

# New high-grade gold and copper at Tennant Creek

Final drill results from Emmerson's 100% owned Mauretania project further enhance future development potential.

Re-assayed results from the upper, oxide zone of diamond drill hole MTDD006 returned:

- 15m at 2.28g/t gold from 57m including:
  - **3m at 5.24g/t gold** from 68m
  - 2m at 4.23g/t gold from 64m
- 1m at 5.75g/t gold and 1.39% copper from 76m
- **21m at 2.4g/t gold** from 81m including:
  - 5m at 4.11 g/t gold
  - 1m at 9.25g/t gold

A new thick zone of copper and gold from diamond drill hole MTDD007 returned:

- 22m at 0.84% copper, 0.04g/t gold and 5.2g/t silver from 88m including:
  - 2m at 1.56% copper and 0.14g/t gold from 88m
  - 2m at 3.11% copper from 108m
  - 1m at 3.35g/t gold from 209m

Continuing thick intersection of gold in the oxide zone in diamond drill hole MTDD008 returned:

- 9m at 1.28g/t gold from 92m
- 1m at 1.67g/t gold from 110m

Emmerson's Managing Director, Rob Bills commented:

"These latest results from Mauretania have established a very thick ~36m zone of gold a mere 57m below the surface. Furthermore, a new zone of shallow copper mineralisation that also points to the possibility of gold at depth remains untested. Particularly as the gold and copper mineralisation are open to the north west, and that the typical metal zonation in these styles of deposits consist of primary gold beneath the copper.

The coarse nature of the gold and poor to no recoveries of some samples in the oxide zone has likely under represented the true gold grades, particularly in comparison to adjacent drill holes which assayed 20m at 38.5g/t gold from 92m, including 4m at 158g/t gold (ASX: 11 June 2019)



The thick intercepts of gold and now copper at shallow levels provides great encouragement that Mauretania will be a viable open cut mine – hence our successful application to the NT Government to convert the Exploration Lease into a Mining Lease."



Photo 1: Native copper in drill holes MTDD006 and MTDD007

# Mauretania Drilling – high grade gold and copper

Mauretania is located within the Northern Project Area (NPA) of Emmerson's Tennant Creek project (figure 1). These are some of the first diamond drill holes completed at Mauretania and confirm the thick high-grade nature of the gold mineralisation, and now copper in the shallow oxide zone.

# Diamond Drill Hole MTDD006 (Figures 2 & 3)

MTDD006 was re-assayed due to the original assay results not matching visual observations of native copper (photo 1). This drill hole intersected a brecciated, hematite dominant ironstone consisting of hematite fragments in a mixed limonite/goethite clay matrix. As compared to the previous assay results, this intercept of 15m at 2.28g/t gold contains higher grade intervals up to 9.25g/t gold (table 1) and is overall thicker yet lower in average grade. Immediately beneath this zone is 1m at 5.75g/t gold with native copper assaying 1.4% and a further, thick 21m of 2.4g/t gold within oxidised hematite ironstone. Thus, this drill hole indicates a **true thickness of the upper oxide gold mineralisation in the order of 36m with intervals of higher grades from only ~57m below the surface.** This is very amenable to open pit mining.

# **Diamond Drill Hole MTDD007**

A new thick, 22m interval of copper mineralization that averages 0.84% Cu was intersected in drill hole MTDD007. It includes higher grade intervals of: 2m at 1.56% Cu and 0.14g/t gold from 88m, 1m at 1.89% Cu from 94m, 1m at 1.33% Cu from 97m and, 2m at 3.11% Cu from 108m associated with hematite-jasperclay (Figure 3). Significant core loss was encountered in specific clay intervals and likely results in an under representation of the overall gold and copper results.

The lower primary gold target of 1m at 3.35g/t gold from 209m is associated with chlorite-hematite-quartz ironstone (Figure 3). Both this drilling and our latest structural interpretation (which is reflected by the trends in the gold geochemistry in figure 2) suggests there is excellent potential to follow this mineralisation to the Northwest.



### **Diamond Drill Hole MTDD008**

A mineralised upper oxide zone of 9m at 1.25g/t gold from 92m is associated with brecciated hematite ironstone. This again highlights the potential for extensions of the gold mineralization to the north-west (Figure 2).

Mauretania is a green-fields discovery identified from recognising that high-grade gold and copper are associated with hematite ironstones that have largely gone undetected up until Emmerson's entry in the Tennant Creek Mineral Field in 2008. The hallmarks of our discoveries at Edna Beryl, Goanna, Monitor and now Mauretania include the exceptional grade of both copper and gold and their association with hematite dominant ironstones.

