

EL 25643 – MT ISABEL AND EL 25653 – ACACIA BORE SAMMY JV PROJECT GROUP TECHNICAL REPORTING STATUS

ANNUAL TECHNICAL REPORT

For the Period

20th August 2010 to 19th August 2011

Compiled By

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MAP REFERENCE: Illogwa Creek 250K - Sheet SG53/15

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SUMMARY

This report summarises work completed on Mithril Resources Sammy Project Exploration Licences (EL 25643 and 25653) for the year ending 19th August 2011.

The project area is located approximately 160 km east of Alice Springs, south of the Plenty Highway and straddles the Illogwa Creek 250,000-scale map sheet.

Work completed over the tenement area during the reporting period included the following:

- 164 Aircore drill holes for 2915 m
- 2 Reverse Circulation (RC) drill holes for 320 m
- 133 rock chip samples
- Geological mapping
- 870 soil samples
- Ground gravity survey
- VTEM Survey: 110 line kilometres of data was collected
- 2 drillholes were surveyed for DHEM

Work completed during the year identified anomalous gold in rockchip and shallow aircore drilling at the Percy Prospect that requires further work. RC Drilling of two offhole conductors at the Kevin Darling Prospect did not intersect anything obviously conductive.

Geological mapping on EL25643 identified extensive hematite – silica altered granites with elevated copper to 500ppm. A 400m x 400m gravity and soil sampling program on the tenement identified coincident gravity and Cu anomalies. These will be followed up in the next year of tenure.

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1.0 INTRODUCTION

This report summarises work completed on Mithril Resources Sammy Project Exploration Licences (EL 25643 and 25653) for the year ending 19th August 2011. These two tenements comprise the Sammy Joint Venture.

The Sammy Project is located approximately 160 km east of Alice Springs. Access to the area is via the Plenty Highway, which passes east-west north of the project area (Figure 1). The tenement is contiguous with Mithril's Huckitta Project.

Mithril entered into a Joint Venture with Cazaly Resources as they interpreted that mafic and ultramafic rocks may extended onto the Sammy Project and that these rocks were prospective for magmatic Ni/Cu/PGE sulphides. This interpretation was proven correct during the last two years of exploration.



Figure 1: Location of Sammy Project EL 25643 and 25653

2.0 TENURE

Leasing details for the project are detailed in Table 1 below. Mithril Resources entered a Heads-of-Agreement with Sammy Resources to farm-in to EL 25643 and 25653. The agreement covers all minerals and Mithril may earn an 80% interest in the tenements by completing expenditure of AUD\$2M within 5 years of the commencement date. Prior to reaching this agreement Sammy Resources have held the tenement in their own right.

Tenement	Grant date	Current size(blocks)
EL25653	19/08/2007	225
EL25643	25/07/2007	218

Table 1:	Tenement Status
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EL 25643 was reduced by the required 50 % at the end of Year 2 to 218 sub blocks.

3.0 GEOLOGY

3.1 Regional Geology

The Project lies within Illogwa Creek 250K Sheet. The Project area is located along the north eastern margin of the Amadeus Basin in a zone of complex deformation and interaction between basement structures and the sedimentary sequence.

The Amadeus Basin sediments overlie the metamorphic rocks of the Arunta Block and postdate the intrusion of the Harts Range pegmatites and dolerites inferred to be part of the Stewart Dyke Swarm. The stratigraphy and geological evolution of the basin is well document in Korsch and Kennard (1991).

The Amadeus Basin in the Illogwa Creek area has a number of important geological differences to the northern margin of the Amadeus Basin south and west of Alice Springs:

- It is characterized by a thin-skinned tectonic style (thrusts and nappes) with intense folding and thrusting that contrasts with a thick-skinned tectonic style further to the west.
- Only the lower stratigraphic section is preserved (up to the Arumbera Sandstone) and lithological facies are markedly different to those further east.
- There is a wide zone of interaction between the sedimentary sequence and basement structures that verge to the south and southwest.
- Alice Springs age shear zones deforming the basin sequence are associated with widespread greenschist facies retrogression or alteration and these zones are similar to those associated with gold mineralisation at Winnecke and Arltunga (Mackie, 1986; Dirks and Wilson, 1991).

