ACN 117 086 745

# NORTHERN PROJECT AREA

# TENNANT CREEK, NORTHERN TERRITORY

# MINING MANAGEMENT PLAN (2018)

## Authorisation – 0467-03

| DISTRIBUTION: | | DATE |
|---|---|---|
| Central Land Council | **1** | |
| Department of Primary Industry & Resources | **2** | |
| Emmerson Resources Limited | **3** | |

| | | | |
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| Prepared By: | Emmerson Resources Ltd – Tenements & Compliance Department | PO Box 1573, West Perth WA 6872 | |
| Authorised By: | Steve Russell Exploration Manager | | |

## CONTENTS

# AMENDMENTS

Changes will be highlighted in yellow where possible to assist in review.

| Section | Amendment |
|---|---|
| | |
| 3.1 History of Mining/Exploration | Updated to reflect 2017 drilling and rehabilitation stats. |
| 3.2 Proposed Activities | Changes to Table 4 of proposed drillholes, page 21. Addition of drill holes at the Jasper Hills Project. With the rehabilitation of all drilling in the NPA no adjustment o the security is required. |
| Figure 12 | New Drill Collar Locations Figure – Jasper Hills |
| Figure 13 | New Drill Collar Locations Figure – Edna Beryl |
| Figure 14 | Updated to include new target areas |
| Figure 15 | Updated to include new target areas |
| 6.1 Costings of Closure Activities | Updated to reflect proposed drilling |
| 7.0 Performance Objectives | Updated new dates for objectives. |
| Appendix 8 | Updated Security Calculation |
| Appendix 14 | NPA Drilling – Completed in 2017 |
| Appendix 15 | NPA Drilling – Proposed for 2018 |
| Appendix 18 | New Appendix – Contains the rehabilitation photos. |

# 1.0 OPERATOR DETAILS

| | |
|---|---|
| **Operator Name:** | Emmerson Resources Ltd (Emmerson) |
| **Key Contact Person/s:** | Mr. Adam Walters Manager - Projects<br>Mr. Steve Russell Exploration Manager |
| **Postal Address:** | Emmerson Resources Limited<br>PO Box 1573, West Perth WA 6872 |
| **Street Address:** | Emmerson Resources Limited<br>3 Kimberley Street, West Leederville WA 6007 |
| **Phone:** | Ph: (08) 9381 7838<br>After Hours: 0407 963 357 (Mr. Steve Russell Exploration Manager) |
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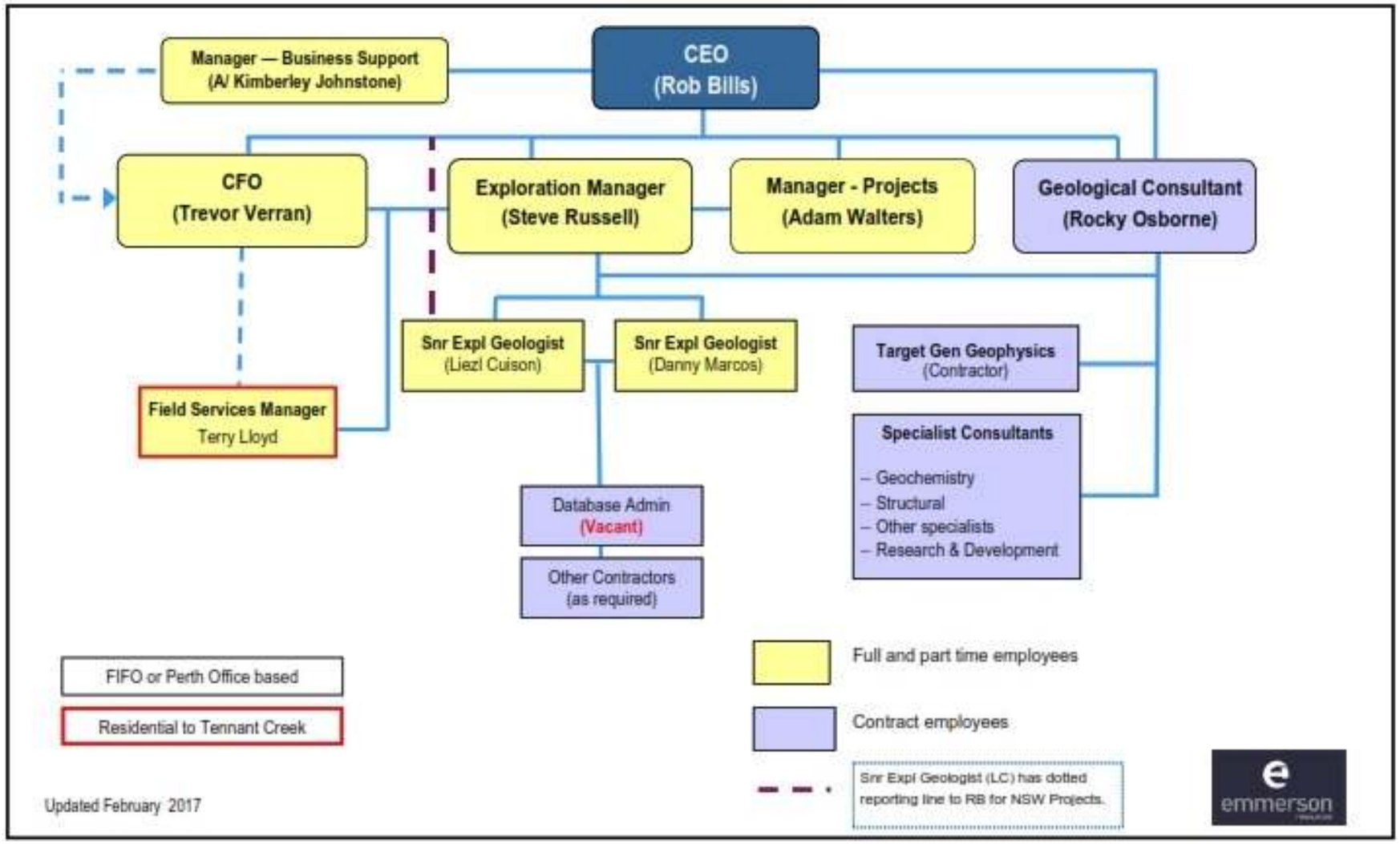
| **Email:** | awalters@emmersonresources.com.au<br>(Mr. Adam Walters ; Manager – Projects) |

## 1.1 ORGANISATIONAL STRUCTURE / CHART



## 1.2 WORKFORCE

The workforce on the Northern Project Area (NPA) will vary as needed, and will include, but is not limited too;

- 1 RC Drill Rig and crew; 3 people (Bullion Drilling)
- 1 Diamond Drill Rig and crew; 3 people (GMP Drilling)
- 1 RAB Drill Rig and crew; 3 people (Bullion Drilling)
- 1 Geophysical crew - 3 – 6 people (Daishsat and/or ABIM Solutions)
- 1 Geologist (Emmerson)
- 1 or 2 Field Assistants (Emmerson)
- Visits by supervising staff or consultants

## 2.0 IDENTIFIED STAKEHOLDERS

Identified parties include:

- Emmerson Resources Ltd, related companies and shareholders
- Evolution Mining Limited
- Evolution Tennant Creek Pty Ltd
- Aboriginal Traditional Owners
- Tennant Creek Station
- Central Land Council (CLC)
- Aboriginal Area Protection Authority (AAPA)
- NTWorksafe
- Department of Primary Industry & Resources
- Department of Environment and Natural Resources
- Department of Infrastructure, Planning & Logistics
- Department of Tourism & Culture - Parks and Wildlife Commission
- Department of Tourism & Culture - Heritage
- Northern Territory Environmental Protection Authority
- National Trust NT
- Tennant Creek Town Council
- Power & Water Corporation

Emmerson maintains a high level of communication and consultation with the key stakeholders within the larger group of identified stakeholders, as detailed above. The key stakeholders and Emmerson's consultation is detailed below;

Evolution Mining Limited & Evolution Tennant Creek Pty Ltd (collectively "Evolution") – Emmerson and Joint Venture (JV) partner Evolution have a constant line of communication and consultation based around preparations, planning and approval for proposed exploration programs (the programs subject to this MMP). JV meetings are held generally quarterly, but as required where past exploration is reviewed and forward exploration is proposed and approved, this approved exploration is then subject to updated/renewal MMP's.

Aboriginal Traditional Owners & CLC – Emmerson meet with the Traditional owners many times throughout the year in various forums. Exploration to be conducted in new areas requires a ground clearance/ heritage clearance survey to be conducted. 2 or 3 times a year Emmerson will hold a liaison meeting were all Traditional Owners and facilitated by the CLC, are invited to attend the CLC's office in Tennant Creek where representatives from Emmerson and occasionally Evolution will present details of completed exploration and proposed exploration, discuss future exploration and

potential impacts for their traditional lands, request clearance surveys to be conducted and answer any questions. The most recent liaison meeting was held on

Department of Primary Industry & Resources (DPIR) – Emmerson has a constant line of communication and consultation open with DPIR and occurs on an as needs basis, as well as an annual exploration update, usually occurring at the beginning of each calendar year which outlines results from the previous year's exploration work, and a high level overview of the proposed exploration for the coming calendar year, as well as raising and/or addressing any exploration/titles/compliance issues outstanding.

Phillip Creek Pastoral Station – Emmerson has a constant line of communication open with Phillip Creek Station to keep them informed of our activities and how the station and its operations may be affected. Further to this we have also a signed Land Access Agreement, included as Appendix 12 (2017 executed agreement).

## 3.0 PROJECT DETAILS

| | |
|---|---|
| **Project Name:** | Northern Project Area (NPA) |
| **Location:** | Refer to Figures 1 - 4 |
| **Site Access:** | Refer to Figure 13 |
| **Mining Interest/s:** | Refer to Appendix 1 |
| **Title holder/s:** | Refer to Appendices 3, 5 & 7. |

