

MACARTHUR MINERALS UPDATE ON THE EXPLORATION AND DEVELOPMENT 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 second quarter 2018 in the ongoing development of the Company’s iron ore projects and exploration activities across the lithium, gold and nickel/cobalt projects in Western Australia and Nevada, USA.

SECOND QUARTER HIGHLIGHTS

- ❖ A SkyTEM Geophysical Survey was conducted at the Hillside Gold Project in the Pilbara. The preliminary results of the survey were successful and identified extensive interpreted bedrock conductors including isolated discrete bedrock conductors over a strike length of 30km. Further interpretation is currently in progress.
- ❖ Moving Loop Electromagnetic and Fixed Loop Electromagnetic surveys were conducted over several Nickel/Cobalt targets at Lake Giles in the Yilgarn region. Preliminary results have identified two strong conductors at the Moonshine North and two bedrock conductors at Snark. Further interpretation of the survey is currently in progress.
- ❖ Three new iron ore exploration areas were applied for in the Yilgarn region, adding an additional 113 km² to the Company’s portfolio. Two of these tenements are adjacent to the Mt Jackson and Deception iron ore deposits of Cleveland-Cliffs Inc. The third area is located 35 km west of Macarthur’s Ularring Hematite Project.
- ❖ The cessation of mining in June 2018 by Cleveland-Cliffs’ Asia Pacific Iron Ore operations in the Yilgarn region opens up the opportunity for rail and port capacity to support the commercialization of the Company’s advanced iron ore projects.
- ❖ Re-assay of three previously drilled holes has identified wide intersections of anomalous nickel (up to 0.2% Ni) at the Clark Hill prospect at Lake Giles.
- ❖ A soil sampling program at the Bonnie Scot project identified an area of anomalous gold. Further stream sediment sampling by Macarthur and Artemis Resources Limited (“Artemis”) at the Panorama Project commenced this week across areas that were previously not sampled.
- ❖ The Company has been advancing discussions with an interested party to take forward exploration for lithium across the Company’s extensive ~1,300 km² portfolio in the Pilbara.
- ❖ The Company has been advancing discussions with an experienced lithium partner to further explore the Company’s Reynold Springs Project in the Railroad Valley, Nevada.

Mr. Cameron McCall, Executive Chairman of Macarthur Minerals commented: “*This has been a very active quarter for the Company. Cleveland-Cliffs Inc’s announcement of the cessation of mining of their Asia Pacific Iron Ore operation places Macarthur in a strong position to exploit the mining, logistics and export infrastructure capacity that may become available in the Yilgarn region of Western Australia.*”

A plan is underway to extend the hematite resource base and mine life by including the Moonshine Magnetite Project. The Company has commissioned London based research firm, Hallgarten & Company to undertake an internal business investigation plan for consideration by financiers.

The potential rail and port capacity in this region makes Macarthur’s historic ~A\$61million investment in resource definition, environmental assessment, metallurgical, economic studies and permitting of the hematite and magnetite iron ore projects very valuable. Macarthur has been holding on to these projects waiting for a stabilisation of the iron ore commodity pricing and an upswing in major mining investment sentiment.

We are excited by the results of recent geophysics undertaken at the Hillside Gold and the Lake Giles Nickel projects. The conductors show strong signal strength and typically correspond with anomalous surface geochemistry. Following the completion of the full interpretation, ground mapping of geophysical targets will be completed to support a scout drilling program in Q3/Q4 2018.”

GOLD

Hillside Gold Project

The Hillside Gold Project in the Pilbara covers an area of ~ 400 km², of greenstone lithologies highly prospective for gold and copper mineralisation. Historical gold mining has occurred within the tenement area with recent activity by prospectors recovering over 700 ounces of gold nuggets. Historical rock chip sampling on the Hillside Gold Project has returned results up to 55 grams per tonne gold and 7.8% copper (**Figure 1**). A rock chip from a recent reconnaissance visit with Artemis to the Hillside Gold Project returned 8.5 grams per tonne gold.

