**Talisman Energy Performs Multistage Stimulation in Just One 18-h Operation**

StimMORE fiber-laden diversion fluid treatment saves 10 h and eliminates well interventions in Montney shale

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**CHALLENGE**

Effectively stimulate 700-m lateral interval without using plug-and-perf completion method.

**SOLUTION**

Complete multiple stages together by using StimMAP* hydraulic fracture mapping service to guide placement of StimMORE* fiber-laden diversion fluid.

**RESULTS**

- Achieved even stimulation coverage in one operation through near-wellbore diversion of fracturing fluid into eight preperforated clusters in the well heel.
- Saved 10 h compared with conventional plug-and-perf method.

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**Unconventional completion method for high-risk shale well sought**

In one horizontal well, Talisman Energy encountered challenging cementing conditions that resulted in less-than-optimal cement quality in the 700-m long heel portion. This meant that Talisman Energy could not perform its usual plug-and-perf completion method, which requires mechanical zonal isolation between stages for optimum stimulation. Talisman Energy needed a way to stimulate the interval cost effectively while minimizing operational time.

**Continuous completion operation based on real-time reservoir response**

To effectively stimulate the intended interval without bridge plugs, Schlumberger recommended a multistage stimulation approach using StimMORE fiber-laden diversion fluid and StimMAP fracture mapping service. StimMAP service would deliver microseismic event data within seconds, enabling real-time optimization of diverter placement and hydraulic fracturing treatments.

Slugs of StimMORE diversion fluid were placed into the fracturing fluid, eliminating the need for mechanical isolation between fracturing stages. The engineered fluid bridged stimulated intervals along the borehole, generating sufficient pressure differential to initiate fractures in unstimulated intervals. The process was repeated until the entire 700-m lateral interval was effectively stimulated.

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StimMORE fiber-laden diversion fluid bridged previously stimulated intervals along the borehole, enabling uniform, complete stimulation coverage of 700-m section in one continuous operation. StimMAP hydraulic fracture mapping confirmed stimulation in the heel portion of the well.
**CASE STUDY:** Talisman Energy performs multistage stimulation in just one 18-hr operation

**Reduced risk, time, and costs compared with plug-and-perf methods**
Integration of real-time microseismic data in the Petrel® E&P software platform let engineers control placement of diversion fluid during the job. Talisman Energy and Schlumberger worked together to analyze microseismic and pumping data after each diversion, confirm sufficient reservoir stimulation, and adjust the treatment as needed.

The design was completed as planned—in just 18 h and one continuous operation—saving 10 h versus conventional completion treatments. Microseismic data confirmed uniform stimulation coverage of the heel portion of the wellbore.

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![Event distribution after stage one, prior to diversion.](image1)

![Evolution of stimulation by diversion stage.](image2)

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