



## **Quarterly Activities Report to 30 September 2015**

### **Mount Cannindah Project**

*Located approx. 100km south of Gladstone, Qld*

- The Mt Cannindah Project represents a large (greater than 9km<sup>2</sup>) high level “porphyry style” Cu-Mo-Au mineralised system. Exploration work during the quarter has outlined further areas of interest for follow up other than the known 5.5Mt @ 0.92%Cu at Mt Cannindah within the project area.
- During this quarter, exploration work continued as planned with further exploration at the Barrimoon prospect confirming the high level character of the large scale mineralised alteration within the system.(see ASX release 6<sup>th</sup> of August)
- During the quarter, exploration activity and a review of the Lifesaver prospect area within the Mt Cannindah project identified separate copper and gold zones. The copper zone is thought to be contained in oxidised skarn confirmed by rock chip samples of 4%Cu and 2%Cu, along with a historical drill intercept by Newcrest in 1996 of 3m from 43m @1.32% in hole MC007. The exploration target estimate for this area remains between 1 million to 2 million tonnes, however this remains conceptual in nature as there has been insufficient exploration to estimate a mineral resource and there is no certainty that further exploration will result in the estimation of a mineral resource (see ASX release 14<sup>th</sup> August).
- The following summary of the prospect areas provides an insight into some of the potential for the known target areas within the Cannindah project once further exploration is completed.

### **Little Wonder-Midway-Cannindah East prospects**

The presence of a significant breccia fault structure has been confirmed between Little Wonder and Cannindah East. This structure hosts felsic dykes that have introduced hydrothermal fluids that have altered and mineralised the fault breccia in proximity to the felsic dykes. High grade Au-Ag veins are known at LW and CE within strong alteration. Both these areas (and Midway) are now drill targets for extensions to mineralisation and to possibly locate high grade veins that could be mined by underground methods.

### **North Mt Cannindah**

It is apparent that the potential northerly extension of the Mt Cannindah mineralisation has not been adequately tested. Several historical shallow holes in this area may not have been deep enough (or were poorly positioned) to test for plunging mineralisation. A very deep angle hole drilled from the west (CARCD003) may not have gone far enough, or could be too deep at this location (about 550m below surface) for a realistic test. The presence of weak mineralisation in DDH017 is encouraging for possible mineralisation continuing to the north or north-east.

Also encouraging is that core hole QMCMDD017 shows good Cu-Au-Ag mineralisation at depth below very low grades in DDH019, RC52, CM21 & QMCMRC016; indicating that good mineralisation is deepening to the north-north-east. To test for deeper northerly extensions of



the mineralised zone, it is proposed that one or two angle holes be drilled from east to west, to “scissor” the known intercepts in QMCMDD010 & 025. If successful, then additional drilling could be done on 25m intervals to provide extensions to the known Cannindah resource area. These E to W holes would also test the Au-Ag intercepts in QMCMDD025 (20m @ 46.4 g/t Au & 98.2 g/t Ag at 245m), in QMCMRC016 (2m @ 2.54 g/t Au, 8.9 g/t Ag & 0.39% Cu from 16 to 18m, and 3m @ 5.28 g/t Au, 7.2 g/t Ag & 0.32% Cu from 25-28m) and in RC53 (4m @ 1.8 g/t Au from 116 to 120m), and in CM21 (10m @ 2.29 g/t Au, 12.6 g/t Ag & 0.33% Cu from 12 to 22m).

### **East Ridge (Blockade) Prospect**

The significance of the three MIM holes and Newcrest’s MC002, is that they show the East Ridge contains sporadic anomalous gold, silver and copper mineralisation within the altered angular breccia that makes up much of this East Ridge. Combined with the presence of old gold workings (Blockade), local anomalous soils, and a deep IP anomaly, makes this East Ridge area a potential target for deeper Cu-Ag-Au mineralisation. It is possible the altered breccia over the East Ridge is actually an upper “alteration plume” that could zone downward into significant mineralisation with higher sulphide content in breccia and veins.

It is surprising that west azimuth angle holes were not used in the past to test the Mt Cannindah “ore zone”, by drilling under the East Ridge (Blockade Mine). It is proposed that reconnaissance and research be done in this area, including two or three IP lines. If further encouragement can be raised for this Blockade area, then two or three angle holes could be drilled to the west under the central part of this ridge.

