Superior Resources

ASX Announcement

20 December 2024

STEAM ENGINE PROJECT PHASE 2 DRILL RESULTS

First assays further define high grade Au shoot at Eastern Ridge Lode with ground-breaking implications for Steam Engine Lode

HIGHLIGHTS:

- **First set of assays covering 6 RC holes (totalling 450m) from Phase 2 drill program starting to reveal an en-echelon system of high-grade gold shoots at Eastern Ridge Lode.**
- **The 6 drill holes were designed to define the new high-grade gold shoot identified during the Phase 1 program which intersected an impressive:**
  - **12m @ 3.29g/t Au** from 71m (SRC202)
    incl **5m @ 7.65g/t Au** from 73m
    incl **2m @ 17.09g/t Au** from 74m
  - **6m @ 2.35g/t Au** from 59m (SRC203)
    incl **3m @ 4.26g/t Au** from 59m
    incl **1m @ 9.08g/t Au** from 59m
- **Assays from the 6 RC holes appear to define the bottom edge of the gold shoot with:**
  - **6m @ 1.96g/t Au** from 64m (SRC225)
    incl **1m @ 3.9g/t Au** from 68m
- **Assays yet to be received from Phase 2 holes that were drilled in front of the apparent plunge of this high-grade gold shoot.**
- **Phase 1 drilling already identified 3 high grade zones from surface, each equally separated by 150m. The 6 Phase 2 holes reported herein show that the high-grade shoots have a very shallow plunge towards the north. This contrasts with the main high-grade zone at the Steam Engine Lode, which plunges more steeply down dip to the northwest.**
- **Potential break-through implication for Steam Engine Lode to also be controlled by an en-echelon structural regime. This would:**
  - **explain the sharp termination of the southern end of the Steam Engine Lode; and**
  - **further strengthen support for the very intense sub-audio magnetics (SAM) anomaly to the immediate south of the Steam Engine Lode to represent a second Steam Engine lode.**
- **SAM anomaly target has become highest drill-test priority. SAM drilling program to be conducted after conduct of a cultural heritage survey.**
- **Assays for a further 26 drill holes (2,218 samples) from the Eastern Ridge and Steam Engine lodes yet to be received.**
- **Feasibility Study progressing and will factor in Mineral Resource upgrades as the study process advances.**

Superior's Managing Director, Peter Hwang commented:

"We are pleased to see the development of a potentially important structural theme with the addition of the first set of Phase 2 RC program assays to the Steam Engine database.

"An en-echelon structural regime results in multiple parallel overlapping dilational structures that repeat infill mineralisation zones, often over large areas. This is becoming apparent from the 2024 Phase 1 and 2 programs at the central part of the Eastern Ridge Lode, which has defined equidistantly spaced high grade gold shoot zones, each showing a similar shallow northerly plunge.

"What is particularly exciting is that some structural observations at Eastern Ridge are also observed at the Steam Engine Lode. Although there are significant differences between the two lodes, several north-westerly plunging shoot zones and an abrupt and apparent southern mineralisation boundary lends support to an en-echelon structural regime at the Steam Engine Lode. This possibility immediately raises the significance of a repeated, second SAM anomaly just to the south of the southern end of the Steam Engine Lode, which is identical to the SAM response over Steam Engine's largest high grade shoot zone.

"Any significant gold mineralisation at the untested SAM anomaly will further lift the project economics by an order of magnitude.

"We will drill test this and several other similar SAM anomalies as soon as we obtain cultural heritage clearance.

"In the meantime, the Feasibility Study is progressing and we will provide an update in due course. We will also be receiving over 2,200 sample assays from the Phase 2 RC program that relate to the northern and southern ends of Eastern Ridge, the northern end of Steam Engine and maiden drilling at Windmill East."

Figure 1. *2024 program reverse-circulation drilling at the northern end of the Eastern Ridge Lode (hole SRC203), viewed looking north.*

Superior Resources Limited (**ASX:SPQ**) (**Superior**, the **Company**) is pleased to report initial results from the 2024 Phase 2 reverse-circulation (**RC**) drilling at the Steam Engine Gold Project (**Project**). Steam Engine is a unique and expanding gold deposit located between several Tier 1-potential porphyry Cu-Au-Mo prospects and a magmatic Ni-Cu-PGE sulphide province within the Company's 100%-owned Greenvale Project in northeast Queensland (**Fig. 2**).

Resource definition drilling during 2020 and 2021 expanded the maiden Mineral Resource Estimate (**MRE**) from 1Mt @ 2.5g/t Au for 85,000oz to the current **4.18 Mt @ 1.5 g/t Au for 196,000oz Au**[1]. The Project presents substantial growth potential as the MRE is established to generally shallow depths on 1.2kms of at least 10kms of potentially mineralised structure as indicated by soil geochemistry.

A recent Scoping Study[2] based on a gold price assumption of **A$3,250**, resulted in financially and technically robust cases for both low CAPEX toll treatment and higher CAPEX stand-alone processing development scenarios, with **pre-tax overall cash flows of approximately $46M (Toll Treatment) and approximately $71M (Stand-Alone Processing)** and **pre-tax NPVs (at 7% discount rate) of approximately $38M (Toll Treatment) and approximately $42M (Stand-Alone Processing)**.

The Company's strategy for Steam Engine is to achieve open-pit mining in the shortest timeframe by conducting parallel programs of Resource expansion drilling, a Feasibility Study and regulatory compliance processes for the grant of a mining lease.

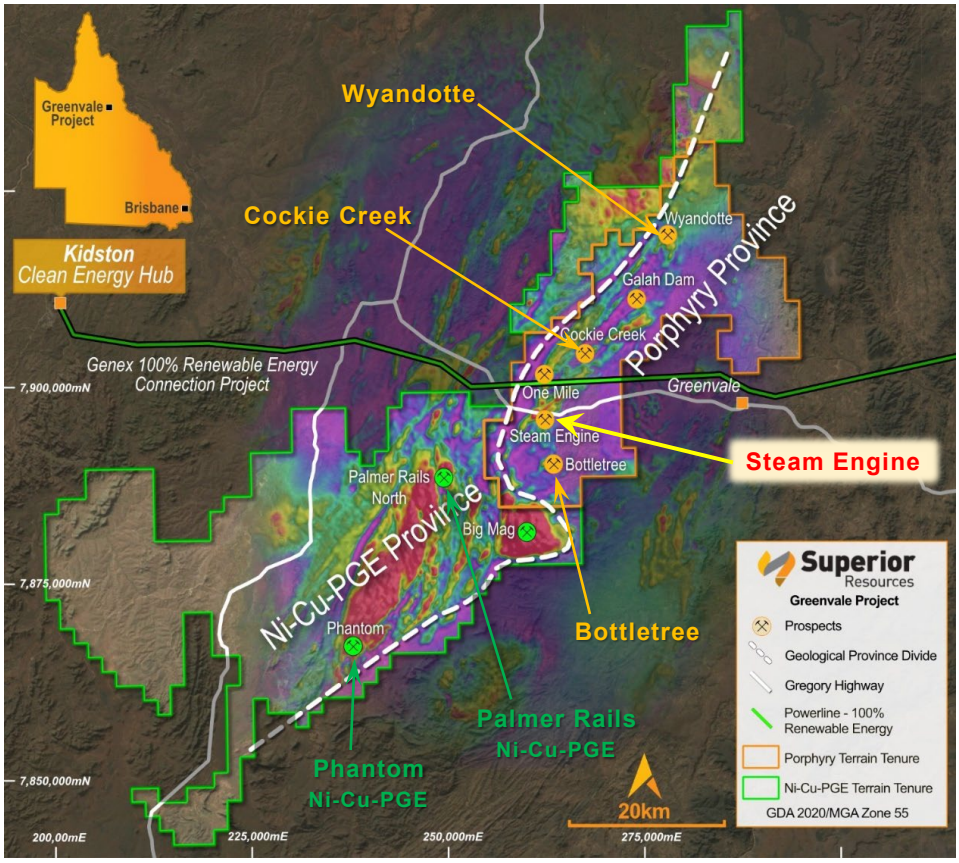

Figure 2. *Regional aerial magnetics over the Greenvale Project area showing the newly recognised porphyry province (tenements outlined in amber) and the magmatic Ni-Cu-PGE sulphide province (tenements outlined in green).*

