

## Quarterly Report for the Period Ending 31 March 2018

27 April 2018

**Emmerson Resources Limited**  
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**ASX Code:** ERM  
405.5 million ordinary shares

**Market Cap**  
~A\$33.7 million (31-03-18)

**Available Cash**  
A\$4.6 million (31-03-18)

**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

- New targets of gold, copper and cobalt identified in Emmerson's 2600km<sup>2</sup> Tennant Creek Project
  - **Spectacular results returned from Jasper Hills, located within the Northern Corridor at Tennant Creek (out of quarter – ASX:10 April 2018):**
    - **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
    - **NSDD100: 11m at 0.22g/t gold, 0.18% cobalt and 2.56% copper** (from 117 to 128m) and includes:
      - 3m at 0.34g/t gold, 0.55% cobalt and 5.80% copper and
      - 1m at 0.48g/t gold, 1.07% cobalt and 5.71% 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
- 2,100m drill program to commence in April (weather permitting), aimed at extending high grade gold
- Proposed restructure of the Tennant Creek project provides Emmerson with 100% of high-grade gold projects and revenue from the small mines
- New epithermal vein system intersected in last drill hole at Kadungle NSW
- Discovery drill hole at Kadungle intersects:
  - 3m at 0.67g/t gold from 299m (drill hole KDD017)
  - 10m at 0.35% copper from 475m (drill hole KDD017) which includes:
    - 1m at 1.63% copper
- High grade Cobalt from rock chip samples in NSW

## Tennant Creek gold-copper project (figure 1)

### 1. Jasper Hills Project

Emmerson Resources Limited (“Emmerson” ASX: ERM) is pleased to announce that a series of spectacular assay results has been returned from the Jasper Hills Project, located within the Northern Corridor of Emmerson’s 100% owned Tennant Creek Project (out of quarter – ASX:10 April 2018).

Drill core 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 2).

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 3).

Mineralisation at Jasper Hills is typically associated with the footwall or core of the ironstones, in the oxide zone some 50m below the surface and 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 4). 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 (figure 5).

### 2. Tennant Creek Joint Venture with Evolution Mining Restructure

Under the proposed restructure, Emmerson will retain a 100% (instead of 35% under the current terms of the TCMF JV) of all the gold dominant assets, prospects and associated exploration ground. Keeping in mind that the TCMF is one of Australia’s highest-grade goldfields and is where Emmerson (and partners) have made the first new discoveries for over a decade. These discoveries have been underpinned by a substantial investment by Evolution in acquiring new data, along with the application of new exploration tools. Directly leading to the discovery of a new generation of hematite hosted, high grade gold projects such as seen at Edna Beryl and Mauretania (figure 6).

This data and inhouse knowledge from testing and trialling of new concepts and technology remains with Emmerson. As do all the other assets such as the Tennant Creek Exploration Base, Warrego mill and extensive drill core library – enabling Emmerson to easily scale up exploration and operations around its small mines and attract potential new joint venture partners.

Under the proposed restructure, Evolution will take a 100% holding in the tenements (or parts of them) that contain the Gecko, Goanna, and Orlando copper-gold prospects, constituting some 6% of the entire TCMF land position (see figure 6). These prospects are predominantly copper rich but have potential for gold grades to increase at depth. Further exploration of these prospects will require deep drilling. Evolution intends to test these prospects for potential new discoveries of scale at depth and along strike.

The ASX has now confirmed that Listing Rule 10.1 applies to the restructure and accordingly Emmerson will now seek the shareholder approval necessary to proceed with the restructure. Documentation for this shareholder meeting has been dispatched to shareholders with the general meeting of Emmerson shareholders to be held on 18 May 2018.

### 3. April Drill Programs

Emmerson is pleased to announce that our first drill program for the 2018 season will commence in April (weather permitting) (Figure 7). This high impact program consists of:

- 8 RC drill holes in the Edna Beryl district aimed at delineating extensions outside of the Edna Beryl Mine area. Previous drilling and gravity geophysics completed in 2017 provided indications of new mineralised hematite ironstones.

Some of the highlights of this drilling (which were not followed up) include: EBWRC083 some 200m to the west of the Edna Beryl mine which intersected a thick shear zone containing chlorite-hematite ironstone and quartz veining that assayed 7m at 1.33g/t gold from 171m including 2m at 4.31g/t gold and 1m at 6.60g/t gold (ASX: 18 September 2017).

Further mineralisation immediately to the north of the Edna Beryl mine was intersected in drill holes EBWRC061 (assaying 12m at 0.59% copper with 0.07g/t gold from 90m) and; EBWRC062 (assaying 15m at 0.25% copper and 0.03g/t gold from 210m). This intersection included some higher grades of 1m at 2.80% copper and anomalous gold (ASX: 18 September 2017);

- 5 RC drill holes to test for extensions and continuity at a promising new discovery called Mauretania. The discovery drill hole, MTRC006 intersected a hematite-chlorite ironstone, assaying 31m at 3.64g/t gold including 19m at 5.51g/t gold from 63m (ASX: 12 October 2015);
- The remainder of the drill program is spread across potential small mines projects and aimed at providing further geological and grade information for future planning purposes.

### 4. 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 announced, 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 will now see 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, and the largest being Chariot – with a JORC resource of ~100,000ozs 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 – 180,000ozs of high grade gold (at 15-20g/t as indicated from the historical reports).

## **New South Wales gold-copper projects (figure 8)**

### **1. Kadungle Project**

A recently completed drilling campaign at the Kadungle project in NSW has identified potential for both deeper copper-gold (ASX 13 December 2017) and now, shallow epithermal gold at the Trig prospect (figure 9). Construction of the drill access track at Trig revealed extensive boulders of epithermal quartz. Excitingly, 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 Au (figure 10).

Drilling at the Mt Leadley prospect has intersected further copper and 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 0.35g/t copper incl. 1m at 1.63% copper)(figure 11). This zone of elevated copper is associated with sheeted chalcopyrite-pyrite veins within pervasive chlorite-sericite-pyrite altered host rocks (drill core in figure 12). 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 (figure 11).

As previously advised, Emmerson has notified Aurelia that it has met all the terms of the stage 1 and stage 2 earn-in to acquire an 80% equity interest in the entire project. An application for the registration of this interest has been submitted to the NSW Department of Planning & Environment – Resources & Energy.

### **2 Other NSW Projects**

Early stage reconnaissance across Emmerson's four new projects in NSW continues to produce promising results and validates our proprietary area selection process which utilises predictive 2 and 3D targeting models. Whilst the strategy continues to focus on the high value metals of gold and copper, some opportunistic exploration revealed an interesting cobalt mineralisation within our Fifield project. Whilst early days, rock chip results of up to 0.55% cobalt and 0.27% copper warrant further investigation, particularly as this area has seen little previous exploration yet is adjacent to historic workings (figure 8).

## **June Quarter Activities for Tennant Creek**

The following activities are planned for the June quarter:

- Commencement and completion of the first drill program for 2018;
- Commencement and completion of an airborne survey utilising the NRG Xcite system over the northern corridor;
- Continuation of the planning, permitting and approval process for the additional small mines ;
- Continuation of the permitting and approval for the modular mill at TC8;
- Planning and commercial terms for the underground exploration drive and drill program at Edna Beryl.

## **June Quarter Activities for NSW Projects**

The following activities are planned for the June quarter:

- Assessment of drill results from Kadungle
- Follow-up assessment, mapping and sampling of the cobalt – copper anomalism from recent rock chip sampling;
- Ongoing exploration over the Fifield, Wellington, Kiola and Temora/Sebastopol projects.

## Announcements

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

09/03/2018 Half Year Accounts  
09/03/2018 Exploration Update  
22/02/2018 Presentation RIU Explorers Conference  
19/02/2018 Restructure of Tennant Creek Mineral Field Joint Venture  
09/02/2018 Exploration Update  
31/01/2018 Quarterly Cashflow Report  
17/01/2018 Quarterly Activities Report  
04/01/2018 Change in Substantial Holding  
02/01/2018 Lapse of unlisted options  
02/01/2018 Change in Directors Interest Notice

Emmerson Resources Limited

A handwritten signature in black ink that reads "R Bills". The signature is written in a cursive, slightly slanted style.

**Mr. Rob Bills**  
**Managing Director and Chief Executive Officer**

## **About Tennant Creek and Emmerson Resources**

The Tennant Creek Mineral Field (TCMF) is 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 announced the first gold pour from the high-grade Edna Beryl gold mine in December 2017. This mine is being operated under a Tribute Agreement with specialist small miner, the Edna Beryl Mining Company.

In addition, 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 overlying cover (plus farm lands) and a lack of exploration focus. Kadungle is a JV with Aurelia Metals covering 43km<sup>2</sup> adjacent to Emmerson's Fifield project.

On the 19<sup>th</sup> of February 2018, Emmerson notified the ASX that it had reached and executed an agreement with previous JV partner, Evolution Mining pertaining to the Tennant Creek Mineral Field JV. Under the proposed restructure, Emmerson retains 100% ownership of 2,600km<sup>2</sup> or 94% of the previous JV area that includes all the gold projects and 100% of the revenue from the small mines. In return Evolution takes 100% of the copper dominant projects of Orlando, Gecko and Goanna. This agreement needs approval by Emmerson shareholders at a meeting of shareholders to be held on 18 May 2018.

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.

