

# Mining Management Plan Exploration Activities

## Northern Territory of Australia – Mining Management Act

It is recommended that the Mining Management Plan 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
<b>Authorisation Number</b> Insert existing authorisation number, where applicable	0979-01
<b>Operator Name</b> Use ASIC-ABR registered name (if a company), or name of the applicant	Primary Gold Pty Ltd ACN 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.
<b>Target Commodity Details</b> Include target commodities (i.e. gold, copper etc)	Gold
<b>Mining Activities</b> Summarise the mining activities (exploration) to be the subject of the proposed Authorisation or Variation	Drilling of 176 holes over three different tenements / projects. Drilling is a combination of RC and diamond. Of these 176 holes, sixteen (16) holes got approved by the DPIR last time and will be carried over.
<b>Proposed Schedule</b> Include start and finish dates of ground disturbing work	The 2021 dry season

## 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	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 2020 (applied for renewal)	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.

Delete or add rows as required

## Organisational Structure

Position Title	Name
Managing Director	Mark Yumin Qiu
Exploration Manager	Fan Wu
Senior Geologist	Camiel van Hinsberg

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 (Evidence of consultation with DENR and/or management plan)
<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>It is likely a threatened species will show up in most reports. Therefore, the Operator must undertake a likelihood analysis, which looks at the likelihood of the species or its habitat occurring at or near the site. If the analysis results in a high likelihood, then a “Significant Impact Assessment” should be undertaken, which may require consultation with the DENR – Flora and Fauna Division. The DENR may recommend a Biodiversity Management Plan – this must be developed and attached to the MMP.</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 understorey 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 (Evidence of consultation with DENR and/or management plan)
<b>Step 2:</b> Are there any known declared weeds within the proposed work area?	Yes	Under the <i>Weeds Management Act</i> declared weeds are required to be eliminated or controlled by the owner and occupier of land. Seek advice from DENR – Weeds Management to 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	<i>Note the Government is proposing to amend the exemption of water licencing under the Water Act for mining activities, including exploration.</i>  <i>This section will be updated in light of any changes in the future.</i>	A limited amount of water will be used for drilling and will be sourced from either the Rustler's Roost open pit 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</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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<b>ASSESSMENT ASPECT</b>	<b>YES or NO</b>	<b>MANAGEMENT REQUIREMENTS</b>
<p><b>Step 6:</b> Are there archaeological and heritage sites in the Project area?</p>	No	<p>Heritage and archaeology sites are protected in the NT. NT Heritage Branch of the Department of Natural Resources and Environment (DENR) administers the <i>Heritage Act</i>. Seek advice in relation to protection of heritage and archaeological sites.</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 clearly identify amendments made.

Section	Amendment
1	Updated the Mining Activities section reflecting the newly proposed drilling.
4	Added the newly proposed holes and associated disturbance.
5	Added the disturbance from the 2020 drilling program.
8.1	Security calculation updated to reflect the newly proposed drilling.
8.5	Map updated.
8.6	Added the holes and tracks of the 2020 drilling program.
8.9	Updated some spatial data files reflecting the newly proposed drilling and the holes drilled during the 2020 exploration program.
8.10	Added EcOz 2020 vegetation survey report and updated the likelihood analysis based on the findings in the report.
8.12	New certificate added.

Delete or add rows as required

## Section 4 – Activities Proposed

Mining Interests (i.e. titles)	EL32104	EL30824	EL30809	EL
Number and type of proposed drill holes	3 holes <sup>1</sup> – combination of RC and diamond	81 holes <sup>2</sup> – combination of RC and diamond	92 holes <sup>3</sup> – combination of RC and diamond	
Maximum depth of proposed holes (m)	650 metres	300 metres	600 metres	
Number and size of drill pads to be cleared (Length: m x Width: m)	3 drill pads – 25m by 25m	81 drill pads – 25m by 25m	92 drill pads – 25m by 25m	
Total area of drill pads to be cleared (ha)	0.19 ha	5.06 ha	5.75 ha	
Is drilling likely to encounter groundwater? (Y, N, unsure)	Yes	Yes	Yes	
Number of costeans (Length: m x Width: m x Depth: m)	None	None	None	
Number of bulk sample pits	None	None	None	
Total bulk sample (tonnes) (Length: m x Width: m x Depth: m)	NA	NA	NA	
Bulk sample pits approved under <i>Mineral Titles Act</i> ? (Y or N)	NA	NA	NA	
Length of line/track clearing (km: x Width: m)	400m x 3m	3km x 3m	2km x 3m	
Camp area to be cleared (ha)	No	No	No	
Camp Infrastructure (i.e. demountable, tents)	No	No	Caravans (40m by 40m)	
Previous disturbance yet to be remediated on title (ha) if known	0.06 ha	2.10 ha	4.57 ha	
Other	No	No	No	
Total area disturbed proposed (ha)	0.37 ha	8.06 ha	10.92 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.</p> <p><sup>2</sup> One (1) 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 80 drill holes are proposed.</p> <p><sup>3</sup> Twelve (12) drill holes and associated disturbance on EL30809 are approved by the DPIR under the current exploration MMP, and secured by Primary Gold Pty Ltd. A further 80 drill holes are proposed.</p>				

