

# **Open File Envelope**

## **No. 12,977**

**EL 4891 AND EL 4892**

**TALLARINGA PROJECT**

**PACE INITIATIVE : THEME 2, YEAR 8**

**DRILLING PARTNERSHIP – COOBER PEDY DISTRICT,  
MABEL CREEK HIGH, CYCLOPS GEOPHYSICALLY  
ANOMALOUS MESOPROTEROZOIC BASEMENT IOCG  
TYPE GOLD AND BASE METAL PROSPECT**

**PROJECT DPY 8-34 FINAL REPORT**

Submitted by  
MinQuest Ltd  
2015

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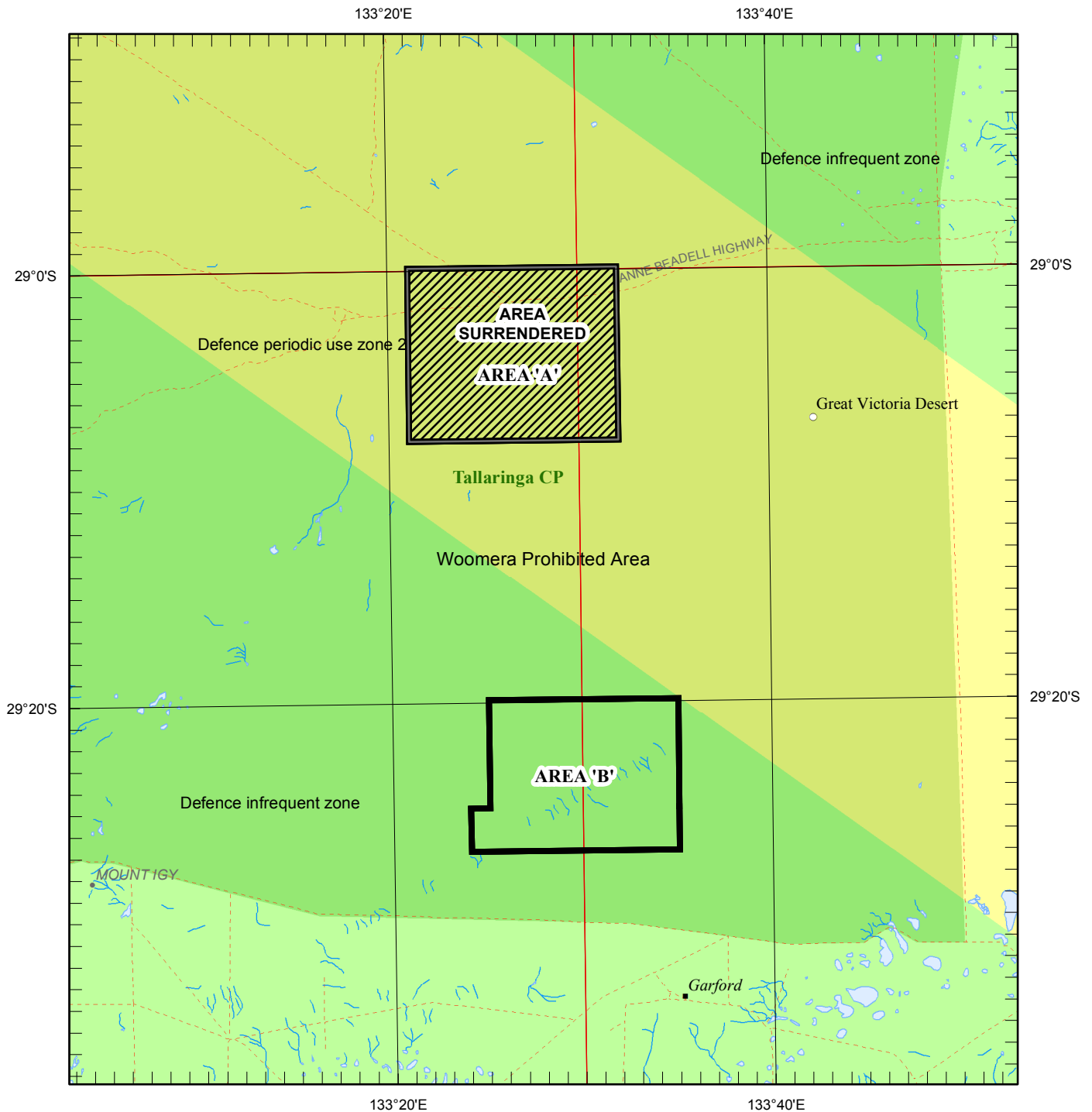
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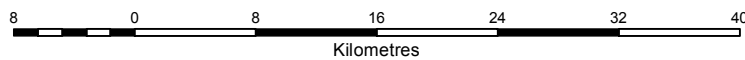


**Government of South Australia**  
Department for Manufacturing,  
Innovation, Trade, Resources and Energy

# SCHEDULE A



SCALE 1 : 500 000



LICENCE BOUNDARIES IN : DATUM AGD66

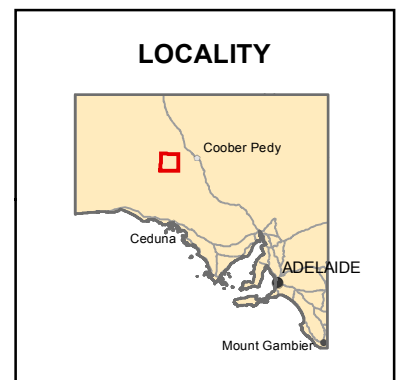
APPLICANT : **TECK AUSTRALIA PTY LTD**

FILE REF : **2011/00120** TYPE : **MINERAL ONLY**

AREA : **215** sq km (approx)

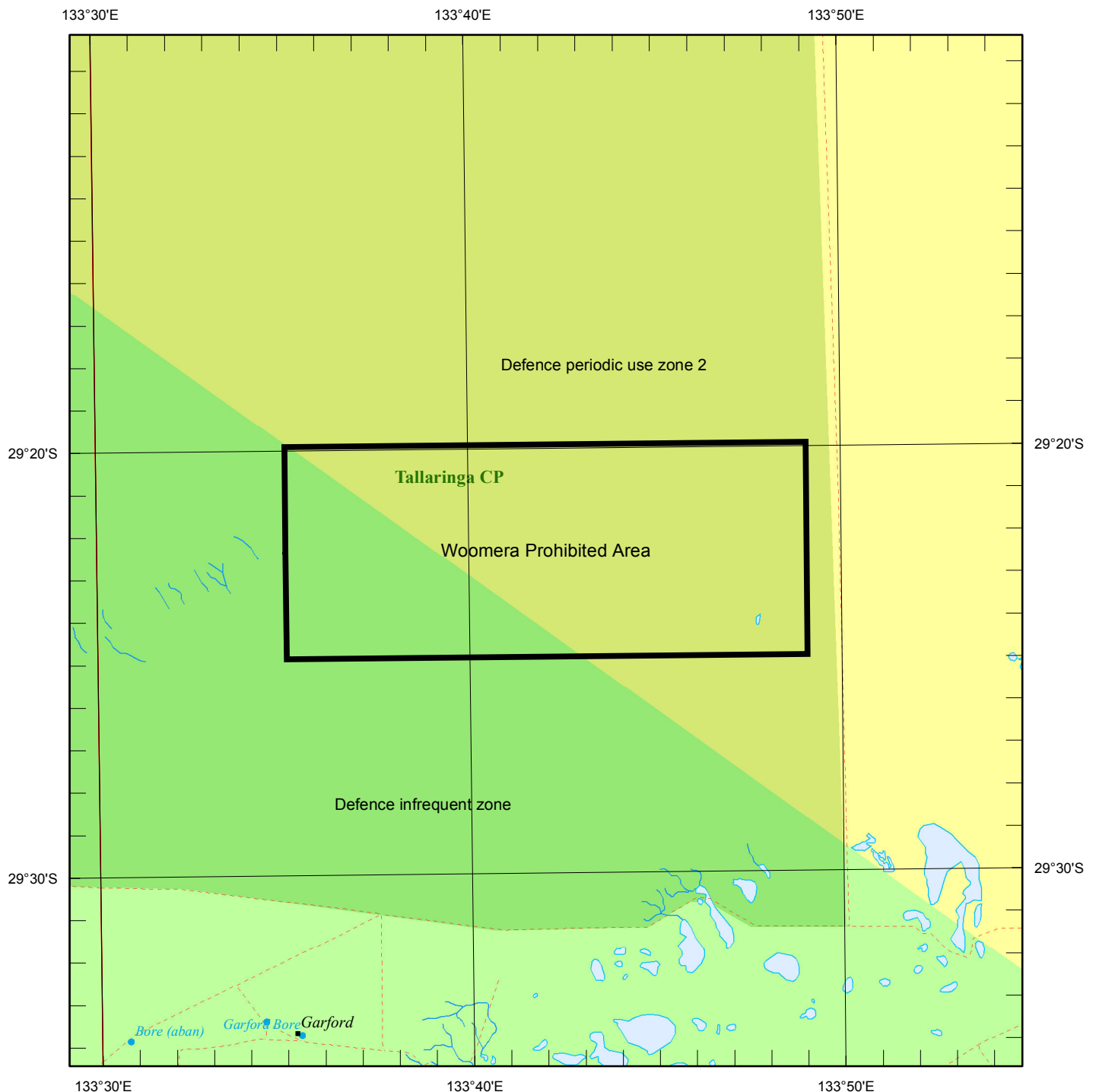
1 : 250 000 MAPSHEETS : **TALLARINGA COOPER PEDY**

