

STAKEHOLDER CONSULTATION INFORMATION SHEET

WA-474-P, WA-70-R ABANDONED AND SUSPENDED WELLS ENVIRONMENT PLAN

CARNARVON BASIN, NORTH-WEST AUSTRALIA

ACTIVITY

Western Gas is planning to permanently leave *in situ* a total of four subsea wellheads associated with four abandoned exploration wells, namely Chester-2, Glencoe-2, Mentor-2 and Snapshot-1 in Petroleum Permits WA-70-R and WA-474-P.

Plugging and abandonment of these wells has already occurred, as described in the Government-accepted Well Operations Management Plan (WOMP) and Well Abandonment Reports for each well.

In addition, the Glenloth-1 well is to remain as a suspended well. Western Gas is proposing to undertake annual vessel-based wellhead survey activities on the suspended well, which is located in Petroleum Permit WA-70-R.

All wells are located approximately 180 km northwest of Onslow and 150 km north of Exmouth, Western Australia at water depths between 1,116 and 1,131 metres.

An Environment Plan for the proposed activities will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for assessment, covering the *in situ* abandoned wellheads, the suspended well, and the vessel-based inspection survey.

Western Gas is Operator and 100% owner of WA-474-P and WA-70-R.

Western Gas welcomes feedback from stakeholders whose functions, activities or interests may be impacted by activities outlined in this Information Sheet. Please provide feedback by close of business on 5 December 2022.



Activity location

SUSPENDED WELLHEAD SURVEY OVERVIEW

Wellhead name:	Glenloth-1
Petroleum Permit:	WA-70-R
Commencement date:	Annually
Approximate estimated duration:	Up to seven days, including contingencies
Approximate location:	20° 04' 23.9" S 113° 46' 46.258" E
Approximate water depth:	1,116.53 m MDSS
Infrastructure:	Wellhead – 98% steel, approx 3m x 3m
Operational area:	500-metre zone from the wellhead
Vessels:	Small utility vessel or similar
Distance to nearest town:	Approx. 150 km northwest of Exmouth
Distance to nearest marine park:	Approx. 70 km north of Gascoyne

PERMANENT ABANDONMENT OF WELLHEADS IN-SITU OVERVIEW

Wellhead name:	Chester-2	Glencoe-2H	Mentorc-2	Snapshot-1
Petroleum Permit:	WA-70-R	WA-70-R	WA-70-R	WA-474-P
Approximate duration:	Presence will be ongoing	Presence will be ongoing	Presence will be ongoing	Presence will be ongoing
Approximate locations:	20° 28' 48.528" S 113° 54' 20.136" E	20° 4' 57.23" S 113° 49' 55.4" E	20° 29' 0.344" S 113° 44' 22.35" E	19° 54' 49.451" S 113° 40' 31.074" E
Approximate water depth:	1,125 m MDSS	1,116 m MDSS	1,131 m MDSS	1,121 m MDSS
Infrastructure:	Wellhead – 98% steel, approx. 3 m x 3 m	Wellhead – 98% steel, approx. 3 m x 3 m	Wellhead – 98% steel, approx. 3 m x 3 m	Wellhead – 98% steel, approx. 3 m x 3 m
Distance to nearest town:	Approx. 170 km northwest of Exmouth	Approx. 220 km northwest of Exmouth	Approx. 180 km northwest of Exmouth	Approx. 230 km northwest of Exmouth
Distance to nearest marine park:	Approx. 30 km north of Gascoyne Marine Park	Approx. 70 km north of Gascoyne Marine Park	Approx. 25 km north of Gascoyne Marine Park	Approx. 88 km north of Gascoyne Marine Park

ACTIVITY DETAILS

Abandoned Wells

The presence of the four permanently abandoned wellheads in-situ will be ongoing and no further work will be required as part of proposed activities under the Environment Plan, as the integrity of the wells has been demonstrated through the WOMP and Well Abandonment process.

Suspended Well

Vessel-based surveys will be undertaken to inspect the Glenloth-1 well and assist with the assessment of decommissioning options.