The margin of the basin is structurally complex. In the Oolera Fault Zone, the Heavitree Quartzite, Gillen Member of the Bitter Springs Formation and rocks of the underlying Arunta block are inter-sliced in numerous thrust blocks. Basement cored folds may represent the cores of thrust nappes. A second major zone of overthrusting coincides with the Illogwa Schist Zone and is inferred to represent the lowest thrust-nappe of the Arltunga Nappe Complex (Shaw and Freeman, 1985; Mackie, 1986). Slivers of Heavitree Quartzite have been overridden by retrogressed schists in this zone and the alteration (retrogression) and deformation is similar to that spatially associated with mineralisation at Arltunga (Mackie, 1986; Dirks and Wilson, 1991) and is coeval with that at the base of the White Range Nappe on the Alice Springs 1:250K sheet. Quartz veins with associated sulphides are common in these zones and a single gold bearing copper occurrence in quartz veins in the basement is reported in the vicinity of the Hale River (Shaw and Freeman, 1985). Associated deformation in the cover sequence is complex and appears to be thin skinned in character.

The Arunta Province has been subjected to several regional orogenic events. Significant gold mineralization occurs in extensively deformed zones of faulting, shearing and greenshist metamorphism marking the boundary between the Arunta Province and Amadeus Basin.

3.2 Project Geology

The Sammy Project area is predominantly covered by a veneer of aeolian and colluvial sand and gravel. Strongly weathered biotite, garnet-biotite and quartzofeldspathic gneiss, calcsilicate rocks and amphibolite are sporadically exposed, particularly in the northern portions of the project area. In addition Mithril has located a number of Ni-Cu-PGE rich mafic intrusions in this northern area which have been the focus of exploration to date. There are numerous ferricrete, calcrete and silcrete rises, some of which may be indicative of the targeted mafic and ultramafic rocks. No detailed mapping has been undertaken in the area with the best regional maps compiled prior to detailed aeromagnetics and the current understanding of the geological history.

The area is considered prospective for Ni-Cu-PGE mineralisation associated with mafic and ultramafic intrusions.

More recently extensive haematite – silica altered granites were identified during remapping of the Limbla 100K sheet and altered granites were located on EL25643. This alteration is extensive and may be indicating a previously unidentified IOCG mineralising event.

4.0 HISTORICAL EXPLORATION WORK COMPLETED

There have been several explorers in the region previously, exploring a range of commodities including gold, uranium, base metals and diamonds. Some of the more significant exploration efforts are summarised below. Gutnick Resources took a total of 27 stream sediment samples in the main regional program covering EL 10269 which partially overlaps EL 25653. Only the top 5 cm of sand from across the active stream channel was sampled. A sample density of 1 sample per 5 sqkm was used. The best result was 0.25 ppb Au. Rio Tinto explored the Casey Bore area in 1998 covering the eastern Amadeus Basin, an intracratonic basin which began to form about 900 Ma, and the Palaeoproterozoic Arunta Block. The contact between the Arunta Block and the Amadeus Basin in the north of the tenement area is marked by a series of east-west trending thrust zones. The southern end of the Woolangi Lineament, a northwest - southeast trending structural zone, marked in the area by a basement high, the Casey Inlier, also occurs within the tenement area. Rio conducted detailed geophysical surveys, stream sediment sampling, RAB and RC drilling. Anomalous Cu, Pb, Zn was returned from several phases of drilling.

4.1 Mithril Resources Work Completed 2009

During the 2008-9 reporting period Mithril undertook field work which included

- Reconnaissance geological mapping
- Rock chip sampling
- Minor soil and stream sediment sampling.
- In Addition a VTEM survey covering ~128 sqkm at 200 m line spacing was completed.

These programs identified multiple gabbroic intrusions containing magmatic Ni/Cu sulphides. The VTEM survey identified a number of targets that were followed up in the 2009-10 reporting year.

