

## **MACARTHUR MINERALS ACCELERATES DEVELOPMENT AND EXPLORATION OF ITS IRON ORE, GOLD, NICKEL AND LITHIUM PROJECTS**

**Macarthur Minerals Limited (TSX-V: MMS)** (the “Company” or “Macarthur”) is pleased to provide an update to Shareholders outlining an active first quarter 2018 in the ongoing development of the Company’s iron ore projects and the exploration activities across the lithium, gold and nickel/cobalt projects in Western Australia and Nevada, USA.

Mr Cameron McCall, Executive Chairman of Macarthur Minerals commented: “*The first quarter of 2018 has been an active and productive period for the Company. Cleveland-Cliffs Inc has announced that their Asia Pacific Iron Ore operations will close by June 30, 2018. Macarthur is in a strong position to exploit the mining, logistics and export infrastructure that may become available with the closure of those operations in the Yilgarn region of Western Australia. In preparation for this, the Company has been in discussions with key Union and Government agencies, including the Southern Ports Authority, as well as mining, infrastructure and engineering service companies to refine operational costs. In March 2018, Macarthur commissioned a London based research firm, Hallgarten & Company to complete an internal business investigation plan looking at the infrastructure that may be available from the closure of Cliffs’ Asia Pacific Iron Ore operations, and the Company’s 2012 PFS on the Ularring Hematite Project. This plan indicates that there is potential commercial benefit for development of the Company’s iron ore projects. In addition, the Company has commenced discussions with project finance groups and off-take trading partners. I assure you, the Company has been actively preparing on all fronts to ensure the successful development of its iron ore assets.*”

### **IRON ORE**

#### Ularring Hematite and Treppo Grande Projects

Macarthur’s iron ore portfolio has been expanded with the addition of the Treppo Grande Project, located centrally between the Company’s Ularring Hematite Project and existing mining and transport infrastructure (refer to news release February 20, 2018). The projects are located in close proximity to the US based Cleveland-Cliffs Inc’s (“Cliffs”) Asia Pacific Iron Ore operations, which is winding down production and export activities with an announced closure date of June 30, 2018. Figure 1 shows the current and potential operations in the Yilgarn region of Western Australia.

The Company has now engaged with port and rail operators, the Western Australian Government and key stakeholders for access to infrastructure and mining services to develop the Company’s iron ore assets. The Company has prepared plans for access to rail and port capacity following Cliffs’ departure from its operations. Gaining access to rail and port capacity has been a major hurdle to overcome before the Company could hold meaningful discussions for development and project financing.

Macarthur’s previously announced plans to beneficiate the iron ore resource at its Ularring Hematite Project remains the Company’s medium-term plan with initial mining and production focussing on extracting higher grade DSO material to commence production.

### **GOLD**

#### Hillside Gold Project

The Company acquired 100% of granted exploration license E45/4685 covering an area of 35 km<sup>2</sup> in the Pilbara region of Western Australia. E45/4685 forms part of the Company’s Hillside Gold Project which covers an area of ~400km<sup>2</sup>. The Hillside Gold Project, where gold nuggets have been found, is highly prospective. Historical rock chip sampling on the Hillside Gold Project has returned results up to

447 grams per tonne gold and 7.8% copper. A rock chip from a recent reconnaissance visit with Artemis Resources to the Hillside Project returned 8.5 grams per tonne gold.

Geophysical data has been reviewed and a follow-up detailed VTEM geophysical survey at 150m line spacing will be conducted over the two areas covering 125km<sup>2</sup>. The aim of the survey is to define high priority targets from conductors such as clusters of massive sulphide hosted base metal deposits at depth. This program is scheduled to be completed in May 2018 with subsequent interpretation to define drill targets (Figure 2).

#### Panorama and Bonnie Scot Gold Projects

As previously announced, Artemis Resources Limited (ASX:ARV) is to earn-in up to 80% interest in the Panorama Project, located in the Pilbara region on Western Australia, consisting of two tenements E45/4779 and E45/4732 covering a total of 265km<sup>2</sup>. The Panorama Project sits adjacent to Macarthur's tenement E45/4764 (Bonnie Scot) covering a total of 13 km<sup>2</sup>.

Stream sediment sampling has been completed for the Company's Panorama and Bonnie Scot Gold Projects. The sampling program explored the area for conglomerate gold as mapping shows extensive outcrops of Mt Roe Basalts and Hardey Formation (Figure 3). The samples were submitted to the lab early April 2018 and assays will be available in due course.

#### **NICKEL AND COBALT**

Exploration for nickel and cobalt at Lake Giles, in the Yilgarn region, Western Australia (as announced on March 5, 2018), now moves to the next stage of geological investigation with a soil sampling program over the Snark prospect and ground EM surveys over targets prospective for nickel at Snark, Clarke Hill and Moonshine. This program will be targeting areas where nickel, cobalt and massive sulphides have been intersected by historical shallow drilling or as float material (refer to Figure 4.)

