PIONEER
Pioneer Energy Services

BHC SONIC

Company	Whiting Oil & Gas Corporation
Well	Razor Federal #26L-2302B
Field	WildCat
County	Weld
State	Colorado

Company Whiting Oil & Gas Corporation
Well Razor Federal #26L-2302B
Field WildCat
County Weld State Colorado

Location: API # : 05123383390000
SHL: 2244' FSL & 593' FWL NWSW
SEC 26 TWP 10N RGE 58W

Other Services
Induction
Density
Neutron

Permanent Datum GL Elevation 4737
Log Measured From KB
Drilling Measured From KB

Elevation
K.B. 4754
D.F. 4753
G.L. 4737

Date	April 5, 2014
Run Number	1
Depth Driller	6020
Depth Logger	5541
Bottom Logged Interval	5530
Top Log Interval	Casing
Casing Driller	1821
Casing Logger	1821
Bit Size	8.75"
Type Fluid in Hole	Chem Gel
Density / Viscosity	10.1 / 40
pH / Fluid Loss	8.5 / 11
Source of Sample	Flowline
Rm @ Meas. Temp	3.35 @ 65 F
Rmf @ Meas. Temp	2.51 @ 65 F
Rmc @ Meas. Temp	4.19 @ 65 F
Source of Rmf / Rmc	Measure / Calc
Rm @ BHT	1.48 @ 147 F
Time Circulation Stopped	1510
Time Logger on Bottom	21:30
Maximum Recorded Temperature	147 F
Equipment Number	49
Location	Ft. Morgan
Recorded By	Clint Christensen
Witnessed By	Corey Neuroth

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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 7" casing
Cade Drilling Rig 23
Thank you for using Pioneer Energy Services

Database File:	13528.db
Dataset Pathname:	Finals
Presentation Format:	sonic
Dataset Creation:	Sun Apr 06 01:33:42 2014
Charted by:	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	200	140	Travel Time (usec/ft)	40
6	Caliper (in)	16	40	Sonic Porosity (pu)	0

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6	Caliper (in)	16	40	Sonic Porosity (pu)	0

Calibration Report

Database File: 13528.db
Dataset Pathname: pass1

Dataset Creation: Sat Apr 05 20:39:36 2014 by Log 0

Dual Induction Calibration Report

Serial-Model: 1011-PSI
Surface Cal Performed:

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		m	b
Deep	0.000	1.000	0.000	1.000	mmho/m	0.510	-28.000
Medium	0.000	1.000	0.000	1.000	mmho/m	0.440	-28.000

Compensated Density Calibration Report

Serial-Model: 998-PSI
Master Calibration Performed: Sat Apr 05 19:16:59 2014

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.750	g/cc	7210.00	9816.00	cps
Aluminum	2.690	g/cc	1326.00	6231.00	cps

	Size		Reading
Small Ring		in	
Medium Ring		in	
Large Ring		in	

Compensated Neutron Calibration Report

Serial Number: 826
Tool Model: PSI

CALIBRATION

Detector	Readings		Target		Normalization
Short Space	1.00	cps	1.00	cps	1.9000
Long Space	1.00	cps	1.00	cps	2.0900

Gamma Ray Calibration Report

Serial Number: 939
Tool Model: PSI
Performed: Sat Apr 05 19:17:16 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.6200 GAPI/cps