



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY/NEUTRON
LOG**

Company	RAYMOND OIL COMPANY, INC.		
Well	#1 BIGGS		
Field	WILDCAT		
County	THOMAS		
State	KANSAS		
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Well	#1 BIGGS		
Field	WILDCAT		
County	THOMAS		
State	KANSAS		
Location:	API # : 15-193-20954-0000 1613' FNL & 1765' FWL		Other Services DIL MEL
Permanent Datum	SEC 36 TWP 6S RGE 36W	GROUND LEVEL	Elevation
Log Measured From		KELLY BUSHING 5' A.G.L.	K.B. 3287
Drilling Measured From		KELLY BUSHING	D.F. 3285 G.L. 3282
Date	7/22/15		
Run Number	ONE		
Depth Driller	4840		
Depth Logger	4844		
Bottom Logged Interval	4820		
Top Log Interval	3500		
Casing Driller	8 5/8" @ 303'		
Casing Logger	302		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4000 PPM	
Density / Viscosity	9.3/57		
pH / Fluid Loss	10.0/9.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.0 @ 93F		
Rmt @ Meas. Temp	.75 @ 93F		
Rmc @ Meas. Temp	1.2 @ 93F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	.75 @ 124F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	124F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	KIM SHOEMAKER		

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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:
LEVANT, KS. - 9 NORTH TO Z RD. - 4 1/2 WEST - SOUTH INTO



NABORS
COMPLETION
& PRODUCTION

MAIN SECTION

Database File:

30510ddn.db

Dataset Pathname:

pass3.1

Presentation Format:

den_neu

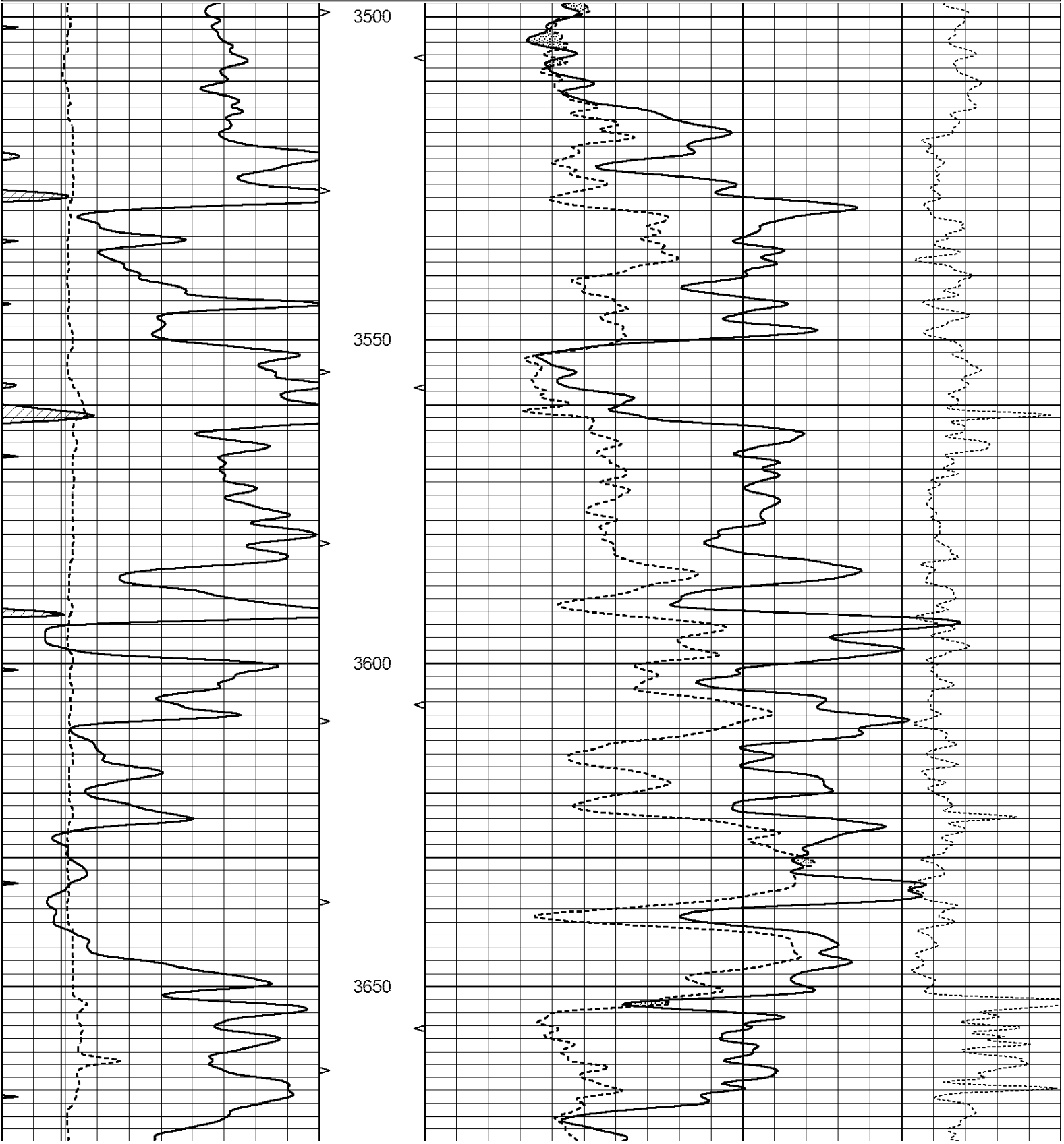
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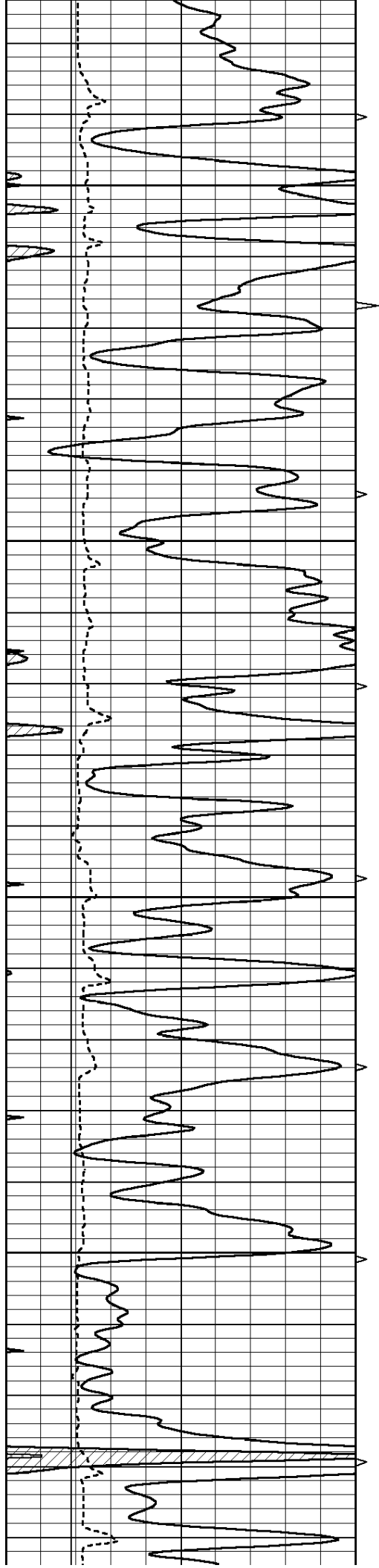
Wed Jul 22 03:32:06 2015 by Calc Open-Cased 090629

