



**PNX Metals Ltd**

**2016/2017**

**MINING MANAGEMENT PLAN FOR**

**EXPLORATION ACTIVITIES**

**FOR**

**CHESSMAN PROJECT**

**Authorisation Number – (NEW)**

**Submitted 22/07/2016**



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Front page: Tractor Corner

## 1.0 OPERATOR DETAILS

Table 1: Operator Details

<b>Operator Name:</b>	PNX Metals Limited (“PNX”)
<b>Key Contact Person/s:</b>	Mr Andy Bennett
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## 1.1 ORGANISATIONAL STRUCTURE / CHART

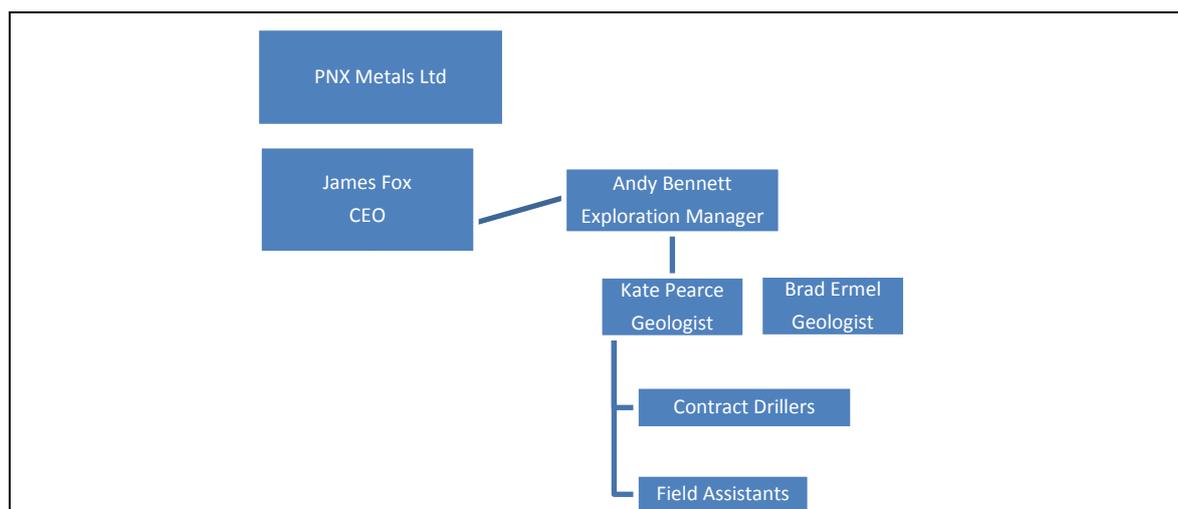


Figure 1: Organisational Chart

## 1.2 WORKFORCE

Exploration activities for the Chessman project will utilise up to six personnel, including one geologist (Andy Bennett, Kate Pearce or Brad Ermel), one field assistant (contracted), up to three drilling personnel (contracted driller and two offside) and one supervisor/manager/director (from time to time).

PNX is in the process of securing drilling and earthmoving contractors for the upcoming 2016 exploration programme. The local pastoralist has indicated availability and experience in preparing drill pads.

While onsite, all staff and contractors will be required to work up to 12 hour days and will reside in Katherine.

## 2.0 PROJECT DETAILS

Table 2: Project Details

<b>Project Name:</b>	Chessman
<b>Location:</b>	Approximately 20km east of Katherine
<b>Site Access:</b>	The main access is from Katherine, southeast via the Stuart Highway to the turn-off (20km) and then via good station tracks and mining tracks. Alternative access to the northern areas is via the Katherine Gorge Road for approximately 16km northeast from Katherine, then via the fire break track into ML30293. See Figures 2 and 3.
<b>Mining Interest/s:</b>	EL25054, EL28902, ML30293
<b>Title holder/s:</b>	Newmarket Gold Inc (“ <b>Newmarket</b> ”). (Refer to Appendix I for nomination of operator form and authorisation application - originals of which have been mailed)

## 2.1 MAP OF SITE LOCATION AND LAYOUT

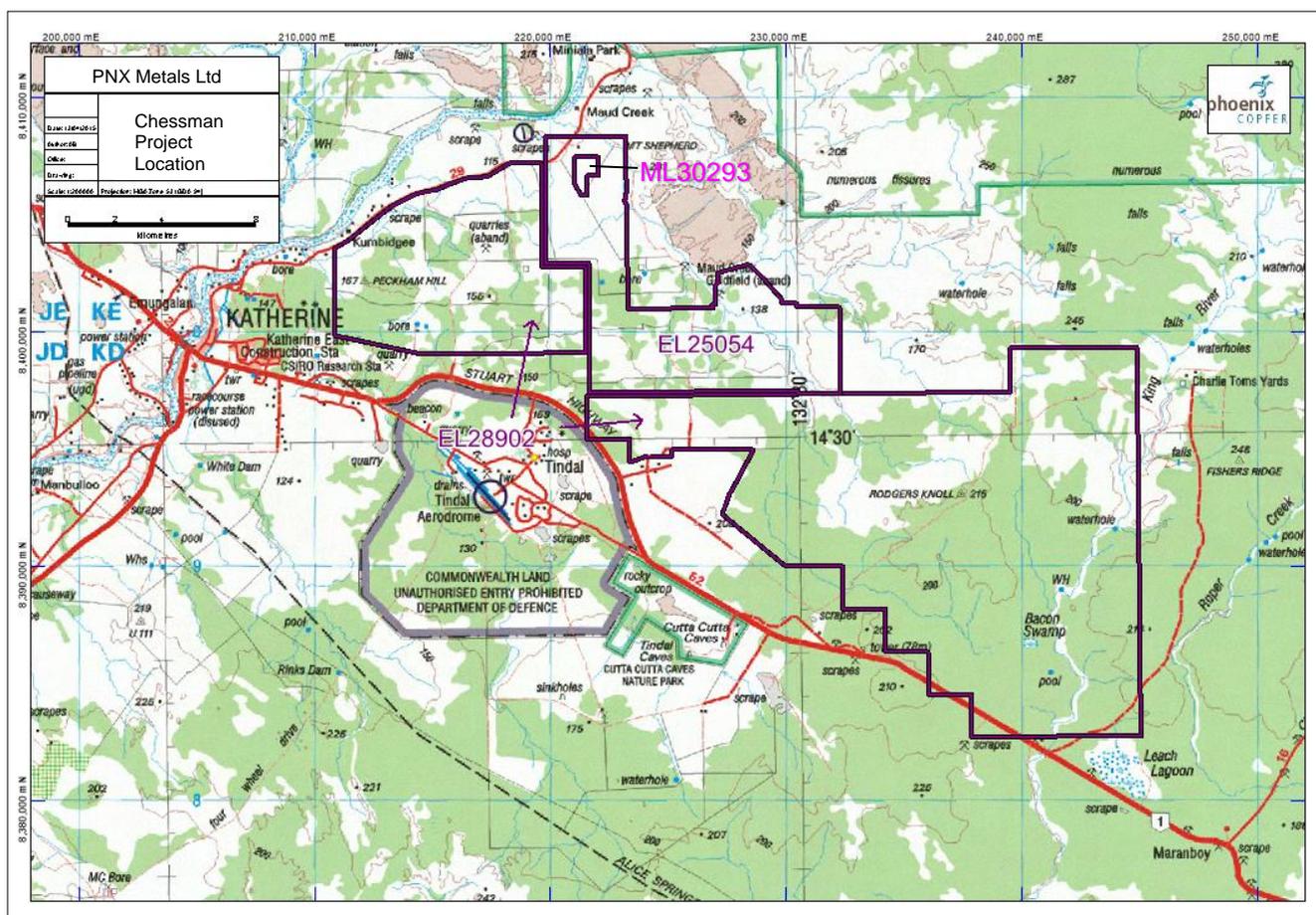


Figure 2: Chessman Project Location

## 2.2 HISTORY OF DEVELOPMENT AND CURRENT STATUS

The Chessman Project is situated south and west of Newmarket's Maud Creek Project, for which a "Preliminary Economic Assessment" was announced earlier in 2016. PNX entered into an agreement with Newmarket in 2014 whereby PNX can earn up to 90% interest in the Chessman tenements through staged expenditures covering a wider tenement group. PNX are primarily targeting base metals on the Chessman Project, although recognise the opportunity for gold mineralisation as well.

On **EL25054** and **EL28902**, there appears to have been very little sub-surface exploration undertaken. Exploration works have focussed on soil geochemistry and aerial geophysical surveys. EL25054 has also been included in Newmarket's Care and Maintenance/Exploration MMP's for Maud Creek (under Authorisation 0525-01)

On **ML30293**, (the Chessman-Red Queen Mineral Lease) previous exploration has included:

- **Magnum Exploration NL 1973 (EL147)** explored for copper-uranium. They drilled 7 holes which met with pyritic material with low copper values. They also dug trenches, and obtained anomalous copper and molybdenum values.
- **CSR Limited 1986 (EL4874)** held large tracts of the Maud Creek area. Their Peckham Hill EL4874 covered the Chessman/Red Queen prospect. They conducted exploration programs comprising rock chip sampling, soil sampling, trenching and drilling at Red Queen. Percussion drilling totalled 1210m in 9 holes (CMPDH series). The results were sub economic with the best values falling in the range 0.1 to 0.4g Au/t over intervals up to 19m.
- **Placer 1989-1990 (EL4874)** re-established the CSR grid and conducted soil sampling, rock chip sampling, mapping, two lines of IP, ground magnetics and five RC holes were drilled at Red Queen for 576m (RQP series). Hole RQP5 drilled under a soil anomaly near a chargeability anomaly met with 10m @ 0.95g Au/t from 46m and 8m @ 0.97g Au/t from 60m. The associated lithology was black cherts.
- **Kilkenny Gold NL 1997-1999** Kalmet purchased the Maud Creek Prospect from Placer on 22 August 1996. Kalmet became a wholly owned subsidiary of Kilkenny Gold in September 1997. Kalmet commissioned an ultradetailed airborne magnetic and radiometric survey over the tenement holding. Soil sampling and a program of RC drilling comprising 35 holes/2673m (CRP series) was carried out. A number of interesting results were detected, including 7m @ 2.02 g/t Au in CRP009 and 8m @ 1.28 g/t Au in CRP005. Work at Chessman/Red Queen then waned during the development drilling and mining of the Main Zone Maud Creek gold deposit in 2000.
- **Newmarket 2011**. After a series of ownership changes, Newmarket took over the failed GBS and completed a project wide VTEM survey and further soil sampling.

