

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

Project Name Provide new or existing project name	Wologorang Project
Authorisation Number Insert existing authorisation number, where applicable	0956-01
Operator Name Use ASIC-ABR registered name (if a company), or name of the applicant	Resolution Minerals Limited (RML)
Operator ABN and ACN numbers	ABN 99 617 789 732
Location and Access Details Include brief description of the location, access details, and distance to nearest town or community	The project area is located on Wologorang Station near the Queensland border in Carpentaria Gulf country. Access to the project area is via graded road from Borrooloola via the Wologorang Road (Highway 1) to Wologorang Homestead and then north via station tracks.
Target Commodity Details Include target mineral commodities (i.e. gold, copper etc.)	Copper and other base metals
Mining Activities 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.	Reverse circulation drilling of 75 collars x 75-400m depth (total 12,500m) and ~100km of new tracks to access collars. Note: 18 drill sites proposed in the approved March 2021 MMP (Ref: MR2021/0060) are being superseded by the proposed 75 drill sites in this MMP submission.
Proposed Schedule Include start and finish dates of ground disturbing work	Proposed exploration activities include drilling. Methods may include air core, reverse circulation and diamond drilling pending exploration stage & rig availability and may occur over a four-year period. Work to be completed during dry season from as early as May 2022 through to December 2026.

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.

Title Number	Title Holder	Expiry Date	Underlying Property Name or Land Holder
EL31272	Mangrove Resources Pty Ltd (Subsidiary of Resolution Minerals Ltd)	08-Apr-22	Wollogorang Station – owned by McMillan Pastoral Company Pty Ltd Corella Park Station, CLONCURRENCY QLD 4824
EL31548	Mangrove Resources Pty Ltd (Subsidiary of Resolution Minerals Ltd)	18-Jan-24	Wollogorang Station – owned by McMillan Pastoral Company Pty Ltd Corella Park Station, CLONCURRENCY QLD 4824
EL31549	Mangrove Resources Pty Ltd (Subsidiary of Resolution Minerals Ltd)	18-Jan-24	Wollogorang Station – owned by McMillan Pastoral Company Pty Ltd Corella Park Station, CLONCURRENCY QLD 4824
EL31550	Mangrove Resources Pty Ltd (Subsidiary of Resolution Minerals Ltd)	18-Jan-24	Wollogorang Station – owned by McMillan Pastoral Company Pty Ltd Corella Park Station, CLONCURRENCY QLD 4824
EL24654	Redbank Operations Pty Ltd	4-Dec-22	Wollogorang Station – owned by McMillan Pastoral Company Pty Ltd Corella Park Station, CLONCURRENCY QLD 4824

Delete or add rows as required

Please note a Land Access Agreement (LAA) is required for disturbance proposed on Pastoral Properties on Exploration Licence (EL).

Organisational Structure

Position Title	Name
Managing Director	Duncan Chessell
General Manager	N/A
Exploration Manager	Christine Lawley
Senior Geologist	
Environmental Manager	Duncan Chessell & Christine Lawley
Radiation Safety Officer	Christine Lawley

Delete or add rows for various position titles as required

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).
<p>Step 1: Are there any threatened flora and fauna species or habitats of significance that may occur in the proposed work area?</p>	<p>YES</p>	<p>The Operator must assess the likelihood of threatened species or their habitats occurring at or near the site. If the likelihood is high, then a “Significant Impact Assessment” must be undertaken and appended to this document.</p>	<p>RML consulted the EPBC Protected Matters Search Tool and appended the report to this document (see attachments). The search found two Critically Endangered species (birds) which could occur on EL32172, EL31548, EL31549, EL31550 or EL24654, the Curlew Sandpiper and the Far Eastern Curlew. Given both species are coastal shorebirds (occasionally found on inland freshwater wetlands) and the drill sites occur within open low shrubland, the likelihood of encountering these species near the drilling areas is considered extremely low. Endangered mammals, which may occur on tenure include Northern Quoll (northern area) and Carpentarian Rock-rat (southern area). However, according to the Species Profile and Threats (SPRAT) Database neither species is <u>likely</u> to occur within the proposed drilling areas. Endangered reptiles include the Loggerhead Turtle, Leatherback Turtle, Gulf Snapping Turtle, Olive Ridley Turtle, however these are unlikely to be encountered given the drill areas are located away from major rivers, where they are likely to occur.</p>

