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ACTIVITY REPORT – EXPLORATION AND DEVELOPMENT

FINAL REPORT

EPM 18624 (Oorindi Park)

Holder

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1 EXECUTIVE SUMMARY

Demetallica Limited, formerly Minotaur Exploration, explored EPM 18624 for copper-gold iron oxide-rich (IOCG) or sulphide-rich (ISCG) systems and for silver-lead-zinc mineralisation. Proterozoic basement within EPM 18624 is masked by Mesozoic cover sediments and is interpreted to be underlain by Soldiers Cap Group rocks including Mount Norna Quartzite, host stratigraphy to the Cannington silver-lead-zinc deposit and the Eloise, Jericho and Osborne copper-gold deposits.

Exploration undertaken by Demetallica (formerly Minotaur) on EPM 18624 sub-blocks retained during Years 1-12 of tenure included:

- Ground magnetic survey (Quantec Geoscience Ltd)
- Ground magnetic survey (Terra Search Pty Ltd)
- Ground electromagnetic (EM) surveying (GEM Geophysics, 2012, 2018)
- Drilling of one diamond drillhole OR12D01 at Oorindi prospect, 311.2m (QEX Drilling)
- Office-based studies.

No field work was undertaken in the final year of tenure. Desktop studies during Year 12 included:

- Basement interpretation
- Target review
- Target ranking against targets in the broader Chimera Project area.

As drilling at Oorindi prospect intersected graphitic sediments interpreted to be the likely source of the modelled EM conductor, and no targets within EPM 18624 were compelling enough to warrant drill testing when compared to other targets in the Chimera project area, EPM 18624 was allowed to expire.

2 INTRODUCTION

This final report documents exploration activities undertaken on tenement EPM 18624 (Oorindi Park) during Years 1-12 of tenure ending 24 August 2022.

2.1 RESOURCE AUTHORITY INFORMATION

EPM 18624 is located approximately 80 kilometres east of Cloncurry (Figure 1).

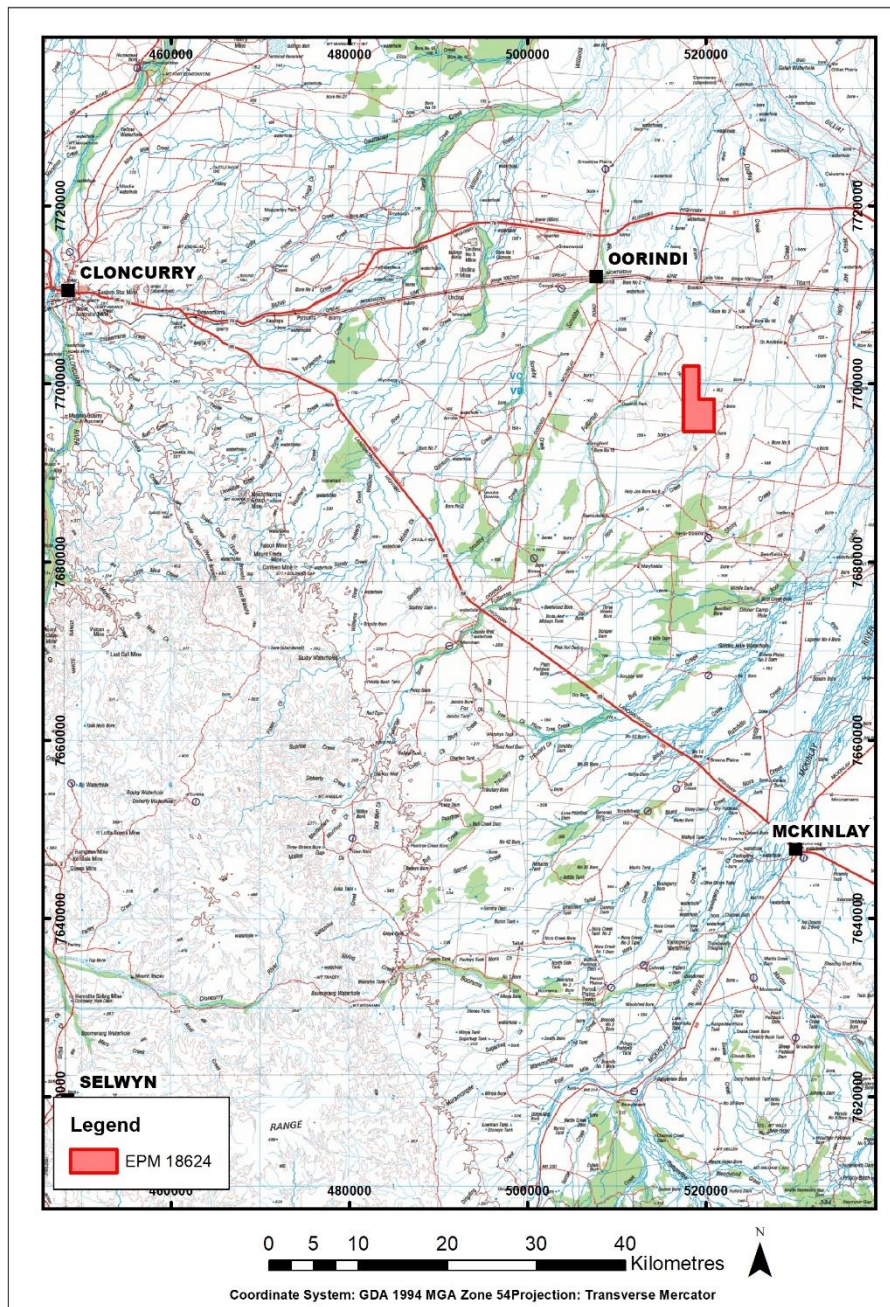


Figure 1: Location plan EPM 18624

EPM 18624, initially comprising 49 sub-blocks, was granted to Minotaur Operations Pty Ltd, a wholly owned subsidiary of Minotaur Exploration, on 25 August 2010. Partial relinquishment of portions of the tenement were undertaken at the grant anniversary in 2013 (24 sub-blocks) and 2014 (12 sub-blocks) (Table 1). Partial relinquishment of 5 sub-blocks was undertaken at the end of Year 7 and at the end of Year 9 a further reduction of 2 sub-blocks was undertaken. At expiry on 24 August 2022 EPM 18624 consisted of 6 sub-blocks (Table 1).

EPM	NAME	LICENCEE	SUB-BLOCKS	FROM	TO
18624	Oorindi Park	Demetallica Operations Pty Ltd	49	25/08/2010	24/08/2013
			25	25/08/2013	24/08/2014
			13	25/08/2014	24/08/2017
			8	25/08/2017	24/08/2019
			6	25/8/2019	24/8/2022

Table 1: Tenement particulars for EPM 18624

In November 2021 it was announced that Andromeda Metals would take over Minotaur Exploration in order to gain 100% control of a significant kaolin/halloysite project in South Australia (MEP ASX release 10/11/2021). Minotaur Exploration demerged and transferred its copper and gold assets into a separate private entity, Demetallica Ltd, which listed on the ASX on 24 May 2022. Minotaur Operations Pty Ltd changed name to become Demetallica Operations Pty Ltd, a wholly owned subsidiary of Demetallica Limited.

OZ Minerals Ltd (ASX: OZL) agreed to transfer ownership of the Jericho and Eloise projects to Demetallica (MEP ASX release 9/12/2021) and EPM 18624 was thereafter held as part of the strategic regional tenement holding, named the Chimera Polymetal Project, established by Demetallica southeast of Cloncurry, Queensland (Figure 1).

Demetallica elected to allow the six remaining sub-blocks of EPM 18624 to expire on 24 August 2022:

- CLON687: L, Q, V, W
- CLON759: A, B

2.2 EXPLORATION RATIONALE

EPM 18624 was identified as prospective as government mapping and geophysical interpretations indicated the Mesozoic cover to be underlain by prospective Soldiers Cap Group rocks, including Mount Norna Quartzite. Minotaur, and subsequently Demetallica, explored EPM 18624 for iron-sulphide copper-gold (ISCG) mineralization, iron oxide copper-gold (IOCG) and Cannington style silver-lead-zinc mineralisation. Known mineralisation nearby to EPM 18624 includes the Eloise Cu-Au mine, Jericho Cu-Au and Maronan and Altia Pb-Ag±Zn deposits, all hosted in the Soldiers Cap Group rocks.

3 WORK PROGRAM

3.1 YEARS 1-11 ACTIVITIES

Exploration undertaken by Demetallica (formerly Minotaur) on the 6 sub-blocks of EPM 18624 retained for 12 years of tenure included:

- Ground magnetic surveying (Quantec Geoscience Ltd)
- Ground magnetic surveying (Terra Search Pty Ltd)
- Ground electromagnetic (EM) surveying (GEM Geophysics)
- Drilling of one diamond drillhole OR12D01 at Oorindi prospect, 311.2m (QEX Drilling)
- Office-based studies.

