

**COMPENSATED  
DENSITY / NEUTRON  
LOG**

Company DOWNING - NELSON OIL CO., INC.  
Well CHARLENE #1-17  
Field UNNAMED  
County RAWLINS  
State KANSAS

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Location: 2310' FSL & 835' FWL  
W/2 - NE - NW - SW  
API #: 15-153-21272-0000  
Permanent Datum GROUND LEVEL Elevation 3345  
Log Measured From KELLY BUSHING 8' A.G.L.  
Drilling Measured From KELLY BUSHING  
SEC 17 TWP 5S RGE 36W  
Other Services  
DILMEEL  
SONIC  
Elevation  
K.B. 3353  
D.F. 3351  
G.L. 3345

Date	12/4/21
Run Number	ONE
Depth Driller	4946
Depth Logger	4948
Bottom Logged Interval	4924
Top Log Interval	3500
Casing Driller	8 5/8" @ 446'
Casing Logger	446
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.3/60
pH / Fluid Loss	9.5/8.4
Source of Sample	FLOWLINE
Rm @ Meas. Temp	1.75 @ 92F
Rmf @ Meas. Temp	1.31 @ 92F
Rmc @ Meas. Temp	2.10 @ 92F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	1.29 @ 125F
Time Circulation Stopped	2.5 HOURS
Time Logger on Bottom	7:30 P.M.
Maximum Recorded Temperature	125F
Equipment Number	922339
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	MARC DOWNING

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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.

15-153-21272-0000 Comments

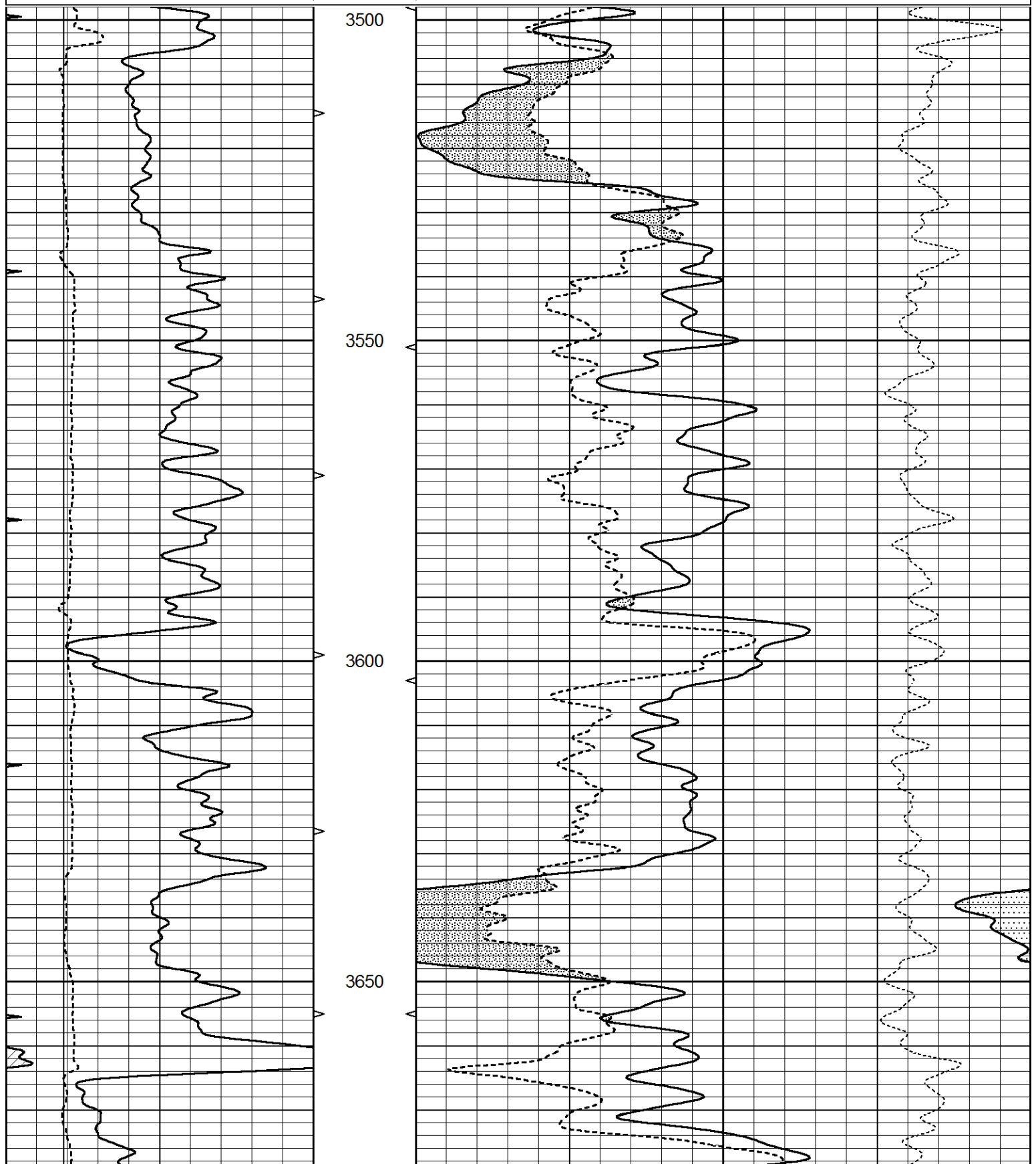
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395  
DIRECTIONS  
BREWSTER, KS., N. ON BLKTOP TO CURVE WEST, THEN 3N., 1/2W., N. INTO

