

## Steam Engine revised Mineral Resource Estimate: JORC Measured and Indicated Resources upgraded by 31%

### HIGHLIGHTS:

- Revision of December 2020 Mineral Resource delivers a new estimate, comprising 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)
- Represents increase of 31% in JORC Measured and Indicated category Resources (123% increase since May 2020 MRE) and 9% in total contained gold (30% since May 2020 MRE)
- 2020 Stage 1 & 2 drilling focussed on upgrading (JORC) confidence levels of shallow portions of Mineral Resource to facilitate early-stage mining proposition; extensional drilling at northern end of Steam Engine Lode and southern end of Eastern Ridge Lode
- Extensions to very high grade (multiple ounce/t) ore shoots identified during 2020 drilling to be targeted during H1 2021 with extensional drilling and geophysics
- New Dinner Creek Lode zone (no prior drilling) has potential to add additional 2 km gold lode and have greater thicknesses than the Steam Engine Lode. Maiden drilling program planned to commence immediately after northern monsoon season
- 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) announced today a revised Mineral Resource estimate (MRE) for its Steam Engine Gold Deposit located 210 kilometres west of Townsville, Queensland.

The Mineral Resource was revised from the previous estimate of December 2020 (ASX Announcement, 14 December 2020) to incorporate results from the 2020 Stage 2 drilling program. The Stage 2 program comprised infill drilling to delineate high grade ore shoots as well as Resource extension drilling at the northern end of the Steam Engine Lode and southern end of the Eastern Ridge Lode. The scope of the latest Resource estimation was expanded to include modelling of various high grade mining scenarios, which will be considered in the Scoping and Pre-Feasibility studies.

The revised JORC (2012) Mineral Resource estimate has been significantly upgraded by delivering a 31% increase in total Measured and Indicated Resources (since December 2020 estimate) and a 123% increase since commencement of drilling in July 2020, together with a 9% increase in total in-situ gold ounces (30% increase since July 2020), as follows:

- **1.73 million tonnes at 2.2 g/t Au (122,000 ounces)<sup>1</sup>, including:**
- **Measured Resources: 240,000 tonnes @ 2.6 g/t Au (20,000 ounces)**
  - **Indicated Resources: 610,000 tonnes @ 2.4 g/t Au (47,000 ounces)**
  - **Inferred Resources: 880,000 tonnes @ 1.9 g/t Au (55,000 ounces)**

<sup>1</sup> Grade normalisation (top-cutting) of the grades by -56% and -67% were applied to very high grade intersections for the purpose of the estimation exercise.

Superior's Managing Director, Peter Hwang commented:

*"We are pleased that the 2020 Resource upgrade programs have been successful in reinforcing the quality and robustness of the Steam Engine Gold Deposit. The programs have delivered on our primary objective of upgrading the geological confidence of the Mineral Resource, resulting in an overall 123% increase in the total Measured and Indicated ounces since commencement of drilling in July last year.*

*"In addition, our expectations of identifying high grade ore shoots were greatly exceeded by the delineation of at least two high grade shoots, including a multiple-ounce grade shoot carrying values of up to 184 grams per tonne. The high grade shoots and the consistency of the lodes is a developing characteristic of the Steam Engine deposit, which elevates the potential for identifying larger zones of mineralisation within the system.*

*"The completion of the Resource upgrade programs now enables the finalisation of the Scoping Study and subject to its results, the commencement of accelerated mining studies.*

*"In parallel with the mining studies, we are preparing significant drilling programs for the coming field season targeting the high grade ore shoots, expansion of the current mineralisation envelope and a maiden drilling program on the new Dinner Creek Lode Zone."*

## Revised Mineral Resource Estimate

The revised Steam Engine Mineral Resource estimate (Table 1, Figures 1 and 2) incorporates the 2020 Resource upgrade drilling programs (Stage 1 and Stage 2 programs) and replaces the May 2020 and December 2020 estimates (refer ASX announcements dated 4 May 2020 and 14 December 2020).

Infill drilling at the Steam Engine and Eastern Ridge lodes has enabled a substantial upgrade in the geological confidence of the near-surface portions of the lodes. Most of the near-surface parts of both lodes have been upgraded to Indicated category, with a central portion of the Steam Engine Lode being classified as Measured. Much of the deeper, extremity and new extensional portions of the Resource remain classified in the Inferred category, due to a lower drilling density (Figure 2).

The estimations were conducted using inverse distance-weighted block modelling of the gold mineralisation zones. Internal waste material was included in the mineralised zones where it was either modelled inside the zone of gold mineralisation or where a zone potentially amenable to mining would otherwise be too narrow.

Grade top-cutting of 56% and 67% was applied to two multi-ounce per tonne intersections (135 g/t Au and 184 g/t Au) for the purpose of normalising the very high grade intersection values to 60 g/t Au.

A total Measured, Indicated and Inferred Resource of **1.73 million tonnes at 2.2 g/t gold** using a 0.5 g/t cut-off is estimated, including a **Measured and Indicated Resource of 850,000 tonnes @ 2.5 g/t gold** and an **Inferred Resource of 880,000 tonnes @ 1.9 g/t gold** (Table 1, Figures 1 and 2).

The current Mineral Resource represents a 31% increase in total Measured and Indicated Resources (since December 2020 MRE) and a 123% increase since commencement of drilling in July 2020, together with a 9% increase in total in-situ gold ounces (since December 2020 MRE) and a 30% increase since July 2020. A comparison between the current MRE and the May 2020 MRE is set out in Table 2.

Block models have been created to determine the Mineral Resource and applicable confidence categories (Figures 1 and 2). The Mineral Resource is being further evaluated for its potential for toll treatment using a pit optimisation based on various assumed AUD gold prices. The pit optimisation results will be released as part of the soon to be finalised Scoping Study. The Resource remains open down dip and along strike at the Steam Engine Lode (Figure 3) and open in all directions at the Eastern Ridge Lode. Drilling to expand the Resource will continue during 2021 in parallel with a series of mining studies.

**Table 1. Steam Engine Gold Deposit summary Mineral Resource estimate**

Classification	Cut-off Grade (g/t Au)	Tonnes	Grade (g/t Au)	Au (ounces)
<b>Steam Engine (Main Lode Zone)</b>				
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
<b>Steam Engine (Footwall Lode Zone)</b>				
Indicated	0.5	60,000	1.8	3,000
Inferred	0.5	110,000	1.6	6,000
<b>Eastern Ridge</b>				
Indicated	0.5	145,000	2.0	9,000
Inferred	0.5	150,000	1.9	9,000
<b>TOTAL MINERAL RESOURCES @ 0.5 g/t Au cut-off (Steam Engine and Eastern Ridge Lodes)</b>				
MEASURED		240,000	2.6	20,000
INDICATED		610,000	2.4	47,000
INFERRED		880,000	1.9	55,000
TOTAL MINERAL RESOURCES		1,730,000	2.2	122,000

**Table 2. Comparison between May 2020 and March 2021 Mineral Resource estimates**

Classification	May 2020			Mar 2021			Comparison		
	Tonnes	Grade (g/t Au)	Gold (ounces)	Tonnes	Grade (g/t Au)	Gold (ounces)	Tonnes	Grade (g/t Au)	Gold (ounces)
<b>Steam Engine (Main Lode Zone)</b>									
Measured	-	-	-	240,000	2.6	20,000	+ 100%	+ 100%	+ 100%
Indicated	370,000	2.5	30,000	405,000	2.7	35,000	+ 9%	+ 8%	+ 17%
Inferred	420,000	2.3	31,000	620,000	2.0	40,000	+ 48%	- 13%	+ 29%
<b>Steam Engine (Footwall Lode Zone)</b>									
Indicated	-	-	-	60,000	1.8	3,000	+ 100%	+ 100%	+ 100%
Inferred	210,000	1.6	11,000	110,000	1.6	6,000	-48%	0%	-45%
<b>Eastern Ridge</b>									
Indicated	-	-	-	145,000	2.0	9,000	+ 100%	+ 100%	+ 100%
Inferred	270,000	2.7	23,000	150,000	1.9	9,000	- 44%	- 30%	- 61%
<b>TOTAL MINERAL RESOURCES @ 0.5 g/t Au cut-off</b>									
Measured	-	-	-	240,000	2.6	20,000	+ 100%	+ 100%	+ 100%
Indicated	370,000	2.5	30,000	610,000	2.4	47,000	+ 65%	- 4%	+ 57%
Inferred	900,000	2.2	64,000	880,000	1.9	55,000	- 2%	- 14%	- 14%
TOTAL	1,270,000	2.3	94,000	1,730,000	2.2	122,000	+ 36%	- 4%	+ 30%



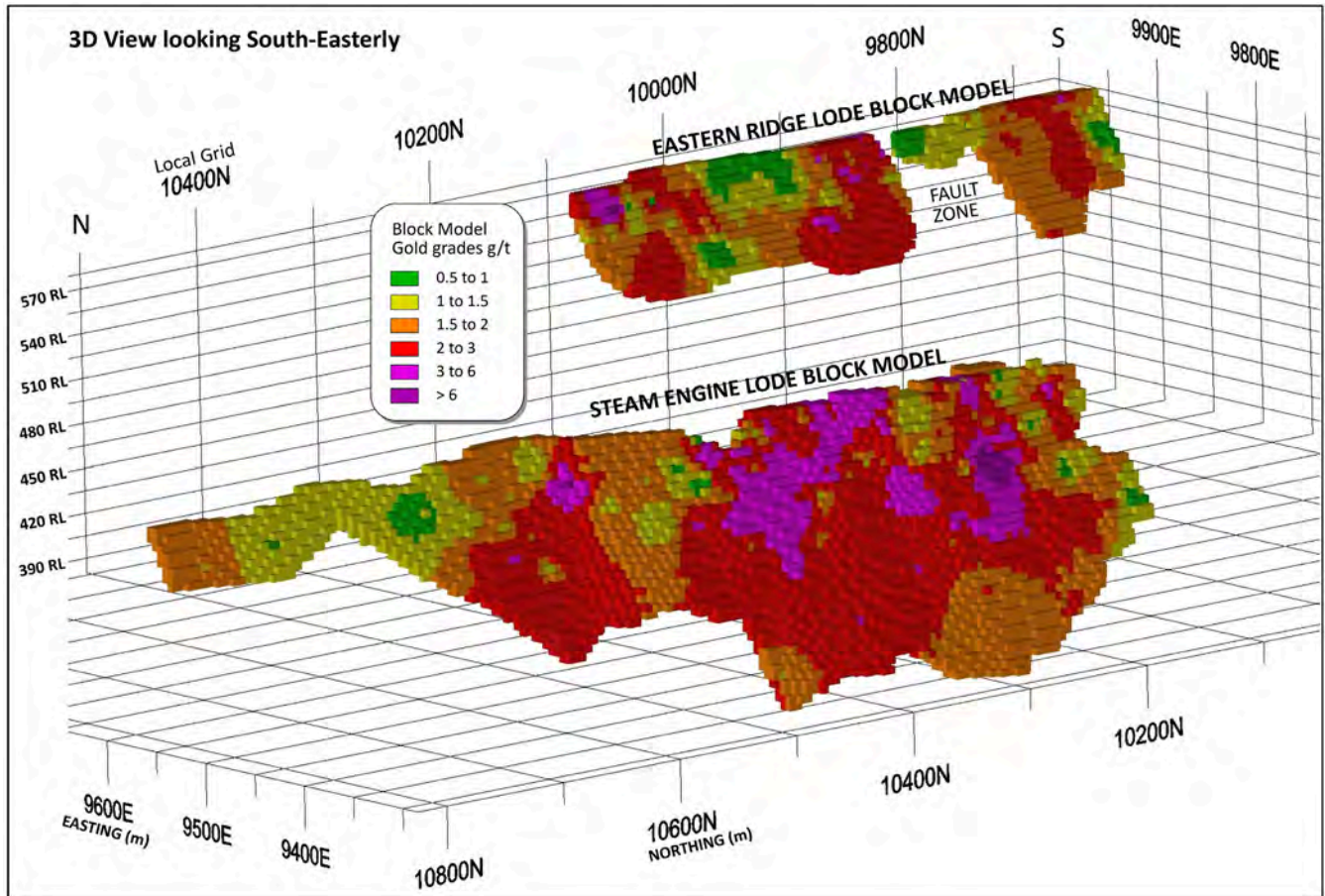


Figure 1. Oblique 3D view (from above GL) of the Steam Engine and Eastern Ridge block models looking grid south easterly showing gold grade distribution.

