

## NEW AREAS OF INTEREST DEFINED OVER HIGH-GRADE CHILE PROJECT

## **HIGHLIGHTS**

- Second site visit has defined new areas of interest across the 3,100 hectare Darwin iron oxide copper-gold (IOCG) project located located 75 km southwest of Copiapó, northern Chile
- > Multiple new historical workings have been defined and follow a trend over more than 1km
- The association between significant Cu, Au and Fe mineralisation with several magnetic anomalies identified in the eastern side of the project give confidence that the deeper IOCG targets are priority drill targets along with the workings that contain high-grade Cu and Au. First pass drill program scheduled for early calendar 2025
- Interpretation of historical magnetics is ongoing and will include analysis of regional data that is being acquired
- > As reported, Darwin hosts very high-grade gold, copper and iron samples from historical workings including:
  - Gold grades of 247g/t Au, 229g/t, 185 g/t Au and 166 g/t Au
  - Copper grades of 8.09% Cu, 7.78% Cu, 4.75% Cu, 3.43% Cu, 3.34% Cu and 3.14% Cu
  - Iron ore above 66% Fe in outcrops
- Lodestar's cash positioned strengthened with recent sale of listed equities with funds to be applied to early 2025 Darwin drill program

**Lodestar Minerals Limited ("LSR" or "the Company") (ASX:LSR)** is pleased to provide this exploration update for the high-grade, highly prospective 3,100 hectare 'Darwin' IOCG project located 75km from Copiapó, northern Chile. As reported, the Company has secured an agreement to acquire an option over the project from unlisted public company Aeramentum Resources Limited *(see ASX release 9 December 2024).* 

Lodestar's technical team has recently completed a second site visit of Darwin last week with new areas of interest defined, including multiple historical workings which follow a trend extending well over 1 kilometre and several magnetic anomalies identified in the East of the project where elements at surface suggest a potential IOCG target as well as a potential gold target (Figures 1-3).

PO Box 584 Fremantle, WA 6959 ABN: 32 127 026 528



The scale of the historical workings, where multiple high-grade gold and copper samples have been taken, are considerable and Lodestar will also assess the potential for small-scale mining opportunities following more extensive exploration. Priority drill targets are now being defined for a low-cost, high-impact drill program scheduled for early in calendar 2025 that will target the most obvious IOCG targets as well as high grade gold and copper mineralisation. High-grade mineralisation has been identified by rock chip sampling as outlined in Table 1 (as reported in ASX release 9 December 2024).

The Company also confirms it has strengthened its cash balance with ~\$180,000 of listed equites sold in the past week. These funds will be applied to planned drilling activities in early 2025.

**Lodestar Managing Director Ed Turner added**: "Darwin's prospectivity has expanded considerably following this second site visit. We have defined more extensive targets, multiple additional historical workings that we believe still have considerable potential for future production as well as some excellent prospects for IOCG discoveries. The presence of copper, gold and iron samples across the project area clearly indicates that Darwin has compelling exploration and development upside and we plan to confirm this will the drill bit early in the new year. Darwin is a gamechanger for Lodestar shareholders."

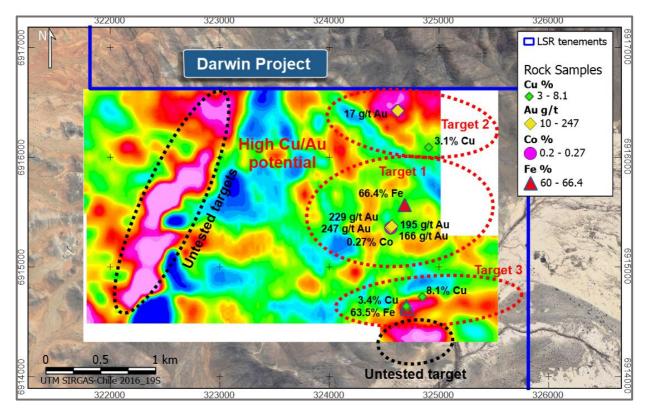


Figure 1: Rock chip assays on top of magnetic surveys (tmirtp hvd) showing a north-south mineralised trend extending over 1km.





