

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	TANAMI REGIONAL EXPLORATION (TRE)
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Authorisation Number Insert existing authorisation number, where applicable	0916-01
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Operator Name Use ASIC-ABR registered name (if a company), or name of the applicant	NORTHERN STAR (TANAMI) PTY LTD	
Operator ABN and ACN numbers	ABN: 88 603 860 831 ACN: 603 860 831	

Location and Access Details Include brief description of the location, access details, and distance to nearest town or community	CENTRAL TANAMI PROJECT IS ACCESSED BY THE TANAMI ROAD FROM EITHER ALICE SPRINGS, 680KM TO THE SOUTH EAST, OR HALLS CREEK IN WESTERN AUSTRALIA, 450KM TO THE WEST.
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Target Commodity Details Include target mineral commodities (i.e. gold, copper etc.)	GOLD (Au)
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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.	AIR CORE (AC) DRILLING 578 HOLES REVERSE CIRCULATION (RC) DRILLING 90 HOLES DIAMOND (DD) DRILLING 26 HOLES	
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Mining Management Exploration Activities

Proposed Schedule Include start and finish dates of ground disturbing work	TBC – 31/12/2023
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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
EL10411	NORTHERN STAR (TANAMI) PTY LTD	03/06/2023	Cave Hill – Central Desert Aboriginal Land Trust
EL 22378	NORTHERN STAR (TANAMI) PTY LTD	07/06/2023	Cave Hill – Central Desert Aboriginal Land Trust
EL 28474	NORTHERN STAR (TANAMI) PTY LTD	11/03/2023**	Rushmore – Central Desert Aboriginal Land Trust
ML 22934	NORTHERN STAR (TANAMI) PTY LTD	13/09/2026	Groundrush – Central Desert Aboriginal Land Trust
MLS168	NORTHERN STAR (TANAMI) PTY LTD	31/12/2044	Central – Central Desert Aboriginal Land Trust
EL 26925	NORTHERN STAR (TANAMI) PTY LTD	24/01/2023**	Goanna 2 – Central Desert Aboriginal Land Trust
EL 26926	NORTHERN STAR (TANAMI) PTY LTD	24/01/2023**	Black Hills 2 – Central Desert Aboriginal Land Trust
EL 25009	NORTHERN STAR (TANAMI) PTY LTD	25/07/2024	Gardiner – Central Desert Aboriginal Land Trust
EL 29593	NORTHERN STAR (TANAMI) PTY LTD	20/08/2024	Gardiner – Central Desert Aboriginal Land Trust
EL 23932	NORTHERN STAR (TANAMI) PTY LTD	20/08/2024	Gardiner – Central Desert Aboriginal Land Trust
EL 9843	NORTHERN STAR (TANAMI) PTY LTD	31/12/2023	Farrands Hill – Central Desert Aboriginal Land Trust
EL 22061	NORTHERN STAR (TANAMI) PTY LTD	31/12/2023	Farrands Hill – Central Desert Aboriginal Land Trust
EL 25171	NORTHERN STAR (TANAMI) PTY LTD	25/07/2024	Boulder Ridge – Central Desert Aboriginal Land Trust
EL 26653	NORTHERN STAR (TANAMI) PTY LTD	15/02/2024	Mt Charles East – Central Desert Aboriginal Land Trust
EL 27590	NORTHERN STAR (TANAMI) PTY LTD	15/02/2024	Boulder Ridge – Central Desert Aboriginal Land Trust
EL 28282	NORTHERN STAR (TANAMI) PTY LTD	9/04/2023**	Suplejack – Suplejack Downs Pastoral Station
EL 29592	NORTHERN STAR (TANAMI) PTY LTD	20/08/2024	Browns Range – Central Desert Aboriginal Land Trust
EL 31799	NORTHERN STAR (TANAMI) PTY LTD	30/07/2024	Gardiner – Suplejack Downs Pastoral Station
EL 24174	NORTHERN STAR (TANAMI) PTY LTD	20/08/2024	Browns Range – Central Desert Aboriginal Land Trust

Delete or add rows as required ** 2year Renewals have been lodged

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

Organisational Structure

Position Title	Name
Chief Executive Officer	Stuart Tonkin
Chief Geological Officer	Daniel Howe
General Manager - Discovery	Jamie Rogers
Senior Geologist - Discovery	Daniel Hawkins
Environmental Manager	Karina Tedesco
Land Manager	Kathryn Todd

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).
Step 1: Are there any threatened flora and fauna species or habitats of significance that may occur in the proposed work area?	YES	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.	e.g. - Consulted EPBC Protected Matters Search Tool and appended it to this document. - Consulted EPBC Protected Matters Search Tool and previous Biodiversity Management Plan, which is still current/related to the proposed work, appended to this document.
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).	Weed Management plan is appended to the MMP
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.	Northern Star will consult with the Water Resources Division of the Department of Environment Parks and Water Security (DEPWS)

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>Step 5: Are there Aboriginal sacred sites in the Project area?</p>	NO	<p>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.</p> <p>Northern Star consults with the Central Land Council (CLC) through their Sacred Site Clearance Certificates (SSCC) process and requests Inspection of Records from the Aboriginal Areas Protection Authority (AAPA) to ensure protection of Aboriginal Sacred Sites.</p>
<p>Step 6: Are there archaeological and heritage sites in the Project area?</p>	NO	<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>Seek advice in relation to protection of heritage and archaeological sites.</p> <p>Northern Star consults with the NT Heritage Branch / conducting Searches in relation to protection of archaeological, mythical and heritage 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 have amendments made since the previous MMP submission clearly identified.

