

11 February 2022

## LITHIUM POTENTIAL UPGRADED AT COOLGARDIE WEST

### HIGHLIGHTS

- Greenstone-hosted pegmatite lithium corridor identified in geochemical sampling.
- The lithium-caesium-tantalum (LCT) corridor extends over 2.5km south from minor historic workings and is located immediately north of the Great Eastern Highway.
- The Coolgardie-Bullabulling terrane hosts known lithium occurrences at the Londonderry and Red Panda pegmatites, 10km east and 12km south, respectively.
- Large +10ppb gold in soil anomalies adjacent to Coolali-Bali Granite contact represent walk-up drill targets.

Lodestar Minerals Limited (“**Lodestar**” or “**the Company**”) (ASX:LSR) advises that the recently completed regional soil sampling over E15/1813, located 10km west of Coolgardie, Western Australia (see Figure 1) has revealed a significant LCT geochemical trend extending from sub-cropping pegmatites exposed in historic scrapings.

The results from a 937 sample UFF™ ultrafine soil sampling program completed in December 2021 have highlighted a 2.5km long coincident Li-Cs-Sn-W geochemical trend within the north-east trending Coolgardie greenstone (see Figures 2-4). Significantly, the results indicate that the pegmatite is more extensive than indicated by minor historic excavations, for which there is no public record.

Lodestar’s first-pass sampling program was completed on a 200m by 100m regular grid over the area of mapped greenstone and expanded to a 400m by 200m grid over a wider area to test historic gold anomalies along the major structural contact between the Bali and Coolarli Granites.

Two extensive +16ppb Au gold anomalies have also been identified. One, extending over 1.8km and adjacent to a north-east trending structure, has confirmed an historic anomaly in Resolute data<sup>1</sup> and demonstrated that the anomaly is not related to drainage dispersion. The second anomaly extends over 2km and trends north-west adjacent to the contact between the Coolarli and Bali Granites (see Figure 5). Both anomalies occur in areas of soil cover and have not been tested by drilling.

Follow up surface exploration planned for the pegmatite target will aim to confirm the lithium potential using LCT-specific analytical methods.

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<sup>1</sup> See Lodestar’s ASX announcement dated 11<sup>th</sup> October 2021.

Lodestar Managing Director Bill Clayton commented “The results of our first-pass geochemical program have exceeded our expectations, providing multiple LCT and gold targets of scale in a demonstrably under explored greenstone sequence, adjacent to major transport and infrastructure hubs. We look forward to progressing the Coolgardie West project through the next phase of exploration.”

