

**NABORS****COMPLETION
& PRODUCTION
SERVICES CO.****COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company	MULL DRILLING COMPANY, INC.	Company	MULL DRILLING COMPANY, INC.
Well	#1-32 MISHLER "A"	Well	#1-32 MISHLER "A"
Field	WILDCAT	Field	WILDCAT
County	NESS	County	NESS
State	KANSAS	State	KANSAS
Location:	2095' FSL & 1004' FEL	API # : 15-135-25735-0000	Other Services
	SEC 32 TWP 16S RGE 23W		DIL
Permanent Datum	GROUND LEVEL	Elevation	2466
Log Measured From	KELLY BUSHING 9' A.G.L.		
Drilling Measured From	KELLY BUSHING	Elevation	K.B. 2475 D.F. 2473 G.L. 2466
Date	2/9/14		
Run Number	ONE		
Depth Driller	4600		
Depth Logger	4601		
Bottom Logged Interval	4577		
Top Log Interval	3600		
Casing Driller	8 5/8"@228'		
Casing Logger	226		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4,500 PPM	
Density / Viscosity	9.3/47		
pH / Fluid Loss	9.5/7.2		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	1.10@60F		
Rmf @ Meas. Temp	.825@60F		
Rmc @ Meas. Temp	1.32@60F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.545@121F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	9:45 P.M.		
Maximum Recorded Temperature	121F		
Equipment Number	4854		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
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, KANSAS (785) 628-6395
DIRECTIONS

RANSOM, KS. (JUNCTION OF HWY 4 & 283) 1E. ON HWY 4 TO "RD. T", 1S. TO TANK BATTERY, W. INTO

**NABORS****COMPLETION
& PRODUCTION****MAIN SECTION**

Database File:

22249pe.db

Dataset Pathname:

pass3.10

Presentation Format:

ldt_neu

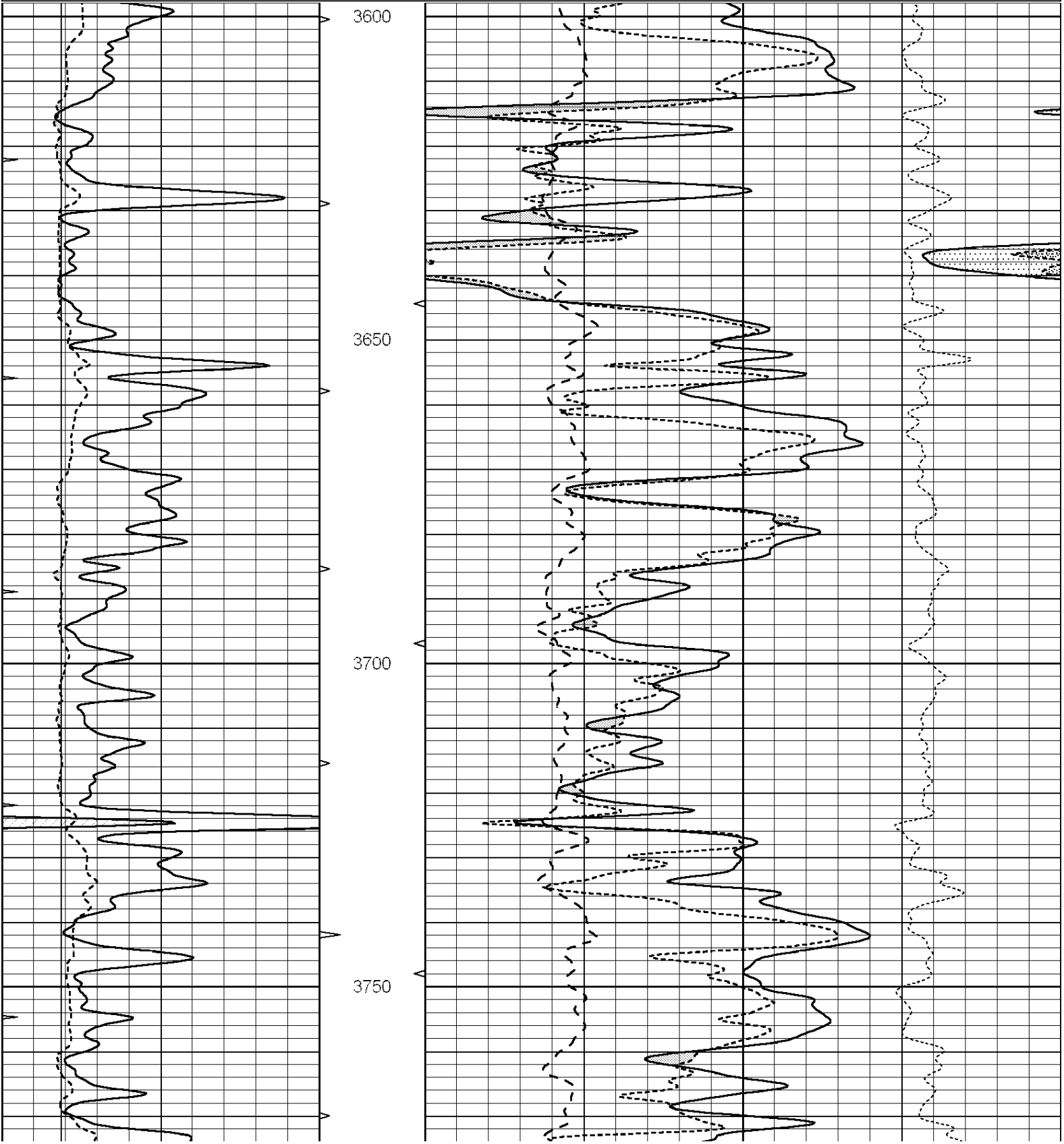
Dataset Creation:

