

# Strong drill results continue at Steam Engine Project

#### **HIGHLIGHTS**:

• Strong intersections in drill core from Steam Engine Lode – likely to upgrade lower grade portion of the current Mineral Resource:

Announcement

- **18m @ 2.4 g/t gold** from 21m (SDD006)
  - incl 6m @ 4.6 g/t gold from 33m
  - incl 1m @ 10.9 g/t gold from 37m
- o 7m @ 3.8 g/t gold from 43m (SDD004)
  - incl 1m @ 5.9 g/t gold from 48m
- Results from deeper drilling at Steam Engine Lode confirms continuation of mineralisation down dip outside current Mineral Resource envelope:
  - 8m @ 2.5 g/t gold from 133m (SRD001)
    - incl 1m @ 6.1 g/t gold from 133m
  - **5m @ 2.0 g/t** gold from 195m (SRD002)
- Assays from historically overlooked Southern Zone Lodes (south of Steam Engine and Eastern Ridge lodes) return significant intersections of high grade coarse gold:
  - o 3m @ 6.0 g/t gold from 58m (SRC063)
    - incl 1m @ 11.3 g/t gold from 59m
  - **1m @ 8.1 g/t gold** from 75m (SRC063)
- Reporting of assays from the Phase 1 program completed
- Current total Mineral Resource of 1.27 million tonnes @ 2.3 g/t gold for 94,000 ounces of gold<sup>1</sup> based on only 30% of at least 2.5 kms of outcropping lode strike at Steam Engine and eastern Ridge lodes and only to shallow depths
- Phase 2 Drilling Program expected to commence next week and will focus on expanding the Mineral Resource along strike and down dip at the Steam Engine and Eastern Ridge Lodes
- Upcoming revised Mineral Resource Estimate expected to be upgraded. Results of initial Scoping Study expected to be delivered later this month

**Superior Resources Limited (ASX:SPQ)** is pleased to report the fourth batch of assay results from the Phase 1 Drilling Program at the Steam Engine Gold Deposit, located approximately 210 kilometers west of Townsville, Queensland. The assays are from a total of 22 reverse circulation (**RC**) and diamond core drill holes comprising:

• down-dip exploration and infill diamond core holes at Steam Engine Lode;

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<sup>&</sup>lt;sup>1</sup> Refer to ASX announcement dated 4 May 2020.

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- exploration and infill RC and diamond core holes at Eastern Ridge Lode; and
- exploration RC holes at the Southern Zone Lodes.

The most significant outcomes from the latest batch of assays include:

- SDD006 returned the program's widest intersection of high grade lode:
  - 18m @ 2.4 g/t gold from 21m (SDD006)
    - o incl 6m @ 4.6 g/t gold from 33m
    - o incl **1m @ 10.9 g/t gold** from 37m.

This intersection is particularly significant because, together with two earlier-reported holes from the Phase 1 program, they infilled a lower-grade near-surface portion of the current Mineral Resource. The lower grade part of the Mineral Resource was based on adjacent historic drill holes that reported grades significantly lower than samples from the recent Phase 1 drilling. The effect of the current result in SDD006 and the two earlier-reported holes will likely be a significant expansion of the high grade portion of the Steam Engine Lode;

- Deeper diamond core holes (SRD001 and SRD002) outside the Resource envelope at the Steam Engine Lode confirm strong continuation of the lode down dip to at least 200 metres down hole depth; and
- Drilling from the poorly defined Southern Zone Lodes located to the south of the Steam Engine and Eastern Ridge lodes indicate that the lodes are of significantly high grade with grade increasing at depth.

#### Superior's Managing Director, Peter Hwang, commented:

"We are very pleased with the latest batch of assays which continues to return robust high grade intersections as well as further confirming the growth potential of the Steam Engine and Eastern Ridge lodes. The Phase 1 drilling has clearly demonstrated the robustness of the deposit and the significant potential for Resource expansion along strike as well as down dip.

This fourth batch of assays is expected to be the final batch relating to the mineralised zones. However, we won't be slowing down at Steam Engine with plans being on track for the commencement of the Phase 2 Drilling Program next week.

We are also advancing the initial Scoping Study, which we plan to deliver later this month."

