ASX ANNOUNCEMENT

30 January 2024

EARAHEEDY PROJECT EXPLORATION UPDATE

HIGHLIGHTS

- **Assays received from maiden diamond core holes confirm orientation of the Au and Cu mineralisation**
- **Assays received for 4,650 geochemical soil samples**
- **Review of all drilling, geochemical and geophysical data underway**

Management Commentary:

Lodestar Managing Director Ed Turner commented: *"The maiden three-hole diamond core drilling programme at our flagship Earaheedy Project has provided valuable geological and structural information for the first time. This will significantly aid with planning of future exploration programmes.*

In addition, we have received multi-element assays from 4,650 geochemical soil samples and a review and interpretation of these results is underway. Outcomes from this review will largely determine the planning of 2024 exploration programmes."

Lodestar Minerals Limited ("**LSR**" or "**the Company**") (**ASX:LSR**) is pleased to provide an update on the results from our maiden diamond core drilling programme as well as multiple geochemical soil sampling programmes at the Earaheedy Project (the "**Project**").

We have now received all assays from the maiden diamond core drilling programme as well as from numerous geochemical soil sampling programmes completed in the second half of 2023. These assays are now being compiled and interpreted. As these comprise a multi-element suite of 60 elements the interpretation will take some time but we expect to be able to report on our findings in the next few weeks. Our conclusions from this review will largely determine our planning of follow up exploration programmes for 2024.

Diamond Core Drilling

The results from the drilling have confirmed the steep sub-vertical dip of the mineralisation and the strike direction parallel to the regional stratigraphy. The drilling was designed to follow up significant gold and copper intersections in first pass Aircore and RC drilling as reported on 17 July 2023, 2 August 2023 and 3 November 2023 (Figure 1). Three diamond core holes were completed for 793.40m and one RC hole was completed for 300m.

