

# 12 July 2023

# Murchison Gold Project Feasibility Study Outlines 660koz Initial Production Plan

- Average annual gold production of 80,000oz over the first eight years, with peak production of 103,000oz in year six.
- Recovered gold production of 663,000oz over 9.3 years (8 years mining, 1.3 years stockpile processing), a 57% improvement on total gold production since the December 2021 Scoping Study.
- Initial Probable Ore Reserve of 4.1Mt @ 3.1g/t gold for 410,000oz.
- 92% of production in the first three years is from Measured and Indicated Mineral Resources.
- Undiscounted free cash flow (after capital and pre-tax): \$363M<sup>1</sup> (\$2,750/oz) and \$521M (\$3,000/oz).
- Net Present Value (NPV<sub>5%</sub>) pre-tax: \$249M (\$2,750/oz) and \$371M (\$3,000/oz).
- Internal Rate of Return pre-tax (IRR): 40% (\$2,750/oz) and 56% (\$3,000/oz).
- Payback following process plant commissioning: 22 months (\$2,750/oz) and 16 months (\$3,000/oz).
- All-in Sustaining Cost (AISC): \$1,684/oz.

**Commenting on the Feasibility Study outcomes, Meeka's Managing Director Tim Davidson said:** "Since we acquired the Project in 2021 we have expanded the Mineral Resource by over 50% and with the release of this Study, outlined a straightforward development strategy that delivers meaningful production and financial outcomes for the Company over an initial 9.3 years.

With over 92% of production in the first 3 years coming from the higher confidence Measured and Indicated Mineral Resources, and the release of a 410koz Ore Reserve with this Study, we believe we have a strong foundation on which to develop. Additionally, the Mineral Resources that support the planned underground mines remain open at depth with strong opportunity to grow.

We are now progressing the remaining environmental studies required to permit the Project and investigating opportunities to accelerate the Project development timeline through toll milling of higher-grade starter pits. Drilling for Mineral Resource upgrade and growth will also advance over the coming months."

92% of production in the first three years is from JORC Measured and Indicated Mineral Resources (Inferred 8%). 71% of total production is from JORC Measured and Indicated Mineral Resources (Inferred 29%). 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.

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<sup>&</sup>lt;sup>1</sup> All amounts are in Australian dollars unless stated otherwise.

# **Financial Metrics**

- Operating and capital cost estimates in this Study are considered to be accurate within ±25%.
- All amounts are in Australian dollars unless stated otherwise.

# \$2,750/oz gold price

- Undiscounted free cash flow of \$363 million pre-tax and \$261 million post-tax.
- NPV<sub>5%</sub> of \$249 million pre-tax and \$171 million post-tax.
- IRR of 40% pre-tax and 30% post-tax.
- Payback of 22 months following process plant commissioning.
- AISC of \$1,684/oz.

# \$3,000/oz gold price

- Undiscounted free cash flow of \$521 million pre-tax and \$372 million post-tax.
- NPV<sub>5%</sub> of \$371 million pre-tax and \$256 million post-tax.
- IRR of 56% pre-tax and 41% post-tax.
- Payback of 16 months following process plant commissioning.
- AISC of \$1,696/oz.

# **Production Profile**

- Average annual gold production of 80,000oz over the first eight years.
- Peak production of 103,000oz in year six.
- Recovered gold production of 663,000oz over an initial 9.3 years.

# **Production Growth Opportunities**

- There is substantial opportunity to build on this base case production plan prior to development:
  - ✓ 14,300oz of in pit Inferred Mineral Resources at Turnberry were treated as waste in the production plan in order to report <30% Inferred Mineral Resources as per the ASX reporting requirements. Near-term infill drilling will target these Mineral Resources for upgrade and inclusion in the production plan.
  - ✓ Additionally, Mineral Resources not included in the Study (518koz) have potential for inclusion in future studies and will potentially increase Ore Reserves and the production plan beyond 9.3 years.
  - ✓ The Mineral Resources that support the planned mines remain open at depth with strong opportunity to grow. Drilling for Mineral Resource upgrade and growth will advance over the coming months.
  - ✓ Ongoing infill and extensional drilling programs targeting Mineral Resource growth and upgrade, including:

- At the large Turnberry deposit (685Koz @ 2.0g/t Au) there is opportunity to upgrade and extend shallow open pit Mineral Resources, which are currently classified as Inferred, and extend the deposit at depth where it remains open.
- The highly fertile 7km gold shear system extending from Turnberry to St Anne's has had only sparce, broadly spaced reconnaissance drilling, has intersected gold and is a near term growth target.
- At the high-grade Andy Well mine the Mineral Resource is open at depth with drilling intersecting gold below the Mineral Resource, including 0.4m @ 25.7g/t Au (WBDD02).

# **Production Confidence**

- 92% of production in the first three years is from JORC Measured and Indicated Mineral Resources (Inferred 8%).
- In accordance with ASX reporting requirements, the Pre-feasibility Study ("PFS" or "Study") production plan is constrained to >70% of production coming from Measured and Indicated Mineral Resources. Accordingly, 70.6% of total production over the initial 9.3 years (8 years mining, 1.3 years stockpile processing) is from Measured and Indicated Mineral Resources (Inferred 29.4%). Furthermore, only 57% of existing Mineral Resources have been included within the Study. The Company's ongoing drilling programs show positive results, which are expected to upgrade the Mineral Resource and increase the Study confidence.
- Initial Probable Ore Reserve of 4.1Mt @ 3.1g/t gold for 410,000oz.

# Processing

- The Project is based on development of a standalone 1.0Mtpa carbon-in-leach (CIL) processing facility.
- The plant processes 9.2Mt over 9.3 years at an average feed grade of 2.4g/t gold.
- Metallurgical recovery averages 95.0%.
- To optimise the recovery of Turnberry fresh ore feed (~20% of total mill feed), which showed sensitivity to grind size, a flotation circuit and small 6.3t/hr regrind mill will be added in year 3 (\$13M capital cost) to coincide with development of the Turnberry underground mine. The flotation circuit was sized after generating a geo-metallurgical model and sulphur feed schedule based on Turnberry underground production. The flotation concentrate will be milled to 15µm using an IsaMill prior to leaching and recovery to produce gold doré. This circuit delivers a total recovery of 88.5% for Turnberry fresh ore.

# Sensitivity Analysis

- Gold price and AUD:USD exchange rate can impact revenues and derived cash flows. For each \$100/oz change in gold price there is a ~\$65M change in pre-tax free cash flow.
- A \$250/oz change in gold price delivers a ~\$160M change in pre-tax free cash flow.
- The Project is more sensitive to volatility in operating costs than capital costs and a ±10% change in operating costs delivers a ~\$95M change in pre-tax free cash flow.

# ESG

- The local community of Meekatharra has supported mining and exploration activities and the Project is anticipated to continue providing significant positive social benefits in the form of employment and commercial opportunities within the community.
- In consultation with the Yugunga-Nya People the Company will develop a training and skills development program to support employment, in addition to direct employment and contracting opportunities available during Project development and operations.
- Environmental baseline studies and test work have been conducted and are at various stages of completion for Turnberry and St Anne's, which will continue as Project approvals are progressed. Studies for Andy Well are completed.
- Heritage clearances have been completed over the Project development and operations area.

# Alternative Development Scenarios Considered

- This Study involves the development of a standalone 1.0Mtpa processing facility at Turnberry. This achieves economies of scale as seen at other large operations in the region.
- Given the level of regional activity including likely changes of ownership, retaining flexibility and optionality is important. Accordingly, in addition to the development of a standalone 1.0Mtpa plant, alternative development scenarios have also been considered and remain under consideration. These include:
  - Recommissioning, with potential to expand, the existing Andy Well processing facility (reduced capital, reduced processing capacity, highgrade focus including underground and St Anne's open pit);
  - 100% toll milling (reduced capital, increased haulage costs, increased processing costs, open-pit focus); and
  - combination of the above (high-grade through Andy Well processing facility, lower-grade open pit processed at a third-party facility within haulage distance).

- All alternative scenarios deliver positive financial outcomes. Not all are within the control of the Company and require consideration and agreement with third parties.
- Under all scenarios, it is clear that significant value can be added by infilling and extending Mineral Resources in this Study. Building on our already substantial, high-grade resource base will remain a focus in 2023.

# **Forward Work Plan**

- The Company is now progressing all remaining environmental studies required to permit the Project and investigating opportunities to accelerate the Project development timeline through toll milling of higher-grade starter pits.
- The Company has initiated discussions with a number of advisors specialising in debt finance. These discussions are ongoing and will be supported by the information in this Study.
- The Mineral Resources that support the planned mines remain open at depth with strong opportunity to grow. Drilling for Mineral Resource upgrade and growth will advance over the coming months.

Key Project Metrics	Units	\$2,750/oz	\$3,000/oz
Initial Life	Years	9.3	9.3
Processing Throughput	Mtpa	1.0	1.0
Avg. Gold Production - years 1 to 8	Koz pa	80	80
Avg. Gold Production	Koz pa	66	66
Ore Mined - Open Pit	Mt	4.7	4.7
Ore Grade - Open Pit	g/t	1.4	1.4
Contained Gold - Open Pit	Koz	204	204
Ore Reserve Strip Ratio	Х	17	17
Ore Mined - Underground	Mt	4.5	4.5
Ore Grade - Underground	g/t	3.4	3.4
Contained Gold - Underground	Koz	493	493
Total Tonnes Processed	Mt	9.2	9.2
Feed Grade	g/t	2.4	2.4
Metallurgical Recovery	%	95.0	95.0
Gold Produced	Koz	663	663
Gold Price	AUD/oz	2,750	3,000
Operating Costs	AUD M	952	959
Pre-Production Capital	AUD M	137	137
Post-Production Capital	AUD M	371	371
EBITDA	AUD M	870	1,028
Free Cash Flow (Pre-tax)	AUD M	363	521
Free Cash Flow (Post-tax)	AUD M	261	372
Operating Cost	AUD/oz	1,436	1,448
AISC	AUD/oz	1,684	1,696
AIC	AUD/oz	2,203	2,214
NPV <sub>5%</sub> (Pre-tax)	AUD M	249	371
NPV5% (Post-tax)	AUD M	171	256
IRR (Pre-tax)		<b>40</b>	<b>56</b>
IRR (Post-tax)	AUD M	30	41
Ducie et Deule els Devie d	Mantha	22	10
Project Payback Period	Months	22	16
Maximum Cash Drawdown	AUD M	137	137

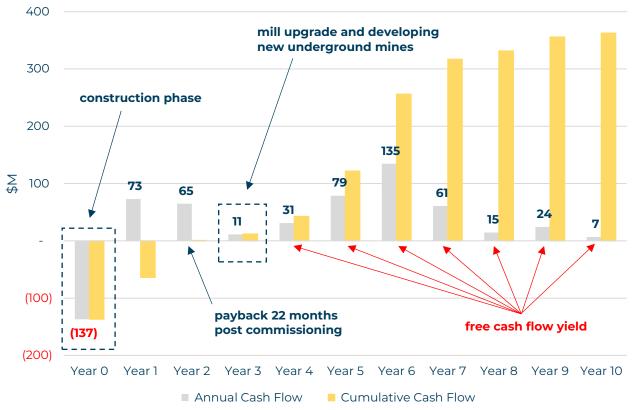


Figure 1 – Annual and cumulative net cash flow (\$2,750/oz).



Figure 2 – Annual gold production and AISC.

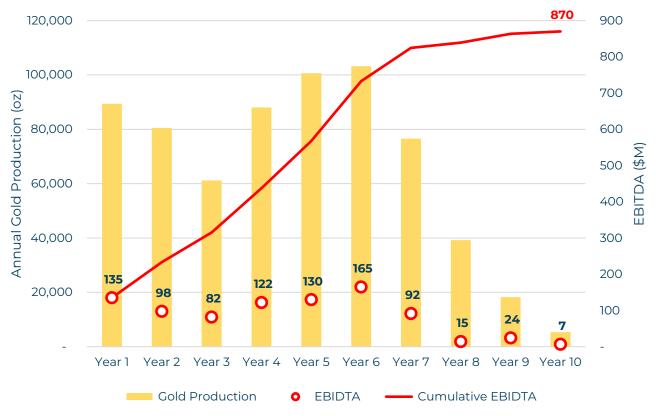


Figure 3 – Annual gold production and EBITDA (\$2,750/oz).

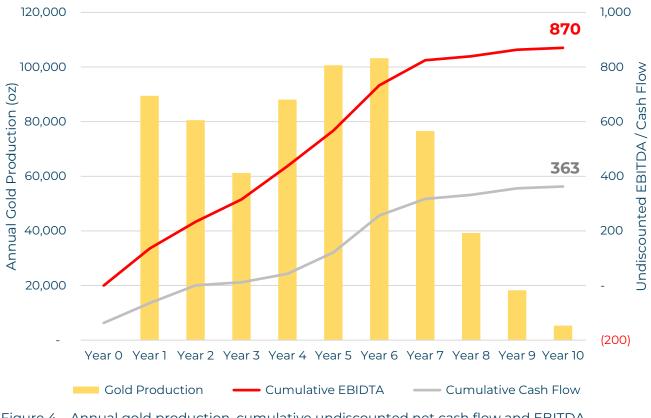


Figure 4 – Annual gold production, cumulative undiscounted net cash flow and EBITDA (\$2,750/oz).

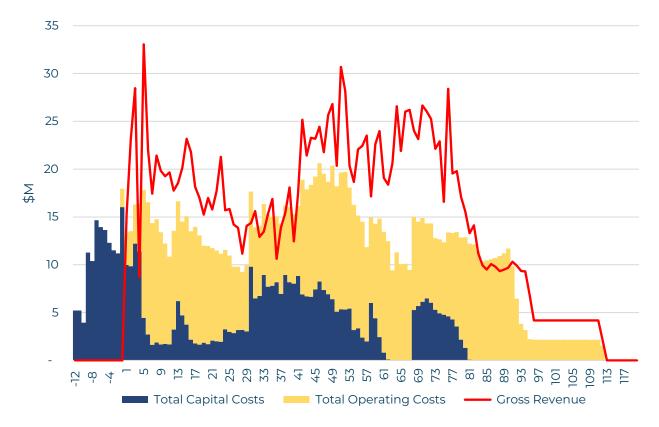


Figure 5 – Total capital and operating expenditure, and gross revenue (\$2,750/oz) by month (mill start = month 1).

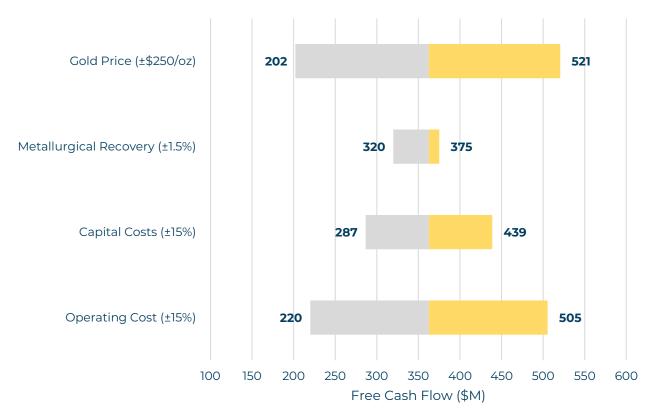


Figure 6 – Undiscounted pre-tax free cash flow sensitivity analysis.

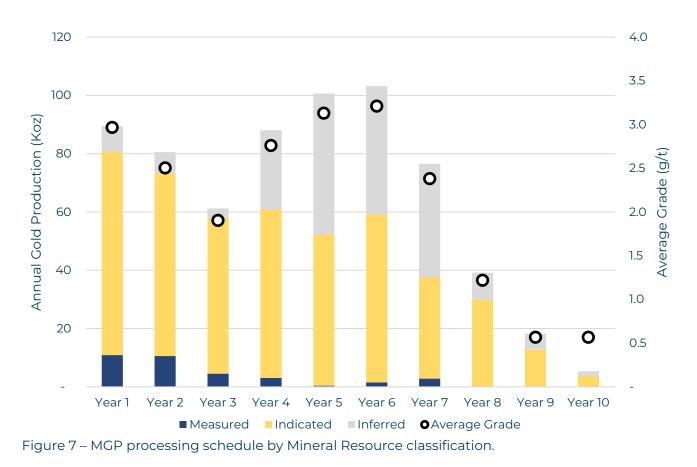
# **Production Strategy and Detailed Schedule**

The production strategy involves feeding the highest margin material through the processing plant each month. This results in the accumulation of a low-grade stockpile, which is milled at the end of the project life once open pit and underground mining ceases. Key points regarding the mill feed schedule include:

- The Project focusses on the higher confidence Measured and Indicated Mineral Resource, which comprises 70.6% of the production plan.
- The processing plant is tonnage constrained to 1Mt per annum and the feed schedule prioritises high grade, high margin material first.
- Development of various open pit and underground mining centres are staged to limit capital draw down while maintaining one open pit and one underground ore source through the life of the Project.
- At the end of the mine life, remaining stockpiles are processed over an 18 month period (Years 9 and 10).
- Metallurgical recovery averages 95.0% over the life of the Project.

Project Year	Units	Total	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Open Pit Minin	g												
Turnberry	Kt	4,323	156	570	654	14		38	519	863	1,509		
	g/t	1.2	2.7	1.7	1.3	1.1		0.8	1.2	1.0	1.0		
	Koz	170	14	30	27	1		1	21	29	49		
St Anne's	Kt	318		318									
	g/t	2.4		2.4									
	Koz	24		24									
Andy Well	Kt	39			39								
	g/t	7.6			7.6								
	Koz	9			9								
Total	Kt	4,680	156	888	693	14		38	519	863	1,509		
	g/t	1.4	2.7	1.9	1.6	1.1		0.8	1.2	1.0	1.0		
	Koz	204	14	55	36	1		1	21	29	49		
Underground N	lining	r											
Turnberry	Kt	1,805				27	463	827	488				
	g/t	2.5				1.1	2.1	2.5	3.1				
	Koz	147				1	31	68	48				
Andy Well	Kt	2,737	12	382	451	471	470	363	274	314			
	g/t	3.9	1.6	3.3	3.0	3.4	4.2	4.2	5.7	4.7			
	Koz	345	1	41	43	51	63	49	50	47			
Total	Kt	4,542	12	382	451	498	933	1,190	762	314			
	g/t	3.4	1.6	3.3	3.0	3.3	3.1	3.1	4.0	4.7			
	Koz	493	1	41	43	52	93	117	99	47			
Mining Total													
Tonnes	Kt	9,222	168	1,271	1,144	512	933	1,228	1,280	1,177	1,509		
Grade	g/t	2.4	2.6	2.3	2.2	3.2	3.1	3.0	2.9	2.0	1.0		
Ounces	Koz	697	14	95	80	53	93	118	119	76	49		
Processing													
Tonnes	Kt	9,222	0	938	1,000	1,000	992	1,000	1,000	1,000	1,000	1,000	292
Grade	g/t	2.4	0.0	3.0	2.5	1.9	2.8	3.1	3.2	2.4	1.2	0.6	0.6
Milled Oz	Koz	697	0	94	85	64	93	106	109	81	41	19	6
Recovered Oz	Koz	663	0	89	81	61	88	101	103	77	39	18	5

Table 1 – MGP Combined Mine and Processing Production Schedule



# Funding

To achieve the range of outcomes indicated in the Study, funding is required. This announcement documents the order of funding required to commence production. Subsequent developments are assumed to be funded by positive cash flow generated from production.

Project financing has not yet been secured, however the Company has initiated discussions with advisors specialising in debt finance.

Potential funding options include the following:

- Equity;
- Senior-secured project debt finance;
- Secured corporate bond;
- Pre-paid off-take and other forms of off-taker financing; and
- Toll treatment of the Project's high-grade starter pits at one of the two processing facilities within a 125km radius of the Project.

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 Company considers that raising secured project finance is a realistic funding option and is in active discussions with financiers and debt advisers.
- The Board has a strong history of securing funding.
- Current and potential investors support the proposed transition from explorer to producer.
- The gold sector continues to remain strong and global debt and equity finance availability for gold projects is robust. A number of recent examples of funding for gold development projects located in Australia in the last 24 months support this view.
- The Project has an 9.3 year life generating meaningful free cash flow relative to the development capital requirement (free cash flow: \$363M @\$2,750/oz and \$521M @\$3,000/oz). Release of this Study provides a basis for advancing discussions with potential financiers.
- The Company has a clean, uncomplicated capital structure, and owns 100% of the Project, making potential financing arrangements simpler, which is attractive to potential financiers.
- The Board and management team have extensive experience in mine development and production in the resources industry, which is attractive to potential financiers seeking certainty of Project delivery.
- The Company has a strong track record of raising equity funds as and when required.

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.

# **Mineral Resource Estimate**

The Mineral Resource estimate for the Project is 12.7Mt @ 3.0g/t Au for 1.215M ounces gold.

Measured		Indicated		Inferred			Total					
Location	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces
	('000t)	(g/t)	('000oz)	('000t)	(g/t)	('000oz)	('000t)	(g/t)	('000oz)	('000t)	(g/t)	('000oz)
Andy Well	150	11.4	55	1,050	9.3	315	650	6.5	135	1,800	8.6	505
Turnberry	-	-	-	4,600	1.6	230	6,000	2.4	455	10,600	2.0	685
St Anne's	-	-	-	270	2.8	25	-	-	-	270	2.8	25
TOTAL	150	11.4	55	5,900	3.0	570	6,700	2.8	590	12,700	3.0	1,215

Table 2 – Mineral Resource Statement

Notes:

- The information that relates the Mineral Resource for St Anne's was first reported by the Company in its announcement to the market on 3 May 2023 titled "Initial High-Grade Oxide Mineral Resource at St Anne's". The information that relates the Mineral Resource for Turnberry was first reported by the Company in its announcement to the market on 3 January 2023 titled "Turnberry Independent Mineral Resource Grows to 685koz Gold". The information that relates the Mineral Resource for Andy Well was first reported by the Company in its announcement to the market on 21 December 2020 titled "Latitude Acquires High-Grade Andy Well Gold Project". The Company is not aware of any new information or data that materially affects the information included in these announcements and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.
- Mineral Resources are classified in accordance with JORC Code (2012).
- Andy Well Mineral Resource is reported using 0.1g/t gold cut-off grade.
- The Turnberry open pit Mineral Resource is only the portion of the Mineral Resource that is constrained within a \$2,600/oz optimised pit shell and above a 0.5g/t gold cut-off grade.
- The Turnberry underground Mineral Resource is only the portion of the Mineral Resource that is located outside the \$2,600/oz optimised pit shell and above a 1.5g/t gold cut-off grade.
- The Mineral Resource is constrained within a \$2,600/oz optimised pit shell and above a 0.5g/t gold cut-off grade.
- Estimates are rounded to reflect the level of confidence in the Mineral Resources at the time of reporting.
- JORC Table 1 appended to this announcement.

# **Ore Reserve Estimate**

The Ore Reserve estimate for the Project is 4.1Mt @ 3.1g/t Au for 0.4M ounces gold.

Cut-off			Proven			Probable			Total		
Location	Grade	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	
	(g/t)	('000t)	(g/t)	('000oz)	('000t)	(g/t)	('000oz)	('000t)	(g/t)	('000oz)	
Open Pit	1		1		1			1	1		
Turnberry	0.5	-	-	-	1,400	1.6	72	1,400	1.6	72	
St Anne's	0.5	-	-	-	320	2.4	25	320	2.4	25	
Undergrour	nd		1		1			1	1		
Turnberry	2.0	-	-	-	570	3.3	61	570	3.3	61	
Andy Well	2.0	-	-	-	1,800	4.3	249	1,800	4.3	249	
Total	-	-	-	-	4,100	3.1	410	4,100	3.1	410	

Table 3 – Ore Reserve Estimate

A detailed summary of all material assumptions underpinning the Ore Reserve estimate pursuant to ASX Listing Rule 5.9 is provided in the Feasibility Study Summary (pages 21 – 129 of this release) and further summarised below. JORC Table 1 appended to this announcement.

# The material assumptions and the outcomes from the preliminary feasibility study or the feasibility study (as the case may be). If the economic assumptions are commercially sensitive to the mining entity, an explanation of the methodology used to determine the assumptions rather than the actual figure can be reported:

Ore Reserves are based on a PFS level study completed in July 2023.

Capital cost estimates are drawn from supplier pricing and detailed first principals cost estimates. The process plant capital cost estimate was compiled by Como Engineering to a PFS level of accuracy. Operating cost estimates are drawn from supplier pricing and detailed first principals cost estimates. A long-term gold price of \$2,200 per ounce was considered by the Competent Person to be an appropriate commodity price assumption.

The Study shows the Project delivers a robust financial outcome, paying back start-up capital in 22 months post commissioning, delivering pre-tax net cash flows and net present value (NPV5%) of \$363M and \$249M respectively, and an internal rate of return (IRR) of 40% over its initial 9.3 year life using a base case \$2,750/oz gold price.

Sensitivity analysis shows the Project to be susceptible to fluctuations in both operating cost and gold price, however when modelled under the more volatile cost and gold price assumptions experienced during the preceding year the Project continues to deliver positive cash flows. A ±10% change in operating costs delivers a ~\$95M change in pre-tax free cash flow. For each \$100/oz change in gold price there is a ~\$65M change in pre-tax free cash flow.

# The criteria used for classification, including the classification of the Mineral Resources on which the Ore Reserves are based and the confidence in the modifying factors applied:

The Probable Ore Reserve is based on that portion of the Measured and Indicated Mineral Resource within the mine designs that may be economically extracted and includes an allowance for dilution and ore loss. No Proven Ore Reserve is being reported.

# The mining method selected and other mining assumptions, including mining recovery factors and mining dilution factors:

Open pit designs and ramp configurations suit 200t class excavators in a backhoe configuration matched to 140t off road haul trucks for waste stripping. A smaller fleet of 100t class excavator and 95t off road haul trucks are planned for ore movement and the smaller benches at the base of each pit. Benches are planned to be 5m high and will be mined in two 2.5m flitches.

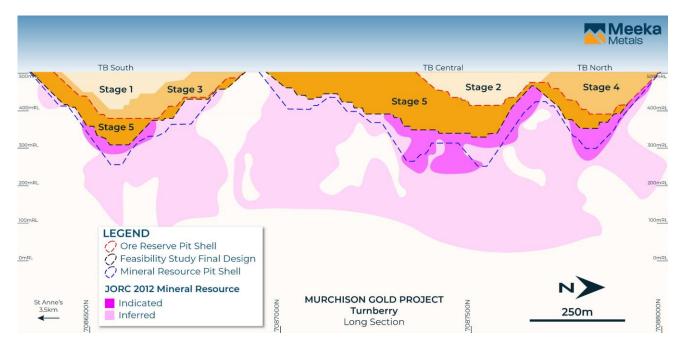
An SMU methodology was applied to determine true mineable ore envelopes. Open pit optimisations were performed using the SMU adjusted block model to evaluate the potential

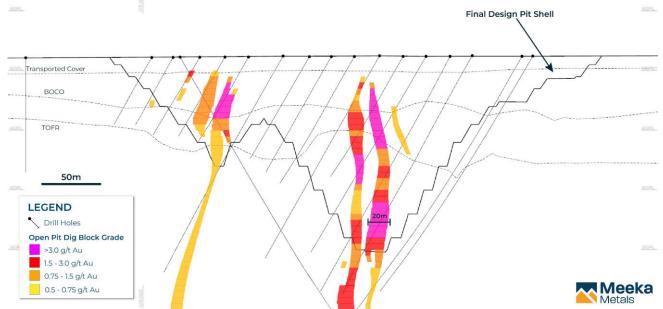
economics of various open pit mining envelopes. A \$2,600/oz optimisation shell was selected to guide all final open pit designs. The physicals from the final pit design were used to create a detailed schedule and evaluated using the PFS financial model to confirm the economic viability of the Ore Reserve under a \$2,200 per ounce gold price scenario.

Variable	Input
Minimum Mining Width	3.5m (3.0m ore plus 0.5m dilution)
Maximum Width	Unlimited
SMU Height	5 m
SMU Length	5 m
Dilution	0.5m of waste added
Cut-off	≥0.5g/t



Figure 8 – Isometric view showing Turnberry final pit design shell and dig blocks.





## Figure 9 – Long Section showing open pit staging at Turnberry.

Figure 10 – Cross section at Turnberry central showing dig blocks and final pit limits, 7087550N.

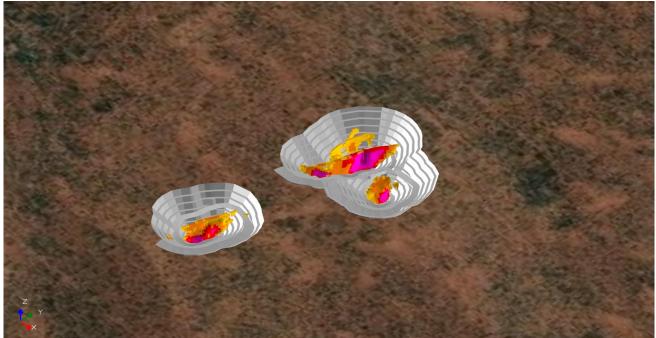


Figure 11 – Isometric view showing St Annes final pit design shell and dig blocks.

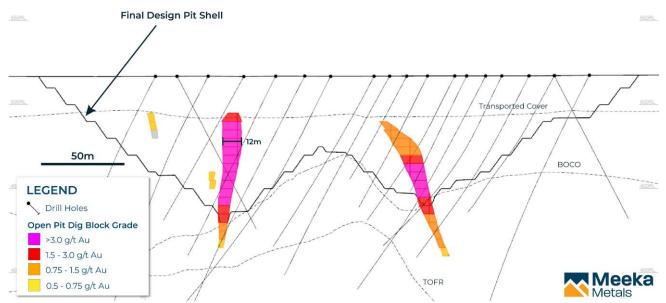


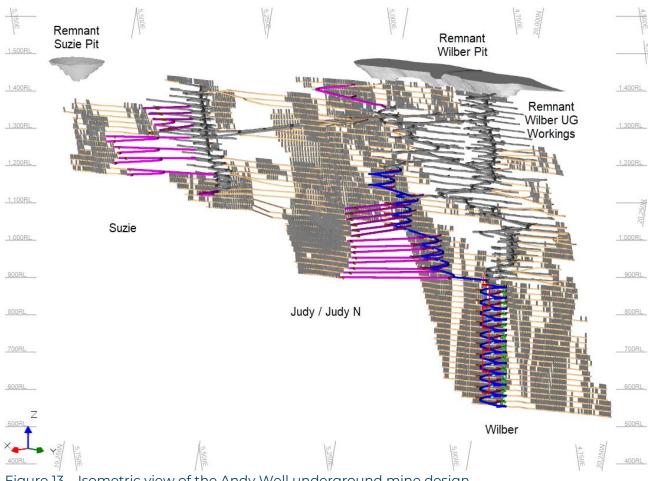
Figure 12 – Cross section at St Anne's showing dig blocks and final pit limits, 7083480N.

Mechanised underground mining is planned using electric hydraulic jumbos for development and long hole stoping for production. Mineable stope shapes were created using Stope Optimiser software. A detailed mine design and schedule was created, incorporating decline access, ventilation airways and ore drives to access stoping areas identified by the optimisation process. The physicals from the final design were evaluated using the Prefeasibility Study financial model to confirm the economic viability of the Ore Reserve under a \$2,200 per ounce gold price scenario.

Table 5 - S	tope Oi	otimisation	Modifying	Factors
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Area	Minimum Mining Width	Unplanned Dilution	Minimum Mined Void	Mining Recovery
	(m)	(m)	(m)	(%)
Andy Well*	1.2	0.8	2.0	95
Turnberry	2.0	0.5	2.5	83

\*Andy Well has a higher mining recovery due to the planned use of CRF.





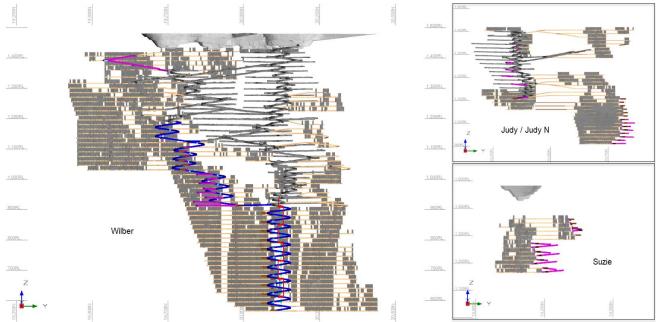
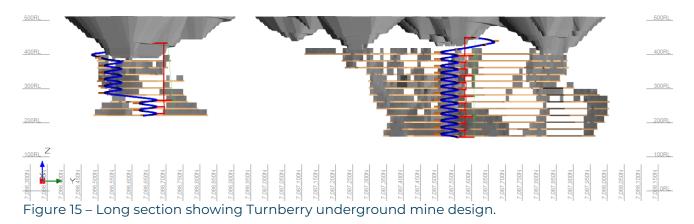


Figure 14 – Long section showing Andy Well underground mine design by lode.



# The processing method selected and other processing assumptions, including the recovery factors applied and the allowances made for deleterious elements:

The Study assumes processing through a 1.0Mtpa CIL plant with the addition of a flotation circuit added in year three to coincide with development of the Turnberry underground mine where the metallurgical recovery from fresh ore is grind size sensitive. The milling circuit is designed to achieve a P80 of 75µm grind size. The flotation and fine grind circuit is designed to achieve a P80 of 15µm grind size.

Deposit	Oxide (%)	Transition (%)	Fresh (%)
Andy Well	98.0	98.0	98.0
Turnberry	94.1	94.1	88.5*
St Anne's	98.0	98.0	N/A

Table 6 – Summary of Metallurgical Recoveries Applied

All gold recoveries, except for Turnberry fresh ore, are based on a  $P_{80}$  75µm grind size. Gold recoveries for Turnberry fresh ore are based on a  $P_{80}$  15µm grind size.

No deleterious elements are expected.

#### The basis of the cut-off grade(s) or quality parameters applied:

Table 7 - Open Pit Cut-Off Grade Estimation

Variable	Unit	Turnberry	St Anne's
Gold Price	\$/oz	2,200	2,200
State Royalty	%	2.5% NSR	2.5% NSR
Private Royalty		<ul> <li>\$1M (Archean Star)</li> <li>8.8% Net Profit Interest (Teck)</li> <li>Yugunga-Nya Royalty</li> </ul>	<ul> <li>\$1M (Archean Star)</li> <li>8.8% Net Profit Interest (Teck)</li> <li>Yugunga-Nya Royalty</li> </ul>
Met. Recovery	%	Ox/Tr = 94.1% / Fr = 88.5%	98%
Surface Haulage	\$/ore t	0.1	0.8
Processing Costs	\$/ore t	20.7-33.5	20.7
G&A	\$/ore t	5.9	5.9
Calculated Cut-Off Grade	g/t	0.4-0.6	0.4-0.5
Applied Cut-Off Grade	g/t	0.5	0.5

Variable	Unit	Fully Costed Cut-off	Stope Cut-off	Process Cut-off			
Gold Price	\$/oz		2,200				
State Royalty	%		2.5% NSR				
Private Royalty		1% NSR (	Wilson) / Yugunga-Nya	Royalty			
Met. Recovery	%		98%				
Overheads	\$/t ore	25.1	25.1				
Capital Development	\$/t ore	28.0					
Operating Development	\$/t ore	43.3					
Stoping	\$/t ore	43.6	65.8				
Mine Services	\$/t ore	11.2	11.2				
Total Mine Costs	\$/t ore	151.2	102.1				
Surface Road Haulage to Plant	\$/t ore	2.8	2.8	2.8			
Processing	\$/t ore	25.7	25.7	25.7			
Total Cost	\$/t ore	179.7	130.6	28.5			
Cut-off grade	g/t	2.7	2.0	0.4			

#### Table 8 – Andy Well Underground Cut-off Grade Calculations

#### Table 9 – Turnberry Underground Cut-off Grade Calculations

Variable	Unit	Fully Costed Cut-off	Stope Cut-off	Process Cut-off	
Gold Price	\$/oz	· · · · ·	2,200		
State Royalty	%		2.5% NSR		
Private Royalty		\$1M (Archean Star) / 8	.8% Net Profit Interest Royalty	(Teck) / Yugunga-Nya	
Met. Recovery	%		88.5%		
Overheads	\$/t ore	23.2	23.2		
Capital Development	\$/t ore	21.4			
Operating Development	\$/t ore	31.9			
Stoping	\$/t ore	16.9	26.5		
Mine Services	\$/t ore	5.7	5.7		
Total Mine Costs	\$/t ore	99.1	55.4		
Surface Road Haulage to Plant	\$/t ore	0.0	0.0	0.0	
Processing	\$/t ore	33.5 33.5 33.5			
Total Cost	\$/t ore	132.6 88.9 33.5			
Cut-off grade	g/t	2.2	1.5	0.6	

# Material modifying factors, including the status of environmental approvals, mining tenements and approvals, other governmental factors:

The tenements are in good standing. All material legal agreements are either in place or the Company is confident, based on information available, that they will be in place in a suitable timeframe to execute the Project. The permitting process is ongoing and the Company sees no reason why approvals required for Project development would not be granted.

#### Infrastructure requirements for selected mining methods and for transportation to market:

The mines are located adjacent to the Great Northern highway and have good road access. Meekatharra aerodrome is located 46km to the south of the Project. Accommodation is available in Meekatharra, which can be used for early works and construction. Additional infrastructure required to deliver the mining plan includes camp, office and ablution buildings, workshops, power station, explosive storage facilities, waste dumps, haul roads, dewatering bores and water storage dams.



DISCOVER GROW DEVELOP

MURCHISON GOLD PROJECT Feasibility Study Summary July 2023

ASX:MEK meekametals.com.au

# CONTENTS

1	INTRODUCTION	
	1.1 Study Team	27
	1.1 Project Location	28
	1.2 Climate	30
	1.3 Project Ownership	30
	1.4 Access	31
	1.5 Mineral Tenure	
	1.6 Land Tenure	
	1.7 Native Title	
2	PROJECT HISTORY	
_	2.1 Andy Well	
	2.1.1 Ownership	
	2.1.2 Exploration	
	2.1.3 Production	
	2.2 Gnaweeda	
	2.2.1 Ownership	
	2.2.2 Exploration	
	2.2.2 Exploration	
3	GEOLOGY	
5		
	5	
,	3.3 St Anne's	
4		
5		
6	GEOTECHNICAL	
	6.1 Andy Well	
	6.1.1 Open Pit	
	6.1.2 Underground	
	6.2 Turnberry	
	6.2.1 Open Pit	
	6.2.2 Underground	
	6.3 St Anne's	
7	HYDROLOGY	
8		
	8.1 Andy Well	
	8.2 Turnberry	50
9	MINING	53
	9.1 Open Pit Mining	56
	9.1.1 Dig Block Creation (SMU)	56
	9.1.2 Open Pit Optimisation	57
	9.1.3 Open Pit Cut-Off Grade	58
	9.1.4 Open Pit Design	59
	9.1.5 Open Pit Schedule	
	9.2 Underground Mining	
	9.2.1 Cut-off Grade	
	9.2.2 Stope Optimisation	
	9.2.3 Underground Design	
	9.2.4 Underground Schedule	
	9.3 Waste Rock Landform Design	
10		
11		
11	11.1 Comminution	
	<ul><li>11.2 Gravity and Intensive Leach</li></ul>	
	5	
	11.4 Turnberry Flotation Test Work	

Feasibility Study Summary July 2023

11.4.	1 Flotation Concentrate Regrind Intensive Leaching	
11.5	Flotation Tails Leaching	
12 MIN	IERAL PROCESSING	
12.1	Crushing	
12.1.		
12.1.	· ·	
12.1.		
12.1.	• •	
12.1.	Milling, Classification & Gravity Separation	
12.2	5	
12.2		
12.3		
12.3		
12.4	Leaching and Adsorption	
12.5	Elution and Goldroom	
12.5	1 Acid Wash	
12.5	2 Elution	
12.5	3 Carbon Regeneration	
12.5	4 Gold Room	
12.6	Tailings	
12.7	Reagents	
12.7	•	
12.7		
12.7		
12.7	5	
12.7	5	
12.8		
12.8		
12.8		
12.8		
12.8		
12.8		
13 TAI	LINGS STORAGE FACILITY	
14 PR0	DJECT INFRASTRUCTURE	
14.1	Access and Haul Roads	
14.2	Administration and Workshops	
14.3	Accommodation	
14.4	Communications	
14.5	Power	
14.5		
	Fuel Storage Facilities	
14.7	Explosives Storage	
14.8	Water Management	
14.8		
14.8		
14.9	Aerodrome	
15 PEF	RMITTING AND APPROVALS	
15.1	Department of Mines, Industry Regulation and Safety (DMIRS)	
15.1.	1 Mining Proposal (MP) and Mine Closure Plan (MCP)	
15.1.		
15.1.		
15.2	Department of Water and Environmental Regulation (DWER)	
15.2		
15.2		
	/IRONMENT	
16 EIN	Topsoil and Soil Profiles	
16.2	Flora and Fauna	
16.3	Waste Rock and Tailings Management	III

Feasibility Study Summary | July 2023

17	col	MMUNITY AND SOCIAL IMPACTS	211
18			
19		ODUCTION SCHEDULE	
20		PITAL COSTS	
	D.1	Site Infrastructure	
	0.2	Processing Plant	
	0.3	Open Pit Capitalised Mining Costs	
	0.4	Underground Mining Capital Mining Costs	
	0.5	Capitalised Operating Costs (Including Owners Costs)	
21	OPI	ERATING COSTS	
21	.1	Mining	
21	.2	Processing	
21	.3	General and Administration (G&A)	120
	.4	Royalties	
22	ECO	ONOMIC ANALYSIS	
22	2.1	Financial Results	
22	2.2	Gold Price	124
22	2.3	Exchange Rate	
22	2.4	Sensitivity Analysis	
23	FUI	NDING	
24	RIS	K	
24	4.1	Gold Price Volatility and Foreign Exchange Rates	
24	4.2	Capital and Operating Costs	
24	4.3	Contractual Risk	
24	4.4	Labour Supply and Turnover	
24	4.5	Mineral Resource and Ore Reserve	
24	4.6	Metallurgy and Process Design	
	4.7	Project Funding	
24	4.8	Regulatory Approvals	
_	4.9	Mineral Tenure	
_		NCLUSIONS	
		RWARD WORK PLAN	

# LIST OF FIGURES

Figure 16 – Map of southern Western Australia showing location of the MGP	
Figure 17 – Regional location of the MGP.	
Figure 18 – Detailed location of the MGP.	
Figure 19 – Detailed site layout for the MGP.	
Figure 20 – Yilgarn craton tectonic divisions and regional greenstone belts	35
Figure 21 – Andy Well interpreted geology and mineralisation.	
Figure 22 – Rock types at Andy Well.	
Figure 23 - Drill sample assay locations coloured by grade, overlain on 2nd Vertical Del	
aeromagnetic image including a simplified overview of the shear structures	
Figure 24 – Mineralisation at Andy Well.	
Figure 25 – Turnberry geological interpretation showing magnetic, chromium and gold	
relationship	
Figure 26 – Turnberry interpreted geology and mineralisation	
Figure 27 – Host rocks for mineralisation at Turnberry North/South	
Figure 28 – Host rocks for mineralisation at Turnberry Central.	
Figure 29 – Flood runoff model and diversion bunding	
Figure 30 – Turnberry drill hole flow rates and monitoring bore locations	51
Figure 31 - Turnberry standing water table and drawdown simulation (worst case)	
Figure 32 – MGP mine production schedule by mining method.	
Figure 33 – MGP mining schedule by mining centre.	55
Figure 34 – Plan showing 5 stage open pit design for Turnberry.	60
Figure 35 – Isometric view showing Turnberry final pit design shell and dig blocks	60
Figure 36 – Long Section showing open pit staging at Turnberry	61

MEEKA METALS LIMITED | MURCHISON GOLD PROJECT

Feasibility Study Summary July 2023

Figure 37 - Plan showing open pit staging, Ore Reserve limits and final pit design limit	
Turnberry	
Figure 38 – Cross section at Turnberry North showing dig blocks and final pit limits, 7087795N	
Figure 39 – Cross section at Turnberry Central showing dig blocks and final pit limits, 70875	
Figure 40 – Cross section at Turnberry South showing dig blocks and final pit limits, 7086560N	
Figure 41 – Plan showing open pit design for St Anne's (design pit shell = Ore Reserve pit shell	
Figure 42 – Isometric view showing St Anne's final pit design shell and dig blocks	
Figure 43 – Cross section at St Anne's showing dig blocks and final pit limits, 7083480N	
Figure 44 – Isometric view of the Andy Well mine design	
Figure 45 – Long section showing Andy Well mine design by lode.	
Figure 46 – Isometric view showing typical Andy Well level layout	
Figure 47 – Long section showing Turnberry mine design.	
Figure 48 – Isometric view showing typical Turnberry level layout	
Figure 49 – Andy Well waste rock landform design	
Figure 50- Turnberry waste rock landform design	
Figure 51 – St Anne's waste rock landform design	
Figure 52 – 1.0Mtpa CIL process plant layout	
Figure 53 – 1.0Mtpa CIL plant flow sheet.	
Figure 54 – Stage 1 and 2 TSF design	
Figure 55 – Cross section showing typical TSF embankment design at the MGP.	
Figure 56 – MGP site layout	
Figure 57 – Turnberry site layout.	
Figure 58 – Andy Well site layout.	
Figure 59 – St Anne's site layout.	
Figure 60 – Turnberry 236 person accommodation village.	
Figure 61 – Site communications.	
Figure 62 – Potable water and wastewater infrastructure layout.	
Figure 63 – Meekatharra aerodrome.	
Figure 64 – Meekatharra aerodrome taxiway and aircraft parking layout.	
Figure 65 – Aboriginal heritage areas at Andy Well.	
Figure 66 – Aboriginal heritage clearance area covering Turnberry and St Anne's.	
Figure 67 – Aboriginal heritage clearance area covering Turnberry to Andy Well haulage route	
Figure 68 – MGP processing schedule by Mineral Resource classification.	
Figure 69 – Capital expenditure schedule by cost centre and month (mill start = month 1)	
Figure 70 – Operating expenditure schedule by cost centre and month (mill start = month 1)	
Figure 71 – Annual and cumulative net cash flow (\$2,750/oz)	
Figure 72 – Annual gold production and AISC.	
Figure 73 – Annual gold production and EBITDA (\$2,750/oz)	
Figure 74 - Annual gold production, cumulative undiscounted net cash flow and EBI	
(\$2,750/oz)	
Figure 75 – Total capital and operating expenditure, and gross revenue (\$2,750/oz) by month	•
start = month 1)	
Figure 76 – Undiscounted pre-tax free cash flow sensitivity analysis.	125

# LIST OF TABLES

Table 10 – Independent Technical Experts	27
Table 11 – Meekatharra Airport Average Climatic Data	
Table 12 – Mineral Tenure	
Table 13 – Andy Well Production History	
Table 14 – Mineral Resource Statement	
Table 15 – Ore Reserve Estimate	
Table 16 – Andy Well Geotechnical Pit Design Parameters	
Table 17 – Andy Well Empirical Stope Stability Assessment	
Table 18 – Turnberry Geotechnical Pit Design Parameters	
Table 19 – Turnberry Empirical Stope Stability Assessment	

Feasibility Study Summary July 2023

Table 20 – St Anne's Geotechnical Pit Design Parameters	
Table 21 – Andy Well Aquifer Characteristics	
Table 22 – Mining and Processing Schedule	
Table 23 – MGP Mine Production Schedule	
Table 24 – Dig Block Inputs for Turnberry and St Anne's	
Table 25 – Dig Block Inputs for Andy Well	
Table 26 – Optimisation Inputs for Andy Well	57
Table 27 – Optimisation Inputs for Turnberry	57
Table 28 – Optimisation Inputs for St Anne's	58
Table 29 - Open Pit Cut-Off Grade Estimation	
Table 30 – Open Pit Design Parameters	
Table 31 – Ramp Design Parameters	59
Table 32 – Open Pit Mining Schedule	
Table 33 – Andy Well Underground Cut-off Grade Calculations	70
Table 34 – Turnberry Underground Cut-off Grade Calculations	
Table 35 - Stope Optimisation Modifying Factors	
Table 36 – Mine Design Criteria for Andy Well Underground	71
Table 37 – Mine Design Criteria for Turnberry Underground	73
Table 38 – Andy Well Scheduling Task Delay Inputs	
Table 39 – Andy Well Scheduling Task Rates	75
Table 40 – Andy Well Schedule Modifying Factors	
Table 41 – Andy Well Equipment Schedule by Year	75
Table 42 – Andy Well Mine Schedule by Year	
Table 43 – Turnberry Scheduling Task Delay Inputs	76
Table 44 – Turnberry Scheduling Task Rates	76
Table 45 – Turnberry Schedule Modifying Factors	
Table 46 – Turnberry Equipment Schedule by Year (North Mine Area)	
Table 47 – Turnberry Equipment Schedule by Year (South Mine Area)	
Table 48 – Turnberry Mine Schedule by Year (North Mine Area)	
Table 49 – Turnberry Mine Schedule by Year (South Mine Area)	78
Table 50 – Combined Underground Production Schedule	
Table 51 – Summary of Metallurgical Recoveries Applied to the Study	
Table 52 – Summary of Turnberry Crushing Work Index Testing	
Table 53 – Summary of Bond Abrasion Indices	
Table 54 – Summary of Bond Rod Mill Work Index and Bond Ball Mill Work Indices	
Table 55 – Andy Well Gravity Gold and Intensive Leach Test work	84
Table 56 – Turnberry Gravity and Intensive Leach Test Work	85
Table 57 – St Anne's Gravity and Intensive Leach Test Work	
Table 58 – Summary of Andy Well Gravity Separation / Cyanidation Time Leach Tests and Wh	
Ore Direct Leach Tests	
Table 59 – Summary of Turnberry Gravity Separation / Cyanidation Time Leach Tests and Wh	lole
Ore Direct Leach Tests	
Table 60 – Summary of St Anne's Gravity Separation / Cyanidation Time Leach Tests and Wh	
Ore Direct Leach Tests	
Table 61 – Turnberry Flotation Test Results	
Table 62 – Turnberry Flotation Concentrate Regrind Intensive Leaching	
Table 63 – Turnberry Flotation Tails Leaching	
Table 64 – TSF Design Outcomes	
Table 65 – MGP Combined Mine and Processing Production Schedule	
Table 66 – MGP Capital Cost Estimate	
Table 67 – Major Capital Cost Items and Sources	
Table 68 – Project Operating Cost by Area	
Table 69 – Key Financial Model Outputs	121

## **1** INTRODUCTION

The Murchison Gold Project (MGP or the Project) is located 46km northeast of Meekatharra and 800km northeast of Perth, Western Australia. Road access is via the Great Northern Highway which runs through the Project tenure. The Meekatharra aerodrome, a sealed 2,181m runway, is used to commute personnel to and from the Project.

