



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

COMPENSATED DENSITY/NEUTRON LOG

Company		RL INVESTMENT, LLC.	
Well		HANNA #1-18	
Field		GRAHAM	
County		KANSAS	
State		KANSAS	
Company		RL INVESTMENT, LLC.	
Well		HANNA #1-18	
Field		GRAHAM	
County		KANSAS	
State		KANSAS	
Location:		API # : 15-065-23968-0000	
Permanent Datum		GROUND LEVEL	
Log Measured From		Elevation 2524	
Drilling Measured From		KELLY BUSHING 8' A.G.L.	
SEC 18 TWP 10S RGE 25W		DIL/MEL	
Other Services		Elevation	
K.B. 2532		D.F. 2530	
G.L. 2524			
Date	8/27/12		
Run Number	ONE		
Depth Driller	4075		
Depth Logger	4075		
Bottom Logged Interval	4051		
Top Log Interval	3450		
Casing Driller	8 5/8" @ 219		
Casing Logger	217		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.2/48		
pH / Fluid Loss	10.0/8.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.75 @ 96F		
Rmt @ Meas. Temp	.56 @ 96F		
Rmc @ Meas. Temp	.90 @ 96F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	.61 @ 117F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	7:15 A.M.		
Maximum Recorded Temperature	117F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	RICHARD BELL		

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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

THANK YOU FOR USING NABORS, HAYS, KS. (785) 628-6395
DIRECTIONS:
ST. PETER, KS. - JUST PAST PFEIFFER SERVICE (RD. E)
3 W. - 1/8 S. - W. INTO

Database File:

011592ddn.db

Dataset Pathname:

pass4.1

Presentation Format:

den_neu

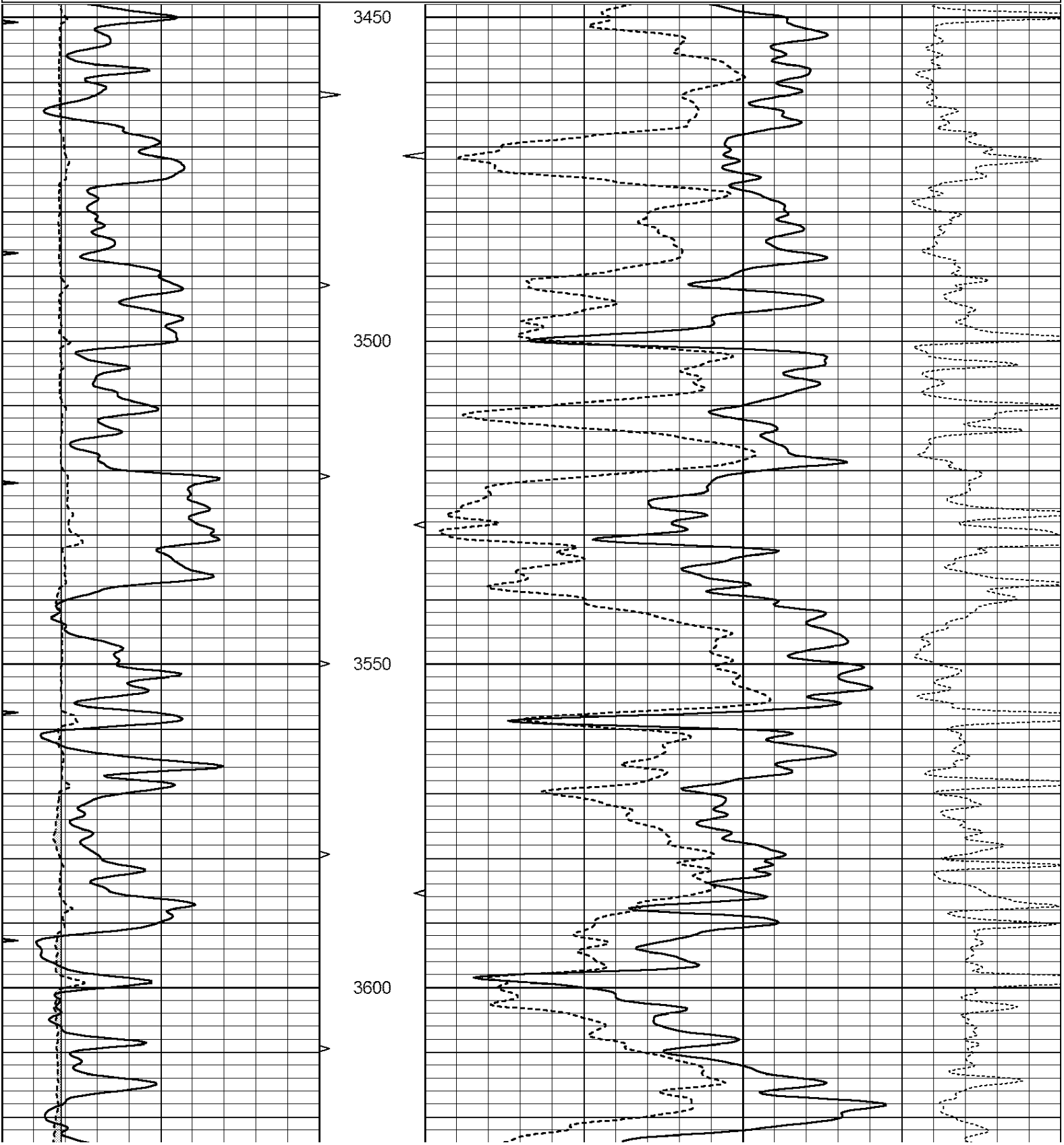
Dataset Creation:

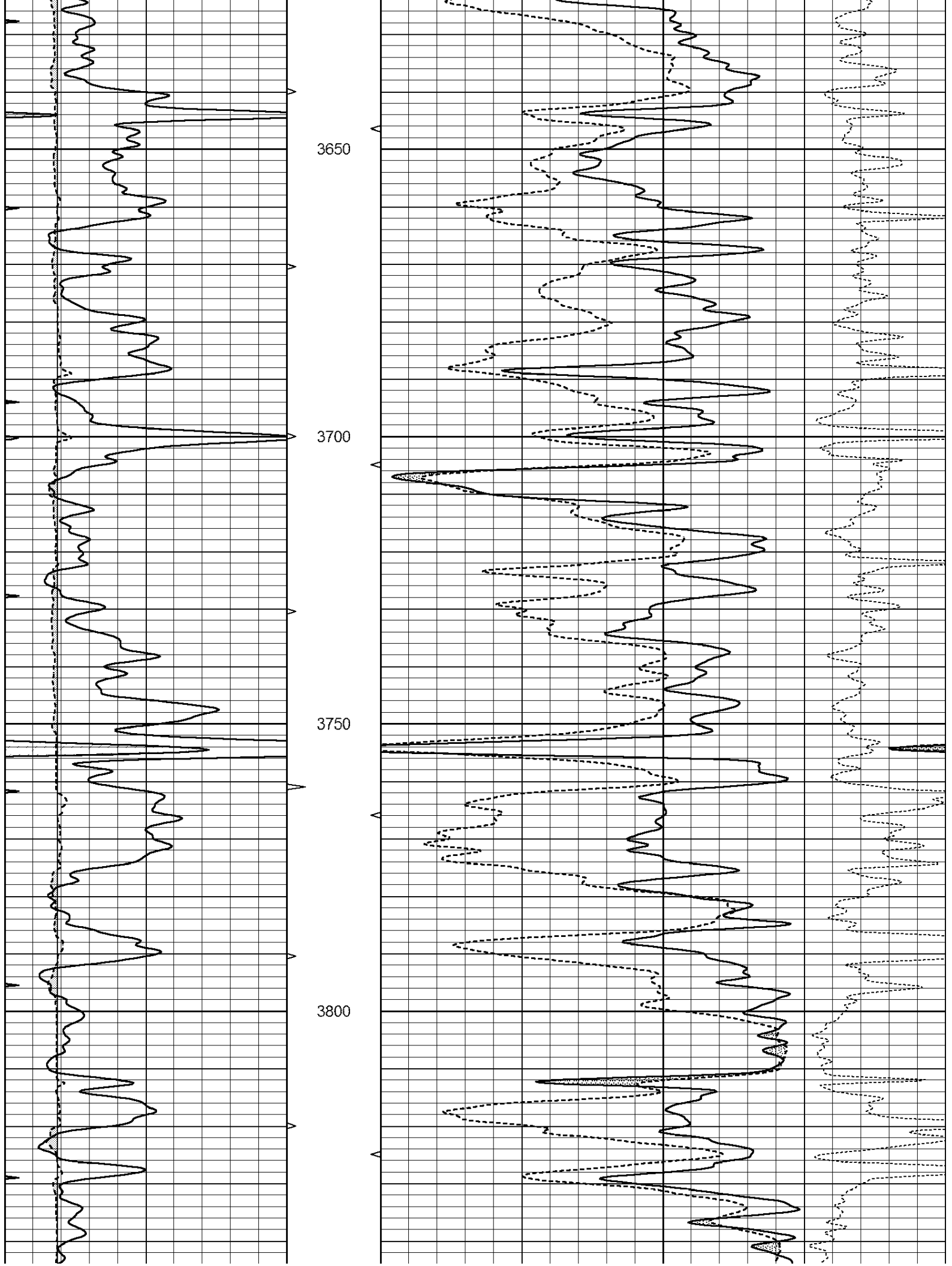
Tue Aug 27 08:07:33 2013 by Calc Open-Cased 090629

