

# Mining Management Exploration Activities

## Northern Territory of Australia – Mining Management Act 2001

It is recommended that the Mining Management Plan (MMP) is completed in conjunction with the user guide available on the [Northern Territory Government website](#).

### Section 1 – Project Details

<b>Project Name</b> Provide new or existing project name	Bluff Extended
<b>Authorisation Number</b> Insert existing authorisation number, where applicable	1078
<b>Operator Name</b> Use ASIC-ABR registered name (if a company), or name of the applicant	Redbank Operations Pty Ltd (Redbank)
<b>Operator ABN and ACN numbers</b>	109 362 165
<b>Location and Access Details</b> Include brief description of the location, access details, and distance to nearest town or community	The project area is located adjacent to the Queensland border and approximately 190 km south-east of Borroloola. The new area of proposed work occurs within the <b>Calvert Hills Station Pastoral Lease</b> .
<b>Target Commodity Details</b> Include target mineral commodities (i.e. gold, copper etc.)	Copper
<b>Mining Activities</b> Summarise the mining activities (exploration) to be the subject of the proposed Authorisation or Variation.  Drilling programs over a maximum of four years are supported and encouraged and can be staged. Please refer to the guidelines for further information.	<b>Redbank propose to drill up to 27 RC drillholes near Calvert Hills Station.</b>  Ground disturbance will be required to access drill sites.

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<b>Proposed Schedule</b> Include start and finish dates of ground disturbing work	<b>June - November 2022</b>
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## Mining Interest and Land Ownership

List the mining interests (titles), the title holder name/s, the title expiry date and the Property name/Land holder (e.g. pastoralist or Aboriginal land trust) for each title.

<b>Title Number</b>	<b>Title Holder</b>	<b>Expiry Date</b>	<b>Underlying Property Name or Land Holder</b>
EL32469	Redbank Operations Pty Ltd	29/03/2027	NT Portion 668, Calvert Hills Station
EL32471	Redbank Operations Pty Ltd	29/03/2027	NT Portion 668, Calvert Hills Station
EL32323	Redbank Operations Pty Ltd	09/09/2026	NT Portion 668, Calvert Hills Station
EL32325	Redbank Operations Pty Ltd	09/09/2026	NT Portion 668, Calvert Hills Station

A Land Access Agreement is in place at Appendix 10.

## Organisational Structure

<b>Position Title</b>	<b>Name</b>
Managing Director	<b>Hugh Thomas</b>
Exploration Manager	<b>Mike Cowin</b>

## Section 2 – Operator Self-Assessment of the Environmental Risk

The purpose of this self-assessment is to ensure Operators complete a project risk assessment of potential environmental impacts and are aware of other legislative obligations from various Agencies. As a result of this self-assessment, further information may be required in the form of a management plan to enable full assessment of the MMP. If you have any queries please contact a Mining Officer prior to submitting the MMP. Useful resources to assist with this self-assessment are provided in the User Guide.

### Environmental considerations

ASSESSMENT ASPECT	YES or NO	ACTIONS REQUIRED (if answered YES)	APPENDED INFORMATION (e.g. evidence of consultation with DEPWS and/or management plan where required).
<b>Step 1:</b> Are there any threatened flora and fauna species or habitats of significance that may occur in the proposed work area?	Yes	An EIS was prepared by EcOz in 2009. A copy is in Appendix 2.  A Flora and Fauna Summary is also located in Appendix 9.  Searches of NR Maps for the project area within Calvert Hills Station show threatened flora and fauna occurrences. Appendix 8.	Appendices 2, 8 and 9.
<b>Step 2:</b> Are there any known declared weeds within the proposed work area?	Yes	A search of NR Maps shows recorded weed occurrences within the project area. Appendix 8.  A pest species summary is also located in Appendix 9.  Weed summary and management priority is located in the EcOz EIS, 2009. A copy is located in Appendix 2.	Appendices 2, 8 and 9.
<b>Step 3:</b> Will you be using water from bores or other sources for the operation?	Yes	Water may be drawn from an existing bore at the Redbank Camp site/ Redbank Prospect/ Bluff Prospect, which are not located within a water control district. Less than 1ML of water will be drawn in 2022.	N/A

