



COMPENSATED DENSITY/NEUTRON PE LOG

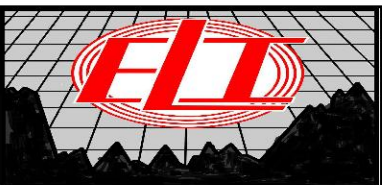
Company	ARP OPERATING, LLC.	Location:	API # : 15-193-21115-0000	Other Services DIL/MEL SONIC
Well	LOS PRIMOS #2	Permanent Datum	1650' FSL & 1320' FEL S/2 - N/2 - SE SEC 26 TWP 10S RGE 33W	Elevation K.B. 3100 D.F. 3098 G.L. 3088
Field	COUSINS	Log Measured From	GROUND LEVEL Elevation 3088 KELLY BUSHING 12' A.G.L.	
County	THOMAS	Drilling Measured From	KELLY BUSHING	
State	KANSAS			
Date	2/13/23			
Run Number	ONE			
Depth Driller	4747			
Depth Logger	4744			
Bottom Logged Interval	4720			
Top Log Interval	3600			
Casing Driller	8 5/8"@261'			
Casing Logger	262			
Bit Size	7 7/8"			
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES: 4,000 PPM		
Density / Viscosity	9.4/59			
pH / Fluid Loss	10.5/8.0			
Source of Sample	FLOWLINE			
Rm @ Meas. Temp	1.40@66F			
Rmf @ Meas. Temp	1.05@66F			
Rmc @ Meas. Temp	1.68@66F			
Source of Rmf / Rmc	MEASURED			
Rm @ BHT	.751@123F			
Time Circulation Stopped	2.5 HOURS			
Time Logger on Bottom	5.30 P.M.			
Maximum Recorded Temperature	123F			
Equipment Number	8916			
Location	HAYS, KANSAS			
Recorded By	JEFF LUEBBERS			
Witnessed By	SEAN DEENIHAN			

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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

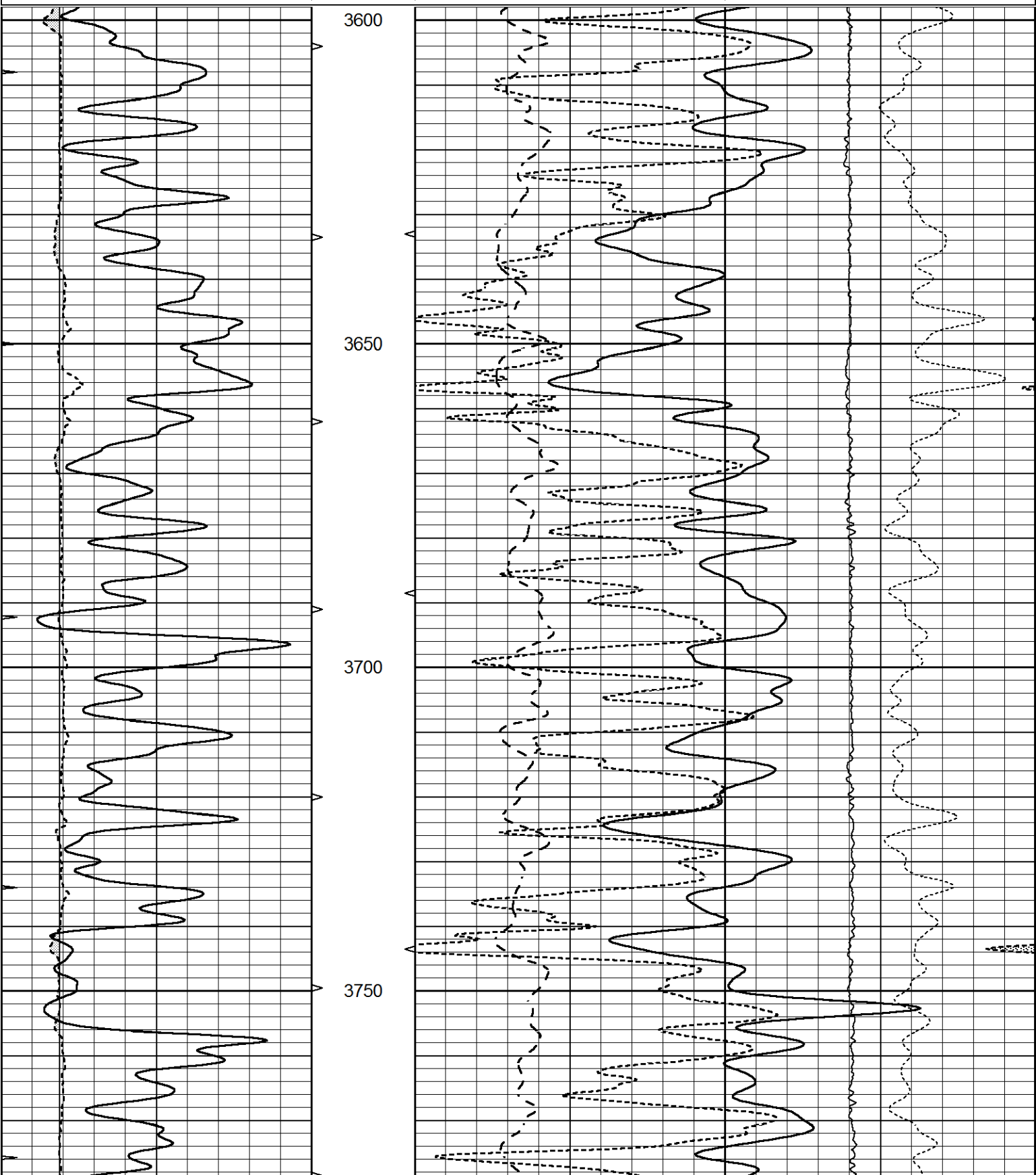
THANK YOU FOR USING ELI WIRELINE, HAYS, KS. (785) 628-6395
DIRECTIONS:
OAKLEY, KS. & SECOND I-70 EXIT, S. TO "RD. C", W. TO "RD. 23", 1S., E. INTO