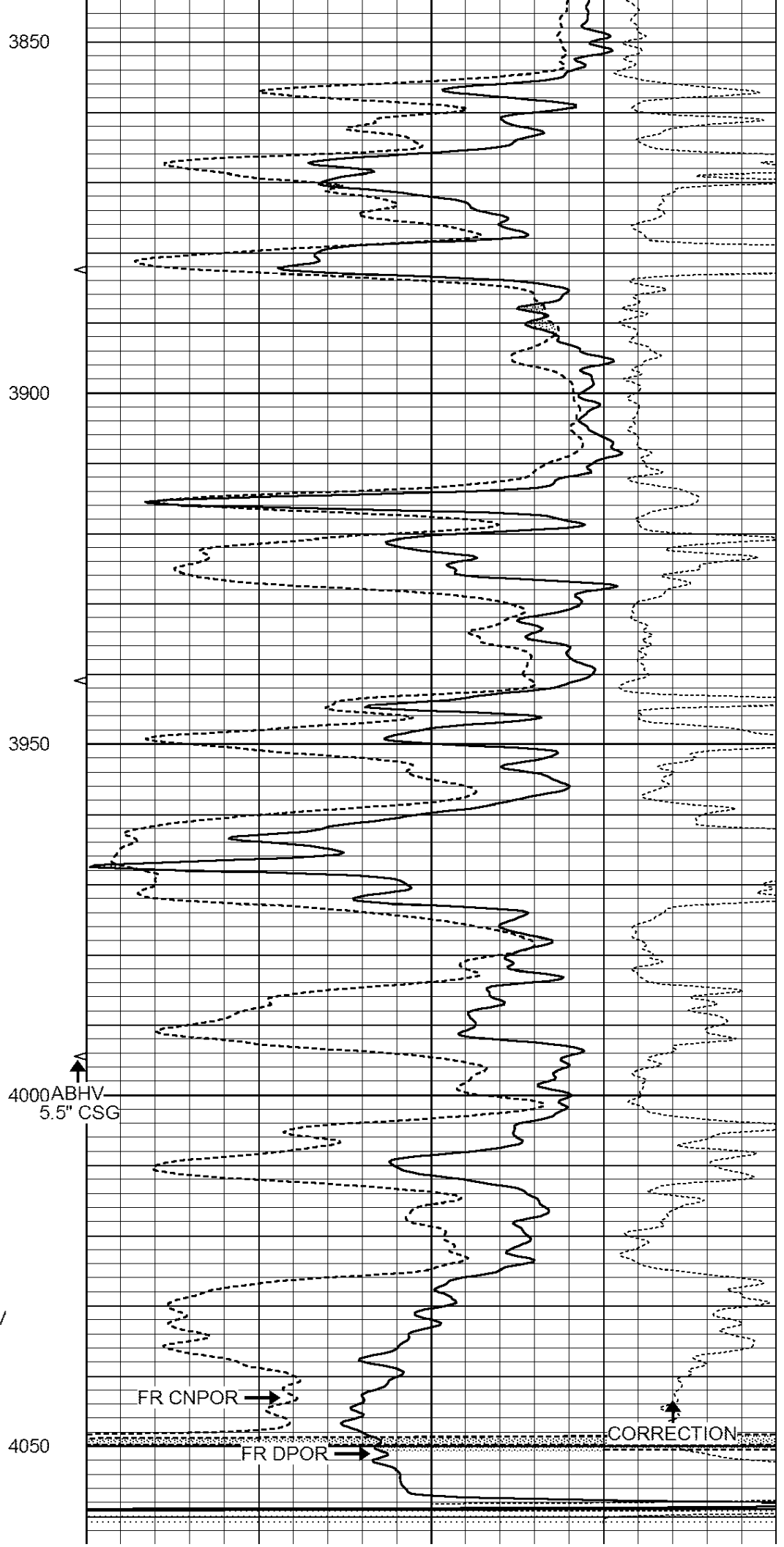
