APO0001726

Approval to undertake assessable prospecting operations

Canonba

3 April 2024

Application summary

Detail	Application
Reference	APO0001726
Date of approval	3 April 2024
Title	EL 9020 (1992)
Contact	[redacted]
Project name	Canonba
Project location	40km NNE from Nyngan
Activity type	Non-complying exploration activity

Important note

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Project

Project details

Application APO0001726 relates to the proposed Canonba at 40km NNE from Nyngan.

The application proposes the following characteristics.

Detail	Proposal
Activity description	Proposed exploration is to drill seven rotary mud drillholes with diamond tails to approximately 500m depth within the requested polygon area on the maps. The areas requested covers whole map units as shown on the attached maps. Tentative proposed collar locations are not shown as these are not confirmed, however are targeting magnetic highs within the map units. Given the landscape in the area holes may require to be moved in order to not adversely affect the environment – vegetation or drainages. Equipment will comprise a diamond drilling rig and support vehicles. A light vehicle will also be used by the field technician and geologist. Should all collars be drilled, drilling is expected to take approximately 7-10 weeks to complete. The drill site will be made safe prior to leaving site, and rehabilitation will be fully completed prior to APO expiry, likely sooner. Drilling contractors will utilise above ground sumps and so no excavations are required. All waste from above ground sumps is removed to a licenced facility by the drilling crew. The drillhole will be backfilled and rehabilitated in accordance with the requirements of the Exploration Code of Practice – Rehabilitation. Rehabilitation will entail cementing from at least 18m depth to 1m from surface. The top of the hole will be backfilled with surface soil and topsoil.
Earthworks or vegetation clearing	Earthworks and vegetation clearance is not required for this drilling program. Sites are relatively flat and open. Drill pad areas, affecting approximately 10 x 20m may require minor clearing of grass from the surface, should this be necessary care will be taken to ensure to leave root stock to enable existing vegetation regrowth.
Access to exploration activities	Access to proposed drilling locations will be along station tracks and along the edges of paddocks if necessary, in line with landholder specifications. No new tracks are required to be constructed.

Detail	Proposal
Ancillary activities	No ancillary infrastructure or water storage is required for this program. Accommodation will be in nearby shearers quarters or the nearest hotel/motel.
Anticipated start date	2 April 2024
Expected duration (weeks)	7-10
Expected rehabilitation completion date	2 April 2026
Proposed hours of operation	Other 12hr shifts 6am-6pm, 7 days a week
On-site employee or contractor numbers	6

Exempted areas

The Canonba has not proposed prospecting in an exempted area.

State conservation areas

The Canonba has not proposed prospecting in a State Conservation Area.

Site description and existing environment

The project comprises the following existing land uses:

The land is currently utilised for agricultural grazing purposes. The land use will not be changed during or after the proposed drilling works.

The project is located near the following sensitive receptors:

There is one homestead, Little Moon, located within the tenement. This homestead is located approximately 1.0km southwest from one of the tentative locations – Canonba_04 noted on Map1 Site Plan. The landholders are currently being sought and contacted and will be fully informed around the proposed drilling of this hole, and the others in the area. There are two homesteads just south (Half Moon Homestead 2.2km south from Canonba_03) and southwest (Wadonga Homestead, 2.1km from Canonba_02) from the tenement and these landholders will also be informed of the proposed works in the area. There are no further sensitive receptors nearby.

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

There are no acid sulfate soils within this area. The proposed drilling area is covered by predominantly soil types 4, 5 and 7 from the Land and Soil Capability Classification, which is moderate to severe limitations. In addition, part of the area is covered by soil type 3 – moderate limitations. One area of soil class 3 is also recorded as Strategic Agricultural Land (Map2B), and additional precautionary processes are placed on works as follows; • Due to the sensitivity of the soil, access will be restricted to only vital personnel and vehicle movement will be restricted where possible. Should compaction occur of the temporary access routes, this will likely be scarified after use by the landholder. Close consultation with the landholder will be maintained throughout this program. • Proposed exploration activities will not impact agricultural resources or activities. There will be no drilling or site preparation within 40m of a riparian zone that could disturb the banks of creeks. • Any waste products (rubbish) will be removed from site and disposed of at the nearest appropriately licenced waste facility. • Rehabilitation will be completed within 6 months, usually sooner. • Rehabilitation outcomes will achieve: o No residual soil or visual contamination; o Runoff water quality is similar to pre-disturbance runoff water quality; and o Revegetation is similar to pre-disturbance vegetation. Wind erosion will be assessed in consultation with the landholder prior to site access and mitigation measures considered.

Salinity of groundwater will be considered, however with the proposed drilling methods groundwater will remain in the ground and any drilling waters will be contained in above ground sumps and not affect the surrounding surface.

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

Surface water should not be affected by the proposed activities. There are several named watercourses running through this tenement, Marra Creek, Crooked Creek, Ferns Creek, Bugwah Cowal and Bread and Cheese Creek. (Milmiland Creek in the north is within the wetlands area that is excluded from this APO request). Drillholes will not be located within 200m or a named watercourse. There are several drainages within the proposed drilling area. Proposed collars will be moved so that they are not within 40m of any existing drainages. Specific access to sites will be undertaken in close consultation with the landholder who knows the ground conditions the best. There are wetlands to the northeast of this proposed drilling area, and as such additional consideration is taken for works in this area. In times of high rainfall and high water in the nearby watercourses, these areas can be inundated / flooded. Should there be elevated water levels this drilling will not be undertaken until water subsides and ground conditions are favourable for vehicular access without detrimentally damaging the ground.