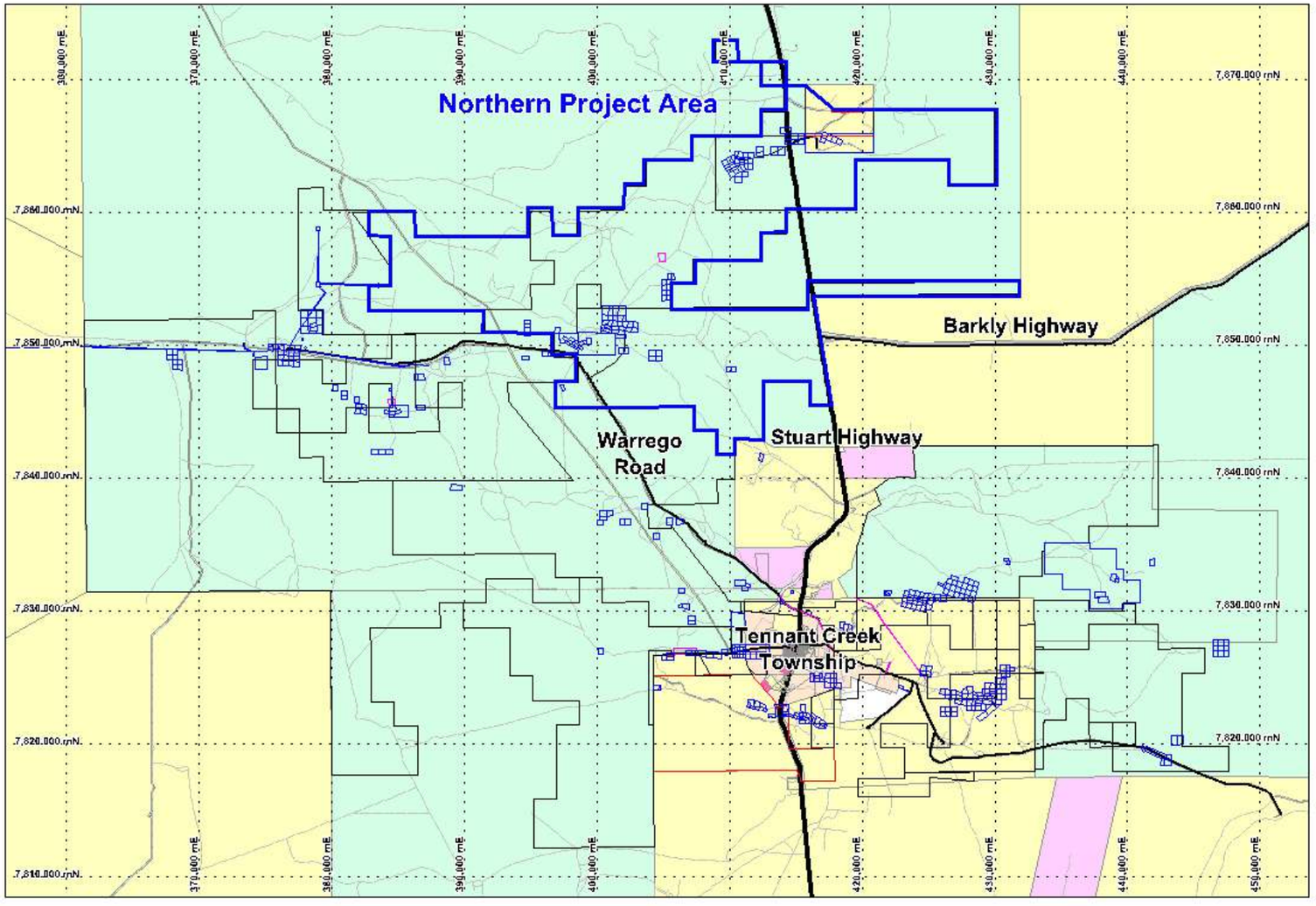



Figure 1: NPA Location

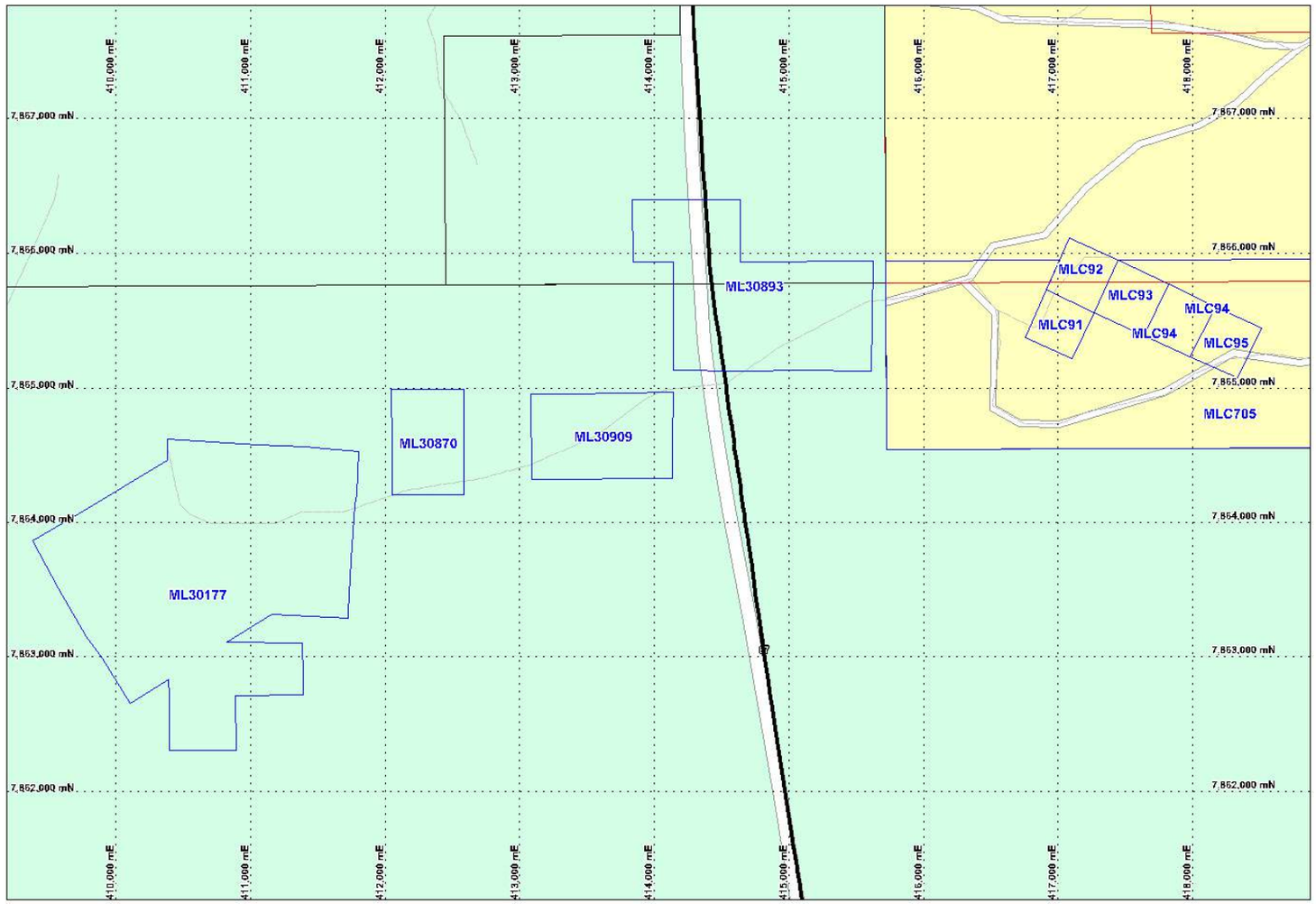



Figure 2: NPA Tenure

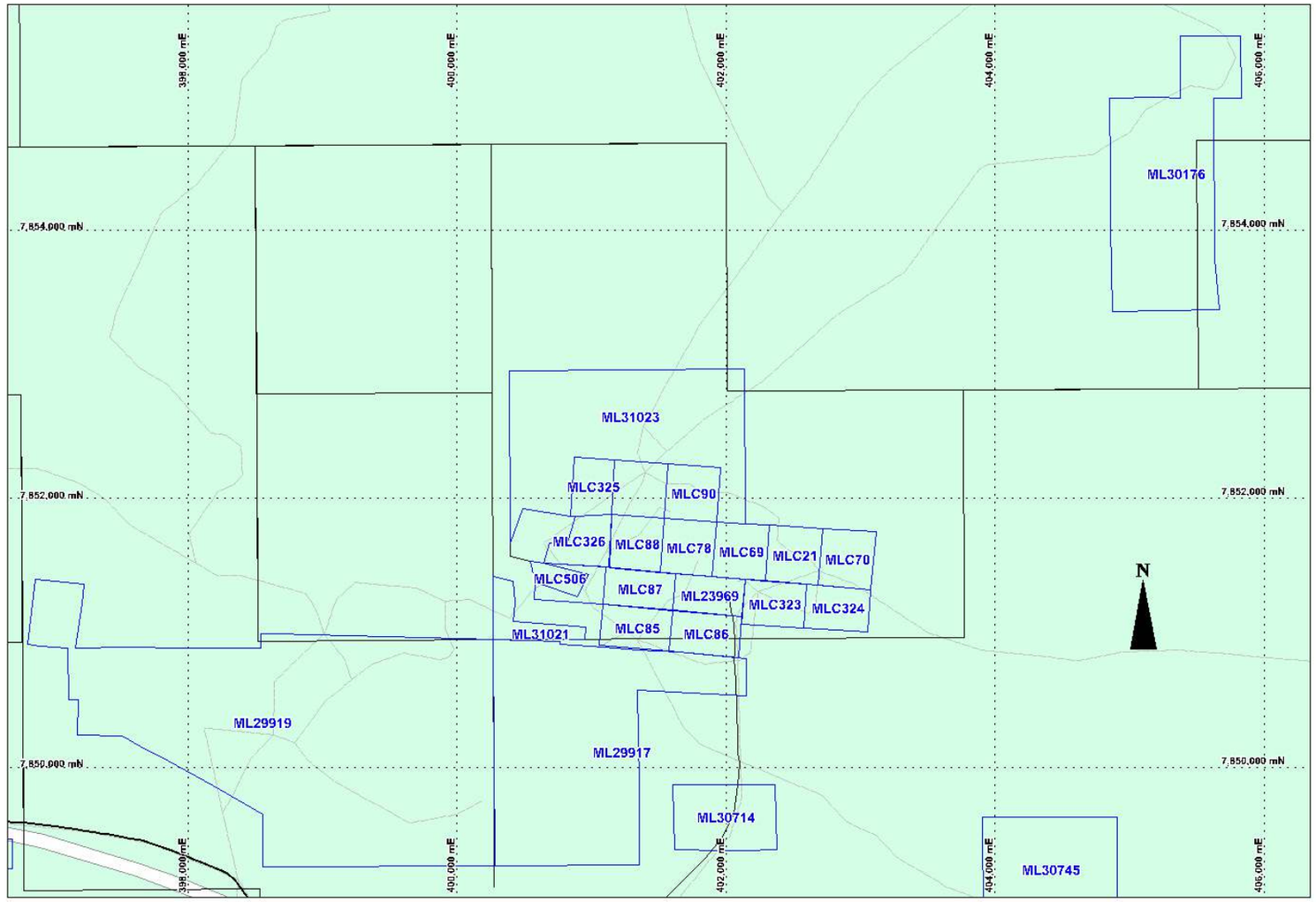



Figure 3: NPA Tenure

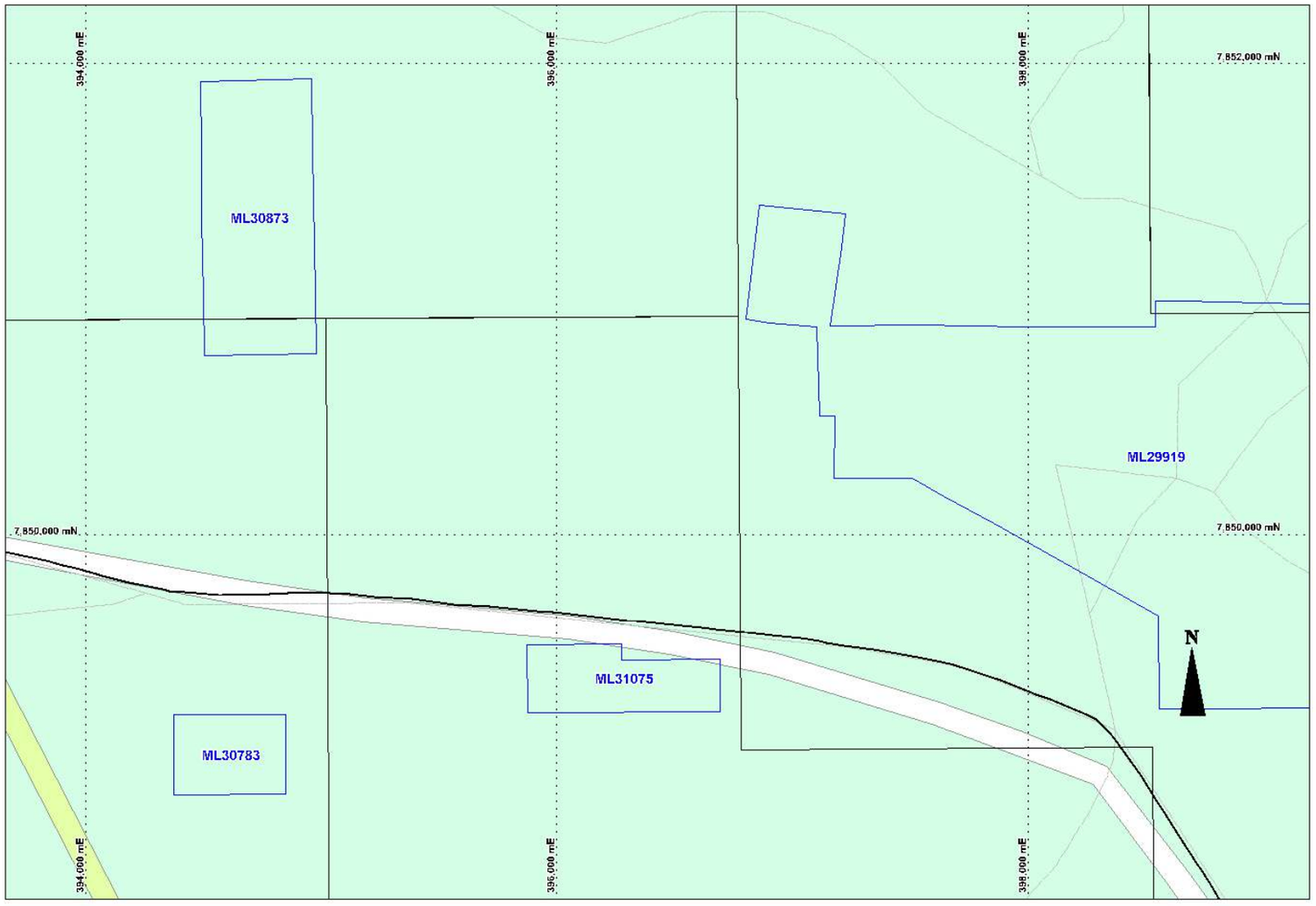



Figure 4: NPA Tenure

## 3.1 HISTORY OF DEVELOPMENT AND CURRENT STATUS

**Historical Mining/Exploration**

The NPA has been subjected to intermittent prospecting, mining and exploration more or less continually since the Tennant Creek goldfield came into being in the early 1930's. Historical Mines with details of production and period of production is detailed in Table 1 below;

| Name | Operation Period | Location (GDA94) | | Au | | Cu | | Bi | |
|---|---|---|---|---|---|---|---|---|---|
| | | East | North | Grade | Oz | Grade | t | Grade | t |
| BERNBOROUGH | ? | 410227 | 7855268 | 0 | 0 | | 0 | | 0 |
| CARRAMAN | 1947-1951 | 416928 | 7865469 | 119.6 | 133.4 | | 0 | | 0 |
| CLEOS GIFT | 1935-1936 | 408128 | 7847770 | 7.5 | 10 | | 0 | | 0 |
| EDNA BERYL | 1935-1959 | 416628 | 7864869 | 43.1 | 4404.6 | | 0 | | 0 |
| ELLEN RUBY | 1938- | 399847 | 7850174 | 24.2 | 50.5 | | 0 | | 0 |
| EVENING STAR | 1938-1940 | 405107 | 7854748 | 22.2 | 16.9 | | 0 | | 0 |
| GECKO | 1973-1997 | 402028 | 7851369 | 1.1 | 98151 | 4.3 | 119325 | | 0 |
| GOLDEN CHANCE | 1937-1940 | 401052 | 7851226 | 95.4 | 1316 | | 0 | | 0 |
| GOLDEN SLIPPER | 1937-1949 | 405077 | 7856628 | 18.2 | 225.1 | | 0 | | 0 |
| GRANITES | 1936-1937 | 410628 | 7863669 | 3.4 | 1.5 | | 0 | | 0 |
| GREAT WESTERN | 1935-1941 | 394628 | 7849470 | 8.3 | 501.7 | | 0 | | 0 |
| HAVELOCK | 1940-1943 | 400447 | 7850549 | 13.2 | 24.6 | | 0 | | 0 |
| JASPER HILL | ? | 410428 | 7863669 | 0 | 0 | | 0 | | 0 |
| KLONDYKE | 1991 | 417128 | 7865369 | 10 | 9.6 | | 0 | | 0 |
| MARION ROSS | 1935-1961 | 400702 | 7851483 | 11 | 183.3 | | 0 | | 0 |
| MORNING STAR | ? | 406628 | 7857069 | 0 | 0 | | 0 | | 0 |
| MT ARGO | 1938-1941 | 406928 | 7848970 | 11.8 | 54.7 | | 0 | | 0 |
| NORTHERN STAR | 35-42,49-55,86-7 | 410228 | 7863769 | 7.9 | 26058 | | 0 | | 0 |
| OCCIDENTAL | 1937-1941 | 407128 | 7848670 | 12 | 72 | | 0 | | 0 |
| OLIVEWOOD | 1940-1942 | 400077 | 7849984 | 15.6 | 134.1 | | 0 | | 0 |
| ONE-OH-TWO | ? | 399407 | 7850529 | 0 | 0 | | 0 | | 0 |
| ORLANDO | 1961-1975, 1994-97 | 398028 | 7850270 | 7.3 | 256430 | 3.07 | 4965 | 0.04 | 5 |
| ORLANDO EAST | 1938-1948 | 398328 | 7850170 | 5.3 | 131.8 | | 0 | | 0 |
| ORLANDO EXT | 1937-39 | 398927 | 7849909 | 4.5 | 28.9 | | 0 | | 0 |
| PGL 810 | 1938 | 399528 | 7851269 | 6.9 | 12.9 | | 0 | | 0 |
| QUEEN OF SHEBA | 1937-1955, 1979 | 405617 | 7855188 | 19.4 | 440.5 | | 0 | | 0 |
| TC35 | ? | 410242 | 7848224 | 0 | 0 | | 0 | | 0 |
| UNNAMED | ? | 411128 | 7855269 | 0 | 0 | | 0 | | 0 |
| UNNAMED | ? | 400328 | 7851169 | 0 | 0 | | 0 | | 0 |
| UNNAMED | ? | 400427 | 7850319 | 0 | 0 | | 0 | | 0 |
| UNNAMED | ? | 401357 | 7851138 | 0 | 0 | | 0 | | 0 |
| WHIPPET | 1938-1961 | 425928 | 7865769 | 42.8 | 18767 | | 0 | | 0 |

Table 1: NPA Historical Mines

The Tennant Creek district is the traditional homeland of the Warumungu people, although several other tribal groups occur in the surrounding region, two (2) agreements cover the NPA as detailed in section 4.3. All Agreements cover exploration and mining on the NPA tenements and a wide surrounding area under the Aboriginal Land Rights Act.
Giants Reef Exploration Pty Ltd (Giants Reef) acquired all of the shares in Normandy Tennant Creek (NTC) in June 2001. On acquisition of NTC, Giants Reef changed the name of NTC to Santexco Pty Ltd (Santexco) and then transferred all assets including the tenure and mineral rights.
Emmerson Resources Ltd (Emmerson) purchased a group of assets including Giants Reef, Santexco and TC8 Pty Ltd (TC8) on 1 August 2006.

