

## Rock chip assays up to 65.9 g/t Au and mapping at new Windmill East/Origin Prospects confirm expanded, very large-scale gold potential for Steam Engine Gold Project

### HIGHLIGHTS:

- Recent geological mapping and high-grade rock chip assays up to 65.9 g/t Au at historic Windmill East and Origin prospects identify potential 4km gold corridor between Steam Engine's Dinner Creek Lode and northern edge of Bottletree Copper Prospect
- Multiple parallel, poorly exposed gold lodes, with substantial strike lengths at Windmill East and Origin appear identical to Steam Engine Lode, largely untested by drilling
- Excellent potential to add substantial ounces to Steam Engine Mineral Resource
- Windmill East/Origin, Steam Engine, Dinner Creek and large alteration zones on eastern edge of Bottletree likely to be closely related gold-mineralised systems

Superior Resources Limited (ASX:SPQ) (Superior, the Company) announced today the identification of two areas containing significantly mineralised multiple gold lodes, located between Steam Engine and Bottletree prospects, at its 100%-owned Greenvale Project, approximately 210kms west of Townsville, Queensland (Figures 1 and 2).

Although the Company has not conducted any prior work at the new Windmill East and Origin prospects, the lodes appear to be highly mineralised and identical in style to the Steam Engine Lode. Rock chips collected during November 2021 returned up to 65.9 g/t Au from Origin and up to 18.6 g/t Au from Windmill East.

Gold-in-soil geochemical data over the area indicates that Windmill East and Origin are directly on-trend to the Dinner Creek Lode, located about 1.5 kms to the north east. A large anomalous zone of gold-in-soils located around the outer northern edge of the Bottletree Copper Prospect lies about 1km to the south of Origin.

The Windmill East and Origin prospects provide Superior with excellent potential to significantly increase total Resource ounces for the Steam Engine Project, further boosting the potential of the project, which currently totals 1.73 million tonnes grading 2.2 g/t Au for 122,000 ounces of gold<sup>1</sup>.

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

*"The discovery of high-grade gold in rock chips from the poorly exposed Windmill East-Origin prospects is a truly exciting development for this emerging North Queensland gold project. Together with detailed geological mapping, we are only just beginning to appreciate that the Steam Engine gold system is a much larger system than previously thought.*

*"We have now traced Steam Engine-type gold lodes and mineralisation in a regular pattern stretching from the Dinner Creek Lode to the southern edge of the Bottletree Prospect, which is about six kilometres to the south. In addition to the exciting developments at Bottletree, we will also be expanding our exploration plans for Steam Engine to test its potential to be a major gold deposit.*

<sup>1</sup> Mineral Resource Estimate based on results from 2020 drilling program. Refer ASX announcement "Steam Engine revised Mineral Resource Estimate: JORC Measured and Indicated Resources upgraded by 31%", dated 22 March 2021.

*"We look forward to releasing an upgraded Mineral Resource Estimate for Steam Engine during February, as we progress an interim strategy study that compares the merits of establishing a scalable processing plant against various haulage and toll-treatment pathways.*

*"These are exciting times for Superior, with Steam Engine's large-scale potential adding to the recent ground-breaking copper developments revealed at the nearby Bottletree Copper Prospect, and with the market starting to appreciate the potential of our new discoveries."*