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

Groundwater sources should not be adversely affected by the proposed drilling. There are 9 recorded water bores located within EL9020 as shown on MinView. Several records were reviewed as below; GW004474, drilled to 425.50m recording salinity of 501-1000ppm, standing water not recorded, water bearing zones recorded at 265m, 300m and 329m. GW004475, drilled to 480.90m recording salinity of 501-1000ppm, standing water not recorded, water bearing zones recorded at 304m and 307m. GW018250, drilled to 38.40m salinity not recorded, standing water not recorded and no water bearing zones recorded. GW006259, drilled to 25.50m recording salinity as brackish. No standing water recorded, water bearing zones recorded in the drillers log at 18.29m and 24.38m. Suitable drilling methods (Mud Rotary and diamond drilling) will be utilised to ensure that water is contained in the same strata and not cross to different water bearing strata. At completion of drilling the drillhole is cemented from at least 18m to the surface if no water is encountered or the whole extent if water is encountered to ensure water does not cross strata.

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

The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with named watercourses and several drainage channels that will be avoided for this program. The majority of the year these watercourses and drainages are dry. Access to proposed collar locations will be undertaken in close consultation with the landholders.

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

On the MNES search there are 27 listed Threatened species, 4 listed Threatened Ecological Communities and 7 Listed Migratory Species. Of the 27 threatened species the Curlew Sandpiper, Plains Wanderer and Swift Parrot are considered to be critically endangered (the link in the MNES states that all three species are endangered and not critical for NSW). The Curlew is migratory and if sighted will be reported to the Department for Environment. This species is not known to breed in Australia, therefore will not be at its most vulnerable if it is sighted. The four listed threatened ecological communities are recoded to be endangered with communities likely within the area. Proposed works can be moved to ensure no vegetation is damaged. The 7 listed migratory species has the Curlew Sandpiper listed as critically endangered – however the link to this species differs stating for NSW this is endangered. The Macquarie Marshes is located within 10km of the northeastern most corner of the proposed drilling area. When the marshes occasionally flood the proposed drilling area and access to it could be affected. Site access will not be undertaken in times of flood. All works will be undertaken in close consultation with the landholder to ensure minimal impact to the ground.

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

There are many flora and fauna records that come up on the BioNet search, however only the Red Darling Pea is recorded as vulnerable. The sighting and record is from 1999. This area is within a paddock and very unlikely that any works will be undertaken past or near this location, however staff will be made aware of this vulnerable flora. The southwestern corner of the proposed drilling area is within the Bogan LGA and is considered to be of moderate or high terrestrial biodiversity. The more sensitive nature of this area will be addressed as discussed above in the soil section. There are four endangered communities listed as likely to occur within the proposed drilling area on the MNES search; Coolibah – Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions, Grey Box Grassy Woodlands and Derived Native Grasslands of southeastern Australia, Poplar Box Grassy Woodland on Alluvial Plains and Weeping Myall Woodlands. All proposed drilling is within open paddocks. Drillholes can be moved to avoid any and all vegetation. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable.

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

There are no items of historic cultural or natural heritage listed within the searches performed for this proposed drilling program and as such no impact envisaged.

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

There are no areas of critical habitat or areas of outstanding biodiversity value within the proposed drilling area.

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

There are no recorded Aboriginal Sites noted within the proposed drilling area on the attached AHIMS search. Proposed works will not be undertaken within proximity to the list above.

Exploration activities

The following exploration activities have been approved.

Drill holes

Id/ Regulator no.	Type	Surface disturbance (m^2)	Veg. Clearing (m^2)	Excavations (m^3)	Produced water (ml)	Depth (m)	Block number	Unit letters
Canonba_04 EDH0014734	DDH drill hole	200				500	BOU2778	g
Canonba_06sp EDH0014736	DDH drill hole	200				500	BOU2777	t
Canonba_08sp EDH0014738	DDH drill hole	200				500	BOU2706	r
Canonba_02 EDH0014732	DDH drill hole	200				500	BOU2777	y

Id/ Regulator no.	Type	Surface disturbance (m^2)	Veg. Clearing (m^2)	Excavations (m^3)	Produced water (ml)	Depth (m)	Block number	Unit letters
Canonba_03 EDH0014733	DDH drill hole	200				500	BOU 2778	v
Canonba_05 EDH0014735	DDH drill hole	200				500	BOU 2706	m
Canonba_07sp EDH0014737	DDH drill hole	200				500	BOU 2778	v

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

Impact management

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

Surface water should not be affected by the proposed activities. Proposed collars will be moved to ensure none are advanced within 200m of any named watercourse. None of the tentatively proposed locations are located within 200m of a named watercourse. There will be no storage of surface water nor disposal of water to surface.