After early examination of the regional airborne magnetic imagery for EPM 18624, two areas were selected for further investigation by Minotaur based on their magnetic signature. Ground magnetic and EM surveys were conducted at both areas, described as Oorindi Prospect and Oorindi East Prospect. Quantec Geoscience Ltd completed a ground magnetic survey at Oorindi prospect in December 2011 and Terra Search Pty Ltd completed a ground magnetic survey at Oorindi East prospect in July 2012 (Morris et al, 2012), both of which partially overlap the expiring eastern sub-blocks of EPM 18624 (Figure 2). Ground electromagnetic (EM) surveying along six east-west lines at Oorindi and Oorindi East prospects, undertaken by GEM Geophysics in May 2012 (Morris et al, 2012), partially overlaps EPM 18624 (Figure 2). In late 2018, GEM Geophysics conducted a regional moving loop ground EM survey over the Holy Joe structure (van der Stelt, 2019) extending survey lines over the western edge of EPM 18624 (Figure 2).

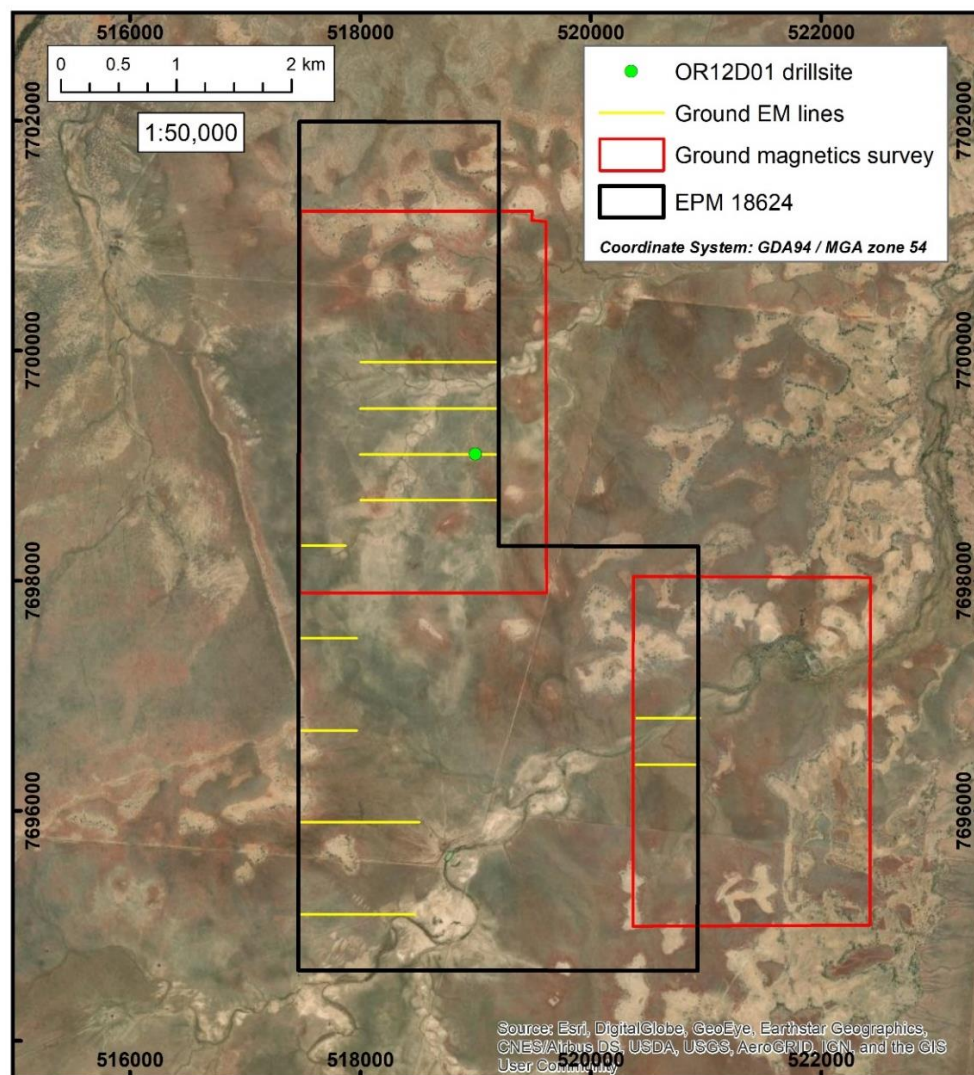


Figure 2: Location of geophysical survey lines and drillhole OR12D01 collar (green circle) within relinquished sub-blocks of EPM 18624

3.1.1 GROUND MAGNETIC SURVEY AT OORINDI PROSPECT

The ground magnetic survey at the Oorindi Prospect was conducted by Quantec Geoscience Ltd using Minotaur's Geometrics magnetometer. Thirty-four lines of ground magnetic data were collected for a total 71.4 line km over an area of 6.9 km². Survey lines were orientated E–W and spaced at 100 m intervals with data automatically collected every second as the operator walked along the line (Table 2-Table 3).

Diurnal corrections were calculated using data from the base station where readings were taken at 30 second intervals throughout the day. The base station was located at 516570E, 7700480N (GDA94, Zone 54). The magnetic field was as follows: field intensity 50634.1nT; inclination -51.13°; declination 6.57°.

Survey Equipment	
Magnetometer	Geometrics G-859 magnetometer
Base Magnetometer	Geometrics G-856 magnetometer
Survey Specifications	
Line Direction	East-West
Line Spacing	100 metres
Survey Speed	Walking pace
Sample Interval	1 per Second

Table 2: Instrument particulars for the ground magnetic survey at the Oorindi Prospect

Line	Easting - Start	Easting - End	Northing	Length (m)
7701200	517500	519600	7701200	2100
7701100	517500	519600	7701100	2100
7701000	517500	519600	7701000	2100
7700900	517500	519600	7700900	2100
7700800	517500	519600	7700800	2100
7700700	517500	519600	7700700	2100
7700600	517500	519600	7700600	2100
7700500	517500	519600	7700500	2100
7700400	517500	519600	7700400	2100
7700300	517500	519600	7700300	2100
7700200	517500	519600	7700200	2100
7700100	517500	519600	7700100	2100
7700000	517500	519600	7700000	2100
7699900	517500	519600	7699900	2100
7699800	517500	519600	7699800	2100
7699700	517500	519600	7699700	2100
7699600	517500	519600	7699600	2100
7699500	517500	519600	7699500	2100
7699400	517500	519600	7699400	2100
7699300	517500	519600	7699300	2100
7699200	517500	519600	7699200	2100
7699100	517500	519600	7699100	2100
7699000	517500	519600	7699000	2100
7698900	517500	519600	7698900	2100
7698800	517500	519600	7698800	2100
7698700	517500	519600	7698700	2100
7698600	517500	519600	7698600	2100
7698500	517500	519600	7698500	2100
7698400	517500	519600	7698400	2100
7698300	517500	519600	7698300	2100
7698200	517500	519600	7698200	2100
7698100	517500	519600	7698100	2100
7698000	517500	519600	7698000	2100
7697900	517500	519600	7697900	2100
Total				71.4 km

Table 3: Extents for ground magnetic survey lines at Oorindi Prospect (GDA94, MGA zone 54)

The ground magnetic surveys at the Oorindi Prospect incorporated two linear regional airborne magnetic features which are coincident with a broad and extensive gravity high. The ground magnetic data are dominated by a NNW–SSE positive magnetic high with an amplitude of ~1500 nT. The highly magnetic portion of the anomaly is ~1.6 km long and 400 m wide. This feature continues to the northwest as a moderate to low magnetic feature. In the western portion of the survey is another positive magnetic unit of similar trend but reduced magnetic intensity (Figure 3-Figure 5).