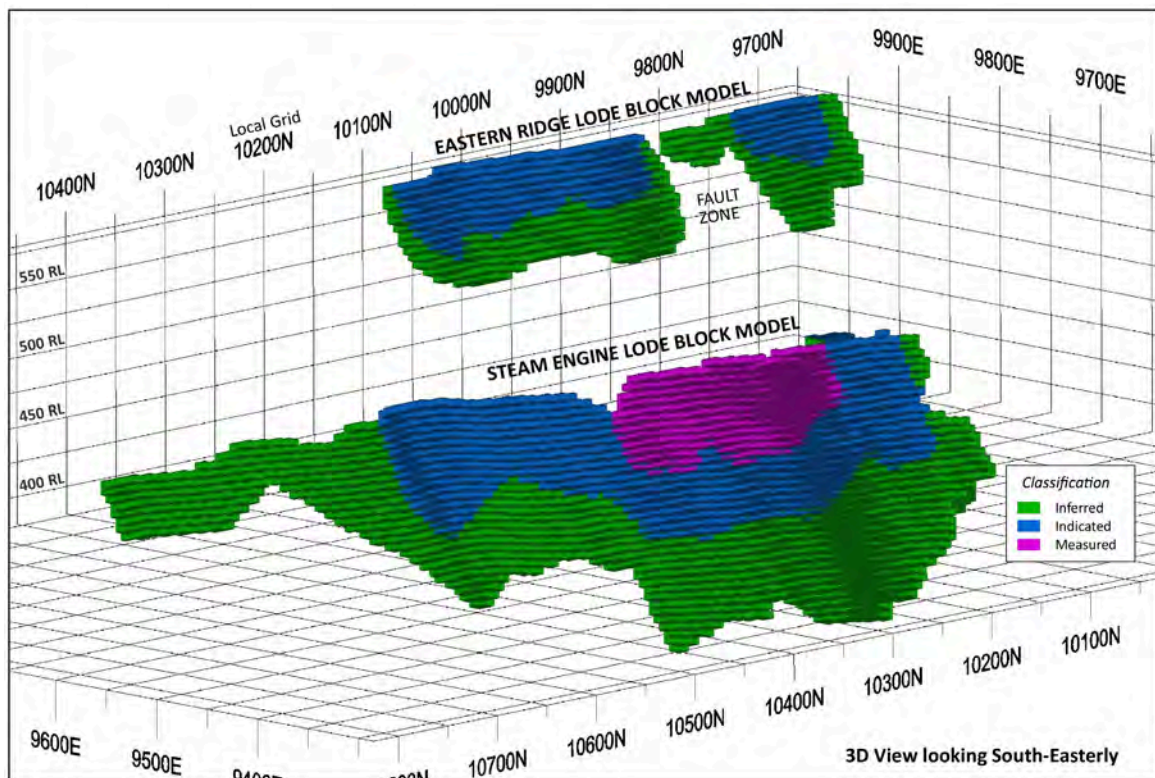


Figure 2. Oblique 3D view (from above GL) of the Steam Engine and Eastern Ridge block models looking grid south easterly showing JORC (2012) Measured, Indicated and Inferred confidence categories.

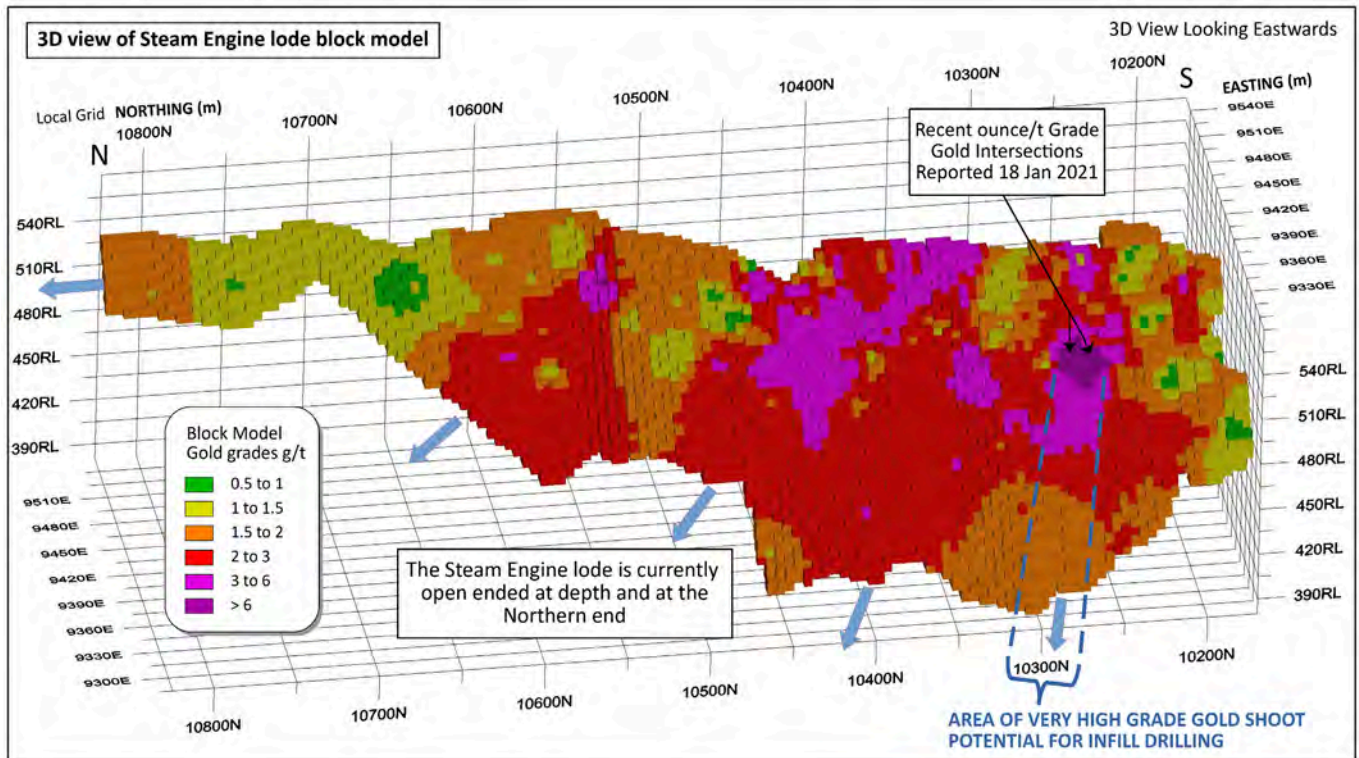


Figure 3. Block model of the Steam Engine Lode showing open-ended high grade ore shoot potential (blue arrows) and the very high grade ore shoot zone containing the multiple once per tonne grade intersections.

## Overview of the Steam Engine Deposit

The Steam Engine Gold Deposit is located within EPM26165, approximately 210km west-northwest of Townsville in Northeast Queensland, Australia (Figure 4).

Gold mineralisation is developed within several north-northeast trending, west-dipping pyritic quartz-muscovite-carbonate schist lodes within metamorphosed intermediate to basic intrusives and metasediments (Figure 5). The metamorphosed host rocks have been heavily chlorite-epidote altered in the vicinity of the mineralised shear zones.

Additionally, the mineralisation appears loosely linked to heavily sericite altered zones, that are readily mappable in some areas where surface exposure is good. Initial observations are that this connection, together with the observable sulphide content could be quite useful in assisting in the mining of the dipping lode zones and to help reduce dilution. The gold mineralisation is represented by a mineral assemblage comprising mainly pyrite with minor arsenopyrite, pyrrhotite, and chalcopyrite (all fine grained).

The lodes are typically interpreted as being of the mesothermal lode type. Recent studies undertaken by Superior indicate that the Steam Engine mesothermal gold mineralisation is most similar to the orogenic style.

The gold-bearing lodes are located within shear zones 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 approximately 45° to 55° to the West.

Several gold bearing lodes occur in the area and include the Steam Engine, Eastern Ridge and Southern Zone lodes and the large, recently delineated Dinner Creek Lode (Figure 6). The Steam Engine Lode has a surface strike length of approximately 500 metres. The Eastern Ridge Lode is located approximately 500 metres east of the Steam Engine Lode and has a surface strike length of approximately 1,400 metres. The Southern Zone Lodes are located between and to the south of the Steam Engine and Eastern Ridge lodes. Located a further 900



metres east of the Eastern Creek Lode, the Dinner Creek Lode has not been subjected to any modern or historical drilling, despite appearing at surface to be the longest and thickest lode zone.

