

21 February 2017

## Extensions to high-grade gold at Edna Beryl confirmed Evolution to fund new Rover project

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- Final batch of results from 2016 Campaign 3 returns intersections:
  - 6.4m at 2.75/t gold and 0.54g/t silver from 292.9m (EBWDD054) including;
    - 1.3m at 11.4g/t gold, 1.4g/t silver and 0.19% bismuth from 298m
  - 2m at 2.11% copper, 8.3g/t silver, 2.06% bismuth and 0.33g/t gold from 197m (EBWDD054)
- Drilling confirms continuation of the Edna Beryl high-grade gold zone at depth
- First ore and visible gold intersected in the development drive of the Edna Beryl small mines project
- Evolution has formally notified ERM that it will complete its earn-in obligations under the Tennant Creek Mineral Field JV and extend the JV to capture Emmerson's newly acquired Rover project
- All exploration is fully funded by the Farm-in and Joint Venture with Evolution Mining
- 2017 Exploration Program underway in NSW

Emmerson Resources Limited ("Emmerson" ASX: ERM) is pleased to announce the last of the assay results from campaign 3 at Edna Beryl (completed in late 2016) that confirm the high-grade gold mineralisation in ironstone 1 continues at depth. Diamond drill hole EBWDD054 is the deepest drill hole to date at Edna Beryl, some 220m below the surface which provides additional confidence to the mineralisation continuing at depth and extending in most directions (figure 2 and 3). Of note is the high-grade bismuth (~2%) and copper (2.1%) which based on the historic metal zonation from other mines, indicates proximity to high-grade gold. Again well illustrated in the best drill intersection (drill hole EBWRC041) from campaign 3 of **8m at 157g/t gold** (which included **1m at 1043g/t gold, 229g/t silver, 1.44% bismuth and 2.04% copper**) (ASX: 31 October 2016). Note this bonanza gold intersection tested a blind (to the surface) ironstone that remains open and will be followed up in subsequent drill programs (Figure 1, 2, 3 and table 1).

Drilling last year at the Retsina prospect intersected hematite ironstone – the host to gold mineralisation, however, the assay results did not confirm the positive trace element geochemistry of these ironstones.

## **Rover Project**

Late last year ERM announced that it had entered into a Heads of Agreement with Adelaide Resources (now Andromeda Metals) to gain access to their highly prospective and underexplored Rover project (ASX:15 November 2016) – some 65km SW of our Tennant Creek project (figure 4).

An in-depth geological and structural review including reprocessing of the magnetics has provided some new insights into the potential of this tenement package. It has highlighted a number of magnetic targets (the typical host to the gold and copper mineralisation) that remain untested or inadequately drill tested. Geophysical surveys will likely be undertaken to further refine targets for drilling.

This new project provides an unparalleled opportunity for ERM to apply its exploration rigour and expertise to a relatively immature but emerging mineral field, and where we have nearby mining, processing options and infrastructure at our Tennant Creek Project – all at a time when quality gold projects are sparse.

The inclusion of this project under the Tennant Creek Mineral Field Earn-in and JV with Evolution Mining is further testament to the calibre and potential of this new acquisition. It not only provides funding by EVN toward the initial earn-in but positions ERM as the major player in one of Australia's highest grade goldfields.

## **2017 Exploration Program**

- A detailed, orientation gravity survey will commence (once the NT wet season abates) over the Edna Beryl project to test the efficacy of this technique in discriminating and extending the multiple hematite ironstones intersected in the drilling
- If successful this survey will then be extended to cover additional new "Edna Beryl" targets in the immediate district
- Geological review of the Adelaide Resources (now renamed Andromeda Metals), Rover project (ASX: 15 November 2016) complete with the delineation of some outstanding targets – these will require screening with additional geophysics ahead of drilling
- Exploration is well underway in NSW with detailed high-resolution magnetic surveys completed over the EL's 8463 (Wellington), 8465 (Temora) and the Kadungle area (JV with Aurelia Metals)
- Ground based activities are expected to commence at Kadungle early next month

## **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) exploration and joint venture portfolio. These deposits are considered to be highly valuable exploration targets and, utilising modern exploration techniques, Emmerson has been successful in discovering copper and gold mineralisation at Goanna and Monitor in late 2011, the first discoveries in the TCMF for over a decade. To date, Emmerson has only covered 5.5% of the total tenement package (in area) with these innovative exploration techniques and is confident that, with further exploration, more such discoveries will be made.

