

gorgon and jansz-io drilling, completions and well maintenance

information sheet, december 2023



figure 1. location of the Gorgon and Jansz-Lo gas fields

overview

Chevron Australia, on behalf of the Gorgon Joint Venture, operates the Gorgon Project (Gorgon) in Western Australia (WA).

Gorgon offshore facilities include 29 production wells in the Gorgon and Jansz-Lo gas fields. The produced gas from the wells is gathered at several subsea structures installed at each field and transported via pipelines to the Gorgon Gas Facility on Barrow Island.

From the facility, gas is processed for export as liquefied natural gas (LNG) or piped to the mainland for WA domestic gas users.

We are now undertaking a routine revision of the *Gorgon and Jansz-Lo Drilling, Completions and Well Maintenance Environment Plan (EP)* as required by Commonwealth regulations to ensure it remains current.

The EP accounts for well maintenance activities, as well as contingency for re-drilling of existing production wells and plug and abandonment activities.

This information is intended to assist 'relevant persons' to make an informed assessment of our activities and to provide input and feedback to enhance our EP.

Relevant persons are those whose functions, interests or activities may be affected by our activities. This includes Traditional Owners and Custodians' spiritual and cultural connection to land and sea Country, commercial and recreational fishing, tourism, individuals or groups in local communities.

location and water depth

The Gorgon gas field is located within production licences WA-37-L and WA-38-L, 130 kilometres off the north-west coast of WA, and 65 kilometres north-west of Barrow Island in water depths of approximately 200 metres.

The Jansz-lo gas fields are located within production licences WA-36-L, WA-39-L and WA-40-L, approximately 200 kilometres off the north-west coast of WA in water depths of approximately 1,350 metres.

All activities will occur within an operational area that extends to a 5-kilometre radius around the well locations shown in Table 1.

Table 1: production well coordinates and approximate water depths

wells	latitude (wgs 84)	longitude (wgs 84)	water depth (m)
<i>gorgon field</i>			
GOR-1A	20°24'29.13" S	114°50'56.00" E	216 m
GOR-1B	20°24'27.69" S	114°50'57.03" E	216 m
GOR-1C	20°24'28.37" S	114°50'56.84" E	215 m
GOR-1D	20°24'28.61" S	114°50'57.73" E	215 m
GOR-1E	20°24'29.17" S	114°50'58.31" E	215 m
GOR-1F	20°24'30.02" S	114°50'58.54" E	215 m
GOR-1G	20°24'29.87" S	114°50'59.26" E	216 m
GOR-2B	20°27'36.54" S	114°50'31.39" E	199 m
GOR-2C	20°27'37.10" S	114°50'31.96" E	199 m
GOR-3B	20°31'11.28" S	114°49'25.85" E	199 m
GOR-3C	20°31'11.84" S	114°49'26.42" E	199 m
GOR-4C	20°34'38.62" S	114°46'38.40" E	250 m
GOR-4D	20°34'38.34" S	114°46'37.54" E	250 m
GOR-4E	20°34'37.79" S	114°46'36.95" E	250 m
GOR-4F	20°34'36.94" S	114°46'36.39" E	250 m

wells	latitude (wgs 84)	longitude (wgs 84)	water depth (m)
<i>jansz-lo field</i>			
JZI-1B	19°49'36.51" S	114°34'13.94" E	1338 m
JZI-1C	19°49'36.40" S	114°34'12.96" E	1338 m
JZI-1D	19°49'35.44" S	114°34'12.47" E	1338 m
JZI-1E	19°49'34.62" S	114°34'12.95" E	1338 m
JZI-1F	19°49'33.97" S	114°34'12.93" E	1338 m
JZI-2B	19°47'28.31" S	114°38'40.03" E	1349 m
JZI-2C	19°47'28.40" S	114°38'41.00" E	1349 m
JZI-2D	19°47'29.36" S	114°38'41.54" E	1349 m
JZI-2E	19°47'30.17" S	114°38'41.01" E	1349 m
JZI-2F	19°47'30.83" S	114°38'41.04" E	1349 m
JZI-3C	19°51'11.42" S	114°30'54.64" E	1315 m
JZI-3D	19°51'10.40" S	114°30'54.33" E	1315 m
JZI-3E	19°51'09.69" S	114°30'54.97" E	1315 m
JZI-3F	19°51'09.04" S	114°30'55.05" E	1315 m

activity summary

In 2024, Chevron Australia plans to undertake well intervention activities on four wells in the Gorgon and Jansz-lo gas fields.

