
CONSULTATION INFORMATION SHEET

OCTOBER 2016



GREATER ENFIELD PROJECT
DRILLING AND SUBSEA INSTALLATION

**Exmouth sub-basin, North West Cape,
Western Australia**

KEY INFORMATION

- ▶ Woodside is preparing an Environment Plan for the Greater Enfield Project drilling, subsea installation and pre-commissioning activities.
- ▶ Proposed drilling and subsea activities are scheduled to start in January 2018.
- ▶ The Greater Enfield Project will develop the Laverda Canyon, Norton over Laverda and Cimatti oil accumulations.
- ▶ The oil reserves will be produced via a 31 km subsea tie-back to the existing Ngujima-Yin floating production storage and offloading facility.

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Activity Overview

Woodside is preparing an Environment Plan (EP) for the Greater Enfield Project drilling, subsea installation and pre-commissioning activities. The Greater Enfield Project is located within petroleum titles WA-28-L and WA-59-L in Commonwealth waters, approximately 40 km north-west of North West Cape, near Exmouth in Western Australia.

The Greater Enfield Project is a joint venture between Woodside Energy Ltd (Operator, 60%) and Mitsui E&P Australia Pty Ltd (40%).

The proposed activities are scheduled to start in January 2018 with the commencement of both the drilling and subsea campaigns. Drilling will be executed with a single drilling and completion campaign and is expected to commence with rig mobilisation in January 2018 and run for approximately two years until Q2 2020. The subsea campaign is scheduled to commence in January 2018 and run through to Q2 2020.

Activities to be undertaken as part of the EP include drilling and installation and pre-commissioning of production and gas injection wells and the associated subsea infrastructure.

The drilling campaign proposes to drill 12 wells in total. Three multilateral production wells will be drilled to the Norton over Laverda accumulations. The Laverda and Cimatti oil accumulations will be drained by two horizontal producers at Laverda and a single horizontal production well at Cimatti. Six horizontal water injection wells will provide aquifer support at the Laverda and Cimatti oil accumulations.

The subsea activities will involve installation of:

- 31 km 16" outer diameter (OD) wet insulated carbon steel rigid flowline and 10" internal diameter (ID) flexible riser connecting the wells via a multiphase pump (MPP) station to the existing Ngujima-Yin floating production storage and offloading (FPSO) facility;
- 10" OD carbon steel rigid flowline and an 8" ID flexible riser providing water injection for pressure support;
- 6" ID flexible gas lift flowline for artificial lift of Cimatti;
- 5 x 8" ID flexible production flowlines connecting production wells to the MPP station; and
- Umbilicals for power and control of the subsea infrastructure.

Subject to detailed planning, the Exmouth Gulf may be used by the project as a staging area for the transport of equipment to the offshore project area.

Project Background

The Greater Enfield Project will develop the Laverda Canyon, Norton over Laverda (WA-59-L) and Cimatti (WA-28-L) oil accumulations. These reserves will be produced via a 31 km subsea tie-back to the existing Ngujima-Yin FPSO facility, currently producing from the Vincent oil field approximately 40 km north-west of North West Cape.

The Ngujima-Yin FPSO will depart the field to be modified to accommodate the needs of both the Greater Enfield Project and the existing Vincent field development. These activities do not form part of the scope of the Drilling and Subsea Installation EP. Activities associated with commissioning and hydrocarbon production from the Greater Enfield Project will be the subject of a future revision to the Ngujima-Yin FPSO Operations EP.

Activity Location

The proposed drilling and subsea activities are within petroleum titles WA-28-L and WA-59-L in Commonwealth waters, in an area of established oil and gas operations, approximately 40 km north-west of North West Cape.

The Norton over Laverda oil accumulation lies in a water depth of approximately 800 m, the Laverda oil accumulation in approximately 845 m and the Cimatti oil accumulation lies in a water depth of approximately 550 m.

The indicative locations being considered for the proposed wells are:

Well name	Latitude GDA94	Longitude GDA94
LAVDWI*	21°31'42.619"S	113°51'33.455"E
LAVCWI*	21°31'15.064"S	113°52'08.874"E
LAVEWI*	21°32'00.118"S	113°51'12.104"E
LAVA	21°31'22.885"S	113°50'39.954"E
LAVB	21°31'35.580"S	113°50'22.387"E
NOLB	21°31'00.803"S	113°51'13.243"E
NOLC	21°30'48.639"S	113°51'05.693"E
NOLA	21°30'42.017"S	113°52'18.541"E
CIMA	21°26'23.372"S	113°57'56.159"E
CIMBWI-1*	21°26'25.039"S	113°58'00.289"E
CIMBWI-2*	21°26'25.823"S	113°58'00.551"E
CIMCWI-1*	21°26'41.190"S	113°57'01.294"E

*WI = Water Injection Well

The Greater Enfield Project is a joint venture between Woodside Energy Ltd (Operator, 60%) and Mitsui E&P Australia Pty Ltd (40%).

Timing

The drilling and subsea campaigns are both expected to commence in January 2018 and be completed by Q2 2020. Overall project timing is subject to weather conditions and operational arrangements.

Drill Rig and Vessels

The wells will be drilled by a mobile offshore drilling unit (MODU). Support vessels, including anchor handling vessels will support the MODU during drilling operations.