## Assay results

The fourth batch of assay results from the Phase 1 Drilling Program includes Reverse Circulation (**RC**) exploration holes at the Eastern Ridge Lode and the Southern Zone lodes, infill RC drill holes and diamond core holes from the Eastern Ridge Lode, infill diamond core holes from the Steam Engine Lode and deeper RC/diamond core holes at the Steam Engine Lode (Figure 1).

The assays are from a total 1,309 metres of drilling that includes:

- 14 RC drill holes for 612 metres of drilling;
- 6 diamond core drill holes for 302 metres of drilling; and
- 2 diamond-tailed drill holes with RC pre-collars targeting the deeper portions of the Steam Engine Lode for 395 metres of drilling (including 258 metres of RC and 137 metres of diamond core).

Significant assay results are listed in Table 1 (refer Table 2 for the hole collar details) that shows all of the significant intersections from the current batch of assays on the Steam Engine, Eastern Ridge, Eastern Ridge North and Southern Zone lodes.



A total of 2,376 samples from the drilling program have been submitted to SGS Australia Pty Ltd laboratories in Townsville for gold analysis. To date, approximately 2,252 samples have been assayed and 124 remain outstanding. The remaining 124 samples comprise "repeat" and "check" samples that are not expected to be material.

	Table 1. Gold assay Hole ID		From	То	Interval	A ( ~/ t )	Lode
	Hole ID		(m)	(m)	(m)	Au (g/t)	Lode
	SDD001		29	33	4 1.4 Eastern	Eastern Ridge	
	00001	Including	31	32	1	3.0	Lastern Ruge
$\square$	SDD002		13	16	3	1.8	Eastern Ridge
$\subseteq$	SDD003		22	26	4	1.8	Eastern Ridge
			43	50	7	3.8	Cteore Engine
7	SDD004	Including	48	49	1	5.9	Steam Engine
			57	60	3	1.0	Steam Engine Footwall
ÛЛ	SDD005		42	48	6	2.1	Steam Engine
	300003	Including	47	48	1	4.1	
			21	39	18	2.4	
	SDD006	Including	33	39	6	4.6	Steam Engine
		Including	37	38	1	10.9	
	SRC052		17	23	6	1.0	Eastern Ridge
	SRC053		2	8	6	0.7	Eastern Ridge
30	SRC054		15	18	3	0.4	Eastern Ridge
	SRC055		6	10	4	2.1	Eastern Ridge
	SRC056		21	24	3	1.6	Eastern Ridge
$\square$	SRC057		13	17	4	0.9	Eastern Ridge North
	SRC058		25	31	6	0.4	Eastern Ridge North
217	SRC059		15	20	5	0.9	Eastern Ridge North
$\mathcal{Y}_{\mathbf{I}}$	SRC062		19	21	2	1.5	Southern Zone
			58	61	3	6.0	Southern Zone
21	SRC063*	Including	59	60	1	11.3	
					1	8.1	Southern Zone
UL			75	76		0.1	Footwall
	SRD001		75 133	7 <b>6</b> 141	8	2.5	
	SRD001	Including					Footwall Steam Engine

Table 1. Gold assay results from the fourth batch of drill hole samples.

\* Note: Hole SRC063 encountered coarse gold. Repeats on the assays varied considerably from a range low of 3m @ 3.9 g/t to a range high of 3m @ 12.5 g/t. Further splits of the original RC chips over the mineralised intervals will be undertaken on all intersections on the Southern Zone lode to obtain a better representative grade estimate of these intersections.