### Next Steps

The progression of the Mauretania discovery has highlighted the potential for repeats of this style of highgrade mineralisation within the Northern Project Area. Emmerson continues to pursue several technical, commercial and processing avenues to fully capitalise on this. Note the reference in the quarterly report where preliminary discussions were held with Elmore (ASX ELE) on their plans to establish a portable, modular mill at the nearby Peko Tails project.

### For further information, please contact:

Rob Bills Managing Director and CEO E: rbills@emmersonresources.com.au T: +61 8 9381 7838

#### Media enquiries

Michael Vaughan, Fivemark Partners E: michael.vaughan@fivemark.com.au T: +61 422 602 720

This release has been authorised by the Board of Emmerson Resources Limited.

#### **Regulatory Information**

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

#### **Competency Statement**

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



#### **Forward-Looking Statements**

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

Hole ID	East (MGA94_53)	North (MGA94_53)	RL AHD	Dip (deg)	AZI mag (deg)	From (m)	To (m)	Width (m)	Au (g/t)	Ag (g/t)	Bi (ppm)	Cu (ppm)	Co (ppm)	Fe (%)	Pb (ppm)	Zn (ppm)	Sb (ppm)	Se (ppm)
						57	72	15	2.28	30	0.11%	962	95.6	19.9	352	294	10.4	6.6
					Incl.	64	66	2	4.23	42.5	0.11%	837	100	15.4	408	262	7.3	8.0
					000	68	71	3	5.24	16.8	0.20%	996	138	20.9	410	422	15.8	6.3
					000	76	77	1	5.75	90.0	0.11%	1.39%	0.16%	21.5	0.86%	0.10%	18.1	5.0
MTDD006	430719.19	7833052.88	329.41	-90		81	102	21	2.40	5.86	0.26%	392	51.7	21.3	576	54.2	8.8	3.2
WI BB000	4007 10.10	1000002.00	020.41	50	Incl.	83	88	5	4.11	3.33	810	404	37.7	21.0	180	67.0	8.48	2.0
						96	97	1	9.25	18.0	1.81%	0.15%	52.6	15.5	0.49%	40.0	19.6	21.0
						101	102	1	5.84	3.53	0.18%	479	117	24.7	371	56.0	8.6	4.0
						113	114	1	5.25	0.75	166	152	48.4	21.1	217	216	4.6	2.0
						153	154	1	1.40	9.89	84.3	117	7.70	14.3	26.4	11.0	1.8	39.0
						88	110	22	0.04	5.2	9.3	0.84%	718	8.3	278	0.16%	3.3	5.2
						88	90	2	0.14	6.3	14.3	1.56%	0.13%	12.6	95.5	0.12%	5.30	0.5
	420000.00	7022027 44	200.20	00 F	Incl.	94	95	1	0.06	12.7	21.1	1.89%	898	17.2	478	918	5.2	1.0
MTDD007	430698.22	7833037.14	329.36	-89.5	000	97	98	1	0.03	18.7	45.8	1.33%	679	15.5	202	653	11.8	0.5
					108	110	2	0.03	9.37	4.27	3.11%	0.35%	14.5	0.17%	0.87%	5.03	41.5	
						209	210	1	3.35	2.18	104	232	61.8	19.3	9.0	171	1.73	58.0
	420695 10	700000 70	220.49	70.4	45.0	92	101	9	1.28	9.13	639	669	113	16.2	372	130	8.20	1.78
MTDD008	430685.10	7833038.73	329.48	-70.4	45.2	110	111	1	0.01	1.67	58.6	1.37%	205	7.04	13.1	0.41%	6.64	0.50

Table 1: Mauretania Prospect MTDD006 (re-assay), MTDD007 & MTDD008 significant drill hole intersections.

#### Note:

- (1) MTDD006 (re-assay), 007 & 008 samples are half HQ<sub>3</sub> or NQ<sub>3</sub> diamond core samples.
- (2) Gold analysis method by 50g fire assay charge with ICP-OES finish.
- (3) Multi element analysis method by 4 acid digest & ICP-OES, ICP-MS finish.
- (4) Intersections are reported as downhole lengths and not true widths.
- (5) Minimum cut off 1g/t Au. No maximum cut off.
- (6) Minimum cut off 0.8% Cu. No maximum cut off.
- (7) Maximum internal dilution is no greater than 4 metres.
- (8) Assay intersections are not reported as weighted averages.