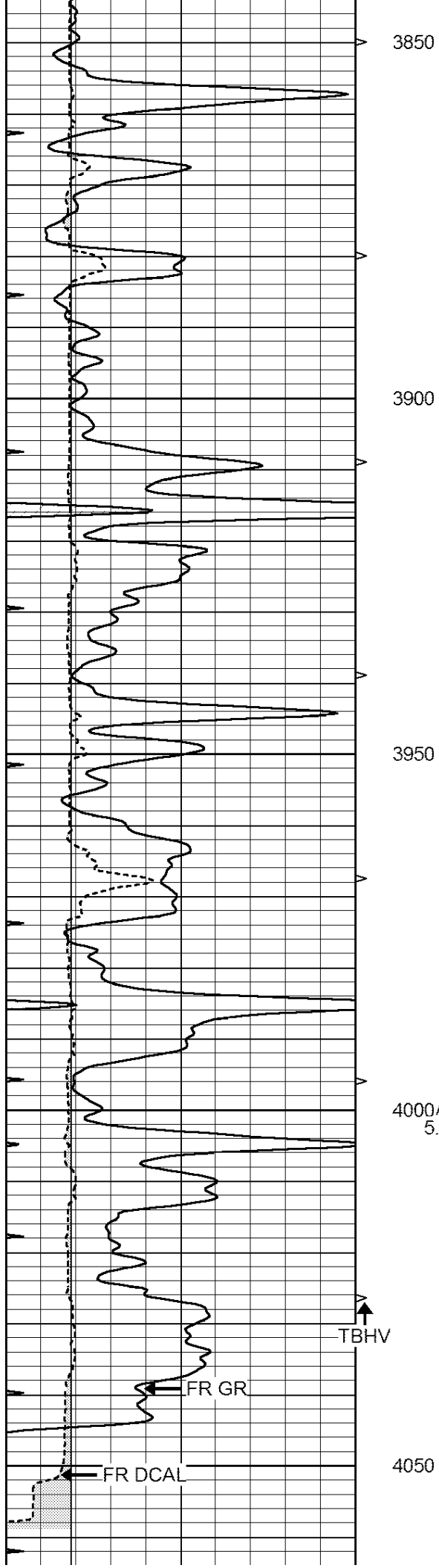
Charted by:

Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		







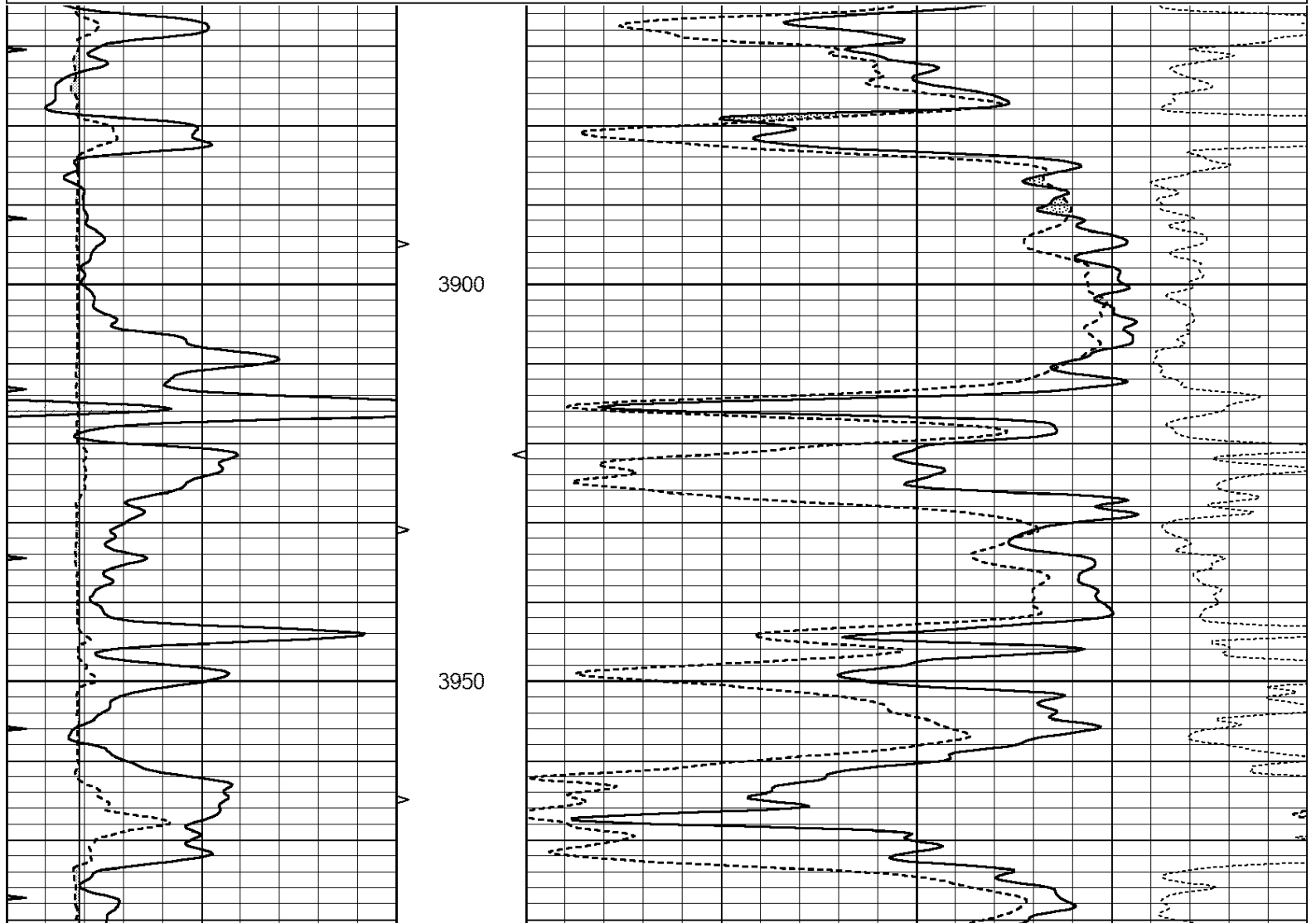
			2.71 LIMESTONE MATRIX		
			LTD 4075		
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu) -10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu) -10
0	MINMK	20	TBHV	-0.25 CORRECTION (g/cc) 0.25	
			0 (ft3) 10		