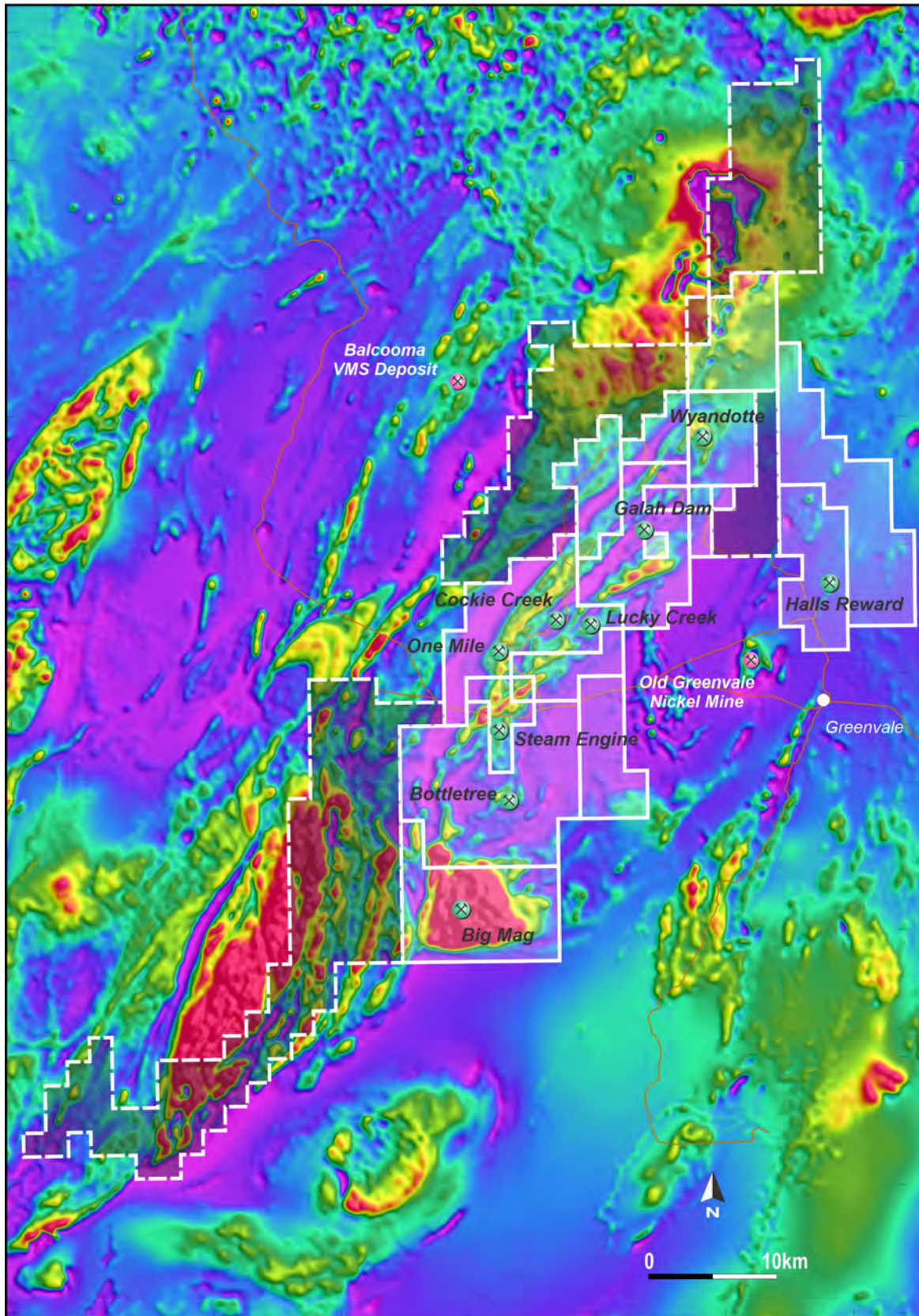


Figure 4. Location of the Steam Engine Gold Deposit and other prospects within the Greenvale Project.



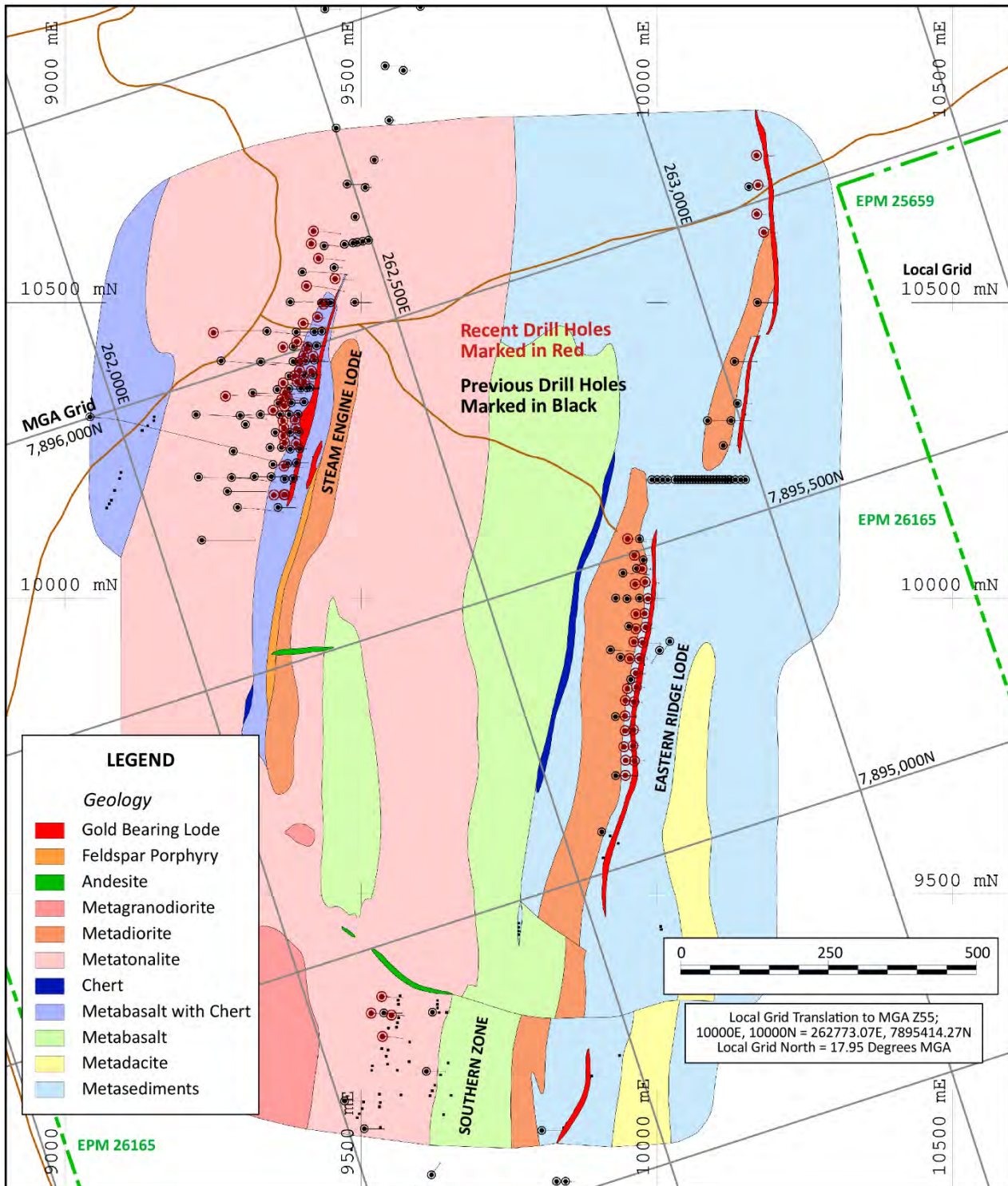


Figure 5. Steam Engine Gold Deposit – Steam Engine and Eastern Ridge lodes – Geology Plan, showing gold lodes (in Red) and Stage 1 drill holes (red dots) and historic holes (black dots).

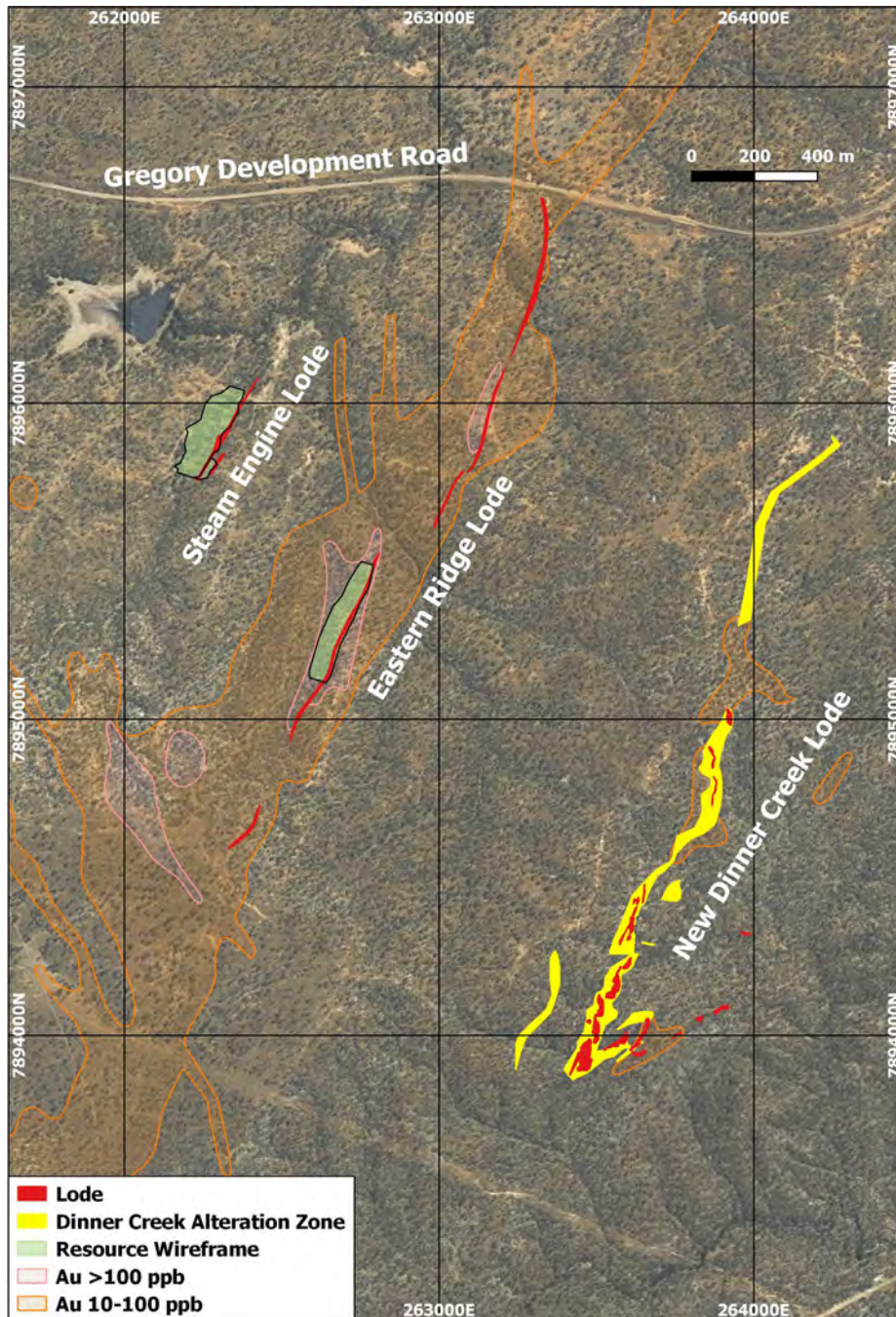


Figure 6. Steam Engine Gold Deposit lodes (in red and yellow) on satellite imagery. The May 2020 Mineral Resource wireframes (in light green) and gold soil geochemistry is also shown.

