

## ASX ANNOUNCEMENT

19 October 2022

RRL1829D

# Youanmi Gold Project Scoping Study

### ROX RESOURCES LIMITED

ASX: RXL

*Rox Resources Limited (ASX: RXL) is an Australian listed company with advanced gold assets in Western Australia: The Youanmi Gold Project and the Mt Fisher Gold project.*

### DIRECTORS

**Mr Stephen Dennis**  
Chairman

**Mr Alex Passmore**  
Managing Director

**Dr John Mair**  
Non-Executive Director

**Mr Robert Ryan**  
Non-Executive Director

Shares on Issue	168.9m
Share Price	\$0.23
Market Cap.	\$38.9m
Cash	\$4.4m

(as at 30 June 22)

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- The Scoping Study indicates the Youanmi Gold Project is set to be a high return project with low capital and operating costs against industry benchmarks.
- Projected average gold production target of approximately 71koz pa at an average feed grade of 5.0g/t Au over an approximate 8-year projected mine life.
- Combination of gold-in-concentrate and carbon-in-leach bullion production target considered optimum commercialisation strategy for Youanmi.
- Rox targeting Youanmi Pre-feasibility Study in 2023.
- Infill drilling to underpin further Feasibility Studies due for completion in 2023.

### Cautionary Statement

*The Scoping Study referred to in this ASX release has been undertaken to evaluate the potential development of the Youanmi Gold Project ("Project") near Mt Magnet, approximately 480 kilometres northeast of Perth, Western Australia. Rox Resources Limited ("Rox Resources, Rox, the Company") owns 70% and is the operator of the Project. The Scoping Study is prepared based on a 100% basis and is a preliminary technical and economic study of the potential viability of the Youanmi Gold Project. It is based on low accuracy level technical and economic assessments that are not sufficient to support estimation of Ore Reserves. Infill drilling and evaluation work and appropriate studies are required before Rox Resources will be able to estimate Ore Reserves or to provide assurance of an economic development case. The Scoping Study has been completed to a level of accuracy of +/- 40%.*

*Of the Mineral Resources scheduled for extraction in this Scoping Study production target, approximately 79% are classified as Indicated and 21% as Inferred in the first three years and 63% are classified as Indicated and 37% as Inferred over the evaluation period. There is a low level of geological confidence associated with Inferred Mineral Resources, and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.*

*The Youanmi Gold Project has been mined successfully over four main campaigns since discovery of the original orebody in 1894, with approximately 667koz Au produced. The Company therefore considers the Youanmi Gold Project to be a very mature project which increases the confidence of converting the current Mineral Resources into Ore Reserves.*

*Rox Resources confirms that the Project is financially viable when excluding Inferred Resources in the production schedule.*

*The Company believes that it has a reasonable basis for providing these forward-looking statements and the forecast financial information based on material assumptions outlined in this release. One of the key assumptions is that the funding for the Project will be available when required. While the Company considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved.*

*To achieve the range of outcomes indicated in the Scoping Study, funding in the order of approximately \$134m will likely be required comprising of approximately \$99m in pre-production capital expenditure and approximately \$35m in working capital and assumed financing charges. There is no certainty that the Company will be able to raise that amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Rox Resources' shares. It is also possible that Rox Resources could pursue other value realisation strategies such as a sale, partial sale or joint venture of the Youanmi Gold Project. If it does, this could materially reduce the Company's proportionate ownership of the Project. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.*

West Australian focused gold exploration and development company, Rox Resources Limited (“Rox” or “the Company”) (ASX: RXL), in conjunction with its joint venture partner Venus Metals Corporation Limited (ASX: VMC), is pleased to present key outcomes of a technical and financial study (“Scoping Study, the Study”) evaluating a development option for the Youanmi Gold Project near Mt Magnet, WA, in the OYG JV area (Rox 70% and Manager, VMC 30%).

Following a substantial upgrade to the Youanmi underground gold resource in January 2022, and a subsequent increase to the near surface resource in April 2022, the Company commenced scoping work to understand the economics and likely development scenarios for the Youanmi Gold Project. The project-wide resource currently stands at **27.9Mt at 3.57g/t Au for 3.2Moz Au** contained gold. The Study is based on this resource estimate.

Drilling and metallurgical testwork has been ongoing since commencement with results expected to enhance the production target (and financial) outcomes presented in this Scoping Study.

The Youanmi Gold Mine has seen high grade gold production in the past with circa 667koz previously mined at the project in total. From available historical data (1987 onwards), open pit mining showed an average mined grade of 3.4g/t Au, while underground mining showed an average of 11g/t Au.

The mining and processing of sulphide material via production from underground operations between 1994 and 1997 are particularly relevant to this Study. The existing decline will be rehabilitated and provide an early platform for development and accessing high grade material. The previous operation produced a concentrate as an intermediate step in the process plant. The data from this concentrate production phase in addition to Rox’s own testwork indicates that marketable gold concentrates can be produced from the Youanmi sulphide material.

A summary of the Study is shown below with additional details provided in the Scoping Study Executive Summary attached to this announcement.

All results are based on the Youanmi Gold Project in 100% terms (Rox 70% economic interest and Venus 30% economic interest), unless otherwise stated.

All financial results are provided in Australian dollars unless stated otherwise.

## Study Highlights

- Average annual gold production target of approximately **71koz per annum** with average gold head grade of 5.0g/t Au for total gold production target of approximately **569koz over an 8-year life of mine** (“LOM”):
  - First three years of the production target underpinned by 79% / 21% Indicated to Inferred Resource Material in the production target plan
  - Dewatering infrastructure in place and well understood with contingency for greater inflows than expected
  - Mine plan rapidly opens up high grade and high confidence resource areas

- Over the **LOM All-In Sustaining Cost (“AISC”)** average of approximately **\$1,538/oz** (payable Au):
    - Consistently <\$1,600/oz AISC unit costs once the production target is ramped up, higher in earlier periods
    - LOM Mining: \$690/oz
    - LOM Processing: \$395/oz
    - LOM Concentrate related: \$238/oz
    - LOM G&A: \$35/oz
  - The combination of gold-in-concentrate and carbon-in-leach (CIL) bullion production target is considered the optimum commercialisation strategy for initial cashflow generation at Youanmi.
  - Total pre-production capital expenditure, working capital and assumed financing charges of approximately \$134m:
    - Capital cost of 480ktpa processing plant and site infrastructure of approximately \$99m;
    - Working capital and other costs (i.e. financing charges) of approximately \$35m; and
    - Capital intensity of approximately \$1,386/oz based on average annual gold production target given high margin production target and long-life cash flows
  - Compelling financial outcomes reflecting the high grade and low capital intensity of the Youanmi Gold Project<sup>^</sup>:
    - Project life of 8 years
    - Cumulative EBITDA of approximately \$577m over the life of the Project
    - Pre-tax undiscounted free cash flow of approximately \$418m over the life of the Project
    - Pre-tax and unleveraged Net Present Value (**NPV**<sub>5%</sub>) of approximately \$303m
    - Pre-tax and unleveraged Internal Rate of Return (**IRR**) of approximately 45%
    - Pre-tax and unleveraged payback of approximately 3.0 years (from commencing the production target)
- <sup>^</sup> Based on a gold price of \$2,450/oz other key assumptions are outlined on pages 6 to 16 of this release.
- In the current market environment, the Study has focused on high quality outcomes at a low capital cost. The following presents upside to the financial outcomes:
    - Only 20% of Youanmi Mineral Resource is included in the mining production target of this Scoping Study, providing additional opportunities to extend Project life and increase the production target rate
    - Growth in Open Pit mined material: underground material produces strong cash flows which can de-risk the Project and be used to assist with funding the expansion to include open pits
    - Further exploration to increase near surface resource size and grade
    - Underground resource growth: resource remains open down dip and along strike. Link parallel zone only delineated to shallow depths whereas Mine Lode extends to +1,000mbgl
    - More than 50km strike of Youanmi Shear Zone is largely untested by historic drilling. Regional deposits to contribute to longer term plant feed

**Managing Director Alex Passmore commented:**

*“The Scoping Study highlights the Youanmi Gold Project’s robust financial metrics as a potential long-life, cashflow-producing gold asset in a world-class Western Australian gold jurisdiction.*

*Rox, like our peers, has not been exempt from the high cost-inflationary environment, and chose to prioritise high-grade, low-cost ounces through the production target of gold-in-concentrate as the preferred method for commercialisation of the Youanmi Project.*

*Importantly, the Study shows low pre-production capital expenditure of approximately \$99m required to establish operations at Youanmi.*

*Gold-in-concentrate is a proven, highly efficient method for producing saleable gold product, with other Western Australian operations realising strong cash flows from this approach.*

*Despite the majority of open-pit material and 73% of the underground resource material excluded from the Study production target (expected to change with project advancement) the Project financial model demonstrates strong cash flows on this base case.*

*Through ongoing, systematic and targeted drilling campaigns, we intend to continue to convert Inferred Resources to the Indicated category at the OYG JV, while adding ounces through Resource expansion and regional exploration drilling.*

*The Youanmi Resource remains open down dip and along strike, with the maximum depth of the Mine Lode interpretation about -600mRL, 1060m below the natural surface. Regional exploration programs are testing more than 50km strike of Youanmi Shear Zone that remains largely untested by historic drilling, with follow up Aircore and RC drilling planned along strike and down dip of newly identified mineralisation.*

*We look forward to continuing to rapidly progress the project to commercialisation and are targeting a Pre-feasibility Study in 2023.”*

## Introduction

The Youanmi Project is situated approximately 480km to the northeast of Perth and is around 400km inland from Geraldton and lies within the East Murchison Mineral Field of Western Australia. Road access to the Project is around 140km along the Paynes Find Sandstone Road. Paynes Find is 480km from Perth on the sealed Great Northern Highway. The Project has an operating airstrip located on site with flight time from Perth around 90 minutes for most aircraft.

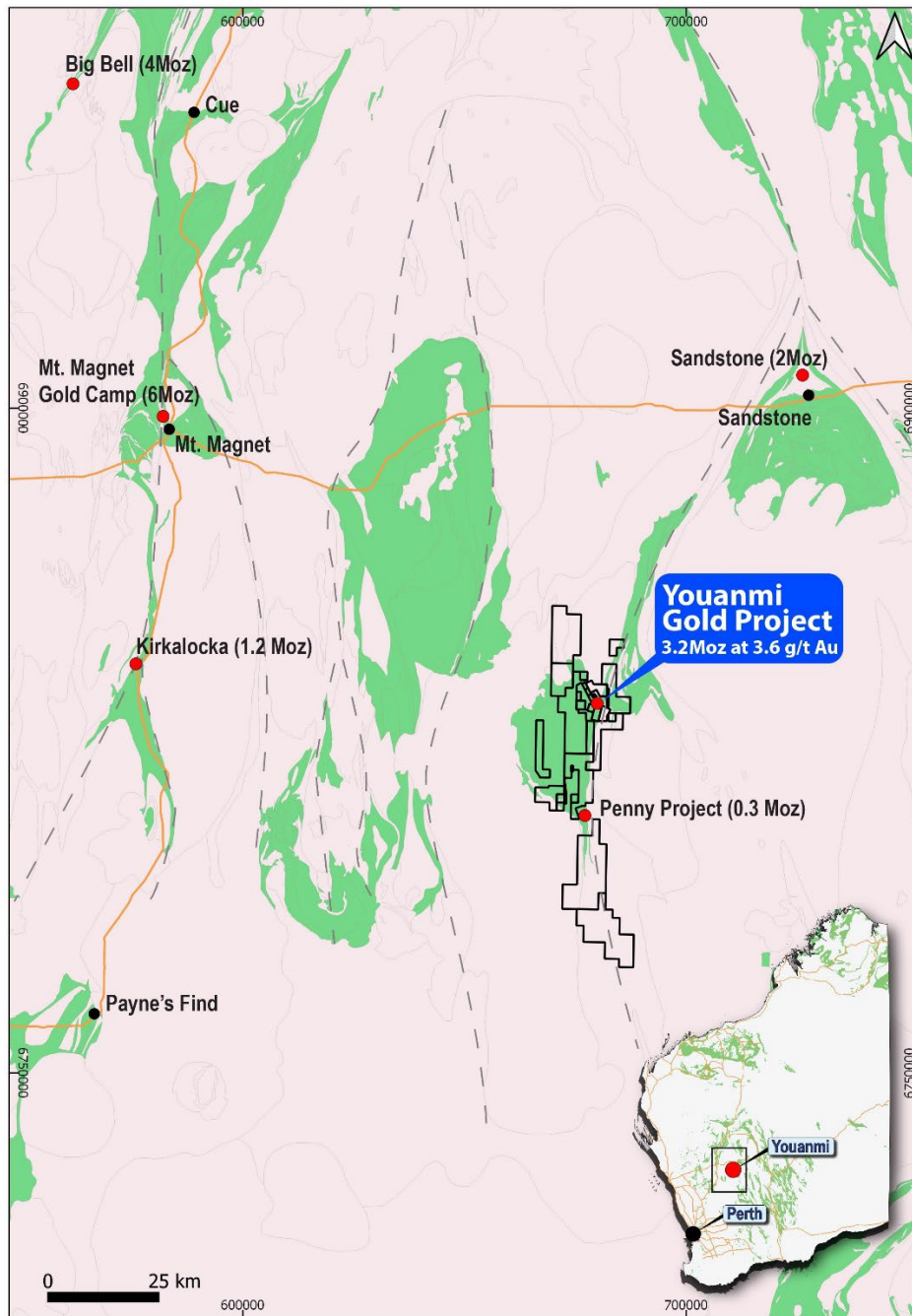


Figure 1. Youanmi Gold Project Location Plan

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The overall Youanmi Project consists of four joint ventures with Venus Metals Corporation Limited (VMC) and tenements 100% owned by Rox. The joint ventures are:

- OYG JV (Rox 70% all minerals) - covers 65km<sup>2</sup>, is circa 10km x 7km wide, and surrounds the Youanmi Gold Mine and nearby extensions;
- Currans Find JV (Rox 45%, all minerals) - covers 4km<sup>2</sup>;
- VMC JV (Rox 50% gold rights) - covers 302km<sup>2</sup>; and
- Youanmi JV (Rox 45% gold rights) - covers 270km<sup>2</sup>.

The Youanmi Project Scoping Study focuses on extraction of mineral resources located within the OYG JV Tenements which comprise of 11 granted Mining Leases that form combined reporting group C 96/1999.

## Key Study Outcomes and Assumptions

The Company has considered various options to develop the Project including producing only concentrates, building an Albion process to produce bullion on site, or various combinations. It has determined that a combination of gold-in-concentrate and CIL bullion production target is considered the optimum commercialisation strategy for Youanmi. This option provides a shorter pre-production period, lower capital requirement and shorter payback period, lowering the risks of the Project. The financial model of the Project was completed on 100% basis and was built on this option using the following key assumptions:

Table 1. Key Physicals Assumptions

Assumptions		
Life Of Mine	years	8.0
Plant Throughput	ktpa	480
<b>Combined Mine Production Target</b>		
Production Target Material Mined	kt	3,972
Au Grade	kt	4.9
Au Ounces Contained	kt	627
<b>Total Open Pit Mine Production Target</b>		
Production Target Material Mined	kt	331
Au Grade	g/t	3.3
Au Ounces Contained	koz	35
<b>Total Underground Mine Production Target</b>		
Lateral Development	metres	40,335
Production Target Material Mined	kt	3,641
Au Grade	g/t	5.1
Au Ounces Contained	koz	592
<b>Processing Physicals</b>		
Material Processed	kt	3,900
Au Grade	g/t	5.0
Ounces Contained	koz	624
Payable Metal <sup>1</sup>	koz	569
Gold-in-concentrate	koz	510
Gold bullion	koz	59

Notes: 1. Payable metal is recovered gold after payability

At a conservative gold price of \$2,450/oz, which is lower than the average gold spot price in the last 12 months, the Project is forecast to generate a healthy unleveraged and pre-tax NPV<sub>5%</sub> of approximately \$303m and an unleveraged and pre-tax IRR of approximately 45%. The financial summary is presented below:

Table 2. Financial Results Summary

<b>Financials</b>		
<b>Key Financial Assumptions</b>		
Gold Price	\$/oz	2,450
Discount Rate	%	5
<b>Project Valuation<sup>1</sup></b>		
Project EBITDA	\$m	577
Project Free Cash Flow (undiscounted and pre-tax)	\$m	418
Project NPV (unleveraged and pre-tax)	\$m	303
Project IRR (unleveraged and pre-tax)	%	45
Payback Period (unleveraged and pre-tax) <sup>2</sup>	years	3.0
Capital Intensity <sup>3</sup>	\$/oz	1,386
Ratio NPV (unleveraged and pre-tax) / Pre-production Capital	ratio	3.1

Notes:

1. Financial results are unleveraged and pre-tax numbers calculated based on 100% basis. Rox as Manager of the OYG Joint Venture owns 70% and Venus owns 30%.
2. Payback period is calculated from the first month of gold the production target.
3. Capital intensity is calculated by dividing pre-production capital by annual payable metal.

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## Production Target

Total payable metal over the life of the Project is forecast to be approximately 569koz, annual numbers with the breakdown of indicated and inferred resources is shown in the figure below. Of the Mineral Resources scheduled for extraction in this Scoping Study production target, approximately 79% are classified as Indicated and 21% as Inferred in the first three years of the production target. Approximately 63% are classified as Indicated and 37% as Inferred during the 8-year evaluation period. The Youanmi Gold Project has been mined over four main campaigns since discovery of the original orebody in 1894, with approximately 667koz produced. The Company therefore considers the Youanmi Gold Project to be a very mature project which increases the confidence of converting the current Mineral Resources into Ore Reserves.

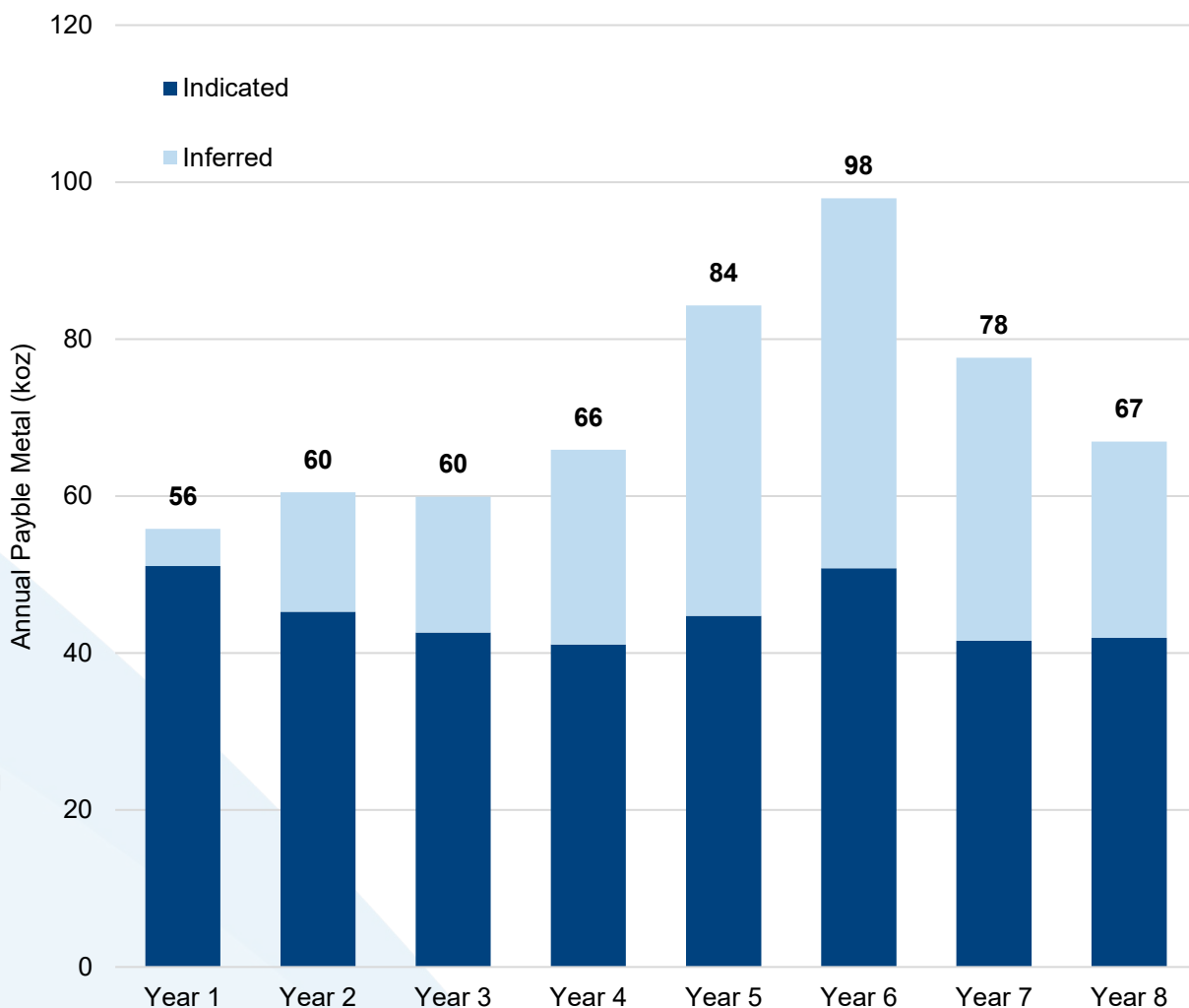


Figure 2. Annual Payable Metal Breakdown

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## Sensitivity Analysis

The Project's unleveraged and pre-tax NPV is most sensitive to changes in gold price and operating cost, while it is more resilient to changes in the discount rate and capital costs as shown in the figure below.

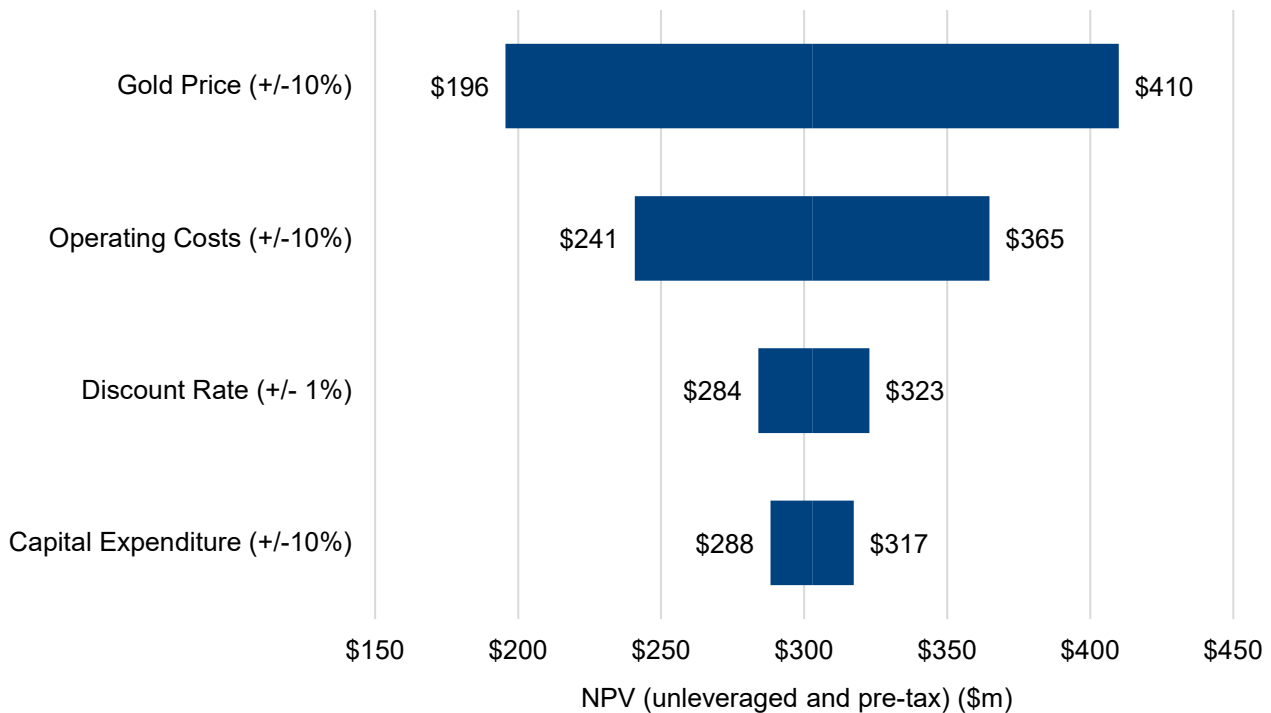


Figure 3. Project NPV Analysis

Table 3. Scenario Analysis – Gold Price Assumptions

Gold Price (A\$/oz)		\$2,000	\$2,100	\$2,200	\$2,300	\$2,400	Base Case \$2,450	\$2,500	\$2,600	\$2,700
NPV	\$m	106	150	193	237	281	303	325	368	412
IRR	%	20	26	32	37	43	45	48	54	59
Payback	years	4.9	4.6	4.0	3.7	3.2	3.0	2.8	2.5	2.3
Annual EBITDA	\$m	41	48	55	62	69	72	76	82	89
LOM EBITDA	\$m	329	384	439	494	549	577	604	659	714
LOM Free Cash Flow	\$m	171	226	281	336	391	418	446	500	555

## Project Positioning

In the current market environment, the Youanmi Scoping Study has focused on high quality outcomes at a low capital cost. The Youanmi Gold Project offers compelling advantages including:

- High grade resource. The Youanmi Gold Project has an indicated category gold resource of 1.3Moz at an average grade of 3.32g/t Au. Notably the underground resource portion of this resource (see ASX announcement 20 April 2022) is 744koz at 7.55g/t Au;
- Leveraging off existing infrastructure in place including an existing underground decline, village, tailings disposal facility, bore field, process water, airstrip and access roads;
- Significant past operating knowledge which has been used to make the Project more robust; and
- Upside in relation to near-mine resource growth and regional exploration.

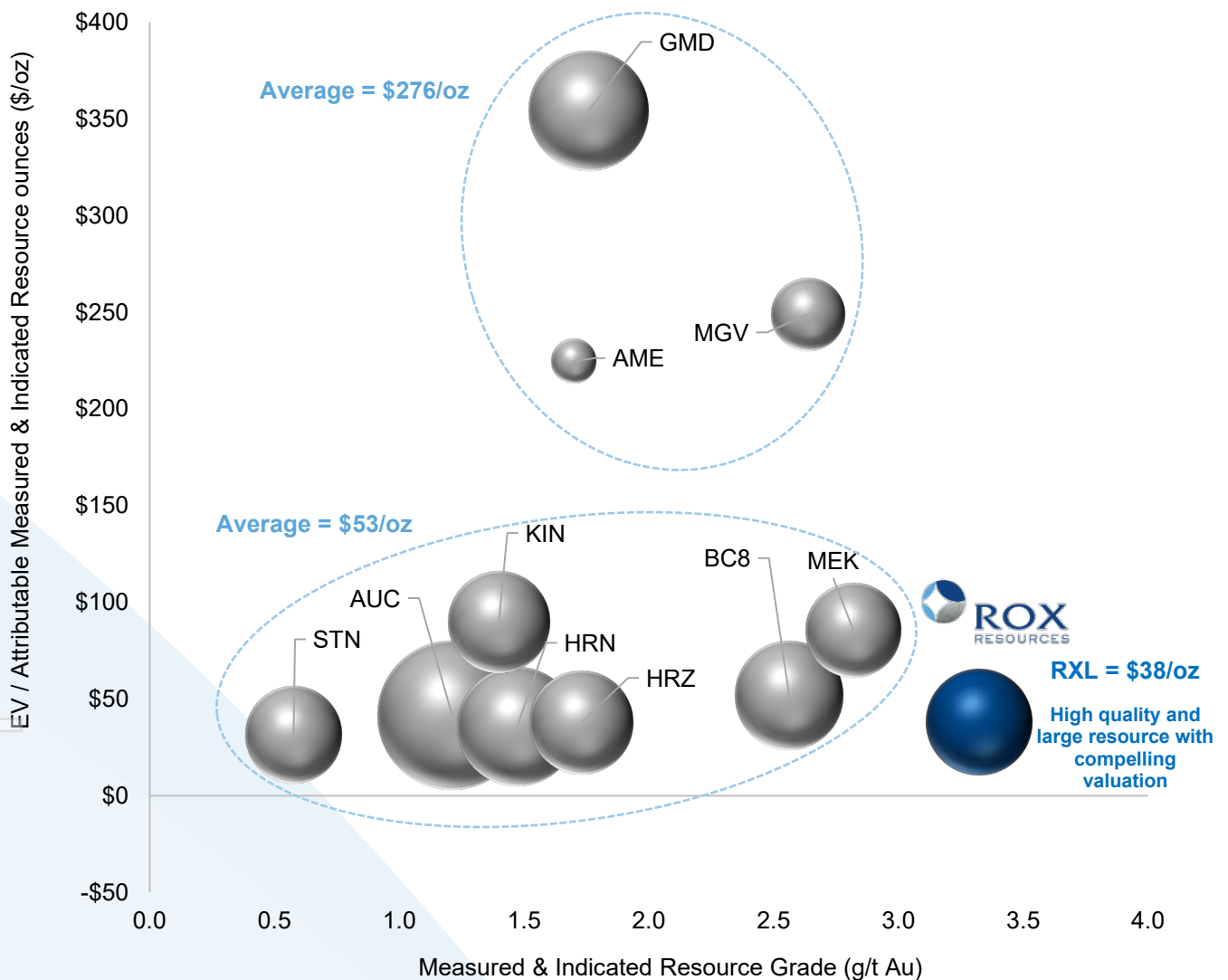


Figure 4. EV / Attributable Measured & Indicated Resource Ounces vs Grade for Comparable Gold Companies<sup>1</sup>

Notes:

1. Refer to Appendix 1 for support

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## Project Configuration

The Company studied a range of plant throughput and mining rate options including 300ktpa, 480ktpa and 1,200ktpa of material. The Company also examined different oxidation and gold liberation methods as part of optimising the processing flow sheet including ultrafine grinding, pressure oxidation and Albion. All of these methods successfully produce gold doré. The highest financial return, lowest technical risk option and the Company's base case is to use conventional processing methods.