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		



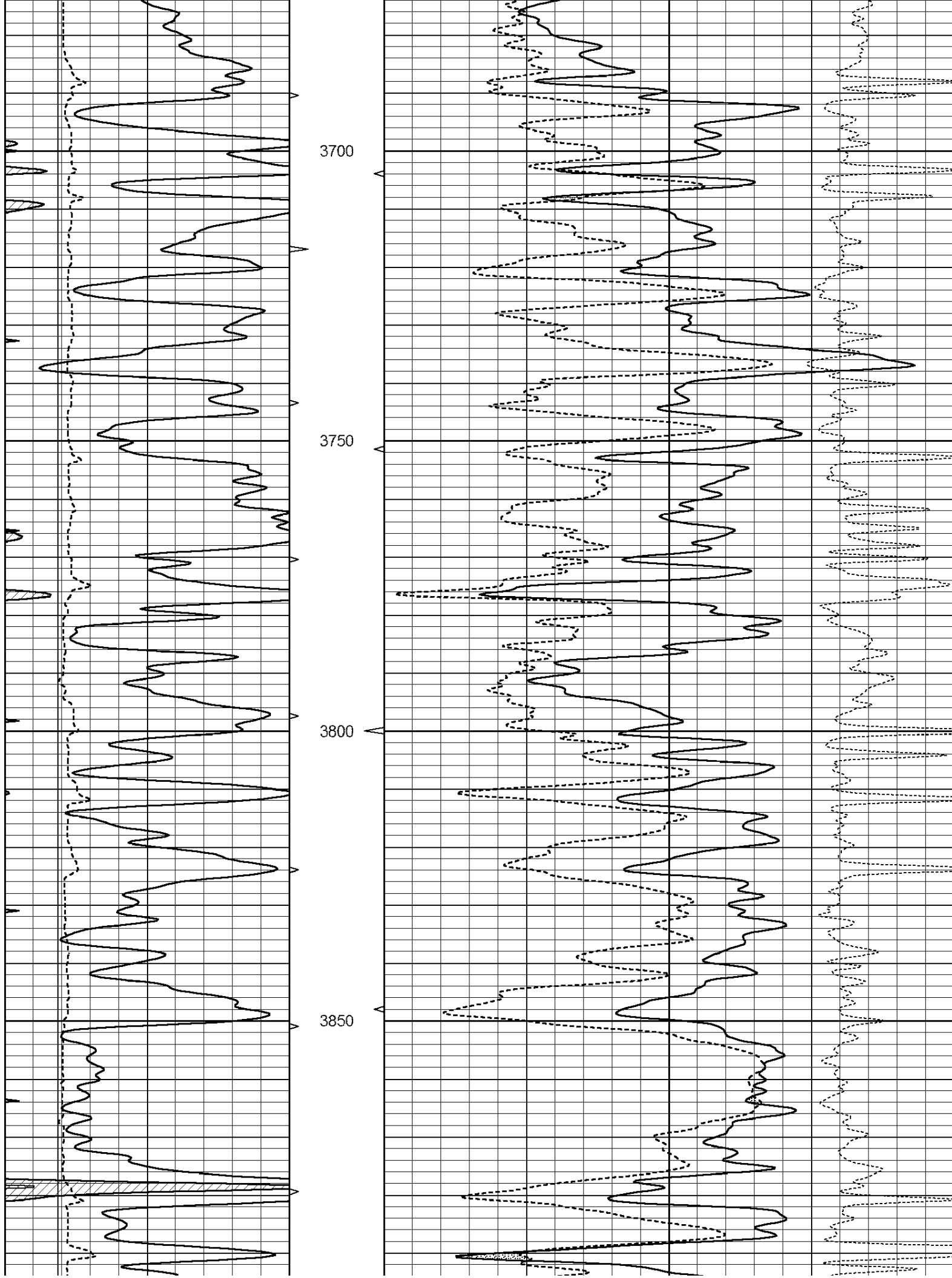
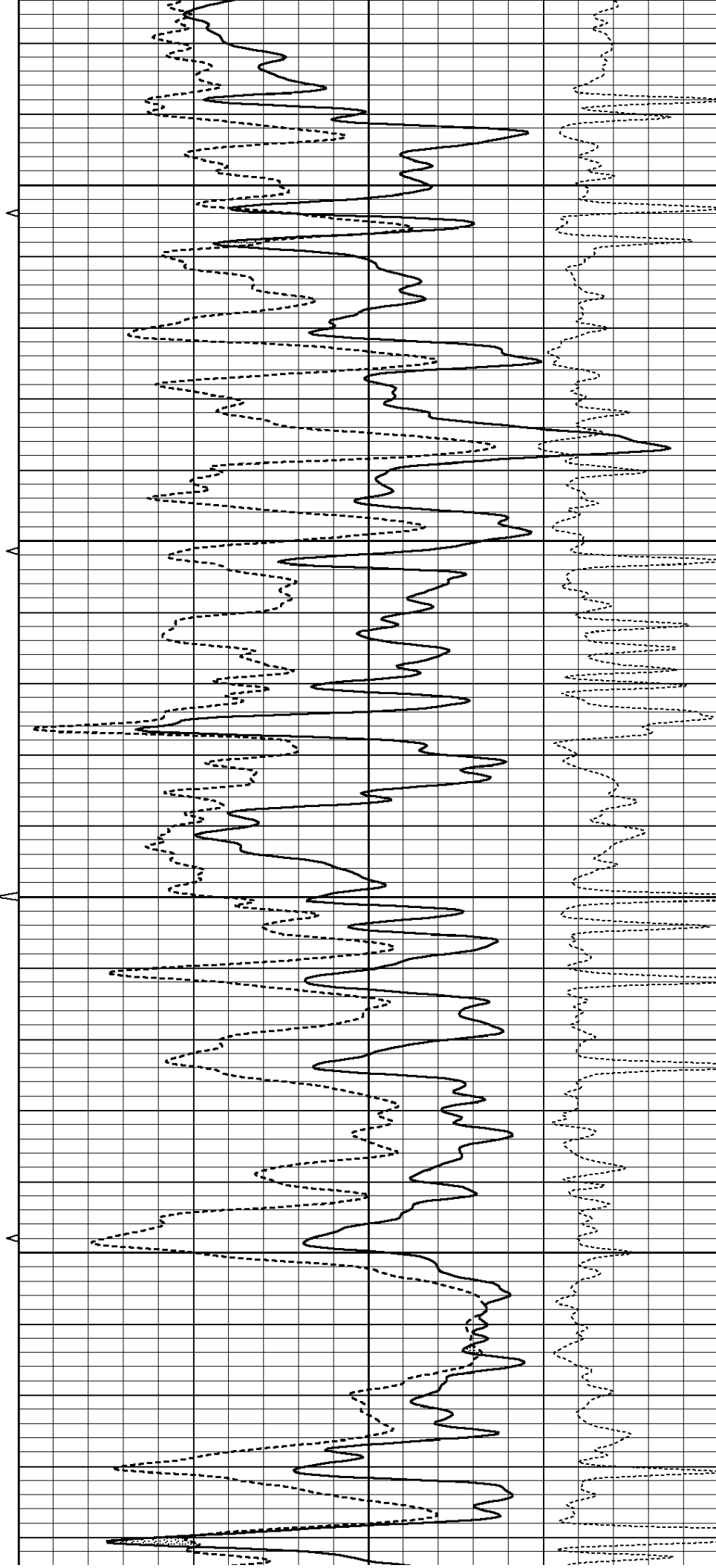


