

## RESULTS RECEIVED FROM RECENT DRILLING AT STEAM ENGINE GOLD PROJECT

### High-grade gold assay results highlight potential to extend previously delineated gold lodes

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- New drill results confirm the potential to extend high-grade gold mineralisation at depth and along strike at the 400m strike length Steam Engine Lode.
  - The Steam Engine Gold Project comprises two main gold bearing lodes which have previously been drilled outlined:
    - Steam Engine Lode (non-JORC resources outlined); and
    - Eastern Ridge Lode.
  - All holes were drilled at depth below historical drilling with each hole successfully intersecting gold mineralisation.
  - High-grade intercepts include:
    - Steam Engine Lode (SSERC006):  
2m @ 1.90 g/t Au from 66m; and  
4m @ 2.34 g/t Au from 90m;
    - Eastern Ridge Lode (SSERC001):  
3m @ 3.09 g/t Au from 45m;
    - Eastern Ridge Lode (SSERC002):  
1m @ 5.28 g/t Au from 33m;
    - Eastern Ridge Lode (SSERC003):  
4m @ 2.47 g/t Au from 36m; and  
2m @ 4.73 g/t Au from 54m;
    - Eastern Ridge Lode (SSERC004):  
3m @ 3.81 g/t Au from 50m.
  - Mineral resource estimation modelling underway for the Steam Engine Lode.
  - The aim of the recent drilling program was to identify additional gold mineralisation at moderate depth below historical drilling and areas of potential where additional resources may be outlined with further drilling.
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Superior Resources Limited (ASX Code: **SPQ**) (**Superior** or **Company**) is pleased to confirm that the drilling of six holes totalling 510 metres at its Steam Engine Gold Project, intersected high-grade gold mineralisation in each of the holes. The drilling was completed recently as part of a 1,422 metre initial drilling program at four new prospects within the Company's 100% owned Greenvale Project (Figure 1).

The successful program at the Steam Engine Prospect extends the mineralised envelope along



strike and at depth at the Steam Engine Lode and extends the depth extent of a portion of the Eastern Ridge Lode (Figures 2, 3 and 4). The Steam Engine Lode has been extensively defined by previous drilling from surface to 100 metres vertical depth along the known 400 metre strike length of the lode (Figure 3). Only five holes have been drilled to depths greater than 100m vertical depth. Gold mineralisation at the Steam Engine Lode remains open at depth and along strike to the north.

Mineral resource modelling of the Steam Engine Lode is currently being conducted using results from the recent drilling program and historical data. A maiden mineral resource estimate will be developed from the modelling work.

Strong results from the Eastern Ridge Lode confirm the potential to extend the lode at depth and also the possibility of delineating multiple parallel mineralised lodes. Multiple zones of mineralisation were intersected in two of the four holes drilled at the Eastern Ridge Lode.

Superior's Managing Director, Peter Hwang said:

*"We are very pleased with the results of our recent drilling program at the Steam Engine Prospect. In particular, the results provide us with a level of confidence that gold mineralisation at each of the lodes is consistently of high grade and that there is excellent potential for the lodes to continue at depth and in respect of the Steam Engine Lode, along strike to the north.*

*We have an extensive high grade gold system at this prospect with over 2.5 kilometres of strike length that crops out at surface and remains open at depth and along strike. With the Eastern Ridge Lode extending for at least 2 kilometres and sparsely drilled, we consider there is excellent potential for discovery of further significant gold mineralisation.*

*The Company is eagerly looking forward to conducting a follow-up drilling program during the second half of the year, which will be aimed at extending the size of the gold lodes and building a viable mineral resource".*

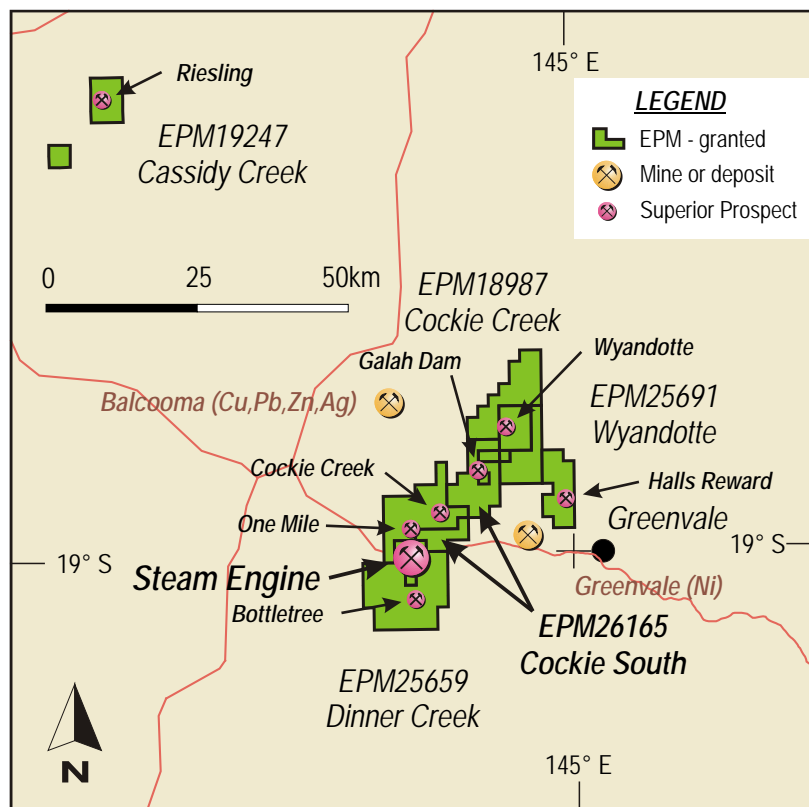


Figure 1. Map of the Greenvale Project showing the location of EPM26165 and the Steam Engine Gold Deposit.



## Recent Drilling Program

Six Reverse Circulation (RC) drill holes were completed in the recent drilling program for a total of 510m of drilling at the Steam Engine Gold Project.

**Table 1. Details of drill holes completed in the recent program**

Hole Name	Easting*	Northing*	RL*	Azimuth* (°)	Dip (°)	Depth (m)	Location
SSERC001	9921.02	9912.50	595.90	90.00	-61.67	72.0	Eastern Ridge
SSERC002	9951.84	9952.41	597.34	90.00	-61.69	72.0	Eastern Ridge
SSERC003	9948.82	9998.79	596.55	90.00	-62.21	72.0	Eastern Ridge
SSERC004	9942.18	10042.67	596.02	90.00	-60.71	72.0	Eastern Ridge
SSERC005	9380.13	10500.63	586.40	90.00	-60.20	102.0	Steam Engine
SSERC006	9400.22	10551.20	584.54	90.00	-61.14	120.0	Steam Engine

\* Locations of the drill holes are on the local Steam Engine Grid. They have been established from MGA coordinates from a DGPS pickup and translated to local coordinates using an accurate translation established from a DGPS survey of historical drill hole collars.

