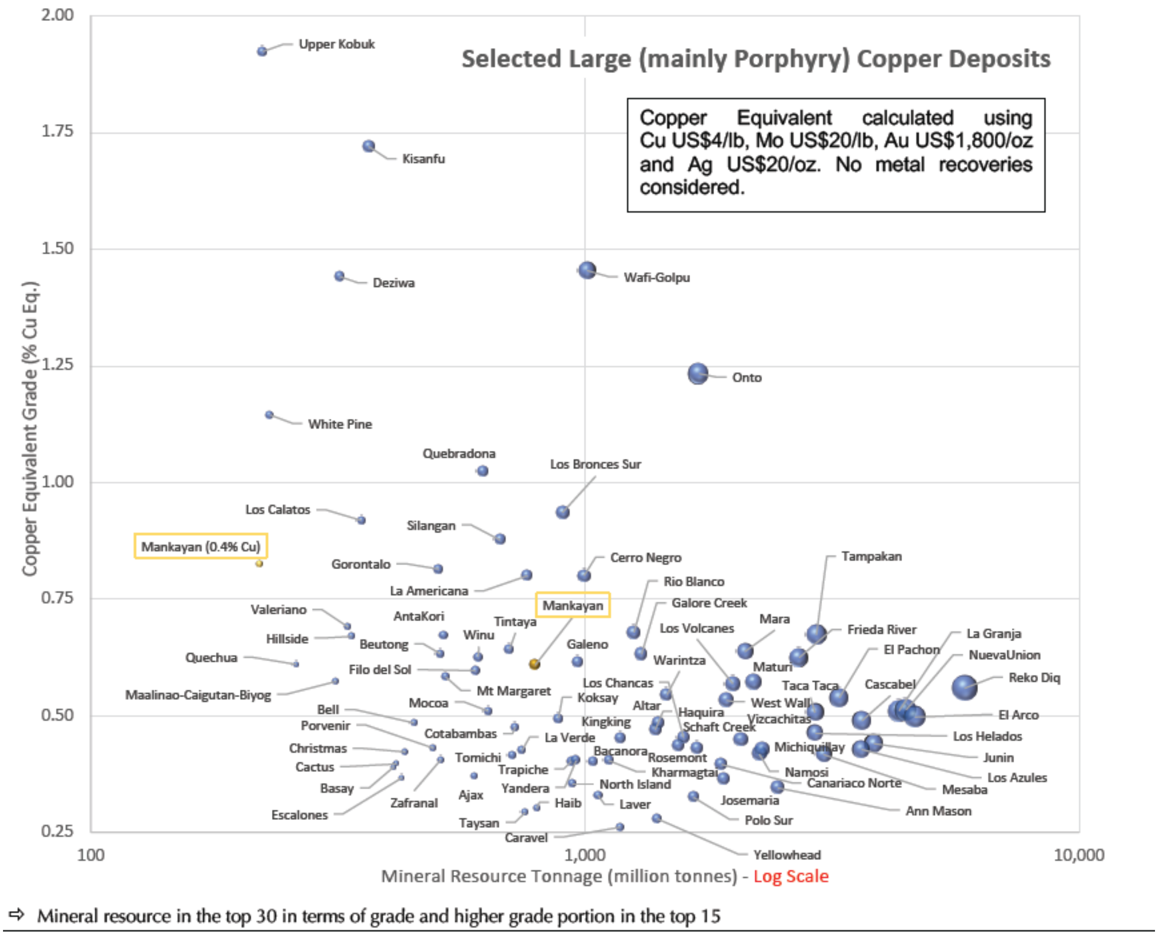
Figure 27.2_1
Listed Pre-production Peer Valuations (Source Terra Studio, May 2022)



Sahara consider changes in the commodity prices since May 2022 have no material effect on Terra Studio's review, which addresses long term projects with >20 year mine life.

The Mankayan project is further represented in the figure below amongst the peer projects internationally.