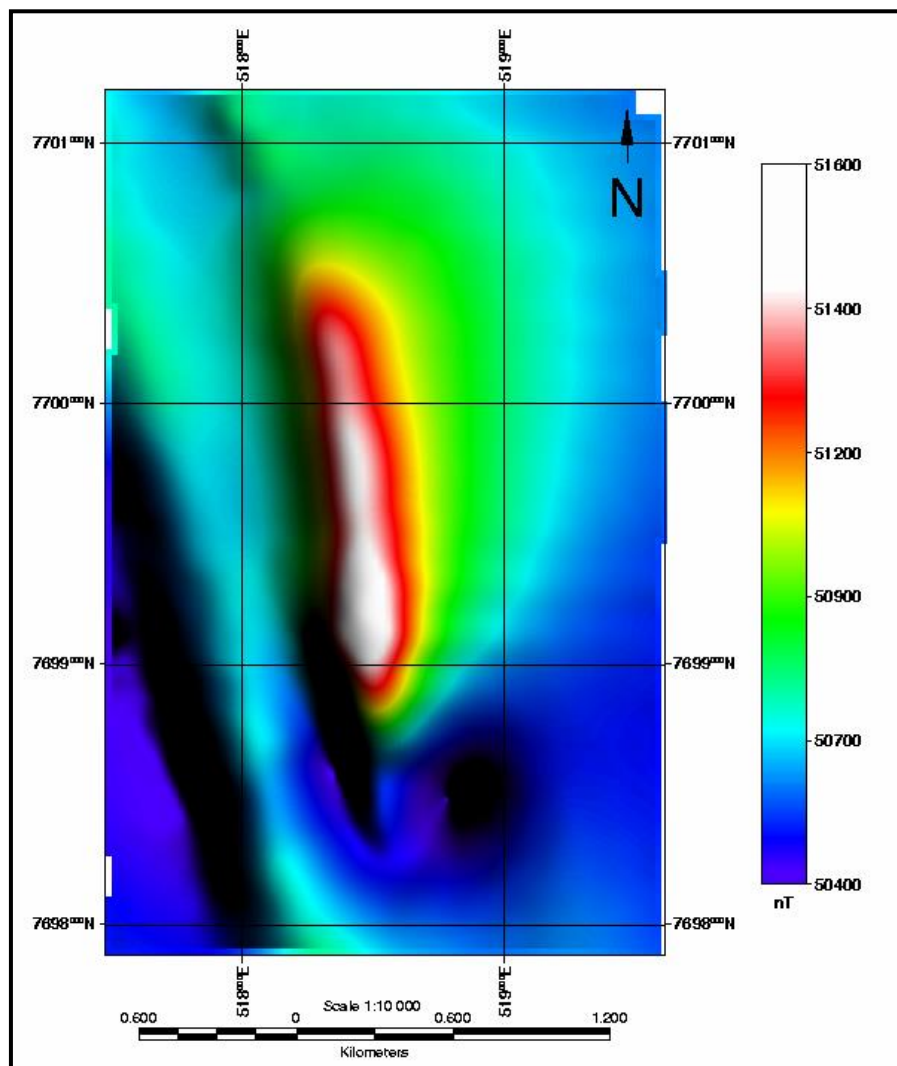


Figure 3: TMI image for the Oorindi Prospect ground magnetic survey

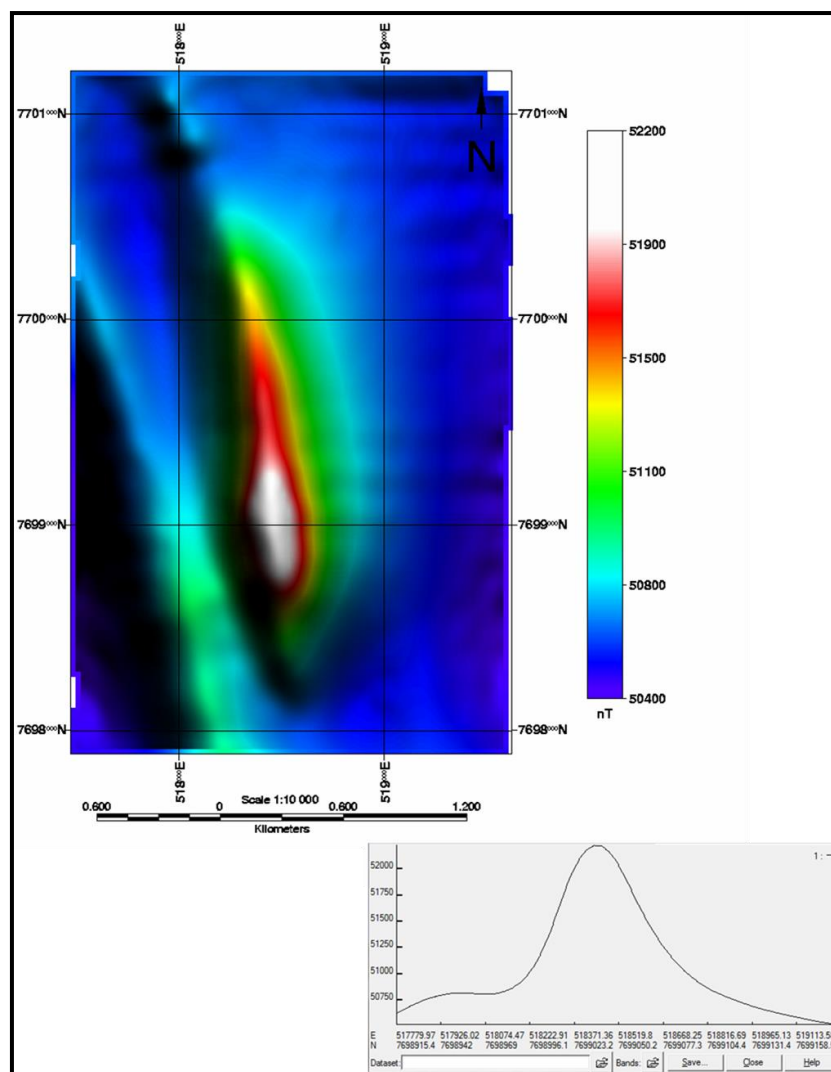


Figure 4: TMI-RTP image for the Oorindi Prospect ground magnetic survey and magnetic profile over the highest amplitude section of the positive anomaly

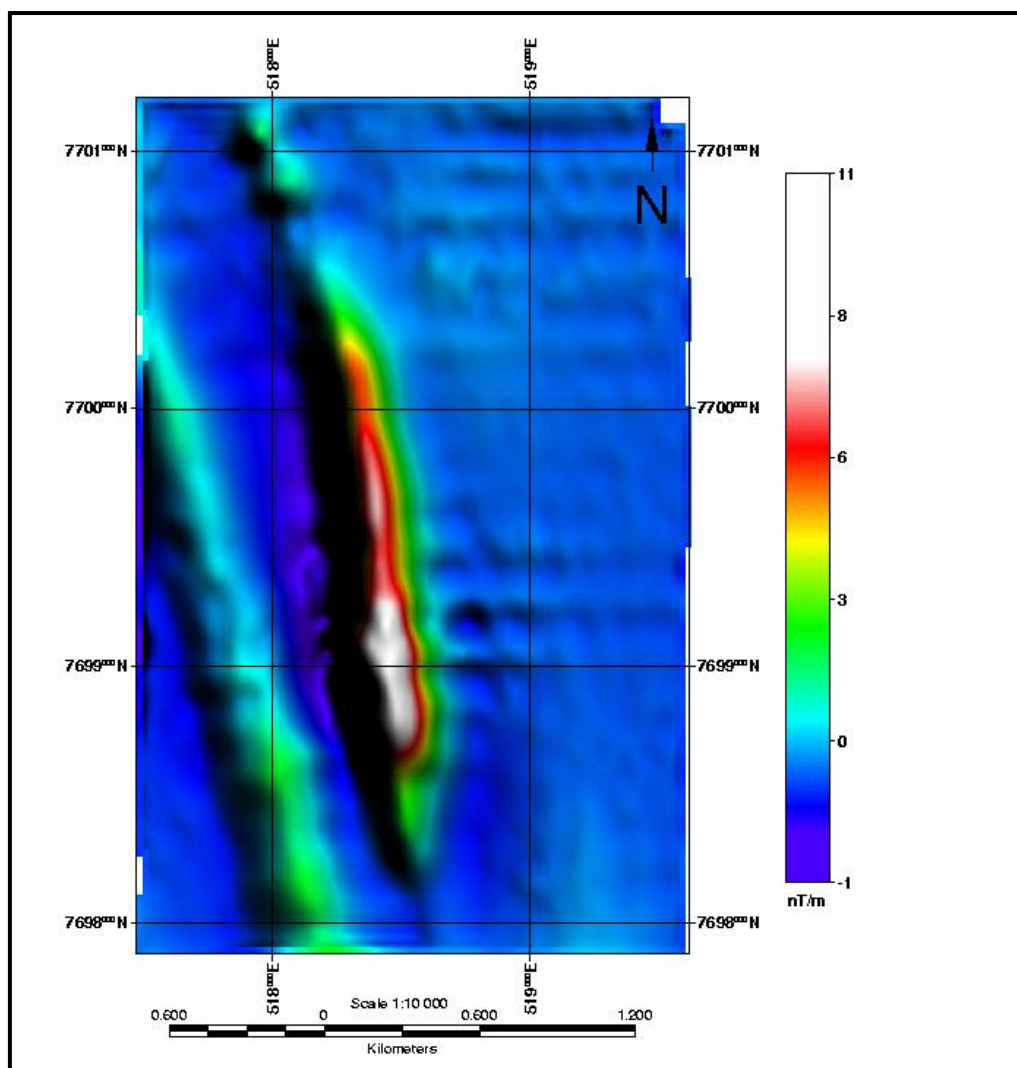


Figure 5: 1VD TMI-RTP image for the Oorindi Prospect ground magnetic survey

3.1.2 GROUND MAGNETIC SURVEY AT OORINDI EAST PROSPECT

The ground magnetic survey at Oorindi East Prospect was conducted by Terra Search Pty Ltd. Thirty E–W lines were collected for a total of 62 line km. Survey lines were spaced 100 m apart and data collected at two second intervals (Table 4-Table 5).