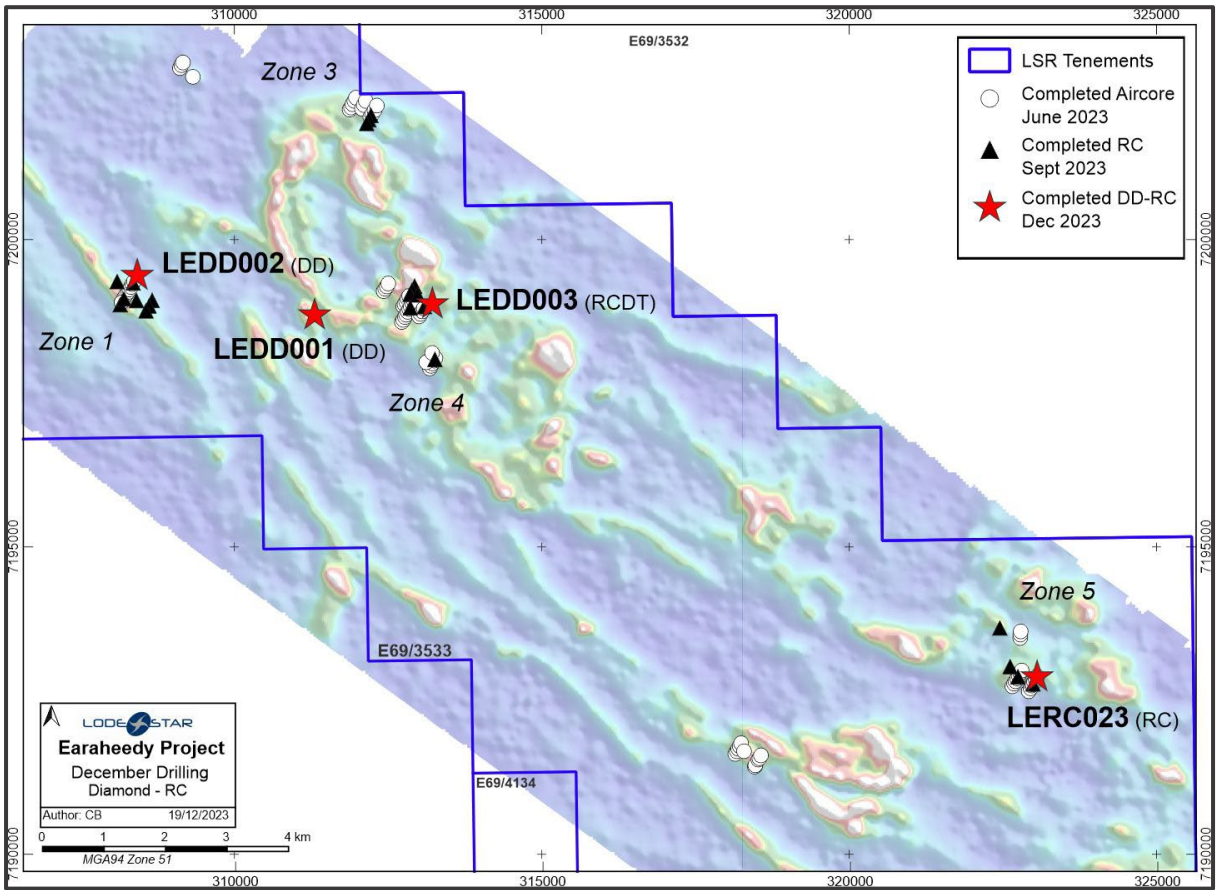

Figure 1: Drill hole location plan in relation to LSR Tenure on EM background.

Although the tenor of the mineralised intervals in the core was lower than in the preceding aircore and RC drillholes we have gained valuable knowledge as to the nature of the mineralising event and the structural controls associated with it (Figure 2). This will benefit planning of future drill programmes in the area. The best Au intersection was 1m @ 0.34 g/t Au from 249.6m in LEDD002. Significant Cu intersections are included in Table 1.

Table 1: Significant Cu intersections

Hole ID	From	To	Interval	Cu %	Description
LEDD001	94.90	110.50	15.60	0.06	15.6m @ 0.06 % Cu from 94.9m
Inc	106.20	107.40	1.20	0.17	1.2m @ 0.17 % Cu from 106.2m
LEDD002	309.00	311.34	2.34	0.06	2.34m @ 0.06 % Cu from 309m
LEDD002	323.87	325.65	1.78	0.09	1.78m @ 0.09 % Cu from 323.87m
LEDD002	327.26	334.00	6.74	0.05	6.74m @ 0.05 % Cu from 327.26m
LEDD002	364.00	366.00	2.00	0.06	2m @ 0.06 % Cu from 364m

