

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	East Tennant 2 EL32109
Authorisation Number Insert existing authorisation number, where applicable	1067-01
Operator Name Use ASIC-ABR registered name (if a company), or name of the applicant	Strategic Energy Resources Ltd
Location and Access Details Include brief description of the location, access details, and distance to nearest town or community	<p>EL32109 is located ~100km east of the township of Tennant Creek. It is located on vacant crown land comprising sand dunes and flat arid waterways.</p> <p>Access is via station tracks east of Tennant Creek. There are no gazette tracks within the tenement. SER has previously accessed the tenement in ATV (All terrain vehicles) following an access route which is proposed to be upgraded to an access track suitable for heavy vehicles.</p>
Target Commodity Details Include target commodities (i.e. gold, copper etc)	Copper and Gold
Mining Activities Summarise the mining activities (exploration) to be the subject of the proposed Authorisation or Variation	<p>SER plans to undertake a two phase exploration program within EL32109.</p> <p>Phase 1 – construct tracks across EL32109 to allow access for ground geophysical activities. The east-west access route is planned to be formed to be suitable for 4wd and heavy vehicles. The total route planned is 35.5km long.</p> <p>Phase 2 - A total of 30 RC drill holes and 10 Diamond drill holes are proposed to be completed across five (5) defined work areas. Up to 40 drill pads are proposed. Additional tracks off the main access track to the four defined work areas and access to drill sites will be formed totally approximately 12km of additional track. SER contractors have previously camped on the edge of the tenement. SER is seeking approval to camp there (at the western start of new track) and more centrally in the tenement when working the eastern targets</p>

<p>Proposed Schedule Include start and finish dates of ground disturbing work</p>	<p>SER plans to undertake the Phase 1 exploration program building access tracks in the second half of 2022.</p> <p>SER plans to undertake the Phase 2 exploration program drill testing in 2023.</p>
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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	Property Name or Land Holder
EL32109	Strategic Energy Resources Ltd	17-11-2025	Vacant Crown land. NT parcel 4469

Organisational Structure

Position Title	Name
Managing Director	David Detata
Exploration Manager	Neil Chalmers
Senior Geologist	Neil Chalmers
Environmental Manager	Neil Chalmers
Radiation Safety Officer	N/A

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>Step 1: 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>Map of EL32109 exported from NR Maps website identified one recorded threatened fauna (Macroderma gigas Ghost Bat) species on the southern boundary of EL32109 tenure. Further investigations of the record (record number M15219, with the SA Museum) indicate this record is noted as “in Australia” with a nominal central Australia coordinate provided. This suggest that the record is incorrectly located and based on the Ghost Bats habitat comprising “caves” it is highly unlikely that they are present in the works area. SER will include avoiding potential Ghost Bats habitat in the site inductions, as an added precaution.</p> <p>Additional threatened species are potentially present in the work area include: Grey Falcon (Falco hypoleucus), Greater Bilby (Macrotis lagotis) and Brush tailed Mulgara (Dasymercus blythi). SERs management plan for each species includes: <u>Grey Falcon</u>: The Grey Falcon is known from the region and will nest in large trees or telecommunications towers. Nesting Grey Falcons are susceptible to disturbance from the presence of people or vehicles within 300 m. If a Grey Falcon nest or suspected nest is encountered then a minimum buffer distance of 300 m should be avoided to reduce potential impacts. <u>Greater Bilby</u>: The Greater Bilby is known from the project area and live in burrows in the soil. Identification of their burrows should be performed by a qualified and experienced person. To reduce impacts to colonies of Greater Bilby, potential burrows should be buffered by 30 m from disturbance with access tracks and pads appropriately micro sited to avoid impacts. <u>Brush-tailed Mulgara</u>: The Brush-tailed Mulgara are widespread in the desert regions of the Northern Territory and as such the expected clearing from the exploration is considered to be unlikely to have a significant impact.</p> <p>The companies Project and Environmental Management Plan will be provided to all onsite staff and detail actions in the event of the identification of threatened or significant native Flora and Fauna. If observed, or habitat identified, sites will be recorded, marked off and left intact.</p>

