



**Casedhole
Solutions**

**COMPENSATED
DENSITY/NEUTRON
LOG**

Company	MAI OIL OPERATIONS, INC.	Company	MAI OIL OPERATIONS, INC.
Well	MAAG "P" #5	Well	MAAG "P" #5
Field	TRAPP	Field	TRAPP
County	RUSSELL	County	RUSSELL
State	KANSAS	State	KANSAS
Location:	AP1 # : 15-167-24036-00-00 1660' FSL & 990' FVL N/2 - SE - NW - SW	Other Services	DIL/MEL
Permanent Datum	SEC 7 TWP 15S RGE 13W	Elevation	
Log Measured From	GROUND LEVEL	Elevation	1867
Drilling Measured From	KELLY BUSHING 8' A.G.L. KELLY BUSHING	K.B. 1875 D.F. 1873 G.L. 1867	
Date	9/23/15		
Run Number	ONE		
Depth Driller	3365		
Depth Logger	3367		
Bottom Logged Interval	3343		
Top Log Interval	2300		
Casing Driller	8 5/8" @ 847		
Casing Logger	847		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4000 PPM	
Density / Viscosity	9.4/52		
pH / Fluid Loss	9.5/9.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.60 @ 85F		
Rmt @ Meas. Temp	.45 @ 85F		
Rmc @ Meas. Temp	.72 @ 85F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	.46 @ 110F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	110F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	KURT TALBOTT		

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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 CASEDHOLE SOLUTIONS, HAYS, KS. (785) 628-6395
DIRECTIONS:
RUSSELL, KS. - SOUTH TO WINTERSET RD. - 1 1/2 EAST TO 187TH RD.
1 1/2 NORTH - EAST INTO