Section	Amendment
4	RC drilling proposed for EL26926 and ML22934
4	DD drilling proposed for ML22934 and MLS168
4	AC/RAB drilling proposed for EL26926, EL26925, EL26635, and EL31799
4	Exploration Camp proposed for EL31799 and EL26635
5	Completed rehabilitation of RC drilling on EL26926 – rehab report to be provided.
5	Completed rehabilitation of AC drilling on EL22378, EL22061, EL9843, ML22934, EL26926, EL28474, EL25171, EL23932 and EL29593
6	Addition of newly granted EL31799

Delete or add rows as required

Section 4 – Activities Proposed for this MMP only

Provide relevant EL numbers

Mining Interests (i.e. titles)	ML22934	ML22934	MLS168	EL26926
Number and type of proposed exploration drill holes	80 RC	20 DD	6 DD	10 RC
Maximum depth of proposed holes (m)	300	400	500	150
Number and size of drill pads to be cleared (Length: m x Width: m)	80	20	6	10
Total area of drill pads to be cleared (ha)	3.2	0.8	0.24	0.4
Number of proposed water bores	0	0	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	Y	Y	Y	Y
Number of costeans	0	0	0	0
Volume to backfill costeans (Length: m x Width: m x Depth: m)	0	0	0	0
Number of bulk sample pits	0	0	0	0
Volume to backfill bulk sample pits (Length: m x Width: m x Depth: m)	0	0	0	0
Bulk sample pits approved under <i>Mineral Titles Act</i> ? (Y or N). If Yes provide approval	N	N	N	N
Line/track clearing: (length m x width 4m)	10,000	5,000	3,000	5,000

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Mining Interests (i.e. titles)	ML22934	ML22934	MLS168	EL26926
Area of proposed line/track clearing (ha)	4	2	1.2	2
Camp area to be cleared (ha)	0	0	0	0
Camp Infrastructure (i.e. demountable, tents) Please provide a complete list with measurements as required in the security calculation	0	0	0	0
Other	0	0	0	0
Total proposed area of disturbance (ha)	7.2	2.8	1.44	2.4

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

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Mining Interests (i.e. titles)	EL26925	EL31799	EL26635	EL26926
Number and type of proposed exploration drill holes	128 AC	150 AC	150 AC	150 AC
Maximum depth of proposed holes (m)	80	80	80	80
Number and size of drill pads to be cleared (Length: m x Width: m)	128	150	150	150
Total area of drill pads to be cleared (ha)	0.512	0.6	0.6	0.6
Number of proposed water bores	0	0	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	N	N	N	N
Number of costeans	0	0	0	0
Volume to backfill costeans (Length: m x Width: m x Depth: m)	0	0	0	0
Number of bulk sample pits	0	0	0	0
Volume to backfill bulk sample pits (Length: m x Width: m x Depth: m)	0	0	0	0
Bulk sample pits approved under <i>Mineral Titles Act</i> ? (Y or N). If Yes provide approval	N	N	N	N
Line/track clearing: (length m x width 4m)	25,000	63,000	40,000	35,000
Area of proposed line/track clearing (ha)	10	25.2	16	14
Camp area to be cleared (ha)	0	0.25	0.25	0

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Mining Interests (i.e. titles)	EL26925	EL31799	EL26635	EL26926
Camp Infrastructure (i.e. demountable, tents) Please provide a complete list with measurements as required in the security calculation	0	2x Tents: 2.4 x 3.05 4x Swags: 0.3 x 2 2x Caravan: 7 x 3 1x Water Tank: 2.15 x 2.15	2x Tents: 2.4 x 3.05 4x Swags: 0.3 x 2 2x Caravan: 7 x 3 1x Water Tank: 2.15 x 2.15	0
Other	0	0	0	0
Total proposed area of disturbance (ha)	10.512	26.05	16.85	14.6

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	✓	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: Drill sumps for percussion methods (AC and RC) will not be lined as this reduces remediation time. Sumps will be constructed to capture surface waters.

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		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)
8.5	✓	Disturbance tracking spreadsheet (for existing Authorisations)
8.6	✓	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
8.8	✓	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		Radiation Management Plan (if applicable)
8.12	✓	Document(s) being appended in relation to Section 2 (if any): <ul style="list-style-type: none"> - Photographs of remediation work -