

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	Nabarlek North
---	----------------

Authorisation Number Insert existing authorisation number, where applicable	TBA
---	-----

Operator Name Use ASIC-ABR registered name (if a company), or name of the applicant	Alligator Energy Ltd
Operator ABN and ACN numbers	ABN 79 140 575 604 ACN 140 575 604

Location and Access Details Include brief description of the location, access details, and distance to nearest town or community	The work area is approximately 80 km NW of Jabiru, in the Western Arnhem Land District of the Northern Territory (see Appendix 4). Access is from the Maningrida Road, which traverses the work area.
--	--

Target Commodity Details Include target mineral commodities (i.e. gold, copper etc.)	Uranium
--	---------

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.	Induced Polarisation (IP) geophysical survey (as per 2021) 25 deep RC (+/-DDH) drill holes (2021 was 12) 1000 shallow RAB/Aircore drill holes, largely accessed cross-country, but some utilising Access lines (new) 3,500 auger soil sites, exclusively cross-country (new) 25km New RAB and RC Access lines (2021 was 6.41 km) 50km New Access track for other activities (new) 30km Refurbished Existing Access track (new)
---	--

Mining Management Exploration Activities

Proposed Schedule Include start and finish dates of ground disturbing work	July 2022 – October 2022
--	--------------------------

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
EL29993	Northern Prospector Pty Ltd	19/04/2027	Arnhem Land Aboriginal Land Trust
EL31480	Northern Prospector Pty Ltd	19/04/2027	Arnhem Land Aboriginal Land Trust

Organisational Structure

Position Title	Name
Executive Director	Gregory Hall
Company Secretary	Michael Meintjes
Exploration Manager	Andrea Marsden-Smith
Senior Project Geologist	Robert Lightfoot
Consultant Geologist	David Rawlings
Environmental Manager	TBA
Radiation Safety Officer	Robert Lightfoot / David Rawlings

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).
Step 1: Are there any threatened flora and fauna species or habitats of significance that may occur in the proposed work area?	Yes	An independent likelihood assessment conducted by SLR Consulting has been Six threatened and significant <u>fauna</u> species have been identified to occur within the project area. Based on the estimates of disturbance outlined in this MMP, it is anticipated that no threatened fauna within the project area will be significantly impacted according to <i>MNES – Significant Impact Guidelines 1.1</i> (DEE, 2013) criteria. Disturbance of habitat will be small scale or avoided by design. Mitigation strategies will be implemented to minimise the residual impact. The assessment did not identify threatened <u>flora</u> species with potential to occur within the project area.	Appendix 7.
Step 2: Are there any known declared weeds within the proposed work area?	No	Nil occurrences within the project area, however Mission Grass invasion is a problem within the region. Northern Prospector will ensure vehicles are inspected when entering and exiting the project area to eliminate weed spread from vehicles.	Appendix 7 and Appendix 9.
Step 3: Will you be using water from bores or other sources for the operation?	Yes	Water to be drawn from a perennial creek that feeds into Cooper Creek where the camp is to be set up. A water extraction licence is currently being assessed by the Water Resources Division of NT Department of Environment, Parks and Water Security.	Appendix 8.

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	Small short-term sampling and drilling program.
<p>Step 5: Are there Aboriginal sacred sites in the Project area?</p>	No	An Abstract of Records from the AAPA was conducted on 18 August 2021 (Appendix 1). A thorough sacred site assessment and archaeological clearance is conducted prior to works via the NLC.
<p>Step 6: Are there archaeological and heritage sites in the Project area?</p>	Yes	<p>A search of the NT Heritage Register conducted on 13 August 2021 found no results for NT Portion 1301, and two results for NT Portion 1646, for Djirurri Rockshelter and Eldo Tracking Station (see Appendix 2).</p> <p>A work program meeting is was held in Jabiru on the 21st June 2022, facilitated by the Northern Land Council. At this meeting, the proposed program was presented to the relevant traditional owners. An assessment by the Traditional Owners for this country will be made as to the necessity for either archaeological clearances or site visits prior to works commencing to minimise the risk of disturbance of undocumented heritage sites. Additionally, Alligator has a policy of employing representatives from whose country is being worked upon, to provide ongoing cultural support and advise to the program.</p> <p>A search conducted by the Heritage Branch at the Territory Families, Housing and Communities Department showed that there are recorded archaeological sites within the project area, but all lie with current exclusion zones (Appendix 3). The majority of the sites are rock art and painting sites and stone artefact scatters. These were recorded many years ago by George Chaloupka, so the coordinates could be out by some distance, given the old datum that was used at the time. Drilling will not be conducted on outcrops with rock art or paintings. Any found rock art will be marked off from exploration works. Before clearing and drill pad construction, the area will be searches for stone artefact scatters. If any are found, the area will be marked off and the Heritage Branch and AAPA will be notified.</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
General	All changes made in this amendment were highlighted at time of submittance to DITT for review.
2	Updated to reflect Variation of Authorisation including: Mining Activities Summary, key personnel, flora and fauna desktop study.
4	Activity expanded to include items outlined in Mining Activities Summary. These include more RC/DDH drillholes, new RAB/Aircore drilling program, new auger soil sampling program, new access and drill-line tracks, and a camp on-country.
6	Notes regarding avoidance of sump liners.
7	Notes in relation to survey markers, ripping drill pads and existing tracks.
8	New documents attached or appended in relation to: Security Calculation, Spatial data for work area, Map of work area, Environmental Report, and Water Resources communications.

