ASX Announcement
12 June 2024

Maiden High-Grade Eldorado Mineral Resource Estimate
445Kt @ 4.9 g/t for 69,800 oz of Gold

Eldorado Deposit, Tennant Creek – Maiden JORC 2012 High-grade Mineral Resource Estimate

- Mineral Resource Estimate of 444,700t @ 4.9 g/t gold for 69,800 oz of Gold completed including:
  - **Indicated Resource of 277,500t @ 6.2 g/t gold for 55,600 oz of gold**
  - **Inferred Resource of 167,200 @ 2.6 g/t gold for 14,200 oz of gold**
- Extremely high grade zones modelled below the Turner Fault with **16,000t @ 67.1 g/t gold for 34,500oz** defined and classified as Indicated Mineral Resource
- Emmerson's Tennant Creek Project Global Mineral Resource expanded to **2.27Mt @ 5.2 g/t for 376,600 oz of gold**:
- Development studies to advance Eldorado planned

Emmerson's Managing Director, Mike Dunbar commented:

"Emmerson's high-grade gold inventory continues rapidly growing: The completion of the maiden Eldorado Mineral Resource Estimate is another substantial step forward for Emmerson's Tennant Creek Project as a whole, as it adds more high-grade gold ounces to the Company's inventory, which now stands at over 370,000oz of gold at 5.2 g/t gold with the Indicated portion of the Mineral Resource now standing at over 310,000oz of gold at 6.1g/t.

"Importantly the Eldorado resource is very robust with 80% of the resource classified as Indicated, which, given the high-grade, should allow a substantial amount of the resource to convert to an Ore Reserve, once additional development studies are completed. The Eldorado studies along with the Golden Forty development studies, which are already being completed, by our Joint Venture partner, Tennant Consolidated Mining Group (TCMG), are expected to lead to a substantial increase in the Probable Ore Reserves.

"It is expected that once these studies are completed, the deposits will be transferred into our "small mines joint venture" (SMJV), where Emmerson receives a 6% gross royalty on all gold produced from the project.

"We expect that the Eldorado resource along with the recently announced Golden Forty resource, will have a material impact on TCMG's plans to revitalise gold mining and processing in the high-grade Tennant Creek Mineral Field and add significantly to the royalties that Emmerson will receive as well as benefiting the Northern Territory."

Estimation of Mineral Resource for the High-Grade Eldorado Gold Deposit

Emmerson Resources Limited (Emmerson or Company ASX: ERM) is pleased to advise the completion of an initial Mineral Resource Estimate (MRE) for the Eldorado deposit within the Tennant Creek Mineral Field (TCMF), Northern Territory (Figure 1). The MRE is an important step forward in the evaluation of the deposit and will form the basis for development studies which are being undertaken by our joint venture partner Tennant Consolidated Mining Group (TCMG) as part of their plans to revitalise mining in the Tennant Creek Mineral Field.

The Eldorado MRE includes **444,700t @ 4.9 g/t gold for 69,800oz** of contained gold using a variable cutoff grade of 0.5g/t gold for the shallow portion of the deposit and a 1.0g/t cutoff below 285mRL with approximately 80% of the ounces classified as Indicated (Table 1 & Figures 2 to 4). The historical mining voids have been modelled and excluded from the resource.

Importantly, the deposit is relatively insensitive to cutoff grade with the global resource ounces only decreasing by approximately 2% and 7% when the cutoff grade is increased from 0.5g/t to 1.0 and 1.5 g/t respectively (see Table 2 and a grade tonnage curve Figure 5).

Included within the resource are two extremely high grade zones at depth, which combined host **16,000t @ 67.1 g/t gold for 34,500oz**, all of which is classified as Indicated. This highlights the very high-grade and consistent nature of the mineralisation and the potential for the high-grade mineralisation to be mined using underground mining methods.

With the Eldorado MRE now completed, Emmerson's Tennant Creek Project now contains **high-grade resources of 376,600oz @ 5.2g/t gold** with 83% of the ounces (**312,000oz @ 6.1g/t**) classified as Indicated (see Table 3 for MRE breakdown).

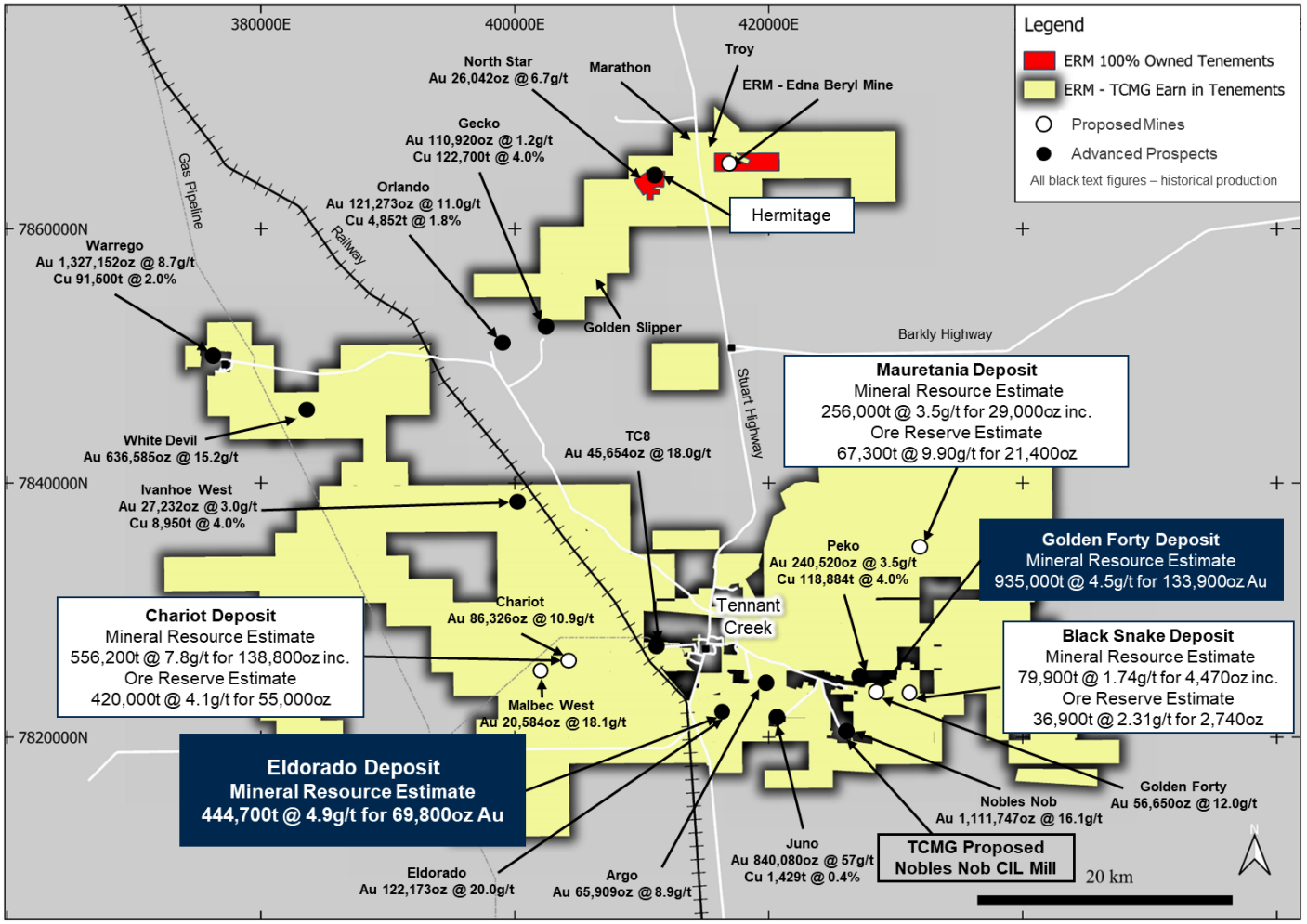

Figure 1: *Emmerson's Tennant Creek Project showing the location of Emerson's Mineral Resources & Ore Reserves and area covered by the Exploration JV (EEJV) and Emmerson's 100% owned projects (white labels are in the SMJV, Blue labels are in the EEJV)*

Note: Quoted production from major historical deposits after Ahmad, M. and Munson, T.J. (2013). Geology and mineral resources of the Northern Territory, Special Publication 5, For Chariot mine and Malbec West mine, quoted production from Giants Reef Mill Reconciled Production to end of month September 2005 (Giants Reef internal reporting).

