The Perforators LLC

DUAL INDUCTION LOG

Company	Charles N. Griffin
Well	Richardson #1
Field	St. John
County	Stafford
State	Kansas

Company Charles N. Griffin
Well Richardson #1
Field St. John
County Stafford State Kansas

Location: API # : 15 185 23669
330' FSL & 1670' FWL
SEC 22 TWP 24S RGE 13W

Other Services
CDNL

Permanent Datum Ground Level Elevation 1926'
Log Measured From KB 9' AGL
Drilling Measured From KB

Elevation
K.B. 1935'
D.F. ------
G.L. 1926'

Date	3-1-11
Run Number	One
Depth Driller	4095'
Depth Logger	4103'
Bottom Logged Interval	4101'
Top Log Interval	Surface Casing
Casing Driller	232'
Casing Logger	232'
Bit Size	7 7/8"
Type Fluid in Hole	Chemical
Density / Viscosity	9.1
pH / Fluid Loss	8.5/11.2
Source of Sample	Pit
Rm @ Meas. Temp	.8@68degf
Rmf @ Meas. Temp	.64@68degf
Rmc @ Meas. Temp	1.28@68degf
Source of Rmf / Rmc	Calculated
Rm @ BHT	.44@123degf
Time Circulation Stopped	7:00 p.m.
Time Logger on Bottom	9:50 p.m.
Maximum Recorded Temperature	123 degf
Equipment Number	T045
Location	Hays, KS.
Recorded By	L. Smith
Witnessed By	Mr.Bruce Reed

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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

South of St. John , crosss hyw. 50 and go 1S,1/2E,N into.

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

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Main Pass

Database File: cgrichardson#1.db
Dataset Pathname: pass2.1
Presentation Format: kdillin2
Dataset Creation: Wed Mar 02 01:00:26 2011 by Calc Open-Cased 100827
Charted by: Depth in Feet scaled 1:600

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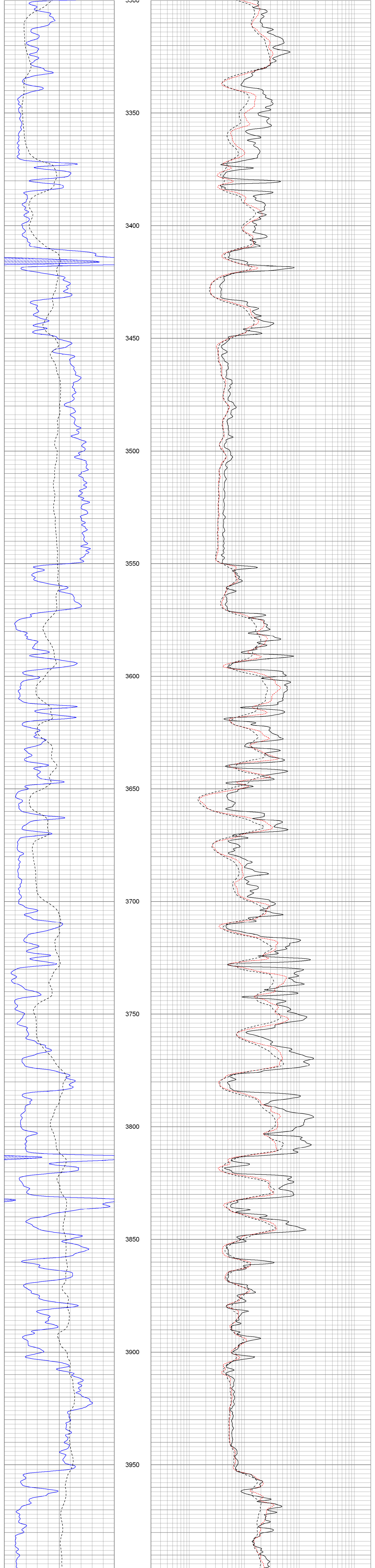
Main Pass

Database File: cgrichardson#1.db
Dataset Pathname: pass2.1
Presentation Format: kdil
Dataset Creation: Wed Mar 02 01:00:26 2011 by Calc Open-Cased 100827
Charted by: Depth in Feet scaled 1:240