At the **Steam Engine Lode**, two holes were drilled to the north of the main area of historical resource drilling undertaken by Noranda Australia and others. The purpose of the drilling was to test the Steam Engine Lode at depth below shallow historical surface drilling (Figure 2). Both holes intersected a well-defined lode structure containing gold bearing pyritic schist similar to historical gold intersections. The following intersections were recorded.

**Table 2. Gold intersections from the recent drilling of the Steam Engine Lode#**

Hole Name	From (m)	To (m)	Length (m)	Gold (g/t Au)
SSERC005	70	72	2	1.90
SSERC006	66	68	2	2.79
SSERC006	90	94	4	2.34

# Drill hole intersections have been calculated using a cutoff of 1g/t with no included material below the cutoff. True widths of intersections are approximately 0.9 times the intersection lengths shown in the table.

A plot of all intersections projected onto the plane of the Steam Engine Lode (Figure 3) shows the position of the intersections in relation to historical drilling intersections. This plot indicates that there is good potential for additional gold resources on the Steam Engine Lode to the north of the area of detailed drilling. This conclusion is based on an interpreted shallow northerly plunge of the stronger gold mineralisation in the area of more detailed drilling. Superior will be conducting a follow-up drilling program during the second half of the year, which will be aimed at extending the extent of mineralisation of the Steam Engine Lode.

At the **Eastern Ridge Lode**, four shallow holes were drilled in a part of the lode where earlier historical drilling had shown the best gold results (Figure 4). All four holes intersected the Eastern Ridge Lode structure with the following intersections recorded.

**Table 3. Gold intersections from the recent drilling of the Eastern Ridge Lode#**

Hole Name	From (m)	To (m)	Length (m)	Gold (g/t Au)
SSERC001	10	12	2	2.24
SSERC001	16	18	2	2.14
SSERC001*	45	48	3	3.09
SSERC002*	33	34	1	5.28
SSERC003	36	40	4	2.47
SSERC003*	54	56	2	4.73
SSERC004	42	43	1	4.67
SSERC004*	50	53	3	3.81

# Drill hole intersections have been calculated using a cutoff of 1g/t with a maximum of 1m of included material below the cutoff. True widths of intersections are approximately 0.9 times the intersection lengths shown in the table. \* Intersections of the main Eastern Ridge Lode structure.

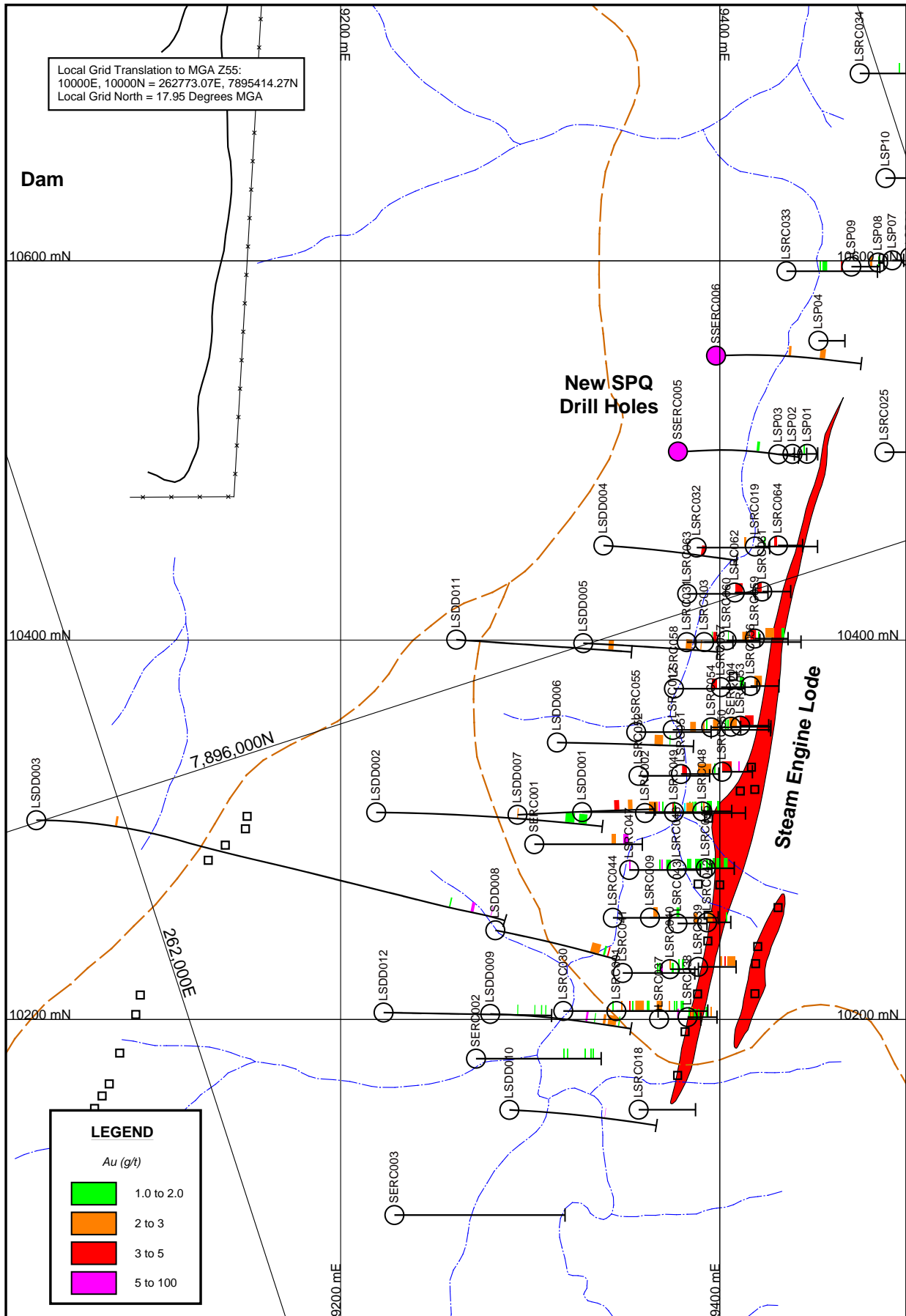


Figure 2. Steam Engine Lode – Gold bearing lodes and drill holes.

