

# **Regional Interests Development Application Assessment Report**

# **Proposed Conventional Petroleum Well**



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# 1. Introduction

Santos Limited undertakes petroleum activities within petroleum lease (PL) 301 located approximately 180 km east of Thargomindah, QLD (Figure 1). These existing petroleum activities are undertaken with the Channel Country Strategic Environmental Area (SEA) Part 2, Division 2 of the *Regional Planning Interests Act 2014*. PL 301 (a *resource authority* under the *Regional Planning Interests Act 2014*) and the associated environmental authority (EA) EPPG0383513 are held by Santos Limited; an *eligibile person* under the *Regional Planning Interests Act 2014*.

Santos Limited proposes to undertake additional petroleum activities within the Channel Country SEA requiring approval under s28 of the *Regional Planning Interests Act 2014*. These proposed petroleum activities are described in Section 2.

#### Non-Notifiable Application

In accordance with Section 34(2) of the *Regional Planning Interests Act 2014*, and Section 13 of the *Regional Planning Interests Regulation* 2014, the assessment application is not notifiable, as the activities are not proposed to be carried out in an area of regional interest that is a priority living area. Notwithstanding, the proposed activities would be located solely on Lot 1 SP209773 forming part of Naryilco Station, a 7,510 km<sup>2</sup> cattle station operated by the same landholder: S. Kidman & Co. Ltd. Discretionary notification under s34(4) would not be necessary given that the very large size of the cattle station and the landholder will receive a copy of the application as described below.

#### Landholder Copy of the Application

In accordance with Section 30 of the *Regional Planning Interests Act 2014* and Schedule 5 of the *Regional Planning Interests Regulation 2014*, a copy of the application will be given to the landowner within 5 business days after the application is made.

#### **Referable Application**

In accordance with Section 12(2) of the *Regional Planning Interests Regulation 2014*, the application is referrable to the Department of Environment and Heritage Protection (DEHP) and the Department of Natural Resources and Mines (DNRM).



# 2. Proposed Activities

Santos Limited proposes to undertake the following resource activities on Lot 1 SP209773 within the Channel Country SEA (Figure 1):

- 1. Construction of one access track.
- 2. Construction of one conventional petroleum well.
- 3. Construction of one above-ground pipeline.
- 4. Use of an existing borrow pit.

The proposed disturbance associated with the above is provided in Table 1.

Proposed Infrastructure	Length	Proposed Disturbance
Access Track	0.3 km	0.3 ha
Conventional petroleum well	N/A	0.4 ha
Above-ground pipeline	0.04 km	N/A <sup>1</sup>
Borrow pit	N/A	1.3 ha
	·	2.0 ha

#### Table 1: Proposed disturbance

Descriptions of the above resource activities are provided below with definitions provided in Appendix A.

# 2.1. Access track

An access track would be required to provide drilling equipment access to the proposed conventional petroleum well site and for ongoing operational access (Figure 1). Existing access tracks would be utilised to minimise the required length of proposed access track.

The proposed access track would be up to 6 m wide and constructed by lightly grading the route and capping the surface with clay or similar locally available borrow pit material. The proposed access track is not designed to be used during wet weather conditions and will therefore not be constructed to any flood immunity. This will allow the passage of surface water across the access track keeping with existing hydrology of the area. However, it is noted that the proposed access track would be located outside of the flood area for all available mapped flood extents (1989, 1990, 1997, 2000, 2004, 2006 and 2010 flood extents) and do not intersect any watercourses.

# 2.2. Conventional Petroleum Well

A drilling pad would be constructed to accommodate modular drilling and ancillary equipment including a derrick, power generators, pipe handling equipment, tanks, drilling sumps, flares, and office areas (Figure 1). The layout of a typical drilling pad is provided in Appendix B. The proposed disturbance required for the drilling pad has been minimised to approximately 0.4 ha (cf. up to approximately 1.4

<sup>&</sup>lt;sup>1</sup> The proposed above-ground pipeline would be located entirely within the disturbance area for the proposed drilling pad and an adjacent existing drilling pad



ha for a typical standalone drilling pad) by utilising areas previously disturbed for an existing access track turnaround and an adjacent drilling pad.

