



Scorpion + Frac Dart Combo Increases Efficiency of Screen-out Recovery

OPERATOR SAVES TIME AND MONEY

CHALLENGE:

Reduce downtime in a complex, horizontal Marcellus well prone to screen-outs.

SOLUTION:

Deploy Nine's Scorpion Composite Plug + Frac Dart.

RESULTS:

Reduced downtime by 20 hours and saved \$70,000.

NINE'S SCORPION COMPOSITE PLUG + FRAC DART SAVES 20 HOURS OF DOWNTIME AND \$70K IN SCREEN-OUT RECOVERY

A Marcellus operator reduced time and cost impacts of screen-outs by trading a traditional plug + ball for Nine's Scorpion + Frac Dart.

Screen-outs during frac operations are time consuming and costly to resolve. Traditionally, operators must flow the well back to clear screen-outs, hoping to recover the frac ball to allow for the subsequent stage pump down. If unsuccessful, a coiled tubing cleanout may be required.

Nine's Frac Dart has been precisely engineered to install within the Scorpion™ Composite Plug and eliminates the need to pump down a ball from surface. If a screen-out occurs, the Frac Dart can be expelled, the well flushed, and the operator can further stimulate the current stage or move on to the next stage. The Frac Dart can also be used for ball recovery. If the plug is set and the guns do not fire, the Frac Dart allows operators to re-initiate pumpdown. This option saves operators both time and money.

After experiencing multiple screen-outs during frac operations, a Marcellus operator put Nine's Frac Dart to the test. After another screen-out left 12,000 lbs of sand in the wellbore, the operator flowed back to successfully unseat the Frac Dart from the plug. An injection test ensured the wellbore was clear, a ball was dropped to regain isolation, and the operator resumed fracturing operations without issue.

Efficiency gains, budgetary wins

Nine's Frac Dart expedited screen-out recovery, allowing the operator to resume fracturing without significant delays. By having the Frac Dart in place, the operator was able to forgo the usual need for coiled tubing. In total, the Frac Dart saved the operator 20 hours of nonproductive time and \$70,000.

