Superior Resources

ASX Announcement

27 April 2021

Scoping Study delivers robust case for development of Steam Engine Gold Deposit

HIGHLIGHTS:

- **Scoping Study indicates robust financial and technical case for a near-term, low CAPEX, open pit mining and toll treatment operation, based on mining 65% of the current total Mineral Resource to recover 70,000 ounces Au**
- **Current total Mineral Resource comprises: 1.73 million tonnes at 2.2 g/t Au for 122,000 ounces, including:**
  - **Measured & Indicated: 850,000 tonnes @ 2.5 g/t Au (approx. 67,000 ounces)**
  - **Inferred: 880,000 tonnes @ 1.9 g/t Au (approx. 55,000 ounces)**
- **Study identified key areas for further optimisation and expansion potential to enhance project economics, including comprehensive metallurgical test program and detailed characterisation of high grade zones where conservative top-cuts have been applied within the Mineral Resource**
- **Positive results support immediate commencement of Feasibility Study**
- **Aggressive drilling program continuing to target Resource expansion at current lodes, including maiden drilling program at the new Dinner Creek Lode**
- **Gold lodes open to the north and at depth (Steam Engine Lode) and open in all directions at Eastern Ridge Lode**

Superior Resources Limited (**ASX:SPQ**) (**Superior**, the **Company**) is pleased to announce the results of a Scoping Study conducted on the Company's 100%-owned Steam Engine Gold Deposit (**Project**) located approximately 210 kilometres west of Townsville, Queensland. The study highlights an opportunity to develop the Project as a low CAPEX, financially and technically robust open pit mining and toll treatment operation.

The Scoping Study is based on the March 2021 revised Mineral Resource estimate of **1.73 million tonnes at 2.2 g/t Au for 122,000 ounces of gold**[1], which incorporated the results of the 2020 Resource definition drilling programs. An open cut mining and toll treatment operation was selected for the base case scenario for the study. Pit optimisation and mine planning exercises result in pit shells which are scheduled to mine 1.1 million tonnes at 2.31 g/t Au to recover 70,000 ounces. This is equivalent to approximately 65% of the current Mineral Resource. A stand-alone gold mining and processing scenario was also examined, which highlighted a significant opportunity for substantially improved project economics in the event that the Mineral Resource is expanded.

Base-case economic modelling indicates that the Project will deliver robust financial metrics over a **21-month** period of mining with a **post-tax LOM cash flow of A$24.2M** at an assumed gold price of A$2,200 per ounce.

As a result of the positive Scoping Study, a Feasibility Study will be commenced immediately, along with further metallurgical test work and drilling programs aimed at expanding the current Mineral Resource, including a maiden drilling program at the Dinner Creek Lode.

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[1] Refer ASX Announcement dated 22 March 2021

Superior's Managing Director, Peter Hwang commented:

"We are very pleased with the outcome of the Scoping Study, which is a significant step forward for the Steam Engine Gold Deposit and the Company's strategy for the greater Greenvale Project.

"The study has demonstrated the economic robustness of the Project and highlights a low-cost start-up opportunity to generate early cash flow. The upside potential is substantial and presents a compelling case to commence a Feasibility Study and the regulatory approvals processes to enable the commencement of mining.

"The exploration potential at Steam Engine is significant. As we progress through the Feasibility phase during 2021, we will also be endeavouring to expand the total gold Resources through aggressive drilling. Leading this program will be the maiden and hopefully, follow-up drilling programs at the new Dinner Creek Zone.

"We are now confident that Steam Engine is poised to be an operation capable of underpinning a greater Greenvale Project copper, gold and potentially, nickel development strategy. This comes as we embark on the Company's 2021 exploration campaign to execute potentially transformative drilling programs at our Tier 1-potential copper and subject to funding, our nickel sulphide targets. We believe that the substantial mineral endowment at Greenvale, predominantly represented by copper and nickel, together with Steam Engine, represents serious potential to support a centralised stand-alone processing operation.

"The implementation of our Greenvale Strategy in 2021 will be key to unlocking the value potential presented by the Greenvale Project."

Cautionary Statement

Scoping Study - General: The Scoping Study referred to in this announcement is a preliminary technical and economic study of the potential viability of developing the Steam Engine Gold Deposit Project (**Project**) as a mining and third-party toll-treatment operation. Preliminary investigations for developing the Project as a stand-alone mining and processing operation were also investigated on a similar technical and economic basis. The Scoping Study is based on low level technical and economic assessments that are not sufficient to support the estimation of Ore Reserves. Further evaluation work and appropriate studies are required before Superior Resources Limited (**Superior**) will be in a position to estimate any Ore Reserves or to provide any assurance of an economic development case.

Material Assumptions: The Scoping Study is based on the material assumptions outlined within this announcement. These include assumptions about the availability of funding. While Superior considers all of the material assumptions to be based on reasonable grounds, there is no certainty that those assumptions will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved.

Funding Requirements: To achieve the range of outcomes indicated in the Scoping Study, total funding in the order of A$10 million will likely be required for CAPEX and operating losses until profits are generated. Investors should note that there is no certainty that Superior will be able to raise that amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to, or otherwise affect the value of Superior's existing shares. Although the availability of funding is affected by many factors including general market factors, Superior has concluded that it has a reasonable basis to assume the ability of funding during the timeframes contemplated by the Scoping Study.

Production Target: The Scoping Study investigates and reports on forecasted financial information based on the mining of a Mineral Resource comprising approximately 27% Inferred Resources. 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 proposed Production Target itself will be realised. Superior has concluded that it has reasonable grounds for disclosing the forecasted financial information and Production Targets, given that approximately 73% of the production ounces are derived from Mineral Resources classified within the Measured and Indicated categories and that at least the first half of the scheduled production will be sourced from Measured and Indicated Resources.

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

Scoping Study Key Financial Outcomes

The Scoping Study has demonstrated robust financial metrics for the Steam Engine Gold Project (**Project**) based on an open pit mining and third-party toll treatment processing operation as the base case proposal.

The proposed operation is based on optimised pits for the mining of **1.1 million tonnes at 2.31 g/t Au to recover 70,000 ounces of gold**, with 73% of the Life of Mine (**LOM**) Production Target in Measured and Indicated categories. This represents approximately 65% of the current Mineral Resource, which comprises Measured, Indicated and Inferred Resources totalling 1.73 million tonnes at 2.2 g/t Au for 122,000 ounces of gold[2].

The Scoping Study was completed to an overall ±30% accuracy and based on assumptions as set out in Table 1 and Appendix 1. The study was managed and conducted by the following highly experienced independent consultants based in Queensland and Western Australia:

- Metcor Pty Ltd (Study Manager, Processing, Cost Estimation, Financial Modelling); and
- Ragnarok Mining Pty Ltd (Pit Optimisation, Mine Scheduling).

Table 1. Steam Engine Gold Deposit – Key Outcomes – Base Case Assumptions

Parameter	Value
Financial Summary	
Overall Cash Flow (post-tax)	A$24.2M
$NPV_{7\%}$ (post-tax)	A$21.2M
Internal Rate of Return (IRR) (post-tax)	242%
All-in Sustaining Costs (AISC)[1]	A$1,673 /oz
Payback Period	11 months
Gold Price Assumption	A$2,200 /oz
Funding	
CAPEX (Pre-Production and Closure)	A$5.1M
Funding Required[2]	A$10.0M
Return on Capital (post-tax)	475%
Physical Outputs	
Life of Mine (LOM) (Construction to Closure)	~2.5 years
Total Ore	1.131 Mt
Ore Grade	2.31 g/t
Overall Gold Recovery	84%
Gold Produced and Sold	70,000 oz

1 *AISC calculated in accordance with the 2018 World Gold Council Updated Guidance Note.*

2 *Includes pre-production CAPEX plus operating losses until profits are generated.*

2 Total Mineral Resource estimate completed during March 2021; refer ASX Announcement dated 22 March 2021

Upside Scenario (@ A$2,500/oz gold price)

On the basis of a generally positive outlook for the price of gold over the near to intermediate term, the Scoping Study also considered an upside scenario based on a gold price of A$2,500 (US$1,900 @ 0.76 AUD/USD). The impact on the Project economics is significant with the post-tax overall cash flow increasing by 69% to A$41.0M (Table 2).

Table 2. Key Outcomes – Upside Scenario compared to Base Case Scenario

Parameter	Base Case @ A$2,200 /oz	Upside Case @ A$2,500 /oz
Financial Summary		
Overall Cash Flow (post-tax)	A$24.2M	A$41.0M
$NPV_{7\%}$ (post-tax)	A$21.2M	A$35.9M
Internal Rate of Return (IRR) (post-tax)	242%	410%
All-in Sustaining Costs (AISC)[1]	A$1,673 /oz	A$1,725 /oz
Payback Period	11 months	9 months
Funding		
CAPEX (Pre-Production and Closure)	A$5.1M	A$5.1M
Funding Required[2]	A$10.0M	A$9.0M
Return on Capital (post-tax)	475%	806%
Physical Outputs		
Life of Mine (LOM) (Construction to Closure)	~2.5 years	~2.9 years
Total Ore	1.131 Mt	1.305 Mt
Ore Grade	2.31 g/t	2.24 g/t
Overall Gold Recovery	84%	84%
Gold Produced and Sold	70,000 oz	79,000 oz

[1] *AISC calculated in accordance with the 2018 World Gold Council Updated Guidance Note.*
[2] *Includes pre-production CAPEX plus operating losses until profits are generated.*

Breakeven Points

Breakeven points for each of the key variables above have been determined – this is the level at which the pre-tax cash flow reduces to zero when all other parameters remain at base case levels (Table 3).

Table 3. Breakeven Analysis

Parameter	Breakeven Value
Gold Price	**A$1,709** (US$1,299 @ 0.76 AUD/USD)
Gold Grade	1.79 g/t
Gold Recovery – Steam Engine Lode Ore	60%

Sensitivity Analysis

The Project economics were subjected to a sensitivity analysis on the basis of a +/-15% change in key parameters (Figure 1). Changes in the Australian dollar gold price and average gold grade result in the largest impact to project economics, with haulage unit costs, being the next most significant factor, having about 30% of the gold price and grade impacts.

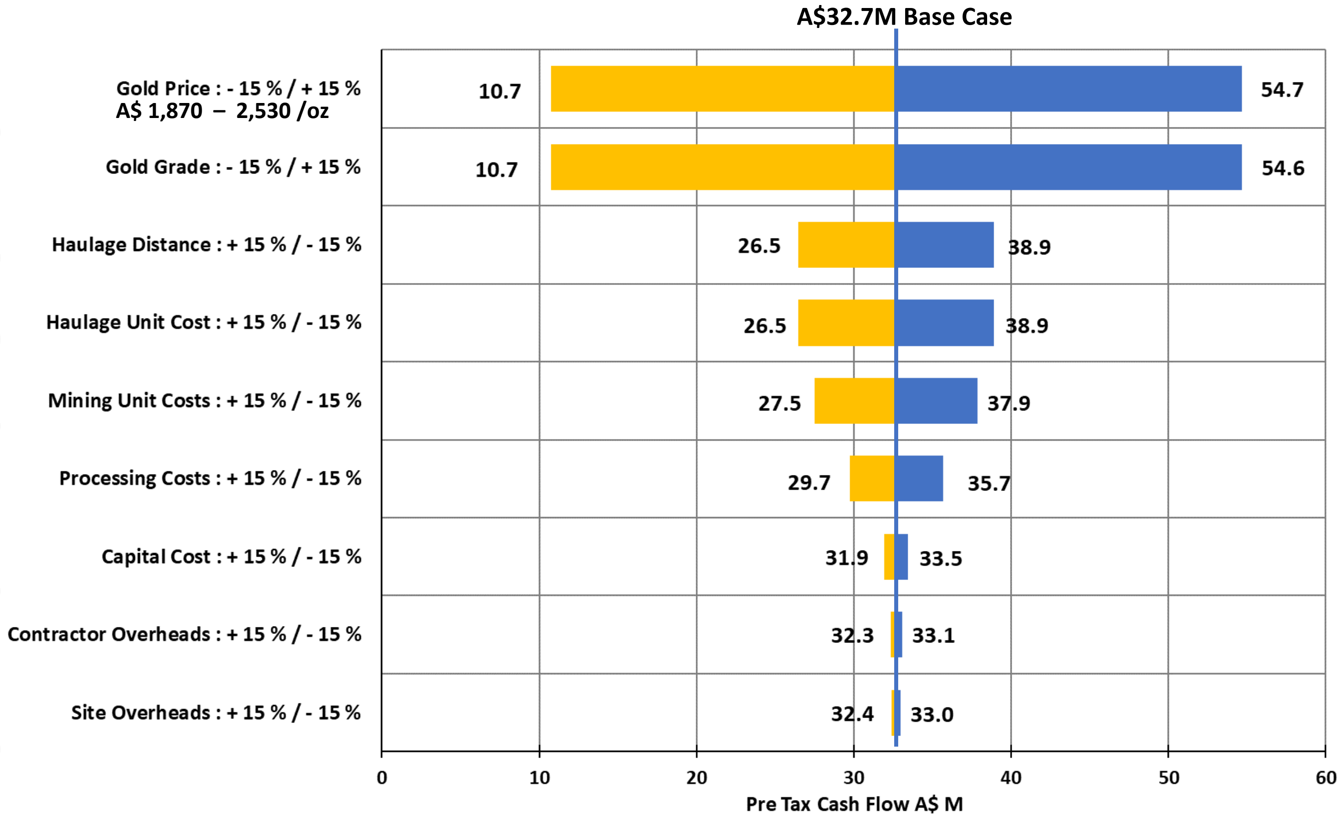

Figure 1. Pre-Tax Cash Flow sensitivity analysis showing the effects on the A$32.7M Pre-Tax Cash Flow (Base Case) using ± 15% variability in select parameters.

Mineral Resources

The Scoping Study is based on the March 2021 Mineral Resource Estimate[3] conducted by a Competent Person employee of the Company, which stands at:

- **1.73 million tonnes at 2.2 g/t Au for 122,000 ounces**, including:
  - Measured & Indicated: **850,000 tonnes @ 2.5 g/t Au** (approx. 67,000 ounces); and
  - Inferred: **880,000 tonnes @ 1.9 g/t Au** (approx. 55,000 ounces).

Pit optimisation and mine planning exercises identified an optimal pit design that results in the mining of approximately 1.1 million tonnes at 2.31 g/t Au to recover 70,000 ounces (Figures 2 and 3). This represents approximately 65% of the current Mineral Resource.

Of the Mineral Resources contained within the optimised pit shells, approximately 73% of the production ounces are derived from Mineral Resources classified within the Measured and Indicated categories (Figure 3) and that at least the first half of the scheduled production will be sourced from Measured and Indicated Resources.

[3] Refer ASX Announcement dated 22 March 2021

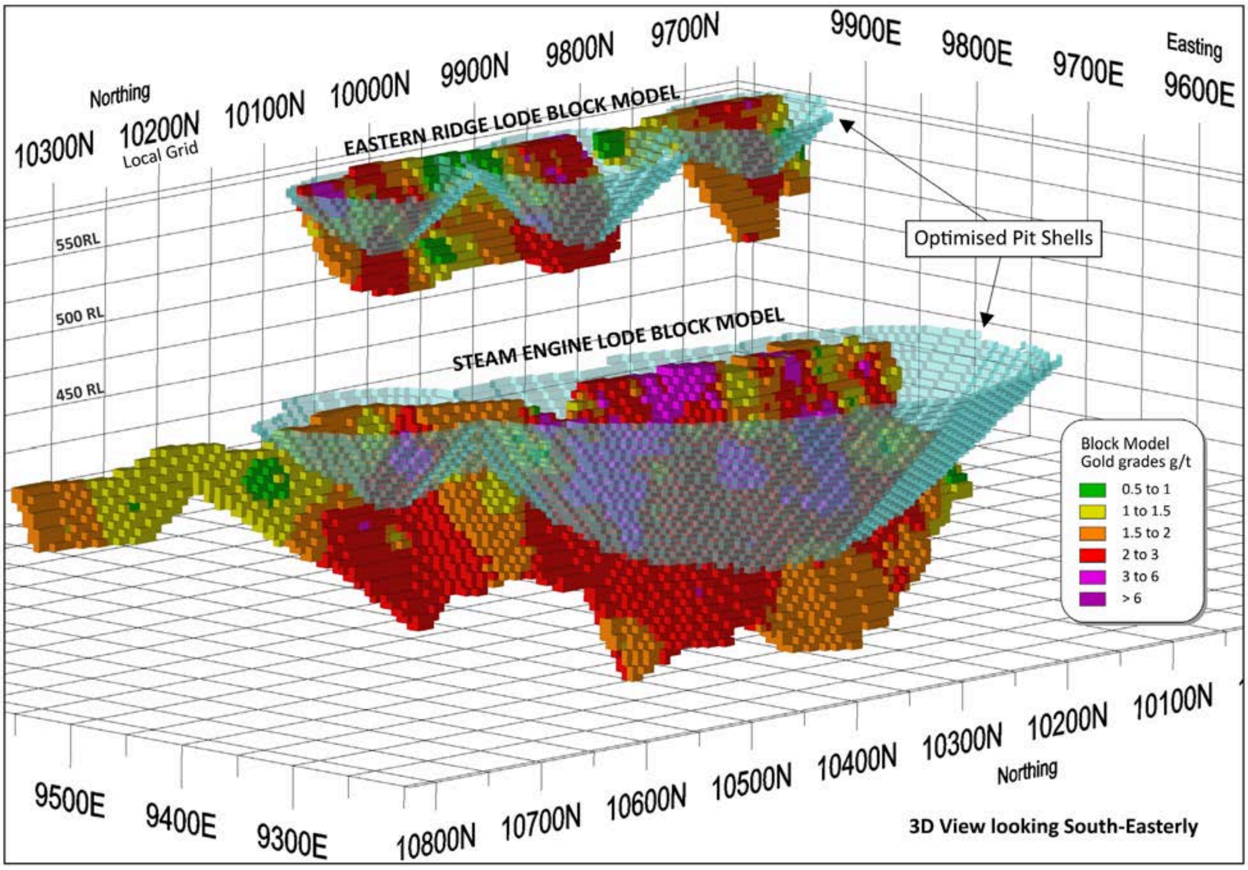

Figure 2. Steam Engine and Eastern Ridge block models showing base case optimised pit shells and gold grade categories.

