



COMPENSATED DENSITY / NEUTRON LOG

Company L.D. DRILLING, INC.

Well #1-28 SPEER

Field STORMONT

County LANE State KANSAS

Location: API #: 15-101-22653-0000

1794' FSL & 477' FEL

NW - SE - NE - SE

SEC 28 TWP 19S RGE 28W

Permanent Datum GROUND LEVEL Elevation 2781
Log Measured From KELLY BUSHING 5' A.G.L.
Drilling Measured From KELLY BUSHING

Other Services
DIL/MEL

Elevation

K.B. 2786
D.F. 2784
G.L. 2781

Date 7/19/21

Run Number ONE

Depth Driller 4785

Depth Logger 4787

Bottom Logged Interval 4763

Top Log Interval 3500

Casing Driller 8 5/8" @ 236'

Casing Logger 236

Bit Size 7 7/8"

Type Fluid in Hole CHEMICAL MUD CHLORIDES 9,800 PPM

Density / Viscosity 9.4/49

pH / Fluid Loss 10.0/8.0

Source of Sample FLOWLINE

Rm @ Meas. Temp .750 @ 99F

Rmf @ Meas. Temp .563 @ 99F

Rmc @ Meas. Temp .900 @ 99F

Source of Rmf / Rmc MEASUREMENT

Rm @ BHT .604 @ 123F

Time Circulation Stopped 2.5 HOURS

Time Logger on Bottom 10:15 A.M.

Maximum Recorded Temperature 123F

Equipment Number 922339

Location HAYS, KANSAS

Recorded By JEFF LUEBBERS

Witnessed By KIM SHOEMAKER

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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.

15-101-22653-0000

Comments

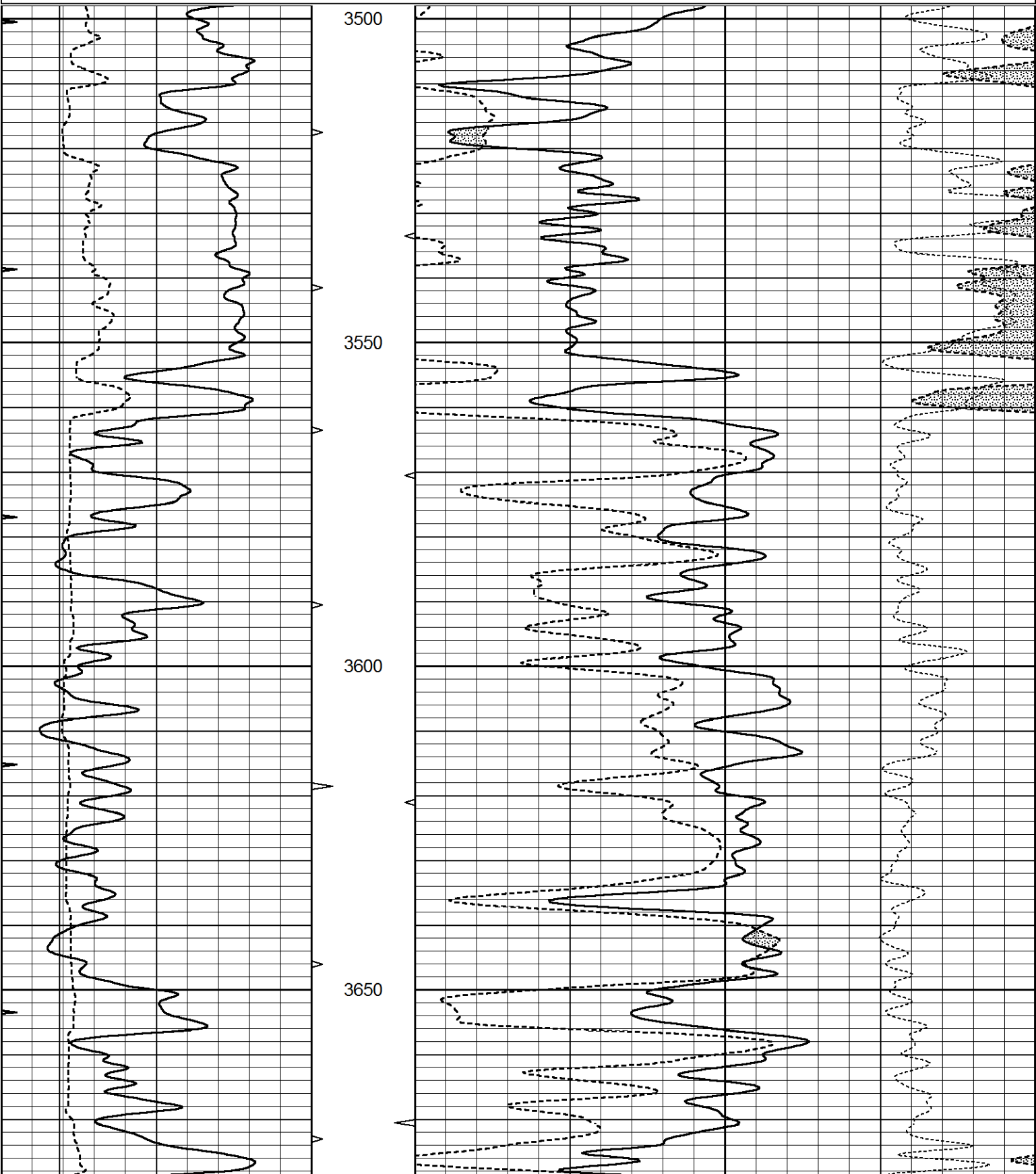
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
DIGHTON, KS, 6S. ON HWY 23 TO "RD. 90", 3E. TO "NEWTON RD.", 1 1/2 S., W. INTO