Once the drilling rig is in place on the well pad, drilling will be undertaken for approximately 8 days. Drilling fluid will be continuously circulated down the drill pipe and back to the surface equipment to balance underground pressure (if required), cool the drill bit and flush out rock cuttings. A drilling sump with an operating volume of approximately 300 kL would be used to contain drilling fluids. Following the completion of drilling, the rig would be dismantled and transported from site and partial rehabilitation would be commenced including:

- removing drilling fluids from the drilling sump;
- backfilling the drilling sump; and
- partial ripping and respreading of topsoil and rootstock on lease areas to promote revegetation.

Drilling would be undertaken in accordance with the *Water Bore Drillers' Licensing Handbook* (Department of Natural Resources and Mines, 2016) prescribed under the *Water Act 2000*, and the minimum standards and good industry practice provided by *Minimum Construction Requirements for Water Bores in Australia* (Australian Government National Water Commission, 2012), including the isolation of overburden formations with steel surface casing, steel production casing, and cement.

# 2.3. Above-ground Pipeline

A proposed above-ground pipeline would be constructed entirely within the area of the proposed drilling pad and an adjacent existing drilling pad, to connect the proposed conventional petroleum well to the existing pipeline gathering network. Up to 100 mm diameter above-ground steel pipeline sections would transported and temporarily stored along the proposed pipeline route prior to joining together the tubing connections of each pipe section. The proposed pipeline would be raised approximately 200 mm above ground level on prefabricated supports located along the proposed pipeline route. Details of prefabricated supports are provided in Appendix C.

# 2.4. Existing Borrow Pit

An existing borrow pit is proposed to be used to provide a source of material required to construct a stable and supportive surface for the proposed drilling pad and access track. The area of the existing borrow pit would be increased by up to approximately 1.3 ha to provide the additional construction materials while minimising the slope of batters within the borrow pit. Erosion within the borrow pit is controlled through construction of diversion banks around the perimeter of the borrow pit to exclude surface water flow and maintaining the existing side batters at a slope of approximately 3:1. Batters of the entrance / exit to the borrow pit are maintained at a slope of approximately 7:1.

The borrow pit will be progressively restored following extraction by returning overburden and ripping the floor and sides of the borrow pit to a minimum depth of 500 mm generally along the contour (Figure 2) to further minimise erosion and promote revegetation. Stockpiled topsoil and vegetation will then be respread to a uniform depth over the entire area from which it was removed. The sides and floor of the pit will be graded to give a contoured finish, consistent with adjacent undisturbed land.





Insert Figure 1







Figure 2: Example borrow pit ripping for rehabilitation





# 3. Environmental attributes

Section 7 of the Regional Planning Interests Regulation 2014 prescribes the following environmental attributes relevant to the Channel Country SEA:

(a) the natural hydrologic processes of the area characterised by-

(i) natural, unrestricted flows in and along stream channels and the channel network in the area; and

(ii) overflow from stream channels and the channel network onto the flood plains of the area, or the other way; and

(iii) natural flow paths of water across flood plains connecting waterholes, lakes and wetlands in the area; and

(iv) groundwater sources, including the Great Artesian Basin and springs, that support waterhole persistence and ecosystems in the area;

(b) the natural water quality in the stream channels and aquifers and on flood plains in the area;

(c) the beneficial flooding of land that supports flood plain grazing and ecological processes in the area.

The RPI Act Guideline 05/14 summarises the above attributes to broadly relate to:

- Riparian process.
- Wildlife corridors.
- Water quality.
- Hydrologic processes.
- Geomorphic processes.
- Beneficial flooding.

The relevance of the above environmental attributes to the proposed activities is described below.

