

ASX Announcement 30 January 2020

ASX: ERM

Quarterly Report for the Period Ending 31 December 2019

Emmerson Resources Limited

ABN 53 117 086 745

3 Kimberley Street West Leederville WA 6007

PO BOX 1573 West Perth WA 6872

Tel: (08) 9381 7838 Fax: (08) 9381 5375 admin@emmersonresources.com.au

ASX Code: ERM 424.8 million ordinary shares

Market Cap ~A\$46.7M (31-12-19)

Available Cash A\$1.9M (31-12-19)

Board of Directors

Andrew McIlwain
Non-executive Chairman

Rob Bills Managing Director & CEO

Allan Trench
Non-executive Director

TENNANT CREEK: building a pipeline of high-value mines for toll treatment Funds generated by this low risk, royalty/profit share to fund high impact exploration.

- High-grade drilling results returned from the 100% owned Mauretania gold discovery in the Northern Project Area (NPA):
 - o **10m at 3.01g/t** gold from 62m (MTD0006)
 - o 6m at 2.43g/t gold from 82m (MTD006)
 - 4m at 4.64g/t gold from 94m (MTDD006) including:
 - 2m at 7.92g/t gold;
 - 1m at 7.19g/t gold from 101m (MTDD006)
 - 1m at 5.11g/t gold from 113m (MTDD006)
- The very positive visual geology returned from the three shallow RC holes warranted a program of diamond drilling which was completed in December 2019 – assay results are expected in February 2020.
- Sub-Audio Magnetics geophysical survey interpretation and target generation continued over the Southern Project Area (SPA).
- Territory Resources have reported that all major components for the refurbishment of their Warrego Mill have now been purchased, however the delivery of the Falcon gravity concentrator has been delayed.

NSW: exploring for large copper-gold porphyry deposits by adopting modern exploration techniques and technology in a prospective region.

- First deep diamond drill hole at Whatling Hill terminated early at ~800m due to difficulties in drilling. Significant alteration was intersected including several intervals of visible disseminated sulphides.
- A large IP (Induced Polarisation) geophysical survey completed at Kiola has generated compelling drill targets. Final interpretation is underway and zones of high chargeability across the survey correspond with elevated copper and gold rockchip results (up to 19.6% copper and 0.36g/t gold) (ASX: 14 June 2018).
- The preliminary IP survey results combined with the epidote and chlorite proximity indicators, suggest the presence of sulphides and numerous drill targets within 400m of the surface.
- Systematic exploration and evaluation continued across all of the NSW projects with preparations for drill testing of the Kiola and Kadungle projects scheduled for early 2020.



CORPORATE: an emerging gold royalty stream to support self-funded exploration

- Interim agreement with Territory Resources on the reconciliation of gold produced from the first parcel of ore from Edna Beryl has now been resolved with final payment of the shortfall of approximately 700oz from which Emmerson is entitled to a 12% royalty.
- Following the sale of the Warrego Mill, the NT Government has extinguished Emmerson's Rehabilitation and Standstill Agreements pertaining to legacy environmental issues with the \$417K Emmerson bond returned on 20 December 2019.
- Discussions on potential processing opportunities across Emmerson's 100% owned NPA, including Mauretania were held with Elmore Ltd (ASX:ELE). Elmore are seeking to establish a mill in the Tennant Creek region to process the Peko tailings project for ICA Mining.
- Cash balance at 31 December of \$1.9M.

Key Activities Expected in March 2020 Quarter

- Compilation of recent Mauretania and SPA drill results ahead of further drilling
- Ongoing discussions regarding multiple processing options for Emmerson's 100%owned high grade gold projects within the Tennant Creek Mineral Field
- On ground activities at the Warrego Mill to include reconfiguring the gravity and leach circuits ahead of commissioning
- Planning and preparation for drilling at Kadungle and Kiola in NSW to test compelling new drill targets following the integration and interpretation of the 3D geophysical surveys
- Planning for the execution of a 3D IP survey to assist drill targeting at the Wellington Project
- Planning and execution of further exploration across Whatling Hill in NSW

1. Tennant Creek Gold-Copper Project (Figure 1)

1.1 Mauretania Drilling - high grade gold intersected

Mauretania is located within the NPA and is 100% owned by Emmerson. It is a greenfields discovery identified from recognising that high-grade gold and copper are associated with oxidised, hematite fluids as seen at Emmerson's other recent Tennant Creek discoveries of Edna Beryl and Goanna. This style of deposit is characterised by very high grades of gold (and copper in the case of Goanna) which are strongly controlled by structure and present difficult targets to intersect from surface drilling. Unless these deposits breach the surface, they also display very restrictive gold, copper and bismuth geochemical footprints (figure 2).

Previous diamond drilling (MTDD003) intersected 20m at 38.5g/t gold from 92m including 4m at 158g/t gold with the hole abandoned in mineralisation (ASX June 2019).

The latest diamond drill hole MTDD006 (Figures 2, 3 and Table 1) intersected a brecciated, hematite dominant ironstone consisting of hematite fragments in a mixed limonite/goethite clay matrix within the upper oxide zone. The assay results of 10m at 3.01g/t gold and 2m at 7.92g/t gold are associated with zones of intense clay alteration.



The lower primary mineralisation of 1m at 1.47g/t gold is associated with a hematite-magnetite ironstone with talc-chlorite alteration and provides evidence of continuing gold mineralisation at depth. Apart from gold, the high bismuth (of up to 1.6%) typically indicates proximity to bonanza style gold mineralisation and augers well for nearby higher grades.

The drilling to date has highlighted potential extensions that remain open to the north-west and south-west (see geochemical trends in Figures 2 and 3).