Emmerson holds 2,500km<sup>2</sup> of ground in the TCMF, owns the only gold mill in the region and holds a substantial geological database plus extensive infrastructure and equipment. Emmerson has consolidated 95% of the highly prospective TCMF where only 8% of the historical drilling has penetrated below 150m.

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 into with Evolution Mining Limited (Evolution) on 11 June 2014, Evolution is continuing to sole fund exploration expenditure of \$15 million over three years to earn a 65% interest (Stage 1 Farm-in) in Emmerson's tenement holdings in the TCMF. An option to spend a further \$10 million minimum, sole funded by Evolution over two years following the Stage 1 Farm-in, would enable Evolution to earn an additional 10% (Stage 2 Farm-in) of the tenement holdings. Emmerson is acting as manager during the Stage 1 Farm-in and is receiving a management fee during this period. Exploration expenditure attributable to the Stage 1 Farm-in to date is approximately \$11.7million.

## **About Evolution Mining**

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

Outside of the life of mine area Evolution will have a 49% interest in future copper, gold and silver production. In FY16 Evolution produced 803,476 ounces of gold at an AISC of A\$1,014 per ounce generating an operating cash flow of A\$628.4 million.

As a result of the acquisition of an economic interest in Ernest Henry in November 2016, Evolution revised its FY17 Group gold production guidance to 800,000 – 860,000 ounces at an AISC of A\$900 – A\$960 per ounce.

## **About Edna Beryl Mineralisation**

Edna Beryl was discovered by prospectors in 1935 and mined underground in the 1940s and 1950s to a maximum depth of approximately 50 metres. Production up until 1952 was reportedly 2,700t of ore at an exceptional grade of 53g/t gold.

More recent exploration between 1996 and 2000 by Giants Reef Mining outlined additional high-grade gold mineralisation below the historic workings of the Edna Beryl East Mine and resulted in a resource estimate being reported in 1998 by independent consultants in accordance with the Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves (JORC:1998). While this estimate does not meet the minimum reporting requirements for a Mineral Resource under the current 2012 JORC Code, Emmerson has decided to monetise this mineralisation via a "small mines" Tribute Agreement with the Edna Beryl Mining company. The Tribute Agreement is constrained to a tight 3D envelope around the mineralisation at the Edna Beryl East Mine (orange and purple colours in Figure 2). The Tribute Agreement also contemplates further underground exploration and drilling, however, any mineralisation outside of this 3D envelope remains 100%, Emmerson.

## **About Andromeda Metals**

Andromeda Metals is an Australian Securities Exchange listed company (code: ADN) focusing principally on mineral exploration for gold deposits, with copper and lithium secondary targets. Andromeda Metals currently has interests in 18 exploration licenses, covering 5,928 sq kms within South Australia, Queensland, Western Australia and the Northern Territory.

### **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. The Company is planning further drilling programs to understand the geology, structure and potential of the untested areas below current mineralisation. 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 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.*