## 2.3 PROPOSED ACTIVITIES

Work during 2016 is planned only at the Tractor Corner Prospect, where PNX was successful in gaining collaboration funding under the DME exploration initiative. No ground disturbing work is planned outside of the Tractor Corner area at this stage.

### 2.3.1 Tractor Corner

A two-hole 580m diamond drill program has been designed to investigate the presence of SEDEX style Zn-Pb mineralisation within the Jindare Formation. The two planned holes are summarised in **Table 3 and Figure 3**.

Both holes are located very close to existing station tracks with only 490m of new track estimated to be required (GIS files are provided in **Appendix IX**). Sumps will be required at both sites and drill pads are expected to be 20x20m in dimension. Water will be initially carted from Katherine to fill sumps until circulation is maintained.

All core will be transported offsite to Brock Creek core facility near Hayes Creek to be logged and processed.

**Table 3: Proposed Drilling Locations at Tractor Corner**

Target	Hole ID	East (MGA53)	North (MGA53)	Dip	Azi	Depth
Tractor Corner	TCDD001	225440	8398960	-60	000	240 m
MCLT-005	TCDD002	223975	8398250	-60	060	340 m

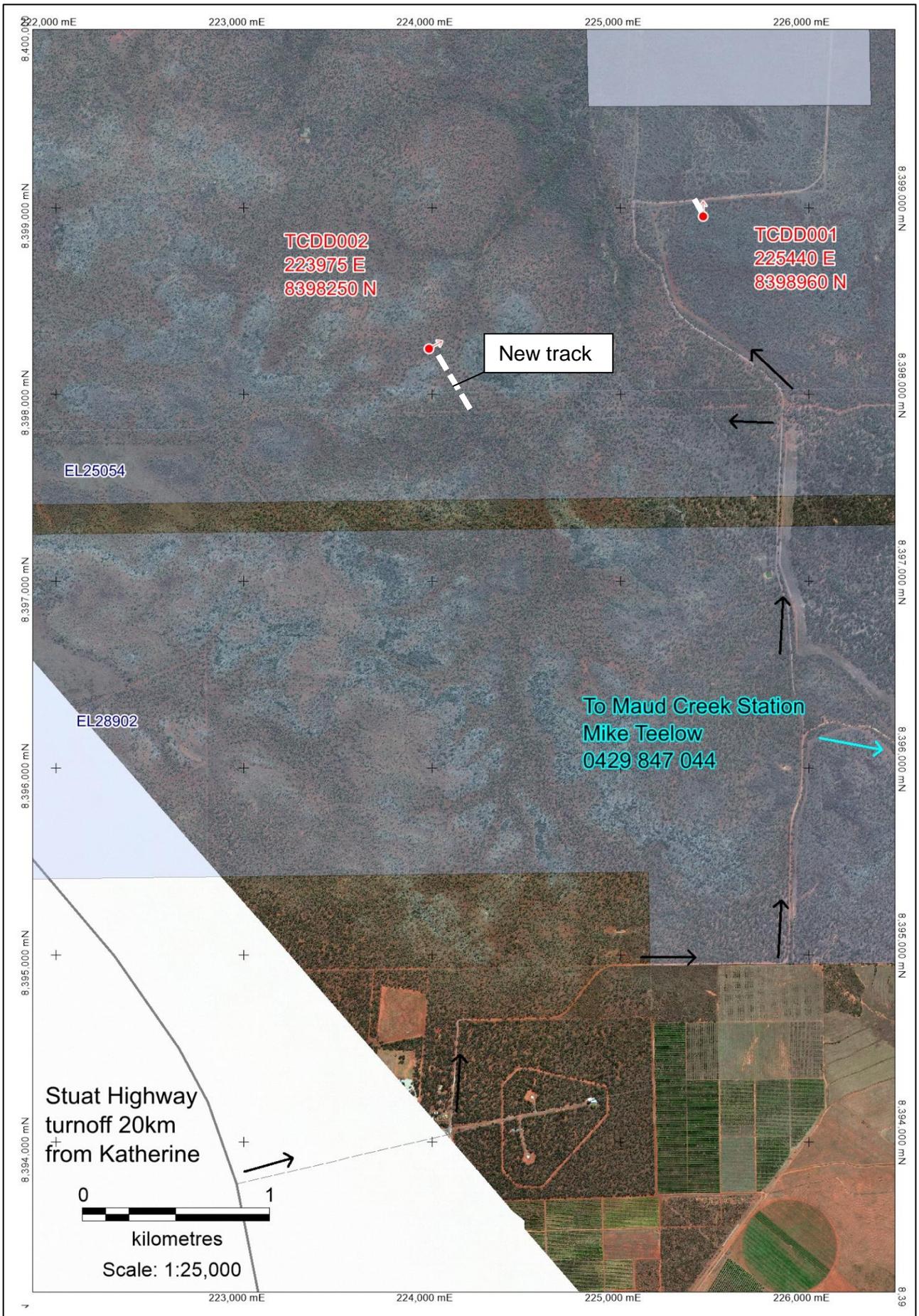


Figure 3: Tractor Corner Drilling Locations and Access

Table 4: Summary of Proposed Disturbance for Tractor Corner

<b>Mining Interests (i.e. titles)</b>	<b>Tractor Corner</b>
<b>What time of the year will exploration occur?</b>	October 2016
<b>How long is exploration expected to occur?</b>	3 weeks
<b>Type of drilling (i.e. RAB, RC, Diamond, aircore)</b>	Diamond
<b>Target commodity</b>	Base metals
<b>Is drilling likely to encounter radioactive material?</b>	No
<b>Number of proposed drill holes</b>	2
<b>Maximum depth of holes</b>	340m
<b>Number of drill pads 2 (Length: 20x Width: 20m)</b>	0.08 Ha
<b>Is drilling likely to encounter groundwater? (Y, N, unsure)</b>	Yes
<b>Number of sumps (Length: 2x Width: 2x Depth:2 m)</b>	4 (32m <sup>3</sup> , 0.002 Ha)
<b>Length of line / track clearing (Kilometres: 0.49 x Width: 3 m)</b>	0.147 Ha
<b>Number of costeans (Length: x Width: x Depth: m)</b>	0
<b>Total bulk sample (tonnes) (Length: x Width: x Depth: m)</b>	0
<b>Will topsoil be removed for rehabilitation purposes?</b>	Yes, if present.
<b>Previous disturbance yet to be rehabilitated on title (ha) if known</b>	Unknown, No previous exploration activities undertaken by PNX Metals Limited.
<b>Camp (Length: 490 x Width: 3m)</b>	0
<b>Total area disturbed (hectares)</b>	0.229 Ha
<b>Other:</b>	N/A

## 2.4 COMPLETED ACTIVITIES

Nil. This is the first MMP under this authorisation application.

### 3.0 CURRENT PROJECT SITE CONDITIONS

#### 3.1 Climate

PNX searched the NT NRM records (**Appendix II**), which provided climate statistics from the Bureau Of Meteorology as per **Figure 4**, from the nearby Katherine Aviation Museum. The mean maximum temperature is 34.0°C, the mean minimum temperature is 20.3°C, the average rainfall is 1123.7mm and the average days of rain is 43.2, which occurs mostly between November and March.

