



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

COMPENSATED DENSITY/NEUTRON LOG

Company		DEUTSCH OIL COMPANY	
Well		HOEME TRUST #4-17	
Field		IUKA-CARMI	
County		PRATT	
State		KANSAS	
Location:		APL # : 15-151-22442-0000	
SEC 17 TWP 27S RGE 12W		DIL/MEL	
Permanent Datum		GROUND LEVEL Elevation 1866	
Log Measured From		KELLY BUSHING 7' A.G.L.	
Drilling Measured From		KELLY BUSHING	
Date		11/12/14	
Run Number		ONE	
Depth Driller		4450	
Depth Logger		4452	
Bottom Logged Interval		4428	
Top Log Interval		3400	
Casing Driller		8 5/8" @ 250	
Casing Logger		248	
Bit Size		7 7/8"	
Type Fluid in Hole		CHEMICAL MUD	
Density / Viscosity		9.6/72	
pH / Fluid Loss		10.0/10.0	
Source of Sample		FLOWLINE	
Rm @ Meas. Temp		.45 @ 60F	
Rmt @ Meas. Temp		.33 @ 60F	
Rmc @ Meas. Temp		.54 @ 60F	
Source of Rmt / Rmc		MEASUREMENT	
Rm @ BHT		.22 @ 120F	
Time Circulation Stopped		2 HOURS	
Time Logger on Bottom			
Maximum Recorded Temperature		120F	
Equipment Number		4010	
Location		HAYS, KANSAS	
Recorded By		JASON CAPPELLUCCI	
Witnessed By		KENT DEUTSCH	

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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:
PRATT, KS. - 3 NORTHEAST ON HWY 61 TO THE CHURCH ON NORTH SIDE OF ROAD
1 SOUTH - EAST INTO

Database File:

26404ddn.db

Dataset Pathname:

pass4.1

Presentation Format:

