

CHALLENGE

A major operator in the Middle East was encountering skin damage in their wells. Normally, the customer would perform a matrix acidization treatment using coiled-tubing. The customer was looking for a cost effective alternative.

HIGHLIGHTS

Conventional oil field
Vertically drilled
Well #1: Perforated
Well #2: Open Hole
Late Jurassic carbonate

LOCATION

Middle East

CONDITIONS

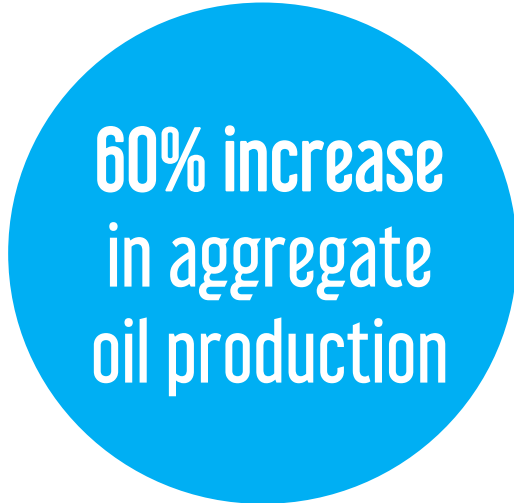
Depth: 6,000 – 7,000 ft (1,800 – 2,100 m)
Temperature: 220 – 240 °F (105 – 115 °C)



Producing Well

OUTCOME

- The operation was completed in significantly less time (1 day vs 5 days per well), with less operational footprint and at a lower cost than a coiled-tubing acid job
- The aggregate increase in oil production for the two wells was 60%
- The water-cut of Well #1 was relatively unchanged and that of Well #2 decreased 14%



Well	Oil Rate before WASP®	Oil Rate after WASP®	Increase in Oil Rate
#1	3,300 BOPD	5,400 BOPD	64%
#2	300 BOPD	400 BOPD	33%

SOLUTION

Improve connectivity to the reservoir clearing out blockages using electro-hydraulic stimulation technology

- The Blue Spark WASP® 275 (Wireline Applied Stimulation Pulsing) tool was run on third-party E-Line to the treatment interval of each of two wells
- So as not to encourage more water production, only the upper 50 ft of the interval of Well #1 and only the upper 100 ft of the interval of Well #2 were treated in 12 hours and 18 hours of operational time respectively
- The wells were put back on production and monitored