



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
LOG**

Company	RITCHIE EXPLORATION, INC.		
Well	#1X BIGGS 21 D		
Field	WILDCAT		
County	PAWNEE	State	KANSAS
Location:	API # : 15-145-21759-0000 1978' FSL & 360' FEL		Other Services DIL/SON
SEC 21 TWP 21S RGE 18W		Elevation	
Permanent Datum	GROUND LEVEL	Elevation	2090
Log Measured From	KELLY BUSHING 9' A.G.L.		
Drilling Measured From	KELLY BUSHING		
Date	4/15/14		
Run Number	ONE		
Depth Driller	4550		
Depth Logger	4551		
Bottom Logged Interval	4527		
Top Log Interval	3400	2250-1900	
Casing Driller	8 5/8 @ 1175'		
Casing Logger	1175		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 9700	
Density / Viscosity	9.4/49		
pH / Fluid Loss	8.5/7.2		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.55 @ 82F		
Rmf @ Meas. Temp	.41 @ 82F		
Rmc @ Meas. Temp	.66 @ 82F		
Source of Rmf / Rmc	MEASURED		
Rim @ BHT	.37 @ 120F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	120F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	ADAM ELDANI		

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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

NABORS COMPLETION & PRODUCTION SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: RUSH CENTER, KS. - SOUTH TO THE 183 & 156 HWY INTERSECTION
1 MILE EAST - 1 1/2 NORTH - WEST INTO