den_neu

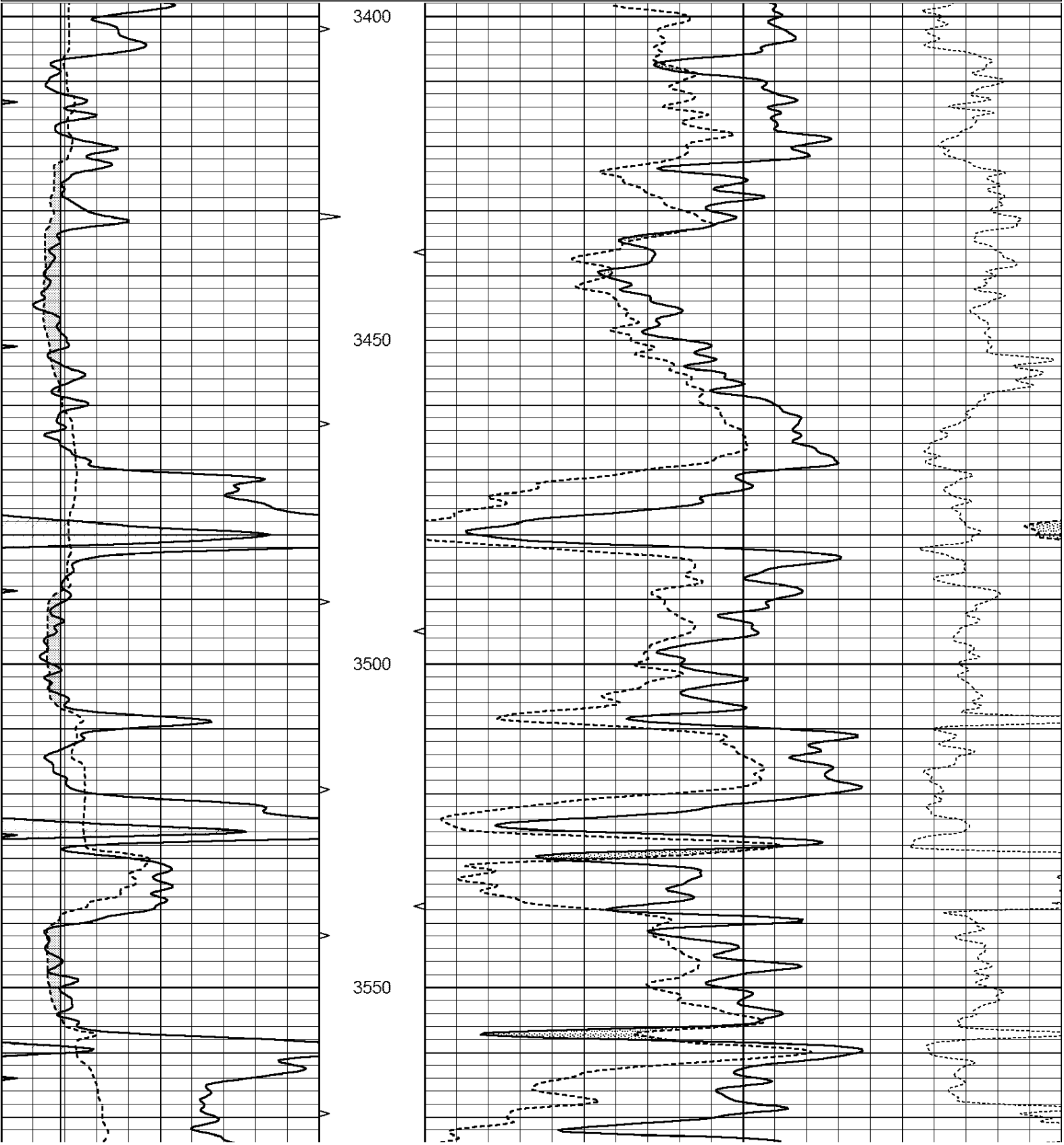
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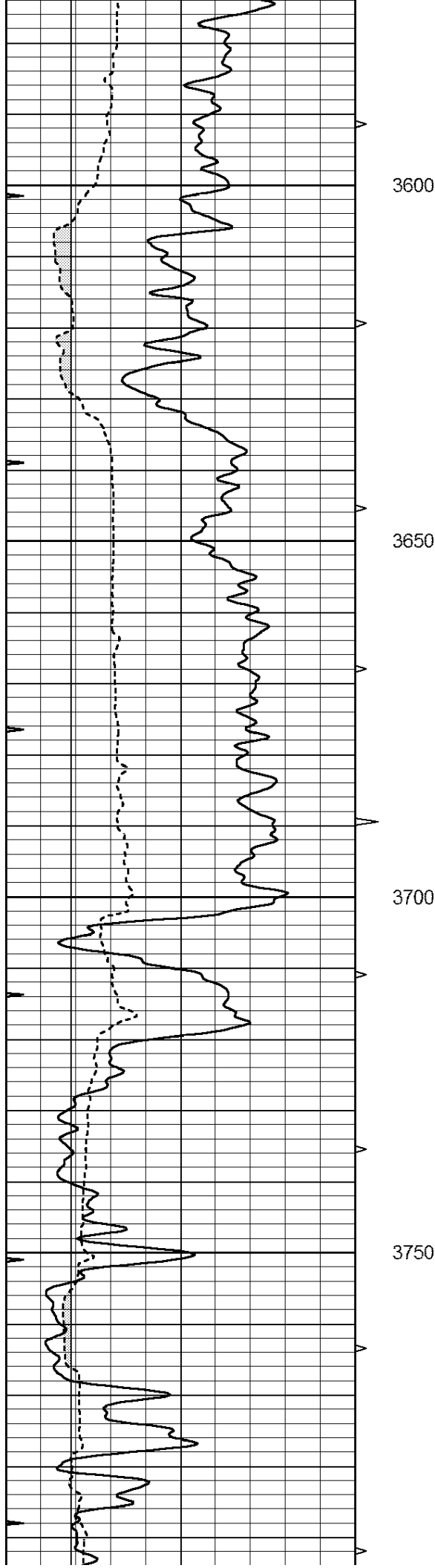
Wed Nov 12 12:23:19 2014 by Calc Open-Cased 090629