Survey Equipment	
Magnetometer	GSM-19 Overhauser walking magnetometer
Base Magnetometer	Geometrics G-856 magnetometer
Survey Specifications	
Line Direction	East-West
Line Spacing	100 metres
Survey Speed	Walking pace
Sample Interval	1 per two seconds

Table 4: Instrument particulars for the ground magnetic survey at the Oorindi East Prospect

Line	StartE	StartN	FinishE	FinishN	Orientation	Length
7695000	520400	7695000	522400	7695000	90	2000
7695100	520400	7695100	522400	7695100	90	2000
7695200	520400	7695200	522400	7695200	90	2000
7695300	520400	7695300	522400	7695300	90	2000
7695400	520400	7695400	522400	7695400	90	2000
7695500	520400	7695500	522400	7695500	90	2000
7695600	520400	7695600	522400	7695600	90	2000
7695700	520400	7695700	522400	7695700	90	2000
7695800	520400	7695800	522400	7695800	90	2000
7695900	520400	7695900	522400	7695900	90	2000
7696000	520400	7696000	522400	7696000	90	2000
7696100	520400	7696100	522400	7696100	90	2000
7696200	520400	7696200	522400	7696200	90	2000
7696300	520400	7696300	522400	7696300	90	2000
7696400	520400	7696400	522400	7696400	90	2000
7696500	520400	7696500	522400	7696500	90	2000
7696600	520400	7696600	522400	7696600	90	2000
7696700	520400	7696700	522400	7696700	90	2000
7696800	520400	7696800	522400	7696800	90	2000
7696900	520400	7696900	522400	7696900	90	2000
7697000	520400	7697000	522400	7697000	90	2000
7697100	520400	7697100	522400	7697100	90	2000
7697200	520400	7697200	522400	7697200	90	2000
7697300	520400	7697300	522400	7697300	90	2000
7697400	520400	7697400	522400	7697400	90	2000
7697500	520400	7697500	522400	7697500	90	2000
7697600	520400	7697600	522400	7697600	90	2000
7697700	520400	7697700	522400	7697700	90	2000
7697800	520400	7697800	522400	7697800	90	2000
7697900	520400	7697900	522400	7697900	90	2000
7698000	520400	7698000	522400	7698000	90	2000
Total						62 km

Table 5: Extents for ground magnetic survey lines at Oorindi East Prospect (GDA94, MGA zone 54)

The ground magnetic survey at Oorindi East Prospect reveals features consistent with the regional magnetic dataset (Figure 6-Figure 7). The N–S linear anomaly is clearly defined and is characterised by higher amplitude to the south. Although this feature looks highly magnetic (due to the colour stretch applied), the amplitude of only 200 nT is modest compared to the 1500 nT for the NNW-trending feature observed in the Oorindi Prospect survey.

The subtle magnetic feature, in the southwest of the Oorindi East Prospect, strikes NNE, similar in orientation to the modelled EM plate. In the centre of the survey there is a break and a change of strike in the N–S magnetic high where it meets the NNE feature.

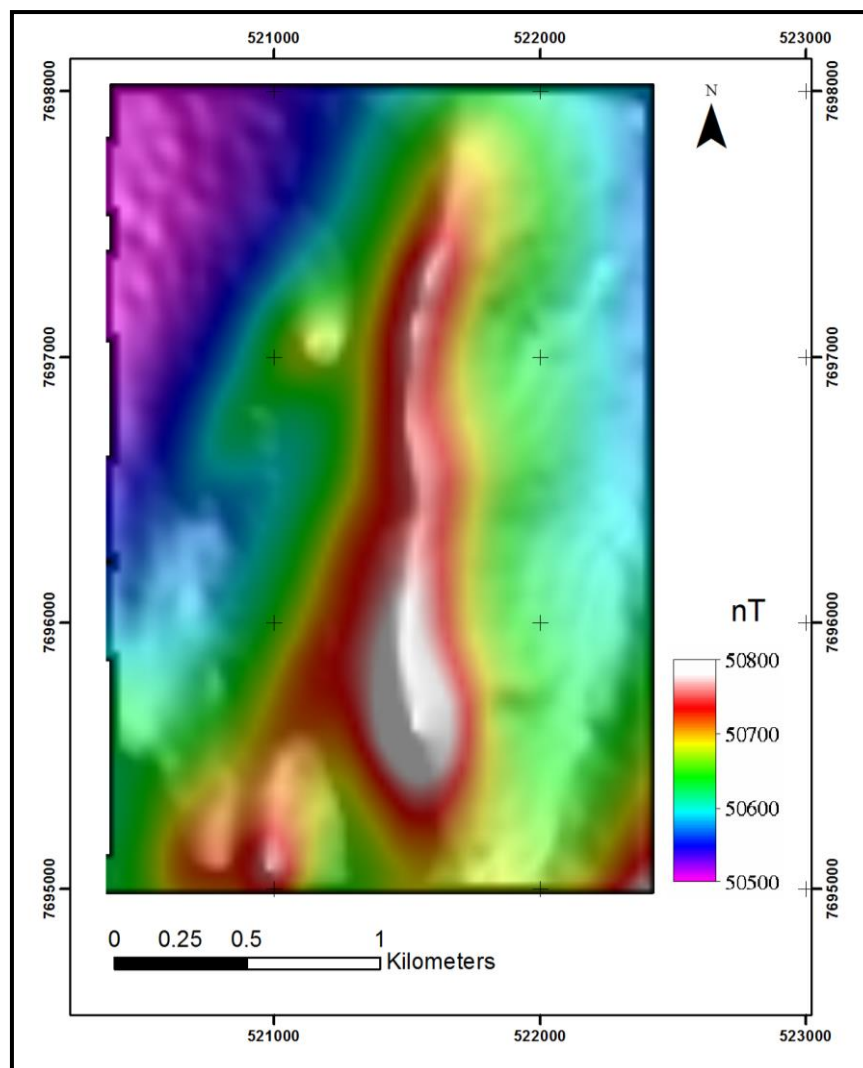


Figure 6: TMI image for the Oorindi East Prospect ground magnetic survey

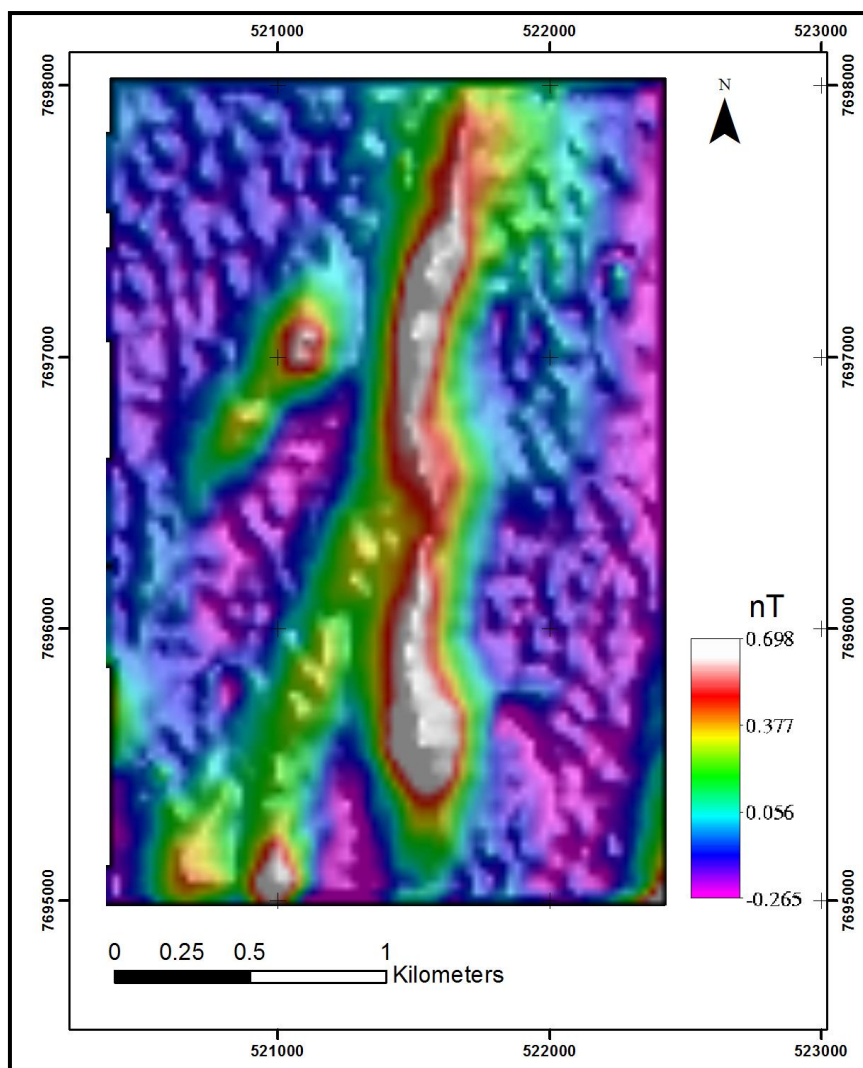


Figure 7: 1VD TMI-RTP image for the Oorindi East Prospect ground magnetic survey

3.1.3 2012 ELECTROMAGNETIC SURVEY

In May 2012, a total of 8 line km of ground EM was surveyed by GEM Geophysics along six-E-W lines over Oorindi Prospect and Oorindi East Prospect (Table 6-Table 7).

