



OM Manganese Ltd

Title holder/operator: OM (Manganese) Ltd (100%)

Tenement Manager: Australian Mining and Exploration Title Services Pty Ltd (AMETS)

EL28604 Renner Springs Project

Annual Technical Report for period 27th Sept 2018 to 26th Sept 2019 (Year 8)

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Abstract

Exploration licence EL28604 makes up the southern portion of OM (Manganese) Ltd Renner Springs Project area and is largely composed of land previously held under EL23459 (expired). EL28604 has several occurrences of manganese mineralisation identified within its boundary.

There was only minor exploration activity on EL28604 in 2018/19. The proposed work program was constrained by delays in the approval of the 2019 Exploration MMP (0629-01), forwarded to the DPIR in May 2019. A copy of the Access Agreement with Helen Springs Pastoral Station was forwarded to the DPIR in June 2019.

The only exploration activity carried out was the grading of the Helen Springs borehole access track for Willieray Bore and minor prospecting of a geophysical anomaly at Carruthers North prospect located at 7966000mN, 366100mE. Two rock samples (one from nearby creek and the other from outcrop) returned 52.2% Mn and 40.4% Mn respectively.

The proposed exploration program on EL28604 for 2018/19 has been deferred to 2019/2020.

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Electronic file list

File Name	File type	Content
EL28604_2019_A.pdf	PDF	This report

1 Introduction

Exploration licence EL28604 was granted on the 26th of September 2011 covers an area of 87.5 sq km (29 blocks).

The EL is located approximately 10 kilometres southwest of Renner Springs Roadhouse and 160 kilometres north of Tennant Creek. Figure 1 shows the location of the licence in relation to the Bootu Creek manganese mine and local stations.

The western boundary of the exploration licence is approximately 20 km east of the Alice Springs-Darwin railway. Access to the exploration licence from Stuart Highway is via a dirt road used to service the natural gas pipeline, running alongside the northern boundary fence of Muckaty station.