The project includes the following measures to manage groundwater impacts:

Groundwater encountered during drilling will be managed and contained by the drilling methods. The Company have drilled many holes in this region and have not encountered any difficulties with water. Mud water pressure used for the proposed diamond drilling will be sufficient pressure to contain the water within the boreholes. At completion of drilling the collar casing will remain in place and the collar made safe and the drill hole is filled with cement to within 1m from the surface.

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

Drill core will be removed from site to a Company storage facility. Once drilling is complete, any minor spoil will be returned down the hole and all materials will be removed from site. The collar will be capped and area made safe with all rubbish and drilling equipment removed from site at end of drilling program. Due to groundwater being shallow in this area, holes will be cemented from base to 1m below surface to ensure groundwater from different strata is not affected.

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

No chemicals anticipated to be used in this drilling program. Diesel will be kept in a bunded storage area. Bio-degradable drilling muds to be utilised with the diamond drilling.

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

Noise is not anticipated to be of concern with the proposed diamond drilling as this style of drilling does not generate excessive noise.

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

Air quality is not anticipated to be of concern with the drilling methods proposed.

Sensitivity of the land to be disturbed

Question	Yes/no
Conservation areas	
Land reserved under the *National Parks and Wildlife Act 1974*?	No
Land acquired by the Minister under Part 11 of the *National Parks and Wildlife Act 1974*?	No
Land subject to a 'conservation agreement' under the *National Parks and Wildlife Act 1974* and/or *the Biodiversity Conservation Act 2016*?	No
Land declared as an aquatic reserve under the *Marine Estate Management Act 2014*?	No
Land declared as a marine park under the *Marine Estate Management Act 2014*?	No
Land within State Forests set aside under the *Forestry Act 2012* for conservation values, including Flora Reserves or Special Management (and other) Zones?	No
Land reserved or dedicated under the *Crown Lands Act 1989/Crown Lands Management Act 2016* (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 *Wilderness Act 1987*?	No
Land subject to a Biobanking agreement (established under the now repealed *Threatened Species Conservation Act 1995*) or a Biodiversity Stewardship agreement established under the *Biodiversity Conservation Act 2016*?	No
Land subject to a Wildlife Refuge agreement under the *Biodiversity Conservation Act 2016*?	No
Land subject to existing conservation agreements on private land under repealed legislation that continue to have effect (e.g., trust agreements under *Native Conservation Trust Act 2001*, Property vegetation plans under *Native Vegetation Act 2003*, Registered property agreements under *Native Vegetation Conservation Act 1997*)?	No
Drinking water catchment protection areas	
Land declared to be a 'controlled area' or a 'special area' under the *Water NSW Act 2014*?	No
Land declared to be a 'special area' under the *Water Management Act 2000* or *Hunter Water Act 1991*?	No
Sensitive areas	
Land declared as area of outstanding biodiversity value under the *Biodiversity Conservation Act 2016* or critical habitat under Part 7A of the *Fisheries Management Act 1994*?	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 *State Environmental Planning Policy (Resilience and Hazards) 2021*?	No
Littoral rainforests mapped under *State Environmental Planning Policy (Resilience and Hazards) 2021*?	No
Coastal zone as defined in the *Coastal Management Act 2016*?	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 *Water Management Act 2000*?	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 *National Parks and Wildlife Act 1974*?	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 *State Environmental Planning Policy (Resources and Energy) 2021*?	No
Community land	
Public land classified as community land under the *Local Government Act 1993*?	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 *National Parks and Wildlife Act 1974*?	No
Will the activity damage any listed heritage items?	No

Attachment 1 – Statement of commitments

Item	Commitment
Activity type	Exploration activity comprising: • 7 diamond drill holes • 0 reverse circulation drill holes • 0 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	40km NNE from Nyngan, within EL 9020 (1992).
Activity scope (including any ancillary activities)	Proposed exploration is to drill seven rotary mud drillholes with diamond tails to approximately 500m depth within the requested polygon area on the maps. The areas requested covers whole map units as shown on the attached maps. Tentative proposed collar locations are not shown as these are not confirmed, however are targeting magnetic highs within the map units. Given the landscape in the area holes may require to be moved in order to not adversely affect the environment – vegetation or drainages. Equipment will comprise a diamond drilling rig and support vehicles. A light vehicle will also be used by the field technician and geologist. Should all collars be drilled, drilling is expected to take approximately 7-10 weeks to complete. The drill site will be made safe prior to leaving site, and rehabilitation will be fully completed prior to APO expiry, likely sooner. Drilling contractors will utilise above ground sumps and so no excavations are required. All waste from above ground sumps is removed to a licenced facility by the drilling crew. The drillhole will be backfilled and rehabilitated in accordance with the requirements of the Exploration Code of Practice – Rehabilitation. Rehabilitation will entail cementing from at least 18m depth to 1m from surface. The top of the hole will be backfilled with surface soil and topsoil. No ancillary infrastructure or water storage is required for this program. Accommodation will be in nearby shearers quarters or the nearest hotel/motel.
Hours of operation	Other 12hr shifts 6am-6pm, 7 days a week
Expected duration (weeks)	7-10
Anticipated start date	2 April 2024
Expected rehabilitation completion date	Estimated 2 April 2026
Maximum area of disturbance	1,400 square metres
Agricultural impact	The activity will be undertaken in accordance with EL9020 APO0001726 Level 2 AIS_maps_amended.pdf (2152571 bytes)
Air quality	Air quality is not anticipated to be of concern with the drilling methods proposed.
Protection of water sources	Surface water should not be affected by the proposed activities. Proposed collars will be moved to ensure none are advanced within 200m of any named watercourse. None of the tentatively proposed locations are located within 200m of a named watercourse. There will be no storage of surface water nor disposal of water to surface.