Assay results from testing the deeper primary mineralisation in the diamond drill hole tail (MTDD007) are expected in early February following further analysis of the visible copper mineralisation intersected within the lower ironstone (figure 3)

Given the positive drill results from Mauretania, Emmerson applied for a Mineral Lease (ML32214) to the Northern Territory Department of Resources, and was granted during the quarter which now paves the way for future mining.

1.2 Southern Project Area (SPA) – Territory Earning 75% by spending \$5m

Drilling in the SPA, as part of the \$5M earn-in funded by Territory, is aimed at growing the known gold resources around the historic mines that are currently in the Territory Resources Mining Schedule.

A total of 76 drill holes for approximately 3,000m were completed across several shallow oxide gold projects including Black Snake, The Susan, and the Three Thirty prospects.

Territory Resources have now cleared the remainder of the samples from this drilling for assay, with results expected in the March quarter 2020.

2. New South Wales gold-copper projects (Figure 4)

2.1 Whatling Hill (Fifield Project)

The second phase of drilling at Whatling Hill, in the September quarter 2019, assisted in providing vectors to the core of this copper-gold porphyry system. Our science based, systematic approach utilising cutting edge techniques coupled with traditional exploration methodology narrowed the search area to targets at depth beneath existing drilling (ASX: 25 July 2019).

A deep diamond drill hole was only partially completed late in the quarter due to difficulties with the tradjectory of the hole. Of interest were several intervals of visible sulphides (pyrite and chalcopyrite) within predominantly epidote, chlorite and sparse garnet, magnetite and actinolite alteration. (Figure 5). Assay results are expected in late February

2.2 Kiola Project

A large IP geophysical survey completed in late December has yet to be fully interpreted, however initial results appear to be consistent with the presence of sulphides associated with porphyry copper style mineralisation. This is potentially significant given the correspondence with surface rock chip assays of up to 19.6% copper and 0.36g/t gold (ASX: 14 June 2018).

Several IP anomalies have been identified with three significant anomalies proposed for drill testing in early 2020.



2.3 Other NSW Projects

Emmerson continues to conduct systematic exploration across its other NSW projects with Kadungle and Kiola the next most advanced. Drilling is planned for both these projects in early 2020 with potential for 50% of the drilling costs met by the NSW Co-operative Drilling Program (up to a maximum of \$200k).

The next phase of work is currently being planned for Wellington and Whatling Hill.

3. Corporate Update

3.1 Return of \$400k Bond to Emmerson

As part of Emmerson's acquisition of the Tennant Creek assets in 2006, it assumed a \$4.2M liability through Rehabilitation and Standstill Agreements with the Northern Territory government that covered legacy mining issues at major mine sites in the historical Tennant Creek Mineral Field (TCMF). As a part of this, a \$416,958 bond was held in favour of the Northern Territory government.

As a consequence of Emmerson selling the Warrego Mill to Territory and the introduction of the Mining Remediation Fund by the NT Government in 2013, the liability has now been transferred to Territiory Resources, resulting in the release of the full bond to Emmerson in December 2019.

3.2 Advancement to Gold Production via Territory Resources Strategic Alliance

Territory continues to make progress on the refurbishment of their 100% owned Warrego Mill. A planned upgrade to the gravity circuit has included completing a number of major new equipment purchases that will greatly enhance the gold recoveries. One of the major upgrades to the mill includes the addition of a Falcon gravity concentrator manufactured by Sepro Mineral Systems in Canada. As reported by Territory Resources, the delivery of this has been delayed, pushing back the commissioning date which will be advised once the equipment has been delivered to Tennant Creek.

Accordingly, Territory Resources have indicated that resumption of development and mining at Edna Beryl Mine is now planned to resume in the March quarter 2020.

3.3 Multiple Gold Processing Opportunites at Tennant Creek: Discussions with Elmore

The recent announcement by Elmore Ltd (ASX:ELE 14 Jan 2020) of executing an agreement with ICA Mining to establish a proprietary modular mill at the Peko Tails Project. This has provided additional options for Emmerson's 100%-owned gold projects in the TCMF, in particular the nearby Mauretania project.

Elmore have designed innovative modular, reusable foundations to enable the use of large ball mills as part of its moveable processing equipment. The company owns two such mills (which are in China) that are comprised of modules which can be transported by conventional road trailers. Elmore have lodged provisional patents for this new system which radically cuts installation to approximately one week (from 4-6 months)

Elmore believe that this new system will be a core element of their ambition to establish contract processing services to stranded mineral projects such as Tennant Creek.

The Peko tails project is located on the edge of the SPA (Figure 1) and material from any of Emmerson's 100%-owned tenure is within short trucking distance of the proposed processing plant.



Announcements

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

29/11/2019 Investor Update Presentation

26/11/2019 Results of Annual General Meeting

15/11/2019 Exploration Update Presentation

04/11/2019 High-Grade Gold Results Continue at Tennant Creek

23/10/2019 Deep Diamond Drilling of NSW Whatling Hill

23/10/2019 Notice of Annual General Meeting and Proxy Form

21/10/2019 Quarterly Cashflow Report

21/10/2019 Quarterly Activities Report

03/10/2019 Investor Update Presentation

Emmerson Resources Limited

Mr. Rob Bills

Managing Director and Chief Executive Officer

About Emmerson

Emmerson Resources Limited (Emmerson) is fast tracking exploration across five exciting early-stage gold-copper projects in NSW. In partnership with Kenex Limited (now Duke Exploration), these projects were identified from the application of 2D and 3D predictive targeting models – aimed at increasing the probability of discovery. The highly prospective Macquarie Arc in NSW hosts >80Mozs gold and >13Mt copper with these resources heavily weighted to areas of outcrop or limited cover. Emmerson's five exploration projects contain many attributes of the known deposits within the Macquarie Arc but remain underexplored due to historical impediments, including an overlying cover (farmlands and younger rocks) and a lack of exploration. Kadungle is a JV with Aurelia Metals covering 43km² adjacent to Emmerson's Fifield project.

