The Perforators LLC

DUAL INDUCTION LOG

Company	Charles N. Griffin
Well	Houlton OWWO #1
Field	Whelan Southwest
County	Barber
State	Kansas

Company Charles N. Griffin
Well Houlton OWWO #1
Field Whelan Southwest
County Barber State Kansas

Location: API # : 15 007 22257 00 01
1987' FNL & 1962' FEL
SEC 9 TWP 32S RGE 12W

Other Services
CDNL

Permanent Datum Ground Level Elevation 1472'
Log Measured From KB 8' AGL
Drilling Measured From KB

Elevation
K.B. 1480'
D.F. 1479'
G.L. 1472'

Date	10-10-12		
Run Number	One		
Depth Driller	4690'		
Depth Logger	4691'		
Bottom Logged Interval	4689'		
Top Log Interval	220'		
Casing Driller	242'		
Casing Logger	242'		
Bit Size	7 7/8"		
Type Fluid in Hole	Chemical		
Density / Viscosity	9.1/60		
pH / Fluid Loss	11.0/14.0		
Source of Sample	Pit		
Rm @ Meas. Temp	.3@72degf		
Rmf @ Meas. Temp	.23@72degf		
Rmc @ Meas. Temp	.36@72degf		
Source of Rmf / Rmc	Calculated		
Rm @ BHT	.18@119degf		
Time Circulation Stopped	1:00 p.m.		
Time Logger on Bottom	4:15 p.m.		
Maximum Recorded Temperature	119 degf		
Equipment Number	T045		
Location	Hays, KS.		
Recorded By	Gus Pfanenstiel		
Witnessed By	Mr. Bruce Reed	Mr. Charles Griffin	Mr. JR Griffin

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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

Turn on road going to Sun City go 3 miles to Spring Creek Road S into

Thanks for using The Perforators LLC Hays, KS. (785-621-4604)

The Perforators LLC

Main Pass

Database File: cghoultonowwo#1oh.db
Dataset Pathname: pass2
Presentation Format: kdillin2
Dataset Creation: Wed Oct 10 16:57:03 2012 by Log Open-Cased 100827
Charted by: Depth in Feet scaled 1:600

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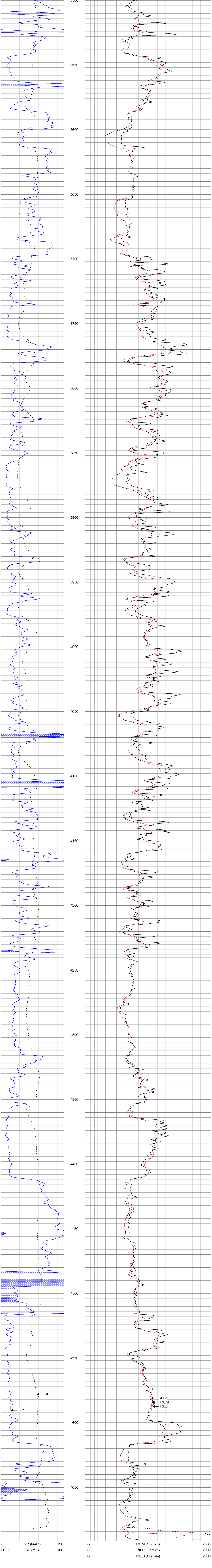
Main Pass

Database File: cghoultonowwo#1oh.db
Dataset Pathname: pass2
Presentation Format: kdil
Dataset Creation: Wed Oct 10 16:57:03 2012 by Log Open-Cased 100827
Charted by: Depth in Feet scaled 1:240



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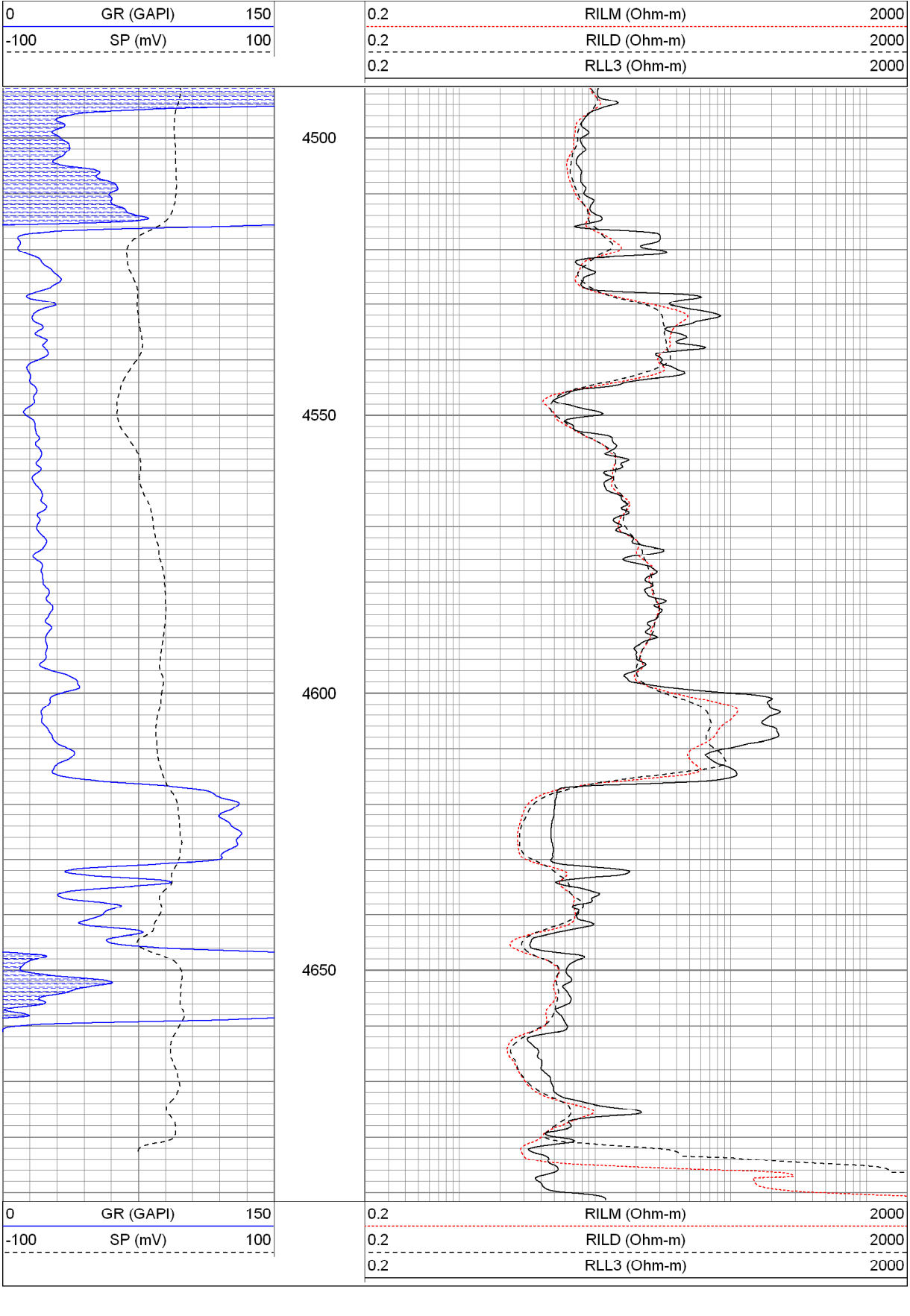
Repeat Pass

