



Suite 4, Level 7, 350 Collins St, MELBOURNE VIC 3000

Tel: +61 3 9602 4856
www.genesisresourcesltd.com.au

MINING MANAGEMENT PLAN UPDATE (EXPLORATION)

FOR EL24814 McARTHUR RIVER IRON-MANGANESE PROJECT

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Reporting Year Ending 24/11/2017

GES Report No: 133

	Author	Reviewed by	Approved by
Date	18/10/2017	20/10/2017	20/10/2017
Name	Dayna Healey & James Patterson	James Patterson	James Patterson
Signature			

I, James Patterson, Exploration Manager and Non – Executive Director declare that to the best of my knowledge the information contained in this mining management plan is true and correct and commit to undertake the works detailed in this plan in accordance with all the relevant Local, Northern Territory and Commonwealth Government legislation.

SIGNATURE:

DATE:.....

DISTRIBUTION

1. Northern Territory Department of Primary Industry and Resources
2. Genesis Resources Ltd

CONTENTS

1. OPERATOR DETAILS	4
1.1 ORGANISATIONAL STRUCTURE	4
1.2 WORKFORCE	4
2. PROJECT DETAILS	5
2.1 MAP OF SITE LOCATION AND LAYOUT	5
2.2 HISTORY OF DEVELOPMENT AND CURRENT STATUS	7
2.3 PROPOSED ACTIVITIES	10
2.3.1 INTERPRETATION OF GRAVITY SURVEY DATA	10
2.3.2 FOLLOW UP SOIL SAMPLING AT STREAM SEDIMENT ANOMALIES	10
2.3.3 DRILLING OF GRAVITY AND SOIL ANOMALIES	10
3. CURRENT PROJECT SITE CONDITIONS	12
3.1 GEOLOGY	12
3.2 HYDROLOGY	12
3.3 FLORA AND FAUNA	12
3.3.1 WEEDS MANAGEMENT	13
3.4 LAND USE	15
3.5 HISTORICAL, ABORIGINAL, HERITAGE SITES	15
4. ENVIRONMENTAL MANAGEMENT SYSTEM / PLAN	17
4.1 ENVIRONMENTAL POLICY AND RESPONSIBILITIES	17
4.2 STATUTORY REQUIREMENTS	18
4.3 NON-STATUTORY REQUIREMENTS	19
4.4 IDENTIFIED STAKEHOLDERS AND CONSULTATION	19
4.5 INDUCTION AND TRAINING	20
4.6 IDENTIFICATION OF ENVIRONMENTAL ASPECTS AND IMPACTS	21
4.6.1 EROSION AND SEDIMENT CONTROL	22
4.6.2 WATER MANAGEMENT	23
4.6.3 RADIATION MANAGEMENT	23
4.6.4 HAZARDOUS MATERIALS AND DANGEROUS GOODS	24
4.6.5 SPILLS MANAGEMENT	25
4.6.6 WASTE MANAGEMENT	25
4.6.7 NOISE AND AIR QUALITY MANAGEMENT	26
4.7 EMERGENCY PROCEDURES AND INCIDENT REPORTING	26
4.7.1 EMERGENCY PROCEDURES	26
4.7.2 INCIDENT REPORTING	26
4.8 ENVIRONMENTAL AUDITS AND INSPECTIONS	27
4.9 ENVIRONMENTAL PERFORMANCE REPORTING	288
4.9.1 BIOLOGICAL MANAGEMENT	28
5. EXPLORATION REHABILITATION	29
5.1 COSTING OF CLOSURE ACTIVITIES	30
6. PERFORMANCE OBJECTIVES	30
7. REFERENCES	31

LIST OF FIGURES

Figure 1: Genesis Resources Ltd organisational chart

Figure 2: Map of the Northern Territory showing EL24814

Figure 3: EL24814 showing prospects and Calvert Hills Station

Figure 4: Data from the VTEM survey showing the 12 targets. Target 1 and 2 match the known mineralisation at Masterton No.2

Figure 5: AAPA map showing sacred sites on EL24814 and location of Masterton No.2 prospect

Figure 6: McArthur River EL24814 – Red dots are Aboriginal archaeological sites (provided by the Heritage Branch 9/04/2015)

LIST OF TABLES

Table 1: McArthur River Project - Tenement Summary

Table 2: Summary of program

Table 3: List of threatened species with potential to occur in a 10km radius of the proposed drill sites. Vu=Vulnerable, EN=Endangered, IN=Invasive species. Information obtained from the EPBC Act Protected Matters Report, 13/9/2017.

Table 4: Environmental aspects and impacts related to proposed exploration activities.

Table 5: Identified Hazardous Materials and Dangerous Goods

Table 6: Summary of exploration rehabilitation plan

APPENDICES

Appendix 1: Rangelands Overview

Information in this report that relates to exploration activity and results was compiled under the guidance of James Patterson who is a Member of the Australasian Institute of Geoscientists. Mr Patterson has sufficient experience relevant to the styles of mineralization and to the activities which are being reported to qualify as a Competent Person as defined by the JORC code, 2004. Mr Patterson consents to the release of the information compiled in this report in the form and context in which it appears

1. OPERATOR DETAILS

Name of operator: Genesis Resources Limited

Contact Persons:

James Patterson – Exploration Manager

Dayna Healey - Tenement Manager (employed by Genesis Resources Limited).

Address: Suite 4, Level 7, 350 Collins Street, Melbourne, VIC 3000

Phone/Mobile/Email:

Phone: 03 9602 4856

Email: dayna.healey@genesisresourcesltd.com.au

1.1 ORGANISATIONAL STRUCTURE

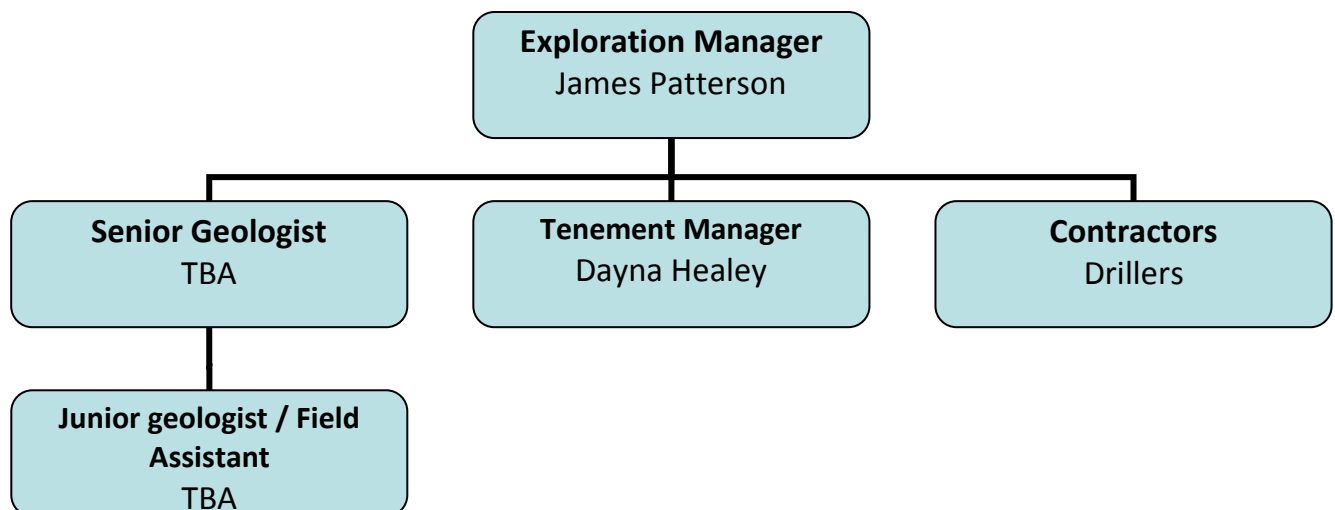


Figure 1: Genesis Resources Ltd organisational chart

1.2 WORKFORCE

The exploration team will consist of one geologist and one field assistant for the non ground disturbance field work.

Up to five people may be involved in the drilling operation including one geologist (supervisor) one field hand and three RC drill contractors.

2. PROJECT DETAILS

The **McArthur River** project is located approximately 850 kilometres south east of Darwin in the Northern Territory and 450 kilometres north-west of Mount Isa in Queensland (Figure 2). The project comprises one exploration licence (EL 24814) which covers a total area of 380.88 sq km.

Table 1: McArthur River Project - Tenement Summary

Project	Tenement Number	Status	Current Area Blocks (sq km)		Current Holder	Granted Date	Renewal Due
McArthur River	EL24814	Granted	116	380.88km ²	Genesis Resources Ltd	18/04/06	17/04/2018

It can be easily accessed from the Carpentaria Highway and is 265 kilometres by road from the working port at McArthur River and 210 kilometres from the Borroloola Township. The main prospect is a series of manganese outcrops, called Masterton No.2, as in earlier literature. Calvert Hills homestead is located 14 kilometres to the west of the Masterton No.2 prospect area. An airstrip suitable for light aircraft is 10 kilometres west of the prospect area near the Calvert Hills homestead (Figure 3). A second prospect, explored for base metals, has previously been called the Thor prospect and is located in the north-west part of the tenement.

