OM Manganese Ltd

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EL 26552
Helen Springs Project

Annual report for EL 26552 for the period 2nd September 2009 to 1st September 2010

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Target Commodity: Manganese
Date of report: 02/09/2009
Datum/zone: GDA94 MGAz53
250k mapsheet: Helen Springs SE 53-10
100k mapsheet: Helen 5661
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Abstract

A detailed mapping program (at 1:20,000 scale) of the Renner Springs and Helen Springs resulted in geological interpretations of the far eastern and western sides of tenement EL26552. Compilation of historical data from publicly available mineral exploration company reports also commenced during the report year.
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1 Introduction

1.1 Location and tenure

Exploration Licence (EL) 26552 was granted on September 2\textsuperscript{nd}, 2008. The licence is held jointly by OM (Manganese) Ltd (50\%) and Neil Henry Scriven (50\%).

The licence covers 240 blocks and forms a bridge between OMM’s ‘Helen Springs Project Area’ tenements in the east and the ‘Renner Springs Project Area’ tenements in the west as shown in Figure 1. These project areas are to the northwest of OMM’s Bootu Creek Manganese Mine.

Access to the licence is by various station tracks and the licence is bisected by the Stuart Highway.
Figure 1: Plan showing the location of EL26552 in relation to Bootu Creek Manganese Mine.
2 Geology

The exploration licence dominantly hosts rocks of the Mesoproterozoic aged Renner Group with minor occurrences of Cambrian aged Helen Springs Volcanics (both the volcanic lithofacies and the Muckaty Sandstone Member) and Cretaceous sediments. The published geological map for the licence comprises Figure 2.

The prospective Proterozoic rocks are also covered in part by Cenozoic alluvium, colluvium and aeolian sand. There are no identified manganese outcrops on the exploration licence.

Figure 2. Geological map showing the location of known outcrop and the extent of recent cover in EL26552. Geological data is taken from the published Helen Springs 1:250,000 geology mapsheet (Hussey et al, 2001)
3 Previous Exploration Activity

Exploration activities conducted during the first year of tenure consisted of an aeromagnetic and radiometric survey covering the entire tenement, as well as tenements to the east and west of EL26552, with lines spaced 150m apart and a couple of 1:20,000 scale aerial photo surveys on either side of the tenement – one over the main Renner Springs project area, the other over the combined Helen Springs and Bootu Creek project areas. The individual aerial photos in each area were orthorectified and seamlessly mosaiced. The aeromagnetic data was sent to Vector Research for reprocessing using the TargetMap algorithms.

4 2009-2010 Exploration Activity

Exploration activities conducted during the past year included:

• a review of historical open file reports and collation of the data within them,
• detailed field mapping at 1:20,000 scale

4.1 Historical report review and data collection

In late 2008, all available open file reports relating to historical exploration activity over the tenement area now held by OMM were requested from the NTGS.

The reports are being reviewed chronologically and, where available and possible, the drilling and surface sample data within them is being extracted and assembled in a historical database, and geological maps, local grid systems and other GIS data is being digitised. This process is ongoing, with approximately 80% of the 46 reports reviewed.

4.2 Mapping

Contact prints made from the previous year’s aerial photography were used as base maps for a regional mapping project at 1:20,000 scale across the Renner Springs and Helen Springs projects, including small portions of EL26552 along its eastern and western edges. The mapping was undertaken in late winter to mid-spring 2009 and the geologist, Tim Blake of Micraster Geological Services, was asked to pay particular attention to structure and alteration (including mineralisation) and their relationship to stratigraphy. The digitisation of the data was completed in mid February 2010 and the results of the subsequent interpretation of findings presented to OMM in March.

A map showing his geological interpretation over the tenement area is included as Plate 1 and a separate detailed legend for the map as Plate 2. The MapInfo layers generated by Blake were included in the EL9975, EL9998, EL23459 & EL23624 Renner Springs Project 2010 annual report as Appendix 1.

No manganese outcrops or favourable geology for either of these project areas were found on EL26552.
5 References


Mostly medium- to fine-grained sandstone. Less abundant coarser and finer symmetrical ripple marks and mudflake breccias. Less common Coarse- to medium-grained sandstone. Parallel very thinly to thinly bedded Ferruginous fine- to very fine-grained sandstone and mudstone. (NTGS Manganese containing fragments of laminated chert. (NTGS Carruthers Fm). Stromatolites. (NTGS Carruthers and Shillinglaw Fms). Cherty mudstone. Laminated to thinly bedded (NTGS Shillinglaw Fm). Conglomerate. Clasts mm-sized to 20 cm, largest 50 cm, dominated by wavy lamination. Locally there are cavities on weathered surfaces (after (NTGS Shillinglaw Fm). Very coarse-grained granular sandstone, commonly pebbly. Very coarse- to coarse-grained sandstone. Most clasts have no preferred orientation dolomite. Rare stromatolites. Bedding weathers as 10–100 cm steps that are very fine-grained sandstone. Most clasts have no preferred orientation dolomite. Rare stromatolites. Bedding weathers as 10–100 cm steps that are strongly silicified, locally brecciated fine grained sedimentary rock rocks. Essentially quartz and clay. Also includes relatively unaltered desiccation cracks. (Includes NTGS Gleeson Fm and Willieray Fm). Coarse- to medium-grained sandstone, locally finer grained. Mostly thinly bedded. “Nodular” and poddy textures, bedding parallel brecciation. (NTGS Willieray Fm). Fine- to very fine-grained sandstone, siltstone and mudstone. Commonly clay stratigraphic relationships uncertain. (NTGS Powell Fm). Very coarse- and coarse-to medium-grained sandstone. Mostly cross bedded. Sets 5-20 cm thick. Local granule quartz conglomerate bed(s). Contact with underlying units not seen therefore summary of the dominant exposed rock type. Notes