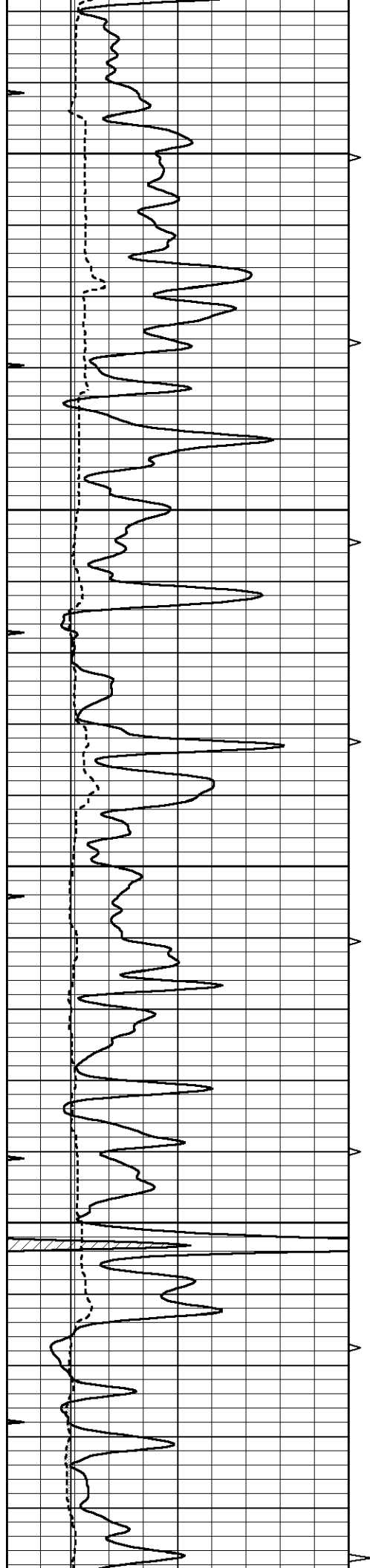


MAIN SECTION

Database File	5588ddn.db
Dataset Pathname	pass3.4M
Presentation Format	den_neu
Dataset Creation	Mon Jul 19 11:33:07 2021
Charted by	Depth in Feet scaled 1:240