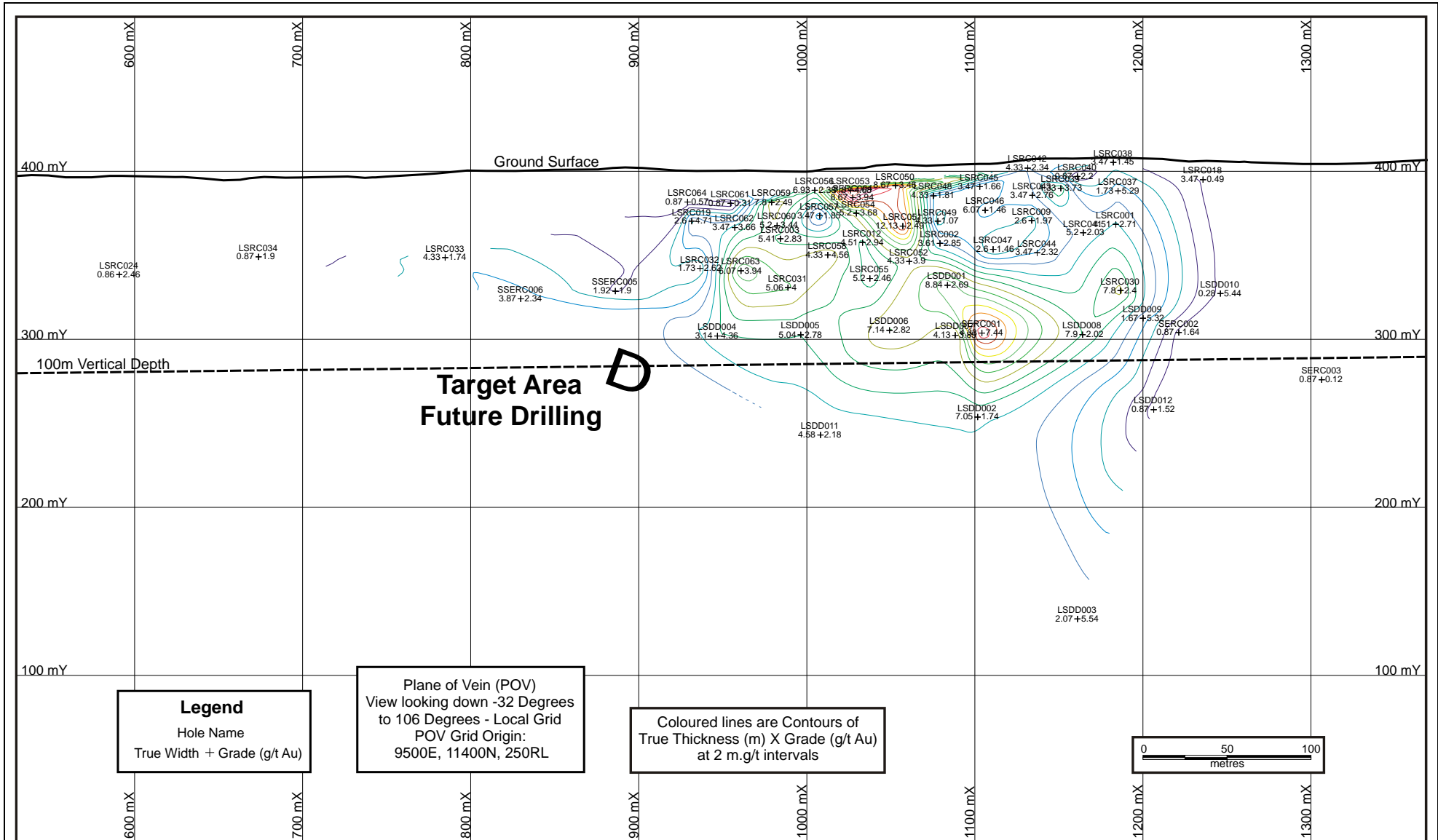


Figure 3. Steam Engine Lode – Plane of Lode diagram showing historical and recent Superior drill hole intersections of the Steam Engine Lode and indicating proposed location for further drilling.

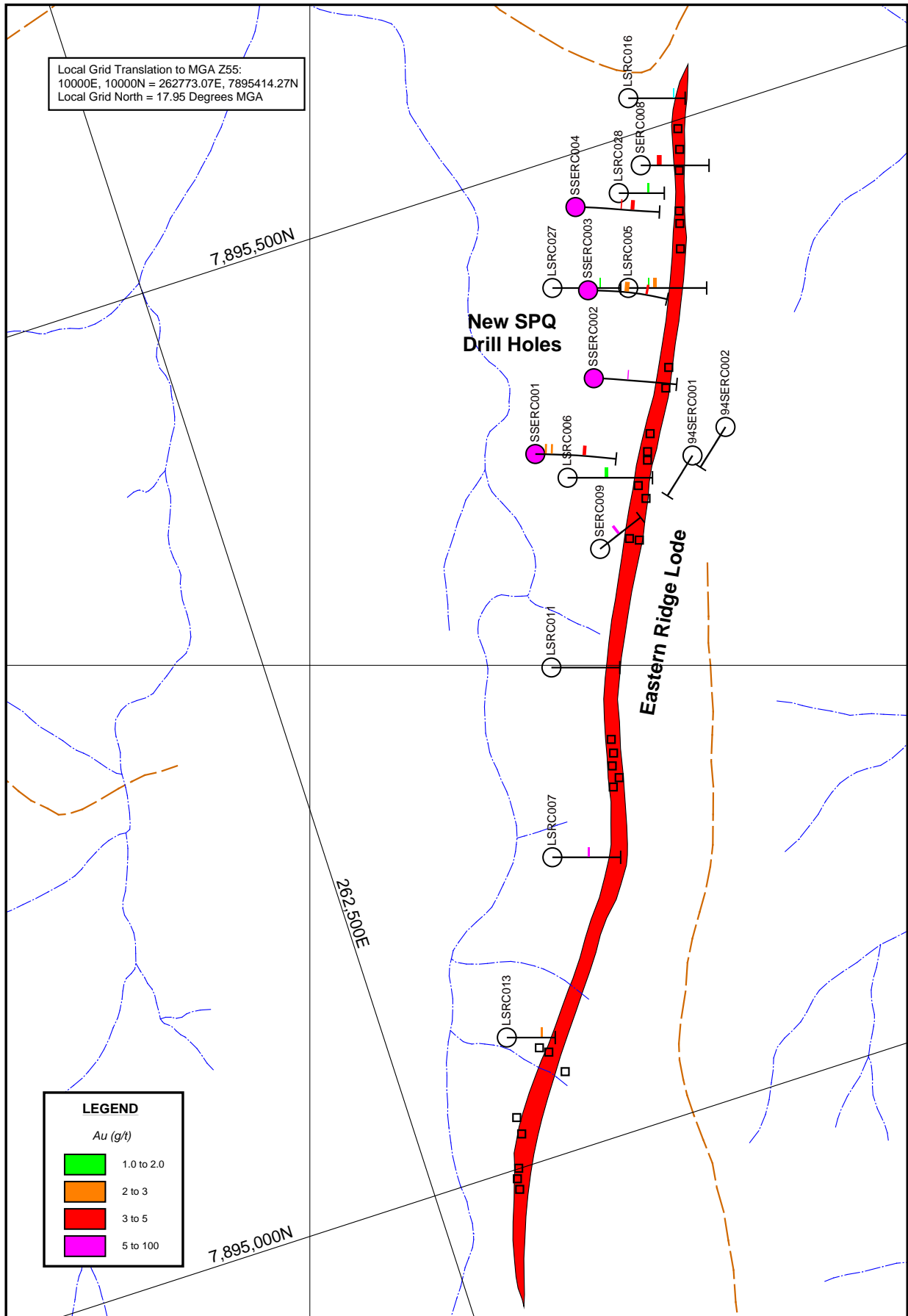


Figure 4. Eastern Ridge Lode – Gold bearing lode and drill holes.