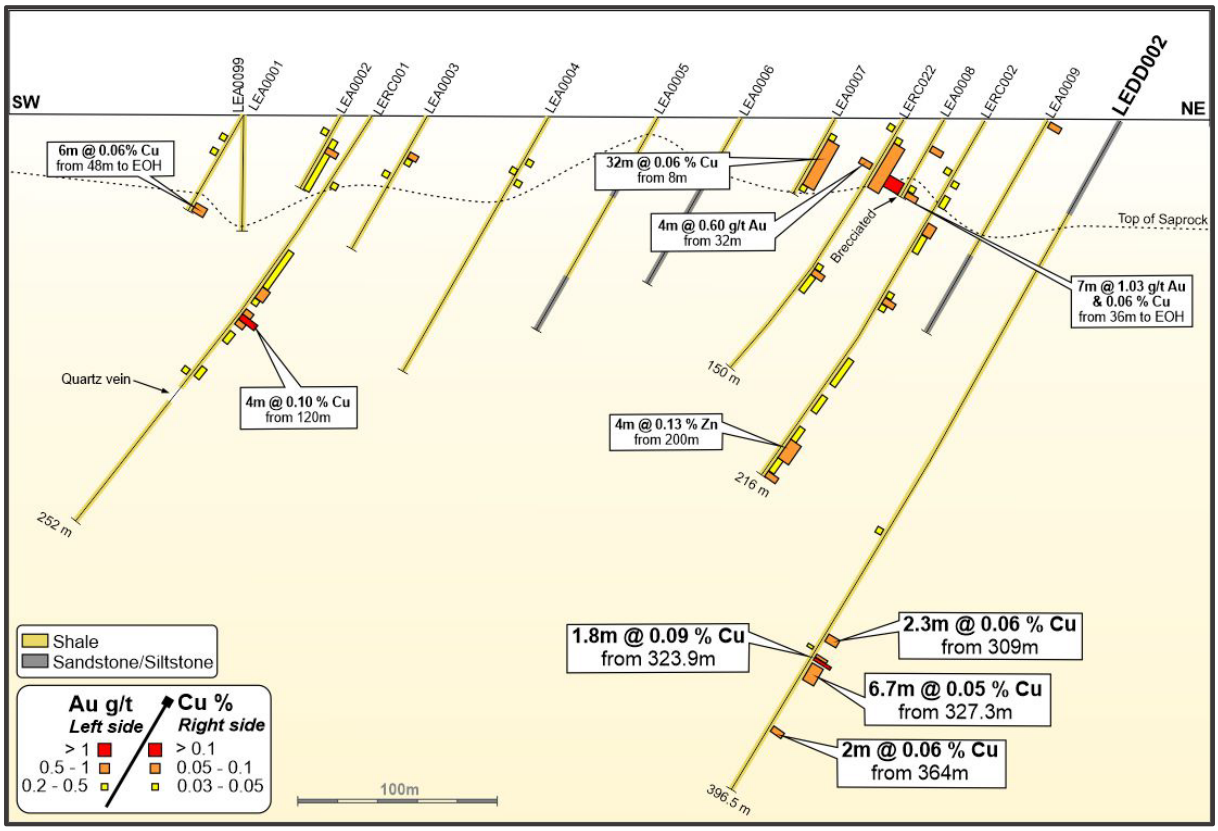

Figure 2: Drill cross section showing LEDD002 results and earlier aircore and RC drill intersections

LEDD001 and LEDD002 presented strong deformation and folding of the sedimentary package, mainly constituted of black shales and fine to medium grained sandstone. Multiple generations of pyrite and veining were observed. LEDD003 presented a less deformed sedimentary package, with little veining and hydrothermal origin pyrite.

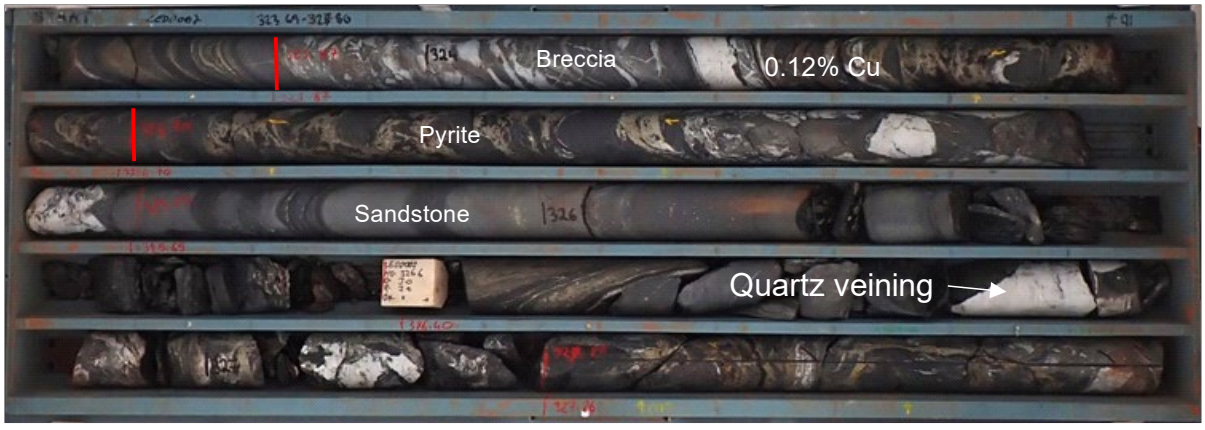

Figure 3: Core tray of LEDD002 showing the strong deformation of the stratigraphy.

As presented on the core tray above, the pyrite and the veins are highly deformed and brecciated indicating the high level of deformation throughout the area. These deformation as well as the relationship between the mineralisation and the sedimentary package could not have been observed with RC or Aircore drilling, due to the size of the chips. Pyrite is often

associated with black shale but we have been able to observe multiple generations of pyrite of which some are linked to the sedimentary deposition and some of hydrothermal origin which could be linked to copper and gold mineralisation.