The plant will treat 480ktpa and on average produce 78koz of gold in concentrate and doré annually.

## Capital Cost

Capital costs are derived from a number of sources including quotes and budget pricing from suppliers and estimates based on recent actual pricing from WA similar mines. They include all pre-production site, process plant, tailings dam, and mining development related including dewatering, as well as sustaining capital post production target start-up.

Table 4. Capital Cost Requirement

Pre-Production Capital		100%	RXL (70%)
Site Infrastructure	\$m	6	5
Processing Facilities	\$m	66	46
Water Management	\$m	6	4
Underground Development	\$m	19	12
Open Pit	\$m	2	2
<b>Total Pre-Production</b>	<b>\$m</b>	<b>99</b>	<b>69</b>
Sustaining Capital – Life of Mine			
Underground	\$m	38	27
Other	\$m	21	14
<b>Total</b>	<b>\$m</b>	<b>59</b>	<b>41</b>

## Operating Cost

Operating costs are derived from a number of sources including quotations and budget pricing supplied by suppliers, estimates based on similar WA mining operations, and pricing built up from processing plant suppliers scaled by accepted methods.

Table 5. Operating Costs Breakdown

Operating Costs <sup>1</sup>	\$m	\$/t Milled	\$/oz Payable
Mining	392	101	690
Processing	225	58	395
Site G&A	19	5	35
Transportation Charge	52	13	91
Smelter Treatment Charge	84	21	147
<b>C1 Cash Cost<sup>2</sup></b>	<b>772</b>	<b>198</b>	<b>1,358</b>
Royalty	46	12	81
Sustaining Capital	57	14	99
<b>All-In Sustaining Cost (AISC)<sup>3</sup></b>	<b>875</b>	<b>224</b>	<b>1,538</b>

Notes:

1. Operating costs presented in table above were calculated based on recovered gold after payability.
2. C1 cash cost includes mining, processing, administration, concentrate charges and accounting adjustments for stockpile movements.
3. All-In Sustaining Cost (AISC) per ounce payable includes C1 cash cost, royalties and sustaining capital. It does not include corporate cost, exploration cost and non-sustaining capital.

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## Funding

To achieve the range of outcomes indicated in the Scoping Study, funding in the order of \$134m will likely be required, which includes all pre-production costs of which the pre-production capital requirement is approximately \$99m. The Company has formed the view that there is a reasonable basis to believe that requisite future funding for development of the Project will be available when required. The grounds on which this reasonable basis is established include:

- The Project has strong technical and economic fundamentals which provides an attractive return on capital investment and generates robust cashflows at conservative gold prices. This provides a strong platform to source debt and equity funding.
- The Company has received significant interest from various financial institutions, credit funds and private equity firms regarding financing for the project, with preliminary discussions occurring.
- The Company has a strong track record of raising equity funds as and when required to further the exploration and evaluation of the Youanmi Gold Project.
- The Company has appointed Argonaut PCF as its corporate debt advisor in relation to the funding of the Youanmi Gold Project. Argonaut PCF have extensive experience in funding resource projects, including Western Australian gold projects.

There is, however, no certainty that the Company will be able to source funding as and when required. Typical project development financing would involve a combination of debt and equity. It is possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of the Company's existing shares.

## Conclusions and Recommendation

The Scoping Study provides justification that the Youanmi Gold Project is a commercially viable stand-alone gold mining operation and accordingly the Board of Rox Resources Limited has approved progression of the Project to a Preliminary Feasibility Study ("PFS").

PFS work will immediately commence in parallel with infill drilling at Youanmi to convert inferred resources to indicated resources, ongoing exploration and resource growth.

Authorised for release to the ASX by the Board of Rox Resources Limited.

### For more information:

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## Competent Person's Statement

### Exploration Results

The information in this release that relates to Exploration Results as those terms are defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserve", is based on information reviewed by Mr Gregor Bennett, a Competent Person who is a member of the Australian Institute of Geoscientists. Mr Bennett is a full-time employee of the Company. Mr Bennett has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Bennett consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Where reference is made to previous releases of exploration results in this announcement, the Company confirms that it is not aware of any new information or data that materially affects the information included in those announcements and all material assumptions and technical parameters underpinning the exploration results included in those announcements continue to apply and have not materially changed.

The information in this report that relates to previous Exploration Results was prepared and first disclosed under the JORC Code 2012 and has been properly and extensively cross-referenced in the text to the date of the original announcement to the ASX.

### Resource Statements

The information in this release that relates to Mineral Resources as those terms are defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserve", is based on information reviewed by Mr David Allmark, a Competent Person who is a member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Allmark is a full-time employee of the Company. Mr Allmark has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Allmark consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The Statement of Estimates of Mineral Resources for the Youanmi Near Surface Resource was reported by Rox in accordance with ASX Listing Rule 5.8 in the announcement released to the ASX on 20th April 2022. Rox confirms it is not aware of any new information or data that materially affects the information included in the previous announcements and that all material assumptions and technical parameters underpinning the estimates in the previous announcements continue to apply and have not materially changed.

The Statement of Estimates of Mineral Resources for the Youanmi Underground Resource was reported by Rox in accordance with ASX Listing Rule 5.8 in the announcement released to the ASX on 20th January 2022. Rox confirms it is not aware of any new information or data that materially affects the information included in the previous announcements and that all material assumptions and technical parameters underpinning the estimates in the previous announcements continue to apply and have not materially changed.

### Scoping Study Summary

The information in this Scoping Study release is based on information compiled by Mr Matt Antill, a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Antill is a full-time employee of the company. Mr Antill is eligible to participate in short and long term incentive plans in the Company. Mr Antill has sufficient experience in the study, development and operation of gold projects and consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## Forward-Looking Statements

Certain statements in this report relate to the future, including forward-looking statements relating to the Company's financial position, strategy and expected operating results. These forward-looking statements involve known and unknown risks, uncertainties, assumptions, and other important factors that could cause the actual results, performance or achievements of the Company to be materially different from future results, performance or achievements expressed or implied by such statements. Actual events or results may differ materially from the events or results expressed or implied in any forward-looking statement and deviations are both normal and to be expected. Other than required by law, neither the Company, their officers nor any other person gives any representation, assurance or guarantee that the occurrence of the events expressed or implied in any forward-looking statements will actually occur. You are cautioned not to place undue reliance on those statements.

### International Financial Reporting Standards

This announcement contains certain financial measures relating to the Scoping Study that are not recognised under International Financial Reporting Standards (IFRS). Although the Company believes these measures provide useful information about the financial forecasts derived from the Scoping Study, they should not be considered in isolation or as a substitute for measures of performance or cash flow prepared in accordance with IFRS. As these measures are not based on IFRS, they do not have standardised definitions and the way the Company calculates these measures may not be comparable to similarly titled measures used by other companies. Consequently, undue reliance should not be placed on these measures.

### Reasonable Basis for Forward-Looking Statements

No Ore Reserve has been declared. This ASX release has been prepared in compliance with the JORC Code (2012) and the ASX Listing Rules. All material assumptions on which the Scoping Study production target and projected financial information are based have been included in this release and disclosed in the table below.

Consideration of Modifying Factors in the format specified by JORC Code (2012) Section 4.

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## Appendix 1

Companies selected are considered comparable to Rox Resources as they are in exploration and/or study phase

Ticker	Name	Ownership	Development Stage	Measured Resource – 100%			Indicated Resources – 100%			Inferred Resources – 100%			Total Resources – 100%			M&I Resources			Attributable		Source
				Tonnage (Mt)	Grade (g/t Au)	Contained Gold (koz)	Tonnage (Mt)	Grade (g/t Au)	Contained Gold (koz)	Tonnage (Mt)	Grade (g/t Au)	Contained Gold (koz)	Tonnage (Mt)	Grade (g/t Au)	Contained Gold (koz)	Tonnage (Mt)	Grade (g/t Au)	Contained Gold (koz)	M&I (koz)	EV/M&I oz (\$/oz)	
MGV	Musgrave Minerals Ltd	100%	Pre-feasibility Study				5.1	2.6	435	7.2	2.1	492	12.3	2.3	927	5.1	2.6	435	435	249	Annual Report 2022 - ASX Announcement on 07/10/2022
GMD	Genesis Minerals Ltd	100%	Resource	0.8	5.3	135	19.7	1.6	1,025	18.8	1.4	857	39.3	1.6	2,017	20.5	1.8	1,160	1,160	354	Perfectly Positioned Corporate Presentation - ASX Announcement on 10/10/2022
AUC	Ausgold Ltd	100%	Definitive Feasibility Study	19.0	1.3	800	26.8	1.1	984	9.5	1.0	370	56.0	1.2	2,160	45.8	1.2	1,784	1,784	42	Sydney Mining Club Presentation - ASX Announcement on 06/10/2022
AME	Alto Metals Ltd	100%	Resource				3.0	1.7	159	9.4	1.6	476	12.4	1.6	635	3.0	1.7	159	159	225	Annual Report 2022 - ASX Announcement on 30/09/2022
KIN	Kin Mining NL	100%	Definitive Feasibility Study	0.8	1.3	31	17.8	1.4	803	15.9	1.1	573	34.5	1.3	1,407	18.6	1.4	834	834	90	Investor Update - ASX Announcement on 14/10/2022
HRZ	Horizon Minerals Ltd	100%	Pre-feasibility Study	1.5	1.3	63	13.9	1.8	791	7.5	1.7	386	22.6	1.7	1,240	15.4	1.7	854	854	38	Gold Resources Increase to 1.24Moz - ASX Announcement on 28/09/2022
BC8	Black Cat Syndicate Ltd	100%	Definitive Feasibility Study	0.4	5.6	66	11.1	2.5	881	13.0	2.5	1,055	24.5	2.5	2,000	11.5	2.6	947	947	52	New Coyote Geological Model Driving High-Grade Success - ASX Announcement on 10/10/2022
STN	Saturn Metals Ltd	100%	Pre-feasibility Study				41.0	0.6	760	35.0	0.6	710	76.0	0.6	1,469	41.0	0.6	760	760	32	Investor Presentation Gold Forum Americas - ASX Announcement on 21/09/2022
MEK	Meeka Gold Ltd	100%	Pre-feasibility Study	0.2	11.4	55	7.9	2.7	670	5.2	2.4	390	13.1	2.6	1,115	8.0	2.8	725	725	86	Drilling and Pre-Feasibility Study Update - ASX Announcement on 30/09/2022
HRN	Horizon Gold Ltd	100%	Resource				24.3	1.5	1,149	12.5	1.6	644	36.8	1.5	1,794	24.3	1.5	1,149	1,149	36	High Grades and Wide Gold Intercepts Returned from RC Drilling - ASX Announcement on 19/09/2022
RXL	Rox Resources Ltd	70%	Scoping Study				12.1	3.3	1,296	15.8	3.8	1,903	27.9	3.6	3,199	12.1	3.3	1,296	907	38	Annual Report 2022 - ASX Announcement on 28/09/2022

Notes:

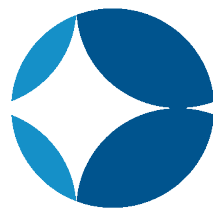
- M&I means Measured and Indicated Resource. Attributable figures have been calculated by multiplying the total input with the project ownership percentage.

Other inputs	Input date	Source
Cash and cash equivalents balances	30 June 2022	Appendix 5B Cash Flow Report – Quarter Ended 30 June 2022
Market capitalisation	17 October 2022	Australian Stock Exchange

### ROX RESOURCES LIMITED

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**ROX**  
RESOURCES

October 2022  
**Executive  
Summary**

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**SCOPING STUDY**

**YOUANMI**

**GOLD PROJECT**

## Executive Summary Table of Contents

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## Introduction

The Youanmi Project is situated approximately 480km to the northeast of Perth and is around 400km inland from Geraldton and lies within the East Murchison Mineral Field of Western Australia. Road access to the Project is around 140km along the Paynes Find Sandstone Road. Paynes Find is 480km from Perth on the sealed Great Northern Highway. The Project has an operating airstrip located on site with flight time from Perth around 90 minutes for most aircraft.

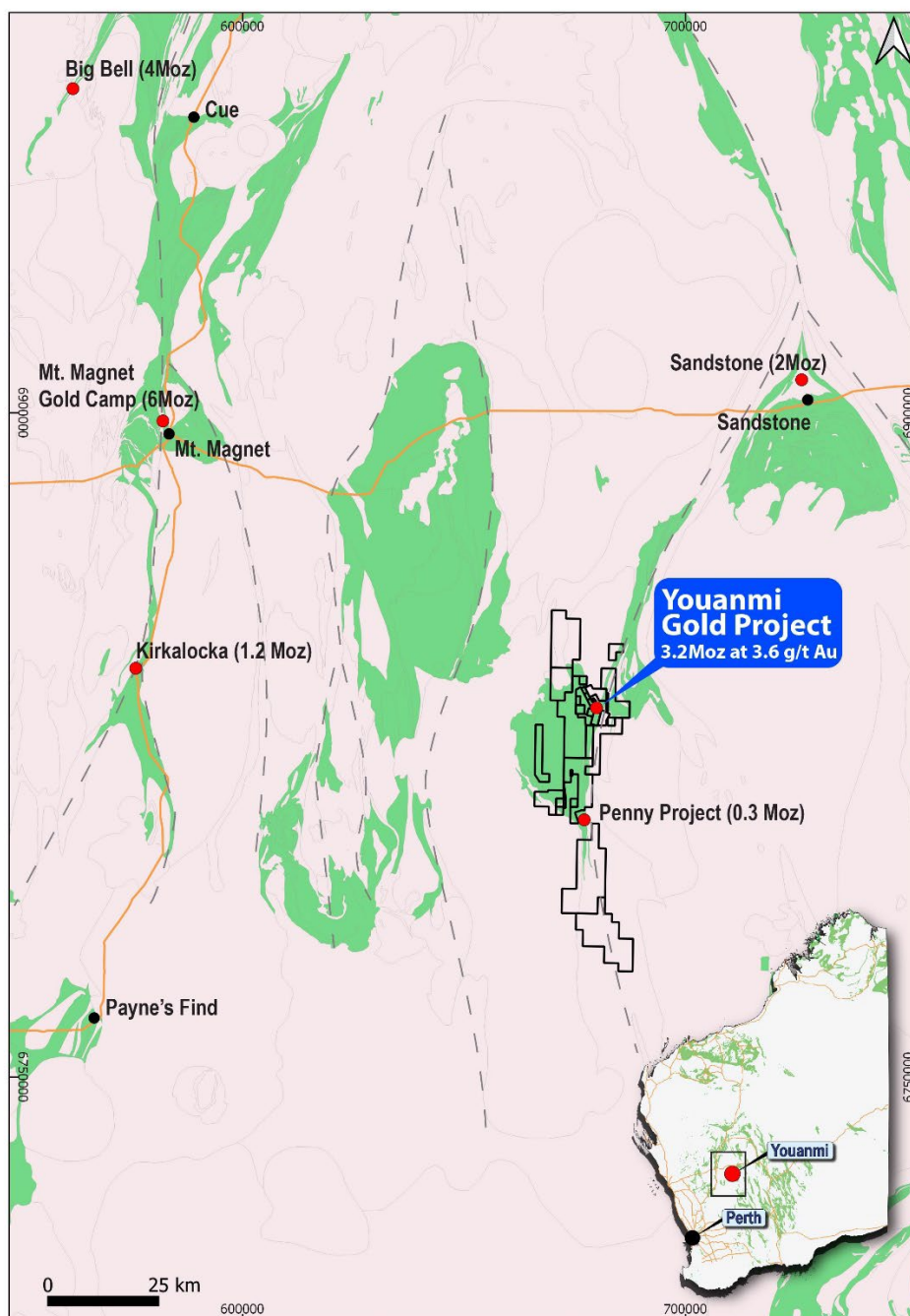


Figure 1. Youanmi Gold Project Location Plan

The Youanmi Gold Project consists of four joint ventures with Venus Metals Corporation Limited (VMC) and tenements 100% owned by Rox Resources Limited (“Rox” or the “Company”). The joint ventures are:

- OYG JV (Rox 70% all minerals) - covers 65km<sup>2</sup>, is circa 10km x 7km wide, and surrounds the Youanmi Gold Mine and nearby extensions
- Currans Find JV (Rox 45%, all minerals) – covers 4km<sup>2</sup>
- VMC JV (Rox 50% gold rights) - covers 302km<sup>2</sup>
- Youanmi JV (Rox 45% gold rights) - covers 270km<sup>2</sup>

The Youanmi Project Scoping Study focuses on extraction of mineral resources located within the OYG JV Tenements which comprise of 11 granted Mining Leases that form combined reporting group C96/1999.

The Company has considered various options to develop the Project including producing only concentrates, building an Albion Process™ to produce bullion on site, or various combinations.

The Company has determined that a combination of gold-in-concentrate and carbon-in-leach (CIL) bullion production target is the optimum commercialisation strategy for Youanmi. This option provides a shorter pre-production period, lower capital requirement and shorter payback period, lowering the risks of the Project. The financial model of the Project was completed on 100% basis and was built on this option using the following key assumptions:

Table 1. Key Physicals Assumptions

Assumptions		
Life Of Mine	years	8.0
Plant Throughput	ktpa	480
<b>Combined Mine Production Target</b>		
Production Target Material Mined	kt	3,972
Au Grade	kt	4.9
Au Ounces Contained	kt	627
<b>Total Open Pit Mine Production Target</b>		
Production Target Material Mined	kt	331
Au Grade	g/t	3.3
Au Ounces Contained	koz	35
<b>Total Underground Mine Production Target</b>		
Lateral Development	metres	40,335
Production Target Material Mined	kt	3,641
Au Grade	g/t	5.1
Au Ounces Contained	koz	592
<b>Processing Physicals</b>		
Material Processed	kt	3,900
Au Grade	g/t	5.0
Ounces Contained	koz	624
Payable Metal <sup>1</sup>	koz	569
Gold-in-concentrate	koz	510
Gold bullion	koz	59

Notes: 1. Payable metal is recovered gold after payability

## Study Team

The Scoping Study was compiled by the Company with technical input and reviewed by a range of independent experts.

Table 2. Study Team and Independent Experts

Area	Completed by
<b>Geology</b>	
Resource Model - Near Surface	Lynn Widenbar and Associates
Resource Model - Underground	In House
Resource Model - Underground Review	CSA Global
Drillhole Database Management	Geobase
Structural Review	Model Earth
<b>Mining Technical</b>	
Geotechnical Engineering - Open Pit	PGM Geotechnical
Geotechnical Engineering - Underground	Turner Mining and Geotechnical
Surface Hydrology	Rockwater
Hydrogeology	Rockwater
Mine Dewatering	In House
Open Pit Optimisations - Whittle	SRK Consulting
Underground Slope Optimisations - MSO Deswik	In House
Underground Slope Optimisations - Review	SRK Consulting
Open Pit Designs	APEG Mining
Underground Designs (SURPAC / DESWIK)	In House
Primary Ventilation Simulation (VENTSIM)	In House
Open Pit Schedules (Excel)	In House
Underground Mining Schedules (DESWIK)	In House
<b>Metallurgy and Processing</b>	
Grace Open Pit Metallurgical Testwork	IMO
Underground Metallurgical Testwork Management	OMC
Underground Metallurgical Testwork POX / UFG	ALS
Underground Metallurgical Testwork Albion Process	Core Technologies
Process Plant Design (POX, Albion, UFG)	Como Engineers
<b>Cost Modelling</b>	
Power Supply Costing	KPS
Processing 300 ktpa Plant – Capital and Operating Costs	Como Engineers
Processing Scaled to 480 ktpa Plant - Capital and Operating Costs	Maca Interquip
TSF Capital Cost	In House
RO Plant	Novatron
Other Site Infrastructure	In House
Mining Open Pit and Underground	In House
Site Administration	In House
Village Expansion Capital	Grounded
Village Services	Northern Rise
Charter Flights	Skipper Aviation
Lake Noondie Pipeline	PPS
<b>Heritage and Environment</b>	
Permitting and Compliance Status	Ecospine
Oversee Flora Fauna and Heritage Planning	Clark Lindbeck
Flora - Main Site and Lake Noondie	Native Vegetation Solutions
Flora - Downstream of Evaporation Ponds	Terratree
Fauna	Western Ecological
Heritage - Site	AHA Logic
Heritage - Lake Noondie and Pipeline Access	Terra Rosa
ESG Strategy Support	ESG Capital
Grace Stage 1 – Waste Rock Characterisation	Mine Earth

## Property Description and Ownership

The Youanmi Mine Site is located around 140km east of Payne’s Find via unsealed road in well maintained condition. The Near Surface Resource, and Underground Resource for which this Scoping Study contemplates mining portions of, are located mainly within the “OYG Tenements” which refers to 11 mining tenements which are subject to the conditions of the OYG Joint Venture Agreement (Rox Resources 70%, Venus Metals 30%).

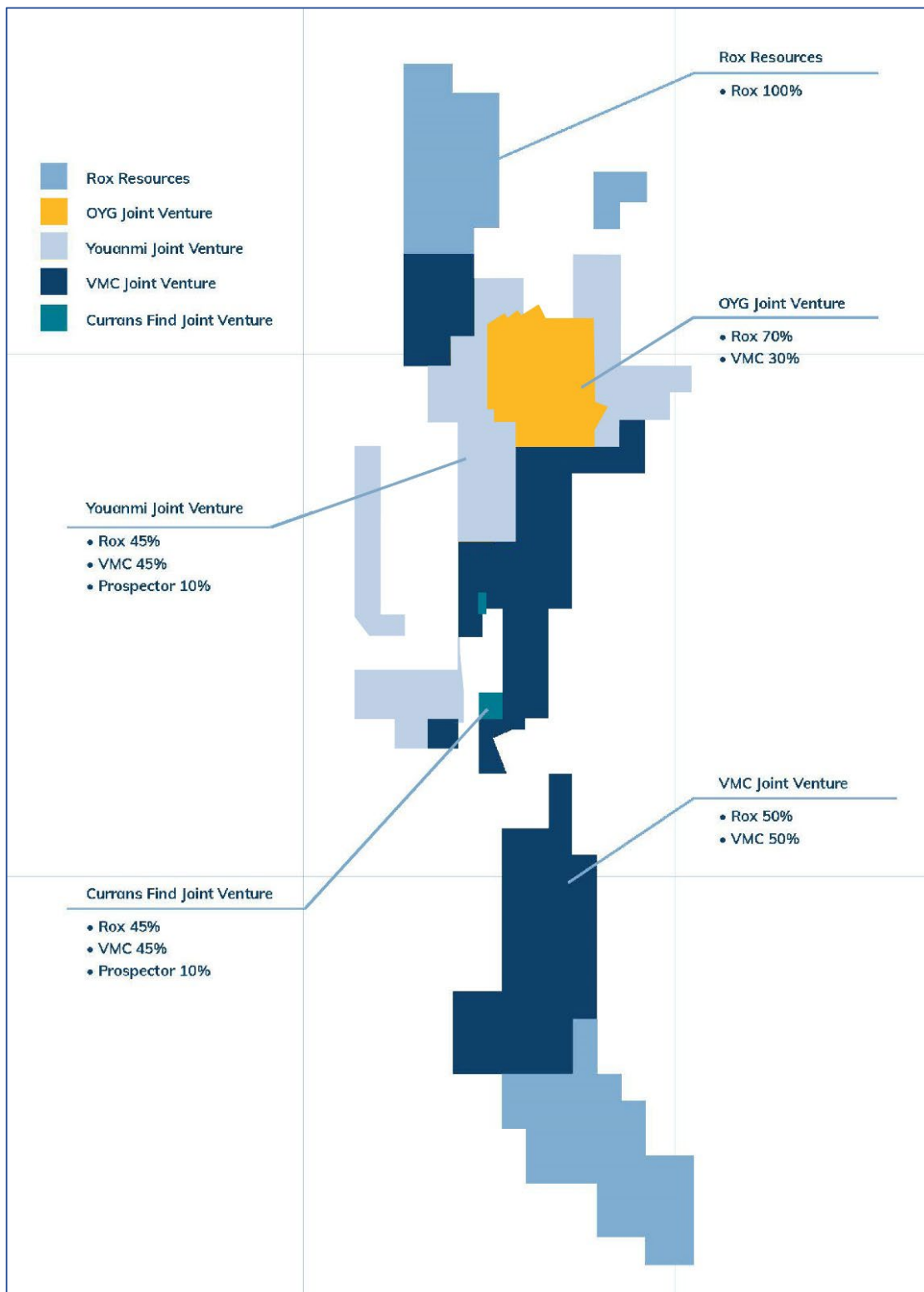


Figure 2. Tenement Plan

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## Geology and Mineral Resource

The Youanmi Gold Deposit is located in the central part of the Youanmi Greenstone Belt, which is situated in the Southern Cross Province of the Archaean Yilgarn Craton in Western Australia.

The greenstone belt is about 80km long and 25km wide and incorporates the Youanmi Shear Zone, a NE-trending major crustal-scale structure and most likely source of hydrothermal fluids through the region.

The geology of the Mine Area consists of a north to north-northwest trending greenstone succession comprising strongly magnetic tholeiitic basalt, sheared basalt, banded iron formation and mafic schist. The greenstone succession is bounded to the east by an adamellite batholith, called the Youanmi Granite.

Gold mineralisation is hosted in both the Mine Lode Shear Zone, a 1m to 25m-wide shear zone that has been traced along strike for over 2,300m and down-dip for 1,100m, and a series of footwall and hanging-wall shear zones.

Gold mineralisation at Youanmi primarily takes the form of sulphide replacement styles where extensive replacement of magnetite in the host sequence has occurred.

Sulphide replaced shear zones are structurally controlled and favour a position at or around the greenstone-granite contact. The greenstone-granite contact has variable dips of between -50° to -70°W and strikes at 330°

Gold is intimately associated with sulphide minerals and silicates in zones of strong hydrothermal alteration and structural deformation. Typical Youanmi lode material consists of a sericite-carbonate-quartz-pyrite-arsenopyrite schist or mylonite which frequently contains significant concentrations of gold, commonly as fine, free gold particles in the silicates, occluded in sulphide minerals and in solid solution in arsenopyrite. The lodes contain between 10% and 25% sulphide, the principal species being pyrite (10% to 20%) and arsenopyrite (1% to 5%).

Granite hosted gold mineralisation occurs at several sites, most notably Grace and the Plant Zone Prospects. Gold mineralisation is hosted in strong sericite altered granite, shear veins and quartz breccia-style veins.

