

HISTORY

A producer was looking for low-cost, low-risk optimization options to increase production and reserve value in a Canadian oilfield. Reservoir was dolomitic sand. Previous treatments with typical HCl blends, solvent blends did not provide satisfactory results.

PROPOSAL

HCR-Series Modified Acid™ with proprietary enhancer from a 3rd party supplier was proposed to strip hydrocarbons and dissolve the acid soluble material that had plugged off the reservoir as a result of scale deposition as produced water travelled into the near wellbore through areas of pressure drop and cooling. Required volumes to treat the damaged area were calculated and a high level application including displacement fluids, pump rates and soak times was presented to the operator. For the vertical wells, bullhead matrix-style treatments were completed to minimize costs and reduce days to payout.

OPERATIONS

Product was delivered in bulk and staged locally and nearby pressure services were utilized to ensure optimum cost effectiveness. Due to the HS&E and environmental profile there were many operational advantages and cost savings to the operations in the field.

RESULTS

See attached production graphs which include 12 month prior and 3 months post stimulation. The first graph shows increased production from six vertical wells that were stimulated of 5 bbl/day to average 70 bbl/day. The second graph depicts the normalized production of three Horizontal wells stimulated with a 250% sustained production increase. This customer continues to optimize the field dozens of treatments per month.

VALUE

Increased Production:

- Low rate producing oil wells could be stimulated in a rigless fashion that exceeded payout expectations. **Sustained multi-well production increase was observed of over 1400% in some areas!**

Increased Reserve Evaluation:

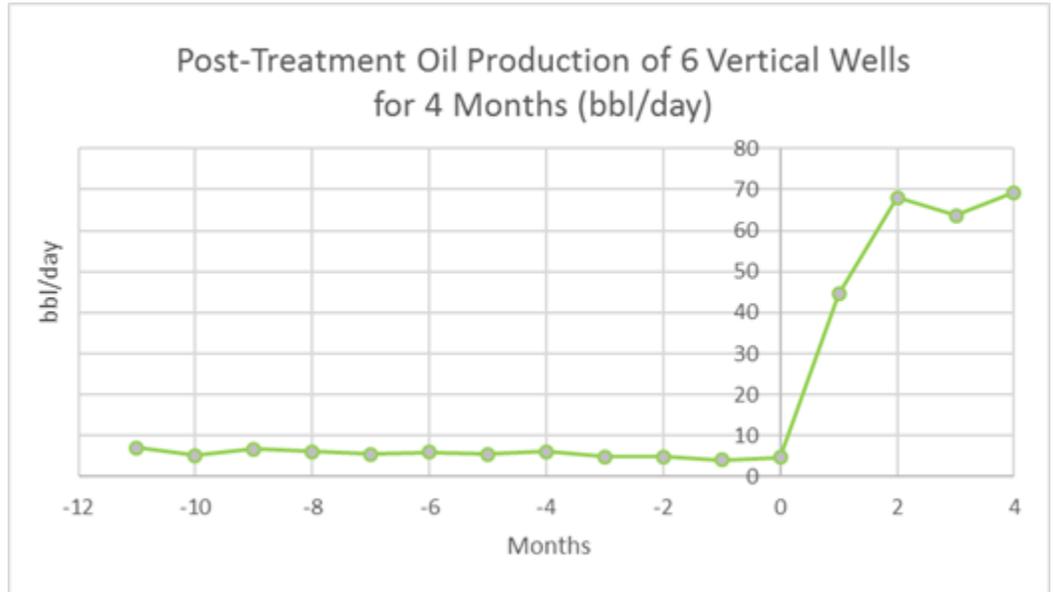
- Trends remain in place as the operator continues to monitor results. Reserve gains will be substantial on all stimulations.

Reduced HSE Exposure

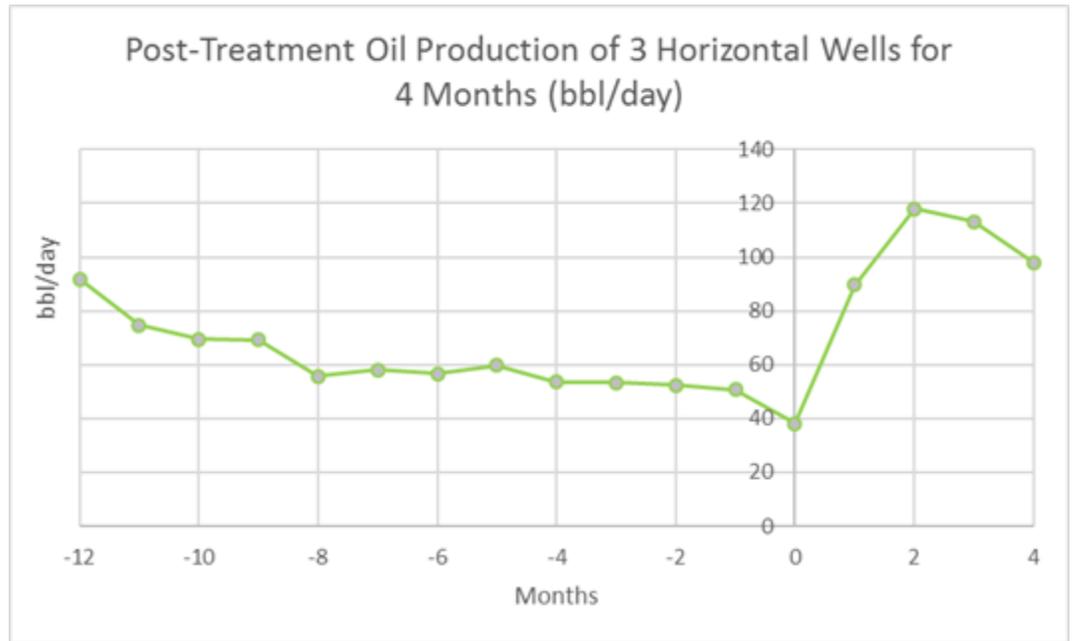
- Since hazardous incumbent HCl was not on site, reduced risk to workover personnel and pumping services staff was observed.



PRODUCTION CHARTS



Above: Normalized production from 6 vertical wells pre and post stimulation



Above: Normalized production from 3 horizontal wells pre and post stimulation

