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**ASX Limited**

**Electronic Lodgement**

**EXPLORATION UPDATE: PEAK HILL – DOOLGUNNA PROJECT**

**Key Points:**

- Heritage clearance surveys have been completed over five priority VTEM (electromagnetic) targets prior to clearing access tracks and drill sites. Formal approval for clearing was received on the 16<sup>th</sup> December. It is the Company's intention to commence drilling these targets as soon as possible. However, due to the lengthy delay in gaining heritage clearance drilling is now scheduled to commence in mid to late January, subject to weather conditions and the availability of the preferred drilling contractor.
- Moving loop in-fill electromagnetic surveys have been completed over a further 11 VTEM anomalies in the McDonald Well area. Survey results are being interpreted at this time and additional drill targets are expected to be identified.
- A reconnaissance ground gravity survey was completed over the K42 magnetic anomaly to test for associated gravity anomalies. The survey results gave a modeled density typical of a mafic/ultramafic basement source with a depth to top of 400 – 500m. This interpretation is consistent with the recent deep drilling completed by Sipa Resources at Johnsons Cairn, which intersected basaltic volcanics at depth within the sedimentary sequence.

Lodestar Minerals Limited (the Company) wishes to advise that heritage clearance surveys have been completed over five priority VTEM targets in the McDonald Well area (Neds Creek Project, Figures 1 & 2) and that approval for clearing has been granted.

Field reconnaissance of the drill sites prior to the survey located outcrops of intense brecciation and iron and silica alteration of sediments adjacent to the B23 target (the B23 target and other four targets are under soil cover) coincident with a north east trending lineament evident on the aeromagnetic data. This outcrop (Figure 3) extends intermittently over 1400m, providing further evidence of focused fluid flow and simultaneous intense brittle deformation within the sedimentary sequence.

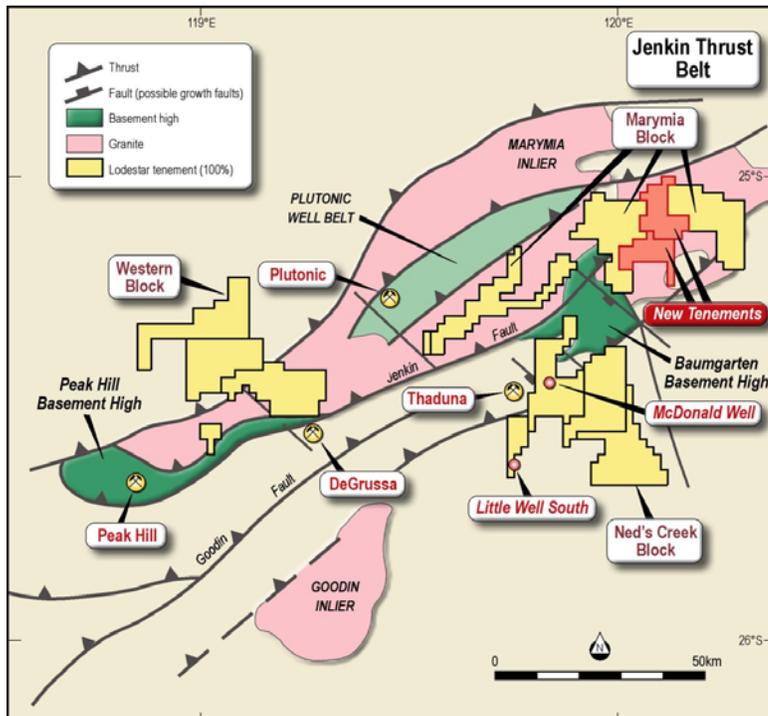


Figure 1 Location plan, showing Lodestar's Neds Creek tenements/McDonald Well area