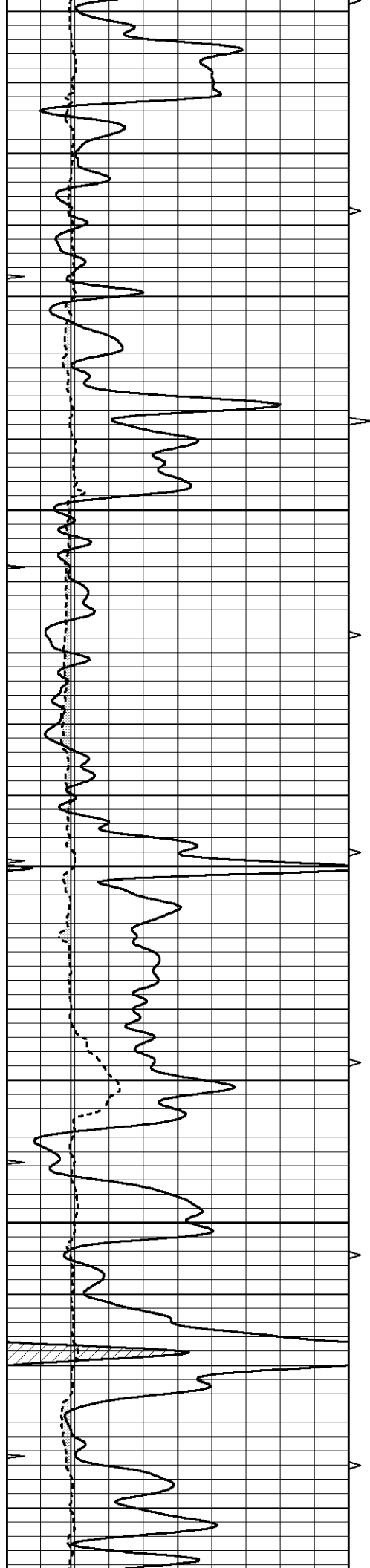


MAIN SECTION

Database File	7509pe.db
Dataset Pathname	pass3.1M
Presentation Format	ldt_neu
Dataset Creation	Mon Feb 13 19:26:35 2023
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 (ft3) 10		0	LTEN (lb)
					-0.25	CORRECTION (g/cc)
						0.25