Item	Commitment
	Groundwater encountered during drilling will be managed and contained by the drilling methods. The Company have drilled many holes in this region and have not encountered any difficulties with water. Mud water pressure used for the proposed diamond drilling will be sufficient pressure to contain the water within the boreholes. At completion of drilling the collar casing will remain in place and the collar made safe and the drill hole is filled with cement to within 1m from the surface.
Soil and land stability	There will be no vegetation clearing for this drill program. Minor clearing of grass may be required to make sites safe, should this be necessary care will be taken to ensure to leave root stock to enable existing vegetation regrowth. Minimal surface disturbance to ensure minimal impact to the soil. Utilising existing tracks where possible, should soil compaction require scarification then the landholder will manage and ensure all ground is returned to existing state.
Noise and vibration	Noise is not anticipated to be of concern with the proposed diamond drilling as this style of drilling does not generate excessive noise.
Coastal processes and hazards	n/a
Hazardous substances or chemicals	No chemicals anticipated to be used in this drilling program. Diesel will be kept in a bunded storage area. Bio-degradable drilling muds to be utilised with the diamond drilling.
Wastes and emissions	Drill core will be removed from site to a Company storage facility. Once drilling is complete, any minor spoil will be returned down the hole and all materials will be removed from site. The collar will be capped and area made safe with all rubbish and drilling equipment removed from site at end of drilling program. Due to groundwater being shallow in this area, holes will be cemented from base to 1m below surface to ensure groundwater from different strata is not affected.
Vegetation	Any areas of vegetation will be avoided.
Threatened fauna and flora species	Drilling during dry conditions only, the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable.
Areas of outstanding biodiversity value/critical habitat	
Endangered ecological community or critically endangered ecological community	All proposed drilling is within open paddocks. Drillholes can be moved to avoid any and all vegetation.
Habitat of a threatened species or ecological community	All proposed drilling is within open paddocks. Drillholes can be moved to avoid any and all vegetation.
Key threatening processes	All proposed drilling is within open paddocks. Drillholes can be moved to avoid any and all vegetation.
Barriers to movement of fauna	Drill site locations are determined based on area of least impact to the environment. Rehabilitation will be undertaken as soon as is reasonably practicable but within the timeframe of this drilling approval application.
Ecological and biosecurity impacts	Extreme care will be taken on this site to avoid uncontrolled fires. Weather conditions and bush fire alert levels will be monitored. Local emergency services contact details will be readily available for the duration of the activity. All equipment will be maintained to high standards and processes will be in place to minimise risk. All vehicles are appropriately prepared and equipped to minimise fire risk.
Community resources	n/a

Item	Commitment
Natural resources	Work will be undertaken in dry conditions and not during extreme weather events.
Social impacts	Community consultation has been initiated with affected landholders and the community. A regular flow of information will be provided, and any concerns will be addressed immediately. No issues have been raised to date.
Economic impacts	The proposed drilling area is located 40km Northeast from Nyngan. The small work crew and vehicles are not anticipated to have an adverse effect on local or regional economies. Use of local shops and services by the drilling crew should not have much impact on this area, positive of negative.
Heritage impacts	n/a
Aesthetic impacts	No drilling within 400m of homestead.
Aboriginal cultural heritage	Should any Aboriginal sites be discovered staff will inform management teams who will record the information on the AHIMS Mobile APP (which is Heritage NSW preferred method of recording). This site would then be avoided by placing a 30m buffer around it. Any concerns regarding new sites and working in the area will be raised directly with Heritage NSW on 02 9873 8500. No drillholes will be advanced within 200m of any named watercourses.
Land use impacts	Additional precautionary processes are placed on works located within the area of BSAL as follows; • Due to the sensitivity of the soil, access will be restricted to only vital personnel and vehicle movement will be restricted where possible. Should compaction occur of the temporary access routes, this will likely be scarified after use by the landholder. Close consultation with the landholder will be maintained throughout this program. • Proposed exploration activities will not impact agricultural resources or activities. There will be no drilling or site preparation within 40m of a riparian zone that could disturb the banks of creeks. • Any waste products (rubbish) will be removed from site and disposed of at the nearest appropriately licenced waste facility. • Rehabilitation will be completed within 6 months, usually sooner. • Rehabilitation outcomes will achieve: o No residual soil or visual contamination; o Runoff water quality is similar to pre-disturbance runoff water quality; and o Revegetation is similar to pre-disturbance vegetation.
Transportation impacts	n/a
Matters of national environmental significance	Agricultural properties that have already been cleared were selected for this drilling program to significantly reduce the risk of impacting threatened ecological communities, threatened species, and threatened migratory species. Vegetation is not to be cleared as part of the program therefore not damaging threatened ecological communities and the habitats of threatened species and threatened migratory species. Crews are instructed to not interact with wildlife or vegetation during the drilling activities.
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 9020 (1992).