More recent history has seen exploration in the NPA operate under three different MMP's, listed in table 2. Pursuant to section 41(1) of the Mine Management Act and condition 2 of the Authorisation, Giants Reef was required to review and submit an updated Mining Management Plan before the anniversary of the Authorisations annually. Due to Giants Reef entering into administration, the Emmerson purchase period and Emmerson's listing (on the ASX) period, these obligations were unable to be fulfilled. On December 10 2008 Emmerson was granted Authorisation 0467-01 for the NPA, 0467-02 in 2010 and 0467-03 in 2011, 2012, 2013, 2014, 2015 & 2016 this Authorisation has incorporated all historic liabilities and requirements of the historic MMP's, as detailed in table 2;

| Authorisation | Project Name |
|---|---|
| 0162-02 | Orlando |
| 0233-02 | Northern |
| 0030-01 | Edna Beryl Mine |

Table 2: Historical Authorisations in NPA.

On ground exploration activities conducted during 2017 is detailed in Appendix 14 and summarised as;

- Drilling was conducted at Edna Beryl and consisted of;
  - 28 RC holes (EBWRC057 – 084, totalling 5,692m);
    - Which included 3 RC pre-collars (EBWDD064, 073 & 076, totalling 708m);
  - 3 diamond drill holes (EBWDD064 (including a wedge RBWD064W1), 073 & 076, totalling 569.3 NQ & total hole depths of 1,277.3m).

| | | |
|---|---|---|
| RC Drilling | 25 holes | 4,984m |
| RC Pre-collars | 3 holes | 708m |
| DDH Drilling | 3 holes | 569.3m |
| RAB Drilling | 0 | 0m |

Table 3: 2017 Drilling Stats in the NPA.

On ground exploration activities conducted during 2018 is detailed in Appendix 14 and summarised as;

- Drilling was conducted at Edna Beryl and consisted of;
  - 8 RC holes (EBWRC085 – 092, totalling 1,196m);

| | | |
|---|---|---|
| RC Drilling | 8 holes | 1,196m |

Table 4: 2018 Drilling Stats in the NPA.

For all proposed programs and future generated programs to proceed, minor drill pad clearing may be required. This minor clearing will be completed by ensuring topsoil and seed stock is collected in a top soil dump at the edge of each drill pad. Minor earthworks may be required on the upgrading of existing access tracks.

All outstanding rehabilitation from 2016 which included 30 drill pads was also completed during 2017, these drill pads where from the Retsina and Edna Beryl projects.

As of 31 July 2018 Emmerson considered rehabilitation of the drilling conducted by Emmerson in the NPA to be completed as per Authorisation 0467-03, is detailed below in a reconciliation of drilling proposed in the granted 2016/17 Authorisation and actual drilling conducted during the 2017/18 field season.

Table 5: 2017/18 Proposed, Drilling & Rehabilitation Reconciliation.

| Target Name | Tenement(s) | | RAB Holes # | RAB (m) | RC Holes # | RC (m) | RC Pre Colls # | RC Pre Colls (m) | DDH Holes # | DDH (m) | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Edna Beryl Area | MLC705 & EL 28776 | | | | 40 | 8,000 | 10 | 2,000 | 10 | 2,500 | | Proposed |
| | | | | | 32 | 6,180 | 3 | 708 | 3 | 569.3 | | Drilled |
| | | | | | 32 | | 3 | | 3 | | | Rehabilitated |
| Edna Beryl Regional Area | MLC705 & EL 28776 | | | | 30 | 7,000 | 10 | 2,000 | 10 | 2,500 | | Proposed |
| | | | | | | | | | | | | Drilled |
| | Outstanding Rehab | | | | 27 | | | | | | | Rehabilitated |
| North Star – Marathon Trend (Retsina, Marathon, Troy, Macedon, other various prospects) | EL 26594, 28776, ML30870, 30893 & ML30909 | | 200 | 10,000 | 5 | 1,000 | 2 | 400 | 2 | 400 | | Proposed |
| | | | | | | | | | | | | Drilled |
| | Outstanding Rehab | | | | 3 | | | | | | | Rehabilitated |
| Gecko Corridor | EL 29488 | | | | 15 | 3,000 | 3 | 600 | 3 | 600 | | Proposed |
| | | | | | | | | | | | | Drilled |
| | | | | | | | | | | | | Rehabilitated |
| Regional / Greenfield | EL's 26594, 26595 & 28777 | | | | 5 | 1,000 | | | | | | Proposed |
| | | | | | | | | | | | | Drilled |
| | | | | | | | | | | | | Rehabilitated |
| **Target Name** | **Tenement(s)** | | **RAB Holes #** | **RAB (m)** | **RC Holes #** | **RC (m)** | | **RC Pre Colls (m)** | **DDH Holes #** | **DDH (m)** | | **Comments** |
| | Total | | 200 | 10,000 | 95 | 20,000 | 25 | 5,000 | 25 | 6,000 | | Proposed |
| | | | | | 32 | 6,180 | 3 | 708 | 3 | 569.3 | | Drilled |
| | | | | | 62 | | 3 | | 3 | | | Rehabilitated |

Drillholes with Rehabilitation Outstanding; Retsina (RET001 – 003) & Edna Beryl (EBWRC031 – 056 & GRED42A), totalling 30 holes were all rehabilitated during 2017.