Table 1: Eldorado Mineral Resource Estimate June 2024
(0.5g/t Au cutoff shallow portion & 1.0g/t Au cutoff at depth)

	Indicated Resources			Inferred Resources			Total Resources		
Weathering Domain	Tonnes	Gold Grade (g/t)	Ounces	Tonnes	Gold Grade (g/t)	Ounces	Tonnes	Gold Grade (g/t)	Ounces
Oxide	-	-	-	5,600	11.3	2,050	5,600	11.3	2,050
Transitional	154,300	2.9	14,150	149,150	2.4	11,600	303,450	2.6	25,750
Fresh	123,200	10.5	41,450	12,500	1.4	600	135,650	9.6	42,000
Total	**277,500**	**6.2**	**55,600**	**167,200**	**2.6**	**14,200**	**444,700**	**4.9**	**69,800**

Note: Inconsistencies in total tonnage and ounces reporting are due to rounding

Lauritz Barnes of Trepanier Pty Ltd, a highly regarded and independent resource estimator, was engaged to complete the MRE on the Eldorado Deposit in accordance with the JORC 2012 code. The scope of work included modelling the ironstone and the surrounding halo of gold-bearing chlorite alteration.

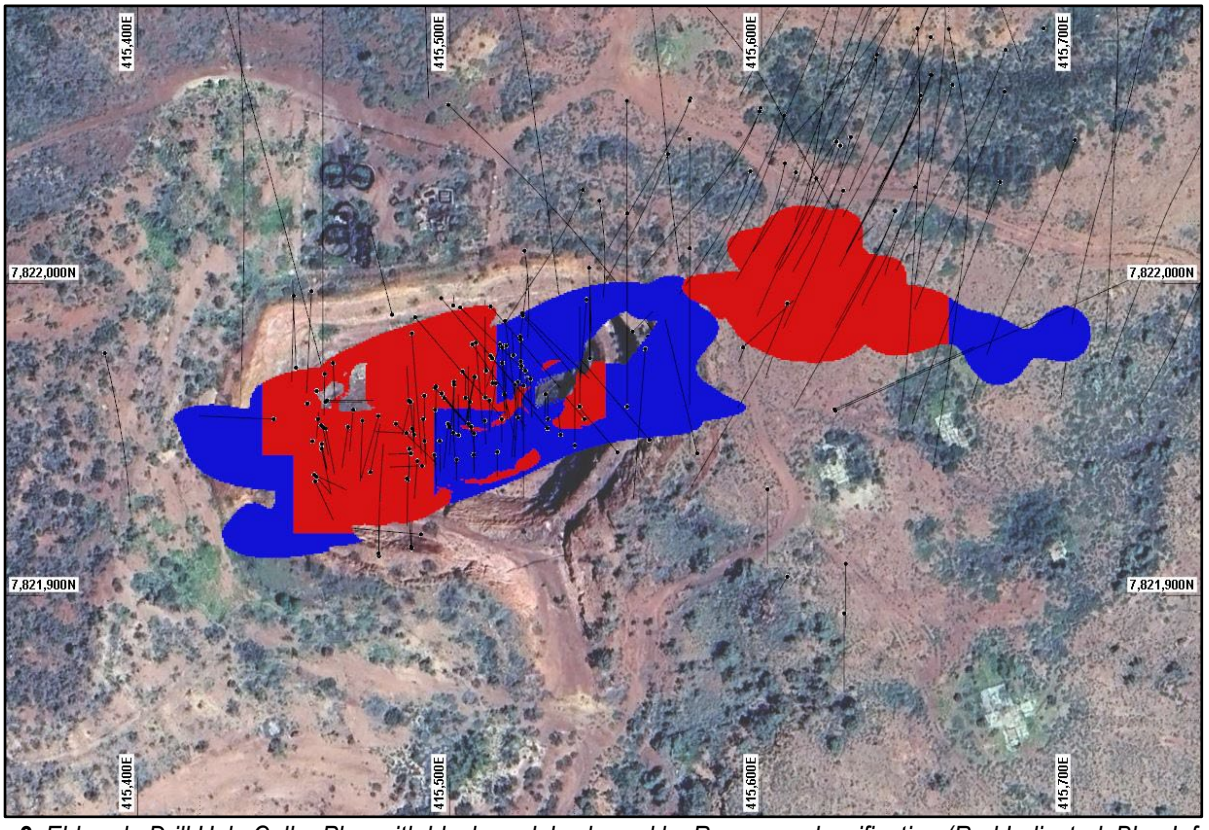

***Figure 2**: Eldorado Drill Hole Collar Plan with block model coloured by Resource classification (Red Indicated, Blue Inferred).*

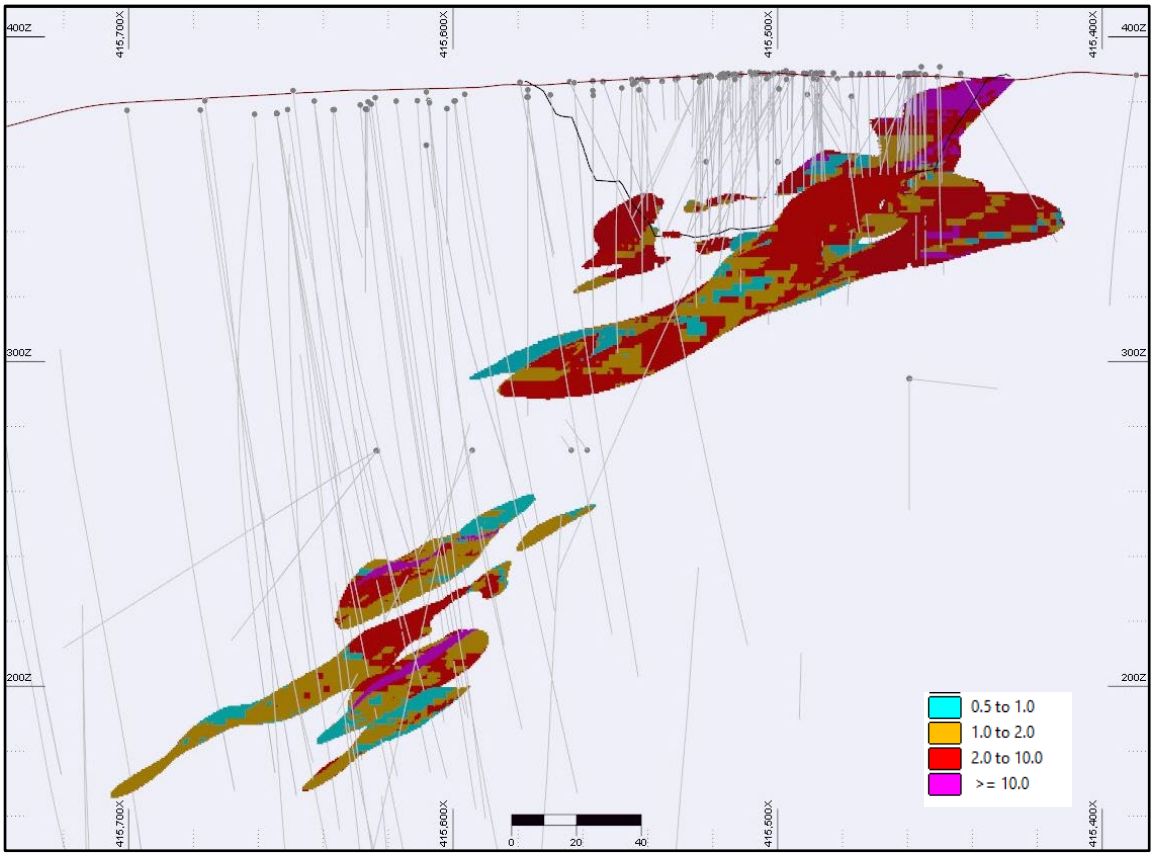

Figure 3: *Long section of the Eldorado Block Model (looking south) coloured by gold grade.*