A petrography study will be completed to determine the different generation of pyrite, allowing us to have a better understanding of the mineralisation events.

Geochemical Soil Sampling

All assays have been received from multiple soil sampling programmes completed in late 2023. A total of 4,650 samples were collected over numerous areas that were previously untested (Figure 4). These programmes cover a large percentage of the 1,400 square km Project area however large areas still remain to be sampled.

A thorough review of the results is underway and follow up programmes will be planned following the interpretation of the results.

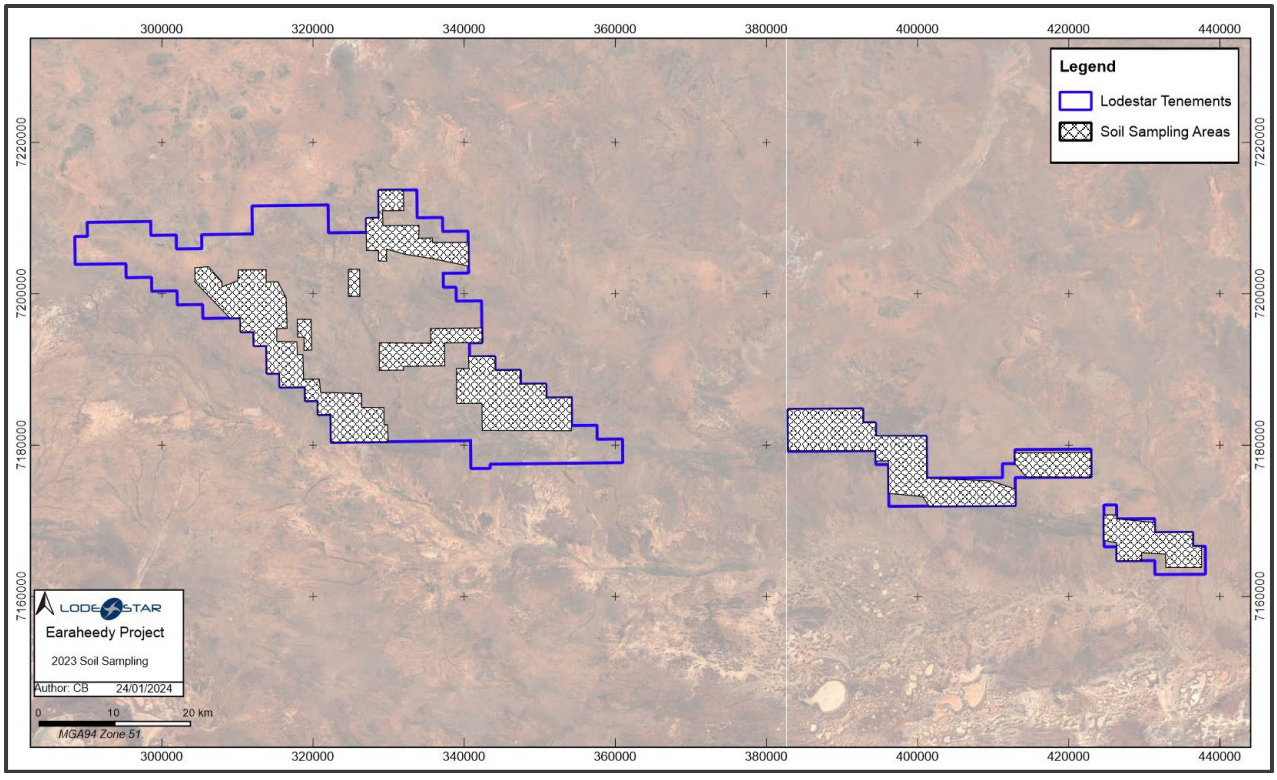

Figure 4: Geochemical soil sampling coverage by Lodestar in 2023

EXPLORATION STRATEGY: NEXT STEPS

A thorough review of all drilling, geochemical and geophysical data is underway and results and conclusions from this will determine exploration programmes for the first half of 2024.

ABOUT LODESTAR

Lodestar Minerals is an active Western Australian base metal and gold explorer. Lodestar's projects comprise the 100% owned Earaheedy, Ned's Creek and Coolgardie West projects (Figure 5).