[1] Maiden MRE (JORC, 2012) was established in 2017 and comprised 100% Inferred category Resources with a cut-off grade of 1.0g/t Au (refer ASX announcement dated 19 October 2017); the current MRE is based on a cut-off grade of 0.25g/t Au and was established for the purposes of examining a stand-alone processing development scenario. The current MRE for a toll treatment development scenario, based on a cut-off grade of 1.0g/t Au is 2.72 Mt @ 2.0 g/t Au for 171,000 oz Au (refer ASX announcement dated 11 April 2022 and Table 1 for Resource category breakdowns). The Company is not aware of any new information or data that materially affects the MRE as presented and all material assumptions and technical parameters underpinning the estimates in the original market announcement continue to apply and have not materially changed.

[2] Refer to original ASX announcement: "*Positive Steam Engine Gold Scoping Study*", dated 16 September 2024. The Company confirms that all the material assumptions underpinning the production target and the forecast financial information derived from the production target in the original ASX announcement continue to apply and have not materially changed.

Steam Engine Gold Project and its Potential

To date, four main lode zones have been identified in outcrop and by drilling: the Steam Engine Lode, Eastern Ridge Lode, the Southern Zone Lodes and the Dinner Creek Zone. The Project is characterised by a significant high grade mineralisation zone, which dominates the Steam Engine Lode. Bonanza grade gold mineralisation occurs within this zone.

Several other gold-mineralised zones are visible in outcrop or otherwise identified by soil geochemistry. The presence of mineralisation in these other zones has been variably confirmed by historical drilling (e.g. Origin and Windmill East) (**Fig. 3**).

The current MRE is established on the Steam Engine and Eastern Ridge lodes over a total strike length of 1.2kms. The total strike length of the key mineralised structures is at least 10kms. Potential exists for substantial expansion of the Mineral Resource (**Fig. 3**).

Further expansion potential may be indicated by highly anomalous responses in the late-channel electro-magnetic (**EM**) component of a recent sub-audio magnetic (**SAM**) survey conducted over the Steam Engine and Eastern Ridge lodes.

The Steam Engine and Eastern Ridge lodes are sub-parallel to each other, dip generally at moderately steep angles of around 50 to 60 degrees to the West and are approximately 600 metres apart. The lodes have significant strike lengths of which only relatively small portions have yet been investigated by systematic drilling.

The current Mineral Resource is of high quality with a significant portion of the Resource in the Measured confidence classification (**Table 1**). The high degree of confidence in the Mineral Resource enables ready progression to feasibility and mining studies.

Table 1. Steam Engine Gold Project – Mineral Resource Estimate[3]

Model	Classification	Tonnes	Grade (g/t Au)	Ounces (Au)
OWNER OPERATOR MODEL (0.25 g/t Au block grade cut-off)	MEASURED	800,000	2.1	53,000
	INDICATED	1,420,000	1.5	68,000
	INFERRED	1,960,000	1.2	75,000
	TOTAL	**4,180,000**	**1.5**	**196,000**
TOLL TREATMENT MODEL (1.0 g/t Au block grade cut-off)	MEASURED	590,000	2.6	49,000
	INDICATED	1,020,000	1.9	62,000
	INFERRED	1,110,000	1.7	60,000
	TOTAL	**2,720,000**	**2.0**	**171,000**

[3] Refer ASX announcement dated 11 April 2022. The Company is not aware of any new information or data that materially affects the MRE as presented and all material assumptions and technical parameters underpinning the estimates in the original market announcement continue to apply and have not materially changed.

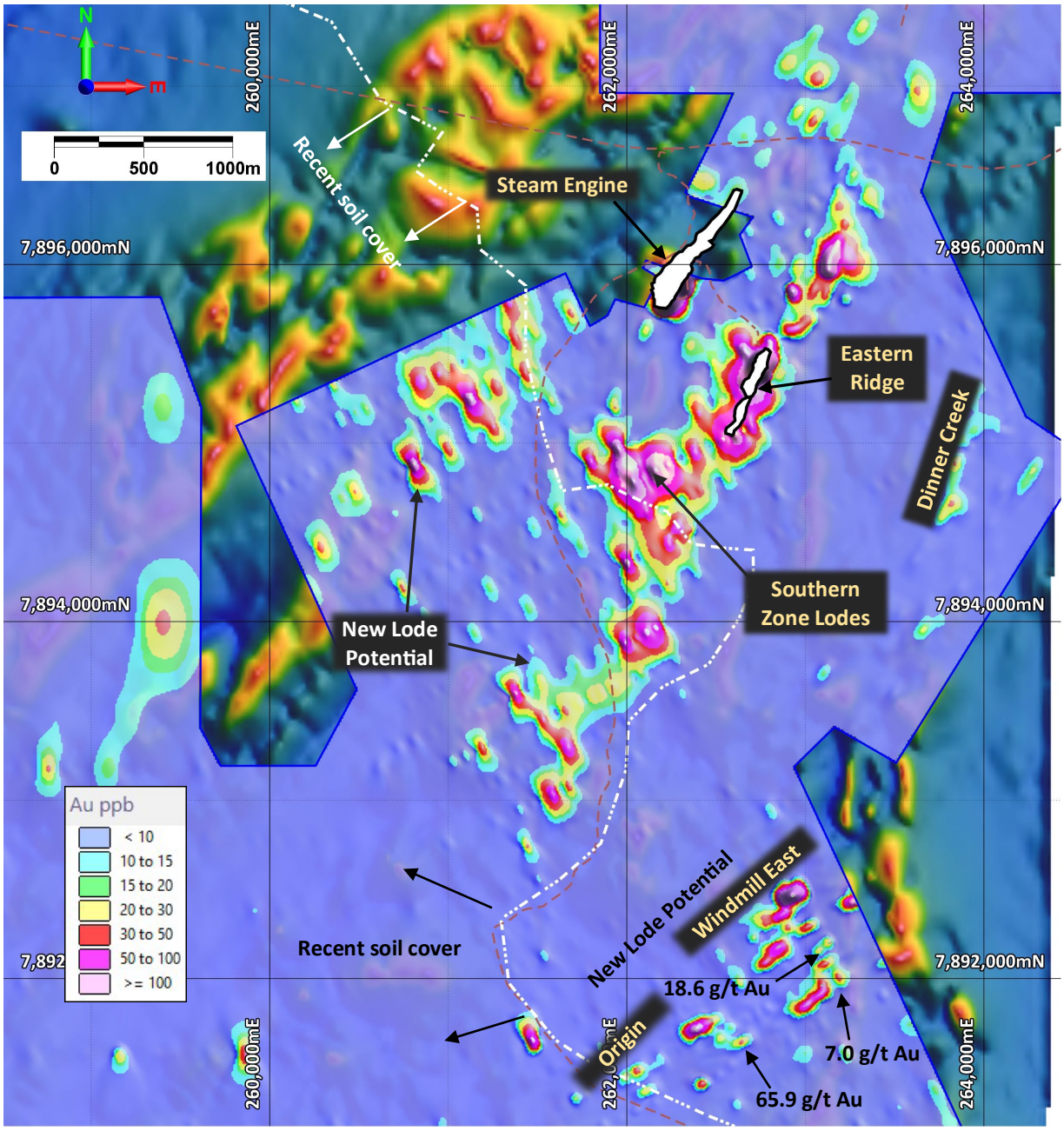

Figure 3. *Plan map showing gridded Au soil geochemistry over background RTP airborne magnetics data. The Steam Engine and Eastern Ridge lode Mineral Resource outlines are shown as white polygons. The Southern Zone, Windmill East and Origin mineralised zones are also shown.*