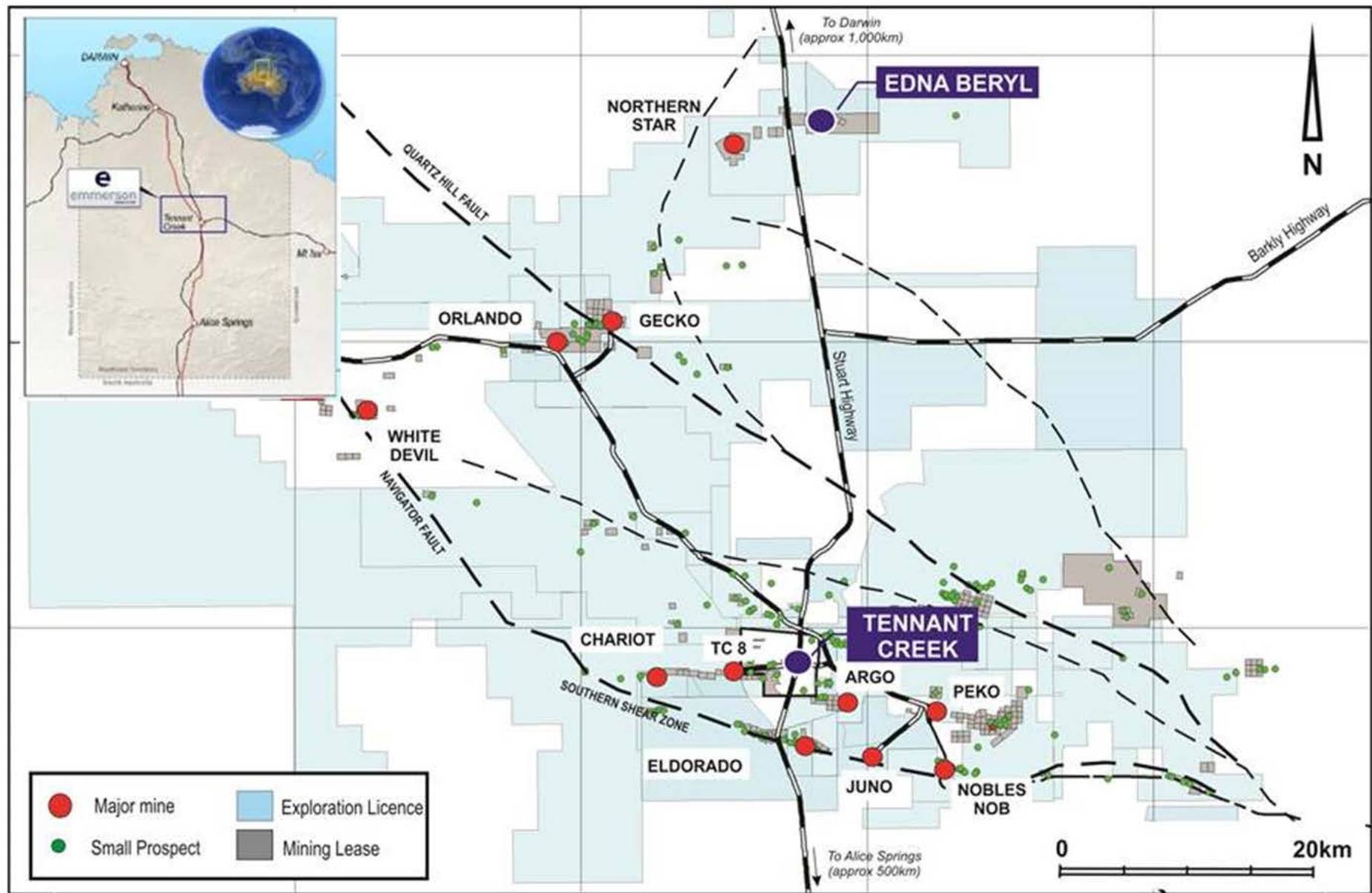


Figure 1: Location diagram of the Edna Project Area



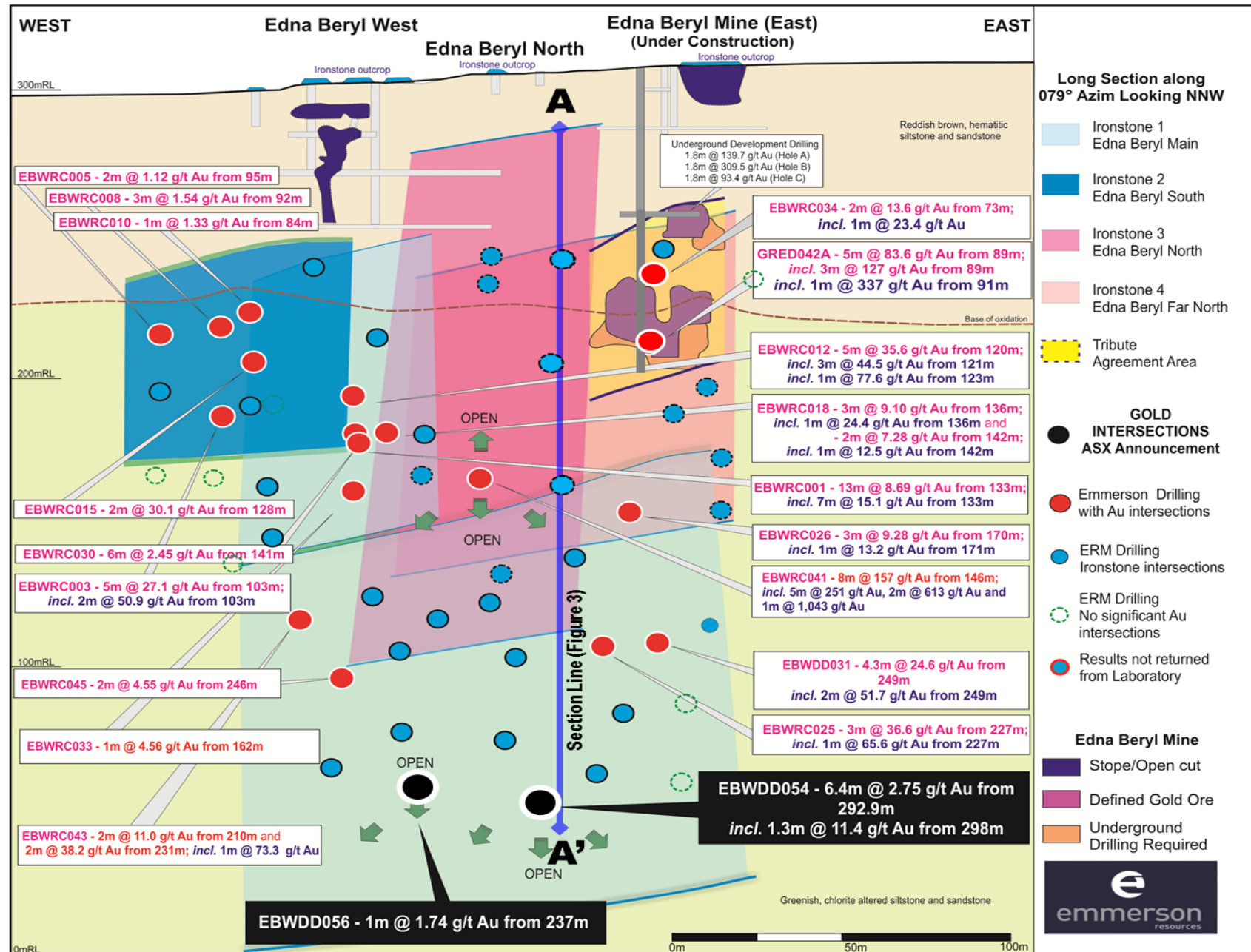


Figure 2: Long Section of the Edna Beryl district and recently completed drilling (solid black circles) highlighting the depth extensions of the Edna Beryl "Deep's" mineralisation.

