PERFORMANCE REPORT

M-I SWACO
A Schlumberger Company

SEAL-N-PEEL pills ensure absence of fluid losses during workover operations and provides previously unattainable productivity of the well after it was killed.

"Reduction of well stimulation time, absence of fluid losses and bringing wells to production without loss of productivity showed excellent results when killing wells in Eastern Siberia."

I.V. Sabanchin, Development Manager, Irkutsk Oil Company LLC
V.V. Valisevich, Process Engineer, M-I SWACO

Well Information

Location ..... Irkutsk Region, Eastern Siberia, Russia

Field ..... Yaraktinsk

Number of wells 4

Kill interval ..... Production Casing /Liner

The Situation

Killing wells with service water without pumping any LCMs at the Yaraktinsk field was always accompanied by extensive kill fluid losses which cause water influx, formation damage, and reduction in well productivity after workover operations. Besides, paraffin and asphaltene deposits formed on the tubing walls during well production. These deposits along with kill service water further reduce productivity and lead to increase in time and costs for near-wellbore treatment or works on bringing well to stable production.

The Yaraktinsk field geology is rather variable with the irregular thickness of productive formation 2 to 4 m (TVD) and with formation pressure 170 to 220 atm. All these facts required a new low impact killing technology that would include paraffin and asphaltene dissolution and minimum formation damage.

The customer is Irkutsk Oil Company LLC, the major operator whose main activity is hydrocarbon production. M-I SWACO specialists suggested a low impact killing technology that proved to be effective worldwide.

The Solution

SEAL-N-PEEL† low impact killing technology was recommended to eliminate kill fluid losses at the Yaraktinsk field. SEAL-N-PEEL pills form a low-permeable filter cake on the surface of the productive zone. This filter cake prevents WBM invasion thus eliminating completion fluid losses and formation damage during downhole workover operations.

The filter cake consists of sized calcium carbonate and polymers that form a filter cake and fluid of the required structure and provide minimum fluid loss of the fluid. The fluid loss reduction filler is selected for each well using the OPTIBRIDGE† software and Kaeuffer's Ideal Packing Theory.

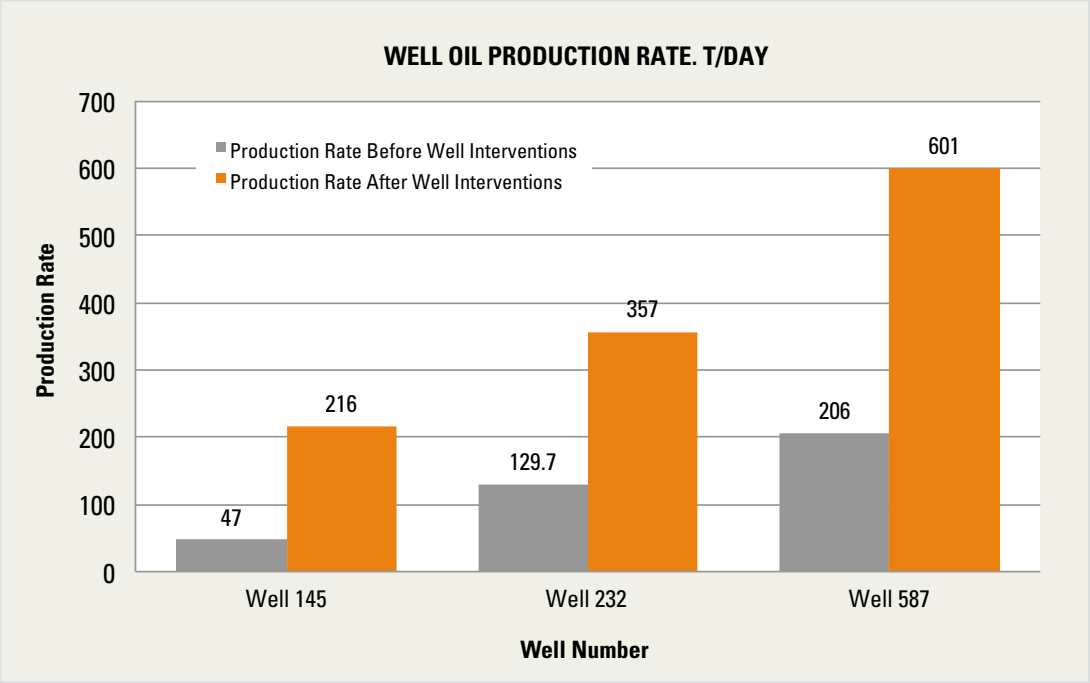
LCM pills are pumped through the annulus. Besides, the pills are preceded by REAWASH† solvent that is pumped frontally and provides dissolution and washing of paraffins and asphaltenes from the tubing walls.

The Results

Well killing operations with the use of LCM pills were performed for four wells of the Yaraktinsk field. The wells had different drilling string assemblies.

The pilot testing of SEAL-N-PEEL pills at the Yaraktinsk field showed the following results:

- No kill fluid losses
- Reduction in time
- Reduction in costs
- Reduction in time for bringing well to stable production
- Achieving target production rates



Questions? We'll be glad to answer them.

If you'd like to know more about our Wellbore Productivity Solutions and how they are performing for our other customers, please call the M-I SWACO office nearest you.

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