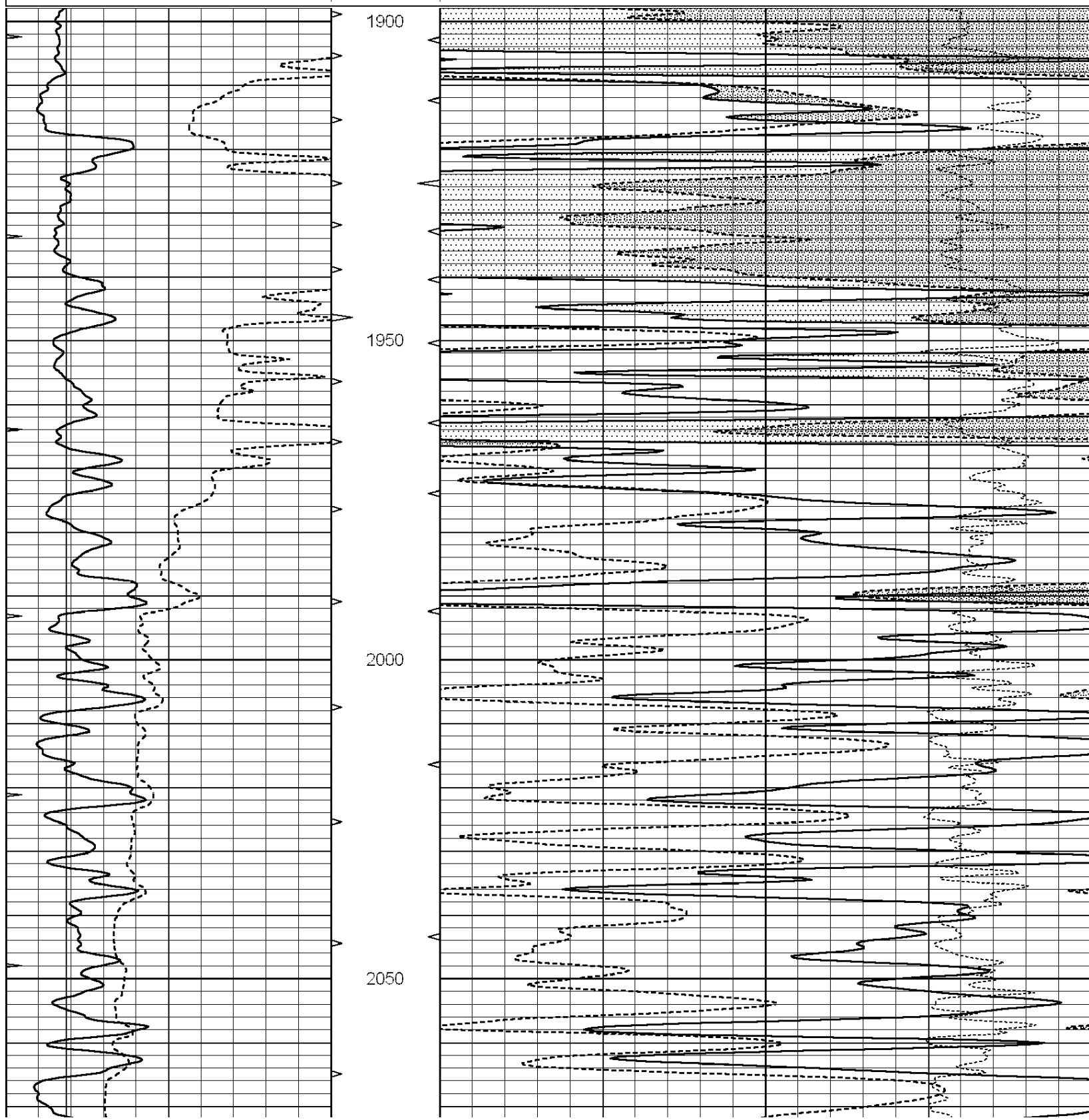
NABORS

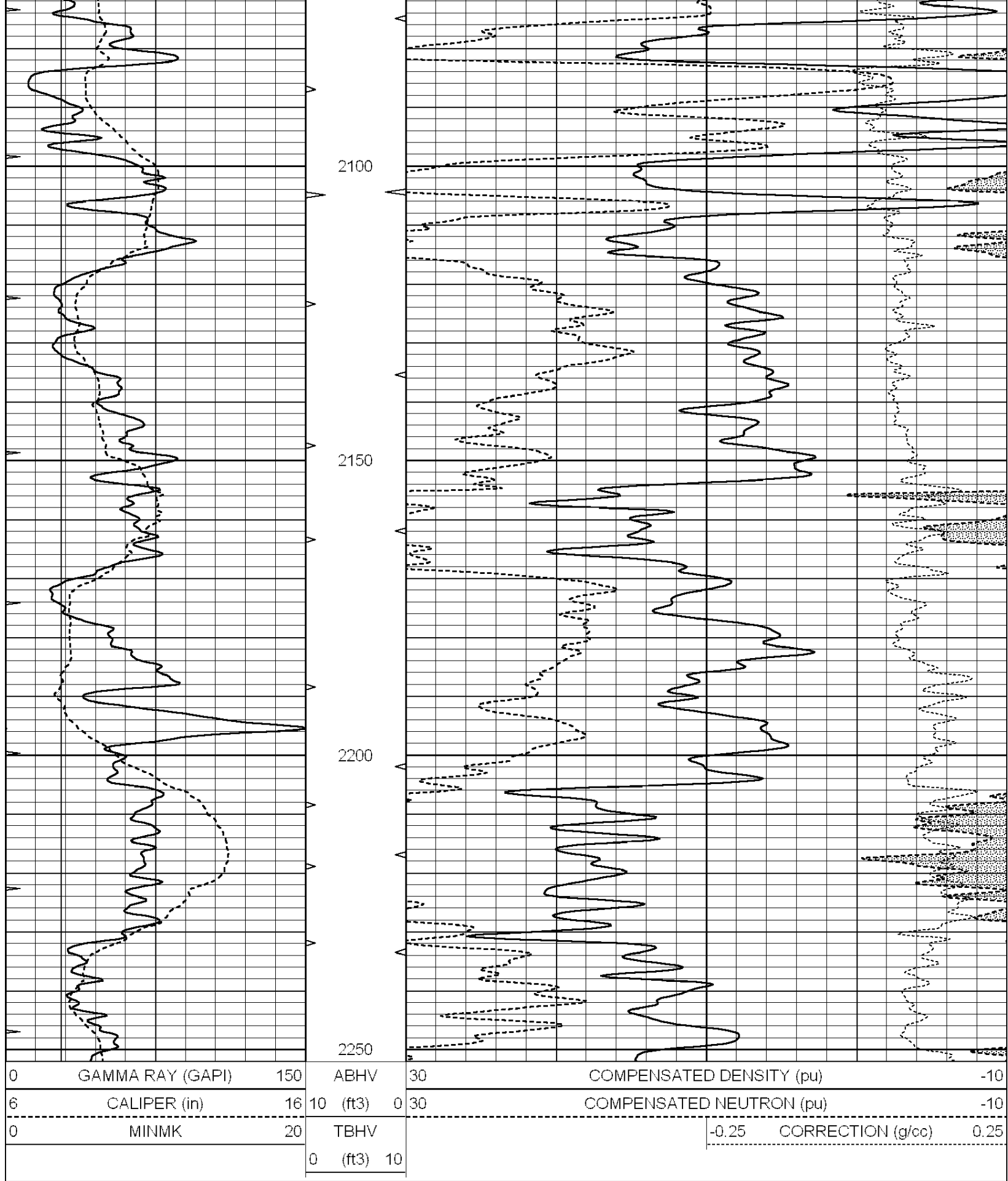
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& PRODUCTION**

UPPER SECTION

Database File: 24137ddn.db
 Dataset Pathname: pass3.1.1
 Presentation Format: _den_neu
 Dataset Creation: Tue Apr 15 22:44:09 2014 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