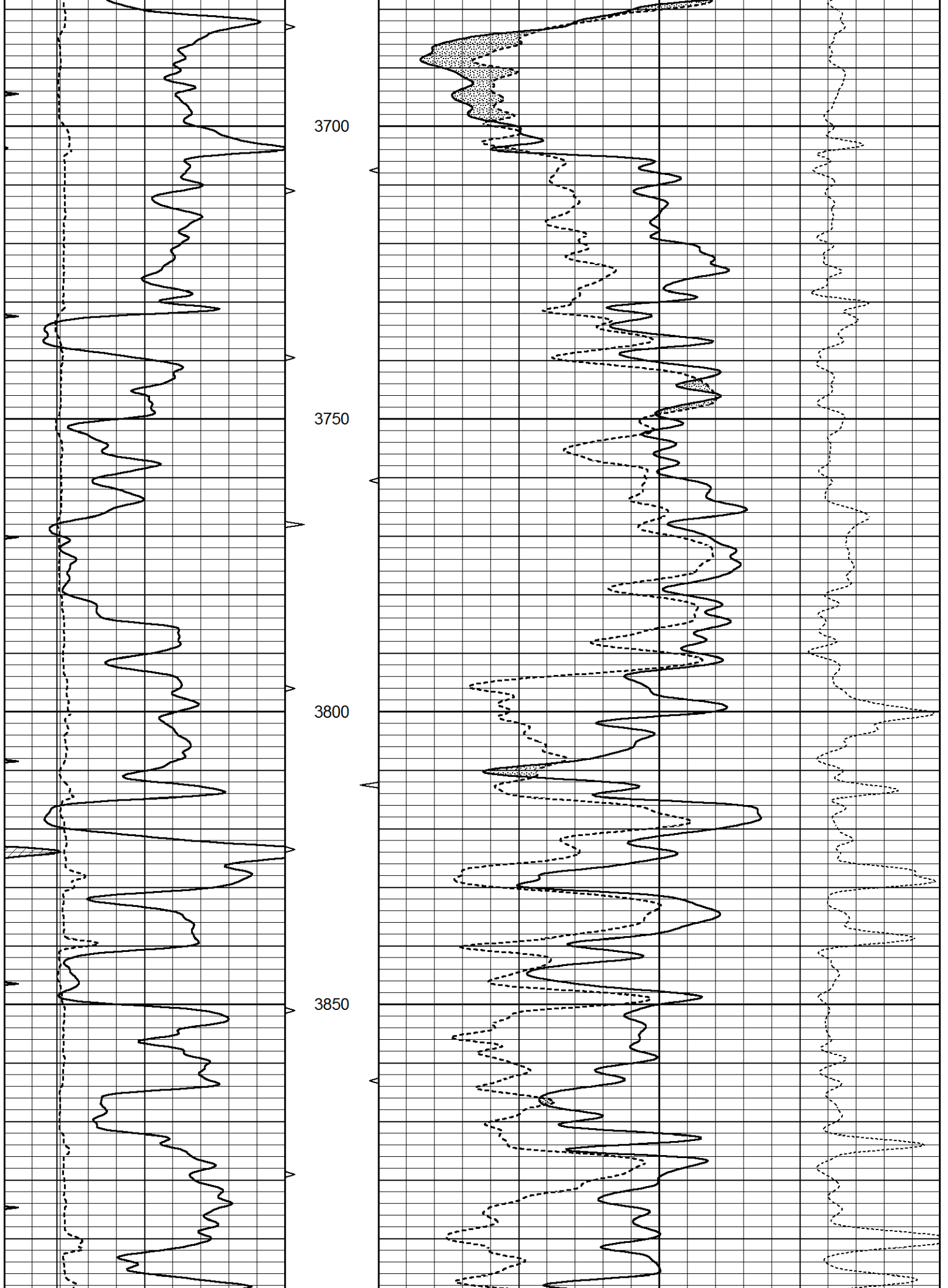


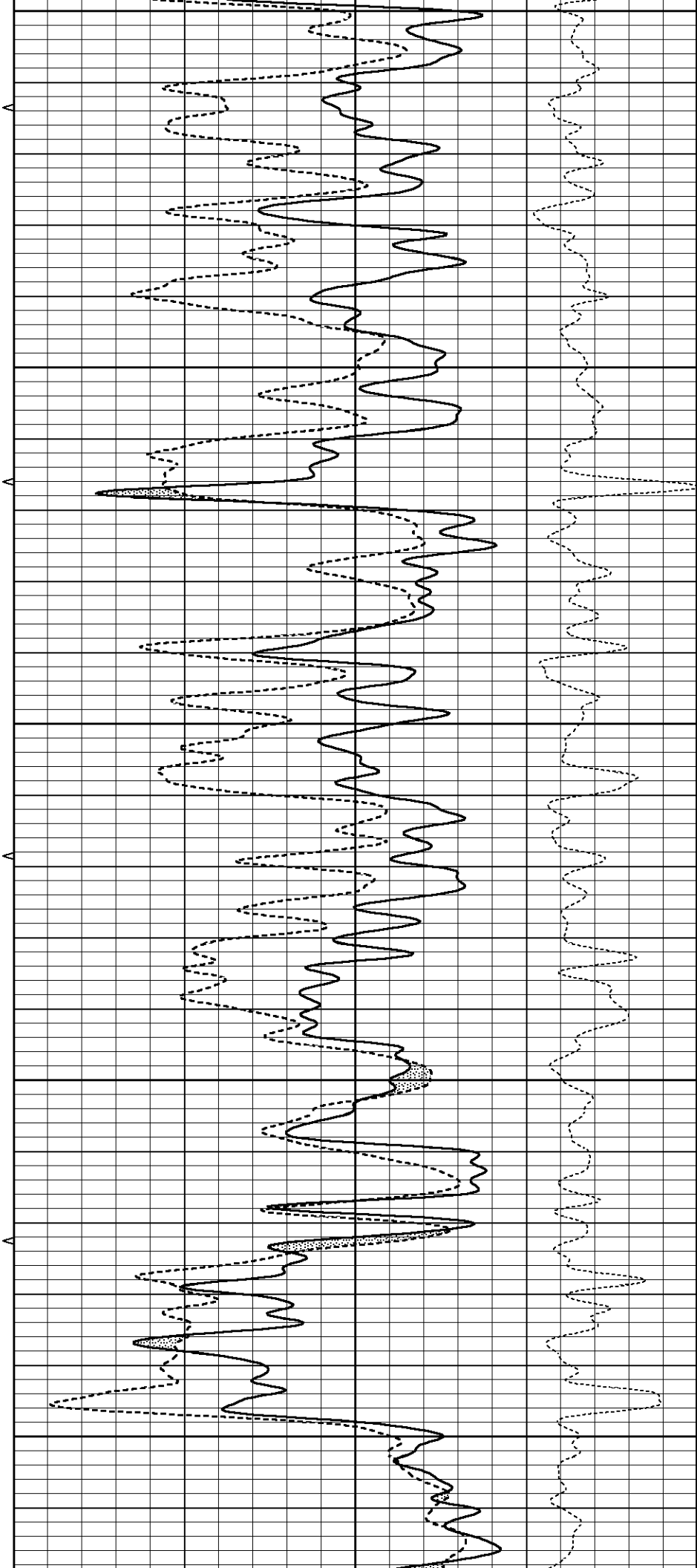