# Table 2. Mauretania drilling collar location data

Hole ID	East (MGA94_53)	North (MGA94_53)	RL AHD	Dip (deg)	AZI mag (deg)	Depth (m)	Drill Date	Drill Type	Tenement
MTDD006	430719.19	7833052.88	329.41	-90	0	127.8	19/09/2019	DDH	EL28761
MTRC035	430682.54	7833010.40	329.23	-74.3	47.2	138.0	18/10/2019	RC	EL28761
MTRC037	430696.25	7833009.22	329.22	-74.6	48.8	204.0	20/10/2019	RC	EL28761
MTDD007	430698.22	7833037.14	329.36	-90	0	221.5	21/10/2019	RC/DDH	EL28761
MTDD008	430685.1	7833038.73	329.48	-70.4	45.2	174.4	19/10/2019	RC/DDH	EL28761



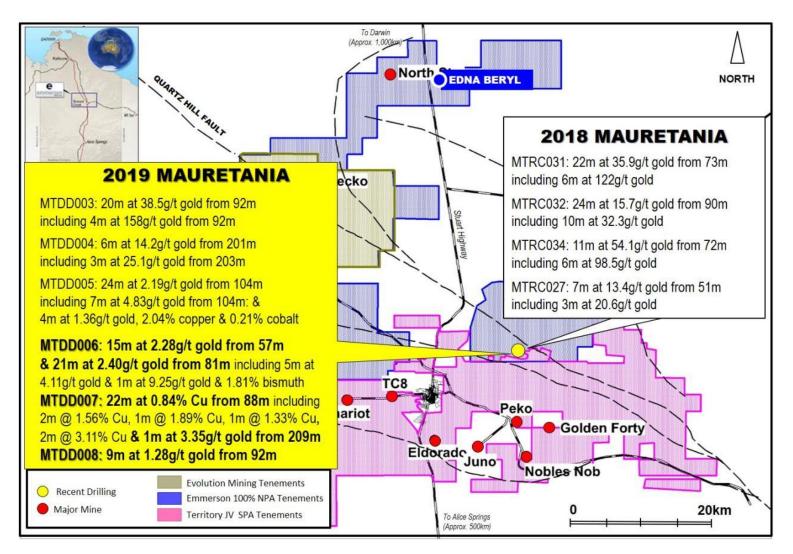


Figure 1: Location of Emmerson's 100% owned package (blue) and assay results from the recently completed Mauretania drill program (yellow dot)



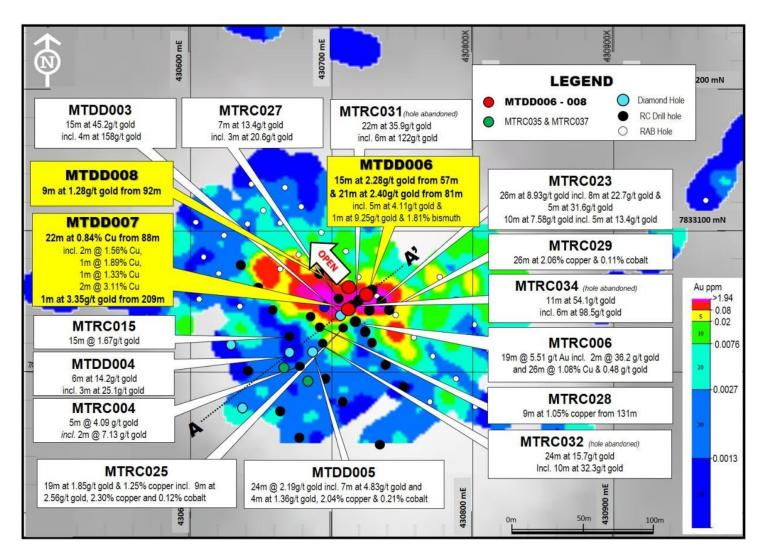


Figure 2: Location of previous drilling (black & white dots) diamond drill holes (light blue dots), recent RC holes (green dots) and diamond holes MTDD006, MTDD007 & MTDD008 (red dots) on a background of gold geochemistry in ppm (colours).