The Project tenure is comprised of five Exploration Licenses and two Mining Leases, totalling 281km<sup>2</sup>. The Project covers the northern end of two adjacent Archean greenstone belts, the Gnaweeda and Meekatharra-Wydgee greenstone belts, and hosts 12.7Mt @ 3.0g/t Au for 1.2M ounces in Mineral Resource and 4.1Mt @ 3.1g/t Au for 0.4M ounces in Ore Reserve. Ongoing exploration since the Project was acquired by the Company in February 2021 has successfully expanded the Mineral Resource by over 50%. The Company is confident this trend will continue, supporting an expanded mine life and/or production profile.

The Project is based on development of a standalone 1.0Mtpa carbon-in-leach (CIL) processing facility and support infrastructure to be constructed on a granted Mining Lease, and the development of three open pit mining centres and two underground mines to produce 663,000 ounces over an initial 9.3-year life.

#### 1.1 Study Team

The Study was managed by the Company with recommendation, detailed design and review by independent technical experts.

Discipline	Company / Consultant
Geology	RSC
Mineral Resource Estimation	RSC
Geotechnical – Open Pit	Peter O'Bryan and Associates
	MineGeoTech
Geotechnical – Underground	Peter O'Bryan and Associates
	MineGeoTech
	AMC Consultants
Mine Design and Scheduling – Open Pit	Oreology
Metallurgy and Comminution	Como Engineers
	ALS Metallurgy
Process Plant Design, Operating and Capital	Como Engineers
Cost Estimate	
Hydrology and Hydrogeology	Rockwater
	RPS Aquaterra
	CDM Smith
Mine Dewatering	UON
	MTP Pumps
Mineral Tenure	Austwide Tenement Management
Environmental Studies	Mattiske Consulting
	Bamford Consulting Ecologists
	Bennelongia Environmental Consultants
	Stantec
	SoilWater
	Atheos Consulting
Permitting and Approvals	Enviro Mining Support
	Stantec
	Atheos Consulting
Financial Modelling Review	Professional Cost Consultants International

Table 10 – Independent Technical Experts

# 1.1 **Project Location**

The Project is located is located 46km northeast of Meekatharra and 800km northeast of Perth.



Figure 16 – Map of southern Western Australia showing location of the MGP.

# MEEKA METALS LIMITED | MURCHISON GOLD PROJECT

Feasibility Study Summary | July 2023

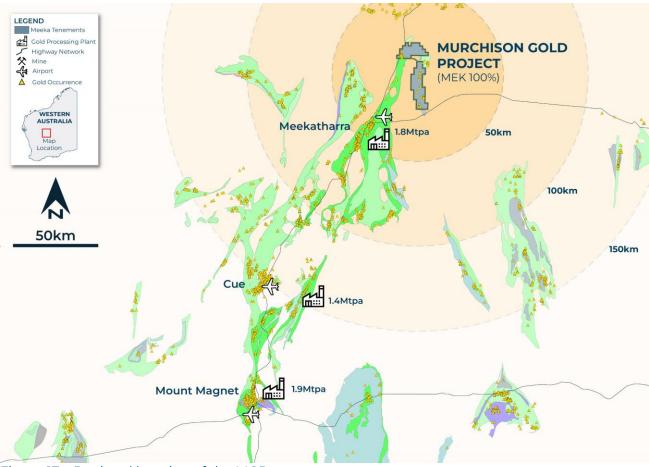
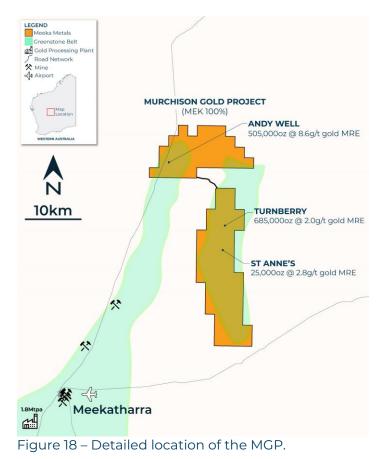


Figure 17 – Regional location of the MGP.



Page 29 of 175

#### MEEKA METALS LIMITED | MURCHISON GOLD PROJECT

Feasibility Study Summary July 2023

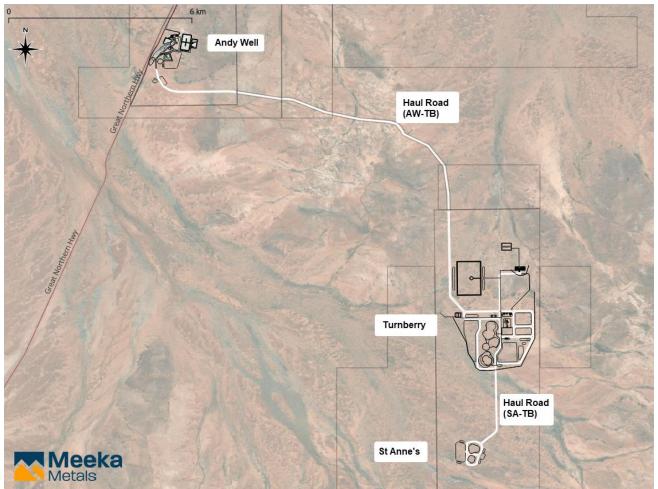


Figure 19 – Detailed site layout for the MGP.

#### 1.2 Climate

The Project is located within the arid desert region of the northern Murchison region of Western Australia and enjoys an all-year round operating season.

The climate of the region is strongly influenced by a band of high pressure known as the subtropical ridge and in the warmer months by a trough of low pressure that extends southwards from the heat low in the tropics. For most of the year, the ridge is located to the south and east to southeast winds prevail. During the cooler months, the ridge moves far enough north to allow cold fronts to pass over the area. While most fronts bring little rain to Meekatharra, they are sometimes linked to tropical cloud bands which deliver the most reliable rains from May to July.

Meekatharra airport is the closest active Bureau of Meteorology weather station to the Project area and climate data is collected for the Meekatharra airport weather station.

Variable	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Temp. Max. (deg. C)	38	37	34	29	24	20	19	21	26	30	33	36
Temp. Min. (deg. C)	24	24	21	17	12	9	7	9	12	15	19	22
Rainfall (mm)	27.1	37.3	28.2	20.5	22.9	30.2	22	11.5	4.8	6.4	11.5	13.6
Evaporation (mm)	585	484	412	293	203	135	142	187	263	399	452	513

Table 11 – Meekatharra Airport Average Climatic Data

#### **1.3 Project Ownership**

Andy Well Mining Pty Ltd, a subsidiary of Meeka Metals Limited (Meeka Metals), owns 100% of all Exploration Licenses, Mining Leases and mineral rights for the Project. Andy Well Mining Pty Ltd

was acquired by Meeka Metals in February 2021 from Silver Lake Resources Limited (Silver Lake). The Project is managed by Meeka Metals.

#### 1.4 Access

Road access to the Project is via the Great Northern Highway that runs adjacent to, and on the western side of the Project tenure. Gazetted gravel roads and unsealed station roads provide vehicle access within the tenure.

Regular commercial flights between Perth and Meekatharra operate weekly, utilising the sealed 2,181m Meekatharra aerodrome.

#### **1.5** Mineral Tenure

The Project mineral tenure is comprised of five Exploration Licenses and two Mining Leases totalling 281km<sup>2</sup>, and a Miscellaneous License to provide haul road access between Mining Leases.

Tenement	Classification	Grant Date	Expiry Date	Area
M51/870	Mining Leases	April 20212	April 2033	1109.5 ha
M51/882	Mining Leases	August 2020	August 2041	3475.4 ha
L51/97	Miscellaneous License	December 2017	December 2038	95.4 ha
E51/1217	Exploration Licenses	January 2008	January 2024	2888.6 ha
E51/1626	Exploration Licenses	July 2015	July 2025	1230.2 ha
E51/1596	Exploration Licenses	October 2014	October 2024	5536.4 ha
E51/927	Exploration Licenses	July 2002	July 2023	7537.8 ha
E51/926	Exploration Licenses	July 2002	July 2023	6199.0 ha

Table 12 – Mineral Tenure

## 1.6 Land Tenure

The mineral tenure covers Crown land and leased pastoral land.

- Mining Leases M51/870 is located within L PL N050070 (Pastoral Lease No. 3114/1088).
- Mining Leases M51/882 is located within L PL N050070 and L PL N049522.
- All other Exploration Licences and the Miscellaneous Licence sit over pastoral and Crown land.

# 1.7 Native Title

The Yugunga-Nya People hold Native Title over the Project area. The Company has an agreement in place with the Yugunga-Nya People facilitating exploration and mining. The Company maintains a strong working relationship with the Yugunga-Nya People.

## **2 PROJECT HISTORY**

#### 2.1 Andy Well

#### 2.1.1 Ownership

Exploration licence E51/1217, which surrounds the current Andy Well Mining Lease M51/870 was pegged by joint venture parties Accent Resources NL (85%) and Murchison Resources Pty Ltd (15%) in February 2007 and granted during January 2008. E51/1217 was pegged to cover the area of a previous tenement, E51/290, which formed the basis of a joint venture between Accent Resources NL and Australasian Gold Mines NL. A subsequent change in strategy by Accent Resources NL in 2008 dissolved the joint venture, with 100% of E51/1217 reverting to Murchison Resources Pty Ltd.

On 12 November 2009 Doray Minerals Limited (Doray) signed a purchase/joint venture agreement to acquire an initial 80% interest in E51/1217 from Murchison Resources Pty Ltd. The agreement allowed for Doray to purchase the remaining 20%, which it subsequently did in 2012, consolidating 100% interest in the Project. Murchison Resources Pty Ltd retained a 1% NSR royalty (Wilson Royalty) over the tenure. A portion of E51/1217 covering the Andy Well Mine was converted to Mining License M51/870 in April 2012 and production commenced in September 2012.

In 2019, Silver Lake merged with Doray and in February 2021 sold the Andy Well Project to Meeka Metals as part of a consolidated package that also included the adjacent Gnaweeda tenure.

#### 2.1.2 Exploration

Exploration for gold in the Andy Well area was carried out in the 1990's by explorers including Dominion Mining Limited and Western Mining Corporation Limited. These programs included detailed 50m line spaced aeromagnetic surveys; geological and regolith mapping; lag and soil sampling and reverse circulation (RC), aircore (AC) and limited diamond core drilling. This work resulted in the identification of sporadic mineralisation at several prospects.

Australasian Gold Mines NL and Accent Resources NL (Accent) drilled 28 holes in the 2000's before abandoning the program due to bad weather and inconsistent results. Work to this date was based on an interpreted northerly strike of the mineralised structures.

Doray commenced exploration in March 2010 with an RC drilling program designed to test the interpretation of previous explorers' results. This drilling led to a revised north-easterly striking interpretation for the mineralisation and the program was successful in intersecting high-grade quartz hosted gold mineralisation within mafic rocks, the Wilber lode. Follow-up RC and diamond drilling successfully intersected mineralisation over a strike length of approximately 200 m below 4–8 m of alluvial cover. By the end of 2011 Doray had drilled out a high-grade Mineral Resource of 329,000oz @ 14.8g/t gold and planning advanced on both mine and mill construction.

During 2012 and 2013 additional parallel lodes were discovered at Judy, Judy North and Suzie, resulting in further Mineral Resource growth to 441,000oz @ 11.2g/t gold. By 2017 when the mine was placed on care and maintenance, drilling had defined a Mineral Resource of 505,000oz @ 8.6g/t gold after accounting for mining depletion.

#### 2.1.3 Production

A 165Ktpa mill, which ultimately proved capable of processing 350Ktpa, was constructed at Andy Well during 2012 and 2013. Open pit mining commenced in September 2012 and processing commenced in June 2013. Mining transitioned underground in 2013 with the decline established on 13 April 2013, within the Stage 1 pit.

Open pit mining recommenced in December 2014 through October 2015 with the excavation of the Stage 2, Stage 2B and Suzie open pits. Mining produced a total of 333Koz of gold between 2012 and September 2017 when project was placed on care and maintenance.

Source Units FY13 FY14 **FY15** FY16 **FY17 FY18** Total 35 Tonnes (kt) 49 45 129 11.2 13.5 12.5 Open Pit Grade (q/t)12.8 \_ \_ \_ Ounces (koz) 18 20 14 52 \_ \_ 350 289 1,178 Tonnes (kt) \_ 184 276 79 Grade (g/t) 10.6 8.3 7.2 5.2 4.8 7.4 Underground \_ Ounces (koz) 63 94 67 46 12 282 \_ Tonnes (kt) 49 184 395 324 276 79 1,307 Total Grade (g/t)11.4 10.6 9.0 7.8 5.2 4.7 7.9 18 63 114 81 46 12 333 Ounces (koz)

#### Table 13 – Andy Well Production History

#### 2.2 Gnaweeda

#### 2.2.1 Ownership

BHP drilled several holes testing a magnetic anomaly within the Gnaweeda greenstone belt over the period 1986 to 1988, followed by Outokumpu in 1991 and 1992 searching for base metals in the Bunarra bore area on the southern end of the belt.

The Gnaweeda tenure in its current form was then pegged by Helix Resources NL (Helix) and JA Bunting and Associates (JA Bunting) in 2001, and subsequently experienced fragmented ownership over the proceeding decade. Helix assigned their interest to JA Bunting and Associates in 2004 prior to JA Bunting selling to Bullion Minerals Limited (Bullion) in July 2004. JA Bunting retained a 1% NSR royalty over the tenure.

In January 2006, Teck Australia Pty Ltd (Teck) entered into a earn-in agreement to acquire up to 70% interest in the Gnaweeda tenements from Bullion by meeting expenditure commitments. In March 2006, Bullion vended its gold assets (Gnaweeda included) into a new ASX listing, Chalice Gold Mines Limited (Chalice).

In 2009, during Teck's earn-in period, Archean Star Resources Australia Pty Ltd (Archean Star) entered into an option agreement with Teck to acquire Teck's interest in Gnaweeda by meeting exploration expenditure hurdles. Teck retained an earn back option in the event that Archean Star defined a Mineral Resource of at least 1,000,000 ounces of gold. If exercised, the Teck option allowed Teck to earn back 75% of the interest assigned to Archean Star. Teck also retained a 10% net profit interest (NPI) royalty in relation to its proportional interest in the Project, at the time 51% but up to 70% if all the expenditure hurdles were to be met.

By January 2010 Teck had satisfied the requirements to acquire 70% interest in Gnaweeda and Archean Star was working toward exercising its option to acquire Teck's interests by continuing to explore the tenure and meet expenditure requirements.

Between 2010 and February 2013, Chalice's interest in the Gnaweeda tenure, which it had been assigned by Bullion, were diluted down to 12% due to non-participation in funding of ongoing joint venture expenditure commitments with Teck. At this point Teck had a beneficial interest in the joint venture of 88% and Chalice 12%.

In July 2013, Archean Star notified Teck it was exercising its option to acquire Teck's interest in Gnaweeda. This resulted in Archean Star and Chalice continuing as parties to the Gnaweeda joint venture with 88% and 12% interest respectively.

In June 2014 Doray acquired the Archean Star interest in Gnaweeda (88%), then in March 2016, purchased the Chalice interest (12%). The consolidation of ownership by Doray in 2016 was the first time since 1997 that Gnaweeda ownership was consolidated in a single active exploration company (Newcrest joint ventured the project in October 1997 and relinquished the project in 1999). In June 2016 Doray purchased the JA Bunting 1% NSR royalty leaving only the Teck earn back option and 8.8% NPI (10% NPI applicable to the 88% ownership Teck ultimately earnt prior to assigning its interest to Archean Star).

In 2019, Silver Lake merged with Doray and subsequently sold the Gnaweeda tenure, with the adjacent Andy Well tenure to Meeka Metals.

In April 2021 Meeka Metals purchased the earn back option from Teck leaving a single royalty remaining over the Gnaweeda tenure, the Teck 8.8% NPI royalty.

#### 2.2.2 Exploration

Gold within the Gnaweeda greenstone belt was first identified by Newcrest Mining Limited (Newcrest) in 1994 following broad spaced regional RAB traverses across the belt (spacing of 400m x 5km). Hole GWL2-8 intersected 12m at 8.7g/t Au from 60m, at Turnberry, and follow up drilling around this hole identified a 1km long supergene gold anomaly.

Limited deeper RC and diamond drilling revealed significant grades, including 16m @ 2.58g/t Au (TR202-6), 20m @ 1.4 g/t Au (TR209-1), 24m @ 2.74 g/t Au (GZ090-1) and 4m @ 5g/t Au (TR20035E-5). Although the drilling showed the mineralisation to be open along strike and down dip, Newcrest relinquished the project in 1999.

No further drilling occurred until Teck optioned the project in 2006, completing nine targeted RC drill holes at Turnberry, which returned grades up to 59g/t (GNRCOO9) within broad mineralised intervals. Regional reconnaissance drilling completed by Teck during this period also returned positive results including 4m @ 2.91g/t Au (GNAC082) in the southern end of the belt, however these results received little follow up work at the time.

Following Archean Star's entry into the project in 2009, diamond drilling was completed at Turnberry where three diamond drill holes were drilled, intersecting broad high-grade intervals including 9m @ 3.3g/t Au from 69m (TB006) and grades up to 42.8g/t (TB008). Diamond drilling was also completed at Bunarra, intercepting significant gold mineralisation including 18m at 11.67 g/t Au (BN003). In addition to drilling, Archean Star completed extensive geophysical surveys between 2009 and 2013, including pole-dipole IP surveys at St Annes and Bunarra, and sub-audio magnetics (SAM) surveys at Turnberry, Bunarra, St Anne's, Archernar, and Far East.

When Doray began work on the project in 2014, focus shifted from regional discovery to Mineral Resource definition at Turnberry with a view that production from open pit mining at Turnberry could supplement mill feed from the underground mine at Andy Well. A 14,000m RC drilling program was completed between 2014 and 2016, intersecting strong, consistent gold mineralisation including 10m @ 18.9g/t Au from 89m (TBRC036), 7m @ 41.6g/t Au from 153m (TBRC043) and 41m @ 4.8g/t Au from 148m (TBRC062). An initial Mineral Resource of 266,000oz @ 1.8g/t gold was reported in 2016 and feasibility study work commenced. By 2017 a Mining Lease application had been submitted and extensive infill RC drilling programs, largely on a 20m x 20m spacing, had defined the Turnberry Mineral Resource over 1.5km, growing it to 322,000oz @ 1.8g/t gold.

Work on the Project stopped in 2017 following Doray placing the Andy Well mine and mill on care and maintenance, and did not recommence until 2021 following Meeka Metals purchase of the Project from Silver Lake. Meeka Metals rapidly set about extensional RC and diamond drilling at Turnberry during 2021 and 2022, and by January 2023 had grown the Mineral Resource to 685,000oz @ 2.0g/t gold. Meeka Metals also recommenced regional drilling in 2022 and in July of that year discovered multiple zones of mineralisation at St Anne's, 3km to the south of Turnberry. Between July and December 2022 drilling at St Anne's had defined mineralisation over 800m of strike, drilling out a Mineral Resource of 25,000oz @ 2.8g/t gold. Meeka Metals has commenced drilling in 2023 targeting further high-grade gold mineralisation within the Fairway shear zone, the central corridor within the Gnaweeda greenstone belt.

#### 2.2.3 Production

There is no recorded gold produced from the Gnaweeda tenure. Shallow shafts are evident at Bunarra, 15km to the south of Turnberry, however there is no record of historical production from these workings.

# **3 GEOLOGY**

The Yilgarn is divided into four broad tectonic terranes; the Narryer, Youanmi, Southwest and Eastern Goldfields Superterrane. The Project is located within the northern end of the Youanmi Terrane.

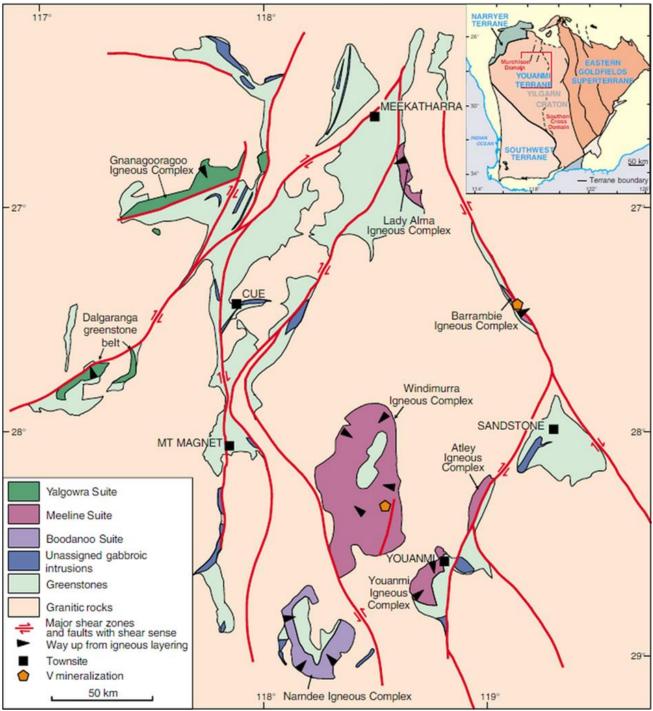


Figure 20 – Yilgarn craton tectonic divisions and regional greenstone belts.

# 3.1 Andy Well

Andy Well is located at the northernmost end of the north-north easterly trending Archaean Meekatharra-Wydgee greenstone belt, within the Youanmi Terrane. The belt comprises a succession of metamorphosed mafic to ultramafics, felsic and sedimentary rocks interpreted to belong to the Norie Group formerly Luke Creek and Mount Farmer Groups.

The northern extent of the Mt Magnet shear zone is interpreted to be <1km to the east and exhibits a change of orientation in the vicinity of Andy Well. Regionally the Mt Magnet shear zone is associated with several other gold occurrences in the Meekatharra-Wydgee greenstone belt.

The Andy Well local stratigraphy is comprised of a north-northeast striking, sub-vertical (~80°) dipping, Achaean volcano-sedimentary package. The stratigraphy youngs toward the West based on sedimentary textures and immobile element geochemistry of basalts. The local package follows a general transition from a basaltic subaqueaous lava sequence at its base which becomes mafic volcaniclastic dominated before transitioning to a siliciclastic sequence of agrillites and arenites to the west of the Great Northern Highway.

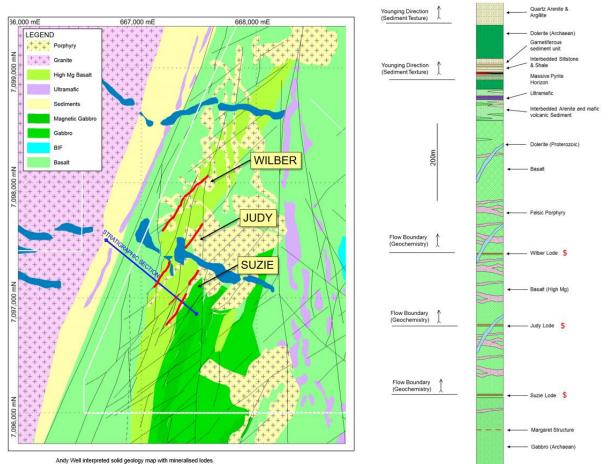


Figure 21 – Andy Well interpreted geology and mineralisation.

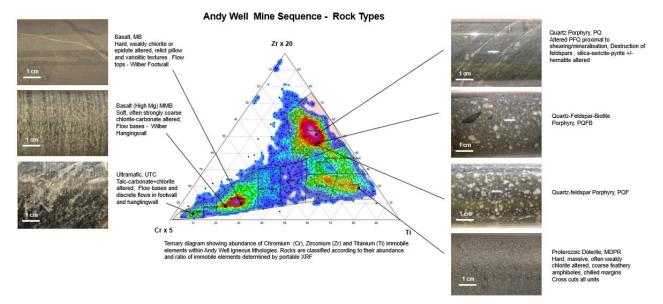
The lowermost unit in the local sequence is a voluminous gabbro unit which is generally massive with a leucocratic texture at its core. West of this unit, a series of at least 3 distinct >200m thick basalt episodes have been recognised texturally and geochemically within the local sequence which are themselves comprised of multiple individual lava flows. Flows generally show a fractionation from high-Mg bases to lower Mg flow tops with flow contacts recognised as having a spatial relationship with the mineralised structures of Wilber, Judy and Suzie lodes.

The high-Mg basalts are typically chlorite-carbonate altered, however replaced by a strong chlorite-sericite-carbonate-pyrite alteration when sheared. Sometimes talc and biotite are included in this assemblage. Coarse bladed amphiboles may overprint basalts for several metres on the margins of the shear structures but are not preserved within the shearing itself. Original volcanic textures are preserved away from shearing including pillow and variolitic textures in basalts.

Towards the top of the basaltic sequence, mafic derived volcaniclastic sediment becomes more abundant interfingered with thin basalt flows. An ultramafic unit exists towards the top of the

volcaniclastic sequence and approximately marks the transition to a siliciclastic dominated domain.

Above the ultramafic, a unit of black shale and laterally equivalent massive pyrite up to 8m thick occurs within fine grained silty arenites and argillites. A 2-5m garnetiferous mafic sediment can be used as a marker within the sedimentary package.



#### Figure 22 – Rock types at Andy Well.

Minor Archaean dolerites are present generally parallel to stratigraphy and most obvious within the sedimentary sequence. Felsic intrusive cross cut stratigraphy at all levels. An older dacitic porphyry has been reported which is itself cut by earlier quartz feldspar-phyric porphyry. Intrusives are typically normal to stratigraphy and have an affinity to intrude along basalt flow boundaries. Porphyries are most abundant within the basaltic sequence and scarce within sediments. Rare lamprophyre has been recorded. East-west Proterozoic dykes crosscut all units approximately perpendicular to stratigraphy within the mine area.

It is interpreted that shearing at Andy Well has developed adjacent to (and in response to) movement along the Mount Magnet Shear zone, which is located ~1km to the east. Shearing along the northeast-southwest trend is likely to have exploited lithological contacts due to rheological contrast between differing basalt flow compositions. Strain appears to have been preferentially accommodated in fractionated magnesium rich basalt flow bases, which contain a higher proportion of ductile alteration minerals such as chlorite and talc compared to more robust brittle flow tops.

The Wilber Shear is a 2-5m intensely sheared zone within a broader 20-60m wide zone of foliation. The shear dips  $80^{\circ} \rightarrow 295^{\circ}$  with an early foliation S1, dipping  $84-90^{\circ} \rightarrow 108-114^{\circ}$ , overprinted by a penetrative S2 foliation that dips on average  $80^{\circ} \rightarrow 295^{\circ}$ . Kinematic indicators inside the shear zone suggest it is dominated by combined reverse-sinistral movement. Younger fold and crenulation cleavage events have little impact on the quartz reef and shear zone. Minor normal block faulting offsets the reef in some areas <5m. The dominant sinistral-reverse movement observed in the Wilber Shear zone is permissive for Wilber being an extension shear vein or riedel shear opening.

The Wilber Shear is one of several similar sub-parallel northeast-southwest shear structures approximately 200m apart. A north-south structure orientation is also evident in magnetic images and appears to have dextrally offset northeast-southwest structures in places by up to 100m. The north-south structures appear to define the northern and southern strike extents of the lodes and dextrally offset the northeast-southwest shears.

#### MEEKA METALS LIMITED | MURCHISON GOLD PROJECT

Feasibility Study Summary July 2023

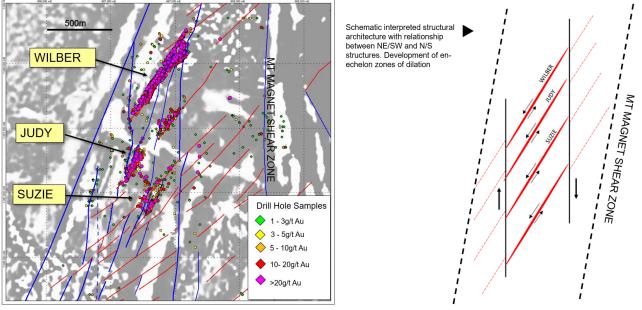


Figure 23 – Drill sample assay locations coloured by grade, overlain on 2nd Vertical Derivative aeromagnetic image including a simplified overview of the shear structures.

The gold mineralisation at Andy Well is orogenic shear hosted, narrow high-grade quartz reefs. Economic mineralisation has so far been identified within five parallel north-northeast trending quartz reefs; Wilber, Judy North, Judy South, Suzie and Jenny.

A geochemical affinity for basalt host rock/contact is also likely to be significant for mineralisation as grade is less abundant within sheared porphyry host rock.

Vein mineralogy is predominantly quartz-calcite-chlorite+/-fuchsite associated with minor disseminated pyrite with lesser amounts of chalcopyrite, galena and sphalerite. Gold is frequently visible and finely dispersed throughout laminated, breccia and massive quartz types as well as with a lesser pyrite and other sulphides. Gold grades within veining are in general above 30g/t, whilst grades outside of veining but within the mineralised envelope are in the order of <0.3g/t Au.

Mineralised veins are interpreted petrographically as a space-filling. During flow of the hydrothermal fluid through the open structure, slivers of altered wall were scavenged into the structure, and suffered replacement to form fine-grained fuchsite + chlorite in stylolitic trails. On-going mild deformation caused partial recrystallisation of the vein quartz, forming finer-grained sutured mosaics.

Historical production was principally sourced from the Wilber Lode, a sub-vertical slightly west dipping laminated quartz vein commonly 0.4 to 1.5m in width with a well-developed boudinage texture. It forms an extensive and largely continuous sheet of mineralisation, which is currently defined over 600m strike and 700m down dip, remaining open at depth.

Wilber quartz lode within sheared basalt with boudinage texture

MNDD154, 388.4m Mineralised quartzcarbonate vein. Visible gold-sphaleritegalena-pyrite

Figure 24 – Mineralisation at Andy Well.

# 3.2 Turnberry

Turnberry is located within the Gnaweeda greenstone belt, a narrow belt of Archaean volcanosedimentary rocks up to 10 kilometres wide in the northern half and decreasing to less than one kilometre in the south, situated at the northernmost margin between the Achaean Murchison, Southern Cross, and Yeelirrie Provinces.

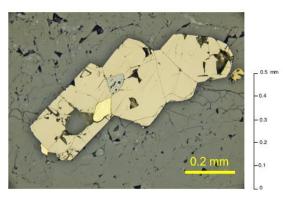
The belt comprises a succession of metamorphosed mafic to ultramafic, felsic and metasedimentary rocks with minor felsic to intermediate intrusives interpreted to belong to the Norie Group formerly Luke Creek within the Murchison Supergroup.

The belt is separated from the adjacent sub-parallel Meekatharra-Widgie Greenstone Belt located 7km to the east by an envelope of gneiss and massive granitoid

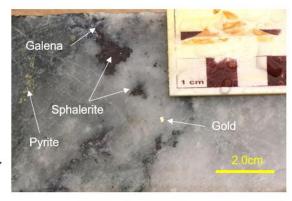
Structurally the belt is situated along the northernmost extent of two main structural lineaments bounding the Murchison and Southern cross Domains, the Evanstone-Edale and the Youanmi shear zones. Regionally both lineaments are associated with several other gold occurrences in the Sandstone greenstone belt to the south of Gnaweeda.

The geological package is largely comprised of fractionated dolerite with an ultramafic base, basalt, felsic volcaniclastics and porphyry surrounded by a package of siliciclastic sediments and shales. Stratigraphy is steeply east to sub-vertically dipping which is interpreted from portable XRF analysis to be isoclinally folded along a north-northeast fold axis with a north-northeast trending foliation.

Lithologies at Turnberry are dominated by dolerites with the best section of mineralisation hosted within a magnetic quartz dolerite which forms a discrete 'double bullseye' aeromagnetic anomaly. The magnetic dolerite is likely to represent a fractionated portion of a layered dolerite sill with a contribution of magnetite from alteration creating the anomaly within the hinge of the folded



SAMPLE MNDD005, 168m (Reflected plane polarised light, Obj. x20, This view captures an aggregate of 4 pyrite grains (cream) with a single inclusion of galena (pale bluish grey), two grains of native gold (bright yellow), and one grain of chalcopyrite (dull yellow, far right).



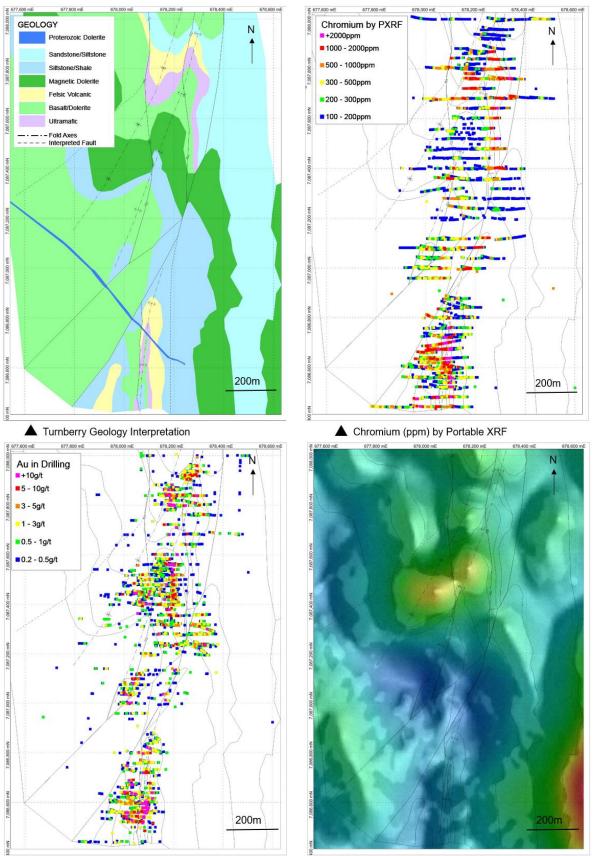
mafic. This mineralisation style is the most well developed at Turnberry as it hosts the highest and most consistent grades and widths.

The area is covered with transported colluvium to a depth of ~10-25m and is highly weathered with a depth to fresh rock of ~100m.

Preliminary structural interpretation suggests that the mineralisation may be aligned along northnortheast trending interpreted fold axes and sub parallel to the regional fabric. The northern part of Turnberry is defined by a folded, differentiated mafic sill that is younging south, as determined by interpretation of chromium from pXRF analysis, and has a sharp, often sheared, contact with lower felsic volcanic units. Folds are interpreted to plunge steeply north in the northern part of Turnberry and more sub-vertical in the southern part. Several northwest-southeast structures are interpreted from geophysical imagery to crosscut the stratigraphy and appear to offset both lithology and mineralisation.

The structural data (e.g. foliation, veins, fractures, joints, crenulation) from drill core at Turnberry are indicative of high-strain deformation within a steeply east-southeast dipping shear zone. The alignment of discontinuous and boudinaged veins subparallel to the measured foliation, as well as the precipitation of quartz in fold hinges, suggest that Au mineralisation typically occurs in dilational sites during fault slip, whereas the shear zone may have acted as fluid pathway. Folding of lithological units, especially at the contacts to other units, may have provided space for Au mineralisation to be deposited as saddle reefs within the hinges of these folds. In fact, some of the highest Au grades have been reported in the hinges of folded lithological contacts or along fold limbs.

Mineralisation forms a 1.7km north-northeast trending gold anomalous corridor, which is broadly defined into three zones, Turnberry South, Central and North. Mineralisation is primarily hosted where shears intersect fold hinges (saddles) and limbs of felsic lithological boundaries. Vein and shear-hosted mineralisation are also present at the mafic contact, which tends to host narrow, high-grade gold. In other areas (e.g. outside of fold hinges or lithological contacts), Au mineralisation is controlled by the orientation of steeply, dipping veins within the shear zone.



▲ Gold in Drilling > 0.2g/t Au

▲ 2VD TMI RTP Composite Aeromagnetic Image

Figure 25 – Turnberry geological interpretation showing magnetic, chromium and gold spatial relationship.

Mineralisation can often be visually indistinct owing to several styles of mineralisation being present and manifested differently depending on the lithology of the host rock. There are several unrelated shearing and veining events, however gold is usually accompanied by an increase in disseminated pyrite.

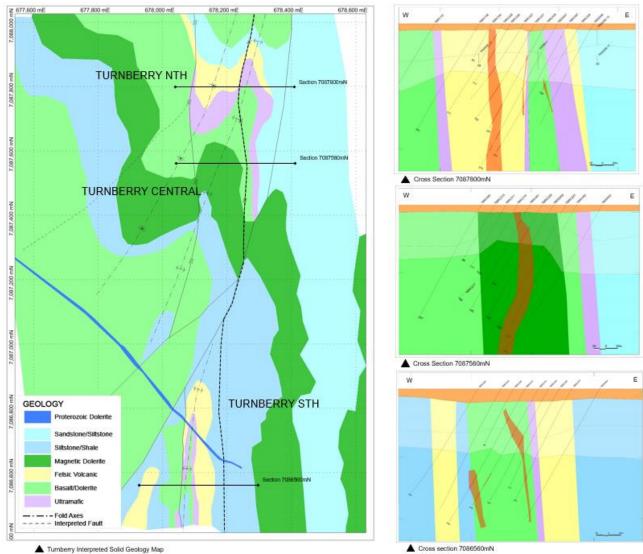


Figure 26 - Turnberry interpreted geology and mineralisation.

Mineralisation at Turnberry South and Turnberry North has developed within felsic volcanics and porphyries with strong pervasive sericite-pyrite alteration, which hosts broad low grade gold mineralisation and local sporadic high grades. Vein and shear mineralisation is also present at the mafic contact which tends to host narrow, high grades with occasional visible gold in RC chips.







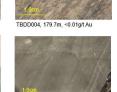
Felsic Volcaniclastic (FVC) examples becoming progressively more altered Left to Right

> Siltsone and Shale (SSL) examples becoming progressively more altered Left to Right



Felsic Volcaniclastic (FVC) hosted low grade mineralisation in RC chips, TBRC007 228-23m (Turnberry Sth) The pictured interval represents 6m @ 1.47gft Au within a wider 31m @ 1.1gft Au. Alteration is Sericite-Pyrite-Silica with moderate shearing

TBDD005, 208.6m, <0.01g/t Au



BDD013, 475.2m, 0.07g/t Au

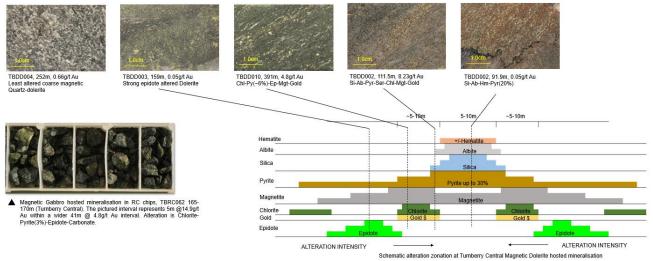
TB003, 188.1m, 0.02g/t Au

Figure 27 – Host rocks for mineralisation at Turnberry North/South.

#### MEEKA METALS LIMITED | MURCHISON GOLD PROJECT

Feasibility Study Summary | July 2023

At Turnberry Central, gold is hosted within a broad alteration zone within a quartz dolerite unit. Gold is believed to occur on the flanks of an intense silica-albite-pyrite 'core' surrounded by distal chlorite and epidote alteration. Gold is associated with disseminated pyrite, which occurs at a background level of around 1% in un-mineralised magnetic dolerite and increases to up to 30% within the centre of the alteration zone. Gold bearing alteration is typically associated with 3-10% disseminated pyrite with moderate chlorite-magnetite+silica alteration and can occur on either side of the core of the altered zone.





# 3.3 St Anne's

St Anne's is located centrally within the north-south trending Archaean Gnaweeda greenstone belt. At St Anne's, the belt comprises a succession of metamorphosed mafic to ultramafic, felsic and metasedimentary rocks with minor felsic to intermediate intrusives interpreted to belong to the Norie Group, formerly Luke Creek, within the Murchison Supergroup.

The St Anne's area is covered with transported colluvium to a depth of ~20m and is highly weathered with a depth to fresh rock of ~100 to 160m.

The local geology and stratigraphy of St Anne's from east to west, interpreted from portable pXRF analysis and geological logging, is comprised of an ultramafic base, sediments, a fractionated mafic package including ultramafic, dolerite and basalt overlain by felsic volcaniclastics. The stratigraphy dips steeply to the east and strikes north–northeast with a stratigraphy sub-parallel foliation.

Structural interpretation suggests a broad zone of shearing trends north-northeast at St Anne's. Several northwest-southeast structures are interpreted from geophysics to crosscut the stratigraphy and appear to off-set stratigraphy regionally and mineralisation locally.

Mineralisation at St Anne's forms an 800m north-northeast trending gold anomalous corridor, which occurs within a broad alteration zone logged by geologists and mapped by arsenic anomalism in pXRF analysis. Mineralisation is widespread and occurs within multiple mineralised envelopes, predominantly concentrated within the mafic rocks proximal to lithology contacts.

# **4 MINERAL RESOURCE ESTIMATE**

The Mineral Resource estimate for the Project is 12.7Mt @ 3.0g/t Au for 1.215M ounces gold.

The Mineral Resource consists of 7 discrete deposits; Wilber, Judy North, Judy South, Suzie and Jenny at Andy Well; and Turnberry and St Anne's deposits within the Gnaweeda greenstone belt.

The Andy Well Mineral Resources were updated in 2017 and both Turnberry and St Anne's were updated/estimated in 2023.