The EP will also account for activities that are not currently planned but may occur including re-drilling of existing wells, other well interventions, well maintenance and repairs, data acquisition and plug and abandonment.

A mobile offshore drilling unit (MODU) or intervention vessel and up to three support vessels will be used to complete these activities.

schedule and duration

Drilling, completions and well maintenance activities may be required throughout the life of the Gorgon offshore facilities.

These activities may be undertaken at any time of year and would take approximately 65 days to complete.

marine exclusion zone

A 500-metre safety exclusion zone will be requested around the MODU or intervention vessel for the duration of the activities.

environment that may be affected (EMBA)

As part of our environmental assessment and consultation process, we create an EMBA map to demonstrate the largest geographical area that may be impacted by planned events or unplanned emergency events.

Figure 2 shows the operational area for the proposed activities, as well as the broader EMBA which is based on a worst-case environmental scenario, which in this case is an unplanned release event from a loss of well control.

The EMBA has been defined through combining 300 simulations of loss of well control under three different hydrological and meteorological conditions. This means that in the highly unlikely event an unplanned release does occur, the entire EMBA would not be impacted.

If there were an unplanned release, cultural, ecological and social values and sensitivities may be exposed to hydrocarbons.

Table 2 summarises the potential impacts/risks and proposed controls to manage these to levels that are acceptable and as low as reasonably practicable (ALARP).

approvals process

Petroleum activities in Commonwealth waters are regulated by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

Before petroleum activities can take place, Chevron Australia must develop an EP which will be assessed by NOPSEMA in accordance with the requirements of the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations (2009)*.

These regulations require us to consult with relevant persons whose functions, interests and activities may be affected by the petroleum activity.

Following consultation, we will develop an EP which will:

- describe the environment in which operations are planned to take place;
- include an assessment of environmental impacts and risks arising from the activities;
- identify control measures to manage the potential impacts and risks to levels that are acceptable and ALARP; and
- outline how Chevron Australia has engaged with relevant persons and how their feedback has been considered and addressed.

Before activities can commence, the EP must be assessed and accepted by NOPSEMA.

your input

We are now seeking your feedback and input if you consider your functions, interests, or activities may be affected based on the information summarised in Table 2. We encourage you to provide details of any additional aspects or control measures or to ask for further information or consultation.

You can contact us at:

- 1800 225 195
- australia.chevron.com/feedback
- or scan the QR code



If a relevant person requests their feedback be treated as sensitive and confidential, Chevron Australia will make this known to NOPSEMA.

what's next?

The feedback we receive during consultation will be used to inform and enhance the EP before it is submitted to NOPSEMA for assessment.

We commit to keeping you informed and providing responses to any relevant person who so requests.

privacy notice

If you choose to provide feedback, Chevron Australia will collect your name and contact details, for the purposes of maintaining contact with you and including your feedback in our submission to NOPSEMA. Provision of this information is purely voluntary, however if you choose not to provide it, we may not be able to contact you in the future.

Chevron may transfer your information to NOPSEMA if required and, if you do not identify it as sensitive, to other Chevron affiliates including our head office in the United States. For further information regarding how we protect your personal information, and your rights, please refer to our privacy notice at australia.chevron.com/privacy.

