### ASX Announcement ASX: ERM ABN: 53 117 086 745

9 February 2018

# High Grade Copper in NSW and the NT Gold production and new epithermal discovery

- Emmerson's 2018 strategy aimed at maximising value from discovery and production of high grade gold, with further optionality from copper
- New epithermal vein system intersected in last drill hole at Kadungle NSW (assays pending)
- Discovery drill hole at Kadungle intersects:
  - 3m at 0.67g/t gold from 299m (drill hole KDD017), plus a deeper intersection of:
  - 10m at 0.35% copper from 475m (drill hole KDD017) which includes:
    - 1m at 1.63% copper
- High grade Cobalt from rock chip samples at the Fifield project, NSW
- Extensional drilling at Tennant Creek intersects high grade copper as follows:
  - 4m at 2.87% copper from 122m (drill hole GRC1413) which includes:
    - 3m at 3.63% copper, plus a deeper intersection of:
  - 6m at 4% copper from 137m which includes:
    - 2m at 6.8% copper





**Kadungle Project** (above) - Drill hole KDD017 with sheeted chalcopyrite ± pyrite veins assaying up to **1.63% copper and 0.12g/t gold** 

Fifield Project (left) - Rock Chip Sample FF011 assaying up to 0.55% Cobalt and 0.27% copper

Figure 1

Emmerson Resources Limited ("Emmerson" ASX: ERM) is pleased to announce results of recent drilling from two of its five projects. The results from Kadungle are strategically important as they represent the emergence of new gold-copper projects in NSW, where Emmerson has a commanding ground position (figure 2). These projects complement our Tennant Creek exploration and recently announced production from the high-grade, Edna Beryl Gold Mine.

## Kadungle Project - New South Wales

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 3). Whilst assays are still pending, 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 gold (figure 4).

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 5). This zone of elevated copper is associated with sheeted chalcopyrite-pyrite veins within pervasive chlorite-sericite-pyrite altered host rocks (figure 1). 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 5).

As previously advised, Emmerson has notified Aurelia that it has met all the terms of the Stage 1 Earn-in to acquire a 60% share of the Kadungle project. This recent round of drilling is part of the next Stage 2 Earn-in of \$200,000 for 80% equity of the project.

## **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 prospect 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 1).

## Tennant Creek Project (figure 6)

The recent drilling at the Gecko-Goanna project further confirms the potential for non-ironstone hosted copper. Better results include:

- 4m at 2.87% copper from 122m (drill hole GRC1413) which includes:
  - 3m at 3.63% copper, plus a deeper intersection of:

- 6m at 4% copper from 137m which includes:
  - 2m at 6.8% copper
- 5m at 1.36% copper from 177m (drill hole GRC1416) which includes:
  - 1m at 4.7 % copper and 1m at 3.8% copper

This supports the previously announced mineralisation in drill hole GODD032 of 7m at 5.98% copper and 3m at 4.75% copper (ASX: 19 August 2015) (figure 7). Some of the other holes were also anomalous in copper and intersected intervals of quartz-hematite gouge likely corresponding with late faulting that has disrupted the overall continuity of the shear zone.

Funding for this recent drilling completes the Stage 1 Earn-in obligation from our joint venture partner, Evolution Mining. Accordingly, we are now in discussions with Evolution regarding the future options for the Tennant Creek joint venture. We are confident that these discussions will deliver a mutually attractive path forward for the project and for our shareholders.

The copper dominant Gecko-Goanna mineralisation stands in contrast to the high-grade gold deposits of the Tennant Creek Field, particularly the recent high-grade gold discovery and new mine development at Edna Beryl. Where Emmerson recently announced first gold production from the processing of 1,000t of ore from a development drive that assayed at over 35g/t gold (ASX: 20 December 2017). Mining at Edna Beryl is via a Tribute Agreement with small mine specialist, the Edna Beryl Mining Company. Emmerson's share of the proceeds from Edna Beryl is proportional to the amount of gold extracted from the Tribute Area (defined by a 3D envelope) and its equity in the Tennant Creek joint venture.

Emmerson's Managing Director, Mr Rob Bills commented: "Emmerson is extremely well positioned with commanding ground positions in NSW and Tennant Creek. This project portfolio is now diversified beyond Tennant Creek and attractive for development, either by Emmerson or third parties. We are confident that positive results across this portfolio will continue to build quality assets and consistency of news flow. Further, Emmerson is one of few junior companies building a revenue stream from small high-grade mines.

Pleasingly the last round of drill results at Kadungle is consistent with the emergence of a large mineralised system that supports ongoing exploration for both shallow gold and deeper copper-gold. Assay results for the Trig drilling will be available toward the end of February as work continues both at Kadungle and across our other NSW projects.

## 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 a variety of deposits including Gecko, Orlando, Warrego, White Devil, Chariot and Golden Forty. All of which are within Emmerson Resources (ASX: ERM) 2,800km<sup>2</sup> exploration and joint venture portfolio. These deposits are highly valuable exploration targets and, utilising modern exploration techniques, Emmerson has been successful in discovering copper and gold mineralisation at Goanna, Monitor and more recently Edna Beryl, the first discoveries in the TCMF for over a decade.

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.

Pursuant to the Farm-in agreement entered with Evolution Mining Limited (Evolution) on 11 June 2014, Evolution has met the Stage 1 Earn-in obligation of \$15 million to earn a 65% interest. There is a further option to spend \$10 million over two years following the Stage 1 Farm-in, allowing Evolution to earn an additional 10% (Stage 2 Farm-in). Emmerson is acting as manager during the Stage 1 Farm-in and is receiving a management fee during this period.

