The Perforators LLC

DUAL INDUCTION LOG

Company	John O Farmer Inc.
Well	Waugh B #2
Field	Wildcat
County	Wabaunsee
State	Kansas

Company John O Farmer Inc.
Well Waugh B #2
Field Wildcat
County Wabaunsee State Kansas

Location: API # : 15 197 20296
1210' FSL & 640' FWL
SEC 18 TWP 15S RGE 12E

Other Services
ML
CDNL

Permanent Datum Ground Level Elevation 1305'
Log Measured From KB 8' AGL
Drilling Measured From KB

Elevation
K.B. 1313'
D.F. 1313'
G.L. 1305'

Date	6-28-12
Run Number	One
Depth Driller	3119'
Depth Logger	3121'
Bottom Logged Interval	3119'
Top Log Interval	300'
Casing Driller	328'
Casing Logger	328'
Bit Size	7 7/8"
Type Fluid in Hole	Chemical Mud
Density / Viscosity	9.2/48
pH / Fluid Loss	9.0/8.2
Source of Sample	Pit
Rm @ Meas. Temp	3.2@82degf
Rmf @ Meas. Temp	2.4@82degf
Rmc @ Meas. Temp	3.84@82degf
Source of Rmf / Rmc	Calculated
Rm @ BHT	2.19@120degf
Time Circulation Stopped	6:00 a.m.
Time Logger on Bottom	9:00 a.m.
Maximum Recorded Temperature	120
Equipment Number	T045
Location	Hays, KS.
Recorded By	L. Smith
Witnessed By	Mr. Austin Klaus

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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

Ap[prox. 8.5 S of Eskridge, turn W at Fireworks building on rd. 390, N on rd. N, E into.
Thank you for using The Perforators LLC
Hays, KS (785) 621-4604

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Main Pass

Database File: jofwaughb#2oh.db
Dataset Pathname: pass2
Presentation Format: kdillin2
Dataset Creation: Thu Jun 28 09:08:19 2012 by Log Open-Cased 100827
Charted by: Depth in Feet scaled 1:600

0 GR (GAPI) 150
-200 SP (mV) 0
0 RILD (Ohm-m) 50
0 RLL3 (Ohm-m) 50
1000 CILD (mmho/m) 0
10000 LTEN (lb) 0
50 RILD x 10 (Ohm-m) 500
50 RLL3 x 10 (Ohm-m) 500

0 GR (GAPI) 150
-200 SP (mV) 0
0 RILD (Ohm-m) 50
0 RLL3 (Ohm-m) 50
1000 CILD (mmho/m) 0
10000 LTEN (lb) 0
50 RILD x 10 (Ohm-m) 500
50 RLL3 x 10 (Ohm-m) 500

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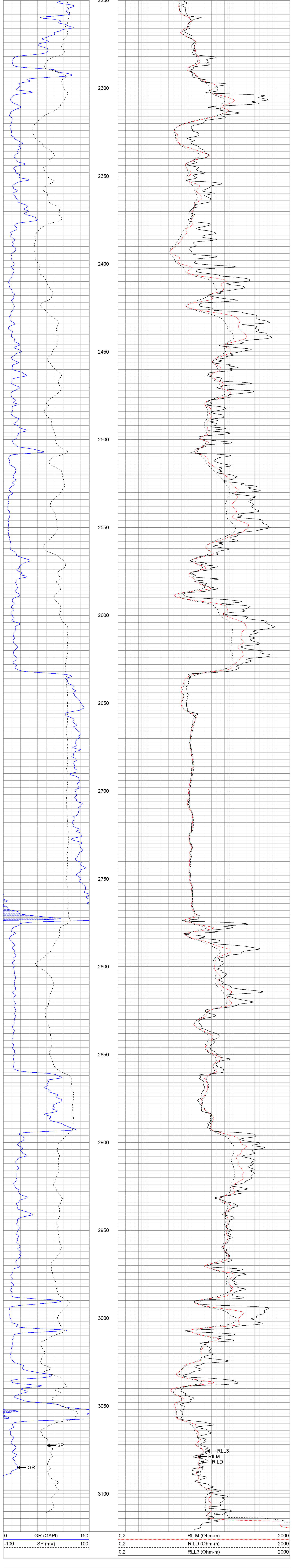
Main Pass