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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).
Step 2: Are there any known declared weeds within the proposed work area?	YES	Seek advice from DEPWS – Weed Management Branch to determine if weeds are present on site and ensure management measures are appropriate for the level of activity proposed and attach a Weed Management Plan (if required).	RML consulted the EPBC Protected Matters Search Tool and appended it to this document. The search found three Invasive Weed Species – Parkinsonia Aculeata, Rubber Vine and Prickly Acacia. Access to the drill area will be via established and new station tracks. All RML and contractor vehicles will be cleaned for weeds/seeds (including the undercarriage) prior to entry onto Wollogorang Station and post program before moving to other project areas in the NT.
Step 3: Will you be using water from bores or other sources for the operation?	YES	Water related matters on mineral titles are no longer exempt from the <i>Water Act 1992</i> . Please consult with DEPWS Water Resources and/or familiarise yourself with the <i>Water Act</i> to ensure compliance under this Act when undertaking exploration activities.	RML will use water from an existing water bore at Stanton camp for both camp and RC drilling where possible. Multiple bores are available to source water on Wollogorang Station to support drilling operations away from Stanton camp. This meets the NT Water Resources exemption criteria: < 5 ML of groundwater p.a. outside of the Darwin Rural Water Control District, therefore no water extraction licence is required.

Environmental assessment and cultural considerations

ASSESSMENT ASPECT	YES or NO	MANAGEMENT REQUIREMENTS
Step 4: Is your project likely to have a significant impact on the environment?	NO	Refer to the NTEPA Environmental Factors and Objectives Guideline.
Step 5: Are there Aboriginal sacred sites in the Project area?	YES	Sacred Sites are protected under the NT <i>Aboriginal Sacred Sites Act 1989</i> and administered by the Aboriginal Areas Protection Authority (AAPA). It is recommended that advice be sought from AAPA in relation to sacred site protection. A search of the AAPA register was undertaken and several sites were located with the Project area (see attached). However, RML have submitted a request for an Authority Certificate for all proposed drilling areas and will not commence work until a survey has been completed by AAPA and survey results received outlining which areas have been approved for drilling access.

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ASSESSMENT ASPECT	YES or NO	MANAGEMENT REQUIREMENTS
<p>Step 6: Are there archaeological and heritage sites in the Project area?</p>	YES	<p>Heritage and archaeology sites are protected in the NT. NT Department of Territory Families, Housing and Communities (DTFHC) administers the <i>Heritage Act 2011</i>.</p> <p style="color: green;">A search was completed on the NT Heritage Register (DTFHC website) and no archaeological and heritage sites are present in the Project area, although there are a number present in the greater Roper Gulf Shire.</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
1, 4	Four tenements added (EL31548, EL31549, EL31550 & EL24654) in addition to EL31272.
1	One tenement removed EL30590. There have been no disturbances under this title.
4	18 drill sites proposed in the approved March 2021 MMP (Ref: MR2021/0060) are being superseded by the proposed 75 drill sites in this MMP