Item	Commitment
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 9020 (1992).
Codes of Practice	Canonba will be operated in accordance with: • 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 *National Parks and Wildlife Act 1974.*
Aboriginal place	Has the same meaning as it has in the *National Parks and Wildlife Act 1974.*
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: • 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 *Mining Act 1992* / *Petroleum (Onshore) Act 1991* – 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 *Marine Estate Management Act 2014.*
Areas of Outstanding Biodiversity Value (AOBVs)	Has the same meaning as it has in the *Biodiversity Conservation Act 2016*. Note: Areas of declared critical habitat under the now repealed *Threatened Species Conservation Act 1995* have become Areas of Outstanding Biodiversity Value (AOBVs) under the *Biodiversity Conservation Act 2016*.
Assessable prospecting operation	Any prospecting operation that is not exempt development within the meaning of *State Environmental Planning Policy (Resources and Energy) 2021.*
Clearing of vegetation	Any one or more of the following: • 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 *Exploration guideline: Application and assessment process for exploration activities*.
Critical habitat	Has the same meaning as it has in the *Fisheries Management Act 1994*. Areas of declared critical habitat under the now repealed *Threatened Species Conservation Act 1995* have become Areas of Outstanding Biodiversity Value (AOBVs) under the *Biodiversity Conservation Act 2016.*
Drill hole	A hole made by drilling or boring, but excludes: • 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 *Mining Act 1992 / Petroleum (Onshore) Act 1991* – as relevant.
Environmentally sensitive area of State significance	Has the same meaning as it has in *State Environmental Planning Policy (Resources and Energy) 2021.*
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 *State Environmental Planning Policy (Resources and Energy) 2021*.
Exploration	Has the same meaning as it has in *State Environmental Planning Policy (Resources and Energy) 2021*.
Fauna	Has the same meaning as it has in the *National Parks and Wildlife Act 1974*.
Groundwater	Water that occurs beneath the ground surface in the saturated zone.
Habitat	Has the same meaning as it has in *the Biodiversity Conservation Act 2016* or the *Fisheries Management Act 1994* (as relevant).
Harm	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 *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*. In relation to the environment, has the same meaning as it has in the *Protection of the Environment Operations Act 1997*. In relation to threatened species or ecological communities, has the same meaning as: • 'harm an animal' in the *National Parks and Wildlife Act 1974* • 'pick a native plant' in the *National Parks and Wildlife Act 1974* • 'harm' in the *Fisheries Management Act 1994*. In relation to an aquifer or waterfront land, has the same meaning as it has in the *Water Management Act 2000*. In relation to Aboriginal places or Aboriginal objects has the same meaning as it has in the *National Parks and Wildlife Act 1974*. In relation to items of heritage significance, has the same meaning as it has in the *Heritage Act 1977*. In relation to protected marine vegetation, has the same meaning as it has in the *Fisheries Management Act 1994*.
Items of heritage significance	Means: • any heritage items listed in one or more of the following: — 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
	• within State Conservation Areas: — 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	Includes: • 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 *Fisheries Management Act 1994*.
Matters of national environmental significance	'Matters of national environmental significance' protected under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*.
Minister	The Minister administering the *Mining Act 1992 / Petroleum (Onshore) Act 1991* – as relevant.
Native vegetation	Has the same meaning as it has in the *Local Land Services Act 2013*.
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 *Mining Act 1992 / Petroleum (Onshore) Act 1991* – 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	Includes: • 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
	• intensive livestock agriculture
Site	The land on which an activity is located.
State Conservation Area	Has the same meaning as it has in the *National Parks and Wildlife Act 1974.*
Surface disturbance	Means: • 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 *Biodiversity Conservation Act 2016* or *Fisheries Management Act 1994* (as relevant).
Title	An authority under the *Mining Act 1992* / a title under the *Petroleum (Onshore) Act 1991* – 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 *Protection of the Environment Operations Act 1997.*
Water source	Has the same meaning as it has in the *Water Management Act 2000.*
Water land	Has the same meaning as it has in the *Fisheries Management Act 1994.*
Waterfront land	Has the same meaning as it has in the *Water Management Act 2000.*
Wetlands	Has the same meaning as it has in the *Fisheries Management Act 1994*.
Wilderness	Lands identified as wilderness under the *Wilderness Act 1987.*
Wilderness area	Lands (including subterranean lands) declared to be a wilderness area under the *Wilderness Act 1987* or the *National Parks and Wildlife Act 1974.*

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.

Air impacts from the proposed program are negligible.

The nearest sensitive receptor located 1km away from proposed drilling is the Little Moon Homestead. As mud rotary and diamond drilling does not produce significant dust the impact to the receptor is predicted to be negligible.

All vehicles will be in good working order and not releasing excess exhaust fumes.

No new tracks are being created.

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.

Drilling will not occur within 400m of sensitive receptors.

Vehicles will travel slowly along all farm tracks to minimise travelling dust.

Vehicles will be well maintained to minimise excessive exhaust fumes.

Landholder consultation will occur throughout the whole program to ensure best and appropriate practices are being maintained.