### **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.*

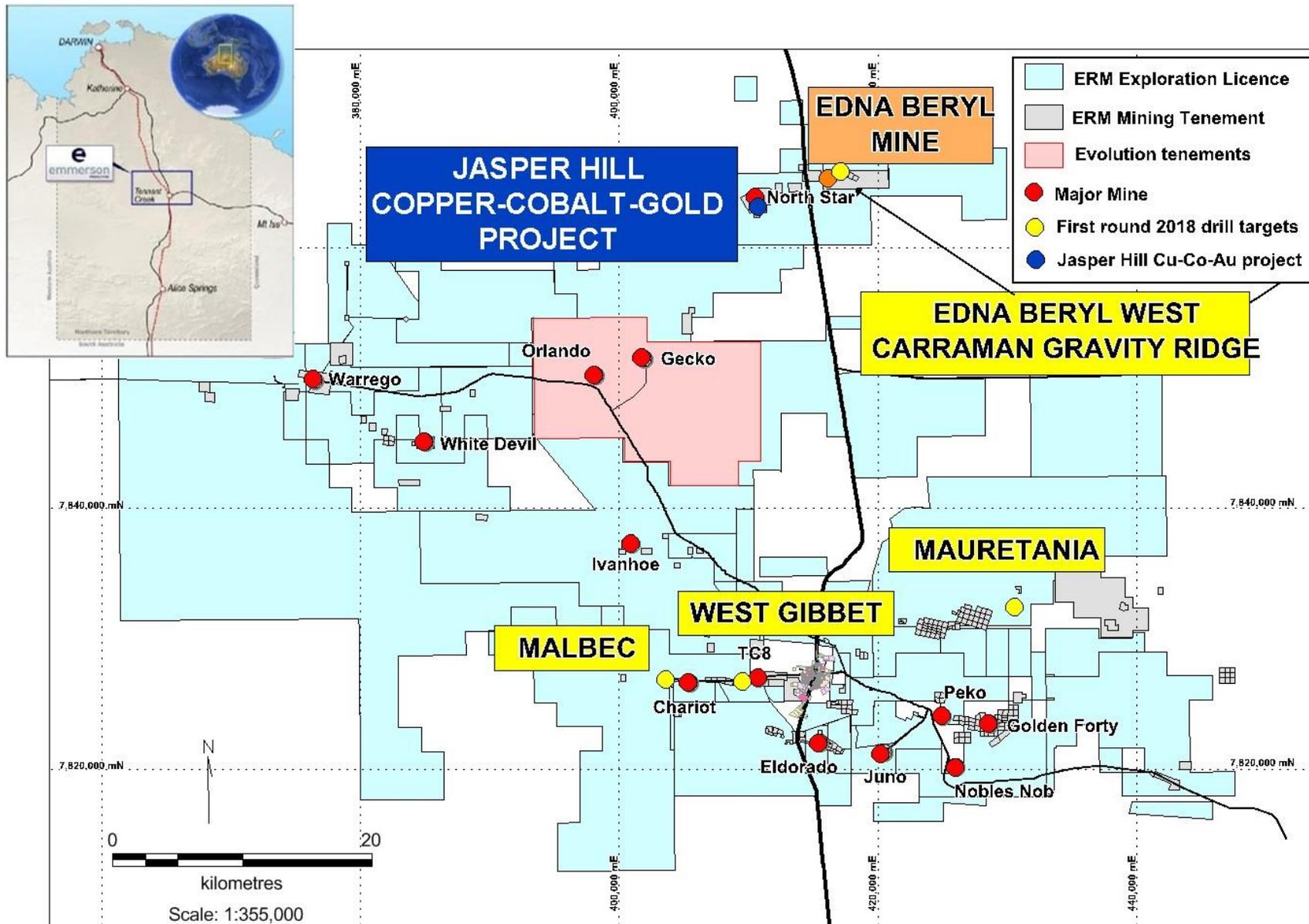
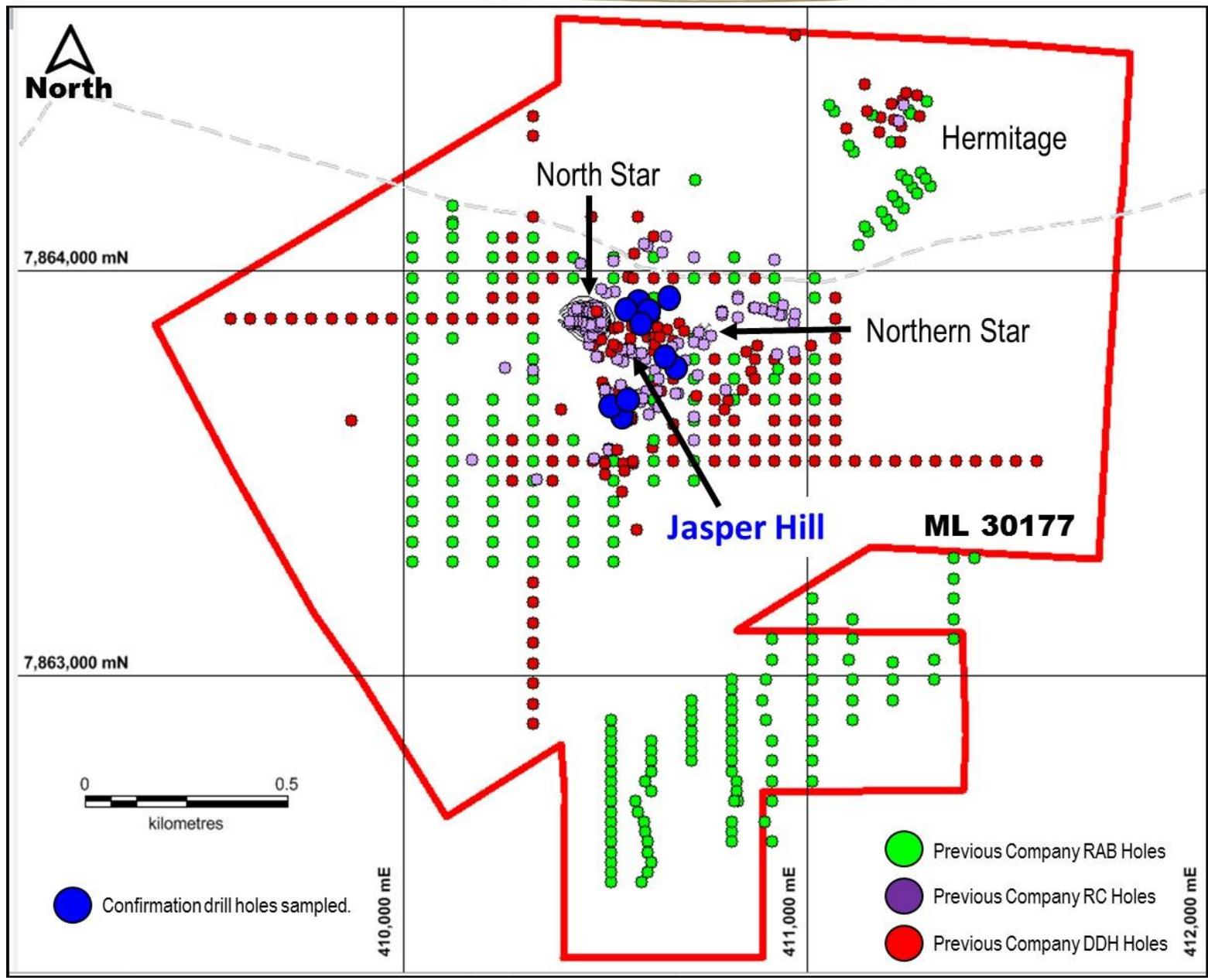
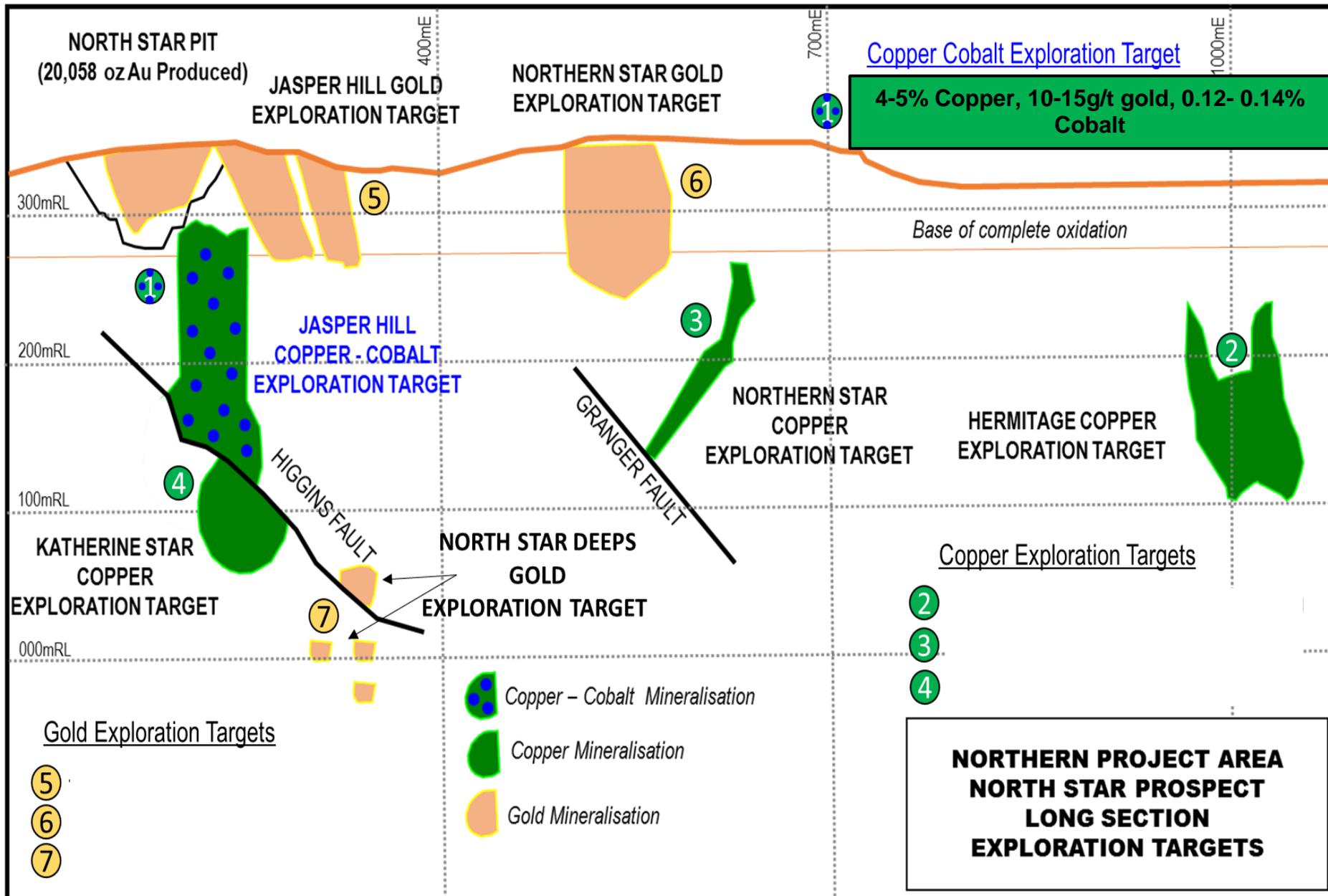


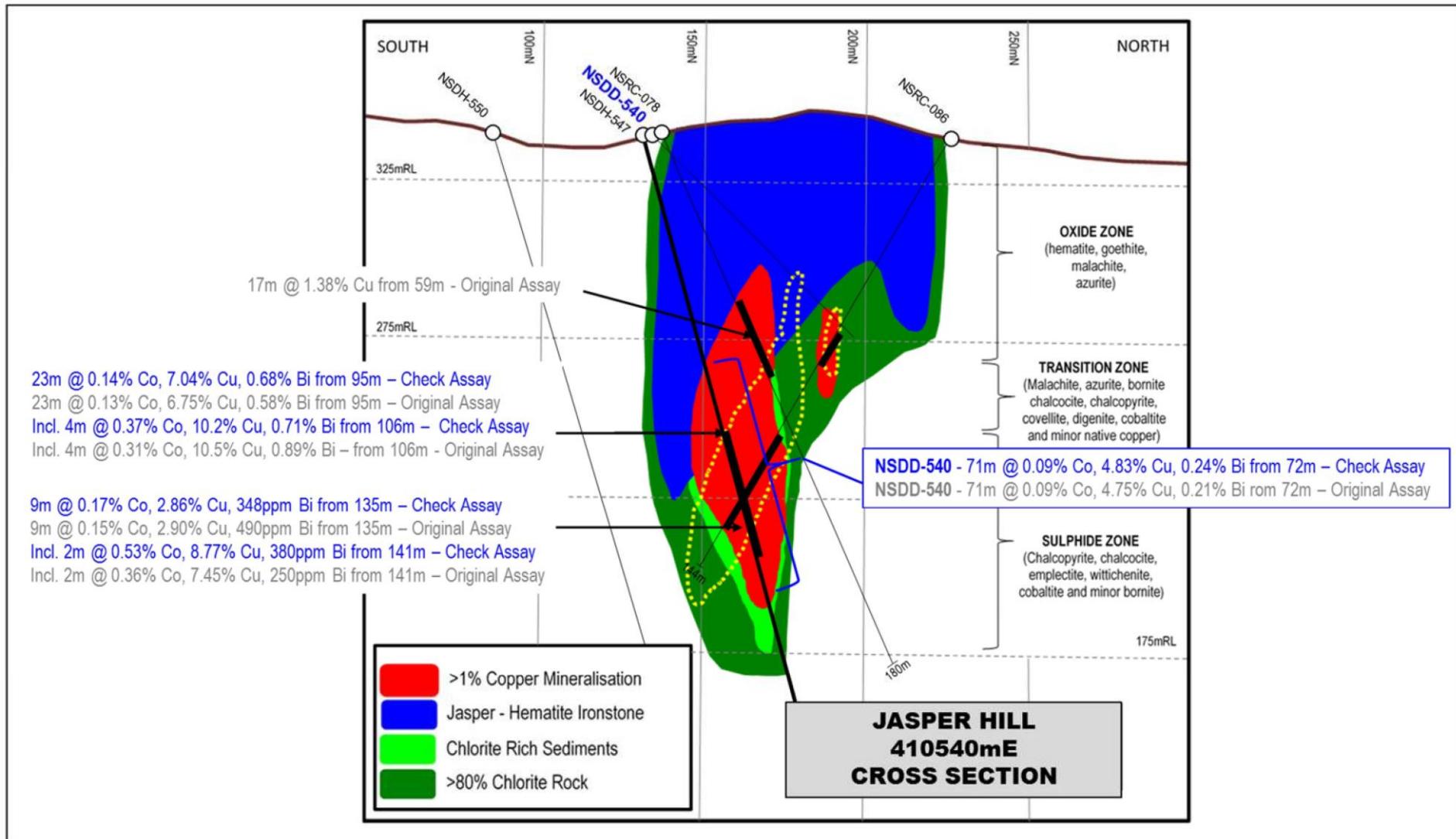
Figure 1: Location of Emmerson's tenement package (light blue), Jasper Hill copper-cobalt project and targets for our forthcoming drilling program (yellow dots)