Figure 27.2_2
Benchmark of Mankayan Mineral Resource (Source Terra Studio, 2022)



Sahara have also reviewed the 2013 transaction of the Far Southeast Project (FSE) by Gold Fields Ltd and Far Southeast Gold Resources Inc. (FSGRI) in 2013.

The FSE project is located ~ 4km from the Mankayan project and although it has a larger resource base, it is a similar style of mineralisation and a fair comparison on a project basis albeit, 10 years old. The basic metrics of the purchase by Gold Fields are

- 40% was acquired for US$230M (in 2013)
- Additional 20% can be acquired for US$110M and incurring initial development costs totalling US$165M
- TOTAL 60% for **= 505M US$**
- For Gold Fields to obtain a further 20% interest in the project, a Financial or Technical Assistance Agreement (FTAA) will be required from the Philippines government.
- Inferred Resource of 891.7M tonnes @ 0.7g/t Au (19.8M oz) and 0.5% Cu (9,921M lb)

This transaction is in close proximity to the Mankayan project but presents a 2013 resource multiplier circa 90US$ per tonne CuEq (2013 Gold Fields agreement) versus the current benchmark above which is a resource multiplier circa US$20 per tonne CuEq.

Sahara has elected to not consider this FSE given the MRE is inferred status, the deal is close to 10 years old, and Sahara also notes this project has not progressed in any material way since 2013 given ESG issues.

Sahara has utilised a discounted Resource multiplier using a low of US$5/t, high of US$15/t and a preferred level of US$10/t assist in a market value for the Mankayan project. (Discounted from benchmark given the ESG issues still present around the FSE project permitting and preliminary level of metallurgical testwork)

27.3 Yardstick Order of Magnitude Crosscheck

Sahara used the Yardstick method as an order of magnitude check on the Mankayan Resources. The Yardstick order of magnitude check is simplistic (e.g. it is very generalised and does not address project specific value drivers but takes an "industry-wide" view). It provides a non-corroborative valuation check on the primary comparative transactions' valuation method, allowing Sahara to assess the reasonableness of the derived comparative transactions valuation and whether there are any potential issues with the preferred primary valuation method.

For the Yardstick order of magnitude check, Sahara used the spot price for gold as of 5 November 2022 of US$1,650/oz and Copper of 6,760/t.

In addition, Sahara utilised the following discounted Yardstick factors:

- Base Metals and Porphyry (Discounted for perceived ESG country risk)
  - Inferred Mineral Resources: 0.05% to 0.1% of spot price
  - Indicated Mineral Resources: 0.10% to 0.25% of spot price

The spot price for copper and gold as of 5 November 2022 used for the Yardstick order of magnitude check was consistent with that used for the evaluation of Comparative Transactions data so that the results could be compared.

A summary of the Yardstick order of magnitude crosscheck valuation based on the yardstick factors above, resulted in the valuation ranges and preferred values for the Mineral Resources in the Table below.

27.4 Exploration Expenditure

Sahara have estimated a high-level exploration expenditure for the project over the prior 50 years of development. The major cost factors on current costs are the ~55,000 meters of deep drilling.

Table 27.4_1
High Level Estimated Expenditure

Item	Estimated Cost US$
Drilling	16,500,000
Assay	2,750,000
Studies and Resource Estimations	1,000,000
Geological and Admin Control	3,037,500
	23,287,500

On the basis of estimated exploration completed (if completed in 2022) and the effectiveness of the exploration, Sahara has reasonably elected to assign a range of productivity enhancement multipliers (PEMs) from 0.5 to 4, indicating that every dollar spent on regional exploration has returned between US$0.5 and US$4 in value.

27.5 Valuation Summary

On the basis of exploration completed and the effectiveness of the exploration along with the market and logistical factors

- The Resource multiplier has been discounted by Sahara given the apparent ESG risks in the Philippines. This is highlighted by the Gold Fields FSE project which has not progressed since 2013. Sahara also note one company's poor ESG performance does not reflect the Philippines mining industry.
- The project has had well over US$20M spent of well-executed and staged exploration (if to be completed at today's costs).
- Sahara has not considered any potential Merger and Acquisition opportunities which logically exist with the FSE project located only 4km away.
- The Mankayan project has excellent exploration potential to expand current Mineral Resources

A summary of the project valuations is provided in Table below.