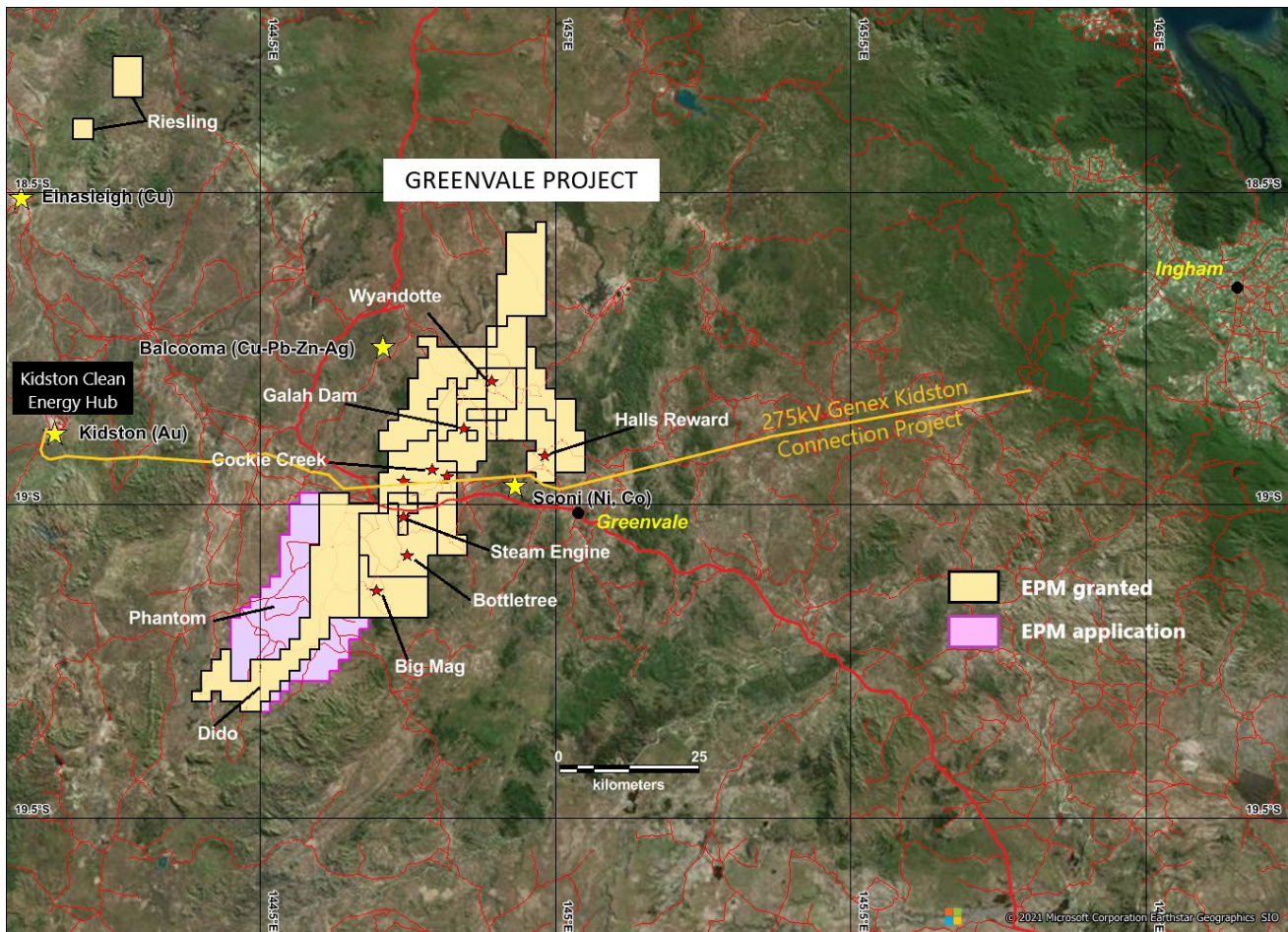


Figure 1. Location of exploration permits comprising the Greenvale Project. Exploration permit applications are shaded purple. Select prospects are marked with a red star. The Greenvale township and existing historic mines (yellow stars) are also indicated.

## New Windmill East and Origin Prospects

Mapping has established that gold mineralisation at the Windmill East Prospect, 2.5kms north of Bottletree (Figure 2), is hosted in intense quartz-sericite-pyrite alteration in meta-tonalite. This alteration closely resembles alteration observed in the mineralised lodes at Steam Engine, located about 1.5kms to the northwest. There are several parallel north to north northeast trending lodes which outcrop very poorly but can be traced for over 250m (Figure 3).

Mineralisation at the Origin Prospect to the southwest is also in two or more lodes, but the best mineralisation appears to be within quartz veins that are contained within the phyllic alteration in meta-tonalite. Mineralisation may also be developed within the phyllic alteration zones (Figure 4).