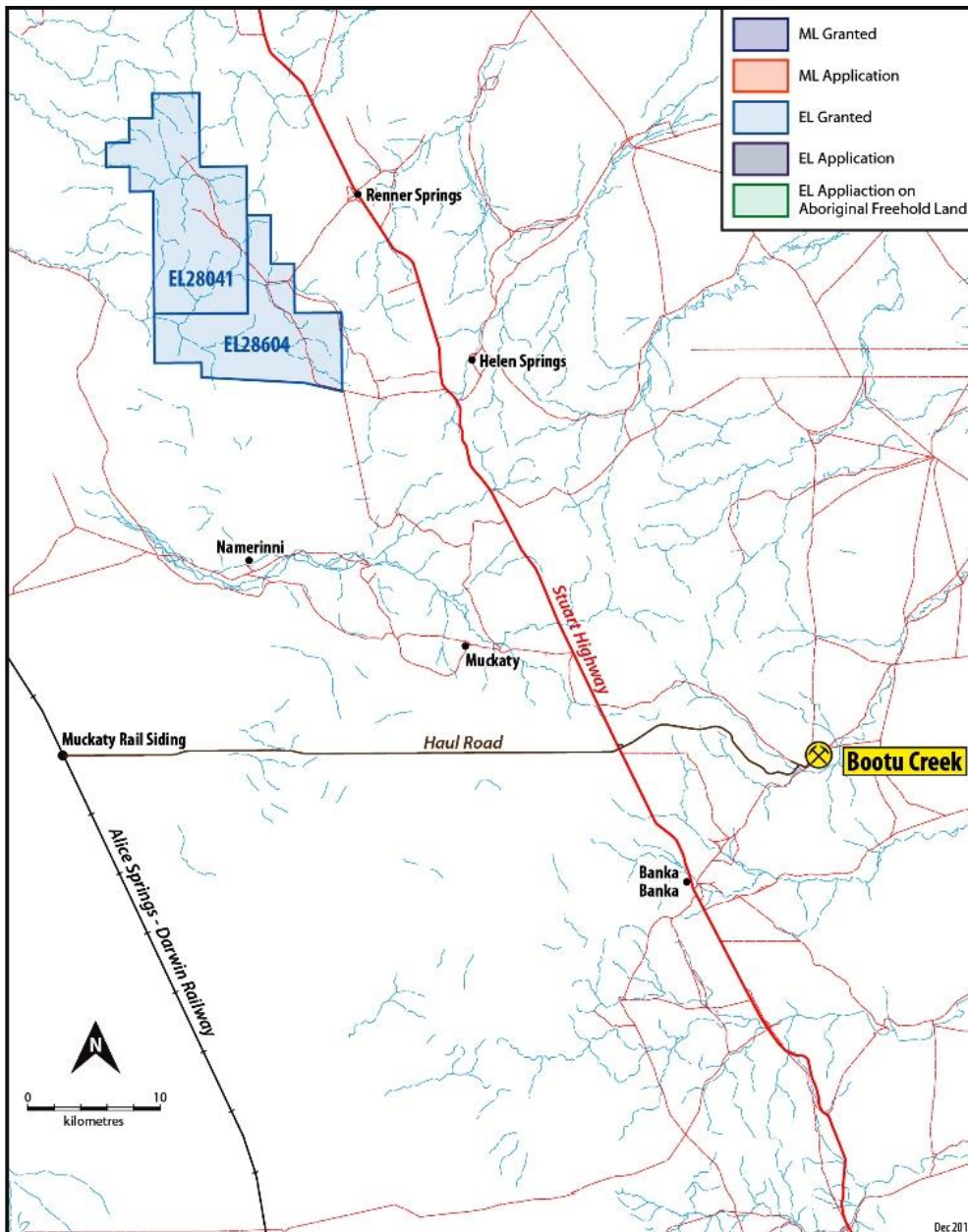


Figure 1. Location plan and access tracks for EL28604

2 Geology

The Renner Springs project is predominately located within the Namerinni Group in the Ashburton Province of the Tennant Creek Inlier. The favourable manganese bearing horizon is hosted principally by the Shillinglaw Formation.

The most significant manganese occurrence in EL28604 is located in the south-east portion of the Licence and referred to as Carruthers (R10) prospect. The manganese mineralisation does not outcrop and was first intersected in percussion drill hole number W38, drilled by Keys Resources NL intersecting 9m @ 36.7% Mn (Ward 1987), see Figure 3.