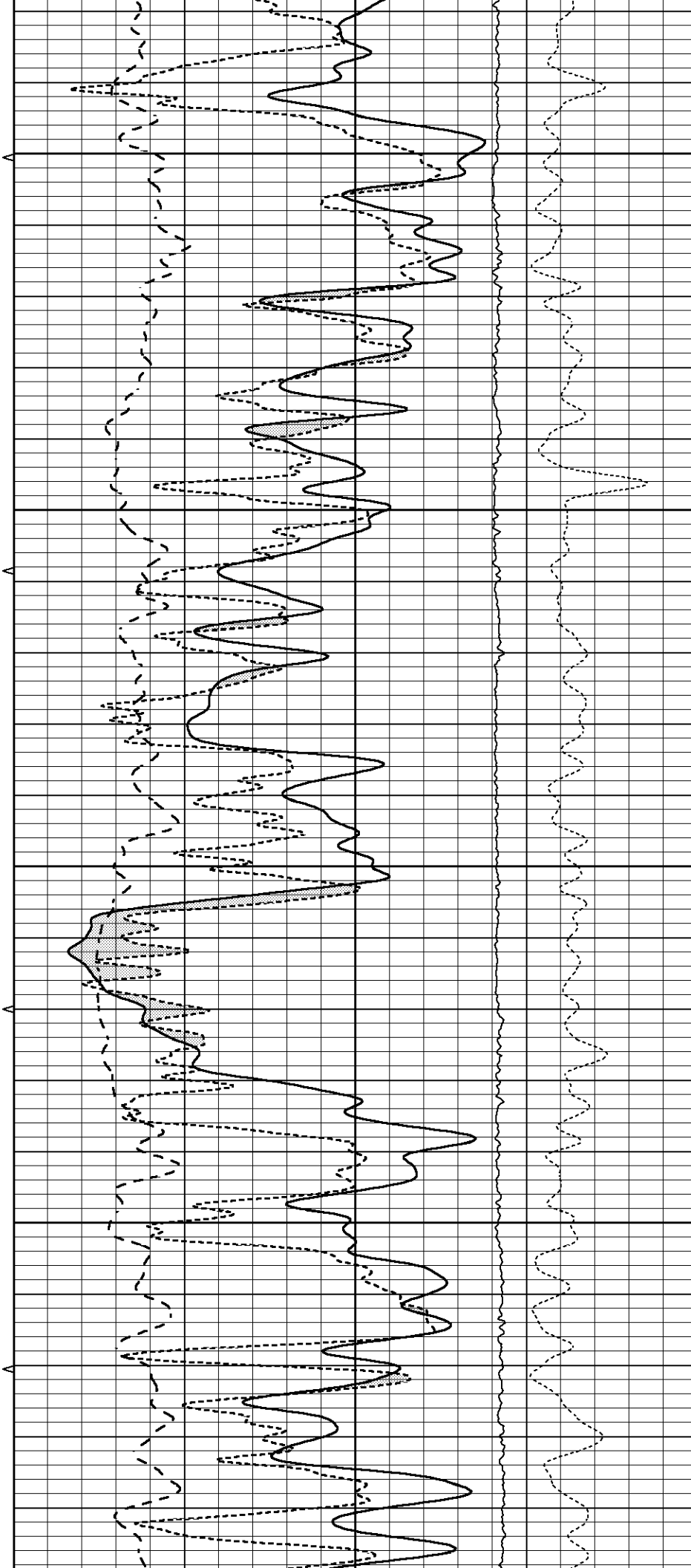


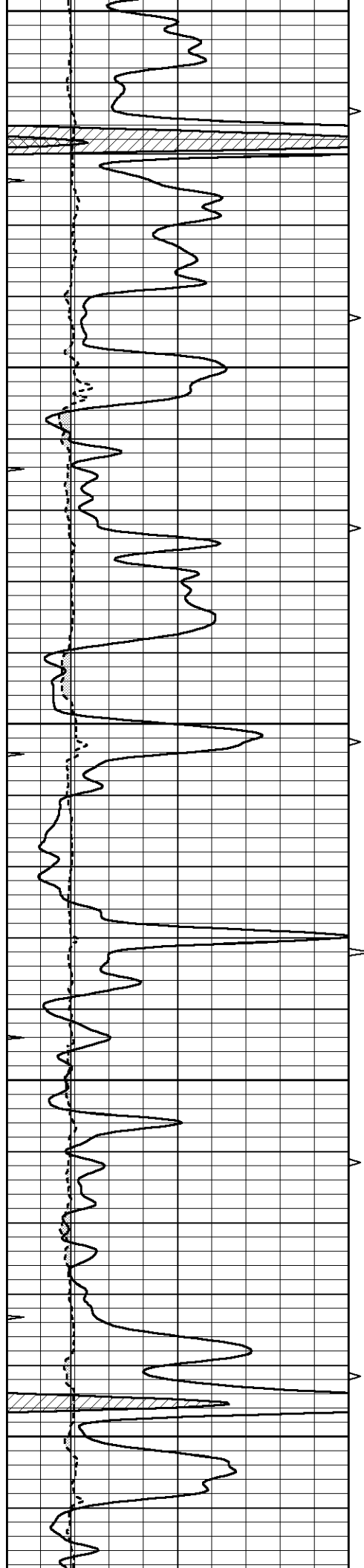
3800

3850

3900

3950





