ACN 117 086 745

NORTHERN PROJECT AREA
TENNANT CREEK, NORTHERN TERRITORY
MINING MANAGEMENT PLAN (2017)
Authorisation – 0467-03

DISTRIBUTION:		DATE
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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

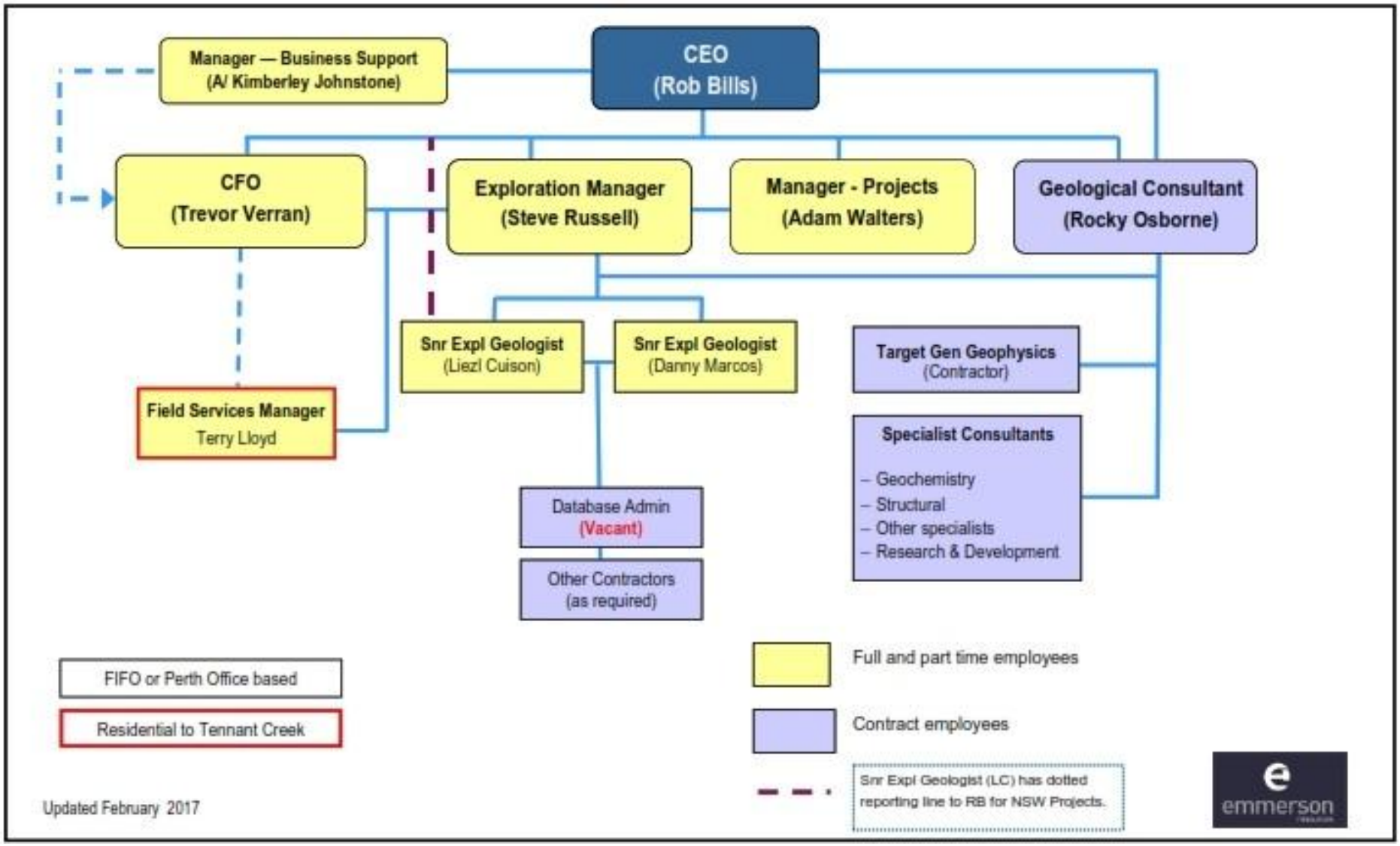
Changes will be highlighted in yellow where possible to assist in review.

Section	Amendment
5.0 Identification of Environmental Aspects & Impacts	Addition to the Risk Matrix – Water Risks
5.8 Environmental Performance Programs & Reporting – Water Management	Update the Water management to include the Evaporation Dam
6.0 Rehabilitation – Evaporation Dam Rehabilitation	Updated this section with the outline for rehabilitation for the Evaporation Dam.

1.0 OPERATOR DETAILS

Operator Name:	Emmerson Resources Ltd (Emmerson)
Key Contact Person/s:	Mr. Adam Walters Manager - Projects Mr. Steve Russell Exploration Manager
Postal Address:	Emmerson Resources Limited PO Box 1573, West Perth WA 6872
Street Address:	Emmerson Resources Limited 3 Kimberley Street, West Leederville WA 6007
Phone:	Ph: (08) 9381 7838 After Hours: (Mr. Steve Russell Exploration Manager)
Fax:	Fx: (08) 9381 5375
Email:	awalters@emmersonresources.com.au (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.