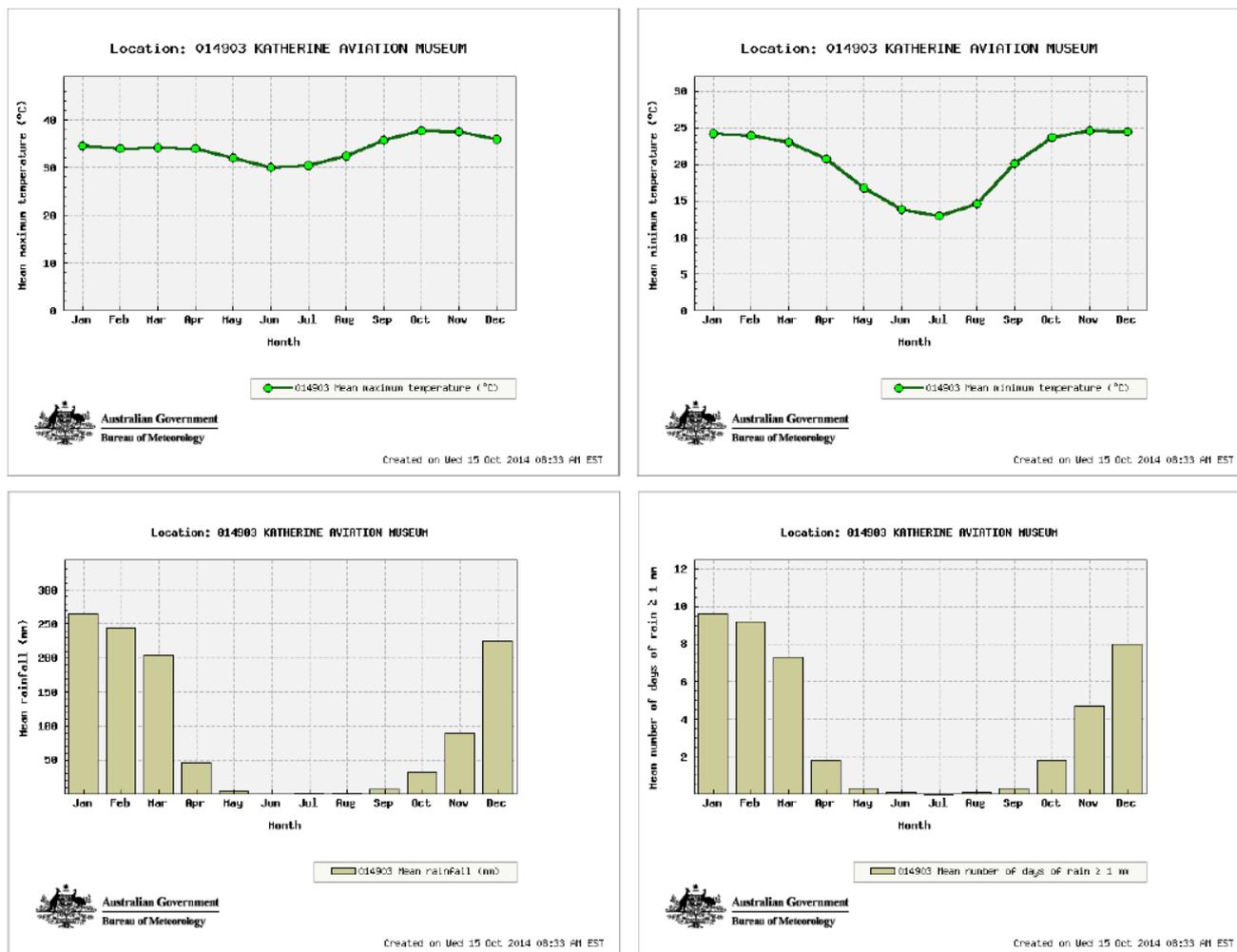


Figure 4: Climate Summaries from Katherine Aviation Museum

#### 3.2 Geology and Land Systems

The Project geology is summarised in **Figure 5**. The Project area is situated at the exposed southern margin of the Pine Creek Orogen, a tightly folded sequence of Lower Proterozoic rocks, 10km to 14km in thickness, laid down on a rifted granitic Archaean basement during the interval ~2.2-1.87Ga. The sequence is dominated by pelitic and psammitic (continental shelf shallow marine) sediments with locally significant inter-layered cherty tuff units. Greywackes and tuffs of the Tollis Formation (~1870Ma) are represented in the project area and the Maud Creek Goldfields are hosted within the Maud Creek Dolerite which intrudes the Tollis Formation.

The Tollis Formation is unconformably overlain by the Edith River Group. The Edith River Group is dominated by the Plum Tree Creek Volcanics, which are an extensive ignimbrite suite that covers 6,000 km<sup>2</sup>. The Edith River Group is overlain concordantly by the Katherine River Group of the McArthur Basin (~1820-1710Ma). At Maud Creek, the Katherine River Group is represented by the Kombolgie Formation, the lowest Formation in the Group.

A depositional hiatus occurred between the middle Proterozoic and earliest Cambrian time which ended with the extrusion of the Antrim Plateau Volcanics in the early Cambrian (~510Ma), part of a widespread

outpouring of sub-aerial basaltic lava in northern Australia and elsewhere. The Jindare Formation is a poorly documented unit wedged between the Antrim Plateau Volcanics (possibly interfingering with them) and the younger Daly Basin sediments. This is the primary target host for SEDEX mineralisation, consisting of sandstone, siltstone, shale, and conglomerate with a thickness of up to 200m.

Gently dipping Cambrian rocks of the Daly River Group unconformably overlie the Antrim Plateau Volcanics and are probably conformable with the underlying Jindare Formation, and in the area of study comprise the Tindal Limestone, which forms widespread outcrops around the margin of the Daly Basin.

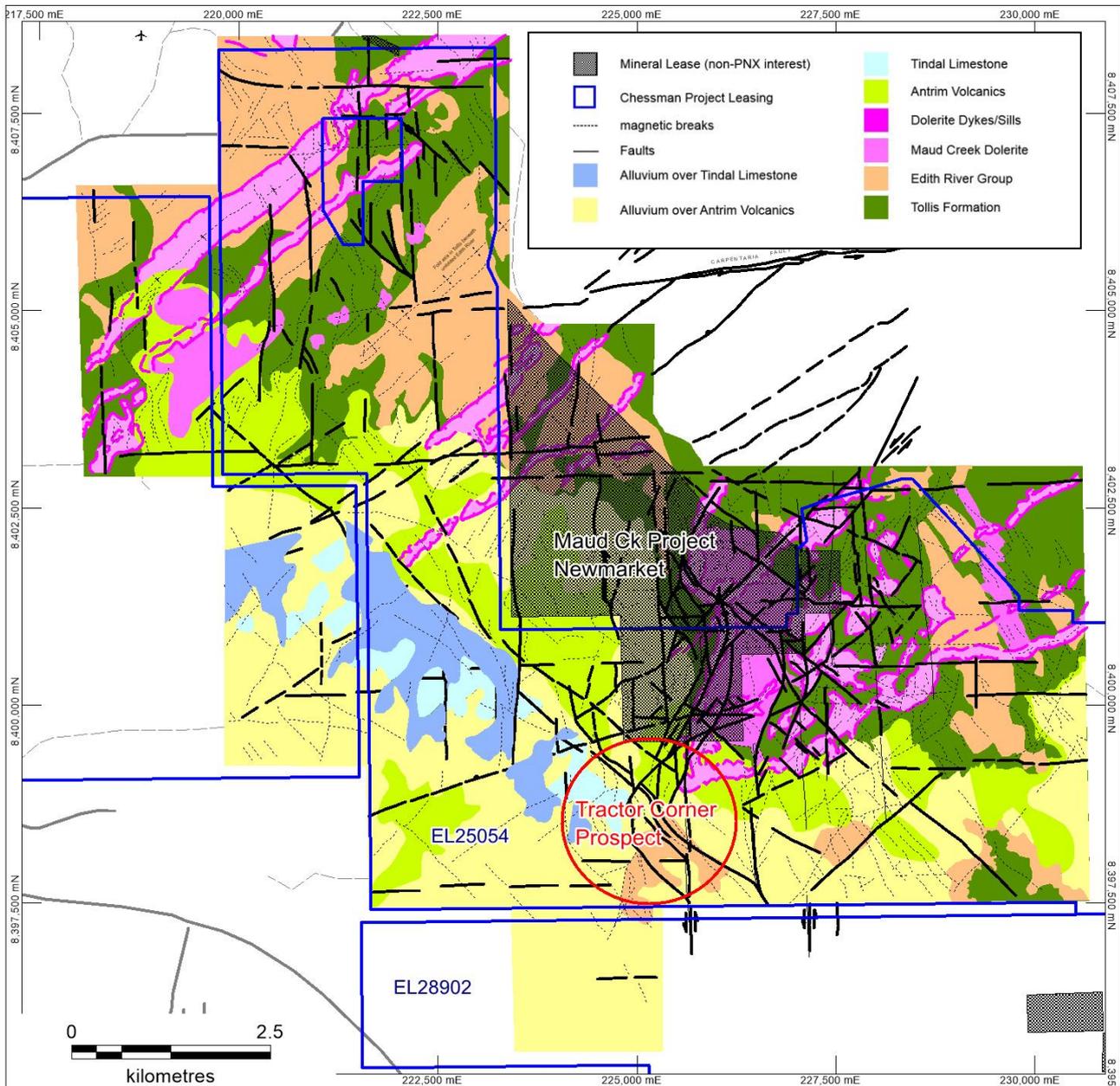


Figure 5: Chessman Project Regional Geology

The terrain in the surrounding area ranges from undulating rises to rugged hills. The southern and south western parts of the surrounding Maud Creek Station are undulating mildly dissected lands with rounded crests. Slopes are generally within a range of 1 to 3%. In the project area the landscape is gently sloping to flat (approximately 1% slope).

### 3.3 Topsoil and Subsoils

The properties associated with soil units in the project area are identified in **Table 5** and locally for the Tractor Corner prospect refer to **Appendix II** (NT NRM report). The soils are varied and range in depth from shallow and rocky in sloping terrain to deep in level to gently sloping terrain over rock. Soil types

vary with and sedimentary geologies produce loams and sands, sometimes sodic at depth (Kandosols, Sodosols). Carbonate parent materials produce calcareous soils (Calcarosols). The volcanic geology produces cracking clays (Vertosols). At Tractor Corner loamy rudosols are predicted.

**Table 5: Soil Descriptions with the Chessman Project**

Soil Unit	Area	Geology	Soils	Australian Soils Classification
1	16%	Tollis Formation in the north and Edith River volcanics in the east	Gravelly soils. Sandy, loamy or clayey gravels. Skeletal soils	Rudosols (Skeletal soils)
2	1%	Antrim Plateau Volcanics west	Sands, earthy sands – siliceous sands	Dermosol (Earthy sands)
3	3%	Maud Dolerite in the east	Loams, gravelly loams, uniform or gradational profiles	Rudosols (Shallow gravelly red loams)
4	19%	Antrim Plateau Volcanics in the north and in the south, Edith River Volcanics in the north and east	Red clay soils with a uniform or gradational profile	Kandosols (Red earths)
5	10%	Antrim Plateau Volcanics in the south and west.	Red clay soils with a uniform profile	Kandosols (Red earths)
6	15%	Cainozoic Residual soil/slope wash in the north and the east	Medium deep uniform or thin loamy surface duplex soils with dark brown or yellow brown clay subsoils underlain by calcrete or calcareous clays	Calcarosols
7	6%	Quaternary Alluvium in the north and east	Deep loamy surface duplex soils with alkaline mottled clay subsoils	Sodosols
8	25%	Antrim Plateau Volcanics in the southwest	Shallow to medium deep grey, brown or dark coloured cracking clay soils over basalt	Vertosols
9	5%	Quaternary Alluvium in the north and south	Deep dark coloured grey or brown cracking clay soils. Alluvial soils	Vertosols

### 3.4 Hydrology and Hydrogeology

#### *Surface Water*

Surface water generally drains northwards into the Katherine River, entering below the Katherine Gorge and upstream of the Katherine Township.

