

## Lodestar Commences Gold-Nickel-Lithium Exploration at Coolgardie West

### HIGHLIGHTS

- 5km long, under explored greenstone belt, 10km west of Coolgardie
- Historic gold and nickel geochemical anomalies present immediate targets
- 10km east and 12km north of Red Panda and Londonderry LCT (lithium – caesium – tantalum) pegmatites respectively – potential LCT district

Lodestar Minerals Limited (“**Lodestar**” or “**the Company**”; **ASX:LSR**) advises that a recently completed review of historic exploration data over application E15/1813 (82 sq. km) has identified historic gold and nickel geochemical anomalies that represent priority targets for planned follow up exploration. E15/1813 is located 10km west of Coolgardie and includes 5km of Coolgardie greenstone comprised of interlayered amphibolite, dolerite, carbonaceous shale and ultramafics. Remarkably, there is little evidence of systematic exploration in the tenement even though it is traversed by the Great Eastern Highway. LCT pegmatites identified south of the tenement at Londonderry and west at the Red Panda prospect, indicate district-scale potential within the Coolgardie greenstone (see Figure 1). There is no record of historic exploration for lithium within E15/1813 although Anaconda geological mapping<sup>1</sup> (circa 1970) has identified pegmatites along strike from the tenement.

### Historic Work

The Coolgardie West tenement was explored for nickel by Anaconda Australia Inc. up to 1971. Anaconda carried out low intensity exploration including geological mapping, reconnaissance sampling and drilled four percussion drill holes targeting a magnetic anomaly.

Resolute Limited carried out regional geochemical sampling for gold in 1996<sup>2</sup>. The sampling identified a 1300m long, north east trending +6ppb Au anomaly west of the greenstone sequence (see Figure 2). The anomaly, which is coincident with a north east trending structure that controls the local drainage, reported a maximum 23ppb Au and has not been targeted by drilling. One traverse of drilling was completed at the 8 Mile prospect, with no anomalous results.

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<sup>1</sup> See Anaconda open file reports WAMEX A2462 & A2463.

<sup>2</sup> See Resolute open file report WAMEX A52592.

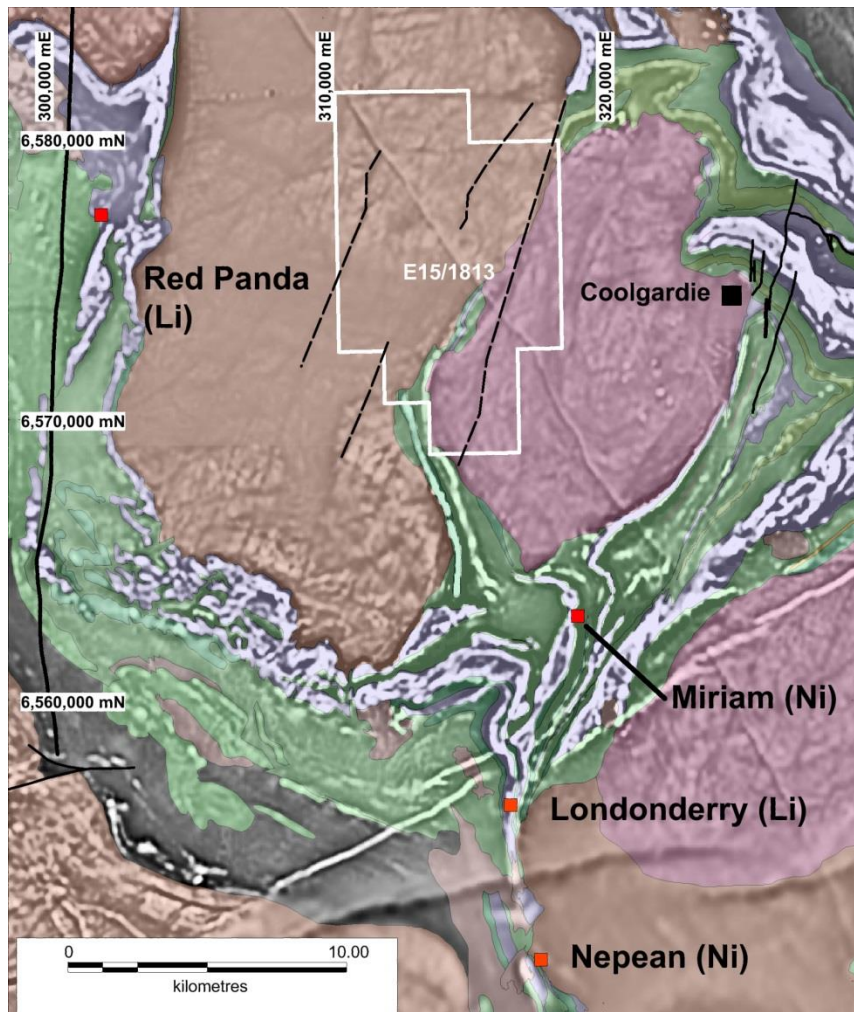


Figure 1 Tenement location showing prospects and greenstone extent on RTP 1VD aeromagnetic image (MGA94 Zone 51).