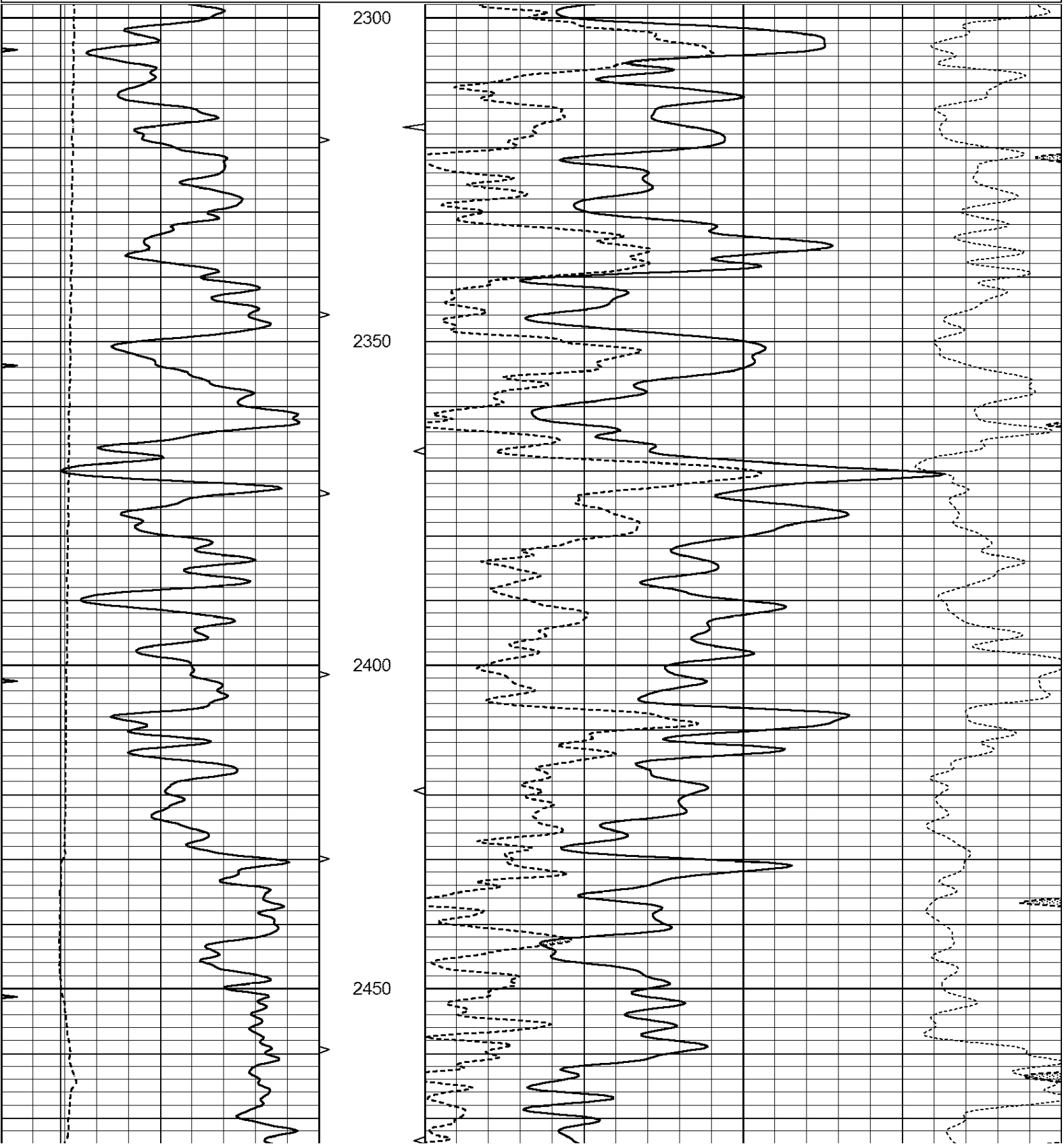


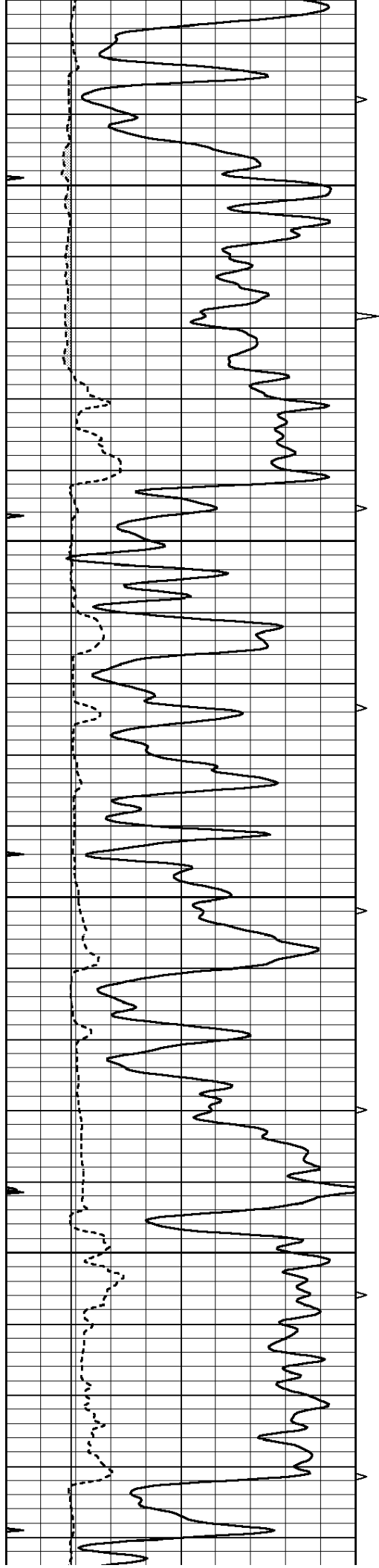
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MAIN SECTION

Database File: 30522ddn.db
Dataset Pathname: pass6.1
Presentation Format: den_neu
Dataset Creation: Wed Sep 23 05:22:25 2015 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		