Beneficial use of surface waters in the project area is limited to small stock water supply dams. However, runoff from the catchments contribute to flow in the Katherine River. The larger Katherine River catchment provides potable water supply to the town of Katherine via a water extraction point at Donkey Camp 30 km downstream from the Maud Creek mine site.

Stream flow gauging for tributaries of the Katherine River indicate that streams flow between November and May with a stream flow maximum in February/March.

Currently, the baseline aquatic environment is in a moderately disturbed condition from pastoral land use and previous mining activity. Historical water quality monitoring results for the Gold Creek catchment is typical of relatively hard waters, dominated by magnesium and calcium sulphate.

## Groundwater

Information on the local groundwater conditions has largely been sourced from nearby Maud Creek area.

Local and regional groundwater flow is controlled by fracturing, surface weathering and alluvial sedimentation. Groundwater at the Maud Creek Deposit is located within fractured, weathered and oxidised tuff, particularly near the contact with the main quartz vein. The quartz breccia zone between the water table and about 100 m depth also forms a fractured rock aquifer. Groundwater may also be present at the interface and within the upper portion of the fresh tuff.

Recharge to the aquifers is from direct infiltration of rainfall, especially near the outcrop of the quartz and quartz breccia. Gold Creek is also a source of recharge to the local aquifers with seepage through the river bed. Groundwater levels in the Maud Creek area are between one and six metres below ground level, depending on topography. Groundwater flow is to the northeast, towards Maud Creek. Seasonal variations in groundwater levels are expected to be between two and four metres.

Regional groundwater yields are low, in the areas of unfractured Tollis Formation, Maud Dolerite and Antrim Plateau Volcanics. Regional drilling indicates low airlift yields up to 100 kL/day. Yields are higher where cavernous limestone or fractured rock is intersected, with yields up to 500 kL/day being reported. Locally, within the Maud Creek Deposit, groundwater yields of up to 1,200 kL/day are reported.

Monitoring in the vicinity of Maud Creek site infrastructure, reported groundwater to be of freshwater quality with an electrical conductivity generally less than 1,200 uS/cm and neutral to slightly alkaline pH (6.99 to 8.13 pH units).

A search of nearby bores by PNX revealed that there two bores located near the Tractor Corner Prospect:

- Bore number RN025636 when sampled in 1988, tested with a pH of 7.4, a conductivity of 870 uS/cm, TDS 500 mg/L, total hardness of 484 mg/L and total alkalinity of 505 mg/L
- Bore number RN007824, when sampled in 1971, tested with a pH of 8, a conductivity of 570 uS/cm, TDS 330 mg/L, total hardness of 234 mg/L and total alkalinity of 312 mg/L.

## 3.5 Flora and Fauna

The NT NRM search (**Appendix II**) predicts largely open woodland as the main vegetation community which was last burnt in 2014. Local vegetation in the Tractor Corner area is shown in **Figure 6**. Cropping areas occur just outside the lease areas (**Figure 3**).



Figure 6: Vegetation at Tractor Corner TCDD001 (LHS) and TCDD002 (RHS)

Threatened species recorded within the NRM search area (**Appendix II**) and the EPBC search (**Appendix VIII**) are shown in **Table 6**. There are 15 vulnerable species, two endangered species (the

Arnhemland Egernia reptile and the Northern Brush-tailed Phascogale mammal) and one critical species (the Northern Quoll) which may occur in the Project area.

Native species in the Project area are too numerous to mention, but are listed in **Appendix II**. The list of weed species is also provided in **Appendix II**. Those listed as NT Class A (to be eradicated) are Fierce Thornapple, Small Devil's Claw and Chinese Apple.

The fauna is dominated by cattle and buffalo, as part of pastoral activities. Other feral animals likely to inhabit the area include cane toads, dingos, cats, donkeys, horses and pigs.

**Table 6: Threatened Species Search Results**



Threatened species recorded in the grid cell(s) in which Custom area occurs (Records Updated: Sept 2013)

Group	Family Name	Scientific Name	Common Name	NT Status	National Status	#Observations	Latest Observation Date	#Specimens	Latest Specimen Date	#Surveys	Latest Survey Record
Cycads	Cycadaceae	<i>Cycas armstrongii</i>	Armstrong's Cycad	VU		0	Unknown	0	Unknown	2	1998
Flowering Plants	Lentibulariaceae	<i>Utricularia singeriana</i>	Bladderwort	VU		0	Unknown	3	2005	0	Unknown
Reptiles	Scincidae	<i>Bellatorias obiri</i>	Arnhemland Egernia	EN	EN	0	Unknown	0	Unknown	1	2011
Reptiles	Varanidae	<i>Varanus mertensi</i>	Mertens' Water Monitor	VU		6	1996	11	1979	2	1994
Reptiles	Varanidae	<i>Varanus mitchelli</i>	Mitchell's Water Monitor	VU		1	2011	7	1979	2	1990
Reptiles	Varanidae	<i>Varanus panoptes</i>	Yellow-spotted Monitor	VU		0	Unknown	4	1978	1	1990
Birds	Columbidae	<i>Geophaps smithii</i>	Partridge Pigeon	VU	VU	15	1999	1	1911	0	Unknown
Birds	Accipitridae	<i>Erythrotriorchis radiatus</i>	Red Goshawk	VU	VU	3	2007	0	Unknown	0	Unknown
Birds	Falconidae	<i>Falco hypoleucos</i>	Grey Falcon	VU		4	2001	0	Unknown	3	2005
Birds	Charadriidae	<i>Charadrius mongolus</i>	Lesser Sand Plover	VU	EN	1	1988	0	Unknown	0	Unknown
Birds	Tytonidae	<i>Tyto novaehollandiae kimberli</i>	Masked Owl (northern mainland)	VU	VU	2	1992	0	Unknown	0	Unknown
Birds	Maluridae	<i>Amytornis woodwardi</i>	White-throated Grasswren	VU		1	1992	0	Unknown	0	Unknown
Birds	Pachycephalidae	<i>Falcunculus frontatus</i>	Crested Shrike-tit		VU	5	1996	0	Unknown	3	1998
Birds	Estrilidae	<i>Erythrura gouldiae</i>	Gouldian Finch	VU	EN	497	2011	23	1992	18	2011
Mammals	Dasyuridae	<i>Dasyurus hallucatus</i>	Northern Quoll	CR	EN	8	1992	3	1996	2	1990
Mammals	Dasyuridae	<i>Phascogale pirata</i>	Northern Brush-tailed Phascogale	EN	VU	1	1995	0	Unknown	0	Unknown
Mammals	Megadermatidae	<i>Macroderma gigas</i>	Ghost Bat		VU	7	2011	9	1996	5	2011
Mammals	Hipposideridae	<i>Hipposideros stenotis</i>	Northern Leaf-nosed Bat	VU		0	Unknown	1	1982	1	1989
Mammals	Muridae	<i>Mesembriomys gouldii gouldii</i>	Black-footed Tree-rat	VU	EN	0	Unknown	0	Unknown	1	1989
Mammals	Muridae	<i>Rattus tunneyi</i>	Pale Field-rat	VU		0	Unknown	0	Unknown	1	1989

### 3.6 Current Land Use

The land tenure is privately owned NT Freehold Title, known as Maud Creek Station. It currently operates as a buffalo and cattle grazing property.

Land uses in the adjoining areas include buffalo grazing, nature conservation, cropping and mining exploration. Land immediately to the north and east of the project area is part of the Nitmiluk National Park which is owned by the Jawoyn Aboriginal Land Trust. An RAAF Communications facility is located to the south of the project area and a horticultural subdivision is located to the south east of the project area.

### 3.7 Aboriginal and Heritage Sites

PNX engaged In-Depth Archaeology to undertake a desktop review of all NT Projects. This included a search of the National Native Title Tribunal (NNTT) registers. The search showed that no application for native title determinations have been made over the Chessman Project area and that one ILUA exists adjacent to project area. Archaeological reports were also reviewed from the Heritage Branch library and the NT Heritage Branch Register to gain information for places and objects protected under the Heritage Act. No declared heritage places or objects were identified.

AAPA Certificate C2007/072 was issued for EL25054 in 2009 (**Appendix III**) and remains valid for this lease. No restricted work areas were identified at or near the Tractor Corner prospect.

An archaeological survey relevant to the Tractor Corner Prospect was undertaken by Dr. Silvano Jung in 2011 for Newmarket. Two isolated stone artefacts were found. The summary of recommendations from this report is shown in Table 7.

**Table 7: Summary of findings from Archaeological Survey at Tractor Corner**

Isoliths (Waypoint No)	Artefact type	Datum	Zone	Easting	Northing	Significance	Recommendations
DRILL PAD CGOLD		GDA94	53L	224182	8398106	n/a	Proceed with proposed operations
Anomaly		GDA94	53L	224392	8398124	n/a	Leave <i>in situ</i> .
Cave		GDA94	53L	224393	8398150	n/a	Leave <i>in situ</i> .
MCSJ001	Flake	GDA94	53L	224386	8398482	Low	Leave <i>in situ</i> .
MCSJ002	Flake	GDA94	53L	224444	8398535	Low	Leave <i>in situ</i> .