### **South Mt Cannindah & Mt Theodore**

**South Mt Cannindah:** The previous drilling immediately south of the “ore body” at Mt Cannindah shows narrower zones of weak copper and gold mineralisation (about 0.40 to 0.60% Cu and 0.1 to 1.0 g/t Au & 3 to 5 g/t Ag) extending for about 50 to 75m south (see DDH012 & 032 and QMCMDD009 and CARCD001). Then there is a short gap due to a failed drill hole (DDH013), before mineralisation picks up from 150 to 250m in three holes close to Mt Theodore (see DDH016 & 027 and CARCD004). The intercept in hole DDH016 is the most significant with 14.3m @ 1.64% Cu, 0.67 g/t Au & 28.4 g/t Ag (including 8.2m @ 2.33% Cu, 0.73 g/t Au & 32.6 g/t Ag). This DDH016 intercept is at 200m vertical depth, and lies beneath a much weaker zone in DDH015 that is at 50m vertical depth. This provides encouragement that the grade and thickness of mineralisation is increasing with depth. The intercept in DDH027, which is located 65m south of DDH016, continues this zone with 18.5m @ 0.75% Cu, about 0.2 g/t Au & ~11 g/t Ag at 100m vertical depth. Within the DDH027 intercept there are three narrow high grade intervals (0.5 to 1.0m) with 2.4 to 6.6% Cu, 0.31 to 1.55 g/t Au & 28 to 54g/t Ag. The mineralised zone in CARCD004 appears to be a separate zone which is more a gold zone, rather than a copper and silver zone as in DDH016 & 027. This broad gold zone in CARCD004 could be related to the alteration centred on Mt Theodore (see below). The mineralised zone in DDH016 should have been intersected deep in CARCD004 at about 300m vertical depth. The fact that this did not happen means that the mineralised zones in DDH016 & 027 has either been faulted out of this projected position, or it has weakened considerably at this location. This could be a case of fluids just not accessing the “structure” at this location due to lack of dilation or other controls such as dyke emplacement.

**Mt Theodore:** Although Mt Theodore is made up of strongly brecciated rock, it is a relatively high hill due to the strong alteration that has healed the breccia and made it resistant to erosion. This alteration is related to at least two felsic dykes that intrude the breccia on Mt Theodore. The altered breccia contains significant sulphide mineralisation that based on analysis, would appear



to be mostly pyrite. However there is some gold anomalism that is present in the soils, and locally in the rock, that was the focus of early miners. Some low level copper is also present in soils. The presence of sulphides at depth is supported by two IP lines that show moderate chargeability responses under Mt Theodore. The potential for gold mineralisation under Mt Theodore is enhanced by hole CARCD004 which is located about 150m NNE of Mt Theodore. CARCD004 contains an intercept of 75m @ 0.23 g/t Au, at a vertical depth of 250m. It could be this is the outer fringe of what may lie beneath Mt Theodore. The high Cu-Au-Ag intercepts in holes DDH016 & 027 lie just to the north-east of Mt Theodore, and may be present at depth along the east side of Mt Theodore. It is important to note the no drill holes have tested under Mt Theodore, and no explanation is made for the large volume of alteration. It is possible this alteration is a cap or plume above significant Au-Ag and Cu-Au-Ag mineralisation in a vein-breccia system associated with felsic dykes. It is proposed that a significant effort be made to test for deeper mineralisation to the south of Mt Cannindah, and in particular, under Mt Theodore. This should entail the use of an IP/resistivity survey looking to depth (~300m), followed by moderately deep drilling to test chargeability anomalies and specifically under the alteration zone at Mt Theodore.

### **Apple Tree**

The Apple Tree prospect is a broad fault breccia zone that has been intruded by multiple felsic dykes that have released hydrothermal fluids into the breccia, adjacent to the dyke contacts. The fluids have provided significant copper, silver, gold and molybdenum into the re-fractured and brecciated altered rock. The zone of known mineralisation is up to 800 metres long and 50 metres wide; and none of the earlier drilling has tested below about 36 metres depth. A deep IP chargeability response is present, and therefore opens the possibility for a deeply mineralised system. It is proposed that a detailed IP survey be run over Apple Tree with the aim of defining drill targets at depth and along strike.

### **United Allies**

The United Allies prospect has several historical high grade copper drill intercepts that appear to be associated with felsic dykes and related hydrothermal alteration and mineralisation. The dykes have intruded into structures within a broad polymict breccia zone that is thought to trend NE-SW.

The breccia has undergone variable argillic to phyllic alteration with local silicic alteration that has healed the breccia. It is noted that the alteration in the Newcrest core hole (MC004) appears to be stronger and more widespread than the alteration seen in the trenches. Almost all of the breccia in the MC004 appears to be strongly altered, whereas the surface trenches show local zones of alteration within larger areas of clayey matrix breccia (thought to be a fault breccia). Hence, the more pervasive alteration in MC004 may indicate a strengthening of alteration with depth. A very deep IP response occurs beneath United Allies on the IP sections produced by GeoDiscovery in 2011. This needs further reprocessing work.