## Drilling

Total drilling on the Steam Engine Gold Project (excluding RAB holes) is 229 drill holes for a total of 14,816 metres. This includes recent as well as historic Reverse Circulation (**RC**) and Diamond core drill holes.

The majority of the drilling to date (196 drill holes for 13,164 metres) has been carried out on the Steam Engine and Eastern Ridge lodes (Figures 7 to 9). This includes 17 Diamond core holes and 117 RC holes for a total of 10,082 metres at the Steam Engine Lode and 3 Diamond core holes and 59 RC holes for a total of 3,082 metres at the Eastern Ridge Lode.

The Mineral Resource has only been developed on parts of the Steam Engine and Eastern Ridge lodes.



## 2020 Stage 1 Drilling Program

The 2020 Stage 1 drilling program was predominantly an infill program aimed at further defining the MRE completed in May 2020. The program also included additional drill holes aimed at exploring and defining extensional areas for additional open pit potential. In addition to the shallow exploration, two deeper Diamond Core holes with RC pre-collars were also drilled to examine the mineralisation potential and further extension of gold mineralisation down dip at the Steam Engine Lode.

The Stage 1 program was completed on 18 September 2020 and totalled 3,756 metres from 73 drill holes including (Figure 7):

- 65 Reverse Circulation drill holes for 3,059 metres;
- 6 shallow Diamond Core drill holes for 302 metres; and
- 2 deeper RC/Diamond tailed drill holes for 395 metres.

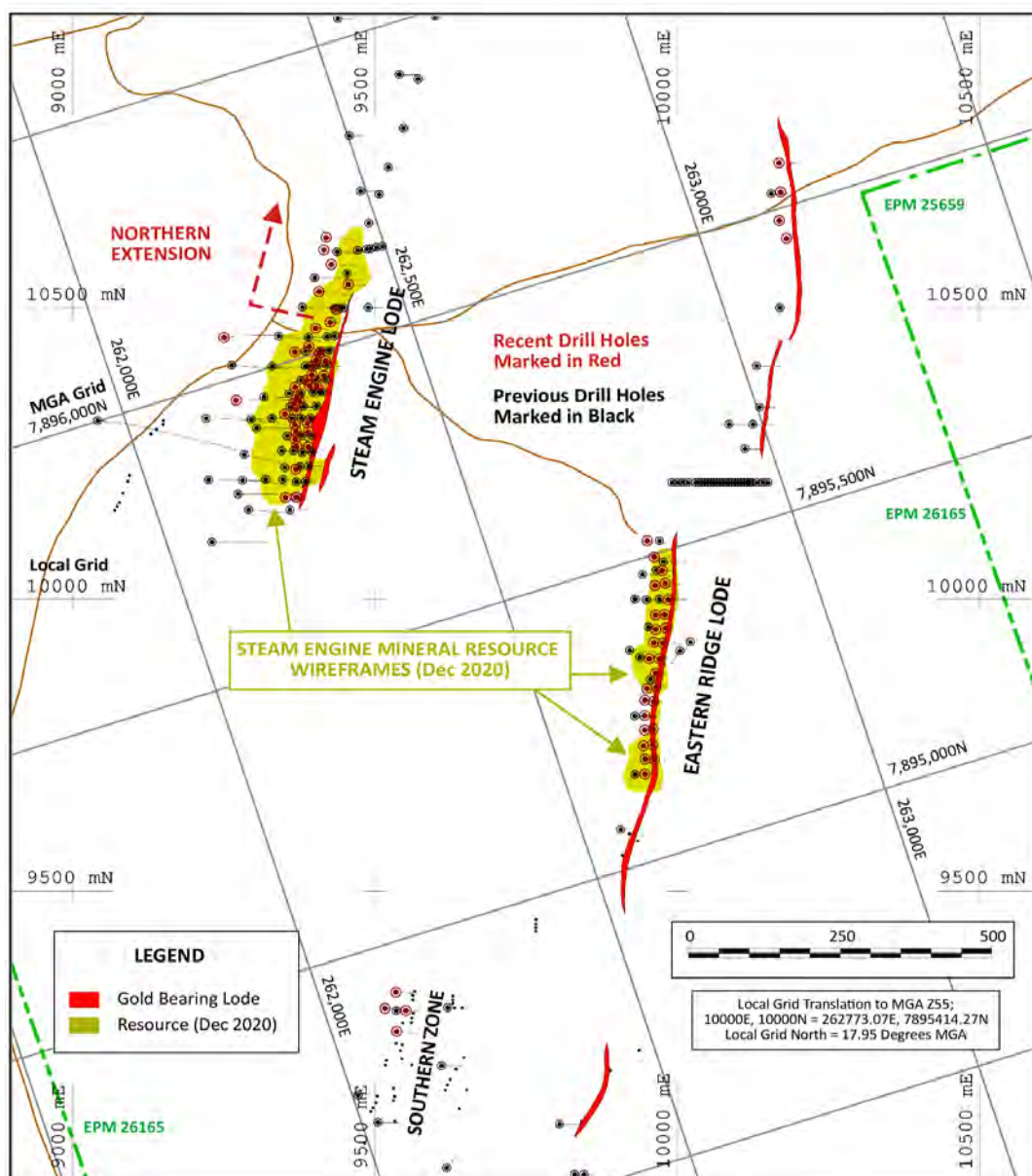


Figure 7. Plan showing the locations of the Stage 1 drilled holes (red dots) and earlier historic holes (black dots). The December 2020 Mineral Resource wireframes are also delineated (in green).

## ***2020 Stage 2 Drilling Program***

The 2020 Stage 2 drilling program at the Steam Engine Gold Deposit commenced on November 11 and concluded on 12 December 2020.

The program comprised a total of 40 RC drill holes for a total of 3,055 metres. Drill hole depths ranged from 48 to 120 metres. Most of this drilling targeted the Steam Engine Lode (33 RC drill holes for 2599 metres; Figure 8), but a small amount of drilling targeted the Southern end of the Eastern Ridge lode (7 RC drill holes for 456 metres; Figure 9).

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.

Below is a summary of the results;

- Higher grade zones were identified in the Steam Engine Lode within previously modelled low grade zones. Two multiple ounce per tonne intersections were identified by the Stage 2 drilling<sup>2</sup>;
- Infill holes on deeper portions of the existing high grade zones showed overall increasing grades with depth<sup>3</sup>;
- Holes intersecting the Steam Engine Footwall Zone have increased the confidence levels in certain portions of this zone but have reduced the area of the zone that contains mineralisation;
- Infill holes on the Steam Engine Lode Northern Extension Zone indicated that the mineralisation extends closer to the surface than was previously understood<sup>4</sup>;
- The drilling confirmed that the Northern Extension Zone mineralisation continued further north and remains open ended. However the grades in this zone were generally lower<sup>5</sup>; and
- The drilling has extended the Eastern Ridge Lode mineralisation by an additional 100 metres south from the Stage 1 drill holes. However most of the mineralisation encountered was of lower grade. A similar lower grade patch was previously encountered between 9775N and 9825N at the Eastern Ridge Lode. However, the gold mineralisation remains open to the south. Further drilling at the southern end of Eastern Ridge is therefore warranted<sup>6</sup>.

## ***Prior Drilling Programs***

Previous drilling at the Steam Engine and Eastern Ridge lode zones have included 87 drill holes for 6,588 metres of drilling. A total of 15 RC drill holes were drilled since 2007;

- 6 RC drill holes were drilled by Superior Resources in 2017; and
- 9 RC drill holes were drilled by Beacon Minerals Limited in 2007.

The earlier phases of RC and Diamond Core drill holes were drilled by Noranda Australia (and subsidiaries) during a series of drilling phases in the 1980's and 1990's.

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<sup>2</sup> For further information, refer to ASX announcement dated 18 January 2021.

<sup>3</sup> For further information, refer to ASX announcement dated 11 February 2021.

<sup>4</sup> For further information, refer to ASX announcement dated 11 February 2021.

<sup>5</sup> For further information, refer to ASX announcement dated 11 February 2021.

<sup>6</sup> For further information, refer to ASX announcement dated 19 February 2021.



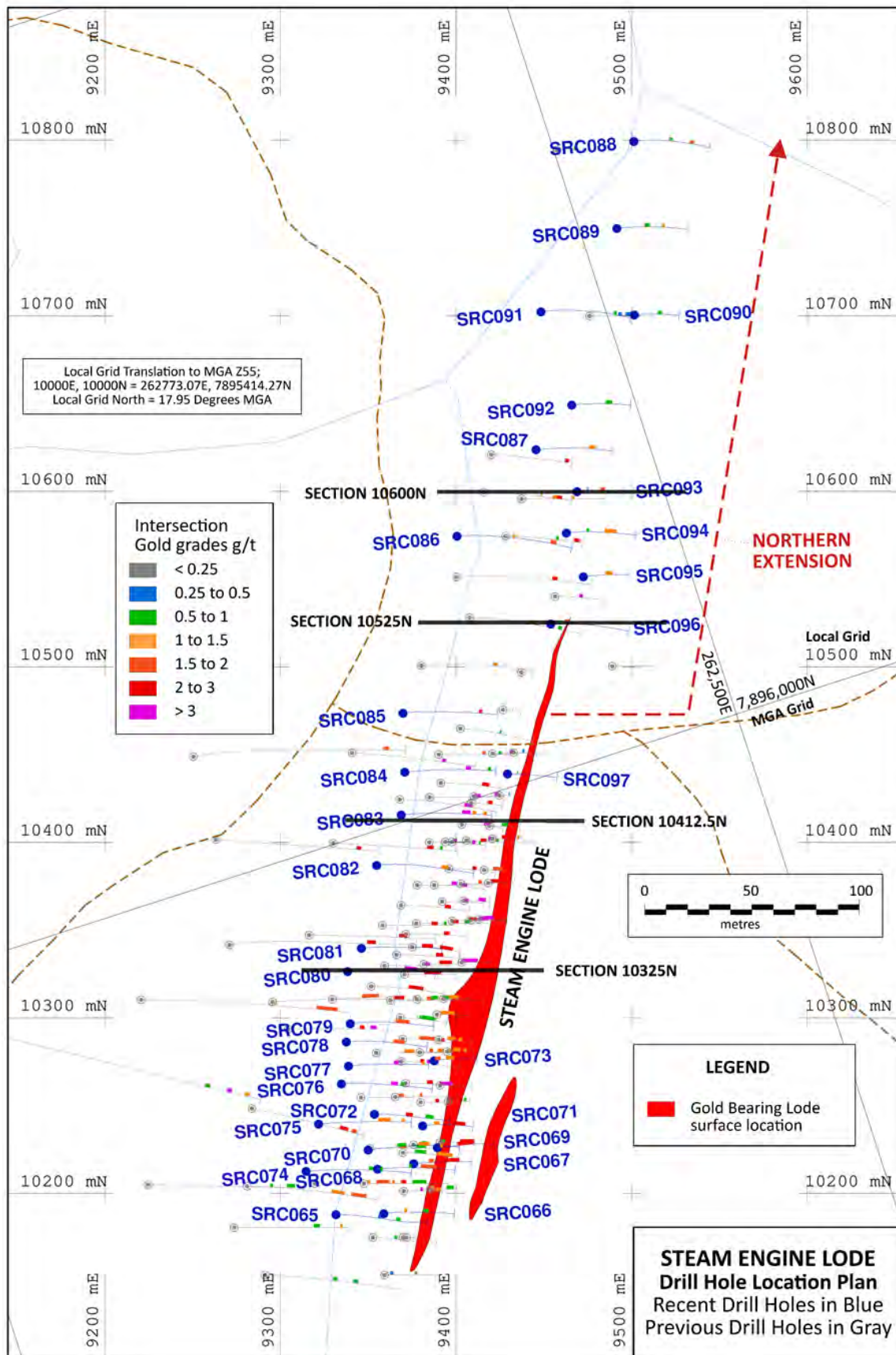


Figure 8. Plan of the Steam Engine Lode showing the locations of the Stage 2 drill holes (in blue) and previously drilled holes (in grey). Cross section traces referred to in this report are also indicated.