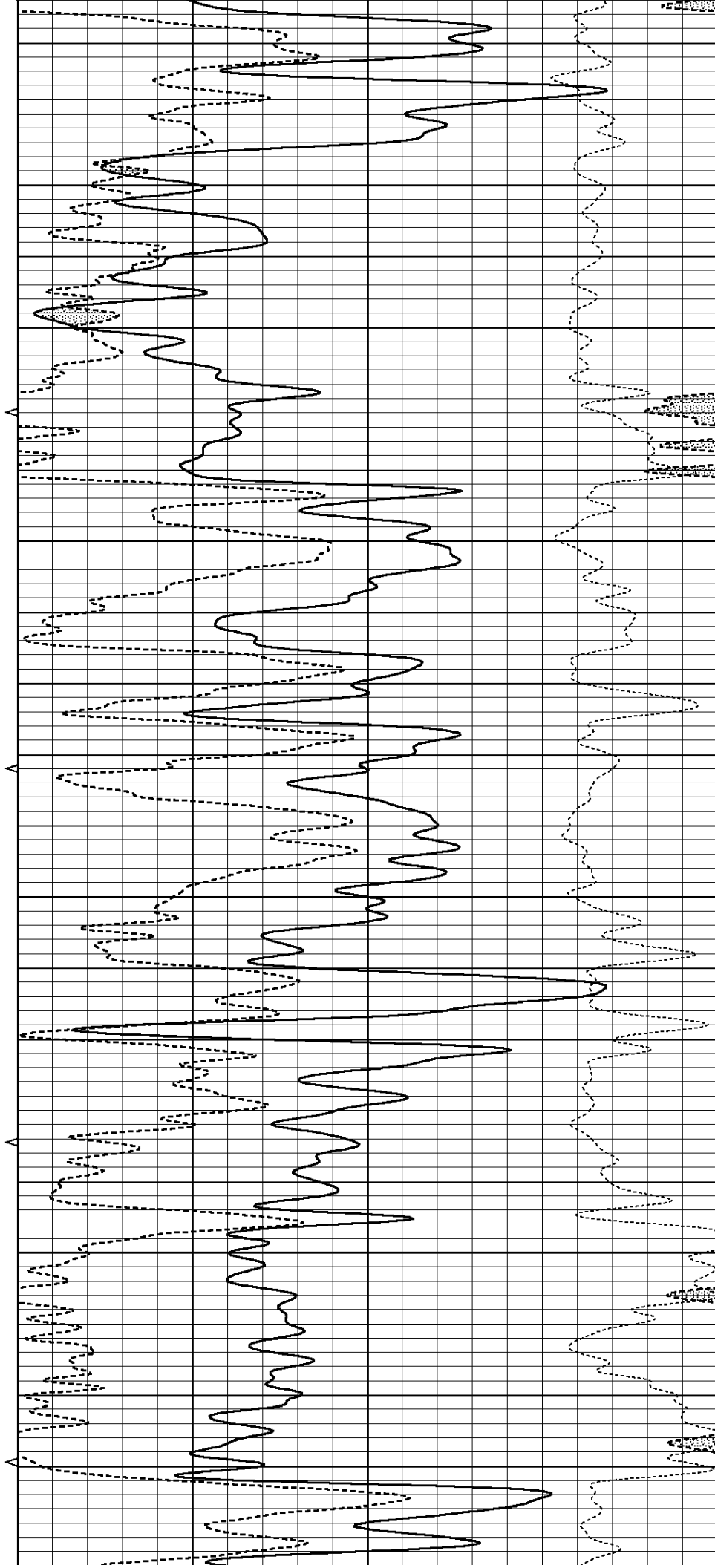


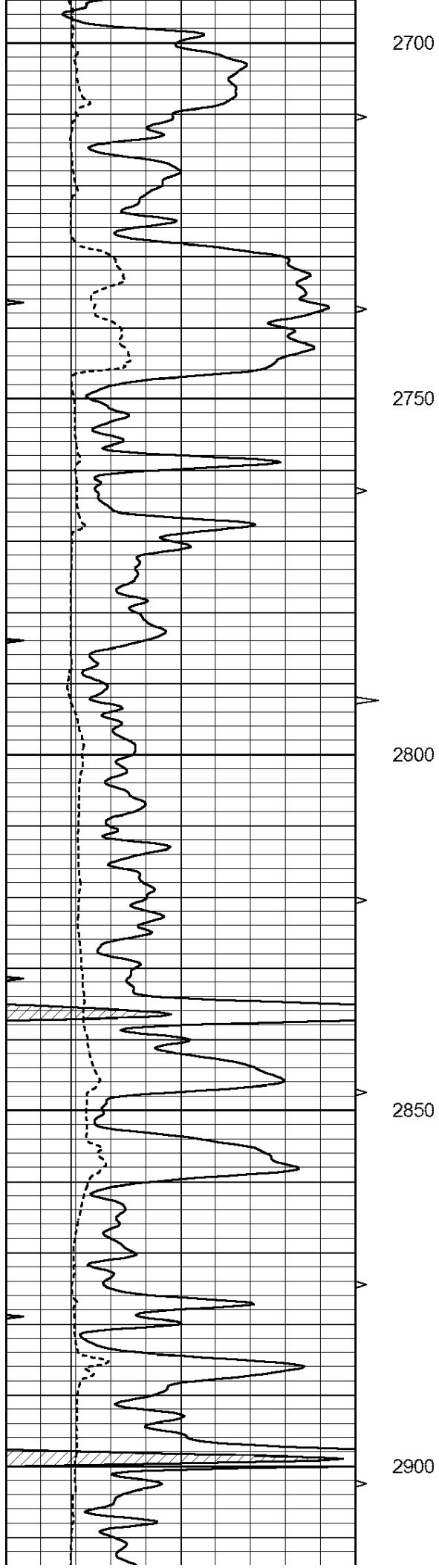
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2550