Phase 2 first batch drill results – Eastern Ridge Lode

Program description

The 2024 Steam Engine Gold Project drilling program was designed with the objective of expanding shallow open-pittable Resources that would provide immediate uplifts to the economic outcomes of a mining and processing proposal during the progress of the current Feasibility Study. The program was conducted over two phases of drilling (**Fig. 4**).

The Phase 2 program further defined the new multi-lode gold shoot zones that were identified by the Phase 1 program.

A total of 37 RC holes for 2,668 metres were drilled in the Phase 2 program (**Fig. 4**). Total Phase 1 and Phase 2 drilling amounts to 69 RC holes for 5,282 metres (**Table 2**).

The specific targets in the Phase 2 program were as follows:

- following up the new gold shoot discoveries from the recently completed Phase 1 program at the northern ends of the Steam Engine and Eastern Ridge lodes;
- SAM geophysical targets at southern end of Eastern Ridge Lode; and
- maiden drill testing of Windmill East Lode.

In particular, several Phase 2 holes followed up a high-grade shoot zone identified by the following Phase 1 intersections[4]:

- **12m @ 3.29g/t Au** from 71m (SRC202)
  incl **5m @ 7.65g/t Au** from 73m
  incl **2m @ 17.09g/t Au** from 74m
- **6m @ 2.35g/t Au** from 59m (SRC203)
  incl **3m @ 4.26g/t Au** from 59m
  incl **1m @ 9.08g/t Au** from 59m

Table 2. Steam Engine Gold Project 2024 RC Drill Program Summary

	Steam Engine	Eastern Ridge	Windmill East	Holes	Metres
Phase 1					
Holes	16	16	-	**32**	**2,614**
Metres	1,230	1,384	-		
Phase 2					
Holes	16	16	5	**37**	**2,668**
Metres	1,222	1,201	245		
			TOTAL	**69**	**5,282**

[4] Refer ASX announcement dated 23 September 2024.

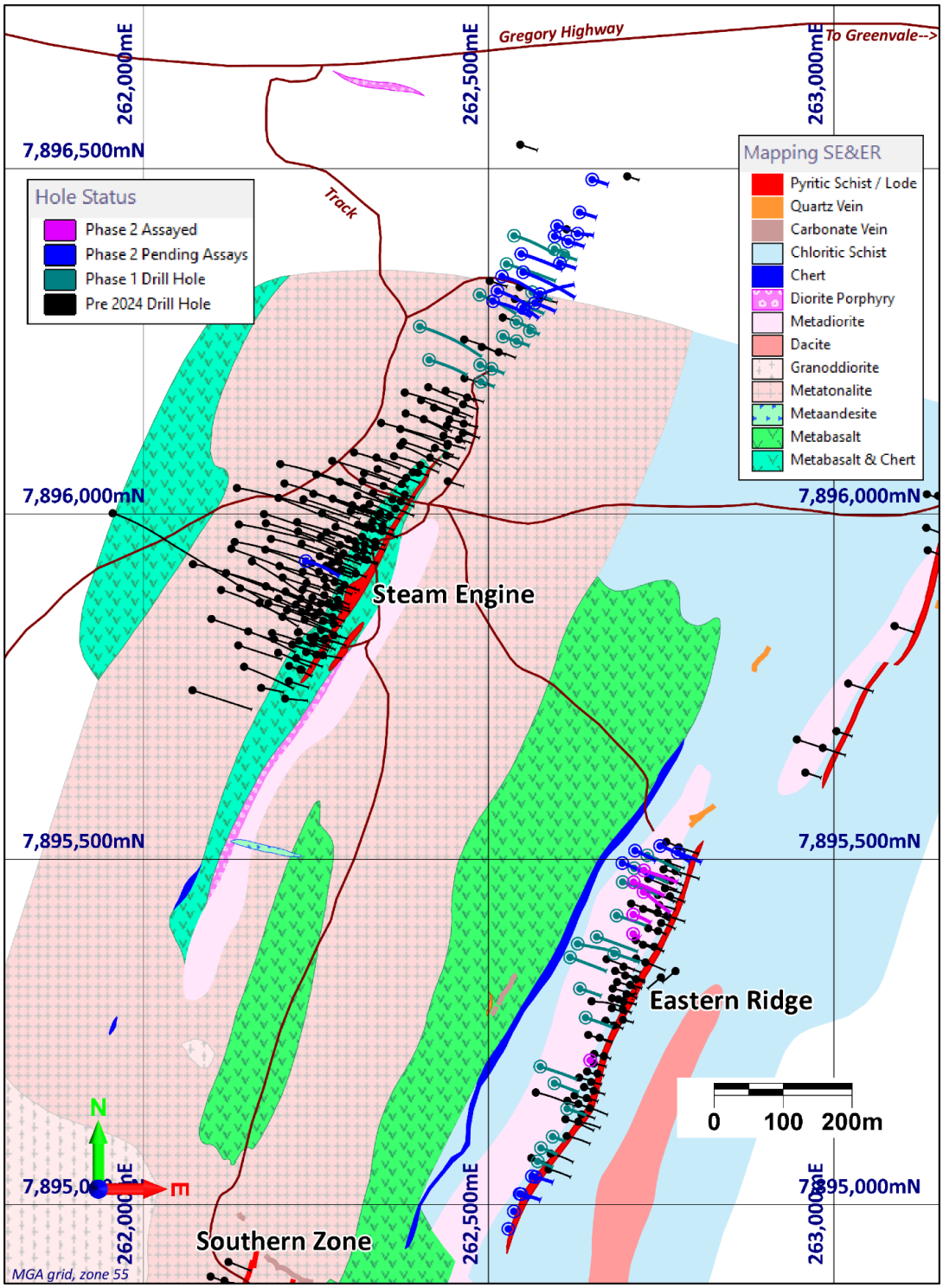

Figure 4. *Geological plan of the Project area showing the locations for the reported Phase 2 assayed holes (pink traces), Phase 2 holes awaiting assaying (blue traces), Phase 1 holes (green traces) and pre-2024 drill holes (black traces). Note the plan does not include the 5 Windmill East Phase 2 drill holes that are located some 3km to the south of the Eastern Ridge Lode (refer to* ***Fig. 3****).*

Assays

Assay results from 6 RC drill holes for a total of 450 metres (SRC222 to SRC227) completed at the Eastern Ridge Lode (**Figs. 4 and 5**) have been received and analysed. Drill hole total depths ranged from 50 to 90 metres.