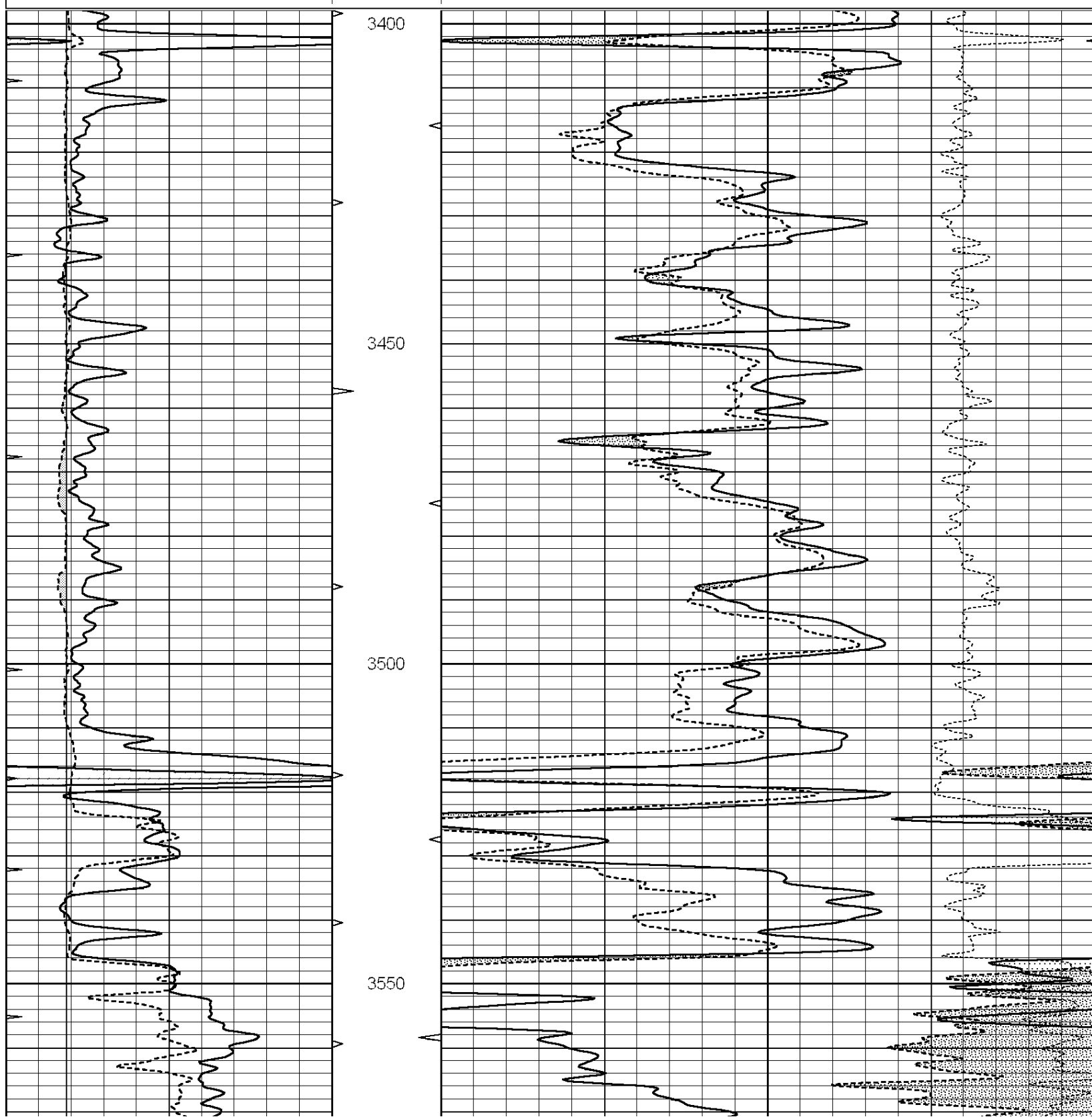
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6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		

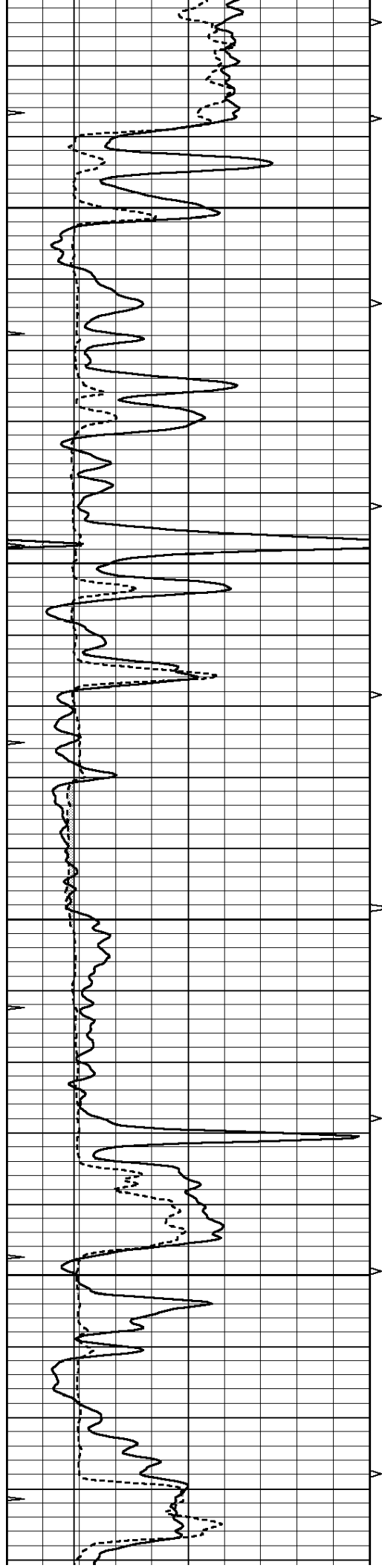




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 Presentation Format: _den_neu
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 Charted by: Depth in Feet scaled 1:240

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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		