2600

2650





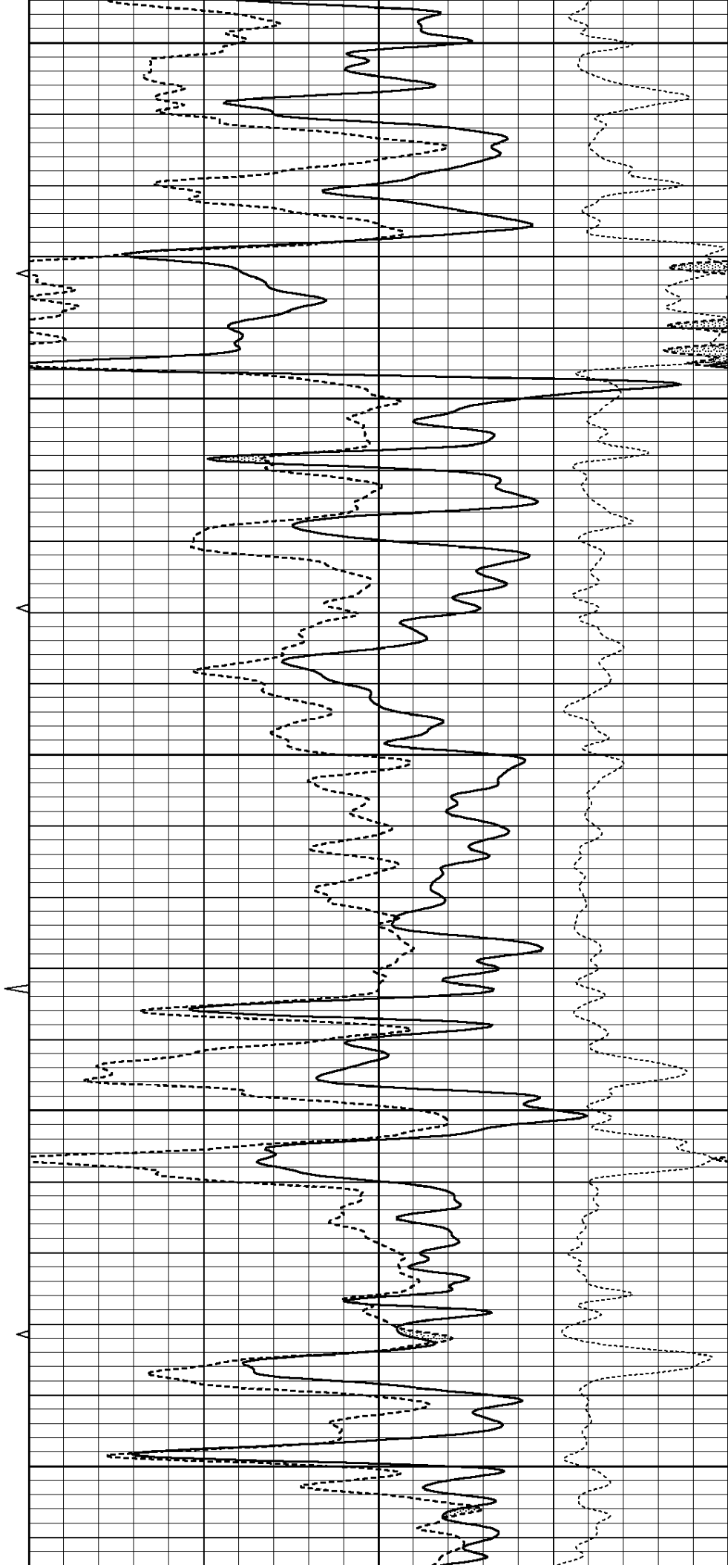
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