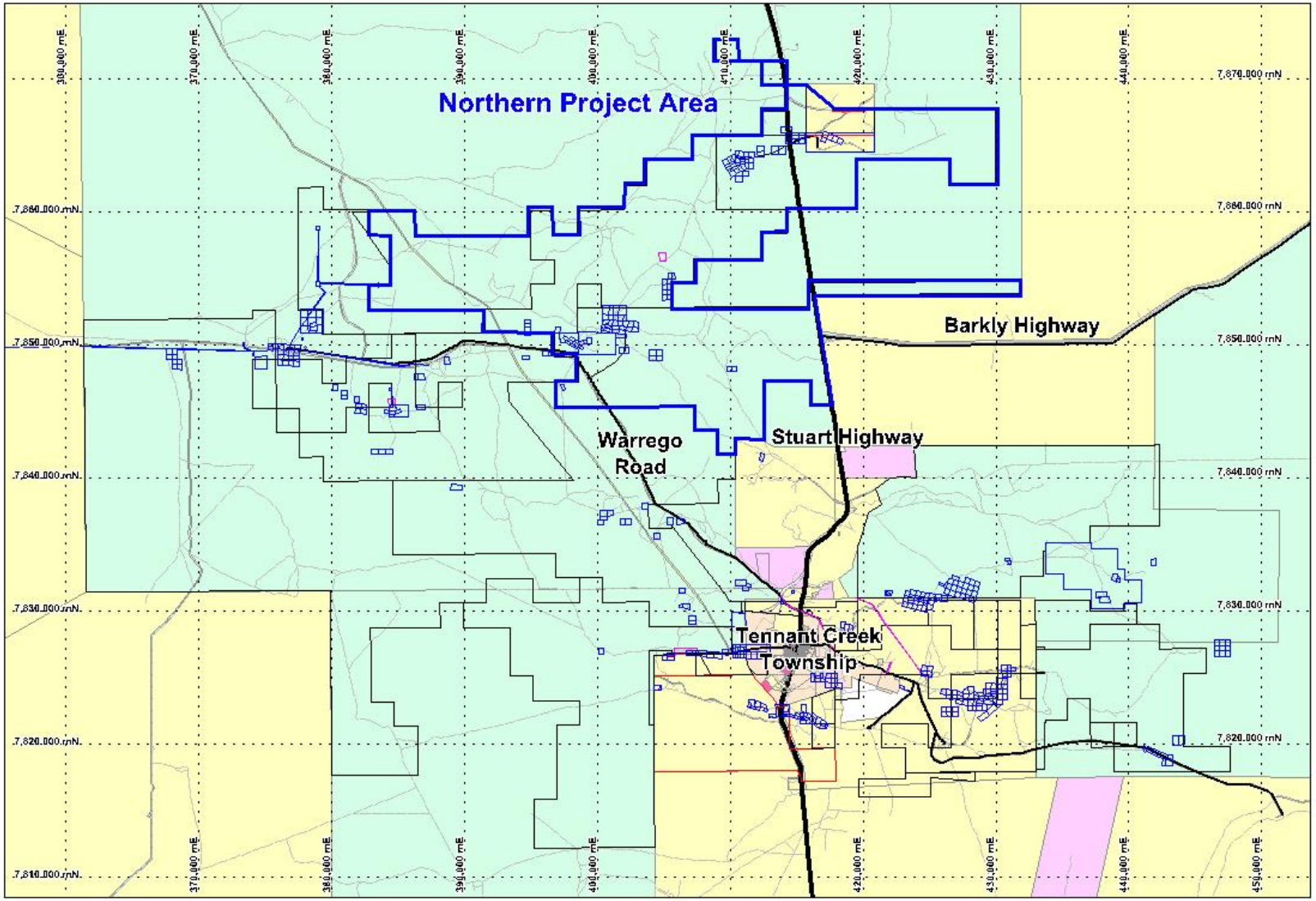


Figure 1: NPA Location

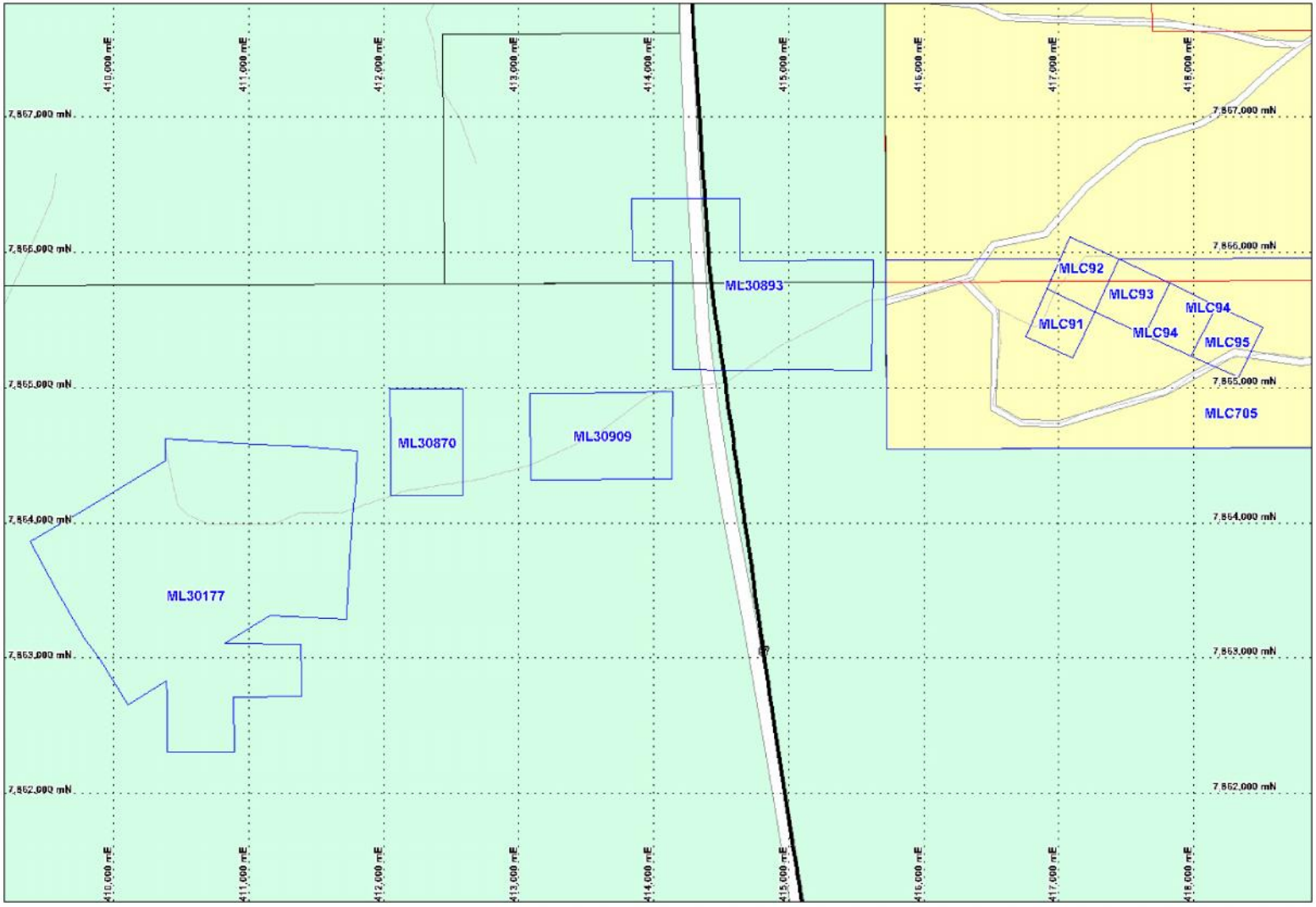


Figure 2: NPA Tenure

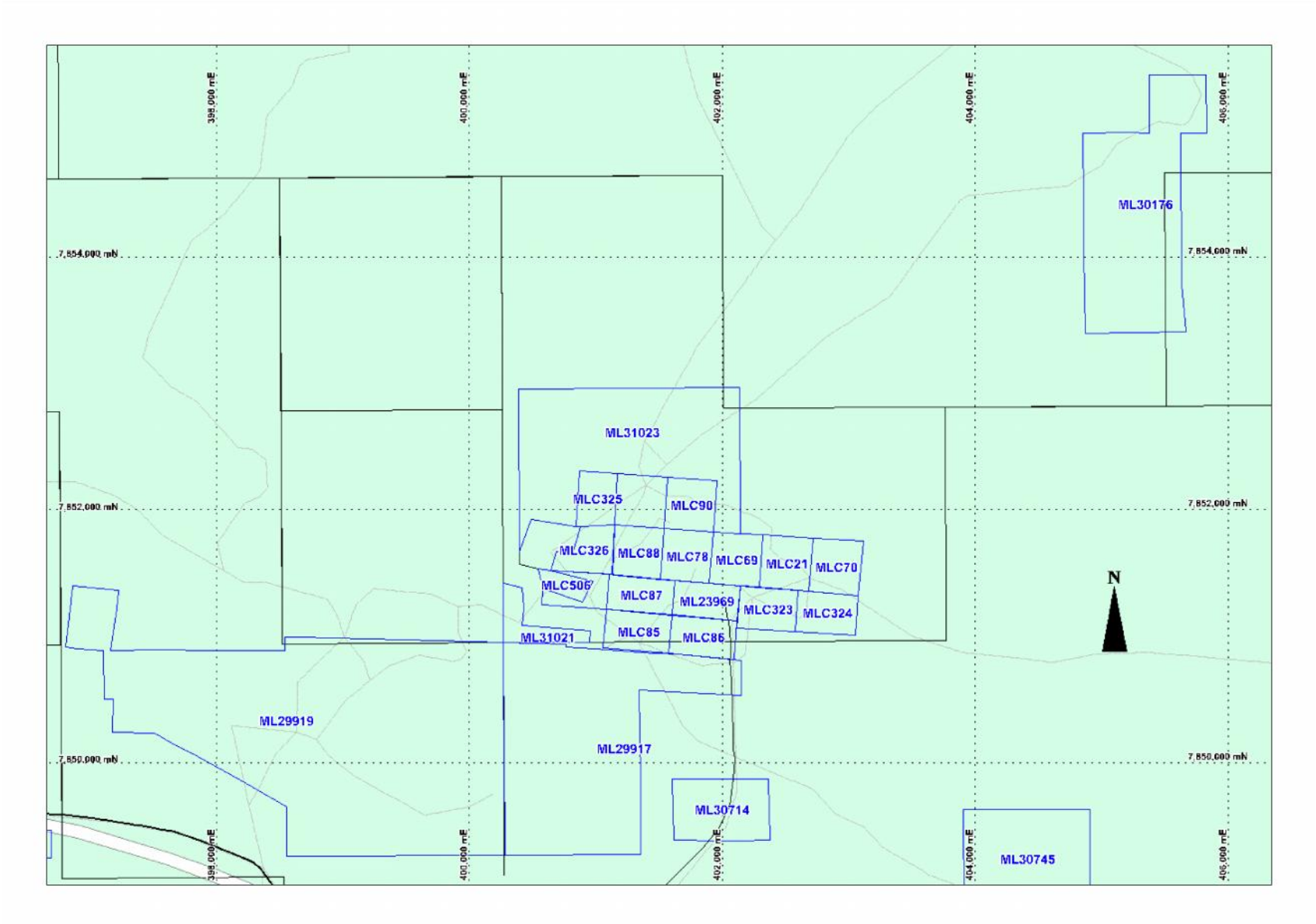


Figure 3: NPA Tenure

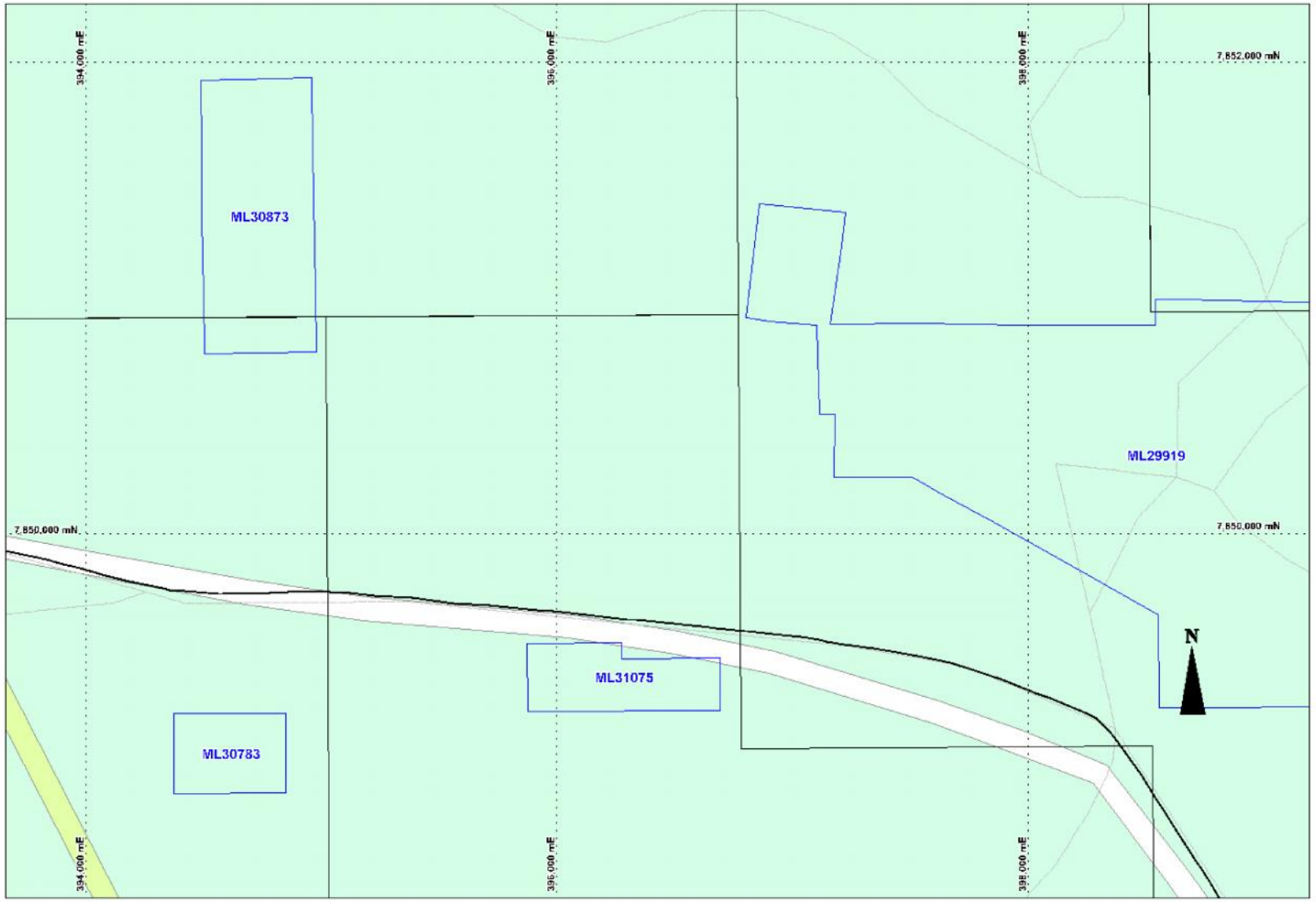


Figure 4: NPA Tenure

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 2016 is detailed in Appendix 14 and summarised as;

- Drilling was conducted at Edna Beryl, Retsina and Rhodes prospects;
  - 1 Reverse Circulation (RC) hole being drilled at Rhodes (RHRC001, totalling 264m);
  - 3 RC holes were drilled at Retsina (RET001 – 003, totalling 180m);
  - Drilling at Edna Beryl consisted of;
    - 50 RC holes (EBWRC001 – 030, 033 – 036, 038 – 048, 050, 052 - 055, totalling 8,418m);
    - 6 RC pre-collars (EBWDD031, 032, 037, 049, 051 & 056, totalling 1,400m);
    - Total RC 9,818m;
    - 7 diamond drill holes (EBWDD031, 032, 037, 049, 051, 056 & GRED42A. GRED42A is an extension of a historical hole, totalling 483.6m of NQ & total hole depths of 1,871.6m).

RC Drilling	54 holes	8,862m
RC Pre-collars	6 holes	1,400m
DDH Drilling	7 hole	483.6m
RAB Drilling	0	0m

Table 3: 2016 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.

As of 16 December 2016 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 Authorisation and actual drilling conducted during the 2016 field season.

Table 4: 2016 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
Monitor – Gecko – Goanna Trend	EL 29488 & 28777			0	0	0	0		0		Proposed
				0	0	0	0		0		Drilled
											Rehabilitated
North Star – Marathon Trend	EL 29488 & MLC705			75	34,500	16	4,400	16	4,100		Proposed
	(Edna Beryl)			50	8,418	6	1,400	7	483.6		Drilled
				30		0		0			Rehabilitated
Regional / Greenfield	EL's 26594, 26595 & 28776	250	16,000	5	5,500	4	5,500	4	3,500		Proposed
	(Rhodes & Retsina Prospects)			4	444						Drilled
				1							Rehabilitated
Target Name	**Tenement(s)**	**RAB Holes #**	**RAB (m)**	**RC Holes #**	**RC (m)**		**RC Pre Colls (m)**	**DDH Holes #**	**DDH (m)**		**Comments**
	Total	250	16,000	80	40,000	20	9,800	20	9,200		Proposed
				54	8,862	6	1,400	7	483.6		Drilled
				31		0		0			Rehabilitated

Drillholes with Rehabilitation Outstanding; Retsina (RET001 – 003) & Edna Beryl (EBWRC031 – 056 & GRED42A), totalling 30 holes of the 61 holes drilled still to be rehabilitated.
Drillholes rehabilitated will be included into the schedule of the annual rehabilitation photographic monitoring. Due to the hospitalisation of Emmerson Field Technician in late November the annual photographic rehabilitation monitoring program (as described in Section 4.8) usually conducted in December prior to the onset of the 'Wet Season' has been postponed until Early February. Below are the 2015 rehabilitation photos.

3.2 PROPOSED ACTIVITIES

Proposed activities for the NPA during the 2017 field season will include geophysical surveys and the implementation of various drilling programs, including Rotary Air Blast (RAB), Reverse Circulation (RC) and Diamond (DDH) drilling.
A ground gravity survey is to be undertaken in the Edna Beryl Area, this will incorporate the Edna Beryl Prospect area, aimed at further identification of potential ironstone and also extend out further to cover a more regional setting, aimed at target generation.
The survey will be a ground based detailed gravity survey and will consist of gravity measurements taken every 25m along gridded lines separated by 50m covering an area of 20km X 7km, refer to figure 10. The measurements will be taken by a field technician walking the gridded lines, no ground disturbance will take place.

Exploration will be focused around the northern part of the project area termed the North Star – Marathon Trend as displayed in figure 11. The 'North Star – Marathon Trend' (a large regional setting) will be the focus for structural interpretation, geological mapping, desktop historical compilation, assessment and modelling and geophysical interpretation and modelling of the proposed detailed ground gravity survey. These will hopefully lead to target generation and testing by further detailed geophysical surveys or drill testing by RAB, RC or DDH.
More detailed analysis, interpretation and modelling will be conducted in the 'Edna Beryl Regional Area' which covers an interpreted major structure trending from the nearby Tennant Creek Granite through Edna Beryl, Macedon, Troy and Marathon. This work will centre on generating targets for drill testing by RAB, RC and/or DDH.
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. 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. Also results from the detailed ground gravity survey may identify further targets within this area that may warrant drill testing.
Follow-up drilling at Retsina to test the identified ironstones may be warranted, dependant on results of the recently completed drilling. The proposed detailed ground gravity survey may also generate further targets for testing at this prospect.
Other proposed activities will be the down hole 'Acoustic Data Capture', this tool descends down the drill from a tripod mounted over the drill hole, with all operation equipment contained in a trailer towed by a 4WD and will use existing tracks and cleared drill pads and therefore won't require any ground disturbance activities.

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 4 for proposed drill hole details. Figure 12 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 2017 field season (March – December) will be;

- RC & DDH drilling of the above selected targets that have return significant anomalous results from the 2016 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 is 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 10km of line tracks. Total area that may be disturbed will be 31ha.