In addition, Emmerson has a commanding landholding position and is exploring the Tennant Creek Mineral Field (TCMF), one of Australia's highest-grade gold and copper fields producing over 5.5 Mozs of gold and 470,000 tonnes of copper from deposits including Warrego, White Devil, Orlando, Gecko, Chariot, and Golden Forty. These high-grade deposits are highly valuable exploration targets, and to date, discoveries include high-grade gold at Edna Beryl and Mauretania, plus copper-gold at Goanna and Monitor. These are the first discoveries in the TCMF for over two decades.

Emmerson recently announced the formation of a strategic alliance with Territory Resources to build a central mill in Tennant Creek to support the processing from Emmerson's small gold mines and other third-party feed. This alliance also extends to a \$5m earn-in by Territory Resources over Emmerson's southern tenements (where ERM is the Operator and Manager) plus a Mining Joint Venture over a portfolio of Emmerson's small mines that is on a 75/25 profit share basis, except for the Edna Beryl and Chariot mines which respectively have a 12% and 6% gold production royalty.

Emmerson is led by a Board and Management team of experienced Australian mining executives including former MIM and WMC mining executive Andrew McIlwain as Non-Executive Chairman, and former senior BHP Billiton and WMC executive Rob Bills as Managing Director and CEO.



About Territory Resources

Territory Resources Limited (Territory) explores, mines and rails iron ore and exports out of the Darwin Port in the Northern Territory (NT), Australia. The company primarily holds an interest in the Frances Creek mine, located south of Darwin,(NT). The Company also has interests in the Mt Bundey project and the Yarram project both located in the NT. The Company was incorporated in 2002 and is based in West Perth, Australia. As of February 28, 2018, Territory operates as a subsidiary of Gold Valley Holdings Pty Ltd. Territory is currently expanding its operations into gold projects in the NT, including advancing the +300koz gold project at Nobles Nob and Juno mines in Tennant Creek.

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, which relates to NSW Projects Exploration Results is based on information compiled by Dr Ana Liza Cuison, MAIG, MSEG. Dr Cuison is a Member of the Australian Institute of Geoscientists and has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which she is undertaking to qualify as a Competent Person as defined in the 2004 edition and the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Cuison is a full-time employee of the Company and consents to the inclusion in this report of the matters based on her information in the form and context in which it appears.

Cautionary Statement

The Exploration Targets described in the 'Mining & Processing' section are conceptual in nature. It must be noted that that there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

Forward-Looking Statements

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

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.



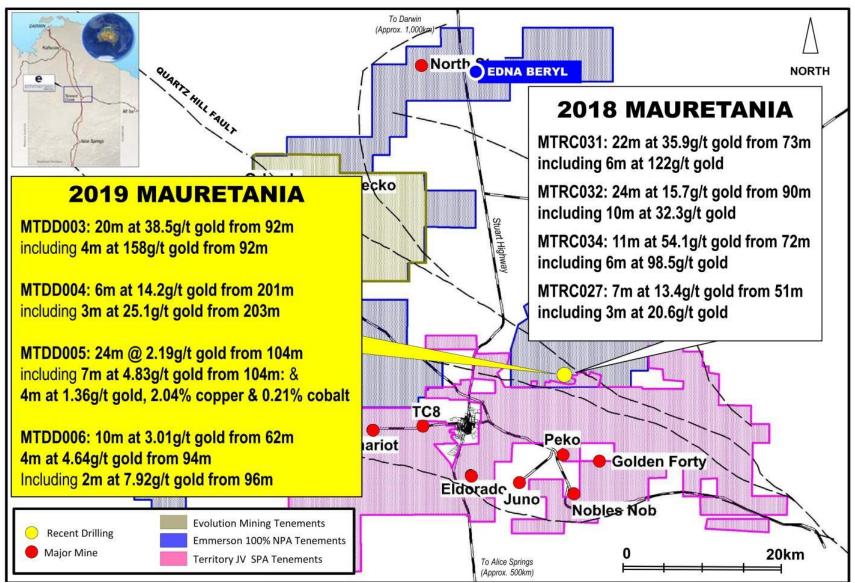


Figure 1: Location of Emmerson's tenement package (blue) and recently completed drill program targets (yellow dots).



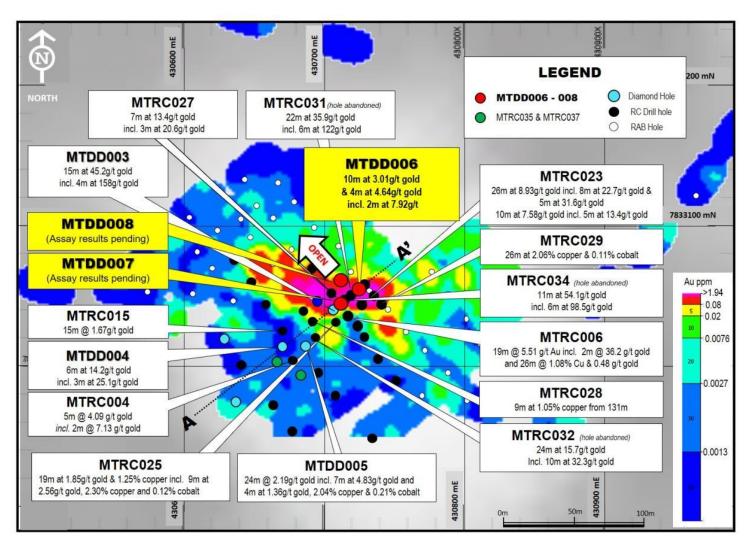


Figure 2: Location previous drilling (black & white dots) diamond drill holes (blue dots) MTDD006 diamond drill hole (red dot) and RC holes (green dots) on a background of gold geochemistry in ppm (colours). Also showing the recent drilling (MTDD007, MTDD008, MTRC035 and MTRC037).



