



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY/NEUTRON
LOG**

Company		IA OPERATING, INC.	
Well		THOMPSON UNIT #1-19	
Field		FAIRPORT	
County		RUSSELL	
State		KANSAS	
Company		IA OPERATING, INC.	
Well		THOMPSON UNIT #1-19	
Field		FAIRPORT	
County		RUSSELL	
State		KANSAS	
Location:		API # : 15-167-23976-0000	
Permanent Datum		GROUND LEVEL	
Log Measured From		KELLY BUSHING 8' A.G.L.	
Drilling Measured From		KELLY BUSHING	
SEC 19		TWP 11S	
RGE 15W		DIL/MEL	
775' FSL & 2465' FWL		Elevation	
		K.B. 1792	
		D.F. 1790	
		G.L. 1784	
Date		6/4/14	
Run Number		ONE	
Depth Driller		3610	
Depth Logger		3610	
Bottom Logged Interval		3586	
Top Log Interval		2550	
Casing Driller		8 5/8" @ 969	
Casing Logger		970	
Bit Size		7 7/8"	
Type Fluid in Hole		CHEMICAL MUD	
Density / Viscosity		9.4/59	
pH / Fluid Loss		10.0/8.4	
Source of Sample		FLOWLINE	
Rm @ Meas. Temp		.60 @ 94F	
Rmt @ Meas. Temp		.45 @ 94F	
Rmc @ Meas. Temp		.72 @ 94F	
Source of Rmt / Rmc		MEASUREMENT	
Rm @ BHT		.50 @ 112F	
Time Circulation Stopped		2 HOURS	
Time Logger on Bottom			
Maximum Recorded Temperature		112F	
Equipment Number		4010	
Location		HAYS, KANSAS	
Recorded By		JASON CAPPELLUCCI	
Witnessed By		JEFF LAWLER	

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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:
FAIRPORT, KS. - 1/2 WEST TO THE T - 1/2 NORTH - 1 MILE EAST & NORTH INTO

Database File:

24630ddn.db

Dataset Pathname:

pass3.1

Presentation Format:

den_neu

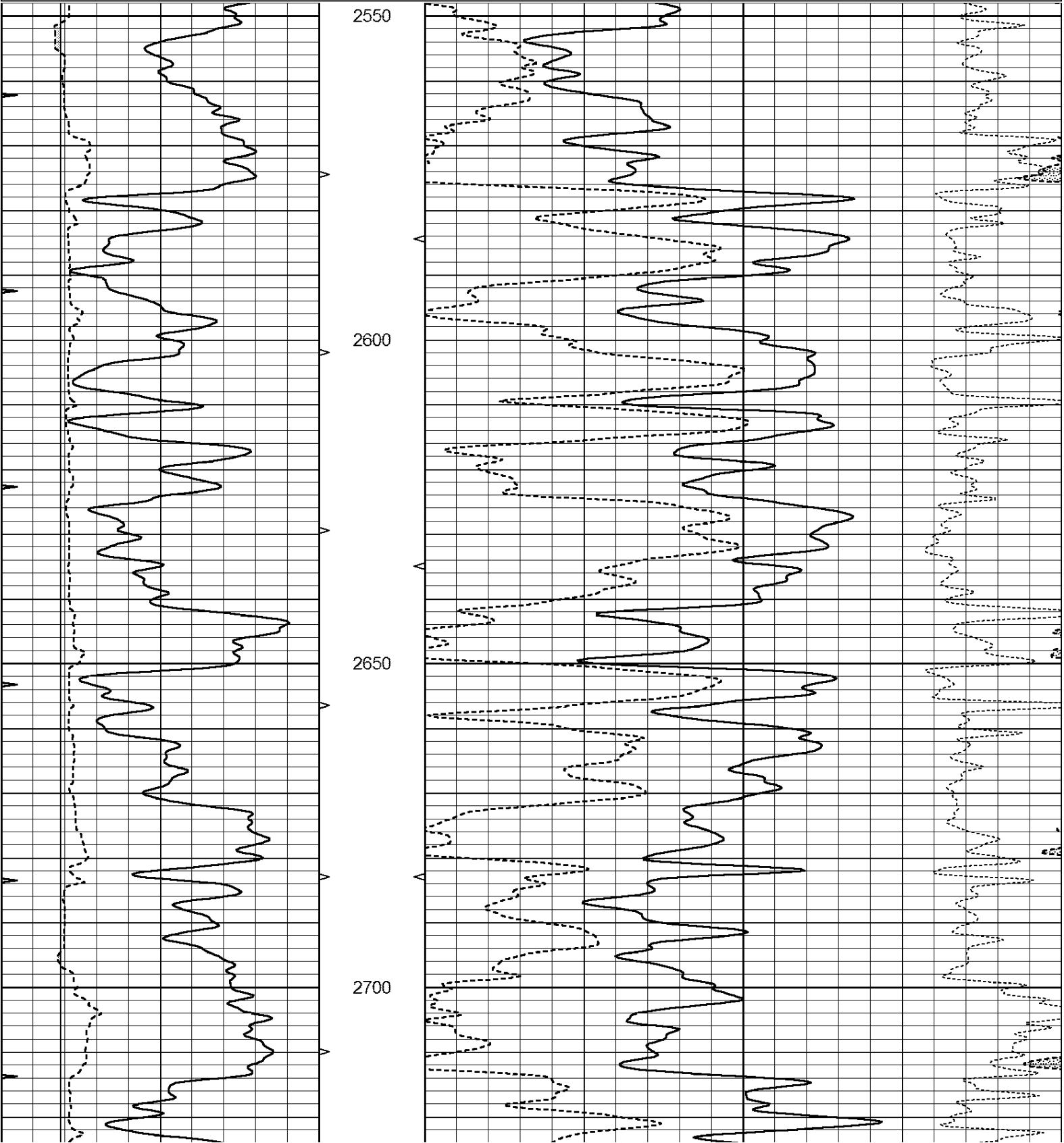
Dataset Creation:

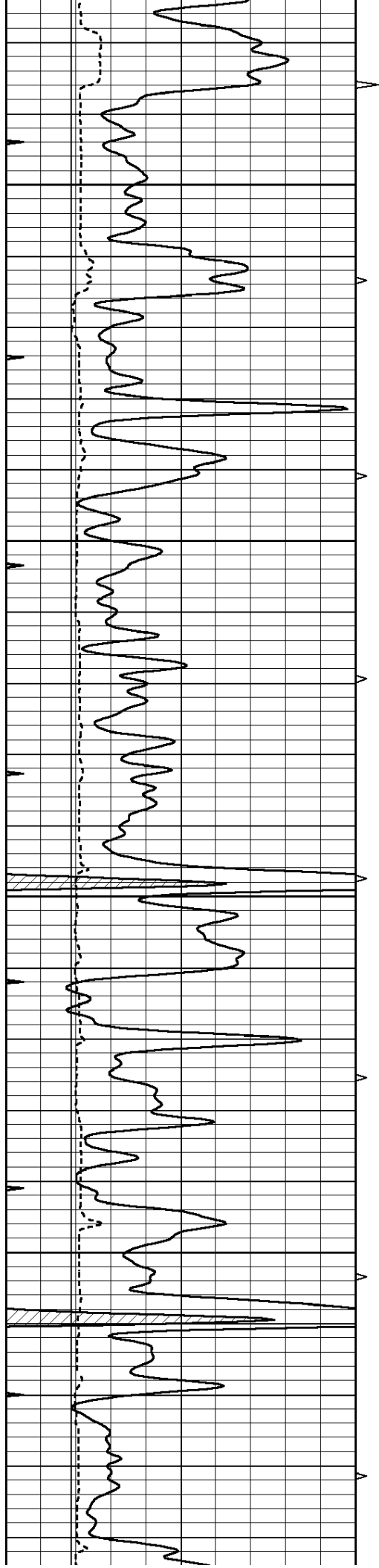
Wed Jun 04 09:41:11 2014 by Calc Open-Cased 090629