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		



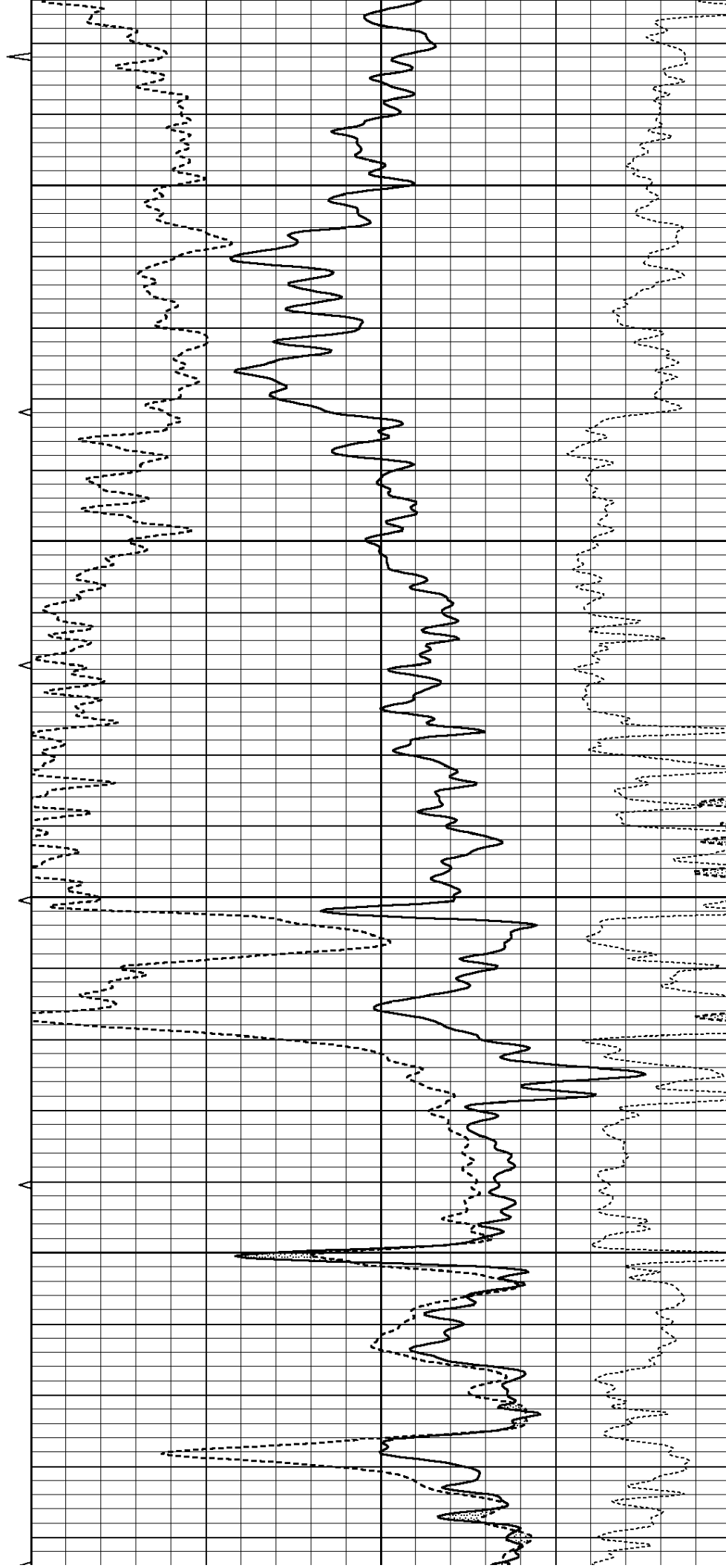