The presence of higher copper assays with maroon coloured limonite at around 100m downhole in MC004 (est. ~70m vertical depth), may indicate deep oxidation and supergene copper mineralisation. This possibility appears to be supported by several of the MIM holes in the vicinity of MC004, where significant copper mineralisation is present to over 40m depth. The possibility for deeper supergene copper could improve the resource potential of this area.

Most of the early drilling was vertical and did not target the dyke/alteration structures. Hence many holes only returned modest copper results. Where drill holes did intersect dyke edges, the copper grade was generally quite high. It is proposed to drill several angled drill holes to test the



dyke/structure contacts at about the level of supergene enrichment. This could add significant resource tonnes for the prospect. An IP survey would also be helpful in trying to define the deep chargeability response seen below United Allies.

#### **Lifesaver, Monument, South Monument & Dunno**

These four prospects contain significant vein and breccia mineralisation related to structures and felsic dykes that have introduced the hydrothermal solutions. These mineralised structures are closely related to very strong soil assays for copper, gold and molybdenum throughout the greater area. It is apparent that many of the ridges in this area are underlain by similar mineralised structures.

The presence of good copper and local gold mineralisation in trenches and shallow drill holes at Monument, Lifesaver and Dunno raise the possibility that these areas could be considered potential open pit targets, as well as a possible underground targets for high grade Cu-Au-Ag veins.

It is proposed that shallow angle drilling be done on all of these prospects to better define the mineralised structures. Assuming encouraging results, the shallow drilling could be followed by an IP/resistivity survey to define the mineralised structures to depth. This should then be followed by deeper drilling to test the mineralised structures at depth.

#### **Monument Ridge**

Monument Ridge contains two types of hydrothermal breccia that are associated with faulting and the intrusion of felsic dykes. Gold in soils are strongly anomalous on the central part of the ridge, and an IP chargeability anomaly appears to underlie the ridge. It is likely that altered sulphide bearing structures occur in the core of Monument Ridge and possibly in several nearby ridges.

The Monument Ridge and other nearby ridges need to be mapped and sampled in more detail to better understand the structural control on potential deeper mineralisation. IP lines could be run at right-angles to ridges at strategic locations, to better define the chargeability responses under the ridges. Ultimately angled drill holes should be used to test for mineralisation underlying the ridges.

#### **Barrimoon Vein**

The sheer size of the Barrimoon vein and alteration structure makes it a viable target for a potential epithermal to mesothermal gold/silver deposit. The length is about 4 kilometres and the width of the shear/vein zone appears to be in the tens of metres.

The other positives for the Barrimoon vein are:

- The moderately anomalous assays for gold (0.05 to 0.21 g/t Au) and arsenic (100s of ppm As) from many rock chip samples at various locations along the vein. Further rock chips have been lodged with LS and the company is awaiting results of assaying.
- The presence of gold in gossan shears and veins in Carboniferous sediments at the Golden Crown gold prospect on the east end of the Barrimoon structure.
- The highly anomalous bismuth and tellurium in the rock and trench samples at Golden Crown.
- The presence of felsic dykes intruding into the Barrimoon structure, similar to that seen at Cannindah. This tends to support the connection of the Barrimoon vein to the Cannindah intrusive complex.



- The fact that no drilling has tested the vein at the unconformity between the older sediments and younger overlying volcanics (other than at Golden Crown, which is 3-4 km from Cannindah).

Given the apparent high level of this vein in the epithermal – mesothermal system; it is proposed that this vein be tested between 200m to 350m below the present surface.

Ideally drill holes should test just above, and just below the level of the unconformity between the Carboniferous sediments and the overlying Triassic andesitic volcanics. The initial drilling could use RC holes angled north-west from the lower slopes on the south side of the vein.

### **Kalpowar Fault**

If the Kalpowar Fault formed before or during the emplacement of the Cannindah Intrusive Complex, then there is a possibility it could be mineralised. More recent movement on this fault has allowed erosion to form the present river valley. Oxidation can be expected to be quite deep in a large fault occupying such a river valley. Thus, any sulphides present would also be oxidised to great depth, and would be difficult to detect by IP.

If evidence arises showing the Kalpowar Fault is younger than the Cannindah intrusive complex, then nothing need be done. On the other hand, if it remains debatable, then further work should be considered to resolve the question, and target possible mineralised areas. This work could include the re-assessment of the Newcrest IP/resistivity data, followed by a new IP survey of two or three lines attempting to look deep on the most likely sites. If successful in finding a chargeability anomaly, then drilling could be contemplated.