Table 27.5_1
Mankayan Copper-Gold project Valuation Summary (27 December 2022)

Method	Equity Interest	Valuation (Million US$)		
		Low US$ (Million)	Preferred US$ (Million)	High US$ (Million)
Resource Multiplier	**100%**	25.7	51.4	77.2
Yardstick	**100%**	32.0	55.3	78.5
MEE	**100%**	23.3	55.3	87.4

**appropriate rounding has been applied to the total*

Sahara have elected to use the Resource Multiplier method which is supported by the other methods utilised.

The value of the Mankayan Cu-Au project on a 100% ownership basis is considered to lie in a range from **US$25.7 million** to **US$77.2 million**, within which range Sahara has selected a preferred value of **US$51.4 million**.

The value of the current IDM 40% equity interest in the Mankayan Cu-Au project is considered to lie in a range from **US$10.3 million** to **US$30.9 million**, within which range Sahara has selected a preferred value of **US$20.6 million.**

28 JORC Tables

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)

CRITERIA	JORC Code Explanation	Commentary
SAMPLING TECHNIQUES	• Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	• The deposit is buried and there are no surface samples. • Drilling is the only feasible sampling method for the mineralisation without underground access. All sampling is from diamond drill core (as described below). • The quality of the samples collected from diamond drilling is high .
	• Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	• Diamond drilling collects samples of the rock that are very representative of the material drilled. No calibration is required.
	• Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	• Mineralisation is associated with porphyry intrusive activity and is generally disseminated or as stockwork veins. Copper grades are typically <2% and gold grades are typically <2 g/t. • Most drillholes are completely sampled and assayed in the target zones below the overlying unmineralised diatreme, but some drillholes have been selectively sampled based on a visual mineralisation content. This introduces potential for grade bias. All drill intervals suspected as selectively sampled have had grades reset to 0.001 (% Cu and g/t Au) to avoid potential overstatement bias.
DRILLING TECHNIQUES	• Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	• All drilling is by diamond core with maximum hole depth of nearly 1,500 m. • Core size varies from PQ, HQ, NQ and BQ. Most records do not document whether coring used triple-tube. • Most of the drilling was completed in five separate campaigns from 1971 to 2009 comprising: – MMDC (11 drillholes) from 1971 to 1973 – TMI and HMDC (14 drillholes) from 1980 to 1982 – GFAL (12 drillholes) from 1983 to 1984 – CMDC and PFRC (11 drillholes) from 1996 to 1997 – Bezant (10 drillholes) from 2007 to 2009 – Bezant and Gold Fields (1 drillhole) in 2013 • There is no preserved drill core for any drilling completed prior to 1996 and some PFC series drill core is also lost.
DRILL SAMPLE ARECOVERY	• Method of recording and assessing core and chip sample recoveries and results assessed.	• Core placed in core trays was measured, recorded, and compared with depth markers placed by the drill crew to determine recovery as a percentage. • The mean core recovery for diamond core collected as part of the 2007-2013 drilling was >96%. • There is no preserved core recovery data for the earlier drilling campaigns but is reported in company documentation prepared by the tenement