# 3.1. Riparian process

As shown on Figures 3 and 4, the proposed activities would be located approximately 150 m from the closest watercourse / riparian zone and RE containing riparian vegetation; RE 5.3.2 consisting of *Eucalyptus camaldulensis*  $\pm$  *E. coolabah* open woodland on levees and banks of drainage lines. There are no known groundwater sources in the area, including the Great Artesian Basin and springs, that support waterhole persistence and ecosystems.

The proposed activities would be undertaken wholly within the regional ecosystems (REs) 5.6.4 / 5.3.16a consisting of *Atalaya hemiglauca*  $\pm$  *Acacia aneura*  $\pm$  *Acacia spp.*  $\pm$  *Corymbia terminalis* tall shrubland on sand dunes (5.6.4) and *Eragrostis australasica* sparse tussock grassland on alluvial plains and clay pans between dunes (5.3.16a). At it's closest point, the proposed access track would be constructed approximately 30m from RE 5.3.22a consisting of sparse herbland on clay pans and lakes. These REs are not known to include any riparian vegetation.

# 3.2. Wildlife corridors

The proposed activities would be located in an area of minimal wildlife corridors due to the negligiblepoor connectivity within REs 5.6.4 and 5.3.16a consisting of sparse tussock grasslands and shrubland on sand dunes as shown on Figure 4.





Insert Figure 3





Insert Figure 4





# 3.3. Water quality

#### Surface Water

The proposed activities are wholly located within the Cooper Creek basin. Historical (1965-2016) water quality data from the QLD Government's Cooper Creek gauging station 003103A is summarised in Table 2.

Parameter	Average Value
Conductivity @ 25°C	345 µS/cm
Turbidity	512 NTU
рН	7.4
Total Nitrogen	1.4 mg/L
Total Phosphorus as P	0.4 mg/L
Sodium as Na	44.6 mg/L
Magnesium as Mg	7.4 mg/L
Chloride as Cl	62.6 mg/L
Fluoride as F	0.2 mg/L

#### Table 2: Cooper Creek surface water quality (1956-2016)

#### Groundwater

Shallow groundwater is generally found with the Quaternary and Tertiary alluvium formations associated with the very flat structures of flood plains and is absent where the Winton Formation occasionally outcrops. Groundwater from Tertiary sediments and the Winton Formation are characterised by a higher proportion of sodium and magnesium and is generally not suitable for irrigation given its high sodium hazard and very high salinity hazard<sup>2</sup>.

There are no known groundwater sources, including the Great Artesian Basin and springs, that support waterhole persistence and ecosystems in the area.

# 3.4. Hydrologic processes

#### Regional

Topography is limited to low undulating topography between the drainage channel system. The Channel Country is characterised by vast flat-lying, braided, flood and alluvial plains surrounded by gravel or gibber plains, dunefields and low ranges. The low resistant hills and tablelands are remnants of the flat-lying Cretaceous sediments.

The drainage system is dominated by the Cooper Creek Basin draining towards Lake Eyre. During periods of high rainfall, the flat topography and drainage channel system becomes a largely flooded plain with water flow concentrating where Cooper Creek crosses the QLD-SA border. The Cooper Creek system catchment covers an area of approximately 300,000 km<sup>2</sup>. Generally, Copper Creek streamflow is confined to the main channels, but every 3-4 years, flows are sufficient to inundate parts

<sup>&</sup>lt;sup>2</sup> Golder Associates 2013 Underground Water Impact Report For Santos Cooper Basin Oil & Gas Fields, SW QLD



of the Cooper floodplain via a network of tributary channels. During extended periods of no flow, the Copper Creek contracts to a series of waterholes<sup>1</sup>.

#### Local

The proposed activities are located outside of the extent of the flood area for all available mapped flood extents (1989, 1990, 1997, 2000, 2004, 2006 and 2010 flood extents) and is dominated by highly permeable sands with a typically low runoff coefficient. Notwithstanding, the area of the proposed activities would experience intermittent surface water flows during storm events, causing localised ponding of surface water. At its closest point, the proposed access track is located approximately 30 m from an arid / semi-arid non-floodplain wetland that would experience ponding of water in response to rainfall events, followed by extended periods of no surface water<sup>3</sup>.