The mineral resource has been estimated in two parts being:

- 1) Near Surface Resource has been estimated by external independent consultant Widenbar and Associates, April 2021 – 18.0Mt at 1.7g/t Au for 1.0Moz Au (refer ASX announcement 20<sup>th</sup> April 2022); and
- 2) Youanmi Underground Resource has been estimated in house by Rox's Principle Resource Geologist and audited by independent third party consultant CSA Global, January 2022 – 9.9Mt at 6.9g/t Au for 2.2Moz Au (refer ASX announcement 20<sup>th</sup> January 2022).

Notably since 2019, Rox has completed extensive drilling programs which have contributed to tripling the mineral resource from around 1Moz to 3Moz of contained Au metal. This Scoping Study is based on extracting a significant portion of the Youanmi Underground Resource, as well as a minor portion of the Near Surface Resource mineralisation contained within four high grade pits containing 96% indicated resource.

Table 3. Youanmi Mineral Resource Estimate

Area	Classification	Cut-off	April 2022 Resource		
			Tonnes (dmt)	Au Grade (g/t)	Au Metal (oz)
Near Surface	Indicated	0.5g/t <sup>2</sup>	9,070,000	1.89	552,000
Underground	Indicated	3.0g/t <sup>1</sup>	3,060,000	7.55	744,000
<b>SubTotal</b>	<b>Indicated</b>		<b>12,130,000</b>	<b>3.32</b>	<b>1,296,000</b>
Near Surface	Inferred	0.5g/t <sup>2</sup>	8,930,000	1.58	453,000
Underground	Inferred	3.0g/t <sup>1</sup>	6,840,000	6.59	1,450,000
<b>SubTotal</b>	<b>Inferred</b>		<b>15,770,000</b>	<b>3.75</b>	<b>1,903,000</b>
Near Surface	Ind + Inf	0.5g/t <sup>2</sup>	18,000,000	1.74	1,004,000
Underground	Ind + Inf	3.0g/t <sup>1</sup>	9,900,000	6.89	2,194,000
<b>Near Surface + Underground</b>	<b>Ind + Inf</b>		<b>27,900,000</b>	<b>3.57</b>	<b>3,199,000</b>

Notes:

1. Underground Resource last updated in January 2022
2. Grace 1.5g/t Au Cut-Off

## Geotechnical and Groundwater

### Underground Geotechnical

Turner Mining & Geotechnical was engaged to complete a geotechnical review for the underground mine design. The review was completed to PFS level for the deep portion of the underground mine, and to a Scoping Study level for the shallower portions of the underground mine, where future work will have more data provided.

Table 4. Youanmi Underground Design – Geotechnical Comments Summary

Item	Summary Comments
Main Tasks Completed	<ul style="list-style-type: none"> <li>• Calculated rock mass quality in terms of RQD and Q;</li> <li>• Calculated critical stoping span limits, and unsupported span requirements; and</li> <li>• Review of underground development designs provided, and, information below was taken directly from Mike's executive summary section of his work.</li> </ul>
Comments on Data	<ul style="list-style-type: none"> <li>• Good coverage for the deep section;</li> <li>• Very limited elsewhere;</li> <li>• Quality of logging good; and</li> <li>• Additional geotechnical logging of core from diamond drillholes for rest of mineral deposit required (minimum RQD).</li> </ul>
Rock Mass Strength	<ul style="list-style-type: none"> <li>• Consistently Fair across all domains;</li> <li>• Hangingwall (10m) = Fair with a typical Q value of 7.2 (Q = 14.4 above 600m depth);</li> <li>• Mineral Deposit = Fair with a typical Q value of 7.3; and</li> <li>• Footwall (50m) = Fair with a typical Q value of 7.5.</li> </ul>



Item	Summary Comments
Critical stope spans	<ul style="list-style-type: none"> <li>70m open strike length for 15/20m sublevel intervals above 600mbs;</li> <li>20m for 100m multi-level above 600mbs (staggered pillars on each level); and</li> <li>30m open strike length for 15/20m sublevel intervals below 600mbs.</li> </ul>
Stope dilution	<ul style="list-style-type: none"> <li>0.2m (drillhole deviation) to 0.5m hangingwall; and</li> <li>0.2m footwall (drillhole deviation).</li> </ul>
Ground support	<ul style="list-style-type: none"> <li>Standard 2.4m split sets and weldmesh down to 600mbs;</li> <li>600 to 800mbs split sets and mesh with 50% dynamic support;</li> <li>Below 800mbs = dynamic support; and</li> <li>Cable bolts for all intersections.</li> </ul>
Comments on Mine Design	<ul style="list-style-type: none"> <li>Footwall access designs good;</li> <li>End access for deeps ok;</li> <li>Stand-off distances ok;</li> <li>Sub-level interval good for stability;</li> <li>Potential for strike drives to undercut hangingwall;</li> <li>Pits and portals not evaluated;</li> <li>Extraction sequence not covered;</li> <li>Pillars required to limit open vertical height to 100m;</li> <li>Island pillars required to control overall spans; and</li> <li>Fill study required.</li> </ul>

### Open Pit Geotechnical

PGM Geotechnical was engaged in 2021 to provide Rox with Grace Stage 1 Open Pit geotechnical recommendations. As part of this work the following was completed; logging on Rox drillholes, mapping of exposures in the adjoining Mine Pit batters, and review of historical drillholes. Overall slope angle recommendations were very conservative in the absence of apparent cohesion test work, therefore further work was programmed in to quantify the apparent cohesions in order to justify more conventional batter and overall slope angles.

In the interim geotechnical design parameters for the four open pit designs were adopted as per below, noting that the existing batters from mining the same areas remain in reasonable condition 30 years later.

- Bench Height– 20m
- Batter Angles – Oxide 55 degrees, Transition 60 degrees, Fresh 70 degrees
- Berm Width – 4m
- Ramp width – 12m
- Pit Base Minimum Width – 10m
- Cutback Minimum Mining Width – 10m to 15m
- Resulting Overall Slope Angles – 40 to 45 degrees

Future studies will incorporate results geotechnical drilling for all pit development areas.

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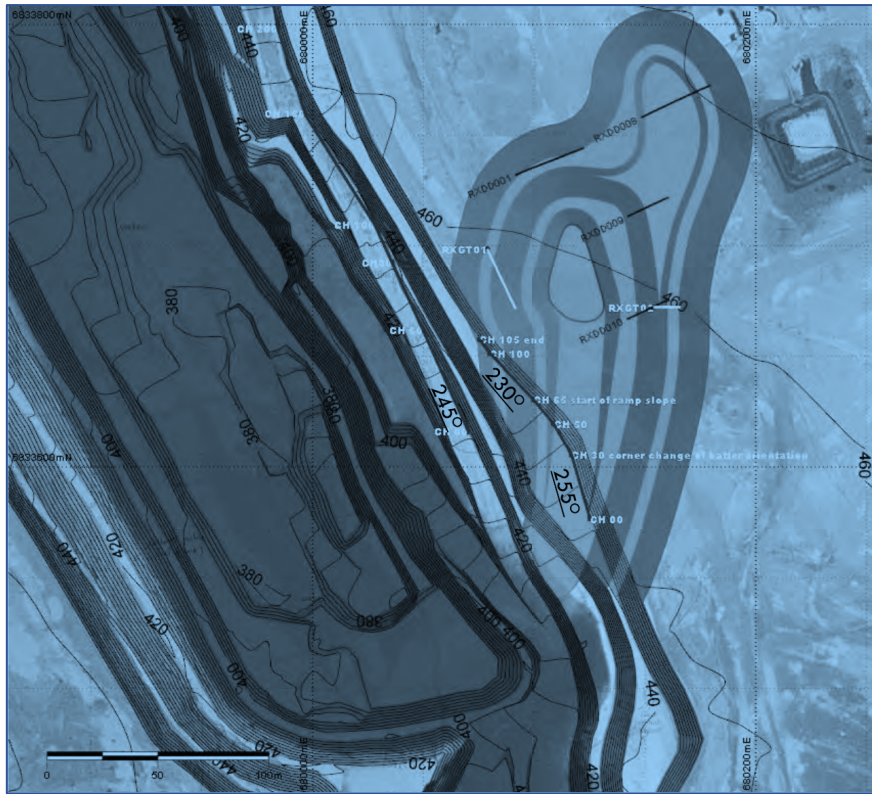


Figure 3. Geotechnical Borehole Locations for Grace Stage 1 Pit

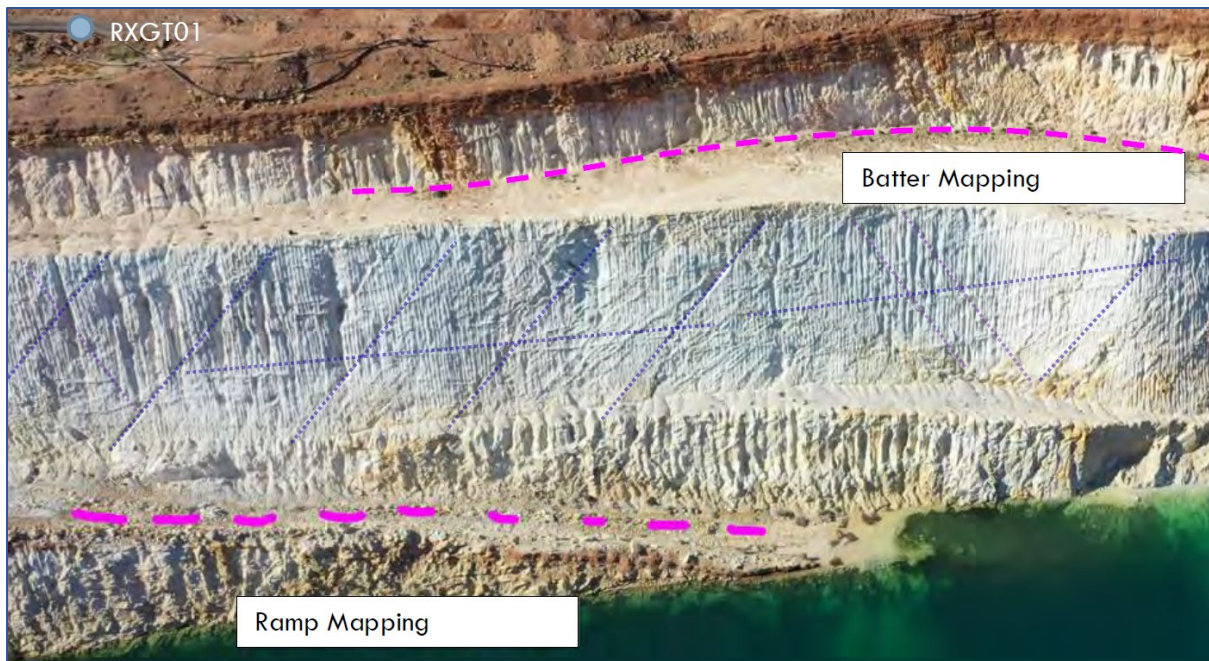


Figure 4. View of Existing 65 Degree Batters Adjacent to Grace Stage 1 – Good Condition After 30 Years

## Hydrology and Hydrogeology

Rockwater was engaged to complete a hydrological (surface water) assessment and hydrogeological (groundwater) assessment for the Project to scoping level.

The surface water assessment focused on the planned mining and infrastructure areas to estimate the bunding and or drains required to protect the pits and infrastructure from flooding.

The groundwater assessment estimated expected inflows for mine dewatering requirements for both the Open Pits, and Underground Mine Designs. For the open pits no large inflows are expected except for the Mine Pit which requires dewatering to commence 12 months prior to month 1 using two 90kW electric submersible pumps.

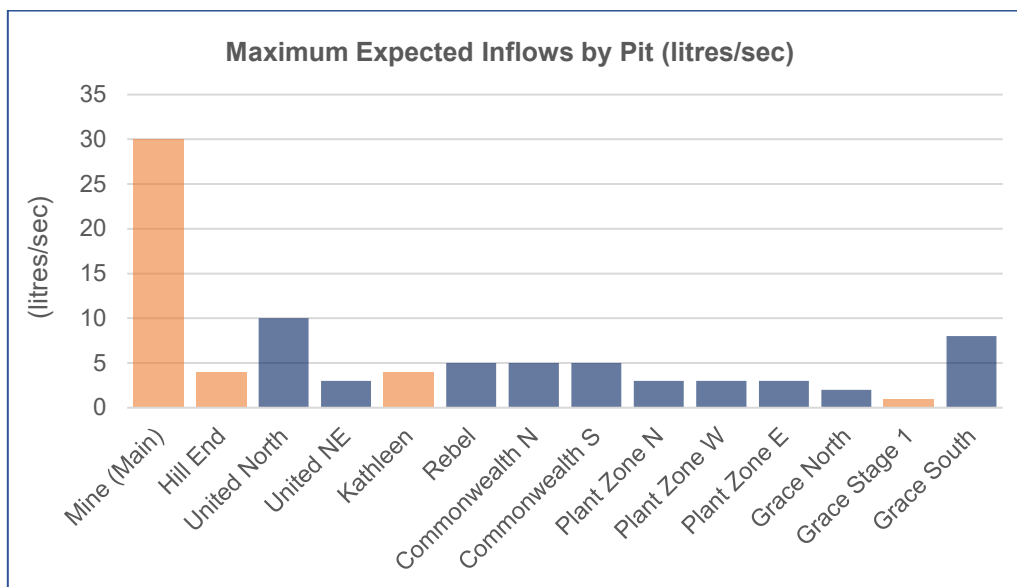


Figure 5. Open Pit Water Inflow Estimates Charted (Scoping Study Pits Highlighted)

Comprehensive data from 1990s actual dewatering records provide a high level of confidence around expected inflows for underground mining, which stabilised at around 40 litres per second of which around 30 litres per second was hypersaline water from the deep part of the mine. The Scoping Study allows for around 50 litres per second of evaporation power refurbishing and using the existing evaporation ponds.

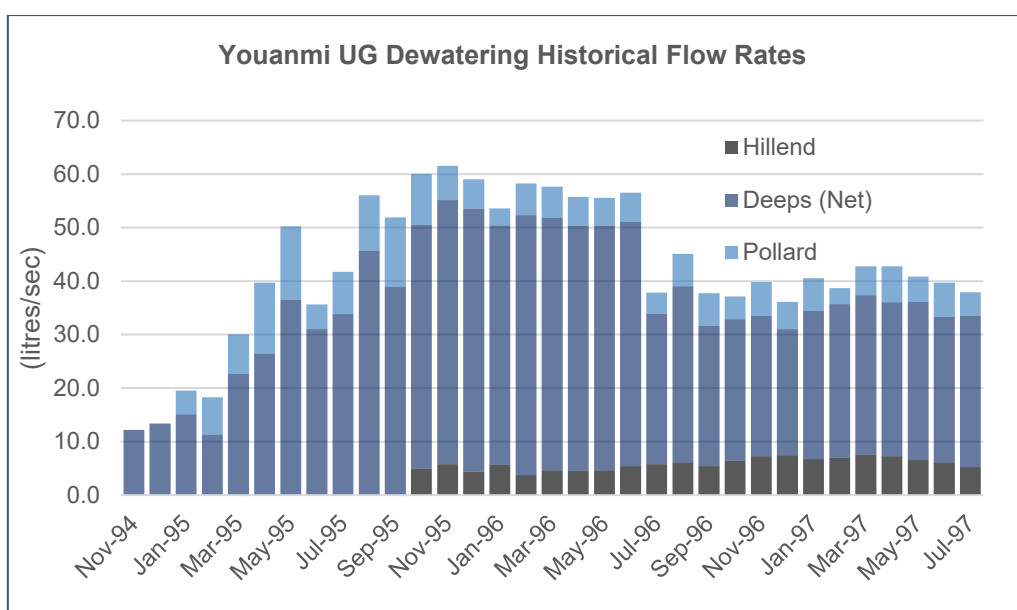


Figure 6. Historical Pumping Flowrates - Monthly Averages (Deeps Hypersaline)

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Rox has modelled dewatering of the Mine Pit and Underground, noting that 12 months lead time of dewatering is required to access the portal for refurbishment and rehabilitation of the existing decline, and a further 10 months of dewatering to completely dewater the mine ahead of the rehabilitation jumbo which has allowed for 12 months of rehabilitation in the mining schedule.

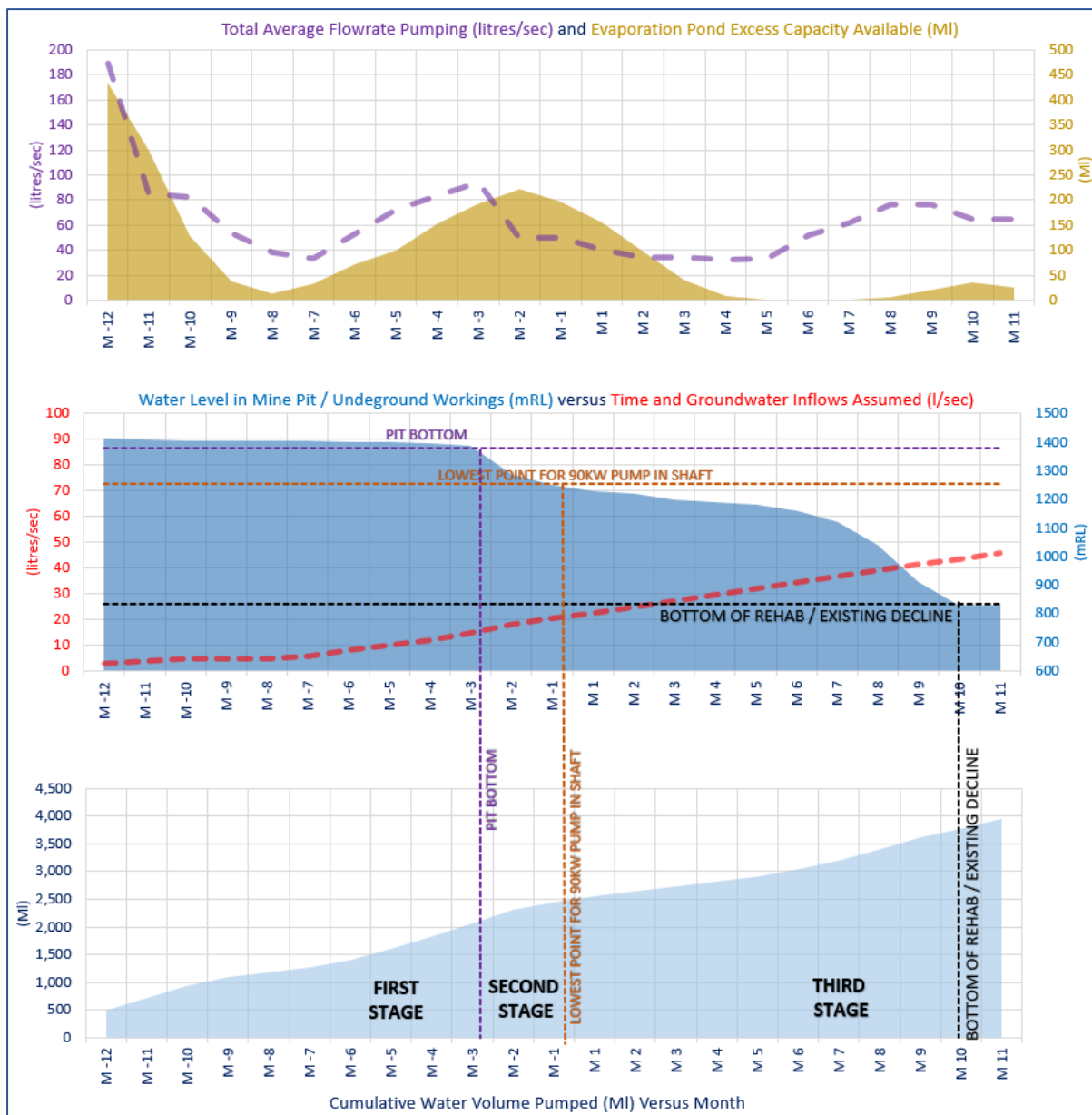


Figure 7. Mine Pit and Underground Dewatering Model Results Charted

As a contingency it was identified that dewatering to Lake Noondie could be undertaken should there be unplanned excessive water encountered in the Underground Mine (approvals process pending).

## Mine Design and Schedule

### Mining Strategy

The Company strategy is focussed on developing the high-grade Youanmi Underground as well as pursuing any beneficial open pit mining opportunities and treating on site through a newly constructed processing plant in order to produce both gold bullion and a saleable gold concentrate. The processing plant selected is matched to the Youanmi Underground production target rates and material type (sulphide production material), and also has the ability to treat any open pit oxide and transition production materials. As such the mining schedule is centred around the Underground Mine achieving a production target rate of around 40,000 tonnes per month, as well as a focus on supplying in the early years a high percentage of material from the indicated classification. As part of this strategy the higher-grade parts of the Open Pit material which is 96% indicated classification is treated first.

The strategy embraces keeping project capital costs to a minimum while achieving robust financial outcomes. The underground mining strategy also aims to develop and produce indicated material early where practically achievable in order to reduce the overall resource risk profile in the early years and to help identify the most practical infill drilling targets for which results may support further study work.

### Mining Production Target Estimate

The production target totals 627koz of gold of which around 35koz of gold is from Open Pit production via the mining of four small first or second stage open pit cutbacks in the Kathleen, Hill End, Grace, and Pollard areas. The remaining 592koz of gold metal is from underground mining of the Youanmi Underground Mineral Resource.

Table 5. Youanmi Scoping Study Mining Production Target

Source	Tonnes (Mt)	Au Grade (g/t)	Au Metal (koz)	Inferred (%)
Open Pits	0.3	3.3	35	4
Underground	3.6	5.1	592	39
<b>Total</b>	<b>4.0</b>	<b>4.9</b>	<b>627</b>	<b>37</b>

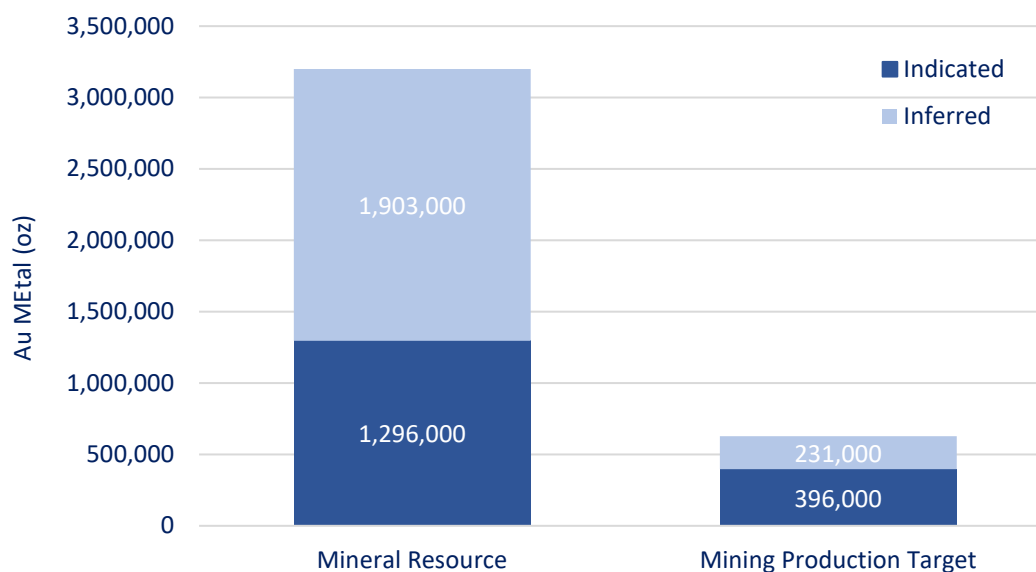


Figure 8. Youanmi Mineral Resource and Scoping Study Mining Production Target

## Underground Stope Optimisation

The Underground Mining production targets were estimated using DESWIK software stope optimisation processes, incorporating minimum mining with of 2.5m with 3.0m wide by 3.0m high strike drives, stope dimensions of nominally 20m long by 15m high, hangingwall dilution of 0.3m, and footwall dilution of 0.2m, with a blanket 85% mining recovery applied to all production target material not including planned geotechnical sill pillars. In the upper levels to around 200m below surface no sill pillars are left. Sill pillars are designed in the intermediate levels from around 200m to 520m below surface and are 5m in the vertical dimension. In the lower levels below 540m below surface a paste filling method is used enabling 100% extraction by taking the last remaining stope levels in a 3 level panel from atop the paste fill. Stope shapes that were too close to existing openings and or too isolated from other stope shapes were removed from the results. Strike drive development is of dimensions 3m wide by 3m high were designed with assumed 100% mining recovery and 10% mining dilution. The stope shapes using have the strike drive shapes removed from their shapes to complete the process before volumes were cut from the resource model blocks in readiness for the scheduling process.

Table 6. Youanmi Scoping Study Underground Production Targets by Area and Type

Area / Type	Tonnes (t)	Au Grade (g/t)	Au Metal (oz)
<b>Hillend</b>			
Development Production	146,000	2.5	12,000
Stope Production	993,000	3.9	125,000
<b>Mine Lode</b>			
Development Production	434,000	5.3	74,000
Stope Production	2,068,000	5.7	381,000
<b>Grand Total Production</b>	<b>3,641,000</b>	<b>5.1</b>	<b>592,000</b>

Parts of the Underground Production Target located in the area of the Near-Surface Mineral Resource, particularly at the northern part of the Project near the Hill End open pit. Underground, optimised stopes have been determined for these areas which form part of the underground Production Target however have not been reported as part of the Underground Mineral Resource. The Mineral Resource reporting will be updated with the next update of the underground resource model so that these areas which are currently outside the Underground Mineral Resource are included and reported within the updated Underground Mineral Resource.

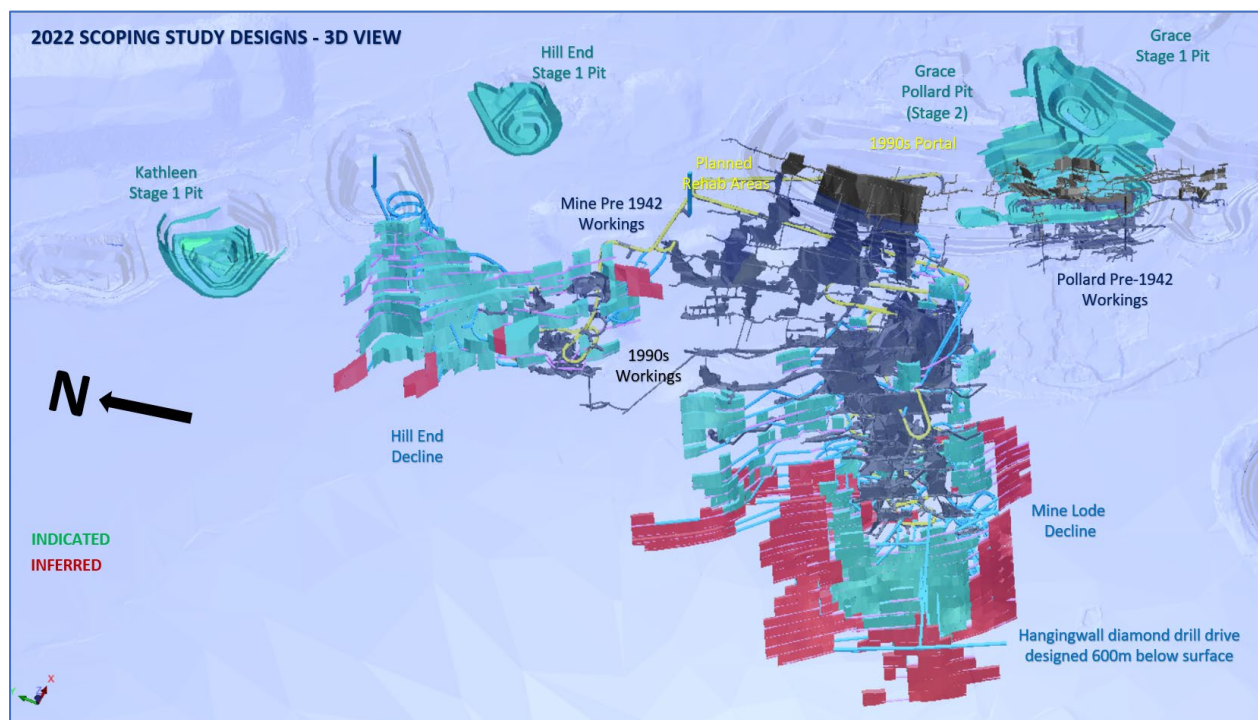


Figure 9. 3D View of Underground Design and Production Target Development and Stopes

## Open Pit Optimisation

Several Open Pit optimization scenarios were run with varying processing costs, (both in house using DESWIK, and through SRK Consulting using Whittle). For the Scoping Study only four small pit designs were included. Despite a range of much larger economically less viable pit designs being available, these were not included in the Scoping Study in order to align with the Company's strategy of keeping project capital costs to a minimum while achieving acceptable financial outcomes. The selection took into account taking the highest Au grade, lowest stripping ratio, and favoured higher ratio of indicated material contained within the designs. On this basis four of the "best" small pits were selected for inclusion in the Scoping Study based on grade and stripping ratio containing a total of 35koz of gold.