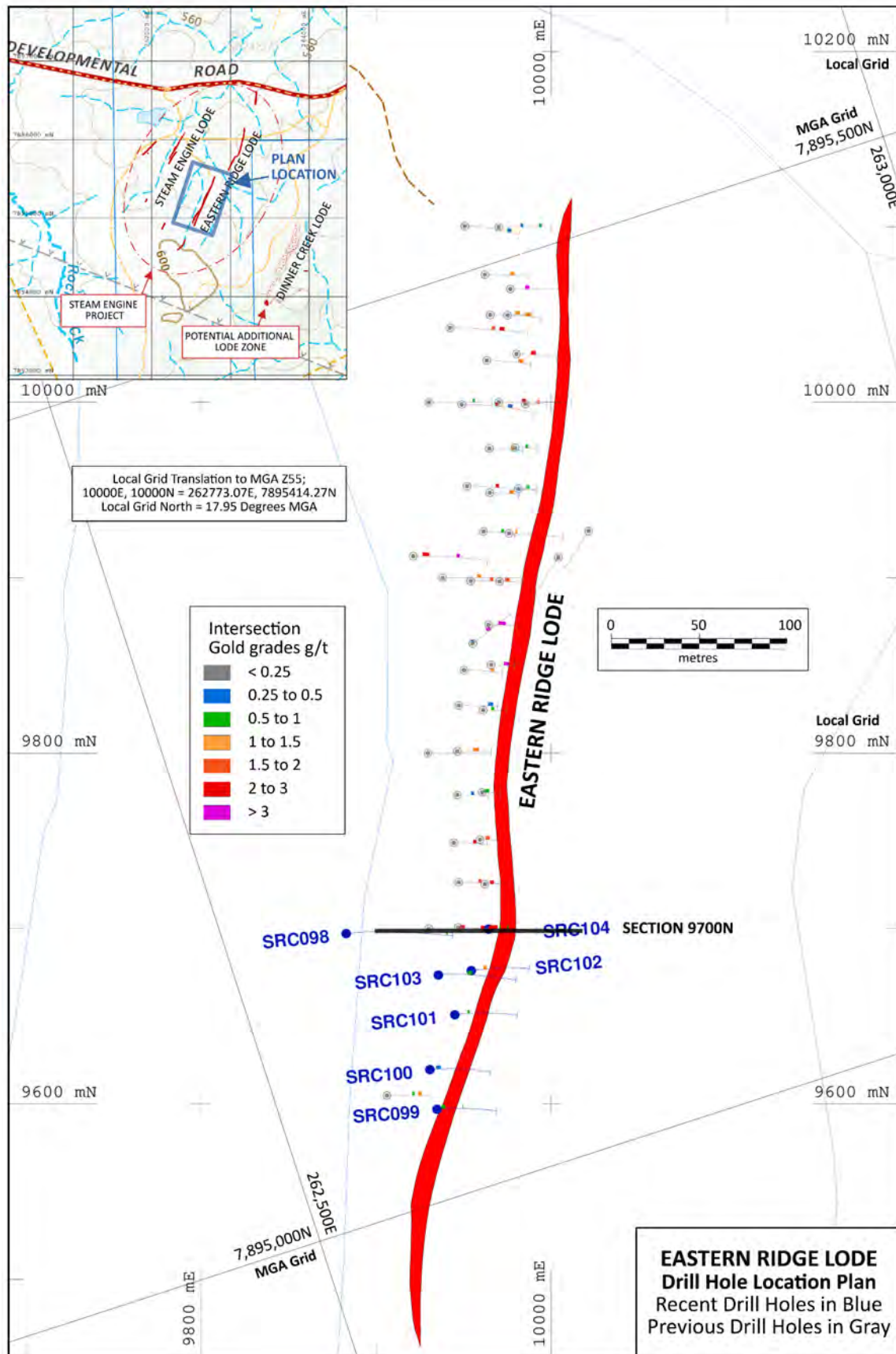


Figure 9. Plan of a portion of the Eastern Ridge Lode showing the locations of the Stage 2 drill holes (in blue) and previously drilled holes (in grey). Cross section traces referred to in this report are also indicated.



## Mineral Resource Estimation

### ***Data Compilation***

Data was compiled from the 2020 drilling programs as well as prior drilling data compiled by the Company.

Data was validated by Competent Persons employed by the Company. Further data validation processes were carried out using Micromine mining software to make the data ready for use. No material inconsistencies were identified and the data was deemed satisfactory for Mineral Resource estimation purposes.

The recent Stage 2 drilling program returned two intersections, each reporting a very high gold assay interval<sup>7</sup> of 135 g/t Au and 184 g/t Au. 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 remains localised and that their effect it is not excessive. This top cut will be re-assessed once more drilling of the zone is carried out.

### ***Sectional Interpretation***

Where available, previous interpretations were used as a guide for the sectional interpretations used for the current Resource estimate, together with the relevant drill hole geology and surface geology information. The recent drilling data confirmed the previous sectional interpretations, with some adjustment being made as a result of the increased level of information.

Sectional interpretations were made of all zones of mineralisation displaying good continuity and sufficient grade (generally >1 g/t intersections), which included the main Steam Engine Lode zone (Figures 10 and 11), a portion of the Steam Engine Footwall Lode zone and a portion of the Eastern Ridge Lode zone (Figure 12).

Although lode material north of 10638N on the Steam Engine Lode zone was left out of the December 2020 MRE, recent additional drilling north of this area allowed for sectional interpretation and extrapolation to be extended approximately 200 metres northwards to 10825N.

The estimation exercise applied a general intersectional cut-off of 1 g/t. A cut-off of approximately 0.7 g/t gold was applied to the mineralised intersections. Intersections of 1 g/t gold and above were considered to have reasonable prospects of economic extraction. The other significant economic factor considered was the width of the gold intersections. Zones of greater width were generally considered to hold better potential for extraction at depth. Other geological factors, including internal waste intervals and a minimum width of the mineralised zone were used to develop what are hoped to be mineable situations and practical mineable widths. Some intersections of less than 1 g/t were also included where necessary for the purposes of mineralisation continuity.

The sectional outlines are the key to the resource interpretation used. In general, any comparison from section to section may contain some risk as to whether the most obvious interpretation is correct. However, an obvious interpretation will usually be correct for this type of mineralisation. The section-to-section interpretations were made in section and in 3D using Micromine software.

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<sup>7</sup> For further information, refer to ASX announcement dated 18 January 2021.

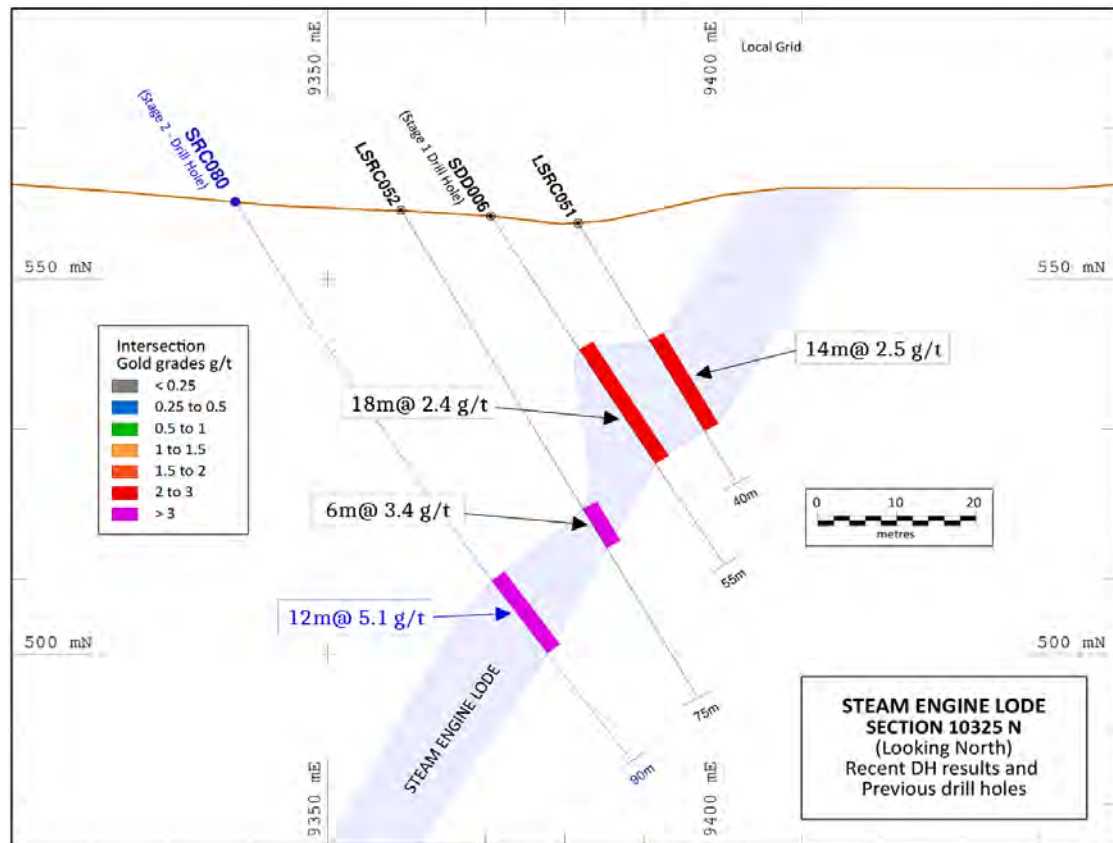


Figure 10. Cross section showing sectional interpretation of Steam Engine Lode at 10325N (refer Figure 8 for location).