# 3.5. Geomorphic processes

#### Regional

Surface geology is dominated by Quaternary alluvium deposits associated with flood plains, with consolidated Tertiary sediments or Winton Formation on the higher ground. Cooper Creek is a large sedimentary sump accreting over a vast floodplain<sup>4</sup>.

#### Local

Surface geology at the location of the proposed activities solely consists of mapping unit Qs/d summarised as "well sorted fine to medium quartz sand; dunes, sandplain with dunes"<sup>5</sup>. These Quaternary materials are subject to ongoing transport processes. However, the typically minimal gradient of the Cooper Creek floodplain (approximately 10cm / km)<sup>2</sup> and location of the proposed activities outside of the extent of the flood area for all available mapped flood extents (1989, 1990, 1997, 2000, 2004, 2006 and 2010 flood extents) would limit significant short-term geomorphic change.

# 3.6. Beneficial flooding

The proposed activities are located outside of the flood area for all available mapped flood extents (1989, 1990, 1997, 2000, 2004, 2006 and 2010 flood extents) and is dominated by permeable sands with a typically low runoff coefficient. Notwithstanding, the area of the proposed activities would experience intermittent surface water flows during storm events, causing shallow ponding of surface water on nearby clay pans<sup>1</sup>.

# 3.7. Climate

The Channel Country SEA is located in an arid to semi-arid region of central Australia where the average rainfall is low. Seasons in the area are characterised by dry, hot summers and short, very dry winters as shown on Figure 5.

<sup>&</sup>lt;sup>3</sup> Department of Environment and Heritage Protection (2017), *Queensland wetland classification method, WetlandInfo,* https://wetlandinfo.ehp.qld.gov.au/wetlands/what-are-wetlands/definitions-classification/classification-systemsbackground/typology.html

<sup>&</sup>lt;sup>4</sup> Maroulis, J (undated) Channel Country landforms and the processes that shape them. University of Southern QLD Faculty of Education/Australian Centre for Sustainable Catchments.

<sup>&</sup>lt;sup>5</sup> Qld Department of Natural Resources and Mines (2015) *Detailed surface geology – Queensland* 





#### Figure 5 – Monthly average rainfall and temperature for Windorah Station (1931-2012)<sup>6</sup>

### 3.8. Land use

The proposed activities are located on Naryilco Station, a 7,510 km<sup>2</sup> pastoral lease that operates as a cattle station with a capacity of up to 12,000 head of cattle<sup>7</sup>.

<sup>&</sup>lt;sup>6</sup> Golder Associates (2013) Underground Water Impact Report For Santos Cooper Basin Oil & Gas Fields, SW QLD

<sup>&</sup>lt;sup>7</sup> S. Kidman & Co Ltd (2017) Naryilco, http://www.kidman.com.au/properties/13/naryilco





# 4. Potential impacts on environmental attributes

# 4.1. Riparian process

The proposed activities would not impact riparian processes as they would be located approximately 150m from the closest riparian zone / watercourse and RE containing riparian vegetation. Accordingly, the proposed activities would not cause a widespread or irreversible impact on riparian processes within the Channel Country SEA.

# 4.2. Wildlife corridors

The proposed activities would not impact wildlife corridors due to the negligible-poor connectivity within REs 5.6.4 and 5.3.16a consisting of sparse tussock grasslands and shrubland on sand dunes. Accordingly, the proposed activities would not cause a widespread or irreversible impact on wildlife corridors within the Channel Country SEA.