Heron Resources completed first-pass multi-element geochemical sampling over a distance of 3.5km along the greenstone. The sampling reported elevated nickel and chrome corresponding to ultramafic lithologies with a maximum 567ppm Ni, 75ppm Cu, 1420ppm Cr, 9ppb Pt and 15ppb Au<sup>3</sup>. No follow up work was reported. Summary statistics are shown in Table 1.

Lodestar will immediately commence a field program leading to multi-element geochemical sampling over the greenstone and adjacent gold anomaly targeting gold, nickel and lithium potential using Ultrafine™ soil sampling to maximise the effectiveness of the program in an area of extensive, shallow colluvial and alluvial cover. The program, extending along the north east trending greenstone contacts and the intrusive-structural contact between the Coolarli and Bali Monzogranite intrusion, will highlight areas to be targeted by a maiden drill program.

<sup>3</sup> See Heron Resource's open file report WAMEX A79310

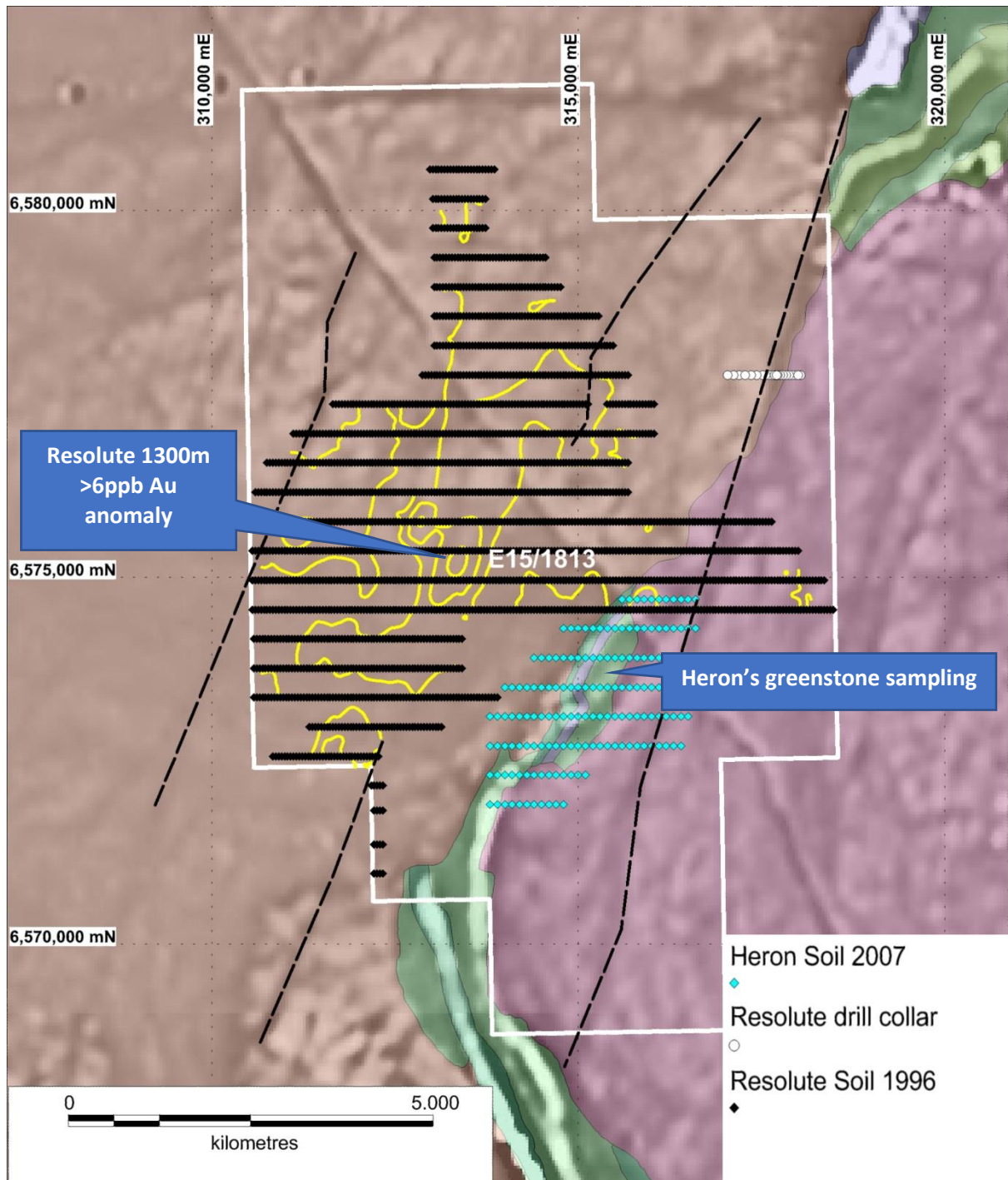


Figure 2 Historic sampling over the Coolgardie West tenement, the gold anomaly identified by Resolute sampling is outlined as >4ppb Au contours (MGA94 Zone 51).

This announcement is approved for release by the Managing Director on behalf of the Board of Directors of the Company.

Table 1 Summary Statistics Historic Geochemical Sampling

Element	n	Mean	Std. dev.	Range	Max	Min	Reference
Au ppb	1911	3.7	2.66	76	76	0	Resolute WAMEX A52592
Ni ppm	172	110	72.04	543	567	33	Heron WAMEX A79310
Cu ppm	172	35	14.52	66	75	9	Heron WAMEX A79310
Cr ppm	172	374	202.2	1277	1420	143	Heron WAMEX A79310
