The Perforators LLC

DUAL INDUCTION LOG

Company	American Patriot Oil
Well	APO #2
Field	Wheeler South
County	Graham
State	Kansas

Company American Patriot Oil
Well APO #2
Field Wheeler South
County Graham State Kansas

Location: API # : 15 065 23850
2310' FNL & 2310' FWL
SEC 19 TWP 10S RGE 21W

Other Services
CDNL

Permanent Datum Ground Level Elevation 2259'
Log Measured From KB 7' AGL
Drilling Measured From KB

Elevation
K.B. 2266'
D.F. 2265'
G.L. 2259'

Date	12-2-12	
Run Number	One	
Depth Driller	3976'	
Depth Logger	3979'	
Bottom Logged Interval	3977'	
Top Log Interval	250'	
Casing Driller	8 5/8" @ 268'	
Casing Logger	268'	
Bit Size	7 7/8"	
Type Fluid in Hole	Chemical	
Density / Viscosity	9.3/55	
pH / Fluid Loss	10.5/7.8	
Source of Sample	Pit	
Rm @ Meas. Temp	.6@70degf	
Rmf @ Meas. Temp	.45@70degf	
Rmc @ Meas. Temp	.72@70degf	
Source of Rmf / Rmc	Calculated	
Rm @ BHT	.36@116degf	
Time Circulation Stopped	12:30 p.m.	
Time Logger on Bottom	2:15 p.m.	
Maximum Recorded Temperature	116degf	
Equipment Number	T045	
Location	Hays, KS	
Recorded By	L. Smith	
Witnessed By	Mr Randy Killian	Mr. Doug Stewart

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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

Thanks for using The Perforators LLC
785-621-4604

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Main Pass

Database File: apoapo#2oh.db
Dataset Pathname: pass2
Presentation Format: kdillin2
Dataset Creation: Sun Dec 02 14:54:36 2012 by Log Open-Cased 100827
Charted by: Depth in Feet scaled 1:600

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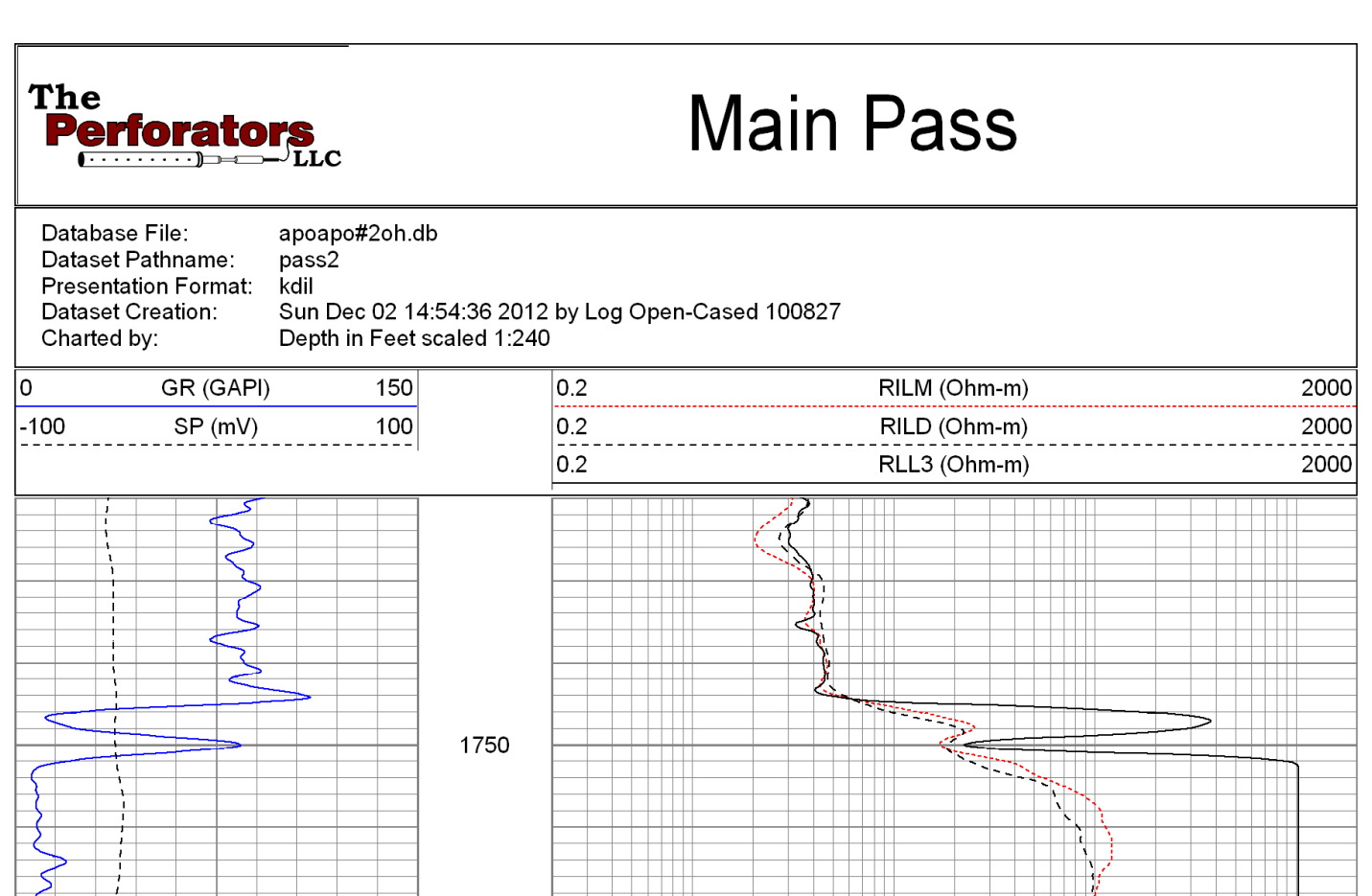
Main Pass