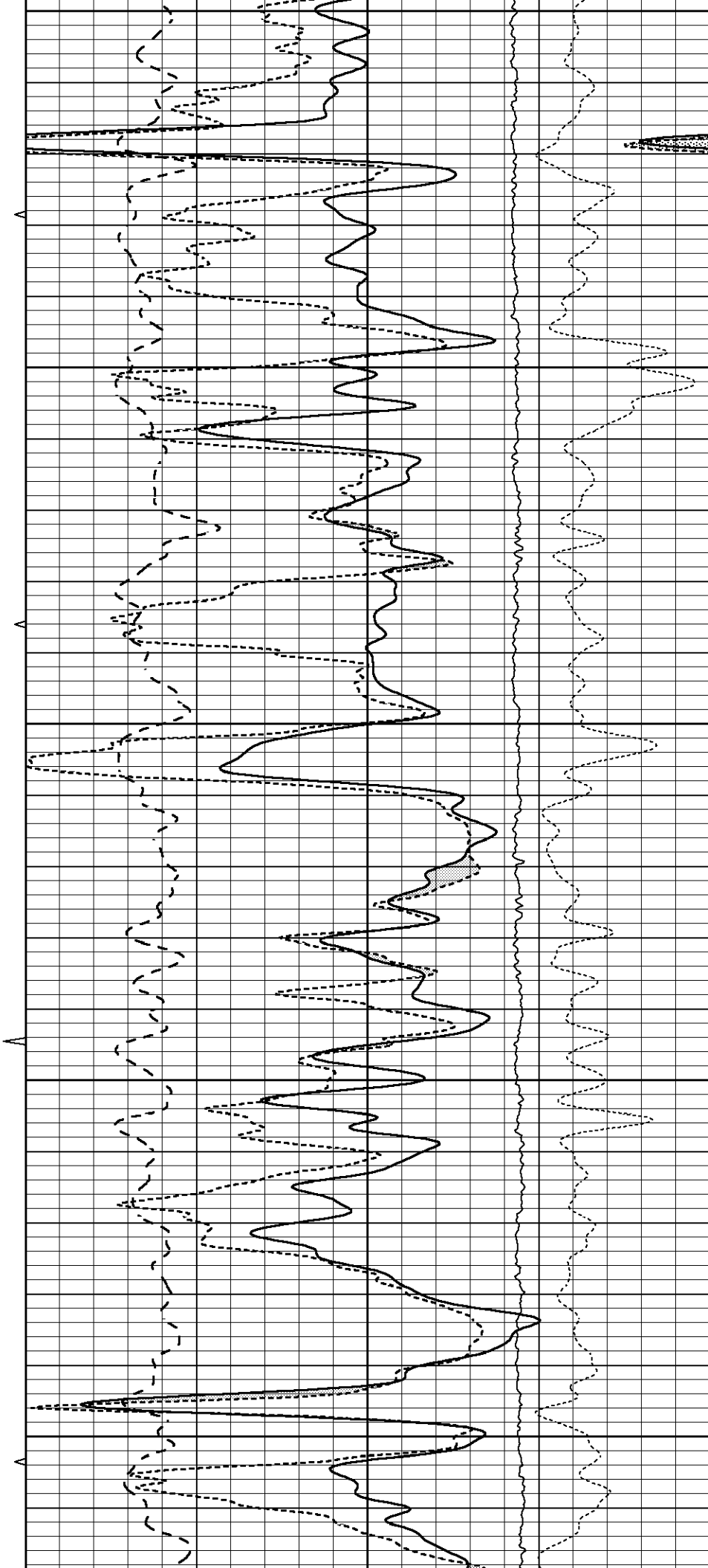
4000

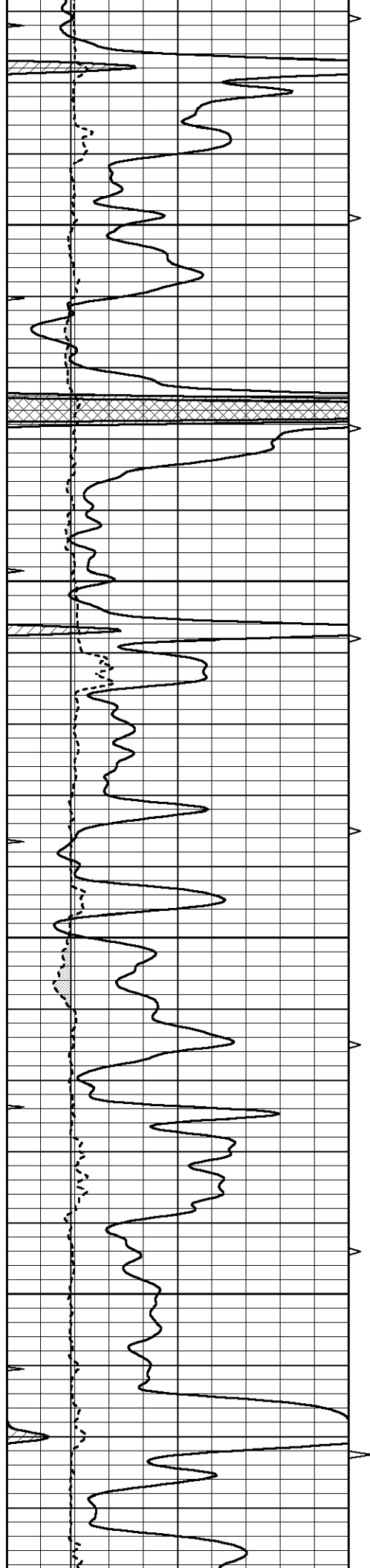
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4100