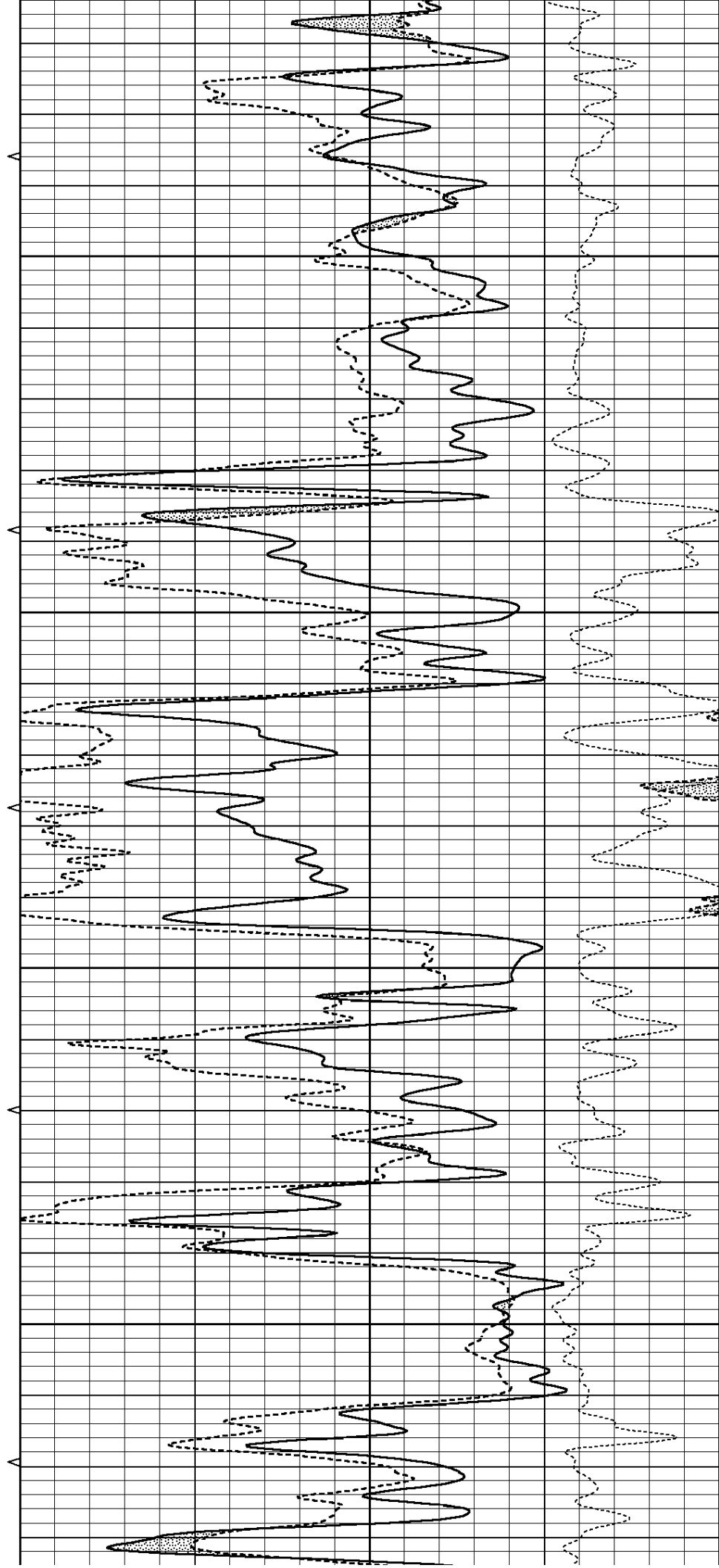
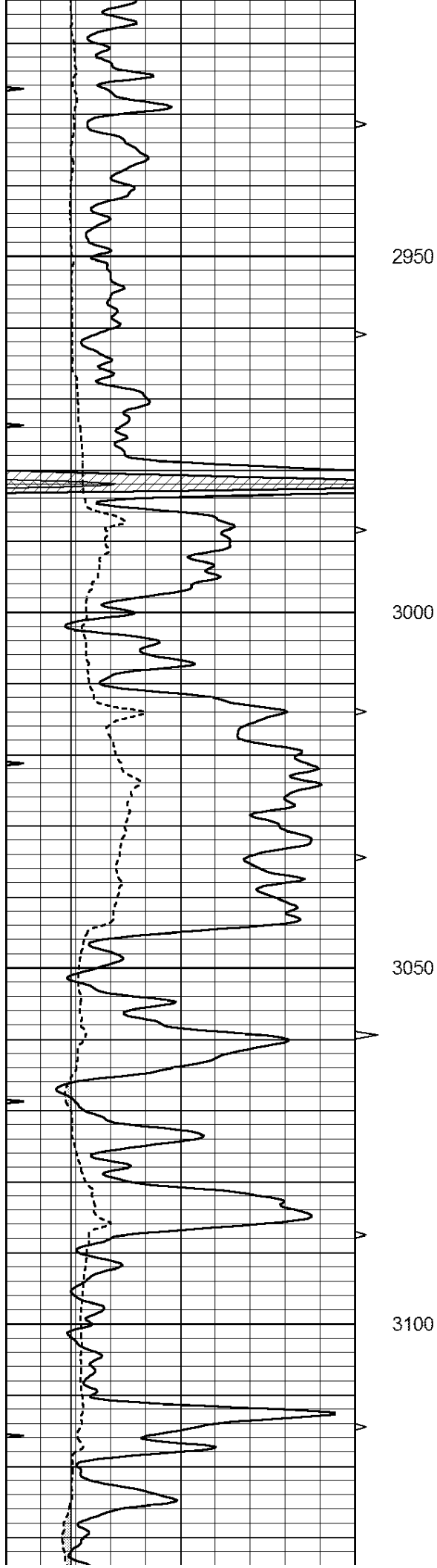
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