Environmental assessment and cultural considerations

ASSESSMENT ASPECT	YES or NO	MANAGEMENT REQUIREMENTS
<p><b>Step 4:</b> Is your project likely to have a significant impact on the environment?</p>	No	Ground disturbance for drill rig and other equipment access.
<p><b>Step 5:</b> Are there Aboriginal sacred sites in the Project area?</p>	Yes	<p>Restricted works areas (AAPA) are acknowledged, however the proposed drillholes will not be in /on any restricted works areas.</p> <p>AAPA reports at Appendix 1.</p> <p>A search request for records on EL32325 was lodged on 4 May 2022. Search requests for EL32469, EL32471 and EL32323 had previously been sought in 2020 and 2021.</p>
<p><b>Step 6:</b> Are there archaeological and heritage sites in the Project area?</p>	Yes	<p>There are previously recorded Aboriginal archaeological sites within the broader Calvert Hills Station. Two of these sites are located within EL32471. Murabana II is located behind the station homestead, approximately 245 metres from Calvert, and Murabana I which is located a further kilometre to the south. Both sites are recorded as stone artefact scatters, quarry. Drilling is not proposed to occur near the mentioned sites, however the recorded sites will be flagged off, to ensure drilling is not conducted within the vicinity of the sites.</p> <p>If any suspected additional Aboriginal archaeological sites and declared heritage sites are found, works in the area will cease and the Department of Territory Families, Housing and Communities will be notified.</p> <p>Please see Appendix 3.</p>

### Section 3 – Amendments

As per Section 41(3) of the *Mining Management Act*, an MMP reviewed and amended under Section 41(1)(a) is to have amendments made since the previous MMP submission clearly identified.

Section	Amendment
<b>Section 1 – Project Details</b>	Mining Activities, Proposed Schedule, Mining Interest and Land Ownership updated.
<b>Section 2 – Operator Self-Assessment of the environmental Risk</b>	Step 1, Step 2, Step 5 and Step 6 updated.
<b>Section 4 – Activities Proposed</b>	Proposed new works inserted.
<b>Section 5 – Previous Disturbance</b>	Previous disturbance inserted into spreadsheet and attached at Appendix 11.
<b>Appendices 1, 3, 4, 5, 6, 7, 8, 9, 10 &amp; 11</b>	Appendices updated to cover proposed new works.

Delete or add rows as required

## Section 4 – Activities Proposed for this MMP only

Provide relevant EL numbers

Mining Interests (i.e. titles)	EL32471	EL32323	EL32325	EL32469
Number and type of proposed exploration drill holes	Rotary Percussion Drilling Sites – 8 (max)	Rotary Percussion Drilling Sites – 8 (max)	Rotary Percussion Drilling Sites – 7 (max)	Rotary Percussion Drilling Sites – 4 (max)
Maximum depth of proposed holes (m)	Up to 300m (max)	Up to 300m (max)	Up to 300m (max)	Up to 300m (max)
Number and size of drill pads to be cleared (Length: 30m x Width: 30m)	Up to 8 (max)	Up to 8 (max)	Up to 7 (max)	Up to 4 (max)
Total area of drill pads to be cleared (ha)	Up to 0.72 ha	Up to 0.72 ha	Up to 0.63 ha	Up to 0.36 ha
Sumps (Length 4m x Width 4m x Depth 1m) (Max dimensions – only if	Only if needed	Only if needed	Only if needed	Only if needed
Number of proposed water bores	Nil	Nil	Nil	Nil
Is drilling likely to encounter groundwater in multiple or confined aquifers? (Y, N, unsure) If answering yes, please provide the number of exploration holes where this is likely to occur	Unsure	Unsure	Unsure	Unsure
Number of costeans	Nil	Nil	Nil	Nil
Volume to backfill costeans (Length: m x Width: m x Depth: m)	Nil	Nil	Nil	Nil
Number of bulk sample pits	Nil	Nil	Nil	Nil
Volume to backfill bulk sample pits (Length: m x Width: m x Depth: m)	Nil	Nil	Nil	Nil
Bulk sample pits approved under <i>Mineral Titles Act</i> ? (Y or N). If Yes provide approval	N/A	N/A	N/A	N/A