Subsea activities will involve the use of a dedicated pipe lay vessel to install the rigid production flowline and water injection line. This vessel will be supplied with additional piping in the field by pipe supply vessels. Primary installation vessels will be used for installation of subsea infrastructure, umbilicals, risers and flexibles and pre-commissioning activities.

A 500 m radius exclusion zone will be in place around the MODU for the duration of the drilling program. Woodside also requests marine users to observe a 2.5 km radius precautionary zone for safety reasons.

Environmental Approvals

An Environment Plan for the proposed drilling and subsea campaign 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).

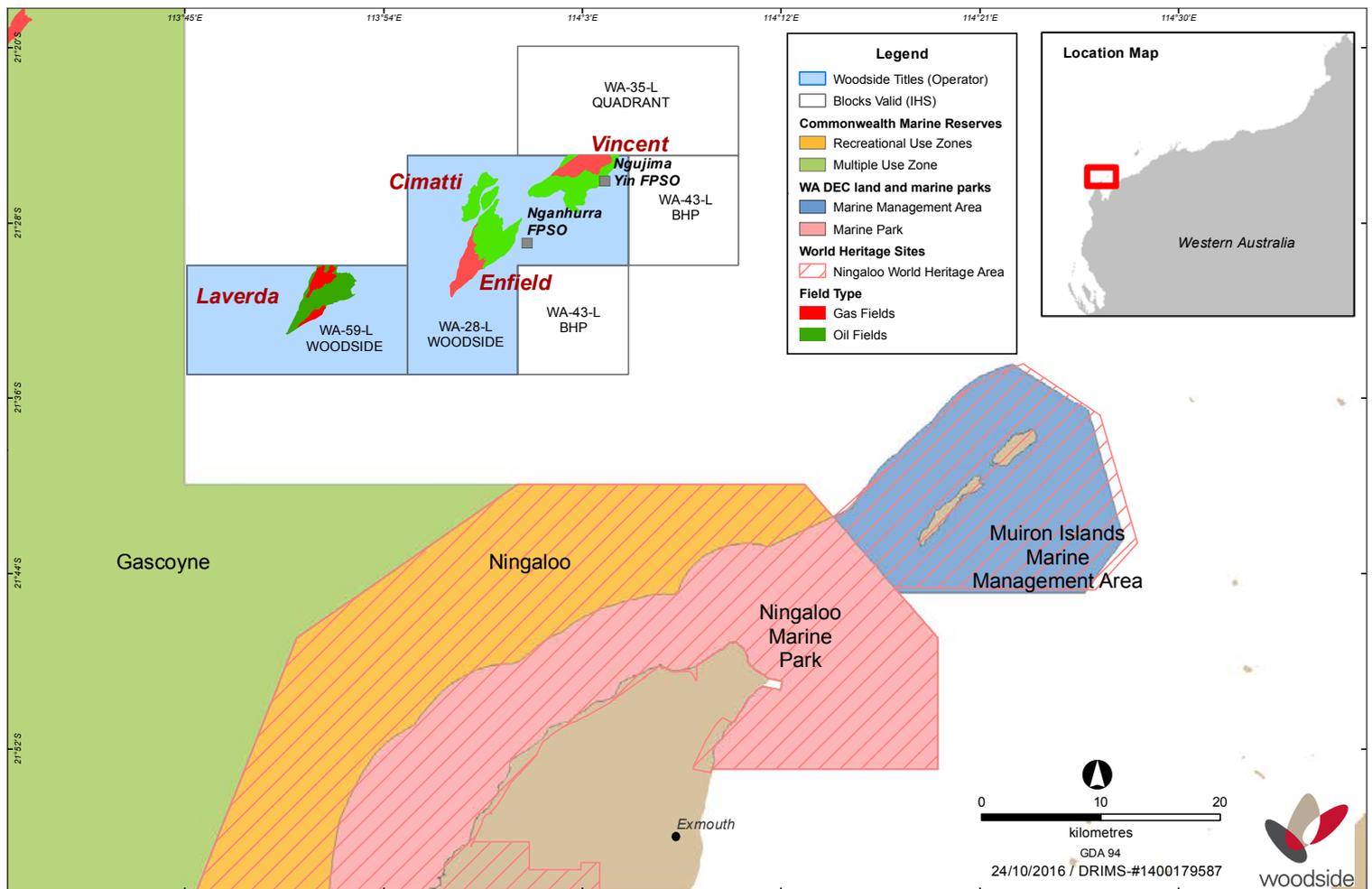
The EP will include an evaluation of the environmental impacts and risks for the activity, and the control measures to be implemented to reduce impacts and risks to as low as reasonably practicable and an acceptable level.

Woodside referred the Ngujima-Yin facility (Vincent) development proposal to the previous Department of Environment in May 2005 (referral reference 2005/2110 – Greater Enfield (Vincent) Petroleum Field Development).

The activity was determined to be a 'controlled action' under the Environment Protection and Biodiversity Conservation (EPBC) Act and the Act and the level of assessment set at 'Environmental Impact Statement' (EIS) in June 2005.

The development is approved with conditions (EPBC Approval 2005/2110). The Greater Enfield Project will be undertaken in accordance with this approval, with relevant conditions addressed within EPs as accepted by NOPSEMA.

Greater Enfield Project location



Providing Feedback

If you would like to comment on the proposed activity outlined in this fact sheet or would like additional information, please contact Woodside before 28 November 2016.

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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. Proposed timing for the activity may be subject to change.



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