

# 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	Mt Bunday
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<b>Authorisation Number</b> Insert existing authorisation number, where applicable	0979-01
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<b>Operator Name</b> Use ASIC-ABR registered name (if a company), or name of the applicant	Primary Gold Pty Ltd
<b>Operator ABN and ACN numbers</b>	ACN 122 726 283 ABN 42 122 726 283

<b>Location and Access Details</b> Include brief description of the location, access details, and distance to nearest town or community	The Mt Bunday project area is located approximately 100 kilometres southeast of Darwin along the Arnhem highway. Access throughout the project area is along the established Tom's Gully haul road, pastoral roads and historic exploration tracks. The community of Marrakai lies directly adjacent to the project area.
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<b>Target Commodity Details</b> Include target mineral commodities (i.e. gold, copper etc.)	Gold
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<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.	Drilling of 262 holes over three different projects. Drilling is a combination of RC and diamond. Of these 262 holes, 176 holes got approved by the DPIR last time and will be carried over.
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## Mining Management Exploration Activities

<b>Proposed Schedule</b> Include start and finish dates of ground disturbing work	The 2021 dry season
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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.

Title Number	Title Holder	Expiry Date	Underlying Property Name or Land Holder
EL30809	Primary Minerals Pty Ltd	29 June 2021*	Old Mount Bunday station, Marrakai station, McKinlay River station, freehold and perpetual crown leases.
EL30824	Primary Minerals Pty Ltd	2 July 2021*	Old Mount Bunday station, McKinlay River station, Koolpinyah station, freehold and perpetual crown leases.
EL32104	Primary Minerals Pty Ltd	23 Sep 2025	Old Mount Bunday station.
ML29812	Primary Minerals Pty Ltd	5 Feb 2023	Old Mount Bunday station.
ML29814	Primary Minerals Pty Ltd	5 Feb 2023	Old Mount Bunday station.
MLN1083	Primary Minerals Pty Ltd	31 Dec 2045	Old Mount Bunday station.
MLN1058	Primary Minerals Pty Ltd	2 Aug 2039	Old Mount Bunday station.
ML29783	Primary Minerals Pty Ltd	5 Feb 2023	McKinlay River station.
ML29786	Primary Minerals Pty Ltd	5 Feb 2023	McKinlay River station.

\* Renewal application submitted

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	<b>Mark Yumin Qiu</b>
Exploration Manager	<b>Fan Wu</b>
Senior Geologist	<b>Camiel van Hinsberg</b>

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><b>Step 1:</b> 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>The proposed drilling does not intersect any sites of conservation significance, sites of botanical significance, parks or reserves.</p> <p>A likelihood analysis (see appendix 2) of the potential for threatened species to be present in the area was undertaken, based on literature and database information as well as flora and fauna surveys. In the location of the proposed drilling, livestock grazing and regular fires have resulted in the understory vegetation being highly modified in comparison to natural conditions thus reducing food sources, shelter and potential breeding sites for threatened species. The likelihood of known threatened species to occur in the proposed drilling areas is low to unlikely.</p> <p>Nevertheless, as part of our proposed environmental management of threatened species we intend to do the following:</p> <ul style="list-style-type: none"> <li>• Minimise vegetation disturbance, avoid habitat trees and riparian vegetation by moving drill pads and access tracks, and where possible use existing tracks.</li> <li>• Stay within approved clearing envelopes and use appropriate size machinery.</li> <li>• Drill pads will be located preferable on flat ground to minimise disturbance and erosion risks.</li> <li>• Limit off-road driving.</li> </ul> <p>In the very unlikely case that goanna burrows are discovered within the target area, any ground disturbance (drill sites, access tracks, etc.) will be at least 100 metres away from these burrows. Burrows will be documented.</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).
<b>Step 2:</b> 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).	Within the exploration areas there is the potential for a number of declared weed species to occur. This is mostly due to the historic and current land use practices and the potential transport of seeds via station vehicles, machinery and animals. As part of our proposed environmental management associated with weed management around the drilling, we intend to do the following: <ul style="list-style-type: none"> <li>• Minimise vegetation disturbance, avoid riparian vegetation and stay within approved clearing envelopes.</li> <li>• Maintain weed quarantine by inspecting for weeds on vehicles and equipment.</li> <li>• Educate the workforce on weed management measures.</li> <li>• Do not drive through seeding weed plants and limit the amount of off-road driving.</li> <li>• Regularly inspect for weeds on stockpiles, access tracks and drill pads.</li> <li>• If required undertake weed control to stop the local spread of weeds due to exploration activities.</li> </ul>
<b>Step 3:</b> 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.	A limited amount of water will be used for drilling and will be sourced from either the Rustler's Roost open pit, the Quest 29 open pits or the station owner. Primary Gold is aware that the water from the Tom's Gully open pit and some of the nearby water bores is of poor quality and therefore unsuitable to use for drilling.