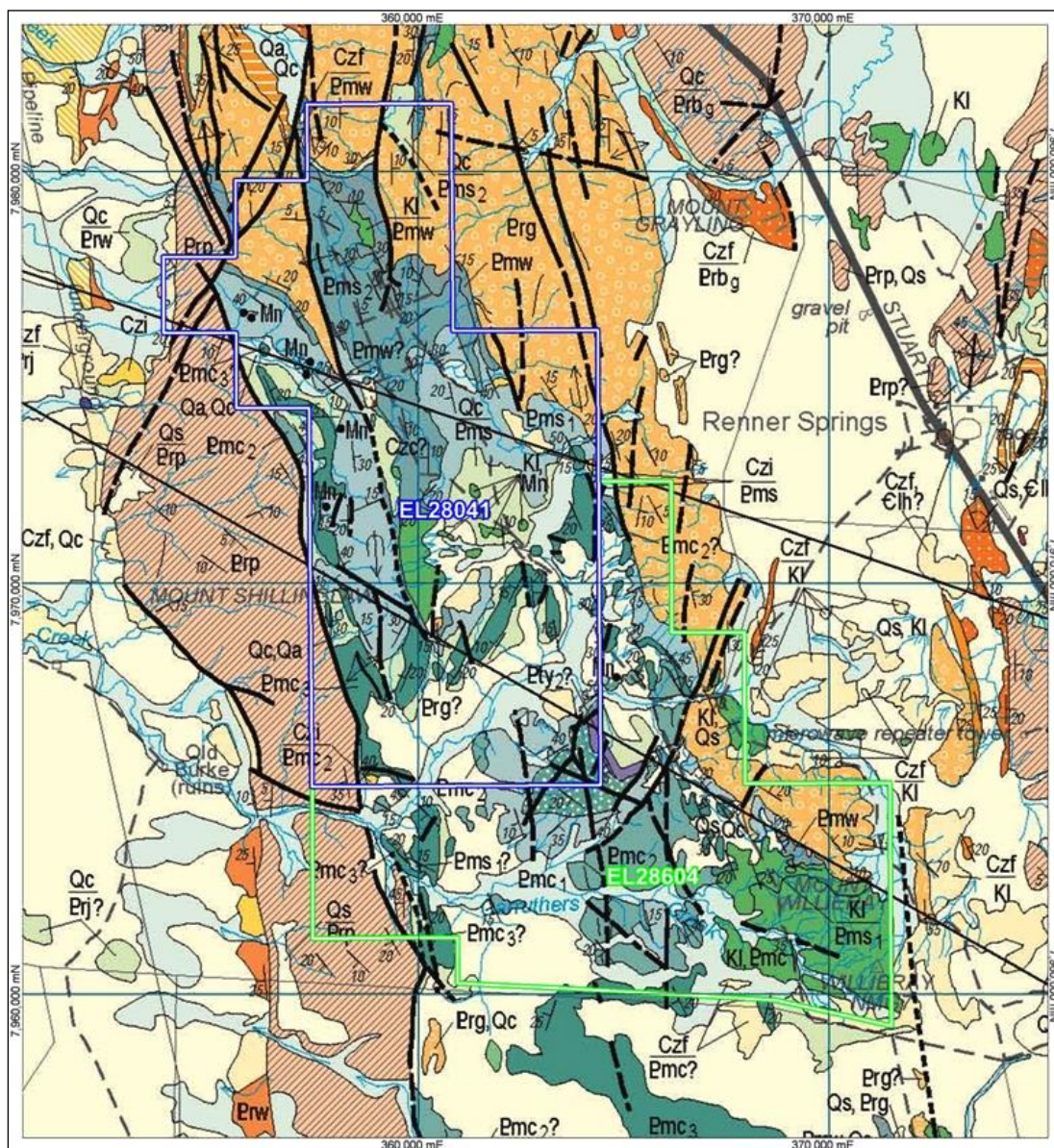


Figure 2. Geology from the NTGS 1:250k Helen Springs sheet, *Hussey et al 2001*.

Physiography of the exploration licence consists of hilly terrain in the east of the exploration licence with the highest point at Mount Willieray (361m). Several incised creeks head west across the exploration licence before dissipating into the sand covered plains to the west.

