



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY/NEUTRON
LOG**

Company	RAYMOND OIL COMPANY		
Well	#3 MICHAELIS		
Field			
County	LOGAN	State	KANSAS
Location:	AP1 # : 15-109-21322-0000		Other Services DIL/MEL
2238' FNL & 835' FWL			
SEC 3 TWP 14S RGE 32W			
Permanent Datum	GROUND LEVEL		Elevation 2873.5
Log Measured From	KELLY BUSHING 11.5' A.G.L.		K.B. 2885
Drilling Measured From	KELLY BUSHING		D.F. 2883
			G.L. 2873.5
Date	8/12/14		
Run Number	ONE		
Depth Driller	4700		
Depth Logger	4700		
Bottom Logged Interval	4676		
Top Log Interval	3400		
Casing Driller	8 5/8" @ 265		
Casing Logger	260		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 6800 PPM	
Density / Viscosity	9.467		
pH / Fluid Loss	10.5/10.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.75 @ 98F		
Rmt @ Meas. Temp	.56 @ 98F		
Rmc @ Meas. Temp	.90 @ 98F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	.60 @ 122F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	122F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	KEVIN KESSLER		

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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 NABORS, HAYS, KS. (785) 628-6395
DIRECTIONS:
OAKLEY, KS. - 16 SOUTH - 1 WEST - SOUTH & EAST INTO



NABORS

**COMPLETION
& PRODUCTION**

MAIN SECTION

Database File:

25850ddn.db

Dataset Pathname:

pass3.1

Presentation Format:

den_neu

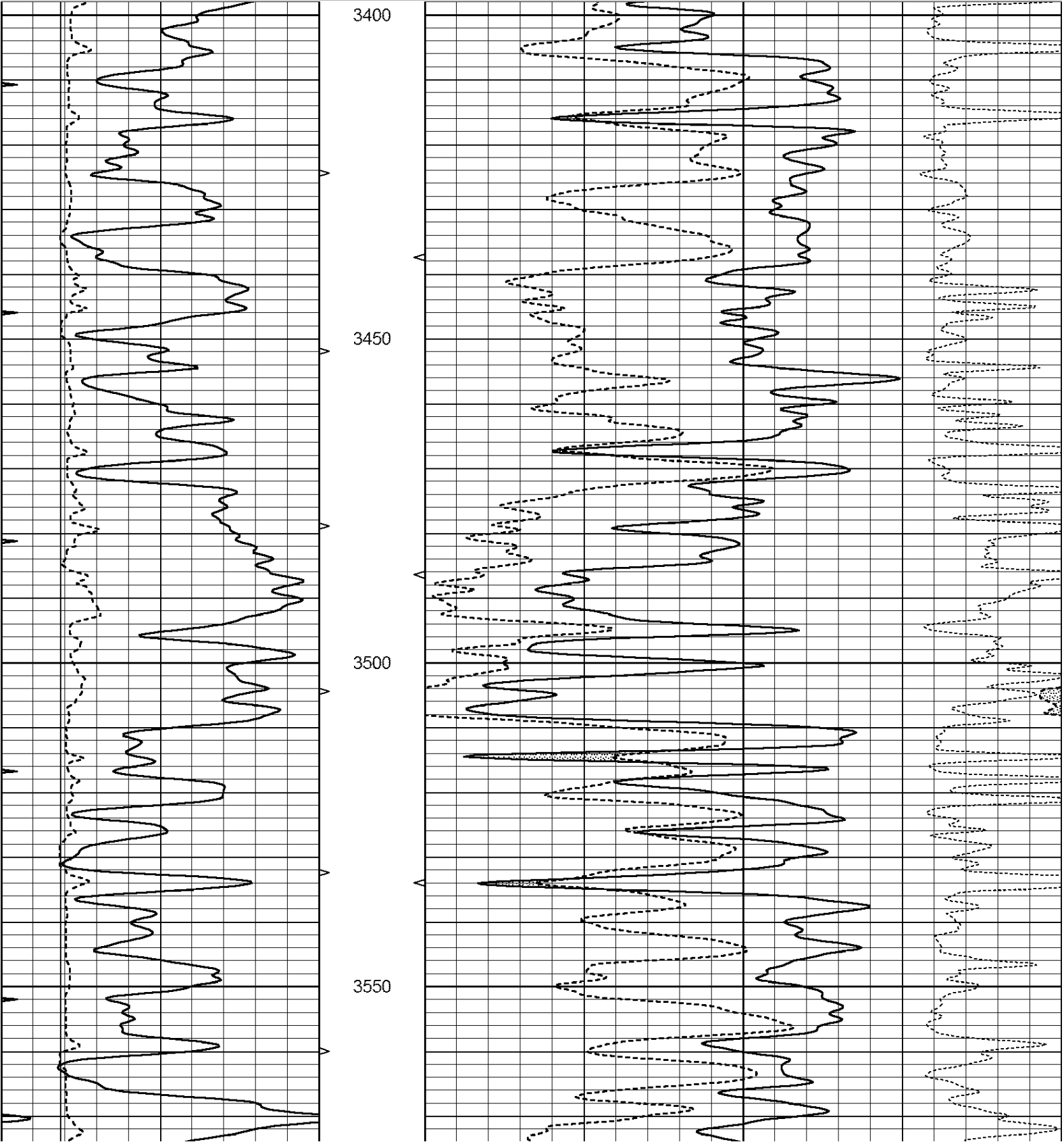
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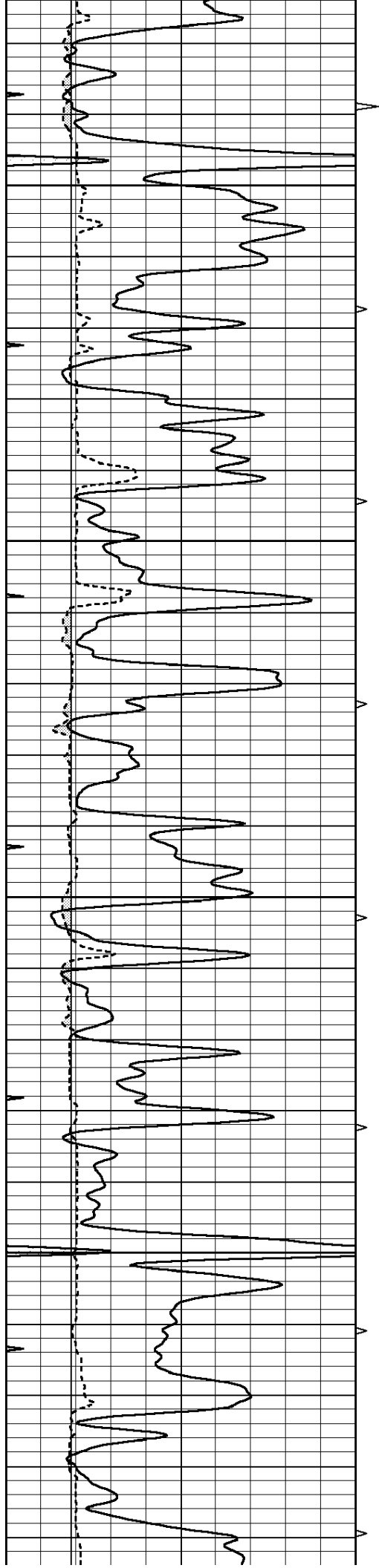
Tue Aug 12 17:44:58 2014