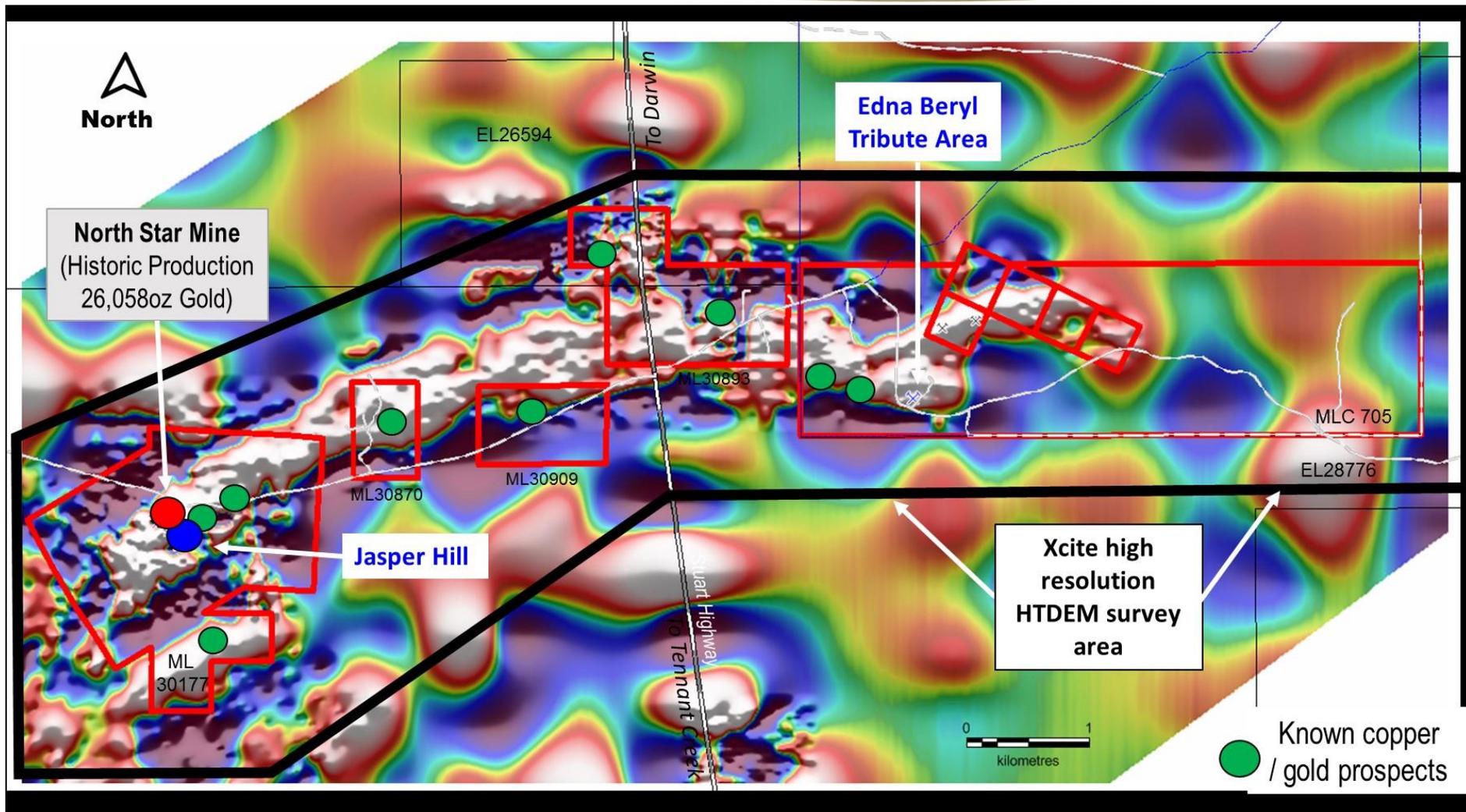
**Figure 2:** Location of Jasper Hill copper-cobalt project and position of confirmatory previous company drill hole collars (blue dots).



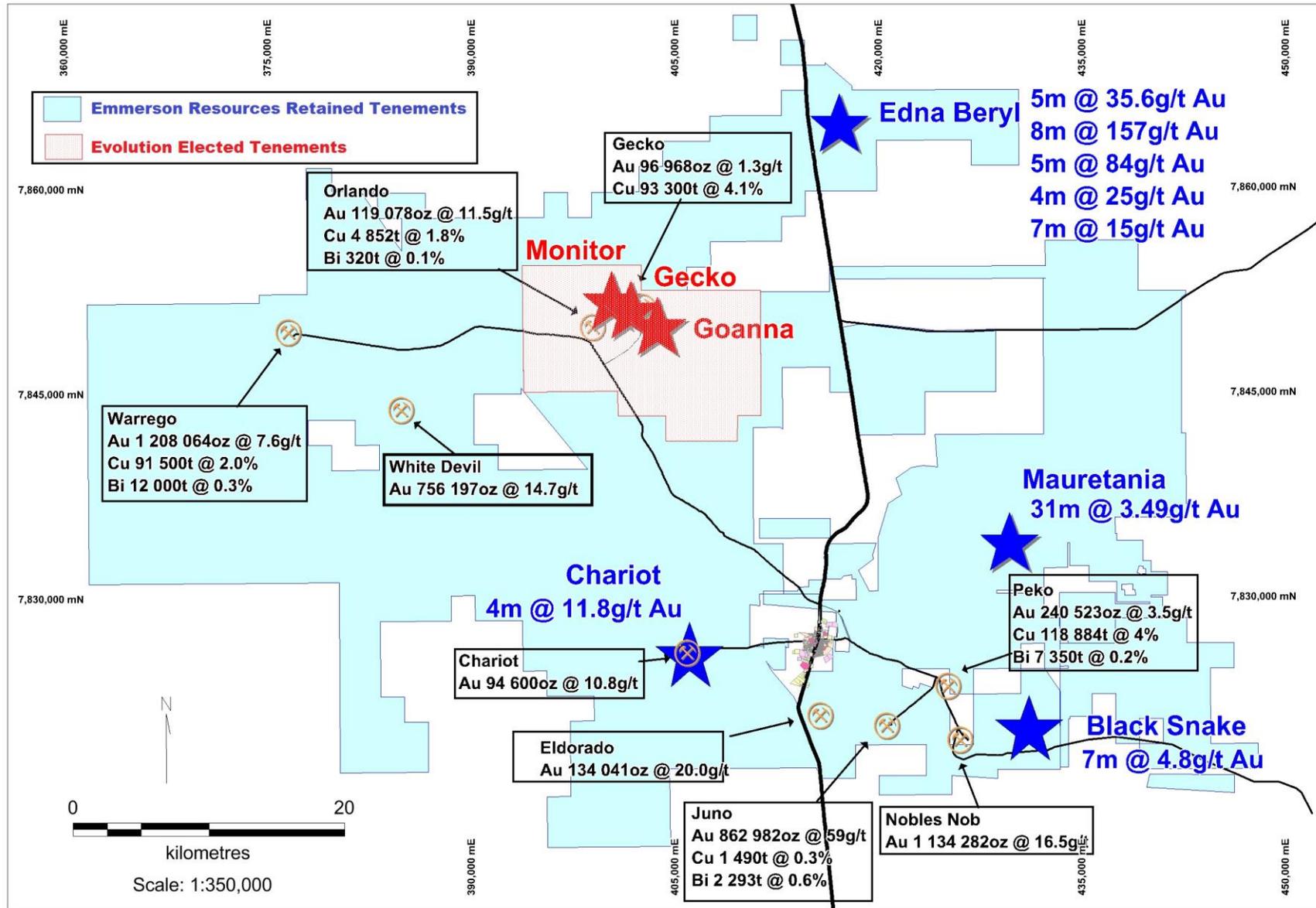
**Figure 3:** Long section highlighting Exploration Targets within the Northern Star project area. Note that these exploration targets are conceptual in nature and that there has been insufficient exploration to estimate a Mineral Resource. It is uncertain if further exploration will result in the estimation of a Mineral Resource.



**Figure 4:** Cross section 410540mE (looking west) Jasper Hill geology and copper – cobalt mineralisation. Note check assays (blue text) and original 1977 assays (grey text) compare well.



**Figure 5:** Location of the Northern Project Area tenements with known mineralisation (prospects) within a large gravity corridor (white colour = gravity high). Heavy black outline = area currently being flown by the NRG Xcite airborne electrical geophysical system looking for further copper, gold and cobalt



**Figure 6:** Proposed location of Emmerson’s 100% Tennant Creek project area (light blue) and the 100% Evolution owned, Gecko-Goanna and Orlando Area (red stipple). Note some of the significant intersections reported during the term of the JV (see various ASX Announcements).