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		



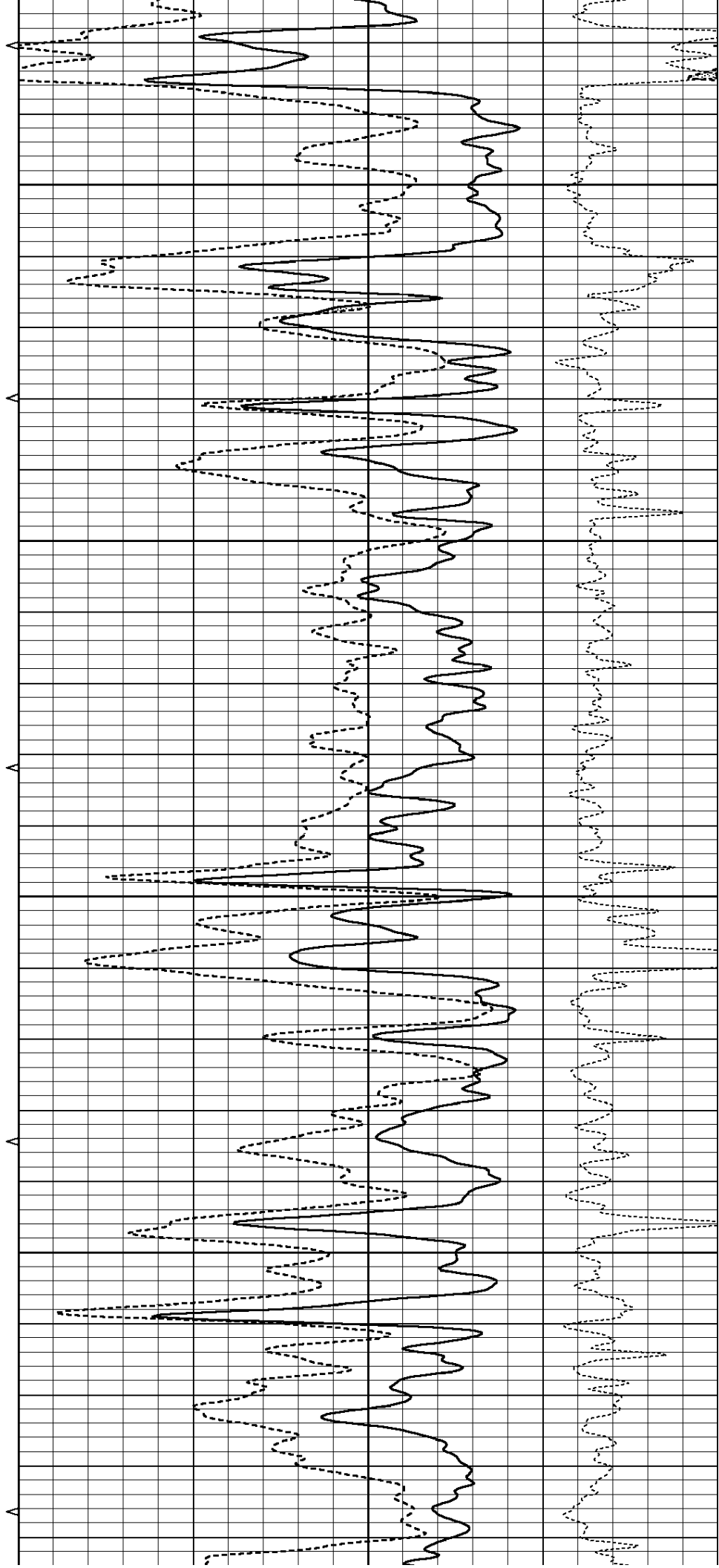


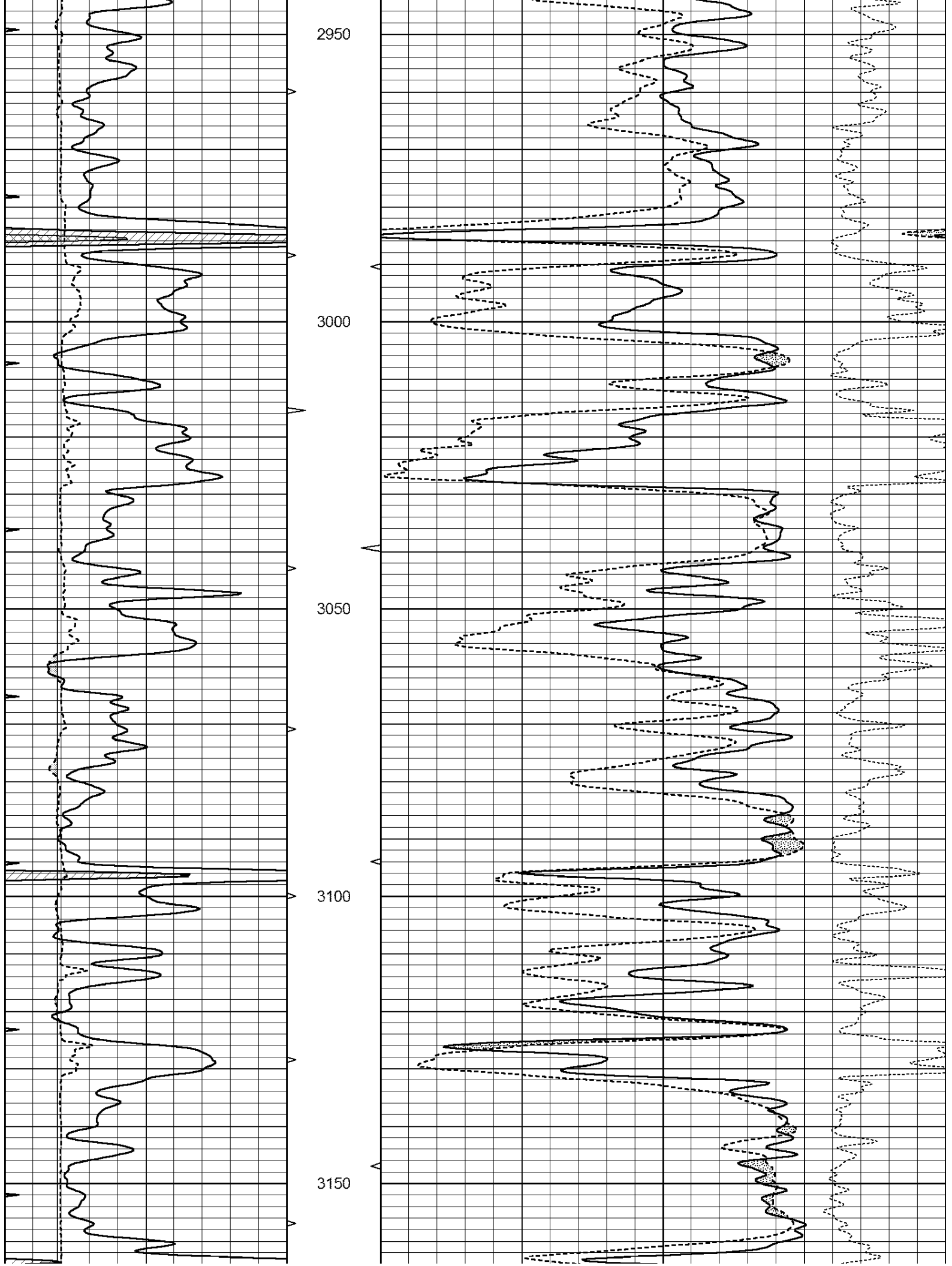
