Doc ID: EPR-03938

31/10/2025

Mr. Peter Reid,
Chief Executive Officer,
Petratherm Ltd,
22B, Beulah Road,
NORWOOD, SOUTH AUSTRALIA, 5067
Email: preid@petratherm.com.au

Mr. Gavin England,
Technical Director,
Leasingham Metals Pty Ltd,
6994, Horrocks Highway,
LEASINGHAM, SOUTH AUSTRALIA, 5452
Email: gavin@narryer.com.au

Dear Mr. Reid and Mr. England,

Notification of Approved Exploration Programme for Environment Protection and Rehabilitation (EPEPR) Review

In reference to your final submission dated 17/10/2025, the EPEPR has been approved pursuant to section 70C(5) of the *Mining Act 1971* (the Mining Act).

The approved EPEPR will be made publicly available on the Mining Register and the Department for Energy and Mining (DEM) website. Details of the approved EPEPR are listed below.

Approval Granted to	**Petratherm Limited – EL6815, EL6855** **Leasingham Metals Pty Ltd – EL6715**
Tenement Type & Number	Exploration License EL6715, EL6855, EL6815
Program Number	EPR-03938 Previous Review: EPER2024-028
EPEPR Description	Exploration targeting titanium rich heavy mineral sands, 30km south of Commonwealth Hill station within the Womera Prohibited Area. The current camp will be expanded to 3ha, an increase of drill holes by 600AC to make a total of 1120AC holes and increase in tracks from 50km to 200km.

You are reminded that you must always implement and comply with this approved EPEPR.

This approval does not constitute endorsement of the systems that you have in place to manage the mining operations in compliance with the Mining Act. Whilst your capability to undertake this activity has been considered in this approval, the responsibility for compliance with the Mining Act always remains with the tenement holder.

The legislative requirements associated with the EPEPR are outlined below, and certain requirements must be actioned prior to commencement of operations authorised by the EPEPR.

1	**Rehabilitation Bond** DEM has determined the rehabilitation liability estimate to be **$25,000** based on your commitment to conduct progressive rehabilitation and the information provided in the EPEPR. Accordingly, a bond of **$25,000** be entered into with the Minister for Energy and Mining (Minister). This bond will be formally requested through separate correspondence. The bond must be entered into before authorised operations can commence.
2	**Public Liability Insurance** Pursuant to Regulation 81 of the *Mining Regulations 2020* (the Mining Regulations), you are required to provide a copy of a certificate evidencing the insurance coverage over the tenement(s).
3	**Compliance Reporting** You are required to submit an annual exploration compliance report. The report is required to be submitted **within 2 months** after the anniversary of the date the licence/ease was granted, or in accordance with joint reporting requirements agreed to with the Minister. Please refer to the DEM website for more information on the reporting requirements. You are reminded that a separate compliance report is required **2 months after** the expiry or surrender of the EL.
4	**Work, Health and Safety Compliance** In accordance with Chapter 10 of the *Work Health and Safety Regulations 2012* (SA), you must meet the requirements for mine operators in South Australia, which include a notification for mining operations, the establishment of a Safety Management System, the identification of Principal Mining Hazards and development of a Principal Mining Hazard Management Plan. Further information on your responsibilities, including a guide to Chapter 10, and the Mine Operator Notification Form, is available on the SafeWork SA website.
5	**EPEPR Timeframe** The EPEPR Review is approved for a period of twelve months from the date of this letter. A further 3 months after expiry of the 12-month period is provided to complete all rehabilitation.

Please note, proposed changes to exploration operations stated in the approved EPEPR may require a EPEPR review to be submitted for assessment. Where a EPEPR review is required, implementation of the operational changes can only occur after the revised EPEPR is approved. Further information on when an exploration PEPR review is required can be found in Departmental guideline *MG22 Conducting mineral exploration.*

In addition to the requirements under the Mining Act, you are reminded that your operation will have other legislative requirements that you will need to comply with.

If you have any further queries, please contact DEM staff as below:

General enquiries	Jonathan Gnanapragasam Senior Assessment Officer, Exploration Regulation DEM.exploration@sa.gov.au

Yours sincerely

Simon Constable
DIRECTOR, MINERALS REGULATION
In accordance with delegated
powers and functions

CC: Access Liaison Officer - Woomera Test Range Woomera.Enquiries@defence.gov.au

The Department's Regulatory Guidelines, Ministerial Determinations and Information Sheets are available at: http://energymining.sa.gov.au/minerals/knowledge_centre

Exploration PEPR - EPEPR | 12 Month PEPR Review

Reference Number: **EPR-03938** • Status: **Submitted**

Select Applicable PEPR

Is historical?

○ No ◉ Yes

Previous PEPR ID

EPEPR2024-028

Applicant and General Details

Applicant Details

Sam Rasch

Full Name *

Sam Rasch

Mobile Phone

Business Phone

Email *

srasch@petratherm.com.au (mailto:srasch@petratherm.com.au)

Project Supervisor

Barry van der Stelt
Exploration Manager
Mob: 0434 991 255
Email: bvanderstelt@petratherm.com.au

Samuel Rasch
Project Geologist
Mob: 0401 372 556
Email: srasch@petratherm.com.au

General Details

Tenement Details *

Tenement Type	Tenement Name	Tenement Holder
Exploration Licence	EL 6715	Leasingham Metals Pty Ltd
Exploration Licence	EL 6855	Petratherm Ltd
Exploration Licence	EL 6815	Petratherm Ltd

Operating Company

Petratherm Ltd

If there is another Operating Company, please provide

Account Name	Entity Type	Registered Address	Registered Email

There are no records to display.

Project/prospect name

Muckanippie Project

Mineral Model

The Projects focus is to further define, develop and explore for titanium and vanadium mineralisation around the Muckanippie project area including EL6815, 6855 and 6715. The program aims to do this by targeting mineralisation in a variety of both soft and hard rock targets. These have been identified from historic drilling and geophysical targeting. The Drill locations are a Quaternary sedimentary sequence at Rosewood. Quaternary sediments and a magnetic horizon at Queeny bore. And magnetic targets at the Duke and Nardoo prospects, previously drilled by WPG, and Tasman Resources.
Drilling at Rosewood will test a flat lying quaternary sedimentary sequence, which will require broad spaced, shallow air core drilling to approximately 30m depth. 10, 1km spaced traverses have been proposed with drillhole spacing initially aimed for 200m, with potential infill down to 100m where required to define continuity.
Air Core drilling at queeny bore will be conducted along a series of traverses that target magnetic features and horizons. Drilling will target both shallow (~30m) quaternary sediments as well as basement features (up to 100m). Drilling will aim to intersect prospective sequences, from GM25.1 and GM25.2 drilled by Tasman resources in the 90s. It also aims to test a magnetic sequence believed to be prospective for Ti / V mineralisation. Drill traverses have been planned over prospective features with a 250m buffer each side for follow up drilling and scope for extension.
There is also potential for drilling around the Nardoo and Duke prospects associated as the source rocks to the quaternary sediments. Re-assaying is currently underway to define drill targets. These will be controlled by WPG drilling and by prospective magnetic features.

Primary Commodities *

Commodity Name ↑	Commodity Group	Grade
Ilmenite	Exploration	
Mineral Sands	Exploration	
Rutile	Exploration	
Titanium	Exploration	

Secondary Commodities

Commodity Name ↑	Commodity Group	Grade
Gold	Exploration	
Platinum	Exploration	
Rare Earths	Exploration	
Vanadium	Exploration	
Zircon	Exploration	

Project Description

The drilling method will be air core, mounted on the back of a light vehicle, minor drill pads but no sumps will be needed. Drill chips will be collected in reusable plastic buckets, and a sample will be taken. Upon completion of each drill hole, the buckets will be poured back down the open collar, before the collar is capped and buried.
This EPEPR review, comes resulting the discovery of the Rosewood Heavy Mineral Sands Prospect on EL6855 and EL6715. Petratherm will require changes in the spacing, number of drillholes and sample collection techniques of drilling, to complete initial infill lines and metallurgical testing. All other conditions of the approved EPEPR can remain the same.

Additional Drill Lines will be added 400m from existing lines to add confidence and prove continuity of mineralization. The number of approved drillholes will increase by up to 600 to allow for this.

Some bulk sample will be required to advance mining studies; drill cuttings will be held in green retainer bags at the drill pad until the sample is required for analyses. Following sampling, the workflow of the original EPEPR will recommence, with backfilling of open drillholes and rehabbing.

This EPEPR review contains amendments to the Petratherm field camp and simplification of the original cleared polygons to allow for flexibility in drilling.

Petratherm intend on expanding its field camp to allow for more suitable facilities as scope of work increases. This camp will include a sleeping unit for 4 people, a small kitchen unit, an ablutions facility and a Fuji Clean Ace 1200 septic system with grey water sprinklers. A shipping container, 2 x 5,000L bunded fuel storage and a water tank will also be installed. All camp units will be non-permanent and can be demobilized in the event that work ceases.

A change to the location of the proposed exploration operations has been made to the edges of Petratherm's tenements to allow for exploration of strandline mineral sands systems.

Proposed Project Schedule

Start Date

01/10/2025

End date

31/10/2026

Clearly describe why a PEPR review is required, summarise all content changes made to the approved PEPR, and provide appropriate justification where a time extension is required.

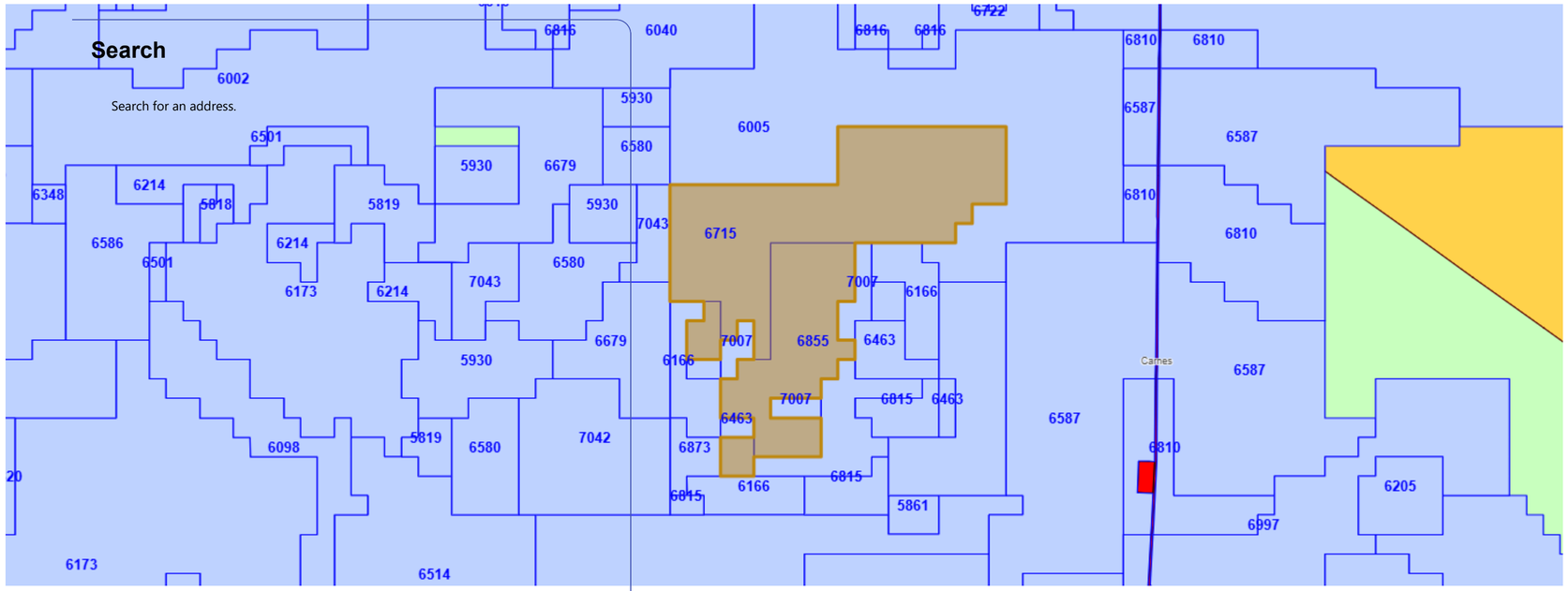
A number of changes will be required in this EPEPR review

Additional drillholes will be required to progress infill drilling at the Rosewood prospect towards a resource. 600 additional drillholes will be required

Additional tracks will be required for access between drillholes. A total of 200km of tracks will be required to drill access (i.e. an increase in 150km from previous). As stated in the original PEPR, vegetation will not be required to be cleared.