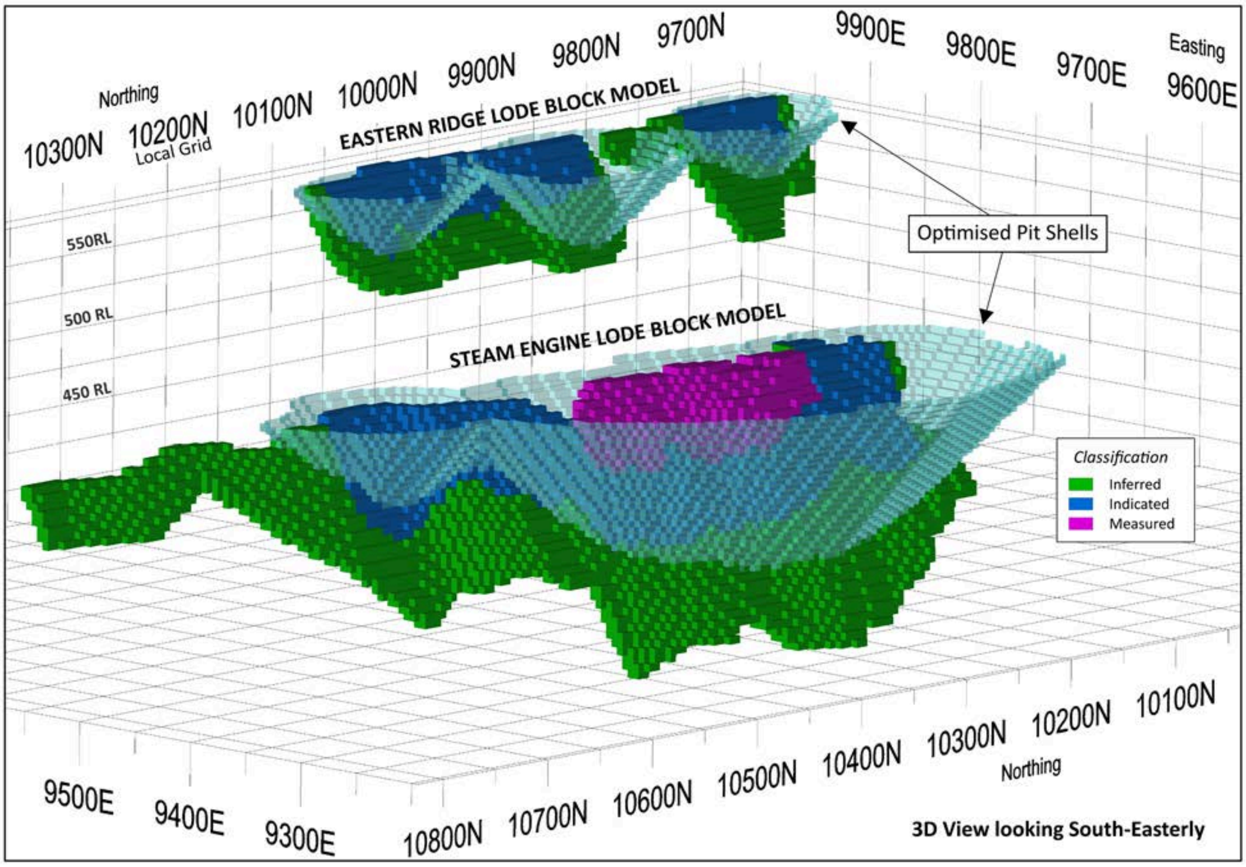

Figure 3. Steam Engine and Eastern Ridge block models showing base case optimised pit shells and Measured, Indicated and Inferred ore confidence categories.

Site Layout

A proposed site layout with the required site infrastructure in place was designed for the purpose of the Scoping Study (Figure 4).

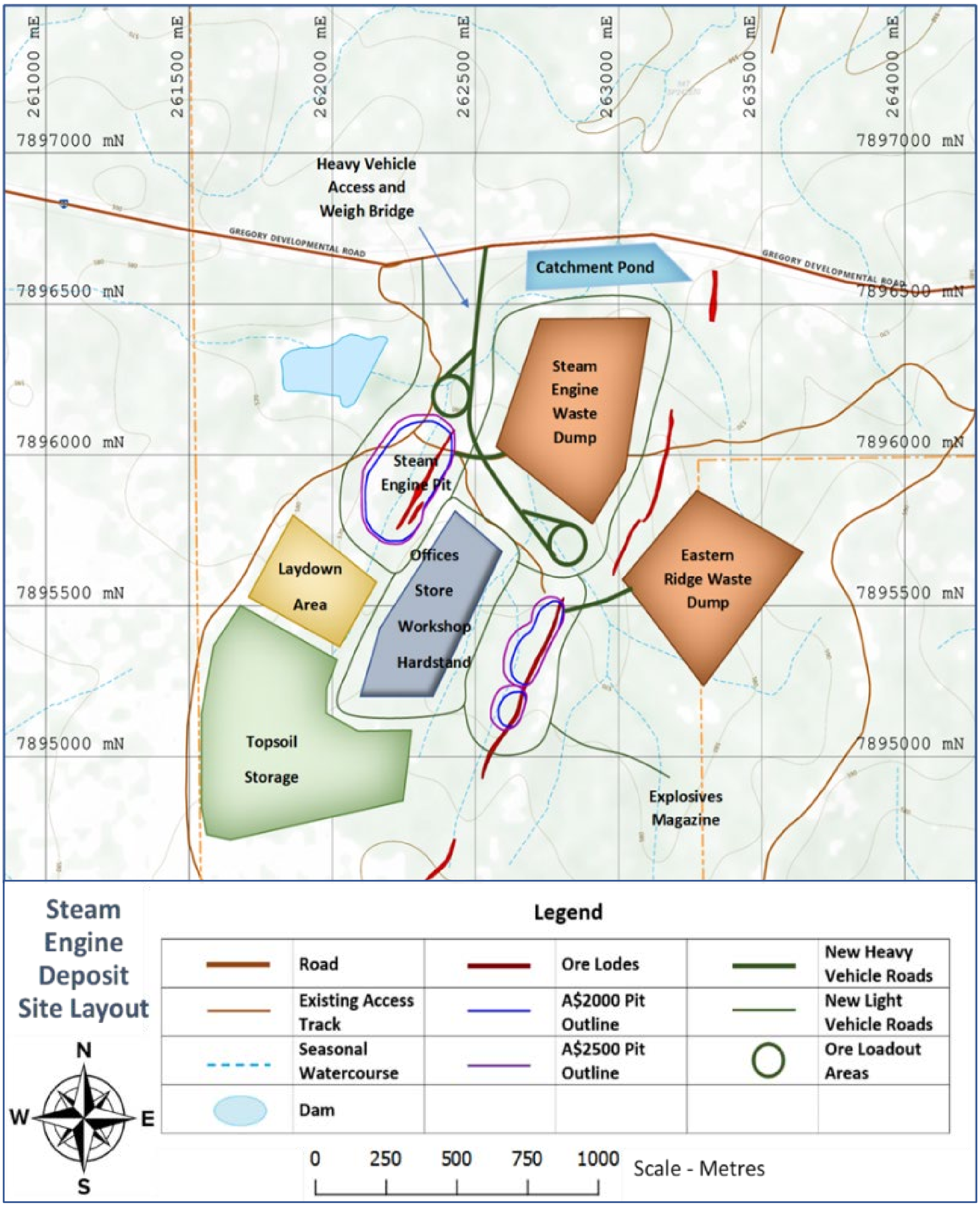

Figure 4. Steam Engine Project conceptual site layout.

Next Steps

On the basis of the positive outcomes from the Scoping Study, the following future work categories will immediately commence:

- **Feasibility Study** on the basis of an open pit mining and third party toll treatment operation, although the scope may change depending on the results of further exploration drilling at the Project;
- **Resource Expansion drilling programs** – Maiden exploration drilling programs at the Dinner Creek Lode and Resource extension drilling programs at the Steam Engine and Eastern Ridge Lodes (Figure 5);
- **Further metallurgical testwork and studies** aimed at improving gold recovery;
- **Detailed analysis of alternative operational pathways**, including standalone processing operations and high grade mining scenarios;
- **Regulatory approvals processes**, including native title, environmental and cultural heritage;
- **Mining lease application**; and
- **Commercial negotiations** regarding third party toll treatment and road haulage.

In particular, the Company's priority objective is to fast-track drilling programs aimed at expanding the existing Mineral Resource. Indications from the Scoping Study are that a standalone treatment and processing operation will return an economic outcome similar to the base case proposal. Assuming the key parameters continue to apply, a modest increase in total Mineral Resources is likely to provide significant justification for a standalone operation, which would then substantially improve the Project economics and returns.

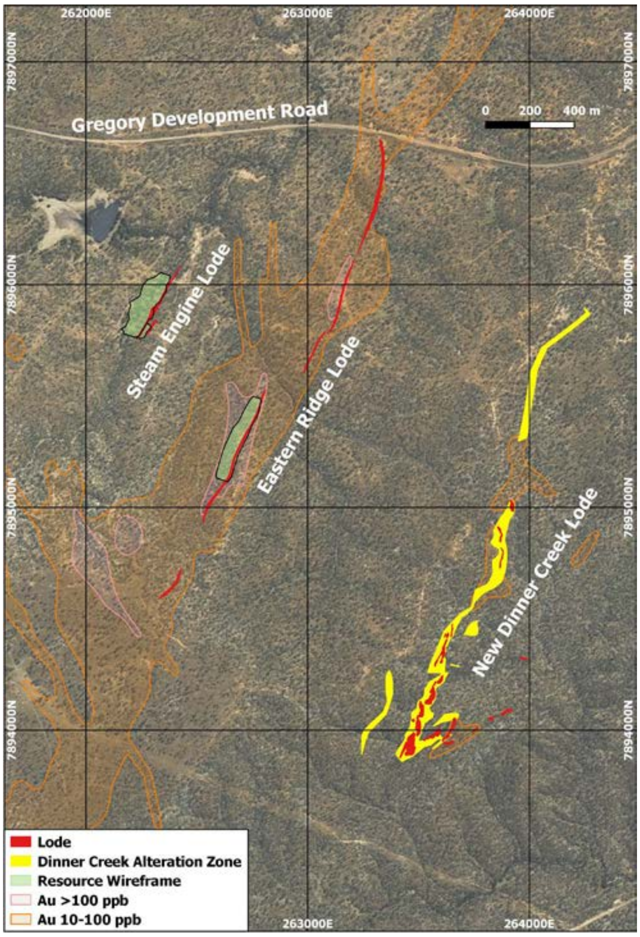

Figure 5. Steam Engine Gold Deposit lodes (in red and yellow) on satellite imagery. The May 2020 Mineral Resource wireframes (in light green) and gold soil geochemistry are also shown.

About Superior Resources

Superior Resources Limited (ASX:SPQ) is an Australian public company exploring for large lead-zinc-silver, copper, gold and nickel-copper-cobalt deposits in northern Queensland which have the potential to return maximum value growth for shareholders. The Company has a dominant exploration position within the Carpentaria Zinc Province, one of the world's richest mineral producing regions and is focused on multiple Tier-1 equivalent exploration targets.

Reporting of Mineral Resources: *Information contained in this report that relates to Mineral Resources is based on information compiled by Mr Kevin Richter, an employee of Superior Resources Limited, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Richter has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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 Richter consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

Reliance on previously reported information: *In respect of references contained in this report to previously reported Exploration Results or Mineral Resources, Superior confirms that it is not aware of any new information or data that materially affects the information, results or conclusions contained in the original reported document. In respect of previously reported Mineral Resource estimates, all originally reported material assumptions and technical parameters underpinning the estimates continue to apply and have not been materially changed or qualified. The form and context in which the relevant Competent Person's findings are presented have not been materially modified from the original document.*

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APPENDIX 1

STEAM ENGINE GOLD PROJECT
SCOPING STUDY

CONTEXT OF STUDY SUMMARY

The evaluation of the Steam Engine Project is at a Scoping level and covers all aspects of developing and operating open pit mines to extract gold bearing ore from the Steam Engine project area, transporting the ore to a suitable processing facility and toll treating the ore through that facility. The study uses the updated Mineral Resource as reported by Superior Resources on 22nd March 2021 incorporating the recently completed Stage 1 and Stage 2 drilling programs completed in 2020.

Throughout this report, units of measure are typically metric, and all currency references are in Australian dollars.

This Summary Study report is a summarised version of the full scoping study for inclusion by SPQ in an ASX announcement. The full study contains more discussion on many aspects of the project particularly in options that have been assessed and risks and opportunities identified. The full scoping study has been provided to Superior Resources Limited for internal use.

This Summary Report and the full Scoping Study Report were prepared by Metcor Pty Ltd at the request of Superior Resources Limited. The statements, technical information and recommendations contained herein are believed to be accurate at the time of writing and all reasonable care has been taken to ensure this, some information in this report has been provided by others and therefore Metcor Pty Ltd can not completely warrant or guarantee the accuracy of the information contained herein.

The user is cautioned that the underlying assumptions and inputs may change over time and the report and any recommendations made should be viewed and used in this context. The user should ensure that the assumptions and inputs remain valid.

Metcor Pty Ltd expressly disclaims any and all liability to the fullest extent possible from any use of this report by any third party for whatever purpose.

1 Project Location / Background

The Steam Engine Project, the basis for this scoping study, lies around 30 kilometres west of the township of Greenvale, which in turn is around 220 km from Townsville. The Steam Engine deposit is one of a number of prospects within the broader Greenvale Project tenements held by Superior Resources Limited (SPQ), an ASX-listed junior Queensland focussed base metals, battery metals and gold explorer based in Brisbane. Steam Engine lies within Exploration Permit for Minerals (EPM) 26165 "Cockie South".

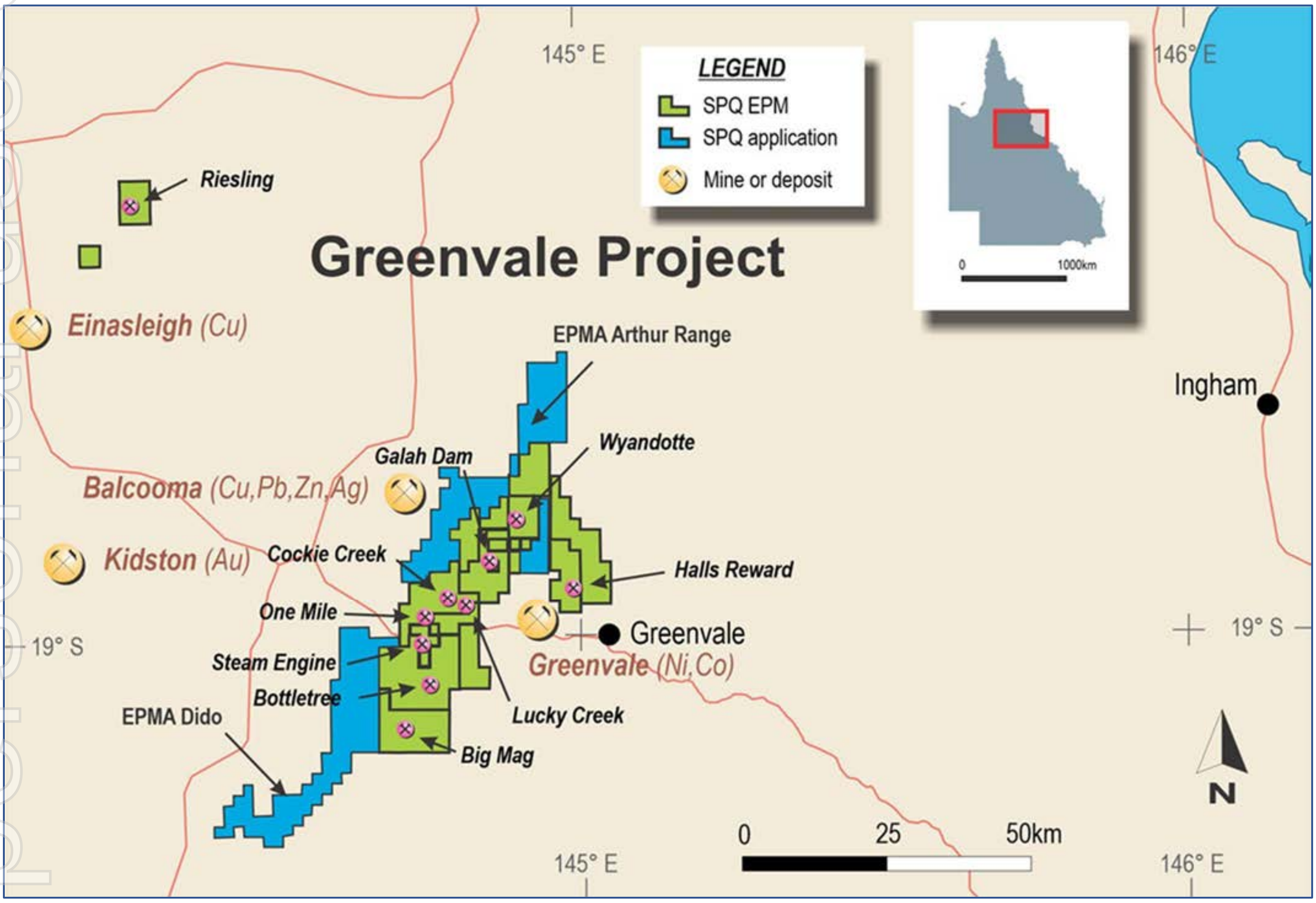

Figure 1: Location of Steam Engine Deposit

Previous exploration on and around the project site has been predominantly for Volcanogenic Massive Sulphides (VMS) style deposits which typically contain a range of base metals and gold. In recent years, some work has been completed on porphyry copper targets along with some limited exploration work targeting other massive sulphide targets in the area.

Prior exploration on the project has been undertaken by a number of companies since the first tenement was granted in 1959 before Superior Resources Limited took over ownership in 2016 and since then have undertaken drilling programs during 2017 and 2020 to better delineate the resource, improve the confidence in the resource and extend the resource at the edges and at depth.

2 GEOLOGY

2.1 GEOLOGICAL CONTEXT

The Greenvale Project lies within a belt of metamorphosed volcanic and sedimentary rocks of probable Cambro-Ordovician age. The units are broadly equivalent, but slightly younger than metavolcanic and metasedimentary rocks in the Balcooma area (Balcooma Metavolcanic Group) and volcanic and sedimentary rocks south of Charters Towers (Mount Windsor Volcanics).

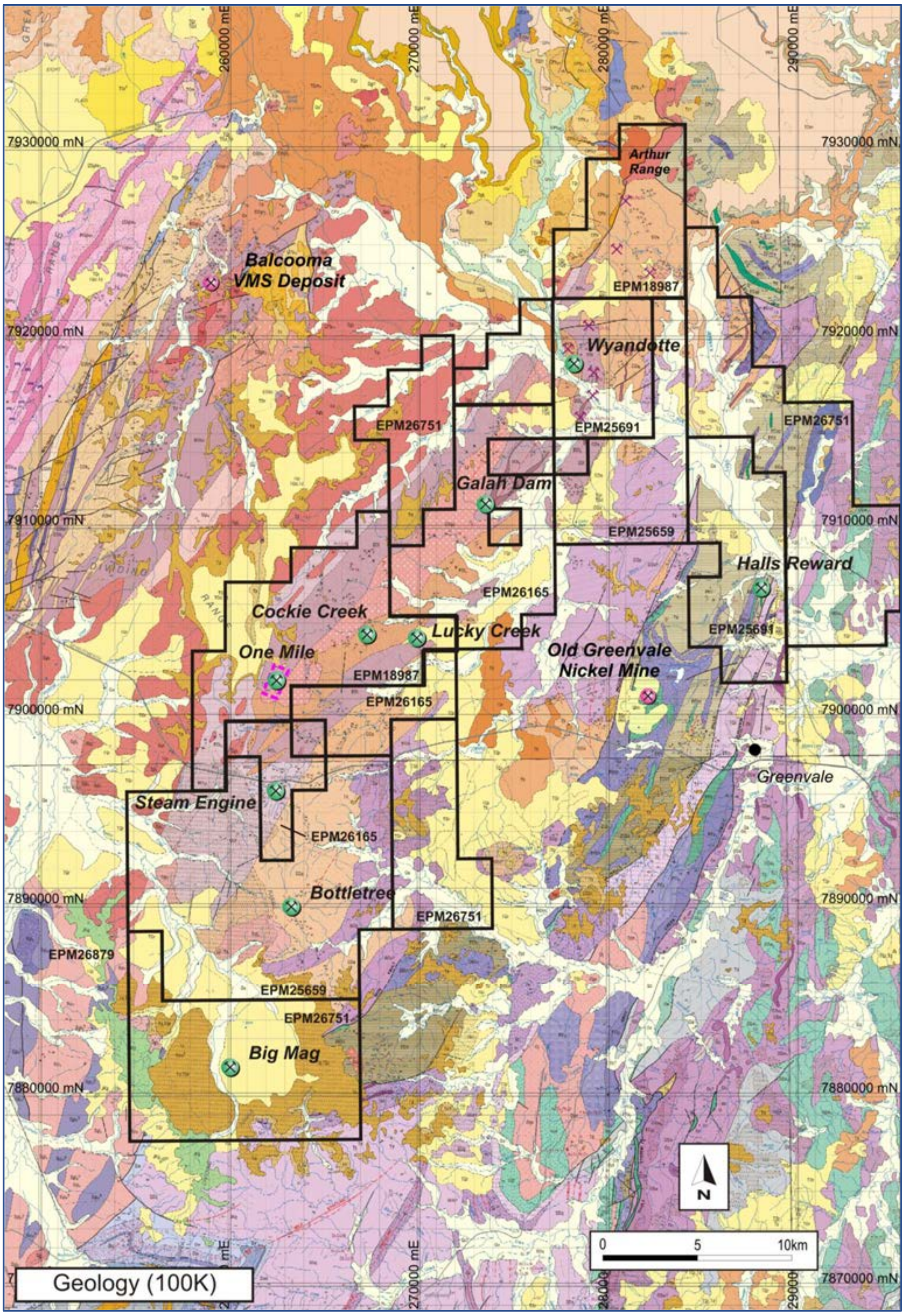

Figure 2: Greenvale Project - Regional Geology

The area west of Greenvale township, the Lucky Creek Domain contains metamorphosed primitive mantle derived intrusives, volcanics and related sediments with low levels of uranium, thorium and lead. It is likely that some of the serpentinised ultramafic rocks of the Greenvale area are part of a sea floor volcanic / sedimentary package rather than injected or intruded rocks. The available limited lead isotope data for the Lucky Creek Domain reflects this difference and in fact shows that the Lucky Creek Domain is probably a distant northern extension of the central New South Wales Ordovician porphyry copper belt.