Table 2: summary of impacts/risks and key proposed controls

aspect	potential interaction (impacts/risks)	proposed control measures
planned activities		
<p>Physical presence of mobile offshore drilling unit (MODU), wellhead, other subsea equipment and vessels within the Operational Area (OA)</p>	<ul style="list-style-type: none"> • Presence of MODU, wellhead, other subsea equipment and vessels within the OA has the potential to interact and disrupt other marine users • Presence of MODU, wellhead, other subsea equipment and vessels within the OA has the potential to interact and disrupt marine fauna 	<ul style="list-style-type: none"> • Marine safety information to be issued via AUSCOAST and/or Notice to Mariners where required prior to commencing the petroleum activity • Relevant parties will be advised of the commencement of activities. • Vessels will meet the crew competency, navigation equipment, and radar requirements of the <i>Chevron Corporation Marine Standard</i> • In accordance with <i>EPBC Regulations 2000 – Part 8 Division 8.1 – Interacting with cetaceans</i>, vessels will implement caution and no approach zones, where practicable
<p>Seabed disturbance from anchors used for mooring, drilling and well intervention activities and temporary parking of equipment</p>	<ul style="list-style-type: none"> • Seabed disturbance may result in alteration of benthic marine habitats and localised and temporary reduction in water quality 	<ul style="list-style-type: none"> • Mooring analysis will be undertaken before MODU anchoring • Mooring line tension will be monitored during the petroleum activity • Vessels will meet the crew competency, navigation equipment, and radar requirements of the <i>Chevron Corporation Marine Standard</i>
<p>Light emissions</p>	<ul style="list-style-type: none"> • Navigation and operational lighting from MODU and vessels as well as flaring activities within the OA may result in a localised and temporary change in ambient light • Change in ambient light may result in a temporary attractant for light-sensitive species 	<ul style="list-style-type: none"> • Vessels will meet lighting requirements of the <i>Chevron Corporation Marine Standard</i> • MODU and support vessels working at night will be required to reduce lighting to the minimum required for safe operations
<p>Air emissions</p>	<ul style="list-style-type: none"> • Combustion of fuel from MODU, vessels and helicopters as well as venting and flaring of hydrocarbons within the OA may result in a localised and temporary reduction in air quality and a contribution to the reduction of the global atmospheric carbon budget 	<ul style="list-style-type: none"> • Reduced sulfur content fuel will be used • Vessels will comply with the requirements of Marine Order 97 (MARPOL 73/78 Annex VI) in relation to air pollution
<p>Underwater sound from drilling activities, vessels and helicopter operations</p>	<ul style="list-style-type: none"> • Drilling activities, vessels and helicopter operations within the OA may result in localised and temporary change in ambient underwater sound • Change in ambient sound may result in behavioural disturbance, injury or auditory impairment to marine fauna 	<ul style="list-style-type: none"> • In accordance with <i>EPBC Regulations 2000 – Part 8 Division 8.1 – Interacting with cetacean</i>: <ul style="list-style-type: none"> • vessels will implement caution and no approach zones, where practicable • helicopters will not operate at a height lower than 1650 feet or within 500 m of a cetacean, where practicable • helicopters will not approach a cetacean from head on

Planned discharge from MODU and vessel operations

- Planned discharges from MODU and vessel operations may result in localised and temporary change in water quality
- Vessels will comply with the requirements of Marine Order 96 (MARPOL 73/78 Annex IV) in relation to sewage discharge
- Vessels will comply with the requirements of Marine Order 95 (MARPOL 73/78 Annex V) in relation to food waste discharge
- Vessels will comply with the requirements of Marine Order 91 (MARPOL 73/78 Annex I) in relation to oily bilge water discharges

Planned discharges from drilling and well interventions

- Planned discharges from drilling activities may result in localised and temporary reduction in water quality and alteration or smothering of benthic habitat
- A change in ambient water quality may result in indirect impacts to fauna arising from chemical toxicity
- Fluids planned for discharge are subject to the hazardous materials selection process as per *Chevron Australia's Hazardous Materials Management Procedure*
- Discharges of drilling fluids and cuttings will be managed in accordance with *Chevron Australia's Well Fluid Field Guidelines Offshore*
- Drilling and cementing procedures will be developed prior to commencement of the petroleum activity
- Heavy metals concentrations in stock barite will be consistent with relevant codes and standards
- Critical equipment will be maintained in accordance with manufacturers specifications

unplanned activities

Invasive marine pests

- Planned discharge of ballast water or the presence of biofouling on MODU or vessels may have the potential to result in the introduction of an invasive marine pest
- Vessels will meet the requirements of *Chevron Australia's Quarantine Procedure for Marine Vessels*
- Ballast water exchanges will be managed in accordance with the *Australian Ballast Water Management Requirements*
- Vessels greater than 400 GT with an antifoul coating are to maintain an up-to-date international antifouling coating certification in accordance with the *Protection of the Sea (Harmful Anti-fouling Systems) Act 2006* and/or relevant codes and standards
- Where required, vessel pre-arrival information will be reported through the Maritime Arrivals Reporting System as per the Commonwealth *Biosecurity Act 2015*

