

APO0001775

Approval to undertake assessable prospecting operations

EL6739 Muriel Tank

27 May 2024

Application summary

Detail	Application
Reference	APO0001775
Date of approval	27 May 2024
Title	EL 6739 (1992)
Contact	[REDACTED]
Project name	EL6739 Muriel Tank
Project location	60km west of Nyngan, just south of the Barrier Highway.
Activity type	Non-complying exploration activity

Important note

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Project

Project details

Application APO0001775 relates to the proposed EL6739 Muriel Tank at 60km west of Nyngan, just south of the Barrier Highway..

The application proposes the following characteristics.

Detail	Proposal
Activity description	The activity consists of a large geochemical sampling grid, with approximately 5000 sample sites (Not all on map grid, subject to location changing during operation, with remainder held for infill of areas as required by technical analyses). All sampling will avoid areas of crown land reserves that overlap the exploration licence along roadways. The sampling will be done by an LV mounted auger, a trailer mounted auger pulled by LV, or an auger attached to a bobcat skid steer type vehicle. The LV will be a 4WD Toyota Landcruiser ute, or a 4WD Suzuki Sierra ute. When the auger rig arrives at a site, it will take 5-15min to set up and drill to the target horizon. Drilled materials will be placed on a mat, and after the samples are taken the hole is immediately rehabilitated by filling the materials back down the hole in the order they were taken out (i.e. topsoil on top). Any grasses present in the immediate vicinity of the actual drill hole location (typically a 15-20cm square) are to be carefully removed before drilling begins, and replaced on top of the hole to complete the site rehabilitation, drilling site will be adjusted to avoid larger vegetation.
Earthworks or vegetation clearing	Nil
Access to exploration activities	Access via local shire sealed and unsealed roads and farm tracks. Vehicle will traverse terrain on rubber wheels/tracks to reach individual sites without the need to construct new tracks.
Ancillary activities	N/A
Anticipated start date	27 May 2024

Detail	Proposal
Expected duration (weeks)	21
Expected rehabilitation completion date	27 March 2028
Proposed hours of operation	Continuous work hours (24 hours a day, 7 days a week).
On-site employee or contractor numbers	2

Exempted areas

The EL6739 Muriel Tank has not proposed prospecting in an exempted area.

State conservation areas

The EL6739 Muriel Tank has not proposed prospecting in a State Conservation Area.

Site description and existing environment

The project comprises the following existing land uses:

Existing land use agricultural, predominantly grazing, with small portions of the tenement used for growing crops.

The project is located near the following sensitive receptors:

There is a single sensitive receiver within the tenement, a homestead, which will be given a 300m buffer zone around it.

The project is located with the following soil types and properties:

Soil types mapped in the tenement are kandosols and rudosols. Soil capability in the area is graded as 6, very severe limitations, due to susceptibility to water erosion and shallow rock. There is no potential for acid sulfate soils, and no strategic agricultural land within the tenement.

The project has the following existing surface water sources in the area that are likely to be affected by the activity:

Surface water sources are limited to 9th and 10th order streams, with no named watercourses within EL6739. Small farm dams exist within the tenement.

The project has the following existing groundwater sources that occur in the area that are likely to be affected by the activity:

N/A

The project is in an area with the following topography, vegetation cover type, density and condition:

Topography in the area consists of gently undulating hills. Vegetation cover is either cleared paddocks or light, open forests, which appear to be regrowth.

The project will impact the following matters of national environmental significance:

N/A

The project is in an area with the following threatened species, ecological communities (or habitats):

No threatened species have been reported in the area.

The project is in an area with the following historic cultural or natural heritage items:

N/A

The project is in an area with the following critical habitat/area of outstanding biodiversity value:

N/A

The project is located in an area with the following location, type and distance to the nearest Aboriginal heritage sites:

AHIMS search returned no results within the tenement.

Exploration activities

The following exploration activities have been approved.

Drill holes

Id/ Regulator no.	Type	Surface disturbance (m ²)	Veg. Clearing (m ²)	Excavation s (m ³)	Produced water (ml)	Depth (m)	Block number	Unit letters
AUG 7 EDH0015 526	Other	333				2	BOURKE 3127	j
AUG 15 EDH0015 534	Other	333				2	BOURKE 3127	f
AUG 9 EDH0015 528	Other	333				2	BOURKE 3055	z
AUG 11 EDH0015 530	Other	333				2	BOURKE 3127	b
AUG 5 EDH0015 524	Other	333				2	BOURKE 3127	g
AUG 13 EDH0015 532	Other	333				2	BOURKE 3127	d
AUG 1 EDH0015 502	Other	333				2	BOURKE 3127	c
AUG 2 EDH0015 511	Other	333				2	BOURKE 3055	w
AUG 4 EDH0015 523	Other	333				2	BOURKE 3127	y
AUG 12 EDH0015 531	Other	333				2	BOURKE 3127	k
AUG 6	Other	333				2	BOURKE 3127	a