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



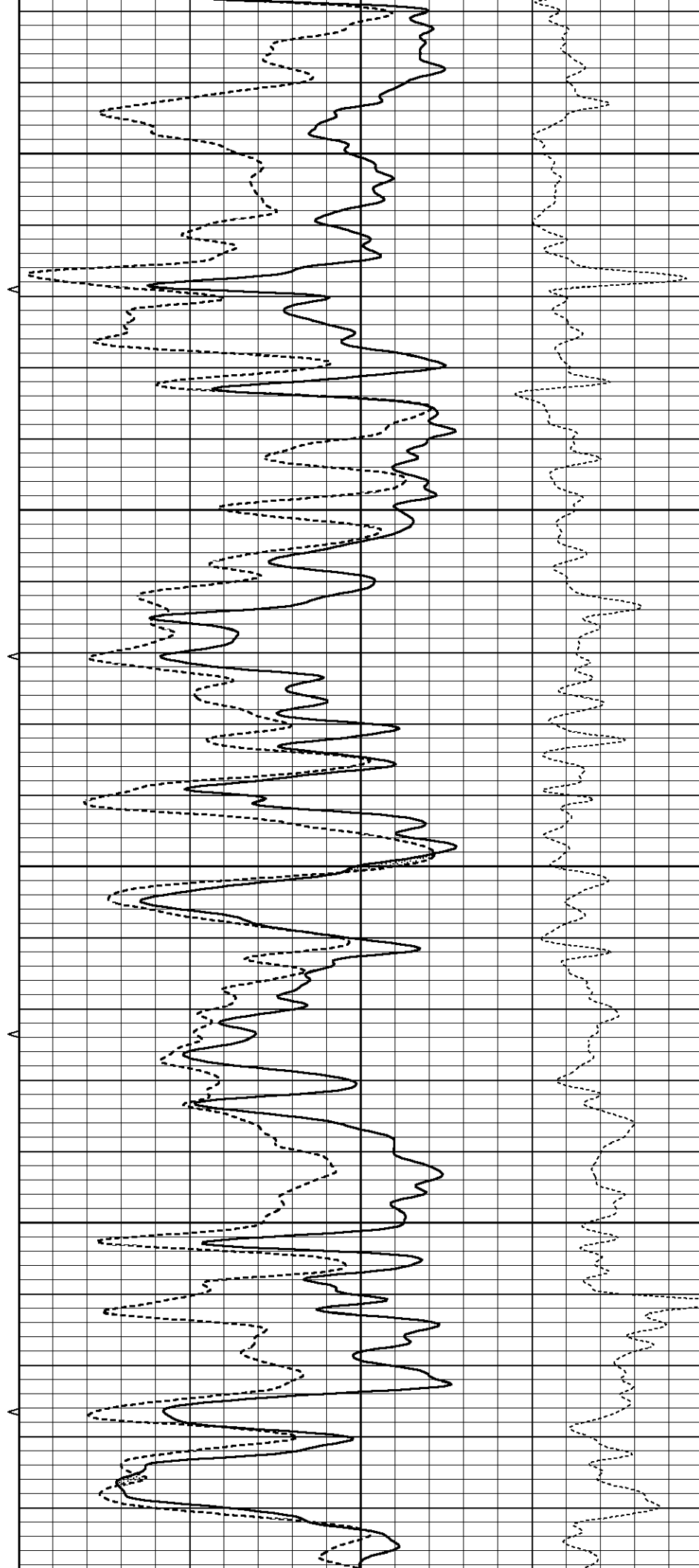


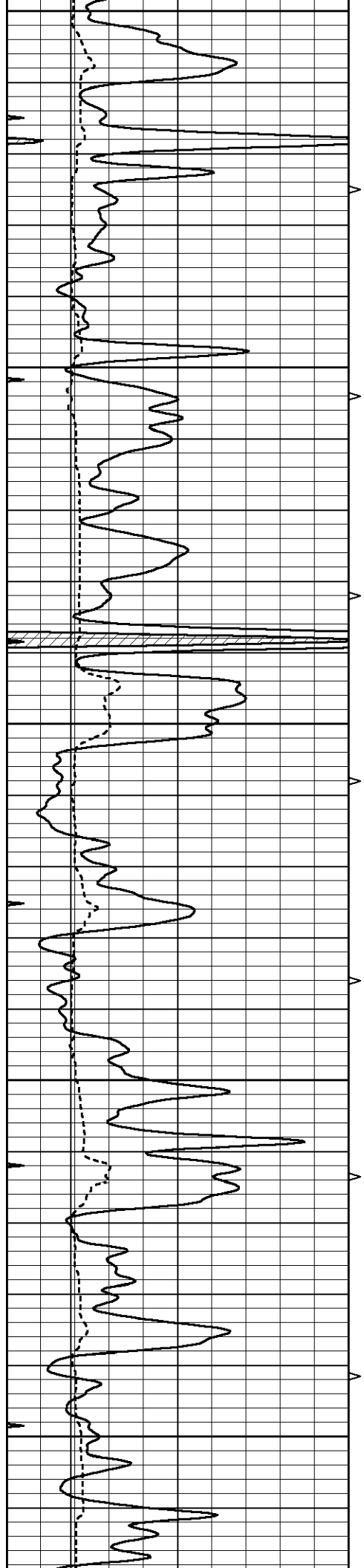