CRITERIA	JORC Code Explanation	Commentary
		operator to be high recovery.
	• Measures taken to maximise sample recovery and ensure representative nature of the samples.	• Professionally drilled diamond coring is acknowledged as a good method for collection of representative samples in reasonably competent rock conditions. Company documentation indicates rock conditions were generally good and sample recovery was adequate. Core holes were not oriented.
	• Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• Basic statistical analysis of sample recovery versus copper and gold grades does not suggest any relationship, nor the presence of a bias.
LOGGING	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	• Logging of geological and geotechnical features in the diamond core was done with sufficient detail to meet the requirements of resource estimation and preliminary mining studies. However, original drill logs for many of the holes drilled prior to 1996 have been lost leaving only digital records of the logging.
	• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	• Logging was qualitative. Consistent core photography is only available for holes drilled after 1997.
	• The total length and percentage of the relevant intersections logged.	• 100% of all core has been geologically logged.
SUB-SAMPLING TECHNIQUES AND SAMPLE PREPARATION	• If core, whether cut or sawn and whether quarter, half or all core taken.	• Core was sampled mostly in 3, 6, 10 m intervals depending on the year the sample was taken. Core was cut using a diamond core saw or split with a chisel and hammer.
	• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	• Not relevant.
	• For all sample types, the nature, quality, and appropriateness of the sample preparation technique.	• Half core samples were dried, crushed, and pulverised to produce a final grind size of minus 150 mesh. Generally sample preparation was done on site. Derisk considers that the documented sample preparation technique was appropriate for the mineralisation.
	• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	• QC procedures varied for different drilling campaigns, but typically included insertion of blanks and coarse duplicates to monitor sub-sampling procedures.
	• Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	• Coarse duplicates sometimes consisted of ¼ core and therefore there are some concerns that this material is not completely representative of the ½ primary sample.
	• Whether sample sizes are appropriate to the grain size of the material being sampled.	• No quantitative tests have been completed to demonstrate sample sizes are appropriate to the grain size of the material. Anecdotally, pulp re-assays at different laboratories and pulp duplicates do not show any significant bias.
QUALITY OF ASSAY DATA AND LABORATORY	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	• Copper and gold were analysed by industry-standard methods appropriate when the drilling was undertaken. • Copper was analysed using an acid digest with an AAS finish. Gold was analysed using the lead fire assay technique with an AAS finish. • Digest methods changed over time, from 2-acid to 3-acid to 4-acid and

Sahara

CRITERIA	JORC Code Explanation	Commentary
TESTS		therefore there is some possibility that some copper analyses from earlier drilling campaigns may understate the copper grade because of incomplete digest.
	• For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	• Not relevant.
	• Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	• QC systems and procedures varied for different drilling campaigns, but generally involved some combination of blanks, duplicates, standards (CRMs), in-house laboratory checks, and umpire laboratory checks. • DrillHoles prior to Bezant did not use CRM's (~70% of all drilling) an dthere is potential accuracy error that cannot be quantified exactly. Spatial reviews identified no bias. • Bezant selectively re-assayed laboratory pulps from THM, TGF and PFC series drillholes to independently check the accuracy of the earlier analytical work. • Bezant/Gold Fields also re-assayed pulps from the BRC series drilling using a different analytical method for Cu. • Snowden completed statistical analysis of Cu and Au from specific drill programs and compared this to the results of the rest of the drilling database.
VERIFICATION OF SAMPLING AND ASSAYING	• The verification of significant intersections by either independent or alternative company personnel.	• Drilling has been completed by different companies and Sahara has reviewed several reports e.g., Angeles (2009), that have in-part tried to verify significant intersections where possible. However much of the core is no longer preserved. • Mr Tuesley visited site in September 2021 and completed a general inspection of core stored at site, specifically inspecting BRC-60 (the most recent drillhole). Visibly mineralised core was sighted that reflected the recorded copper grade assigned to specific intervals. • Each of the five major drilling programs has reported similar low and disseminated copper gold grades, consistent with porphyry mineralisation.
	• The use of twinned holes.	• The only twinned drillholes are THM-12 and TGF-32, however THM-12 contains very few assay records and therefore does not allow a twinned hole assay comparison.
	• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	• Records pertaining to management of primary data, data entry procedures, and data verification are not well documented for most drilling campaigns. • Derisk was supplied with various digital datasets and needed to amalgamate data from different files to generate a new master database to incorporate the latest work completed by Bezant/Gold Fields.
	• Discuss any adjustment to assay data.	• Derisk adjusted some of the data in the digital database to ensure that analysed samples that recorded below detection limits were treated differently to unsampled intervals.
LOCATION OF DATA	• Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	• All the MMD, THM, TGF and PFC drillhole collars were surveyed using a theodolite.