LOCALITY : **TALLARINGA AREA -**  
**Approximately 120 km west of Cooper Pedy**

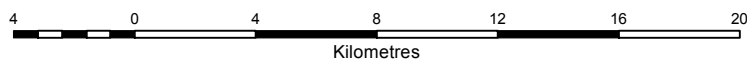


DATE GRANTED: **24-May-2012** DATE EXPIRED: **23-May-2014** EL NO: **4891**

# SCHEDULE A



SCALE 1 : 250 000



LICENCE BOUNDARIES IN : DATUM AGD66

APPLICANT : **TECK AUSTRALIA PTY LTD**

FILE REF : **2011/00125** TYPE : **MINERAL ONLY**

AREA : **209** sq km (approx)

1 : 250 000 MAPSHEETS : **COOBER PEDY**

LOCALITY : **TALLARINGA AREA -**

**Approximately 110 km southwest of Coober Pedy**



DATE GRANTED: **24-May-2012** DATE EXPIRED: **23-May-2014** EL NO: **4892**



**Coober Pedy Project  
Cyclops Prospect  
PACE Final Report and Accompanying Drill Data  
Agreement DPY8-34**

**MinQuest Ltd.  
October 2, 2015**

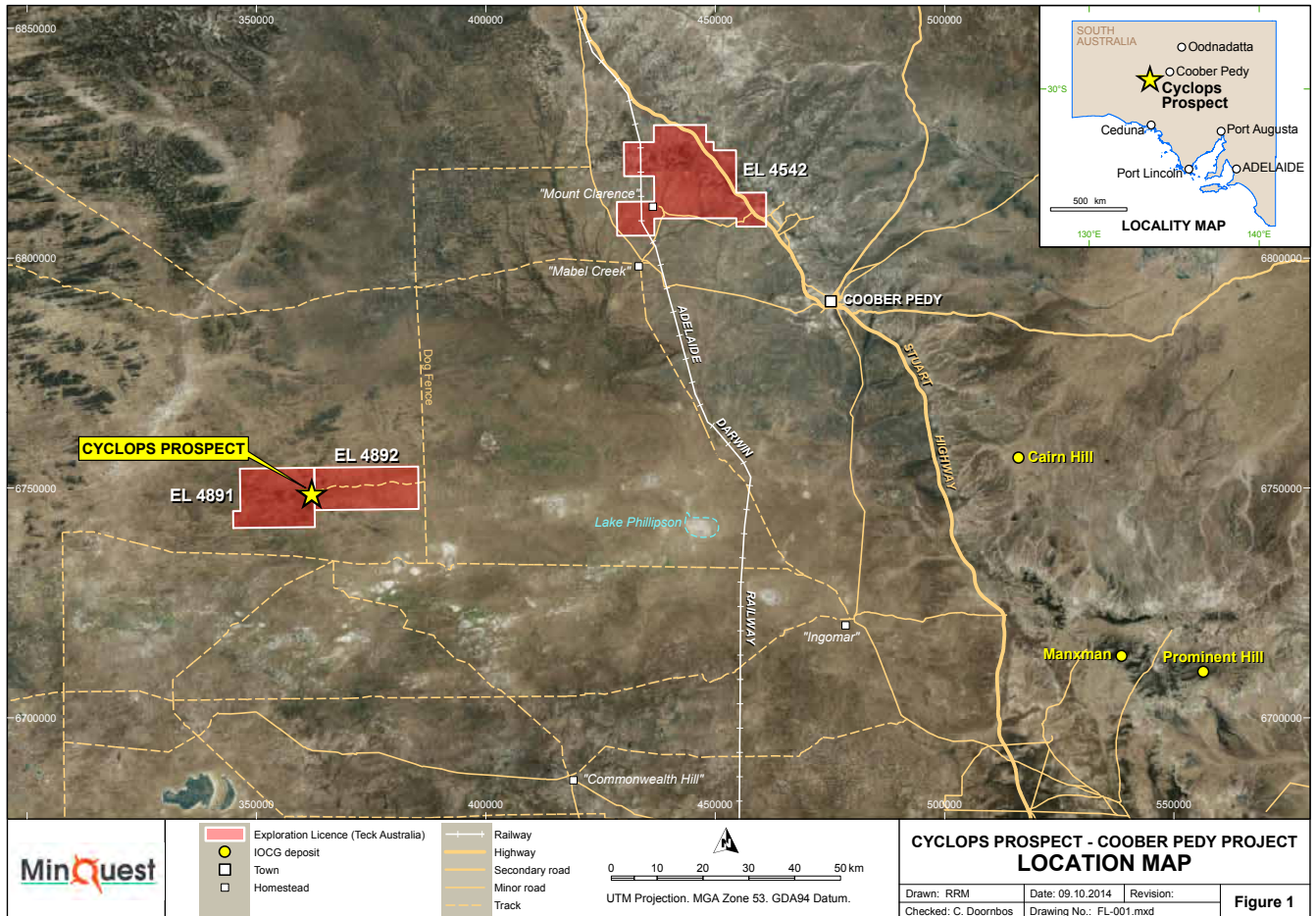


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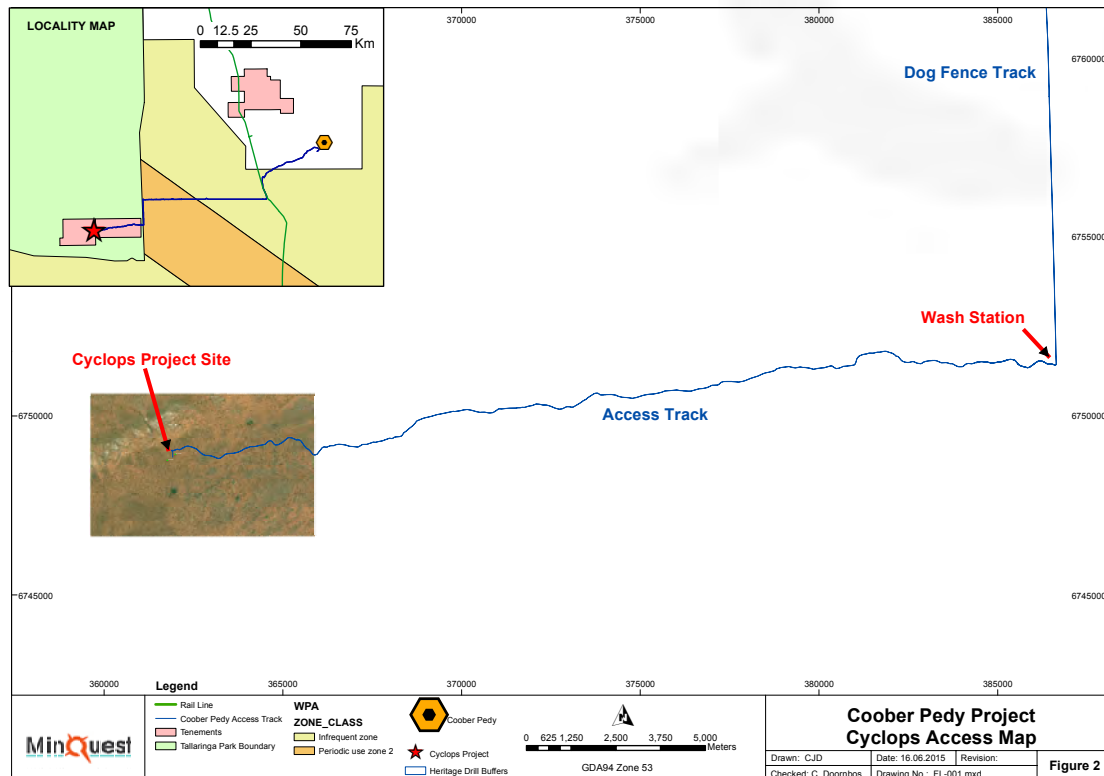
## 1. INTRODUCTION

The Cyclops Prospect is located approximately 150km south-west of Coober Pedy (Figure 1-1) along the boundary between granted exploration licenses EL4891 and EL4892. The tenement is held by Teck Australia Pty Ltd., and has been optioned to MinQuest in August, 2014. Situated within the Mable Creek Terrain, it lies to the west of the world class Prominent Hill Mine and to the north of Challenger Mine.