Drillholes rehabilitated will be included into the schedule of the annual rehabilitation photographic monitoring, usually conducted in December prior to the onset of the 'Wet Season'. Rehabilitation photos for the above rehabilitation conducted at both Retsina and Edna Beryl are attached as Appendix 18.

## 3.2 PROPOSED ACTIVITIES

Proposed activities for the NPA during the 2018 field season will include Reverse Circulation (RC) and Diamond (DDH) drilling.
Exploration will be focused around the 'Jasper Hills' Project, refer to figure 11. The 'Jasper Hills' Area will be the focus for the proposed drilling targeting the recent excellent results from resampling of historical drill core form the area where high-grade gold, copper and cobalt was confirmed.
More detailed exploration activities will centre on the 'Edna Beryl Area' and will target drilling, RC & DDH, to follow up the successful drilling during 2016/17. The drilling will target extensions to the currently identified mineralisation and also definition drilling to further outline the size and continuity of the identified mineralisation at Edna Beryl.

Minimal access tracks are required as existing roads, 4WD and fence line tracks will be used with all additional access required is in areas of low relief and accessible by 4WD and drill rigs.

Further targets and refining of current targets may be generated from the proposed activities and the compilation and modelling of any drilling completed and further detailed geological mapping data. During the capture, processing and assessment of this data Emmerson geoscientific staff and management may generate further target areas and further define existing target areas for drill testing. If these additional targets areas generate more drilling or ground disturbing activity in additional to the work programs currently proposed, they will be submitted as addendums to this MMP.

Refer to the Table 6 for proposed drill hole details and displayed in figures 12 & 13. Figure 11 shows the access tracks that will be utilized during exploration and drilling activities, any work conducted will be able to utilise the existing mine roads and tracks, due to the historical nature of the Tennant Creek Mineral field and numerous Pastoral Station tracks and fence line tracks all drilling conducted will utilise existing tracks, some upgrading may be required, with minimal new access tracks.

Presently the exploration program and other details for the 2018 field season (March – December) will be;

- RC & DDH drilling of the above selected targets that have return significant anomalous results from the 2018 drilling,
- Targeting gold, copper and base metal mineralisation,
- Drilling is not likely to encounter radioactive material,
- Drilling may encounter ground water, which will be managed as outlined in the Water Management section of this MMP,
- Emmerson's RC drilling contractor, Bullion Drilling will conduct the drilling. Only minor earthworks to upgrade existing tracks will be required, with potential for minimal new access tracks.
- Emmerson's diamond drilling contractor GMP Drilling.
- Rehabilitation and soil management is outlined in Section 5.0 of this MMP,
- Generation of additional RAB, RC and DDH drilling aimed at prospective geological, geophysical and geochemical targets,

- Geophysical and geochemical surveys (detailed ground gravity survey to be conducted by Daishsat),
- Reassessment and evaluation of historical prospects within the regional area aimed at generating extensional RAB, RC and DDH drilling.

Drill pad size will be approximately 20m X 30m with a sump size of 2m X 5m were required, allowance for 2km of line tracks. Total area that may be disturbed will be 5ha.

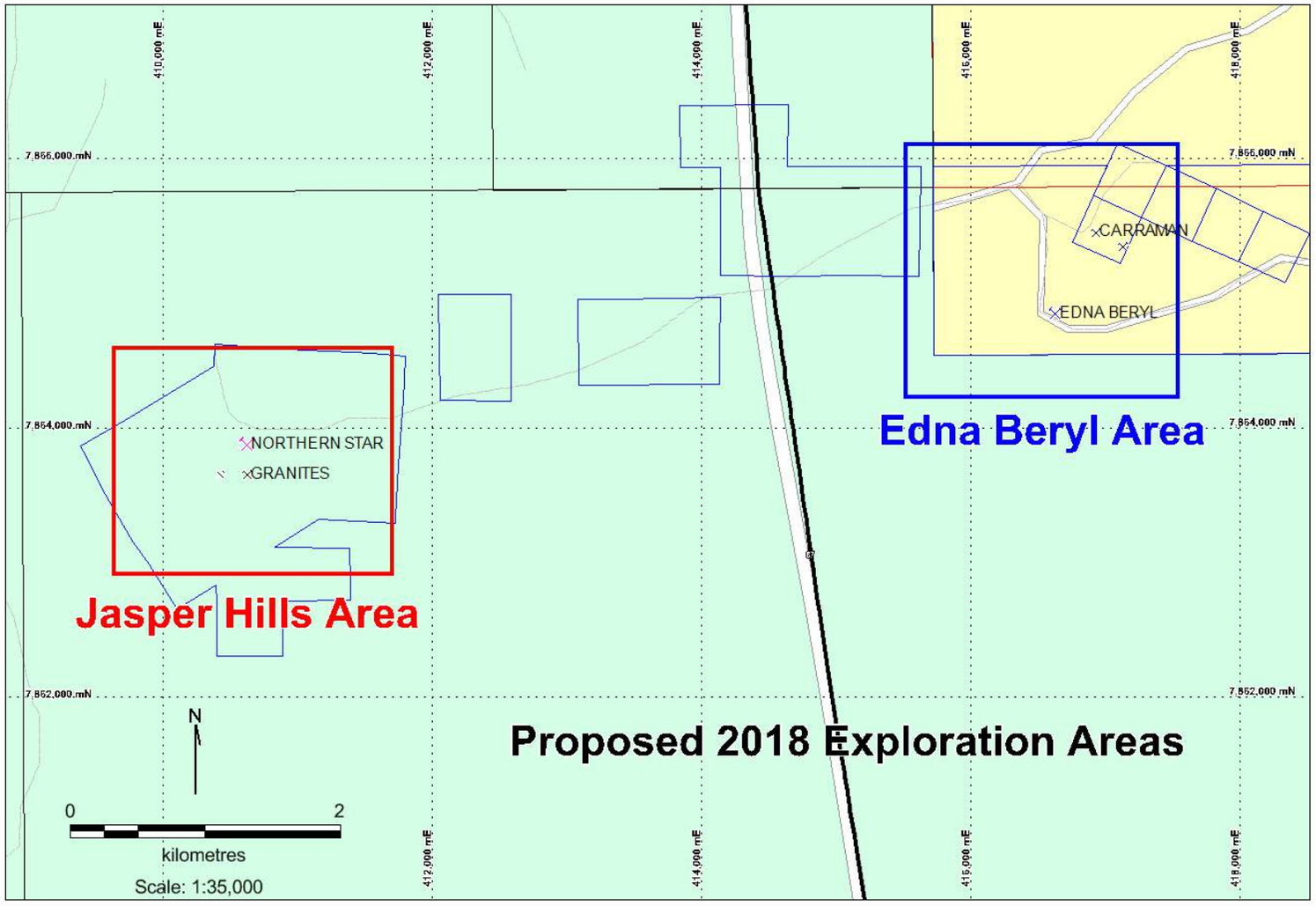



Figure 10: Target Areas

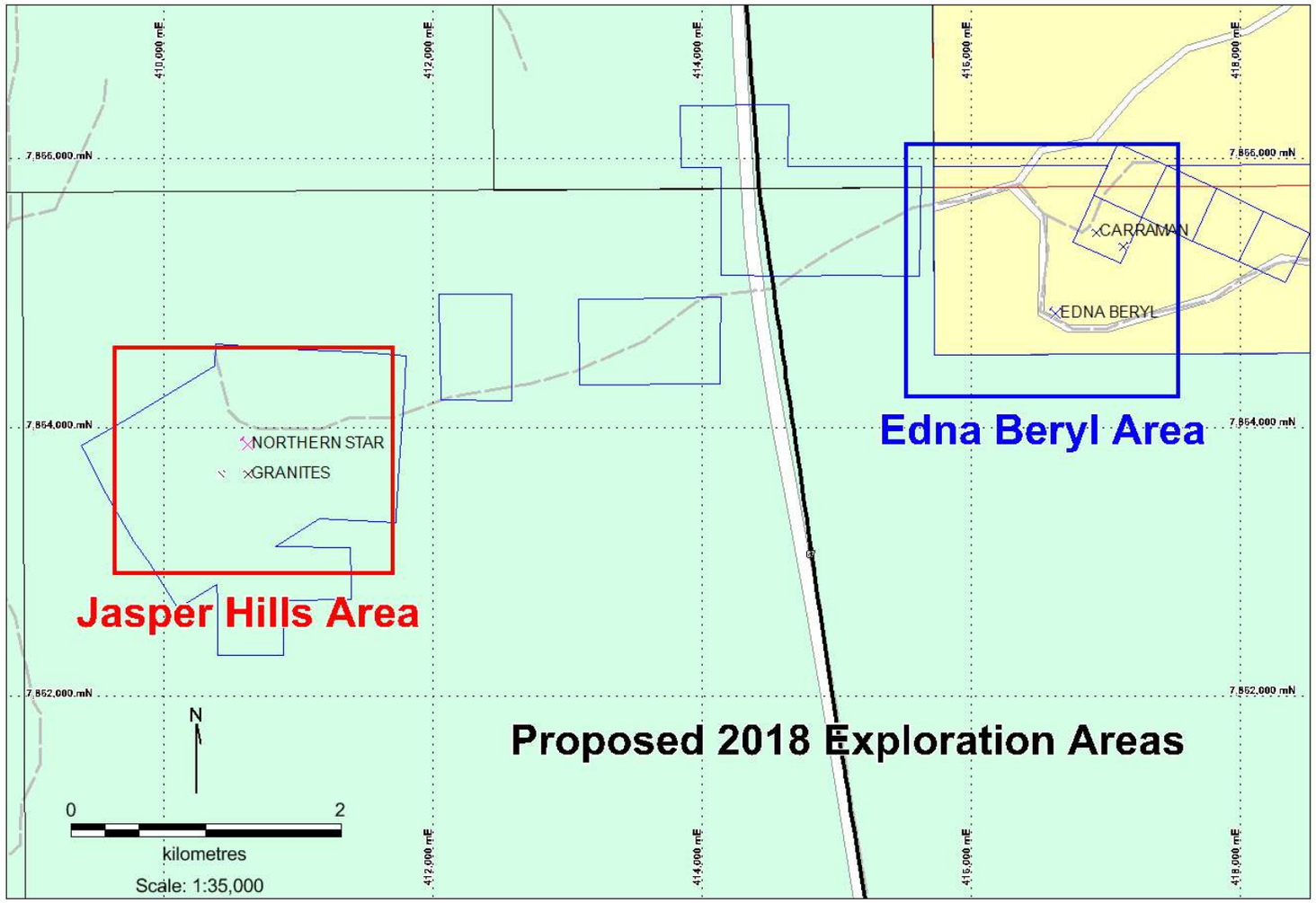



Figure 11: Access Tracks

Table 6: Proposed NPA Drill Collar Numbers for the 2018 field season.

| Target Name | Tenement(s) | RAB Holes # | RAB (m) | RC Holes # | RC (m) | RC Pre Colls # | RC Pre Colls (m) | DDH Holes # | DDH (m) | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Edna Beryl Area | MLC705 & EL 28776 | | | 20 | 6,000 | 5 | 1,500 | 5 | 1,000 | | Proposed |
| Jasper Hills Area | EL 28776 & ML30177 | | | 20 | 6,000 | 10 | 3,000 | 10 | 2,000 | | Proposed |
| Regional / Greenfield | EL's 26594, 26595 & 28777 | | | 10 | 3,000 | | | | | | Proposed |
| Target Name | Tenement(s) | RAB Holes # | RAB (m) | RC Holes # | RC (m) | | RC Pre Colls (m) | DDH Holes # | DDH (m) | | Comments |
| | Total | | | 50 | 15,000 | 15 | 4,500 | 15 | 3,000 | | Proposed |

All proposed drill hole locations are detailed in Appendix 15 and displayed in Figures 12 & 13.

