

Case History

EXPatch™ Expandable Metal Casing Patch

Problem

An oil producing well, originally drilled in the early 1950s, suffered a casing collapse when an offset injector well went on line. Cladding was deployed to correct this problem and failed the existing casing at the 20 ft - 23 ft interface sections.

Solution

- 6-1/4-in. OD mill run was made to ream and re-establish alignment of shifted casing between the 20 ft - 23 ft sections
- Cement squeeze job was performed to secure the casing strings
- Second 6-1/4-in. OD mill run was made to remove squeeze cement
- Composite bridge plug was set to prevent well fluid losses during workover
- Approximately 675 ft (198 m) of EXPatch .25-in. cladding was assembled and run in hole to TD on running/expansion tool
- Top of clad set at 3,800 ft (1,158.24 m) inside 20-lb casing and bottom of clad at 4,475 ft (1363.98 m) inside 23-ft casing
- Running/expansion tool pulled from well
- Composite bridge plug was milled out
- Downhole submersible pump was put on line

Results

Approximately 675 ft (198 m) of EXPatch was installed inside 7-in. casing with the expansion process completed in 3.5 hours. This project incorporated the first use of the EXPatch expandable metal casing patch technology to repair a damaged wellbore casing section.

Project Details

Project Date: July 2003

Well Location: Oklahoma, USA

Well Type: Workover/oil

Formation/Lithology: Sand

Casing Size to Surface: 7in. 20 ft and 23 ft

Screen Deployment Deviation: Vertical

Expanded Clad Length: 675 ft (198 m)

Top/Bottom of Clad Set Depth: 3,800 ft/4,475 ft (1,158.24 m/1363.98 m)

