



**MOUNT ISA
MINES**

A GLENCORE COMPANY

**Technical Report
No. 4057**

**Exploration Permit for Minerals No 18477
'Kamileroi 5', Queensland
Partial Relinquishment Report
For the Period Ended 12 June 2016**

MIM RESOURCE DEVELOPMENT PTY LIMITED

TECHNICAL REPORT

No. 4057

TITLE: EXPLORATION PERMIT FOR MINERALS No. 18477
'KAMILEROI 5', QUEENSLAND
PARTIAL RELINQUISHMENT REPORT
FOR THE PERIOD ENDED 12 JUNE 2016

HOLDER: ORBIS GOLD LIMITED

OPERATOR: MIM RESOURCE DEVELOPMENT PTY LIMITED

1:250,000 SHEET: SE54-14 'DOBBYN'

1:100,000 SHEET: 6959 'KAMILEROI'

**INVESTIGATIONS
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DATE: JUNE 2016

COPY: 2

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SUMMARY

Aim of Project

Exploration Permit for Minerals (EPM) 18477 'Kamileroi 5' was obtained to explore for iron-oxide copper-gold (IOCG) mineralisation within Proterozoic basement units of the Mount Isa Inlier.

Object of Report

The object of this report is to document exploration carried out on relinquished sub-blocks from EPM 18477 Kamileroi 5 for the period ending 12 June 2016.

Location

EPM 18477 Kamileroi 5 is located 160 km north of Cloncurry and 160 km northeast of Mount Isa.

Tenure

EPM 18477 Kamileroi 5 was granted on 13 June 2012 over twenty-eight (28) sub-blocks for a period of five years. A joint venture (METJV) between Orbis Gold Limited (formerly Mt Isa Metals or MET; in early 2015, Orbis was taken over by SEMAFO Inc) and Mount Isa Mines Limited (MIM – a Glencore company, with work to be completed by MIM Resource Development Pty Limited - MIMRD), was signed in December 2011. Under the terms of the JV, MIM has earned 51% of the project by spending \$1M over 3 years and has the right to earn an additional 29% by spending a further \$2.5M in the 3 years after the initial earn-in. EPM18477 is one of the six granted tenements that comprise the METJV.

Three (3) sub-blocks are relinquished in this report for the period ending 12 June 2016, and subsequently, the tenement consists of four (4) sub-blocks.

Precis

Exploration completed over the relinquished sub-blocks comprised of eighty-seven (87) mobile metal ion (MMI) soil samples.

Conclusions

Three (3) sub-blocks are considered low priority for further mineral exploration.

Recommendations

Three (3) sub-blocks are recommended for relinquishment.

1. INTRODUCTION

Exploration Permit for Minerals (EPM) 18477 'Kamileroi 5' now comprises four (4) sub-blocks and is located 160km north of Cloncurry in northwest Queensland. This tenement is one of six included in the Joint Venture (METJV) between Orbis Gold Limited (previously Mt Isa Metals Limited or MET; in early 2015, Orbis was taken over by SEMAFO Inc) and Mount Isa Mines Limited (MIM – a Glencore company, with work undertaken by MIM Resource Development Pty Limited - MIMRD).

MET applied for EPM 18477 Kamileroi 5 following review of regional airborne magnetic datasets taken over the Mount Isa Inlier. These magnetic features were interpreted to have potential for iron-oxide copper-gold (IOCG) style mineralisation. This report documents work carried out on the three relinquished sub-blocks from EPM 18477 Kamileroi 5 for the period ending 12 June 2016. Note: All coordinates in this report are in AGD84 zone 54.

2. LOCATION AND ACCESS

EPM 18477 Kamileroi 5 is located 160 km north of Cloncurry, the closest regional centre. Cloncurry is linked to the west with Mount Isa, and to the east with Townsville via sealed roads and a rail line. The project area is located 20 km to the west of the Burke Development Road (Cloncurry to Normanton). Access within the tenement is via station tracks.