### **Mount Borium Gold Project and Oak River Uranium /Gold Project**

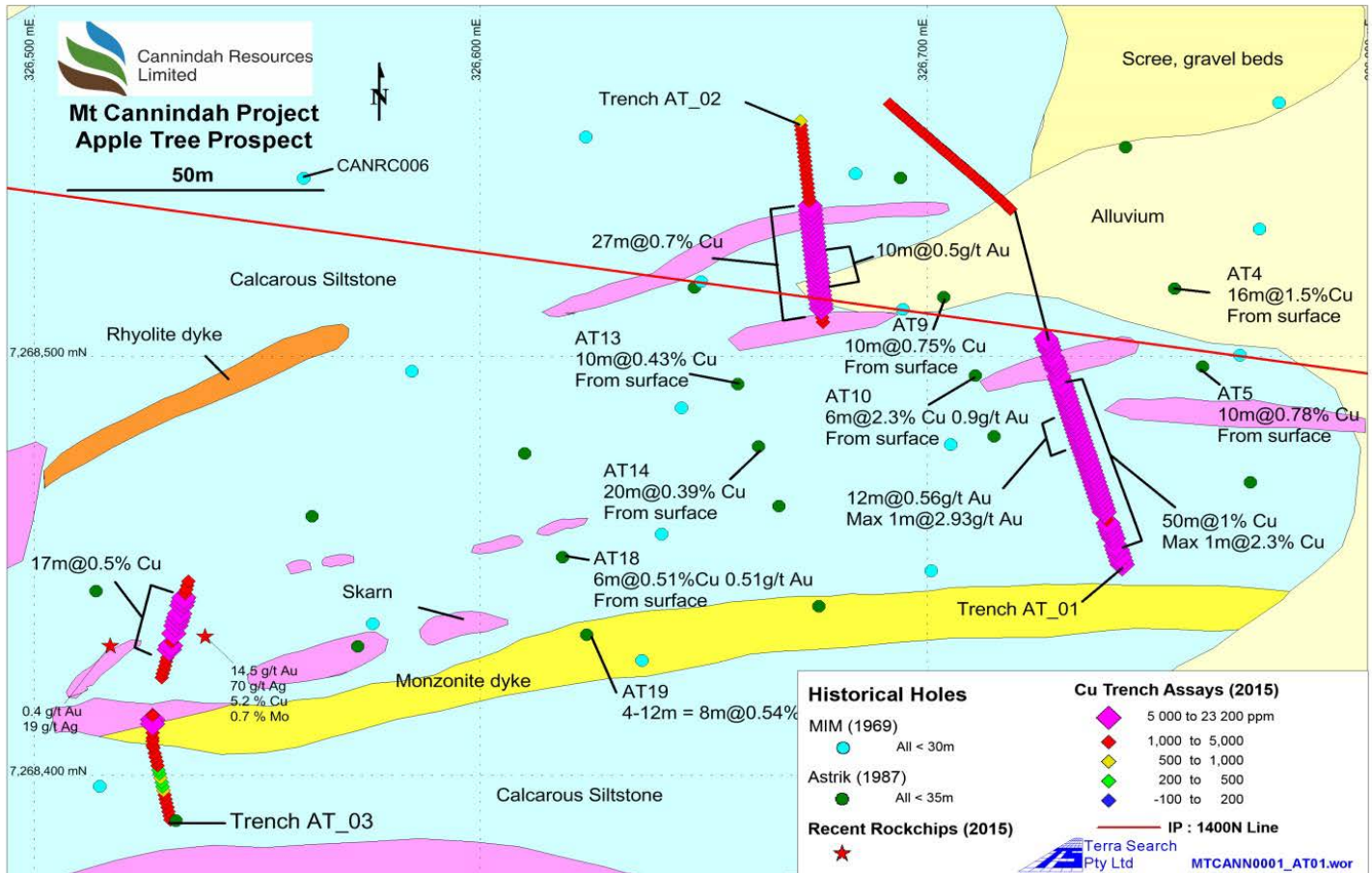
(EPMs 18960, 19009, 19015, 17945)

- No work was conducted on these projects during the September quarter CAE is still seeking appropriate JV partners for these assets or divestment as they are non-core assets of the company.
- The company is intending to relinquish the Oak River Uranium tenement area