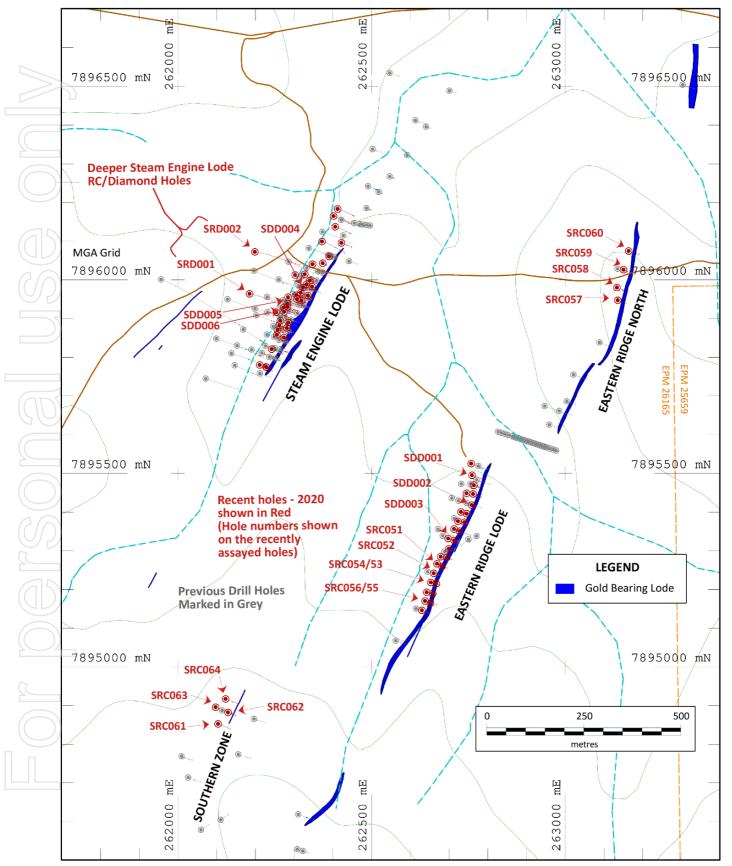


Figure 1. Location plan of drill holes to which the fourth batch of assay results relate. Gold-bearing lodes (as historically mapped) are shown in blue.



# Core Drilling at the Steam Engine Lode intersects good widths and grades

Diamond core holes were included as part of the initial resource infill drilling on the Steam Engine lode. Diamond Core hole SDD006 intersected 18 metres @ 2.4 g/t Au from 22 metres downhole, including 6m @ 4.6 g/t from 33 metre downhole (Figure 2). This lies close to previously reported RC drill hole SRC024 that intersected 15m @ 2.3 g/t from 40 metres downhole (ASX Announcement, 14 September 2020).

Another high grade intersection was intersected in Hole SDD004 that intersected 7m @ 3.8 g/t Au from 43 metres downhole.

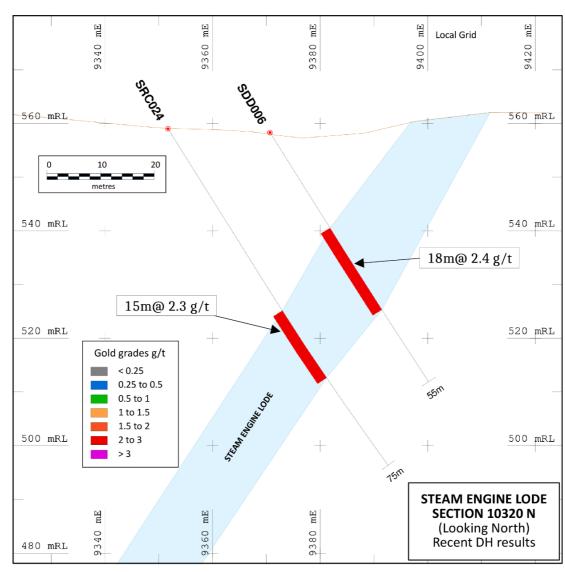


Figure 2. Steam Engine Lode – Cross Section 10320 N (local grid) showing recent diamond hole SDD006 and previously reported hole SRC024 (refer ASX Announcement, 14 September 2020) on the Steam Engine Lode

# Steam Engine Lode continues at depth

Drill holes targeting deeper portions of the Steam Engine lode, show the continuation of the Steam Engine lode to depth.

SRD001 intersected 8 metres @ 2.5 g/t gold from 133 metres downhole (approximately 100m vertical below surface; Figure 3). It is located approximately 40 metres north of historic hole LSDD002 (18.45 metres @ 1.6 g/t Au from 160.55 metres downhole) and approximately 30 metres down dip from historic hole LSDD006 (14.75m @ 1.8 g/t Au from 94.1 metres downhole).



SRD002 intersected 5 metres @ 2.0 g/t gold from 195 metres downhole (approximately 160m vertical below surface). This hole is located approximately 60 metres north of historic hole LSDD011 (5.2 metres @ 2.2 g/t Au from 156 metres downhole) and approximately 80 metres down dip of historic hole LSDD004 ( 3.7 metres @ 4.1 g/t Au from 96.5 metres downhole).