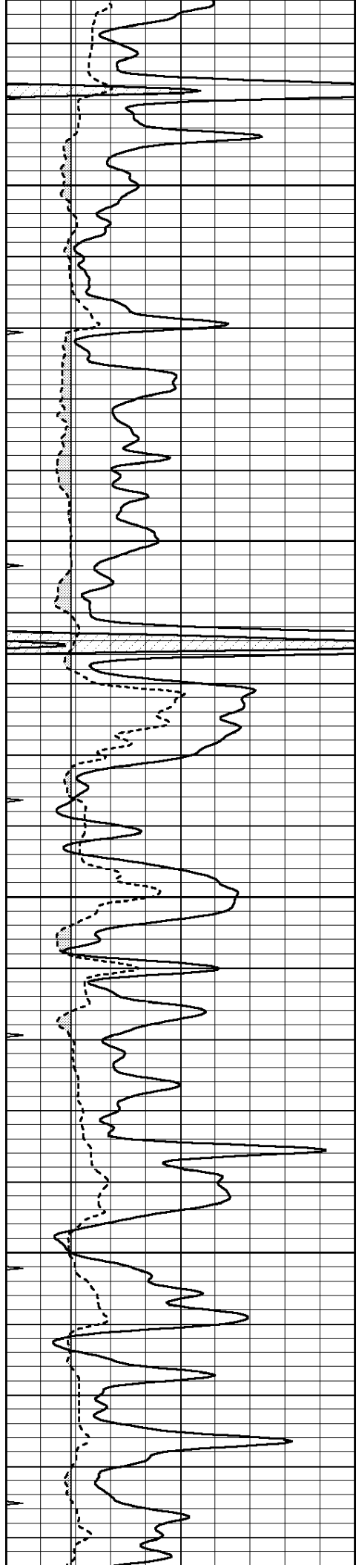
Sun Feb 09 23:06:26 2014 by Calc SOC 120430

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	PE	10	-0.25	CORRECTION (g/cc)	0.25	
			0 (ft3)	10						