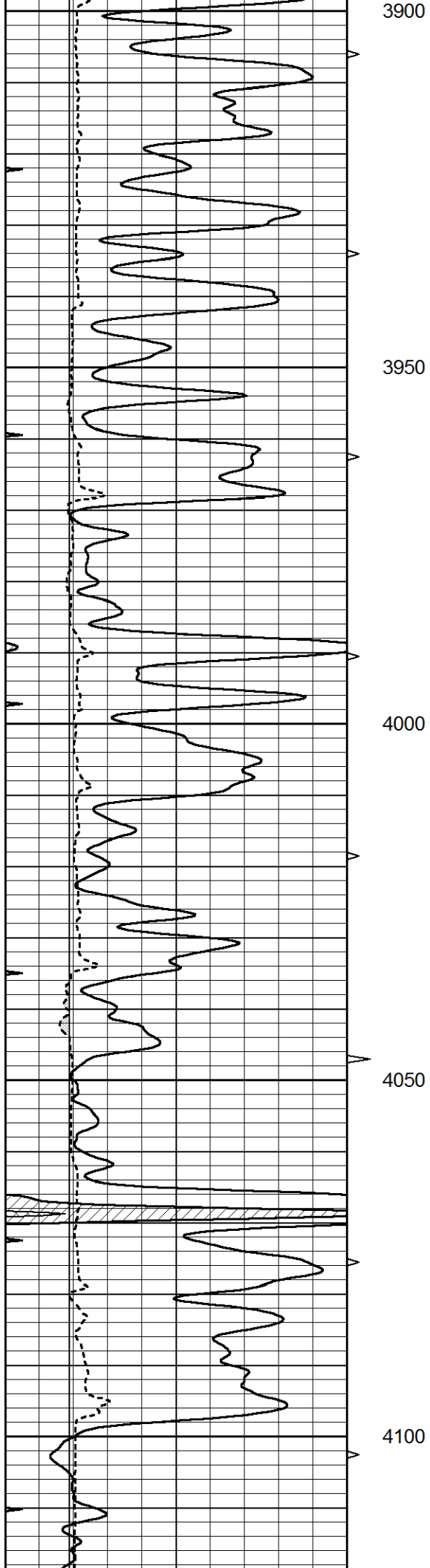
# MAIN SECTION