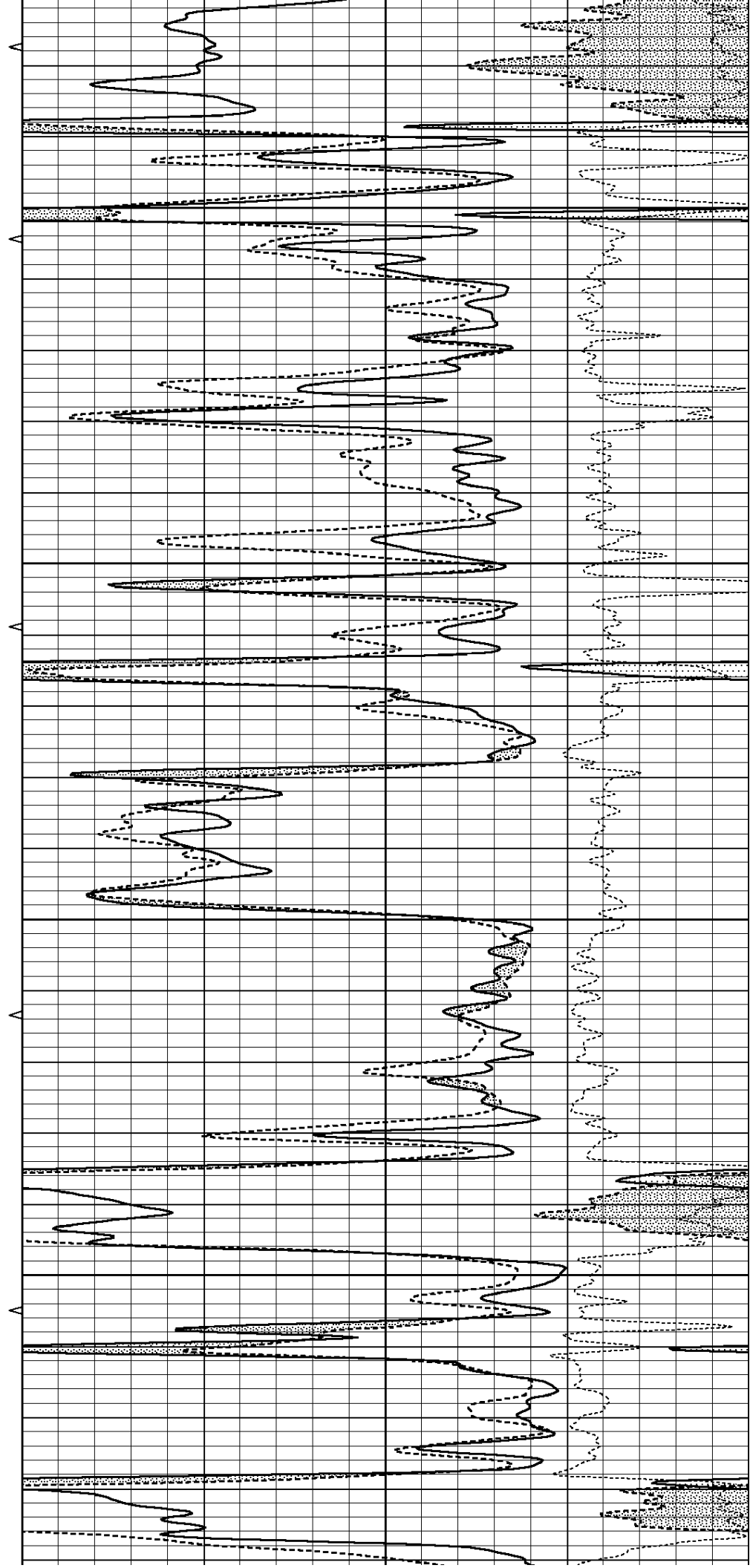


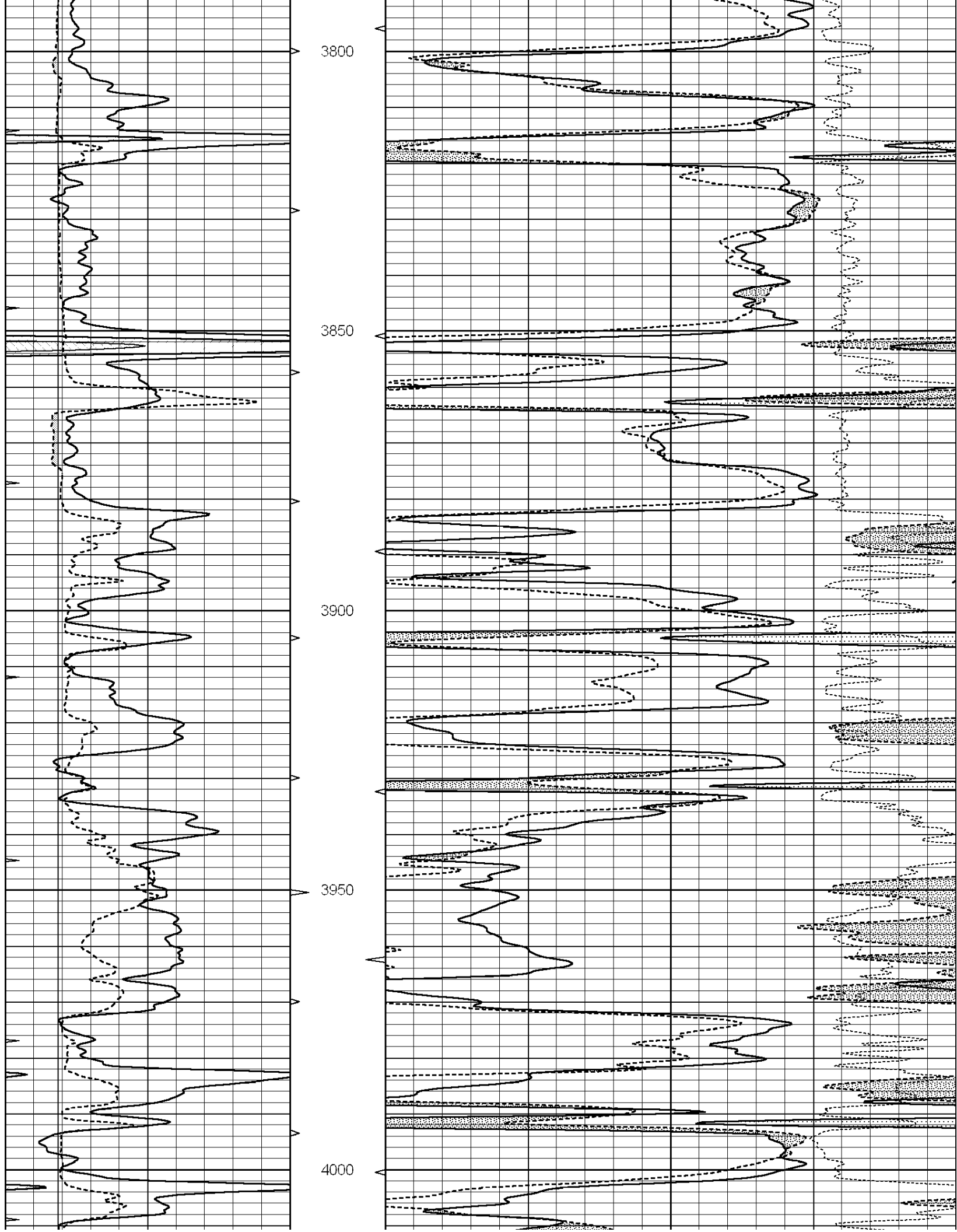
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