The total of 65 holes, as detailed in Table 6 and appendix 15 was used in the security calculation, which is attached as Appendix 8.

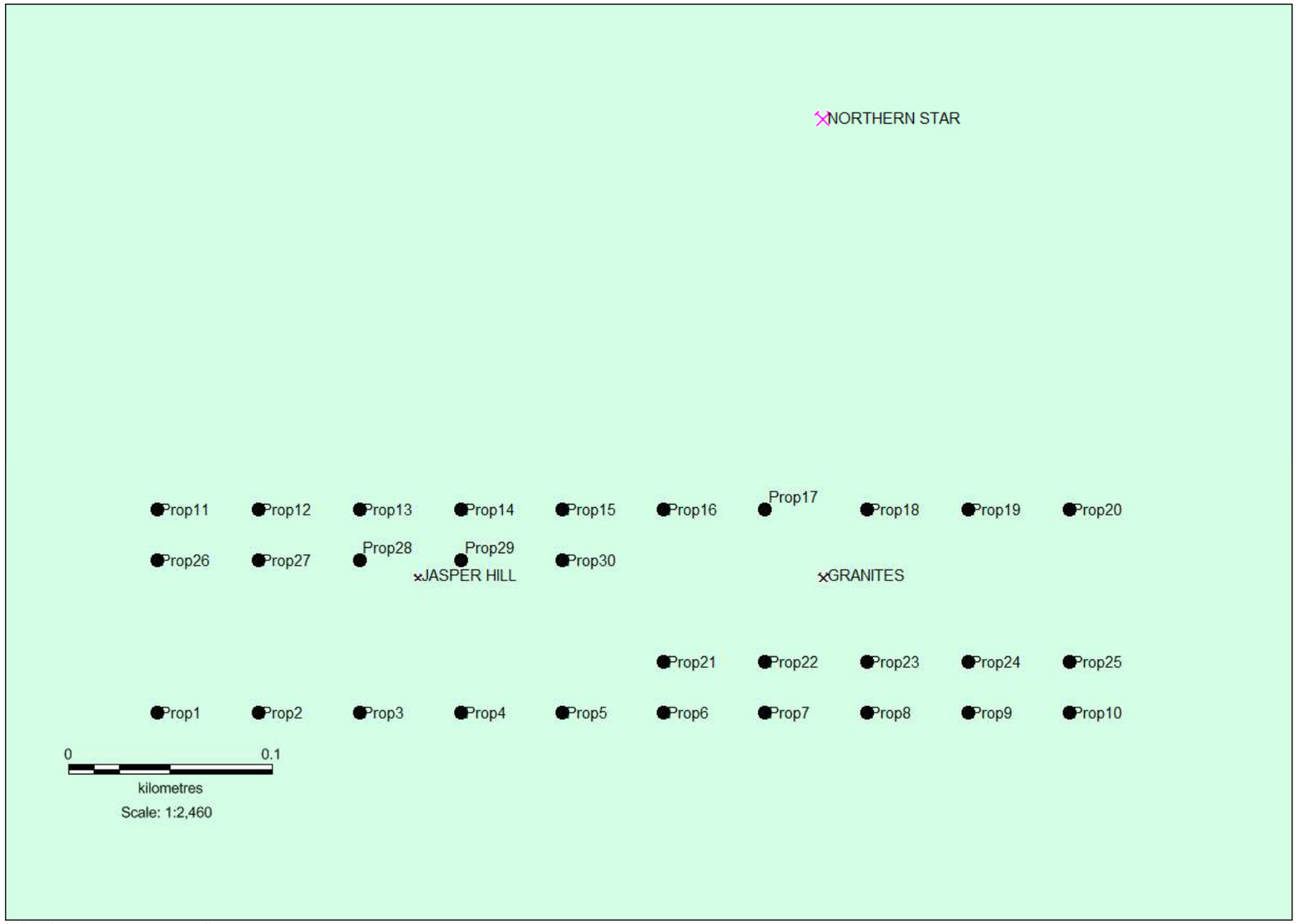



Figure 12: Drill Hole Locations – Jasper Hills

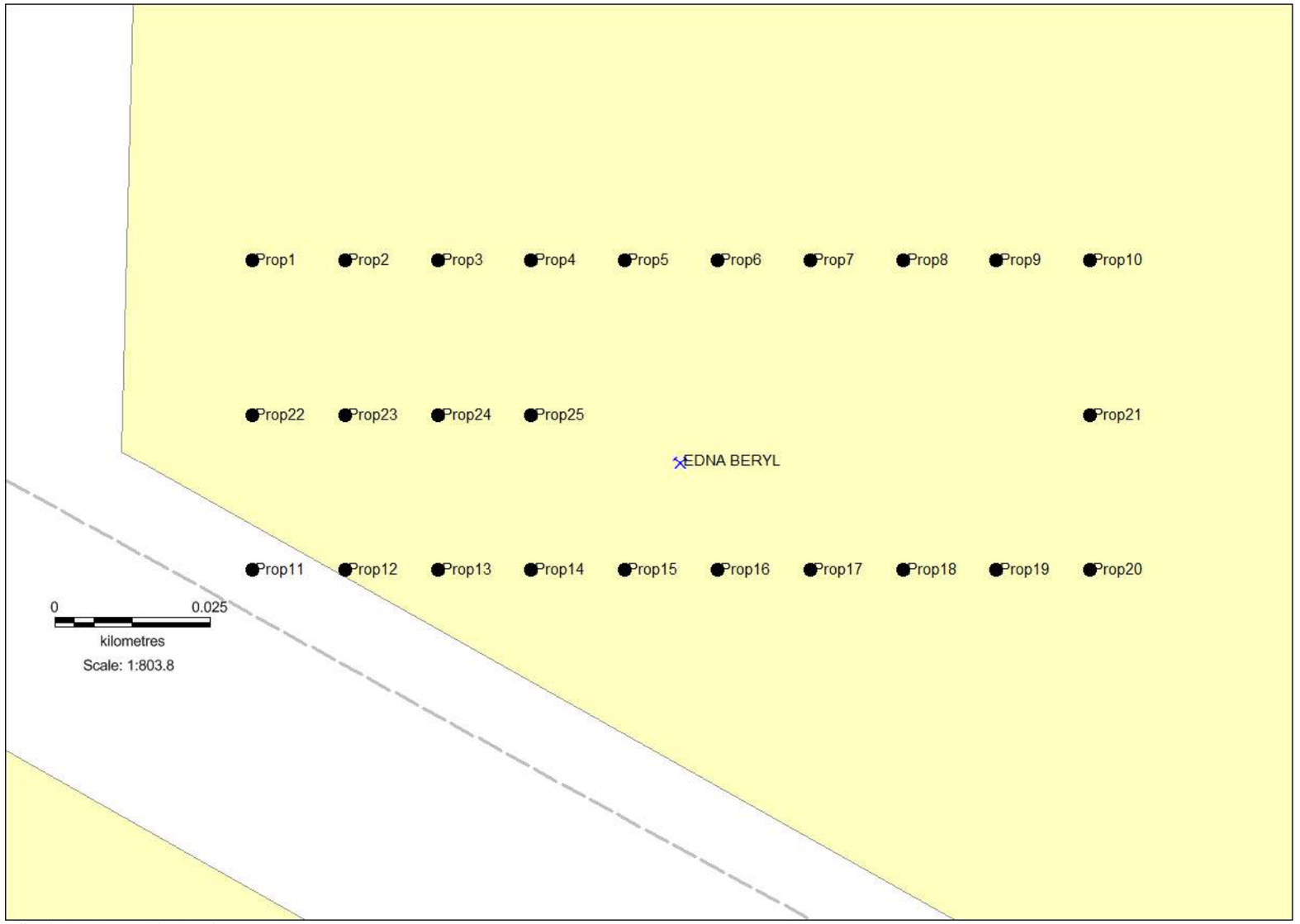



Figure 13: Drill Hole Locations – Edna Beryl

# 4.0 CURRENT PROJECT SITE CONDITIONS

## GEOLOGY

A map depicting the project area and land type is attached as figure 1, figures 12 and 13 detail the proposed drill collar locations, figure 10 details the target areas and figure 11 details relevant access tracks.

The NPA covers a region of the Tennant Creek Province and includes deformed lower-greenschist facies flyshe sequence (Warramunga Formation) intruded by syn-orogenic granite and granodiorite as well as stratabound felsic porphyry. This sequence is overlain by silicic volcanics and volcaniclastics (Flynn Subgroup) and intruded by late orogenic granite, porphyry and lamprophyre. The Warramunga Formation comprises greywacke, siltstone, shale with interbedded felsic volcanics. Crustal melting resulted in the formation of dry, I-type granodiorite melts and granitic differentiates (Tennant Creek Supersuite), which intruded the Warramunga Formation and lower parts of the Flynn Subgroup during and subsequent to the Barramundi Orogeny. Deformation of the Warramunga Formation produced tight upright folds with a pervasive sub-vertical east west slaty cleavage accompanied by lower greenschist facies metamorphism. Deposition of the volcanosedimentary Flynn Subgroup more or less coincided with the plutonic events.

Progressive dextral shearing resulted in large-scale east trending open folds, as defined by the stratabound porphyries. Disharmonic folds, angular folds and plunging doubly peaking anticlines with a weak sub-vertical crenulation cleavage developed within the Warramunga Formation. North west trending open folds of disharmonic style were generated within the Flynn Subgroup.

The youngest igneous events in the Tennant Creek Province were intrusion of the Warrego and Gosse River East granites, as well as lamprophyre dykes and sills.

The NPA is largely covered by Quaternary sands and gravels in relict fluvial systems, active channels, floodplains and quartz-rich dissected colluvial fan deposits.

Outcrop within the NPA is limited to ridges and these comprise scattered outcrops of Palaeoproterozoic Warramunga Formation and Flynn Sub-group/ Tomkinson Creek Sub-group (Ooradidgee Group).

Vegetation is mostly sparse, but includes varying combinations of spinifex grasses and small eucalypts, Acacia species and a range of other native vegetation types. The vegetation can be classed as semi-arid savannah, and appears typical of a much wider surrounding region.