Petratherm Field Camp size will require expanding to 3 hectares to accommodate, access track, fuel storage and grey water sprinkler system.

Identify Application Area



Maptaskr © 2025 10 km -30.209092, 134.926296

Powered By Esri - Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Map Layer Intersects

Application Area Details

Location Description

The nearest settlement is the Commonwealth Hill Station which lies approx. 30 km to the North

Area (Sqkm)

501.46

Spatial Data Intersects - Summary Table

Show 10 entries Search:

Spatial Layer Name	Category	Referral	Intersect Count
1:250K mapsheets	Other		2
Cadastral Parcels	Other		4
Determinations of Native Title	Other		1
Exploration licences (mineral/opal)	No-Go Area		7
Pastoral Lease Boundaries	Other		4
Registered and Notified ILUAs	Other		5
Schedule of Native Title Claims	Other		1
Terrestrial - BOM Groundwater Dependant Atlas (GDE Atlas)	Other		25

Spatial Layer Name	Category	Referral	Intersect Count
Woomera Prohibited Area - access zones	Restricted Land		1

Showing 1 to 9 of 9 entries

Previous 1 Next

Spatial Data Intersects - Details Table

Show 10 entries

Search:

Spatial Layer Name	Shape	Primary Attribute	All Attributes	Category
1:250K mapsheets	Shape 1	TARCOOLA	View attributes	Other
1:250K mapsheets	Shape 1	COOBER PEDY	View attributes	Other
Cadastral Parcels	Shape 1	D28564AL2	View attributes	Other
Cadastral Parcels	Shape 1	F259686AL18	View attributes	Other
Cadastral Parcels	Shape 1	F259685AL17	View attributes	Other
Cadastral Parcels	Shape 1	F260271QP100	View attributes	Other
Determinations of Native Title	Shape 1	Antakirinja Matu-Yankunytjatjara	View attributes	Other
Exploration licences (mineral/opal)	Shape 1	EL 6855	View attributes	No-Go Area
Exploration licences (mineral/opal)	Shape 1	EL 6815	View attributes	No-Go Area
Exploration licences (mineral/opal)	Shape 1	EL 6463	View attributes	No-Go Area

Showing 1 to 10 of 50 entries

Previous 1 2 3 4 5 Next

Program Preparation

Work undertaken in preparing the proposal

Desktop review of all .
- Review of groundwater conditions using http://www.waterconnect.sa.gov.au.
- Review of historic exploration and company reports.
- Environmental Protection Policy (Water Quality) 2015

Consultation with Landowners
- Direct communication with traditional landowners for the purposes of native title by CEO Peter Reid
- Native title clearance was completed in February 2021 and a second clearance was completed in December 2021 to facilitate drilling. Further heritage surveys were conducted on 22-24 September 2024. A final report detailing survey results was provided to PTR and AMYAC by the consultant anthropologists on 8 October outlining allowable exploration activities.
- Multiple consultations with Tom Wheelhouse the station manager at Commonwealth Hill station by Michael Beven.

Contractor Consultation
Petratherm intends to and has commissioned both geological and drilling contractors with many years on the ground experience in this area.

Operator Capability

Petratherm has an integrated SHEQ management system which provides the standard operating procedures and systems for all areas of Petratherm activities including safety, health, environment and quality control. Petratherm Exploration Manager Peter Reid is the identified responsible officer for Petratherm to ensure the SHEQ management system including PEPRs, Exploration Permits and deeds are adhered to.

The internal systems and controls that Petratherm have in place under the supervision and direction of Peter Reid have ensured that in the past environmental outcomes have been achieved.

Lease Conditions

NA

Land Access

Identify the Owners of Land and authority to access land

Land Title Reference	Plan Parcel Reference	Type of Land	Owner of Land ↑	Land Access Authorisation Method	Date of Form 21 or Agreement Signed	Instrument or Uploaded Document Id	Uncheck land not applicable to your application ar
CL 6212/558	D28564AL2	Perpetual Lease	Jumbuck Pastoral	Service of Notice of Entry	08/01/2023		Checked
CL 6299/451	F259686AL18	Perpetual Lease	Jumbuck Pastoral	Service of Notice of Entry	08/01/2023		Checked
CL 6299/450	F259685AL17	Perpetual Lease	Jumbuck Pastoral	Service of Notice of Entry	08/01/2023		Checked
CL 6304/473	F260271QP100	Perpetual Lease	Jumbuck Pastoral	Service of Notice of Entry	08/01/2023		Checked

Is any of the application area over a road, street or highway

No

Woomera Prohibited Area (WPA)

Will activities be conducted within the WPA

Yes

In which zone will activities be conducted?

Name	Are you intending to undertake work?	Closure start date	Closure end date
Defence infrequent zone	Yes	01/10/2025	29/08/2026

Does the tenement holder hold a valid and current Resource Exploration Permit under the WPA Rule?

Yes

Permit No.

REX043-19-3

What is the expiry date of the permit?

28/06/2026

Does the Exploration Permit allow the operator to conduct exploration operations in the WPA?

Yes

Other Land Owned or Controlled by the Commonwealth Department of Defence

Indicate if you are intending to undertake exploration operations within the identified defence land

No

Other Commonwealth defence land

Defence Land	Applicable
There are no records to display.	

Do you have a Deed of Access with Defence?

—

Expiry date of the Deed of Access

—

Date the Range Control Officer granted permission to conduct the proposed exploration operations.

—

Describe the results of consultation and how any concerns raised were addressed

—

Native Title

Does 'Native Title land' exist within the application area?

Yes

Using the table below, describe how you have complied with the requirements of Part 9B of the Mining Act for each tenement.

Name of Determined / Claimant Group	Agreement Type	Instrument Number	Applicable
Antakirinja Matu-Yankunytjatjara	Native Title	438, 54782	Yes
Bulgunnia Pastoral ILUA	ILUA		Yes
Antakirinja Area Minerals Exploration ILUA	ILUA		Yes
Pt Woorong Downs (PE 2178) Pastoral ILUA	ILUA		Yes
Pt Woorong Downs (PE 2175) Pastoral ILUA	ILUA		Yes
Muckanippie Pastoral ILUA	ILUA		Yes
Antakirinja Matu-Yankunytjatjara Aboriginal Corporation RNTBC			No

Provide any additional relevant information

—

Exempt Land

Exempt Land

Has Exempt land been identified?

No

If a "Waiver of Exemption" has been reached to waive the benefit of the exemption, a notice of the agreement must be given to the Mining Registrar, either within 21 days after the agreement was entered into or when an application for the mineral tenement is made under the Mining Act.

In the table below enter the relevant instrument numbers for any Form 23C - Notice of wavier of exemption provided to the Mining Registrar.*

Land Title	Plan Parcel	Owner of Land that has benefit of exemption ↑	Why is the land exempt land?	Waiver of exemption(s) been negotiated	Instrument Number or Uploaded Document Id
CL 6212/558	D28564AL2	Jumbuck Pastoral			
CL 6299/451	F259686AL18	Jumbuck Pastoral			
CL 6304/473	F260271QP100	Jumbuck Pastoral			
CL 6299/450	F259685AL17	Jumbuck Pastoral			

Consultation

Consultation

Stakeholder ↑	Land Use	Matters raised	Stakeholder concerns raised and how addressed
AMYAC	Other (e.g. historic mining)	No concerns raised	
Jumbuck Pastoral	Grazing	No concerns raised	
WPA	Defence activity	No concerns raised	

If any individual or group of similar affected persons were not able to be consulted, what steps were taken to consult with them?

—

Provide any additional relevant information.

—

Describe any council policies (or out of council) or development plans that may impact the program area and a description of any known plans for future land use changes by other parties.

—

Description of Environment

Proximity to Infrastructure and Housing

Provide the following information:

The nearest settlement is the Commonwealth Hill Station which lies approx. 30 kilometres to the North of EL6715, 6815 and 6855 Coober Pedy is located 110km to the northwest. No impacts on human settlements or infrastructure are expected.

Attach Files ⓘ

Expand/Collapse

File Name	File Size (Mb)	Created On	Download
EPR_03938 Locality.png	1.16 Mb	25-09-2025 16:28:39	Download (MERS/EPR-03938/Proximity to infrastructure/EPR_03938 Locality_2025-09-25T06-58-40.919Z.png)

Landform, topography, soil and surface cover

Describe the topography and soil and surface cover (e.g. gibber) of the general area affected by the exploration program. Include details on the susceptibility to compaction, erosion, dust, runoff and visual attributes (steep or undulating slopes, plains, rocky outcrops, dunes, saltpans, claypans etc) any other characteristics (e.g. acid sulphate soils) that may require control strategies to reduce environmental impacts during operations or rehabilitation.

The tenements topography and surface are largely flat laying sand plains dominated by lightly populated scrubland with Senna and Acacia being the dominant plants. Isolated patches of bluebush exist on topographic highs dominated by silcrete and or calcrete. The exploration activities will have no impact on erosion on the tenement.

Attach Files

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Surface Water

Will the proposed program interfere with surface water bodies and natural drainage (e.g. drainage lines, creeks, floodplains, wetlands)?

No

Describe the potential interference and surface water bodies and natural drainage on maps.

—

Indicate how you will avoid disturbance

Petratherm will avoid drainage lines, creeks, floodplains, wetlands when conducting exploration activites.

Is the program area located within water protection areas defined under the River Murray Act 2003?

No

Select the name(s) of protected water areas

Is the program area located within any prescribed watercourses or prescribed surface water areas under the Landscape?

No

Select the name(s) of the prescribed watercourses or prescribed surface water areas under the Landscape South Australia Act 2019.

Attach Files

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File Name	File Size (Mb)	Created On	Download
No Files Uploaded			

Name	Applicable
There are no records to display.	

Groundwater

Is groundwater likely to be intersected when conducting the exploration program?

Yes

Provide evidence or any supporting information demonstrating this.

The Muckanippie project lies outside of the Far North Prescribed Wells Area. There are multiple Mineral drillholes on the tenements, which describe, shallow 20-30m cover above paleoproterezoic, Muckanippie Anorthosite Complex. Hiistoric Drilling has been drilled to blade refusal without groundwater issues. The majority of drilling will be shallower than historic drilling in similar locations. It is Highly unlikely that we will encounter ground water in the proposed drillholes due to their shallow nature.

All mineral drill holes will be backfilled and rehabilitated in accordance with the Mineral Exploration Drillholes – General specifications for construction and backfilling for bores completed within an. A class one driller will be on site to drill all mineral drill holes and supervise the rehabilitation of drill holes should any water be intersected.

Description of the localites/areas where different groundwater conditions may be encountered

The Muckanippie project lies outside of the Far North Prescribed Wells Area. There are multiple Mineral drillholes on the tenements, which describe, shallow 20-30m cover above paleoproterezoic, Muckanippie Anorthosite Complex. Hiistoric Drilling has been drilled to blade refusal without groundwater issues. The majority of drilling will be shallower than historic drilling in similar locations. We are likely to intersect groundwater in the paleochannel sediments, this may occur in a small percentage of drill holes.

All mineral drill holes will be backfilled and rehabilitated in accordance with the Mineral Exploration Drillholes – General specifications for construction and backfilling for bores completed within an. A class one driller will be on site to drill all mineral drill holes and supervise the rehabilitation of drill holes should any water be intersected.

Add the different groundwater conditions for each localities/areas to the table below.

Name ↑	Formation age and/or stratigraphic unit	Stratigraphic intervals (depth range) (m)	Aquifer formation name	Aquifer Interval/thinkness (from-to) (m)	Aquifer Type	Aquifer salinity (TDS)	Depth to groundwater (m)	Comments
Muckanippie	Jurrasic – Cretacous JK1	5	JK1	15-50	Unconfined	1000-10000	15	Depth of sands recorded JK-1 Aquifers varies over the region but are typically not deeper then fifty metres. These sediments do not always contain water and overly the Archean basement. Salinity where water is found in this lithology can greatly vary from greater then 1000 to greater than 10,000.
Muckanippie	Archean-Devonian A-d	5	A-d	30m onwards	Unconfined	1000-75000	5	Water Salinity of ground waters found in broken rock aquifers in this region is usually very high in salinity. Recent water bores drilled at nearby Aurora Tank returned salinity readings of 35,000 and 75,000.

Provide the environmental value of each aquifer present determined according to the current Environment Protection (Water Quality) Policy.