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		



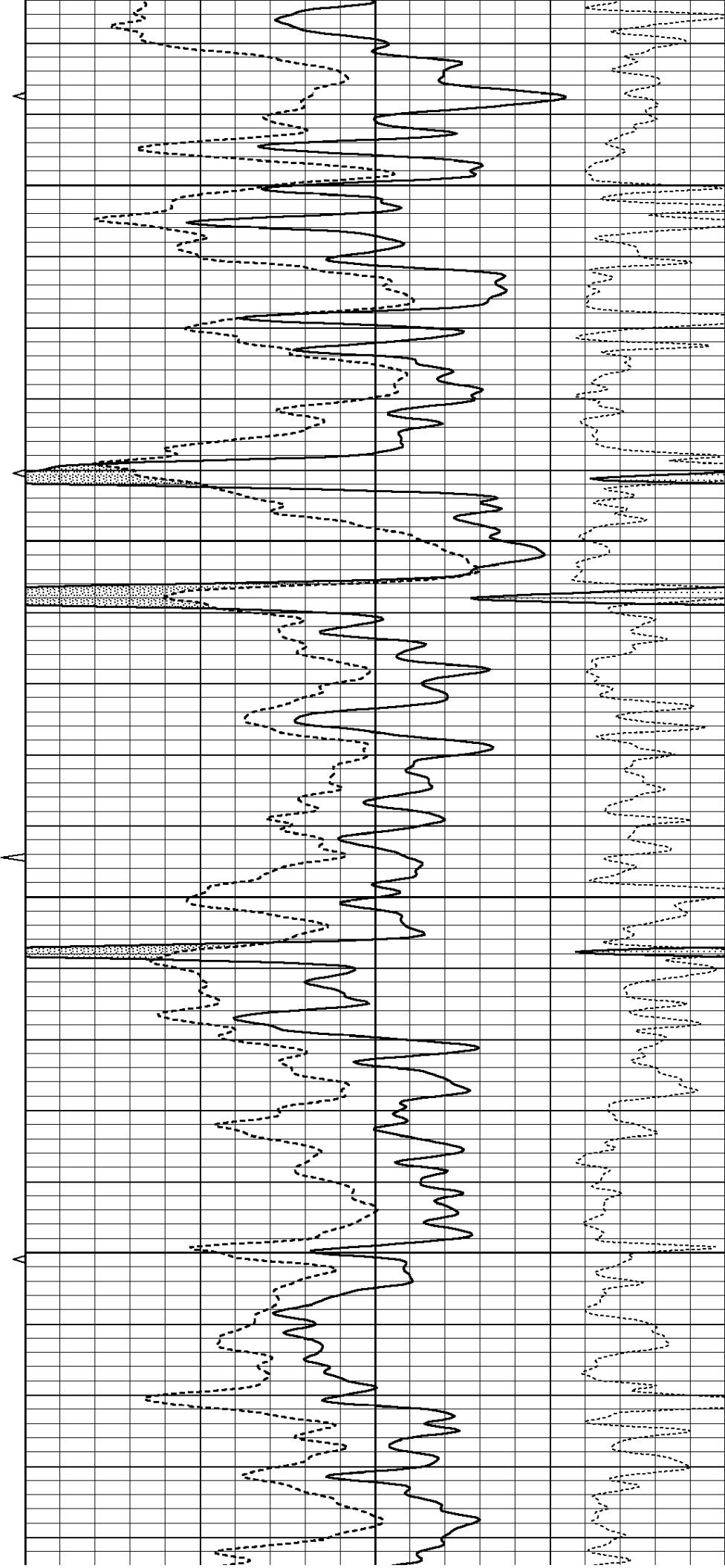


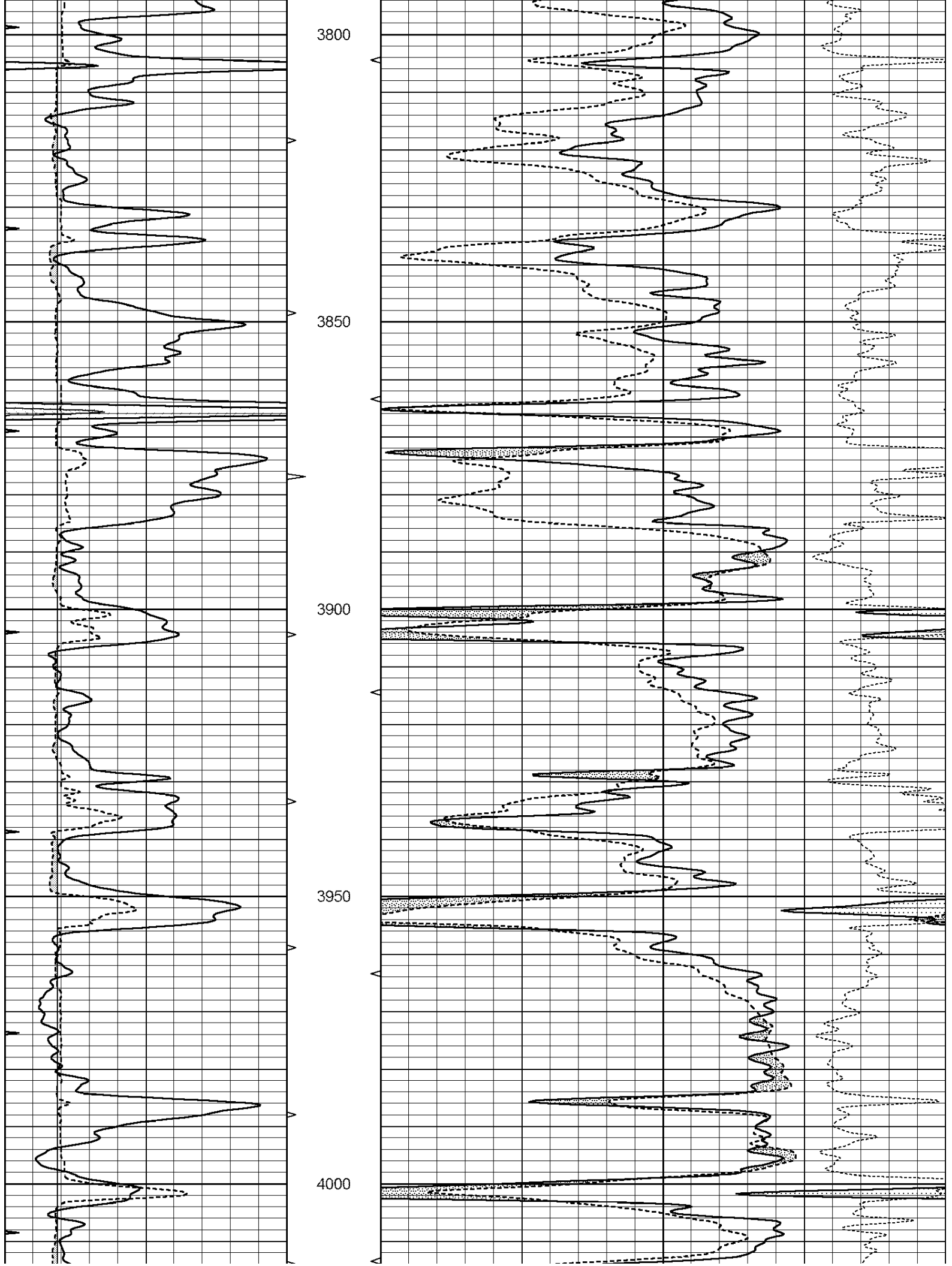