4150

4200



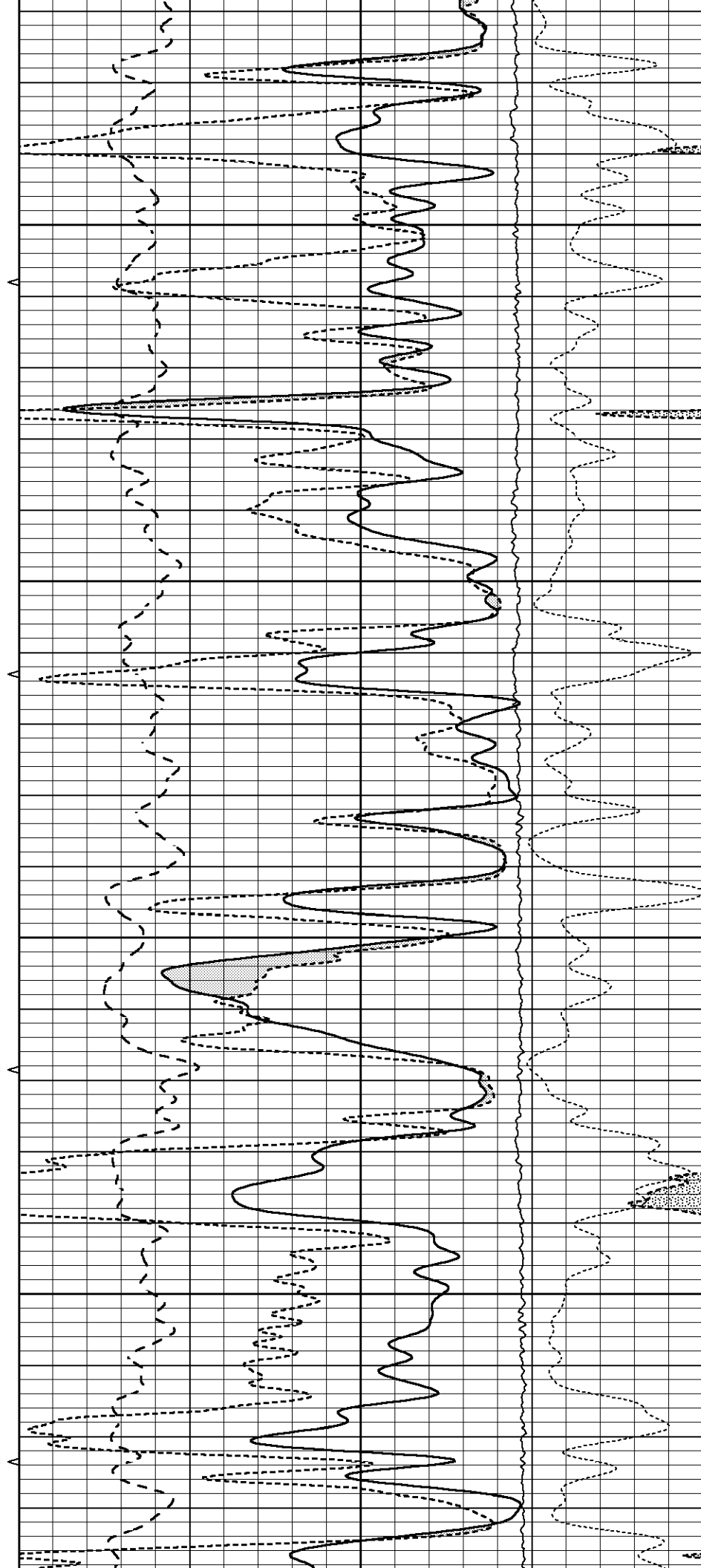


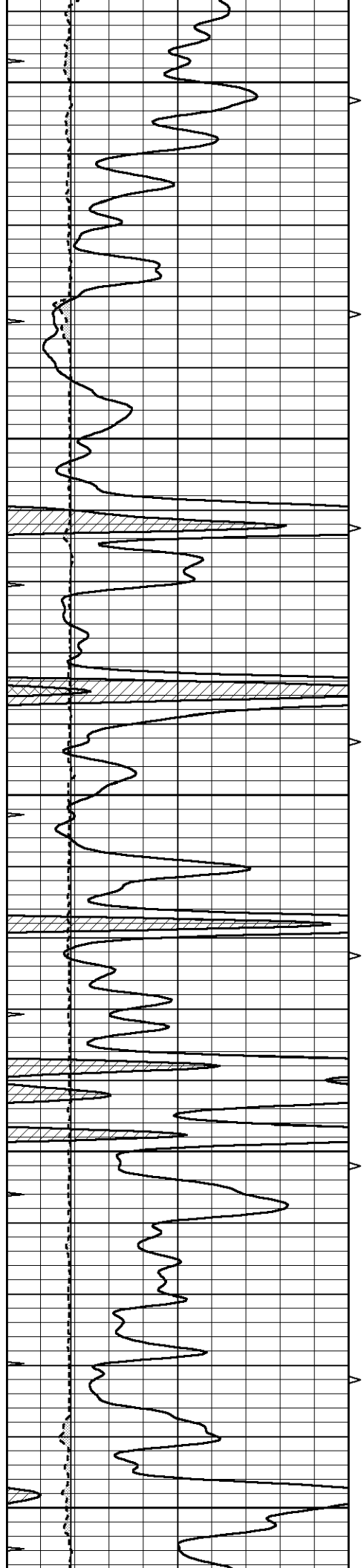
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4300