In February this year, Macarthur collected five samples of float material from the Snark prospect containing asbolite returning assays up to 2.61% cobalt and 2.01% nickel. The Company has engaged HGS Australia Exploration Services to complete a geochemical soil sampling program at Snark prospect at Lake Giles. A total of 500 samples will be collected across two target areas. Samples will be collected 200x50m spacing at area 1 and 100x50m spacing at area 2 covering a total of 4km<sup>2</sup> (Figure 5). Previous soil sampling conducted by Macarthur across the Snark prospect was at 1x1km spacing with one sample assaying 162ppm Cobalt warranting further investigation.

In May 2018, a moving loop EM survey will be completed over identified areas at Snark and at Moonshine (Figure 6). We plan to conduct a 200m spacing ground EM survey covering an area of 3.5 km<sup>2</sup>. During a comprehensive review of all previous drilling, two holes within the target area intersected anomalous nickel. Intercepts of 128 meters @ 0.17% Ni including 1m @ 0.29% Ni in hole LGRC\_0010 and 106 meters @ 0.15% Ni in hole LGRC\_0015 and are in close proximity to one another (Figure 7).

Additionally, Macarthur will conduct a 200m spacing ground EM survey covering a total area of 1 km<sup>2</sup> (Figure 8). This target area has also been identified as being prospective for nickel sulphide deposits from previous drilling. Anomalous nickel values of 1.4% nickel were detected within the first 30 meters of a 2012 EIS (co-funded) diamond drill hole. The elevated nickel values within shallow weathered zone may be an indication of a nearby sulphide deposit. It was also noted from logging, that sulphides are abundant throughout the sequence and are believed to be a product of hydrothermal convection. There is also mention of abundant sulphides within subsequent drill holes nearby. To date, there has not been adequate drilling at depth hence ground EM is recommended.

The majority of historical drilling at Snark and Moonshine has been shallow RC or Diamond and regionally, Kambalda style Nickel mineralisation has only been found at depth. The interpretation of historical aeromagnetic data suggests possible presence of lava channels and Komatiites flows which are favourable of nickel-sulphide deposits.

## LITHIUM

### Western Australia

Macarthur's ~1,300km<sup>2</sup> lithium tenement portfolio in the Pilbara has now had all its exploration licences granted and the Company is actively seeking joint venture partners to advance the geological investigation of these tenements.

### Reynolds Springs Project, Nevada USA

Exploration activity at Company's Reynolds Springs Project located in Railroad Valley in Nevada, USA has focused on interpretation of historical oil and gas logs drilled on and adjacent to the claims, to identify prospective lithium brine zones (refer to news release March 7, 2018). These logs contained both resistivity and often conductivity logs. Liquids high in salt minerals freely allow the passage of an electrical current and therefore record high conductivity.

On Macarthur's claims multiple spikes in conductivity were observed in six of eight logs and are interpreted as zones that may contain brines. Conductive zones were typically 30 feet thick with a maximum thickness of 120-140 feet observed in wells 15 and 12. Brine targets were observed from 860m feet to 2,685 feet below surface.

In March 2018, Macarthur applied for water rights over these claim areas.

### **QUALIFIED PERSONS**

Mr Andrew Hawker, a member of the Australian Institute of Geoscientists, is a full-time employee of Hawker Geological Services Pty Ltd and is a Qualified Person as defined in National Instrument 43-101. Mr Hawker has reviewed and approved the technical information, except that of the Reynolds Springs Project contained in this news release.

Mr Randy Henkle, a Registered Member of the Society of Mining and Exploration and a Professional Geologist licensed in British Columbia, Canada, is a Qualified Person as defined in National Instrument 43-101. Mr Henkle has reviewed and approved the technical information in relation to the Reynolds Springs Project contained in this news release

### **ABOUT MACARTHUR MINERALS LIMITED (TSX-V: MMS)**

Macarthur Minerals Limited is an exploration company that is focused on identifying high grade gold and lithium. Macarthur Minerals has significant gold, lithium and iron ore exploration interests in Australia and Nevada. Macarthur Minerals has three iron ore projects in Western Australia; the Ularring hematite project, the Moonshine magnetite project and the Treppo Grande iron ore project.

On behalf of the Board of Directors,  
**MACARTHUR MINERALS LIMITED**

"Cameron McCall"  
Cameron McCall, Executive Chairman

#### **Company Contact:**

Joe Phillips, CEO and Director  
[jphillips@macarthurminerals.com](mailto:jphillips@macarthurminerals.com)  
Tel: +61 448899247