Release of waste

- MODU and vessel operations activities may result in an unplanned release of waste to environment causing marine pollution
- Vessels will comply with the requirements of Marine Order 95 (MARPOL 73/78 Annex V) in relation to managing waste (garbage) offshore

Minor loss of containment

- Unplanned release of hazardous material to the environment may result in indirect impacts to fauna arising from chemical toxicity
- Vessels will meet the requirements of the *Chevron Corporation Marine Standard*, including the pre-mobilisation inspections of equipment, couplings and secondary containment
- Bulk transfers of drilling fluids to be undertaken in accordance with *Chevron Australia's Well Fluid Field Guidelines Offshore*
- Critical equipment will be maintained in accordance with manufacturers specifications
- A permit system will be implemented to control the isolation of overboard drainage aboard the MODU
- Vessels will comply with the requirements of Marine Order 91 (MARPOL 73/78 Annex I) in relation to having an approved *Ship Oil Pollution Emergency Plan* in place.

Vessel collision event

A vessel collision event may occur as a result of a loss of Dynamic Positioning, navigational error or floundering due to weather:

- the potential environmental impacts associated with hydrocarbon exposures from a vessel collision event may result in marine pollution, smothering of subtidal and intertidal habitats, indirect impacts to fisheries, reduction in amenity (resulting in impacts to tourism and recreation) and changes to values and sensitivities of marine protected areas
- Vessels will meet the crew competency, navigation equipment, and radar requirements of the *Chevron Corporation Marine Standard*
- Notification to relevant agencies of activities and vessel movements to allow them to send warnings and/or notices to mariners prior to commencing activities
- Vessels will comply with the requirements of Marine Order 91 (MARPOL 73/78 Annex I) in relation to having an approved *Ship Oil Pollution Emergency Plan* in place
- Emergency response implemented in accordance with the response arrangements and strategies detailed in *Chevron Australia's Oil Pollution Emergency Plan*
- Where required, operational and scientific monitoring undertaken in accordance with *Chevron Australia's Operational and Scientific Monitoring Plan*

Loss of well control

An unplanned loss of effective well control may occur due to an unplanned hydrocarbon influx, breach of well fluids, or loss of hydrostatic barrier:

- the potential environmental impacts associated with hydrocarbon exposures from a loss of well control may result in marine pollution, smothering of subtidal and intertidal habitats, indirect impacts to fisheries, and reduction in amenity (resulting in impacts to tourism and recreation) and changes to values and sensitivities of marine protected areas
- A NOPSEMA-accepted *Well Operations Management Plan* will be in place prior to the commencement of the petroleum activity
- A blowout preventer will be installed and tested
- Certifications as required by *Chevron Australia's Wellsafe Standard Operating Procedure* will be in place prior to commencement of the petroleum activity
- Critical equipment will be maintained in accordance with manufacturers' specifications
- Emergency responses will be implemented in accordance with the *Source Control Emergency Response Plan* and the response arrangements and strategies detailed in *Chevron Australia's Oil Pollution Emergency Plan*
- Where required, operational and scientific monitoring undertaken in accordance with *Chevron Australia's Operational and Scientific Monitoring Plan*

emergency response

Planned discharges - chemical dispersant

- In the event of a worst-case spill event, chemical dispersant may be applied to support response objectives and minimise the potential environmental impacts. Chemical dispersant application has the potential to change ambient water quality resulting in marine pollution causing sublethal or lethal effects to marine fauna and/or subtidal or intertidal habitats
- Emergency responses will be implemented in accordance with the *Source Control Emergency Response Plan* and the response arrangements and strategies detailed in *Chevron Australia's Oil Pollution Emergency Plan*
- Where required, operational and scientific monitoring will be undertaken in accordance with *Chevron Australia's Operational and Scientific Monitoring Plan*

Ground disturbance - shoreline spill response

- In the event of a worst-case spill event, if shoreline is impacted, implementing shoreline clean-up techniques involves people and equipment, which may disturb shoreline habitat with subsequent impacts to fauna
- Where required, operational and scientific monitoring will be undertaken in accordance with *Chevron Australia's Operational and Scientific Monitoring Plan*