2.2 STEAM ENGINE DEPOSIT

A number of gold bearing lodes occur in the area, of which the Steam Engine lode is the most notable. The Steam Engine lode has a known surface strike length of approximately 600 metres and is open along strike to the north and down dip. The Eastern Ridge lode is located some 500 metres eastwards of the Steam Engine lode. The Eastern Ridge lode has a surface strike length of approximately 1,400 metres and is open in all directions.

The gold bearing lode zones are located within a shear zone and show strong continuity and a persistent dip to the west, the Steam Engine lode typically dips around 50° to 60° to the west. The Eastern Ridge lode typically dips at around 40° to 50° to the west.

The lodes are typically interpreted as being of the mesothermal vein type. The lodes are essentially mineralised shear zones comprised of pyrite-quartz-muscovite-carbonate schist within amphibolite, metasediment and / or metatonalite. A small area of gold mineralisation occurs between and south of these two lodes and this is referred to as the Southern Zone. The interpreted geology along with the location of drill holes is shown in Figure 3.

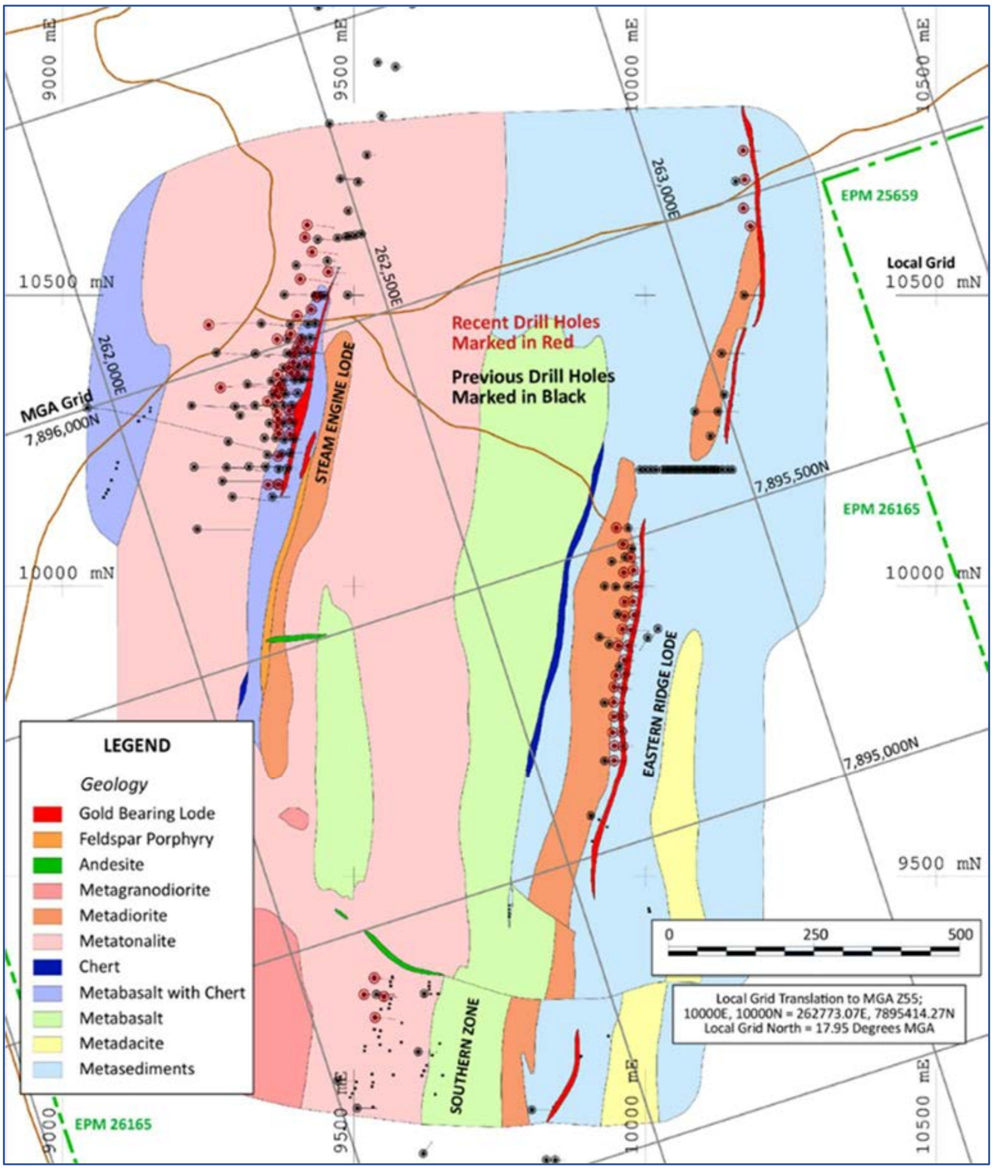

Figure 3: Steam Engine Interpreted Geology

Total drilling carried out on the Steam Engine and Eastern Ridge lode zones as at April 2021 has included 196 holes for 13,164 metres of drilling. This total includes recent as well as historical reverse circulation and diamond core drill holes but excludes RAB holes. Of this the Steam Engine lode has had 17 diamond core holes and 117 reverse circulation holes for a total of 10,082 metres of drilling; and the Eastern Ridge lode has had 3 diamond core holes and 59 reverse circulation holes for a total of 3,082 metres of drilling.

Detailed cross sections through the Steam Engine lodes are shown in the full Scoping Study.

2.3 Mineral Resource

The 2020 drilling programs have served to validate both the prior drilling assays and the location of the mineralised areas. All of the drilling assays and data up to the completion of the Stage 2 program along with the drill hole geology, surface geology and geological interpretations have been used to make sectional interpretations of all zones of mineralisation displaying good continuity, which included the main

Steam Engine mineralisation, a portion of the Steam Engine footwall zone, and a portion of the Eastern Ridge mineralisation.

The Stage 1 drilling from 2020 allowed the Steam Engine lode to be extended further to the north due to additional drilling in this area and the greater detail at the Eastern Ridge lode allowed a fault zone to be interpreted. The Stage 2 drilling was a combination of exploration aimed at increasing the mineral resource and further infill drilling aimed at increasing measured and indicated resources. This drilling contained two intersections each containing a very high gold assay metre interval (1m at 135 g/t from hole SRC076 and 1m at 184 g/t from hole SRC077) suggesting the existence of one or more high grade gold shoots.

The sectional interpretations have then been used to form three-dimensional wireframe models of the gold mineralisation and finally block models have been developed to estimate the gold resources by respective classifications. The Stage 1 and Stage 2 drilling from 2020 have improved the confidence in the resource significantly, the increased density of drilling data available has reduced the uncertainty in the 3D interpretation and allowed material to be moved from inferred to indicated and some material to now be classified as measured.

A total indicated and inferred resource of 1.7 million tonnes at 2.2 g/t gold with 122 kozs of gold was estimated, increasing from the 1.3 million tonnes at 2.3 g/t gold with 94 kozs of gold reported in May 2020. This resource is predominantly based around the Steam Engine lode zone. This updated Mineral Resource estimate is based on the data available and the block model as at March 2021 and was reported officially on the 22nd March 2021. This Mineral Resource tonnage and grade is the basis for this scoping study.

Table 1: Steam Engine Classification of Mineral Resource as Reported in March 2021

Classification	Cut Off Grade – g/t	Tonnes	Gold Grade – g/t	Gold Metal - oz
Steam Engine – Main Zone				
Measured	0.5	240,000	2.6	20,000
Indicated	0.5	405,000	2.7	35,000
Inferred	0.5	620,000	2.0	40,000
Sub Total		**1,265,000**	**2.3**	**95,000**
Steam Engine – Footwall Zone				
Indicated	0.5	60,000	1.8	3,000
Inferred	0.5	110,000	1.6	6,000
Sub Total		**170,000**	**1.6**	**9,000**
Eastern Ridge				
Indicated	0.5	145,000	2.0	9,000
Inferred	0.5	150,000	1.9	9,000
Sub Total		**295,000**	**1.9**	**18,000**
Overall Deposit				
Measured		240,000	2.6	20,000
Indicated		610,000	2.4	47,000
Inferred		880,000	1.9	55,000
Total		**1,730,000**	**2.2**	**122,000**

The wire frame for the Steam Engine lode is shown in Figure 4 as a three-dimensional view looking to the north west, while that for Eastern Ridge is shown in Figure 5 looking to the south west.

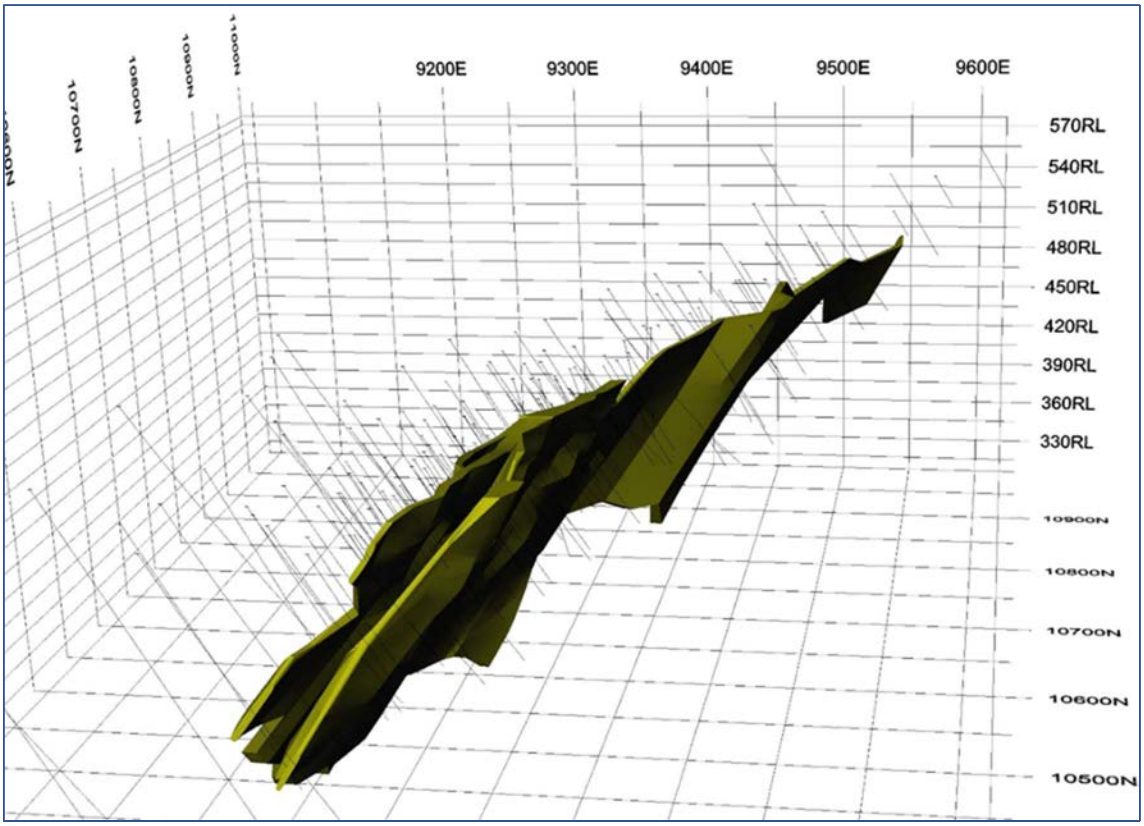

Figure 4: Steam Engine Wire Frame Looking North West

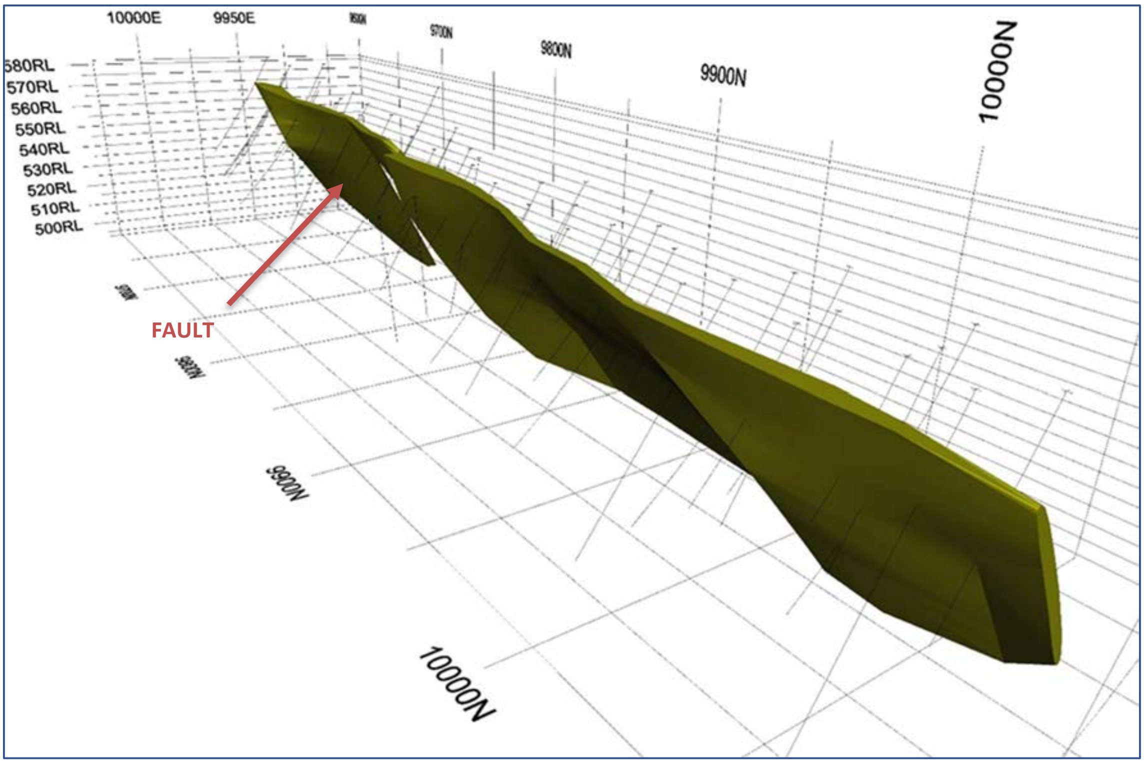

Figure 5: Eastern Ridge Wireframe Looking South West

The block model for the potential ore in the Steam Engine zone is shown in Figure 6 as a three dimensional view looking from above and to the north. Figure 7 shows the Steam Engine and Eastern Ridge block models with the zone resource classification, the measured and indicated areas are nearer to surface while the inferred areas are generally at the periphery of the known resource and at depth.

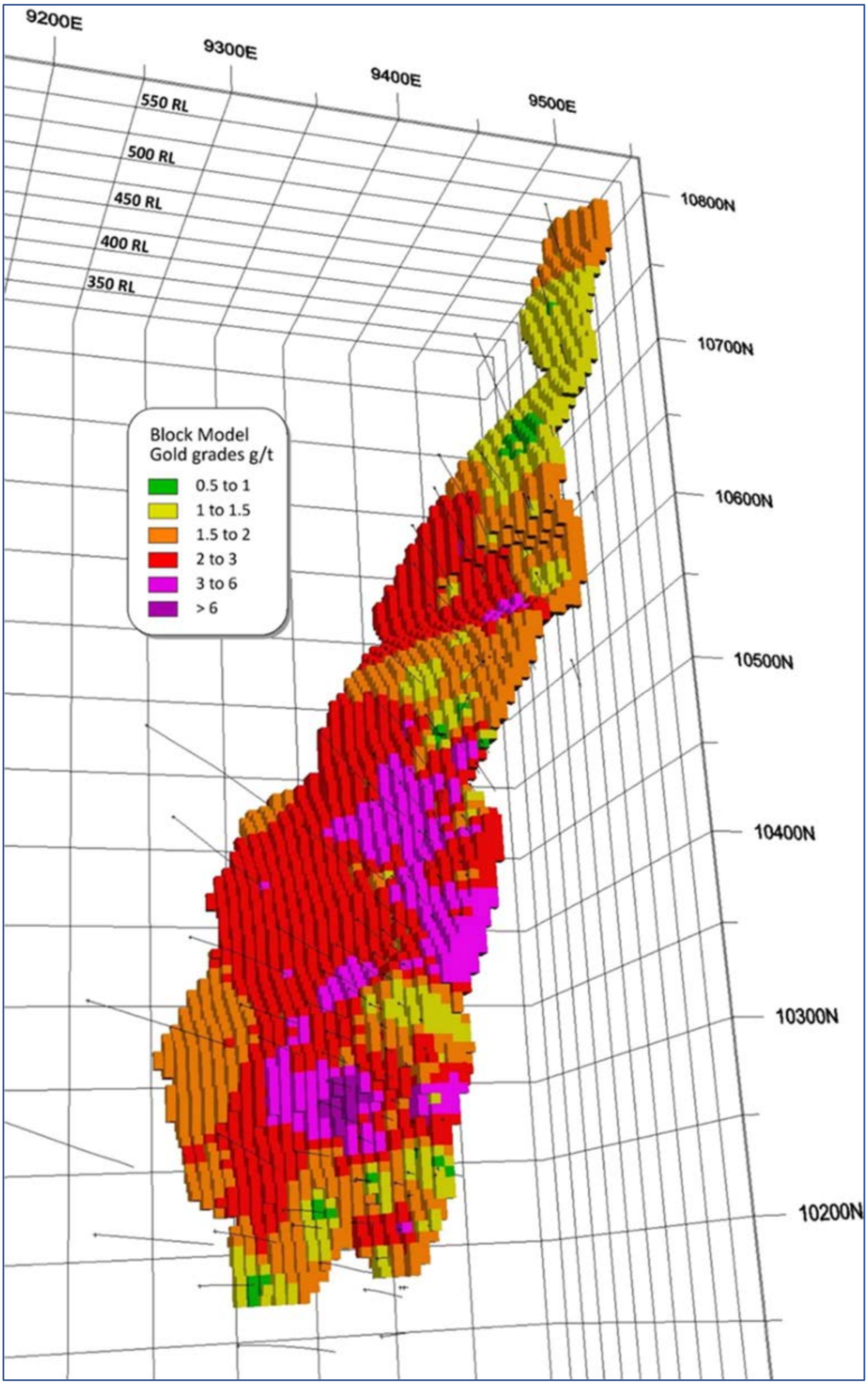

Figure 6: Steam Engine Block Models

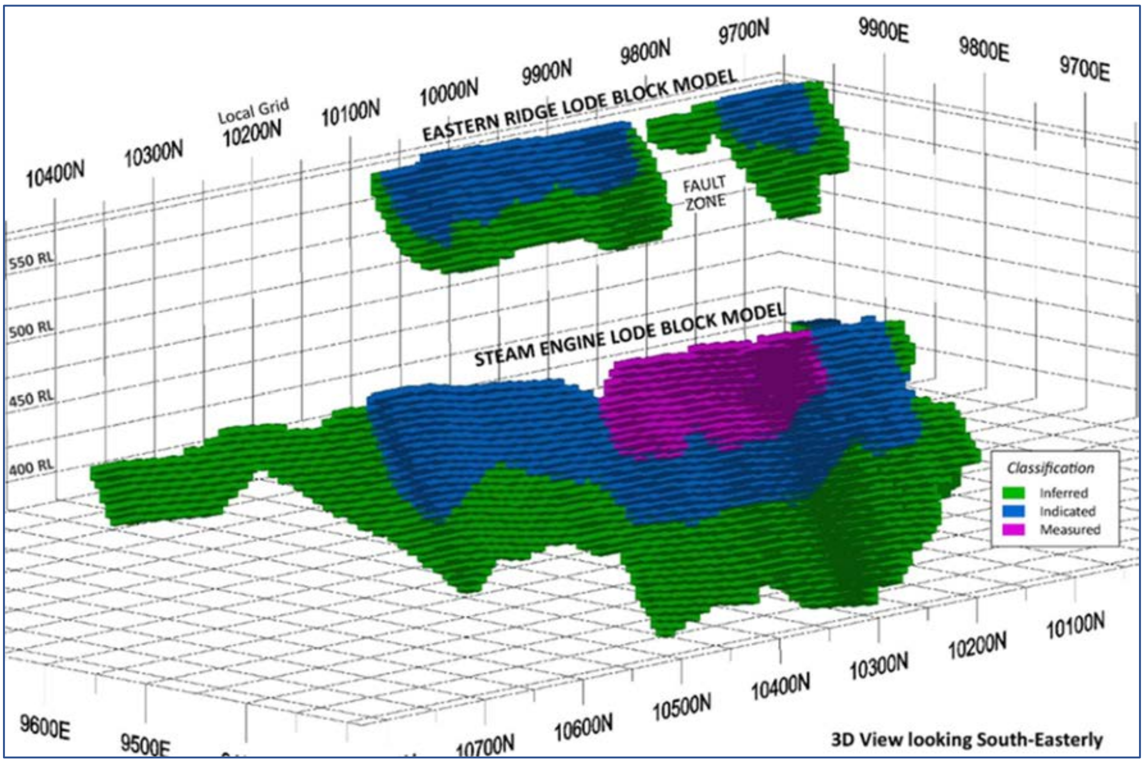

Figure 7: Steam Engine and Eastern Ridge Block Model with Resource Classification