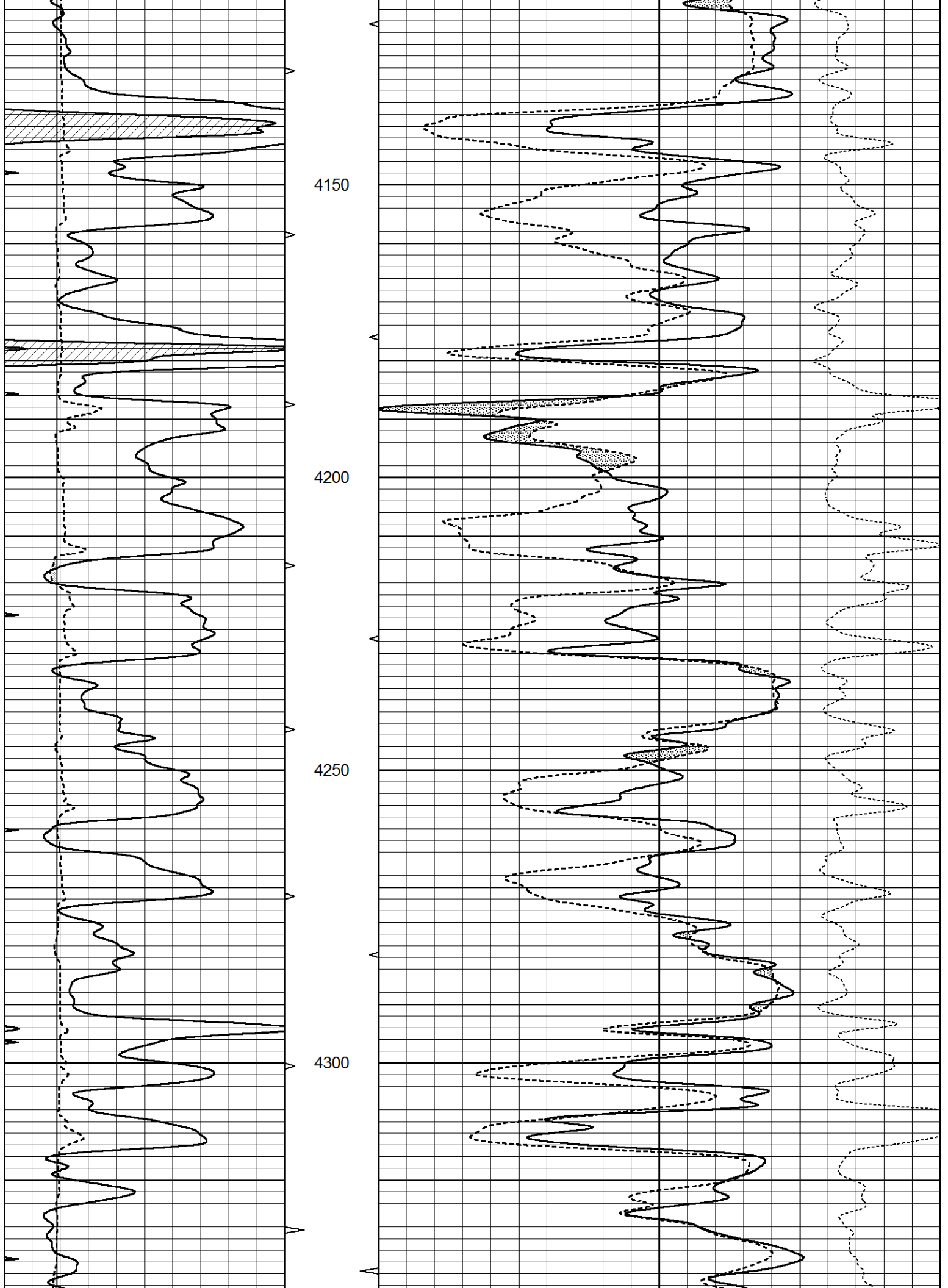
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 Dataset Pathname pass3.1M  
 Presentation Format den\_neu  
 Dataset Creation Sat Dec 04 21:10:26 2021  
 Charted by Depth in Feet scaled 1:240

