

COMPENSATED
DENSITY / NEUTRON
PE LOG

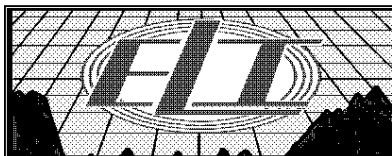
Company	ANDERSON ENERGY, INC.		
Well	DUGAN #1-11		
Field	O.S.A.		
County	SEDGWICK	State	KANSAS
Location:	APL # : 15-173-21057-0000 990' FSL & 1650' FWL		Other Services DIL/MEL SONIC
Permanent Datum	GROUND LEVEL	Elevation	1288
Log Measured From	KELLY BUSHING 9' A.G.L.		
Drilling Measured From	KELLY BUSHING		
SEC 11 TWP 29S RGE 1W			
Date	4/7/78		
Run Number	ONE		
Depth Driller	3060		
Depth Logger	3052		
Bottom Logged Interval	3028		
Top Log Interval	2000		
Casing Driller	8 5/8"@390'		
Casing Logger	390		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 1,500 PPM	
Density / Viscosity	9.0/57		
pH / Fluid Loss	11.0/8.8		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.950@70F		
Rmf @ Meas. Temp	.713@70F		
Rmc @ Meas. Temp	1.14@70-F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.616@108F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	3:45 A.M.		
Maximum Recorded Temperature	108F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	KEN LeBLANC		

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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

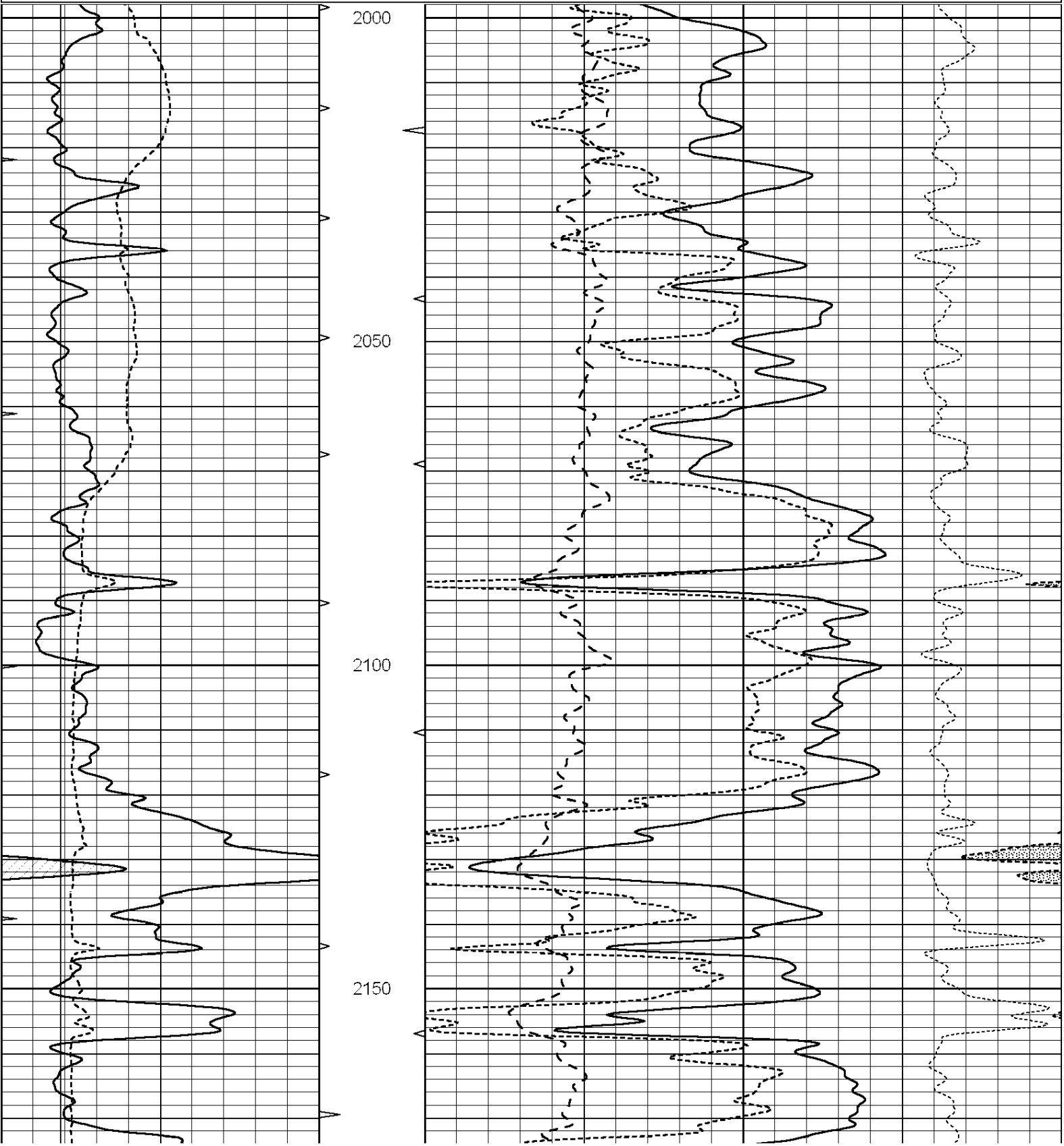
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
HAYSVILLE, KS., 2S. ON "MERIDIAN" TO "87TH ST.", 2W. TO "HOOVER ST.", 1/2N., W. INTO