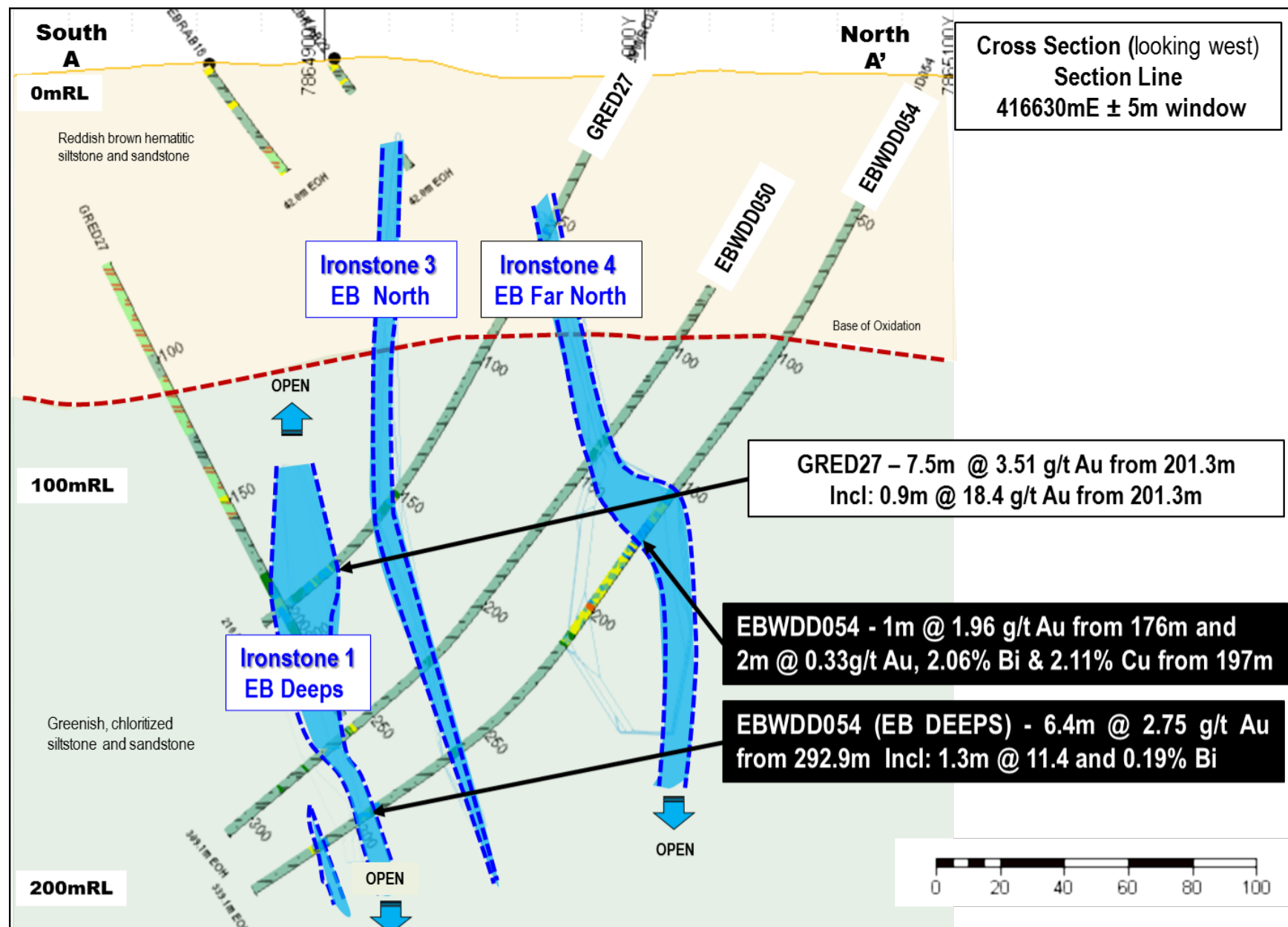


Figure 3: Cross Section of the Edna Beryl main and deeps ironstone with recently completed drilling and significant intersections.

