

State of Colorado 36-1 Scope of Work:

Objective:

- Characterize the fracture stimulation (height, length and ability to flow) of the D-chalk horizon through direct measurements of the hydraulic fracture itself.

Scope of Work:

- Obtain a direct measurement of stress of the D-chalk via small injection test and pressure build-up.
- Fracture stimulate the D-chalk with a representative treatment design to a horizontal well.
- Measure created fracture heights after fracturing operations using temperature logging and tracer logging tools.
- Measure bottom-hole pressures during fracturing operations for use in modeling of treatment.

Operational Overview:

- 1 day to perform stress measurement test (injection test)
 - 2-3 trucks with one trailer on location; testing only lasts ~ 1 hr.
- 30-45 days of no operations on location
 - Pressure build-up test of previous injection test underway
- 2 days of well preparation work
 - 1 day to move-in and set-up workover rig
 - 1 day to retrieve pressure build-up equipment, install tubing and move-out workover rig
 - Less than 12 people on location during operations
- Theoretically we could have no gap between the operations above and below; however pending field operations there could be 1-30 days of no operations on location
- 2 Days total of preparation and execution of fracturing operations
 - 1 day to set-up fracturing equipment; roughly 6 trucks on location with a man-basket and one towable trailer.
 - 1 day of fracturing operations (~ 2hrs. total of actual treatment), same equipment above.
 - ~ 30 people on location during preparation and treatment operations
- No gap between operations
- 2 days of logging operations after fracturing operations
 - 1 truck on location with 3-4 people during operations
 - Operations happen in every 6-12 hrs.; otherwise no personnel are on location

Contact:

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