Database File: jofwaughb#2oh.db
Dataset Pathname: pass2
Presentation Format: kdil
Dataset Creation: Thu Jun 28 09:08:19 2012 by Log Open-Cased 100827
Charted by: Depth in Feet scaled 1:240

0 GR (GAPI) 150
-100 SP (mV) 100
0.2 RILM (Ohm-m) 2000
0.2 RILD (Ohm-m) 2000
0.2 RLL3 (Ohm-m) 2000



0 GR (GAPI) 150
-100 SP (mV) 100
0.2 RILM (Ohm-m) 2000
0.2 RILD (Ohm-m) 2000
0.2 RLL3 (Ohm-m) 2000

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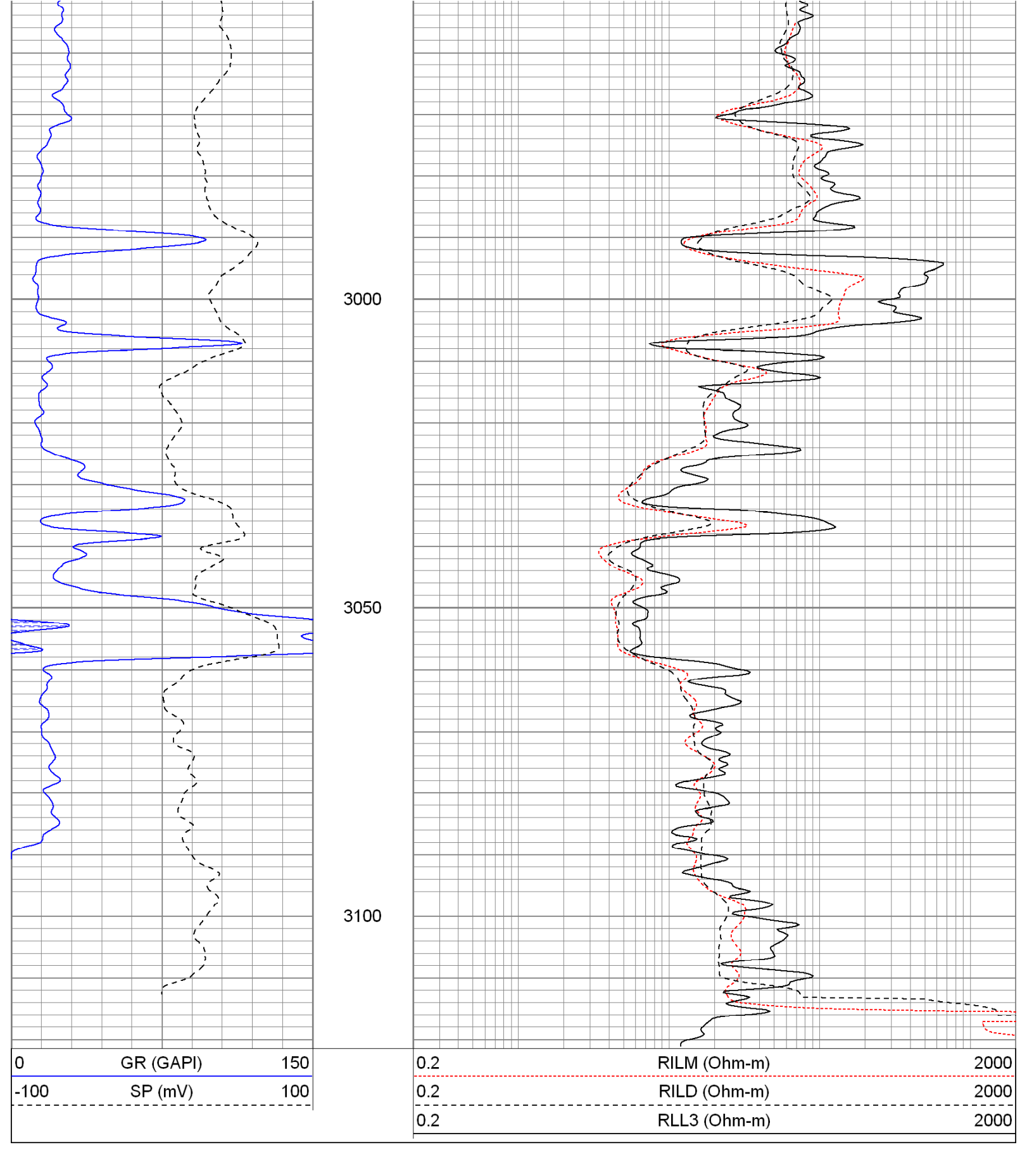
Repeat Pass