**Figure 1-1: Location of the Cyclops Target, near Coober Pedy, South Australia**

The topography of the region is a generally flat and sparsely vegetated plane, located within the Tallaringa Conservation Area (TCA). Access to the project is via a 27km track that heads east from the Dog Fence that forms the border with the TCA (Figure 1-2).



**Figure 1-2: Access to the Cyclops Prospect, South Australia**

## 2. EXPLORATION MODEL

Previous exploration work by Teck Australia Pty Ltd defined strong, discrete magnetic and gravity anomalies at the Cyclops Prospect. Forward modelling of the gravity and magnetic data indicated the potential source is a magnetite-rich body of approximately 800m x 250m, starting at a depth of approximately 100m-150m below surface. Soil geochemical surveys detected a gold geochemical anomaly, coincident with the geophysical anomaly, on one of two soil lines.

MinQuest identified the Cyclops target as having a similar geophysical signature to the world class Prominent Hill Deposit. The original target at Prominent Hill was a magnetic anomaly to the north of a semi-linear gravity anomaly. Previous explorers had drilled the magnetic anomaly and found very low grade copper hosted in a magnetite skarn unit with carbonate-hematite-sulphide veining. The main deposit consists of a hematite breccia complex that is fault separated from a magnetite skarn to the north creating the geophysical anomaly identified. The breccia clasts consist of heavily altered sandstones and volcanic rocks with mineralisation generally confined to the breccia matrix.

MinQuest applied for PACE funding in order to test the exploration model developed for the Cyclops Prospect.

The Cyclops Target was generated from a magnetic and density anomaly that was targeted based on the understanding developed from the Prominent Hill Deposit. The geophysical signature is a magnetic anomaly offset from a large gravity anomaly sitting on a craton tapping major structure (the Karari Shear).

The Cyclops drill target was developed as:

- IOCG deposit equivalent in size to Prominent Hill emplaced at time of Hiltaba Event (~1595-1575 Ma).
- Structural control means older re-activated faults in Archean basement or splays/break-back thrusting of the Karari Shear Zone (active ~1580-1540 Ma, but possibly as early as 1680 Ma).
- Dynamic environment at continental paleo-margin, with variable stress regimes, variable fluid sources (mixing).
- Important ENE and NW-NNW structures linked to IOCG formation in Gawler Craton.

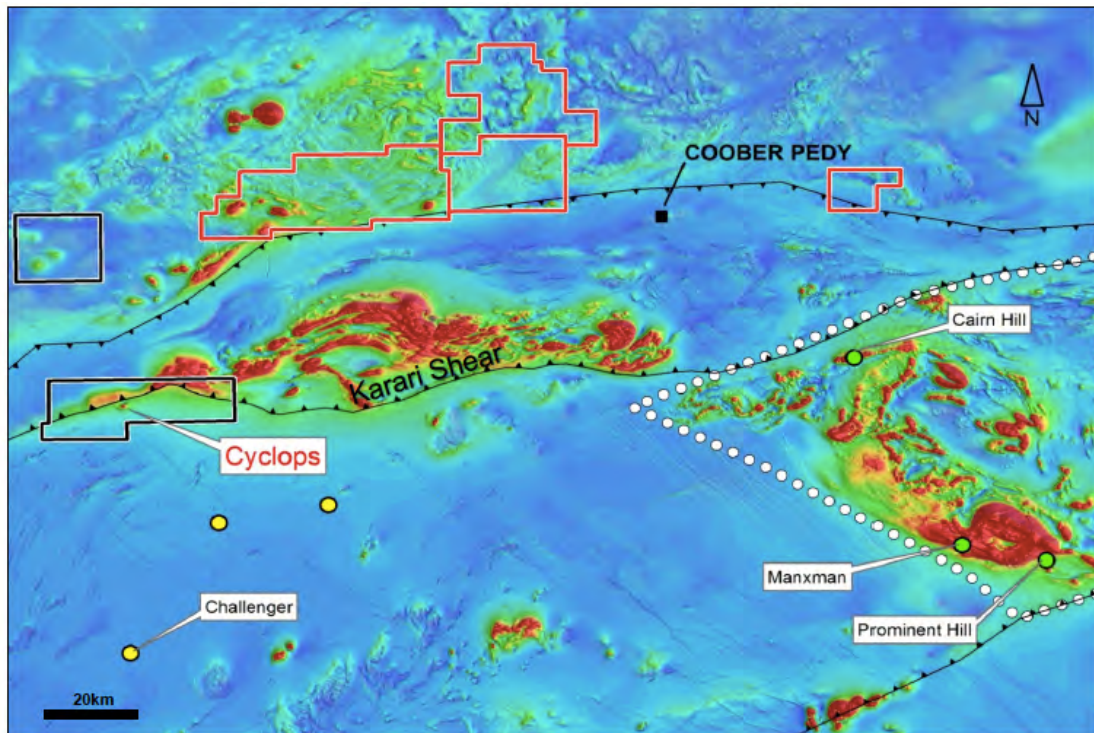
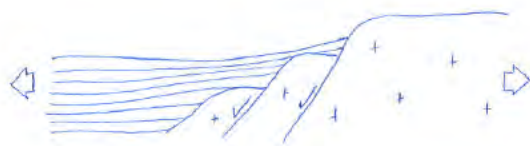


Figure 2-1: Regional Gravity map of the North Central Gawler Craton



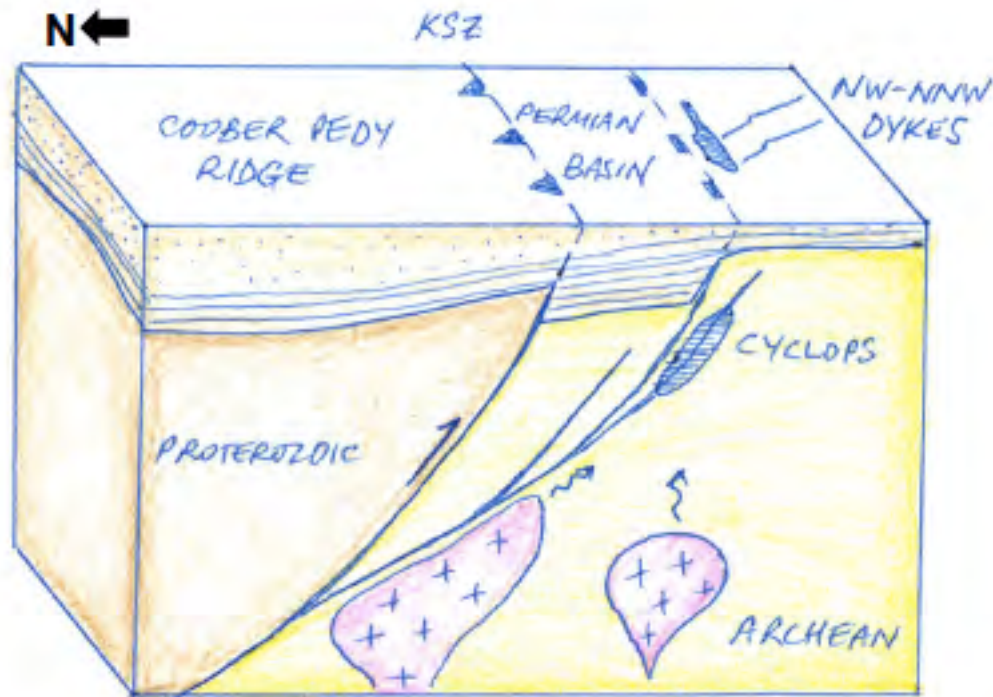
Passive continental margin above ancient metasomatised SCLM. Deposition of paleo-Proterozoic basins (~1730 Ma).