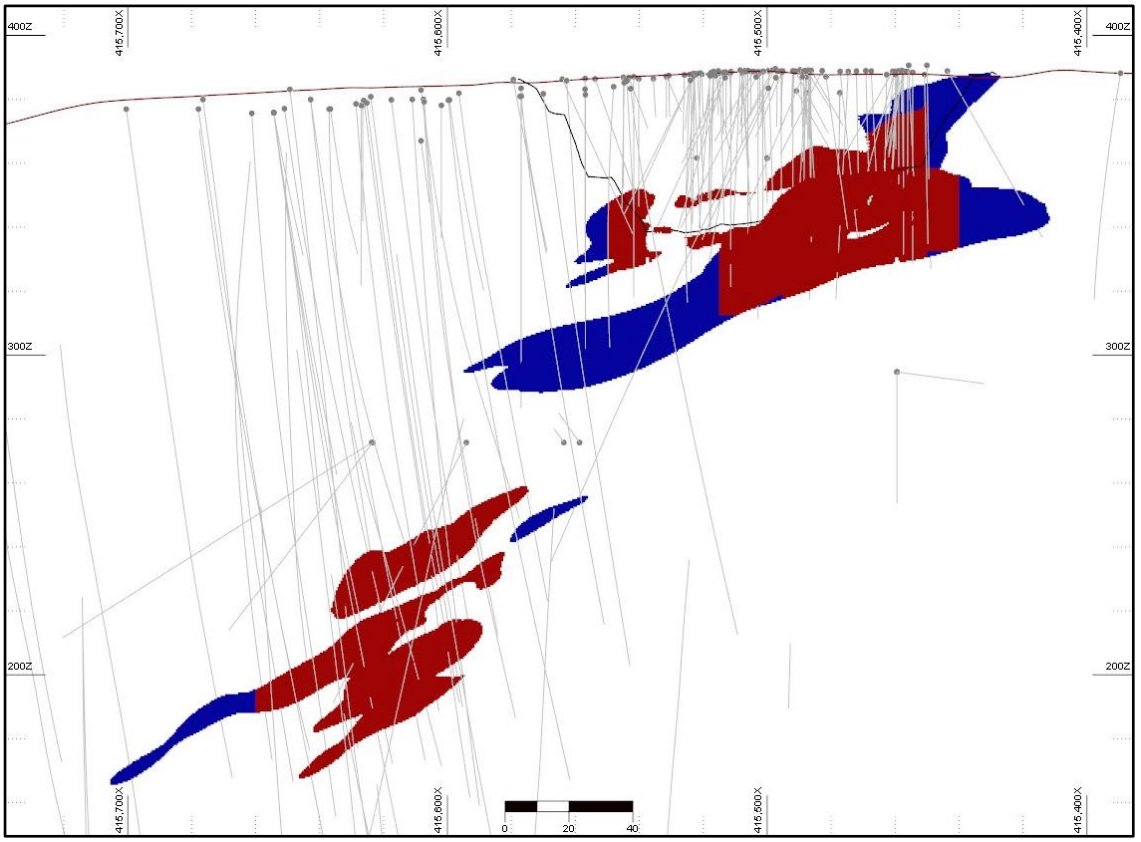

Figure 4: *Long section of the Eldorado Block Model (looking south) coloured by Resource Classification (Red blocks Indicated, Blue Inferred).*

Table 2: Eldorado Mineral Resource Estimate June 2024 at various cutoff grades

	Total Resources (Ind + Inf)		
Cutoff Grade	**Tonnes**	**Gold Grade (g/t)**	**Ounces**
0.0 g/t	469,200	4.7	70,370
0.5 g/t	466,100	4.7	70,330
1.0 g/t	395,500	5.4	68,650
1.5 g/t	319,400	6.4	65,550
2.0 g/t	229,700	8.2	60,530
2.5 g/t	159,400	10.8	55,500
3.0 g/t	116,100	13.9	51,720
3.5 g/t	91,200	16.8	49,140
4.0 g/t	74,400	19.7	47,120
4.5 g/t	62,200	22.7	45,460
5.0 g/t	52,200	26.2	43,930

** Appropriate rounding applied*

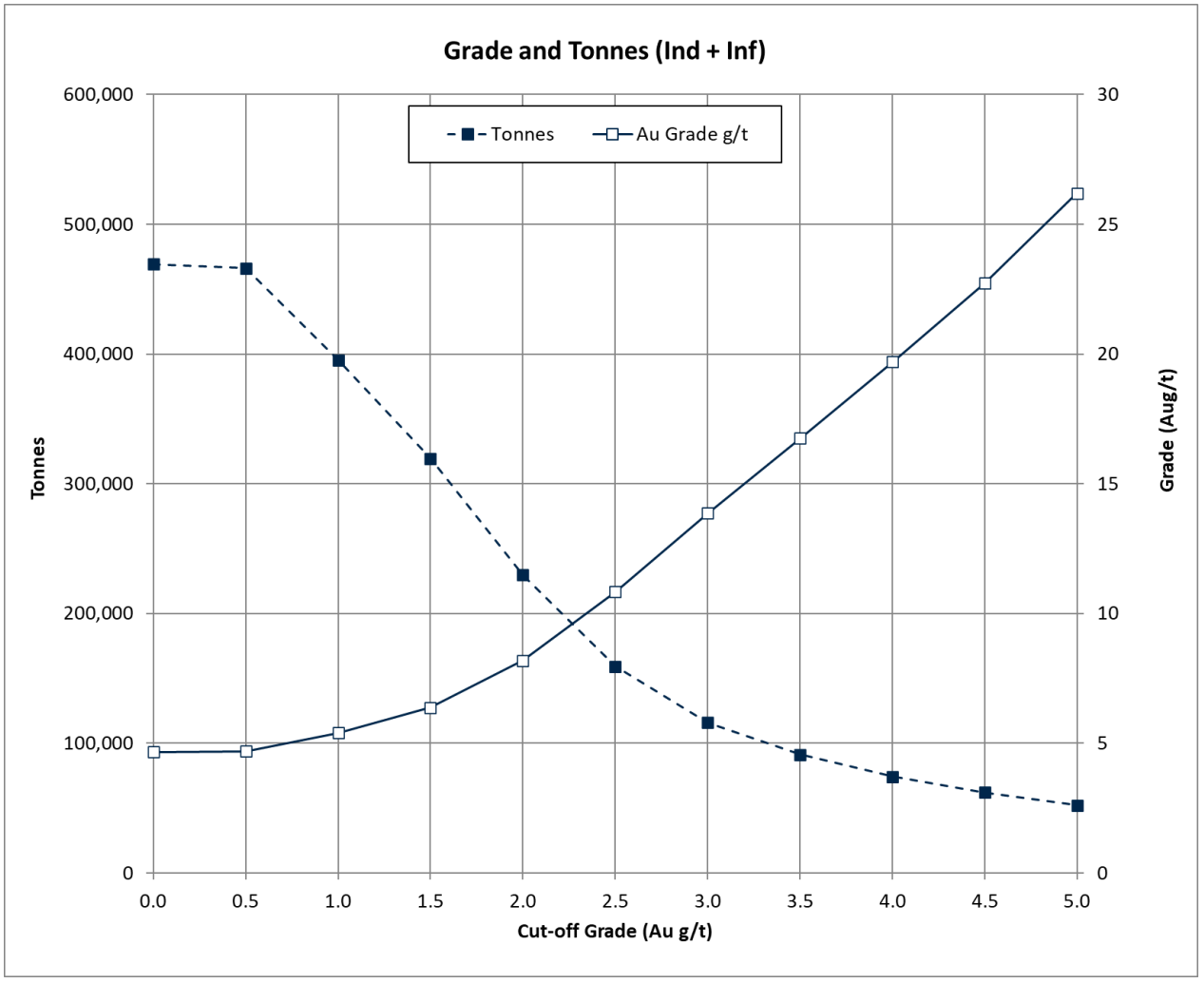

Figure 5: *Emmerson's Eldorado Mineral Resource Estimate June 2024 – grade-tonnage curve*

Table 3: Emmerson Resources Tennant Creek Project JORC 2012 Mineral Resource Details

