



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY/NEUTRON
LOG**

Company	DEUTSCH OIL COMPANY	Company	DEUTSCH OIL COMPANY
Well	SHUMWAY #9-33	Well	SHUMWAY #9-33
Field	BAUMAN	Field	BAUMAN
County	STAFFORD	County	STAFFORD
State	KANSAS	State	KANSAS
Location:	AP1 # : 15-185-23910-0000 1762' FSL & 998' FEL NW SW NE SE	Other Services	DIL/MEL
Permanent Datum	GROUND LEVEL	Elevation	1834
Log Measured From	KELLY BUSHING 7' A.G.L.	K.B.	1841
Drilling Measured From	KELLY BUSHING	D.F.	1839
		G.L.	1834
Date	11/2/14		
Run Number	ONE		
Depth Driller	4195		
Depth Logger	4194		
Bottom Logged Interval	4170		
Top Log Interval	3000		
Casing Driller	8 5/8" @ 260		
Casing Logger	260		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES	10400 PPM
Density / Viscosity	9.5/48		
pH / Fluid Loss	7.5/14.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.40 @ 75F		
Rmt @ Meas. Temp	.30 @ 75F		
Rmc @ Meas. Temp	.48 @ 75F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	.25 @ 118F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	118F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	SCOTT ALBERG		

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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:
PRESTON, KS. - MAIN STREET - 3 NORTH TO 110 RD - 1 EAST - 1 1/4 NORTH
TO THE T - 1/2 EAST - 1/4 NORTH - WEST INTO

Database File:

26221ddn.db

Dataset Pathname:

pass3.1

Presentation Format:

den_neu

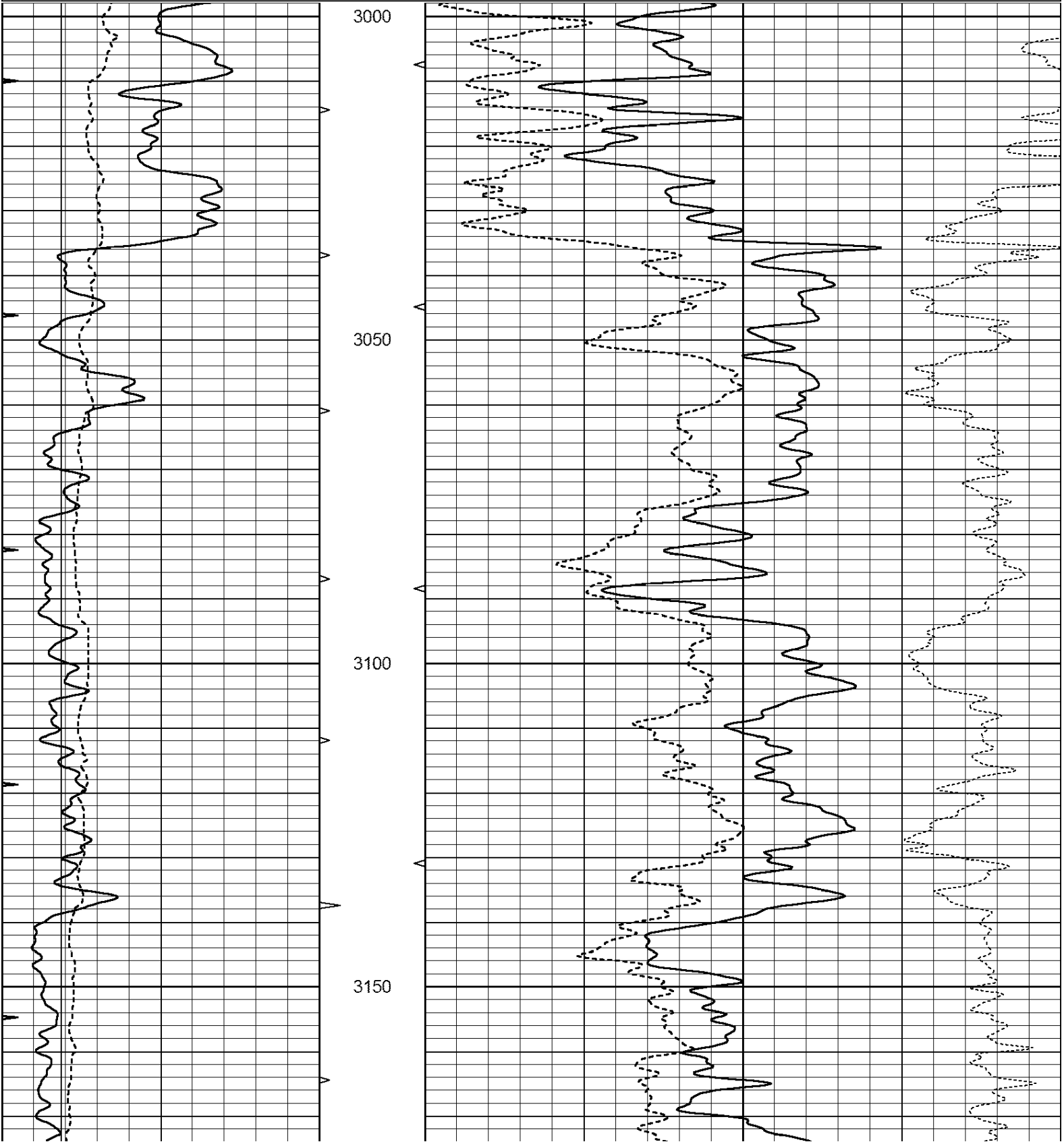
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