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Mining Interests (i.e. titles)	EL32471	EL32323	EL32325	EL32469
Line/track clearing: (length m x width m)	Length 6.9 km x Width 3 m  Up to 6.9 km of lines	Length x 0.749 km x Width 3 m  Up to 0.749 km of lines	Length x 8.41 km x Width 3 m  Up to 8.41 km of lines	Length x 1.149 km x Width 3 m  Up to 1.149 km of lines
Area of proposed line/track clearing (ha)	Up to 2.07 ha	Up to 0.2247 ha	Up to 2.523 ha	Up to 0.3447 ha
Camp area to be cleared (ha)	Nil	Nil	Nil	Nil
Camp Infrastructure (i.e. demountable, tents) Please provide a complete list with measurements as required in the security calculation	Nil	Nil	Nil	Nil
Other	Nil	Nil	Nil	Nil
Total proposed area of disturbance (ha)	2.79 ha	0.9447 ha	3.153 ha	0.7047 ha

Tenement	Holes	Access Disturbance km	Pad Disturbance Ha	Track Disturbance Ha (3m wide)	Total Disturbance Ha
EL32471	8	6.8994	0.72	2.06982	2.78982
EL32323	8	0.7488	0.72	0.22464	0.94464
EL32325	7	8.4136	0.63	2.52408	3.15408
EL32469	4	1.1487	0.36	0.34461	0.70461
<b>Totals</b>	<b>27</b>	<b>17.2105</b>	<b>2.43</b>	<b>5.16315</b>	<b>7.59315</b>

## Section 5 – Previous Disturbance (for existing Authorisations only)

The 'Disturbance Tracking' spreadsheet must be completed and attached to the MMP submission to complete this section. The spreadsheet is available on the departmental web page where this template is located.

Please see Appendix 11.

## Section 6 – Environmental Management

By checking these shaded boxes, you are agreeing to implement the following minimum environmental management standards on the project area. Where boxes have been left unchecked, justification is required.

6.1	✓	Blade-up approach for clearing will be used (i.e. no windrows, leave root stock and topsoil)
6.2	✓	Significant vegetation will be avoided during clearing (i.e. large trees, specimens providing habitat or food sources, riparian vegetation, and threatened species)
6.3	✓	Vegetation clearing during, and immediately after rainfall events, will be avoided
6.4	✓	Vegetation clearing will be kept to the minimum required to safely traverse vehicles and drill rigs along tracks and drill pads
6.5	✓	Where blade-up techniques cannot be employed, topsoil and vegetation will be stockpiled appropriately for rehabilitation purposes
6.6	✓	All employees and contractors will be trained and inducted in relation to the management of environmental risks in the work area, including weeds, waterways, threatened species, soil erosion, sacred sites and heritage areas
6.7	✓	Sumps will be lined or tanks of appropriate size to contain water, sediment and drilling fluids encountered during drilling, will be used
6.8	✓	Sumps, drill holes, and fuel stores will be located away from environmentally significant areas and water courses
6.9	✓	Excavations (sumps, costeans and pits) will be appropriately ramped to allow fauna egress
6.10	✓	Drill holes will be securely capped immediately after drilling
6.11	✓	Vehicle hygiene measures will be employed to prevent the introduction and spread of invasive species and pathogens when mobilising vehicles and equipment from one location to another
6.12	✓	Hydrocarbon spills will be minimised using liners and drip trays under machinery, and appropriately sized spill-kits available in the event of a spill
6.13	✓	Hazardous substances (including hydrocarbons) will be stored and handled in accordance with relevant Australian Standards
6.14	✓	Hydrocarbons will be stored in lined and bunded areas
6.15	✓	Waste will be stored securely while on-site to minimise windblown rubbish and access by feral animals
6.16	✓	Waste will be removed off-site and disposed of at an appropriate waste management facility
6.17	✓	All environmental incidents will be reported to the Department in accordance with Section 29 of the <i>Mining Management Act</i> .
6.18	✓	Acid and Metalliferous Drainage (AMD) and Potentially Acid Forming (PAF) material derived from drilling cuts will be managed to avoid AMD and PAF related issues on site.