Id/ Regulator no.	Type	Surface disturbance (m ²)	Veg. Clearing (m ²)	Excavation s (m ³)	Produced water (ml)	Depth (m)	Block number	Unit letters
EDH0015 525								
AUG 14 EDH0015 533	Other	333				2	BOURKE 3055	x
AUG 8 EDH0015 527	Other	333				2	BOURKE 3055	v
AUG 10 EDH0015 529	Other	333				2	BOURKE 3127	h
AUG 3 EDH0015 512	Other	333				2	BOURKE 3127	e

Other exploration activities

Id/ Regulator no.	Type	Surface disturbance (m ²)	Veg. Clearing (m ²)	Excavations (m ³)	Produced water (ml)	Block number	Unit letters
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Impact management

The project includes the following measures to manage surface water impacts:

We will be maintaining a 40m exclusion zone around all water courses and dams.

The project includes the following measures to manage groundwater impacts:

We do not anticipate this shallow drilling activity will intersect ground water.

The project includes the following measures to manage waste and excess materials:

All non-sampled materials from drilling will be back filled into the auger holes, with soil on top. Any general waste will be collected and disposed of at a local waste management centre. No other waste is expected.

The project includes the following measures regarding the handling, use, storage and transportation of any chemicals and hydrocarbons:

Spare diesel and/or petrol will be stored in appropriately coloured and labelled jerry cans, and stored in a lay down area within plastic tubs to prevent spills. Transportation will be carried out on the back of a ute in an upright position and well secured. A spill kit will be kept alongside the fuels.

The project includes the following measures of how noise impacts will be managed to minimise impacts on nearby sensitive receptors:

A 300m exclusion zone will be placed around sensitive receptors, allowing sound from the auger rig to attenuate to negligible levels. Drilling an auger hole takes approximately 5-15 minutes, after which the rig will move on to a new site, minimising the duration of any noise impact.

The project includes the following measures to manage air quality impacts:

No dust or gas is anticipated. In the event of excessive exhaust emissions from light vehicles or the auger rig then maintenance will be scheduled to resolve any mechanical issues.

Sensitivity of the land to be disturbed

Question	Yes/no
Conservation areas	
Land reserved under the <i>National Parks and Wildlife Act 1974</i> ?	No
Land acquired by the Minister under Part 11 of the <i>National Parks and Wildlife Act 1974</i> ?	No
Land subject to a 'conservation agreement' under the <i>National Parks and Wildlife Act 1974</i> and/or the <i>Biodiversity Conservation Act 2016</i> ?	No
Land declared as an aquatic reserve under the <i>Marine Estate Management Act 2014</i> ?	No
Land declared as a marine park under the <i>Marine Estate Management Act 2014</i> ?	No
Land within State Forests set aside under the <i>Forestry Act 2012</i> for conservation values, including Flora Reserves or Special Management (and other) Zones?	No
Land reserved or dedicated under the <i>Crown Lands Act 1989/Crown Lands Management Act 2016</i> (as applicable) for the preservation of flora, fauna, geological formations or other environmental protection purposes?	No
Land identified as wilderness or declared a wilderness area under the <i>Wilderness Act 1987</i> ?	No
Land subject to a Biobanking agreement (established under the now repealed <i>Threatened Species Conservation Act 1995</i>) or a Biodiversity Stewardship agreement established under the <i>Biodiversity Conservation Act 2016</i> ?	No
Land subject to a Wildlife Refuge agreement under the <i>Biodiversity Conservation Act 2016</i> ?	No
Land subject to existing conservation agreements on private land under repealed legislation that continue to have effect (e.g., trust agreements under <i>Native Conservation Trust Act 2001</i> , Property vegetation plans under <i>Native Vegetation Act 2003</i> , Registered property agreements under <i>Native Vegetation Conservation Act 1997</i>)?	No
Drinking water catchment protection areas	
Land declared to be a 'controlled area' or a 'special area' under the <i>Water NSW Act 2014</i> ?	No
Land declared to be a 'special area' under the <i>Water Management Act 2000</i> or <i>Hunter Water Act 1991</i> ?	No
Sensitive areas	
Land declared as area of outstanding biodiversity value under the <i>Biodiversity Conservation Act 2016</i> or critical habitat under Part 7A of the <i>Fisheries Management Act 1994</i> ?	No
Wetlands of international significance listed under the Ramsar Wetlands Convention?	No
Land designated as a nationally important wetland in the Directory of Important Wetlands?	No
Coastal wetlands mapped under <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> ?	No
Littoral rainforests mapped under <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> ?	No
Coastal zone as defined in the <i>Coastal Management Act 2016</i> ?	No
Land identified in an environmental planning instrument as being of biodiversity/conservation significance or zoned for environmental conservation, protection and/or management?	Yes
Waterfront land defined under the <i>Water Management Act 2000</i> ?	No
Land with a slope greater than 18 degrees measured from the horizontal?	No
Land with potential for soil and water contamination	
Land mapped as Actual Acid Sulfate Soils (AASS) or Potential Acid Sulfate Soils (PASS) on the Acid Sulfate Soils Risk Maps for NSW?	No