Lodestar also has **exposure to lithium via its strategic 3.6% shareholding in Future Battery Minerals (ASX:FBM)** who own the Kangaroo Hills lithium Project in Western Australia and the Nevada Lithium Project in the US.

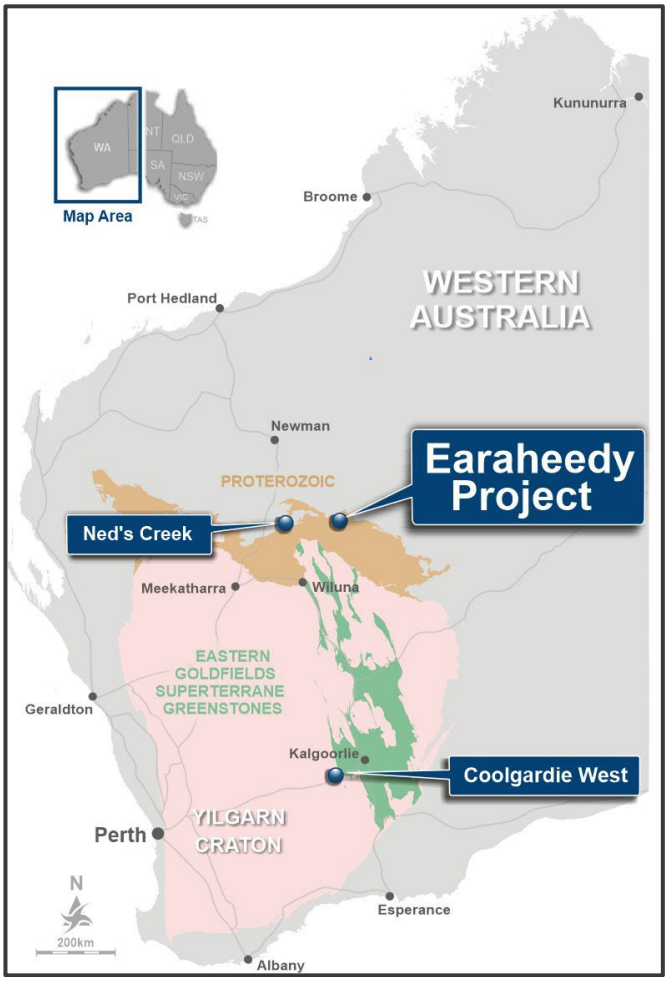

Figure 5: Lodestar's Project locations

The Earaheedy Project (Figure 6) is a major strategic land holding comprising over 1,400 sqkm in the emerging Earaheedy Province. The Project is located on the northern margin of the prospective Earaheedy Basin and Lodestar now owns approximately 100km of strike length of the Yelma-Frere unconformity which hosts Rumble Resource's Zn-Pb Ag Chinook Deposit on the Earaheedy Basin's southern margin. The Chinook MRE is **94Mt @ 3.1% Zn+Pb** and **4.1 g/t Ag**.

The Project also includes Cu-Au targets within a similar geological setting to the DeGrussa Copper Deposit which is located in the neighbouring Bryah Basin. Limited historic drilling within Lodestar's tenements has intercepted high grade copper including **2m @ 4.65% Cu and 3m @ 1.97% Cu**.