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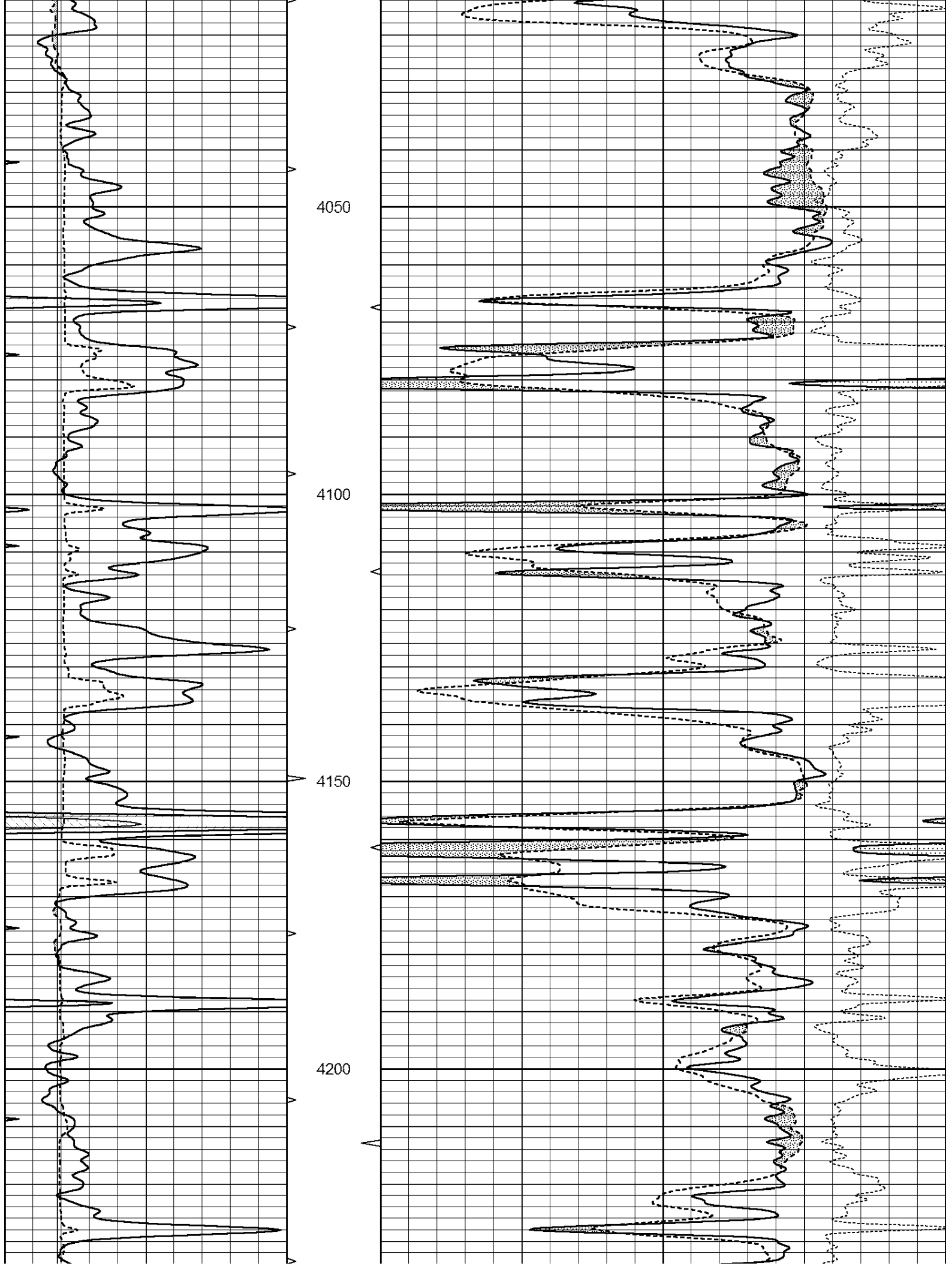
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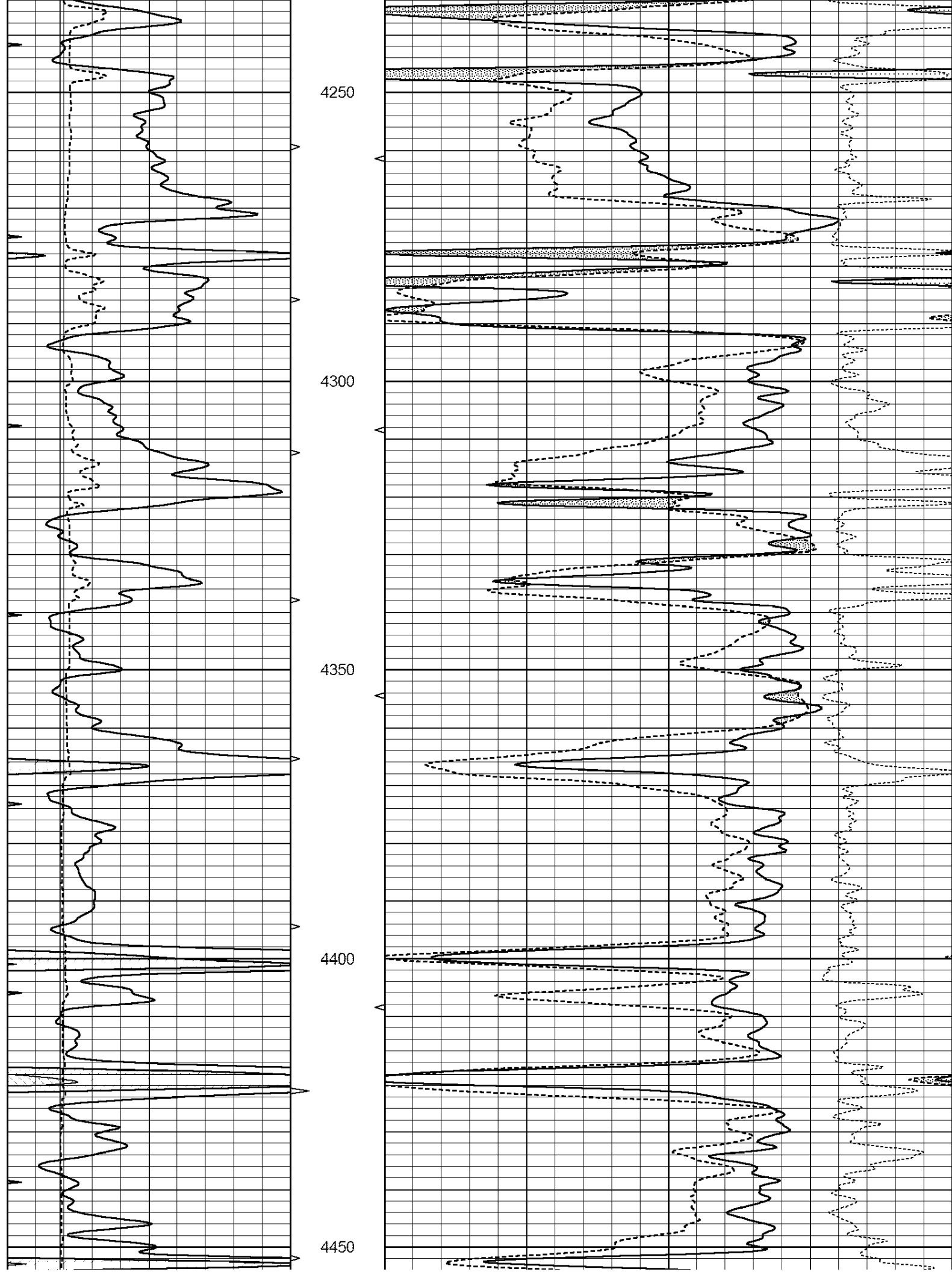