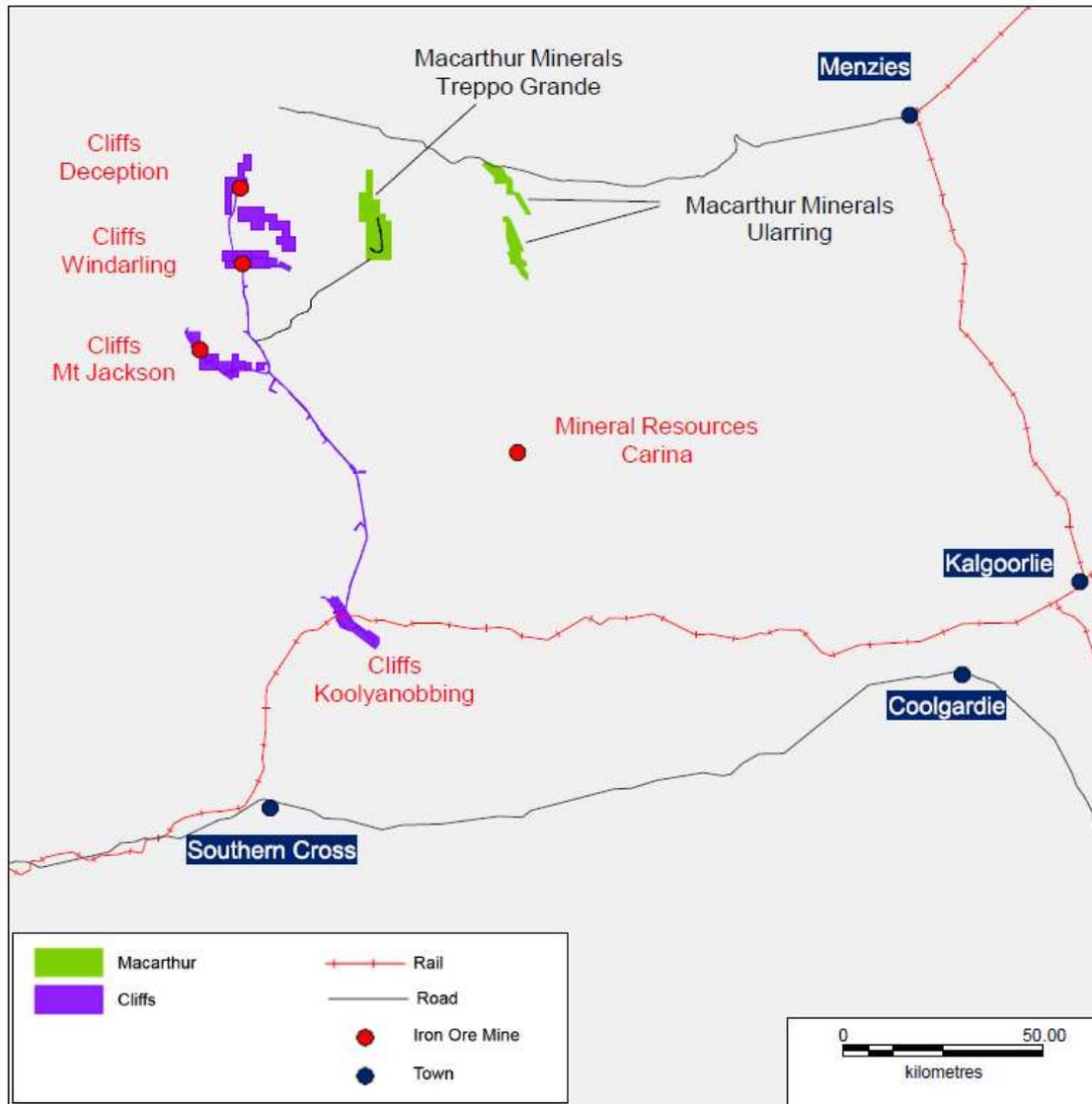
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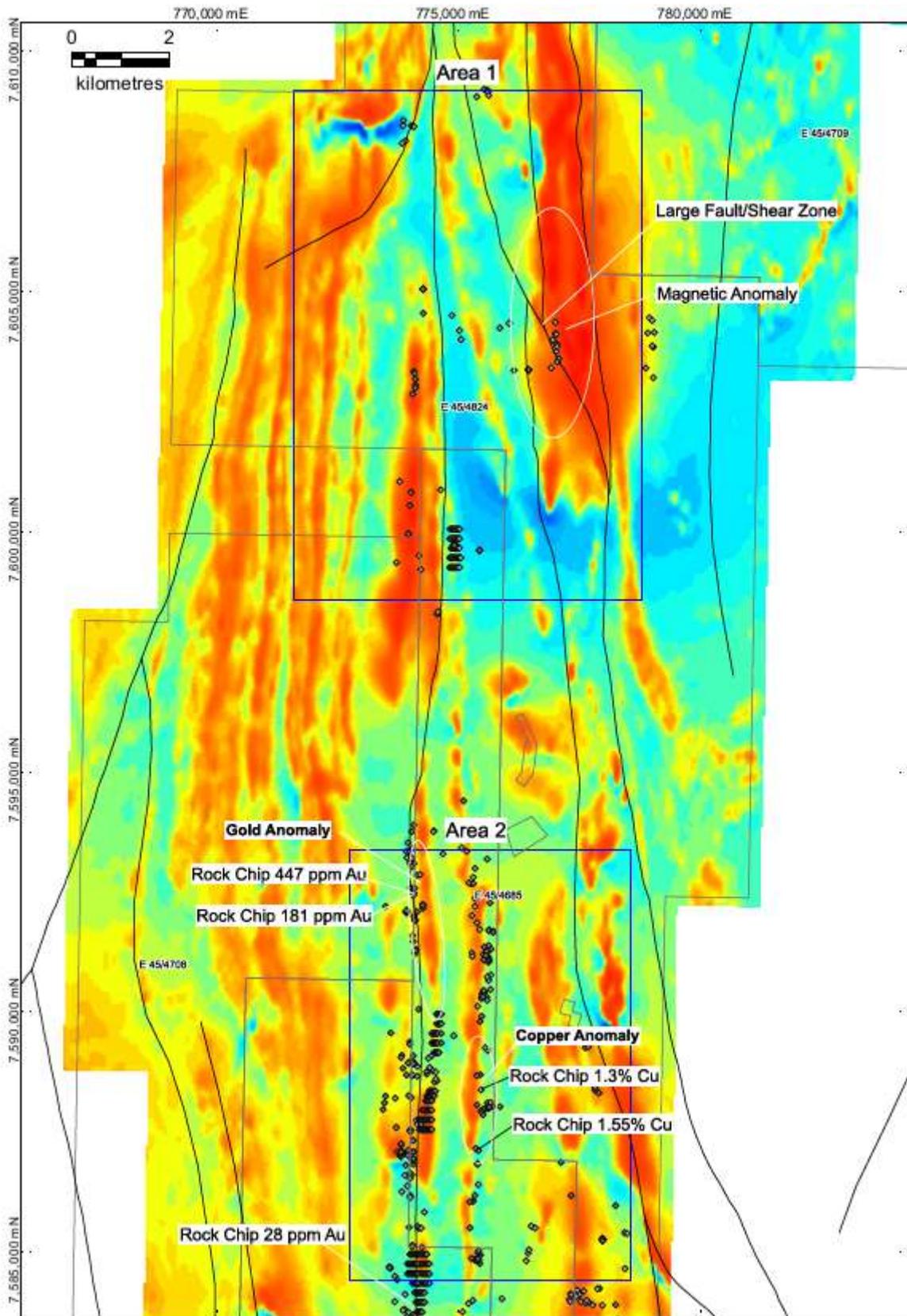
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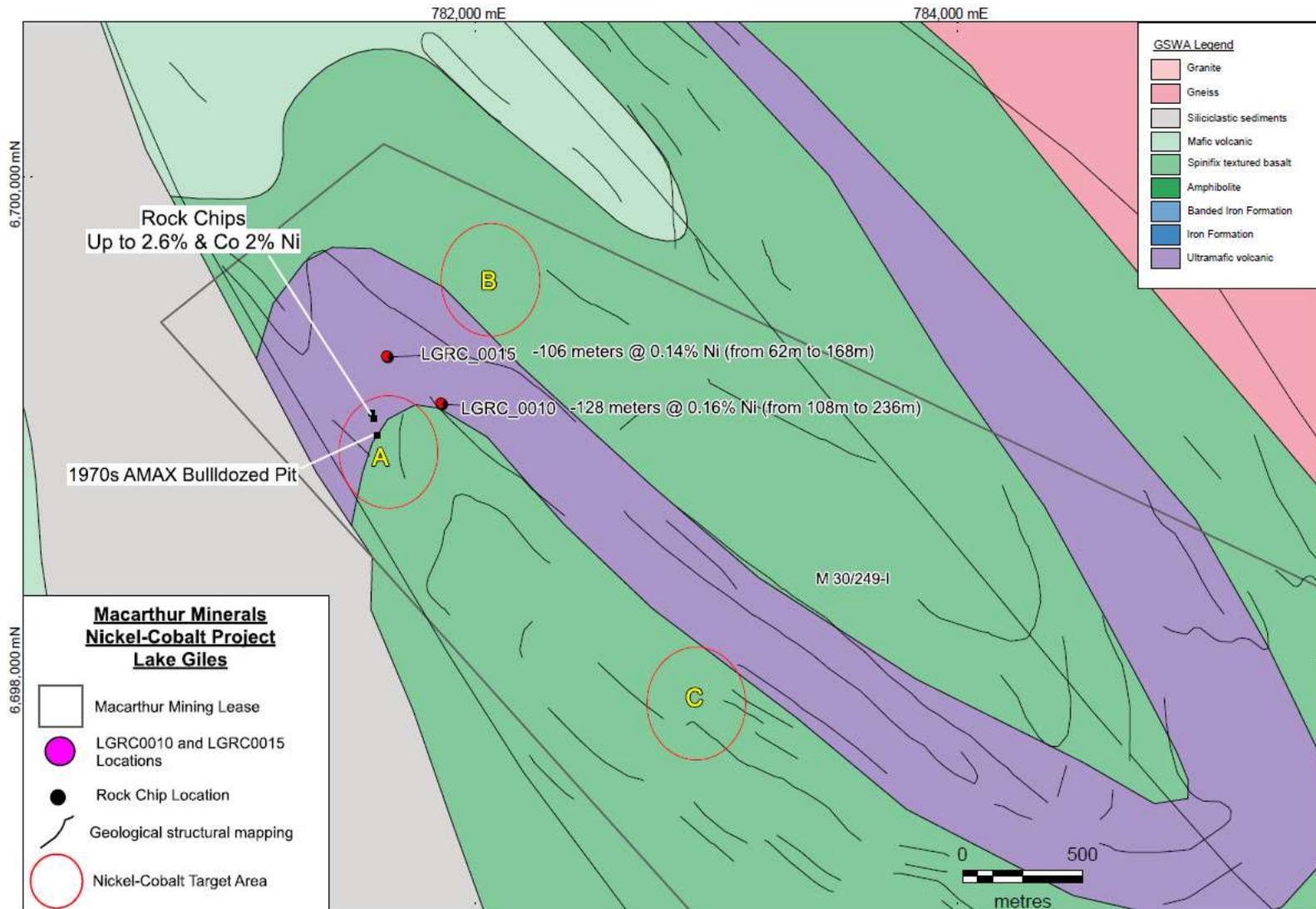