Emmerson has recently commenced exploration on new gold-copper projects in NSW, identified (with our strategic alliance partner Kenex Limited) from the application of 2 and 3D predictive targeting models – aimed at increasing the probability of discovery. The highly prospective Macquarie Arc hosts >80Mozs gold and >13Mt copper but 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.

### About Evolution Mining (ASX: EVN)

Evolution Mining is a leading, growth-focussed Australian gold miner. Evolution operates five wholly-owned mines – Cowal in New South Wales; Mt Carlton, Mt Rawdon, and Cracow in Queensland; and Mungari in Western Australia. In addition, Evolution holds an economic interest in the Ernest Henry copper-gold mine equivalent to 100% of gold production and 30% of copper and silver production from an agreed life of mine area.

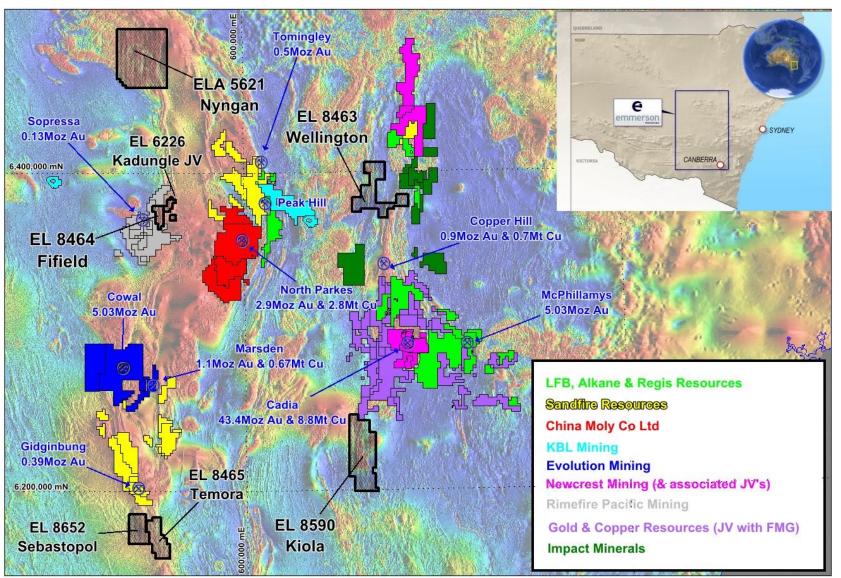
### About Aurelia (ASX: AMI)

Aurelia Metals Limited is an Australian gold, silver, lead and zinc mining and exploration company. The Company operates the wholly-owned Hera gold and base metal mine, in Central West New South Wales and has a key development opportunity in the Nymagee Copper, lead, zinc project, some 5 km north of Hera. Aurelia has entered into a binding agreement with New Gold to purchase the Peak Mine. In FY17, the Company produced 45,679 ounces of gold and 32,308 tonnes of lead-zinc concentrate.

#### **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.



**Figure 2:** Location of Emmerson Resources NSW Projects (bold black outlines) plus major explorers and deposits within the Macquarie Arc of NSW (muted red colour=magnetic signature of the Macquarie Arc).