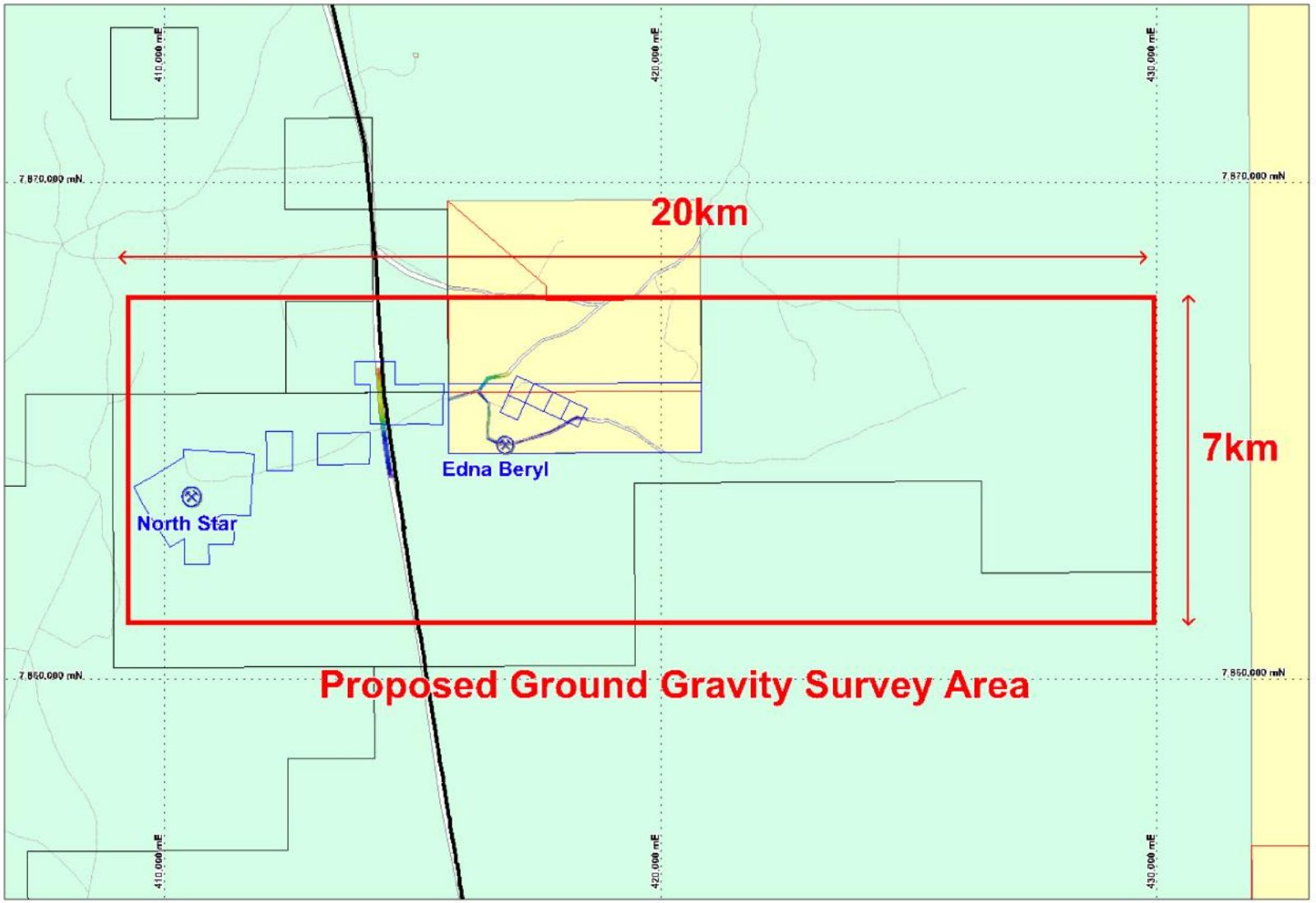


Figure 10: Ground Gravity Survey Area

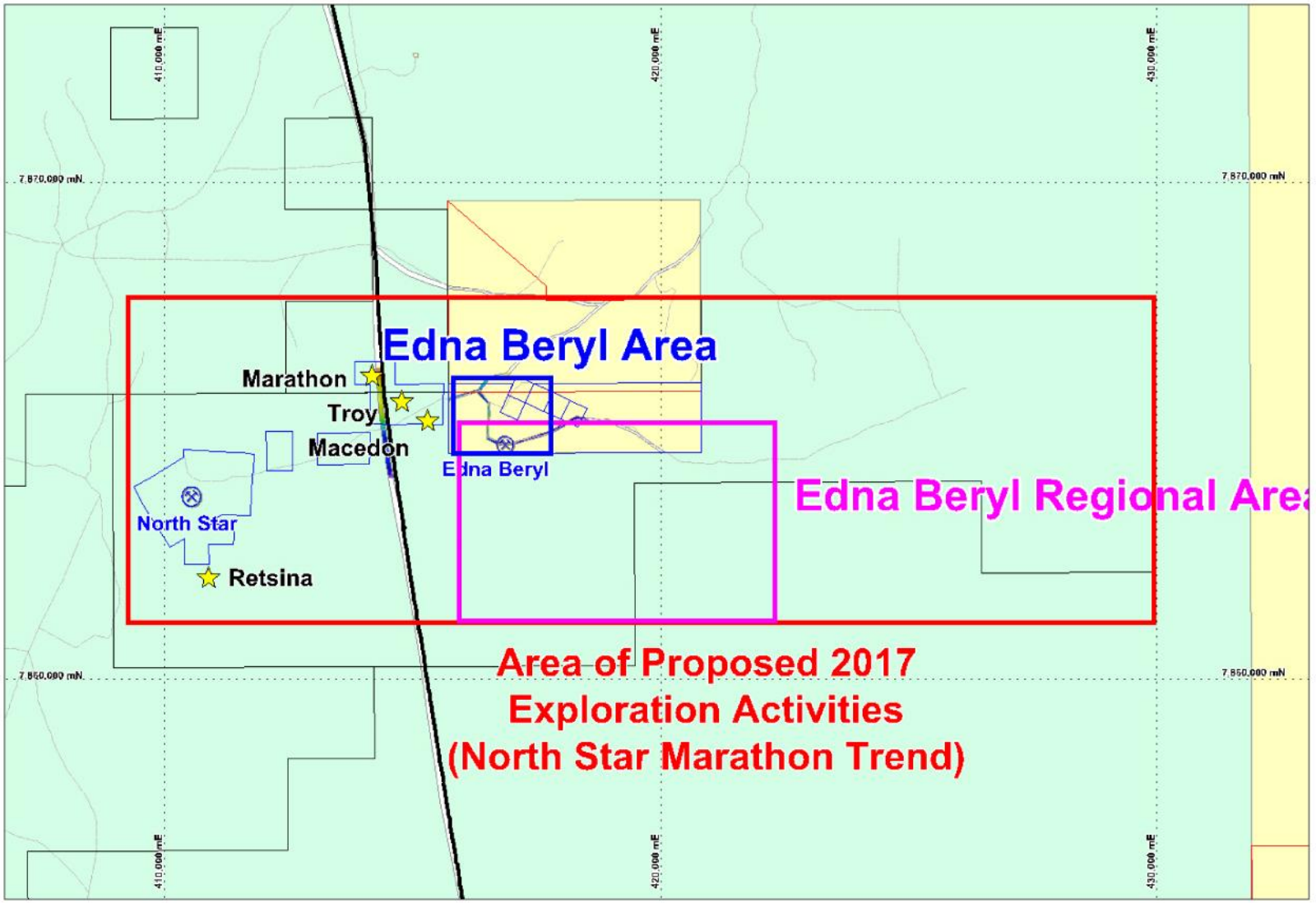


Figure 11: Target Areas

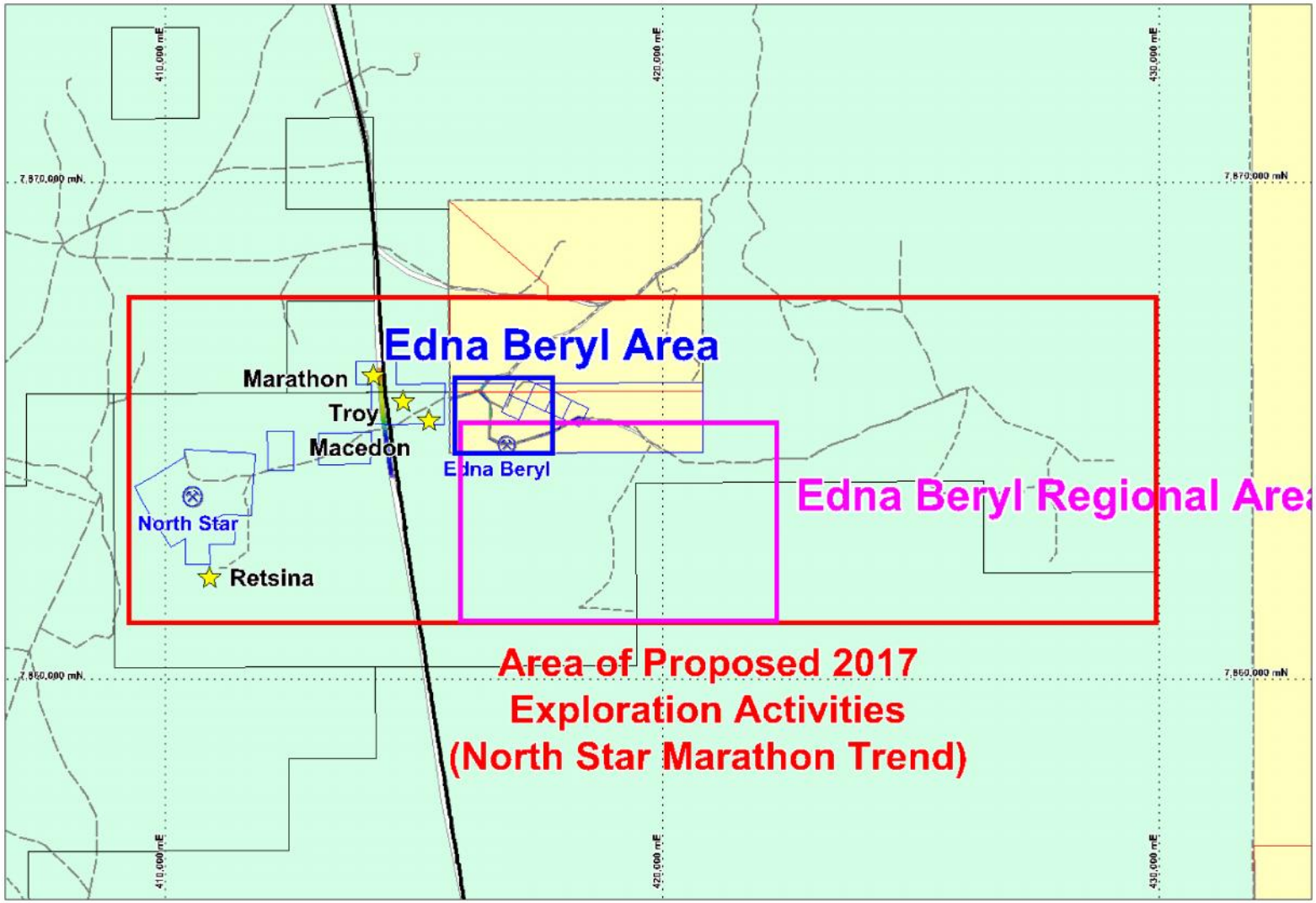


Figure 12: Access Tracks

Table 4: Proposed NPA Drill Collar Numbers for the 2017 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			40	8,000	10	2,000	10	2,500		Proposed
Edna Beryl Regional Area	MLC705 & EL 28776			30	7,000	10	2,000	10	2,500		
North Star – Marathon Trend (Retsina, Marathon, Troy, Macedon, other various prospects)	EL 26594, 28776, ML30870, 30893 & ML30909	200	10,000	20	4,000	5	1,000	5	1,000		Proposed
Regional / Greenfield	EL's 26594, 26595 & 28777			5	1,000						Proposed
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

All proposed drill hole locations are detailed in Appendix 15 and displayed in Figure 15.
The total of 350 holes derived by the addition of 320 proposed holes (200 RAB, 95 RC & 25 Pre-collar/DDH) and 30 holes with outstanding rehabilitation will be used in the security calculation, which is attached as Appendix 8.

4.0 CURRENT PROJECT SITE CONDITIONS

GEOLOGY

A map depicting the project area and land type is attached as figure 1, figure 10 details the proposed ground gravity survey area, figure 11 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 13. 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 14.

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 highlights the potential for;

<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, therefore need to be monitored closely.

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.

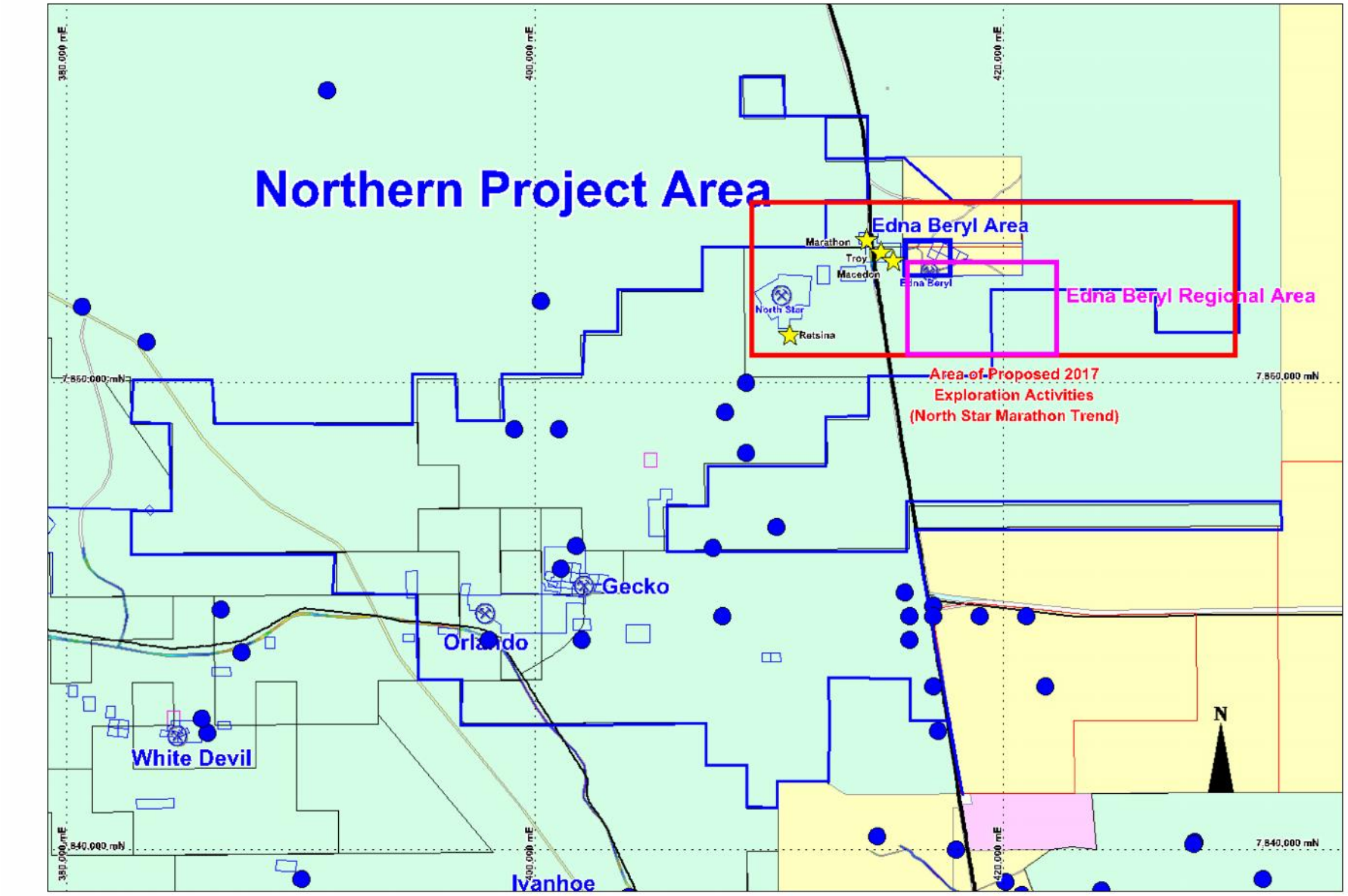


Figure 13: Water Bores

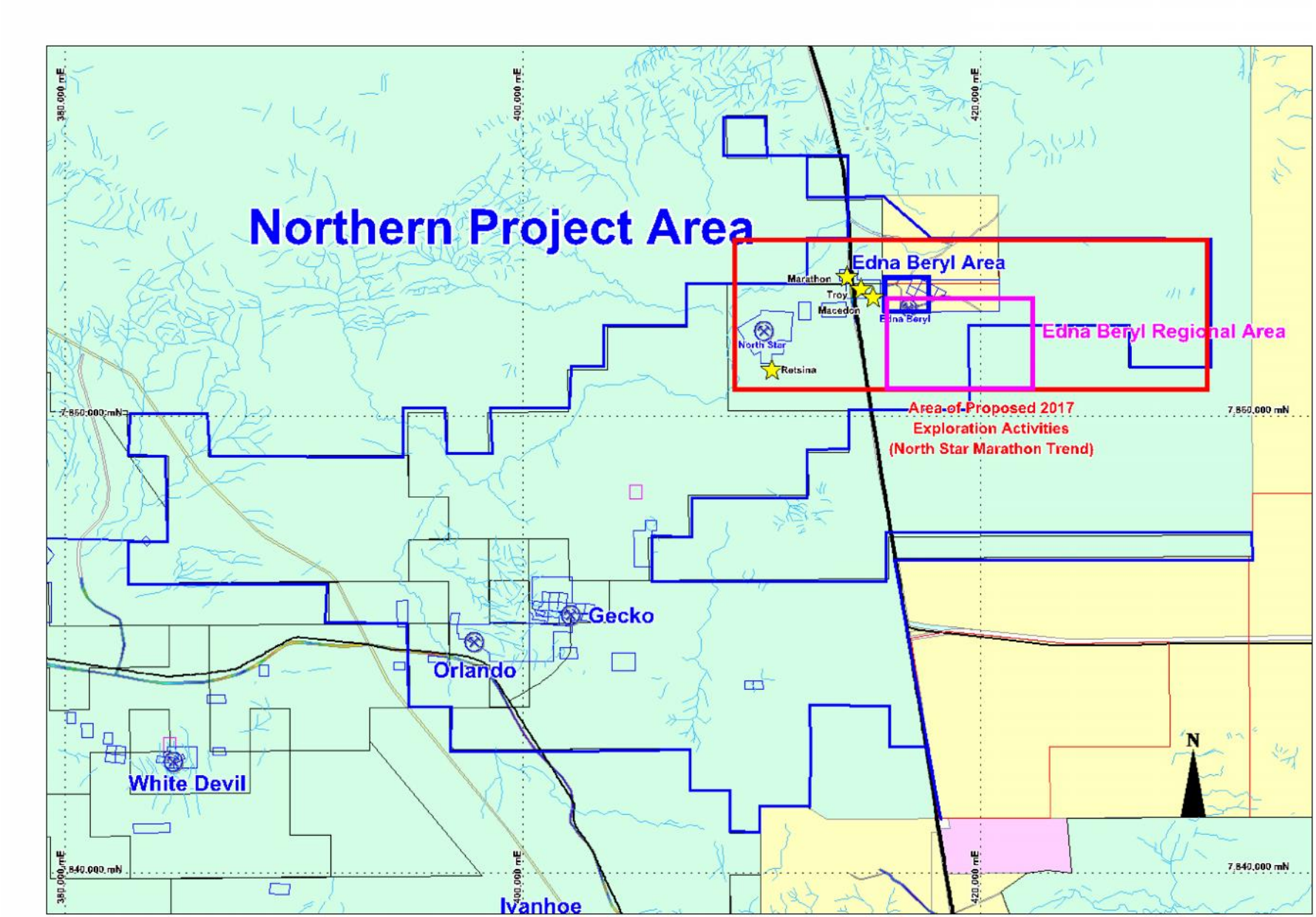


Figure 14: Drainage

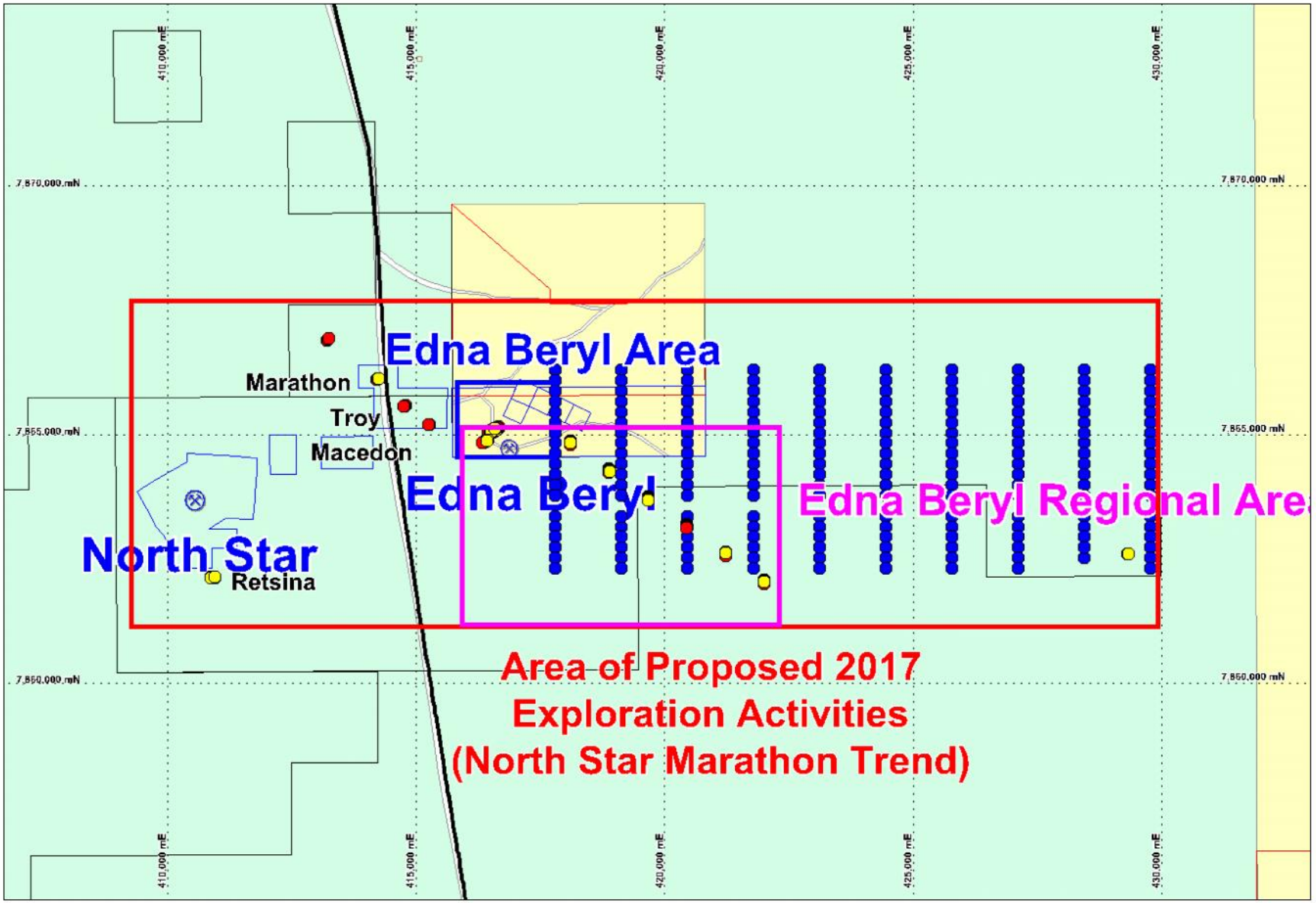


Figure 15: Proposed 2017 Drill collar locations (Blue = RAB; Red = RC; Yellow = Pre collar/DDH)

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 6 below and attached as Appendix 16;

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

Table 6: ERM CLC Clearance Certificates
Sacred sites have been identified in the areas for proposed activities, displayed in figure 16 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.