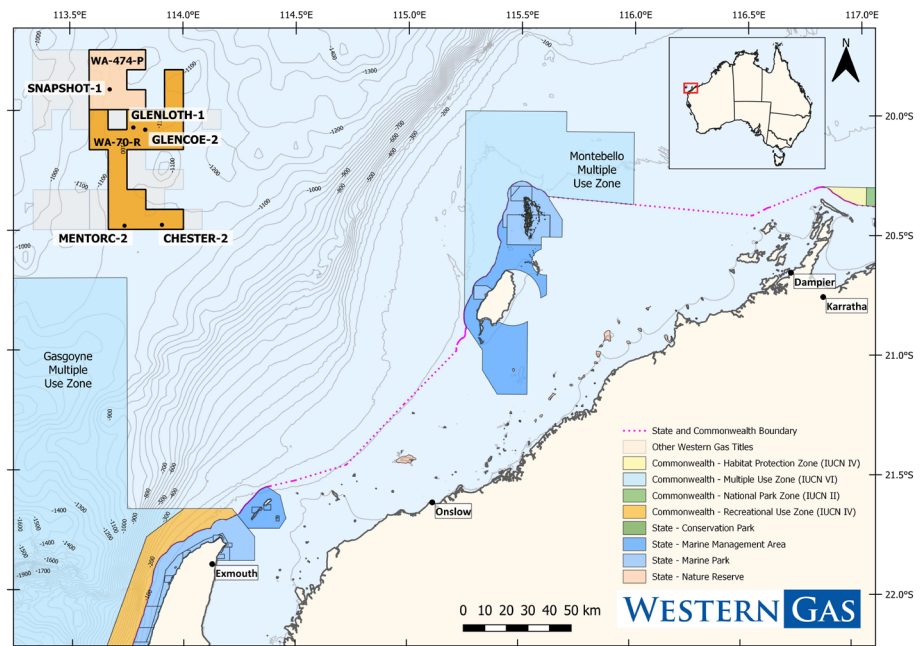
This survey will be undertaken annually from acceptance of the Environment Plan and may be undertaken at a time when Western Gas is performing other Petroleum Activities in the area.

The inspection survey will be undertaken using a remotely operated vehicle (ROV) deployed from a small utility vessel. The survey may take up to 7 days, including time for contingencies. The ROV inspection of the wellhead itself is expected to take approximately 4 hours.

To assist in locating the wellhead, the ROV will use various geophysical and hydrographic survey techniques such as Multibeam echo-sounder (MBES), Side-scan Sonar (SSS), Ultra-short Baseline System (USBL) and General Video Inspection (GVI).

At this time, the small utility vessel that will be used to undertake inspection survey activity has not been identified, however would typically be less than 30 m in length and support a crew of approximately 15 persons.

Vessels will be fuelled by marine diesel fuel, and there is no planned vessel refuelling to take place in the operational area. All vessel fuelling is proposed to take place within the nearest suitable harbour.



Activity location

ACTIVITY ASSESSMENT AND POTENTIAL IMPACTS

Western Gas has undertaken a comprehensive assessment of the four abandoned wellheads considering water depth, potential interaction with other marine users, and impacts and risks associated with the removal of the wellheads.

This assessment determined that leaving the wellheads *in situ* presented an equal or better environmental outcome compared to the regulatory base case of removing the wellheads.

Western Gas also considered potential impacts from the conduct of the vessel-based inspection survey for the suspended Glenloth-1 well.

Both assessments considered impacts to physical, ecological, social, economic, and cultural values and sensitivities based on a wide range of impact criteria. The outcome of the assessments will be provided in detail in the Environment Plan. A summary of key impacts and management measures is outlined in **Table 1** and **Table 2**.

Impacts from the vessel transiting to and from the operational area have not been included in the assessment scope of the Environment Plan.

Table 1. Summary of key impacts

ACTIVITY	POTENTIAL RISKS AND/OR IMPACTS	ASSESSMENT	MITIGATION AND/OR MANAGEMENT MEASURES
PRESENCE OF THE WELLHEADS	PHYSICAL		
	Physical presence of the wellheads may cause interference.	Minor potential impact given water depth and distance from shore.	Consultation with maritime safety agencies. Wellhead locations marked on marine charts.
	Physical presence of the wellheads may cause snagging risks to trawl fisheries.	Minor potential impact as water depth is below that typically fished by trawl fishers.	Consultation with licence holders in the Western Deepwater Trawl Fishery, their representative organisation and relevant Commonwealth government agencies.
	ECOLOGICAL		
	Ecological values that may be impacted include: <ul style="list-style-type: none">■ Plankton■ Fish■ Marine mammals■ State Protected Marine Values	There are little to no impacts associated to leaving the wellheads in-situ as there are no activities associated with this process.	No activity is associated with the process of leaving wellheads <i>in situ</i> .
	SOCIAL, ECONOMIC AND CULTURAL		
	Impacts to the functions, activities and interests of stakeholders relevant to: <ul style="list-style-type: none">■ Commercial fishing activities■ Defence activities■ Indigenous values■ Petroleum activities■ Shipping activities	There are little to no impacts associated to leaving the wellheads in-situ as there are no activities associated with this process.	Consultation with the following organisations to inform decision making for the proposed activity and development of the Environment Plan: <ul style="list-style-type: none">■ Commercial fishing licence holders and their representative organisations■ Government Agencies■ Indigenous representative bodies■ Petroleum titleholders■ Port authorities