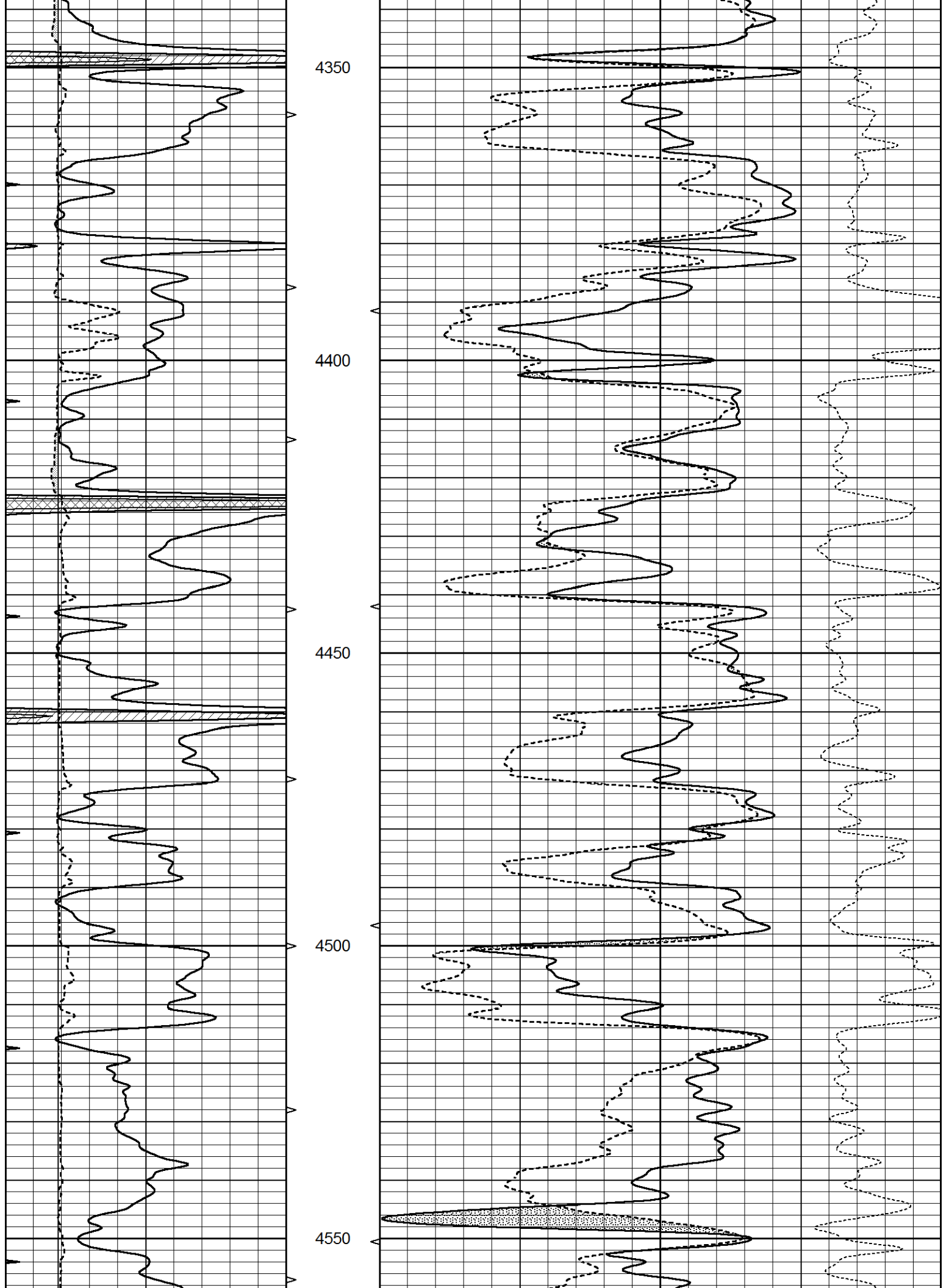
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10	
6	DCAL (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25	CORRECTION (g/cc)	0.25
			0 (ft3)	10			