In late May, an Airborne Electromagnetic survey was flown over the Hillside Gold Project over two areas. The aim of the survey was to define high priority targets from conductors such as clusters of massive sulphide hosted base metal deposits at depth. The survey was conducted using the SkyTEM system with 150m spaced lines. In total the system flew 846 line-kilometers covering approximately 125 km². The survey was successful and identified numerous interpreted bedrock conductors including isolated discrete bedrock conductors that correlates with historical gold workings, magnetic anomalies and fault systems. Final interpretation reports are scheduled to be completed end of July 2018 with subsequent field mapping to define drill targets. See preliminary results in **Figure 2**.

Panorama and Bonnie Scot Gold Projects

As previously announced, Artemis is to earn-in up to 80% interest in the Panorama Project, located in the Pilbara region of Western Australia. The project consists of two tenements E45/4779 and E45/4732 covering a total of 265 km². The Panorama Project sits adjacent to Macarthur's Bonnie Scot Project on tenement E45/4764. GSWA geological mapping shows extensive outcrops of Mt Roe Basalts and Hardey Formation across both projects which are prospective for conglomerate hosted gold (**Figure 3**).

Phase one stream sediment sampling has been completed at the Panorama and Bonnie Scot Projects with anomalous gold identified at the Bonnie Scot Project. Artemis has mobilised a field crew to site to undertake a follow up sampling program across a more extensive area.

NICKEL AND COBALT

Exploration for nickel and cobalt at Lake Giles, in the Yilgarn region (as announced on March 5, 2018), moved to the next stage of exploration by completing Moving Loop Electromagnetic ("MLEM") and Fixed-Loop Electromagnetic ("FLEM") surveys across three prospect areas: Moonshine, Snark and Clark Hill (**Figure 4**). The program targeted areas where elevated nickel has been identified in surface geochemical sampling and intersected by drilling.

Preliminary interpretation of the MLEM and FLEM survey identified two distinct bedrock conductors at Moonshine and two bedrock conductors at Snark. Further interpretation is underway. The widespread Nickel, Cobalt and Magnesium Oxide correlations across the Lake Giles tenement package is a good indication of komatiite structures being present. These structures can often host nickel-copper sulphide mineralisation such as the Kambalda type komatiitic nickel ore deposits.

IRON ORE

Macarthur holds Mining Leases over two advanced projects; the Ularring Hematite Project and the Moonshine Magnetite Project. The Ularring Hematite Project's Mineral Resource consists of Indicated 54.46 Mt @ 47.2% Fe and Inferred 25.99Mt @ 45.4% Fe¹ and Moonshine Magnetite Project has an Inferred Mineral Resource consisting of 1,316 Mt @ 30.1% Fe².

¹ Previously announced on August 16, 2012 NI 43-101 Technical Report filed October 1, 2012, titled "NI 43-101 Technical Report, Macarthur Minerals Limited, Pre-Feasibility Study, Ularring Hematite Project, Western Australia

² NI43-101 Technical Report filed March 25, 2011, titled "Macarthur Minerals Limited: Moonshine and Moonshine North Prospects, Lake Giles Iron Project, Western Australia, NI43-101 Technical Report – Preliminary Assessment

Over the last 10 years the Company has invested ~A\$61 million on:

- Delineating hematite and magnetite iron resources.
- Approval of Mining Leases over the core resource areas.
- Completing positive Preliminary Economic Assessments (“PEA”) for the hematite and magnetite projects.
- Completing a Prefeasibility Study for the hematite project for 2 Mtpa high grade sinter fines beneficiation project.
- Obtaining key environmental approvals for the hematite project.

A recent upswing in the commodity price for premium high-grade (+65% Fe), low impurity iron ore has resulted in a resurgence in mining investment in the iron ore sector as exemplified by recent announcements of BHP, Rio Tinto and Fortescue Metals Group.

Access to capacity on the rail and port infrastructure has changed the commercial dynamics of the Yilgarn. Moreover, Macarthur has the capacity to deliver a high-grade magnetite product utilising existing infrastructure under a much lower capital expenditure than anticipated in the PEA.

The Company has been engaging with port and rail operators and the Western Australian Government to gain access to rail and port capacity. This is a major hurdle before the Company can hold meaningful discussions for development and project financing.

