REAL RESULTS

Capillary Injection String Increases Gas Production by 160% in Well, Adding $1600 in Revenue per Day

Objectives

• Identify the most cost-effective solution to increase gas and water production in a horizontal Marcellus Shale well that was experiencing liquid loading and inconsistent line pressure causing fluctuation in gas rates. The well was only producing approximately 250 MCF/D and 5 BWP/D at a flowing tubing pressure of 480 psi.

Results

• Weatherford conducted an evaluation of the well and determined that capillary injection string was the best artificial-lift method to combat the issues in the well. We installed a 3/8-in. 2205 capillary injection string into the 2 7/8-in. tubing at a set depth of 5,420 ft (1652 m), 100 ft (30 m) above perforations. Once the installation was complete, the client’s chemical provider pumped surfactant (foamer) at the rate of 4 qt/d.

Value to Client

• The Weatherford capillary injection string allowed the client to increase gas production from approximately 250 to 650 MCF/D. This 400 MCF/D increase in production at $4.00 per MCF resulted in approximately $1,600 per day and $584,000 per year in additional revenue.