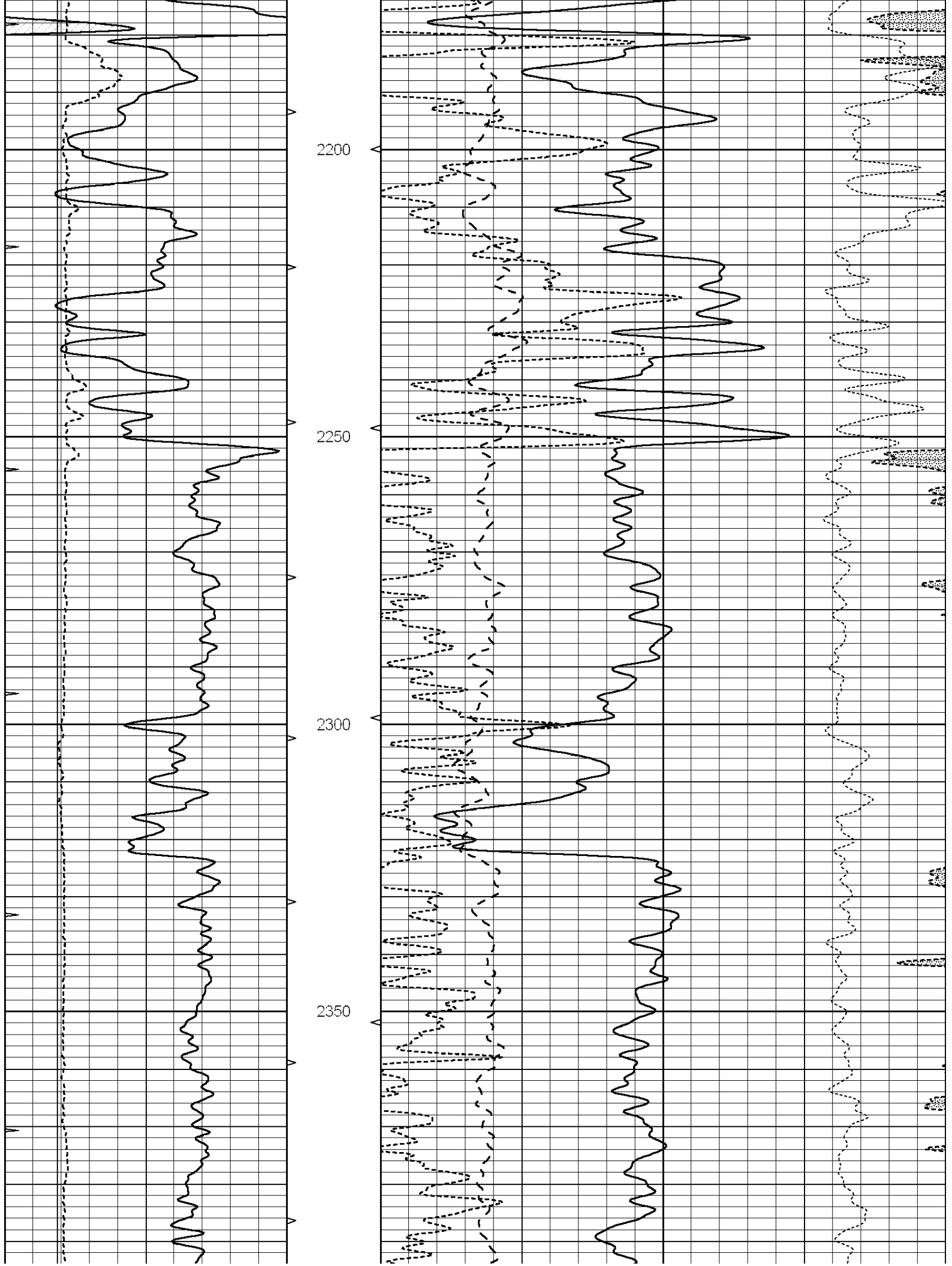


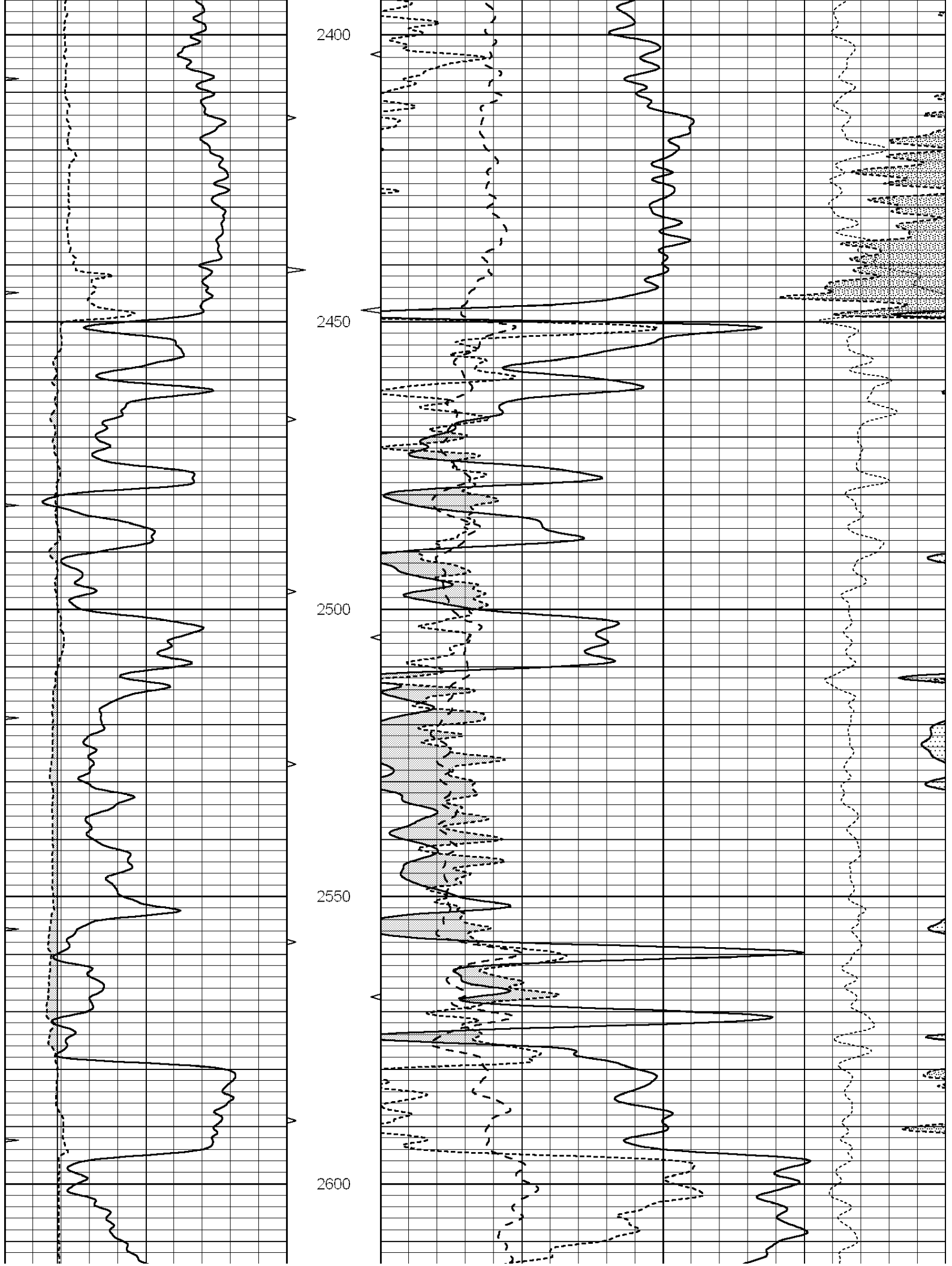
MAIN SECTION

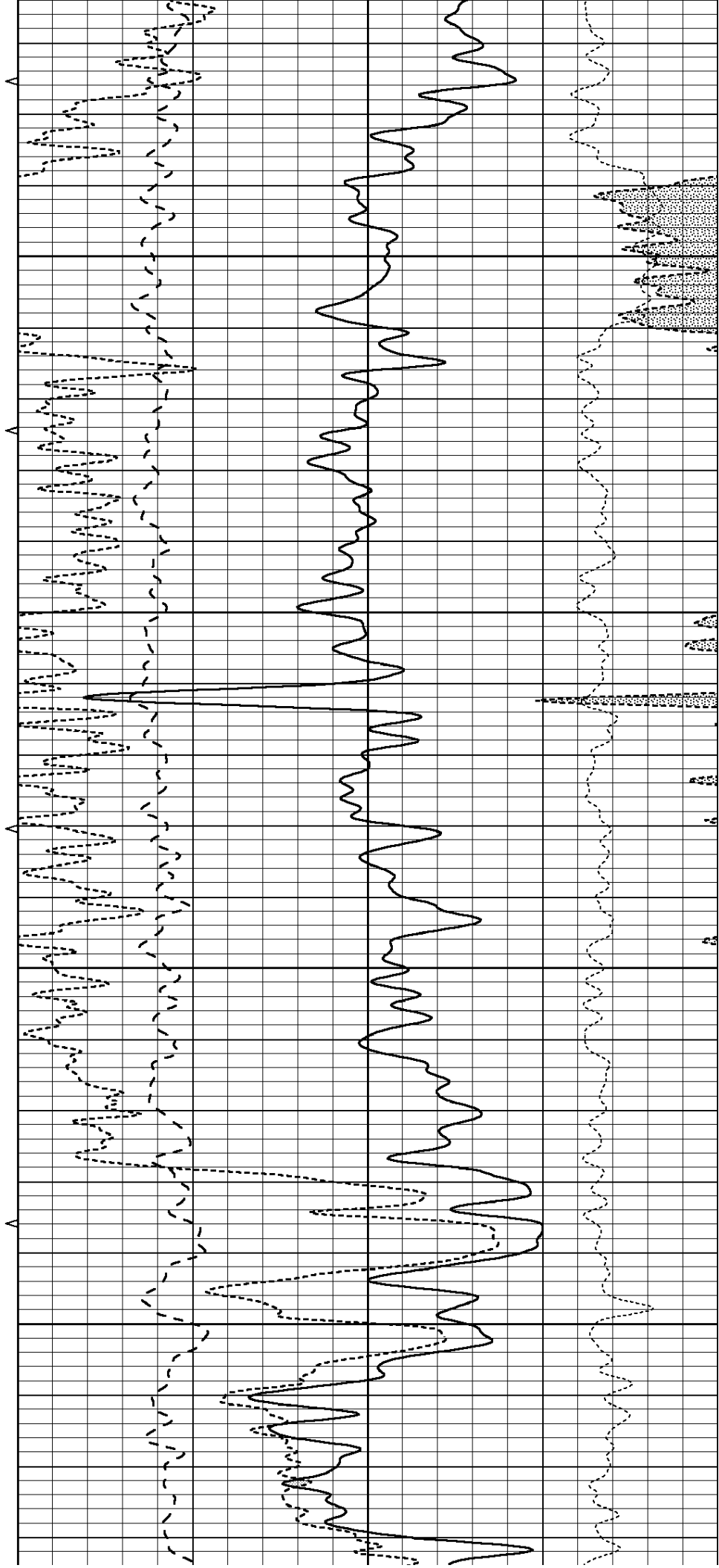