Question	Yes/no
Aboriginal protection areas	
Land identified in an environmental planning instrument (such as a State Environmental Planning Policy or Local Environment Plan) as being of Aboriginal cultural significance?	No
Land declared as an Aboriginal place under the <i>National Parks and Wildlife Act 1974</i> ?	No
Historic or natural heritage protection areas	
Land listed on the World Heritage List, National Heritage List or Commonwealth Heritage List?	No
Land, places, buildings or structures listed on the NSW State Heritage Register?	No
Land identified in an environmental planning instrument (such as a State Environmental Planning Policy or Local Environment Plan) as being of heritage significance or a heritage conservation area?	No
Critical industry clusters	
Land identified as Critical Industry Cluster under <i>State Environmental Planning Policy (Resources and Energy) 2021</i> ?	No
Community land	
Public land classified as community land under the <i>Local Government Act 1993</i> ?	No
Other areas	
Land identified on the authority (e.g., exploration licence or assessment lease) as environmentally sensitive land?	No
Ecology	
Will the activity have a significant effect on threatened species or their habitats?	No
Will the activity have a significant effect on threatened ecological communities or their habitats?	No
Will vegetation be removed as part of access track upgrade works in waterfront land?	No
Aboriginal and European heritage	
Will the activity harm Aboriginal objects as defined under the <i>National Parks and Wildlife Act 1974</i> ?	No
Will the activity damage any listed heritage items?	No

Attachment 1 – Statement of commitments

Item	Commitment
Activity type	<p>Exploration activity comprising:</p> <ul style="list-style-type: none"> • 0 diamond drill holes • 0 reverse circulation drill holes • 15 other drill holes • 0 cubic metres of bulk sampling • 0 square metres of new access tracks • 0 lines of seismic testing • 0 square metres of air core drilling • 0 square metres of other drilling
Activity location	60km west of Nyngan, just south of the Barrier Highway., within EL 6739 (1992).
Activity scope (including any ancillary activities)	<p>The activity consists of a large geochemical sampling grid, with approximately 5000 sample sites (Not all on map grid, subject to location changing during operation, with remainder held for infill of areas as required by technical analyses). All sampling will avoid areas of crown land reserves that overlap the exploration licence along roadways. The sampling will be done by an LV mounted auger, a trailer mounted auger pulled by LV, or an auger attached to a bobcat skid steer type vehicle. The LV will be a 4WD Toyota landcruiser ute, or a 4WD Suzuki Sierra ute. When the auger rig arrives at a site, it will take 5-15min to set up and drill to the target horizon. Drilled materials will be placed on a mat, and after the samples are taken the hole is immediately rehabilitated by filling the materials back down the hole in the order they were taken out (i.e. topsoil on top). Any grasses present in the immediate vicinity of the actual drill hole location (typically a 15-20cm square) are to be carefully removed before drilling begins, and replaced on top of the hole to complete the site rehabilitation, drilling site will be adjusted to avoid larger vegetation.</p> <p>N/A</p>
Hours of operation	Continuous work hours (24 hours a day, 7 days a week).
Expected duration (weeks)	21
Anticipated start date	27 May 2024
Expected rehabilitation completion date	Estimated 27 March 2028
Maximum area of disturbance	4,995 square metres
Agricultural impact	The activity will be undertaken in accordance with EL6739 Level 1 AIS.xlsx (11826 bytes)
Air quality	No dust or gas is anticipated. In the event of excessive exhaust emissions from light vehicles or the auger rig then maintenance will be scheduled to resolve any mechanical issues.
Protection of water sources	<p>We will be maintaining a 40m exclusion zone around all water courses and dams.</p> <p>We do not anticipate this shallow drilling activity will intersect ground water.</p>
Soil and land stability	<p>Minimising surface disturbance and rehabilitating holes immediately after sample collection. Rehabilitated holes are back filled in sequence so that topsoil is replaced on top of the profile. Grasses present at the drill site are carefully removed</p>