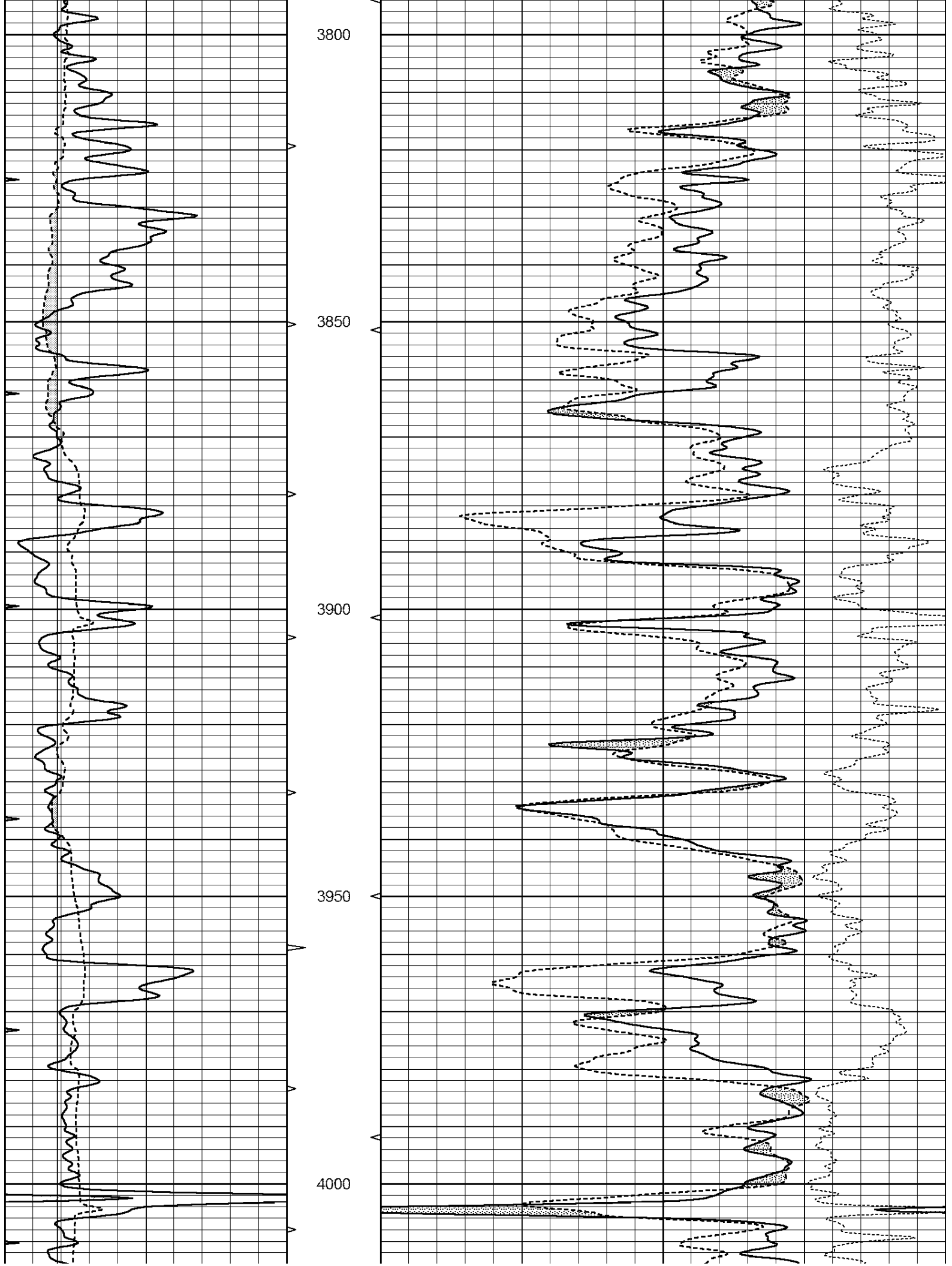
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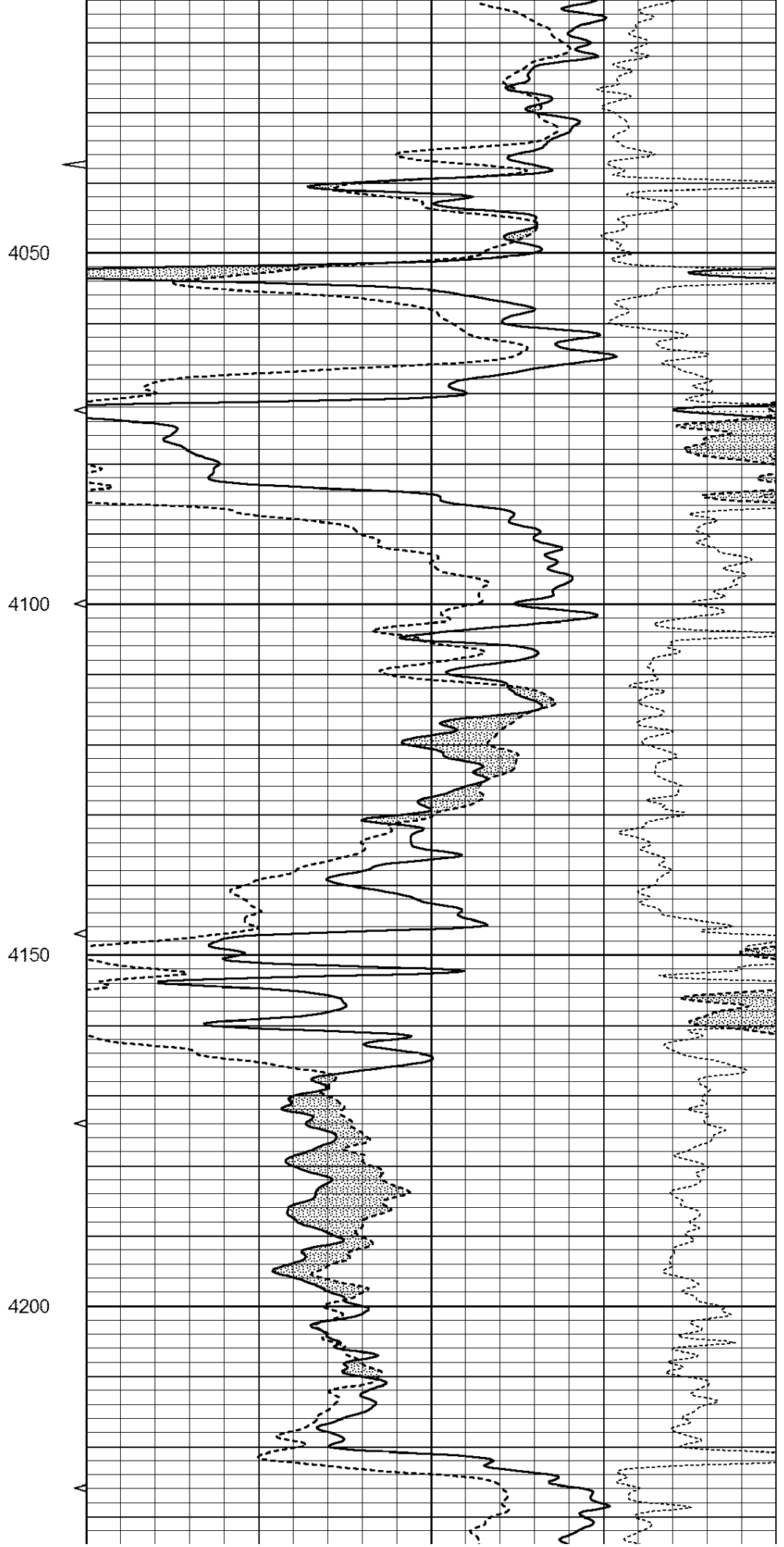