The tenement area is of generally low relief, with the dominant current land use of cattle grazing. It is located within the 1:250,000 sheet of Dobbryn (SE54-14) and the 1:100,000 sheet of Kamileroi (6959). Refer to Drawing No. 63192 for location and sub-block details.

3. TENURE

EPM 18477 Kamileroi 5 was granted on 13 June 2012 over twenty-eight (28) sub-blocks for a period of five years. A joint venture (JV) between Orbis Gold Limited and MIM was signed in December 2011. Under the terms of the JV, MIM has earned 51% of the six granted tenements (includes EPM 18477) that comprise the METJV by spending \$1M over three years.

Previous relinquishments were made in 2014 (14 sub-blocks), 2015 (7 sub-blocks) and now 2016 (3 sub-blocks) as part of the tenure schedule. The tenement will subsequently be comprised of four (4) sub-blocks – the relinquished and retained sub-blocks are listed below and shown along with the tenement location in Drawing No. 63192.

Relinquished Sub-Blocks

BIM	Block	Sub-Blocks
NORM	2833	p, t, y
Total		3 Sub-Blocks

Retained Sub-Blocks

BIM	Block	Sub-Blocks
NORM	2833	r, s, w, x
Total		4 Sub-Blocks

4. PREVIOUS EXPLORATION

Previous exploration within the area now occupied by EPM 18477 Kamileroi 5 has been very limited. The tenement contains subtle RTP magnetic fabric, and there are no known historic drill holes within the current tenement area. The depth of cover and more subtle magnetic response in the area is likely to account for the lack of historical exploration.

While BHP were very active during the mid-late 1990s within the Corkwood area, no drilling was completed within their historic EPM 7670 'Kamileroi' that is part of the current EPM 18477 tenure (CR32452).

EPM 10051 Leichardt was held by MIMEX during the mid-1990s. Geophysical surveys were completed by MIMEX including MLEM, gravity and magnetics surveys (CR27044).

5. REGIONAL GEOLOGY

The project area is located to the west of the Boomara Ridge, which is the north western component of the Eastern Fold Belt and is characterised by extensive regions of intensely metasomatised, polydeformed sediments and volcanic rocks.

No areas of Proterozoic outcrop exist within the project area. Distribution of rock types is based on the NWQMP study, which interprets that the area is underlain by Proterozoic sediments belonging to the Corella Formation (1742Ma to 1756Ma) from the Mary Kathleen Group of Cover Sequence 2. The Corella Formation is dominated by carbonate sequences, varying from very fine to fine grained calcareous to dolomitic siltstone to fine arenite. The NWQMP study also interprets that the area is underlain in the west by Proterozoic Argylla Formation units (intermediate and felsic extrusives – Cover Sequence 2 volcanics), Eastern Creek Volcanics (mafic extrusives – Cover Sequence 2), Quilalar Formation units (clastics-dominated sedimentary rocks – Cover Sequence 2) and Pre-Barramundi basement.

The Corella Formation sediments occur around the margin of a Wonga-Burstall aged intrusive. Regionally, the sequences occur within the upper plate of the Wonga detachment fault zone in a region of North-trending faults (which are interpreted as early basement faults, with multiple stages of reactivation, including Wonga and D₃ events). The anomalies are covered by approximately 100m to 200m of younger cover.

The target in the project area is large tonnage breccia or replacement style magnetite or hematite associated Cu-Au mineralisation within strongly altered Cover Sequence 2 sediments (eg Ernest Henry Mine with a pre-mining open-cut resource of 166Mt @ 1.1%Cu & 0.5g/tAu).

6. WORK COMPLETED ON THE RELINQUISHED AREA

6.1 Geochemistry

Mobile metal ion (MMI) soil sampling can be an appropriate technique to identify mineralisation through moderate to thick cover. MIMRD collected eighty-seven (87) MMI soil samples within the three relinquished sub-blocks of EPM 18477 Kamileroi 5 as part of a wider soil sampling programme targeting areas of elevated magnetic signature (Figure 1). The samples were sent to SGS Minerals Laboratory in Perth, WA (assaying code MMI-M). Results are included in Appendix 1.