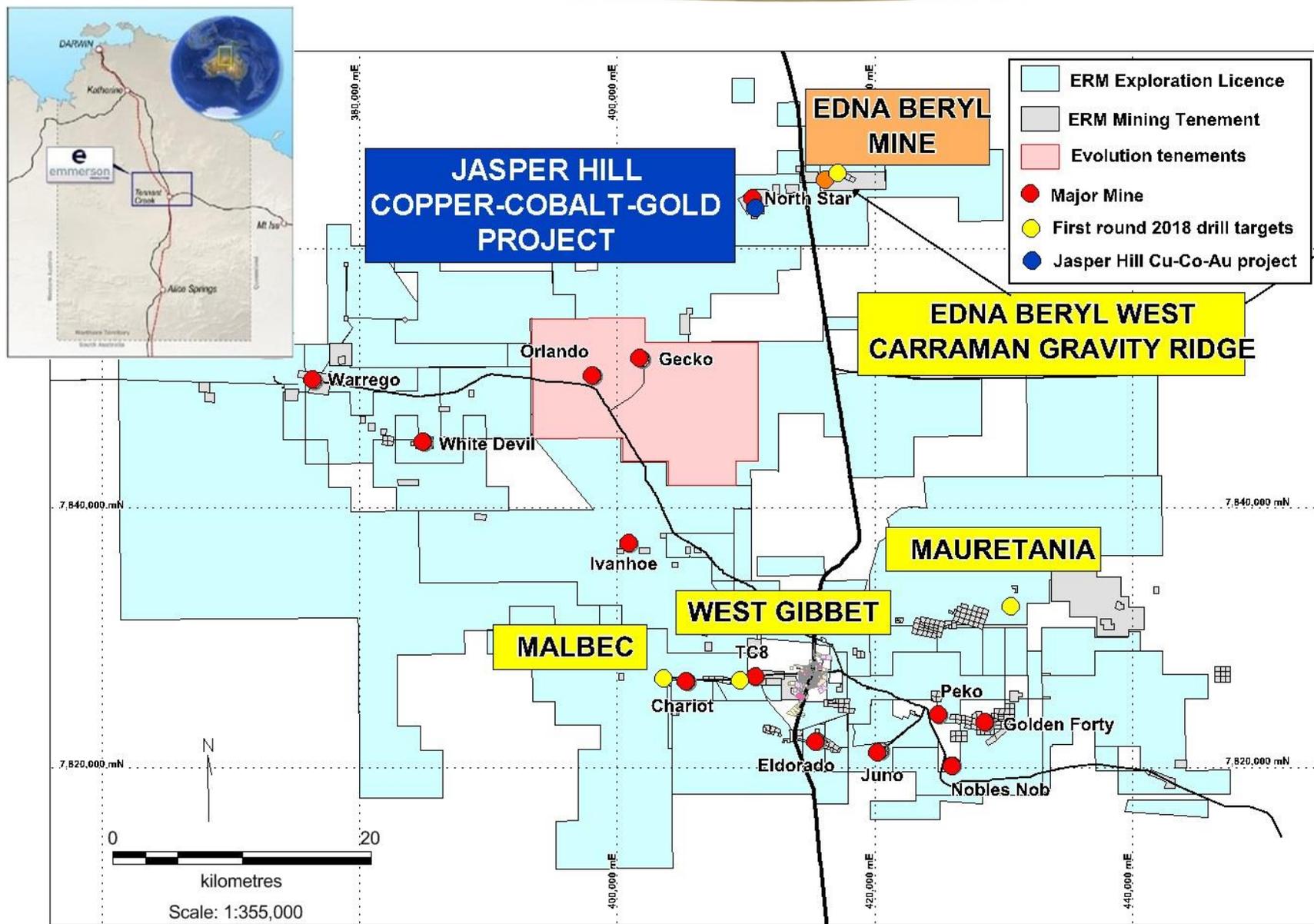
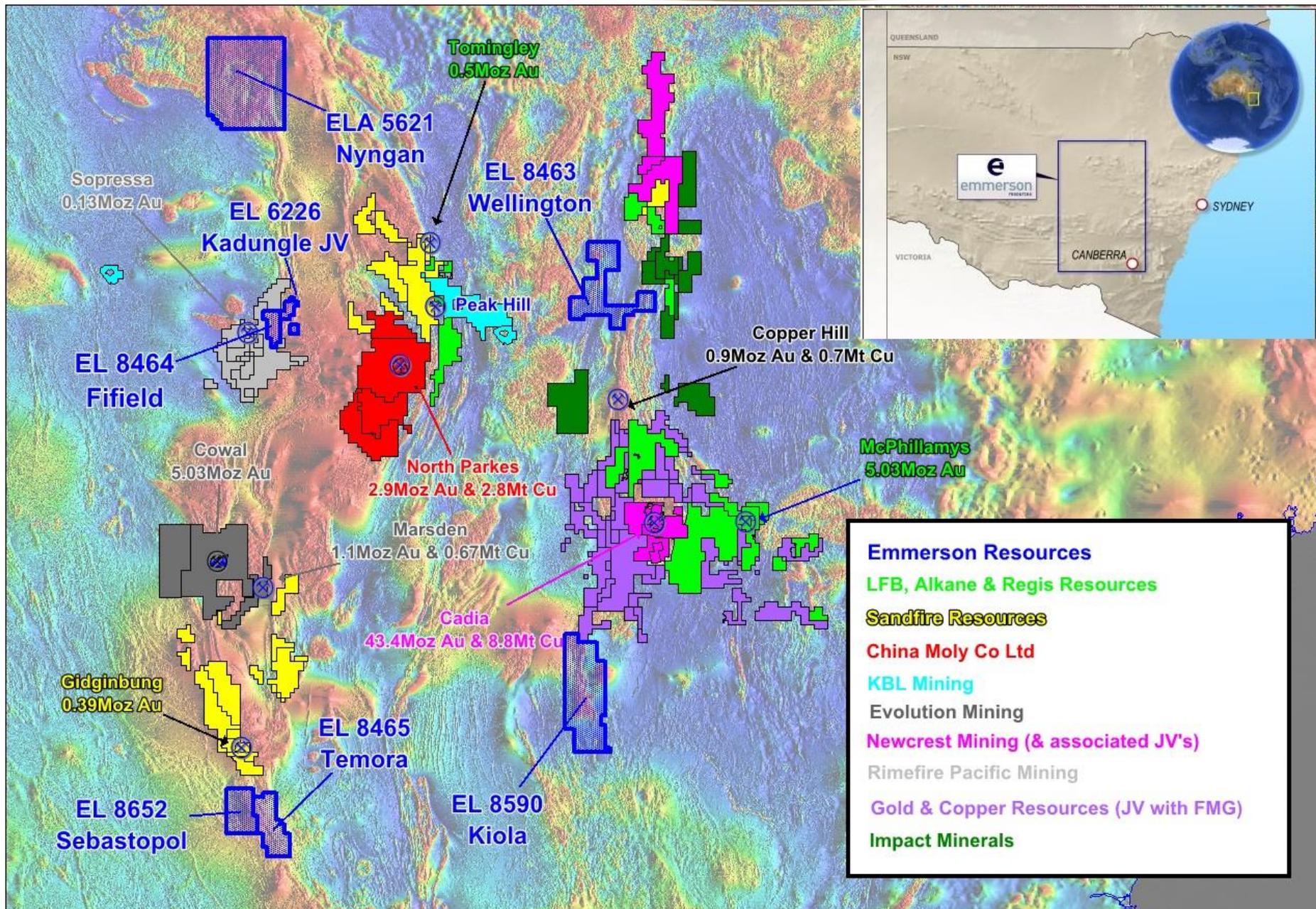
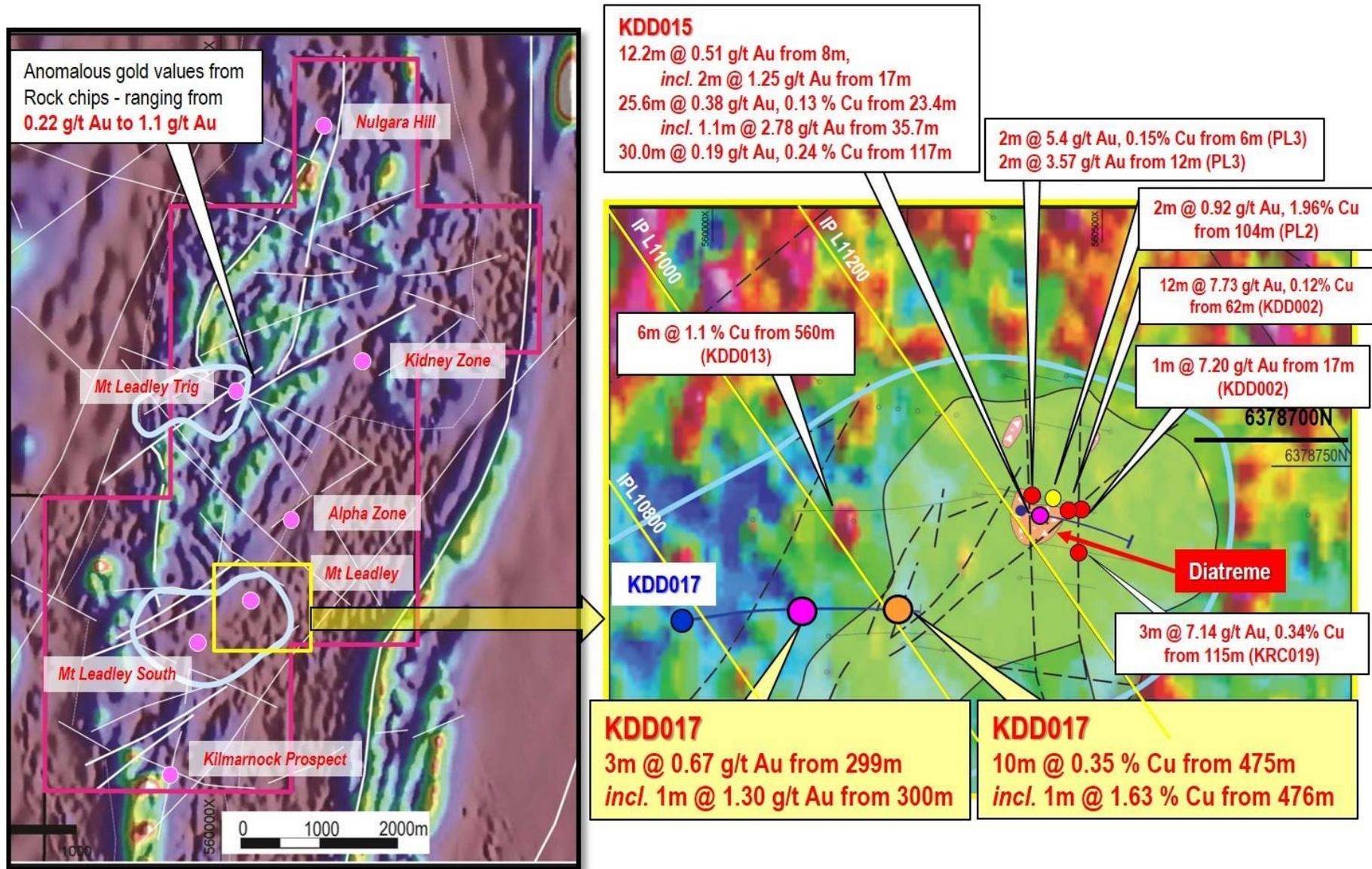


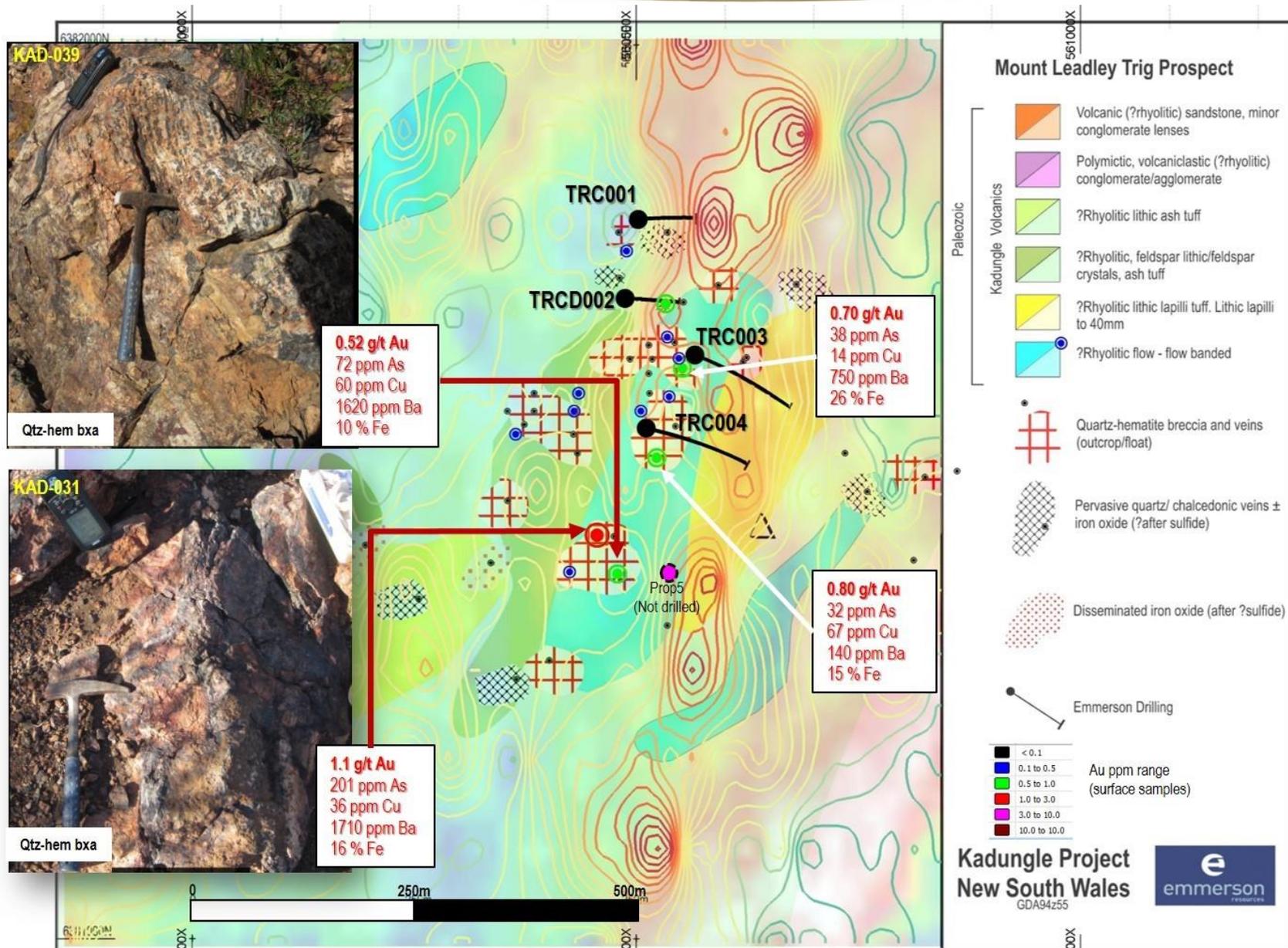
Figure 7: Location of Emmerson's tenement package (light blue), Jasper Hill copper-cobalt project and targets for our forthcoming drilling program (yellow dots).