Macarthur’s iron ore portfolio has been expanded with the addition of the Treppo Grande Project and two Exploration Licence applications adjacent to the Mt Jackson and Deception iron ore mines of Cleveland-Cliffs. **Figure 5** shows the current and potential operations in the Yilgarn region of Western Australia.

LITHIUM

Western Australia

Macarthur’s ~1,300km² lithium tenement portfolio in the Pilbara has now had all its exploration licences granted and the Company has been advancing discussions with potential partners to further 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 for wells drilled on and adjacent to the claims, to identify prospective lithium brine zones (refer to news release March 7, 2018). These logs contained a combination of resistivity and conductivity data. 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 and the Company is waiting on allocation.

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, expect 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”
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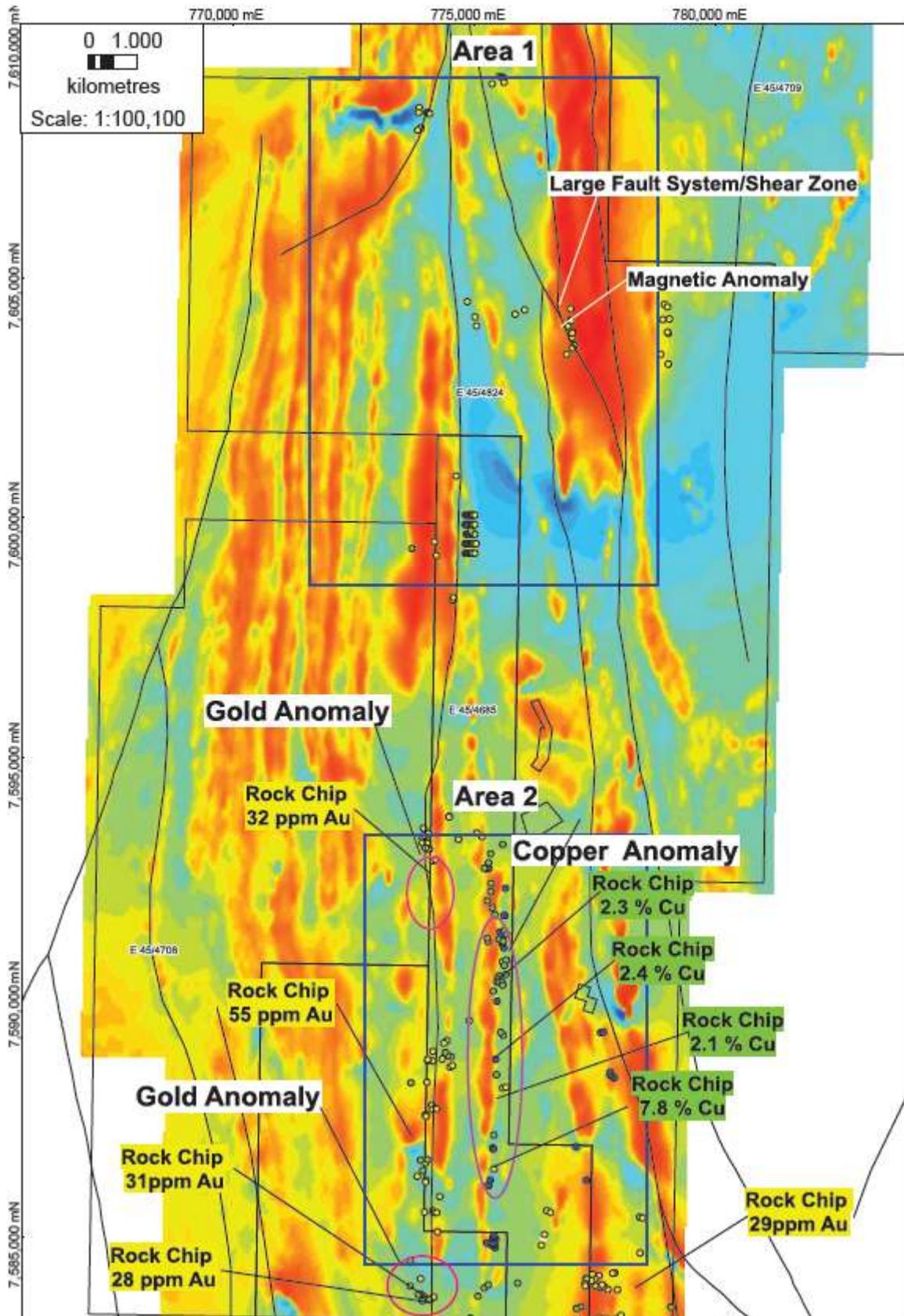


Figure 1. Hillside VTEM survey target areas in the Pilbara and VTEM planned survey. Map showing government magnetic data and faults. Area is heavily faulted with multiple shear zones and several gold and copper anomalies in surface rocks.