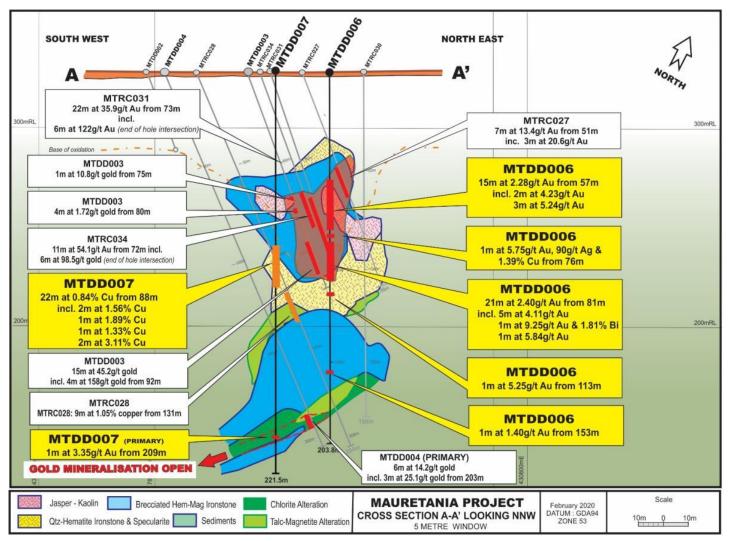


Figure 3: Mauretania cross Section A-A' – note the white call out boxes represent the previously reported assay results and yellow call out boxes are assay results received from the MTDD006 (re-assay) & MTDD007, 2019 drilling program.



The exploration results contained within the above company release are in accordance with the guidelines of *The Australasian* Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition–Table 1). Section 1.1 Sampling Techniques and Data – MAURETANIA EXPLORATION TARGET – MTDD006-008 DIAMOND DRILLING & MTRC035 & 037 REVERSE CIRCULATION DRILLING.

(Criteria in this section apply to all succeeding sections)

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 30g 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>The Mauretania Project holes have been sampled using Reverse Circulation (RC) and Diamond (DDH) drilling techniques. 31 holes RC holes (MTRC003-034 for 4,487m) and 5 DDH (MTDD001-005 for 738.1m) have been completed prior to this current drilling campaign at the Mauretania Exploration Target.</li> <li>The deepest RC hole is 287m, shallowest was 101m and the average hole depth was 187m.</li> <li>Three diamond drill holes (MTDD006-008) were drilled for a total of 599.7m and are reported in this current release. All holes are sampled using Diamond drilling techniques (DDH).</li> <li>Two RC holes (MTRC035 &amp; 037) were drilled for a total of 342m and are reported in this current release.</li> <li>Pre collars MTRC036 and MTRC038 were drilled to 96m &amp; 72m respectively.</li> <li>Two pre-collars were drilled for diamond holes</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>RC drilling accounts for 55%, RAB 20% and Diamond holes (MTDD001-008) = 25% of reported drilling at Mauretania Exploration Target.</li> <li>MTDD006 HQ3 = 88.7m, NQ3 = 115.1m final depth = 203.8m.</li> </ul>



		resources
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>MTDD007 - RC pre-collar to 72m. HQ3 = 56.7m, NQ3 = 92.8m, final depth 221.5m.</li> <li>MTDD008 - RC pre-collar to 96m. HQ3 = 78.4m, final depth = 174.4m.</li> <li>HQ3 core diameter is 63.5mm.</li> <li>NQ3 core diameter is 47.6mm</li> <li>MTDD006 &amp; 007 core was not oriented due to the vertical nature of the drill hole.</li> <li>GMP Exploration completed the diamond drilling.</li> <li>Standard HQ inner tube was used for drill holes MTDD001-002.</li> <li>HQ3/NQ3 triple tube was used for drill holes (MTDD003-008)</li> <li>DDH recoveries are logged and recorded in the database and are considered to be of poor to fair in the oxidized zone and fair to excellent in the primary zone (below base of oxidation).</li> <li>RQD measurements and core loss is recorded on diamond logging sheets, loaded into Emmerson's database and retained for reference.</li> <li>RQD logging records core lengths, recovery, hardness and weathering.</li> <li>Any issues or concerns are discussed at the time with the drilling contractor and recorded in our database.</li> <li>Recoveries are considered fair for reported RC drilling.</li> <li>It is considered by Emmerson that there is preferential loss of fine to medium grained material within the upper ore zones.</li> <li>Emmerson 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>samples.</li> <li>All DDH samples are lithologically logged in one metre intervals.</li> <li>All DDH samples are defined by geological characteristics and controlled by alteration and lithological boundaries.</li> </ul>