CRITERIA	JORC Code Explanation	Commentary
POINTS		• Bezant series holes were surveyed using a handheld GPS unit. • The drillhole holes are on average over 900 m deep. There is only limited downhole survey information derived from single shot camera devices. The downhole azimuth readings will be distorted to some extent by magnetite, which is a common alteration product. Consequently, there will be significant uncertainties tied to the accuracy of many of the drillholes at depth.
	• Specification of the grid system used.	• Almost all the MMD, THM, TGF and PFC drillhole collars were re-surveyed by CMDC/PFRC using the WGS 84 coordinate system.
	• Quality and adequacy of topographic control.	• The surface topography is adequate, but Angeles (2009) recommended that the existing topographic survey be redone. • The Guinaoang deposit is buried. The topography data is not material to the Mineral Resource estimate but will be critical for the design of surface infrastructure.
DATA SPACING AND DISTRIBUTION	• Data spacing for reporting of Exploration Results.	• Not relevant.
	• Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	• The drilling has been located on a grid of approximately 100 m by 100 m. Most of the drilling is vertical. This drillhole spacing is sufficient to confirm areas assigned to the Indicated category where there is reasonable geological and grade continuity between sections.
	• Whether sample compositing has been applied.	• For resource estimation purposes a 9 m composite interval was used to standardise the sample lengths.
ORIENTATION OF DATA IN RELATION TO GEOLOGICAL STRUCTURE	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	• Mineralisation covers an extent of 900 m by 500 m by 1,000 m depth and is sub-vertical in nature. Mineralisation is disseminated and hosted in veins and stockworks. • Drillholes are either vertical or moderate to steeply dipping. This orientation is not ideal for unbiased sampling of steeply dipping vein systems. However, the location and orientation of the diamond drilling is adequate given the strike, depth, and morphology of the copper mineralisation.
	• If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• No assessment of potential sampling bias has been completed because there is no oriented core available to complete an assessment.
SAMPLE SECURITY	• The measures taken to ensure sample security.	• Mineralisation is typically low grade and no specific security measures have been recorded for any drilling campaigns.
AUDITS OR REVIEWS	• The results of any audits or reviews of sampling techniques and data.	• A review of Guinaoang drilling, sampling, and logging was conducted by Angeles, in 2009. The objective was to prepare the data for the June 2009 resource estimation work. • Snowden completed an independent review of the drillhole database in readiness for a Mineral Resource estimate in 2009. • Derisk completed spot checks of the Snowden database and compiled all available data from the Bezant/Gold Fields joint venture into a new master database in 2020.

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)

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CRITERIA	JORC Code explanation	Commentary
MINERAL TENEMENT AND LAND TENURE STATUS	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	• The Project is held under MPSA 057-96-CAR, totalling 534 ha, granted on 11 December 1996 for a period of 25 years and renewed for an additional 25 years in 2022.
	• The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• MPSA 057-96-CAR has been renewed for an additional 25 years.
EXPLORATION DONE BY OTHER PARTIES	• Acknowledgment and appraisal of exploration by other parties.	• The deposit was discovered in the early 1970s and has been explored through drilling by six separate parties. Each program has added to the current database and deposit knowledge. • The deposit is buried and there is no other exploration information that is material to the Mineral Resource.
GEOLOGY	• Deposit type, geological setting, and style of mineralisation.	• The Guinaoang porphyry copper deposit is related to Island Arc porphyry emplacement. The subduction environment results in magmatism and porphyry deposits that are the result of hydrous magmas being emplaced at relatively shallow depths (<2 km). The Philippines has numerous similar deposits located in clusters along the Luzon, Visayas and Mindanao orogenic belts. • Mineralisation is mostly associated with the sericite-chlorite-clay, sericite, and argillic phases. The sulphide minerals consist principally of pyrite, with lesser amounts of chalcopyrite, bornite, covellite and chalcocite. Trace amounts of molybdenite, galena and sphalerite also occur. Gold occurs as native gold and as inclusions in other sulphides.
DRILLHOLE INFORMATION	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: • Easting and northing of the drillhole collar. • Elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar. • Dip and azimuth of the hole. • Down hole length and interception depth. • Hole length.	• Exploration Results are not reported. • The Mineral Resource is based on 56 drillholes with an average depth of 1,030 m and which are predominantly vertical. • The drilling is regularly spaced on the most part, nominally 100 m by 100 m.
	• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	• Four drillholes were excluded because of no assay data, being outside the model area or were replaced by a nearby more completely sampled drillhole.