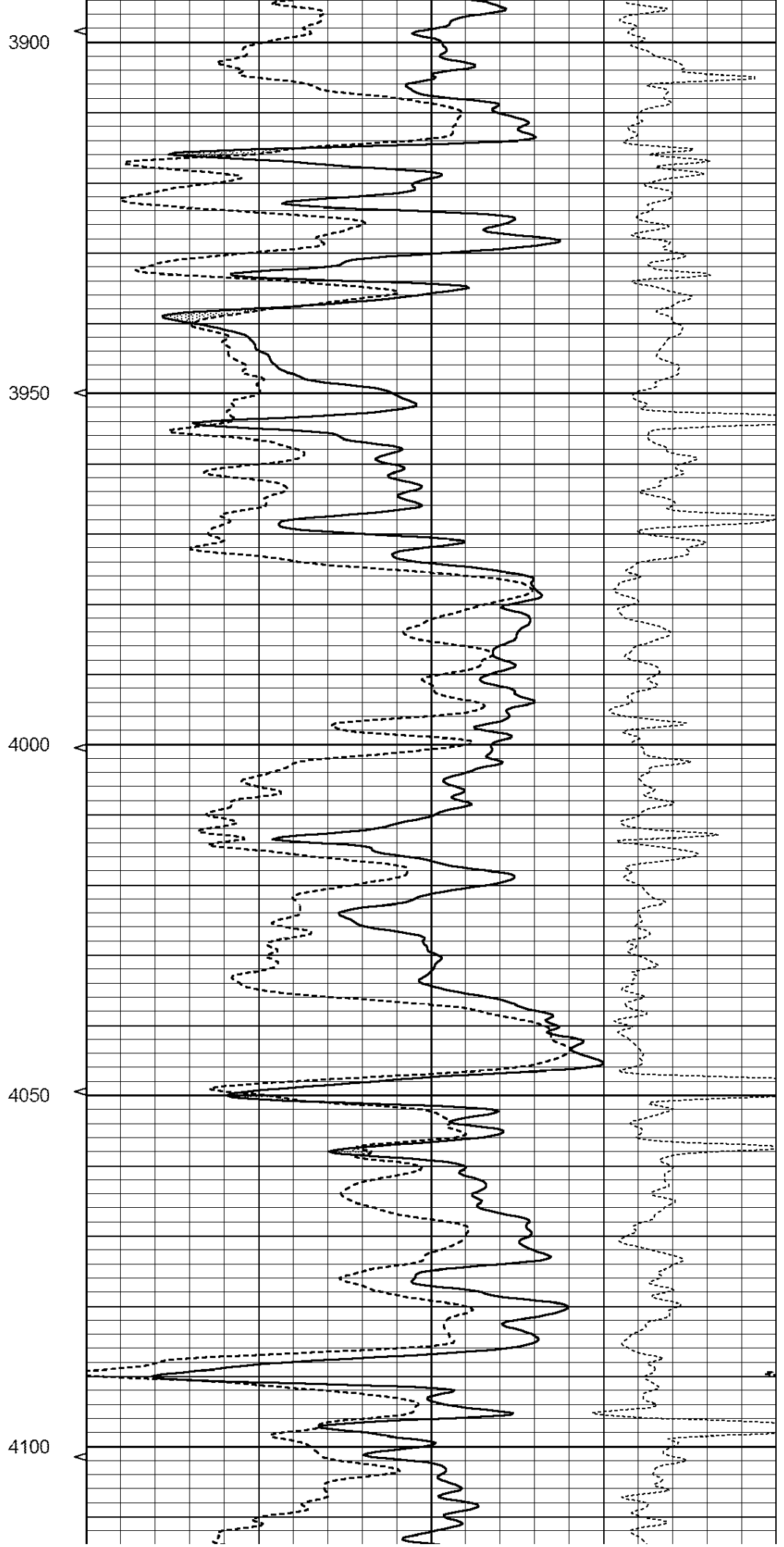
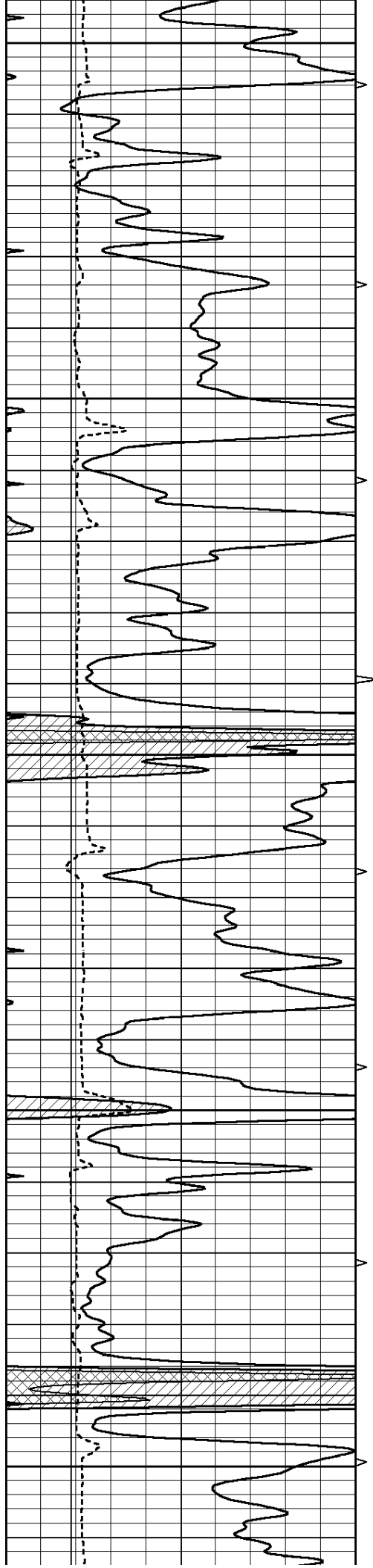
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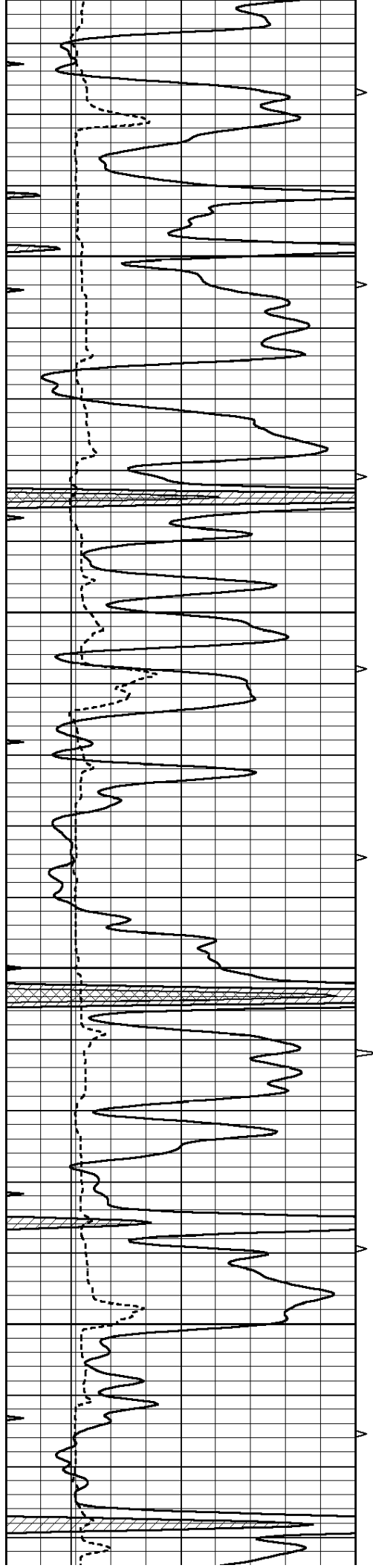
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3800