Figure 16: Sacred Sites (Exclusion Zones = Red hashed polygons; Restricted work Areas = Green hashed polygons)

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.

5.5 IDENTIFICATION 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 (2nd 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 320 drill holes in the NPA, with 30 holes outstanding for rehabilitation from the 2016 field season.

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 2017 remain the same as they did for 2016 and all previous years, and they are:

1. To complete all the drillholes by December 2017, 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.

The Application for an Authorisation is attached as Appendix 13.

Steve Russell
Exploration Manager
31 May 2017

APPENDIX ONE

NORTHERN PROJECT AREA

Northern Project Area Tenure Details

Tenement	Name	Holder	Interest	Granted	Effective	Expiry	Ha	Km2	Blocks	Project Area
EL26594	Bills	GRE	100	7/07/2008	7/07/2014	6/07/2016	3157	31.57	5	NPA
EL26595	Russell	GRE	100	7/07/2008	7/07/2014	6/07/2016	13930	139.3	39	NPA
EL28776	Whippet	GRE	100	16/11/2011	16/11/2011	15/11/2017	9485	94.85	32	NPA
EL28777	Bishops Creek	GRE	100	14/09/2011	14/09/2015	13/09/2017	16515	165.15	54	NPA
EL28913	Amstel	GRE	100	23/12/2011	23/12/2011	22/12/2017	7128	71.28	22	NPA
EL29012	Tetley	GRE	100	3/04/2012	3/04/2014	2/04/2016	323	3.24	1	NPA
EL29488	Rocky	GRE	100	1/05/2013	1/05/2013	30/04/2019	2902	29.02	9	NPA
ELA27539	Telegraph	GRE	100	Moratorium	9/12/2009	9/12/2014	1088	10.88	7	NPA
ELA30516	Barkly Highway	GRE	100		22/08/2014		20021	200.21	71	NPA
ELA30614	Franc	GRE	100	6/10/2015	6/10/2015	5/10/2021	9716	9.716	3	NPA
ML23969	Gecko Headframe	San	100	17/03/2009	17/03/2009	16/03/2034	14.25	0.1425	0	NPA
ML29917	Havelock	GRE	100	1/10/2013	1/10/2013	30/09/2023	201.4	2.014	0	NPA
ML29919	Orlando	GRE	100	1/10/2013	1/10/2013	30/09/2024	436.2	4.362	0	NPA
ML30176	Queen of Sheba	GRE	100	15/04/2014	15/04/2014	14/04/2024	144.2	14.42	0	NPA
ML30177	North Star	GRE	100	15/04/2014	15/04/2014	14/04/2024	355.7	35.57	0	NPA
ML30714	Pedro	San	100	18/03/2015	18/03/2015	17/03/2025	40	0.4	0	NPA
ML30745	Bomber	GRE	100	17/02/2015	17/02/2015	16/02/2025	80	0.8	0	NPA
ML30783	Semillon	GRE	100	10/04/2015	10/04/2015	9/04/2025	20	0.2	0	NPA
ML30870	Rising Star	TC8	100	10/07/2015	10/07/2015	9/07/2025	40	0.04		NPA
ML30873	Pinot	San	100	18/08/2015	18/08/2015	17/08/2020	60	0.6		NPA
ML30893	Troy	GRE	100	10/07/2015	10/07/2015	9/07/2020	160	1.6	0	NPA
ML30909	Archimedes	GRE	100	3/08/2015	3/08/2015	2/08/2020	62	0.62		NPA
ML31021	Gecko 3	San	100	19/10/2015	19/10/2015	18/10/2025	13.04	0.1304	0	NPA
ML31023	Gecko 1	San	100	27/11/2015	27/11/2015	26/11/2020	148.46	1.4846		NPA
ML31075	Franc	San	100	8/12/2015	8/12/2015	7/12/2020	20.8	0.208		NPA
MLC21	Gecko	San	100	23/12/1958	23/12/1958	31/12/2020	17	0.17	0	NPA
MLC323	Gecko	San	100	22/04/1976	22/04/1976	31/12/2022	16	0.16	0	NPA
MLC324	Gecko	San	100	22/04/1976	22/04/1976	31/12/2022	16	0.16	0	NPA
MLC325	Gecko	San	100	22/04/1976	22/04/1976	31/12/2022	13	0.13	0	NPA
MLC326	Gecko	San	100	22/04/1976	22/04/1976	31/12/2022	15	0.15	0	NPA
MLC327	Gecko	San	100	22/04/1976	22/04/1976	31/12/2022	9	0.09	0	NPA
MLC506	Marion Ross	San	100	2/08/1941	1/01/2008	31/12/2017	7	0.07	0	NPA
MLC69	Gecko	San	100	31/01/1968	31/12/2013	31/12/2023	16	0.16	0	NPA
MLC70	Gecko	San	100	31/01/1968	31/12/2013	31/12/2023	16	0.16	0	NPA
MLC705	Apollo 1	GRE	100	6/08/1999	6/08/1999	31/12/2023	632.3	6.323	0	NPA
MLC78	Gecko	San	100	14/03/1968	31/12/2013	31/12/2023	16	0.16	0	NPA
MLC85	Gecko	San	100	19/10/1970	31/12/2010	31/12/2020	15.89	0.1589	0	NPA
MLC86	Gecko	San	100	19/10/1970	31/12/2010	31/12/2020	15.81	0.1581	0	NPA
MLC87	Gecko	San	100	19/10/1970	31/12/2010	31/12/2020	14.12	0.1412	0	NPA
MLC88	Gecko	San	100	29/04/1971	31/12/2012	31/12/2022	16	0.16	0	NPA
MLC89	Gecko	San	100	29/04/1971	31/12/2012	31/12/2022	16	0.16	0	NPA
MLC90	Gecko	San	100	29/04/1971	31/12/2012	31/12/2022	16	0.16	0	NPA
MLC91	Carraman/Klondyke	TC8	100	20/07/1971	31/12/2012	31/12/2022	17	0.17	0	NPA
MLC92	Carraman/Klondyke	TC8	100	20/07/1971	31/12/2012	31/12/2022	17	0.17	0	NPA
MLC93	Carraman/Klondyke	TC8	100	20/07/1971	31/12/2012	31/12/2022	17	0.17	0	NPA
MLC94	Carraman/Klondyke	TC8	100	20/07/1971	31/12/2012	31/12/2022	17	0.17	0	NPA
MLC95	Carraman/Klondyke	TC8	100	20/07/1971	31/12/2012	31/12/2022	17	0.17	0	NPA
MLC96	Osprey	San	100	30/07/1971	31/12/2012	31/12/2022	16	0.16	0	NPA
MLC97	Osprey	San	100	30/07/1971	31/12/2012	31/12/2022	16	0.16	0	NPA
MLA23911	Golden Slipper	GRE	100		21/05/2003		33.72	0.3372		NPA

APPENDIX TWO

NORTHERN PROJECT AREA

Nomination of an Operator Form

(Santexco Pty Ltd)

Nomination of an Operator of a Mining Site

ThisformistobecompletedbyaTitleHolderappointinganOperatorinaccordancewithsection10oftheMiningManagementAct.EachTitleHolder havingan interestin thesiteshould completeaseparatenominationform.
Section 10 of the *Mining Management Act*

TITLEHOLDER'SNAME	Santexco Pty Ltd
ACN/ABN:	002 910 296
POSTALADDRESS	PO Box 1573, West Perth, Western Australia
	Postcode: 6872
CONTACTPERSON	Adam Walters
PHONE	Business: (08) 9381 7838 Mobile:
E-MAIL	awalters@emmersonresources.com.au

MINING INTEREST/S (i.e.: Title numbers)	Please refer to Appendix 3 of this MMP

NAMEOFOPERATOR (asperASIC-ABRregistered name)	Emmerson Resources Limited
ACN/ABN:	117 086 745

CONFIRMATIONOFTITLEHOLDER'SNOMINATIONOFOPERATOR

We,theauthorisedofficers of theTitleHolderconfirmthe TitleHolderhas, bywrittenagreement(s) with theOperator:

- appointed the Operator in accordance with section 10 of the Mining Management Act; and
- conferred on theOperatortherightoftheTitleHolderto takeandusewater inaccordancewith section81oftheMineral TitlesAct.

Signed(TitleHolder)	Name(PleasePrint)	Date
Director	Rob Bills	16/12/2016

Director/CompanySecretary

Signed inaccordance withsection 126/127*of theCorporations Act2001Cth(*delete inapplicablesection)

CONFIRMATION OFOPERATOR'SACCEPTANCE OFAPPOINTMENT

We,theauthorisedofficers of theOperator,confirmtheOperator has:

- accepted theappointmentandcompliedwithsection10oftheMiningManagementAct;and
- acceptedthe TitleHolder'srightstotakeandusewater pursuanttosection81 ofthe Mineral TitlesActandinaccordance with theMiningManagementActaccepts responsibilityformeetingtheenvironmentalobligations.

Signed(Operator)	Name(PleasePrint)	Date
Director	Rob Bills	~~16/12/2016~~

Director/CompanySecretary

Signed inaccordance withsection 126/127*of theCorporationsAct2001Cth(*delete inapplicablesection)

APPENDIX THREE

NORTHERN PROJECT AREA

Santexco Pty Ltd Tenure Details

Tenement	Name	Holder	Interest	Granted	Effective	Expiry	Ha	Km2	Blocks	Project Area
ML23969	Gecko Headframe	San	100	17/03/2009	17/03/2009	16/03/2034	14.25	0.1425	0	NPA
ML30714	Pedro	San	100	18/03/2015	18/03/2015	17/03/2025	40	0.4	0	NPA
ML30873	Pinot	San	100	18/08/2015	18/08/2015	17/08/2020	60	0.6		NPA
ML31021	Gecko 3	San	100	19/10/2015	19/10/2015	18/10/2025	13.04	0.1304	0	NPA
ML31023	Gecko 1	San	100	27/11/2015	27/11/2015	26/11/2020	148.46	1.4846		NPA
ML31075	Franc	San	100	8/12/2015	8/12/2015	7/12/2020	20.8	0.208		NPA
MLC21	Gecko	San	100	23/12/1958	23/12/1958	31/12/2020	17	0.17	0	NPA
MLC323	Gecko	San	100	22/04/1976	22/04/1976	31/12/2022	16	0.16	0	NPA
MLC324	Gecko	San	100	22/04/1976	22/04/1976	31/12/2022	16	0.16	0	NPA
MLC325	Gecko	San	100	22/04/1976	22/04/1976	31/12/2022	13	0.13	0	NPA
MLC326	Gecko	San	100	22/04/1976	22/04/1976	31/12/2022	15	0.15	0	NPA
MLC327	Gecko	San	100	22/04/1976	22/04/1976	31/12/2022	9	0.09	0	NPA
MLC506	Marion Ross	San	100	2/08/1941	1/01/2008	31/12/2017	7	0.07	0	NPA
MLC69	Gecko	San	100	31/01/1968	31/12/2013	31/12/2023	16	0.16	0	NPA
MLC70	Gecko	San	100	31/01/1968	31/12/2013	31/12/2023	16	0.16	0	NPA
MLC78	Gecko	San	100	14/03/1968	31/12/2013	31/12/2023	16	0.16	0	NPA
MLC85	Gecko	San	100	19/10/1970	31/12/2010	31/12/2020	15.89	0.1589	0	NPA
MLC86	Gecko	San	100	19/10/1970	31/12/2010	31/12/2020	15.81	0.1581	0	NPA
MLC87	Gecko	San	100	19/10/1970	31/12/2010	31/12/2020	14.12	0.1412	0	NPA
MLC88	Gecko	San	100	29/04/1971	31/12/2012	31/12/2022	16	0.16	0	NPA
MLC89	Gecko	San	100	29/04/1971	31/12/2012	31/12/2022	16	0.16	0	NPA
MLC90	Gecko	San	100	29/04/1971	31/12/2012	31/12/2022	16	0.16	0	NPA
MLC96	Osprey	San	100	30/07/1971	31/12/2012	31/12/2022	16	0.16	0	NPA
MLC97	Osprey	San	100	30/07/1971	31/12/2012	31/12/2022	16	0.16	0	NPA

APPENDIX FOUR

NORTHERN PROJECT AREA

Nomination of an Operator

(Giants Reef Exploration Pty Ltd)

Nomination of an Operator of a Mining Site

ThisformistobecompletedbyaTitleHolderappointinganOperatorinaccordancewithsection10oftheMiningManagementAct.EachTitleHolder havingan interestin thesiteshould completeaseparatenominationform.
Section 10 of the *Mining Management Act*

TITLEHOLDER'SNAME	Giants Reef Exploration Pty Ltd
ACN/ABN:	58 009 200 346
POSTALADDRESS	PO Box 1573, West Perth, Western Australia
	Postcode: 6872
CONTACTPERSON	Adam Walters
PHONE	Business: (08) 9381 7838 Mobile:
E-MAIL	awalters@emmersonresources.com.au

MINING INTEREST/S (i.e.: Title numbers)	Please refer to Appendix 5 of this MMP

NAMEOFOPERATOR (asperASIC-ABRregistered name)	Emmerson Resources Limited
ACN/ABN:	117 086 745

CONFIRMATIONOFTITLEHOLDER'SNOMINATIONOFOPERATOR

We,theauthorisedofficers of theTitleHolderconfirmthe TitleHolderhas, bywrittenagreement(s) with theOperator:

- appointed the Operator in accordance with section 10 of the Mining Management Act; and
- conferred on theOperatortherightoftheTitleHolderto takeandusewater inaccordancewith section81oftheMineral TitlesAct.

Signed(TitleHolder)	Name(PleasePrint)	Date
Director	Rob Bills	16/12/2016

Director/CompanySecretary

Signed inaccordance withsection 126/127*of theCorporations Act2001Cth(*delete inapplicablesection)

CONFIRMATION OFOPERATOR'SACCEPTANCE OFAPPOINTMENT

We,theauthorisedofficers of theOperator,confirmtheOperator has:

- accepted theappointmentandcompliedwithsection10oftheMiningManagementAct;and
- acceptedthe TitleHolder'srightstotakeandusewater pursuanttosection81 ofthe *Mineral TitlesAct*andinaccordance with the*MiningManagementAct*accepts responsibilityformeetingtheenvironmentalobligations.