	Measured			Indicated			Inferred			Total		
Location	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces
	('000t)	(g/t)	('000oz)	('000t)	(g/t)	('000oz)	('000t)	(g/t)	('000oz)	('000t)	(g/t)	('000oz)
Andy Well	150	11.4	55	1,050	9.3	315	650	6.5	135	1,800	8.6	505
Turnberry	-	-	-	4,600	1.6	230	6,000	2.4	455	10,600	2.0	685
St Anne's	-	-	-	270	2.8	25	-	-	-	270	2.8	25
TOTAL	150	11.4	55	5,900	3.0	570	6,700	2.8	590	12,700	3.0	1,215

Table 14 – Mineral Resource Statement

Notes:

- The information that relates the Mineral Resource for St Anne's was first reported by the Company in its announcement to the market on 3 May 2023 titled "Initial High-Grade Oxide Mineral Resource at St Anne's". The information that relates the Mineral Resource for Turnberry was first reported by the Company in its announcement to the market on 3 January 2023 titled "Turnberry Independent Mineral Resource Grows to 685koz Gold". The information that relates the Mineral Resource for Andy Well was first reported by the Company in its announcement to the market on 21 December 2020 titled "Latitude Acquires High-Grade Andy Well Gold Project". The Company is not aware of any new information or data that materially affects the information included in these announcements and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.
- Mineral Resources are classified in accordance with JORC Code (2012).
- Andy Well Mineral Resource is reported using 0.1g/t gold cut-off grade.
- The Turnberry open pit Mineral Resource is only the portion of the Mineral Resource that is constrained within a \$2,600/oz optimised pit shell and above a 0.5g/t gold cut-off grade.
- The Turnberry underground Mineral Resource is only the portion of the Mineral Resource that is located outside the \$2,600/oz optimised pit shell and above a 1.5g/t gold cut-off grade.
- The Mineral Resource is constrained within a \$2,600/oz optimised pit shell and above a 0.5g/t gold cut-off grade.
- Estimates are rounded to reflect the level of confidence in the Mineral Resources at the time of reporting.
- JORC Table 1 appended to this report.

# **5 ORE RESERVE ESTIMATE**

The initial Ore Reserve estimate for the Project is 4.1Mt @ 3.1g/t Au for 0.4M ounces gold. The Ore Reserve is a subset of the Measured and Indicated Mineral Resource that is assessed as economically minable following the application of appropriate modifying factors. The Ore Reserve estimate was compiled in June 2023.

Table 15	5 – Ore	Reserve	Estimate
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	Cut-off	Proven				Probable		Total		
Location	Grade	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces
	(g/t)	('000t)	(g/t)	('000oz)	('000t)	(g/t)	('000oz)	('000t)	(g/t)	('000oz)
Open Pit	<u> </u>				1			1		-
Turnberry	0.5	-	-	-	1,400	1.6	72	1,400	1.6	72
St Anne's	0.5	-	-	-	320	2.4	25	320	2.4	25
Undergrour	nd				1			1		-
Turnberry	2.0	-	-	-	570	3.3	61	570	3.3	61
Andy Well	2.0	-	-	-	1,800	4.3	249	1,800	4.3	249
Total	-	-	-	-	4,100	3.1	410	4,100	3.1	410

Notes:

• The Ore Reserve cut-off grades was estimated using a \$2,200/oz gold price.

• JORC Table 1 appended to this report.

# 6 **GEOTECHNICAL**

# 6.1 Andy Well

# 6.1.1 Open Pit

Peter O'Brian and Associates completed an open pit geotechnical study in 2012, which included geotechnical logging of exploration drill holes and gathering mechanical rock properties to assess conditions within the open pit walls. Open pit design parameters were adopted from this 2012 geotechnical report.

Wall Location	Geotechnical Domain	Depth Below Surface	Bench Height (m)	Batter Angle (deg)	Berm Width (m)
East Wall	Highly Weathered to Moderately Weathered	0m to 20m	10	50	6
East Wall	Slightly Weathered	20m to 40m	20	50	6
East Wall	Slightly Weathered to Fresh	40m to 50m	20	70	6
South and West Wall	Highly Weathered to Moderately Weathered	0m to 10m	10	50	6
South and West Wall	Slightly Weathered	10m to 20m	10	60	6
South and West Wall	Slightly Weathered to Fresh	20m to 50m	15	70	6

Table 16 – Andy Well Geotechnical Pit Design Parameters

### 6.1.2 Underground

Andy Well has been the subject of 11 separate geotechnical studies completed between 2012 and 2016 by technical experts including Peter O'Bryan and Associates, AMC Consultants, Coffee Mining and MineGeoTech. These studies, in addition to learnings gathered from operational experience during production, guided ground support, development stand-off distances and stope stability parameters.

Geotechnical modelling using Wedge software recommends split sets and mesh to provide adequate support for development mining at Andy Well. This is supported by practical experience during operation of the mine. As the mine advances at depth, ground support, including the use of dynamic or secondary support, will be considered during the annual ground support management plan review.

A standoff distance of 25m has shown to be effective in controlling damage to capital infrastructure from stoping.

Stable hydraulic radius (HR) values and stope strike lengths have evolved as increased geotechnical information became available during mining. The most recent empirical stope stability assessment to derive stable stope spans was completed by AMC Consultants.

Location	Q' Value	Α	В	С	N'	HR (m)	Dimensions Length x Height
Hangingwall	4.2	1.0	0.2	6.5	5.5	4.5	18m x 18m (1 sublevels)
Footwall	4.2	1.0	0.2	3.9	3.3	3.5	18m x 12m (1 sublevels)

Table 17 – Andy Well Empirical Stope Stability Assessment

Based on a design floor to floor sublevel spacing of 15m vertical, geotechnical conditions would allow for an unsupported stope strike length of ~12m before a pillar or backfill is required.

# 6.2 Turnberry

### 6.2.1 Open Pit

Two geotechnical studies have been completed to determine open pit design parameters for Turnberry. The first study was completed by MineGeotech in 2017 and provided open pit geotechnical design criteria. Peter O'Brian and Associates completed a second study in 2022, which built on the 2017 study and refined the open pit geotechnical design parameters based on additional rock mass characterisation and mechanical rock property data gathered from diamond core. Both studies provide similar geotechnical design recommendations and the more recent Peter O'Brian and Associates parameters were adopted for open pit design.

Geotechnical Domain	TB North	TB South	Bench Height (m)	Batter Angle (deg)	Berm Width (m)
Transported and clay rich weathered rocks	Surface to 460mRL	Surface to 440mRL	10	55	5
Transitional Rocks	460mRL to 420mRL	440mRL to 400mRL	15	60	6
Fresh Ultramafic Rocks	Below 420mRL	Below 400mRL	10	55	7
All Other Fresh Rocks	Below 420mRL	Below 400mRL	20	75	7

Table 18 – Turnberry Geotechnical Pit Design Parameters

#### 6.2.2 Underground

Peter O'Brian and Associates completed an underground geotechnical study in 2022, which included geotechnical logging of diamond core from 17 drill holes and gathering mechanical rock property data. This study provided portal establishment, stope stability, ground support and development stand-off design inputs used for mine planning.

The underground portal sites are located in fresh rock within the open pit. Portal development will incorporate a free-hanging wire mesh curtain suspended from the berm directly overlying the portal to cover the batter to within proximity of the ramp roadway at the portal location. The mesh curtain will extend 15m on each side of the portal. The batter surrounding the immediate portal will be systematically supported with 3.0m long full-column cement or resin grouted rock bolts. 6m long twin bulbed strand cable bolts will be used to support the rock mass overlying the portal brow.

Ground conditions within the underground mine have been assessed to be good or better under the Q-system. In these anticipated favourable conditions, development openings can be supported with friction bolts and mesh installed over the backs and sidewalls to within 2.5m of floor level.

A standoff distance of 30m should be targeted to control damage to capital infrastructure from stoping.

Stable HR values and stope dimensions developed through empirical analysis indicate stable stope voids up to ~20m by ~60m can be achieved. Based on a design floor to floor sublevel spacing of 20m vertical, rib pillars are planned to be placed every 20m to limit stope strike lengths resulting in a conservative HR of 6m being achieved.

Location	Orebody	Stope Wall	Q' Value	Α	В	С	N	HR (m)	Dimensions Length x Height
	North Main	Hangingwall	25.0	1.0	0.3	7.5	56.2	12.5	41m x 65m (2 sublevels)
North	Orebody North	Footwall	25.0	1.0	0.3	2.5	18.5	8.7	24m x 65m (2 sublevels)
NORTH		Hangingwall	33.1	1.0	0.3	7.5	74.5	14.0	50m x 65m (2 sublevels)
	Footwall Orebody	Footwall	33.1	1.0	0.3	2.5	24.8	9.5	27m x 65m (2 sublevels)
South	South Main	Hangingwall	23.0	1.0	0.3	7.5	51.7	12.2	39m x 65m (2 sublevels)
Orebody		Footwall	23.0	1.0	0.3	2.5	17.2	8.5	23m x 65m (2 sublevels

Table 19 – Turnberry Empirical Stope Stability Assessment

# 6.3 St Anne's

Due to the relatively shallow nature of the St Anne's open pits the Turnberry open pit design parameters were applied at St Anne's.

Geotechnical Domain	Bench Height (m)	Batter Angle (deg)	Berm Width (m)
Transported and clay rich weathered rocks	10	55	5
Transitional rocks	15	60	6

# Table 20 – St Anne's Geotechnical Pit Design Parameters

# 7 HYDROLOGY

The Project is located within the Murchison River Basin. The principal hydrological feature is a surface drainage channel located to the south of the planned Turnberry open pits. A diversion bund has been designed to address preliminary modelling of flood events within the Basin.

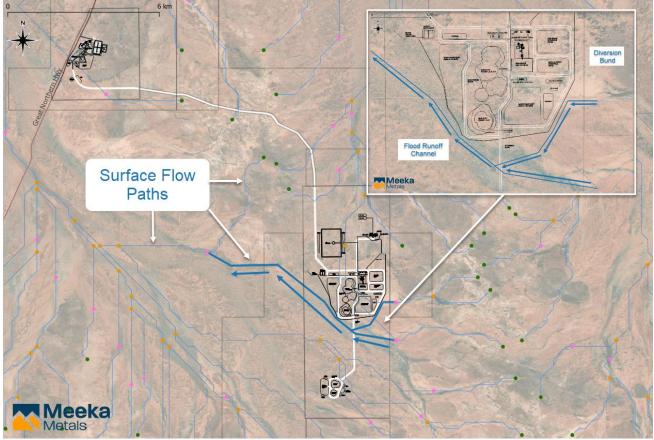


Figure 29 – Flood runoff model and diversion bunding.

There are no mapped drainage lines, watercourses or wetlands in the vicinity of the Andy Well mine, however flood protection barriers have been constructed around the mine workings and have proven effective over the preceding decade.

# 8 HYDROGEOLOGY

# 8.1 Andy Well

Hydrogeology investigations show depth to groundwater is relatively uniform and has been measured at between 4.5 and 5.8 metres below ground level (mbgl). Three aquafer horisons have been identified below the saprolite, which extends to a depth of 10mbgl. The aquifers are not continuous, and some degree of compartmentalisation is expected. The most significant permeabilities are associated with the ore body transition zone aquifers. Some minor groundwater inflows may also be derived from the country rock transition zone aquifers and deeper ore body aquifer. Some anisotropy or preferred groundwater flow is likely parallel to the strike of the ore body and major structural features. Historical dewatering records indicate mine groundwater inflows of 15 to 20L/s resulting in a positive water balance. Surface discharge is planned to occur at the existing ridgeline discharge locations.

Zone	Characteristics
Upper Transition Zone Aquifer	From the base of saprolite to around 35 to 40mbgl (445 to 440mAHD) is a highly weathered and fractured zone. This zone is also highly oxidized with abundant iron staining on fracture surfaces. Near surface unloading and opening of fractures, enhanced by chemical weathering has resulted in a transition zone aquifer with potential for moderate to high permeability. As the water table is around 5 to 6m below ground the majority of this material is saturated.
Lower Transition Zone Aquifer	Beneath the upper transition zone is a zone of partial oxidation and discrete fracturing, with the frequency of fracturing decreasing with depth. This zone generally extends to around 70 to 80m below ground (410 to 400mAHD). While individual fractures may display moderate permeability the overall bulk permeability of this zone is likely to be moderate to low.
Basement Aquifer	Below 80m from ground level (400mAHD) the observed lithologies are predominantly massive with only minor fractures. From a ground water perspective, the lithology will be very tight with little to no significant permeability. Occasional discrete fractures and fracture zones are evident and may result in localised groundwater inflows.

Table 21 – Andy Well Aquifer Characteristics

# 8.2 Turnberry

Groundwater occurrence in the area can be categorised into three aquifer types; surficial, sedimentary and fractured rock. Locally, most domestic and stock water requirements are met from small supplies of fresh to brackish groundwater sourced from surficial aquifers (hosted in colluvium, valley-fill alluvium, and calcrete). Away from the drainage lines, low yielding supplies can be sourced from colluvial hillslope wash, weathered bedrock and from fractures and shear zones within the bedrock. Bore yields from fractured rock aquifers are variable and water quality is mostly related to geology.

Groundwater occurrence within the weathering profile, fractures in the bedrock and associated with shear zones, quartz veins and dykes appear to be the main sources of groundwater encountered during drilling at Turnberry.

The depth to groundwater is generally 9 to 13mbgl, and the results from the hydrogeological drilling and testing program conducted in 2017 indicate the groundwater is fresh (total dissolved solids, TDS, average 600mg/L) and slightly alkaline (pH average of 8.1). This is consistent with historical hydrogeological investigations in the area, which suggest the quality of the groundwater is relatively fresh and potable. These historical studies also identified artesian groundwater conditions may be present in the area. Regional groundwater flow likely correlates with topography and surface water catchments.

Six vertical wells were drilled at Turnberry as part of the hydrogeological drilling and testing program and targeted areas of inferred structure, including the intersection of lineaments, in the

north, south and central area, as well as one out-of-pit location. In addition to the vertical holes drilled, two angled drillholes were selected for airlift recovery testing to obtain additional hydrogeological data.

Groundwater flow is interpreted to be structurally controlled and the geology is anisotropic, with apparent increased hydraulic conductivity in a northwest-southeast orientation. This will possibly result in an elliptical cone of depression, aligned with the northwest-southeast structures, developing in response to groundwater pumping and mine dewatering.

Dewatering bores are proposed to be installed around the perimeter of the open pits to lower the pore water pressure in advance of open pit mining. The bores will pump into a site water dam providing process water.

Ground water inflow to mining operations is expected to result in a positive water balance requiring surface discharge or reinjection.

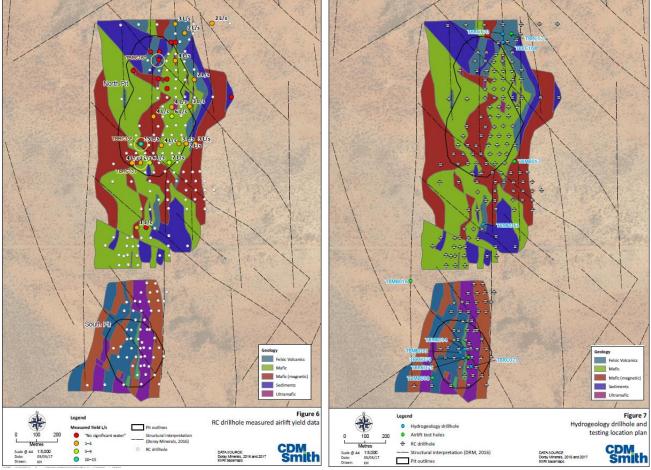


Figure 30 – Turnberry drill hole flow rates and monitoring bore locations.

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Feasibility Study Summary July 2023

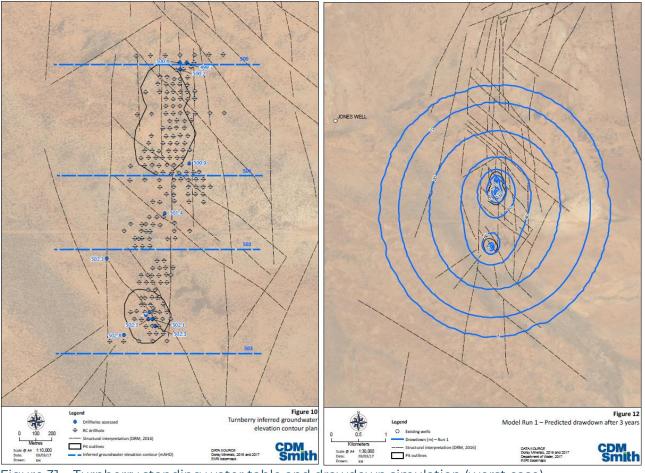


Figure 31 - Turnberry standing water table and drawdown simulation (worst case).

# 9 MINING

Mining is planned at Andy Well, Turnberry and St Anne's, supplying ore to a 1.0Mtpa processing facility located at Turnberry. Both open pit and underground mining is planned at Andy Well and Turnberry, while St Anne's is currently only planned to be mined by open pit methods. Andy Well is located within Mining Lease M51/870. Turnberry and St Anne's are located within Mining Lease M51/882.

Mining is planned to occur simultaneously at each mining centre to provide production flexibility with stockpiling and grade streaming adopted to maximise production and cash flow. Higher grade ore feed is prioritised for milling and lower grade ore is stockpiled for processing at a later date.

At Andy Well, two open pits are planned to be mined in addition to underground mining activities. Extensive underground development infrastructure is already in place and there is no interaction between underground and open pit mining activities. Both open pit and underground mining is planned to occur concurrently. Ore produced from the Andy Well mining centre will be stockpiled on surface and then trucked 19.5km via a planned haul road to the processing facility at Turnberry by road train.

Five open pit stages are planned to be mined at Turnberry with pit staging providing early and consistent access to ore. The Turnberry open pits will also provide a platform for underground development with mining scheduled to limit interaction between open pit and underground activities. The open pit and underground fleet will deliver ore directly to the ROM pad located adjacent to the open pit.

Two open pits are planned at St Anne's. These will be mined as satellite pits to the Turnberry mining centre due to proximity to the Turnberry infrastructure. Ore from St Anne's will be stockpiled and trucked by road train 5km via a newly established haul road to the processing facility at Turnberry.

Infrastructure construction, dewatering and pre-stripping for mining activities will occur prior to commissioning of the mill in Year 1. Mining of the various deposits occurs over eight years followed by an 18-month period of processing low grade stockpiles accumulated during the mining phase.

Area	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Turnberry OP			-			5					10
St Anne's OP											
Andy Well OP											
Turnberry UG											
Andy Well UG											
Stockpile Processing											

Table 22 – Mining and Processing Schedule

Project Year	Units	Total	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Open Pit Minin	a		0		2	3	4	5	6	7	8	9	10
Turnberry	Kt	4,323	156	570	654	14		38	519	863	1.509		
	g/t	1.2	2.7	1.7	1.3	1.1		0.8	1.2	1.0	1.0		
	Koz	170	14	30	27	1		1	21	29	49		
St Anne's	Kt	318		318									
	g/t	2.4		2.4									
	Koz	24		24									
Andy Well	Kt	39			39								
	g/t	7.6			7.6								
	Koz	9			9								
Total	Kt	4,680	156	888	693	14		38	519	863	1,509		
	g/t	1.4	2.7	1.9	1.6	1.1		0.8	1.2	1.0	1.0		
	Koz	204	14	55	36	1		1	21	29	49		
	Mining	1	1	1		1	1			1		1	
Turnberry	Kt	1,805				27	463	827	488				
	g/t	2.5				1.1	2.1	2.5	3.1				
	Koz	147				1	31	68	48				
Andy Well	Kt	2,737	12	382	451	471	470	363	274	314			
	g/t	3.9	1.6	3.3	3.0	3.4	4.2	4.2	5.7	4.7			
	Koz	345	1	41	43	51	63	49	50	47			
Total	Kt	4,542	12	382	451	498	933	1,190	762	314			
	g/t	3.4	1.6	3.3	3.0	3.3	3.1	3.1	4.0	4.7			
	Koz	493	1	41	43	52	93	117	99	47			
Mining Total													
Tonnes	Kt	9,222	168	1,271	1,144	512	933	1,228	1,280	1,177	1,509		
Grade	g/t	2.4	2.6	2.3	2.2	3.2	3.1	3.0	2.9	2.0	1.0		
Ounces	Koz	697	14	95	80	53	93	118	119	76	49		

#### Table 23 – MGP Mine Production Schedule

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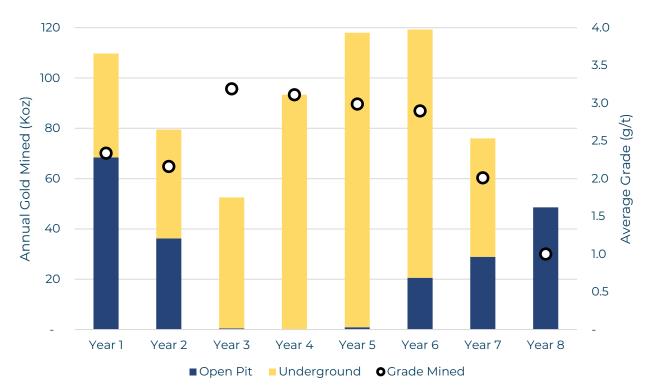


Figure 32 – MGP mine production schedule by mining method.

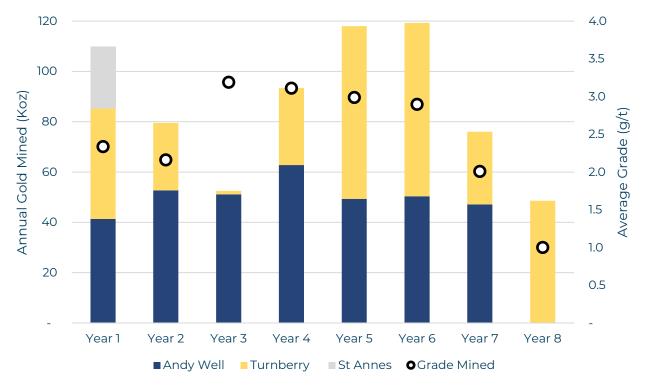


Figure 33 – MGP mining schedule by mining centre.

# 9.1 Open Pit Mining

The open pit mining strategy provides consistent baseload mill feed. Open pit mill feed will be supplemented by lower tonnage, higher grade underground ore sources. The open pit mine plan delivers 4.7Mt at 1.4g/t for 205Koz.

A total of six open pits are planned to be mined over the life of the project, including two pits at Turnberry (mined in five stages), two pits at St Anne's and two pits at Andy Well. All open pits are planned to be mined by conventional load and haul mining fleet with mining services provided by a contractor operating 24 hours a day, 7 days a week. Open pit optimisations were completed to evaluate pit limits that balance pit economics and access for underground development. Optimisation shells corresponding to a \$2,600/oz gold price were used to guide open pit design.

Open pit designs and ramp configurations suit 200t class excavators in a backhoe configuration matched to 140t off road haul trucks for waste stripping. A smaller fleet of 100t class excavator and 95t off road haul trucks are planned for ore movement and the smaller benches at the base of each pit.

Benches are planned to be 5m high and will be mined in two 2.5m flitches. 92% of the open pit ore tonnes come from Turnberry where the average width of the dig block being mined is 6m. St Anne's, 7% of the ore tonnes, has an average dig block size of 5.5m.

Ore boundaries will be delineated by grade control drilling completed from surface initially and then from the pit floor as mining progresses. Pit wall angles were designed based on geotechnical recommendations specific to each open pit. Open pit optimisation, design and scheduling was completed internally with third party review completed by Orelogy Consulting.

### 9.1.1 Dig Block Creation (SMU)

Prior to running open pit optimisations, each block model was adjusted to account for dilution based on the selected mining equipment fleet being employed. This selective mining unit (SMU) adjusted block model was then used for the optimisation process to evaluate the potential economics of various open pit mining envelopes.

Table 24 – Dig	Block Inputs	for Turnberry and	d St Anne's
----------------	--------------	-------------------	-------------

Variable	Input		
Minimum Mining Width	3.5m (3.0m ore plus 0.5m dilution)		
Maximum Width	Unlimited		
SMU Height	5 m		
SMU Length	5 m		
Dilution	0.5m of waste added		
Cut-off	≥0.5g/t		

Table 25 – Dig	Block	Inputs fo	or Andy Moll
Table 25 – Dig	DIUCK	inputsit	JI ANUY WEII

Variable	Input
Minimum Mining Width	2.5m (2.0m ore plus 0.5m dilution)
Maximum Width	Unlimited
SMU Height	5 m
SMU Length	5 m
Dilution	0.5m of waste added
Cut-off	≥0.5g/t

# 9.1.2 Open Pit Optimisation

Open pit optimisations were performed to evaluate the potential economics of various open pit mining envelopes. These optimisation shells were further interrogated to understand the economics of each shell at various gold prices, and the impact of pit size on mining productivity and costs. In the case of Turnberry, where there is a deep weathering profile, the need to gain access to fresh rock to establish an underground development portal was also considered. A \$2,600/oz optimisation shell was selected to guide all final open pit designs.

Variable	Unit	Input		
Model used		2017 MRE – Reblocked for SMU		
Gold Price at RF1.0	\$/oz	2,600		
Price per Gram (post royalty)	\$/g	81.5		
Royalty	%	2.5		
Mining Dilution	m	0.5m at 0g/t Au added to each dig block		
Mining Recovery	%	100		
Milling Recovery	%	98		
Block Size	m	Minimum 2mX, 5mY, 5mZ		
Pit Slopes	Deg	37 (Reg/Ox), 42 (Tr), 47 (Fr)		
Processing Costs	\$/ ore t	20 (Reg/Ox), 22 (Tr), 25 (Fr)		
Drilling and Blasting Costs	\$/BCM	1.0 (Ox), 2.0 (Tr), 3.1 (Fr)		
Mining Cost	\$/BCM	7.0 (first bench)		
Mining Escalation Costs	\$/BCM	0.075 per 5m bench		
Owners Costs	\$/BCM	1.5		

Table 26 – Optimisation Inputs for Andy Well

#### Table 27 – Optimisation Inputs for Turnberry

Variable	Unit	Input
Model used		2023 MRE – Reblocked for SMU
Gold Price at RF1.0	\$/oz	2,600
Price per Gram (post royalty)	\$/g	81.5
Royalty	%	2.5
Mining Dilution	m	0.5m at 0g/t Au added to each dig block
Mining Recovery	%	100
Milling Recovery	%	94 (Reg/Ox/Tr) & 90 (fr)
Block Size	m	Minimum 3.5mX, 5mY, 5mZ
Pit Slopes	Deg	37 (Reg/Ox), 42 (Tr), 47 (Fr)
Processing Costs	\$/ ore t	20 (Reg/Ox), 22 (Tr), 25 (Fr)
Drilling and Blasting Costs	\$/BCM	1.0 (Ox), 2.0 (Tr), 3.1 (Fr)
Mining Cost	\$/BCM	7.0 (first bench)
Mining Escalation Costs	\$/BCM	0.075 per 5m bench
Owners Costs	\$/BCM	1.5

Variable	Unit	Input
Model used		2023 MRE – Reblocked for SMU
Gold Price at RF1.0	\$/oz	2,600
Price per Gram (post royalty)	\$/g	81.5
Royalty	%	2.5
Mining Dilution	m	0.5m at 0g/t Au added to each dig block
Mining Recovery	%	100
Milling Recovery	%	98
Block Size	m	Minimum 3.5mX, 5mY, 5mZ
Pit Slopes	Deg	37 (Reg/Ox), 42 (Tr), 47 (Fr)
Processing Costs	\$/ ore t	20 (Reg/Ox), 22 (Tr), 25 (Fr)
Drilling and Blasting Costs	\$/BCM	1.0 (Ox), 2.0 (Tr), 3.1 (Fr)
Mining Cost	\$/BCM	7.0 (first bench)
Mining Escalation Costs	\$/BCM	0.075 per 5m bench
Owners Costs	\$/BCM	1.5

#### Table 28 – Optimisation Inputs for St Anne's

### 9.1.3 Open Pit Cut-Off Grade

The decision point for classifying open pit material as ore or waste is made at the crest of the open pit as every tonne mined from within the pit shell needs to be hauled to either the waste dump or the ROM pad. The costs occurring within the pit do not differ materially for ore and waste, and therefore do not factor in the cut-off grade decision. The cut-off grade is estimated based on costs to haul, stockpile and rehandle material from the pit crest to the ROM feed bin, as well as processing costs and overheads. This is estimated to be between 0.4 g/t and 0.6 g/t gold based on oxidation state, operating cost profile and a gold price of \$2,200/oz. A pragmatic approach was taken with respect to open pit cut-off grade application with 0.5g/t gold used for financial modelling.

Variable	Unit	Andy Well	Turnberry	St Anne's
Gold Price	\$/oz	2,200	2,200	2,200
State Royalty	%	2.5% NSR	2.5% NSR	2.5% NSR
Private Royalty		<ul> <li>1% NSR (Wilson)</li> <li>Yugunga-Nya Royalty</li> </ul>	<ul> <li>\$1M (Archean Star)</li> <li>8.8% Net Profit Interest (Teck)</li> <li>Yugunga-Nya Royalty</li> </ul>	<ul> <li>\$1M (Archean Star)</li> <li>8.8% Net Profit Interest (Teck)</li> <li>Yugunga-Nya Royalty</li> </ul>
Met. Recovery	%	98%	Ox/Tr = 94.1% / Fr = 88.5%	98%
Surface Haulage	\$/ore t	3.0	0.1	0.8
Processing Costs	\$/ore t	20.7-27.5	20.7-33.5	20.7
G&A	\$/ore t	5.9	5.9	5.9
Calculated Cut-Off Grade	g/t	0.4-0.5	0.4-0.6	0.4-0.5
Applied Cut-Off Grade	g/t	0.5	0.5	0.5

Table 29 - Open Pit Cut-Off Grade Estimation

# 9.1.4 Open Pit Design

Open pit designs for all the pits were guided by the optimisation shells. In some instances, the final design results in a shallower pit wall angle than that of the optimised shell due to constraints imposed by mining modifying factors (minimum bench and ramp widths) and geotechnical parameters (berm widths and batter angles).

Domain	Batter Height	Batter Angle	Berm Width
	(m)	(deg)	(m)
Oxide	10	55	5
Transitional	15	60	5
Fresh	20	75	7

#### Table 31 – Ramp Design Parameters

Description	Units	Ramp Width
Ramp Width – Double Lane	m	23
Ramp Width – Single Lane	m	15
Gradient	l:n	10





Figure 35 – Isometric view showing Turnberry final pit design shell and dig blocks.

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Feasibility Study Summary | July 2023

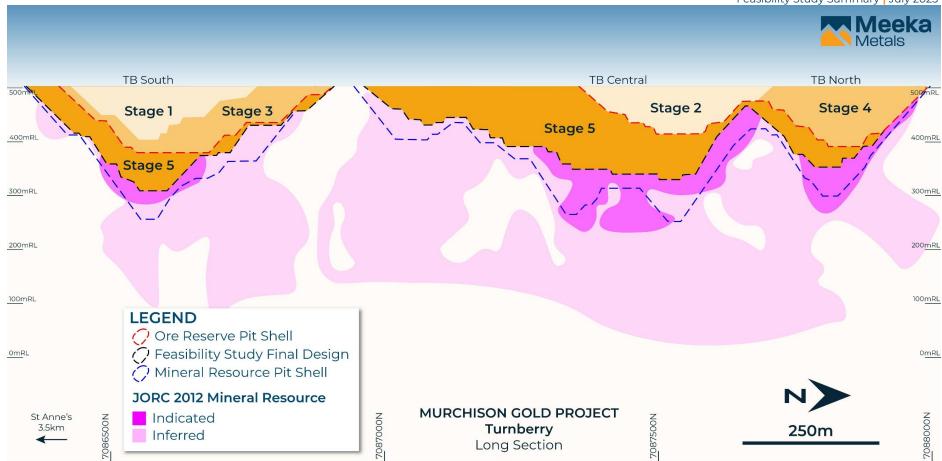


Figure 36 – Long Section showing open pit staging at Turnberry.

Feasibility Study Summary July 2023

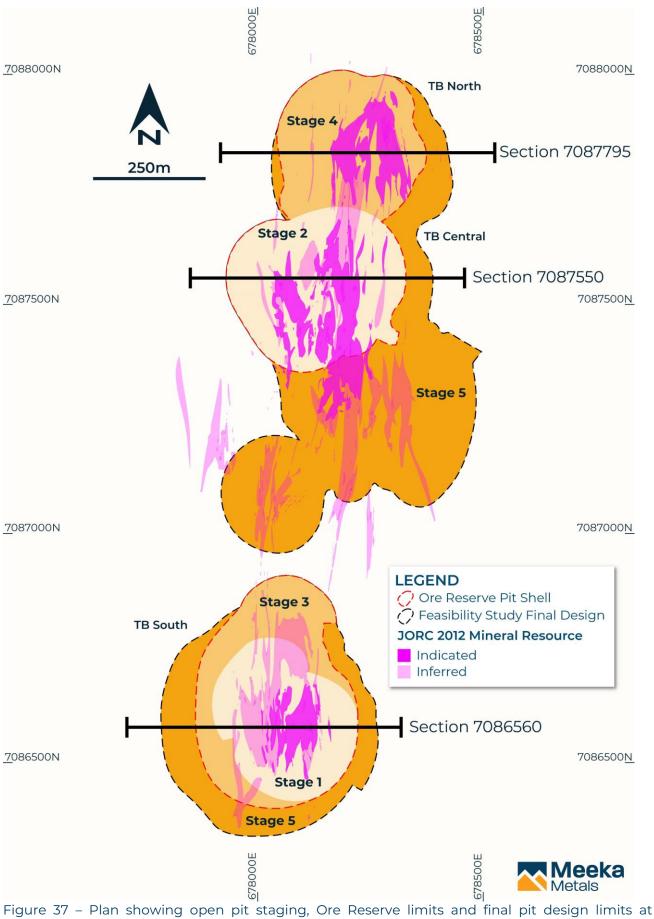


Figure 37 – Plan showing open pit staging, Ore Reserve limits and final pit design lin Turnberry.

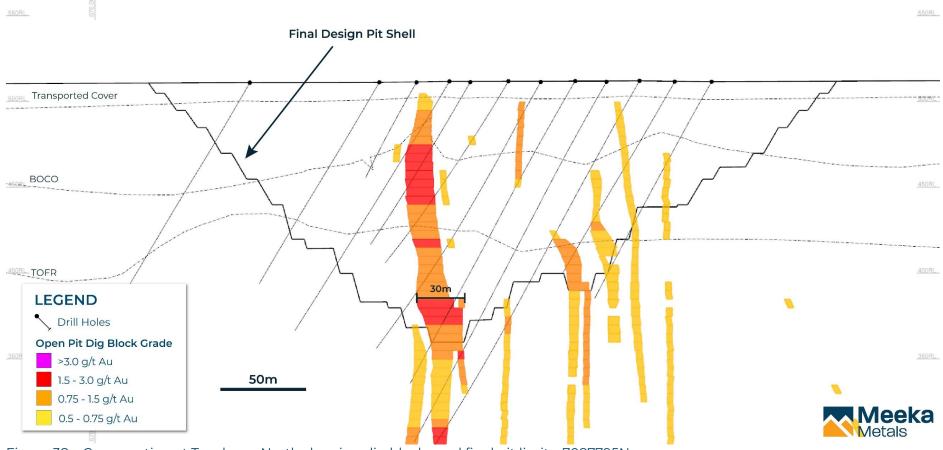


Figure 38 – Cross section at Turnberry North showing dig blocks and final pit limits, 7087795N.

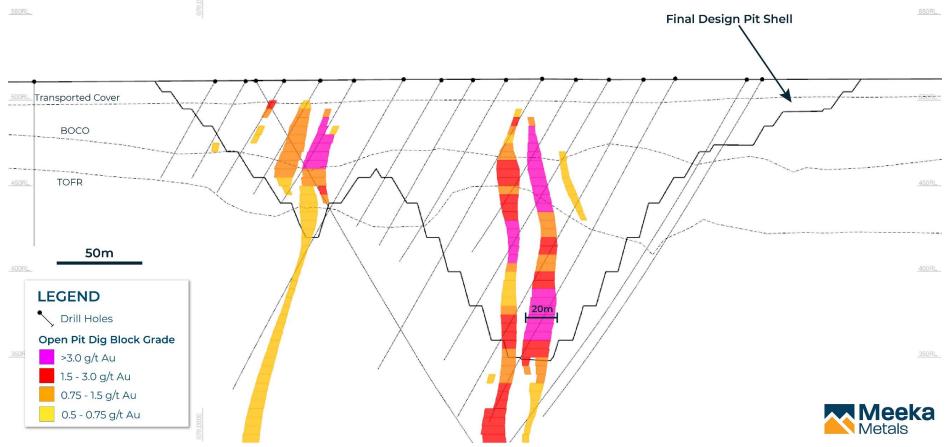


Figure 39 – Cross section at Turnberry Central showing dig blocks and final pit limits, 7087550N.

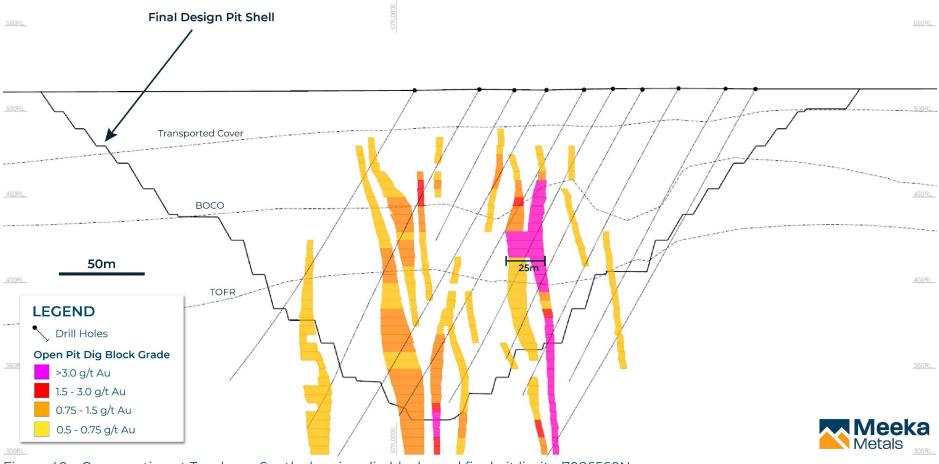


Figure 40 – Cross section at Turnberry South showing dig blocks and final pit limits, 7086560N.



Figure 41 – Plan showing open pit design for St Anne's (design pit shell = Ore Reserve pit shell).

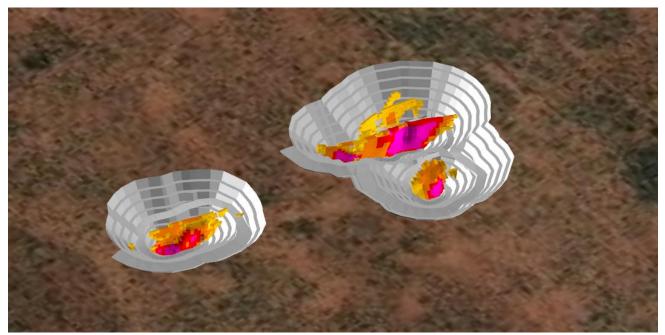
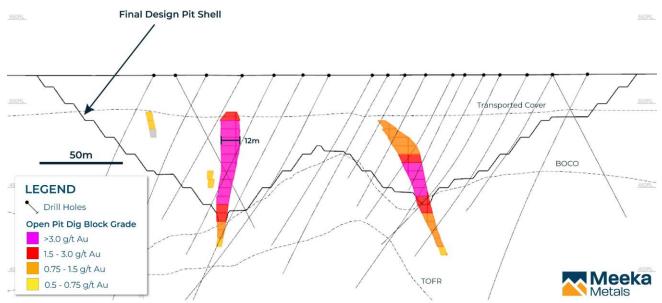


Figure 42 – Isometric view showing St Anne's final pit design shell and dig blocks.

Feasibility Study Summary | July 2023





#### 9.1.5 Open Pit Schedule

The Turnberry open pits will be staged, due to their size, to ensure consistent access to ore and limit cash drawdown due to stripping. The Andy Well and St Anne's open pits will be mined to the final pit design in one pass.

Key scheduling drivers and constraints included:

- Mining productivities based on proposed contractor mining fleet:
  - 1 x 100 t excavator;
  - Up to 2 x 200 t excavator; and
  - Up to 3 x production drills.
- Constraints on the mining schedule:
  - Top-down mining with each bench completed before the subsequent bench can commence;
  - Maximum advance of 3 benches per month (15 m vertical);
  - Maximum material movement varied by material type, equipment productivity and depth of mining;
  - o Bench priority given to mining blocks closest to the ramp; and,
  - At Turnberry, the final open pit stage (stage 5) mines through the top levels of the Turnberry underground mine. The start of this final stage of open pit mining is delayed (starts in year five) to maintain access to the underground.

	Units	Total	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Open Pit Or	e Moveme	nt Sched	ule				1		1	1	<u></u>
Turnberry	Kt	4,323	156	570	654	14		38	519	863	1,509
	g/t	1.2	2.7	1.7	1.3	1.1		0.8	1.2	1.0	1.0
	Koz	170	14	30	27	1		1	21	29	49
St Anne's	Kt	318		318							
	g/t	2.4		2.4							
	Koz	25		25							
Andy Well	Kt	39			39						
	g/t	7.6			7.6						
	Koz	9			9						
Total	Kt	4,680	156	888	693	14		38	519	863	1,509
	g/t	1.4	2.7	1.9	1.6	1.1		0.8	1.2	1.0	1.0
	Koz	205	14	55	36	1		1	21	29	49
Open Pit Ma	aterial Mov	ement Sc	hedule								
Turnberry											
Ore	M BCM	1.7	0.1	0.3	0.2	0.1		0.1	0.1	0.5	0.3
Waste	M BCM	32.6	3.8	4.0	1.2			2.9	9.6	9.6	1.5
Total	M BCM	34.3	3.9	4.3	1.4			3.1	9.7	10.2	1.7
St Anne's											
Ore	M BCM	0.1		0.1							
Waste	M BCM	3.7		3.7							
Total	M BCM	3.8		3.8							
Andy Well											
Ore	M BCM	0.1			0.1						
Waste	M BCM	1.3			1.3						
Total	M BCM	1.4			1.4						

# Table 32 – Open Pit Mining Schedule

# 9.2 Underground Mining

The underground mining strategy is to stage development to ensure at least one underground mine is providing high grade ore feed to the mill throughout the life of the project. This approach ensures consistent supply of higher-grade ore to supplement the baseload open pit ore sources, while also reducing working capital requirements. The underground mine plan delivers 4.5Mt at 3.4g/t for 493Koz.

Underground mining is planned at both Andy Well and Turnberry. The steeply dipping, high grade lodes are planned to be mined predominantly by mechanical means. Decline development will be performed by twin boom electric hydraulic jumbo. At Turnberry where the wider lodes can accommodate a larger development opening without excessive dilution, ore drives will be mined by twin boom jumbo. Andy Well ore drive development will be completed by single boom jumbo developing a smaller profile. Long hole stoping is planned for both mining centres with the addition of rock fill at Andy Well to provide geotechnical control within stopes. Underground mining will be managed by the Company with contractors performing development and production activities, operating 24 hours a day, 7 days a week.

The underground planning and optimisation process involved iterative stope optimisations using various cut-off grades and modifying factors estimated from historical operating experience for the style of deposit and mining method being considered.

Mine design was then completed for each deposit, incorporating decline access, ventilation airways and ore drives to access stoping areas identified by the optimisation process. The physicals from the mine design were then scheduled and inserted into the Company's cost model to confirm cut-off grade estimates, and the stope optimisation process re-run using the refined cut-off grades. Manual adjustment of the optimised stopes was then completed to remove outlier stopes that would not justify the capital or operating expenditure to access them. The resulting development design and stopes were then scheduled and inserted into the cost model for economic evaluation.

Ground conditions at both Turnberry and Andy Well are expected to be good and geotechnical recommendations include the use of mesh and rockbolts for primary development support. Previous operating experience at Andy Well supports this recommendation.

A combination of barrier, sill, island and rib pillars will be strategically used to break up stoping fronts with their positioning to be confirmed following ore drive development and the accurate delineation of economic panels of ore. Recovery factors have been applied during the mine planning process to account for remnant pillars and ore loss left during the stoping process. Both loose rock fill and cement rock fill (CRF) will be applied at Andy Well to provide further geotechnical control during stoping.

### 9.2.1 Cut-off Grade

Cut-off grades were estimated based on a \$2,200/oz gold price, forecast costs, royalties and metallurgical recoveries.

At Andy Well three cut-off grades were adopted for final planning and economic analysis:

- A fully costed cut-off grade (2.7g/t), which includes all capital and operating costs and is used to define economic stoping blocks.
- An incremental stope operating cut-off grade (2.0g/t), which only considers operating overheads, mine service, stoping, surface haulage and processing costs, and is applied to evaluate stoping of ore that is developed as a consequence of extracting the fully costed inventory.
- An incremental process cut-off grade (0.4g/t), which only considers surface haulage and processing costs, and is applied to evaluate processing of ore that is necessarily trucked to surface as part of the development process.

Variable	Unit	Fully Costed Cut-off	Stope Cut-off	Process Cut-off		
Gold Price	\$/oz	2,200				
State Royalty	%		2.5% NSR			
Private Royalty		1% NSR (	Wilson) / Yugunga-Nya	Royalty		
Met. Recovery	%		98%			
Overheads	\$/t ore	25.1	25.1			
Capital Development	\$/t ore	28.0				
Operating Development	\$/t ore	43.3	43.3			
Stoping	\$/t ore	43.6	43.6 65.8			
Mine Services	\$/t ore	11.2	11.2			
Total Mine Costs	\$/t ore	151.2	102.1			
Surface Road Haulage to Plant	\$/t ore	2.8	2.8	2.8		
Processing	\$/t ore	25.7	25.7	25.7		
Total Cost	\$/t ore	179.7	130.6	28.5		
Cut-off grade	g/t	2.7	2.0	0.4		

Table 33 – Andy Well Underground Cut-off Grade Calculations

At Turnberry three cut-off grades were adopted for final planning and economic analysis:

- A fully costed cut-off grade (2.2g/t), which includes all capital and operating costs and is used to define economic stoping blocks.
- An incremental stope operating cut-off grade (1.5g/t), which only considers operating overheads, mine service, stoping, surface haulage and processing costs, and is applied to evaluate stoping of ore that is developed as a consequence of extracting the fully costed inventory.
- An incremental process cut-off grade (0.6g/t), which only considers surface haulage and processing costs, and is applied to evaluate processing of ore that is necessarily trucked to surface as part of the development process.

