**Case study:** Indonesia

# EC Prime enhanced conductivity fracturing service doubled production in low-permeability well

## The background

An operator working onshore Indonesia needed a fracturing solution for its new wells. Having used a conventional fracturing approach in the past, the operator had achieved mediocre gains in production, with most wells in the area producing an average of 60 barrels of oil per day (BOPD). Part of the challenge was that the sandstone formation had relatively low permeability of less than 10 mD. The conventional fracturing approaches created limited conductivity within the fracture due to proppant pack damage, which drove down the operator's production rates.

## The proposal

Believing that better conductivity and higher production were possible, the operator asked Baker Hughes if the EC Prime™ enhanced conductivity fracturing service could be a feasible solution. The EC Prime service is a Baker Hughes pillar fracturing service that creates open, stable hydrocarbon pathways through proprietary pumping techniques that are tailored to the specific formation properties and well conditions where it is applied. Those pathways are also reinforced with ultralightweight proppant that resists settling and provides extra support for the fracture if it does start to close. Baker Hughes worked with the operator to understand the formation properties and downhole conditions.

After that, our personnel implemented an EC Prime service, which involved pumping 70,000 lbs (31,751 kg) of traditional ceramic proppant and 700 lbs (317 kg) of the LiteProp™ Prime 108 ultralightweight proppant with the Baker Hughes Spectra Frac™ G fracturing fluid.

## The results

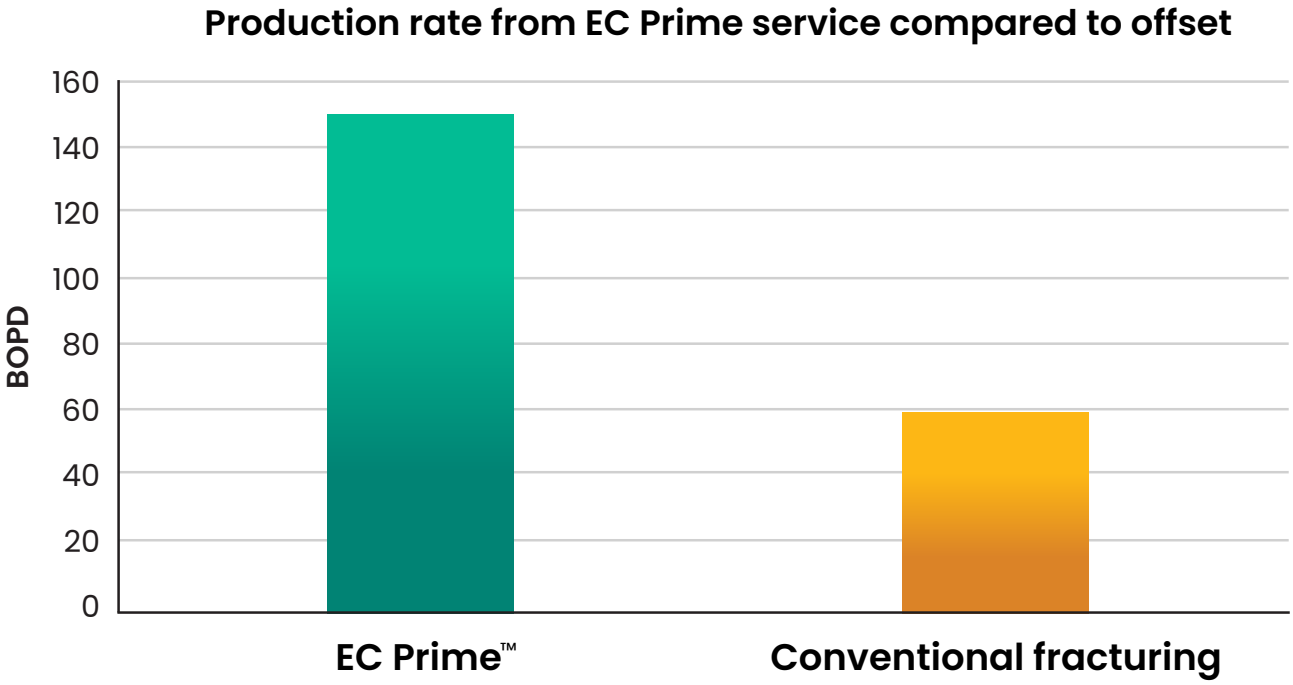
After Baker Hughes implemented the EC Prime service, the initial production rate from the well was 700 BOPD—much higher than the initial rates from conventional fracturing in offset wells. Two months later, after the initial production rates—which tend to stabilize during the weeks after the job—leveled out, production from the well was still approximately 150 BOPD. The production is still being monitored. During these two months, the EC Prime service generated $270,000 USD more revenue for the operator than conventional fracturing in offset wells. The operator was very happy with the results of the EC prime service and has already implemented it in several other wells.

## Challenges

- Increase production from low-permeability formation
- Customize fracturing treatment to the formation

## Results

- Doubled production rates compared to conventional fracturing
- Created $270,000 USD additional revenue over two months
- Created high-conductivity fractures




The EC Prime™ service more than doubled the production rate delivered by the conventional fracturing service.

Baker Hughes