#### 4.0 ENVIRONMENTAL MANAGEMENT SYSTEM / PLAN

PNX's Environmental Management Policy is shown in **Figure 6** and the Environmental Management Plan is provided in **Appendix IV**. The basic premise of the environmental management plan is to minimise the environmental impact of activities and to ensure that the environmental risks are identified and managed prior to disturbance. Routine activities undertaken on site are described by SWPs (Procedures) and new activities are subject to a JSA (job safety analysis) prior to commencement, both of which cover safety and environmental aspects.

As the operations are being undertaken as part of a joint venture, PNX also have obligations to comply with Newmarket's environmental systems, where they are relevant. In particular, where new ground disturbance is planned, PNX will utilise Newmarket's environmental scientists to undertake Ground Disturbance Permits. These permits will be appended to the MMP's as evidence that environmental and cultural aspects have been considered and authorised. Ground disturbance permits for Tractor Corner have yet to be undertaken.

#### 4.1 ENVIRONMENTAL POLICY AND RESPONSIBILITIES

**Figure 7** shows PNX's Environmental Policy. Details on PNX responsibilities in relation to environmental management are detailed in the Environmental Management Plan, provided as **Appendix IV** to this Exploration MMP.

## Environmental Policy

PNX Metals Ltd is committed to minimising environmental impacts during all phases of exploration, development, and production through a best practice environmental approach.

Carefully managed exploration programmes have little or no long lasting impacts on the environment and the company has formed a best practice policy for the management of its exploration programmes.

The company is committed to achieving the highest standards of environmental management in its activities by complying with and, where possible, exceeding governmental requirements.

To achieve this objective PNX adopts the following policies:

- Encourage environmental stewardship and responsibility amongst all employees and contractors through education, training and management actions.
- Promote knowledge of, and compliance with the appropriate laws and regulations.
- Develop a culture of continuous improvement and pursuit of excellence in environmental practice.
- Rehabilitate land affected by its mineral exploration with the goal of returning it to its pre-exploration condition
- Communicate freely and openly with relevant authorities, stakeholders, local communities, special interest groups and the public at large to ensure that the company clearly understands its environmental expectations.
- Monitor environmental impact and rehabilitation to ensure long term success.
- Publicly report and showcase the company's environmental achievements
- At least annually review and maintain our Environmental Policy and Procedures performance.

A handwritten signature in red ink, appearing to read 'James Fox'.

16/6/2016

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James Fox (Managing Director and CEO)

Figure 7: PNX Environmental Policy

## 4.2 STATUTORY REQUIREMENTS

The relevant legislation is presented in **Error! Reference source not found.**

Table 8: Statutory Requirements

Northern Territory	Commonwealth
Bushfires Act	Aboriginal Land Rights Act
Dangerous Goods Act	Aboriginal and Torres Strait Islander Heritage Protection Act
Energy Pipelines Act	Environment Protection and Biodiversity Conservation Act
Environmental Assessment Act	Native Title Act
Heritage Act	National Environmental Protection Measures (NEPM)
Minerals Titles Act	
Mining Management Act	
Northern Territory Aboriginal Sacred Sites Act	
Northern Territory Land Corporation Act	
Northern Territory Rail Safety Act	
Pastoral Land Act	
Public Health Act	
Soil Conservation and Land Utilisation Act	
Territory Parks and Wildlife Conservation Act	
Traffic Act	
Waste Management and Pollution Control Act	
Water Act	
Weeds Management Act	
Work Health and Safety (National Uniform Legislation) Act 2011	
Plant Health Regulations (2011)	

## 4.3 NON-STATUTORY REQUIREMENTS

PNX where appropriate will work with the non-government organisations presented in **Table 9.**

Table 9: Non-Statutory Requirements

Organisation	Identified Groups or Departments
Non-Government Organisations	NT Bushfire Council Minerals Council of Australia –NT Division

## 4.4 IDENTIFIED STAKEHOLDERS AND CONSULTATION

The stakeholders identified for this Exploration Project are listed in **Table 10.** Consultation for this project will be undertaken with the identified stakeholders on an ‘as needed’ basis, with all consultation documented and detailed.

PNX personnel met with the pastoralist Mike Teelow in the area during May 2016 and provided a signed notice of entry (**Appendix V**) to formally notify entry to his property. As a result of these discussions, it was determined that no burning should take place and that engagement of his services for earthmoving requirements would provide sufficient compensation. Evidence of this approval in the form of email communication with Mike Teelow is provided in **Appendix VI.** It was suggested that timing for drilling would be around September-October.

PNX personnel also met with staff at the NLC (Catherine Whitehead) during May 2016 to inform them of planned activities in the Chessman Project area. PNX were referred back to the AAPA.

PNX are in regular contact with other exploration companies, including Newmarket as titleholders (through Mark Edwards), and Rockland Resources (through exploration manager Geoff Beckitt).

PNX also met with DME staff in the Geological Survey in May 2016 (Ian Scrimgeour and others) and through the co-funding application process and routine reporting requirements maintain regular contact.

PNX presented at the Katherine Regional Exploration and Mining Forum in May 2015 and introduced PNX as a new and active participant in the region, engaging with many and varied interested industry contractors and community members.

**Table 10: Identified Stakeholders**

Type of Stakeholder	Identified Groups or Departments
Company	Newmarket Gold Inc Management Team PNX Metals Ltd Management Team Rockland Resources
Community	Katherine community, residents and businesses Adjacent Tenement holder/s Local Police Local Fire & Emergency Response Group (volunteers) Tindal RAAF base Manager, Maud Creek Station Chamber of Commerce and Industry Jawoyn Association
Commercial	Mine Site contractors / Materials & Service Supply Organisations Telstra Power and Water Corporation Darwin – Adelaide Railway (GWA) APA - Amadeus Gas pipeline
Regulatory	NT Department of Infrastructure NT Department of Land Resource Management Power and Water Corporation NT Department of Business NT Department of Mines and Energy NT Department of Lands, Planning and Environment NT Department of Land Resource Management NT Department of Education Commonwealth Department of the Environment Aboriginal Areas Protection Authority NT Environment Protection Authority NT WorkSafe NT Department of Police, Fire and Emergency Services NT Bushfires Council Pine Creek Community Government Council Adelaide River Community Government Council
Non Government Organisations	NT Bushfire Council Minerals Council of Australia – NT Division Northern Land Council APA Group – NT Division

#### 4.5 INDUCTION AND TRAINING

All PNX employees, contractors and visitors to the site must undergo a site specific induction, which is conducted by the senior company representative on site and includes relevant site safety and environmental information, along with a competency assessment questionnaire and sign-off. An

induction manual is provided to all workers, and specific items discussed in the induction manual include:

- Environmental responsibilities
- Respecting landowners
- Respecting heritage sites and traditional owners
- Minimise disturbance by good planning, keeping to existing tracks
- Spill prevention and remediation
- Rehabilitation strategies
- Importance of weed prevention
- Fire management
- Surface and groundwater management when drilling
- Fuel and chemical storage
- Air quality
- Incident reporting obligations

Because PNX utilise Newmarket's facilities such as the Cosmo Deeps Mine and Brock's Creek Core Facility for core logging, fuel, vehicle washing, rubbish disposal and first aid, all PNX staff and contractors must also undergo site inductions as required by Newmarket to ensure that access to the mine and site are done safely and responsibly.

PNX maintains its own safety and environmental procedures to ensure that personnel are properly informed and trained when carrying out field work.

PNX have completed and submitted a Risk Management Plan (RMP) – mining operations to NT Worksafe. An Emergency Response Plan is developed specifically for each project area. This provides staff with site specific information about muster points and evacuation responses at times of emergency. PNX manage the training and communication of site specific requirements primarily through the use of SWP's and JSA's. A JSA is performed for any new activity, and will include involvement from earthmoving and drilling contractors. This process is used to collaboratively explore safety and environmental risks and site specific management strategies.

At the start of each campaign, all staff and contractors will be given a copy of the Emergency Response Plan and given laminated copies to be kept in each vehicle for the duration of the exploration programme. Emergency response Plans are also distributed to the Newmarket Emergency Response Team, Exploration Department and Safety Department so that they can familiarise themselves with the areas that we are working.

In terms of training, the basic training requirements for PNX are completion of the site inductions, drivers license, radiation licence (for XRF operation) and current first aid certificate. However, recruiting and contractor procurement looks favourably to those personnel or companies who have additional competencies, for example White Cards, 4WD defensive driving, cultural awareness experience or environmental qualifications.

PNX keeps all records of training competencies of its employees and requests Contractors do the same.

Ongoing awareness and communication of environmental issues will be reinforced through email notifications, bulletin boards and induction programs. Toolbox meetings on site will be held regularly (one per shift during site activity) between PNX and its contractors, and PNX will liaise with the Newmarket's Environmental Department where information and advice is shared.