The Open Pit Production Targets were based on applying mining dilution and production material loss factors to the Near Surface Resource Model encapsulated within the selected pit designs using a cut-off grade of 0.5g/t Au for Low Grade (LG) material and 1.2g/t Au for High Grade (HG) material. For Grace Stage 1 and Grace Pollard Stage 2, a very conservative 30% mining dilution was applied to account for the spotty nature of mineralisation in this area along with mining recovery of 95% or production material loss of 5%. For the other two pits Kathleen and Hill End, a mining dilution factor of 15% and mining recovery factor of 95% was applied.

Total volumes for the Open Pits were reported using SURPAC software by intersecting the design pits with the recently acquired Lidar terrain model combined with original final pit survey as-builts presently underwater.

Total Production Target for the Scoping Study of 4.0Mt at a grade of 4.9g/t Au for 627koz Au was defined by applying the processes described above.

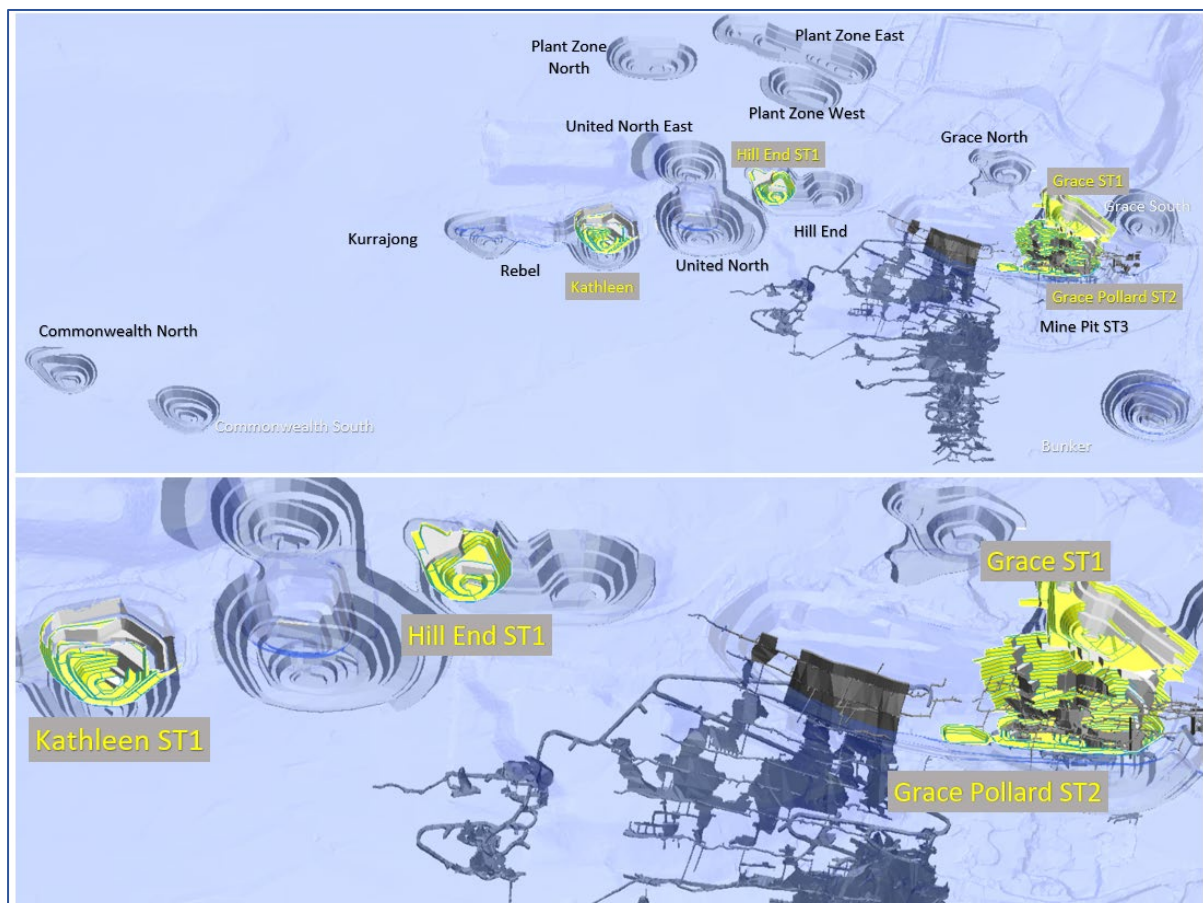


Figure 10. All Open Pit Designs Considered and those Included in Scoping Study Highlighted Yellow

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Table 7. Open Pit Mining Production Target Summary by Pit – Included in the Scoping Study

Pit	Total BCMs (bcm)	Specific Gravity (t/m <sup>3</sup> )	Total Tonnes (t)	Waste Tonnes (t)	Strip Ratio (W:O)	Indicated + Inferred			Indicated			Inferred		
						Total Tonnes (t)	Au Grade (g/t)	Au Metal (oz)	Total Tonnes (t)	Au Grade (g/t)	Au Metal (oz)	Tonnes (t)	Au Grade (g/t)	Au Metal (oz)
Grace Stage 1	531,000	2.3	1,231,000	1,161,000	17	70,000	3.3	7,000	69,000	3.4	7,000	1,000	0.4	0
Grace Stage 2 Pollard	720,000	2.7	1,933,000	1,740,000	9	193,000	2.8	17,000	187,000	2.7	16,000	6,000	5.0	1,000
Hill End	264,000	2.5	661,000	619,000	15	42,000	3.6	5,000	31,000	4.3	4,000	10,000	1.4	0
Kathleen	363,000	2.8	1,015,000	989,000	38	26,000	6.1	5,000	26,000	6.2	5,000	0	1.1	0
<b>Total Pits</b>	<b>1,879,000</b>	<b>2.6</b>	<b>4,840,000</b>	<b>4,509,000</b>	<b>14</b>	<b>331,000</b>	<b>3.3</b>	<b>35,000</b>	<b>312,000</b>	<b>3.3</b>	<b>33,000</b>	<b>18,000</b>	<b>2.6</b>	<b>2,000</b>

### Underground Mining Design and Schedule

The underground mine design and schedule is based on an uphole bench retreat mining method which is incorporated extensively in WA in similar narrow vein gold mining settings. The method involves standard decline access from the footwall to levels spaced 15m apart – lower in cases where existing levels have been already developed less than 15m apart, strike driving north and south along strike to extents of the resource, and then retreating long hole uphole stopes from strike extents back to the accesses.

The mine design is based on DESWIK MSO stope shapes using the following design parameters:

- Nominal 15m level spacing, adjusted to match existing development as required
- 20m stope strike length
- 2.5m minimum true stope width
- Strike Drives Profile 3.0m wide by 3.0m high
- Development Dilution 10%, and Recovery 100%
- 64mm diameter production up holes
- 3.0 g/t Au cut-off grade and 2.0 g/t Au cut-off grade for Hill End area above the 300 mRL
- Hangingwall Dilution 0.3m
- Footwall Dilution 0.2m
- Stopping production material loss 15% (accounting for in stope and low grade pillars)
- Sill Pillars (additional production material loss not in the 15%) 5m vertical strategically placed
- Decline Profile 5.5mW x 5.5mH
- Decline Gradient 1 in 7 down
- Level Access, Stockpiles, and Return Airway Access Profiles 5.0mW x 5.0mH
- Resource Access Profile 4.0m wide by 4.0m high
- Escapeway Access Profile 3.0m wide by 3.0m high
- Slot Rises and Escapeway profiles 1.5m by 1.5m
- Production drilling diameter 64mm up-holes
- Return Airway Rises - raisebore 4.0m diameter or longhole rise (LHR) 4.0m by 4.0m



In terms of geotechnical considerations for stoping, the mine is split into three main areas:

- Hill End areas down to 356mRL (200m below surface) – localised pillars in low grade areas. Top-down method.
- Hill End and Mine Decline areas down to -60mRL (200m to 520m below surface) – sill pillars left every 3<sup>rd</sup> level plus localised pillars in low grade areas. Top-down method leaving sills.
- Mine Decline Areas below -60mRL – Full extraction with paste fill – mined bottom up but only in panels of 3 x 15m vertically, with the final extracted panel not backfilled.

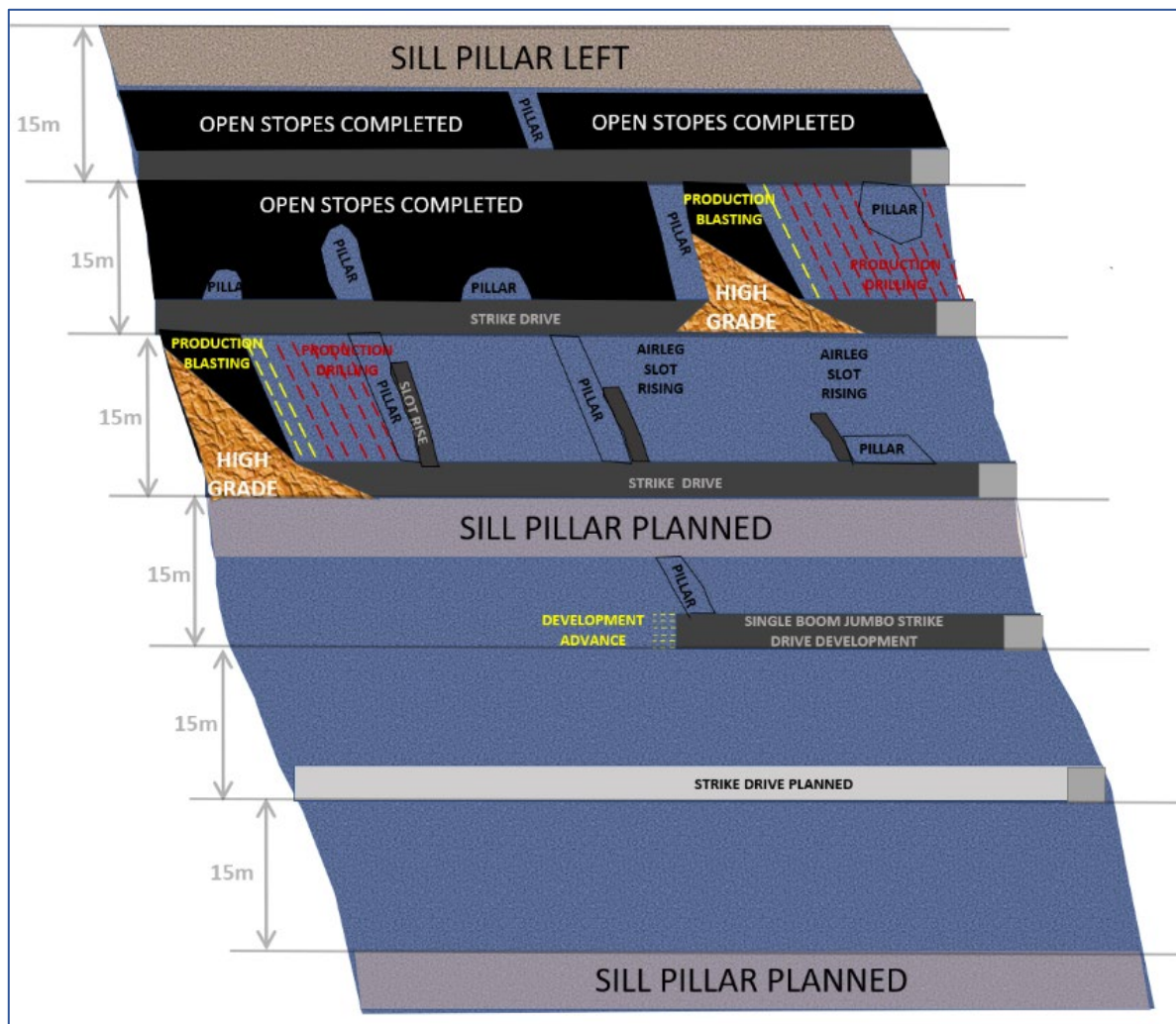


Figure 11. Schematic Long section Showing Underground Mining Method - Intermediate Levels

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Each level design includes in most cases a single cut sump mined at a gradient of 1 in 6 down, a stockpile 20m long, escapeway access and resource access. The return airway access are located off the main declines in every loop spaced approximately 30m floor to floor.

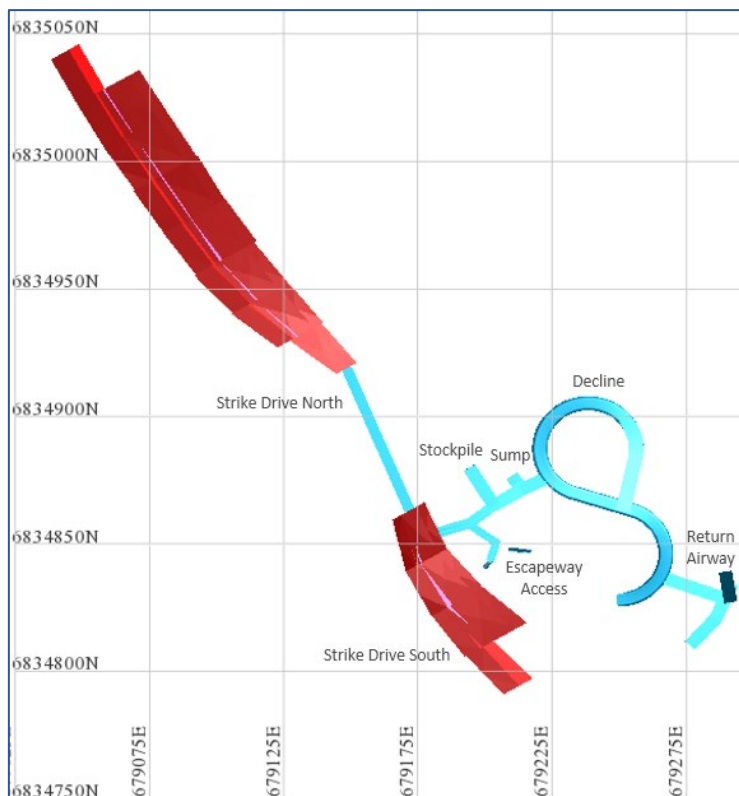


Figure 12. Plan View Showing a Typical Level Layout

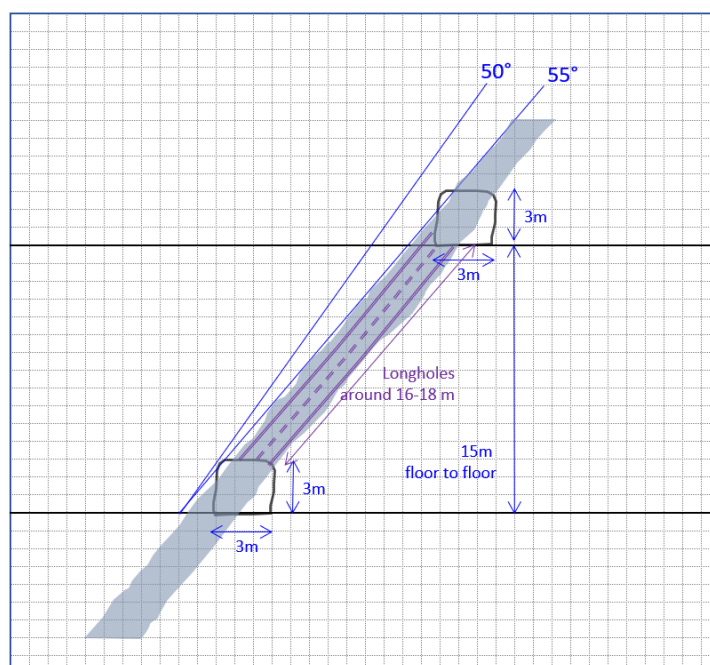


Figure 13. Schematic Cross Section View of Strike Drive and Stope Geometry (1m grid)

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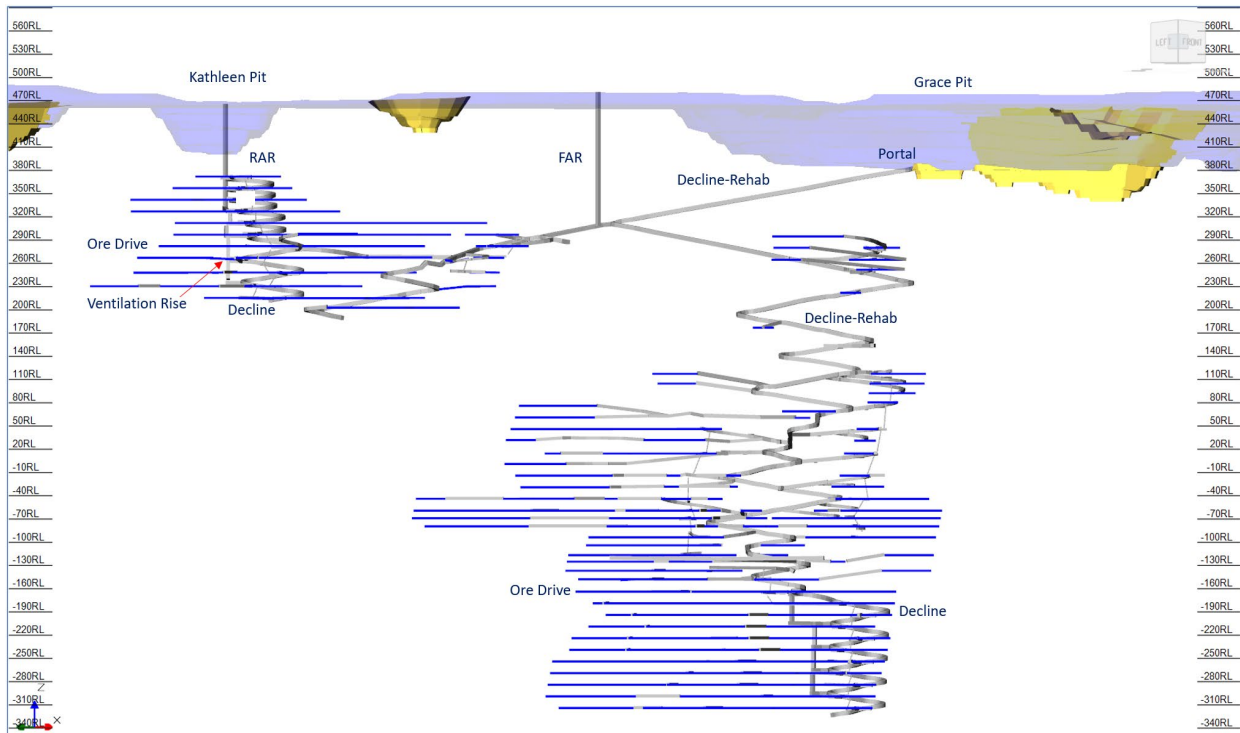


Figure 14. Longsection View (North-East) of the Scoping Study LOM Development Design

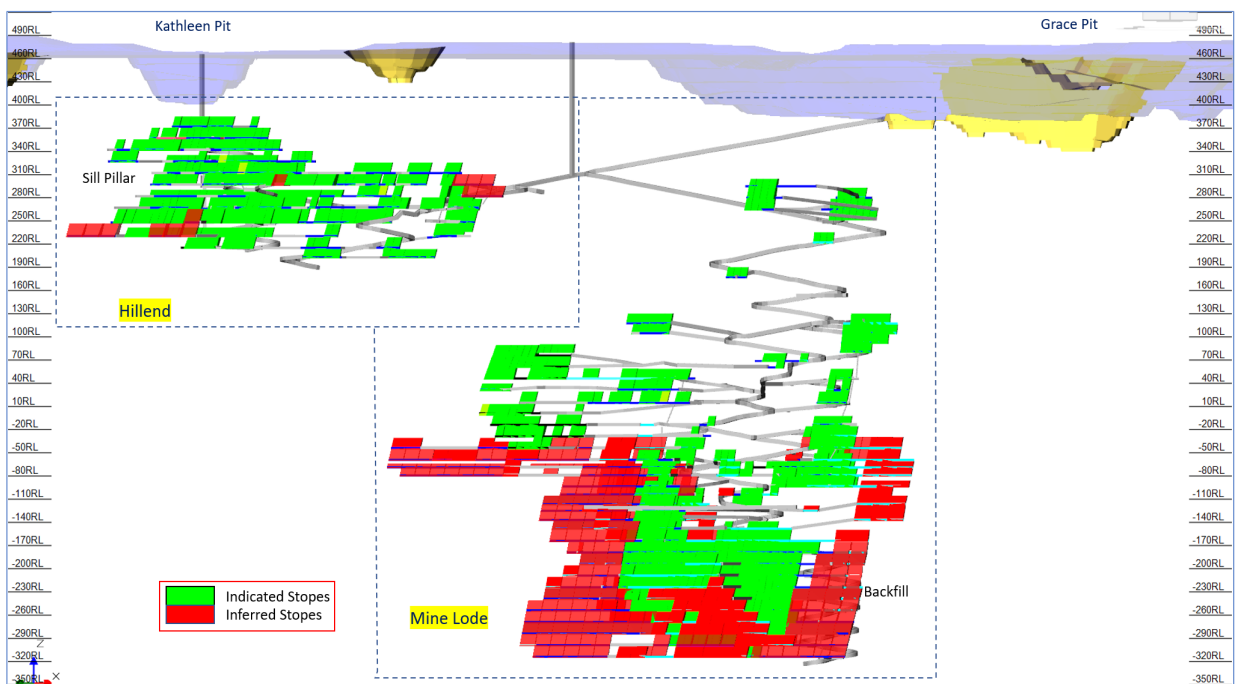


Figure 15. Longsection View (North-East) Showing the Stope Designs by Area and Category

The mine scheduling was completed using the software package Deswik.Sched in combination with Deswik.CAD. The approach assumes the use of jumbo development and primarily long-hole stoping in combination with a truck and loader fleet. Deswik.Sched was used to optimise each of the

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schedules to produce a realistic production target rate and timing for key activities and estimates for equipment requirements.

Development in the mine has been limited to a maximum advance rate of 80m/month per heading in all areas over the life of the schedule where multiple headings are available. The number of Jumbo's required is based on a maximum of 270m/month per Jumbo (twin boom jumbo) and 120m/month per Jumbo (single boom jumbo) based on an average 3m advance.

The mining schedule based on these assumptions (max advance rates) was evaluated to ensure that development advancement rates were sufficient to ensure stope tonnes remained unconstrained. The resulting optimisation identified that up to two twin boom jumbo and four single boom jumbo would be required during the peak production target period of the project with reduced requirements during the early and late stages of the project.

The DESWIK schedule has been constructed to slightly exceed the required 40,000 tonnes per month (or 480,000 tpa) of material to the surface ROM pad by 5% or 2,000 tonnes per month for a total of 42,000 tonnes per month. The mine production target requires between 4 to 5 areas to be operational at any given time to meet this schedule with the rule of thumb for narrow vein stoping around 10,000 to 15,000 tonnes per month from each producing area. This represents around 100 rings fired for each area assuming a 2.5m wide stope which in terms of number of firings assuming on average 3 rings fired per firing is on average 1 stope firing per 24 hours per area.

Table 8. Underground Mining Schedule Key Physicals

		LOM	M2 - M12	M13 - M24	M25 - M36	M37 - M48	M49 - M60	M61 - M72	M73 - M84	M85 - M96	M97 - M100
Lateral Development	(km adv)	40.3	4.4	8.9	3.8	5.4	5.2	4.8	4.0	3.1	0.7
Vertical Development	(km adv)	10.8	0.4	2.0	0.9	1.6	1.7	1.8	1.4	0.8	0.2
Production Drilling	(lin km)	1,331	34	129	154	140	182	165	183	210	134
HG + LG Tonnes	(kt)	3,641	96	400	398	408	513	481	495	528	322
Au Grade	(g/t)	5.1	3.5	3.2	5.0	4.2	4.9	6.3	6.9	5.0	4.8
<b>Au Metal</b>	<b>(koz)</b>	<b>592</b>	<b>11</b>	<b>41</b>	<b>63</b>	<b>55</b>	<b>80</b>	<b>97</b>	<b>110</b>	<b>84</b>	<b>50</b>