Signed(Operator)	Name(PleasePrint)	Date
Director	Rob Bills	~~16/12/2016~~

Director/CompanySecretary

Signed inaccordance withsection 126/127*of theCorporationsAct2001Cth(*delete inapplicablesection)

APPENDIX FIVE

NORTHERN PROJECT AREA

Giants Reef Exploration Pty Ltd Tenure Details

Tenement	Name	Holder	Interest	Granted	Effective	Expiry	Ha	Km2	Blocks	Project Area
EL26594	Bills	GRE	100	7/07/2008	7/07/2014	6/07/2016	3157	31.57	5	NPA
EL26595	Russell	GRE	100	7/07/2008	7/07/2014	6/07/2016	13930	139.3	39	NPA
EL28776	Whippet	GRE	100	16/11/2011	16/11/2011	15/11/2017	9485	94.85	32	NPA
EL28777	Bishops Creek	GRE	100	14/09/2011	14/09/2015	13/09/2017	16515	165.15	54	NPA
EL28913	Amstel	GRE	100	23/12/2011	23/12/2011	22/12/2017	7128	71.28	22	NPA
EL29012	Tetley	GRE	100	3/04/2012	3/04/2014	2/04/2016	323	3.24	1	NPA
EL29488	Rocky	GRE	100	1/05/2013	1/05/2013	30/04/2019	2902	29.02	9	NPA
ELA27539	Telegraph	GRE	100	Moratorium	9/12/2009	9/12/2014	1088	10.88	7	NPA
ELA30516	Barkly Highway	GRE	100		22/08/2014		20021	200.21	71	NPA
ELA30614	Franc	GRE	100	6/10/2015	6/10/2015	5/10/2021	9716	9.716	3	NPA
ML29917	Havelock	GRE	100	1/10/2013	1/10/2013	30/09/2023	201.4	2.014	0	NPA
ML29919	Orlando	GRE	100	1/10/2013	1/10/2013	30/09/2024	436.2	4.362	0	NPA
ML30176	Queen of Sheba	GRE	100	15/04/2014	15/04/2014	14/04/2024	144.2	14.42	0	NPA
ML30177	North Star	GRE	100	15/04/2014	15/04/2014	14/04/2024	355.7	35.57	0	NPA
ML30745	Bomber	GRE	100	17/02/2015	17/02/2015	16/02/2025	80	0.8	0	NPA
ML30783	Semillon	GRE	100	10/04/2015	10/04/2015	9/04/2025	20	0.2	0	NPA
ML30893	Troy	GRE	100	10/07/2015	10/07/2015	9/07/2020	160	1.6	0	NPA
ML30909	Archimedes	GRE	100	3/08/2015	3/08/2015	2/08/2020	62	0.62		NPA
MLC705	Apollo 1	GRE	100	6/08/1999	6/08/1999	31/12/2023	632.3	6.323	0	NPA
MLA23911	Golden Slipper	GRE	100		21/05/2003		33.72	0.3372		NPA

APPENDIX SIX

NORTHERN PROJECT AREA

Nomination of an Operator

(TC8)

Nomination of an Operator of a Mining Site

ThisformistobecompletedbyaTitleHolderappointinganOperatorinaccordancewithsection10oftheMiningManagementAct.EachTitleHolder havingan interestin thesiteshould completeaseparatenominationform.
Section 10 of the *Mining Management Act*

TITLEHOLDER'SNAME	TC8 Pty Ltd
ACN/ABN:	009 644 188
POSTALADDRESS	PO Box 1573, West Perth, Western Australia
	Postcode: 6872
CONTACTPERSON	Adam Walters
PHONE	Business: (08) 9381 7838 Mobile:
E-MAIL	awalters@emmersonresources.com.au

MINING INTEREST/S (i.e.: Title numbers)	Please refer to Appendix 7 of this MMP

NAMEOFOPERATOR (asperASIC-ABRregistered name)	Emmerson Resources Limited
ACN/ABN:	117 086 745

CONFIRMATIONOFTITLEHOLDER'SNOMINATIONOFOPERATOR

We,theauthorisedofficers of theTitleHolderconfirmthe TitleHolderhas, bywrittenagreement(s) with theOperator:

- appointed the Operator in accordance with section 10 of the Mining Management Act; and
- conferred on theOperatortherightoftheTitleHolderto takeandusewater inaccordancewith section81oftheMineral TitlesAct.

Signed(TitleHolder)	Name(PleasePrint)	Date
Director	Rob Bills	16/12/2016

Director/CompanySecretary

Signed inaccordance withsection 126/127*of theCorporations Act2001Cth(*delete inapplicablesection)

CONFIRMATION OFOPERATOR'SACCEPTANCE OFAPPOINTMENT

We,theauthorisedofficers of theOperator,confirmtheOperator has:

- accepted theappointmentandcompliedwithsection10oftheMiningManagementAct;and
- acceptedthe TitleHolder'srightstotakeandusewater pursuanttosection81 ofthe Mineral TitlesActandinaccordance with theMiningManagementActaccepts responsibilityformeetingtheenvironmentalobligations.

Signed(Operator)	Name(PleasePrint)	Date
Director	Rob Bills	16/12/2016

Director/CompanySecretary

Signed inaccordance withsection 126/127*of theCorporationsAct2001Cth(*delete inapplicablesection)

APPENDIX SEVEN

NORTHERN PROJECT AREA

TC8 Pty Ltd Tenure Details

Tenement	Name	Holder	Interest	Granted	Effective	Expiry	Ha	Km2	Blocks	Project Area
ML30870	Rising Star	TC8	100	10/07/2015	10/07/2015	9/07/2025	40	0.04		NPA
MLC91	Carraman/Klondyke	TC8	100	20/07/1971	31/12/2012	31/12/2022	17	0.17	0	NPA
MLC92	Carraman/Klondyke	TC8	100	20/07/1971	31/12/2012	31/12/2022	17	0.17	0	NPA
MLC93	Carraman/Klondyke	TC8	100	20/07/1971	31/12/2012	31/12/2022	17	0.17	0	NPA
MLC94	Carraman/Klondyke	TC8	100	20/07/1971	31/12/2012	31/12/2022	17	0.17	0	NPA
MLC95	Carraman/Klondyke	TC8	100	20/07/1971	31/12/2012	31/12/2022	17	0.17	0	NPA

APPENDIX EIGHT

Northern Project Area

Security Calculation

APPENDIX NINE

Northern Project Area

Edna Beryl Hydrogeological Report

APPENDIX TEN

Northern Project Area

Protected Matters Report

Australian Government
Department of the Environment and Energy

EPBC Act Protected Matters Report

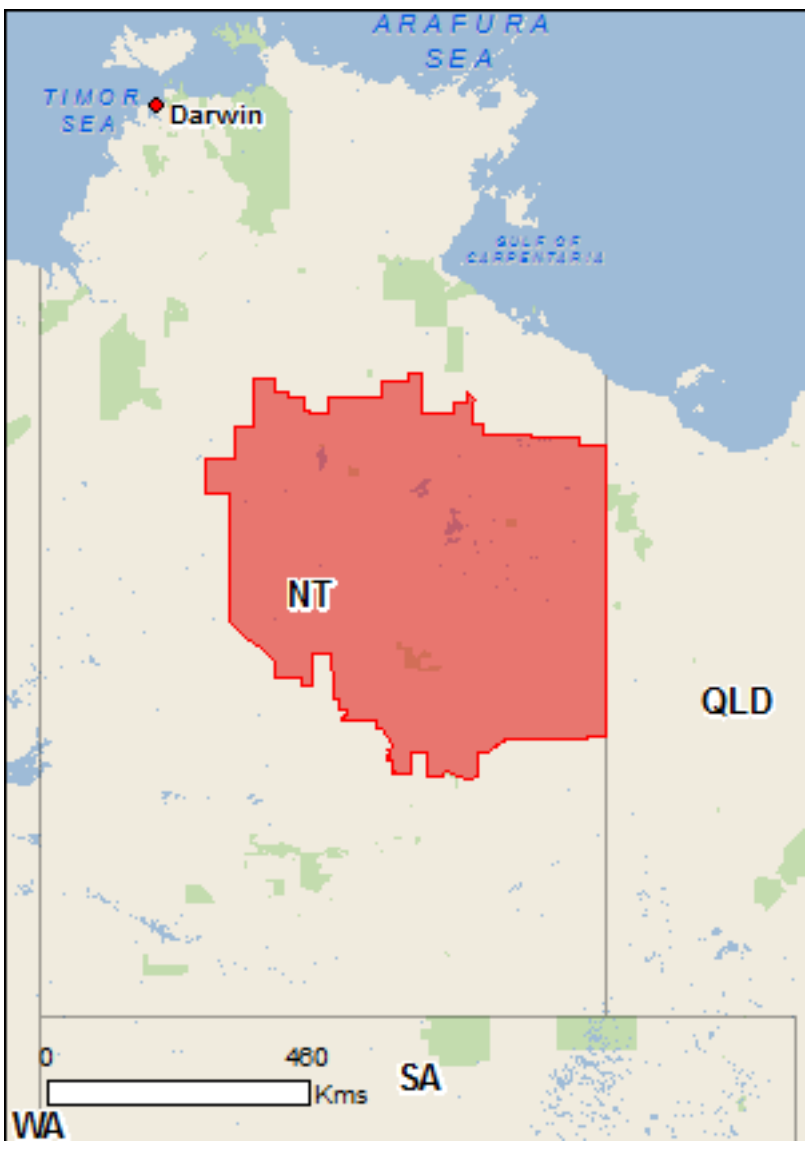
This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

LGA BARKLY SHIRE, NT

Report created: 15/12/16 14:41:35



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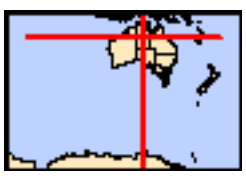

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance - see http://environment.gov.au/protection/environment-assessments

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Significance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Threatened Ecological Communities:	None
Threatened Species:	24
Migratory Species:	14

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species. Information on EPBC Act permit requirements and application forms can be found at http://www.environment.gov.au/epbc/permits-and-application-forms

Commonwealth Lands:	6
Commonwealth Heritage Places:	None
Listed Marine Species:	20
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	13
Regional Forest Agreements:	None
Invasive Species:	24
Nationally Important Wetlands:	6

Details

Matters of National Environmental Significance

Threatened Species		[Resource Information]
Name	Status	Type of Presence
BIRDS		
Amytornis dorotheae		
Carpentarian Grasswren [558]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Erythrotriorchis radiatus		
Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Erythrura gouldiae		
Gouldian Finch [413]	Endangered	Species or species habitat known to occur within area
Falcunculus frontatus whitei		
Crested Shrike-tit (northern), Northern Shrike-tit [26013]	Vulnerable	Species or species habitat likely to occur within area
Grantiella picta		
Painted Honeyeater [470]	Vulnerable	Species or species habitat known to occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pedionomus torquatus		
Plains-wanderer [906]	Critically Endangered	Species or species habitat may occur within area
Pezoporus occidentalis		
Night Parrot [59350]	Endangered	Species or species habitat may occur within area
Polytelis alexandrae		
Princess Parrot, Alexandra's Parrot [758]	Vulnerable	Species or species habitat may occur within area
Rostratula australis		
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Tyto novaehollandiae kimberli		
Masked Owl (northern) [26048]	Vulnerable	Species or species habitat known to occur within area
MAMMALS		
Dasyurus hallucatus		
Northern Quoll, Digul [331]	Endangered	Species or species habitat may occur within area

Name	Status	Type of Presence
Macroderma gigas		
Ghost Bat [174]	Vulnerable	Breeding likely to occur within area
Macrotis lagotis		
Greater Bilby [282]	Vulnerable	Species or species habitat known to occur within area
Petrogale lateralis MacDonnell Ranges race		
Warru, Black-footed Rock-wallaby (MacDonnell Ranges race) [66649]	Vulnerable	Species or species habitat known to occur within area
Pseudantechinus mimulus		
Carpentarian Antechinus [59283]	Vulnerable	Species or species habitat likely to occur within area
Saccolaimus saccolaimus nudicluniatus		
Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat [66889]	Vulnerable	Species or species habitat may occur within area
Zyzomys pedunculatus		
Central Rock-rat, Antina [68]	Endangered	Species or species habitat may occur within area
PLANTS		
Eleocharis papillosa		
Dwarf Desert Spike-rush [2519]	Vulnerable	Species or species habitat may occur within area
REPTILES		
Acanthophis hawkei		
Plains Death Adder [83821]	Vulnerable	Species or species habitat known to occur within area
Elseya lavarackorum		
Gulf Snapping Turtle [67197]	Endangered	Species or species habitat known to occur within area
Liopholis kintorei		
Great Desert Skink, Tjakura, Warrarna, Mulyamiji [83160]	Vulnerable	Species or species habitat may occur within area
SHARKS		
Pristis pristis		
Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat known to occur within area

Migratory Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Marine Species		
Crocodylus porosus		
Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Pristis pristis		
Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat known to occur within area
Migratory Terrestrial Species		
Cecropis daurica		
Red-rumped Swallow [80610]		Species or species habitat may occur within area
Cuculus optatus		
Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
[Hirundo rustica](#) Barn Swallow [662]		Species or species habitat may occur within area
[Motacilla cinerea](#) Grey Wagtail [642]		Species or species habitat may occur within area
[Motacilla flava](#) Yellow Wagtail [644]		Species or species habitat may occur within area
Migratory Wetlands Species		
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
[Charadrius veredus](#) Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
[Glareola maldivarum](#) Oriental Pratincole [840]		Species or species habitat may occur within area
[Numenius madagascariensis](#) Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
[Pandion haliaetus](#) Osprey [952]		Species or species habitat likely to occur within area
[Tringa nebularia](#) Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name
Commonwealth Land -
Commonwealth Land - Australian Government Solicitor
Commonwealth Land - Department of Administrative Services
Commonwealth Land - Department of Transport & Regional Development
Defence - NORFORCE DEPOT - TENNANT CREEK
Defence - RSL Hall

Listed Marine Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
[Anseranas semipalmata](#) Magpie Goose [978]		Species or species habitat may occur within area
[Apus pacificus](#) Fork-tailed Swift [678]		Species or species habitat likely to occur within area
[Ardea alba](#) Great Egret, White Egret [59541]		Species or species habitat known to occur within area

Name	Threatened	Type of Presence
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
Cuculus saturatus Oriental Cuckoo, Himalayan Cuckoo [710]		Species or species habitat may occur within area
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Hirundo daurica Red-rumped Swallow [59480]		Species or species habitat may occur within area
Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area
Reptiles		
Crocodylus johnstoni Freshwater Crocodile, Johnston's Crocodile, Johnston's River Crocodile [1773]		Species or species habitat may occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area

Extra Information

State and Territory Reserves [Resource Information]

Name	State
Attack Creek	NT
Barrow Creek Telegraph Station	NT
Connells Lagoon	NT
Dulcie Range	NT
Iytwelepenty / Davenport Ranges	NT
Iytwelepenty / Davenport Ranges National Park (Proposed)	NT
John Flynn	NT
Karlu Karlu / Devils Marbles	NT
Lake Woods	NT
Longreach Waterhole Protected Area	NT
Northern Tanami	NT
Southern Tanami	NT
Tennant Creek Telegraph Station	NT

Invasive Species [Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit,

Name	Status	Type of Presence
Birds		
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Frogs		
Rhinella marina Cane Toad [83218]		Species or species habitat likely to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Bubalus bubalis Water Buffalo, Swamp Buffalo [1]		Species or species habitat likely to occur within area
Camelus dromedarius Dromedary, Camel [7]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species

Name	Status	Type of Presence
		habitat likely to occur within area
Equus asinus Donkey, Ass [4]		Species or species habitat likely to occur within area
Equus caballus Horse [5]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Acacia nilotica subsp. indica Prickly Acacia [6196]		Species or species habitat may occur within area
Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213]		Species or species habitat likely to occur within area
Jatropha gossypifolia Cotton-leaved Physic-Nut, Bellyache Bush, Cotton-leaf Physic Nut, Cotton-leaf Jatropha, Black Physic Nut [7507]		Species or species habitat likely to occur within area
Parkinsonia aculeata Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]		Species or species habitat likely to occur within area
Parthenium hysterophorus Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed [19566]		Species or species habitat likely to occur within area
Prosopis spp. Mesquite, Algaroba [68407]		Species or species habitat likely to occur within area
Tamarix aphylla Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018]		Species or species habitat likely to occur within area
Vachellia nilotica Prickly Acacia, Blackthorn, Prickly Mimosa, Black Piquant, Babul [84351]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area
Nationally Important Wetlands		[Resource Information]

Name	State
Corella Lake	NT
Eva Downs Swamp	NT
Lake Sylvester	NT
Lake Woods	NT
Lake de Burgh	NT
Tarrabool Lake	NT

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining oigations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environment and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
-Forestry Corporation, NSW
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

Department of the Environment
GPO Box 787
Canberra ACT 2601 Australia
+61 2 6274 1111

APPENDIX ELEVEN

NORTHERN PROJECT AREA

HS&E Statement

3 Kimberley Street, West Leederville WA 6007
PO BOX 1573 West Perth WA 6872
Telephone 08 9381 7838 Facsimile 08 9381 5375
Email: info@emmersonresources.com.au
Website: www.emmersonresources.com.au
ABN 53 117 086 745

Health, Safety, Environment & Community Policy

Emmerson Resources Limited is committed to proactive development of our HSEC (Health, Safety, Environment, and Community) values and culture.

In support of this policy, Emmerson Resources Limited will:

- Ensure that employees and contractors have access to appropriate training, suitable equipment and effective supervision;
- Meet statutory regulations and use "best practice" as our minimum standard and ensure all employees and contractors are aware of their legislative obligations and work in a safe and healthy manner, and in a way that minimises the impact of their activities on the environment and the community;
- Measure and benchmark HSEC performance, to achieve continuous improvement;
- Manage risks through hazard identification, assessment and appropriate corrective actions;
- Maintain our licence to operate by engaging and communicating with all stakeholders and above all respecting the wishes of the traditional owners on whose land we explore;
- Fostering a proactive HSEC culture is everyone's responsibility and thus all employees and contractors are expected to follow workplace practices and actively contribute to their improvement.