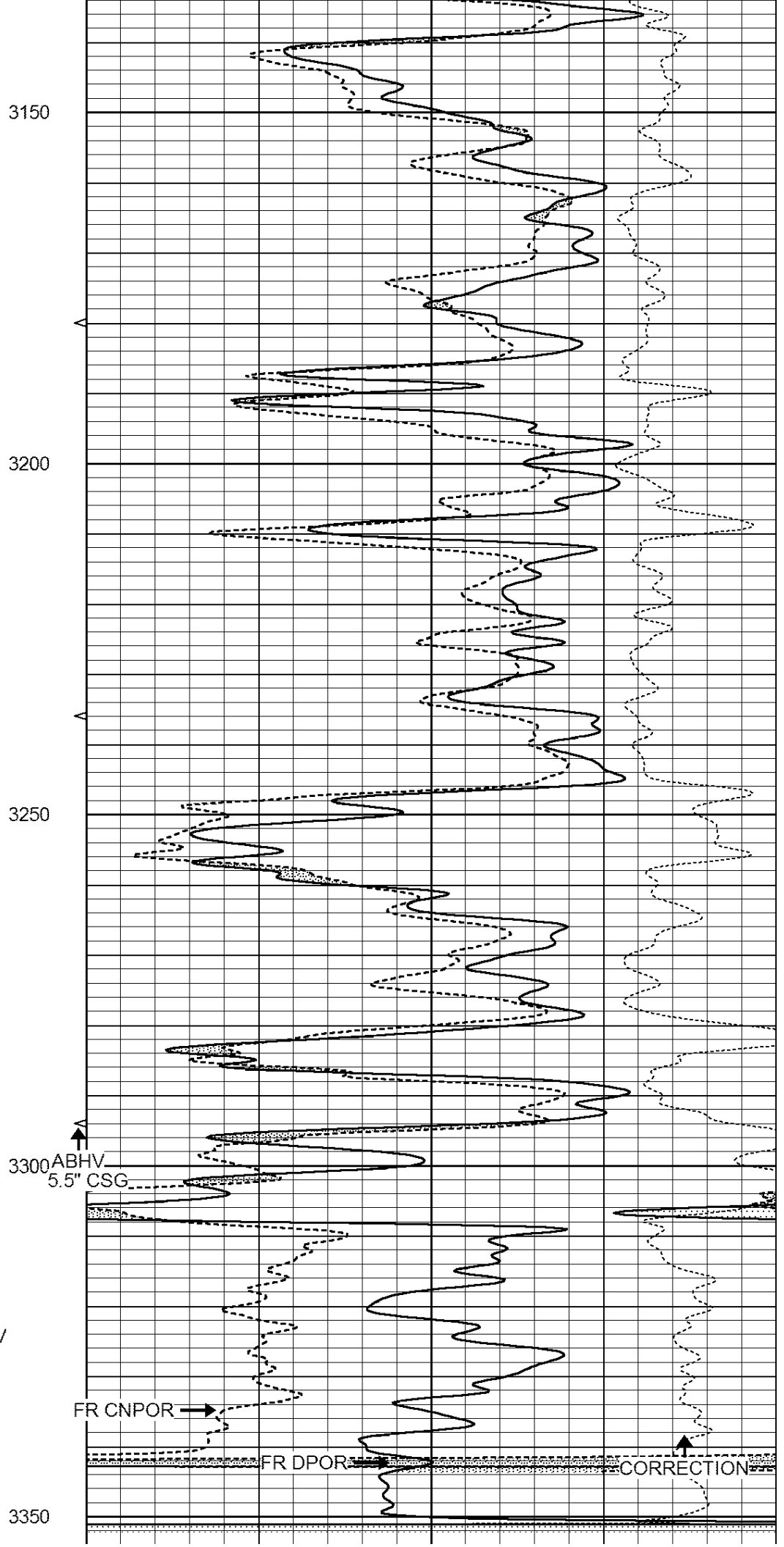
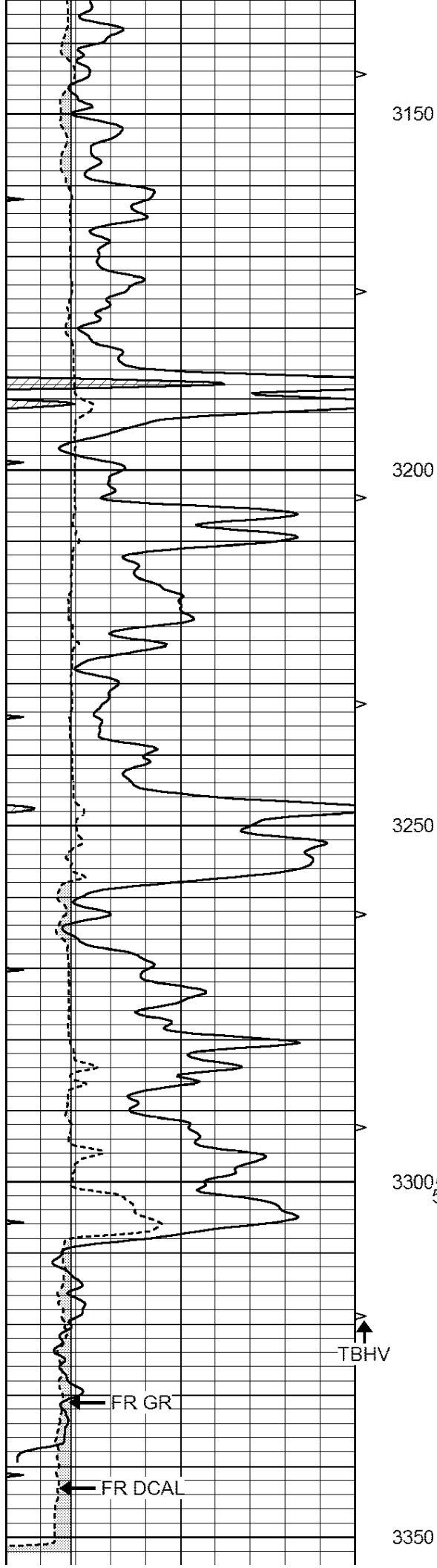
2800