Deposit	Indicated Resources			Inferred Resources			Total Resources		
	Tonnes (Kt)	Gold Grade (g/t)	Ounces	Tonnes (Kt)	Gold Grade (g/t)	Ounces	Tonnes (Kt)	Gold Grade (g/t)	Ounces
Mauretania (OP)	159.3	4.8	25,000	97.0	1.4	4,000	256.0	3.5	29,000
Chariot (OP)	64.5	18.1	37,600	8.2	14.4	3,800	72.7	17.7	41,400
Chariot (UG)	344.6	7.0	77,000	138.9	4.6	20,400	483.5	6.3	97,400
Black Snake (OP)	50.9	2.1	3,500	29.0	1.1	1,000	79.9	1.7	4,500
Golden Forty	706.0	5.0	113,200	228.7	2.8	20,700	935.0	4.5	133,900
Eldorado	277.5	6.2	55,600	167.2	2.6	14,200	444.7	4.9	69,800
Total	**1,602.8**	**6.1**	**312,000**	**669.2**	**3.0**	**64,600**	**2,272.0**	**5.2**	**376,600**

Notes: Inconsistencies in the table above are due to rounding.
Mauretania Open Pit (OP) as reported 6 April 2022 using a 0.5g/t gold cut-off grade and above the 190mRL (within 140m of surface).
Chariot Open Pit (OP) is as reported 2 December 2021, using a 1.0 g/t cutoff.
Chariot Underground is as reported 2 December 2021, using a 2.0 g/t cutoff and reported below a 180mRL.
Black Snake Open Pit Resource reported 19 March 2024, using a 0.5 g/t cutoff
Golden Forty Resource reported 6 May 2024 using a 0.5g/t cut-off.
Eldorado Resource (in this release) using a 0.5g/t cut-off for shallow portion and 1.0g/t at depth

A summary of JORC Table 1 is provided below in line with requirements of ASX listing rule 5.8.1.

Geology and Geological Information

The Eldorado Project is located 4 kilometres south-southeast of the Tennant Creek Township.

Tennant Creek Au-Cu-Bi mineralisation is typically hosted in hematite-magnetite-quartz-jasper ironstones within the Lower Proterozoic Warramunga Formation.

The Eldorado Mine is situated in a West-Northwest trending structural corridor located within the Mt Samuel-Eldorado-Juno and Nobles Nob mineralised corridor. The gold-bearing ironstone bodies at Eldorado strike NE-SW, are north- dipping and north-east plunging. Eldorado produced 122,000oz of gold at a head grade of approximately 20g/t gold from 1935 to 1991, with the last production from open cut mining in early 1991.

The ironstone bodies are commonly truncated and offset by a series of faults. A late thrust fault (Turner Fault) displaced the upper part of the Eldorado deposit ~70m west-southwest relative to the Eldorado 'Deeps' part.

Drilling below the Turner Fault outlined five narrow high grade ore pods which occur between 140m to 200m below surface and dip at 60 degrees to the NNE and are generally conformable with the ironstone lode.

The geological interpretation of the deposit is based on detailed logging and sampling combined with a 3D model of the lithology domains. The high-density Reverse Circulation (RC) and Diamond Drilling (DDH) throughout the deposit has supported the development of this geological model plus a robust understanding of the distribution of mineralisation.

Drilling Techniques

Historical drilling from 1950 until 2014, a combination of underground and surface diamond, reverse circulation, percussion, vacuum and RAB rigs were used by Australian Development Limited (ADL), Poseidon Gold, Normandy and Geopeko.

Since 2014, Emmerson have used a combination of RC and surface diamond rigs.

The hole types within the deposit include seven percussion, nine vacuum, nine RAB, 5 combined RC-DDH, 125 RC and 80 diamond holes. This includes ten underground diamond holes.

The Eldorado MRE is based on logging and sampling of 236 drill holes with approximately 9,700 metres of diamond and RC drilling sampled. Sample lengths for diamond core were typically 1m intervals with ranges of 0.30m to 1.53m.

Sampling and Sub-sampling techniques

While there is limited documented information for historical sampling techniques, the Company has a detailed library of hard copy historical records dating back to the 1960's which outline the drilling techniques, geological data and analytical information for the deposit. For the recent Emmerson drilling, there has been systematic insertion of Quality Control (QC) standards, blanks and duplicates, which have been reviewed by Emmerson geologists and are considered industry standard.

RC samples by Emmerson, were collected from the drill rig's fixed cone splitter with two sample chutes providing a sampled from each 1m and a 1m bulk sample. The 1m bulk sample is then riffle split to obtain a representative sample for each 1m interval for inclusion into a 3m composite sample, weighing approximately 3kg. Anomalous samples were then re-assayed as single 1m samples.

Diamond cores were oriented and are sampled based on geological boundaries to a maximum length of 1.5m, marked up prior to being cut using an automatic core saw. Samples are collected from the same side of drill core and dispatched for analysis. Diamond core samples weigh ~4kg.

All RC and core samples were prepared by Intertek Genalysis Laboratory in either Alice Springs or in Adelaide. Preparation involved weighing and drying the sample, crushing the sample (to 10mm) and pulverising to >85% passing at 75µm where 200g pulp samples. Pulp samples were then transported to Intertek Genalysis Laboratory in Perth, West Australia for analysis.

Samples were composited to 1m for inclusion in the resource.

Sample Analysis Method

Historical gold assays for were reported in Dwt/ton for most of the historical assay results. Conversion used from this imperial to metric measurement was undertaken: 1 Dwt/ton = 1.530612 g/t.

These historical assays were entered from historical reports into the database as part of data compilation and for estimation work purposes. Random checks of historical records against results contained within the database has been undertaken.

For historical ADL holes, an on-site laboratory at Nobles Nob was used until 1986 where analysis was carried out by fire assay using a 50g charge. A suite of ancillary elements (Bi, Cu, Pb) were also assayed by Agua Regia and Atomic Spectroscopy (AAS) finish. Procedures developed for assay quality control with field duplication and blanks were also inserted.

Emmerson field QC procedures involve the use of certified reference material (CRM) as assay standards and include blanks. Certified reference material or blanks are inserted at least every 20 samples.

During the 2014 Emmerson drill program, RC and DDH samples were sent to Genalysis in Alice Springs for analysis using code ARU25/OM907. Elements Au, Ag, Bi, Cu, Fe, Pb, Zn were analysed.

All Emmerson assays were received electronically and imported directly into Emmerson's Datashed database.

Mineral Resource Classification

Mineral Resource classification criteria are based on the level of data informing both the geological model and grade estimation.

The Mineral Resource has been constrained to a maximum vertical depth of 160mRL, which is approximately 210m below surface. Blocks have been classified as Indicated and Inferred based on drill hole spacing, geological continuity and estimation quality parameters.

The Indicated Mineral Resource is supported by drilling with nominal 10-20m x 10-20m spacing, and predominately informed by the first estimation pass. Geological continuity is demonstrated by the geological interpretation from drilling.

The Inferred Mineral Resource was defined where there was a low to moderate level of geological confidence in geometry, there was still continuity of grade, and drill spacing was greater than 20m. Inferred blocks are informed by the first and second estimation

pass. Geological support was defined to a lower level of confidence in terms of continuity and extent.

Unclassified mineralisation has not been included in this Mineral Resource. This is the material that has no estimated grades above 0.5g/t gold and material unsupported by geology and drilling or zones that are considered to be too sparsely drill tested to confirm continuity of grade or geology.

Estimation Methodology

The mineralised wireframes were modelled by intrusion and vein modelling tools using Leapfrog Software. The ironstone was used as a guide for the gold mineralisation constraining wireframes (again using Leapfrog intrusion and vein modelling tools) within the ironstone and using an approximate 0.3-0.5g/t Au cut-off. Internal high grade (approx. >10g/t Au) sub-domains were modelled and estimated separately within the deeper domains. All wireframe solids were snapped to RC and diamond drillholes.

Drillhole intercepts were composited downhole to 1m lengths and gold estimation was carried out using ordinary kriging (OK), with hard boundaries between the domains. The search ellipsoids to follow the vein reference plane to improve local estimation efficiency. Caps (top-cuts) were applied to the composites prior to estimation to reduce the influence of outliers, 90g/t gold to the main shallower mineralised domain and 300g/t gold to the deeper internal high-grade sub-domain. Gold variography was undertaken on both main domains and gave a nugget of approximately 20%. Maximum ranges of between 50m and 60m were applied. Three search passes were used, with increasing search distances and decreasing minimum sample numbers employed.

Bulk density (SG) was assigned to the block model based on weathering type and lithology. The applied density values were derived from density undertaken on the diamond drill core using the water immersion method for the nearby Golden Forty deposit

Cut-off Grades

For reporting, the cut-off grades applied to the estimate was material above 0.5g/t gold for the shallow portion of the resource (above the Turner fault) and 1.0g/t for the deeper portions of the deposit.