These holes provide a new level of confidence in the down dip continuation of the Steam Engine lode in these areas, as no other drilling has reached such depths since the previous historical drilling carried out during the 1980's.

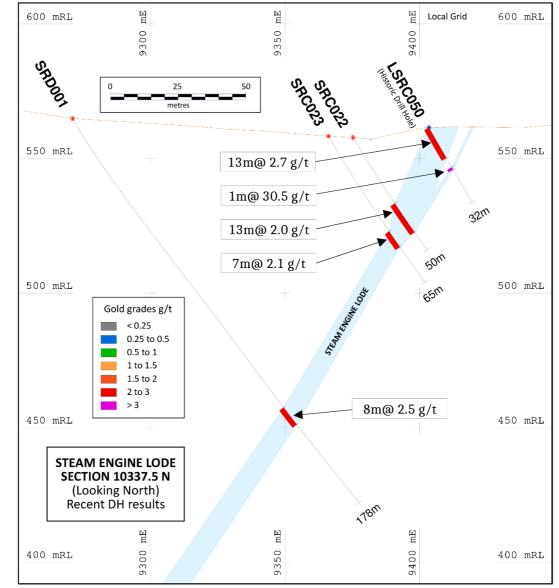


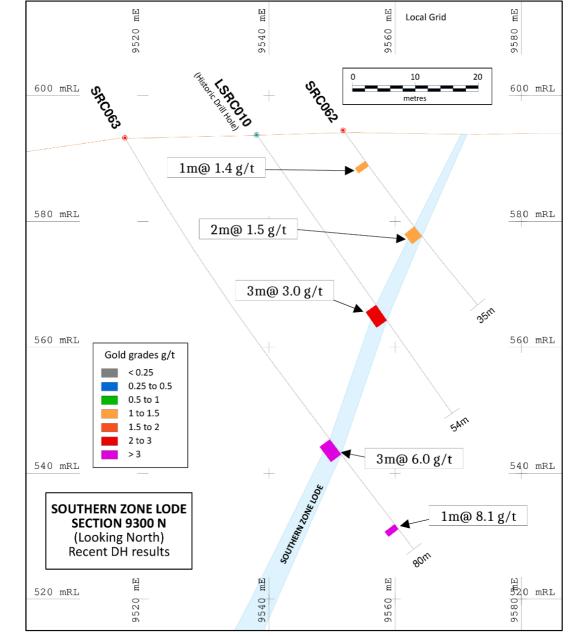
Figure 3. Steam Engine Lode – Cross Section 10337.5 N (local grid) showing recent diamond hole SRD001 and the other recent holes and an historic hole at the Steam Engine Lode.

# A new significant intersection at the Southern Zone

Drilling carried out in the Southern Zone and targeting a lode zone near historic drill hole LSRC010, returned a high grade intersection in Hole SRC063 (3m @ 6.0 g/t Au)\* at depth beneath the historic drill hole LSRC010 (3m @ 3.0 g/t Au; Figure 4). Another hole shallower than LSRC010 has returned a lower width and grade (SRC062: 2m @ 1.5 g/t Au).

\* Note: Hole SRC063 encountered coarse gold and repeats on the assays varied considerably from a range low of 3m @ 3.9 g/t to a range high of 3m @ 12.5 g/t. Further splits of all the original RC chips over the mineralised





intervals will be undertaken on all intersections on the Southern Zone lode to better estimate the grade of these intersections.

Figure 4. Southern Zone Lodes – Cross Section 9300 N (local grid) showing recent RC holes SRC062 & SRC063 and historic hole.

# Some further intersections at Eastern Ridge

Recent assays received include some of the remaining holes for infill at Eastern Ridge including Reverse circulation and Diamond Core drill holes. Best intersections from these holes include 4m @ 2.1g/t Au in hole SRC055 from 6 metres downhole (Figure 5), 4m @ 1.8 g/t Au in core hole SDD003 from 22 metres downhole, 3m @ 1.8 g/t Au in core hole SDD 002 from 13 metres downhole, 3m @ 1.6 g/t Au in hole SRC056 from 21 metres downhole, 4m @ 1.4 g/t Au in core hole SDD001 from 29 metres downhole, and 6m @ 1 g/t Au from 17 metres downhole (See Table 1 for all drilling intercepts). The grade range of assay intersections from the holes were within the expected limits for the zone of mineralisation drilled.