4350

4400





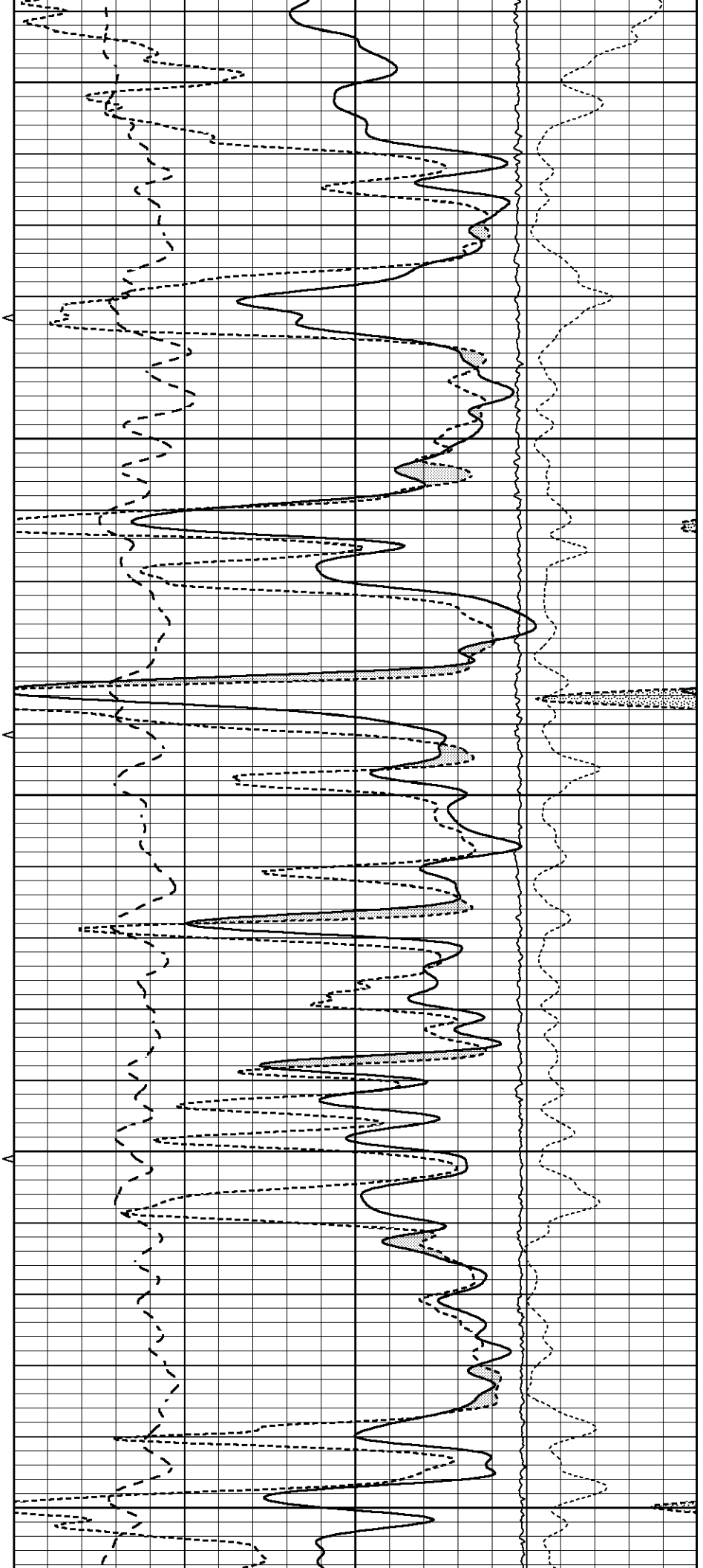
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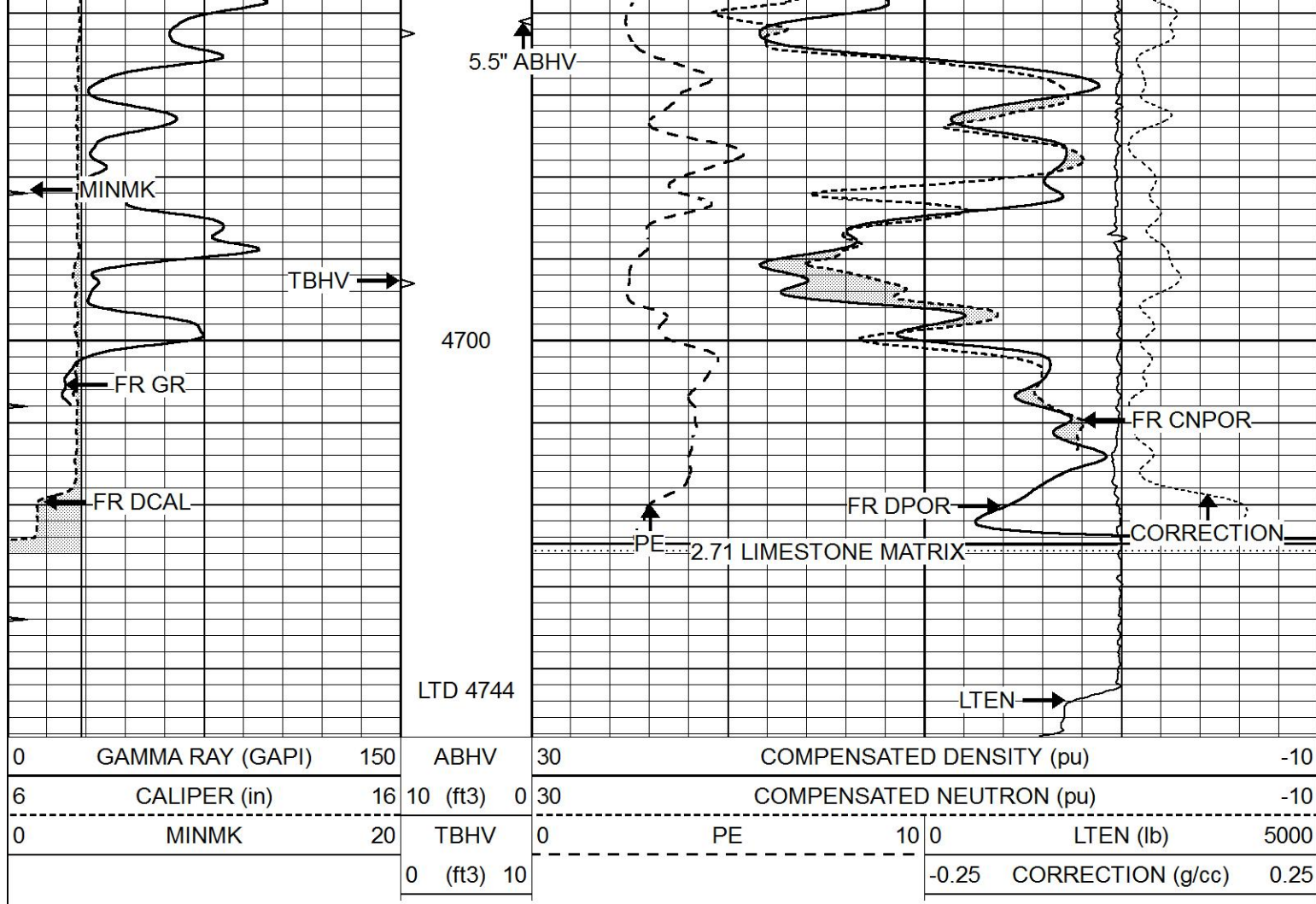
4500