CRITERIA	JORC Code explanation	Commentary
DATA AGGREGATION METHODS	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	• Exploration Results are not reported. • The Mineral Resource estimated is based on length weighted 9 m composites of diamond drill core samples.
	• Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	• Exploration Results are not reported. • Samples are aggregated into 9 m composites for Mineral Resource estimation and incorporate any intervals of high grade.
	• The assumptions used for any reporting of metal equivalent values should be clearly stated.	• Exploration Results are not reported, but a copper-equivalent is calculated using copper and gold grades, metal price assumptions and recovery assumptions for reporting of the Mineral Resource (refer to Section 3).
RELATIONSHIP BETWEEN MINERALISATION WIDTHS AND INTERCEPT LENGTHS	• These relationships are particularly important in the reporting of Exploration Results.	• Exploration Results are not reported. • The global extent of the porphyry copper mineralisation extends hundreds of metres in all directions. Typically, individual drillhole sample intervals range from 1 m to 10 m and therefore represent a small proportion of the mineralisation width.
	• If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.	• The broad nature of porphyry copper mineralisation is sub-vertical, as is much of the drilling. Whilst not ideal, drilling is adequate to define the porphyry style of mineralisation, which displays considerable depth over a broad zone.
	• If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	• All references to mineralised intervals are downhole lengths.
DIAGRAMS	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.	• Example sections and plans are included in the report.
BALANCED REPORTING	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• Exploration Results are not reported. • The Mineral Resource is reported on a tonnage weighted basis.
OTHER SUBSTANTIVE EXPLORATION DATA	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• The deposit is buried and all exploration data is derived from drilling.
FURTHER WORK	• The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	• The Project has been dormant since 2014 except for several desktop reviews and scoping studies. IDM has commenced PFS work including drilling in 2022.

CRITERIA	JORC Code explanation	Commentary
		• Future activities will be aimed at collecting data to support a prefeasibility study and conversion of Mineral Resources to Ore Reserves.
	• Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• The limits of mineralisation are still open in a number of directions

Section 3 Estimation and reporting of Mineral Resources

CRITERIA	JORC Code Explanation	Commentary
DATABASE INTEGRITY	• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.	• Most previous drilling campaigns were logged on hardcopy records and then transcribed into digital files. Derisk has not sighted any documentation describing measures taken to ensure database integrity. • Derisk was provided with several digital datasets of all drilling data as Microsoft Excel files, that were then converted to a database for analysis.
	• Data validation procedures used.	• Several previous data validation exercises have been sighted e.g. Angeles (2009) and Snowden (2009). Snowden checked some original hardcopy logs. • During the September 2021 site visit, Tuesley sighted a range of hardcopy geological logs and laboratory records. • Derisk completed a range of standard digital data validation checks including survey, sampling, geological and analysis checks.
SITE VISITS	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	• The Tuesley site visit in September 2021 provided confirmation of site conditions and remaining drill core, samples and drilling-related records stored at site. Due to the project having a long history, geological information has been misplaced or lost and unfortunately a significant amount of the drill core has been discarded and historic logging and photographic information no longer exists
	• If no site visits have been undertaken indicate why this is the case.	• Site visit in July 2020 by Tuesley is considered current as only one hole has been drilled in 2022 for metallurgical purposes in the current PFS
GEOLOGICAL INTERPRETATION	• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	• Mineralisation is interpreted to be influenced by lithology, alteration, and structure. • Confidence in the broad high-level geological interpretation is high because it is relatively simple. However, at a local scale the interpretation will be more complex. • Simplified geological interpretation of the four main geological units and the key alteration types was compiled as part of the 2009 review and remains unchanged in the 2020 estimate except for minor edits to incorporate BRC-60, drilled in 2013. • Alteration may play an important role and control on grade and requires further work, particularly when additional closer spaced drilling data