Variable	Unit	Fully Costed Cut-off	Stope Cut-off	Process Cut-off	
Gold Price	\$/oz	2,200			
State Royalty	%	2.5% NSR			
Private Royalty		\$1M (Archean Star Resources) / 8.8% Net Profit Interest (Teck) / Yugunga-Nya Royalty			
Met. Recovery	%	88.5%			
Overheads	\$/t ore	23.2	23.2		
Capital Development	\$/t ore	21.4			
Operating Development	\$/t ore	31.9			
Stoping	\$/t ore	16.9	26.5		
Mine Services	\$/t ore	5.7	5.7		
Total Mine Costs	\$/t ore	99.1	55.4		
Surface Road Haulage to Plant	\$/t ore	0.0	0.0	0.0	
Processing	\$/t ore	33.5	33.5	33.5	
Total Cost	\$/t ore	132.6	88.9	33.5	
Cut-off grade	g/t	2.2	1.5	0.6	

Table 34 – Turnberry Underground Cut-off Grade Calculations

### 9.2.2 Stope Optimisation

Modifying factors were determined based on geotechnical inputs, the proposed mining methods and mining fleet. Stope optimisation outputs were reviewed on a level-by-level basis and refined as follows:

- Stopes that met optimisation and cut-off grade parameters but were isolated and could not justify the capital and operating development required to access them were removed from the mine plan.
- Shallow stopes within the oxide horizon were removed from the mine plan.

Area	Minimum Mining Width	Unplanned Dilution	Minimum Mined Void	Mining Recovery
	(m)	(m)	(m)	(%)
Andy Well*	1.2	0.8	2.0	95
Turnberry	2.0	0.5	2.5	83

#### Table 35 - Stope Optimisation Modifying Factors

\*Andy Well has a higher mining recovery due to the planned use of CRF.

### 9.2.3 Underground Design

The Andy Well underground mine was designed around the optimised stopes and existing mine development. Only limited capital development is required above 1,200mRL (~280m below surface) due to the existing decline and ventilation development. This development provides immediate benefit to the production plan with early access to Wilber, Suzie, Judy and Judy North lodes from the existing decline. As mining advances, new decline infrastructure will be developed to access deeper mining fronts.

Access to each stoping level is via a level crosscut developed on each stoping horizon. Escapeways will be developed at approximately 15m vertical intervals and ventilation shafts will be installed adjacent to the decline infrastructure at between 20m and 60m intervals using longhole drill and blast or raisebore respectively.

Development Type	Gradient	Length	Width	Height
Decline	1:7		5.0 m	5.5 m
Level Access	1:50 up		4.0 m	4.5 m
Return Airway Drive	1:50 up		5.0 m	5.5 m
Stockpiles				
Decline Stockpiles	1:50 up	20.0 m	5.0 m	5.5 m
Truck Tip	1:50 up	20.0 m	5.0 m	8.0 m
Level Stockpiles	1:50 up	15.0 m	4.0 m	4.5 m
Sumps	1:5 down	10.0 m	4.0 m	4.5 m
Escapeway Drive	1:50 up	15.0 m	4.0 m	4.5 m
Ore Drives	1:50 up		2.9m	3.5 m
Sub-Station Cuddy	1:50 up	20.0m	5.0 m	5.5 m
Escapeway Rises	65°		1.2 m	1.2m
Return Air Rises	90°		3.0m dia.	

Table 36 - Mine Design Criteria for Andy Well Underground

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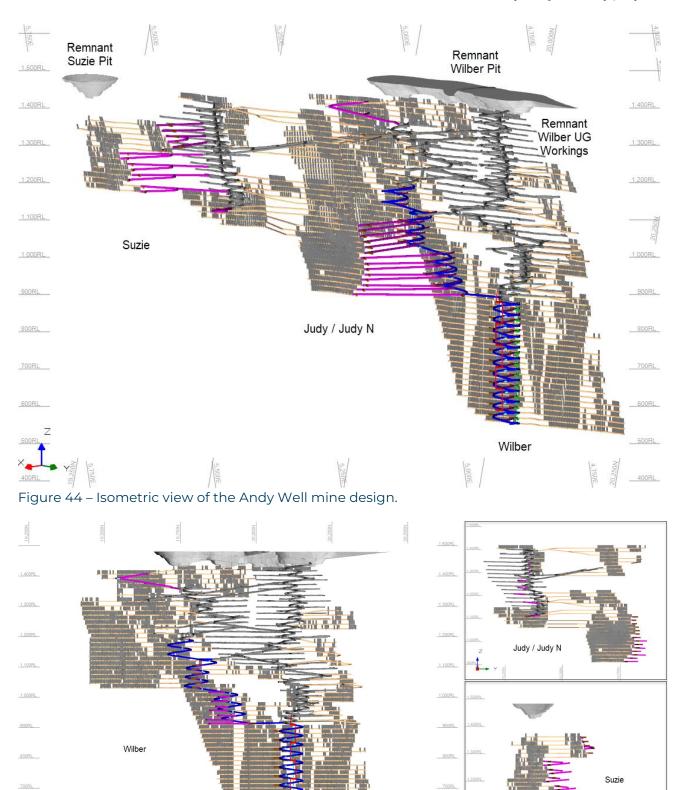


Figure 45 – Long section showing Andy Well mine design by lode.

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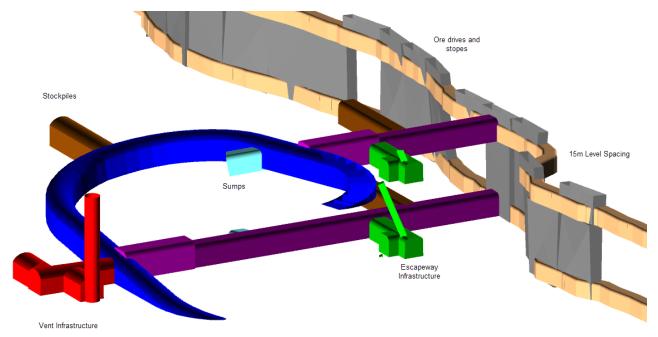
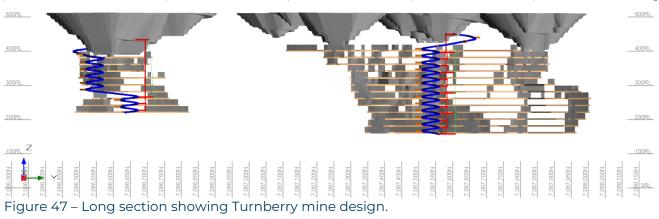


Figure 46 - Isometric view showing typical Andy Well level layout.

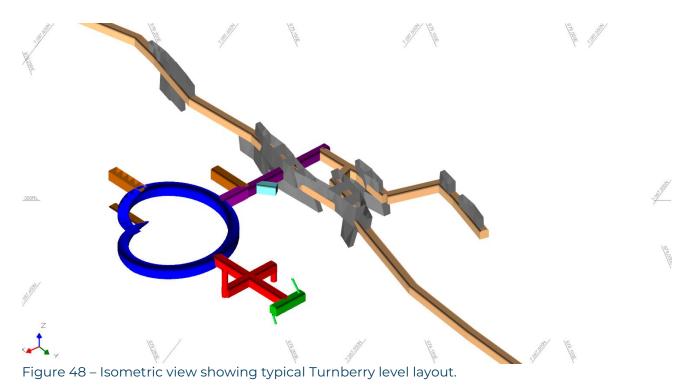
The Turnberry underground mine was designed around the optimised stopes and planned open pit shells. Both the north and south mining areas are established via portals in the base of the respective open pits. Primary ventilation and secondary egress is established via an adit in the open pit.

Development Type	Gradient	Set Length	Width	Height
Decline	1:7		5.0 m	5.5 m
Level Access	1:50 up		4.5 m	4.5 m
Return Airway Drive	1:50 up		5.0 m	5.5 m
Stockpiles				
Decline Stockpiles	1:50 up	20.0 m	5.0 m	5.5 m
Truck Tip	1:50 up	20.0 m	5.0 m	8.0 m
Level Stockpiles	1:50 up	20.0 m	4.5 m	4.5 m
Sumps	1:5 down	10.0 m	4.5 m	4.5 m
Escapeway Drive	1:50 up	20.0 m	4.5 m	4.5 m
Ore Drives	1:50 up		4.5m	4.5 m
Sub-Station Cuddy	1:50 up	20.0m	5.0 m	5.5 m
Escapeway Rises	80-90°		1.0m dia.	
Return Air Rises	80-90°		3.0m dia.	

Table 37 - Mine Design Criteria for Turnberry Underground



Feasibility Study Summary July 2023



## 9.2.4 Underground Schedule

Each mine schedule was created by linking development design and optimised stope shapes through a prescribed series of dependencies. Several of the activity links included time delays, which delay the starting of a subsequent activity in the schedule. This seeks to replicate the actual progression of tasks during the mining process, allowing for activities such as installation of cable bolts at a development turn-out or the completion of technical service activities such as geology modelling and stope design at the completion of ore drive development but preceding stope production. Development and stoping rates are then applied to all activities to reflect the maximum possible rate achievable for a specific activity. The schedule is then levelled to reflect practical levels of resourcing within the mine and the total development or stope production achievable during a specific period. The levelled schedule reflects the likely production profile of the mine and is used for cash flow modelling.

Table 38 – Andy Well Scheduling Task Delay Inputs

Inter-Activity Dependencies	Delay
End of Ore Drive to Production Drilling	15 days
End of Production Drilling to Stope Bogging	0 days
End of Escapeway Drive to Escapeway Rise	0 days
All Other Links	0 days

#### Feasibility Study Summary July 2023

## Table 39 – Andy Well Scheduling Task Rates

Item	Units	Value
Single Heading Rates (maximum rates)		
Decline	m/week	17
Decline Offtakes	m / week	17
Level Cross Cuts	m/week	17
Other Level Infrastructure	m / week	Variable
Ore Drives	m/week	13.6
Return Air Rising	m / day	2.5-3.0
Escapeway Rising	m / day	2.0
Stoping		
Production Drilling	drill m / day / rig	230
Stope Bogging (<100m)	t/day/stope	280
Stope Bogging (<200m)	t/day/stope	230
Stope Bogging (<300m)	t/day/stope	165
Stope Bogging (>300m)	t/day/stope	120
Stope Backfill	t/day/stope	150

# Table 40 – Andy Well Schedule Modifying Factors

Item	Factor
Recovery Factors	
Development	100%
Stope with Fill	95%
Stope without Fill	95%
Equipment Available and Rates	
Twin Boom Jumbo	Up to 2 units at 220m per month/unit
Single Boom Jumbo	Up to 4 units at 220m per month/unit
Production Drilling	Up to 2 units at 6,500m per month/unit
Development Bogging	Up to 2 units at 145t/hr and 350hrs per month/unit
Stope Bogging / Backfill	Up to 4 units at 50t/hr and 350hrs per month/unit
Truck haulage (50t-60t trucks)	Up to 5 units at 176.5tkms/hr and 450hrs per month/unit

## Table 41 – Andy Well Equipment Schedule by Year

Equipment	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Twin Boom Jumbo	1	1	2	2	2		
Single Boom Jumbo	4	4	4	4	4		
Production Drill	2	2	2	3	2	1	1
Large Loader (7m³)	2	2	2	2	2	1	1
Small Loader (3m³)	4	4	4	4	4	3	3
Truck (50t)	2	2	4	5	3	2	2
Charge Up Unit	1	1	1	1	1	1	1
Small Charge Unit	1	1	1	1	1	1	1
Multipurpose IT	1	1	1	1	1	1	1

Feasibility Study Summary July 2023

Item	Units	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Development			I	1	1	1	1	I	1
Capital (5.0mW x 5.5mH)	m	12,054	2,238	1,911	3,363	3,373	1,168	0	0
Capital (4.0mW x 4.5mH)	m	3,560	115	435	1,329	1,319	361	0	0
Operating (2.9mW x 3.5mH)	m	43,744	9,411	9,386	9,386	9,386	6,175	0	0
Material Movement									
Development Ore	Kt	923	181	180	210	211	141	0	0
Stoping Ore	Kt	1,814	178	272	267	248	241	266	342
Waste	Kt	1,548	279	277	416	415	160	0	0
CRF / Rockfill	Kt	1,256	104	190	183	197	192	176	215
Production					1	1	1		
Ore Tonnes Mined	Kt	2,737	359	452	477	459	381	266	342
Ore Grade Mined	g/t	3.9	3.3	3.0	3.3	4.0	4.3	5.6	4.8
Ounces Mined	Koz	345	38	44	51	59	53	48	53
Other									
Production Drilling	m	738,977	129,481	136,542	145,290	194,812	132,853	0	0
Haulage TKMs	Ktkms	17,019	1,198	1,982	3,658	4,312	2,785	1,269	1,815

# Table 42 – Andy Well Mine Schedule by Year

# Table 43 – Turnberry Scheduling Task Delay Inputs

Inter-Activity Dependencies	Delay
End of Ore Drive to Production Drilling	7 days
End of Production Drilling to Stope Bogging	0 days
End of Escapeway Drive to Escapeway Rise	0 days
All Other Links	0 days

## Table 44 – Turnberry Scheduling Task Rates

Item	Units	Value
Single Heading Rates (maximum rates)		
Decline	m/week	17
Decline Offtakes	m / week	17
Level Cross Cuts	m / week	17
Other Level Infrastructure	m / week	Variable
Ore Drives	m/week	13.6
Return Air Rising	m / day	2.5
Escapeway Rising	m / day	3.0
Stoping		
Production Drilling	drill m / day / rig	250
Stope Bogging (<100m)	t / day / stope	850
Stope Bogging (<200m)	t / day / stope	600
Stope Bogging (<300m)	t / day / stope	500
Stope Bogging (>300m)	t / day / stope	250
Stope Backfill	t / day / stope	NA

Feasibility Study Summary July 2023

## Table 45 – Turnberry Schedule Modifying Factors

Item	Factor				
Recovery Factors					
Development	100%				
Stope with Fill	83%				
Stope without Fill	83%				
Equipment Available and Rates					
Twin Boom Jumbo	Up to 3 units at 220m per month/unit				
Production Drilling	Up to 3 units at 8,000m per month/unit				
Development Bogging	Up to 2 units at 145t/hr and 350hrs per month/unit				
Stope Bogging / backfill	Up to 2 units at 145t/hr and 350hrs per month/unit				
Truck haulage (50t-60t trucks)	Up to 3 units at 176.5tkms/hr and 450hrs per month/unit				

#### Table 46 – Turnberry Equipment Schedule by Year (North Mine Area)

Equipment	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Twin Boom Jumbo			1	3	3	1	
Production Drill				1	2	2	1
Large Loader (7m³)			1	3	4	3	1
Truck (50t)			1	2	3	2	1
Charge Up Unit			1	1	1	1	1
Multipurpose IT			1	1	1	1	1

#### Table 47 – Turnberry Equipment Schedule by Year (South Mine Area)

Equipment	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Twin Boom Jumbo				2	1		
Production Drill					1	1	
Large Loader (7m³)				1	2	1	
Truck (50t)				1	2	1	
Charge Up Unit				1	1	1	
Multipurpose IT				1	1	1	

Item	Units	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Development									
Capital (5.0mW x 5.5mH)	m	4,926	0	0	883	1,981	2,000	62	0
Capital (4.5mW x 4.5mH)	m	1,314	0	0	377	539	398	0	0
Operating (4.5mW x 4.5mH)	m	13,860	0	0	676	5,443	6,480	1,260	0
Material Movement									
Development Ore	Kt	465	0	0	22	192	216	36	0
Stoping Ore	Kt	1,006	0	0	0	153	360	477	15
Waste	Kt	754	0	0	112	321	295	26	0
CRF / Rockfill	Kt	0	0	0	0	0	0	0	0
Production		1						1	
Ore Tonnes Mined	Kt	1,471	0	0	22	345	576	513	15
Ore Grade Mined	g/t	2.5	0.0	0.0	1.2	2.1	2.4	3.1	3.6
Ounces Mined	Koz	121	0	0	1	23	44	51	2
Other	- 1		1			1			1
Production Drilling	m	135,911	0	0	0	20,728	48,649	64,456	2,078
Haulage TKMs	Ktkms	5,156	0	0	177	1,164	2,202	1,566	46

## Table 48 – Turnberry Mine Schedule by Year (North Mine Area)

## Table 49 – Turnberry Mine Schedule by Year (South Mine Area)

Item	Units	Total	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Development		1	1					1	
Capital (5.0mW x 5.5mH)	m	1,524	0	0	0	1,158	366	0	0
Capital (4.5mW x 4.5mH)	m	1,620	0	0	0	996	624	0	0
Operating (4.5mW x 4.5mH)	m	3,688	0	0	0	1,672	2,016	0	0
Material Movement									
Development Ore	Kt	132	0	0	0	73	59	0	0
Stoping Ore	Kt	202	0	0	0	0	180	22	0
Waste	Kt	298	0	0	0	179	119	0	0
CRF / Rockfill	Kt	0	0	0	0	0	0	0	0
Production	- 1	1	1	1	1	1	1	1	1
Ore Tonnes Mined	Kt	334	0	0	0	73	239	22	0
Ore Grade Mined	g/t	2.5	0.0	0.0	0.0	1.9	2.7	2.2	0.0
Ounces Mined	Koz	27	0	0	0	5	21	2	0
Other									
Production Drilling	m	27,297	0	0	0	0	24,324	2,973	0
Haulage TKMs	Ktkms	1,305	0	0	0	454	794	57	0

	Units	Total	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Underground Ore Schedule										
Turnberry	Kt	1,805				27	463	827	488	
	g/t	2.5				1.1	2.1	2.5	3.1	
	Koz	147				1	31	68	48	
Andy Well	Kt	2,737	12	382	451	471	470	363	274	314
	g/t	3.9	1.6	3.3	3.0	3.4	4.2	4.2	5.7	4.7
	Koz	345	1	41	43	51	63	49	50	47
Total	Kt	4,542	12	382	451	498	933	1,190	762	314
	g/t	3.4	1.6	3.3	3.0	3.3	0.0	3.1	4.0	4.7
	Koz	493	1	41	43	52	93	117	99	47

### Table 50 – Combined Underground Production Schedule

# 9.3 Waste Rock Landform Design

Waste rock landforms were designed to comply with guidelines for slope angles of waste rock landforms. The waste rock landforms have a maximum 10m batter height and 20 degrees slope angle. Additional lifts of the waste dump will be separated by a berm width of 7m between the toe of the new lift and the crest of the preceding lift.

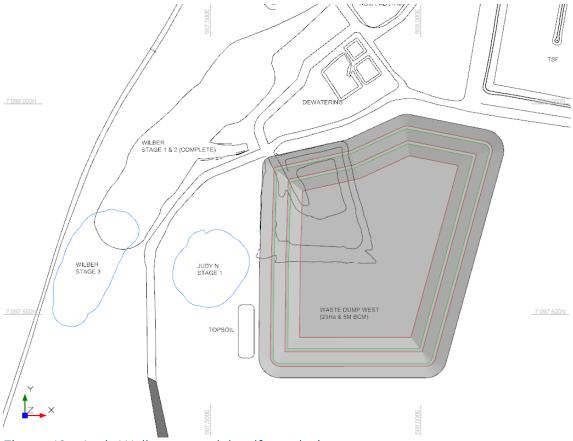


Figure 49 – Andy Well waste rock landform design.

Feasibility Study Summary July 2023

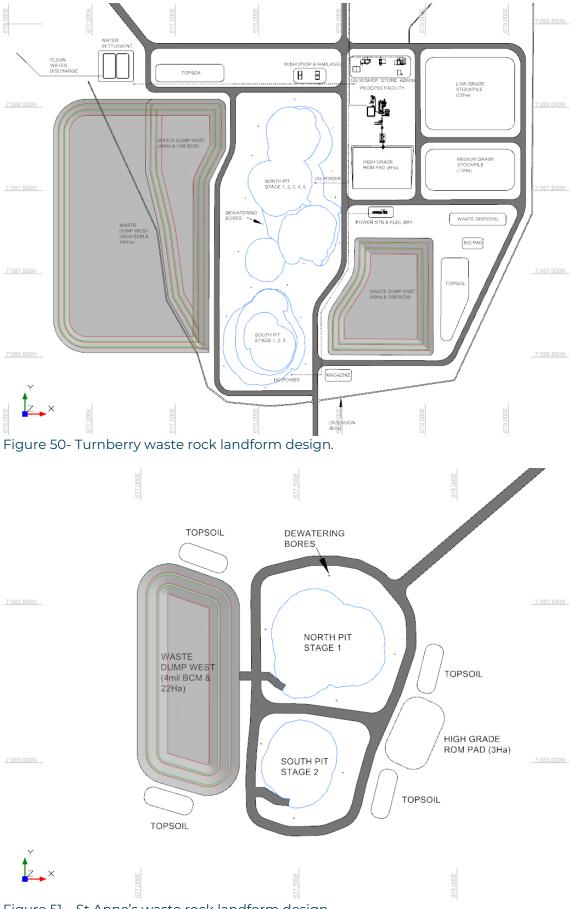


Figure 51 – St Anne's waste rock landform design.

# **10 ORE HAULAGE AND CRUSHER FEED**

Ore produced from Andy Well and St Anne's will be hauled to the Turnberry ROM by a contractor using 270t quad road trains operating on maintained, but unsealed haul roads. 2.7Mt will be trucked 19.5km from Andy Well to Turnberry over the life of the project and 0.3Mt will be trucked 5km from St Anne's to Turnberry.

Ore haulage, including loading ore onto road trains at both Andy Well and St Anne's, and hauling to the Turnberry ROM as well as all road maintenance and supervision of these activities will be performed by contractors.

The crusher feed and ROM management at the centrally located Turnberry processing plant will be managed by the Company using a 980 loader.

## 11 METALLURGY

Metallurgical test work was undertaken between 2011 and 2023. This test work included comminution, gravity and cyanidation testing.

Test work for Andy Well is supported by five years of production records from the processing of 1.3Mt of Andy Well ore through a CIL plant constructed adjacent to the mine and operated between June 2013 and September 2017. Metallurgical recovery often exceeded 98% with a high gravity component (~80%) due to a large proportion of coarse gold.

Test work on oxide and transitional ore from Turnberry shows good metallurgical recovery, averaging 94% at a  $P_{80}$  150 $\mu$ m grind size, with a variable gravity component ranging between 14% and 72%.

Initial metallurgy for fresh ore samples from quartz dolerite hosted gold mineralisation within Turnberry Central showed sensitivity to grind size and additional mineralogical analysis, flotation and fine grind test work was completed. Results of intensive leach test work at varying grind size indicate that the optimum grind size for fresh ore sourced from Turnberry Central is 15µm, achieving a total recovery of 88.5%. To achieve this grind size a flotation circuit and 6.3t/hr regrind mill will be added to the processing circuit in year 3 of operations with additional capital expenditure of \$13M accounted for in the capital cost estimate. The addition of this flotation and fine grind circuit is scheduled to coincide with development of the Turnberry underground mine.

Test work on oxide ore from St Anne's shows good metallurgical recovery, averaging 98% at a relatively coarse  $P_{80}$  150µm grind size. Gravity recoveries were also variable, ranging between 29% and 82%. Higher grade composite samples displayed higher gravity recoveries, confirming observations from drilling where high-grade samples were associated with coarse visible gold.

Deposit	Oxide (%)	Transition (%)	Fresh (%)
Andy Well	98.0	98.0	98.0
Turnberry	94.1	94.1	88.5*
St Anne's	98.0	98.0	N/A

Table 51 – Summary of Metallurgical Recoveries Applied to the Study

All gold recoveries, except for Turnberry fresh ore, are based on a  $P_{80}$  75µm grind size. Gold recoveries for Turnberry fresh ore are based on a  $P_{80}$  15µm grind size.

# 11.1 Comminution

Comminution test work was undertaken on fresh rock core samples for the Andy Well and Turnberry deposits. Andy Well test work comprised Bond Abrasion Index, Bond Rod Mill Work Index and Bond Ball Mill Work Index. Turnberry test work comprised Bond Impact Crushing, Bond Ball Mill, Bond Rod Mill and Bond Abrasion Work indices. Due to the oxide nature of the St Anne's ore, no comminution test work was completed for this deposit and the process plant design considered the harder, more abrasive Andy Well and Turnberry test work results.

The crushing work index for fresh ore samples from Turnberry averaged 6.3kWh/t and ranged between 3.1kWh/t and 7.7kWh/t.

Sample Size	Specimen Thickness	Impact Energy	Impact Energy	Crushing Work Index
(mm)	(mm)	(joules)	(joules/mm)	(kWh/t)
-75 / +51	64.4	16.3	0.25	4.7
-75 / +51	66.0	27.1	0.41	7.6
-75 / +51	65.8	21.7	0.33	6.1
-75 / +51	65.6	27.1	0.41	7.6
-75 / +51	66.0	16.3	0.25	4.5
-75 / +51	64.9	27.1	0.42	7.7
-75 / +51	64.5	21.7	0.34	6.2
-75 / +51	65.9	21.7	0.33	6.1
-75 / +51	65.8	21.7	0.33	6.1
-75 / +51	63.9	10.8	0.17	3.1
-75 / +51	66.1	27.1	0.41	7.6
-75 / +51	66.3	21.7	0.33	6.0
-75 / +51	66.6	27.1	0.41	7.5
-75 / +51	64.7	21.7	0.34	6.2
-75 / +51	65.4	21.7	0.33	6.1
-75 / +51	65.0	27.1	0.42	7.7

Table 52 – Summary of Turnberry Crushing Work Index Testing

The abrasion work indices averaged 0.2261 and ranged between 0.1153 and 0.4188. While the high value is classified as moderately abrasive, the lower average value is considered low to medium.

Table 53 – Summary of Bond Abrasion Indices

Sample Source	Sample Source	Feed Particle Size (mm)	Bond Abrasion Index (Ai)
Andy Well – Fresh	Drill core	-19.0 / +12.7	0.4188
Andy Well – Fresh	Drill core	-19.0 / +12.7	0.1702
Andy Well – Fresh	Drill core	-19.0 / +12.7	0.1153
Turnberry – Fresh	Drill core	-19.0 / +12.7	0.1999

The rod mill work index averaged 18.85 kWhr/t at a closing screen size of 1,180 micron. The ball mill work indices averaged 17.7 kWhr/t at a closing screen size of 106 micron were reported as 15.8 kWhr/t and 17.6 kWhr/t respectively, averaging 16.7 kWhr/t.

Table 54 – Summary of Bond Rod Mill Work Index and Bond Ball Mill Work Indic
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Area	Sample Source	Bond Rod Mill Work Index	Bond Ball Mill Work Index
Andy Well – Fresh	Drill core	14.9 Kwhr/t	15.8 Kwhr/t
Andy Well – Fresh	RC chips		17.6 Kwh/t
Turnberry – Fresh	Drill core	22.8 Kwhr/t	19.7 Kwhr/t

#### **11.2 Gravity and Intensive Leach**

Gravity separation and intensive leaching were performed to determine the gravity recoverable gold component of the Andy Well and Turnberry composites. The gravity tails of each sample were subjected to direct cyanidation time leach test work.

Gravity recoveries from Andy Well samples were high, with the majority higher than 80%. There was a small reduction in both gravity and overall recovery as grind P<sub>80</sub> increased.

Sample Source	Grind Size	Gravity Recovery
	Ρ <sub>80</sub> μm	%
Fresh Quartz Vein Ore	125	93.0
Fresh / Transitional Quartz Vein Ore	125	83.7
Trans Quartz Vein + Shear Zone Ore	125	59.6
Transitional Quartz Vein Ore	125	86.1
Fresh Quartz Vein Ore	125	90.6
Transitional / Oxide Quartz Vein Ore	125	18.9
Fresh Quartz Vein Ore	125	88.4
Fresh Quartz Vein Ore	125	84.2
Fresh Quartz Vein Ore	250	80.0
Fresh Quartz Vein Ore	250	74.9
Fresh Quartz Vein Ore	180	82.1
Fresh Quartz Vein Ore	180	84.3
Fresh Quartz Vein Ore	250	83.3
Fresh Quartz Vein Ore	250	82.3
Fresh Quartz Vein Ore	180	89.8
Fresh Quartz Vein Ore	180	89.2
Fresh / Transitional Quartz Vein Ore	250	78.6
Fresh Quartz Vein Ore	150	73.4
Fresh Quartz Vein Ore	125	83.6
Fresh Quartz Vein Ore	150	81.7
Fresh Quartz Vein Ore	150	64.5
Fresh Quartz Vein Ore	150	50.4
Fresh Quartz Vein Ore	180	74.7
Fresh Quartz Vein Ore	180	83.4
Fresh Quartz Vein Ore	125	85.0
Fresh Quartz Vein Ore	180	82.8
Fresh Quartz Vein Ore	125	88.8
Fresh Quartz Vein Ore	75	86.2
Mill Feed Belt Cut	212	84.9
Mill Feed Belt Cut	150	82.8
Mill Feed Belt Cut	125	86.6
Mill Feed Belt Cut	106	87.4
Mill Feed Belt Cut	75	84.8
Mill Feed Belt Cut	53	88.7

# Table 55 – Andy Well Gravity Gold and Intensive Leach Test work

Gravity recoveries from Turnberry were more variable, ranging between 14.3% and 71.5%.

Sample Source	Grind Size	Gravity Recovery
	P80 µm	%
Oxide	150	57.2
Oxide	150	14.3
Oxide	150	14.8
Transitional	150	50.3
Transitional	150	64.4
Transitional	150	34.5
Transitional	150	18.2
Fresh	150	66.5
Fresh	150	36.0
Fresh	150	71.5
Fresh	150	47.0
Fresh	150	31.9
Fresh	106	32.0
Fresh	75	45.0
Fresh	150	29.4
Fresh	106	29.0
Fresh	75	38.1

#### Table 56 – Turnberry Gravity and Intensive Leach Test Work

Gravity recoveries for St Anne's were also variable, ranging between 28.9% and 82.1%. Higher grade composite samples displayed higher gravity recoveries, confirming observations from drilling where high-grade samples were associated with coarse visible gold.

Table 57 – St Anne's Gravity and Intensive Leach Test Work

Sample Source	Grind Size	Gravity Recovery
	P80 μm	%
Oxide Composite Sample	150	82.1
Oxide Composite Sample	150	28.9
Oxide Composite Sample	150	34.3

# **11.3 Direct Cyanidation Leach**

Results from direct cyanidation testing indicated high overall gold recoveries for Andy Well, averaging 98%. There were generally very good to excellent total gold recoveries at coarse grind  $P_{80}$  of 125um, 150µm, 180um and 250µm.

Site water, which is good quality, had no adverse effects on gold recovery or reagent consumption.

Table 58 – Summary of Andy Well Gravity Separation / Cyanidation Time Leach Tests and Whole Ore Direct Leach Tests

Sample Source	Grind Size	Sparge (oxy/air)	Cal'd Head	Recovery Gravity	Recovery Total	Tails Grade	Lime Used	Cyanide
	<b>Ρ</b> 80 μm		g/t	%	%	g/t	kg/t	kg/t
Fresh Quartz Vein Ore	125	Oxygen	94.9	93.0	99.5	0.4	0.29	0.36
Fresh / Transitional Quartz Vein Ore	125	Oxygen	13.4	83.7	99.0	0.1	0.38	0.36
Trans Quartz Vein + Shear Zone Ore	125	Oxygen	16.8	59.6	98.6	0.2	0.40	0.36
Transitional Quartz Vein Ore	125	Oxygen	10.8	86.1	96.6	0.4	0.47	0.77
Fresh Quartz Vein Ore	125	Oxygen	11.1	90.6	99.1	0.1	0.50	0.29

Feasibility Study Summary July 2023

Sample Source	Grind Size	Sparge (oxy/air)	Cal'd Head	Recovery Gravity	Recovery Total	Tails Grade	Lime Used	Cyanide
	P80 µm		g/t	%	%	g/t	kg/t	kg/t
Transitional / Oxide Quartz Vein Ore	125	Oxygen	3.5	18.9	94.4	0.2	1.78	0.80
Fresh Quartz Vein Ore	125	Oxygen	4.1	88.4	98.6	0.1	0.94	0.39
Fresh Quartz Vein Ore	125	Oxygen	15.7	84.2	98.9	0.2	0.33	0.47
Fresh Quartz Vein Ore	250	Oxygen	15.1	80.0	96.7	0.5	0.36	0.81
Fresh Quartz Vein Ore	250	Air	16.1	74.9	91.7	1.3	0.39	0.77
Fresh Quartz Vein Ore	180	Oxygen	14.5	82.1	98.6	0.2	0.37	0.85
Fresh Quartz Vein Ore	180	Air	14.1	84.3	98.7	0.2	0.39	0.74
Fresh Quartz Vein Ore	250	Oxygen	14.4	83.3	97.4	0.4	0.29	0.40
Fresh Quartz Vein Ore	250	Air	14.5	82.3	95.3	0.7	0.29	0.76
Fresh Quartz Vein Ore	180	Oxygen	15.6	89.8	98.9	0.2	0.29	0.29
Fresh Quartz Vein Ore	180	Air	15.7	89.2	98.1	0.3	0.75	0.16
Fresh / Transitional Quartz Vein Ore	250	Oxygen	17.2	0.0	97.7	0.4	0.45	0.33
Fresh / Transitional Quartz Vein Ore	250	Oxygen	15.3	78.6	98.6	0.2	0.44	0.30
Fresh Quartz Vein Ore	150	Oxygen	14.4	73.4	95.8	0.6	0.17	0.41
Fresh Quartz Vein Ore	150	Oxygen	13.6	0.0	93.5	0.9	0.17	0.38
Fresh Quartz Vein Ore	125	Air	16.9	0.0	98.8	0.2	0.44	0.44
Fresh Quartz Vein Ore	125	Air	16.0	83.6	98.9	0.2	0.37	0.33
Fresh Quartz Vein Ore	150	Air	17.3	81.7	98.4	0.3	N/A	0.44
Fresh Quartz Vein Ore	150	Air	15.9	64.5	97.4	0.4	0.45	0.48
Fresh Quartz Vein Ore	150	Air	17.1	50.4	96.2	0.7	0.44	0.56
Fresh Quartz Vein Ore	180	Oxygen	5.7	0.0	97.6	0.1	N/A	0.15
Fresh Quartz Vein Ore	180	Oxygen	5.7	74.7	97.4	0.2	N/A	0.15
Fresh Quartz Vein Ore	180	Air/Perth Water	10.7	83.4	96.4	0.3	0.21	0.39
Fresh Quartz Vein Ore	125	Air/Perth Water	10.1	85.0	98.0	0.2	0.21	0.39
Fresh Quartz Vein Ore	180	Air/Site Water	9.2	82.8	96.5	0.3	0.35	0.60
Fresh Quartz Vein Ore	125	Air/Site Water	12.9	88.8	98.6	0.2	0.36	0.53
Fresh Quartz Vein Ore	75	Air/Site Water	9.4	86.2	98.5	0.1	0.38	0.56
Mill Feed Belt Cut	212	Air/Perth Water	10.0	84.9	97.2	0.3	0.14	0.27
Mill Feed Belt Cut	150	Air/Perth Water	10.0	82.8	97.2	0.2	0.17	0.28
Mill Feed Belt Cut	125	Air/Perth Water	7.1	86.6	97.8	0.1	0.14	0.27
Mill Feed Belt Cut	106	Air/Perth Water	7.2	87.4	98.6	0.1	0.14	0.28
Mill Feed Belt Cut	75	Air/Perth Water	6.9	84.8	98.2	0.1	0.14	0.28

Feasibility Study Summary | July 2023

Sample Source	Grind Size	Sparge (oxy/air)	Cal'd Head	Recovery Gravity	Recovery Total	Tails Grade	Lime Used	Cyanide
	Ρ <sub>80</sub> μm		g/t	%	%	g/t	kg/t	kg/t
Mill Feed Belt Cut	53	Air/Perth Water	6.9	88.7	99.1	0.1	0.17	0.35

Direct cyanidation testing showed generally good recoveries for oxide and transitional samples from Turnberry, averaging 94% at a coarse grind,  $P_{80}$  of 150µm. Recovery for fresh samples averaged 75% with gold dissolution improving with reduction in grind size.

Table 59 – Summary of Turnberry Gravity Separation / Cyanidation Time Leach Tests and Whole Ore Direct Leach Tests

Sample Source	Grind Size	Sparge (oxy/air)	Cal'd Head	Recovery Gravity	Recovery Total	Tails Grade	Lime Used	Cyanide
	P <sub>80</sub> µm		g/t	%	%	g/t	kg/t	kg/t
Oxide	150	Air/Perth Water	11.5	57.2	85.9	1.2	0.14	1.99
Oxide	150	Air/Perth Water	0.9	14.3	97.1	0.0	0.22	1.02
Oxide	150	Air/Perth Water	9.1	14.8	92.1	0.5	0.26	0.92
Transitional	150	Air/Perth Water	5.0	50.3	98.3	0.1	0.30	0.60
Transitional	150	Air/Perth Water	12.6	64.4	92.4	0.8	0.10	0.80
Transitional	150	Air/Perth Water	1.6	34.5	93.1	0.1	0.23	0.89
Transitional	150	Air/Perth Water	1.1	18.2	99.6	0.0	0.39	0.91
Fresh	150	Air/Perth Water	0.7	66.5	85.6	0.1	0.20	0.37
Fresh	150	Air/Perth Water	2.0	36.0	58.6	0.8	0.20	0.39
Fresh	150	Air/Perth Water	5.0	71.5	93.3	0.3	0.23	0.67
Fresh	150	Air/Perth Water	4.6	47.0	76.1	1.1	0.49	0.39
Fresh	150	Air/Site Water	5.0	31.9	71.7	1.3	0.33	0.20
Fresh	106	Air/Site Water	4.9	32.0	74.7	1.1	0.30	0.18
Fresh	75	Air/Site Water	4.8	45.0	79.2	0.9	0.33	0.22
Fresh	150	Air/Site Water	3.7	29.4	64.4	1.2	0.20	0.17
Fresh	106	Air/Site Water	3.8	29.0	67.2	1.2	0.16	0.23
Fresh	75	Air/Site Water	3.7	38.1	73.9	0.9	0.20	0.25

Direct cyanidation testing showed good recoveries for St Anne's, averaging 98% at a coarse grind,  $P_{80}$  of 150  $\mu m.$ 

Table 60 – Summary of St Anne's Gravity Separation / Cyanidation Time Leach Tests and Whole Ore Direct Leach Tests

Sample Source	Grind Size	Sparge (oxy/air)	Cal'd Head	Recovery Gravity	Recovery Total	Tails Grade	Lime Used	Cyanide
	P80 µm		g/t	%	%	g/t	kg/t	kg/t
Oxide Composite Sample	150	Air/Site Water	34.3	82.1	99.4	0.1	0.07	0.57
Oxide Composite Sample	150	Air/Site Water	1.6	28.9	97.2	0.0	0.13	0.91
Oxide Composite Sample	150	Air/Site Water	1.9	34.3	97.0	0.0	0.16	0.73

# **11.4 Turnberry Flotation Test Work**

Flotation test work conducted on fresh samples from Turnberry Central showed total gold recovered to concentrate, and gravity was 97.6%. The flotation recovery accounts for 87.8% and gravity recovery is 9.7%. Sulphur recovery and grade in the final concentrate are 98.6% and 29.4% respectively.

P <sub>80</sub>	Calc.	Gravity Mass					Flotatio	on Tails			
	Head Grade		Pull	Au	% dist.	S	% dist.	Au	% dist.	S	% dist.
μm	g/t	%	%	g/t		%		g/t		%	
75	3.05	9.7	6.8	39.4	87.8	29.4	98.6	0.08	2.4	0.03	1.4

Table 61 – Turnberry Flotation Test Results

## **11.4.1** Flotation Concentrate Regrind Intensive Leaching

Flotation concentrate was milled to 25  $\mu$ m, 15  $\mu$ m and 10  $\mu$ m and then leached with results showing that the optimum grind size is  $\leq$ 15 $\mu$ m. The majority of the leaching is completed within two hours, achieving 88% extraction.

Table 62 – Turnberry Flotation Concentrate Regrind Intensive Leaching

Grind size (micron)	Au Extraction (%) 24hrs	NaCN consumption (kg/t)
25	80.9	27.2
15	87.8	29.1
10	88.4	39.9

# **11.5** Flotation Tails Leaching

Leaching of the flotation tails shows most of the gold is leached within eight hours and gold extraction of 73% is achieved after 24 hours. Limited further improvement in leaching occurs after 48 and 72 hours.

Table 63 – Turnberry Flotation Tails Leaching

Time	Au	As	Cu	Fe	S
hr	%	%	%	%	%
0	0	0	0	0	0
2	37.2	1.5	17.7	0.0	42.9
4	55.5	1.5	19.5	0.0	42.9
8	64.5	1.5	20.8	0.0	42.9
24	73.3	1.5	23.0	0.0	42.9

# 12 MINERAL PROCESSING

The processing plant has been designed based on processing 1.0Mtpa of gold ore for both the CIL and flotation (flotation to be added in year three of the Project).

The plant processes 9.2Mt at an average feed grade of 2.4g/t gold over 9.3 years, producing 663koz of gold. Metallurgical recovery averages 95.0% over the life of the Project.

To optimise the recovery of Turnberry fresh ore feed (~20% of total mill feed), which showed sensitivity to grind size, a flotation circuit and 6.3t/hr regrind mill will be installed in year 3 (\$13M capital cost) to coincide with development of the Turnberry underground mine. The flotation circuit and 6.3t/hr regrind mill was sized after generating a geo-metallurgical model and sulphur feed schedule based on Turnberry underground production. The flotation concentrate will be milled to 15µm using an IsaMill prior to leaching and recovery to produce gold doré. Flotation and fine grind deliver a total recovery of 88.5% for Turnberry fresh ore.

The design crusher throughput rate is 150tph, equating to 76% availability (day and night shift operation). Design milling rate is 125tph based on availability of 91.3% to process 1.0Mtpa.

The milling circuit is designed to achieve a  $P_{80}$  of 75µm grind size. The flotation and fine grind circuit is designed to achieve a  $P_{80}$  of 15µm grind size.

The processing circuit includes the following major equipment areas:

- Primary jaw crusher
- Secondary cone crusher
- Tertiary cone crusher
- Screening
- Milling and gravity separation
- Cyclone classification
- Gravity concentration and intensive leaching
- Flotation circuit (addition to the circuit in year 3)
- Leaching and adsorption
- Elution circuit and carbon regeneration
- Services and reagents

Feasibility Study Summary July 2023

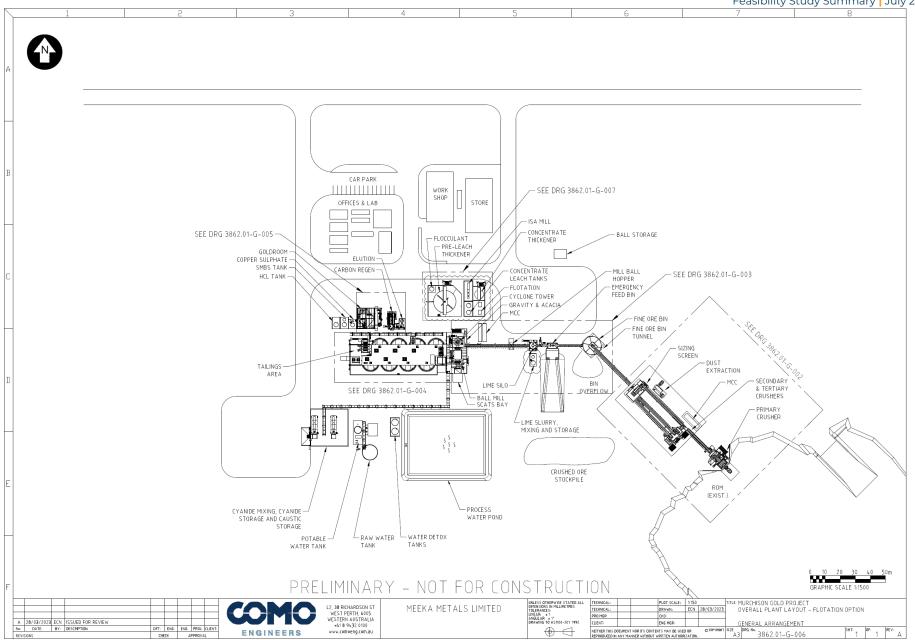


Figure 52 – 1.0 Mtpa CIL process plant layout.

Feasibility Study Summary July 2023

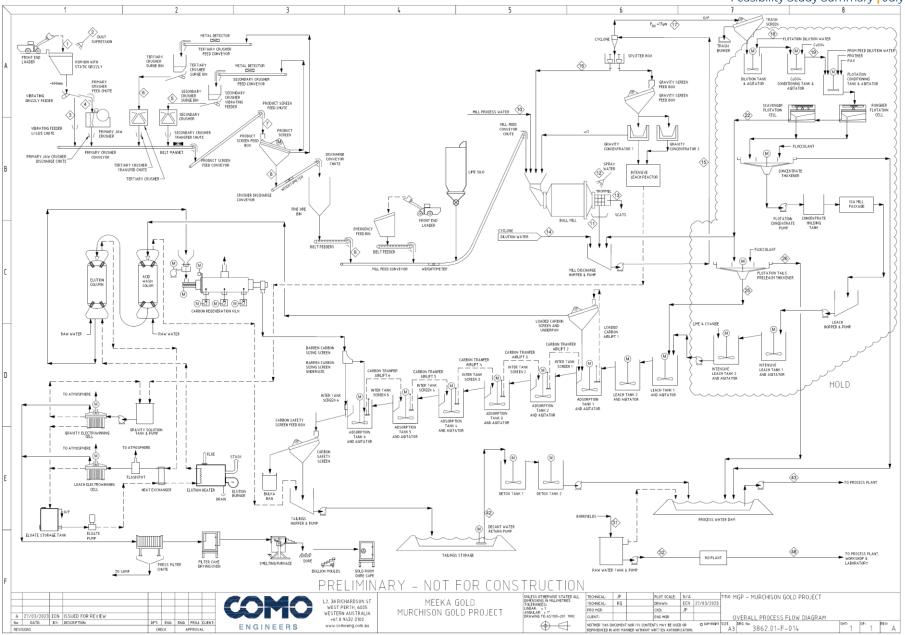


Figure 53 – 1.0Mtpa CIL plant flow sheet.

