

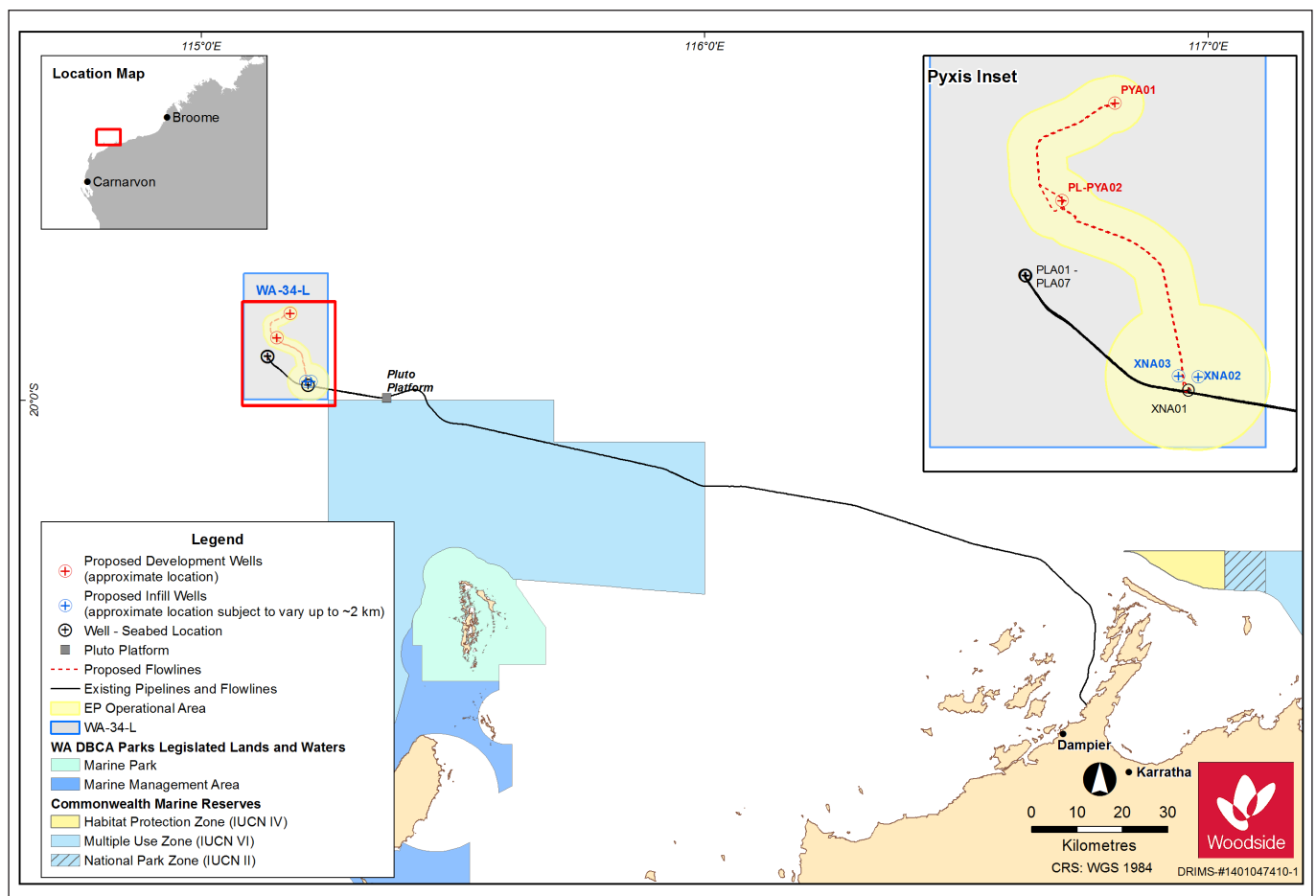
WA-34-L PYXIS DRILLING AND SUBSEA INSTALLATION

CARNARVON BASIN, NORTH-WEST AUSTRALIA

Woodside is planning to undertake drilling, construction, installation and pre-commissioning activities in Production Licence WA-34-L in Commonwealth waters to support ongoing production from the Pluto LNG Project, commencing in Q1 2020 pending approvals, vessel availability and weather constraints.