These results are encouraging for the development of a shoot of gold mineralisation on the Eastern Ridge Lode in and around the area drilled.

Superior will be conducting a follow-up drilling program during the second half of the year, which will be aimed at intersecting the Eastern Ridge Lode at greater depth.

### **Background**

The Steam Engine Gold Deposit lies within the old Lucky Creek Goldfield about 25km west of Greenvale in north Queensland (Figure 1). The deposit lies some 6km south of Superior's One Mile Project and 4km north of Superior's Bottletree Copper Project. It was discovered by Noranda Australia Limited in 1983 with the first drilling being undertaken in 1985. Following substantial drilling to establish a resource, the area was covered with a Mineral Development Licence (MDL107) in 1991. MDL107 has been held by various parties until it was recently relinquished along with a surrounding EPM making the area available for application by Superior as an Exploration Permit for Minerals.

### **Work Completed To Date**

Superior has undertaken a program of digital compilation and interpretation of previous exploration data over the Steam Engine and surrounding area. The data compilation work has been done from digital scans of hard-copy reports held at the Queensland Department of Natural Resources and Mines and from other sources. Whilst considerable valuable data is held by the Department, the data is incomplete in that assay and geology logs for fill-in drilling at 25m centres are not held by the Department. The data held, however, does include some drafted 25m spaced sections allowing most of the missing assay and geological information to be recovered to digital form.

### **Gold Lodes**

The Steam Engine area contains two main gold bearing lodes and a number of smaller lodes. The western lode is known as the Steam Engine Lode and the eastern lode, located some 600m east of the Steam Engine Lode, as the Eastern Ridge Lode. A small area of gold mineralisation (Southern Zone) occurs between and south of these two lodes. The lodes are north-northeast-trending west-dipping lodes and are essentially mineralised shear zones comprised of pyritic quartz-muscovite-carbonate schist within meta-amphibolite and/or meta-tonalite. The gold mineralisation contrasts with many gold occurrences in Queensland which are associated with gold bearing quartz veins.

### **Steam Engine Lode**

Most of the historical drilling in the Steam Engine area has been concentrated on the Steam Engine Lode. Some 75 holes have been drilled into and adjacent to the Steam Engine Lode including 45 reverse circulation (RC) holes and 12 diamond drill holes (DD). Gold intersections above 5 metresXgrams/tonne (m.g/t) from drilling on the Steam Engine Lode are listed in Table 4. The detailed drilling shows that the gold mineralisation dips consistently to the west at about 55-58° and that it has good continuity as indicated in the sections in Figures 5 and 6.

Detailed drilling over a 300m section of this lode down to approximately 100m depth has allowed previous explorers to determine a resource (non-JORC) for this area. Superior will be completing a resource estimation on this area of mineralisation in accordance with the JORC Code when the necessary information has been compiled.



**Table 4. Steam Engine drill hole intersections above 5m.g/t from historical drilling#**

Hole Name	From (m)	To (m)	Gold (g/t)	Length (m)	LX Au (m.g/t)	East (Local)	North (Local)	RL (Local)	Azimuth (Local)	Dip (°)
LSDD001	61.6	69.4	2.48	7.8	19.3	9367.12	10310.52	534.43	90.0	-55.0
LSDD001	70.4	71.4	6.80	1.0	6.8	9370.22	10310.52	530.00	90.0	-55.0
LSDD002	160.6	168.0	1.93	7.5	14.4	9322.92	10304.74	466.95	96.0	-48.0
LSDD002	171.4	178.0	1.83	6.6	12.1	9329.74	10304.07	459.09	96.0	-48.0
LSDD003	348.4	350.5	5.54	2.1	11.6	9271.39	10257.67	348.07	107.0	-40.0
LSDD004	96.5	100.0	4.36	3.5	15.0	9393.07	10445.70	505.94	97.0	-55.0
LSDD005	100.0	105.6	2.78	5.6	15.6	9385.66	10396.21	502.72	95.0	-56.0
LSDD006	94.1	102.0	2.82	7.9	22.3	9369.91	10345.82	506.63	92.0	-54.3
LSDD007	93.4	98.0	3.85	4.6	17.7	9347.90	10311.41	510.47	88.0	-53.5
LSDD007	106.0	110.1	2.85	4.1	11.7	9355.03	10311.66	500.39	88.0	-53.5
LSDD008	95.3	104.0	2.02	8.7	17.6	9335.95	10236.04	505.07	105.0	-56.0
LSDD008	112.0	113.3	4.62	1.3	6.0	9342.87	10234.19	494.22	105.0	-56.0
LSDD009	90.6	92.4	5.32	1.8	9.6	9331.71	10199.85	512.97	99.0	-51.2
LSDD009	110.0	117.0	2.45	7.0	17.2	9345.04	10197.92	495.58	99.0	-51.2
LSDD011	156.0	161.2	2.18	5.2	11.3	9346.49	10394.30	459.05	94.0	-59.0
LSRC001	37.0	42.0	2.71	5.0	13.6	9370.32	10205.61	556.65	90.0	-55.0
LSRC002	38.0	44.0	2.17	6.0	13.0	9386.28	10310.03	551.24	90.0	-55.0
LSRC003	35.0	41.0	2.83	6.0	17.0	9415.76	10400.18	552.73	90.0	-55.0
LSRC009	28.0	31.0	1.97	3.0	5.9	9380.11	10254.85	561.91	90.0	-60.0
LSRC012	37.0	42.0	2.94	5.0	14.7	9400.03	10353.88	551.60	90.0	-55.0
LSRC019	20.0	23.0	4.71	3.0	14.1	9431.49	10450.56	564.28	90.0	-60.0
LSRC030	76.0	85.0	2.40	9.0	21.6	9359.90	10205.66	516.43	90.0	-60.0
LSRC031	54.0	61.0	4.00	7.0	28.0	9399.65	10400.13	528.14	90.0	-75.0
LSRC032	50.0	52.0	2.62	2.0	5.2	9415.50	10450.00	540.73	90.0	-60.0
LSRC033	38.0	43.0	1.74	5.0	8.7	9460.25	10600.00	548.13	90.0	-60.0
LSRC037	19.0	21.0	5.29	2.0	10.6	9380.20	10201.40	573.48	90.0	-60.0
LSRC037	36.0	39.0	1.88	3.0	5.6	9388.95	10201.40	558.32	90.0	-60.0
LSRC039	23.0	25.0	2.69	2.0	5.4	9402.80	10228.90	571.87	90.0	-60.0
LSRC039	31.0	39.0	2.69	8.0	21.5	9408.30	10228.90	562.34	90.0	-60.0
LSRC041	41.0	42.0	8.15	1.0	8.2	9371.75	10225.70	551.96	90.0	-60.0
LSRC042	1.0	6.0	2.34	5.0	11.7	9397.25	10252.40	588.02	90.0	-60.0
LSRC043	17.0	21.0	2.76	4.0	11.0	9389.40	10251.80	573.50	90.0	-60.0
LSRC044	43.0	47.0	2.32	4.0	9.3	9368.30	10254.80	546.38	90.0	-60.0
LSRC045	11.0	15.0	1.66	4.0	6.6	9401.30	10280.90	577.44	90.0	-60.0
LSRC046	11.0	15.0	1.78	4.0	7.1	9386.00	10280.40	575.89	90.0	-60.0
LSRC046	20.0	27.0	1.46	7.0	10.2	9391.25	10280.40	566.80	90.0	-60.0
LSRC047	0.0	1.0	6.51	1.0	6.5	9354.65	10280.00	585.17	90.0	-60.0
LSRC047	34.0	35.0	6.78	1.0	6.8	9371.65	10280.00	555.72	90.0	-60.0
LSRC047	39.0	44.0	1.31	5.0	6.6	9375.15	10280.00	549.66	90.0	-60.0
LSRC048	5.0	10.0	1.81	5.0	9.1	9396.75	10310.90	578.95	90.0	-60.0
LSRC050	0.0	10.0	3.46	10.0	34.6	9405.91	10331.80	584.27	90.0	-60.0
LSRC050	17.0	18.0	30.50	1.0	30.5	9412.16	10331.80	573.44	90.0	-60.0
LSRC051	18.0	32.0	2.49	14.0	34.9	9394.20	10330.60	562.60	90.0	-60.0
LSRC052	46.0	51.0	3.90	5.0	19.5	9383.55	10326.70	543.75	90.0	-60.0
LSRC053	5.0	14.0	4.68	9.0	42.1	9417.75	10356.10	577.92	90.0	-60.0
LSRC054	19.0	27.0	2.96	8.0	23.7	9409.20	10355.20	566.23	90.0	-60.0
LSRC055	57.0	63.0	2.46	6.0	14.8	9388.10	10352.70	533.34	90.0	-60.0
LSRC056	4.0	12.0	2.38	8.0	19.0	9422.40	10377.00	578.82	90.0	-60.0
LSRC057	20.0	24.0	1.86	4.0	7.4	9413.80	10376.40	566.00	90.0	-60.0
LSRC058	40.0	45.0	4.56	5.0	22.8	9399.25	10375.60	547.04	90.0	-60.0
LSRC059	11.0	20.0	2.49	9.0	22.4	9428.45	10402.00	570.98	90.0	-60.0
LSRC060	25.0	31.0	3.44	6.0	20.6	9419.80	10401.10	559.70	90.0	-60.0
LSRC062	24.0	28.0	3.65	4.0	14.6	9423.10	10426.30	560.78	90.0	-60.0
LSRC063	51.0	58.0	3.94	7.0	27.6	9412.25	10425.60	536.75	90.0	-60.0
SERC001	82.0	86.0	2.48	4.0	9.9	9344.71	10291.54	519.25	90.0	-60.0
SERC001	94.0	99.0	7.44	5.0	37.2	9350.96	10291.54	508.43	90.0	-60.0
SERC004	9.0	19.0	3.94	10.0	39.4	9416.19	10355.47	574.88	90.0	-60.0