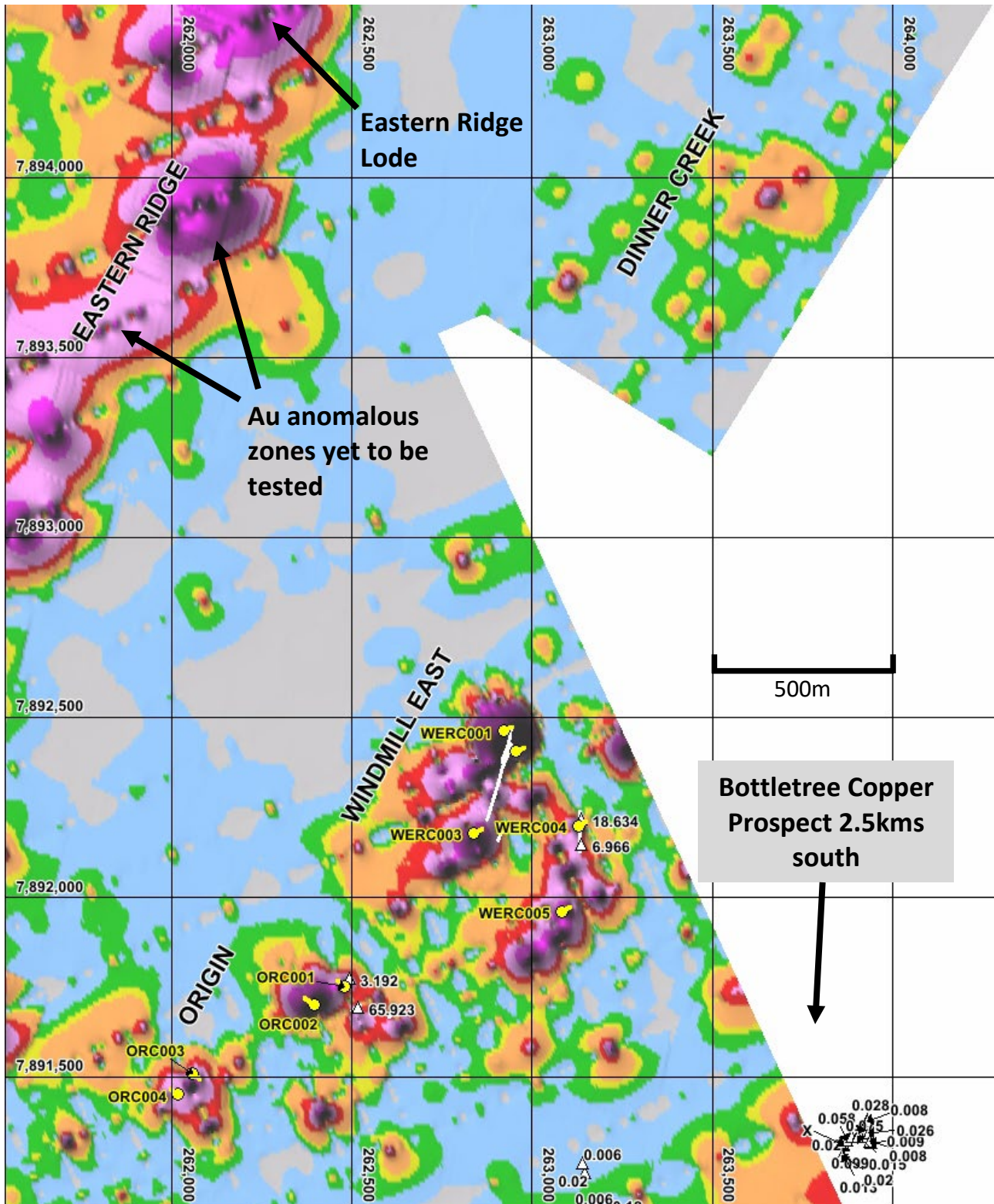


Figure 2. Soil gold image with mapped surface gold lodes at Windmill East and Origin prospects with connection to the Dinner Creek prospect and sub-parallel to the Steam Engine lodes. Historical shallow drill holes are shown, mapped lodes where exposed (white) and rock chip gold results (g/t Au).

Despite the poor exposure, the trends of the Windmill East lodes and elevated gold-in-soil zones (Figure 2) suggest a connection with the Dinner Creek Lode and it seems highly likely that the two prospects are part of the same system. The poor gold tenor at Dinner Creek may be due to a different host rock lithology (mafic to intermediate schist) compared to intrusive meta-tonalite at Windmill East-Origin.



Only two rock chip samples were taken from each prospect. Values of 18.63 g/t Au and 6.97 g/t Au were obtained from Windmill East and 65.92 g/t Au and 3.19 g/t Au from Origin. These are significant gold numbers, which require further sampling and investigation before drill testing.

