



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

COMPENSATED DENSITY / NEUTRON LOG

Company		RITCHIE EXPLORATION, INC.	
Well		#1 JOSEPH - HESS	
Field		ANTELOPE RIDGE	
County		GOVE	
State		KANSAS	
Company		RITCHIE EXPLORATION, INC.	
Well		#1 JOSEPH - HESS	
Field		ANTELOPE RIDGE	
County		GOVE	
State		KANSAS	
Location:		API # : 15-063-22123-0000	
Permanent Datum		GROUND LEVEL	
Log Measured From		KELLY BUSHING 8' A.G.L.	
Drilling Measured From		KELLY BUSHING	
SEC 30 TWP 13S RGE 31W		Elevation	
1700' FSL & 175' FEL		K.B. 2877	
SE - NE - SE		D.F. 2875	
DIL		G.L. 2869	
Date		8/3/13	
Run Number		ONE	
Depth Driller		4650	
Depth Logger		4648	
Bottom Logged Interval		4624	
Top Log Interval		3500	
Casing Driller		8 5/8"@235'	
Casing Logger		235	
Bit Size		7 7/8"	
Type Fluid in Hole		CHEMICAL MUD	
Density / Viscosity		9.3/75	
pH / Fluid Loss		8.5/16.8	
Source of Sample		FLOWLINE	
Rim @ Meas. Temp		.700@80F	
Rmf @ Meas. Temp		.525@80F	
Rmc @ Meas. Temp		.840@80F	
Source of Rmf / Rmc		MEASUREMENT	
Rim @ BHT		.459@122F	
Time Circulation Stopped		4.5 HOURS	
Time Logger on Bottom		6:00 A.M.	
Maximum Recorded Temperature		122F	
Equipment Number		4854	
Location		HAYS, KANSAS	
Recorded By		JEFF LUEBBERS	
Witnessed By		ADAM ELDANI	

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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

OAKLEY, KS. 16S. ON HWY 83 TO "NAVAJO RD.", 3E. PAST 2 CATTLE GUARDS, 3/4N., W. INTO



**COMPLETION
& PRODUCTION**

MAIN SECTION

Database File:

011198ddn.db

Dataset Pathname:

pass3.8

Presentation Format:

den_neu

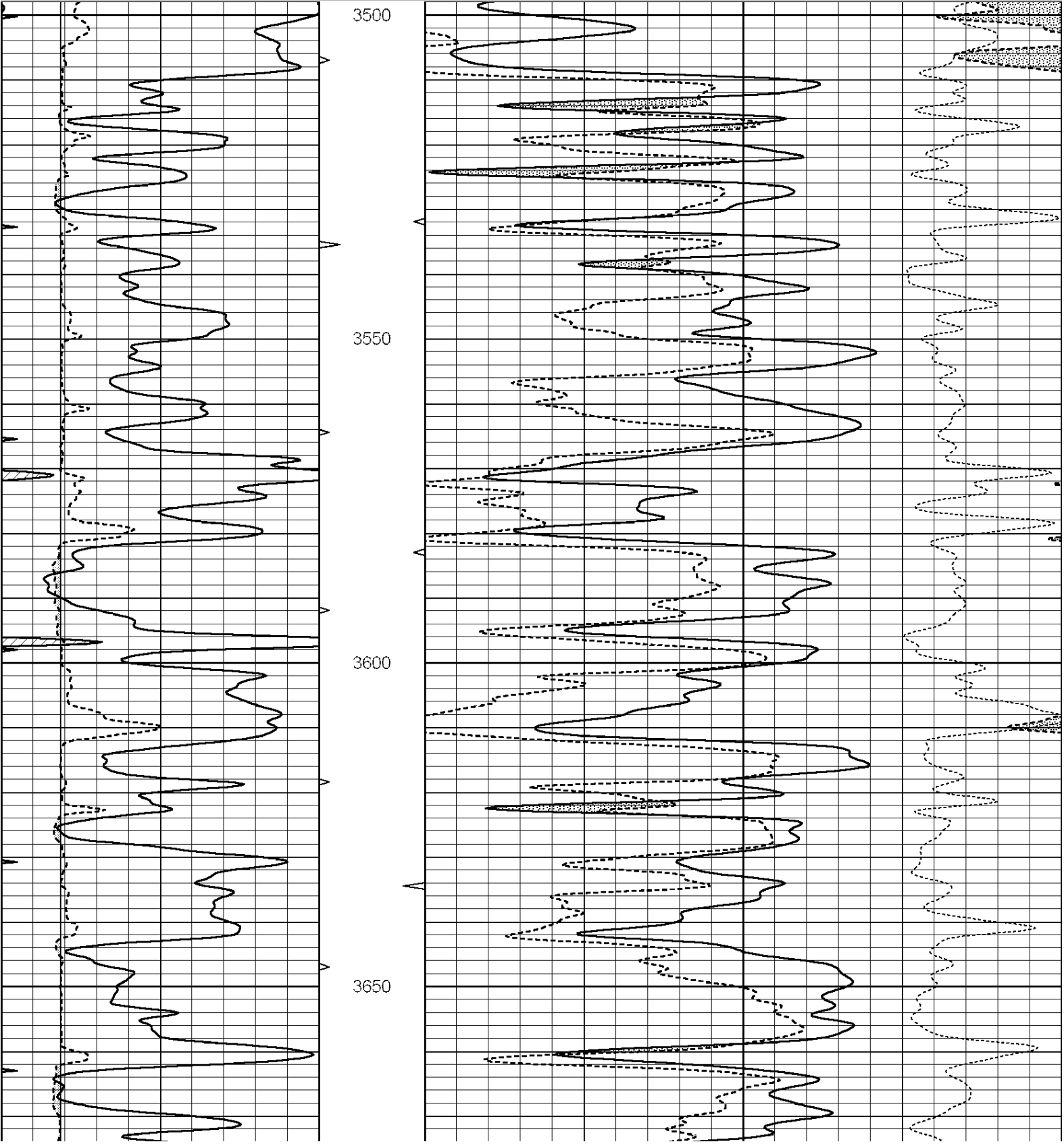
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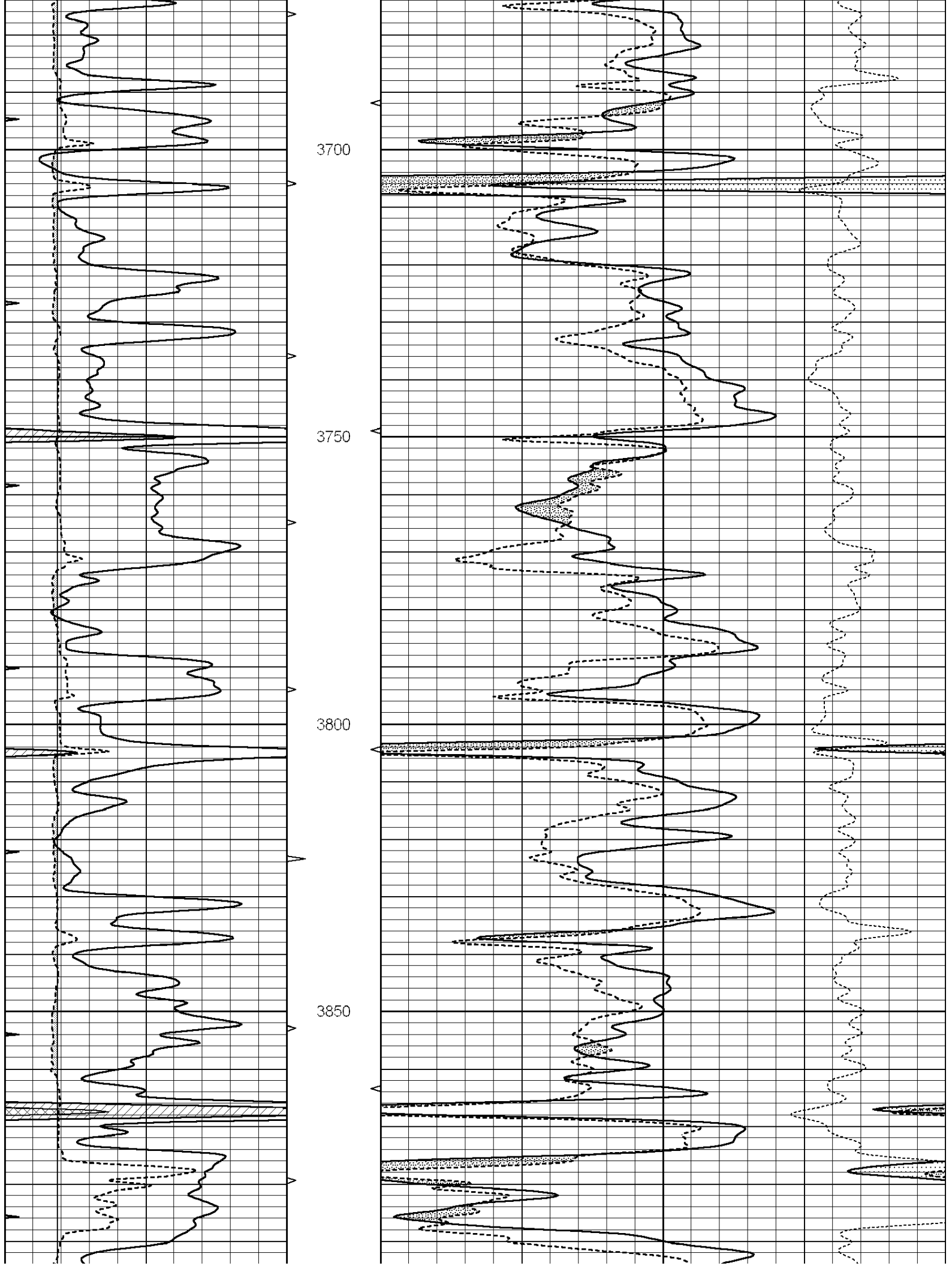
Sun Aug 04 07:36:45 2013