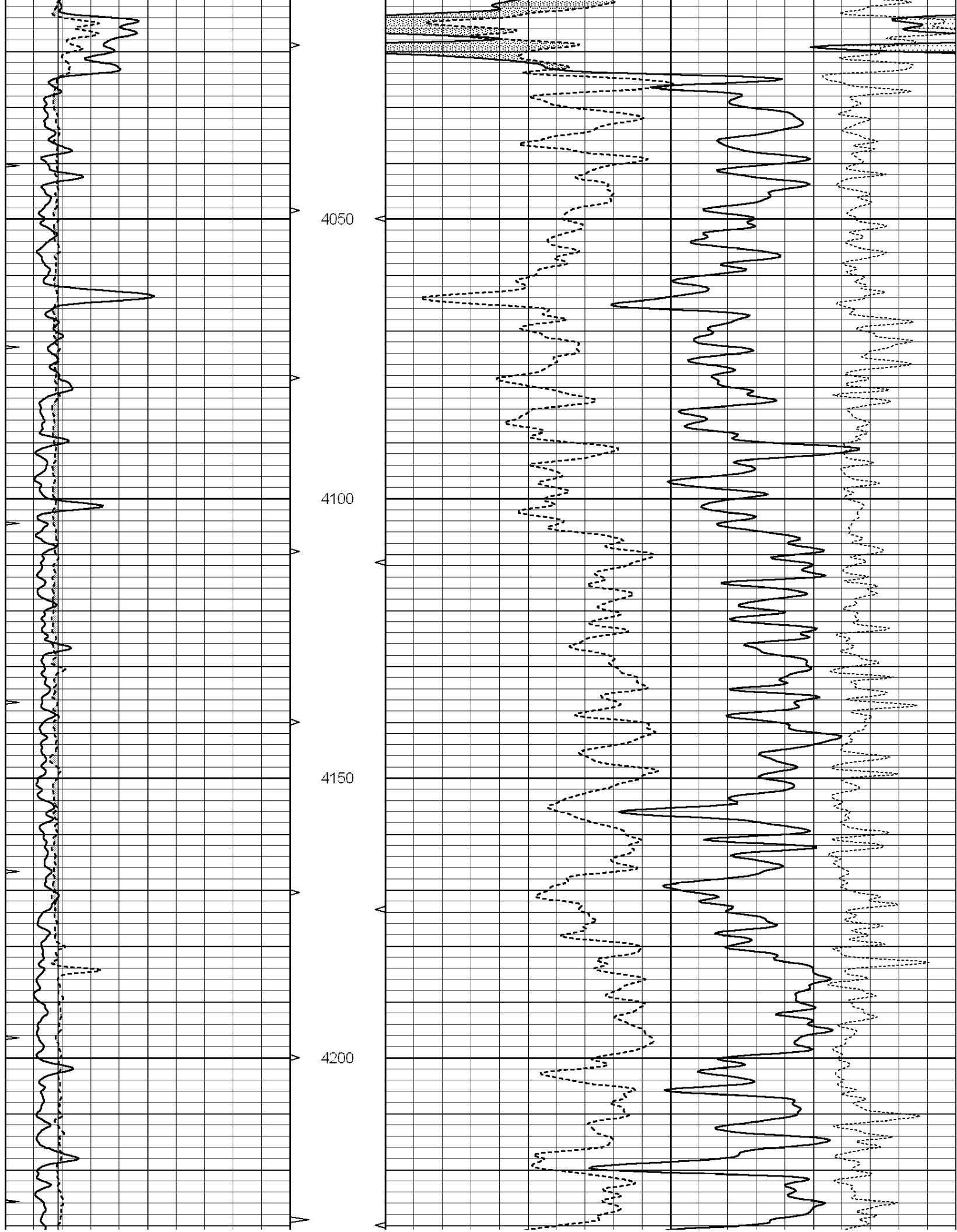
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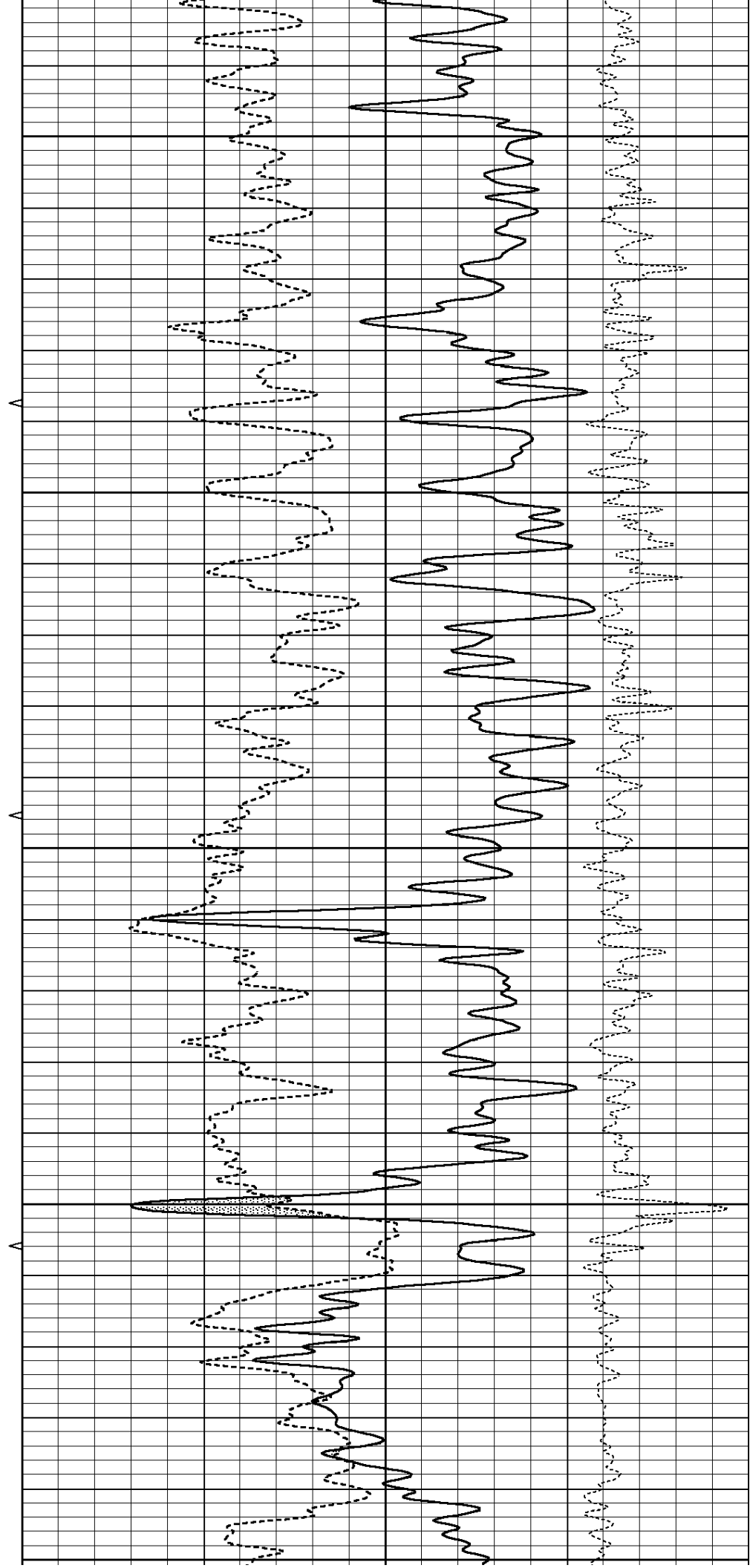