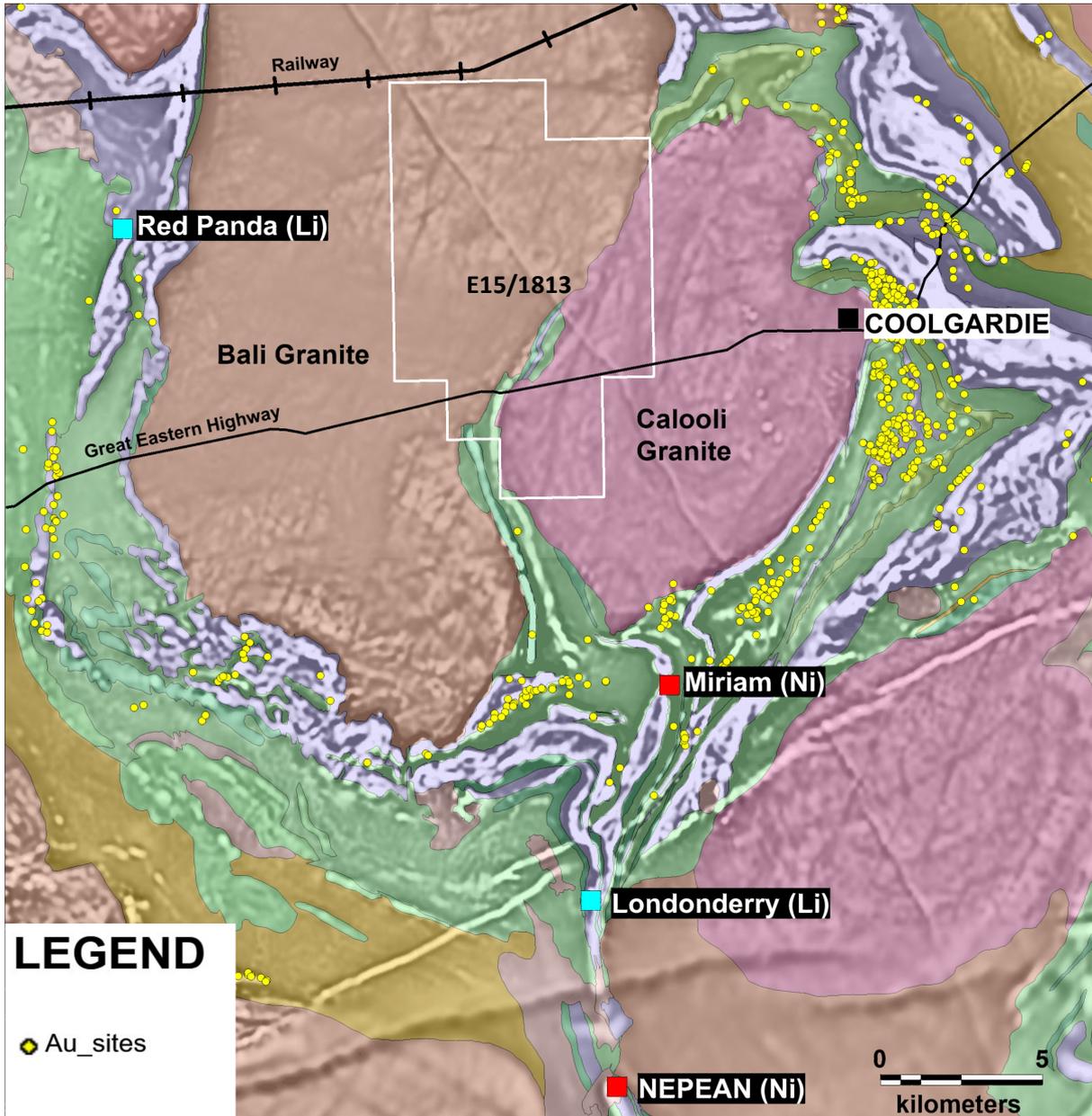


Figure 1 Location plan showing E15/1813 in relation to gold occurrences, LCT and nickel occurrences on 1:500 000 GSWA geology and aeromagnetic images.