3850





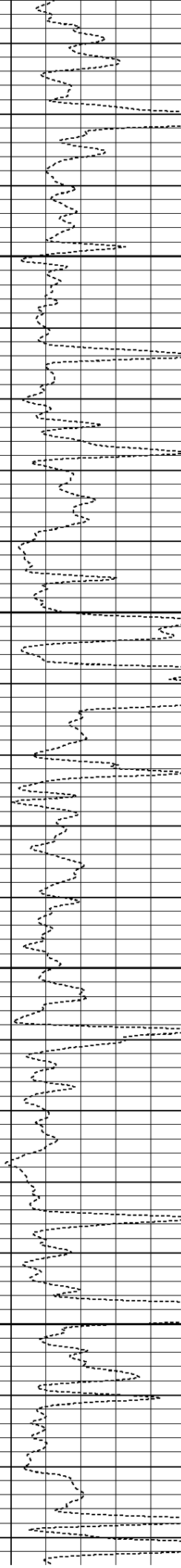
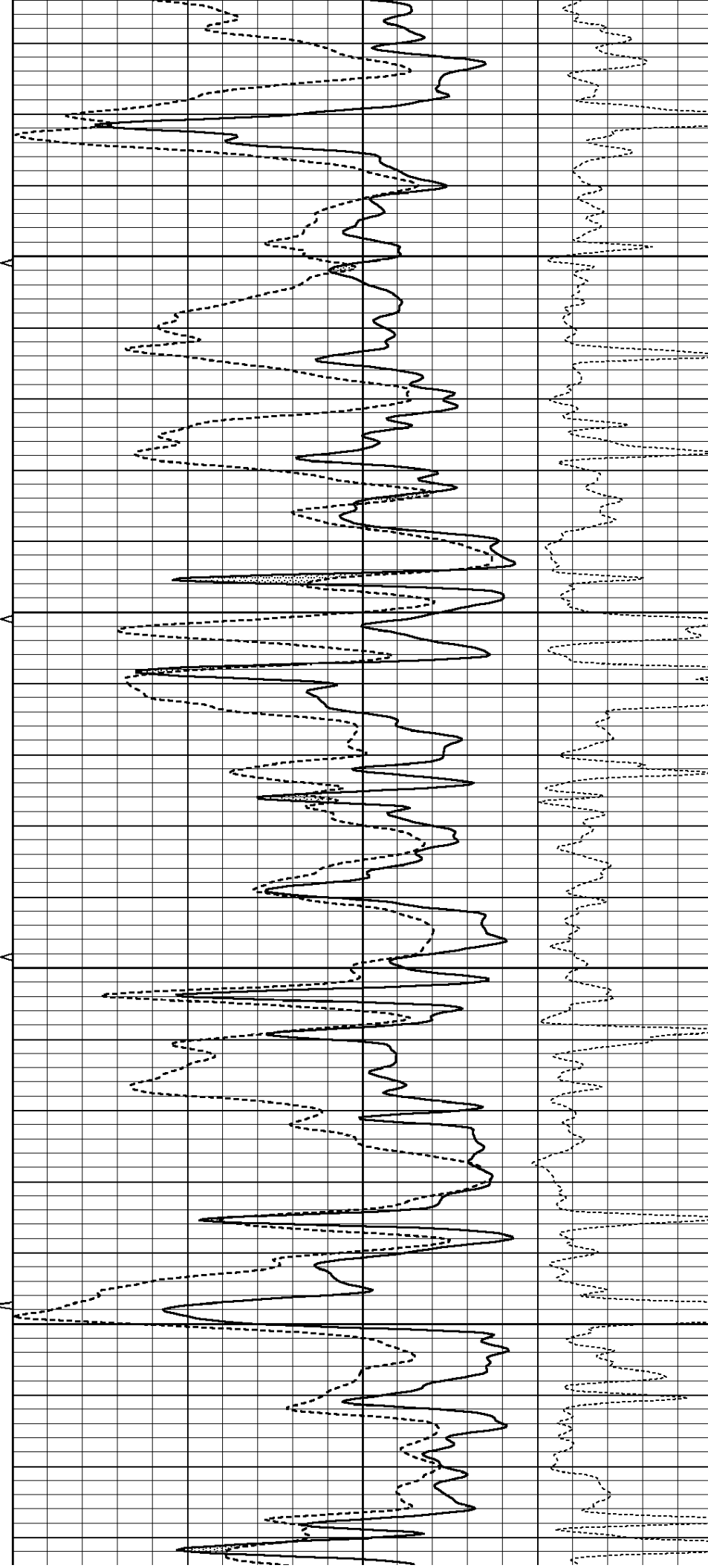


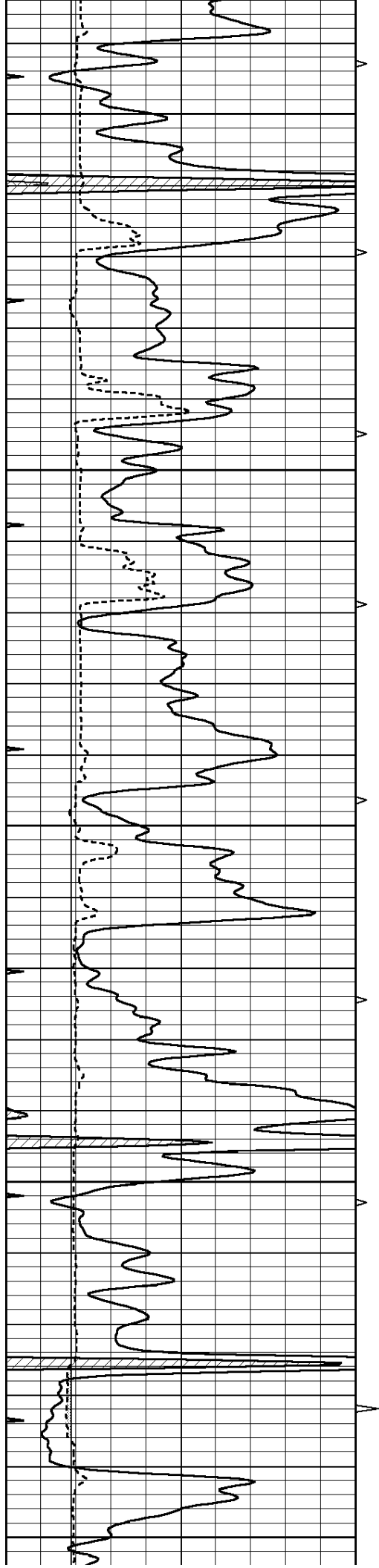
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4250