# 12.1 Crushing

The Project will use three-stage crushing to produce  $P_{80}$  of 13.5mm feed for the milling circuit.

The nominal crushing rate is 150tph with double shift operation and 76% crusher utilization. Crushed ore more than the mill requirement overflows the fine ore bin (FOB). Alternatively, the crushed ore is stockpiled by pulling out overflows from the FOB by a front-end loader. The FOB is normally kept full by operating the crushing circuit at a rate exceeding the milling capacity. This allows for crusher maintenance shutdowns when required, without interruption of milling operations.

All conveyors in the crushing circuit are fixed speed and are equipped with:

- Overhead magnet/metal detector to remove tramp metal (at various points)
- Belt scrapers
- Belt ploughs
- Belt underspeed detection
- Belt drift detection
- Local emergencies stop button
- Local isolation, and
- Conveyors pull wires

Walkway access is provided on one side of the conveyor to the head pulleys on the screen feed, and fine ore bin feed, secondary and tertiary crusher feed conveyors. All conveyor transfer chutes are fitted with blocked chute detectors which are interlocked to stop the respective conveyor drive if a chute has a high level.

## 12.1.1 Primary Crushing

Ore is fed by front-end loader to the 50m<sup>3</sup> capacity ROM bin, which is fitted with parallel grizzly scalping bars at 600mm spacing to prevent oversize entering the ROM bin. The width of the ROM bin is sized to allow a front loader with a bucket width of 3.0m to dump directly to the bin. The ROM bin is equipped with dump/no dump lights to regulate feeding ore to the bin. The ROM bin dump point incorporates a concrete pad with integrated tyre bump stop.

Ore is withdrawn from the ROM bin at a controlled rate by a variable speed apron feeder, feeding the vibrating grizzly to remove any undersized material before feeding the oversized to the primary crusher and controlled from the crusher control room. The primary crusher is a single toggle 30" x 42" or equivalent jaw crusher.

Ore passing through the jaw crusher falls onto the heavy-duty primary sacrificial crusher discharge conveyor. This conveyor also receives crushed product from the secondary and tertiary crushers and is fitted with an overhead magnet at the discharge end to remove tramp metal. The primary sacrificial crusher discharge conveyor discharges to the screen feed conveyor.

From the primary crusher, crushed ore feeds onto a double deck vibrating screen which sizes the crushed ore into mill feed and secondary/tertiary crusher feeds. The transfer chute onto the screen is designed to ensure even distribution of material across the screen. Additional screening capacity has been allowed in the screen size selection. The screen undersize (nominally  $P_{80}$  of 13.5mm crushed product) is fed to the fine ore bin via the product conveyor.

#### 12.1.2 Secondary Crushing

Top-deck oversize from the product screen is fed to the secondary crusher surge bin by the secondary crusher feed conveyor. A metal detector is fitted to detect any tramp metal on the conveyor.

The secondary crusher feed bin is fitted with a level element transmitter. Ore is withdrawn from the crusher feed bin by a vibrating feeder fitted with a variable speed drive (VSD) to allow the feed rate to the crusher to be controlled. The crusher feed rate can be automatically controlled by the level indicator installed above the crusher feed bowl. Level control allows choke feeding of the crusher to ensure efficient operation and minimize power and wear.

The secondary crusher has adjustable closed side setting, which can be changed using the vendor supplied hydraulic adjustment pack.

# 12.1.3 Tertiary Crushing

Bottom-deck oversize from the product screen is fed to the tertiary crusher surge bin by the tertiary crusher feed conveyor. A metal detector is fitted to detect any tramp metal on the conveyor.

The tertiary crusher feed bin is fitted with a level element transmitter. Ore is withdrawn from the crusher feed bin by a vibrating feeder fitted with a VSD to allow the feed rate to the crusher to be controlled. The crusher feed rate can be automatically controlled by the level indicator installed above the crusher feed bowl. Level control allows choke feeding of the crusher to ensure efficient operation and minimize power and wear. The tertiary crusher has adjustable closed side setting, which can be changed using the vendor supplied hydraulic adjustment pack.

## 12.1.4 Fine Ore Bin

The fine ore bin has a live volume of 611m<sup>3</sup>, equating to 9 hours of production.

An overflow chute is fitted to the fine ore bin so that when the bin is full, excess ore will flow to the side of the bin for relocation to the emergency feed bin stockpile. When the crusher circuit is offline, the crushed ore reclaimed from the stockpile using the front-end loader is fed into the milling circuit via the emergency feed bins.

A weightometer is fitted to the fine ore bin feed conveyor to provide the instantaneous and totalized crusher tonnage rate.

Crushed ore is withdrawn from the fine ore bin using two belt feeders with variable speed drives. The speed of the belt feeders is controlled by a process loop to the weightometer located on the mill feed conveyor. The mill feed rate is automatically controlled to the selected mill feed rate.

The crushed ore is transferred from the fine ore bin discharge belt feeders to the mill feed conveyor. The mill feed conveyor is fitted with a walkway to one side and a dual idler weightometer linked to the fine ore belt feeder VSD to control the mill feed rate.

A ball mill kibble is located above the mill feed conveyor to feed grinding media to the mill.

A lime silo and feeder are located above the mill feed conveyor. Bulk quicklime is delivered to site and pneumatically transferred to the lime silo. The lime is fed by a variable speed screw feeder onto the mill feed conveyor at a rate controlled by a pH loop in the first leach tank.

# 12.2 Milling, Classification & Gravity Separation

## 12.2.1 Milling and Classification

The milling circuit comprises a single stage 3,850kW ball mill, fitted with rubber liners, discharge trommel and operating in closed circuit with cyclone classification. The mill discharge density is controlled by water addition to the mill feed chute, regulated using a flowmeter and flow control valve. The mill discharge slurry flows through the trommel screen into the mill discharge hopper fitted with a level indicator. The slurry level in the mill discharge hopper is maintained constant by a level control loop to the VSD on the cyclone feed pump motor.

The mill discharge slurry is pumped to a cluster of 10" cyclones for classification to oversize (product which is at the P<sub>80</sub> of 75µm for the leach circuit) and coarse undersize. Operation of the cyclones is monitored by a slurry flowmeter and pressure transmitter. The cyclone feed density is regulated by water addition to the mill discharge hopper using a flowmeter and flow control valve.

A fraction (~25%) of the cyclone underflow (coarse fraction) flows to a gravity feed splitter box and will then gravitate back to the ball mill via a pipe and boiler box arrangement. The rest of the cyclone underflow will gravitate back to the ball mill feed chute.

The milling area is equipped with a manually operated sump pump that pumps into the mill discharge hopper.

## 12.2.2 Gravity Circuit and Intensive Leach

A fraction of the cyclone underflow slurry is diverted from a splitter box to a horizontal vibrating gravity concentrator feed screens. Dilution water for the gravity screen feed is added to the feed line before the screens. Oversize from the screens (nominally +2mm) is directed to the mill feed chute. Undersize from the gravity concentrator feed screens (nominally -2 mm) flows into a 20" batch centrifugal concentrator.

The concentrators maintain fluidized beds using raw water added at constant flow rates which is controlled by flowmeters and flow control valves. The concentrators and feed screens can be bypassed if required for maintenance or operational purposes (during dump cycles).

The gravity concentrators are operated semi-continuously by local PLCs. Concentrate from the batch centrifugal concentrators is periodically discharged to a secure hopper feeding the gravity leach unit.

Tailings from the gravity concentrator and the gravity screen oversize are discharged into the mill feed chute.

Gold from the centrifugal concentrator is stored in the concentrate collection cone to be treated in the intensive leach reactor. The intensive leach reactor dissolves gold recovered in the gravity concentrator by using a high concentration cyanide/caustic solution with added LeachAid. After leaching the gold, solids are allowed to settle, and the clarified solution is then transferred to a loaded solution tank for recovery by electrowinning. The barren solid is transferred to mill discharge hopper.

The intensive leach area is equipped with a manually operated sump pump that pumps into the mill discharge hopper

# 12.3 Flotation Circuit (added in Year 3)

To optimise the recovery of the Turnberry fresh ore feed, which showed sensitivity to grind size, a flotation circuit will be installed in year three to coincide with development of the Turnberry underground mine. The flotation circuit was sized after generating a geo-metallurgical model and sulphur feed schedule based on Turnberry underground production.

Cyclone overflow from the ball mill circuit is fed to the trash screen. The trash screen undersize slurry is pumped to the 11m<sup>3</sup> agitated dilution tank (3 min residence time) where process water is added. The diluted slurry is then transferred to the 11m<sup>3</sup> agitated copper sulphate conditioning tank, where copper sulphate solution is added for surface activation of the sulphide particles. The slurry is further transferred to the 11m<sup>3</sup> agitated flotation conditioning tank where potassium amyl xanthate (PAX) and W55 frother are added. The slurry is then pumped to the first of the 2 Takraf BQR100 flotation cells forming the rougher-scavenger bank having a total residence time of approximately 5 min (2.3 times the laboratory residence time).

The tailings from the flotation cells are pumped to the pre-leach thickener and the underflow subsequently pumped to the CIL circuit. The final concentrate collected from the flotation cells is pumped to a concentrate thickener.

#### 12.3.1 Concentrate Treatment

Ultra-fine grinding will be utilised for processing of the flotation concentrate prior to cyanide leaching.

Thickened concentrate (50% w/w solids) from the flotation circuit concentrate thickener is pumped to the feed pump box of the IsaMill module. The IsaMill has its own media recovery and addition facility. The discharge from the IsaMill is pumped to two agitated intensive leach tanks for intensive cyanide leaching. The leached slurry will then gravitate to a hopper where it will be pumped to the CIL circuit.

# 12.4 Leaching and Adsorption

Both the thickened flotation tails from the preleach thickener and the intensively leached flotation concentrate from the concentrate leach tanks are fed to the first of two leach tanks. The feed can be diverted into the second leach tank if the first tank is offline for maintenance.

The leach circuit will comprise 2 x 554m<sup>3</sup> live volume leach tanks, followed by 6 x 554m<sup>3</sup> live volume adsorption tanks. A pH probe is installed in the first leach tank and controls the lime addition rate to the milling circuit.

Cyanide is added to the first leach tank and the option to divert it to tank 2 at a set rate controlled using a flowmeter and flow control valve.

Air is added to each of the leach tank sparges at a rate manually controlled using a flow control valve and monitored using a flowmeter. The air addition rate is adjusted manually to target the required dissolved oxygen levels as measured by the dissolved oxygen probe installed in the first leach tank.

Carbon is added to the adsorption tanks to collect the gold from solution and is pumped counter current to the direction of slurry flow using slurry airlifts. Carbon concentration in the adsorption tanks will typically be 15 – 20 g/L. The granular activated carbon adsorbs the dissolved gold from solution as it travels counter current to the slurry flow. Carbon is retained within each tank by mechanically agitated cylindrical wedge wire inter-tank screens as the slurry flows through the screens and overflow launders.

Barren carbon is added to the last adsorption tank and is successively moved up the tank train using slurry airlifts, as the carbon loads with gold.

The loaded carbon is recovered from the first adsorption tank by an air lift to the horizontal vibrating loaded carbon screen, where it is washed by sprays and then flows to the acid wash circuit.

The tailings slurry flow from the last adsorption tank will gravitate to a linear vibrating carbon safety screen. This screen will collect carbon if there is a leaking inter-tank screen. The undersize from the carbon safety screen will flow to the tailings hopper. Allowance has been included to feed the carbon safety screen from either adsorption tank number 5 or 6, for periods when one tank is offline.

The leach and adsorption area are equipped with a manually operated sump pump.

## 12.5 Elution and Goldroom

The elution circuit is a 2.0 tonne pressure Zadra circuit. The circuit includes separate acid and elution columns, electrowinning cell, thermal heater and a carbon regeneration kiln. The elution process is automated by a PLC system.

Slurry with loaded carbon from adsorption tank number 1 is transferred to the loaded carbon screen by an air lift. The loaded carbon screen recovers and washes the loaded carbon, while the underflow gravitates back to adsorption tank number 1.

## 12.5.1 Acid Wash

The loaded carbon on the screen is washed and gravitates into the acid wash column.

Once the acid wash column is full, the drain valve is closed and a mixture of raw water and hydrochloric acid (to a concentration of 3% HCI) is pumped up through the column before discharging to the tailings hopper.

After one bed volume of dilute acid has been pumped through the column, the carbon bed is then flushed with four bed volumes of raw water to remove residual acid and increase pH. The spent acid solution and rinse solution are sent to the tailings hopper.

After completing the acid washing and rinsing, the column is pressurized, and the carbon is hydraulically transferred (educted) to the elution column.

The acid wash bund is equipped with a manually operated sump pump discharging to the carbon safety screen.

## 12.5.2 Elution

Once full of carbon, the elution column is drained of excess water before being pressurized and placed in a closed loop with the eluate tank, elution heater, heat exchangers and electrowinning cells.

To recover gold, a caustic/cyanide solution is pumped from the eluate tank and pre-heated up to 90 °C by passing through the reclaim heat exchanger. The solution is then further heated to 130 °C in the direct fired heater. To prevent boiling, the pressure of the system is maintained above the vapour pressure of water at 130°C. The hot, pressurized solution is pumped through the elution column via screens at the base. The hot caustic eluate causes the gold and silver to release from the carbon back into solution as a cyanide complex.

The solution then exits the column at the top via tube screens, flows through the hot side of the reclaim heat exchanger and then into a trim heat exchanger to ensure that the temperature of the eluate remains below boiling point. The eluate is then discharged into a flash pot to lower the pressure to atmospheric levels.

The gold bearing solution flows to the dual electrowinning cell where the precious metals are plated onto cathodes.

The barren solution discharging the electrowinning cells gravitates back to the eluate tank. This cycle is repeated for up to 16 hours or until the barren eluate concertation target is reached. Barren eluate from the elution circuit is returned to the first leach tank in a controlled manner. Fresh eluate is prepared by filling the tank with potable water and adding cyanide and caustic.

After carbon stripping and electrowinning is completed, the elution column is rinsed with water to cool the carbon and remove excess caustic. The elution column is then re-pressurized with raw water and the now barren carbon is transferred to the regeneration kiln feed hopper. The elution area is equipped with a manually operated sump pump discharging to the leach tank number 2.

## 12.5.3 Carbon Regeneration

The barren carbon from the elution column is hydraulically transferred to the regeneration kiln feed hopper across a static dewatering screen. The wastewater from the underflow is gravity fed to the tailings hopper.

Once the regeneration kiln feed hopper is full, carbon is added to kiln at a controlled rate using the VSD on the kiln screw feeder. Water entering the kiln with the wet carbon creates a reducing atmosphere and prevents burning of the carbon.

Carbon is heated to 750°C in the horizontal regeneration kiln, with the temperature regulated by a burner control loop. The high temperature removes volatiles (diesel, oils, grease etc.) and regenerates the carbon surface to near its new adsorption capability.

The regenerated carbon discharges from the kiln into a quench tank and is then pressure transferred to the barren carbon dewatering/sizing screen above the last adsorption tank.

The barren carbon dewatering screen is a static sieve bend screen, which is used to dewater the carbon before it enters the adsorption circuit. The underflow from the dewatering screen is sent to the carbon safety screen.

The regeneration area is equipped with a manually operated sump pump that can be directed to the carbon safety screen or the carbon dewatering screen.

## 12.5.4 Gold Room

Gold is recovered as sludge from the electrowinning cathodes and after drying can be smelted separately for reconciliation.

The loaded cathodes from the electrowinning cells are periodically removed and gold sludge washed from the stainless-steel mesh using a high-pressure washer. The sludge is pumped to the

gold sludge filter press, from where the sludge cake is recovered and dried in the drying oven. The drying oven is positioned beneath an extraction hood which vents external to the goldroom.

After drying, the gold sludge is mixed with fluxes and smelted in the diesel fired tilting barring furnace at ~1,100°C. The barring furnace is positioned beneath an extraction hood which vents external to the goldroom. Once the contents of the barring furnace are fully molten, it will have separated into two phases: reduced metal and slag. The molten contents are then poured into moulds, the heavier metal (gold) remaining in the base of these moulds and the slag flowing over the top.

# 12.6 Tailings

Tailings slurry from the carbon safety screen will flow into the tailings hopper and be pumped to the tailing storage facility (TSF). The slurry level in the tails hopper is maintained constant by a level control loop to the VSD on the tails pump motor and slurry is pumped to the TSF. The final tails hopper is equipped with process water addition to flush the tails line as required.

Return water will be recovered from the TSF central decant using a decant return pump. Cyanide acts as a depressant in the flotation of sulphide minerals. Therefore, when the flotation circuit is installed, a detoxification circuit will be required to remove residual cyanide from the tailings return water before being pumped into the process water dam. The tailings return water will be pumped to two agitated cyanide detoxification tanks and treated with SMBS prior to flowing into the process water pond.

The process water is distributed to the milling and leaching areas and for general hosing. Process water will be sourced from a combination of raw water and detoxified tailings dam return water. The tailings area in the process plant is equipped with a manually operated sump pump.

# 12.7 Reagents

## 12.7.1 Quicklime

Hydrated lime will be delivered to site in bulk and transferred to the lime silo, located over the mill feed conveyor. Lime is dosed from the lime silo by the lime silo rotary valve into the lime silo discharge screw feeder and drops onto the mill feed conveyor. The lime feed rate is controlled via a variable speed drive in a control loop to the leach tank pH meter.

The hydrated lime will also be distributed from the lime silo rotary valve to an adjacent lime slurry preparation plant for use in the flotation circuit. This plant will consist of a mixing and storage tank. The lime solution will be pumped from the storage tank through a ring main to the flotation conditioning tank, flotation cells and detoxification tanks.

## 12.7.2 Cyanide

Liquid sodium cyanide (~30% w/w) will be delivered by road train and transferred to holding tanks fitted with level indicators. Cyanide solution is pumped to the leach circuit through a ring main using a variable speed dosing pump. The variable speed dosing pump is interlocked to the lower level in the tank to prevent the pump running dry. The cyanide storage area is equipped with a manually operated area sump pump.

## 12.7.3 Diesel

Diesel fuel for the elution circuit, barring furnace and kiln will be pumped from a day-tank which will be filled from the site diesel fuel supply system. Diesel for the regeneration kiln will be pumped directly from the site fuel supply system.

#### 12.7.4 Elution, Acacia and Goldroom Reagents

Liquid sodium hydroxide (~50% w/w) will be delivered by road train and transferred to holding tanks fitted with level indicators. The sodium hydroxide storage area is equipped with a manually operated area sump pump.

Hydrochloric acid (~32% w/w) will be delivered by road train and transferred to holding tanks fitted with level indicators. The hydrochloric storage area is equipped with a manually operated area sump pump.

Flux reagents for gold smelting will be delivered in powder form in 25 kg bags, including silica sand, sodium nitrate, soda ash and borax.

LeachAid will be delivered in 20 kg buckets for use in the intensive leach reactor.

# 12.7.5 Flotation Reagents

A vendor package dry powder flocculant mixing system will prepare flocculant solution for use in the pre-leach thickener and concentrate thickener. The flocculant mixing system is based on a total plant-wide consumption rate of 40 g/t. The mixing system will comprise of an agitated mixing tank and storage tank. Frother will be delivered in 1,000L IBCs and dosed to the flotation cells as required with variable speed dosing pumps. Copper sulphate will be delivered to site in 25kg bags and transferred to a mixing tank where the solution will be pumped to a storage tank. The copper sulphate solution is pumped from the storage tank to the flotation area and detox tanks. SMBS will be delivered to site in bulka bags and transferred to a mixing tank where the solution is pumped from the storage tank to the storage tank to the detox tanks. PAX will be delivered to site in bulka bags and transferred to a mixing tank where the solution will be pumped to a storage tank. The PAX solution is pumped from the storage tank to the flotation will be pumped to a storage tank. The PAX solution is pumped from the storage tank to the flotation will be pumped to a storage tank. The PAX solution is pumped from the storage tank to the flotation will be pumped to a storage tank. The PAX solution is pumped from the storage tank to the flotation cells and conditioning tank via a series of dedicated dosing pumps.

# 12.8 Services

## 12.8.1 Compressed Air

Two rotary screw compressors with 30 kW electric drives will service the general plant including the workshop. This circuit will also provide compressed air for the leach circuit required for the carbon transfer air lifts and air addition to the leach slurry. A separate air compressor will be required for the mill lubrication system.

#### 12.8.2 Low Pressure Air

Duty and standby blowers will be utilised to supply low pressure air to the flotation cells.

#### 12.8.3 Raw Water

Raw water will be distributed throughout the plant by a duty pump from the raw water tank which is fitted with a level indicator. A separate gland water pump will supply water for pump seals. The fire water pump skid will be equipped with a backup diesel pump and supplied with water from the raw water tank.

### 12.8.4 Process Water Services

Process water will be sourced from a combination of raw water and detoxified tailings dam return water. Raw water from the borefield and pit dewatering are pumped into the HDPE lined 7,200m<sup>3</sup> process water dam. The dam is built as cut and fill and provides sufficient water storage capacity for 24 hours of operation. Tailings return water is also pumped from the tailings decant to the process water dam. Once the flotation circuit is installed, the tailings return water will be detoxified to remove residual cyanide before flowing into the process water dam.

## 12.8.5 Potable and Safety Shower Water System

Potable water is supplied by a vendor supplied RO plant. The RO plant is fed from the raw water tank. The potable water produced is transferred into a holding tank, and the wastewater will be transferred back to the process water dam. The holding tank is to service the elution/goldroom area and safety shower ring main. Pressure for the safety showers is maintained by a pressure sustaining valve on the return ring into the tank. The safety shower circuit is equipped with a backup diesel pump in the event of power failure.

# 13 TAILINGS STORAGE FACILITY

Tailings storage facilities (TSF) will be constructed on the northwestern side of the proposed process plant location and are designed using a rectangle layout. Each TSF is designed for two stages (lifts) and constructed using roller compacted mine waste walls. Each stage has a 3.0m high wall lift resulting in an effective height of 2.4m for tails containment and freeboard. Provision has been made for an expanded TSF (Stage 3 and 4) located to the North of the initial TSF. This replicates the design of the initial TSF and ensures capacity for mine life extension.

The geometric design parameters for the development of the TSF are:

- Embankment crest width 6 m including windrows
- Upstream slopes 2H:1V
- Downstream slopes 3H:1V
- Deposited density of 1.35t/m<sup>3</sup>
- 600mm of free board against the lift design
- Required capacity of 4,074,000m<sup>3</sup> from 5,500,000t of rock

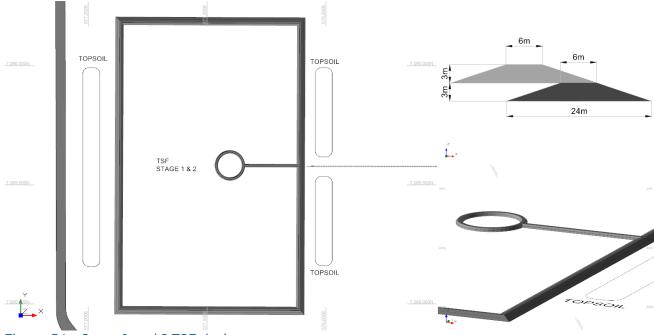


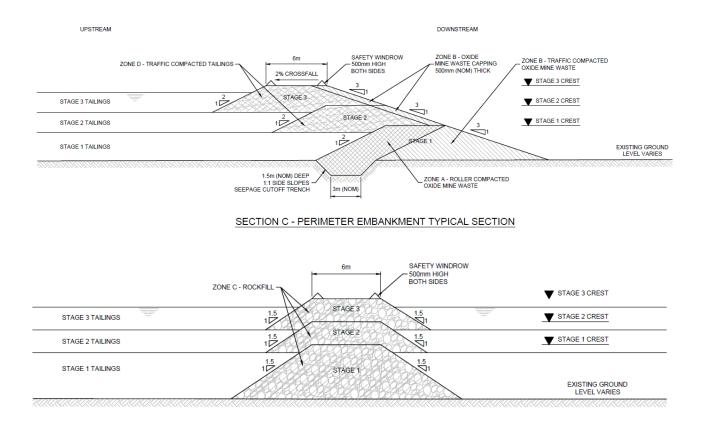
Figure 54 – Stage 1 and 2 TSF design.

The construction materials comprise mine waste from open pit stripping for the starter embankments with a roller compacted, engineered fill on the upstream face and traffic compacted mine waste fill on the downstream face. The decant facilities are to be rock rings constructed from hard durable free draining rock with oxide mine waste on the decant accessways.

Table 64 – TSF	Design	Outcomes
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Stage	Area	Lift	Effective Lift	Storage Volume
Stage 1	890,000m <sup>2</sup>	3.0m	2.4m	2,136,000m <sup>3</sup>
Stage 2	865,000m <sup>2</sup>	3.0m	2.4m	2,076,000m <sup>3</sup>

Feasibility Study Summary July 2023



SECTION B - DECANT ACCESSWAY TYPICAL SECTION

Figure 55 – Cross section showing typical TSF embankment design at the MGP.

# 14 PROJECT INFRASTRUCTURE

## 14.1 Access and Haul Roads

Access to the Project is via the existing Andy Well mine turnoff from the Great Northern Highway. Local roads through and around the Andy Well Mine are also in place. A new haul road from Andy Well to the Turnberry will be constructed on a granted Miscellaneous Licence (L 51/97). Local roads around the Turnberry and St Anne's mining areas will be constructed during the site establishment and construction phase of the Project. Roads will be constructed to provide dual lane access and will be maintained under the ore haulage contract by the haulage contractor.

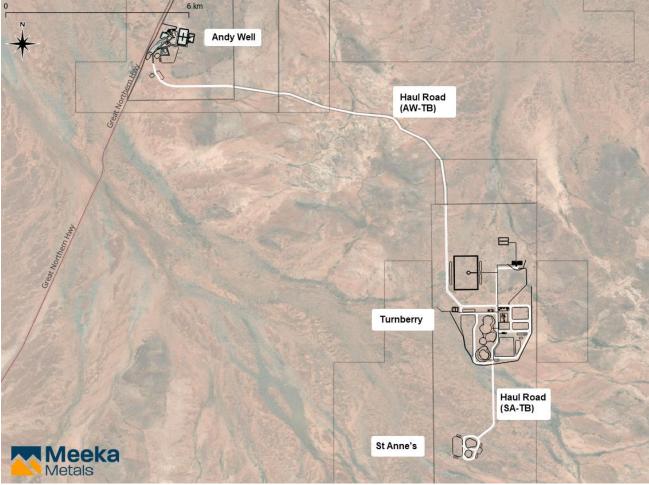


Figure 56 – MGP site layout.

# 14.2 Administration and Workshops

Administration facilities and workshops are required at Andy Well and Turnberry to service mining operations. At Andy Well, these facilities will consist of a small administration complex, store and change house facilities. The existing Andy Well mill workshop will be re-purposed for use by the mining contractor.

A larger administration complex will be constructed at Turnberry to service the mine, process plant and open pit mining operations at St Anne's. Three workshops will also be constructed to service the surface haulage, open pit and underground fleets respectively.

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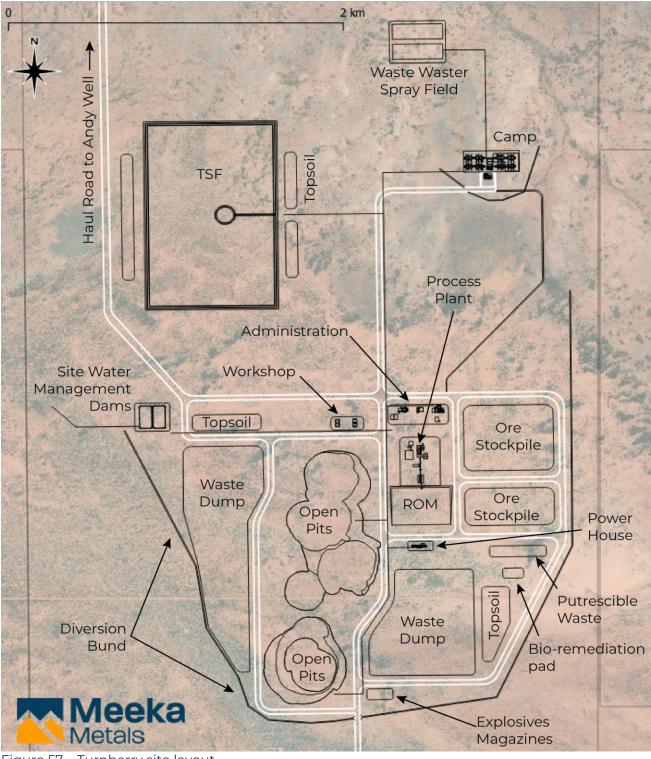


Figure 57 – Turnberry site layout.

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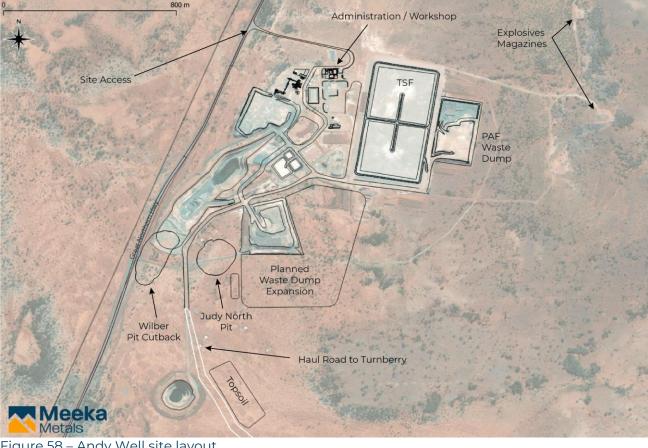


Figure 58 – Andy Well site layout.



Figure 59 – St Anne's site layout.

# 14.3 Accommodation

A 236 person accommodation and messing facilities will be constructed at Turnberry with the design providing for:

- En-suited accommodation in demountable buildings positioned on precast concrete plinths and accessed via concrete footpaths with colourbond awnings for all weather access;
- A central wet and dry mess;
- Gaming, gym and fitness facility;
- Laundry blocks located for centralised access;
- Underground power, water and sewage; and,
- RO and WWTP.

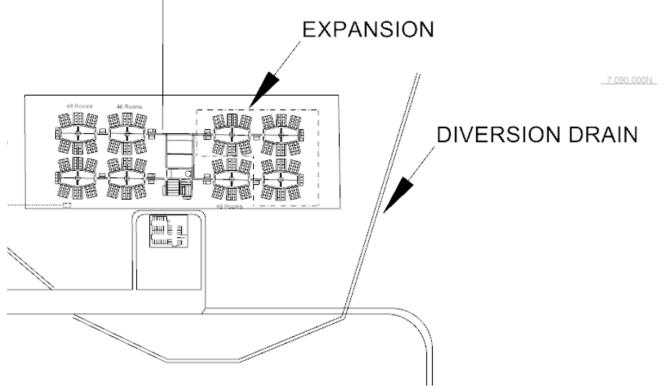


Figure 60 – Turnberry 236 person accommodation village.

# 14.4 Communications

Site communications will be provided by a high frequency microwave link through a central exchange. Site will also make use of the limited 3g/4g signal from Meekatharra using 3g/4g receivers and amplifiers.

Feasibility Study Summary July 2023

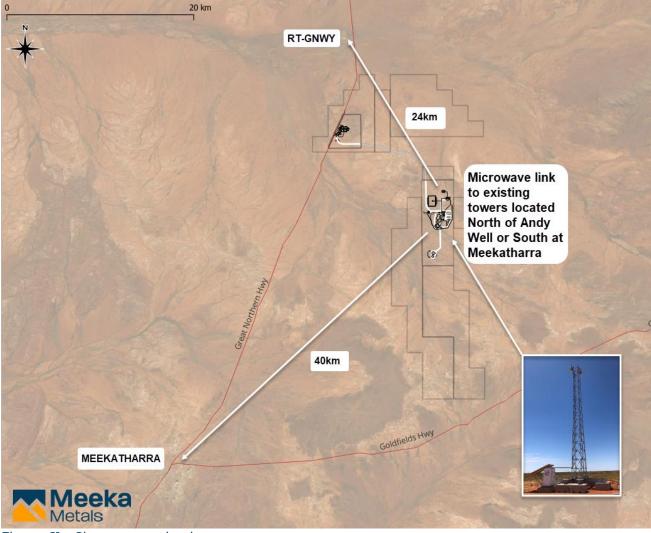


Figure 61 – Site communications.

#### 14.5 Power

Two modular diesel fired power stations will be established at the Project, a 10MW facility at Turnberry to service mining, processing and non-process infrastructure, and a 2.4MW facility at Andy Well to service the underground mine.

- 10MW Power Station Located at Turnberry and servicing the mill, camp, administration and mining infrastructure. The power station is positioned adjacent to the mill and provides 415V power to step-up transformers before distribution at 1000V to the underground mine and various step-down transformers located at the administration, village and dewatering infrastructure. Site distribution is via overhead and underground power. Fuel storage at the power station also provides access to diesel for mobile fleet requirements.
- 2.4MW Power Station Located at Andy Well and provides power for mining and dewatering activities. The generator units will be installed in the existing powerhouse building, adjacent to the underground transformer and associated pumping infrastructure. Fuel storage at the power station also provides access to diesel for mobile fleet requirements.

# 14.6 Fuel Storage Facilities

Fuel storage will consist of a series of 110kL double lined tanks located adjacent to each power station. The tanks will provide direct feed to each generation units' day tank via on demand transfer pumps. The storage tanks will also feed fuel discharge bowsers to supply diesel equipment operating at both sites.

# **14.7 Explosives Storage**

Magazines will be constructed at Turnberry and Andy Well. Andy Well will require 2 x HE magazines capable of storing ANFO bulka bags (500kg) and 1 x IE magazine capable of storing initiating detonators. These will be positioned in the existing magazine compound on the eastern side of the Andy Well ridgeline.

Turnberry requires a larger facility including emulsion storage for the open pits, 3 x HE magazines capable of storing ANFO bulka bags (500kg) and 2 x IE magazine capable of storing initiating detonators. Delivery of explosives is via road train from Kalgoorlie.

## 14.8 Water Management

At Andy Well water will be sourced from the existing mine and reticulated to the dam located on the eastern side of the Wilber open pit. Water from the dam will be reticulated to the header tanks located at the top of the open pit near for underground use and to the RO plant for use in the administration and workshop area. Surplus water will be discharged on the ridgeline in accordance with the approved water discharge licence. There is a positive water balance at Andy Well over the mine life.

At Turnberry water will initially be sourced from the open pit dewatering bores positioned around the pits to lower the water table prior to and during mining. An existing production bore located at Turnberry will provide a backup water supply. On commencement of underground mining at Turnberry in year three of the production plan, the phreatic head is expected to drop below the borehole depths and a bore field will be developed within the paleochannel to the southeast of the processing plant to supplement process water provided by dewatering of the Turnberry underground workings. All process water will feed directly to the process water storage ponds before being distributed. The Turnberry water balance is expected to be positive over the mine life.

## 14.8.1 Potable Water Supply

Potable water for use in the accommodation village and non-process infrastructure will be supplied by modular RO plants located at Andy Well and Turnberry respectively. The system will feed chlorinated HDPE water storage tanks and provide storage equal to five days of site consumption. Assuming 200 persons on site and a 300L/d per person consumption rate this equates to 300kL of water storage (6 x 50kL polymer tanks).

#### 14.8.2 Wastewater Treatment

Wastewater treatment will be via modular self-contained biological aerobic units. The treated wastewater will be stored and chlorinated before discharge to the approved spray field located 200m from the camp.

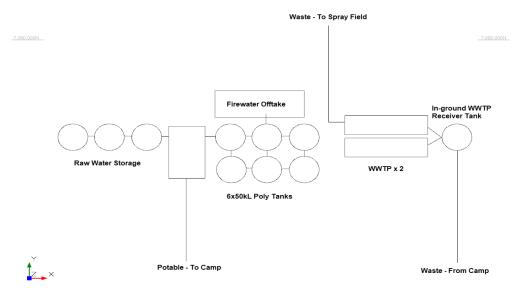


Figure 62 – Potable water and wastewater infrastructure layout.

# 14.9 Aerodrome

Meekatharra aerodrome consists of sealed airstrip of 2,181m and a gravel runway of 1,065m. Aircraft refuelling is available at the terminal. In addition to the main apron area (3 bays) a sealed light aircraft parking area is available.



Figure 63 – Meekatharra aerodrome.

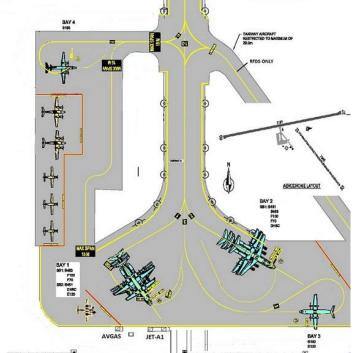


Figure 64 – Meekatharra aerodrome taxiway and aircraft parking layout.

# 15 PERMITTING AND APPROVALS

The Project involves a brownfield restart of mining at Andy Well and a greenfield start up at Turnberry and St Anne's. Andy Well was previously permitted for mining and processing operations, and various licenses and permits remain in place. Turnberry and St Anne's require new approvals prior to development. Based on the work completed to date and the information available, the Company is confident that approvals required for development will be granted.

## **15.1** Department of Mines, Industry Regulation and Safety (DMIRS)

### 15.1.1 Mining Proposal (MP) and Mine Closure Plan (MCP)

Legislated by the *Mining Act 1978* a MP must be submitted for a proposed mining operation, or for a change to a mining operation, and must detail activities proposed to be undertaken. The MP must be accompanied by a MCP that outlines decommissioning and rehabilitation.

A MP and updated MCP will be required prior to development.

## **15.1.2 Native Vegetation Clearing Permit (NVCP)**

Legislated by the *Environmental Protection Act 1986* but delegated to the *Mining Act 1978* for streamlined approvals that meet criteria.

If clearing of native vegetation is proposed then a clearing permit is required.

In accordance with section 20 of the *Environmental Protection Act 1986*, DMIRS has been delegated authority for the administration of applications to clear native vegetation for mineral and petroleum activities regulated under the *Mining Act 1978*, the *Petroleum and Geothermal Energy Resources Act 1967*, the *Petroleum Pipelines Act 1969*, the *Petroleum (Submerged Lands) Act 1982*, and activities under State Agreements administered by the Department of Jobs, Tourism, Science and Innovation, in Western Australia.

Current land disturbance at Andy Well and Turnberry, including associated exploration, totals approximately 107.8 Ha. 104.3 Ha of this is related clearing for existing mining and support infrastructure at Andy Well. An additional 250 Ha of clearing is required for development of the process plant, TSF, haul roads, mining infrastructure and accommodation village.

A new permit application will be required for the Turnberry/St Anne's Mining Lease (M51/882).

#### **15.1.3 Dangerous Goods Licence**

Administered by the DMIRS Dangerous Goods Licensing Branch under the *Dangerous Goods Safety Act 2004*. A dangerous goods license will be required for the storage of classed consumables such as diesel, cyanide and explosives.

## **15.2** Department of Water and Environmental Regulation (DWER)

#### 15.2.1 Works Approval / Prescribed Premise Licence

DWER regulates industrial emissions and discharges to the environment through a works approval and licensing process, under Part V of the *Environmental Protection Act 1986*.

Industrial premises with potential to cause emissions and discharges to air, land or water are known as 'prescribed premises' and trigger regulation under the *Environmental Protection Act* 1986. Prescribed premises categories are outlined in Schedule 1 of the *Environmental Protection Regulations* 1987.

The *Environmental Protection Act 1986* requires a works approval to be obtained before constructing a prescribed industrial premises and makes it an offence to cause an emission or discharge unless a licence or registration is held for the premises (eg. mineral processing, crushing & screening, landfill, mine dewatering, concrete batch plant, sewage discharge).

A prescribed premises license is currently in place for Andy Well covering processing operations, mine dewatering and putrescible landfill.

A prescribed premises license will be required for Turnberry covering processing operations, mine dewatering, waste water treatment, chemical storage, crushing of rock and putrescible landfill.

#### 15.2.2 Groundwater Extraction Licence – 5C and 26D licence

Legislated by the *Rights in Water and Irrigation Act 1914* a 5C licence allows the licence holder to 'take' water from a watercourse, wetland or underground source. A 26D Licence enables construction of bores for the water extraction required under a 5C licence.

A ground water licence (GWL 17556) is in place that covers the Andy Well Mining Lease (M51/870) and was amended to include Turnberry/St Anne's Exploration Licenses in 2016. This GWL has provision for extraction of 2,000,000KL per annum. An amendment will be submitted to include the Turnberry/St Anne's Mining Lease (M51/882), which covers portions of Turnberry/St Anne's Exploration Licenses for which approval was granted in 2016.

# 16 ENVIRONMENT

Environmental baselines studies have commenced and are at various stages of completion for Turnberry and St Anne's. Studies for Andy Well are completed. Environmental baselines studies are required to perform an environmental impact assessment and inform an environmental management system to support applications for development.

## **16.1** Topsoil and Soil Profiles

Andy Well topsoils are characterised as typically poorly developed with only a minor accumulation of organic matter and nutrients, however they are likely to contain a valuable seed store for the establishment of revegetation species. Surficial soils are highly erodible, however represent a good growth medium, being non-saline and of favourable water retention properties for use in rehabilitation. Soil is an important resource to be managed appropriately for reuse during site rehabilitation. Consideration of the handling and placement of soil materials is required to maintain optimal soil properties and avoid contamination by soil materials that exhibit adverse properties. Stockpiles should be height limited to maintain biological component and retention of nutrient sources. Andy Well reports covering soil characterisation were completed as part of the initial feasibility study and remain relevant.

- Wilber Lode Deposit Pre-Mine Soil Characterisation (Soil Water Consultants 2012); and,
- Wilber Lode Deposit Geochemical Characterisation (Soil Water Consultants 2011).

Turnberry soils are generally uniform across the larger potential disturbance area, consisting predominately of a reddish-brown loam between 40 and 100 cm over a consolidated hardpan layer. The mapping unit can be partially differentiated according to the depth of the surficial soils overlying the red-brown hardpan, with shallower profiles typically found occupying slightly elevated positions in the landscape and / or areas of reduced vegetation cover. The deeper soils encountered however showed little correlation with position in the landscape and are likely reflective of changes in the previous quaternary aged surfaces formed by repeated wetting and drying cycles. The key aspect of the soils throughout the study area is their shallow nature, with an underlying hardpan being prevalent over the entirety of the area. Turnberry reports covering soil characterisation were completed in 2017:

Gnaweeda Deposit Soil Characterisation (Soil Water Consultants 2017).

Impacts to soils will be minimised through implementation of the following management measures:

- Available topsoil will be stripped from all areas requiring clearing and stored locally in a designated area for later use in rehabilitation;
- Wherever practicable, the duration that topsoil is stockpiled will be minimised to reduce the loss of seed viability and soil biota; and,
- Topsoil stockpiles will be limited to a maximum of 2 m in height to minimise erosion and the deterioration of soil structure, valuable organic matter and seeds.

Maintenance of soil stockpiles will ensure viability of soils for use in rehabilitation.

# 16.2 Flora and Fauna

Flora and fauna surveys have been completed for Andy Well and no further work is required. Previous reports include:

- Flora and Vegetation of the Andy Well Survey Area (Mattiske Consulting, 2011);
- Fauna Assessment of the Andy Well Mining Lease Area (Bamford Consulting Ecologists, 2012); and,
- Subterranean Fauna Assessment for the Andy Well Project (Bennelongia Environmental Consultants, 2011).

Turnberry studies were undertaken by Stantec personnel in 2017 and 2018, including:

- Gnaweeda Level 2 flora and vegetation assessment, (Stantec, March 2017);
- Gnaweeda Level 1 fauna assessment (Stantec, January 2017); and,

Gnaweeda Flora and fauna impact assessment (Stantec, April 2018).

Bennelongia Environmental Consulting undertook both desktop and Level 1 field surveying for stygofauna and troglofauna at Turnberry and produced the following report:

 Gnaweeda Project: 2017 Subterranean Fauna Assessment. Prepared for Doray Minerals Limited, June 2017.

The Bennelongia 2017 report concluded: "No troglofauna were recorded. Survey results are consistent with desktop review and demonstrate a depauperate stygofauna community and absence of troglofauna. In combination, results of desktop review and field survey strongly suggest that the Project will not significantly threaten species or communities of subterranean fauna".

## 16.3 Waste Rock and Tailings Management

Andy Well has provision for a Class 1 Category A Potentially Acid Forming (PAF) Waste Rock Landform (WRL). Where required, this WRL will be expanded and used for any PAF material mined at Andy Well.

Turnberry has had material characterisation work completed by SoilWater in 2017 (Gnaweeda Deposit Geochemical Characterisation, 2017), which indicated that of the 20 waste rock samples assessed only one was considered PAF and this is under review. A summary of findings of from the material characterisation report are presented below:

- Screen testing of the deposit profile has shown the material to exist in a neutral to alkaline state, with low contained salinity. These materials can therefore be used, without restriction, to construct the outer surface of the WRL. Their non-saline characteristics will not restrict root exploration, and therefore the upper regolith materials are likely to represent favourable growth medium materials. However, the consistently low salinity is likely to increase structural instability and therefore testing should be undertaken to confirm the materials erosion characteristics prior to placement on the outer surface to avoid stability issues.
- Screen testing and sulphur speciation determination has shown that sulphides are not common within the waste material with screen testing indicating that they are confined to mineralised areas which will be processed as ore. Because of this 19 of the 20 tested samples were classified as non-acid forming (NAF). Although measured sulphur contents were uniformly low, the dominant waste lithologies (felsic volcaniclastics and mafic volcanics) contain low available buffering capacities and therefore in one sample, slightly increased sulphur content (0.57%) resulted in the sample being classified as PAF.
- Both the alluvium clay and ultramafic lithologies were reported to contain large buffering capacities due to increased carbonate contents within these two material types. The results of ABA and geochemical classification have indicated that the potential for the development of acid mine drainage (AMD) within the major waste lithology types represented by the materials testing in this investigation is low, with the generally low buffering capacity sufficient to neutralise the negligible reported sulphide mineralisation.
- Multi-element composition and leaching trials have reported low concentrations both within solid materials and both neutral and acidic static leach tests. Consequently, the development of AMD following disturbance of waste materials is considered to be low.