## HYDROLOGY

Twelve (12) Water Bores for cattle or other uses have been identified by Emmerson in the NPA, refer to figure 14. Water required for the proposed drilling will be trucked to the drill sites on a needs basis. Emmerson does not intend to utilise water from the landowners, Emmerson pays for the water from the contractor, ‘Baber Hire’ who sources the water through their business.

Examination of previous drilling in the NPA suggests the standing water table in most of the Project Area will be between 40m and 75m below the land surface, and that the groundwater will not be suitable for drinking water.
Any drilling that intersects aquifers will be rehabilitated in accordance with DPIR guidelines – Construction and Rehabilitation of Exploration Drill Sites.

Drainage within the NPA is very limited and the drainage here drains from towards the centre and southwest of the project area, as shown in figure 15.

Topography is very flat with limited small ridges scattered throughout the Project Area, due to the cultural and heritage significance of these ridges exploration is often limited to the flat surrounding ground, therefore pad construction on these ridges will not be necessary.

During 2016 as part of the MMP submitted by the Edna Berryl Mining Company (EBMC) for their proposed mining of the historical Edna Beryl Mine, they sought a review of the hydrogeological aspects of the Edna Beryl Area and is attached as Appendix 9.

**FLORA AND FAUNA**

Due to the historical nature of Mineral Exploration and Mining in the Tennant Creek Region, Emmerson has had access and been able to incorporate studies and surveys conducted by previous exploration and mining companies to identify the presence of any endangered Flora and Fauna species within Emmerson's Project Areas. Further to this Emmerson has conducted an EPBC Protected Matters Report, attached as appendix 10.

The EPBC Protected Matters Report has identified;

<u>23 Threatened Species, including;</u>

Amytornis dorotheae – Carpentarian Grasswren – Endangered
Calidris ferruginea – Curlew Sandpiper – Critically Endangered
Erythrotriorchis radiates – Red Goshawk – Vulnerable
Erythrura gouldiae – Gouldian Finch – Endangered
Falcunculus frontatus whitei – Crested Shrike-tit (northern) – Vulnerable
Grantielaa Picta – Painted Honey Eater – Vulnerable
Numenius madagascariensis – Eastern Curlew – Critically Endagered
Pedionomous torquatus – Plains wanderer – Critically Endangered
Pezoporus occidentalis – Endangered
Polytelis alexandrae – Night Parrot – Vulnerable
Rostratula australis – Australian Painted Snipe – Endangered
Tyto novaehollandiae kimberli – Masked Owl – Vulnerable
Dasyurus hallucatus – Northern Quoll – Endangered
Macroderma gigas – Ghost Bat – Vulnerable
Macrotis iagotis – Greater Bilby – Vulnerable
Petrogale lateralis – Black footed Rock Wallby – Vulnerable
Pseudantechinus mimulus – Carpentaria Antechnius – Vulnerable
Saccolaiums saccolaiums nundicluniatus – Bare-rumped Sheath tailed Bat – Vulnerable
Zyzomys pedunculatus – Central Rock Rat – Endangered
Eleocharis papillosa – Dwarf Desert Spike-rush – Vulnerable
Acanthophis hawkei – Plains Death Adder – Vulnerable

<u>Migratory Species, including;</u>

Cecropis daurica – Red Rumped Swallow
Cuculus optatus – Oriental Cuckoo
Hirundo rustica – Barn Swallow
Motacilla cinerea – Grey Wagtail
Motacilla flava – Yellow Wagtail
Calidris ferruginea – Curlew Sandpiper
Charadrius veredus – Oriental Plover
Glareola maldivarum – Oriental Pranticole
Numenius madagascariensis – Eastern Curlew
Pandion haliaetus – Osprey
Tringa nebularia – Comon Greenshank

<u>Weeds, including;</u>

Prickly Acacia
Buffel Grass
Cotton-leaf Jatropha
Jerusalem Thorn
Bitter Weed (Parthenium Weed)
Mesquite
Athel Pine

During Emmerson's 10 years of exploration in the Tennant Creek Mineral Field hasn't identified any of the rare and endangered species of animals, birds or plants that may be affected by the exploration activities as outlined in the Protected Matters Report in the subject areas for exploration activities.
To further ensure the protection of these detailed species, that potentially may occur within the area Emmerson has engaged Ecoz to review the Protected Matters Report and provided expert advice on, for example, the potential to encounter any detailed endangered species, or the requirement to implement particular systems and/or procedures for Emmerson to ensure that the environment is protected. The results of this review and assessment are attached as Appendix 17 and identified that nine threatened species (all fauna) have potential to occur within the TCP area, of which three have a high or moderate likelihood of occurrence – Grey Falcon (Falco hypoleucos), Brush-tailed Mulgara (Dasycercus blythi) and Greater Bilby (Macrotis lagotis). Risk of impact from exploration activities to Grey Falcon is considered low, as nesting habitat (tall trees along major drainages) is not expected to occur within the TCP, and if it is present, tall trees will not be cleared as part of proposed works. Impact to Brush-tailed Mulgara and Greater Bilby may occur if burrows are directly disturbed; therefore, field inspections would be required to confirm if risk level to these species. The remaining six species (refer to Table 3.1 in Appendix 17) are considered to have a low likelihood of occurrence, and no specific risk mitigation measures are considered necessary (as general environmental management measures would be suffice).

Twelve listed weed species are known to occur in the region surrounding the project area – Athel Pine, Bellyache Bush, Caltrop, Coffee Senna, Hyptis, Khaki Weed, Mossman River Grass, Parkinsonia, Parthenium, Prickly Acacia, Rubber Bush and Star Burr. Various other (non-declared) introduced flora species also occur in the region, such as Buffel Grass and Couch Grass. It is likely that there will be some existing weed infestations present within the exploration footprint, in particular in previously disturbed areas and along drainage lines. Exploration activities have potential to introduce new weeds to the area (on equipment and machinery) and/or spread and increase the densities of existing weed infestations.

Pest animals are likely to occur in the project area. Any increase in pest numbers could impact threatened species populations (and other native fauna). In the case of the TCP area, the greatest risk is likely to be associated with any increase in Feral Cats and Foxes, which subsequently could increase predation of small mammals (and other native fauna, including threatened species).

When Emmerson has discovered an economic deposit then it will further engage with Ecoz to conduct appropriate baseline flora and fauna surveys over the relevant areas resulting in the populating of a Flora and Fauna Register and the identification and implementation of management programs for any endangered or threatened species and to provide an up to date assessment and baseline.
Emmerson's proposed ground disturbing work is of a limited and low impact nature in this MMP.

The NPA is subject to sporadic wildfires.