A further 26 Phase 2 drill holes amounting to 2,218 samples, are still pending assay results (**Fig. 4**).

The 6 holes currently being reported are located at the northern end of the central part of the Eastern Ridge Lode (**Fig. 5**).

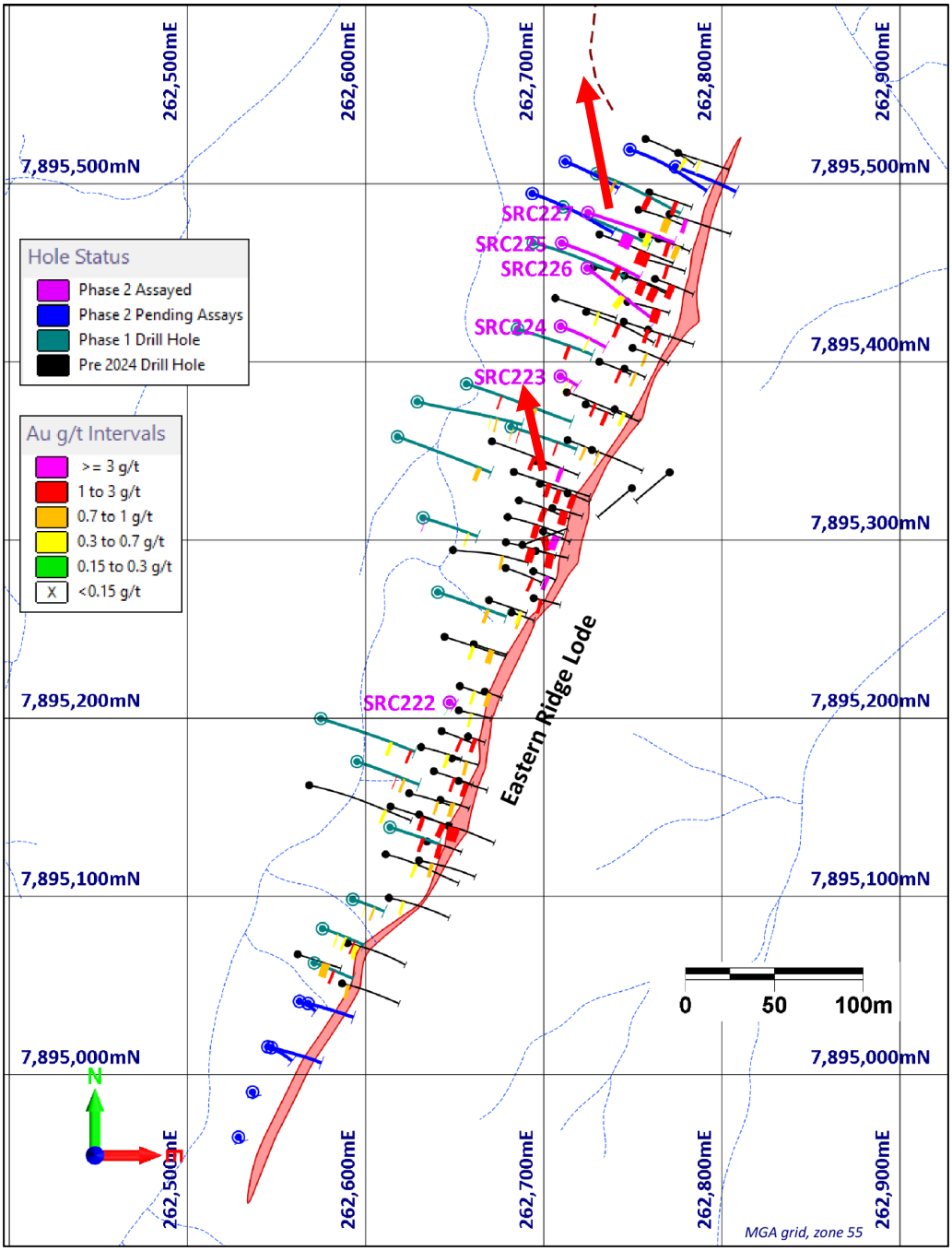

Figure 5. *Plan view of central part of the Eastern Ridge Lode showing the assayed Phase 2 drill hole traces (pink traces), Phase 2 drill holes awaiting receipt of assays (blue traces), Phase 1 drill holes (green traces) and pre-2024 holes (black traces). The red arrows indicate the interpreted plunge direction of the gold shoot zones.*

Samples were taken at 1 metre intervals for laboratory assaying and logging. Assaying of the samples was carried out for gold and instances where gold grades were over 0.1 g/t Au, multi-element assaying was conducted. Multi-element analysis included Ag, Al, As, Ba, Bi, Ca, Ce, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Se, Sn, Sr, Te, Th, Tl, Ti, U, V, W, Zn, and Zr. Rock lithologies and alteration were logged for every metre and compared to the multi-element signatures to assist with interpretation of the Eastern Ridge Lode zone.

The best result from the 6 drill holes included: SRC225 returning an interval average of **6 metres @ 1.96 g/t Au** from 64 metres downhole (**including 1m @ 3.9 g/t Au** from 68m) (**Figs. 6 to 8**). All significant assays and the interpreted lode zones are listed in **Table 3**. **Appendix 1** sets out the drill hole collar details.

Observations

Shallow plunging shoot zone

The 6 RC drill holes (SRC222 to SRC227) appear to define a gold shoot zone with a shallow plunge towards the north (**Figs. 5 and 6**). This is consistent with current observations from two other gold shoot zones on the central part of the Eastern Ridge Lode and indicates further mineralisation potential at this northern end of the Eastern Ridge Lode.

Potential en-echelon system

The 2024 drilling has so far indicated a potential en-echelon structural control to the gold mineralisation at Eastern Ridge. En-echelon structures often develop in shear zones and are expressed as a repeating series of dilational zones within a zone that has undergone shearing deformation. En-echelon structures are typically developed as multiple overlapping dilational structures that are infilled with mineralisation and can be extensive over large areas.

The three gold shoot zones that have been identified to date at Eastern Ridge are equidistantly spaced with about 150 metres of separation (**Fig. 5**). At least two of the zones show a similar shallow plunging orientation towards the north.

The Eastern Ridge Lode zone is very extensive and can be traced geochemically over at least 4kms. Considerable potential exists for the delineation of multiple gold lode zones along the Eastern Ridge structure.

Implications for the Steam Engine Lode

Although there are significant differences between the Eastern Ridge and Steam Engine lodes, particularly in terms of size, the Steam Engine Lode also shows high grade shoot zones with a plunge towards the northwest, albeit at a steeper plunge angle.

The somewhat perplexing truncation at the southern end of the Steam Engine Lode together with the lack of any structural displacement or faulting, may actually represent the southern boundary of a (very) large dilatational zone that is developed within an en-echelon regime.

This observation has elevated the significance of an intense SAM chargeability anomaly located immediately to the south of the southern end of the Steam Engine Lode (**Fig. 9**). This SAM anomaly is currently unexplained but resembles the SAM anomaly that is perfectly coincident with the highest grade and largest gold shoot zone within the Steam Engine Lode.

The above observations would be consistent with a second Steam Engine high grade lode that is in an en-echelon spatial and structural arrangement to the main Steam Engine Resource.