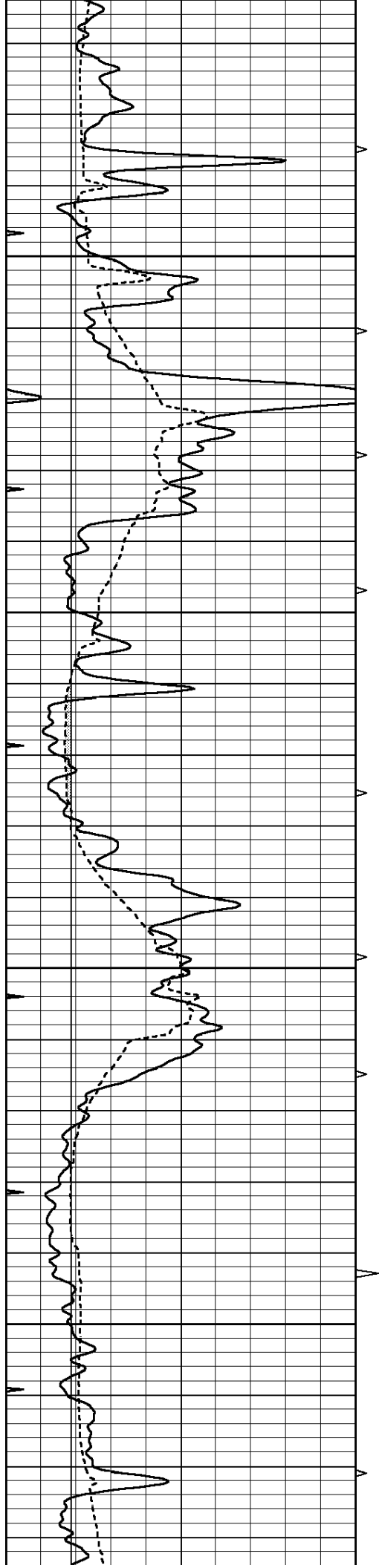
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