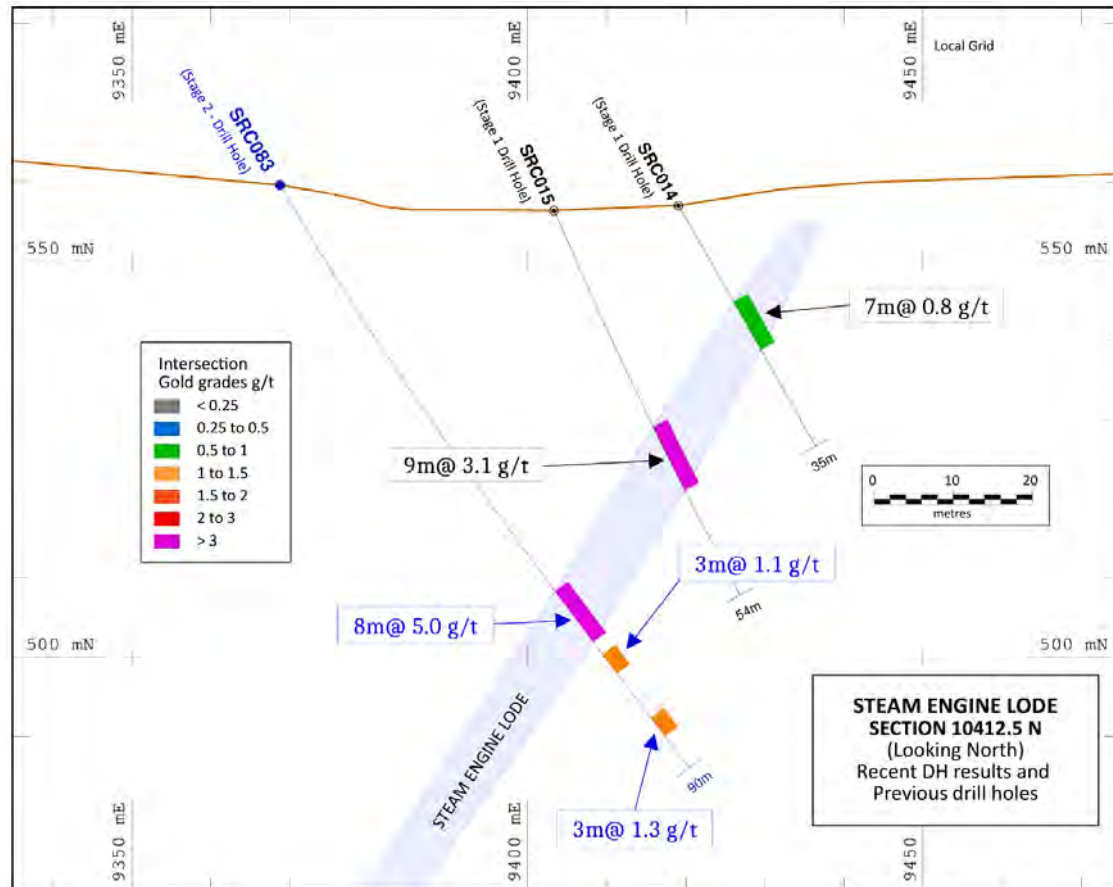


Figure 11. Cross section showing sectional interpretation of Steam Engine Lode at 10412.5N (refer Figure 8 for location)..



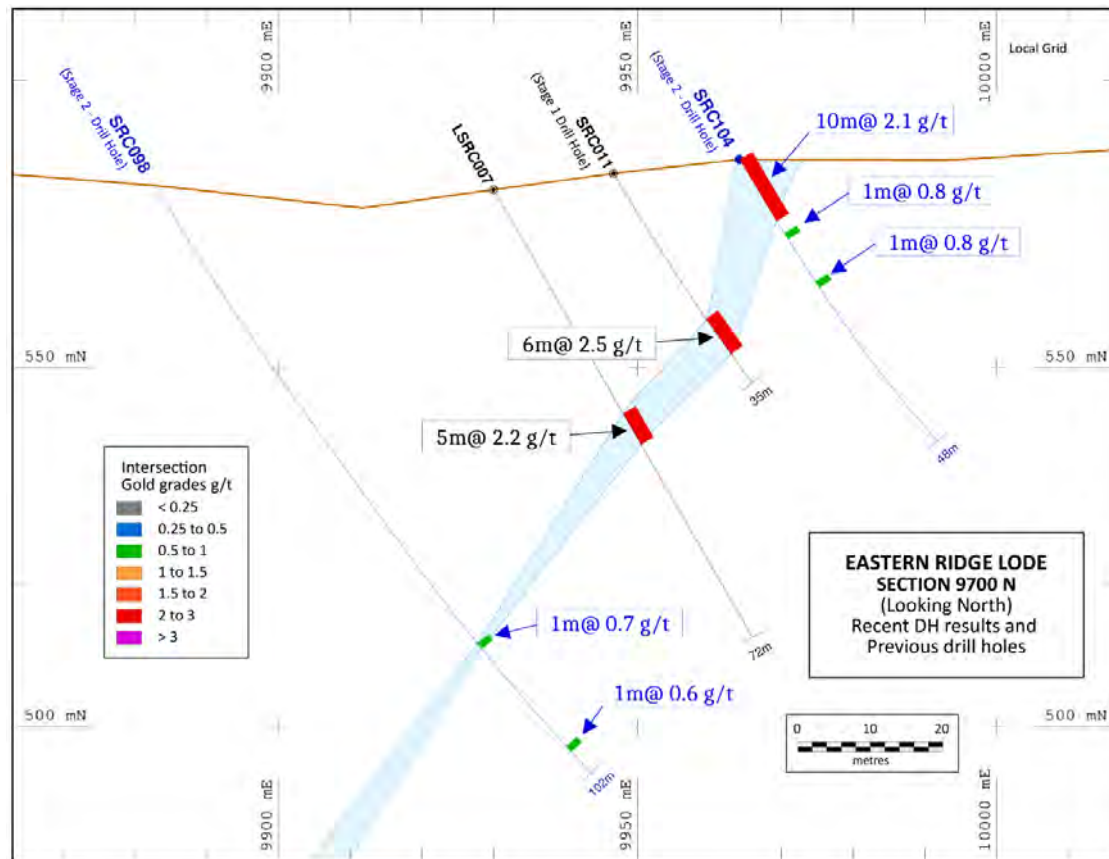


Figure 12. Cross section showing sectional interpretation of Eastern Ridge Lode at 9700N (refer Figure 9 for location).

### Wireframing – Steam Engine Lode

The 3D interpretation of the Steam Engine Lode zone is similar to previous Steam Engine Lode wireframes (Figure 13), apart from some adjustments as a result of additional infill drilling from the Stage 2 program. The most significant difference is a further northwards extension of the wireframe reflecting the continuation of the Resource in that direction.

The interpretation of the Steam Engine Lode indicates that the Footwall Lode Zone merges close to the Main Lode Zone at a location just south of the thickest part of the Main Lode Zone. This merge point is also located near to where the main lode zone it is at its highest grades, notably from two multiple ounce per tonne intersections returned from the Stage 2 drilling<sup>8</sup>.

Wireframing of the new Northern Extension part of the Steam Engine Lode has extended the lode towards the north and it remains open ended. However, the grades in the Northern Extension are generally lower and the lode is generally thinner. The recent drilling has shown the North Extension portion of the Main Lode Zone to extend closer to the ground surface than was previously understood.

### Wireframing – Steam Engine footwall

Not all of the Steam Engine Footwall Zone is economic and only zones of sufficient grade were wireframed for this Resource estimation. This includes part of the merge point and a section of footwall mineralisation to the south of the merge point.

<sup>8</sup> For further information, refer to ASX announcement dated 18 January 2021.

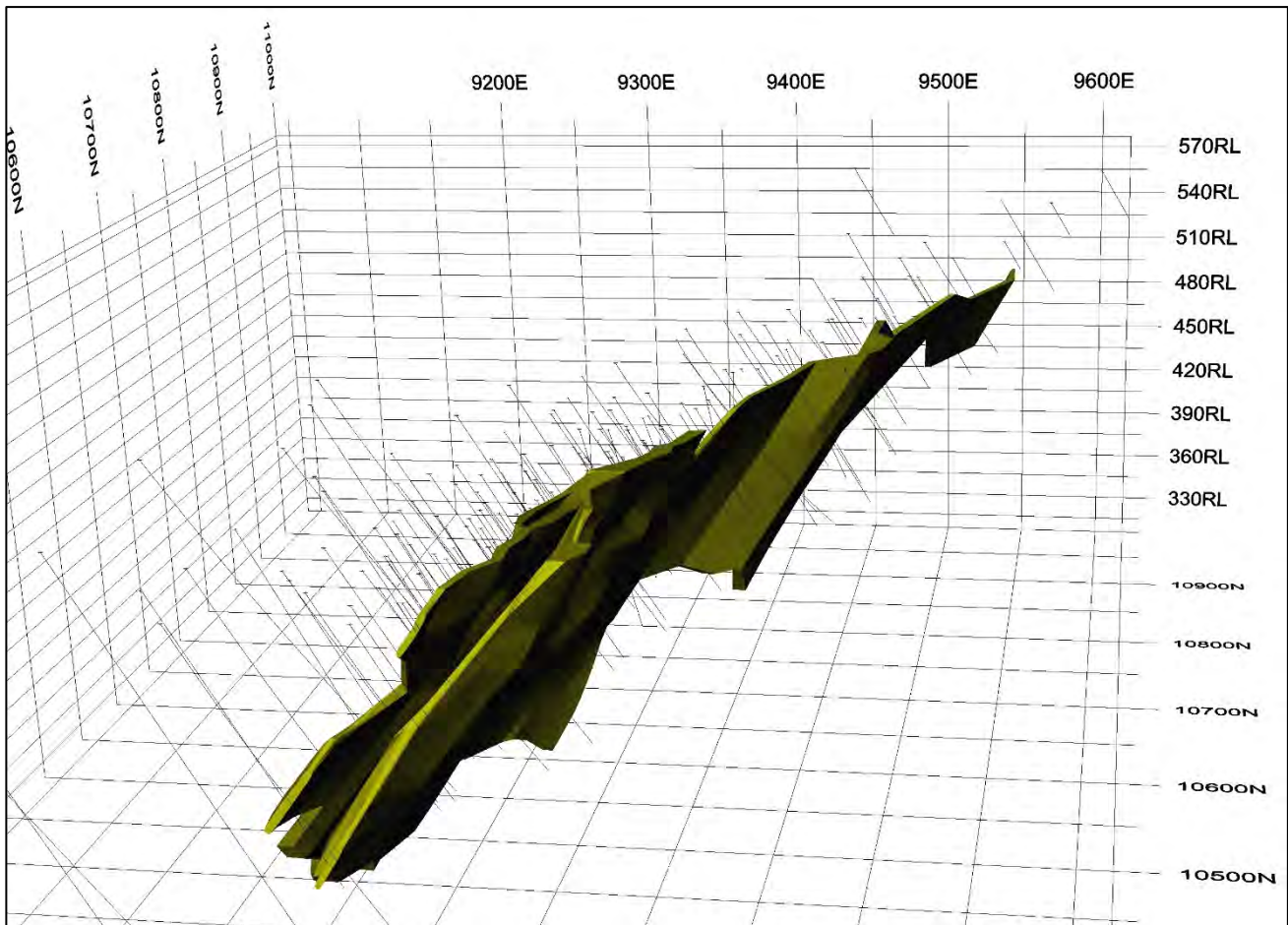


Figure 13. 3D perspective view of the Steam Engine Lode wireframe looking grid north-westerly from above Surface Level.