Possible early movement on proto-Karari Shear Zone. Emplacement of Hiltaba Suite intrusives using existing basement architecture (1595-1575Ma). Formation of Cyclops ironstone?



Compression and thrusting during Kararan Orogeny (~1580-1540 Ma) and huge vertical displacement. Possible reactivation of early architecture and/or break-back thrusting along KSZ? Exhumation to current levels.



**Figure 2-2: Schematic diagram of potential formation of the Cyclops Target, completed by Teck Australia.**

The geophysical character of the Cyclops Target is demonstrated by a large dense body, detailed as a gravity anomaly, off-set just slightly to the north from a large magnetic anomaly, all dipping towards 330° (Figure 3-1). The geometry of the magnetic and gravity anomaly is reversed as compared to Prominent Hill. At Prominent Hill, the mineralisation is hosted within a hematite breccia complex that is marked by a large gravity anomaly. The magnetite skarn is unmineralised and separated from the mineralisation by a fault contact.

The main target at Cyclops Prospect is the gravity anomaly looking for a Prominent Hill style hematite breccia complex. However, in IOCG's magnetite can play an important role in the deposition of copper mineralisation. Consequently the MAG anomaly will also be properly investigated.

An important observation on the size of the Cyclops Target, this may be marked by the abrupt end to the N trending dykes (Figure 2-4). The dykes in this image clearly and abruptly end just south of the gravity anomaly. This may actually show the southern limits of the deposit.

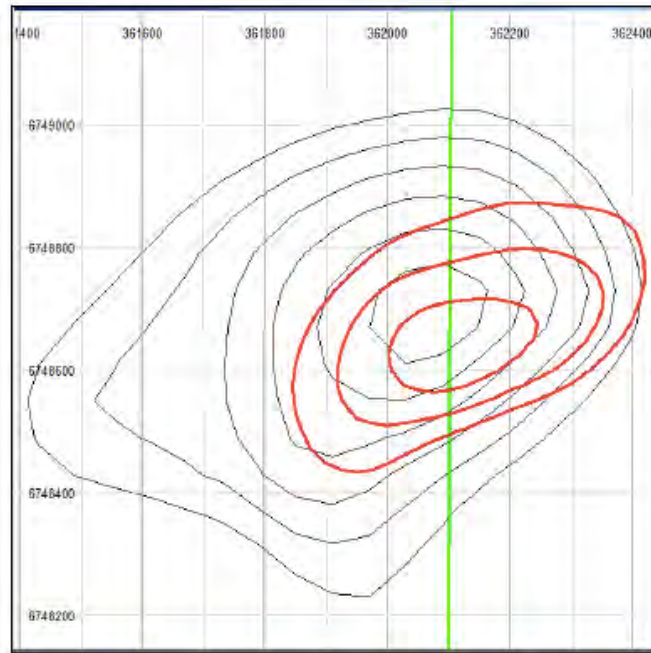


Figure 2-3: Demonstrates the gravity anomaly (black) slightly offset and to the north of the magnetic anomaly (red).

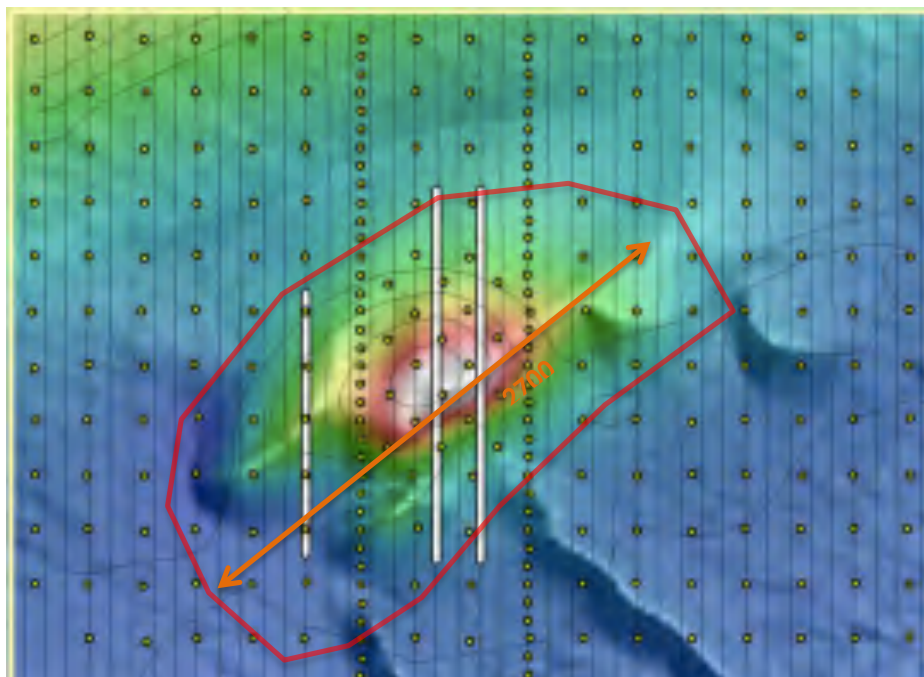
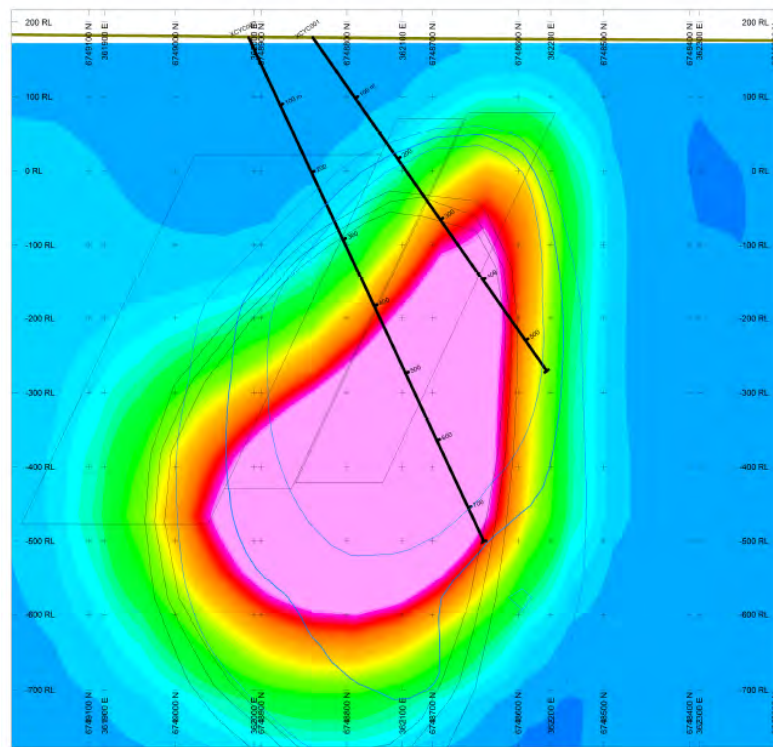


