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ASX Limited.

Dear Sirs,

## **Lodestar outlines multi-commodity potential of Peak Hill-Doolgunna Project**

### **HIGHLIGHTS**

- **Lodestar set to complete acquisition of Peak Hill-Doolgunna Project (once Shareholder approval received in late February.)**
- **The Project will provide Lodestar with a large tenement holding in an emerging major metallogenic province with historic gold, base metal and uranium exploration targets for immediate evaluation.**
- **Assets strategically located:**
  - between Plutonic (8Moz gold) and Peak Hill (1Moz gold) camps,
  - north west and abutting **Sandfire Resource's** DeGrussa Copper-Gold discovery.
- **Acquisition includes north east extension of the Jenkin Fault Zone** - associated with the DeGrussa deposit and Johnsons Cairn (Sipa) Copper-Gold anomaly
- **Potential for copper gold intrusion-related hydrothermal style mineralisation at MacDonald Well copper occurrence and the K42 magnetic feature, where multi-element geochemical anomalies have been identified.**
- **Historic diamond exploration drilling reported pyrite, other sulphides (not identified) and copper carbonate in heavy mineral concentrate – not assayed for base or precious metals. PacMag's Northling copper prospect occurs on adjacent tenement.**

Lodestar Minerals Limited (ASX: LSR) ("Lodestar" or "the Company") recently announced its proposed acquisition the Peak Hill-Doolgunna Project in the Doolgunna district and is pleased to provide an overview of regional exploration targets.

The project is prospective for a number of exploration targets including Archaean to Proterozoic mesothermal gold deposits, Proterozoic VMS and syntectonic copper-gold deposits, Proterozoic base metal deposits (SEDEX and MVT) and Cainozoic calcrete-hosted uranium.

Exploration of this underexplored and geologically complex region has accelerated following the discovery of the DeGrussa Cu-Au sulphide deposit by Sandfire Resources in 2009. Airborne (VTEM) and surface electro-magnetic surveys (EM) have been applied successfully, with numerous new conductors identified on adjacent tenements.

Following shareholder approval and completion of the acquisition, Lodestar will conduct a detailed review of available geophysical data and integrate this with historic geochemical and drill hole information, to assist in defining exploration targets.

The project area is divided into three geographic blocks that overlie distinct geological and magnetic domains (Figures 1 and 2 overleaf).

## WESTERN BLOCK - Gold, Copper and Uranium anomalies

(E52/2418, E52/2431, E52/2430, E52/2403 and E52/2512)

### GOLD

The Western Block abuts the northern boundary of Sandfire Resource's Doolgunna project tenements that include the recent high grade DeGrussa/Conductor 1 Cu-Au discovery. The southern Western Block tenements overlie granite - greenstone terrane concealed by transported cover and are strategically situated on a major north-east trending structural corridor between the Plutonic (8Moz Au) and Peak Hill (1Moz Au) gold camps.

Historic exploration has identified significant Au in soil anomalies of up to 80ppb. Follow up RAB drilling on traverses spaced at 1500m, targeting magnetic and Au anomalies, has failed to explain the anomalies; maximum values obtained from drilling are 0.12g/t Au from a 4m composite sample obtained from 44m in the last hole on a traverse.

This intersection has not received further testing (Figure 3). The unresolved Au in soil anomalies, transported cover, limited geochemical dispersion and regional scale of the drilling suggest that significant potential remains in this region of major gold endowment.

### COPPER

Outcropping gossanous quartz veining associated with a strongly magnetic feature two kilometres in length, has reported up to 876ppm Cu in rock chip sampling.

Follow up RAB drilling related to Au exploration intersected maximum values of 370ppm Cu and 500ppm Cu in end of hole samples on adjacent drill traverses 1500m apart (Figure 3).