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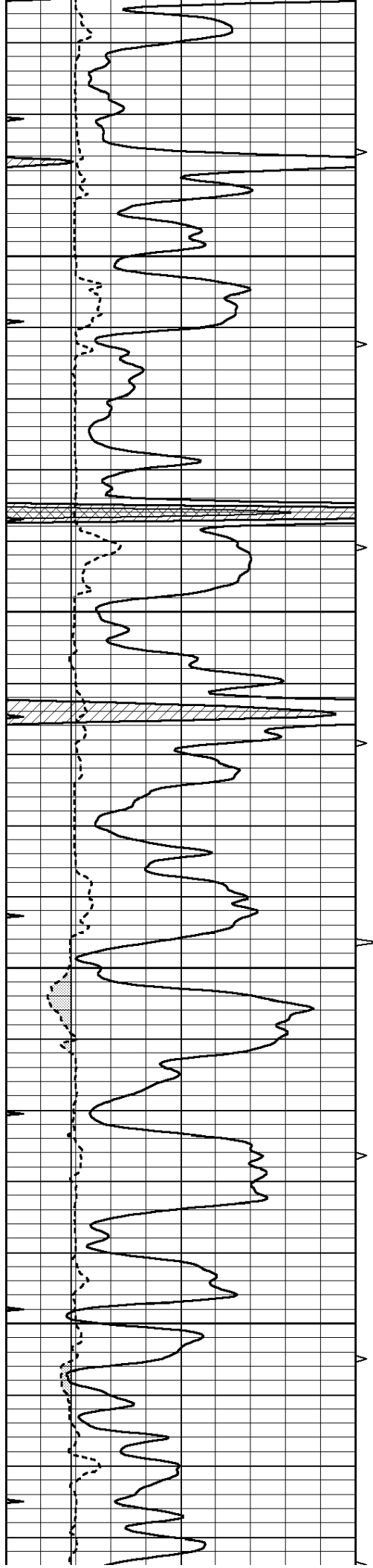
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2850