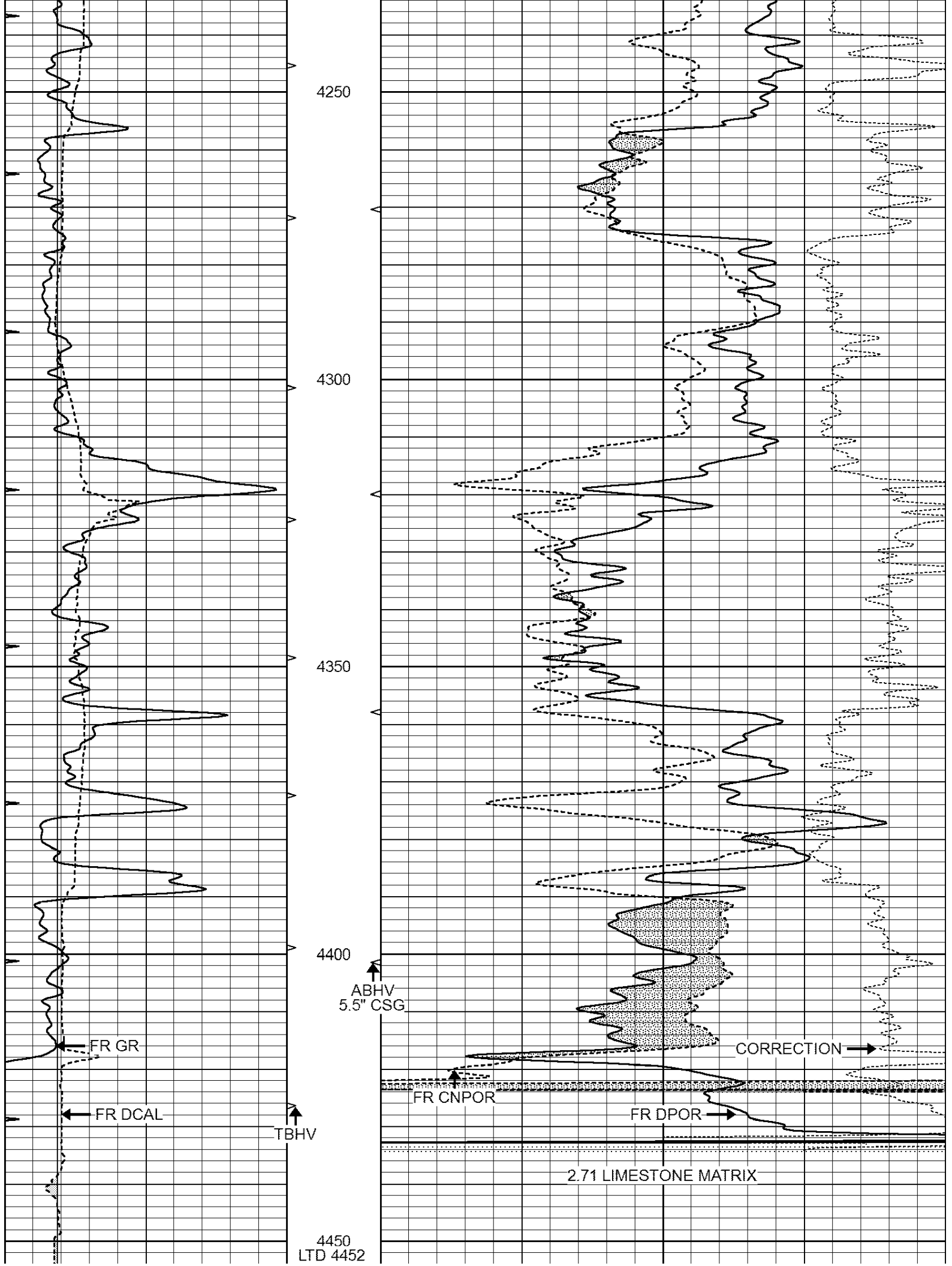
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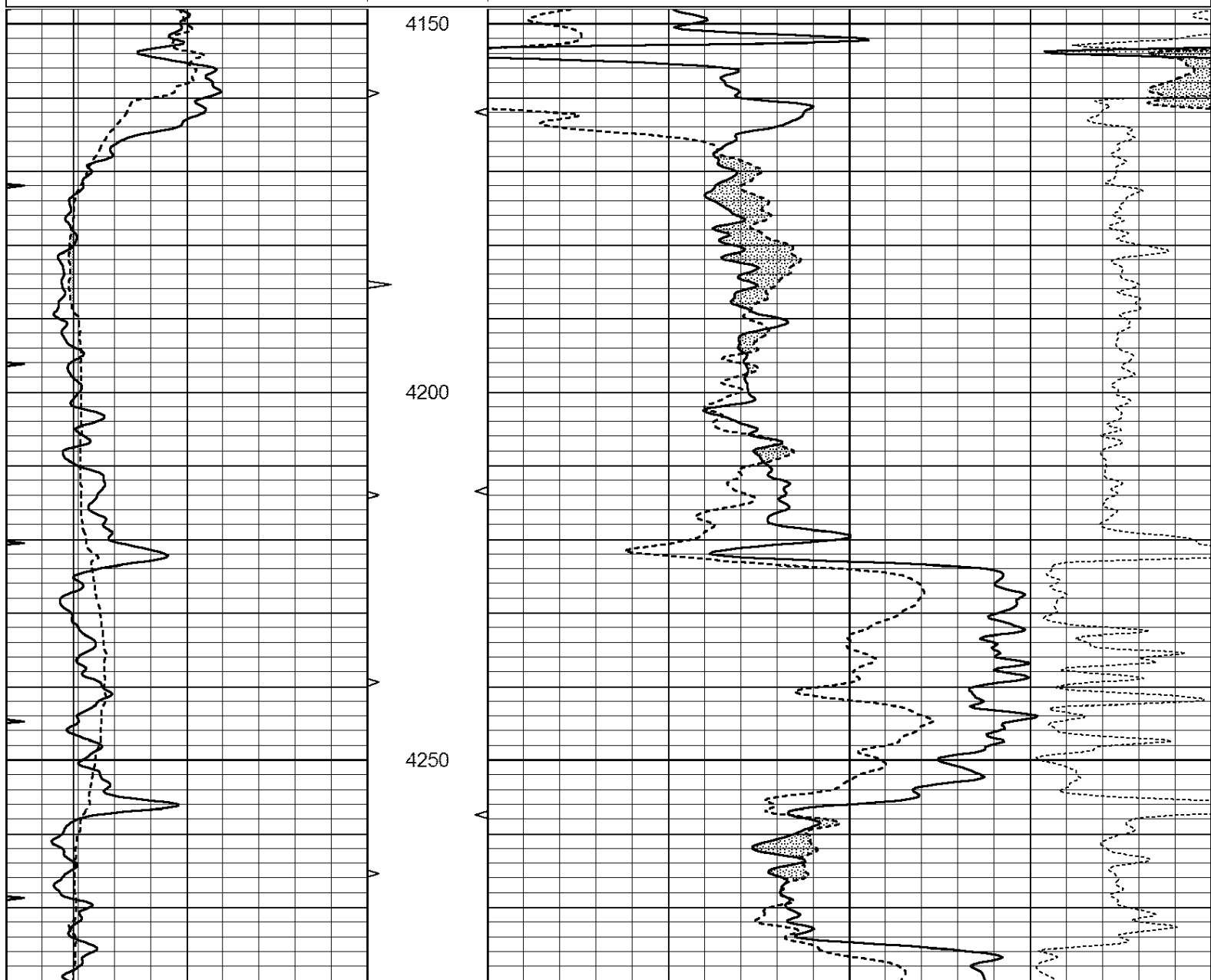
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0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		