Database File: jofwaughb#2oh.db
Dataset Pathname: pass1
Presentation Format: kdil
Dataset Creation: Thu Jun 28 08:58:47 2012 by Log Open-Cased 100827
Charted by: Depth in Feet scaled 1:240

0 GR (GAPI) 150
-100 SP (mV) 100
0.2 RILM (Ohm-m) 2000
0.2 RILD (Ohm-m) 2000
0.2 RLL3 (Ohm-m) 2000



0 GR (GAPI) 150
-100 SP (mV) 100
0.2 RILM (Ohm-m) 2000
0.2 RILD (Ohm-m) 2000
0.2 RLL3 (Ohm-m) 2000

Calibration Report

Database File: jofwaughb#2oh.db
Dataset Pathname: pass1
Dataset Creation: Thu Jun 28 08:58:47 2012 by Log Open-Cased 100827

Dual Induction Calibration Report

Serial-Model: 080522-Probe
Surface Cal Performed: Sun Jun 03 19:16:54 2012
Downhole Cal Performed: Sun Jun 03 19:17:47 2012
After Survey Verification Performed: Sun Jun 03 19:17:47 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	626.605	-0.291
Medium	0.002	0.737	V	0.000	464.000	mmho/m	631.164	-1.052
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.001	0.639	V	0.000	400.000	mmho/m	626.929	-0.486
Medium	0.002	0.737	V	0.000	464.000	mmho/m	631.641	-1.307

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.142	400.398	mmho/m	0.195	399.989	mmho/m	0.999	0.054
Medium	0.293	464.339	mmho/m	0.254	463.904	mmho/m	0.999	-0.038
LL3		7.252	V		750.000	Ohm-m		
		0.000	V		12.000	Ohm-m		
		-7.329	V		3745.000	mmho-m		

Compensated Density Calibration Report

Serial-Model: 2388DHT-DHT
Source / Verifier: /
Master Calibration Performed: Thu Jun 21 11:00:02 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	8.15	in	5771.32
Large Ring	14.00	in	10165.20

Gamma Ray Calibration Report

Serial Number: 2000
Tool Model: P2000
Performed: Tue Jun 19 18:23:04 2012

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.2200 GAPI/cps

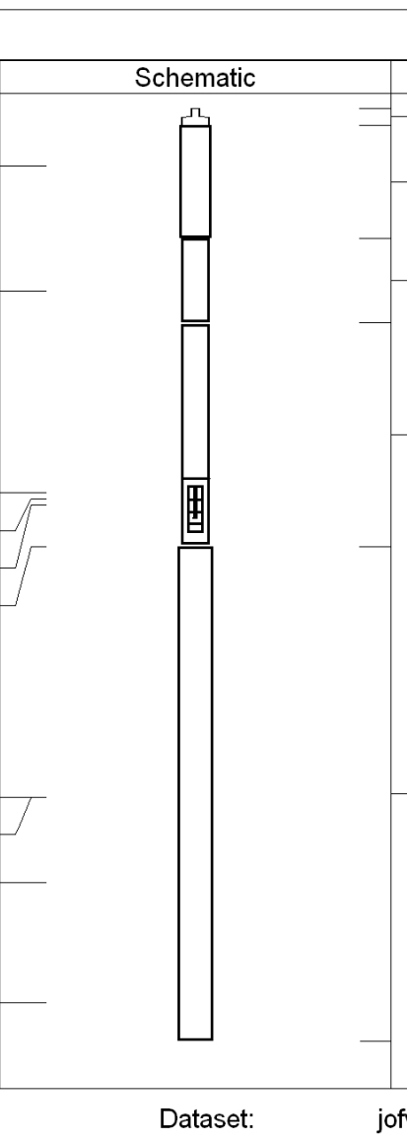
Neutron Calibration Report

Serial Number: 5108
Tool Model: PROBE
Performed: Wed Jun 27 12:59:57 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	37.96		NEU-PROBE (5108) Probe	4.92	3.63	85.00
GR	32.57		GR-P2000 (2000)	3.67	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: jofwaughb#2oh.db: field/well/run1/pass1
Total Length: 40.49 ft
Total Weight: 676.00 lb
O.D. 4.00 in