Mining and Metallurgical Methods Parameters

Given the high-grade nature of the deposit, the MRE has not been constrained by a nominal depth, there are Reasonable Prospects of Eventual Economic Extraction for JORC compliance, as the deposit is high grade, only 10km from a proposed CIL processing facility, and has historically been mined using underground methods and processed through a standard CIL processing flowsheet.

An approximate metallurgical recovery of +92% has been assumed in determining Reasonable Prospects of Eventual Economic Extraction, based on the historical metallurgical testwork and the fact that portions of the deposit has previously been mined and processed through a standard CIL processing circuit with high recoveries.

For further information, please contact:

Mike Dunbar

Managing Director and CEO

E: mdunbar@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.

Competency Statement

The information in this release on Exploration Results is based on information compiled by Mr Mike Dunbar, who is a Member Australasian Institute of Mining and Metallurgy. Mr Dunbar has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Dunbar is a full-time employee of the Company and consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

The information in this announcement that relates to Mineral Resources is based on and fairly represents information compiled by Mr Mike Dunbar (Managing Director and full-time employee and option holder of the Company) and Mr Lauritz Barnes, (Consultant with Trepanier). Mr Dunbar and Mr Barnes are both members of the Australasian Institute of Mining and Metallurgy (AusIMM). Both have sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Specifically, Mr Dunbar is the Competent Person for the database, underlying geological and mineralisation model and site visits and Mr Barnes is the Competent Person for building the 3D model and the estimation. Mr Dunbar and Mr Barnes consent to the inclusion in this announcement of the matters based on their information in the form and context in which they appear.

Information in this announcement that relates to Exploration Results, Mineral Resources and Ore Reserves has been extracted from the following Company ASX announcements:

- *ASX: 2 December 2021 – Chariot High Grade Gold Resource increased by 40%*
- *ASX: 6 April 2022 – High-Grade Gold Resource for Mauretania at Tennant Creek*
- *ASX: 12 December 2022 – Bonanza Gold from an emerging new ore zone at Tennant Creek*
- *ASX: 21 March 2023 – Further High-Grade Precious and Base metal mineralisation at Tennant Creek*
- *ASX: 27 October 2023 – RC Drilling has commenced at the High - Grade Golden Forty Project*
- *ASX: 16 January 2024 - Grades up to 43.2 g/t gold intersected from Extensional Drilling at Golden Forty*
- *ASX: 19 March 2024 - Initial Ore Reserve for Chariot, Mauretania and Black Snake*
- *ASX: 6 May 2024 – Maiden High-Grade Golden Forty Mineral Resource Estimate*

The Company confirms that it is not aware of any new information or data that materially affects the information that relates to Exploration Results, Mineral Resources or Ore Reserves included in previous market announcements. The Company confirms that the form and context in which the Competent Person's findings area presented have not been materially modified from the original market announcements.

The above announcements are available to view on the Company's website at www.emmersonresources.com.au

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.

Cautionary Statement and Forward-Looking Statements

This document may include forward-looking statements, opinions and projections, all preliminary in nature, prepared by the Company on the basis of information developed by itself in relation to its projects. Forward-looking statements include, but are not limited to, statements concerning Emmerson Resources Limited's anticipated future events, including future resources and exploration results, and other statements that are not historical facts. When used in this document, the words such as "could", "estimate", "plan," "expect," "intend," "may", "potential," "should," "believe", "anticipates", "predict", "goals", "targets", "aims", "outlook", "guidance", "forecasts", "may", "will", "would" or "should" or, in each case, their negative or other variations or similar expressions are forward-looking statements. By their nature, such statements involve known and unknown risks, assumptions, uncertainties, and other important factors, many of which are beyond the control of the Company, and which may cause actual results, performance, or achievements to differ materially from those expressed or implied by such statements.

Forward-looking statements speak only as at the date of this document and the Company does not undertake any obligation to update forward-looking statements even if circumstances or management's estimates or opinions should change. Forward-looking statements are provided as a general guide only and should not be relied on as an indication or guarantee of future performance. No representation is made that any of these statements or projections will come to pass or that any forecast result will be achieved, nor as to their accuracy, completeness or correctness. Similarly, no representation is given that the assumptions upon which forward looking statements may be based are reasonable. Given these uncertainties, investors should not place undue reliance on forward-looking statements. The Company cautions investors against using this announcement solely as a basis for investment decisions without regard for this disclaimer.

About Emmerson Resources

Tennant Creek

Emmerson has a commanding land position and is exploring the Tennant Creek Mineral Field (TCMF), one of Australia's highest-grade gold and copper fields that has produced over 5.5Moz of gold and 470,000t of copper from deposits including Warrego, White Devil, Orlando, Gecko, Chariot, and Golden Forty. These high-grade deposits are highly valuable exploration targets, and to date, Emmerson's discoveries include high-grade gold at Edna Beryl and Mauretania, plus copper-gold at Goanna and Monitor and these were found utilising new technology and concepts and are the first discoveries in the TCMF for over two decades.

The rush of new tenement applications by major and junior explorers in the Tennant Creek district, not only highlights the prospectivity of the region for copper and gold but also Emmerson's strategic ~1,800km^2 land holding.

New South Wales

Emmerson is actively exploring two early-stage gold-copper projects in NSW, identified from the application of 2D and 3D predictive targeting models.

The highly prospective Macquarie Arc in NSW hosts >80Moz gold and >13Mt copper with these resources heavily weighted to areas of outcrop or limited cover. Emmerson's exploration projects contain many attributes of the known deposits within the Macquarie Arc but remain underexplored due to historical impediments, including overlying cover (farmlands and younger rocks) and a lack of effective historic exploration.

Table 4: Emmerson Resources Tennant Creek Project JORC 2012 Ore Reserve Details

	Proved Ore Reserves			Probable Ore Reserves			Total Ore Reserves		
Deposit	**Tonnes**	**Grade g/t**	**Gold Ounces**	**Tonnes**	**Grade g/t**	**Gold Ounces**	**Tonnes**	**Grade g/t**	**Gold Ounces**
Chariot	-	-	-	420,000	4.1	55,000	420,000	4.1	55,000
Mauretania	-	-	-	67,300	9.9	21,400	67,300	9.9	21,400
Black Snake	-	-	-	36,900	2.31	2,740	36,900	2.31	2,740
TOTAL	**-**	**-**	**-**	**524,000**	**4.7**	**79,140**	**524,000**	**4.7**	**79,140**

Appendix 1

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 – Eldorado Project Area

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code Explanation	Commentary

Sampling techniques	• Nature and quality of sampling (e.g., 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.
	• Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.
	• Aspects of the determination of mineralisation that are Material to the Public Report.
	• In cases where 'industry standard' work has been done this would be relatively simple (e.g., '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 (e.g., submarine nodules) may warrant disclosure of detailed information.
		• The Eldorado Estimate is based on logging and sampling of 236 drill holes. Drilling type include surface and underground DDH and RC.
		• Historically, ironstone units have been sampled at 1m intervals. Typically, either no sample was taken outside ironstone lithologies or 3mm composite samples were collected by spear.
		• **For ERM holes:**
		  • Typically, 3m composite samples are collected from collar to start of mineralised zone. Sampled are collected directly off the cyclone is riffle split to separate and produce two samples, with one side going into a pre-numbered calico sample bag. The other half are then placed back into the original sample bag and left on site.
		  • 3m composite samples weighs from 2 – 3kg, from which a representative sample is pulverised to produce a 10g charge for analysis by Aqua Regia digestion/ ICP (ARU25/OM907).
		  • 1m samples were collected through zones of interest. The 1m samples are collected directly off the cyclone and riffle split to separate and produce two samples, with one side going into a pre-numbered calico sample bag, providing a 1m homogenous sample for analysis. The other half were then placed back into the original sample bag and left on site.
		  • The 1m samples weigh from 2 – 3kg, from which a representative sample is pulverised to produce a 10g charge for analysis by Aqua Regia digestion/ ICP (ARU25/OM907). High grade samples were repeated using fire assay

Drilling techniques	• Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., 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).	• Drilling from 1950 until 2014, a combination of underground and surface diamond, reverse circulation, percussion, vacuum and RAB rigs were used. • Since 2014, Emmerson have used a combination of RC and surface diamond rigs.
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • 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.	• Drill sample recovery was not recorded for all drilling • Core recoveries are fair to good on comments and data recorded on previous company reports. • RC samples are visually checked for recovery, moisture and contamination. • Any issues or concerns are recorded in the sampling ledger. • The RC cyclone is routinely cleaned by the drilling contractor offsiders, with more attention spent when recovering damp or wet samples. • Recoveries from some of the surface and underground holes range from 50 to 98%.
Logging	• 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.	• The entire length of all drill holes at Eldorado have been logged for lithology, alteration, mineralisation, veining and structures. • Logging has been carried out to a level of detail to support appropriate MRE. • Standard logging / operating procedures (SOPs) were employed by ADL, Poseiden Gold, Normandy and Geopeko.