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6.19	✓	Radioactive/NORM drill cuttings will be managed to avoid radiation related issues on site.
6.20	✓	Dust management will be implemented on site.

Justification and alternative management measures:

## Section 7 – Rehabilitation and Closure

By checking these shaded boxes, you are agreeing to implement the following minimum rehabilitation standards on the project area. Where boxes have been left unchecked, justification is required.

A refund of security related to completed rehabilitation on site requires the submission of a rehabilitation report including photographs, an updated security calculation and updated disturbance tracking spreadsheet to the Department.

7.1	✓	Drill holes will be plugged below ground level at a minimum depth of 0.4 metres and soil mounded to prevent subsidence, within 6 months of completion of drilling.
7.2	✓	Drill holes encountering multiple or confined aquifers will be grouted with concrete.
7.3	✓	Drill samples/spoil will be returned down drill holes, buried in sumps, or removed from site.
7.4	✓	All drill hole and access markers including flagging tape, wooden markers and star pickets will be removed from site.
7.5	✓	Cut and fill drill pads will be re-contoured to be consistent with the surrounding terrain.
7.6	✓	Drill pads and compacted areas along the contour (on sloping ground) will be ripped/scarified of and tracks will be cross-ripped (zig-zag).
7.7	✓	Tracks will be rehabilitated, including pushing in all windrows, unless otherwise agreed in writing by the land holder or appropriate third party.
7.8	✓	Appropriate erosion and sediment controls will be installed where erosion is evident or likely to occur.
7.10	✓	Access through watercourses will be removed and banks restored.
7.11	✓	All previously disturbed areas will be stable, with no evidence of active soil erosion.
7.12	✓	All excavations will be backfilled within 6 months of their completion.
7.13	✓	All water bores will be decommissioned unless otherwise agreed in writing by the land holder or appropriate third party.
7.14	✓	All rubbish and infrastructure will be removed from site.
7.15	✓	Topsoil will be replaced, and vegetation re-established.
7.16	✓	Contaminated soils (e.g. hydrocarbon or hazardous chemicals) will be rehabilitated or removed from site.
7.17	✓	Monitoring will be undertaken following the wet season or a significant rainfall event.

Justification and alternative management measures:

## Section 8 – Required Attachments

8.1	✓	Initial Application for Authorisation or variation of Authorisation (only if details on the form have subsequently changed).
8.2	N/A	Nomination of Operator Form, where required
8.3	✓	Security Calculation Spreadsheet
8.4	✓	Evidence of Land Access Agreement if operating on an Exploration Licence (EL) on Pastoral Lease (e.g. two-ways exchange of email)
8.5	✓	Disturbance tracking spreadsheet (for existing Authorisations)
8.6	✓	Spreadsheet with coordinates of proposed drill holes or polygons of target areas
8.7	✓	KML/shape files/track logs of proposed tracks, camp sites and proposed drill holes or polygons of target areas
8.8	✓	Map(s) of the work area(s) showing: <ul style="list-style-type: none"> <li>1. title boundaries and title numbers</li> <li>2. current and proposed drill holes, or polygons of target areas</li> <li>3. current and proposed tracks</li> <li>4. rehabilitated areas</li> <li>5. camp sites</li> <li>6. heritage sites or significant environmental areas</li> <li>7. environmental constraints</li> </ul>
8.10	N/A	Radiation Management Plan (if applicable)
8.12	✓	Document(s) being appended in relation to Section 2 (if any): <ul style="list-style-type: none"> <li>- Appendix 1- AAPA Reports</li> <li>- Appendix 2- Environmental Reports</li> <li>- Appendix 3- Heritage &amp; Archaeological Correspondence</li> <li>- Appendix 8- NR Maps</li> <li>- Appendix 9- Environmental Summary</li> </ul>