



Weatherford®

REAL RESULTS

Downhole Deployment Valve (DDV®) Enables Successful Air Drilling in Appalachian Basin Gas Well

Objectives

- Run and set a *DDV* downhole deployment valve at 2,478 ft (755 m). This project would be the first application of the *DDV* valve in the Appalachian basin for an air-drilled well.
- Minimize formation damage caused by kill mud and increase production in this water-sensitive formation.
- Isolate the formation to run completions involving complex production strings with four or more packers.

Results

- The installation and wellhead penetration were performed without incident, using mechanical and hydraulic analysis calculations to prevent downtime or failures.
- The *DDV* valve functioned in the open and closed positions on each occasion and held pressure from below the flapper valve as designed.
- The *DDV* successfully isolated formation pressure for two required drillstring trips while avoiding fluid contact with the formation.
- Since this initial run, 11 other *DDV* valves have been installed.

Value to Client

- Safety was enhanced throughout the operation.
- The success of the *DDV* valve provided the operator with a valuable new technology when developing future horizontal wells in this field.
- The operator saved rig time because no drilling mud was required during the operation.



Weatherford's *DDV* valve enables safe installation of drillstrings and completion assemblies during underbalanced operations and increases well productivity by avoiding formation damage. The *DDV* valve reduces well costs and risk exposure with faster tripping and elimination of snubbing units.

Location

Mingo, West Virginia, USA

Formation

Devonian shale

Type of Well

Horizontal, low-pressure, high-volume gas well

Casing Size and Type

7-in., 26-lb, N-80

DDV Setting Depth

2,478 ft (755 m)

Products/Services

7-in., 26-lb/ft, 3,000-psi, NACE, *DDV* valve