Criteria	JORC Code Explanation	Commentary
	• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged.	• Historical logging methods and codes have been reviewed by Emmerson geologists and have been converted into Emmerson standard naming conventions. • Logging data is directly entered using Logchief software into a field laptop. Standardised codes are used for lithology, oxidation, alteration, minerals and veins; presence of sulphide information is recorded. • Magnetic susceptibility data were collected for RC every 1m meter as per standard procedure using a Terraplus KT-10 magnetic susceptibility meter.
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • 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.	• ADL, Poseiden Gold, Normandy and Geopeko employed sampling protocols for sampling RC and DDH samples. These company procedures are considered satisfactory by Emmerson geologists. • Core from historical drilling was cut in half using a brick saw. A nominal 1m sample was collected from half core splits from the same side of the core. Sampling was typically constrained by ironstone boundaries. • Core from underground drill holes were sampled with the whole core submitted for analysis. • Emmerson used standard sampling operating procedures for sampling RC samples. • The 3m composite riffle split samples weigh from 2 – 3kg. • The 3m composite samples collected direct from the RC cyclone weigh from 4 – 10kg. • The 1m riffle split samples weigh from 2 – 3kg. • The 1m samples collected direct from the RC cyclone weigh 4 – 7kg. • The RC and core sample sizes are considered appropriate to represent the mineralisation on the style of mineralisation. • Standards, Blanks and Duplicates are routinely inserted in the sampling batch for QAQC purposes. • Emmerson field QC procedures involve the use of certified reference material (CRM's) inserted at every 20 samples. • Duplicates are collected every 20 samples. • Blanks are inserted every 100 samples.
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • 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. • Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.	• Historical field QC procedures undertaken by ADL, Poseiden Gold, Normandy and Geopeko have been documented and reviewed, which document the use of certified reference material (CRM) as a standard and include blanks and duplicates. • ADL used the on-site laboratory at Nobles Nob until 1986 where analysis was carried out by fire assay using a 50g charge. A suite of ancillary elements (Bi, Cu, Pb) were also assayed by Agua Regia and Atomic Spectroscopy (AAS) finish. Procedures developed for assay quality control with field duplication and blanks were also inserted. • For Emmerson drill holes, RC samples were submitted to Intertek Adelaide for sample preparation and analysed at Intertek Laboratory in Perth. The sample preparation follows industry best practice. • RC samples were analysed by ARU25/OM907 method (Au, Ag, Bi Cu, Fe, Pb, Zn). A 10g of finely pulverised sample is digested with aqua regia acid and the resulting solution analysed for elemental concentration by Inductive Coupled Plasma Mass Spectrometry (ICPMS). • For samples with >2000ppb Au, the pulp samples were analysed using FA25/OE method. A 25 g finely pulverised sample is assayed for Au by the fire assay fusion and cupellation process with the resulting solution analysed for gold content by ICPOES. • No downhole geophysical tools or handheld XRF instruments are used to determine grade. • Magnetic susceptibility data are collected every 1m meter as per standard procedure using a Terraplus KT-10 magnetic susceptibility meter.

Criteria	JORC Code Explanation	Commentary
		• 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.
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• Laboratory data is received in digital format and uploaded directly to the database. • Assay data from the lab is received as .csv. The results are then loaded by Database contractor into industry-standard database (Datashed). Sample data sheets were used to merge the assay results with the sample intervals for each hole. • Assay data and intercepts are cross-checked internally by Emmerson staff. • Drill Hole Data including meta data, lithological, mineral, downhole survey, sampling, magnetic susceptibility are collected and entered to Logchief. • All digital logs, sample ledgers, assay results are uploaded to a secure server (Datashed). The merged and complete database is then plotted imported to Micromine software for assessment. • Geochemical data is managed by ERM using and external database administrator and secured through a relational database (Datashed). • No adjustments were made on original assay data for the purpose of reporting grade and mineralised intervals.
Location of data points	• Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	• Collar locations and details have previously been released. • All reported drill hole collars are surveyed using a differential GPS. • Collar survey accuracy is ± 30 mm for easting, northing and elevation coordinates. • Downhole survey measurements are collected every 18m using True North seeking Gyro (Reflex). Once the hole is completed, the hole is surveyed with a Sprint IQ Gyro (multi-shot) every 10m from collar to end of hole. • All coordinates are based on Map Grid Australia Zone 53H Geodetic Datum of Australia 1994. • Topographic measurements are collected from the final survey drill hole pick up.
Data spacing and distribution	• Data spacing for reporting of Exploration Results. • 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. • Whether sample compositing has been applied.	• Drill density in the Eldorado Project is variable, ranging from multiple holes drilled from the same collar to 50m apart. • The mineralised areas demonstrate sufficient grade and/or geological continuity to support the estimation of a Mineral Resource and the classifications applied under the 2012 JORC code. A MRE forms part of the forward work programme • No sample compositing was applied.
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • 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.	• Recently completed drilling is drilled perpendicular to the strike of the Eldorado ironstones. • No orientation-based sampling bias has been identified in the data at this point. • Review of available drill data, historical reports and geological maps confirm that the Eldorado Project has been drilled at the correct orientation.
Sample security	• The measures taken to ensure sample security.	• All 3m and 1m RC samples are collected and bagged in a pre-determined Sample Number by field technician at the drill site. • The RC samples are placed in sealed polyweave bags and then larger bulka bags for transport to the sample preparation facility in Intertek Adelaide. • The assay laboratory confirms that all samples have been received and that no damage has occurred during transport.

Criteria	JORC Code Explanation	Commentary
		• Tracking is available through the internet and designed by the laboratory to track the progress of batches of samples. • All RC chips are stored in an Emmerson yard in Tennant Creek.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• No formal audits ore reviews have been completed on the samples being reported.

Section 2: Reporting of Exploration Results – Eldorado Project Area

Criteria	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	• 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. • 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.	• The Eldorado Project is located 4kms south-southeast of Tennant Creek Township. • The Eldorado Project lies in Mineral Leases MLC581, MLC582 and MLC583. • The Eldorado Project contains the historical Eldorado mine. • MLC581, MLC582 and MLC583 are in Aboriginal Freehold Land held by the Warumungu Aboriginal Land Trust. • MLC581, MLC582 and MLC583 are 100% held by Santexco a 100% subsidiary of Emmerson Resources Limited. • Emmerson Resources are in Joint Venture with Tennant Consolidated Mining Group (TCMG) Pty Ltd. • Tenements MLC581, MLC582 and MLC583 are in good standing and no known impediments exist.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• The Eldorado orebody was discovered in 1932. • Minor extraction began in 1935 and was later acquired by Eldorado (Central Australia) Goldmine Ltd. • 1936 the Eldorado Stamp Battery commenced operating with the installation of a cyanidation plant later in the year. • 1937 3914 imperial tons for 2445oz Au yielded since start of Stam Battery Operation. • 1939-1940 Shaft development down to 100 level as well as a stope at 75 level • Intensive development followed in 1941 and in 1942 twelve months of production yielded 8355 tons for 4945oz Au. • New treatment plant commissioned in 1946 and commencement of refurbishment of existing cyanidation plant in 1947. • 1947-1949 6000tons or ore and 5618 tons produced respectively. • 1950-1951 Inclined shaft sunk between 300 and 400 levels while production continued through stoping of the western lode to surface. • 1952 refurbishment of cyanide leach plant. • 1953-1954 known ore reserves almost exhausted, production continued mainly through removal of upper-level pillars and strip-back of drives through centra/western lode. • 1954 New ore reserve discovered on eastern branch of a stope at 300 level. Ore extraction from this between 1954 and 1958. • From 1957 diamond drilling testing Eldorado Deeps. • Mine closure in 1958 citing almost-exhausted ore reserves and poor head-grade reconciliation. • 1959- 1960 Syndication agreement yielding 3753tons for 2924 oz Au. • 1960 Minor treatment operations to re-process 10,000tons of stamp sands. • 1961- 1962 resource extension drilling failed to discover new source of ore. • 1962 production ceased and Eldorado mine closed. • 1964 Entire asset transfer of Eldorado Tennant Creek Ltd. To Peko Mines NL after liquidation. • Portion of Eldorado mining lease sold to private party for small-scale underground mining concentrating on the oxidised zone.