Delete or add rows as required

Section 4 – Activities Proposed for this MMP only

Provide relevant EL numbers

Mining Interests (i.e. titles)	EL29993	EL31480
Number and type of proposed exploration drill holes	5 RC/DDH (2021 was 4) 200 RAB 1000 Auger soils	20 RC/DDH (2021 was 8) 800 RAB 2500 Auger soils
Maximum depth of proposed holes (m)	300	300
Number and size of drill pads to be cleared (Length: m x Width: m)	5 (was 4) 30 m x 20 m (was 20x15m) (inc up to 2 sumps as needed)	20 (was 8) 30 m x 20 m (was 20x15m) (inc up to 2 sumps as needed)
Total area of drill pads to be cleared (ha)	0.3 Ha (was 0.12 Ha)	1.2 Ha (was 0.24 Ha)
Number of proposed water bores	0	0
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	Unlikely	Unlikely
Number of costeans	0	0
Volume to backfill costeans (SUMPS) (Length: m x Width: m x Depth: m)	1000m ³ 20 x 2.5m x 8m x 2.5m	3500m ³ 70 x 2.5m x 8m x 2.5m
Number of bulk sample pits	0	0
Volume to backfill bulk sample pits (Length: m x Width: m x Depth: m)	0	0
Bulk sample pits approved under <i>Mineral Titles Act</i> ? (Y or N). If Yes provide approval	0	0
Line/track clearing: (length km x width 3m)	32km x3m 18(track)+9(refurb)+5(drill) (was 2.86km)	73km x3m 32(track)+21(refurb)+20(drill) (was 3.55km)
Area of proposed line/track clearing (ha)	9.6 Ha (was 0.858)	21.9 Ha (was 1.065)
Camp area to be cleared (ha)	0	1.0 Ha (new)

Mining Management Exploration Activities

Mining Interests (i.e. titles)	EL29993	EL31480
Camp Infrastructure (i.e. demountable, tents) Please provide a complete list with measurements as required in the security calculation		Mobile Camp to be established 200m north of perennial creek (water source via poly pipe and small tank). Tents, caravans and possibly 20" shipping containers (max 6). 100x100m max size. Long drop toilet.
Other	Nil	Nil
Total proposed area of disturbance (ha)	9.9 Ha (was 0.978)	24.1 Ha (1.305)

Section 5 – Previous Disturbance (for existing Authorisations only)

The 'Disturbance Tracking' spreadsheet is attached at Appendix 11. There has been no on-ground activity to date, and the disturbance tracker is therefore currently empty.

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	X	Blade-up approach for clearing will be used (i.e. no windrows, leave root stock and topsoil)
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	X	Where blade-up techniques cannot be employed, topsoil and vegetation will be stockpiled appropriately for rehabilitation purposes
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		Sumps will be lined or tanks of appropriate size to contain water, sediment and drilling fluids encountered during drilling, will be used
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> .
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.

Mining Management Exploration Activities

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

Justification and alternative management measures:

6.7: sumps are not lined with plastic, as this provides no benefit unless trying to conserve water where sumps do not hold water (DDH only). All drilling additives used now are biodegradable and drill cuttings are contained by the natural low-permeability nature of surface materials in the tropics (ie, clays). Plastic liners are an environmental hazard and are almost impossible to remove once the hole has been drilled, thereby often getting buried in the sump.

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

Justification and alternative management measures:

7.4: Flagging tape is not removed as it is impractical on most occasions where it has been used to mark 10s of km of line for various activities. In any case, modern flagging tape is not UV stabilised and breaks down within 6 months. Wooden pegs are used to mark Environmental Monitoring Sites that require on-going monitoring. Using wooden pegs enables both the Company and Compliance Branch inspectors to locate sites of disturbance readily. In any case,

Mining Management Exploration Activities

wooden pegs are broken down by termites within 2 years, which means they leave no long-term legacy. All other markers are removed.

7.6: Ripping of drill pads and access tracks is restricted only to those that have identifiable signs of compaction. Generally, these have received only minimal traffic compared to the main access tracks. Experience in Arnhem Land, and the Top End generally, indicates that natural rehabilitation of tracks and pads is sufficient. Alligator block tracks as soon as practical to minimise the opportunity for them to become a thoroughfare for hunters and adventurers.

7.7: Existing tracks won't be remediated. These have been identified prior to works. These were formed at various times, largely by traditional owners, hunters and adventurers. Alligator has no control over any infrastructure that was created prior to the EL being granted, as the project is readily accessible to stakeholders and the NLC-permitted public.

Section 8 – Required Attachments

8.1	X	Initial Application for Authorisation or variation of Authorisation (only if details on the form have subsequently changed).
8.2	X	Nomination of Operator Form, where required
8.3	X	Security Calculation Spreadsheet
8.4	N/A	Evidence of Land Access Agreement if operating on an Exploration Licence (EL) on Pastoral Lease (e.g. two-ways exchange of email)
8.5	X	Disturbance tracking spreadsheet (for existing Authorisations)
8.6	N/A	Spreadsheet with coordinates of proposed drill holes or polygons of target areas
8.7	X	KML/shape files/track logs of proposed tracks, camp sites and proposed drill holes or polygons of target areas
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	X	Radiation Management Plan (if applicable)
8.12	X	Document(s) being appended in relation to Section 2 (if any): <ul style="list-style-type: none"> - Appendix 7- Environmental Report - Appendix 8- Water Resources Communication - Appendix 9- NR Maps