### **Corporate**

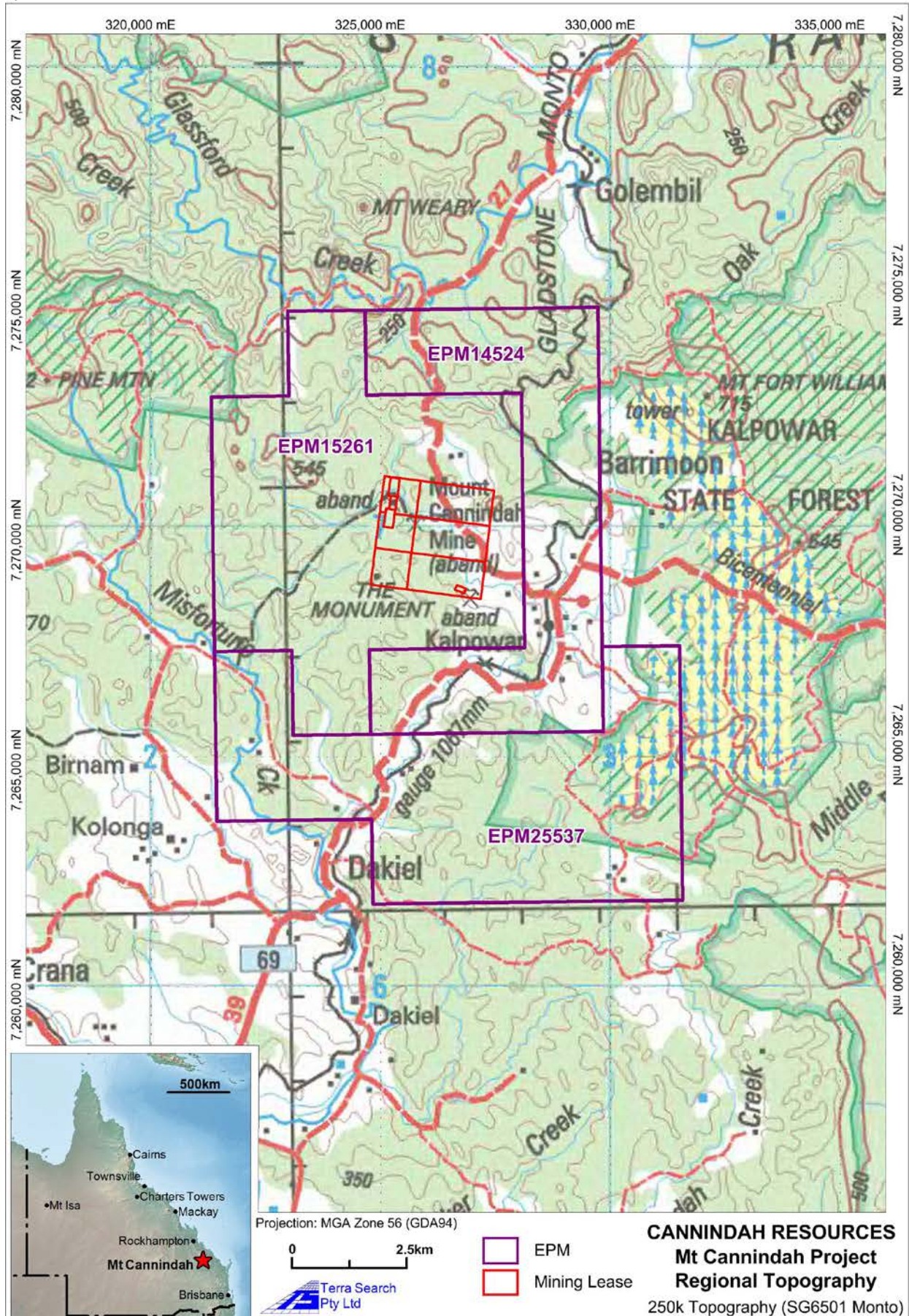
- \$2m funding facility remains current and further drawdowns completed as required.
- At the end of the quarter the company had \$26k Cash and approx. \$1.4m undrawn on the finance facility.
- The Executive Chairman's Executive Service Agreement has been renewed for a further two years on the same terms and conditions as the original agreement.
- The board recognises the current difficulty facing many small scale exploration companies and has been reviewing possible options for diversification. The board will inform shareholders of significant opportunities as they arise.





