



# Weatherford®

## REAL RESULTS

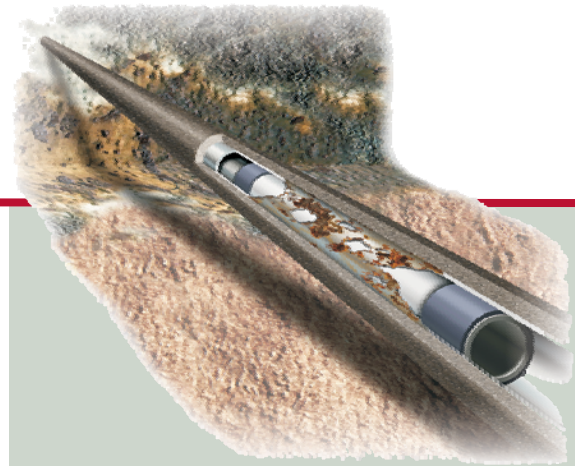
### MetalSkin® Cased-Hole Liner Restores Production in Offshore Well with Severely Corroded Liner

#### Objectives

- Repair a badly corroded 7-in. liner in an oil-producing well. The problem was caused by ineffective zonal isolation in an area where a highly corrosive aquifer frequently created severe cementing challenges. A conventional 7-in. tieback liner was previously installed to attempt to return the well to production. The well was subsequently shut in because of high levels of corrosion over an interval of 1,800 ft (549 m), which included the tieback liner. The cost and risk involved in removing the existing 7-in. liner and tieback liner made that alternative impractical.

#### Results

- A 5 1/2- × 7-in., 17-lb/ft *MetalSkin* cased-hole liner system with a total pre-expansion length of 2,176 ft (663 m) was chosen for the repair job. Working in collaboration with the operator's metallurgists, Weatherford enhanced the corrosion resistance of the *MetalSkin* system by coating the entire length of the liner with an expandable fusion-bonded epoxy. Multiple zonal isolation joints were strategically placed over the expanded liner to offer additional isolation along its length.
- A total of 39 hr was required to install the *MetalSkin* system, from picking up the bottomhole assembly to retrieving the expansion assembly after completing the liner expansion. The system was then expanded in approximately 6 hr.
- Once installed, the *MetalSkin* system was successfully pressure-tested to 1,000 psi (6,895 kPa). The recompleted well was promptly put back on line.



With a post-expansion length of 2,081 ft (634 m) on this job, the *MetalSkin* cased-hole liner system had a top setting depth of 718 ft (219 m), demonstrating its ability to handle shallow setting depths. The *MetalSkin* system's ability to obtain zonal isolation along the wellbore, which had a combination of 23- and 26-lb/ft casing across the setting length of the liner, further demonstrates the system's flexibility.

#### Location

Offshore, Kingdom of Saudi Arabia

#### Casing

23- and 26-lb/ft, 7-in. J-55 casing

#### Mud Weight and Type

68-lb/ft<sup>3</sup> brine

#### Fracture Gradient

0.33 psi/ft

#### Bottomhole Temperature

185°F (85°C) at 7,000 ft (2,134 m)

#### Inclination

72° at 7,000 ft (2,134 m)

#### Products/Services

*MetalSkin* cased-hole liner system



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### Value to Client

- The flexibility and adaptability of the MetalSkin® cased-hole liner system provided a cost-effective and safe solution, enabling the well to be returned to production and maximizing its return on investment.
- By providing a simple, single-trip solution, the *MetalSkin* system required no drill-out following expansion and eliminated an expensive additional trip in a difficult offshore environment.
- Working over the well and installing the *MetalSkin* system resulted in an estimated production gain of 3,000 BOPD. Based on these results, the *MetalSkin* cased-hole liner system has been added to the operator's recompletion tool box.