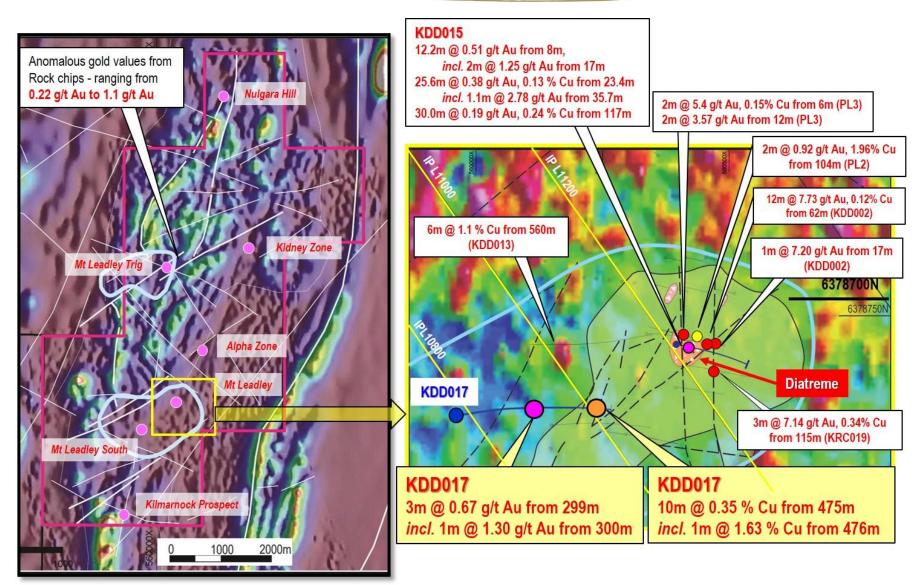
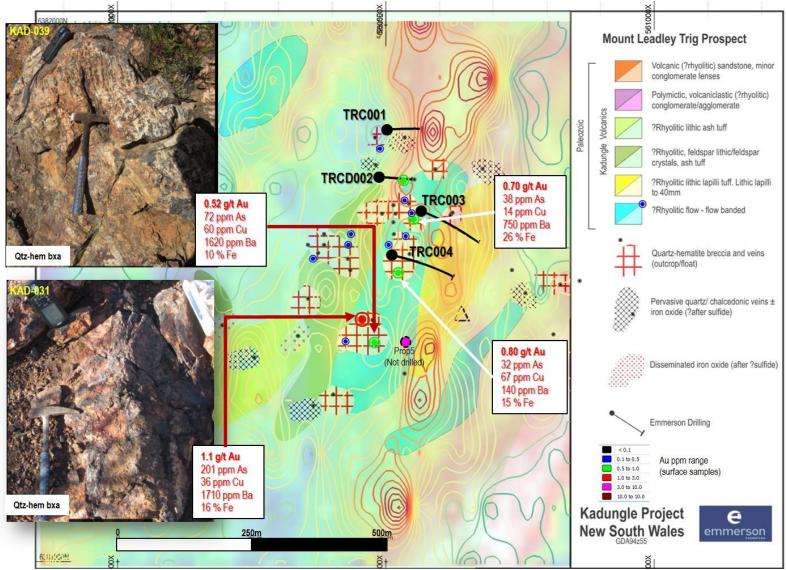
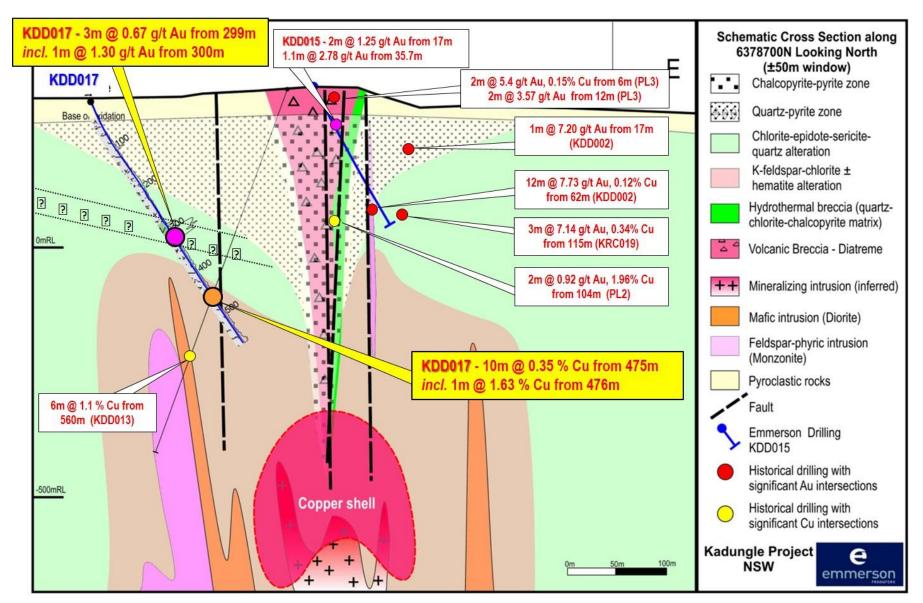


Figure 3: Plan of the Mt Leadley and Trig Prospects within the Kadungle Tenement. Background is the aeromagnetics with blue correlating to possible zones of magnetite destruction marking the hydrothermal alteration. Note ERM drill hole KDD017 and KDD015 plus historic intersections. Also shown is the location of the geophysical IP survey (yellow lines).



**Figure 4:** Plan showing the geology of the Trig prospect and location of Emmerson drilling. Note the distribution of mapped quartz-hematite breccia and veins of chalcedonic quartz plus selected significant assay results from surface rock samples (ASX Announcement 18 July 2017). The background image is the Gradient Array Resistivity with the Chargeability as contours.



**Figure 5:** Schematic cross section of the interpreted geology with 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. Drill hole KADD017 is shown with the gold and copper intersections (see Figures 1 for photo).

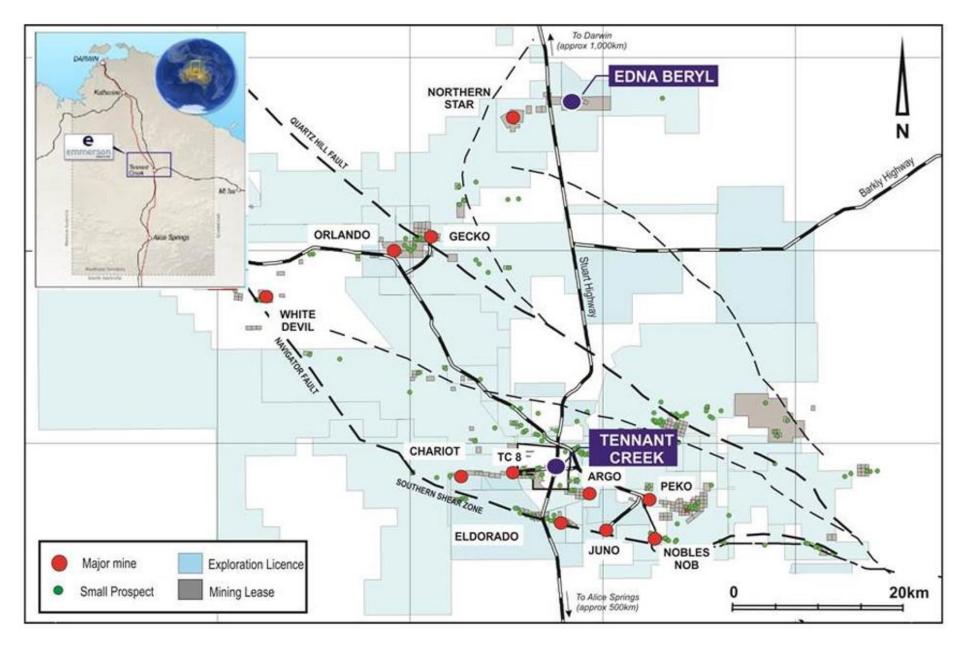


Figure 6: Location of Emmerson's tenement package (light blue) and the Gecko-Goanna and Edna Beryl Project Areas