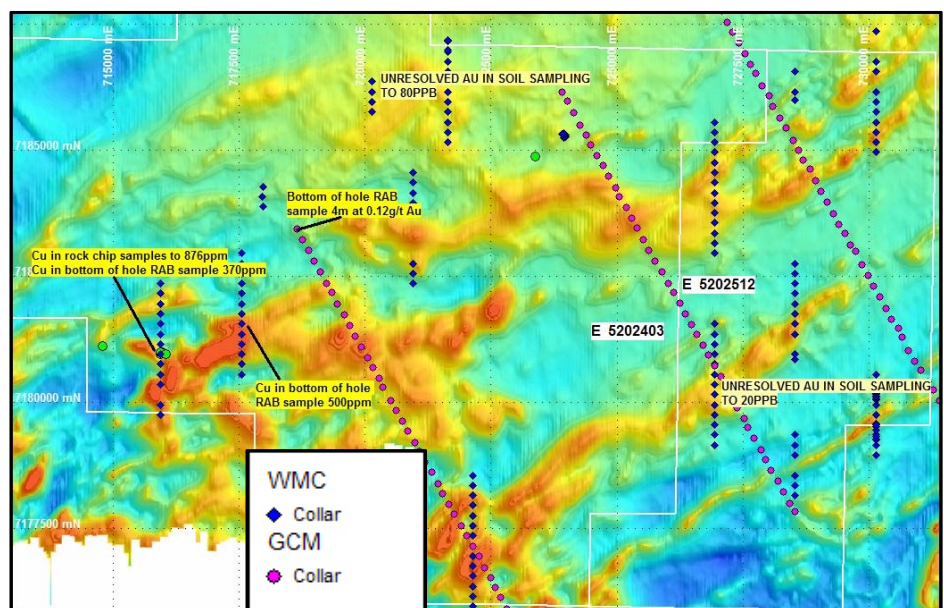


Figure 1 RAB drilling and soil geochemical Au and Cu anomalies on TMI aeromagnetics (GDA94 Zone 50)