2.1 MAP OF SITE LOCATION AND LAYOUT

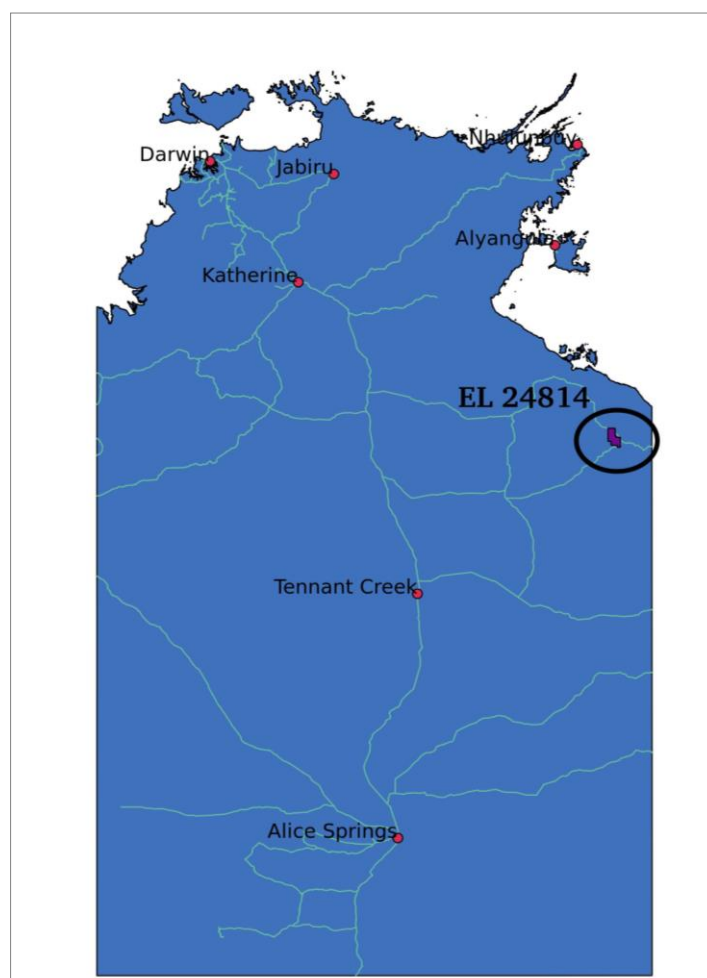


Figure 2: Map of the Northern Territory showing EL24814

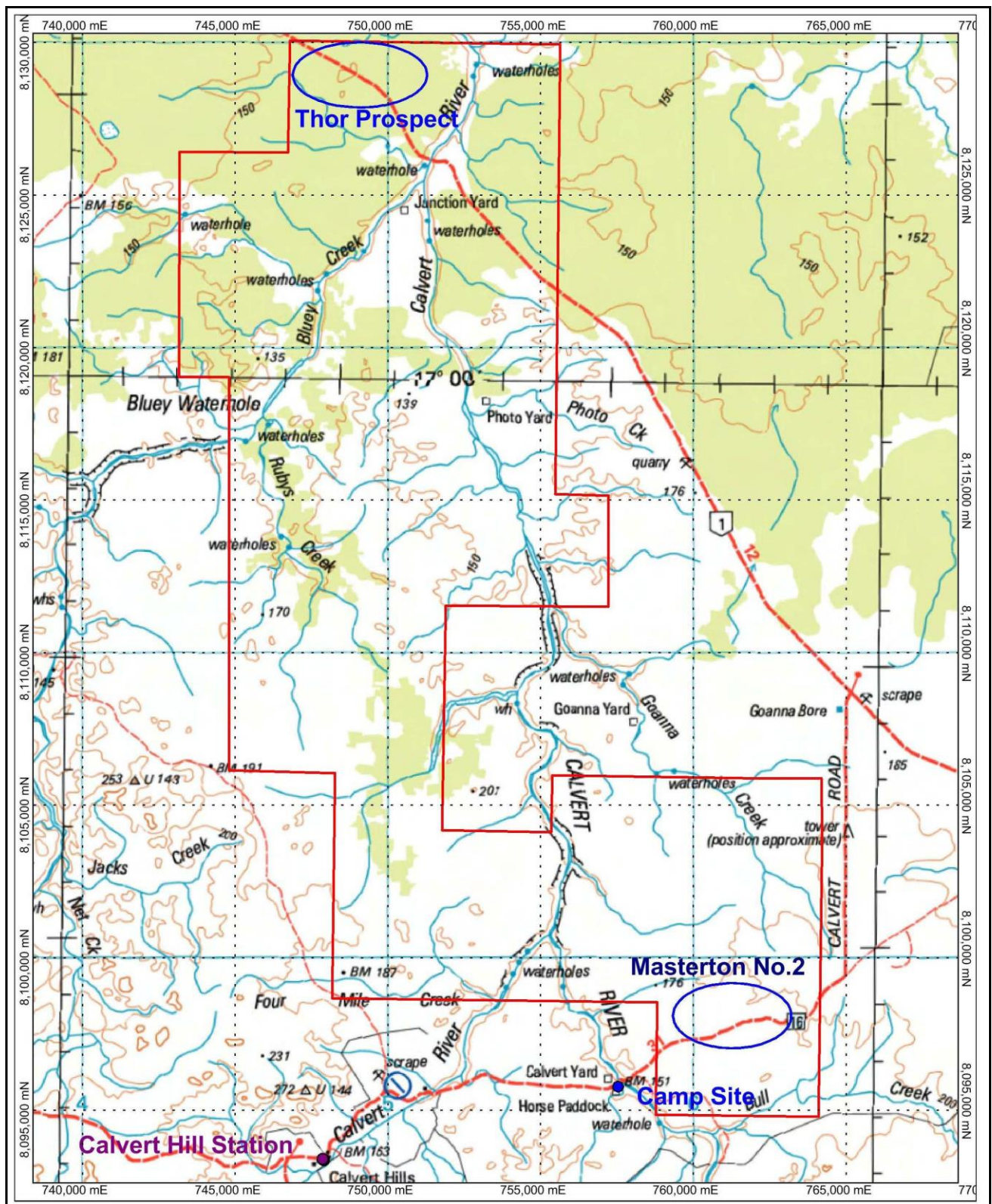


Figure 3: EL24814 showing prospects and Calvert Hills Station

2.2 HISTORY OF DEVELOPMENT AND CURRENT STATUS

Historical Mining/Exploration

Early work in the area was carried out by AGGSNA in the period 1939-40, mainly in the Wollogorang district and around the Redbank copper occurrences which were discovered in 1916 (Howard, 2011). When uranium was discovered at Pandanus Creek in 1955, considerable interest was shown in the area and several mining companies were active in the ensuing four years.

The area was mapped by the BMR in the period 1957 to 1962 with the information published as Calvert Hills 1:250,000 Geological Sheet (Yates et al., 1962). The text also briefly mentions that disseminated chalcopyrite apparently occurs in specific beds within the Karns Dolomite. Galena is said to show similar field relationships to the disseminated chalcopyrite.

In 1971, C.H.C Shannon mapped three of the manganese prospects in detail and sampled/assayed, though not exhaustively (Shannon, 1971). He considered that the manganese occurrences were formed by the segregation of the manganese from the dolomite into joints and also replacing other material. The largest manganese (known today as Masterton No.2) prospect was mapped as joints with manganese with an aggregate length of 1,400 metres and an average width of 6 metres within an area of about 50 hectares. The joints have major directions of 090° and 110° magnetic with a pronounced direction of 350° magnetic.

Chip sampling across the manganese bodies gave assay results between 40% & 50% Mn or 60% to 80% MnO₂. Iron content varied between 1% and 8%. Psilomelane is the principal manganese mineral of the outcropping manganese bodies, except for sub-crops which contain pyrolusite.

In 1979, Carpentaria Exploration Company Pty. Ltd. conducted base metal exploration targeting statabound copper mineralisation with affinities with the Zambian Copper Belt type deposits (Dennis, 1981). They also recognized the potential for mineralised breccia pipes of the Redbank type copper deposits which occur east of EL24814. Exploration activities included open file literature research, geological mapping, petrological studies and stream sediment sampling. Minor anomalous stream sediments hosting copper were outlined.

