



Weatherford®

REAL RESULTS

DwC™ Technology, Defyer™ Bits Prove Key in Drilling Two Sections, Offshore Malaysia, Enable Operator to Save Significant Rig Time, Costs

Objectives

- Simplify operations and increase drilling efficiency for the first two casing sections.
- Drill in the 20-in. conductor casing and drill out the 20-in. shoe track with 13 3/8-in. surface casing using drilling-with-casing (DwC) technology and continue to the setting depth.

Results

- Weatherford personnel performed a drillability and application study to calculate formation strength and evaluate casing fatigue and torque and drag.
- Weatherford used DwC technology to deploy a 20- × 24-in. Defyer DT306 drillable casing bit for the 20-in. conductor casing section, drilling to 590 ft (180 m) with an on-bottom rate of penetration (ROP) of 104 ft/hr (32 m/hr).
- Weatherford used DwC technology to deploy the 13 3/8- × 16-in. Defyer DPA4416 drillable casing bit for the 13 3/8-in. surface casing section.
- The Defyer DPA4416 drillable casing bit was used to drill out the previous 20-in. shoe track and the Defyer DT306 drillable casing bit, completing the drillout in 5 hours, which included 2 hours for drilling out the Defyer DT306 drillable casing bit.
- The Defyer DPA4416 bit drilled to total depth of 1,632 ft (497.5 m) and achieved an on-bottom ROP of 158.7 ft/hr (48.4 m/hr), which is an increase of 23% compared to previous offset wells with other casing bits.
- The shoe track was completely drilled out in 80 minutes. The drillout of the 13 3/8-in. shoe track was performed with a five-blade, double-row, 16-mm PDC drill bit. The Defyer DPA4416 was drilled out in only 12 minutes.



Weatherford deployed the 13 3/8- × 16-in. Defyer DPA4416 drillable casing bit to a TD of 1,632 ft (497.5 m) with an on-bottom ROP of 158.7 ft/hr (48.4 m/hr), an increase of 23% compared to other bits.

Location

Sarawak, Malaysia

Well Type

Offshore, appraisal

Formation

Sandstone and claystone

Hole Size

- 24 in., vertical
- 16 in., vertical

Depth

- Top of the cement (13 3/8-in. DwC technology): 511 ft (156 m) MD from rotary table (MDRT)
- TD (13 3/8-in casing): 1,632 ft (497.5 m) MDRT

Run Length

1,120 ft (341.5 m) 13 3/8-in. section

Casing

- 20-in., 133-lb/ft X56 E60MT connector
- 13 3/8-in., 54 1/2-lb/ft K-55 BTC

Products/Services

- DwC technology
- 20- × 24-in. DT306 Defyer drillable casing bit
- 13 3/8- × 16-in. DPA4416 Defyer drillable casing bit



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Value to Client

- Using Weatherford's Defyer™ DT306 and *Defyer* DPA4416 drillable casing bits enabled the operator to drill in and drill out more efficiently with an excellent ROP, realizing significant time and cost savings.
- The DwC™ technology helped the operator to complete two well sections in record time and enabled the operator to drill to the next well section using only one-bit run, saving valuable rig time and associated costs.



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