

# Illusion<sup>®</sup> Frac Plug Helps Operator Save \$200,000

## ALL 15 PLUGS DISSOLVED, REMOVING THE NEED FOR COILED TUBING MILLOUT

VACA MUERTA, NEUQUEN, ARGENTINA.

### CHALLENGE

The operator wanted to remove the costs, time and risks associated with milling out composite plugs.

### SOLUTION

Illusion<sup>®</sup> frac plugs for high-performance zonal isolation were deployed during the stimulation with traditional plug-and-perf techniques.

### RESULTS

The customer was able to successfully flow back the wellbore and start production without issue, eliminating the need for wellbore cleanout intervention.

- » Zero issues with pump-down installation and fracturing.
- » 2-3 days of intervention were saved.

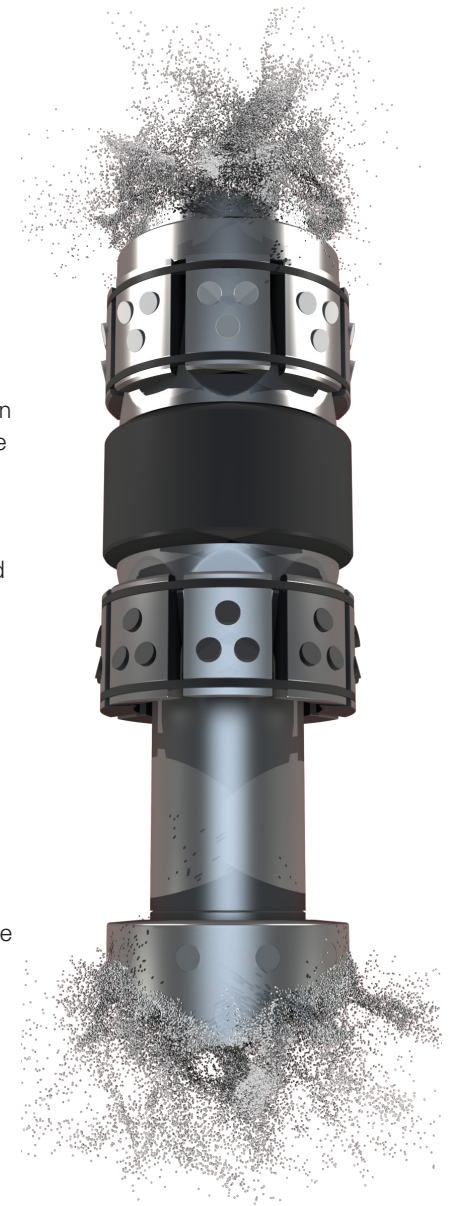
### OVERVIEW

An operator in the Vaca Muerta formation in the Neuquen Basin needed a solution to reduce or eliminate the risks and costs associated with post-fracture millout operations. The wellbore consisted of 5 1/2-in. mono bore casing and 10,800 ft (3,292 m) of total vertical depth with a 5,000 ft (1,524 m) horizontal section.

Halliburton recommended its dissolvable Illusion<sup>®</sup> frac plugs for the plug-and-perforate operation, not only to effectively isolate during the fracture but also to remove the need for coiled tubing intervention afterward. Upon successful completion of the 15 stages, which required no special wireline installation equipment or pump-down procedures, the plugs dissolved and the need for intervention was eliminated. The well was flowed back and placed onto production without completing a coiled tubing millout, exceeding operator expectations.

### CHALLENGE

In an ongoing effort to reduce the risks and costs incurred when completing a well using the plug-and-perforate method, the operator was primarily looking for ways to remove the need for milling out composite plugs. As an added challenge, the customer's objective was to maintain the same parameters during the pump down and setting operations of the plug, without having to modify the values used with traditional composite frac plugs.





### SOLUTION

Halliburton highlighted the benefits that Illusion frac plugs offer over the traditional composite frac plugs being provided by another service company.

Illusion frac plugs are dissolvable and help eliminate the need for intervention prior to putting the well onto production. In addition, this high-performance frac plug provides zonal isolation for pump-down applications during wellbore stimulation, and combines the industry-leading Halliburton frac plug designs with the most advanced dissolvable metal and rubber materials.

It is run-in-hole just as a composite frac plug would be, making installation quick and easy. No special tools need to be deployed in the casing string to set the frac plugs, maintaining the flexibility provided by the plug-and-perforation technique.

As with previous wells, a conventional electric setting tool was used to set the Illusion frac plugs. The large-bore ID allows operators to produce through the plug while it remains in the wellbore and begins the dissolution process immediately following fracturing.

### RESULT

The Illusion dissolvable frac plugs were pumped down and set without issue during the fracturing operations. Run-in-hole speeds exceeding 400 ft (122 m) per minute through the horizontal were achieved — a conservative, but typical, application of Illusion plug efficiency and reliability.

All 15 plugs held up to fracturing treating pressures, even after hours of down time and wellbore fluid exposure.

The customer was able to successfully flow back the wellbore and start production without issue, helping to eliminate the need for a wellbore cleanout intervention. This saved an estimated \$200,000 in costs typically associated with a coil tubing millout operation.

Because Halliburton Illusion frac plugs helped eliminate the need for intervention, the application was a success for the customer.

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