Criteria	JORC Code Explanation	Commentary
		• 1984 Australian Development Limited purchased MLC581 & MLC583 from the private entity. • 1986 tribute mine the Eldorado underground for Peko Mines NL concentrating on 300 level. • 1987 Peko Mines NL complete an in-ground reserve calculations for an oxide, open-cut pit development down to 150 level. Three resource shells outlined using varying low-grade cut-offs but maintaining top-cut 30g/t. The Feasibility Study of Eldorado Deeps assessed by Geopeko after eleven drillholes returned a total inferred resource of 21,100t @ 32.3g/t Au (grade using geometric mean grade at a 5g/t cut-off). • A study carried out by Isokangas Pty Ltd in 1988 showed Eldorado Deeps 21,000 t @ 30g/t Au. • 1989 Peko Mines commenced open-cut mining of the Eldorado Shallow oxide resource. • 1990 Closure of the Eldorado pit due to forced receivership of local earthmoving contractors Leckpeach Pty Ltd. During this time 28,486tonnes @ 5.48 g/t ore for 5809 oz Au. • 1991 Poseiden Gold Ltd re-opened the open cut mine to extract the remainder of the previously delineated reserves (Peko). A total ore production for 47,000tonnes @ 6.81g/t of ore for 10,300oz. • June 1991 PosGold / Normandy acquired the Eldorado Mine leases • 1992 High-Definition Ground magnetic covered from Nobles Nob to Mount Samuel • 1994 Eldorado Deeps Pre-feasibility study carried out by S.Hewitt finding a resource of 16,000tonnes grading at 16g/t (with a 5g/t notional cut off). Ore reserve of 14,219 tonnes at 17g/t calculated. • 1995 A 370-hole vacuum drilling program carried out over lease group • 1998 Area of Interest Agreement signed with CLC • 1999 High resolution aeromagnetic survey conducted • 1999 Environment audit of lease group completed. • Nov 1999 TDEM survey flown over leases. • 2000 three holes drilled into AN5. • 2001 Giants Reef Exploration Ltd (GRE) acquire leases from Normandy Tennant Creek and in the process changed the name to Santexco Pty Ltd. • 2003 Nine-hole drill program at Cats Whiskers • Early 2004 Tribute agreement to mine Cats Whiskers • September 2004 91-hole RAB drill program by GRE in MLC500 • August 2006 Emmerson Resources purchased a group of assets including Giants Reef and Santexco. • 2014 Emmerson drilled both Reverse Circulation (RC) and Diamond (DDH) holes, 11 RC holes for 2,285m including 3 RC pre-collars for 429m and 3 DDH holes for 298metres, including 1 wedge run of 15.7m
Geology	• Deposit type, geological setting and style of mineralisation.	• The geological understanding of the Tennant Creek Mineral Filed (TCMF) has been advanced by detailed mapping, dating of stratigraphic units and regional geophysical interpretation. • Tennant Creek Au-Cu-Bi mineralisation is typically hematite-magnetite-quartz-jasper ironstones are hosted in the Lower Proterozoic Warramunga Formation. • Eldorado Mine is situated in a West-Northwest trending structural corridor located within the Mt Samuel-Eldorado-Juno and Nobles Nob mineralised corridor. • The geology and mineralisation over the main Eldorado orebody can be characterised as: • Economic mineralisation is typically hosted in brecciated lithologies hosted in magnetite-hematite-chlorite, quartz–hematite breccias and chlorite-hematite stringer zones.

Criteria	JORC Code Explanation	Commentary
		The high-grade pods are typically hematite dominant. • The ironstone bodies are commonly truncated and offset by a series of faults. A late thrust fault (Turner Fault) displaced the upper part of the Eldorado deposit ~70m west-southwest relative to the Eldorado 'Deeps' part. • The Eldorado 'Shallows' ore envelope is controlled by the NE-SW trending Pug Seam (a discordant sinistral sub-vertical fault system) and A faults with steep northwest dips and the early ESE-WNW trending Thomas Fault and ironstones. The intersection of these two structural orientations has produced zones of high fractured density with coincident high-grade ore shoots located at the intersections. • Drilling below the Turner Fault outlined five narrow high grade ore pods which occur between 140m to 200m below surface and dip at 60 degrees to the NNE and are generally conformable with the ironstone lode.
Drillhole information	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: o Easting and northing of the drillhole collar. o Elevation or RL of the drillhole collar. o Dip and azimuth of the hole. o Downhole length and interception depth. o Hole length.	• 570 drill holes in the project area were validated in preparation for the resource work. • Drill hole information and collar details for holes has been previously released for ERM drilling and is publicly available on the NTGS Strike geological database for historical drilling.
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and / or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated. • 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. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• No new drill information is being reported as part of this report. • No metal equivalent values are reported.
Relationship between mineralization widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported. • If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g., 'downhole length, true width not known').	• The magnetite – hematite – quartz ironstones at the Eldorado Project trend east-west, north- dipping and east plunging. • Mineralisation at the Eldorado Project is hosted in brecciated magnetite-hematite-chlorite ironstone. • Mineralised intersections are reported as down hole intervals, true width not known at this stage.
Diagrams	• 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.	• Refer to Figures 2 to 4 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.	• recent and historical drilling data has previously been reported, no new drill data is being reported in this report.

Criteria	JORC Code Explanation	Commentary
Other substantive exploration data	• 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.	• Various geophysical surveys have been conducted over the Eldorado Project. These include magnetic and gravity surveys.
Further work	• The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• Further work will involve: o A preliminary development study (Scoping Study) is expected to be completed now that the MRE has been completed.

Section 3: Estimation and Reporting of Mineral Resources – Eldorado Deposit

(Criteria listed in section 1, and where relevant in sections 2, also apply to this section.)

Criteria	JORC Code Explanation	Commentary
Database integrity	• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.	• All historical ADL and Geopeko data for the Eldorado deposit was uploaded into ERM's DataShed database after ERM acquired the project. ERM data was logged in the field, and imported into DataShed, with assay files uploaded in digital format upon receipt from the laboratory. • Routine database checks are conducted by ERM's consultant Database Manager. • All data has been validated by ERM geologists prior to inclusion in the resource estimate. • Personnel access to the DataShed database is restricted to preserve the security of the data.
	• *Data validation procedures used.*	• A period of database validation was carried out by ERM geologists. The validation was updated in the Datashed database and extracted into specislist software to validate in 3D. Random check validation has also been undertaken on the historical data.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	• A site visits have been completed by co-Competent Person Mike Dunbar. • A site visit was not undertaken by co-Competent Person Lauritz Barnes.
	• *If no site visits have been undertaken indicate why this is the case.*	N/A
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*	• The high density of RC and Diamond drilling throughout the deposit and underground mining has supported the development of a robust geological model and understanding of the mineralisation distribution. The geological interpretation of the deposit is supported by underground mapping and sampling of the host units which have been interpreted into a 3D model of the lithology domains. • The host rocks are generally well defined in the logged lithology records. Geological continuity is demonstrated by historical underground mining.
	• *Nature of the data used and of any assumptions made.*	• Data is stored in a master DataShed database. Exports were in Microsoft Access format for import to modelling software.. No assumptions were made or applied to the data.