# 4.3. Water quality

Construction for the proposed activities is scheduled to be completed outside of the wet season and would be undertaken approximately 150m from the closest watercourse. Notwithstanding the large distance to the closest watercourse and limited sediment available in the area of the proposed activities dominated by fine to medium quartz sand, erosion controls would be implemented in accordance with EA EPPG0383513. Following the completion of petroleum activities, disturbed land would be rehabilitated to pre-activity condition. Petroleum wells would be completed with steel surface casing, steel production casing, and cement to isolate the well from aquifers, including the Great Artesian Basin, and other geological units.

Given the location and nature of the proposed activities, and implementation of the above management measures, the proposed activities would not cause a widespread or irreversible impact on water quality within the Channel Country SEA.

# 4.4. Hydrologic processes

Construction for the proposed activities is scheduled to be completed outside of the wet season and would be undertaken approximately 150m from the closest watercourse. At its closest point, the proposed access track would be located approximately 30m from an arid / semi-arid non-floodplain wetland. The proposed activities would be located outside of the extent of the flood area for all available mapped flood extents (1989, 1990, 1997, 2000, 2004, 2006 and 2010 flood extents). Notwithstanding, the area of the proposed activities would experience localised ponding of surface water during heavy rainfall, the frequency and duration of such ponding would be relatively minimal outside of the wet season, and given that the area is dominated by highly permeable sands with a very low runoff coefficient.

The proposed above-ground pipeline would be raised approximately 200 mm above ground level on prefabricated supports to avoid impacts to the existing surface hydrology. Similarly, the proposed access track would be not be constructed with flood immunity, allowing the natural passage of surface water to avoid impacts to the existing surface hydrology.

The proposed use of the borrow pit and construction of well pad would include the construction of berms to divert overland flow and minimise potential erosion. However, minimal overland flow would be diverted due to the low runoff coefficient of the surrounding permeable sands and the small footprint of these disturbances (approximately 1.7 ha) relative to the sub-catchment area. Petroleum wells would be completed with steel surface casing, steel production casing, and cement to isolate the well from aquifers, including the Great Artesian Basin, and other geological units.



Following the completion of petroleum activities, disturbed land would be rehabilitated to pre-activity condition. Given the location and nature of the proposed activities, and implementation of the above management measures, there would be no widespread or irreversible impacts on the hydrologic processes within the Channel Country SEA.

# 4.5. Geomorphic processes

The proposed activities would be located away from the sources / areas of significant geomorphic processes; approximately 150m from the closest watercourse and outside of the extent of the flood area for all available mapped flood extents (1989, 1990, 1997, 2000, 2004, 2006 and 2010 flood extents). Following the completion of petroleum activities, disturbed land would be rehabilitated to preactivity condition. Given the distance to these major sources of geomorphic change and the surface geology at the location of the proposed activities, it is not envisaged that there would be widespread or irreversible impacts on the geomorphic processes within the Channel Country SEA.

# 4.6. Beneficial flooding

The proposed activities would be located outside of the extent of the flood area for all available mapped flood extents (1989, 1990, 1997, 2000, 2004, 2006 and 2010 flood extents) and not significantly divert or impound surface water flows contributing to flood flows. Following the completion of petroleum activities, disturbed land would be rehabilitated to pre-activity condition. Accordingly, it is not envisaged that there would be widespread or irreversible impacts on beneficial flooding within the Channel Country SEA.

# 4.7. *Regional Planning Interests Regulation 2014* assessment criteria

Part 5, Schedule 2 of the *Regional Planning Interests Regulation 2014* provides criteria for assessment by agencies. In accordance with Section 14(3) of the *Regional Planning Interests Regulation 2014*, if the application demonstrates compliance with either of the prescribed solutions stated in Part 5, Schedule 2, the proposed activity will meet the required outcome for the regional interest. Critically, the application demonstrates that the prescribed solution provided in s15(1)(a) will be met as the proposed activities are located in a section of the SEA that is largely devoid of relevant environmental attributes. The RPI Guideline 05/14 *Carrying out resource activities and regulated activities in a Strategic Environmental Area* provides examples of how activities would meet the s15(1)(a) prescribed solution, including the following:

RPI Guideline Example – s15(1)(a) prescribed solution		Relevance to the application
The activity will not have any direct or indirect release of contaminants to waters including groundwater from the operation of the activity.	•	The proposed activities would not include the direct or indirect release of contaminants to waters
The activity will not result in any potential or actual adverse effect on a wetland, lake, watercourse or spring.	•	The proposed activities would be carried out approximately 150m from any lake, watercourse or spring. At its closest point, the proposed access track would be located approximately 30m from an arid / semi-arid non- floodplain wetland. This access track would be not be constructed with flood immunity, allowing the natural passage of surface water to avoid impacts to the existing surface hydrology. Following the completion of petroleum activities, disturbed land would be rehabilitated to pre-activity condition



RPI Guideline Example – s15(1)(a) prescribed solution		Relevance to the application
Water storage dams are located off stream or not in major watercourses.	1	The proposed activities do not include the storage of water in dams.
Undertaking construction activities in times when there is no water present.	1	The proposed activities would be located outside of the extent of the flood area for all available mapped flood extents (1989, 1990, 1997, 2000, 2004, 2006 and 2010 flood extents), and would not be undertaken when surface water is present.
The activity will not inhibit the overflow or flow of surface water in or out of the wetland or watercourse (e.g. wells on stilts) post-construction.	•	At its closest point, the proposed access track would be located approximately 30 m from an arid / semi-arid non- floodplain wetland. This access track would be not be constructed with flood immunity, allowing the natural passage of surface water to avoid impacts to the existing surface hydrology. Following the completion of petroleum activities, disturbed land would be rehabilitated to pre-activity condition. Above-ground pipelines would be raised approximately 200 mm above ground level on prefabricated supports to avoid impacts to the existing surface hydrology.
Operation of the activity will not result in actual or potential adverse effects on groundwater.	•	Operation of the proposed activities do not include the direct or indirect discharge of contaminants to groundwater. The conventional petroleum well would be completed with steel surface casing, steel production casing, and cement to isolate the well from aquifers, including the Great Artesian Basin, and other geological units. Following the completion of petroleum activities, disturbed land would be rehabilitated to pre-activity condition
The activity will not result in the clearing of native vegetation within or adjoining watercourses, lakes, wetlands or springs	•	The proposed activities would not include the clearing of native vegetation within or adjoining watercourses, lakes, wetlands or springs. Following the completion of petroleum activities, disturbed land would be rehabilitated to pre-activity condition.
Water storage dams are located off stream or not in major watercourses.	1	The proposed activities would be located approximately 150 m from watercourses and do not include the construction or operation of water storage dams.
The activity is separated from wildlife corridors by an appropriate buffer (e.g. 200 metres) and will not result in actual or potential adverse effects onto the integrity or functioning of the corridor.	•	There are no known wildlife corridors within 200 m of the proposed activities.



The application also demonstrates the prescribed solution provided in s15(1)(b) will also be met.