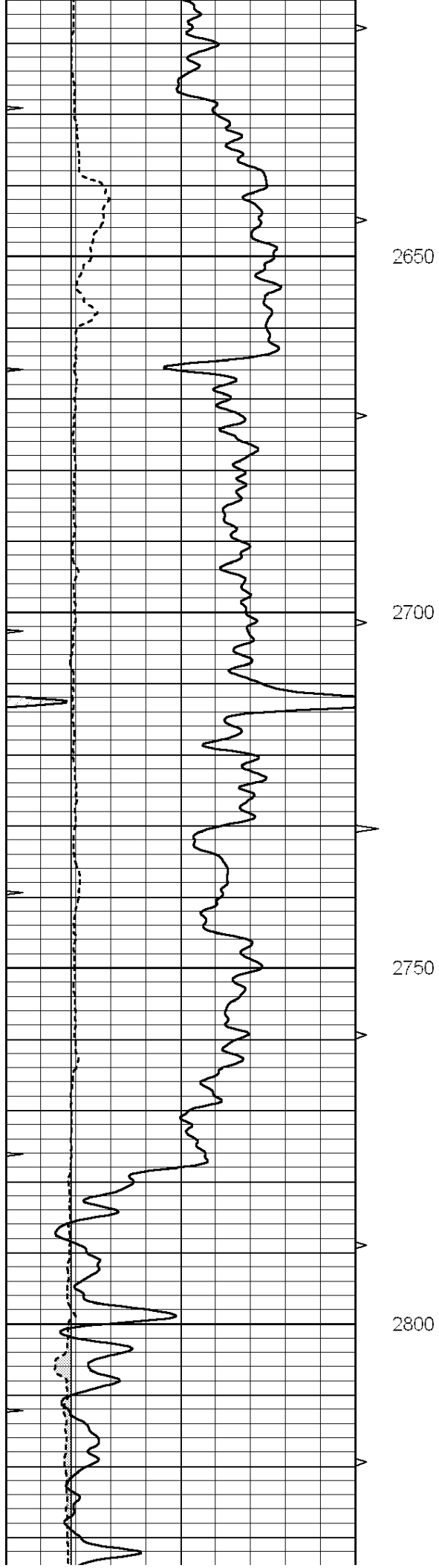
Database File: 2482pe.db
Dataset Pathname: pass3.5
Presentation Format: ldt_neu
Dataset Creation: Tue Apr 17 17:10:06 2018 by Calc SOC 120430
Charted by: Depth in Feet scaled 1:240