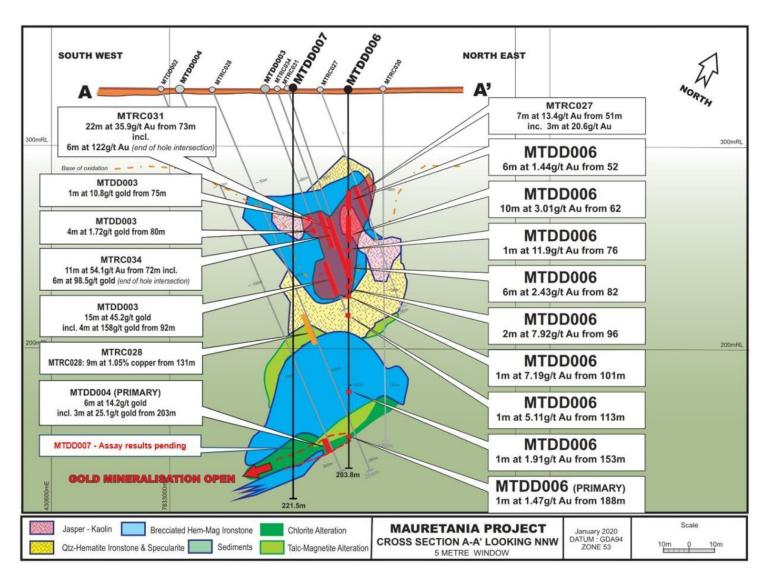


Figure 3: Mauretania cross section along A-A': the white call out boxes represent the previously reported assay results and larger text call out boxes are assay results received from the MTDD006, 2019 drilling program. Note assays yet to be received from MTDD007.



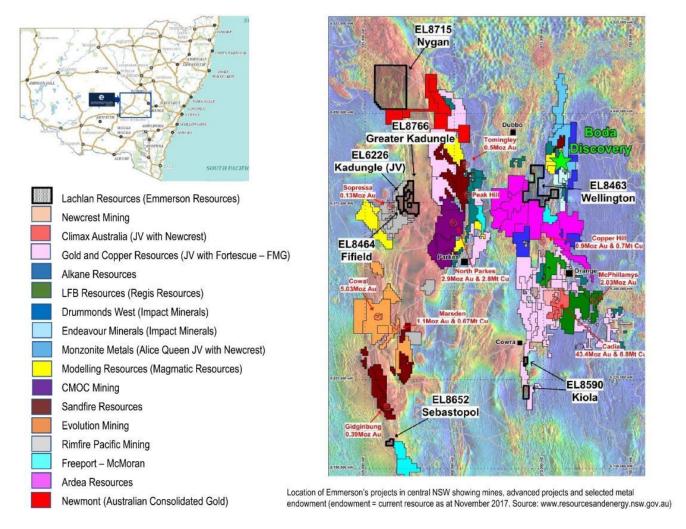


Figure 4: Location of Emmerson's NSW Projects (black outline= Emmerson ELs 8715, 8766, 6226, 8464, 8463, 8590, 8652), plus the recent Boda discovery by Alkane Resources (green star). The background is the regional magnetic image, with red indicating the various segments of the Macquarie Arc. Note the Fifield (EL8464) tenement contains the Whatling Hill project.



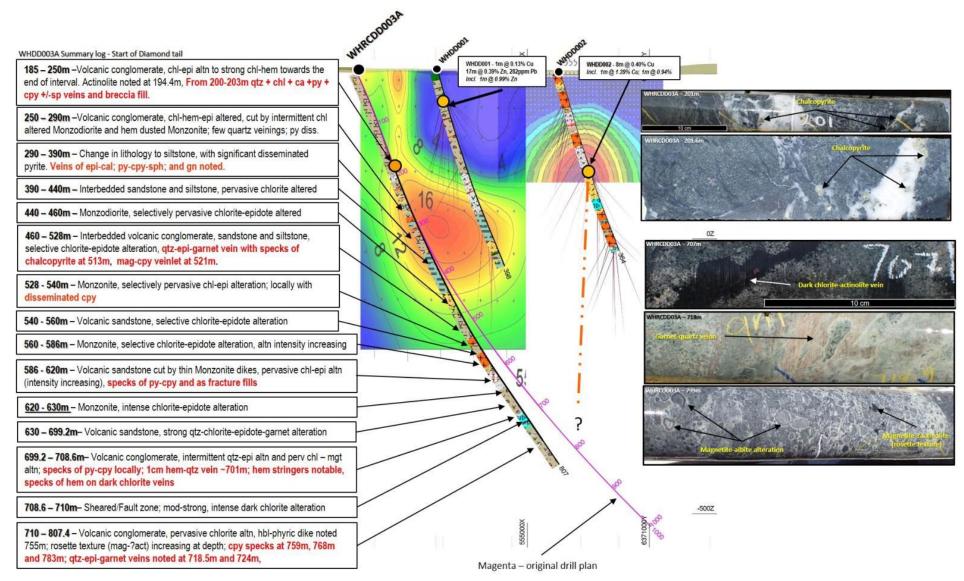


Figure 5: Whatling Hill project WHRCDD003A summary log, cross-section with actual drill hole trace and planned drill hole trace (magenta line).



Table 1: Mauretania prospect MTDD006 significant drill hole intersections.

