

## Devil Creek Development Project Pile grouting the foundations for a new domestic natural gas processing hub



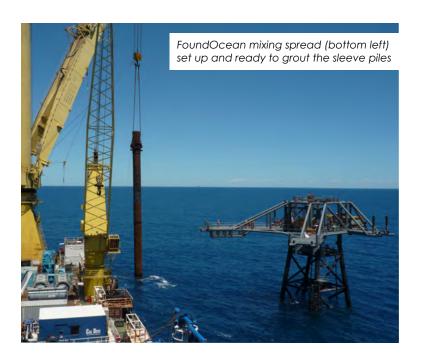
The Devil Creek Development Project (DCDP) and the associated Reindeer Gas Field is a Greenfield development located approximately 80 km offshore northwest of Dampier, Western Australia.

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 anunli 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.



## PROJECT FACTS

Region Western Australia
Services Pile grouting

Operator Apache Energy Limited

Contractor Sapura Acergy

ater depth 60 m

Cement type AS 3972 General Purpose

otal cement 585 tonnes

Mixer type Recirculating Jet Mixer

Grout specification 60 MPa
Mixing rate Up to 25m³/hr