Au ppb	172	2.99	2.14	16	15	0.5	Heron WAMEX A79310

### Contacts

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### About Lodestar

Lodestar Minerals is an active Western Australian gold and base metal explorer.

Lodestar's projects comprise the advanced Nepean Nickel Project JV, the Ned's Creek JV and the 100% owned Earaaheedy-Imbin, Camel Hills, Jubilee Well and Bulong and Coolgardie West projects.

The Earaaheedy-Imbin Project is a major strategic land holding in the emerging Earaaheedy Province, site of Rumble Resource's recent and potentially world-class Zinc-Lead discoveries. The Imbin Project is located on the northern margin of the prospective basin and is the site of significant historic copper intersections in drilling and approximately 20km of strike over the Zn-Pb target, the Yelma-Frere unconformity

Lodestar discovered multiple zones of syenite intrusion-related gold mineralisation at the Ned's Creek Project on the Yilgarn craton margin, 150km west of Imbin. Vango Mining Limited is earning a 51% interest in the Ned's Creek JV by contributing \$5M of expenditure over 3 years.

Bulong and Jubilee Well are recent acquisitions in highly endowed gold districts; first-pass drill programs are being planned.

### Competent Person Statement

*The information in this report that relates to Exploration Results is based on information compiled by Bill Clayton, Managing Director, who is a Member of the Australasian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Clayton consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.*