Criteria	JORC Code Explanation	Commentary
		• The data is considered to be robust due to effective database management, and validation checks to verify the quality. Original data and survey records are utilised to validate any noted issues.
	• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*	• Alternative interpretations for the mineralisation in the underground model have been reported as a high-grade selective model which uses an ordinary kriged estimate within constrained mineralisation domains. This interpretation resulted in a highly selective high grade Mineral Resource Estimate which does not reflect current exploitation plans.
	• *The use of geology in guiding and controlling Mineral Resource estimation.*	• The underground gold grade estimate is wholly constrained within the ironstone lithological unit. All geological observations were used to guide the interpretation and further control the trends of the Mineral Resource estimate.
	• *The factors affecting continuity both of grade and geology.*	• Gold mineralisation at Eldorado occurs as an east-plunging, north-dipping ironstone body. • There are several ironstone bodies present at Eldorado. These bodies have been faulted, folded, and brecciated, consequently creating zones of gold deposition. • The gold-bearing units are typically hosted by magnetite-haematite-rich ironstone unit with localised zones of talc-magnetite and quartz-magnetite lithologies. Some mineralisation is present within the chloritised halo surrounding the ironstone. • Faulting and shearing are very localised, and as such have not been used to constrain the mineralisation and geological domains.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource*	• The Eldorado deposit Mineral Resource has an approximate strike length of 290m. • The plan width of mineralised zones in the model ranges from 10 m to 50 m for the narrower mineralisation Domains.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	Software used: • Leapfrog Geo – wireframe modelling of geological units • Surpac & Isatis - geostatistics, variography, kriging neighbourhood analysis (KNA) and block model validation. • Surpac – compositing, block modelling, estimation, classification and reporting. • Density was assigned following statistical analysis of on 182 measurements from the nearby Golden Forty Deposit. Of these, 39 are from within the modelled mineralised domains. For the oxide ironstone domains 2.80 t/$m^3$was assigned, for transitional zones 3.40 t/$m^3$was assigned and for fresh, 3.71 t/m^3. • A parent block of 4m (Y) x 4m (X) x 4m (Z) with sub celling to 0.5m (Y) x 0.5m (X) x 0.5m (Z) was applied.
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*	• While the area has had pre-JORC 2012 estimates, none were reported since the JORC code was first introduced.
	• *The assumptions made regarding recovery of by-products.*	• No by-product recovery has been assumed.
	• *Estimation of deleterious elements or other non-grade variables of economic significance (e.g., sulphur for acid mine drainage characterisation).*	• No other elements were estimated.
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*	• parent block size is 5m (Y) x 5m (X) x 5m (Z). This is based upon an average drillhole spacing of 5-10 m in selected domains opening up to 10-20m.
	• *Any assumptions behind modelling of selective mining units.*	• The Eldorado deposit has been mined underground between 1935 and 1986 and by open cut methods from

Criteria	JORC Code Explanation	Commentary
		1989 to 1991. The selectivity implied by the current underground MRE model is considered to be appropriate for a bulk tonnage underground extraction style gold deposit to be exploited.
	• Any assumptions about correlation between variables.	• No correlated variables have been investigated or estimated.
	• *Description of how the geological interpretation was used to control the resource estimates.*	• The geological interpretation, in particular a host ironstone unit, was used at all stages to control the estimation. It was used to guide the orientation and shape of the mineralised domains and the low-grade subdomains. These were then used as boundaries for the grade estimation, using the trend of the mineralisation and geological units to control the search ellipse direction and the major controls on the distribution of grade. • Internal high grade (approx. >10g/t Au) sub-domains were modelled and estimated separately within the deeper domains.
	• *Discussion of basis for using or not using grade cutting or capping.*	• Top cuts were used in the estimate to control the over-influence of high-grade outliers. Top cuts, where appropriate, were applied on an individual domain basis. • Caps (top-cuts) were applied to the composites prior to estimation to reduce the influence of outliers, 90g/t gold to the shallower mineralised domain and 300g/t gold to the deeper internal high-grade sub-domain
	• *The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.*	• Validation checks of the estimate occurred by way of global and local statistical comparison, comparison of volumes of wireframe versus the volume of the block model, comparison of the model average grade (and general statistics) and the declustered sample grade by domain, swath plots by northing, easting and elevation, visual check of drill data versus model data and comparison of global statistics for check estimates.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• The tonnage was estimated on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied*	• For the model, a nominal lower cut-off grade of 0.3g/t gold was utilised for interpreting geological continuity of the mineralisation. For reporting, the cut-off grades applied to the estimate was 0.5g/t gold for reporting above 285mRL (approx. 105m below surface above the Turner fault) and 1.0g/t gold for the deeper domains (up to 210m below surface).
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• Given the high-grade nature of the deposit, the MRE has not been constrained by a nominal depth, there are Reasonable Prospects of Eventual Economic Extraction for JORC compliance, as the deposit is high grade, only 10km from a proposed CIL processing facility, and has historically been mined using underground methods and processed through a standard CIL processing flowsheet.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and*	• An approximate metallurgical recovery of +92% has been assumed in determining Reasonable Prospects of Eventual Economic Extraction, based on historical production data. The mine was in production in the 1990'sand treated at a conventional CIP gold plant. There is extensive data supporting that gold can be extracted using conventional processes.

Criteria	JORC Code Explanation	Commentary
	parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made*	• The deposit lies within leases MLC581, MLC582 and MLC583. The Eldorado project is located in a mature gold mining district, with mining in the area occurring over the past 100 years. There are no major water courses in the project area, although ephemeral streams cut across the project. • The current assumption of waste rock being of no environmental significance is based on local experience in numerous greenschist facies gold deposits which contain significant carbonate mineralogy as part of the mineralisation and waste rock. The mineralisation is a low-sulphidation type with limited acid forming potential. • It is assumed that surface waste dumps will be used to store waste material and conventional storage facilities will be used for the process plant tailings. • The deposit has been mined in the past. Existing waste dumps are present, with no signs or records of environmental issues.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	• Density was assigned following statistical analysis of on 182 measurements from the nearby Golden Forty Deposit. For the oxide ironstone domains 2.80 t/m^{3}was assigned, for transitional zones 3.40 t/m^3 was assigned and for fresh, 3.71 t/m^3.
	• *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.*	• Density was measured using a standard well-documented procedure, the immersion or Archimedes method. Density has been calculated in both the ironstone and alteration zones and on both mineralised and barren zones.
	• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Samples taken were coded by lithology and weathering. Averages were derived within each weathering zone and this value then used to code the block model for the oxide and transition zones. Results within each weathering zone (oxide, transitional and fresh) compared well to previous model bulk density application in the region.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.*	• The Mineral Resource has been constrained to a maximum vertical depth of approximately 210 m below surface. • Blocks have been classified as Indicated and Inferred based on drill hole spacing, geological continuity and estimation quality parameters. • The Indicated Mineral Resource is supported by drilling with nominal 10-20 m x 10-20 m spacing. Geological continuity is demonstrated by the geological interpretation, pit and underground mapping and mining. • The Inferred Mineral Resource was defined where there was a low to moderate level of geological confidence in geometry, there was still continuity of grade, and drill spacing was generally greater than 20 m. Geological support was defined to a lower level of confidence in terms of continuity and extent. •
	• *Whether appropriate account has been taken of all relevant factors (i.e., relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and*	• Grade reliability, volume uncertainty and assay uncertainty have all been considered in the assignment of Mineral Resource categories. Consideration has been given to all relevant factors in the classification of the Mineral Resource.

Criteria	JORC Code Explanation	Commentary
	metal values, quality, quantity, and distribution of the data).	
	• *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The classification reflects the Competent Person's view of the deposit.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No external audits have been conducted on the Mineral Resource estimate.
	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate*	• With further drilling it is expected that there will be variances to the tonnage, grade, and metal of the deposit. The Competent Person expects that these variances will not impact on the economic extraction of the deposit. One of the main issues is continuity and thickness variations, and these will continue to be a key focus of mining as the deposit is exploited, and locally there will be variable outcomes as grade control progresses. The Competent Person considers the Mineral Resource categories to be appropriate with respect to these risks. • It is the Competent Person's view that this Mineral Resource estimate is appropriate to the type of deposit and proposed mining style. The Tennant Creek ironstone-hosted style of mineralisation is well understood and has a substantial mining history to underpin the decisions made in preparing this Mineral Resource estimate.
	• *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used*	• The Mineral Resource classification is appropriate at the global scale.
	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available*	• A review of production data and underground surveyed voids of the Eldorado mine was undertaken by ERM. The purpose of the review was to confirm spatially what ore material had been mined previously. The review confirmed that the 3D void model used previously was accurate based on all historical information available. • Eldorado was mined (underground) by ADL from 1935 and 1986.