2850

2900







			2.71 LIMESTONE MATRIX		
			LTD 3367		
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		

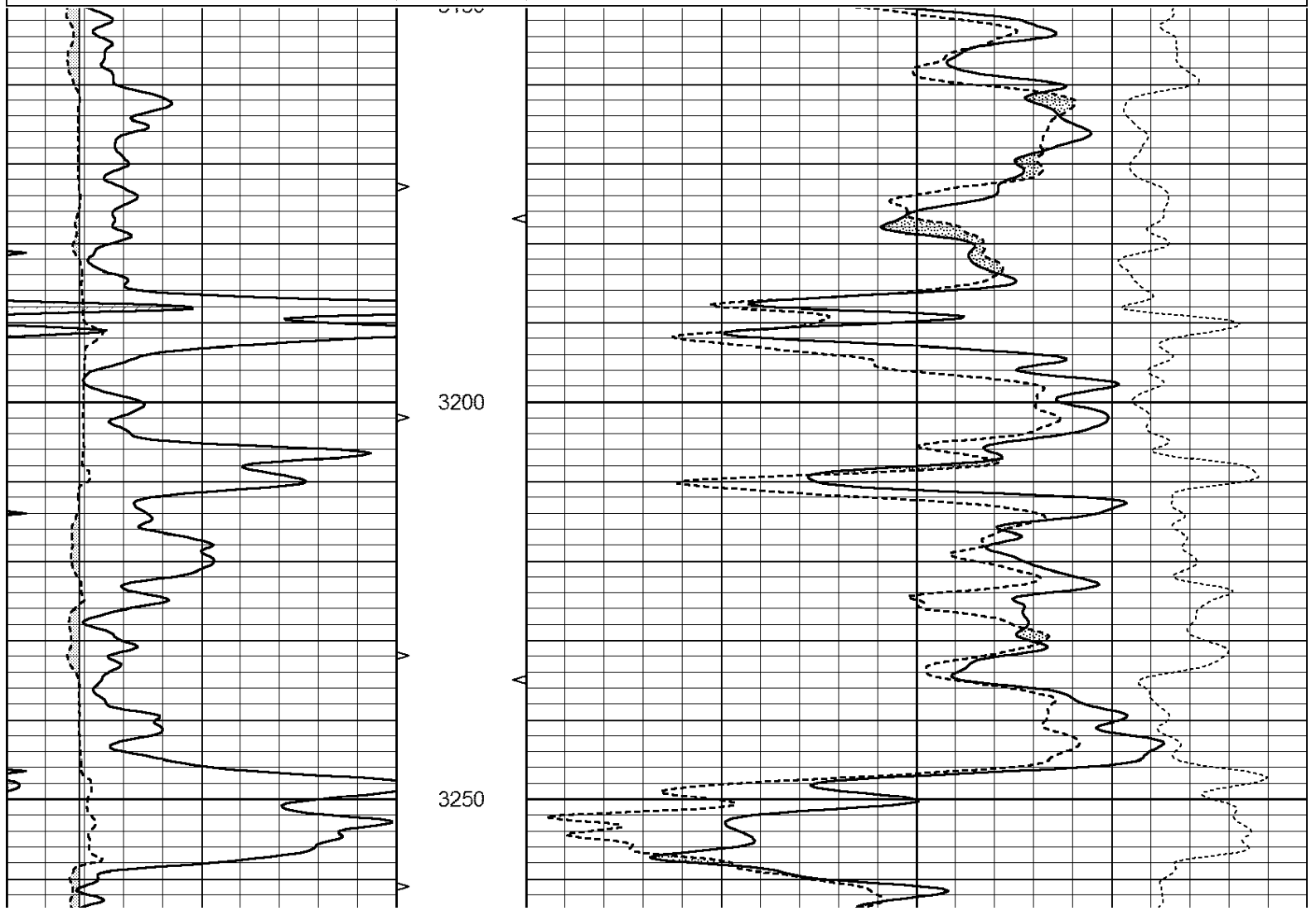


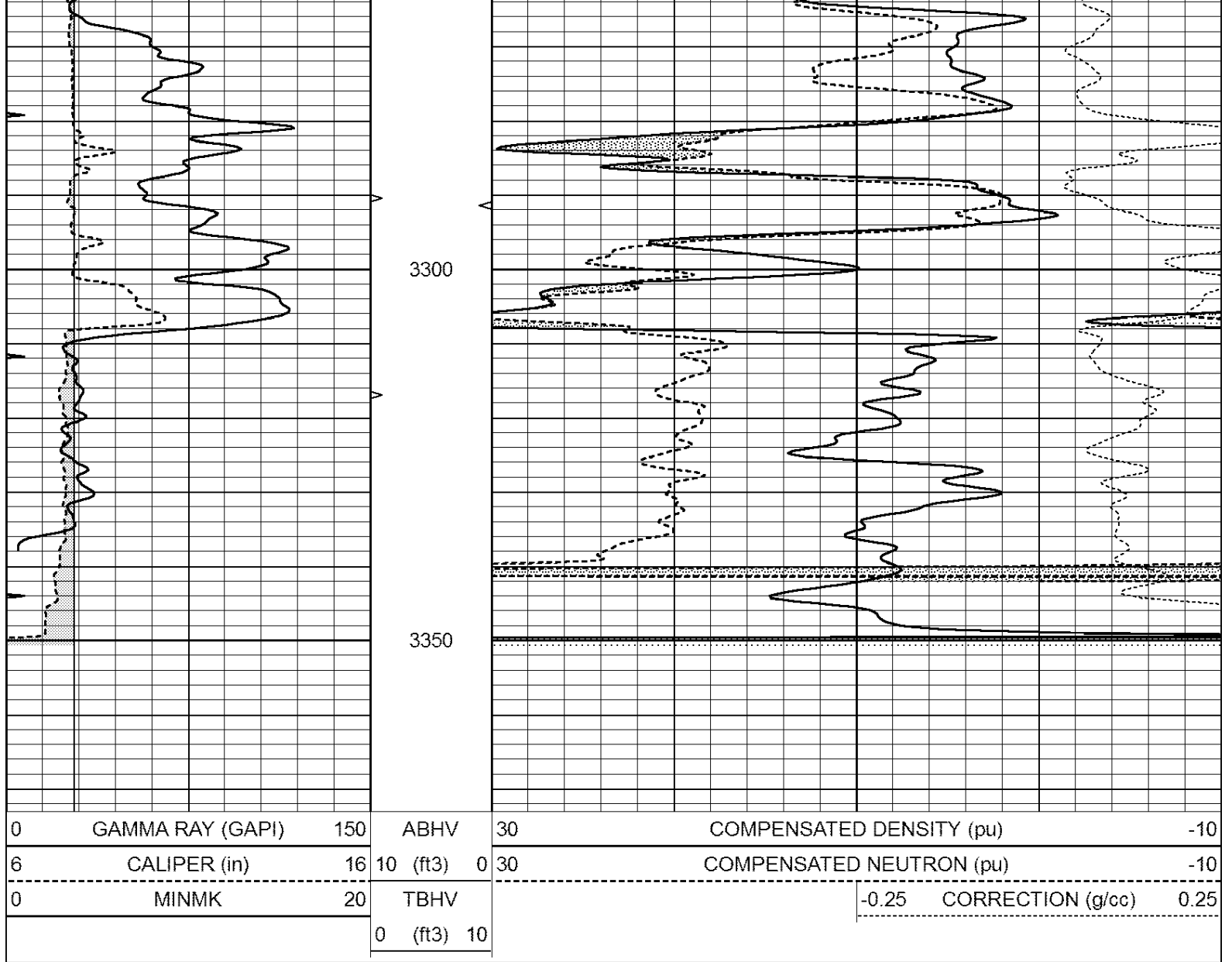
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REPEAT SECTION

Database File: 30522ddn.db
Dataset Pathname: pass5.1
Presentation Format: den_neu
Dataset Creation: Wed Sep 23 05:20:44 2015 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: 30522ddn.db
 Dataset Pathname: pass5.1
 Dataset Creation: Wed Sep 23 05:20:44 2015 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
 Surface Cal Performed: Sun May 10 19:54:09 2015
 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	620.000	0.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-12.000
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		

Litho Density Calibration Report								
Serial: 006 Model: PRB								

Master Calibration					Performed Wed Mar 12 14:26:38 2014			
	Background	Magnesium	Aluminum	Sandstone				
Window 1	1296.6	7199.0	2625.4	7833.2				cps
Window 2	1218.8	5956.6	2257.8	6372.0				cps
Window 3	926.7	2990.0	1318.7	3107.7				cps
Window 4	314.3	319.6	320.3	326.2				cps
Long Space	0.0	4737.9	1039.0	5153.3				cps
Short Space	1.3	1655.6	1074.2	1728.4				cps
Rho		1.7100	2.5960	1.3800				g/cc