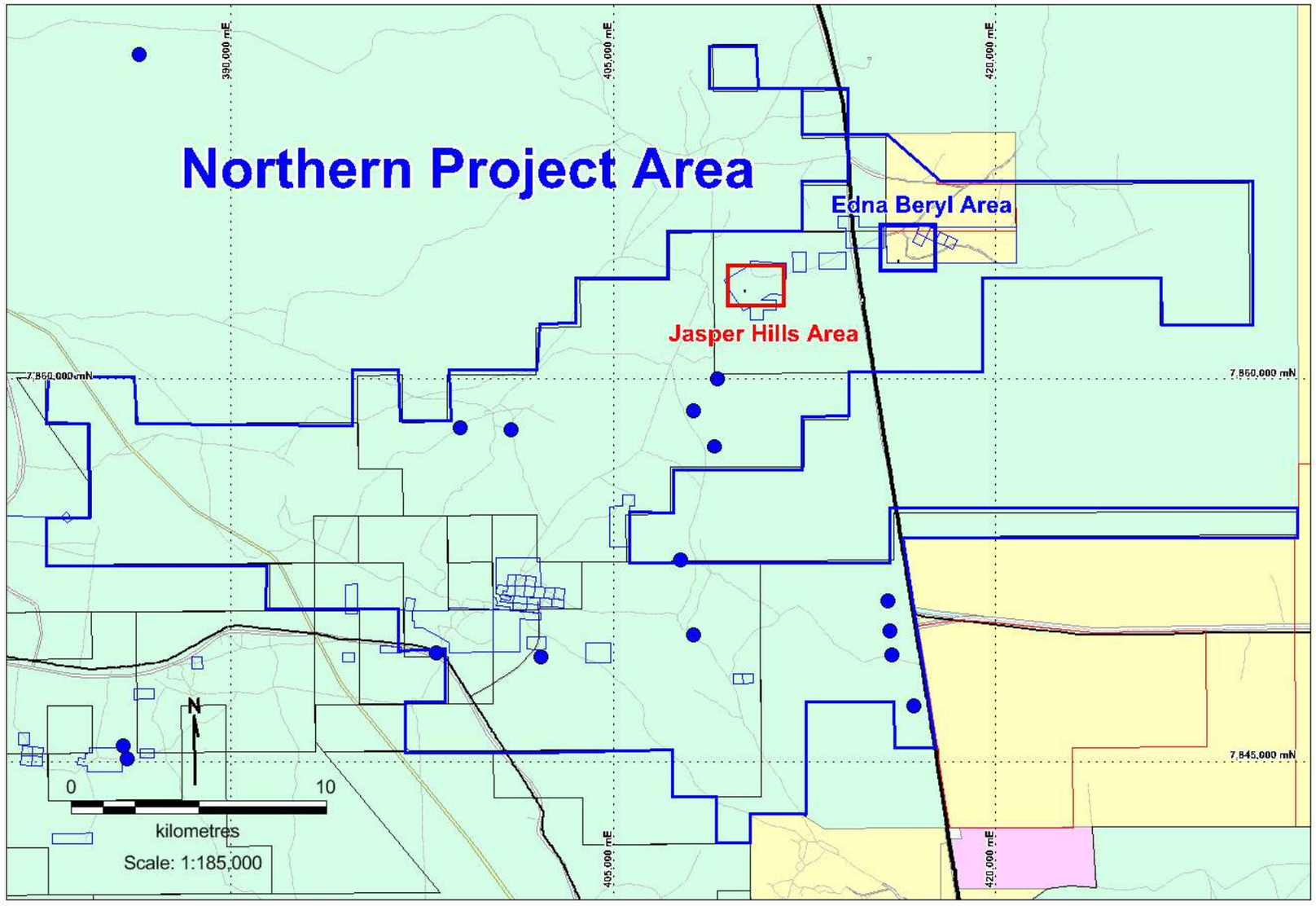



Figure 14: Water Bores

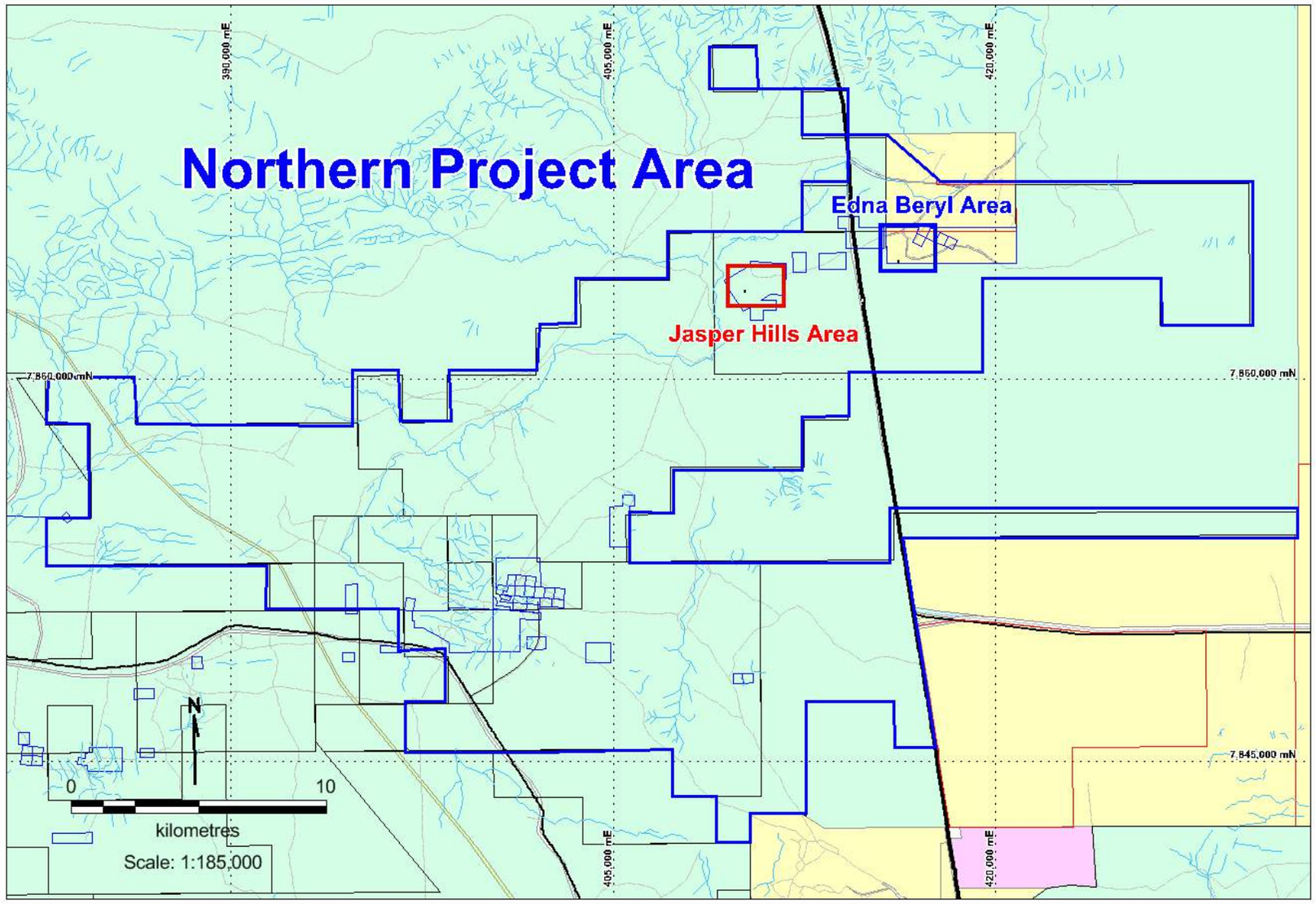



Figure 15: Drainage

## CURRENT LAND USE

The NPA is on Aboriginal Freehold land and Pastoral Land Managed by Phillip Creek Station. As far as Emmerson is aware, the principal land use is for cattle-raising. Figure 1 details the land type and tenure.

## HISTORICAL, ABORIGINAL, HERITAGE SITES

Emmerson utilises an MapInfo layer containing all Aboriginal Areas Protection Authority (AAPA) registered sacred sites and also a MapInfo layer containing all Central Land Council (CLC) registered sacred sites to cross reference proposed areas of exploration activities with registered sites. Further to this Emmerson also consults with the CLC and traditional owners and has on ground heritage surveys conducted prior to any undertaking of exploration activities, as per the Sacred Sites, Aboriginal Land Rights and Native Title Act's in areas previously not explored.
Emmerson conducted a further clearance in the Retsina Area during 2016 to ensure that Emmerson's proposed exploration activities didn't disturb any sacred and culturally sensitive sites, the clearances conducted are detailed in table 7 below and attached as Appendix 16;

| Clearance Area | Date | CLC Reference No. |
|---|---|---|
| Retsina - NPA | September 2016 | C 2016 |

Table 7: ERM CLC Clearance Certificates

Sacred sites have been identified in the areas for proposed activities and these will be protected as per the details in the CLC clearance certificates and the NT Aboriginal Sacred Sites Act. Emmerson ALWAYS adheres to recommendations and exclusions zones emplaced by the AAPA and the CLC.
There are historical workings in and around some ironstone outcrops which, although having been disturbed during historic mining, are still of significance to the local people and Emmerson must avoid damaging these sites further.

# 5.0 ENVIRONMENTAL MANAGEMENT SYSTEM / PLAN

Emmerson encourages the commitment to the highest level of compliance and importance to all operations, staff and contractors in relation to meeting all statutory obligations and regulations for the protection and management of the environment while conducting exploration activities.
Emmerson outlines its systems, policies and procedures in its Environmental Manual to ensure the protection of the environment. Emmerson is currently restructuring the Environmental Manual aimed at reducing the size of the document, ensuring that all procedures are suitable to the current size of the company and the number of staff to resource the requirements, to stream line the document and ensure that it operates more efficiently and that the environment can be protected. The manual will be made available on request along with an update on the progress of the restructure and review. Emmerson will regularly or when appropriate, have an independent body assess the manual to ensure that Emmerson conducts and complies with all regulations and statutory requirements in its protection and management of the environment during exploration activities.

Emmerson has also implemented an Environment Policy Statement which is a simple 1 page document for employees and contractors to adhere too and conduct work by, in conjunction with the Environmental Manual, and is attached as Appendix 11.

## 5.1 ENVIRONMENTAL POLICY AND RESPONSIBILITIES

As detailed in the Environmental Manual and the Environmental Policy, Emmerson will:

- Establish appropriate industry practice and HS&E standards for its operations.
- Actively assess and control hazards in the workplace.
- Train its employees in the principles of working to protect the environment.
- Maintain employee involvement in environmental matters.
- Communicate with its employees and respond in a timely manner to their environmental concerns.
- Make a commitment to the protection of the environment and comply with all laws, statutory and non-statutory requirements.

Emmerson employees are encouraged to share responsibility for environmental matters and:

- Work in a manner to minimise the impact of their activities on the environment.
- Promptly report all incidents, hazards, unsafe practices or conditions in the workplace.
- Actively participate in the support and promotion of environmental responsibility in the workplace.

## 5.2 STATUTORY REQUIREMENTS

- Aboriginal and Torres Strait Islander Heritage Act
- Aboriginal Land Rights (NT) Act
- Australasia Railway Act
- Bushfires Act
- Code of Practice for Safe Transport of Radioactive Materials 2001
- Environment Protection and Biodiversity Conservation Act
- Environmental Assessment Act
- Environmental Penalties and Offences Act
- Heritage Conservation Act
- Native Title Act
- NT Aboriginal Lands Act
- NT Aboriginal Sacred Sites Act
- NT Lands Act
- NT Mineral Titles Act
- NT Mining Management Act
- NT Mining Management Regulations
- Petroleum Act
- Reporting Requirements such as those for; employment/injury and safety statistics; frequency of water quality reporting lease conditions
- Waste Management and Pollution Control Act
- Water Act
- Weeds Management Act
- Work Health & Safety (National Uniform Legislation) Act

All other relevant Statutory Legislation will be strictly adhered to.

## 5.3 NON-STATUTORY REQUIREMENTS

- "Indigenous Land Use Agreement (ILUA)" between Giants Reef Mining Limited and the Central Land Council.
- "Mineral Lease No C705 Agreement (Edna Beryl)" between Giants Reef Exploration Pty Ltd and the Central Land Council (MLC705).
- NT Minerals Council Code of Conduct for Mineral Explorers in the NT

## 5.4 INDUCTION AND TRAINING

All personnel, including contractors, undergo Emmerson's company Site Induction prior to any exploration activities. Issues detailed in the Site Induction include site safety equipment, evacuation procedures, conduct rules, personal safety instructions, cultural and environmental awareness and

systems, safety policies, obligation of care, personal protective equipment and safe work procedures. The environmental awareness and systems section of the induction includes;

- Clearing of Roads and Tracks and use of Burrow Pits
- Drill hole sampling and capping
- Drilling Operations
- Environmental Monitoring
- Hydrocarbon and chemical management
- Reconnaissance Exploration
- Rehabilitation Procedures and Monitoring
- Topsoil Management and Monitoring
- Waste Management and Monitoring
- Vegetation Management and Monitoring
- Water Management and Monitoring
- Incident Reporting
- Accountabilities Flow Charts
- Legal Requirements
- Environmental Auditing

All staff, contractors and visitors who undergo the induction are recorded in the Induction register.

## 5.5IDENTIFICATION OF ENVIRONMENTAL ASPECTS AND IMPACTS

Below is the Risk Matrix Key for all identified environmental risks.

| Likelihood | Consequence | | |
|---|---|---|---|
| | **Low** | **Medium** | **High** |
| | Little or no Impact | Medium term -ve impact | Irreversible or long term -ve impact |
| **High** | 4 | 7 | 9 |
| >75% chance event will occur in life of plan | | | |
| **Medium** | 2 | 5 | 8 |
| 25% - 75% chance event will occur in life of plan | | | |
| **Low** | 1 | 3 | 6 |
| <25% chance event will occur in life of plan | | | |

| | |
|---|---|
| | Critical Risk |
| | High Risk |
| | Moderate Risk |
| | Low Risk |

| OPERATION | HAZARD | RISK RATING | | | | REFINED RISK (after Mitigation) | Mitigation Process |
|---|---|---|---|---|---|---|---|
| | | Critical (9) | High Risk (6 - 8) | Moderate Risk (3 - 5) | Low Risk (1 - 2) | | |
| Driving | Spread of Weeds | | | 5 | | 3 | Removal of Weeds in the field, wash down in yard |
| | Spread of Pests | | | 3 | | 2 | Removal of any identified pests immediately, on location |
| | Animal Hazards | | | | 2 | 1 | Policy - Daylight Driving Only, Driving to Road Conditions |
| Earthworks / Clearing / Rehabilitation | Loss of Native Flora | | | 3 | | 2 | Minimize areas to be cleared, use existing tracks where possible |
| | Loss of Native Fauna | | | 3 | | 2 | Minimize areas to be cleared, use existing tracks where possible |
| | Erosion | | | 3 | | 2 | Clearing and rehabilitation commences as close to operational timeframes as possible, prior to the wet season |
| | Dust Hazard | | | | 2 | 1 | Water, PPE, working upwind |
| Refuelling Operations | Hydrocarbon Spills | | | 5 | | 2 | Have appropriate spill kit and personal cleaning kit available |
| | Contamination Risk | | | | 2 | 1 | Environmental Policy, induction, Incident reporting |
| General Operations | Noise Hazard | | | 3 | | 2 | Fitting noise restrictors, PPE, Induction, SOPs, Polices, Monitoring |
| | Dust Hazard | | | | 2 | 1 | Water as dampener, PPE, working upwind, Inductions, polices, SOPs |
| Drill Rig Operations | Hydrocarbon Spills | | | 5 | | 2 | Have appropriate spill kit and personal cleaning kit available |
| | Noise Hazard | | | 3 | | 2 | Fitting noise restrictors, PPE, Induction, SOPs, Polices, Monitoring |
| | Dust Hazard | | | | 2 | 1 | Water as dampener, PPE, working upwind, Inductions, polices, SOPs |
| | Contamination Risk | | | | 2 | 1 | Environmental Policy, induction, Incident reporting |
| Wildfire | Endangering Flora & Fauna | | | 3 | | 1 | Operate safely and minimise the risk of starting a fire that may lead to a wildfire. |
| Drill Hole Capping | Endangering Fauna | | | 3 | | 1 | Ensure drill holes are capped ASAP to ensure limited time for fauna to be endangered |
| Reconnaissance Exploration | Noise Hazard | | | 3 | | 2 | Fitting noise restrictors, PPE, Induction, SOPs, Polices, Monitoring |
| | Dust Hazard | | | | 2 | 1 | Water as dampener, PPE, working upwind, Inductions, polices, SOPs |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Endangering Flora & Fauna | | | | 2 | 1 | Operate with the minimal impact possible |
| Water | Contamination Risk | | | | 2 | 1 | Environmental Policy, induction, Incident reporting |
| | Contamination due to Release of mine water from Evaporation dam | | | 4 | | 2 | Weekly site inspections monitoring the integrity of the dam, water volumes and quality |
| | Aquifer Leakage | | | 3 | | 1 | Rehabilitation of the hole as per DPIR guidelines |
| | | | | | | | |

## 5.6 EMERGENCY PROCEDURES AND INCIDENT REPORTING

No environmental incidents or accidents were encountered during the previous twelve months.