Survey Type	Moving loop (in loop)
Station Spacing	50 m
Line spacing	400 m
Loop Size	200
Sensor	B Field
No. turns	2
Components	X and Z
Frequency	0.5 Hz

Table 6: Ground EM survey parameters

Prospect	Line	Start	Finish	Ori.	Station Spacing	Length	No stations	Priority
Oorindi	7698700N	518000E	519500E	90	50	1500	31	2
Oorindi	7699100N	518000E	519500E	90	50	1500	31	1
Oorindi	7699500N	518000E	519500E	90	50	1500	31	1
Oorindi	7699900N	518000E	519500E	90	50	1500	31	1
Oorindi East	7696800N	520400E	522400E	90	50	2000	41	1
Oorindi East	7696400N	520400E	522400E	90	50	2000	41	2

Table 7: Ground EM survey line locations (GDA94, MGA54)

An EM response occurred on the eastern margin of one of the original one kilometre lines at the Oorindi Prospect and all lines were extended 500 m to the east to close off the anomaly. A late-time M-shaped response was observed at late time on all lines in the Z Component data, indicating an east-dipping, highly conductive body to the east of the magnetic feature (Figure 8-Figure 11). The corresponding late-time X component data are noisy at early time but show a strong positive to negative crossover from west to east on each line. The conductor appears to strike obliquely to the magnetic feature, and it is open to the north and south.

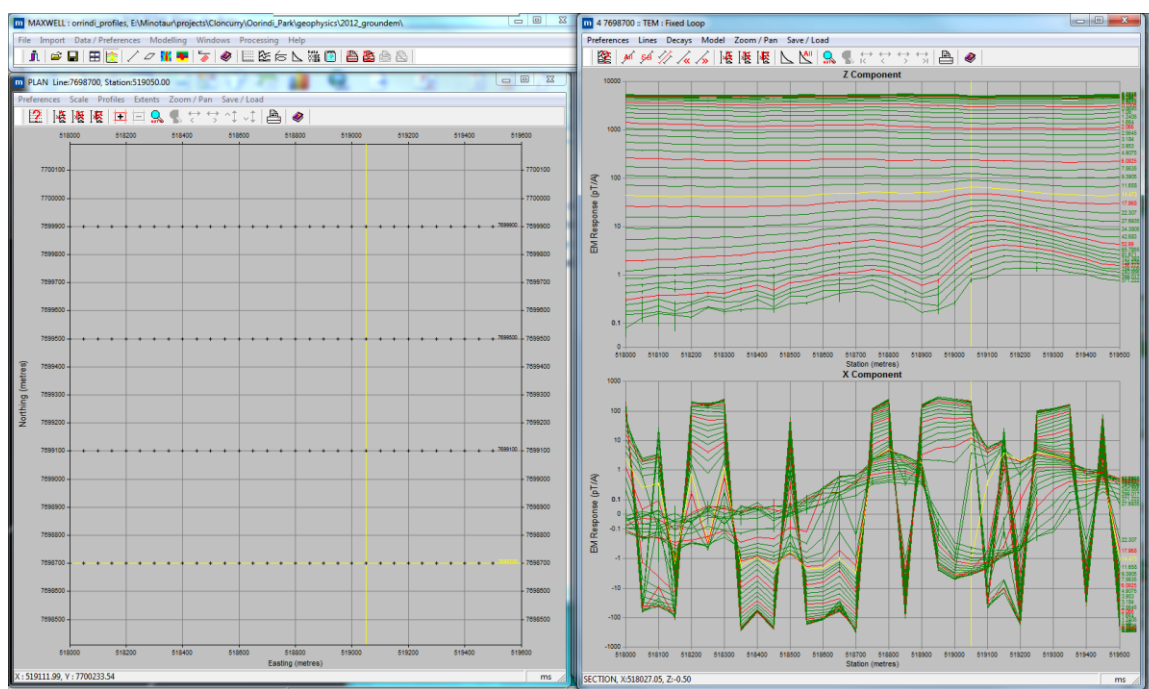


Figure 8: EM Line 7698700N, Oorindi Prospect — Z and X component B Field EM profiles

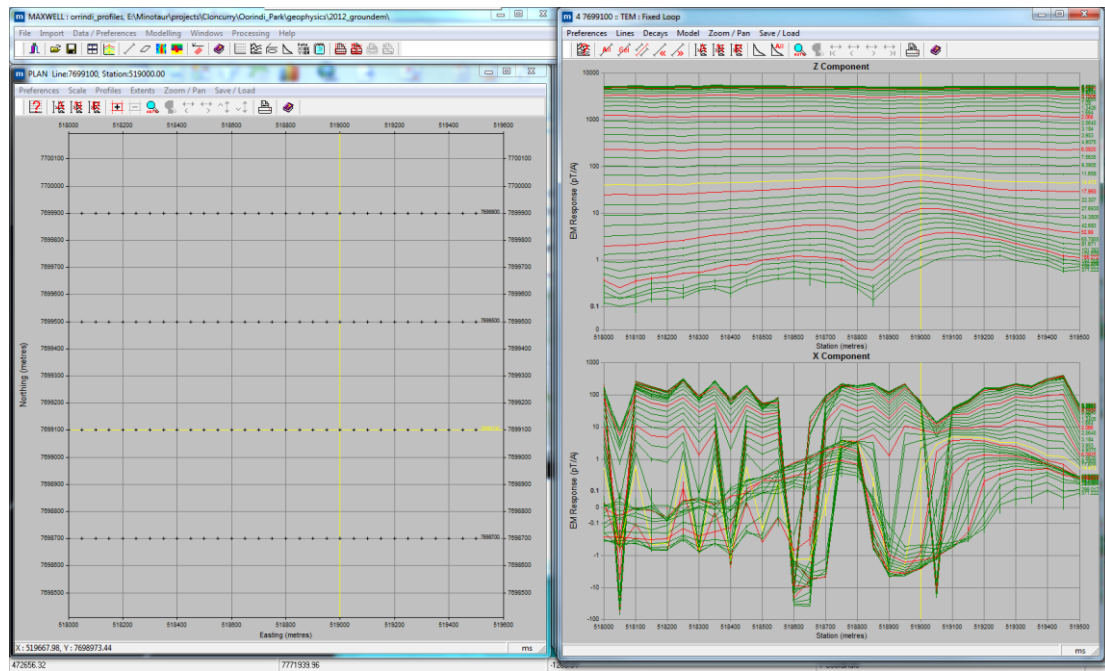


Figure 9: EM Line 7699100N, Oorindi Prospect — Z and X component B Field EM profiles

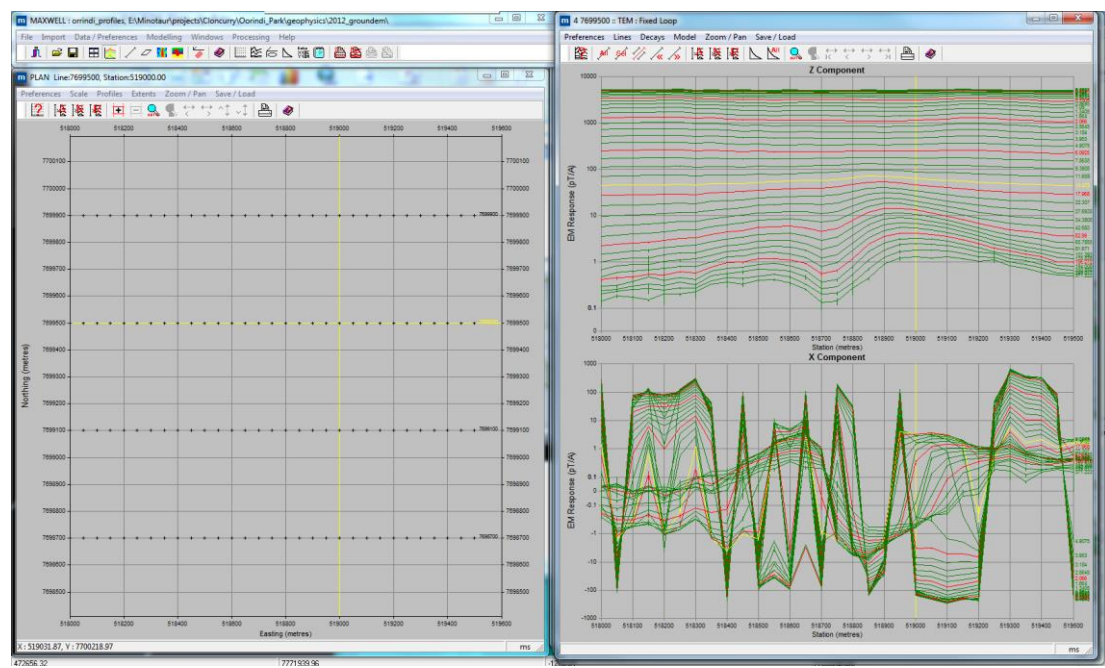


Figure 10: EM Line 7699500N, Oorindi Prospect — Z and X component B Field EM profiles