Pe		0.0000	2.5700	1.5500				
Rib Angle	: 44.1	Rib Slope	: 0.969	Density/Spine Ratio			: 0.562	
Spine Angle	: 74.1	Spine Slope	: 3.507	Spine Intercept			: -17.5	

Before Survey Verification					Performed Wed Dec 31 18:00:00 1969			
Window 1	0.0	0.0	0.0	0.0				cps
Window 2	0.0	0.0	0.0	0.0				cps
Window 3	0.0	0.0	0.0	0.0				cps
Window 4	0.0	0.0	0.0	0.0				cps
Long Space	0.0	0.0	0.0	0.0				cps
Short Space	0.0	0.0	0.0	0.0				cps
Measured Rho		0.0000	0.0000	0.0000				g/cc
Measured Correction		0.0000	0.0000	0.0000				g/cc
Measured Pe			0.0000	0.0000				

After Survey Verification					Performed Wed Dec 31 18:00:00 1969			
Window 1	0.0	0.0	0.0	0.0				cps
Window 2	0.0	0.0	0.0	0.0				cps
Window 3	0.0	0.0	0.0	0.0				cps
Window 4	0.0	0.0	0.0	0.0				cps
Long Space	0.0	0.0	0.0	0.0				cps
Short Space	0.0	0.0	0.0	0.0				cps
Measured Rho		0.0000	0.0000	0.0000				g/cc
Measured Correction		0.0000	0.0000	0.0000				g/cc
Measured Pe			0.0000	0.0000				

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				
	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:		GR6				
Tool Model:		OPEN				
Performed:		Fri Sep 04 01:07:14 2015				
Calibrator Value:		150.0		GAPI		
Background Reading:		0.0		cps		
Calibrator Reading:		276.0		cps		
Sensitivity:		0.8000		GAPI/cps		