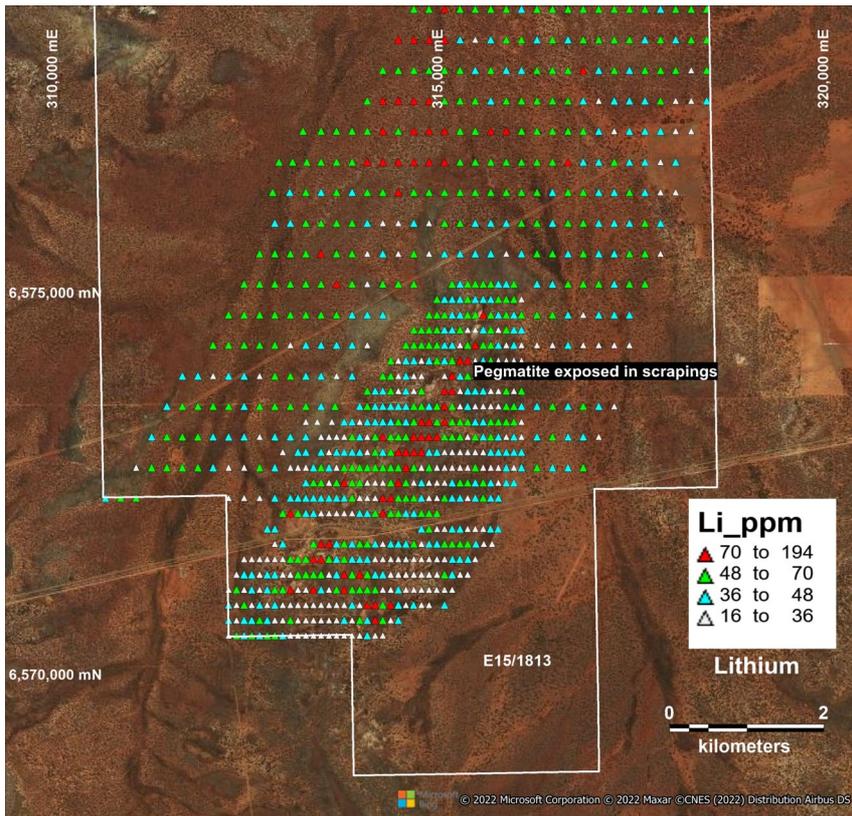


Figure 2 Lithium distribution along strike from pegmatite exposure (MGA94 zone 51).

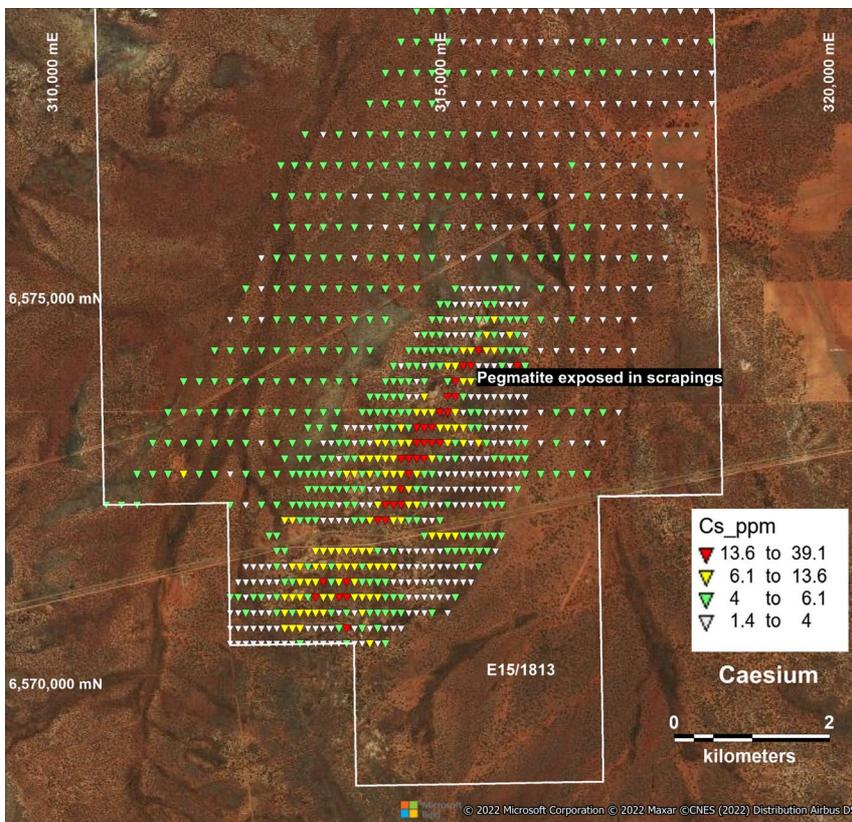


Figure 3 Caesium distribution along strike from pegmatite exposure.