Item	Commitment
	before drilling commences, and replaced on top of the replaced soil profile to complete rehabilitation. Vegetation clearing is not planned - areas which are not accessible to a light vehicle will not be sampled in this program.
Noise and vibration	A 300m exclusion zone will be placed around sensitive receptors, allowing sound from the auger rig to attenuate to negligible levels. Drilling an auger hole takes approximately 5-15 minutes, after which the rig will move on to a new site, minimising the duration of any noise impact.
Coastal processes and hazards	N/A
Hazardous substances or chemicals	Spare diesel and/or petrol will be stored in appropriately coloured and labelled jerry cans, and stored in a lay down area within plastic tubs to prevent spills. Transportation will be carried out on the back of a ute in an upright position and well secured. A spill kit will be kept alongside the fuels.
Wastes and emissions	All non-sampled materials from drilling will be back filled into the auger holes, with soil on top. Any general waste will be collected and disposed of at a local waste management centre. No other waste is expected.
Vegetation	This exploration program will only occur in places which are already accessible via a light vehicle, any areas which are not accessible to a light vehicle will be skipped. Avoiding clearing will prevent us from having any substantial impact on the Bogan Council's terrestrial biodiversity zone. A large portion of this tenement is covered by the biodiversity zone, however one of the landowners has clear felled a substantial portion of the native vegetation for agricultural purposes, which will allow us to sample there.
Threatened fauna and flora species	If any threatened species are sighted they will be reported to authorities and an 300m buffer will be established around the area of the threatened species sighting.
Areas of outstanding biodiversity value/critical habitat	N/A
Endangered ecological community or critically endangered ecological community	N/A
Habitat of a threatened species or ecological community	N/A
Key threatening processes	N/A
Barriers to movement of fauna	N/A
Ecological and biosecurity impacts	N/A
Community resources	N/A
Natural resources	We will not be clearing any vegetation. All cropped fields will be avoided to prevent damaging crops.
Social impacts	N/A
Economic impacts	N/A
Heritage impacts	N/A
Aesthetic impacts	N/A

Item	Commitment
Aboriginal cultural heritage	N/A
Land use impacts	N/A
Transportation impacts	We will stay on existing roads and tracks as much as possible, drive at low speeds on dirt tracks and not drive on dirt tracks or roads in wet conditions.
Matters of national environmental significance	N/A
Cumulative impacts	N/A
Rehabilitation commitments	The activity will be undertaken in accordance with the rehabilitation objectives and targets provided for this project.
Risk assessments	The titleholder must monitor the risks associated with activities and, if the risk associated with an activity changes, implement revised environmental management controls.
Incident management	The NSW Resources Regulator will be notified of all incidents in accordance with the requirements of EL 6739 (1992).
Reporting	Reporting to the NSW Resources Regulator and Mining, Exploration and Geoscience – Department of Regional NSW will be in accordance with the legislation and conditions of EL 6739 (1992).
Codes of Practice	EL6739 Muriel Tank will be operated in accordance with: <ul style="list-style-type: none"> • Exploration Code of Practice: Environmental Management • Exploration Code of Practice: Rehabilitation
Other (as applicable)	1. No additional terms specified.

Attachment 2 – Definitions

To search for NSW legislation, visit www.legislation.nsw.gov.au. Commonwealth legislation can be found at www.legislation.gov.au.

Word	Definition
Aboriginal object	Has the same meaning as it has in the <i>National Parks and Wildlife Act 1974</i> .
Aboriginal place	Has the same meaning as it has in the <i>National Parks and Wildlife Act 1974</i> .
Acid Sulfate Soils	Sediments and soils containing iron sulfides which, when exposed to oxygen, generate sulfuric acid. Acid sulfate soils include actual acid sulfate soils (AASS) or potential acid sulfate soils (PASS).
Activity	Any activity carried out in connection with exploration, including: <ul style="list-style-type: none"> the use of land means of accessing land the carrying out of a work.
Activity approval	An approval to carry out assessable prospecting operations granted under the <i>Mining Act 1992 / Petroleum (Onshore) Act 1991</i> – as relevant.
Actual Acid Sulfate Soils (AASS)	Sediments and soils containing highly acidic soil horizons or layers resulting from the aeration of sediments and soils that are rich in iron sulfides, primarily sulphide.
Applicant	In relation to an exploration activity, the person proposing to carry out the exploration activity.
Aquatic reserve	Has the same meaning as it has in the <i>Marine Estate Management Act 2014</i> .
Areas of Outstanding Biodiversity Value (AOBVs)	Has the same meaning as it has in the <i>Biodiversity Conservation Act 2016</i> . Note: Areas of declared critical habitat under the now repealed <i>Threatened Species Conservation Act 1995</i> have become Areas of Outstanding Biodiversity Value (AOBVs) under the <i>Biodiversity Conservation Act 2016</i> .
Assessable prospecting operation	Any prospecting operation that is not exempt development within the meaning of <i>State Environmental Planning Policy (Resources and Energy) 2021</i> .
Clearing of vegetation	Any one or more of the following: <ul style="list-style-type: none"> cutting down, felling, thinning, lopping, logging or removing vegetation, or killing, destroying, poisoning, ringbarking, uprooting or burning vegetation.
Complying exploration activities (CEA)	Exploration activities that are considered unlikely to significantly affect the environment as set out in <i>Exploration guideline: Application and assessment process for exploration activities</i> .
Critical habitat	Has the same meaning as it has in the <i>Fisheries Management Act 1994</i> . Areas of declared critical habitat under the now repealed <i>Threatened Species Conservation Act 1995</i> have become Areas of Outstanding Biodiversity Value (AOBVs) under the <i>Biodiversity Conservation Act 2016</i> .
Drill hole	A hole made by drilling or boring, but excludes: <ul style="list-style-type: none"> sampling and coring using handheld equipment, petroleum wells.
Drilling	The perforation of the earth's surface crust by mechanical means to form a hole, whether the hole caused by the perforation is vertical, inclined or horizontal, and includes all operations for preventing collapse of the sides of

