

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

Project Name Provide new or existing project name	Fountain Head and Tally-Ho Project Area (FHThPA)
Authorisation Number Insert existing authorisation number, where applicable	0971-01
Operator Name Use ASIC-ABR registered name (if a company), or name of the applicant	PNX Metals Ltd
Location and Access Details Include brief description of the location, access details, and distance to nearest town or community	<p>The tenements are approximately 160km south-east of Darwin and 50km south of Adelaide River. The FHTh tenements are situated within the Burnside Project Area, and are to the east of the Brocks Creek Project Area.</p> <p>The FHThPA is located within a pastoral property (Ban Ban Springs Station).</p> <p>The site is accessed via Fountain Head Road then Ban Ban Springs Road.</p>
Target Commodity Details Include target commodities (i.e. gold, copper etc)	Gold
Mining Activities Summarise the mining activities (exploration) to be the subject of the proposed Authorisation or Variation	<p>2890m of RC drilling as near mine exploration around Fountain Head and Tally Ho deposits.</p> <p>760m of Diamond drilling geotechnical drill holes to inform the proposed Fountain Head and Tally Ho pit design (two of these holes were completed in 2020, however, due to the COVID-19 border restrictions, these will have to be redrilled to obtain fresh core.</p>
Proposed Schedule Include start and finish dates of ground disturbing work	15th February 2021

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
MLN1034	PNX Metals Ltd	30/11/2033	Ban Ban Springs Station/Ty Blokland
ML31124	PNX Metals Ltd	5/02/2022	Ban Ban Springs Station/Ty Blokland
MLN4	PNX Metals Ltd	20/05/2039	Ban Ban Springs Station/Ty Blokland
MLN1020	PNX Metals Ltd	02/05/2039	Ban Ban Springs Station/Ty Blokland

Delete or add rows as required

Organisational Structure

Position Title	Name
Managing Director	James Fox
General Manager	James Fox
Exploration Manager	Charles Nesbitt
Resource Geologist	Marco Scardigno
Environmental Manager	Charles Nesbitt / Loren Yallop (SLR Consulting)
Radiation Safety Officer	N/A

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)
Step 1: Are there any threatened flora and fauna species or habitats of significance that may occur in the proposed work area?	Yes	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.	Appendix 6 and Appendix 8
Step 2: 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).	Appendix 7
Step 3: Will you be using water from bores or other sources for the operation?	No	<i>Note the Government is proposing to amend the exemption of water licencing under the Water Act for mining activities, including exploration. This section will be updated in light of any changes in the future.</i>	

Environmental assessment and cultural considerations

ASSESSMENT ASPECT	YES or NO	MANAGEMENT REQUIREMENTS
<p>Step 4: Is your project likely to have a significant impact on the environment?</p>	No	<p>Refer to the NTEPA Environmental Factors and Objectives Guideline.</p> <p>All work is to occur in previously disturbed areas adjacent to the open pits of the Fountain Head and Tally Ho deposits.</p>
<p>Step 5: Are there Aboriginal sacred sites in the Project area?</p>	Yes	<p>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.</p>
<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 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
Section 1	Corrected the Lease Holder name and Authorisation Number. 12/08/2019
Section 2	Amended Environmental Considerations by the addition of Appendix 8 to the “Appended information” field of “Step 1”. 12/08/2019
Section 4	Amended number of holes to be drilled under this Exploration MMP 28/10/2019
Section 5	Amended number of holes, tracks and drill sites rehabilitated. 28/10/2019
Section 1	Addition of diamond holes as proposed drill type 21/01/2020
Appendix 10	Addition of appendix 10 to show location of the proposed temporary office, toilet and core racks.21/01/2020
Section 4	7 of the proposed holes will be drilled as diamond holes. Number of holes remains unchanged.
Section 1	Amended “Mining Interest and Land Ownership” to reflect ownership transfer of the Title to PNX Metals and to correct the expiry dates for each ML. 16/12/2020
Section 2	Environmental assessment and cultural considerations – removed the proposed Office and Toilet block placement at Fountain Head. (This has been removed from site. No disturbance was created, no rehab required.) 16/12/2020
Section 5	Corrected the previous disturbance under existing authorisation drill hole tally to be in line with drill hole audit and corrected the drill holes ML 16/12/2020
Section 6: 6.8, 6.15 and 6.16	Deleted the reference to the temporary toilet block as it was removed from site and does not the site does not require rehab 16/12/2020
Section 4	“Camp Infrastructure” – deleted reference to temporary office and toilet facilities as this has been removed from site and the site does not require rehab.17/12/2020
Section 5	Holes drilled and disturbance area rehabilitated from 2019-2020 were added to this section.
Appendix 10	Removal of appendix 10 as the temporary office and toilet have been removed. No disturbance of site and no rehab required.