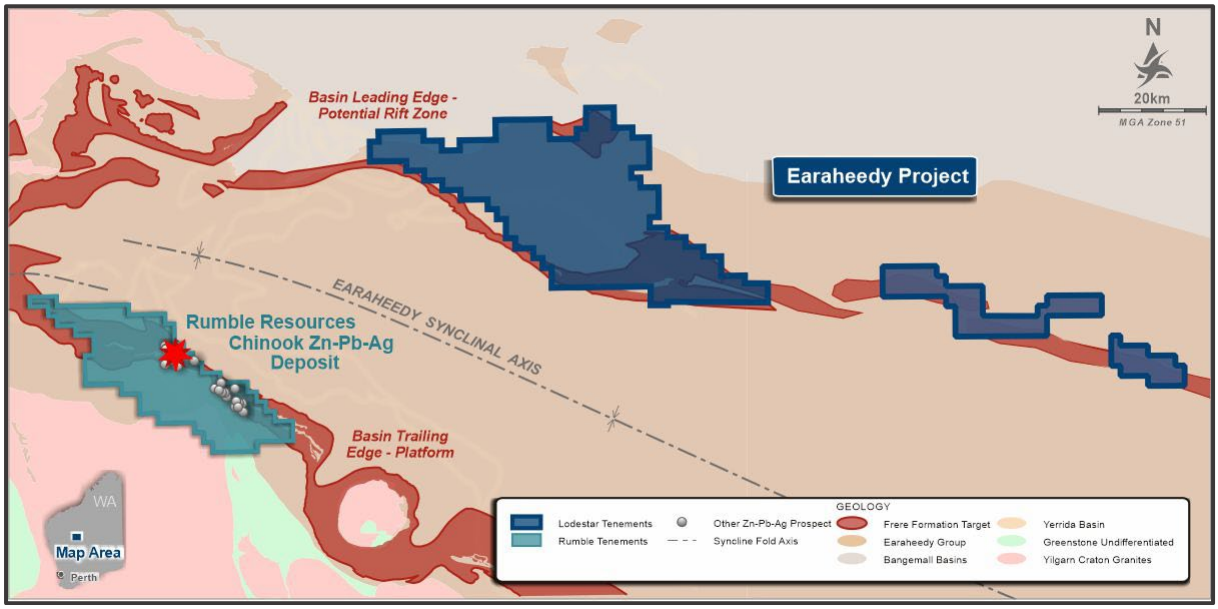

Figure 6: Lodestar's Earaheedy Project tenements

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

-ENDS-

Contacts

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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

Sections 1 & 2 Sampling Techniques and Data & Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *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.*	• Mineralised intervals were drilled with HQ diamond core and sampled by cutting the core with an automatic diamond saw and the half core submitted for assay. • Sample intervals vary depending on geological contacts and are generally between 0.3m and 1.2m, averaging 1.0m in length. • Prior to cutting, the core was marked up by a geologist, orienting the core to ensure the relative orientation of consecutive pieces of core, always taking the left-hand half of the core looking down the hole. • All core photographed for reference and sample intervals and can be compared with assays. • The RC hole and precollar were sampled on 4m composite intervals using a scoop to collar ~1kg of each meter and putting them into 1 calico bag. Single split meters were collected and left on site for future single meter sampling. • The samples were submitted to Bureau Veritas, Perth, laboratory for drying, crushing, and pulverising to produce a 40g charge for fire assay of gold and multi-elements by multi-acid digest.
Drilling techniques	• *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).*	• HQ core intervals were drilled either from surface or RC drilling was used as pre-collars. NQ core was drilling from the depth the core had sufficient competency. • HQ and NQ core holes were systematically oriented using either a Reflex ACT core orientation system. The bottom of hole was marked on the core as a reference for structural measurements.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	• All core was measured for recovery by LSR staff and recovery % recorded. Overall recovery was within acceptable limits considering the nature of the rock. • Photographic evidence of all core supports this. • Drilling clay was used during the drilling to keep the recovery of the core close to 100%. The recovery were affected in the weathered zone on diamond holes drilled from surface, so decision was made to use RC precollars to drill the weathered zone

Criteria	JORC Code explanation	Commentary
		and have competent core at depth.
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Logging is qualitative in nature. • All DD and RC holes are geologically logged every meters in sufficient details for mineral exploration. • Logging included lithology, texture, veining, grain size, structure, alteration, RQD, alteration and mineralisation. • All core was photographed both wet and dry.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• All cut core was initially sampled as half core for assaying. • All core was appropriately oriented and marked up for sampling by LSR Geologists prior to cutting. • No sub sampling • No duplicate was taken from the core. • Sample sizes are considered to be appropriate to the mineralisation type. • Certified reference standards (1:20) and laboratory repeats are used to monitor satisfactory reproducibility and accuracy of sampling and assays.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *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.*	• Fire Assay was used for gold analysis. Multi-elements, Al, Ca, Cr, Fe, K, Mg, Mn, Ti, V, Ag, As, Ba, Bi, Co, Cu, Mo, Ni, Pb, Sb, Se, U, W & Zn were analysed by mixed Acid Digest - Full ICP-AES & ICP-MS Scan. • No geophysical tools were used to determine any element concentrations. • Reference standards and blanks were inserted at 1:20 throughout the drill program for DD. Results indicate satisfactory accuracy and precision was achieved.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• All significant interception were verified against the geological logging. • Twinned holes were not drilled in this program. • Field and laboratory data are collected electronically and entered into AcQuire Arena which is then stored into an access database. • No adjustment to assay data.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down- hole*	• A hand-held GPS has been used to locate the drillhole collars with estimated 3-5m