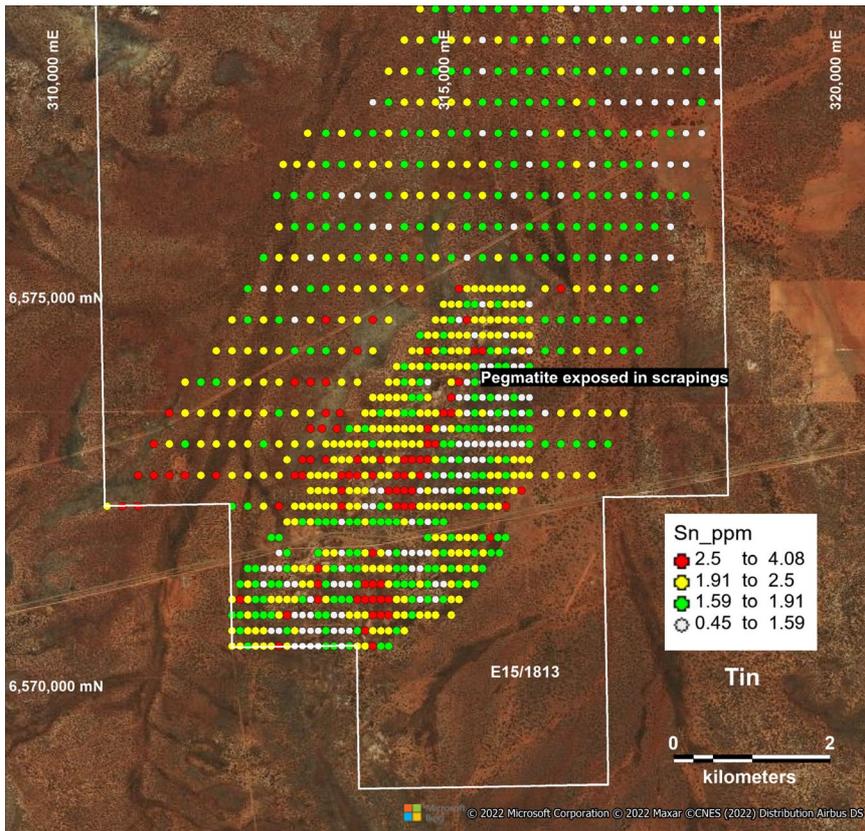


Figure 4 Tin distribution along strike from pegmatite exposure.

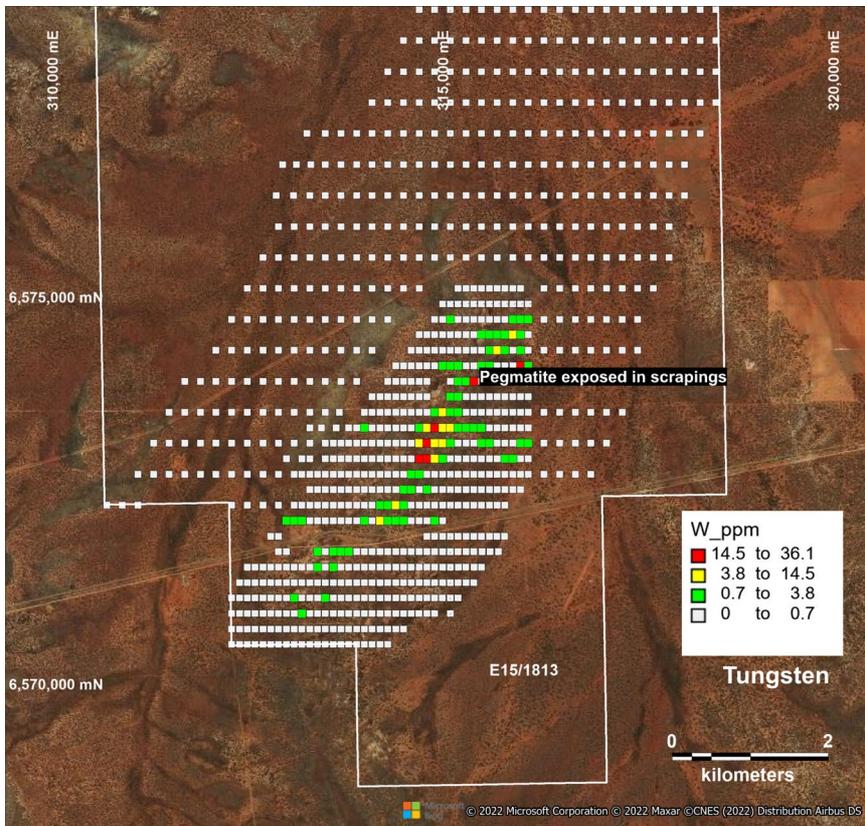


Figure 5 Tungsten distribution along strike from pegmatite exposure.