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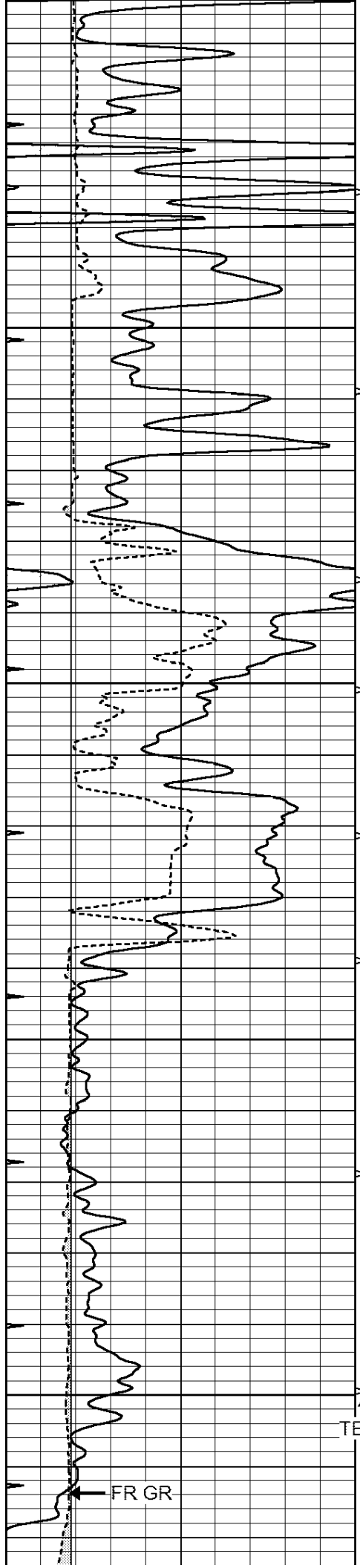
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4500