Two new and two in-fill production wells are proposed, as well as the installation of subsea structures, to complement production from existing wells at the Pluto and Xena fields. If required, Woodside may also need to intervene, workover or re-drill existing Pluto and Xena production wells within Production License WA-34-L.

Woodside is operator of Pluto LNG with a 90% interest, with Kansai Electric and Tokyo Gas each holding a 5% interest in the project.



WA-34-L Pyxis Drilling and Subsea Installation

Earliest expected commencement date	+ Q1 2020 pending approvals, vessel availability and weather constraints
Approximate estimated duration	+ 70 days per well + Cumulative 240 days for installation and pre-commissioning
Water depth	+ 170 m to 990 m
Project vessels	+ Moored semi-submersible mobile offshore drilling unit (MODU), a dynamically positioned drill ship or a dynamically positioned MODU + Subsea Installation vessel + Light well intervention vessel + Support vessels, including anchor handling vessels, heavy lift vessels and activity support vessels
Distance to nearest port	+ 175 km north west of Dampier
Distance to nearest marine park	+ -46 km north west of the Montebello Islands Marine Park (WA) + -5 km north west of Montebello Marine Park - Multiple Use Zone (Cwlth)

Proposed activity

Woodside is proposing to develop and produce hydrocarbons from the Pyxis, Pluto and Xena fields to support ongoing production from the Pluto LNG Project.

The proposed activities comprise the drilling of two new and two in-fill wells, which will be tied-in to existing subsea infrastructure via subsea Xmas trees, flexible flowlines, production manifolds and service umbilicals. The proposed activities are planned to commence in Q1 2020, starting with the Pyxis wells and related subsea installation.

Xena-related drilling and subsea installation activities will follow at a later date and contingent intervention, workover or re-drill activities on existing production wells, if required. Relevant stakeholders will be advised prior to the commencement of activities if this work is required.

Drilling of the four production wells is expected to take approximately 70 days per well to complete. Installation of subsea infrastructure and pre-commissioning will commence on completion of the drilling of the relevant new wells and is expected to take a cumulative duration of approximately 240 days.

Activities will be 24 hours per day, seven days per week and timing and duration of these activities is subject to change due to project schedule requirements, drill rig and vessel availability, weather and unforeseen circumstances.

Project vessels

Woodside is currently considering rig options for the drilling of the four wells, which include a moored semi-submersible mobile offshore drilling unit (MODU), a dynamically positioned drill ship or a dynamically positioned MODU. Dynamic positioning is a computer-controlled system to automatically maintain a vessel or rig's position and heading by using its own propellers and thrusters.

Typically, two or three vessels will support drilling activities, with at least one vessel in the vicinity to complete standby duties, if required. Supply vessels from Dampier Port will visit the selected MODU/drill ship at regular intervals.

A primary installation vessel will be used for the installation of the subsea infrastructure, with support from additional dedicated vessels.

Communications with mariners

A petroleum safety zone of 500 m will be in place around the MODU and installation vessel for the duration of activities. The following Operational Areas will also apply:

- + Dynamically positioned MODU/drillship – 500 m radius from each well centre
- + Moored MODU – 4000 m radius from each well centre
- + Installation vessel – 1500 m radius around subsea locations

Marine notices will be issued prior to activity commencement to alert vessels which maybe operating in waters nearby.

Proposed locations

Approximate development well locations are provided in Table 1. The exact location of XNA02 and XNA03 production wells are to be determined and approximate locations are provided in Table 1. Relevant stakeholders will be advised of these locations once planning is finalised.