# Drill hole intersections have been calculated using a cutoff of 1g/t gold with a maximum of 2m of included material below the cutoff. True widths of intersections are approximately 0.87 times the intersection lengths shown in the table.



The drilling on the Steam Engine Lode is generally restricted to the near surface zone down to about 120m vertical depth. Only one hole (LSDD003) has been drilled to any significant depth. This diamond drill hole intersected the lode between 348.4m and 350.5m down hole with 2.1m @ 5.54g/t Au intersected (true width approximately 2.0m). This is at a vertical depth of about 220m below surface showing that the lode continues at least to this depth.



Photograph 1. The steam engine from which the Steam Engine Gold Deposit gets its name

**Eastern Ridge Lode**

Some 47 holes have been drilled into and adjacent to the Eastern Ridge Lode of which 20 are RC drill holes and the remainder RAB holes. No diamond drill holes have been drilled into the lode. Gold intersections above 5 metresXgrams/tonne (m.g/t) from drilling on the Eastern Ridge Lode are listed in Table 2. The drilling shows that, like the Steam Engine Lode, the gold mineralisation occurs within a shear zone which dips to the west.

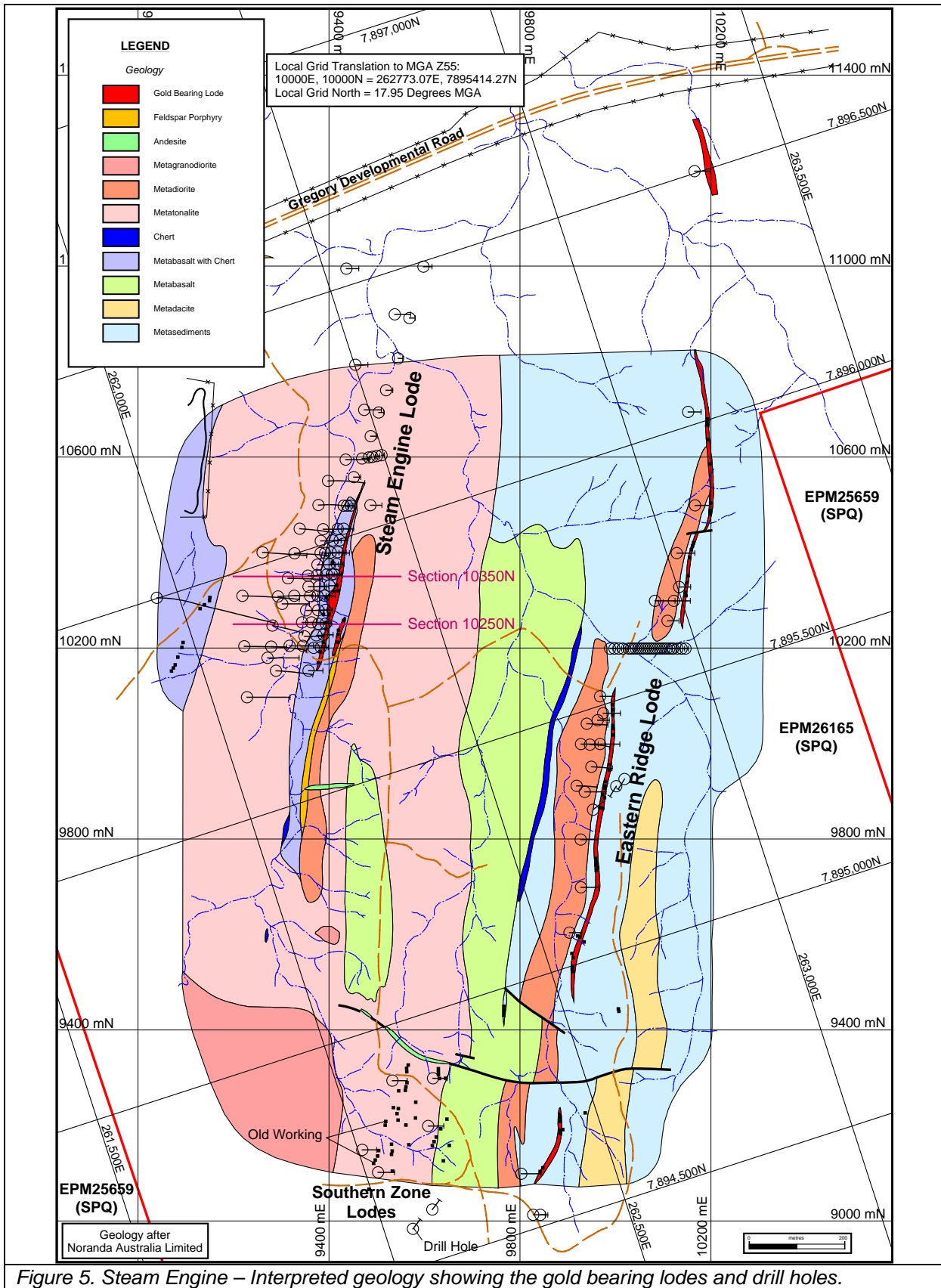
**Table 5. Eastern Lode drill hole intersections above 5m.g/t from historical drilling#**