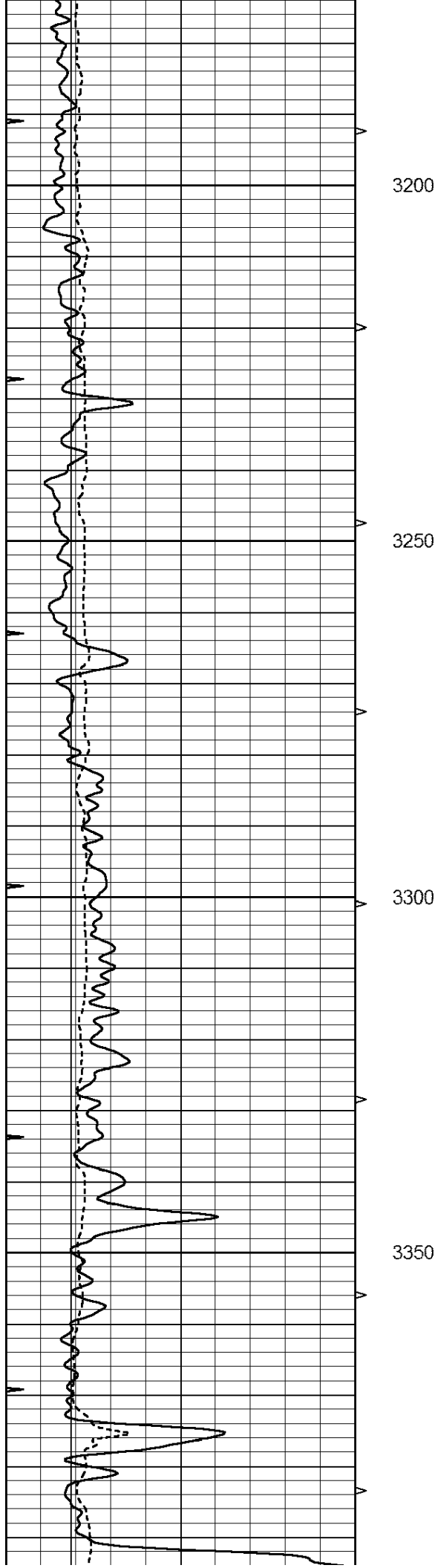
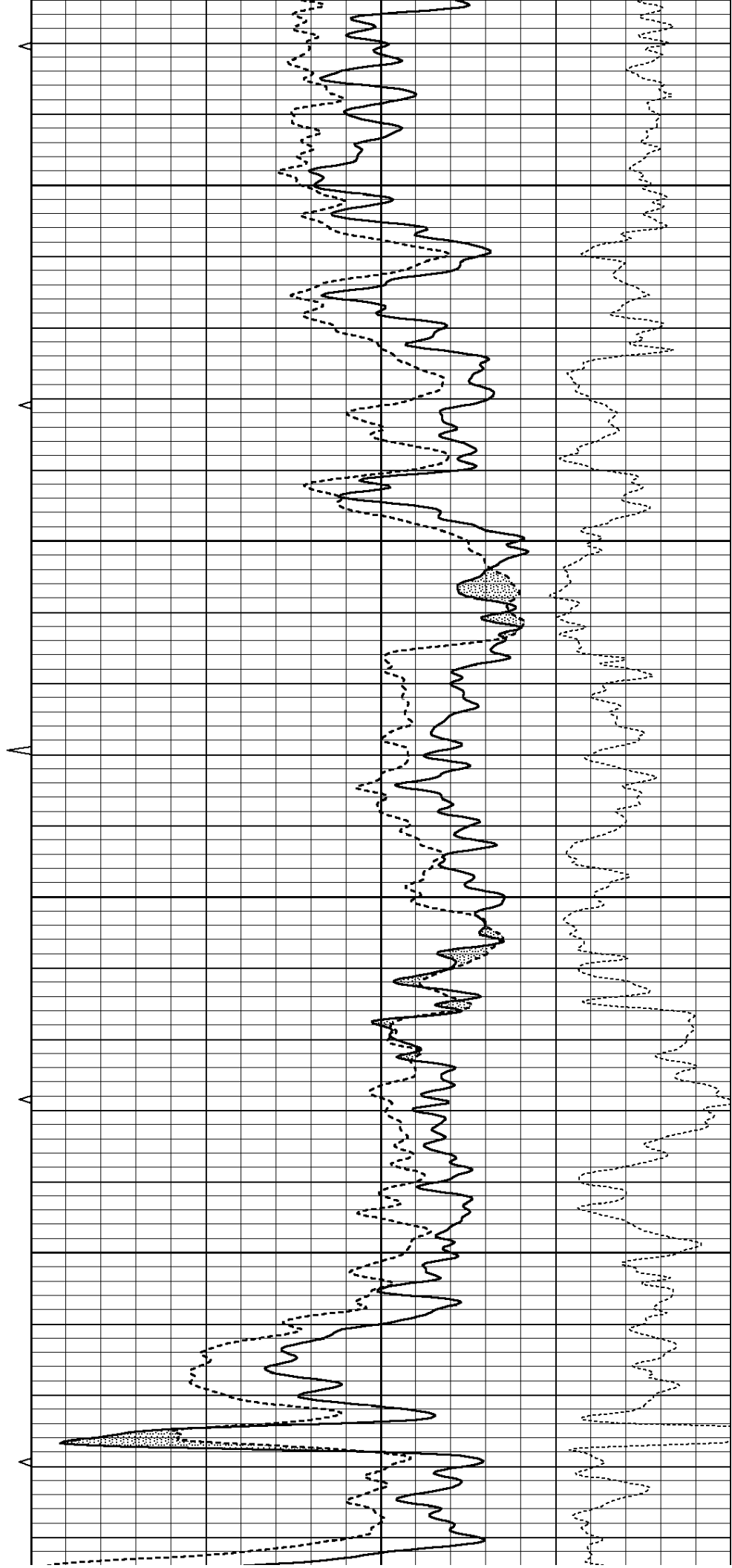
Sun Nov 02 17:50:49 2014 by Calc Open-Cased 090629