Jurassic-Cret. unit JK1 - Primary Industries - Irrigation and general water use, Livestock, Aquaculture

Archean – Devonian A-d - Primary Industries - Aquaculture

Provide a description of the existence, location and value of all Groundwater Dependent Ecosystems (GDE) within and immediately surrounding the project area

Refer to Figure 1 and 2

Is the proposed program located within a prescribed wells area?

No

Select the prescribed wells

Is the proposed program located within a prescribed water resource area?

No

Select the prescribed water resource areas

Provide any additional information

—

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File Name	File Size (Mb)	Created On	Download
Figure 1.png	0.32 Mb	03-09-2025 13:54:00	Download (MERS/EPR-03938/Ground water/Figure 1_2025-09-03T04-24-00.745Z.png)
Figure 2.png	0.12 Mb	03-09-2025 13:54:00	Download (MERS/EPR-03938/Ground water/Figure 2_2025-09-03T04-24-00.776Z.png)

Native Vegetation

Will you be working within areas of native vegetation?

Yes

Provide the following information:

Vegetation consists of chenopod-dominated shrublands, with open woodland groves of Acacia restricted to sandy areas. In the extensive dunes to the south-west, taller vegetation of Casuarina, Callitris and Eucalyptus is found.

Indicate why you will not be working within areas of native vegetation?

—

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Fauna

Describe the native and feral fauna that may be present in the application area, including feral species.

Most common Fauna present in the area are traditional outback species such as Kangaroos, Emus, Wedge Tailed Eagles, Brown Falcons, Budgies, Galahs, Finches, Bearded Dragons, Sand Goanna and Military Dragons. Various species of mice both native and feral are known to inhabit the area.

The most common feral species in the area are sheep along with feral cats, foxes, and species of mice.

A search was conducted on https://pmst.environment.gov.au/ There is no change in significant fauna compared to the previously approved Exploration area.

Significant Habitats, Flora & Fauna

Are there any significant habitats, flora and fauna within the project area?

No

Use the table below to list any significant habitats and any rare or endangered flora and fauna species located or reported to have been in the area that may be impacted by the proposed program. Include known sightings of listed species on a locality plan/map.

Species name/habitat	Common name	NPW Act Rating	EBPC Act Rating
There are no records to display.			

Attach Files

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No Files Uploaded			

Weeds and Pathogens

Provide information of the extent the area is affected or potentially affected by weeds and pathogens (e.g. phytophthora; buffel grass Cenchrus ciliaris).

The exploration area occurs within the Arid Lands Natural Resources Management Region. The Area is within a known Buffel Grass region- Zone 2 on the SA Buffel Grass Strategic Plan 2012-2017. When looking at the map of known locations of Buffel Grass it is dominantly located along bitumen Stuart Highway and beginning to spread to the west along the Tarcoola unsealed road. There are no known pathogens within the proposed drilling area.

If any infestations of Buffel Grass are encountered during the drilling program, cleaning procedures will be implemented when leaving the area and the infestation will be avoided.

Attach Files

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No Files Uploaded			

Aboriginal Heritage

Describe the steps taken to identify Aboriginal heritage sites within the proposed area of exploration. Include a statement advising if an Aboriginal heritage survey has been conducted by the proponent and if so, the results of the survey.

Aboriginal heritage surveys were conducted on 22-24 September 2024. A final report detailing survey results was provided to PTR and AMYAC by the consultant anthropologists on 8 October outlining allowable exploration activities.

Environmentally Sensitive Locations

Indicate if you are intending to undertake exploration operations within the environmentally sensitive locations listed.

No

Name	Applicable
There are no records to display.	

Are you likely to impact on the environmentally sensitive area?

No

Detail the likely effects the proposed program may have.

—

Attach Files Expand/Collapse

File Name	File Size (Mb)	Created On	Download
No Files Uploaded			

Exploration Operations

Equipment and Personnel requirements

Using the table below, describe the maximum composition of field crews (operator, contractors, and geologists) and proposed working hours/days for each type of activity.

Type of Personnel	Number	Name of contractor company (if applicable)
Geologists	3	Petratherm
Field assistants/technicians	2	Petratherm
Drilling Crew	3	McLeod Drilling/MJ Drilling/Bullion Drilling or similar contractor
Site Preparation and rehabilitation	1	Mcleod Drilling

Shifts worked per day	Hours worked per day	Days worked per week
1	12	7

Using the table below, describe the equipment (size, number and contractor details) required to conduct the proposed operations.

Name	Owner/Operator	Description/capacity	Activity/purpose
4x4 Mounted RAB/AC rig	Mcleod Drilling Services	4 x 4 Drill Rig mounted on light vehicle	AC drilling.
4x4 Mounted compressor	Mcleod Drilling Services	4 x 4 compressor mounted on light vehicle	AC drilling.
4 x 4 Light Vehicle	Petrathern	Landcruiser for Geologist and field assistant	AC Drilling

Low impact exploration activities

Will low impact exploration operations be conducted that are not covered by the Generic program for environment protection and rehabilitation – low impact mineral exploration in South Australia, (generic PEPR)?

No

Describe each type of low impact operations proposed.

—

Drilling Operations

Will exploration drilling Operations be conducted?

Yes

Fill out the below table

Tenement	Drilling Types	Maximum number of drillholes	Maximum drillhole depth (m)	Number of drill pads	Maximum number of sumps required at each site	Maximum size of sumps (lenght x depth x width)	Average size of each drill pad	Number of sites requiring pad excavation	Average volume of material to be excavated
EL 6715	Aircore	550	60.00	550	0	0.00	80.00	0	0.00
EL 6855	Aircore	550	60.00	550	0	0.00	80.00	0	0.00
EL 6815	Aircore	20	60.00	20	0	0.00	80.00	0	0.00

Other Drilling Method(s)

—

Drillsite preparation

If exploration drilling activities are proposed, describe the methods used to prepare sites, including vegetation clearance requirements, site levelling and digging of sumps.

No clearing will be required for shallow AC drilling, The Drill rig and support vehicles are mounted on light vehicles which can be driven off road to the collar location. Each Collar location can be adjusted within reason to avoid dense vegetation or dunes. Samples will be collected in reusable containers which will be placed on the ground away from vegetation to allow sampling. No sumps will be required for the shallow AC Drilling as no significant water is expected to be intersected.

Drillhole construction and decommissioning

Drillhole construction and decommissioning

For AC drilling, most drillholes will not require casing and will be drilled as open holes. If required, a 1m casing will be used, after the completion of the drill hole, the casing will be removed during back filling. Once sampling is completed at each site the drillhole will be backfilled with the drill cuttings in the same stratigraphic order it was withdrawn with remaining metre placed on top with the topsoil reinstated. During this process the PVR collar will be removed and reused on subsequent drillholes.

All drillholes will be backfilled and rehabilitated in accordance with the “Mineral Exploration Drillholes — General specifications for construction and backfilling” for bores completed within an unconfined aquifer. Drillholes which penetrate a single unconfined aquifer — backfill with drill cuttings, clean fill containing clay, or cement
The rehabilitation of all AC drill holes will be completed within three months of the expiry of the EPEPR in line with DEM requirements.

As the drilling will occur in non-artesian conditions a level 1-3 driller is satisfactory for the purposes of completing the exploration.

Some bulk sample will be required to advance mining studies, drill cuttings will be held in green retainer bags at the drill pad until the sample is required for lab work. Drillholes will be capped with a hole plug in the interim period. Holes will be decommissioned using the same backfilling process stated in the approved EPEPR during the bulk sampling process.

Have the personnel responsible for implementing the proposed program read and understood the Earth Resources Information Sheet M21, Mineral exploration drillholes – general specifications for construction and backfilling?

Yes

Describe how drillholes will be constructed, including the casing material to be used, depth of casing, if the casing will be cemented, cementing intervals and the class of driller that will install the casing.

For AC drilling, most drillholes will not require casing and will be drilled as open holes. If required, a 1m casing will be used, after the completion of the drill hole, the casing will be removed during back filling. Once sampling is completed at each site the drillhole will be backfilled with the drill cuttings in the same stratigraphic order it was withdrawn with remaining metre placed on top with the topsoil reinstated. During this process the PVR collar will be removed and reused on subsequent drillholes.

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Some bulk sample will be required to advance mining studies, drill cuttings will be held in green retainer bags at the drill pad until the sample is required for lab work. Drillholes will be capped with a hole plug in the interim period. Holes will be decommissioned using the same backfilling process stated in the approved EPEPR during the bulk sampling process.

When describing drillhole decommissioning requirements, include the materials to be used, stratigraphic intervals where cement plugs will be placed, if the casing will be removed and when decommissioning will occur after drilling is completed.

No cementing of intervals is not required as no significant water is expected to be intersected during the drilling.

All drill casing from around the collar will be removed once decommissioning is complete.

Attach Files

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Costeans and bulk sample disposal pits

Will costeans/bulk sample disposal pits be required for the proposed program?

No

Tenement	Number of costeans/pits	Size of costean (length x width) (m2)	Average depth (m)	Volume excavated (m3)	Total Volume Excavated (m3)	Total area of disturbance
There are no records to display.						

Describe site preparation methods, vegetation clearance, and safety and maintenance requirements

—

Sample management

Describe the size of samples collected (including drilling samples and bulk sampling), collection methods, materials used when collecting the sample, sample disposal methods (including removal of sample bags), safety management and any other sample management requirements at the exploration site (e.g. tarps or matting used to contain cuttings). Include requirements for on-site geological sample management (splitting of archive samples, bag farms, core processing and storage).

During the AC drilling drill cuttings will be poured directly into reusable tubs for each meter drilled, a sample will be taken using a splitter off of the side of the cyclone, into a calico bag. A sample will be taken from each reusable tub, to be logged and a sample take in a chip tray. Any bulk samples can be taken from these tubs.
At the completion of each hole, All calico bags will be collected for assay, and all reusable tubs will be poured back down the open drill collar, in stratigraphic order. Any PVR pipe will be removed during this process.
Bulk samples from selected drill holes will be required for mining studies. These will be selected once initial analysis of drill samples is complete. Drill cuttings will be held in green plastic retainer bags, until data is analysed to determine bulk sampling. Bulk samples will be composited from retainer bags, and excess material will be returned down the open drill hole along with material from unsampled bags. All waste and green bags will be removed from the drill pad, and the hole will be rehabbed during bulk sampling.

Access routes to work areas

Will existing tracks require upgrading and/or maintenance?

No

Detail the work required to upgrade/maintain existing tracks.

—

Will access be required across adjoining tenements?

No

Detail the method(s) for gaining access, and if an agreement is in place with all stakeholders. Include the total area of disturbance required (i.e. length (km) and width (m) of tracks) and provide on a locality map.

- The Drill rig will be Mounted on a Light Vehicle which is capable of accessing all drill pads, cross country. Access tracks are limited however fence lines can be used to get within ~2km of each target. Access between each drill site will require cross country driving. All vehicles will follow the same tire lines between drill sites. Access tracks will pass around areas of dense vegetation for the most efficient and least damaging route.
- Drill program will be planned as it progresses, the shortest route with least environmental disturbance will be followed.
- No clearing will be required for light vehicles
- Routes will be traversed once before moving to the next collar location
- Fencelines will be followed where possible

Approximately 50km of access track will be required to gain access to drill traverses. Width of the tracks will be approximately 2m.

Will access off existing tracks be required?

Yes

Detail the method(s) for gaining access and if vegetation clearance is required. Details of the total area of disturbance (includes drill traverses and seismic lines) required off existing tracks (i.e. length (km) and width (m) of new tracks) must be provided in the program notification.

- The Drill rig will be Mounted on a Light Vehicle which is capable of accessing all drill pads, cross country. Access tracks are limited however fence lines can be used to get within ~2km of each target. Access between each drill site will require cross country driving. All vehicles will follow the same tire lines between drill sites. Access tracks will pass around areas of dense vegetation for the most efficient and least damaging route.
- Drill program will be planned as it progresses, the shortest route with least environmental disturbance will be followed.
- No clearing will be required for light vehicles
- Routes will be traversed once before moving to the next collar location
- Fencelines will be followed where possible

Approximately 50km of access track will be required to gain access to drill traverses. Width of the tracks will be approximately 2m.

Attach Files

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Campsites and equipment laydown areas

Indicate where staff and contractors will be accommodated during the exploration program.