Water impacts

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

If groundwater is encountered during drilling it will be managed and contained by the drilling methods to ensure that water is contained in the same strata and not cross to different water bearing strata. The Company have drilled many holes in this area and have not encountered any difficulties with water.

The program is not expected to have an impact on surface water.

There are several named watercourses running through this tenement, Marra Creek, Crooked Creek, Ferns Creek, Bugwah Cowal and Bread and Cheese Creek. (Milmiland Creek in the north is within the wetlands area that is excluded from this APO request). Drillholes will not be located within 200m or a named watercourse.

There are several drainages within the proposed drilling area. Proposed collars will be moved so that they are not within 40m of any existing drainages. Specific access to sites will be undertaken in close consultation with the landholder who knows the ground conditions the best.

There are wetlands to the northeast of this proposed drilling area, and as such additional consideration is taken for works in this area. In times of high rainfall and high water in the nearby watercourses, these areas can be inundated / flooded. Should there be elevated water levels this drilling will not be undertaken until water subsides and ground conditions are favourable for vehicular access without detrimentally damaging the ground.

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

Negligible

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

Nil/Not applicable

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?

Water impacts

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?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

Drilling will not be undertaken during extreme weather events. Should there be elevated water levels this drilling will not be undertaken until water subsides. Groundwater is not expected to cause concern as drilling methods ensure that water is contained in the same strata and does not cross to different water bearing strata.

Soil and stability impacts

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

There are no acid sulfate soils within this area.

The proposed drilling area is covered by predominantly soil types 4, 5 and 7 from the Land and Soil Capability Classification, which is moderate to severe limitations. In addition, part of the area is covered by soil type 3 – moderate limitations. One area of soil class 3 is also recorded as Strategic Agricultural Land (Map2B), and additional precautionary processes are placed on works as follows;

- Due to the sensitivity of the soil, access will be restricted to only vital personnel and vehicle movement will be restricted where possible. Should compaction occur of the temporary access routes, this will likely be scarified after use by the landholder. Close consultation with the landholder will be maintained throughout this program.
- Proposed exploration activities will not impact agricultural resources or activities. There will be no drilling or site preparation within 40m of a riparian zone that could disturb the banks of creeks.
- Any waste products (rubbish) will be removed from site and disposed of at the nearest appropriately licenced waste facility.
- Rehabilitation will be completed within 6 months, usually sooner.
- Rehabilitation outcomes will achieve:
  - No residual soil or visual contamination;
  - Runoff water quality is similar to pre-disturbance runoff water quality; and
  - Revegetation is similar to pre-disturbance vegetation.

Wind erosion will be assessed in consultation with the landholder prior to site access and mitigation measures considered. Salinity of groundwater will be considered, however with the proposed drilling methods groundwater will remain in the ground and any drilling waters will be contained in above ground sumps and not affect the surrounding surface.

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?

Negligible

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?

Soil and stability impacts

Nil/Not applicable

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

There will be no vegetation clearing for this drill program. Minor clearing of grass may be required to make sites safe, should this be necessary care will be taken to ensure to leave root stock to enable existing vegetation regrowth. Minimal surface disturbance to ensure minimal impact to the soil. Utilising existing tracks where possible, should soil compaction require scarification then the landholder will manage and ensure all ground is returned to existing state.

Noise and vibration impacts

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

Little Moon Homestead is located 1km away from proposed collar Canonba_04. Drilling will be undertaken in daylight hours only and the mud rotary and diamond drilling method selected has relatively low noise outputs compared to other drilling methods.

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

Drilling will not occur within 400m of sensitive receptors. Drilling works will be undertaken in daylight hours only.

Coastal locations and processes

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

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.

Diesel fuel is the only anticipated hydrocarbon to be used on site. It will be transported to site in a dedicated diesel tank mounted on an auxiliary drill vehicle. A spill kit will always be on site and minor spills will be cleaned up and waste material removed from site and disposed of at the nearest appropriately licensed waste facility.

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.

Maintain regular checks of all fuel and lubricants, provide bunded areas where required. A spill kit will be at the site at all times.

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 should be minimal impact to the environment from the proposed short drilling program. Fuels maintained in appropriately bunded storage tanks. There will be no disposal of drilling waste at site – all waste removed from site and disposed of at appropriately licenced waste facility. Above ground tanks/sumps will be utilised to better contain drilling fluids.

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

There will be no impact to the nearby Wetlands during this proposed short drilling program. Drilling to be conducted during dry conditions. There will be no works conducted within riparian zones. Any spills will be cleared up immediately utilising spill kits.

What is the likely level of the impacts?

Low adverse

Outline any proposed management controls and/or mitigation measures.

Clean up all rubbish and any minor spills immediately and dispose of any contaminated materials to an appropriately managed licenced facility. Conduct works during dry conditions in close consultation with the landholder. No unnecessary vehicle movement.

Vegetation

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

The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program.

What is the likely level of the impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

Any areas of vegetation will be avoided.

Threatened species

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

There are many flora and fauna records that come up on the BioNet search, however only the Red Darling Pea is recorded as vulnerable. The sighting and record is from 1999. This area is within a paddock and very unlikely that any works will be undertaken past or near this location, however staff will be made aware of this vulnerable flora.