The second SAM anomaly will be drill tested with highest priority as soon as cultural heritage clearance is obtained. Any significant gold mineralisation that is intersected would significantly lift the overall project economics.

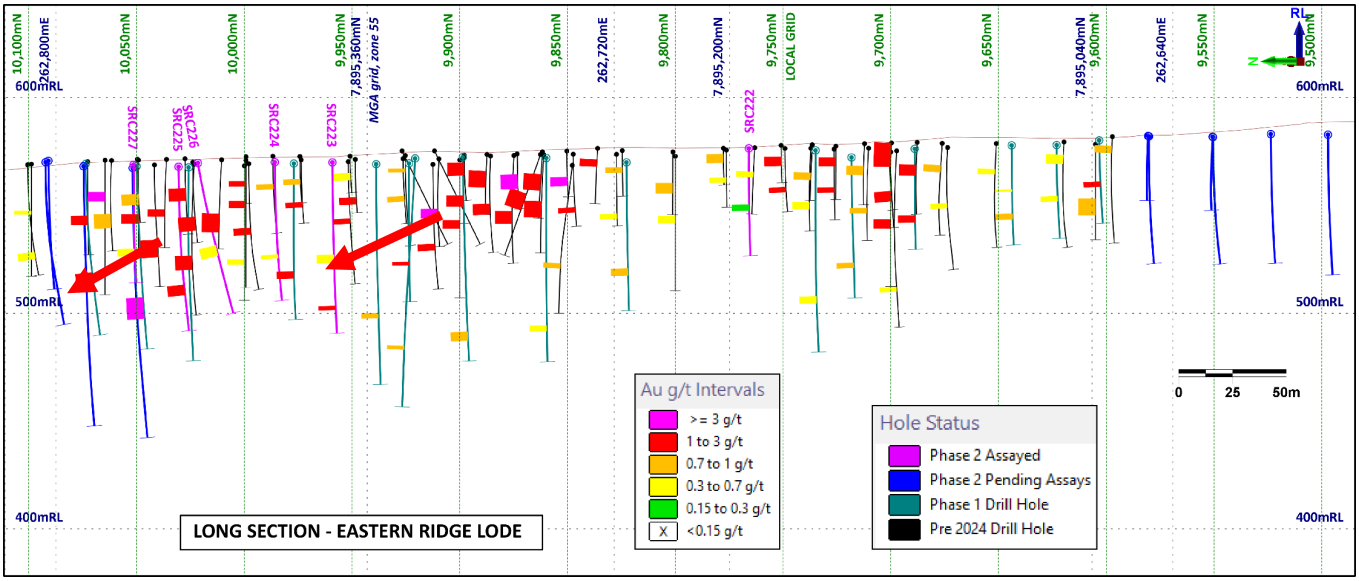

Figure 6. *Long section view of the central part of the Eastern Ridge Lode, viewed ESE and showing the interpreted plunge of high-grade gold shoots (red arrows), Au intersections and grade categories, 2024 Phase 1 drill holes (green traces), Phase 2 assayed holes (pink traces), Phase 2 holes awaiting receipt of assays (blue traces) and pre-2024 holes (black traces).*

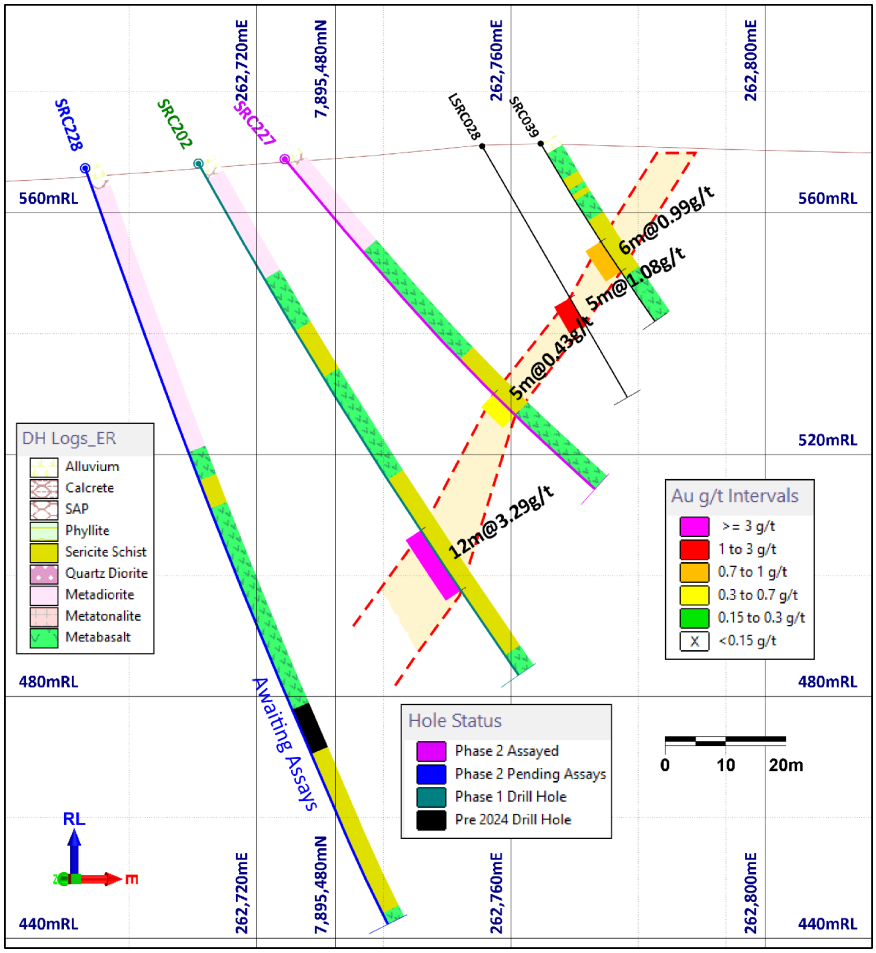

Figure 7. *Cross section of Eastern Ridge Lode looking NNE along Phase 2 drill hole SRC227. Also shown is the Phase 2 drill hole SRC228 awaiting assays, and earlier drill holes.*