During 1980, work included field follow up of anomalous stream sediment values, detailed geological mapping and soil sampling over the Thor Prospect. Soil results yielded strong lead and zinc anomalies with up to 3,500 ppm Pb and 2,500 ppm Zn. The area covered by the Pb-Zn is approximately 0.27 sq km and corresponds with outcropping galena and sphalerite gossanous veins. An electrical induced polarization survey at the Thor Prospect indicated two narrow, steeply dipping chargeable zones. Two diamond holes (totalling 269.3 m) were drilled to test the chargeable zones, and yielded minor disseminated galena and minor pyrite from 8.8 m to 36 m in Thor DD4, and a similar style of mineralisation in a single narrow band at 82.1 m in the Thor DD4 hole. No assays results of the drilling are mentioned in the report.

The Masterton No.2 prospect was first mapped and sampled by Enterprise Exploration Ltd (Murray, 1953); a sample from one of the outcrops assayed 63.32% Mn, 7.37% SiO₂, 1.53% Fe, 0.43% P and 0.51% Al₂O₃.

In 1992, Eupene Exploration Pty Ltd concentrated exploration activities around the Masterton No.2 manganese prospect (Goulevitch, 1990). At Masterton No.2, manganiferous lenses up to 160 metres in length and averaging 10 metres in width have assayed up to 63% manganese and averaged approximately 50% manganese. The manganese lenses at Masterton No.2 are interpreted to be flat-lying or shallow-dipping based on drilling undertaken to date.

Five reverse circulation (RC) drill holes totalling 160 metres have been drilled into three of the largest exposures but only three holes were terminated at the planned depths, with two abandoned due to poor drilling conditions. Only 25% of the proposed drilling was completed because of the poor early results. The drilling suggested that the manganese lenses are no more than 2 to 4m deep. Based on the data from these holes an estimated recoverable resource of 40,000 to 50,000 tonnes grading 50% manganese has been calculated (non-JORC compliant).

A brief reconnaissance rock chip sampling program was conducted by Genesis Resources Ltd over the Masterton No.2 prospect and the surrounding areas in October 2008 (Kastellorizos, 2009). High grade manganese assay results were obtained, with up to 53.1% Mn.

A Versatile Time Domain Electromagnetic (VTEM) survey was commissioned to cover the known Masterton No.2 manganese occurrences and surrounds in order to test the method on these known massive manganese occurrences, highlight other anomalies that may represent previously undiscovered or blind deposits at shallow depths, and provide walk up drill targets.

Resource Potentials Pty. Ltd. assisted in the planning and implementation of this helicopter electromagnetic (HEM) survey then provided ongoing quality control of the survey data and completed preliminary processing and interpretation of the results.

Twelve areas of particular interest have been determined after interpretation of the VTEM results. Two of those match the known mineralisation at Masterton 2, confirming the suitability of the geophysical method to detect manganese occurrences. Those 12 areas thus represent potential drilling targets for further exploration, refer Figure 4.

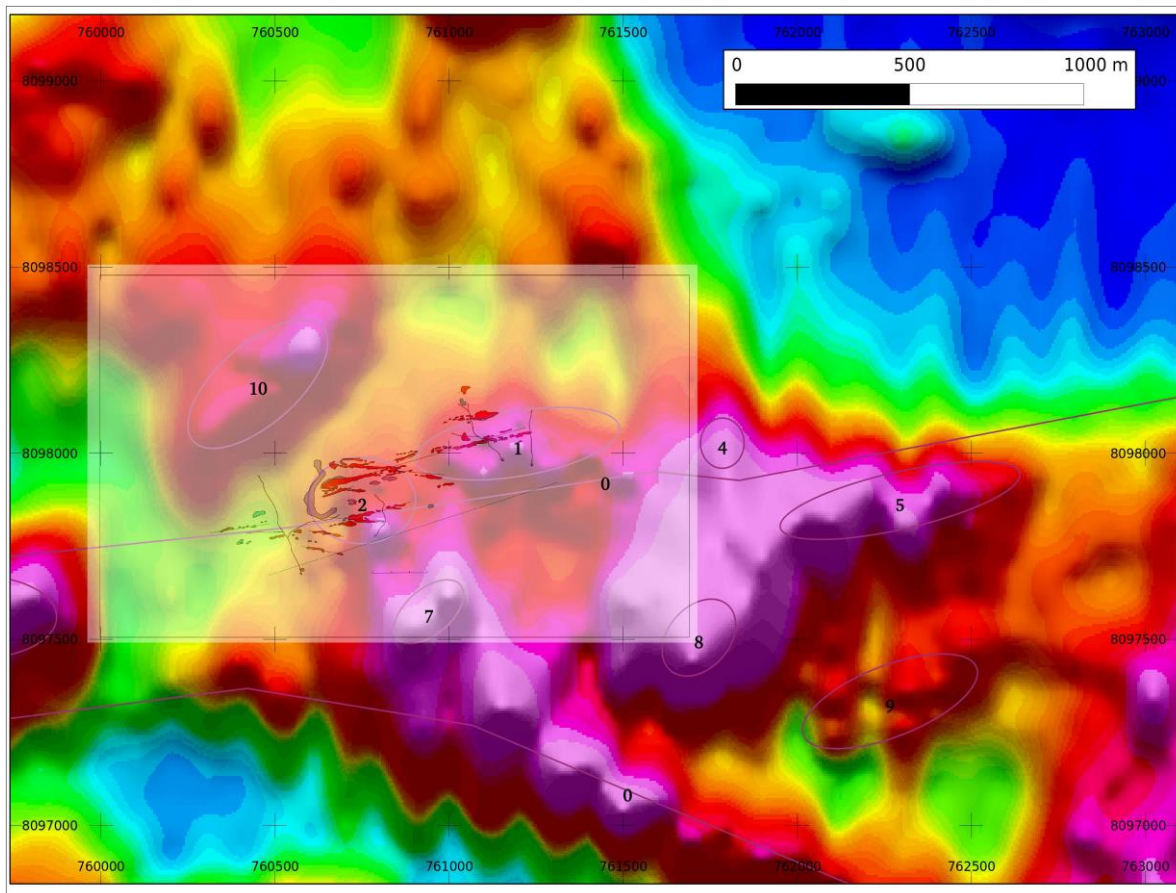


Figure 4: Data from the VTEM survey showing the 12 targets. Target 1 and 2 match the known mineralisation at Masterton No.2

Other significance features detected and interpreted is an east-west trending structure which runs through (and beyond) the known manganese mineralisation at Masterton No.2 and may be an important control on the mineralisation as the Woodie Woodie deposits also follow major structures (Hashemi 2005).

In June 2011 Genesis Resources Ltd conducted further field reconnaissance, especially on the 12 target areas determined by the VTEM data interpretation. This led to some new discoveries of small manganese outcrops. Further mapping and rock chip sampling have been performed.

PVC collar pipes of Eupene Exploration Pty Ltd drilling were accurately located. It was considered the manganese outcrops were adequately tested, showing them to be very shallow features of no further economic potential.

Thus, the proposed drilling was cancelled.

Genesis Resources Ltd conducted a gravity survey to test for possible buried manganese mineralisation. The Geophysical survey was conducted around the Masterton No.2 Prospect and in a quarry in the north-west part of the tenement.

2.3 PROPOSED ACTIVITIES

2.3.1 Interpretation of gravity survey data.

2.3.2 Follow-up soil sampling at stream sediment anomalies.

Accommodation will be at the nearby Calvert Hills station or in a campsite by the Calvert River, in agreement with the landowner (Figure 3). This campsite is often used by visiting people, and has been recommended to us by the landowner. There is no clearing required. If used, a small pit-toilet will have to be dug. Initial access will be by 4 x 4 vehicle and secondary access by quad or motor bike.

2.3.3 Drilling of gravity and soil anomalies.

Drilling of gravity and soil anomalies may be carried out during the 2018 year. Targets defined in the gravity survey together with previously defined AEM targets, will be considered for an RC drilling program. At the present time it is planned that the drilling program should be focused on the known area of mineralisation (targets 1 & 2 in Figure 4) and test the potential of VTEM target 9 (Figure 4). However, a final target list will be defined at a later date.

An RC drill rig with support vehicles will be used to carry out the drill programme. Approximately 14 drill holes and drill pads will be planned (these were applied for in the 2011 MMP). Drill holes will be sited with a GPS. Access to the drill sites will mainly be along tracks already created for a drilling program in 1992. Those tracks will have to be re-prepared in order to access the drill sites. The tracks are still visible and present no sign of major erosion. There is some vegetation on the old tracks, mainly consisting of grasses and occasional eucalyptus which can generally be avoided. No tree will be cut down if not necessary. Approximately 0.5 kilometres of new tracks will also be prepared. The drill pads will be 8m x 8m of levelled ground with a further cleared area of 2m surrounding. The drilling contractor has not been chosen yet. Drill site and access will be subject to strict supervision and enforcement of environmental procedures to minimise vegetation and soil disturbance.