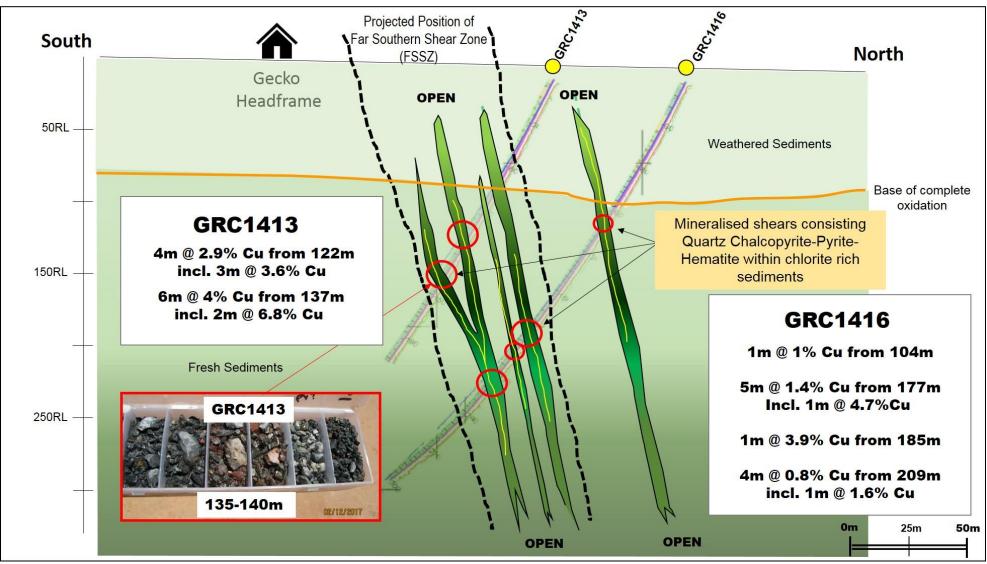


Figure 7: Cross -section at Gecko showing results from GRC1413 & 1416.

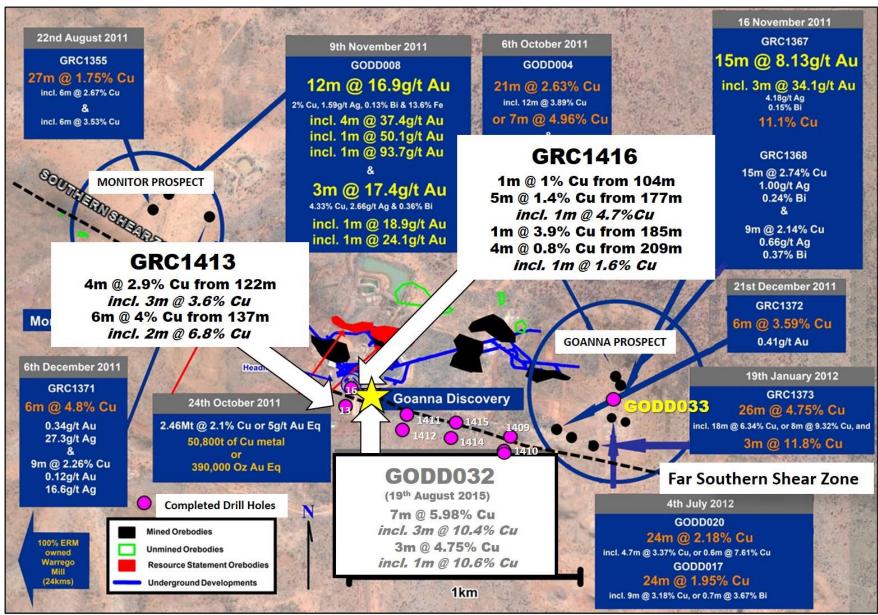


Figure 8: Gecko – Goanna corridor showing drilling results from the recent campaign (white callout boxes) and other Emmerson drilling (blue callout boxes).

## Table 1: Gecko – Goanna drill hole details

Hole No	Easting MGA94_53	Northing MGA94_53	RL AHD	Dip (Deg)	Azi (Mag)	RC Depth (m)	Pre Collar Depth (m)	Diamond NQ2 (m)	Diamond HQ (m)	Final Hole Depth (m)	Drill Date	Tenement
GODD033	403364.91	7851247.6	347.93	-65	211.5		218.0	232.5	51.1	501.6	26/11/2017	EL29488
GRC1409A	402605.10	7851279.74	347.19	-65.00	170.50	258.0					22/11/2017	MLC324
GRC1410	402605.83	7851268.28	347.29	-60.00	165.50	144.0					24/11/2017	MLC324
GRC1411	402219.29	7851322.13	348.32	-70.00	170.50	205.0					26/11/2017	MLC323
GRC1412	402222.25	7851348.90	347.83	-70.00	165.50	300.0					27/11/2017	MLC323
GRC1413	402003.13	7851349.82	351.47	-65.0	170.5	198.0					28/11/2017	MLC23969
GRC1414	402425.20	7851269.72	347.38	-65.0	170.5	198.0					28/11/2017	MLC323
GRC1415	402420.18	7851320.24	347.16	-65.0	165.5	300.0					29/11/2017	MLC323
GRC1416	402000.17	7851424.41	350.35	-65.0	165.5	300.0					30/11/2017	MLC23969