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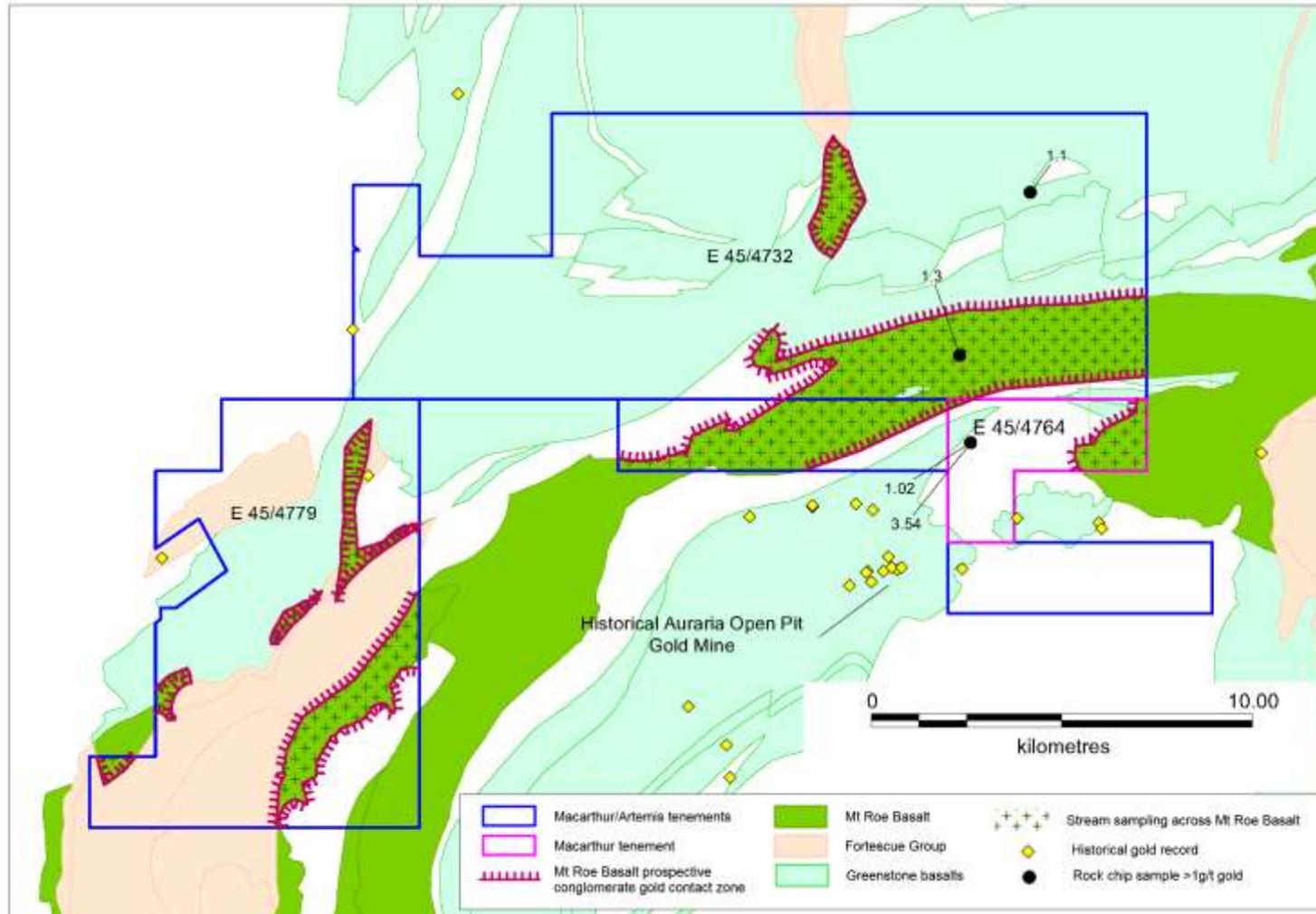
**Figure 1:** Current operations and potential operations in the Yilgarn Region of Western Australia.