4300





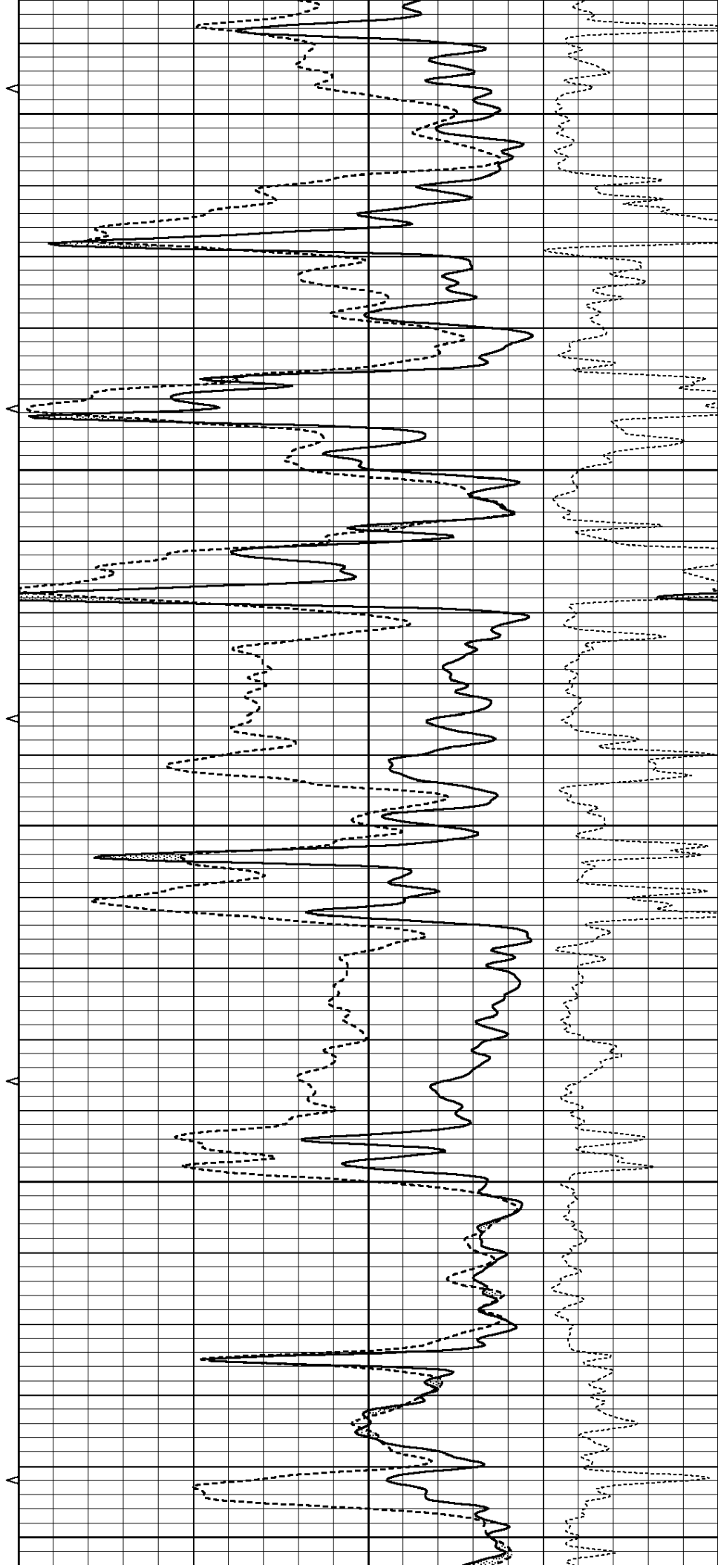
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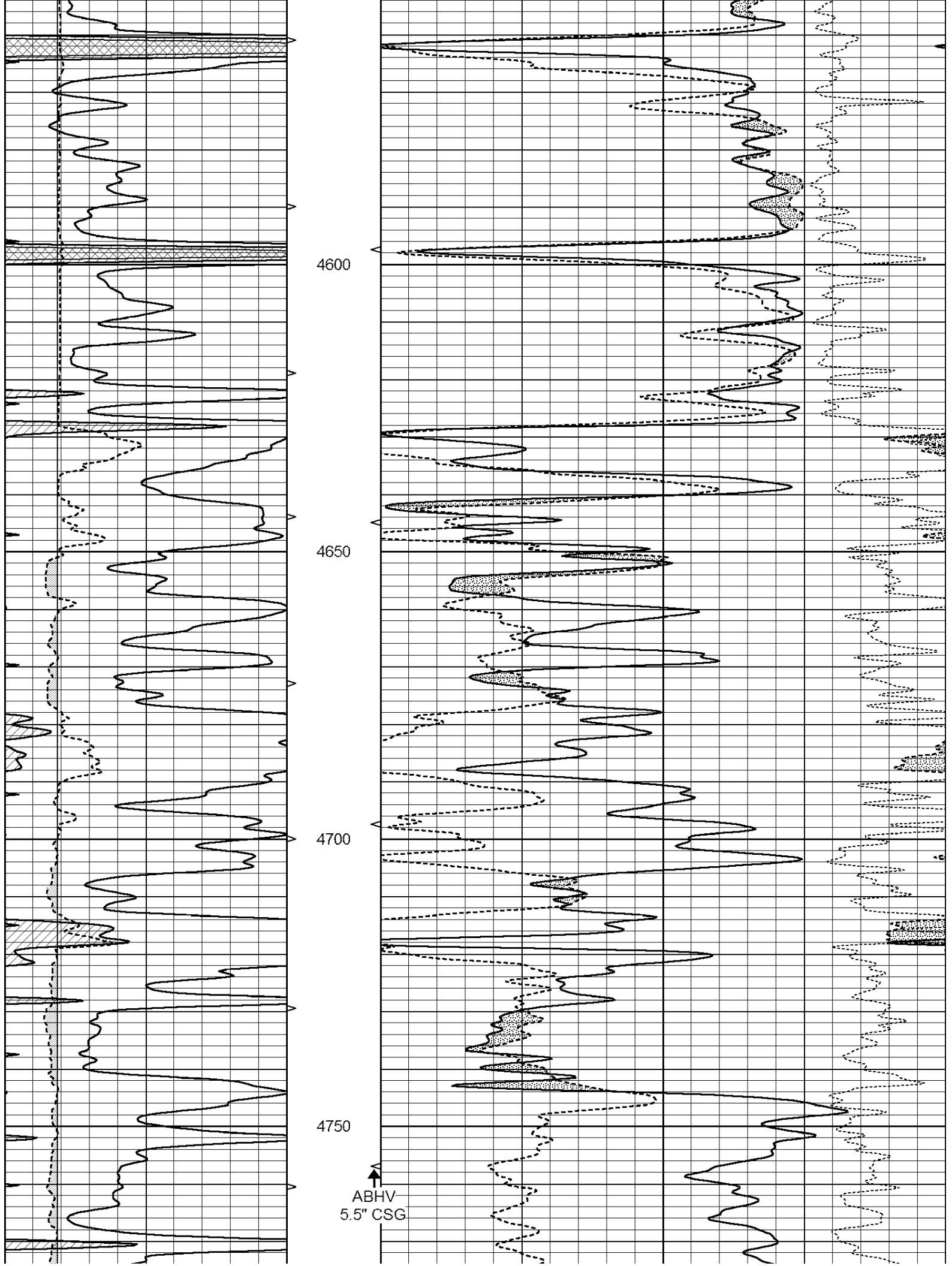
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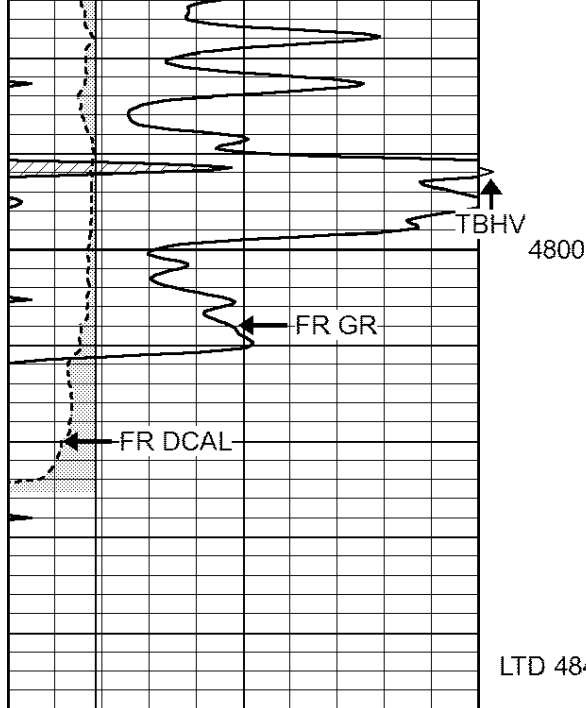