Drill Contractors will bring a towed Caravan with them to serve as a kitchen and to store food and perishables while staff will sleep in small individual tents.
Petratherm staff will stay in a towed accommodation caravan or if not available in individual tents and share the facilities provided by the drilling company.
A small laydown area will be required for storage or drill consumables and drilling equipment.
During drilling an average of 6 people will live on site however this may be exceeded temporarily as visitors visit the site during resupply or site visits.

Alteration to the camp set up is required to accommodate extra staff and with more permanence, the camp set up will be portable and can be demobilised by Petratherm if no longer required. Staff will be accommodated in portable sleeping units with portable amenity units.

What is the maximum number of personnel requiring accommodation?

9

Is a campsite required to be established?

Yes

Provide a description and justification of the camp location (e.g. previously cleared areas etc.), and any other relevant information.

The campsite will be set up at the site of a previous fly camp on a clear vegetation free patch just off a main track to the north Muckanippie outstation. The Camp will consist of tents and/or up to four towable caravans. Small hand dugs sumps will be dug to facilitate any runoff from shower facilities. A generator will be onsite to power the camp and some hydrocarbons will be stored on the back of the driller's support/camp truck used for the program.
The Camp modifications will occur in the same location as the previous camp, which was selected by local farmers in an area with little vegetation to disturb. The footprint of the new camp will not exceed that of the old camp.
An increase in camp size is required to accommodate septic system sprinklers and a 2 x 5,000L bunded fuel storage area.

What will be the total area (ha) of the campsite(s)?

3.00

Will native vegetation clearance be required?

No

What will be the total area (ha) of vegetation clearance for the campsite?

—

Describe the methods used to prepare the campsite includuing vegetation requirements and site levelling.

—

Will any excavations be required?

Yes

Describe the purpose of the excavation

Excavation for semi submerged septic system.
Creation of a bund (to be HDPE lined) for fuel storage.

Describe the maximum volume (m3) of material to be excavated.

10.00

Provide confirmation that the proposed ablution facilities have been endorsed for use by the Department of Health or local council, where applicable.

Yes

Indicate why endorsement approval is not required by the Department of Health or local council.

—

Proposed infrastructure (includes caravans, tents, offices, hydrocarbon and water storage requirements etc)

Proposed infrastructure	Quantity	Description / capacity
Fuel storage	2	5000L Diesel Tanks - bunded
Camp Trailer/Caravan	4	Towed camping trailers or Caravans to provide kitchen and storage space for personnel.
tent	8	Tents for persons to sleep in.
Water Cube 1000L	1	1000l Litre water cube stored on trailer.
Diesel Pods 1000L	2	2 x 100 litre pods for storage of diesel stored on drillers trailer.
sleeping unit	1	2.44m x 12.2m, 4 person transportable sleeping unit
Ablution facility	1	2.42m x 9.86m, A portable shower/ toilet ablution unit
Kitchen unit	1	2.42m x 9.86m, A portable kitchen facility
Fuji Clean Ace 1200 septic system	1	Semi Submerged system. A septic system for kitchen and ablution facility with grey water sprinklers
40ft Shipping container	1	2.44m x 12.2m, Portable shipping container, for consumable and field equipment storage

Will laydown areas be required?

Yes

Will the laydown area(s) be located at the same location as the campsite?

Yes

Provide a description and justification of the location (e.g. previously cleared areas), and any other relevant information if required.

Previously Cleared area

What will be the maximum area (ha) required for the laydown area(s)?

2.00

Will native vegetation clearance be required?

No

What will be the total area (ha) of vegetation clearance for the site?

—

Describe the methods used to prepare the laydown area includuing vegetation requirements and site levelling.

—

Will any excavations be required?

No

Describe the purpose of the excavation.

—

What will be the volume (m3) of material to be excavated.

—

Proposed infrastructure (includes hydrocarbon and water storage requirements)

Proposed infrastructure	Quantity	Description / capacity
Fuel storage	2	5000L Diesel Tanks - bunded
Water tank	1	5000l Water tank

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Other exploration methods and/or ancillary operations

Are any other proposed exploration methods (e.g. seismic) and/or ancillary exploration operations required?

No

Describe the activity(s), site preparation, vegetation clearance, and safety and maintenance requirements.

—

Water supply and management

Will camp and/or drilling water be required?

Yes

Describe how and where water will be sourced for drilling, track maintenance and camping purposes (e.g. groundwater, surface water, mains). Indicate how wastewater and/or runoff water will be managed.

The drilling contractor will truck in potable drinking water for the duration of the program and will resupply as required when completed diesel and other consumable resupply runs to Glendambo. Camp and or drill water may also be accessed from the Muckanippie tank with permission and agreement from Jumbuck Pastoral.

Will surface water and/or mineral drillholes be used as a water source/supply?

No

Indicate if a licence for water extraction/usage is required (refer to relevant Natural Resources Management water allocation plan available on the Department for Environment and Water (DEW) website.

—

Attach a copy of the licence or include a statement confirming that a licence will be obtained before the extraction and/or usage of water.

—

Groundwater investigation and water affecting activities

Will any water investigation (e.g. pump testing, water monitoring sites, water storage, turkey nests/dams) and/or water affecting activities, be undertaken (refer to s. 127 of the Landscape South Australia Act 2019)?

No

Describe the water investigation and/or water affecting activities, including site preparation, vegetation clearance, and safety and maintenance requirements.

—

Indicate if water affecting activities permits (eg well and water extraction/discharge permits) have been obtained and in accordance with the Landscape South Australia Act 2019.

—

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Management of hazardous materials

Will activities be conducted in areas of known uranium and thorium mineralisation?

No

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Will any other hazardous material be encountered when exploring in the area?

No

List the types of hazardous materials and provide a management plan on how these materials will be managed.

—

Rehabilitation

Detail all the activities and strategies relating to the remediation of all impacts associated with the proposed exploration operations (includes exploration camps and laydown areas, tracks). Completion of rehabilitation must be achieved within 3 months after the expiry of each program notification.

Upon completion of the exploration and assessment of results rehabilitation of all drill sites and new tracks will be completed within three months of the expiry of the PEPR and will be completed in line with M33 Statement of environmental objectives and environmental guidelines for mineral exploration activities in South Australia

At any one time there will be around 150 drill holes and pads requiring rehabilitation. Rehabilitation will be completed on a 3-month rolling period for these items. Note that AC drilling impacts (4WD mounted rig with no sump) are limited to minor surface disturbance only. Regarding tracks at any one time there will be 50km of tracks unrehabilitated.

State the estimated budget required to rehabilitate all impacted sitesState the estimated budget required to rehabilitate all impacted sites. Include a breakdown of the cost associated with each rehabilitation component

The original rehabilitation budget was accepted in the initial EPEPR based on Quotes from drill contractors to scarify drill tracks and rehabilitate drill pads.

$13,000 for 220 holes and 50km of tracks (from 2024 program), so approximate pro-rata for 1120 holes and 200km is $52,000

Vegetation Clearance

Will any area of cleared native vegetation be unrehabilitated after the authorised period?

No

Provide a map and description of the vegetation present in the application area, the extent of any proposed vegetation clearance and the likelihood of the presence of threatened flora.

—

State the estimated quantum of significant environmental benefit (SEB) to be gained in exchange for the proposed native vegetation clearance and describe how the SEB will be provided.

—

System

Tenement Name ↑	Tenement Holder	Tenement Operators	Grant Date	Expiry Date	Tenement Type	Location Description	Tenement Area	Tenement Status	Shape Identifier
EL 6715	Leasingham Metals Pty Ltd	Petratherm Ltd	06/04/2022	05/04/2028	Exploration Licence	Mulgathing area approximately 70km northwest of Tarcoola	324.00	Active	10013576-0000
EL 6815	Petratherm Ltd		12/08/2022	11/08/2028	Exploration Licence	Mulgathing area approximately 60km northwest of Tarcoola	80.00	Active	10014220-0000
EL 6855	Petratherm Ltd		18/10/2022	17/10/2028	Exploration Licence	Mulgathing area approximately 70km northwest of Tarcoola	178.00	Active	10014686-0000

Management of Environmental Impacts

Applicable environmental aspects and potential impacts

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk	Outcomes	Outcome Measurement Criteria
Aboriginal heritage	Aboriginal heritage sites	Disturbance to Aboriginal heritage	Heritage approval has been granted to use the overlanding tracks during the drilling program. All vehicles will follow wheel prints to avoid multiple tracking. The onsite supervisor will have Heritage Clearance outcome maps (including exclusion zones) on site, at all times, for reference. Personnel will be notified of any heritage sites during the induction process, on maps, and at toolbox meetings, etc. Any suspected sites, that may have been overlooked during the Heritage Clearance will be recorded and reported. The suspected site will be avoided for the duration of the program (flagged off with a 50m exclusion zone put in place).	Low	No disturbance to Aboriginal artefacts or sites of significance unless prior approval under the relevant legislation is obtained.	Maintain a database and provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report demonstrating that: • Heritage sites were not impacted during the conduct of the exploration program, unless prior approval was obtained under the appropriate legislation • Work ceased on discovery of a significant site and recommenced only after authorisation. • Aboriginal heritage sites identified during the exploration program were appropriately recorded and reported to authorities, if not previously known.
Fauna	All fauna	Entrapment of fauna through open drillholes and excavations.	Drillholes will be temporary plugged to prevent any Fauna falling or becoming trapped in the collar while awaiting rehabilitation.	Low	No fauna traps created as a result of exploration activities.	Maintain before, during and after photographic evidence of all drillholes and/or excavations demonstrating that: • All drillholes were permanently or temporarily capped/plugged immediately upon completion. • No fauna and livestock became trapped in drillholes and/or excavations throughout the duration of the program. • All rehabilitation was completed within 3 months of expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. Representative photos are to be included within the annual exploration compliance report. Provide the information requested within the 'Rehabilitation' section of the annual exploration compliance report.
Fire	Community/landowners	Damage to infrastructure and loss of income through fire.	Hot works permits (internal management tool) will be required for activities such as welding, grinding, oxy cutting – i.e., firefighting provisions need to be in place. All vehicles will be fitted with fire extinguishers. Fire suppression units will be fitted to large plant such as the rig. The area is not prone to fires due to minimal ground cover and the presence of native grasses in some areas only.		No loss of infrastructure or income through fire as a result of exploration activities.	Provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report confirming that no uncontrolled fires* occurred. Alternatively, provide a report on the independent investigation of all uncontrolled fires* demonstrating that the licensee could not have reasonably prevented the fire through the implementation of precautionary measures.
Native Vegetation	Flora and fauna and their habitats; includes Commonwealth and state scheduled species.	Loss/modification of native vegetation and associated habitats through the clearance of vegetation.	- Interrogate relevant SA Govt. GIS databases to become familiar with presence of significant flora and fauna species in drilling area. - Any sightings of significant species will be recorded and reported. - Use existing station tracks wherever possible. - Initial planned drillhole locations to be inspected in the field during the reconnaissance phase – hole locations to be modified if site is located within dense vegetation (e.g., if within an isolated stand of trees, move to adjacent grassland). Sites will be located in naturally cleared areas where possible. - All overland tracking takes the most direct, practical routes. - Overland tracking utilises naturally open areas to avoid trees and densely vegetated areas. - Overland tracking was created by driving across unprepared ground to retain root stock and minimise potential for erosion. No deviations (multi- tracking) to occur, and designated routes will be flagged for clarity. - All areas of disturbance are to be rehabilitated after the drilling program within 15 months of the PEPR approval date.		No permanent loss/modification of native flora and fauna populations and their habitats through: • clearance • fire • other unless prior approval under the relevant legislation is obtained.	Maintain before, during and after photographic evidence of all exploration sites (e.g. drillsites, new track exit/entry points off existing tracks, costeans, campsites) demonstrating that: • The area and method of disturbance is consistent with that described in the PEPR. • No uncontrolled fires* occurred as a result of exploration activities. Representative photos to be included within the annual exploration compliance report.