Hole Name	From (m)	To (m)	Gold (g/t)	Length (m)	LXAu (m.g/t)	East (Local)	North (Local)	RL (Local)	Azimuth (Local)	Dip (°)
LSRC005	23.0	26.0	2.79	3.0	8.4	9984.05	10000.00	574.63	90.0	-55.0
LSRC007	37.0	39.0	5.07	2.0	10.1	9949.00	9700.00	570.09	90.0	-60.0
LSRC015	29.0	33.0	2.75	4.0	11.0	10142.28	10300.00	570.41	90.0	-55.0
SERC008	17.0	22.0	4.47	5.0	22.4	9939.41	10199.27	573.61	90.0	-60.0
SERC009	24.0	27.0	6.90	3.0	20.7	9963.10	9868.86	575.92	52.0	-60.0

# Drill hole intersections have been calculated using a cutoff of 1g/t with a maximum of 2m of included material below the cutoff. True widths of intersections are approximately 0.87 times the intersection lengths shown in the table.



The Eastern Lode extends for a total distance of over 2km and the spacing of the drill holes is variable. The lode structure is poorly drilled opening up the possibility of gold intersections from further drilling particularly around the better historical intersections shown in Table 2.



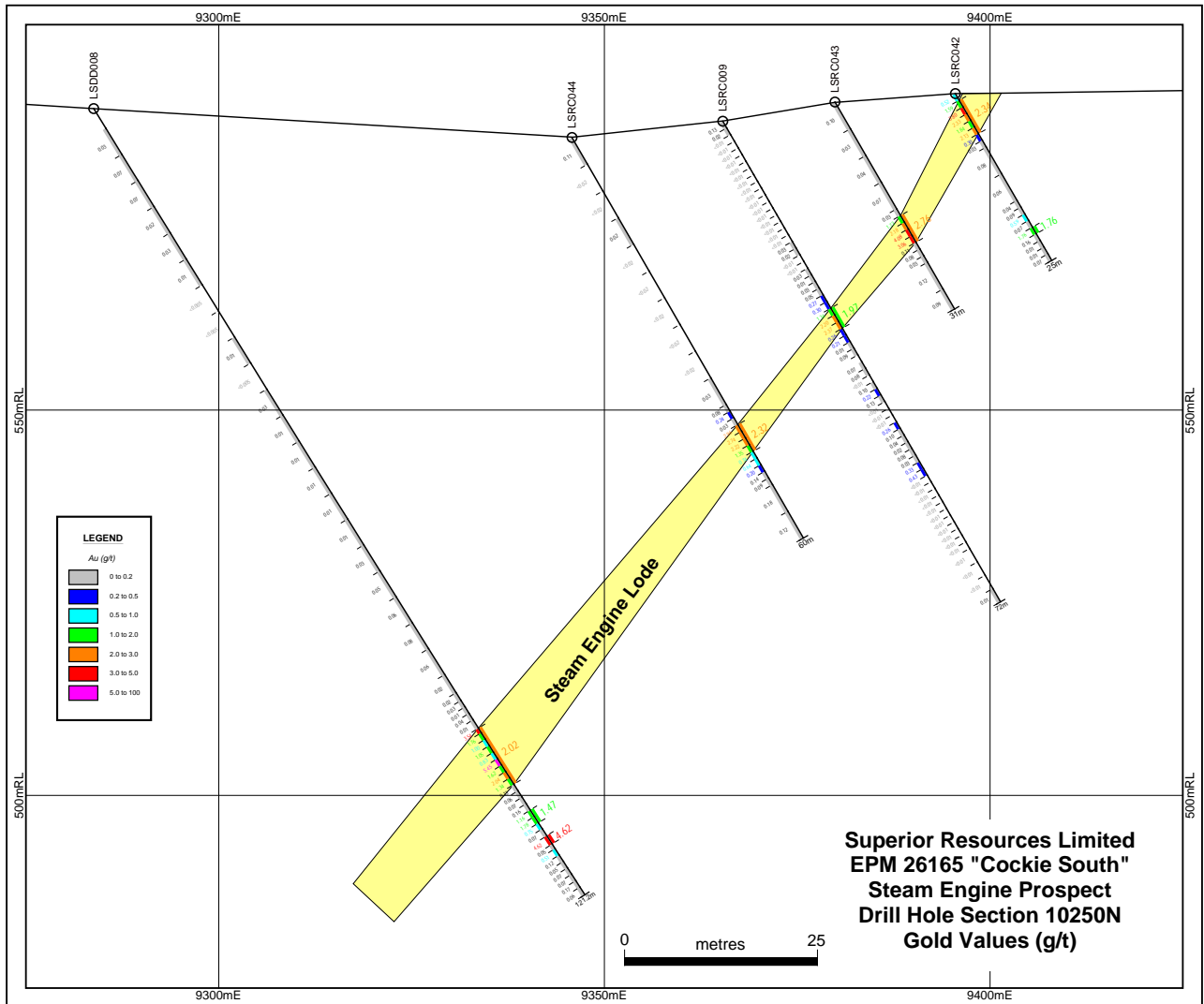


Figure 6. Steam Engine Drill Hole Assay Section 10250N showing gold intersections of the Steam Engine Lode. The lode shows good continuity and has a westerly dip of about 55°. This section and the following section are separated by 100m and are located near the centre of the area of detailed drilling on the lode.