Figure 2-4: Gravity Anomaly of the Cyclops Target

## 3. DRILL PROGRAM PROPOSAL

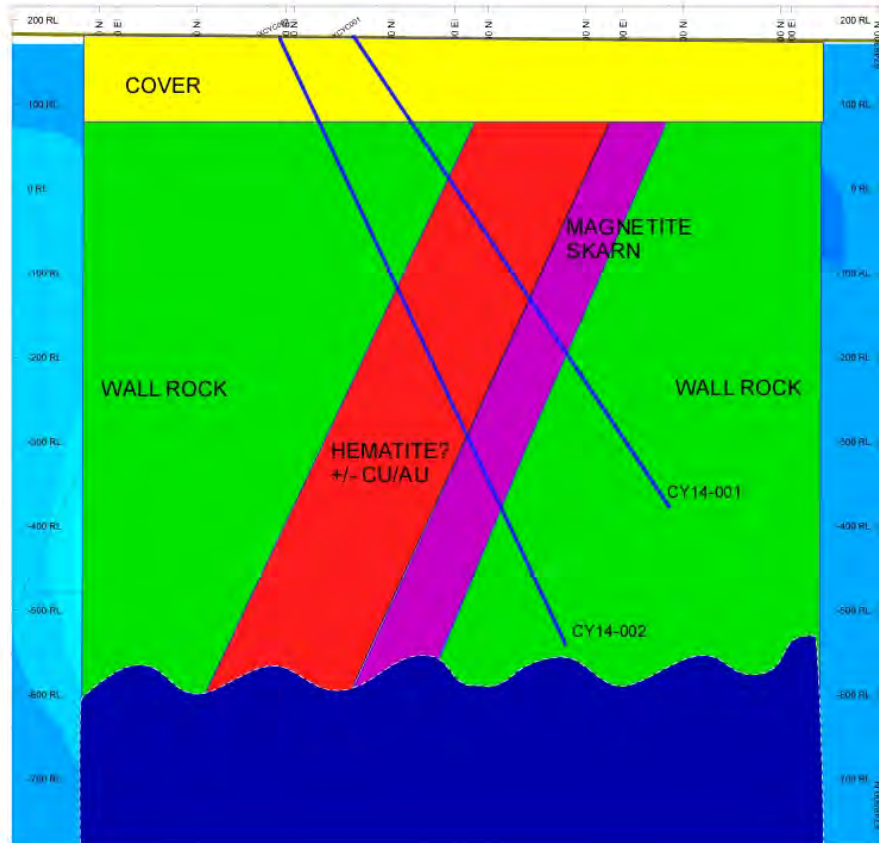
From the 2.5D modelling of the geophysical data, the anomaly appears begin at approximately 100m below the surface, which is the suspected depth of cover over the basement sequence in the area. The anomaly strikes approximately 060° and dips steeply towards the NW (60, 330 – dip/dip direction). The gravity anomaly is offset to the north just slightly from the mag anomaly (Figure 3-1). This is the opposite relationship to Prominent Hill where the mag anomaly is north of the density anomaly.



**Figure 3-1: Mag (gradient) and Gravity (Blue lines) with the 2.5D polygons showing planned drill holes CY14-001 (shallow) and CY14-002.**

The geological model that has been developed for the Cyclops Prospect is a Prominent Hill style IOCG deposit. The density anomaly would then be a series of hematite breccia zones hosted in a sheared complex (Figure 3-2). Within the system, copper and gold would occur within the main shear zone as well as in splays coming off the main zone. High-grade gold zones would also occur erratically in pods and are not a target for the current program due to the unsystematic locations (at the present scale) in which they have been distributed. At Prominent Hill, the hanging wall consisted of a magnetite skarn creating the mag anomaly to the north. The footwall consisted of units believed to be part of the Gawler Range Volcanics.

At the Cyclops Prospect, the mag anomaly is located to the south and may be a similar style unit to Prominent Hill, given similar fluid chemistry and deep seated faults. At Prominent Hill, the magnetite skarn was unmineralised, however, it is common given the fluid chemistry of the copper rich ore; they this fluid may have reacted with the magnetite if they came into contact with the unit. This could have deposited copper mineralisation within the magnetic unit and should be investigated.

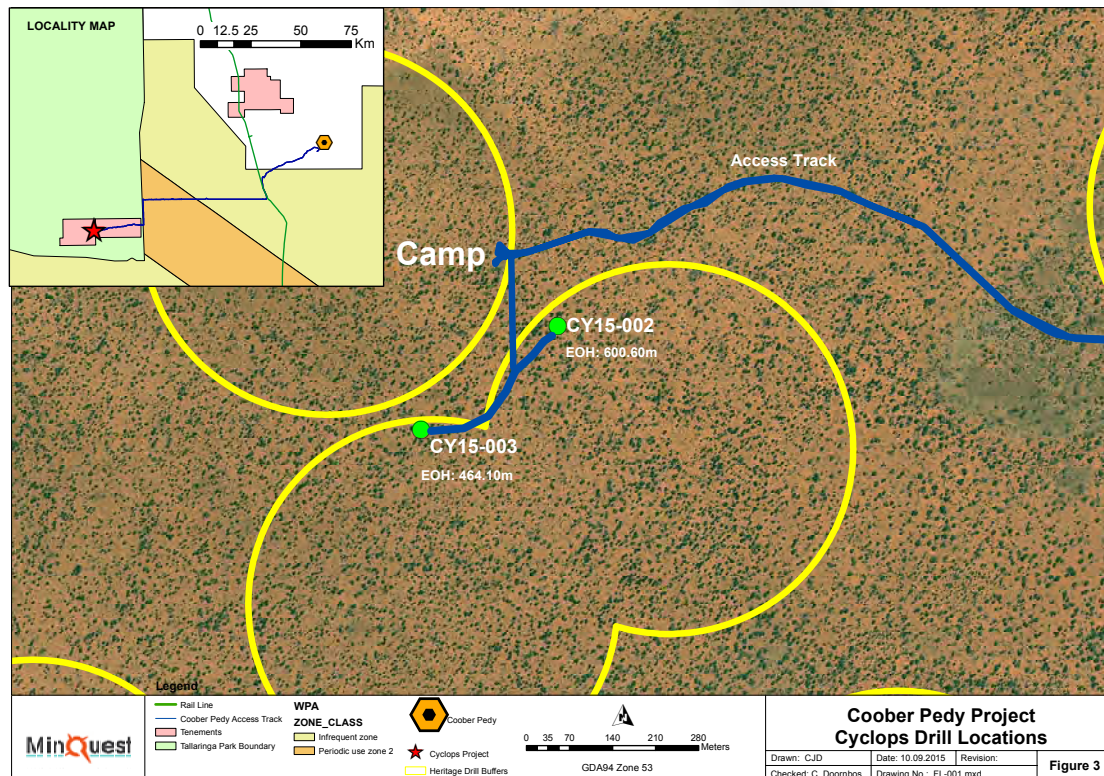


**Figure 3-2: Schematic cross section of the Cyclops Prospect with interpreted geology based on the Prominent Hill model.**

Four drill holes were proposed to test the gravity anomaly and concurrent MAG anomaly. Drill holes 1 (CY14-001) and 2 (CY14-002) on Figure 3-1 and 3-2 have been planned to intersect the heart of the anomaly. They are planned at 150° and stepped back from each other with dips set at -55° and -65°, respectively. These two holes should provide a full coverage of the entire density anomaly with CY14-001 intersecting the mag anomaly within 450m. They will also provide some information as to the extent the system extends at depth. Drill holes 3 (CY14-003) and 4 (CY14-004) are designed to test the lateral extent of the anomaly. These holes may need to be adjusted NW or SE depending on what is intersected in CY14-001 and 002. They have also been planned based on testing the density anomaly. For precision targeting of these holes, the results from the first hole will need to be plotted against the geophysical signature to ensure that these holes will intersect the system in the correct location and angle.

#### 4. PACE DRILL SUMMARY

A total of three drill holes were completed on the Cyclops Prospect, located in the Mable Creek Domain. CY15-001 (proposed hole CY14-001) was abandoned in the cover sequence due to poor ground conditions. CY15-002 (proposed hole CY14-002) and CY15-003 (proposed hole CY14-003), were completed into the basement and have tested the causative sources of both the gravity and magnetic anomalies at Cyclops (Figure 4-1). Drill hole CY15-002 was completed to a depth of 600.6m and drill hole CY15-003 was completed to a depth of 464.1m.



**Figure 4-1: Outline of drill locations, access track and the drill camp for the Cyclops Drill Program**

## 4.1. DRILL HOLE SUMMARY

### CY15-002

CY15-002 intersected a thick, likely early cretaceous sedimentary cover sequence consisting of shales and mudstones of, likely, the Bulldog Shale and calcareous sandstone of the Cadna-owie Formation. The lower portion of the Cadna-owie sandstone contains minor sedimentary breccia interbeds and unconformably overlies the basement banded iron formation. The unconformity was intersected at a depth of 184.20 m downhole and was marked by semi massive pyrite blebs in the sandstone and a sharp contact between sandstone and underlying iron formation. Basement lithologies were dominated by sericite rich sandstone with pervasive magnetite or banded iron formation (BIF), minor carbonate and aluminous metasediments interbeds through to 534.70 m. A healed fault haematite breccia was intersected at 271.1m-272m and 534.2m-534.7m. From 534.70 m through to the end of hole consisted of a foliated potassic and hematite altered light pink felsic schist. The felsic schist contained two xenoliths of the overlying BIF unit at 544.90 and 555.00 m.

Trace to 1% Chalcopyrite was observed in five distinct areas with the largest spanning just over 11 m from 377.00 to 388.27 m.

Abundant sericite, hematite and minor chlorite alteration was observed throughout the basement lithologies. Hematite and sericite alteration in the banded iron formation was focussed along and within quartz and feldspar leucosomes. Chlorite alteration was limited to

the carbonate interbeds. Pervasive moderate to strong potassic and hematite alteration affected the felsic schist. Figures 4-2 to 4-6 display the units intersected in CY15-002.