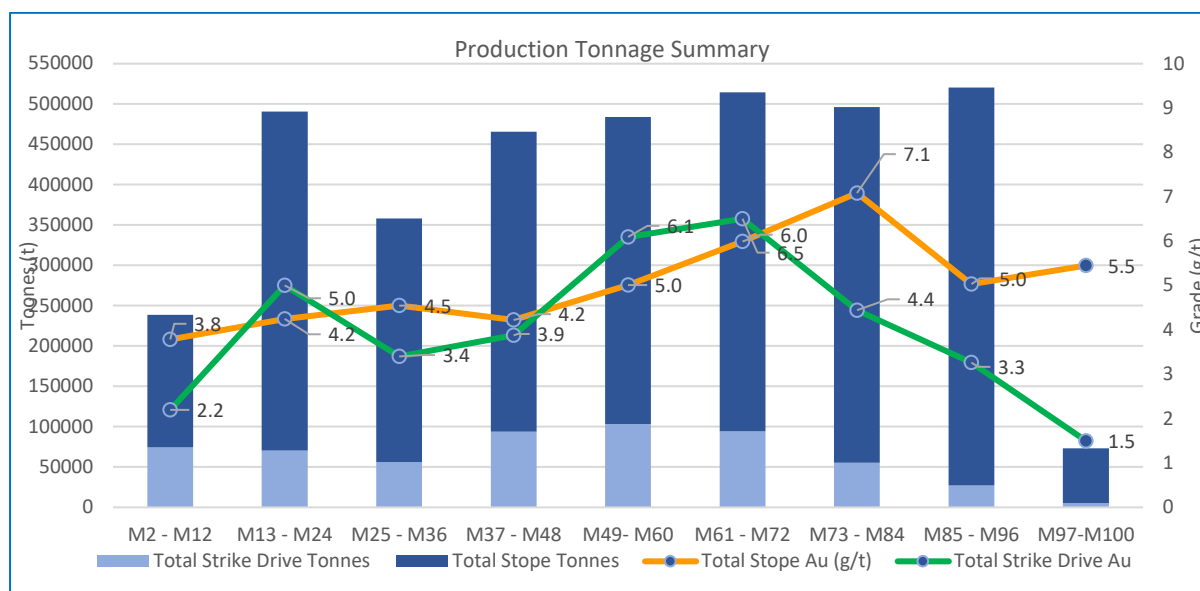


Figure 16. Chart Showing Production Target Summary by Source

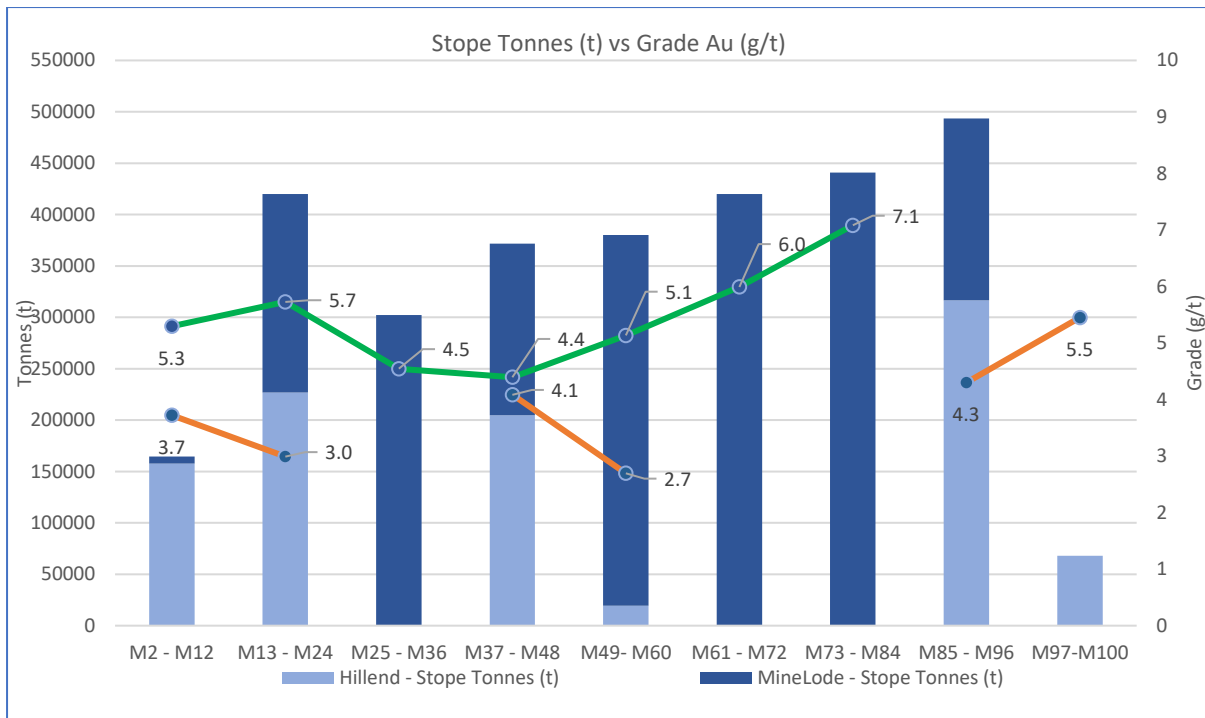


Figure 17. Chart Showing Stope Production Target by Area

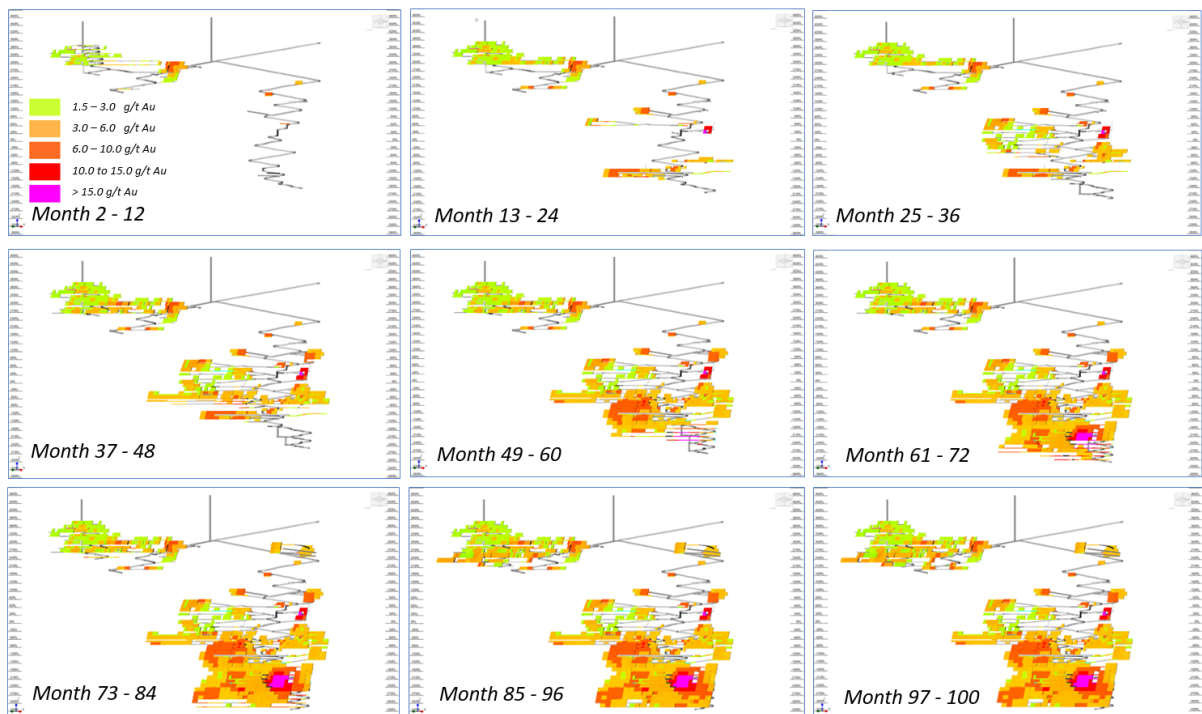


Figure 18. Year on Year Underground Production Target Schedule Colour Coded by Au Grade

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The primary method of grade control is strike drive development, which using single boom jumbos is mined under geological control. This effectively means each face is inspected by the mine geologist and an instruction is given with respect to the direction of the next cut, or in cases instruct to go back and strip sidewalls to ensure the mineralisation is being followed adequately. The mineralisation is easy to follow under visual control once position is established in cross-cutting. For this reason, a small allowance only is made for underground diamond drilling at a rate of 1 drill metre per 200 stoping tonnes produced. This works out to be on average around 170 drill metres per month.

Face, stope, and ROM stockpile sampling will be conducted on a regular basis to ensure a good understanding of metal contribution is attained in order to conduct end of month reconciliations.

### Open Pit Mine Design and Schedule

Designs for selected Open Pits were completed using the parameters stated below, with the designer following the shape of the relevant optimised pit shell:

- Bench Height– 20m
- Batter Angles – Oxide 55 degrees, Transition 60 degrees, Fresh 70 degrees
- Berm Width – 4m
- Ramp width – 12m
- Pit Base Minimum Width – 10m
- Cutback Minimum Mining Width – 10m to 15m
- Resulting Overall Slope Angles – 40 to 45 degrees

Table 9. Open Pit Design Dimensions

Pit Reference	Depth (m)	Length (m)	Width (m)	Total Volume (bcm)
Grace Stage 1	50	280	130	531,248
Grace Pollard ST2	120	340	180	719,574
Hill End	46	175	150	264,480
Kathleen	55	320	110	363,476

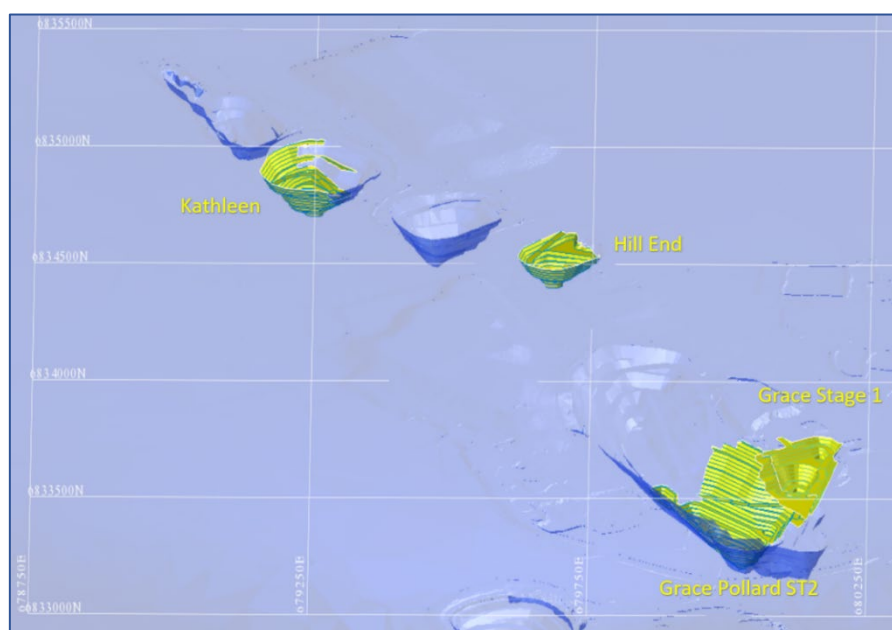


Figure 19. 3D View Showing The Scoping Study Pit Designs on a 500m Grid

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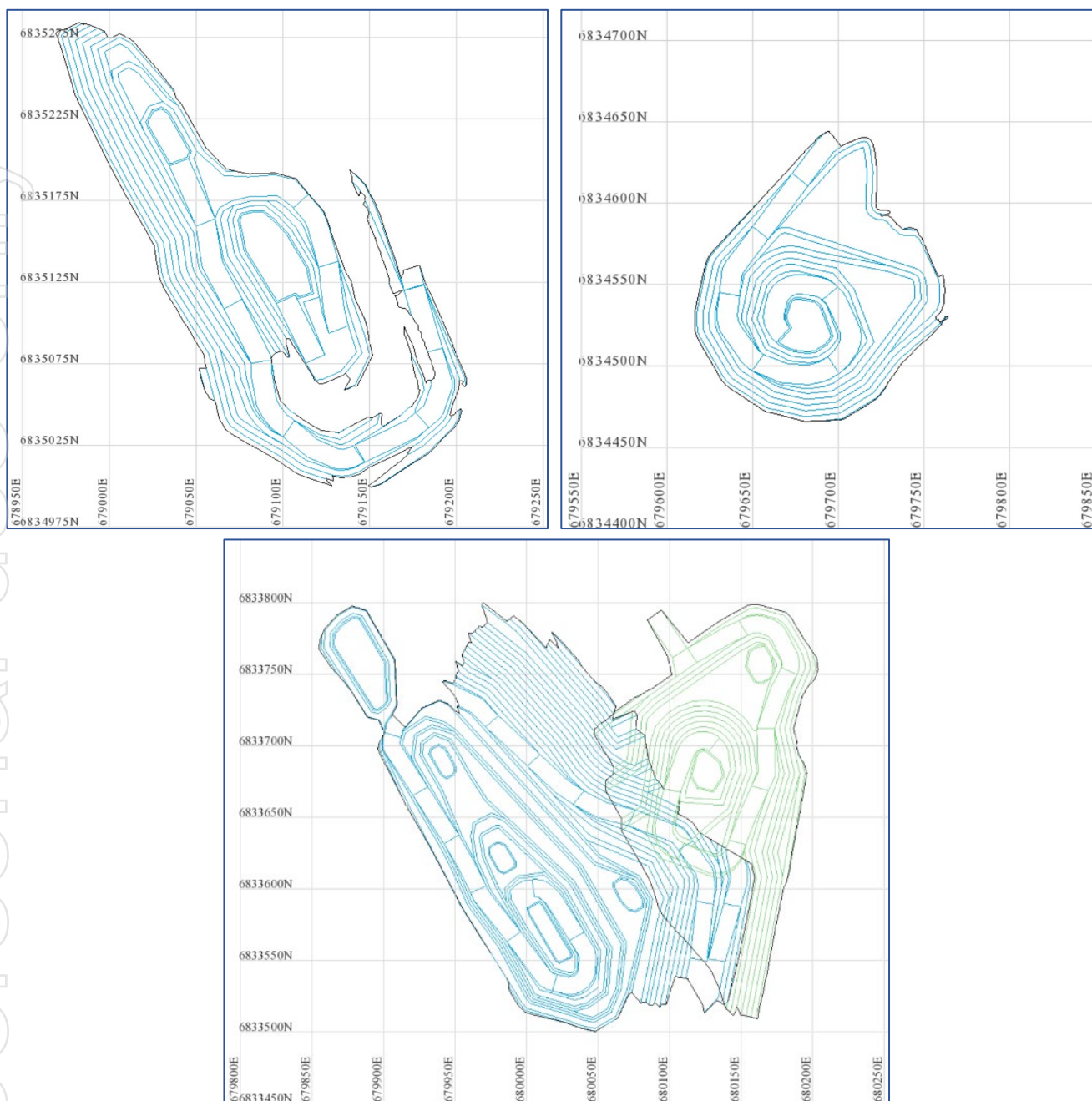


Figure 20. Kathleen (on left), Hill End (on right), Grace ST1 and Grace Pollard ST2 (lower) Pit Designs

Scheduling for the Open Pits was done using excel spreadsheets incorporating SURPAC volume and resource data reported against detailed pit designs, and natural surface data from a Lidar survey completed in April 2022. Top-down assumptions, and a conservative mining rate assuming a dayshift only 2 crew operation over a 4 month period to excavate the total volume of 470,000 bcms to win nearly 11,000oz of contained metal quickly in the first 6 months of the Project. The schedule assumes utilisation of two 100t mining fleets using excavator of size Hitachi EX1200 or equivalent and fixed body dump trucks of size Caterpillar 777 or equivalent. Conventional Drill and Blast practices have been assumed whereby 5.0m benches are drilled and blasted using a suitable production drillhole diameter depending on the ground ranging from 89mm to 115mm, and incorporating ANFO in dry conditions and Emulsion bulk product in wet conditions or where price competitive in all conditions.

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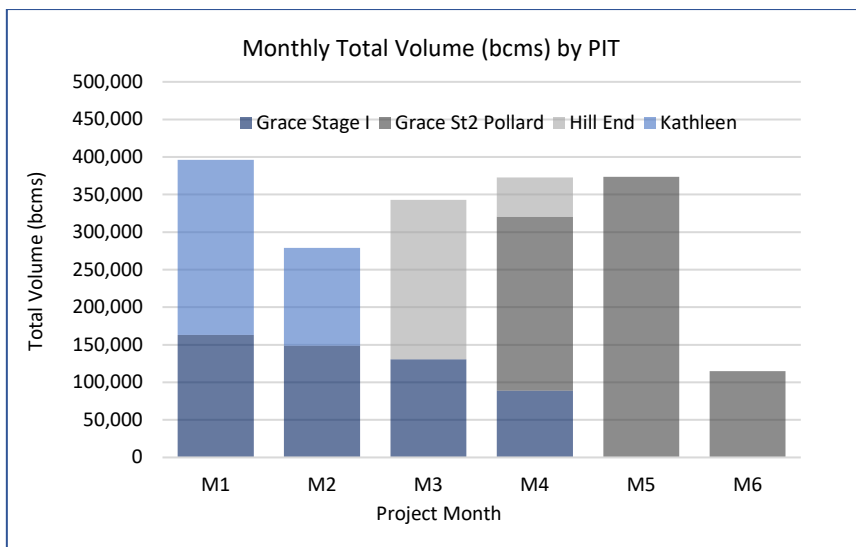


Figure 21. Open Pit Mining Total Volumes Mined Charted

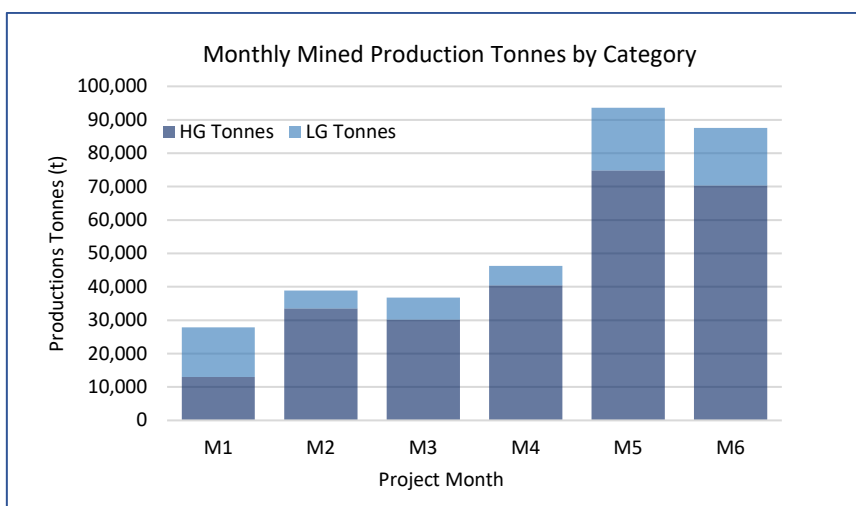


Figure 22. Open Pit Mining Production Tonnes Charted

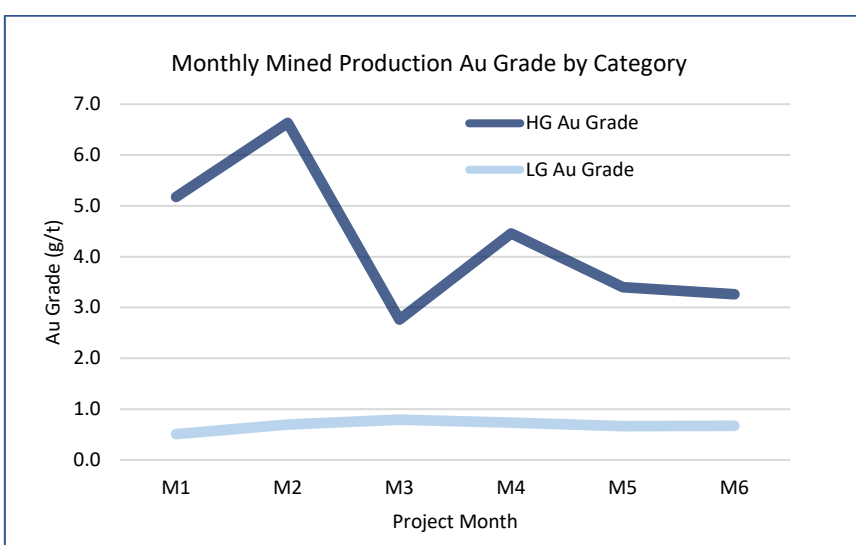


Figure 23. Open Pit Mining Total Volumes Mined Charted



# Metallurgy and Processing

## Underground Feed Metallurgical Testwork

The first phase of Scoping Study metallurgical testwork was performed on three main samples from the Youanmi Underground deposit. They represent the largest domains in the deposit plus a sample of the as mined Youanmi deposit taken from surface stockpiles. The following samples were prepared from known drillholes based upon their spatial location. Drillhole intervals for each are documented.

- Upper Hanging Wall Domain Composite; and
- Upper Main Domain Composite.

An additional sample was also taken as it provided a low-cost method for producing a bulk composite of the Youanmi sulphide material. This sample was characterised as well to ensure it was representative of the sulphide material metallurgically.

- ROM Stockpile Sample – Historical mined sample taken from remnants of historical surface stockpiles. Rock specimens were hand selected by geologists for use in the metallurgical program. Exact location unknown.

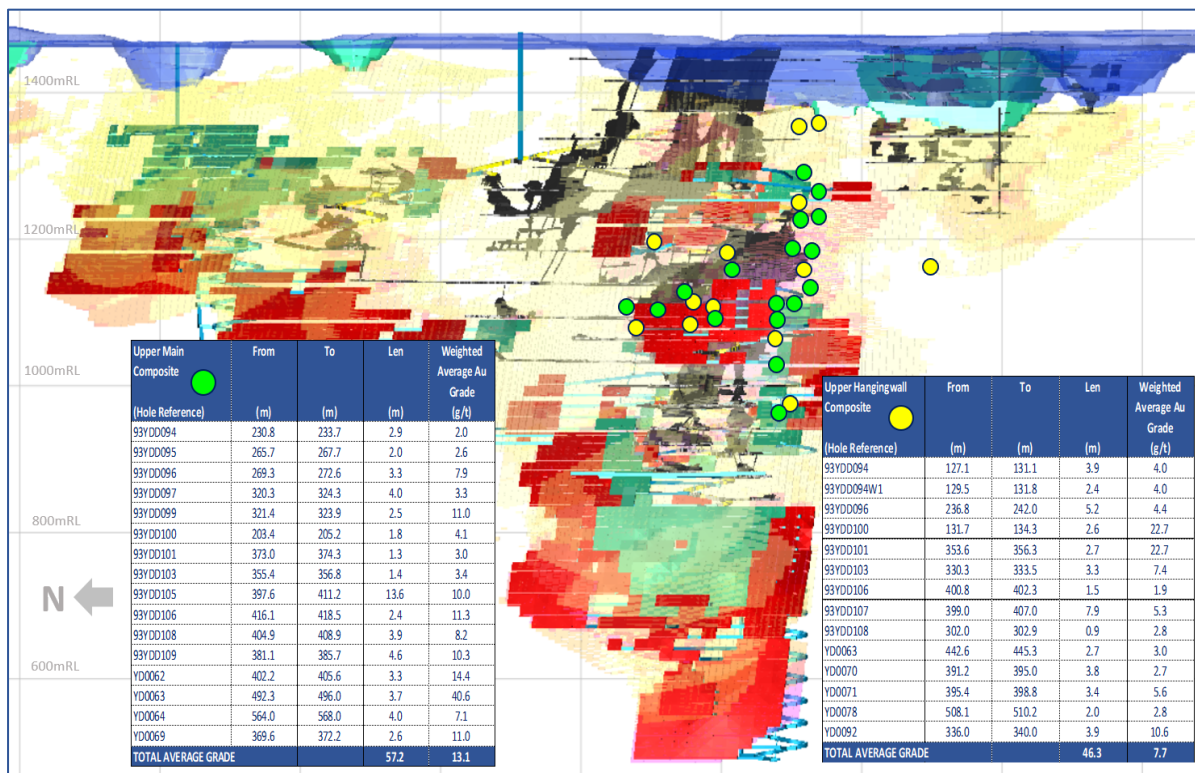


Figure 24. Long section - Core Sample Locations for UG Scoping Level Test Work – 30 Intervals 2 Domains

Table 10. Detailed Drillhole Information for Core Used In Metallurgical Composite Samples

Oxidation Domain	HoleID	Depth From (m)	Depth To (m)	Down - hole Width (m)	Collar North (GDA94)	Collar East (GDA94)	Collar RL (GDA94)	Dip (deg)	Azimuth (deg)	Hole Depth (m)	Met Composite Sample
Fresh	93YDD094	127.1	131.1	3.9	6,833,693	679,715	460	-57	69	243	Upper Hangingwall
Fresh	93YDD094W1	129.5	131.8	2.4	6,833,693	679,715	460	-54	62	215	Upper Hangingwall
Fresh	93YDD096	236.8	242.0	5.2	6,833,707	679,675	461	-57	77	294	Upper Hangingwall
Fresh	93YDD100	131.7	134.3	2.6	6,833,712	679,707	462	-58	62	240	Upper Hangingwall
Fresh	93YDD101	353.6	356.3	2.7	6,833,636	679,575	463	-54	64	435	Upper Hangingwall
Fresh	93YDD103	330.3	333.5	3.3	6,833,782	679,554	463	-55	81	387	Upper Hangingwall
Fresh	93YDD106	400.8	402.3	1.5	6,833,752	679,494	460	-54	64	452	Upper Hangingwall
Fresh	93YDD107	399.0	407.0	7.9	6,833,787	679,467	461	-52	67	447	Upper Hangingwall
Fresh	93YDD108	302.0	302.9	0.9	6,833,845	679,455	462	-58	74	441	Upper Hangingwall
Fresh	YD0063	442.6	445.3	2.7	6,833,601	679,455	460	-57	62	558	Upper Hangingwall
Fresh	YD0070	391.2	395.0	3.8	6,833,764	679,427	460	-64	67	511	Upper Hangingwall
Fresh	YD0071	395.4	398.8	3.4	6,833,841	679,402	460	-66	58	491	Upper Hangingwall
Fresh	YD0078	508.1	510.2	2.0	6,833,524	679,300	460	-60	64	746	Upper Hangingwall
Fresh	YD0092	336.0	340.0	3.9	6,833,371	679,532	460	-45	88	685	Upper Hangingwall
Fresh	93YDD094	230.8	233.7	2.9	6,833,693	679,715	460	-57	69	243	Upper Main
Fresh	93YDD095	265.7	267.7	2.0	6,833,678	679,685	460	-55	73	281	Upper Main
Fresh	93YDD096	269.3	272.6	3.3	6,833,707	679,675	461	-57	77	294	Upper Main
Fresh	93YDD097	320.3	324.3	4.0	6,833,656	679,650	460	-56	68	339	Upper Main
Fresh	93YDD099	321.4	323.9	2.5	6,833,690	679,593	461	-55	80	387	Upper Main
Fresh	93YDD100	203.4	205.2	1.8	6,833,712	679,707	462	-58	62	240	Upper Main
Fresh	93YDD101	373.0	374.3	1.3	6,833,636	679,575	463	-54	64	435	Upper Main
Fresh	93YDD103	355.4	356.8	1.4	6,833,782	679,554	463	-55	81	387	Upper Main
Fresh	93YDD105	397.6	411.2	13.6	6,833,676	679,520	460	-55	81	474	Upper Main
Fresh	93YDD106	416.1	418.5	2.4	6,833,752	679,494	460	-54	64	452	Upper Main
Fresh	93YDD108	404.9	408.9	3.9	6,833,845	679,455	462	-58	74	441	Upper Main
Fresh	93YDD109	381.1	385.7	4.6	6,833,941	679,515	481	-71	78	414	Upper Main
Fresh	YD0062	402.2	405.6	3.3	6,833,635	679,526	460	-54	63	484	Upper Main
Fresh	YD0063	492.3	496.0	3.7	6,833,601	679,455	460	-57	62	558	Upper Main
Fresh	YD0064	564.0	568.0	4.0	6,833,562	679,376	460	-55	58	623	Upper Main
Fresh	YD0069	369.6	372.2	2.6	6,833,812	679,524	463	-62	60	422	Upper Main

A preliminary gold metallurgical characterisation program was performed in 2021 on each of the samples to provide an insight into the performance of the materials (refer ASX announcements 6 October 2021 and 23 December 2021). The preliminary program included:

- Sample preparation and head assay;
- Standard cyanide free milling gold extraction leaching;
- Mineralogical analysis;
- Sulphide flotation testwork;
- Ultrafine grinding and cyanide leach testwork on the sulphide concentrates;
- Pressure oxidative leaching (POX) and cyanidation on sulphide concentrates; and
- Albion Process™ atmospheric oxidative leaching of finely ground sulphide concentrates
- Roasting and leaching testwork on sulphides concentrates.

Both the Albion Process™ and POX Processes require flotation to make a concentrate before other processes are applied, so sufficient information for the Concentrate Sales and CIL Option was obtained from the characterisation programme.

The difference in payable gold between the Concentrate Sales and CIL Option and the Albion Process™ is minor (around 1.2% difference) provided the concentrate grade attracts high payability which it does in the present markets. On this basis the Concentrate Sales and CIL Option being less capital intensive and having a lower operating cost is by far the best option.

### Open Pit Metallurgical Testwork

Detailed testwork was completed on the Grace oxide mineralisation from three representative composites by IMO (Independent Metallurgical Operations) which comprises of around 50% of the gold produced from Open Pit Mining in the Scoping Study Schedule. This work showed excellent gravity and overall cyanide leach recovery, with an average of 95.3% over 24hrs. In the Scoping Study 95% was assumed for this style of mineralisation.

Table 11. Summary of Grace Oxide Metallurgical Testwork – Gravity / Cyanide Leach

Composite Description	Units	Composite 1 LT 01	Composite 2 LT 02	Composite 3 LT03
Gravity Recovery	%	60.50	10.30	44.70
2 hour Au Recovery	%	82.90	71.50	77.70
4 hour Au Recovery	%	89.80	82.40	87.60
8 hour Au Recovery	%	93.30	90.20	96.20
24 hour Au Recovery	%	94.00	94.50	97.40
48 hour Au Recovery	%	96.30	93.70	96.50
Gravity Recovery	g/t	3.6	0.55	2.85
Leach Recovery	g/t	2.13	4.47	3.3
Total Recovery	g/t	5.73	5.02	6.14
Calculated Head Grade	g/t	5.95	5.36	6.36
Assayed Head Grade	g/t	5.87	5.3	8.98
Residue Grade	g/t	0.22	0.34	0.22
2 hour Solution Au	ppm	1.09	2.69	1.72
4 hour Solution Au	ppm	1.4	3.11	2.21
8 hour Solution Au	ppm	1.55	3.38	2.62
24 hour Solution Au	ppm	1.55	3.51	2.65
48 hour Solution Au	ppm	1.62	3.37	2.53
2 hour CN	ppm	480	400	480
4 hour Cn	ppm	360	380	440
8 hour CN	ppm	440	360	440
24 hour CN	ppm	320	260	380
48 hour CN	ppm	360	320	380
2 hour DO	ppm	9.07	8.78	9.06
4 hour DO	ppm	9.1	8.9	9
8 hour DO	ppm	8.9	8.91	8.89
24 hour DO	ppm	7.24	7.54	7.39
48 hour DO	ppm	7.3	7.5	7.43
48 hour Cyanide Consumption	kg/t	0.12	0.22	0.1
48 hour Lime Consumption	kg/t	0.3	0.33	0.17

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For the remainder of the Open Pit oxide and transition material mined, no recent metallurgical testwork has been completed. An overall metallurgical recovery of 90% is assumed based on historical testwork (1986 Metskill) which surmised an expected recovery to be over 92% in Youanmi Oxides. Actual data from the Eastmet 1980s operation is not available. Future studies are planned to incorporate new testwork results for all potential pit areas for which work already commenced in 2022. Historical work was also completed in 2005 by Silver Asset Pty Ltd on the Plant Zone areas which supported potential increase in grade in the higher size fractions for oxide granite-based materials, for which future work will further investigate.