3700

3750

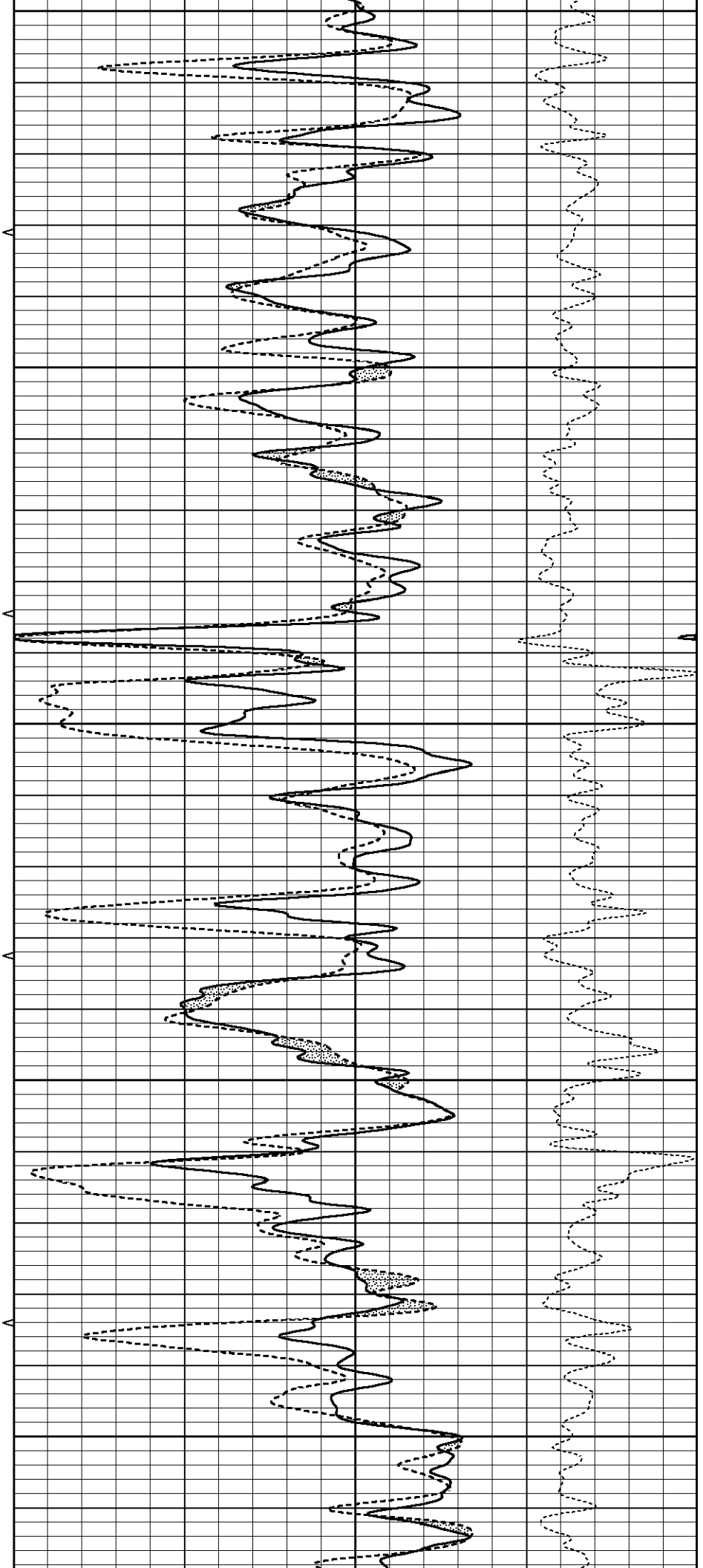
3800

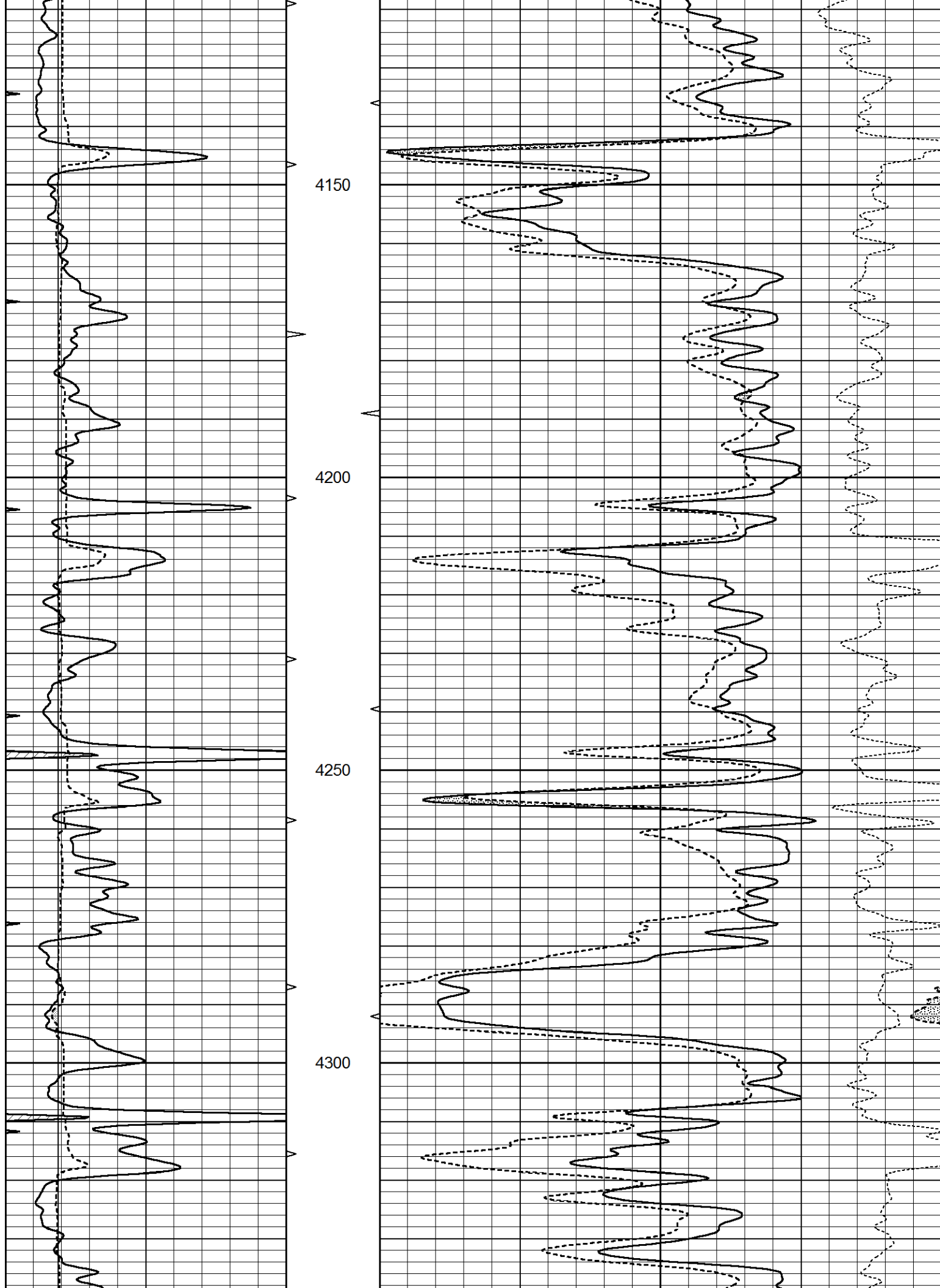
3850

