PSI

PRECISION SURVEYS, INC.

HIGH RESOLUTION INDUCTION COMPENSATED NEUTRON

Company: Bonanza Creek Operating Co. LLC
Field: Wattenberg
Well: Antelope 13-17
API #: 05-123-32746-00
Location: Sec 17 - T3N - R67W
2065' FSL & 799' FWL
Elevation: 4573'
State/Prov: Colorado
Country: United States

Log Measured From: KB
Permanent Datum: Ground Level
Drilling Measured From: KB

Run No. 1
Date: 13-Jan-11
Depth Driller: 9700'
Depth Logger: 9700'
Bottom Logged Interval: 9700'
Top Logged Interval: 6500'
Casing Driller Size @ Depth: 4.500" @ 9700'
Casing Logger Size @ Depth: 4.500" @ 9700'
Bit Size: 4.750"
Type Fluid in Hole: Water
Density / Viscosity: 8.4 / 28
Max Recorded Temp: 220 °F
Resistivity @ Temp: 0.0200 @ 75 °F
Source of Sample: Flowline
Rm @ Meas Temp: 0.0200 @ 75 °F
Rmf @ Meas Temp: 0.0200 @ 75 °F
Rmc @ Meas Temp: 0.0200 @ 75 °F
Source of Rmf / Rmc: Flowline
Rm @ BHT: 0.0200 @ 75 °F
Time Since Circulation: 4 hrs
Time on Bottom: 13-Jan-11 @ 0600
Max Rec Temp: 220 °F
Equipment / Base: 1074 / Greeley
Recorded By: Jeff Hall
Witnessed By: Mr. Rick Vigil

Run No. | Bit Size | Depth Driller | Depth Logger | Bottom Logged Interval | Top Logged Interval | Type Fluid in Hole | Density / Viscosity | Max Recorded Temp | Resistivity @ Temp | Source of Sample | Rm @ Meas Temp | Rmf @ Meas Temp | Rmc @ Meas Temp | Source of Rmf / Rmc | Rm @ BHT | Time Since Circulation | Time on Bottom | Max Rec Temp | Equipment / Base | Recorded By | Witnessed By

1 | 4.750" | 9700' | 9700' | 9700' | 6500' | Water | 8.4 / 28 | 220 °F | 0.0200 @ 75 °F | Flowline | 0.0200 @ 75 °F | 0.0200 @ 75 °F | 0.0200 @ 75 °F | Flowline | 0.0200 @ 75 °F | 4 hrs | 13-Jan-11 @ 0600 | 220 °F | 1074 / Greeley | Jeff Hall | Mr. Rick Vigil

Fold Here

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 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 4-1/2" casing
Fort Drilling Rig 5
Thank you for using Phoenix Surveys!
API # 05-123-32746-00

Database File: 1107.4.db
Dataset Pathname: final
Presentation Format: 2&5
Dataset Creation: Thu May 05 06:13:21 2011
Charted by: Depth in Feet scaled 1:240

Density Caliper (in) 16
Gamma Ray (GAPI) 150
SP (mV) 200
ABHV (ft3)

Deep Resistivity (Ohm-m) 200 20
Medium Resistivity (Ohm-m) 200 20
Shallow Resistivity (Ohm-m) 200 20
Rt (Ohm-m) 200

Density Porosity (pu) 0
Neutron Porosity (pu) 0

2.68 SS Matrix

Caliper (in) 16
Gamma Ray (GAPI) 150
SP (mV) 200
ABHV (ft3)

Deep Resistivity (Ohm-m) 200 20
Medium Resistivity (Ohm-m) 200 20
Shallow Resistivity (Ohm-m) 200 20
Rt (Ohm-m) 200

Density Porosity (pu) 0
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Shallow Resistivity (Ohm-m) 200 20
Rt (Ohm-m) 200

Density Porosity (pu) 0
CH Porosity (pu) 0

2.71 LS Matrix
Matrix Change @ 6537'
2.68 SS Matrix
CH Porosity
2.68 SS Matrix
Density Porosity
Caliper
Shallow Resistivity
Deep Resistivity
Medium Resistivity
Logger's TD: 6716
Logger's TD: 6716

Caliper (in) 16
Gamma Ray (GAPI) 150
SP (mV) 200
ABHV (ft3)

Deep Resistivity (Ohm-m) 200 20
Medium Resistivity (Ohm-m) 200 20
Shallow Resistivity (Ohm-m) 200 20
Rt (Ohm-m) 200

Density Porosity (pu) 0
CH Porosity (pu) 0