2900





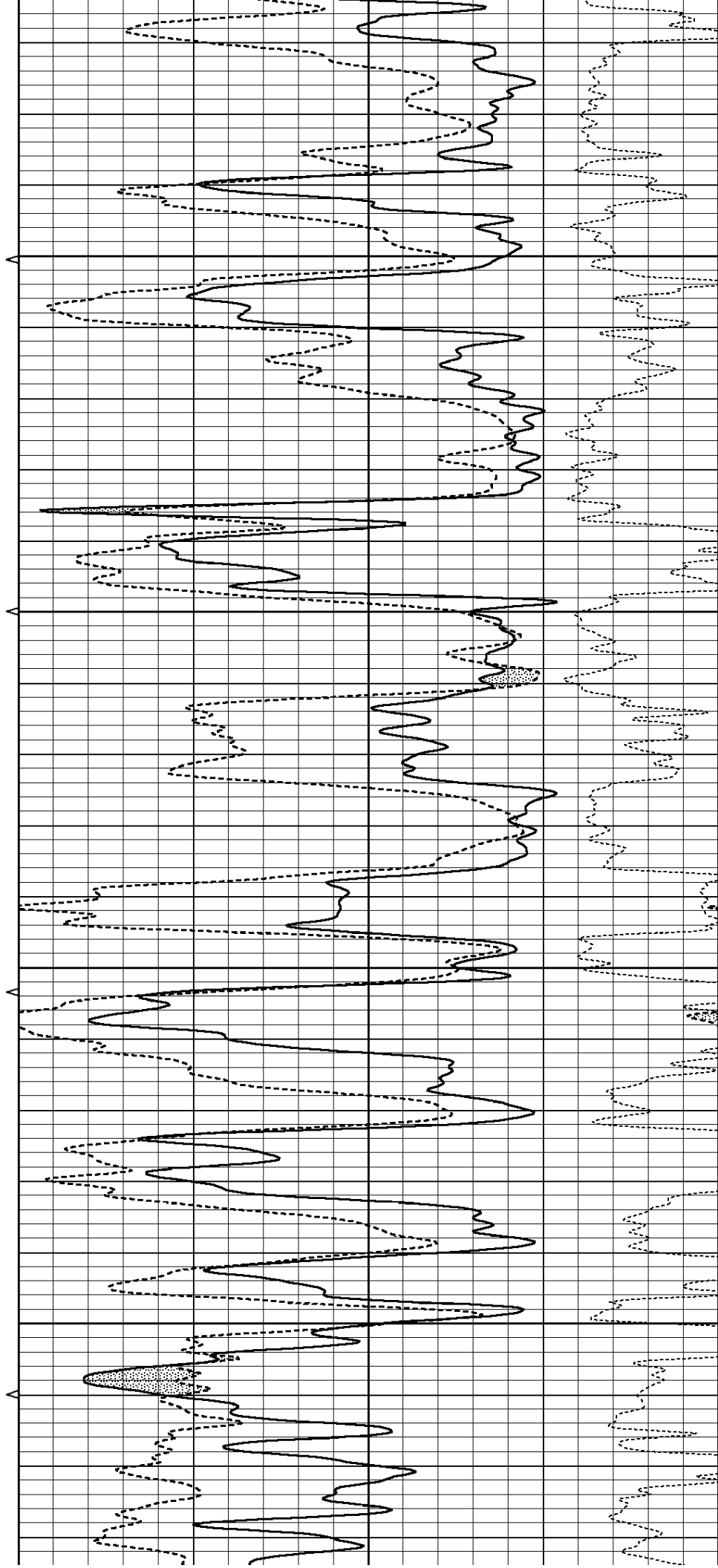