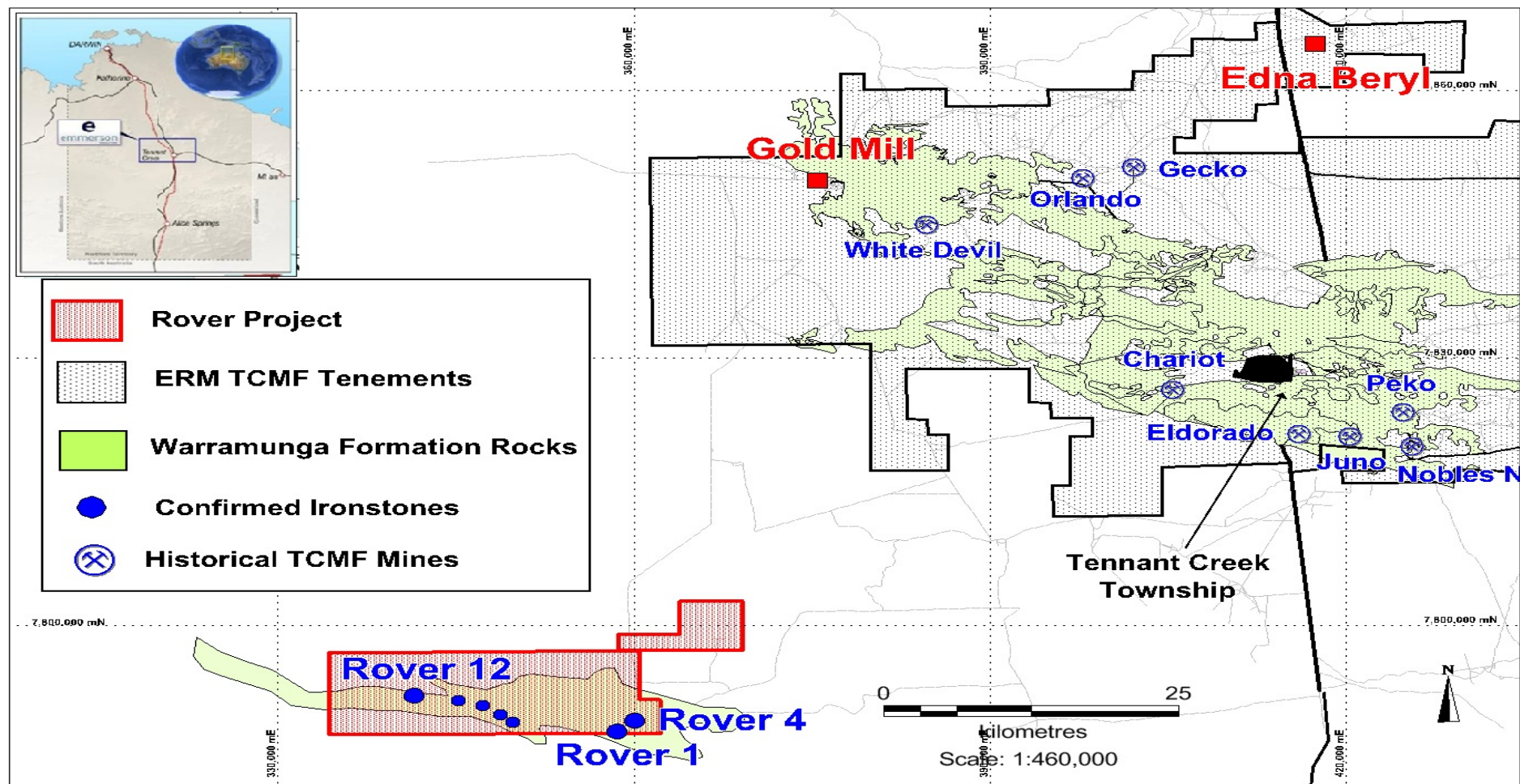


Figure 4: Location of the Rover Project and Emmerson's 100% owned Tennant Creek Mineral Field Project



**Table 1: Edna Beryl significant drill hole intersections**

Hole ID	East (MGA94_53)	North (MGA94_53)	RL AHD	Dip (deg)	AZI mag (deg)	From (m)	To (m)	Width (m)	Au (g/t)	Ag (ppm)	Bi (ppm)	Cu (ppm)	Fe (%)	Pb (ppm)	Zn (ppm)	Mo (ppm)	Sb (ppm)	Sample Type
EBWDD054	416622.79	7865086.61	301.22	-66	159.0	176	177	1.0	1.96	0.11	32.1	0.02	16.8	10.1	6.00	18.7	2.06	½ NQ²
						197	199	2.0	0.33	8.30	2.06%	2.11%	7.21	61.8	16.0	53.1	59.6	½ NQ²
						292.9	299.3	6.4	2.75	0.54	695	0.002	6.35	9.47	65.6	5.11	0.69	½ NQ²
					Incl.	298.0	299.3	1.3	11.4	1.40	0.19%	0.002	6.66	11.7	57.2	1.60	0.71	½ NQ²
EBWDD056	416594.19	7865067.18	301.38	-66	163.4	237	238	1.0	1.74	0.77	171	0.32	23.4	43.7	15.0	87.8	4.9	½ NQ²

**Note:**

- (1) EBWDD054 + EBWDD056 results are ½ diamond core samples.
- (2) EBWDD054 results are reported as a down hole weighted average.
- (3) Gold analysis method by 25g fire assay with ICP-OES finish.
- (4) Multi element analysis method by 4 acid digest & ICP-OES, ICP-MS finish.
- (5) Intersections are reported as downhole lengths and not true width.
- (6) Minimum cut-off of 1 g/t Au. No maximum cut-off.
- (7) Minimum cut-off of 1% Cu. No maximum cut-off.
- (8) Maximum of 2m internal dilution.
- (9) ½ NQ² represents Diamond Drill core sawn in half.