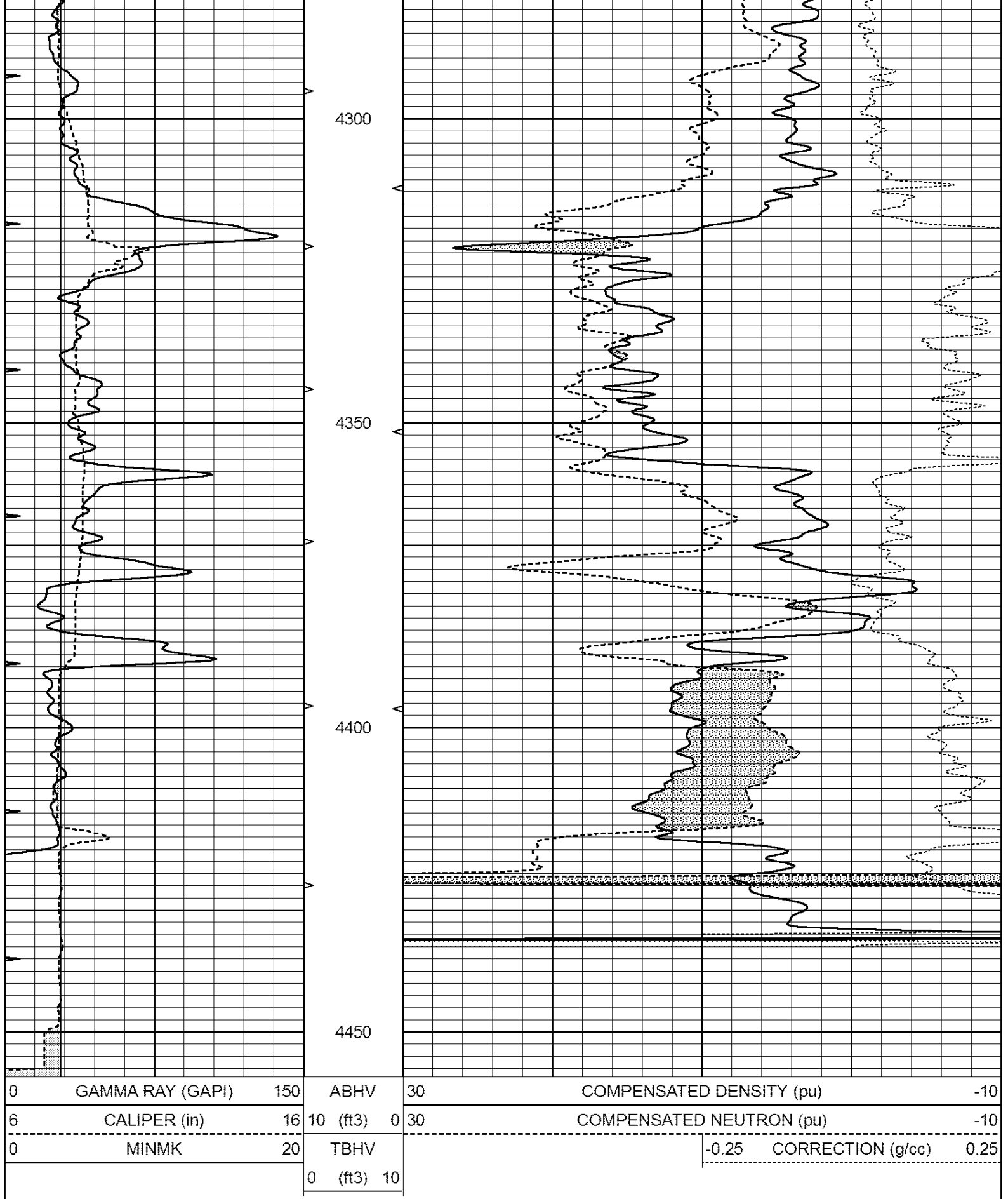


REPEAT SECTION

Database File: 26404ddn.db
 Dataset Pathname: pass2.1
 Presentation Format: den_neu
 Dataset Creation: Wed Nov 12 12:25:56 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: 26404ddn.db
Dataset Pathname: pass2.1
Dataset Creation: Wed Nov 12 12:25:56 2014 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model:	PROBE8-DILG
Surface Cal Performed:	Sun Aug 17 08:09:53 2014
Downhole Cal Performed:	Mon Jul 28 11:08:27 2008
After Survey Verification Performed:	Mon Jul 28 11:08:27 2008

Surface Calibration

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	620.000	-2.000
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	
	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:	GEAR4-GEARHART
Source / Verifier:	143 / 143
Master Calibration Performed:	Wed Sep 18 03:03:09 2013
Before Survey Verification Performed:	
After Survey Verification Performed:	

Master Calibration

	Density			Far Detector		Near Detector	
Magnesium	1.710	g/cc		1075.98		532.39	cps
Aluminum	2.560	g/cc		286.51		422.88	cps
Spine Angle = 80.13				Density/Spine Ratio = 0.633			
	Size			Reading			
Small Ring	8.00	in		3.21	V		
Large Ring	14.00	in		5.46	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:		6l	
		Tool Model:		G	
CALIBRATION					
Detector		Readings		Target	
Short Space		1.00 cps		1.00 cps	
Long Space		1.00 cps		1.00 cps	
				Normalization	
				1.0000	
				1.0000	
PRE-SURVEY VERIFICATION					
Detector		Readings		Measured	
1) Short Space		cps			
Long Space		cps		pu	
2) Short Space		cps			
Long Space		cps		pu	
3) Short Space		cps			
Long Space		cps		pu	
POST-SURVEY VERIFICATION					
Detector		Readings		Measured	
1) Short Space		cps			
Long Space		cps		pu	
2) Short Space		cps			
Long Space		cps		pu	
3) Short Space		cps			
Long Space		cps		pu	
Gamma Ray Calibration Report					
Serial Number:		GR6			
Tool Model:		OPEN			
Performed:		Sun Aug 17 15:23:09 2014			
Calibrator Value:		150.0		GAPI	
Background Reading:		0.0		cps	
Calibrator Reading:		276.0		cps	
Sensitivity:		0.7000		GAPI/cps	