Delete or add rows as required

Section 4 – Activities Proposed for this MMP only

Provide relevant EL numbers

Mining Interests (i.e. titles)	EL31272	EL31548	EL31549	EL31550	EL24654
Number and type of proposed exploration drill holes	20 RC Holes	10 RC Holes	25 RC Holes	20 RC Holes	Nil
Maximum depth of proposed holes (m)	400m	250m	300m	350m	Nil
Number and size of drill pads to be cleared (Length: m x Width: m)	20 pads, length 30m x width 30m	10 pads, length 30m x width 30m	25 pads, length 30m x width 30m	20 pads, length 30m x width 30m	Nil
Total area of drill pads to be cleared (ha)	1.8	0.9	2.25	1.8	Nil
Number of proposed water bores	Nil	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	Yes, there is potential for ground water in all 20 holes	Yes, there is potential for ground water in all 10 holes	Yes, there is potential for ground water in all 25 holes	Yes, there is potential for ground water in all 20 holes	Nil
Number of costeans	Nil	Nil	Nil	Nil	Nil
Volume to backfill costeans (Length: m x Width: m x Depth: m)	Nil	Nil	Nil	Nil	Nil
Number of bulk sample pits	Nil	Nil	Nil	Nil	Nil
Volume to backfill bulk sample pits (Length: m x Width: m x Depth: m)	Nil	Nil	Nil	Nil	Nil
Bulk sample pits approved under <i>Mineral Titles Act</i> ? (Y or N). If Yes provide approval	N	N	N	N	N
Line/track clearing: (length m x width m)	26.2km x 5m	14.8km x 5m	14km x 5m	45.0km x 5m	2.5km x 5m

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Mining Interests (i.e. titles)	EL31272	EL31548	EL31549	EL31550	EL24654
Area of proposed line/track clearing (ha)	13.1 ha	7.4 ha	7 ha	22.5 ha	1.25 ha
Camp area to be cleared (ha)	Nil	Nil	0.64	0.64	Nil
Camp Infrastructure (i.e. demountable, tents) Please provide a complete list with measurements as required in the security calculation	Two shipping containers and one to four caravans (existing Stanton	Nil – Crew to travel from EL31272 Stanton Camp for this portion of the	One to four caravans supporting ~6 tents (shift Stanton camp	One to four caravans supporting ~6 tents (shift Stanton camp	Nil
Other	Nil	Nil	Nil	Nil	Nil
Total proposed area of disturbance (ha)	14.9 ha	8.3 ha	9.89 ha	24.94 ha	1.25ha

Staging approach based on disturbance can be proposed and will be considered by the Department.

EL24654 is held by Redbank Operations Pty Ltd. A two-way email exchange with between Resolution and Redbank has been attached demonstrating Resolution have advise Redback on intended track creation on EL24654.

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.

See attached Disturbance Tracking spreadsheet. Note: None of the work proposed in variation 5 has been undertaken - 18 drill sites proposed in the approved March 2021 MMP (Ref: MR2021/0060) are being superseded by the proposed 75 drill sites in variation 6.

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	NA	Blade-up approach for clearing will be used (i.e. no windrows, leave root stock and topsoil) Constructing permanent station tracks.
6.2	X	Significant vegetation will be avoided during clearing (i.e. large trees, specimens providing habitat or food sources, riparian vegetation, and threatened species)
6.3	X	Vegetation clearing during, and immediately after rainfall events, will be avoided
6.4	X	Vegetation clearing will be kept to the minimum required to safely traverse vehicles and drill rigs along tracks and drill pads
6.5	NA	Where blade-up techniques cannot be employed, topsoil and vegetation will be stockpiled appropriately for rehabilitation purposes Constructing permanent station tracks.
6.6	X	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	NA	Sumps will be lined or tanks of appropriate size to contain water, sediment and drilling fluids encountered during drilling, will be used. Sumps will not be lined, but allowed to drain and dry out naturally before being back-filled post drilling. Only biodegradable drilling fluids will be utilised.
6.8	X	Sumps, drill holes, and fuel stores will be located away from environmentally significant areas and water courses
6.9	X	Excavations (sumps, costeans and pits) will be appropriately ramped to allow fauna egress
6.10	X	Drill holes will be securely capped immediately after drilling
6.11	X	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	X	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	X	Hazardous substances (including hydrocarbons) will be stored and handled in accordance with relevant Australian Standards
6.14	X	Hydrocarbons will be stored in lined and bunded areas
6.15	X	Waste will be stored securely while on-site to minimise windblown rubbish and access by feral animals
6.16	X	Waste will be removed off-site and disposed of at an appropriate waste management facility
6.17	X	All environmental incidents will be reported to the Department in accordance with Section 29 of the <i>Mining Management Act</i> .