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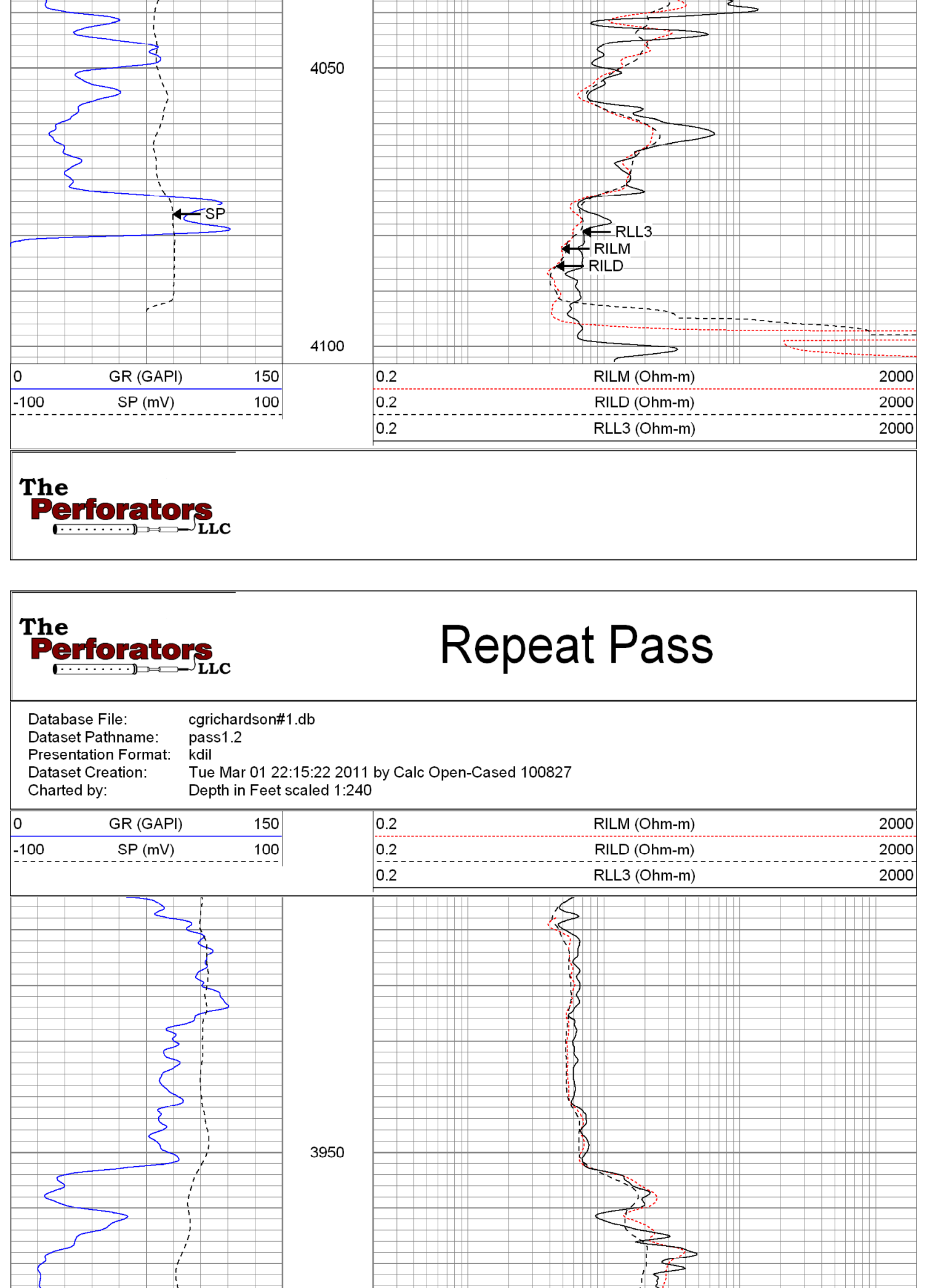
Repeat Pass