2.4 Potential of Deposit

In its current state, the Steam Engine gold prospect can be described as still somewhat under-explored in terms of its extents and the potential for high-grade gold shoots. Previous work has concentrated on limited exploration areas, targeted largely around the Steam Engine lode itself, along with limited drilling on the Eastern Ridge lode zone. Only recent work has specifically targeted the potential for high-grade ore shoot zones within this mesothermal gold lode system.

Although less drilling information is currently available for Eastern Ridge, it displays a similar pattern of the higher-grade portions as for Steam Engine, reinforcing the concept that the two are most likely linked at depth. The concept of a northwest plunge is further reinforced by the thickest portion of the drilling intersection at the Eastern Ridge lode lying in a south easterly direction from the highest grade portions at Steam Engine. Targeting for an Eastern Ridge lode flexure would then best be targeted along this line also.

Interpretation from the previous drilling indicates that the mineralisation encountered is from the top of a larger ore system. The significantly low levels of silver, lead and zinc for this ore type suggest that the lode mineralisation has only just been exposed at the Steam Engine lode and even less so at the Eastern Ridge lode. The Eastern Ridge lode is more extensive with over 1,400 metres of exposed strike length and at a shallower dip than the Steam Engine lode. This reinforces the assumption that the two lode systems are linked at depth and that the splaying of the lode at a steeper angle at Steam Engine has allowed leakage of material from further down in the vein system to reach the surface sooner than at Eastern Ridge.

The deposit model at the Steam Engine prospect is of an extensive mesothermal gold lode system that has the potential to contain significant high-grade gold shoots that may extend to very significant depths. As a more sheared structure is in evidence here than at many similar lode gold deposits, the Steam Engine prospect includes the added benefit of greater average widths.

2.5 FURTHER DRILLING PROGRAMS

The updated March 2021 Mineral Resource has been modelled on only about one third of at least 2.5 kilometres of strike length of outcropping lode and only modelled to relatively shallow depths. Further drilling on the lodes still has potential to extend the resource as well as further improve the confidence and classification category. Targeting of high grade shoots may see more evidence emerge.

The existence of a new lode system, Dinner Creek, further to the south east has recently been identified. Drilling of this lode is planned to determine if it can add to the total resource.

3 MINING

3.1 PIT DESIGN

Pit Optimisation work has been undertaken on the Steam Engine Project from April 2020 through until March 2021, with the latest optimisation results and mining schedules as used in this study being aligned with the March 2021 reported Mineral Resource.

The block model covers the three known systems; Steam Engine Main, Steam Engine Footwall and Eastern Ridge. The Steam Engine Main and Steam Engine Footwall zones were targeted from the same pit while the Eastern Ridge zone had a standalone pit. Block sizes in the model were 5 x 5 x 5 metres.

Three gold prices were used to show the sensitivity of the pit to the price, these were A$ 2,000, A$ 2,200 and A$ 2,500 per ounce. The steam engine pit is taken in three stages, which in plan view are shown in the figure below.

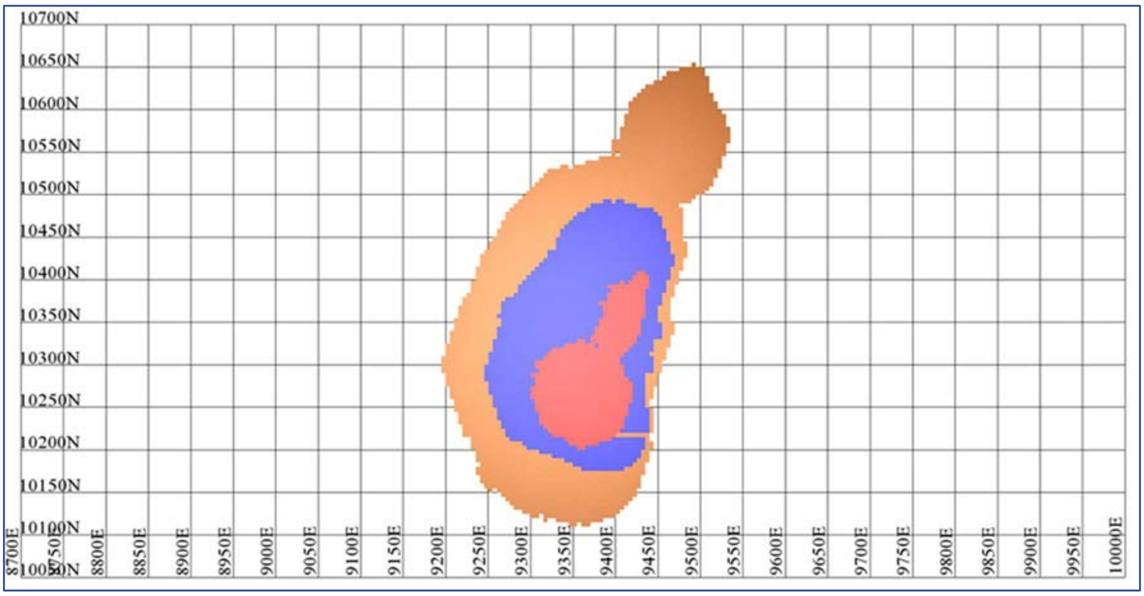

Figure 8: Steam Engine Pit – Plan View of Pit Stages

The final pit shape at the three metal prices studied is shown in plan, 3D and long section view in the three figures below, where the red outline is the A$2,000 final shell, the blue outline is the A$2,200 final shell and the brown outline is the A$2,500 final shell.

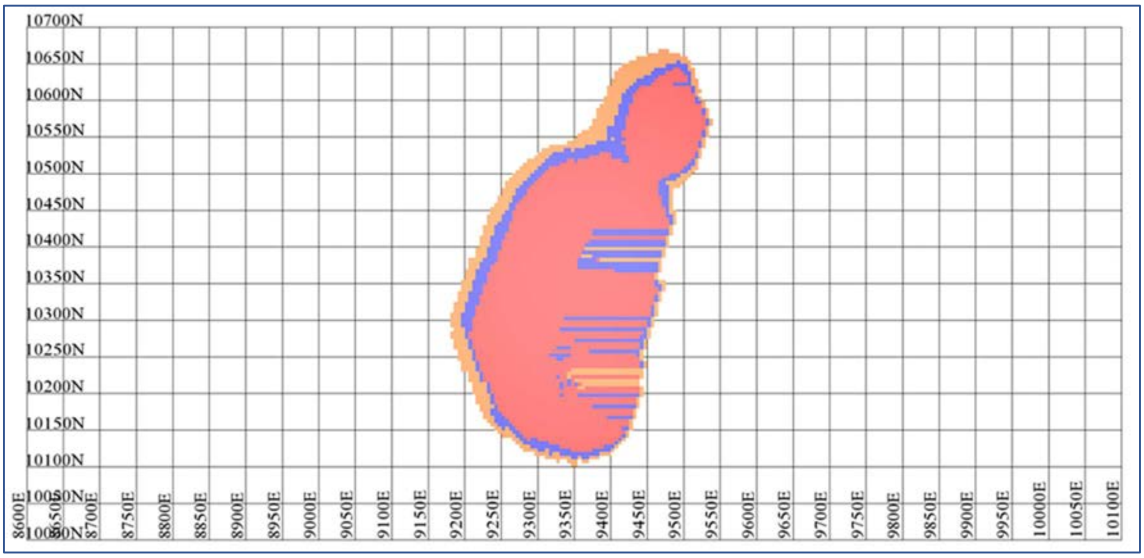

Figure 9: Steam Engine Final Pits at Different Gold Prices – Plan View

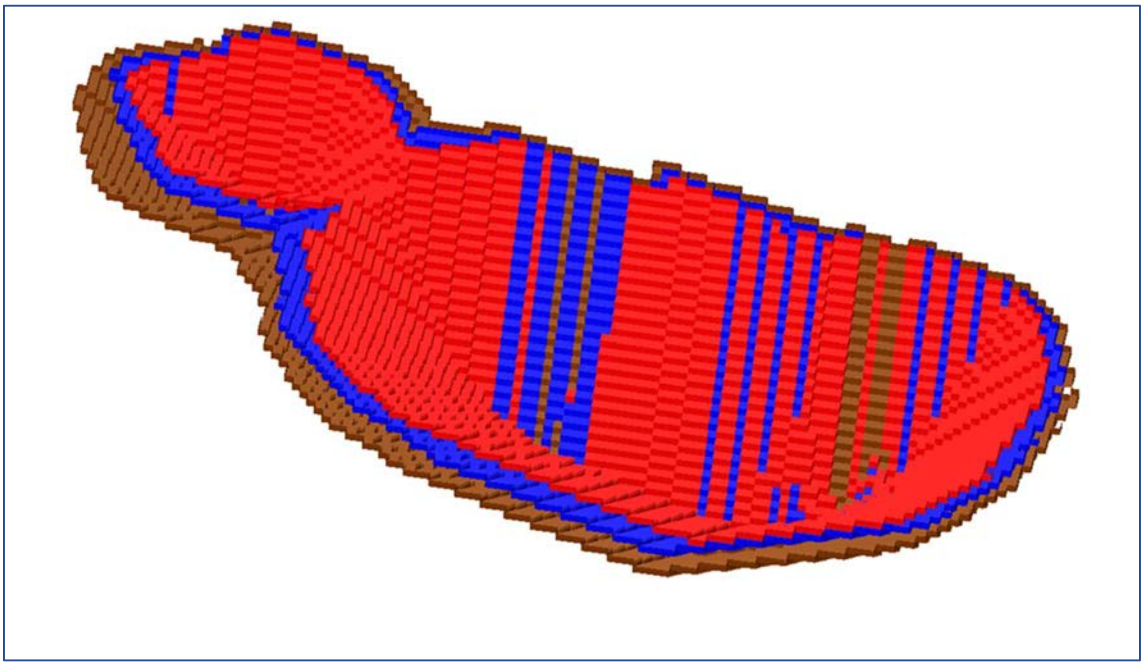

Figure 10: Steam Engine Final Pits at Different Gold Prices – 3D View

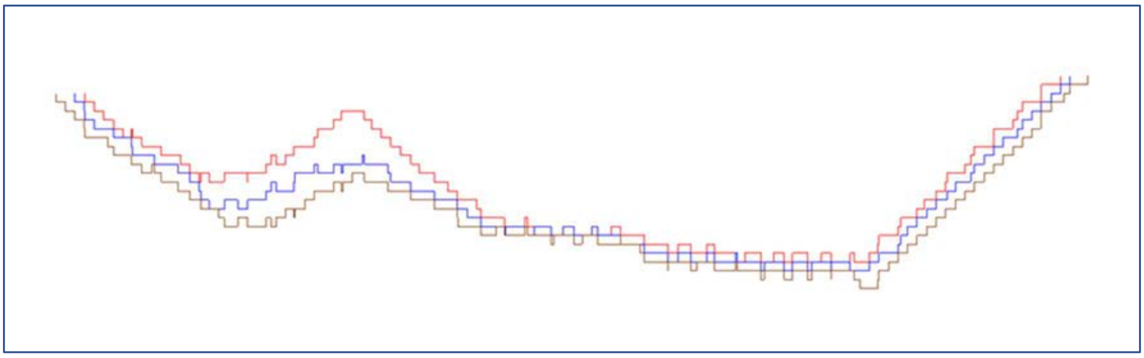

Figure 11: Steam Engine Final Pits at Different Gold Prices – Long Section

The Eastern Ridge deposit is mined by three more distinct pits, again the revenue shells for the three price scenarios are shown in the three images below.

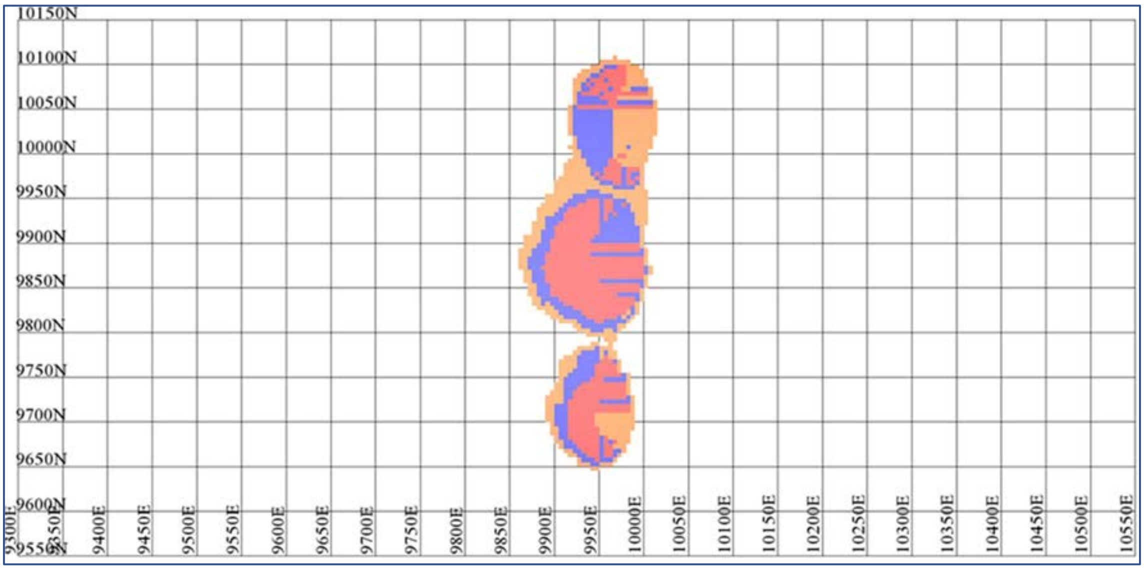

Figure 12: Eastern Ridge Final Pits at Different Gold Prices – Plan View

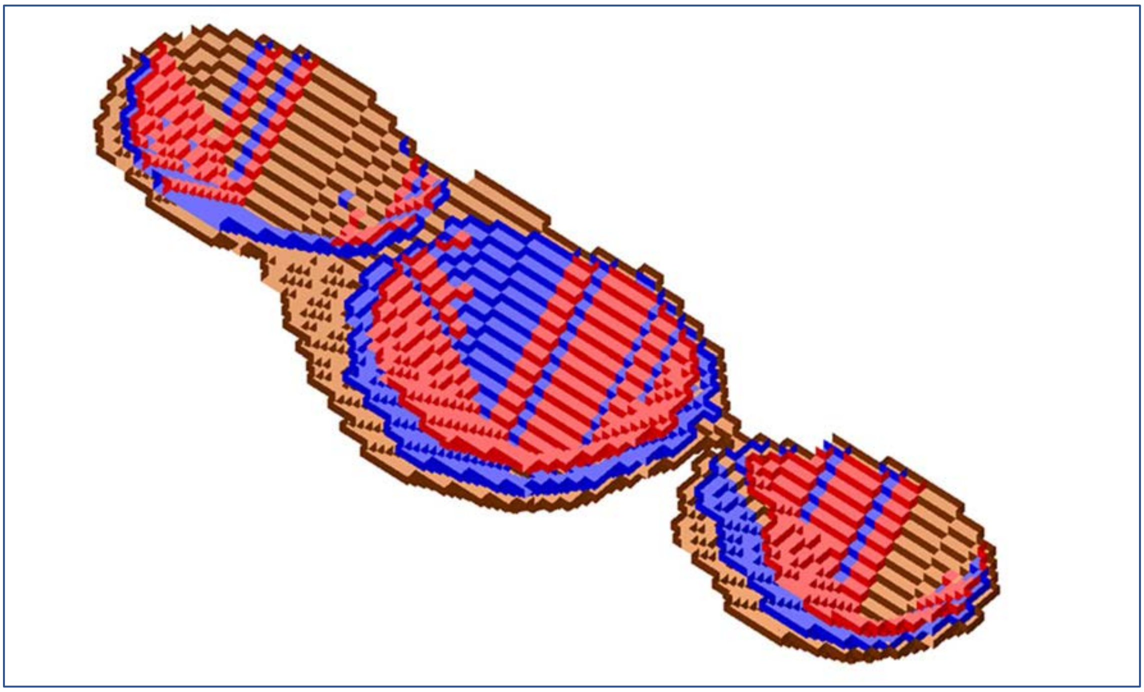

Figure 13: Eastern Ridge Final Pits at Different Gold Prices – 3D View

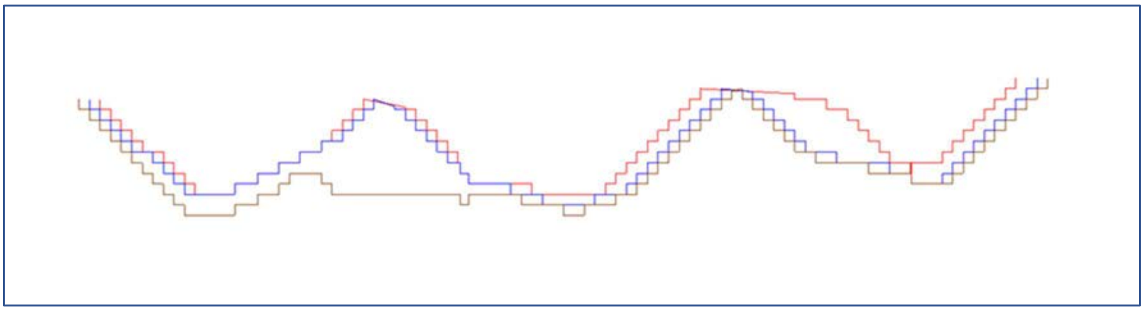

Figure 14: Eastern Ridge Final Pits at Different Gold Prices – Long Section

There is a significant step out in the Eastern Ridge pit going to A$2,500 gold price as the area between the first and second pits becomes economic and is mined. There may be potential to develop underground from the ultimate pits, however this has not been assessed in this scoping study due to a lack of deep drilling data.

