Lake Rosebery EL 41/2010

ANNUAL REPORT

FOR THE PERIOD ENDING 1st JUNE 2019

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1. SUMMARY

No work was completed on EL41/2010 Lake Rosebery for the reporting period 2nd June 2018 to 1st June 2019. As discussed in the 2018 report MMG has reinvigorated within and near mine exploration. MMG are exploring for the extensions of the Rosebery system to the north and to follow up the high-grade intersection of 9.8 metres @ 8.3% Zn, 4.5 % Pb, 0.4 % Cu, 514 g/t Ag and 5.5 g/t Au located on the western side of the Rosebery fault and located close to the boundary of EL 41/2010.

MMG requested and was granted a 3-year extension with expenditure of 250K. This is to allow the exploration on the northern part of the mine lease to be completed before a full assessment of southern part of EL41/2010 can be completed.

Work completed on the northern part of ML 28M/1993 include A first pass diamond drilling program for a total of 5 holes for 4473 metres. These holes along with 5 historical holes have been cleaned out to allow a large Radio Imaging Survey. This survey is in progress now.

2. INTRODUCTION

Access to the tenement is via the Rosebery Mine lease 28M/1993 south of Lake Rosebery (Figure 1). A network of 4WD tracks gives access for near mine extension of the Rosebery ore body over the top of Mt Black. The Pieman Road enables access to areas north of Lake Rosebery through a series of unsealed Hydro Electric Commission roads.

MMG's main exploration target within EL 41/2010 is Rosebery style Zn–Pb–Cu–Au rich VMS subsurface seafloor replacement style mineralisation and/or Hellyer type seafloor mound-type mineralisation hosted in the Central Volcanic Complex (CVC) of the Cambrian Mount Read Volcanic (MRV) belt. The tenement covers a generally N-S striking section of the CVC.

MMG recognise the potential of the Lake Rosebery tenement for near mine resource extension of the Rosebery deposit. MMG Exploration in conjunction with the Rosebery Mine intends to continue deep exploration diamond drilling, geophysical surveys and geologic mapping to resolve old and new geologic interpretations on the northern Mine Lease and Lake Rosebery EL. Deep exploration drilling of the northern ML is ongoing.