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk	Outcomes	Outcome Measurement Criteria
General Public	General Public	Injury or death to members of the public as a result of exploration activities.	Given the drilling program is occurring on a private pastoral lease, the likelihood of members of the public being present is reduced. - Only inducted personnel who have direct need to be in the work area of the rig will be permitted near operations. - Any visitors to the drilling operations will undergo a visitor's induction and will be required to be accompanied by a fully inducted staff member. - Warning signs, highlighting the hazards of drilling operations will be erected around the drill site. - Note that whilst the likelihood of such an incident occurring is rated as rare (1), the consequence has been rated as Major (D), producing a risk ranking of 'high'. This is deemed acceptable, given the likelihood, and the safety measures and level of supervision that will be present at the rig.	High	No accidents involving the public that could have been reasonably prevented by the licensee.	Provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report confirming no accidents occurred involving the public during and after the exploration program. If an accident involving the public did occur, provide a copy of the independent investigation report within the annual exploration compliance report demonstrating that the licensee could not have reasonably prevented the accident through the implementation of precautionary measures.
Groundwater users	Groundwater users	Interference to existing water users when extracting water from existing dams, water bores or mineral drillholes.	There will be no extraction of groundwater as part of the drilling program therefore this is not applicable. Any groundwater encountered will be incidental, not significant in volume and non-artesian.		No public nuisance impacts resulting from the extraction of water for exploration purposes, unless prior approval under the relevant legislation is obtained.	Provide the information requested within the 'Complaints' section of the annual exploration compliance report demonstrating that all reasonable complaints from stakeholders were resolved to the satisfaction of both parties, prior to and ongoing during the course of the exploration program without the involvement of DEM. Where permits are required for the extraction and/or usage of groundwater, provide copies of the licence or permit within the annual exploration compliance report.
Groundwater	Groundwater/aquifer	Groundwater contamination: • contamination of aquifers through entry of pollutants from the surface • interconnection between aquifers • degradation of natural hydrostatic conditions (maintain pre-drilling pressures).	No ground water was intersected during previous drilling. It is likely to intersect groundwater in the paleochannel sediments, which may occur in small percentage of drill holes. If groundwater is encountered containment will be implemented. If containment is unsuccessful the drill hole will be abandoned. Drill holes will be decommissioned as per page 13 drill hole construction and decommissioning and accordance with M21 specifications. Backfill and rehabilitate bore holes in accordance with the "Mineral Exploration Drillholes — General specifications for construction and backfilling" for bores completed within an unconfined aquifer. Drillholes which penetrate a single unconfined aquifer — backfill with drill cuttings, clean fill containing clay, or cement.		Drillholes restored to controlling geological conditions that existed before the hole was drilled or, where it is intended to re-enter the hole, the hole must be completed with casing of adequate strength and the casing cemented so that all aquifers are isolated to prevent the movement of any fluids behind the casing.	Maintain evidence demonstrating that drillholes are decommissioned in accordance with Earth Resources Information Sheet M21, Mineral exploration drillholes – general specifications for construction and backfilling, and/or specific conditions from DEW (Groundwater) within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. Provide the information requested within the 'Groundwater' section of the annual exploration compliance report.
Soil	Soil	Disturbance to the soil profile and topography, and accelerated soil erosion caused by exploration activities (e.g. construction of sumps, new tracks and drill pads; ground compaction at laydown areas and camps).	Existing tracks will be used where possible. when traversing cross country vehicle will travel in single file to minimise impacts. Access tracks, drill line and drill pad clearance will only occur on an as needed basis. To Prevent accidentally exceeding the required and approved camp area witches' hats will be placed around the area to demark the approved area. Appropriate speed restrictions (e.g., <25km/hr) will be imposed (communicated during the company induction) Complete rehabilitation of temporary tracks and drill pads as per the M33 guidelines. Tacks will be lightly scarified and closed off by placing fallen logs and debris across the entrance to the tracks to discourage reuse. the tracks and terrain in the vicinity of this PEPR are generally not prone to erosion and is not a general concern in the area. Drill pads are scarified by hand at the completion of each hole, to avoid discolouration from dust. Appropriate PPE is used by all staff and contractors.	Low	Where soil disturbance occurs as a result of exploration activities, ensure that: • topsoil quality and quantity is maintained • the soil profile and topography is reinstated to original conditions • there is no accelerated soil erosion.	Maintain before, during and after photographic evidence of all excavations, drillsites, camps, laydown areas and new tracks demonstrating that: • The soil profile and topography is reinstated to original conditions and is consistent with natural surroundings within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. • Where required, sufficient topsoil is removed (depending on soil profile), stored separately from subsoil and reinstated (in the correct order) within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. • There are no signs of accelerated soil erosion during and post rehabilitation of disturbed sites. Representative photos to be included within the annual exploration compliance report. Provide the information requested within the 'Rehabilitation' section of the annual exploration compliance report.

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk	Outcomes	Outcome Measurement Criteria
Third party access	Soil/vegetation/fauna	Degradation of rehabilitated access tracks caused by third party access (includes previously closed and rehabilitated access tracks).	Degradation of temporary/rehabilitated access tracks are unlikely to occur, given that drilling is occurring on privately owned pastoral leases (i.e. minimal through traffic). Once rehabilitation is complete, entry points to access to tracks will be disguised with extreme care.	Low	Rehabilitated access tracks remain permanently closed, unless prior approval under the relevant legislation is obtained.	Maintain before and after photographic evidence demonstrating that all tracks are closed and rehabilitated within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. Representative photos are to be included within the annual exploration compliance report. Provide the information requested within the 'Rehabilitation' section of the annual exploration compliance report.
Groundwater	Soil/vegetation/fauna	Discharge of groundwater into the surrounding environment.	If groundwater is intersected the drillhole will be terminated. No discharge of ground water of any significant amount will occur during this program. Petratherm will not be exploring in or proximal to any creeks and or water courses.	Low	No discharge of groundwater outside of the exploration site (e.g. drillsite) into the surrounding environment and no discharge of water into a watercourse, unless prior approval under the relevant legislation is obtained.	Maintain photographic evidence of all drillsites demonstrating that groundwater was not discharged into the surrounding environment, unless water affecting activity permits were obtained allowing the discharge of groundwater into watercourses and/or lakes. Representative photos and water affecting activity permits (where applicable) to be included within the annual exploration compliance report.
Contamination	Soil/vegetation/fauna	Soil/vegetation contamination (e.g. hydrocarbons, rubbish, drill samples/cuttings, ablutions, other sources)	No bulk chemical storage is required for the program. Diesel will be stored on support vehicle fuel tank (compliant with Australian Standards) or within a bunded area . At least one large spill kit to be present at the drill rig. All personnel to be reminded in the induction of the need to clean up any small hydrocarbon spills, using shovels and green plastic bags. Any hydrocarbon spill/leak contaminated soil will be immediately collected/ bagged for disposal at a licenced waste disposal point (Coober Pedy). Any hydrocarbon spills >5L are to be reported. All rubbish to be securely placed in bins or bags and disposed of at approved waste facility. Rubbish is not to be left in areas accessible to wildlife or vermin. Drill cuttings will be stored in green bags and returned downhole when no longer required. Empty green bags will be disposed of at the Port Augusta or Coober Pedy tip after completion of rehabilitation.	Low	No contamination of soil and vegetation as a result of exploration activities.	Demonstrate that all domestic or industrial waste (includes general rubbish and hydrocarbons) is disposed of in accordance with the Environment Protection Act 1993 within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), and that all fuel and chemicals are stored in accordance with EPA requirements, by providing: • The name, location and contact details of the authorised waste disposal facility. • A statement within the 'Compliance with approved programs' section of the annual exploration compliance report confirming domestic and industrial waste was removed from all exploration sites and disposed of at an authorised waste disposal facility. • Photographic evidence within the annual exploration compliance report demonstrating that all fuel and chemical storage facilities were managed in accordance with EPA requirements. Maintain photographs of all exploration sites and provide representative photos within the annual exploration compliance report demonstrating that drill cuttings are: • removed from site and disposed of at a licensed facility • buried under a minimum of 30 cm of soil, or in accordance with EPA guideline, Radiation protection guidelines on mining in South Australia: mineral exploration, available on the EPA website, or • backfilled down the drillhole, within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. Provide the information requested within the 'Rehabilitation' section of the annual exploration compliance report.

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk	Outcomes	Outcome Measurement Criteria
Stakeholders	Stakeholders	Stakeholders: - freehold land owners - perpetual lease holders - pastoral lease holders - Aboriginal land (Anangu Pitjantjatjara Yankunytjatjara and Maralinga Tjarutja lands) - Department of Defence - state government departments. - local government (councils) - federal government - native title parties.	Commence early consultation (phone and face to face discussions) with Pastoral Lease holders to explain scope of program, and to ascertain areas of concern. Meet with Pastoral Lease holders at an agreed frequency, to discuss drill program progress/issues, once program is underway. Drill holes will be situated well away from infrastructure and stock watering points (i.e., >500m). Water for drilling to only be sourced from sites and in quantities approved by Station owners. Use existing track networks wherever possible. Rehabilitate any areas of disturbance within required timeframes. All drill sites are situated at least 10km from the nearest occupied residences. Minimal dust will be generated from drilling activities Night-time vehicle movements will be minimal. Vehicles may have various speed limits imposed in different areas, to limit dust generation from dirt roads, for example 25kph when driving past homesteads. A Heritage Clearance has been completed covering all proposed exploration activities. A WPA permit has been granted. All persons are W003 Approved Persons and a W007 Access Request to complete the program has been completed. Petratherm will abide by all WPA instructions.	Low	Stakeholders are fully informed and satisfied with the proposed methods used to conduct exploration activities on their land, and all prescribed forms are served and agreements obtained in accordance with the Mining Act.	Provide the information requested within the 'Complaints' section of the annual exploration compliance report demonstrating that all reasonable complaints from stakeholders are resolved to the satisfaction of both parties prior to and ongoing during the course of exploration program, without the involvement of DEM. Provide the information requested within the 'Landowner details and liaison' section of the annual exploration compliance report demonstrating that prescribed forms were served and agreements obtained in accordance with the Mining Act prior to the commencement of exploration activities.
Other	All flora and fauna, especially listed species.	Loss/modification of the environment (biological, social and economic) through the introduction of weeds and pathogens.	Interrogate Weeds in Australia Public Resources website (Australian Government) to determine presence and extent of current weed infestation. Make observations of current weed presence and distribution during the reconnaissance phase. Any new vehicle/earthmoving equipment to be brought on site is to be thoroughly washed off-site first. A visual inspection for introduced mud/soil is to be made by Petratherm personnel, prior to vehicle/machinery operation. All new vehicles entering the program area, or vehicles re-entering the program area after travelling on other unsealed roads, are to be cleaned at first, and be visually inspected. Risk of weed introduction to be discussed with all new personnel coming to site as a part of induction process. Rehabilitated sites are to be revisited periodically. If weed infestation or increase in abundance of pre-existing weeds is noticed, selective spraying is to occur.	Low	No introduction of new species of weeds and plant pathogens, nor increase in abundance of existing weeds species.	Provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report, confirming that: • Vehicle logs were kept during the exploration program, demonstrating that all vehicles are clean and free of plant and mud material prior to entering properties† within the tenement areas, unless otherwise agreed to with the relevant landowners. • Photographic evidence before and during exploration operations and after rehabilitation of disturbed sites was captured, demonstrating that no new weeds and plant pathogens were introduced, nor an increase in abundance of existing weeds recorded.