Further test work on fresh rock at Turnberry will be completed.

# 17 COMMUNITY AND SOCIAL IMPACTS

The Project is 46 km north of Meekatharra and it is not anticipated that there will be a direct physical impact on the town from the proposed operation.

The local community of Meekatharra has supported previous mining and exploration activities at the Project and in the region. During operation of the mine, donations were made to the Shire for the community benefit fund. It is anticipated that further contributions, as well as positive social benefits in the form of employment and commercial opportunities within the local community will result from development of the Project.

In consultation with the Yugunga-Nya People the Company will develop a training and skills development program to support employment. This will be in addition to direct employment and contracting opportunities available during Project development and operations.

#### 18 HERITAGE

Archaeological assessment of the Project area has resulted in the identification of seven archaeological sites consisting of five artefact scatters and two quarry sites at Andy Well. Scatter sites that were in infrastructure development areas were approved for disturbance with support from the Yugunga-Nya elders under Section 18 of the Aboriginal Cultural Heritage Act. Sites outside of mining and infrastructure areas remain on site avoidance register and have 30 m buffer zones in place.



Figure 65 – Aboriginal heritage areas at Andy Well.

Turnberry heritage surveys have been completed for mine development areas and haulage routes. Two heritage surveys (2016 and 2017) were undertaken by Yungunga-Nya Native Title claimants in conjunction with the Yamatji Marlpa Aboriginal Corporation. The following two heritage survey reports were produced:

- Yamatji Marlpa Aboriginal Corporation YUG543-5 Yugunga-Nya Work Area Clearance Survey for Doray Minerals Limited for M51/870 (October 2016); and,
- Yamatji Marlpa Aboriginal Corporation YUG543-6 Yugunga-Nya Work Area Clearance Survey for Doray Minerals Limited for L51/97 (January 2017).

Two locations in the southeast section of Mining Lease M51/870 and outside of proposed disturbance areas were identified for avoidance and are recorded in the site avoidance register.

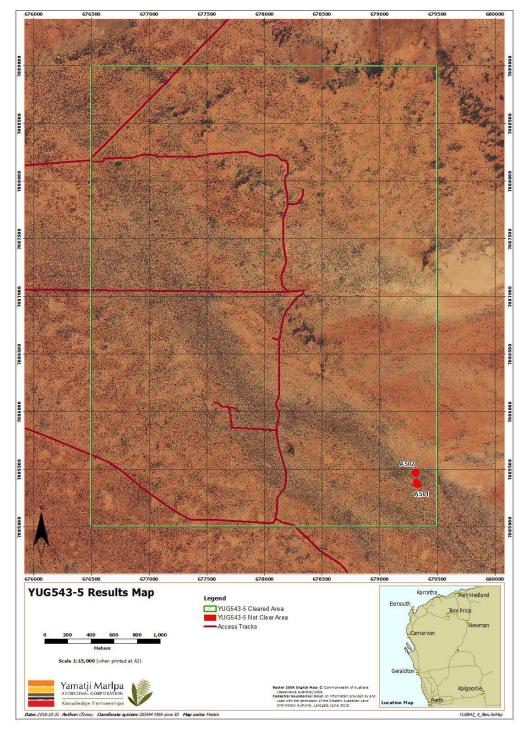


Figure 66 – Aboriginal heritage clearance area covering Turnberry and St Anne's.

The follow up 2017 heritage survey was undertaken to clear a haulage deviation within L51/97 and a small additional area within M51/870.

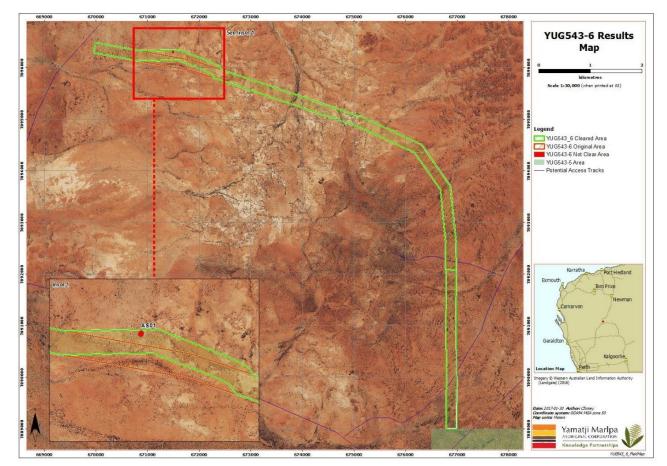


Figure 67 – Aboriginal heritage clearance area covering Turnberry to Andy Well haulage route.

#### 19 **PRODUCTION SCHEDULE**

The production strategy involves feeding the highest margin material through the processing plant each month. This results in the accumulation of a low-grade stockpile, which is milled at the end of the project life once open pit and underground mining ceases. Key points regarding the mill feed schedule include:

- The Project focusses on the higher confidence Measured and Indicated Mineral Resource, which comprises 70.6% of the production plan.
- The processing plant is tonnage constrained to 1.0Mtpa and the feed schedule prioritises high grade, high margin material first.
- Development of various open pit and underground mining centres are staged to limit capital draw down while maintaining one open pit and one underground ore source through the life of the Project.
- At the end of the mine life, remaining stockpiles are processed over an 18 month period (Years 9 and 10).

Metallurgical recovery averages 95.0% over the life of the Project.

Project Year	Units	Total	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Open Pit Minin	g												
Turnberry	Kt	4,323	156	570	654	14		38	519	863	1,509		
	g/t	1.2	2.7	1.7	1.3	1.1		0.8	1.2	1.0	1.0		
	Koz	170	14	30	27	1		1	21	29	49		
St Anne's	Kt	318		318									
	g/t	2.4		2.4									
	Koz	24		24									
Andy Well	Kt	39			39								
	g/t	7.6			7.6								
	Koz	9			9								
Total	Kt	4,680	156	888	693	14		38	519	863	1,509		
	g/t	1.4	2.7	1.9	1.6	1.1		0.8	1.2	1.0	1.0		
	Koz	204	14	55	36	1		1	21	29	49		
	lining	r.											
Turnberry	Kt	1,805				27	463	827	488				
	g/t	2.5				1.1	2.1	2.5	3.1				
	Koz	147				1	31	68	48				
Andy Well	Kt	2,737	12	382	451	471	470	363	274	314			
	g/t	3.9	1.6	3.3	3.0	3.4	4.2	4.2	5.7	4.7			
	Koz	345	1	41	43	51	63	49	50	47			
Total	Kt	4,542	12	382	451	498	933	1,190	762	314			
	g/t	3.4	1.6	3.3	3.0	3.3	3.1	3.1	4.0	4.7			
	Koz	493	1	41	43	52	93	117	99	47			
Mining Total													
Tonnes	Kt	9,222	168	1,271	1,144	512	933	1,228	1,280	1,177	1,509		
Grade	g/t	2.4	2.6	2.3	2.2	3.2	3.1	3.0	2.9	2.0	1.0		
Ounces	Koz	697	14	95	80	53	93	118	119	76	49		
Processing													
Tonnes	Kt	9,222	0	938	1,000	1,000	992	1,000	1,000	1,000	1,000	1,000	292
Grade	g/t	2.4	0.0	3.0	2.5	1.9	2.8	3.1	3.2	2.4	1.2	0.6	0.6
Milled Oz	Koz	697	0	94	85	64	93	106	109	81	41	19	6
Recovered Oz	Koz	663	0	89	81	61	88	101	103	77	39	18	5

Table 65 – MGP Combined Mine and Processing Production Schedule

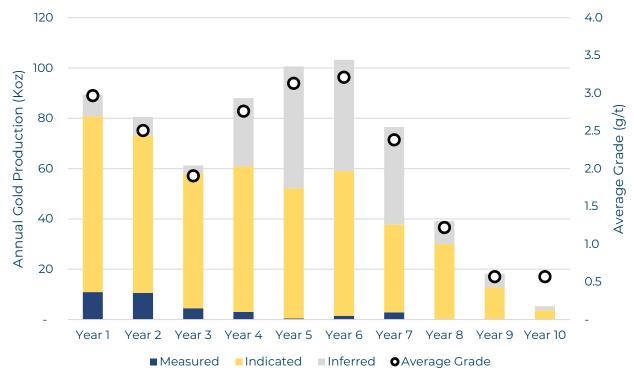


Figure 68 – MGP processing schedule by Mineral Resource classification.

# 20 CAPITAL COSTS

Total capital expenditure for the Project is estimated at \$508M, which includes \$137M preproduction capital, \$207M major project capital for development of new mines and \$164M sustaining capital expenditure.

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Table 66 – MGP Capital Cost Estimate
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Capital Expenditure	Pre-Production	Post- Production Major Capital	Post-Production Sustaining	Total
	(\$M)	(\$M)	(\$M)	(\$M)
Site Infrastructure	26.6	4.6	-	31.2
Processing Plant	68.2	13.1	2.5	83.7
Open Pit	13.3	105.1	-	118.4
Underground	7.1	83.6	161.7	252.5
Capitalised Operating Costs	14.2	-	-	14
Sub Total	129.4	206.5	164.2	500.0
Contingency	7.6	-	-	7.6
Total	136.9	206.5	164.2	507.6

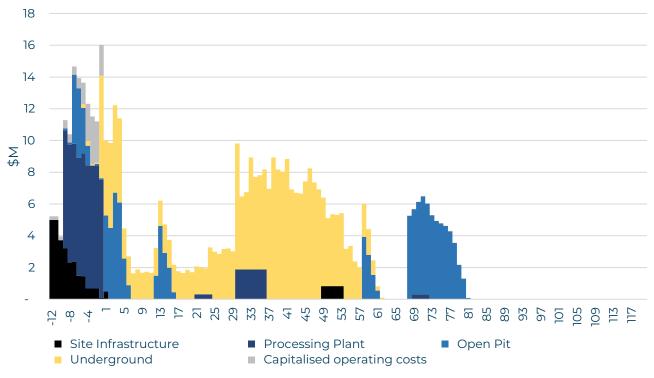


Figure 69 – Capital expenditure schedule by cost centre and month (mill start = month 1).

Capital cost estimates are drawn from supplier pricing based on request for quotation (RFQ) and detailed first principals cost estimates.

Item	Cost (\$M)	Source
Process Facility	\$83.7	Q2CY23 Como Engineers PFS Report
Open Pit Mining Costs	\$118.4	Q2CY23 RFQ
Underground Mining Costs	\$252.5	Q2CY22 RFQ
Tailing Storage Facility	\$8.3	Q2CY22 RFQ
Accommodation Village	\$11.3	Q2CY22 RFQ

Table 67 – Major Capital Cost Items and Sources

# 20.1 Site Infrastructure

Site infrastructure capital includes all clearing and site establishment earthworks, office, power station and accommodation village infrastructure, as well as various other ancillary items. These costs were built up using a combination of first principals and RFQ pricing submissions. The largest single item captured under stie infrastructure is the accommodation village.

## 20.2 Processing Plant

Como Engineers were engaged to provide the PFS cost basis for a 1.0Mtpa processing plant. The processing plant capital estimate is comprised of \$67M for the CIL plant and \$13M for a flotation and fine grind circuit to be constructed in year 3 to process Turnberry Central underground ore, which requires a 15µm grind size to achieve 88.5% metallurgical recovery.

The tailings dam was initially designed to be constructed at Andy Well. This design continues to be the basis for the proposed TSF however it will now be constructed at Turnberry where the mill is to be built. The Stage 1 and 2 lifts were costed using RFQ contractor pricing for earthworks applied to design quantity estimates taken from design report.

## 20.3 Open Pit Capitalised Mining Costs

The open pit capitalised mining cost estimate consist of mobilisation and establishment costs for the open pit mining contractor, including workshop construction, as well as open pit pre-strip costs.

A RFQ process in 2023 resulted in three open pit mining contractors providing rates for the proposed open pit mining operations. These rates form the basis of the open pit mining cost estimate.

# 20.4 Underground Mining Capital Mining Costs

The underground capitalised mining cost estimate consists of initial infrastructure establishment for the mine, mobilisation and establishment costs for the underground contractor, capital mining equipment including ventilation and electrical infrastructure, capital development and a proportion of the mine overheads.

A RFQ process in 2022 resulted in one underground mining contractor providing rates for the proposed underground mining operations. These rates form the basis of the underground mining cost estimate.

# 20.5 Capitalised Operating Costs (Including Owners Costs)

Capitalised operating costs include the mine operating costs incurred prior to commercial production commencing, as well as owner's costs associated with the development of the Project.

Owner's costs were estimated from first principals and reflect the direct costs incurred during the construction phase, including:

- Project administration and supervision costs;
- OHS&E costs, including statutory compliance costs; and,
- Flights, transfer services, accommodation and catering costs for the workforce.

# 21 OPERATING COSTS

Total operating expenditure for the Project is estimated at \$952M (\$103 per tonne milled or \$1,436 per ounce produced) and is based on 2022 and 2023 RFQ price submissions and detailed first principals cost estimates. Operating costs incurred prior to commencement of mill commissioning are included in the capital cost estimate.

Table 68 – Project Operating Cost by Area

Operating Costs	\$M	\$/t Milled	\$/oz Produced
Open Pit Mining	226.3	24.54	342
Underground Mining	368.9	40.00	557
Processing	245.9	26.67	371
G&A	54.2	5.88	82
Royalties	56.2	6.10	85
Total	951.6	103.20	1,436

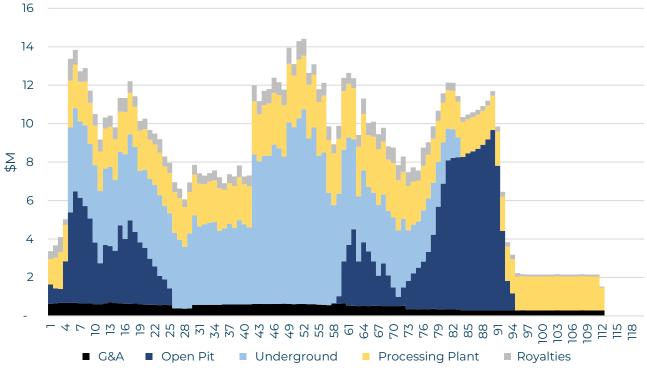


Figure 70 – Operating expenditure schedule by cost centre and month (mill start = month 1).

# 21.1 Mining

Mine operating costs represent \$595M or 62% of total operating costs. Costs are built up from RFQ price submissions provided by open pit and underground mining contractors, and consumables suppliers, received during 2022 and 2023.

Open pit mining contractors were provided with open pit designs and schedule that outlined proposed mining physicals by month. Contractors subsequently provided the Company with a variable schedule of rates pricing structure to achieve those physicals and an indicative personnel schedule to allow for owner costs to be estimated.

Underground mining contractors were provided with mining development profiles, a responsibility matrix and schedule that outlined proposed mining physicals by month. Contractors subsequently provided the Company with a fixed and variable schedule of rates pricing structure to achieve those physicals and an indicative personnel schedule to allow for owner costs to be estimated.

Diesel used for mining operations is based on June 2023 supplier pricing of \$1.47/L delivered to site, which excludes GST and includes the \$0.477/L rebate.

Mining costs exclude accommodation, messing and flights, which are captured under the general and administration cost centre.

# 21.2 Processing

Process operating costs represent \$246M or 25% of total operating costs. Costs are built up by Como Engineers (Como) from design criteria, vendor quotations and historical data from Como's database and provided to the Company as part of the June 2023 Process Plant Design Report. Costs vary depending on material type (oxide/fresh) and sulphide component (Turnberry underground).

Processing costs capture contractor haulage costs and Company supplied diesel to move material from Andy Well and St Anne's, by road train, to the Turnberry processing plant.

Power is to be provided by diesel fired power station and diesel power costs are based on June 2023 supplier pricing of 1.47/L delivered to site, which excludes GST and includes the 0.477/L rebate.

The processing plant is to be operated by Company staff and staff salaries are estimated based on Como's database and validated through discussions with third party mine operators regarding remuneration expectations in the industry.

A refining charge of \$4.68 per ounce sold is captured in the process operating cost centre.

Process costs exclude accommodation, messing and flights, which are captured under the general and administration cost centre.

# 21.3 General and Administration (G&A)

G&A operating costs represent \$54M or 6% of total operating costs. G&A costs capture messing, accommodation, flights and camp power costs.

Messing and camp management costs are estimated based on the Company's database of operating costs for current projects. Flight costs were sourced from June 2023 quarter RFQ price submissions.

G&A also captures site administration, environmental and general management costs.

# 21.4 Royalties

Royalties represent \$56M or 6% of total operating costs.

Royalties applicable to all MGP gold production:

- State Royalty 2.5% NSR.
- Yugunga-Nya Native Title Royalty.

Royalties applicable specifically to M51/882 (Turnberry/St Anne's):

- Gnaweeda Teck Royalty 8.8% Net Profit Interest which is calculated on revenue from gold produced and sold from M51/882 less all expenses (capital, operating and historical exploration expenses) and only payable once those expenses are recovered by the Project operator.
- Archean Star Resources Australia Pty Ltd Royalty \$5/oz sold from mining operations within M51/882, capped at \$1M.

Royalties applicable specifically to M51/870 (Andy Well):

• Wilson Royalty – 1%NSR.

# 22 ECONOMIC ANALYSIS

## 22.1 Financial Results

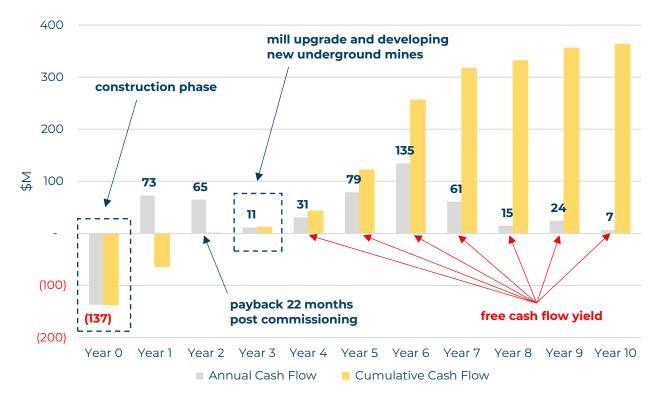
The Project delivers a robust financial outcome, paying back start-up capital in 22 months post commissioning, delivering pre-tax net cash flows and net present value (NPV<sub>5%</sub>) of \$363M and \$249M respectively, and an internal rate of return (IRR) of 40% over its initial 9.3 year life using a \$2,750/oz gold price.

Using the May 2023 spot gold price of ~3,000/02 the Project outcomes are even more substantial with start-up capital paid back in 16 months, pre-tax net cash flows of \$521M, an NPV<sub>5%</sub> of \$371M and IRR of 56%.

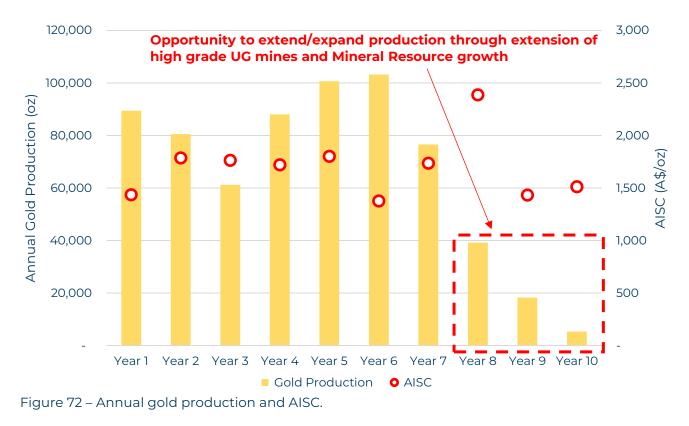
The financial model is based on a standalone 1.0Mtpa processing plant and assumes tax losses held by the Company at the end of December 2022 of \$24M.

Project Economics at Gold Price	Unit	\$2,500	\$2,750	\$3,000
Gold Production	Koz	663	663	663
Gross Revenue	\$M	1,656	1,822	1,988
Pre-production Capital	\$M	137	137	137
Free Cash Flow (Pre-tax)	\$M	202	363	521
Free Cash Flow (Post-tax)	\$M	149	261	372
NPV <sub>5%</sub> (Pre-tax)	\$M	125	249	371
NPV <sub>5%</sub> (Post-tax)	\$M	81	171	256
IRR (Pre-tax)	%	24	40	56
IRR (Post-tax)	%	18	30	41
Payback Period	Months	40	22	16
Operating Cost	\$/oz	1,429	1,436	1,448
AISC	\$/oz	1,677	1,684	1,696
EBITDA	\$M	710	870	1,028

Table 69 – Key Financial Model Outputs







Feasibility Study Summary July 2023

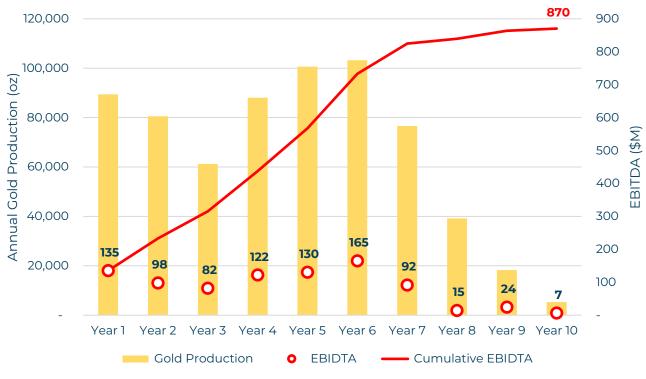


Figure 73 – Annual gold production and EBITDA (\$2,750/oz).

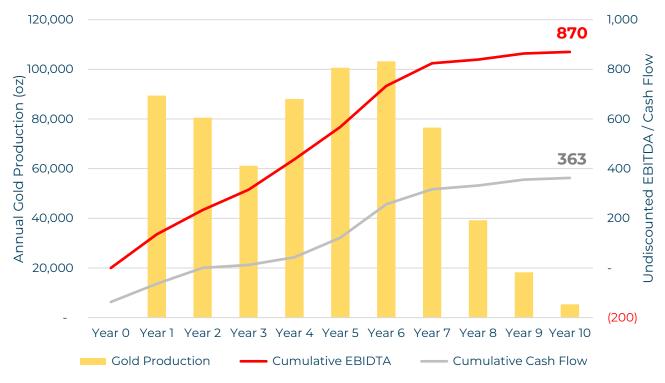


Figure 74 – Annual gold production, cumulative undiscounted net cash flow and EBITDA (\$2,750/oz).

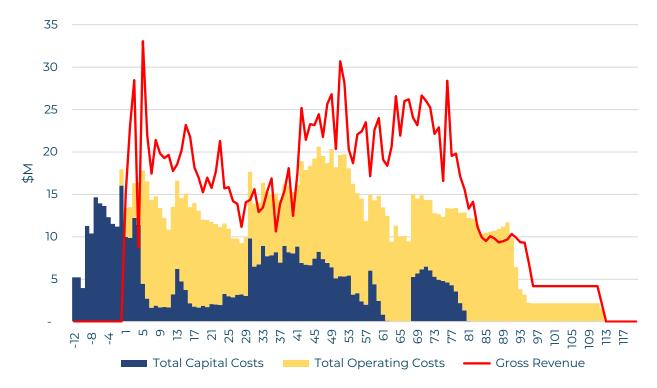


Figure 75 – Total capital and operating expenditure, and gross revenue (\$2,750/oz) by month (mill start = month 1).

# 22.2 Gold Price

The gold price assumption of \$2,750/oz is mid-way between the consensus mean of various analyst gold price forecasts (\$2,600/oz) and the May 2023 spot price (\$3,000/oz).

# 22.3 Exchange Rate

All costs in this Study are in Australian dollars with RFQ's sourced in 2022 and 2023. During this period the AUD:USD exchange rate varied from 0.62 to 0.75. As at June 2023, the exchange rate was 0.67 (one Australian dollar equals 0.67 United States dollars).

# 22.4 Sensitivity Analysis

Analysis of undiscounted net cash flow for the Project under varied financial and physical inputs show operating cost and gold price to be areas of sensitivity. Analysis was performed on the following basis:

- Gold price variation by \$250/oz either side of the base case \$2,750/oz which captures both the upper and lower bound of the Australian dollar gold price over the preceding 12 months.
- Metallurgical recovery varied by ±1.5% to investigate sensitivity to potential variability in metallurgy.
- Operating costs varied by ±15% to investigate sensitivity to potential inaccuracies in operating cost estimates, or future inflationary or deflationary price environments.
- Capital costs varied by ±15% to investigate sensitivity to potential inaccuracies in capital cost estimates, or future inflationary or deflationary price environments.

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Feasibility Study Summary July 2023

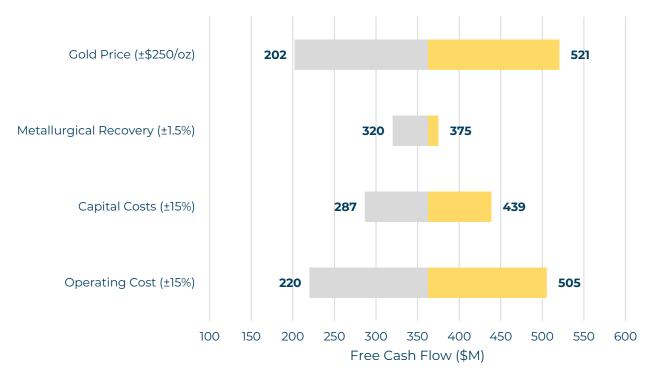


Figure 76 – Undiscounted pre-tax free cash flow sensitivity analysis.

This analysis shows that while sensitive to fluctuations in both operating cost and gold price, the Project continues to deliver positive cash flows under conservative assumptions. This supports the positive financial outcome modelled under the base case scenario.

# 23 FUNDING

To achieve the range of outcomes indicated in the Study, funding is required. This announcement documents the order of funding required to commence production. Subsequent developments are assumed to be funded by positive cash flow generated from production.

Project financing has not yet been secured, however the Company has initiated discussions with advisors specialising in debt finance.

Potential funding options include the following:

- Equity;
- Senior-secured project debt finance;
- Secured corporate bond;
- Pre-paid off-take and other forms of off-taker financing; and
- Toll treatment of the Projects high-grade starter pits at one of the two processing facilities within a 125km radius of the Project.

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 Company considers that raising secured project finance is a realistic funding option and is in active discussions with financiers and debt advisers.
- The Board has a strong history of securing funding.
- Current and potential investors support the proposed transition from explorer to producer.
- The gold sector continues to remain strong and global debt and equity finance availability for gold projects is robust. A number of recent examples of funding for gold development projects located in Australia in the last 24 months support this view.
- The Project has an 9.3 year life generating meaningful free cash flow relative to the development capital requirement (\$363M @\$2,750/oz and \$521M @\$3,000/oz), and release of this Study provides a basis for advancing discussions with potential financiers.
- The Company has a clean, uncomplicated capital structure, and owns 100% of the Project, making potential financing arrangements simpler, which is attractive to potential financiers.
- The Board and management team have extensive experience in mine development and production in the resources industry, which is attractive to potential financiers seeking certainty of Project delivery.
- The Company has a strong track record of raising equity funds as and when required.

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.

# 24 RISK

The Company considers the following key risks represent important factors relevant to the successful development and continued operation of the Project.

## 24.1 Gold Price Volatility and Foreign Exchange Rates

The Project is both technically and financially robust, delivering meaningful free cash flow. The Project is however sensitive to gold price, which can impact revenues and derived cash flows through USD price volatility, changes in AUD:USD exchange rates or both. Sensitivity analysis shows a \$250/oz change in gold price delivers a ~\$160M change in pre-tax free cash flow. To mitigate potential downside volatility to revenues, a hedging strategy may be implemented to ensure the Project remains capable of servicing any debt and meeting operating expenditure commitments.

# 24.2 Capital and Operating Costs

The Project is more sensitive to volatility in operating costs than capital costs, however both can impact economic outcomes. Input pricing used to construct cash flow models for the Project is current, having being sourced within the preceding 12 months prior to the release of the Study, and should provide an accurate reflection of actual costs if the Project were to be developed in the near term. Costs are however influenced by many factors and for this reason the cost estimates in this Study are considered to be accurate within ±25%. Additionally, where able, the Company will seek to enter into fixed price agreements for larger capital items and long-term service agreements for ongoing service contracts to provide a level of cost stability. Strong free cash flows are the ultimate buffer against cost volatility, which reinforces the need for a level of downside revenue protection.

## 24.3 Contractual Risk

Adverse contractual outcomes could include project delays and reduced or delayed cash flows, increased costs and inability to deliver the specified product or service. In order to mitigate potential negative outcomes, the following strategies will be adopted during procurement process:

- Prequalification (information-gathering) to determine a contractor's capability, capacity, resources and prior performance.
- Use of Australian Standards for preparation of contractual conditions where applicable and appropriate.

#### 24.4 Labour Supply and Turnover

Labour supply risk, for the Company and service providers to the Company, is a key Project execution risk. Currently high commodity prices are ensuring the Western Australian extractive industries are active. This is resulting in high demand for the relatively fixed pool of skilled labour servicing the industry, ensuring labour pricing pressure remains high. The Company believes this pricing pressure has been captured by the cost modelling and estimated operating costs reflect the high level of demand. Negative impacts, in addition to increased operating costs, include reduced productivity or inability to perform certain operational functions if labour is unable to be secured, ultimately leading to increased cost, deferred revenue or both.

#### 24.5 Mineral Resource and Ore Reserve

Mineral Resource and Ore Reserve estimates are expressions of judgement based on knowledge, experience and industry practice, including compliance with the 2012 JORC Code. These estimates are imprecise and depend on interpretations that may prove to be inaccurate. In accordance with ASX requirements, the Company has limited the inclusion of gold production from lower confidence Inferred Mineral Resources to below 30% of the total gold production within the Study. Additionally, Mineral Resources for Turnberry and St Anne's were estimated by independent technical experts to ensure unbiased outcomes. Major variances to contained metal in the Mineral Resource and Ore Reserve will have a negative impact on the revenue generated by the Project. There is a risk that Ore Reserves can become uneconomic.

# 24.6 Metallurgy and Process Design

The economic viability of mineralisation depends on a number of factors such as metal distribution, mineralogical association and an economic process route for metal recovery, which may or may not ultimately be successful. The recovery of gold from ores in Western Australia utilises a commonly used process although changes in mineralogy that are currently not known, may result in inconsistent metal recovery. Importantly, ~50% of the gold production within the Study is from Andy Well, which has 5 years of recent processing and reconciliation information available to support the metallurgical assumptions applied during the Study.

# 24.7 Project Funding

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. There is also no certainty that the Company will be able to source funding as and when required.

# 24.8 Regulatory Approvals

Regulatory approvals are required from DMIRS and DWER to develop the Project. At Andy Well, a number of requisite approvals already exist. In addition, based on the volume of work that has been completed to support regulatory approval applications, historical precedence, and existing approvals, it is considered that all required permits are likely to be granted. However, there is no guarantee that approvals will be granted as required, leading to potential delays or abandonment of the Project.

## 24.9 Mineral Tenure

The Company's tenements are situated in Western Australia and are governed by Western Australia legislation. Each licence or lease is for a specific term and carries with it compliance, expenditure and reporting commitments. Potential exists to lose title to tenements if licence conditions are not met or if insufficient funds are available to meet expenditure commitments. Further, there are no guarantees that the tenements will be renewed or that any applications for exemption from minimum expenditure conditions will be granted, each of which could adversely affect the standing of a tenement.

# 25 CONCLUSIONS

This Study is based on a standalone 1Mtpa processing facility and support infrastructure to be constructed on granted Mining Leases at the Company's Murchison Gold Project, 46km north of Meekatharra in Western Australia.

The Study outlines a straightforward development strategy that delivers meaningful production and financial outcomes for the Company over an initial 9.3 year production plan. The production plan is supported by 12.7Mt @ 3.0g/t Au for 1.2M ounces in Mineral Resource and an initial 4.1Mt @ 3.1g/t Au for 0.4M ounces in Ore Reserve, with significant opportunity for growth through drilling. The technical assumptions and mining methods underpinning the Ore Reserve and production plan are well understood and widely adopted within the Western Australian mining industry, lowering execution risk.

The Project delivers a robust financial outcome, paying back start-up capital in 22 months post commissioning, delivering pre-tax net cash flows and net present value (NPV<sub>5%</sub>) of \$363M and \$249M respectively, and an internal rate of return (IRR) of 40% over its initial 9.3 year life using a \$2750/oz gold price.

Using the May 2023 spot gold price of ~33,000/02 the Project outcomes are even more substantial with start-up capital paid back in 16 months, pre-tax net cash flows of \$521M, an NPV<sub>5%</sub> of \$371M and IRR of 56%.

Sensitivity analysis shows the Project to be susceptible to fluctuations in both operating cost and gold price, however when modelled under the more volatile cost and gold price assumptions experienced during the preceding year the Project continues to deliver positive cash flows.

The positive technical and financial outcomes delivered in the Study support advancement of the Project to DFS level while also working to secure funding for development.

## 26 FORWARD WORK PLAN

The Company is now progressing all remaining environmental studies required to permit the Project and investigating opportunities to accelerate the Project development timeline through toll milling of higher-grade starter pits.

The Company has initiated discussions with a number of advisors specialising in debt finance. These discussions are ongoing and will be supported by the information in this Study.

The Mineral Resources that support the planned mines remain open at depth with strong opportunity to grow. Drilling for Mineral Resource upgrade and growth will advance over the coming months.



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This announcement has been authorised for release by the Company's Board of Directors.

#### For further information, please contact:

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#### **COMPETENT PERSON'S STATEMENT**

The information 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 Duncan Franey, a Competent Person who is a member of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Franey is a full-time employee of the Company. Mr Franey 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 Franey consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information that relates to Mineral Resources for the Murchison Gold Project was first reported by the Company in its announcement to the market on 3 May 2023. The Company is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The information that relates to Ore Reserves is based on information compiled by Mr Chris Davidson, a Competent Person who is a Member of the Australian Institute of Mining and Metallurgy. Mr Davidson is a full-time employee of the company. Mr Davidson is eligible to participate in short and long-term incentive plans of and holds shares and performance rights in the Company as previously disclosed. Mr Davidson 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 Davidson 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.

### JORC 2012 - TABLE 1: ANDY WELL

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure</li> </ul>	<ul> <li>Reverse circulation (RC) percussion drill chips collected through a cyclone and sampled at 1 metre intervals, riffle split, cone split and spear sampled.</li> <li>Diamond core (HQ, NQ, LTK-60) sampled half core, 0.1m to 1.3m.</li> <li>Diamond core (BQ) sampled whole core, 0.1m to 1.3m.</li> <li>Riffle and cone splitting; spear sampling.</li> </ul>
	<ul> <li>sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Mineralisation determined qualitatively through: presence of sulphide and visible gold in quartz; internal structure (massive, brecciated, laminated) of quartz.</li> <li>Mineralisation determined quantitatively via fire assay and aqua regia assay methods.</li> </ul>
Drilling techniques Drill sample recovery	<ul> <li>Drill type (e.g. core, reverse circulation, openhole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc).</li> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> </ul>	<ul> <li>Diamond core samples crushed to 2mm and pulverized to 75µm.</li> <li>RC samples 1m analysed by 30g Fire Assay and AAS.</li> <li>When visible gold is observed in RC chips or diamond core, this sample is flagged by the supervising geologist for the benefit of the laboratory.</li> <li>PQ, HQ and NQ sized diamond drill core, oriented by Reflex system.</li> <li>Underground NQ, LTK-60 and BQ sized diamond drill core, not oriented</li> </ul>
	<ul> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>150mm reverse circulation drill chips.</li> <li>Core, assessed during drilling for loss, loss intervals recorded on core blocks, logged by geologist.</li> <li>Visual estimate of RC drill chip recovery recorded in database.</li> <li>Core: use of drilling fluid to minimize wash out.</li> <li>RC chips, minimize drill water use.</li> </ul>
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	<ul> <li>Holes logged to a level of detail to support mineral resource estimation: lithology; alteration; mineralization; geotechnical; structural.</li> <li>Qualitative: lithology, alteration, foliation.</li> <li>Quantitative: vein percentage; mineralization (sulphide) percentage; RQD measurement; structural orientation angles; assayed for gold, arsenic, copper, iron, nickel; density from downhole gamma ray logging (6 holes), water displacement (11 holes);</li> <li>Core photographed wet and dry.</li> <li>All holes logged for entire length of hole.</li> </ul>
	• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	<ul> <li>Qualitative: lithology, alteration, foliation.</li> <li>Quantitative: vein percentage; mineralization (sulphide) percentage; RQD measurement;</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		structural orientation angles; assayed for gold, arsenic, copper, iron, nickel; density from downhole gamma ray logging (6 holes), water displacement (11 holes);
	The total length and percentage of the	<ul><li>Core photographed wet and dry.</li><li>All holes logged for entire length of hole.</li></ul>
	relevant intersections logged.	
Sub-sampling techniques and sample	• If core, whether cut or sawn and whether quarter, half or all core taken.	• Core sawn half and quarter core from pre-2014 diamond drilling. All current underground diamond drilling is whole core sampled
preparation	• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	• RC chips cone and riffle split, sampled dry where possible, and wet when excess ground water could not be prevented.
	• For all sample types, the nature, quality and appropriateness of the sample preparation technique.	• Diamond core is crushed to 10mm by a jaw crusher then the entire sample is pulverized to 75µm by a LM5 (85% passing)
		<ul> <li>The entire ~3kg RC sample is pulverized to 75µm (85% passing)</li> <li>Gold analysis is determined by either</li> <li>25g charge fire assay with an AAS finish</li> </ul>
		<ul> <li>25g charge fire assay with an AAS finish (Minanalytical pre-2017)</li> <li>50g charge fire assay with an AAS finish (Minanalytical 2017)</li> </ul>
		• 30g charge fire assay with an AAS finish (SGS).
	• Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	<ul> <li>Pulp duplicates taken at the pulverising stage and selective repeats conducted at the laboratory's discretion.</li> </ul>
	• Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field	<ul> <li>RC chips: field duplicates from re-split residual sample.</li> <li>Core: quarter or half core taken as duplicate.</li> </ul>
	duplicate/second-half sampling.	•
	• Whether sample sizes are appropriate to the grain size of the material being sampled.	<ul> <li>Sample size appropriate for grain size of samples material.</li> </ul>
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	<ul> <li>Fire assay, total technique, appropriate for gold</li> <li>Aqua regia digest, partial assay, appropriate for gold and trace elements</li> <li>AAS appropriate for gold.</li> <li>ICPOES for trace elements.</li> </ul>
	• For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	<ul> <li>No geophysical data used in estimation.</li> </ul>
	• Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	<ul> <li>Certified reference material standards, 1 in 50 samples</li> <li>Blanks: CRM blank, field blank; lab - barren quartz flush</li> <li>Duplicates:</li> <li>Field: RC - re-split residual sample, core - every</li> </ul>
		<ul><li>50th sample quarter cored</li><li>Lab: Random pulp duplicates are taken on average 1 in every 10 samples</li></ul>
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel.	<ul> <li>All sampling is routinely inspected by senior geological staff. Significant intersections are inspected by senior geological staff and DRM corporate staff.</li> <li>2% of samples returned &gt; 0.1g/t Au are sent to an umpire laboratory on a quarterly basis for verification.</li> </ul>
	• The use of twinned holes.	<ul> <li>A single diamond hole (MNDD064) was drilled immediately adjacent to a RC hole (MNRC038) but was not sampled as it was for geotechnical purposes. Visual inspection of the diamond hole correlates well with the intersection returned from the RC hole.</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	• Data stored in Datashed database on internal company server, logging performed on LogChief and synchronised to Datashed database, data validated by database administrator, import validate protocols in place. Visual validation in Surpac by company geologists.
	• Discuss any adjustment to assay data.	• No adjustments made to assay data. First gold assay is utilized for any resource estimation.
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> </ul>	<ul> <li>Collars: surveyed with RTK GPS.</li> <li>Downhole: surveyed with in-rod Reflex tool; conventional or north-seeking gyro tool, in-rod or open hole.</li> <li>MGA94 - Zone 50; Wilber Local grid, rotated 45° east, along strike of Wilber deposit.</li> </ul>
	• Quality and adequacy of topographic control.	Topographic data generated using high resolution photogrammetric techniques.
Data spacing and distribution	• Data spacing for reporting of Exploration Results.	• Drill hole spacing is nominally 25 x 50m at shallow depths (0-175m) and 50x50m to 50m x 100m at deeper depths (>175m)
	• Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	Nominal 20m spacing on 25m section in mineralized area, 50m x 50m along strike and down dip.
	Whether sample compositing has been applied.	• N/A
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	• Drill holes oriented at right angles to strike of deposit, dip optimized for drillability and dip of orebody, sampling believed to be unbiased.
	• If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• Not Applicable
Sample security	• The measures taken to ensure sample security.	• All samples are selected, cut and bagged in a tied numbered calico bag, grouped into larger polyweave bags and cable tied. Polyweave bags are placed into larger bulky bags with a sample submission sheet and tied shut. Consignment note and delivery address details are written on the side of the bag and delivered to Toll Express in Meekatharra. The bags are delivered directly to MinAnalytical in Canning Vale, WA who are NATA accredited for compliance with ISO/IEC17025:2005.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	Review of sampling and QAQC procedures and data by Cube Consulting in November 2011.

# Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>Meeka Metals Limited control 100% interest in M51/870 and the tenement is in good standing.</li> <li>M51/870 is located within the Yugunga-Nya Native Title Claim.</li> <li>Gold production royalties of 2.5% to the WA State Government and 1% to a private entity are applicable to all production from M51/870</li> <li>M51/870 Heritage surveys have been conducted over active mining and exploration areas</li> <li>M51/870 is valid until 2033</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Historic exploration was carried out on Wilber by Dominion Mining, Western Mining Corporation and Australasian Gold Mines, including geophysics, soil mapping and sampling, and drilling.</li> </ul>
Geology	• Deposit type, geological setting and style of mineralisation.	• Project scale geology consists of Archean aged high Mg Basalt units intruded by north-south striking porphyry intrusives. These are cross cut by east-west striking Proterozoic dolerite dykes. The mineralized quartz vein cross cuts the Archean units but not the Proterozoic dykes.
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul> <li>See table of significant intercepts in this release. Previous drillholes have been periodically released to the ASX since 2010.</li> </ul>
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>No top-cuts have been applied when reporting results.</li> <li>Aul from the interval in question is reported</li> <li>Intercepts are reported on a geological basis (i.e. where quartz veining is present). Significant grade intervals are often intercepted external to quartz veining but are not included in the released figures, only those that have quartz veining associated.</li> <li>No metal equivalent values are used for reporting exploration results</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>Drill holes oriented at right angles to strike of deposit, dip optimized for drilling purposes and dip of ore body. Mineralised intersections should approximate true widths.</li> <li>Strike of Wilber and Judy Lodes is 45° dipping to the west at 80°.</li> <li>Strike of Suzie Lode is 45° dipping 70° to the west.</li> </ul>
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	<ul> <li>Not Applicable due to infill drilling on previously established mineralised areas.</li> </ul>
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• All holes drilled have been reported since 2010.
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical</li> </ul>	• All meaningful and material data is reported.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>No further work is planned at this stage with the Andy Well Gold Mine due to go on Care and Maintenance in November 2017. Conceptual exploration targets will continue to be generated and tested.</li> </ul>

## Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Database integrity	<ul> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	Data stored in Datashed database on internal company server, logging performed on LogChief and synchronised to Datashed database, data validated by database administrator, import validate protocols in place. Visual validation in Surpac and Micromine by company geologists.
Site visits	<ul> <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</li> </ul>	<ul> <li>Numerous site visits have been conducted by the Competent Person. The deposit area, core logging and cutting facility was inspected with no issues identified.</li> <li>Not Applicable</li> </ul>
	why this is the case.	
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	• Due to the relative simplicity and tabular nature of the deposit, a high degree of confidence is placed in the geological interpretation. Uncertainty increases with depth as drill spacing increases and surveying errors compound.
	<ul> <li>Nature of the data used and of any assumptions made.</li> </ul>	<ul> <li>All holes used in the estimation were either RC (872) or diamond (1024) drilled and sampled by Doray to industry standard, except 4 RC and 1 diamond hole drilled by WMC.</li> </ul>
	• The effect, if any, of alternative interpretations on Mineral Resource estimation.	• No alternative interpretations have been considered. The Wilber, Judy and Suzie deposits are planar with mineralization contained with a clearly visible quartz vein defining the mineralized domain. Sufficient data has been collected to confirm this as the mineralized model.
	<ul> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> </ul>	<ul> <li>Mineralized domains were determined for each Lode using logged quartz vein and quartz vein percentages.</li> <li>Wilber Lode consists of three domains, Judy Lode two domains and Suzie is modelled as one domain.</li> </ul>
	<ul> <li>The factors affecting continuity both of grade and geology.</li> </ul>	• The lodes are hosted within, and discordant to, a wider mineralized shear zone, cross cutting the mafic host rock sequence. High grade is restricted to the quartz veins.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	<ul> <li>The Wilber resource extends for 845m in strike length, from 4m below surface to 1,000m below surface, and averages 1 meter true thickness, average 80° dip to the west.</li> <li>The Judy resource strikes 900m and extends from surface down to 800m below surface, averaging 0.5m to 1.0m true thickness and dipping approximately 80° to the west.</li> <li>The Suzie resource extends for 500m along strike from surface down to 500m below</li> </ul>

CRITERIA	JORC CODE EXPLANATION		(		ITARY		
					to 1.0m tru		ess
		and dip	os approx	imately [	70° to the v	west.	
Estimation and	• The nature and appropriateness of the	All dom	naining b	ased on	observed g	geology a	and
modelling	estimation technique(s) applied and key	unders	tanding	of minera	alization as	observe	d
techniques	assumptions, including treatment of extreme	in oper	n pit and	undergro	ound envir	onment.	
	grade values, domaining, interpolation				oreted into		
	parameters and maximum distance of				lber Lode		
	extrapolation from data points. If a computer				Vilber Lode		
	assisted estimation method was chosen				as two mi		
	include a description of computer software	5					
	and parameters used.	interpre	eted as o		d Judy Sou nuous min		IS
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		and sou	uth of las	t drill hol	es, and do	wn-dip 2	0
		to 30m	depende	ent on su	rrounding	drill	
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		betwee	en 30% ar	nd 35% fo	r each dor	main	
		• The tab	ole below	summai	rises the es	stimation	า
		parame	eters use	d to dete	rmine sea	rch ellips	es:
							_
		Domain	Wilber	Judy South	Judy North	Suzy	
		Minimum No	12	6	7	3	1
		Composites	12	0	,	5	
		Maximum					
		No.	20	14	15	12	
		Composites	20	14	15	12	
		Search					1
		Major Axis	120	100	120	85	
		Bearing	151	320	330	120	1
							-
		Plunge	54	-63	-63	65	-
		Dip	-73	67	67	-52	
						-32	
		Major/	,,,			-32	-
			1.9	2	3	2.5	_
		Major/		2	3		
		Major/ Semi Major Ratio Major/	1.9		_	2.5	-
		Major/ Semi Major Ratio		2 4.5	3		
		Major/ Semi Major Ratio Major/ Minor Ratio Max	1.9		_	2.5	
		Major/ Semi Major Ratio Major/ Minor Ratio	1.9 3	4.5	5	2.5 5	-
		Major/ Semi Major Ratio Major/ Minor Ratio Max	1.9		_	2.5	
		Major/ Semi Major Ratio Major/ Minor Ratio Max Number of	1.9 3	4.5	5	2.5 5	
	• The availability of check estimates, previous	Major/ Semi Major Ratio Major/ Minor Ratio Max Number of Samples per dh • The est	1.9 3 3	4.5 3 as checke	5 2 ed against	2.5 5 2 previous	
	<ul> <li>The availability of check estimates, previous estimates and/or mine production records and</li> </ul>	Major/ Semi Major Ratio Major/ Minor Ratio Max Number of Samples per dh • The est	1.9 3 3	4.5 3 as checke	5	2.5 5 2 previous	ts
		Major/ Semi Major Ratio Major/ Minor Ratio Max Number of Samples per dh • The est estimat	1.9 3 iimate wa	4.5 3 as checke	5 2 ed against external co	2.5 5 2 previous onsultant	ts
	estimates and/or mine production records and whether the Mineral Resource estimate takes	Major/ Semi Major Ratio Major/ Minor Ratio Max Number of Samples per dh • The est estimat and con	1.9 3 imate wa tes comp mparisor	4.5 3 as checke eleted by as agains	5 2 ed against	2.5 5 2 previous onsultant	ts
	estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	Major/ Semi Major Ratio Major/ Minor Ratio Max Number of Samples per dh • The est estimat and cor also cor	1.9 3 imate wa tes comp mparisor mpleted.	4.5 3 as checke leted by as agains	5 2 ed against external c t productio	2.5 5 2 previous onsultant	ts ds
	<ul> <li>estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of</li> </ul>	Major/ Semi Major Ratio Major/ Minor Ratio Max Number of Samples per dh • The est estimat and con also con	1.9 3 iimate wa tes comp mparisor mpleted. umptions	4.5 3 as checke eleted by as agains a made, a	5 2 ed against external co t production Ithough si	2.5 5 2 previous onsultant on recorc	ts ds Dy-
	estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	Major/ Semi Major Ratio Major/ Minor Ratio Max Number of Samples per dh • The est estimat and cor also cor	1.9 3 imate wa tes comp mparisor mpleted. umptions it in shipp	4.5 3 as checke bleted by as agains s made, a bed doré,	5 2 ed against external cr t production Ithough si and is a co	2.5 5 2 previous onsultant on recorc lver is a b omponer	ts ds Dy-
	<ul> <li>estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of</li> </ul>	Major/ Semi Major Ratio Major/ Minor Ratio Max Number of Samples per dh • The est estimat and cor also col • No assu produc of rever	1.9 3 imate wa tes comp mparisor mpleted. umptions it in shipp	4.5 3 as checke bleted by as agains s made, a bed doré,	5 2 ed against external co t production Ithough si	2.5 5 2 previous onsultant on recorc lver is a b omponer	ts ds Dy-
	estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. • The assumptions made regarding recovery of by-products.	Major/ Semi Major Ratio Major/ Minor Ratio Max Number of Samples per dh • The est estimat and cor also col • No assu produc of rever only.	1.9 3 imate wa tes comp mparisor mpleted. umptions it in shipp nue. Estir	4.5 3 as checke bleted by as agains a made, a bed doré, mation m	5 2 ed against external c t production Ithough si and is a con nade on go	2.5 5 2 previous onsultant on recorc lver is a b omponer ild value	ts ds Dy-
	<ul> <li>estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other</li> </ul>	Major/ Semi Major Ratio Major/ Minor Ratio Max Number of Samples per dh • The est estimat and cor also col • No assu produc of rever only.	1.9 3 imate wa tes comp mparisor mpleted. umptions it in shipp nue. Estir	4.5 3 as checke bleted by as agains a made, a bed doré, mation m	5 2 ed against external cr t production Ithough si and is a co	2.5 5 2 previous onsultant on recorc lver is a b omponer ild value	ts ds Dy-
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CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	Any assumptions about correlation between	No assumptions made regarding correlation of
	variables.	variables, only gold was estimated in model.
	Description of how the geological interpretation was used to control the	Grade was estimated within the modelled mineralization lode wire frames. Areas outside the demain were assigned a grade of zero.
	<ul> <li>resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> </ul>	<ul> <li>the domain were assigned a grade of zero.</li> <li>Outliers were determined from statistical (log probability) plots, and a top cut of 400g/t Au at the 99<sup>th</sup> percentile for the Wilber Lode domains.</li> <li>A top cut of 150g/t Au was applied to Judy South, while Judy North is 70g/t Au representing the 97<sup>th</sup> and the 99<sup>th</sup> percentiles respectively.</li> <li>A top cut of 100g/t Au was applied to Suzie just</li> </ul>
	• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	<ul> <li>under the 99<sup>th</sup> percentile.</li> <li>Comparison was made between the kriged estimate and the mean grade for each domain. Comparison was also made between the kriged estimate and reconciliation data (both open-pit and underground) for all three orebodies.</li> </ul>
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnes were in-situ dry tonnes.
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• A 0.1g/t Au reporting cut-off was applied.
Mining factors or assumptions	<ul> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	The interpretation and reporting was based on a geological domain, which is assumed to be mineable in its entirety, using standard open pit and underground development and longhole stoping techniques.
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	• Current production data confirms the gold is amenable to extraction via standard gravity and carbon in pulp techniques.
Environmental factors or assumptions	<ul> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	• No environmental factors are expected to impact further economic extraction.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Bulk density	• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	• Bulk density was determined using down hole gamma logging of six holes, at 10cm intervals for 6,064 values. Data was classified by oxidation state, and extracted as discrete datasets and sub-classified by ore type. The declustered mean of each domain was assigned as the bulk density of each domain.
	<ul> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>Down-hole gamma measurements would account for all variables.</li> <li>Subsequent water-displacement check samples are routinely taken from underground mining material.</li> <li>Modelling of weathering horizons (oxide, transitional and fresh) were taken from geology logs for both RC and diamond drilling. Densities were assigned to each of these weathered zones.</li> </ul>
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories.	<ul> <li>Classification based on geological continuity, data spacing and estimation properties (number of informing composites, average distance and kriging quality parameters).</li> </ul>
	• Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	• Confidence in the relevant factors such as tonnage/grade estimates and confidence in the geological continuity and contained metal is high and supported by several years of mining production on all three orebodies.
	• Whether the result appropriately reflects the Competent Person's view of the deposit.	• The Mineral Resource estimate appropriately reflects the Competent Person's view of the deposit.
Audits or reviews	<ul> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	• The Mineral Resource estimate was completed by Doray Minerals, with internal checks completed. The estimate was also validated against past models completed by external consultants.
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	• The Mineral Resource is considered robust as reflected in the reporting of the Mineral Resource per the guidelines of the 2012 JORC code. Slope of regression is used to assess quality and confidence in the estimate and as a guide in assigning resource categories.
	• The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	• The Mineral Resource is considered robust on a local scale for material classified as Indicated.
	• These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• The Mineral Resource for Wilber, Judy and Suzie lodes are within 10% of contained metal when compared to reported production data.

# Section 4 Estimation and Reporting of Ore Reserves

# (Criteria listed in section 1, and where relevant in section 2 and 3, also apply to this section.)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Mineral	• Description of the Mineral Resource estimate	• The Mineral Resource estimate was compiled
Resource	used as a basis for the conversion to an Ore	by Doray Minerals Limited in 2018 with internal
estimate for	Reserve.	checks as reflected in the reporting of the
conversion to		Mineral Resource per the guidelines of the
Ore Reserves		2012 JORC code.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	<ul> <li>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</li> </ul>	• The Mineral Resources are inclusive of the Ore Reserves.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	• Numerous site visits have been conducted by the Competent Person.
	• If no site visits have been undertaken indicate why this is the case.	• Not Applicable.
Study status	• The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.	• The Ore Reserve is underpinned by studies conducted to a Pre-feasibility Study level.
	• 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.	• Modifying factors accurate to the study level were applied based on detailed expert design analysis. The study indicates that the Ore Reserve and mine plan is technically achievable and economically viable.
Cut-off parameters	• The basis of the cut-off grade(s) or quality parameters applied.	<ul> <li>Cut-off grade parameters for determining open pit and underground Ore Reserves were based on the Pre-feasibility Study financial analysis and, with a gold price of A\$2,200/oz used as a reference price.</li> <li>The open pit cut-off grade used for design and analysis was 0.5g/t Au.</li> <li>The underground cut-off grades used for design and analysis was:</li> <li>Fully costed – 2.7g/t Au;</li> <li>Stoping – 2.0g/t Au; and</li> <li>Processing – 0.4g/t Au.</li> </ul>
Mining factors or assumptions	• 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).	<ul> <li>Underground:</li> <li>Ore development is performed by single boom jumbo.</li> <li>Production is by longhole stoping methods using CRF.</li> <li>Mineable stope shapes were created using Deswik Stope Optimiser software.</li> <li>A minimum mining void width of 2.0m was applied to the stope optimisation process.</li> <li>Dilution of 0.4m footwall and 0.4m hanging wall was applied to all stopes to account for unplanned dilution.</li> <li>Mining recoveries were set at 95% for stoping using CRF.</li> <li>Inferred Mineral Resources are included in the mine plan and economic analysis for the site, however Inferred Mineral Resources are not included in any Ore Reserve estimate.</li> <li>A detailed mine design and schedule was created and evaluated using the Feasibility Study financial model to confirm the economic viability of the Ore Reserve.</li> </ul>
	• 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.	• The mining methods were selected based on economic considerations, orebody geometry and geotechnical advice. They are widely adopted methods and have previously been successfully applied for mining of these ore bodies at this site.
	The assumptions made regarding geotechnical parameters (eg. pit slopes, stope sizes, etc.), grade control and pre-production drilling.	• Independent geotechnical advice formed the basis of the mine design parameters, including open pit slope angles, batter heights and angles, berm widths, stable underground void dimensions and stand-off distances amongst other things.
	<ul> <li>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</li> </ul>	<ul> <li>The Mineral Resource model used was that which was stated above.</li> <li>For open pit optimisation, an SMU model was created from the Mineral Resource which</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		<ul> <li>accounted for dilution based on the selected mining equipment fleet being employed.</li> <li>Dig block height and length was 5m and minimum width was 2.5m.</li> <li>A minimum mining void width of 2.0m and stope height of 15m was applied to the stope optimisation process.</li> </ul>
	• The mining dilution factors.	<ul> <li>Unplanned dilution of 0.5m was added to open pit dig blocks.</li> <li>Unplanned dilution of 0.8m was added to underground stopes.</li> </ul>
	• The mining recovery factors.	• Mining recoveries were set at 95% for stoping using CRF.
	• Any minimum mining widths used.	<ul> <li>Underground minimum mining void width of 2.0m was applied to the stope optimisation process.</li> <li>Open pit minimum mining width of 2.5m was applied.</li> </ul>
	• The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.	<ul> <li>Only the Measured and Indicated portion of the Mineral Resource was used to estimate the Ore Reserve.</li> <li>The Ore Reserve is technically and economically viable without the inclusion of Inferred Mineral Resources.</li> <li>Inferred Mineral Resource was included in the economic analysis for the Pre-feasibility Study.</li> </ul>
	• The infrastructure requirements of the selected mining methods	• Mining infrastructure required to deliver the plan include office and ablution buildings, workshops, power station, explosive storage facilities, waste dumps, haul roads, dewatering bores and water storage dams.
Metallurgical factors or assumptions	• The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.	<ul> <li>Ore will be processed through a 1Mtpa CIL plant.</li> <li>The milling circuit is designed to achieve a P<sub>80</sub> of 75µm grind size.</li> </ul>
	<ul> <li>Whether the metallurgical process is well- tested technology or novel in nature.</li> <li>The nature, amount and representativeness of metallurgical testwork undertaken and the metallurgical recovery factors applied.</li> </ul>	<ul> <li>The metallurgical process is well-tested and widely adopted.</li> <li>Extensive metallurgical test work and five years of operational data supports the metallurgical recovery factors applied.</li> <li>Metallurgical recovery of 98% was applied.</li> </ul>
	• Any assumptions or allowances made for deleterious elements.	No deleterious elements are expected.
	The existence of any bulk sample or pilot scale testwork and the degree to which such samples are representative of the orebody as a whole.	• Test work for Andy Well is supported by five years of production records from the processing of 1.3Mt of Andy Well ore through a CIL plant constructed adjacent to the mine and operated between June 2013 and September 2017. Metallurgical recovery often exceeded 98% with a very high gravity component (~80%) due to a large proportion of coarse gold.
	• For minerals that are defined by a specification, has the Ore Reserve estimation been based on the appropriate mineralogy to meet the specifications?	• Not applicable.
Environmental	• 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.	<ul> <li>Environmental baselines studies have been completed.</li> <li>Andy Well has provision for a Class 1 Category A Potentially Acid Forming (PAF) Waste Rock Landform (WRL). Where required, this WRL will be expanded and used for any PAF material mined at Andy Well.</li> <li>The permitting process is ongoing and based on the work completed to date and the information available the Company is confident that approvals required for Project development will be granted.</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Infrastructure	• 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.	<ul> <li>The mine is located adjacent to the Great Northern highway and has good road access.</li> <li>Meekatharra aerodrome is located 46km to the south of the Project.</li> <li>Accommodation is available in Meekatharra which can be used for early works and construction.</li> <li>Workshop and partial process plant are in place on site.</li> <li>Site roads, water management infrastructure and dams, and waste rock dumps are in place.</li> <li>There is sufficient area available to expand existing infrastructure or for new infrastructure.</li> <li>A portal and extensive underground development exists and be used for accessing the planned underground mine.</li> </ul>
Cost and revenue factors	The derivation of, or assumptions made, regarding projected capital costs in the study.	<ul> <li>Capital cost estimates are drawn from supplier pricing and detailed first principals cost estimates.</li> <li>The process plant capital cost estimate was compiled by Como Engineering to a PFS level of accuracy.</li> </ul>
	The methodology used to estimate operating costs.	• Operating cost estimates are drawn from supplier pricing and detailed first principals cost estimates.
	Allowances made for the content of deleterious elements.	No deleterious elements are expected.
	• The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.	• A long-term gold price of A\$2,200 per ounce was considered by the Competent Person to be an appropriate commodity price assumption.
	• The source of exchange rates used in the study.	<ul> <li>All costs in this Study are in Australian dollars with requests for quotes, sourced between QI 2022 through Q2 2023. During this period the AUD:USD exchange rate varied from 0.62 to 0.75. As at June 2023, the exchange rate was 0.67 (one Australian dollar equals 0.67 United States dollars).</li> </ul>
	Derivation of transportation charges.	<ul> <li>Transport charges for consumables to site are based on supplier pricing.</li> <li>Transport charges for gold doré from site to the Perth Mint have been allowed for.</li> </ul>
	• The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.	• Sale of gold doré to the Perth Mint.
	• The allowances made for royalties payable, both Government and private.	<ul> <li>State Royalty – 2.5% NSR.</li> <li>Yugunga-Nya Native Title Royalty.</li> <li>Wilson Royalty – 1%NSR.</li> </ul>
Revenue Factors	• 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.	• Ore Reserve economic evaluation estimated revenue from the recovered gold sold multiplied by the assumed long term gold price, A\$2,200 per ounce. Transportation and treatment charges, and royalties were treated as expenses during financial evaluation.
	• The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	• A long-term gold price of A\$2,200 per ounce was considered by the Competent Person to be an appropriate commodity price assumption.
Market assessment	• The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.	• There is a well-established and transparent spot market for gold.
	• A customer and competitor analysis along with the identification of likely market windows for the product.	<ul> <li>There is a well-established and transparent spot market for gold.</li> </ul>
	• Price and volume forecasts and the basis for these forecasts.	• There is a well-established and transparent spot market for gold.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	<ul> <li>For industrial minerals the customer specification, testing and acceptance</li> </ul>	Not applicable.
	requirements prior to a supply contract.	
Economic	<ul> <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> <li>Operating and capital cost estimates are considered to be accurate within ±25%.</li> <li>Cost estimates are drawn from supplier pricing and detailed first principals cost estimates.</li> <li>A discount rate of 5% has been applied.</li> <li>This analysis shows that while sensitive to fluctuations in both operating cost and gold price, the Project continues to deliver positive</li> </ul>
Social	• The status of agreements with key stakeholders and matters leading to social licence to operate.	<ul> <li>NPV under conservative assumptions.</li> <li>The Company has an agreement in place with the Native Title Holders, the Yugunga-Nya People, facilitating exploration and mining.</li> <li>The Company maintains a strong working relationship with the Government, Yugunga- Nya People, pastoralists and the local community.</li> </ul>
Other	• To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:	
	<ul> <li>Any identified material naturally occurring risks.</li> </ul>	• A formal process to identify and mitigate naturally occurring risks was completed during the Study. Outcomes were integrated into the study planning process.
	<ul> <li>The status of material legal agreements and marketing arrangements.</li> </ul>	<ul> <li>All material legal agreements are either in place, or based on information available the Company is confident that they will be in place in a suitable timeframe.</li> <li>No marketing agreements are needed, gold doré will be produced on site and sold into the spot market.</li> </ul>
	<ul> <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>	• The tenements are in good standing and the permitting process is ongoing. Based on the work completed to date and the information available the Company is confident that approvals required for Project development will be granted in a suitable timeframe.
Classification	<ul> <li>The basis for the classification of the Ore Reserves into varying confidence categories.</li> <li>Whether the result appropriately reflects the</li> </ul>	<ul> <li>The Probable Ore Reserve is based on that portion of the Measured and Indicated Mineral Resource within the mine designs that may be economically extracted and includes an allowance for dilution and ore loss.</li> <li>The results appropriately reflect the</li> </ul>
	Competent Person's view of the deposit. • The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	<ul> <li>Competent Person's view of the deposit.</li> <li>Measured Mineral Resource makes up 13% of the Andy Well Probable Ore Reserve.</li> </ul>
Audits or	• The results of any audits or reviews of Ore	Internal review was completed for all Ore
reviews. Discussion of relative accuracy/ confidence.	<ul> <li>Reserve estimates.</li> <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</li> </ul>	<ul> <li>Reserves.</li> <li>The design, schedule, and financial evaluation on which the Ore Reserve is based is to a Pre- feasibility Study level, with a corresponding level of confidence.</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	factors which could affect the relative accuracy and confidence of the estimate.	
	• The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	• The Ore Reserve is estimated as a global estimate.
	• 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.	<ul> <li>In the opinion of the Competent Person, cost assumptions and modifying factors applied in the process of estimating Ore Reserves are reasonable.</li> <li>Gold price and exchange rates are subject to market forces and present an area of uncertainty.</li> </ul>
	• 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.	• Historical production data has reconciled well with and supported previously released Ore Reserve estimates on a global estimate basis.

## JORC 2012 - TABLE 1: TURNBERRY

#### Section 1 Sampling Techniques and Data

#### (Criteria in this section apply to all succeeding sections.)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Sampling techniques	• Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	<ul> <li>RC/AC drill chips collected through a cyclone and sampled at 1 or 4 metre intervals, cone split or spear sampled.</li> <li>Diamond core (HQ, NQ) sampled half core, 0.1m to 1.3m.</li> <li>Diamond core (BQ) sampled whole core, 0.1m to 1.3m.</li> </ul>
	• Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	• Riffle and cone splitting; spear sampling.
	• Aspects of the determination of mineralisation that are Material to the Public Report.	<ul> <li>Mineralisation determined qualitatively through monitoring presence of sulphide and visible gold in quartz and internal structure (massive, brecciated, laminated) of quartz.</li> <li>Mineralisation determined quantitatively via fire assay and aqua regia assay methods.</li> </ul>
	<ul> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Diamond core samples crushed to 2mm and pulverized to 75µm.</li> <li>RC/AC samples 1m analysed by 50g Fire Assay and AAS.</li> <li>When visible gold is observed in chips or diamond core, this sample is flagged by the supervising geologist and a quartz flush was added after these samples.</li> </ul>
Drilling techniques	• Drill type (e.g. core, reverse circulation, open- hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <li>PQ, HQ and NQ sized diamond drill core, oriented by Reflex system.</li> <li>Underground NQ, LTK-60 and BQ sized diamond drill core, not oriented.</li> <li>150mm RC/AC drill chips.</li> <li>In the Competent Person's opinion the drilling techniques employed are appropriate for the mineralisation style and the classificaltion of an Inferred and Indicated resource.</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Drill sample	Method of recording and assessing core and	Core, assessed during drilling for loss, loss
recovery	chip sample recoveries and results assessed.	<ul><li>intervals recorded on core blocks, logged by geologist.</li><li>Visual estimate of drill chip recovery recorded in database.</li></ul>
	• Measures taken to maximise sample recovery and ensure representative nature of the samples.	<ul> <li>Core: use of drilling fluid to minimize wash out.</li> <li>RC/AC chips, minimize drill water use.</li> </ul>
	• Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	<ul> <li>As sample recoveries are generally very high, there is no known relationship between sample recovery and grade.</li> <li>In the Competent Person's opinion while no quantitative data are available, the qualitative data available and recent drilling conducted by MEK indicate there is no relationship between recovery and grade.</li> </ul>
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	<ul> <li>Holes logged to a level of detail to support mineral resource estimation: lithology; alteration; mineralisation; geotechnical; structural.</li> <li>Qualitative: lithology, alteration, foliation.</li> <li>Quantitative: vein percentage; mineralisation (sulphide) percentage; RQD measurement; structural orientation angles; assayed for gold, arsenic, copper, iron, nickel; density from downhole gamma ray logging (6 holes), water displacement (11 holes);</li> <li>Core photographed wet and dry.</li> <li>All holes logged for entire length of hole.</li> </ul>
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	<ul> <li>Qualitative: lithology, alteration, foliation.</li> <li>Quantitative: vein percentage; mineralization (sulphide) percentage; RQD measurement; structural orientation angles; assayed for gold, arsenic, copper, iron, nickel; density from downhole gamma ray logging (6 holes), water displacement (11 holes);</li> <li>Core photographed wet and dry.</li> </ul>
	• The total length and percentage of the relevant intersections logged.	• All holes logged for entire length of hole.
Sub-sampling techniques and sample	• If core, whether cut or sawn and whether quarter, half or all core taken.	Half and quarter core taken using core saw.
preparation	<ul> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> </ul>	• RC chips cone and riffle split, sampled dry where possible, and wet when excess ground water could not be prevented.
	• For all sample types, the nature, quality and appropriateness of the sample preparation technique.	<ul> <li>Diamond core is crushed to 10mm by a jaw crusher then the entire sample is pulverized to 75µm by a LM5 (85% passing)</li> <li>The entire ~3kg RC sample is pulverized to 75µm (85% passing)</li> <li>Gold analysis is determined by either</li> <li>25g charge fire assay with an AAS finish (Minanalytical pre-2017)</li> <li>50g charge fire assay with an AAS finish (Minanalytical 2017)</li> <li>30g charge fire assay with an AAS finish (SGS 2017-2020).</li> <li>50g charge fire assay with an AAS finish (ALS 2021 onwards).</li> </ul>
	• Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	<ul> <li>Pulp duplicates taken at the pulverising stage and selective repeats conducted at the laboratory's discretion.</li> <li>Field: RC – re-split residual sample, DD core – every 50th sample quarter cored.</li> </ul>
	• Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	<ul> <li>RC chips: field duplicates from re-split residual sample.</li> <li>Core: quarter or half core taken as duplicate.</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		• In the Competent Person's opinion the results of the field duplicates indicate the sampling practices produced representative sub- samples with variance levels as expected from a high-grade gold deposit.
	• Whether sample sizes are appropriate to the grain size of the material being sampled.	In the Competent Person's opinion, the sample size is appropriate for the grain size of the material being sampled.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	<ul> <li>Fire assay, total technique, appropriate for gold.</li> <li>Aqua regia digest, partial assay, appropriate for gold and trace elements.</li> <li>AAS appropriate for gold.</li> <li>ICPOES for trace elements.</li> <li>In the Competent Person's opinion, the analysis methods employed are appropriate for the mineralisation style and use in mineral resource estimation.</li> </ul>
	• For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	• No geophysical data used in estimation.
	• Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	<ul> <li>Certified reference material: 1 in 50 samples</li> <li>Blanks: CRM blank, field blank; lab - barren quartz flush</li> <li>Duplicates were inserted at a rate of 1/20.</li> <li>Field: RC - re-split residual sample, DD core - every 50th sample quarter cored</li> <li>Lab: Random pulp duplicates taken on average 1 in every 10 samples.</li> <li>In the Competent Person's opinion, the lab performed acceptably, and the quality of analysis is appropriate for mineral resource estimation.</li> </ul>
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel.	<ul> <li>All sampling is routinely inspected by senior geological staff.</li> <li>2% of samples returned &gt; 0.1g/t Au were sent to an umpire laboratory on a quarterly basis for vorification.</li> </ul>
	• The use of twinned holes.	<ul> <li>for verification.</li> <li>A single diamond hole (MNDD064) was drilled immediately adjacent to a RC hole (MNRC038) but was not sampled as it was for geotechnical purposes. Visual inspection of the diamond hole shows that results correlate well with the intersection returned from the RC hole.</li> </ul>
	• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	<ul> <li>Data stored in Datashed database on internal company server, logging performed on LogChief and synchronised to Datashed database, data validated by database administrator, import validate protocols in place. Visual validation in Leapfrog by Company geologists.</li> <li>In the Competent Person's opinion, data collection, management and storage is robust and provides a reliable data set to produce a mineral resource estimate.</li> </ul>
	• Discuss any adjustment to assay data.	<ul> <li>No adjustments made to assay data. First gold assay is utilized for any resource estimation.</li> </ul>
Location of data points	• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	<ul> <li>Collars: surveyed with RTK GPS.</li> <li>Downhole: surveyed with in-rod Reflex tool; conventional or north-seeking gyro tool, in-rod or open hole.</li> <li>In the Competent Person's opinion, the accuracy and quality of the drill hole location data is appropriate for use in mineral resource estimation.</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	Specification of the grid system used.	• MGA94 - Zone 50.
	Quality and adequacy of topographic control.	• Topographic data generated using high resolution photogrammetric techniques.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	• Drill hole spacing is nominally 20m x 20m to 25 x 50m at shallow depths (0-175m) and 50x50m to 50m x 100m at deeper depths (>175m)
	• Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	• Yes.
	• Whether sample compositing has been applied.	Not Applicable.
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	• Drill holes oriented at right angles to strike of deposit, dip optimized for drillability and dip of orebody, sampling believed to be unbiased.
	<ul> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	• Not Applicable.
Sample security	• The measures taken to ensure sample security.	• All samples are selected, cut and bagged in a tied numbered calico bag, grouped into larger polyweave bags and cable tied. Polyweave bags are placed into larger bulky bags with a sample submission sheet and tied shut. Consignment note and delivery address details are written on the side of the bag and delivered to Toll Express in Meekatharra. The bags are delivered directly to ALS in Perth, WA who are NATA accredited for compliance with ISO/IEC17025:2005.
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>Review of sampling and QAQC procedures and data by Cube Consulting in November 2011.</li> </ul>

## Section 2 Reporting of Exploration Results

# (Criteria listed in the preceding section also apply to this section.)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>Meeka Metals Limited control 100% interest in M51/882 and the tenement is in good standing.</li> <li>M51/882 is located within the Yugunga-Nya Native Title Claim.</li> <li>Heritage surveys have been conducted over active exploration areas.</li> <li>Teck holds an 8.8% net profit interest which is paid only after all expenses incurred by the project (including historical exploration expenses) are recovered by Meeka Gold Limited.</li> <li>Milestone payments of \$5/oz produced are to be paid to Archean Star Resources Australia Pty Ltd, capped at \$1m.</li> </ul>
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	Historic exploration was carried out at Turnberry by ASRA, Teck and Newcrest including drilling and geophysics
Geology	• Deposit type, geological setting and style of mineralisation.	• Geology consists of Archean aged orogenic style mineralisation. Primary mineralisation is interpreted to be hosted within a moderate shear zone(s) +/- stringer quartz veins within both mafic and felsic lithologies. Some

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		supergene mineralisation is developed locally and defined by ferruginous red saprolite clays.
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	• All drill results are reported to the ASX in line with ASIC requirements.
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>No top-cuts have been applied when reporting results.</li> <li>First assay from the interval in question is reported.</li> <li>Aggregate sample assays are calculated using a length-weighted algorithm.</li> <li>Significant intervals are based on the logged geological interval, with all internal dilution included.</li> <li>No metal equivalent values are used for reporting exploration results.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>Drill holes are oriented at right angles to strike of deposit, dip optimized for drilling purposes and dip of ore body. Down hole widths are reported with most drill holes intersecting the mineralised lenses at 30-40 degrees.</li> <li>Strike of mineralisation is approximately north- south in the Fairway Trend.</li> </ul>
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	• Drilling is presented in long-section and cross section as appropriate and reported quarterly to the ASX in line with ASIC requirements.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• All drillhole results have been reported including those drill holes where no significant intersection was recorded.
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	• All meaningful and material data are reported.
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling</li> </ul>	• Follow up work at Fairway trend will comprise of further infill and extensional drilling programs to continue to develop the resource potential.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	areas, provided this information is not	
	commercially sensitive.	

#### Section 3 Estimation and Reporting of Mineral Resources

## (Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Database integrity	<ul> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>Geological data is stored in a Data Shed SQL server database. User access to the database is regulated by specific user permissions and validation checks to ensure data is valid.</li> <li>Existing protocols maximise data functionality and quality whilst minimizing the likelihood of error introduction at primary data collection points and subsequent database upload, storage and retrieval points. Data templates with lookup tables and fixed formatting are used for collecting primary data using Logchief software on field laptops. The software has validation routines and data is subsequently imported into a secure central database.</li> <li>The SQL server database is configured for validation through parent/child table relationships, required fields, logical constraints and referenced library tables. Data that fails these rules on import is rejected or quarantined until it is corrected.</li> <li>The SQL server database is centrally managed by a Database Administrator who is responsible for all aspects of data entry, validation, development, and quality control &amp; specialist queries. There is a standard suite of validation checks for all data.</li> </ul>
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	<ul> <li>The Competent Person for Table 1, Section 1 and 2 conducts regular site visits. The Competent Person for Table 1, Section 3 is a consultant to the Company with extensive experience in the Western Australian gold industry, including site visits within Western Australia.</li> <li>The consultant has reviewed previous resource reports and taken into account the long history of the project in forming the view that no site visit is required.</li> </ul>
	<ul> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	There is no surface exposure of the mineralisation or underlying geology. Geological data including high resolution diamond core and chip tray photographs are stored electronically.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	<ul> <li>Due to the amount of data sourced from drill programs and consistent geologically logging, there is a high degree of confidence in the geological interpretation of the Turnberry Deposit.</li> <li>Uncertainty inevitably increases as the drill spacing increases which is reflected in the classification of the Resource from Indicated (~20m x ~20m) to Inferred (greater than ~40m x ~40m).</li> </ul>
	Nature of the data used and of any assumptions made.	• The dataset (geological mapping, RC and diamond core logging and assays etc.) is considered acceptable for determining a geological model.
	• The effect, if any, of alternative interpretations on Mineral Resource estimation.	• Alternative interpretations of the high-grade sub-domains have been investigated. The alternative interpretation provides a comparable amount of contained metal.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	The use of geology in guiding and controlling Mineral Resource estimation.      The factors affecting continuity both of grade and geology.	<ul> <li>The geological package is largely comprised of three main units: a dominantly mafic package containing a differentiated basalt and gabbro, a felsic volcaniclastic, a siliciclastic siltstone/shale unit. The units strike approximately N-S and are dominated by similarly trending shearing which is cross cut by several N-SE structures which appear to offset both lithology and mineralisation.</li> <li>Primary mineralisation is interpreted to be hosted within moderate to strongly developed shear zones with stringer quartz veins, within both mafic and felsic lithologies. Higher-grade mineralisation appears to be associated within a more favourable zone of the differentiated basalt unit, which has been subjected to regional scale folding.</li> <li>Mineralised domains are interpreted to be striking north-south with a near vertical dip with one zone of supergene enrichment.</li> <li>Continuity of geology and grade can be generally tread from cortion to cortion uring</li> </ul>
	and geology.	generally traced from section to section using geochemical and visual attributes. Grade continuity follows the overall structural NNE trend.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• The Resource extends to over 1,700m strike and from 10m to 450m below surface. It remains open at depth. These extents host 82 modelled mineralised wireframes, interpreted as a proxy for the mineralisation (ore domains). The ore zones vary between 1 m to 10 m in width.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	<ul> <li>Ordinary Block Kriging of Im composites was used for the grade estimation of gold.</li> <li>A 3D block model consisting of 10mE x 10mN x 10mRL parent blocks and sub celled to 0.5mE x 2.0mN x 1.0mRL.</li> <li>Data spacing, geometry of mineralised zones and volume fill were the primary considerations taken into account when selecting an appropriate estimation block size.</li> <li>Estimation domains were interpreted implicitly from gold grade data with the orientations of estimation domains guided by geological and structural knowledge of the deposit.</li> <li>Variograms were modelled using the combined composites for the high-grade and low-grade domains, respectively.</li> <li>The major direction for the interpreted variogram orientations supports the subvertical dip of the lodes and typical for this type of shear-hosted Au mineralisation setting.</li> <li>Variograms are moderately high (0.5-0.55), typical of a deposit of this style.</li> <li>Kriging Neighbourhood Analysis were used to support the selection of relevant estimate and search parameters.</li> <li>Estimation of Au grade was completed in three passes. (Pass 150m x 25m x 5m, Pass 2 300m x 150m x 60m and pass 3 600m x 300m x 60m) Variable orientations were utilised to guide the search ellipse within the estimation domains. The grade of each block was estimated using a minimum of eight and a</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		<ul> <li>maximum of 40 drillhole samples and discretisation of 5 x 5 x 5 (x-y-z).</li> <li>The model was validated through visual validation, mean comparison checks, and review of swath plots.</li> </ul>
	• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	• The estimate was checked against previous estimates. The differences which were observed where due to additional ~16,213m of drilling completed since the previous MRE, and an updated interpretation approach.
	• The assumptions made regarding recovery of by-products.	No assumptions made.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	No deleterious elements estimated.
	• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	• Block size was deemed appropriate for the drill spacing and thickness and geometry of the orebody, and search ellipse employed.
	<ul> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> </ul>	<ul> <li>No assumptions made regarding mining of selective mining units.</li> <li>No assumptions made regarding correlation of variables, only gold was estimated in model.</li> </ul>
	<ul> <li>Description of how the geological interpretation was used to control the resource estimates.</li> </ul>	<ul> <li>The continuity of mineralisation was modelled implicitly from gold grade data and guided by the orientation of modelled shear zones and geological contacts, which display excellent association with Au grade.</li> <li>The Grade was estimated within these modelled estimation domains</li> </ul>
	• Discussion of basis for using or not using grade cutting or capping.	<ul> <li>The low-grade domains were top-cut to 20g/t Au to lower the influence of outliers during grade interpolation. This value was selected after reviewing log histograms and mean and variance plots to assess the impact of grade cutting within these domains. Distance- buffered grade capping was used to lessen the effect of top cutting, and extreme grades were honoured for all blocks estimated in pass one and within 15% of the search distances of passes two and three.</li> <li>The high-grade domains presented low CV values (0.95, 0.70 and 1.72). On this basis it was considered appropriate to not top cut the grade in these domains in order to preserve the metal distribution.</li> </ul>
	• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	<ul> <li>Grade estimation is validated visually on a section-by-section review; statistically by comparison of input drillhole data against estimated grade and by swath plots of northing, easting and RL to composite data.</li> <li>The Competent Person considers the block model to be appropriately estimated with block grades representative (within 10 -15%) of the input data.</li> <li>In addition, the geology, estimation domaining and final estimate is peer reviewed. This includes detailed discussion on applied methodology and parameters.</li> </ul>
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are estimated on a dry basis.
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	<ul> <li>The open pit Mineral Resource is only the portion of the block model that is constrained within a \$2,600/oz optimised pit shell and above a 0.5g/t gold cut-off grade.</li> <li>The underground Mineral Resource is only the portion of the block model that sits outside</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		the \$2,600/oz optimised pit shell and is
Mining factors or assumptions	<ul> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul> <li>reported using a 1.5g/t gold cut-off grade.</li> <li>Due to the width and grade of the resource, and its position relative to the surface, it has been assumed potential mining of the Turnberry deposit would initially be by open pit with underground mining potentially beneath the pit.</li> </ul>
Metallurgical factors or assumptions	<ul> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul> <li>No assumption or factors have been applied to the resource estimate regarding the metallurgical amenability.</li> <li>Metallurgical test work on mineralised samples sourced from Turnberry was conducted by ALS Metallurgy at a target grind size of 80% passing 150µm and demonstrated good metallurgical properties at this relatively coarse grind size. Recoveries averaged above 93% with average gravity recovery above 40%. Further metallurgy and comminution test work is being completed as part of the</li> </ul>
Environmental factors or assumptions	<ul> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul> <li>work is being completed as part of the Company's ongoing feasibility studies.</li> <li>Preliminary environmental studies have been completed at Turnberry, including native flora and fauna surveys, subterranean fauna surveys, topsoil and waste rock characterisation studies and preliminary hydrogeological and dewatering studies.</li> <li>To date studies have not presented any issues that will impact on potential mining of ore from the deposit.</li> </ul>
Bulk density	<ul> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> </ul>	<ul> <li>In-situ bulk densities (ISBD) (dry basis) applied to the resource estimate were based on systematic test work completed on drill core for selected material types.</li> <li>This work is captured in the Density report by Drillhole Data Services</li> <li>The ISBD determination method includes a combination of downhole gamma and a water immersion technique.</li> </ul>
Classification	<ul> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> </ul>	<ul> <li>Densities are assigned according to the weathering horizon model interpreted from downhole logging.</li> <li>The models have utilised all available data.</li> <li>On a global scale the data presents good geological and mineralisation continuity.</li> <li>The local error increases in areas of wider spaced data and as such the model estimated reflects the confidence according to applied classification criteria.</li> <li>Those areas of the deposit that have demonstrated relatively high continuity of grade from the ~20m x ~20m drilling, with and</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		<ul> <li>associated robust geological interpretation have been classified as Indicated.</li> <li>Those areas where the geological interpretation is strong, but continuity of grade is less clear from the ~40m - 60m x ~40m - 60m drilling have been classified as Inferred.</li> <li>Due to the strong subvertical continuity reflective of the structural, mineralisation and geological control, the classification for indicated is extrapolated 20m down dip. The inferred portion is extrapolated 100m.</li> </ul>
	<ul> <li>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the</li> </ul>	<ul> <li>Appropriate account has been taken of all relevant factors in determining classification.</li> <li>The classification reflects the view of the</li> </ul>
Audits or reviews	<ul> <li>Competent Person's view of the deposit.</li> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul> <li>Competent Person.</li> <li>The Mineral Resource was compiled by consultants RSC.</li> <li>An internal peer review has been completed prior to this release; no issues found.</li> </ul>
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	<ul> <li>The Mineral Resources have been reported in accordance with the guidelines within the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources &amp; Ore Reserves &amp; reflects the relative accuracy of the Mineral Resources estimate. The Competent Person deems the process to be in line with industry standards for resource estimation &amp; therefore within acceptable statistical error limits.</li> <li>The confidence reflected in the Indicated and Inferred classification of the deposit is based on exploration, sampling and assaying information gathered through appropriate techniques from appropriately spaced drillholes and geological understanding,</li> <li>The confidence in the estimate is supported by slope of regression values calculated during estimation, in conjunction with domain by domain swath plots of composite vs block grades.</li> </ul>
	• The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	• The statement relates to global estimates of tonnes & grade for open pit and underground mining scenarios.
	• These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• No production data are available.

