CHALLENGE

The client operates a small field under steam flood with declining oil production. Conventional stimulation techniques such as acid had yielded mixed and/or short term results. The client was interested in trying a cost effective technology that would potentially provide better and/or longer lasting results.

HIGHLIGHTS

Heavy oil
Steam flood
Vertically drilled
Artificially lifted
Slotted liner
Gravel pack

LOCATION

California, USA
Onshore

CONDITIONS

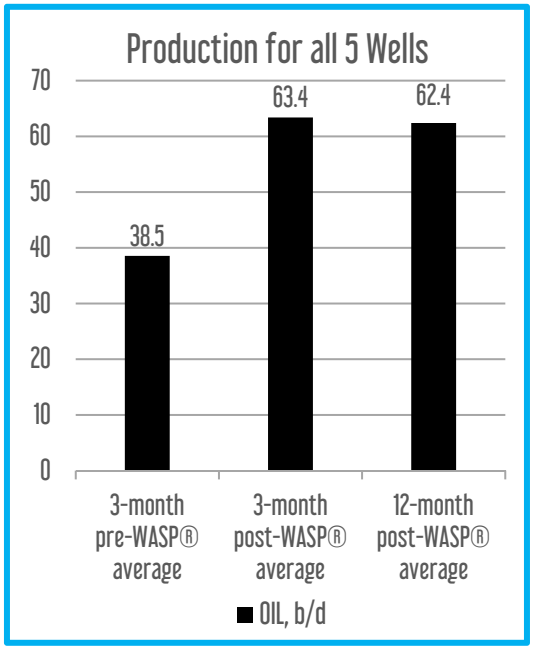
Depth: 650 ft (200 m)
Etchegoin Sandstone
Porosity 35%; Perm 5 D

Producing Wells

OUTCOME

- The wells were immediately put back on production and rates, pressures and fluid levels were monitored.
- The total production for the 5 wells increased by 65% based on a 3-month comparison, while the water cut decreased by 5%
- Three of the wells saw increases of over 100%.
- The total production for the 5 wells maintained a 62% increase for the 12-months following the stimulation

Aggregate oil increased by 65%



SOLUTION

Improve connectivity to the reservoir through a slotted liner using electro-hydraulic stimulation technology.

- The client chose 5 wells to treat with the Blue Spark WASP® (Wireline Applied Stimulation Pulsing) to improve production.
- The client selected the treatment zones from open hole logs, such that the total interval stimulated could be maximized in a single day of operation for each well.
- Tubing was pulled and a bit-and-scraper run was done on each well.
- The WASP® stimulation was completed on all 5 wells in 5 working days.

BLUESPARK