Accommodation will be at the nearby Calvert Hills station or in a campsite by the Calvert River, in agreement with the landowner (Figure 3). This campsite is often used by visiting people, and has been recommended to us by the landowner. There is no clearing required.

A summary of the drilling program details is provided in the following table.

Mining Interests (i.e. titles)	EL24814
What time of the year will exploration occur?	Second or third quarter of 2018
How long is exploration expected to occur?	2-3 weeks
Type of drilling (i.e. RAB, RC, Diamond, aircore)	RC
Target commodity	Manganese and base and precious metals
Is drilling likely to encounter radioactive material?	No
Number of proposed drill holes	Approximately 14 (applied for in 2011 MMP)
Maximum depth of holes	75m (approximately)
Number of drill pads (Length: x Width: m)	Approximately 14 (10m x 15m)
Is drilling likely to encounter groundwater? (Y, N, unsure)	Y
Number of sumps (Length: x Width: x Depth: m)	Sumps will only be dug if ground water needs be contained, loader available at Calvert Hills Station.
Length of line / track clearing (Kilometres: x Width: m)	Old tracks to be refreshed: about 2km. New tracks: about 0.5km.
Number of costeans (Length: x Width: x Depth: m)	0
Will topsoil be removed for rehabilitation purposes?	Yes, when possible.
Previous disturbance yet to be rehabilitated on title (ha) if known	No
Camp (Length: 3m x Width: 20m)	0
Total area disturbed (hectares)	c. 1 ha
Other:	N/A

Table 2: Summary of program

3. CURRENT PROJECT SITE CONDITIONS

3.1 GEOLOGY

The dominant lithologies within EL24814 are the Proterozoic carbonate rocks of the Karns Dolomite (McArthur Group), and sedimentary rocks of the Masterton Formation (Tawallah Group). The Karns Dolomite outcrops extensively throughout the tenement with a maximum of 100 m to 150 m thickness.

The unconformity between the Masterton Formation and the overlying Karns Dolomite is quite major as can be seen by its highly irregular nature. Jointing is well developed with two major directions of 090° and 110°, with less well developed sets at around 350°.

Copper, lead, zinc and manganese mineralisation are known within the area and the Redbank copper breccia pipes are about 40km to the east. Chamosite and manganese are widespread throughout the dolomite. Lead occurs as galena apparently filling cavities in small areas. Copper occurs as chalcopyrite associated with galena.

3.2 HYDROLOGY

The area is drained by one major river system: the Calvert River located in the central part of the EL. Previous drilling did not intersect any major aquifer, only minor moist clays. The Karns dolomite is however known for hosting fracture aquifers. Any aquifer in the prospect area would be connected to the Calvert River drainage system.

3.3 FLORA AND FAUNA

The major vegetation type is that of tropical eucalyptus woodland with grassy under-storey. The area has been submitted to control burning in June 2011, so it is unknown what endangered flora can actually be found in the area. A description of the flora and fauna of the region, including the endangered species from the EPBA Act Protected Matters Report is shown in Table 3. Refer to Appendix 1: Rangelands Overview.

Table 3: List of threatened species with potential to occur in a 10km radius of the proposed drill sites. Vu=Vulnerable, EN=Endangered, IN=Invasive species, CE=Critically Endangered. Information obtained from the EPBC Act Protected Matters Report, 13/09/2017.

Group	taxons	Common Name	NT level
Listed Threatened Species			
Bird	<i>Calidris ferruginea</i>	Curlew Sandpiper [856]	CE
Bird	<i>Grantiella picta</i>	Painted Honeyeater [470]	VU
Bird	<i>Numenius madagascariensis</i>	Eastern Curlew, Far Eastern Curlew [847]	CE
Bird	<i>Erythroriorchis radiatus</i>	Red Goshawk [942]	VU
Bird	<i>Rostratula australis</i>	Australian Painted Snipe [77037]	EN
Bird	<i>Erythrura gouldiae</i>	Gouldian Finch [413]	EN
Bird	<i>Tyto novaehollandiae kimberli</i>	Masked Owl (Northern) [26048]	VU
Mammal	<i>Dasyurus hallucatus</i>	Northern Quoll [331]	EN
Mammal	<i>Pseudantechinus mimulus</i>	Carpentarian Antechinus [59283]	VU
Mammal	<i>Saccolaimus nudiclunatus</i>	Bare-rumped Sheath-tail Bat [66889]	VU
Mammal	<i>Macroderma gigas</i>	Ghost Bat [174]	VU
Reptile	<i>Acanthophsis hawkei</i>	Plains Death Adder [83821]	VU
Reptile	<i>Elseya lavarackorum</i>	Gulf Snapping Turtle [67197]	EN
Listed Marine Species			
Migratory Wetlands	<i>Rostratula benghalensis</i>	Painted Snipe [889]	EN
Invasive Species			
Frogs	<i>Rhinella marina</i>	Cane Toad [83218]	IN
Mammal	<i>Felis catus</i>	Domestic Cat [19]	IN
Mammal	<i>Bos Taurus</i>	Domestic Cattle [16]	IN
Mammal	<i>Bubalus bubalis</i>	Water Buffalo, Swamp Buffalo [1]	IN
Mammal	<i>Canis lupus familiaris</i>	Domestic Dog [82654]	IN
Mammal	<i>Equus caballus</i>	Horse [5]	IN
Mammal	<i>Sus scrofa</i>	Pig [6]	IN
Plant	<i>Parkinsonia aculeate</i>	Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]	IN

3.3.1 Weeds Management

Prevention in the Natural Environment

Prevention is the most effective method of dealing with weeds. Early detection and eradication are crucial to reduce its potential environmental and economic impacts. It is much easier to treat weeds when present in small numbers than when they are well established.

Early detection and eradication requires an awareness and understanding of the factors that favour the establishment and spread of weeds, and applying appropriate management practices that can prevent or reduce the risks. The spread of most weeds occurs through similar pathways, such as the movement of goods, animals and vehicles contaminated with weed seeds.

It is important to reduce the risk of the environment becoming vulnerable to invasion by exotic species by encouraging beneficial vegetation growth and by avoiding disturbance as much as possible.

Measures for weed prevention in the landscape include:

- Minimise the disturbance of desirable plants along trails, roads, and waterways.
- Maintain desired plant communities through good management.
- Monitor high-risk areas such as transportation corridors and bare ground.
- Revegetate disturbed sites with desired plants.

We need to be aware of new infestations and report potential new weeds or new outbreaks to the local council, or to the Northern Territory weed management agencies.

A. Objectives and targets

Implement weed control activities to reduce the chance of weed infestation by washing down vehicles before entering the tenement. The target is to enter the tenement with clean vehicles so as no seeds can contaminate the area.

B. Prevent the introduction and spread of weeds

Measures that will be implemented by Genesis Resources employees to prevent the introduction and limit the spread of weeds include:

- appropriate standards of hygiene with the inspection of earthmoving equipment entering site and the provision of adequate vehicle wash down facilities.
- use only established access roads to prevent further spread;
- minimise the introduction and spread of feral animals that may be further spreading weeds on or off site; and
- education and awareness of weed related matters for employees and contractors.

c) Prioritise weed control activities

Weed control activities should be prioritised to maximise the use of the resources allocated and to take advantage of timing in relation to burning, seeding and growth periods of weed species (plant life cycle). Examples of specific factors to consider when prioritising weed control efforts for individual areas of infestation include:

- proximity to roads/tracks (e.g. infestations close to tracks get high priority);
- phase of invasion (e.g. early stages can be controlled more easily, so get high priority);
- size of infestation (e.g. smaller infestations can be controlled more easily);
- proximity to drainage lines/waterways (e.g. infestations close to drainage lines more likely to spread);

- susceptibility to wind dispersal as well as prevailing wind direction (e.g. weeds growing in elevated areas or weeds with light seeds more likely to disperse); and
- proximity to lease boundary (e.g. weeds close to boundary get higher priority).

d) Outline weed control methods – How to manage the situation

Weeds can be controlled by chemical (i.e. herbicide), physical removal (i.e. hand pulling and the use of machinery), biological and/or land management (i.e. use of fire and cattle grazing) methods. Optimal methods vary from one species to another and may change over time with weed research and/or new chemical products.

3.4 LAND USE

The tenement is covered by the “Calvert Hills Station” with station tracks providing access. It is a cattle station with about 20,000 cattle heads.