Figure 2: Historic workings within a +1km trend not previously identified



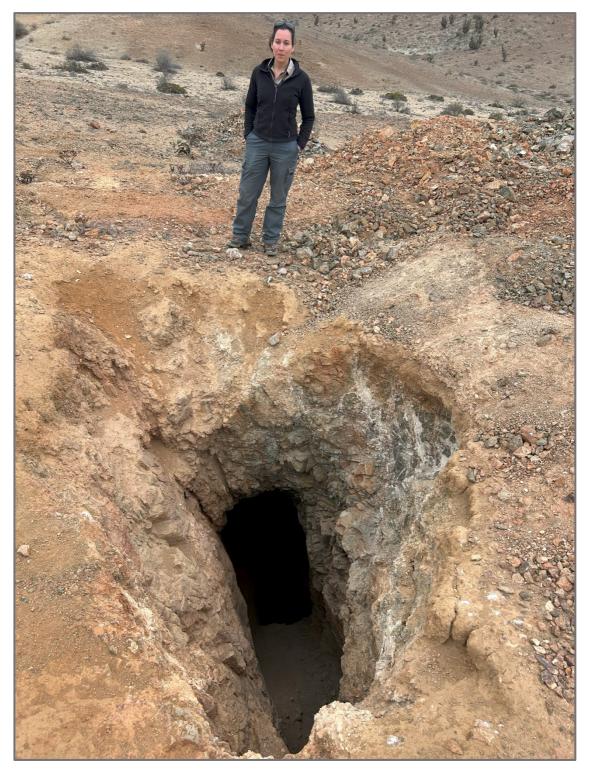


Figure 3: Historic workings within a +1km trend not previously identified





Figure 4: Historic workings within a +1km trend that has rock chip assays of 3.4% Cu and 63.4% Fe above a magnetic anomaly.

Aeromagnetic surveys and anomalies



Two drone aeromagnetic surveys have been flown over the Darwin Project. The surveys were carried out between the months of March and May 2023 and consisted with recording earth magnetic field anomalies using unmanned drones, initially flying E-W lines spaced at 100m and control lines N-S direction every 1000 m, followed by one detailed area with E-W lines spaced at 25m and control lines N-S direction every 240m (Figure 5).

The surveys delineated numerous magnetic anomalies, some of which are coincidental with significant Au, Cu and Fe rock chip assays (Figure 1). Many of the magnetic anomalies not previously investigated on the ground for potential mineralisation were visited during this reported trip. Interpretation of their potential for hosting IOCG deposits is in progress and may delineate additional drill targets for testing in 2025.

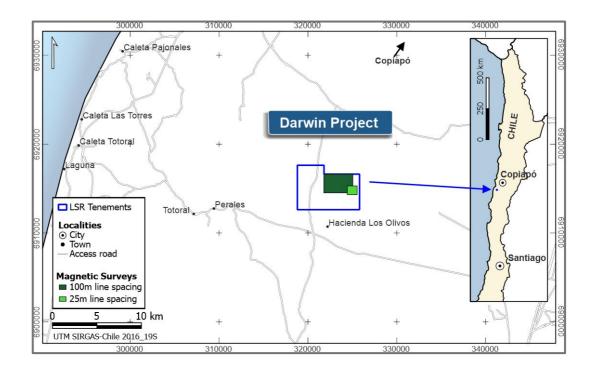


Image 5: Location of Darwin Project and location of the magnetic surveys



Sample						
No	Northing	Easting	Au	Cu	Fe	Co
			ppm	%	%	%
1	6,914,641	324,703	0.31	2.51	60.73	0.01
2	6,914,631	324,710	0.34	0.98	54.76	0.01
3	6,914,641	324,703	0.79	1.69	48.46	0.01
4	6,914,620	324,711	5.43	1.18	56.17	0.00
5	6,914,728	324,849	1.58	8.09	13.37	0.00
6	6,914,631	324,710	1.31	3.43	12.27	0.00
7	6,914,641	324,703	1.75	2.66	6.60	0.00
8	6,914,728	324,849	0.38	2.61	9.29	0.00
9	6,914,620	324,711	1.69	1.90	24.19	0.00
10	6,914,620	324,711	0.51	0.44	63.46	0.00
11	6,915,355	324,561	247.00	0.01	23.41	0.27
12	6,916,424	324,625	17.10	0.11	19.10	0.18
13	6,916,479	324,827	3.66	0.07	14.65	0.14
14	6,915,374	324,574	166.00	0.01	33.86	0.12
15	6,915,554	324,894	2.94	0.03	21.43	0.11
16	6,916,424	324,625	1.89	0.00	16.29	0.08
17	6,916,168	324,877	0.59	0.00	10.32	0.08
18	6,916,479	324,827	0.33	0.00	11.21	0.06
19	6,915,360	324,561	185.00	0.00	22.45	0.06
20	6,915,565	324,687	0.02	0.02	66.40	0.05
21	6,915,360	324,561	80.80	0.01	20.68	0.04
22	6,915,565	324,884	0.14	0.01	34.32	0.04
23	6,915,565	324,884	2.46	0.00	33.24	0.03
24	6,916,090	324,906	0.65	3.05	9.51	0.00
25	6,916,090	324,906	0.13	0.84	9.46	0.00
26	6,915,355	324,561	0.28	0.12	7.17	0.00
27	6,915,410	324,534	0.21	0.02	3.00	0.00
28	6,915,410	324,534	1.71	0.00	4.22	0.00
29	6,915,663	324,889	0.31	0.00	45.09	0.00
30	6,915,374	324,574	229.00	0.01	19.06	0.01
31	6,915,567	324,889	0.17	0.00	18.17	0.00
32	6,915,367	324,563	2.22	0.00	2.98	0.01
33	6,915,370	324,570	194.67	0.01	28.90	0.01
34	6,916,500	325,077	0.47	2.78	14.53	0.00
35	6,916,501	325,079	4.25	2.50	22.69	0.00