		resources
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 subsampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the insitu 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 data undergoes a further set of validations checks prior to final upload.</li> <li>Standardised codes are used for lithology, oxidation, alteration and presence of sulphide minerals.</li> <li>Magnetic susceptibility data for all individual 1m DDH samples are collected as per ERM procedure.</li> <li>Specific density is recorded for all lithological types and entered in the database.</li> <li>Representative diamond core is available to all geologists (a physical reference set) to ensure consistency of logging.</li> <li>All drill core is photographed.</li> <li>Standard sampling operating procedures have used by ERM at Mauretania Project area drilling for DDH samples.</li> <li>The sample preparation of DDH 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>Core was cut in half (HQ3/NQ3) at Emmerson's Tennant Creek exploration office, using an automatic core saw.</li> <li>All samples were collected from the same side of the core.</li> <li>For MTDD006, the remaining half-core samples were sent for re-assay due to original results not matching visual observations,</li> <li>Half core samples are submitted for analysis, unless a field duplicate is required, in which case quarter core samples are submitted.</li> <li>RC samples are 1m riffle split on site.</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>DDH sample weight varies between 3 – 5kg.</li> </ul>
Quality of assay data and laboratory tests	<ul><li>assaying and laboratory procedures used and whether the technique is considered partial or total.</li><li>For geophysical tools, spectrometers, handheld</li></ul>	<ul> <li>Field QC procedures involve the use of certified reference material (CRM's) as assay standards, and ERM include blanks, duplicates.</li> <li>QAQC protocols consist of the insertion of blanks at a rate of one in every 40 samples, insertion of standards (CRM's) at a rate of approximately one in every 20 samples and duplicate field sample analysis of at a rate of approximately one in every 20 samples.</li> </ul>



		resources
	(ie lack of bias) and precision have been established.	<ul> <li>A selection of CRM's is available to the geologists and insertion points are predetermined prior to drilling.</li> <li>The geologist has the ability to override this predetermined insertion based on visual and geological characteristics of the current drill hole.</li> <li>Insertion of assay blanks is increased when visual mineralisation is encountered and consists of insertion above and below the mineralised zone.</li> <li>Samples typically weigh less than 3kg to ensure total preparation at the pulverisation stage.</li> <li>Laboratory checks include CRM's and/or inhouse 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 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>Sample sizes are considered to be appropriate to correctly represent the mineralisation at <i>the Mauretania 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>The Exploration Manager of ERM has visually verified significant intersections reported in the DDH samples.</li> <li>Geochemical data is managed by ERM using and external database administrator and secured through a relational database (Datashed).</li> <li>Laboratory data is received in digital format and uploaded directly to the database.</li> </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> </ul>	<ul> <li>Original data sheets and files are retained and are used to validate the contents of the database against the original logging.</li> <li>Drill holes MTDD003 and MTDD005 are considered as twin drill holes.</li> <li>Drill hole collars were surveyed (set out and pick up) using a differential GPS and by a suitably qualified company employee.</li> <li>Collar survey accuracy is +/- 30 mm for</li> </ul>



		resources
	<ul> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>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 for diamond drilling were collected at a minimum of every 30m using an CORE EX ® electronic single shot camera for this current round of drilling.</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>Downhole survey measurements for RC were collected using a true north seeking Gyro.</li> <li>There were no down hole survey issues during this drill program.</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>Drill density within the Mauretania Exploration Target area is 10m x 10m. On the discovery line, containing MTRC004,005,006,023- 025,032 and MTDD003, MTTDD005 &amp; MTDD006 spacing is 5m x 10m.</li> <li>There is insufficient drill / assay data to establish the geological and grade continuity at this stage of drilling.</li> <li>No Mineral Resource Estimation can be applied to these Exploration Results.</li> </ul>
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>Exploration drilling is perpendicular to the interpreted strike of the Mauretania target.</li> <li>No orientation based sampling bias has been identified in the data at this point.</li> <li>Results at this stage suggest that the geological and geophysical targets being tested have been drilled in the correct orientation.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Samples are selected, bagged and labelled by logging geologist.</li> <li>They are placed in sealed polyweave bags and then larger bulka bags for transport to the sample preparation facility in Alice Springs (laboratory).</li> <li>The 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 sampling techniques, QAQC protocols and data collection was conducted by Emmerson in November 2013.</li> <li>Optiro (2013) also reviewed the standard</li> </ul>



	operating procedures for RC and diamond core sampling used and discussion with the site geologist confirmed that these were understood and being followed.
•	•
•	•

### Section 2 Section 2: Reporting of Exploration Results – MAURETANIA EXPLORATION TARGET – MTDD006-008 DIAMOND DRILLING & MTRC035 & 037 REVERSE CIRCULATION DRILLING.