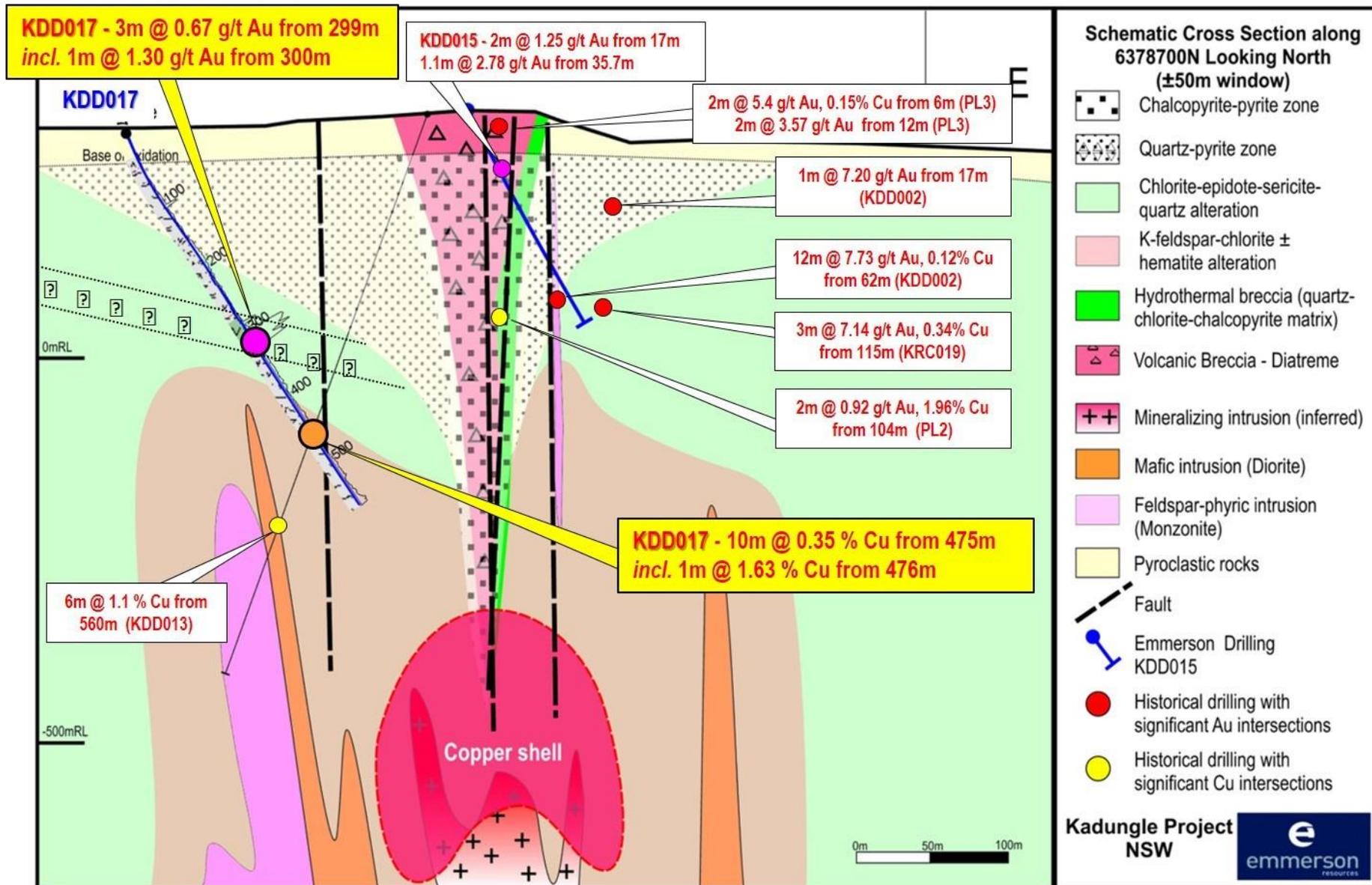
**Figure 8:** Location of Emmerson Resources NSW Projects (bold black outlines) plus major explorers and deposits within the Macquarie Arc (muted red colour=magnetic signature of the Macquarie Arc).



**Figure 9:** Plan of the Mt Leadley and Trig Prospects within the Kadungle Tenement. Background is the 1VD of the recent aeromagnetics with blue correlating to possible zones of magnetite destruction with associated hydrothermal alteration. Note ERM drill hole KDD017 and KDD015 plus historic intersections. Also shown are Mount Leadley geophysical IP survey (yellow line).



**Figure 10:** Plan showing the geology of Mount Leadley Trig prospect and location of Emmerson drilling. Note the distribution of mapped quartz-hematite breccia and veins and chalcedonic quartz veining, and selected significant assay results from surface rock samples (ASX Announcement 18 July 2017). The background image is the Gradient array resistivity map overlain with the chargeability contour.



**Figure 11:** Cross section of the interpreted geology from the recent drilling. Note the extensive chalcopyrite-pyrite and quartz-pyrite zones plus hydrothermal breccia at the margin of the volcanic breccia/diatreme. For reference, the red dots are historic intersections projected onto this section. KADD017 is shown with significant gold and copper intersections (see Figure 12 for photos).



**Figure 12:**

(left) Fifield Project - Rock Chip Sample FF011 returned Co (0.55%) and Cu (0.27%); Mn (1010 ppm), V (219ppm);

(below) Kadungle Project drill hole KDD017 – sheeted chalcopyrite ± pyrite veins, 2 – 10mm thick (from 476.6m) hosted in quartz – chlorite – sericite altered welded ignimbrite (KDD017 – 1m @ 1.63% Cu, 0.12 g/t Au).



**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
					<b>Incl.</b>	<b>151</b>	<b>156</b>	<b>5</b>	<b>0.17</b>	<b>0.40</b>	<b>3.27</b>	<b>0.02</b>	<b>0.80</b>	<b>28.4</b>	<b>0.54</b>	<b>63.4</b>	<b>0.01</b>	<b>0.37</b>
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
					<b>Incl.</b>	<b>307</b>	<b>308</b>	<b>1</b>	<b>0.04</b>	<b>0.35</b>	<b>4.57</b>	<b>0.01</b>	<b>0.13</b>	<b>35.1</b>	<b>0.47</b>	<b>79.0</b>	<b>0.01</b>	<b>1.75</b>
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
					<b>Incl.</b>	<b>122</b>	<b>125</b>	<b>3</b>	<b>0.34</b>	<b>0.55</b>	<b>5.80</b>	<b>0.01</b>	<b>0.07</b>	<b>23.2</b>	<b>0.34</b>	<b>421</b>	<b>0.20</b>	<b>3.66</b>
					<b>Incl.</b>	<b>123</b>	<b>124</b>	<b>1</b>	<b>0.48</b>	<b>1.07</b>	<b>5.71</b>	<b>0.01</b>	<b>0.04</b>	<b>19.1</b>	<b>0.48</b>	<b>442</b>	<b>0.36</b>	<b>2.55</b>
						138	147	9	0.68	0.15	4.05	0.63	0.04	26.4	0.17	113	0.17	2.31
<b>Incl.</b>	<b>144</b>	<b>146</b>	<b>2</b>	<b>2.20</b>	<b>0.32</b>	<b>5.60</b>	<b>1.98</b>	<b>0.06</b>	<b>19.9</b>	<b>0.37</b>	<b>160</b>	<b>0.43</b>	<b>4.33</b>					
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
					<b>Incl.</b>	<b>170</b>	<b>172</b>	<b>2</b>	<b>0.01</b>	<b>0.22</b>	<b>0.49</b>	<b>0.01</b>	<b>0.14</b>	<b>7.87</b>	<b>0.28</b>	<b>297</b>	<b>0.01</b>	<b>8.08</b>
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
					<b>Incl.</b>	<b>115</b>	<b>134</b>	<b>19</b>	<b>0.56</b>	<b>0.47</b>	<b>11.4</b>	<b>0.47</b>	<b>0.10</b>	<b>16.7</b>	<b>0.36</b>	<b>510</b>	<b>0.17</b>	<b>3.68</b>
						<b>134</b>	<b>136</b>	<b>2</b>	<b>50.1</b>	<b>0.09</b>	<b>10.5</b>	<b>0.23</b>	<b>0.11</b>	<b>9.55</b>	<b>0.09</b>	<b>348</b>	<b>0.03</b>	<b>4.42</b>
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
					<b>Incl.</b>	<b>106</b>	<b>110</b>	<b>4</b>	<b>1.35</b>	<b>0.37</b>	<b>10.2</b>	<b>0.71</b>	<b>0.11</b>	<b>7.67</b>	<b>0.42</b>	<b>0.34%</b>	<b>0.75</b>	<b>3.61</b>
						135	144	9	0.07	0.17	2.86	0.03	0.07	5.20	0.19	241	0.01	4.29
					<b>Incl.</b>	<b>141</b>	<b>143</b>	<b>2</b>	<b>0.09</b>	<b>0.53</b>	<b>8.77</b>	<b>0.04</b>	<b>0.02</b>	<b>2.22</b>	<b>0.64</b>	<b>164</b>	<b>0.01</b>	<b>3.22</b>
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
					<b>Incl.</b>	<b>127</b>	<b>132</b>	<b>5</b>	<b>0.25</b>	<b>0.36</b>	<b>2.92</b>	<b>1.29</b>	<b>0.18</b>	<b>24.0</b>	<b>0.45</b>	<b>426</b>	<b>0.03</b>	<b>3.95</b>
						138	146	8	0.06	0.19	1.28	0.02	0.18	18.13	0.20	329	0.01	7.23
					<b>Incl.</b>	<b>143</b>	<b>146</b>	<b>3</b>	<b>0.10</b>	<b>0.29</b>	<b>3.21</b>	<b>0.06</b>	<b>0.18</b>	<b>17.6</b>	<b>0.32</b>	<b>389</b>	<b>0.03</b>	<b>7.49</b>
						284	299	15	6.72	0.26	2.56	0.24	0.29	24.5	0.33	939	0.14	8.12
<b>Incl.</b>	<b>296</b>	<b>298</b>	<b>2</b>	<b>0.78</b>	<b>1.32</b>	<b>2.00</b>	<b>0.85</b>	<b>0.32</b>	<b>24.5</b>	<b>0.17</b>	<b>0.12%</b>	<b>0.48</b>	<b>4.38</b>					
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
						<b>91</b>	<b>94</b>	<b>3</b>	<b>0.09</b>	<b>0.43</b>	<b>5.17</b>	<b>0.01</b>	<b>0.31</b>	<b>21.66</b>	<b>0.09</b>	<b>442</b>	<b>0.02</b>	<b>3.51</b>
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
					<b>Incl.</b>	<b>155</b>	<b>160</b>	<b>5</b>	<b>0.21</b>	<b>0.23</b>	<b>5.66</b>	<b>640</b>	<b>0.20</b>	<b>22.8</b>	<b>0.30</b>	<b>482</b>	<b>0.07</b>	<b>8.49</b>
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
					<b>Incl.</b>	<b>307</b>	<b>308</b>	<b>1</b>	<b>0.04</b>	<b>0.35</b>	<b>4.57</b>	<b>26.0</b>	<b>0.13</b>	<b>35.1</b>	<b>0.47</b>	<b>79</b>	<b>0.01</b>	<b>1.75</b>
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
					<b>Incl.</b>	<b>141</b>	<b>147</b>	<b>6</b>	<b>0.92</b>	<b>0.19</b>	<b>5.09</b>	<b>0.94%</b>	<b>0.24</b>	<b>23.0</b>	<b>0.21</b>	<b>138</b>	<b>0.24</b>	<b>3.09</b>
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
					<b>Incl.</b>	<b>120</b>	<b>135</b>	<b>15</b>	<b>10.5</b>	<b>0.18</b>	<b>13.2</b>	<b>0.59%</b>	<b>0.10</b>	<b>12.8</b>	<b>0.34</b>	<b>497</b>	<b>0.19</b>	<b>3.62</b>
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
					<b>Incl.</b>	75	81	6	0.11	0.07	6.29	0.01	0.04	27.4	0.08	705	0.01	0.02
					<b>Incl.</b>	<b>85</b>	<b>116</b>	<b>31</b>	<b>0.69</b>	<b>0.12</b>	<b>6.83</b>	<b>0.42%</b>	<b>0.13</b>	<b>20.4</b>	<b>0.16</b>	<b>1162</b>	<b>0.20</b>	<b>4.18</b>
						131	145	14	0.06	0.12	4.17	0.04	0.09	6.97	0.13	302	0.01	4.88
<b>Incl.</b>	<b>132</b>	<b>134</b>	<b>2</b>	<b>0.07</b>	<b>0.03</b>	<b>14.9</b>	<b>0.11%</b>	<b>0.15</b>	<b>11.0</b>	<b>0.03</b>	<b>408</b>	<b>0.01</b>	<b>5.06</b>					
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
						<b>144</b>	<b>148</b>	<b>4</b>	<b>0.14</b>	<b>0.22</b>	<b>3.33</b>	<b>635</b>	<b>0.18</b>	<b>15.7</b>	<b>0.24</b>	<b>516</b>	<b>0.03</b>	<b>7.27</b>
						292	299	7	3.51	0.46	4.48	0.37%	0.27	23.8	0.59	1060	0.24	6.18
					<b>Incl.</b>	<b>293</b>	<b>299</b>	<b>6</b>	<b>0.67</b>	<b>0.53</b>	<b>4.88</b>	<b>0.42%</b>	<b>0.27</b>	<b>23.4</b>	<b>0.68</b>	<b>1056</b>	<b>0.26</b>	<b>5.29</b>
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
					<b>Incl.</b>	<b>85</b>	<b>88</b>	<b>3</b>	<b>0.27</b>	<b>0.07</b>	<b>9.14</b>	<b>0.01</b>	<b>0.05</b>	<b>19.3</b>	<b>0.11</b>	<b>196</b>	<b>0.02</b>	<b>1.25</b>
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> |
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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
<b>Sampling techniques</b>	<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>• 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>• Diamond drill core was located within Emmerson’s (ERM) core shed located on our Warrego site.</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>
<b>Drilling techniques</b>	<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>• 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> <li>•</li> </ul>
<b>Drill sample recovery</b>	<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</i></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>