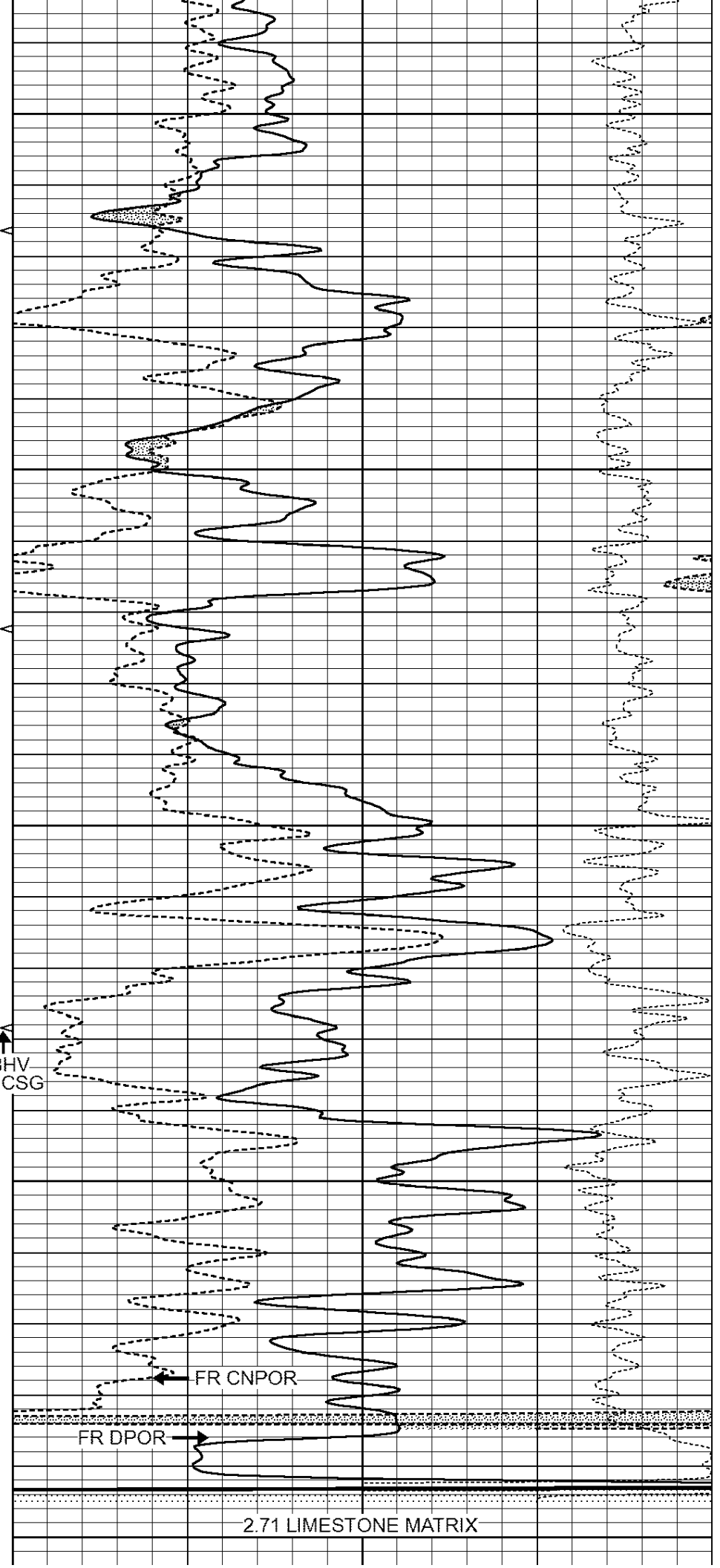
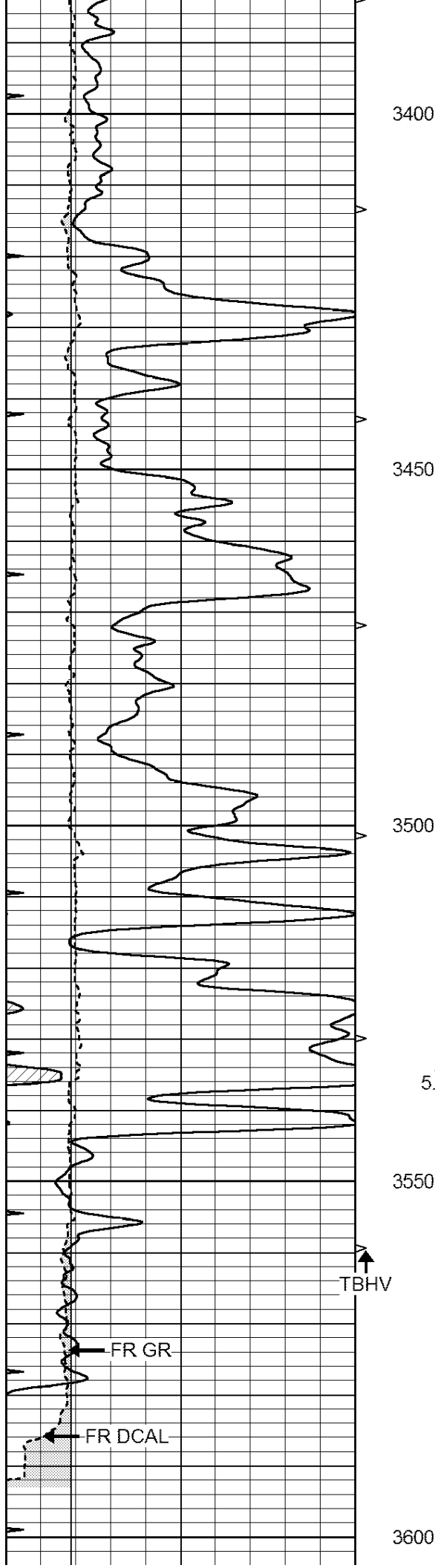
3200