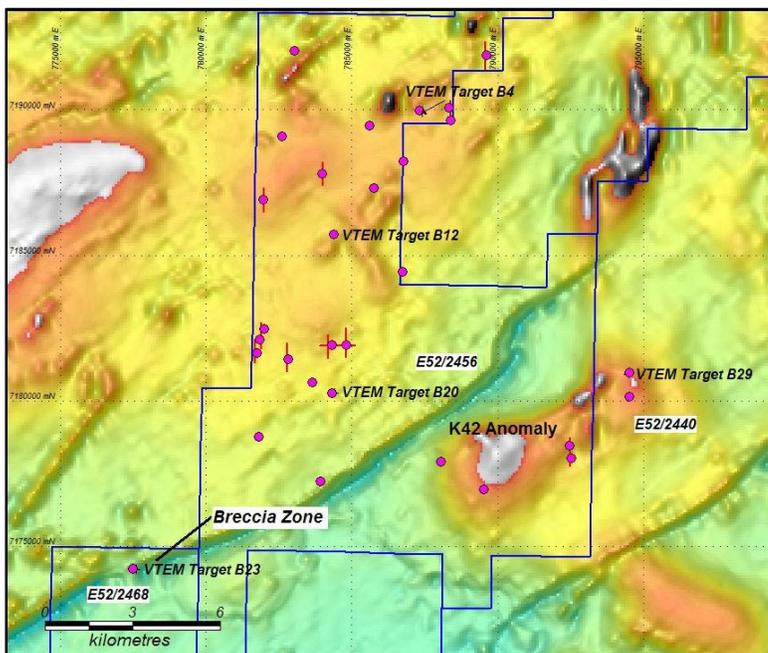


Figure 2 Neds Creek VTEM anomalies (crimson), EM lines (red) and priority drill targets. Aeromagnetic data © Geoscience Australia 2009.



Figure 3 Intense silica/iron alteration in breccia outcrop adjacent to the B23 VTEM target

### **EM - moving loop electromagnetic survey**

Eleven VTEM anomalies identified from the Neds Creek survey flown in April 2010 have been tested with moving loop EM (electromagnetic) surveys to confirm the anomalies and assist modeling of drill targets (Figure 2). The results of the survey are currently being interpreted and are expected to provide targets for phase 2 of the drilling program scheduled for 2011.

### **Gravity – ground gravity survey**

Several lines of ground gravity survey were completed over the K42 magnetic anomaly (Figure 2) to test for an associated gravity anomaly. The survey identified a gravity signature consistent with a mafic/ultramafic basement source at a depth of 400-500m. The gravity interpretation is in agreement with the recently reported intersection of basaltic volcanic rocks in a deep diamond drill hole completed by Sipa Resources at the nearby Johnson Cairn magnetic anomaly. The discovery of basalts within the sedimentary sequence is viewed as a positive development for Cu exploration in the Yerrida Basin for the following reasons;

- They represent a potential source of Cu (through leaching by brines) and are commonly found in the lower part of the sedimentary succession in many sediment-hosted copper districts
- Basalts indicate a magmatic event or heat source that can drive the circulation of fluids during basin evolution, the fluids mobilize and transport base metals in solution and deposit them at trap sites under favourable physical and chemical conditions. Potential trap sites include major structures, basin margins and reduced sedimentary layers (for example, black shale - Johnson Cairn Formation)

## **Planned Activities**

Lodestar will embark upon an active exploration program in early 2011 to complete drilling of VTEM targets in the immediate McDonald Well area and to define additional targets in the region through systematic geochemical sampling and extended VTEM coverage along a zone north and east of the Neds Creek tenements.

- *Upcoming drill program to test the five priority VTEM drill targets*
- *Interpretation of the recently completed moving loop EM survey to guide the definition of additional drill targets in the McDonald Well area*
- *Regional regolith interpretation is complete and geochemical sampling programs will commence over the Neds Creek and Marymia tenements in 2011*
- *Extended VTEM coverage over structural / stratigraphic targets*

Yours Sincerely,



Bill Clayton  
Managing Director

### ***Competent Person's 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 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 report of the matters based on the information in the form and context in which it appears.*

### **About Lodestar Minerals:**

*Lodestar Minerals Limited is a Perth – based explorer with projects in the Kimberley, Peak Hill and Kalgoorlie regions. Lodestar acquired the Peak Hill – Doolgunna project in March 2010. The Peak Hill – Doolgunna project forms the core of Lodestar's project portfolio and represents a strategic landholding of 2000 square kilometres covering 120 kilometres of the Jenkin Thrust Belt, a regional fault system that is adjacent to the recently discovered DeGrussa Cu-Au deposit. Lodestar is embarking on an aggressive exploration program to assess the excellent potential of the emerging and under - explored north Murchison base metal province.*