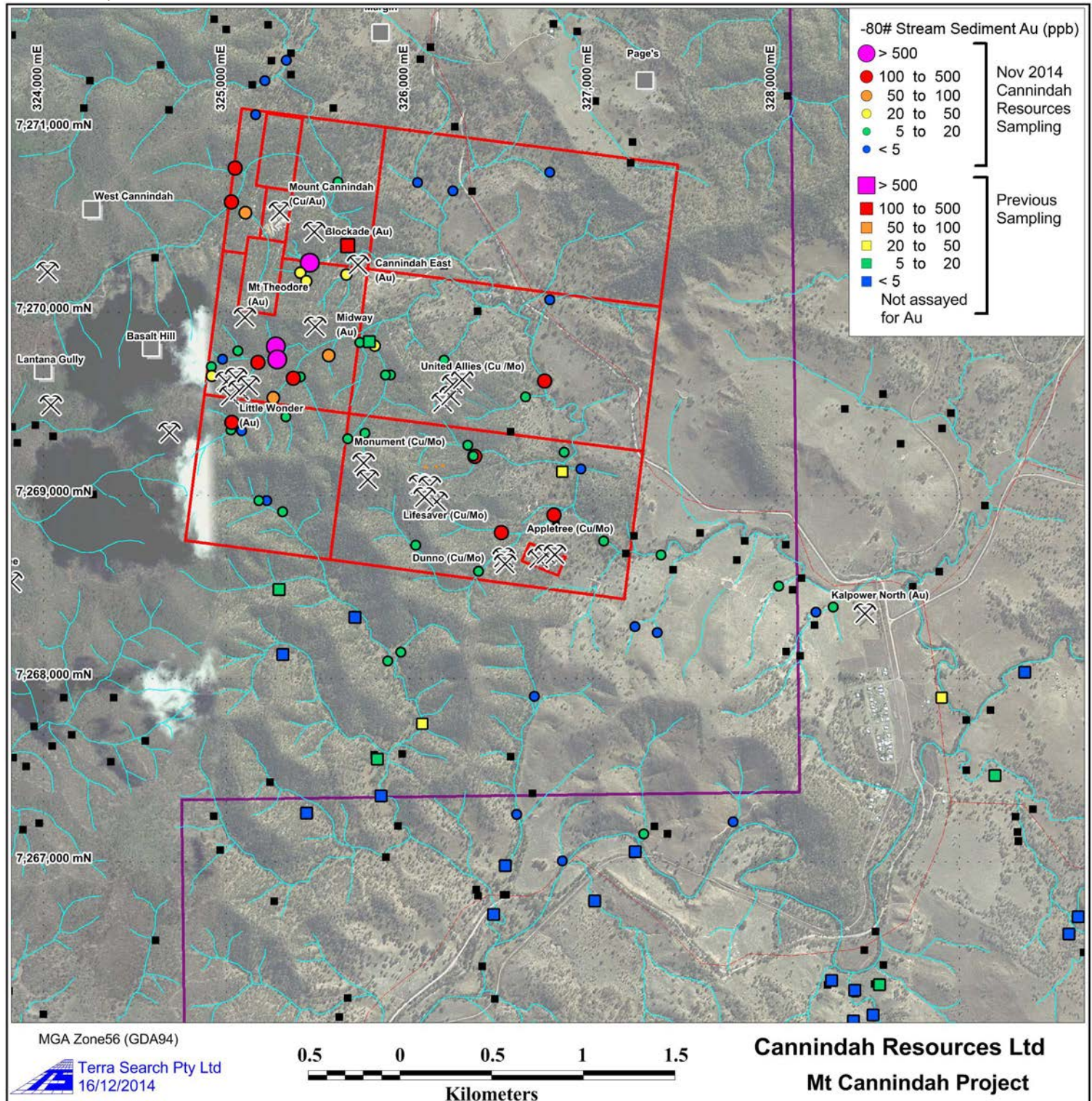
**Figure 1: Trenching at Appletree**





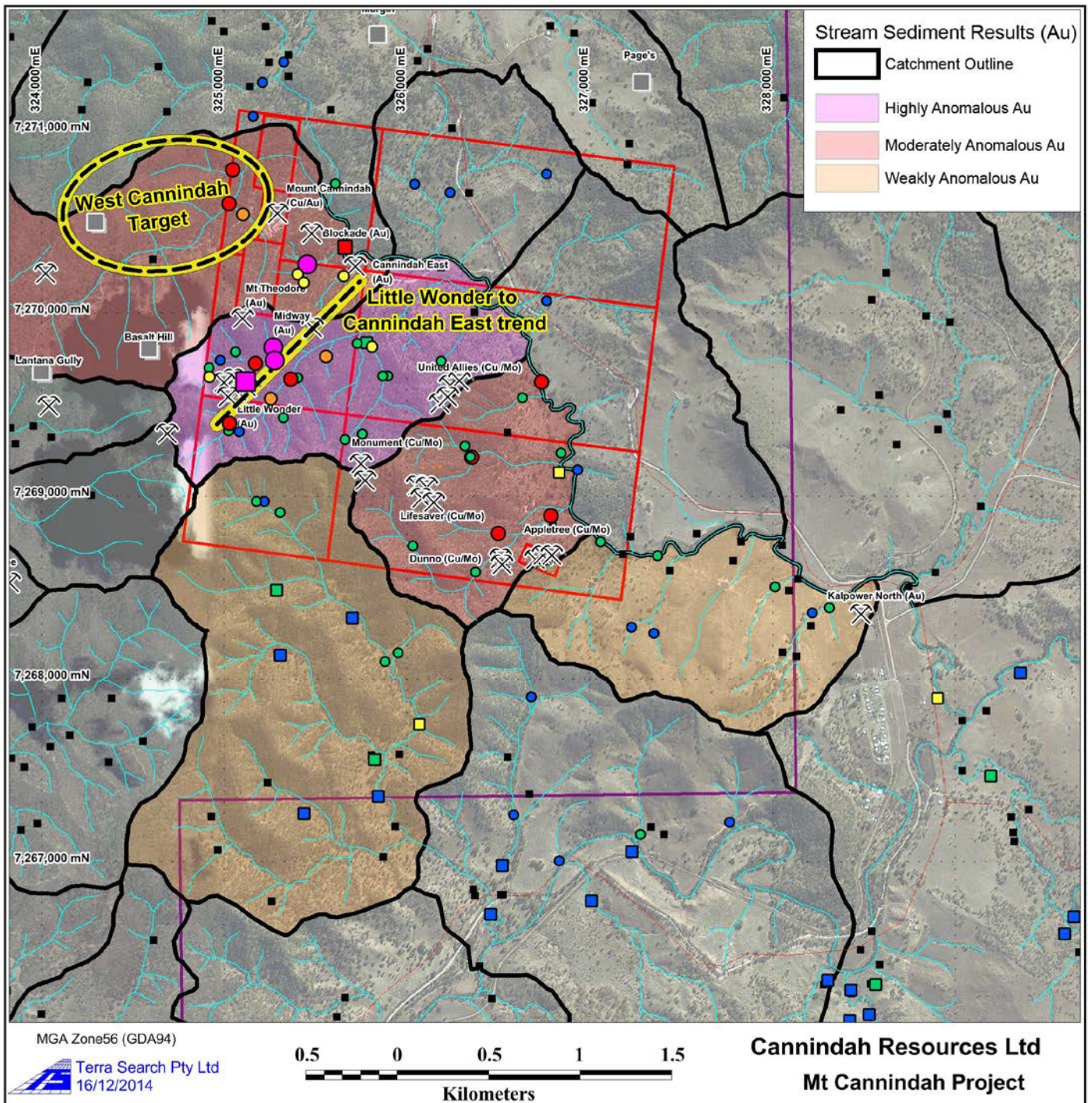
**Figure 2: Location of the Mt Cannindah Project area showing Cannindah Resources tenure.