The southwestern corner of the proposed drilling area is within the Bogan LGA and is considered to be of moderate or high terrestrial biodiversity. The more sensitive nature of this area will be addressed as discussed above in the soil section.

Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable.

What is the likely level of the impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

Drilling during dry conditions only, the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable.

Area of outstanding biodiversity value (AOBV) / Critical habitat

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

Area of outstanding biodiversity value (AOBV) / Critical habitat
There are no areas of critical habitat/area of outstanding biodiversity within the approval area.
What is the likely level of the impacts?
Outline any proposed management controls and/or mitigation measures.

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.
There will be no impact to any of the four potentially occurring endangered communities listed as likely to occur within the proposed drilling area on the MNES search; Coolibah – Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions, Grey Box Grassy Woodlands and Derived Native Grasslands of southeastern Australia, Poplar Box Grassy Woodland on Alluvial Plains and Weeping Myall Woodlands.
What is the likely level of the impacts?
Negligible
Outline any proposed management controls and/or mitigation measures.
All proposed drilling is within open paddocks. Drillholes can be moved to avoid any and all vegetation.

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.
There will be no impact to any threatened species or ecological community as all drilling will be progressed in open grazing paddocks.
What is the likely level of the impacts?
Negligible
Outline any proposed management controls and/or mitigation measures.
All proposed drilling is within open paddocks. Drillholes can be moved to avoid any and all vegetation.

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.
There are no critically endangered species in this area and so no key threatening processes (the MNES search lists that the Curlew Sandpiper, Plains Wanderer and Swift Parrot are considered to be critically endangered, however further research confirms that all three species are actually endangered and not critically endangered for NSW). Drillholes can and will be moved to avoid damaging or impacting any vegetation in the area.
What is the likely level of any impacts?
Negligible
Outline any proposed management controls and/or mitigation measures.

Key threatening process

All proposed drilling is within open paddocks. Drillholes can be moved to avoid any and all vegetation.

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.

The small drilling program does not require vegetation clearance. Minor areas of disturbance will be rehabilitated within a couple of months and so minimal impact is envisaged.

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

Drill site locations are determined based on area of least impact to the environment. Rehabilitation will be undertaken as soon as is reasonably practicable but within the timeframe of this drilling approval application.

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.

No impact envisaged

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

Extreme care will be taken on this site to avoid uncontrolled fires. Weather conditions and bush fire alert levels will be monitored. Local emergency services contact details will be readily available for the duration of the activity. All equipment will be maintained to high standards and processes will be in place to minimise risk. All vehicles are appropriately prepared and equipped to minimise fire risk.

Community resources

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

There will be no impact to the demand or use of local services and resources for this drill program

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

No diversion of resources required

What is the likely level of the impact?

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.

The proposed drilling program is not anticipated to disrupt, deplete, or destroy any natural resources

Natural resources

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).

The proposed program will be undertaken at a time appropriate to landholders and so will not disrupt any existing activities. The drill holes are to be collared in paddocks which are used for grazing purposes

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

The Wetlands in the north east corner of EL9020 are identified in the Warren Local Environmental Plan 2012. The low impact nature of the drilling and small footprint will not result in the degradation of the Wetlands. Mineral exploration drilling is not declared as designated development in the Warren LEP. This area of wetland is excluded from this drilling approval.

What is the likely level of the impact?

Negligible

Outline any proposed management controls and/or mitigation measures.

Work will be undertaken in dry conditions and not during extreme weather events.

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.

The proposed program is small and will not affect the demographics of the local communities

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.

There will be no impact or change to the community following the proposed drilling program

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).

The small program will not disadvantage the community or individuals in the area

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.

The impacts are minimal and not within proximity to sensitive receptors or communities

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.

There will be no detrimental effect on the aesthetics, or any other special value

What is the likely level of any social impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

Community consultation has been initiated with affected landholders and the community. A regular flow of information will be provided, and any concerns will be addressed immediately. No issues have been raised to date.

Economic impacts

Provide a brief description of any likely economic impacts.

Economic impacts

It is not envisaged that this small drilling program will have an economic impact on the area. There will be a small field crew that utilise local shops and services.

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

The proposed drilling area is located 40km Northeast from Nyngan. The small work crew and vehicles are not anticipated to have an adverse effect on local or regional economies. Use of local shops and services by the drilling crew should not have much impact on this area, positive of negative.

Heritage impacts

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

There are no listed heritage items, places, or areas in this proposed drilling area

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.

The proposed drilling will be of short duration, is 1km away from the nearest residence, and no night works so no lights.

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

No drilling within 400m of homestead.

Cultural impacts

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

The proposed drilling program is not anticipated to disturb or destroy any Aboriginal heritage

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

There are no listed Aboriginal Sites noted within the proposed drilling area on the attached AHIMS search.

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

There are several named watercourses through this tenement, however no drilling will be conducted within 200m of any of these. There are no other landscape features as listed above.

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.

The proposed drilling area is not within an area where native title may exist. All drilling is proposed on Freehold land and not within parcels of Crown Land.

Cultural impacts

What is the likely level of any cultural impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

Should any Aboriginal sites be discovered staff will inform management teams who will record the information on the AHIMS Mobile APP (which is Heritage NSW preferred method of recording). This site would then be avoided by placing a 30m buffer around it. Any concerns regarding new sites and working in the area will be raised directly with Heritage NSW on 02 9873 8500.