Hole ID	East (MGA94_53)	North (MGA94_53)	RL AHD	Dip (deg)	AZI mag (deg)	From (m)	To (m)	Width (m)	Au (g/t)	Ag (g/t)	Bi (ppm)	Cu (ppm)	Co (ppm)	Fe (%)	Pb (ppm)	Zn (ppm)	Sb (ppm)	Se (ppm)
						52	58	6	1.44	18.5	83.7	889	58.4	17.2	246	176	7.23	2.17
						62	72	10	3.01	23.6	0.15%	1182	104	17.3	390	295	10.7	5.50
		7833053.00	3053.00 329.3		000	76	77	1	11.9	96.7	0.11%	1.27%	0.14%	20.1	0.91%	925	15.9	2.00
						82	88	6	2.43	2.53	827	409	36.5	14.5	174	74.2	6.69	1.33
MTDD006	430719.00			-90		94	98	4	4.64	14.5	0.94%	635	33.5	12.6	1730	29.3	9.07	5.00
						96	98	2	7.92	16.8	1.57%	1046	44.2	13.3	3174	31.0	13.2	9.00
						101	102	1	7.19	3.36	0.16%	355	84.8	19.0	265	48.0	5.00	2.00
						106	107	1	1.32	5.74	743	1274	74.6	26.7	132	111	4.63	4.00
						113	114	1	5.11	0.64	463	129	38.3	14.9	206	202	1.84	2.00
						153	154	1	1.91	18.0	133	113	6.80	11.6	38.0	11.0	1.45	66.0
						188	189	1	1.47	2.10	240	405	109	20.5	19.0	302	1.49	56.0

Note:

- (1) Samples are half HQ₃ or NQ₃ 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 1% Cu. No maximum cut off.

- (7) Maximum internal dilution is no greater than 1 metre.
 (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
MTRC035	430685	7833039	329	-70	116	138	18/10/2019	RC	EL28761
MTDD008	430681	7833009	330	-74	77.7	174.4	19/10/2019	RC/DDH	EL28761
MTRC037	430696	7833009	331	-75	116	204	20/10/2019	RC	EL28761
MTDD007	430698	7833037	332	-90	77.7	221.5	21/10/2019	RC/DDH	EL28761

Table 3. Whatling Hill drilling collar location data

Hole ID	East (MGA94_55)	North (MGA94_55)	RL AHD	Dip (deg)	AZI mag (deg)	Depth (m)	Drill Date	Drill Type	Tenement
WHRCDD003A	554819	6371435	307	-65	112	807.4	19/11/2019	RC/DDH	EL8464



The exploration results contained within the above company release are in accordance with the guidelines of *The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves* (JORC Code, 2012 Edition–Table 1).

Section 1.1 Sampling Techniques and Data – MAURETANIA PROJECT AREA – MTDD006 DIAMOND DRILL (Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	 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. 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 (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. 	 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) were completed prior to this current drilling campaign at the Mauretania Exploration Target. The deepest RC hole is 287m, shallowest was 101m and the average hole depth was 187m. One diamond drill hole (MTDD006) is drilled for a total of 203.8m and are reported in this current release. This hole was sampled using Diamond drilling techniques (DDH). MTDD006 is drilled as a vertical hole to confirm shallow oxide gold mineralisation and extended to test for primary gold mineralisation confirmed by previous drilling. Diamond core has been logged for lithological, density, magnetic susceptibility and geotechnical characteristics. MTDD006 has been drilled as HQ3 and NQ3 size, sampled on geological intervals (typically 1m), cut into half core to provide sample weights of approximately 4.0kg. Individual 1m DDH core samples are pulverised to produce a 50g charge for analysis by four acid digest with an ICP/OES (Cu, Fe, Pb, Zn) ICP/MS (Ag, Bi, Mo, Se, Sb, U, Co) & Fire Assay/AAS (Au) finish.
Drilling techniques	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).	 RC drilling accounts for 60%, RAB 20% and Diamond holes (MTDD001-006) = 20% of reported drilling at Mauretania Exploration Target. MTDD006 HQ3 = 88.7m, NQ3 = 115.1m final depth = 203.8m. HQ3 core diameter is 63.5mm. NQ3 core diameter is 47.6mm MTDD006 core was not oriented due to the vertical nature of the drill hole. GMP Exploration completed the diamond drilling. Standard HQ inner tube was used for drill holes MTDD001-002. HQ3/NQ3 triple tube was used for drill holes (MTDD003-006)
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 	DDH recoveries are logged and recorded in the database and are considered to be of fair standard. RQD measurements and core loss is recorded on diamond logging sheets, loaded into Emmerson's database and retained for



	have occurred due to preferential loss/gain of fine/coarse material.	 reference. RQD logging records core lengths, recovery, hardness and weathering. Diamond core recovery is considered fair. Any issues or concerns are discussed at the time with the drilling contractor and recorded in our database. Recoveries are considered fair for reported RC drilling. It is considered by Emmerson that there is preferential loss of fine to medium grained material within the ore zones. Emmerson consider that there is evidence for sample bias that may have occurred due to preferential loss/gain of fine/coarse material.
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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	 Standard operating procedures are employed by Emmerson for logging of DDH samples. All DDH samples are lithologically logged in one metre intervals. All DDH samples are defined by geological characteristics and controlled by alteration and lithological boundaries. Structural logging of all diamond drill core records orientation of veins, fractures and lithological contacts. Information on diamond core structure type, dip, dip direction, alpha angle, beta angle, texture, shape, roughness and fill material is stored in the structure table of the database. Logging data is directly entered into field tough book computers via Logchief software. Look up codes and real time validations reduce the risk of data entry mistakes. Computer data (the drill log) are uploaded to Emmerson's relational database whereby the data undergoes a further set of validations checks prior to final upload. Standardised codes are used for lithology, oxidation, alteration and presence of sulphide minerals. Magnetic susceptibility data for all individual 1m DDH samples are collected as per ERM procedure. Specific density is recorded for all lithological types and entered in the database. Representative diamond core is available to all geologists (a physical reference set) to ensure consistency of logging. All drill core is photographed.
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 subsampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is 	Standard sampling operating procedures have used by ERM at Mauretania Project area drilling for DDH samples. 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. Core was cut in half (HQ3/NQ3) at



representative		of	the	insitu	material	collected,	
including	for	i	nsta	nce	results	for	field
duplicate/s	econ	d-r	nalf s	amplir	ng.		

