

# Quarterly Report for the Period Ending 30 June 2018

30 July 2018

Emmerson Resources Limited  
ABN 53 117 086 745

3 Kimberley Street  
West Leederville WA 6007  
PO BOX 1573, West Perth WA 6872

Tel: (08) 9381 7838  
Fax: (08) 9381 5375  
[admin@emmersonresources.com.au](mailto:admin@emmersonresources.com.au)

ASX Code: ERM  
405.5 million ordinary shares

Market Cap  
~A\$32.4 million (30-06-18)

Available Cash  
A\$3.8 million (30-06-18)

Board of Directors  
Andrew McIlwain  
*Non-executive Chairman*

Rob Bills  
*Managing Director & CEO*

Allan Trench  
*Non-executive Director*

Website:  
[www.emmersonresources.com.au](http://www.emmersonresources.com.au)

## Highlights

- Strategic Alliance with Territory Resources to build the Tennant Creek Processing Hub to support Small Mines
- High-grade Gold intersected at the Mauretania project in Tennant Creek
  - MTRC023: 26m at 8.9g/t gold, 85g/t silver, 0.49% copper and 0.13% bismuth from 53m and includes:
    - 8m at 23g/t gold, 219g/t silver, 0.72% copper and 0.26% bismuth
  - 10m at 7.6g/t gold, 2.4g/t silver, 0.19% copper and 0.14% bismuth from 171m and includes:
    - 5m at 13.4g/t gold, 2.8g/t silver, 0.22% copper and 0.21% bismuth
  - MTRC027: 12m at 10.4g/t gold and 0.27% bismuth from 48m and includes:
    - 6m at 18.9g/t gold and 0.46% bismuth.
  - MTRC025 intersected 19m at 1.85g/t gold, 28.7g/t silver, 1.25% copper and 734ppm cobalt from 101m and includes:
    - 9m at 2.6g/t gold, 22.8g/t silver, 2.3% copper and 0.12% cobalt.
- Spectacular results returned from Jasper Hills, located within the Northern Corridor at Tennant Creek
  - NSDH101: 28m at 5.83g/t gold, 0.17% cobalt and 8.52% copper (from 108 to 136m) and includes:
    - 19m at 0.56g/t gold, 0.47% cobalt and 11.4% copper and
    - 2m at 50.1g/t gold and 10.5% copper
  - NSDH547: 23m at 0.14% cobalt and 7.04% copper (from 95 to 118m) and includes:
    - 4m at 0.37% cobalt and 10.2% copper and 1.35g/t gold
  - NSDH488: 14m at 6.72g/t gold, 0.28% cobalt and 2.17% copper (from 284 to 298m) and includes:
    - 5m at 16.6g/t gold 2m at 1.32% cobalt and 2% copper
  - NSDD110: 15m at 7g/t gold (from 295 to 310m) and includes:
    - 6m at 14.9g/t gold
- Successful Restructure of the Tennant Creek Mineral Field Joint Venture
- Promising New Porphyry Copper-Gold Discovery in NSW

## Tennant Creek Gold-Copper project (figure 1)

### 1. Strategic Alliance to Build Tennant Creek Processing Hub

During the June quarter **Emmerson Resources Limited** (“Emmerson” ASX: ERM) entered into a landmark Asset Sale and Purchase Agreement plus a Strategic Alliance with Territory Resources Ltd (TTY) with the following key outcomes:

- **Sale of Emmerson’s Warrego Mill Lease to TTY for construction and commissioning of a Central Processing Facility**
- **Proposed 300,000tpa facility to be the hub for feed from Emmerson’s 100% owned small mines** which have priority over other third party feed
- TTY to pay an initial \$100,000 non-refundable deposit to Emmerson with further payments subject to final negotiations and transfer of liabilities
- **TTY to assess Emmerson’s small mines for future mining and processing on a profit share or royalty basis**
- Negotiation of a farm-in and JV over Emmerson’s southern tenements and TTY’s Nobles Nob and Juno projects – further consolidating the ownership of the Tennant Creek Mineral Field
- Emmerson to manage and operate the exploration program of any future farm-in and JV.

The development of a modern centralised processing facility at Warrego is a major step forward to establishing an integrated exploration, mining and processing hub in the Tennant Creek Mineral Field. Emmerson has been championing this concept for some time as it has the potential to unlock stranded gold assets in the region and is consistent with our strategy of monetising **Emmerson’s** smaller, high grade resources. Profits generated from the development of the assets will be reinvested into the current exploration program aimed at discovering high grade gold, copper and cobalt, similar to recent discoveries at Edna Beryl and Jasper Hills.

#### Warrego Mill Sale

Emmerson has entered into a binding agreement to sell its mothballed Warrego Mill Lease (ML 30888) to TTY. In exchange, TTY will build a modern processing facility on the site and prioritise the processing of ore from **Emmerson’s assets over other third party ore. The deal is subject to a number of conditions subsequent**, including negotiation with the NT Government on the existing Environmental Liabilities. Emmerson has already fulfilled its commitment for the rehabilitation of the Warrego Town site and any remaining liabilities are expected to be transferred to TTY as part of the sale agreement.

#### Mining and Processing

Emmerson and TTY will work collaboratively to establish profit share or royalty agreements pertaining to the **mining and processing of Emmerson’s portfolio of mines and tailings at Warrego. TTY’s intention is to construct** a modern, 300,000tpa processing facility on the Warrego Mill lease. First gold production is projected to occur in late 2018 – contingent on receiving the necessary regulatory approvals.

TTY is an experienced mining and processing operator with a successful track record at other sites around Australia – allowing Emmerson to remain focussed on its core objective of exploration and discovery.

#### Earn-in and JV

As part of the strategic alliance, TTY will enter into an earn-in and potential joint **venture over Emmerson’s** southern tenements, subject to reaching agreement on the commercial terms. This area is the most gold endowed portion of the Tennant Creek Mineral Field. It contains the historical Nobles Nob and Juno deposits (now owned by TTY) and the gold tailings from these projects will provide a source of feed to the Central Processing Facility. Under the contemplated earn-in and JV, Emmerson will conduct systematic, science-based exploration utilising modern techniques, aimed at making further discoveries or extensions to these historic mines.

## 2. High Grade Gold at Tennant Creek

Exploration at Tennant Creek during the June quarter continued to return highly encouraging drill results.

### Mauretania

At Mauretania, 3 RC holes were drilled to refine the structural understanding and test for extensions to the mineralisation with the ultimate aim of adding this project to **Emmerson's** small to medium-sized mine portfolio (Figure 3). Both objectives were successfully achieved. The continuity of the ironstone has been demonstrated, plus a new zone consisting of: 10m at 7.6g/t gold, 2.4g/t silver, 0.19% copper and 0.14% bismuth has been discovered in the footwall of the hematite ironstone.

Drill hole MTRC023, a vertical hole through the alteration and ironstone, provides an insight into the metal and alteration zonation plus highlights mineralisation both on the footwall and hangingwall of the ironstone – opening up the untested potential for additional mineralisation at depth (Figure 4).

Whilst the highest gold grades occur above the base of oxidation, this new deeper gold, copper and bismuth mineralisation indicates further drilling will be required before mining studies are finalised. The intersection of 9m at 2.56g/t gold, 22.8g/t silver, 2.3% copper and 0.12% cobalt (drill hole MTRC025) highlight the likely true width of the mineralisation and potential for copper and cobalt credits.

This latest drilling together with the geochemical footprint, now suggests great potential for down dip and strike extensions to the mineralisation (Figure 5). Metallurgical test work will be completed on samples from the recent drill program in support of future development.

### West Gibbet

West Gibbet is an undercover target that is associated with a discrete magnetic anomaly coincident with an underlying, magnetite ironstone. It occurs along a highly mineralised, east-west trending structural corridor **referred to as the “wine line”**. **This corridor hosts the Chariot, Malbec and TC8 mines** – with all associated gold and copper mineralisation hosted in magnetite and/or transitional magnetite-hematite ironstone.

Previous drill results at West Gibbet intersected extremely high grades of 9m at 95.5g/t gold within the oxide zone, some 74m from surface (ASX: 26/05/2008). This recent hole drilled (WGRC052) was aimed at confirming the tenor of the historical drill hole and to provide a bulk metallurgical sample, ahead of converting this target to a small mine.

Drill hole WGRC052 intersected lower tenor mineralisation (7m at 7g/t gold from 66m) compared to **Emmerson's previous drilling, indicating the mineralisation was likely associated with coarse gold**. However, it did confirm the continuity and potential for a shallow underground mine. The nearby Analytic target contains a historic intercept of 24m at 6.3g/t gold from 246m (including 3m at 48.3g/t gold) (ASX:15/12/2008) – suggesting the possibility for deeper, high-grade gold at West Gibbet beneath the existing ironstone (Figure 6). As similar to Edna Beryl, this potential is likely best realised once the underground development is established.

## 3. Jasper Hills Project

A series of spectacular assay results were also returned from the Jasper Hills Project, located within the Northern Corridor of the Tennant Creek Project (ASX:10 April 2018).

Drill cores from most of the previous diamond holes (drilled between 1975 and 1997) have been located as part of **Emmerson's ongoing target generation activities over the Northern Corridor**. **The diamond core is in excellent condition**, with key intervals resubmitted for assay utilising standards under the JORC Code (2012). The resultant assays accord well with the historic results and detailed geological information, providing a high integrity database for ongoing studies (Tables 1, 2, 3 and Figure 7).

The Jasper Hills mineralisation is hosted in brecciated hematite ironstones surrounded by intensely chloritized sediments of the Warramunga Group. The ironstones are enveloped by silicified carbonates, quartz and jasper, similar in most respects to Edna Beryl and within the district, encompass high-grade gold exploration targets (North Star Deeps Gold, Jasper Hill Gold), high-grade copper exploration targets (Katherine Star, Northern Star and Hermitage) and high-grade copper-cobalt exploration targets (Jasper Hills Figure 8).

Mineralisation at Jasper Hills is typically associated with the footwall or core of the ironstones and in the oxide zone, some 50m below the surface, consists of malachite and lesser azurite. The transition zone includes these plus bornite, chalcocite and native copper, extending down some 200m below the surface to encompass the sulphide zone of mainly chalcopyrite. The high-grade cobalt zone transgresses the copper and consists of mainly cobaltite in association with chalcopyrite and digenite (figure 9). Interestingly, **historic metallurgical testing of these ores in the 1990's produced a high-grade copper and cobalt concentrate**, with a 20kg sample grading 3.6% copper and 0.16% cobalt (1990 Optimet Laboratories).

The ironstones of the Northern Corridor are hematite dominant and, up until now, have been challenging to **discover. Emmerson's success in discovery for these styles of deposits (for example Edna Beryl, Mauretania and Goanna)** comes from systematic, science-based exploration utilising the application of new exploration models combined with modern geophysical detection technologies.

#### 4. Tennant Creek Mineral Field Joint Venture with Evolution Mining Restructure

Emmerson completed the restructure of the Tennant Creek Mineral Field Farm-In and Joint Venture Agreement **with Evolution Mining Limited ("Evolution", ASX: EVN) following a shareholder meeting to approve the restructure** at a General Meeting on 18 May 2018.

Under the restructure Emmerson has retained 100% ownership of the majority of the Tennant Creek tenements representing approximately 94% of the entire tenement package. It includes the gold dominant projects, small mines and associated exploration ground considered highly prospective for new discoveries. In addition, Emmerson now holds a 100% interest in the Tribute Mining Agreement at Edna Beryl and all the other small mine projects.

Evolution has taken a 100% holding in the tenements (or parts of them) that contain the Gecko, Goanna and Orlando copper-gold prospects, constituting some 6% of tenement package. These prospects are predominantly copper rich but have potential for gold grades to increase at depth. Further exploration will require deep directional drilling looking for discoveries of significant scale.

#### 5. Small Mines

First production from a portion of the Edna Beryl Mine (the Tribute Area) was announced in December 2017. Since then, plans have progressed for the commercial production from the Tribute Area which includes full scale mining and processing. As previously outlined, **Emmerson receives a "risk free" income stream via a royalty agreement** with the specialist small scale miner, the Edna Beryl Mining Company. The restructure of the Tennant Creek project sees Emmerson retain full control of the small mines and receive 100% of the revenue stream from the royalty (proportional to the amount of gold produced).

Emmerson firmly believes there is excellent exploration upside at Edna Beryl, but like many of the historical mines in the field, will require higher density drilling that is best achieved from underground.

Additionally, Emmerson is accelerating the permitting and development of the remainder of the small mines, with the Black Snake project the most advanced (with an approved MMP for two exploration shafts), and the largest being Chariot – with a JORC resource of ~100,000oz of gold at a grade of 17.4g/t (ASX: 28 November 2013). The other small mines can be considered exploration targets, adding a further 160,000 – 180,000oz of high grade gold (at 15-20g/t gold as indicated from the historical reports).

## New South Wales gold-copper projects (figure 10)

### 1. Fifield Project

Highly encouraging, early-stage results were returned from the Whatling Hill prospect within the Fifield project in NSW. This area falls within a regionally significant metallogenic province, bounded by the Lachlan Transfer Zone (LTZ) and the Ordovician age, Macquarie Arc. This province also hosts a number of emerging platinum, cobalt, gold and copper projects (Figure 11).

Whatling Hill consists of a discrete magnetic anomaly bounded by WNW trending faults with minimal surface expression. The discovery was a result of purposeful exploration driven by a proprietary targeting model developed by Emmerson and its strategic alliance partner Kenex Ltd. The results to date consist of rockchip samples across an area of ~1km<sup>2</sup> (which is the extent of outcrop/float and may not reflect the size/extent of the underlying mineralisation).

The rockchip values are elevated in gold (up to 0.25g/t) and copper (up to 2%), mainly from sheeted quartz-magnetite veins locally hosted in monzonite intrusions. There has been no historical drilling or soil sampling in the area. The alteration assemblage of epidote, chlorite with quartz, magnetite, chalcopyrite and malachite veins indicate proximity to a porphyry gold- copper system, but within **the outer “green rock” halo**. Further field work is currently underway, complimented by the latest scientific analysis as part of the University of Tasmania, ARC Linkage project. This analysis is aimed at identifying metallogenic fertile systems and providing vectors to the central part of the mineralisation (Figure 12).

Given the promising results, Emmerson has accelerated exploration at Whatling Hill where an auger rig has recently completed a large geochemical program to accurately define the underlying mineralisation and guide future drilling.

### 2. Wellington Project

**The Wellington project was targeted utilising similar methodologies as Emmerson’s other NSW projects and sits along strike from Newcrest Mining’s world-class Cadia–Ridgeway gold-copper deposit.**

Auger soil sampling across the Ponto prospect (the northernmost area) has revealed moderate copper anomalism, corresponding to outcrops/float of copper altered intrusives (Figure 13). The most consistent geochemical result came from Ponto East, with a 500m<sup>2</sup> area of +200ppm copper and combined gold-copper-molybdenum anomalism. A new area was identified in the far north (New Anomaly) that has strong copper-gold anomalism associated with gabbro/diorite intrusive.

Further work is underway both in the field and at the University of Tasmania to better understand the significance of these results.

### 3. Kadungle Project

A recently completed drilling campaign at the Kadungle project in NSW identified potential for both deeper copper-gold (ASX 13 December 2017) and now, shallow epithermal gold at the Trig prospect. Construction of the drill access track at Trig revealed extensive boulders of epithermal quartz. The last drill hole at Trig (drill hole TRC004) intersected multiple epithermal veins which correspond with boulders at surface that contain extensive quartz-hematite veins. Previous rock chip sampling at Trig returned highly anomalous gold geochemistry with up to 1.27 g/t gold.

Drill hole KDD017 intersected both shallow gold (3m at 0.67g/t) in quartz-hematite chlorite stock-work veins and zones of deeper copper mineralisation (10m at 0.35% copper incl. 1m at 1.63% copper). This zone of elevated copper is associated with sheeted chalcopyrite-pyrite veins within pervasive chlorite-sericite-pyrite altered host rocks. The other two drill holes at Mt Leadley intersected strong alteration and anomalous gold (up to 0.25g/t) which combined with the recent geophysics, suggests that the main, higher grade portion of the system is yet to be tested.

As previously advised, Emmerson has notified Aurelia Metals Limited (ASX:AMI) that it has met all the terms of the Stage 1 earn-in to acquire a 60% share and also the Stage 2 earn-in of for 80% equity of the entire project. An application for the registration of this interest has been approved by the NSW Department of Planning & Environment – Resources & Energy.

## 2 Other NSW Projects

Field-based activities continued **across Emmerson's other NSW projects, with some of the more significant** results coming from the Sebastopol gold project. These include up to 27.8g/t gold from rock chip samples within the Morning Star project. This cluster of historic workings is associated with a series of sub parallel quartz veins that contain gold, galena, chalcopyrite and pyrite hosted by the Wagga group turbidites.

Other results of significance come from the Kiola project where up to 19.6% copper and 0.36g/t gold has been reported from rock chips. Whilst the elevated copper is associated with surficial malachite veins, the entire 28km<sup>2</sup> **"Kiola Geochemical Zone" is anomalous in copper and requires further work.**

## September Quarter Activities for Tennant Creek

The following activities are planned for the September quarter:

- Finalisation of the earn-in and potential JV with TTY
- Further drilling in the JV area (subject to the successful conclusion of the above)
- Processing and field review of the airborne EM anomalies in the Northern Project
- Continuation of the planning, permitting and approval process for the additional small mines
- Finalisation of the planning and commercial terms for the underground exploration drive and drill program at Edna Beryl.

## September Quarter Activities for NSW Projects

The following activities are planned for the September quarter:

- Planning and execution of a larger geochemical program at Whattling Hill following the success of the current program
- Further assessment of drill results from Kadungla and design of the next drill campaign
- Follow up exploration at the Kiola project to assess the 19.6% copper and 0.36g/t gold rock chips, the elevated copper associated with surficial malachite veins, within the 28km<sup>2</sup> **"Kiola Geochemical Zone"**
- Further assessment at the Wellington **project, specifically the 'Ponto East' and 'New Anomaly' areas** generated from the recent auger soil sampling program.



## Announcements

The Company has made the following announcements since the start of the quarter.

28/06/2018 Change in Substantial Holding  
25/06/2018 Tennant Creek Exploration Update Presentation  
21/06/2018 High Grade Gold Intersected at Tennant Creek  
14/06/2018 New South Wales Exploration Update Presentation  
14/06/2018 Promising New Porphyry Copper-Gold Discovery in NSW  
13/06/2018 Strategic Alliance and Exploration Update Presentation  
31/05/2018 Strategic Alliance to Build Tennant Creek Processing Hub  
21/05/2018 JV Restructure and Exploration Update Presentation  
21/05/2018 Successful Restructure of the TCMF Joint Venture  
18/05/2018 Results of General Meeting  
08/05/2018 Investor Update Presentation  
07/05/2018 Investor Update Presentation  
27/04/2018 Quarterly Activities Report  
27/04/2018 Quarterly Cash Flow Report  
17/04/2018 Exploration Update  
13/04/2018 Notice of General Meeting & Proxy Form  
12/04/2018 Exploration Update Presentation  
10/04/2018 New High-Grade Cobalt, Copper and Gold  
05/04/2018 Change in Substantial Holding

Emmerson Resources Limited



Mr. Rob Bills  
Managing Director and Chief Executive Officer

### About Emmerson Resources, Tennant Creek and New South Wales

Emmerson recently commenced exploration on new gold-copper projects in NSW, identified (with our strategic alliance partner Kenex Limited) from the application of 2D and 3D predictive targeting models – aimed at increasing the probability of discovery. The highly prospective Macquarie Arc in NSW hosts >80Mozs gold and >13Mt copper with these resources heavily weighted to areas of outcrop or **limited cover**. **Emmerson's five exploration projects** contain many attributes of the known deposits within the Macquarie Arc but remain under explored due to historical impediments, including an overlying cover (plus farmlands) and a lack of exploration focus. Kadungle is a JV with **Aurelia Metals covering 43km<sup>2</sup> adjacent to Emmerson's Fifield project.**

**In addition, Emmerson is exploring the Tennant Creek Mineral Field (TCMF), one of Australia's highest-grade gold and copper fields producing over 5.5 Mozs of gold and 470,000 tonnes of copper from deposits including Warrego, White Devil, Orlando, Gecko, Chariot and Golden Forty.** These high-grade deposits are highly valuable exploration targets, and to date, discoveries include high-grade gold at Edna Beryl and Mauretania, plus copper-gold at Goanna and Monitor. These are the first discoveries in the TCMF for over a decade.

Emmerson has now received the proceeds of the third gold pour from the high-grade Edna Beryl gold mine in December 2017. This mine is being operated under a Tribute Agreement with a specialist small miner, the Edna Beryl Mining Company

Emmerson recently announced a strategic alliance with Territory Resources to build a central processing hub in Tennant Creek to support the milling and processing from **Emmerson's small gold mines and other third party feed**. This alliance is intended to extend to an earn-in and JV with Territory Resources over Emmerson's southern tenements.

Emmerson is led by a board and management group of experienced Australian mining executives including former MIM and WMC mining executive Andrew McIlwain as non-executive chairman, and former senior BHP Billiton and WMC executive Rob Bills as Managing Director and CEO.

### About Territory Resources

Territory Resources Limited (TTY) explores, mines, rails iron ore and exports out of the Darwin Port in Northern Territory Australia. The company primarily holds an interest in the Frances Creek mine, located to the south of Darwin, Northern Territory. The Company also has interests in the Mt Bunday project and the Yarram project both located in Northern Territory. The Company was incorporated in 2002 and is based in West Perth, Australia. As of February 28, 2018, TTY operates as a subsidiary of Gold Valley Holdings Pty Ltd. TTY is currently expanding its operations into gold projects in the NT, including advancing the +300koz gold project at Nobles Nob and Juno mines in Tennant Creek.

### *Regulatory Information*

*The Company does not suggest that economic mineralisation is contained in the untested areas, the information contained relating to historical drilling records have been compiled, reviewed and verified as best as the Company was able. As outlined in this announcement the Company is planning further drilling programs to understand the geology, structure and potential of the untested areas. The Company cautions investors against using this announcement solely as a basis for investment decisions without regard for this disclaimer.*

### *Competency Statement*

*The information in this report which relates to Tennant Creek Exploration Results is based on information compiled by Mr Steve Russell BSc, Applied Geology (Hons), MAIG, MSEG. Mr Russell is a Member of the Australian Institute of Geoscientists and has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 edition and the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Russell is a full-time employee of the Company and consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

*The information in this report which relates to NSW Projects Exploration Results is based on information compiled by Dr Ana Liza Cuison, MAIG, MSEG. Dr Cuison is a Member of the Australian Institute of Geoscientists and has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which she is undertaking to qualify as a Competent Person as defined in the 2004 edition and the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Cuison is a full-time employee of the Company and consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

### *Cautionary Statement*

*The Exploration Targets described in Figure 3 are conceptual in nature. It must be noted that there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.*

### *Forward-Looking Statements*

*This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning **Emmerson Resources Limited's planned exploration program and other statements** that are not historical facts. When used in this document, the words such as "could," "plan," "expect," "intend," "may", "potential," "should," and similar expressions are forward-looking statements. Although Emmerson believes that its expectations reflected in these forward- looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that further exploration will result in the estimation of a Mineral Resource.*



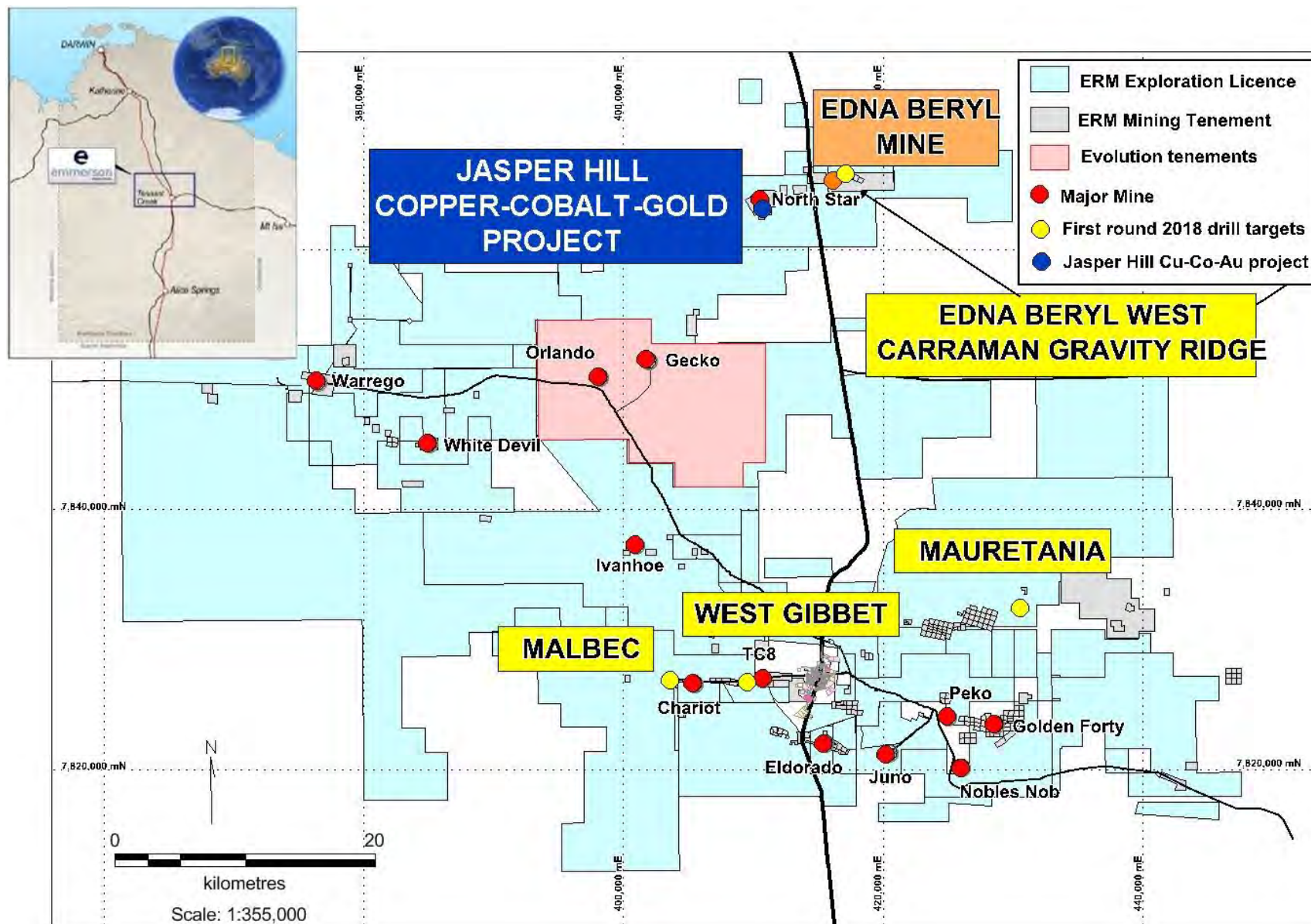


Figure 1: Location of Emmerson's tenement package (light blue), Jasper Hill copper-cobalt project and recent drilling program projects (yellow dots).