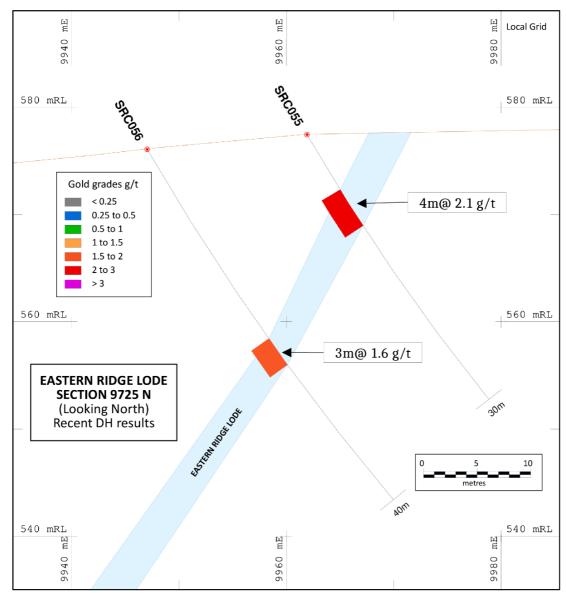


Figure 5. Eastern Ridge Lode – Cross Section 9725 N (local grid) showing recent RC holes SRC055 & SRC056.

## Exploration Holes at Eastern Ridge North

The assays returned included four exploration holes at Eastern Ridge North. Three of these holes encountered significant widths of low-grade gold mineralisation, the best of these being SRC059 that intersected 5m @ 0.9 g/t Au from 15 metres downhole. This intersection lies up dip from historical drill hole SERC005 (5m @ 1.3 g/t Au) that was the basis for this exploration drilling program. The drilling has downgraded near surface potential, however the mineralisation widths and the indicated improvement in grade with depth, indicate that deeper drilling may be warranted soon.



		Northing		Depth		
Hole	Easting (m)	(m)	RL (m)	(m)	Azimuth <sup>o</sup>	Dip <sup>o</sup>
SDD001	262759.3	7895495.2	570.3	50	108	-60
SDD002	262758.6	7895418.1	572.5	25	108	-60
SDD003	262697.9	7895331.6	572.0	34.9	108	-60
SDD004	262323.4	7895980.6	557.7	70	113	-75
SDD005	262282.4	7895938.7	558.0	67	108	-60
SDD006	262274.5	7895917.3	558.3	55	108	-58
SRC051	262669.3	7895266.3	573.7	40	108	-60
SRC052	262660.8	7895241.6	574.9	35	108	-60
SRC053	262667.0	7895214.9	576.6	20	108	-60
SRC054	262653.0	7895218.0	575.7	32	108	-60
SRC055	262652.2	7895164.8	577.5	30	108	-60
SRC056	262638.3	7895170.2	576.1	40	108	-60
SRC057	263135.8	7895947.5	581.5	40	108	-60
SRC058	263133.8	7895980.0	581.8	50	108	-60
SRC059	263150.9	7896026.4	580.5	42	108	-60
SRC060	263163.9	7896074.4	578.7	48	108	-60
SRC061	262103.6	7894852.6	588.9	60	108	-60
SRC062	262129.5	7894882.1	594.5	35	108	-60
SRC063	262097.5	7894895.9	593.3	80	108	-60
SRC064	262123.4	7894916.9	591.4	60	108	-60
SRD001	262185.0	7895963.9	564.9	178.2	98	-60
SRD002	262198.5	7896072.3	563.7	216.4	98	-60

Table 2: Collar details for the reported holes, MGA Zone 55.

## <ENDS>

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#### **About Superior Resources Limited**

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 and the Greenvale Ordovician rock sequences. The Carpentaria Zinc Province one of the world's richest mineral producing regions and the Company is focused on multiple Tier-1 equivalent exploration targets. At Greenvale, the Company holds ground covering the majority of the Ordovician sequences in the region, which includes at least three significant copper-gold porphyry and VMS prospects, an advancing high-grade gold deposit and a regionally large magmatic sulphide nickel-copper-cobalt prospect.