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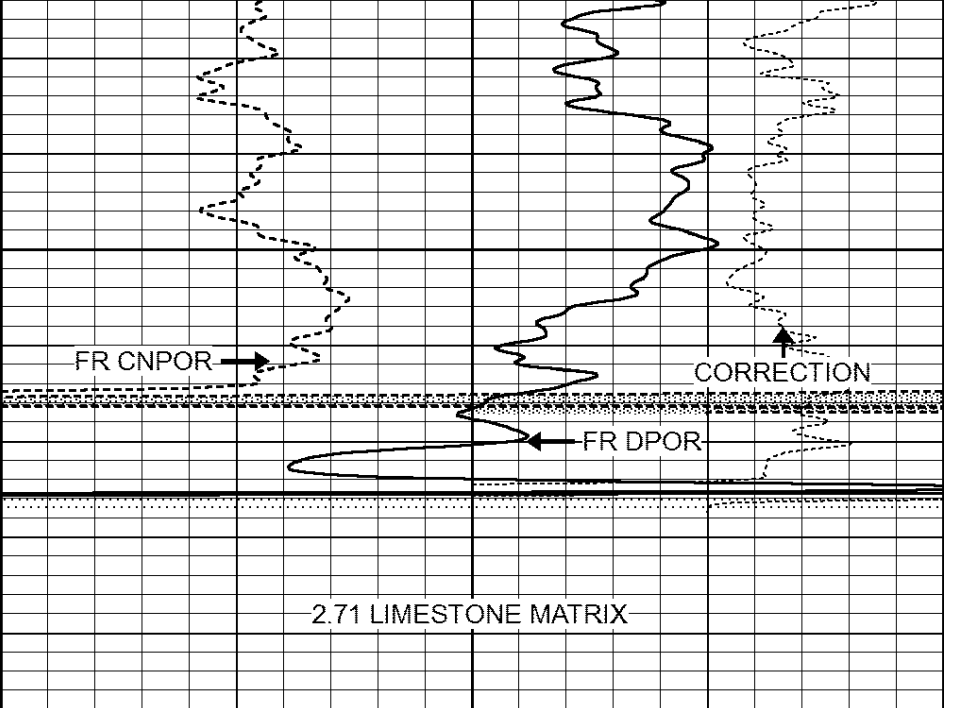
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0	GAMMA RAY (GAPI)	150	ABHV
6	CALIPER (in)	16	10 (ft3) 0
0	MINMK	20	TBHV
			0 (ft3) 10