Rob Bills

Managing Director and Chief Executive Officer

16/12/2016

APPENDIX TWELVE

NORTHERN PROJECT AREA

Land Access Agreement with Phillip Creek Station

APPENDIX THIRTEEN

NORTHERN PROJECT AREA

Application for Authorisation

Application for Authorisation
Application for Variation of Authorisation

Section 36orSection 38 of the *Mining Management Act*

CHECK APPROPRIATE BOX

☐ **NEW AUTHORISATION(for a new mining site ormining activities)**

Section 36(1)- Application must be accompanied by a mining management plan (section 36(2)(a)) and operator appointment notice (section 36(2)(b).

X **VARIATION TO CURRENT AUTHORISATION**

Section 38(1)-Application must be accompanied by the current mining management plan or the proposed amendment thereof (section 38(3))**and** an explanation of the reasons for the application (for example changes in operator name, mining interests (ie titles) and mining activities).

AUTHORISATION NUMBER(FORMAT 0XXX-XX):	0467-03

NAME OF OPERATOR: (as per ASIC-ABR registered name)	Emmerson Resources Limited
ACN/ABN:	117 086 745
POSTAL ADDRESS:	PO Box 1573, West Perth, Western Australia
	Postcode: 6872
STREET ADDRESS:	3 Kimberley Street, West Leederville, Western Australia
	Postcode: 6007
CONTACT PERSON:	Adam Walters
PHONE:	Business: (08) 9381 7838 Mobile:
E-MAIL:	awalters@emmersonresources.com.au

NAME OF MININGSITE:	Northern Project Area
MININGINTERESTS: (ie: Titlenumbers)	Please refer to Appendix 1 of the Northern Project Area MMP
MINING ACTIVITIES:	Exploration Works as per section 2.3of this MMP

Signed(Operator)	**Name(PleasePrint)**	**Date**
Director	Rob Bills	16/12/2016
Director/CompanySecretary		

Signed inaccordance withsection 126/127*of the*Corporations Act2001Cth*(*delete inapplicablesection)

APPENDIX FOURTEEN

NORTHERN PROJECT AREA

2016 Drill Collar Data

Prospect	Hole No	Easting	Northing	RL	Dip
Rhodes	RHRC001	**415261.87**	**7861785.32**	**301.01**	-70.0
Edna Beryl West	EBWRC001	**416573.10**	**7864800.14**	**24-Oct-00**	-67.0
Edna Beryl West	EBWRC002	**416547.76**	**7864805.43**	**298.39**	-67.0
Edna Beryl West	EBWRC003	**416547.40**	**7864807.41**	**298.41**	-66.0
Edna Beryl West	EBWRC004	**416537.54**	**7864790.41**	**298.25**	-67.0
Edna Beryl West	EBWRC005	**416517.91**	**7864805.21**	**298.13**	-66.0
Edna Beryl West	EBWRC006	**416516.46**	**7864776.71**	**298.05**	-70.0
Edna Beryl West	EBWRC007	**416516.21**	**7864778.67**	**298.02**	-67.0
Edna Beryl West	EBWRC008	**416536.97**	**7864805.22**	**298.20**	-66.0
Edna Beryl West	EBWRC009	**416546.82**	**7864780.13**	**298.23**	-67.0
Edna Beryl West	EBWRC010	**416546.97**	**7864814.13**	**298.26**	-66.5
Edna Beryl West	EBWRC011	**416565.38**	**7864829.08**	**299.40**	-66.5
Edna Beryl West	EBWRC012	**416573.06**	**7864809.09**	**298.97**	-66.5
Edna Beryl West	EBWRC013	**416573.38**	**7864790.91**	**298.65**	-66.5
Edna Beryl West	EBWRC014	**416583.39**	**7864826.57**	**298.87**	-66.5
Edna Beryl West	EBWRC015	**416536.29**	**7864791.06**	**298.25**	-65.5
Edna Beryl ENE Shear	EBWRC016	**416603.80**	**7864829.75**	**300.90**	-66.5
Edna Beryl ENE Shear	EBWRC017	**416603.78**	**7864809.07**	**300.05**	-65.5
Edna Beryl West	EBWRC018	**416582.29**	**7864804.00**	**299.19**	-65.5
Edna Beryl ENE Shear	EBWRC019	**416619.76**	**7864845.91**	**303.11**	-60.0
Edna Beryl ENE Shear	EBWRC020	**416623.79**	**7864837.87**	**303.01**	-66.0
Edna Beryl ENE Shear	EBWRC021	**416637.69**	**7864827.28**	**303.36**	-65.0
Edna Beryl East	EBWRC022	**416689.75**	**7864856.15**	**308.09**	-66.0
Edna Beryl East	EBWRC023	**416709.82**	**7864861.29**	**308.75**	-65.5
Edna Beryl Deeps	EBWRC024	**416645.81**	**7864777.06**	**300.12**	-66.5
Edna Beryl Deeps	EBWRC025	**416645.10**	**7864779.21**	**300.08**	-65.5
Edna Beryl Deeps	EBWRC026	**416657.62**	**7864802.05**	**302.18**	-65.5
Edna Beryl North	EBWRC027	**416606.34**	**7864957.71**	**299.14**	-60.0
Edna Beryl Deeps	**EBWRC028**	**416595.13**	**7865012.99**	**299.28**	-66.0
Edna Beryl Deeps	**EBWRC029**	**416628.85**	**7864994.02**	**300.72**	-66.0
Edna Beryl West	**EBWRC030**	**416573.32**	**7864793.31**	**298.77**	-65.5
Edna Beryl West	**EBWRC033**	**416572.27**	**7864952.54**	**298.40**	-66.0
Edna Beryl Mine	**EBWRC034**	**416656.12**	**7864921.06**	**307.95**	-69.0
Edna Beryl Mine	**EBWRC035**	**416661.57**	**7864923.91**	**308.16**	-65.0
Edna Beryl Deeps	**EBWDD036**	**416655.30**	**7865055.93**	**302.22**	-66.0
Edna Beryl West	**EBWRC038**	**416591.72**	**7864943.01**	**299.15**	-66.0
Edna Beryl West	**EBWRC039**	**416516.87**	**7864912.95**	**298.08**	-66.0
Edna Beryl Deeps	**EBWRC040**	**416640.84**	**7865054.91**	**302.13**	-66.0
Edna Beryl Deeps	**EBWRC041**	**416609.09**	**7864988.66**	**299.06**	-65.0
Edna Beryl Deeps	**EBWRC042**	**416585.37**	**7865013.38**	**299.04**	-65.0
Edna Beryl Deeps	**EBWRC043**	**416553.12**	**7864998.04**	**298.14**	-65.0
Edna Beryl Deeps	**EBWRC044**	**416684.06**	**7864995.37**	**306.66**	-65.0
Edna Beryl Deeps	**EBWRC045**	**416559.5**	**7865022.01**	**298.39**	-65.0
Edna Beryl Deeps	**EBWRC046**	**416603.03**	**7865029.25**	**300.17**	-65.0
Edna Beryl Deeps	**EBWDD047**	**416640.20**	**7865077.8**	**301.67**	-65.0

Edna Beryl Deeps	**EBWRC048**	**416583.15**	**7865038.7**	**299.74**	-65.0
Edna Beryl Deeps	**EBWDD050**	**416615.17**	**7865056.8**	**301.31**	-65.0
Edna Beryl Deeps	**EBWRC052**	**416517.27**	**7864914.71**	**297.97**	-65.0
Edna Beryl Deeps	**EBWRC053**	**416672.66**	**7865031.88**	**303.67**	-65.0
Edna Beryl Deeps	**EBWDD054**	**416622.79**	**7865086.61**	**301.22**	-66.0
Edna Beryl Deeps	**EBWDD055**	**416594.29**	**7865065.88**	**301.39**	-66
Edna Beryl Deeps	**EBWDD032**	**416659.18**	**7865093.92**	**301.32**	-66.0
Edna Beryl Deeps	**EBWDD032**	**416659.18**	**7865093.92**	**301.32**	-66.0
Edna Beryl Deeps	**EBWDD031**	**416655.07**	**7865052.95**	**302.33**	-66.0
Edna Beryl Deeps	**EBWDD031**	**416655.07**	**7865052.95**	**302.33**	-66.0
Edna Beryl Tribute	**GRED42**	**416660.45**	**7864843.01**	**305.80**	-55.0
Edna Beryl Tribute	**GRED42A**	**416660.45**	**7864843.01**	**305.80**	-55.0
Edna Beryl Deeps	**EBWDD049**	**416563.47**	**7865048.6**	**298.86**	-65.0
Edna Beryl Deeps	**EBWDD049**	**416563.47**	**7865048.6**	**298.86**	-65.0
Edna Beryl Deeps	**EBWDD037**	**416652.17**	**7865063.07**	**302.08**	-67.0
Edna Beryl Deeps	**EBWDD037**	**416652.17**	**7865063.07**	**302.08**	-67.0
Edna Beryl Deeps	**EBWDD056**	**416594.19**	**7865067.18**	**301.38**	-66
Edna Beryl Deeps	**EBWDD056**	**416594.19**	**7865067.18**	**301.38**	-66
Edna Beryl Deeps	**EBWDD051**	**416637.96**	**7865085.9**	**301.16**	-67.0
Edna Beryl Deeps	**EBWDD051**	**416637.96**	**7865085.9**	**301.16**	-67

Azi (Nat)	Azi (Mag)	Sample From	Sample To	Number of Samples	RC Depth (m)	Rock Roller (m)	Pre Collar Depth (m)	Diamond NQ (m)
14-Nov-00	10-Nov-00	202643	202672	30	**264.0**			
19-Dec-00	14-Dec-00	161498	161546	49	**161.0**			
18-Dec-00	13-Dec-00	161547	161582	36	**168.0**			
18-Dec-00	13-Dec-00	161583	161648	66	**167.0**			
18-Dec-00	13-Dec-00	161649	161702	54	**192.0**			
352.5	348.0	162038	162072	35	**131.0**			
352.5	348.0	162074	162099	26	**96.0**			
352.5	348.0	162100	162146	47	**180.0**			
353.5	349.0	162147	162204	58	**143.0**			
352.5	348.0	162205	161777	-427	**204.0**			
353.5	349.0	161778	161826	49	**132.0**			
354.0	349.5	162296	162337	42	**108.0**			
353.9	349.4	162338	162384	47	**149.0**			
352.5	348.0	162385	162422	38	**204.0**			
353.8	349.3	162423	162460	38	**108.0**			
353.5	349.0	162073	162073	1	**168.0**			
353.3	348.8	162100	162146	47	**126.0**			
353.3	348.8	162147	162204	58	**156.0**			
353.8	349.3	162205	162264	60	**162.0**			
359.5	355.0	162265	162295	31	**84.0**			
353.4	348.9	162296	162337	42	**114.0**			
353.5	349.0	162338	162384	47	**126.0**			
353.7	349.2	162385	162422	38	**102.0**			
353.4	348.9	162423	162460	38	**102.0**			
349.5	345.0	162461	162484	24	**66.0**			
349.5	345.0	162485	162500	16	**246.0**			
347.5	343.0	157262	157336	75	**204.0**			
164.8	160.3	157337	157392	56	**150.0**			
166.5	162.0	157393	157485	93	**252.0**			
165.5	161.0	157486	157563	78	**210.0**			
348.5	344.0	157564	157623	60	**162.0**			
168.5	164.0	168023	168044	22	**168.0**			
174.3	169.8	168045	168077	33	**108.0**			
179.0	174.5	168078	168088	11	**84.0**			
161.5	157.0	Not Sampled		0	**63.0**			
169.5	165.0	168089	168119	31	**161.0**			
171.5	167.0	Not Sampled		0	**138.0**			
162.5	158.0	168120	168156	37	**294.0**			
166.5	162.0	168292	168294	3	**228.0**			
165.5	161.0	168225	168262	38	**252.0**			
165.0	160.5	168508	168534	27	**263.0**			
175.5	171.0	Not Sampled			**204.0**			
163.5	159.0	168535	168592	58	**264.0**			
166.5	162.0	168593	168601	9	**276.0**			
167.5	163.0				**119.0**			

168.5	164.0	168602	168654	53	**300.0**			
165.5	161.0	157857	157897	41	**234.0**			
168.5	164.0	157908	157942	35	**132.0**			
167.5	163.0	157943	157984	42	**246.0**			
163.5	159.0	157985	157999	15	**264.0**			
166.0	161.5				**47.0**			
161.5	157.0	168000	168022	23	**263.0**			
158.5	154.0	0	0	1			263.0	70.2
165.5	161.0	168189	168201	13	**191.0**			
165.5	161.0	38673	38682	10			191.0	79.2
310.4	305.9	0	0	1			0.0	12.0
310.4	305.9	0	0	1			0.0	15.1
164.5	160.0	157822	157856	35	**246.0**			
164.5	160.0	0	0	1			246.0	81.1
158.5	154.0	Not Sampled		0	**192.0**			
158.5	154.0	38729	38755	27			192.0	98.8
167.9	163.4	158505	158537	33	**281.0**			
168	163.4	38756	38776	21			281.0	53.9
177.5	173.0	157898	157907	10	**227.0**			
178	173.0	38777	38804	28			227.0	73.3

Diamond HQ (m)	Final Hole Depth (m)	Date Started	Date Finished	Drill	Tenure	Logged By (Geologist)	WITH PVC	Mag probed
		10/04/2016	11/04/2016	Bullion	EL28776	DM	YES	YES?
		11/04/2016	12/04/2016	Bullion	MLC705	DM	NO	NO
		12/04/2016	13/04/2016	Bullion	MLC705	DM	NO	NO
		13/04/2016	13/04/2016	Bullion	MLC705	DM	YES	YES
		14/04/2016	14/04/2016	Bullion	MLC705	DM	YES	YES
		5/06/2016	5/06/2016	Bullion	MLC705	SCR	NO	NO
		5/06/2016	6/06/2016	Bullion	MLC705	SCR/LC	NO	NO
		6/06/2016	6/06/2016	Bullion	MLC705	LC	NO	NO
		7/06/2016	7/06/2016	Bullion	MLC705	LC	NO	NO
		7/06/2016	8/06/2016	Bullion	MLC705	LC	NO	NO
		8/06/2016	8/06/2016	Bullion	MLC705	LC	NO	NO
		9/06/2016	9/06/2016	Bullion	MLC705	LC	NO	NO
		9/06/2016	9/06/2016	Bullion	MLC705	LC/SCR	NO	NO
		9/06/2016	11/06/2016	Bullion	MLC705	SCR/DM	NO	NO
		11/06/2016	11/06/2016	Bullion	MLC705	SCR	NO	NO
		12/06/2016	12/06/2016	Bullion	MLC705	DM	NO	NO
		13/06/2016	13/06/2016	Bullion	MLC705	DM	NO	NO
		14/06/2016	14/06/2016	Bullion	MLC705	DM	NO	NO
		14/06/2016	15/06/2016	Bullion	MLC705	DM	NO	NO
		16/06/2016	16/06/2016	Bullion	MLC705	DM	NO	NO
		16/06/2016	16/06/2016	Bullion	MLC705	DM	NO	NO
		16/06/2016	17/06/2016	Bullion	MLC705	SCR	NO	NO
		17/06/2016	17/06/2016	Bullion	MLC705	SCR	NO	NO
		19/06/2016	19/06/2016	Bullion	MLC705	DM	NO	NO
		19/06/2016	19/06/2016	Bullion	MLC705	DM	NO	NO
		19/06/2016	20/06/2016	Bullion	MLC705	DM	NO	NO
		20/06/2016	21/06/2016	Bullion	MLC705	DM	NO	NO
		21/06/2016	22/06/2016	Bullion	MLC705	DM	NO	NO
		22/06/2016	23/06/2016	Bullion	MLC705	DM	NO	NO
		23/06/2016	24/06/2016	Bullion	MLC705	DM	NO	NO
		24/06/2016	25/06/2016	Bullion	MLC705	DM/AC	NO	NO
		18/09/2016	19/09/2016	Bullion	MLC705	DM	NO	NO
		19/09/2016	19/09/2016	Bullion	MLC705	DM	NO	NO
		19/09/2016	19/09/2016	Bullion	MLC705	DM	0/01/1900	0/01/1900
		19/09/2016	19/09/2016	Bullion	MLC705	DM	NO	NO
		20/09/2016	21/09/2016	Bullion	MLC705	DM	NO	NO
		21/09/2016	22/09/2016	Bullion	MLC705	DM	NO	NO
		22/09/2016	24/09/2016	Bullion	MLC705	DM/AC	NO	NO
		26/09/2016	27/09/2016	Bullion	MLC705	AC	NO	NO
		27/09/2016	28/09/2016	Bullion	MLC705	AC	NO	NO
		28/09/2016	29/09/2016	Bullion	MLC705	AC	NO	NO
		30/09/2016	30/09/2016	Bullion	MLC705	SCR	NO	NO
		4/10/2016	4/10/2016	Bullion	MLC705	DM	NO	NO
		4/10/2016	5/10/2016	Bullion	MLC705	DM	NO	NO
		5/10/2016	6/10/2016	Bullion	MLC705	DM	NO	NO