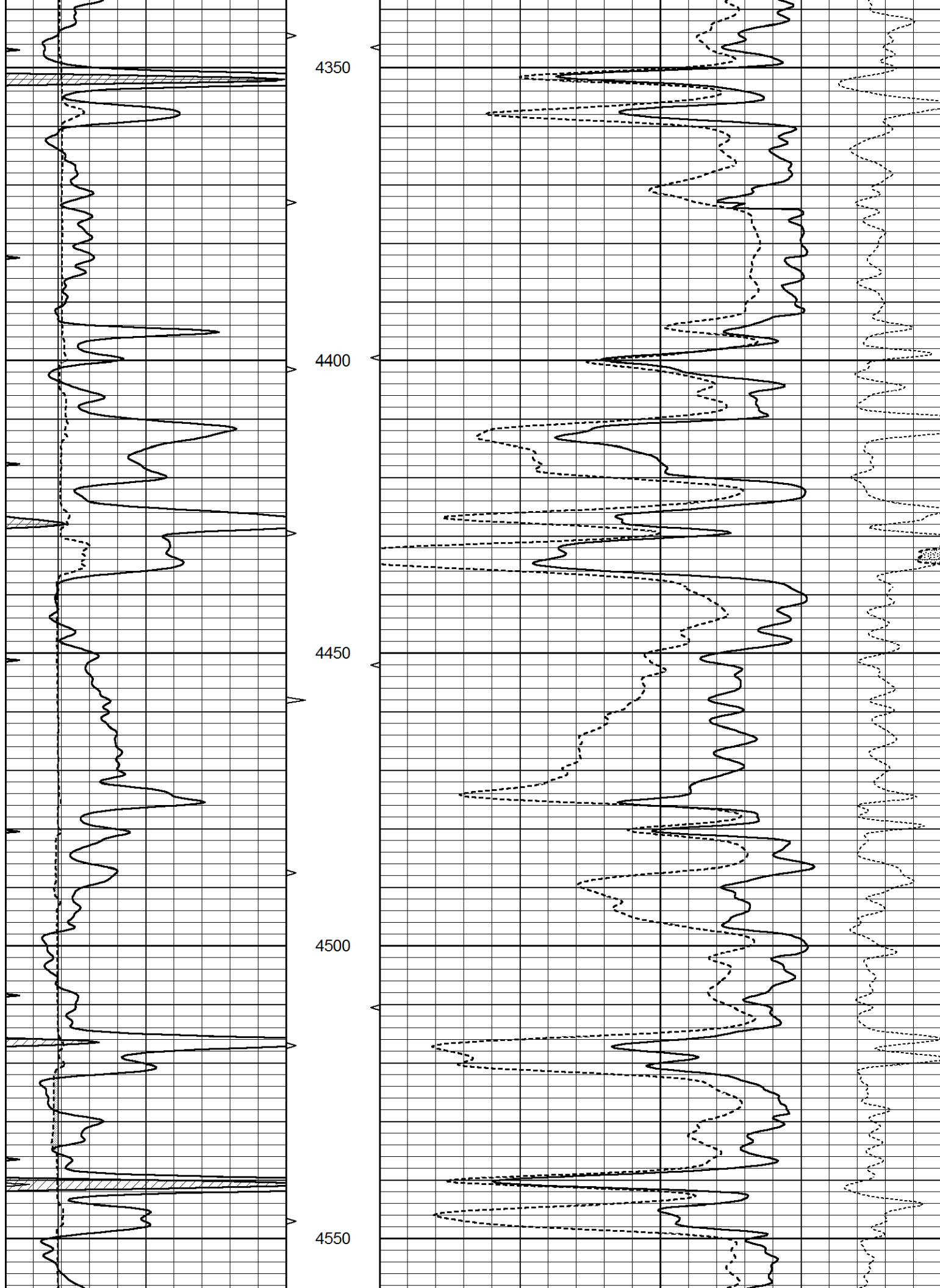


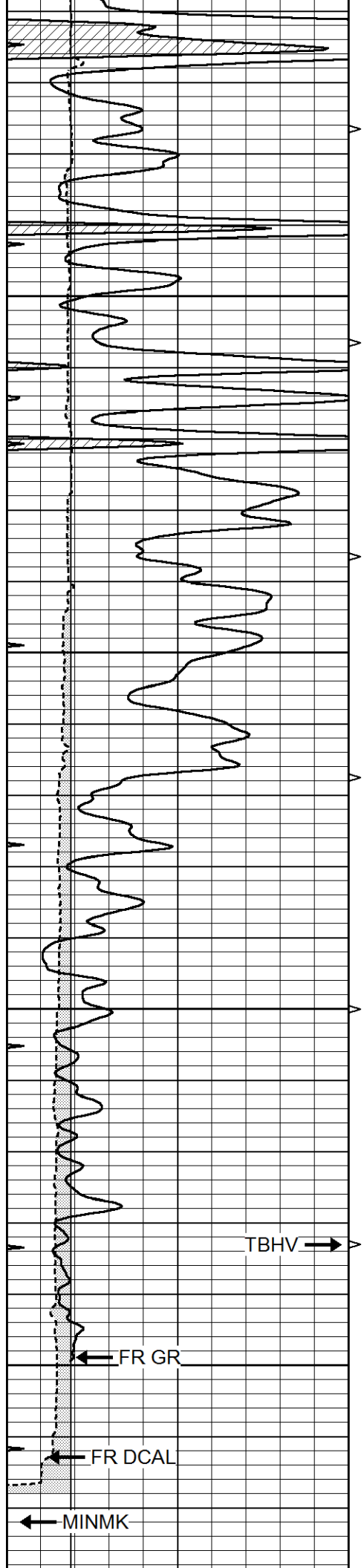


3900
3950
4000
4050
4100