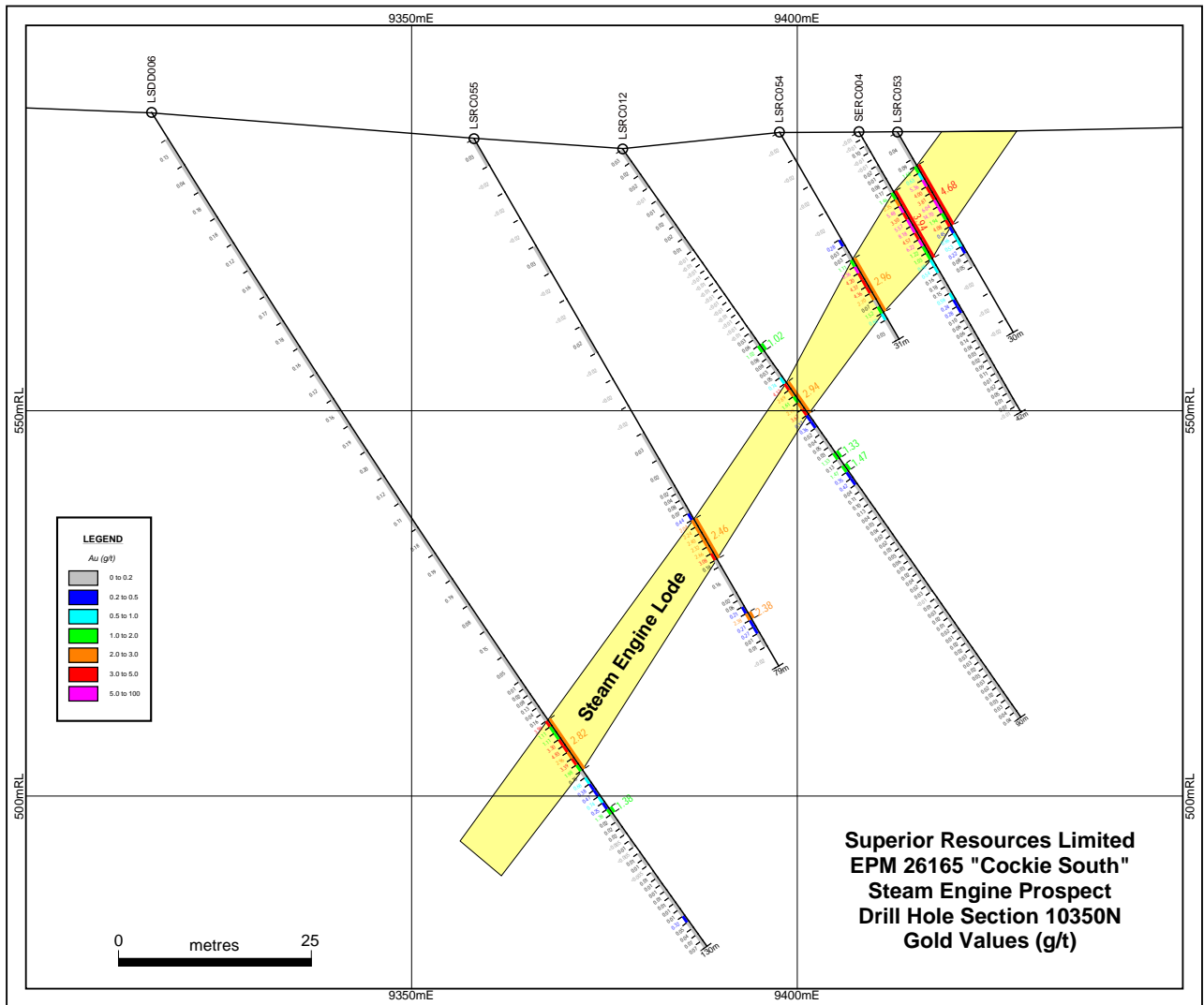


Figure 7. Steam Engine Drill Hole Assay Section 10350N showing gold intersections of the Steam Engine Lode. The lode shows good continuity and has a westerly dip of about 55°. This section and the previous section are separated by 100m and are located near the centre of the area of detailed drilling on the lode. This section also shows hole SERC004 (drilled more recently by Beacon Minerals Limited) which supports the gold grades in earlier drilling on this section.



**Southern Zone**

The Southern Zone lies at the southern end of the Steam Engine area. A number of shallow scattered pits appear to indicate prospecting on a series of narrow gold bearing structures. Some 20 RC drill holes have been drilled in this general area of which three show gold intersections above 5 metresXgrams/tonne (m.g/t). These are shown in Table 3.

**Table 1. Southern Zone drill hole intersections above 5m.g/t from historical drilling#**

Hole Name	From (m)	To (m)	Gold (g/t)	Length (m)	LXAu (m.g/t)	East Local	North (Local)	RL (Local)	Azimuth (Local)	Dip (°)
LSRC010	33.0	36.0	2.95	3.0	8.9	9554.79	9295.00	588.54	90.0	-55.0
LSRC020	39.0	40.0	5.37	1.0	5.4	9491.75	9150.00	583.89	90.0	-60.0
LSRC021	45.0	47.0	2.92	2.0	5.8	9635.05	9200.00	581.22	90.0	-57.0

# Drill hole intersections have been calculated using a cutoff of 1g/t gold with a maximum of 2m of included material below the cutoff. True widths of intersections are unknown but expected to be approximately 0.87 times the intersection lengths shown in the table for lodes dipping approximately 60° to the west.

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Managing Director

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The information in this report, insofar as it relates to Exploration Results is based on information compiled by Mr Ken Harvey, who is a non-executive Director of Superior Resources Limited and a member of the Australian Institute of Geoscientists. Mr Harvey has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the 2012 Edition of 'The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Harvey consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

Certain statements made in this report may contain or comprise certain forward-looking statements. Although Superior Resources Limited believes that any estimates and expectations reflected in such forward-looking statements are reasonable, no assurance can be given that such expectations will prove to have been correct. Accordingly, results and estimations could differ materially from those set out in the forward-looking statements as a result of, among other factors, changes in the economic and market conditions, success of business and operating initiatives and changes in the regulatory environment. Superior undertakes no obligation to update publicly or release any revisions of any forward-looking statements to reflect events or circumstances after the date of this report or to reflect the occurrence of unanticipated events.



