CHALLENGE

Client had a well with blocked perforation tunnels from fines circulated into the perforations during a workover. Oil production was down significantly, and all other attempts to clean out the perforations had been ineffective. The client was willing to try a new technology to clear the perforations to help improve fluid flow into the borehole.

HIGHLIGHTS

Onshore
Vertically drilled
Heavy Oil (21 API)

LOCATION

San Joaquin Basin
California, USA

CONDITIONS

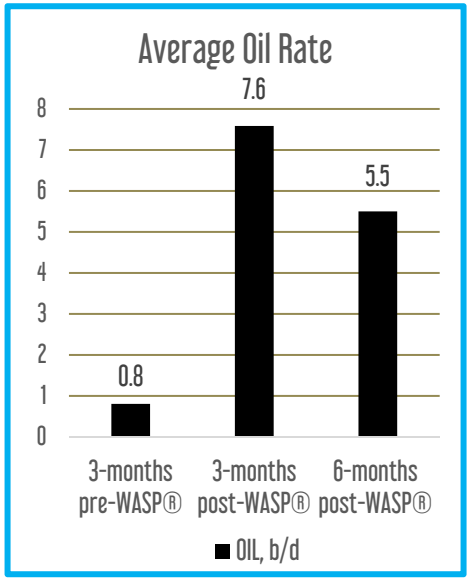
Depth: 1,200-2,300 ft (360-700 m)
Rock type: diatomite

Producing Wells

OUTCOME

- Perforations were cleared, allowing for increased fluid flow into the wellbore.
- Public data from the WASP® treated well showed an average production increase from 0.8 b/d to 7.6 b/d (comparing 3 months pre- stimulation to 3 months post-stimulation), an 850% increase
- The average rate for the first 6 months post-stimulation was 5.5 b/d, and increase of almost 600% versus the pre-stimulation rate

Over 9x increase in oil production



SOLUTION

Unblock the perforations and improve connectivity to the reservoir by using electro-hydraulic stimulation technology

- Unconsolidated sandstone reservoir was treated with Blue Spark WASP® (Wireline Applied Stimulation Pulsing) to improve production
- No special tools or equipment were required on location to complete the remediation operation, other than third party E-Line
- There were 14 individual perforation clusters treated with WASP® in 8 hours of stimulation time
- Production rates and fluid levels were both monitored for comparison to pre-treatment values

BLUESPARK