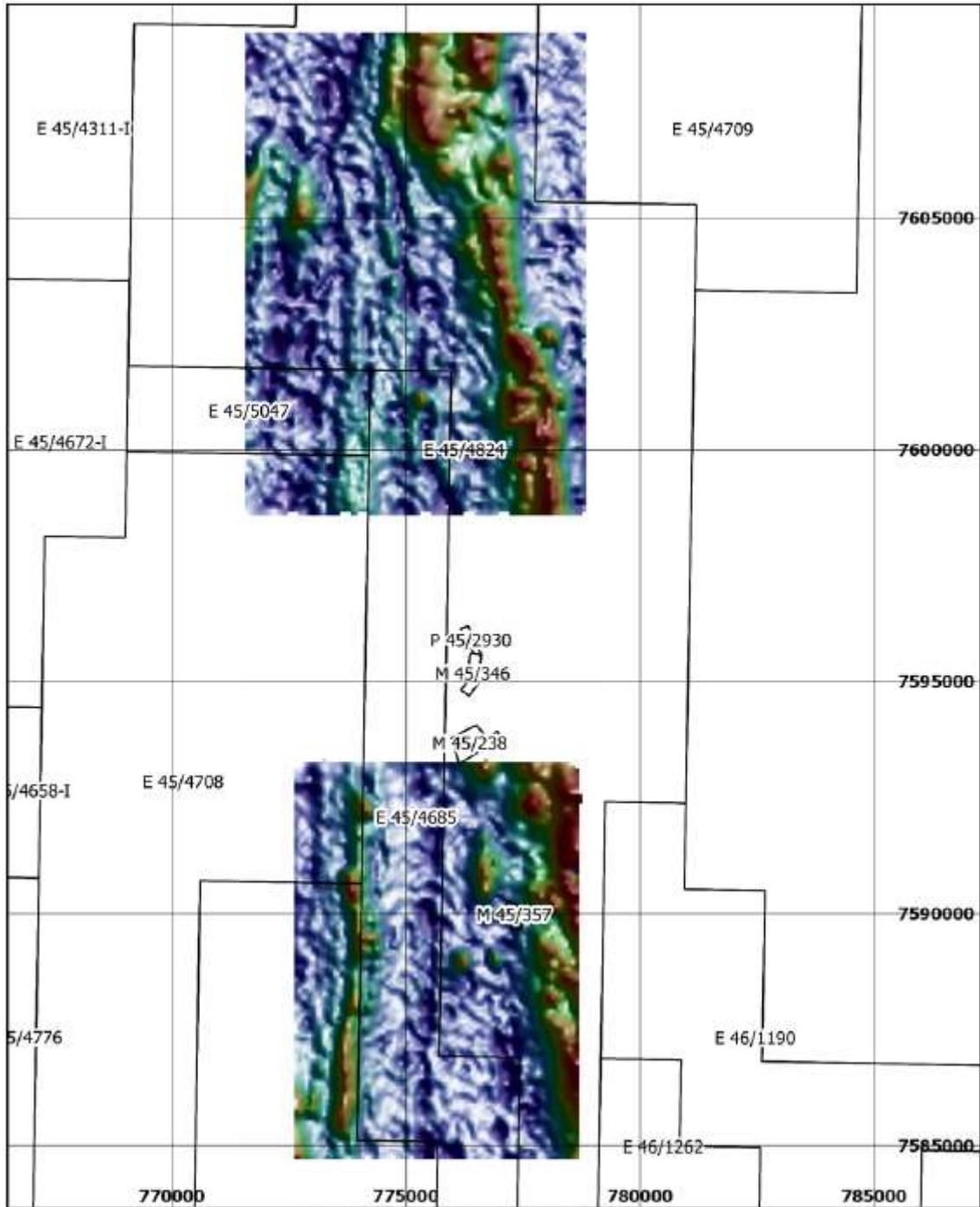


Figure 2. Hillside SkyTEM survey flown at 150 m line spacing. Map of preliminary results showing conductors.