Supporting Information

Photos

Upload Photos

Expand/Collapse

File Name	File Size (Mb)	Created On	Download
Picture3.png	0.82 Mb	03-09-2025 15:01:05	Download (MERS/EPR-03938/Supporting information/Photos/Picture3_2025-09-03T05-31-05.535Z.png)
Picture4.jpg	0.47 Mb	03-09-2025 15:01:05	Download (MERS/EPR-03938/Supporting information/Photos/Picture4_2025-09-03T05-31-05.688Z.jpg)

Site identification	Date taken	Photo number & PEPR section reference	Easting (GDA94)	Northing (DGA94)	Zone	Details and comments	Document ID
Rosewood Prospect	14/08/2024	1	415388	6664119	53	Typical vegetation over rosewood prospect area/	Picture 3
Camp	30/03/2025	2	420875	6673178	53	Camp Layout	Picture 4

Supporting Maps

Upload Maps

Expand/Collapse

File Name	File Size (Mb)	Created On	Download
ACE1200 SA APPROVAL WWP-20162.pdf	0.71 Mb	16-10-2025 14:54:46	Download (MERS/EPR-03938/Supporting information/Maps/ACE1200 SA APPROVAL WWP-20162_2025-10-16T04-24-47.440Z.pdf)
EPR_03938 Camp info.pdf	0.16 Mb	26-09-2025 10:09:05	Download (MERS/EPR-03938/Supporting information/Maps/EPR_03938 Camp info_2025-09-26T00-39-06.069Z.pdf)
EPR_03938 Map 2 Rev.png	4.19 Mb	26-09-2025 17:06:20	Download (MERS/EPR-03938/Supporting information/Maps/EPR_03938 Map 2 Rev_2025-09-26T07-36-21.164Z.png)
Map 1.jpg	0.43 Mb	03-09-2025 15:04:08	Download (MERS/EPR-03938/Supporting information/Maps/Map 1_2025-09-03T05-34-08.247Z.jpg)

File Name	File Size (Mb)	Created On	Download
Muckanippie Track Locations.jpg	0.77 Mb	16-10-2025 14:56:04	Download (MERS/EPR-03938/Supporting information/Maps/Muckanippie Track Locations_2025-10-16T04-26-05.760Z.jpg)

Figure Description	Document ID
Map Depicting Petratherm Tenements, and exploration area	Map 1

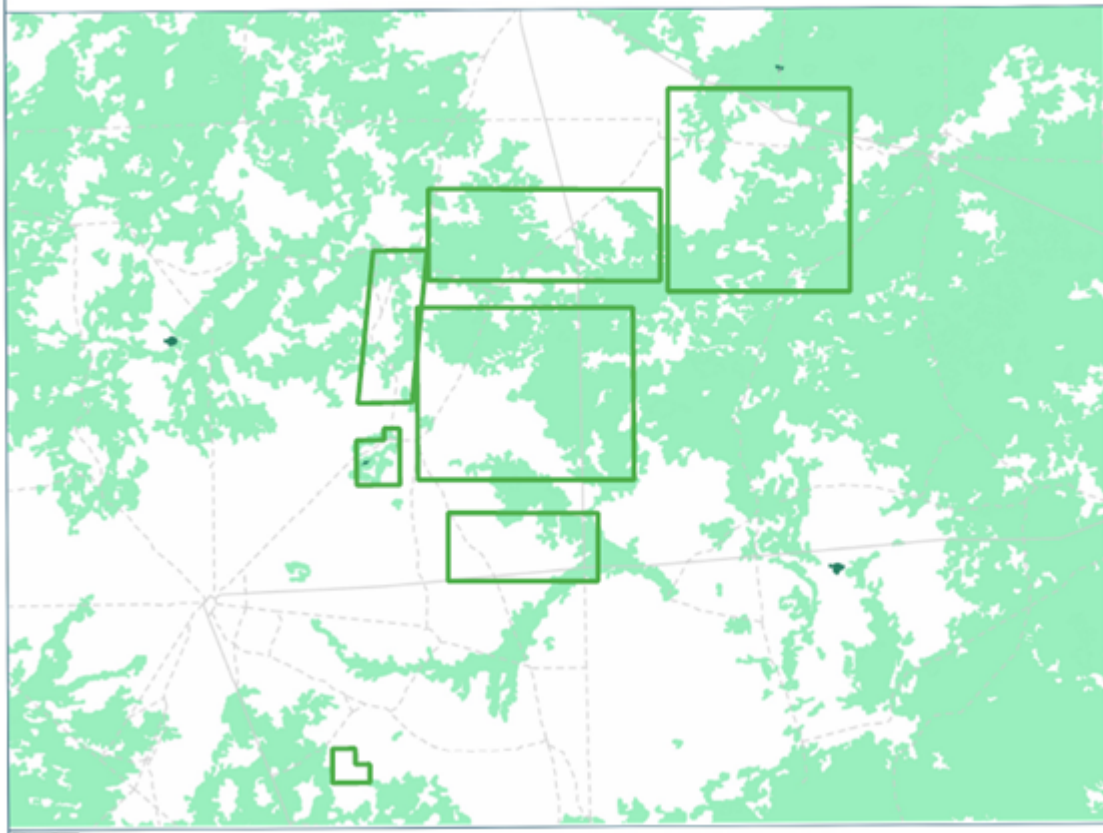
Additional Information

List any other supporting information and/or documents submitted with the application, including land access approvals/permits required to conduct the proposed exploration program.

Department of health approval for ablution facility, Camp Specifications - Attached at supporting maps

Australian Government
Bureau of Meteorology

Terrestrial GDE 2



Terrestrial GDE (no data)

No ecosystems analyse

Terrestrial GDE

- Known GDE (regional study)
- High potential GDE (regional study)
- Moderate potential GDE (regional study)
- Low potential GDE (regional study)
- Unclassified potential GI (regional study)
- High potential GDE (national assessment)
- Moderate potential GDE (national assessment)
- Low potential GDE (national assessment)
- Unclassified potential GI (national assessment)

N

1:279,361

Kilometres 5 10

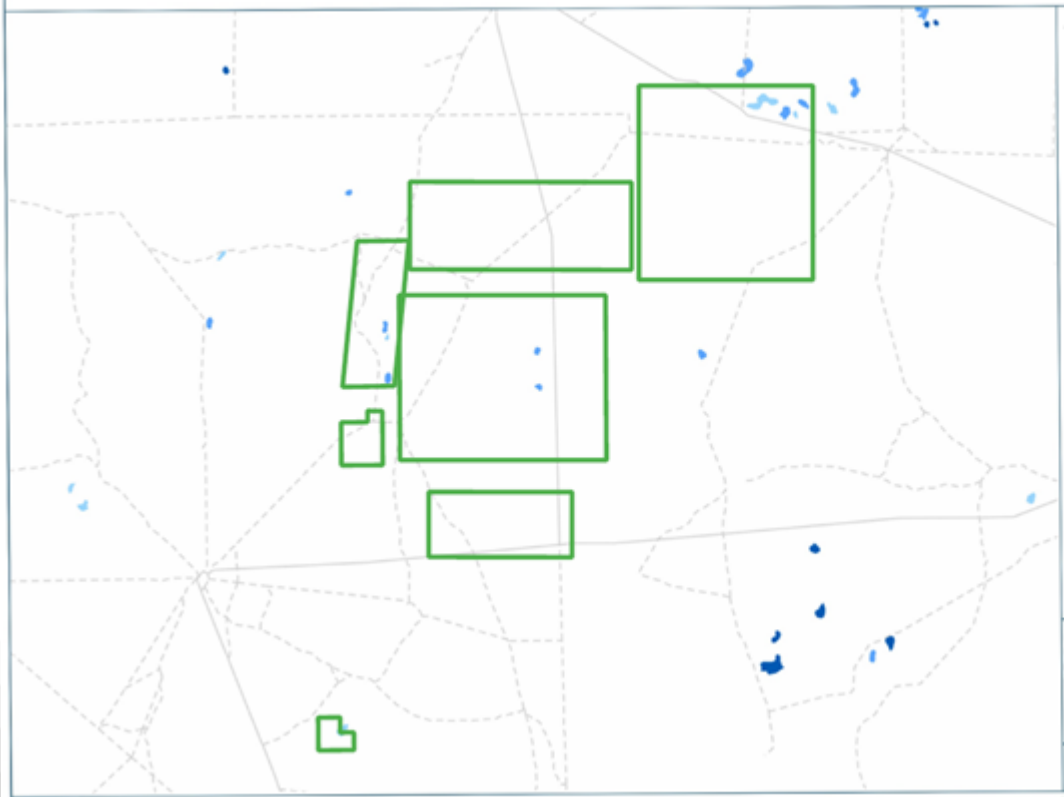
Data Source: Bureau of Meteorology, Geoscience Australia and State/Territory lead water agencies. Refer to metadata for further information: Click here

Australian Albers GDA94

Date: 26 September, 2024

Australian Government
Bureau of Meteorology

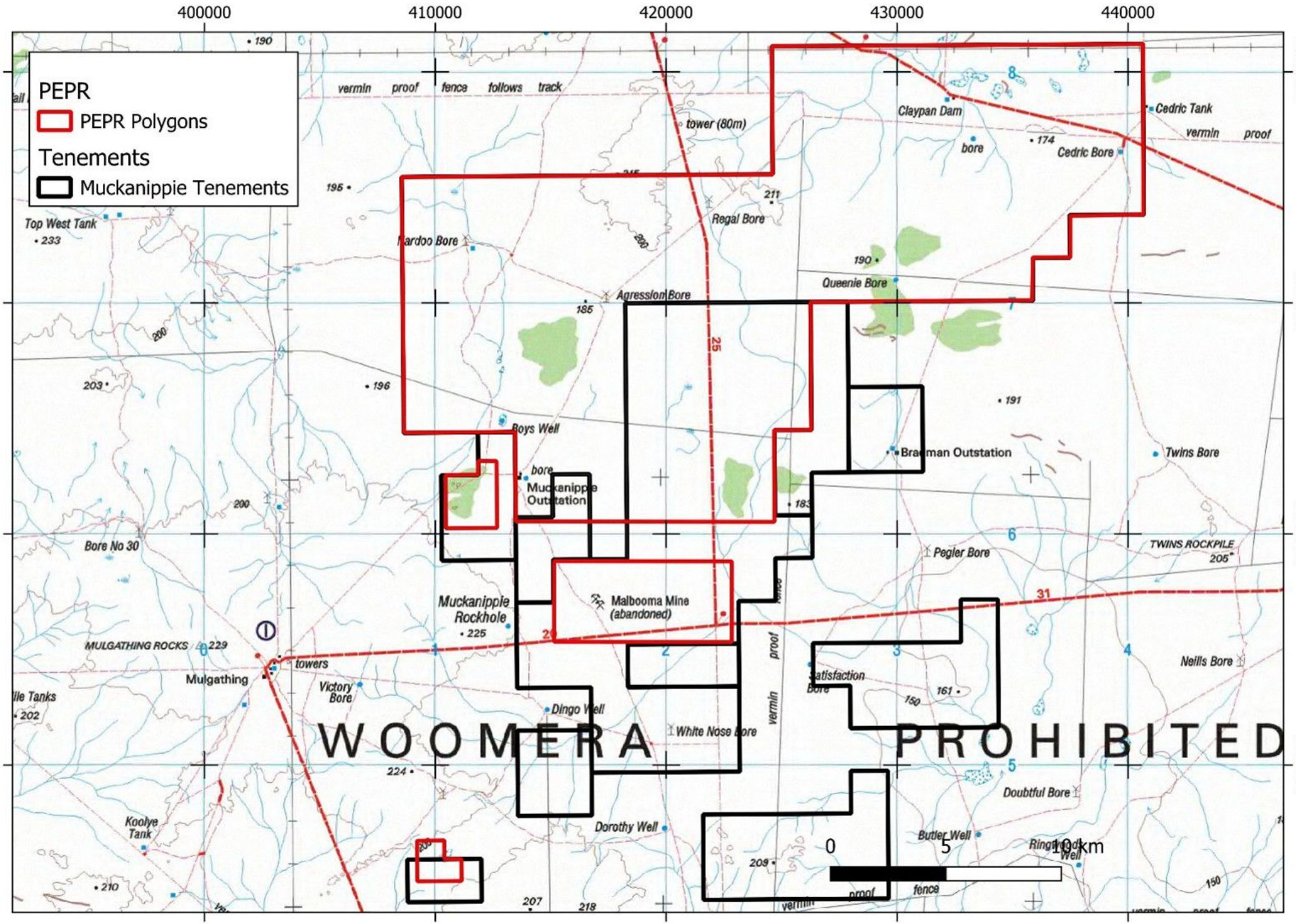
Aquatic GDE 2



Data Source: Bureau of Meteorology, Geoscience Australia and State/Territory lead water agencies. Refer to metadata for further information: Click here