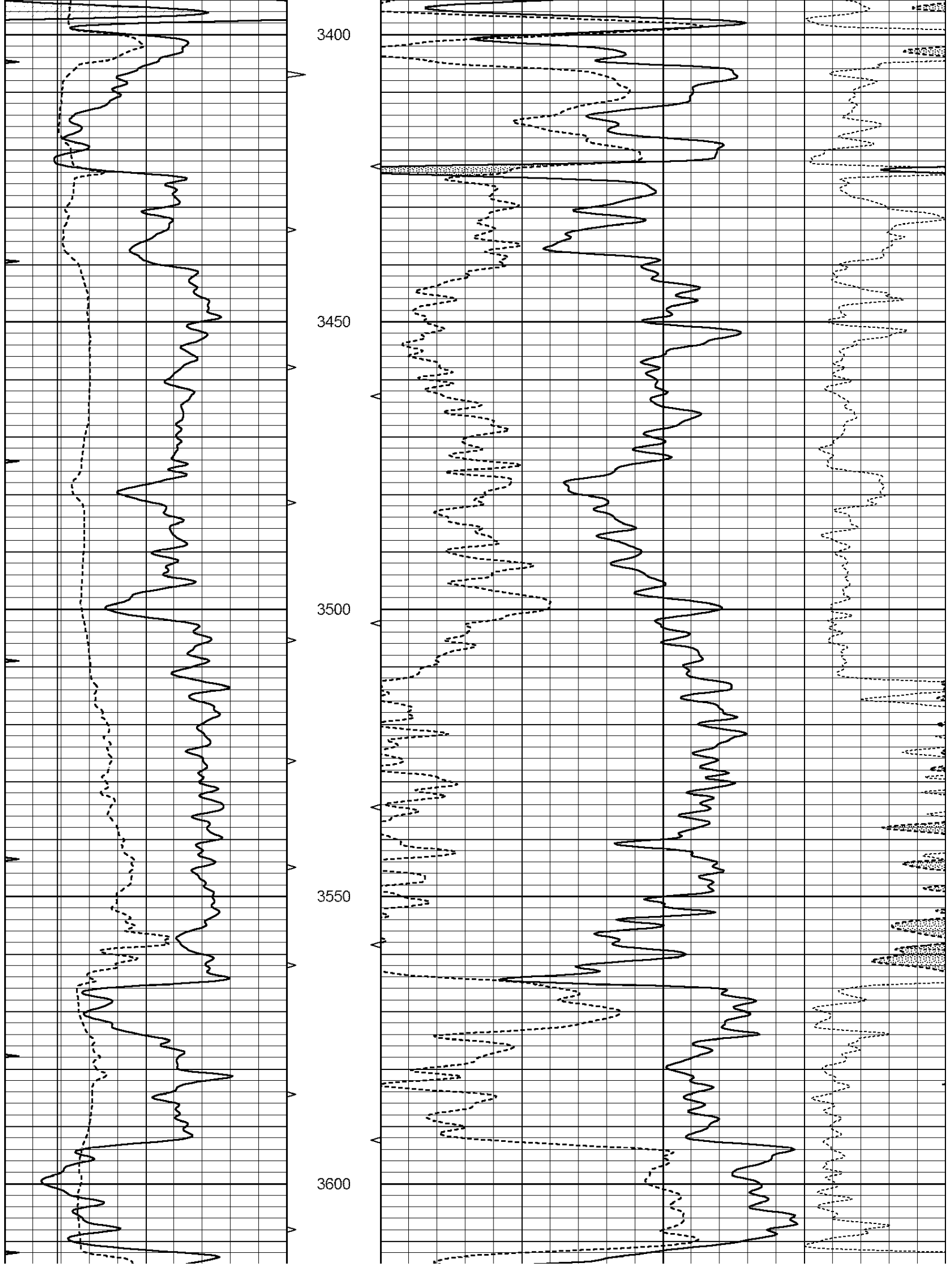
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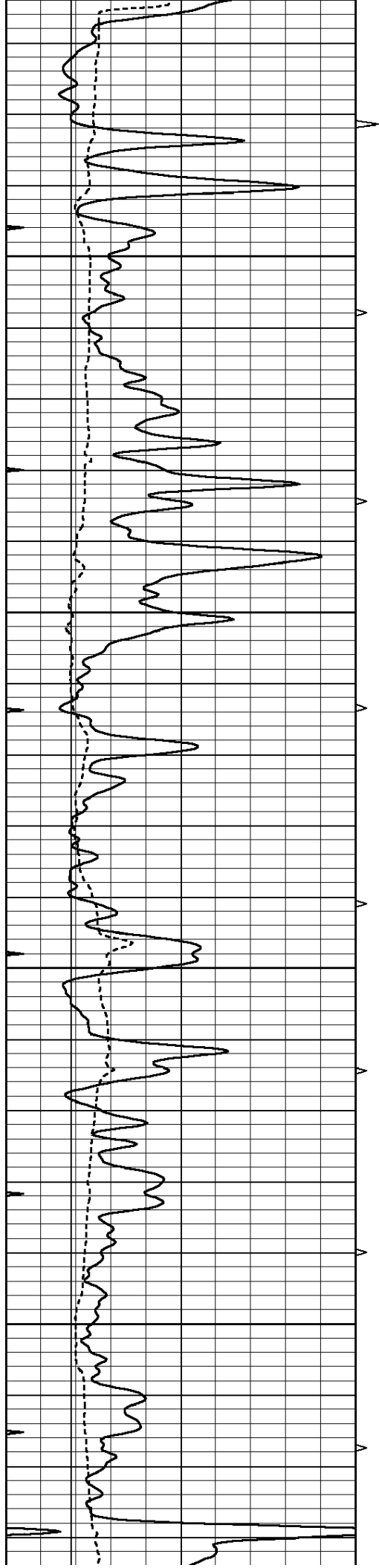
Depth in Feet scaled 1:240