Part 5, Schedule 2 of the Regional Planning Interests Regulation 2014		Relevance to the application
<b>14 Required outcome</b> The activity will not result in a widespread or irreversible impact on an environmental attribute of a strategic environmental area.	•	The proposed activities would not result in a widespread or irreversible impact on each of the environmental attributes as provided in Sections 4.1-4.6. Notwithstanding, the application also demonstrates that the required outcome would be achieved as the proposed activities would be undertaken in accordance with the below prescribed solution.
<b>15 Prescribed solution</b> (1) The application demonstrates either— (a) the activity will not, and is not likely to, have a direct or indirect impact on an environmental attribute of the strategic environmental area; or	•	The proposed activities are located in a section of the SEA that is largely devoid of relevant environmental attributes as described in Section 4.1-4.6. Accordingly, the proposed activities are not likely to have a measurable impact on the environmental attributes of the SEA, especially given the management/mitigation measures described throughout Section 4.
(b) all of the following— (i) if the activity is being carried out in a designated precinct in the strategic environmental area—the activity is not an unacceptable use for the precinct;	•	The proposed activities do not include any of the unacceptable uses prescribed by Section 15(2) of the <i>Regional Planning Interests Regulation 2014</i> .
(ii) the construction and operation footprint of the activity on the environmental attribute is minimised to the greatest extent possible;	•	Existing access tracks, pipelines, drillings pads and borrow pits would be utilised to minimise the disturbance footprint for the proposed construction activities. The disturbance required for construction of the access track (up to a 10 m right-of-way) is the minimum trafficable and/or safe disturbance required to facilitate the proposed activities. The proposed disturbance required for the drilling pad has been minimised to approximately 0.4 ha (cf. up to approximately 1.4 ha for a typical standalone drilling pad) by utilising areas previously disturbed for an existing access track turnaround and an adjacent drilling pad. The proposed pipeline would be constructed entirely within the disturbance area of proposed drilling pad and existing adjacent drilling pad. An existing camp located outside of PL 301 will be utilised to avoid disturbance associated with construction of additional camps.
(iii) the activity does not compromise the preservation of the environmental attribute within the strategic environmental area;	•	The proposed activities are located in a section of the SEA that is largely devoid of relevant environmental attributes as described in Section 4.1-4.6. Accordingly, the proposed activities would not compromise the preservation of relevant environmental attributes within the strategic environmental area, especially given the management/mitigation measures described throughout Section 4.



Part 5, Schedule 2 of the <i>Regional</i> <i>Planning Interests Regulation</i> 2014		Relevance to the application
(iv) if the activity is to be carried out in a strategic environmental area identified in a regional plan—the activity will contribute to the regional outcomes, and be consistent with the regional policies, stated in the regional plan.	•	The South West Regional Plan does not identify the Channel Country Strategic Environmental Area.

The application also demonstrates the proposed use of a temporary drilling sump does not constitute a *regulated activity* as defined by the *Regional Planning Interests Regulation 2014*.

s11(3) of the Regional Planning Interests Regulation 2014		Relevance to the application
Water storage (dam) is storing water using a dam, other than storing water on land to be used only for any or all of the following purposes— (a) to meet the domestic water needs of the occupants of the land; (b) to water the stock that is usually grazed on the land; (c) to water stock that is travelling on a stock route on or near the land.	•	N/A – the application does not propose to store water in a dam; the application proposes to temporarily store drilling fluids in a drill sump designed to exclude overland flow. As shown in Appendix B, the sump is designed to exclude overland flow and avoid the impounding of water.
Schedule 6 of the Regional Planning Interests Regulation 2014		Relevance to the application
dam— (a) means the following— (i) a barrier, whether permanent or temporary, that does, could or would impound water;	1	N/A – the sump would not impound water. As shown in Appendix B, the sump is designed to exclude overland flow
<ul> <li>(ii) the storage area created by the barrier;</li> <li>(iii) an embankment or other structure that is associated with the barrier and controls the flow of water; but</li> </ul>	•	N/A – the sump would not constitute a barrier for the storage of water.
(b) does not include a water tank, including a rainwater tank, constructed of steel, concrete, fibreglass, plastic or similar material.	1	N/A – the proposed sump does not constitute a water tank



# Appendix A

### Definitions

Activity	Definition
Well pad / drilling pad	An area of up to approximately 1.4 hectares (e.g. approximately 120 m x 120 m) used to provide a stable platform for the temporary storage and operation of drilling equipment (e.g. drilling rig) required for construction and subsequent operation of a petroleum well.
Above-ground pipeline	A cleared linear alignment approximately 3 m wide required to facilitate construction of petroleum pipeline
Access track	A cleared track approximately 6 m in width constructed of earthen material to facilitate access of drilling equipment to well pads.
Borrow pit	A source of shallow earthern material excavated to provide a construction material for well pads and access tracks.





Appendix B

Proposed Drilling Pad Layout





Appendix C

Prefabricated Above-Ground Pipeline Support