If an environmental hazard or incident occurs that cannot be dealt with immediately on site by following the procedures and guidelines developed in Emmerson's EMS detailed in the Environmental Manual, the relevant authorities in Tennant Creek will be notified (e.g., Bushfires Council). Any environmental incident will be reported immediately, as per DPIR requirements. All environmental incidents will be recorded on site and reported to the CEO of DPIR.

Emergencies will be dealt with on an individual case basis, and the response will be as outlined in the Environmental Incident and Non-Compliance Reporting section of Emmerson's Environmental Manual, and also as per the DPIR Incident Response Guideline.

## 5.7 ENVIRONMENTAL AUDITS AND INSPECTIONS

Emmerson inspects all drill sites pre and post drilling and also during activities to routinely monitor progress and assess the environmental compliance to identify and address any potential issues early.
When rehabilitation has been completed DPIR is advised at the time of the MMP renewal application and the rehabilitated sites are available for any audit and check for compliance.
A detailed audit of Emmerson's NPA by DPIR mining compliance officers is proposed for 2017.
Emmerson will routinely conduct further visits to the rehabilitated site when the chance arises to monitor the progress of the rehabilitation and ensure that the rehabilitation is progressing as expected, should any matters arise from these further visits then remedial action is taken, as per the standard procedures for rehabilitation.
Emmerson has initiated an annual inspection of a selection of rehabilitated sites where photos are taken and details noted to ensure that all future inspections and photos are taken from the same spot (defined by a geographical coordinate; easting and northing), looking in the same direction (bearing recorded), they will be taken approximately at the same time each year (2$^{nd}$ week of December; annually) and any comments or further remedial action required will be noted at that time and actioned for remediation ASAP.

## 5.8 ENVIRONMENTAL PERFORMANCE PROGRAMS AND REPORTING

**WATER MANAGEMENT**

If significant flows of water are encountered during any drilling activities the overflow will be managed by diversion into specially constructed sumps. The sumps are constructed with a ramp egress at one end to

allow fauna/livestock to exit should that be required. The CLC and NT Power & Water will be notified immediately.
Should an aquifers be encountered during drilling then the drill holes will be rehabilitated as per sections 3.2.2 – 3.2.4 of DPIR's 'Construction and Rehabilitation of Exploration Drill Sites Guideline.
This system is outlined in the Environmental Manual (Environmental Management System 23).

No significant water flows were encountered.

Water Management and monitoring associated with the Evaporation Dam is outlined in the Hydrogeological report attached as appendix 9, section 4, but is summarized as follows;

- Water volumes in the dam will managed by the use of a flow meter on the pipeline from the steel tank to the dam (the meter should be a cumulative flow meter reading in $m^3$) which is read and recorded on a daily basis recording the date, time and cumulative flow volume.
- Water quality in the dam will be monitored by a sample taken every two weeks and sent to INTERTEK for analysis. The results will be used for the continual assessment of potential risks associated with any release of dewatering flows.
- The evaporation dam integrity will be monitored weekly, as part of the weekly site inspection conducted as part of the mining operations, the checks monitor the dam walls to ensure no leaks have occurred and to refine all potential risks of wall leakage and/or failure.

**BIOLOGICAL MANAGEMENT**
Emmerson has guidelines for all employees and contractors to follow to ensure protection of the environment, detailed in Emmerson's Environmental Manual (Vegetation and Weed Management Procedure – Environmental Management System 22). It also details the weeds that may be encountered in the field so as employees and contractors can report any discovered weeds for remediation.
All Emmerson employees and contractors are directed to stay to the existing tracks and weeds are removed from vehicles in the field and the vehicles are washed down in the wash bay at Emmerson's Tennant Creek yard.

**WASTE MANAGEMENT**
The current waste management procedure is to bring rubbish back from the drill sites to Tennant Creek on a daily basis and dispose of it at the town dump. This system is outlined in the Environmental Manual (Environmental Management System 20).

**NOISE AND AIR QUALITY MANAGEMENT**
Noise is controlled by suitable mufflers and sound-absorbing pads on drilling machinery such as air compressors and large diesel engines.
Suppression of dust produced from the drill rig is achieved by the use of modern design cyclones or water injection. Dust from vehicles using dusty tracks is not expected to be a major problem as the period of use of these tracks will only be of short duration.

**REPORTING**
While contracting to Emmerson, all Contractors will comply with the Company's Environmental Manual and the HS&E Policy. Therefore the Contractors environmental performance will be included in the Company's annual report. Environmental Performance Reporting (Form as per DPIR MMP Advisory Note 2008);

- Were the previous year's Exploration Activities meeting the Environmental Objectives & Targets?

  YES – Exploration activities were closely monitored and all employees and contractors followed company guidelines to ensure the protection of the environment and all objectives and targets were met.

- Was progress made towards achieving revegetation and closure objectives during the previous year?

  YES – All sites visited during the field season displayed regrowth, the amount of regrowth varied significantly depending on the maturity of the rehabilitation. Those site rehabilitated more than 18 months ago were strongest, as they had experienced a significant wet season which has promoted strong regrowth of natural vegetation, those site rehabilitated more recently (less than 18 months) displayed low to moderate regrowth, with a below average wet season this year most growth was in the low range for the more recently rehabilitated areas. When the annual photo monitoring has been completed in early 2017, then these photos will be provided for evidence of the continued rehabilitation of sites.

- Were any reviews (e.g. audits) conducted through the year?

  YES
  Emmerson conducted sporadic monitoring as opportunities arose during the year. When Emmerson employees were travelling past historical sites the area was overviewed for any obvious rehabilitation non-compliances, rehabilitation regrowth was observed, with any negative observations used for remediation actions. During these sporadic visits no remediation activities were actioned or required. The annual photographic monitoring program was unable to be completed due to the hospitalisation of Emmerson's field technician over the period where this task is usually performed, he will remain on light duties for the remainder of the year and will return in early 2017, where one of the first tasks will be to conduct and complete this monitoring;

  YES;
  Yes an external audit was conducted on 13 October by DME officers (Matthew Bird & others) notes or information of rehabilitation have yet to be received by Emmerson, as such it was taken that rehabilitation conducted was considered to have been satisfactory.

- Was there any Environmental Monitoring (e.g. noise, dust) completed during the year?

  NO – As detailed above the annual photographic monitoring program couldn't be completed;

- Are there any waste management issues that have arisen during the previous year?

  NO

## 6.0 REHABILITATION

During 2016 Emmerson conducted rehabilitation where exploration activities were conducted as detailed in section 3.1 of this MMP with reconciliations with the proposed drilling, actual drilling and rehabilitation.

For all proposed programs and future generated programs to proceed, minor drill pad clearing may be required. This minor clearing will be completed by ensuring topsoil and seed stock is collected in a top soil dump at the edge of each drill pad. Minor earthworks may be required on the upgrading of existing access tracks.

After drilling is completed it is planned that all drill samples will be buried, as per the agreement, signed 22 February 2010, with the owners and operators of Phillip Creek Station (Perpetual Pastoral Lease 946)

prior to the onset of the 'Wet Season' usually within a 6 month period. All sample bags are cut open and the spoil is buried, the sample bag is then disposed of at the Tennant Creek Rubbish Dump.

All rubbish will be removed from the sites and disposed of at the Tennant Creek Town Rubbish Dump. Drillholes will be plugged and covered in the approved manner. The approved manner for drill hole rehabilitation is as described below, any drilling that intersects aquifers will be rehabilitated in accordance with DPIR guidelines – Construction and Rehabilitation of Exploration Drill Sites;

- The collar is plugged with a cement hole plug
- This cement hole plug contains a metal wire which protrudes from the top of the plug as small 'handle' like object
- The cement hole plug is wedged as tight as possible into the PVC collar
- The collar is then backfilled by replacing and dirt spoil from around the collar into the void and padded down
- The collar and plug are then back filled over, so no protruding evidence of the hole is visible, also no hole peg remains at the site
- The hole is later located by using a metal detector, which locates the metal wire in the cement hole plug
- The hole is plugged and backfilled to prevent the entrapment of small fauna species

**TOPSOIL MANAGEMENT**

Any piled-up topsoil heaps resulting from clearing the drill pads will be pulled back over the pads after the completion of drilling and prior to the onset of the 'wet season', and is described in detail in Emmerson's Environmental Manual EMS 19.

**REVEGETATION METHODS**

Emmerson has found from Giants Reef's and Normandy's years of experience in the Tennant Creek region that lightly-cleared drill pads and access tracks will revegetate naturally over a few years, to the point where they become almost indistinguishable from the surrounding undisturbed bush. Natural re-vegetation is initiated by the ripping of compacted areas and pulling heaped topsoil and captured seed stock back over the cleared area prior to the onset of the NT seasonal rains.

It can be seen from the photos provided in this MMP and those over the past few years that this process is working and continues to be the best approach.

**EVAPORATION DAM REHABILITATION**

At completion of the use of the evaporation dam, water will cease being pumped into the dam and the remaining water will be allowed to evaporate. When no water remains in the evaporation dam an earthworks contractor will then come in and remove all contaminated soils (contamination is defined as salts built up over the life of the evaporation dam and clay materials used in the dam construction), the short mine life will mean that negligible salt accumulation will be encountered. This material will then be used as part of the mine shaft backfill material. When all contaminated soils have been removed the remaining material from the bunds and other uncontaminated materials will be dozed back into the dam and the surface ripped and scarified to natural landscapes contouring and promote regrowth of natural revegetation.

## 6.1 COSTING OF CLOSURE ACTIVITIES

Emmerson has completed a security calculation form, obtained from the DPIR website, and has attached it as Appendix 8. As per section 3.2 Emmerson has proposed to drill approximately 65 drill holes in the NPA.

Emmerson will lodge the security as cash.

In the case that following the analysis and interpretation of the work programs listed in section 3.2, further work programs were submitted as addendums to the NPA MMP, generating drill hole numbers higher than initially proposed, then Emmerson would increase the security held to compensate for the increased exploration activities in the NPA through the submission of an addendum to this MMP.

## 7.0 PERFORMANCE OBJECTIVES

The performance objectives for the proposed drilling program at the NPA for 2018 remain the same as they did for 2016/17 and all previous years, and they are:

1. To complete all the drill holes by December 2018, and
2. To complete the rehabilitation work at each drill site within a six (6) month period after the completion of the program and prior to the onset of the 'Wet Season', where possible.

The person responsible for meeting these objectives is Mr. Steve Russell, Exploration Manager. A company structure flow chart is detailed in section 1.1 of this MMP.

Steve Russell
Exploration Manager
31 July 2018