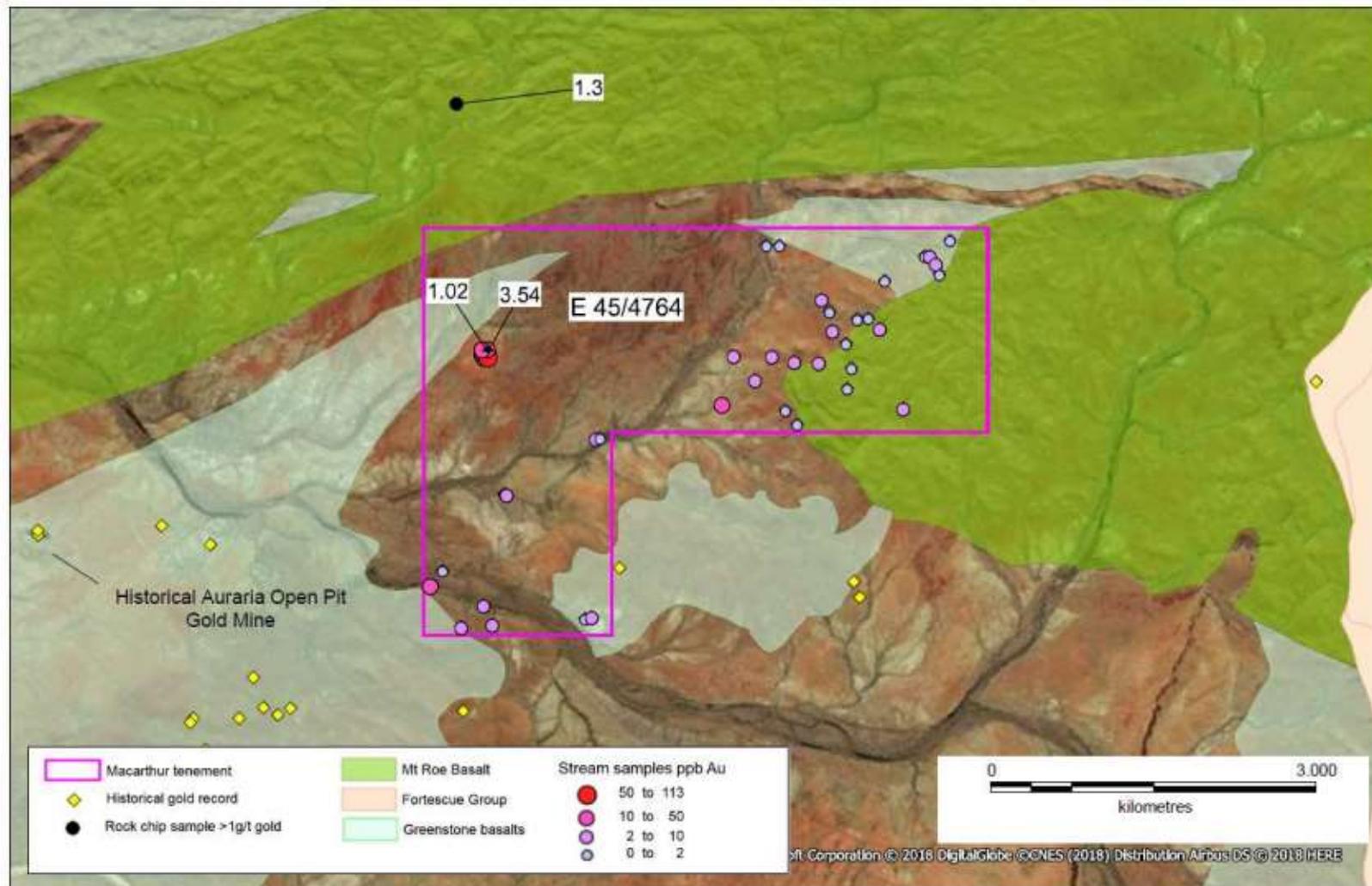


Figure 3. Stream sediment sampling at the Bonnie Scot project E45/4764. A Further 50 samples will be collected across untested areas of the tenement.