### **Wireframing – Eastern Ridge Lode**

Consistent with the previous MREs (March and December 2020), the Eastern Ridge Resource is dominated by one single lode that is easily wireframed. Results from the 2020 Stage1 drilling identified a faulted zone at 9825N that results in the deterioration of gold grades in this section and on the section immediately to the south of it. The fault zone was excluded from the Resource estimation, pending future drilling of this portion of the lode.

As a result, the Eastern Ridge Lode is split into a northern and a southern portion, separated by a slight gap zone. The two portions are slightly offset to one another due to the faulting, with the southern portion lying approximately 10 metres true width to the hangingwall of the northern portion (Figure 14). Consequently, the northern and southern portions of the Eastern Ridge resource are wireframed separately.

The recent Stage 2 drilling at the southern end of the Eastern Ridge Lode was able to track the mineralisation further south, however lower grades in this zone precluded much of this mineralisation from being wireframed into in the Resource.

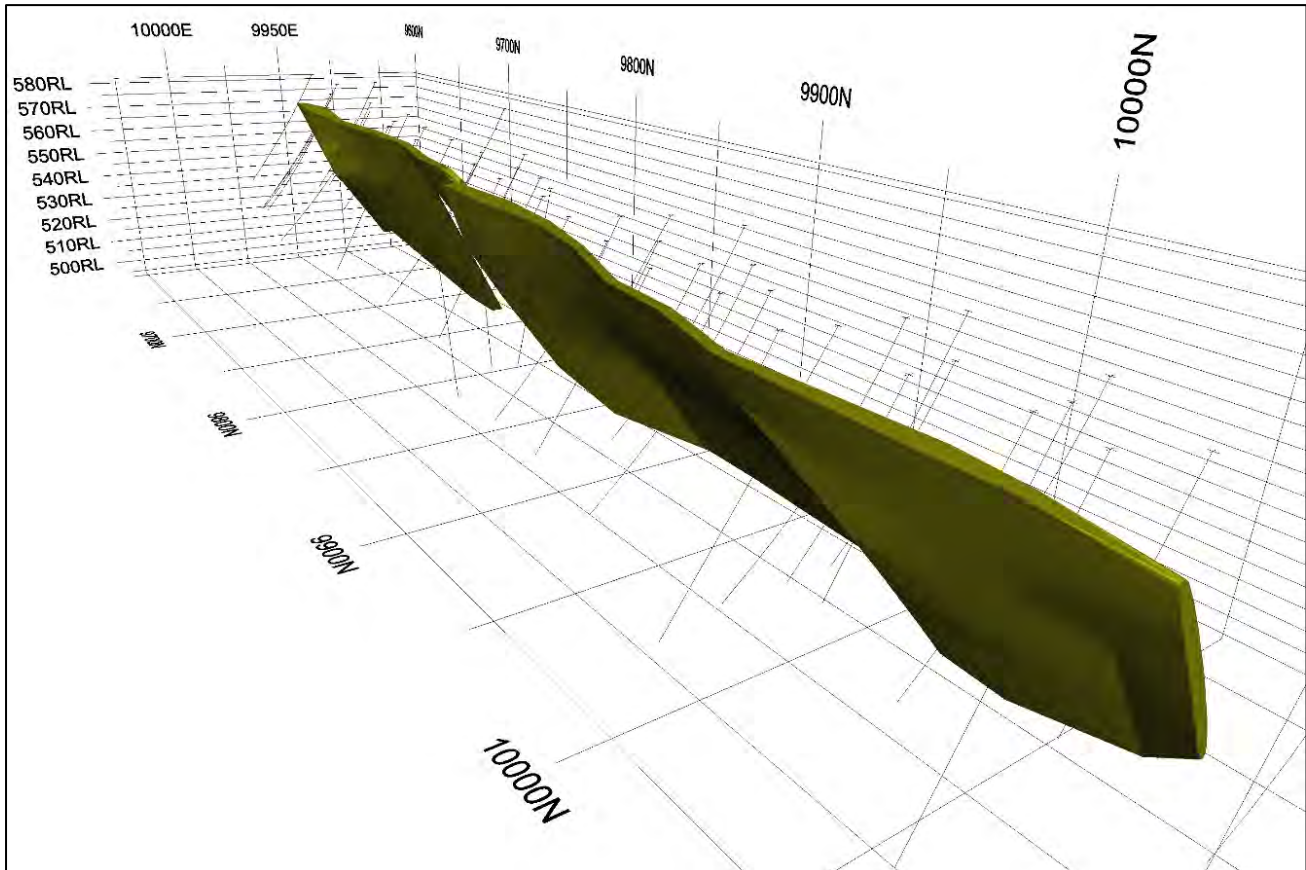


Figure 14. 3D perspective view of the Eastern Ridge Lode wireframe looking grid south-easterly from above Surface Level.

### **Block Modelling**

Inverse distance weighted (IDW) block models were used to make the Resource estimates for the modelled gold Resources. The block models consisted of 5x5x5 metre blocks. A search criteria of 90 metres was used for the Steam Engine and Eastern Ridge lodes. Assays were filtered from within the wireframed zones for the Resource estimation. A top cut of 60 g/t was applied to values above this grade (refer to “Data Compilation” section above).

An inverse power of 3 was used to more closely map the grade distributions in 3D (Figure 15). This method is considered to most closely reflect the grade fluctuations in the ore shoot zones near the drill holes and will still result in adequate averaging of the areas where additional infill drilling may be desirable.

As part of cross checking, inspections of the modelled grade blocks against the sectional and long section views reflect a close fit with the grade fluctuations in the drilling. The Resource model wireframes were used to allocate the proportion (the fraction) of each block that lies within the wireframe to allow accurate estimates of the tonnes and grade.

As any block model is essentially ‘black box’ technology, a range of block model scenarios were run to confirm ‘ball-park’ tonnage and grade. As a final check wireframe estimates were used to cross-check the block model Resource figures. The comparison showed the volumes to be a near exact matches.

The grade figures for the wireframe estimates are only an average of all of the weighted assay values and do not use any form of distance weighting. Despite this, the wireframe grade estimates gave reasonably similar figures for the global grades compared to the block model estimate.



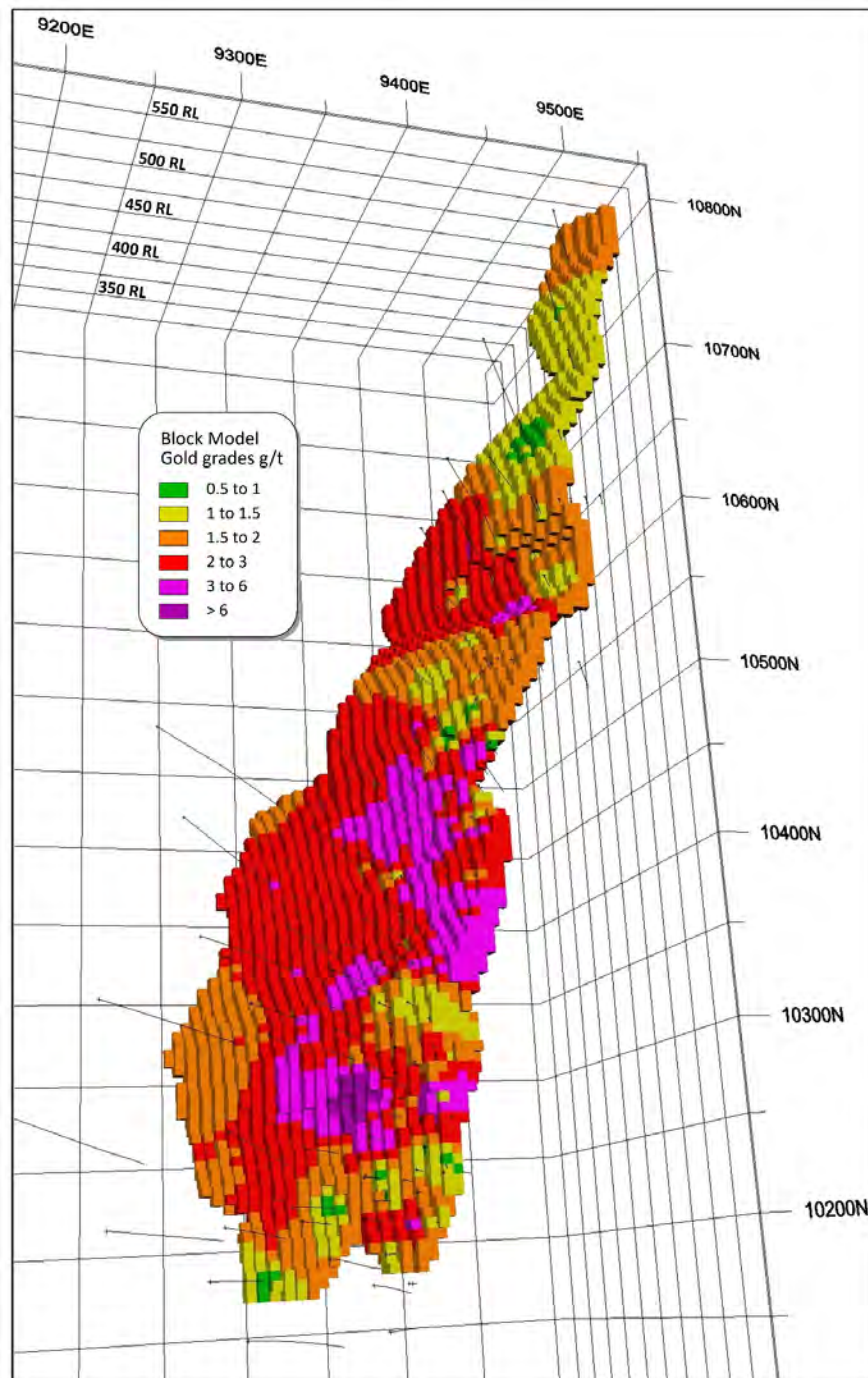


Figure 15. 3D perspective view of the Steam Engine Lode block model looking northwards from above.

### Resource Classification

Drill hole spacing criteria for the material classifications at the Steam Engine and Eastern Ridge lodes were determined as:

- Measured – holes up to 20 metres (along strike) by 20 metres, or less;
- Indicated – holes up to 40 metres (along strike) by 40 metres, or less; and
- Inferred – holes up to 100 metres (along strike), or less.

The estimated Measured, Indicated and Inferred Resources are summarised in Table 1 and a 3D diagrammatic representation of the break-down is shown in Figure 2.