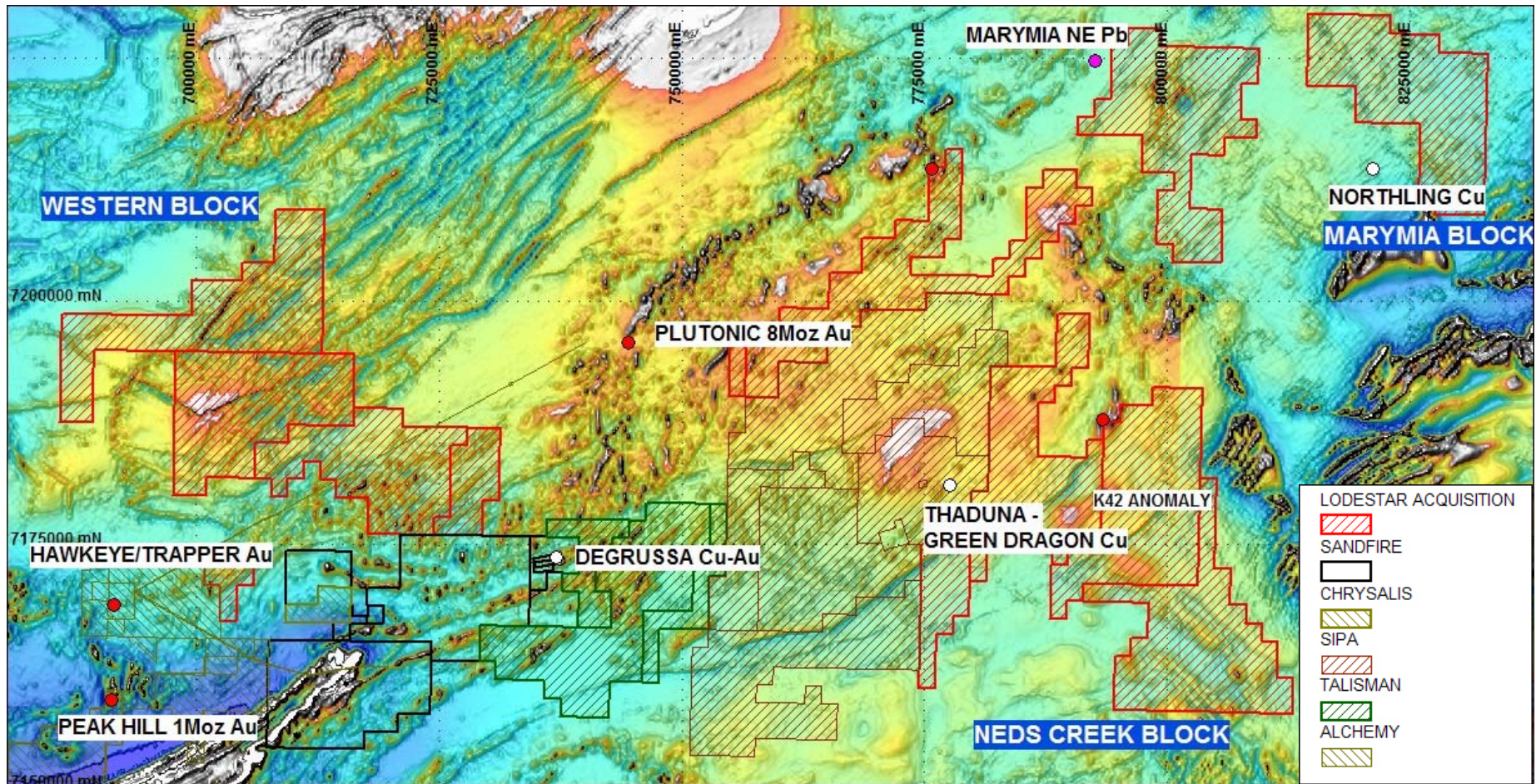
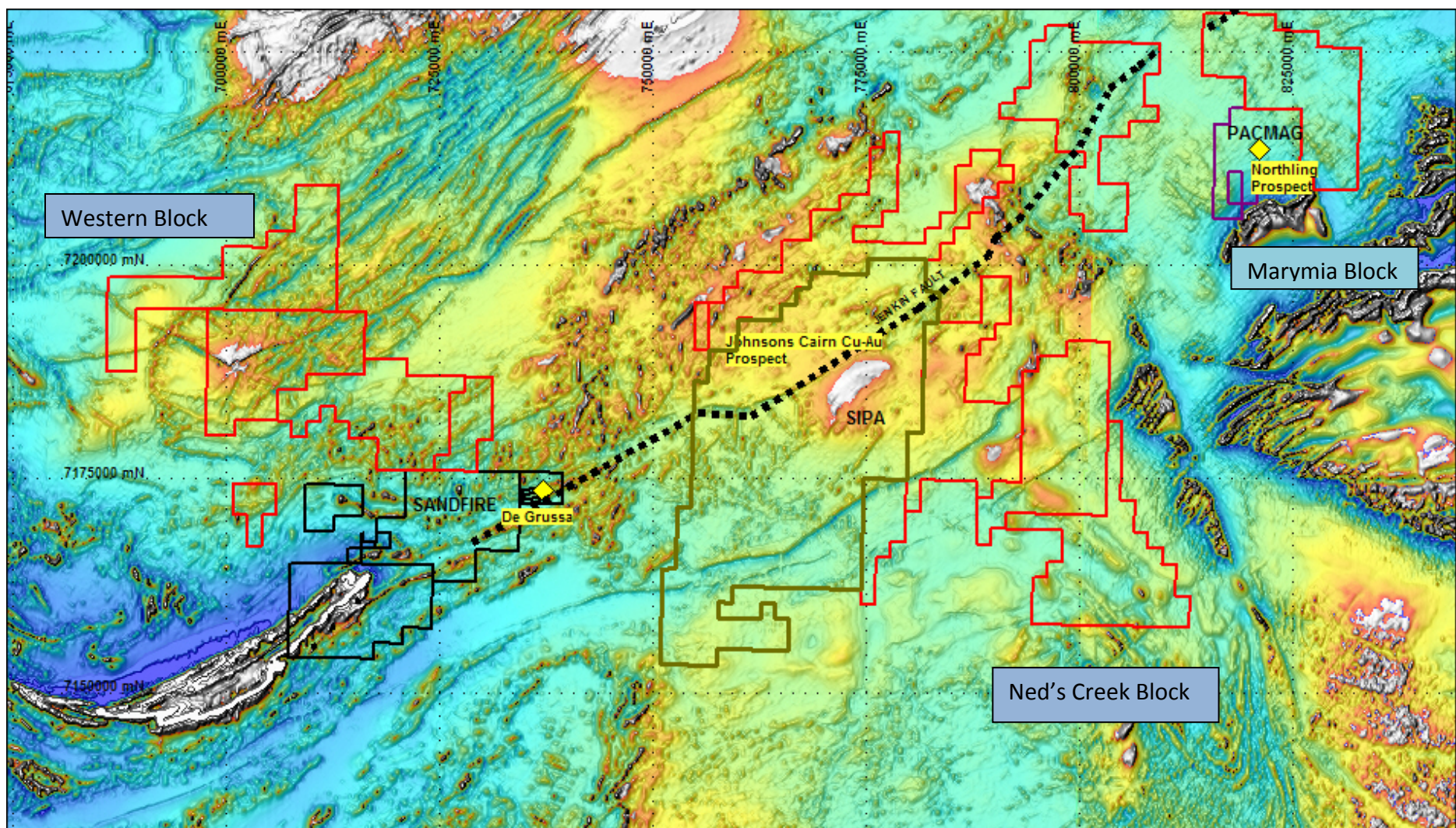