PPL 1169 Owners: Mr William McMillan
McMillan Pastoral Company Pty Ltd (ACN 096 630 885)
(07) 4742 5999

C/- Post Office
Cloncurry QLD 4824

Or via the Station:

Private Bag 19
Tennant Creek NT 0862

PPL 968 Owners: Northern Territory of Australia
(c/- Department of Lands, Planning & Environment, GPO Box 1680, Darwin NT 0801)

3.5 HISTORICAL, ABORIGINAL, HERITAGE SITES

A search of the AAPA register by the previous project manager showed no recorded sites of significance in the Masterton No.2 area or the Thor prospect area (Figure 5). There is no sacred site within 6km of the Masterton No.2 prospect. Genesis Resources Ltd were advised by the National Native Title Tribunal on the 25 August 2014 that a Native Title Determination Application was made over the Calvert Hills Pastoral Lease (NTD25/2014). The notification day for this application was the 10 September 2014. A search of the EPBC Act Protected Matters report on the 13 September 2017 shows no Heritage sites are located within the area.

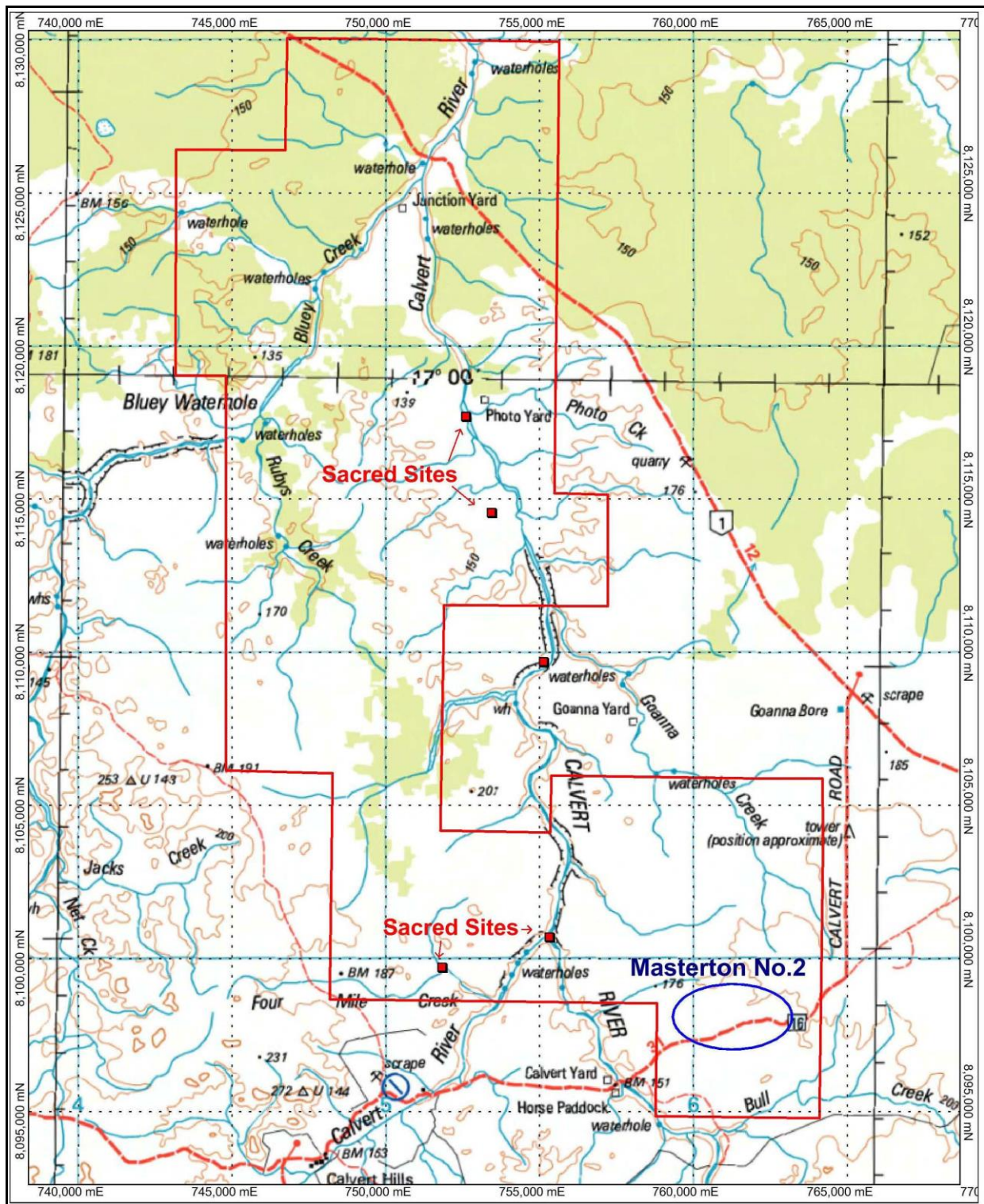


Figure 5: AAPA map showing sacred sites on EL24814 and location of Masterton No.2 prospect.

A search of the NT Heritage Register and the NT Archaeological Sites Database showed no nominated, provisional or declared heritage places located within EL24814. However, there are a small number of previously recorded Aboriginal archaeological sites located within EL24814. Figure 6 is a map extract showing EL24814 on a map with the archaeological sites as red dots. The map was provided by the Heritage Branch on the 9 April 2015. The archaeological sites are old sites that were originally recorded in AGD066 as Eastings and Northings and are listed as a

combination of stone artefact scatters, middens, rock art and stone arrangements. They are protected under the NT Heritage Act 2011 and will be avoided during any exploration and extraction activities.

There may be also be other as yet undiscovered Aboriginal archaeological sites in the area, given that there is rocky terrain and watercourses crossing EL24814 and the wider area in general is considered to be an archaeological-rich area. Care will be taken during these activities and if any other potential archaeological sites are discovered then all work in the immediate vicinity will be ceased and the Heritage Branch contacted on (08) 8999 5051.

(<http://www.ntlis.nt.gov.au/heritageregister>).

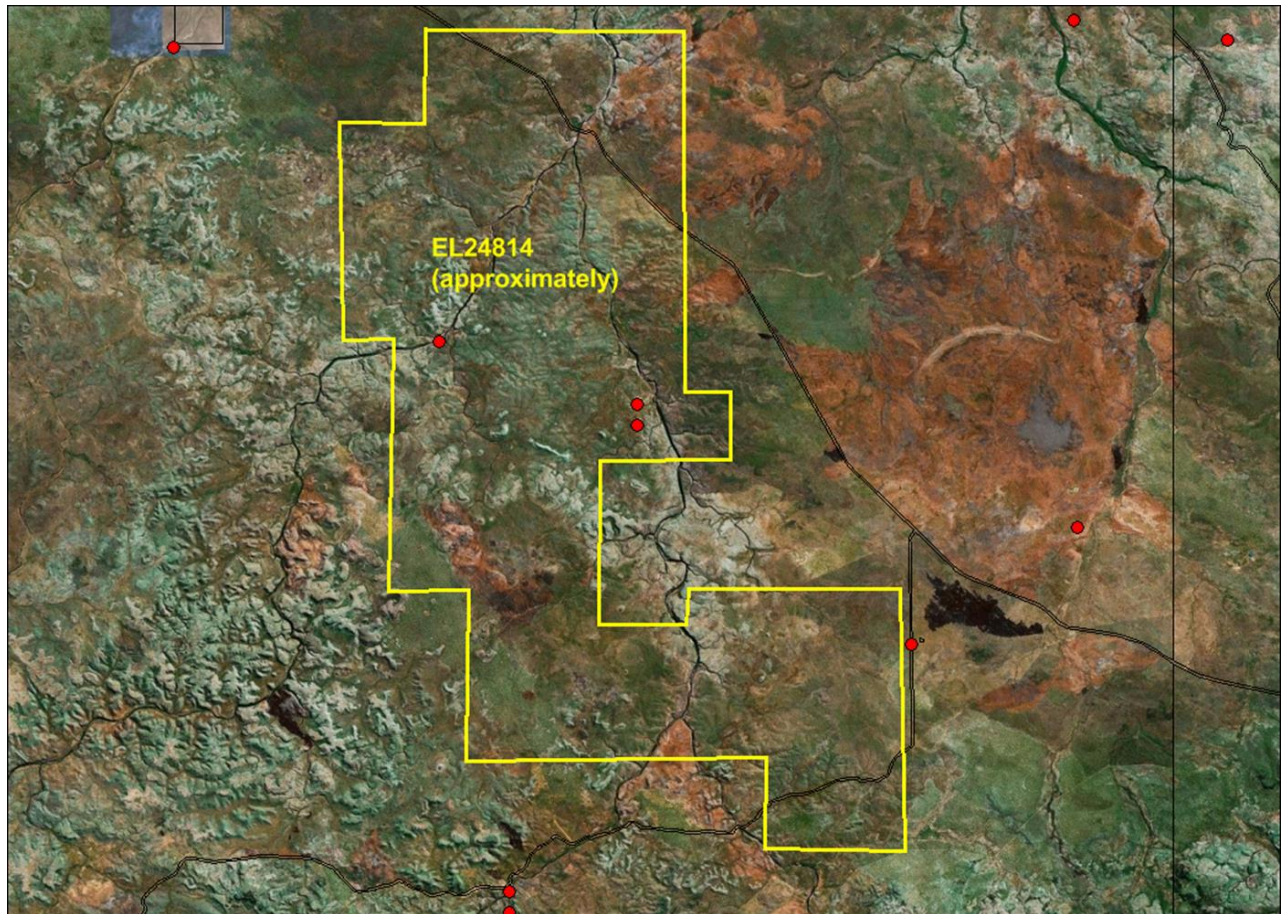


Figure 6: McArthur River EL24814 – Red dots are Aboriginal archaeological sites (provided by the Heritage Branch 9/04/2015).