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		







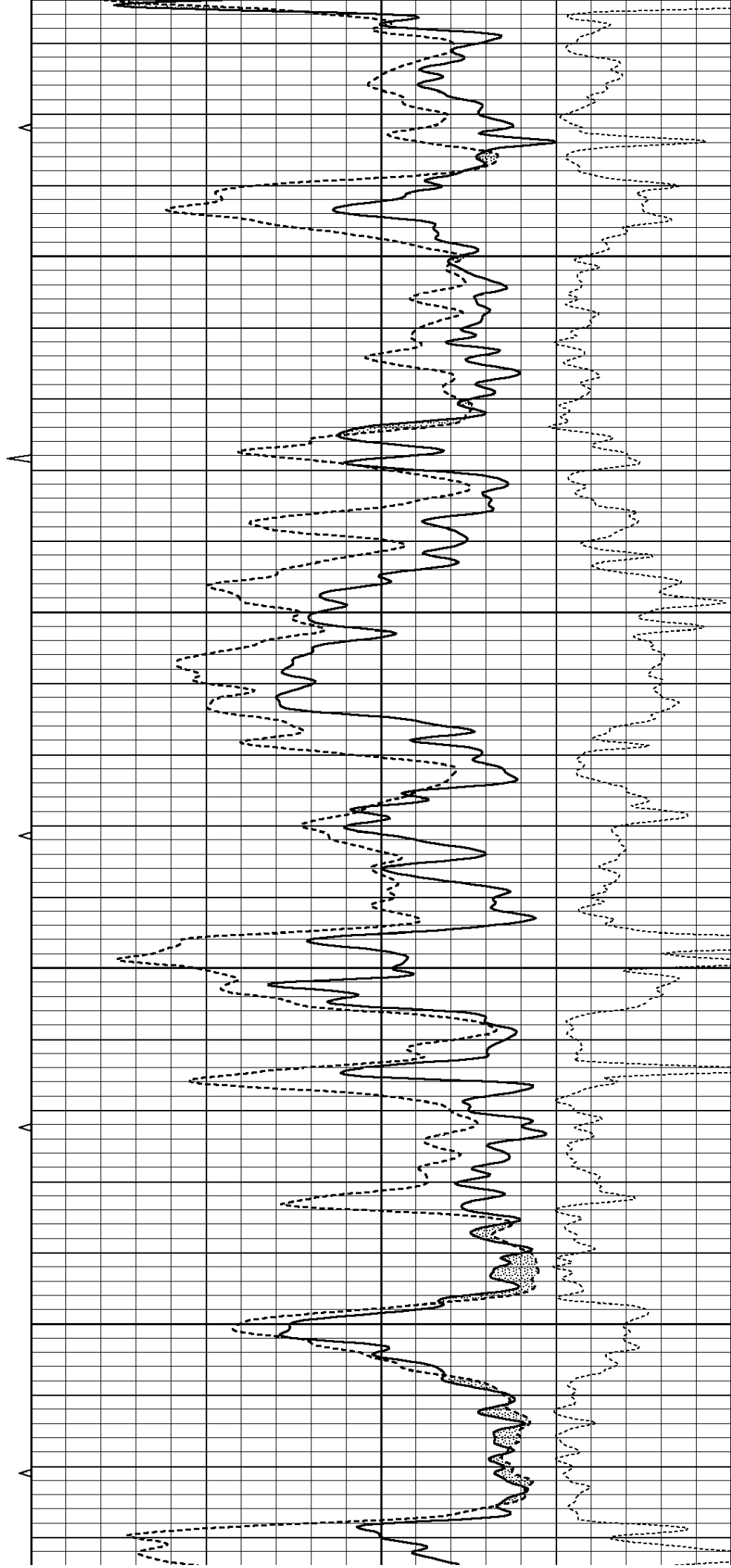