• Whether sample sizes are appropriate to the grain size of the material being sampled.

- Emmerson's Tennant Creek exploration office, using an automatic core saw.
- All samples were collected from the same side of the core.
- Half core samples are submitted for analysis, unless a field duplicate is required, in which case quarter core samples are submitted.
- 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.
- Coarse rejects are disposed of by the Laboratory.
- DDH sample weight varies between 3 5kg.

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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.
- Field QC procedures involve the use of certified reference material (CRM's) as assay standards, and ERM include blanks, duplicates.
- 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.
- A selection of CRM's is available to the geologists and insertion points are predetermined prior to drilling.
- The geologist has the ability to override this predetermined insertion based on visual and geological characteristics of the current drill hole.
- Insertion of assay blanks is increased when visual mineralisation is encountered and consists of insertion above and below the mineralised zone.
- Samples typically weigh less than 3kg to ensure total preparation at the pulverisation stage.
- 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.
- QAQC data is uploaded with the sample values into ERM's database through an external database administrator (contractor).
- A QAQC database is created as a separate table in the database and includes all field and internal laboratory QC samples.
- QC data is reported through a series of control charts for analysis and interpretation by the Exploration Manager or his/her delegate.
- Sample sizes are considered to be appropriate
 to correctly represent the mineralisation at the
 Mauretania Exploration Target based on the
 style of mineralisation (iron oxide copper gold),
 the thickness and mineral consistency of the
 intersection(s).



		Emmerson's sampling methodology (SOP) is available at any time for poor review.
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.	 available at any time for peer review. The Exploration Manager of ERM has visually verified significant intersections reported in the DDH samples. Geochemical data is managed by ERM using and external database administrator and secured through a relational database (Datashed). Laboratory data is received in digital format and uploaded directly to the database. Original data sheets and files are retained and are used to validate the contents of the database against the original logging. Drill holes MTDD003 and MTDD005 are considered as twin drill holes at the Mauretania Exploration Target.
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. 	 Drill hole collars were surveyed (set out and pick up) using a differential GPS and by a suitably qualified company employee. Collar survey accuracy is +/- 30 mm for easting, northing and elevation coordinates. Co-ordinate system GDA_94, Zone 53. Topographic measurements are collected from the final survey drill hole pick up. Downhole survey measurements were collected at a minimum of every 30m using an CORE EX ® electronic single shot camera for this current round of drilling. This survey camera equipment is quoted by the manufacturer to have an accuracy of
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 within the Mauretania Exploration Target area is 20m x 10m. On the discovery line, containing MTRC004,005,006,023-025,032 and MTDD003, MTTDD005 & MTDD006 spacing is 10m x 10m. There is insufficient drill / assay data to establish the geological and grade continuity at this stage of drilling. No Mineral Resource Estimation can be applied to these Exploration Results.
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.	 Exploration drilling is perpendicular to the interpreted strike of the Mauretania target. No orientation based sampling bias has been identified in the data at this point. Results at this stage suggest that the geological and geophysical targets being tested have been drilled in the correct orientation.
Sample security	The measures taken to ensure sample security.	Samples are selected, bagged and labelled by logging geologist. They are placed in sealed polyweave bags and



		then larger bulka bags for transport to the sample preparation facility in Alice Springs (laboratory). The laboratory confirms that all samples have been received and that no damage has occurred during transport. Tracking is available through the internet and designed by the Laboratory for ERM to track the progress of batches of samples. Sample receipt is logged into ERM's sample ledger.
		While samples are being processed in the Lab they are considered to be secure.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	 An internal review of the sampling techniques, QAQC protocols and data collection was conducted by Emmerson in November 2013. Optiro (2013) also reviewed the standard 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 PROJECT AREA – MTDD006 DRILLING (Criteria in this section apply to all succeeding sections)

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 Mauretania Exploration Target is located within Exploration Licence 28761. The Mauretania target is located on Tennant Station Perpetual Pastoral Lease. Exploration Licence 28761 is 100% held by Emmerson Resources Limited. Land Access is secured through Emmerson's Indigenous Land Use Agreement (ILUA) with the CLC which is in good standing. Land Access is secured through Emmerson's Land Access Agreement signed by the owners of the Tennant Creek station. Heritage surveying (assisted by the Central Land Council) was conducted prior to any exploration being conducted within the Mauretania Project Area. Sacred Site Certificate Numbers 2015-40a, 2015-40b and 2015-40c subsequently issued post field inspection allowing field exploration and drilling to commence. Two exclusion zones were identified during the field inspections however do not impact on the current exploration drilling. Emmerson do not believe that the two identified exclusion zones will impact of future exploration of the Mauretania Project Area. The tenement is in good standing and no known impediments exist.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	 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. 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 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. Matana Minerals NL also mapped the general area in 1989.