Database File: apoapo#2oh.db
Dataset Pathname: pass2
Presentation Format: kdil
Dataset Creation: Sun Dec 02 14:54:36 2012 by Log Open-Cased 100827
Charted by: Depth in Feet scaled 1:240



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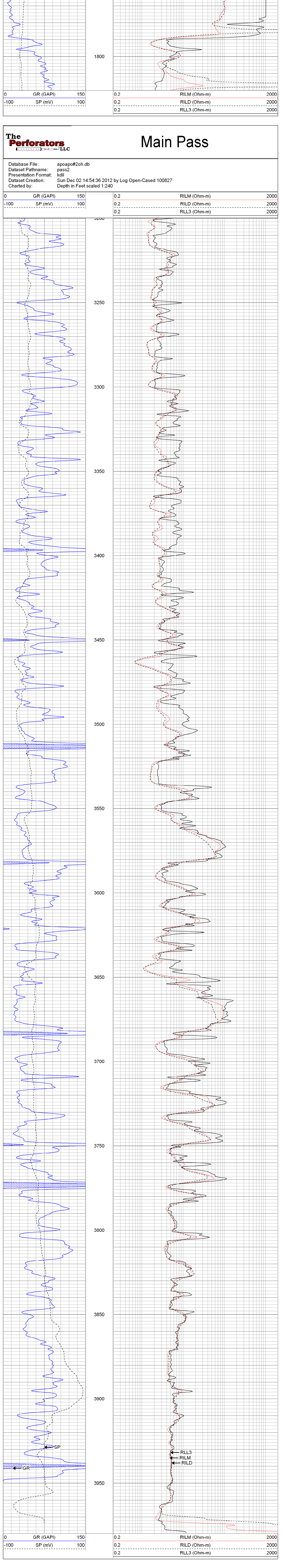