Table 1. Approximate well location details

Activity	Water Depth	Latitude	Longitude	Production Licence
PYA01 well	985 m	19°49'40.371" S	115°10'34.956" E	WA-34-L
PL-PYA02 well	862 m	19°52'34.908" S	115°09'00.666" E	WA-34-L
XNA02 well	178 m	19°57'50.131" S	115°13'3.498" E	WA-34-L
XNA03 well	189 m	19°57'48.055" S	115°12'28.440" E	WA-34-L

Implications for Stakeholders

Woodside will consult relevant stakeholders whose interests, functions, and activities may be affected by the proposed activities. We will also keep other stakeholders who have identified an interest in the activities informed about our planned activities.

Woodside has undertaken an assessment to identify potential risks to the marine environment and relevant stakeholders, considering timing, duration, location and potential impacts arising from the drilling, construction and installation activities.

A number of mitigation and management measures will be implemented and are summarised in Table 2. Further details will be provided in the Environment Plan.

Table 2. Summary of key risks and/or impacts and management measures.

Potential Risk and/or Impact	Mitigation and/or Management Measure
Planned	
Chemical use	+ Chemical use will be managed in accordance with Woodside and contractor chemical selection and approval procedures.
Interests of relevant stakeholders with respect to: + Defence activities + Petroleum activities + Commercial fishing activities + Shipping activities	+ Consultation with relevant petroleum titleholders, commercial fishers and their representative organisations, and government departments and agencies to inform decision making for the proposed activity and development of the Environment Plan. + Advice to relevant stakeholders prior to the commencement of activities.
Marine fauna interactions	+ Measures will be taken to protect marine fauna and ecosystems from vessel activities and to prevent vessel collisions and groundings.
Marine discharges	+ All routine marine discharges will be managed according to legislative and regulatory requirements and Woodside's Environmental Performance Standards where applicable.
Seabed disturbance	+ Well location and site appraisal to identify and address well-specific hazards and drilling constraints. + MODU mooring analysis, anchor deployment and suction piling, if required, in accordance with internal standards. + No anchoring of support and installation vessels during drilling, construction and installation activities, as well as logging/ retrieval of wet-stored items.
Vessel interaction	+ Woodside will notify relevant fishery stakeholders and Government maritime safety agencies of specific start and end dates, specific vessel-on-location dates and any exclusion zones prior to commencement of the activity. + A 500 m radius petroleum safety zone will be in place around the MODU or drill ship and installation vessel for the duration of activities + Commercial fishers and other marine users are permitted to use but should take care when entering the Operational Area around the MODU or drill ship. The Operational Area depending on the activity and vessel ranging from a 500 m radius for a dynamically positioned MODU or 4000 m radius for a moored MODU, and a 1500 m radius around subsea installation.
Waste generation	+ Waste generated on the vessels will be managed in accordance with legislative requirements and a Waste Management Plan. + Wastes will be managed and disposed of in a safe and environmentally responsible manner that prevents accidental loss to the environment. + Wastes transported onshore will be sent to appropriate recycling or disposal facilities by a licensed waste contractor.
Unplanned	
Hydrocarbon release	+ Appropriate spill response plans, equipment and materials will be in place and maintained. + Appropriate refuelling procedures and equipment will be used to prevent spills to the marine environment.
Introduction of invasive marine species	+ All vessels will be assessed and managed as appropriate to prevent the introduction of invasive marine species. + Compliance with Australian biosecurity requirements and guidance.

Providing feedback

Our intent is to minimise environmental and social impacts associated with the proposed activities, and we are seeking any interest or comments you may have to inform our decision making.

An Environment Plan for the proposed activity 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).

If you would like to comment on the proposed activities outlined in this information sheet, or would like additional information, please contact Woodside before 15 May 2019.

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Please note that stakeholder feedback will be communicated to NOPSEMA as required under legislation. Woodside will communicate any material changes to the proposed activity to affected stakeholders as they arise.