The DME's operation advice and advisory notes are made available to staff and contractors including:

- Weed management (AA7-017)
- Clearing and rehabilitation of grid lines and tracks (AA7-005)
- Construction and Rehabilitation of Costeans and Pits (AA7-006)
- Ground Water Sampling Methodology (AA7-024)
- Surface Water Sampling Methodology (AA7-025)
- Construction and Rehabilitation of Exploration Drill Sites (AA7-029)

- Environmental Incident Reporting (AT8-006\_S29)
- A-Z guide to Weed Identification Tables ([www.lrm.nt.gov.au](http://www.lrm.nt.gov.au))
- Clearing Guidelines, Fact Sheets and Reports (LRM)

## 4.6 IDENTIFICATION OF ENVIRONMENTAL ASPECTS AND IMPACTS

Table 11 below summarises the environmental aspects and impacts detailed in the EMP (**Appendix IV**)

**Table 11: Environmental Aspects and Impacts**

Aspect	Impact	Risk Rating	Control measures (prevention & minimisation)	Management measures (monitoring & remediation)
Earthworks associated with Drill Site Preparation, Camp, Track Construction and Site Rehabilitation	Damage to native flora and fauna, and habitat	Moderate	Consultation and authorisations with landowners, Aboriginal Traditional Owners and relevant Government Departments	Manager site visits to monitor works and carry out checks/audits – rehabilitation register
	Damage or destruction of native vegetation			
	Introduction and/or spread of weeds			
	Disturbance to natural drainage patterns		Inductions	Photographic evidence to be collected to monitor before, during and after disturbance activities and included in rehabilitation reporting
	Damage to third party infrastructure		Communication and use of Advisory Guidelines AA7-005 and AA7-029 guidelines and MMP conditions	
	Soil erosion		Use existing access tracks to sites where possible.	Incident reporting process (including implementation of corrective actions)
	Inversion of soil profile		New tracks planned to take route of least disturbance, reestablishing known tracks where possible, avoiding large trees, historic sites, any identified vegetation, drainage / creek lines.	
	Dust generation			
	Soil compaction			Selection of specialist environmental consultants to assist if/when required (eg. weed mapping, vegetation mapping, biodiversity studies, groundwater studies)
	Disturbance to cultural heritage sites			
	Short to medium term loss of visual amenity			
Disruption to land use (e.g. grazing and recreation)	Drill pads kept to minimum size for safe operation and access tracks kept to			

Aspect	Impact	Risk Rating	Control measures (prevention & minimisation)	Management measures (monitoring & remediation)
			<p>minimum width for vehicle access.</p> <p>Design curved tracks to create less visible impact and lower vehicle speeds and reduce dust</p> <p>Routes checked and inspected prior to commencing disturbance (eg. avoid trees with nests) - Newmarket Clearing/Ground Disturbance Permit.</p> <p>Use blade up method when clearing access tracks to preserve root stock and promote regrowth and minimise erosion potential</p> <p>Vehicles required to be washed down prior to arrival on site.</p> <p>Avoid clearing of riparian vegetation</p> <p>Avoid making windrows when constructing tracks – use whoa boys and diversion drains to divert water from tracks</p> <p>During disturbance, topsoil to be stored nearby in low</p>	

Aspect	Impact	Risk Rating	Control measures (prevention & minimisation)	Management measures (monitoring & remediation)
			<p>mounds together with any plant litter</p> <p>During rehabilitation, top soil replaced and area ripped along contours and re-contoured (if sloping ground) to allow natural revegetation to occur</p>	
<p>Fuel/oil/chemicals storage and transfer</p>	<p>Hydrocarbon spills causing localised contamination of soil and/or groundwater</p> <p>Pollution of surface and ground water</p> <p>Fire</p>	<p>Low</p>	<p>Drill rig inspection before commencement</p> <p>Use of biodegradable drilling fluids</p> <p>Have spill kits available at refueling points and at drill site</p> <p>Spills to be remediated immediately</p> <p>No fuel is stored on site - refueling is done off-site in Katherine. Fuel transferred on location via hand pump with protective matting – a hydrocarbon spill kit is available on site to clean up any small spills</p> <p>Only quantities of chemicals required for day-to-day use will be kept on site; excess will be stored off site</p>	<p>Manager to monitor works and carry out checks/audits</p> <p>Small spills to be cleaned up prior to moving to next site using spill kits</p> <p>During contractor selection ensure regular maintenance programs are integral to operations</p> <p>Daily pre-start vehicle checks</p> <p>Incident reporting process (including implementation of corrective actions)</p>

Aspect	Impact	Risk Rating	Control measures (prevention & minimisation)	Management measures (monitoring & remediation)
			<p>Repair leaks as soon as possible</p> <p>Containment bunds and matting will be used if it becomes necessary to store fuels/oils/chemicals on site. The volume of bunded areas will be greater than the volume of stored substances. An area to be designated on high ground away from water courses</p> <p>Maintained fire suppression equipment to be in every vehicle</p> <p>MSDS data sheets for all hazardous materials.</p>	
Drilling operations	<p>Contamination of groundwater aquifers</p> <p>Escape of groundwater outside containment</p> <p>Ground and soil compaction</p> <p>Erosion hazard</p> <p>Hydrocarbon Spills</p> <p>Animal entrapment in sump or drill hole</p>	Low	<p>Favour the lighter, track mounted rigs or large tired vehicles when choosing a contractor to minimise compaction and pad size</p> <p>Drillers will plug and grout if multiple aquifers intersected or if flowing water encountered.</p> <p>Plug hole collars with temporary cap as soon as drilling completed, and permanent plug when</p>	<p>Manager site visits to monitor works and carry out checks/audits – rehabilitation register</p> <p>Photographic evidence to be collected to monitor before, during and after disturbance activities and included in rehabilitation reporting</p> <p>Inductions, toolbox talks, daily pre-start meetings and JSA's are the primary tools to identify, communicate and manage the environmental risks</p>

Aspect	Impact	Risk Rating	Control measures (prevention & minimisation)	Management measures (monitoring & remediation)
	<p>Fire</p> <p>Dust emissions from RC drilling</p> <p>Noise</p>		<p>downhole testing is finished</p> <p>Ensure sumps are of sufficient size when drilling in high groundwater areas – have ability to dig extra sumps on hand</p> <p>Minimise vehicle movements; avoid movement in wet weather</p> <p>Dispose of drill cuttings in sumps or downhole</p> <p>Remove all rubbish and sample bags</p> <p>Avoid placing sumps in drainage systems</p> <p>Sumps to be open for as limited time as possible.</p> <p>Maintained fire suppression equipment to be in every vehicle. Back burn around rig if in imminent danger from wildfire</p> <p>Topsoil to be stored nearby in low mounds together with any plant litter and respread as soon as practical when the site is no longer required</p>	<p>Incident reporting process (including implementation of corrective actions)</p> <p>If, on inspection, vehicles require wash-down, they will be directed to Katherine for wash-down.</p> <p>Selection of specialist environmental consultants to assist if/when required</p> <p>Groundwater quality tests</p> <p>Monitor radioactive properties of rocks either with pXRF or Geiger counter (none expected)</p>

Aspect	Impact	Risk Rating	Control measures (prevention & minimisation)	Management measures (monitoring & remediation)
			Refueling of vehicles to be conducted away from drainage lines and always conducted over absorbent matting	
General waste handling	<p>Spread of windblown debris</p> <p>Poor aesthetics</p> <p>Increase in pests and insects</p>	Low	<p>Inductions to instruct personnel on correct waste management</p> <p>Covered bins will be used for the collection and storage of waste on site</p> <p>All refuse to be removed offsite to waste disposal facilities in Katherine</p> <p>Work areas will be maintained and rubbish removed on a daily basis to ensure that sites are not frequented by wildlife</p> <p>Rubbish to be well contained/tied down during transport</p>	<p>Manager to monitor works and carry out checks/audits periodically.</p> <p>Incident reporting process</p>
Driving	<p>Creation of dust and noise</p> <p>Vehicle accidents causing wildlife or stock collision</p> <p>Soil compaction</p> <p>Disturbance to cultural heritage sites</p>	High	<p>Induction to enforce high risks involved with driving</p> <p>Drive to suit conditions and reduce speed to minimise dust</p> <p>Keep to existing tracks</p>	<p>Re-enforce safe driving practices through tool box talks.</p> <p>4WD defensive driver training preferred.</p> <p>Record illegal travelers on private roads.</p> <p>Incident reporting process.</p>

Aspect	Impact	Risk Rating	Control measures (prevention & minimisation)	Management measures (monitoring & remediation)
	<p>Introduction/spread of weeds</p> <p>Disruption to land use (eg grazing and recreation)</p>		<p>Drive with lights on to maximise visibility to other road users</p> <p>Avoid travel at dawn and dusk if possible.</p> <p>Minimise vehicle movements; avoid movement in wet weather</p> <p>Vehicles required to be washed down prior to arrival on site.</p>	

## 4.7 EMERGENCY PROCEDURES AND INCIDENT REPORTING

For safety and environmental emergencies, PNX is fortunate to have the services of Newmarket's Emergency Response Team (ERT) based at Cosmo Deeps Mine site within mobile phone range. PNX provide the ERT with current and accurate Emergency Response Plan for each area within the Chessman Project that the PNX staff will be working. This includes a map which is updated each site move and an email sent each day to Newmarket HSEC personnel. Emergency Services are also available in Katherine.

The Newmarket ERT team and site medic are resourced with a fully equipped ambulance and fire/emergency response vehicle to assist with both safety and environmental emergencies if required. All PNX staff have current First Aid Certificates. All light vehicles are equipped with a current Emergency Response Plan (relevant to the area that the team is working within), first aid kits and have UHF radios to call for assistance should an emergency arise. Satellite phones and SPOT messengers are also available to the exploration team.

The ERT undergo half-day weekly training in areas such as firefighting, vehicle incidents, search and rescue, medical assistance and first aid and emergency situation handling / communication. This includes the use of emergency response vehicles, turnout PPE, firefighting equipment and methods, breathing apparatus (BA), hydraulic cutting and lifting equipment, GPS & maps, first aid and medical equipment, defensive driving and radio / satellite phone communications.