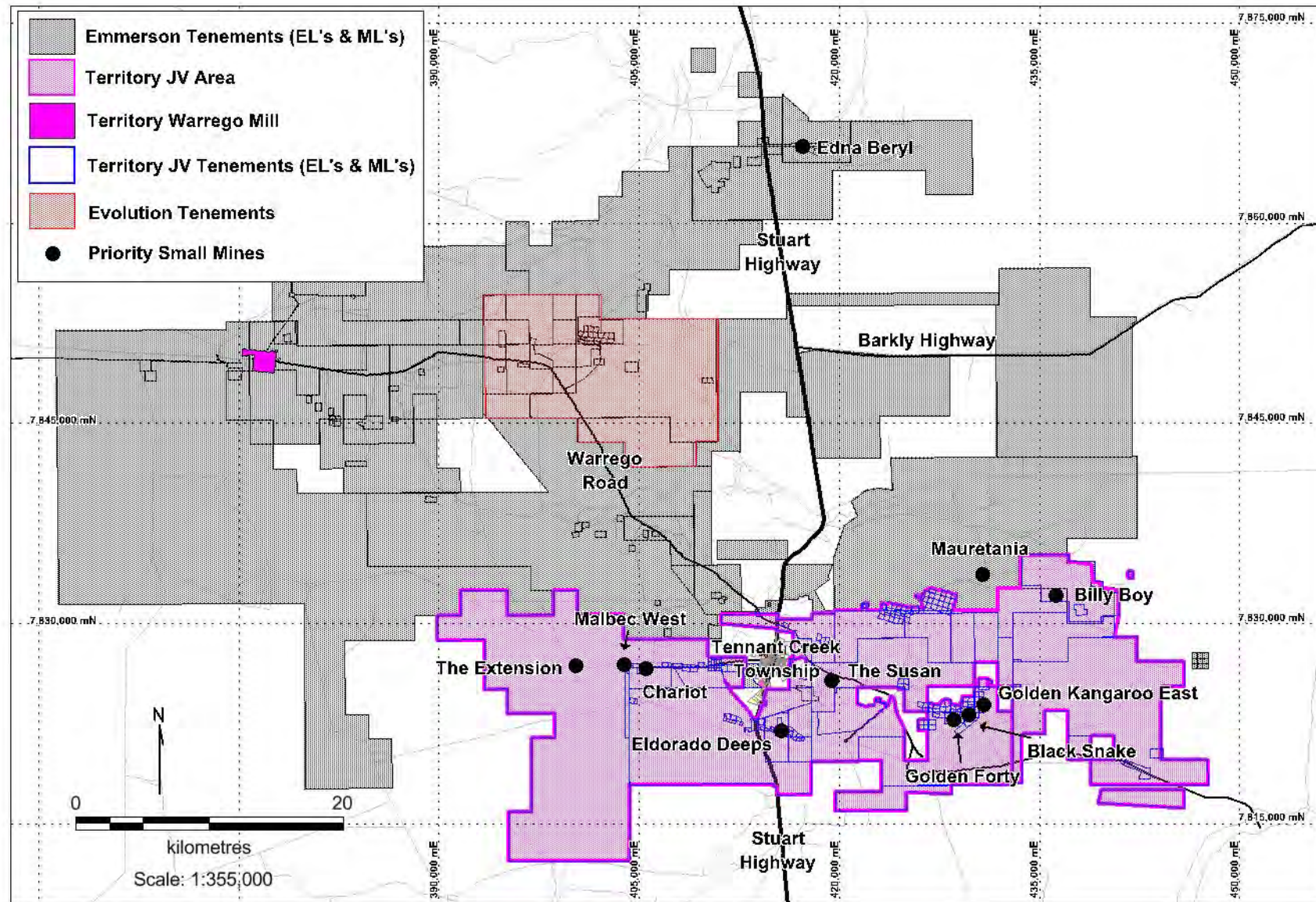
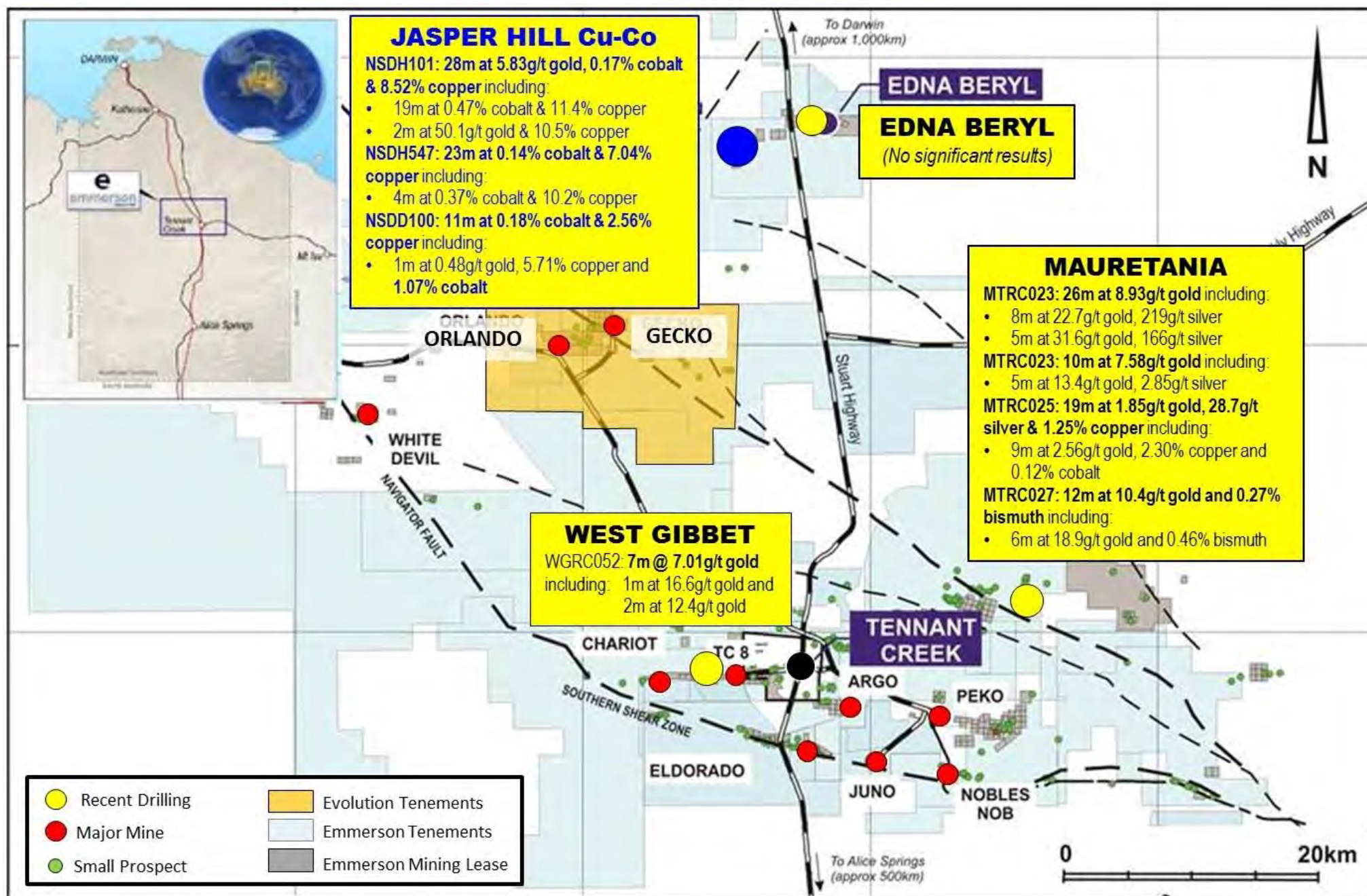


Figure 2: Emmerson Resources 100% owned Tennant Creek project (black), proposed Centralised Processing Facility (Warrego Mill), general area of proposed JV with Territory Resources (pink), note the Evolution Mining tenements (red).





**Figure 3:** Location of Emmerson's tenement package (light blue) and recently completed drill program targets (yellow dots).



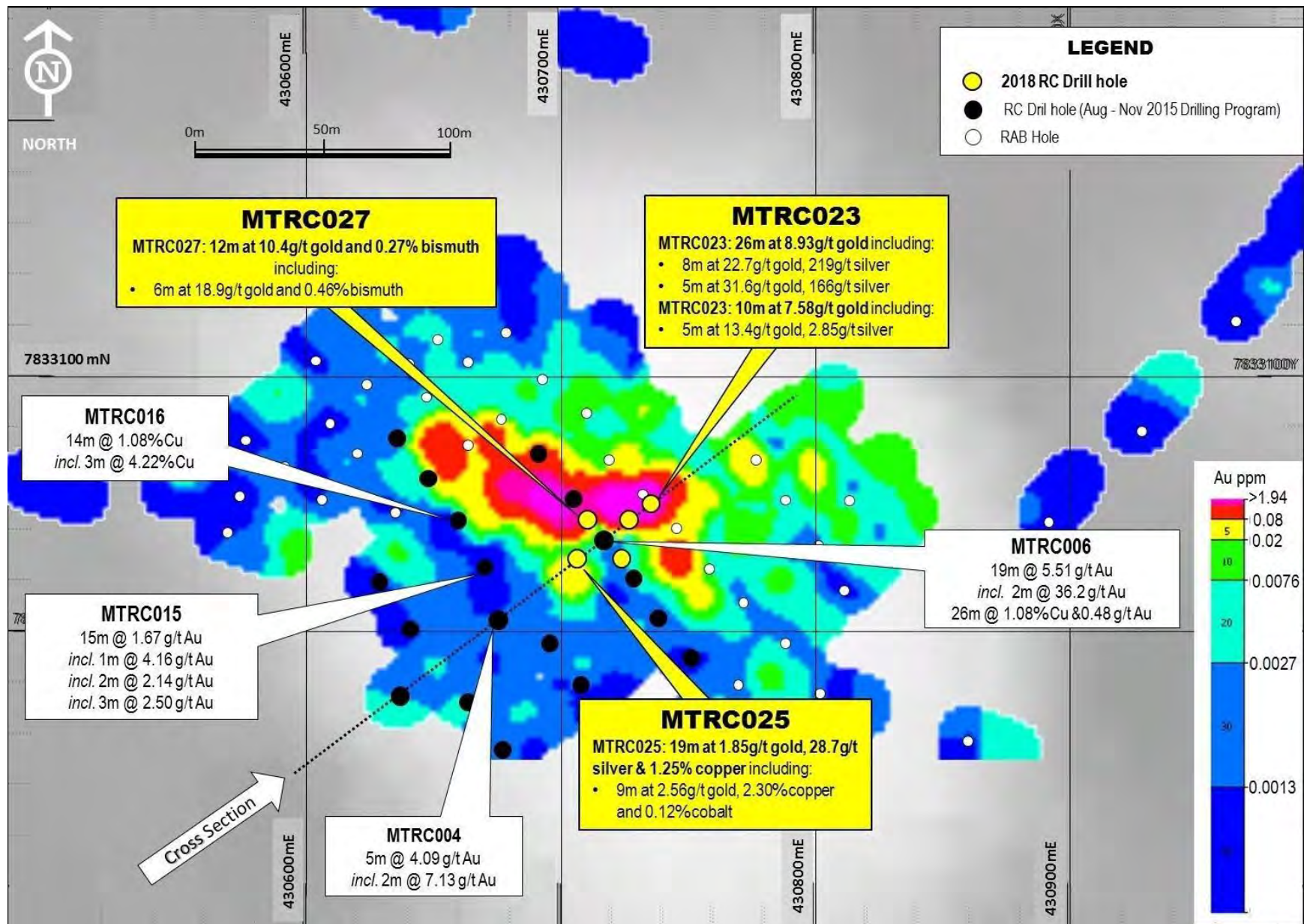


Figure 4: Location of the Mauretania project with previous drilling (black & white dots) plus recent RC collars (yellow call out boxes) on a background of gold geochemistry in ppm (colours), magnetics (grey-scale).

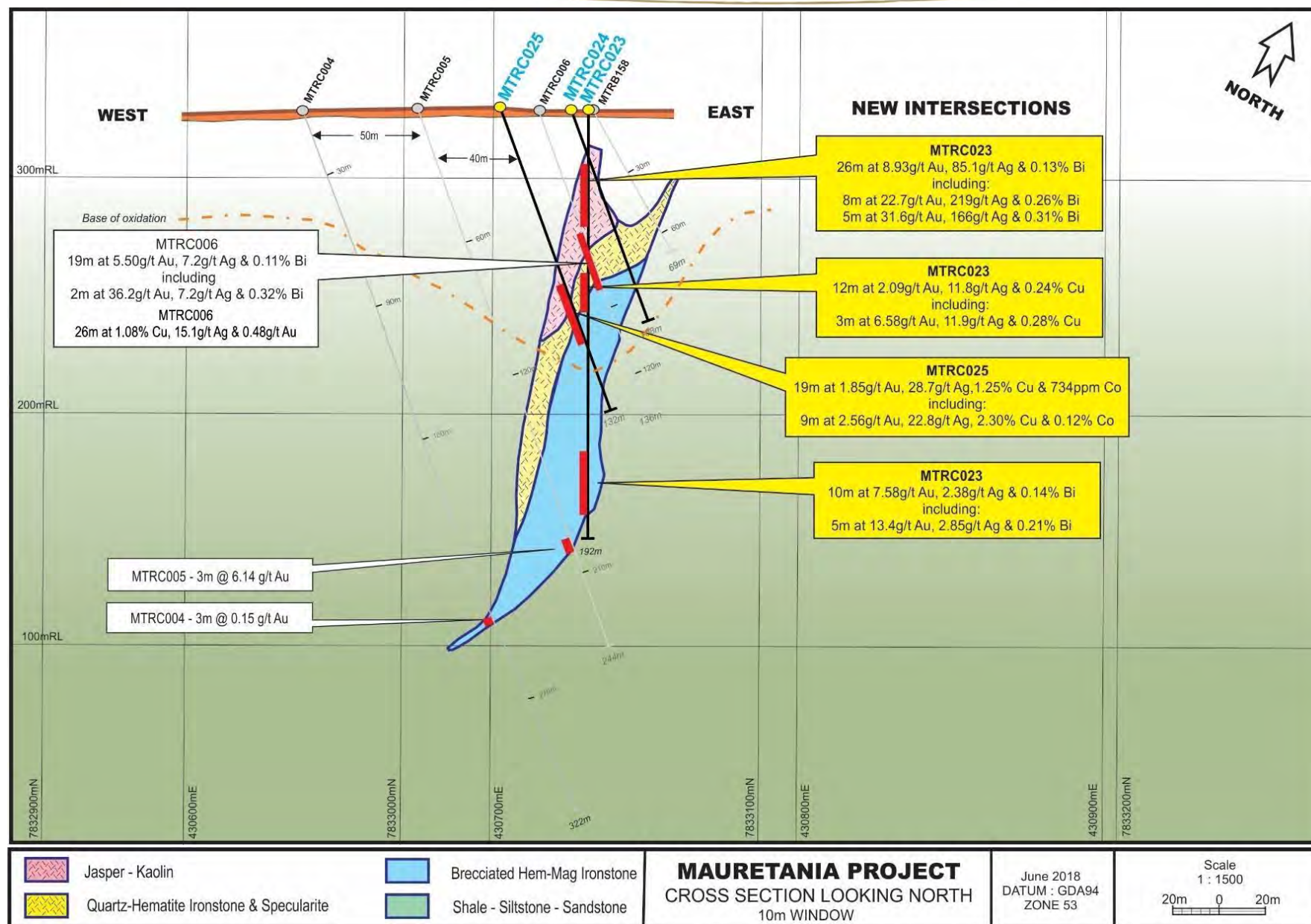


Figure 5: Mauretania schematic cross section – note white call out boxes are assay results from the 2015 drilling program and yellow call out boxes are assay results from the recent 2018 drilling program.



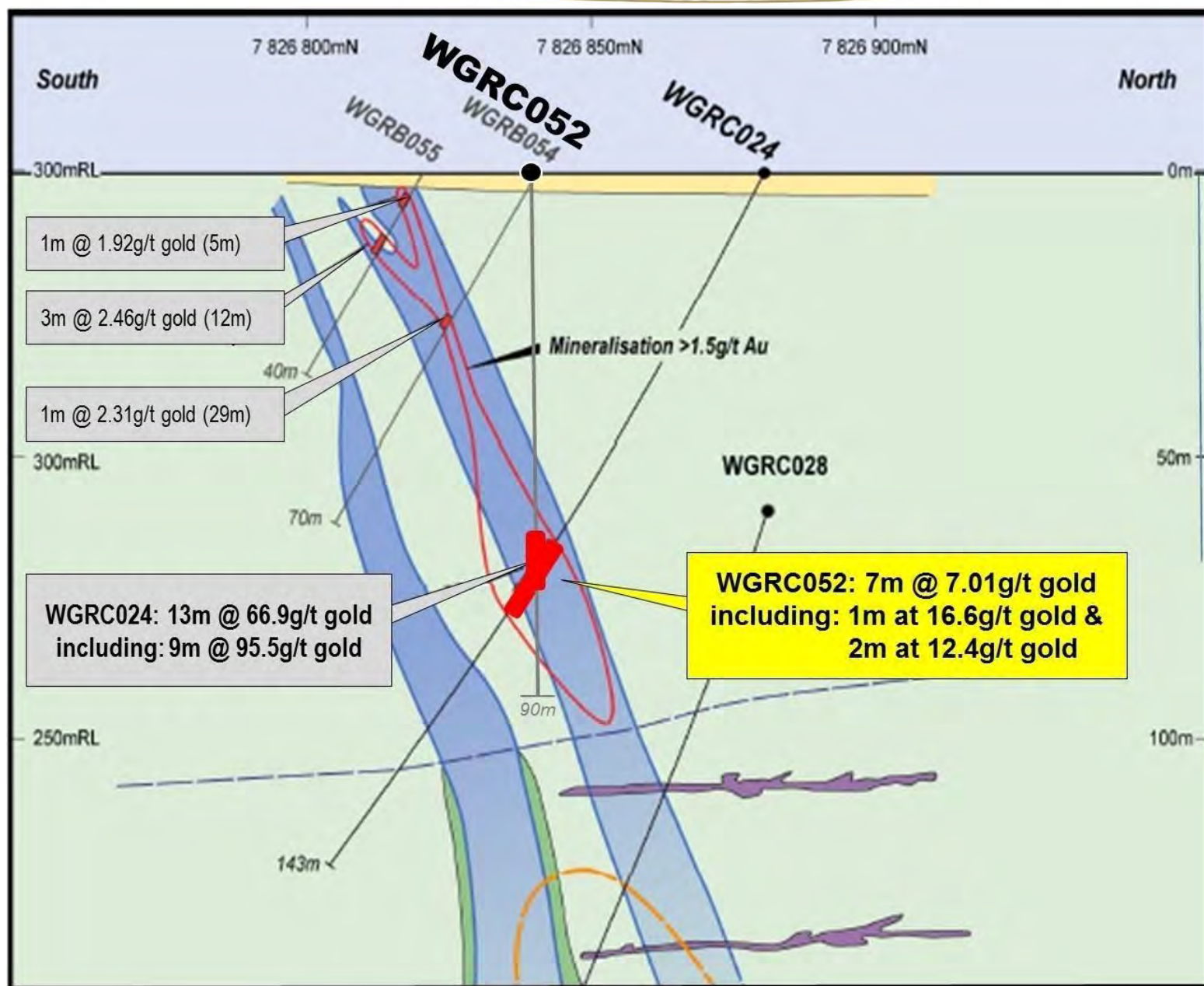


Figure 6: West Gibbet schematic cross section – grey call out boxes are assay results from previous drilling programs and yellow call out boxes are assay results from the recent 2018 drilling program.



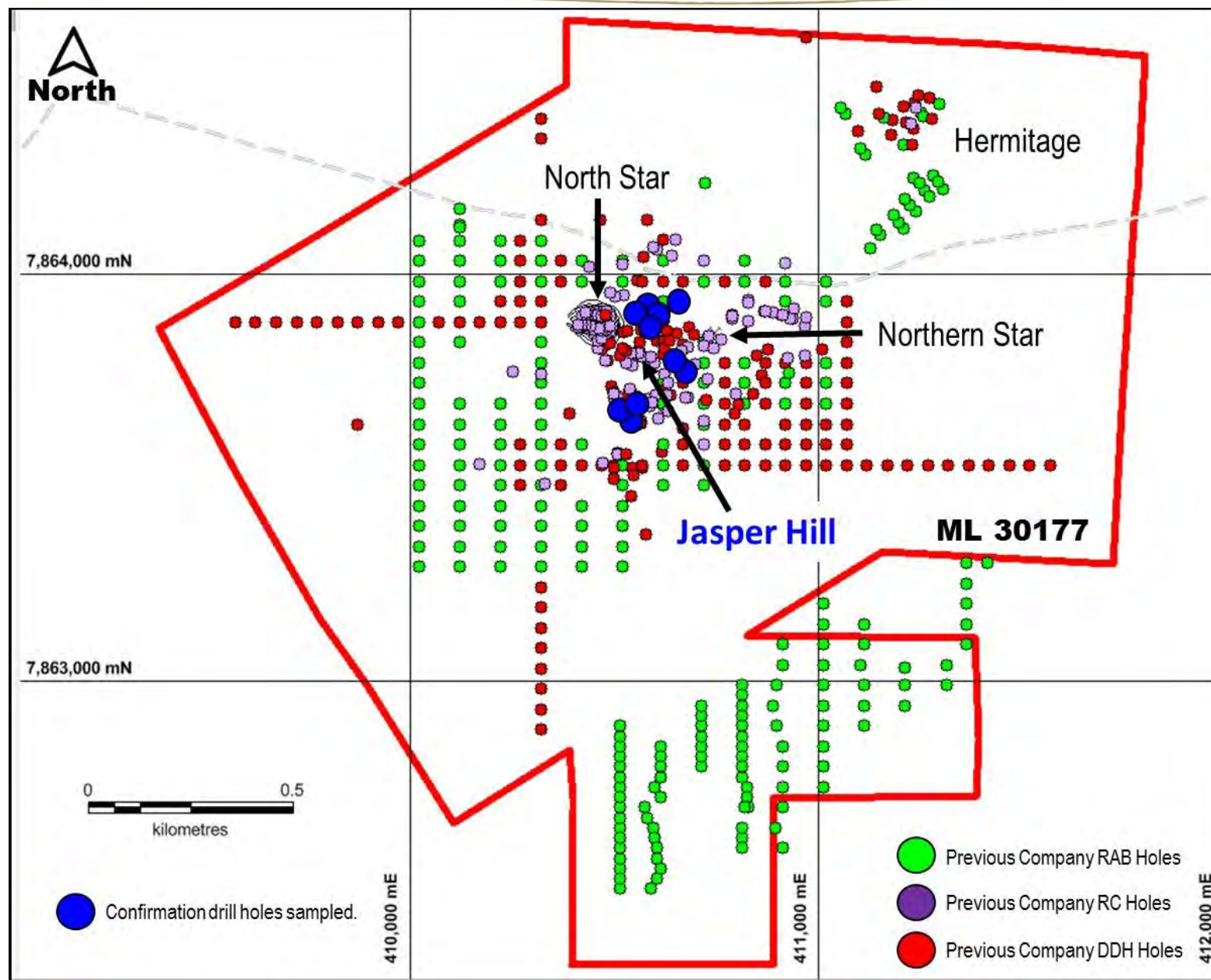


Figure 7: Location of Jasper Hill cobalt-copper-gold project and position of historic drill hole collars (blue dots).

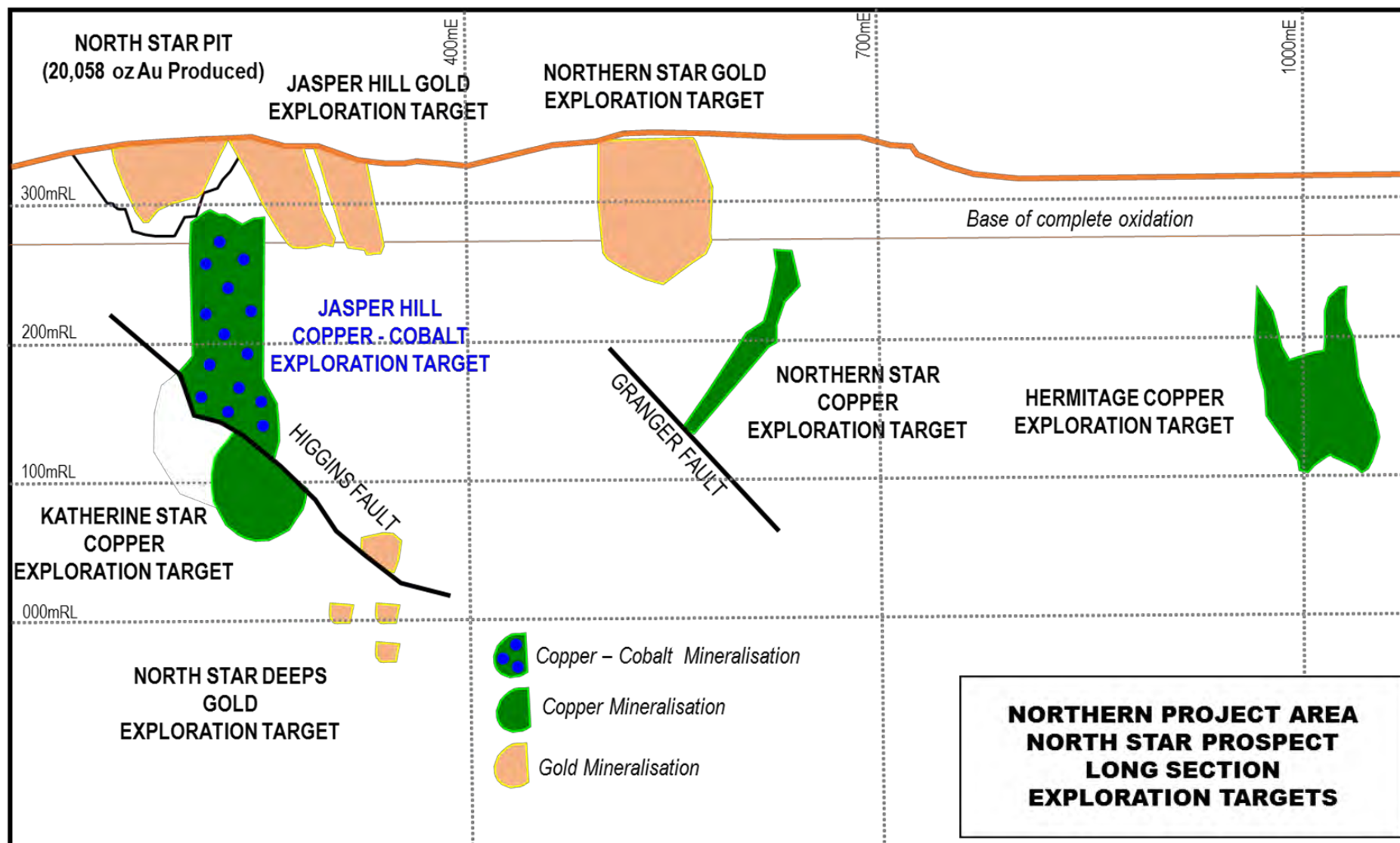


Figure 8: Long section highlighting Exploration Targets within the Northern Star project area. Note that these exploration targets are conceptual in nature and that there has been insufficient exploration to estimate a Mineral Resource.

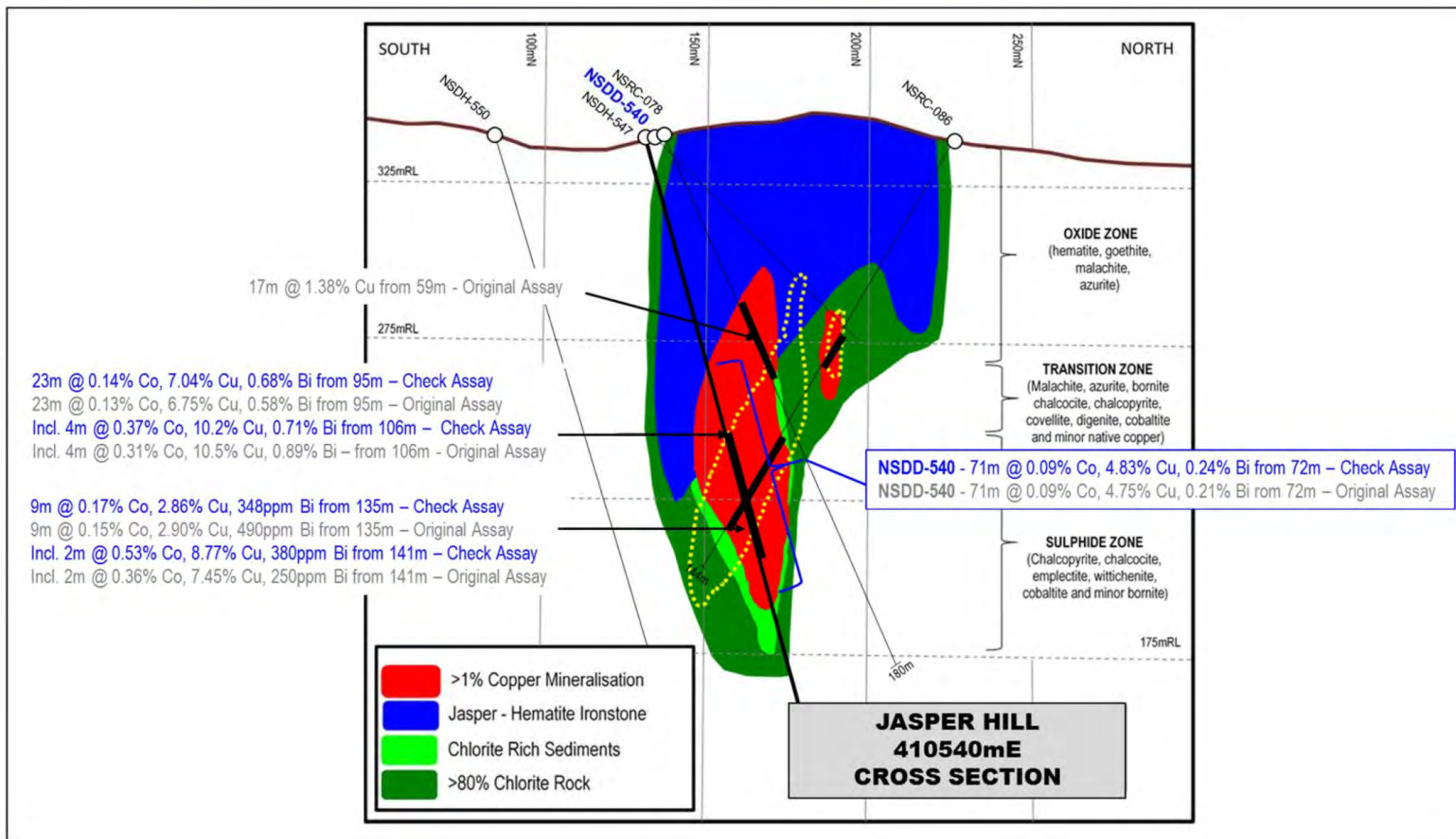


Figure 9: Cross section of Jasper Hill (looking west). With interpreted copper – cobalt – gold mineralisation (cobalt within the yellow dotted outline). Note check assays (blue text) and original 1977 assays (grey text) compare well.