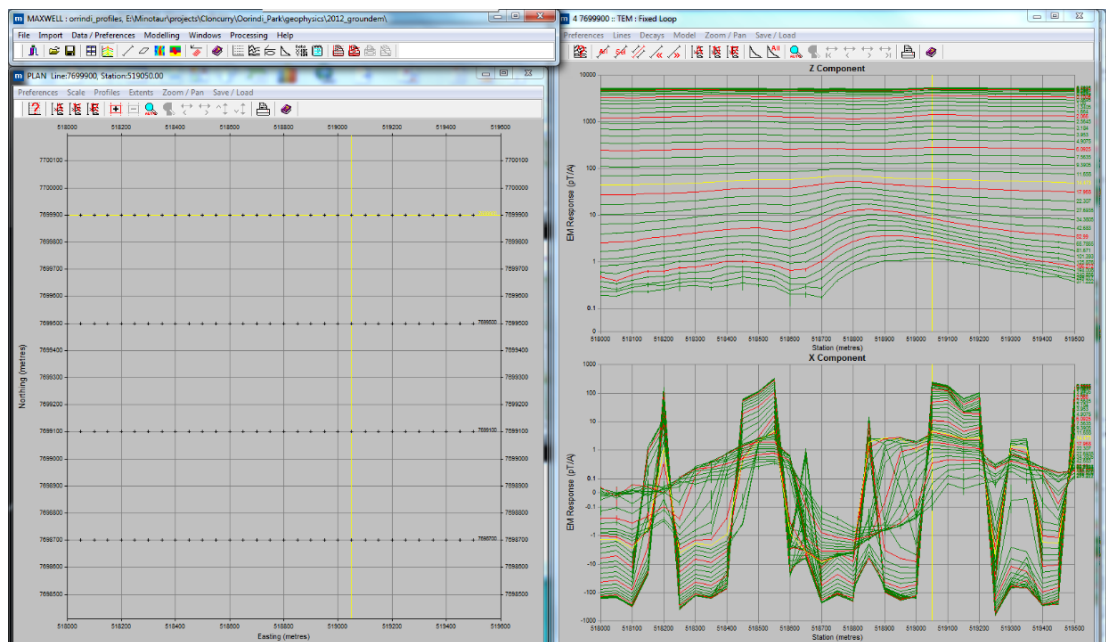


Figure 11: EM Line 7699900N, Oorindi Prospect — Z and X component B Field EM profiles

At the Oorindi East Prospect, two lines of data were surveyed over the magnetic feature associated with a major regional lineament. A strong M-shaped conductor was observed in the Z component data on each line, indicating a steep west-dipping conductor apparently located just to the west of the linear magnetic feature (Figure 12-Figure 14). A peak can be observed in the corresponding late-time X component data. The conductor remains open to the north and south.

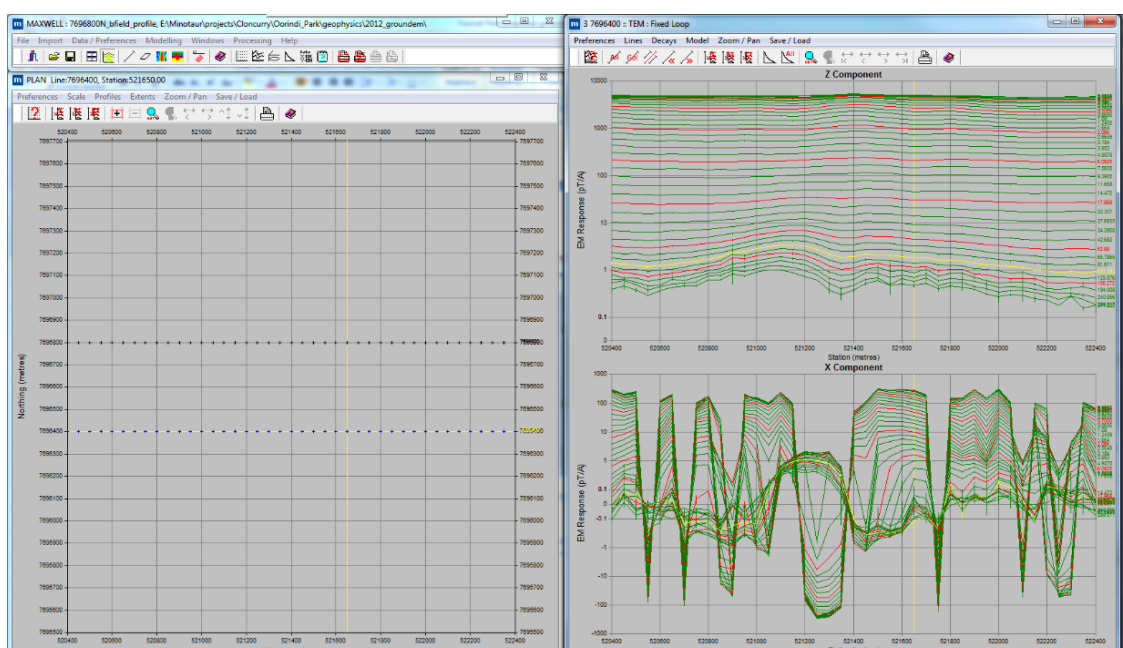


Figure 12: EM Line 7696400N, Oorindi East Prospect — Z and X component B Field EM profiles

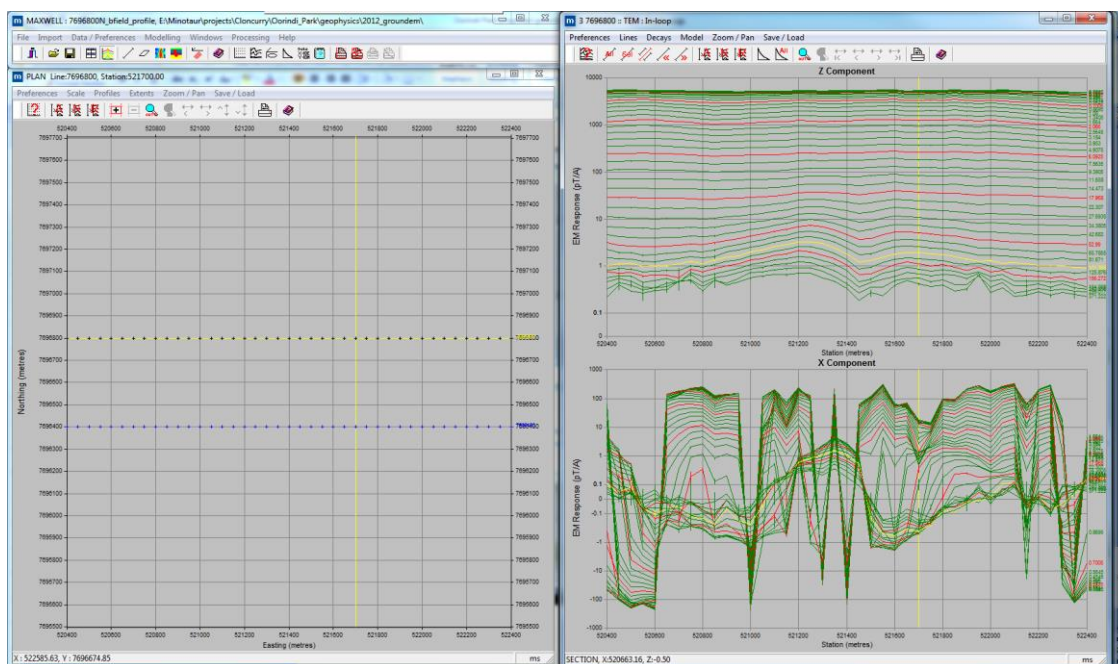


Figure 13: EM Line 7696800N, Oorindi East Prospect — Z and X component B Field EM profiles

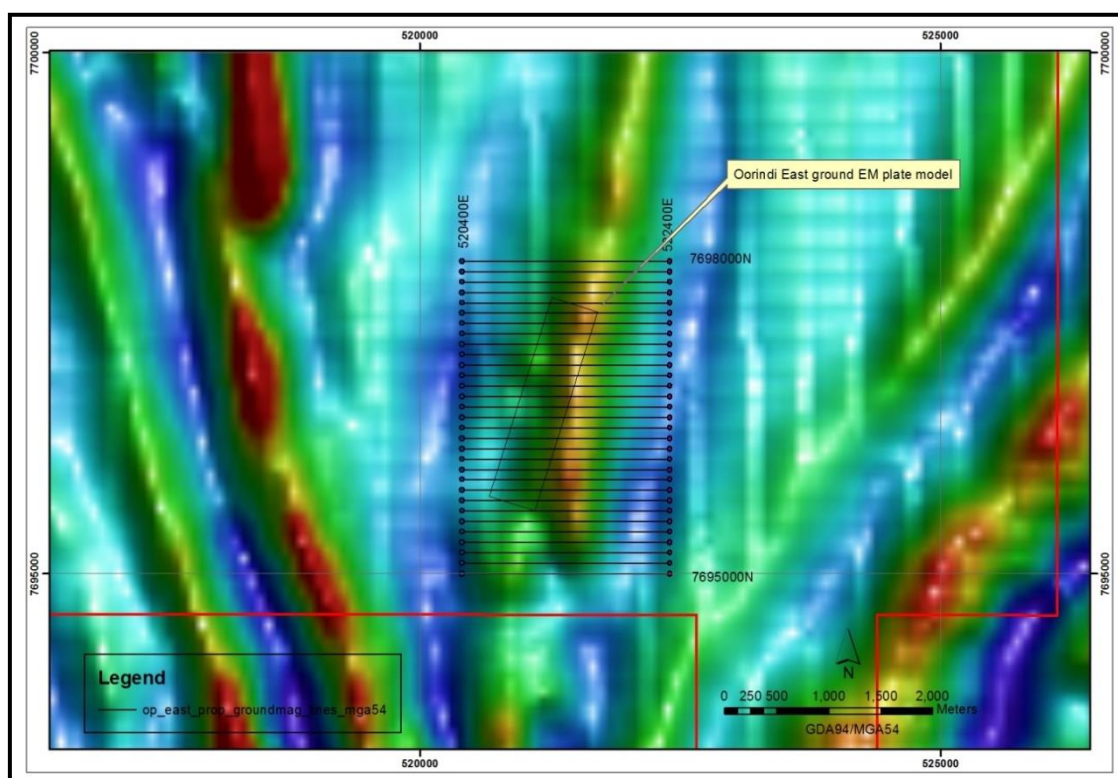


Figure 14: Oorindi East Prospect showing interpreted location of EM conductor (grey rectangle) with respect airborne magnetic TMI-RTP C-norm image and ground magnetic lines

3.1.4 DIAMOND DRILLING

The positive basement conductor delineated in the 2012 Oorindi Prospect ground EM survey, located immediately east of a NNW-trending curvilinear magnetic anomaly was subsequently diamond drill tested in August 2012 (total 311.2 m drilling) (Morris et al, 2012) (see Figure 15).