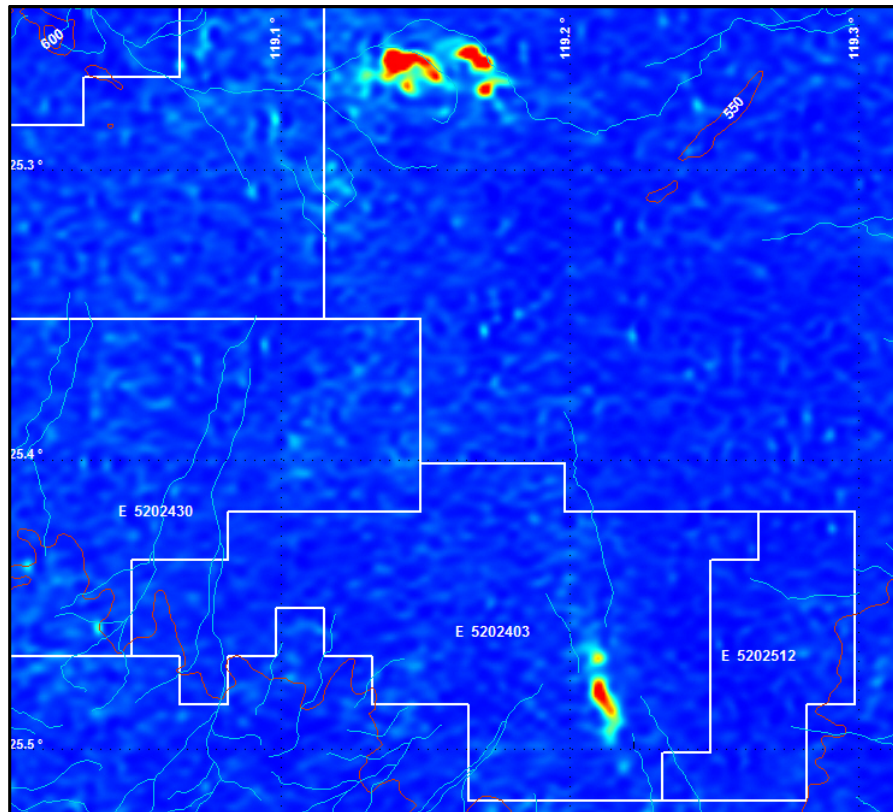
Figure 2 Regional tenure and major deposits – Peak Hill to Marymia area.  
Magnetic data ©Commonwealth of Australia (Geoscience Australia) 2003



**Figure 3** Regional TMI aeromagnetics showing trace of the Jenkin Fault system.  
 Magnetic data ©Commonwealth of Australia (Geoscience Australia) 2003

## URANIUM

A significant uranium radiometric anomaly, associated with mapped calcrete, is located within E52/2403. The anomaly occupies a north-north-east trending drainage over a distance of 3km (Figure 4). There is no record of previous assessment of the anomaly, which can be rapidly confirmed by handheld spectrometer.



**Figure 4 Calcrete associated radiometric anomaly E52/2402**  
Radiometric data ©Commonwealth of Australia (Geoscience Australia) 2003

## NED'S CREEK BLOCK

(E52/2492, E52/2493, E52/2440, E52/2444, E52/2456, E52/2468)

The Ned's Creek Block includes the north eastern extension of the Jenkin Fault and parallel structures representing large scale, deep structures and potentially, re-activated basin margins that facilitate transfer of mineralising fluids.

### MacDonald Well

Ned's Creek tenements contain the MacDonald Well copper occurrence; exploration dating from the 1970's identified rock chip samples to 4200ppm copper in a ferruginous breccia within shale and sandstone. Shallow drilling reported low-level copper to 1150ppm. There has been no further exploration.

## K42

K42 is a large magnetic feature that may represent an igneous intrusion at depth, limited interface sampling over a portion of the anomaly has reported low level, coincident multi-element geochemical anomalies of Au (to 8ppb), As (to 310ppm), Cu (to 250ppm) and Zn (to 250ppm). Shallow drilling failed to identify a source to the anomaly, however the K42 magnetic anomaly and the potential for intrusion-related hydrothermal mineralisation has not been adequately tested.

