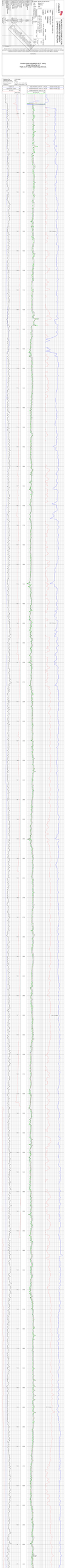

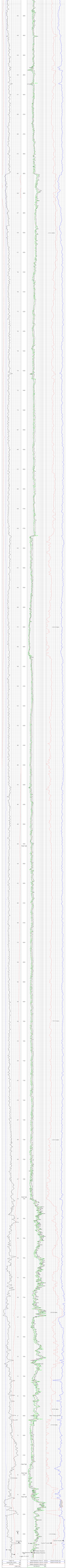

**PIONEER**
Pioneer Energy Services

# HIGH RESOLUTION INDUCTION COMPENSATED DENSITY COMPENSATED NEUTRON

| | |
|---|---|
| Company | EnCana Oil & Gas (USA) Inc |
| Well | Billings 22-18 |
| Field | Wattenberg |
| County | Weld |
| State | Colorado |

| | | | |
|---|---|---|---|
| Company | EnCana Oil & Gas (USA) Inc | | |
| Well | Billings 22-18 | | |
| Field | Wattenberg | | |
| County | Weld | State | Colorado |
| Location: | API # : 05123362000000<br>SHL: 254' FNL & 445' FWL NWNW<br>BHL: 1980' FNL & 1980' FWL SENW<br>SEC 18 TWP 3N RGE 68W | Other Services | None |
| Permanent Datum | GL | Elevation 5214 | Elevation |
| Log Measured From | KB | | K.B. 5227 |
| Drilling Measured From | KB | | D.F. 5227<br>G.L. 5214 |

| | | | |
|---|---|---|---|
| Date | February 06, 2013 | | |
| Run Number | 1 | | |
| Depth Driller | 8370 | | |
| Depth Logger | 8360 | | |
| Bottom Logged Interval | 8360 | | |
| Top Log Interval | Casing | | |
| Casing Driller | 673 | | |
| Casing Logger | 673 | | |
| Bit Size | 7-7/8" | | |
| Type Fluid in Hole | Chem Gel | | |
| Density / Viscosity | 9.5 / 50 | | |
| pH / Fluid Loss | 7.5 / 13.0 | | |
| Source of Sample | Flowline | | |
| Rm @ Meas. Temp | 3.53 @ 61 F | | |
| Rmf @ Meas. Temp | 2.82 @ 61 F | | |
| Rmc @ Meas. Temp | 4.24 @ 61 F | | |
| Source of Rmf / Rmc | Measure / Calc | | |
| Rm @ BHT | 0.92 @ 224 F | | |
| Time Circulation Stopped | 0000 | | |
| Time Logger on Bottom | 0915 | | |
| Maximum Recorded Temperature | 224 F | | |
| Equipment Number | 50 | | |
| Location | Brighton, CO | | |
| Recorded By | Clint Christensen | | |
| Witnessed By | Wes Harrison | | |

Confidential

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will 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.

Comments

Annular volume calculated for 4-1/2" casing
Ensign Drilling Rig 122
Thank you for using Pioneer Energy Services.

Database File: 13183-84.db
Dataset Pathname: final
Presentation Format: encana
Dataset Creation: Tue Feb 12 12:19:53 2013
Charted by: Depth in Feet scaled 1:240

6 Caliper (in) 16
0 Gamma Ray (GAPI) 300
0 SP (mV) 200
ABHV (ft3)
2 Deep Resistivity (Ohm-m) 200
2 Medium Resistivity (Ohm-m) 200
2 Shallow Resistivity (Ohm-m) 200
2 Rt (Ohm-m) 200
40 Density Porosity (pu) 0
40 Neutron Porosity (pu) 0
2.68 SS Matrix

4450
4500
4550
4600
4650
4700
4750
4800
4850
4900
4950
5000
5050
5100
5150
5200
5250
5300
5350
5400
5450
5500
5550
5600
5650
5700
5750
5800
5850
5900
5950
6000
6050
6100
6150
6200
6250
6300
6350
6400
6450
6500
6550
--Pulled Tight--
6600
6650
6700
6750
6800
6850
6900
6950
7000
7050
7100
7150
7200
7250
7300
7350
7400
7450
--Pulled Tight--
7500
7550
7600
7650
7700
7750
7800
7850
7900
7950
8000
8050
8100
--Pulled Tight--
--Pulled Tight--
50
8150
38
8200
--Pulled Tight--
26
8250
ABHV
14
8300
Gamma Ray
Caliper
SP
2
8350
Logger's TD: 8360'
2.68 SS Matrix
2.68 SS Matrix
2.68 SS Matrix
2.68 SS Matrix
2.68 SS Matrix
2.68 SS Matrix
2.68 SS Matrix
Matrix Change @ 8000
2.65 SS Matrix
2.65 SS Matrix
Density Porosity
Neutron Porosity
Rt
Deep Resistivity
Shallow Resistivity
Medium Resistivity
6 Caliper (in) 16
0 Gamma Ray (GAPI) 300
0 SP (mV) 200
ABHV (ft3)
2 Deep Resistivity (Ohm-m) 200
2 Medium Resistivity (Ohm-m) 200
2 Shallow Resistivity (Ohm-m) 200
2 Rt (Ohm-m) 200
40 Density Porosity (pu) 0
40 Neutron Porosity (pu) 0