**





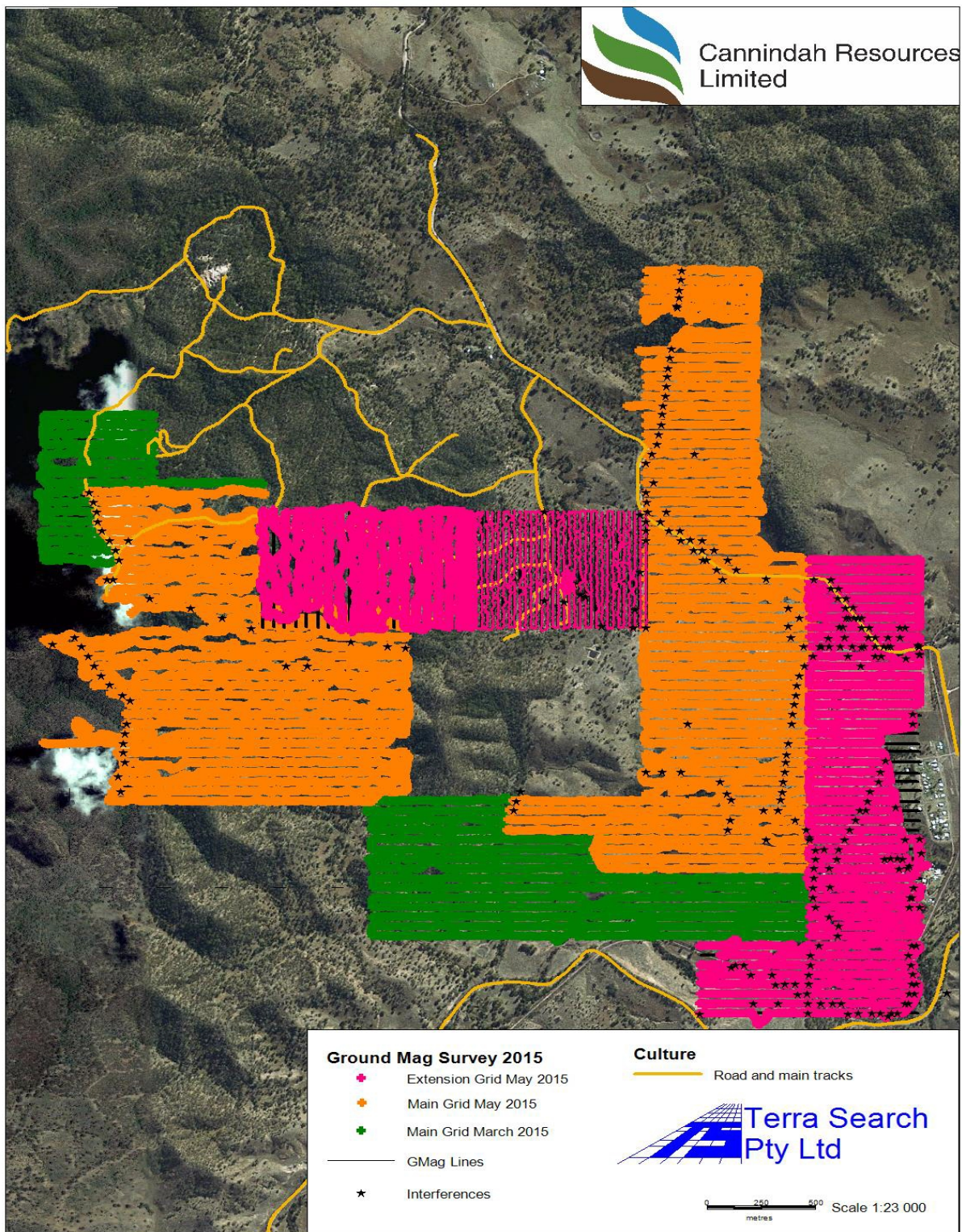
**Figure 3: Location of current and previous stream sediment sampling in the Mt Cannindah Project area.**