Australian Albers GDA94

Date: 26 September, 2024


PEPR
PEPR Polygons
Tenements
Muckanippie Tenements
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410000
420000
430000
440000
6680000
6670000
6660000
6650000
WOOMERA PROHIBITED
vermin proof fence follows track
tower (80m)
Claypan Dam
bore
Cedric Tank
Cedric Bore
vermin proof
Top West Tank
Mardoo Bore
Regal Bore
Queenie Bore
Agression Bore
Boys Well
bore
Muckanippie Outstation
Braeman Outstation
Twins Bore
TWINS ROCKPILE
Bore No 30
Pegler Bore
Malbooma Mine (abandoned)
Muckanippie Rockhole
MULGATHING ROCKS
towers
Mulgathing
Victory Bore
Dingo Well
White Nose Bore
Satisfaction Bore
Neills Bore
Koolye Tank
Dorothy Well
Doubtful Bore
Butler Well
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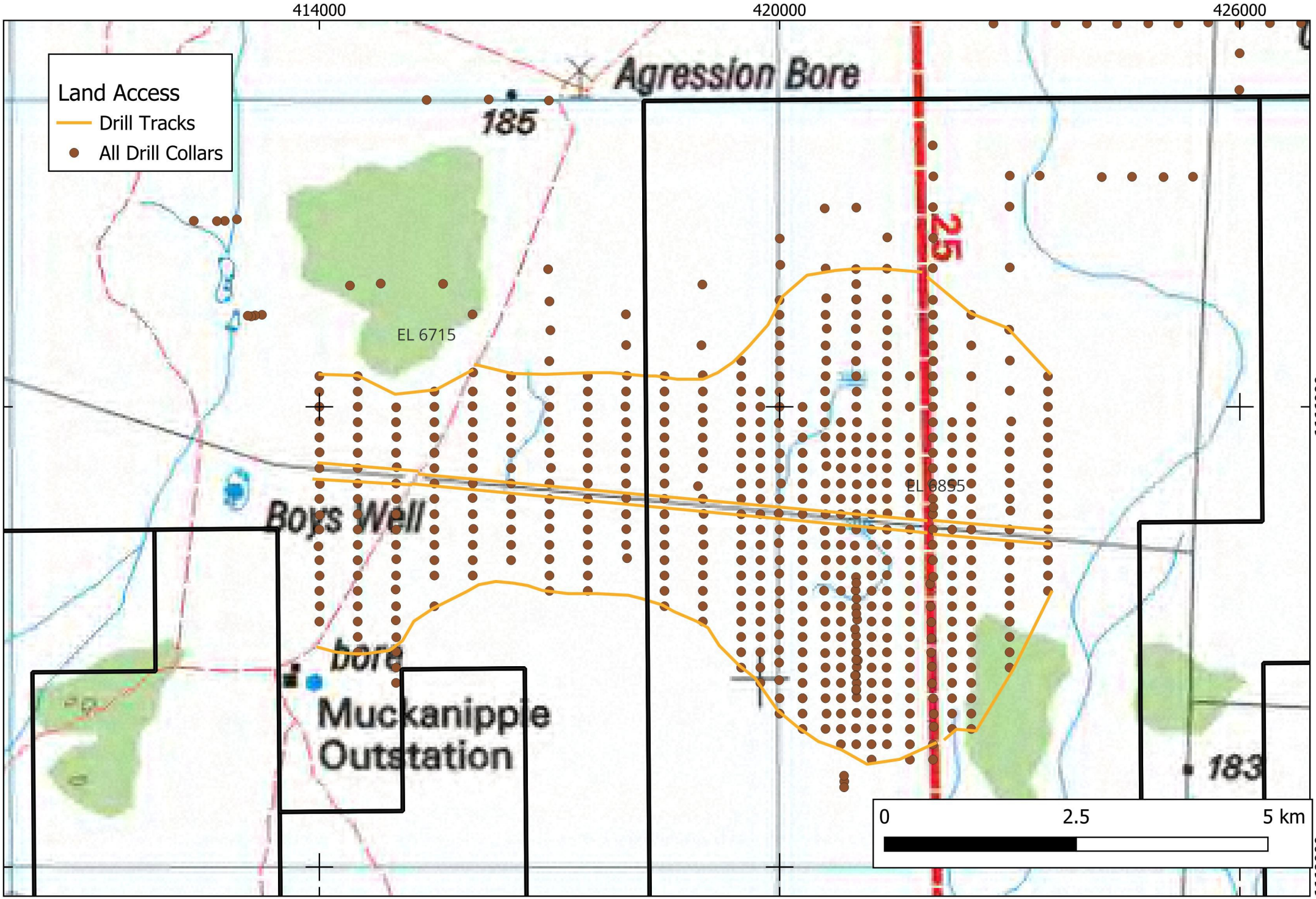
414000
420000
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Land Access
Drill Tracks
All Drill Collars
Agression Bore
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EL 6855
Boys Well
bore
Muckanippie
Outstation
183
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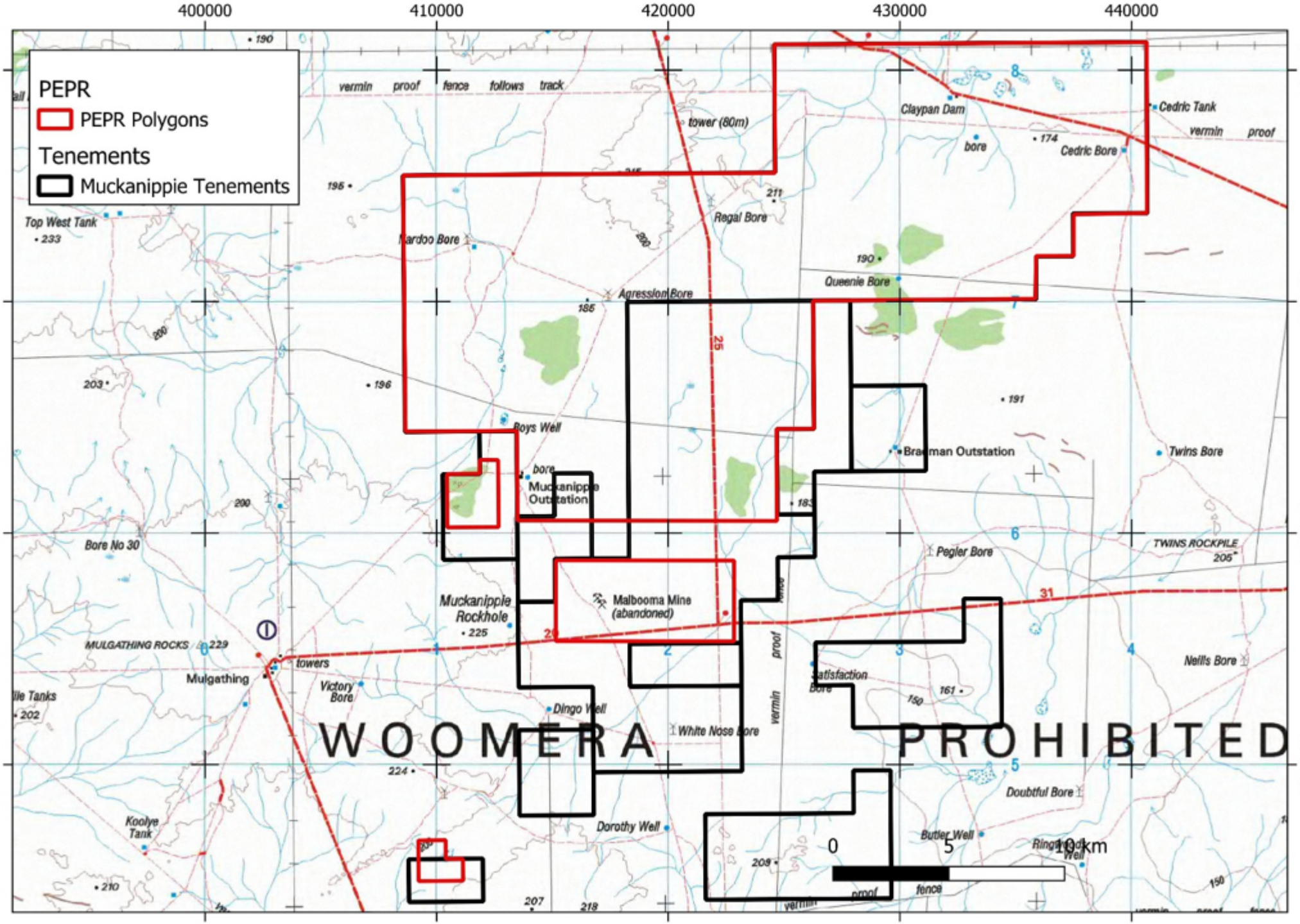
PEPR
PEPR Polygons
Tenements
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WOOMERA PROHIBITED
Claypan Dam
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Pegler Bore
Malbooma Mine (abandoned)
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MULGATHING ROCKS
Mulgathing
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Dingo Well
White Nose Bore
Neills Bore
Doubtful Bore
Dorothy Well
Butler Well
Koolye Tank
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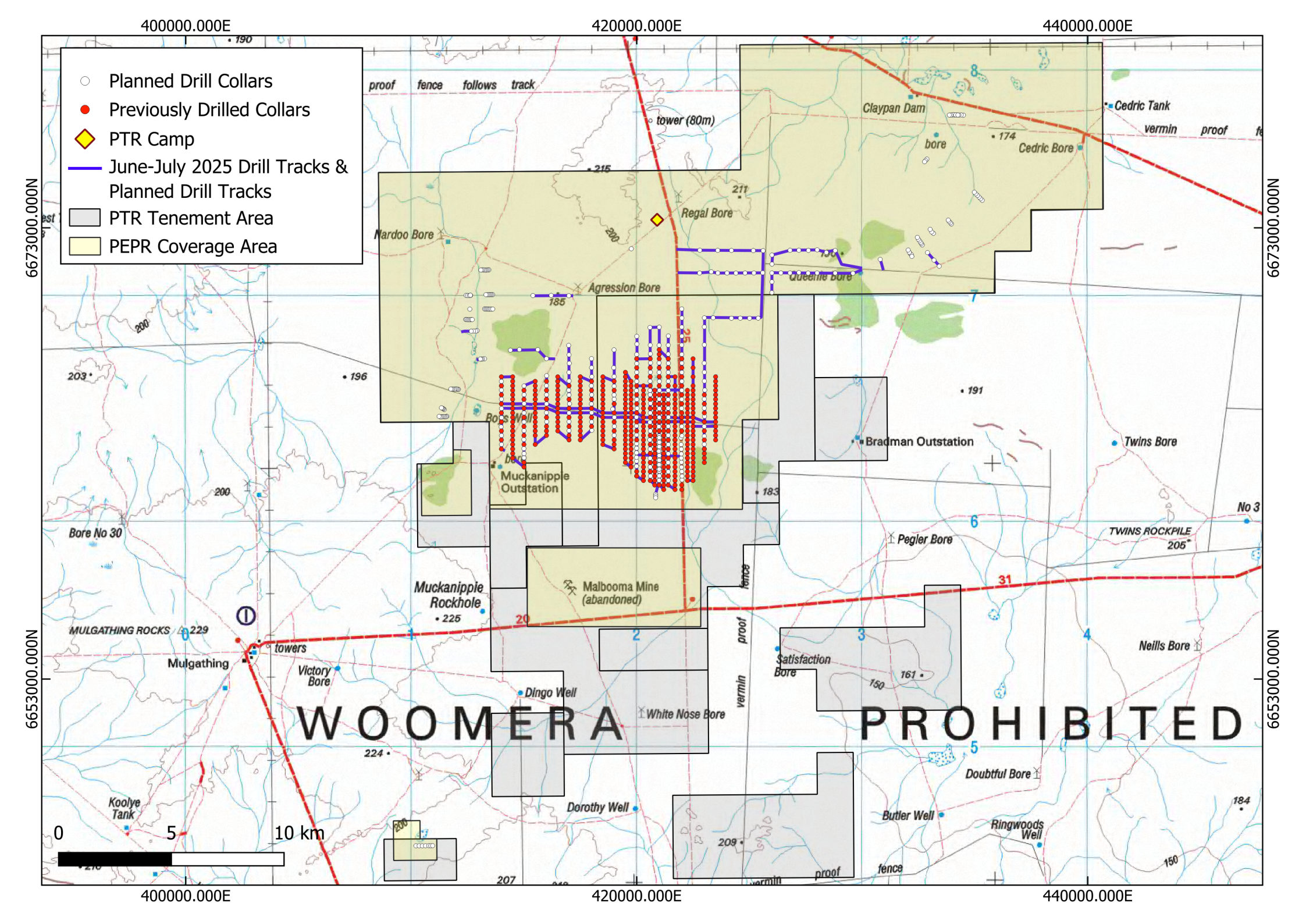

400000.000E
420000.000E
440000.000E
6673000.000N
6653000.000N
Planned Drill Collars
Previously Drilled Collars
PTR Camp
June-July 2025 Drill Tracks & Planned Drill Tracks
PTR Tenement Area
PEPR Coverage Area
proof fence follows track
tower (80m)
Claypan Dam
bore
Cedric Tank
Cedric Bore
vermin proof
Regal Bore
Nardoo Bore
Agression Bore
Queenie Bore
Boss Well
Muckanipple Outstation
Bradman Outstation
Twins Bore
No 3
TWINS ROCKPILE
Bore No 30
Pegler Bore
Malbooma Mine (abandoned)
Muckanippie Rockhole
MULGATHING ROCKS
towers
Mulgathing
Victory Bore
Dingo Well
White Nose Bore
Satisfaction Bore
Neills Bore
WOOMERA PROHIBITED
Doubtful Bore
Koolye Tank
Dorothy Well
Butler Well
Ringwoods Well
0 5 10 km