Delete or add rows as required

Section 4 – Activities Proposed

Mining Interests (i.e. titles)	MLN4	MLN1034	ML31124	EL
Number and type of proposed drill holes	18 RC 5 Diamond	9 RC	3 RC	
Maximum depth of proposed holes (m)	205	100	100	
Number and size of drill pads to be cleared (Length: 20m x Width: 15 m)	18 RC holes will require clearing; 5 Diamond holes do not require clearing.	9 will require clearing	3 require clearing	
Total area of drill pads to be cleared (ha)	0.54ha	0.27ha	0.09ha	
Is drilling likely to encounter groundwater? (Y, N, unsure)	Y	Y	Y	
Number of costeans (Length: m x Width: m x Depth: m)	0			
Number of bulk sample pits	0			
Total bulk sample (tonnes) (Length: m x Width: m x Depth: m)	0			
Bulk sample pits approved under <i>Mineral Titles Act</i> ? (Y or N)	0			
Length of line/track clearing (km: x Width: 5m)	0.974km	0.887km	0.296km	
Camp area to be cleared (ha)	0	0		
Camp Infrastructure (i.e. demountable, tents)	0			
Previous disturbance yet to be remediated on title (ha) if known	0	0	0	
Other				
Total area disturbed proposed (ha)	1.01ha	0.71ha	0.24ha	

Section 5 – Previous Disturbance (for existing Authorisations only)

Mining Interests (i.e. titles)	MLN1034	MLN4	EL	EL
Number/type of holes drilled	26 RC + 1 DD	9 x Diamond Drill holes 87 x RC drill holes		
Maximum depth of holes drilled (m)	110	426.38		
Number of holes remediated (i.e. plugged/capped)	27	96		
Number and size of drill pads cleared (Length: m x Width: m)	17 20 x 15	3 20 x 15		
Total area of drill pads cleared (ha)	5.1	0.9		
Total area of drill pads remediated (ha)	5.1	0		
Was groundwater encountered? (Y or N)	Y	Y		
Length of line/track cleared (Length: km x Width: m)	782m x 3m = 2346m ²	0		
Length of line/track remediated (Length: km x Width: m)	782m x 3m = 2346m ²	0		
Number of costeans excavated (L: m x W: m x D: m)	N/A	0		
Number of costeans remediated	N/A	NA		
Total bulk sample pits excavated (Length: x Width: x Depth: m)	N/A	NA		
Total bulk sample pits remediated	N/A	NA		
Camp area/s cleared (ha)	N/A	NA		
Camp area/s remediated (ha)	N/A	NA		
Total area disturbed (ha)	7.58	0.9		

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Total area remediated (ha)	7.58	0.9		
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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	Y	Blade-up approach for clearing will be used (i.e. no windrows, leave root stock and topsoil)
6.2	Y	Significant vegetation will be avoided during clearing (i.e. large trees, specimens providing habitat or food sources, riparian vegetation, and threatened species)
6.3	Y	Vegetation clearing during, and immediately after rainfall events, will be avoided
6.4	Y	Vegetation clearing will be kept to the minimum required to safely traverse vehicles and drill rigs along tracks and drill pads
6.5	Y	Where blade-up techniques cannot be employed, topsoil and vegetation will be stockpiled appropriately for remediation purposes
6.6	Y	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	Y	Sumps will be lined or tanks of appropriate size to contain water, sediment and drilling fluids encountered during drilling, will be used
6.8	Y	Sumps, drill holes, and fuel stores will be located away from environmentally significant areas and water courses.
6.9	Y	Excavations (sumps, costeans and pits) will be appropriately ramped to allow fauna egress
6.10	Y	Drill holes will be securely capped immediately after drilling
6.11	Y	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	Y	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	Y	Hazardous substances (including hydrocarbons) will be stored and handled in accordance with relevant Australian Standards
6.14	Y	Hydrocarbons will be stored in lined and bunded areas.
6.15	Y	Waste will be stored securely while on-site to minimise windblown rubbish and access by feral animals.
6.16	Y	Waste will be removed off-site and disposed of at an appropriate waste management facility.
6.17	Y	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:

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

Justification and alternative management measures:

None of the 18 drill holes drilled in Aug-Sep 2019 have not had any remediation carried out as we are still awaiting assay results. Temporary cones have been placed in the drill hole collar.



One extra drill hole was drilled in Aug-Sep 2019 however, two holes were re-drills utilising the same drill pad. Drill hole locations differ from the proposed locations due to difficulty with broken ground and ground water during drilling campaign.

Section 8 – Required Attachments

8.1	Y	Security Calculation Spreadsheet
8.2	Y	Nomination of Operator Form
8.3	Y	Spreadsheet with coordinates of proposed drill holes or polygons of target areas
8.4	N	Google Earth KML/shape files/track logs of proposed tracks and camp sites
8.5	Y	<p>A map of the work area(s) showing:</p> <ol 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. remediated areas 5. camp sites 6. sacred/heritage sites 7. environmental constraints
8.6	Y	Remediation Register (for existing Authorisations)
8.7	Y	Photographs of remediation work
8.8	N/A	Radiation Management Plan (if applicable)

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	18/12/2020	18/12/2020	18/12/2020
Name	Charles Nesbitt	Marco Scardigno	Charles Nesbitt
Signature			

I, **Charles Nesbitt, Exploration Manager - PNX Metals Ltd**, 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: 18/12/2020