3250

3300

3350





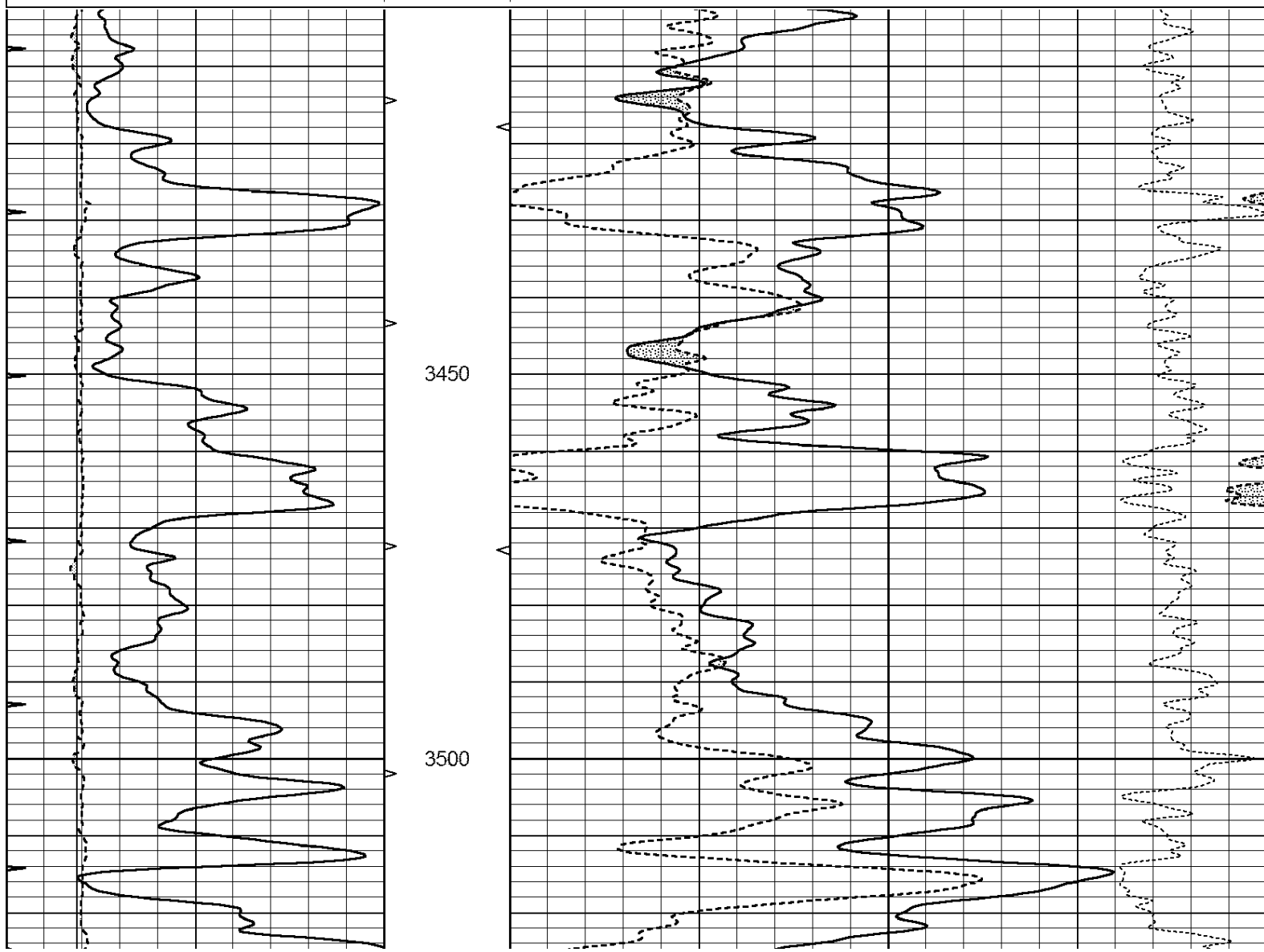
			LTD 3610			
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV	-0.25 CORRECTION (g/cc) 0.25		
			0 (ft3) 10			