## Table 2: Gecko - Goanna significant drill hole intersections

Hole ID	East (MGA94_53)	North (MGA94_53)	RL AHD	Dip (deg)	AZI mag (deg)	From (m)	To (m)	Width (m)	Au (ppb)	Ag (ppm)	Bi (ppm)	Cu (%)	Fe (%)	Pb (ppm)	Zn (ppm)	Mo (ppm)	Sb (ppm)	Co (ppm)
					170.5	122	126	4	23.3	0.36	579	2.87	6.16	2.3	34.0	4.65	0.14	75.7
					Incl.	122	125	3	29.0	0.45	753	3.63	6.87	2.6	35.3	5.82	0.16	64.4
GRC1413	402003.13	7851349.82	351.47	-65		137	143	6	24.5	0.30	524	4.01	7.12	3.73	30.2	9.59	0.18	85.6
					Incl.	139	141	2	35.5	0.4	791	6.80	9.79	3.55	28.5	15.8	0.18	84.1
					Incl.	139	140	1	42.0	0.5	883	7.15	10	4.80	29.0	27.4	0.20	105
					165.5	104	105	1	13.0	0.44	6.30	1.04	5.64	6.50	380	4.60	0.28	17.3
						177	182	5	9.60	0.26	280	1.36	5.21	3.02	36.8	1.48	0.19	15.0
					Incl.	181	182	1	27.1	0.69	859	4.72	7.49	9.20	27	1.40	0.35	12.0
GRC1416	402000.17	7851424.41	350.3	-65		185	186	1	27.0	1.62	645	3.81	7.38	13.7	28.0	10.30	0.18	13.8
						209	213	4	6.00	0.11	128	0.79	4.82	1.53	23.3	1.68	0.25	28.9
					Incl.	209	210	1	11	0.18	93	1.62	4.89	1.82	18.0	1.26	0.34	21.3

#### Note:

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- All results reported are Reverse Circulation 1 metre riffle split samples.
   Gold analysis method by 25g fire assay with ICP-OES finish.
   Multi element analysis method by 4 acid digest & ICP-OES, ICP-MS finish.
   Intersections are reported as downhole lengths and not true width.
   Minimum cut-off of 0.5% Cu. No maximum cut-off.

- (6) Maximum of 2m internal dilution.

Table 3:	Kadungle collar details	

Hole ID	East (MGA94_53)	North (MGA94_53)	RL AHD	Dip (deg)	Azi (deg)	From (m)	To (m)	Length (m)	Final Depth (RC + DD) (m)	Drill Type	Drill Date	Prospect Name	Tenement	Comment
KDD014	560107.90	6378262.30	292.8	-60	255.2	120.0	255.5	135.5	375.5	DDH	12/13/2017	Mount Leadley	EL6226	120m Pre-collar RC (KDD014) drilled by Big Sky Holdings March 2006
KDD016	559978.90	6378548.20	290.9	-70	116.0	0.0	119.7	119.7	450.6	RC	27/11/2017	Mount	EL6226	
KDD016	559976.90	0370040.20	290.9	-70	116.0	119.7	450.6	330.9	450.6	DDH	27/11/2017	Leadley	EL0220	
KDD017	559959.50	6378553.80	291.1	-68	76.0	222.0	351.6	129.6	573.6	DDH	12/6/2017	Mount Leadley	EL6226	222m Pre-collar RC (KRC021) drilled by YTC Resources Dec 2011
TRC001	560502.10	6381804.60	311.8	-60	74.0	0.0	138.0	138.0	138.0	RC	15/12/2017	TrigMount Leadley	EL6226	
TRCD002	560487.40	6381716.10	317.2	-60	80.0	0.0	65.0	65.0	120.4	RC	12/18/2017	TrigMount	EL6226	Pre-collar RC down to 65m,
TRODUUZ	500467.40	0301710.10	317.2	-00	80.0	65.0	120.4	55.4	120.4	DDH	11/01/18	Leadley	EL0220	continued with diamond tail
TRC003	560565.65	6381652.90	328.8	-55	99.5	0.0	180.0	180.0	180.0	RC	15/1/2018	TrigMount Leadley	EL6226	
TRC004	560510.90	6381570.80	333.9	-55	90.0	0.0	186.0	186.0	186.0	RC	18/1/2018	TrigMount Leadley	EL6226	
						TOTAL	RC	688.7m						

RC 688.7m

> DDH 651.4m

### Table 4: Assay results from Kadungle KDD017.

Hole ID	East (MGA94_55)	North (MGA94_55)	RL AHD	Dip (deg)	AZI mag (deg)	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (ppm)	Bi (ppm)	Cu (%)	Fe (%)	Pb (ppm)	Zn (ppm)	Sample Type	Geology	Tenement
					076	299.0	302.0	3.0	0.67	2.97	0.8	0.02	8.2	25	174	0.5 NQ3	Quartz-hematite-chlorite stockworks hosted in	
					Incl.	300.0	301.0	1.0	1.3	6.16	1.7	0.03	8.6	52	187	0.5 NQ3	chlorite altered, feldspar- phyric, moderately magnetic basalt	
KDD017	559959.50	6378553.80	291.1	-68		475.0	485.0	10.0	0.04	0.52	6.0	0.35	3.7	11	44	0.5 NQ3	Parallel veins of chalcopyrite ± pyrite	EL6226
					Incl.	476.0	477.0	1.0	0.12	1.70	21.0	1.63	4.6	20	61	0.5 NQ3	veins and stringers hosted in quartz - sericite - chlorite altered welded ignimbrite and crsytal tuff	

(1) KDD017 samples are half NQ3 diamond core samples. Note:

(1) KDD017 samples are nan NQ3 diamond core samples.
(2) Au analysis method by 50g Fire Assay with AAS finish
(3) Cu analysis method by four acid digestion
(4) Multi element analysis method by four acid digestion with ICP-AES finish.
(5) Intersections are reported as downhole lengths and not true width.
(6) Minimum cut-off of 0.2 % g/t Au. No maximum cut-off.
(7) Minimum cut-off 0.2 % Cu. No maximum cut-off.
(8) Maximum internal division of 2 matrices

(8) Maximum internal dilution of 2 metres.