**Table One – Summary Geological Log for Drill Hole CY15-002**

| Hole     | East<br>(GDA94,<br>Zone<br>53,m) | North<br>(GDA94,<br>Zone 53,<br>m) | Azi.<br>(150°) | Dip<br>(-<br>65°) | From<br>(down<br>hole m) | To<br>(down<br>hole m) | Lithology and Alteration                                                                   |
|----------|----------------------------------|------------------------------------|----------------|-------------------|--------------------------|------------------------|--------------------------------------------------------------------------------------------|
| CY15-002 | 361,996                          | 6,748,914                          | (150°)         | (-<br>65°)        | 184.2                    | 241.1                  | Magnetite- Quart Banded Gneiss                                                             |
|          |                                  |                                    | (150°)         | (-<br>65°)        | 241.1                    | 244.7                  | Calc-silicate with potassic alteration                                                     |
|          |                                  |                                    | (150°)         | (-<br>65°)        | 244.7                    | 249                    | Magnetite- Quart BIF                                                                       |
|          |                                  |                                    | (150°)         | (-<br>65°)        | 249                      | 254.2                  | Potassic and sericite altered sandstone with minor pyrite                                  |
|          |                                  |                                    | (150°)         | (-<br>65°)        | 254.2                    | 257.1                  | Potassic altered BIF                                                                       |
|          |                                  |                                    | (150°)         | (-<br>65°)        | 257.1                    | 262.2                  | Calcareous sandstone with pervasive chlorite alteration                                    |
|          |                                  |                                    | (150°)         | (-<br>65°)        | 262.2                    | 271.1                  | Magnetite- Quart BIF                                                                       |
|          |                                  |                                    | (150°)         | (-<br>65°)        | 271.1                    | 272                    | Healed haematite breccia                                                                   |
|          |                                  |                                    | (150°)         | (-<br>65°)        | 272                      | 308.4                  | BIF with variable haematite alteration, sericite and potassic alteration                   |
|          |                                  |                                    | (150°)         | (-<br>65°)        | 308.4                    | 331.7                  | Well banded BIF with epidote alteration and earthy bands of haematite                      |
|          |                                  |                                    | (150°)         | (-<br>65°)        | 331.7                    | 450.7                  | BIF with variable haematite alteration, sericite and potassic alteration                   |
|          |                                  |                                    | (150°)         | (-<br>65°)        | 450.7                    | 507.9                  | Moderately banded BIF with variable haematite alteration, sericite and potassic alteration |
|          |                                  |                                    | (150°)         | (-<br>65°)        | 507.9                    | 534.2                  | Greywacke, moderately foliated with biotite, variable carbonates;                          |

|  |  |  |        |        |       |       |                                                                                    |
|--|--|--|--------|--------|-------|-------|------------------------------------------------------------------------------------|
|  |  |  | (150°) | (-65°) | 534.2 | 534.7 | Healed fault breccia. Moderate haematite alteration / dusting of alkali feldspars. |
|  |  |  | (150°) | (-65°) | 534.7 | 542.9 | Felsic schist, haematite coated feldspars, minor silicification.                   |
|  |  |  | (150°) | (-65°) | 542.9 | 553.5 | Highly sheared BIF xenolith, downhole contact bx'd but healed.                     |
|  |  |  | (150°) | (-65°) | 553.5 | 600.6 | Felsic schist, haematite coated feldspars, minor silicification.                   |



Figure 4-2: Large irregular leucosome with hematite dusting of alkali feldspar in magnetite rich BIF with disseminated euhedral specular hematite porphyroblasts (CY15-002, 191.30m).

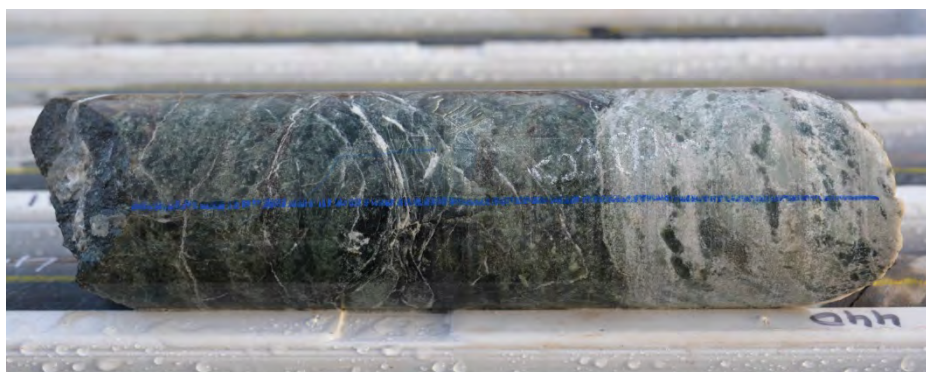


Figure 4-3: Galena and Chalcopyrite in Siliceous Altered Meta-Sediment (CY15-002, 516.22m)



Figure 4-4: Strong pervasively chlorite altered carbonate (CY15-002, 523.82m).



Figure 4-5: Fault Zone with Sericite Alteration (CY15-002, 533m)



Figure 4-6: "Red Rock" Alteration in Felsic Schist (CY15-002, 558m)

## CY15-003

Drill hole CY15-003 was completed 350m south-west of drill hole CY15-002. This drill hole targeted a section of the Cyclops gravity and magnetic anomalies showing greater structural complexity. At this location the basement rocks were intersected at a down hole depth of 157.5m, which corresponds to a vertical depth of 130m. The basement rocks are very similar to the sequence intersected in drill hole CY15-002 and are dominated by haematite and sericite altered BIF. Underlying the BIF unit is a heavily haematite and potassic altered felsic schist also containing a BIF xenolith.

**Table Two – Summary Geological Log for Drill Hole CY15-003**

| Hole     | East<br>(GDA94, Zone 53,m) | North<br>(GDA94, Zone 53, m) | Azi.<br>(150°) | Dip<br>(-65°) | From<br>(down hole m) | To<br>(down hole m) | Lithology and Alteration                                                      |
|----------|----------------------------|------------------------------|----------------|---------------|-----------------------|---------------------|-------------------------------------------------------------------------------|
| CY15-003 | 361,772                    | 6,748,748                    | (150°)         | (-65°)        | 158.4                 | 320.6               | Greywacke and Magnetite with Quartz Banded Gneiss                             |
|          |                            |                              | (150°)         | (-65°)        | 320.6                 | 325.98              | Felsic schist, potassic and haematite coated feldspars, minor silicification. |
|          |                            |                              | (150°)         | (-65°)        | 325.98                | 328.76              | Greywacke, moderately foliated with biotite.                                  |
|          |                            |                              | (150°)         | (-65°)        | 328.76                | 335.64              | Brecciated unit of felsic schist and calc-cilicate with chlorite alteration   |
|          |                            |                              | (150°)         | (-65°)        | 335.64                | 396.65              | Greywacke and Magnetite with Quartz Banded Gneiss                             |
|          |                            |                              | (150°)         | (-65°)        | 396.65                | 400.5               | Greywacke, moderately foliated with biotite.                                  |
|          |                            |                              | (150°)         | (-65°)        | 400.5                 | 402.3               | Calc-silicate with chlorite and epidote alternation                           |
|          |                            |                              | (150°)         | (-65°)        | 402.3                 | 429.5               | Felsic schist, potassic and haematite coated feldspars, minor silicification. |
|          |                            |                              | (150°)         | (-65°)        | 429.5                 | 446.1               | Weakly chloritised BIF xenolith with minor haematite alteration.              |
|          |                            |                              | (150°)         | (-65°)        | 446.1                 | 464.1               | Felsic schist, potassic and haematite coated feldspars, minor silicification. |

## 4.2. ASSAY RESULTS

Samples taken from each drill hole were submitted for multi-element geochemical analysis. Results from this test work show that no appreciable copper, gold, silver, lead or zinc was discovered within the samples submitted from CY15-002 and CY15-003. Minor amounts of copper, lead and zinc were identified and correspond to the visual identification of trace amounts of chalcopyrite, galena and sphalerite. Outlined in Table Three are the maximum and minimum values received from the multi-element geochemical analysis between both holes.

