



Weatherford®

REAL RESULTS

WellMaster™ Deepwater System, Achieves Well Control, Isolates Weak Formation, Runs Liner to TD, Reducing Rig Time

Objectives

- Run a 11 3/4-in., 1,122-ft (341-m) liner to total depth (TD) with minimal losses and reduced rig time.
- Complete an effective liner cement job to support a 13 5/8-in. casing string and isolate weak formation.
- Provide a contingency solution to run a 450-ft (137-m) liner extension to isolate a potential lost circulation zone.

Results

- Weatherford used a 14-in. MetalSkin™ monobore open-hole liner tieback shoe in the 13 3/8-in. casing string, enabling a potential 450-ft (137-m) liner extension to isolate a possible lost circulation zone.
- Based on hydraulic SurgeMOD simulations, Weatherford personnel deployed the following *WellMaster* configuration: WPHS hanger, WTSP4R packer, L45WP auto-fill collar, MudMaster™ filter shoe, SurgeMaster II™ multiple-opening diverter tool, and rotating centralizer subs.
- The *SurgeMaster II* tool and auto-fill equipment enabled TPAO to run the casing up to 45 ft/min (13.7 m/min) with minimal losses, surpassing a typical rate of 3 ft/min (0.9 m/min), and reaching TD of 16,213 ft (4,942 m).
- TPAO converted the auto-fill collar, set the WPHS hanger at 15,091 ft (4,600 m), and performed a flawless cement job by releasing the Sub-Surface Release™ plugs and darts from the remote-control top-drive cementing head (RC-TDH).
- The WTSP4R packer was set and successfully tested to 2,000 psi (13,789 KPa).

Value to Client

- Using Weatherford's *WellMaster* system enabled TPAO to control the well and run the liner to TD quicker than conventional technology, significantly saving rig time and associated costs while minimizing mud losses.
- By controlling the wellbore with the simple, effective *WellMaster* solution, TPAO isolated a weak formation, eliminating a potentially costly problem and saving considerable rig time and associated costs.
- The *SurgeMaster II* tool enabled TPAO to maintain a clean rig floor with zero mud spills and zero recordable incidents.



Weatherford's *WellMaster* all-in-one deepwater system provided an integrated solution to gain operational control of this Black Sea well, enabling TPAO to run the liner to TD quicker than conventional technology, minimize mud losses, and isolate a weak formation with zero recordable incidents.

Operator

Turkish Petroleum Corporation (TPAO)

Location

Black Sea

Well Type

Offshore, ultra-deepwater exploration

Hole Size

14-1/2 in.

Depth

16,213 ft (4,942 m)

Setting Depth

15,091 ft (4,600 m): Top of liner

Casing

13 5/8-in., 88.2-lb/ft, 125HC TSH-513

Liner

11 3/4-in., 65-lb/ft, 125HC TSH-513

Products/Services

- *WellMaster* system comprised of:
 - WTSP4R packer
 - WPHS hanger
 - Dual *Sub-Surface Release* plug
 - 541R centralizer subs
 - MX200 *MudMaster* filter shoe
 - L45WP auto-fill collar
 - *SurgeMaster II* surge reduction tool
 - RC-TDH
- SurgeMOD casing running simulator
- *MetalSkin* monobore open-hole liner tieback shoe
- Solid expandable *MetalSkin* monobore open-hole liner and all running tools on stand-by

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