### Table 5: Assay results for rock chip sample FF011.

Rock Ch	p East	North	Co	Cu	Au	Ag	Ba	Bi	Fe	Mn	Mo	Ni	P	Pb	Sr	V	Zn	Sample	Tenement
ID	(MGA94_55)	(MGA94_55)	(%)	(%)	(ppm)	(ppm)	(ppm)	(ppm)	(%)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(pmm)	(ppm)	Type	
FF011	560548	6381649	0.55	0.27	0.003	0.25	>10,000	8	1.19	1010	3	675	1120	26	330	219	333	Float	EL8464

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 – Diamond and Reverse Cycle Drilling Gecko -Goanna Exploration

	Target.	
Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>8 RC holes (GRC1409A-GRC1416) and 1 Diamond hole (GODD033) were drilled during December 2017. The Goanna to Gecko trend exploration target has not previously been drill tested and this drilling is a proof of concept exploration drill program.</li> <li>The RC pre-collar for GODD033 was drilled to 218m and final hole depth was 501.6m.</li> <li>Final depths for the RC holes are described within the body of the text.</li> <li>All RC chips were riffle split on site to obtain 3m composite samples from which 2.5 – 3.0kg was pulverised (at the laboratory) to produce a 25g charge for analysis by Aqua Regia digestion / ICP-MS/OES (Au,Ag,Bi,Cu,Co,Mo,Fe,Pb,Se,Pb,Zn).</li> <li>Individual 1m samples are retained on the drill site.</li> <li>RC samples were collected via a fixed splitter that is mounted to the drill rig under a 900cfm cyclone.</li> <li>Diamond core has been or is in the process of being logged for lithological, structural, geotechnical, density and other attributes.</li> <li>Sampling was carried out under Emmerson's procedures and QAQC measures as per industry best practice.</li> <li>Diamond core is NQ<sup>2</sup> size, sampled on geological intervals (0.4 m to 1.4 m), cut into half (NQ<sup>2</sup>) core to provide sample weights of approximately 3.0kg. Samples were crushed, dried and pulverised (Lab) to produce a 25g sub sample for analysis by Aqua Regia digestion / ICP-MS/OES (Au,Ag,Bi,Cu,Co, Mo,Fe,Pb,Se,Pb,Zn).</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul> <li>See Drill Table in the text.</li> <li>GODD033 has a RC pre collar utilizing a 4.5 inch, face sampling bit.</li> <li>The core was oriented using down hole core orientation equipment provided by the drilling company.</li> <li>Titeline Drilling completed both the RC and diamond drilling using a multipurpose UDR1200 drill rig.</li> <li>Diamond core and RC recoveries are logged and recorded in the database and considered to be of an excellent standard.</li> <li>Standard inner tube has been used for the diamond core drilling.</li> <li>No triple tube has been used on GODD033.</li> <li>Core from GODD033 exploration target is currently stored on core racks in the Emmerson Tennant Creek core shed and is progressively being geologically logged by company geologists.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>Recoveries are considered satisfactory for both Diamond and RC drilling.</li> <li>RQD measurements and core loss is recorded on diamond logging sheets, loaded into Emmerson's database and retained for reference.</li> <li>RC chip recoveries are &gt;95% for and there are no reported core loss or significant sample recovery problems identified.</li> <li>Diamond core and RC sample recovery is considered excellent.</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 while drilling the RC pre collar or the diamond tail.</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core</li> </ul>	<ul> <li>RC samples from were lithological logged and have been entered in Emmerson's relational database.</li> <li>One metre RC chip intervals are sieved, washed and stored in standard chip trays for later review.</li> <li>Drill hole logging data is directly entered into field tough book</li> </ul>