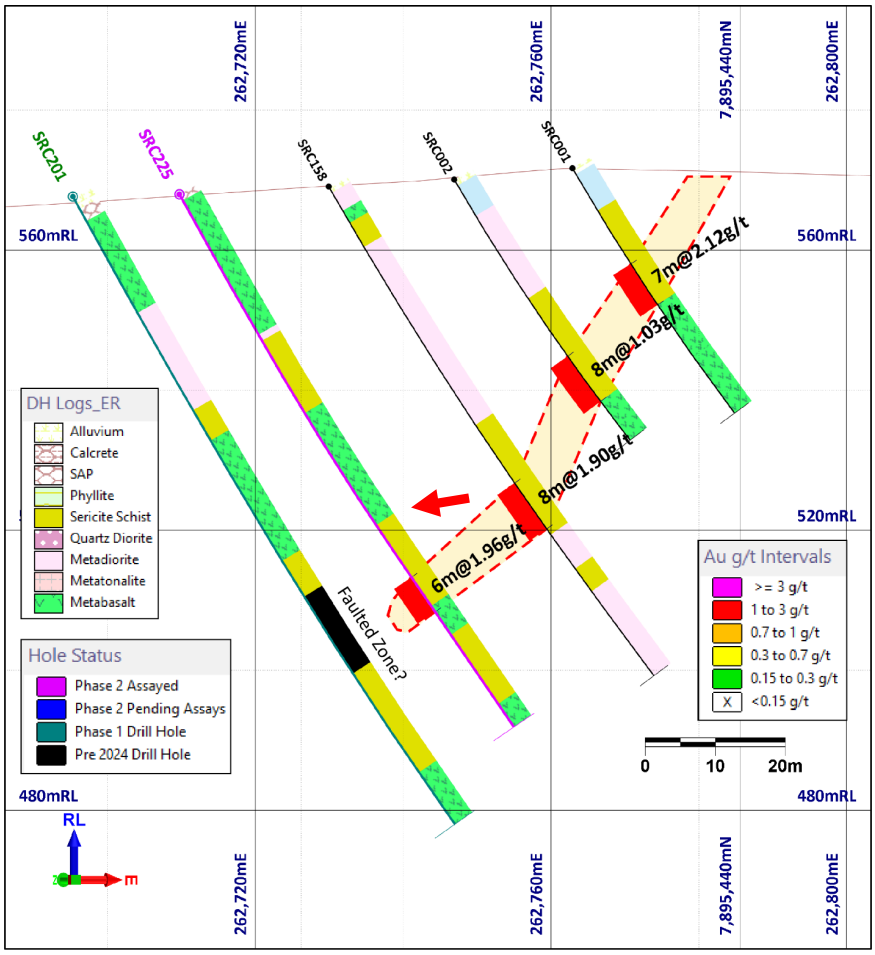

Figure 8. *Cross section of Eastern Ridge Lode looking NNE along Phase 2 drill hole SRC225. Note that the gold lode is interpreted to have a shallow plunge towards the north (red arrow) – i.e. into the page – and not towards SRC201.*

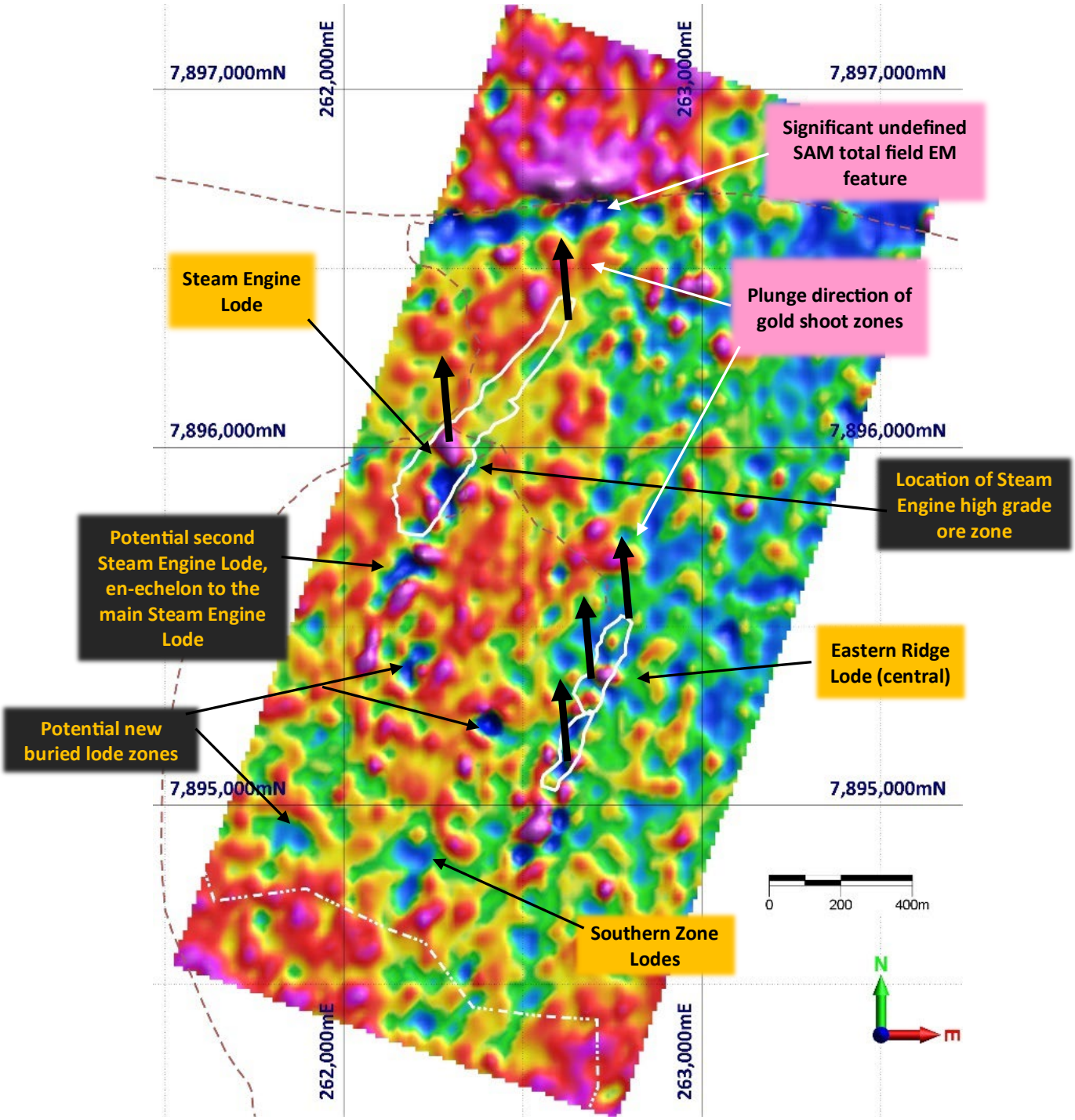

Figure 9. *Image of late channel (Channel 16) total field electromagnetics (TFEM) chargeability responses over the Steam Engine and Eastern Ridge lodes. Discrete areas of low TFEM response are coincident with the most intensely mineralised parts of the gold lodes. A possible southern extension to the Steam Engine Lode is now interpreted to represent a possible second Steam Engine Lode that is developed in an en-echelon arrangement to the main Steam Engine high grade shoot zone. Other potential lode zones are highlighted by several other SAM anomalies.*

Table 3. Eastern Ridge Lode – Phase 2 intersections

Hole ID		From (m)	To (m)	Interval (m)	Au (g/t)	Lode
SRC222		26	29	3	0.29	Eastern Ridge
SRC223		43	47	4	0.59	Eastern Ridge
	including	43	45	2	1.01	
		67	69	2	1.32	Unnamed FW Lode
SRC224		46	48	2	0.46	Eastern Ridge
SRC225		64	70	6	1.96	Eastern Ridge
	including	68	69	1	3.90	
SRC226		45	51	6	0.63	Eastern Ridge
		45	46	1	1.50	
SRC227		52	57	5	0.43	Eastern Ridge

Next Steps

The following sets out the key work units that are planned to be conducted on the Steam Engine Gold Project over the next Quarter:

1. Continuation of Feasibility Study work units;
2. Receive and report on outstanding Phase 2 drill sample assays. A total of 2,218 assays representing 26 RC holes from the northern ends of the Eastern Ridge and Steam Engine lodes, the SAM target at the southern end of the Eastern Ridge Lode and maiden drilling from the Windmill East zone will be analysed and reported;
3. Mineral Resource re-modelling and upgrade;
4. Cultural heritage surveys over priority SAM targets;
5. Discussions / negotiations with potential third party toll processing parties;
6. Metallurgical and other mining study related work relating to Feasibility Study; and
7. Establish a maiden Ore Reserve.