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		becomes available.
	• Nature of the data used and of any assumptions made.	• All data contributing to the geological interpretation is derived from drilling.
	• The effect, if any, of alternative interpretations on Mineral Resource estimation.	• A mineralisation envelope defined at a nominal 0.2% Cu grade has been interpreted to constrain the estimation of Cu, Au and Ag. • Grade is disseminated around the core porphyry units but also extends into the surrounding volcanics. This outlines a massive area of disseminated low grade copper and gold where alternative grade interpretations are not likely. • Alteration is expected to play a significant role in influencing grade distribution for Cu and Au but has not been used in the 2020 estimate. The use of alteration domains to control grade estimates are unlikely to materially alter the global estimate but will change local estimation of Cu and Au.
	• The use of geology in guiding and controlling Mineral Resource estimation.	• Lithology has been used indirectly to create the 0.2% Cu mineralisation envelope. • Estimation is undertaken for geology and mineralisation subsets. • Geology is used for grade estimation control as this captures the downward trend in grades away from the porphyry core.
	• The factors affecting continuity both of grade and geology.	• Six phases of alteration and mineralisation have been interpreted at Guinaoang and the interplay between the different phases is the key factor affecting continuity of grade.
DIMENSIONS	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• The Guinaoang deposit is an elongate body that is about 900 m long, 500 m wide and drilled to a depth of approximately 1,200 m.
ESTIMATION AND MODELLING TECHNIQUES	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	• A block model was used for estimating and reporting tonnage weighted grades. • Grades for Cu, Au and Ag were estimated using OK (parent cell estimation) using two estimation passes using a radius of 125 m initially and then 250 m. Parameters for the first pass included: – Ten 9 m composites per drillhole – Between 15 and 50 composites – Minimum of three and maximum of five drillholes – 5 by 5 by 5 discretisation points • These parameters are suited for a large, mineralised body likely to be a bulk mining operation such as block cave extraction.
	• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	• The 2020 estimate was directly compared with the 2009 Snowden estimate. Results are comparable but there are differences as a result of one new hole, subtle changes to the domaining, and treatment of unsampled intervals. There is no mining at the site.
	• The assumptions made regarding recovery of by-products.	• Processing is likely to be by flotation to produce a concentrate containing Cu, Au and Ag. Cu and Au are the main metals of economic significance.

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	• Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	• No elements other than Cu, Au and Ag were estimated. The drillhole database does not contain a significant number of analyses for other elements to permit estimation of deleterious elements.
	• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	• The blocks of 25 m by 25 m by 25 m were sub-blocked to 6.25 m along mineralisation or geology boundaries. • Most drilling is on a nominal spacing of 100 m by 100 m.
	• Any assumptions behind modelling of selective mining units.	• Modelling of selective mining units was not undertaken.
	• Any assumptions about correlation between variables.	• Cu, Au and Ag were independently estimated.
	• Description of how the geological interpretation was used to control the resource estimates.	• The geological interpretation was used to guide the creation of the 0.2% Cu grade envelope that was used to constrain resource estimation but was not directly used to constrain the estimate.
	• Discussion of basis for using or not using grade cutting or capping.	• No grade caps were utilised. A statistical analysis shows low variance with CoV values below 1, especially for the mineralised domains.
	• The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	• Validation was completed by: – Visual checks of model grades vs drillholes. – Comparing block model statistics with composite statistics. – Swath plots. • Results suggest that the modelling and estimation process has been undertaken as expected.
MOISTURE	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• All tonnages have been estimated as dry tonnes. • Previous estimates were reported as dry but measurements were undertaken on undried core samples with natural moisture contents, • Derisk applied an assumed moisture content of 4% to convert bulk density to dry bulk density for the 2020 estimate.
CUT-OFF PARAMETERS	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• In 2009, 0.4% Cu cut-off criterion was used for reporting, but this does not consider the contribution of Au. • A CuEq was calculated to recognise the value of gold. Assumptions are based on: – Metal prices of USD 2.80/lb Cu and USD 1,800/oz Au. – Recoveries of 90% for Cu and 75% for Au. • A scoping study in 2014, updated in 2018 indicated a cut-off criterion of 0.20 – 0.23% CuEq would be appropriate for a block caving operation at Guinaoang. In addition, reporting cut-off criteria for other large copper deposits were reviewed, with criterion from 0.15 – 0.40% CuEq applied. • For the 2020 estimate, Derisk applied a reporting cut-off criterion of 0.25% CuEq.
MINING FACTORS	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider	• The depth of the deposit below the surface indicates the deposit would be most likely mined using underground methods, and the large scale and disseminated low grades would be suited to bulk underground mining.