Criteria	JORC Code explanation	Commentary
	(or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged.	<ul> <li>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>Structural logging of all diamond drill core records orientation of veins, fractures and lithological contacts.</li> <li>Information on diamond core 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>Magnetic susceptibility data for all individual 1m RC samples are collected as per ERM procedure.</li> <li>All drill core is photographed.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise retrospectivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>The sample preparation for the GODD033 RC pre-collar and RC samples involves oven drying followed by pulverisation of the entire sample (total prep).</li> <li>Diamond core samples consist of half sawn core and have been dispatched to the laboratory at the time of writing this release.</li> <li>Diamond samples are pulverised (at the laboratory) to produce a 25g charge for analysis</li> <li>All RC chips were riffle split on site to obtain 3m composite samples from which 2.5 – 3.0kg was pulverised (at the laboratory) to produce a 25g charge for analysis by Aqua Regia digestion / ICP-MS/OES (Au,Ag,Bi,Cu,Co,Mo,Fe,Pb,Se,Pb,Zn).</li> <li>3m composite and selected 1m individual samples were dispatched to the Laboratory.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>Field QC procedures involve the use of certified reference material (CRM's) as assay standards, and include ERM include blanks, duplicates.</li> <li>QAQC protocols consist of the insertion of blanks at a rate of approximately one in every 40 samples, insertion of standards at a rate of approximately one in every 20 samples and duplicate field sample analysis of at a rate of approximately one in every 20 samples and duplicate field sample analysis of at a rate of approximately one in every 20 samples.</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>Field duplicates were collected on the 3m composites samples, using a riffle splitter.</li> <li>Individual 1m RC sample duplicates are also collected using the same technique.</li> <li>All core samples are submitted for analysis, unless a field duplicate is required, in which case quarter core samples are submitted.</li> <li>The sample preparation of diamond core for follows industry best practice in sample preparation involving oven drying, coarse crushing of the half core 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. The sample preparation for RC samples is identical, without the coarse crush stage.</li> <li>Pulverised material not required by the laboratory (pulps) 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>Laboratory checks include CRM's and/or in-house controls, blanks, splits, and replicates that are analysed with each batch of samples submitted. These QC results are reported along with sample values in the final analytical report. Barren quartz washes are also routinely used in zones of mineralisation.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>database through an external database administrator (contractor).</li> <li>A QAQC database is created as a separate table in the database and includes all field and internal laboratory QC samples.</li> <li>QC data is reported through a series of control charts for analysis and interpretation by the Exploration Manager or his/her delegate.</li> <li>The sample sizes are considered to be appropriate to correctly represent the sulphide <i>mineralisation at the Gecko Deep exploration target</i> based on the style of mineralisation (iron oxide copper gold), the thickness and mineral consistency of the intersection(s).</li> </ul>
Verification of sampling and assaying	<ul> <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> <li>No twin drillholes to Emmerson's knowledge have been completed.</li> <li>Selective sampling and re-assay will be undertaken to confirm key assay results.</li> <li>The geochemical data is managed by ERM using and external database administrator and secured through a relational database (DataShed).</li> </ul>
Location of data points	<ul> <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> <li>All holes were surveyed (set out) 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 at a minimum of every 18m using an REFLEX EZ-Shot® electronic single shot camera for RC and every 6m-12m for diamond drill section.</li> <li>This survey camera equipment is quoted by the manufacturer to have an accuracy of         <ul> <li>Azimuth 0-360° ± 0.5°</li> <li>Dip ± 90° ± 0.2°</li> </ul> </li> <li>Final collar positions were surveyed on completion of drilling (DGPS).</li> </ul>
Data spacing and distribution	<ul> <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> <li>No analytical results have been reported in the text.</li> <li>RC sampling is on 1m intervals that may have originally consisted of 3m composites.</li> <li>Diamond core sampling is generally defined by geological characteristics and controlled by alteration and lithological boundaries.</li> </ul>
Orientation of data in relation to geological structure	<ul> <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> <li>Limited exploration has been conducted along the Gecko to Goanna target.</li> <li>Drilling is oriented perpendicular to the interpreted Gecko-Goanna shear.</li> <li>No sample bias has been introduced via drilling orientation.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Samples are selected, bagged and labelled by site geologists.</li> <li>They are placed in sealed polyweave bags and larger bulka bags for transport to the assay laboratory.</li> <li>The assay laboratory that is to be used will be Genalysis Intertek.</li> <li>Sample preparation occurs in Alice Springs, Northern Territory.</li> <li>Analytical occurs in Perth, Western Australia.</li> <li>The assay laboratory confirms that all samples have been received and that no damage has occurred during transport.</li> <li>Tracking is available through the internet and designed by the Laboratory for ERM to track the progress of batches of samples.</li> <li>Sample receipt is logged into ERM's sample ledger.</li> <li>While samples are being processed in the Lab they are considered to be secure.</li> </ul>
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	<ul> <li>An internal review of the historical sampling techniques, QAQC protocols and data collection was conducted by Emmersor from January to March 2013 however was not specific to the</li> </ul>

Criteria	JORC Code explanation	Commentary
		Gecko-Goanna target.

#### Section 2: Reporting of Exploration Results – Gecko-Goanna Diamond & Reverse Circulation Drilling

Criteria	porting of Exploration Results – Gecko-Goan JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <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> <li>Drilling was conducted on granted Mineral Leases ML C69, C323-324, 23969 and Exploration Licence 29488 which form part of the Gecko Mine Mineral Lease Group and is owned 100% by Emmerson Resources Limited.</li> <li>All tenure falls within Perpetual Pastoral Lease 946 which is run as Phillip Creek Station.</li> <li>Land Access to the target is secured through an Indigenous Land Use Agreement with the CLC representing Traditional Owners for the area.</li> <li>There are no Heritage or Indigenous exclusion zones recorded within the drilling area.</li> <li>The tenements are in good standing and no known impediments exist.</li> <li>Emmerson Resources are in Joint Venture with Evolution Mining.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Various drill campaigns have been completed within the exploration area primarily by Peko Mines and Normandy Tennant Creek (1960-1999).</li> <li>Limited exploration or drilling has been conducted within the Gecko – Goanna Exploration Target.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>Mineralisation within the target area consists of hematite- quartz-magnetite ironstone within talc-chlorite-magnetite- bearing sediments of the Warramunga Formation.</li> <li>Target style for Emmerson is nonmagnetic ironstone related iron oxide copper gold.</li> <li>The drilling lies within a defined structural corridor known as the Gecko-Goanna Shear Zone. Mineralisation (Copper and Gold) in the Gecko Shear Zone sheared chloritic sediments with later stage quartz-chalcopyrite-pyrite veining.</li> </ul>
Drillhole information	<ul> <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> <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>	All drill hole information is tabulated in Tables 1 & 2 of the text.
Data aggregation methods	<ul> <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>	Please refer to the table of significant results in the body of the text.
Relationship between mineralization widths and intercept lengths	<ul> <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> <li>Downhole assay lengths are reported in the table of significant results, true width is unknown at this stage.</li> <li>Mineralisation is interpreted to run perpendicular to the drillhole azimuth.</li> </ul>
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should</li> </ul>	Refer to Figures in body of text.