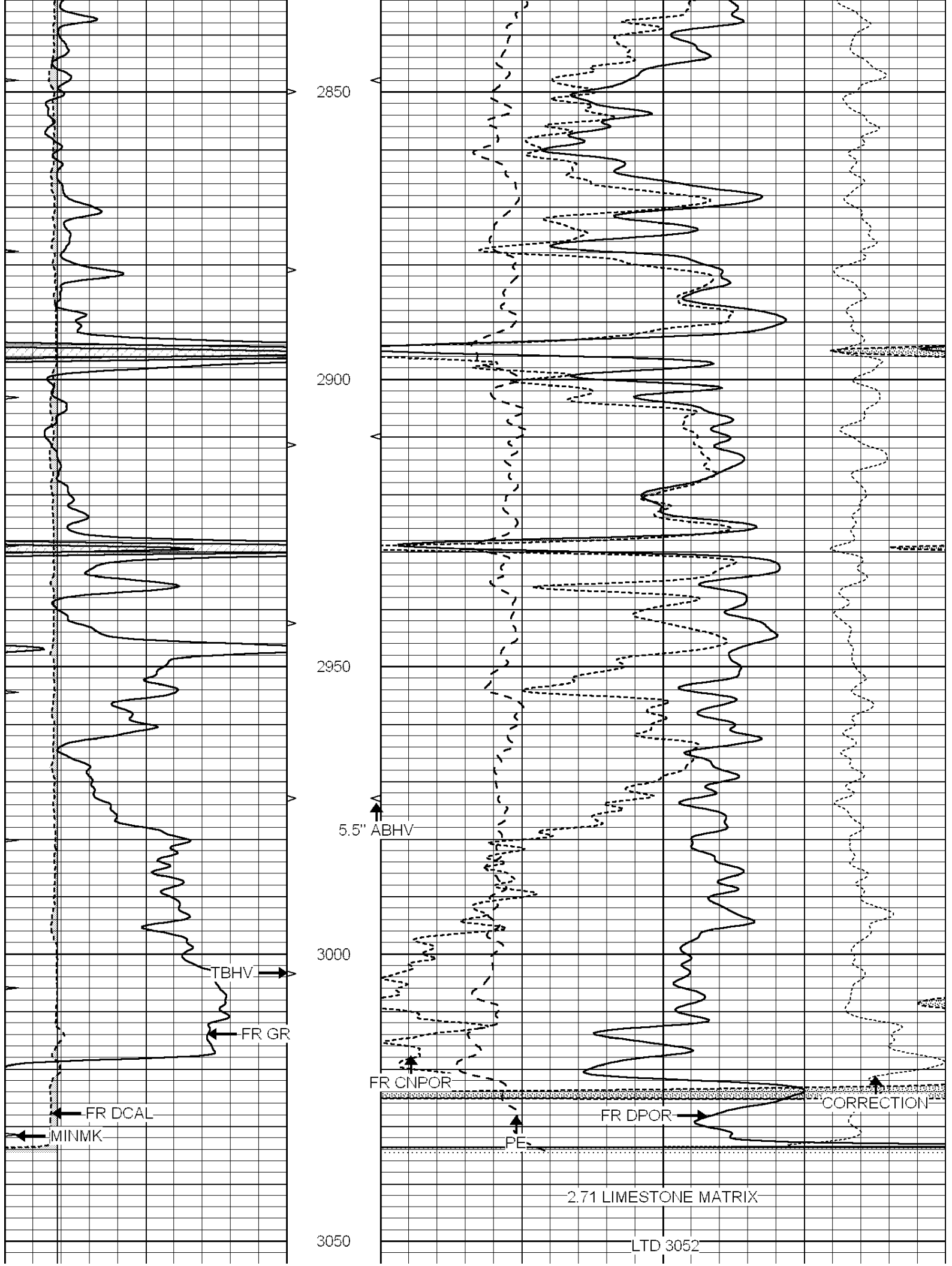
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV	0	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3)	10		