4550

4600

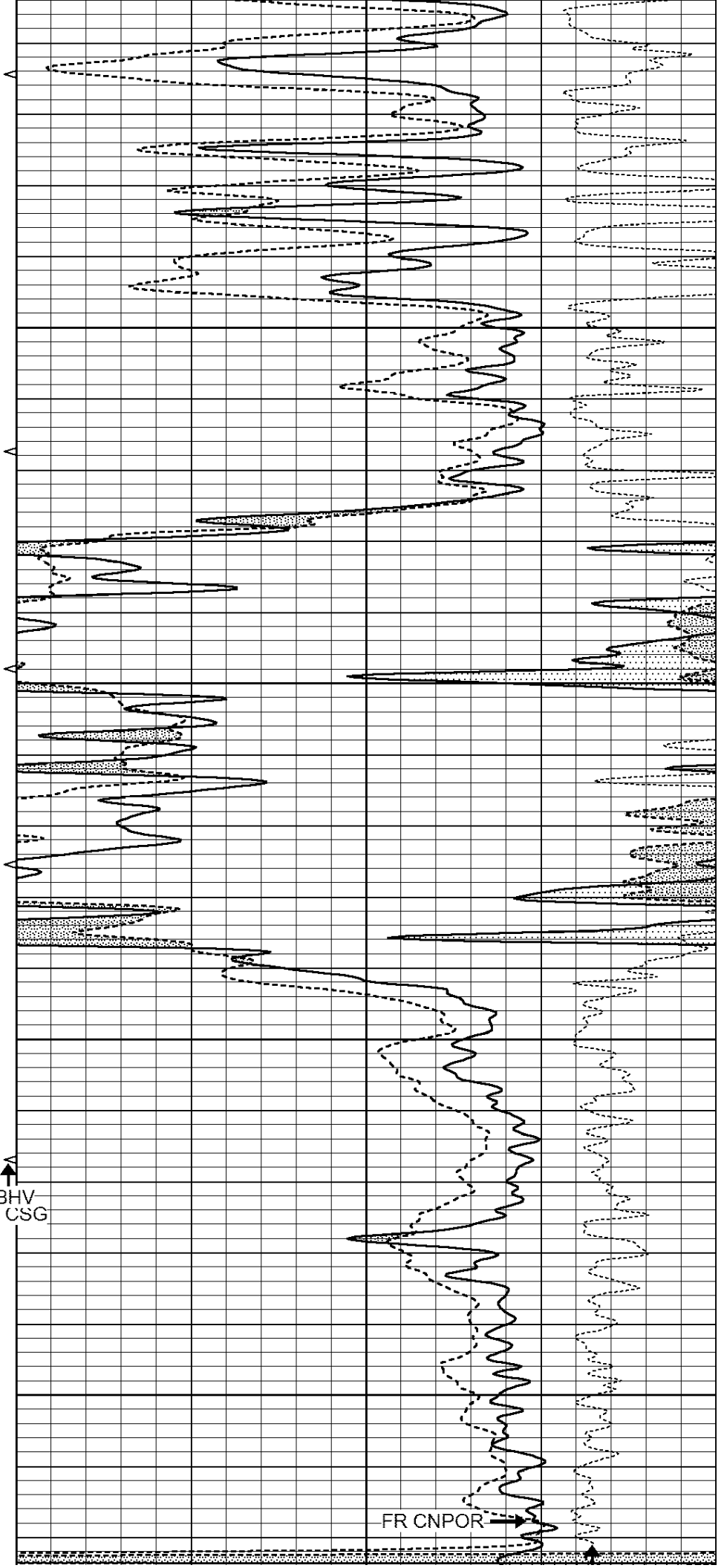
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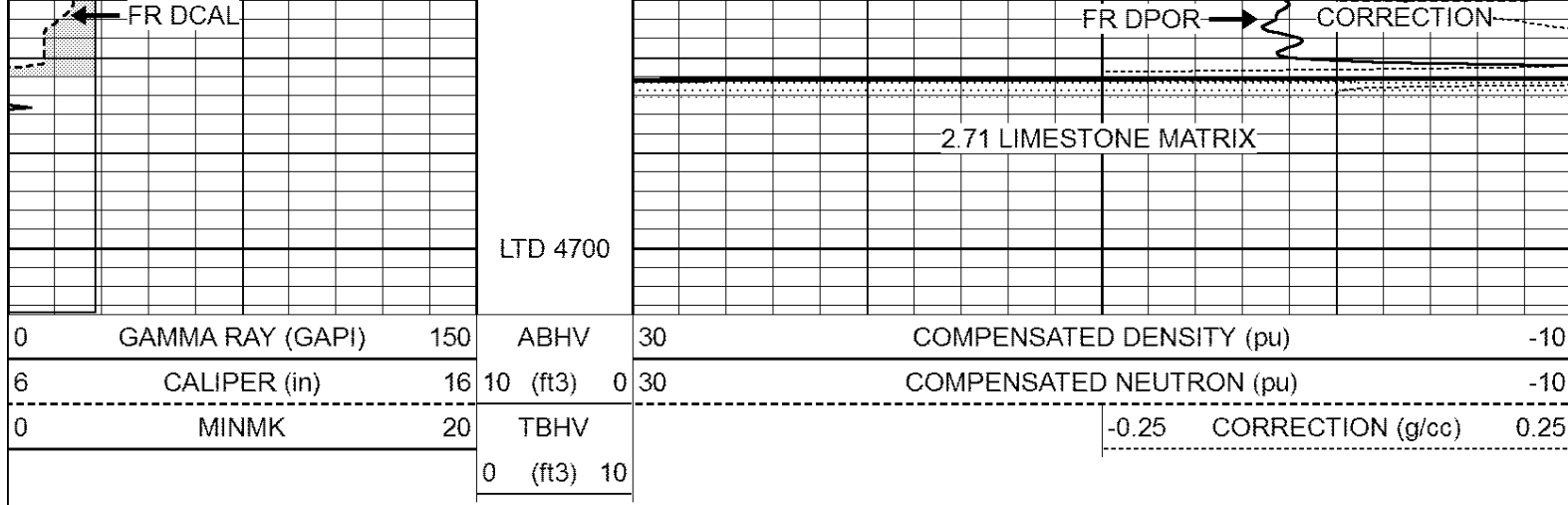
TBHV