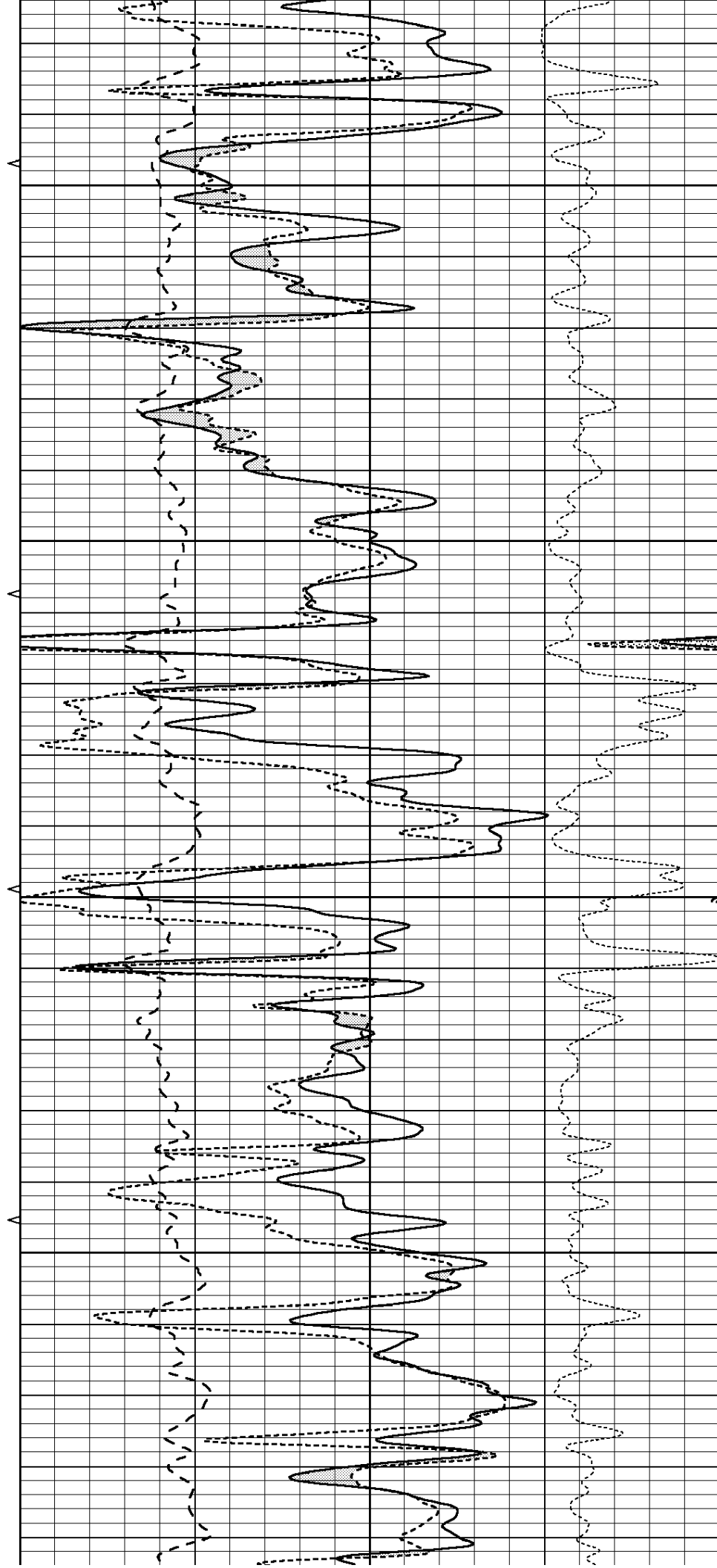


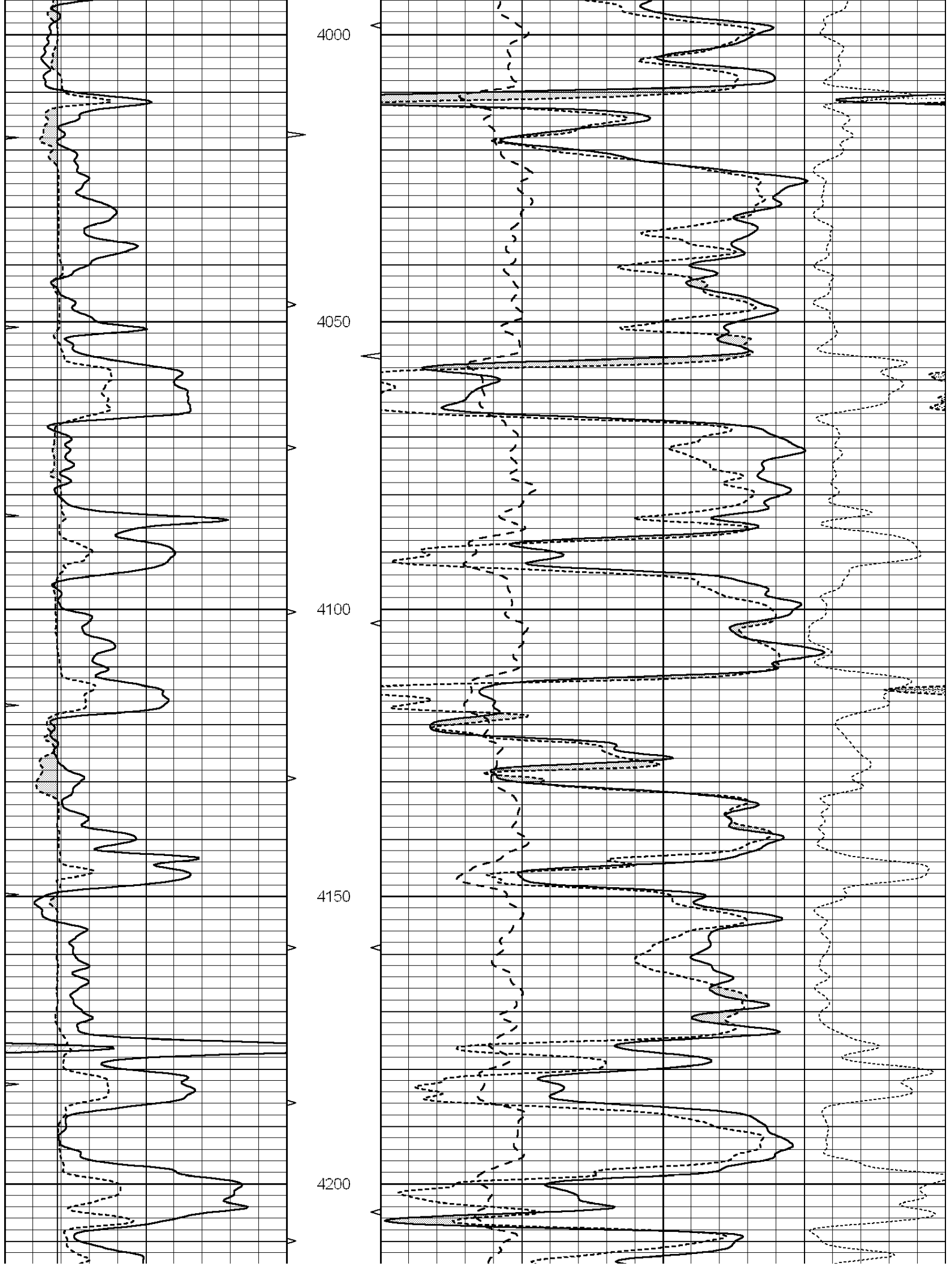
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