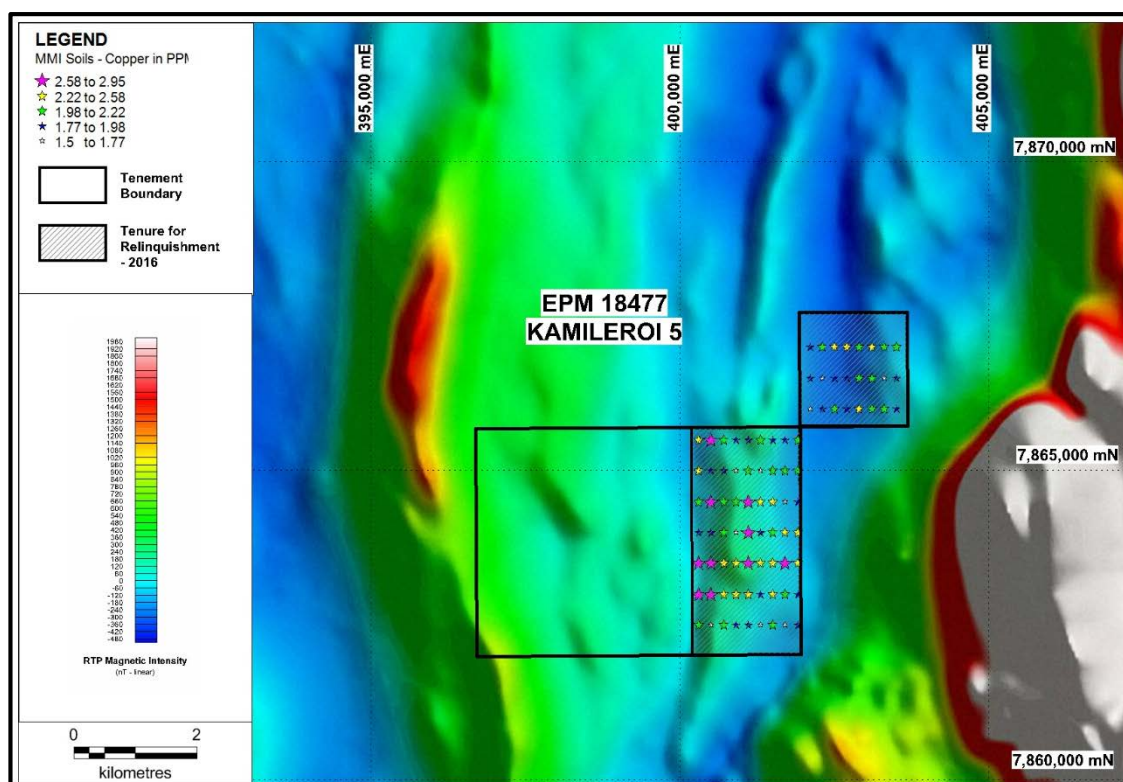


Figure 1: Location of MMI Soil Sample within Relinquished Sub-Blocks of EPM 18477 Kamileroi 5 on an RTP Linear Magnetic Image

7. DISCUSSION

Relinquishment is required by the department as part of the conditions of the grant of EPM 18477 Kamileroi 5. Appropriate assessments have been made and three (3) sub-blocks have been selected for relinquishment based on current understanding of the local geology and geochemical results. Following this relinquishment, EPM 18477 Kamileroi 5 will be comprised of four (4) sub-blocks.

8. CONCLUSIONS

Three (3) sub-blocks have been nominated for relinquishment from EPM 18477 Kamileroi 5 as they are considered low priority for further work.

9. RECOMMENDATIONS

Three (3) sub-blocks are recommended for relinquishment.

10. REFERENCES

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DRAWINGS

APPENDICES