The Emergency Management (Response) Plan includes:

- Critical incident management for all persons and environments affected by the emergency event;
- Liaison with government authorities, community and community services;
- Protecting all persons, the environment and property;
- Salvaging of damaged goods, plant and equipment;
- Wildfire management in conjunction with stakeholders, community, community services and government authorities;

All PNX personnel and contractors will receive training in the emergency response procedures as an integral part of the Newmarket site induction. For each project area the PNX team will develop a site specific Emergency Response Plan. The PNX Emergency Response Plan should be consulted for further detailed information regarding emergency response management, which will be addressed by the Mine Rescue Team.

Environmental events will be reported using the Accident and Incident Investigation form (following the flowchart as seen in **Figure 8**) and notified according to the Mining Management Act to the DME using Form CF7-001 if rated at "Class 2" or above. All environmental incidents will be recorded in the site register.

This procedure requires that:

- All events and incidents are to be reported to PNX Management and the Newmarket's General Manager – Exploration as soon as the hazard or incident is identified and the severity will be assessed;
- All environmental incidents with a severity Class 2 or greater will be recorded and reported to DME as required by Section 29 the Mining Management Act 2001 (refer Guideline AT8-006\_S29); and
- Incidents and events will be investigated to improve systems and prevent recurrences. Reportable incidents may include spillages, burst pipelines, bund failures, significant dust issues, unapproved clearing of vegetation, unauthorised release of water to environment etc.

Checks and routine inspections by the PNX Metals Ltd Exploration Manager as well as periodic inspections by the Newmarket Environmental team will ensure prompt reporting of any identified hazards or problems.

Major environmental events will be reported to the site supervisor who will then carry out an investigation and inform both the PNX Management team and the Newmarket General Manager – Exploration and Environment Team. In the case of a serious accident or critical incident, it is the

responsibility of the PNX Exploration Manager to file the incident report and investigation to the Chief Executive Officer of the Department of Mines and Energy in accordance with Section 29 of the Mining Management Act. The site supervisor may carry out the investigation, yet the responsibility for a full investigation rests with PNX Exploration Manager.

PNX Exploration Manager will also be notified immediately of any incident occurring and will liaise with Newmarket staff in relation to response, remediation and reporting activities.

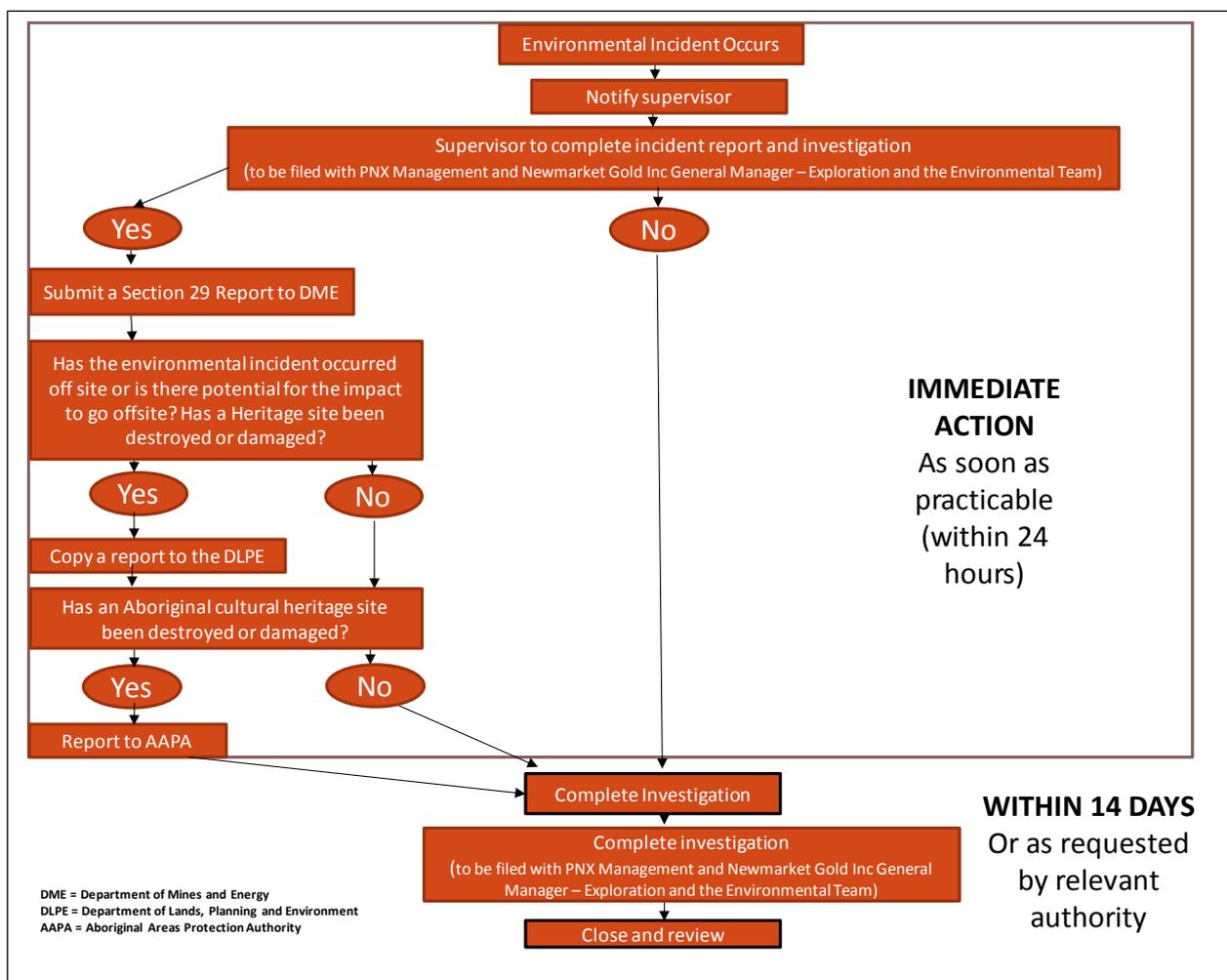


Figure 8: PNX Metals Environmental Incident Flowchart

## 4.8 ENVIRONMENTAL AUDITS AND INSPECTIONS

### Pre-Clearing Inspections

PNX consult with Newmarket’s Environmental and Exploration departments with regard to any exploration disturbance on the Chessman Project.

Initial liaison work in relation to the areas to be accessed and drilled include:

- topography, surface water courses and ground water, including any monitoring bores
- flora, fauna and weeds
- location of historic or archaeological sites
- firebreaks or controlled burning required
- other environmental aspects to be aware of for the particular sites.

The above are all covered in the Newmarket’s “Clearing Permit” process, which is signed off before any clearing of tracks and pads commence.

### ***Drill Rig Inspections***

Before arriving at site, drilling companies (or other companies if relevant) will be expected to have completed a “PNX Pre-commencement Drill Rig Safety Inspection Report”. This includes that vehicles and rigs have been washed-down and are free from contaminants including weed seed, and checking that all oils and fluids brought to site are appropriate and will be stored and disposed of correctly.

### ***Exploration Site Inspections***

Exploration areas will be periodically inspected, criteria covered in the inspections will include that:

- Clearing has been undertaken to best practice
- Topsoil has been correctly stockpiled
- Oils and drilling fluids are correctly stored and disposed of
- Drillpad closure and rehabilitation after drilling is complete
- Waste is being correctly managed
- Photographic records are kept for monitoring purposes

## **4.9 ENVIRONMENTAL PERFORMANCE REPORTING**

As this is the first MMP for this Project, there is nothing yet to report against.

Please refer to **Table 15** for preliminary performance objectives in preparing this MMP.

## 5.0 EXPLORATION REHABILITATION

PNX Metals Ltd will follow the guidelines set out in the Advisory Notes, as supplied on the DME website.

**Table 12: Exploration Rehabilitation**

Disturbance	Rehabilitation Activities	Schedule (Timing)	Closure Objectives / Targets	Monitoring Techniques
<p><b>Drill holes</b></p>	<p>Diamond holes will be grouted if multiple aquifers intersected, or artesian flows encountered otherwise capped and buried 40cm below surface according to AA7-029 guidelines.</p> <p>RC holes will be backfilled with drill spoils, then capped and buried according to AA7-029.</p>	<p>At the completion of each drill hole or &lt;3 months after downhole geophysical or geochemical testing complete.</p>	<p>All holes plugged / capped and stable by end of drilling programme (est December 2016).</p>	<p>Inspection of holes to be undertaken at the end of the drilling programme and again at the end of the wet season to ensure no hole failures. Remediation to be undertaken if failures found.</p>
<p><b>Drill pads</b></p>	<p>All materials to be removed from the pad e.g. core trays/bags, waste items.</p> <p>At the end of the programme, the RC drill spoil to be tipped back down the hole (deepest to shallowest ensuring limited oxygen exposure of any sulphide material brought to the surface during the drilling process, limiting acid production).</p>	<p>At the completion of the drilling programme</p>	<p>All pads rehabilitated by end of drilling programme (est. December 2016).</p>	<p>Inspection of pads to be undertaken at the end of the drilling program and again at the end of the wet. Remediation to be undertaken if failures found.</p>

Disturbance	Rehabilitation Activities	Schedule (Timing)	Closure Objectives / Targets	Monitoring Techniques
	<p>Green bags to be removed from site and disposed of in Katherine.</p> <p>Topsoil (if available) and logs respread over drill pad on completion of hole.</p>			
<b>Sumps</b>	<p>Earth moving contractors employed to rehabilitate the sumps and drill pads.</p> <p>Sumps to be pushed in with soil mounded over to accommodate future soil compaction and subsidence. Sumps provide a water source for animals and will not be left to dry out before filling in as they pose a risk for animals drowning.</p>	At the completion of the drilling programme	All sumps rehabilitated by end of drilling programme (est. December 2016).	Inspection of sumps to be undertaken at the end of the drilling programme and again at the end of the wet. Remediation to be undertaken if failures found.
<b>Costeans</b>	N/A	N/A	N/A	N/A
<b>Bulk sample pits</b>	N/A	N/A	N/A	N/A
<b>Tracks / Gridlines</b>	<p>Existing access roads will be maintained and graded with erosion control (if required – eg diversion drains and whoa boys).</p> <p>Non-required tracks will ripped and access block with large fallen trees/logs.</p>	Non-essential tracks will be ripped on completion of use.	All non-essential tracks to be ripped at the end of the drilling programme (est. December 2016).	Inspection of tracks to be undertaken at the end of the drilling programme and again at the end of the wet. Remediation to be undertaken if failures found.