Criteria	JORC Code explanation	Commentary
	<p><i>may have occurred due to preferential loss/gain of fine/coarse material.</i></p>	
<b>Logging</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li><i>The total length and percentage of the relevant intersections logged.</i></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>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 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> <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>
<b>Sub-sampling techniques and sample preparation</b>	<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> </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>
<b>Quality of assay data and laboratory tests</b>	<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) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i></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>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>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> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <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>
<b>Verification of sampling and assaying</b>	<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 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>
<b>Location of data points</b>	<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>
<b>Data spacing and distribution</b>	<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>
<b>Orientation of data in relation to geological structure</b>	<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>
<b>Sample security</b>	<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> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>• Sample receipt is logged into ERM's sample ledger.</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>
<b><i>Audits or reviews</i></b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• <b><u>No formal audit has been completed on the historical samples.</u></b></li> <li>• <b><u>An internal review of the sampling techniques, QAQC protocols and data collection has not been conducted by Emmerson.</u></b></li> </ul>

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

Criteria	JORC Code explanation	Commentary
<p><b>Mineral tenement and land tenure status</b></p>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></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 subject to terms and agreements under Emmerson's ILUA.</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>
<p><b>Exploration done by other parties</b></p>	<ul style="list-style-type: none"> <li>• <i>Acknowledgment and appraisal of exploration by other parties.</i></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>

Criteria	JORC Code explanation	Commentary
<b>Geology</b>	<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>• 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> <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>
<b>Drillhole information</b>	<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>easting and northing of the drillhole collar</i></li> <li>○ <i>elevation or RL of the drillhole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>downhole length and interception depth</i></li> <li>○ <i>hole length.</i></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>
<b>Data aggregation methods</b>	<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> <li>• <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></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>
<b>Relationship between mineralization</b>	<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</i></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> </ul>

Criteria	JORC Code explanation	Commentary
<b>widths and intercept lengths</b>	<p><i>mineralisation with respect to the drillhole angle is known, its nature should be reported.</i></p> <ul style="list-style-type: none"> <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>The drill hole spacing may also be influenced due to access and topographic conditions.</li> </ul>
<b>Diagrams</b>	<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>
<b>Balanced reporting</b>	<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>
<b>Other substantive exploration data</b>	<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>Normandy Gold Pty Limited completed an “in house” Resource Estimate and Geological Report for the Jasper Hill Exploration Target.</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> <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>
<b>Further work</b>	<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
<b>Sampling techniques</b>	<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>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>
<b>Drilling techniques</b>	<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>24 RC drill holes for 5,564m were drilled in this current drill program (EBWRC058-083)</li> <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 <sup>3/4</sup> inch, face sampling bit.</li> <li>Diamond drilling utilizes NQ<sup>2</sup> size drill bit, standard tube.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <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>
<b>Drill sample recovery</b>	<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>• 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>• There were no “wet samples” during this program.</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>
<b>Logging</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></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>• 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 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</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>material is stored in the structure table of Emmerson's database.</p> <ul style="list-style-type: none"> <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> <li>Logging is qualitative in nature and records interpreted lithology, mineralogy, mineralisation, weathering, colour and other features of the samples</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<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>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>
<b>Quality of assay data and laboratory tests</b>	<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) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i></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</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>database through an external database administrator (contractor).</p> <ul style="list-style-type: none"> <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>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></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> <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>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• <i>Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></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 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 and all collar positions have been validated by the Exploration Manager.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></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> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <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 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>
<b>Orientation of data in relation to geological structure</b>	<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>
<b>Sample security</b>	<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>Sample receipt is logged into ERM's sample ledger.</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>
<b>Audits or reviews</b>	<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>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
<b>Mineral tenement and land tenure status</b>	<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>
<b>Exploration done by other parties</b>	<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>Giants Reef Mining conducted all known “modern” exploration in and around the Edna Beryl Exploration Target Area.</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 Company (formally known as Craig’s Mining Services) in a Tribute 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>
<b>Geology</b>	<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</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>different source but following the same structurally controlled path.</p> <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. 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>
<b>Drillhole information</b>	<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>
<b>Data aggregation methods</b>	<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>
<b>Relationship between mineralization widths and intercept lengths</b>	<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>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>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Figures in body of text.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>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.</i></p>	
<p><b>Balanced reporting</b></p>	<ul style="list-style-type: none"> <li>• <i>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.</i></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>
<p><b>Other substantive exploration data</b></p>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Geotechnical logging was carried out on all historical and current diamond drill holes for recovery, RQD 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 completed.</li> <li>• Higher gold grade intersections selected for screen fire assay.</li> <li>•</li> </ul>
<p><b>Further work</b></p>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></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 – Kadungle Mount Leadley and Mount Leadley Trig prospects

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>	<p><b>Mount Leadley prospect and Mount Leadley Trig prospect</b></p> <ul style="list-style-type: none"> <li>The diamond tails for KDD014, KDD016, KDD017 and TRCD002 were drilled with diamond core to obtain high quality samples that were logged for lithological, structural, geotechnical, density and other attributes.</li> <li>Diamond core were NQ<sup>3</sup> sizes.</li> <li>Core was sampled on geological intervals (0.5 m to 1.5 m), cut into half core using a standard brick saw. Sample weights of approximately 3.0kg were crushed, dried and pulverised (ALS Lab in Orange) to produce a 25g sub sample for ME-ICP61 analysis by four acid digest with ICP -AES finish &amp; Fire Assay (Au) finish.</li> <li>RC chips (KADD016 precollar, TRCD002 precollar, TRC001, TRC003 and TRC004) were riffle split on site to obtain 3m composite samples from which 2.5–3.0kg sample was pulverised (ALS Lab in Orange) to produce a 25g charge ME-ICP61 analysis by four acid digest with ICP -AES finish &amp; Fire Assay (Au) finish.</li> </ul> <p><b>Fifield Area (Forrest View prospect)</b></p> <ul style="list-style-type: none"> <li>Outcropping rock samples were taken in the field some were taken from hill sides others from creek bed exposures. Samples were pulverised (ALS Lab in Orange) to produce a 25g charge ME-ICP61 analysis by four acid digest with 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>	<p><b>Mount Leadley prospect</b></p> <ul style="list-style-type: none"> <li>Three diamond holes for 596m were drilled for Mount Leadley (all diamond tail) and 119.7m of RC.</li> <li>KDD014 is a diamond tail from an existing historical hole (KDD014 – 120m depth), NQ<sup>3</sup> core diameter is 45.0mm</li> <li>KDD016 has been drilled with RC from collar to 119.7m (pre-collar RC); RC hole size 130mm. KDD016 diamond tail from 119.7m to 470.6m, NQ<sup>3</sup> core diameter is 45.0mm</li> <li>KADD017 is a diamond tail from an existing historical hole (KRC021 – 222 depth). KDD017 diamond tail from 222m to 573.6m, NQ<sup>3</sup> core diameter is 45.0mm</li> <li>The core was oriented using downhole core orientation equipment provided by the drilling company.</li> </ul> <p><b>Mount Leadley Trig Prospect</b></p> <ul style="list-style-type: none"> <li>Four RC holes for 569m were drilled for Mount Leadley Trig; and one diamond tail for 55.4m (using NQ3)</li> <li>RC hole is 130m; NQ3 core diameter is 45.0mm</li> <li>TRC001, TRC003 and TRC004 were drilled with RC.</li> <li>TRC002 was drilled with from down to 65m, then changed to diamond tail down to 120.4m (EOH). The core was oriented using downhole core orientation equipment provided by the drilling company.</li> <li>See table in text for details.</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>	<p><b>Mount Leadley prospect and Mount Leadley Trig prospect</b></p> <ul style="list-style-type: none"> <li>Recoveries are considered good and representative.</li> <li>RQD measurements and core loss has been recorded logging sheets and retained for reference.</li> <li>RC samples were visually checked for recovery, moisture and contamination.</li> <li>Any issues or concerns were recorded in the database.</li> <li>The cyclone and splitter are routinely cleaned with more attention spent during the drilling of damp or wet samples.</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>
Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically</li> </ul>	<p><b>Mount Leadley prospect and Mount Leadley Trig prospect</b></p>