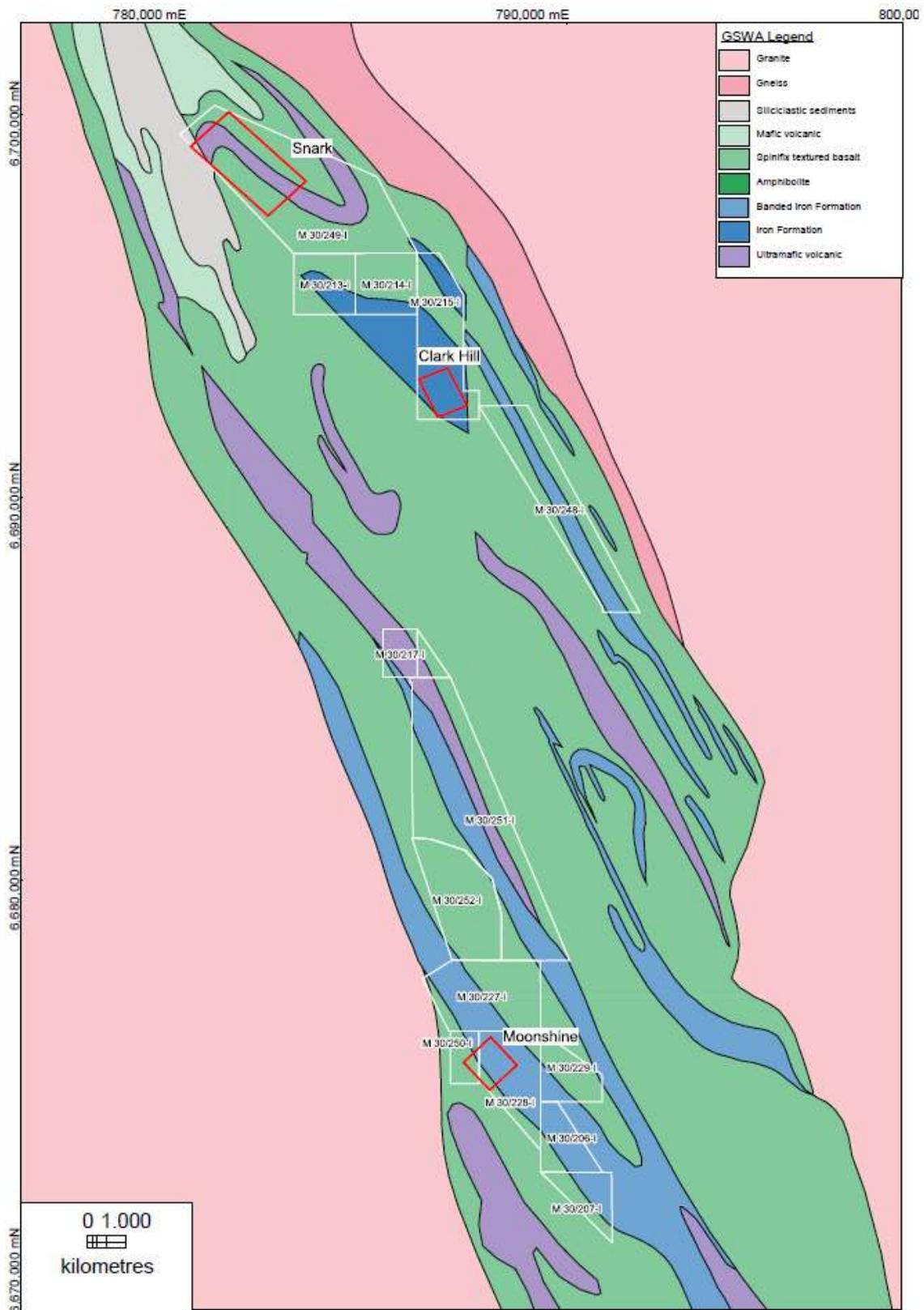


Figure 4. Lake Giles MLEM and FLEM survey across three prospect areas Snark, Clark Hill and Moonshine.