Criteria	JORC Code explanation	Commentary
	surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	accuracy. • Drill hole coordinates were recorded in MGA94 Zone 51 grid. • The topography within prospect areas has been derived from GPS RL (2-10 m accuracy).
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• Diamond drilling were single holes per target following AC and RC Drilling to get an understanding of the structure and mineralisation. • This drilling is not used for resource estimation.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	• At Earaheedy, the main geological stratigraphy is steeply dipping to the NNE with some variation within the geological sequence. • At Earaheedy, the geology is not known enough yet to extrapolate the thickness of the intercepts.
Sample security	• *The measures taken to ensure sample security.*	• All samples were stored at Lodestar's exploration camp then transported to Dynamics G-EX Perth for core cutting by PXD Drilling. Core was then cut and sampled by LSR employees prior to dispatch to Bureau Veritas Laboratories.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audit or reviews carried out.
Mineral tenement and land tenure status	• *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.* • *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.*	• The drilling in Earaheedy is located on E69/3533 owned 100% by Lodestar Minerals Ltd. The tenements are within the Birriliburu People (MNR) and the Matuwa Piarku Aboriginal Corporation (TMPAC) Native Titles.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• On Earaheedy tenements, several episodes of limited exploration for gold, diamonds and base metals have been carried out in the area, including surface geochemistry, aeromagnetics, EM surveys, vacuum, RAB, RC and diamond drilling. Exploration of the southern part of the tenements completed by Sons of Gwalia, Aztec Exploration and MIM defined and tested the main outcropping targets, identifying significant copper mineralisation in drilling at the Main

Criteria	JORC Code explanation	Commentary
		Gossan Prospect. Follow up drilling by Empire Resources (up to 2011) has in the main targeted the outcropping, siliceous ironstones representing sulphide-bearing strata within complexly deformed metasediments and discrete magnetic anomalies within the regional aeromagnetic data. Large areas under shallow aeolian sand cover were unexplored.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Earaheedy tenements are located on the northeastern margin of the Earaheedy Basin, a NW-trending asymmetric east-plunging synclinal basin 250km long and 150km wide. The northern margin has been locally strongly deformed by folding and faulting and was formerly known as the Stanley Fold Belt. Early explorers assigned the sedimentary sequence in the Earaheedy Project to the "Troy Creek Beds" that were thought to pre-date the Earaheedy Basin. The sediments have since been assigned to the Yelma Formation. MIM state that conformable dolerite sills intrude the sequence in the area of the North Chert prospect, raising the possibility of syn-sedimentary volcanic activity on the northern margin. Bunting (1986) regards the northern margin as tectonically active, the presence of mafic intrusives and ultramafic rocks indicates potential for a rifted margin and Besshi-style VMS mineralisation with SEDEX and epigenetic structurally controlled mineralisation styles also possible.
Drill hole information	• *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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level - elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *hole length.* • *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.*	• See tables in the main text.
Data aggregation	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or*	• Minimum cut off 0.2g/t Au, with dilution of maximum 8m @ 0.1g/t Au.

Criteria	JORC Code explanation	Commentary
methods	*minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *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.*	• Minimum cut off for Copper is 0.05% Cu with a maximum dilution of 2m below 0.05% Cu.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* o *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *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').*	• Drilling at Earaheedy is -60 towards 210 which is across the regional stratigraphy dip. One hole was drilled in -60 towards 50 due to heritage clearance.
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.***	• For illustration refer to Figures for interpreted geological drillhole cross section.
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.***	• All assays greater than 0.2g/t gold and greater than 0.05% Cu copper are reported.
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, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• All information have been reported within the text of the announcement, no other information to report.
Further Work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• At Earaheedy, soil sampling results are being analyzed to define new targets areas across all tenements for future exploration.