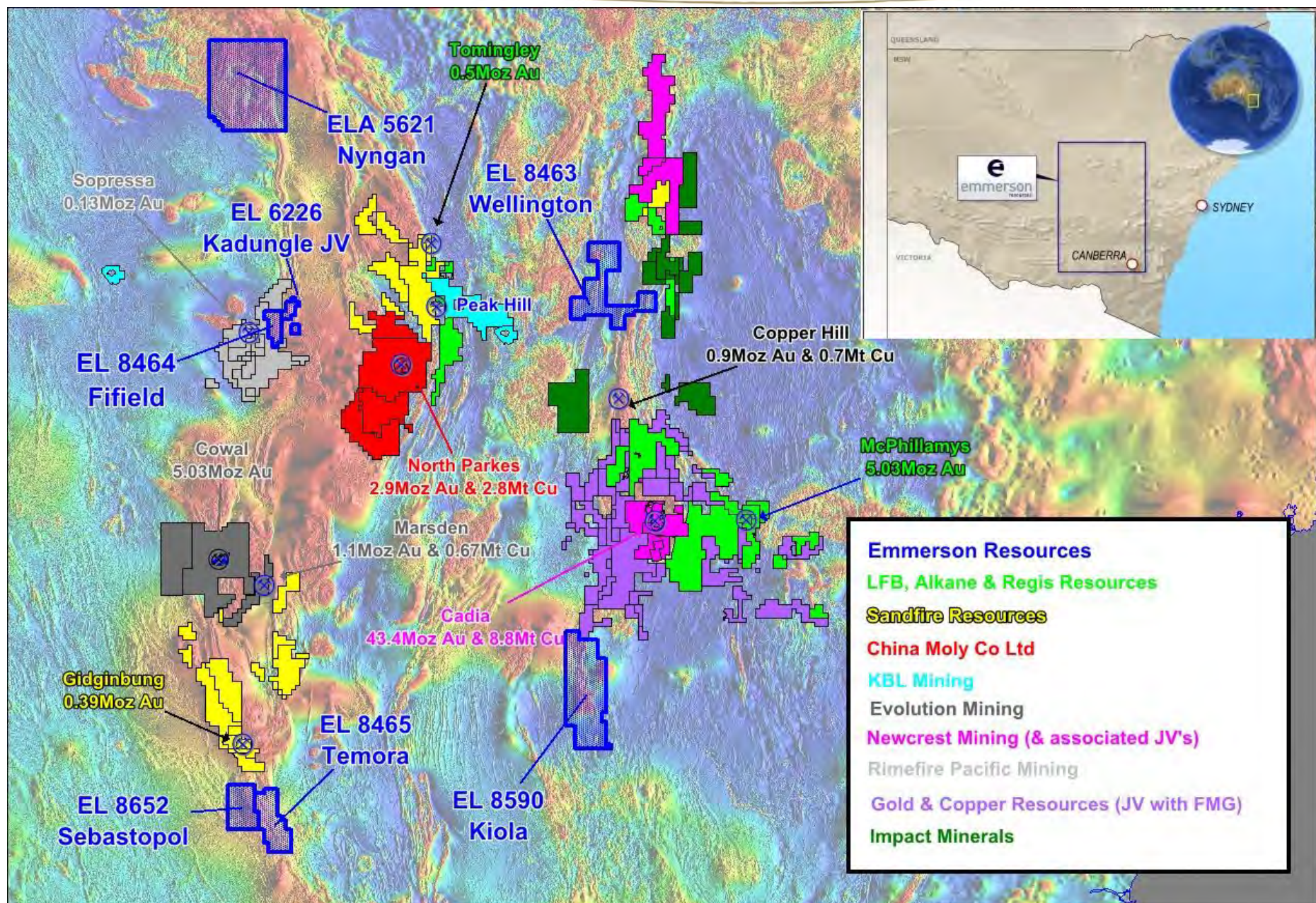


Figure 10: Location of Emmerson Resources NSW Projects (bold blue outline) plus major explorers and deposits within the Macquarie Arc (muted red colour=magnetic signature of the Macquarie Arc).



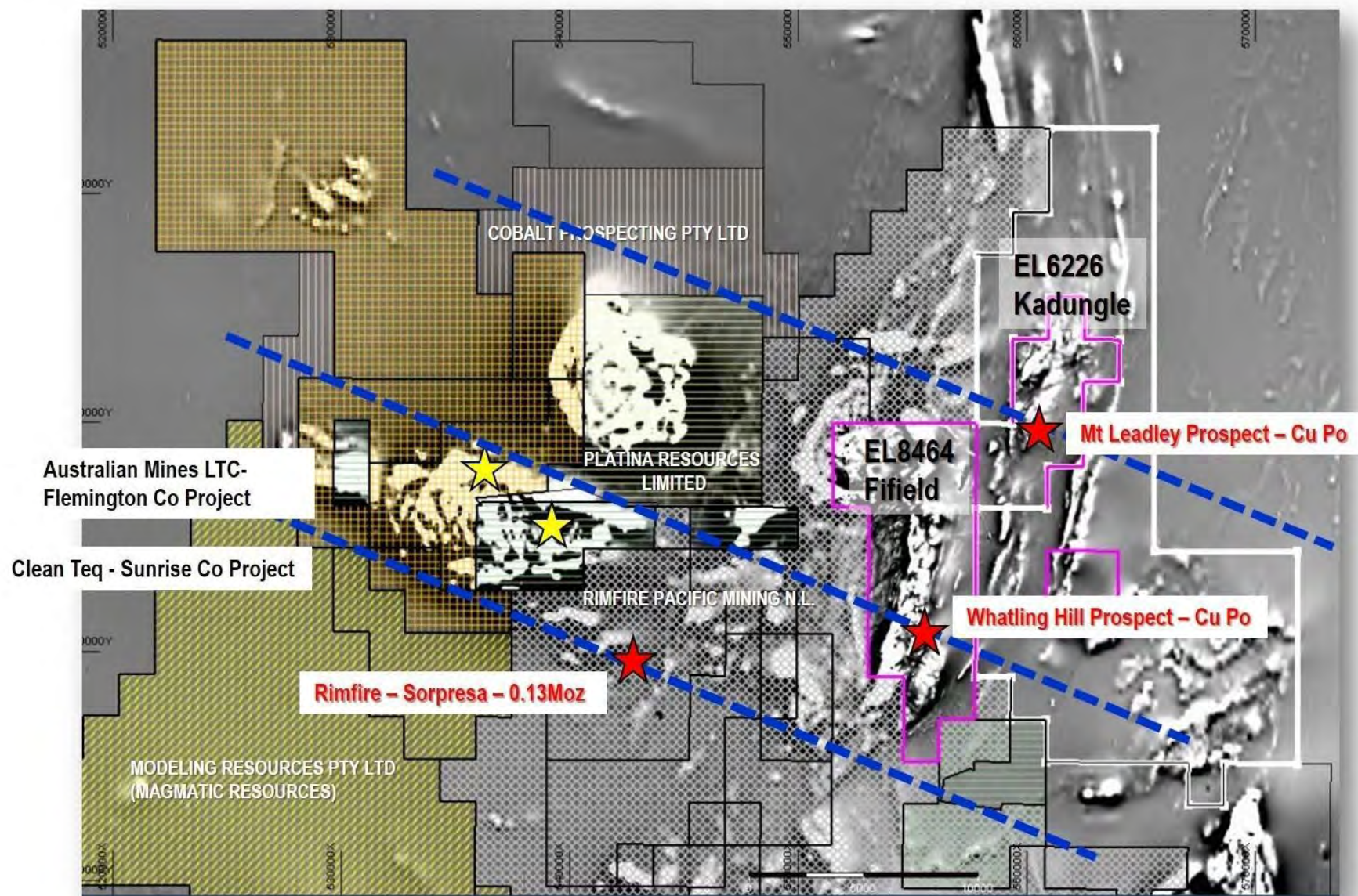


Figure 11: Whatling Hill Project within the Emmerson Fifield tenement (purple) & WNW trending lineaments of the Lachlan Transfer Zone (blue dashed lines).



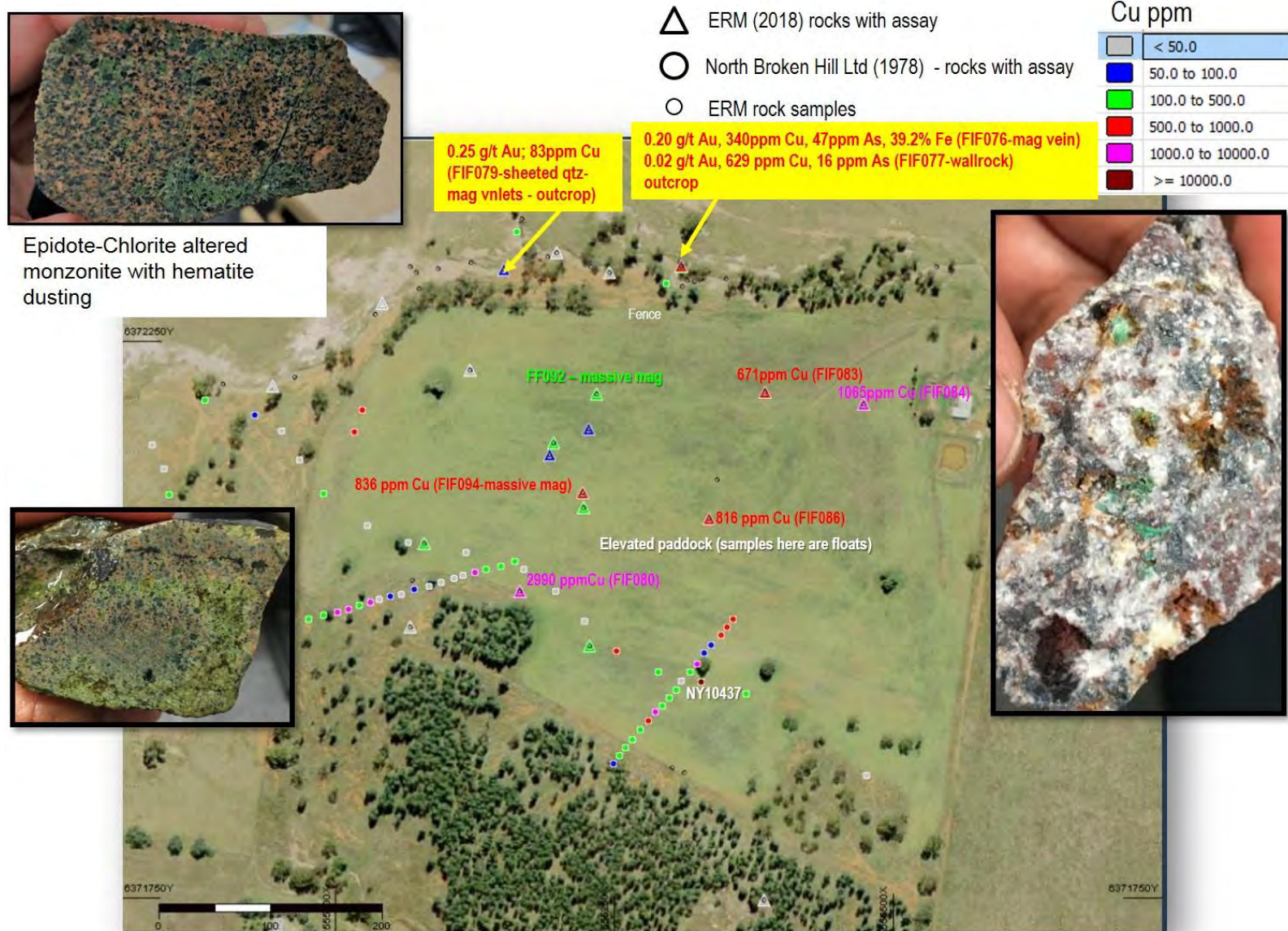


Figure 12: Whatling Hill Project showing highly elevated copper (up to 2%) and gold (up to 0.25g/t) rock chip samples with the only previous line of sampling by North Broken Hill Ltd – yet highly anomalous alteration and mineralisation from sporadic outcrop. Note these rockchip samples may not reflect the underlying size/extent of the mineralisation.



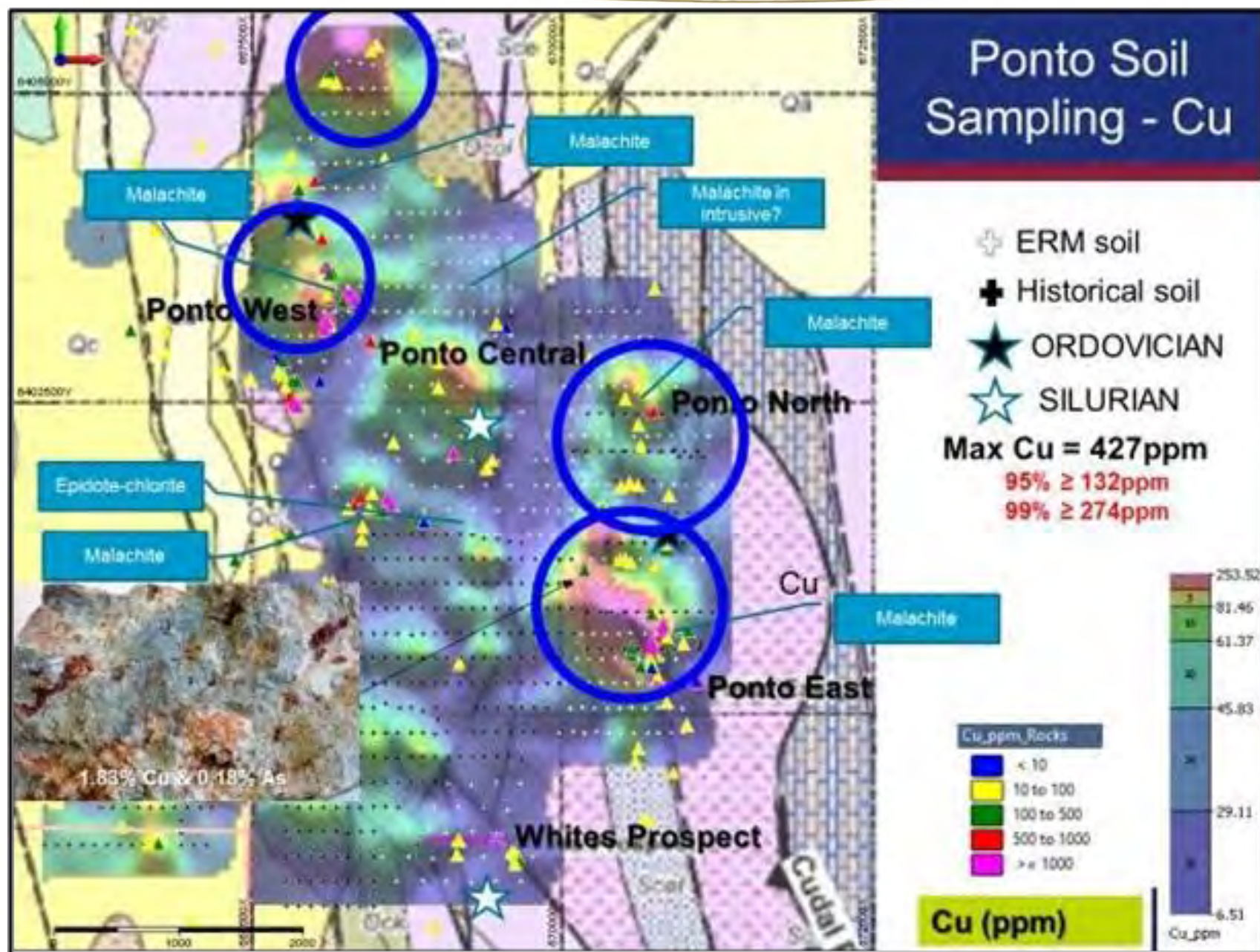


Figure 13: The Ponto Prospect (within our larger Wellington Project) soil geochemistry (Cu), highlighting a number of areas for future follow up. Note the rock chip sample of 1.8% copper.

Table 1: Jasper Hill significant confirmation Cobalt drill hole intersections.

Hole ID	East (MGA94_53)	North (MGA94_53)	RL AHD	Dip (deg)	AZI mag (deg)	From (m)	To (m)	Width (m)	Au (g/t)	Co (%)	Cu (%)	Bi (%)	Mn (%)	Fe (%)	As (%)	Zn (ppm)	Mo (%)	Al (%)
NSDH105	410530.71	7863557.11	320.8	-70.0	347	146	160	14	0.17	0.20	3.45	0.02	0.70	25.7	0.26	202	0.03	3.15
					Incl.	151	156	5	0.17	0.40	3.27	0.02	0.80	28.4	0.54	63.4	0.01	0.37
NSD75	410648.06	7864084.75	315.5	-68.8	166	307	317	10	0.03	0.15	1.71	0.01	0.17	34.4	0.19	57.7	0.01	1.73
					Incl.	307	308	1	0.04	0.35	4.57	0.01	0.13	35.1	0.47	79.0	0.01	1.75
NSDD100	410559.31	7863805.19	336.8	-61.0	171	117	128	11	0.22	0.18	2.56	0.01	0.05	17.6	0.22	222	0.06	4.38
					Incl.	122	125	3	0.34	0.55	5.80	0.01	0.07	23.2	0.34	421	0.20	3.66
					Incl.	123	124	1	0.48	1.07	5.71	0.01	0.04	19.1	0.48	442	0.36	2.55
						138	147	9	0.68	0.15	4.05	0.63	0.04	26.4	0.17	113	0.17	2.31
					Incl.	144	146	2	2.20	0.32	5.60	1.98	0.06	19.9	0.37	160	0.43	4.33
NSDD140	410562.536	7863806.796	337.95	-55.0	173	168	172	4	0.01	0.16	0.34	0.01	0.17	10.5	0.20	382	0.01	7.72
					Incl.	170	172	2	0.01	0.22	0.49	0.01	0.14	7.87	0.28	297	0.01	8.08
NSDH101	410529.49	7863809.75	338.8	-63.0	171	88	97	9	0.05	0.10	2.65	0.01	0.17	21.6	0.14	454	0.02	5.68
						108	136	28	5.83	0.17	8.52	0.33	0.09	19.2	0.27	417	0.12	3.32
					Incl.	115	134	19	0.56	0.47	11.4	0.47	0.10	16.7	0.36	510	0.17	3.68
						134	136	2	50.1	0.09	10.5	0.23	0.11	9.55	0.09	348	0.03	4.42
NSDH547	410539.86	7863713.43	338.2	-73	002	95	118	23	0.86	0.14	7.04	0.68	0.18	13.42	0.17	0.16%	0.34	5.72
					Incl.	106	110	4	1.35	0.37	10.2	0.71	0.11	7.67	0.42	0.34%	0.75	3.61
						135	144	9	0.07	0.17	2.86	0.03	0.07	5.20	0.19	241	0.01	4.29
					Incl.	141	143	2	0.09	0.53	8.77	0.04	0.02	2.22	0.64	164	0.01	3.22
NSDH488	410521.29	7863855.79	330.7	-48	175.5	119	134	15	0.14	0.17	2.03	0.05	1.45	30.2	0.18	377	0.02	3.18
					Incl.	127	132	5	0.25	0.36	2.92	1.29	0.18	24.0	0.45	426	0.03	3.95
						138	146	8	0.06	0.19	1.28	0.02	0.18	18.13	0.20	329	0.01	7.23
					Incl.	143	146	3	0.10	0.29	3.21	0.06	0.18	17.6	0.32	389	0.03	7.49
						284	299	15	6.72	0.26	2.56	0.24	0.29	24.5	0.33	939	0.14	8.12
					Incl.	296	298	2	0.78	1.32	2.00	0.85	0.32	24.5	0.17	0.12%	0.48	4.38
NSDH543	410555.13	7863697.91	339.7	-56	010	83	99	17	0.13	0.14	3.70	0.01	0.16	23.14	0.07	354	0.01	2.83
						91	94	3	0.09	0.43	5.17	0.01	0.31	21.66	0.09	442	0.02	3.51
NSDD110	410619.83	7863713.62	327.9	-70	355					NSI								
NSDD112	410552.16	7863681.30	339.7	-70	360					NSI								

Table 2: Jasper Hill significant confirmation Copper drill hole intersections.

Hole ID	East (MGA94_53)	North (MGA94_53)	RL AHD	Dip (deg)	AZI mag (deg)	From (m)	To (m)	Width (m)	Au (g/t)	Co (%)	Cu (%)	Bi (ppm)	Mn (%)	Fe (%)	As (%)	Zn (ppm)	Mo (%)	Al (%)
NSD105				-70.0	347	147	160	13	0.17	0.21	3.69	260	0.62	25.0	0.28	211	0.03	3.39
					Incl.	155	160	5	0.21	0.23	5.66	640	0.20	22.8	0.30	482	0.07	8.49
NSD75	410648.06	7864084.75	315.5	-68.8	166	306	315	9	0.03	0.16	2.09	22.0	0.13	35.5	0.20	88	0.01	2.12
					Incl.	307	308	1	0.04	0.35	4.57	26.0	0.13	35.1	0.47	79	0.01	1.75
NSDD100	410559.31	7863805.19	336.8	-61.0	171	117	126	9	0.26	0.22	3.03	34.1	0.06	14.0	0.27	248	0.07	5.13
						138	147	9	0.68	0.15	4.05	0.63%	0.04	26.0	0.17	113	0.17	2.31
					Incl.	141	147	6	0.92	0.19	5.09	0.94%	0.24	23.0	0.21	138	0.24	3.09
NSDH101	410529.49	7863809.75	338.8	-63.0	171	73	97	24	0.25	0.08	2.51	44.0	0.16	21.7	0.14	262	0.02	2.98
						101	103	2	0.05	0.03	2.74	10.0	0.14	24.9	0.02	564	0.01	5.21
						108	136	28	5.83	0.17	8.52	0.33%	0.09	19.2	0.27	417	0.12	3.32
					Incl.	120	135	15	10.5	0.18	13.2	0.59%	0.10	12.8	0.34	497	0.19	3.62
NSDH547	410539.86	7863713.43	338.2	-73	002	66	119	58	0.47	0.09	5.32	0.31%	0.45	23.1	0.12	932	0.16	2.86
					Incl.	75	81	6	0.11	0.07	6.29	0.01	0.04	27.4	0.08	705	0.01	0.02
					Incl.	85	116	31	0.69	0.12	6.83	0.42%	0.13	20.4	0.16	1162	0.20	4.18
						131	145	14	0.06	0.12	4.17	0.04	0.09	6.97	0.13	302	0.01	4.88
					Incl.	132	134	2	0.07	0.03	14.9	0.11%	0.15	11.0	0.03	408	0.01	5.06
NSDH488	410521.29	7863855.79	330.7	-48	175.5	116	133	17	0.13	0.15	2.10	409	1.59	31.1	0.16	330	0.01	2.59
						144	148	4	0.14	0.22	3.33	635	0.18	15.7	0.24	516	0.03	7.27
						292	299	7	3.51	0.46	4.48	0.37%	0.27	23.8	0.59	1060	0.24	6.18
					Incl.	293	299	6	0.67	0.53	4.88	0.42%	0.27	23.4	0.68	1056	0.26	5.29
NSDH543	410555.13	7863697.91	339.7	-56	010	82	100	18	0.13	0.14	3.53	0.01	0.16	22.5	0.07	355	0.02	319
					Incl.	85	88	3	0.27	0.07	9.14	0.01	0.05	19.3	0.11	196	0.02	1.25
NSDD110	410619.83	7863713.62	327.9	-70	355						NSI							
NSDD112	410552.16	7863681.30	339.7	-70	360						NSI							

Table 3: Jasper Hill significant confirmation Gold drill hole intersections.

Hole ID	East (MGA94_53)	North (MGA94_53)	RL AHD	Dip (deg)	AZI mag (deg)	From (m)	To (m)	Width (m)	Au (g/t)	Co (%)	Cu (%)	Bi (%)	Mn (%)	Fe (%)	As (%)	Zn (ppm)	Mo (%)	Al (%)
NSDH488	410521.29	7863855.79	330.7	-48.0	175.5	284	298	14	6.72	0.28	2.17	0.26	0.29	24.4	0.34	996	0.14	8.68
					Incl.	288	293	5	16.9	0.08	0.72	0.16	0.30	24.0	0.08	999	0.07	9.21
NSDD110	410619.83	7863713.62	327.9	-70.0	355	295	310	15	7.00	0.01	0.06	0.12	0.16	50.1	0.01	71.7	0.01	0.74
					Incl.	302	308	6	14.9	0.01	0.04	0.09	0.18	58.6	0.01	73.5	0.01	1.06
NSDH547	410539.86	7863713.43	338.2	-73.0	002	106	117	11	1.47	0.19	8.70	1.22	0.13	8.28	0.18	0.21%	0.65	4.18
					Incl.	112	117	5	1.99	0.09	9.19	2.02	0.13	8.45	0.06	0.17%	0.73	4.27
NSDH101	410529.49	7863809.75	338.8	-63.0	171	134	136	2	50.1	0.09	10.5	0.23	0.11	9.55	0.09	348	0.03	4.42

Note:

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>(1) All samples are sawn quarter diamond NQ or HQ size core samples.</p> <p>(2) All core is historic in nature with some holes dating back to 1975.</p> <p>(3) Gold analysis method by 25g Aqua Regia with ICP-OES finish.</p> <p>(4) Where gold analysis is greater than 2 g/t Au, repeat assay is by Fire Assay</p> <p>(5) Multi element analysis method by 4 acid digest &amp; ICP-OES, ICP-MS finish.</p> <p>(6) Intersections are reported as downhole lengths and not true width.</p> | <p>(7) Minimum cut-off of 400 ppm Co. No maximum cut-off.</p> <p>(8) Minimum cut-off of 0.50 g/t Au. No maximum cut-off.</p> <p>(9) Minimum cut-off of 0.50% Cu. No maximum cut-off.</p> <p>(10) Minimum cut-off of 0.50 g/t Au. No maximum cut-off.</p> <p>(11) Maximum of 2m internal dilution.</p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Table 4: West Gibbet and Mauretania significant drill hole intersections.

Hole ID	East (MGA94_53)	North (MGA94_53)	RL AHD	Dip (deg)	AZI mag (deg)	From (m)	To (m)	Width (m)	Au (g/t)	Ag (g/t)	Bi (ppm)	Cu (%)	Co (ppm)	Fe (%)	Pb (ppm)	Zn (ppm)	Sb (ppm)	Se (ppm)
WGRC052 (West Gibbet)	409614.02	7826841.06	348.3	-90	0.00	44	46	2	3.13	0.55	1198	0.01	20.5	18.8	28.0	17.5	4.35	23.3
						55	56	1	2.68	0.26	130	0.02	17.2	21.5	20.7	30.0	10.2	1.00
						66	73	7	7.01	2.64	516	0.01	12.7	22.8	74.3	15.6	15.5	21.5
					Incl.	68	69	1	16.6	4.45	462	0.01	12.3	25.2	102	11.0	23.9	20.5
					Incl.	70	72	2	12.4	4.19	0.13%	0.01	7.80	19.6	89.0	10.5	6.73	46.8
						84	87	3*	1.10	0.10	164	0.05	50.1	6.53	7.30	136	0.27	2.20
MTRC023 (Mauretania)	430730.80	7833052.00	329.7	-90	0.00	53	79	26	8.93	85.1	0.13%	0.49	223	24.3	0.13%	410	11.4	3.55
					Incl.	59	67	8	22.7	219	0.26%	0.72	341	23.4	0.19%	513	11.8	5.29
					Incl.	59	64	5	31.6	166	0.31%	0.67	263	24.5	0.22%	447	11.8	6.96
						95	96	1	1.91	10.4	69.9	0.20	252	13.9	0.38%	557	6.80	1.90
						97	109	12	2.09	11.8	90.9	0.24	251	22.4	0.51%	542	5.64	3.94
					Incl.	104	107	3	6.58	11.9	166	0.28	414	25.5	0.39%	0.10%	5.89	5.50
						171	181	10	7.58	2.38	0.14%	0.19	69.8	29.1	13.9	107	2.37	30.0
					Incl.	172	177	5	13.4	2.85	0.21%	0.22	69.8	30.6	12.1	89.4	2.58	27.1
MTRC025 (Mauretania)	430706.69	7833029.32	329.7	-70	45.6	101	120	19	1.85	28.7	63.2	1.25	734	17.0	0.22%	0.16%	6.88	2.35
					Incl.	111	120	9	2.56	22.8	40.1	2.30	0.12%	11.7	929	0.30%	7.68	2.59
MTRC027 (Mauretania)	430709.00	7833042.00	329.5	-70	45.6	48	60	12*	10.4	1.33	0.27%	0.06	17.6	25.4	166	64.8	8.02	0.50
					Incl.	51	57	6*	18.9	0.66	0.46%	0.04	14.5	26.9	199	64.0	7.32	0.13
MTRC024 (Mauretania)	430722.75	7833042.90	329.7	-70	45.6	NSI												
MTRC026 (Mauretania)	430726.00	7833034.00	329.5	-70	45.6	NSI												
EBWRC085 (Edna Beryl)	416244.00	7865058.00	297.70	-60.0	177.50	NSI												
EBWRC086 (Edna Beryl)	416249.00	7865084.00	298.70	-60.0	177.50	NSI												
EBWRC087 (Edna Beryl)	416210.00	7865085.00	297.89	-60.0	164.50	NSI												
EBWRC088 (Edna Beryl)	416290.00	7865085.00	299.70	-60.0	164.50	NSI												
EBWRC089 (Edna Beryl)	416807.00	7865390.00	297.89	-65.0	164.50	NSI												
EBWRC090 (Edna Beryl)	416728.50	7865312.50	297.89	-65.0	164.50	NSI												



EBWRC091 (Edna Beryl)	416729.70	7865412.00	297.66	-65.0	<b>164.50</b>	NSI
EBWRC092 (Edna Beryl)	416650.00	7865377.00	297.89	-65.0	<b>164.50</b>	NSI
<b>MARC215</b> (Malbec)	<b>404339.99</b>	<b>7826599.19</b>	<b>334.03</b>	<b>-90.0</b>	0.0	NSI

Note:

- (1) All samples are 1-metre riffle split Reverse Circulation samples.
- (2) \* denotes a 3-metre composite Reverse Circulation sample.
- (3) Gold analysis method by 25g Aqua Regia with ICP-OES finish.
- (4) Where gold analysis is greater than 1 g/t Au, repeat assay is by 50g Fire Assay.
- (5) Multi element analysis method by 4 acid digest & ICP-OES, ICP-MS finish.
- (6) Intersections are reported as downhole lengths and not true
- (7) Minimum cut-off of 0.50 g/t Au. No maximum cut-off.
- (8) Minimum cut-off of 1% Cu. No maximum cut-off.
- (9) Maximum of 2m internal dilution.



Table 5. Selected significant rock chip sample results from Whatling Hill prospect.