30	COMPENSATED DENSITY (pu)	-10
30	COMPENSATED NEUTRON (pu)	-10
-0.25	CORRECTION (g/cc)	0.25

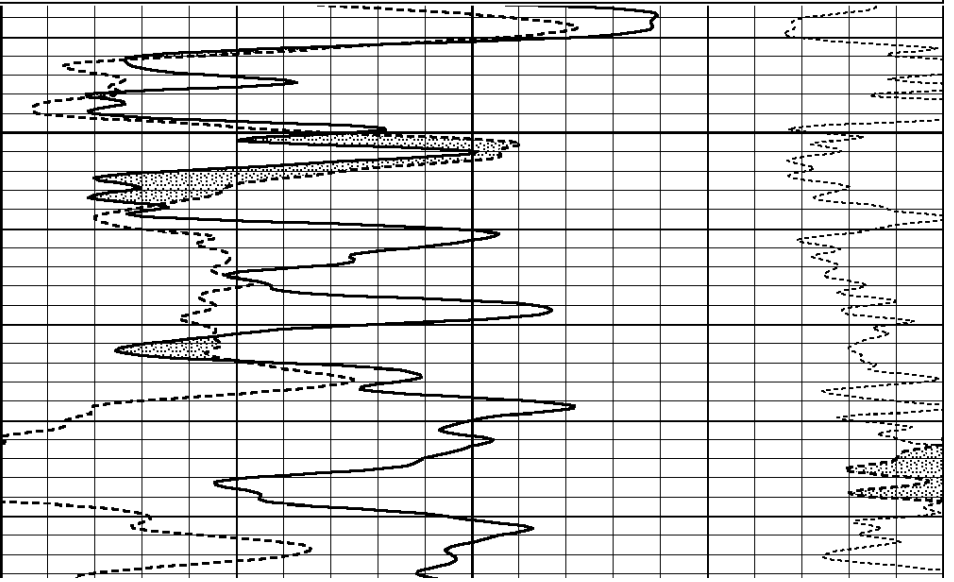
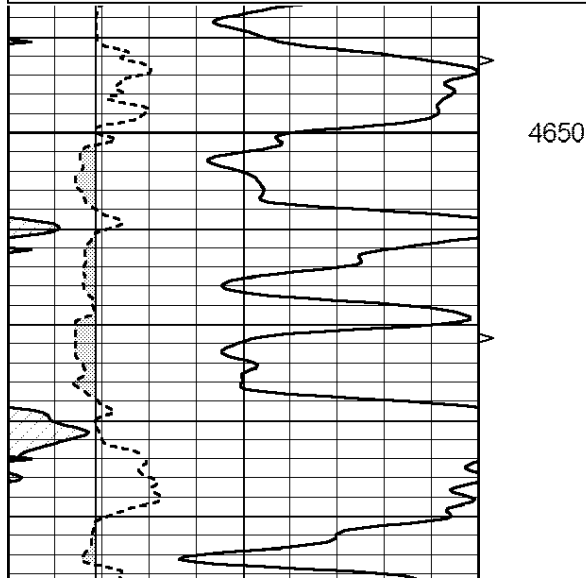