4. ENVIRONMENTAL MANAGEMENT SYSTEM / PLAN

4.1 ENVIRONMENTAL POLICY AND RESPONSIBILITIES

The company is committed to achieving the highest performance in occupational health and safety with the aim of creating and maintaining a safe and healthy working environment throughout its work sites.

The company has set a target of zero lost time injuries for its officers and contractors engaged in exploration activities at the McArthur River project.

Genesis have set the following targets for environmental performance:

- Avoid any disturbance of sites of cultural significance to traditional owners.
- Have 0% introduction of weed species and pests.
- Have 0% of oil spills.
- 100% of hazardous materials and dangerous goods to be removed from site within 6 months after drilling completed.
- All waste to be removed from the drilling site within 6 months.
- Rehabilitation of drill holes, drill sites and access tracks to be finalised within 6 months after completion of the drilling program to prevent erosion. This will be monitored after the 2018-2019 wet season.
- Ensure damage to native vegetation and fauna habitat is kept to a minimal level.

The person responsible for implementing safety management at the Project is the company's Exploration Manager, James Patterson.

4.2 STATUTORY REQUIREMENTS

Current applicable legislation permits and conditions under which the project has been operated are:

- Mining Management Act,
- Mining Management Regulations,
- Mineral Titles Act,
- Weeds Management Act,
- Bushfires Act,
- Heritage Act,
- NT Aboriginal Sacred Sites Act,
- Native Title Act,
- Aboriginal Land Rights (Northern Territory) Act,
- Environment Protection & Biodiversity Conservation Act,
- Soil Conservation and Land Utilization Act
- Work Health and Safety (National Uniform Legislation) Act,
- Radioactive Ores and Concentrates (Packaging and Transport) Act (NT),
- Code of Practice for Safe Transport of Radioactive Materials 2001,
- Code of Practice for Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing,
- Reporting requirements such as those for; production statistics; employment/injury and safety statistics; frequency of water quality reporting,

- Lease conditions,
 - Authorisation conditions,
- Territory Parks and Wildlife Conservation Act,
Waste Management and Pollution Control Act
& the Dangerous Goods Act.

4.3 NON-STATUTORY REQUIREMENTS

Genesis has no Exploration Deed agreement with the Northern Land Council, as there are no Native Title Claims over the Exploration Licence.

Genesis will fulfil its obligations to follow Environmental Management Plans for the project and maintain communication with relevant stakeholders during the life of the exploration project.

4.4 IDENTIFIED STAKEHOLDERS AND CONSULTATION

Land owner/ manager of pastoral lease:

Genesis Resources Ltd will contact with Mr William McMillan the land owner of McMillan Pastoral Company so that the exploration activities do not interfere with the land use (muster, controlled burning etc...). Activities will be conducted in agreement with the landowner.

During the exploration activities, contact will be made via phone or face to face with the land owner regularly to update on the program and notify them of any change to circumstances.

Northern Land Council:

Contact has been made with the Northern Land Council (NLC) who referred to the Aboriginal Areas Protection Authority (AAPA) regarding any potential sacred site in the area. A consultation of the sacred site register showed that no sacred sites are located in the prospect areas.

Other stakeholders are:

Genesis Resources Limited, NT WorkSafe, Northern Territory Department of Primary Industry and Resources.

Land Access Agreement

Amanda McMillan from the McMillan Pastoral Company owners of the Calvert Hills Station confirmed via email on the 24 May 2017 that everything is ok for land access. William and Amanda McMillan can be contacted on (07) 4742 5999.

4.5 INDUCTION AND TRAINING

Genesis are aware that as the operator we take full responsibility for all environmental and safety management on site.

The company has in place a generic induction process which can be adapted (or altered) to suit specific project needs. For the Project, the initial induction process would focus on remote area safety, vehicle safety and drill rig safety.

Standard operating procedures and inductions are in place for the following:

- Field communication & search and rescue;
- Emergency evacuation procedure and
- Vehicle induction

Various consultants will be employed and the company will ensure that they will provide their safety procedures. An induction to drill rig safety is always conducted at the commencement of a drill program and generally delivered by the rig supervisor or the most senior drill operator. All site personnel are required to participate in an induction before commencing work.

Environmental topics to be covered in induction include but are not limited to: Threatened plants and animals (identification, actions, responsibilities), weeds (identification, responsibilities), erosion minimisation, vegetation clearing minimisation techniques, emergency responses to spills or accidents, hazardous substances, location of first aid, fire extinguishers, bush fire safety, stop work events such as heavy rain, sacred sites, health and safety topics such as heat stress, dehydration and fatigue.

Appropriate manuals and training will be provided where required.

Identification, assessment, management and control of risks will be the subject of daily toolbox meetings between all site personnel. The results of these discussions will be passed to the Operator.

The contractor supervisor, to ensure risk minimisation, will conduct audits of sites of potential hazards daily.

All contractors will have to demonstrate they are aware of their company's safety and environmental procedures and all visitors to the site will be escorted and will wear appropriate personal protective equipment.

A Standard Operating Procedure (Emergency Evacuation Procedure) is in place for a medical emergency.

4.6 IDENTIFICATION OF ENVIRONMENTAL ASPECTS AND IMPACTS

Refer to Table 4 for the Environmental aspects and impacts related to proposed exploration activities at the McArthur River Project.

Table 4: Environmental aspects and impacts related to proposed exploration activities.

Aspect	Impact	Risk Rating
Clearing of tracks / drill pads / digging of sumps	Damage to native vegetation and fauna habitat Erosion of soil and increased sedimentation in watercourses Disturbance of cultural heritage sites.	Moderate
Mobilisation to site and driving between drill sites	Spread of weeds / pests Compaction of soil.	Low
Drilling	Hydrocarbon spills – contamination of soil, surface and ground water Intersection of confined aquifers Dust and noise emission – pollution and disturbance to fauna Intersection of naturally occurring radioactive minerals	Low

- A low level of environmental risk from the proposed mining exploration program will be from erosion caused by ground clearance and disturbance of approximately 0.1ha for road access establishment and drill site clearance. Erosion will be minimised by ensuring a proper surface drainage system is realised while preparing the tracks.
- Another potential impact is from weed infestations due to machinery entering the area; refer to 3.3.1 for management strategy.
- Potential impact on listed vulnerable, near threatened or endangered species in the area will be minimal due to lack of appropriate habitat for such species. If threatened species are identified, NRETAS will be contacted to discuss the best procedure to implement.
- The site is 0.4km from an ephemeral waterway which is an area of natural importance. If rain does occur, the area will be susceptible to erosion and extra care will need to be taken near the waterway to avoid disturbance of soil and ephemeral plants that come up quickly after rain. Roads will not be used until they have dried sufficiently after rains.
- As with any use of machinery there is a risk of hydrocarbon spills. Those spills will be avoided at maximum by checking the hydraulics of the machinery before entering the drill site.

If however a spill happens, then the spilled substance will be covered by absorbent sand (clay litter) which will be removed from site and disposed of in an approved dump.

- Other risks include disturbing of sacred or heritage sites if new sites are discovered during the exploration program. If this happens the NLC and AAPA will be contacted for advice on the best practice to adopt.

4.6.1 EROSION AND SEDIMENT CONTROL

Clearing of access tracks and drill pads has the potential to damage vegetation and fauna habitats and cause erosion and compaction of soil.