No drillholes will be advanced within 200m of any named watercourses.

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.

There will be temporary impact on an area of BSAL where drillhole 05 is proposed. This BSAL is vegetation predominantly around the Marra Creek. There will be no change to land use for the drilling of this one drillhole. Where possible the drillhole location will be located more towards the paddock to the NE and away from the Creek and BSAL areas, however likely will encroach on the periphery of the BSAL area depicted on the maps.

What is the likely level of any impacts?

Low adverse

Outline any proposed management controls and/or mitigation measures.

Additional precautionary processes are placed on works located within the area of BSAL as follows;

- Due to the sensitivity of the soil, access will be restricted to only vital personnel and vehicle movement will be restricted where possible. Should compaction occur of the temporary access routes, this will likely be scarified after use by the landholder. Close consultation with the landholder will be maintained throughout this program.
- Proposed exploration activities will not impact agricultural resources or activities. There will be no drilling or site preparation within 40m of a riparian zone that could disturb the banks of creeks.
- Any waste products (rubbish) will be removed from site and disposed of at the nearest appropriately licenced waste facility.
- Rehabilitation will be completed within 6 months, usually sooner.
- Rehabilitation outcomes will achieve:
  - No residual soil or visual contamination;
  - Runoff water quality is similar to pre-disturbance runoff water quality; and
  - Revegetation is similar to pre-disturbance vegetation.

Transportation impacts

Provide a brief description of any significant impacts on transportation.

There will be no significant impact on transportation from a small temporary drilling program

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

n/a

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.

The Macquarie Marshes Wetlands are identified in the Warren Local Environmental Plan 2012. Mineral exploration drilling is not declared as designated development in the Warren LEP. The low impact nature of the drilling and small footprint will not result in the degradation of the Wetlands, sites are within agricultural land. All works will only be conducted in dry weather conditions. The wetland in the north eastern corner of EL9020 is excluded from the drilling approval.

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

Works occur only during dry season. Limit vehicle movement and stick to tracks where possible. Drive slowly on tracks. Undertake rehabilitation as soon as practicable, most likely as soon as drill rig has moved from site, but otherwise within 6 months of end of drilling. Strong knowledge of the area and good relationships with landholders will ensure rehabilitation methods are undertaken efficiently and effectively.

Ensure all staff and contractors maintain high standards of work and care for the environment.

All rubbish and equipment removed from site as soon as practicable.

Minimise vehicle movement across the land. Proposed works do not proposed to damage native vegetation, and the temporary works will be rehabilitated as soon as practicable to return the land to its pre drilled condition.

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.

On the MNES search there are 27 listed Threatened species, 4 listed Threatened Ecological Communities and 7 Listed Migratory Species.

Of the 27 threatened species the Curlew Sandpiper, Plains Wanderer and Swift Parrot are considered to be critically endangered (the link in the MNES states that all three species are endangered and not critical for NSW). The Curlew is migratory and if sighted will be reported to the Department for Environment. This species is not known to breed in Australia, therefore will not be at its most vulnerable if it is sighted.

The four listed threatened ecological communities are recoded to be endangered with communities likely within the area. Proposed works can be moved to ensure no vegetation is damaged.

The 7 listed migratory species has the Curlew Sandpiper listed as critically endangered – however the link to this species differs stating for NSW this is endangered.

The Macquarie Marshes is located within 10km of the northeastern most corner of the proposed drilling area. When the marshes occasionally flood the proposed drilling area and access to it could be affected. Site access will not be undertaken in times of flood. All works will be undertaken in close consultation with the landholder to ensure minimal impact to the ground.

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

Agricultural properties that have already been cleared were selected for this drilling program to significantly reduce the risk of impacting threatened ecological communities, threatened species, and threatened migratory species.

Vegetation is not to be cleared as part of the program therefore not damaging threatened ecological communities and the habitats of threatened species and threatened migratory species.

Crews are instructed to not interact with wildlife or vegetation during the drilling activities.

Cumulative impacts
Is the activity likely to result in cumulative environmental effects with other existing or likely future activities?
No
Describe the impact.
It is not considered that the proposed drilling will have any cumulative impacts as outlined above.
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.
not required

Attachment 4 – List of supporting documents

- APO0001726_Aboriginal heritage.zip
  - APO0001726_Critical Habitat.zip
  - APO0001726_Map5_ Historic cultural or natural heritage items.png
  - APO0001726_Site Plan Locations.zip
  - APO0001726_Submission Report_11_Mar_2024 5 30pm.pdf
  - APO0001726_Submission Report_28_Mar_2024 12 55pm.pdf
  - APO0001726_Submission Report_29_Mar_2024 4 57pm.pdf
  - APO0001726_Threatened species.zip
  - DPI Ag Response_AIS_EL 9020 (1992)_Canonba_APO0001726.pdf
  - EL9020 APO0001726 Canonba Locations_Photos.pdf
  - EL9020 APO0001726 Level 2 AIS_maps_amended.pdf
  - Protected Matters - MNES layers - March 7th 2024.pdf
  - Re EL 9020 (1992) _ Canonba _ Review of AIS by DPI _ APO0001726.eml