Approved for release by the Board of Directors

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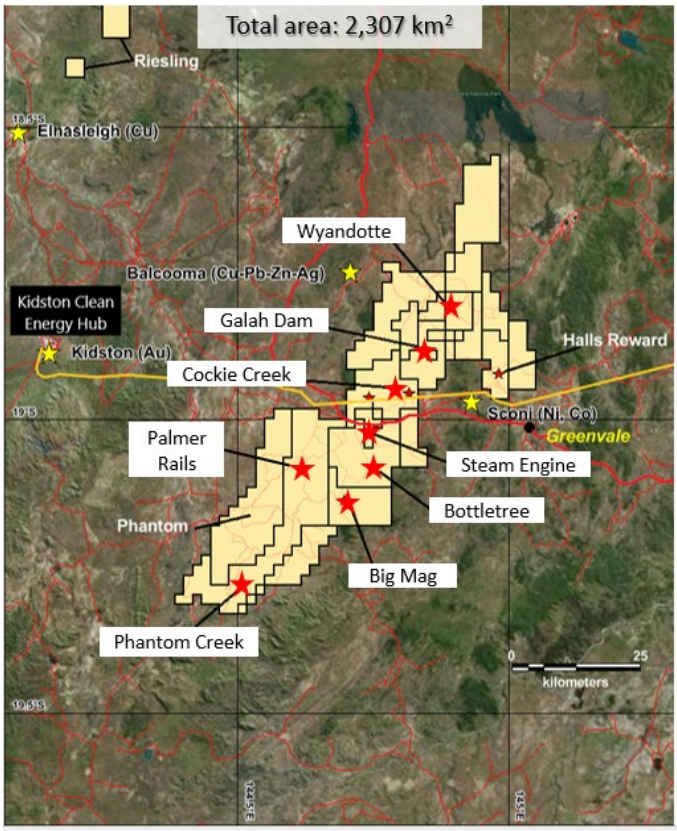
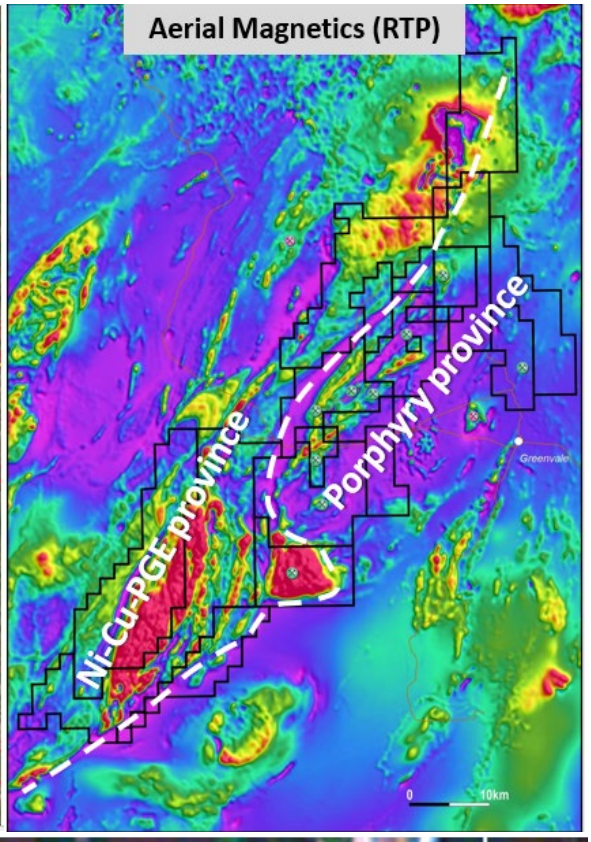
Greenvale – Juxtaposed porphyry and magmatic Ni-Cu-PGE sulphide provinces



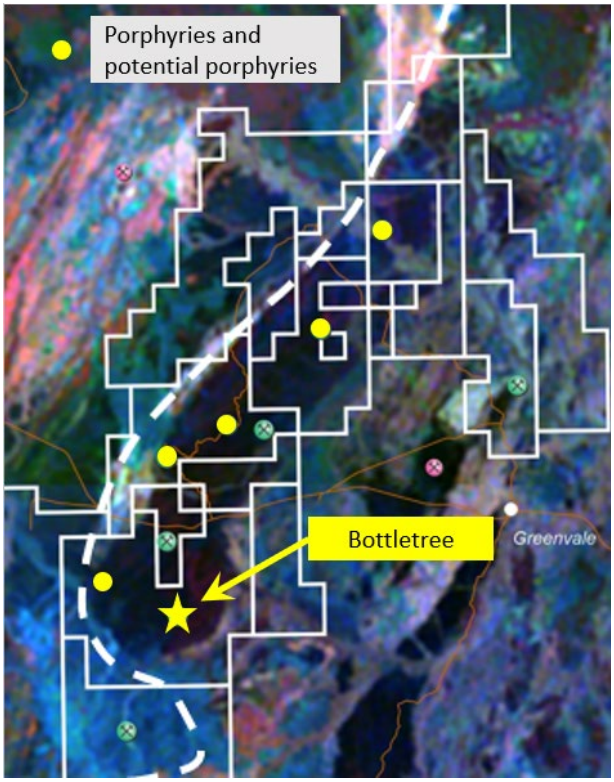


Superior has long recognised the copper potential within the Lucky Creek Corridor. However, recent exploration drilling at Bottletree, coupled with regional geological investigations over several years has enabled the characterisation of the Lucky Creek Corridor as a fossil island arc porphyry province, hosting numerous porphyry and potential porphyry systems recurring along a 50 km zone.

Superior is taking the lead with Tier-1 potential copper-gold porphyry exploration in this part of Australia.

Juxtaposed against the Greenvale Porphyry Province is a second province formed by a completely different geological genesis model. Originally formed at a much deeper crustal level, the Greenvale Magmatic Nickel-Copper-PGE Sulphide Province has been technically proven in terms of the presence of such mineralising systems. However, the province remains practically unexplored.

Superior enjoys a first mover advantage over the entire province, which presents as one of the best sulphide Ni-Cu-PGE propositions in Australia.



About Superior

Superior Resources Limited (ASX:SPQ) is an Australian public company exploring for large copper, nickel-copper-cobalt-PGE, lead-zinc-silver and gold deposits in northern Queensland, which have the potential to return maximum value growth for shareholders. The Company is focused on multiple Tier-1 equivalent exploration targets and has a dominant position within the Carpentaria Zinc Province in NW Qld and Ordovician rock belts in NE Qld considered to be equivalents of the NSW Macquarie Arc.

For more information, please visit our website at www.superiorresources.com.au.

Reporting of Exploration Results: *Information contained in this report that relates to the reporting of Steam Engine Gold Project exploration results is based on information compiled by Mr Kevin Richter who is a full-time employee of Superior Resources Limited. Mr Richter is a Member of the Australasian Institute of Mining and Metallurgy and 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.*

Other information contained in this report relating to Exploration Results, Mineral Resource Estimations, Scoping Study outcomes and exploration interpretations reflect information that has been previously reported in ASX market announcements as referenced within this report.

Information in this report relating to the Steam Engine Gold Project 2024 Scoping Study is a summary of information contained in original ASX announcement: "Positive Steam Engine Gold Scoping Study", dated 16 September 2024.