Geology	Deposit type, geological setting and style of mineralisation.	 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. 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. The rocks of the Warramunga Formation host most of the ore bodies in the region and underlie the Exploration License. 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.
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: easting and northing of the drillhole collar elevation or RL of the drillhole collar dip and azimuth of the hole downhole length and interception depth hole length.	MTDD006 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.
Data aggregation methods	 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. 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. 	 Mineralized intersections are reported as down hole intervals and not weighted averages. Please refer to the table of significant results in the body of the text for detail on cut off grades and mineralised widths. These results are exploration results only and no allowance is made for recovery losses that may occur should mining eventually result, nor metallurgical flow sheet considerations. Cut-off grades have been used for reporting of exploration drill results and are defined below the Table of Significant results.
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 (eg 'downhole length, true width not known'). 	Mineralisation identified at the Mauretania Exploration Target is contained within hematite-magnetite-quartz jasper ironstone which grades with depth to a hematite-magnetite ironstone (see cross – section in the text). 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.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being	Refer to Figures in body of text.



Balanced reporting	reported. These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views. • 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.
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. A regional RAB program was completed in 2015 and included some areas within the Mauretania Exploration Target. One bulk sample was collected and stored for further metallurgical testing. Rock characterisation of mineralised and non-mineralised material has been collected. SAM geophysical survey completed in July 2019 over the Mauretania Exploration Target. Results are still being assessed.
Further work	 The nature and scale of planned further work (eg 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. Geological reinterpretation based on new drilling information and additional geophysical detail. Additional RC drilling is planned for October 2019.



Mining Tenements Held at 31 December 2019 (Northern Territory, Australia)

Tenement	Name	Interest	Tenement	Name	Interest	Tenement	Name	Interest
EL10114	McDougall	100%						
EL10124	Speedway	100%	MCC334	Estralita Group	100%	MLA29530	Wiso	100%
EL10313	Kodiak	100%	MCC340	The Trump	100%	MLA29531	Wiso	100%
EL10406	Montana	100%	MCC341	The Trump	100%	MLA29532	Wiso	100%
EL23285	Corridor 2	100%	MCC344	Mt Samuel	100%	MLC127	Peko East Ext 4	100%
EL23286	Corridor 3	100%	MCC364	Estralita	100%	MLC129	Peko Sth- East	100%
EL23905	Jackie	100%	MCC365	Estralita	100%	MLC130	Golden Forty	100%
EL26594	Bills	100%	MCC366	Estralita	100%	MLC131	Golden Forty	100%
EL26787	Rising Ridge	100%	MCC524	Gibbet	100%	MLC132	Golden Forty	100%
EL27011	Snappy Gum	100%	MCC55	Mondeuse	100%	MLC133	Golden Forty	100%
EL27408	Grizzly	100%	MCC56	Shiraz	100%	MLC134	Golden Forty	100%
EL27537	Chappell	100%	MCC57	Mondeuse	100%	MLC135	Golden Forty	100%
EL27538	Mercury	100%	MCC66	Golden Forty	100%	MLC136	Golden Forty	100%
EL28601	Malbec	100%	MCC67	Golden Forty	100%	MLC137	Golden Forty	100%
EL28602	Red Bluff	100%	MCC9	Eldorado	100%	MLC138	Golden Forty	100%
EL28603	White Devil	100%	MCC925	Brolga	100%	MLC139	Golden Forty	100%
EL28618	Comstock	100%	MCC926	Brolga	100%	MLC140	Golden Forty	100%
EL28760	Delta	100%	ML22284	Billy Boy	100%	MLC141	Golden Forty	100%
EL28761	Quartz Hill	100%	ML23216	Chariot	100%	MLC142	Golden Forty	100%
EL28775	Trinity	100%	ML23969	Gecko	100%	MLC143	Golden Forty	100%
EL28776	Whippet	100%	ML30096	Malbec	100%	MLC144	Golden Forty	100%
EL30167	Dolomite	100%	ML30177	North Star	100%	MLC146	Golden Forty	100%
EL30584	Juno North	100%	ML30322	Verdot	100%	MLC147	Golden Forty	100%
EL30748	Battery Hill	100%	ML30620	Kia Ora	100%	MLC148	Golden Forty	100%
EL9403	Jess	100%	ML30623	Pinnacles	100%	MLC149	Golden Forty	100%
EL9958	Running Bear	100%	ML30636	Jacqueline the	100%	MLC15	Eldorado 4	100%
ELA27539	Telegraph	100%	ML30716	Comstock	100%	MLC16	Eldorado 5	100%
ELA27902	Lynx	100%	ML30742	Black Cat	100%	MLC176	Chariot	100%
ELA30505	Golden East	100%	ML30743	True Blue	100%	MLC177	Chariot	100%
ELA30746	Mule	100%	ML30620	Kia Ora	100%	MLC18	West Gibbet	100%
ELA30749	Mary Anne	100%	ML30623	Pinnacles	100%	MLC182	Riesling	100%
ELA31355	Mt Samuel	100%	ML30636	Jacqueline the	100%	MLC183	Riesling	100%
EMP31008	Warrego Gravel	100%	ML30870	Rising Star	100%	MLC184	Riesling	100%
MA23236	Udall Road	100%	ML30872	The Extension	100%	MLC21	Gecko	100%
MA30798	Little Ben	100%	ML30893	Troy	100%	MLC253	Mulga 1	100%
MCC174	Mt Samuel	0%	ML30909	Archimedes	100%	MLC254	Mulga 1	100%
MCC203	Galway	100%	ML30911	Wolseley	100%	MLC255	Mulga 1	100%
MCC211	Shamrock	100%	ML30912	Ivanhoe	100%	MLC256	Mulga 2	100%
MCC212	Mt Samuel	85%	ML30938	EXP195	100%	MLC257	Mulga 2	100%
MCC239	West Peko	100%	ML30945	Metallic Hill	100%	MLC258	Mulga 2	100%
MCC240	West Peko	100%	ML31074	Rocky Range	100%	MLC259	Mulga 2	100%
MCC287	Mt Samuel	0%	ML31123	Gibbet1	100%	MLC260	Mulga 2	100%
MCC288	Mt Samuel	0%	ML31651	White Devil	100%	MLC261	Mulga 2	100%
MCC308	Mt Samuel	85%	MLA29527	Wiso	100%	MLC32	Golden Forty	100%
MCC316	The Trump	100%	MLA29528	Wiso	100%	MLC342	Tinto	100%
MCC317	The Trump	100%	MLA29529	Wiso	100%	MLC343	Rocky Range	100%