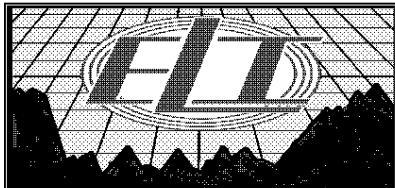








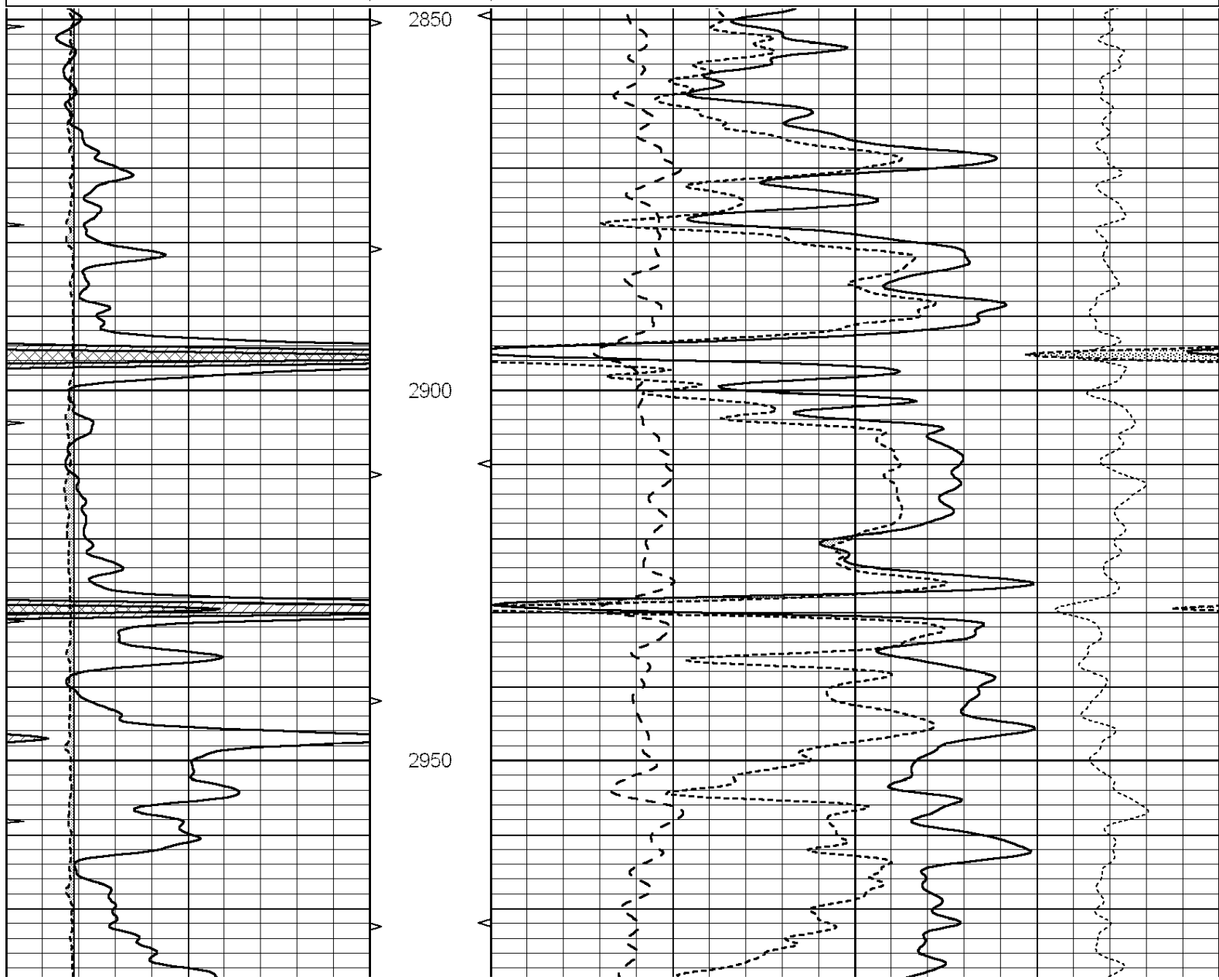
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV	0	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3) 10			