Information in this report relating to Mineral Resource Estimates (MRE) and associated block models is a summary of information contained in original ASX announcement: "Material upgrade in Steam Engine Resource to 196,000 oz Au with 80.6% increase to Measured and Indicated categories", dated 11 April 2022. The Competent Person relevant to the original ASX announcement is Mr Kevin Richter. The Company is not aware of any new information that materially affects the MRE as presented and all material assumptions and technical parameters underpinning the estimates in the original market announcement continue to apply and have not materially changed.

Reliance on previously reported information: *Information contained in this report relating to the findings and outcomes of the Company's 2024 Scoping Study is provided on the basis of material assumptions that applied at the time of the original reporting of the Scoping Study. The Company confirms that all the material assumptions underpinning the production target and the forecast financial information derived from the production target in the original ASX announcement continue to apply and have not materially changed.*

Forward looking statements: *This document may contain forward looking statements. Forward looking statements are often, but not always, identified by the use of words such as "seek", "indicate", "target", "anticipate", "forecast", "believe", "plan", "estimate", "expect" and "intend" and statements that an event or result "may", "will", "should", "could" or "might" occur or be achieved and other similar expressions. Indications of, and interpretations on, future expected exploration results or technical outcomes, production, earnings, financial position and performance are also forward-looking statements. The forward-looking statements in this report are based on current interpretations, expectations, estimates, assumptions, forecasts and projections about Superior, Superior's projects and assets and the industry in which it operates as well as other factors that management believes to be relevant and reasonable in the circumstances at the date that such statements are made. The forward-looking statements are subject to technical, business, economic, competitive, political and social uncertainties and contingencies and may involve known and unknown risks and uncertainties. The forward-looking statements may prove to be incorrect. Many known and unknown factors could cause actual events or results to differ materially from the estimated or anticipated events or results expressed or implied by any forward-looking statements. All forward-looking statements made in this presentation are qualified by the foregoing cautionary statements.*

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APPENDIX 1

REPORTED DRILL HOLE COLLAR DETAILS

Holes	Easting (m)	Northing (m)	RL (m)	Depth (m)	Dip°	Azimuth°
SRC222	262647	7895209	576	50	-89	73
SRC223	262709	7895392	570	80	-84	111
SRC224	262710	7895420	570	70	-71	109
SRC225	262710	7895467	568	90	-61	109
SRC226	262724	7895453	570	85	-61	126
SRC227	262725	7895484	569	75	-51	109

Note: Locations reported are in MGA Zone 55. Location information is derived from GPS and not DGPS data.

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.*	• Reverse Circulation (**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. • The drill bit sizes used in the drilling were consistent in size and are considered appropriate to indicate the degree and extent of mineralisation. • 1m representative samples were assayed for gold at SGS Laboratories in Townsville. Assaying for gold was via fire assay of a 50-gram charge. • Samples of the gold mineralisation over 0.1g/t Au were also submitted for multi-element assaying using a four-acid digest. • The sample preparation was conducted by SGS Laboratories in Townsville for all 2024 samples.
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.).*	• Drilling from surface was performed using standard RC drilling techniques as applicable to the hole drilled. • RC Drilling was conducted by AED (Associated Exploration Drillers) using a Schramm 660 drilling rig with a 5.5 inch drill bit. Additional to the on-board air compressor of the drilling rig being used, additional compressed air was available as necessary via a separate booster compressor. Sampling was by the use of a face-sampling hammer bit. • All holes were surveyed using a Reflex Gyro north-seeking gyroscopic instrument to

Criteria	JORC Code explanation	Commentary
		obtain accurate down-hole directional data.
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.*	• Sample recovery was performed and monitored by a Pinata 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. • No relationship is evident between sample recovery and grade.
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.*	• Geological logging was conducted during the drilling of each hole by a Pinata 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 RC drill holes. A spear was used to produce representative samples for the logging of RC holes. • All logging data is digitally compiled and validated before entry into Superior's database. • The level of logging detail is considered appropriate for Resource drilling. • The RC chip trays were all photographed.
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 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*	• The sample collection methodology is considered appropriate for RC drilling and was conducted in accordance with standard 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. Duplicate samples are taken and assayed in each batch processed for assaying. • The sample sizes are considered appropriate to the style of mineralisation being assessed.

Criteria	JORC Code explanation	Commentary
	material being sampled.	
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.*	• All samples were submitted to SGS Laboratories in Townsville for gold. Samples of the gold mineralisation above 0.1g/t Au were also submitted for multi-element assaying 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 the gold mineralisation using a four-acid digestion followed by an ICP-OES/MS finish using method GO_ICP41Q100. • The following 35 elements were assayed: Ag, Al, As, Ba, Bi, Ca, Ce, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Se, Sn, Sr, Te, Th, Tl, Ti, U, V, W, Zn and Zr. • Certified gold, multi-element standards and blanks were included in the samples submitted to the laboratories for QAQC. Laboratory assay results for these quality control samples are within 5% of accepted values. • Additionally, the laboratories used a series of their own standards, blanks, and duplicates for the QC of the elements assayed.
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.*	• The reported significant intersections have been verified by Pinata and Superior geologists against the representative drill chips collected and the drill logs. • No holes drilled by Superior were twinned. • Logs were recorded by Pinata 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.
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.*	• Drill hole collars have been recorded in the field using handheld GPS with three metre or better accuracy. The locations will be further defined later this year 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 Resource estimation procedures that

Criteria	JORC Code explanation	Commentary
		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. • Topographic control is currently from DGPS pickup that has been merged with RL adjusted contours. This arrangement will be upgraded prior to any possible mining when further definition of the topography would be needed (e.g. a LIDAR survey).
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 Project area, due to the different stages of Resource evaluation at the Project. • The drill hole spacing is sufficient in the central portions of the Steam Engine and Eastern Ridge lodes to allow estimation of 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 SGS Laboratories by Terra Search contractor 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 land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The areas reported lie within Exploration Permit for Minerals 26165 and is held 100% by Superior. • 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 their 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 consists of a predominant pyrite sulphide assemblage +/- minor arsenopyrite, 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 about 500m to the east of the Steam Engine Lode zone. • The lodes are typically interpreted as being of the mesothermal lode type. Recent studies undertaken by Superior suggest the Steam Engine mesothermal gold mineralisation is most similar to orogenic style mineralisation. • The important features of the lodes are their continuity and a persistent dips 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:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *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 Hole collar tables with significant intersections are included in this announcement and previous ASX announcements including those dated: 22 November 2021, 18 October 2021, 29 September 2021, 1 September 2021, 12 August 2021, 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. • No metal-equivalent values are reported.
Relationship between mineralisation widths and intercept lengths	• *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, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• 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° 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 as referred to in this report.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high*	• Drill Holes collar tables with significant intersections are included in this announcement and previous ASX announcements as referred to in this report.

Criteria	JORC Code explanation	Commentary
	grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	
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.*	• Three batches of metallurgical tests from composited samples have been conducted between 2020 to 2022 involving a total of 31 samples (24 for Steam Engine and 7 from Eastern Ridge). • A summary of the metallurgical test work undertaken so far has concluded an average recovery for the Steam Engine Lode of 82% and for the Eastern Ridge Lode of 95%.

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.*
		• Additional work programs include:
		  • Cultural heritage surveys
		  • Drill testing of SAM and geochemical targets
		  • Mineral Resource remodelling
		  • Further Metallurgical studies
		  • Soil surveys
		  • Geotechnical studies
		  • Toll treatment negotiations
		  • Preliminary mining and rehabilitation planning
		  • Preliminary environmental studies