Sample ID	Sample Type	MGA94 55 Easting	MGA94 55 Northing	Au ppm	As ppm	Ba ppm	Bi ppm	Cu ppm	Cu %	Fe %	Mn ppm	Mo ppm	Pb ppm	Sr ppm	V ppm	Zn ppm	Description
FIF076	OUTCROP	555309.7	6372317.0	0.20	47	1270	21	340	0.03	39.2	751	4	17	390	625	45	Magnetite-quartz vein cutting weathered Monzonite?
FIF077	OUTCROP	555310.0	6372317.5	0.02	16	2860	5	629	0.06	7.91	1290	<1	16	338	286	150	Wallrock of magnetite-quartz vein
FIF079	OUTCROP	555150.8	6372313.6	0.25	<5	5430	15	83	0.01	5.32	788	1	17	503	228	105	Sheeted quartz-magnetite veinlets
FIF080	FLOAT	555165.0	6372025.2	0.04	5	6700	3	2990	0.30	12.25	186	2	469	72	184	4	Quartz-magnetite vein with disseminated malachite
FIF082	FLOAT	555079.0	6372067.8	0.01	7	390	<2	169	0.02	12.3	197	1	65	20	95	20	Quartz-hematite-magnetite vein
FIF083	FLOAT	555385.2	6372204.1	0.01	11	140	2	671	0.07	2.56	241	<1	<2	14	59	16	Quartz stockworks with malachite specks
FIF084	FLOAT	555473.1	6372193.4	0.05	18	6880	10	1065	0.11	5.15	249	4	7	512	108	12	Quartz vein with malachite blebs
FIF086	FLOAT	555335.2	6372090.8	0.07	21	>10000	11	816	0.08	8.1	340	8	11	559	140	14	Quartz-magnetite vein: breccia
FIF088	FLOAT	555227.2	6371976.1	0.01	<5	970	3	196	0.02	9.94	285	1	27	54	104	27	Quartz-hematite vein
FIF089	OUTCROP	554884.6	6371164.0	0.06	<5	>10000	<2	1905	0.19	3.57	493	<1	11	477	120	41	Quartz-hematite vein with malachite specks
FIF093	FLOAT	555222.4	6372100.2	0.01	9	520	7	364	0.04	6.87	637	1	357	722	113	10	Quartz vein
FIF094	FLOAT	555221.3	6372113.4	0.05	28	8520	<2	836	0.08	6.1	1125	<1	52	2580	82	16	Quartz vein

Table 6. Wellington Project - Ponto Corridor Power Auger details, collar, and geochemical results.

Sample ID	Sample Type	Assay Method	MGA94_55 Easting	MGA94_55 Northing	Depth (cm)	Au ppm	Ag ppm	As ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Pb ppm	Zr ppm
NSW70001	Power Auger	METL43	668170	6405231	15	0.004	0.06	12.8	185	4.81	1380	0.46	8.2	3.9
NSW70002	Power Auger	METL43	668275	6405250	20	0.006	0.1	4.8	272	4.7	1100	0.3	5	3.2
NSW70003	Power Auger	METL43	668365	6405233	16	0.006	0.06	5	254	5.85	1240	0.3	4.7	3.5
NSW70004	Power Auger	METL43	668464	6405227	13	0.003	0.07	7.4	161.5	4.26	1520	0.29	6.5	2.8
NSW70005	Power Auger	METL43	668572	6405229	18	0.002	0.09	5.7	114	3.29	2490	0.32	8	3
NSW70006	Power Auger	METL43	668673	6405238	11	0.001	0.05	17.5	42.5	2.88	2740	0.62	9.9	2.4
NSW70007	Power Auger	METL43	668672	6405033	12	0.001	0.05	6	67.6	3.08	924	0.38	8.3	2.4
NSW70008	Power Auger	METL43	668570	6405034	20	0.002	0.06	5.6	104	3.91	1040	0.35	7.5	3.2
NSW70009	Power Auger	METL43	668476	6405029	22	0.002	0.07	4.7	159	4.46	1320	0.37	7.5	2.9
NSW70010	Power Auger	METL43	668375	6405027	40	0.003	0.06	4.4	160	4.89	985	0.28	6.3	2.8
NSW70011	Power Auger	METL43	668272	6405030	14	0.003	0.07	4.9	158.5	4.76	1320	0.39	7.1	3
NSW70012	Power Auger	METL43	668173	6405032	22	0.002	0.03	7.9	89.4	3.98	961	0.31	6.6	3.1
NSW70013	Power Auger	METL43	668072	6404828	17	0.001	0.04	5.7	55.6	3.93	1240	0.41	8.2	3.5
NSW70014	Power Auger	METL43	668167	6404834	18	0.002	0.02	4.7	61.9	3.72	463	0.28	7.1	3.5
NSW70015	Power Auger	METL43	668266	6404839	32	0.001	0.04	4.6	76.2	5.34	885	0.32	5.9	5.1
NSW70016	Power Auger	METL43	668368	6404830	24	0.002	0.03	4.3	95.6	4.39	639	0.27	6.7	3.8
NSW70017	Power Auger	METL43	668469	6404840	25	0.001	0.03	3.5	87.7	3.88	1100	0.29	6.8	2.4
NSW70018	Power Auger	METL43	667975	6404831	16	0.001	0.05	4.6	70.5	3.27	1450	0.48	7.7	2.4
NSW70019	Power Auger	METL43	667870	6404836	23	0.001	0.08	6.7	71.2	3.75	788	0.44	9.1	3
NSW70020	Power Auger	METL43	667867	6404623	20	0.019	0.04	4	54.2	3.88	810	0.26	8.2	4.9
NSW70021	Power Auger	METL43	667970	6404632	35	0.005	0.05	2.4	44.4	3.18	628	0.15	6.4	2.5
NSW70022	Power Auger	METL43	668069	6404631	40	0.001	0.03	1.7	40.6	2.96	737	0.18	6.1	2.9
NSW70023	Power Auger	METL43	668173	6404630	43	0.001	0.03	3.1	60.1	3.52	713	0.21	6.2	4.1
NSW70024	Power Auger	METL43	668268	6404632	41	0.013	0.04	3.8	61.8	4.36	852	0.24	7.3	4.2
NSW70026	Power Auger	METL43	668272	6404434	37	0.001	0.05	3	51.7	4.01	1010	0.25	8.5	4.4
NSW70027	Power Auger	METL43	668175	6404431	45	0.015	0.03	2.9	54.6	4.61	1050	0.38	7.8	4.2

Sample ID	Sample Type	Assay Method	MGA94_55 Easting	MGA94_55 Northing	Depth (cm)	Au ppm	Ag ppm	As ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Pb ppm	Zr ppm
NSW70028	Power Auger	METL43	668078	6404429	26	0.001	0.03	3.4	54.7	4.75	905	0.31	5.5	5.7
NSW70029	Power Auger	METL43	667973	6404431	22	0.002	0.03	3.8	37.4	3.51	663	0.15	6.2	4.2
NSW70030	Power Auger	METL43	667874	6404430	31	0.002	0.03	4.4	38.7	3.97	654	0.23	6.4	3.8
NSW70031	Power Auger	METL43	667777	6404430	35	0.002	0.05	5.2	50	3.75	958	0.19	6	3.6
NSW70032	Power Auger	METL43	668173	6404235	25	0.002	0.11	3.9	28.8	3.47	617	0.2	7.9	3.4
NSW70034	Power Auger	METL43	668575	6404834	26	0.002	0.07	4.5	99.5	4.37	897	0.36	8.3	4.4
NSW70035	Power Auger	METL43	668570	6404632	16	0.001	0.05	3.9	66.4	4.04	1340	0.44	9	3.1
NSW70036	Power Auger	METL43	668475	6404627	25	0.001	0.06	3.8	60.2	4.14	1280	0.5	8.9	2.8
NSW70037	Power Auger	METL43	668376	6404632	27	0.001	0.04	4.6	70.4	4.94	1000	0.38	7.8	3.7
NSW70038	Power Auger	METL43	668370	6404432	40	0.001	0.09	3.9	50.1	3.67	886	0.26	8.4	5.5
NSW70039	Power Auger	METL43	668467	6404437	36	0.001	0.05	4.1	45.5	3.33	708	0.21	8.1	4.2
NSW70040	Power Auger	METL43	668579	6404432	31	0.001	0.05	4.3	39.7	2.94	744	0.16	7.7	3.9
NSW70041	Power Auger	METL43	668580	6404237	35	0.002	0.07	4.6	51.6	3.54	1040	0.24	5.8	2.9
NSW70042	Power Auger	METL43	668477	6404231	29	0.001	0.05	4.6	31.2	3.95	586	0.27	7.1	3.2
NSW70043	Power Auger	METL43	668376	6404233	30	0.002	0.06	4.8	34.1	3.41	712	0.18	7.7	4.5
NSW70044	Power Auger	METL43	668270	6404227	70	0.002	0.04	4.6	28.8	3.06	728	0.19	6.5	3.3
NSW70045	Power Auger	METL43	668071	6404222	38	0.001	0.02	3.5	24.1	3.32	1080	0.21	5.6	3.4
NSW70046	Power Auger	METL43	667965	6404234	23	0.001	0.01	6.6	32.5	3.9	596	0.22	4.6	3.2
NSW70047	Power Auger	METL43	667872	6404231	32	0.003	0.03	4.8	131	5.61	916	0.28	3.9	3.4
NSW70048	Power Auger	METL43	668076	6404032	45	0.001	0.01	7.8	12.8	4.2	698	0.16	4.5	2.9
NSW70049	Power Auger	METL43	667977	6404030	10	0.001	0.02	10.2	34.5	4.09	708	0.26	5.3	3.1
NSW70051	Power Auger	METL43	667878	6404023	20	0.002	0.04	8	125	6.17	953	0.19	5.9	11.8
NSW70052	Power Auger	METL43	667774	6403828	74	0.003	0.02	10.6	86.9	5.81	683	0.26	6.4	5.3
NSW70053	Power Auger	METL43	667864	6403831	40	0.003	0.03	10.7	98.1	5.63	923	0.3	5	4.1
NSW70054	Power Auger	METL43	667972	6403835	42	0.002	0.05	7.2	122	6.33	1360	0.22	5.8	7.5
NSW70055	Power Auger	METL43	668071	6403830	10	0.002	0.04	15.9	83.1	5.36	1140	0.34	5.2	3.5
NSW70056	Power Auger	METL43	668072	6403627	25	0.002	0.03	6.2	66.6	6.18	1080	0.24	5.8	3.5
NSW70057	Power Auger	METL43	667971	6403635	25	0.002	0.02	4.4	86.1	5.56	1020	0.2	3.1	3
NSW70058	Power Auger	METL43	667875	6403629	28	0.003	0.01	6.8	121.5	6.5	1070	0.27	3.5	3.8
NSW70059	Power Auger	METL43	667771	6403629	25	0.002	0.02	5.6	71.4	5.79	1190	0.27	4.6	2.8
NSW70060	Power Auger	METL43	667767	6403435	20	0.002	0.02	4.6	62	4.72	1000	0.3	4.1	2
NSW70061	Power Auger	METL43	667873	6403434	17	0.004	0.04	7.8	98.5	5.95	1270	0.32	4.5	2.8
NSW70062	Power Auger	METL43	667976	6403434	21	0.003	0.02	8.7	143.5	6.18	988	0.22	2.6	3.5
NSW70063	Power Auger	METL43	667978	6403237	19	0.002	0.02	5.2	142.5	6.08	1320	0.33	3.1	3.7
NSW70064	Power Auger	METL43	667875	6403231	17	0.002	0.02	4.1	97	5.4	1440	0.4	3.9	2.3
NSW70065	Power Auger	METL43	667771	6403233	27	0.001	0.02	4.9	80.4	4.95	1260	0.33	4.3	3.4
NSW70067	Power Auger	METL43	667673	6403226	25	0.001	0.02	4	63.3	4.17	1300	0.39	10.3	2.9
NSW70068	Power Auger	METL43	667666	6403035	10	0.001	0.03	4.2	57.3	4.59	940	0.42	5.1	1.4
NSW70069	Power Auger	METL43	667771	6403035	25	0.001	0.04	3.8	63	4.46	1120	0.36	5	2.1
NSW70070	Power Auger	METL43	667879	6403041	21	0.001	0.03	4.4	77.5	4.2	983	0.22	4.1	2.6
NSW70071	Power Auger	METL43	667967	6403033	41	0.002	0.08	6.4	223	5.82	769	0.3	5.1	5.4
NSW70072	Power Auger	METL43	668171	6404034	36	0.001	0.02	4.9	31.3	4.85	1010	0.28	5.1	3
NSW70073	Power Auger	METL43	668271	6404037	45	0.002	0.02	6.1	39.2	3.99	888	0.27	6.2	3.3
NSW70074	Power Auger	METL43	668365	6404040	48	0.002	0.04	5	36.7	4.06	715	0.18	7.3	4.4
NSW70076	Power Auger	METL43	668473	6404041	15	0.001	0.11	4.1	50.1	4.5	947	0.3	6.3	2.6
NSW70077	Power Auger	METL43	668370	6403833	26	0.001	0.07	4.8	71.2	5.09	1010	0.24	5.7	3.3
NSW70078	Power Auger	METL43	668269	6403830	30	0.001	0.03	4.3	44.1	4.22	899	0.28	6	2.8
NSW70079	Power Auger	METL43	668172	6403826	27	0.001	0.03	6.4	45.4	5.53	844	0.27	5.6	4.2
NSW70080	Power Auger	METL43	668169	6403630	37	0.001	0.02	9.3	46	4.7	632	0.19	5.1	3.2
NSW70081	Power Auger	METL43	668272	6403631	25	0.002	0.03	6.3	77.8	5.15	1130	0.25	4.9	3.8
NSW70082	Power Auger	METL43	668268	6403427	20	0.002	0.03	7.1	109	5.82	1100	0.35	4.3	4.1
NSW70083	Power Auger	METL43	668172	6403431	24	0.001	0.01	3.2	13.2	5.03	604	0.19	4.9	1.6
NSW70084	Power Auger	METL43	668059	6403431	20	0.003	0.02	11.2	150.5	5.7	892	0.31	3	3.4
NSW70085	Power Auger	METL43	668071	6403229	21	0.003	0.03	5.1	187	6.63	598	0.21	3.3	3.3
NSW70086	Power Auger	METL43	668167	6403232	17	0.002	0.01	7.9	18.7	3.26	700	0.21	4.3	3.9
NSW70087	Power Auger	METL43	668266	6403233	20	<0.001	0.01	3.8	18.8	3.9	696	0.33	4.1	2.1
NSW70088	Power Auger	METL43	668071	6403042	41	0.003	0.03	8	32.1	6.1	1060	0.87	5.7	20.5
NSW70089	Power Auger	METL43	668157	6403035	29	0.001	0.02	2.4	13.9	3.93	655	0.2	4.1	2.3
NSW70090	Power Auger	METL43	668269	6403027	40	0.002	0.01	3.2	14.1	7.73	996	0.34	4.9	4
NSW70091	Power Auger	METL43	668371	6403034	41	0.001	0.01	4.5	14.2	5.15	939	0.28	4.9	3.4
NSW70092	Power Auger	METL43	668472	6403031	30	0.001	0.01	2.9	13.2	4.75	1080	0.26	4.9	2
NSW70093	Power Auger	METL43	668572	6403228	35	0.001	0.01	5.5	26.2	6.48	789	0.28	5.5	4.5
NSW70094	Power Auger	METL43	668473	6403237	39	0.001	0.02	5.2	34.6	5.68	1030	0.27	4.9	2.9
NSW70095	Power Auger	METL43	668376	6403234	33	0.001	0.01	5.6	9.9	3.55	625	0.17	2.8	2.4
NSW70096	Power Auger	METL43	668367	6403433	26	0.003	0.03	6	71.8	5.61	1050	0.3	5.3	3.3
NSW70097	Power Auger	METL43	668468	6403433	38	0.001	0.04	5.1	82.7	4.93	771	0.27	6.4	3.6
NSW70098	Power Auger	METL43	668573	6403435	34	0.001	0.04	6.6	79.1	5	940	0.22	5.6	5.3
NSW70104	Power Auger	METL43	668369	6403629	35	0.001	0.03	5.2	60.8	4.67	1260	0.33	6	4.5
NSW70107	Power Auger	METL43	668671	6403835	47	0.004	0.07	3.7	30.7	3.09	619	0.67	11.3	5.3

Sample ID	Sample Type	Assay Method	MGA94_55 Easting	MGA94_55 Northing	Depth (cm)	Au ppm	Ag ppm	As ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Pb ppm	Zr ppm
NSW70112	Power Auger	METL43	668566	6404035	30	0.001	0.07	3.9	54.6	4.24	924	0.24	6.1	3.3
NSW70113	Power Auger	METL43	668972	6404029	30	0.001	0.02	7	49.7	4.54	921	0.83	7.4	3
NSW70114	Power Auger	METL43	669067	6404026	25	0.001	0.02	3.8	34	4.23	627	0.3	4.1	1.7
NSW70115	Power Auger	METL43	669084	6403829	16	<0.001	0.02	6.6	32.2	3.81	1680	0.54	12.6	2.7
NSW70116	Power Auger	METL43	669164	6404028	27	0.001	0.03	6.6	29.7	4.04	1530	0.64	6.8	2.9
NSW70117	Power Auger	METL43	669174	6403830	17	0.001	0.04	4.9	29.2	4.02	1570	0.74	7	2.8
NSW70118	Power Auger	METL43	669272	6403832	26	<0.001	0.04	2.9	20.5	2.83	511	0.45	5.2	1.2
NSW70119	Power Auger	METL43	669369	6403832	40	<0.001	0.04	3.8	25.7	2.59	739	0.44	6.9	1.6
NSW70120	Power Auger	METL43	669471	6403830	25	<0.001	0.04	6.7	23.7	2.88	545	0.53	8.1	1.4
NSW70121	Power Auger	METL43	669569	6403826	46	<0.001	0.03	3.5	19.6	2.27	483	0.33	5.8	2.5
NSW70122	Power Auger	METL43	669569	6403632	24	<0.001	0.07	4.5	36.3	3.23	858	0.58	7.9	2.8
NSW70123	Power Auger	METL43	669476	6403632	20	0.001	0.05	3.3	38.6	3.03	668	0.45	6.9	1.5
NSW70124	Power Auger	METL43	669373	6403631	17	<0.001	0.09	3.5	39.7	3.13	776	0.51	6.5	1.2
NSW70126	Power Auger	METL43	669264	6403634	18	0.001	0.08	3.5	37.6	3.29	1480	0.43	7.2	2.7
NSW70127	Power Auger	METL43	669180	6403435	15	<0.001	0.04	3.5	38.5	2.9	906	0.7	6.5	3.3
NSW70128	Power Auger	METL43	669271	6403428	30	0.001	0.05	3.6	48.8	3.35	1020	0.44	6.9	3.1
NSW70129	Power Auger	METL43	669375	6403426	27	0.001	0.04	4.8	35.9	3.2	1000	0.28	8	3.6
NSW70131	Power Auger	METL43	669568	6403434	33	0.001	0.04	3.8	28.1	2.35	835	0.71	8.5	9.1
NSW70132	Power Auger	METL43	669576	6403237	37	0.001	0.04	8.6	24.9	2.66	1700	2	11.8	10.8
NSW70134	Power Auger	METL43	669476	6403237	10	0.001	0.03	6.9	40.3	3.05	1330	0.88	10.3	8.9
NSW70135	Power Auger	METL43	669378	6403231	28	<0.001	0.03	5.3	76.6	3.59	1420	0.58	6.3	4.2
NSW70136	Power Auger	METL43	669277	6403225	20	<0.001	0.04	5.5	22.9	3.32	1740	0.64	8.7	2.6
NSW70137	Power Auger	METL43	669178	6403227	26	<0.001	0.03	5	32.4	3.53	1460	0.62	7	2.6
NSW70138	Power Auger	METL43	669168	6403027	33	0.001	0.04	4.6	35.4	3.19	1050	0.43	7.7	5
NSW70139	Power Auger	METL43	669270	6403038	46	<0.001	0.01	7.4	35.2	4.2	1120	0.35	6.1	3.2
NSW70140	Power Auger	METL43	669367	6403038	23	<0.001	0.02	6.8	36.6	3.86	1230	0.78	6.2	3.9
NSW70141	Power Auger	METL43	669460	6403033	30	0.002	0.06	6.3	26.3	2.98	591	3.51	13.4	72.6
NSW70142	Power Auger	METL43	669579	6403033	25	<0.001	0.06	1.8	5.8	1.94	1330	3.59	14.1	19.3
NSW70143	Power Auger	METL43	669172	6403630	34	<0.001	0.03	5.2	32.6	4.42	646	0.58	7.2	2.8
NSW70144	Power Auger	METL43	669074	6403631	38	0.001	0.04	6.2	37.7	4.61	1360	0.57	6.7	4.8
NSW70145	Power Auger	METL43	668970	6403625	32	<0.001	0.01	4	42.3	4.33	954	0.6	3.7	2.1
NSW70146	Power Auger	METL43	668870	6403639	27	0.001	0.04	9.7	79.3	4.53	1510	0.55	7.1	3.8
NSW70147	Power Auger	METL43	668778	6403632	22	0.001	0.04	5.2	32.9	2.9	1150	0.36	7.7	4.9
NSW70149	Power Auger	METL43	668872	6403433	60	0.002	0.05	7	61.8	4.86	748	0.27	6.4	4.2
NSW70151	Power Auger	METL43	668970	6403434	55	0.001	0.05	5.5	34.6	4.33	733	0.28	6	2.9
NSW70152	Power Auger	METL43	669071	6403435	30	0.001	0.07	5.3	40	4.09	757	0.4	7.9	3.4
NSW70153	Power Auger	METL43	669070	6403232	43	0.001	0.05	5.9	50.9	4.59	576	0.4	8	4.5
NSW70154	Power Auger	METL43	668971	6403232	50	0.002	0.04	8.6	61.7	4.95	478	0.25	8.2	5.6
NSW70155	Power Auger	METL43	668869	6403229	46	0.001	0.03	8	41.7	4.88	660	0.59	8.4	3.9
NSW70156	Power Auger	METL43	668772	6403234	45	0.001	0.05	4.5	32.4	3.74	1210	0.2	7.5	6.3
NSW70157	Power Auger	METL43	668675	6403232	44	0.002	0.02	5.9	43.7	3.9	639	0.15	5.3	2.9
NSW70158	Power Auger	METL43	670212	6403233	25	0.001	0.04	5	27.6	2.86	1200	0.46	11.4	2.5
NSW70159	Power Auger	METL43	670308	6403232	25	0.001	0.04	6.4	29.9	3.05	1520	0.41	11.7	3.6
NSW70160	Power Auger	METL43	670408	6403234	20	0.001	0.03	8.7	31.4	3.36	1030	0.4	12.4	3.9
NSW70161	Power Auger	METL43	670508	6403235	20	<0.001	0.02	12.4	23.7	2.97	502	0.28	10.8	3.5
NSW70162	Power Auger	METL43	670611	6403233	33	0.001	0.02	6.9	25.3	3.13	659	0.24	14.7	3.7
NSW70163	Power Auger	METL43	670707	6403026	37	0.002	0.02	6.4	18.5	2.18	226	0.18	9.4	3.6
NSW70164	Power Auger	METL43	670614	6403032	20	0.001	0.03	5.8	23.3	2.91	1460	0.63	13.9	3.1
NSW70165	Power Auger	METL43	670511	6403030	35	0.001	0.04	6.2	28.7	3.1	867	0.51	12.6	4.6
NSW70167	Power Auger	METL43	670410	6403028	30	0.001	0.03	5	19.7	2.61	740	0.6	8.9	2.7
NSW70168	Power Auger	METL43	670315	6402832	34	0.001	0.05	3.4	42.5	3.32	1090	0.68	10.8	2.8
NSW70169	Power Auger	METL43	670411	6402829	30	0.002	0.06	5.5	36.6	4.96	1000	1.39	8.4	5.7
NSW70170	Power Auger	METL43	670509	6402830	28	0.001	0.02	4.7	16.7	2.33	775	0.43	7.7	1.8
NSW70171	Power Auger	METL43	670609	6402828	25	0.001	0.02	5.6	21	2.33	1060	0.5	7.9	2.1
NSW70172	Power Auger	METL43	670110	6403231	75	0.001	0.12	4	29.2	2.85	981	0.41	14.5	3
NSW70173	Power Auger	METL43	670109	6403030	22	<0.001	0.11	3.4	13	2.03	337	0.35	11.2	1.3
NSW70174	Power Auger	METL43	670211	6403032	24	0.001	0.08	2.9	30.7	2.91	1350	0.59	14.1	2.3
NSW70176	Power Auger	METL43	670311	6403037	19	0.001	0.05	3	26.1	2.97	999	0.6	11.3	2.8
NSW70177	Power Auger	METL43	670211	6402828	23	0.001	0.04	3.5	20.8	2.85	624	0.33	13.9	2.4
NSW70178	Power Auger	METL43	670112	6402832	26	0.001	0.1	3	16.2	2.22	863	0.33	13.8	1.7
NSW70179	Power Auger	METL43	670711	6402835	26	0.001	0.05	5.5	23.5	2.9	665	0.52	15.2	2.2
NSW70180	Power Auger	METL43	670813	6402829	30	<0.001	0.03	2.2	11.4	2.06	417	0.37	7.5	1.6
NSW70181	Power Auger	METL43	670911	6402633	19	0.003	0.04	3.1	67.1	4.93	762	0.73	7	3.7
NSW70182	Power Auger	METL43	670811	6402634	30	0.005	0.04	4.3	84.5	5.14	762	0.8	8.8	4.8
NSW70183	Power Auger	METL43	670711	6402627	30	0.004	0.03	3.5	75.3	4.72	1030	0.84	7.8	3.5
NSW70184	Power Auger	METL43	670611	6402633	25	0.002	0.02	25.8	35.7	4.03	529	1.42	6.1	3.9
NSW70185	Power Auger	METL43	670505	6402631	20	0.006	0.03	4.7	226	5.7	1150	2.15	7	4.7
NSW70186	Power Auger	METL43	670411	6402628	25	0.006	0.04	5.3	62.1	5.02	1060	1.76	8.1	5.8
NSW70187	Power Auger	METL43	670312	6402633	30	0.001	0.08	3.1	41.2	2.67	1700	0.56	21.5	2.4