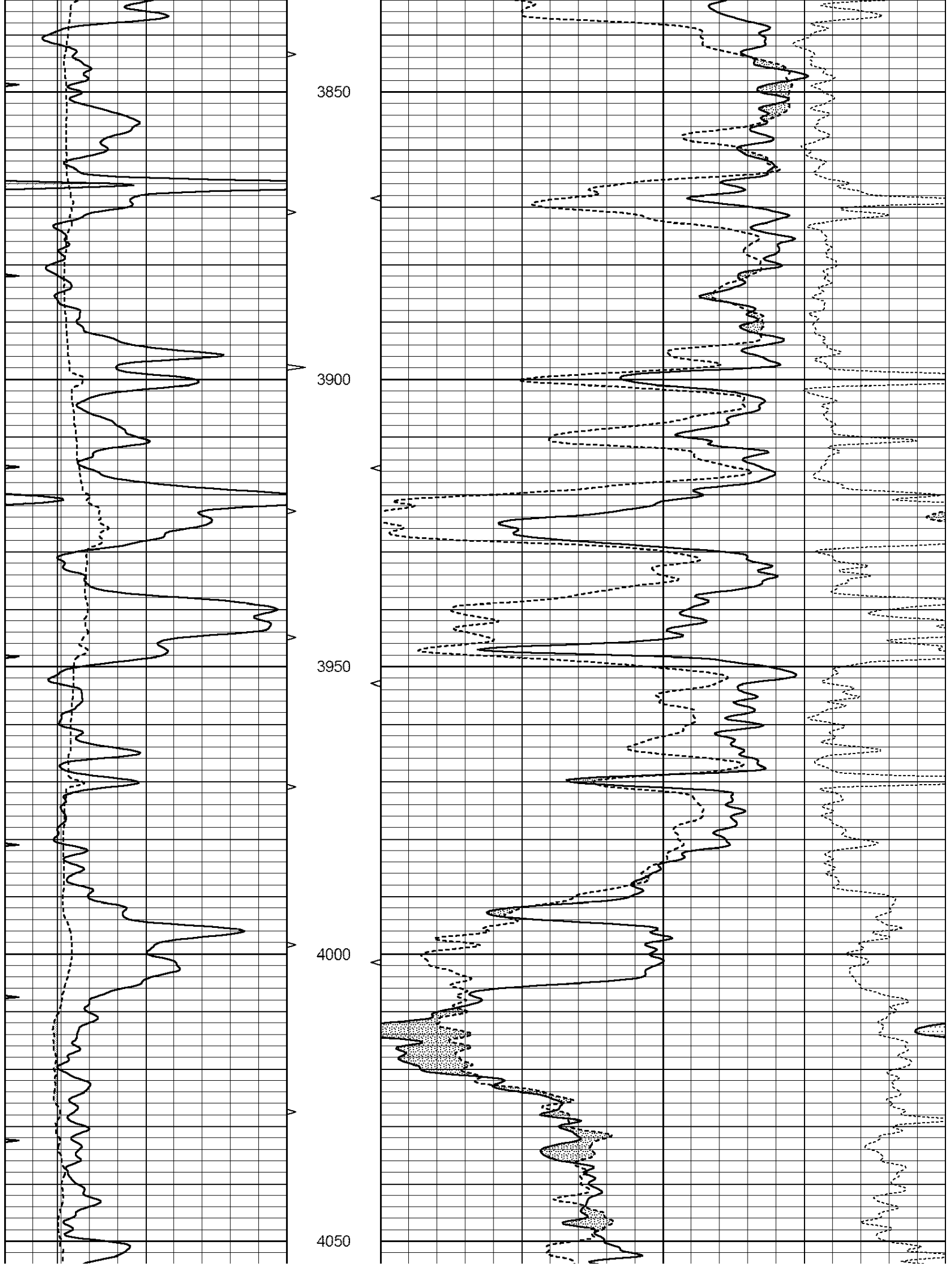
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