Word	Definition
	such hole or for preventing it from being filled with extraneous materials including water
Environment	Has the same meaning as it has in the <i>Mining Act 1992 / Petroleum (Onshore) Act 1991</i> – as relevant.
Environmentally sensitive area of State significance	Has the same meaning as it has in <i>State Environmental Planning Policy (Resources and Energy) 2021</i> .
Excavation	The removal of the surface layer to a depth greater than 500 mm from the natural surface level.
Exempt development	Has the same meaning as it has in <i>State Environmental Planning Policy (Resources and Energy) 2021</i> .
Exploration	Has the same meaning as it has in <i>State Environmental Planning Policy (Resources and Energy) 2021</i> .
Fauna	Has the same meaning as it has in the <i>National Parks and Wildlife Act 1974</i> .
Groundwater	Water that occurs beneath the ground surface in the saturated zone.
Habitat	Has the same meaning as it has in the <i>Biodiversity Conservation Act 2016</i> or the <i>Fisheries Management Act 1994</i> (as relevant).
Harm	<p>In relation to matters of national environmental significance, has the same meaning as 'significant impact' as provided by the 'Significant Impact Guidelines' used to determine whether assessment and approval is required under the <i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>.</p> <p>In relation to the environment, has the same meaning as it has in the <i>Protection of the Environment Operations Act 1997</i>.</p> <p>In relation to threatened species or ecological communities, has the same meaning as:</p> <ul style="list-style-type: none"> • 'harm an animal' in the <i>National Parks and Wildlife Act 1974</i> • 'pick a native plant' in the <i>National Parks and Wildlife Act 1974</i> • 'harm' in the <i>Fisheries Management Act 1994</i>. <p>In relation to an aquifer or waterfront land, has the same meaning as it has in the <i>Water Management Act 2000</i>.</p> <p>In relation to Aboriginal places or Aboriginal objects has the same meaning as it has in the <i>National Parks and Wildlife Act 1974</i>.</p> <p>In relation to items of heritage significance, has the same meaning as it has in the <i>Heritage Act 1977</i>.</p> <p>In relation to protected marine vegetation, has the same meaning as it has in the <i>Fisheries Management Act 1994</i>.</p>
Items of heritage significance	<p>Means:</p> <ul style="list-style-type: none"> • any heritage items listed in one or more of the following: <ul style="list-style-type: none"> — the Commonwealth Heritage List — the World Heritage List — the National Heritage List — the State Heritage Register — an Environmental Planning Instrument • any relic (being any deposit, object or material evidence which relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and which is 50 or more years old), or

Word	Definition
	<ul style="list-style-type: none"> • within State Conservation Areas: <ul style="list-style-type: none"> — items that are listed on the DECC Historic Heritage Information Management System, or — any deposit, object or material evidence relating to the settlement or occupation of New South Wales or a part of New South Wales (not being Aboriginal settlement or occupation) if the deposit, object or material evidence is more than 25 years old at the date of the interference or removal.
Land	<p>Includes:</p> <ul style="list-style-type: none"> • the sea or an arm of the sea • a bay, inlet, lagoon, lake or body of water, whether inland or not and whether tidal or non-tidal • a river, stream or watercourse, whether tidal or non-tidal, and • a building erected on the land
Marine vegetation	Has the same meaning as it has in the <i>Fisheries Management Act 1994</i> .
Matters of national environmental significance	'Matters of national environmental significance' protected under the <i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i> .
Minister	The Minister administering the <i>Mining Act 1992 / Petroleum (Onshore) Act 1991</i> – as relevant.
Native vegetation	Has the same meaning as it has in the <i>Local Land Services Act 2013</i> .
Potential acid sulphate soils (PASS)	Sediments and soils that contain iron sulfides or sulfidic material which have not been exposed to air and oxidised
Produced water	Any form of groundwater that is actively extracted from a borehole or excavation, excluding incidental groundwater mixed with drilling fluids.
Rehabilitation	Has the same meaning as it has in the <i>Mining Act 1992 / Petroleum (Onshore) Act 1991</i> – as relevant.
Seismic survey	The use of shock waves (generated in the ground using either small explosive charges detonated below the surface, hand-held mechanical hammers or vehicle-mounted hammers) and an array of geophones, which are connected to measuring instruments, to differentiate the geophysical properties of the subsurface of the earth.
Sensitive receiver	<p>Includes:</p> <ul style="list-style-type: none"> • dwellings • libraries • educational and research institutions (including schools, colleges and universities) • childcare centres • kindergartens • hospitals, surgeries and other medical institutions • places of worship • milking sheds and holding yards associated with dairies • animal boarding or training establishments • aquaculture

