

Devil Creek Development Project

Pile grouting the foundations for a new domestic natural gas processing hub



The Devil Creek Development Project (DCDP) and the associated Reindeer Gas Field is a Greenfield development located approximately 80 km offshore northwest of Dampier, Western Australia.

The 1,700t Reindeer jacket was set on the seabed and a 2.25m diameter hole was drilled to a depth of 42m through each of the four skirt pile sleeves.

A pile was inserted into each hole and held in position using a pile gripper. FoundOcean grouted the annuli between the drilled holes and the piles to give the jacket added stability.

Once the grout had cured, the jacket was levelled and FoundOcean could start second stage grouting.

A conventional grouting system was designed for grouting the skirt pile annuli. Each skirt was equipped with primary and secondary grout lines terminating above the sea level. The lower end of each sleeve was also fitted with a dual Crux seal to retain the grout whilst it is curing. As a contingency, a pile sleeve grout bag was fitted at the lower end of each pile sleeve should any of the Crux seals have failed.



FoundOcean mixing spread (bottom left) set up and ready to grout the sleeve piles

PROJECT FACTS

Industry	Oil & Gas
Region	Western Australia
Services	Pile grouting
Project year	2011
Operator	Apache Energy Limited
Contractor	Sapura Acergy
Water depth	60 m
Cement type	AS 3972 General Purpose
Total cement	585 tonnes
Mixer type	Recirculating Jet Mixer
Grout specification	60 MPa
Mixing rate	Up to 25m ³ /hr

TYPICAL RJM DECK PLAN

