

SecureView® Service and MetalSkin® Liner

Diagnose and Permanently Restore Casing Integrity, Save \$120 million in Out-of-Service Costs

Objectives

- Inspect a 1,919 ft (585-m) ethylene storage well for casing integrity issues. During the last workover in 2005, the operator noted internal corrosion of the 9 5/8-in., 40 lb/ft casing.
- Restore casing integrity, as needed, to ensure the well can safely withstand the pressures required for storing ethylene.
- Maintain a large inside diameter (ID) in the repaired areas.

Our Approach

- Working closely with the client, Weatherford deployed wireline and solid expandable teams for a thorough pre-job analysis. The team proposed a two-stage workover: Phase 1 would remove the existing brine string and collect logging data. Phase 2 would install a casing-remediation system based on the wireline logging data and then reinstate the brine string.
- Using the SecureView suite of casing and cement-evaluation technologies, the wireline services team collected data in three runs over a total of 12 hours. Upon review of the logs, the team confirmed numerous areas of corrosion from 1,053 ft (321 m) to total depth (TD). The tools also revealed that the casing was 36 lb/ft, rather than 40 lb/ft.
- The casing remediation team recommended installation of a 7 5/8 × 9 5/8-in. MetalSkin solid expandable liner system from 1,053 ft (321 m) to 1,919 ft (585-m). The team ran and successfully expanded the solid expandable system over a 4-day period.
- The system was successfully pressure tested to 2,200 psi (15.17 Mpa), which provided a secure system for ethylene storage.

Value to Client

- Through use of SecureView casing integrity and cement evaluation service and MetalSkin solid expandable liner system, the multidisciplinary Weatherford teams diagnosed and then restored casing integrity to an ethylene storage well.
- The MetalSkin system provided a permanent mechanical isolation barrier for the corroded casing string.
- Compared to a conventional casing-replacement operation that would require substantial equipment lead times, the Weatherford solution reduced out-of-service time from 33 weeks to just 8 weeks. With a USD \$4.8 million per week out-of-service rate, the client estimates that the total savings for operation totaled as much as USD \$120 million.



A multidisciplinary Weatherford team diagnosed casing corrosion and then restored casing integrity to an ethylene storage well. The operation saved the client weeks of out-of-service time and costs.

LOCATION

Teesside, United Kingdom

WELL TYPE

Ethylene storage

CASING SIZE

9 5/8-in., 36 lb/ft

CASING REPAIR LENGTH

866 ft (264 m)

POST-EXPANSION ID

8.066 in.

PRODUCTS/SERVICES

- MetalSkin solid expandable liner
- Wireline services
- SecureView service
- CalView® tool
- BondView® tool
- UltraView® tool
- FluxView® tool
- Fishing services
- Jars
- Slickline services
- Thru-tubing services
- Tubular running services
- Downhole rental tools
- Pressure control equipment
- Cementing products