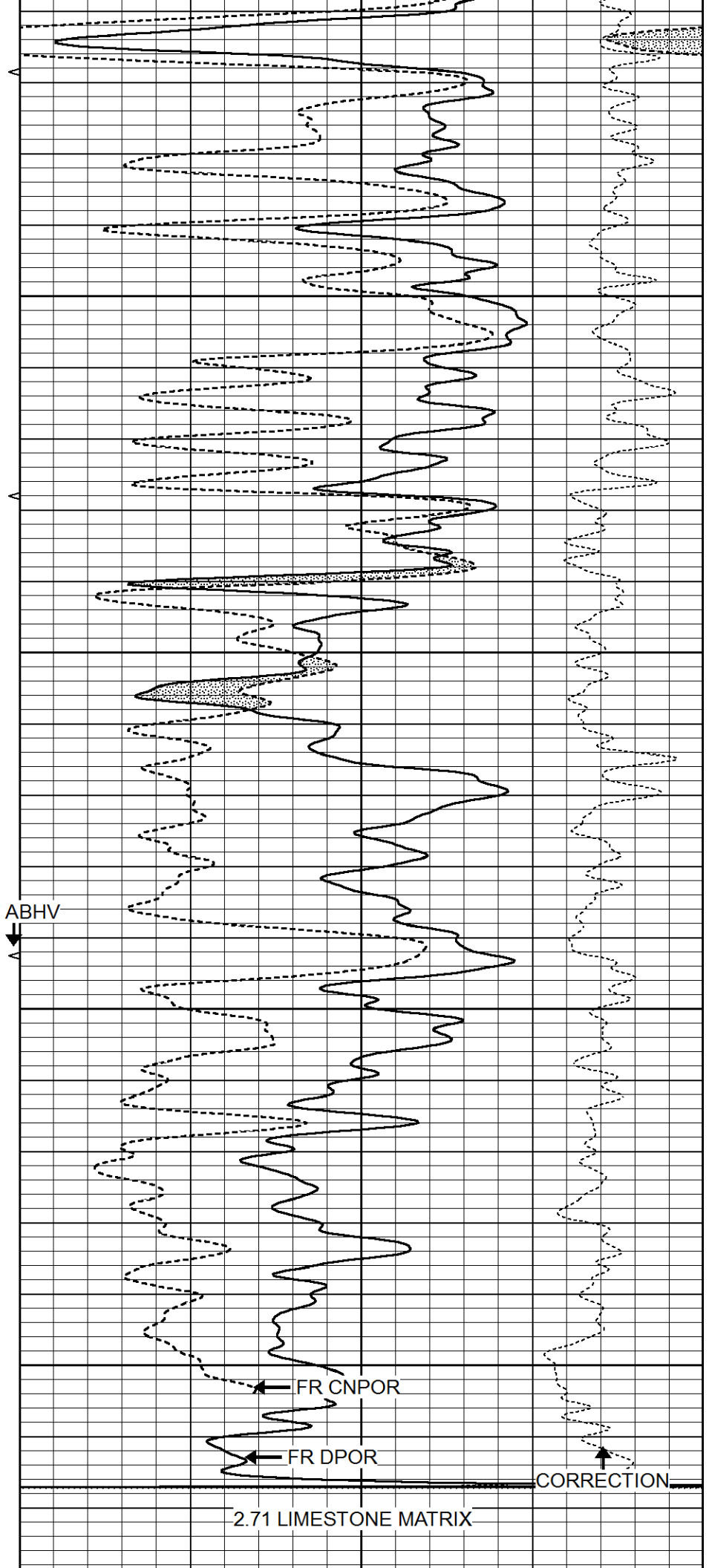
4600

4650

4700

4750

5.5" ABHV



LTD 4787

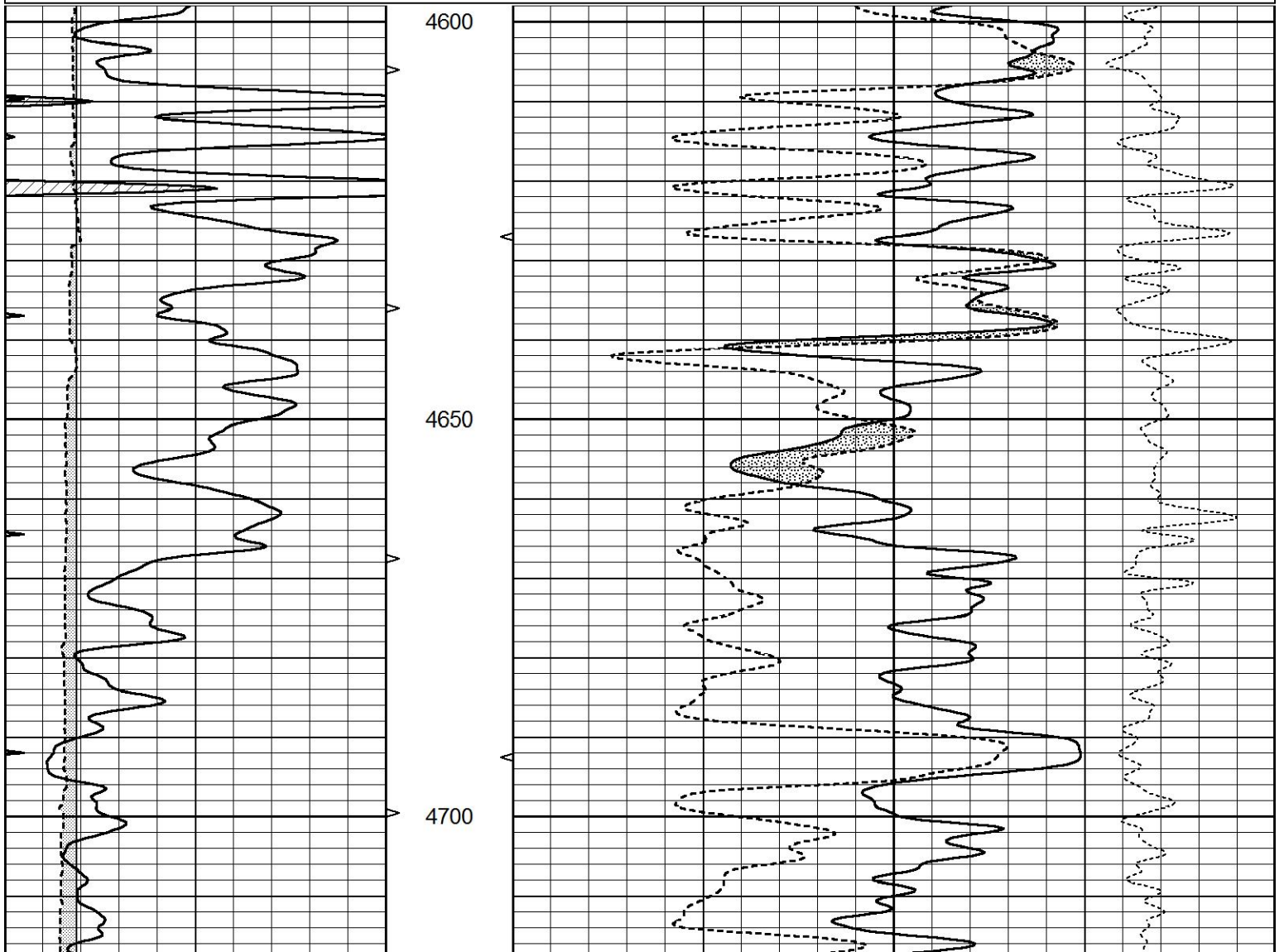
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	DCAL (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3) 10			