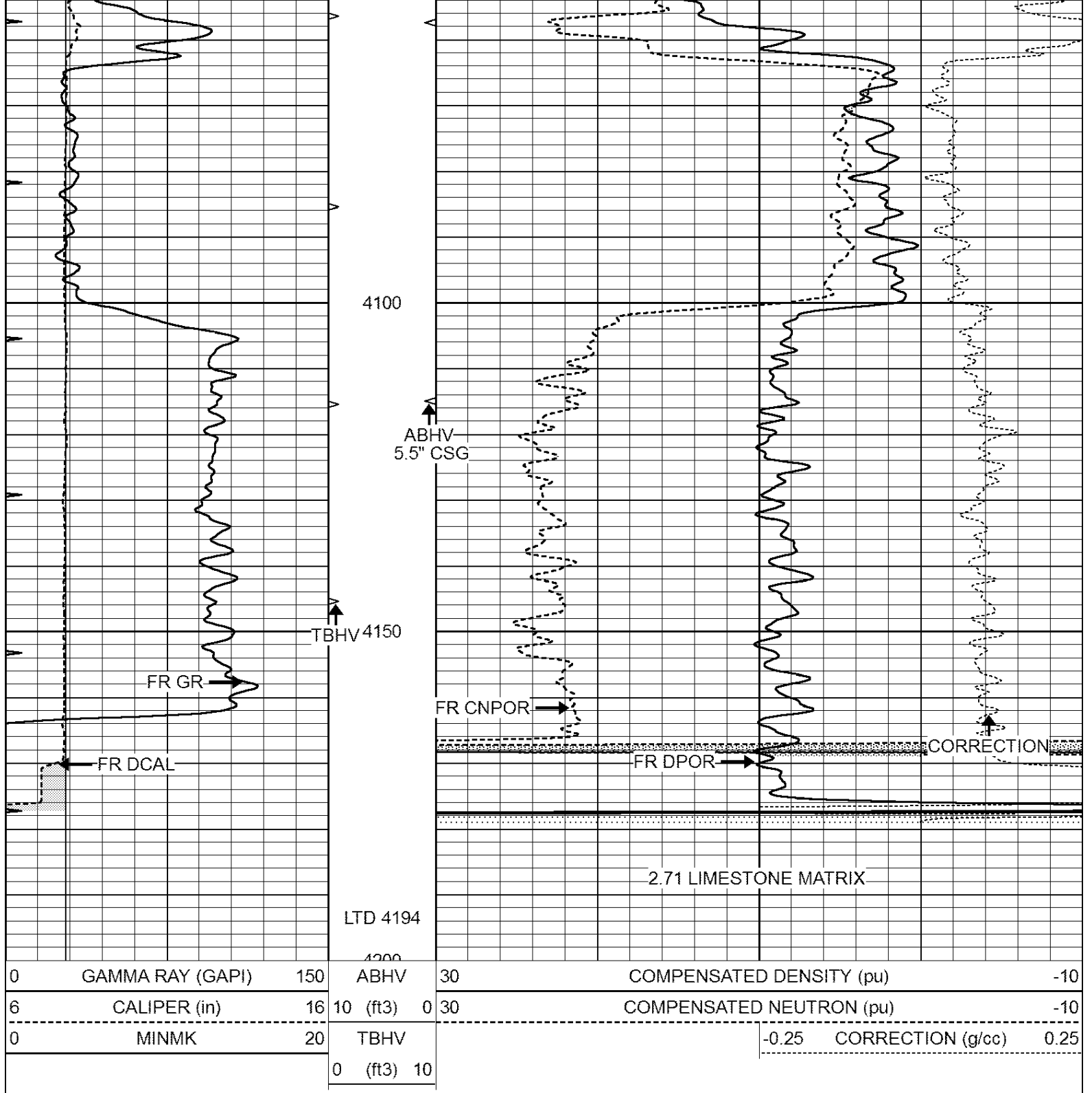
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3800