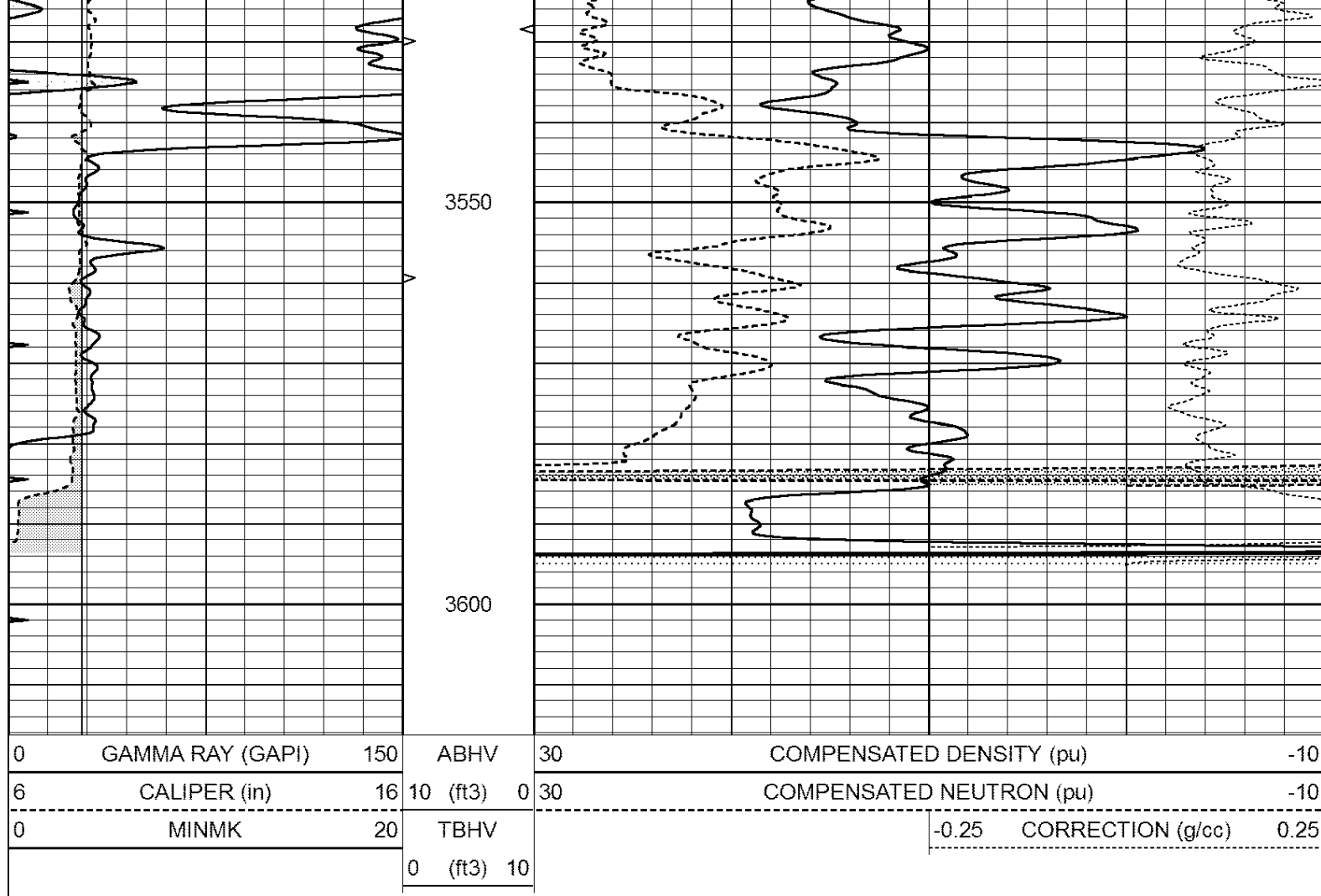


REPEAT SECTION

Database File: 24630ddn.db
 Dataset Pathname: pass2.1
 Presentation Format: den_neu
 Dataset Creation: Wed Jun 04 09:34:33 2014 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: 24630ddn.db
Dataset Pathname: pass2.1
Dataset Creation: Wed Jun 04 09:34:33 2014 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

Loop:	Readings			References			Results	
	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'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000

LL3	7.500	V	1500.000	Ohm-m
	0.000	V	20.000	Ohm-m
	-7.200	V	3800.000	mmho-m

After Survey Verification								
Readings				Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		

Compensated Density Calibration Report								
Serial-Model:				GEAR3-GEARHART				
Source / Verifier:				143 / 143				
Master Calibration Performed:				Fri Jan 04 15:48:16 2013				
Before Survey Verification Performed:								
After Survey Verification Performed:								

Master Calibration						
	Density			Far Detector		Near Detector
Magnesium	1.710	g/cc		935.36		501.55 cps
Aluminum	2.580	g/cc		209.32		357.01 cps
Spine Angle = 77.21				Density/Spine Ratio = 0.567		
	Size			Reading		
Small Ring	8.00	in		4.29	V	
Large Ring	14.00	in		6.24	V	

Before Survey Verification						
	Target			Measured		
			g/cc			g/cc
			g/cc			g/cc
			g/cc			g/cc

After Survey Verification						
	Target			Measured		
			g/cc			g/cc
			g/cc			g/cc
			g/cc			g/cc

Compensated Neutron Calibration Report						
Serial Number:				6I		
Tool Model:				G		

CALIBRATION						
Detector		Readings		Target		Normalization
Short Space		1.00	cps	1.00	cps	1.0000
Long Space		1.00	cps	1.00	cps	1.0000

PRE-SURVEY VERIFICATION						
Detector		Readings		Measured		Target
1\	Short Space		cps			

1)	Short Space Long Space	cps cps	pu	pu
2)	Short Space Long Space	cps cps	pu	
3)	Short Space Long Space	cps cps	pu	

POST-SURVEY VERIFICATION				
	Detector	Readings	Measured	Target
1)	Short Space Long Space	cps cps	pu	pu
2)	Short Space Long Space	cps cps	pu	pu
3)	Short Space Long Space	cps cps	pu	pu

Gamma Ray Calibration Report

Serial Number:	GR6	
Tool Model:	OPEN	
Performed:	Sat May 31 01:22:06 2014	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.7535	GAPI/cps