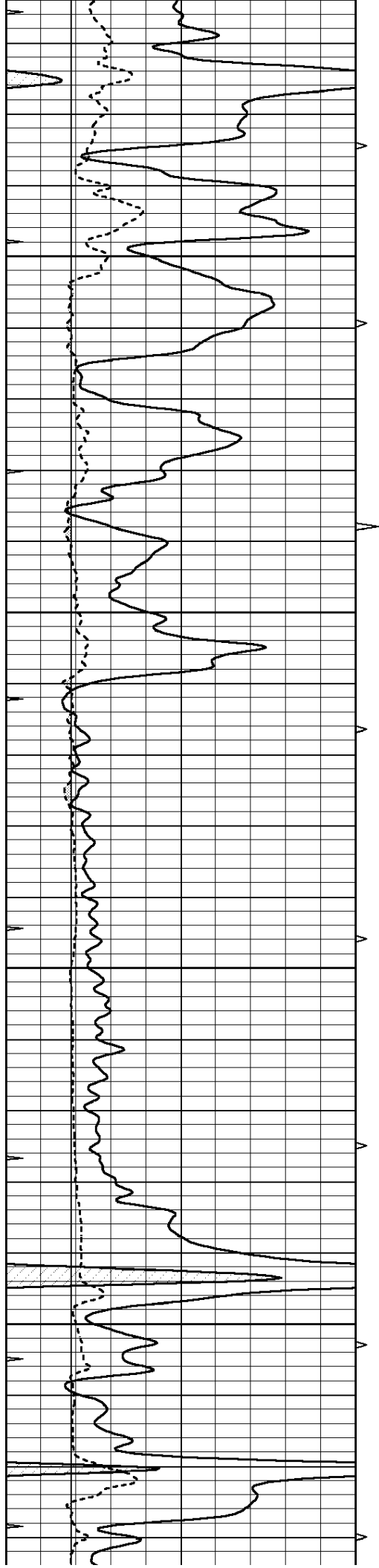
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3950