Word	Definition
	<ul style="list-style-type: none"> intensive livestock agriculture
Site	The land on which an activity is located.
State Conservation Area	Has the same meaning as it has in the <i>National Parks and Wildlife Act 1974</i> .
Surface disturbance	Means: <ul style="list-style-type: none"> disturbance or exposure of the soil or surface rock layer, or degradation or deterioration in any manner of the physical surface of land.
Terms	In relation to activity approvals, the terms imposed by the decision-maker on the grant of an activity approval.
Threatened species or ecological communities	Has the same meaning as it has in the <i>Biodiversity Conservation Act 2016</i> or <i>Fisheries Management Act 1994</i> (as relevant).
Title	An authority under the <i>Mining Act 1992</i> / a title under the <i>Petroleum (Onshore) Act 1991</i> – as relevant.
Titleholder	A person or company to whom a title has been issued.
Track	All unsealed routes that will be traversed multiple times, but does not include single pass (ingress and egress) routes or seismic shot and receiver lines.
Waste	Has the same meaning as it has in the <i>Protection of the Environment Operations Act 1997</i> .
Water source	Has the same meaning as it has in the <i>Water Management Act 2000</i> .
Water land	Has the same meaning as it has in the <i>Fisheries Management Act 1994</i> .
Waterfront land	Has the same meaning as it has in the <i>Water Management Act 2000</i> .
Wetlands	Has the same meaning as it has in the <i>Fisheries Management Act 1994</i> .
Wilderness	Lands identified as wilderness under the <i>Wilderness Act 1987</i> .
Wilderness area	Lands (including subterranean lands) declared to be a wilderness area under the <i>Wilderness Act 1987</i> or the <i>National Parks and Wildlife Act 1974</i> .

Attachment 3 – Review of environmental factors

Air impacts

Provide a brief description of likely impacts to air quality, including the distance to, and impacts on, nearby sensitive receivers.

Negligible dust generated by driving on dirt tracks at low speed.
Light vehicle and generator exhaust emissions

What is the activity's likely impact due to generation of greenhouse gases emissions or release of chemicals which affect the ozone layer or produce photo-chemical smog?

Negligible

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

Vehicles will drive at slow speeds (<40km/h) on dirt tracks. Vehicles and generators will have regular services and will undergo maintenance if producing excessive exhaust.

Water impacts

Provide a brief description of the likely impacts to water quality and/quantity.

There is potential to cause changes to runoff patterns/mobilise sediments or hydrocarbons due to the use of light vehicles.

What is the activity's impact due to the storage of water?

Nil/Not applicable

What is the activity's impact to natural water bodies, wetlands or runoff patterns?

Negligible

What is the activity's impact due to aquifer interference, including changes to inter-aquifer connectivity?

Nil/Not applicable

What is the activity's impact due to changes to flooding or tidal regimes?

Nil/Not applicable

What are the impacts from any hydraulic fracturing (well stimulation), including through gas and fluid migration?

Nil/Not applicable

What is the activity's impact due to changes in surface or groundwater quality and quantity?

Nil/Not applicable

What is the likely level of any water impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

A 40m buffer zone will be maintained around all waterways and farm dams, within which drilling will not happen. Due to the shallow nature of auger drilling it is not anticipated that groundwater will be intersected. If vehicles make deep tracks/bog marks we will repair the tracks to prevent changes to runoff patterns. Operations will cease in wet conditions to avoid damaging tracks/getting bogged. Hydrocarbons will be stored in appropriate containers within plastic tubs, with a spill kit on site.

Soil and stability impacts

Provide a brief description of the likely impacts to soil quality or land stability.

It is anticipated that soil compaction will occur due to light vehicle travel, and the back filled auger holes will contain a slightly disturbed soil profile.

What is the activity's impact on the degradation of soil quality including contamination, salinisation or acidification?

Negligible

What is the activity's impact on land with high agricultural capability?

Nil/Not applicable

What is the activity's impact due to loss of soil from wind or water erosion?

Negligible

What is the activity's impact due to the loss of structural integrity of the soil?