### Process Plant Strategy

Strategy for Processing Plant selection in terms of both capacity and process method takes into account the ability to:

- 1) Treat oxide and transitional material from existing, planned, and not yet discovered open pits;
- 2) Align with the major feed source production rate – from the Underground Mine;
- 3) Manage project capital costs to a minimum; and
- 4) Achieve good financial outcomes by considering results from capital and operating cost modelling along with metallurgical recovery data obtained from metallurgical testwork.

A 480ktpa circuit configured to produce a saleable gold concentrate via a standard flotation circuit as well as gold dore via a standard CIL circuit from float tails and parts of the open pit feed was selected for the Scoping Study model.

### Capacities Considered

The Youanmi Scoping study investigated a range of throughput rates to provide information on the impact of economies of scale and the incorporation of oxide material into the project. The following capacities were investigated to provide a comprehensive picture of the project capacity options.

- 300ktpa - Treatment of underground sulphide material only at 300,000tpa.
- 480ktpa – Treatment of underground sulphide material only at 480,000tpa. This capacity simulates a high yet still achievable mining rate for underground mining operations. This size plant also allows for treatment of high-grade open pits, which being softer material can be run through the crushing and grinding circuit at slightly higher throughput rates.
- 1.2Mtpa – Treatment of underground sulphide material and open pit oxide/transition material. The higher-grade underground sulphide material would be mined at 480,000tpa. The lower grade oxide material would be mined at 720,000tpa. The oxide and sulphide materials would be treated in the same process plant in a campaigning scenario.

The model used in the Scoping Study as the base case was 480ktpa plant, which is matched to the underground mine production rate capacities achievable based on the mine design and production assumptions. This size processing plant also allows for treatment of high grade oxide pits. Allowance in this option has been made to expand to a 1.2Mtpa plant size at a later date, which becomes important in consideration of economically treatable near surface resources which become larger with a larger processing plant due to the reduced unit costs achievable.

### Process Methods Considered

For shallow Open Pit material standard CIL processes are expected to achieve high recoveries in the Mine Lode style oxide mineralisation, which is supported by both testwork in the 1980s which found likely recoveries to be in the range of 92% to 98%, and also by Leachwell assay results which Rox conducted on selected intervals of various relevant drillholes. For granite hosted mineralisation east of the main mineralised areas as is found in Grace and Plant Zone, detailed testwork conducted in 2021 showed that over 95% recovery can be obtained through gravity circuit plus standard CIL.

For the Underground Mine production gold bearing material which is predominantly sulphide based a number of processes were considered, knowing that standard CIL at regular grind sizes is not able to achieve reasonable gold extraction. These processes included:

- Pressure Oxide Leach Process – discounted early due to high capital and operating cost,
- Albion Process™;
- UFG - Ultra Fine Grid of flotation concentrate to 10 micron to standard CIL; and
- Produce gold concentrate for sale and produce gold doré on site from oxide feed and also material from the flotation tailings.

### Process Flow

The option to produce a gold concentrate for sale and make gold doré on site was selected for the Scoping Study case for a number of reasons including:

- Low capital requirements;
- Low operating costs;
- Excellent overall gold recovery achievable;
- High gold payability in concentrate sold;
- Percentage of gold produced as bullion on site;
- Flexibility to treat oxide only material; and
- Ability to upgrade process easily to Albion Process™.

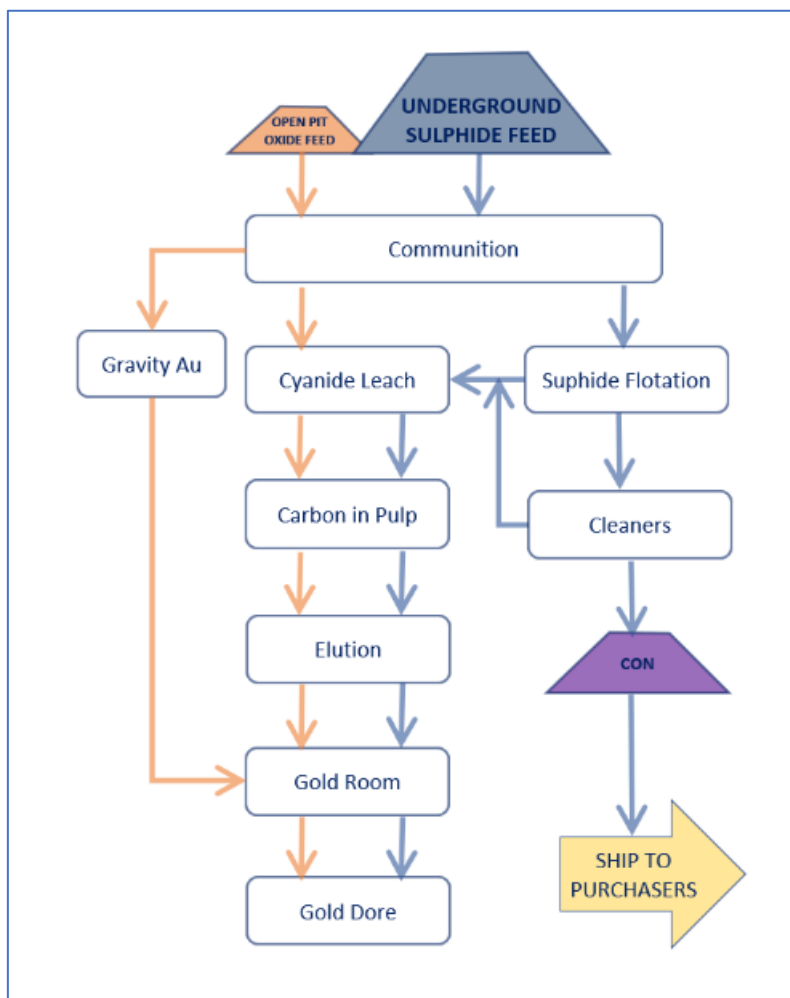


Figure 25. Schematic Showing Process Flow

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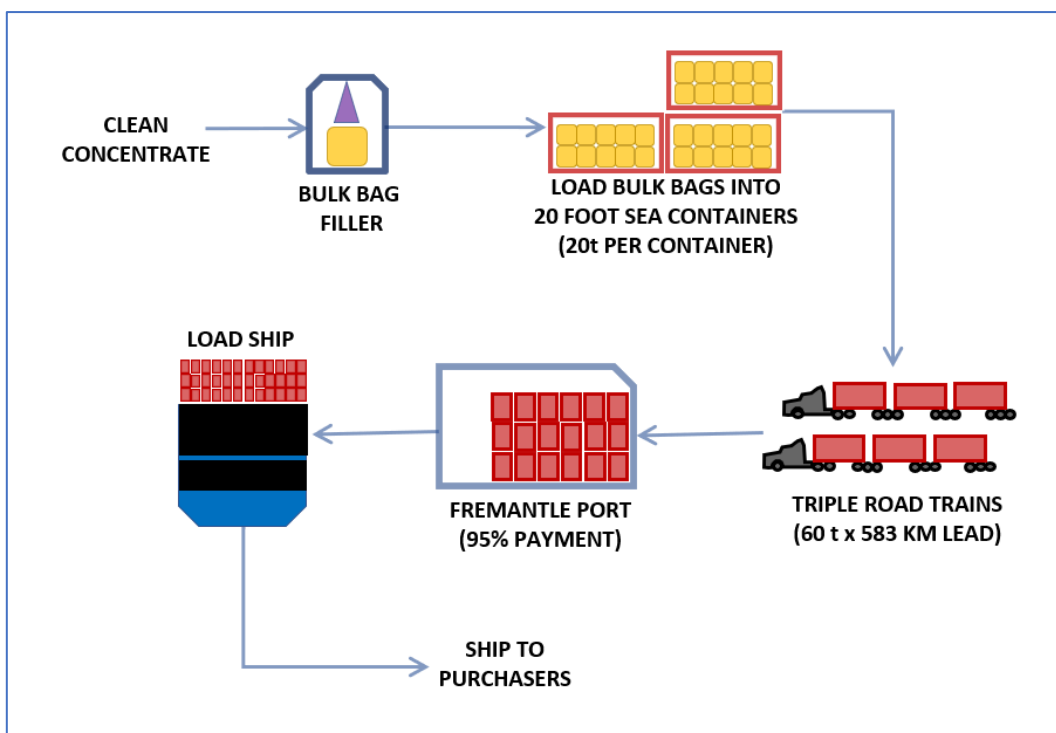


Figure 26. Schematic Showing Gold Concentrate Logistics

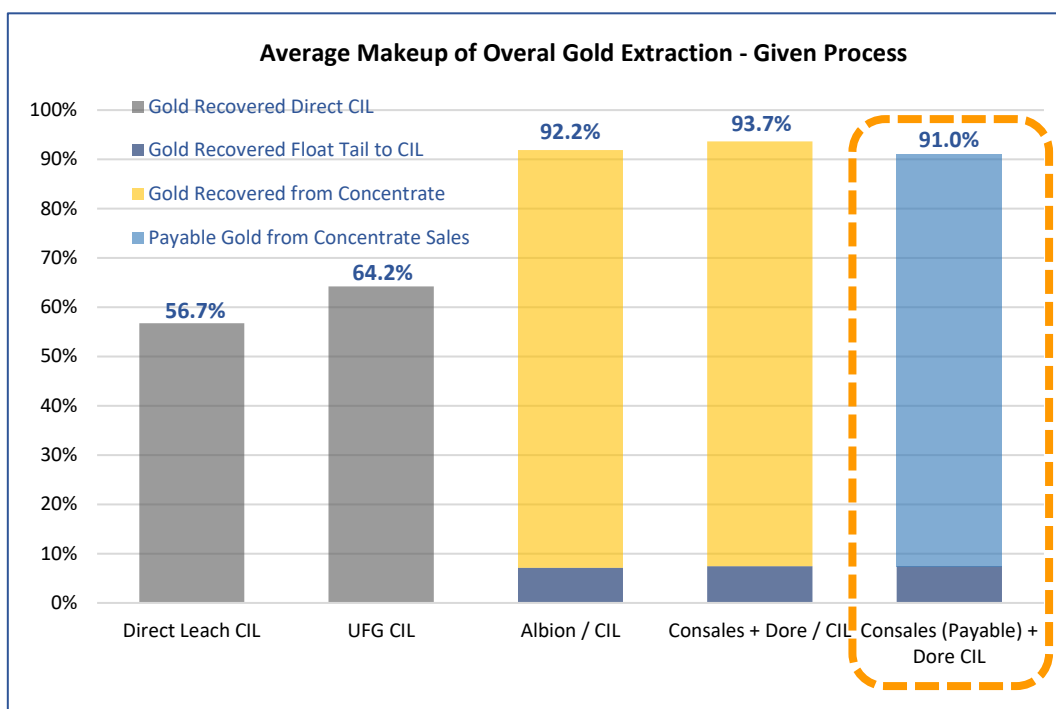


Figure 27. Chart Comparing Gold Extraction / Payable Gold

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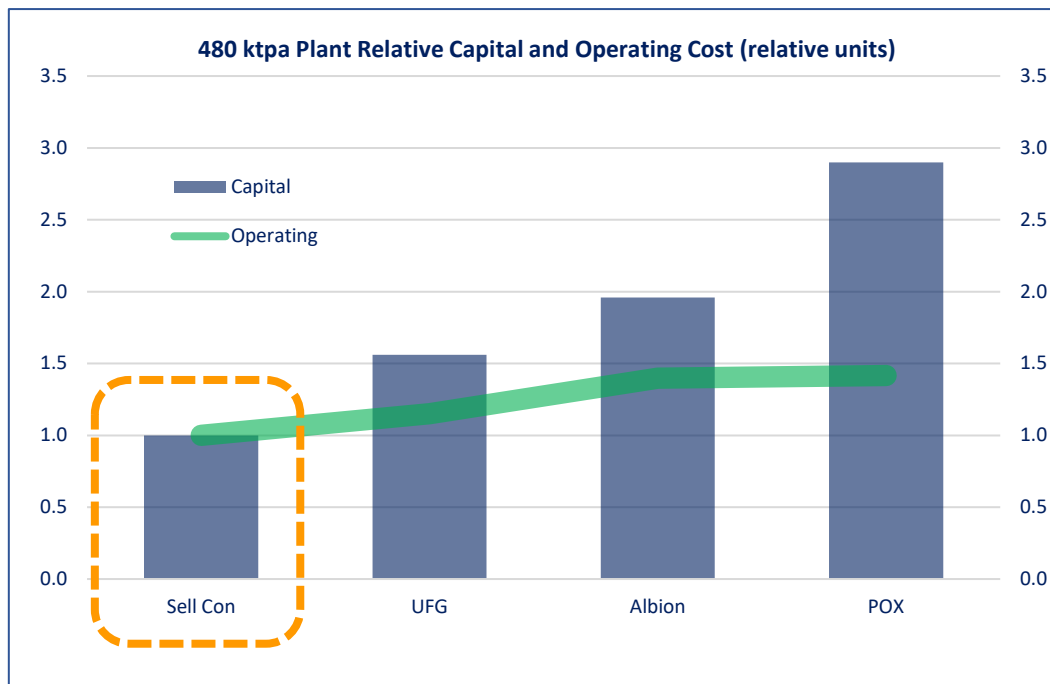


Figure 28. Chart Comparing Relative Capital and Operating Costs for Various Processes

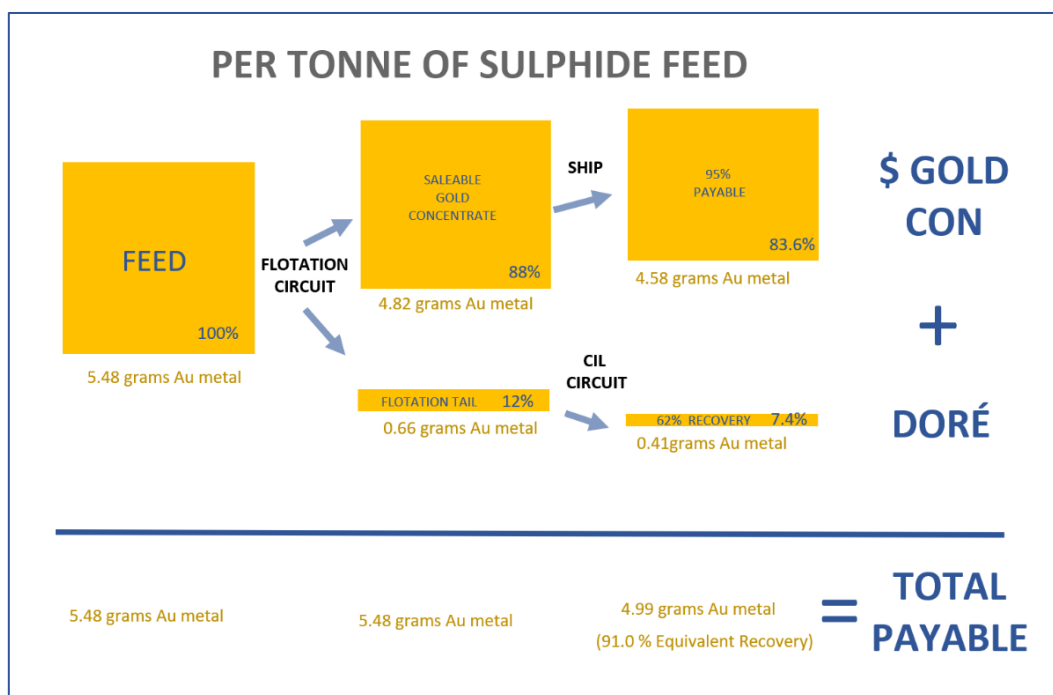


Figure 29. Sulphide Gold Treatment Path to Payable Metal Equivalent

### Concentrate Production Target

In the 1990s the Youanmi Gold Mine produced a “regular concentrate” as a precursor for the then operated Bactech Process™ plant. This concentrate was produced over 3 years from December 1994 to November 1997 at practically saleable grades i.e. +40gpt Au (refer Figure below).

From recent Rox testwork, sulphide minerals make up 53% of the rougher concentrate indicating that producing a high grading high quality “clean” saleable concentrate should be easily achievable. Cleaning of the rougher concentrate will be achieved by a number of ways for which the most efficient pathway will be investigated as part of future metallurgical test and study work, including possibility of using a Jameson cell.

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The importance of concentrate grade lies in achieving a saleable concentrate, achieving high payabilities with low TCRCs and also in reducing transport costs.

Previously the Youanmi operation was not focussed on producing a high-grade concentrate since all downstream processing was completed on site making saleability etc and also concentrate transport costs irrelevant. Notable historical actual concentrate grade data from this time show a reasonably high-grade concentrate (in the order of 40g/t Au) which is saleable on today's market with circa 94% payability achievable.

### Saleable Concentrate Optimisation

With a circuit designed specifically to optimise concentrate grade (assumed for the Scoping Study) grades of up to 60g/t Au (premium concentrate) are considered easily achievable. Concentrate grades of this range achieve very high payabilities. Further, it may be possible to make an exceptionally high-grade concentrate over 80g/t Au. Every 1% increase in payability increases the Project NPV by around \$43m. The next round of study work will consider the additional capital required to achieve varying levels of high to very-high grade concentrate.

The following risks have been identified for concentrate sales, and appropriate and practically achievable mitigation measures have also been identified:

- The gold grade in the mineral concentrate may vary considerably with material type. This is due to differing sulphur, arsenic and gold grades in the material. An extensive metallurgical testwork program is required to examine the flotation response across a range of sulphide material types to understand the concentrate quality. Blending of feed material will be performed during operations to smooth out extreme material type characteristics; and
- Recovery losses due to concentrate cleaning. Laboratory testwork included cleaning locked cycle testwork can be performed to provide confidence in the cleaned concentrate recovery. The use of non-standard flotation cells such as a Jameson Cell can be applied to improve the cleaning efficiency.

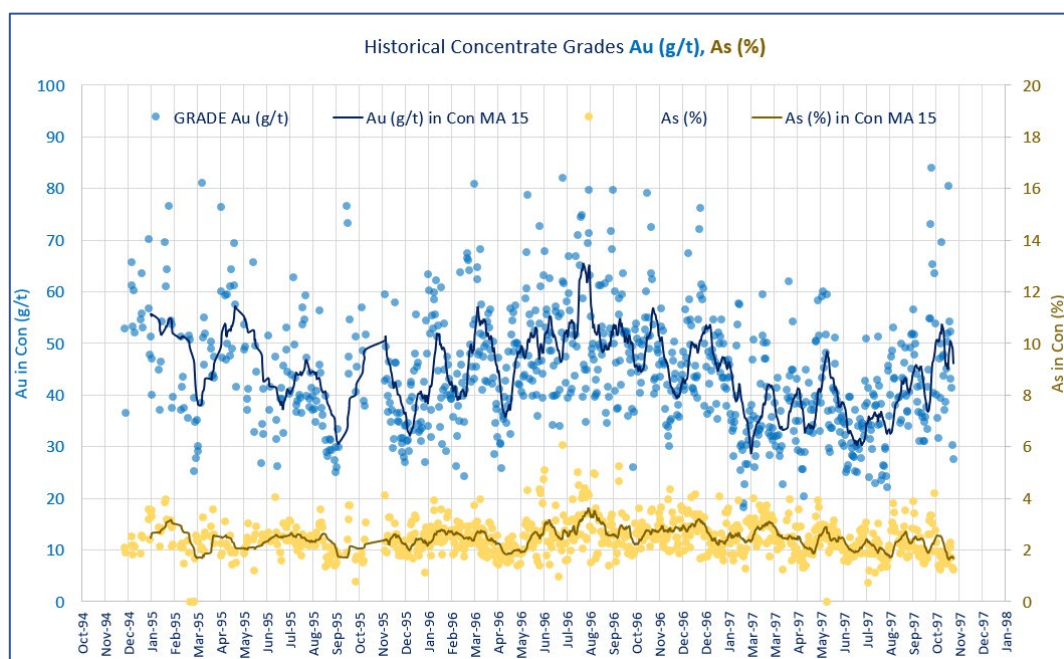


Figure 30. Chart Showing Historical Concentrate Grades for Au and As (Instantaneous and MA15)

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The metallurgical test work on the three samples showed that without cleaning an average mass pull of 13% is achieved, and for the Scoping Study Model which takes into account utilisation of a cleaner circuit of some form, a mass pull of 10% is assigned. This is considered to be conservative given the average mineral abundance of the rougher concentrate, which as stated shows that the sulphide minerals only make up 53% of the concentrate.

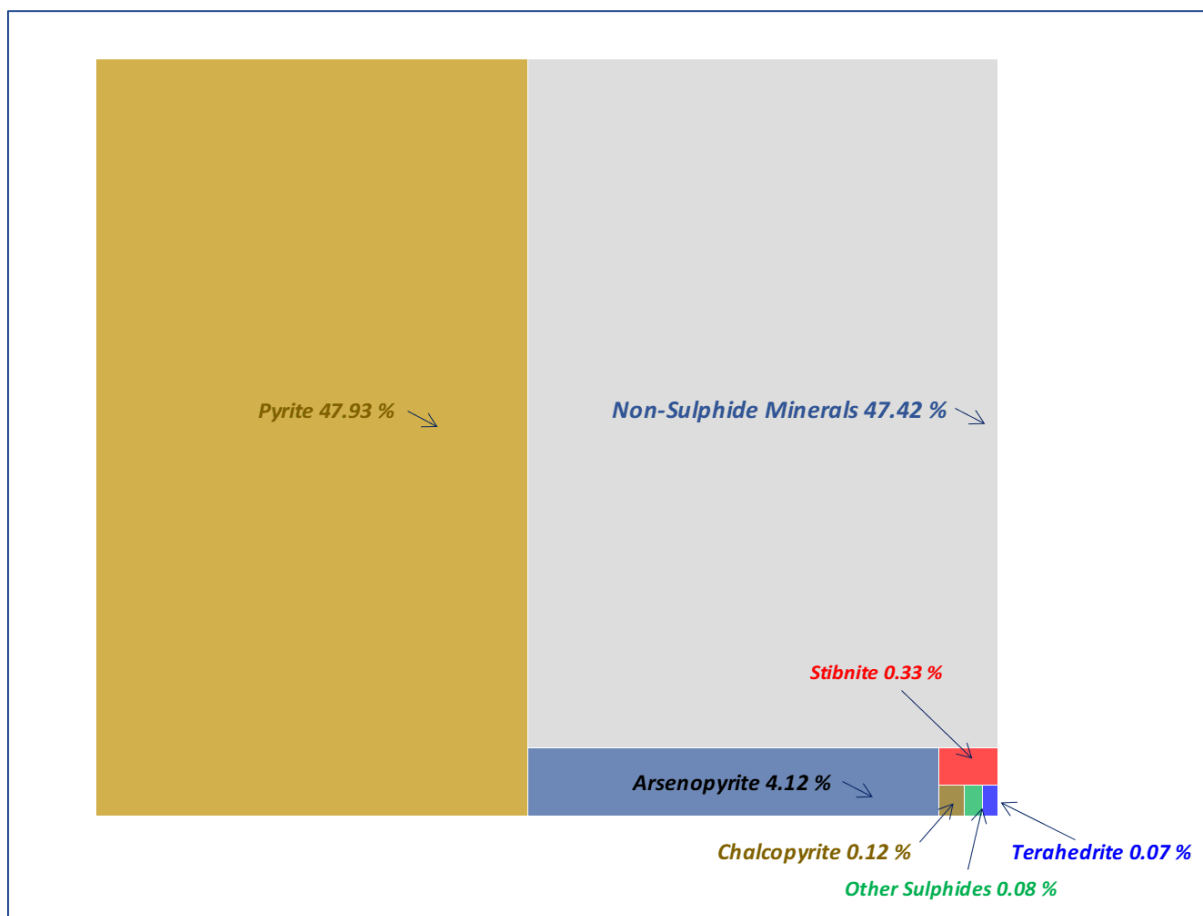


Figure 31. Illustration Showing Percentages of Sulphide Minerals In the Rougher Concentrate (Without Cleaning)

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Table 12. Mineral Abundance Average from the Three Testwork Samples

Mineral group	Average of Three Samples		
	Float Con	Combined Rougher Tail	Combined
	Mass% in fraction		
Native gold	<0.01	<0.01	<0.01
Au-(Ag)-tellurides	<0.01	<0.01	<0.01
<b>Pyrite</b>	47.9	0.3	6.7
<b>Arsenopyrite</b>	4.1	0.1	0.6
Loellingite and As intergrowths	0.3	0.1	0.2
<b>Chalcopyrite</b>	0.1	0.0	0.0
<b>Tetrahedrite</b>	0.1	0.0	0.0
<b>Stibnite</b>	0.3	0.0	0.1
<b>Other sulphides</b>	0.1	0.0	0.0
Quartz	12.1	30.4	27.9
Micas	15.5	22.3	21.4
Feldspars	1.3	6.1	5.4
Chlorite	7.1	18.0	16.6
Amphibole	1.1	2.4	2.2
Tourmaline/kaolinite	0.3	0.4	0.4
Talc	0.9	0.3	0.4
Epidote	0.5	1.7	1.5
Other silicates	0.4	0.4	0.4
Apatite	0.4	0.9	0.9
Ti minerals	1.6	2.4	2.3
Magnetite/hematite	1.6	2.8	2.7
Calcite/ankerite-dolomite	4.0	10.9	10.0
Steel	0.3	0.4	0.4
Other minerals	0.0	0.0	0.0
<b>TOTAL</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Total Sulphide Minerals</b>	<b>52.7</b>	<b>0.4</b>	<b>7.4</b>

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## Power

Site power generation is assumed to be from a power station utilising trucked gas, owned and operated by a power supply contractor. The system includes some diesel power for emergency. A price was obtained from KPS for this arrangement which included no start-up cost, and comprised of fixed monthly cost made up of a capital charge and affixed operational charge plus a variable rate based on actual power consumption. The two main users of electrical power are the processing plant and the underground mine.

Como estimated power requirement for the 300ktpa UFG Process option at 3,300kW which, after removing UFG component which is not required for the make and sell concentrate option drops to 2,800kW and then when scaled up to 480ktpa makes the total power average power requirement around 4,500kW for making a concentrate. This is much lower than the requirement for an Albion Process™ which for 300ktpa estimated at 3,050kW scales up to 4,900kW for a 480ktpa plant.

Underground power requirement gets up to around 3,000kW, and other (village and office) power requirement will be around 300kW.

Total site power requirement is estimated to range from 4,000kW to 8,000kW depending on processing and underground mining stage. The KPS pricing obtained was for the original smaller processing plant and mine configuration so is therefore considered to be conservative.

