

WELL REFURBISHMENT CASE STUDY

Coogee Resources - Jabiru 11

Timor Sea, Offshore Australia

AWT DISCIPLINES

Subsea

Well Suspension

Well Refurbishment



PROJECT BACKGROUND

Jabiru was Australia's first FPSO development utilising the Jabiru Venture, which had an installed capacity of 55,000 barrels of oil per day. Field production levels were in jeopardy due to leakage of produced fluids from the Jabiru 11 subsea well into the environment. Coogee Resources engaged AWT to immediately assist the arrest of the leakage and later assist the rejuvenation of this important well's commercial production capability.

Location:

Timor Sea @ 120 metres water depth

Issues:

Produced fluids leakage from subsea well into the environment

AWT WORKSCOPE

- AWT undertook an extensive failure modes and effects analysis for the Jabiru-11 subsea well and identified possible leak paths through multiple production barriers. The numerous possible complicated internal leak paths demanded a radically different approach in order to develop a robust diagnosis and repair strategy for the well. AWT's customised technical solution involved:
 - Develop cause and effects flowchart with various possible leak paths and solutions.
 - Selecting most robust solution, which included deployment of additional 7-5/8" casing string inside the original 9-5/8" production casing, and a slim design completion string.
 - Performance of HAZID/HAZOP on preferred solution and decision tree.
 - Performing flow simulation modelling for reinstated completion
 - Specification and equipment procurement and services
 - Development of all well kill, commissioning, first start-up and well clean-up procedures.
 - Workover execution, full reporting, customer debriefing and close out
- AWT developed and finalised a solution capable of handling all probable leak paths, ultimately leading to the commercial recovery of the Jabiru 11 subsea well

AWT ADDED VALUE

- Drawing on AWT's unparalleled experience in FPSO field refurbishments and well integrity issues resulted in the recovery of the Jabiru 11 well with minimal losses. Based on flow and process evaluations, AWT as an independent consultancy was able to secure precise fit-for-purpose subsea completion components from multiple vendors.
- AWT's close commercial and technical alignment with Coogee Resources resulted in an intimate understanding of the client's needs and an ability to rapidly respond to changes in operating requirements.

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