## TABLE 1: Rock chip assay results

Table 1: Darwin rock chip assay results



### **About Lodestar**

Lodestar Minerals is an active base metal and gold explorer. Lodestar's projects, aside from the Darwin Project in Chile, comprise the 100% owned Earaheedy, Ned's Creek and Coolgardie West projects in Western Australia (Figure 6).

Lodestar also has exposure to lithium via its 27.5M performance rights in Future Battery Minerals (ASX:FBM) who own the Kangaroo Hills and Miriam lithium Projects in Western Australia.

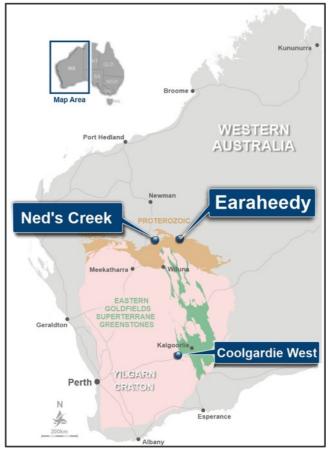


Figure 6: Lodestar's WA Project locations

This announcement has been authorised by the Board of Directors of the Company.

-ENDS-



#### **Contacts**

### **Ed Turner**

Managing Director info@lodestarminerals.com.au +61 8 9435 3200

Ben Jarvis, Six Degrees Investor Relations: 0413 150 448

#### **Competent Person Statement**

The information in this report that relates to Exploration Results is based on information compiled by Ed Turner, 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 Turner consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

This announcement is 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> <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. 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> <li>Rock chip samples were taken from historic workings and outcrops where the Geologists believed there was a chance of mineralisation.</li> <li>Systematic sampling at regular intervals was not possible. The purpose was to check for any possible economic grades when there was sufficient gossanous material available at surface or within the workings.</li> <li>Each sample was approximately 1kg in weight which is sufficient to get a meaningful assay after crushing and pulverizing to produce a 50g charge. For samples 1-30 in Table 1 analysis was carried out by Spectrolab Laboratory in Geraldton, Australia for all analytes (excluding Au) via XRF fused bead technique Method PR0034. Loss on Ignition is via gravimetric technique Method Number PR0007. Gold Analysis (Au) was carried out by Ultratrace and Aurum Laboratories on samples prepared by Spectrolab and analysed via Fire Assay (50g) and ICP-OES or AAS finish. Copper and cobalt were originally assayed as CuO% and CoO% then converted to Cu% and Co% with the conversion formula CuO% = Cu% x 1.2518 and CoO% = Co% x 1.2715. Samples 31-35 were assayed at Intertek in Perth, Australia using fire assay for gold. Cu, Co and Fe underwent multiacid digest and analysed by Inductively Coupled Plasma Optical (Atomic) Emission Spectrometry.</li> </ul>
Drilling techniques	<ul> <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> <li>No drilling results being reported.</li> </ul>
Drill sample recovery	<ul> <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</li> </ul>	<ul> <li>N/A</li> <li>N/A</li> <li>N/A</li> </ul>