Sample ID	Sample Type	Assay Method	MGA94_55 Easting	MGA94_55 Northing	Depth (cm)	Au ppm	Ag ppm	As ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Pb ppm	Zr ppm
NSW70188	Power Auger	METL43	670208	6402629	20	0.001	0.02	2.9	20.1	2.31	710	0.43	12.6	1.6
NSW70189	Power Auger	METL43	670117	6402633	29	0.001	0.03	2.5	16.4	1.99	732	0.33	12.9	1.1
NSW70190	Power Auger	METL43	670014	6402634	35	<0.001	0.02	1.7	8.3	1.34	288	0.26	8.9	1.1
NSW70191	Power Auger	METL43	669972	6402436	22	<0.001	0.06	2.2	13.9	1.86	870	0.29	12.4	1.4
NSW70192	Power Auger	METL43	670067	6402423	26	0.001	0.04	2.3	10.9	1.66	278	0.29	9.5	2.2
NSW70193	Power Auger	METL43	669871	6402231	44	<0.001	0.03	1.5	13.1	1.48	961	0.19	9.9	1
NSW70194	Power Auger	METL43	669969	6402233	37	<0.001	0.03	2.7	13.5	2.05	866	0.25	12.1	1.7
NSW70195	Power Auger	METL43	670071	6402231	41	<0.001	0.05	2.5	15.7	2.12	594	0.3	11.2	2.3
NSW70196	Power Auger	METL43	670172	6402234	30	0.003	0.17	3.4	76.1	4.25	2890	0.55	45.2	3.6
NSW70197	Power Auger	METL43	670269	6402229	35	0.002	0.22	3.2	55.4	3.53	2320	0.45	40.8	3.4
NSW70198	Power Auger	METL43	670373	6402236	42	0.003	0.11	4.8	58.2	4.1	1250	0.86	24.3	3.1
NSW70199	Power Auger	METL43	670575	6402231	38	0.003	0.06	4.1	50.6	4.43	1140	0.87	9.1	3.5
NSW70201	Power Auger	METL43	670676	6402229	38	0.002	0.07	3.4	35.9	3.37	829	0.7	11.2	2.2
NSW70202	Power Auger	METL43	670770	6402229	37	0.002	0.1	3.9	43	3.84	990	0.92	10.8	1.9
NSW70203	Power Auger	METL43	670871	6402227	20	0.002	0.05	4	40.5	3.93	974	0.71	9.8	1.9
NSW70204	Power Auger	METL43	669771	6402034	18	0.001	0.03	3.6	16.7	2.12	1200	0.35	13	1.8
NSW70205	Power Auger	METL43	669869	6402034	20	0.001	0.04	3.1	20.3	2.4	1610	0.44	14.2	2.2
NSW70206	Power Auger	METL43	669972	6402030	17	0.001	0.05	3.4	14.3	2.26	500	0.35	10.8	1.7
NSW70207	Power Auger	METL43	670077	6402035	34	<0.001	0.06	2.4	9.7	1.47	285	0.29	8	1.3
NSW70208	Power Auger	METL43	670360	6401835	20	0.001	0.07	2.9	26.5	2.24	1120	0.39	16.3	1.9
NSW70209	Power Auger	METL43	670271	6401831	20	0.001	0.28	3.8	79.3	4.07	2560	0.44	58.5	3.8
NSW70210	Power Auger	METL43	670170	6401830	19	0.001	0.21	3.6	70.4	3.61	2380	0.44	55.3	3.1
NSW70211	Power Auger	METL43	670066	6401825	39	0.001	0.05	2.3	13.7	1.67	507	0.28	10.7	1.6
NSW70212	Power Auger	METL43	669968	6401830	32	0.001	0.03	3.8	15.7	2.12	991	0.27	15.9	1.6
NSW70213	Power Auger	METL43	669873	6401833	40	<0.001	0.02	4.8	13.4	2.08	526	0.27	12.5	1.2
NSW70214	Power Auger	METL43	669773	6401830	25	<0.001	0.02	4.1	16.2	2.28	854	0.23	14.5	1
NSW70215	Power Auger	METL43	669766	6401631	20	0.001	0.02	17.4	17.1	2.96	395	0.27	16	2.1
NSW70216	Power Auger	METL43	669871	6401629	40	0.001	0.02	3.5	15	2.05	1140	0.26	13.6	1.7
NSW70217	Power Auger	METL43	669969	6401627	43	<0.001	0.01	1.7	5.8	1.16	218	0.2	6.1	0.8
NSW70218	Power Auger	METL43	670069	6401635	25	0.001	0.07	3.7	34.5	2.88	1280	0.42	13.5	2.9
NSW70219	Power Auger	METL43	670172	6401629	25	0.001	0.07	3.8	65.1	3.46	1820	0.34	21.3	2.5
NSW70220	Power Auger	METL43	670277	6401628	35	0.002	0.09	5	62.6	3.15	3110	0.49	50	3.8
NSW70221	Power Auger	METL43	670117	6401439	38	0.001	0.05	6	38.4	3.57	1060	0.38	7.6	2.5
NSW70222	Power Auger	METL43	670018	6401440	20	0.001	0.06	4.6	37.9	2.96	1780	0.42	10.5	3
NSW70223	Power Auger	METL43	669919	6401436	26	<0.001	0.02	2.7	12.1	2.11	600	0.26	10.4	1.4
NSW70224	Power Auger	METL43	669817	6401442	32	<0.001	0.02	2.8	13.6	2.31	731	0.25	11.5	1.1
NSW70226	Power Auger	METL43	669720	6401440	40	<0.001	0.01	9.9	18.2	3.32	823	0.25	16.1	1.5
NSW70227	Power Auger	METL43	670229	6401240	23	0.001	0.05	9.4	89.3	4.18	2710	0.39	7.4	3.3
NSW70228	Power Auger	METL43	670333	6401242	30	0.001	0.03	5	56.4	5	1540	0.71	6.2	1.7
NSW70229	Power Auger	METL43	670227	6401043	30	0.001	0.06	5.5	168.5	4.72	2180	0.26	6.4	3.5
NSW70230	Power Auger	METL43	670327	6401043	28	0.001	0.09	6.7	212	4.94	2350	0.29	7.4	5.1
NSW70231	Power Auger	METL43	670431	6401042	20	0.001	0.04	6.5	41	3.25	1260	0.31	6.5	3.7
NSW70232	Power Auger	METL43	670525	6401041	26	0.001	0.05	9.1	34.1	3.69	2660	0.5	8	3.8
NSW70234	Power Auger	METL43	670630	6401050	20	0.001	0.02	9.4	60.8	5.09	1300	0.39	5.7	2
NSW70235	Power Auger	METL43	670419	6401239	22	<0.001	0.05	8.1	55.9	5.1	1870	0.6	4.6	1.3
NSW70236	Power Auger	METL43	670538	6401233	30	0.001	0.06	7.9	44	3.72	1860	0.48	6	2.3
NSW70237	Power Auger	METL43	670627	6401240	22	0.003	0.26	4.8	127.5	5.53	3490	0.59	32.6	4
NSW70238	Power Auger	METL43	670731	6401238	36	0.001	0.06	3.1	21.8	4.14	1410	0.41	11.5	2.2
NSW70239	Power Auger	METL43	670724	6401042	35	0.001	0.1	7.9	69.4	4.94	1770	0.45	6.7	2.5
NSW70240	Power Auger	METL43	670750	6400635	27	0.004	0.16	21.8	305	6.36	1490	0.55	6.5	4.4
NSW70241	Power Auger	METL43	670664	6400639	25	0.002	0.13	5.1	427	6.74	1790	0.43	4.8	4.5
NSW70242	Power Auger	METL43	670148	6400640	22	0.001	0.06	9.5	164.5	4.94	1720	0.35	6.7	4.1
NSW70243	Power Auger	METL43	670248	6400637	20	0.002	0.06	9.3	114.5	4.94	1150	0.45	7.1	5.1
NSW70244	Power Auger	METL43	670341	6400638	17	0.001	0.07	5.7	132.5	4.28	2180	0.34	8	4.6
NSW70245	Power Auger	METL43	670449	6400638	27	0.003	0.08	8.6	165.5	5.47	1060	0.34	7.3	4.8
NSW70246	Power Auger	METL43	670517	6400435	17	0.001	0.06	5.7	153	3.74	1720	0.4	5.1	3
NSW70247	Power Auger	METL43	670420	6400438	20	0.002	0.05	9.7	123	5.15	1380	0.34	5.4	2.8
NSW70248	Power Auger	METL43	670314	6400432	17	0.001	0.04	6.2	157.5	5.29	1130	0.29	4.7	3.4
NSW70249	Power Auger	METL43	670213	6400430	15	0.001	0.05	8.5	86	3.89	1430	0.29	5.6	2.7
NSW70251	Power Auger	METL43	670114	6400431	20	0.001	0.08	7.3	55.9	4.38	871	0.41	7.4	4
NSW70252	Power Auger	METL43	670012	6400245	26	<0.001	0.03	5.9	17.5	2.06	1010	0.29	12.2	1.5
NSW70253	Power Auger	METL43	670116	6400244	23	0.001	0.06	7.3	73.2	4	1450	0.35	8.3	3.8
NSW70254	Power Auger	METL43	670210	6400249	46	0.002	0.07	8.3	81.1	4.3	638	0.5	9.4	5.2
NSW70255	Power Auger	METL43	670256	6400038	34	0.002	0.06	6.3	43	3.33	2670	0.49	14.9	3.8
NSW70256	Power Auger	METL43	670154	6400042	21	0.001	0.06	5.4	39.1	2.78	2130	0.43	12.2	2.6
NSW70257	Power Auger	METL43	670062	6400038	21	0.001	0.08	4.9	48.9	3.1	2090	0.36	10.6	2.8
NSW70258	Power Auger	METL43	669973	6399841	40	0.001	0.04	8.8	14.9	2.45	523	0.36	18.5	2.6
NSW70259	Power Auger	METL43	670087	6399844	22	<0.001	0.02	5.7	10.5	2.07	373	0.27	12.7	1.7
NSW70260	Power Auger	METL43	670173	6399840	26	<0.001	0.01	3.4	7.4	1.53	285	0.22	10.1	0.9

Sample ID	Sample Type	Assay Method	MGA94_55 Easting	MGA94_55 Northing	Depth (cm)	Au ppm	Ag ppm	As ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Pb ppm	Zr ppm
NSW70261	Power Auger	METL43	670275	6399848	42	<0.001	0.01	2.2	5.4	1.07	189	0.22	6.5	1
NSW70262	Power Auger	METL43	670371	6399838	37	0.001	0.06	18.3	37.3	2.8	2080	0.31	14.5	3
NSW70263	Power Auger	METL43	670470	6399841	27	0.001	0.07	10	73.8	4.02	895	0.45	9.5	4.4
NSW70264	Power Auger	METL43	670572	6399838	33	0.001	0.06	8.4	103.5	4.55	1930	0.37	8.7	5.2
NSW70265	Power Auger	METL43	670663	6400036	30	0.003	0.03	6.4	98.4	5.55	1550	0.33	7.7	2.5
NSW70267	Power Auger	METL43	670558	6400040	50	0.002	0.08	12.2	109.5	4.77	1090	0.37	8.8	5.2
NSW70268	Power Auger	METL43	670460	6400037	26	0.001	0.09	6.5	55.1	3.62	1210	0.43	9.3	3.2
NSW70269	Power Auger	METL43	670359	6400038	23	0.001	0.06	4	32.5	2.73	607	0.35	9.3	1.5
NSW70270	Power Auger	METL43	670306	6400245	25	0.002	0.13	8.9	82.9	4.31	1600	0.45	9.7	4.8
NSW70271	Power Auger	METL43	670411	6400239	27	0.001	0.11	9.1	89.5	4.02	1820	0.35	8.2	5.2
NSW70272	Power Auger	METL43	670509	6400237	28	0.002	0.06	10.3	164	4.69	2020	0.47	7.5	4.7
NSW70273	Power Auger	METL43	670609	6400239	28	0.002	0.04	7.6	110	5.42	1800	0.37	5.9	2.5
NSW70274	Power Auger	METL43	670711	6400236	34	0.003	0.05	11.9	46.6	4.98	1210	0.4	7.5	4.3
NSW70276	Power Auger	METL43	670810	6400240	35	<0.001	0.02	7.9	24.2	3.66	1390	0.25	16.8	1.7
NSW70277	Power Auger	METL43	670919	6400246	31	<0.001	0.01	3	16.6	2.77	884	0.15	12.4	1.4
NSW70278	Power Auger	METL43	671009	6400240	26	<0.001	0.02	4.3	35.2	3.35	948	0.23	22.7	6.2
NSW70279	Power Auger	METL43	670961	6400038	29	<0.001	0.02	6.7	19.1	2.82	656	0.16	13.3	1.6
NSW70280	Power Auger	METL43	670856	6400040	23	<0.001	0.02	7.5	10.7	2.1	769	0.17	20.8	1.1
NSW70281	Power Auger	METL43	670764	6400042	28	<0.001	0.03	7.7	23.2	2.3	600	0.41	48.9	1.9
NSW70282	Power Auger	METL43	670685	6399843	30	<0.001	0.03	14	16.7	2.65	380	0.73	30.9	1.9
NSW70283	Power Auger	METL43	670770	6399840	27	0.001	0.03	7.3	12.9	1.94	956	0.19	15.5	2.4
NSW70284	Power Auger	METL43	670871	6399840	32	<0.001	0.03	4.6	11.7	1.76	965	0.13	12.3	2.3
NSW70285	Power Auger	METL43	670974	6399839	29	<0.001	0.02	4.1	7.5	1.56	563	0.19	11.4	0.7
NSW70286	Power Auger	METL43	670548	6400644	25	0.001	0.07	5.1	184	5.37	1400	0.41	6	3.1
NSW70287	Power Auger	METL43	670612	6400437	22	0.002	0.02	14.4	79.6	5.4	954	0.32	5.1	2.5
NSW70288	Power Auger	METL43	670725	6400444	10	0.003	0.02	5.3	43	6.64	1190	0.37	9	4.9
NSW70289	Power Auger	METL43	670810	6400432	41	0.002	0.04	6.7	69.5	4.49	1420	0.92	14.6	2.7
NSW70290	Power Auger	METL43	670911	6400435	33	0.001	0.03	11	28.4	3.1	1230	0.82	31.4	2.2
NSW70291	Power Auger	METL43	670952	6400642	22	0.001	0.08	9.5	111	4.24	2290	0.76	11.9	3.8
NSW70292	Power Auger	METL43	670844	6400636	35	0.001	0.3	6.6	18.8	3.55	1470	2.27	16.3	5.2
NSW70293	Power Auger	METL43	670826	6401041	24	0.001	0.05	11.2	98.9	5.27	1750	1.36	6	2.7
NSW70294	Power Auger	METL43	670929	6401041	27	0.001	0.06	5.7	67.2	4.31	2170	0.38	6.2	3.1
NSW70295	Power Auger	METL43	671025	6401041	36	<0.001	0.05	4.6	39.8	3.08	2130	0.39	9	1.8
NSW70296	Power Auger	METL43	670795	6401830	23	0.001	0.05	7.4	47.8	5.93	1950	1.13	7.8	2.1
NSW70297	Power Auger	METL43	669662	6399434	23	0.001	0.04	5	12.5	2.28	328	0.41	10.2	1.9
NSW70298	Power Auger	METL43	669463	6399439	20	0.003	0.05	11.8	15.4	2.82	712	0.43	20.9	2.9
NSW70299	Power Auger	METL43	669263	6399425	15	0.001	0.05	8.7	22.5	2.16	2430	0.56	12.3	1.2
NSW70301	Power Auger	METL43	669064	6399433	20	0.001	0.04	8.2	18.6	2.56	1870	0.54	15.4	1.6
NSW70302	Power Auger	METL43	668757	6399233	20	0.001	0.04	6.5	29.7	2.18	1600	0.42	8.8	2.1
NSW70303	Power Auger	METL43	668957	6399240	15	0.001	0.04	9.4	23.1	2.97	2260	0.52	12.8	3.3
NSW70304	Power Auger	METL43	669157	6399242	20	0.003	0.04	13	17.9	2.78	1030	0.6	16.9	1.9
NSW70305	Power Auger	METL43	669359	6399238	45	0.003	0.09	21.9	15.8	2	368	0.6	10	<0.5
NSW70306	Power Auger	METL43	669554	6399219	29	0.004	0.07	13.3	14.2	1.71	1040	0.33	11.6	0.9
NSW70307	Power Auger	METL43	669663	6399033	44	<0.001	0.03	8.6	10.2	1.76	385	0.28	13.6	1.5
NSW70308	Power Auger	METL43	669754	6398842	44	0.003	0.91	33.5	23.8	2.98	1320	0.43	228	2.6
NSW70309	Power Auger	METL43	669656	6398641	40	<0.001	0.03	11.2	6	1.65	106	0.38	9.3	0.5
NSW70310	Power Auger	METL43	669528	6398435	38	0.001	0.05	3.8	7.4	1.5	604	0.33	9.1	1
NSW70311	Power Auger	METL43	669562	6398847	25	0.001	0.06	8.3	12.1	2.41	91	0.43	9	1.5
NSW70312	Power Auger	METL43	669465	6399030	28	<0.001	0.1	5.1	13	1.42	397	0.44	5.5	0.8
NSW70313	Power Auger	METL43	669458	6398640	45	0.001	0.1	12.8	11.3	1.56	149	0.56	7.8	<0.5
NSW70314	Power Auger	METL43	669261	6398638	25	0.003	0.09	11.6	23.1	2.39	1540	0.49	20.8	2.1
NSW70315	Power Auger	METL43	669316	6398468	38	0.001	0.06	6.7	7.9	0.98	54	0.6	6.4	0.5
NSW70316	Power Auger	METL43	669061	6398642	33	0.001	0.03	12.9	7.6	1.58	636	0.47	10.1	1.1
NSW70317	Power Auger	METL43	669155	6398836	28	0.001	0.05	24.3	12.2	1.12	375	0.42	8.3	<0.5
NSW70318	Power Auger	METL43	669266	6399038	35	0.002	0.07	21.2	16	1.5	293	0.76	12.8	<0.5
NSW70319	Power Auger	METL43	669358	6398841	29	<0.001	0.04	6.5	8.2	1.34	577	0.34	12.5	1.2
NSW70320	Power Auger	METL43	668576	6403027	28	0.002	0.02	7.1	28.9	5.3	704	0.35	5.9	4
NSW70321	Power Auger	METL43	668771	6403030	40	0.001	0.03	3.6	70.6	4.86	1150	0.37	5.9	4
NSW70322	Power Auger	METL43	668676	6402828	34	0.003	0.04	5.8	102	5.44	923	0.32	5.4	4.3
NSW70323	Power Auger	METL43	668574	6402828	45	0.002	0.04	4.3	69.1	4.99	1310	0.31	8	6.1
NSW70324	Power Auger	METL43	668472	6402832	47	0.001	0.03	4.8	23.6	4.42	1190	0.2	6.8	4.1
NSW70326	Power Auger	METL43	668972	6403031	29	<0.001	0.03	5.1	44.7	4.32	1020	0.42	7.5	3.2
NSW70327	Power Auger	METL43	668872	6402831	40	0.001	0.03	2.5	56.3	4.79	1500	0.39	5.8	3.3
NSW70328	Power Auger	METL43	669069	6402831	35	0.004	0.04	5.5	182	5.68	1160	0.44	5.9	3.3
NSW70329	Power Auger	METL43	669271	6402827	34	0.001	0.03	3.2	79.3	3.91	1350	0.54	7	2.2
NSW70330	Power Auger	METL43	669477	6402828	34	0.001	0.09	4.3	10.6	2.08	900	2.71	16.4	23
NSW70331	Power Auger	METL43	669575	6402634	36	<0.001	0.02	10.5	26.6	3.09	818	1.43	13.8	1.7
NSW70332	Power Auger	METL43	669673	6402429	28	<0.001	0.01	5.4	15.3	2.59	850	0.36	12.8	1.3
NSW70334	Power Auger	METL43	669375	6402631	30	0.003	0.02	6.3	105	4.96	1040	0.27	4.8	2.1



Sample ID	Sample Type	Assay Method	MGA94_55 Easting	MGA94_55 Northing	Depth (cm)	Au ppm	Ag ppm	As ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Pb ppm	Zr ppm
NSW70335	Power Auger	METL43	669176	6402630	20	0.003	0.03	4.5	142.5	6.28	1080	0.31	5.5	3
NSW70336	Power Auger	METL43	668946	6402648	43	0.001	0.05	6.4	77	4.67	1100	0.56	8.2	4.3
NSW70337	Power Auger	METL43	668772	6402629	40	0.001	0.05	3.3	73.7	3.69	1050	0.27	7	3.9
NSW70338	Power Auger	METL43	668573	6402631	45	0.002	0.03	4.1	71.7	4.99	1140	0.22	6.6	5
NSW70339	Power Auger	METL43	668372	6402628	46	0.002	0.02	3.7	24.1	3.94	818	0.19	6.8	4
NSW70340	Power Auger	METL43	668274	6402434	40	0.002	0.02	3.8	24.5	3.82	841	0.12	7.1	5
NSW70341	Power Auger	METL43	668471	6402430	50	0.002	0.03	4.3	71.5	4.72	725	0.25	7.1	3.6
NSW70342	Power Auger	METL43	668673	6402435	44	0.001	0.06	3.3	49.3	4.02	602	0.34	6.3	2
NSW70343	Power Auger	METL43	668872	6402433	30	0.001	0.04	3.3	55.8	4.69	1320	0.27	6.7	3.9
NSW70344	Power Auger	METL43	669064	6402430	31	0.001	0.02	4.6	67.8	5.35	698	0.26	5.6	3.6
NSW70345	Power Auger	METL43	669271	6402433	34	0.002	0.03	5.7	108	5.37	795	0.25	4.7	4.2
NSW70346	Power Auger	METL43	669376	6402233	24	<0.001	0.02	6.1	101	5.61	689	0.27	9.6	2.7
NSW70347	Power Auger	METL43	669169	6402231	22	0.001	0.01	5	70.5	5.85	743	0.34	4.3	2.7
NSW70348	Power Auger	METL43	669272	6402029	25	0.001	0.02	7.8	58.5	4.02	1020	0.33	8.6	2.8
NSW70349	Power Auger	METL43	669473	6402030	24	0.001	0.01	3	16.1	2.44	540	0.25	15.4	1.3
NSW70351	Power Auger	METL43	669573	6402230	37	<0.001	0.01	4.5	17.4	2.71	614	0.29	12.4	1.4
NSW70352	Power Auger	METL43	669475	6402431	32	<0.001	0.01	35.7	28.6	3.9	520	0.37	19.9	2
NSW70353	Power Auger	METL43	669572	6401832	35	<0.001	0.01	11.9	16.5	2.74	778	0.33	12.6	1.1
NSW70354	Power Auger	METL43	669666	6401637	33	<0.001	0.01	8.9	16.9	2.64	1140	0.39	20.4	1.2
NSW70355	Power Auger	METL43	669477	6401629	30	<0.001	0.02	2.7	9.6	1.68	363	0.25	8.1	1.3
NSW70356	Power Auger	METL43	669378	6401831	20	<0.001	0.06	4.9	19.3	2.39	1280	0.43	12.3	2.4
NSW70357	Power Auger	METL43	669277	6401635	35	0.001	0.06	6.9	28.2	3.25	1720	0.5	12.8	2.7
NSW70358	Power Auger	METL43	669074	6401640	18	<0.001	0.02	6.8	33.5	4.08	1760	0.65	7	3.1
NSW70359	Power Auger	METL43	669170	6401828	30	0.002	0.1	8.3	28.1	3.5	1700	0.5	14.4	4.5
NSW70360	Power Auger	METL43	669076	6402031	45	0.001	0.01	5.4	49.6	3.7	874	0.35	8.9	3
NSW70361	Power Auger	METL43	668874	6402035	46	0.001	0.05	5.9	57.8	3.68	925	0.4	8.8	3
NSW70362	Power Auger	METL43	668973	6401828	35	0.001	0.03	5.1	22.2	2.53	802	0.33	11.1	2
NSW70363	Power Auger	METL43	668772	6401831	30	0.001	0.05	5.1	31.6	3.4	1350	0.53	8.4	3.2
NSW70364	Power Auger	METL43	668671	6401633	26	<0.001	0.02	5.8	49.5	3.97	1810	0.46	6.1	1.6
NSW70365	Power Auger	METL43	668874	6401631	19	<0.001	0.06	5.4	35.6	3.98	2040	0.64	7.1	2.9
NSW70367	Power Auger	METL43	668670	6402043	19	0.001	0.05	5	30.4	2.9	945	0.53	10.7	2.1
NSW70368	Power Auger	METL43	668472	6401629	32	0.001	0.02	11.5	42.9	4.52	982	0.41	4.2	4.4
NSW70369	Power Auger	METL43	668572	6401836	26	0.001	0.02	6.8	46.1	4.65	1100	0.58	4.8	2.2
NSW70370	Power Auger	METL43	668378	6401832	21	0.001	0.03	13.8	90.2	4.46	1590	0.65	10.1	3.5
NSW70371	Power Auger	METL43	668274	6401642	23	0.001	0.02	8.6	38.4	4.55	973	0.64	3.8	3.8
NSW70372	Power Auger	METL43	668080	6401677	44	<0.001	0.02	6.4	20.7	3.52	1990	0.48	8.1	1.8
NSW70373	Power Auger	METL43	668172	6401826	26	0.001	0.02	5.5	31.6	4.55	1260	0.48	5.1	3.6
NSW70374	Power Auger	METL43	667975	6401828	29	<0.001	0.02	5.1	17.7	2.85	936	0.5	9.6	0.8
NSW70376	Power Auger	METL43	668074	6402028	36	0.002	0.04	4.3	22.6	2.51	506	0.2	7	2.8
NSW70377	Power Auger	METL43	668282	6402026	21	0.001	0.04	3.9	35.1	3.79	966	0.33	5.9	2.8
NSW70378	Power Auger	METL43	668470	6402032	30	<0.001	0.04	2.9	28.3	3.17	856	0.37	6.6	1.9
NSW70379	Power Auger	METL43	668574	6402238	35	0.001	0.13	4.5	42.6	3.5	560	0.45	7.2	2.5
NSW70380	Power Auger	METL43	668773	6402229	38	0.001	0.05	3.2	54.9	3.52	1470	0.32	7.7	3
NSW70381	Power Auger	METL43	668972	6402228	30	<0.001	0.02	4.8	28.1	4.49	1110	0.41	5.9	2.7
NSW70382	Power Auger	METL43	668270	6402830	40	0.002	0.01	4.6	16.7	3.94	705	0.13	4.9	3.5
NSW70383	Power Auger	METL43	668078	6402830	44	0.001	0.01	2	23.9	3.99	916	0.24	4.3	2.6
NSW70384	Power Auger	METL43	667876	6402836	42	0.001	0.01	3.6	20.8	3.58	817	0.16	4	2.7
NSW70385	Power Auger	METL43	667670	6402831	23	<0.001	0.01	7.6	32	5	1690	0.36	10.3	3.3
NSW70386	Power Auger	METL43	669062	6399037	26	0.001	0.11	21.1	52.7	2.75	1420	0.43	12.3	2.5
NSW70387	Power Auger	METL43	668947	6398827	21	0.001	0.04	8.9	20.9	1.93	1790	0.47	11.6	2.1
NSW70388	Power Auger	METL43	668753	6398838	22	0.002	0.19	24	47.9	3.72	4500	1.38	13.8	7.6
NSW70389	Power Auger	METL43	668868	6399031	20	0.001	0.1	8.9	56.1	2.65	2260	0.45	10.2	2.6
NSW70390	Power Auger	METL43	670832	6401227	28	0.001	0.05	5.6	31.9	4.31	2290	0.46	7	3
NSW70391	Power Auger	METL43	670932	6401236	30	0.001	0.06	5.8	37.8	3.38	1960	0.31	9	2.4
NSW70392	Power Auger	METL43	671029	6401243	33	0.001	0.06	7.8	37	3.94	962	0.43	10.6	3.5
NSW70393	Power Auger	METL43	671128	6401243	29	0.001	0.07	6.6	39.6	3.71	1380	0.4	10.3	2.9
NSW70394	Power Auger	METL43	671230	6401242	36	<0.001	0.07	5	40.5	2.99	1980	0.35	9.4	2
NSW70395	Power Auger	METL43	671198	6401829	37	<0.001	0.05	4.6	29.1	3.22	2160	0.34	19.9	1.9
NSW70396	Power Auger	METL43	671097	6401837	36	0.003	0.05	4.6	22.6	2.92	1880	0.28	21.6	1.5
NSW70397	Power Auger	METL43	670991	6401831	30	0.001	0.03	4.5	40.2	3.98	1610	0.66	14.5	2.9
NSW70398	Power Auger	METL43	670895	6401838	32	0.001	0.06	6.1	62.8	5.6	2570	0.98	15.3	4.1
NSW70399	Power Auger	METL43	670970	6402223	30	0.001	0.04	4.9	35.8	4.1	960	0.72	11	2.2
NSW70401	Power Auger	METL43	671073	6402229	21	0.001	0.06	5	37.8	3.93	1340	0.7	12.5	2.5
NSW70402	Power Auger	METL43	671172	6402234	20	0.001	0.05	4.4	28.7	3.27	1200	0.56	14.4	2.8
NSW70403	Power Auger	METL43	668663	6399029	12	0.002	0.1	31.9	59.4	3.89	4580	1	12.7	6.6
NSW70404	Power Auger	METL43	668544	6398835	20	0.003	0.06	29.9	53.4	4.11	3430	1.68	13.4	18.2
NSW70405	Power Auger	METL43	668655	6398643	15	0.002	0.04	32.3	43.9	4.73	3770	1.98	13.6	43.7
NSW70406	Power Auger	METL43	668870	6398650	12	0.001	0.08	7.3	19.7	1.91	2970	0.63	11.2	2.8
NSW70407	Power Auger	METL43	669123	6398431	20	0.002	0.07	7	17.4	1.81	1210	0.59	14.6	0.9



Sample ID	Sample Type	Assay Method	MGA94_55 Easting	MGA94_55 Northing	Depth (cm)	Au ppm	Ag ppm	As ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Pb ppm	Zr ppm
NSW70408	Power Auger	METL43	668922	6398429	30	0.001	0.06	13.3	42.2	2.92	1970	0.97	13.2	3.2
NSW70409	Power Auger	METL43	668722	6398431	28	0.001	0.05	5.9	14.9	1.79	902	0.4	9.2	1.6
NSW70410	Power Auger	METL43	668522	6398430	18	0.001	0.04	12.8	32.5	2.83	1840	0.7	13.2	5
NSW70099	Power Auger	MSM41	668669	6403434	45	<0.02	0.05	6.2	73.1	5.28	1000	0.35	6.3	5
NSW70101	Power Auger	MSM41	668674	6403629	55	<0.02	0.04	4.7	32.5	4.89	741	0.34	7	5.6
NSW70102	Power Auger	MSM41	668571	6403631	40	<0.02	0.03	5.4	42	5.02	751	0.51	6.6	5.4
NSW70103	Power Auger	MSM41	668470	6403632	36	<0.02	0.03	6.5	37.7	5.19	772	0.34	6.3	5.5
NSW70105	Power Auger	MSM41	668473	6403833	40	<0.02	0.05	6	55.6	4.22	953	0.31	7.2	6
NSW70106	Power Auger	MSM41	668569	6403831	42	<0.02	0.04	5.9	43.2	4.16	737	0.22	6.8	5.7
NSW70108	Power Auger	MSM41	668770	6403832	46	<0.02	0.03	8.2	50.7	4.21	458	0.18	7.8	4.7
NSW70109	Power Auger	MSM41	668874	6404028	60	<0.02	0.03	11.7	67.8	4.67	840	0.21	6.1	5.2
NSW70110	Power Auger	MSM41	668770	6404031	50	<0.02	0.04	10.4	58.3	4.66	662	0.21	8.1	6
NSW70111	Power Auger	MSM41	668673	6404030	60	<0.02	0.09	4.8	38.1	3.05	953	0.2	8.6	4
NSW70130	Power Auger	MSM41	669479	6403440	41	<0.02	0.04	8.8	43.7	4.43	641	0.57	8.8	7.1
NSW70148	Power Auger	MSM41	668768	6403430	55	<0.02	0.05	7.6	69.5	4.56	852	0.17	6.4	5.2

The exploration results contained within the above company release are in accordance with the guidelines of *The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the JORC Code, 2012).