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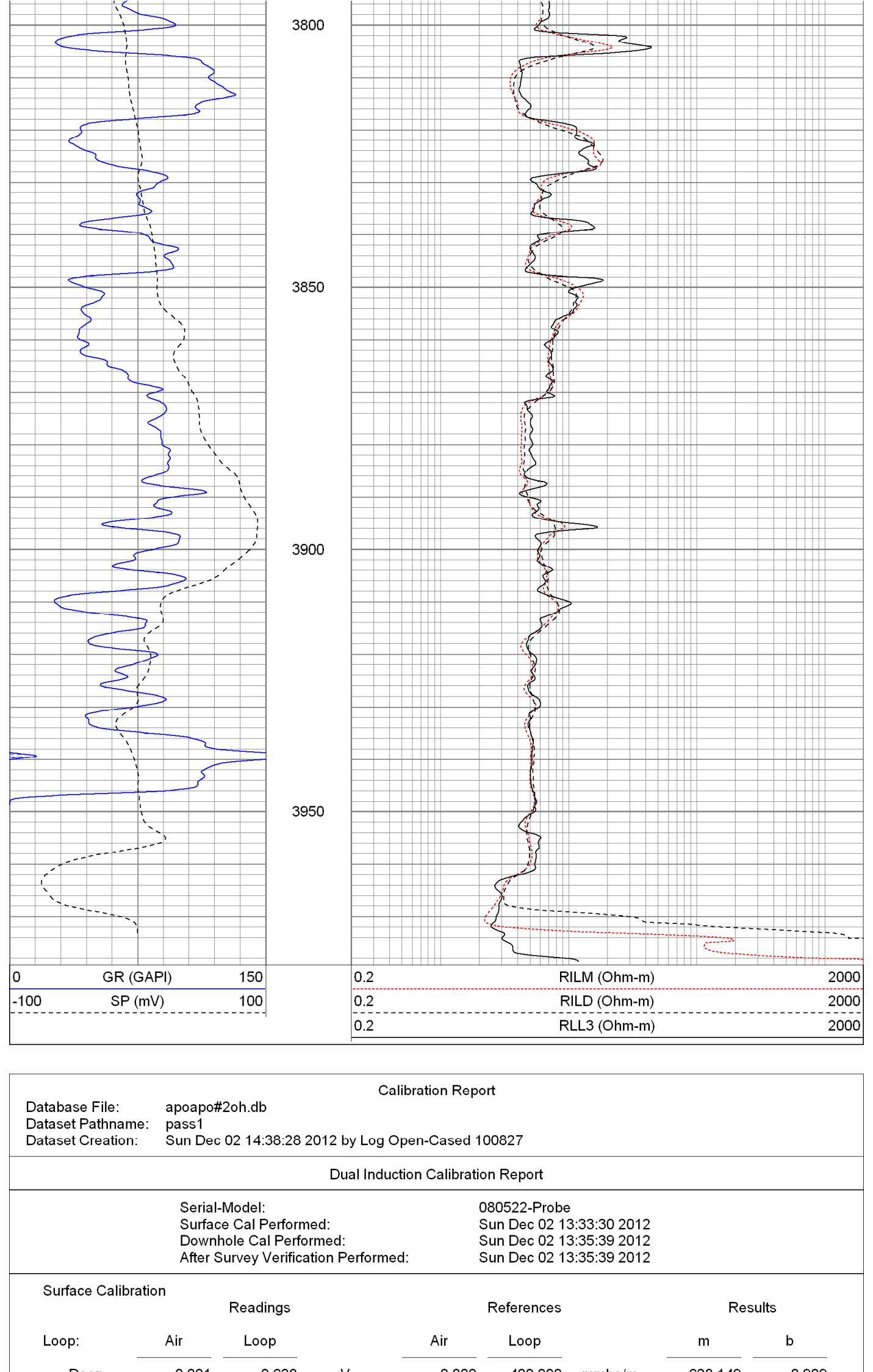
Repeat Pass

Database File: apoapo#2oh.db
Dataset Pathname: pass1
Presentation Format: kdil
Dataset Creation: Sun Dec 02 14:38:28 2012 by Log Open-Cased 100827
Charted by: Depth in Feet scaled 1:240