		17/10/2016	18/10/2016	Bullion	MLC705	AC	NO	NO
		21/10/2016	22/102016	Bullion	MLC705	AC/SCR	NO	NO
		24/10/2016	24/10/2016	Bullion	MLC705	DM	NO	NO
		25/10/2016	26/10/2016	Bullion	MLC705	DM	NO	NO
		29/10/2016	30/10/2016	Bullion	MLC705	DM	NO	NO
		30/10/2016	30/10/2016	Bullion	MLC705	DM	NO	NO
		16/09/2016	18/09/2016	Bullion	MLC705	DM	NO	NO
	333.2	18/09/2016	23/09/2013	GMP	MLC705	AC	No	No
		16/09/2016	16/09/2016	Bullion	MLC705	DM/AC	NO	NO
	270.2	12/10/2016	16/10/2016	GMP	MLC705			
	0.0	circa 1996		GMP	MLC705			
	15.1	28/10/2016	30/10/2016	GMP	MLC705	SCR	No	No
		19/10/2016	20/10/2016	Bullion	MLC705	AC	NO	NO
	327.1	1/11/2016	4/11/2016	GMP	MLC705	AC	No	No
		20/09/2016	21/09/2016	Bullion	MLC705	LC	NO	NO
	290.8	17/10/2016	28/10/2011	GMP	MLC705	AC	No	No
		30/10/2016	31/10/2016	Bullion	MLC705	DM	NO	NO
	334.9	6/11/2016	7/11/2016	GMP	MLC705	AC	No	No
		23/10/2016	24/10/2016	Bullion	MLC705	SCR/DM	NO	NO
	300.3	8/11/2016	13/11/2016	GMP	MLC705	DM	No	No

Gamma Probe	Water / Aquifer	Capped	Reahbilitated
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Yes	Yes
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No

	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
No	r Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	Water Table, No a	Temporary	No
	r Table, No a	Temporary	No
No	r Table, No a	Temporary	No
	Water Table, No a	Temporary	No
No	r Table, No a	Temporary	No
	Water Table, No a	Temporary	No
No	r Table, No a	Temporary	No
	Water Table, No a	Temporary	No
No	r Table, No a	Temporary	No
	Water Table, No a	Temporary	No
No	r Table, No a	Temporary	No

Comments
Collect a water sample for the station - dry hole
Eastern EB West extension
Central Up dip EB West (upper/lower tagets)
Central Up dip EB West (upper/lower tagets)
Western EB West extension
Prop_15
Prop16_NOT SENT FOR ASSAY, Abandoned hole at 96m, due to dip not lifting
Recollar of EBWRC006. moved 2m north
Prop_12
Prop_11
Prop_9
Prop_7
Prop_4
Prop_6
Prop_3
Prop_14A
Prop_19
Prop_17
Prop_1
Prop_24
Prop_23
Prop_26
Prop_31 (this hole has been flocced)
Prop_33 (this hole has been flocced)
Prop29A_NOT SENT FOR ASSAY, Abandoned hole at 66m, due to dip not lifting
Recollar of EBWRC024, moved 2m north (this hole has been flocced)
Prop_36A (this hole has been flocced)
Prop_32A (this hole has been flocced)
Prop_35A (this hole has been flocced)
Prop_28A (this hole has been flocced)
Prop6A (this hole has been flocced), ONLY SELECTED SAMPLES FOR ASSAY 157605-157623
Prop8
Kevs_Prop1
Kevs_prop2A
Prop28A, abandoned. Lifting , above trace
Prop10
Prop4 - Missed Target (Not sampled)
Prop30
Prop 24
Prop 18
Prop 14
Prop 31A
Prop 15
Prop 21
Prop22 Abandoned and not sampled - REDESIGN

Prop 19
Prop25, Diamond Tail
Prop4A
Prop32
Prop23, Diamond Tail
Abandoned due to deviation
Prop29, RC pre-collar
Prop29
Prop30, PRC to 191m. To continue with diamon tail.
Prop30
Check Sampling
GRED042 Twin (wedge)
Prop 16 RC Pre-collar. Diamond Tail
Prop16
Prop28B, RC pre-collar. Dtail to be wedged at 192m
Prop28
Prop 20A, Diamond Tail
Prop20A
Prop22A, Diamond Tail
Prop22

APPENDIX FIFTEEN

NORTHERN PROJECT AREA

Proposed Drill Collar Locations

DataSet	PropHole_ID	Hole_Type	Max_Depth	NAT_Grid_I	NAT_East	NAT_North	NAT_RL
Edna Beryl Area	Prop1	RC	200	MGA94_53	416650	7865120	300
Edna Beryl Area	Prop2	RC	200	MGA94_53	416630	7865110	300
Edna Beryl Area	Prop3	RC	200	MGA94_53	416610	7865100	300
Edna Beryl Area	Prop4	RC	200	MGA94_53	416590	7865090	300
Edna Beryl Area	Prop5	RC	200	MGA94_53	416570	7865080	300
Edna Beryl Area	Prop6	RC	200	MGA94_53	416550	7865070	300
Edna Beryl Area	Prop7	RC	200	MGA94_53	416530	7865060	300
Edna Beryl Area	Prop8	RC	200	MGA94_53	416510	7865050	300
Edna Beryl Area	Prop9	RC	200	MGA94_53	416490	7865040	300
Edna Beryl Area	Prop10	RC	200	MGA94_53	416470	7865030	300
Edna Beryl Area	Prop11	RC	200	MGA94_53	416450	7865020	300
Edna Beryl Area	Prop12	RC	200	MGA94_53	416650	7865140	300
Edna Beryl Area	Prop13	RC	250	MGA94_53	416630	7865130	300
Edna Beryl Area	Prop14	RC	250	MGA94_53	416610	7865120	300
Edna Beryl Area	Prop15	RC	250	MGA94_53	416590	7865110	300
Edna Beryl Area	Prop16	RC	250	MGA94_53	416570	7865100	300
Edna Beryl Area	Prop17	RC	250	MGA94_53	416550	7865090	300
Edna Beryl Area	Prop18	RC	250	MGA94_53	416530	7865080	300
Edna Beryl Area	Prop19	RC	250	MGA94_53	416510	7865070	300
Edna Beryl Area	Prop20	RC	250	MGA94_53	416490	7865060	300
Edna Beryl Area	Prop21	RC	250	MGA94_53	416470	7865050	300
Edna Beryl Area	Prop22	RC	250	MGA94_53	416450	7865040	300
Edna Beryl Area	Prop23	RC	250	MGA94_53	416650	7865160	300
Edna Beryl Area	Prop24	RC	250	MGA94_53	416630	7865150	300
Edna Beryl Area	Prop25	RC	250	MGA94_53	416610	7865140	300
Edna Beryl Area	Prop26	RC	250	MGA94_53	416590	7865130	300
Edna Beryl Area	Prop27	RC	250	MGA94_53	416570	7865120	300
Edna Beryl Area	Prop28	RC	250	MGA94_53	416550	7865110	300
Edna Beryl Area	Prop29	RC	250	MGA94_53	416530	7865100	300
Edna Beryl Area	Prop30	RC	300	MGA94_53	416510	7865090	300
Edna Beryl Area	Prop31	RC	300	MGA94_53	416490	7865080	300
Edna Beryl Area	Prop32	RC	300	MGA94_53	416470	7865070	300
Edna Beryl Area	Prop33	RC	300	MGA94_53	416450	7865060	300
Edna Beryl Area	Prop34	RC	300	MGA94_53	416440	7864890	300
Edna Beryl Area	Prop35	RC	300	MGA94_53	416420	7864880	300
Edna Beryl Area	Prop36	RC	300	MGA94_53	416400	7864870	300
Edna Beryl Area	Prop37	RC	300	MGA94_53	416380	7864860	300
Edna Beryl Area	Prop38	RC	300	MGA94_53	416360	7864850	300
Edna Beryl Area	Prop39	RC	300	MGA94_53	416340	7864840	300
Edna Beryl Area	Prop40	RC	300	MGA94_53	416320	7864830	300
Edna Beryl Area	Prop41	RC / DDH	400	MGA94_53	416495	7865040	300
Edna Beryl Area	Prop42	RC / DDH	400	MGA94_53	416475	7865030	300
Edna Beryl Area	Prop43	RC / DDH	400	MGA94_53	416615	7865100	300
Edna Beryl Area	Prop44	RC / DDH	400	MGA94_53	416595	7865090	300
Edna Beryl Area	Prop45	RC / DDH	400	MGA94_53	416515	7865070	300
Edna Beryl Area	Prop46	RC / DDH	400	MGA94_53	416495	7865060	300
Edna Beryl Area	Prop47	RC / DDH	400	MGA94_53	416595	7865130	300
Edna Beryl Area	Prop48	RC / DDH	400	MGA94_53	416575	7865120	300
Edna Beryl Area	Prop49	RC / DDH	400	MGA94_53	416445	7864890	300

Edna Beryl Area	Prop50	RC / DDH	400	MGA94_53	416425	7864880	300
Edna Beryl Region	Prop1	RC	300	MGA94_53	418100	7864880	300
Edna Beryl Region	Prop2	RC	300	MGA94_53	418100	7864860	300
Edna Beryl Region	Prop3	RC	300	MGA94_53	418100	7864840	300
Edna Beryl Region	Prop4	RC	300	MGA94_53	418100	7864820	300
Edna Beryl Region	Prop5	RC	300	MGA94_53	418100	7864800	300
Edna Beryl Region	Prop6	RC	300	MGA94_53	418880	7864320	300
Edna Beryl Region	Prop7	RC	300	MGA94_53	418880	7864300	300
Edna Beryl Region	Prop8	RC	300	MGA94_53	418880	7864280	300
Edna Beryl Region	Prop9	RC	300	MGA94_53	418880	7864260	300
Edna Beryl Region	Prop10	RC	300	MGA94_53	418880	7864240	300
Edna Beryl Region	Prop11	RC	300	MGA94_53	419660	7863760	300
Edna Beryl Region	Prop12	RC	300	MGA94_53	419660	7863740	300
Edna Beryl Region	Prop13	RC	300	MGA94_53	419660	7863720	300
Edna Beryl Region	Prop14	RC	300	MGA94_53	419660	7863700	300
Edna Beryl Region	Prop15	RC	300	MGA94_53	419660	7863680	300
Edna Beryl Region	Prop16	RC	300	MGA94_53	420440	7863200	300
Edna Beryl Region	Prop17	RC	300	MGA94_53	420440	7863180	300
Edna Beryl Region	Prop18	RC	300	MGA94_53	420440	7863160	300
Edna Beryl Region	Prop19	RC	300	MGA94_53	420440	7863140	300
Edna Beryl Region	Prop20	RC	300	MGA94_53	420440	7863120	300
Edna Beryl Region	Prop21	RC	300	MGA94_53	421220	7862640	300
Edna Beryl Region	Prop22	RC	300	MGA94_53	421220	7862620	300
Edna Beryl Region	Prop23	RC	300	MGA94_53	421220	7862600	300
Edna Beryl Region	Prop24	RC	300	MGA94_53	421220	7862580	300
Edna Beryl Region	Prop25	RC	300	MGA94_53	421220	7862560	300
Edna Beryl Region	Prop26	RC	300	MGA94_53	422000	7862080	300
Edna Beryl Region	Prop27	RC	300	MGA94_53	422000	7862060	300
Edna Beryl Region	Prop28	RC	300	MGA94_53	422000	7862040	300
Edna Beryl Region	Prop29	RC	300	MGA94_53	422000	7862020	300
Edna Beryl Region	Prop30	RC	300	MGA94_53	422000	7862000	300
Edna Beryl Region	Prop31	RC / DDH	400	MGA94_53	419665	7863700	300
Edna Beryl Region	Prop32	RC / DDH	400	MGA94_53	419665	7863680	300
Edna Beryl Region	Prop33	RC / DDH	400	MGA94_53	421225	7862640	300
Edna Beryl Region	Prop34	RC / DDH	400	MGA94_53	421225	7862620	300
Edna Beryl Region	Prop35	RC / DDH	400	MGA94_53	422005	7862060	300
Edna Beryl Region	Prop36	RC / DDH	400	MGA94_53	422005	7862040	300
Edna Beryl Region	Prop37	RC / DDH	400	MGA94_53	418105	7864860	300
Edna Beryl Region	Prop38	RC / DDH	400	MGA94_53	418105	7864840	300
Edna Beryl Region	Prop39	RC / DDH	400	MGA94_53	418885	7864280	300
Edna Beryl Region	Prop40	RC / DDH	400	MGA94_53	418885	7864260	300
North Star Marath	Prop1	RC	150	MGA94_53	410950	7862120	300
North Star Marath	Prop2	RC	150	MGA94_53	410930	7862120	300
North Star Marath	Prop3	RC	150	MGA94_53	410910	7862120	300
North Star Marath	Prop4	RC	150	MGA94_53	410890	7862120	300
North Star Marath	Prop5	RC	150	MGA94_53	410870	7862120	300
North Star Marath	Prop6	RC	150	MGA94_53	410950	7862140	300
North Star Marath	Prop7	RC	150	MGA94_53	410930	7862140	300
North Star Marath	Prop8	RC	150	MGA94_53	410910	7862140	300
North Star Marath	Prop9	RC	150	MGA94_53	410890	7862140	300

North Star Marath	Prop10	RC	150	MGA94_53	410870	7862140	300
North Star Marath	Prop11	RC	300	MGA94_53	414200	7866120	300
North Star Marath	Prop12	RC	300	MGA94_53	414220	7866130	300
North Star Marath	Prop13	RC	300	MGA94_53	414240	7866140	300
North Star Marath	Prop14	RC	300	MGA94_53	414780	7865590	300
North Star Marath	Prop15	RC	300	MGA94_53	414760	7865580	300
North Star Marath	Prop16	RC	300	MGA94_53	414740	7865575	300
North Star Marath	Prop17	RC	300	MGA94_53	415260	7865210	300
North Star Marath	Prop18	RC	300	MGA94_53	415240	7865200	300
North Star Marath	Prop19	RC	300	MGA94_53	429300	7862600	300
North Star Marath	Prop20	RC	300	MGA94_53	429320	7862600	300
North Star Marath	Prop21	RC / DDH	500	MGA94_53	410875	7862120	300
North Star Marath	Prop22	RC / DDH	500	MGA94_53	410955	7862140	300
North Star Marath	Prop23	RC / DDH	500	MGA94_53	414245	7866140	300
North Star Marath	Prop24	RC / DDH	500	MGA94_53	429305	7862600	300
North Star Marath	Prop25	RC / DDH	500	MGA94_53	429325	7862600	300
North Star Marath	Prop26	RAB	50	MGA94_53	417800	7866300	300
North Star Marath	Prop27	RAB	50	MGA94_53	417800	7866090	300
North Star Marath	Prop28	RAB	50	MGA94_53	417800	7865880	300
North Star Marath	Prop29	RAB	50	MGA94_53	417800	7865670	300
North Star Marath	Prop30	RAB	50	MGA94_53	417800	7865460	300
North Star Marath	Prop31	RAB	50	MGA94_53	417800	7865250	300
North Star Marath	Prop32	RAB	50	MGA94_53	417800	7865040	300
North Star Marath	Prop33	RAB	50	MGA94_53	417800	7864830	300
North Star Marath	Prop34	RAB	50	MGA94_53	417800	7864620	300
North Star Marath	Prop35	RAB	50	MGA94_53	417800	7864410	300
North Star Marath	Prop36	RAB	50	MGA94_53	417800	7864200	300
North Star Marath	Prop37	RAB	50	MGA94_53	417800	7863990	300
North Star Marath	Prop38	RAB	50	MGA94_53	417800	7863780	300
North Star Marath	Prop39	RAB	50	MGA94_53	417800	786370	300
North Star Marath	Prop40	RAB	50	MGA94_53	417800	7863360	300
North Star Marath	Prop41	RAB	50	MGA94_53	417800	7863150	300
North Star Marath	Prop42	RAB	50	MGA94_53	417800	7862940	300
North Star Marath	Prop43	RAB	50	MGA94_53	417800	7862730	300
North Star Marath	Prop44	RAB	50	MGA94_53	417800	7862520	300
North Star Marath	Prop45	RAB	50	MGA94_53	417800	7862310	300
North Star Marath	Prop46	RAB	50	MGA94_53	419130	7866300	300
North Star Marath	Prop47	RAB	50	MGA94_53	419130	7866090	300
North Star Marath	Prop48	RAB	50	MGA94_53	419130	7865880	300
North Star Marath	Prop49	RAB	50	MGA94_53	419130	7865670	300
North Star Marath	Prop50	RAB	50	MGA94_53	419130	7865460	300
North Star Marath	Prop51	RAB	50	MGA94_53	419130	7865250	300
North Star Marath	Prop52	RAB	50	MGA94_53	419130	7865040	300
North Star Marath	Prop53	RAB	50	MGA94_53	419130	7864830	300
North Star Marath	Prop54	RAB	50	MGA94_53	419130	7864620	300
North Star Marath	Prop55	RAB	50	MGA94_53	419130	7864410	300
North Star Marath	Prop56	RAB	50	MGA94_53	419130	7864200	300
North Star Marath	Prop57	RAB	50	MGA94_53	419130	7863990	300
North Star Marath	Prop58	RAB	50	MGA94_53	419130	7863780	300
North Star Marath	Prop59	RAB	50	MGA94_53	419130	786370	300