## SECTION 1 SAMPLING TECHNIQUES AND DATA– MAURETANIA PROJECT AREA – RC DRILLING

Criteria	JORC Code explanation	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>The <i>Mauretania</i> holes were sampled using Reverse Circulation drilling techniques (RC). Five holes (MTRC023-MTRC027) were drilled for a total of 660m and are reported in this current release.</li> <li>Holes were angled to optimally test the interpreted shear zones/geophysical model). Four drill holes have been drilled at an angle of 70 degrees.</li> <li>One drill hole MTRC023 was drilled as a vertical hole to test vertical continuity of ironstone body and to allow collection of a 100kg bulk metallurgical sample.</li> <li>RC chips are riffle split on site to obtain 3m composite samples from which 2.5 – 3.0kg was pulverised (at Genalysis in Alice Springs) to produce a 25g charge for analysis by Aqua Regia digestion / ICP-MS/OES (Au, Ag, Bi, Cu, Fe, Pb, Zn, Mo, Co, Se, Sb).</li> <li>Selected 1m samples were individually assayed.</li> <li>Individual 1m samples are pulverised to produce a 25g charge for analysis by four acid digest with an ICP/OES (Cu, Fe, Pb, Zn) ICP/MS (Ag, Bi, Mo, Se, Sb, Co) &amp; Fire Assay/AAS (Au) finish.</li> <li>RC samples were collected via a fixed cone splitter that is mounted to the drill rig under a 1200cfm cyclone.</li> <li>The fixed cone splitter has three sample chutes for comparative sampling, 2 chutes are synchronised for comparative samples with 1 chute independently set for the geologists field samples.</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>RC drilling accounts for 100% of the current reported drilling at <i>Mauretania Exploration Target</i> and comprises, 3m riffle split, composite RC samples and selected 1m riffle split RC intervals.</li> <li>RC drilling utilizes a 4.5 inch, face sampling bit.</li> <li>Drill hole depths range from 108m to 192m.</li> <li>RC recoveries are logged and recorded in the database.</li> <li>Overall RC recoveries are &gt;90% for the Mauretania Project, and there are no significant sample recovery problems.</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>RC samples are visually checked for recovery, moisture and contamination.</li> <li>Any issues or concerns are discussed at the time with the drilling contractor and recorded in our database.</li> <li>Recoveries are considered good for the reported RC drilling.</li> <li>The cyclone and splitter are routinely cleaned with more attention spent during the drilling of damp or wet samples.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>It was rare to experience more than 2 sequential “wet samples” during this program.</li> <li>Emmerson do not consider that there is evidence for sample bias that may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Standard operating procedures are employed by Emmerson for logging RC samples.</li> <li>All RC samples are lithologically logged in one metre intervals.</li> <li>Drill hole logging data is directly entered into field tough book computers via Logchief software. Look up codes and real-time validations reduce the risk of data entry mistakes.</li> <li>Field computer data (the drill log) are uploaded to Emmerson's relational database whereby the data undergoes a further set of validations checks prior to final upload.</li> <li>Standardised codes are used for lithology, oxidation, alteration, veining and presence of sulphide minerals.</li> <li>Structural logging of the RC drill samples was not possible.</li> <li>Magnetic susceptibility data for all individual 1m RC samples are collected as per ERM procedure.</li> <li>All RC chips are stored in trays in 1m intervals.</li> <li>Representative RC chips and diamond core is available to all geologists (a physical reference set) to ensure consistency of logging.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Standard sampling operating procedures have used by ERM at Mauretania Project area drilling for RC samples.</li> <li>The sample preparation of RC samples for follows industry best practice in sample preparation involving oven drying, coarse crushing of the sample down to ~10mm followed by pulverisation of the entire sample (total prep) using LM5 grinding mills to a grind size of 85% passing 75 micron.</li> <li>Pulverised material not required by the laboratory (pulp) including duplicate samples are returned to ERM, logged into a database and stored undercover at the Tennant Creek office.</li> <li>Coarse rejects are disposed of by the Laboratory.</li> <li>RC samples were collected on the rig using cone (from the drill rig) and then riffle split by the field assistants if dry to obtain a 3 kg sample.</li> <li>If samples are wet, they are left to dry before being riffle split.</li> </ul>
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Field QC procedures involve the use of certified reference material (CRM's) as assay standards, and ERM include blanks, duplicates.</li> <li>QAQC protocols consist of the insertion of blanks at a rate of one in every 40 samples, insertion of standards (CRM's) at a rate of approximately one in every 20 samples and duplicate field sample analysis of at a rate of approximately one in every 20 samples.</li> </ul>

Criteria	JORC Code explanation	Commentary
	checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	<ul style="list-style-type: none"> <li>A selection of CRM's is available to the geologists and insertion points are predetermined prior to drilling.</li> <li>The geologist has the ability to override this predetermined insertion based on visual and geological characteristics of the current drill hole.</li> <li>Insertion of assay blanks is increased when visual mineralisation is encountered and consists of insertion above and below the mineralised zone.</li> <li>Samples typically weigh less than 3kg to ensure total preparation at the pulverisation stage.</li> <li>RC field duplicates are collected on the 3m composites samples, using a riffle splitter.</li> <li>Individual 1m RC sample duplicates are also collected using the same technique.</li> <li>Laboratory checks include CRM's and/or in-house controls, blanks, splits, and replicates that are analysed with each batch of samples submitted. These QC results are reported along with sample values in the final analytical report. Barren quartz washes are also routinely used in zones of mineralisation.</li> <li>QAQC data is uploaded with the sample values into ERM's database through an external database administrator (contractor).</li> <li>A QAQC database is created as a separate table in the database and includes all field and internal laboratory QC samples.</li> <li>QC data is reported through a series of control charts for analysis and interpretation by the Exploration Manager or his/her delegate.</li> <li>The sample sizes are considered to be appropriate to correctly represent the mineralisation at the <i>Mauretania Exploration Target</i> based on the style of mineralisation (Iron oxide copper gold), the thickness and mineral consistency of the intersection(s). <ul style="list-style-type: none"> <li>Emmerson's sampling methodology (SOP) is available at any time for peer review.</li> </ul> </li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>The Exploration Manager of ERM has visually verified significant intersections in RC samples.</li> <li>The geochemical data is managed by ERM using an external database administrator and secured through a relational database (Datashed).</li> <li>Laboratory data is received in digital format and uploaded directly to the database.</li> <li>Original data sheets and files are retained and are used to validate the contents of the database against the original logging.</li> <li>No twin drill holes have been completed at the <i>Mauretania Exploration Target</i>.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>RC Drill hole collars were surveyed (set out and pick up) using a differential GPS and by a suitably qualified company employee.</li> <li>Collar survey accuracy is +/- 30 mm for easting, northing and elevation coordinates.</li> <li>Co-ordinate system GDA_94, Zone 53.</li> <li>Topographic measurements are collected from the</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>final survey drill hole pick up.</p> <ul style="list-style-type: none"> <li>Downhole survey measurements were collected at a minimum of every 30m using an CORE EX<sup>®</sup> electronic single shot camera for RC.</li> <li>This survey camera equipment is quoted by the manufacturer to have an accuracy of <ul style="list-style-type: none"> <li>Azimuth <math>0-360^{\circ} \pm 0.5^{\circ}</math></li> <li>Dip <math>\pm 90^{\circ} \pm 0.2^{\circ}</math></li> </ul> </li> <li>If the measurement is considered to be affected by magnetic material (ironstone) then an average from the last non affected and the next non-affected measurement is used.</li> <li>There were no down hole survey issues during this drill program.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Drill density within the <i>Mauretania Exploration Target</i> area is 50m x 50m. On the discovery line containing MTRC004,005,006,023-025 spacing is 10m x 10m.</li> <li>RAB drill hole density is 20m x 20m.</li> <li>There is insufficient drill / assay data to establish the geological and grade continuity at this stage of drilling.</li> <li>No Mineral Resource Estimation can be applied to these Exploration Results.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration drilling is perpendicular to the interpreted strike of the Mauretania target.</li> <li>No orientation based sampling bias has been identified in the data at this point.</li> <li>Results at this stage suggest that the geological and geophysical targets being tested have been drilled in the correct orientation.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Samples are selected, bagged and labelled by site geologist.</li> <li>They are placed in sealed polyweave bags and then larger bulka bags for transport to the assay laboratory.</li> <li>The assay laboratory confirms that all samples have been received and that no damage has occurred during transport.</li> <li>Tracking is available through the internet and designed by the Laboratory for ERM to track the progress of batches of samples.</li> <li>Sample receipt is logged into ERM's sample ledger.</li> <li>While samples are being processed in the Lab they are considered to be secure.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>An internal review of the sampling techniques, QAQC protocols and data collection was conducted by Emmerson in November 2013.</li> <li>Optiro (2013) also reviewed the standard operating procedures for RC and diamond core sampling used and discussion with the site geologist confirmed that these were understood and being followed.</li> </ul>



Section 1.2 Reporting of Exploration Results - MAURETANIA PROJECT AREA – RC DRILLING  
*(Criteria listed in the proceeding section may apply to this section)*

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li><i>The Mauretania Exploration Target</i> is located within Exploration Licence 28761.</li> <li><i>The Mauretania target</i> is located on Tennant Station Perpetual Pastoral Lease.</li> <li>Exploration Licence 28761 is 100% held by Emmerson Resources Limited.</li> <li>Land Access is secured through Emmerson's Indigenous Land Use Agreement (ILUA) with the CLC which is in good standing.</li> <li>Land Access is secured through Emmerson's Land Access Agreement signed by the owners of the Tennant Creek station.</li> <li>Heritage surveying (assisted by the Central Land Council) was conducted prior to any exploration being conducted within the <i>Mauretania Project Area</i>.</li> <li>Sacred Site Certificate Numbers 2015-40a, 2015-40b and 2015-40c subsequently issued post field inspection allowing field exploration and drilling to commence.</li> <li>Two exclusion zones were identified during the field inspections however do not impact on the current exploration drilling.</li> <li>Emmerson do not believe that the two identified exclusion zones will impact of future exploration of the <i>Mauretania Project Area</i>.</li> <li>The tenement is in good standing and no known impediments exist.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Emmerson Resources commenced exploration at the <i>Mauretania Exploration Target</i> in 2015. RAB drilling (158 holes for 6,956 metres), 22 RC holes for 3,843 metres (MTRC001-MTRC022) and 2 diamond (HQ) drill hole tails for 393.1 metres.</li> <li>Minor regional mapping and rock chipping was undertaken by previous explorers. The majority of this work was completed in the 1970's by Australian Development Pty Ltd and in the 1980's by Normandy Tennant Creek</li> <li>Adelaide Petroleum NL (Sabminco NL JV) drilled 11 RC holes at the Black Cat Prospect (1988) however did not discover significant results and no further work was done.</li> <li>Matana Minerals NL also mapped the general area in 1989.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The reader is referred to AusIMM Monograph 14 (Geology of the Mineral Deposits of Australia and Papua New Guinea), Volume 1, pp. 829-861, to gain an introduction to the regional geology and styles of gold-copper mineralisation of the area.</li> <li>In 1995 the Northern Territory Geological Survey released a geological map and explanatory notes for the Tennant Creek 1:100,000 sheet, which covers the area of the license.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>The rocks of the Warramunga Formation host most of the ore bodies in the region and underlie the Exploration License.</li> <li>Mineralisation is considered to be Proterozoic Iron Oxide Copper Gold (IOCG) mineralisation of similar style and nature to other mineralisation / deposits in the Tennant Creek Mineral Field.</li> </ul>
<i>Drillhole information</i>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: <ul style="list-style-type: none"> <li>o easting and northing of the drillhole collar</li> <li>o elevation or RL of the drillhole collar</li> <li>o dip and azimuth of the hole</li> <li>o downhole length and interception depth</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>A list of the drillholes and the drillhole collar locations and elevation, the total depth, drill type and dip and azimuth and assay results are included as a Table in the body of the text.</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Mineralized intersections are reported as down hole intervals and not weighted averages.</li> <li>Please refer to the table of significant results in the body of the text for detail on cut off grades and mineralised widths.</li> <li>These results are exploration results only and no allowance is made for recovery losses that may occur should mining eventually result, nor metallurgical flow sheet considerations.</li> <li>Cut-off grades have been used for reporting of exploration drill results and are defined below the Table of Significant results.</li> </ul>
<i>Relationship between mineralization widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</li> <li>If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (eg 'downhole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>Mineralisation identified at the <i>Mauretania Exploration Target</i> is contained within hematite-magnetite-quartz jasper ironstone which grades with depth to a hematite-magnetite ironstone (see cross – section in the text).</li> <li>The ironstone dips 75 degrees to the southwest and strikes NNW-SSE. Magnetic modelling suggests the ironstone has a strike length of 120m and the modelled body plunges to the northwest.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Figures in body of text.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>All results are reported.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>Geophysical magnetic susceptibility logging is completed at 1m intervals on site (RC drilling).</li> <li>Three component magnetic probing of has been completed.</li> <li>A regional RAB program was completed in 2015 and included some areas within the Mauretania Exploration Target.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Further work</i>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Step out drilling North and South of MTRC023, MTRC25 and MTRC027 looking for lateral extensions to mineralisation reported.</li> <li>Collection of a 100kg composited bulk metallurgical sample from drill hole MTRC023.</li> </ul>

The exploration results contained within the above company release are in accordance with the guidelines of *The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves* (JORC Code, 2012 Edition – Table 1).

## SECTION 1 SAMPLING TECHNIQUES AND DATA–WEST GIBBET EXPLORATION TARGET

Criteria	JORC Code explanation	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li><i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30-g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<ul style="list-style-type: none"> <li>The <i>West Gibbet exploration</i> hole (WGRC052) was sampled using Reverse Circulation drilling techniques (RC).</li> <li>WGRC052 was drilled to a final depth of 90m and is reported in this current release.</li> <li>WGRC052 was drilled as a vertical hole to test vertical grade and geological continuity of the known ironstone body and to allow collection of a 100kg bulk metallurgical sample.</li> <li>RC chips are riffle split on site to obtain homogeneous 1m samples for assay.</li> <li>1m samples are pulverised to produce a 25g charge for analysis by four acids digest with an ICP/OES (Cu, Fe, Pb, Zn) ICP/MS (Ag, Bi, Mo, Se, Sb, Co) &amp; Fire Assay/AAS (Au) finish.</li> <li>RC samples were collected via a fixed cone splitter that is mounted to the drill rig under a 1200cfm cyclone.</li> <li>The fixed cone splitter has three sample chutes for comparative sampling, 2 chutes are synchronised for comparative samples and 1 Chute is independently set for the <b>geologist's</b> field samples.</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li><i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i></li> </ul>	<ul style="list-style-type: none"> <li>RC drilling accounts for 100% of the current reported drilling at <i>West Gibbet Exploration Target</i>.</li> <li>RC drilling utilizes a 4.5 inch, face sampling bit.</li> <li>RC recoveries are logged and recorded in the database.</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li><i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></li> </ul>	<ul style="list-style-type: none"> <li>Overall RC recoveries are &gt;90% for the West Gibbet target, and there are no significant sample recovery problems.</li> <li>All WGRC052 samples were dry.</li> <li>No voids were experienced during RAB drilling.</li> <li>Emmerson do not consider that there is evidence for sample bias that may have occurred due to preferential loss/gain of fine/coarse material during</li> </ul>

Criteria	JORC Code explanation	Commentary
		the West Gibbet drill program.
Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the</li> </ul>	<ul style="list-style-type: none"> <li>WGRC052 was logged by Emmerson's Exploration Manger on site.</li> <li>Logged data was then uploaded to Emmerson's relational database – Datashed.</li> <li>WGRC052 logging intervals are 1m increments and the entire hole was logged.</li> <li>All RC chips are stored in chip trays in 1m intervals.</li> <li>Logging is considered to be qualitative in nature.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Standard sampling operating procedures have been used by ERM.</li> <li>The sample preparation of RC samples for follows industry best practice in sample preparation involving oven drying, coarse crushing of the sample down to ~10mm followed by pulverisation of the entire sample (total prep) using LM5 grinding mills to a grind size of 85% passing 75 microns.</li> <li>Pulverised material not required by the laboratory (pulp) including duplicate samples are returned to ERM, logged into a database and stored undercover at the Tennant Creek office.</li> <li>Coarse rejects are disposed of by the Laboratory.</li> <li>RC samples were collected on the rig using cone (from the drill rig) and then riffle split by the field assistants if dry to obtain a 3kg sample.</li> <li>All samples were dry.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>Field QC procedures are routinely undertaken by Emmerson and involve the use of representative certified reference materials (CRM's) as assay standards, and include blanks and duplicates.</li> <li>QAQC protocols consisted of the insertion of blanks at a rate of approximately one in every 40 samples, insertion of standards at a rate of approximately one in every 20 samples and duplicate field sample analysis of at a rate of approximately one in every 20 samples.</li> <li>The geologist on the rig is responsible for maintaining the field QC.</li> <li>Insertion of assay blanks was increased when visual mineralisation was encountered and consists of insertion above and below the mineralised zone.</li> <li>Internal Laboratory checks were also included as in- house controls, blanks, splits, and replicates that are analysed with each batch of samples submitted. These QC results are reported along with sample values in the final analytical report. <ul style="list-style-type: none"> <li>Intertek Genalysis conducted the analytical analysis. Sample preparation occurred in Alice Springs, Northern Territory and analyses were read in Perth, Western Australia.</li> </ul> </li> <li>Review of QC results were conducted through a series of control charts and are considered satisfactory to good.</li> <li>The sample sizes are considered to be appropriate</li> </ul>

Criteria	JORC Code explanation	Commentary
		to correctly represent the style of mineralisation - Iron oxide copper gold.
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> </ul>	<ul style="list-style-type: none"> <li>No twin drill holes have been completed.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>WGRC052 was surveyed (set out and pick up) using a differential GPS and by a suitably qualified company employee.</li> <li>Collar survey accuracy is +/- 30 mm for easting, northing and elevation coordinates. <ul style="list-style-type: none"> <li>Co-ordinate system GDA_94, Zone 53.</li> </ul> </li> <li>Topographic measurements are collected from the final survey drill hole pick up.</li> <li>Downhole survey measurements were collected at a minimum of every 30m using an <b>CORE EX</b>® electronic single shot camera for RC.</li> <li>This survey camera equipment is quoted by the manufacturer to have an accuracy of <ul style="list-style-type: none"> <li>Azimuth 0-360° ± 0.5°</li> <li>Dip ± 90° ± 0.2°</li> </ul> </li> <li>If the measurement is considered to be affected by magnetic material (ironstone) then an average from the last non-affected and the next non-affected measurement is used.</li> <li>There were no down hole survey issues during this drill program.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Drill density within the West Gibbet Exploration Target area is 40m x 40m.</li> <li>There is insufficient drill / assay data to establish the geological and grade continuity at this stage of drilling.</li> <li>Sample compositing has been used by previous explorers.</li> <li>No Mineral Resource Estimation can be applied to these Exploration Results.</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>WGRC052 was drilled vertically into the known ironstone body.</li> <li>Previous company drilling is drilled perpendicular to the known strike of the West Gibbet Ironstone body.</li> <li>No orientation based sampling bias has been identified in the data at this point.</li> <li>Results at this stage suggest that the geological and geophysical targets being tested have been drilled in the correct orientation.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Samples were collected, bagged and labelled by site geologists.</li> <li>They are placed in sealed bags for transport to the assay laboratory.</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>The assay laboratory confirms that all samples have been received and that no damage has occurred during transport.</li> <li>While samples are being processed in the Lab they are considered to be secure.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Emmerson geologists have reviewed previous drilling campaigns and are happy that data is in good condition and data is to industry best standards.</li> </ul>

The exploration results contained within the above company release are in accordance with the guidelines of *The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the JORC Code, 2012).

## SECTION2 REPORTING OF EXPLORATION RESULTS – WEST GIBBET EXPLORATION TARGET

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The West Gibbet Exploration Target is entirely located within Mining Lease Central 18 (MLC018) and on Tennant Station Perpetual Pastoral Lease 1142.</li> <li>MLC018 is 100% held by Emmerson Resources Limited and is in good standing with no known impediments existing.</li> <li>Land Access to the area is secured through a current Indigenous Land Use Agreement between Emmerson Resources and the CLC, representing Traditional Owners.</li> <li>Land Access to the area is also secured through a current Land Access Agreement with Tennant Creek Station.</li> <li>No exclusion zones are identified within MLC018.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The West Gibbet Target has been campaign drilled since the early 1970s.</li> <li>Original work targeted the deep ironstone centred on the large magnetic and gravity anomalies (peak values 0.7 mgal and 550nT)</li> <li>Modelling of historic drilling defines an east west striking magnetite rich ironstone pod, approximately 125m long, 100m wide, up to 50m thick with a depth to top of 150m. The ironstone body has a shallow 200 north dip and a shallow 200 east plunge.</li> <li>High grade Au intersections were recorded in chlorite-magnetite alteration on the footwall of the ironstone body (e.g. 3m @ 35.9 g/t Au from 241m in WGBDD001).</li> <li>Follow up drilling encountered sporadic mineralisation, typically 1 to 2 g/t Au over several metres, in both the hanging wall and footwall alteration zones.</li> <li>Giants Reef completed a detailed (80m x 40m) gravity survey in 2005 which revealed a large gravity anomaly to the west of the deep magnetic ironstone.</li> <li>Gravity anomaly was thought to represent an untested hematite dominant ironstone up dip from the historic deep ironstone target</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Giants Reef RAB drilling intersected mineralised ironstone (max 1m @ 5.3ppm Au) 15-30m below surface.</li> <li>Emmerson completed a small RC drill program in 2008 (ASX:26/05/2008).</li> </ul>
Geology	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>Mineralisation within the area consists of hematite-magnetite-quartz ironstone within sediments of the Warramunga Formation.</li> <li>Target style for Emmerson is non-magnetic ironstone related iron oxide copper gold.</li> <li>Mineralisation is Proterozoic Iron Oxide Copper Gold (IOCG) mineralisation of similar style and nature to other mineralisation / deposits in the Tennant Creek Mineral Field</li> </ul>
Drillhole information	<ul style="list-style-type: none"> <li><i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:</i> <ul style="list-style-type: none"> <li><i>o easting and northing of the drillhole collar</i></li> <li><i>o elevation or RL of the drillhole collar</i></li> <li><i>o dip and azimuth of the hole</i></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Assay results from WGRC052 plus collar location, elevation, total depth, drill type and dip and azimuth is included as a table in the body of the announcement text.</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li><i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></li> </ul>	<ul style="list-style-type: none"> <li>Mineralised intersections are reported as down hole single metre drill intervals and not weighted averages.</li> <li>These results are exploration results only and no allowance is made for recovery losses that may occur should mining eventually result, nor metallurgical flow sheet considerations.</li> <li>Cut-off grades have been used for reporting of exploration drill results and are defined below the Table of Significant results.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</i></li> <li><i>If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (eg 'downhole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>Mineralisation identified at the <i>West Gibbet Exploration Target</i> is contained within hematite- magnetite-quartz ironstone which grades with depth to a magnetite-quartz ironstone (see cross – section in the text).</li> <li>The ironstone dips 85 degrees to the south and strikes east-west.</li> <li>WGRC052 was drilled as a vertical hole.</li> <li>Caution must be exercised when interpreting the assay results from WGRC052 as the drill hole represents a vertical intersection and not the typical angled drill hole intersection.</li> <li>All results reported in the text and figures are down-hole lengths and may not represent true widths.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li><i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional</i></li> </ul>	<ul style="list-style-type: none"> <li>Refer to Figures in body of text.</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li><i>Where comprehensive reporting of all Exploration Results is not practicable,</i></li> </ul>	<ul style="list-style-type: none"> <li>Not relevant for the data reported.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or</li> </ul>	<ul style="list-style-type: none"> <li>No deleterious or contaminated substances have been identified during Emmerson's the desktop review.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling</li> </ul>	<ul style="list-style-type: none"> <li>Additional drilling is being considered to better define the West Gibbet Exploration Target as a potential small mine proposition.</li> <li>Collection of a 100kg composited bulk metallurgical sample from drill hole WGR052.</li> </ul>



The exploration results contained within the above company release are in accordance with the guidelines of *The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the JORC Code, 2012).

## SECTION 1 SAMPLING TECHNIQUES AND DATA—JASPER HILL EXPLORATION TARGET

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Drill holes reported in the above ASX announcement are of a historical nature and were drilled during the period from 1975 to 1997.</li> <li>Drilling targeted the Jasper Hill Exploration Target which is ironstone containing Copper, Cobalt and Gold mineralisation.</li> <li>Holes were angled to optimally test the interpreted shear zone containing the above-mentioned ironstone.</li> <li>The Jasper Hill Exploration Target has been historically sampled using Reverse Circulation (RC) and diamond drilling (DD) techniques.</li> <li>Diamond drill core was identified to contain elevated copper and cobalt assay information through research of historical reports.</li> <li><b>Diamond drill core was located within Emmerson's (ERM) core shed located on our Warrego site.</b></li> <li>Diamond drill core was found to be under cover and in excellent condition for its age.</li> <li>Selected intervals were recovered, transported back to the Tennant Creek office where the core was geologically logged, photographed and sampled.</li> <li>10 diamond drill holes were selected for confirmation Cu-Co-Au sampling.</li> <li>400 quarter NQ core samples were collected as a first stage confirmation of mineralisation project.</li> <li>The selected diamond core had been cut in half by previous companies and was sent for assay.</li> <li>The check diamond cores were cut using an automatic core saw consisting of quarter NQ core samples with one quarter retained in the tray for reference.</li> <li>The check diamond core samples dispatched were typically 2.5–3.0kg in weight. These samples were pulverised (at Genalysis Laboratories in Alice Springs) to produce a 25g charge for analysis.</li> <li>A 4 Acid digest low grade mineralisation analytical package was selected on suggestion of laboratory staff.</li> <li>Gold was analysed using Aqua Regia, 25g charge. Assays that returned greater than 1 g/t Au were re-assayed using Fire Assay technique.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Diamond, Reverse Circulation and Rotary Air Blast drilling has been completed at Jasper Hills Exploration Target.</li> <li>Diamond drilling consisted NQ &amp; HQ size drill bit, standard tube.</li> <li>Core does not appear to have been oriented.</li> <li>Reverse Circulation drilling utilizes a 5 3/4 inch, face sampling bit.</li> <li>RAB, RC and Diamond drilling accounts for 100% of the current drilling at the Jasper Hills Exploration Target.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Core recoveries are fair to good based on visual inspection and comments (data) recorded on previous company reports.</li> <li>Visual inspection of the 10 DDH holes selected for check sampling were consistent with the paper records.</li> <li>Sample recovery for the diamond core is considered good and representative, however this is based solely on the 10 drill holes inspected.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Standard operating procedures are employed by Emmerson for logging of the 10 diamond drill holes selected for sampling.</li> <li>All DDH samples have been geologically logged in one metre intervals.</li> <li>Drill hole logging data is directly entered into field tough book computers via Logchief software. Look up codes and real time validations reduce the risk of data entry errors.</li> <li><b>Field computer data (the drill log) are uploaded to Emmerson's relational database</b> whereby the data undergoes a further set of validations checks prior to final upload.</li> <li>Standardised codes are used for lithology, oxidation, alteration, veining and presence of sulphide minerals.</li> <li>Structural logging of the diamond drill core was not possible.</li> <li>Magnetic susceptibility or specific gravity data were not recorded.</li> <li>Selected diamond core intervals were photographed prior to cutting of the drill core.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>All historical drill core has been geologically logged by the various companies however a detailed validation of the historical drilling data has not yet been completed.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> </ul>	<ul style="list-style-type: none"> <li>Standard sampling operating procedures have used by Emmerson during the selected diamond core re sampling exercise.</li> <li>The sample preparation for both diamond drill samples follows industry best practice in sample preparation involving oven drying, coarse crushing of the sample down to ~10mm followed by pulverisation of the entire sample (total prep) using LM5 grinding mills to a grind size of 85% passing 75 micron.</li> <li>Pulverised material not required by the laboratory (pulp) including duplicate samples have been returned to ERM, logged into a database and stored undercover at the Tennant Creek office.</li> <li>Coarse rejects have also been provided back to Emmerson by the Laboratory.</li> <li>Diamond duplicate samples (quarter core) were routinely submitted with duplicate assays returning acceptable comparison results.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li><b>Field QC procedures involve the use of certified reference material (CRM's) as assay standards, and ERM include blanks, duplicates.</b></li> <li>QAQC protocols consist of the insertion of blanks at a rate of one in every 40 samples, <b>insertion of standards (CRM's) at a rate of approximately one in every 20 samples</b> and duplicate field sample analysis of at a rate of approximately one in every 20 samples.</li> <li><b>A selection of CRM's is available to the geologists and insertion points</b> are predetermined prior to drilling.</li> <li>Insertion of assay blanks is increased when visual mineralisation is encountered and consists of insertion above and below the mineralised zone.</li> <li>Diamond drill core duplicates were in the form of quarter core.</li> <li><b>Laboratory checks include CRM's and in-house controls, blanks, splits, and replicates</b> that are analysed with each batch of samples submitted. These QC results are reported along with sample values in the final analytical report. Barren quartz washes are also routinely used in zones of mineralisation.</li> <li><b>QAQC data is uploaded with the sample values into ERM's database through an external database administrator (contractor).</b></li> <li>A QAQC database is created as a separate table in the database and includes all field and internal laboratory QC samples.</li> <li>QC data is reported through a series of control charts for analysis and interpretation by the Exploration Manager or his/her delegate.</li> <li>The sample sizes are considered appropriate to correctly represent the gold mineralisation at the Jasper Hill Exploration Target based on the style of mineralisation (iron oxide copper gold), the thickness and mineral consistency of the intersection(s).</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li><b>Emmerson's Exploration Manager (Competent Person) has discussed</b> sample preparation and analyses with Genalysis Intertek sample Prep and Lab Manager to confirm the integrity of the sample assay process.</li> <li>Do to the high-grade nature of the samples several repeats have been carried out and the repeatability is reasonable.</li> <li>Original data sheets and files are retained to validate the contents of the database against the original logging.</li> <li>No twin drill holes have been completed at the Jasper Hill Exploration Target.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Sample locations are provided within Tables 1, 2 &amp; 3 within the main text.</li> <li>Reported drill hole collar locations have been translated from local coordinated system to current GDA_94, Zone 53 co-ordinate system.</li> <li>Downhole survey measurements have been transferred from original drill logs and drilling records.</li> <li>Diamond drill holes were typically surveyed every 15m using various survey tools available at the time of drilling.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>The spacing of historic diamond drill hole collars is erratic, possibly to allow for the high degree of drilling deviation encountered in the Tennant Creek Mineral Field.</li> <li>Emmerson considers the Jasper Hill copper – cobalt mineralisation to be a Medium to Advanced Stage Exploration Target.</li> <li>It is uncertain that following further data evaluation and/or further exploration work (drilling) that the target can advance to be able to be reported as Mineral Resources or Ore Reserves in accordance with the requirements in Appendix 5A (JORC Code).</li> </ul>

Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond and RC drilling is at a high angle to the mineralized body</li> <li>Diamond and RC drilling is perpendicular to mineralized body.</li> <li>No orientation based sampling bias has been identified in the data at this point.</li> <li>Based on review of drill data and historical reports it is considered that the drilling is representative and that no sample bias has been introduced.</li> <li>Review of available drill data and historical reports suggests that the Jasper Hill Exploration Target has been drilled at the correct orientation.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Samples from this round of confirmation sampling were selected, bagged and labelled by site geologist and field assistant.</li> <li>They are placed in sealed poly weave bags and then larger bulka bags for transport to the assay laboratory.</li> <li>Diamond core is cut down the centre line and same side half core is collected for assay.</li> <li>Core length minimum is 0.8m and maximum 1.0m.</li> <li>Sampling intervals are determined by lithological changes.</li> <li>The assay laboratory confirms that all samples have been received and that no damage has occurred during transport.</li> <li>Tracking is available through the internet and designed by the Laboratory for ERM to track the progress of batches of samples.</li> <li><b>Sample receipt is logged into ERM's sample ledger.</b></li> <li>While samples are being prepared in the Lab they are considered to be secure.</li> <li>While samples are being analysed in the Lab they are considered to be secure.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li><u>No formal audit has been completed on the historical samples.</u></li> <li><u>An internal review of the sampling techniques, QAQC protocols and data collection has not been conducted by Emmerson.</u></li> </ul>



## SECTION2 REPORTING OF EXPLORATION RESULTS – JASPER HILL EXPLORATION TARGET

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The Jasper Hill Exploration Target lies wholly within Mineral Lease 30177 (ML 30177).</li> <li>The Jasper Hill Exploration Target is located 37kms north of Tennant Creek Township and 4kms west of the Stuart Highway.</li> <li>The Jasper Hill Exploration Target is situated on map sheet SE53-14 Tennant Creek 1:250,000 and sheet 5759 Flynn 1:100,000 at GDA94_Z53 coordinate 410530mE /7863770mN.</li> <li>ML 30177 is located within Perpetual Pastoral Lease 946, known as Phillip Creek Station.</li> <li>ML 30177 is 100% held by Santexco a 100% subsidiary of Emmerson Resources Limited.</li> <li>As the Exploration Target is on Perpetual Pastoral Lease exploration is <b>subject to terms and agreements under Emmerson's ILUA</b>.</li> <li>The ILUA entered between Emmerson Resources and the Central Land Council on behalf of the Aboriginal landowners provides for the protection of site and the payment of compensation.</li> <li>Exclusion Zones are identified within ML30177 however does not impact on the Jasper Hill Exploration Target work <u>at this stage</u>. The current nature of work does not require on ground access or ground based exploration.</li> <li>As this exploration target advances then ground access will be requested through a suitable anthropological study and resultant clearance certificate coordinated through the Central Land Council and traditional owners.</li> <li>ML 30177 is in good standing and no known impediments exist.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Previous exploration of this area commenced with prospectors discovering the North Star orebody in 1933 with underground mining occurring sporadically from 1940 to 1950 when the reserves were exhausted after producing 9,600 oz of gold from 29,000 tonnes.</li> <li>Other companies exploring in the North Star Area which includes the Jasper Hill Exploration Target include Northern Mines Development NL (1950-54), Peko Mines Ltd (1957), Metals Exploration / Paringa Mining (1962-68).</li> <li>In 1964 the BMR in cooperation with the NT Mines branch, undertook a shallow drilling program and defined a geochemical anomaly over the Jasper Hill Exploration Target, which was also known as No 2 Hill.</li> <li>Australian Consolidated Minerals (1972) joint ventured the area to Australian Development Limited (ADL) in 1975 where diamond drilling commenced. Posgold Limited were the next company to explore the area.</li> <li>Open Cut mining of the North Star orebody (ADL) commenced in October 1986 and ceased in May 1987. Recorded production from this mining campaign was 70,184 tonnes at a grade of 6.18 g/t Au.</li> <li>Normandy Mining Pty Limited (NML) and its precursor companies have been actively exploring the Northern Star Leases since the prior and after the closure of the open cut. This exploration included gridding, RAB drilling (1981), RC/diamond drilling of the North Star orebody (1985-87), RC/diamond drilling (1987-92), RAB drilling (1992) and vacuum drilling (1995).</li> <li>Normandy Gold Pty Limited (1996-1997) completed the 13 RC holes for a total of 1,831.5 meters. Four of these holes were extended with diamond tails for an additional 299.3 meters.</li> <li>Normandy Gold Pty Limited (1999) completed extensive environmental rehabilitation. Rehabilitation included organising permits for clearance, soil contamination studies, earthworks, fencing, seeding and planting.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Gold and copper-gold deposits discovered in the Tennant Creek gold field to date, are hosted in the Lower Proterozoic Warramunga Formation; a metamorphosed (greenschist facies)</li> <li>Greywacke-siltstone-shale sedimentary sequence that usually displays a pronounced east-west cleavage. Ore occurs adjacent to steeply dipping, lenticular or pipe-like magnetite/haematite/chlorite/quartz bodies ('ironstone') that are found along east-west trending structures. It is generally thought that the magnetite / haematite was hydrothermally formed in dilation zones along the controlling structures, and that the deposition of gold, sulphides and associated alteration minerals was a later event with mineralisation possibly being derived from a different source but following the same structurally controlled path.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>In plan view, the ironstone bodies tend to be narrowest in the north-south direction and elongated east west, reflecting the regional cleavage and shearing. The Jasper Hill Exploration Target clearly follows this pattern. Their vertical dimensions may run to hundreds of metres, beyond the reach of surface drilling.</li> <li>Ore grades may occur over substantial vertical intervals of an ironstone pipe or lens, but are not expected to occur over the entire length.</li> <li>The mineralisation style is considered to be Iron Oxide Copper Gold.</li> <li>Supergene enrichment is very evident.</li> </ul>
Drillhole information	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: <ul style="list-style-type: none"> <li>easting and northing of the drillhole collar</li> <li>elevation or RL of the drillhole collar</li> <li>dip and azimuth of the hole</li> <li>downhole length and interception depth</li> <li>hole length.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Tables of significant results are presented in the text and in Tables 1, 2 &amp; 3.</li> <li>Plans showing location of drill holes and location of significant results and interpreted trends are provided in the figures within this report.</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Mineralised diamond drill intersections are reported as down hole intervals and not weighted averages.</li> <li>The assay results discussed are exploration results only and no allowance is made for recovery losses that may occur should mining eventually result, nor metallurgical flow sheet considerations.</li> <li>The assay results discussed in the release text are confirmatory in nature and are intended to provide confidence in the historical assay results.</li> </ul>
Relationship between mineralization widths and intercept lengths	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</li> <li>If it is not known and only the downhole lengths are reported, there should be a <b>clear statement to this effect (eg 'downhole length, true width not known')</b>.</li> </ul>	<ul style="list-style-type: none"> <li>The spacing of historic diamond and RC drill hole collars are erratic, possibly to allow for the high degree of drilling deviation encountered in the Tennant Creek Mineral Field.</li> <li>The drill hole spacing may also be influenced due to access and topographic conditions.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Figures in body of text.</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>This information is provided in the results tables and comments in the report.</li> <li>Due to the age the data for the Jasper Hill Exploration Target, Emmerson are cautious and do not believe a historical Mineral Resource Estimate can be reported in accordance with the current 2012 JORC Code.</li> <li>Emmerson considers the Jasper Hill copper – cobalt mineralisation to be a Medium to Advanced Stage Exploration Target.</li> <li>It is uncertain that following evaluation and/or further exploration work that the historical assay results will be able to be reported as Mineral Resources or Ore Reserves in accordance with the requirements in Appendix 5A (2012 JORC Code).</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics;</li> </ul>	<ul style="list-style-type: none"> <li><b>Normandy Gold Pty Limited completed an "in house" Resource Estimate and Geological Report for the Jasper Hill Exploration Target.</b></li> <li>Emmerson are cautious and do not believe a historical Resource Estimate can be reported in accordance with the current 2012 JORC Code.</li> <li>Metallurgical reports have been located on test work completed on the Jasper Hill Cu-Co-Au ore (Opimet Laboratories). Given the age of these reports caution must be exercised during data interpretation.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>potential deleterious or contaminating substances.</i>	<ul style="list-style-type: none"> <li>Groundwater has been reported to lie 120-140m below current ground level.</li> <li>Various geophysical surveys have been conducted over the Jasper Hill Exploration Target. These include magnetic and gravity surveys.</li> </ul>
Further work	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Current drill hole spacing is still considered too wide to enable an accurate Mineral Resource Estimate and additional definition drilling is anticipated.</li> <li>Geophysical survey to include the Jasper Hill Exploration Target area and focus future drilling.</li> <li>Compilation of historical geological and geophysical data.</li> <li>Compilation of historical survey and assay data.</li> <li>Revised Mineral Resource Estimation primarily for Copper, Cobalt and Gold.</li> <li>Collection of density information.</li> <li>Petrological study of selected core.</li> <li>Geological interpretation as discussed in the text.</li> </ul>

## SECTION 1 SAMPLING TECHNIQUES AND DATA—EDNA BERYL EXPLORATION TARGET

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Drill holes (EBWRC001-004) were reported ASX: 19/05/2016.</li> <li>Drill holes (EBWRC005-030) were reported were drilled during the period from 5/06/2016 – 25/06/2016 and reported to the ASX: 02/08/2016.</li> <li>Drill holes (EBWRC033-035, EBWRC038-046, 048, 052,) and EBWDD031-32, DD036-037, DD047 (abandoned), DD049-057 and GRED42A were drilled during the period from 16/09/2016 – 21/11/2016 and reported to the ASX: 21/02/2017.</li> <li>Drill holes EBWRC058-083 (RC) and EBWDD064, EBWDD064W1, EBWDD073 and EBWDD076 were drilled during the period from 26/06/2017 – 27/07/2017 – reported in this ASX release.</li> <li>Current drilling targeted gravity anomalies interpreted to be ironstone to the east, west and to the north of the known Edna Beryl mineralisation. Three diamond holes and one wedge hole were drilled to test for extensions within the Edna Beryl Deeps area.</li> <li>Holes were angled to optimally test the interpreted shear zones.</li> <li>Drill holes have been drilled at an angle between 60 – 69 degrees with all holes are drilling towards the south.</li> <li>The Edna Beryl Exploration Target has been historically sampled using RAB, Reverse Circulation (RC) and diamond drilling (DD) techniques. 24 RAB holes for 1,140m, 67 RC/Percussion holes for 10,971m and 32 Diamond holes for 5396.9m have been completed. The drill hole spacing is nominal 10m x 10m grid spacing.</li> <li>RC chips (EBWRC058-EBRC083) were riffle split on site to obtain 3m composite samples from which 2.5–3.0kg sample was pulverised (at Intertek in Alice Springs) to produce a 25g charge for analysis by Aqua Regia digestion / ICP-MS/OES (Au, Ag, Bi, Cu, Fe, Pb, Zn, Mo, Se, Sb).</li> <li>To increase assay turnaround times samples reported in this release were collected as 1m samples through zones of interest.</li> <li>These 1m samples were pulverised to produce a 25g charge for analysis by four acid digest with an ICP/OES (Cu, Fe, Pb, Zn) ICP/MS (Ag, Bi, Mo, Sb,) &amp; Fire Assay/AAS (Au) finish.</li> <li>RC samples were collected via a fixed cone splitter that is mounted to the drill rig under a 1200cfm cyclone.</li> <li>The fixed cone splitter has three sample chutes for comparative sampling, 2 chutes are synchronised for comparative samples and 1 Chute is independently set for the geologists field samples.</li> <li>Diamond holes were sawn in half and submitted to Intertek in Alice Springs) to produce a 25g charge for analysis by four acid digest with an ICP/OES (Cu, Fe, Pb, Zn) ICP/MS (Ag, Bi, Mo, Sb,) &amp; Fire Assay/AAS (Au) finish.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details</li> </ul>	<ul style="list-style-type: none"> <li>24 RC drill holes for 5,564m were drilled in this current drill program (EBWRC058-083)</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>(eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i>	<ul style="list-style-type: none"> <li>3 diamond hole pre collars (RC) for 708m were drilled in this current drill program (EBWDD064, EBWDD073, EBWDD076).</li> <li>3 diamond holes have been completed for 569.3m (EBWDD064, EBWDD073, EBWDD076).</li> <li>RC drilling utilizes a 5 3/4 inch, face sampling bit.</li> <li>Diamond drilling utilizes NQ<sup>2</sup> size drill bit, standard tube.</li> <li>RAB, RC, Diamond drilling &amp; underground air leg drilling accounts for 100% of the current drilling at the Edna Beryl Exploration Target.</li> <li>RC recoveries are logged and recorded in the database and for this program were considered excellent.</li> <li>Diamond drill core were oriented in unbroken ground.</li> <li>Orientation tool was a ori-mark tool.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>RC samples are visually checked for recovery, moisture and contamination. No issues were encountered.</li> <li>If any issues or concerns are raised they are discussed at the time with the drilling contractor and also recorded in our database and drilling diary.</li> <li>Recoveries for both diamond and RC drill holes are considered good to excellent.</li> <li>Core recoveries are measured and cross checked against the drillers records.</li> <li>RC samples are collected via a fixed cone splitter that is mounted to the drill rig under a 1200cfm cyclone.</li> <li>The cyclone and splitter are routinely cleaned with more attention spent during the drilling of damp or wet samples.</li> <li><b>There were no "wet samples" during this program.</b></li> <li>Drill core is oriented and recovery recorded during geological logging.</li> <li>Emmerson consider that there is evidence for sample bias that may have occurred due to preferential loss/gain of fine/coarse material. Visible (course) gold is identified in sections of historical diamond core so caution is required.</li> <li>Sample recovery for RC and Diamond core is considered good and representative.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Standard operating procedures are employed by Emmerson for logging of RC and diamond drill samples.</li> <li>All RC and DDH samples are lithologically logged in one metre intervals.</li> <li>Drill hole logging data is directly entered into field tough book computers via Logchief software. Look up codes and real time validations reduce the risk of data entry mistakes.</li> <li><b>Field computer data (the drill log) are uploaded to Emmerson's relational database</b> whereby the data undergoes a further set of validations checks prior to final upload.</li> <li>Standardised codes are used for lithology, oxidation, alteration, veining and presence of sulphide minerals.</li> <li>Structural logging of the RC drill samples was not possible however is possible within sections of the diamond core.</li> <li>Magnetic susceptibility data for all individual 1m RC samples and selected zones of diamond core are collected as per ERM procedure.</li> <li>All RC chips are stored in trays in 1m intervals.</li> <li>All diamond holes are photographed prior to cutting of the drill core.</li> <li>Representative RC chips and diamond core is available to all geologists (a physical reference set) to ensure consistency of logging.</li> <li>All historical drill core and RAB &amp; RC samples has been lithologically re logged.</li> <li>A detailed validation of all historical drilling data was completed in 2015 by a full time Emmerson Resources senior geologist.</li> <li>Structural logging of diamond drill core was completed recording orientation of veins, fractures and lithological contacts.</li> <li>Information on structure type, dip, dip direction, alpha angle, beta angle, texture, shape, roughness and fill material is stored in the <b>structure table of Emmerson's database.</b></li> <li>Historical and current diamond core is stored in Tennant Creek however several historical holes (or sections of holes are missing or incomplete. Historical RC chips could not be located.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Logging is qualitative in nature and records interpreted lithology, mineralogy, mineralisation, weathering, colour and other features of the samples</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Standard sampling operating procedures have used by Emmerson during this current drill program Edna Beryl drilling.</li> <li>The sample preparation for both diamond drill and RC samples follows industry best practice in sample preparation involving oven drying, coarse crushing of the sample down to ~10mm followed by pulverisation of the entire sample (total prep) using LM5 grinding mills to a grind size of 85% passing 75 micron.</li> <li>Pulverised material not required by the laboratory (pulp) including duplicate samples are returned to ERM, logged into a database and stored undercover at the Tennant Creek office.</li> <li>Coarse rejects are disposed of by the Laboratory.</li> <li>RC and diamond duplicate samples were routinely submitted with duplicate assays returning acceptable comparison results.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>Field QC procedures involve the use of certified reference material (CRM's) as assay standards, and ERM include blanks, duplicates.</li> <li>QAQC protocols consist of the insertion of blanks at a rate of one in every 40 samples, insertion of standards (CRM's) at a rate of approximately one in every 20 samples and duplicate field sample analysis of at a rate of approximately one in every 20 samples.</li> <li>A selection of CRM's is available to the geologists and insertion points are predetermined prior to drilling.</li> <li>The geologist has the ability to override this predetermined insertion based on visual and geological characteristics of the current drill hole.</li> <li>Insertion of assay blanks is increased when visual mineralisation is encountered and consists of insertion above and below the mineralised zone.</li> <li>Individual 1m field duplicates RC samples are collected using a riffle splitter.</li> <li>Diamond drill core duplicates were in the form of quarter core. Remaining quarter core resides in the core trays on site in Tennant Creek.</li> <li>Laboratory checks include CRM's and in-house controls, blanks, splits, and replicates that are analysed with each batch of samples submitted. These QC results are reported along with sample values in the final analytical report. Barren quartz washes are also routinely used in zones of mineralisation.</li> <li>QAQC data is uploaded with the sample values into ERM's database through an external database administrator (contractor).</li> <li>A QAQC database is created as a separate table in the database and includes all field and internal laboratory QC samples.</li> <li>QC data is reported through a series of control charts for analysis and interpretation by the Exploration Manager or his/her delegate.</li> <li>The sample sizes are considered to be appropriate to correctly represent the gold mineralisation at the Edna Beryl Exploration Target based on the style of mineralisation (iron oxide copper gold), the thickness and mineral consistency of the intersection(s).</li> <li>Emmerson's sampling methodology (SOP) is available at any time for peer review.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Emmerson's Exploration Manager (Competent Person) has discussed in detail the drill and sample collection procedures with the drillers and is satisfied that best practice has been followed.</li> <li>Emmerson's Exploration Manager (Competent Person) has discussed sample preparation and analyses with Intertek sample Prep and Lab Manager to confirm the integrity of the sample assay process.</li> <li>Do to the high grade nature of the samples several repeats have been carried out and the repeatability is considered to be reasonable.</li> <li>Screen assays have been previously submitted to assist in correct reporting and particle size analysis.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Original data sheets and files are retained to validate the contents of the database against the original logging.</li> <li>No twin drill holes have been completed at the Edna Beryl Exploration Target.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Sample locations are shown in Figure 6 and Table 1-3 within the main text.</li> <li>All reported drill hole collars were surveyed (set out and picked up) using a differential GPS and by a suitably qualified company employee.</li> <li>Collar survey accuracy is +/- 30 mm for easting, northing and elevation coordinates.</li> <li>Co-ordinate system GDA_94, Zone 53.</li> <li>Topographic measurements are collected from the final survey drill hole pick up.</li> <li>Downhole survey measurements were collected routinely every 6m down hole using an REFLEX EZ-Shot® electronic single shot camera for RC.</li> <li>A selection of RC holes have been surveyed using a gyroscope tool and accuracy is comparable to the REFLEX single shot too.</li> <li>Diamond drill holes are surveyed every 15m using a REFLEX single shot tool.</li> <li>This survey camera equipment is quoted by the manufacturer to have an accuracy of <ul style="list-style-type: none"> <li>Azimuth <math>0-360^{\circ} \pm 0.5^{\circ}</math></li> <li>Dip <math>\pm 90^{\circ} \pm 0.2^{\circ}</math></li> </ul> </li> <li>If the measurement is considered to be affected by magnetic material (ironstone) then an average from the last non affected and the next non affected measurement is used.</li> <li>There were no down hole survey issues during this drill program and all collar positions have been validated by the Exploration Manager.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Drill holes are spaced 10-15 metres apart in dip and strike. This close spacing is necessary due to the style and morphology of the shear zone being drill tested.</li> <li>The spacing of historic drill hole collars is erratic, possibly to allow for the high degree of drilling deviation encountered in the Tennant Creek Mineral Field.</li> <li>Identified mineralisation within the Edna Beryl Exploration Target has been defined by drill holes on a section spacing of 10m to 20m with an average on-section spacing of 10m.</li> <li>Emmerson considers the Edna Beryl mineralisation to be an Advanced Exploration Target and that it is uncertain that following evaluation and/or further exploration work that the historical estimate will be able to be reported as Mineral Resources or Ore Reserves in accordance with the requirements in Appendix 5A (JORC Code).</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration drilling is at a high angle to the mineralized bodies and/or shear zones.</li> <li>Exploration drilling is perpendicular to mineralized bodies or shear zones.</li> <li>No orientation based sampling bias has been identified in the data at this point.</li> <li>It is considered that the recent RC and diamond drilling is representative and that no sample bias has been introduced.</li> <li>Results at this stage suggest that the geological targets being tested have been drilled at the correct orientation.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>RC samples from this round of drilling were selected, bagged and labelled by site geologist and field assistants.</li> <li>They are placed in sealed polyweave bags and then larger bulka bags for transport to the assay laboratory.</li> <li>Diamond core is cut down the core orientation line and same side half core is collected for assay.</li> <li>Core length minimum is 0.6m and maximum 1.5m.</li> <li>Sampling intervals are determined by lithological changes.</li> <li>The assay laboratory confirms that all samples have been received and that no damage has occurred during transport.</li> <li>Tracking is available through the internet and designed by the Laboratory for ERM to track the progress of batches of samples.</li> <li><b>Sample receipt is logged into ERM's sample ledger.</b></li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>While samples are being prepared in the Lab they are considered to be secure.</li> <li>While samples are being analysed in the Lab they are considered to be secure.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No formal audit has been completed on the historical samples.</li> <li>An internal review of the historical sampling techniques, QAQC protocols and data collection <u>has not been conducted by Emmerson.</u></li> <li>Digital Rock Services Pty Ltd (1998) and Rocksearch Australia validated historical data on two separate occasions. Minor issues were identified and remedied at the time.</li> </ul>

## SECTION 2 REPORTING OF EXPLORATION RESULTS – EDNA BERYL EXPLORATION TARGET

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The Edna Beryl Exploration Target lies wholly within Mineral Lease C705 (ML C705).</li> <li>The Edna Beryl Exploration Target is located 37kms north of Tennant Creek Township and 3kms east of the Stuart Highway.</li> <li>Edna Beryl is situated on map sheet SE53-14 Tennant Creek 1:250,000 and sheet 5759 Flynn 1:100,000 at GDA coordinate 416500mE 7864700mN.</li> <li>ML C705 is located within Aboriginal Freehold Land held by the Warumungu Aboriginal Land Trust (NT portion 1754). The tenement is 100% held by Emmerson Resources Limited.</li> <li>The exploration target is on Aboriginal Freehold Land. An agreement under the Aboriginal Land Rights (Northern Territory) Act 1976 has been entered into between Emmerson Resources and the Central Land Council on behalf of the Aboriginal landowners. The agreement provides for the protection of sites, the payment of compensation and allows the landowners unfettered access to the lease area (other than the immediate mine site where there are restrictions).</li> <li>Emmerson Resources are in Joint Venture with Evolution Mining.</li> <li>Exclusion Zones are identified within MLC 705 however does not impact on the Edna Beryl Exploration Target area.</li> <li>Approval to drill the third phase of drilling was received from Traditional Owners prior to drilling commencement.</li> <li>MLC 705 is in good standing and no known impediments exist.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Edna Beryl was discovered in 1935 and mined in the 1940s and 1950s by excavation of vertical shafts and horizontal drives to a maximum depth of about 50 metres. Production up until 1952 was reportedly 2,700 tonnes of ore at an average grade of 53 grams gold per tonne.</li> <li><b>Giants Reef Mining conducted all known “modern” exploration in and around the Edna Beryl Exploration Target Area.</b></li> <li>Giants Reef has carried out exploration on the Edna Beryl area from 1990 to 2005 and during this time identified significant gold mineralisation below the original workings.</li> <li>An existing shaft sunk during the earlier mining was refurbished in 1996.</li> <li>In 2004 – 2005 mining was conducted by the Edna Beryl Mining <b>Company (formally known as Craig’s Mining Services) in a Tribute</b> arrangement with Giants Reef Mining. Approximately 410 ounces was produced during this period from the upper mineralised pod from an exploration shaft and drive to current depth of 52m.</li> <li>Influx of underground water plus declining gold price ceased the operation in July 2005.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Gold and copper-gold deposits discovered in the Tennant Creek gold field to date, are hosted in the Lower Proterozoic Warumunga Formation: a metamorphosed (greenschist facies).</li> <li>Greywacke-siltstone-shale sedimentary sequence that usually displays a pronounced east-west cleavage. Ore occurs adjacent to steeply dipping, lenticular or pipe-like <b>magnetite/haematite/chlorite/quartz bodies (“ironstone”) that are</b> found along east-west trending structures. It is generally thought that the magnetite / haematite was hydrothermally formed in dilation zones along the controlling structures, and that the deposition of gold, sulphides and associated alteration minerals was a later event with mineralisation possibly being derived from a different source but following the same structurally controlled path.</li> <li>In plan view, the ironstone bodies tend to be narrowest in the north-south direction and elongated east west, reflecting the regional cleavage and shearing. Edna Beryl clearly follows this pattern. Their vertical dimensions may run to hundreds of metres, beyond the reach of surface drilling.</li> <li>Ore grades may occur over substantial vertical intervals of an ironstone pipe or lens, but are not expected to occur over the entire length.</li> <li>The mineralisation style is considered to be Iron Oxide Copper Gold.</li> <li>Supergene enrichment is very evident.</li> </ul>

Criteria	JORC Code explanation	Commentary
Drillhole information	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: <ul style="list-style-type: none"> <li>easting and northing of the drillhole collar</li> <li>elevation or RL of the drillhole collar</li> <li>dip and azimuth of the hole</li> <li>downhole length and interception depth</li> <li>hole length.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>A table of significant results is presented in the text, Table 3 and on Figure 6 within this report.</li> <li>A list of the drill holes and collar detail is provided as Tables 1 and 2.</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Mineralized RC and Diamond intersections are reported as down hole intervals and not weighted averages</li> <li>The results discussed are exploration results only and no allowance is made for recovery losses that may occur should mining eventually result, nor metallurgical flow sheet considerations.</li> </ul>
Relationship between mineralization widths and intercept lengths	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</li> <li>If it is not known and only the downhole lengths are reported, there should be a clear <b>statement to this effect (eg 'downhole length, true width not known')</b>.</li> </ul>	<ul style="list-style-type: none"> <li>The holes drilled within the Edna Beryl Exploration Target area are perpendicular the east-west striking shear zones. The holes were designed and drilled perpendicular to the steep dipping mineralised zone making the intercepts approximate to true width.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Figures in body of text.</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>Due to the age the Resource Estimation for the Edna Beryl resource, Emmerson are cautious and do not believe the historical Resource Estimate can be reported in accordance with the current 2012 JORC Code. Emmerson considers the Edna Beryl mineralisation to be an Advanced Exploration Target.</li> <li>It is uncertain that following evaluation and/or further exploration work that the historical estimate will be able to be reported as Mineral Resources or Ore Reserves in accordance with the requirements in Appendix 5A (JORC Code).</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>Geotechnical logging was carried out on all historical and current diamond drill holes for recovery, ROD and number of defects (per interval). Information on structure type, dip, dip direction, alpha angle, beta angle, texture, shape, roughness and fill material was stored in the structure table of the Micromine database.</li> <li>Density measurements were routinely collected by Giants Reef and Emmerson geologists.</li> <li>Metallurgical testing of selected mineralised Edna Beryl samples was conducted by Metcon Laboratories Pty Ltd in 1996.</li> <li>Metallurgical testing concluded that 70% of the ore could be gravity recovered with the remaining gold cyanide soluble so that total gold extraction of &gt;98% could be obtained. Screen Fire Assay of selected samples was conducted by Giants Reef Mining.</li> <li>Geophysical magnetic susceptibility logging is completed at 1m intervals on site (RC drilling) and in the core shed for selected sections of diamond core.</li> <li>Thin section and polished samples were collected by Giants Reef Mining to assist in the refinement of the geological model.</li> <li>Three component magnetic down hole surveying was completed 7 of the RC holes from this current drill program.</li> <li>Optical / Acoustic televiewer survey of selected drill holes has been</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>completed.</p> <ul style="list-style-type: none"> <li>Higher gold grade intersections selected for screen fire assay.</li> </ul>
Further work	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>RC and diamond drilling (Phase 4) is now completed. This information will further assist in confirming the geological and grade continuity of gold mineralisation already intersected.</li> <li>Current drill hole spacing is still considered too wide to enable an accurate Mineral Resource Estimate.</li> <li>Twin hole drill program to be designed.</li> <li>Petrological study of selected core and drill chips continues</li> <li>Geological interpretation as discussed in the text.</li> </ul>

## Section 1 Sampling Techniques and Data – Whatling Hill Prospect – Rockchip samples

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Rock chip samples were collected during field inspection on the Whatling Hill prospect.</li> <li>Rock chip samples were collected from surface outcrops and floats.</li> <li>Outcrop samples represent the resistant and exposed portions of the local geology. The float samples are inferred to have originated from the local area where they were found, with no evidence of substantial transport.</li> <li>Submitted samples weigh from 0.2 kg to 2 kg.</li> <li>Samples were crushed, dried and pulverised (Lab) to produce a 50g sub sample for analysis by four acid digest with an ICP-AES finish &amp; Fire Assay (Au) finish.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable – surface rock chip samples.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable – surface rock chip samples.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>A short geological description of each sample was taken at the time of collection.</li> <li>The description is qualitative: lithology, alteration, mineralisation</li> </ul>