## 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), DD049-056 and GRED42A were drilled during the period from 16/09/2016 – 21/11/2016.</li> <li>Drilling targets ironstone both to the east and to the west of the known Edna Beryl mineralisation plus confirmation of historical gold intersections and extensions within the Edna Beryl Deeps area (Ironstone 1, formally Panel 3).</li> <li>Holes were angled to optimally test the interpreted shear zone).</li> <li>Drill holes have been drilled at an angle between 60 – 67 degrees and 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, 40 RC/Percussion holes for 5,407 and 28 Diamond holes for 4,827.6m have been completed. The drill hole spacing is nominal 10m x 10m grid spacing. Holes have been angled to optimally test the host shear zone.</li> <li>RC chips (EBWRC001-EBRC030) were riffle split on site to obtain 3m composite samples from which 2.5–3.0kg sample was pulverised (at Genalysis in Alice Springs) to produce a 25g charge for analysis by Aqua Regia digestion / ICP-MS/OES (Au, Ag, Bi, Cu, Fe, Pb, Zn, Mo, U, Se, Sb).</li> <li>Individual 1m (re-split) samples are retained on the drill site. Anomalous zones were individually assayed (re-splits) once 3m composite results are returned.</li> <li>Individual 1m samples are pulverised to produce a 25g charge for analysis by four acid digest with an ICP/OES (Cu, Fe, Pb, Zn) ICP/MS (Ag, Bi, Mo, Sb,) &amp; Fire Assay/AAS (Au) finish.</li> <li>To increase assay turnaround 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>Air Leg samples (ASX:16 Mar 2016) were collected from the floor of the refurbished cross cut drive at Edna Beryl to a final depth of 1.83m or 6 foot.</li> <li>Air Leg samples were collected from approximately 53m below surface level.</li> <li>Samples consisted of powdered (dust) and larger chips of red hematite ironstone.</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>15 RC drill holes for 3,118m were drilled in this third drill program (EBWRC033-035, EBWRC038-045, 046, 048, 52 &amp; 053).</li> <li>9 diamond hole pre collars for 2,127m were drilled in this third drill program (EBWDD031-032, 036-037, 047, 049-051, 054-056).</li> <li>9 diamond holes have been completed for 621.8m (EBWDD031-032, 0378, 049-051, 054 &amp; 056)</li> <li>RC drilling utilizes a 5 3/4 inch, face sampling bit.</li> <li>Diamond drilling utilizes NQ<sup>2</sup> size drill bit, standard tube.</li> <li>RAB, RC, Diamond drilling &amp; underground air leg drilling accounts for 100% of the current drilling at the Edna Beryl Exploration Target.</li> <li>RC recoveries are logged and recorded in the database and for this program were considered excellent.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Diamond drill core were oriented in unbroken ground.</li> <li>Orientation tool was a ori-mark tool.</li> <li>Three vertical air leg holes were spaced at 1m x 1m and drilled to a final depth of 1.83m (ASX: 16 Mar 2016).</li> <li>The diameter of the air leg drill steel outside diameter is 30mm.</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>Selected core and RC chips and diamond core have been re submitted to the laboratory for screen fire assay to assist with any sample bias.</li> <li>Air leg drill sample was collected as dust and chips were returned to the surface of the cross cut drive.</li> <li>All samples were dry.</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 RC 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 was 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>Standardised codes were used for lithology, oxidation, alteration and presence of sulphide minerals.</li> <li>Structural logging of selected historical diamond drill core was completed in 2016 recording orientation of veins, fractures and lithological contacts.</li> <li>Information on structure type, dip, dip direction, alpha angle, beta angle, texture, shape, roughness and fill material is stored in the</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>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 holes (or sections of holes are missing or incomplete. RC chips could not be located.</li> <li>No geological logging was completed on the 3 air leg drill holes however; the samples are described as brick red, heavy ironstone.</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 the Edna Beryl West 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 database through an external database administrator (contractor).</li> <li>A QAQC database is created as a separate table in the database and includes all field and internal laboratory QC samples.</li> <li>QC data is reported through a series of control charts for analysis and interpretation by the Exploration Manager or his/her delegate.</li> <li>The sample sizes are considered to be appropriate to correctly represent the gold mineralisation at the Edna Beryl Exploration Target based on the style of mineralisation (iron oxide copper gold), the thickness and mineral consistency of the intersection(s).</li> <li>Emmerson's sampling methodology (SOP) is available at any time for peer review.</li> </ul>
<b>Verification of</b>	<b>The verification of significant</b>	<ul style="list-style-type: none"> <li>Emmerson's Exploration Manager (Competent Person) has discussed</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>sampling and assaying</b>	<p><i>intersections by either independent or alternative company personnel.</i></p> <ul style="list-style-type: none"> <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>in detail the drill and sample collection procedures with the driller and is satisfied that best practice has been followed.</p> <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 considered to be reasonable.</li> <li>Screen assays are 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 2 &amp; 3 and Table 1 within the main text.</li> <li>All reported drill hole collars were surveyed (set out and picked up) using a differential GPS and by a suitably qualified company employee.</li> <li>Collar survey accuracy is +/- 30 mm for easting, northing and elevation coordinates.</li> <li>Co-ordinate system GDA_94, Zone 53.</li> <li>Topographic measurements are collected from the final survey drill hole pick up.</li> <li>Downhole survey measurements were collected routinely every 6m down hole using an REFLEX EZ-Shot® electronic single shot camera for RC.</li> <li>A selection of RC holes have been surveyed using a gyroscope tool and accuracy is comparable to the REFLEX single shot too.</li> <li>Diamond drill holes are surveyed every 15m using a REFLEX single shot tool.</li> <li>This survey camera equipment is quoted by the manufacturer to have an accuracy of <ul style="list-style-type: none"> <li>Azimuth <math>0-360^{\circ} \pm 0.5^{\circ}</math></li> <li>Dip <math>\pm 90^{\circ} \pm 0.2^{\circ}</math></li> </ul> </li> <li>If the measurement is considered to be affected by magnetic material (ironstone) then an average from the last non affected and the next non affected measurement is used.</li> <li>There were no down hole survey issues during this drill program and all collar positions have been validated by the Exploration Manager.</li> </ul>
<b>Data spacing and distribution</b>	<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>	<ul style="list-style-type: none"> <li>Drill holes are spaced 10-15 metres apart in dip and strike. This close spacing is necessary due to the style and morphology of the shear zone being drill tested.</li> <li>The spacing of historic drill hole collars is erratic, possibly to allow for the high degree of drilling deviation encountered in the Tennant Creek Mineral Field.</li> <li>Identified mineralisation within the Edna Beryl Exploration Target has been defined by drill holes on a section spacing of 10 m to 20 m with an average on-section spacing of 10 m.</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> <li>The air leg holes were space 1m apart.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<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 orientation of key mineralised structures is considered to have</i></li> </ul>	<ul style="list-style-type: none"> <li>Exploration drilling is at a high angle to the mineralized bodies and/or shear zone.</li> <li>Exploration drilling is perpendicular to mineralized bodies or shear zone.</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</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>introduced a sampling bias, this should be assessed and reported if material.</i>	<p>have been drilled at the correct orientation.</p> <ul style="list-style-type: none"> <li>The 3 air leg holes were drilled vertically into the floor of the cross cut drive.</li> <li>It is considered that the vertical drilling is representative and that no sample bias has been introduced.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></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 0.8m 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><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 historical samples.</u></li> <li>An internal review of the 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>