Mining Tenements Held at 31 December 2019 (Northern Territory, Australia)

Tenement	Name	Interest	Tenement	Name	Interest	Tenement	Name	Interest
MLC344	Rocky Range	100%	MLC408	Comet	100%	MLC596	TC8 Lease	100%
MLC345	Rocky Range	100%	MLC409	Comet	100%	MLC597	TC8 Lease	100%
MLC346	Rocky Range	100%	MLC432	Mulga 1	100%	MLC598	Golden Forty	100%
MLC347	Golden Forty	100%	MLC48	Tinto	100%	MLC599	Mt Samuel	85%
MLC348	Brolga	100%	MLC49	Mt Samual	100%	MLC601	TC8 Lease	100%
MLC349	Brolga	100%	MLC498	Eldorado	100%	MLC602	TC8 Lease	100%
MLC35	Golden Forty	100%	MLC499	Eldorado	100%	MLC603	TC8 Lease	100%
MLC350	Brolga	100%	MLC5	Peko Extended	100%	MLC604	TC8 Lease	100%
MLC351	Brolga	100%	MLC50	Eldorado Anom	100%	MLC605	TC8 Lease	100%
MLC352	Golden Forty	100%	MLC500	Eldorado	100%	MLC606	Lone Star	100%
MLC353	Golden Forty	100%	MLC501	Eldorado	100%	MLC607	Lone Star	100%
MLC354	Golden Forty	100%	MLC502	Eldorado	100%	MLC608	Lone Star	100%
MLC355	Golden Forty	100%	MLC503	Eldorado	100%	MLC609	Lone Star	100%
MLC36	Golden Forty	100%	MLC504	Eldorado	100%	MLC610	Lone Star	100%
MLC362	Lone Star	100%	MLC505	Eldorado	100%	MLC611	Lone Star	100%
MLC363	Lone Star	100%	MLC51	Eldorado Anom	100%	MLC612	Lone Star	100%
MLC364	Lone Star	100%	MLC518	Ellen, Eldorado	100%	MLC613	Lone Star	100%
MLC365	Lone Star	100%	MLC520	Great Northern	100%	MLC614	Lone Star	100%
MLC366	Lone Star	100%	MLC522	Aga Khan	100%	MLC615	Lone Star	100%
MLC367	Lone Star	100%	MLC523	Eldorado	100%	MLC616	Lone Star	100%
MLC368	Lone Star	100%	MLC524	Susan	100%	MLC617	Mt Samuel	50%
MLC369	Lone Star	100%	MLC527	Mt Samual	100%	MLC619	True Blue	85%
MLC37	Golden Forty	100%	MLC528	Dingo, Eldorado	100%	MLC644	Enterprise	100%
MLC370	Lone Star	100%	MLC529	Cats Whiskers	100%	MLC645	Estralita	100%
MLC371	Lone Star	100%	MLC53	Golden Forty	100%	MLC654	TC8 Lease	100%
MLC372	Lone Star	100%	MLC530	Lone Star	100%	MLC66	Traminer	100%
MLC373	Lone Star	100%	MLC535	Eldorado No 5	100%	MLC67	Traminer	100%
MLC374	Lone Star	100%	MLC54	Golden Forty	100%	MLC683	Eldorado	100%
MLC375	Lone Star	100%	MLC546	The Mount	100%	MLC692	Warrego Mine	100%
MLC376	Mulga 1	100%	MLC55	Golden Forty	100%	MLC705	Apollo 1	100%
MLC377	Mulga 1	100%	MLC558	New Hope	100%	MLC91	Carraman/Klond	100%
MLC378	Mulga 1	100%	MLC56	Golden Forty	100%	MLC92	Carraman/Klond	100%
MLC379	Mulga 1	100%	MLC576	Golden Forty	100%	MLC93	Carraman/Klond	100%
MLC38	Memsahib East	100%	MLC577	Golden Forty	100%	MLC94	Carraman/Klond	100%
MLC380	Mulga 1	100%	MLC581	Eldorado ABC	100%	MLC95	Carraman/Klond	100%
MLC381	Mulga 1	100%	MLC582	Eldorado ABC	100%			
MLC382	Mulga 1	100%	MLC583	Eldorado ABC	100%			
MLC383	Mulga 1	100%	MLC584	Golden Forty	100%			
MLC384	Mulga 2	100%	MLC585	Golden Forty	100%			
MLC385	Mulga 2	100%	MLC586	Golden Forty	100%			
MLC386	Mulga 2	100%	MLC591	TC8 Lease	100%			
MLC387	Mulga 2	100%	MLC592	TC8 Lease	100%			
MLC4	Peko Extended	100%	MLC593	TC8 Lease	100%			
MLC406	Comet	100%	MLC594	TC8 Lease	100%			
MLC407	Comet	100%	MLC595	TC8 Lease	100%			



Mining Tenements Held at 31 December 2019 (New South Wales, Australia)

Tenement	Name	Interest	
EL6226	Kadungle	80%	
EL8463 EL8464	Wellington Fifield	90% 90%	
EL8519	Kiola	90%	
EL8652 EL8715	Sebastopol Nyngan	90% 100%	
EL8766	Greater Kadungle	100%	