4550

4600

4650

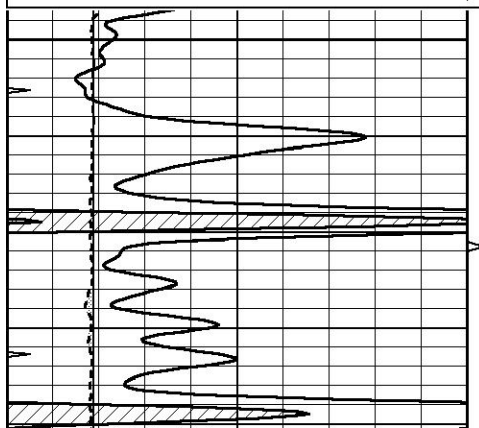




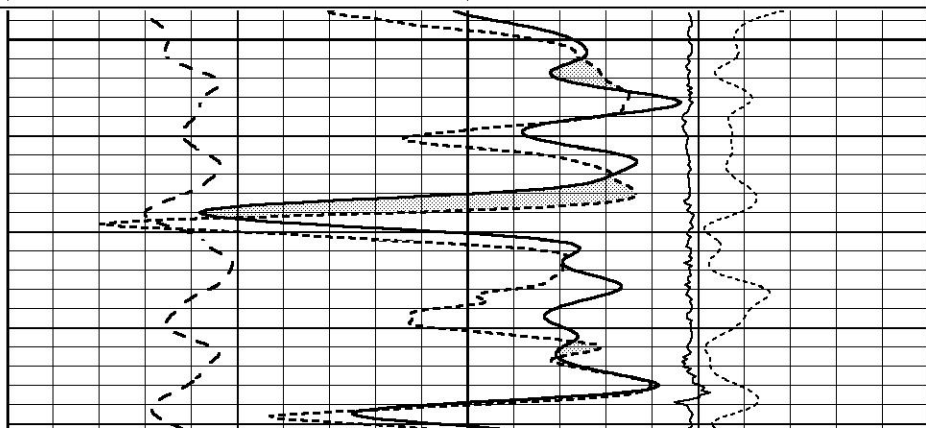
REPEAT SECTION

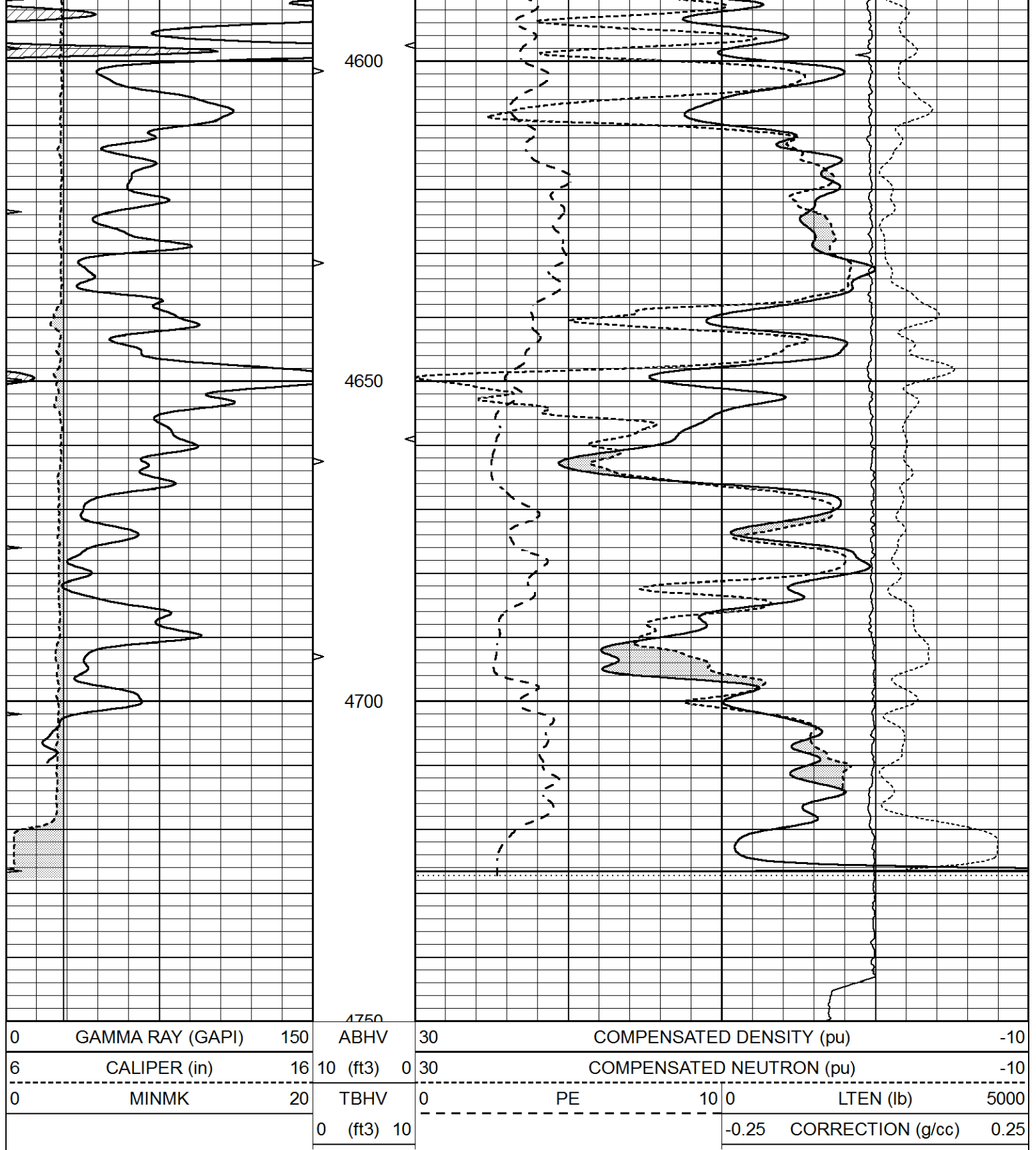
Database File 7509pe.db
 Dataset Pathname pass2.1R
 Presentation Format ldt_neu
 Dataset Creation Mon Feb 13 18:25:14 2023
 Charted by Depth in Feet scaled 1:240

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
			0 (ft3) 10		LTEN (lb)	5000
					-0.25	CORRECTION (g/cc) 0.25



4550





Calibration Report

Database File 7509pe.db
 Dataset Pathname pass3.1M
 Dataset Creation Mon Feb 13 19:26:35 2023

Dual Induction Calibration Report

Serial-Model:	DIL7-GEAR
Surface Cal Performed:	Mon Feb 13 03:29:35 2023
Downhole Cal Performed:	Tue Jul 22 10:15:08 2008

Surface Calibration								
Readings			References			Results		
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.019	0.660	V	0.000	400.000	mmho/m	660.000	16.000
Medium	-0.006	0.655	V	0.000	462.500	mmho/m	720.000	-32.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.010	0.665	V	0.000	400.000	mmho/m	610.018	-5.925
Medium	0.009	0.655	V	0.000	400.000	mmho/m	618.983	-5.564

Downhole Calibration								
Readings			References			Results		