Criteria	JORC Code explanation	Commentary
	<p><i>and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></p> <ul style="list-style-type: none"> <li><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li><i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>Standard operating procedures are employed for logging all the holes RC and Diamond core samples</li> <li>Drill hole logging data is directly entered into field laptop computer. Standardised code were used for lithology, oxidation, alteration, presence of sulphide information are recorded.</li> <li>Structural logging records 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 structure table of the database.</li> <li>RQD logging records core lengths, recovery, hardness and weathering.</li> <li>Magnetic susceptibility data were collected for diamond core every 1m meter as per procedure.</li> <li>Magnetic susceptibility data for all individual 1m RC samples was collected.</li> <li>All drill core was digitally photographed. (Wet and Dry)</li> <li>Magnetic susceptibility data for all individual 1m RC samples was collected.</li> </ul> <p><b>Fifield Area (Forrest View prospect)</b></p> <ul style="list-style-type: none"> <li>A brief geological description of the sample and the outcrop from which it was taken at the time of collection.</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>	<p><b>Mount Leadley prospect and Mount Leadley Trig prospect</b></p> <ul style="list-style-type: none"> <li>Standard operating procedures are used for sampling RC and diamond core samples.</li> <li>Areas of geological interest were identified by the company geologist contractor and the halved core samples dispatched for assay.</li> <li>Diamond core (NQ3) was halved using an automatic core saw. Half core from the same side was dispatched for analysis.</li> <li>The sample preparation of diamond core followed industry best practice in sample preparation involving oven drying, coarse crushing of the half core followed by pulverisation of the entire sample (total prep) using grinding.</li> <li>RC duplicate samples were routinely submitted with duplicate assays returning acceptable comparison results.</li> <li>Standards are routinely inserted in the sampling batch for QAQC purposes.</li> <li>Pulverised material not required by the laboratory (pulps) including duplicate samples were returned, and are held in Orange, NSW</li> </ul> <p><b>Fifield Area (Forrest View prospect)</b></p> <ul style="list-style-type: none"> <li>The samples were hammered off outcrops using a rock hammer. Each sample would weigh between 1 – 3kg.</li> <li>These samples are considered point data and may be biased towards mineralised samples.</li> <li>The size of the sample taken is appropriate for this work.</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) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i></li> </ul>	<p><b>Mount Leadley prospect, Mount Leadley Trig prospect and Fifield Area (Forrest View prospect)</b></p> <ul style="list-style-type: none"> <li>Field QC procedures involve the use of certified reference material (CRM's) as assay standards, including blanks and duplicates.</li> <li>Average sample weight was 3 to 4kgs.</li> <li>Samples were crushed and pulverised to 95% passing 75 micron</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.</li> <li>A prepared sample (0.25 g) is digested with perchloric, nitric, hydrofluoric and hydrochloric acids. The residue is topped up with dilute hydrochloric acid and the resulting solution is analyzed by inductively coupled plasma-atomic emission spectrometry. Results are corrected for spectral interelement interferences.</li> <li>Four acid digestions are able to dissolve most minerals; however, although the term "near- total " is used, depending on the sample matrix, not all elements are quantitatively extracted. A final 50 gram split was then fire assayed with an AA-26 finish.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>• QAQC protocols are documented and involve the use of certified reference material (CRM's) as assay standards, and include blanks, duplicates.</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 Kadungle Mount Leadley prospects based on the style of mineralisation, the thickness and mineral consistency of the intersection(s).</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<p><b>Mount Leadley prospect, Mount Leadley Trig prospect and Fifield Area (Forrest View prospect)</b></p> <ul style="list-style-type: none"> <li>• Drill Hole Data including: meta data, orientation methods, any gear left in the drill hole, lithological, mineral, structural, geotechnical, density, survey, sampling, magnetic susceptibility is collected and entered directly into an excel spread sheet using drop down codes. When complete the spreadsheet is emailed to the geological database administrator, the data is validated and secured through a relational database.</li> <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, down hole survey results and the geological logging.</li> <li>• No twin drillholes have been completed at the Kadungle Mount Leadley prospects.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>• <i>Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<p><b>Mount Leadley prospect, Mount Leadley Trig prospect and Fifield Area (Forrest View prospect)</b></p> <ul style="list-style-type: none"> <li>• Sample locations are shown in Tables 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 contractor.</li> <li>• Collar survey accuracy is +/- 5 mm for easting, northing and elevation coordinates.</li> <li>• Co-ordinate system GDA_94, Zone 55.</li> <li>• Downhole survey measurements were collected every 30-40 for diamond drill hole using REFLEX EZ-SHOT</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 then an average from the last non-affected and the next non affected measurement is used.</li> <li>• For Mount Leadley Trig prospect, no azimuth was taken/ measured from TRC001, TRC003 and TRC004 due to magnetic interference from the rod.</li> <li>• A hand-held GPS was used to identify all rock chip locations.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<p><b>Mount Leadley prospect, Mount Leadley Trig prospect and Fifield Area (Forrest View prospect)</b></p> <ul style="list-style-type: none"> <li>• Core sampling is typically defined by geological characteristics and lithological boundaries.</li> <li>• A 3m composite was collected for RC chips. Depending on the assay results, 1m resplit will be done to check the grade.</li> <li>• The drillholes at TRIG are spaced 85 – 100m in strike to test the extent of the linear continuity from the base map.</li> <li>• Rock chip samples were taken at non-regular intervals according to observations made at the time in the field.</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>If the relationship between the drilling orientation and the</i></li> </ul>	<p><b>Mount Leadley prospect</b></p> <ul style="list-style-type: none"> <li>• Exploration drilling at Mount Leadley has different orientations and oriented perpendicular to the interpreted mineralized shear zone.</li> <li>• KDD014 was angled, to extend the hole with a diamond tail. The hole</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i></p>	<p>was drilled from east to west, to intersect the interpreted coincident chargeability and resistivity from 3D inversion model from IP surveys.</p> <ul style="list-style-type: none"> <li>• KDD016 drilling was angled, drilled from NW to SE; to test both shallow resistivity and chargeability anomalies within a broad zone of magnetite destruction, interpreted to represent hydrothermal fluids focussed within fault bounded breccia.</li> <li>• KDD017 drilling was angled, to extend the hole with a diamond tail from west to east testing both the IP and the increase in intensity of alteration and copper mineralisation with depth, as the causative intrusion(s) is approached</li> </ul> <p><b>Mount Leadley Trig prospect</b></p> <ul style="list-style-type: none"> <li>• Exploration drilling at Trig is perpendicular to the peaks of coincident chargeability and resistivity anomaly identified from the Gradient Array survey, generally trending N-S, interpreted as shear zone.</li> <li>• The holes were drilled at an angle, from west to east.</li> </ul> <p><b>Fifield Area (Forrest View prospect)</b></p> <ul style="list-style-type: none"> <li>• Samples were taken according to observations at the time in the field.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<p><b>Mount Leadley prospect, Mount Leadley Trig prospect and Fifield Area (Forrest View prospect)</b></p> <ul style="list-style-type: none"> <li>• Rock Chip and 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 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 0.5m and maximum 1.5m.</li> <li>• Sampling intervals are determined by geological changes.</li> <li>• The assay laboratory confirms that all samples have been received and that no damage has occurred during transport.</li> <li>• Sample receipt is logged into NSW Emmerson sample ledger.</li> <li>• While samples are being prepared in the Lab they are considered to be secure.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></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 – Kadungle Mount Leadley and Mount Leadley Trig prospects

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Mount Leadley and Mount Leadley prospects were drilled within EL6226.</li> <li>• EL6226 is located between the towns of Tullamore and Trundle and 55kms NW of Parkes in Central Western NSW. Kadungle is situated on map sheet SI55-3 Narromine 1:250,000 and sheet 8432Tullamore 1:100,000.</li> <li>• EL6226 is located within regional farm land. The tenement is 60% held by Emmerson Resources and 40% held by Defiance Resources Pty Ltd.</li> <li>• Emmerson Resources are in Joint Venture with Aurelia Metals.</li> <li>• EL6226 is in good standing and no known impediments exist.</li> <li>• Fifield Area (Forrest View prospect) is located within EL 8464.</li> <li>• EL8464 is located between Tullamore and Trundle in Central Western NSW. Fifield is situated on map sheet SI55-3 Narromine 1:250,000 and sheet 8432Tullamore 1:100,000</li> <li>• EL8464 is located within regional farm land.</li> <li>• EL 8464 is in good standing and no known impediments exist.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>• <i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Union Miniere Development and Mining Corp Ltd carried out exploration in the 1970's in and around the Kadungle Exploration Target Area.</li> <li>• CRA Exploration Pty Ltd carried out exploration in and around the Kadungle Exploration Target Area between 1970 and 1971 and also 1996 – 1998.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Mines Exploration Proprietary Ltd carried out exploration in and around the Kadungle Exploration Target Area between 1979 and 1983.</li> <li>Seltrust Gold Pty Ltd – Peko Wallsend Operations Pty Ltd – Paragon Gold Pty Ltd conducted exploration between 1983 – 1993 in and around the Kadungle Exploration Target Area.</li> <li>BHP Gold Mines Ltd carried out exploration in and around the Kadungle Exploration Target Area between 1991 and 1992.</li> <li>LFB carried out exploration between 1997 – 2004 in and around the Kadungle Exploration Target Area and during this time outlined very encouraging gold and copper mineralisation.</li> <li>Big Sky Holdings Pty Ltd carried out exploration in and around the Kadungle Exploration Target Area between 2004 and 2006.</li> <li>YTC Resources carried out exploration in and around the Kadungle Exploration Target Area between 2006 and 2014.</li> <li>Aurelia Metals Ltd carried out exploration in and around the Kadungle Exploration Target Area between 2015 and 2016.</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 Kadungle Volcanics contain minor historic Au ± Pb ± Ag workings at the Mount Leadley Prospect and anomalous enrichment of Au ± base metals is also recorded at various other localities.</li> <li>Mineralization within the target area has identified five styles of mineralisation: <ol style="list-style-type: none"> <li>Epithermal (chalcedonic) quartz + Au + Ag + Cu veins;</li> <li>Disseminated chalcopyrite ± bornite ± Mo mineralisation;</li> <li>Pervasively silica–pyrite flooded volcanics with low grade Au mineralisation and sporadic quartz veining associated with higher Au grades;</li> <li>Quartz-chalcopyrite vein mineralisation associated with monzodiorite intrusive; and</li> <li>Volcanic hosted base metal mineralisation associated with the top of the volcanic pile.</li> </ol> </li> <li>The mineralisation style is considered to be Porphyry Copper Gold and/or Epithermal Copper Gold.</li> <li>The Kadungle Volcanics are considered to be highly prospective for shallow marine to sub-aerial mesothermal and epithermal Au ± base metal deposits. Potential also exists for deeper level porphyry style mineralisation and possibly volcanic hosted base metal mineralisation.</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>A list of the drill holes, collar detail and intersections is provided in the body of this text Tables 3 &amp; 4 and on figure 3.</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 DDH 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> <li>Cut-off grades applied to results reported in this report are : <ul style="list-style-type: none"> <li>Minimum cut-off of 0.2 g/t Au. No maximum cut-off.</li> <li>Minimum cut-off of 0.2 % Cu. No maximum cut-off.</li> </ul> </li> <li>Maximum internal dilution for diamond drilling is 2 metres.</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>The holes drilled at Mount Leadley and Mount Leadley Trig prospects are perpendicular to the mineralised zone. The holes were designed and drilled aimed at being as perpendicular as possible to the steep dipping mineralised zone, the drill holes are at a high angle therefore making the intercepts larger than 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</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Figures in body of text.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Balanced reporting</i>	<p><i>collar locations and appropriate sectional views.</i></p> <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>Emmerson considers the Mount Leadley Trig is exhibiting showing a high level epithermal mineralization. The Trig is still underexplored, and a work program is designed to understand and define the extent of the mineralization both open to the north and south.</li> <li>The drilling at Mount Leadley confirmed/suggest that pyrite is ubiquitous in the system, which could suggest that the core of the system might still be deeper.</li> <li>It is uncertain that following evaluation and/or further exploration work that the current identified mineralisation will be able to be reported as Mineral Resources or Ore Reserves in accordance with the requirements in Appendix 5A (JORC Code).</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>Geotechnical logging of KDD016 was carried out recovery, RQD 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 database.</li> <li>Magnetic susceptibility was carried out 100% for all the holes drilled/completed.</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 areas, provided this information is not commercially sensitive.</li> </ul>	<p><b>Mount Leadley prospect</b></p> <ul style="list-style-type: none"> <li>The drilling at Mount Leadley suggest that the core of the system might still be deeper. The sheeted/parallel chalcopyrite± veins/stringers with not quartz veining might suggest that the recently completed drilling is still? distal to the core of the mineralization. Alteration is still pervasive with chlorite-sericite-pyrite-quartz assemblage. Future work:</li> <li>Assess the assay results.</li> <li>Collect samples for rock staining to check K-felds alteration.</li> <li>Assess the orientation of the sheeted chalcopyrite veins.</li> </ul> <p><b>Mount Leadley Trig Prospect</b></p> <p>Further work:</p> <ul style="list-style-type: none"> <li>Assess the assay results when completed. Identify any anomalism on the different element geochemistry that would be used as a path finder to ascertain the epithermal style model.</li> <li>Expand/extend the existing geochemical coverage. Which will allow sampling on a regular grid. Previous results have a limited package. This round should add more elements and use an ultra-low level detection limit.</li> <li>Additional rock chip sampling, and possible a grid rock chip to get a direct analysis of anomalism. The area exposed more outcrops after the drilling program.</li> <li>Consider possible ground geophysical survey in the future. IP to compliment the Gradient array survey and ground gravity survey.</li> </ul> <p><b>Fifield Area (Forrest View prospect)</b></p> <p>Further work:</p> <ul style="list-style-type: none"> <li>Further field inspection, mapping and rock chip work will be completed.</li> </ul>