Negligible

What is the activity's impact due to increased land instability with high risks from landslides or subsidence?

Nil/Not applicable

What is the activity's impact due to any induced seismicity or ground movements associated with fracture stimulation or injection or extraction of groundwater?

Nil/Not applicable

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

Minimising surface disturbance and rehabilitating holes immediately after sample collection. Rehabilitated holes are back filled in sequence so that topsoil is replaced on top of the profile. Grasses present at the drill site are carefully removed before drilling commences, and replaced on top of the replaced soil profile to complete rehabilitation. Vegetation clearing is not planned - areas which are not accessible to a light vehicle will not be sampled in this program.

Noise and vibration impacts

Provide a brief description of the likely noise and/or vibration impacts.

Likely noise and vibration impacts are negligible. The auger rig operates at approximately 75 decibels, and will be given a 300m buffer around sensitive receptors to allow noise to attenuate to acceptable levels.

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

A 300m buffer will be maintained around all sensitive receptors. Auger rigs will move to a new hole every 5-15 minutes, minimising any prolonged noise exposure.

Coastal locations and processes

Provide a brief description of likely impacts on coastal environments, coastal processes and coastal hazards.

Coastal locations and processes

N/A

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

N/A

Hazardous substances and chemicals**Provide a brief description of likely impacts associated with the use, generation, storage or transport of hazardous substances or chemicals.**

Small potential for spills of diesel and/or petrol fuels.

What is the likely level of the impact associated with the use, generation, storage or transport of hazardous substances or chemicals?

Negligible

Outline any proposed management controls and/or mitigation measures.

Fuels will be transported upright and well secured in the back of a light vehicle. Fuels will be stored in a suitable plastic tub if left on site. A spill kit will be kept with the fuel during storage and transportation.

Wastes and emissions**Provide a brief description of likely impacts to the environment from the generation or disposal of gaseous, liquid or solid wastes or emissions.**

There is potential for environmental impacts from generation of general waste and potential for fuel spills onto soils.

Provide a brief description of likely impacts on areas sensitive to this type of impact.

N/A

What is the likely level of the impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

Any general waste generated is to be collected and disposed of at appropriate council facilities. Fuels will have spill kits kept alongside them, stored in plastic tubs and when being transported they will be well secured on the back of a light vehicle.

Vegetation**Provide a brief description of any vegetation clearing or modification and the likely impacts to the environment.**

We will be avoiding any vegetation clearing or modifications for this program.

What is the likely level of the impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

This exploration program will only occur in places which are already accessible via a light vehicle, any areas which are not accessible to a light vehicle will be skipped.

Vegetation

Avoiding clearing will prevent us from having any substantial impact on the Bogan Council's terrestrial biodiversity zone. A

large portion of this tenement is covered by the biodiversity zone, however one of the landowners has cleared a

substantial portion of the native vegetation for agricultural purposes, which will allow us to sample there.

Threatened species

Provide a brief description of any likely impacts to threatened fauna and flora species.

No threatened fauna or flora has been reported within the EL6739.

What is the likely level of the impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

If any threatened species are sighted they will be reported to authorities and a 300m buffer will be established around

the area of the threatened species sighting.

Area of outstanding biodiversity value (AOBV) / Critical habitat

Provide a brief description of any likely impacts to AOBV/critical habitat.

No areas of AOBV/critical habitat reported within EL6739

What is the likely level of the impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

N/A

Endangered ecological community or critically endangered ecological community

Is the activity likely to have an adverse effect on an endangered ecological community or critically endangered ecological community? Select as relevant:

N/A

Provide a brief description of any impacts.

N/A

What is the likely level of the impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

N/A

Habitat of a threatened species or ecological community

Is the activity likely to have an adverse effect on the habitat of a threatened species or ecological community (including protected aquatic species)? Select as relevant:

N/A

Describe the impacts.

N/A

What is the likely level of the impacts?

Habitat of a threatened species or ecological community

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

N/A

Key threatening process

Provide a brief description of whether the activity will constitute, or form part of, a key threatening process - or is likely to increase the impact of a key threatening process.

N/A

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

N/A

Barriers to movement of fauna

Provide a brief description regarding the potential of the activity to endanger, displace or disturb fauna or create a barrier to their movement.

N/A

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

N/A

Ecological and biosecurity impacts

Is the activity likely to have any adverse ecological or biosecurity impacts? Select as relevant:

N/A

Provide a brief description of any impacts.

The light vehicles used have the potential to spread weeds and cause bushfires.

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

N/A

Community resources

Describe whether the activity is likely to degrade or significantly increase the demand for services and infrastructure resources.

The activity is not likely to have a significant impact on services.

Describe whether the activity is likely to result in any diversion of resources to the detriment of other communities or natural systems.

N/A

What is the likely level of the impact?

