

Bakken Formation

# Illusion<sup>®</sup> Prestige frac plugs deployed in the Bakken formation

Dissolvable plugs reduce intervention costs related to wellbore cleanup

## CHALLENGE

Provide reliable zonal isolation and minimize need for wellbore cleanout operations

## SOLUTION

Deploy 3.68-in. OD Illusion<sup>®</sup> Prestige frac plugs in 4 1/2-in. casing

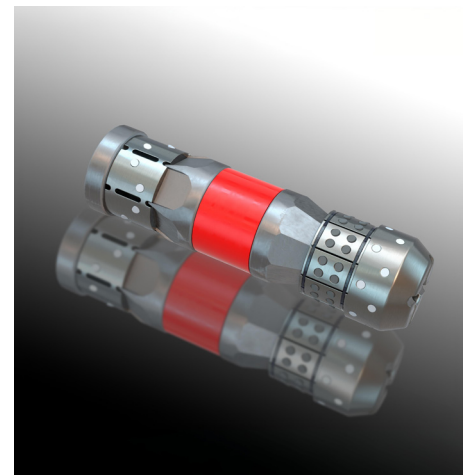
## RESULT

- Efficient deployment operations
- Reliable isolation achieved
- Dissolvable materials reduced intervention costs related to wellbore cleanout operations

## Overview

With the release of the Illusion<sup>®</sup> Prestige dissolvable frac plug, a major operator in the Bakken formation transitioned from traditional composite frac plugs to full wellbores of dissolvable frac plugs to improve intervention costs and operational efficiency. The operator sought a solution to provide reliable zonal isolation and minimize the need for wellbore cleanout operations.

Halliburton deployed 3.68-in. OD Illusion<sup>®</sup> Prestige frac plugs in 4 1/2-in. casing to measured depths of more than 19,000 ft with a true vertical depth of approximately 10,000 ft and a bottomhole static temperature of 220°F. Fresh water was used to pump the plugs to depth. This successful trial run highlighted the plug's capability to provide efficient and reliable runs, ball action, and quick cleanout.



Illusion<sup>®</sup> Prestige FS frac plug

## Challenge

Traditional composite frac plugs present multiple challenges, such as high intervention costs related to time-consuming mill-out operations. Another challenge is operational inefficiency related to wellbore cleanout, delayed production, and increased operational costs. It is critical that reliable pressure integrity be ensured during fracturing operations.

## Solution

Halliburton recommended deployment of Illusion® Prestige dissolvable frac plugs instead of traditional composite plugs to complete the entirety of the wellbore. The self-removing nature of the Illusion Prestige plug helps eliminate the need for mill-out operations for wellbore removal.

## Result

Deployment of the Illusion Prestige frac plugs offered the following advantages:

- Dissolvable materials: The plug is made from advanced materials that dissolve quickly in wellbore fluid, which eliminates the need for mill-out operations.

- Efficient deployment: The plug can be set using both ball-in-place (BIP) and ball-drop methods, which provide deployment flexibility.

Reliable isolation: Excellent ball seating and verified pressure test results help ensure reliable zonal isolation.

The Illusion Prestige frac plugs were deployed in the Bakken formation without any changes to the standard operations. This reduced intervention costs for the operator because of the dissolvable nature of the plug, which decreased the need for wellbore cleanout operations.

Successful dissolution of plugs was confirmed through dissolution tests, fluid analysis, and wellbore conditions.



# Reduced

costs related to wellbore cleanout operations



# No

anomalies in pressure integrity were detected



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