Disturbance	Rehabilitation Activities	Schedule (Timing)	Closure Objectives / Targets	Monitoring Techniques
<b>Sample bags</b>	To be disposed of at Katherine waste facilities.	At completion of the drilling programme.	All drill pads to be cleared by end of drilling programme (est. December 2016).	Inspection of drill pads to be undertaken at the end of the drilling programme.
<b>Camp</b>	N/A – personnel will stay at Katherine	N/A	N/A	N/A

## 5.1 COSTING OF CLOSURE ACTIVITIES

The Department of Mines and Energy Exploration Security Calculation Tool has used to obtain the figures detailed in **Table 13**. The full Exploration Security Calculation Tool workbook including assumptions used has been provided as **Appendix VII** to this Exploration MMP. The total estimated security is \$5,070.70 prior to discounts and levies.

Table 13: Security Calculation Summary

 Northern Territory Government		DEPARTMENT OF MINES AND ENERGY		<a href="http://www.nt.gov.au">www.nt.gov.au</a>
AF7-014		last review: September 2012		
<b>M &amp; E Security Calculation Tool</b> <b>Exploration Operations</b>  <b>PNX Metals Ltd - Chessman Project</b>				
<b>Security Calculation Summary</b>				
<b>Details</b>				
Contact Name	Andy Bennett	Authorisation #	857	
Project	Chessman Project	Date	3/06/2016	
MMP				
<b>Calculation Trigger</b>				
New Authorisation	MMP Renewal/amendment	Audit Finding	Client Request	
<b>Domains</b>		<b>Calculated Cost</b>		
Site Infrastructure		\$0.00		
Exploration		\$2,763.50		
Post Closure Management		\$1,645.80		
<b>Sub-Total - All Domains</b>		<b>\$4,409.30</b>		
<b>CONTINGENCY @15%</b>		<b>\$661.40</b>		
<b>TOTAL COST</b>		<b>\$5,070.70</b>		
<b>10% Discount</b>		<b>\$507</b>		
<b>Amended amount</b>		<b>\$4,564</b>		
<b>1% levy</b>		<b>\$46</b>		

## 6.0 PERFORMANCE OBJECTIVES

Performance objective for the proposed work program are set in accordance with PNX's EMP (**Appendix IV**) and progress is tracked as per **Tables 14-15** below.

**Table 14: Commitment Table Key**

Target Status	Definition	Symbol
Achieved	Action/project has been met within the given timeframe	*
In progress	Action/project is currently in progress and has either a changed project objective or an extended timeframe for completion.	*
Not achieved	Action/project has not been met within the given timeframe	*

**Table 15: Environmental Commitments for PNX Burnside Project**

Commitments	Section in MMP	Comments	Performance	
			Outcome	Comments
<b>Native Flora and Fauna Management Commitments</b>				
Under take a desktop threatened species search	Appendix II Appendix VIII	Undertake a search for threatened species in each project area on the EPBC protected matters and the NT NRM Infonet website	*	Completed
Establish an Environmental Observation Register	Appendix IX	Create register for staff to record sightings of native and introduced Flora and Fauna species in each project area. Create folder for photographs taken of Flora and Fauna that cannot be identified in the field for later identification.	*	Environmental Observation Registers have been located in each field vehicle. Staff will record the details of each sighting and records will be collated each week. If the species cannot be identified, where possible, staff will photograph for later identification.
Maintain Environmental Observation Register	Appendix IX	Log sightings of native flora and fauna into Environmental Observation Register	*	Environmental Observation Register to be included with future MMP submissions. Ongoing
<b>Weed and Pest Management Commitments</b>				
Inspect mobile equipment and clean prior to entry and exit project site	Appendix IV: PNX Environmental Management Plan		*	Visual inspections of all vehicles accessing site to be undertaken Drilling contractor to be sent pre-commencement checklist
Establish an Environmental and Community Observation Register for pest species		Create register for staff to record sightings of native and introduced Flora and Fauna species in each project area. Create folder for photographs taken of Flora and Fauna that cannot be identified in the field for later identification.	*	Environmental and Community Observation Register have been located in each field vehicle. Staff will record the details of each sighting and records will be collated each week. If the species cannot be identified, where possible, staff will photograph for later identification. Started populating in May 2016
Maintain Environmental and Community Observation Register for pest species		Log sightings of native flora and fauna into Environmental and	*	Environmental and Community Observation Register to be included with future MMP submissions.

		Community Observation Register		Started populating in May 2016
Develop and implement a safe work procedure to minimise the physical effects of bite and stings from ticks, mosquitoes etc.			*	SOP004 Bites and Stings
<b>Cultural Heritage Management commitments</b>				
Desktop review of the status of cultural and heritage matters for the entire Burnside area		Engage contract Archaeologist to perform desktop study	*	Completed 2015 Follow up site survey in July 2016 specific to drill site
Undertake heritage surveys for all areas where land disturbing activities are planned.		Consult with NLC and organise archaeological surveys prior to any land clearing	*	Met with NLC in May 2016 , no further action required Archaeological site survey in July 2016 specific to drill sites
Protect cultural heritage sites	Appendix III	Engage archaeological heritage surveys prior to any land clearing activities	*	AAPA searches conducted AAPA clearance is current Archaeological site survey in July 2016 specific to drill sites
Maintain Heritage and Cultural significance Register		Collect details on PDA or GPS or record and update register weekly at Toolbox meeting	*	
<b>Socio-Economic Management Commitments</b>				
Undertake regular consultations and communication with underlying pastoral lease holders		Consult with Mike Teelow regularly and openly	*	Communications maintained with face to face meetings, telephone contact as well as via email. A register of communications with landholders, community and stakeholders
Written notice of entry to landholders and compensation agreement	Appendix V, VI	Written correspondence informing landholders of PNK intentions for entering their property in the June-December 2016 exploration season	*	Letters hand delivered to landholders during site visit May 2016.
Establish an Environmental and Community Observation Register for recording trespassers in and around work areas		Create register for staff to record sightings of trespassers (such as pig hunters, campers and possible fire lighters) in each project area. Create folder for photographs taken of car number plates.	*	Environmental and Community Observation Register have been located in each field vehicle. Staff will record the details of each sighting of trespassers or suspicious activities in and around project areas, records will be collated each week. If possible photographs should be taken of car number plates so that the information can be distributed to Station Managers and Newmarket Exploration Team in case there is a need for further follow up.
Apply to Newmarket, Environment Team for Ground Disturbance Permits		Apply for ground disturbance permits when MMP has been approved.	*	Have maps and paper work ready to be submitted to Newmarket Enviros. Only seek permits if MMP is granted. Enviros will need to do a site visit to assess the area before signing off on permits.
<b>Fire management commitments</b>				
Establish an Environmental and Community Observation Register for recording incidence of wildfire and any controlled burning events in		Create register for staff to record prescribed burns and wild fires in Environmental and Community Observation Register	*	Started collection in May 2016
Log incidence of wildfire and any controlled burning events in			*	Environmental and Community Observation Register to be included in future MMP
Obtain a permit to burn prior to any controlled burning		Bushfires NT	NA	No controlled burning has been undertaken at this point at pastoralists request

Undertake a fire history assessment	Appendix II		*	NT NRM search done
Rehabilitation management commitments				
Rehabilitate drill hole locations within 6 months	Section 2.4.1	All staff and contractors will be given a copy of the Advisory note: Construction and Rehabilitation of Exploration Drill Pads, NTGS Department of Resources, May 2011.	*	.
Establish and implement a rehabilitation register		Use the DME Rehabilitation checklist as a guide to register. Keep all holes drilled by PNX on the list so that they can be revisited over time to monitor erosion, weeds, subsidence etc	*	This register will accompany all future MMP's.
Investigate site conditions		Inspections and checklist to establish conditions for future development of rehabilitation plans or management options.	*	Visual inspections undertaken, formal documented inspections to be undertaken in the upcoming reporting period. Initial site visits have taken place with detailed site inspections to be carried out before any clearing takes place
Apply to Newmarket Environmental Team for clearance permits before any site clearing occurs		Newmarket Environmental Team	*	Permits will be applied for prior to drilling

### Useful Links and Resources

- Advisory Note: Construction and Rehabilitation of Exploration Drill Pads, NTG Department of Resources, May 2011.
- Field Guide Northern Territory - Android Apps on Google Play. 2016. *Field Guide Northern Territory - Android Apps on Google Play*. [ONLINE] Available at: <https://play.google.com/store/apps/details?id=au.gov.nt.artsandmuseums.fieldguide&hl=en>. [Accessed 12 May 2016].
- Infonet. 2016. Infonet. [ONLINE] Available at: <http://www.ntinfonet.org.au/infonet2/>. [Accessed 10 May 2016].
- Protected Matters Search Tool - EPBC Act - Home Page. 2016. *Protected Matters Search Tool - EPBC Act - Home Page*. [ONLINE] Available at: <http://www.environment.gov.au/epbc/pmst/>. [Accessed 10 May 2016].