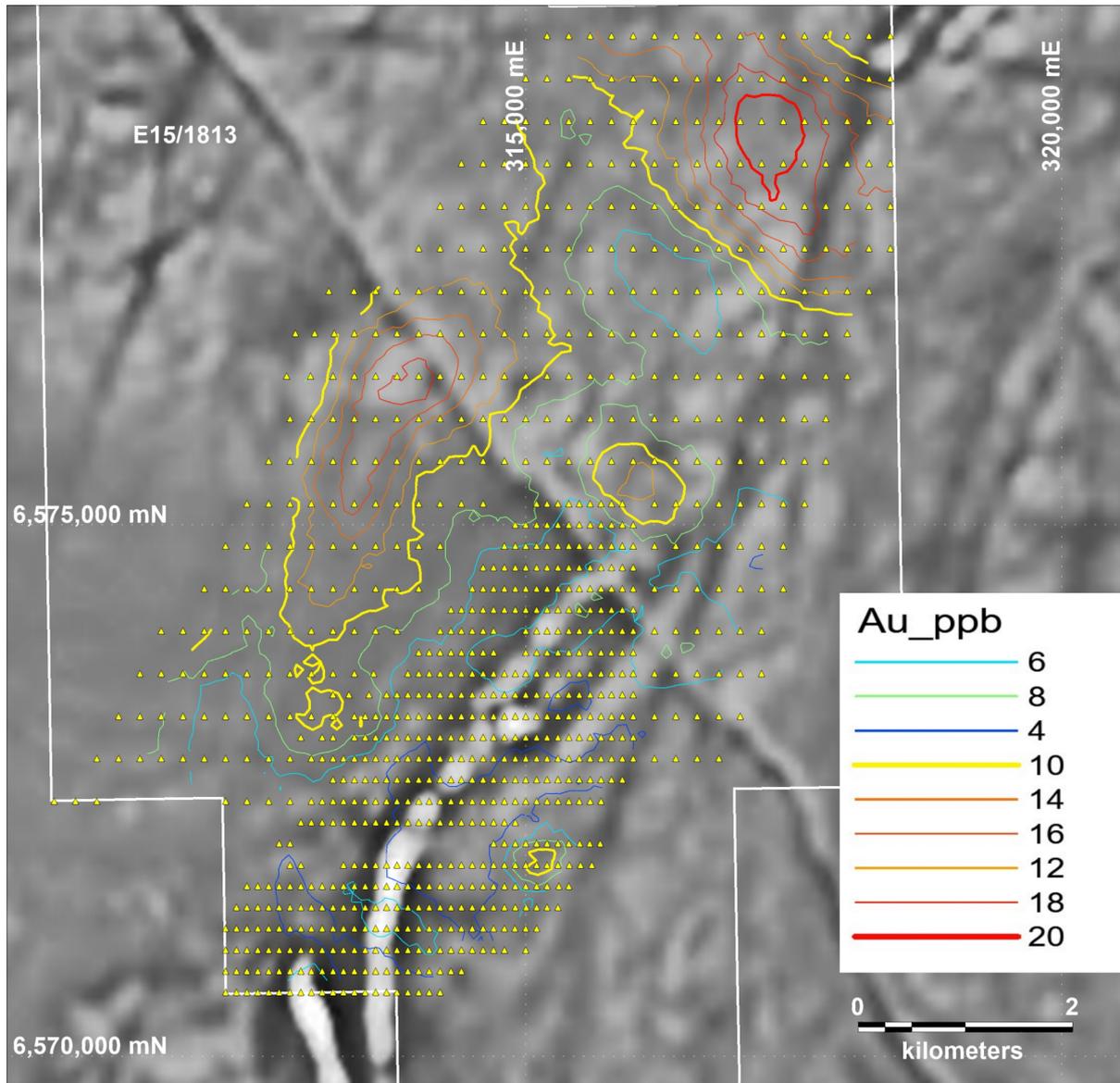


Figure 6 Gold targets highlighted by the 10ppb Au (yellow) contour (RTP1VD aeromagnetic data MGA94 zone 51).

Table 1 Summary statistics for selected elements.

|                    | <i>Au_ppb</i> | <i>Cs_ppm</i> | <i>Li_ppm</i> | <i>Sn_ppm</i> | <i>W_ppm</i> |
|--------------------|---------------|---------------|---------------|---------------|--------------|
| Mean               | 7.216         | 5.107         | 47.651        | 1.932         | 0.615        |
| Median             | 5.600         | 4.190         | 46.000        | 1.880         | 0.294        |
| Standard Deviation | 4.797         | 3.846         | 16.488        | 0.410         | 2.097        |
| Range              | 25.000        | 37.670        | 178.000       | 3.630         | 36.063       |
| Minimum            | 1.300         | 1.430         | 16.000        | 0.450         | 0.037        |
| Maximum            | 26.300        | 39.100        | 194.000       | 4.080         | 36.100       |
| n                  | 919           | 919           | 919           | 919           | 919          |

## Contacts

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|--|---|
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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 Camel Hills, Imbin, Jubilee Well and Bulong projects.

The Imbin Project is a major strategic land holding in the emerging Earraheedy 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 of the target 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.

The Bulong, Jubilee Well and Coolgardie West acquisitions are located highly endowed gold districts of the Eastern Goldfields in Western Australia; 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.*

*The information in this announcement that relates to previously released exploration results was disclosed under JORC 2012 in the ASX announcements dated*

- 21<sup>st</sup> June 2021 "Lodestar adds to Coolgardie Nickel-Gold Position".
- 11<sup>th</sup> October 2021 "LSR Commences Au-Ni-Li Exploration at Coolgardie West".

*These announcements are available to view on the Lodestar website. The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.*