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OR ASSUMPTIONS	potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	• Scoping studies completed in 2014 and updated in 2018 suggested block caving would be feasible.
METALLURGICAL FACTORS OR ASSUMPTIONS	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	• Limited metallurgical testwork has been completed that indicates the deposit is amenable to a conventional crush, grind, flotation, and drying operation to produce a readily marketable copper-gold concentrate for sale. • Preliminary testwork indicated recoveries of 94% for Cu and 74% for Au were obtainable.
ENVIRONMENTAL FACTORS OR ASSUMPTIONS	• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	• For the Mineral Resource estimate, no assumptions were made with respect to environmental factors and assumptions.
BULK DENSITY	• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size, and representativeness of the samples.	• Density averages are based on 2,426 measurements collected as part of the 2007-2009 drilling campaign. • An assumption of inherent sample free moisture content (about 4%) was necessary to convert the density values to a dry basis. • The data precision is low and supports a single bulk density value of 2.5 t/m^3 for all mineralised porphyry and volcanic rock materials. • Sahara consider this BD data needs significant additional testwork to quantify the moisture and provide additional coverage over the deposit
	• The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.	• Measurements were performed on drill core samples using a weigh-in-air, weigh-in-water method. The rock mass is generally competent and contains few visible voids. No attempt was made to seal the core before the measurements were undertaken.
	• Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	• A range of host rock and mineralised rock samples were measured for bulk density across the lateral and vertical extent of the deposit. • Statistical analysis of the different lithologies was used to apply a standard dry bulk density to Mineralised and unmineralised porphyry and volcanics, and to unmineralised epiclastics.
CLASSIFICATION	• The basis for the classification of the Mineral Resources into varying confidence categories.	• Resources have been classified based on continuity of copper grade as defined by the nominal drillhole spacing (100 m by 100 m). • Classification is flagged based on 3 drillholes within a 110 m search radius and more than 75% of the samples are assayed. The assay quality

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		aspect reduces the area around a few drillholes where sampling and assaying is selective to Inferred. In most cases the resetting of missing grades to zero will remove most of these areas from the Mineral Resource statement.
	• Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity, and distribution of the data).	• Appropriate account has been taken of the key uncertainties in the drillhole data inputs, including loss of drill core from earlier programs, loss of some drillhole data records, loss of QA/QC documentation, and the use of a broad grade envelope to constrain the estimate rather than dedicated lithology and alteration controls.
	• Whether the result appropriately reflects the Competent Person's view of the deposit.	• The classification of the resource into Indicated and Inferred categories reflects the Competent Person's view.
AUDITS OR REVIEWS	• The results of any audits or reviews of Mineral Resource estimates.	• Derisk reviewed the 2009 estimate by Snowden in preparation for the 2020 estimate. • Sahara has reviewed the 2020 Derisk estimate. A number of limitations will require addressing including the bulk density data and QAQC limitations on historical drilling prior to 2013.
DISCUSSION OF RELATIVE ACCURACY/ CONFIDENCE	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	• No study of the quantification of confidence has been carried out. • Indicated Resources are considered a reasonable basis for initial prefeasibility assessment of the deposit. Mine development would require additional infill and validation drilling to better understand and predict grades.
	• The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	• The 2020 estimate is considered to be a robust global estimate. • There is expected to be significant localised variability due to the likely influences of lithology and alteration that have not been modelled in the 2020 estimate.
	• These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• There is no production data from this deposit.