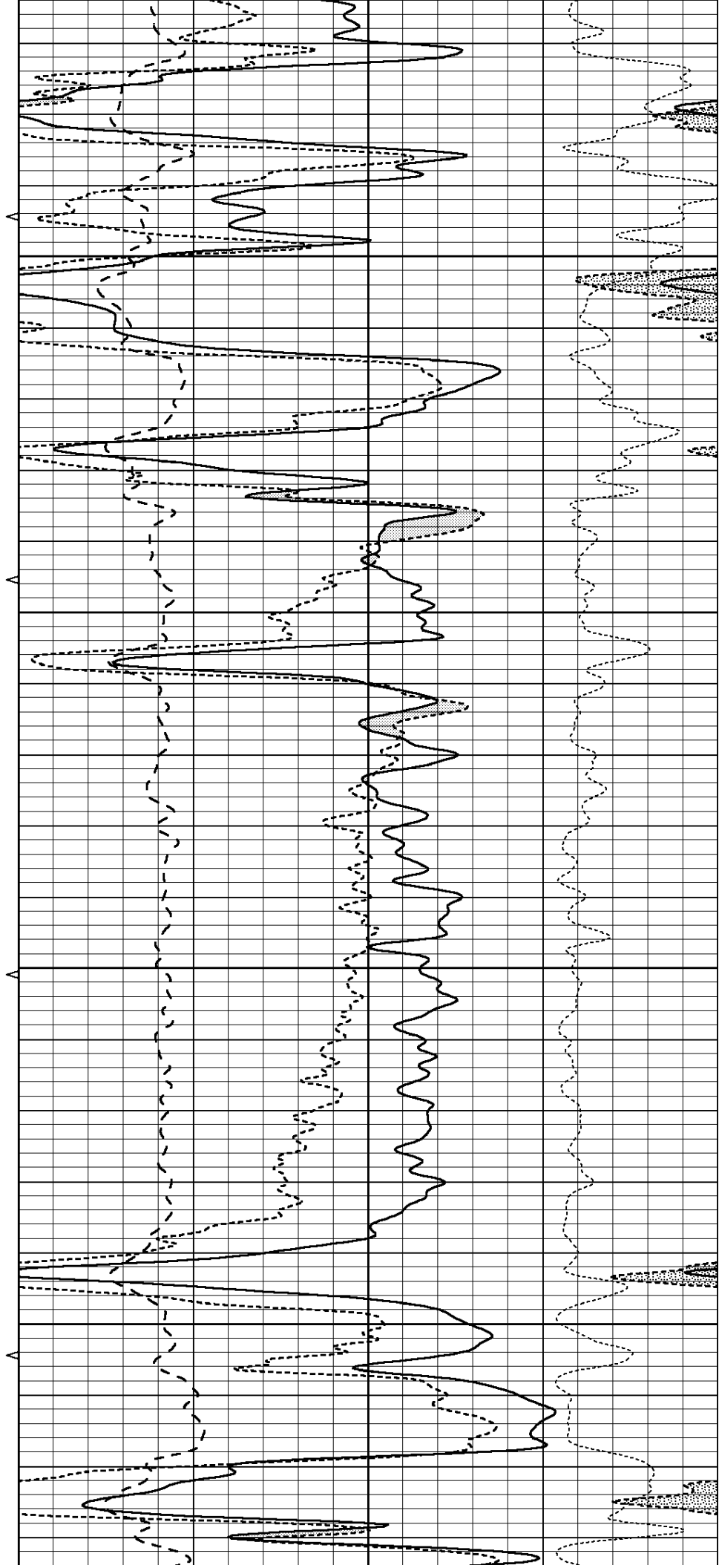


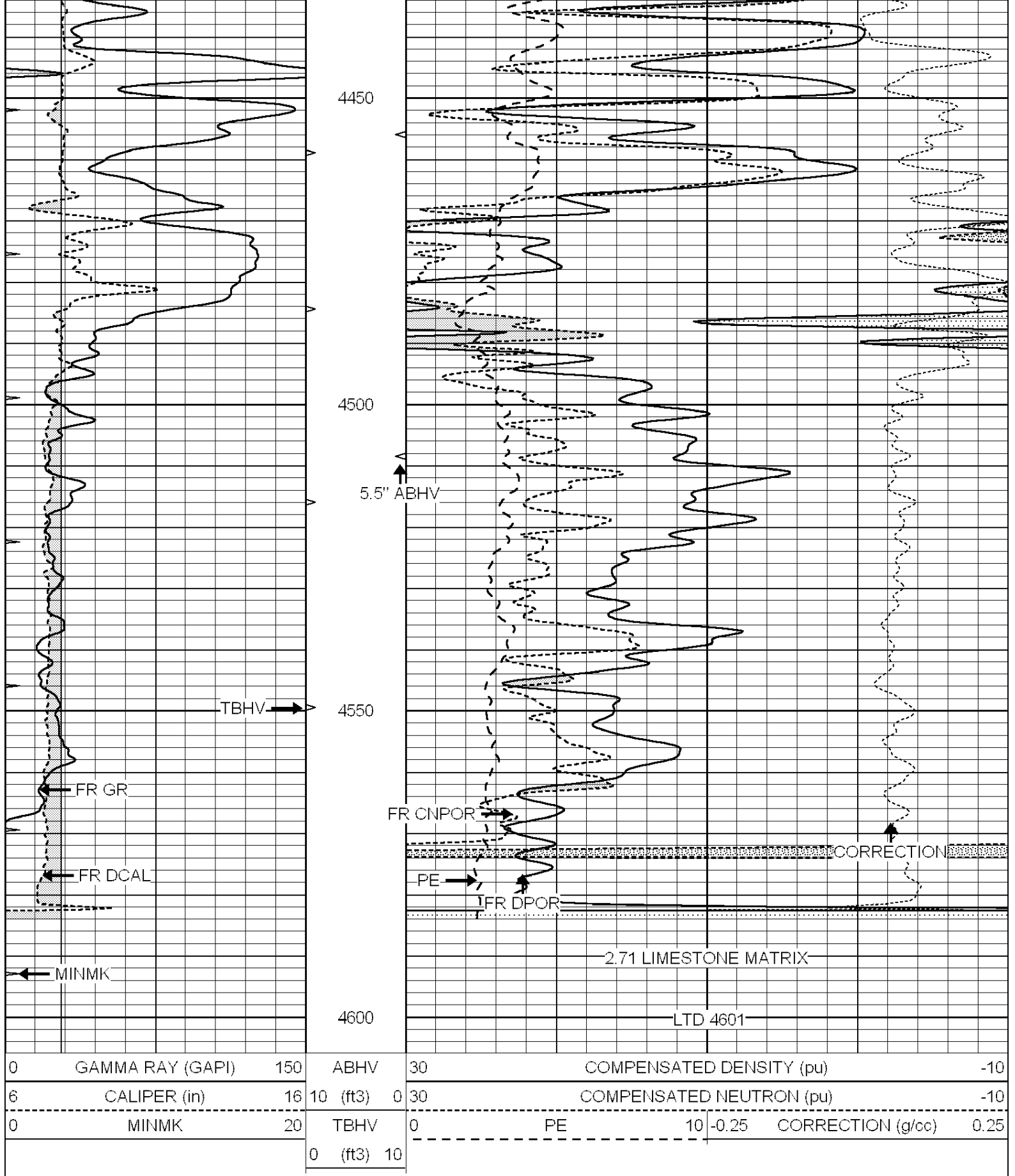
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4300