(Criteria in this section apply to all succeeding sections)

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>The Mauretania Exploration Target is located within Exploration Licence 28761.</li> <li>Application for a ineral Lease has been made to the Northern Territory Government.</li> <li>The Mauretania exploration target is located on Tennant Station Perpetual Pastoral Lease.</li> <li>Exploration Licence 28761 is 100% held by Emmerson Resources Limited.</li> <li>Land Access is secured through Emmerson's Indigenous Land Use Agreement (ILUA) with the CLC which is in good standing.</li> <li>Land Access is secured through Emmerson's Land Access Agreement signed by the owners of the Tennant Creek station.</li> <li>Heritage surveying (assisted by the Central Land Council) was conducted prior to any exploration being conducted within the Mauretania Project Area.</li> <li>Sacred Site Certificate Numbers 2015-40a, 2015-40b and 2015-40c subsequently issued post field inspection allowing field exploration and drilling to commence.</li> <li>Two exclusion zones were identified during the field inspections however do not impact on the current exploration drilling.</li> <li>Emmerson do not believe that the two identified exclusion zones will impact of future exploration of the Mauretania Project Area.</li> <li>The tenement 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>Emmerson Resources commenced exploration at the Mauretania Exploration Target in 2015. RAB drilling (158 holes for 6,956 metres), 31 RC holes for 4,487 metres (MTRC003-MTRC034) and 5 diamond (HQ) drill hole tails for 738.1m.</li> <li>Regional mapping and rock chipping was undertaken by previous explorers. Most of this work was completed in the 1970's by Australian Development Pty Ltd and in the 1980's by Normandy Tennant Creek</li> <li>Adelaide Petroleum NL (Sabminco NL JV) drilled 11 RC holes at the Black Cat Prospect (1988) however did not discover significant results and no further work was done.</li> <li>Matana Minerals NL also mapped the general area in 1989.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The reader is referred to AusIMM Monograph 14 (Geology of the Mineral Deposits of Australia and Papua New Guinea), Volume 1, pp. 829-861, to gain an introduction to the regional geology and styles of gold-copper mineralisation of the area.</li> <li>In 1995 the Northern Territory Geological Survey released a geological map and explanatory notes for the Tennant Creek 1:100,000 sheet, which covers the area of the license.</li> <li>The rocks of the Warramunga Formation host most of the ore bodies in the region and underlie the Exploration License.</li> <li>Mineralisation is considered to be Proterozoic Iron Oxide Copper Gold (IOCG) mineralisation of similar style and nature to other mineralisation / deposits in the Tennant Creek Mineral Field.</li> </ul>
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>MTDD006, MTDD007 and MTDD008 collar location, elevation, the total depth, drill type and dip, azimuth and assay results are included as a Table in the body of the text for the current holes being reported.</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</li> </ul>	<ul> <li>Mineralized intersections are reported as down hole intervals and not weighted averages.</li> <li>Please refer to the table of significant results in the body of the text for detail on cut off grades and mineralised widths.</li> <li>These results are exploration results only and no allowance is made for recovery losses that may occur should mining</li> </ul>



	resources
	<ul> <li>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> <li>Cut-off grades have been used for reporting of exploration drill results and are defined below the Table of Significant results.</li> <li>Interval of no core recovery were assigned zero grades.</li> <li>Assay results are compiled across both RC and diamond sampled intervals.</li> </ul>
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> <li>The ironstone dips 75 degrees to the southwest and strikes NNW-SSE. Magnetic modelling suggests the ironstone has a strike length of 120m and the modelled body plunges to the northwest.</li> </ul>
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> <li>Refer to Figures in body of text.</li> </ul>
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> <li>All results are reported.</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> <li>Geophysical magnetic susceptibility logging is completed at 1m intervals on site (RC drilling).</li> <li>Three component magnetic probing of has been completed for selected drill holes.</li> <li>A regional RAB program was completed in 2015 and included some areas within the Mauretania Exploration Target.</li> <li>One bulk sample was collected and stored for further metallurgical testing.</li> <li>Rock characterisation of mineralised and non-mineralised material has been collected.</li> <li>SAM geophysical survey completed in July 2019 over the Mauretania Exploration Target. Results are still being assessed.</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</li> <li>Geological reinterpretation based on new drilling information and additional geophysical detail.</li> <li>Additional RC/DDH drilling is considered appropriate and will be completed during</li> </ul>



geological interpretations and future drilling areas, provided this information is not commercially sensitive.	the 2020 field season.