# 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 (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>Lodestar completed first-pass surface geochemistry on E15/1813. 937 soil samples were collected from a depth of 10cm on a regular 200m by 100m or 400m by 200m grid, using a sample size of approximately 200g.</li> </ul> |
| Drilling techniques   | <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>Surface sampling only.</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>Surface sampling only.</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>Sample locations and descriptions are recorded in written ledgers or spreadsheets.</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>Lodestar's samples were submitted to LabWest in Perth for the Ultrafine™ method of analysis. A ~200g sample is added to de-ionised water to which sodium hexametaphosphate is added as a dispersant. The sample is rolled for 24hrs, followed by up to 4hrs settling. A solution containing the 2 micron particle size is drawn from the solution, 0.2g of the 2 micron fraction is analysed for gold and multi-elements using microwave assisted aqua regia digest. Analysis is completed by ICP-MS/OES. The Ultrafine™ method utilizes an aqua regia digest. Aqua regia is a partial digest and refractory elements are not expected to be completely dissolved, therefore the Ultrafine™ method is not optimized for LCT exploration. A detailed description of the technique is provided in Noble, R., Lau, I., Anand, R. and Pinchand, T. 2018, MRIWA Report no. 462: Multi-scaled near surface exploration using ultrafine soils: Geological Survey of Western Australia, Report 190. P. 31-82.</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 (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.</li> </ul>   | <ul style="list-style-type: none"> <li>Lodestar samples were analysed using Labwest's Ultrafine™ method, developed for geochemical exploration in sand covered terrane, the method is a partial digest and not optimized for LCT exploration.</li> <li>No geophysical instruments were used.</li> <li>Lodestar collected duplicate field samples every 50<sup>th</sup> sample with consistent repeatability, reference standards were not submitted.</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>Data has not been independently verified.</li> <li>Sample locations, sample descriptions and assay results were compiled in spreadsheets from which information has been extracted.</li> <li>No adjustments to assay data were undertaken.</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> </ul>   | <ul style="list-style-type: none"> <li>location data was recorded on hand held GPS with an estimated accuracy of 3-5m.</li> <li>Topographic variation is not significant at the current stage of exploration.</li> </ul>  |