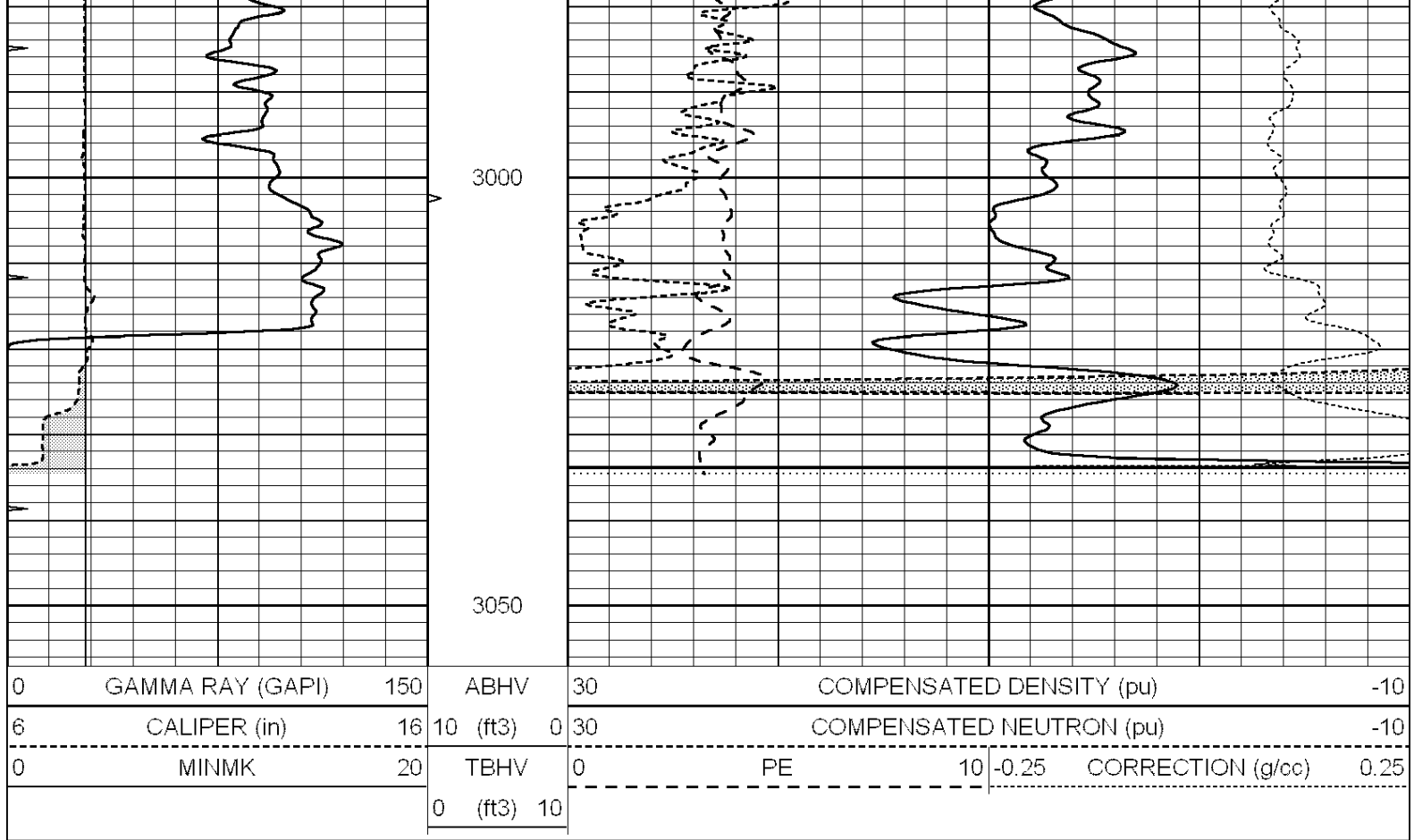


REPEAT SECTION

Database File: 2482pe.db
 Dataset Pathname: pass2.3
 Presentation Format: ldt_neu
 Dataset Creation: Tue Apr 17 16:56:56 2018 by Calc SOC 120430
 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	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3) 10			





Calibration Report									
Database File:		1598ddn.db							
Dataset Pathname:		pass4							
Dataset Creation:		Wed Aug 30 02:13:00 2017 by Log SOC 120430							
Dual Induction Calibration Report									
Serial-Model:		PROBE7-DILG							
Surface Cal Performed:		Wed Aug 30 00:06:33 2017							
Downhole Cal Performed:		Mon Jul 28 12:02:56 2008							
After Survey Verification Performed:		Mon Jul 28 12:02:56 2008							
Surface Calibration									
		Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b	
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	620.000	0.000	
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-44.000	
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256	
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102	
Downhole Calibration									
		Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'	
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000	
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000	
LL3		7.500	V		1400.000	Ohm-m			