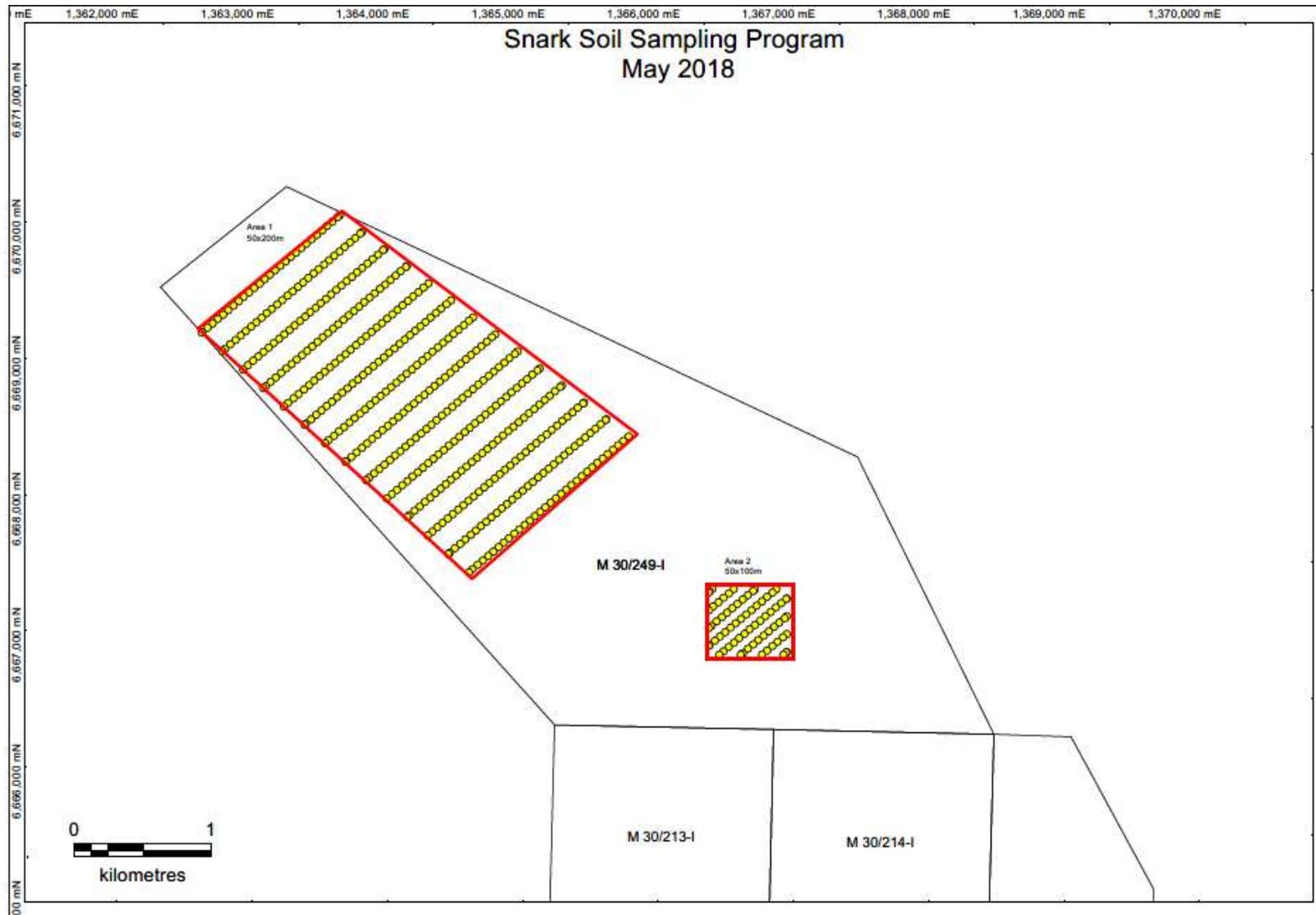
**Figure 2.** Hillside VTEM survey target area in the Pilbara and 150m lined spacing VTEM planned survey. Map showing government magnetic data and faults. Area is heavily faulted with multiple shear zones and several gold and copper anomalies in surface rocks.



