CHALLENGE

A major client in West Texas has a field in which most wells develop barium sulfate scale (BaSO4). The BaSO4 scale can build very rapidly, resulting in reduced production. The scale builds up in the tubing/casing and in the perforation tunnels. The client wanted to try a method to remove the scale in the casing as well as in the perforation tunnels in one trip into the well.

HIGHLIGHTS

Conventional oil wells
Vertically drilled
Perforated

LOCATION

District 7B, Texas

CONDITIONS

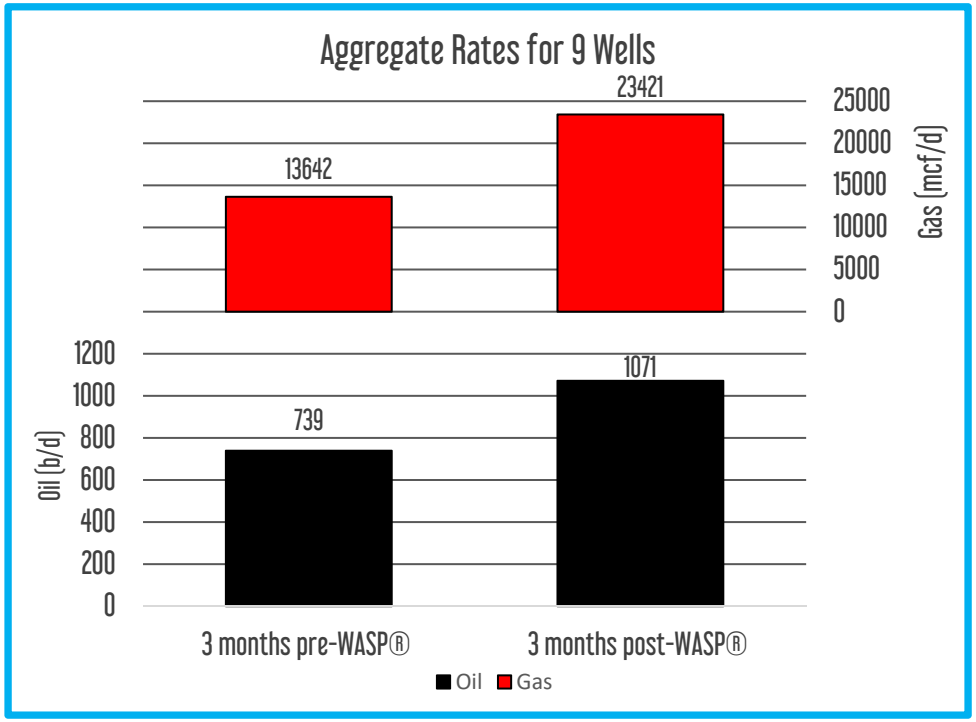
Depth: 4,800 – 5,200 ft (1,460 – 1,585 m)
Sandstone formation

Scale Removal

OUTCOME

- The 9 wells saw the aggregate oil rate increase from 739 b/d to 1071 b/d (45%)
- Water cut decreased by 0.5%
- Gas increased from 13642 mcf/d to 23421 mcf/d (72%)

RESULTS for 9 wells:
45% increase in oil;
72% increase in gas



SOLUTION

Improve connectivity to the reservoir by removing BaSO4 scale and clearing out blockages using electro-hydraulic stimulation technology

- An initial well was chosen to test the new technology
- The Blue Spark WASP® 275 (Wireline Applied Stimulation Pulsing) tool was run over the perforated interval on third-party E-Line
- A sample of the fill created confirmed BaSO4 as well as silica and clay from the formation
- Eight more wells we added to the program, which were all treated without any operational issues
- All wells were put back on production and monitored

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