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.000	0.000	mmho/m	-6.200	401.333	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	-1.141	472.660	mmho/m	1.000	0.000
Shallow	2.521	0.019	V	500.000	2.000	Ohm-m	200.000	0.000

After Survey Verification								
Readings			Targets			Results		
Internal:	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Medium	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Shallow	2.500	0.010	Ohm-m	500.000	2.000	Ohm-m	200.000	0.000

Litho Density Calibration Report								
Serial: 004			Model: PRB					

Master Calibration				Performed Fri Nov 04 15:19:59 2022				
	Background	Magnesium		Aluminum	Aluminum+Fe			
Window 1	1153.2	7232.1		2536.8	2279.5			cps
Window 2	1055.6	6225.5		2222.3	2030.5			cps
Window 3	902.5	3849.3		1546.4	1462.0			cps
Window 4	254.4	258.2		253.1	253.9			cps
Long Space	0.0	5169.9		1166.7	974.9			cps
Short Space	4.7	1383.0		950.5	792.1			cps
Rho		1.7100		2.5900	0.0000			g/cc
Pe		2.0000		2.7500	5.7900			
Rib Angle	: 45.9	Rib Slope	: 1.031	Density/Spine Ratio			: 0.573	
Spine Angle	: 75.9	Spine Slope	: 3.970	Spine Intercept			: -20.2	

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:	Mon Feb 13 04:57:01 2023	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.8500	GAPI/cps