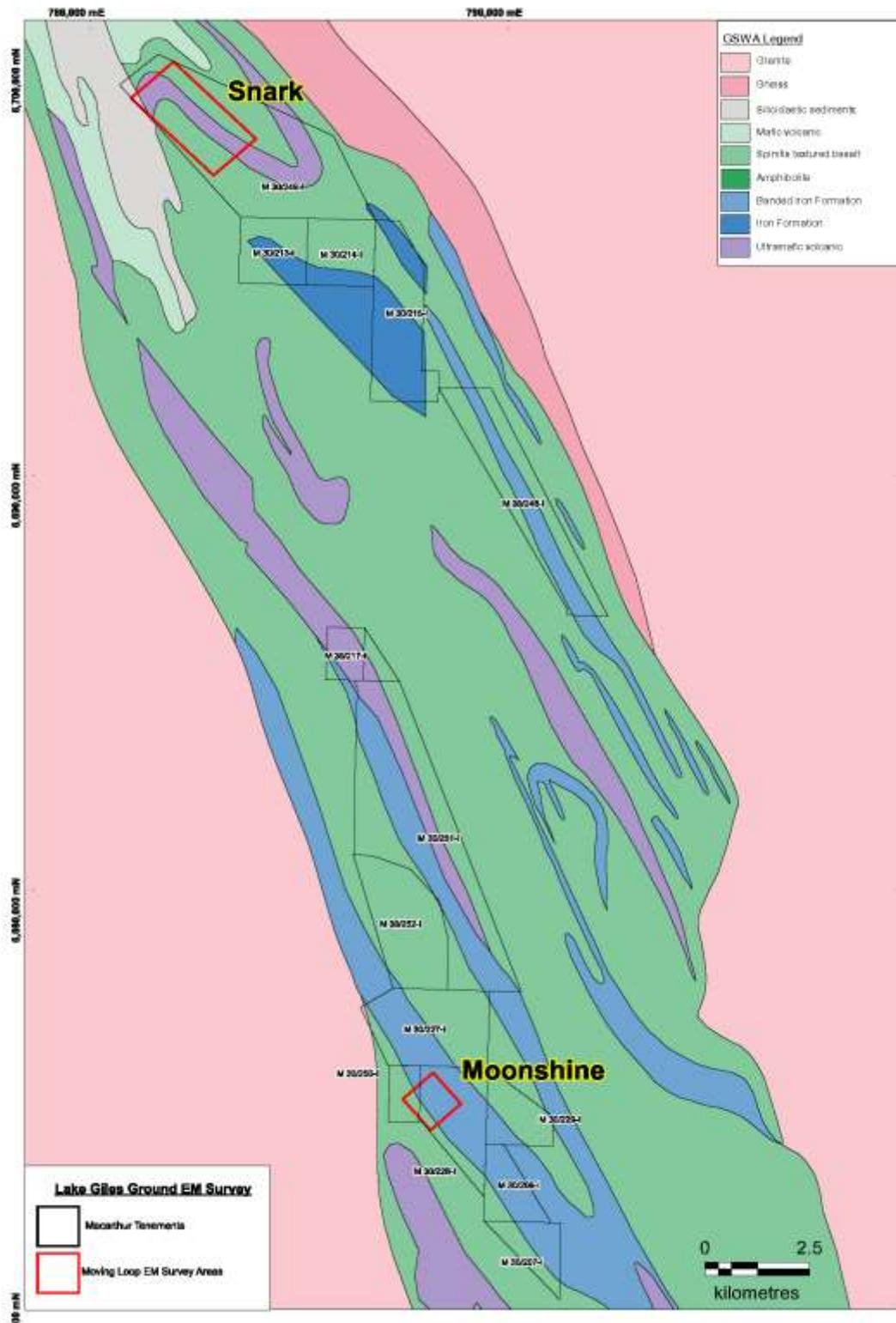
**Figure 3.** Macarthur Minerals and Artemis tenure. Stream sediments were collected across the Mount Roe Basalt contact zone which is prospective for conglomerate gold.



