

# Achieves Zero Lost-Time Injuries, Breaks Annual Safety Record

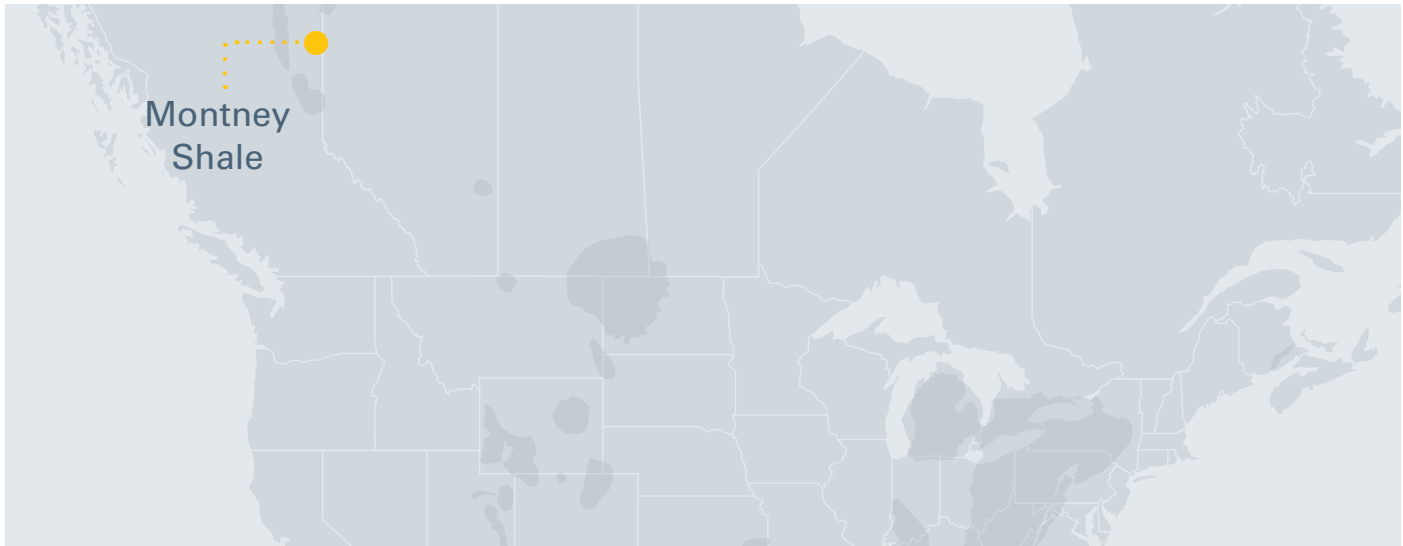
Simplified frac site helps reduce NPT and HSE risks

**SPM™ Oil & Gas**

*A Caterpillar Company*

## Case Study

A Montney Shale operator, deployed the SPM™ One Straight Line (OSL) Frac Connection to simplify and safeguard its multi-well hydraulic fracturing operations. The new frac manifold helped them reduce connections by up to 84% compared to conventional frac iron. In addition to improving operational efficiency, the partnership prioritized HSE performance and contributed to NuVista's first year with zero lost-time injuries (LTIs).



## TOTAL SAVINGS



**Decreased**

erosion by  
approximately 70%



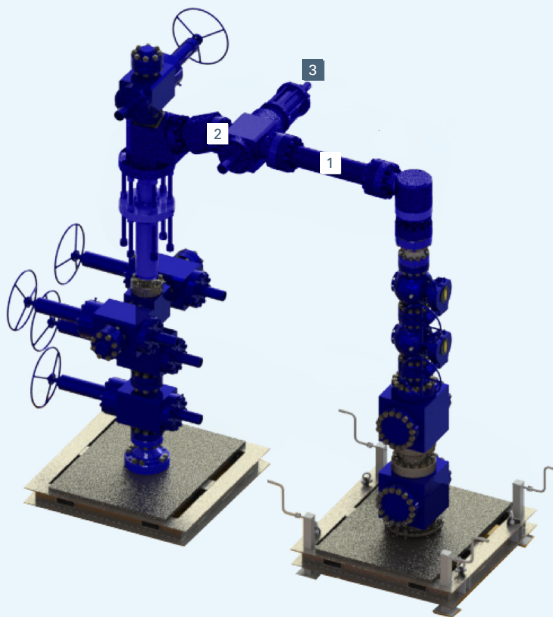
**Replaced**

six flow lines  
between the frac manifold  
and the wellhead



**Achieved**

zero lost-time injuries  
(LTIs)



- 1 84% fewer connections, reducing potential leak paths, non-productive time, and rig-up time
- 2 Flanged vs. hammer-union connections for greater safety and reliability slip segments
- 3 One simple, linear flow line for a cleaner site and less fluid friction

**Reduced**

connections  
by up to  
84%

**Minimized**

potential  
leak paths

**Eliminated**

hammer union  
connections

## CASE STUDY

### THE CHALLENGE

The operator actively explores and develops unconventional reserves throughout the Western Canadian Sedimentary Basin, primarily focusing on the gas- and condensate-rich Montney Formation. With reserves estimated at 449 Tcf, the Montney formation is among the world's largest natural gas plays. To produce it, operators must use innovative technologies—such as multiwell pad operations, directional drilling, and multistage hydraulic fracturing—to maximize efficiency and develop these wells in a way that is safe, economical, and sustainable.

### THE APPROACH

To help the operator save time and reduce operational risk, SPM Oil & Gas, their sole wellhead partner, approached the operator about using the SPM™ One Straight Line (OSL) Frac Connection. The OSL Frac Connection replaces hammer union connections with flanges, dramatically reducing the amount of iron and connections required on the wellsite. Instead of six flow lines between the frac manifold and the wellhead, the innovative frac connection features just one simple, large-bore connection—for faster rig-up time and fewer safety risks.

Prior to starting the job, SPM Oil & Gas engineers debriefed the company and conducted rigorous computational fluid dynamics (CFD) simulations to predict erosion. The results helped NuVista minimize erosion and prolong frac equipment life.

### THE RESULT

The operator deployed the OSL Frac Connection on an eight-well pad. SPM Oil & Gas mobilized and rigged up the new frac connection within 48 hours—saving approximately \$63,000 and five days of setup time compared to a traditional hammer union configuration. Today, they routinely uses the OSL Frac Connection to pump more than 5,000 tons of proppant per well.

This move helped the operator set a new record in safety. For the first year in the company's history, they achieved zero lost-time injuries, including employees and contractors. The Canadian operator recognized SPM Oil & Gas for its contribution to this exemplary achievement and its ongoing commitment to communication, safety, and environmental protection.

### THE INNOVATION

Engineered for demanding frac applications, the patent-pending SPM™ One Straight Line Frac Connection significantly reduces the amount of iron and connections required on the wellsite. This means a corresponding reduction in nonproductive time (NPT), rig-up time, labor costs, potential leak paths, and safety hazards.