#### About Greenvale Project

The Greenvale Project covers a region of volcanic and intrusive rocks of Ordovician Age that are similar in type and age to the porphyry copper belt in New South Wales. The New South Wales belt of rocks host the large Cadia and North Parkes porphyry copper mines. The sequence of rocks in the Greenvale area are likely to be the northern-most extension of the remnant New South Wales Ordovician Macquarie Arc rocks.

Superior's Greenvale Project is highly prospective for VMS and porphyry copper, gold, zinc and silver deposits and contains at least ten mineral prospects. The project is located within an area of notable economic significance, being proximal to the Kidston, Balcooma, Surveyor and Dry River South deposits.

#### About Steam Engine Gold Deposit

The Steam Engine Gold Deposit is an extensive mesothermal gold lode system on which an Indicated and Inferred Mineral Resource Estimate of 1.27 million tonnes at 2.3 g/t for 94,000 ounces of gold has been established (refer ASX announcement 4 May 2020). The Resource has been modelled on only 30 percent of at least 2.5 kilometres of strike length of outcropping lode and only modelled to relatively shallow depths.

Currently, three gold lode zones have been identified: (1) the Steam Engine Lode; (2) the Eastern Ridge Lode; and (3) the Southern Zone of lodes. The deposit has the potential to contain significant greater tonnages high-grade gold ore shoots that may extend to significant depths. The mineralisation is hosted within structures that are sheared to a greater extent than many similar lode gold deposits, which increases the potential for significant thicknesses of gold lode mineralisation.

The Eastern Ridge Lode zone, being the longest lode structure, potentially represents the primary ore conduit. Although the lode has been mapped at surface to be at least 1.4 kilometres long, gold surface soil geochemistry indicates that the structure is closer to at least 4 kilometres long. Many shorter structures exist on the hanging wall side of the Eastern Ridge lode zone, such as the Steam Engine lode and numerous other zones have mainly only been identified from historic gold soil sampling.

Large portions of the world's economic deposits of gold are found in vein systems of this kind and they can hold impressive amounts of valuable ore. The veins and shoot zones typically can extend to significant depths with gold grades typically higher than other types of gold deposits.



**Reporting of Exploration Results and Mineral Resources:** The reporting of some exploration results in this report reflects information that was originally reported in market announcements as referenced in various parts of this report. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant original market announcement.

Other information contained in this report that relates to exploration results 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

Information contained in this report that relates to Exploration Activities is based on information evaluated by Mr Peter Hwang, an executive director and shareholder of Superior Resources Limited and a Member of the Australian Institute of Geoscientists. Mr Hwang has sufficient experience which is relevant to this style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person under the 2012 edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Hwang consents to the inclusion in this report of the matters based on the 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
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>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.</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 area of interest based on previous drilling 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>
Drilling techniques	<ul> <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,</li> </ul>	<ul> <li>Drilling from surface was performed using standard Reverse-Circulation (RC) drilling and diamond core techniques.</li> <li>BC Drilling was conducted by AED (Accepted Evployed Evployed Drillore) using a UDB (EQ)</li> </ul>
	face-sampling bit or other type, whether core is oriented and if	<ul> <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</li> </ul>



Criteria	JORC Code explanation	Commentary
	so, by what method, etc.).	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.
D		<ul> <li>Diamond drilling was conducted by AED (Associated Exploration Drillers) using a UDR 650 drilling rig and HQ 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 above.</li> </ul>
		• All holes were surveyed using a Reflex Gyro north-seeking gyroscopic instrument to obtain accurate down-hole directional data.
Drill sample recovery		<ul> <li>Sample recovery was performed and monitored by Terra Search contractor and Superior Resources' representatives.</li> </ul>
	<ul> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and</li> </ul>	• The volume of sample collected for assay is considered to be representative of each 1m interval.
	grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• 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.
		• Diamond core drilling used a wireline to retrieve core samples that are then placed in core trays.
Logging	<ul> <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>	<ul> <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> </ul>
		• All holes were logged in their entirety at 1m intervals for the RC drill holes. A spear was used to produce representative samples for logging.
		<ul> <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> </ul>
		<ul> <li>All logging data is digitally compiled and validated before entry into the Superior database.</li> </ul>
		The level of logging detail is considered appropriate for resource drilling.
		• The RC Chip trays and diamond core trays were photographed.
L		13



Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul> <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 stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>The sample colled drilling and was</li> <li>RC drill hole sam representative.</li> <li>RC samples are set and the samples were complete the sample sample.</li> <li>Duplicate sample.</li> <li>Diamond Core dintervals. Quarter Samples were complete the sample sizes assessed.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul> <li>All samples were or above 0.5 g/t using a four-acid</li> <li>Samples were or through 75 micro 50 gram sample.</li> <li>Multi-element a four-acid digesti</li> <li>A sub-sample of and ICP emission Be, Bi, Ca, Cd, Ce Te, Th, Ti, U, V, V</li> <li>Gold and multi-e laboratory for Q</li> <li>Additionally, SGS of the elements</li> </ul>
		14

# • The sample collection methodology is considered appropriate for RC and diamond core drilling and was conducted in accordance with standard industry practice.

- RC drill hole samples were split 1m samples are regarded as reliable and representative.
- RC samples are split with a riffle splitter at 1m intervals as drilled.
- Samples were collected as dry samples.
- Duplicate samples are taken and assayed in each batch processed for assaying.
- Diamond Core drill hole samples were collected from quartered core over 1 metre intervals. Quartered NQ Core samples are regarded as reliable and representative. Samples were collected as dry samples.
- The sample sizes are considered appropriate to the style of mineralisation being assessed.
- All samples were submitted to SGS laboratories in Townsville for gold. Gold assays at or above 0.5 g/t were additionally assayed for a full suite of 38 additional elements using a four-acid digest.
- Samples were crushed, pulverised to ensure a minimum of 85% pulp material passing through 75 microns, then analysed for gold by fire assay method GO\_FA50V10 using a 50 gram sample.
- Multi-element analyses were conducted on assays of 0.5 g/t gold or above using a four-acid digestion followed by an ICP-AES finish using method GO\_ICP41Q100.
- A sub-sample of each was also subject to multi-element analysis using four acid digest and ICP emission spectroscopy technique 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.
- Gold and multi-element standards were included in the samples submitted to the laboratory for QAQC.
- Additionally, SGS used a series of its own standards, blanks, and duplicates for the QC of the elements assayed.



Criteria	JORC Code explanation	Commentary
Verification of sampling	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data</li> </ul>	• The reported significant intersections have been verified by Terra Search geologists against representative drill chips collected and the drill logs.
and assaying		No holes were twinned.
	<ul> <li>verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Logs were recorded by Terra Search field geologists on hard copy sampling sheets which were entered into spreadsheets for merging into a central SQL database.</li> </ul>
		<ul> <li>Laboratory assay files were merged directly into the database.</li> </ul>
		• 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.	<ul> <li>Drill hole collars have been recorded in the field using handheld GPS with three metre or better accuracy. The collar locations have been further defined using DGPS to give sub-one metre accuracy.</li> </ul>
	<ul> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Drill hole spacing and drilling technique are appropriate to establish the degree of geological and grade continuity of the mineral resources estimation procedures that will be applied. The mineralised system remains open and further infill and depth an strike extension drilling is required to confirm the full extent of the ore bodies.</li> </ul>
		• The area is located within MGA Zone 55.
		<ul> <li>A new level for the RL's has been defined as the MGA RL (previously, a grid RL was used) in preparation for pre-feasibility (previously, a grid RL was used).</li> </ul>
		• Topographic control is currently from DGPS point data 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 using a LIDAR survey. This will be carried out during the next phase of drilling.
Data spacing and distribution	<ul> <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> <li>Drill hole spacing is variable at the Steam Engine area, due to different stages of resource evaluation at the project.</li> </ul>
		<ul> <li>The drill hole spacing is sufficient in the central portions of the Steam Engine Lode an the Eastern Ridge Lode to allow estimation of resources when all the necessary information is compiled. An updated resource statement will be carried out at the completion of this current exploration phase.</li> </ul>



Orientation of data in relation to geological structure Sample security	JORC Code explanation
	<ul> <li>Whether the orientation of sampling of possible struct known, considering the de</li> <li>If the relationship betweet orientation of key minera introduced a sampling bid reported if material.</li> </ul>
	• The measures taken to en
Audits or reviews	• The results of any audits of and data.
	porting of Exploration Result sted in the preceding sect JORC Code explanation