3.2 PRODUCTION SCHEDULE

A high level production schedule was generated using the revenue factor 1.00 shells for the A$2,200 price scenario. The mining rates are based on a fleet of 90 t capacity rigid body mining trucks (similar to a Caterpillar 777) paired with an excavator similar to a Komatsu PC1250 in tight areas or a Hitachi EX2500 in more open benches. It is assumed for the purposes of the scoping study that mining would be undertaken by a contractor due to the relatively short duration of mining.

The schedule was developed in monthly periods, a summary of this by quarter is shown below. The schedule prioritises the Steam Engine pits due to their higher grade, mining as three phases to accelerate access to the high grade ore. Once Steam Engine is completed the smaller Eastern Ridge pits are mined. Alternates were examined varying the sequencing of the pits and even overlapping production from the pits (which would require additional mining equipment) with little overall impact on the project economics, hence the base pit schedule has been selected for simplicity.

Table 2: Mining Production Schedule for the A$ 2,200 / oz Pit Shells

Parameter	Unit	Totals	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 5	Quarter 6	Quarter 7
Steam Engine									
Waste Mined	kt	12,607	2,160	2,123	2,182	2,295	2,242	1,605	
Ore Mined	kt	953	177	218	141	46	98	273	
Ore Grade	g / t	2.36	2.71	2.33	2.96	1.70	1.69	2.19	
Ounces Mined	oz	72,195	15,421	16,355	13,408	2,486	5,351	19,175	
Total Tonnes	Kt	13,560	2,338	2,341	2,323	2,341	2,341	1,877	
Eastern Ridge									
Waste Mined	kt	1,921	0	0	0	0	0	402	1,519
Ore Mined	kt	179	0	0	0	0	0	27	151
Ore Grade	g / t	2.06	0	0	0	0	0	2.17	2.04
Ounces Mined	oz	11,812	0	0	0	0	0	1,882	9,930
Total Tonnes	kt	2,100	0	0	0	0	0	429	1,671
Total									
Waste Mined	kt	14,529	2,160	2,123	2,182	2,295	2,242	2,007	1,519
Ore Mined	kt	1,131	177	218	141	46	98	300	151
Ore Grade	g / t	2.31	2.71	2.33	2.96	1.70	1.69	2.19	2.04
Ounces Mined	oz	84,008	15,421	16,355	13,408	2,486	5,351	21,057	9,930
Total Tonnes	kt	15,660	2,338	2,341	2,323	2,341	2,341	2,306	1,671

This mining schedule shows total ore mined of 1,131 kt at an average gold grade of 2.31 g/t. The average strip ratio of both the Eastern Ridge pit and the Steam Engine pit is 12.8.

4 PROCESSING

4.1 METALLURGICAL TESTWORK

Leach testwork has been undertaken in October and November 2020 to confirm the amenability of the ore to conventional CIP / CIL leaching. Six sample composites were generated from drill holes from the early 2020 drilling program, these samples were of ore grade and considered representative of the resource as declared in May 2020. Two samples of each of the three main ore zones were collected. The details of the samples are shown in Table 3.

Table 3: Samples for Metallurgical Testwork

Zone	Drill Hole	Depth M	Interval m	Sample ID	Gold Assay g/t	Cu Assay ppm	As Assay ppm	Fe Assay %	S Assay %
Steam Engine	SRC019	27 – 33	6	5223041	3.6	58	12,800	7.5	3.6
Steam Engine	SRC035	24 – 30	6	5223044	2.2	162	3,900	10.3	3.2
Steam Engine Footwall	SRC031	22 – 26	4	5223042	1.4	199	4,600	8.2	2.3
Steam Engine Footwall	SRC032	40 – 43	3	5223043	2.5	149	8,200	10.2	3.1
Eastern Ridge	SRC039	19 - 25	6	5223045	0.9	70	230	5.5	0.6
Eastern Ridge	SRC043	11 – 19	8	5223046	3.6	101	1,100	5.6	0.1

An immediate observation is that the sulphur assays in the Eastern Ridge samples are significantly lower than those in the Steam Engine samples, the iron assays are also lower. This indicates that more sulphide minerals are present in the Steam Engine lode than Eastern Ridge.

The leach test conditions were as follows:

- Grind size (P80) 75 microns
- Sodium Cyanide Dosage 1.5 kg/t
- Density 40 % solids
- pH 10 – 10.5
- Dissolved Oxygen 15 – 20 ppm

These conditions are typical of CIP / CIL leach circuits. The leach tests were run for 48 hours with a sample taken after 24 hours to assist in understanding the leach kinetics.

The results obtained are as follows. The samples were assayed by ALS for gold, this differs from the sample assay from the drilling program shown above. The head assay was then also back calculated from the leach residue and the leach solution assays to provide a check on the validity of the test results, all of these check calculations were as expected.

Table 4: Metallurgical Testwork Results

Zone	Sample ID	Gold Head Grade g/t		Gold Extraction %		Gold Tail Grade g/t	Reagents kg/t	
		Assayed	Calculated	24 hours	48 hours		NaCN	Lime
Steam Engine	5223041	3.8	3.9	63	67	1.3	0.67	0.70
Steam Engine	5223044	2.5	2.9	84	82	0.52	0.70	0.79
Steam Engine Footwall	5223042	1.3	1.8	70	80	0.36	0.63	0.64
Steam Engine Footwall	5223043	3.0	2.8	72	73	0.76	0.63	0.56
Eastern Ridge	5223045	1.0	1.3	97	97	0.04	0.48	0.82
Eastern Ridge	5223046	2.9	3.1	96	98	0.08	0.52	1.3

(Note that the calculated extraction for sample 5223044 drops from 24 to 48 hours, this is due to the 48 hour solution assay being lower than the 24 hour assay – 1.56 g/t versus 1.59 g/t – this is just a slight discrepancy in assaying and it can only be concluded that no additional gold was extracted from 24 to 48 hours and the reported extraction should be the same).

The results for the Eastern Ridge samples (5223045 and 5223046) were excellent with 97 and 98 percent of the gold being extracted respectively, and with virtually all of this extracted after 24 hours. The results for the Steam Engine lode were not as good with the average grade samples (5223044, 5223042 and 5223043) seeing total gold extraction of 84, 80 and 73 percent respectively. The highest grade sample showed lower gold extraction at 67 percent. From Table 3 it can be seen that this sample also had the highest sulphur grade indicating that in some areas of the Steam Engine lode, some of the gold may be present with sulphide minerals, most likely pyrite and arsenopyrite. The potential association with arsenopyrite is supported by the relatively high arsenic assay of this sample. The relationships with gold grade and gold recovery versus arsenic content are shown in Figure 15. Note that for the gold grade relationship, only the four Steam Engine samples are shown as the Eastern Ridge samples showed a different pattern. It can be seen that there is a relatively strong association with each. In the Steam Engine deposit, the gold grade tends to increase with increasing arsenic content and in all samples the gold recovery decreases with increasing arsenic content.

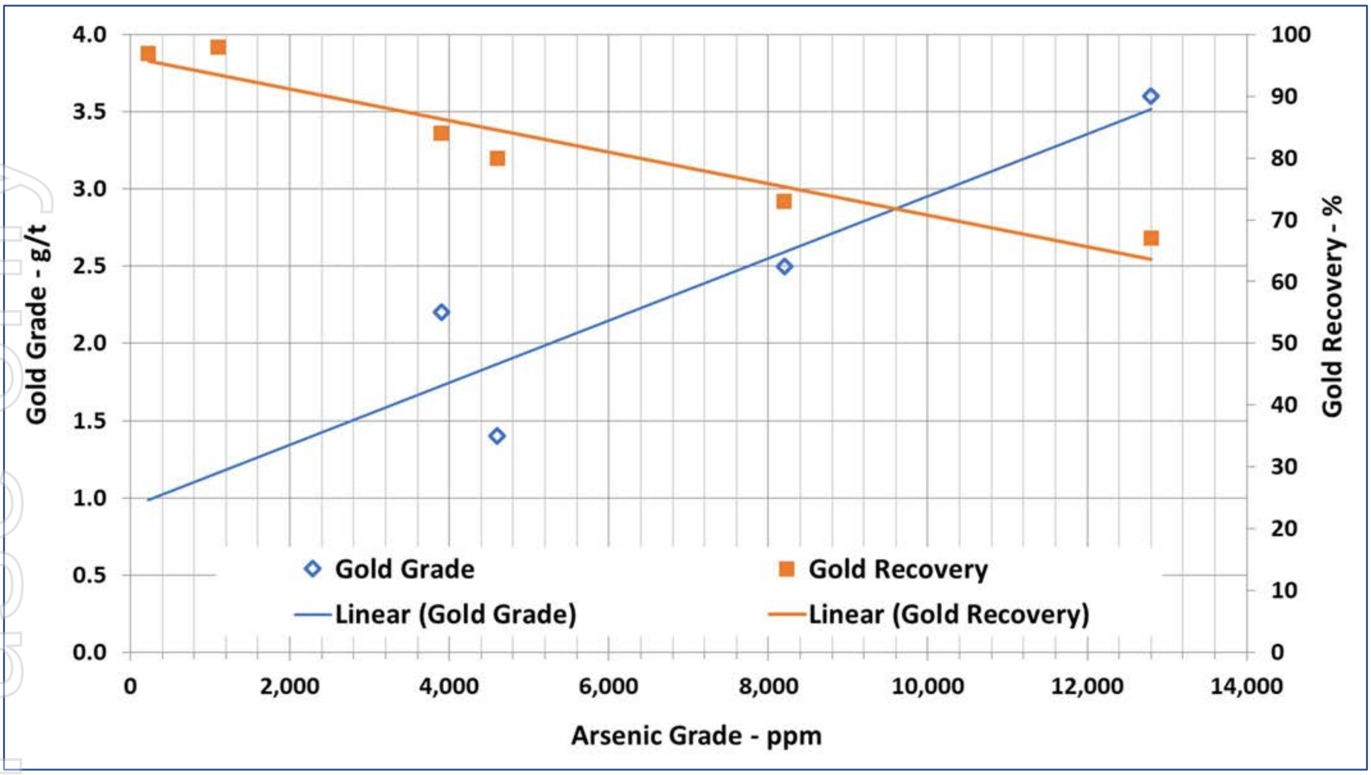

Figure 15: Association of Gold Grade and Gold Recovery versus Arsenic Grade

Recent petrographic observation of similar samples confirms the conclusions that a portion of the gold in the Steam Engine deposit is associated with arsenopyrite. This is usually described as some of the gold being in solid solution – within the crystal lattice – of the arsenopyrite and therefore refractory in nature and not fully amenable to recovery by traditional cyanide leaching. Options to increase recovery on refractory ores are to utilise a process that breaks down the pyrite and arsenopyrite further, by ultra fine grinding or by roasting or pressure oxidising the ore.

At this stage, no testwork has been done to investigate options to improve the gold recovery in the higher arsenic content Steam Engine samples. It stands to reason that recoveries could be improved above the results seen in these sighter tests, however if the gold not recovered is indeed refractory then the opportunity for significant recovery gains using gravity or cyanide leaching may be limited.

4.2 Recovery Estimates

On the basis of the relatively limited testwork to date, the recovery predictions for Steam Engine ore and Eastern Ridge ore respectively (used in subsequent financial evaluation) are 82 and 95 percent, recognising that there may be scope for some improvement in gold recovery in further testwork on the Steam Engine ore and through blending and targeting of low arsenopyrite material.

4.3 Ore Haulage

The ore would be hauled from the Steam Engine project site to a suitable processing plant for toll treatment. It is envisaged that a haulage contractor would be utilised for this work. The production schedule indicates that the average ore production rate from the project is around 50,000 tonnes per month and this value has been chosen as the capacity required in the haulage fleet. The largest capacity trucks that could be used on the route chosen would be selected, it has been assumed that these would be Type 2 road trains with ore capacity of around 75 tonnes. A cycle time of 8 hours has also been assumed based on the likely haulage distance to a suitable plant which indicates that the total haulage fleet required by the contractor would be 10 trucks and their associated trailers.

4.4 Toll Treatment

A number of potential toll treatment plants exist in Queensland that could accept ore from the Steam Engine project. General criteria for selection of a suitable plant is:

- Gold processing plants utilising traditional CIP / CIL to leach gold;
- A flowsheet that includes gravity gold recovery equipment would be an advantage;
- Capacity to treat up to 50,000 tonnes per month of additional ore;
- Gold grade of usual ore lower than the gold grade of the Steam Engine ore to provide incentive to preferentially treat Steam Engine ore; and
- Within trucking distance of the project and with suitable existing road linkage.

4.5 Tailings Management

Tailings management would be the responsibility of the toll treatment plant, and the costs to manage and store tailings produced from the Steam Engine ore would be included in the processing charges.

5 INFRASTRUCTURE AND FACILITIES

A proposed site layout with the required site infrastructure in place is provided has been developed and is shown in Figure 16. Details of traffic management, water management, communications, power supply, safety and emergency facilities, environmental monitoring and closure plans are included in the full Scoping Study document.

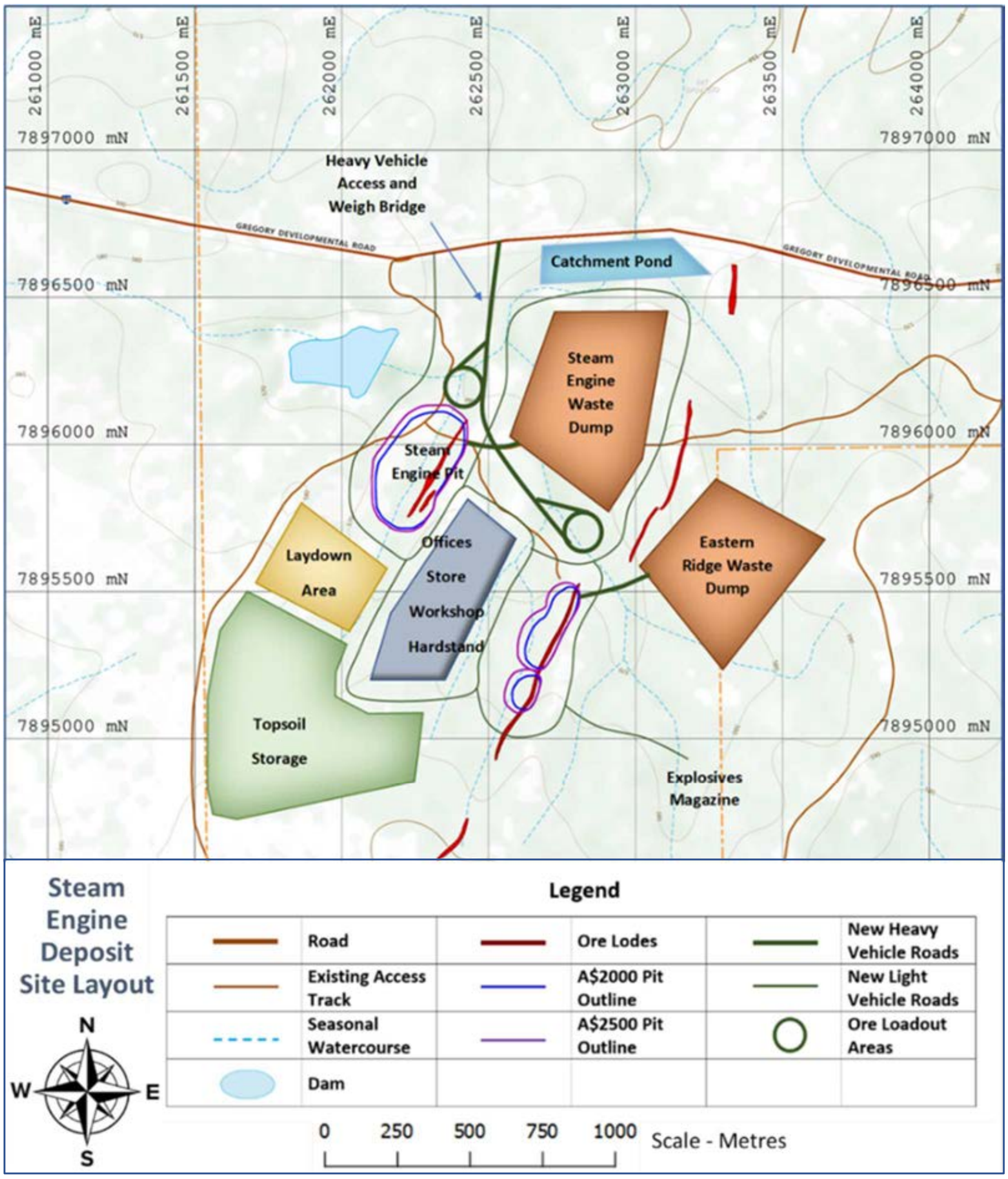

Figure 16: Steam Engine Project Site Layout

6 PROJECT APPROVALS

Details of the project approvals processes and the current status for the required mining lease application, landholder compensation agreement access, native title approval, environmental authority application and cultural heritage clearances are included in the full scoping study.

7 CAPITAL COSTS

A capital cost estimate to develop the project until the point of ore production has been completed at an accuracy level of ± 30 %, generally in line with or better than an AACE Class 5 Estimate Category (Guidelines developed by the Association for the Advancement of Cost Engineering).

The capital costs have been developed line by line based on estimates obtained for this or prior projects. Freight cost is estimated as either a cost per tonne for break bulk goods, a cost per 20' or 40' container or a percentage of the purchase cost for miscellaneous items (such as spares).

The following items are excluded from the cost estimate:

- Sunk costs and costs associated with this and prior studies;
- Cost of pre-feasibility and feasibility studies and associated testwork; and
- Costs for gaining project approvals, these are sunk costs at the time of commencing the project development.

7.1 GROWTH AND CONTINGENCY

Growth and contingency have been applied in line with guidelines for studies of this nature. As this project is at scoping level with a relatively short construction and ramp up duration the cost estimate includes a contingency allowance of 25 %.

7.2 SITE ESTABLISHMENT COSTS

Many of the site establishment costs will likely be the responsibility of the mining contractor and will be included and itemised in the mining contract as mobilisation expenses. These may include:

- Hardstand, laydown and park-up areas;
- Workshop and tyre change facilities;
- Warehousing for mining parts;
- Office, change house and amenities;
- Fuel storage and refuelling facilities;
- Explosives magazine;
- Power supply and water storage;
- Site roads; and
- Environmental control systems.

To allow a more accurate capital cost estimate to be developed – for the purposes of this scoping study all of these items have been costed separately as if they were owner supplied rather than part of a larger and nebulous mobilisation charge. This allows greater transparency in the project costs at this early stage. Future negotiations with the preferred contractor will then define and allocate who is responsible for provision of these and other items and how these will be funded.

7.3 Design Criteria and Key Assumptions

The design criteria and key assumptions used in the development of the capital cost estimate for this scoping study are detailed in Table 5.