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

<b>Mining Interests (i.e. titles)</b>	<b>EL32104</b>	<b>EL30824</b>	<b>EL30809</b>
Number/type of holes drilled	1	29	62
Maximum depth of holes drilled (m)	418m	220m	576.8m
Number of holes remediated (i.e. plugged/capped)	0 (holes capped, but not buried)	0 (holes capped, but not buried)	0 (holes capped, but not buried)
Number and size of drill pads cleared (Length: m x Width: m)	1 pad – 25m by 25m	29 pads – 25m by 25m	62 pads – 25m by 25m
Total area of drill pads cleared (ha)	0.06 ha	1.81 ha	3.88 ha
Total area of drill pads remediated (ha)	0 ha	0 ha	0 ha
Was groundwater encountered? (Y or N)	Yes	Yes	Yes
Length of line/track cleared (Length: km x Width: m)	0 km	950 m x 3m	2.3 km x 3m
Length of line/track remediated (Length: km x Width: m)	NA	0 km	0 km
Number of costeans excavated (L: m x W: m x D: m)	NA	NA	NA
Number of costeans remediated	NA	NA	NA
Total bulk sample pits excavated (Length: x Width: x Depth: m)	NA	NA	NA
Total bulk sample pits remediated	NA	NA	NA
Camp area/s cleared (ha)	NA	NA	NA
Camp area/s remediated (ha)	NA	NA	NA
Total area disturbed (ha)	0.06 ha	2.10 ha	4.57 ha
Total area remediated (ha)	0 ha	0 ha	0 ha

## Section 6 – Environmental Management

By checking these 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 remediation 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	X	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> .

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 – Remediation and Closure

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

7.1	✓	Drill holes 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 samples/spoil returned down drill holes, buried in sumps, or removed from site
7.3	✓	All drill hole and access markers including flagging tape, wooden markers and star pickets will be removed from site
7.4	✓	Re-contouring of cut and fill drill pads will be consistent with the surrounding terrain
7.5	✓	Ripping/scarifying of drill pads, and compacted areas along the contour (on sloping ground) and cross-ripping (zig-zag) along tracks
7.6	✓	Tracks will be remediated, including pushing in all windrows
7.7	✓	Appropriate erosion and sediment controls will be installed where erosion is evident or likely to occur
7.8	✓	All tracks will be remediated unless otherwise agreed in writing by the land holder or appropriate third party
7.9	✓	Access through watercourses will be removed and banks restored
7.10	✓	No erosion is occurring in disturbed areas, on tracks and in remediated areas
7.11	✓	All excavations backfilled within 6 months of completion of drilling
7.12	✓	All water bores decommissioned unless otherwise agreed in writing by the land holder or appropriate third party. The bore must comply with the Minimum Construction Requirements for Water Bores in Australia and may require permits or licenses under the <i>Water Act</i>
7.13	✓	All rubbish and infrastructure will be removed from site
7.14	✓	Replacement of topsoil and vegetation
7.15	✓	Contaminated soils (e.g. hydrocarbon or hazardous chemicals) will be remediated or removed from site
7.16	✓	Monitoring will be undertaken following the wet season or a significant rainfall event

Justification and alternative management measures:

## Section 8 – Required Attachments

8.1	✓	Security Calculation Spreadsheet
8.2	NA	Nomination of Operator Form
8.3	NA	Spreadsheet with coordinates of proposed drill holes or polygons of target areas
8.4	✓	Google Earth KML/shape files/track logs of proposed tracks and camp sites (see <i>appendix 1</i> )
8.5	✓	A map of the work area(s) showing: <ul 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. remediated 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. sacred/heritage sites (<i>see appendix 1</i>)</li> <li>7. environmental constraints (<i>no environmental constraints</i>)</li> </ul>
8.6	✓	Remediation Register (for existing Authorisations)
8.7	NA	Photographs of remediation work
8.8	NA	Radiation Management Plan (if applicable)
8.9	✓	Appendix 1 Spatial data files
8.10	✓	Appendix 2 Likelihood analysis threatened species
8.11	✓	Appendix 3 Land access agreements
8.12	✓	Appendix 4 Aboriginal Sacred Sites Authority Certificates

## Section 9 – Declaration

The Mining Management Plan must be endorsed by a senior representative of the company who has the appropriate level of authority to do so.

	Author	Reviewed by	Approved by
Date	13 Jan 2021	13 Jan 2021	13 Jan 2021
Name	Camiel van Hinsberg	Fan Wu	Fan Wu
Signature			

I, Fan Wu – Exploration Manager, declare that I have the authority to make the commitments contained in this mining management plan on behalf of the company. To the best of my knowledge the information contained in this plan is true and correct and commit to undertake the works in accordance with the agreed minimum standards and all relevant Northern Territory and Commonwealth Government legislation.

SIGNATURE:  .....

DATE: 13/01/2021 .....