## Environmental assessment and cultural considerations

ASSESSMENT ASPECT	YES or NO	MANAGEMENT REQUIREMENTS
<b>Step 4:</b> Is your project likely to have a significant impact on the environment?	No	Refer to the NTEPA Environmental Factors and Objectives Guideline.
<b>Step 5:</b> Are there Aboriginal sacred sites in the Project area?	No	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.

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ASSESSMENT ASPECT	YES or NO	MANAGEMENT REQUIREMENTS
<b>Step 6:</b> Are there archaeological and heritage sites in the Project area?	No	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> .  Seek advice in relation to protection of heritage and archaeological sites.

### 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	Updated the Mining Activities section reflecting the newly proposed drilling.
2	Added details of MLN1058
4	Added the newly proposed holes and associated disturbance.
5	Copied the previous disturbance into the new template
8.3	Security calculation updated to reflect the newly proposed drilling.
8.12	Appendix 2 Likelihood analysis threatened species updated to reflect newly proposed drilling

Delete or add rows as required

## Section 4 – Activities Proposed for this MMP only

Provide relevant EL numbers

Mining Interests (i.e. titles)	EL32104	EL30824	EL30809	MLN1058
Number and type of proposed exploration drill holes	6 holes <sup>1</sup> – combination of RC and diamond	160 holes <sup>2</sup> – combination of RC and diamond	92 holes <sup>3</sup> – combination of RC and diamond	4 holes <sup>4</sup> – RAB holes
Maximum depth of proposed holes (m)	650 metres	400 metres	400 metres	100 metres
Number and size of drill pads to be cleared (Length: m x Width: m)	6 drill pads – 25m by 25m	160 drill pads – 25m by 25m	92 drill pads – 25m by 25m	4 drill pads – 25m by 25m
Total area of drill pads to be cleared (ha)	0.38 ha	10 ha	5.75 ha	0.25 ha
Number of proposed water bores	0	0	0	4
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	0	0	0	0
Volume to backfill costeans (Length: m x Width: m x Depth: m)	NA	NA	NA	NA
Number of bulk sample pits	0	0	0	0
Volume to backfill bulk sample pits (Length: m x Width: m x Depth: m)	NA	NA	NA	NA
Bulk sample pits approved under <i>Mineral Titles Act</i> ? (Y or N). If Yes provide approval	NA	NA	NA	NA
Line/track clearing: (length m x width m)	200m x 3m	10km x 3m	2km x 3m	100m x 3m

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Mining Interests (i.e. titles)	EL32104	EL30824	EL30809	MLN1058
Area of proposed line/track clearing (ha)	0.06 ha	3 ha	0.6 ha	0.03 ha
Camp area to be cleared (ha)	none	none	none	none
Camp Infrastructure (i.e. demountable, tents) Please provide a complete list with measurements as required in the security calculation	NA	NA	NA	NA
Other				
Total proposed area of disturbance (ha)	0.44 ha	13 ha	6.35 ha	0.28 ha
<p><sup>1</sup> Three (3) drill holes and associated disturbance on EL32104 are approved by the DPIR under the current exploration MMP, and secured by Primary Gold Pty Ltd. A further 3 drill holes are proposed.</p> <p><sup>2</sup> Eighty one (81) drill holes and associated disturbance on EL30824 are approved by the DPIR under the current exploration MMP, and secured by Primary Gold Pty Ltd. A further 79 drill holes are proposed.</p> <p><sup>3</sup> Ninety two (92) drill holes and associated disturbance on EL30809 are approved by the DPIR under the current exploration MMP, and secured by Primary Gold Pty Ltd.</p> <p><sup>4</sup> Four (4) new water bore holes on MLN1058 are proposed.</p>				

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

## 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.



## 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	<b>NA</b>	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:

6.7 Sumps will be of appropriate size to contain the water encountered during drilling, but will not be lined. Drill fluids used will be non-toxic, biodegradable and environmentally acceptable. It is anticipated that the water quality in the proposed drill areas will be of good quality and doesn't cause any environmental issues.

## 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	NA	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) ( <i>see appendix 3</i> )
8.5	✓	Disturbance tracking spreadsheet (for existing Authorisations)
8.6	NA	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 ( <i>see appendix 1</i> )
8.8	✓	Map(s) of the work area(s) showing: <ol style="list-style-type: none"> <li>1. title boundaries and title numbers</li> <li>2. <del>current and proposed drill holes</del>, or polygons of target areas</li> <li>3. current and proposed tracks</li> <li>4. rehabilitated areas (<i>no remediated areas</i>)</li> <li>5. camp sites (<i>camping on top of the Rustler's Roost waste dump</i>)</li> <li>6. heritage sites or significant environmental areas (<i>see appendix 1</i>)</li> <li>7. environmental constraints (<i>no environmental constraints</i>)</li> </ol>
8.10	NA	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 Spatial data files</li> <li>- Appendix 2 Likelihood analysis threatened species</li> <li>- Appendix 3 Land access agreements</li> <li>- Appendix 4 Aboriginal Sacred Sites Authority Certificates</li> </ul>