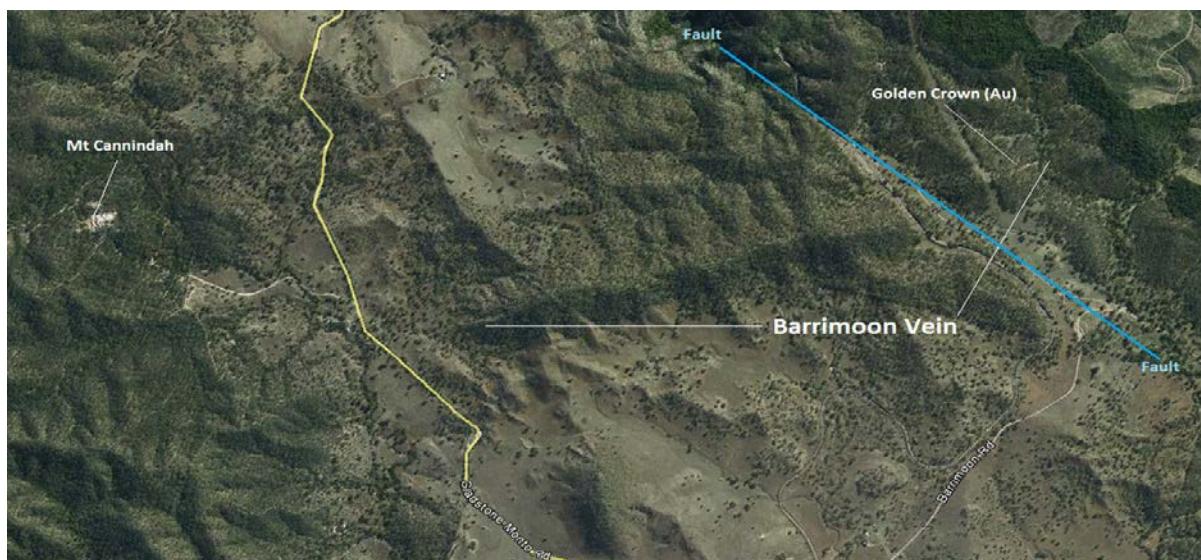
**Figure 4: Showing anomalous gold catchments and Cannindah Resources targets**





**Figure 5: Ground Mag Survey 2015**





**Figure 6: Barrimoon Structure**

## COMPETENT PERSON STATEMENT

*The information in this report that relates to exploration results has been previously released to the ASX and has been reviewed by Mr Laurie Johnson B.Sc (Geology) F.AusIMM who is a Director of Cannindah Resources Limited. Mr Johnson is a member of the Australian Institute of Mining and Metallurgy (AusIMM) and is bound by and follows the Institute's codes and recommended practices. Mr Johnson has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Johnson consents to the inclusion of this information in the form and context in which it appears in this report.*

For further information, please contact:

**Tom Pickett**

**Executive Chairman**

**Ph: 07 3357 3988**