Community resources

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

N/A

Natural resources**Describe any likely impacts that would disrupt, deplete or destroy natural resources.**

N/A

Describe whether the activity is likely to disrupt existing activities which rely upon natural resources, including forestry, farming or extractive industries (or will reduce options for future activities).

N/A

Describe whether the activity is likely to result in the degradation of any area reserved for conservation purposes.

N/A

What is the likely level of the impact?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

We will not be clearing any vegetation.

All cropped fields will be avoided to prevent damaging crops.

Social impacts**Describe whether the activity is likely to result in a change to the demographic structure of the community, including changes to the workforce or industry structure of the area/region.**

N/A

Describe whether the activity is likely to have an environmental impact that may cause substantial change or disruption to the community, including loss of facilities, reduced links to other communities or loss of community identity.

N/A

Describe whether the activity is likely to result in some individuals or communities being significantly disadvantaged, including a change in the level of demand for community resources (e.g. community facilities / services, and labour force).

N/A

Describe whether the activity likely to result in any impacts on the health, safety, privacy or welfare of individuals or communities because of factors such as pollution, odour, noise, vibration, lighting, visual impacts, etc.

There is potential for health impacts for the drillers due to noise, and other hazards involved with auger drilling.

Describe if the activity is likely to have any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations.

N/A

What is the likely level of any social impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

N/A

Economic impacts

Provide a brief description of any likely economic impacts.

Supplies and consumables and accommodation will be locally sourced and positively contribute to the community. There will be a broader impact from employment of contactors.

What is the likely level of any impacts?

Positive

Outline any proposed management controls and/or mitigation measures.

N/A

Heritage impacts

Describe whether the activity is likely to cause impacts on localities, places, landscapes, buildings or archaeological relics of heritage significance.

N/A

What is the likely level of the impact?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

N/A

Aesthetic impacts

Describe whether the activity is likely to cause impacts on the visual or scenic landscape, including any lighting, venting or flaring of gas.

N/A

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

N/A

Cultural impacts

Describe the likely impacts associated with any disturbance of the ground surface or any culturally modified trees.

N/A

Describe whether the activity will affect known Aboriginal objects or Aboriginal places.

N/A

Describe whether the activity is located in areas where landscape features indicate the presence of Aboriginal objects.

N/A

Describe whether the activity will affect areas where native title exists or land subject to native title claims, indigenous land use agreements or joint management agreements.

N/A

Cultural impacts**What is the likely level of any cultural impacts?**

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

N/A

Land use impacts**Provide a brief description of any impacts on land use including any major changes to land use and/or curtailment of other beneficial land uses.**

N/A

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

N/A

Transportation impacts**Provide a brief description of any significant impacts on transportation.**

Slightly more road and track wear.

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

We will stay on existing roads and tracks as much as possible, drive at low speeds on dirt tracks and not drive on dirt tracks
or roads in wet conditions.

Consistency with applicable local strategic planning statements, regional strategic plans or district strategic plans**Provide a brief description of any relevant local strategic planning statements, regional strategic plans or district strategic plans and whether the proposed activity is consistent with these.**

Bogan LEP 2011 (terrestrial biodiversity) - a plan for conservation of local native fauna and flora.

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

Densely vegetated areas will be avoided, and no modifications to the vegetation will be undertaken by Helix. Areas where
it is easy to access with a light vehicle may be driven through, but we will avoid moving any fallen vegetation.

Matters of national environmental significance

Is the activity likely to impact on any of the following matters of national environmental significance under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*? Select as relevant:

N/A

Provide further details relating to any impacts on matters of national environmental significance.

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

N/A

Cumulative impacts

Is the activity likely to result in cumulative environmental effects with other existing or likely future activities?

No

Describe the impact.

N/A

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

N/A

Environmental assessment conclusions

Having regard to the potential significance of the individual impacts of the proposed activity (as well as the aggregation of all the impacts of the activity) determine whether (select as relevant):

the activity is not likely to significantly affect the environment, including threatened species or ecological communities (or their habitats), or declared areas of outstanding biodiversity value/critical habitat.

Provide any further details as relevant.

N/A

Attachment 4 – List of supporting documents

- APO0001468 - Quote_H01_Rehab Cost Per Hole.pdf
 - APO0001775_Submission Report_23 May 2024 4:32pm.pdf
 - APO0001775_Submission Report_27 May 2024 1:34pm.pdf
 - EL6739 AHIMS Search.pdf
 - EL6739 Environmental layers.pdf
 - EL6739 Heritage search.pdf
 - EL6739 Level 1 AIS.xlsx
 - EL6739 Photos.zip
 - EL6739 Species sightings.pdf
 - EL6793 Location.zip
 - Protected Matters - MNES layers - June 27th 2023.pdf

FORM: APO_NC_Apvl v3.3