## SECTION2 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 different source but following the same structurally controlled path.</li> <li>In plan view, the ironstone bodies tend to be narrowest in the</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>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.</p> <ul style="list-style-type: none"> <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 list of the drill holes, collar detail and intersections is provided in the body of Emmerson Resources latest quarterly report (ASX: January, 2017).</li> <li>• A table of significant results is presented in the text, Table 1 and on Figures 2 and 3 within this report.</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>• Mineralisation within Diamond Drill Hole EBWDD054 is reported as a weighted average.</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 mineralised zone. 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 intercepts should be included for any significant discovery being</li> </ul>	<ul style="list-style-type: none"> <li>• Refer to Figures in body of text.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>reported. These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.</i>	
<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>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>
<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>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> </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>RC and diamond drilling (Phase 3) is completed. This information will further assist in confirming the geological and grade continuity of gold mineralisation already intersected.</li> <li>Gyro survey of completed holes.</li> <li>Optical / Acoustic televiewer survey of selected drill holes.</li> <li>Down hole density and 3 component magnetometry underway.</li> <li>Current drill hole spacing is still considered too wide to enable an accurate Mineral Resource Estimate.</li> <li>Higher gold grade intersections selected for screen fire assay.</li> <li>Twin hole drill program to be designed.</li> <li>Petrological study of selected core and drill chips is underway.</li> <li>Geological interpretation as discussed in the text.</li> </ul>