Criteria	JORC Code explanation	Commentary
		<ul> <li>Most intersections reported in this report are weighted composites of smaller sample intervals, as is standard industry practice.</li> </ul>
Orientation of data in relation to geological structure	<ul> <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> <li>The orientation of the drill holes is ideal for reporting of the intersection results.</li> <li>No orientation sample bias has been identified at this stage.</li> </ul>
Sample security	• The measures taken to ensure sample security.	<ul> <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 Resources employees.</li> <li>Sample security measures within SGS laboratories are considered adequate.</li> </ul>
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	<ul> <li>No audits or reviews of the sampling techniques and data have been undertaken to date.</li> </ul>

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tion 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	• The areas reported on lie within Exploration Permit for Minerals 26165 which was granted on 30 January 2017. Superior holds much of the surrounding area under granted exploration permits.
	<ul> <li><i>environmental settings.</i></li> <li><i>The security of the tenure held at the time of reporting along</i></li> </ul>	• Superior has agreements or other appropriate arrangements in place with landholders and native title parties with respect to work in the area.
	with any known impediments to obtaining a licence to operate in the area.	<ul> <li>No regulatory impediments affect the relevant tenements or the ability of Superior Resources to operate on the tenements.</li> </ul>



Criteria	JORC Code explanation	Commentary
Exploration done by other	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>All historical drilling reported in this report has been completed and reported in accordance with their current regulatory regime.</li> </ul>
parties		• 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.
		<ul> <li>The gold mineralisation occurs within several north-northeast trending, west-dipping pyritic quartz-muscovite-carbonate schist lodes within metamorphosed intermediate to basic intrusives and metasediments.</li> </ul>
		• 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 inbetween the Steam Engine and Eastern Ridge lodes.
		• The gold mineralisation occurs in lode zones and is thought to be of the mesothermal vein type. At least some of the shearing has occurred post mineralisation, along the plane of the mineralisation.
		• The important features of the Steam Engine and Eastern Ridge lodes are their continuity and a persistent dip to the west.
Drill hole nformation	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul> <li>Drill hole collar and significant intersection tables are included in the main body of the announcement. These tables include information relevant to an understanding of the results reported.</li> </ul>
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Criteria	JORC Code explanation	Commentary
Data aggregation methods Relationship between mineralisatio n widths and intercept lengths	<ul> <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> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul> <li>The exploration results are reported as a length weighted average of all the assays of the intersections.</li> <li>No top cutting has been applied as there are a limited number of high-grade gold assays that influence the calculated intersection grades. This is a feature of the Steat Engine Gold Deposit.</li> <li>No metal equivalent values are reported.</li> <li>For the Steam Engine lode zone an interpreted westerly dip of approximately 50 to and drill holes which generally dip to the east at around 60° (or less) result in near twidths 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 40 to and drill holes that generally dip to the east at around 60° (or less) result in true wide at or above 0.9 times the intersection lengths reported.</li> <li>For the Southern Zone lode an interpreted westerly dip of approximately 65° is indicated at this early stage of investigation. As a result, most true widths from the current drill holes are expected to be at or above about 0.8 times the intersection length reported.</li> </ul>
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• Included.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• Reporting of all RC drill holes and diamond core drill holes with intersections on the Steam Engine, Eastern Ridge lodes and Southern Zone Lodes at or above 0.4 g/t gol has been included in tables within the report.



Criteria	JORC Code explanation	Commentary
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• Preliminary metallurgical test work is to be carried out shortly, using composited RC chip samples. With the Diamond core hole assaying now complete, additional work will also be carried out on density tests, crush tests and further metallurgical test work.
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).	• An additional exploration drilling program is about to commence aimed at further extending the current mineral resource (refer to ASX Announcement 23 September 2020).
	• Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially	• The proposed first stage of infill and exploration drilling just completed was designed to infill a significant portion of the Mineral Resource Estimate (May 2020). Subsequent to this drilling phase additional work programs now include:
	sensitive.	Metallurgical studies;
		Geotechnical studies;
		Toll treating negotiations;
		Preliminary mining and rehabilitation planning; and
		Preliminary environmental studies.