**Table Three – Summary of the Maximum and Minimum Results from the Multi-Element Geochemical Analysis**

|            | <b>Au</b>  | <b>Ag</b>  | <b>Cr</b>  | <b>Cu</b>  | <b>Fe</b> | <b>Ni</b>  | <b>Pb</b>  | <b>U</b>   | <b>Zn</b>  |
|------------|------------|------------|------------|------------|-----------|------------|------------|------------|------------|
|            | <b>ppm</b> | <b>ppm</b> | <b>ppm</b> | <b>ppm</b> | <b>%</b>  | <b>ppm</b> | <b>ppm</b> | <b>ppm</b> | <b>ppm</b> |
| <b>MAX</b> | 0.004      | <0.5       | 218        | 337        | 27.4      | 182        | 691        | <10        | 1090       |
| <b>MIN</b> | <0.002     | <0.5       | <1         | <1         | 0.8       | <1         | <2         | <10        | 8          |

*Note that "<" denotes below detection of the analytical method used.*

Representative samples from each major unit within the two drill holes were submitted for whole rock geochemical analysis. The complete data for both the assay and whole rock analytical results have been submitted to the Geological Survey of South Australia.

## 4.3. PETROLOGY

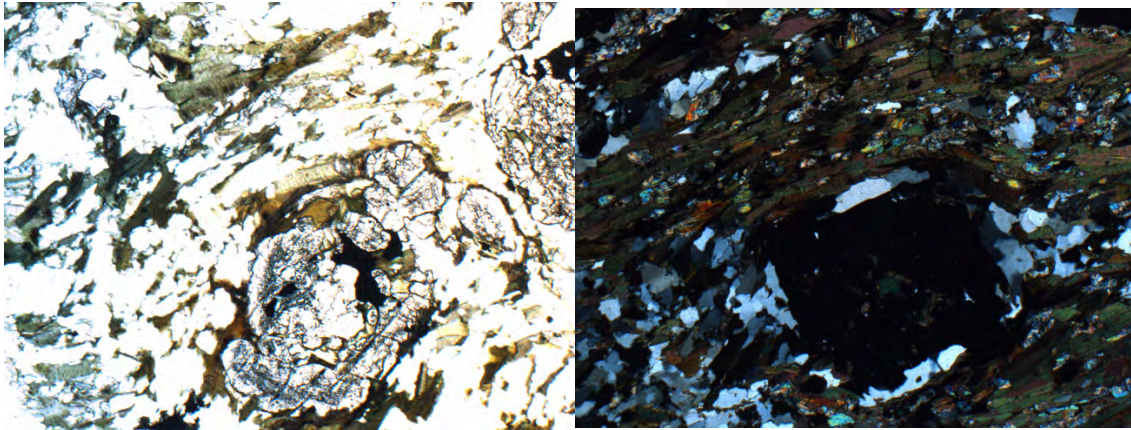
MinQuest completed a high level review of the petrography of five thin sections to confirm the lithologies and alternation that were identified during the core logging. A quick summary of these five sections is presented below.

### **CY15-002 (358.70m)**

Metasandstone with biotite altering to chlorite in places. Magnetite appears later than the metamorphism. Lucosome contains both quartz and feldspar, the latter altering the sericite.

### **CY15-002 (508.96m)**

Metasandstone with clinozoisite and garnets with biotite. Garnet post dates fabric formation to marginally syn-deformation (Figure 4-7).



**Fig 4-7 a) thin section of CY15-002 at 508.96m    b) crossed polars of CY15-002 at 508.96m**

## **CY15-003 (182.70m)**

Metasandstone unit, green patch seen in hand sample is zoisite and clinozoisite. Garnets presented surrounded by quartz and feldspar luesome.

## **CY15-003 (448.20m)**

Two mica granite (biotite and muscovite) with chlorite alteration. Metamorphism is likely prograde and contains thin quartz ribbons (recrystallization??)

## **CY15-003 (437.70m)**

High temperature metasandstone similar to (CY15-002 – 358m) with biotite, chlorite and garnets. Minor magnetite occurs with quartz.

## **5. DISCUSSION**

Drill holes CY15-002 and CY15-003 targeted a blind slightly offset magnetic and gravity anomaly paired with anomalous gold in soil results directly overlying the geophysical anomalies. To further add to the prospectivity of the area, the anomaly is located proximal to the early Proterozoic crustal scale Karari shear all of which are key ingredients for IOCG style mineralization. The modelled density of the gravity anomaly ranges from 2.87 – 3.50 g/cm<sup>3</sup>, the banded iron formation intersected in the drilling has an average density of 3.16 g/cm<sup>3</sup> with values up to 3.46 g/cm<sup>3</sup>. The intersected BIF is also highly magnetic with susceptibilities being 1000x higher than the cover and underlying felsic schist. Given the high density and magnetic susceptibility it is clear that the magnetic and gravity geophysical anomalies have been explained.

Groves et al, 2010 set out seven essential criteria for the classification of IOCG deposits:

- Formed by magmatic – hydrothermal processes
- Copper and/or gold as economic metals
- Structurally controlled – commonly with breccias
- Surrounded by alteration and/or brecciation zones more regional in scale relative to mineralization

- Depleted SiO<sub>2</sub> content of altered wall rocks
- Have abundant low Ti iron oxides (magnetite / hematite) or iron silicates
- Close temporal, but not apparent spatial, relationship to causative intrusions

Drilling at the Cyclops Target intersected significant zones of sericite and hematite alteration similar to the alteration zones typically associated with IOCG deposits which have large alteration halos around the mineralized body. To add further intrigue is the presence of both chalcopyrite and galena along fractures which is indicative of mineralizing fluids being present in the area (the chalcopyrite associated with the highly altered selvages of leucosomes may represent copper which was scavenged from the host rock during deformation rather than a separate mineralizing event).

One of the key factors of IOCG deposits is that they are structurally controlled and linked to crustal scale features. The proximity of the Karari shear zone to the Cyclops project area as well as the numerous structures intersected in the drilling, some of which appear to have been reactivated several times during the geologic evolution of the region, indicate that there is a significant potential for a structurally controlled mineralized body to be present. Given the importance of the Hiltaba Intrusive Suite to mineralization in the Gawler Craton it would be important to age date the felsic schist intersected to determine if it is part of this suite or part of a different intrusive event.

The early stages of the exploration program at the Cyclops prospect have identified several of the key criteria for IOCG deposits as outlined by Groves et al, 2010, as being present in the project area. The key to further exploration would be determining the extent of the felsic schist and its potential link to mineralization as well as looking for dilational areas along the structures identified to key in on structural traps. There are several other, more discrete gravity anomalies to the south east of the drill area that may represent additional targets.

## **6. REHABILITATION**

Drilling completed on the 22nd of June, 2015. The camp and drilling equipment were quickly packed and demobilised from site with 2 days of completion of the last hole. Once all cuttings and equipment were removed from the drill sites, the drill holes were plugged with the collars cut off below surface. Rehabilitation of the drill areas commenced on the afternoon of the 24<sup>th</sup> June by Andrew Braukoff. All of the small trenches for channelling the cuttings to above ground storage tanks were shovelled into in RC bags. The drill sites and access to the drill sites from the camp were scraped by a small front end loader to remove any last remnants of drilling activity and buried. The drill sites were covered with the top soil which was initially removed. The drill sites were then back bladed and levelled and then scarified to remove the effects of compaction. Lastly, brush and dead trees which had been hand cleared from the drill sites initially were scattered back across the sites to promote micro-habitat and vegetation regrowth. The camp area was also cleaned up of all equipment and rubbish, it was then back bladed and scarified. The grey water sump was backfilled, whereas the black water disposal hole was capped and marked for future use. The main access tracks were cleaned up, but left in useable condition to reduce the impact of creating new access tracks for future programs. The first 200m of the access track off of the main dog fence track was levelled and scarified, with brush and dead trees placed on it in order to deter others from utilizing the access track. The access track can no longer be identified from the dog fence track. All other sites including the wash station, access points into the Tallaringa Conservation Park and the drilling water bore water source were reclaimed by levelling and scarifying.

The access track left in place follows the original access track used to complete the initial geophysics program (magnetics and gravity), which was undertaken by Teck in 2013. This has been left in place from 200m from the dog fence track to about 100m from the work site. It was cleaned up with any short diversions, which were scarified so only one track remains. The black water drill hole is clearly marked and can be utilised if a camp is set up for another program. If the decision is made not to complete another program, the black water drill hole will be filled in and the remaining track scarified to reduce compaction and allow vegetation regrowth.

Refer to Appendix 1 and Appendix 2 for Operations and Rehabilitation Photos and locations.