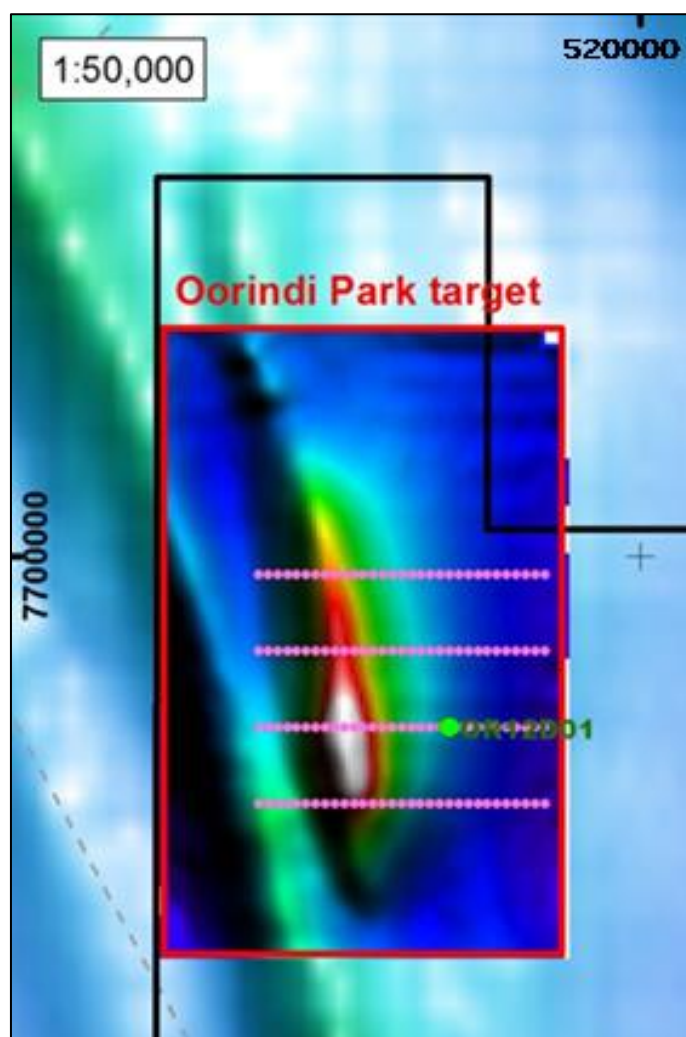


Figure 15: Location of 2012 ground EM lines and OR12D01 relative to TMI imagery.

Hole ID	Depth	Completion	East MGA	North MGA	Prospect	Lot/Plan No.
OR12D01	311.2m	21/08/2012	519000	7699100	Oorindi	2/BD52

Table 8: Details for hole OR12D01 drilled on Oorindi Park station. Locations are in GDA94, Zone 54.

Drilling was undertaken by QEX Drilling between 14–29 August 2012. The down-hole thickness of Mesozoic cover sediments is 152.4 m, hole was drilled to a total depth of 311.2 m and then back filled with cement from surface to a depth of 170 m.

Observations on magnetic susceptibility and specific gravity were recorded every 1 m and 5 m respectively, portable XRF analyses were obtained every 1 m and select intervals of drillcore were submitted for standard laboratory analyses.

The predominant basement lithology intersected is argillite containing abundant carbonate and minor quartz veins and pyrite veins (Figure 16-Figure 17). The argillite is probably in part graphitic. Quartz carbonate veining intersected at 307.95–308.05 m contains magnetite, pyrite, pyrrhotite and minor chalcopyrite (Figure 18).



Figure 16: Slump bedding within fine-grained Mesozoic sandstone at 150.7 m, OR12D01



Figure 17: Carbonate veinlets with disseminated pyrite into graphitic argillite at 260.86 m, OR12D01



Figure 18: Pyrrhotite, pyrite and chalcopyrite bearing quartz +carbonate vein at 308 m, OR12D01

Magnetic susceptibility measurements on OR12D01 drill core indicate that the highest value of $0.65 \times 10^{-3}\text{SI}$ is associated with a quartz carbonate vein with magnetite and pyrite with minor chalcopyrite from 307.95–308.05 m (Figure 18-Figure 19).

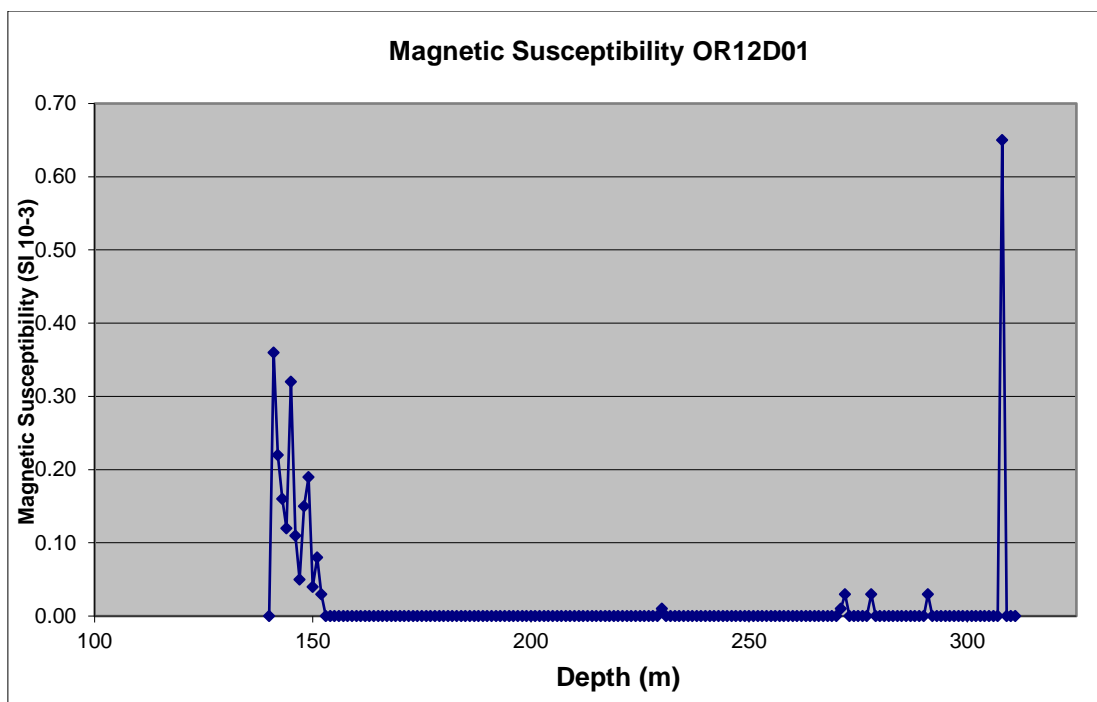


Figure 19: Magnetic susceptibility plot for drill core from OR12D01

Specific gravity measurements for drill hole OR12D01 indicate that Mesozoic sediments have an average SG of below ~2.25 g/cc whereas the basement graphite argillite ranges between 2.50–2.90 g/cc (Figure 20).