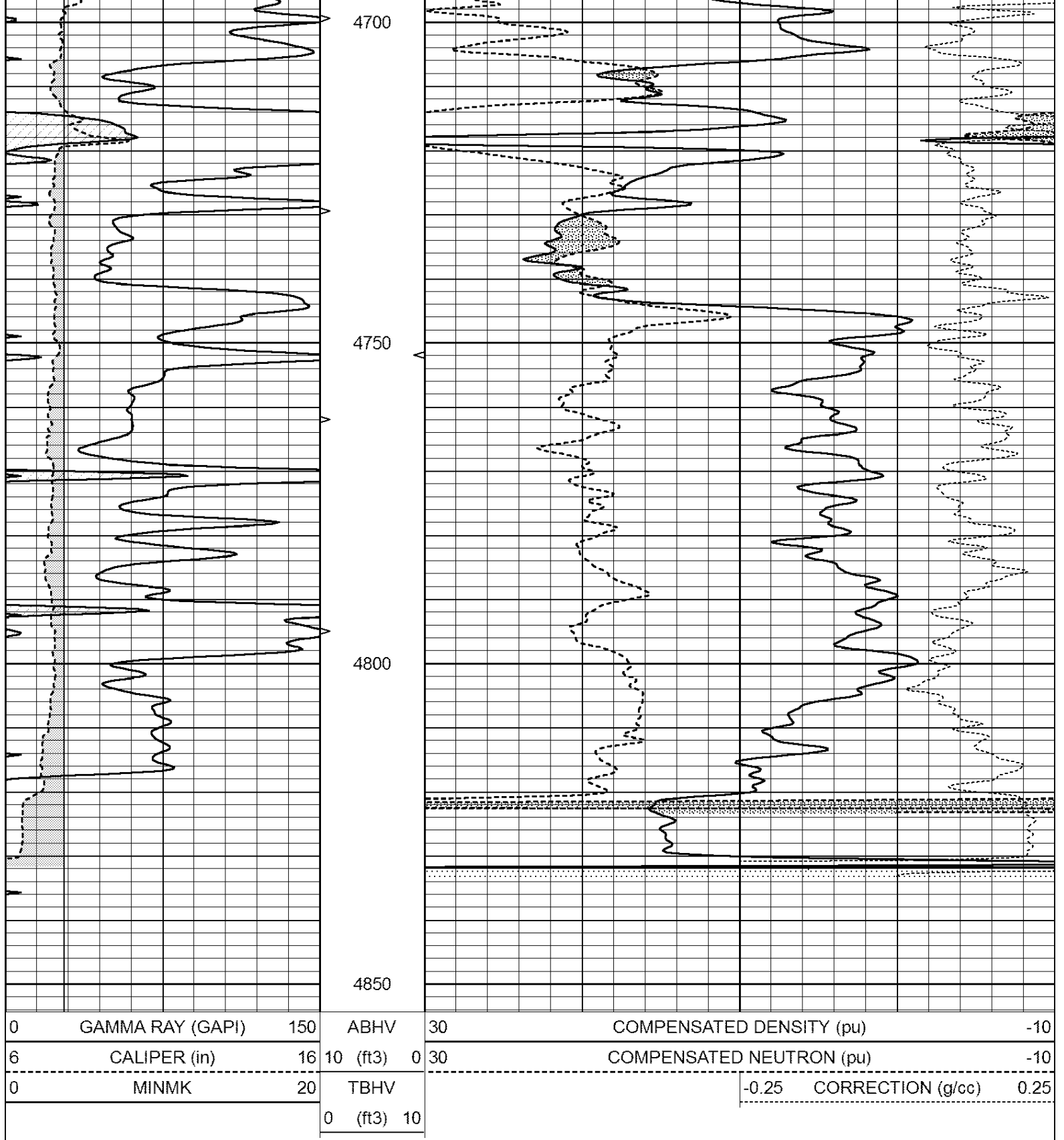
REPEAT SECTION

Database File: 30510ddn.db
 Dataset Pathname: pass2.1
 Presentation Format: den_neu
 Dataset Creation: Wed Jul 22 02:59:19 2015 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV
6	CALIPER (in)	16	10 (ft3) 0
0	MINMK	20	TBHV
			0 (ft3) 10

30	COMPENSATED DENSITY (pu)	-10
30	COMPENSATED NEUTRON (pu)	-10
-0.25	CORRECTION (g/cc)	0.25





Calibration Report

Database File: 30510ddn.db
Dataset Pathname: pass2.1
Dataset Creation: Wed Jul 22 02:59:19 2015 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model:	PROBE8-DILG
Surface Cal Performed:	Sun May 10 19:54:09 2015
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	0.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-12.000
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:				GEAR3-GEARHART				
Source / Verifier:				143 / 143				
Master Calibration Performed:				Sun May 10 19:53:41 2015				
Before Survey Verification Performed:								
After Survey Verification Performed:								

Master Calibration						
	Density		Far Detector	Near Detector		
Magnesium	1.710	g/cc	881.29	468.35	cps	
Aluminum	2.560	g/cc	210.51	354.56	cps	
Spine Angle = 79.00			Density/Spine Ratio = 0.583			
	Size		Reading			
Small Ring	8.00	in	4.29	V		
Large Ring	14.00	in	6.24	V		

Before Survey Verification								
Target			Measured					

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 May 10 18:59:16 2015					
Calibrator Value:		150.0		GAPI			
Background Reading:		0.0		cps			
Calibrator Reading:		276.0		cps			
Sensitivity:		0.8000		GAPI/cps			