## Mining Tenements Held at 31 March 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	100%	HLDC91	Wiso Basin	100%	ML30177	North Star	100%

## Mining Tenements Held at 31 March 2018 (Northern Territory, Australia)

Tenement	Name	Interest	Tenement	Name	Interest	Tenement	Name	Interest
ML30322	Verdot	100%	ML31076	Jubilee	100%	MLC207	Argo West	100%
ML30620	Kia Ora	100%	ML31123	Gibbet1	100%	MLC208	Argo West	100%
ML30623	Pinnacles South	100%	ML31651	White Devil	100%	MLC209	Argo West	100%
ML30636	Jacqueline the	100%	MLA29526	Blue Moon	100%	MLC21	Gecko	100%
ML30712	Battery Hill	100%	MLA29527	Wiso	100%	MLC217	Perserverance	30%
ML30713	The Pup	100%	MLA29528	Wiso	100%	MLC218	Perserverance	30%
ML30714	Pedro	100%	MLA29529	Wiso	100%	MLC219	Perserverance	30%
ML30715	Red Bluff North	100%	MLA29530	Wiso	100%	MLC220	Perserverance	30%
ML30716	Comstock	100%	MLA29531	Wiso	100%	MLC221	Perserverance	30%
ML30742	Black Cat	100%	MLA29532	Wiso	100%	MLC222	Perserverance	30%
ML30743	True Blue	100%	MLC120	Cabernet / Nav	100%	MLC223	Perserverance	30%
ML30744	Scheurber	100%	MLC121	Cabernet / Nav	100%	MLC224	Perserverance	30%
ML30745	Bomber	100%	MLC122	Cabernet / Nav	100%	MLC253	Mulga 1	100%
ML30781	Smelter	100%	MLC123	Cabernet / Nav	100%	MLC254	Mulga 1	100%
ML30782	Dark	100%	MLC127	Peko East Ext 4	100%	MLC255	Mulga 1	100%
ML30783	Semillon	100%	MLC129	Peko Sth- East	100%	MLC256	Mulga 2	100%
ML30784	Noir	100%	MLC130	Golden Forty	100%	MLC257	Mulga 2	100%
ML30815	Blue Moon	100%	MLC131	Golden Forty	100%	MLC258	Mulga 2	100%
ML30864	Verdelho	100%	MLC132	Golden Forty	100%	MLC259	Mulga 2	100%
ML30865	Dong Dui	100%	MLC133	Golden Forty	100%	MLC260	Mulga 2	100%
ML30867	Thurgau	100%	MLC134	Golden Forty	100%	MLC261	Mulga 2	100%
ML30870	Rising Star	100%	MLC135	Golden Forty	100%	MLC32	Golden Forty	100%
ML30871	Colombard	100%	MLC136	Golden Forty	100%	MLC323	Gecko	100%
ML30872	The Extension	100%	MLC137	Golden Forty	100%	MLC324	Gecko	100%
ML30873	Pinot	100%	MLC138	Golden Forty	100%	MLC325	Gecko	100%
ML30874	Merlot	100%	MLC139	Golden Forty	100%	MLC326	Gecko	100%
ML30875	Grenache	100%	MLC140	Golden Forty	100%	MLC327	Gecko	100%
ML30885	Zinfandel	100%	MLC141	Golden Forty	100%	MLC342	Tinto	100%
ML30886	EXP212	100%	MLC142	Golden Forty	100%	MLC343	Rocky Range	100%
ML30888	Warrego	100%	MLC143	Golden Forty	100%	MLC344	Rocky Range	100%
ML30893	Troy	100%	MLC144	Golden Forty	100%	MLC345	Rocky Range	100%
ML30909	Archimedes	100%	MLC146	Golden Forty	100%	MLC346	Rocky Range	100%
ML30910	Marsanne	100%	MLC147	Golden Forty	100%	MLC347	Golden Forty	100%
ML30911	Wolseley	100%	MLC148	Golden Forty	100%	MLC348	Brolga	100%
ML30912	Ivanhoe	100%	MLC149	Golden Forty	100%	MLC349	Brolga	100%
ML30937	Gris	100%	MLC15	Eldorado 4	100%	MLC35	Golden Forty	100%
ML30938	EXP195	100%	MLC16	Eldorado 5	100%	MLC350	Brolga	100%
ML30945	Metallic Hill	100%	MLC176	Chariot	100%	MLC351	Brolga	100%
ML30946	Sauvignon	100%	MLC177	Chariot	100%	MLC352	Golden Forty	100%
ML30947	Warrego East	100%	MLC18	West Gibbet	100%	MLC353	Golden Forty	100%
ML31021	Gecko 3	100%	MLC182	Riesling	100%	MLC354	Golden Forty	100%
ML31023	Gecko 1	100%	MLC183	Riesling	100%	MLC355	Golden Forty	100%
ML31055	EXP 80	100%	MLC184	Riesling	100%	MLC36	Golden Forty	100%
ML31057	Durif	100%	MLC204	Argo West	100%	MLC362	Lone Star	100%
ML31074	Rocky Range	100%	MLC205	Argo West	100%	MLC363	Lone Star	100%
ML31075	Franc	100%	MLC206	Argo West	100%	MLC364	Lone Star	100%

## Mining Tenements Held at 31 March 2018 (Northern Territory, Australia)

Tenement	Name	Interest	Tenement	Name	Interest	Tenement	Name	Interest
MLC365	Lone Star	100%	MLC52	Muscadel	100%	MLC613	Lone Star	100%
MLC366	Lone Star	100%	MLC520	Great Northern	100%	MLC614	Lone Star	100%
MLC367	Lone Star	100%	MLC522	Aga Khan	100%	MLC615	Lone Star	100%
MLC368	Lone Star	100%	MLC523	Eldorado	100%	MLC616	Lone Star	100%
MLC369	Lone Star	100%	MLC524	Susan	100%	MLC617	Mt Samuel	50%
MLC37	Golden Forty	100%	MLC527	Mt Samual	100%	MLC619	True Blue	85%
MLC370	Lone Star	100%	MLC528	Dingo, Eldorado	100%	MLC626	Caroline	100%
MLC371	Lone Star	100%	MLC529	Cats Whiskers	100%	MLC634	Dolomite	100%
MLC372	Lone Star	100%	MLC53	Golden Forty	100%	MLC644	Enterprise	100%
MLC373	Lone Star	100%	MLC530	Lone Star	100%	MLC645	Estralita	100%
MLC374	Lone Star	100%	MLC535	Eldorado No 5	100%	MLC654	TC8 Lease	100%
MLC375	Lone Star	100%	MLC54	Golden Forty	100%	MLC66	Traminer	100%
MLC376	Mulga 1	100%	MLC546	The Mount	100%	MLC67	Traminer	100%
MLC377	Mulga 1	100%	MLC55	Golden Forty	100%	MLC683	Eldorado	100%
MLC378	Mulga 1	100%	MLC558	New Hope	100%	MLC69	Gecko	100%
MLC379	Mulga 1	100%	MLC56	Golden Forty	100%	MLC692	Warrego Mine	100%
MLC38	Memsahib East	100%	MLC57	Perserverence	30%	MLC70	Gecko	100%
MLC380	Mulga 1	100%	MLC576	Golden Forty	100%	MLC705	Apollo 1	100%
MLC381	Mulga 1	100%	MLC577	Golden Forty	100%	MLC78	Gecko	100%
MLC382	Mulga 1	100%	MLC581	Eldorado ABC	100%	MLC85	Gecko	100%
MLC383	Mulga 1	100%	MLC582	Eldorado ABC	100%	MLC86	Gecko	100%
MLC384	Mulga 2	100%	MLC583	Eldorado ABC	100%	MLC87	Gecko	100%
MLC385	Mulga 2	100%	MLC584	Golden Forty	100%	MLC88	Gecko	100%
MLC386	Mulga 2	100%	MLC585	Golden Forty	100%	MLC89	Gecko	100%
MLC387	Mulga 2	100%	MLC586	Golden Forty	100%	MLC90	Gecko	100%
MLC4	Peko Extended	100%	MLC591	TC8 Lease	100%	MLC91	Carraman/Klond	100%
MLC406	Comet	100%	MLC592	TC8 Lease	100%	MLC92	Carraman/Klond	100%
MLC407	Comet	100%	MLC593	TC8 Lease	100%	MLC93	Carraman/Klond	100%
MLC408	Comet	100%	MLC594	TC8 Lease	100%	MLC94	Carraman/Klond	100%
MLC409	Comet	100%	MLC595	TC8 Lease	100%	MLC95	Carraman/Klond	100%
MLC432	Mulga 1	100%	MLC596	TC8 Lease	100%	MLC96	Osprey	100%
MLC48	Tinto	100%	MLC597	TC8 Lease	100%	MLC97	Osprey	100%
MLC49	Mt Samual	100%	MLC598	Golden Forty	100%			
MLC498	Eldorado	100%	MLC599	Mt Samuel	85%			
MLC499	Eldorado	100%	MLC601	TC8 Lease	100%			
MLC5	Peko Extended	100%	MLC602	TC8 Lease	100%			
MLC50	Eldorado Anom	100%	MLC603	TC8 Lease	100%			
MLC500	Eldorado	100%	MLC604	TC8 Lease	100%			
MLC501	Eldorado	100%	MLC605	TC8 Lease	100%			
MLC502	Eldorado	100%	MLC606	Lone Star	100%			
MLC503	Eldorado	100%	MLC607	Lone Star	100%			
MLC504	Eldorado	100%	MLC608	Lone Star	100%			
MLC505	Eldorado	100%	MLC609	Lone Star	100%			
MLC506	Marion Ross	100%	MLC610	Lone Star	100%			
MLC51	Eldorado Anom	100%	MLC611	Lone Star	100%			
MLC518	Ellen, Eldorado	100%	MLC612	Lone Star	100%			
MLC366	Lone Star	100%	MLC520	Great Northern	100%			

## Mining Tenements Held at 31 March 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%