- Drill pads and tracks will be prepared and cleared with a minimum of disturbance to the environment and rehabilitated to promote rapid re-vegetation and prevent erosion.
- The routes of access tracks and locations of drill pads will be chosen to avoid areas of dense vegetation and to minimise tree clearing. Track routes will be chosen after consultation with the landholder.
- Clearing will not occur within 25m of a creek or drainage line.
- Wherever possible track routes and drill pads will be sited so as to avoid steep slopes.
- When establishing tracks blade work will be kept to a minimum and as much as possible the “blade up” method used to avoid removal of rootstock and top soil and to promote regrowth.
- Tracks and drill pads will be formed so as not to block natural drainage lines. Creek crossings will maintain the form of the natural bed of the creek. “Gully plug” material will not be used to create crossings.
- Tracks will be kept to the minimum width required for the drill rig. The formation of windrows on the track sides will be avoided as these can channel surface water flow causing serious erosion. Any windrows will be back bladed as part of site rehabilitation.
- In the event of a storm where a large amount of rain falls, vehicle movement and drilling will cease as the area will be very susceptible to compaction and erosion at this time. Drilling will only recommence when the soil has dried sufficiently to support vehicles.
- Drill pads will be sited to avoid the need for excavation if possible. If excavation is required to level a drill pad then top soil will be stockpiled for re-spreading during rehabilitation. Any excavated material will be reformed to as close to the original land surface as possible during rehabilitation.
- Drill collars will be sited so that no drilling occurs within 25m of the bank of a creek or drainage line.
- Drill sumps will be located on the downslope side of drill pads and will be lined. Sumps will be sited at least 25m from creeks or drainage lines and so that no overflow occurs within the 25m buffer zone. Sumps will be sited away from the drip lines of any trees where possible to avoid

damage to the root zone. Sumps will be dug with a slope to allow fauna to escape. On completion of drilling sumps will be allowed to dry, the lining removed and disposed of. Sumps will be backfilled and capped with at least 1m of clean, compacted soil.

- During rehabilitation of drill sites, drill samples will be emptied from their plastic bags either into the drill hole or dry sump. Sample bags will be removed from site and disposed in an approved manner after receipt of assay results.
- If drill pads or access tracks become compacted they will be ripped along contour to loosen soil during rehabilitation.

4.6.2 WATER MANAGEMENT

Water for industrial use (e.g. drill hole clearing or dust suppression) will be carried on the drill rig or support vehicles. Industrial water will be sourced from local Bores on the Calvert Hills pastoral lease. Written approval to use these bores will be sought from the landholder, Mr H Chapple before commencement of any drilling program. Drinking water will be sourced from the Calvert Hills station or from a campsite by the Calvert River.

Drill holes will be collared with PVC to prevent washout.

If groundwater from a single unconfined aquifer is encountered it will be channelled from the drill collar into the lined sump. Sumps will be sited so that any over flow will remain at least 25m from the banks of creeks or drainage lines.

When rehabilitating the hole, casing will be cut at a minimum depth of 0.4m below ground. If possible drill samples will be backfilled into the hole. A concrete hole plug will be placed above the remaining casing. Compacted soil will be back filled over the hole and mounded to allow for subsidence and to prevent rainwater entering the hole.

If two or more confined aquifers are intersected the hole will be grouted and sealed to prevent water flow between aquifers. Grout plugs will be placed between aquifers and the overlying confining beds. Grout plugs will be of at least 4m thickness with 2m above and below the interface of the aquifers. The hole will then be plugged and backfilled at surface as outlined above.

4.6.3 RADIATION MANAGEMENT

The primary focus of Genesis Resources exploration program for 2017/2018 is manganese mineralisation. It is not considered likely that radioactive minerals and elements (uranium and thorium) will be intersected during the proposed RC program. Thorium occurs as a constituent of rare earth elements, monazite and zircon.

However to control potential risks from naturally occurring radioactive minerals to people and the environment during drilling the following procedures will be implemented.

- Use of appropriate PPE including safety glasses, dust masks, full length clothing and gloves to minimise contact with samples. Waste PPE will be bagged and disposed of at the Borroloola landfill.
- Washing of hands before eating or smoking.
- Showering and change of clothing at the end of shift. Clothes to be regularly laundered.
- Use of a dust suppression system on the drill rig.
- Regular cleaning of machinery where significant build-up of mud or dust occurs. This will occur on site and this material to be contained within the lined drill sump. Equipment will also be cleaned prior to demobilisation from the work site. The drill sump will be allowed to dry and covered with at least 1m of compacted, clean soil.
- RC bulk drill samples will be bagged and stored on site until assay results are received. There is no authorised public access to the proposed areas of drilling. After assay results are received the bulk samples will be emptied from their bags into the drill hole or dry sump and covered with at least 1m of compacted clean soil. Empty sample bags will be disposed of in the Borroloola landfill.
- Any groundwater encountered during drilling will be channelled into and contained within sumps at the drill site. Sumps will be site at least 25m from creeks or drainage lines and also so that any overflow will also be outside the 25m buffer zone. Sumps will be lined, water will be allowed to evaporate and the sump covered with at least 1m of compacted soil. The sump lining will be removed prior to back filling and disposed of in the Borroloola landfill.

4.6.4 HAZADAROUS MATERIALS AND DANGEROUS GOODS

The substances and materials tabled below are those that will be used during the RC drilling program. The hazard and danger rating classifications are those given by the National Occupational Health and Safety Commission (NOHSC) and the Australian Dangerous Goods Code (ADGC), refer Table 5.

Table 5: Identified Hazardous Materials and Dangerous Goods

Substance/Material	NOHSC Hazard Rating	Dangerous Goods Rating	Comments
Diesel	Hazardous	Non dangerous	
Engine oil	Non - hazardous	Non dangerous	
Hydraulic oil	Non - hazardous	Non dangerous	
Liqui-pol	Non - hazardous	Non dangerous	Viscosifier
Superfoam	Non - hazardous	Non dangerous	Bio-degradable surfactant

No hazardous substances will be stored on site.

Diesel for re-fueling the drill rig will be carried in metal tanks or drums on a support vehicle. A manual or electric fuel pump and hose will be used to transfer fuel.

Engine oil, hydraulic oil and drilling fluids (Liqui-pol and Superfoam) will be carried on a support vehicle in 20 litre plastic or metal containers. No hazardous substances will be stored on site.

Support vehicles and light vehicles will be refueled from the public fuel stations at Borroloola.

4.6.5 SPILLS MANAGEMENT

Spillage of hydrocarbons such diesel, engine and hydraulic oils has the potential to contaminate soils and drainages.

To prevent such contamination the following procedures will be used.

- All vehicles to be serviced prior to commencement of the drilling program to minimise risk of hydrocarbon leaks. A high standard of vehicle maintenance will also be enforced during the course of the drilling program with any leaks to be repaired immediately.
- Use of plastic sheeting beneath drill rig and compressor to catch any fuel or oil spillages.
- Any spills of hazardous substances will be cleaned up immediately. Spills will not be cleaned using water or sweeping which may allow contaminants to enter the natural drainage and groundwater.
- Any spills will be contained and absorbed with earth, sand or vermiculite. Contaminated soil will be shoveled into plastic bags or containers which will be sealed and clearly labelled for disposal.

4.6.6 WASTE MANAGEMENT

All waste materials will be removed from site including all hydrocarbons, solid waste and food waste. Waste material will not be stored on site.

Solid waste (used PPE, empty plastic bags and containers) and food waste will be contained in plastic bags and removed to the waste facility.

All plastic sample bags will be emptied and removed from site to be disposed of at the Borroloola waste facility after completion of the drill program.

All plastic sump linings will also be removed and disposed of at the Borroloola waste facility at the end of the drilling program.

Hydrocarbon waste including used engine oil and hydraulic oils will be contained in metal or plastic containers and will be removed from site to the Borroloola waste facility.

4.6.7 NOISE AND AIR QUALITY MANAGEMENT

All drill pads are situated in areas well removed from dwellings and are not accessible to the public.

A dust suppression system will be fitted to the drill rig. If required industrial water sourced from the local bores and carried on the rig or support vehicle will be hand sprayed over the drill pad area and sample area for dust suppression.

4.7 EMERGENCY PROCEDURES AND INCIDENT REPORTING

4.7.1 EMERGENCY PROCEDURES

Part of the induction program will identify the method of contact for the Tennant Creek Hospital and Royal Flying Doctors, and the person in charge will ensure that there is a method of contact via phone (satellite if necessary) and any evacuation procedures recommended. A comprehensive first aid kit will be available onsite and site personnel will be shown its location.

A fire extinguisher and water pump and trailer will be available at the site if necessary. The induction program will make all staff aware of responsibilities and procedures in preventing and surviving bush fires.

Environmental emergencies could be contamination by hydrocarbons of water or soil. The risk is however minimal due to the small size of the exploration program. Some hydrocarbons will be stored on-site, on an easily accessible location close to the Calvert road. This location will be chosen so that if a spill occurs the hydrocarbons will be contained on the storage location, to prevent any large scale soil contamination or contamination of a waterway. If necessary a bund will be built around the storage tank.

4.7.2. INCIDENT REPORTING

In the case of an environmental incident (an unplanned event) that causes environmental harm, it will be dealt with immediate containment and, if necessary, an environmental consultant will be contacted. All incidents will be reported as soon as practicable after the environmental incident has occurred to the Chief Executive Officer of the Department of Mines and Energy, in accordance with Section 29 of the Mining Management Act. If we give notice orally, we will provide written notice to the Chief Executive Officer no later than 48 hours after the event.

Genesis understands that when assessing an incident and making decisions about reporting on an environmental incident or serious environmental incident, we should have regard to the definition of “environment” in the MMA.