The very limited shallow historical drilling by Pancontinental produced a best result of 2m @ 1.72 g/t Au at Origin (hole ORC001, 12-14m) and 2m @ 1.84 g/t Au at Windmill (WERC003, 21-23m). Given that the lodes normally dip northwest, the orientation of some of the Origin holes parallel this direction and may not have tested the target zone. Overall, the Windmill East and Origin lodes remain largely untested and have potential for strike extensions and additional yet to be identified parallel lodes.

The Windmill East and Origin Prospects present significant potential to add substantial ore to the Steam Engine Resource.



*Figure 3. Quartz-sericite-pyrite altered lode from the Windmill East prospect. (Note similarity to the Dinner Creek lode).*



*Figure 4. Granular quartz vein with boxworks after pyrite from the Origin prospect. Schistose wall-rock is tonalite with intense quartz-sericite-pyrite alteration.*

## About Superior Resources

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

**Reporting of Exploration Target:** The information in this report as it relates to exploration results, geology, geophysical imagery and drilling was compiled by Dr Peter Gregory, who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM) and an independent consultant to the Company. Dr Gregory does not hold shares or any other interest in the Company. He has not been on the Bottletree Project site, but has reviewed all primary data, inspected drill core located in Townsville and its context, 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'. Dr Gregory consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

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

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## APPENDIX 1

### 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>	<ul style="list-style-type: none"> <li>Samples are rock chip samples collected from outcrop.</li> <li>Representivity is not possible with this kind of sampling.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> </ul>	<ul style="list-style-type: none"> <li>No drilling reported.</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</li> </ul>	<ul style="list-style-type: none"> <li>No drilling reported.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>representative nature of the samples.</i></p> <ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	
<b>Logging</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling reported.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling reported.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li>• <i>Nature of quality control procedures adopted (e.g. standards,</i></li> </ul>	<ul style="list-style-type: none"> <li>• All samples were submitted to Intertek laboratories in Townsville for gold.</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 FA50/OE04 using a 50 gram sample.</li> <li>• A sub-sample of each was subjected to multi-element analyses using a four acid digestion followed by an OES finish using method 4A/OE33 for the following 33</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i>	<p>elements: Ag, Al, As, Ba, Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, La, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sn, Sr, Te, Ti, Tl, V, W, Zn.</p> <ul style="list-style-type: none"> <li>Intertek used a series of its own standards, blanks, and duplicates for the QC of the elements assayed.</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>	<ul style="list-style-type: none"> <li>No drilling reported.</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>	<ul style="list-style-type: none"> <li>Rock Chip locations were obtained using handheld GPS with approx. three metre or better accuracy.</li> <li>The area is located 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>No drilling reported.</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>Not applicable.</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>The rock chip samples were delivered directly to Intertek laboratories in Townsville.</li> <li>Sample security measures within the Intertek laboratories are considered adequate.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No audits or reviews of the sampling techniques and data have been undertaken to date.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</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 interests, historical sites, wilderness or national park and environmental settings.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The areas reported lie within Exploration Permit for Minerals 26165, which is held 100% by Superior Resources Limited.</li> <li>Superior holds much of the surrounding area under granted exploration permits.</li> <li>Superior has agreements or other appropriate arrangements in place with landholders and native title parties with respect to work in the area.</li> <li>No regulatory impediments affect the relevant tenements or the ability of Superior to operate on the tenements.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>All historical drilling reported in this report has been completed and reported in accordance with their current regulatory regime.</li> <li>Compilation in digital form and interpretation of the results of that work in digital form has been completed by a Competent Person.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The Windmill East and Origin gold lodes are hosted within shear zones.</li> <li>Gold is mineralised within a number of north-northeast trending, west-dipping pyritic quartz-muscovite-carbonate schist lodes within metamorphosed tonalite intrusions. Significant chlorite-epidote and sericite type alteration zones exist in the shear zones with the mineralisation appearing to be mostly associated with heavily sericite altered sections of the host rock.</li> <li>The gold bearing lodes in the area are of a similar mineralisation style to the Steam Engine and Eastern Ridge lodes.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>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 orogenic style mineralisation.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling reported.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling reported.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>No drilling reported.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of</li> </ul>	<ul style="list-style-type: none"> <li>Included.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>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.</i>	
<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>Only a limited number of rock chips samples were collected.</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>None.</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>Additional work includes: <ul style="list-style-type: none"> <li>Additional soil geochemical sampling surveys;</li> <li>Ground magnetometer survey; and</li> <li>Exploration drilling.</li> </ul> </li> </ul>