## 7. CONCLUSION

The geophysical model suggested the Cyclops target was a magnetite rich body located under approximately 100m of cover. The drill outlined a magnetite rich sandstone under approximately 120m of vertical cover. The magnetic susceptibility and density measured from the banded iron formation within the core are consistent with the magnetic and gravity anomaly as modelled.

The drill program was successful in identifying alteration assemblages similar to those associated with IOCG deposit types. Additionally, the program was able to identify trace copper mineralization. The drill program did not, however, discover a large energy brecciated system. This would suggest the mechanism and size for IOCG emplacement is not present in the immediate area for a large, Prominent Hill style deposit. The absence of gold from the assay results, even within some of the more altered areas, suggest the fluids associated with the alteration, and perhaps even the felsic schist are likely barren in gold.

MinQuest undertook the exploration at the Cyclops Target with the anticipation of intersecting an IOCG system similar to Prominent Hill. The broad alteration assemblages are similar to Prominent Hill, however, MinQuest will undertake further testing and analysis to determine if the age and geochemical signature match those of the large intrusive event that could be responsible for the formation of a large IOCG system. This will drive further exploration in the area.

## 8. REFERENCES

Groves, D, Bierlein, F, Meinert, L and Hitzman, M; Iron Oxide Copper-Gold (IOCG) Deposits through Earth History: Implications for Origin, Lithospheric Setting, and Distinction from Other Epigenetic Iron Oxide Deposits, Economic Geology May, vol. 105 no. 3, pp641-654



## **Appendix 1:**

### **Cyclops Prospect Operation Photos**



Photo 1: Backhoe used for clearing track and consumables being transported to site.



Photo 2: Swimming pools at "Overnight Bore".



Photo 3: "360" Filtration Pump.



Photo 4: Cuttings in RC bags.



Photo 5: Cuttings loaded onto truck.



**Appendix 2:**  
**Before, During and After Operation Photos**

| Site identification/details | Date taken | Easting (GDA94) | Northing (GDA94) | Zone | Comments                                       |
|-----------------------------|------------|-----------------|------------------|------|------------------------------------------------|
| Wash Station                | 26/05/2015 | 386620          | 6751440          | 53   | Wash Station and Track Entrance, program start |



| Site identification/details | Date taken | Easting (GDA94) | Northing (GDA94) | Zone | Comments                                     |
|-----------------------------|------------|-----------------|------------------|------|----------------------------------------------|
| Wash Station                | 26/05/2015 | 386620          | 6751440          | 53   | Wash Station and Track Entrance, final rehab |



| Site identification/details | Date taken | Easting (GDA94) | Northing (GDA94) | Zone | Comments                   |
|-----------------------------|------------|-----------------|------------------|------|----------------------------|
| CY15-001                    | 26/05/2015 | 362045          | 6748832          | 53   | CY15-001 site pre drilling |



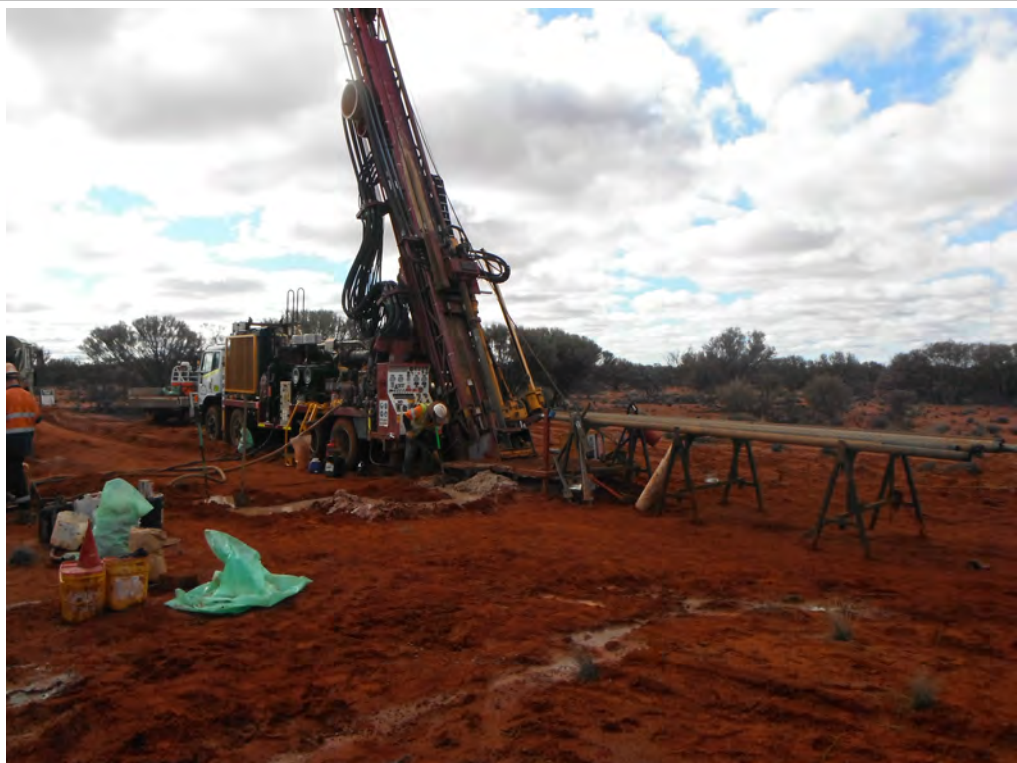
| Site identification/details | Date taken | Easting (GDA94) | Northing (GDA94) | Zone | Comments                   |
|-----------------------------|------------|-----------------|------------------|------|----------------------------|
| CY15-001                    | 28/05/2015 | 362045          | 6748832          | 53   | CY15-001 with active drill |



| Site identification/details | Date taken | Easting (GDA94) | Northing (GDA94) | Zone | Comments              |
|-----------------------------|------------|-----------------|------------------|------|-----------------------|
| CY15-002                    | 26/05/2015 | 361994          | 6748916          | 53   | CY15-002 site prepped |



| Site identification/details | Date taken | Easting (GDA94) | Northing (GDA94) | Zone | Comments                       |
|-----------------------------|------------|-----------------|------------------|------|--------------------------------|
| CY15-002                    | 30/05/2015 | 361994          | 6748916          | 53   | CY15-002 site during operation |



| Site identification/details | Date taken | Easting (GDA94) | Northing (GDA94) | Zone | Comments                   |
|-----------------------------|------------|-----------------|------------------|------|----------------------------|
| CY15-002                    | 21/06/2015 | 361994          | 6748916          | 53   | CY15-002 site during rehab |



| Site identification/details | Date taken | Easting (GDA94) | Northing (GDA94) | Zone | Comments                     |
|-----------------------------|------------|-----------------|------------------|------|------------------------------|
| CY15-002                    | 25/06/2015 | 361994          | 6748916          | 53   | CY15-002 post rehabilitation |



| Site identification/details | Date taken | Easting (GDA94) | Northing (GDA94) | Zone | Comments                |
|-----------------------------|------------|-----------------|------------------|------|-------------------------|
| CY15-003                    | 06/06/2015 | 361772          | 6748748          | 53   | Drill site pre clearing |



| Site identification/details | Date taken | Easting (GDA94) | Northing (GDA94) | Zone | Comments                         |
|-----------------------------|------------|-----------------|------------------|------|----------------------------------|
| CY15-003                    | 19/06/2015 | 361772          | 6748748          | 53   | Drill site during rehabilitation |



| Site identification/details | Date taken | Easting (GDA94) | Northing (GDA94) | Zone | Comments                          |
|-----------------------------|------------|-----------------|------------------|------|-----------------------------------|
| CY15-003                    | 25/06/2015 | 361772          | 6748748          | 53   | CY15-003 site post rehabilitation |



| Site identification/details | Date taken | Easting (GDA94) | Northing (GDA94) | Zone | Comments               |
|-----------------------------|------------|-----------------|------------------|------|------------------------|
| Camp                        | 24/05/2015 | 361910          | 6749030          | 53   | Camp area before setup |



| Site identification/details | Date taken | Easting (GDA94) | Northing (GDA94) | Zone | Comments                    |
|-----------------------------|------------|-----------------|------------------|------|-----------------------------|
| Camp                        | 29/05/2015 | 361910          | 6749030          | 53   | Camp area in full operation |



| Site identification/details | Date taken | Easting (GDA94) | Northing (GDA94) | Zone | Comments                      |
|-----------------------------|------------|-----------------|------------------|------|-------------------------------|
| Camp                        | 25/06/2015 | 361910          | 6749030          | 53   | Camp area post rehabilitation |