Criteria	JORC Code explanation	Commentary
	include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.	
Balanced reporting	<ul> <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>	Refer to table of significant results in body of text.
Other substantive exploration data	<ul> <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>	Not relevant for the data reported.
Further work	<ul> <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> <li>Further work on the Gecko – Goanna exploration target will involve:</li> <li>Interpretation of assay results as the come to hand.</li> <li>Downhole geophysical surveys including Magnetic susceptibility methods.</li> <li>Collection of physical rock property data to assist with future geophysical modelling.</li> <li>Age dating and thin section collection at various intervals down hole.</li> <li>Further RC and diamond drilling.</li> </ul>

# Section 1 Sampling Techniques and Data – Kadungle Mount Leadley and Mount Leadley Trig prospects

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Mount Leadley prospect and Mount Leadley Trig prospect</li> <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 precolar, 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> <li>Fifield Area (Forrest View prospect)</li> <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> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul> <li>Mount Leadley prospect</li> <li>Three diamond holes for 596m were drilled for Mount Leady (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> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <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>
		Mount Leadley Trig Prospect
		<ul> <li>Four RC holes for 569m were drilled for Mount Leady 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	Method of recording and assessing core and chip sample     recording and recording	Mount Leadley prospect and Mount Leadley Trig prospect
recovery	<ul> <li>recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <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> </ul>
		<ul> <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> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Mount Leadley prospect and Mount Leadley Trig prospect</li> <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>
0.4.5."		which it was taken at the time of collection.
Sub-sampling techniques and	If core, whether cut or sawn and whether quarter, half or all core taken.	Mount Leadley prospect and Mount Leadley Trig prospect
sample preparation	<ul> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> </ul>	<ul> <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</li> </ul>

Criteria	JORC Code explanation	Commentary
	Whether sample sizes are appropriate to the grain size of the material being sampled.	<ul> <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> <li>Fifield Area (Forrest View prospect)</li> <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>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>Mount Leadley prospect, Mount Leadley Trig prospect and Fifield Area (Forrest View prospect)</li> <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> <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</li></ul>
Verification of sampling and assaying	<ul> <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> <li>Mount Leadley prospect, Mount Leadley Trig prospect and Fifield Area (Forrest View prospect)</li> <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	Accuracy and quality of surveys used to locate drillholes     (collar and downhole surveys), trenches, mine workings	Mount Leadley prospect, Mount Leadley Trig prospect and Fifield Area (Forrest View prospect)

Criteria	JORC Code explanation	Commentary
	<ul> <li>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> <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> <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> <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> <li>Mount Leadley prospect, Mount Leadley Trig prospect and Fifield Area (Forrest View prospect)</li> <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,q1m 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> <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> <li>Mount Leadley prospect</li> <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 was drilled from east to west, to intersect the interpreted coincident chargeability and resistivity from 3D inversion model from IP surveys.</li> <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> <li>Mount Leadley Trig prospect</li> <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. The behavior deliber an advector of the provide magnetic from the diamonetic form the diamonetic form</li></ul>
Sample security	The measures taken to ensure comple occurity	<ul> <li>The holes were drilled at an angle, from west to east.</li> <li>Fifield Area (Forrest View prospect)         <ul> <li>Samples were taken according to observations at the time in the field.</li> </ul> </li> <li>Mount Leadley prospect, Mount Leadley Trig prospect and Fifield</li> </ul>
Затре зеситу	The measures taken to ensure sample security.	<ul> <li>Mount Leadley prospect, Mount Leadley Trig prospect and Fifield Area (Forrest View prospect)</li> <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</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>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 review	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<u>No formal audit has been completed on the samples being reported.</u>

## 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> <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> <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 Emmeron 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	Acknowledgment and appraisal of exploration by other parties.	<ul> <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> <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 Target Area.</li> <li>BHP Gold Mines Ltd carried out exploration in and around the Kadungle Exploration between 1991 and 1992.</li> <li>LFB carried out 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 2004 and 2006.</li> <li>YTC Resources 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 2004 and 2006.</li> <li>YTC Resources carried out exploration in and around the Kadungle Exploration Target Area between 2005 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	Deposit type, geological setting and style of mineralisation.	<ul> <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> <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> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <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> <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> <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> <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> <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> <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 : Minimum cut-off of 0.2 g/t Au. No maximum cut-off. Minimum cut-off of 0.2 % Cu. No maximum cut-off.</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> <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>	• 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.
Diagrams	<ul> <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>	Refer to Figures in body of text.
Balanced reporting	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.	<ul> <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>
Other substantive exploration data	<ul> <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> <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>
Further work	<ul> <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> <li>Mount Leadley prospect</li> <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-seriicite-pyrite-quartz assemblage. Future work:</li> <li>Assess the assay results.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>Collect samples for rock staining to check K-felds alteration.</li> <li>Assess the orientation of the sheeted chalcopyrite veins.</li> <li>Mount Leadley Trig Prospect</li> </ul>
		Further work:
		<ul> <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 ultralow 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>
		Fifield Area (Forrest View prospect)
		Further work:
		• Further field inspection, mapping and rock chip work will be completed.