4350

4400



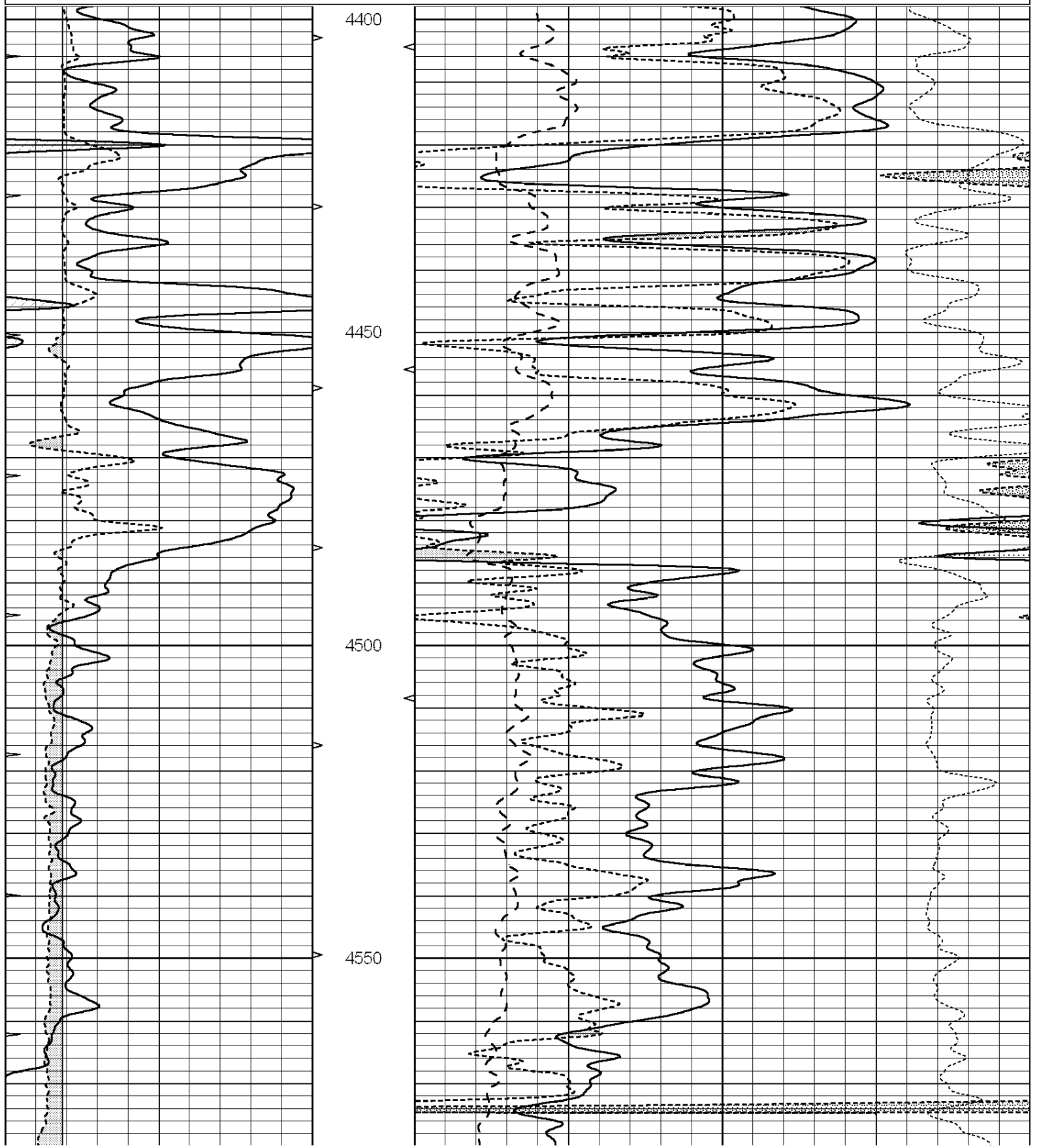


NABORS
COMPLETION
& PRODUCTION
SERVICES CO.

REPEAT SECTION

Database File: 22249pe.db
Dataset Pathname: pass2.6
Presentation Format: ldt_neu
Dataset Creation: Sun Feb 09 22:07:44 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	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3) 10			



Calibration Report									
Database File:		22249pe.db							
Dataset Pathname:		pass3.10							
Dataset Creation:		Sun Feb 09 23:06:26 2014 by Calc SOC 120430							
Dual Induction Calibration Report									
Serial-Model:				PROBE9-DILG					
Surface Cal Performed:				Wed Feb 05 09:18:43 2014					
Downhole Cal Performed:				Mon Jul 28 12:02:56 2008					
After Survey Verification Performed:				Mon Jul 28 12:02:56 2008					
Surface Calibration									
		Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b	
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	650.000	-16.000	
Medium	0.039	0.728	V	0.000	464.000	mmho/m	660.000	-24.000	
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256	
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102	
Downhole Calibration									
		Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'	
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000	
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000	
LL3		7.500	V		1400.000	Ohm-m			