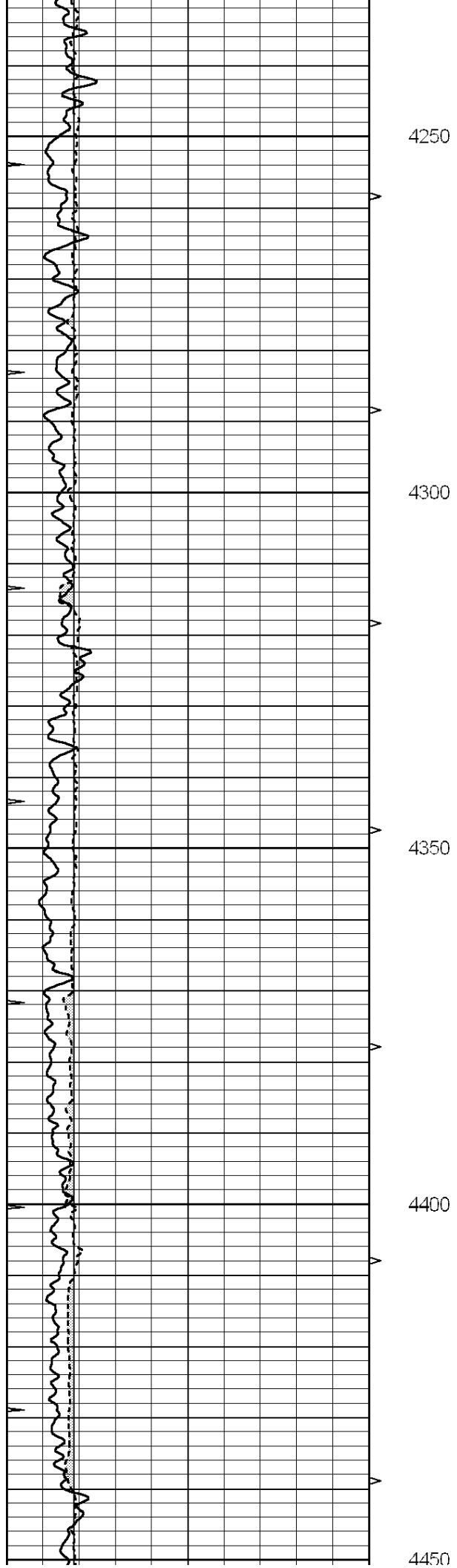
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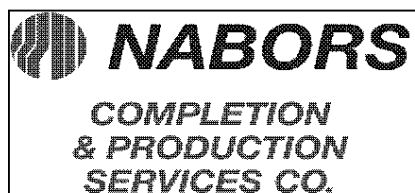