<p><i>Sub-sampling techniques and sample preparation</i></p>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The sample preparation of rock chip samples followed industry best practice in sample preparation involving oven drying, coarse crushing of the rocks followed by pulverisation of the entire sample (total prep) using grinding.</li> <li>• Where possible, samples were selected to represent different parts of the mineral system as a whole. No field duplicate samples were collected.</li> <li>• Sample sizes were sufficiently large to sample a good representation of the local geology</li> </ul>
<p><i>Quality of assay data and laboratory tests</i></p>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li>• <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks)</i></li> </ul>	<ul style="list-style-type: none"> <li>• Samples were delivered to ALS Chemex, in Orange NSW.</li> <li>• Average sample weight was ~0.5 kg.</li> <li>• Standard assay procedures performed by a reputable assay lab, (ALS Group), were undertaken. Gold assays are initially by 50g fire assay with AAS finish (method Au-AA26). For samples with a gold value greater than 0.5ppm the entire remaining sample is screen fire assayed using wet screening to 75 microns. Ag, As, Cu, Fe, Pb, S, Zn are digested in aqua regia then analysed by ICP-AES (method ME-ICP61). Comparison with 4 acid digestion</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	<p>indicate that the technique is considered total for Ag, As, Cu, Pb, S, Zn. Fe may not be totally digested by aqua regia but near total digestion occurs. A final 50 gram split was then fire assayed with an AAS finish.</p> <ul style="list-style-type: none"> <li>Internal ALS QC results are reported along with sample values in the final analytical report.</li> <li>QAQC protocols are documented and involve the use of certified reference material (CRM's) as assay standard.</li> <li>Certified reference material or blanks are inserted at least every 40 samples. Standards are purchased from Certified Reference Material manufacture companies. Standards were purchased in foil lined packets of between 60g and 100g. Different reference materials are used to cover high grade, medium grade and low-grade ranges of elements: Au, Ag, Pb, Zn Cu, Fe S and As. The standard names on the foil packages were erased before going into the pre numbered sample bag and the standards are submitted to the lab blind. The sample sizes are considered to be appropriate to correctly represent the mineralisation at the Whatling Hill prospect.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Original sample data sheets and files have been retained and were used to validate the contents of the company's database against the original assay</li> <li>The raw assay data were reviewed and verified by company's Exploration Manager – NSW.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>A handheld GPS was used to locate each sample. GPS accuracy is +/- 5m for easting and northing coordinates.</li> <li>Coordinate system GDA_94, Zone 55.</li> <li>Topographic control is maintained by use of widely available government datasets.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Only reconnaissance sampling completed – spacing is variable and based on outcrop location and degree of exposure</li> <li>Samples were taken at non-regular intervals according to observations at the time in the field.</li> <li>No sample compositing has been applied.</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>Samples were taken according to geological observations at the time in the field.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Samples were placed in tied calico bags with unique sample numbers. Once delivered from the field the samples were housed in secure premises prior to laboratory submission by Emmerson's contractor. Samples were placed in sealed polyweave bags for transport to the assay laboratory.</li> <li>Digital data was emailed to the Exploration Manager - NSW.</li> <li>The assay laboratory confirms that all samples have been received and that no damage has occurred during transport.</li> <li>Results data was emailed to the Exploration Manager - NSW. While samples are being processed in the Lab they are considered to be secure.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No formal audit has been completed on the samples being reported.</li> </ul>



## Section 2 Reporting of Exploration Results – Whatling Hill Prospect – Rockchip samples

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>Whatling Hill prospect is within EL8464.</li> <li>EL8464 Fifiield is located just south of Tullamore and approximately 50 NW of Northparkes Cu-Au mine.</li> <li>EL8464 is situated on map sheet SI55-3 Narromine 1:250,000</li> <li>EL8464 is consists of wheat paddocks and minor grazing paddocks.</li> <li>The tenement is 100% held by Lachlan Resources (Emmerson Resources).</li> <li>EL8464 is in good standing and no known impediments exist.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>North Broken Hill Ltd explored the area in 1978 for tungsten and skarn.</li> <li>Shell Company of Australia from 1981 - 1983 explored for tin-tungsten skarn deposits associated with the Gobondery granite; porphyry copper and base metal mineralisation associated with monzonite-diorite; tin-quartz- tourmaline mineralisation hosted by Girilambone sediments; and gold-base metal stockwork mineralisation hosted in Ordovician sediments.</li> <li>North Mining Ltd (North) explored the district for Porphyry Cu-Au deposits within the Ordovician Volcanics from 1992 – 1995.</li> <li>Clancy Exploration Ltd held the ground through EL6534 from 2006 – 2014 targeting Ordovician Porphyry Cu-Au system.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Since the 1960's, the area inside EL8464 has been actively explored for a variety of metals including Cu,Au, Pb, Zn, Pt, Ni, Sn and W. Several historical small mining operations have been conducted in the tenement, Allandale and Gobondery. The Allandale Cu mine is a vein associated copper occurrence. The Gobondery Fe Mine was described as a small high-grade hematite deposit on the eastern contact of the Devonian Gobondery Granite.EL8464 lies within an inlier of Ordovician arc interpreted to have been rifted west off the Northparkes Igneous Complex. The main Ordovician arc is dominated by the Raggatt Volcanics consists of andesitic to trachyandesitic lavas and volcanoclastic rocks. The Devonian Gobondery granite in the western part of the tenement outcrops as a prominent hill.</li> <li>The Ordovician Raggatt Volcanics have been tentatively correlated with the Womblin and Goonumbla Volcanics at Northparkes. Age dating of two intrusive samples collected by Emmerson Resources confirmed this correlation, with dates ranging from Middle to Late Ordovician to Early Silurian. Preliminary ages yielded <math>(465.3 \pm 6.5 \text{ Ma})</math> and <math>439 \pm 11 \text{ Ma}</math>; zircon U-Pb – UTAS-CODES).</li> <li>The style of mineralization of the Kadungle Valley prospect is considered to be Porphyry Copper Gold. Elsewhere in the tenement, other porphyry prospects are Forrest View and Allandale prospect.</li> <li>The Raggat Volcanics are considered to be highly prospective to host Porphyry Cu Au, supported by the Late Ordovician age, and the occurrence of alteration associated with this style of mineralization. i.e. pervasive epidote and chlorite alteration, locally with disseminated magnetite, presence of magnetite veins and quartz-magnetite veins with clots of malachite.</li> </ul>
Drillhole information	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: <ul style="list-style-type: none"> <li>easting and northing of the drillhole collar</li> <li>elevation or RL of the drillhole collar</li> <li>dip and azimuth of the hole</li> <li>downhole length and interception depth</li> <li>hole length.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>All results are reported as Table 1 within the body of this report.</li> </ul>

Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>No length-weighting or cut-off grades have been applied.</li> <li>No metal equivalent values reported.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</li> <li>If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (eg 'downhole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable. Only rockchips (point data) is presented.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Figures in body of text.</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>All results are reported as Table 1</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>All meaningful and material information is reported.</li> </ul>
Further work	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Further work on the reported exploration targets will involve:</li> <li>-Soil sampling program to assess extent of mineralization</li> <li>-Petrographic and mineragraphic analysis of alteration and mineralization from collected rock samples</li> <li>Age dating of intrusions collected from surface rock chips, i.e. Monzonite</li> <li>Review and assess the aeromag, further geophysical method is proposed (i.e Deep penetrating IP) to fully assess the potential of the prospect.</li> </ul>

Section 1 Sampling Techniques and Data – Wellington Project - Ponto Corridor Prospect – Soil  
Sampling using Power Auger

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Soil sampling at Ponto used Power Auger for the program. The hole was sunk as close as possible to the target horizon or bedrock to obtain samples of the decomposed rock.</li> <li>Soil samples were generally collected to a depth 30cm and 50cm to permit easy collection of samples.</li> <li>The samples were sieved to -2mm or -80 mesh with sample weights typically &gt; 60g. Where soils were damp to sieve, coarser samples were collected (~500g)</li> <li>The samples are considered to effectively represent the residual soil at point of collection.</li> <li>Soil samples comprise ~300g unsieved material which is submitted to lab for pulverising and assaying. Samples collected on 200 x 100m grid.</li> <li>Samples were dried, pulverised and sieved at the Lab (passing 80 micron) to produce at least 60g sub sample for analysis by AuME-TL43 Low Level Gold in Soils and Sediments and MS-MS41.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>One-person Power Auger method with 40mm diameter screw</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Sample recovery was assessed visually via average sample size collected in kraft bag.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>A short geological description of each sample was taken at the time of collection. Sample description was recorded by the collecting geologist.</li> <li>The description is qualitative: Prospect/Target Name; Sample number, coordinates, coordinate system and survey control method; Sample weight, depth (from and to intervals if auger sampling), colour, Mesh size (if not sieved then it should be recorded that the sample is a bulk sample), Grain size distribution (relative percentages of different sized material), texture, Moisture content is recorded to give an indication of the effect this may have had on the soil colour and the potential where wet samples are collected for contamination between samples, lithology, alteration, Regolith regime (depositional or residual regime)</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>The sample preparation of soil samples followed industry best practice in sample preparation involving oven drying, coarse crushing followed by pulverisation of the entire sample (total prep) using grinding.</li> <li>Field duplicate samples were collected.</li> <li>Sample sizes were sufficiently large to sample a good representation of the local geology.</li> </ul>

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>Samples were delivered to ALS Chemex, in Orange NSW.</li> <li>Average sample weight was ~300g.</li> <li>Standard assay procedures performed by a reputable assay lab, (ALS Group), were undertaken.</li> <li>Soil samples analysed by AuME-TL43 (374 samples) and MS-MS41 (12 samples).</li> <li>Internal ALS QC results are reported along with sample values in the final analytical report.</li> <li>QAQC protocols are documented and involve the use of certified reference material (CRM's) as assay standard.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Original sample data sheets and files have been retained and were used to validate the contents of the company's database against the original assay.</li> <li>The raw assay data were reviewed and verified by company's Exploration Manager – NSW.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>A handheld GPS was used to locate each sample. GPS accuracy is +/- 5m for easting and northing coordinates.</li> <li>Coordinate system GDA_94, Zone 55.</li> <li>Topographic control is maintained by use of widely available government datasets.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Auger holes and soil samples were preferentially located in prospective areas. Sample spacing was typically 200 x 100m.</li> <li>No sample compositing has been applied.</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>The orientations of structures were inferred from geophysical imagery and mapping. No sampling bias is thought to be present.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Samples were placed in kraft bag with unique sample numbers.</li> <li>Once delivered from the field the samples were housed in secure premises prior to laboratory submission by Emmerson's contractor. Samples were placed in sealed polyweave bags for transport to the assay laboratory.</li> <li>Digital data was emailed to the Exploration Manager - NSW.</li> <li>The assay laboratory confirms that all samples have been received and that no damage has occurred during transport.</li> <li>Results data was emailed to the Exploration Manager - NSW. While samples are being processed in the Lab they are considered to be secure.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li><u>No formal audit has been completed on the samples being reported.</u></li> </ul>



## Section 2 Reporting of Exploration Results – Wellington Project - Ponto Corridor Prospect – Soil Sampling using Power Auger

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>Ponto Corridor is within EL8463.</li> <li>EL8463 is located in central New South Wales, approximately 15km west of Wellington.</li> <li>EL8463 falls within the Wellington (8632) and Dubbo (8732) 1:100,000 map sheets</li> <li>EL8463 is comprised numerous landholdings which are farmed for a variety of crops including wheat, canola, oats, and barley; as well as grazing for sheep and cattle.</li> <li>The tenement is 100% held by Lachlan Resources (Emmerson Resources).</li> <li>EL8463 is in good standing and no known impediments exist.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The exploration maturity for EL8463 for near surface/outcropping mineralisation is believed to be high given the more than 30 years aggressive exploration</li> </ul> <p>Ponto Area:</p> <ul style="list-style-type: none"> <li>Australian Anglo American Group (in JV with Metals Exploration Ltd) explored the area from 1973-1976</li> <li>Mines Exploration Pty Ltd and Electrolytic Zinc Company explored the area from 1977 – 1981.</li> <li>Newcrest Mining Ltd focused on the Ponto East and West from 1990 -1992.</li> <li>CRA took out a large tenement package in search of porphyry Cu - Au mineralisation from 1993 – 1998.</li> <li>Newcrest returned to investigate magnetic anomalies and was encouraged by hydrothermal alteration in monzonite from 1998 - 2000</li> <li>Mount Isa Mines (MIM) targeted bulk tonnage porphyry mineralization from 2001 - 2002</li> <li>Rimfire explored the area from 2007 to 2011 focusing on the Ponto Ordovician monzonite along a regional shear structure.</li> <li>Newmont looked at the Ponto area between 2012 and 2014</li> <li>Minotaur Exploration Ltd is the last company that undertook exploration on the west section of Ponto Area from 2010 to 2015.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>EL8463 is well located in the Molong Volcanic Belt within Ordovician volcanic and intrusive rocks of the Macquarie Arc that are host to the majority of the significant mineral deposits in the region. The main targets are alkalic porphyry Au-Cu mineralisation. Other styles of mineralisation which had been investigated within the tenement includes epithermal, skarn, shear and intrusion hosted mineralisation.</li> <li>The Ordovician Oakdale Formation crops out as a NS trending bodies through the central and eastern section of EL8463 and is host to a number of small gold and copper occurrences in the area.</li> <li>Porphyry mineralisation are centred in and around quartz monzonite porphyry complexes, and within EL8463 the obvious highest priority target is the Ponto Area located on the northern section of the EL. The high priority Ponto area (Ponto East, Ponto West and Whites) is located on the north section where historic copper workings are within chalcopyrite-bearing quartz veins in sheared volcanics, sediments, conglomerate and tuff sequence.</li> <li>Possible epithermal style Au and shear zone hosted precious-base metals mineralisation were also explored by several companies targeting the Gunners Dam, Owens Shaft, Walmer-Trounce, Hill 4S, Neurea and Higgins Reef corridors located within the south section of EL8463. Two gold occurrences east of Neurea located on the SE section of EL8463 represent two other areas of similar style mineralisation target, with numerous alluvial gold workings associated with fragments and small</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>outcrops of fine grained chalcedonic silica, and ferruginous veinlets in sediments and volcanics.</p> <ul style="list-style-type: none"> <li>Preliminary age dating of the intrusive outcrop (Monzonite?) at Ponto sampled by Emmerson yielded an Early Ordovician to Middle Ordovician age (<math>481.4 \pm 2.2</math> Ma - zircon U-Pb and <math>472 \pm 15</math> Ms – apatite – UTAS-CODES).</li> </ul>
Drillhole information	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: <ul style="list-style-type: none"> <li>easting and northing of the drillhole collar</li> <li>elevation or RL of the drillhole collar</li> <li>dip and azimuth of the hole</li> <li>downhole length and interception depth</li> <li>hole length.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>See Table 2 for details of Auger soils and results.</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>No length-weighting or cut-off grades have been applied.</li> <li>No metal equivalent values reported.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</li> <li>If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (eg 'downhole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Figures in body of text.</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>See Table 2</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>All meaningful and material information is reported.</li> </ul>
Further work	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Further work on the reported exploration targets will involve: <ul style="list-style-type: none"> <li>Collect epidote and chlorite samples for "green rock" study</li> <li>Petrographic and mineragraphic analysis of alteration and mineralization from collected rock samples</li> <li>Review and assess the aeromag, further geophysical method is proposed (i.e Deep penetrating IP) to fully assess the potential of the prospect.</li> </ul> </li> </ul>

## Mining Tenements Held at 30 June 2018 (Northern Territory, Australia)

Tenement	Name	Interest	Tenement	Name	Interest	Tenement	Name	Interest
EL10114	McDougall	100%	HLDC100	Sally No Name	100%	HLDC92	Wiso Basin	100%
EL10124	Speedway	100%	HLDC101	Sally No Name	100%	HLDC93	Wiso Basin	100%
EL10313	Kodiak	100%	HLDC37	Warrego, No 1	100%	HLDC94	Warrego, No.4	100%
EL10406	Montana	100%	HLDC39	Warrego Min,	100%	HLDC95	Warrego, No.3	100%
EL23285	Corridor 2	100%	HLDC40	Warrego, No 2	100%	HLDC96	Wiso Basin	100%
EL23286	Corridor 3	100%	HLDC41	Warrego, No 3	100%	HLDC97	Wiso Basin	100%
EL23905	Jackie	100%	HLDC42	Warrego, S7	100%	HLDC98	Wiso Basin	100%
EL26594	Bills	100%	HLDC43	Warrego , S8	100%	HLDC99	Wiso, No.3 pipe	100%
EL26595	Russell	100%	HLDC44	Warrego, No.2	100%	MA23236	Udall Road	100%
EL26787	Rising Ridge	100%	HLDC45	Warrego, No.1	100%	MA27163	Eagle	100%
EL27011	Snappy Gum	100%	HLDC46	Warrego, No.1	100%	MA30798	Little Ben	100%
EL27136	Reservoir	100%	HLDC47	Wiso Basin	100%	MCC174	Mt Samuel	100%
EL27164	Hawk	100%	HLDC48	Wiso Basin	100%	MCC203	Galway	100%
EL27408	Grizzly	100%	HLDC49	Wiso Basin	100%	MCC211	Shamrock	100%
EL27537	Chappell	100%	HLDC50	Wiso Basin	100%	MCC212	Mt Samuel	85%
EL27538	Mercury	100%	HLDC51	Wiso Basin	100%	MCC239	West Peko	100%
EL28601	Malbec	100%	HLDC52	Wiso Basin	100%	MCC240	West Peko	100%
EL28602	Red Bluff	100%	HLDC53	Wiso Basin	100%	MCC287	Mt Samuel	100%
EL28603	White Devil	100%	HLDC54	Wiso Basin	100%	MCC288	Mt Samuel	100%
EL28618	Comstock	100%	HLDC55	Warrego, No.4	100%	MCC308	Mt Samuel	85%
EL28760	Delta	100%	HLDC56	Warrego, No.5	100%	MCC316	The Trump	100%
EL28761	Quartz Hill	100%	HLDC58	Wiso Line, No.6	100%	MCC317	The Trump	100%
EL28775	Trinity	100%	HLDC59	Warrego, No.6	100%	MCC334	Estralita Group	100%
EL28776	Whippet	100%	HLDC69	Wiso Basin	100%	MCC340	The Trump	100%
EL28777	Bishops Creek	100%	HLDC70	Wiso Basin	100%	MCC341	The Trump	100%
EL28913	Amstel	100%	HLDC71	Wiso Basin	100%	MCC344	Mt Samuel	100%
EL29012	Tetley	100%	HLDC72	Wiso Basin	100%	MCC364	Estralita	100%
EL29488	Rocky	100%	HLDC73	Wiso Basin	100%	MCC365	Estralita	100%
EL30167	Dolomite	100%	HLDC74	Wiso Basin	100%	MCC366	Estralita	100%
EL30168	Caroline	100%	HLDC75	Wiso Basin	100%	MCC524	Gibbet	100%
EL30301	Grey Bluff East	100%	HLDC76	Wiso Basin	100%	MCC55	Mondeuse	100%
EL30488	Colombard	100%	HLDC77	Wiso Basin	100%	MCC56	Shiraz	100%
EL30584	Juno North	100%	HLDC78	Wiso Basin	100%	MCC57	Mondeuse	100%
EL30614	Franc	100%	HLDC79	Wiso Basin	100%	MCC66	Golden Forty	100%
EL30748	Battery Hill	100%	HLDC80	Wiso Basin	100%	MCC67	Golden Forty	100%
EL31249	Prosperity	100%	HLDC81	Wiso Basin	100%	MCC9	Eldorado	100%
EL9403	Jess	100%	HLDC82	Wiso Basin	100%	MCC925	Brolga	100%
EL9958	Running Bear	100%	HLDC83	Wiso Basin	100%	MCC926	Brolga	100%
ELA27539	Telegraph	100%	HLDC84	Wiso Basin	100%	ML22284	Billy Boy	100%
ELA27902	Lynx	100%	HLDC85	Wiso Basin	100%	ML23216	Chariot	100%
ELA30505	Golden East	100%	HLDC86	Wiso Basin	100%	ML23969	Gecko	100%
ELA30516	Barkly Highway	100%	HLDC87	Wiso Basin	100%	ML29917	Havelock	100%
ELA30746	Mule	100%	HLDC88	Wiso Basin	100%	ML29919	Orlando	100%
ELA30749	Mary Anne	100%	HLDC89	Wiso Basin	100%	ML30096	Malbec	100%
ELA31355	Mt Samuel	100%	HLDC90	Wiso Basin	100%	ML30176	Queen of Sheeba	100%
EMP31008	Warrego Gravel 1	100%	HLDC91	Wiso Basin	100%	ML30177	North Star	100%

## Mining Tenements Held at 30 June 2018 (Northern Territory, Australia)

Tenement	Name	Interest	Tenement	Name	Interest	MLC219	Perserverance	30%
ML30322	Verdot	100%	ML31076	Jubilee	100%			
ML30620	Kia Ora	100%	ML31123	Gibbet1	100%	MLC220	Perserverance	30%
ML30623	Pinnacles South	100%	ML31651	White Devil	100%	MLC221	Perserverance	30%
ML30636	Jacqueline the	100%	MLA29526	Blue Moon	100%	MLC222	Perserverance	30%
ML30712	Battery Hill	100%	MLA29527	Wiso	100%	MLC223	Perserverance	30%
ML30713	The Pup	100%	MLA29528	Wiso	100%	MLC224	Perserverance	30%
ML30714	Pedro	100%	MLA29529	Wiso	100%	MLC253	Mulga 1	100%
ML30715	Red Bluff North	100%	MLA29530	Wiso	100%	MLC254	Mulga 1	100%
ML30716	Comstock	100%	MLA29531	Wiso	100%	MLC255	Mulga 1	100%
ML30742	Black Cat	100%	MLA29532	Wiso	100%	MLC256	Mulga 2	100%
ML30743	True Blue	100%	MLC120	Cabernet / Nav	100%	MLC257	Mulga 2	100%
ML30744	Scheurber	100%	MLC121	Cabernet / Nav	100%	MLC258	Mulga 2	100%
ML30745	Bomber	100%	MLC122	Cabernet / Nav	100%	MLC259	Mulga 2	100%
ML30781	Smelter	100%	MLC123	Cabernet / Nav	100%	MLC260	Mulga 2	100%
ML30782	Dark	100%	MLC127	Peko East Ext 4	100%	MLC261	Mulga 2	100%
ML30783	Semillon	100%	MLC129	Peko Sth- East	100%	MLC32	Golden Forty	100%
ML30784	Noir	100%	MLC130	Golden Forty	100%	MLC323	Gecko	100%
ML30815	Blue Moon	100%	MLC131	Golden Forty	100%	MLC324	Gecko	100%
ML30864	Verdelho	100%	MLC132	Golden Forty	100%	MLC325	Gecko	100%
ML30865	Dong Dui	100%	MLC133	Golden Forty	100%	MLC326	Gecko	100%
ML30867	Thurgau	100%	MLC134	Golden Forty	100%	MLC327	Gecko	100%
ML30870	Rising Star	100%	MLC135	Golden Forty	100%	MLC342	Tinto	100%
ML30871	Colombard	100%	MLC136	Golden Forty	100%	MLC343	Rocky Range	100%
ML30872	The Extension	100%	MLC137	Golden Forty	100%	MLC344	Rocky Range	100%
ML30873	Pinot	100%	MLC138	Golden Forty	100%	MLC345	Rocky Range	100%
ML30874	Merlot	100%	MLC139	Golden Forty	100%	MLC346	Rocky Range	100%
ML30875	Grenache	100%	MLC140	Golden Forty	100%	MLC347	Golden Forty	100%
ML30885	Zinfandel	100%	MLC141	Golden Forty	100%	MLC348	Brolga	100%
ML30886	EXP212	100%	MLC142	Golden Forty	100%	MLC349	Brolga	100%
ML30888	Warrego	100%	MLC143	Golden Forty	100%	MLC35	Golden Forty	100%
ML30893	Troy	100%	MLC144	Golden Forty	100%	MLC350	Brolga	100%
ML30909	Archimedes	100%	MLC146	Golden Forty	100%	MLC351	Brolga	100%
ML30910	Marsanne	100%	MLC147	Golden Forty	100%	MLC352	Golden Forty	100%
ML30911	Wolseley	100%	MLC148	Golden Forty	100%	MLC353	Golden Forty	100%
ML30912	Ivanhoe	100%	MLC149	Golden Forty	100%	MLC354	Golden Forty	100%
ML30937	Gris	100%	MLC15	Eldorado 4	100%	MLC355	Golden Forty	100%
ML30938	EXP195	100%	MLC16	Eldorado 5	100%	MLC36	Golden Forty	100%
ML30945	Metallic Hill	100%	MLC176	Chariot	100%	MLC362	Lone Star	100%
ML30946	Sauvignon	100%	MLC177	Chariot	100%	MLC363	Lone Star	100%
ML30947	Warrego East	100%	MLC18	West Gibbet	100%	MLC364	Lone Star	100%
ML31021	Gecko 3	100%	MLC182	Riesling	100%	MLC365	Lone Star	100%
ML31023	Gecko 1	100%	MLC183	Riesling	100%	MLC366	Lone Star	100%
ML31055	EXP 80	100%	MLC184	Riesling	100%	MLC367	Lone Star	100%
ML31057	Durif	100%	MLC21	Gecko	100%	MLC368	Lone Star	100%
ML31074	Rocky Range	100%	MLC217	Perserverance	30%	MLC369	Lone Star	100%
ML31075	Franc	100%	MLC218	Perserverance	30%	MLC37	Golden Forty	100%



## Mining Tenements Held at 30 June 2018 (Northern Territory, Australia)

Tenement	Name	Interest	Tenement	Name	Interest	Tenement	Name	Interest
MLC370	Lone Star	100%	MLC529	Cats	100%	MLC645	Estralita	100%
MLC371	Lone Star	100%	MLC53	Golden Forty	100%	MLC654	TC8 Lease	100%
MLC372	Lone Star	100%	MLC530	Lone Star	100%	MLC66	Traminer	100%
MLC373	Lone Star	100%	MLC535	Eldorado No 5	100%	MLC67	Traminer	100%
MLC374	Lone Star	100%	MLC54	Golden Forty	100%	MLC683	Eldorado	100%
MLC375	Lone Star	100%	MLC546	The Mount	100%	MLC69	Gecko	100%
MLC376	Mulga 1	100%	MLC55	Golden Forty	100%	MLC692	Warrego Mine	100%
MLC377	Mulga 1	100%	MLC558	New Hope	100%	MLC70	Gecko	100%
MLC378	Mulga 1	100%	MLC56	Golden Forty	100%	MLC705	Apollo 1	100%
MLC379	Mulga 1	100%	MLC57	Perserverence	30%	MLC78	Gecko	100%
MLC38	Memsahib East	100%	MLC576	Golden Forty	100%	MLC85	Gecko	100%
MLC380	Mulga 1	100%	MLC577	Golden Forty	100%	MLC86	Gecko	100%
MLC381	Mulga 1	100%	MLC581	Eldorado ABC	100%	MLC87	Gecko	100%
MLC382	Mulga 1	100%	MLC582	Eldorado ABC	100%	MLC88	Gecko	100%
MLC383	Mulga 1	100%	MLC583	Eldorado ABC	100%	MLC89	Gecko	100%
MLC384	Mulga 2	100%	MLC584	Golden Forty	100%	MLC90	Gecko	100%
MLC385	Mulga 2	100%	MLC585	Golden Forty	100%	MLC91	Carraman/Klond	100%
MLC386	Mulga 2	100%	MLC586	Golden Forty	100%	MLC92	Carraman/Klond	100%
MLC387	Mulga 2	100%	MLC591	TC8 Lease	100%	MLC93	Carraman/Klond	100%
MLC4	Peko Extended	100%	MLC592	TC8 Lease	100%	MLC94	Carraman/Klond	100%
MLC406	Comet	100%	MLC593	TC8 Lease	100%	MLC95	Carraman/Klond	100%
MLC407	Comet	100%	MLC594	TC8 Lease	100%	MLC96	Osprey	100%
MLC408	Comet	100%	MLC595	TC8 Lease	100%	MLC97	Osprey	100%
MLC409	Comet	100%	MLC596	TC8 Lease	100%			
MLC432	Mulga 1	100%	MLC597	TC8 Lease	100%			
MLC48	Tinto	100%	MLC598	Golden Forty	100%			
MLC49	Mt Samual	100%	MLC599	Mt Samuel	85%			
MLC498	Eldorado	100%	MLC601	TC8 Lease	100%			
MLC499	Eldorado	100%	MLC602	TC8 Lease	100%			
MLC5	Peko Extended	100%	MLC603	TC8 Lease	100%			
MLC50	Eldorado Anom	100%	MLC604	TC8 Lease	100%			
MLC500	Eldorado	100%	MLC605	TC8 Lease	100%			
MLC501	Eldorado	100%	MLC606	Lone Star	100%			
MLC502	Eldorado	100%	MLC607	Lone Star	100%			
MLC503	Eldorado	100%	MLC608	Lone Star	100%			
MLC504	Eldorado	100%	MLC609	Lone Star	100%			
MLC505	Eldorado	100%	MLC610	Lone Star	100%			
MLC506	Marion Ross	100%	MLC611	Lone Star	100%			
MLC51	Eldorado Anom	100%	MLC612	Lone Star	100%			
MLC518	Ellen, Eldorado	100%	MLC613	Lone Star	100%			
MLC52	Muscadel	100%	MLC614	Lone Star	100%			
MLC520	Great Northern	100%	MLC615	Lone Star	100%			
MLC522	Aga Khan	100%	MLC616	Lone Star	100%			
MLC523	Eldorado	100%	MLC617	Mt Samuel	50%			
MLC524	Susan	100%	MLC619	True Blue	85%			
MLC527	Mt Samual	100%	MLC626	Caroline	100%			
MLC528	Dingo,	100%	MLC644	Enterprise	100%			

## Mining Tenements Held at 30 June 2018 (New South Wales, Australia)

Tenement	Name	Interest
EL6226	Kadungle	80%
EL8463	Wellington	90%
EL8464	Fifield	90%
EL8465	Temora	90%
EL8519	Kiola	90%
EL8652	Sebastopol	90%