Mining Management Plan Exploration Activities

ASSESSMENT ASPECT	YES or NO	ACTIONS REQUIRED (if answered YES)	APPENDED INFORMATION (Evidence of consultation with DENR and/or management plan)
<p>Step 2: Are there any known declared weeds within the proposed work area?</p>	No	<p>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).</p>	<p>NR maps contains no records of weeds within EL32109. This is likely a result of limited infrastructure in the tenement and subsequently limited surveys.</p> <p>Vehicle hygiene measures are detailed in the Project and Environmental Management Plan. Wash down stations will be established for the Project, for all vehicles entering and exiting of site.</p>
<p>Step 3: Will you be using water from bores or other sources for the operation?</p>	Yes	<p><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></p>	<p>There no registered water bores located on or near the project area.</p> <p>SER will consult with adjacent landholders for suitable water sources as required.</p> <p>Access to free water and effluent will be restricted through bunding to avoid subsidising pest animals.</p>

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>The drill plan as designed will not have any long terms impacts on the environment with all ground disturbance rehabilitated within three (3) months of being undertaken and all holes capped below surface</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</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>SER has obtained a Request for Information from AAPA covering EL32109. No recorded or registered sites are identified near the project area. The report details that there are no previous surveys over the drill area.</p> <p>SER has requested an on-ground Authority Certificate through AAPA, results of which will be abided by during activities.</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 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> <p>NT Heritage Branch have confirmed no known heritage or archaeological sites are present within the project area.</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
Proposed schedule	Adjusted proposed program timing
Step 1	Updated information on threatened fauna
Step 1	Additional, updated information on threatened fauna
Step 3	Additional, updated information on bunding water sources
Mining Activities	Changing scope to make it a two phase program

Delete or add rows as required

Section 4 – Activities Proposed

Mining Interests (i.e. titles)	EL32109 (Phase 1)	EL (Phase 2)
Number and type of proposed drill holes	N/A	30 RC 10 Diamond
Maximum depth of proposed holes (m)	N/A	750m
Number and size of drill pads to be cleared (Length: m x Width: m)	N/A	Up to 40 pads 20m*25m
Total area of drill pads to be cleared (ha)	N/A	2ha
Is drilling likely to encounter groundwater? (Y, N, unsure)	N/A	Y
Number of costeans (Length: m x Width: m x Depth: m)	N/A	N/A
Number of bulk sample pits	N/A	N/A
Total bulk sample (tonnes) (Length: m x Width: m x Depth: m)	N/A	N/A
Bulk sample pits approved under <i>Mineral Titles Act</i> ? (Y or N)	N/A	N/A
Length of line/track clearing (km: x Width: m)	35.5km * 4m (14.2ha)	13km * 4m (5.2ha)
Camp area to be cleared (ha)	0.5 ha (*2)	
Camp Infrastructure (i.e. demountable, tents)	Caravans, tents	Caravans, tents
Previous disturbance yet to be remediated on title (ha) if known	N/A	N/A
Other		Sumps will be prepared for diamond drill holes and RC
Total area disturbed proposed (ha)	14.2ha	7.2ha

Section 5 – Previous Disturbance (for existing Authorisations only)

Mining Interests (i.e. titles)	EL	EL	EL	EL
Number/type of holes drilled				
Maximum depth of holes drilled (m)				
Number of holes remediated (i.e. plugged/capped)				
Number and size of drill pads cleared (Length: m x Width: m)				
Total area of drill pads cleared (ha)				
Total area of drill pads remediated (ha)				
Was groundwater encountered? (Y or N)				
Length of line/track cleared (Length: km x Width: m)				
Length of line/track remediated (Length: km x Width: m)				
Number of costeans excavated (L: m x W: m x D: m)				
Number of costeans remediated				
Total bulk sample pits excavated (Length: x Width: x Depth: m)				
Total bulk sample pits remediated				
Camp area/s cleared (ha)				
Camp area/s remediated (ha)				
Total area disturbed (ha)				
Total area remediated (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	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 remediation 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	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	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> .

Justification and alternative management measures:

6.1 Whilst SER will instruct for blade up track construction there may be portions of the planned tracks where some blade down track construction is required to ensure that a safe and passable track is constructed. Where blade up is not possible the tracks will have top soil stockpiled and replaced in accordance with 6.5

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

Justification and alternative management measures:

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Section 8 – Required Attachments

8.1	<input checked="" type="checkbox"/>	Security Calculation Spreadsheet
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8.2	X	Nomination of Operator Form
8.3	X	Spreadsheet with coordinates of proposed drill holes or polygons of target areas
8.4	X	Google Earth KML/shape files/track logs of proposed tracks and camp sites
8.5	X	<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	N/A	Remediation Register (for existing Authorisations)
8.7	N/A	Photographs of remediation work
8.8	N/A	Radiation Management Plan (if applicable)