Table 5: Capital Cost Key Assumptions

Assumption	Unit	Value	Source
Physical Assumptions			
Depth of Topsoil Stripping	m	0.15	Based on soil type
Perimeter of Mining Area	m	10,000	Estimate
Length of Access Road to Construct	m	5,000	Estimate
Surface Area of Steam Engine Pit	m^2	135,000	Calculation
Surface Area of Steam Engine Waste Dump	m^2	360,000	Calculation
Surface Area of Eastern Ridge Pit	m^2	67,500	Calculation
Surface Area of Eastern Ridge Waste Dump	m^2	90,000	Calculation

7.4 Capital Cost Summary

The cost estimate summary by discipline is shown in Table 6. The same estimate is summarised by cost area in

Table 7. Detail of the capital cost estimate is included in Appendix One of the full Scoping Study.

Table 6: Capital Cost Estimate Summarised by Discipline

Discipline		Materials A$	Labour Cost A$	Growth A$	Freight A$	Total A$
Direct Costs	Civil works	66,600	341,045	81,529	1,460	**490,634**
	Earthworks	19,000	1,064,431	216,686	400	**1,300,517**
	Mechanical Equipment	600,000	44,000	128,800	10,600	**783,400**
	Electrical Installations	133,500	20,740	30,848	378	**185,466**
	Piping	92,200	95,370	37,514	2,510	**227,594**
	Buildings	165,000	41,600	41,320	68,200	**316,120**
	Total Direct Costs	**1,076,300**	**1,607,186**	**536,697**	**83,548**	**3,303,731**
Indirect Costs	Project Management	0	30,000	6,000	0	**36,000**
	Owners Costs	264,028	313,667	110,672	500	**688,867**
	Spares	31,008	0	6,202	0	**37,210**
	Total Indirect Costs	**295,036**	**343,667**	**122,874**	**500**	**762,077**
Sub Total Direct and Indirect Costs		**1,371,336**	**1,950,853**	**659,571**	**84,048**	**4,065,808**
Contingency @ 25 %						**1,016,452**
Total		**1,371,336**	**1,950,853**	**659,571**	**84,048**	**5,082,260**

Table 7: Capital Cost Estimate Summarised by Area with Sub Area Detail

Area	Materials A$	Labour Cost A$	Growth A$	Freight A$	Total A$
100 - Site Preparation	**35,000**	**260,365**	**59,073**	**1,000**	**355,438**
110 - Site Preparation	16,000	103,500	23,900	600	**144,000**
120 - Access Roads	0	40,000	8,000	0	**48,000**
130 - Water Management	19,000	116,865	27,173	400	**163,438**
200 - Mining	**72,000**	**363,971**	**87,194**	**2,000**	**525,165**
210 - Mine Development	72,000	167,620	47,924	2,000	**289,544**
220 - Waste Dump Construction	0	185,678	37,136	0	**222,814**
230 - Drainage	0	10,673	2,135	0	**12,807**
300 - Infrastructure	**779,300**	**185,130**	**192,886**	**79,948**	**1,237,264**
310 - Offices	96,700	18,040	22,948	36,200	**173,888**
320 - Workshop	86,300	55,280	28,316	24,440	**194,336**
330 - Warehouse	11,900	3,810	3,142	8,210	**27,062**
340 - Explosives Magazine	100,400	20,340	24,148	20	**144,908**
350 - Power Generation	**21,800**	**17,680**	**7,896**	**240**	**47,616**
360 - Power Reticulation	2,000	2,040	808	16	**4,864**
370 - Infrastructure General	460,200	67,940	105,628	10,822	**644,590**
400 - Owner's Costs	**485,036**	**1,141,387**	**320,418**	**1,100**	**1,947,941**
430 - Contractor Management	0	430,000	86,000	0	**516,000**
440 - Owner's Overheads	354,028	225,000	115,806	1,100	**695,934**
450 - Capital and Insurance Spares	31,008	0	6,202	0	**37,210**
460 - Provision for Closure	100,000	486,387	112,411	0	**698,797**
Contingency @ 25 %					**1,016,452**
Total	**1,371,336**	**1,950,853**	**659,571**	**84,048**	**5,082,260**

The timing of the expenditure has been classified as either during project development and start-up (A$ 4,058,764) or during closure (A$ 1,023,497) for appropriate treatment in subsequent financial evaluations.

8 Operating Costs

The total operating costs over the life of the project have been estimated, with ± 30 % accuracy. All costs are in Australian dollars.

8.1 Key Operating Cost Assumptions

The key operating cost assumptions are shown in the full scoping study.

The pits are of suitable size for reasonable capacity mining equipment to operate which will assist in keeping the unit costs low. The haulage is via sealed road along the entire route. The haulage distance selected is based on the distances of the potential toll treatment facilities.

The processing costs are based on experience of operating costs of plants similar to those that may be able to undertake the toll treatment, with an allowance for the margin received by the plant owner. Owners costs and corporate overheads are estimated based on the project size.

The mining costs are on the basis of dry tonnes, as are the processing costs, while the haulage tonnes are on the basis of wet tonnes as this is how the payments would be calculated.

8.2 Personnel

The mining contractor will be responsible for the recruitment, training and transportation of their own workforce. It is likely that all contract employees will be locally based or will drive in and drive out using Greenvale as their base.

Superior Resources will have a number of site personnel to supervise the project and the major contracts as well as perform mining engineering and grade control functions. Probable manning levels are shown in the full Scoping Study. Provision for severance for all positions is included in the capital cost estimate during the closure phase.

8.3 Offsite Costs

The offsite costs of doré transport, refining and royalties have been calculated based on the following assumptions. Actual offsite cost terms will be defined by the contracts in place between the toll treatment plant and the refiner.

9 FINANCIAL EVALUATION

The capital and operating cost estimates have been combined with the mining schedule to develop a full production, cost and revenue model for the project. This model takes into consideration all of the estimates and assumptions detailed in the prior sections to develop a physicals schedule for the mining, stockpiling, haulage and processing of ore as well as detail of all on and off site costs and revenue streams for the project. The full model output for the base case is included in Appendix 2 in the full Scoping Study.

9.1 KEY ASSUMPTIONS

Key assumptions that have been used in the development of the model for the project are detailed in Table 8.

Table 8: Financial Evaluation Key Assumptions

Assumption	Unit	Value	Source
Economic Assumptions			
Gold Price	A$ / oz	2,200	Superior
Discount Rate	%	7	Superior
Corporate Tax Rate	%	30	ATO
Physical Assumptions			
Grind P80	microns	75	Estimate
Leach Residence Time	hours	24	Estimate
Gold Recovery from Steam Engine Ore	%	82	Testwork
Gold Recovery from Eastern Ridge Ore	%	95	Testwork
Doré Gold Grade	%	97.5	Estimate
Project Assumptions			
Maximum Haulage and Processing Rates	t / month	50,000	Modelled

9.2 PHYSICAL OUTPUTS OF EVALUATION

The physical outputs of the mining and production schedule are summarised in Table 9.

Table 9: Base Case Physical Outputs

Parameter	Unit	Value
Total Ore	kt	1,131
Ore Gold Grade	g/t	2.31
Overall Gold Recovery	%	84
Gold Produced and Sold	koz	70

Figure 17 shows the ore production profile by month – tonnes mined, hauled and processed and also the gold production (on the secondary axis). The shape of the ore mining profile reflects the mining of the

Steam Engine deposit as three separate phases or cutbacks. This allows early access to high gold grade material and hence brings gold production forward in the production profile. The haulage profile is offset based on ore stockpiling on site while the processing and gold production profiles are further offset with stockpiling at the processing plant. Haulage and therefore processing are constrained by the amount of ore mined and the capacity of the haulage fleet.

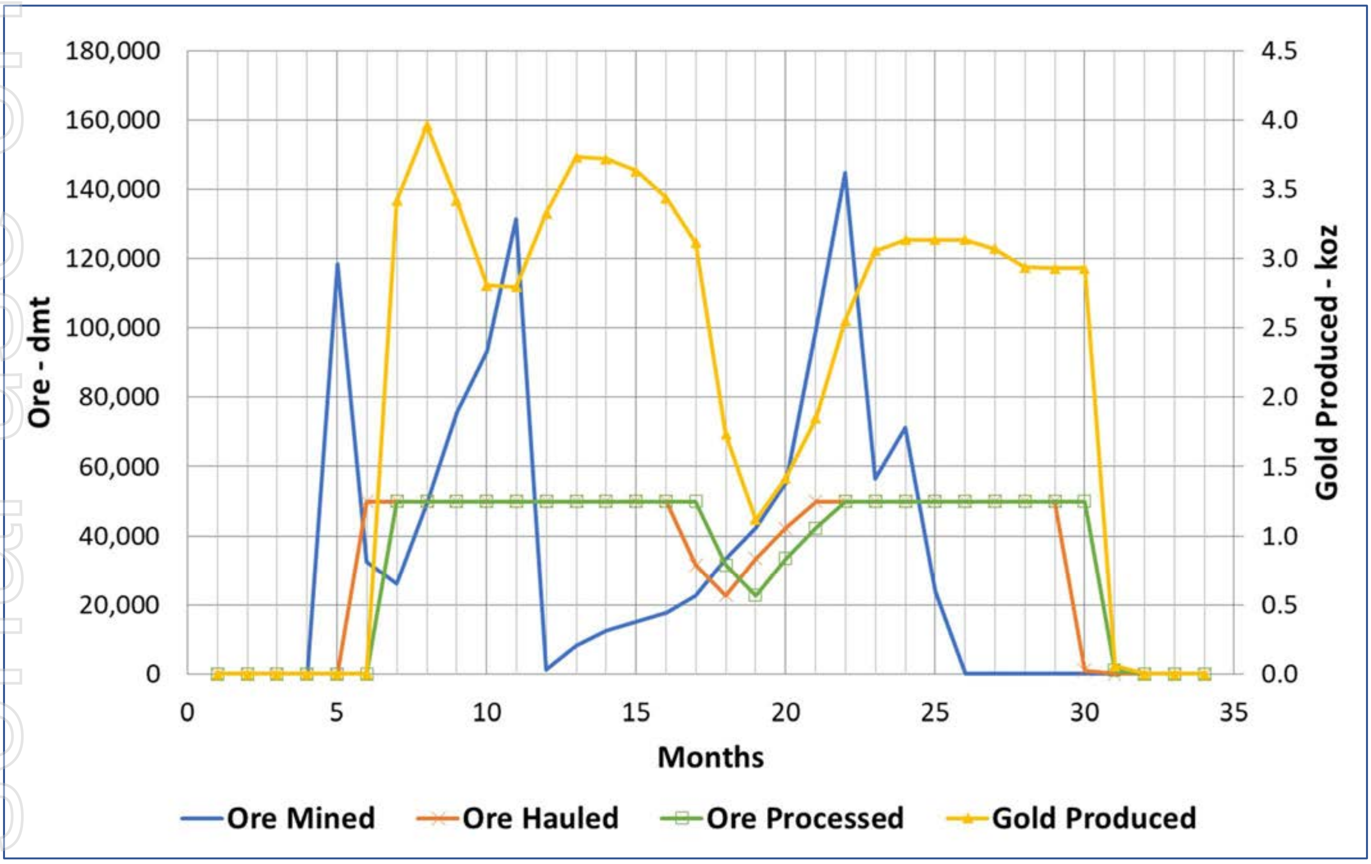

Figure 17: Base Case Production Profile

9.3 FINANCIAL OUTCOMES OF EVALUATION

The base case financial model is included as Appendix 2 of the full Scoping Study, key outcomes are detailed in the summary tables below.

Table 10: Base Case Financial Summary – Pre Tax

Parameter	Unit	Value
Pre Tax Overall Cash Flow	A$ M	32.7
Payback Period	Months	11
Pre Tax NPV	A$ M	28.6
Return on Capital	%	643
Funding Required	A$ M	10.0
Return on Funding	%	327

The funding required is equal to the most negative value of the cumulative cash flow from the financial model, this amount of financial backing is required to meet all expenditure required until the cumulative cash flow starts to become more positive. This funding may be from internal or external sources – the method of securing this funding is not assessed as part of this scoping study.

The same parameters shown on a post tax basis are detailed in Table 11. This assumes that Superior Resources have carried forward losses of A$ 4.25 million at the start of the project.

Table 11: Base Case Financial Summary – Post Tax

Parameter	Unit	Value
Post Tax Overall Cash Flow	A$ M	24.2
Payback Period	Months	11
Post Tax NPV	A$ M	21.2
Return on Capital	%	475
Funding Required	A$ M	10.0
Return on Funding	%	242

The post tax cash flow and cumulative cash flow month by month from the time of project approval are shown below. The cash flow profiles show the initial period of capital expenditure (months 1-4), the commencement of operations with increased costs (months 5-6) and then the commencement of gold production and revenue (month 7). In months 18-21 the amount of waste mining is high but the quantity of ore drops and the gold grade of the processed material is low, therefore cash losses are incurred in this period, exacerbated by the delay in payments for gold produced. The closure costs and final company tax payments are seen at the end of operations.

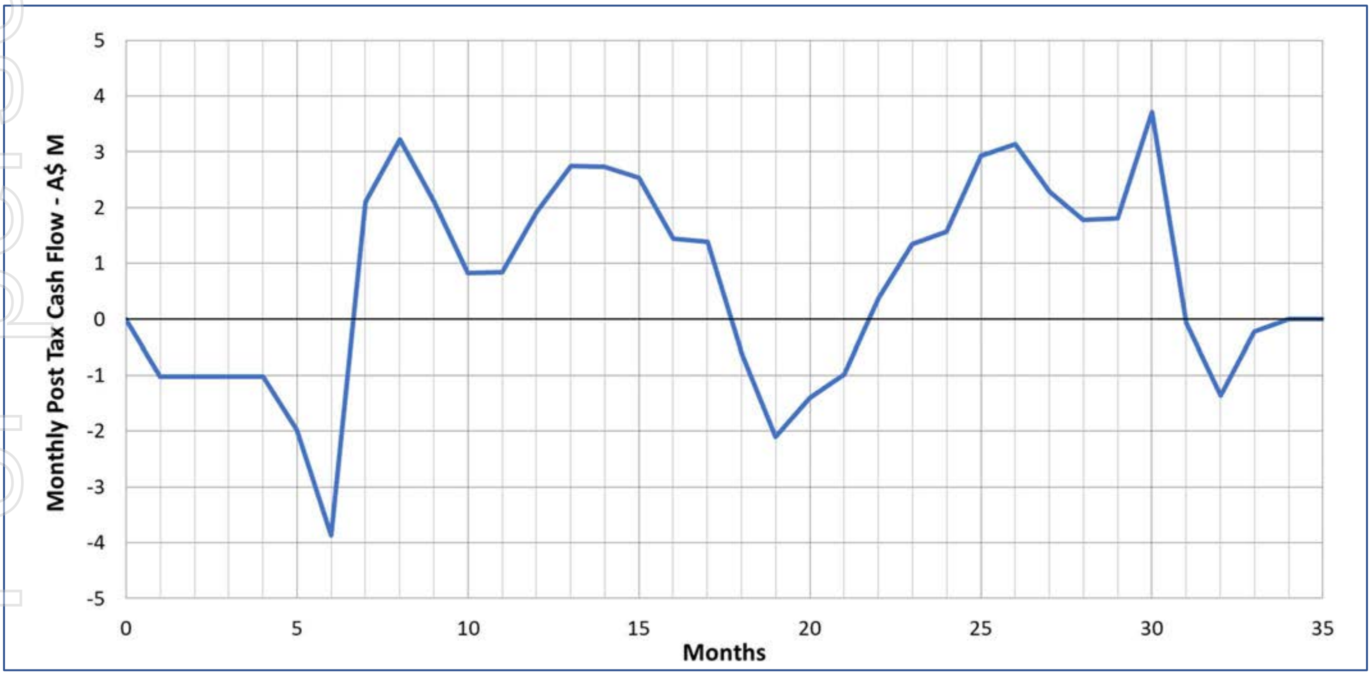

Figure 18: Post Tax Monthly Cash Flow

Figure 19 shows the cumulative post tax cash flow and highlights the funding requirement – the largest negative cumulative cash flow amount, the payback period and the final position.

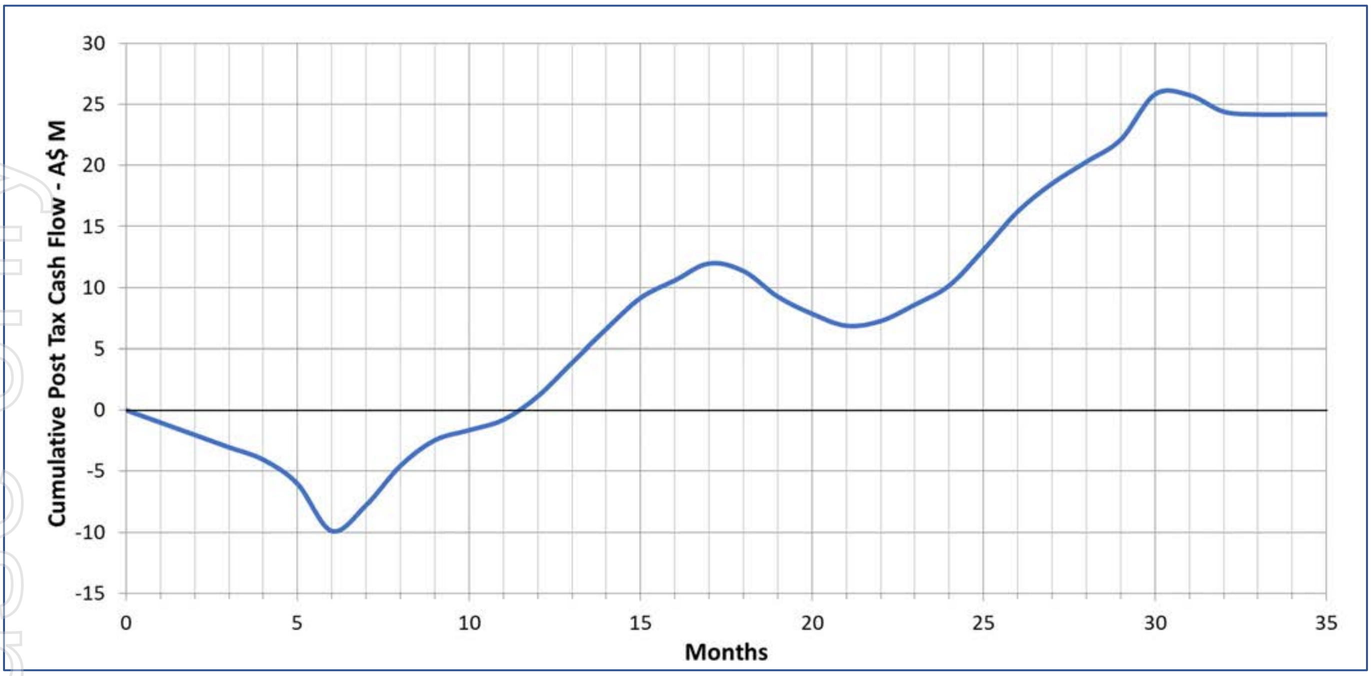

Figure 19: Cumulative Post Tax Cash Flow

The project is robust with the assumptions used in the base case – delivering a post tax total cash flow of A$ 24.2 million, a post tax NPV of A$ 21.2 million and payback in 11 months from the onset of capital expenditure.

10 Sensitivities

The project will be sensitive to a number of the assumptions used. A graph showing the relative magnitude of the sensitivity to key factors is shown in Figure 20, for each parameter the graph shows the pre tax cash flow for ± 15 % change in the parameter. Pre tax cash flow is used as the reported outcome as this is the cleanest output to examine, without impacts of timing, discounting and taxation. The base case pre tax cash flow is A$ 32.7 million. More detail of these sensitivities is shown in the full Scoping Study.