Lynx Mining and Exploration Services Exploration Camps

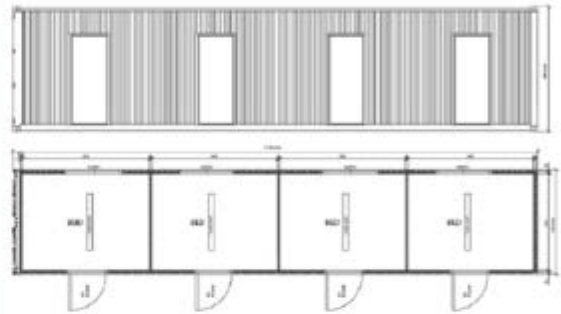
40ft Accommodation Container

FEATURES

- 40' Late model High Cube container
- Painted colour of choice
- Fully lined in a 50mm insulated panel
- Vinyl floor throughout
- 3 x insulated partition walls
- 4 x PA doors
- 4 x windows with shutters

Electrical fit out includes
- 4 x Double Fluro's
- 4 x light switches
- 4 x double 10 amp GPO's
- 4 x 10 amp smoke detectors
- 1 x Junction box & 1 x RCD circuit breaker

FLOOR PLAN

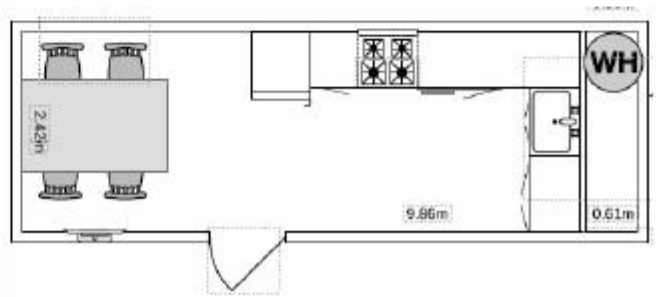


20ft Kitchen Container

FEATURES

- Kitchen Bench with cupboards
- Cuttlery draws
- 1 x 415L fridge
- 1 x Chest Freezer
- Airconditioning
- stainless steel sink
- microwave
- Hot water service
- Gas oven and cook top.
- Table and Chairs.

FLOOR PLAN



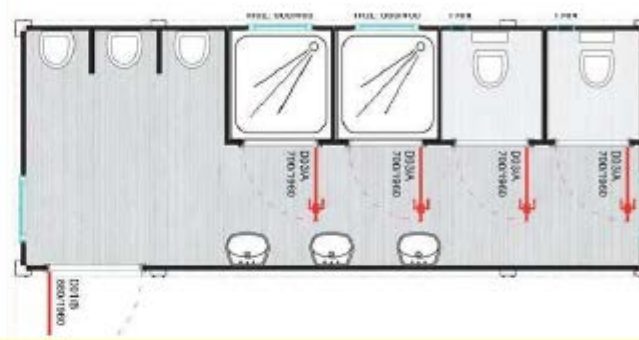
Lynx Mining and Exploration Services Exploration Camps

20ft Ablution Block

FEATURES

- Stainless Steel Sink
- 2 x Toilet Cubicles
- 2 x Shower Cubicles
- 1 x Urinal Trough
- Ventilation Fans

FLOOR PLAN



Extra accessories to complete camp setup.

Generator

A diesel powered generator can be provided with 3 phase cables to mount on cable rails above walkways to connect all containers to the generator.

Wastewater treatment systems

All camps which have ablution blocks or kitchens will be supplied with mobile waste water treatment systems that will treat water down to grey water that is disposed of near by through a sprinkler or grey water soakage.

Water Tanks

Depending on the customers preference a 5000L tank can be supplied on site for the client to have filled with clean water. Or a trailer and IBC or 2000L water tank can be supplied so customer can retrieve water when required.

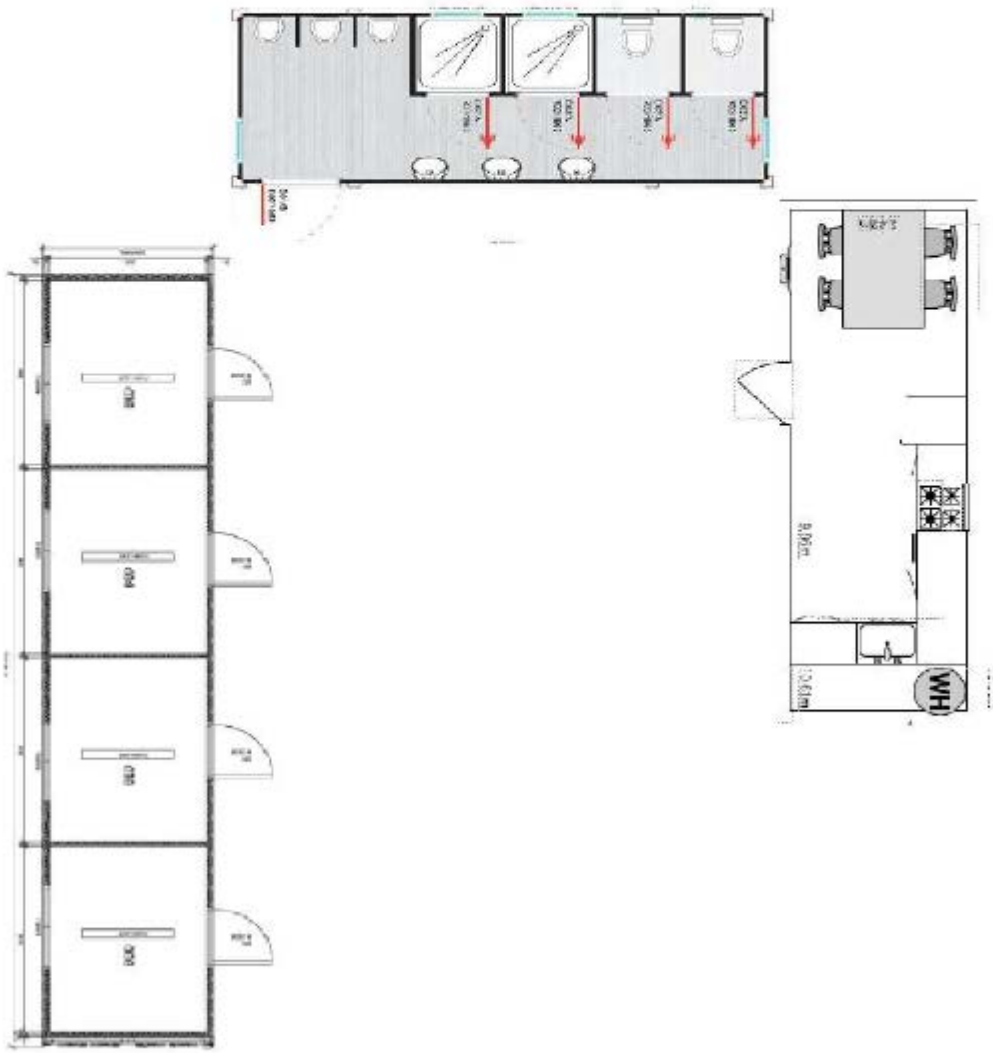
Walk ways

If requested further walkways or PVC bog matts can be supplied to run between camps to allow a mess free track between accommodation, ablution blocks and Kitchen. Please Enquire about the different options for this.

Lynx Mining and Exploration Services Exploration Camps

Typical Small Camp Layout

Waste Water treatment	Generator



Government of South Australia
SA Health

Contact: Callum Brady
Telephone: (08) 8226 7100
Email: healthwastewatermanagement@sa.gov.au

Health Protection & Regulation

Citi Centre Building
11 Hindmarsh Square
Adelaide SA 5000

PO Box 6
Rundle Mall SA 5000
DX 243

Tel 08 8226 7100
Fax 08 8226 7102

ABN 97 643 356 590

www.health.sa.gov.au

Our reference: WWP-20162

Attn: Shunya Kitai
FujiClean Australia
PO BOX 1230
Oxenford QLD 4210

Dear Mr Kitai,

RE: PRODUCT APPROVAL FOR THE FUJICLEAN ACE1200 SECONDARY TREATMENT SYSTEM

We refer to your application seeking product approval for the FujiClean ACE1200 Secondary Treatment System.

Approval of the product is granted on the basis that the FujiClean ACE1200 has been certified by Global Certification Pty Ltd to conform with:

- AS/NZS1546.1:2008 On-site domestic wastewater treatment units – Septic tanks, certification no. 249/4; and
- AS 1546.3:2017 On-site domestic wastewater treatment units – Secondary treatment System - certification no. 5627-3568-01.

Pursuant to the South Australian Public Health (Wastewater) Regulations 2013, this product approval is granted subject to the following conditions:

1. The approved secondary treatment system incorporates:
    1.1. A single horizontal axis type cylindrical fibreglass reinforced plastic tank with a total design capacity of 3,265L manufactured by FujiClean.
    1.2. Maximum treatment capacity of 1200L/day hydraulic load and 560g BOD_5/day organic load.

2. The product shall be manufactured and constructed in accordance with:
    2.1. The plans, drawings and specifications, as referenced in this approval.
    2.2. AS/NZS 1546.1:2008 On-site domestic wastewater treatment units – Septic tanks.
    2.3. AS 1546.3:2017 On-site domestic wastewater treatment units – Secondary treatment systems.
    2.4. All other relevant standards and codes.
    2.5. Conditions of this approval.

3. The seller of the approved product shall provide the purchaser with an electronic or hard copy of the following:

    3.1. FujiClean ACE Installation Manual,

    3.2. FujiClean ACE Operation & Maintenance Manual,

    3.3. FujiClean ACE Owner's Manual, and

    3.4. any other instructions relating to the installation, operation or maintenance of the product.

4. Modification of the design, materials or manufacturing process of the approved products or any of their associated components requires a variation to this approval by the DHW.

5. This product approval will expire on **15 March 2029**, at which time the product will no longer be approved and will be removed from the SA Health approved product database.

6. This product approval does not constitute approval for the installation of the product. For individual installations, an application for wastewater works approval must be sought from the relevant authority as defined in the Wastewater Regulations.

Approved by: Date: 20 June 2024

Manager, Wastewater Management
Delegate of the Minister for Health and Wellbeing

References:

- Global Certification Audit Report AS 1546.3:2017, report no. 2636 by Global Certification Pty Ltd dated February 2020
- Product Certificate of Registration no. 5627-3568-01 by Global Certification Pty Ltd, for Product Performance Testing AS 1546.3:2017 Advanced Secondary 8EP Level, date of issue 7 February 2024
- Product Certificate of Registration no. 249/4 by Global Certification Pty Ltd, for Product Performance Testing AS/NZS 1546.1:2008 On-site Domestic Wastewater Treatment Units – Septic Tanks, date of issue 14 September 2021
- "FujiClean ACE Installation Manual" version 15 by FujiClean updated 5 June 2024
- "FujiClean ACE Operation & Maintenance Manual" version 14 by FujiClean updated 5 June 2024
- "FujiClean ACE Owner's Manual" version 12 by FujiClean updated 5 June 2024
- "FujiClean ACE 1200 Product Specifications" by FujiClean
- "FujiClean ACE Overall view" schematic drawing by FujiClean dated November 2018

- "Short Instruction Manual FujiMAC Air Pump"
- "FujiClean ACE 1200 Wiring Instructions"
- "Fuji Clean Australia ACE Domestic System Commissioning Form"
- "Fuji Clean Australia ACE Domestic System CE1500EX/ACE1200 Servicing Report"
- "FujiClean Wastewater Treatment Systems ACE 1200 Service Guide"

Notes:

Pursuant to the SA Public Health (Wastewater) Regulations 2013

1. *The Department for Health and Wellbeing (DHW) may, by written notice, revoke the approval if satisfied that:*

    1.1. The approval was obtained improperly.
    1.2. A condition of the approval has been contravened.

2. *The DHW may conduct an inspection of an approved product to establish compliance with the submitted plans and the conditions of this approval.*

3. *The DHW may vary or revoke any or all of the approval conditions, or impose a further condition where:*

    3.1. Variation, revocation or imposition is necessary in order to prevent or mitigate significant harm to public or environmental health or the risk of such harm.
    3.2. Reference to a new version of a manual is required.