## Next Steps

### SCOPING STUDY

The results of the current MRE will form the Resource dataset on which a Scoping Study will be based. The Scoping Study work is already advanced and will financially model mining scenarios at a range of gold price assumptions as well as a range of MREs at a range of gold grade cut-offs.

The Scoping Study is expected to be finalised during April 2021.

### PRE-FEASIBILITY STUDY

Depending on the results of the Scoping Study, a Pre-Feasibility Study will commence immediately after finalisation of the Scoping Study.

<ENDS>

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## 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.

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## APPENDIX 1

### 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
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<p>Current Sampling</p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>The drill bit sizes used in the drilling were consistent in size and are considered appropriate to indicate the degree and extent of mineralisation.</li> <li>Sample intervals that lack metalliferous anomalism are not reported and are not considered to be material.</li> <li>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.</li> <li>1m representative samples of intervals with visible mineralisation were assayed for gold at SGS laboratories in Townsville.</li> <li>1m samples at 0.5 g/t Au and above were also submitted for multi-element assaying using a four acid digest.</li> <li>Assaying for gold was via fire assay of a 50 gram charge.</li> <li>Sample preparation at SGS laboratories in Townsville for all samples is considered to be of industry standard procedure.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>Historical Sampling</p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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.).</li> </ul>	<p>Current Drilling</p> <ul style="list-style-type: none"> <li>Drilling from surface was performed using standard RC and diamond core drilling techniques as applicable to the hole drilled.</li> <li>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.</li> <li>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.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>All holes were surveyed using a Reflex Gyro north-seeking gyroscopic instrument to obtain accurate down-hole directional data.</li> </ul> <p>Historical Drilling</p> <ul style="list-style-type: none"> <li>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).</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<p>Current Drilling</p> <ul style="list-style-type: none"> <li>Sample recovery was performed and monitored by Terra Search contractor and Superior's representatives.</li> <li>The volume of sample collected for assay is considered to be representative of each 1m interval.</li> <li>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.</li> <li>For Diamond core drilling a wireline was used to retrieve core samples that are then placed in core trays.</li> </ul> <p>Historical Drilling</p> <ul style="list-style-type: none"> <li>Recoveries for RC drill holes were not recorded.</li> <li>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.</li> <li>No relationship is evident between sample recovery and grade.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Logging</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<p><b>Current Drilling</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> <li>All logging data is digitally compiled and validated before entry into the Superior database.</li> <li>The level of logging detail is considered appropriate for resource drilling.</li> <li>The RC chip trays and Diamond Core trays were all photographed.</li> </ul> <p><b>Historical Drilling</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>The logging is generally of a qualitative nature. No core or chip photography is available in the reports.</li> <li>For the logs available logging of all material has been completed.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling</li> </ul>	<p><b>Current Sampling</b></p> <ul style="list-style-type: none"> <li>The sample collection methodology is considered appropriate for RC and Diamond Core drilling and was conducted in accordance with best industry practice.</li> <li>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.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>stages to maximise representivity of samples.</i></p> <ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<p>Duplicate samples are taken and assayed in each batch processed for assaying.</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• The sample sizes are considered appropriate to the style of mineralisation being assessed.</li> </ul> <p>Historical Sampling</p> <ul style="list-style-type: none"> <li>• The diamond drill core samples were collected from halved core.</li> <li>• 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.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>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.</i></li> <li>• <i>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.</i></li> </ul>	<p>Current Assaying</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• Additionally, SGS used a series of its own standards, blanks, and duplicates for the QC of the elements assayed.</li> </ul> <p>Historical Assaying</p> <ul style="list-style-type: none"> <li>• Sampling and assaying techniques used during various phases of the previous drilling</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>were done by commercial laboratories using industry standard procedures used at the time of drilling.</p> <ul style="list-style-type: none"> <li>• Assay data reviewed with the historical reports include some duplicate assaying. It is unknown in detail what other quality control procedures were adopted.</li> <li>• 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.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<p>Current Sampling</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• No holes were twinned by Superior.</li> <li>• Logs were recorded by Terra Search field geologists on hard copy sampling sheets which were entered into spreadsheets for merging into a central database.</li> <li>• Laboratory assay files were merged directly into the database.</li> <li>• The data is routinely validated when loading into the database.</li> <li>• No adjustments to assay data were undertaken.</li> </ul> <p>Historical Sampling</p> <ul style="list-style-type: none"> <li>• Close spaced recent drilling by Superior (2020) to historic drill holes confirms the order of the drill gold intersections obtained by the historic drilling.</li> <li>• 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.</li> <li>• 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.</li> <li>• No adjustments have been made to historical sample assay data as there was no apparent reason for such adjustment.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<p><b>Current Drilling</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• The area is located within MGA Zone 55.</li> <li>• 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.</li> <li>• 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.</li> </ul> <p><b>Historical Drilling</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Drill holes completed by Beacon Minerals Limited were reported using handheld GPS collar coordinates with a likely accuracy of about <math>\pm 5\text{m}</math>. An accurate translation from GPS coordinates to local grid coordinates has been used to convert the Beacon drill hole data to local coordinates.</li> <li>• 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.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration Results.</li> <li>• Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>• Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>• Drill hole spacing is variable at the Steam Engine area, due to different stages of the resource evaluation at the project.</li> <li>• 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.</li> <li>• Most intersections reported in this report are weighted composites of smaller sample intervals as is standard practice.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>• If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>• The orientation of the drill holes is generally ideal for reporting of the intersection results.</li> <li>• No orientation sample bias has been identified at this stage.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• Sub-samples selected for assaying were collected in heavy-duty polyweave bags which were immediately sealed.</li> <li>• These bags were delivered directly to the SGS assay laboratory in Townsville by Terra Search and Superior's employees.</li> <li>• Sample security measures within SGS laboratories are considered adequate.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>• No audits or reviews of the sampling techniques and data have been undertaken to date.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and</b>	<ul style="list-style-type: none"> <li>• Type, reference name/number, location and ownership including agreements or material issues with third parties such</li> </ul>	<ul style="list-style-type: none"> <li>• The areas reported lie within Exploration Permit for Minerals 26165 and held 100% by Superior.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>land tenure status</b>	<p><i>as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i></p> <ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Superior holds much of the surrounding area under granted exploration permits.</li> <li>Superior has agreements or other appropriate arrangements in place with landholders and native title parties with respect to work in the area.</li> <li>No regulatory impediments affect the relevant tenements or the ability of Superior to operate on the tenements.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>All historic drilling reported in this report has been completed and reported in accordance with the current regulatory regime.</li> <li>Compilation in digital form and interpretation of the results of that work in digital form has been completed by the Competent Person.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Steam Engine and Eastern Ridge gold deposits are hosted within shear zones.</li> <li>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.</li> <li>The gold mineralisation phase itself consists of a mainly pyrite sulphide assemblage +/- minor arsenopyrite, pyrrhotite, and chalcopyrite (all fine grained).</li> <li>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.</li> <li>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.</li> <li>The important features of the Steam Engine and Eastern Ridge lodes are their continuity and a persistent dip to the west.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration results are reported as a length weighted average of all the assays of the hole intersections.</li> <li>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.</li> <li>No metal equivalent values are reported.</li> </ul>
<b>Relationship between mineralisation widths and</b>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported,</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>For the Eastern Ridge lode zone an interpreted westerly dip of approximately 45 to 55°</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>intercept lengths</b>	<i>there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i>	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.
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>Included.</li> <li>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.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Grind size for the test work was P80 (80% passing size of 75 microns).</li> <li>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.</li> <li>Leach tests were run for 48 hours with a sample taken after 24 hours to assist in understanding the leach kinetics.</li> <li>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.</li> <li>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.</li> <li>At this stage, no test work has been done to investigate options to improve the gold recovery in the Steam Engine Lode samples.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Further work</b>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>Subsequent to this Mineral Resource estimate additional work programs will now include: <ul style="list-style-type: none"> <li>Pit optimisation studies</li> <li>Metallurgical studies</li> <li>Geotechnical studies</li> <li>Toll treatment negotiations</li> <li>Preliminary mining and rehabilitation planning</li> <li>Preliminary environmental studies</li> </ul> </li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Data validation procedures used.</i></li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>Data validation processes were also carried out using mining software to make the data ready for use.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li><i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></li> <li><i>If no site visits have been undertaken indicate why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li><i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i></li> <li><i>Nature of the data used and of any assumptions made.</i></li> <li><i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i></li> </ul>	<ul style="list-style-type: none"> <li>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).</li> <li>The geological Interpretations are consistent with the previous interpretation by</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li><i>The use of geology in guiding and controlling Mineral Resource estimation.</i></li> <li><i>The factors affecting continuity both of grade and geology.</i></li> </ul>	<p>Noranda.</p> <ul style="list-style-type: none"> <li>The data includes drill hole data and surface exposures, but there are no current underground ore exposures.</li> <li>No alternative interpretations are evident or have been considered.</li> <li>Lode geology is fundamental to the interpretations.</li> <li>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.</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>These are apparent on the various sections included with this report.</li> </ul>
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></li> <li><i>The assumptions made regarding recovery of by-products.</i></li> <li><i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i></li> <li><i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li> <li><i>Any assumptions behind modelling of selective mining units.</i></li> <li><i>Any assumptions about correlation between variables.</i></li> <li><i>Description of how the geological interpretation was used to control the resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>Further detail on the resource estimation process is included in the main body of this announcement.</li> <li>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.</li> <li>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.</li> <li>Checks against previous resource estimations also showed similar tonnages and grades over the portions of the Resource that have been previously estimated by Superior.</li> <li>The estimate is for gold only. No by-products are considered likely.</li> <li>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.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>• Discussion of basis for using or not using grade cutting or capping.</li> <li>• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• No intersection data below 2m true thickness was used in the estimation.</li> <li>• No correlation between variables.</li> <li>• The lode geology was a fundamental element of the modelling and controlled the modelling process.</li> <li>• 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.</li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li>• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>• The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the 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.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Internal dilution zones within the mineralised downhole intervals were included in the estimates.</li> <li>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).</li> <li>Further mining dilution effects will need to be considered during the reserve estimation process.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Grind size for the test work was P80 (80% passing size of 75 microns).</li> <li>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.</li> <li>Leach tests were run for 48 hours with a sample taken after 24 hours to assist in understanding the leach kinetics.</li> <li>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.</li> <li>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.</li> <li>At this stage, no test work has been done to investigate options to improve the gold recovery in the Steam Engine Lode samples.</li> </ul>

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<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>These factors have yet to be studied and some preliminary assumptions for this are expected to be adopted in an upcoming scoping study.</li> </ul>
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Tests will need to be carried out in the next phase of drilling to determine more accurate estimates for the average density.</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>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).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>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).</li> <li>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.</li> <li>The result appropriately reflects the Competent Person's current view of the deposit.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>No audits have been undertaken at this stage.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> <li><i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>This approach provides an estimate within any area of the lode that is locally based.</li> <li>No comparisons with production data are possible.</li> </ul>