Calibration Report

Database File: apoapo#2oh.db
Dataset Pathname: pass1
Dataset Creation: Sun Dec 02 14:38:28 2012 by Log Open-Cased 100827

Dual Induction Calibration Report

Serial-Model: 080522-Probe
Surface Cal Performed: Sun Dec 02 13:33:30 2012
Downhole Cal Performed: Sun Dec 02 13:35:39 2012
After Survey Verification Performed: Sun Dec 02 13:35:39 2012

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.001	0.638	V	0.000	400.000	mmho/m	628.149	-0.909
Medium	0.003	0.735	V	0.000	464.000	mmho/m	634.133	-1.885
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.001	0.639	V	0.000	400.000	mmho/m	627.770	-0.927
Medium	0.003	0.735	V	0.000	464.000	mmho/m	634.038	-1.896

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	-0.587	400.153	mmho/m	0.019	400.261	mmho/m	0.999	0.605
Medium	-0.685	463.926	mmho/m	0.012	464.081	mmho/m	0.999	0.696
LL3		7.259	V		750.000	Ohm-m		
		-0.000	V		12.000	Ohm-m		
		-7.420	V		3745.000	mmho-m		

Compensated Density Calibration Report

Serial-Model: 2501DHT-DHT
Source / Verifier: /
Master Calibration Performed: Tue Nov 06 10:51:50 2012

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.750	g/cc	706.18	260.37	cps
Aluminum	2.680	g/cc	133.68	175.21	cps

Spine Angle = 76.61
Density/Spine Ratio = 0.544

	Size		Reading
Small Ring	8.50	in	6273.19
Large Ring	14.00	in	10676.90

Gamma Ray Calibration Report

Serial Number: 2000
Tool Model: P2000
Performed: Sun Dec 02 13:08:27 2012

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.2400 GAPI/cps

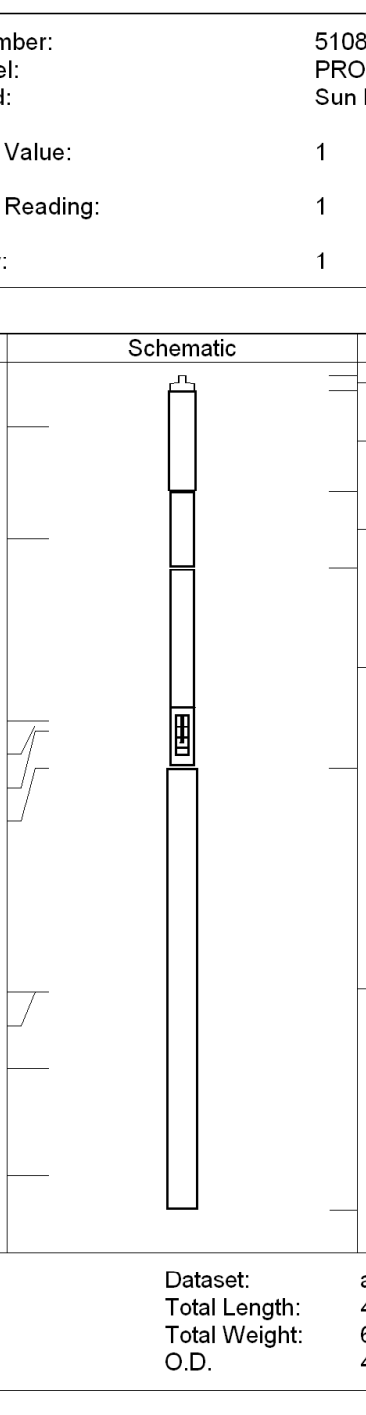
Neutron Calibration Report

Serial Number: 5108
Tool Model: PROBE
Performed: Sun Dec 02 14:05:16 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 (2501DHT) 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: apoapo#2oh.db: field/well/run1/pass1
Total Length: 40.49 ft
Total Weight: 676.00 lb
O.D.: 4.00 in