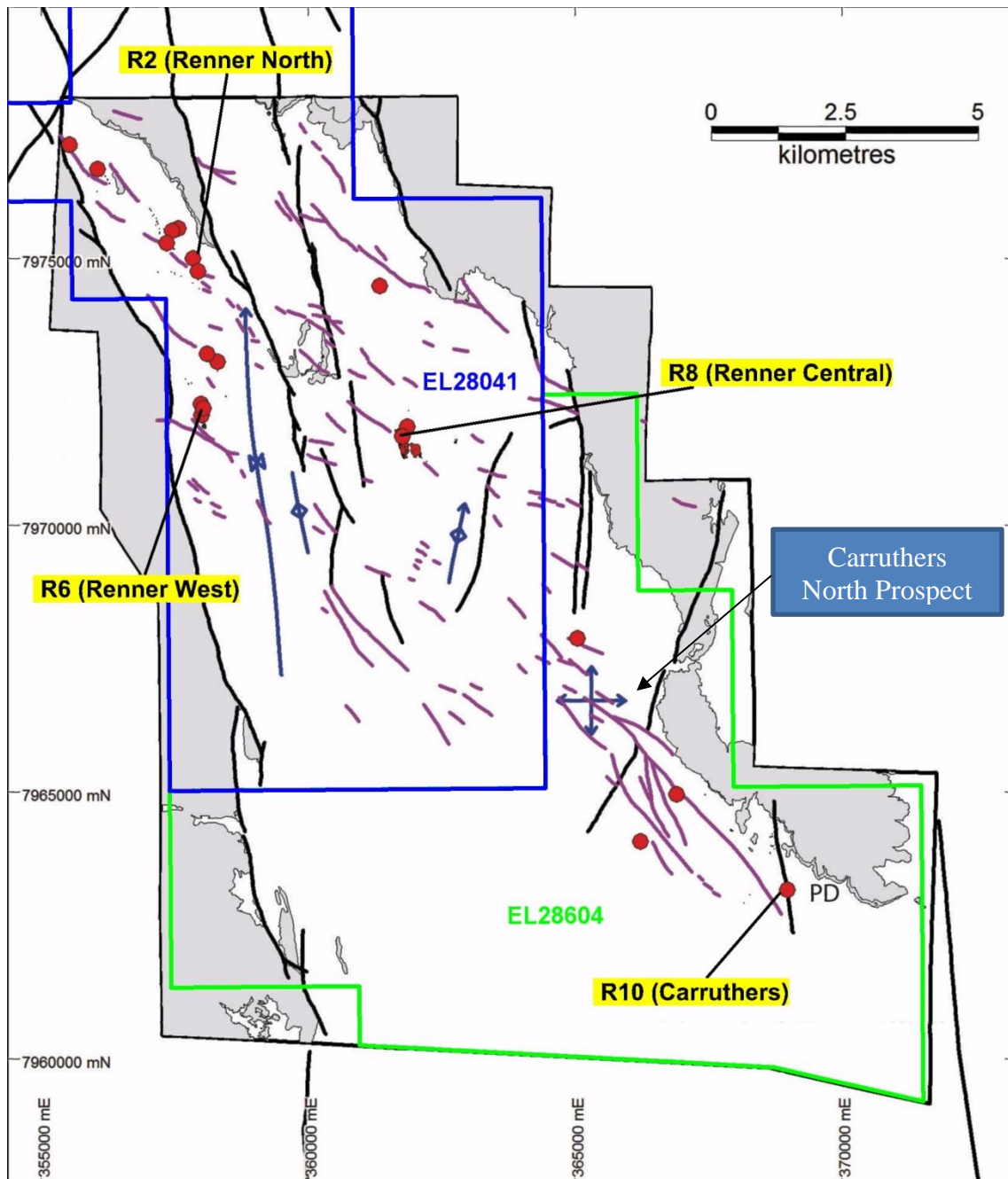


Figure 3. Renner Springs Manganese Prospect locations

Manganese prospects - distribution of manganese at Renner Springs (red) from all Mn units mapped at 1:20,000 (Blake) and 1:4,000 (Drake-Brockman) and public domain data.

Structural features - northwest trending fault suite and air photo lineaments in (mauve), major faults (black) and fold axes (blue).

Location of the recently discovered Carruthers North prospect highlighted in blue.

3 Previous Exploration Activity

3.1 Exploration Activity 2003/2011

Exploration carried in the 8 year life of EL23459 include -

- Handheld EM (E31 & E34) surveys conducted by Neil Scriven,
- Excavation and sampling of a costean (since rehabilitated),
- Review of multispectral satellite imagery (by Amit Eliyahu),
- Helicopter-borne SkyTEM survey,
- Detailed aeromagnetic and radiometric survey,
- Aerial photography,
- Regional geology mapping (1:20,000) by Tim Blake,
- Detailed prospect mapping (1:4,000) by Joe Drake-Brockman,
- RC drilling at Carruthers, Willieray Dam and Northern Costean prospects,
- Gradient Array IP (GAIP) ground survey at Carruthers prospect.

Detail of these exploration programs is included in the EL23459 Final Technical report (2003-2011).

3.2 Exploration Activity 2011/2012

Exploration activities undertaken in 2011/2012 period (Year 1) include -

- 700m north & 500m south extension of 2010 Carruthers GAIP ground survey,
- 13 hole (1,194m) RC drill program testing potential southern and down dip extensions of Carruthers prospect,
- Rehabilitation of costean excavated by Scriven in 2007.