		0.000	V		20.000	Ohm-m			
		-7.200	V		4000.000	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: 002			Model: PRB					

Master Calibration			Performed Mon Aug 21 11:27:42 2017					
	Background	Magnesium	Aluminum	Sandstone				
Window 1	837.1	10632.5	2945.1	12110.1			cps	
Window 2	772.0	9117.4	2570.1	10197.3			cps	
Window 3	631.7	4669.0	1481.9	5042.9			cps	
Window 4	187.0	187.5	185.9	189.9			cps	
Long Space	0.0	8345.4	1798.1	9425.3			cps	
Short Space	1.1	1927.9	1285.9	2050.2			cps	
Rho		1.7100	2.5960	1.3800			g/cc	
Pe		0.0000	2.5700	1.5500				
Rib Angle	: 45.2	Rib Slope	: 1.008	Density/Spine Ratio			: 0.558	
Spine Angle	: 75.2	Spine Slope	: 3.790	Spine Intercept			: -19.6	

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								
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Serial Number:			070808					
Tool Model:			Probe					

PRE-SURVEY VERIFICATION								
Detector	Readings	Measured	Target					

Short Space Long Space		cps cps	pu	pu
POST-SURVEY VERIFICATION				
Detector		Readings	Measured	Target
Short Space		cps		
Long Space		cps	pu	pu
Gamma Ray Calibration Report				
Serial Number:		070558		
Tool Model:		OPEN_GR		
Performed:		Wed May 31 00:09:32 2017		
Calibrator Value:		1.0	GAPI	
Background Reading:		0.0	cps	
Calibrator Reading:		1.0	cps	
Sensitivity:		0.2800	GAPI/cps	