North Star Marath	Prop60	RAB	50	MGA94_53	419130	7863360	300
North Star Marath	Prop61	RAB	50	MGA94_53	419130	7863150	300
North Star Marath	Prop62	RAB	50	MGA94_53	419130	7862940	300
North Star Marath	Prop63	RAB	50	MGA94_53	419130	7862730	300
North Star Marath	Prop64	RAB	50	MGA94_53	419130	7862520	300
North Star Marath	Prop65	RAB	50	MGA94_53	419130	7862310	300
North Star Marath	Prop66	RAB	50	MGA94_53	420460	7866300	300
North Star Marath	Prop67	RAB	50	MGA94_53	420460	7866090	300
North Star Marath	Prop68	RAB	50	MGA94_53	420460	7865880	300
North Star Marath	Prop69	RAB	50	MGA94_53	420460	7865670	300
North Star Marath	Prop70	RAB	50	MGA94_53	420460	7865460	300
North Star Marath	Prop71	RAB	50	MGA94_53	420460	7865250	300
North Star Marath	Prop72	RAB	50	MGA94_53	420460	7865040	300
North Star Marath	Prop73	RAB	50	MGA94_53	420460	7864830	300
North Star Marath	Prop74	RAB	50	MGA94_53	420460	7864620	300
North Star Marath	Prop75	RAB	50	MGA94_53	420460	7864410	300
North Star Marath	Prop76	RAB	50	MGA94_53	420460	7864200	300
North Star Marath	Prop77	RAB	50	MGA94_53	420460	7863990	300
North Star Marath	Prop78	RAB	50	MGA94_53	420460	7863780	300
North Star Marath	Prop79	RAB	50	MGA94_53	420460	786370	300
North Star Marath	Prop80	RAB	50	MGA94_53	420460	7863360	300
North Star Marath	Prop81	RAB	50	MGA94_53	420460	7863150	300
North Star Marath	Prop82	RAB	50	MGA94_53	420460	7862940	300
North Star Marath	Prop83	RAB	50	MGA94_53	420460	7862730	300
North Star Marath	Prop84	RAB	50	MGA94_53	420460	7862520	300
North Star Marath	Prop85	RAB	50	MGA94_53	420460	7862310	300
North Star Marath	Prop86	RAB	50	MGA94_53	421790	7866300	300
North Star Marath	Prop87	RAB	50	MGA94_53	421790	7866090	300
North Star Marath	Prop88	RAB	50	MGA94_53	421790	7865880	300
North Star Marath	Prop89	RAB	50	MGA94_53	421790	7865670	300
North Star Marath	Prop90	RAB	50	MGA94_53	421790	7865460	300
North Star Marath	Prop91	RAB	50	MGA94_53	421790	7865250	300
North Star Marath	Prop92	RAB	50	MGA94_53	421790	7865040	300
North Star Marath	Prop93	RAB	50	MGA94_53	421790	7864830	300
North Star Marath	Prop94	RAB	50	MGA94_53	421790	7864620	300
North Star Marath	Prop95	RAB	50	MGA94_53	421790	7864410	300
North Star Marath	Prop96	RAB	50	MGA94_53	421790	7864200	300
North Star Marath	Prop97	RAB	50	MGA94_53	421790	7863990	300
North Star Marath	Prop98	RAB	50	MGA94_53	421790	7863780	300
North Star Marath	Prop99	RAB	50	MGA94_53	421790	786370	300
North Star Marath	Prop100	RAB	50	MGA94_53	421790	7863360	300
North Star Marath	Prop101	RAB	50	MGA94_53	421790	7863150	300
North Star Marath	Prop102	RAB	50	MGA94_53	421790	7862940	300
North Star Marath	Prop103	RAB	50	MGA94_53	421790	7862730	300
North Star Marath	Prop104	RAB	50	MGA94_53	421790	7862520	300
North Star Marath	Prop105	RAB	50	MGA94_53	421790	7862310	300
North Star Marath	Prop106	RAB	50	MGA94_53	423120	7866300	300
North Star Marath	Prop107	RAB	50	MGA94_53	423120	7866090	300
North Star Marath	Prop108	RAB	50	MGA94_53	423120	7865880	300
North Star Marath	Prop109	RAB	50	MGA94_53	423120	7865670	300

North Star Marath	Prop110	RAB	50	MGA94_53	423120	7865460	300
North Star Marath	Prop111	RAB	50	MGA94_53	423120	7865250	300
North Star Marath	Prop112	RAB	50	MGA94_53	423120	7865040	300
North Star Marath	Prop113	RAB	50	MGA94_53	423120	7864830	300
North Star Marath	Prop114	RAB	50	MGA94_53	423120	7864620	300
North Star Marath	Prop115	RAB	50	MGA94_53	423120	7864410	300
North Star Marath	Prop116	RAB	50	MGA94_53	423120	7864200	300
North Star Marath	Prop117	RAB	50	MGA94_53	423120	7863990	300
North Star Marath	Prop118	RAB	50	MGA94_53	423120	7863780	300
North Star Marath	Prop119	RAB	50	MGA94_53	423120	786370	300
North Star Marath	Prop120	RAB	50	MGA94_53	423120	7863360	300
North Star Marath	Prop121	RAB	50	MGA94_53	423120	7863150	300
North Star Marath	Prop122	RAB	50	MGA94_53	423120	7862940	300
North Star Marath	Prop123	RAB	50	MGA94_53	423120	7862730	300
North Star Marath	Prop124	RAB	50	MGA94_53	423120	7862520	300
North Star Marath	Prop125	RAB	50	MGA94_53	423120	7862310	300
North Star Marath	Prop126	RAB	50	MGA94_53	424450	7866300	300
North Star Marath	Prop127	RAB	50	MGA94_53	424450	7866090	300
North Star Marath	Prop128	RAB	50	MGA94_53	424450	7865880	300
North Star Marath	Prop129	RAB	50	MGA94_53	424450	7865670	300
North Star Marath	Prop130	RAB	50	MGA94_53	424450	7865460	300
North Star Marath	Prop131	RAB	50	MGA94_53	424450	7865250	300
North Star Marath	Prop132	RAB	50	MGA94_53	424450	7865040	300
North Star Marath	Prop133	RAB	50	MGA94_53	424450	7864830	300
North Star Marath	Prop134	RAB	50	MGA94_53	424450	7864620	300
North Star Marath	Prop135	RAB	50	MGA94_53	424450	7864410	300
North Star Marath	Prop136	RAB	50	MGA94_53	424450	7864200	300
North Star Marath	Prop137	RAB	50	MGA94_53	424450	7863990	300
North Star Marath	Prop138	RAB	50	MGA94_53	424450	7863780	300
North Star Marath	Prop139	RAB	50	MGA94_53	424450	786370	300
North Star Marath	Prop140	RAB	50	MGA94_53	424450	7863360	300
North Star Marath	Prop141	RAB	50	MGA94_53	424450	7863150	300
North Star Marath	Prop142	RAB	50	MGA94_53	424450	7862940	300
North Star Marath	Prop143	RAB	50	MGA94_53	424450	7862730	300
North Star Marath	Prop144	RAB	50	MGA94_53	424450	7862520	300
North Star Marath	Prop145	RAB	50	MGA94_53	424450	7862310	300
North Star Marath	Prop146	RAB	50	MGA94_53	425780	7866300	300
North Star Marath	Prop147	RAB	50	MGA94_53	425780	7866090	300
North Star Marath	Prop148	RAB	50	MGA94_53	425780	7865880	300
North Star Marath	Prop149	RAB	50	MGA94_53	425780	7865670	300
North Star Marath	Prop150	RAB	50	MGA94_53	425780	7865460	300
North Star Marath	Prop151	RAB	50	MGA94_53	425780	7865250	300
North Star Marath	Prop152	RAB	50	MGA94_53	425780	7865040	300
North Star Marath	Prop153	RAB	50	MGA94_53	425780	7864830	300
North Star Marath	Prop154	RAB	50	MGA94_53	425780	7864620	300
North Star Marath	Prop155	RAB	50	MGA94_53	425780	7864410	300
North Star Marath	Prop156	RAB	50	MGA94_53	425780	7864200	300
North Star Marath	Prop157	RAB	50	MGA94_53	425780	7863990	300
North Star Marath	Prop158	RAB	50	MGA94_53	425780	7863780	300
North Star Marath	Prop159	RAB	50	MGA94_53	425780	786370	300

North Star Marath	Prop160	RAB	50	MGA94_53	425780	7863360	300
North Star Marath	Prop161	RAB	50	MGA94_53	425780	7863150	300
North Star Marath	Prop162	RAB	50	MGA94_53	425780	7862940	300
North Star Marath	Prop163	RAB	50	MGA94_53	425780	7862730	300
North Star Marath	Prop164	RAB	50	MGA94_53	425780	7862520	300
North Star Marath	Prop165	RAB	50	MGA94_53	425780	7862310	300
North Star Marath	Prop166	RAB	50	MGA94_53	427110	7866300	300
North Star Marath	Prop167	RAB	50	MGA94_53	427110	7866090	300
North Star Marath	Prop168	RAB	50	MGA94_53	427110	7865880	300
North Star Marath	Prop169	RAB	50	MGA94_53	427110	7865670	300
North Star Marath	Prop170	RAB	50	MGA94_53	427110	7865460	300
North Star Marath	Prop171	RAB	50	MGA94_53	427110	7865250	300
North Star Marath	Prop172	RAB	50	MGA94_53	427110	7865040	300
North Star Marath	Prop173	RAB	50	MGA94_53	427110	7864830	300
North Star Marath	Prop174	RAB	50	MGA94_53	427110	7864620	300
North Star Marath	Prop175	RAB	50	MGA94_53	427110	7864410	300
North Star Marath	Prop176	RAB	50	MGA94_53	427110	7864200	300
North Star Marath	Prop177	RAB	50	MGA94_53	427110	7863990	300
North Star Marath	Prop178	RAB	50	MGA94_53	427110	7863780	300
North Star Marath	Prop179	RAB	50	MGA94_53	427110	786370	300
North Star Marath	Prop180	RAB	50	MGA94_53	427110	7863360	300
North Star Marath	Prop181	RAB	50	MGA94_53	427110	7863150	300
North Star Marath	Prop182	RAB	50	MGA94_53	427110	7862940	300
North Star Marath	Prop183	RAB	50	MGA94_53	427110	7862730	300
North Star Marath	Prop184	RAB	50	MGA94_53	427110	7862520	300
North Star Marath	Prop185	RAB	50	MGA94_53	427110	7862310	300
North Star Marath	Prop186	RAB	50	MGA94_53	428440	7866300	300
North Star Marath	Prop187	RAB	50	MGA94_53	428440	7866090	300
North Star Marath	Prop188	RAB	50	MGA94_53	428440	7865880	300
North Star Marath	Prop189	RAB	50	MGA94_53	428440	7865670	300
North Star Marath	Prop190	RAB	50	MGA94_53	428440	7865460	300
North Star Marath	Prop191	RAB	50	MGA94_53	428440	7865250	300
North Star Marath	Prop192	RAB	50	MGA94_53	428440	7865040	300
North Star Marath	Prop193	RAB	50	MGA94_53	428440	7864830	300
North Star Marath	Prop194	RAB	50	MGA94_53	428440	7864620	300
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North Star Marath	Prop196	RAB	50	MGA94_53	428440	7864200	300
North Star Marath	Prop197	RAB	50	MGA94_53	428440	7863990	300
North Star Marath	Prop198	RAB	50	MGA94_53	428440	7863780	300
North Star Marath	Prop199	RAB	50	MGA94_53	428440	786370	300
North Star Marath	Prop200	RAB	50	MGA94_53	428440	7863360	300
North Star Marath	Prop201	RAB	50	MGA94_53	428440	7863150	300
North Star Marath	Prop202	RAB	50	MGA94_53	428440	7862940	300
North Star Marath	Prop203	RAB	50	MGA94_53	428440	7862730	300
North Star Marath	Prop204	RAB	50	MGA94_53	428440	7862520	300
North Star Marath	Prop205	RAB	50	MGA94_53	429770	7862310	300
North Star Marath	Prop206	RAB	50	MGA94_53	429770	7866300	300
North Star Marath	Prop207	RAB	50	MGA94_53	429770	7866090	300
North Star Marath	Prop208	RAB	50	MGA94_53	429770	7865880	300
North Star Marath	Prop209	RAB	50	MGA94_53	429770	7865670	300

North Star Marath	Prop210	RAB	50	MGA94_53	429770	7865460	300
North Star Marath	Prop211	RAB	50	MGA94_53	429770	7865250	300
North Star Marath	Prop212	RAB	50	MGA94_53	429770	7865040	300
North Star Marath	Prop213	RAB	50	MGA94_53	429770	7864830	300
North Star Marath	Prop214	RAB	50	MGA94_53	429770	7864620	300
North Star Marath	Prop215	RAB	50	MGA94_53	429770	7864410	300
North Star Marath	Prop216	RAB	50	MGA94_53	429770	7864200	300
North Star Marath	Prop217	RAB	50	MGA94_53	429770	7863990	300
North Star Marath	Prop218	RAB	50	MGA94_53	429770	7863780	300
North Star Marath	Prop219	RAB	50	MGA94_53	429770	786370	300
North Star Marath	Prop220	RAB	50	MGA94_53	429770	7863360	300
North Star Marath	Prop221	RAB	50	MGA94_53	429770	7863150	300
North Star Marath	Prop222	RAB	50	MGA94_53	429770	7862940	300
North Star Marath	Prop223	RAB	50	MGA94_53	429770	7862730	300
North Star Marath	Prop224	RAB	50	MGA94_53	429770	7862520	300
North Star Marath	Prop225	RAB	50	MGA94_53	429770	7862310	300
Greenfields	Prop1	RC	300	MGA94_53	413200	7866900	300
Greenfields	Prop2	RC	300	MGA94_53	413210	7866910	300
Greenfields	Prop3	RC	300	MGA94_53	413220	7866920	300
Greenfields	Prop4	RC	300	MGA94_53	413230	7866930	300
Greenfields	Prop5	RC	300	MGA94_53	413240	7866940	300

Comment

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Cooridnate Point	Easting	Northing
1	416200	7865250
2	416200	7864750
3	416900	7865250
4	416900	7864750

APPENDIX SIXTEEN

NORTHERN PROJECT AREA

CLC Clearance Cetificate