Database File: cgrichardson#1.db
Dataset Pathname: pass1.2
Presentation Format: kdil
Dataset Creation: Tue Mar 01 22:15:22 2011 by Calc Open-Cased 100827
Charted by: Depth in Feet scaled 1:240



Calibration Report

Database File: cgrichardson#1.db
Dataset Pathname: pass2
Dataset Creation: Tue Mar 01 21:51:11 2011 by Log Open-Cased 100827

Dual Induction Calibration Report

Serial-Model: 080522-Probe
Surface Cal Performed: Wed Feb 23 07:50:38 2011
Downhole Cal Performed: Wed Feb 23 07:51:03 2011
After Survey Verification Performed: Sat Jan 29 19:35:24 2011

Surface Calibration

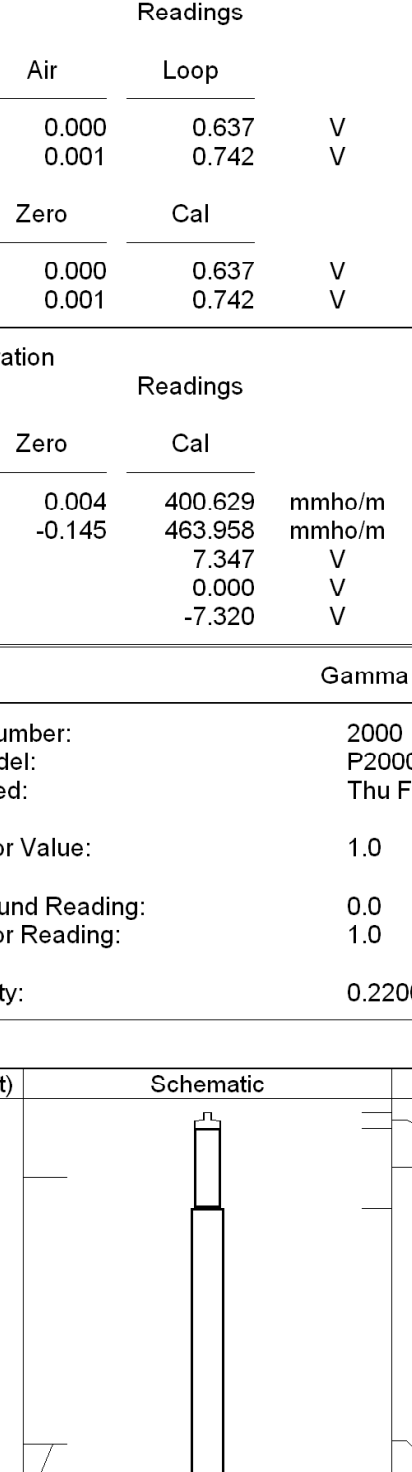
	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.000	0.637	V	0.000	400.000	mmho/m	627.896	-0.077
Medium	0.001	0.742	V	0.000	464.000	mmho/m	625.977	-0.588
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.000	0.637	V	0.000	400.000	mmho/m	627.836	-0.146
Medium	0.001	0.742	V	0.000	464.000	mmho/m	626.663	-0.708

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.004	400.629	mmho/m	0.069	400.107	mmho/m	0.999	0.065
Medium	-0.145	463.958	mmho/m	0.118	463.610	mmho/m	0.999	0.263
LL3		7.347	V		750.000	Ohm-m		
		0.000	V		12.000	Ohm-m		
		-7.320	V		3745.000	mmho-m		

Gamma Ray Calibration Report

Serial Number:	2000	
Tool Model:	P2000	
Performed:	Thu Feb 17 16:29:58 2011	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.2200	GAPI/cps

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			None	0.75	1.50	5.00
GR	22.89		GR-P2000 (2000)	3.67	3.25	40.00
CILD SP CILM RLL3	10.60 10.60 6.89 1.70		DIL-Probe (080522) Probe Dual Induction	21.47	4.00	345.00

Dataset: cgrichardson#1.db: field/well/run1/pass2
Total Length: 25.89 ft
Total Weight: 390.00 lb
O.D. 4.00 in