PSI
PRECISION SURVEYS INC.

COMPENSATED DENSITY
COMPENSATED NEUTRON
DUAL INDUCTION

Company: Bonanza Creek Operating Co. LLC
Field: Wattenberg
County, State: Weld, Colorado
Well: Wattenberg 34-17
Surface Location: SW SW 17-2N-64W
API#: 05-123-32884-00
Drilling Measured From: KB
Permanent Datum: Ground Level
Elevation: 4,967 ft
Log Measured From: KB, 16 ft above Perm. Datum
Total Depth Driller: 7,000 ft
Total Depth Logger: 7,000 ft
Bottom Log Interval: 6,997 ft
Top Log Interval: 3,500 ft
Casing Driller: 8.625 in @ 1,000 ft
Casing Logger: 1,000 ft
Bit Size: 7.875 in
Type Fluid in Hole: Water Based Mud
Density: 9.0 lb/gal
Viscosity: 40 s/qt
Fluid Loss: 8.4 cc
Source of Sample: Flowline
Rm @ Measured Temp: 0.1 @ 70 °F
Rmf @ Measured Temp: 0.08 @ 70 °F
Rmc @ Measured Temp: 0.12 @ 70 °F
Source of Rmf and Rmc: Measured
Rm @ BHT: 0.06 @ 150 °F
Time Since Circulation: 12 hrs
Time on Location: 10/23/2015 06:00
Unit Number: 8
Recorded By: Jeff Hall
Witnessed By: Jeff Hall

Run No.	1
Service Order	15361
Depth Driller	7,000 ft
Depth Logger	7,000 ft
Bottom Log Interval	6,997 ft
Top Log Interval	3,500 ft
Casing Driller	8.625 in @ 1,000 ft
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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments:

Annular volume calculated for 4.5" casing
Rig Ford 7
Thank you for choosing Pathfinder Surveys!
API # 05-123-32884-00

Database File: 11391.db
Dataset Pathname: Step
Presentation Format: dlis1
Dataset Creation: Wed Mar 30 08:23:55 2016
Charted by: Depth in Feet scaled 1:240

0 Density Caliper (in) 10
50 Gamma Ray (GAPI) 150
0 SP (mV) 100
ABHV (B/)

0.2 Deep Resistivity (Ohm-m) 200.20 Density Porosity (pu) 0
0.2 Medium Resistivity (Ohm-m) 200.20 Neutron Porosity (pu) 60
0.2 Shallow Resistivity (Ohm-m) 200
RX (Ohm-m) 200

2.68 SS Matrix

Database File: 11391.db
Dataset Pathname: Step
Presentation Format: dlis1
Dataset Creation: Wed Mar 30 08:36:39 2016 by Calc Open-Cased 193807
Charted by: Depth in Feet scaled 1:240

0 Caliper (in) 10
50 Gamma Ray (GAPI) 150
0 SP (mV) 100

0.2 Deep Resistivity (Ohm-m) 200.20 Density Porosity (pu) 0
0.2 Medium Resistivity (Ohm-m) 200.20 Neutron Porosity (pu) 60
0.2 Shallow Resistivity (Ohm-m) 200
RX (Ohm-m) 200

2.71 LS Matrix

Matrix Change @ 6600'

2.68 SS Matrix

2.71 LS Matrix

2.68 SS Matrix

Gamma Ray
Caliper
Loggers TD 6,997
Neutron Porosity
Density Porosity
Shallow Resistivity
Medium Resistivity
Deep Resistivity