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6.18	X	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.
6.19	NA	Radioactive/NORM drill cuttings will be managed to avoid radiation related issues on site. Significant concentrations of radioactive minerals have not been previously detected within or proximal to the proposed drilling area.
6.20	X	Dust management will be implemented on site.

Justification and alternative management measures:

6.1 & 6.5 - Construction of permanent station tracks will require blade down. Given the tracks will not be rehabilitated, no stockpiling of top soil or vegetation is required.

6.7 – Sumps will not be lined, but allowed to drain and dry out naturally before being back-filled post drilling. Only biodegradable drilling fluids will be utilised.

6.19 - Significant concentrations of radioactive minerals have not been previously detected within or proximal to the proposed drilling areas. However, RML will monitor radiation levels with a hand held scintillometer as a precaution. If significant radiation levels are detected a Radiation Management Plan will be implemented.

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	X	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	X	Drill holes encountering multiple or confined aquifers will be grouted with concrete.
7.3	X	Drill samples/spoil will be returned down drill holes, buried in sumps, or removed from site.
7.4	X	All drill hole and access markers including flagging tape, wooden markers and star pickets will be removed from site.
7.5	X	Cut and fill drill pads will be re-contoured to be consistent with the surrounding terrain.
7.6	X	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	NA	Tracks will be rehabilitated, including pushing in all windrows, unless otherwise agreed in writing by the land holder or appropriate third party. Constructing permanent station tracks. Two way email correspondence attached.
7.8	X	Appropriate erosion and sediment controls will be installed where erosion is evident or likely to occur.
7.10	X	Access through watercourses will be removed and banks restored.
7.11	X	All previously disturbed areas will be stable, with no evidence of active soil erosion.
7.12	X	All excavations will be backfilled within 6 months of their completion.
7.13	X	All water bores will be decommissioned unless otherwise agreed in writing by the land holder or appropriate third party.
7.14	X	All rubbish and infrastructure will be removed from site.
7.15	X	Topsoil will be replaced and vegetation re-established.
7.16	X	Contaminated soils (e.g. hydrocarbon or hazardous chemicals) will be rehabilitated or removed from site.
7.17	X	Monitoring will be undertaken following the wet season or a significant rainfall event.

Justification and alternative management measures:

7.7 - Construction of permanent station tracks, therefore tracks will not be rehabilitated. Written confirmation from the landholder has been provided.
 7.13 – Existing exploration drill hole is being used as camp water source at the Stanton Camp located on the Stanton Cobalt Deposit and will not be rehabilitated until no further works are recommended.

Section 8 – Required Attachments

8.1	NA	Initial Application for Authorisation or variation of Authorisation (only if details on the form have subsequently changed). Attached
8.2	NA	Nomination of Operator Form, where required Attached
8.3	X	Security Calculation Spreadsheet Attached
8.4	NA	Evidence of Land Access Agreement if operating on an Exploration Licence (EL) on Pastoral Lease (e.g. two-ways exchange of email) Provided - MMP Variation 5
8.5	X	Disturbance tracking spreadsheet (for existing Authorisations) Attached
8.6	X	Spreadsheet with coordinates of proposed drill holes or polygons of target areas Attached
8.7	X	KML/shape files/track logs of proposed tracks, camp sites and proposed drill holes or polygons of target areas Proposed camp sites would fall within drill polygons.
8.8	X	Map(s) of the work area(s) showing: <ul style="list-style-type: none"> 1. title boundaries and title numbers 2. current and proposed drill holes, or polygons of target areas 3. current and proposed tracks 4. rehabilitated areas 5. camp sites 6. heritage sites or significant environmental areas 7. environmental constraints
8.10	NA	Radiation Management Plan (if applicable) Not Applicable
8.12	X	Document(s) being appended in relation to Section 2 (if any): <ul style="list-style-type: none"> - EPBC Act Protected Matters Report - AAPA Request For Information
		8.10 - Significant concentrations of radioactive minerals have not been previously detected within or proximal to the proposed drilling areas. However, RML will monitor radiation levels with a hand held scintillometer as a precaution. If significant radiation levels are detected a Radiation Management Plan will be implemented.