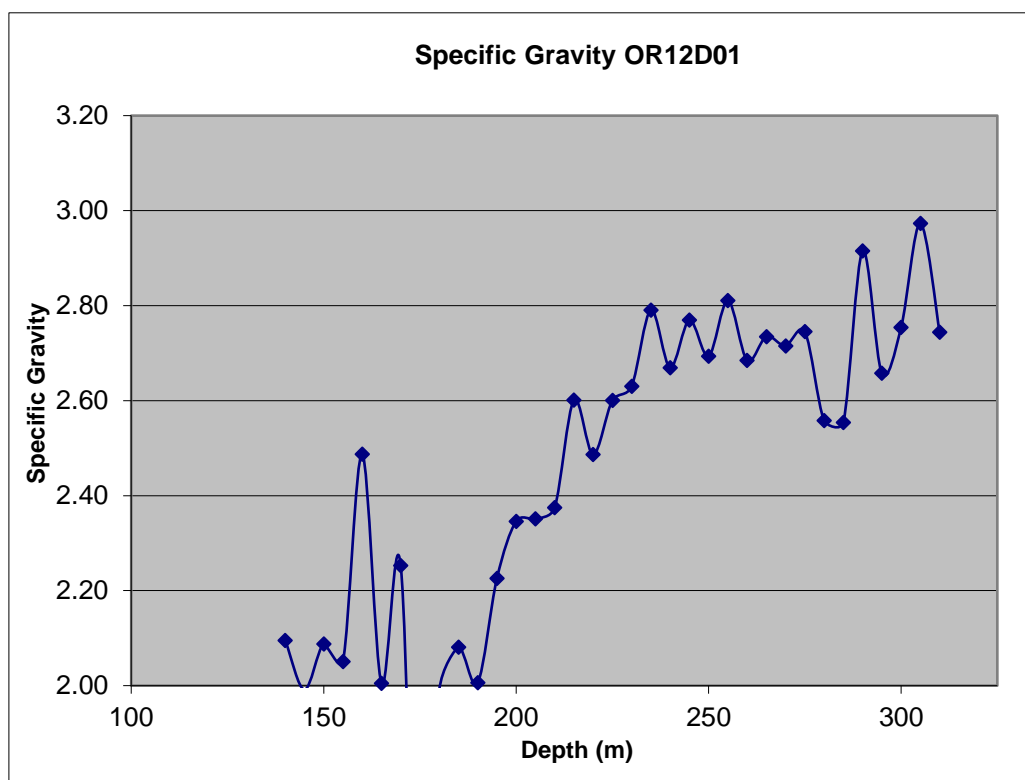


Figure 20: Specific gravity plot for drill core from OR12D01

A total of 18 core samples (123957–123974 inclusive) from drill hole OR12D01 were collected and sent to ALS Chemex for standard laboratory analysis. The samples were assayed using scheme ME-MS61r (48 element, four-acid ICP-MS+REEs). Gold analysis was undertaken using Au-AA25 (ore grade gold, 30 g fire assay with AA finish). Laboratory results indicated presence of trace amounts of base metals (Cu 9–160 ppm, Pb 8–535 ppm, Zn 470–645 ppm) with low REEs. Portable XRF observations also indicate trace amounts of copper, lead and zinc.

The presence of the partly graphitic mudstone/argillite likely accounts for the modelled EM conductor, however the sulphide vein at 307.95–308.05 m (only 3.2 m from end of hole) contained coarse-grained magnetite, pyrite, chalcopyrite and pyrrhotite, possibly indicating entry into a sulphide-rich basement system. Irrespective, no further drilling was undertaken on the prospect.

On 13 May 2015 drill site OR12D01 was inspected. The disturbed vegetation has grown back and there is no evidence remaining of drilling activities. Figure 21-Figure 23 illustrate drill site OR12D01 transitioning from pre-drilling to post-drilling to mature rehabilitated site. Grass re-established on site was noted to be adversely impacted by drought and cattle grazing by 2015 with only root stock and grass tufts apparent (Figure 23).



Figure 21: Photograph taken 31 July 2012 of pegged collar location on OR12D01 drillsite before commencement of drilling (looking northwest 320° azimuth)



Figure 22: Photograph taken 24 August 2012 of OR12D01 drillsite (capped white collar pipe exposed) showing water-filled sumps (looking north 360° azimuth)



Figure 23: Photograph taken 13 May 2015 of OR12D01 drillsite showing rehabilitated drill site (looking north 360° azimuth)

3.1.5 2018 ELECTROMAGNETIC SURVEY

From October to December 2018, GEM Geophysics conducted a moving loop ground EM survey over the northern portion of the Eloise JV Project, including the western edge of EPM 18624. The purpose of the survey was to expand ground EM coverage over the Holy Joe structure where the contacts between the Toole Creek Volcanics and Mt Norna Quartzite, and Mt Norna Quartzite and Llewelyn Creek Formation are interpreted.

A total of 39 new EM stations for 3.4 line km were acquired along five east-west lines. Lines were spaced at 800 m intervals with 100 m stations (Table 9). The Jessy Deep HT Squid was used throughout. The survey was conducted as a moving loop survey using a 200 m loop and B-field Jessy Deep HT squid sensor. Data were acquired in the in-loop position with 100 m stations. All data were collected by GEM Geophysics; the survey details are summarised in Table 9. The coordinate system used throughout is GDA94, MGA 54. Processed EM data were delivered by the contractor as .tem files.

Data quality was satisfactory throughout the survey. Production met expectations for most of the survey, although some down-time was experienced towards the end of the survey due to storm activity.

Survey Type	In-loop
Loop Size	200 m
No of turns	1 (using thick wire)
Stations Spacing	100 m
Loop Spacing	100 m
Sensor	Jessy Deep HT Squid
Transmitter	TTX-1
Power Supply	GEM
Receiver	SmartEM 24
Components	Z,X,Y
Frequency	0.25 Hz

Table 9: 2018 Holy Joe ground EM survey specifications.

Review of the profile and gridded data sets did not reveal any significant conductors within the tenement. An elevated late-time (i.e. basement) response in the basement is thought to be caused by graphitic units within interpreted Toole Creek Volcanics (Figure 24).

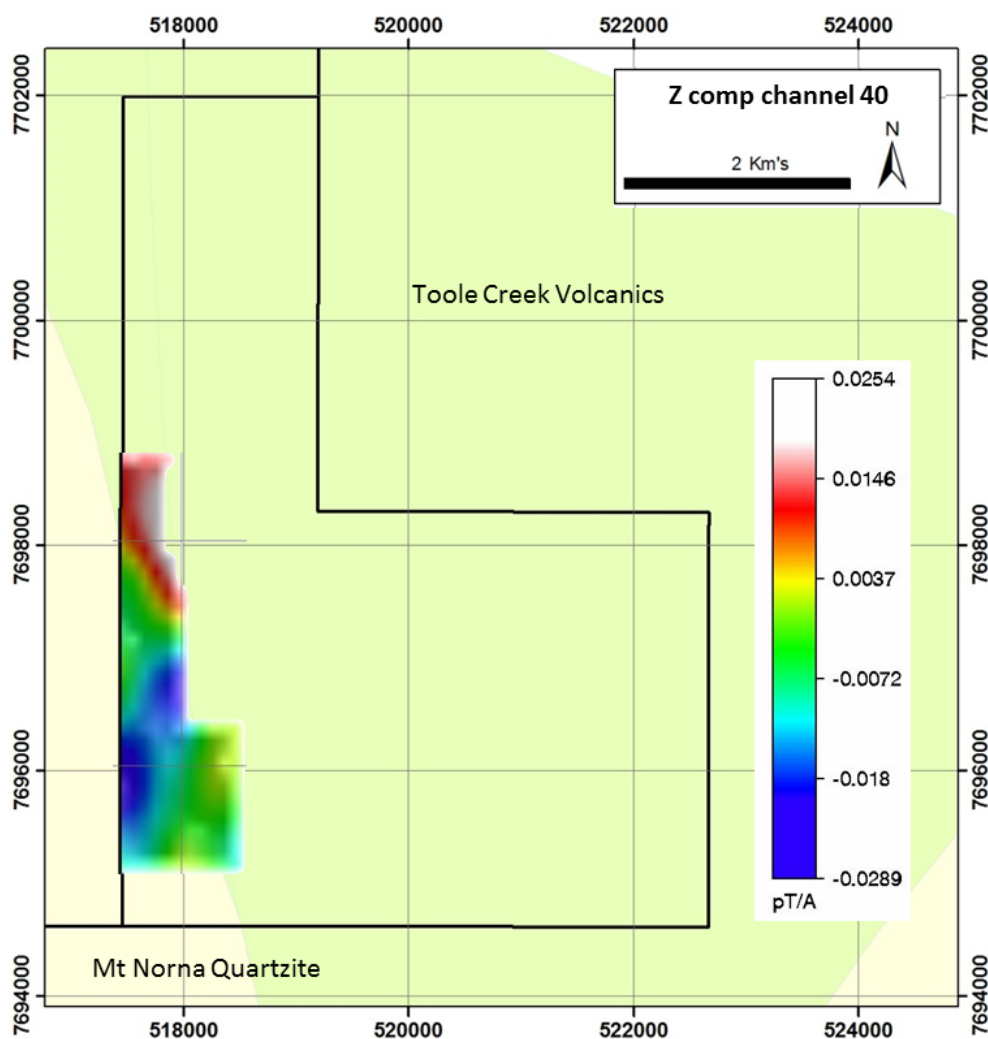


Figure 24: Gridded late-time EM data, Z component channel 40

3.2 ACTIVITY DURING THE PAST 12 MONTHS

No field work was completed on EPM 18624 during the reporting period. Work undertaken on adjacent EPM 26703 was used to inform basement interpretation on EPM 18624. A final assessment of historic data and Minotaur's exploration on EPM 18624 led to the tenement being relinquished to focus resources on higher ranked targets across the Chimera tenement package.

4 WORK PROGRAM COMPLIANCE STATEMENT

Work completed during Year 12 of tenure was not compliant with the Approved Work Program (AWP) which required follow-up drilling (two holes).

Work completed during Year 12 included data review and assessment only, no field work was undertaken. Work undertaken during Years 9-11 has not generated targets within EPM 18624 ranked higher priority for drilling than the Jericho prospect where 15,000m of drilling was completed in 2022.

5 COPYRIGHT STATEMENT

ACKNOWLEDGEMENT AND WARRANTY

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