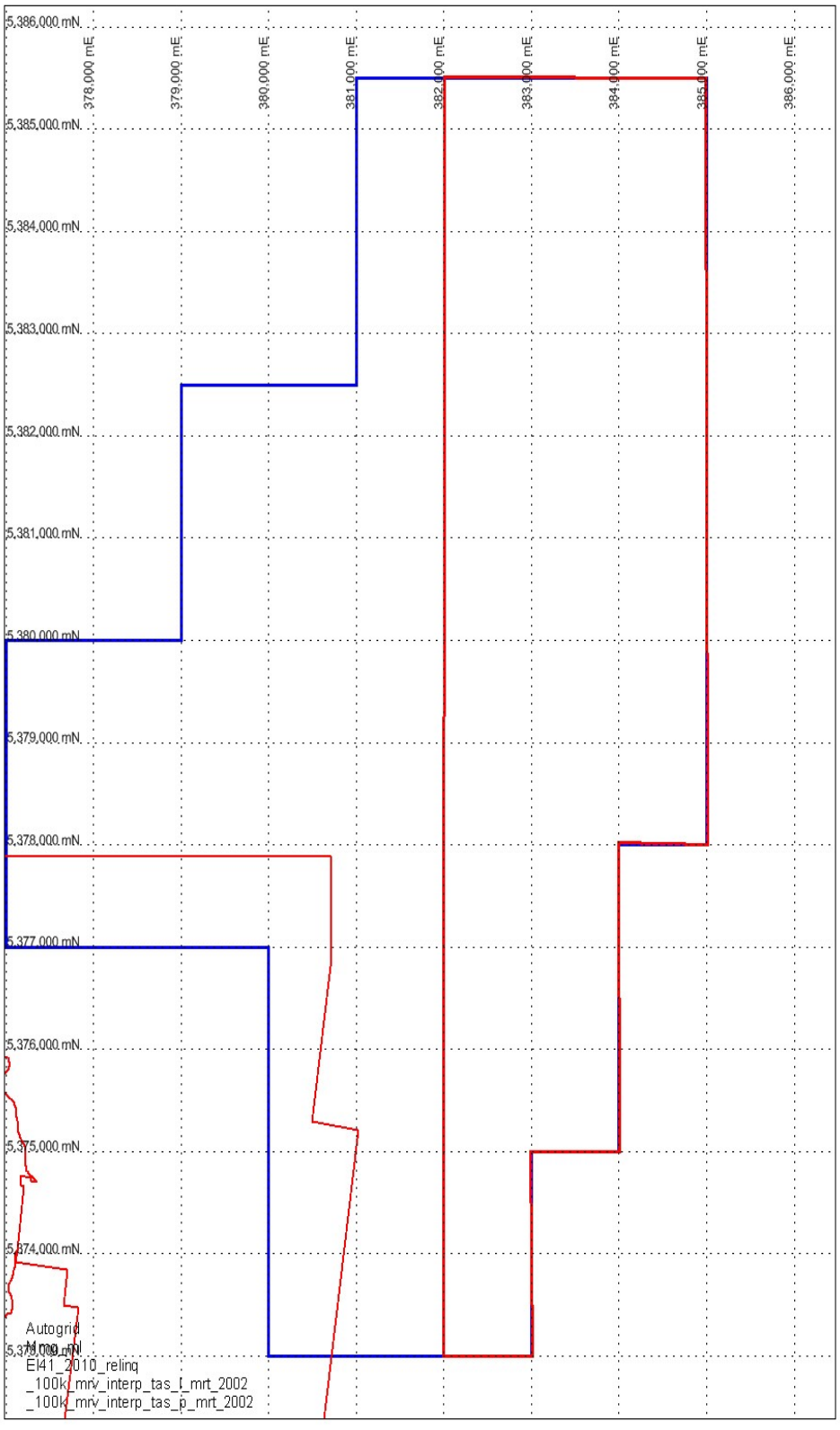

Figure 1. **Location of EL41/2010 Lake Rosebery**

3. LAND TENURE

EL 41/2010 Lake Rosebery (58 sq. km- Figure 1) was granted to MMG Exploration Pty. Ltd. in 2011 for a period of 5 years. EL 41/2010 is contiguous with the northern boundary of the Rosebery Mine Lease 28M/1993. One-year extensions were granted in 2016 and 2017 and in 2018 MMG applied for and were granted a 3-year extension after a reduction in size of the tenement to the 33km^2 immediately north of the mine lease 28M/1993 (Figure 1).

Land covered by EL 41/2010 is crown land designated as State Forest or informal reserves including parts of the Boco Creek and Mackintosh Forest Reserve areas. A small section of the Murchison Regional Reserve lies in the South of the tenement. All of the area contained within the tenement boundary is available for exploration under the Mineral Resources Development Act, 1995.

4. GEOLOGY

4.1 REGIONAL GEOLOGY

Western Tasmania has been subject to complex deformation, igneous activity and sedimentation from the Late Proterozoic to the present. The Dundas Trough exerted a major control on the pre-Carboniferous geology of Western Tasmania.

Around 700Ma a shallow rift basin developed between the northwest and eastern basement blocks of dominantly Proterozoic meta-sediments. Early basin infill consisted of the Oonah Formation and Success Creek Formation siliciclastic and carbonate sediments. Continued rifting in the Late Proterozoic-Early Cambrian (580-550Ma) resulted in the deposition of a thick sequence (>5km) of tholeiitic volcanics and associated sediments of the Crimson Creek Formation.

During the Middle Cambrian (515-510Ma) a sequence of mafic-ultramafic complexes were emplaced into the western margin of the Dundas Trough. Ultramafic detritus in clastic rocks suggests they were emplaced towards the top of or above the Crimson Creek Formation and were subject to Middle Cambrian erosion (Corbett, 1989). Berry and Crawford, (1988) proposed an obduction model for the emplacement of the mafic-ultramafic complexes and associated sedimentary sequences where a fore arc terrain was thrust over a passive continental margin.

Post collision extensional tectonics produced troughs into which the Cambrian Dundas Group and Mt Read Volcanics (MRV) were deposited. The Dundas Group forms a complex sequence of locally derived sediments and volcanics along the western margin of the Dundas Trough.

The MRV form a 200km long by 20km wide broadly north-south trending belt adjacent to and in some areas on-lapping and intruding Proterozoic basement rocks on the eastern margin of the Dundas Trough. The volcanics include dominantly calc-alkaline intermediate to felsic lavas, sub-volcanic porphyries and granites, volcaniclastics and basement-derived sedimentary rocks. The MRV is one of the most mineral rich areas in the world, hosting the Rosebery and Hellyer world class volcanic hosted massive sulphide (VHMS) deposits as well as several other smaller VHMS deposits (Que River and Hercules). The MRV also host volcanogenic gold and copper deposits including the Mt Lyell Field and the Henty Gold Mine. Several regional fault structures subdivide the MRV including the Rosebery and Henty Faults.

The Late Cambrian Delamerian orogeny resulted in localised uplift and erosion of the Tyennan Block and subsidence of the Dundas Trough, forming structural and erosional basins that were subsequently filled with Late Cambrian to Devonian Wurawina Supergroup sedimentary rocks.