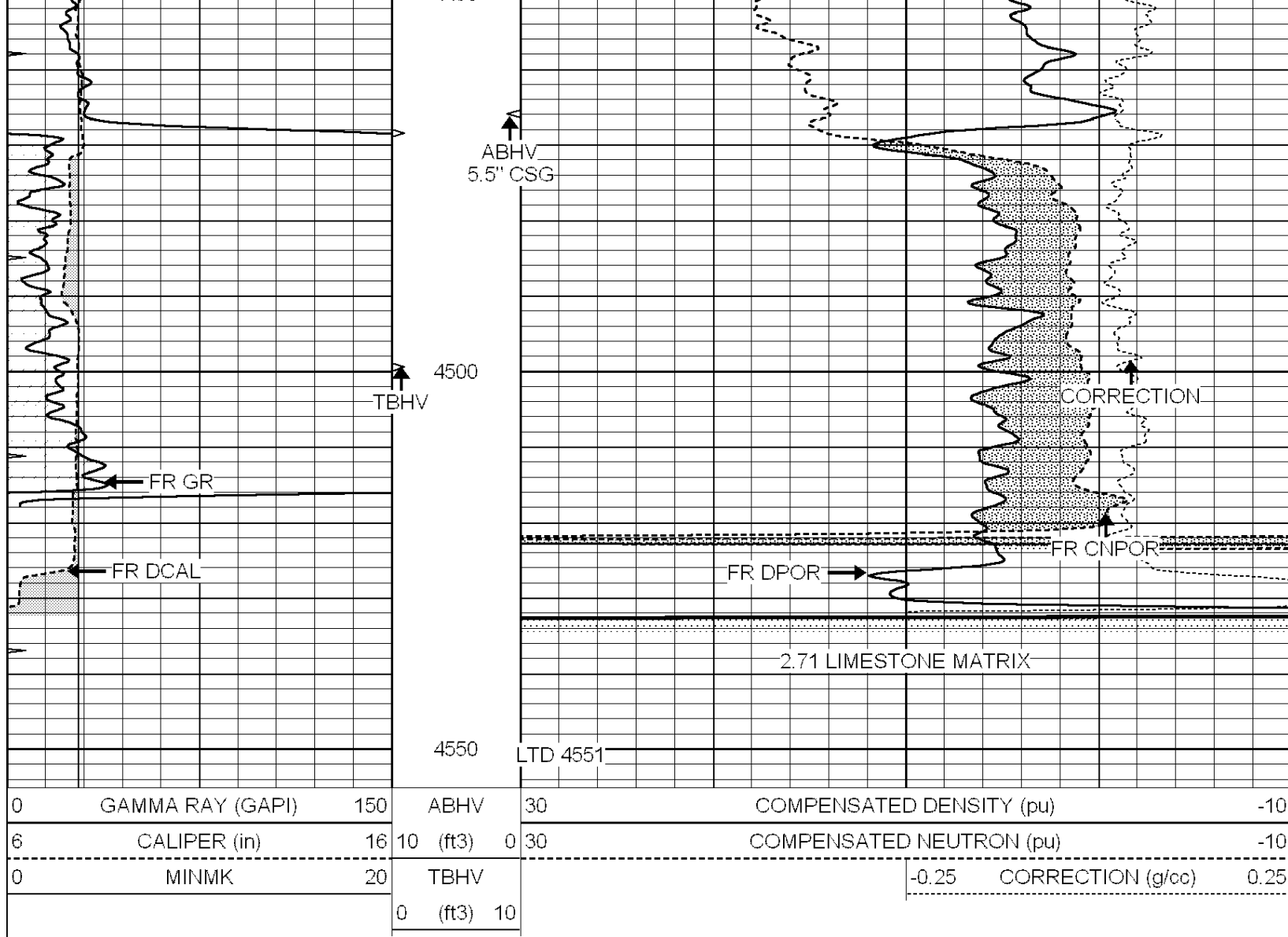
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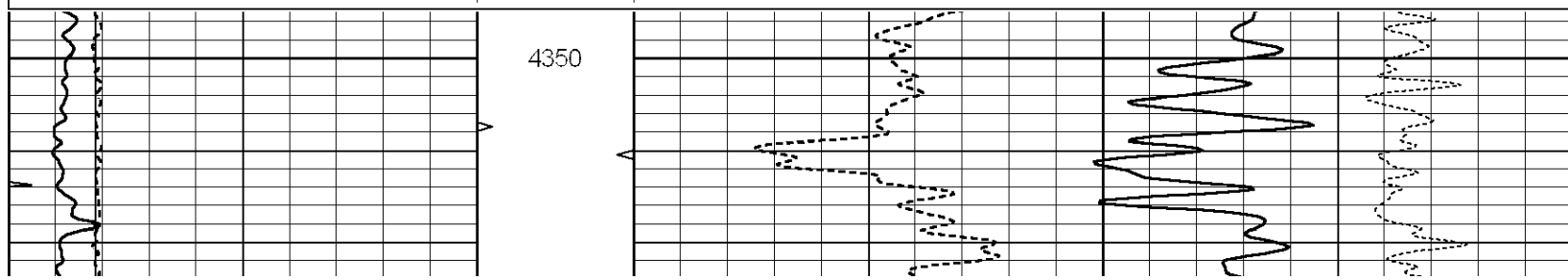