“Environment” is defined under section 4 of the MMA as follows:

land, air, water, organisms and ecosystems on a mining site and includes:

- (a) the well-being of humans;*
- (b) structures made or modified by humans;*

(c) the amenity values of the site; and economic, cultural and social conditions

A new requirement of The Department of Primary Industry and Resources is that all environmental incidents are to be recorded in a site register and reported to the Chief Executive regardless of its severity class.

Incidents that require reporting are:

- (a) Escape (by any means such as a spill or leak) of a fuel, chemical, product or residue in solid, liquid or gaseous form including fumes, smoke, vapours, contaminated water, or dust;
- (b) Emissions of noise (beyond reasonable permitted levels);
- (c) Uncontrolled or accidental fire on any land, structure or infrastructure;
- (d) Unauthorised, uncontrolled, or both, discharge of controlled waters to surface or ground waters;
- (e) Damage to a Sacred Site, Aboriginal Protected Area, other protected area, archaeological or heritage site;
- (f) Unauthorised mining, whether the activity is undertaken on or off an authorised mining site;
- (g) Unauthorised clearing of vegetation or disturbance of the ground on or off an authorised mining site; and,
- (h) Harm to human well-being.

4.8 ENVIRONMENTAL AUDITS AND INSPECTIONS

No environmental audit or inspection has been undertaken to date as there has been no exploration that has impacted on the environment (only soil and rock chip sampling, an electronic survey (XTEM) and an aeromagnetic survey).

Environmental audits will be carried out by Genesis Resources. Inspection of access tracks, drill pads, sumps and the weed wash down area will be undertaken within six months and/or at the end of the following wet season to ensure that no erosion, hole failures or weed growth has occurred. Remediation will be undertaken at inspection if necessary.

Photographs of the site will be taken before track and drill site clearance, during the process and after rehabilitation as proof of minimal impact and to monitor the progress of revegetation.

If Genesis personnel are unavailable, Low Ecological Services will be engaged to carry out inspections. Low Ecological Services (08) 8955 5222 is a Northern Territory business based in Alice Springs, directed by Bill Low, who has been working in environmental management and research in Central Australia for over 39 years. They have a detailed working knowledge of central Australian flora, fauna, landscape, soils, geology and environmental remediation.

No environmental audit or inspection has been undertaken to date.

4.9 ENVIRONMENTAL PERFORMANCE REPORTING

Genesis Resources' goal is to prevent incidents that impact people, wildlife and the environment. When they do occur, we are committed to transparent reporting.

Genesis will, at all times, operate its facilities in compliance with applicable laws and regulations and will adopt and adhere to standards that are protective of both human health and the environment.

The McArthur River Project, in addition to its mineral resources, is an area rich in other natural resources and plant and animal species, and we are committed to conserving and protecting biological diversity and ecosystem service.

Genesis will establish an audit program to systematically evaluate compliance of operating facilities with applicable federal, state, and local rules and regulations.

Each employee (including contractors) will be held accountable for ensuring that those employees, equipment, facilities and resources within his or her area of responsibility are managed to comply with this policy, and to minimize environmental risk.

As above, as no work has commenced to date that affects the environment, there is nothing to report at this time.

Factors for consideration for MMP update in the future:

- ♣ Results of monitoring programs will be presented e.g. water, noise, dust, weeds etc
- ♣ Pollution and waste management and minimisation progress
- ♣ Progress made against environmental targets
- ♣ Progress towards achieving revegetation and closure objectives.

4.9.1. BIOLOGICAL MANAGEMENT

Training of site personnel about threatened flora and fauna at induction prior to drill commencement and track clearance will assist in reducing risk.

Vegetation clearance and soil disturbance will be minimised by using blade up techniques, only clearing tracks to a blade width of approximately 4m, diverting around large trees and driving on established tracks where possible.

Fauna will not be harassed during the exploration program. Induction of staff will discuss vulnerable species that potentially occur in the area so that any impact can be avoided. Vulnerable species are only likely to occur during wet periods when fauna are exploring for new country. During these periods staff will be extra vigilant and report any sightings to Parks and Wildlife.

Feral species will not be brought to site. No feeding of wildlife will be permitted on site. Weeds species will not be brought to site. Care will be taken with any wildlife noticed and a record will be kept of the species noted.

Genesis will minimise environmental impacts from weeds in the proposed drill area by cleaning vehicles and machinery at the local bore before entering the site and before leaving washing or air hosing vehicles down.

Site personnel will endeavour to drive on established tracks as much as possible to minimise soil disturbance where weeds are prone to establish and to avoid weed seed distribution.

Staff and contractors will report any Weeds of National Significance found in the exploration zone to NRETAS immediately. Staff will remove weeds of lower impact during and after drill exploration using appropriate and effective methods which can be found in the Greening Australia Field Guide or from NRETAS.

5.0. EXPLORATION REHABILITATION

Table 6: Summary of exploration rehabilitation plan

Disturbance	Rehabilitation Activities	Schedule	Closure Objective / Targets	Monitoring and Remediation
Drill holes	Plugging with concrete plug below ground level, backfilling, and mounding	At the completion of each hole	All holes plugged and stable prior to end of program	Monitoring at the end of wet season, Remediation at inspection if necessary
Drill pads	fill with soil and level	After the completion of the drill program	Scarification, cover with top soil	Monitoring at the end of wet season, Remediation at inspection if necessary
Sumps	Refilled with soil	After the completion of the drill program	Replace topsoil and scarification	Monitoring at the end of wet season, Remediation at inspection if necessary
Costeans	N/A			
Bulk sample pits	NA			
Tracks / Gridlines	Rehabilitated	After the completion of the drill program	All tracks will be closed, replace topsoil and scarification	Monitoring at the end of wet season, Remediation at inspection if necessary
Sample bags	Removed from site	At the completion of the program	Remove to approved dump site	
Camp	N/A	N/A	N/A	

5.1 COSTING OF CLOSURE ACTIVITIES

The following assumptions have been for the Security Calculation.

- 0.5 line kms of new tracks will be constructed to provide safe drill access;
- 2 line kms of old tracks will have to be refreshed, and
- Approximately 14 holes may be drilled to test targets generated by exploration activities. These holes were previously approved from the 2011 MMP (they are not additional).

The close-out techniques are those recommended in the Department of Mines and Energy advisory notes on:

Clearing and Rehabilitation of Grid Lines and Tracks,
Capping and Plugging Of Exploration Drill Holes.

6.0. PERFORMANCE OBJECTIVES

- Successfully complete exploration drilling program with minimal environmental impact.
- Zero lost time injuries by implementing and maintaining best practice in occupational health and safety.
- Avoid any disturbance of sites of cultural significance to traditional owners.
- To have minimal, preferably zero impact on the environment.
- Have 0% introduction of weed species and pests.
- Have 0% of oil spills.
- 100% of hazardous materials and dangerous goods to be removed from site within 6 months after drilling completed.
- All waste to be removed from the drilling site within 6 months.
- Rehabilitation of drill holes, drill sites and access tracks to be finalised within 6 months after completion of the drilling program to prevent erosion. This will be monitored after the 2017-2018 wet season.
- Ensure damage to native vegetation and fauna habitat is kept to a minimal level.
- Advance Genesis Resources staff knowledge-awareness of Indigenous cultural and heritage values through structured programs.
- Genesis's Exploration Manager James Patterson is the person responsible for ensuring the performance objectives are completed.

7. REFERENCES

- Dennis, R.W., 1981, Annual report on EL 2129, Calvert River, Carpentaria Exploration Company, N.T. Report No. CR1981-0124.
- Goulevitch, J., 1990, RC Drill programme Manganese prospect Calvert Hills, Eupene Exploration, N.T. Report No. CR1991-0092 .
- Hashemi, A., Meyers, J., and Rothery, E. 2005 Sub-audio magnetic surveying for shallow occurrences of conductive manganese ore, Woodie Woodie area WA. Exploration Geophysics (2005) Vol 36, 170-175.
- Howard, J.P., 2011, Fifth Annual technical report on EL24814, Mc Arthur River Project, N.T. Genesis Resources Ltd report, March 2011.
- Kastellorizos, P. 2009, Third Annual technical report on EL24814, Mc Arthur River Project, N.T. Genesis Resources Ltd report, March 2009.
- Murray, K.J., 1953, Calvert Hills Manganese Deposit, Enterprise Exploration, N.T. Report No. CR1953-0001.
- Shannon, C.H.C., 1971, Progress report on Calvert Hills area AP2901, McArthur Basin, N.T. Report No. CR1971-0099.
- Yates, K.R., Roberts, J.M., Mikolajack, A.S., Rhodes, J.M., 1962, Calvert Hills Northern Territory 1:250 000 geological series map sheet SE 53-8. First Edition., Bureau of Mineral Resources, Australia, 1v, Map.