

# SUBSEA GAS DEVELOPMENT CASE STUDY

Woodside Energy - WA-23-L  
Dampier Sub-Basin, Australia

## AWT DISCIPLINES

Completions Engineering  
Production Technology



## PROJECT BACKGROUND

Echo-Yodel is a two well subsea satellite development operated by Woodside Energy Limited. The development resides approximately 23 km from the Goodwyn A platform offshore Australia's North West Shelf. Each of the wells was to deliver gas and condensate into 12" pipeline back to Goodwyn A

Location:

Offshore Australia's North West Shelf

Objective:

To exploit wet gas / condensate reserves in productive lower Miocene reservoir units (LE1 & LE2)

Well Type:

Big bore (9-5/8" production tubing)

Well Capacity:

Up to 300 MMscfd wet gas

> 30,000 bpd condensate

## AWT WORKSCOPE

Woodside Energy Limited faced a number of technical challenges. Anticipation of immediate sand control problems required sand control as an integral component of initial completion design and 1350 m long horizontal wells were required to develop field with significant shale member separating the productive units (350 – 700 m in length). For economics, high rate, big bore production wells were required. Potentially reactive inter-unit shale section ruled out gravel packing as a sand control technique.

AWT was contracted to provide a number of services including the well construction and completion design, selection and specification of the downhole completion equipment, review and selection of the sand control method and supervision of the subsea completion installation high rate (> 100 MMscfd) flowbacks to the rig.

## AWT ADDED VALUE

- AWT tackled these challenges through the implementation of the many industry FIRSTS:
  - 1st use of sand control by Woodside
  - 1st use of BHI Nexes synthetic EBM horizontal well drill-in fluid
  - 1st installation of expandable sand screens in Australia.
  - 1st compliant rotary expansion of 5-1/2" Weatherford ESS globally
  - 1st subsea big bore production wells
- AWT achieved all primary and technical objectives. Field life was originally set at a minimum of 4 years. The field produced successfully for over 10 years at up to 120% design rate with no sand production.

For more information contact:

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