# JORC Code, 2012 Edition – Table 1 report template

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Soil samples collected from near surface.</li> <li>Regolith mapping to identify residual and erosional landscapes generally suitable for soil geochemistry.</li> <li>Soil sampling, not applicable.</li> <li>Resolute - a bulk soil fraction was collected from a depth of 10-15cm and sieved to -3.5mm to recover a 100-200g sample for assay.</li> <li>Heron – a ~ 1kg of -1/32" sieved soil fraction is collected from a depth of 25-200mm. This sample is then sieved to -80mesh in the laboratory.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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>Soil sampling, not applicable.</li> </ul>
Drill sample recovery	<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>	<ul style="list-style-type: none"> <li>Soil sampling, not applicable.</li> </ul>
Logging	<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> </ul>	<ul style="list-style-type: none"> <li>Heron records a brief description of surface characteristics in ledger, e.g. pisolite sand, deep sand, deep soil etc.</li> <li>Not applicable.</li> <li>Not applicable.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <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>	
Sub-sampling techniques and sample preparation	<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>	<ul style="list-style-type: none"> <li>• Not applicable.</li> <li>• Dry samples, sieved to -3.5mm fraction, approximately 150g submitted for assay (Resolute). Approximately 1kg of sieved 1/32" sample submitted to laboratory (Heron).</li> <li>• Sample preparation involved drying, followed by a single stage mix and grind to 90% passing -75um (Resolute). Samples were dried and sieved to -80 mesh in the laboratory (Heron). No description of laboratory sample protocols.</li> <li>• Second splits not analysed. Laboratory repeat assays and standards included in laboratory reporting.</li> <li>• Sampling protocols not reported in detail. Duplicate sampling not reported. Heron inserted control (reference standard) samples at a ratio of 1:20.</li> <li>• Sample sizes are standard for regional geochemical sampling of the time.</li> </ul>
Quality of assay data and laboratory tests	<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> <li>• Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>• Samples from both companies were analysed in a reputable commercial laboratory (MinLab, Resolute &amp; Amdel, Heron). Resolute assayed for gold only using an aqua regia digest of a 25g charge and AAS determination. Heron also used an aqua regia digest for multi-elements including Au (1ppb), Pt (5ppb) Pd (1ppb) and a suite of 28 elements. Cu, Cr, Ni, &amp; Zn have a DL of 2ppm. The method is not a complete digest and refractory minerals will not be taken into solution. A sand component in the sample may contribute to dilution.</li> <li>• Soil sampling, not applicable.</li> <li>• Laboratory standards and repeat assays were inserted in the sample stream routinely. Heron specified reference samples at 1:20 samples, rotating duplicate, pulp standard and blanks i.e. duplicate, reference standard or blank every 1:60 samples. Resolute QA not specified.</li> </ul>
Verification of sampling and assaying	<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>• Regional geochemical sampling to identify low-level anomalies, no independent verification.</li> <li>• Not applicable.</li> <li>• Protocols not described in detail, methodology outlined in annual reporting within Resolute WAMEX report A52592 and Heron WAMEX A79310.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>No adjustment has been made to assay data.</li> </ul>
Location of data points	<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>Not applicable.</li> <li>Resolute and Heron do not report the survey control used to locate samples..</li> <li>No topographic control.</li> </ul>
Data spacing and distribution	<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>Sampling completed on a regular 400m by 40m grid (Resolute) and 100m by 400m grid (Heron).</li> <li>Not Applicable.</li> <li>No sample compositing.</li> </ul>
Orientation of data in relation to geological structure	<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> <li>Not applicable.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Not reported.</li> </ul>
Audits or reviews	<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 have been completed.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<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>Historic regional exploration was completed over E15/1813 and within the Coolgardie Mineral Field. The tenements is currently under application by Brosnan and Lodestar has announced an agreement to purchase the tenement from the vendor (see Lodestar's ASX announcement dated 21<sup>st</sup> June 2021). The main area of the tenement lies within native title claims of the Maduwongga (5087) and Marlinyu Ghoolie (5590) Peoples. There are no known impediments to obtaining the grant of the tenement, subject to</li> </ul>

Criteria	JORC Code explanation	Commentary
		existing rights under the Mining and Native Title Acts.
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>• <i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Previous exploration within the area of the tenement includes geological mapping, surface sampling, aeromagnetic surveys, and minor shallow drilling (4 percussion holes and x1 traverse of RAB drilling). Previous explorers include Anaconda Australia, Resolute Resources and Heron Resources (Atriplex).</li> </ul>
<i>Geology</i>	<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>• Target deposit types include komatiite hosted nickel, sheared-hosted lode gold and lithium in pegmatite. The Coolgardie West greenstone consists of interlayered metamorphosed amphibolite, dolerite, carbonaceous shale and ultramafics. The greenstone is surrounded by the Bali and Calooli monzogranites.</li> </ul>
<i>Drill hole Information</i>	<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 – elevation above sea level in metres) 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>• Not applicable – soil geochemistry, summary sample statistics provided in Table 1.</li> <li>• Regional soil geochemistry to identify drill targets.</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>• <i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg 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>• No weighted averages or cuts have been applied.</li> <li>• Not applicable.</li> <li>• Not applicable.</li> </ul>
<i>Relationship between mineralisation widths and intercept</i>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>If it is not known and only the down hole lengths are reported, there</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable.</li> <li>• Not applicable.</li> <li>• Not applicable.</li> </ul>



Criteria	JORC Code explanation	Commentary
<i>lengths</i>	<i>should be a clear statement to this effect (eg 'down hole length, true width not known').</i>	
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable, gold in soil results shown as contoured image to illustrate relative abundance.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Historic exploration results are used to provide evidence of low-level gold abundance at a district scale in a prospective geological setting. Insufficient work has been done to assess the accuracy of the historic results or to fully understand the influence of the regolith environment on these results.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No other results to report in relation to geochemical sampling.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Additional soil geochemistry is planned over prospective areas.</li> </ul>