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in section 2 and 3, also apply to this section.)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Mineral Resource estimate for conversion to	• Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.	• The Mineral Resource was compiled by consultants RSC. An RSC internal peer review was completed prior to this release; no issues found.
Ore Reserves	<ul> <li>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</li> </ul>	• The Mineral Resources are inclusive of the Ore Reserves.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	• Numerous site visits have been conducted by the Competent Person.
	• If no site visits have been undertaken indicate why this is the case.	Not Applicable.
Study status	• The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.	• The Ore Reserve is underpinned by studies conducted to a Pre-feasibility Study level.
	<ul> <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> <li>Modifying factors accurate to the study level were applied based on detailed expert design analysis. The study indicates that the Ore Reserve and mine plan is technically achievable and economically viable.</li> </ul>
Cut-off parameters	• The basis of the cut-off grade(s) or quality parameters applied.	<ul> <li>Cut-off grade parameters for determining open pit and underground Ore Reserves were based on the Pre-feasibility Study financial analysis and, with a gold price of A\$2,200/oz used as a reference price.</li> <li>The open pit cut-off grade used for design and analysis was 0.5g/t Au.</li> <li>The underground cut-off grades used for design and analysis was:</li> <li>Fully costed – 2.2g/t Au;</li> <li>Stoping – 1.5g/t Au; and</li> <li>Processing – 0.6g/t Au.</li> </ul>
Mining factors or assumptions	<ul> <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> </ul>	<ul> <li>Underground:</li> <li>Ore development is performed by twin boom jumbo.</li> <li>Production is by longhole stoping methods.</li> <li>Mineable stope shapes were created using Deswik Stope Optimiser software.</li> <li>A minimum mining void width of 2.5m was applied to the stope optimisation process.</li> <li>Dilution of 0.5m was applied to all stopes to account for unplanned dilution.</li> <li>Mining recoveries were set at 83% for stoping.</li> <li>Inferred Mineral Resources are included in the mine plan and economic analysis for the site, however Inferred Mineral Resources are not included in any Ore Reserve estimate.</li> <li>A detailed mine design and schedule was created and evaluated using the Feasibility Study financial model to confirm the economic viability of the Ore Reserve.</li> <li>Open Pit:</li> <li>Open pit designs and ramp configurations suit 200t class excavators in a backhoe configuration matched to 140t off road haul trucks for waste stripping. A smaller fleet of 100t class excavator and 95t off road haul trucks are planned for ore movement and the smaller benches at the base of each pit. Benches are planned to be 5m high and will be mined in two 2.5m flitches.</li> <li>An SMU methodology was applied to determine true mineable ore envelopes.</li> <li>Minimum mining width of 3.5m was applied.</li> <li>Dilution of 0.5m was applied to all dig blocks.</li> <li>Open pit optimisations were performed using the SMU adjusted block model to evaluate the potential economics of various open pit mining envelopes.</li> <li>A \$2,600/oz optimisation shell was selected to guide all final open pit designs.</li> <li>Optimisation slope angles were 37 deg</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		• The physicals from the final pit design were then used to create a detailed schedule and evaluated using the feasibility study financial model to confirm the economic viability of the Ore Reserve.
	• 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.	<ul> <li>The mining methods were selected based on economic considerations, orebody geometry and geotechnical advice. They are widely adopted methods and have previously been successfully applied for mining of these ore bodies at this site.</li> </ul>
	• The assumptions made regarding geotechnical parameters (eg. pit slopes, stope sizes, etc.), grade control and pre-production drilling.	• Independent geotechnical advice formed the basis of the mine design parameters, including open pit slope angles, batter heights and angles, berm widths, stable underground void dimensions and stand-off distances amongst other things.
	• The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).	<ul> <li>The Mineral Resource model used was that which was stated above.</li> <li>For open pit optimisation, an SMU model was created from the Mineral Resource which accounted for dilution based on the selected mining equipment fleet being employed.</li> <li>Dig block height and length was 5m and minimum width was 3.5m.</li> <li>A minimum mining void width of 2.5m and stope height of 20m was applied to the stope optimisation process.</li> </ul>
	• The mining dilution factors.	<ul> <li>Unplanned dilution of 0.5m was added to open pit dig blocks.</li> <li>Unplanned dilution of 0.5m was added to underground stopes.</li> </ul>
	<ul> <li>The mining recovery factors.</li> <li>Any minimum mining widths used.</li> </ul>	<ul> <li>Mining recoveries were set at 83% for stoping.</li> <li>Underground minimum mining void width of 2.5m was applied to the stope optimisation process.</li> <li>Open pit minimum mining width of 3.5m was applied.</li> </ul>
	• The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.	<ul> <li>Only the Indicated portion of the Mineral Resource was used to estimate the Ore Reserve.</li> <li>The Ore Reserve is technically and economically viable without the inclusion of Inferred Mineral Resources.</li> <li>Inferred Mineral Resource was included in the economic analysis for the Pre-feasibility Study.</li> </ul>
	• The infrastructure requirements of the selected mining methods	<ul> <li>Mining infrastructure required to deliver the plan include office and ablution buildings, workshops, power station, explosive storage facilities, waste dumps, haul roads, dewatering bores and water storage dams.</li> </ul>
Metallurgical factors or assumptions	• The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.	<ul> <li>Ore will be processed through a 1Mtpa CIL plant.</li> <li>The milling circuit is designed to achieve a P<sub>80</sub> of 75µm grind size to treat oxide and transition ore from Turnberry.</li> <li>The milling circuit is designed to achieve a P<sub>80</sub> of 15µm grind size to treat fresh ore from Turnberry.</li> </ul>
	<ul> <li>Whether the metallurgical process is well- tested technology or novel in nature.</li> <li>The nature, amount and representativeness of metallurgical testwork undertaken and the metallurgical recovery factors applied.</li> </ul>	<ul> <li>The metallurgical process is well-tested and widely adopted.</li> <li>Suitable representative metallurgical test work supports the metallurgical recovery factors applied.</li> <li>Metallurgical recovery of between 94.1% and 88.5% was applied based on oxidation state of the ore.</li> </ul>
	• Any assumptions or allowances made for deleterious elements.	No deleterious elements are expected.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	• The existence of any bulk sample or pilot scale testwork and the degree to which such samples are representative of the orebody as a whole.	No bulk sample has been collected.
	• For minerals that are defined by a specification, has the Ore Reserve estimation been based on the appropriate mineralogy to meet the specifications?	• Not applicable.
Environmental	• 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.	<ul> <li>Environmental baselines studies have been partially completed and work is ongoing.</li> <li>Turnberry has had material characterisation work completed, which indicated that of the 20 rock samples assessed only one was considered PAF and this is under review.</li> <li>The permitting process is ongoing and based on the work completed to date and the information available the Company is confident that approvals required for Project development will be granted.</li> </ul>
Infrastructure	• 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.	<ul> <li>The mine is located adjacent to the Great Northern highway and has good road access.</li> <li>Meekatharra aerodrome is located 46km to the south of the Project.</li> <li>Accommodation is available in Meekatharra which can be used for early works and construction.</li> <li>No site infrastructure is in place however there is sufficient area available for new infrastructure.</li> </ul>
Cost and revenue factors	• The derivation of, or assumptions made, regarding projected capital costs in the study.	<ul> <li>Capital cost estimates are drawn from supplier pricing and detailed first principals cost estimates.</li> <li>The process plant capital cost estimate was compiled by Como Engineering to a PFS level of accuracy.</li> </ul>
	• The methodology used to estimate operating costs.	<ul> <li>Operating cost estimates are drawn from supplier pricing and detailed first principals cost estimates.</li> </ul>
	Allowances made for the content of deleterious elements.	No deleterious elements are expected.
	• The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.	• A long-term gold price of A\$2,200 per ounce was considered by the Competent Person to be an appropriate commodity price assumption.
	• The source of exchange rates used in the study.	• All costs in this Study are in Australian dollars with requests for quotes, sourced between QI 2022 through Q2 2023. During this period the AUD:USD exchange rate varied from 0.62 to 0.75. As at June 2023, the exchange rate was 0.67 (one Australian dollar equals 0.67 United States dollars).
	<ul> <li>Derivation of transportation charges.</li> <li>The basis for forecasting or source of treatment and refining charges, penalties for</li> </ul>	<ul> <li>Transport charges for consumables to site are based on supplier pricing.</li> <li>Transport charges for gold doré from site to the Perth Mint have been allowed for.</li> <li>Sale of gold doré to the Perth Mint.</li> </ul>
	<ul> <li>failure to meet specification, etc.</li> <li>The allowances made for royalties payable, both Government and private.</li> </ul>	<ul> <li>State Royalty – 2.5% NSR.</li> <li>Yugunga-Nya Native Title Royalty.</li> <li>\$1M (Archean Star Resources)</li> <li>8.8% Net Profit Interest (Teck)</li> </ul>
Revenue Factors	• 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.	• Ore Reserve economic evaluation estimated revenue from the recovered gold sold multiplied by the assumed long term gold price, A\$2,200 per ounce. Transportation and treatment charges, and royalties were treated as expenses during financial evaluation.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	• The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	<ul> <li>A long-term gold price of A\$2,200 per ounce was considered by the Competent Person to be an appropriate commodity price assumption.</li> </ul>
Market assessment	• The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.	There is a well-established and transparent spot market for gold.
	• A customer and competitor analysis along with the identification of likely market windows for the product.	<ul> <li>There is a well-established and transparent spot market for gold.</li> </ul>
	<ul> <li>Price and volume forecasts and the basis for these forecasts.</li> <li>For industrial minerals the customer specification, testing and acceptance</li> </ul>	<ul> <li>There is a well-established and transparent spot market for gold.</li> <li>Not applicable.</li> </ul>
	requirements prior to a supply contract.	
Economic	• 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.	<ul> <li>Operating and capital cost estimates are considered to be accurate within ±25%.</li> <li>Cost estimates are drawn from supplier pricing and detailed first principals cost estimates.</li> <li>A discount rate of 5% has been applied.</li> </ul>
	NPV ranges and sensitivity to variations in the significant assumptions and inputs.	• This analysis shows that while sensitive to fluctuations in both operating cost and gold price, the Project continues to deliver positive NPV under conservative assumptions.
Social	• The status of agreements with key stakeholders and matters leading to social licence to operate.	<ul> <li>The Company has an agreement in place with the Native Title Holders, the Yugunga-Nya People, facilitating exploration and mining.</li> <li>The Company maintains a strong working relationship with the Government, Yugunga- Nya People, pastoralists and the local community.</li> </ul>
Other	• To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:	
	<ul> <li>Any identified material naturally occurring risks.</li> </ul>	• A formal process to identify and mitigate naturally occurring risks was completed during the Study. Outcomes were integrated into the Study planning process and site layout.
	• The status of material legal agreements and marketing arrangements.	<ul> <li>All material legal agreements are either in place, or based on information available the Company is confident that they will be in place in a suitable timeframe.</li> <li>No marketing agreements are needed, gold doré will be produced on site and sold into the spot market.</li> </ul>
	<ul> <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>	• The tenements are in good standing and the permitting process is ongoing. Based on the work completed to date and the information available the Company is confident that approvals required for Project development will be granted in a suitable timeframe.
Classification	<ul> <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> </ul>	<ul> <li>The Probable Ore Reserve is based on that portion of the Indicated Mineral Resource within the mine designs that may be economically extracted and includes an allowance for dilution and ore loss.</li> <li>The results appropriately reflect the Competent Person's view of the deposit.</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	• The proportion of Probable Ore Reserves that	• There is no Measured Mineral Resource.
	have been derived from Measured Mineral	
	Resources (if any).	
Audits or	<ul> <li>The results of any audits or reviews of Ore</li> </ul>	<ul> <li>Internal review was completed for all Ore</li> </ul>
reviews.	Reserve estimates.	Reserves.
Discussion of	• Where appropriate a statement of the relative	• The design, schedule, and financial evaluation
relative	accuracy and confidence level in the Ore	on which the Ore Reserve is based is to a Pre-
accuracy/	Reserve estimate using an approach or	feasibility Study level, with a corresponding
confidence.	procedure deemed appropriate by the	level of confidence.
	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.	
	• The statement should specify whether it	• The Ore Reserve is estimated as a global
	relates to global or local estimates, and, if local,	estimate.
	state the relevant tonnages, which should be	
	relevant to technical and economic evaluation.	
	Documentation should include assumptions	
	made and the procedures used.	
	Accuracy and confidence discussions should	• In the opinion of the Competent Person, cost
	extend to specific discussions of any applied	assumptions and modifying factors applied in
	Modifying Factors that may have a material	the process of estimating Ore Reserves are
	impact on Ore Reserve viability, or for which	reasonable.
	there are remaining areas of uncertainty at the	• Gold price and exchange rates are subject to
	current study stage.	market forces and present an area of
		uncertainty.
	• It is recognised that this may not be possible	• No production data is available however the
	or appropriate in all circumstances. These	Ore Reserve is estimated on a global basis and
	statements of relative accuracy and	the CP is reporting it with accuracy and
	confidence of the estimate should be	confidence on that basis.
	compared with production data, where	
	available.	

## JORC 2012 – TABLE 1: ST ANNE'S

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Sampling techniques	• Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	<ul> <li>One- metre primary samples and four metre composite samples were collected via reverse circulation and large format aircore (AC) blade drilling.</li> <li>Additional sampling of diamond core was conducted more selectively to understand controls on mineralisation and collect density data.</li> <li>The quality of the samples were actively monitored and evaluated using various quality control techniques.</li> <li>The majority of sampling occurred in the near-completely oxidised regolith clays using large-format AC drilling methods. With appropriate air pressure and volume available and a larger 4-inch hammer air-core is an effective drilling technique in clay formations.</li> <li>When blade refusal is reached, with a larger format AC rig a slimline face sampling RC hammer can be used to sample through consolidated formations. With appropriate air pressure and volume available and monitoring of sample recovery, this method can be considered appropriate.</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
CRITERIA	<ul> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g.</li> </ul>	<ul> <li>Diamond core drilling has been used to verify key air core drilled intersections.</li> <li>Reverse circulation and diamond core drilling techniques are typical and appropriate for the style of mineralisation being estimated.</li> <li>The quality of the sampling is deemed to be appropriate and fit-for-purpose of mineral resource estimation.</li> <li>Various measures were employed to monitor and assure the quality of samples collected. Such measures include:</li> <li>Every effort is made to drill dry samples. Where wet samples are drilled they are logged as wet and the quality of these samples are taken into account in the resource estimation.</li> <li>Qualitative active monitoring of sample recovery and photographing of drill samples at the end of hole to assess sample recovery.</li> <li>The calibration of scales used for the collection of wet-dry Archimedes density data using a calibration weight during the collection process.</li> <li>Internal calibration checks were performed by the pXRF analyser daily.</li> <li>Calibration of the DGPS instrument was performed before the travelled to site for each surveying campaign.</li> <li>Gold mineralisation was initially determined with ~3kg, speared, four metre composite samples which were dried, crushed and pulverised with a 50g sample fire assayed and</li> </ul>
	'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	<ul> <li>analysed using atomic absorption spectrometry.</li> <li>Mineralised composites greater than 0.3 g/t had their respective 1m, ~2-3kg, cone split samples collected and submitted for either fire assay or photon analysis. Fire assay was as described above and photon assay involves drying the sample, fine crushing to 90% passing -3mm and a 500g sub-sample is put in a photon assay jar and analysed for gold.</li> <li>Mineralisation determined qualitatively through monitoring presence of sulphide, quartz veining and visible gold. Additional mineralisation was qualitatively determined using pXRF analysis for pathfinder geochemistry which maps the mineralisation.</li> <li>pXRF analyses for alteration and common rock-forming elements was carried out on every metre by taking a small ~50g sample from the AC/RC fines and analysing with the Olympus Vanta VMR XRF Analyser using all 3 beams for 15 seconds each.</li> </ul>
Drilling techniques	<ul> <li>Drill type (e.g. core, reverse circulation, openhole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul> <li>A combination of AC drilling with 4 inch cutting blade bits and smaller-format 4-inch face sampling hammer bits, RC drilling with 5.5 inch face sampling hammers and triple tube HQ3 and NQ diamond core tails were used to obtain samples.</li> <li>Air drilling was performed with the multipurpose (AC and RC) Schramm T450 rig with 400psi/1240cfm onboard air for AC drilling and the addition of 350psi/1350cfm compressor and 1000psi booster when drilling deeper or drilling RC. The rig runs 3.5 inch rods and a 3 inch diameter sample hose.</li> <li>Diamond core was collected using triple-tube methods in the clays and conventional methods in fresh rock NQ diamond tails. All</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		core was oriented wherever possible using Reflex orientation instruments.
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed.	<ul> <li>Visual assessment of sample recovery monitored and communicated with drillers. Photographs of drill sample at the end of each hole as a visual record of recovery from each hole.</li> <li>Core, assessed during drilling for loss, loss intervals recorded on core blocks by drillers. Core markup conducted by field technicians to assess core recovery and recoveries are logged by geologist.</li> </ul>
	• Measures taken to maximise sample recovery and ensure representative nature of the samples.	<ul> <li>Larger format 4 inch AC blade bits were used with appropriate onboard air volume and pressure to maximise recovery regolith clays.</li> <li>A booster and auxiliary compressor were used to drill RC holes to ensure appropriate air pressure to drill holes dry and lift total samples.</li> <li>HQ3 triple tube techniques were used when diamond drilling to maximise recovery through the regolith clays.</li> </ul>
	• Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	<ul> <li>As sample recoveries are generally very high, there is no known relationship between sample recovery and grade.</li> <li>In the Competent Person's opinion, while no quantitative data are available, the qualitative data available and recent drilling conducted by MEK indicate there is no relationship between recovery and grade.</li> </ul>
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Holes logged to a level of detail to support mineral resource estimation, mining studies and metallurgy studies: lithology; alteration; mineralisation; geotechnical; structural.
	• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	<ul> <li>Qualitative: geological data (lithology, alteration, mineralogy, veining etc.)</li> <li>Quantitative: structural orientation angles; geotechnical and geochemical data.</li> <li>A handheld pXRF instrument was used to collect continuous geochemical data to assist with logging.</li> <li>Core photography or the whole hole wet and photography or sample piles at the completion of each drillhole.</li> </ul>
	• The total length and percentage of the relevant intersections logged.	• All holes logged and chipped for entire length of hole. All chip trays and diamond core archived for future reference.
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken.	<ul> <li>Core diamond tails were half cored with an Almonte core saw.</li> <li>The HQ3 triple tubed holes were whole core sampled apart from the quartz veins which were half core sampled.</li> </ul>
	<ul> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> </ul>	<ul> <li>All 4 m composites were spear sampled.</li> <li>All air drilled 1 m primary samples were split using a gravity fed fixed cone splitter system, predominantly dry. Where samples were split wet these samples were logged as wet samples and the sample system cleaned and dried to minimise bias and contamination.</li> </ul>
	• For all sample types, the nature, quality and appropriateness of the sample preparation technique.	<ul> <li>The subsampling technique applied to the RC and AC samples is considered industry standard, with measures in place to maximise recovery and minimise contamination,</li> <li>This includes the application of a cone splitter which allows for a more consistent sample split. In addition, the samples are kept dry using appropriate downhole air pressure</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	Quality control procedures adopted for all sub-	<ul> <li>within the reverse circulation system. The samples delineation is actively controlled.</li> <li>Diamond core followed half-core sampling techniques. Core was cut along the orientation line and the same half of core was always submitted for analysis.</li> <li>Recovery was logged and accounted for in the logging and sampling.</li> <li>Air drilled (RC and AC) samples were</li> </ul>
	sampling stages to maximise representivity of samples.	<ul> <li>presented to a gravity fed cone splitter to produce a ~3kg sub-sample for each metre.</li> <li>Samples were pulverised to 85% passing 75 microns. The pulp split is scooped from the pulverised pulp sample.</li> <li>For photon analysis the cone split sample is crushed to 90% passing -3mm and a 500g split is taken to fill the photon analysis jar. No duplicates were included in this sample stream.</li> <li>Pulp duplicates taken at the pulverising stage and selective repeats conducted at the laboratory's discretion.</li> </ul>
	• Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	• No twin drilling has been completed for the project but close spaced diamond drilling of some of the key mineralised areas drilled with AC have been drilled. These holes return similar grade tenor and distributions as the AC holes.
		<ul> <li>Field duplicates are taken from the cone splitter using the second shoot every 20 samples. These are analysed when included in a mineralised interval identified by the composite samples.</li> <li>No field duplicates are included in the core sample stream. Using two quarter cores as</li> </ul>
		duplicates significantly reduces the sample support of the "duplicates" and sampling of the second half of diamond core leaves no core for future reference.
	• Whether sample sizes are appropriate to the grain size of the material being sampled.	• In the Competent Person's opinion, the sample size is appropriate for the grain size of the material being sampled. The primary sample is as large as possible to use blade drilling for the effective sampling of clay and considering economic constraints. The first split sizes are industry standard and considered appropriate for the mineralisation style. A 50g fire assay is considered the optimal sample size considering practical and economic constraints. The 500g Photon sample is a further improvement in sample support.
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	<ul> <li>Fire assay, total technique, with AAS finish is appropriate for gold.</li> <li>Photon assay is considered a total technique and appropriate for gold.</li> <li>In the Competent Person's opinion, the analysis methods employed are appropriate for the mineralisation style and use in mineral resource estimation.</li> </ul>
	• For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	• pXRF analysis data were collected for most drilling included in the resource definition programme to support geological modelling. An Olympus Vanta VMR pXRF analyzer with a 50kV x-ray tube and a Rh anode was used for the programme in geochemical mode with all three beams set to 15 seconds. Each day the instrument internally calibrates itself to ensure

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		it is operating within factory specifications. No calibrations have been applied.
	• Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	<ul> <li>Certified reference material: 1:25 samples</li> <li>Blanks: coarse blank nominally 1:100; lab - barren quartz flush</li> <li>Field: RC - duplicate taken from second chute on fixed cone splitter at a rate of 1:20.</li> <li>Pulp duplicates selected by the laboratory.</li> <li>In the Competent Person's opinion, the lab performed acceptably, with acceptable levels of accuracy and precision established. The quality of analysis is appropriate for mineral resource estimation.</li> </ul>
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel.	All sampling is routinely inspected by senior geological staff.
	• The use of twinned holes.	• No holes have been twinned at this stage. However key mineralised zones have been core drilled in the centre of a dice-5 pattern to verify high-grade intervals defined from AC.
	• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	<ul> <li>Data stored in Datashed database on internal company server, logging performed on LogChief and synchronised to Datashed database, data validated by database administrator, import validate protocols in place. Visual validation in Leapfrog by Company geologists.</li> <li>In the Competent Person's opinion, data collection, management and storage is robust and provides a reliable data set to produce a mineral resource estimate.</li> </ul>
	• Discuss any adjustment to assay data.	<ul> <li>No adjustments made to assay data. First gold assay is utilized for any resource estimation.</li> </ul>
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	<ul> <li>Collars: surveyed with RTK GPS.</li> <li>Downhole: surveyed with in-rod Reflex tool; conventional or north-seeking gyro tool, in-rod or open hole.</li> <li>In the Competent Person's opinion, the accuracy and quality of the drill hole location data is appropriate for use in mineral resource estimation.</li> </ul>
	• Specification of the grid system used.	• MGA94 - Zone 50.
Data spacing and distribution	<ul> <li>Quality and adequacy of topographic control.</li> <li>Data spacing for reporting of Exploration Results.</li> </ul>	<ul> <li>Topographic data generated using high resolution photogrammetric techniques.</li> <li>Drill hole spacing is nominally 20m x 20m at shallow depths (0-100m) and 50x50m to 50m x 100m at deeper depths (&gt;100m)</li> </ul>
	<ul> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Yes.</li> <li>Not applicable, as mineralised 4m composites samples (&gt;0.3 g/t) had their respective 1m samples subsequently assayed which take precedence.</li> </ul>
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	• Drill holes oriented at right angles to strike of deposit, dip optimized for drillability and dip of orebody, sampling believed to be unbiased.
	• If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	<ul> <li>There is no apparent bias in any of the drilling orientations used.</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Sample security	• The measures taken to ensure sample security	<ul> <li>All samples are selected, cut and bagged in a tied, numbered calico bag, grouped into larger polyweave bags. Polyweave bags are placed into larger bulky bags with a sample submission sheet and tied shut. Consignment note and delivery address details are written on the side of the bag and delivered to Toll Express in Meekatharra or collected by Dananni Haulage later in the programme. The bags are delivered directly to ALS in Perth, WA who are NATA accredited for compliance with ISO/IECI7025:2005. ALS reconcile the physical samples delivered against the sample submission and communicate any errors identified.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No independent reviews of QAQC have been conducted for the St Annes drilling.

### Section 2 Reporting of Exploration Results

# (Criteria listed in the preceding section also apply to this section.)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures partnerships, overriding royalties, native title interests, historical sites, wilderness or nationa park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>Meeka Metals Limited control 100% interest in M51/882 and the tenement is in good standing.</li> <li>M51/882 is located within the Yugunga-Nya Native Title Claim.</li> <li>Heritage surveys have been conducted over active exploration areas.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	
Geology	• Deposit type, geological setting and style of mineralisation.	<ul> <li>Geology consists of Archean aged orogenic style mineralisation. Primary mineralisation is interpreted to be hosted within shear zone(s) +/- stringer quartz veins within both mafic and felsic lithologies. Some supergene mineralisation is developed locally and defined by ferruginous red saprolite clays.</li> </ul>
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</li> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul> <li>All drill results have been reported to the ASX in line with ASIC requirements, and available from previous announcements at https://meekametals.com.au/asx- announcements/</li> </ul>
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of	• No top-cuts have been applied when reporting results.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	<ul> <li>high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>All fire and photon assay results associated with the exploration drilling have been reported.</li> <li>Aggregate sample assays are calculated using a length-weighted average.</li> <li>Significant intervals are based on the logged geological interval, with all internal dilution included.</li> <li>No metal equivalent values are used for reporting exploration results.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>Drill holes are oriented at right angles to strike of deposit, dip optimized for drilling purposes and dip of ore body. Down hole widths are reported with most drill holes intersecting the mineralised lenses at 30-40 degrees.</li> <li>Strike of mineralisation is approximately north- south in the Fairway Trend.</li> </ul>
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• Drilling is presented in long-section and cross section as appropriate and reported quarterly to the ASX in line with ASIC requirements.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	<ul> <li>All drillhole results have been reported in previous announcements available at https://meekametals.com.au/asx- announcements/.Reports also include drillholes of insignificant intersections</li> </ul>
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	• All meaningful and material data are reported.
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	• Follow up work at Fairway trend will comprise of further infill and extensional drilling programs to continue to develop the resource potential and test additional exploration targets.

## Section 3 Estimation and Reporting of Mineral Resources

### (Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Database integrity	<ul> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>Geological data is stored in a Data Shed SQL server database. User access to the database is regulated by specific user permissions and validation checks to ensure data is valid.</li> <li>Existing protocols maximise data functionality and quality whilst minimizing the likelihood of error introduction at primary data collection points and subsequent database upload, storage and retrieval points. Data templates with lookup tables and fixed formatting are used for collecting primary data using Logchief software on field laptops. The software has validation routines and data is subsequently imported into a secure central database.</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		<ul> <li>The SQL server database is configured for validation through parent/child table relationships, required fields, logical constraints and referenced library tables. Data that fails these rules on import is rejected or quarantined until it is corrected.</li> <li>The SQL server database is centrally managed by a Database Administrator who is responsible for all aspects of data entry, validation, development, and quality control &amp; specialist queries. There is a standard suite of validation checks for all data.</li> <li>RSC validated the data using automated error identification in Leapfrog Geo as well as visual checks.</li> <li>Errors identified were communicated to Meeka and clarified or adjusted as necessary.</li> <li>The Competent Person considers the data to be valid and fit for purpose to inform a Mineral</li> </ul>
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	<ul> <li>Resource estimate.</li> <li>The Competent Person for Table 1, Section 1 and 2 conducts regular site visits. The Competent Person for Table 1, Section 3 is a consultant to the Company with extensive experience in the Western Australian gold industry, including site visits within Western Australia; however, has not visited the St Anne's site.</li> </ul>
	<ul> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>The drilling was completed prior to the commencement of the Mineral Resource estimate. As a result there would be no meaningful value from a site visit at that time.</li> <li>The Competent Person did however engage frequently with the Competent Person (for Section 1 and 2) to discuss drilling protocols and sampling approaches.</li> <li>In addition, drill core photos and AC and RC chips were reviewed.</li> <li>There is no surface exposure of the mineralisation or underlying geology. Geological data including high resolution diamond core and chip tray photographs are stored electronically.</li> <li>The Competent person is satisfied with the approaches to the drilling and sampling.</li> </ul>
Geological interpretation	• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	<ul> <li>Due to the amount of data sourced from drill programs and consistent geologically logging, there is a high degree of confidence in the geological interpretation of the St Anne's deposit.</li> <li>Within the well drilled (~20m x ~20m) portions of the deposit, the spacing and quantity of collected data provide geological evidence sufficient to verify geological and grade continuity.</li> <li>The Competent Person considers that the deposit is well drilled and due to the nature of the deposit, alternative interpretations of the geology are not likely to deviate materially from the current model.</li> </ul>
	<ul> <li>Nature of the data used and of any assumptions made.</li> </ul>	<ul> <li>The dataset (geological mapping, RC and diamond core logging and assays etc.) are considered acceptable for determining a geological model.</li> <li>From this data, downhole lithological, alteration, geochemical and structural information were considered and incorporated into the geological interpretation.</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	• The effect, if any, of alternative interpretations on Mineral Resource estimation.	• Alternative geological interpretations were considered throughout the process.
		<ul> <li>These focussed on the key elements informing the geological model particularly the alteration intensity and arsenic proxies.</li> <li>The Competent Person considers that due to the nature of the deposit, alternative interpretations of the geological model are not likely to materially deviate from the final interpretation.</li> </ul>
	• The use of geology in guiding and controlling Mineral Resource estimation.	<ul> <li>Alteration intensity, host lithology, structural trends and a known association with As and Gold mineralisation were considered as the foundation for the Geological Interpretation.</li> <li>Within this defined geological domain, estimation domains were interpreted. This recognises the link between geological data highlighting mineralised fluid flow and the estimation domaining.</li> <li>The Competent Person considers the application of the geological controls to define the estimation domaining as best practice to control the Mineral Resource Estimation.</li> </ul>
	• The factors affecting continuity both of grade and geology.	<ul> <li>Sudden changes in lithology and/or structural trends at a local scale can influence the grade and geological continuity.</li> <li>The Competent Person has considered this risk by reviewing the materiality of alternate interpretations as well as assigning lower confidence Resource classification to areas of low information density.</li> </ul>
Dimensions	<ul> <li>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</li> </ul>	• The Mineral Resource extends over 550m strike and from ~20m to ~90m below surface. It remains open at depth. These extents host 15 modelled mineralised wireframes, interpreted as a proxy for the mineralisation. This proxy considers the lithology host, the alteration intensity, the presence of high value arsenic (associated with arsenopyrite) and the structural orientation. The mineralised wireframes vary between ~1 m and ~13 m in width.
Estimation and modelling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	<ul> <li>The interpreted geological domains provide the foundation for the determination of the estimation domains. These geological domains incorporate lithology, alteration, and mineral chemistry associations (specifically arsenic) with gold grade.</li> <li>Three vein system volumes representing the estimations domains (Driver, Wood and Iron) were refined within these geological domains by applying an implicit approach.</li> <li>In addition, the orientation of continuity is defined to recognise regional and deposit scale structural trends.</li> <li>In Leapfrog Geo/Edge, Ordinary Kriging (OK) of Im top cap composites was applied for grade estimation of gold. OK is the most widely used non-biased linear estimation method for grade populations that exhibit reasonable statistical homogeneity within estimation domains.</li> <li>Within the Driver estimation domain (vein system), a top cap indicator residual methodology adapted to very skewed grade distributions (Rivoirard et al., 2010) was applied to the major gold bearing lode. The methodology manages extreme gold values without having to apply traditional top</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	JORC CODE EXPLANATION	<ul> <li>capping. The remaining estimation domains within the Driver vein system, used a traditional top capping methodology.</li> <li>Sub domaining of the Iron domain was applied to distinguish between high- and low-grade portions.</li> <li>In preparation for grade interpolation using OK, weights were generated by modelling variograms within the estimation domains. Nugget values interpreted from the downhole variograms are moderate (0.2–0.3) and are typical of a deposit of this style. The overall structure and orientations of the variogram are representative of the expected nature of the mineralisation and the interpreted geological assumptions. The variograms were modelled using Snowden Supervisor and Leapfrog Edge.</li> <li>A parent block of 5mE x 10mN x 5mRL sub celled to 0.25mE x 0.5mN x 0.5mRL (minimum with variable height) was used. This is based on the current drill spacing and estimation vein geometries.</li> <li>Estimation of gold grade was completed in two passes. Pass 1 is ~130m x ~20m and pass 2 is ~260m x ~200m x ~20m. Both passes are orientated in the direction of maximum continuity and apply a minimum 8 and maximum of 40 samples. A discretisation of 5 x 5 x 5 (x-y-z) was applied.</li> <li>The model was validated through visual comparison of input data and model, global statistical checks, and review of swath plots trends. The Competent Person considers the</li> </ul>
		block model to be appropriately estimated with block grades representative (within 10- 15%) of the input data.
	• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	<ul> <li>This is a maiden Mineral Resource estimate for the St Anne's deposit.</li> </ul>
	• The assumptions made regarding recovery of	No assumptions made.
	<ul> <li>by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li> </ul>	No deleterious elements estimated.
	<ul> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> </ul>	<ul> <li>The Parent block size considered the drill spacing, the thickness and the geometry of the orebody.</li> <li>No assumptions made regarding mining of selective mining units.</li> </ul>
	Any assumptions about correlation between variables.	• No assumptions made regarding correlation of variables, only gold was estimated in the model.
	Description of how the geological interpretation was used to control the resource estimates.	<ul> <li>The Geological Domains provided the foundation for the determination of the estimation domains. These Geological Domains incorporate lithology, alteration, and mineral chemistry associations (specifically arsenic associated with arsenopyrite) with gold grade.</li> <li>Three vein system volumes representing the estimations domains (Driver, Wood and Iron) were refined within these geology domains by applying an implicit approach.</li> <li>In addition, the orientation of continuity is defined to recognise regional and deposit scale structural trends.</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	<ul> <li>Discussion of basis for using or not using grade cutting or capping.</li> </ul>	<ul> <li>Top capping was applied to the estimation domains (includes sub domains) where necessary to lower the influence of outlier gold values. This was based on reviewing the histograms and log probability plots, and considering the impacts / assessment of the CVs (within margin of &lt;2)</li> <li>The major gold bearing lode within the Driver estimation domain, did not undergo top capping and a top cap indicator residual methodology adapted to very skewed grade distributions (Rivoirard et al., 2010) was applied.</li> <li>Top capping was applied with the high- and low-grade sub-domains (20 Au ppm &amp; 2.5 Au ppm respectively) within the Iron estimation domains,</li> <li>No top capping was applied within the Wood estimation domain(s), as the CV's was below 2 and did not contain extreme outlier gold values, and still within relevance of the distributions</li> </ul>
	• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	<ul> <li>Grade estimation is validated visually on a section-by-section review; statistically by comparison of input drillhole data against estimated grade and by swath plots of northing, easting, and RL to composite data.</li> <li>The Competent Person considers the block model to be appropriately estimated with block grades representative (within 10 -15%) of the input data.</li> <li>In addition, the geology, estimation domaining and final estimate is peer reviewed. This includes detailed discussion on applied methodology and parameters.</li> </ul>
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnages are estimated on a dry basis.
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• The Mineral Resource is only the portion of the block model that is constrained within a \$2,600/oz optimised pit shell and above a 0.5g/t gold cut-off grade, reflective of current mining costs and design parameters.
Mining factors or assumptions	<ul> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	• Due to the width and grade of the resource, and its position relative to the surface, it has been assumed potential mining of the St Anne's deposit would be by open pit.
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	<ul> <li>No assumption or factors have been applied to the resource estimate regarding the metallurgical amenability.</li> <li>Metallurgical test work on mineralised samples sourced from St Anne's was conducted by ALS Metallurgy at a target grind size of 80% passing 150µm and demonstrated good metallurgical properties at this relatively coarse grind size. Recoveries averaged above 98% with average gravity recovery above 49%. Further metallurgy and comminution test work is being completed as part of the Company's ongoing feasibility studies.</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Environmental	Assumptions made regarding possible waste	• Preliminary environmental studies have been
factors or	and process residue disposal options. It is	completed, including native flora and fauna
assumptions	always necessary as part of the process of	surveys.
	determining reasonable prospects for	• To date studies have not presented any issues
	eventual economic extraction to consider the	that will impact on potential mining of ore
	potential environmental impacts of the	from the deposit.
	mining and processing operation. While at this	
	stage the determination of potential	
	environmental impacts, particularly for a	
	greenfields project, may not always be well	
	advanced, the status of early consideration of these potential environmental impacts should	
	be reported. Where these aspects have not	
	been considered this should be reported with	
	an explanation of the environmental	
	assumptions made.	
Bulk density	• Whether assumed or determined. If assumed,	• In-situ bulk densities (ISBD) (dry basis) applied
	the basis for the assumptions. If determined,	to the resource estimate were based on
	the method used, whether wet or dry, the	systematic test work completed on drill core
	frequency of the measurements, the nature,	for selected material types.
	size and representativeness of the samples.	
	• The bulk density for bulk material must have	• The ISBD determination method used a water
	been measured by methods that adequately	immersion technique.
	account for void spaces (vugs, porosity, etc), moisture and differences between rock and	
	alteration zones within the deposit.	
	Discuss assumptions for bulk density	Densities are assigned according to the
	estimates used in the evaluation process of	weathering horizon model interpreted from
	the different materials.	downhole logging.
Classification	The basis for the classification of the Mineral	The models have utilised all available data.
	Resources into varying confidence categories.	• The model has been classified as Indicated as
		determined by drill spacing and local
		geological and grade confidence.
		• The Competent Person considers the block
		model to be appropriately estimated based on
		validation of input and estimated grades
		through visual assessment, domain grade
		mean comparisons, and a review of swath plots.
		<ul> <li>The local error increases in areas of wider</li> </ul>
		spaced data and as such the model estimated
		reflects the confidence according to applied
		classification criteria.
		• The deposit has a robust geological
		interpretation and relatively high continuity of
		geology and mineralisation from the ~20m x
		~20m drilling and therefore has been classified
		as Indicated.
		• Due to the strong subvertical continuity
		reflective of the structural, mineralisation and
		geological control, the classification for
	Whether appropriate account has been taken	<ul><li>indicated is extrapolated 20m down dip.</li><li>Appropriate account has been taken of all</li></ul>
	of all relevant factors (i.e. relative confidence in	relevant factors in determining classification.
	tonnage/grade estimations, reliability of input	
	data, confidence in continuity of geology and	
	metal values, quality, quantity and distribution	
	of the data).	
	Whether the result appropriately reflects the	• The classification reflects the view of the
	Competent Person's view of the deposit.	Competent Person.
		• Portions of the deposit that do not have
		reasonable prospects for eventual economic
		extraction are not included in the Mineral
		Resource. In assessing the reasonable
		prospects, the Competent Person has evaluated preliminary mining, metallurgical,
		economic and geotechnical parameters.
Audits or	The results of any audits or reviews of Mineral	The Mineral Resource was estimated by
reviews	Resource estimates.	consultants RSC.
. <u> </u>	1	1

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Discussion of	Where appropriate a statement of the relative	<ul> <li>An internal peer review has been completed prior to this release and no material issues have been highlighted.</li> <li>The Mineral Resource estimates have been reported in according with the guideling.</li> </ul>
relative accuracy/ confidence	accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	<ul> <li>reported in accordance with the guidelines within the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources &amp; Ore Reserves &amp; reflects the relative accuracy of the Mineral Resources estimate. The Competent Person deems the process to be in line with industry standards for resource estimation &amp; therefore within acceptable statistical error limits.</li> <li>The confidence reflected in the Indicated classification of the deposit is based on exploration, sampling and assaying information gathered through appropriate techniques from appropriately spaced drillholes and geological understanding,</li> <li>The confidence in the estimate is supported by slope of regression values calculated during estimation, in conjunction with domain-by- domain swath plots of composite vs block grades.</li> </ul>
	• 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.	<ul> <li>The statement relates to global estimates of tonnes and grade for open pit mining scenarios.</li> </ul>
	• These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	<ul> <li>No production data are available.</li> </ul>

## Section 4 Estimation and Reporting of Ore Reserves

## (Criteria listed in section 1, and where relevant in section 2 and 3, also apply to this section.)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Mineral Resource estimate for conversion to	• Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.	• The Mineral Resource was compiled by consultants RSC. An RSC internal peer review was completed prior to this release; no issues found.
Ore Reserves	Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	• The Mineral Resources are inclusive of the Ore Reserves.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	• Numerous site visits have been conducted by the Competent Person.
	• If no site visits have been undertaken indicate why this is the case.	• Not Applicable.
Study status	The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.	• The Ore Reserve is underpinned by studies conducted to a Pre-feasibility Study level.
	• 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.	• Modifying factors accurate to the study level were applied based on detailed expert design analysis. The study indicates that the Ore Reserve and mine plan is technically achievable and economically viable.
Cut-off parameters	• The basis of the cut-off grade(s) or quality parameters applied.	<ul> <li>Cut-off grade parameters for determining open pit and underground Ore Reserves were based on the Pre-feasibility Study financial analysis and, with a gold price of A\$2,200/oz used as a reference price.</li> <li>The open pit cut-off grade used for design and analysis was 0.5g/t Au.</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Mining factors	• The method and assumptions used as	Open Pit:
or assumptions	• 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).	<ul> <li>Open Pit.</li> <li>Open pit designs and ramp configurations suit 200t class excavators in a backhoe configuration matched to 140t off road haul trucks for waste stripping. A smaller fleet of 100t class excavator and 95t off road haul trucks are planned for ore movement and the smaller benches at the base of each pit. Benches are planned to be 5m high and will be mined in two 2.5m flitches.</li> <li>An SMU methodology was applied to determine true mineable ore envelopes.</li> <li>Minimum mining width of 3.5m was applied.</li> <li>Dilution of 0.5m was applied to all dig blocks.</li> <li>Open pit optimisations were performed using the SMU adjusted block model to evaluate the potential economics of various open pit mining envelopes.</li> <li>A \$2,600/oz optimisation shell was selected to guide all final open pit designs.</li> <li>Optimisation slope angles were 37 deg (Reg/Ox), 42 deg (Tr), 47 deg (Fr).</li> <li>Mining recovery – everything within the pit shell is assumed to be mined.</li> <li>The physicals from the final pit design were then used to create a detailed schedule and evaluated using the feasibility study financial model to confirm the economic viability of the</li> </ul>
	• 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.	<ul> <li>model to confirm the economic viability of the Ore Reserve.</li> <li>The mining methods were selected based on economic considerations, orebody geometry and geotechnical advice. They are widely adopted methods and have previously been successfully applied for mining of these ore bodies at this site.</li> </ul>
	• The assumptions made regarding geotechnical parameters (eg. pit slopes, stope sizes, etc.), grade control and pre-production drilling.	<ul> <li>Independent geotechnical advice formed the basis of the mine design parameters, including open pit slope angles, batter heights and angles and berm widths.</li> </ul>
	• The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).	<ul> <li>The Mineral Resource model used was that which was stated above.</li> <li>For open pit optimisation, an SMU model was created from the Mineral Resource which accounted for dilution based on the selected mining equipment fleet being employed.</li> <li>Dig block height and length was 5m and minimum width was 3.5m.</li> </ul>
	• The mining dilution factors.	Unplanned dilution of 0.5m was added to open pit dig blocks.
	The mining recovery factors.	• St Anne's only includes an open pit Ore Reserve.
	Any minimum mining widths used.	Open pit minimum mining width of 3.5m was applied.
	• The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.	<ul> <li>Only the Indicated portion of the Mineral Resource was used to estimate the Ore Reserve.</li> <li>The Ore Reserve is technically and economically viable without the inclusion of Inferred Mineral Resources.</li> </ul>
	The infrastructure requirements of the selected mining methods	• Mining infrastructure required to deliver the plan include office and ablution buildings, workshops, power station, explosive storage facilities, waste dumps, haul roads, dewatering bores and water storage dams.
Metallurgical factors or assumptions	• The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.	<ul> <li>Ore will be processed through a 1Mtpa CIL plant.</li> <li>The milling circuit is designed to achieve a P<sub>80</sub> of 75µm grind size.</li> </ul>

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	<ul> <li>Whether the metallurgical process is well- tested technology or novel in nature.</li> <li>The nature, amount and representativeness of metallurgical testwork undertaken and the</li> </ul>	<ul> <li>The metallurgical process is well-tested and widely adopted.</li> <li>Suitable representative metallurgical test work supports the metallurgical recovery factors</li> </ul>
	metallurgical recovery factors applied.	<ul> <li>applied.</li> <li>Metallurgical recovery of 98% was applied based on PFS metallurgical test work completed during 2022 and 2023.</li> </ul>
	• Any assumptions or allowances made for deleterious elements.	• No deleterious elements are expected based on PFS metallurgical test work completed during 2022 and 2023.
	• The existence of any bulk sample or pilot scale testwork and the degree to which such samples are representative of the orebody as a whole.	No bulk sample has been collected.
	• For minerals that are defined by a specification, has the Ore Reserve estimation been based on the appropriate mineralogy to meet the specifications?	Not applicable.
Environmental	• 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.	<ul> <li>Environmental baselines studies have been partially completed and work is ongoing.</li> <li>St Anne's pits are predominantly confined to the oxide horizon. Material characterisation work is ongoing, however it is not expected that the open pit will produce PAF material.</li> <li>The permitting process is ongoing and based on the work completed to date and the information available the Company is confident that approvals required for Project development will be granted.</li> </ul>
Infrastructure	• 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.	<ul> <li>The mine is located adjacent to the Great Northern highway and has good road access.</li> <li>Meekatharra aerodrome is located 46km to the south of the Project.</li> <li>Accommodation is available in Meekatharra which can be used for early works and construction.</li> <li>No site infrastructure is in place however there is sufficient area available for new infrastructure.</li> </ul>
Cost and revenue factors	• The derivation of, or assumptions made, regarding projected capital costs in the study.	<ul> <li>Capital cost estimates are drawn from supplier pricing and detailed first principals cost estimates.</li> <li>The process plant capital cost estimate was compiled by Como Engineering to a PFS level of accuracy.</li> </ul>
	The methodology used to estimate operating costs.	Operating cost estimates are drawn from supplier pricing and detailed first principals cost estimates.
	Allowances made for the content of deleterious elements.	No deleterious elements are expected.
	• The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.	• A long-term gold price of A\$2,200 per ounce was considered by the Competent Person to be an appropriate commodity price assumption.
	• The source of exchange rates used in the study.	<ul> <li>All costs in this Study are in Australian dollars with requests for quotes, sourced between QI 2022 through Q2 2023. During this period the AUD:USD exchange rate varied from 0.62 to 0.75. As at June 2023, the exchange rate was 0.67 (one Australian dollar equals 0.67 United States dollars).</li> </ul>
	Derivation of transportation charges.	<ul> <li>Transport charges for consumables to site are based on supplier pricing.</li> <li>Transport charges for gold doré from site to the Perth Mint have been allowed for.</li> </ul>
	• The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.	• Sale of gold doré to the Perth Mint.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	• The allowances made for royalties payable, both Government and private.	<ul> <li>State Royalty – 2.5% NSR.</li> <li>Yugunga-Nya Native Title Royalty.</li> <li>\$1M (Archean Star Resources)</li> <li>8.8% Net Profit Interest (Teck)</li> </ul>
Revenue Factors	<ul> <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> <li>Ore Reserve economic evaluation estimated revenue from the recovered gold sold multiplied by the assumed long term gold price, A\$2,200 per ounce. Transportation and treatment charges, and royalties were treated as expenses during financial evaluation.</li> <li>A long-term gold price of A\$2,200 per ounce was considered by the Competent Person to be an appropriate commodity price assumption.</li> </ul>
Market assessment	<ul> <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> </ul>	<ul> <li>There is a well-established and transparent spot market for gold.</li> <li>There is a well-established and transparent spot market for gold.</li> </ul>
	<ul> <li>Price and volume forecasts and the basis for these forecasts.</li> <li>For industrial minerals the customer specification, testing and acceptance</li> </ul>	<ul> <li>There is a well-established and transparent spot market for gold.</li> <li>Not applicable.</li> </ul>
Economic	<ul> <li>requirements prior to a supply contract.</li> <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> </ul>	<ul> <li>Operating and capital cost estimates are considered to be accurate within ±25%.</li> <li>Cost estimates are drawn from supplier pricing and detailed first principals cost estimates.</li> <li>A discount rate of 5% has been applied.</li> </ul>
	• NPV ranges and sensitivity to variations in the significant assumptions and inputs.	• This analysis shows that while sensitive to fluctuations in both operating cost and gold price, the Project continues to deliver positive NPV under conservative assumptions.
Social	• The status of agreements with key stakeholders and matters leading to social licence to operate.	<ul> <li>The Company has an agreement in place with the Native Title Holders, the Yugunga-Nya People, facilitating exploration and mining.</li> <li>The Company maintains a strong working relationship with the Government, Yugunga- Nya People, pastoralists and the local community.</li> </ul>
Other	• To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:	
	• Any identified material naturally occurring risks.	• A formal process to identify and mitigate naturally occurring risks was completed during the Study. Outcomes were integrated into the Study planning process and site layout.
	• The status of material legal agreements and marketing arrangements.	<ul> <li>All material legal agreements are either in place, or based on information available the Company is confident that they will be in place in a suitable timeframe.</li> <li>No marketing agreements are needed, gold doré will be produced on site and sold into the spot market.</li> </ul>
	• 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	• The tenements are in good standing and the permitting process is ongoing. Based on the work completed to date and the information available the Company is confident that approvals required for Project development will be granted in a suitable timeframe.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	third party on which extraction of the Reserve	
	is contingent.	
Classification	• The basis for the classification of the Ore Reserves into varying confidence categories.	• The Probable Ore Reserve is based on that portion of the Indicated Mineral Resource within the mine designs that may be economically extracted and includes an allowance for dilution and ore loss.
	Whether the result appropriately reflects the	• The results appropriately reflect the
	Competent Person's view of the deposit.	Competent Person's view of the deposit.
	• The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	• There is no Measured Mineral Resource.
Audits or	• The results of any audits or reviews of Ore	Internal review was completed for all Ore
reviews.	Reserve estimates.	Reserves.
Discussion of relative accuracy/ confidence.	<ul> <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 to technical and economic evaluation.</li> </ul>	<ul> <li>The design, schedule, and financial evaluation on which the Ore Reserve is based is to a Pre- feasibility Study level, with a corresponding level of confidence.</li> <li>The Ore Reserve is estimated as a global estimate.</li> </ul>
	<ul> <li>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> <li>In the opinion of the Competent Person, cost assumptions and modifying factors applied in the process of estimating Ore Reserves are reasonable.</li> <li>Gold price and exchange rates are subject to market forces and present an area of uncertainty.</li> <li>No production data is available however the Ore Reserve is estimated on a global basis and the CP is reporting it with accuracy and confidence on that basis.</li> </ul>