		0.000	V		20.000	Ohm-m			
		-7.200	V		4000.000	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			
Litho Density Calibration Report									
		Serial: 003N Model: PRB							

	Background	Magnesium	Aluminum	Sandstone	
Window 1	2042.6	12312.8	4225.8	13758.4	cps
Window 2	1855.8	10134.7	3624.2	11113.1	cps
Window 3	1639.4	6760.2	2716.3	7260.3	cps
Window 4	466.4	469.2	466.1	476.5	cps
Long Space	0.0	8278.9	1768.4	9257.4	cps
Short Space	2.2	2377.3	1544.1	2574.2	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	

Rib Angle	: 44.4	Rib Slope	: 0.979	Density/Spine Ratio	: 0.549
Spine Angle	: 74.4	Spine Slope	: 3.577	Spine Intercept	: -18.8

Before Survey Verification		Performed Wed Dec 31 18:00:00 1969			
Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

After Survey Verification		Performed Wed Dec 31 18:00:00 1969			
Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

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Compensated Neutron Calibration Report					
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Serial Number:		070808			
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					
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Serial Number:		070559			
Tool Model:		OPEN_GR			

Performed: Thu Dec 19 09:01:02 2013

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps

Calibrator Reading: 1.0 cps

Sensitivity: 0.2800 GAPI/cps