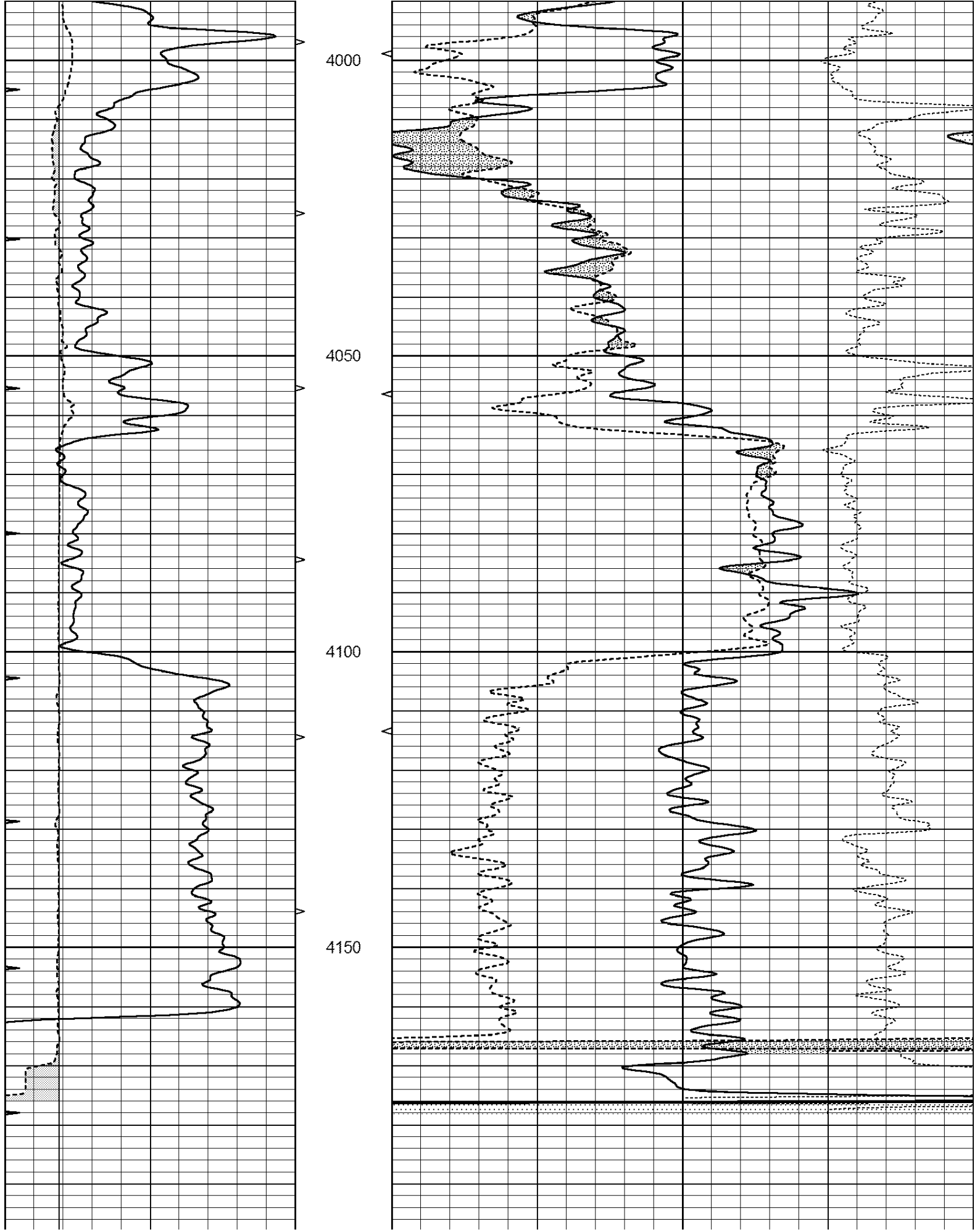


REPEAT SECTION

Database File: 26221ddn.db
 Dataset Pathname: pass2.1
 Presentation Format: den_neu
 Dataset Creation: Sun Nov 02 17:41:04 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)

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



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:	26221ddn.db
Dataset Pathname:	pass2.1
Dataset Creation:	Sun Nov 02 17:41:04 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
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000
Internal:	Zero	Cal		Zero	Cal	m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992

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
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000
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
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	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
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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

Aluminum	2.500	g/cc	200.51	422.00	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					
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Serial Number:		6I			
Tool Model:		G			

CALIBRATION					
	Detector	Readings		Target	Normalization
	Short Space	1.00	cps	1.00	1.0000
	Long Space	1.00	cps	1.00	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					
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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