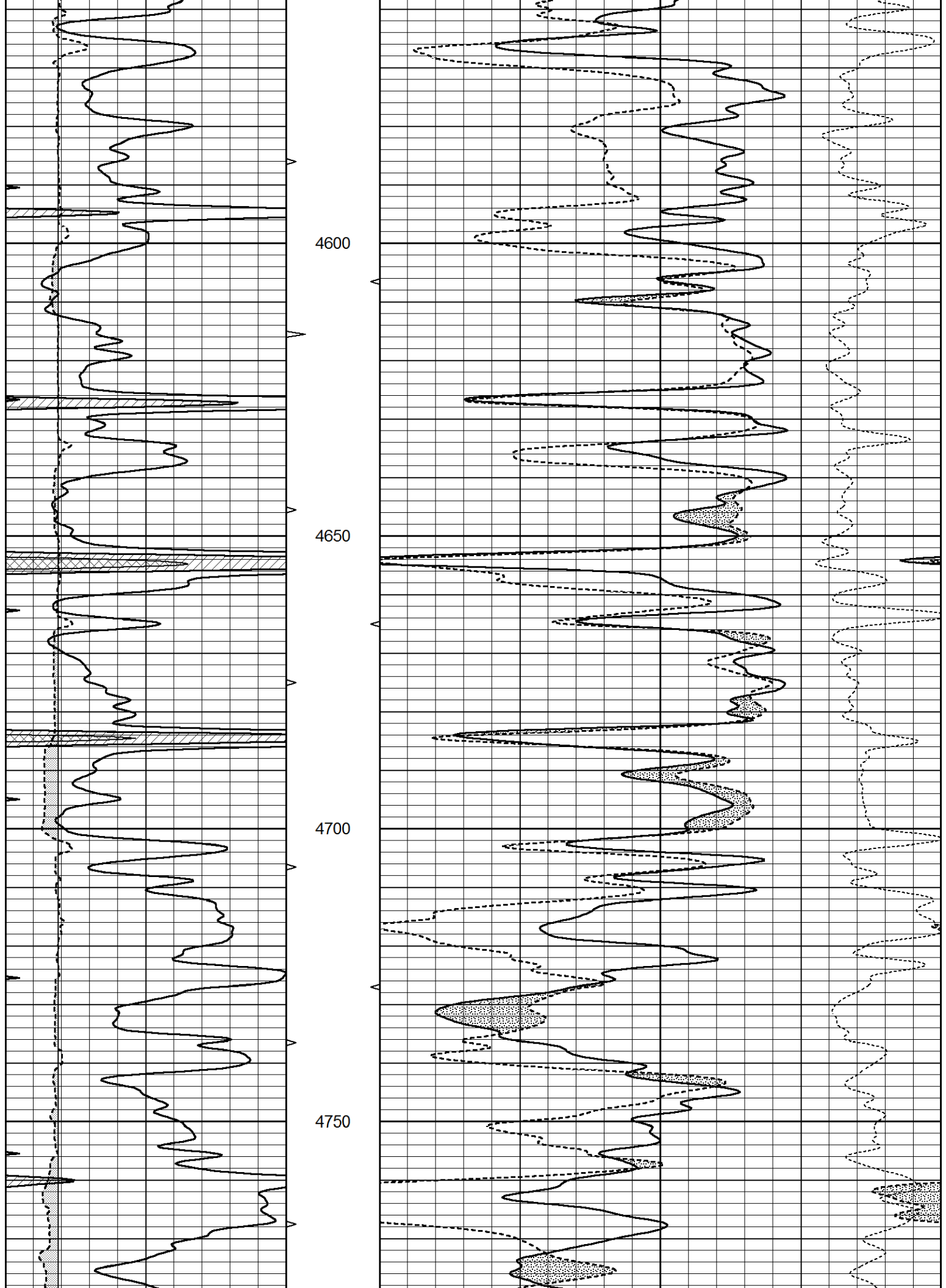


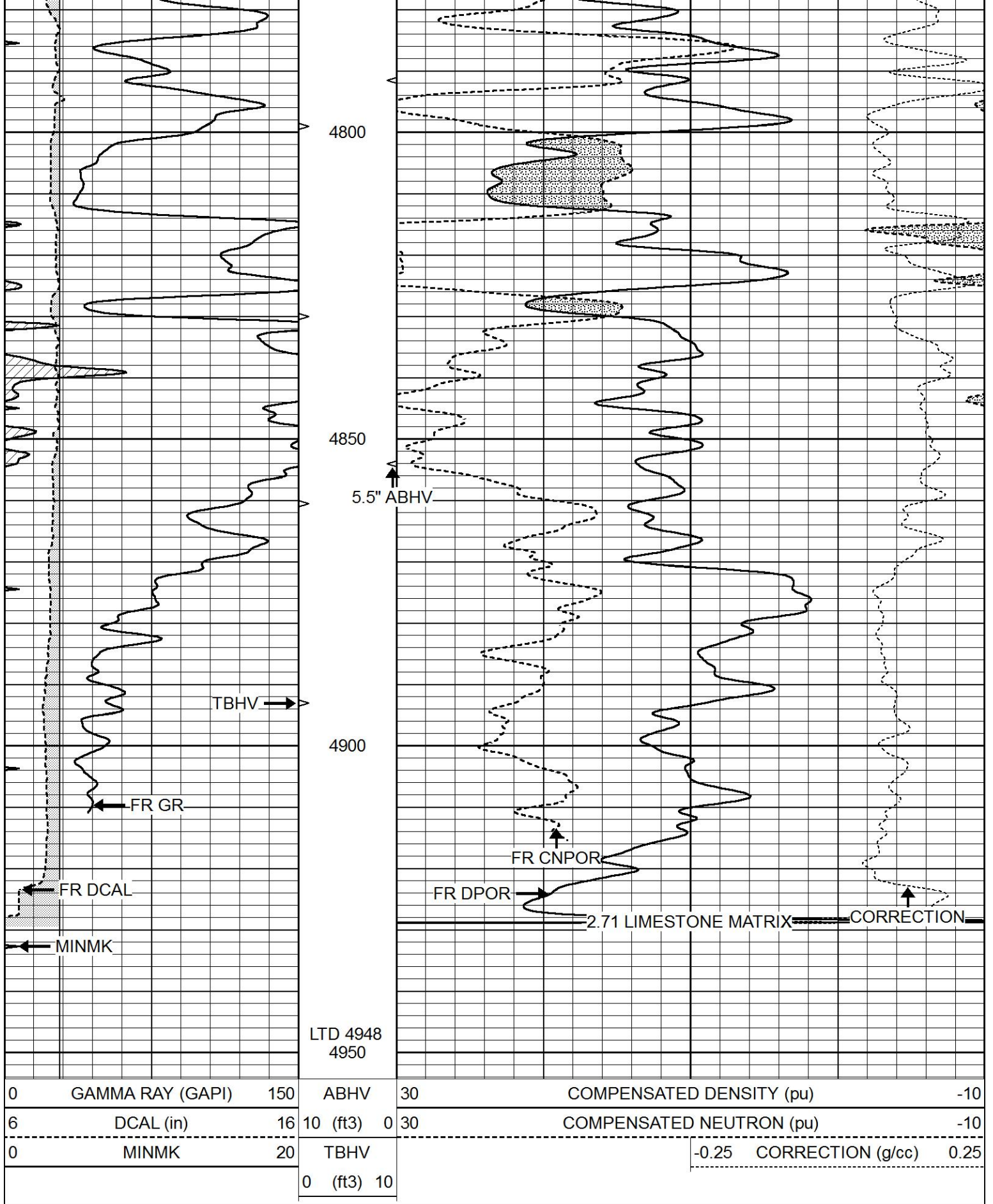










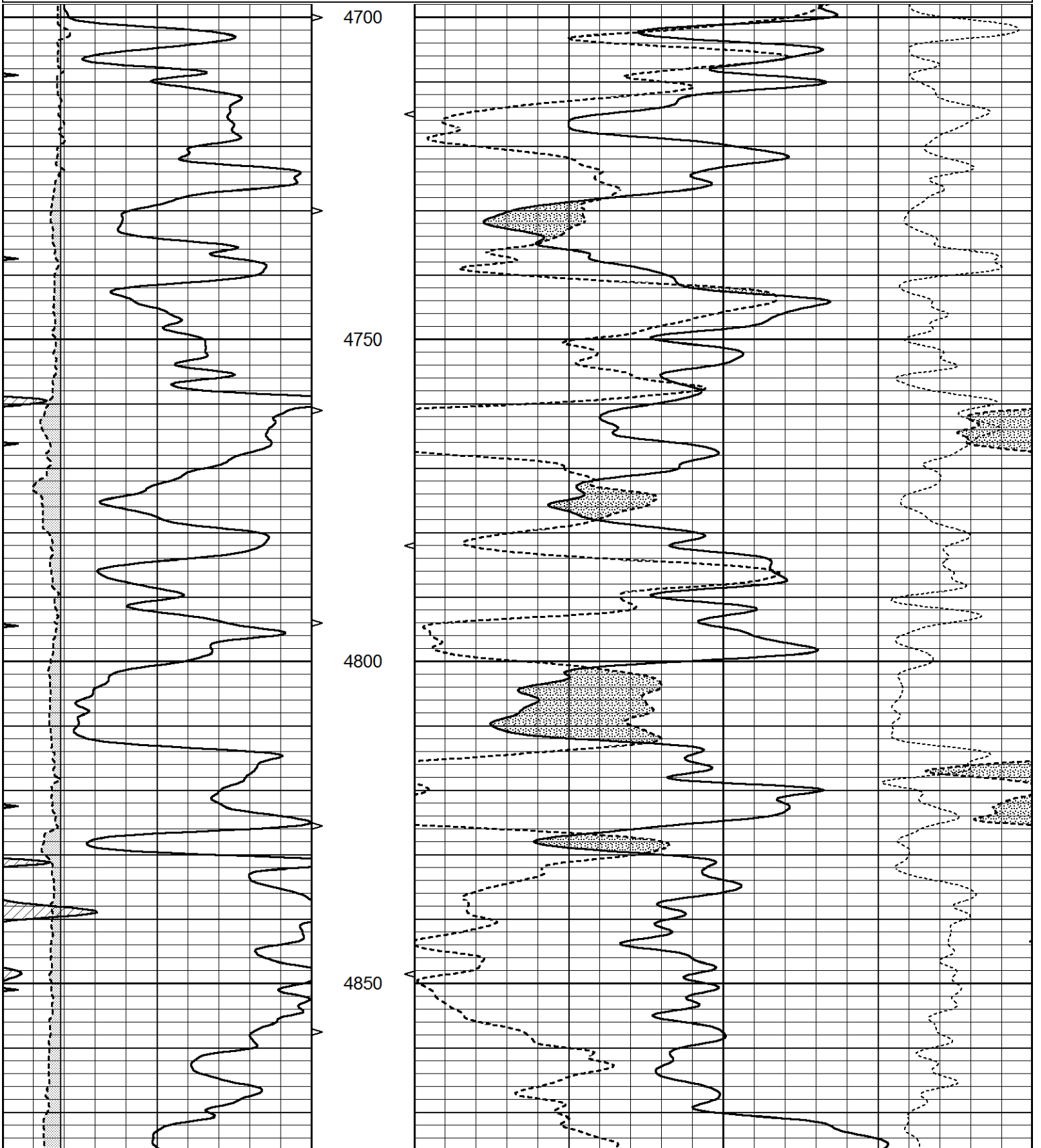


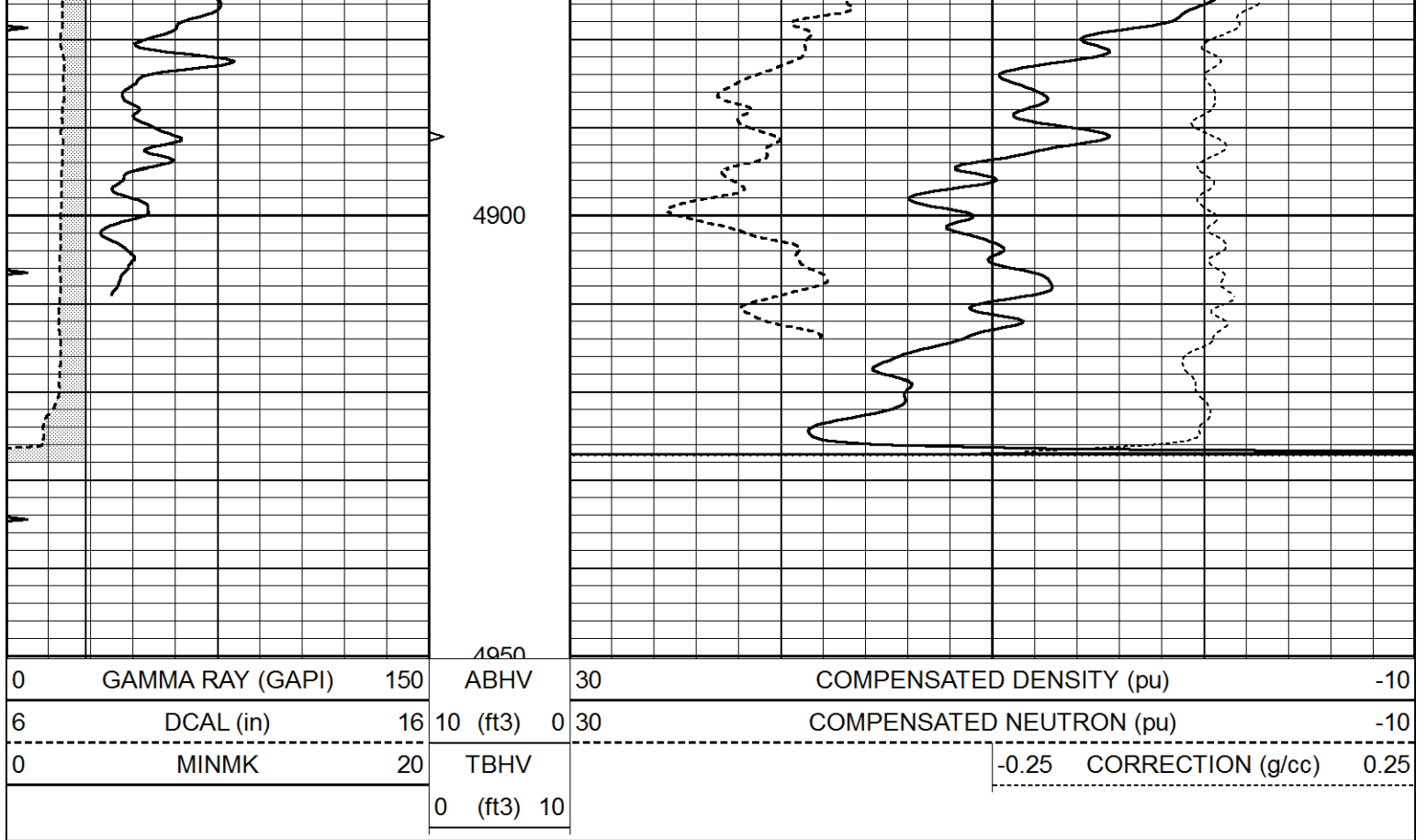
REPEAT SECTION



Database File 5840ddn.db  
 Dataset Pathname pass2.1R  
 Presentation Format den\_neu  
 Dataset Creation Sat Dec 04 21:17:28 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 5840ddn.db  
 Dataset Pathname pass3.1M  
 Dataset Creation Sat Dec 04 21:10:26 2021

### Dual Induction Calibration Report

Serial-Model: PROBE9-DILG  
 Surface Cal Performed: Fri Dec 03 10:55:19 2021  
 Downhole Cal Performed: Wed Mar 11 11:31:19 2020  
 After Survey Verification Performed: Wed Mar 11 11:31:22 2020

#### Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	720.000	-8.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	720.000	-18.000
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: 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					
	Background	Magnesium	Aluminum	Aluminum+Fe			
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					
	Background	Magnesium	Aluminum	Aluminum+Fe			
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 Sep 03 05:25:49 2021		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.2800	GAPI/cps	