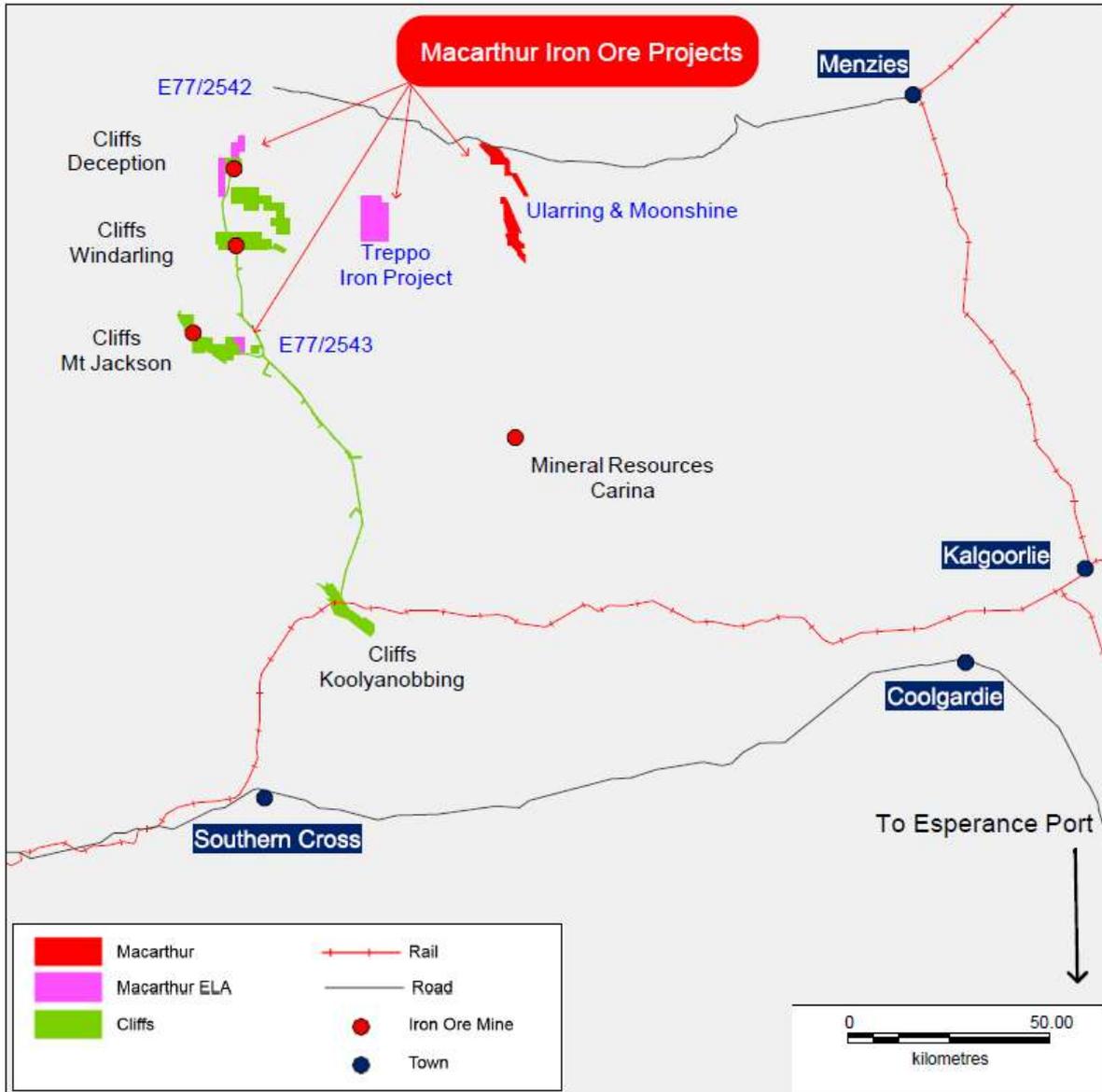


Figure 5. Current operations and potential operations in the Yilgarn Region of Western Australia