3.3 Exploration Activity 2012/2013

Exploration activities undertaken in 2012/2013 period (Year 2) include -

- Commenced a 54.7 line km Gradient Array IP ground survey (includes 3.0 line km extending west onto EL28041). Survey 75% completed (39.2 line km) at the end of Year 2, with the remainder completed 8th October 2013 (Year 3).
- Ground checking of Chargeability anomalies generated by above survey.

3.4 Exploration Activity 2013/2014

Exploration activities undertaken in 2013/2014 period (Year 3) include -

- Remaining 15.5 line km, of an overall 54.7 line km Gradient Array IP ground survey program (including 3.0 line km on EL28041), completed October 2013.
- Drill collar self-audit and repair/rehabilitation of 52 RC holes.

3.5 Exploration Activity 2014/2016

Exploration activity in 2014/2015 and 2015/16 was essentially nil, other than minor field reconnaissance and data review with a view to drill targets. The budget for planned exploration programs on this and other Exploration Licences in 2016 was been deferred until 2017, due to market downturn and capital restrictions and OMM being under 'Administration' from December 2015 to August 2016.

3.6 Exploration Activity 2016/2017

There was no exploration activity on OM (Manganese) Ltd - Exploration Licences in 2016/2017. The OMM exploration budget for 2016/2017 was constrained by priorities placed on recommencement of the Bootu Creek mining operation.

OMM was under 'Administration' from December 2015 to August 2016. OMM continued on a Care and Maintenance until processing and mining operations recommenced in January 2017. The proposed exploration program for 2016/17 was deferred to 2017/18.

3.7 Exploration Activity 2017/2018

There was no exploration activity OM (Manganese) Ltd - Exploration Licences in 2017/2018. The OMM exploration budget for 2017/2018 was constrained by priorities placed on prospects within the Bootu Creek mining operation on ML24031.

4 2018-2019 Exploration Activity

There was only minor exploration activity on EL28604 in 2018/19. The proposed work program was constrained by delays in the approval of the 2019 Exploration MMP (0629-01), forwarded to the DPIR in May 2019. A copy of the Access Agreement with Helen Springs Pastoral Station was forwarded to the DPIR in June 2019.

The only exploration activity carried out was the grading of the Helen Springs borehole access track for Willieray Bore and minor prospecting of a geophysical anomaly at Carruthers North prospect located at 7966000mN 366100mE. Two rock samples (one from a nearby creek bed and the other from an outcrop) returned 52.2% Mn and 40.4% Mn respectively.

An RC drill program has been proposed to test the downdip and surface extent of a recently discovered manganese outcrop. The proposed 2018/2019 exploration program on EL28604 has been deferred to 2019/2020 with timing depending on approval of the Exploration MMP or start of the wet season.

Carruthers North Grab Samples:

Sample	Mn*	Fe*	SiO ₂	Al ₂ O ₃	P*
	(%)	(%)	(%)	(%)	(%)
CRAIG#1	52.222	1.866	11.126	0.672	0.078
CRAIG#2	40.345	4.929	16.341	3.637	0.061

5 Conclusions and Recommendations

The previous exploration program had conducted reconnaissance ground geophysical GAIP survey testing the 6km long NNW-SSE manganese trend extending from Carruthers prospect in the south through to 600m north of the Scriven costean, to identify manganese mineralisation obscured by the shallow alluvial cover.

The chargeability survey results highlighted two significant anomalies and several minor anomalies. The two more significant anomalies are both covered by shallow alluvium, with a recently discovered manganese outcrop near the northern of the two anomalies returning high grade Mn assays from two rock grab samples.

The recommended exploration program for 2018/2019 (Year 8) has been deferred to 2019/2020 (Year 9), following delays in the approval of the Exploration MMP, and will RC drill test the recently discovered Carruthers North manganese outcrop. The area of interest lies midway between the Willieray prospect to the SW and the Scriven costean to the NE.

The objective of the exploration program is to discover and delineate additional mining opportunities to improve the overall economic potential of the Renner West Inferred Mineral Resource on adjacent EL28041.

6 References

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Drake-Brockman, J. A. P. (2010), Report following 1:4,000 Scale Mapping of the Selected Areas in the Renner Springs Tenement Area (Northern Territory). *Unpublished report for OM (Manganese) Ltd.*