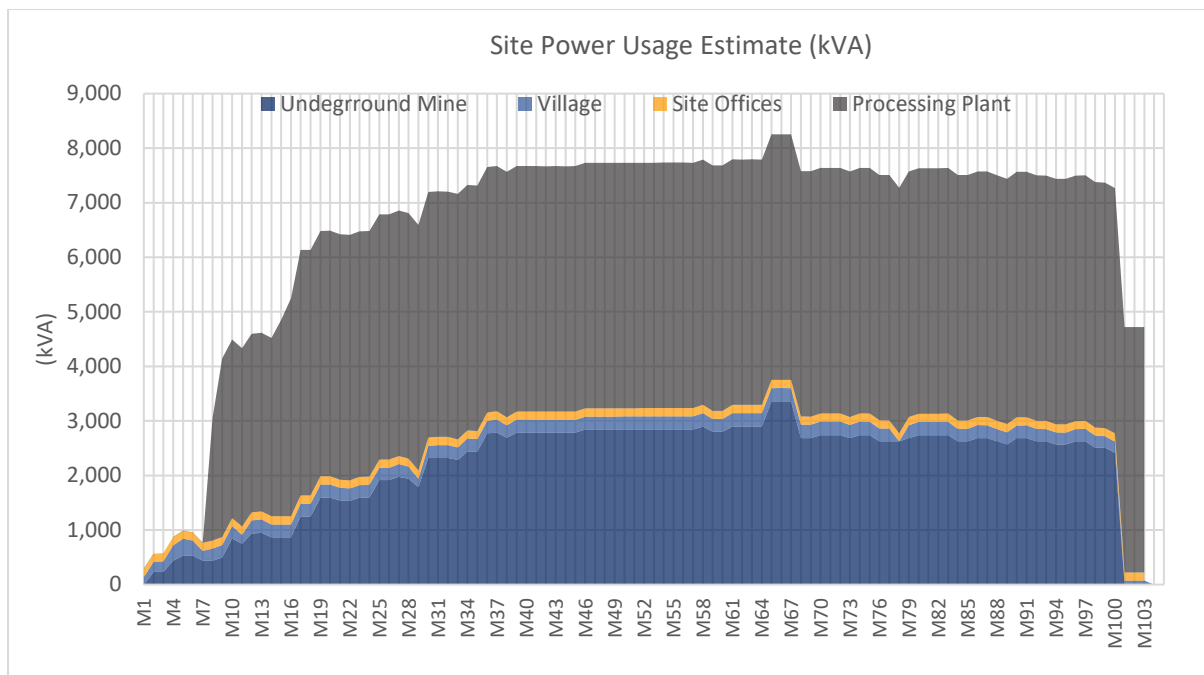


Figure 32. Chart Showing Site Power Usage by Area by Month

## Other Infrastructure

### Site Roads and Access

Over 90% of required roads and access is already in place from previous operations, making very little work required other than an initial site roads and traffic design and risk assessment required, followed by execution of some minor earthworks as well as signage and delineator installation.

### Accommodation Village

The existing village which is the remnants of what was built in the 1980s and 1990s, presently has capacity for 51 residents. This capacity is in the form of 2, 3, and 6 bedroom units as well one SPQ with shared ensuites. The scoping study allows for expansion of the village by adding 28 dongas or 112 rooms and 3 laundry blocks, and a locker room. Allowance has also been made to upgrade the dry mess to cater for up to 150 people on site at any one time.

## Tailings Storage Facility

For the first six months of processing, tailings is assumed to be sent to the previously used TSF2 which has 1.5m of capacity over its 74,000m<sup>2</sup> surface or around 110,000m<sup>3</sup>. Tailings produced after TSF2 is full to capacity will go into a newly built TSF located to the east of the current dam in a sterilised area of around 22 months capacity or 875,000t or 500,000m<sup>3</sup>.

Four additional TSF expansions are assumed at the same cost over the remaining life of the project, spaced 24 months apart, for a total additional installed capacity of around 4.4Mt which is much higher than the planned tailings forecast of 3.1Mt required (including allowance for first 6 months and concentrate production).

## Evaporation Ponds

Evaporation ponds were built and extended in the 1990s, and were last operated by Apex Minerals when they commenced dewatering the Mine Open Pit in 2006. The condition of the ponds was assessed by a geotechnical dam specialist Peter McGough in November 2021 at which time auger samples were taken from the outer walls. The investigation determined that certain remediation works should be conducted prior to future use in areas where the outer wall was deemed to be sub-standard. A design was recently completed to buttress the outer wall in the areas recommended, and the DWER site license was amended to include dewatering and use of the evaporation ponds. The license amendment was approved in July 2022.

The evaporation ponds previously were able to evaporate 45 litres per second, which has also been assumed in the Scoping Study Water balance.

## Water Supply and Storage Distribution

Water management is a key aspect for the Youanmi Project, especially noting that during the time of the 1990s underground operations, there were unplanned events involving excess hypersaline and storm water that had negative impacts on production and development as well as poor outcomes for the environment downstream of the evaporation ponds.

The strategy for recommencement of underground mining operations hinges mainly around ensuring there is more than adequate capacity to evaporate or otherwise use water on site.

In the 1990's the evaporation ponds could not keep up with mine water adequately, especially when excessive hypersaline water was encountered in aquifers, and when Cyclone Bobby struck causing unplanned heavy rainfall.

The planned operation will utilise some of the existing evaporation ponds, as well as use innovative evaporation techniques, and a small (10 to 20 litre per second ) RO plant.

The option of pumping water to lake Noondie which is located 23km to the east of the site is also being considered as a contingency plan.

The site is expected to be self-sufficient and will not require additional water to be sourced from bore fields. Should there be a shortfall of water, there is some spare capacity in the form of Town Well bore, which in the current model is not utilised and is capable of supplying 4.1 litres per second.

There will be a standard set-up with respect to process water storage on site, and there will also be water stored but only for purposes of evaporation in the evaporation ponds.

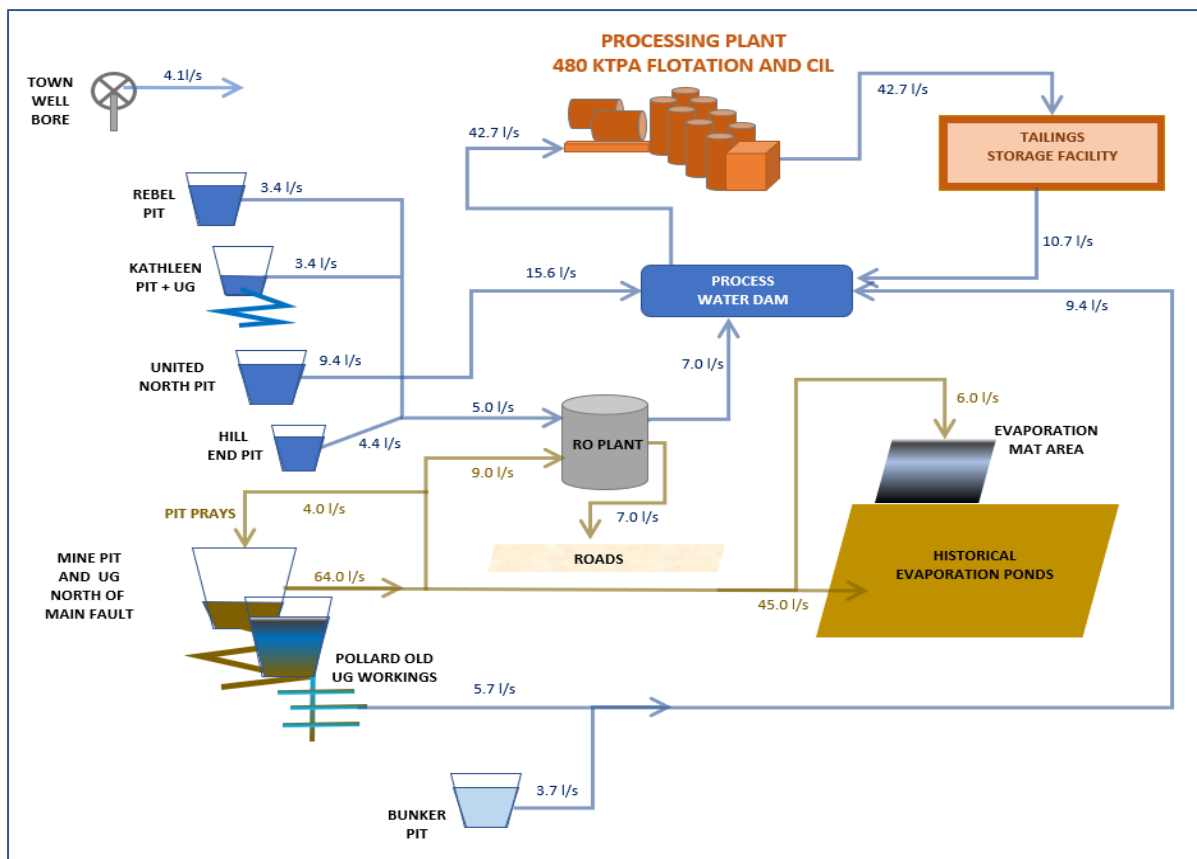


Figure 33. Site Water Balance Schematic

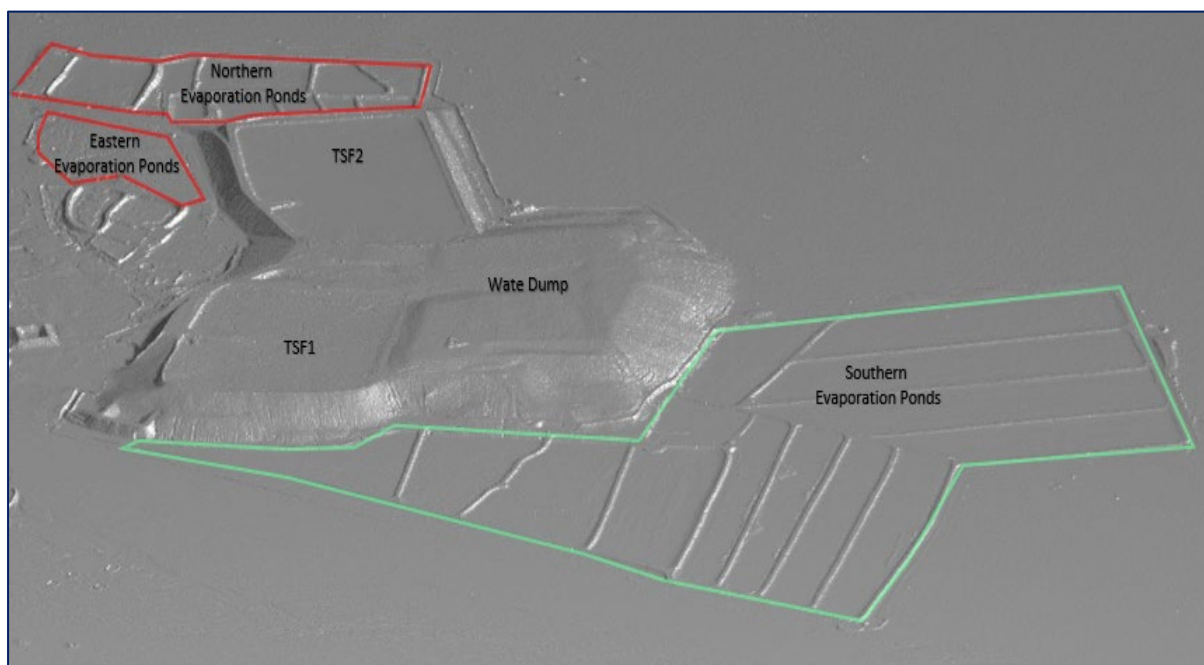


Figure 34. View of Evaporation Ponds Terrain Model (Green Area Relicensed Red Area not)

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## Environmental Social

The Youanmi site, having been worked extensively over three major campaigns of mining since 1894, is already significantly disturbed and has no special flora or fauna, or heritage significance that has been observed in various surveys conducted in the last 12 months by Rox.

The most noteworthy aspect environmentally is the mine closure cost, which was recently estimated to be \$11.7m. The financial model assumes that this is spent over the final 7 months of the Project. There are opportunities to lower mine closure cost, noting that once there is a contractor site presence during mining operations, mine closure works can be completed ahead of time and under cost by utilising existing fleet.

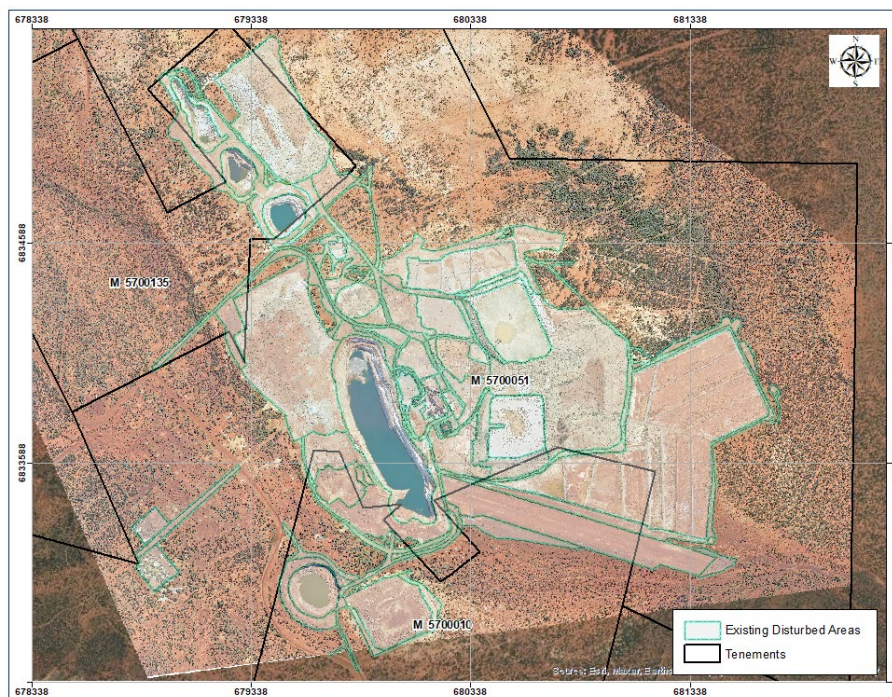


Figure 36. Existing Disturbed Areas at Youanmi Site

## Native Title and Heritage

### Native Title

The project area is not within a Native Title Claim Area. The Wutha group did have a prior claim in application over the area, but in March 2019, the application was dismissed.

### Heritage – Youanmi Site

Prior to 2022 there had been very few detailed surveys completed surrounding the Aboriginal or European Heritage sites.

In 2022 Aaron Rayner from AHA Logic was engaged to identify the presence of any Aboriginal heritage cultural material or Aboriginal heritage sites within a defined area that Rox is seeking to develop.

Prior to the field survey a desktop assessment considered the existing Aboriginal heritage information that is on the public record for the survey area and broader region. A search of the Aboriginal Heritage Inquiry System (AHIS) found that there are no recorded Aboriginal sites in the survey area. The nearest recorded Aboriginal site is Lake Noondie site ID 19515, a mythological place located approximately 20km to the east of the survey area. A search of the National Native Title Tribunal database found no future act decisions had been made for land within the survey area and consequently there are no records of sites of particular significance in the database.

The field inspection was undertaken between 24 and 26 June 2022 by Mr Aaron Rayner and Mr Terry Russell, Field Assistant and GIS expert. Access to the survey area was good given the network of haul roads and exploration access tracks. The field work was undertaken using both vehicle and pedestrian inspection. Given the relatively large size of the survey area and the high levels of ground disturbance the field methodology was designed to focus inspection on creek lines and areas where the ground was relatively intact.

No heritage sites were identified within the meaning of section 5 of the AH Act were identified, and it was recommended that there are no Aboriginal heritage management considerations that Rox needs to address.

### Heritage – Lake Noondie

As a contingency plan to be able to evaporate more water from site expansions or unexpected excess water during operations, Rox has been following a pathway to seek approval to discharge water to the nearby Lake Noondie, over which there lies a registered site. As part of the approvals process Rox has been consulting with the Wutha Traditional Owners.

Terra Rosa Consulting were commissioned to undertake a site identification heritage survey over areas planned for potential Lake Noondie pipeline development within the former Wutha native title claim area (WC1999/010), and to assist Rox in the consultation process with the registered knowledge holders for Site 19515, as is required under the Aboriginal Heritage Act as part of the approval process prior to discharging water into the lake.

The heritage survey was undertaken with Wutha Traditional Owners between 30 May to 1 June 2022 by seven Wutha representatives and one heritage consultant from Terra Rosa. Three Rox representatives were also present during this time to support the survey team. The results of the survey are summarised below:

- Department of Planning, Lands and Heritage (DPLH) registered site (DPLH ID 19515) is located within the survey area;
- No lodged or stored DPLH other heritage places are located within the survey area;
- No new heritage places were identified; and
- Several isolated artefacts were documented within DPLH 19515.

The full survey area includes the pipeline route to lake and the lake area planned discharge location. In the June 2022 survey only the areas within the lake were covered, with the remainder of the work planned to complete at a later date.

The Pithindara Songline, an extension of the serpent dreaming, extends from Lake Noondie, through Lake Barlee, Lake Rebecca, Sunrise and on towards Lake Austin. Lake Noondie is an important spiritual place for the Wutha Traditional Owners and the appropriate management and protection of country is intrinsic to their health and well-being. Having noted and discussed the presence of this dreaming site, Wutha Traditional Owner's stated that impacts of water discharge into this lake system are small and will not impact the spiritual significance of the site.



Figure 35. Part of the Lake Noondie Survey Team

## Permitting

The proposed underground development and development of four open pits is located within granted mining leases (specifically M57/10, M57/51, and M57/135) and which are the site of previous mining and processing operations. There are currently licenses and permits in place including:

- DWER Prescribed Premises License recently amended to re-instate the dewatering rate of 1,480,000kl/annum, approve the use of the evaporation ponds, and approve a new landfill location
- 5C Groundwater Extraction License, previously allowed to expire recently re-applied for to include more flexibility in dewatering from all areas for an increased number of usages
- Mine Closure Plan submitted 2019 due for renewal by December 2022
- Various Programme of Work (POW) approvals active for exploration activities

Approvals required to achieve the outcomes of the Scoping Study in its current format include:

- Mining Proposal and Mine Closure Plan
- Project Management Plan
- Further amendment of DWER site license to include processing plant and tailings dam
- Works Approval required for use of processing plant

It is noted that a heritage agreement is not required of the OYG leases and hence for the scope of the Study. A Native Vegetation Clearing Permit is also not required for the current scope on site, but will be required if other open pit mining areas are included in future plans. A Native Vegetation Clearing Permit will be required for dewater pipeline route access – an item considered not required at the stage with current knowledge and results of innovative evaporation techniques on site pending.

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## Operating Cost Estimate

Operating costs are derived from a number of sources including quotations and budget pricing supplied by suppliers, estimates based on similar WA mining operations, and pricing built up from processing plant suppliers scaled by accepted methods.

Table 13. Operating Costs Summary

Operating Costs <sup>1</sup>	\$m	\$/t Milled	\$/oz Payable
Mining	392	101	690
Processing	225	58	395
Site G&A	19	5	35
Transportation Charge	52	13	91
Smelter Treatment Charge	84	21	147
<b>C1 Cash Cost<sup>2</sup></b>	<b>772</b>	<b>198</b>	<b>1,358</b>
Royalty	46	12	81
Sustaining Capital	57	14	99
<b>All-in Sustaining Cost (AISC)<sup>3</sup></b>	<b>875</b>	<b>224</b>	<b>1,538</b>

Notes:

1. Operating costs presented in table above were calculated based on recovered gold after payability.
2. C1 cash cost includes mining, processing, administration, concentrate charges and accounting adjustments for stockpile movements.
3. All-in Sustaining Cost (AISC) per ounce payable includes C1 cash cost, royalties and sustaining capital. It does not include corporate cost, exploration cost and non-sustaining.

### Mining Costs

Open Pit Mining costs are derived from estimated cost per bcm rates for load and haul, drill and blast, and technical services, as well as an assumed cost per tonne for grade control drilling and related costs. Total cost per total bcm mined excluding capital costs is \$11, and with Open Pit mining capital related included is \$12 per total bcm mined or \$71/t of the production target mined.

Underground Mining costs are built up from a combination of unit rate drivers for each type of physical activity plus assumed fixed costs for contractor overheads and owner overheads. Mining costs also include site water management costs which is an assumed monthly cost. Total cost per tonne mined excluding capital costs is \$102 per tonne of the production target and with all Underground mining capital related is \$117 per tonne of the production target.

Table 14. Underground Mining LOM Total Costs by Year

	Unit	Project	YR0	YR1	YR2	YR3	YR4	YR5	YR6	YR7	YR8
Operating Cost (incl Site Dewater)	\$/t	102	111	101	103	114	100	113	107	94	78
UG Mining Capital	\$/t	15	183	38	13	10	7	6	6	5	5
<b>Total Mining Cost</b>	<b>\$/t</b>	<b>117</b>	<b>293</b>	<b>138</b>	<b>116</b>	<b>124</b>	<b>107</b>	<b>119</b>	<b>114</b>	<b>99</b>	<b>83</b>
<b>Total Mining Cost</b>	<b>\$m</b>	<b>427</b>	<b>28</b>	<b>55</b>	<b>46</b>	<b>51</b>	<b>55</b>	<b>57</b>	<b>56</b>	<b>52</b>	<b>27</b>

Table 15. Open Pit LOM Total Cost Summary

	Rate	Unit	Cost \$m	\$/bcm
Site Establishment / Mobilisation / Clearing			\$2.48	\$1.32
Load and Haul	\$2.78	/t total mined (average)	\$13.45	\$7.16
Drill and Blast	\$0.63	/t total mined (average)	\$3.05	\$1.62
Technical Services	\$0.78	/t total mined (average)	\$3.76	\$2.00
Grade Control	\$2.50	/t ore mined	\$0.68	\$0.36
<b>Total</b>	<b>\$4.84</b>	<b>/t total mined (average)</b>	<b>\$23.41</b>	<b>\$12.46</b>

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## Processing Costs

Processing costs are split into two unit rates, with one for oxide and transition material treatment which takes an assumed CIL treatment pathway only (\$46/t), and a second for treatment of sulphide material (\$58/t) which follows the flotation circuit pathway whereby a gold concentrate is produced for shipment and sale, and flotation tailings are treated through the CIL circuit to produce gold dore on site. The average overall processing cost over LOM is close to \$58/t given the small tonnage of CIL only material from the Open Pits of 127,000 tonnes, compared with total sulphide feed of 3.4Mt.

## Concentrate Related Costs

For all the concentrate production target an average mass pull of 10% is assumed, assuming 88% of the sulphide feed gold in the process reports to the float concentrate with an average gold grade of 45 g/t Au. Concentrate Haulage cost assumed from Youanmi to Perth's Fremantle Port assumed a price of \$0.154/tkm which equates to \$90/t over the 583km distance.

Shipping related charges assumed totalled \$48/t of concentrate made up of storage \$3/t, Shipping \$39/t, Cargo \$2.25/t, and Assays \$3/t.

The total of all concentrate related costs off site including TCRCs, any penalties payable, trucking and shipping comes to \$359/t of concentrate which is around 14% of the value of the concentrate.

## G & A Costs

A fixed monthly cost of \$190k per month is allocated for site G and A costs. Included in this is personnel costs for Site General Manager, Commercial Manager, as well as Administration, Safety, Training, and Environment functions. The major component of this cost is salaries, and also included is flights allocation (\$29k), accommodation allocation (\$11k), and other minor costs. This cost does not include the mining department or processing department administration related costs which are allowed for in those area rates, for mining as an overhead cost (open pit as a bcm rate, and underground as a monthly rate), and in the processing costs is built into the unit operating cost per tonne rates.

## Royalties

Royalties are incurred as follows:

- WA State Government Royalty of 2.5% of gold revenues;
- Redscope Enterprises Pty Ltd (a wholly-owned subsidiary of Venus Metals) holds a 0.7% net smelter royalty, subject, in the case of M57/10 to the St Barbara Royalty;
- St Clair Resources holds a 0.3% net smelter royalty; and
- St Barbara holds a 2% gross royalty on M57/10.

The St Barbara royalty only would affect the Bunker Pit cut-back which is presently not in the base case plan however may be included in later studies.

## Capital Cost Estimate

Capital costs are derived from a number of sources including quotes and budget pricing from suppliers and estimates based on recent actual pricing from WA similar mines. They include all pre-production site, process plant, tailings dam, and mining development related including dewatering, as well as sustaining capital postproduction start-up.

Table 16. Capital Cost Requirement

Pre-Production Capital		100%	RXL (70%)
Site Infrastructure	\$m	6	5
Processing Facilities	\$m	66	46
Water Management	\$m	6	4
Underground Development	\$m	19	12
Open Pit	\$m	2	2
<b>Total Pre-Production</b>	<b>\$m</b>	<b>99</b>	<b>69</b>
<b>Sustaining Capital – Life Of Mine</b>			
Underground <sup>1</sup>	\$m	38	27
Open Pit <sup>2</sup>	\$m	21	14
<b>Total</b>	<b>\$m</b>	<b>59</b>	<b>41</b>

Notes:

- Underground mining sustaining cost includes dewatering related costs
- Open pit mining sustaining cost includes site rehabilitation

Site Infrastructure pre-production capital includes:

- Village expansion project to add 112 rooms to the existing village
- Site roads and carparks
- Radio communications infrastructure
- Administration office complex
- Site vehicles

Processing Plant pre-production capital includes:

- Design and Construction of new 480ktpa CIL and Flotation Circuit
- Plant costs including - EPCM, global costs, bulk earthworks, electrical, buildings, crushing circuit, milling and classification circuit, flotation circuit, leaching and absorption circuit, elution and regeneration circuit, gold room, services, reagents areas, tailings area (not including dam), water services, and contingency
- Owner costs including – Labour (supervision), first fills, commissioning spares, warehouse, critical spares

Tailings Dam pre-production capital includes:

- Design and construct of initial tailings dam and subsequent expansions to accommodate life of mine tailings storage requirement

Open Pit Mining pre-production capital includes:

- Site earthworks
- Contractor establishment
- IT, Survey equipment and software
- Wash pad installation
- Electrical and reticulation establishment
- Initial dewatering equipment and piping
- Light vehicles

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Open Pit Mining sustaining capital includes Mine Site Rehabilitation

Underground Mining pre-production capital includes:

- Site Earthworks
- Office and changerooms
- Computer Hardware and software
- Electrical reticulation establishment
- Primary ventilation fans
- Light vehicles
- Refuge Chambers
- Mines Rescue Equipment
- Fire Truck
- Survey Equipment
- Safety Equipment first fills
- Wash pad facility
- Underground radio Head End set up
- Underground contractor site establishment related costs
- Capital Development costs specific to areas leading up to mining production for the area

Underground Mining sustaining capital includes:

- Auxiliary fans
- Miscellaneous drilling
- Underground substations installations
- Electrical backbone
- Underground pump station installations and rising mains
- Underground compressed air receiver
- Capital development based cost pre-production commencement for the relevant area

#### **Processing Plant Cost Breakdown**

The estimate for the processing plant cost construction was initially completed by Como Engineers for a smaller (300ktpa) processing plant with different configurations (specifically POX, Albion Process™, and UFG options), and was later scaled up to a 480ktpa size for a variant on those options being Produce Gold Concentrate via Flotation with CIL Plant for a total cost of \$66m. Estimated break down of the total capital cost is shown below.

Table 17. Processing Plant Capital Costs Breakdown

Plant Costs		Equipment/ Material Costs	Installation	Total
EPCM	\$m	-	4.3	4.3
Global Costs	\$m	1.4	-	1.4
Bulk Earthworks	\$m	-	0.4	0.4
Electrical	\$m	3.3	3.2	6.5
Buildings	\$m	2.7	0.6	3.3
Crushing	\$m	10.7	2.0	12.7
Milling and Classification	\$m	7.1	1.6	8.7
Flotation	\$m	4.0	1.0	5.0
Leaching and Adsorption	\$m	5.0	1.6	6.6
Elution and Regeneration	\$m	3.3	0.7	4.0
Goldroom	\$m	0.6	0.2	0.8
Services	\$m	0.3	0.1	0.4
Reagents	\$m	1.1	0.2	1.3
Tailings	\$m	1.4	0.3	1.7
Water Services	\$m	0.6	0.2	0.8
<b>Subtotal</b>	<b>\$m</b>	<b>41.5</b>	<b>16.4</b>	<b>57.9</b>
Contingency 10%	\$m	4.2	1.6	5.8
<b>Total</b>	<b>\$m</b>	<b>45.7</b>	<b>18.0</b>	<b>63.7</b>
Owners' Costs		Equipment/ Material Costs	Labour	Total
Client Costs	\$m	-	1.0	1.0
First Fills	\$m	0.3	-	0.3
Commissioning Spares	\$m	0.2	-	0.2
Warehouse and Critical Spares	\$m	0.6	-	0.6
<b>Subtotal</b>	<b>\$m</b>	<b>1.1</b>	<b>1.0</b>	<b>2.1</b>
Contingency 10%	\$m	0.1	0.1	0.2
<b>Total</b>	<b>\$m</b>	<b>1.2</b>	<b>1.1</b>	<b>2.3</b>
Plant + Owners' Costs				
Plant Costs	\$m	45.7	18.0	63.7
Owner's Costs	\$m	1.2	1.1	2.3
<b>Total Costs</b>	<b>\$m</b>	<b>46.9</b>	<b>19.1</b>	<b>66.0</b>

## Concentrate Market and Offtake

The main buyers in the current market are in China, with the largest percentage extracting gold through copper smelters, and the remainder via roasting plants. Other buyers of concentrate utilise hydrometallurgical process plants incorporating POX or BIOX circuits.