## MARYMIA BLOCK

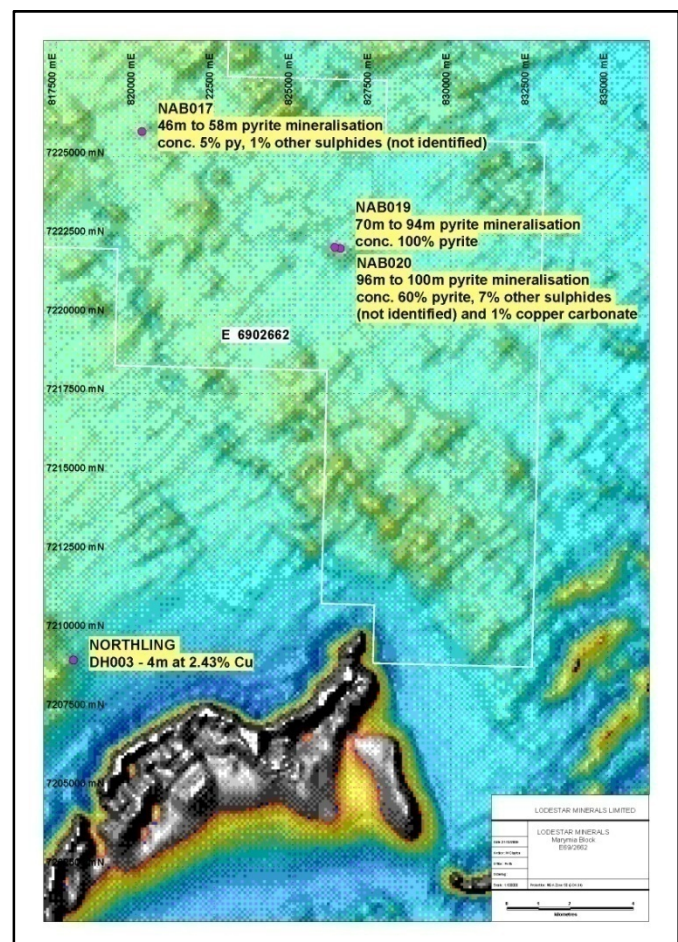
(E69/2662)

The area consists of granite-greenstone terrain overlain by sediments of the Earahedy Basin and extensive sand cover. Exploration for diamonds during the 1990's targeted discrete magnetic anomalies that were tested by drilling to bedrock. Three drill holes intersected sulphide mineralisation from which heavy mineral concentrates were prepared for microscopic examination, there were no base metal or precious metal analyses performed on these samples (Figure 5).

Sulphides are associated with ultramafic-mafic lithologies. One hole reported sulphide mineralisation over a 4m interval (NABA020, 96m to 100m); the concentrate was prepared from a 30m interval (70m to 100m) and reported 60% pyrite, 7% other sulphides (unidentified) and 1% copper carbonate. No further work has been completed.

The Marymia tenement lies 6km east of the Northling copper occurrence where diamond exploration drilling intersected copper sulphide mineralisation associated with chlorite-sericite schist (4m at 2.43% Cu from 58m).

The Northling prospect has been recently re-evaluated by PacMag, who noted the association of copper mineralisation and strongly altered rocks of possible volcanic origin, an observation that raises the possibility that unrecognised volcanic sequences, prospective for VMS-style mineralisation, are present in the area.



**Figure 5 Sulphide drill intersections (no assay data) on TMI aeromagnetics (E69/2662).**  
Magnetic data ©Commonwealth of Australia (Geoscience Australia) 2003

## **CONCLUSION**

Lodestar Directors believe the Peak Hill-Doolgunna Project delivers a large tenement position in an emerging major metallogenic province with historic gold, base metal and uranium exploration targets for immediate evaluation.

Significant base metal (e.g. Northling (Cu), Marymia NE (Pb)) prospects located in areas adjacent to the Project's eastern tenements, together with recent exploration success by mining companies in the region, highlight the potential of this emerging province, where base metal exploration has not been a priority.

### **Competent Persons Statement**

The information in this release that relates to Exploration Results and Mineral Resources is based on information compiled by Mr Bill Clayton who is a member of the Australian Institute of Geoscientists. Mr Clayton is managing director and a full time employee of Lodestar. Mr Clayton 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 Competent Persons as defined in the 2004 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 release of the matters based on information in the form and context in which it appears.

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