| Criteria   | JORC Code explanation  | Commentary  |
|--|--|---|
|  | <ul style="list-style-type: none"> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>  |   |
| <i>Data spacing and distribution</i>                           | <ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>                        | <ul style="list-style-type: none"> <li>• Surface sampling only to identify anomalies.</li> <li>• Sample spacing is sufficient for first – pass regional geochemical sampling in areas that include residual soils and transported cover.</li> </ul> |
| <i>Orientation of data in relation to geological structure</i> | <ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>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.</i></li> </ul> | <ul style="list-style-type: none"> <li>• Any structural and geological controls are not known at the current stage of exploration.</li> </ul>   |
| <i>Sample security</i>   | <ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>   | <ul style="list-style-type: none"> <li>• Lodestar samples were carried by the Company's contractor in sealed bags and delivered to the laboratory.</li> </ul>   |
| <i>Audits or reviews</i>                                       | <ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>   | <ul style="list-style-type: none"> <li>• No independent audit or review has been carried out.</li> </ul>  |

## Section 2 Reporting of Exploration Results

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

| Criteria                                       | JORC Code explanation  | Commentary  |
|--|--|---|
| <i>Mineral tenement and land tenure status</i> | <ul style="list-style-type: none"> <li>• <i>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.</i></li> <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>• E15/1813 is currently under application by Brosnan, 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 the native title claims of the Maduwonnga (5087) and Marlinyu Ghoolie (5590) Peoples. There are no known impediments to the grant of the tenement, subject to existing rights under the Mining and Native Title Acts.</li> </ul> |
| <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 tenement includes geological mapping, surface sampling, aeromagnetic surveys and minor shallow drilling. Previous explorers include Anaconda Australia, Resolute Resources and Heron Resources (Atriplex). There is evidence of local costeaning and prospecting for which no record can be found,</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, shear-hosted</li> </ul>  |

| Criteria   | JORC Code explanation   | Commentary  |
|--|---|---|
|  |   | <p>lode gold and LCT pegmatities. The Coolgardie West greenstone comprises interlayered and metamorphosed amphibolite, dolerite, carbonaceous shale and ultramafics. The greenstone sequence trends north east and is wedged between the Bali and Calooli Granites.</p> |
| Drill hole Information   | <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 – elevation above sea level in metres) 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>• Not applicable, surface sampling only, summary statistics of selected elements provided in Table 1.</li> <li>• Regional soil geochemistry to identify anomalies for follow up exploration.</li> </ul>                          |
| Data aggregation methods   | <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 data aggregation, surface sampling only.</li> <li>• Not applicable.</li> <li>• Not applicable.</li> </ul>   |
| Relationship between mineralisation widths and intercept lengths | <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>• Surface sampling only.</li> </ul>  |
| Diagrams   | <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</li> </ul>  | <ul style="list-style-type: none"> <li>• Not applicable, contoured and thematic plans of geochemical data provided.</li> </ul>  |

| Criteria                                  | JORC Code explanation  | Commentary  |
|---|--|---|
|   | <i>drill hole collar locations and appropriate sectional views.</i>  |   |
| <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>• Statistical summary of selected elements provided in Table 1.</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 substantive data to report.</li> </ul>  |
| <i>Further work</i>                       | <ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (e.g., 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>• Surface exploration over the potential extension of the target pegmatite is planned. Gold targets will require drilling to test beneath transported cover..</li> </ul> |