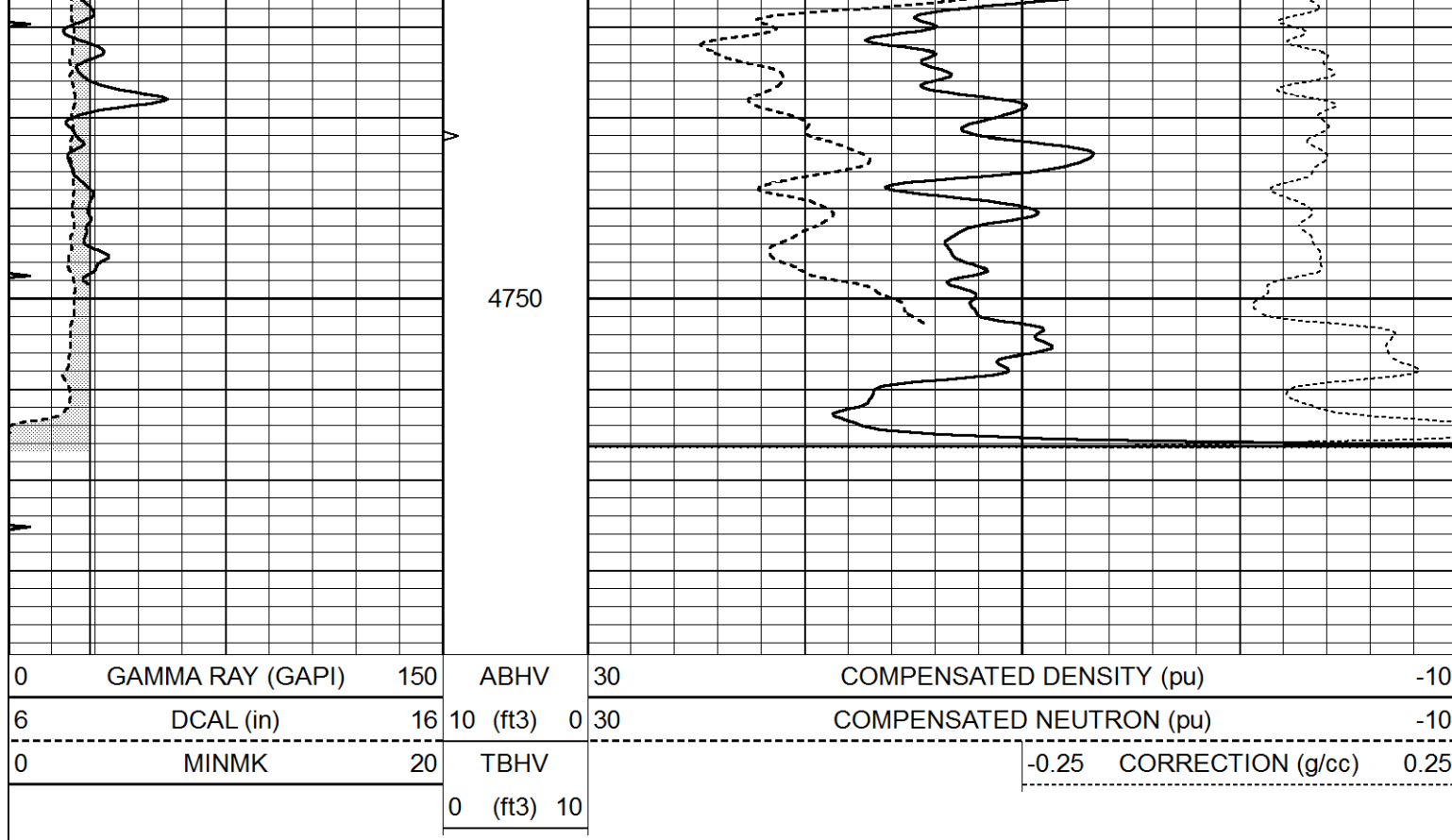


REPEAT SECTION

Database File 5588ddn.db
 Dataset Pathname pass2.6R
 Presentation Format den_neu
 Dataset Creation Mon Jul 19 11:44:09 2021
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	DCAL (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	5588ddn.db								
Dataset Pathname	pass3.1M								
Dataset Creation	Mon Jul 19 11:12:09 2021								
Dual Induction Calibration Report									
Serial-Model:					PROBE7-DILG				
Surface Cal Performed:					Mon Jul 12 00:16:57 2021				
Downhole Cal Performed:					Thu Mar 12 11:45:10 2020				
After Survey Verification Performed:					Thu Mar 12 11:45:00 2020				
Surface Calibration									
Readings				References			Results		
Loop:	Air	Loop		Air	Loop		m	b	
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	630.000	-6.000	
Medium	0.039	0.728	V	0.000	464.000	mmho/m	685.000	-56.000	
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		

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		
		0.000	mmho-m		4000.000	mmho-m		

Litho Density Calibration Report
Serial: 004 Model: PRB

Master Calibration			Performed Tue May 18 11:02:48 2021					
	Background	Magnesium		Aluminum		Aluminum+Fe		
Window 1	1187.1	10004.0		3142.5		2810.8		cps
Window 2	1084.9	8556.6		2749.3		2502.4		cps
Window 3	923.1	5129.8		1819.8		1719.3		cps
Window 4	263.5	263.6		259.7		262.8		cps
Long Space	0.0	7471.7		1664.4		1417.5		cps
Short Space	1.5	984.9		645.6		561.2		cps
Rho		1.7100		2.5900		0.0000		g/cc
Pe		2.0000		2.7500		5.7900		
Rib Angle	: 44.3	Rib Slope	: 0.976	Density/Spine Ratio			: 0.564	
Spine Angle	: 74.3	Spine Slope	: 3.555	Spine Intercept			: -15.6	

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

Serial Number:	070808PMC
Tool Model:	NABORS

PRE-SURVEY VERIFICATION			
Detector	Readings	Measured	Target

Short Space	cps		
Long Space	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:	Fri Jul 09 13:16:04 2021		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.3000	GAPI/cps	