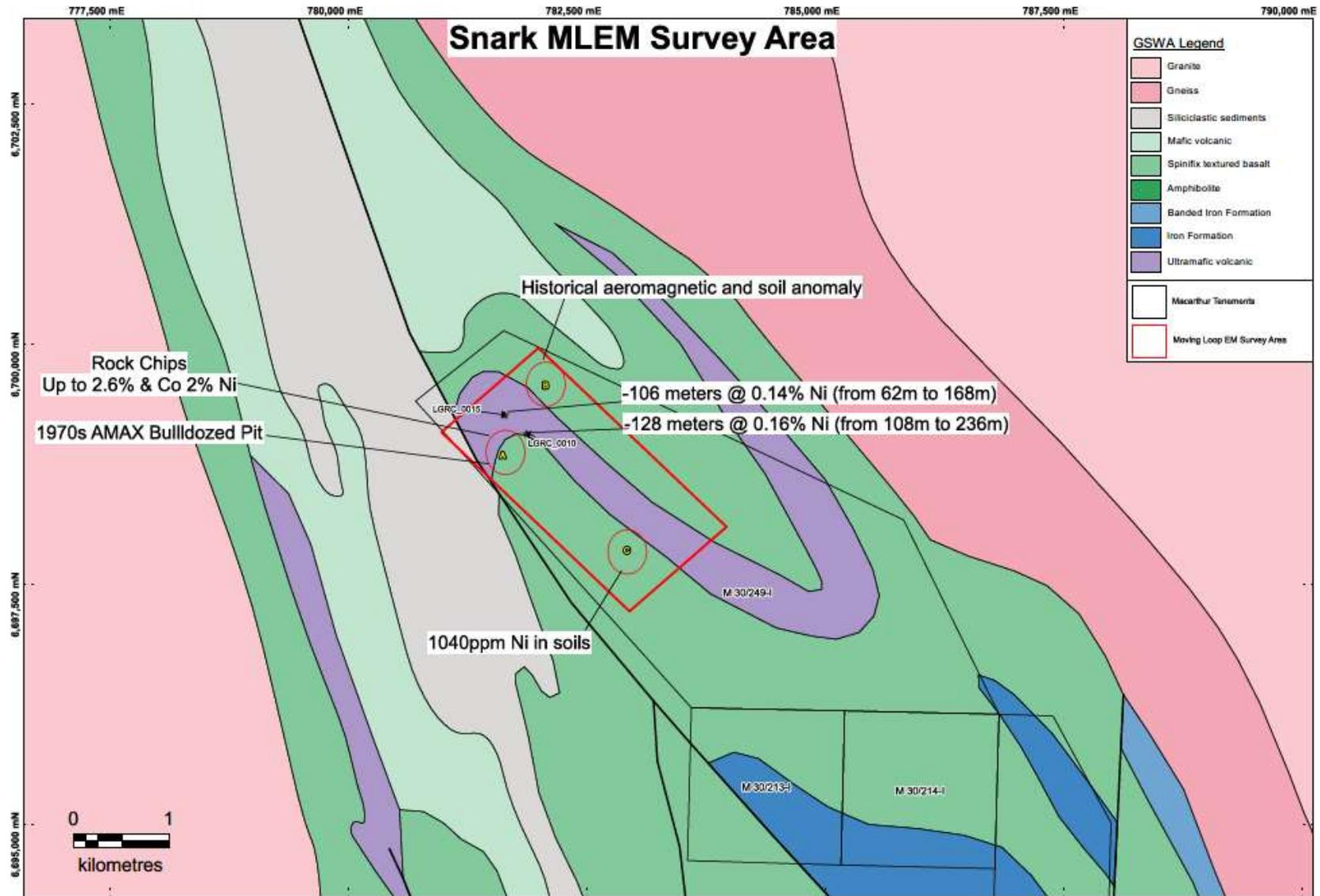
**Figure 4.** Macarthur Minerals and Artemis tenure. Stream sediments were collected across the Mount Roe Basalt contact zone which is prospective for conglomerate gold.