Database File: cghoultonowwo#1oh.db
Dataset Pathname: pass1
Presentation Format: kdil
Dataset Creation: Wed Oct 10 16:33:07 2012 by Log Open-Cased 100827
Charted by: Depth in Feet scaled 1:240



Calibration Report

Database File: cghoultonowwo#1oh.db
Dataset Pathname: pass1
Dataset Creation: Wed Oct 10 16:33:07 2012 by Log Open-Cased 100827

Dual Induction Calibration Report

Serial-Model: 080522-Probe
Surface Cal Performed: Tue Sep 18 12:59:01 2012
Downhole Cal Performed: Tue Sep 18 12:59:58 2012
After Survey Verification Performed: Tue Sep 18 12:59:58 2012

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.000	0.639	V	0.000	400.000	mmho/m	626.671	-0.176
Medium	0.002	0.734	V	0.000	464.000	mmho/m	633.736	-1.211
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.001	0.639	V	0.000	400.000	mmho/m	626.563	-0.317
Medium	0.002	0.735	V	0.000	464.000	mmho/m	633.003	-1.059

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.046	400.409	mmho/m	0.142	400.210	mmho/m	0.999	0.096
Medium	0.062	464.391	mmho/m	-0.151	464.387	mmho/m	1.000	-0.213
LL3		7.268	V		750.000	Ohm-m		
		-0.000	V		12.000	Ohm-m		
		-7.309	V		3745.000	mmho-m		

Compensated Density Calibration Report

Serial-Model: 2388DHT-DHT
Source / Verifier: /
Master Calibration Performed: Thu Sep 13 16:04:57 2012

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.750	g/cc	717.11	305.57	cps
Aluminum	2.620	g/cc	140.63	205.93	cps

Spine Angle = 76.38
Density/Spine Ratio = 0.519

	Size		Reading
Small Ring	8.25	in	5771.32
Large Ring	14.00	in	10165.20

Gamma Ray Calibration Report

Serial Number: 2001
Tool Model: OH
Performed: Sat Sep 22 13:47:45 2012

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.2300 GAPI/cps

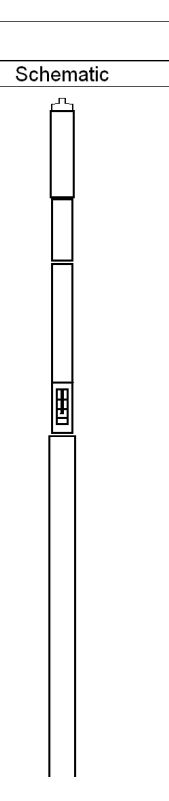
Neutron Calibration Report

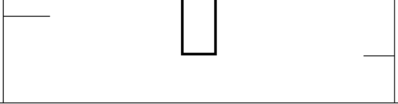
Serial Number: 5108
Tool Model: PROBE
Performed: Mon Sep 03 08:08:04 2012

Calibrator Value: 1 NAPI

Calibrator Reading: 1 cps

Sensitivity: 1 NAPI/cps

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			None	0.75	1.50	5.00
NEU	37.85		NEU-PROBE (5108) Probe	4.92	3.63	85.00
GR	32.32		GR-OH (2001) 2001	3.56	3.25	40.00
			CDL-DHT (2388DHT) Digital High Temp CDL Tool	9.69	4.00	201.00
LSD	23.78					
DCAL	23.49					
SSD	23.24					
HEADVOLT	21.47					
CILD	10.60		DIL-Probe (080522) Probe Dual Induction	21.47	4.00	345.00
SP	10.60					
CILM	6.89					

RLL3	1.70					

Dataset:	cghoultonowwo#1oh.db: field/well/run1/pass1
Total Length:	40.39 ft
Total Weight:	676.00 lb
O.D.	4.00 in