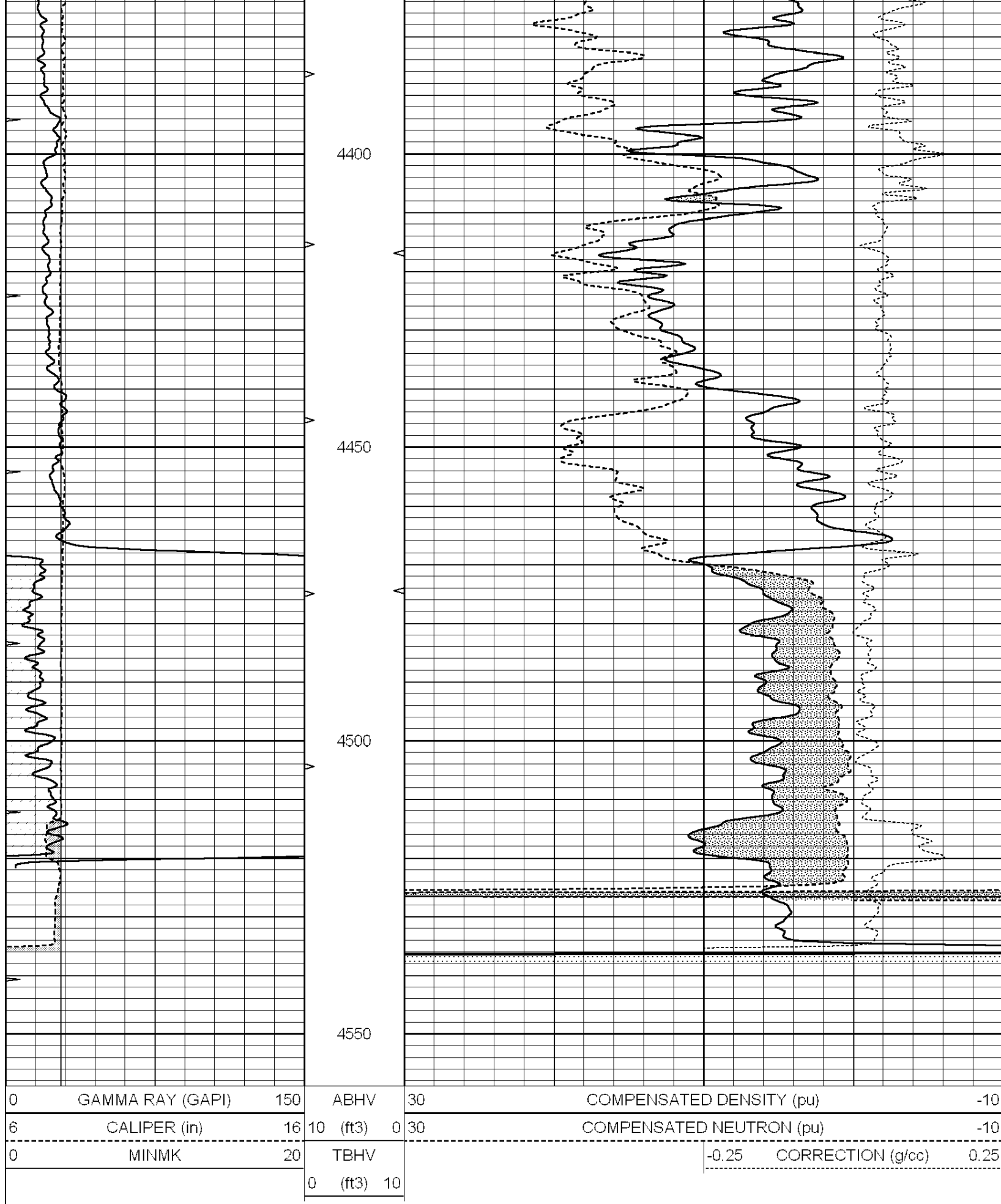


REPEAT SECTION

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 Presentation Format: _den_neu
 Dataset Creation: Tue Apr 15 22:07:57 2014 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: 24137ddn.db

Date of Birth: 11/11/2011

Dual Induction Calibration Report								
Serial-Model: Performed:			DIL3-GEAR Tue Apr 01 19:32:51 2014					
Readings			References			Results		
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	500.000	5.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	540.000	-2.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	560.000	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	540.000	-4.000

Compensated Density Calibration Report					
Serial-Model:			GEAR1-GEARHART		
Source / Verifier:			147 / 147		
Master Calibration Performed:			Tue Apr 01 19:31:33 2014		
Master Calibration					
	Density		Far Detector		Near Detector
Magnesium	1.710	g/cc	1211.27	625.92	cps
Aluminum	2.590	g/cc	267.11	413.26	cps
Spine Angle = 74.64			Density/Spine Ratio = 0.561		
	Size		Reading		
Small Ring	8.20	in	5.18	V	
Large Ring	14.00	in	8.18	V	

Compensated Neutron Calibration Report				
		Serial Number:	080620	
		Tool Model:	Probe	
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:	7	
Tool Model:	Probe1	
Performed:	Tue Apr 01 19:11:08 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps

Sensitivity:

0.4500

GAPI/cps