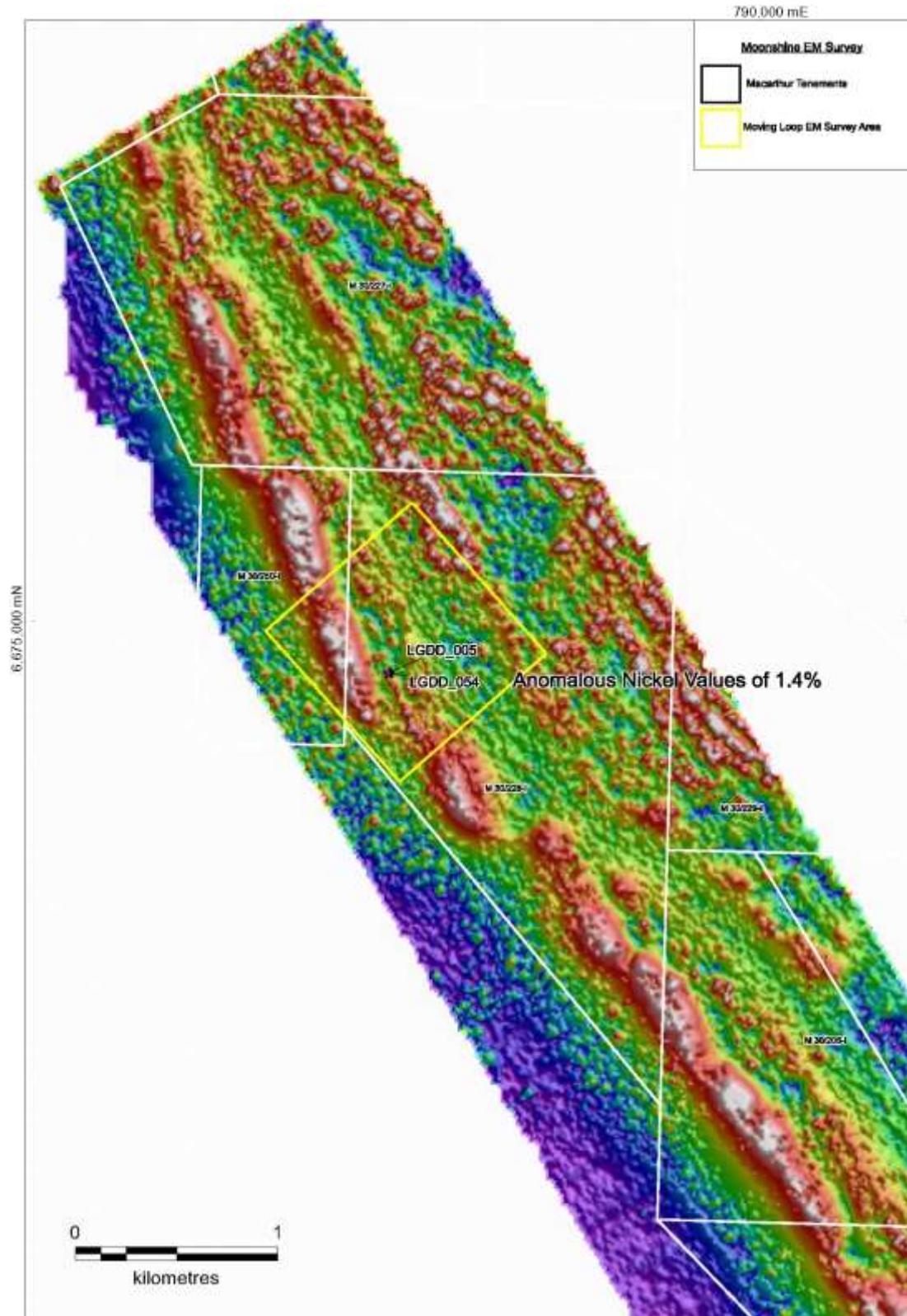
**Figure 5.** Lake Giles soil sampling program to commence soon. Geochemical anomalies and elevated pathfinder elements in soils will be used in conjunction with geophysical data to target possible sulphide deposits at depth.



**Figure 6.** MacArthur Minerals Lake Giles Moving Loop EM survey target areas Snark and Moonshine.



**Figure 7.** Macarthur Minerals Lake Giles Moving Loop EM survey target area at Snark. Map shows the various Nickel and Cobalt anomalies at surface.



**Figure 8.** Macarthur Minerals Lake Giles Moving Loop EM survey target area at Moonshine. Map containing 50m Ground mag conducted in 2006. This was used as part of the magnetite resource modelling