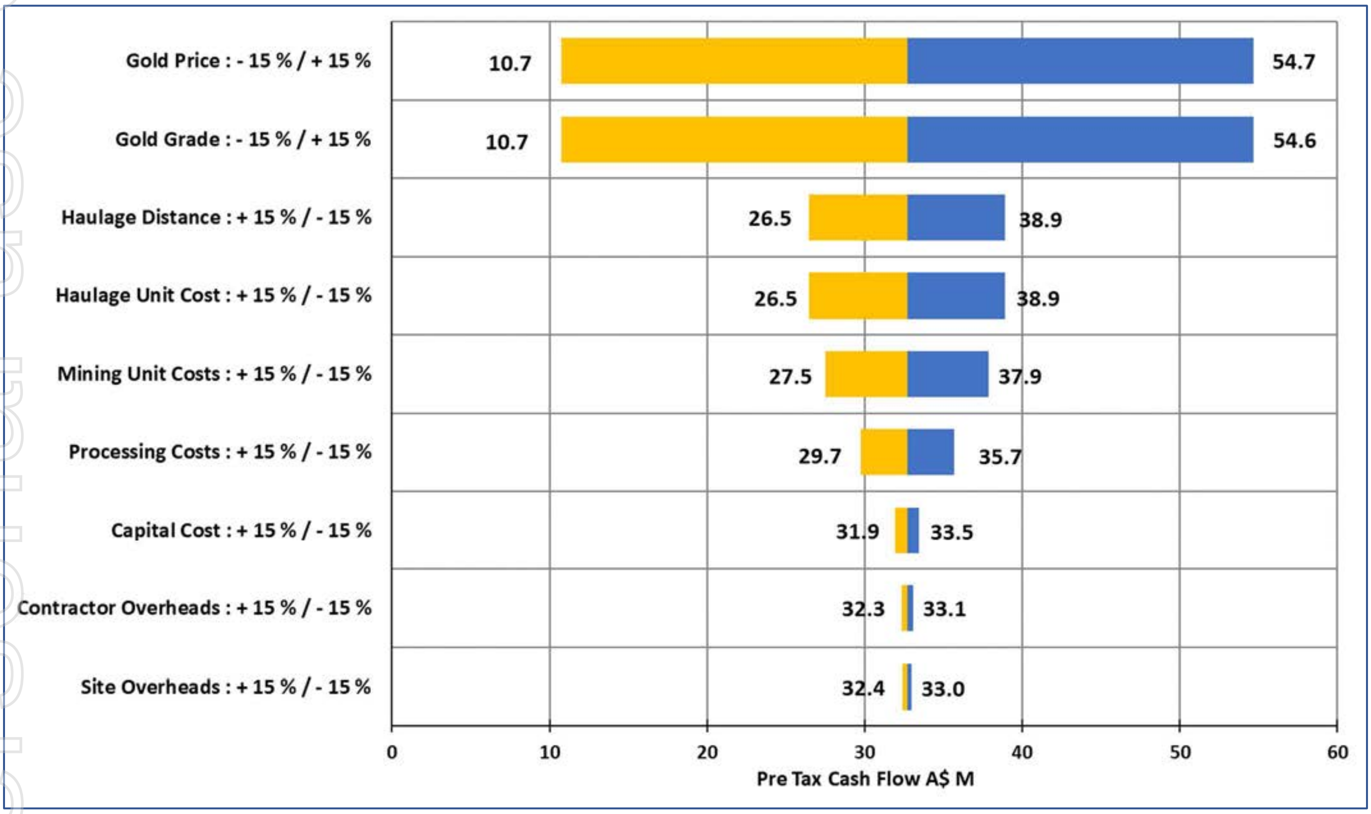

Figure 20: Sensitivity Summary

Of the parameters investigated, the largest impacts are the gold price and gold grade – which is to be expected. The haulage distance, haulage unit cost and mining unit cost all have about 30 % of the impact that gold price and grade do, processing cost has a lesser impact and the impact of capital cost, contractor overheads and site overheads is relatively minor.

Gold recovery is obviously another important variable, a separate table showing appropriate ranges of variation of recovery is shown below. With the smaller quantities of ore and gold from Eastern Ridge – the sensitivity of the overall project economics to Eastern Ridge gold recovery is only about one sixth of the impact of Steam Engine gold recovery.

Table 12: Sensitivity to Gold Recovery

	Change in Parameter														
Steam Engine Gold Recovery	75	76	77	78	79	80	81	**82**	83	84	85	86	87	88	89
Pre Tax Cash Flow A$ M	22.2	23.7	25.2	26.7	28.2	29.7	31.2	**32.7**	34.2	35.7	37.2	38.7	40.2	41.7	43.2
Eastern Ridge Gold Recovery	88	89	90	91	92	93	94	**95**	96	97	98	98	98	98	98
Pre Tax Cash Flow A$ M	31.0	31.2	31.5	31.7	32.0	32.2	32.4	**32.7**	32.9	33.2	33.4	33.4	33.4	33.4	33.4

Any increase in the size of the resource tonnage has a significant effect on the project economics. The impact on pre tax cash flow is shown in Table 13 for successive increases of 50 kt of ore in each deposit.

Table 13: Sensitivity to Resource Size

	Change in Parameter							
Eastern Ridge Resource Size - Ore kt	**179**	229	279	329	379	429	479	529
Pre Tax Cash Flow A$ M	**32.7**	34.6	36.6	38.6	40.5	42.5	44.4	46.4
Steam Engine Resource Size - Ore kt	**953**	1,003	1,053	1,103	1,153	1,203	1,253	1,303
Pre Tax Cash Flow A$ M	**32.7**	34.6	36.4	38.3	39.9	41.5	43.1	44.7

Increases in the size of the Steam Engine ore resource have similar impact to increases in the Eastern Ridge ore resource, due to similar grades and similar unit costs. Every additional 100 kt of ore that can be brought into either resource would improve project cash flow by around A$ 3.7 – 3.9 M pre tax.

10.1 UPSIDE SCENARIO A$ 2,500 PER OUNCE

The pit optimisations at A$ 2,500 per ounce gold price includes significantly more material than the base case scenario as shown in Table 14, with indicative scheduling showing that the ore tonnes would increase by around 15 % and the produced gold increasing by around 13 %. The impact on the project economics is significant as shown in Table 15 with the post tax overall cash flow increasing by 69 % to A$ 41.0 M and the post tax NPV increasing by 69 % to A$ 35.9 M.

Table 14: Physical Outputs of Base and Upside Cases

Parameter	Unit	Base Case A$ 2,200 / oz	Upside Case A$ 2,500 / oz
Total Ore	kt	1,131	1,305
Ore Gold Grade	g/t	2.31	2.24
Overall Gold Recovery	%	84	84
Gold Produced and Sold	koz	70	79

Table 15: Financial Summary of Base and Upside Cases

Parameter	Unit	Base Case A$ 2,200 / oz	Upside Case A$ 2,500 / oz
Post Tax Overall Cash Flow	A$ M	24.2	41.0
Payback Period	Months	11	9
Post Tax NPV	A$ M	21.2	35.9
Return on Capital	%	475	806
Funding Required	A$ M	10.0	9.0
Return on Funding	%	242	410

The cumulative post tax cash flow in this scenario would be improved considerably.

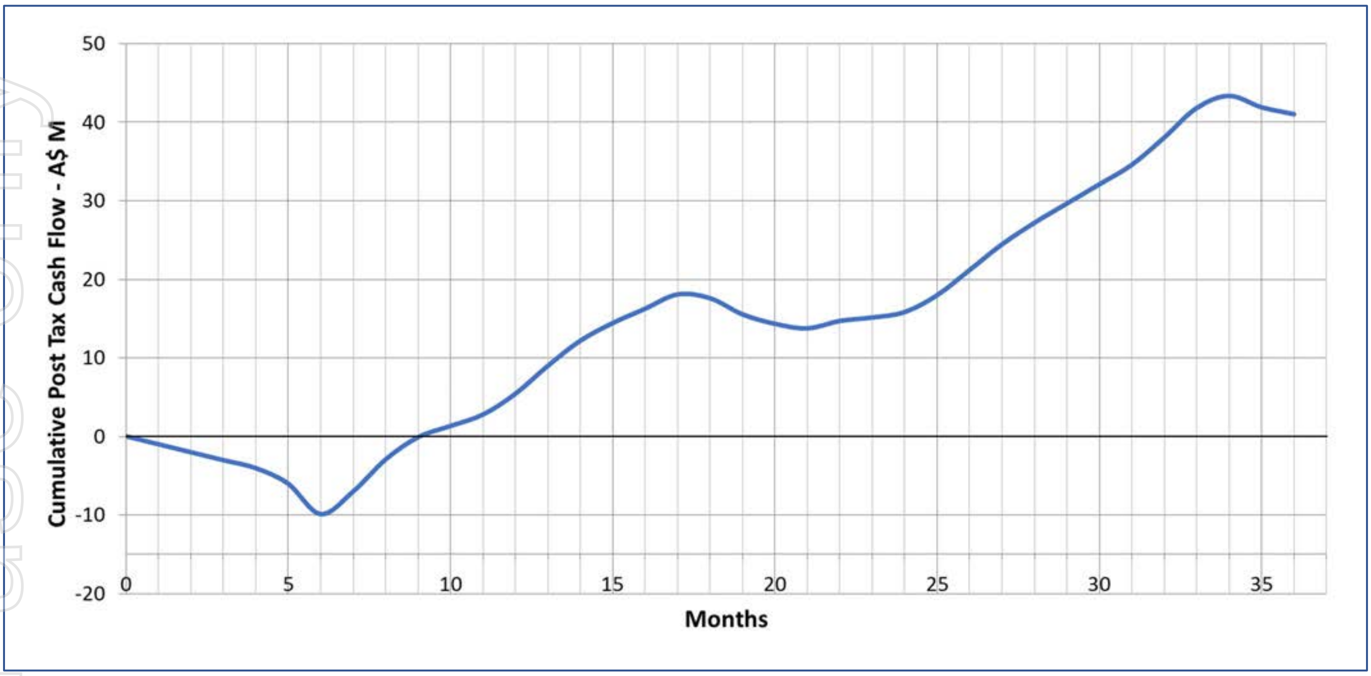

Figure 21: Cumulative Post Tax Cash Flow of Upside Case

10.2 Current Gold Price

The current spot gold price is around A$ 2,300 per ounce. This spot price lies between the base and upside cases, interpolating shows that at the current spot price the project post tax NPV would be around A$ 26.1 M.

10.3 Breakeven Points

Breakeven points for each of the key variables above have been determined – this is the level at which the pre tax cash flow reduces to zero when all other parameters remain at base case levels. The breakeven points for key input cost and pricing assumptions are shown in the full scoping study.

Table 16: Breakeven Levels

Parameter	Unit	Breakeven
Gold Price	A$ / oz	1,709
Gold Grade	g/t	1.79
Steam Engine Ore Gold Recovery	%	60

The project is considered quite robust to most parameters.

11 ALTERNATE OPTIONS

A number of alternate strategies to that which forms the basis of the scoping study could be utilised for the project. Options discussed in the full Scoping Study include:

11.1 CONSTRUCT PURPOSE BUILT PROCESSING FACILITY

The basis of the scoping study is for haulage of ore to an existing processing plant for toll treatment. An alternative strategy could be to construct a dedicated facility on site for processing the Steam Engine and Eastern Ridge ores. While early evaluation indicates that there may be modest cost benefit in constructing a purpose built facility, there are also added risks and the project timeline and payback periods would be extended considerably. An advantage of this strategy is that the cut off grade would also drop which would see more of the deposit treated as ore, increasing the size of the pits, increasing gold production and bringing additional revenue.

If the plant that is built is able to be used for processing ore from other resources owned by Superior Resources then this synergy may add further significant value. Much of the capital cost for the plant is in the crushing and grinding circuits, in the Tailings Storage Facility and in providing power and water, so even if the other resources were copper sulphide deposits the plant could be modified at relatively low cost to include flotation for copper concentrate production.

The other scenario which may make the option of a constructed facility more attractive and compelling would be if the haulage distance or the haulage unit cost were to increase significantly from the assumptions used in this study, or if no other plants were interested in toll treating the Steam Engine ore.

At the scoping study stage it is considered that the total ore tonnage from the Steam Engine project alone is likely too low to support the construction of a dedicated plant, making the toll treatment strategy preferred. This option will be explored further as studies into Steam Engine progress and as the potential overall project pipeline for Superior Resources develops – a Superior Resources central processing hub may become economically viable with upside at Steam Engine or with the development of other deposits.

11.2 MINE STEAM ENGINE PIT ONLY

The Eastern Ridge pit contains around 16 % of the gold ounces. At a scoping level the option to mine the Steam Engine pit only was examined – while this would see these ounces removed from the project, there would also be some savings in capital costs and overheads through simplifying the operation to a single open pit only. However the post tax NPV reduced from A$ 21.2 M to around A$ 19.3 M so this option should not be pursued, mining Eastern Ridge as well still adds value.

12 PROJECT SCHEDULE

The indicative project schedule milestone dates which could be achieved are shown below.

• Scoping Study Complete	Apr 2021
• Mining Design Updates	May 2021
• Pre-Feasibility Study Complete	Aug 2021
• Tendering of Major Contracts Complete	Oct 2021
• Feasibility Study Complete	Dec 2021
• Project Approvals in Place	Jan 2021
• Site Development Commences	Feb 2022
• Mining of Ore Commences	Jun 2022
• First Gold Production	Aug 2022
• Gold Production Ceases	Aug 2024

There are no long lead time capital items with this project so the critical path for the project schedule is the timing of the approvals process. If good progress is made in this area and further studies remain positive, then the project could be producing gold within 18 months.

13 Risks and Opportunities

A number of risks and opportunities exist with the Steam Engine Project, as would be the case with other projects of this type. If the outcomes of the financial evaluation fit with corporate objectives and the project is progressed, then these risks should be mitigated in the course of further studies and design and the opportunities should be assessed and adopted where appropriate. No risks are considered to be fatal flaws at the Scoping Study stage. A complete discussion of the risks and opportunities identified is included in the full Scoping Study report.

13.1 Risks

Risks include:

- Schedule Delays;
- Geotechnical Issues; and
- Reduced Gold Recovery.

13.2 Opportunities

Opportunities include:

- Increased Resource Size;
- Improved Timing of Cash Flow;
- Steeper Pit Slopes;
- Reduction in Capital; and
- Beneficiation of Marginal or All Ore.

13.3 Aspects That Present Both Risks And Opportunities

Several risks exist for which there is a directly converse opportunity, these include:

- Higher or Lower Gold Price;
- Higher or Lower Gold Grade; and
- Higher or Lower Operating Costs.

The impact of these is shown in the sensitivities and strategies to manage the risks and opportunities are discussed in the full Scoping Study.

14 FUTURE WORK

If the project progresses, additional work will be required in a number of areas, typical of a project of this nature moving from scoping into feasibility. Key work packages will likely include:

- Additional drilling to increase the size of and confidence in the Mineral Resource Estimate;
- Further testwork to confirm the finding that gold recovery can decrease with arsenic content, and to target strategies to overcome this and return a recovery gain;
- Mapping of arsenic grades and mineralogy throughout the deposit to better understand the areas where a component of the gold present may be associated with arsenopyrite;
- Testwork to determine if beneficiation is viable and if there is sufficient upgrade to offset any gold losses;
- Geotechnical investigation to determine pit wall angles that are likely to be achieved and identify any potential geotechnical issues;
- Geochemical classification of waste to identify waste types that are potentially acid forming versus non acid forming and to help develop strategies for waste dump construction and management;
- Detailed pit design and waste dump design – incorporating the additional drilling data being obtained and updates to the resource model and thus better defining pit sizes, strip ratios and ramp locations;
- Studies into the optimal mining production rates and sequences, haulage rates and processing rates. These studies should include modelling and evaluation of strategies to accelerate gold production through earlier mining of high grade zones and through preserving and prioritising high grade ore parcels through downstream haulage and processing;
- Further evaluation of the option to construct a dedicated processing facility at or near Steam Engine for this project and potentially to also process ore from other deposits owned by Superior Resources, either gold or base metals;
- Reporting of Ore Reserve. Once the resource model is updated and designs progress, and if project economics remain favourable, then an Ore Reserve can be developed and published, this will better inform the production schedules and increase confidence in project outcomes;
- Sterilisation drilling. This will allow the site layout to be finalised, confirming locations of waste rock dumps and topsoil stockpiles as well as the general site facilities and infrastructure; and
- Hydrology assessment to quantify the groundwater inflow and to better understand site water management and the need, if any, for a supplementary water bore.

15 RECOMMENDATIONS

It is recommended that studies into the Steam Engine deposit continue, as financial evaluation shows the project to have a positive NPV with current assumptions used. There are several opportunities to significantly improve the NPV further and make the project more robust, these should be pursued during future study stages.

APPENDIX 2

JORC Code, 2012 Edition – Table 1

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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	Current Sampling • RC drill samples are collected as drilled via a riffle splitter attached to the drill rig cyclone and collected as 1m riffle split samples. Approximately 1-3kg of sample was collected over each 1m interval used for assaying. • Diamond core drill samples are collected by quartering of the NQ core from Diamond drilling. Approximately 1 to 1.5 kg of sample was collected over each one metre interval used for assaying. • The drill bit sizes used in the drilling were consistent in size and are considered appropriate to indicate the degree and extent of mineralisation. • Sample intervals that lack metalliferous anomalism are not reported and are not considered to be material. • 1m representative samples of intervals with visible mineralisation and those in the areas of interest based on previous drilling were assayed for gold at SGS laboratories in Townsville. • 1m representative samples of intervals with visible mineralisation were assayed for gold at SGS laboratories in Townsville. • 1m samples at 0.5 g/t Au and above were also submitted for multi-element assaying using a four acid digest. • Assaying for gold was via fire assay of a 50 gram charge. • Sample preparation at SGS laboratories in Townsville for all samples is considered to be of industry standard procedure.

Criteria	JORC Code explanation	Commentary
		Historical Sampling • Information relating to historical results relies on data contained in reports submitted to the Queensland Department of Natural Resources and Mines as part of the Company Report System attaching to the grant of Exploration Permits. • The sampling techniques, where reported, used standard industry approaches. These include: 1. splitting off a sample of material delivered to the top of the hole during RC drilling to produce a sample for assay accompanied by geological logging of the sample. 2. Halving of drill core from diamond drilling to produce an assay sample accompanied by geological logging of the core. • Assaying of samples was completed by commercial laboratory methods that were appropriate at the time the samples were collected. Sample intervals of 4m were commonly used for initial determination of the presence of gold by a geochemical method followed by more detailed sampling of mineralised intervals at usually 1m intervals using a more precise method. • Whilst it is not possible to determine the reliability of historical assay results, no issues arose during compilation and interpretation of the results that would suggest that the assay results were not reasonable. Additional to this, the recent sampling and assaying completed in 2020 by Superior shows that the various previous drilling phases have given consistently similar results when compared to those of the recent (2020) sampling.
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.).*	Current Drilling • Drilling from surface was performed using standard RC and diamond core drilling techniques as applicable to the hole drilled. • RC Drilling was conducted by AED (Associated Exploration Drillers) using a UDR 650 drilling rig and 5.5 inch drill bit. Additional to the on-board air compressor of the drilling rig, additional compressed air was available as necessary via a separate booster truck. Sampling was by the use of a face-sampling hammer bit. • Diamond drilling was conducted by AED (Associated Exploration Drillers) using a UDR 650 drilling rig and NQ drill rods and wireline to retrieve the core. Drill core was oriented to allow structural measurements. The deeper drill holes were first pre-collared using the RC Drilling method outlined above.