Criteria	JORC Code explanation	Commentary
Logging	<ul> <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> <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</li> </ul>	<ul> <li>N/A</li> <li>N/A</li> <li>N/A</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>the relevant intersections logged.</li> <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</li> </ul>	<ul> <li>N/A</li> <li>N/A</li> <li>Rock chip sampling using a geological hammer to collect approximately 1kg samples is considered industry standard although it is qualitative rather than quantitative sampling.</li> <li>The lack of outcrop and vein material in the workings means this sampling stage cannot cover the entire mineralized structures in the same way as drilling can.</li> <li>Repeat samples (duplicates) were taken at several sites to confirm the high-grade nature of the mineralisation</li> <li>1kg rock chip samples are sufficient size for the style of mineralization.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>sampled.</li> <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> <li>The assaying techniques used are appropriate for the metals being assayed. These are considered partial techniques.</li> <li>N/A.</li> <li>Numerous duplicate samples were taken from high-grade Au and Cu locations and submitted to an independent credited laboratory to verify the high grades.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic)</li> </ul>	<ul> <li>N/A.</li> <li>No drilling is reported.</li> <li>Field and laboratory data are collected electronically and entered into an excel spreadsheet which is then stored into a database.</li> <li>Historical assays for Cu and Co were</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul><li>protocols.</li><li>Discuss any adjustment to assay data.</li></ul>	reported as CuO% and CoO%. Using the formulas CuO% = Cu% x 1.2518 and CoO% = Co% x 1.2715 they were normalized to Cu% and Co%.
Location of data points	<ul> <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> <li>A hand-held GPS has been used to locate the rock chip samples with estimated 3-5m accuracy.</li> <li>Sample hole coordinates were recorded in WGS84 UTM 19South.</li> <li>The topography within prospect areas has been derived from GPS RL (2-10 m accuracy).</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Rock chip samples were taken at irregular distances.</li> <li>Rock chip samples are not sufficient for resource estimation.</li> <li>No compositing was done.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>There are insufficient rock chip samples at this stage to achieve unbiased sampling across the mineralized structures.</li> <li>N/A.</li> </ul>
Sample security	• The measures taken to ensure sample security.	<ul> <li>All samples taken by Lodestar were transported in sealed bags under supervision prior and delivered directly by Lodestar personel to the laboratory.</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	• No audit or reviews carried out.



## **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> <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</li> </ul>	• All four Exploitation Licences and eight Exploration Licences are owned by Coastal Metal Chile or subsidiary companies. Lodestar has an agreement to take on Aeramentum Resources option agreement with Coastal Metals Chile over these Darwin Project tenements.
	impediments to obtaining a licence to operate in the area.	
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	<ul> <li>There is no record of previous exploration within the project area.</li> </ul>
Geology	• Deposit type, geological setting and style of mineralisation.	• The Darwin Project is located in the Iron Belt of Northern Chile, specifically in the Coastal Range of the Atacama Region located in the Atacama Fault System. It is located in an old mining district with numerous Fe, Fe-Cu-Au, Au and Mn deposits, within the Cretaceous iron belt characterized by a large presence of iron oxide-copper-gold (Fe-Cu-Au) or iron oxide- copper-gold (IOCG) and iron oxide-apatite (IOA) deposits.
Drill hole information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level - 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>	• N/A.



Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul> <li>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.</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. The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>There were no weighting or upper/lower cuts applied.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.         <ul> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> </ul> </li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>Samples were taken within the mineralised structures in the workings and at surface. True widths and orientations are not know at this time.</li> </ul>
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	<ul> <li>Plans of sample locations are included in the body of the text.</li> </ul>
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	<ul> <li>All assays are included in a table within the text.</li> </ul>
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater,	<ul> <li>Two aeromagnetic surveys were carried out between the months of March and May 2023 and consisted with recording earth magnetic field anomalies using unmanned drones, initially flying E-W lines spaced at 100m and control lines N-S direction every 1000 m, followed by one detailed area with E-W lines spaced at 25m and control lines N-S direction every 240m</li> </ul>



Criteria	JORC Code explanation	Commentary
	geotechnical and rock characteristics;	
	potential deleterious or contaminating	
	substances.	
Further Work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).	• Further rock chip sampling is planned over magnetic anomalies not yet sampled. Geological mapping is also planned prior to the planning of first pass RC and diamond
	• Diagrams clearly highlighting the areas of	core drilling.
	possible extensions, including the main	
	geological interpretations and future	
	drilling areas, provided this information is	
	not commercially sensitive.	