**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>Drill holes are sampled and collected as 1m riffle split samples. Approximately 1-3kg of sample was collected over each 1m interval.</li> <li>All samples are collected as drilled via a riffle splitter attached to the drill rig cyclone.</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>The magnetic susceptibility of all samples was measured in the field.</li> <li>Portable XRF analyses were systematically recorded in controlled environment at Terra Search offices in Townsville.</li> <li>1m representative samples of intervals with visible mineralisation were assayed for gold at ALS laboratories in Townsville. 2m representative samples of intervals without visible mineralisation, derived from compositing two samples from consecutive 1m intervals, were also assayed for gold at ALS laboratories in Townsville. Where gold mineralisation was detected in the 2m composite samples, 1m samples were submitted for further assaying.</li> <li>1m samples were also submitted for multi-element assaying using aqua regia digestion.</li> <li>Assaying for gold was via fire assay of a 50 gram charge.</li> <li>Sample preparation at ALS laboratories in Townsville for all samples is considered to be of industry standard procedure.</li> </ul> <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</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>method followed by more detailed sampling of mineralised intervals at usually 1m intervals using a more precise method.</p> <ul style="list-style-type: none"> <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.</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 Reverse-Circulation (RC) drilling techniques.</li> <li>Drilling was conducted by Kelly Drilling using a Schramm 450WS with a 900cfm/350psi compressor and 700 psi on-board booster.</li> <li>Sampling was by the use of a face-sampling hammer bit.</li> <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.</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 Resources' 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> </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>Current Drilling</p> <ul style="list-style-type: none"> <li>There is no apparent relationship between sample recovery and grade of mineralisation.</li> <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. 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>Magnetic susceptibility data for each 1m sample interval was collected in the field.</li> </ul> <p>Historical Drilling</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 as mentioned in the report. The available logging appears to be of a standard to support resource estimation. No geotechnical logs have been reported and it is assumed that these were not done. Diamond drill hole logs usually include structural data which 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 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>	<p>Current Drilling</p> <ul style="list-style-type: none"> <li>The sample collection methodology is considered appropriate for RC drilling and was conducted in accordance with standard industry practice.</li> <li>Split 1m samples are regarded as reliable and representative.</li> <li>RC samples are split with a riffle splitter at 1m intervals as drilled.</li> <li>Samples were collected as dry samples.</li> </ul> <p>Historical Drilling</p> <ul style="list-style-type: none"> <li>As reported above, it is reported that diamond drill core has been halved as is standard practice for most explorers.</li> <li>Details of the approach taken for sampling of RC drill holes are not available.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <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> </ul>	<p>Current Drilling</p> <ul style="list-style-type: none"> <li>All samples were submitted to ALS laboratories in Townsville for gold and multi-element analysis.</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 Au-AA26 using a 50 gram sample.</li> <li>Multi-element analyses were conducted using aqua regia digestion followed by an</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <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>	<p>ICPAES finish using method ME-ICP41.</p> <ul style="list-style-type: none"> <li>Gold and base metal standards were included in the samples submitted to the laboratory.</li> </ul> <p>Historical Drilling</p> <ul style="list-style-type: none"> <li>As reported above, 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 with assaying for gold by a more precise method.</li> <li>Assay data submitted with the reports include some duplicate assaying. It is unknown in detail what quality control procedures were adopted.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <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 verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<p>Current Drilling</p> <ul style="list-style-type: none"> <li>The reported significant intersections have been verified by at least two Terra Search geologists against representative drill chips collected and the drill logs.</li> <li>No holes were twinned.</li> <li>No adjustments to assay data were undertaken.</li> <li>All drill hole logging and sampling data continue to be uploaded and validated by Terra Search and Superior staff.</li> </ul> <p>Historical Drilling</p> <ul style="list-style-type: none"> <li>Limited more recent drilling by Beacon Minerals Limited confirms the drill gold intersections obtained by Noranda Australia Limited as shown in Figure 7. Other drill hole results reported by Beacon support the order of gold grades at both the Steam Engine and Eastern Ridge lodes.</li> <li>No twinned holes have been drilled by Superior at this time.</li> <li>It is evident that most of the historical drill hole data was captured on paper and stored on paper. The compilation of that data in digital form has been completed by the competent person with plotting of the data on both plans and sections also held in digital form.</li> <li>No adjustments have been made to historical sample assay data as there was no apparent reason for such adjustment.</li> </ul>
<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>Current Drilling</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.</li> <li>Current drill hole collar locations and selected historical drill hole collar locations and topographic RL control were further defined using DGPS operated by Terra Search staff.</li> <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 infill and depth and strike extension drilling is required to confirm the full extent of the ore bodies.</li> <li>The area is located within UTM Zone 55, GDA94 datum.</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>Historical Drilling</p> <ul style="list-style-type: none"> <li>Noranda Australia 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. Data has been compiled using the local grid coordinates. Drill holes completed by Beacon Minerals Limited are reported using handheld GPS collar coordinates with a likely accuracy of about ± 5m. An accurate translation from GPS coordinates to local grid coordinates has been used to convert the Beacon drill hole data to local coordinates. Many of the drill hole collars are still evident at the prospect allowing validation of the drill hole locational data by DGPS before being used for resource estimation work.</li> <li>The area lies within UTM Zone 55, GDA94 datum.</li> </ul>
<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.</li> <li>The drill hole spacing is sufficient for the central portion of the Steam Engine Lode to allow estimation of resources when all necessary information is compiled to allow this to occur as documented in the report.</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 ideal for reporting of results and estimation of resources.</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>Sample security measures in the field and within ALS laboratories is 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 at this time.</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 land tenure</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>status</b>	<p><i>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 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>	<p>Historical Drilling</p> <ul style="list-style-type: none"> <li>All of the historical 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>As reported, the Steam Engine Gold Deposit is hosted within a shear zone. It is thought to have some similarities with the shear gold mineralisation at Hemlo in Ontario, Canada which the Competent Person is familiar with having visited one of the operating mines on the lode. Important features of the Steam Engine mineralisation are its continuity and its persistent dip to the west.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li><i>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:</i> <ul style="list-style-type: none"> <li><i>easting and northing of the drill hole collar</i></li> <li><i>elevation or RL (Reduced Level) of the drill hole collar</i></li> <li><i>dip and azimuth of the hole</i></li> <li><i>down hole length and interception depth</i></li> <li><i>hole length.</i></li> </ul> </li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Drill hole collar tables with significant intersections are included in the main body of the announcement. These tables include information relevant to an understanding of the results reported.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>Exploration results are reported as a length weighted average of all the assays of the whole hole 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 Steam Engine Gold Deposit.</li> <li>No metal equivalent values are reported.</li> </ul>
<b>Relationship between</b>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> </ul>	<ul style="list-style-type: none"> <li>For the Steam Engine area an interpreted westerly dip of approximately 60° (or less) and drill holes which generally dip to the east at around 60° (or less) result in true widths at or</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <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>	above 0.87 times the intersection lengths as 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> </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>Reporting of all reverse circulation and diamond drill holes with intersections above 1g/t gold has been included in tables within the report. Possibly less reliable RAB holes have not been included.</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>An interpreted geological map of the Steam Engine area is included in the report. This map also shows drill hole collars and traces with all gold intersections over 1g/t shown. The size of the area makes it difficult to clearly present this A0 sized map on an A4 piece of paper. Down hole geology compiled digitally for most holes is also difficult to show in sections at A4 size. The critical geological information that the mineralisation is hosted in a shear zone is reported.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Proposed further work is outlined in the report</li> </ul>