



## **Quarterly Activities Report to 30 June 2017**

### **June Quarter Activities:**

#### **Piccadilly**

- During the June quarter significant sampling and evaluation of the Piccadilly Mine ML 1442 was undertaken by the company. With the extensions of the targeted area identifying new potential for the Piccadilly project.
- The establishment of gold grades being returned from thicker rock units than the quartz veins opened up the potential for bulk tonnage as the gold targets are no longer restricted to the high grade narrow quartz veins.
- A previously undiscovered parallel quartz vein was sampled returning 2m @ 16.05g/tAu. Further to this new quartz vein an additional aspect was confirmation of gold values of 3.64g/tAu from representative sampling of 1m wide channel sampling of caliche carbonate veined chlorite bearing dolomitic mudstone. This result is significant according to our consulting geologists at Terra Search as up until this sampling occurred the gossanous quartz veining had been regarded as the prerequisite for gold grades at the Piccadilly mine.
- Sampling has opened up the possibility of gold being present across wider lithological units.
- The system occurring at the Piccadilly mine may be driven by an interpreted intrusive source for hydrothermal fluid driving the mineralised system.
- The results from investigations at Piccadilly have been obtained quicker than expected and therefore the focus is now on establishing a model around the potential of the whole site rather than just a small part of the mining lease area. To this end we have extended the area to be sampled further to the west and will update the market once further data is available. This approach will possibly provide upside to shareholders both in terms of grade and size potential of the targets within the mining lease. Equally as important is gathering further data supporting the interpreted intrusive related gold system driving the mineralisation at Piccadilly. The company will continue to comply with its disclosure obligations in relation to further investigations occurring on site and access to surrounding areas of the ML once agreements are completed in this regard going forward.
- As a result of the high grade results that were obtained quite quickly by the company (highest being 79.4g/tAu as per ASX announcement 29th of March) there has been some interest in the purchase of the stockpiled material. As at the end of the quarter this was not finalised and the company will keep the market informed as to developments of negotiations with the various parties once a position is determined.



## Corporate

- Discussions with interested parties from both domestic and international entities regarding both the Mt Borium project and the Mt Cannindah project are continuing to be undertaken. To date the company has not signed any agreements and discussions are on-going. The preference is for the company to sell one or both of these assets. The Mt Cannindah asset is the most advanced having a current JORC resource and recent exploration work which provides significant upside potential to an interested purchaser. The company will only pursue a transaction that realises sufficient value for the benefit of all shareholders.
- The company announced on the 16<sup>th</sup> of June that John Hamilton resigned as a non-executive director to pursue his growing private business interests.
- The company raised \$300,000.00 in a placement and increased the Aquis finance facility limit as per the ASX announcement dated 29 June 2017.
- The Aquis funding facility remains on foot and negotiations are on-going as to future funding requirements of the company which the board will update shareholders on in due course.
- The company will again be making application for the R&D tax incentive program to be applied and will update shareholders once this process is determined
- The Board is currently working through the usual commercial discussions that occur when certain commercial transactions are contemplated. The company is interested in pursuing the Piccadilly project further and will provide updates as they arise with future plans for the project area including possible access to the surrounding EPM areas.

## Projects:

### 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. During the quarter the company has outlined further areas of interest other than the known 5.5Mt @ 0.92%Cu at Mt Cannindah to interested parties of the project area. Particular interest is the potential for gold mineralisation within the existing mining lease area which has previously been underexplored.**
- **No ground based exploration on site was performed during the quarter. The EA amendment application has been considered and approved such that on-going environmental fees are reduced by over \$100,000 per year for the project.**
- **The following summary of the prospect areas provides an insight into some of the potential for the known target areas within the Cannindah project for further exploration:-**

### Little Wonder-Midway-Cannindah East prospects

The presence of a significant breccia fault structure has been confirmed between Little Wonder (LW) and Cannindah East (CE). 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, 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). 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 54 g/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 have 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.

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 conducted 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 could 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.



- 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 suggested that this vein needs to 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**

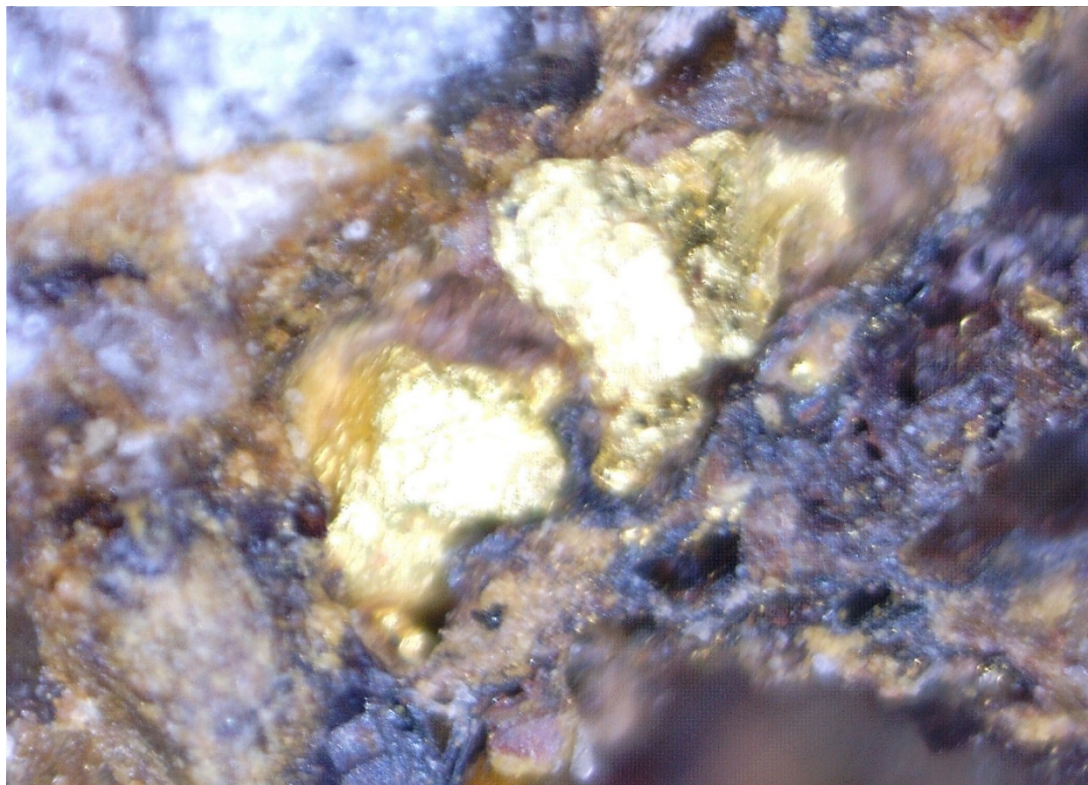
(EPMs 18960, 19009, 19015)

- No work was conducted on these projects during the period.





**Figure 1: Visible Gold in gossanous quartz vein Piccadilly East – West Slot**



**Figure 2: Visible Au Tail in panned concentrate from crushed Piccadilly lode.**







**Figure 3: Visible Au tail in panned concentrate from crushed Piccadilly lode.**



**Figure 4: Close up of visible Au tail in panned concentrate from crushed Piccadilly lode.**







**Figure 5: Close up of visible gold tail in gossanous quartz vein Piccadilly East – West Slot**



**Figure 6: Visible Gold in gossanous quartz vein Piccadilly East – West Slot**





## **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.*

*The information in this report that refers to Mineral Resources 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 2004 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.*

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