Arsenic and other deleterious elements are important in the relative value of gold concentrates. Buyers typically incorporate penalties based on arsenic content and when a level of 6.5% arsenic is reached the product is considered not saleable.

Rox has commenced discussions with potential buyers who have all pointed out that the relatively low arsenic content of Youanmi concentrate makes it more desirable not just for the final buyer but potentially for other producers who may wish to blend down their high arsenic levels.

Various market estimates suggest that approximately 12 per cent of global primary gold production is carried in concentrates.

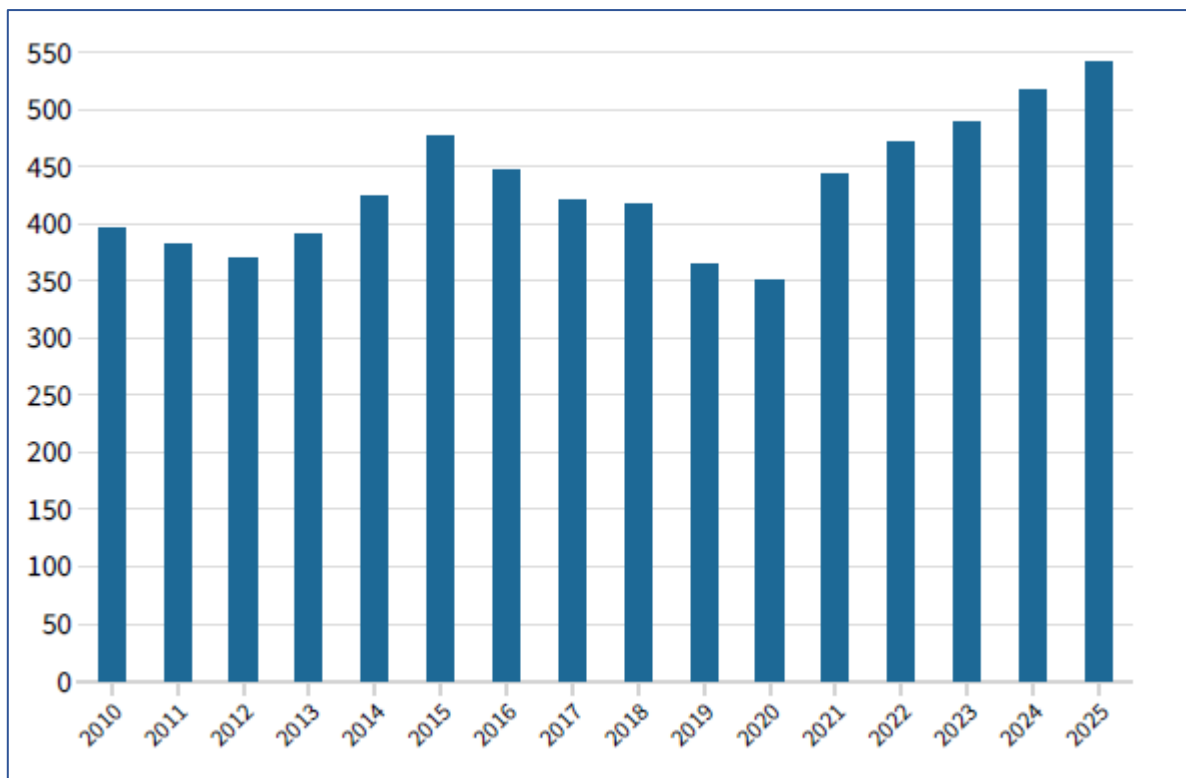


Figure 36. Gold in Concentrate (tonnes traded) by Year, forecast to 2025 (Source: MetalsFocus)

At present, the key purchasers for gold concentrates are generally in China although some Australian and international based roasters, pressure oxidation (POX) and bio-oxidation (bioX) processors have capacity.

Gold roasters in China are mostly located in the provinces of Hunan, Henan and Shandong. Originally constructed to process local concentrates, they now also purchase imported feed. Mines can sell to these smelters either under direct contracts or more typically via traders.

Chinese import regulations focus upon the contained gold grade as well as levels of deleterious elements, in particular arsenic. High levels of arsenic-in-concentrate have a detrimental effect on gold recovery, which will be reflected in payment terms for the concentrate. At a very high level (>6.5 per cent) it may be non-deliverable under Chinese regulations or may attract punitive import taxes.

Gold Concentrate contracts most typically have a percentage deduction to gold content plus penalties for deleterious elements, and the seller arranges and pays for freight. Alternatively, some contracts may more closely conform to typical copper concentrate NSR deductions including TC/ RC, gold payability and other deductions.

Commercial terms for gold concentrates are typically negotiated on a stand-alone basis. Given the expected low level of deleterious elements in Youanmi Gold Concentrate, notably Arsenic, the Company has received some initial interest from traders. Based on this interest and their relevant experience (including at Bardoc and Wiluna) the Rox Board and Management are confident there will be international (and potentially domestic) market demand for Youanmi Gold Concentrate.

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## Financial Analysis

At a conservative gold price of A\$2,450 / oz which is lower than the average gold spot price in the last 12 months, the Project is forecasted to generate a healthy unleveraged and pre-tax NPV<sub>5%</sub> of approximately \$303m and an unleveraged and pre-tax IRR of approximately 45%. The financial summary is presented below:

Table 18. Financial Results Summary

Financials		
<b>Key Financial Assumptions</b>		
Gold Price	\$/oz	2,450
Discount Rate	%	5
<b>Project Valuation<sup>1</sup></b>		
Project EBITDA	\$m	577
Project Free Cash Flow (undiscounted and pre-tax)	\$m	418
Project NPV (unleveraged and pre-tax)	\$m	303
Project IRR (unleveraged and pre-tax)	%	45
Payback Period (unleveraged and pre-tax) <sup>2</sup>	years	3.0
Capital Intensity <sup>3</sup>	\$/oz	1,386
Ratio NPV (unleveraged and pre-tax) / Pre-production Capital	ratio	3.1

Notes:

- 1) Financial results are unleveraged and pre-tax numbers calculated based on 100% basis. Rox owns 70% of the OYG joint venture.
- 2) Payback period is calculated from the first month of gold production.
- 3) Capital intensity is calculated by dividing pre-production capital by annual payable metal.

## Production Target

Total payable metal over the life of the Project is forecast to be approximately 569koz, annual numbers with the breakdown of indicated and inferred resources is shown in the figure below. Of the Mineral Resources scheduled for extraction in this Scoping Study production target, approximately 79% are classified as Indicated and 21% as Inferred in the first three years of the production target. Approximately 63% are classified as Indicated and 37% as Inferred during the 8-year evaluation period. The Youanmi Gold Project has been mined over four main campaigns since discovery of the original orebody in 1894, with approximately 667koz produced. The Company therefore considers the Youanmi Gold Project to be a very mature project which increases the confidence of converting the current Mineral Resources into Ore Reserves.

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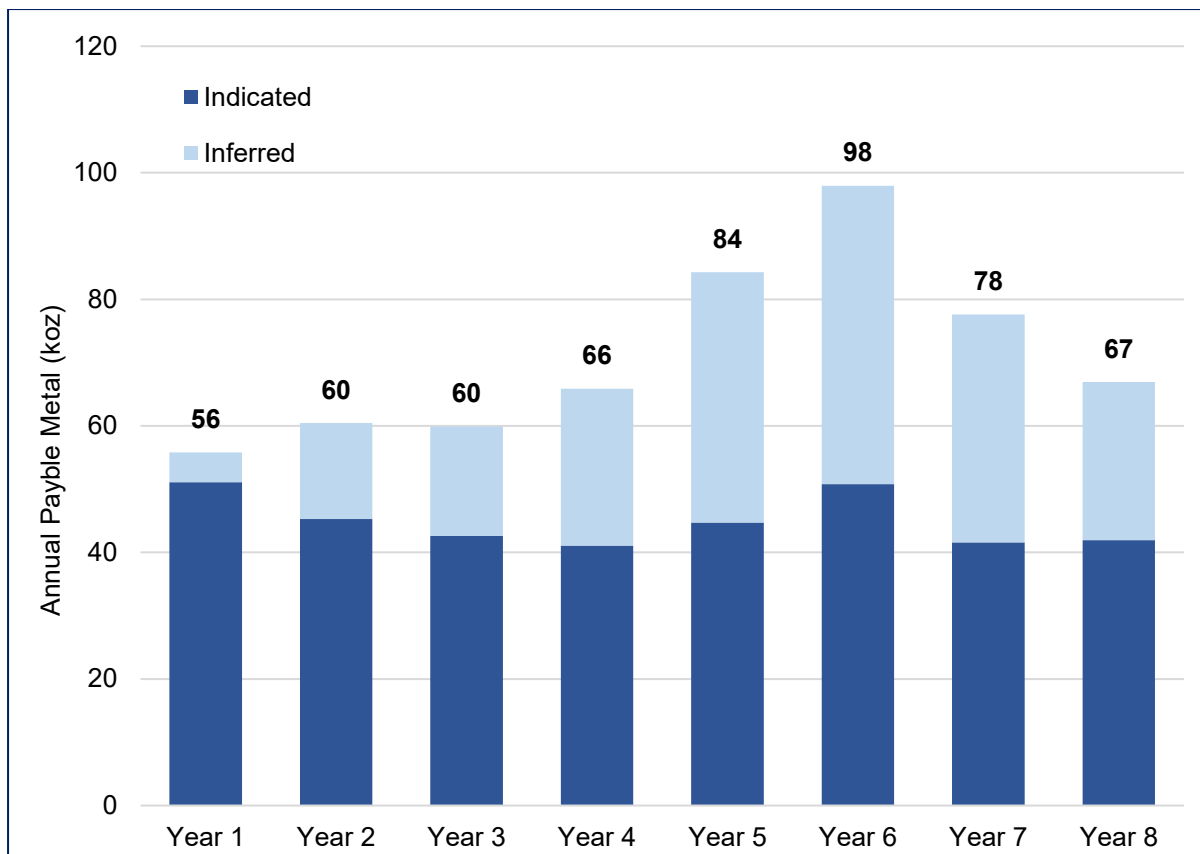


Figure 37. Annual Payable Metal Breakdown

## Sensitivity Analysis

The Project's unleveraged and pre-tax NPV is most sensitive to changes in gold price and operating cost, while it is more resilient to changes in the discount rate, and capital costs as shown in the figure below.

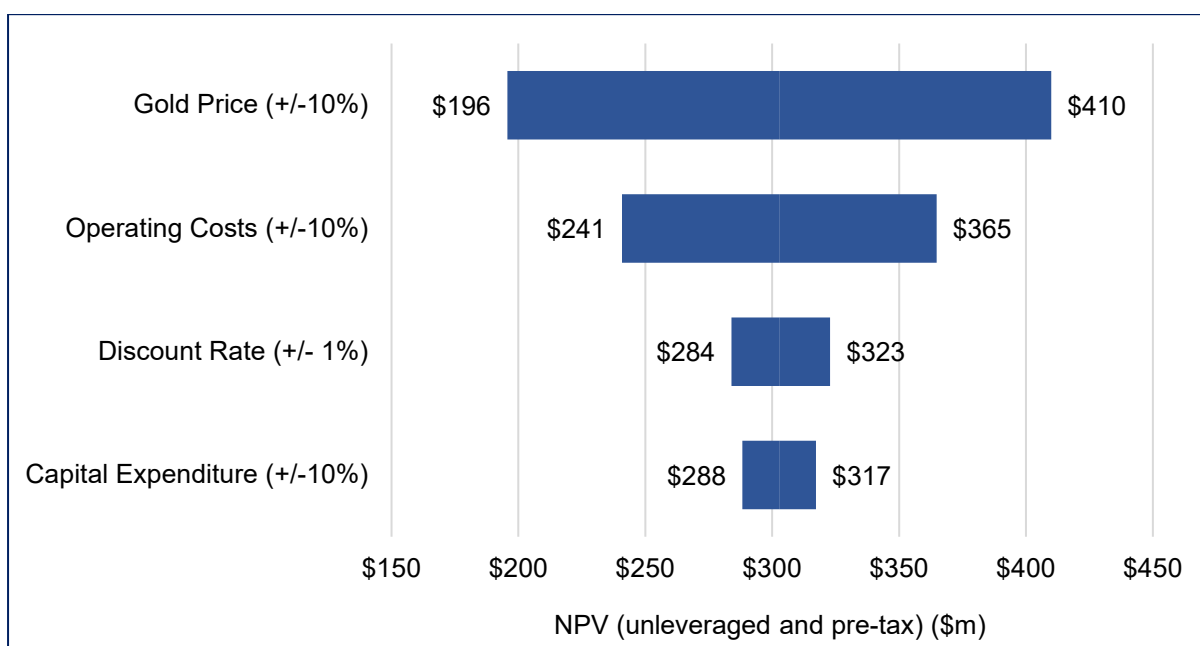


Figure 38. Project NPV Analysis



Table 19. Scenario Analysis - Gold Price Assumptions

Gold (A\$/oz)	Price										
		\$2,000	\$2,100	\$2,200	\$2,300	\$2,400	<b>Base Case</b> \$2,450	\$2,500	\$2,600	\$2,700	
NPV	\$m	106	150	193	237	281	<b>303</b>	325	368	412	
IRR	%	20	26	32	37	43	<b>45</b>	48	54	59	
Payback	years	4.9	4.6	4.0	3.7	3.2	<b>3.0</b>	2.8	2.5	2.3	
Annual EBITDA	\$m	41	48	55	62	69	<b>72</b>	76	82	89	
LOM EBITDA	\$m	329	384	439	494	549	<b>577</b>	604	659	714	
LOM Free Cash Flow	\$m	171	226	281	336	391	<b>418</b>	446	500	555	

## Upside and Growth

In the current market environment, the Study has focused on high quality outcomes at a low capital cost. The following factors have not been captured in the Scoping Study and can offer medium term upside to the financial outcomes:

- Growth in Open Pit material:
  - The majority of the open-pit material is excluded from the Study (only 3% of the Near Surface Mineral Resource is included in mining production target) to lower capital and operating costs given current external market pressures on costs. Underground material produces strong cash flows which can de-risk the Project and be used to assist with funding the expansion to include open pits
  - Further exploration can potentially increase the Near Surface Resource
- Underground resource growth:
  - Only 27% of the Underground Mineral Resource is included in mining production target
  - Kathleen Decline and related stopes excluded from the Scoping Study due to high percentage of inferred material, good potential to convert with infill drilling to the indicated category
  - Resource remains open down dip and along strike
  - Maximum depth of the Mine Lode interpretation is to approx. -600mRL, 1060m below the natural surface
  - Midway Lode recently discovered between the Scoping Study design area and Bunker Pit has good potential for extension being open in all directions
- Regional exploration:
  - More than 50km strike of Youanmi Shear Zone is largely untested by historic drilling
  - Follow up drilling (Aircore and RC) is planned along strike and down dip of newly identified mineralisation
  - Regional target generation is ongoing on 50km of strike of the Youanmi Shear Zone

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## Project Development Schedule

- Commenced - PFS work commenced early in 2022 with the commencement of the second stage of Metallurgical Testwork expected to be completed by December 2022.
- July 2022 – December 2022
  - Commence Processing Plant design and costing – 6 months
  - Commence Infill drilling Youanmi Underground Resource – 6 months
  - Complete Geotechnical, Metallurgical, and Waste Rock Characterisation drilling
  - Complete Flora and Fauna Surveys – Mine and Lake Noondie Areas
- January – June 2023
  - Update Underground Resource Model and Near Surface Resource Model
  - Complete Geotechnical, Hydrology, Hydrological, and Waste Rock Characterisation work (Ethnographic work already completed in mine area)
  - Commence PFS Mine Design and Scheduling Options
- H2 2023
  - Complete Mine Design, Schedules, and Financial Modelling
  - Release PFS

## Funding

To achieve the range of outcomes indicated in the Scoping Study, funding in the order of \$134m will likely be required, which includes all pre-production costs of which the pre-production capital requirement is approximately \$99m. The Company has formed the view that there is a reasonable basis to believe that requisite future funding for development of the Project will be available when required. The grounds on which this reasonable basis is established include:

- The Project has strong technical and economic fundamentals which provides an attractive return on capital investment and generates robust cashflows at conservative gold prices. This provides a strong platform to source debt and equity funding.
- The Company has received significant interest from various financial institutions, credit funds and private equity firms regarding financing for the project, with preliminary discussions occurring.
- The Company has a strong track record of raising equity funds as and when required to further the exploration and evaluation of the Youanmi Gold Project.
- The Company has appointed Argonaut PCF as its corporate debt advisor in relation to the funding of the Youanmi Gold Project. Argonaut PCF have extensive experience in funding resource projects, including Western Australian gold projects.

There is, however, no certainty that the Company will be able to source funding as and when required. Typical project development financing would involve a combination of debt and equity. It is possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of the Company's existing shares.

## Conclusions and Next Steps

The Scoping Study provides justification that the Youanmi Gold Project is a commercially viable stand-alone gold mining operation and accordingly the Board of Rox Resources Limited has approved progression of the Project to a Preliminary Feasibility Study ("PFS").

PFS work will immediately commence in parallel with infill drilling at Youanmi to convert inferred resources to indicated resources, ongoing exploration and resource growth.

## Reasonable Basis for Forward Looking Assumptions

No Ore Reserve has been declared. This document has been prepared in compliance with the JORC Code (2012) and the ASX Listing Rules. All material assumptions on which the Scoping Study production target and projected financial information are based have been included in this release and disclosed in the table below.

Consideration of Modifying Factors in the format specified by JORC Code (2012) Section 4

Criteria	JORC Code explanation	Commentary
<b>Mineral Resource estimate for conversion to Ore Reserves</b>	<ul style="list-style-type: none"> <li>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</li> <li>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</li> </ul>	<ul style="list-style-type: none"> <li>The Mineral Resource estimate on which the Scoping Study is based was announcements to the ASX on 20th April 2022 for the Near Surface Resource, and 20<sup>th</sup> January 2022 for the Youanmi Underground Resource (Underground Resource).</li> <li>No Ore Reserve has been declared as part of the Scoping Study.</li> </ul>
<b>Site Visits</b>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>The Competent Person has undertaken site visits.</li> </ul>
<b>Study status</b>	<ul style="list-style-type: none"> <li>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</li> <li>The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</li> </ul>	<ul style="list-style-type: none"> <li>No Ore Reserve has been declared.</li> <li>The Study is a Scoping Study.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The basis of the cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>Cut-off grade parameters are based on operating costs and site overheads.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</li> <li>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</li> <li>The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.</li> <li>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</li> <li>The mining dilution factors used.</li> <li>The mining recovery factors used.</li> <li>Any minimum mining widths used.</li> <li>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</li> </ul>	<ul style="list-style-type: none"> <li>No Ore Reserve has been declared.</li> <li>Refer to Mine Design and Schedule Section.</li> <li>UG Geotechnical parameters were provided by an independent consultant based on detailed assessment of project information including information from drilling. Open pit batter angles were designed at 55 degrees in oxide, 60 degrees in transition, and 70 degrees in fresh material, applying 4m berm widths at 20m vertical intervals, and 12m wide access ramps resulting in overall wall angles ranging between 40 and 45 degrees. or Open Pits grade control drilling is assumed at a rate of 1 metre drilled for every 12 tonnes of production material equating to \$2.50 per tonne of production material assuming a cost \$30 per drill metre including drilling an assaying. For Underground Grade control drilling of 1m of diamond drilling per 300 tonnes of production material at a rate of \$222 per metre including assaying as well as geologists labour assumed in the mine overhead costs.</li> <li>Pit optimisations assumed overall slope angles of 38 degrees, and mining costs of \$10</li> <li>Underground mining dilution applied on all stopes of 0.3m on the hangingwall, and 0.2m on the footwall at a grade determined by the resource model during the DESWIK stope optimising process. Open Pit mining dilution of 30% applied for Grace Stage 1 open pit, and 15% for all other pits.</li> <li>Underground mining recovery based on leaving sill pillars placed strategically, and then applying a global 85% mining recovery to account for island pillars and</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>The infrastructure requirements of the selected mining methods.</li> </ul>	<p>production loss from bogging operations. Open Pit mining recovery of 95% applied to all pits.</p> <ul style="list-style-type: none"> <li>For underground stope optimisations a minimum true stope width of 2.5m was assumed. For open pit minimum width of pit base of 10m, and minimum width of cutback 10m.</li> <li>Inferred Mineral Resources account for 62% of the metal production contemplated by this this Scoping Study. The project remains economic under the gold price, cost and productivity assumptions made in this Scoping Study irrespective of the inclusion or otherwise of Inferred Mineral Resources.</li> <li>Refer to Infrastructure Section.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</li> <li>Whether the metallurgical process is well-tested technology or novel in nature.</li> <li>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</li> <li>Any assumptions or allowances made for deleterious elements.</li> <li>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</li> <li>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Metallurgy and Processing section of announcement.</li> <li>The process is widely used and well understood in so far as producing a gold concentrate via a standard flotation circuit process flow, and producing bullion on site from oxide feed and flotation tails using a standard CIL process flow.</li> <li>Refer to Metallurgy and Processing sections. Further comminution and metallurgical testwork has also commenced as part of the next phase of study work.</li> <li>Penalties to be deducted from concentrate sales are assumed at recent market rates for As content in concentrate at an assumed average grade of 2% As by weight, which is supported by the testwork to date.</li> <li>Ore from the from historical mining of both the Youanmi Underground, and Open Pits mine was processed in the 1980s, and 1990s on site and metallurgical properties are well understood especially with respect to flotation of the underground sulphide material.</li> <li>N/A</li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li>The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Permitting section.</li> <li>Waste rock characterisation has been completed for the Grace Stage 1 Open Pit and will be completed prior to the commencement of mining of the other open pits. Waste rock composition from historical underground mining is well understood with more of the same benign granite and basalt materials expected in the planned mining, noting also that formalised waste rock characterisation work for the planned underground mining areas will be carried out before mining commences.</li> </ul>
<b>Infrastructure</b>	<ul style="list-style-type: none"> <li>The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.</li> </ul>	<ul style="list-style-type: none"> <li>Sufficient land is available within the Mining Leases to accommodate the infrastructure contemplated by this Scoping Study. There exists significant accommodation, roadway, airstrip, tailings dam, and evaporation pond infrastructure already on site. There is an abundance of water required for mining and treatment operations. For completion of civil construction works including the planned processing facility, and village expansion, the company has a view after discussions with relevant suppliers that resources required to complete the construction will be available when required.</li> </ul>
<b>Costs</b>	<ul style="list-style-type: none"> <li>The derivation of, or assumptions made, regarding projected capital costs in the study.</li> <li>The methodology used to estimate operating costs.</li> <li>Allowances made for the content of deleterious elements.</li> <li>The source of exchange rates used in the study.</li> </ul>	<ul style="list-style-type: none"> <li>Project capital costs for the processing plant have been provided at <math>\pm 35\%</math> by experienced constructors for 300 ktpa process plant option and scaled up using scaling factors to 480 ktpa also by an independent experienced constructor to a level of accuracy of <math>\pm 40\%</math>. For the tailings dam capital costs recent industry actuals for similar size and type of dam was used. For village expansion capital costs were based on recent quote from a supplier. For all other capital costs including infrastructure and mining related costs have</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>• Derivation of transportation charges.</li> <li>• The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</li> <li>• The allowances made for royalties payable, both Government and private.</li> </ul>	<p>been estimated from similar Western Australian mining operations.</p> <ul style="list-style-type: none"> <li>• Project operating costs are derived from budget pricing provided to the Company and estimates from similar Western Australian mining and processing operations. Unit Costs are estimated using reasonable consumable price estimates, equipment productivity assumptions, current labour costs and consumable price assumptions.</li> <li>• Penalties are assumed per tonne of concentrate sold based on an average Arsenic content of 1.9%, and recent industry actual penalties.</li> <li>• All costs were estimated in Australian dollars.</li> <li>• Transport charges are based on industry standard rates assumptions. Concentrate Haulage cost assumed from Youanmi to Perth Port assumed a price of \$0.154/tkm which equates to \$89.57 per tonne over the 583km distance. Shipping related charges assumed totalled \$47.67 per tonne of concentrate made up of storage \$3.13 per tonne, shipping \$39.29 per tonne, Cargo \$2.25 per tonne, and Assays \$3.00 per tonne.</li> <li>• Concentrate treatment and refining charges and arsenic penalty assumptions in the financial model are based on market observations for similar products where available.</li> <li>• The state government royalty of 2.5% is applied in the economic analysis. Two other royalties are also applied specifically 0.7% to Venus Metals, and 0.3% to Claire Resources as per relevant agreements.</li> </ul>
<b>Revenue factors</b>	<ul style="list-style-type: none"> <li>• The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</li> <li>• The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</li> </ul>	<ul style="list-style-type: none"> <li>• The derivation of feed grades comes from the Mineral Resource estimates with the application of dilution modifying factors as outlined above.</li> <li>• The product to be sold is gold in the form gold concentrate and doré bars produced on site. The gold price assumed is A\$2,450 per ounce. Assumed gold concentrate payability is based on recent market observations.</li> </ul>
<b>Market assessment</b>	<ul style="list-style-type: none"> <li>• The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</li> <li>• A customer and competitor analysis along with the identification of likely market windows for the product.</li> <li>• Price and volume forecasts and the basis for these forecasts.</li> <li>• For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</li> </ul>	<ul style="list-style-type: none"> <li>• Gold doré bars will be sold at spot price, and gold concentrate will be sold at spot price adjusted with a payability factor.</li> <li>• NA</li> <li>• NA</li> <li>• NA</li> </ul>
<b>Economic</b>	<ul style="list-style-type: none"> <li>• The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</li> <li>• NPV ranges and sensitivity to variations in the significant assumptions and inputs.</li> </ul>	<ul style="list-style-type: none"> <li>• Refer to economic analysis, which assumes a discount rate of 5%, and nil inflation.</li> <li>• Economic analysis includes a sensitivity analysis on various cost factors gold grade and gold price. price scenarios.</li> </ul>
<b>Social</b>	<ul style="list-style-type: none"> <li>• The status of agreements with key stakeholders and matters leading to social licence to operate.</li> </ul>	<ul style="list-style-type: none"> <li>• Given the history of mining on the leases, and the recent stakeholder engagement processes undertaken by the company, there are no issues expected around forming agreements with key stakeholders if so required to complete the works as planned.</li> </ul>
<b>Other (incl Legal and Governmental)</b>	<ul style="list-style-type: none"> <li>• To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</li> </ul>	<ul style="list-style-type: none"> <li>• No Ore Reserve has been declared.</li> <li>• No naturally risks have been identified.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Any identified material naturally occurring risks.</li> <li>The status of material legal agreements and marketing arrangements.</li> <li>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</li> </ul>	<ul style="list-style-type: none"> <li>The project is 70% owned by Rox (30% Venus Metals), and there are no marketing arrangements in place.</li> <li>All of the working area in the study are on approved mining leases with no outstanding issues or requirements with DMIRS. There are no third party unresolved matters that may impact upon approvals.</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>The basis for the classification of the Ore Reserves into varying confidence categories.</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> <li>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</li> </ul>	<ul style="list-style-type: none"> <li>No Ore Reserve has been declared.</li> <li>No Ore Reserve has been declared.</li> <li>No Ore Reserve has been declared.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Ore Reserve estimates.</li> </ul>	<ul style="list-style-type: none"> <li>No Ore Reserve has been declared.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.</li> <li>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.</li> <li>Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.</li> <li>It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul style="list-style-type: none"> <li>No Ore Reserve has been declared.</li> <li>Metallurgical recoveries have been based on testwork data.</li> <li>Costs have been derived from both recent industry data and estimations from independent consultants and suppliers.</li> <li>Cost estimate accuracy for the Scoping Study is considered to be in the order of <math>\pm 40\%</math>.</li> </ul>