FR GR

ABHV
5.5" CSG

FR CNPOR

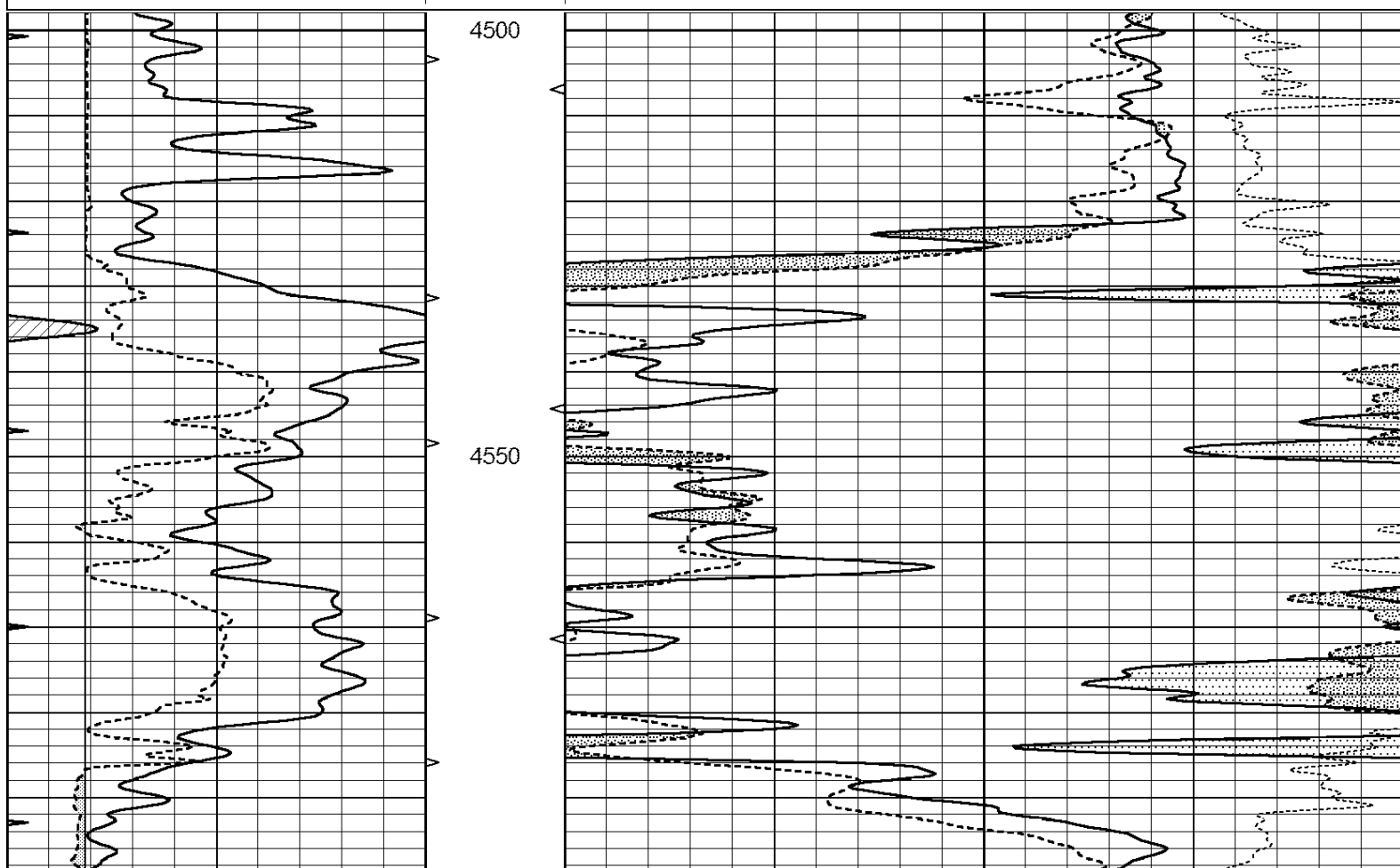


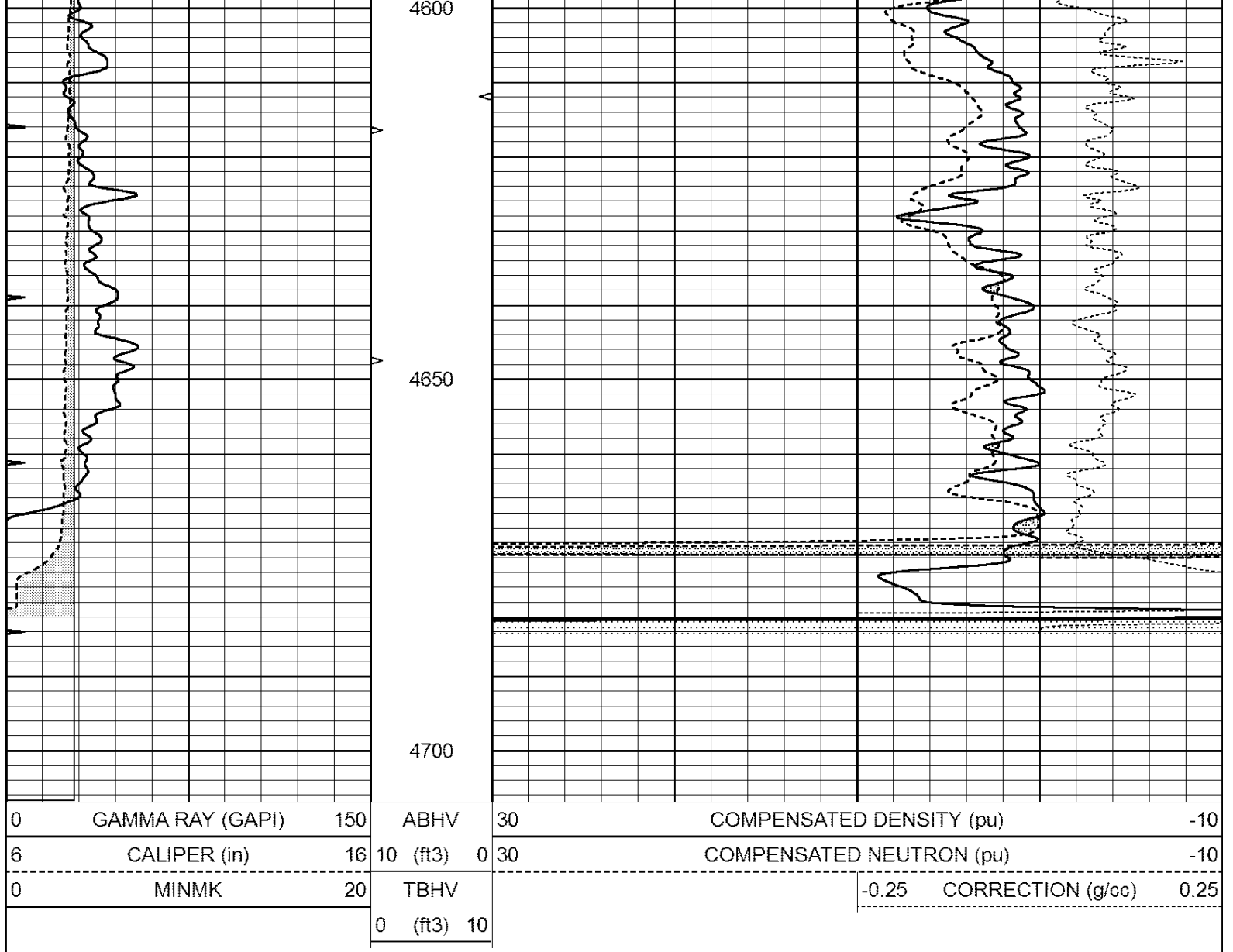


REPEAT SECTION

Database File: 25850ddn.db
 Dataset Pathname: pass2.1
 Presentation Format: den_neu
 Dataset Creation: Tue Aug 12 16:02:51 2014
 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: 25850ddn.db
 Dataset Pathname: pass3.1
 Dataset Creation: Tue Aug 12 17:44:58 2014

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
 Surface Cal Performed: Sun Jul 27 18:19:21 2014
 Downhole Cal Performed: Mon Jul 28 11:08:27 2008
 After Survey Verification Performed: Mon Jul 28 11:08:27 2008

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	630.000	-6.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-16.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration

Readings References Results

Readings			Targets			Results		
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	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		

Compensated Density Calibration Report

Serial-Model:	GEAR3-GEARHART
Source / Verifier:	143 / 143
Master Calibration Performed:	Fri Jan 04 15:48:16 2013
Before Survey Verification Performed:	
After Survey Verification Performed:	

Master Calibration						
	Density			Far Detector		Near Detector
Magnesium	1.710	g/cc		935.36		501.55 cps
Aluminum	2.580	g/cc		209.32		357.01 cps
Spine Angle = 77.21			Density/Spine Ratio = 0.567			
	Size			Reading		
Small Ring	8.00	in		4.29	V	
Large Ring	14.00	in		6.24	V	

Before Survey Verification						
	Target			Measured		
			g/cc			g/cc
			g/cc			g/cc
			g/cc			g/cc

After Survey Verification						
	Target			Measured		
			g/cc			g/cc
			g/cc			g/cc
			g/cc			g/cc

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:		Sun Jul 27 22:13:15 2014		
Calibrator Value:		150.0	GAPI	
Background Reading:		0.0	cps	
Calibrator Reading:		276.0	cps	
Sensitivity:		0.7500	GAPI/cps	