Physical presence—oiled wildlife response

- In the event of a worst-case spill event, if fauna is affected, the handling and treating of marine fauna will result in personnel interacting with marine fauna
- Where required, operational and scientific monitoring will be undertaken in accordance with *Chevron Australia's Operational and Scientific Monitoring Plan*

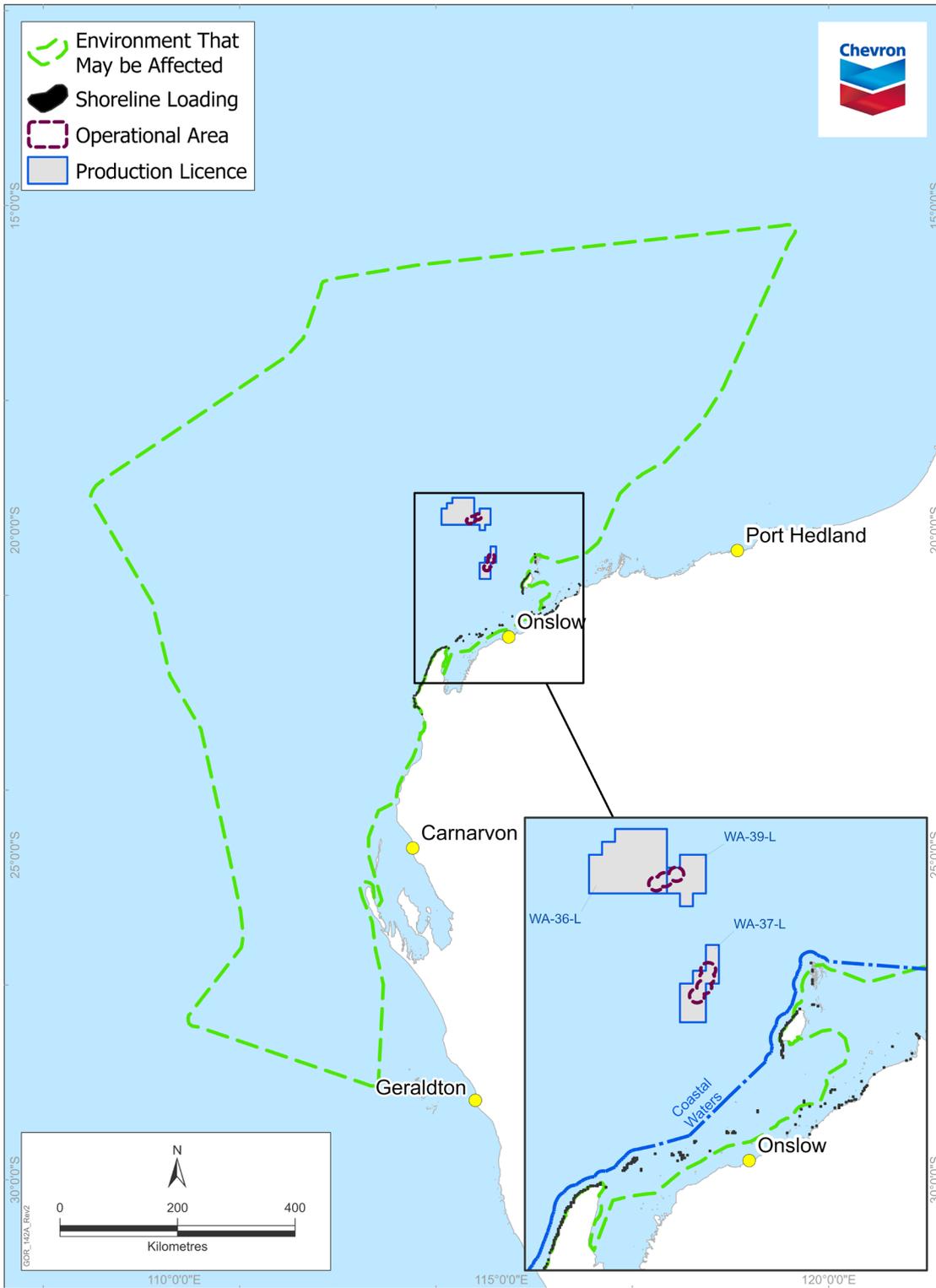


figure 2: gorgon and jansz-io drilling, completions and well maintenance EMBA map

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