Table 2: Summary of key impacts

ACTIVITY	POTENTIAL RISKS AND/OR IMPACTS	ASSESSMENT	MITIGATION AND/OR MANAGEMENT MEASURES
VESSEL-BASED SURVEYS	PHYSICAL		
	Physical presence of the vessel may cause interference or displacement.	The potential impacts are predicted to be minor due to distance from shore.	Wellhead locations marked on marine charts.
	ECOLOGICAL		
	<p>Ecological values that may be impacted include:</p> <ul style="list-style-type: none"> ■ Plankton ■ Fish ■ Marine mammals ■ State Protected Marine Values 	The potential impacts are predicted to be minor due to the short duration of activities, water depth and distance from shore.	Vessel activities will be managed according to relevant legislation and guidelines.
	SOCIAL, ECONOMIC AND CULTURAL		
	<p>Impacts to the functions, activities and interests of stakeholders relevant to:</p> <ul style="list-style-type: none"> ■ Commercial fishing activities ■ Defence activities ■ Indigenous values ■ Petroleum activities ■ Shipping activities 	<p>Minor potential impact given:</p> <ul style="list-style-type: none"> ■ Water depth ■ Distance from shore <p>Short duration of activities compared to regional marine traffic.</p>	<p>Consultation with the following organisations to inform decision making for the proposed activity and development of the Environment Plan:</p> <ul style="list-style-type: none"> ■ Commercial fishing licence holders and their representative organisations ■ Government Agencies ■ Indigenous representative bodies ■ Petroleum titleholders ■ Port authorities <p>Notifications prior to the start and upon completion of the vessel inspection survey will be provided to the Australian Hydrographic Office to generate a Notice to Mariners.</p> <p>Notifications prior to the start and upon completion of the vessel inspection survey will be provided to other marine users if requested.</p>

STAKEHOLDER CONSULTATION

Planned activities

Western Gas is consulting relevant stakeholders to inform planning for the development of the Environment Plan for proposed activities. Relevant stakeholders have been determined using the following methodology:

- Identifying physical, environmental, social, economic, and cultural values and sensitivities that may be affected by planned activities.
- Identifying government agencies with management roles for the identified values and sensitivities.
- Identifying government agencies with management roles for the development of plans to support emergency situations, such as marine pollution.
- Identifying other stakeholders whose functions, activities or interests are relevant to the identified values and sensitivities.

Western Gas complements this regulatory consultation approach by way of regular engagement of stakeholders who have identified an interest in the development of our Equus gas fields and adjacent exploration interests.

Unplanned activities

Western Gas is also consulting relevant stakeholders to inform planning for the development of the Environment Plan for unplanned activities, specifically marine pollution.

Relevant stakeholders, in addition to those government agencies already identified as having a role in response activities, have been determined using the following methodology:

- Identifying physical, environmental, social, economic, and cultural values and sensitivities that may be affected by marine pollution based on modelling predictions from a worst-case marine pollution event.
- Identifying stakeholders whose functions, activities or interests may be impacted based on potential impacts to the identified values and sensitivities.
- Where possible, consult organisations that represent the interests of potentially impacted stakeholders, acknowledging that not all stakeholders within the extent of the modelled impacted area will be affected in the event of an actual spill.
- Confirm with these organisations notifications and communications expectations in the event of a spill to ensure efficient and timely emergency response effort.

- Include these stakeholder expectations in the Oil Pollution Emergency Plan that will be developed for this Environment Plan, which will provide a detailed assessment of marine pollution risk, and response preparedness and planning.

For this activity, the credible worst-case marine pollution event would be a marine diesel oil spill due to a vessel collision. The typical support vessel required for this activity would have a maximum fuel tank size of less than 250m³. However, as a conservative measure, the marine diesel oil spill modelling assesses a 1000m³ marine diesel oil release.

This hydrocarbon volume and type were then modelled using a number of hypothetical spills under different environmental conditions to determine the widest extent of possible oil dispersion.

PROVIDING FEEDBACK

Please contact us before **close of business on 5 December 2022** with your comments on proposed activities outlined in this information sheet.

Your feedback will be included in the Environment Plan for the proposed activities, which will be submitted to the National Offshore Petroleum Safety and Environmental Management

Authority (NOPSEMA) for acceptance in accordance with the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (Cth).

Please let us know if wish your personal/organisation details or any part of your feedback to remain confidential as a summary of your

feedback and our response in the Environment Plan for this activity will be published on NOPSEMA's web site.

Please contact Western Gas at:
feedback@westerngas.com.au