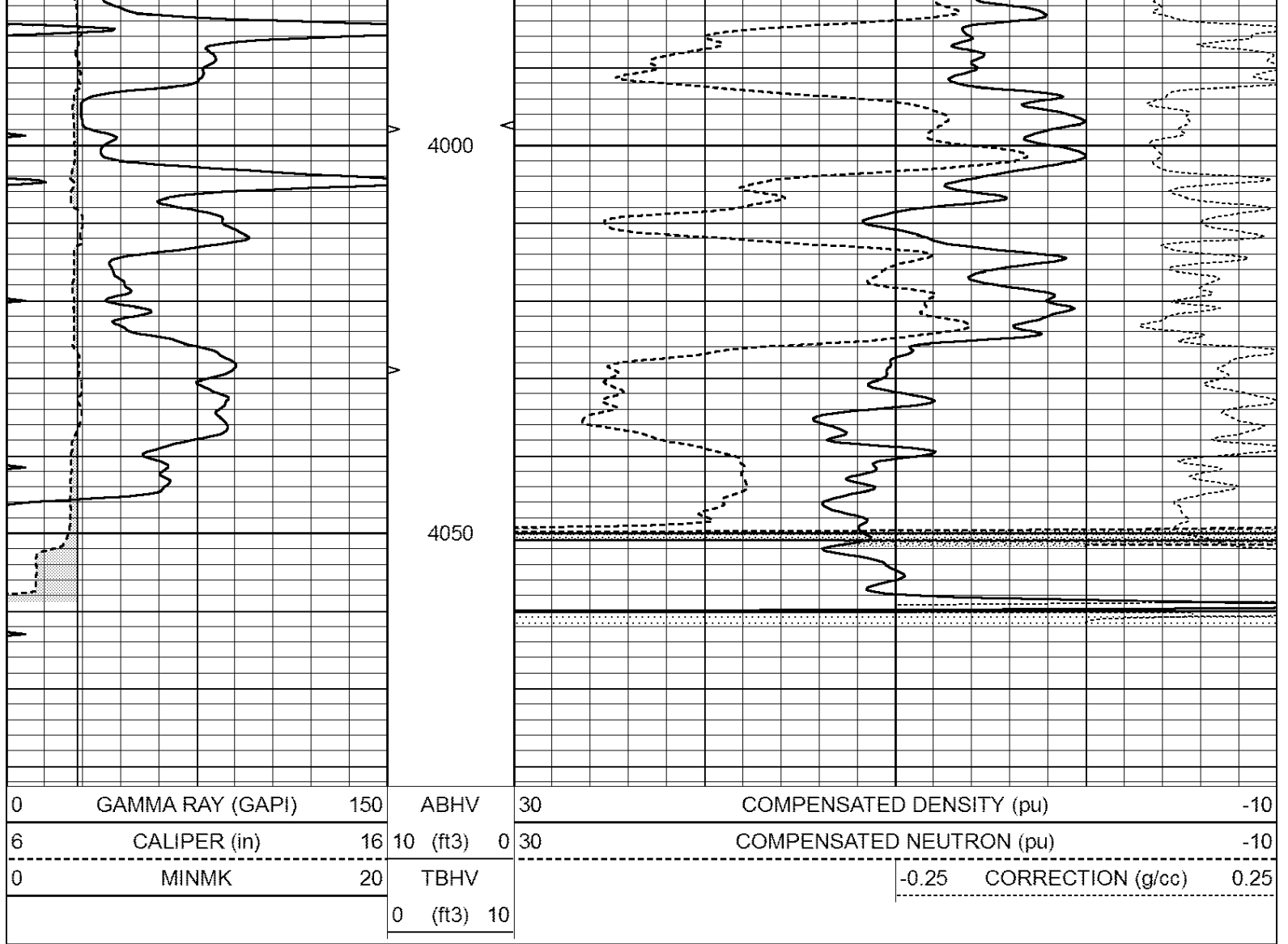

NABORS
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REPEAT SECTION

Database File: 011592ddn.db
 Dataset Pathname: pass3.1
 Presentation Format: den_neu
 Dataset Creation: Tue Aug 27 07:56:11 2013 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu) -10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu) -10
0	MINMK	20	TBHV	-0.25 CORRECTION (g/cc) 0.25	
			0 (ft3) 10		





Calibration Report

Database File: 011592ddn.db
Dataset Pathname: pass3.1
Dataset Creation: Tue Aug 27 07:56:11 2013 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
Surface Cal Performed: Fri Aug 01 06:33:19 2008
Downhole Cal Performed: Mon Jul 28 11:08:27 2008
After Survey Verification Performed: Mon Jul 28 11:08:27 2008

Surface Calibration

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	632.616	-9.730
Medium	0.029	0.796	V	0.000	464.000	mmho/m	605.049	-17.680
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration

Readings		References		Results	
Zero	Cal	Zero	Cal	m'	b'

	Detector	Readings	Measured	Target
1)	Short Space	cps		
	Long Space	cps	pu	pu
2)	Short Space	cps		
	Long Space	cps	pu	
3)	Short Space	cps		
	Long Space	cps	pu	
POST-SURVEY VERIFICATION				
	Detector	Readings	Measured	Target
1)	Short Space	cps		
	Long Space	cps	pu	pu
2)	Short Space	cps		
	Long Space	cps	pu	pu
3)	Short Space	cps		
	Long Space	cps	pu	pu
Gamma Ray Calibration Report				
	Serial Number:	#8		
	Tool Model:	OPEN		
	Performed:	Tue Jun 18 19:34:11 2013		
	Calibrator Value:	150.0	GAPI	
	Background Reading:	0.0	cps	
	Calibrator Reading:	175.0	cps	
	Sensitivity:	0.8371	GAPI/cps	