In the Rosebery region, the MRV are overlain by a late Cambrian – early Ordovician marine and fluviatile sequence of quartzwacke, polymict sandstones, siltstones, shales and polymict conglomerates (Rosebery Group/Stitt Quartzite to the west of the MRV and Owen Group to the east; Corbett, 2002).

The Middle Devonian Tabberabberan Orogeny encompassed polyphase deformation (Williams, 1978). The development of folding, cleavage and regional thrusts in lower Palaeozoic rocks were associated with this event. Several small to medium sized post tectonic I and S type granites intrude the early lithologies at shallow levels. A number of styles of mineralization are associated with the Devonian granites including tin-tungsten and lead-zinc-silver. The carbonate replacement and skarn Sn mineralisation at Renison Bell, Mount Bischoff and Mt Lindsay, the Pb Zn Ag vein deposits of Zeehan and, possibly, the Tullah Fields are associated with the Devonian granites.

In the Quaternary extensive unconsolidated glacial and fluvioglacial deposits up to >100m thick accumulated (Augustinius and Nichol, 1999). These deposits now obscure parts of the Palaeozoic geology.

4.2 LOCAL GEOLOGY

The Lake Rosebery licence is located along strike immediately north of the Rosebery Mine and is mapped as containing the northern continuation of the Rosebery stratigraphy. The Rosebery deposit is hosted within the upper Central Volcanic Complex (CVC) of the MRV. The CVC at Rosebery has been subdivided into three main stratigraphic units: the footwall pumice breccia, the host rocks and a fault bounded sequence of dominantly coherent rhyolitic volcanics (Mt Black Volcanics). The younger White Spur Formation unconformably overlies the CVC.

The MRV architecture is controlled by major N-S trending fault zones including the Rosebery Fault which separates the MRV from the underlying Rosebery Group, and the Mt Black Fault which has thrust the older Mt Black Volcanics over the host sequence and White Spur Formation. The Henty Fault dissects the MRV in the east of the licence area. The CVC is strongly foliated, with the

foliation and bedding essentially parallel, striking north-south and dipping moderately east at approximately 40-50 degrees.

Central Volcanic Complex

The CVC is dominated by proximal volcanic rocks (rhyolite and dacite flows, domes and cryptodomes and massive pumice breccias) and andesite and rare basalt (lavas, hyaloclastites and intrusive rocks) deposited in a shallow marine environment (Seymour et al., 2006). Specific stratigraphic/volcanic sequences of the CVC relevant to Rosebery are discussed below.

The Footwall Pumice Breccia (CVC)

The Footwall pumice breccia consists of a massive, uniform sequence of feldspar porphyritic pumice lithic and crystal vitric mass flows which lie below the ore horizon at both the Rosebery and Hercules deposits (Smith & Huston, 1992). The Footwall pumice breccia is intensely sericite altered and strongly foliated.

The Host Rocks (CVC)

The host sequence at Rosebery and Hercules consist predominantly of dacitic to rhyolitic pumice lithic mass flow breccias, grading into vitric siltstone and quartz crystal sandstone.

Localised small, quartz-feldspar and feldspar phyric porphyries intrude the host sequence in the Rosebery Mine. A discontinuous black shale horizon marks the top of the Rosebery Host Sequence.

Basaltic to andesitic volcanics become more prevalent north of the Rosebery Mine Lease on the Lakeside EL increasing in frequency northwards towards the Que-Hellyer Deposits.

White Spur Formation

The White Spur Formation disconformably overlies the host sequence and consists of several black shale horizons and graded, polymict mass flow breccias and medium grained crystal-lithic volcaniclastics and quartz-feldspar rhyolite intrusives.

The Mt Black Volcanics

The older Mt Black Volcanics are located east of the CVC and White Spur Formation, thrust over the western volcanics and Mineralised sequence by the east dipping Mt Black Fault. The Mt Black Volcanics consist of massive to brecciated lavas of dacitic to andesitic composition with interstitial volcaniclastic units.

5. WORK COMPLETED 2018 - 2019

No work was completed during the period.

6. PREVIOUS EXPLORATION

Previous exploration is documented in the 2018 report.

7. ENVIRONMENTAL

There was no environmental or rehabilitation activities conducted on EL 41/2010 during this reporting period.

8. CONCLUSIONS AND RECOMMENDATIONS

EL41/2010 Lake Rosebery is of strategic importance to the future development of the Rosebery Mine. The EL is mature and requires annual term of extension applications to maintain tenure. Work is currently occurring close to the southern boundary of this tenement on the Rosebery Mine lease with a plan to extend this work into the tenement in the next two years.

9. EXPENDITURE

Expenditure for the reporting period 2017-2018 was $8,333 as outlined in the table below.

EXPENDITURE TABLE	
Administration and Licence Fee costs	$8,333
Expenditure Total	**$8,333**

Table 1: Expenditure for Reporting Period ending 1 June 2019

10. REFERENCES

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