4.2 Mithril Resources Work Completed 2010

Work completed over the tenement area during the 2009-2010 reporting period included the following:

- Airborne Geophysical surveying (VTEM covering 24 sqkm at 200 m line spacing)
- Ground EM (4 lines for 5 km)
- Geological mapping
- Rock chip Sampling (7 samples)
- Heritage surveys
- RC Percussion Drilling (5 holes for 536 m)

5.0 MITHRIL WORK COMPLETED 20TH AUGUST 2010 TO 19TH AUGUST 2011

5.1 Drilling – Aircore Drilling

An aircore drilling program by Drill North completed 164m and commenced in April 2011 and was completed in early May 2011. This program concentrated on following up regional geophysical and geochemical targets identified from previous surveys on EL25653.

A number of weak base metal and gold anomalies were detected from this work and will be followed up in the next year of tenure.

Two RC percussion drillholes were also completed targeting offhole conductors at the Kevin Darling Prospect. No significant results were returned from these drillholes and the conductors are still unexplained.

All data relating to the aircore programs are included in Appendix 2 to 6. All drillhole locations are displayed in Figure 2.

Chemical analysis:

Chemical analysis was undertaken by ALS. Samples were delivered to the Alice Springs sample preparation facility where the samples were crushed and pulverised. Sample pulps were them sent to ALS's Perth laboratory where geochemical analysis was undertaken.

Samples from the 2011 program were analysed using ALS's 'ME-ICP43' and 'Au-TL43'.



5.2 Surface Sampling

133 surface samples (rock chips) were collected during mapping and sampling campaigns that have been undertaken at various times throughout the reporting period.

This sampling concentrated around the Ni-Cu-Au Percy Prospect on EL25653 and around the Bullhole Dam area on EL25643 where haematite altered granites were identified. Significantly elevated Ni-Cu-Au was returned from the Percy Prospect and up to 500ppm Cu was returned from Bullhole area in rock samples. These areas will be a focus for future exploration activities.

All locations for surface samples were recorded using GDA94 Zone 53 (Figure 3). Location and assay data is included in Appendix 7 and 8, respectively.

Chemical analysis of the rock chip samples was undertaken by ALS. Samples were delivered to the Alice Springs sample preparation facility where the samples were crushed and pulverised. Sample pulps were them sent to ALS's Perth laboratory where geochemical analysis was undertaken.

All rock and samples were analysed using ALS's 'ME-ICP61' or ALS's 'ME-ICP41' and 'Au-AA25 Method'. Where Pt or Pd is reported Au, Pt and Pd were analysed using ALS's PGM-ICP23 method.





5.3 Soil Sampling

Soil sampling (-5mm + 1.6mm fraction) was completed by the Haines gravity crew on a 400m x 400m spacing on EL25643 when completing the gravity survey. A number of weak copper and gold anomalies were detected and will be followed up in the next reporting period. Maximum values recorded are 127ppm Cu and 8ppb gold.

Samples were analysed by ALS in Perth using the ME-ICP43 and Au-TL43. All location and analytical results are contained in Appendix 9 and 10.



Figure 4: Soil sampling locations

5.4 Geophysics – Ground Gravity

1032 gravity stations were read on EL25643 as located in Figure 5. These data were collected by Haines surveys and a full report is contained in Appendix 11 with all data contained in Appendix 12. A number of anomalies were detected as shown in Figure 6 and it is planned that these be followed up on the ground in the coming months.



Figure 5: Gravity station locations

5.5 Geophysics – VTEM

One airborne geophysical EM survey was undertaken during the reporting period. The survey was conducted from the 5th to the 22nd May 2011.

110 line kilometres of data was collected over the Bullhole Dam area and some weak conductors were identified, Figure 6.

A report and all data from the VTEM survey are included in Appendix 13 and 14, respectively.



Figure 6: Location of VTEM survey area on Gravity and LANDSAT image

5.6 Geophysics – DHEM

Downhole EM was completed on two drillholes at the Kevin Darling Prospect. Anomalies were detected and these were followed up by two RC percussion drillholes (see section 5.1). Data for each hole is included in Appendix 15.

6.0 CONCLUSIONS AND PLANNED WORK 2011-12

Work completed has further enhanced the Project area to host a number of mineral deposits including Ni-Cu, Au and IOCG deposits. Work is expected to increase in the next year of tenure, particularly on EL25643 where evidence of an extensive IOCG mineralisation province may be unfolding. This work will include further geophysical surveys, geological mapping and sampling and drilling following heritage surveys.

7.0 REFERENCES

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