Criteria	JORC Code explanation	Commentary
		• All holes were surveyed using a Reflex Gyro north-seeking gyroscopic instrument to obtain accurate down-hole directional data. Historical Drilling • Reverse Circulation (RC) and Diamond Drilling (DD) are the only drill types relied on in this report. Historical Percussion and RAB holes have only been used in terms of constraining the extent of the Mineral Resource, when applicable and not for any estimation purposes (Note: Where recent drilling is available this is used instead of historical open hole percussion and/or RAB holes in determining the extents of the mineralisation).
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	Current Drilling • Sample recovery was performed and monitored by Terra Search contractor and Superior's representatives. • The volume of sample collected for assay is considered to be representative of each 1m interval. • RC drill rod string delivered the sample to the rig-mounted cyclone which is sealed at the completion of each 1m interval. The riffle splitter is cleaned with compressed air at the end of each 1m interval and at the completion of each drill hole. • For Diamond core drilling a wireline was used to retrieve core samples that are then placed in core trays. Historical Drilling • Recoveries for RC drill holes were not recorded. • Recoveries for diamond drill core samples were recorded for most holes drilled at Steam Engine. These recoveries were usually of the order of 100% indicating that recoveries should not be an issue if the results are used for estimating resources. • No relationship is evident between sample recovery and grade.

Criteria	JORC Code explanation	Commentary
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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	Current Drilling • Geological logging was conducted during the drilling of each hole by a Terra Search geologist having sufficient qualification and experience for the mineralisation style expected and observed at each hole. • All holes were logged in their entirety at 1m intervals for the Reverse Circulation (RC) drill holes. A spear was used to produce representative samples for the logging of RC holes. • Intact entire Diamond drill hole core was use for the logging of Diamond core, the core was used to record RQD, as well as structural information and geological logging. • All logging data is digitally compiled and validated before entry into the Superior database. • The level of logging detail is considered appropriate for resource drilling. • The RC chip trays and Diamond Core trays were all photographed. Historical Drilling • Geological logging of most of the drill holes is available in the Company Report System. Logs for holes drilled at fill-in 25m sections have not been located at this stage. The available logging are of a good standard. No geotechnical logs have been reported and it is assumed that these were not done. Diamond drill hole logs usually include structural data that has been compiled in digital form. • The logging is generally of a qualitative nature. No core or chip photography is available in the reports. • For the logs available logging of all material has been completed.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling*	Current Sampling • The sample collection methodology is considered appropriate for RC and Diamond Core drilling and was conducted in accordance with best industry practice. • RC drill hole samples are split with a riffle splitter at 1m intervals as drilled. Split 1 metre samples are regarded as reliable and representative. Approximately 1-3kg of sample was collected over each 1m interval. Samples were collected as dry samples.

Criteria	JORC Code explanation	Commentary
	stages to maximise representivity of samples. • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Duplicate samples are taken and assayed in each batch processed for assaying. • Diamond Core drill hole samples were collected from quartered core over 1 metre intervals. Approximately 1 to 1.5 kg of sample was collected over each one metre interval used for assaying. Quartered NQ Core samples are regarded as reliable and representative. Samples were collected as dry samples. • The sample sizes are considered appropriate to the style of mineralisation being assessed. Historical Sampling • The diamond drill core samples were collected from halved core. • Details of the approach taken for sampling of RC drill holes are not available but it is expected to be of industry standard for the time.
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.* • *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.* • *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.*	Current Assaying • All samples were submitted to SGS laboratories in Townsville for gold. Gold assays at or above 0.5 g/t were additionally assayed for a full suite of 38 additional elements using a four acid digest. • Samples were crushed, pulverised to ensure a minimum of 85% pulp material passing through 75 microns, then analysed for gold by fire assay method GO_FA50V10 using a 50-gram sample. • Multi-element analyses were conducted on assays of 0.5 g/t gold or above using a four acid digestion followed by an ICP-AES finish using method GO_ICP41Q100 for the following 38 elements: Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, La, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Se, Sn, Sr, Te, Th, Ti, U, V, W, Y, Zn, Zr. • Certified gold, multi-element standards and blanks were included in the samples submitted to the laboratory for QAQC. Laboratory assay results for these quality control samples are within 5% of accepted values. • Additionally, SGS used a series of its own standards, blanks, and duplicates for the QC of the elements assayed. Historical Assaying • Sampling and assaying techniques used during various phases of the previous drilling

Criteria	JORC Code explanation	Commentary
		were done by commercial laboratories using industry standard procedures used at the time of drilling. • Assay data reviewed with the historical reports include some duplicate assaying. It is unknown in detail what other quality control procedures were adopted. • The recent sampling and assaying completed in 2020 by Superior shows that the various historical drilling phases show consistent results when compared to those from the recent drilling.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	Current Sampling • The reported significant intersections have been verified by Terra Search and Superior geologists against the representative drill chips and diamond drill core collected and the drill logs. • No holes were twinned by Superior. • Logs were recorded by Terra Search field geologists on hard copy sampling sheets which were entered into spreadsheets for merging into a central database. • Laboratory assay files were merged directly into the database. • The data is routinely validated when loading into the database. • No adjustments to assay data were undertaken. Historical Sampling • Close spaced recent drilling by Superior (2020) to historic drill holes confirms the order of the drill gold intersections obtained by the historic drilling. • To date, no dedicated twinned holes have been drilled by Superior on the historic drill holes, however very close spaced recent drill holes to the historic drilling has resulted in very similar results both in terms of widths and grades. • Most of the historic drill hole data was captured and stored on paper. The compilation of that data in digital form has been completed by the Competent Person. • No adjustments have been made to historical sample assay data as there was no apparent reason for such adjustment.

Superior Resources

Criteria	JORC Code explanation	Commentary
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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	Current Drilling • Drill hole collars have been recorded in the field using hand held GPS with three metre or better accuracy. The locations have also been further defined using DGPS to give sub one metre accuracy. • The drill hole spacing and drilling technique are appropriate to establish the degree of geological and grade continuity for the Mineral Resources estimation procedures that have been applied. The gold mineralised system remains open and further infill, depth and strike extension drilling is required to confirm the full extent of the ore bodies. • The area is located within MGA Zone 55. • A new level for the RL's has been defined as the MGA RL (previously the grid RL was used) in preparation for the pre-feasibility. • Topographic control is currently from DGPS pickup that has been merged with RL adjusted contours. This arrangement will be upgraded prior to pre-feasibility when further definition of the topography is planned to use a LIDAR survey. This will be carried out for the pre-feasibility study. Historical Drilling • Noranda Australia (and subsidiaries) controlled exploration of the Steam Engine area using a local grid. As the property advanced a surveyor was used to provide a more accurate local grid control with a local height datum being implemented. Their data has been originally compiled using the local grid coordinates. • Drill holes completed by Beacon Minerals Limited were reported using handheld GPS collar coordinates with a likely accuracy of about ± 5m. An accurate translation from GPS coordinates to local grid coordinates has been used to convert the Beacon drill hole data to local coordinates. • Many of the historical drill hole collars are still evident at the prospect. Superior completed surveying of most of the previous drill hole collars using a DGPS system. The DGPS surveying validates the accuracy of Noranda's reported collar locations and provided an additional level of location confidence to the historical drill hole data.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• Drill hole spacing is variable at the Steam Engine area, due to different stages of the resource evaluation at the project. • The drill hole spacing is sufficient in the central portions of the Steam Engine Lode and the Eastern Ridge Lode to allow estimation of Mineral Resources when all the necessary information is compiled. • Most intersections reported in this report are weighted composites of smaller sample intervals as is standard practice.
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.* • *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.*	• The orientation of the drill holes is generally ideal for reporting of the intersection results. • No orientation sample bias has been identified at this stage.
Sample security	• *The measures taken to ensure sample security.*	• Sub-samples selected for assaying were collected in heavy-duty polyweave bags which were immediately sealed. • These bags were delivered directly to the SGS assay laboratory in Townsville by Terra Search and Superior's employees. • Sample security measures within SGS laboratories are considered adequate.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits or reviews of the sampling techniques and data have been undertaken to date.

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	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such*	• The areas reported lie within Exploration Permit for Minerals 26165 and held 100% by Superior.

Criteria	JORC Code explanation	Commentary
land tenure status	*as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *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.*	• Superior holds much of the surrounding area under granted exploration permits. • Superior has agreements or other appropriate arrangements in place with landholders and native title parties with respect to work in the area. • No regulatory impediments affect the relevant tenements or the ability of Superior to operate on the tenements.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• All historic drilling reported in this report has been completed and reported in accordance with the current regulatory regime. • Compilation in digital form and interpretation of the results of that work in digital form has been completed by the Competent Person.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Steam Engine and Eastern Ridge gold deposits are hosted within shear zones. • The gold mineralisation occurs within a number of north-northeast trending, west-dipping pyritic quartz-muscovite-carbonate schist lodes within metamorphosed intermediate to basic intrusives and metasediments. Significant chlorite–epidote and sericite type alteration zones exist in the shear zones, with the mineralisation appearing to be mostly linked with heavily sericite altered sections of the host rock. • The gold mineralisation phase itself consists of a mainly pyrite sulphide assemblage +/- minor arsenopryrite, pyrrhotite, and chalcopyrite (all fine grained). • Several gold bearing lodes occur in the area, of which the Steam Engine Lode zone is the most notable. The Eastern Ridge Lode zone is located some 500m east of the Steam Engine Lode zone. The Southern Lode zone is located approximately 600m South West of the current Eastern Ridge mineral resource area and lies geologically in-between the Steam Engine and Eastern Ridge lodes. • The lodes are typically interpreted as being of the mesothermal lode type. Recent studies undertaken by Superior Resource suggest the Steam Engine mesothermal gold mineralisation is most similar to orogenic style mineralisation. • The important features of the Steam Engine and Eastern Ridge lodes are their continuity and a persistent dip to the west.

Criteria	JORC Code explanation	Commentary
Drill hole Information	• *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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *hole length.* • *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.*	• Drill Holes collar tables with significant intersections are included in previous ASX announcements for the drill holes including the announcements dated 19 February 2021, 11 February 2021, 18 January 2021, 5 November 2020, 15 October 2020, 30 September 2020, 14 September 2020 and 14 August 2017.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Exploration results are reported as a length weighted average of all the assays of the hole intersections. • No top cutting has been applied to the exploration results. However, the recent addition of some ounce/tonne gold grades in some assays resulted in grade cutting of very high values for the purposes of the resource estimation. The 2020 Stage 2 drilling returned two intersections, each containing a very high gold assay metre interval of 135 g/t Au and 184 g/t Au (for further information see ASX report dated 18 January 2021). These two very high grade ounce per tonne assays suggest a new high grade population and are interpreted to indicate a high grade gold ore shoot. Top cuts of 56% and 67% were applied to the very high grade intersections, resulting in a reduction of the grades to 60 g/t Au for the purpose of the Resource estimation. Together with the surrounding assays and an inverse power of 3 in the block modelling this top cut ensures that the effect of these two individual assays remain significant only in the localised location and that their effect it is not excessive. This top cut will again be re-assessed once more drilling of the zone is carried out. • No metal equivalent values are reported.
Relationship between mineralisation widths and	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported,*	• For the Steam Engine lode zone an interpreted westerly dip of approximately 50 to 60° and drill holes which generally dip to the east at around 60° (or less) result in near true widths at or above 0.87 times the intersection lengths as reported. • For the Eastern Ridge lode zone an interpreted westerly dip of approximately 45 to 55°

Criteria	JORC Code explanation	Commentary
intercept lengths	*there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	and drill holes that generally dip to the east at around 60° (or less) result in true widths at or above 0.9 times the intersection lengths reported.
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.*	• Included. • Further relevant maps and sections are included in previous ASX announcements for the drill holes including the announcements dated 19 February 2021, 11 February 2021, 18 January 2021, 5 November 2020, 15 October 2020, 30 September 2020, 14 September 2020 and 14 August 2017.
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.*	• Drill hole collar tables with significant intersections are included in previous ASX announcements for the drill holes including the announcements dated 19 February 2021, 11 February 2021, 18 January 2021, 5 November 2020, 15 October 2020, 30 September 2020, 14 September 2020 and 14 August 2017.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• Preliminary metallurgical leach test work was undertaken in October and November 2020 by ALS Laboratories to confirm the amenability of the ore to conventional CIP / CIL leaching. Six sample composites were generated from material which was of ore grade and considered representative of the ore to be mined, with two samples of each of the three main ore zones. • Grind size for the test work was P80 (80% passing size of 75 microns). • The leach test conditions comprised sodium cyanide dosage of 1.5 kg/t, density of 40% solids, pH of 10 to 10.5, with dissolved oxygen at 15 to 20 ppm. • Leach tests were run for 48 hours with a sample taken after 24 hours to assist in understanding the leach kinetics. • The results for the Eastern Ridge samples (5223045 and 5223046) were excellent with 97 and 98 percent of the gold being extracted respectively, and with virtually all of this extracted after 24 hours. • The results for the Steam Engine lode were lower with the average grade samples (5223044, 5223042 and 5223043) seeing total gold extraction of 84, 80 and 73 percent respectively. • At this stage, no test work has been done to investigate options to improve the gold recovery in the Steam Engine Lode samples.

Criteria	JORC Code explanation	Commentary

Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*
		• Subsequent to this Mineral Resource estimate additional work programs will now include:
		  • Pit optimisation studies
		  • Metallurgical studies
		  • Geotechnical studies
		  • Toll treatment negotiations
		  • Preliminary mining and rehabilitation planning
		  • Preliminary environmental studies

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	• *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.* • *Data validation procedures used.*	• This report is based on data compilations from recent Superior drilling (2020) and drilling carried out as reported in previous resource estimations conducted by competent persons working for Superior. • Data validation for the recent drilling has been carried out by the Competent Person by matching up the original field records with the digital information to ensure the information is correct. Data validation for the previous drilling was carried out by the inspection of the previous reports dating back to the earliest phases of drilling. • Data validation processes were also carried out using mining software to make the data ready for use.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Site visits have been undertaken by a Competent Person to confirm the drill hole locations and to undertake geological and mineralisation interpretations, as well as for the additional drilling carried out.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.*	• In general, a higher level of confidence exists for the Steam Engine Main Lode Zone, than for the Steam Engine Footwall Lode Zone (due to patchy grades) and for the Eastern Ridge Lode Zone (due to less drilling). • The geological Interpretations are consistent with the previous interpretation by

Superior Resources

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.*	Noranda. • The data includes drill hole data and surface exposures, but there are no current underground ore exposures. • No alternative interpretations are evident or have been considered. • Lode geology is fundamental to the interpretations. • The lack of underground exposures and the soil cover in the area may obscure crosscutting faults, but significant displacement on these mineralisation zones is not apparent in the sectional data.
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.*	• These are apparent on the various sections included with this report.
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.* • *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 assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.*	• Further detail on the resource estimation process is included in the main body of this announcement. • Inverse distance block modelling was used for the resource estimations. When properly constrained by wireframing, block modelling is a good method for the estimation of this kind of resource. An inverse power of 3 was used to more closely map the grade distributions present in vein zones. An appropriate search radius was used for individual lode zones and the estimation method used. • Check estimates were carried out using global estimates from the wireframes. These gave similar tonnages to the global block model estimates. While the wireframe estimate uses weighting of the intersectional grades it does not use any weighting in relation to distance from those intersections. However, as a comparative method it shows that the tonnages are correct and even gave relatively close gold grade values to the block model. • Checks against previous resource estimations also showed similar tonnages and grades over the portions of the Resource that have been previously estimated by Superior. • The estimate is for gold only. No by-products are considered likely. • Incomplete assay data from early drilling does not allow estimation of other elements. Some arsenic occurs within the gold mineralisation where it has been assayed.

Criteria	JORC Code explanation	Commentary
	• *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• The 2020 Stage 2 drilling returned two intersections, each containing a very high gold assay metre interval of 135 g/t Au and 184 g/t Au (for further information see ASX report dated 18 January 2021). These two very high grade ounce per tonne assays suggest a new high grade population and are interpreted to indicate a high grade gold ore shoot. Top cuts of 56% and 67% were applied to the very high grade intersections, resulting in a reduction of the grades to 60 g/t Au for the purpose of the Resource estimation. Together with the surrounding assays and an inverse power of 3 in the block modelling this top cut ensures that the effect of these two individual assays remain significant only in the localised location and that their effect it is not excessive. This top cut will again be re-assessed once more drilling of the zone is carried out. • Interpolation for Inferred Resources has allowed for up to approximately 100 metres along strike between drill holes in some cases if it conforms to the current geological interpretation. • Extrapolation for Inferred Resources (outside of the drilling extents) has allowed for up to approximately 60 metres of extension, predominantly on dip, where holes either side along strike have indicated the continuation of the mineralisation. However, extension down dip was moderated by the width of the mineralisation, and if that mineralisation was considered wide enough to be feasible for future extraction. • No intersection data below 2m true thickness was used in the estimation. • No correlation between variables. • The lode geology was a fundamental element of the modelling and controlled the modelling process. • Validation was carried out by checking each stage of the modelling process against the resource intersections and assay values. As mentioned above global wireframe estimates also gave close values to the block modelling process.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• In the absence of any specific gravity data, the tonnages were estimated on an assumed SG of 2.7. This appeared to be a reasonable value given the sulphide content of the lodes.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• An arbitrary intersection cut-off grade of 1g/t was used based on a likely cut-off grade required for a toll treatment gold operation in the area.

Criteria	JORC Code explanation	Commentary
Mining factors or assumptions	• *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 JORC Code explanation Commentary 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.*	• Open cut mining appears to be the most likely extraction method. The depth to which that might be possible is uncertain until further studies have been done. • Internal dilution zones within the mineralised downhole intervals were included in the estimates. • A minimum width of the mineralised zone (including waste as necessary) was used to develop what are hoped to be mine practical widths down to a minimum of 3m in some cases (at the Eastern Ridge Lode zone and at the extremities of the Steam Engine Lode). • Further mining dilution effects will need to be considered during the reserve estimation process.
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.*	• Preliminary metallurgical leach test work was undertaken in October and November 2020 by ALS Laboratories to confirm the amenability of the ore to conventional CIP / CIL leaching. Six sample composites were generated from material which was of ore grade and considered representative of the ore to be mined, with two samples of each of the three main ore zones. • Grind size for the test work was P80 (80% passing size of 75 microns). • The leach test conditions comprised sodium cyanide dosage of 1.5 kg/t, density of 40% solids, pH of 10 to 10.5, with dissolved oxygen at 15 to 20 ppm. • Leach tests were run for 48 hours with a sample taken after 24 hours to assist in understanding the leach kinetics. • The results for the Eastern Ridge samples (5223045 and 5223046) were excellent with 97 and 98 percent of the gold being extracted respectively, and with virtually all of this extracted after 24 hours. • The results for the Steam Engine lode were lower with the average grade samples (5223044, 5223042 and 5223043) seeing total gold extraction of 84, 80 and 73 percent respectively. • At this stage, no test work has been done to investigate options to improve the gold recovery in the Steam Engine Lode samples.

Criteria	JORC Code explanation	Commentary
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• These factors have yet to be studied and some preliminary assumptions for this are expected to be adopted in an upcoming scoping study.
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.* • *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.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• At this stage the density for the resource has been assumed at an SG of 2.7, which is considered to be a close figure for this type of rock and mineralisation in situ. • Tests will need to be carried out in the next phase of drilling to determine more accurate estimates for the average density.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie 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).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• Confidence levels for classification were based on similar classifications that have been made on similar deposits and by the degree of continuity of the lode zone, the density of the existing drilling, and the apparent reliability of the historical data (having been confirmed by the recent 2020 drilling). • The additional infill drilling (in 2020) has led to an improved level of classification, in many of the areas previously estimated. Further additional exploration drilling has also led to new Resources at the northern end of the Steam Engine Lode, but of generally lower grades and widths than for previous Steam Engine mineralisation. This has been offset by the location of some higher grade zones within infill drilling in some of the deeper drill holes at the Steam Engine Lode. • The result appropriately reflects the Competent Person's current view of the deposit.

Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No audits have been undertaken at this stage.
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 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.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The factors that could affect the relative accuracy or confidence of the estimates include all drilling data quality issues, data density, modelled grade continuity and the used resource model assumptions. All of these are adequately discussed in the information above. • This approach provides an estimate within any area of the lode that is locally based. • No comparisons with production data are possible.