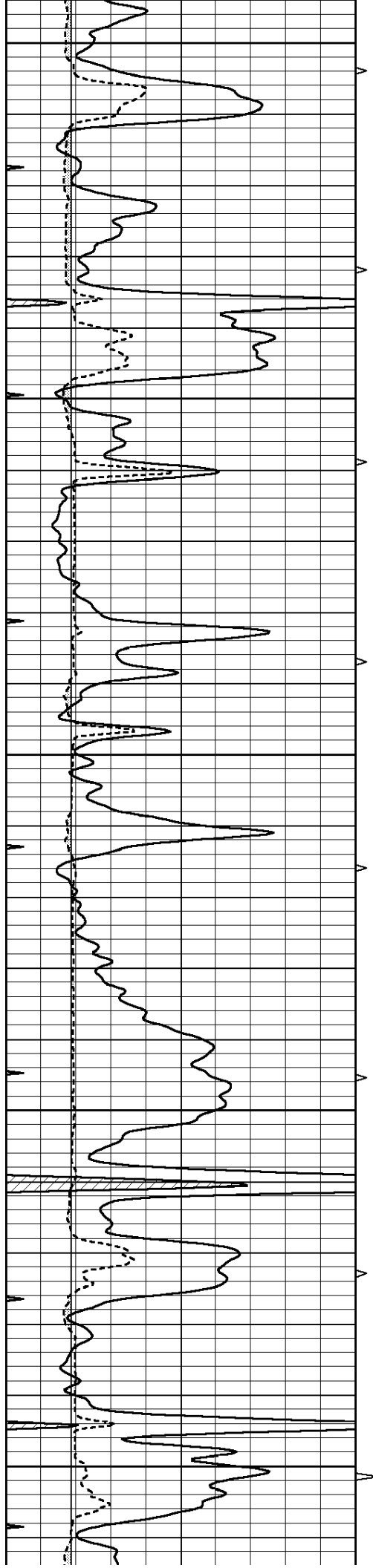
Charted by:

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		







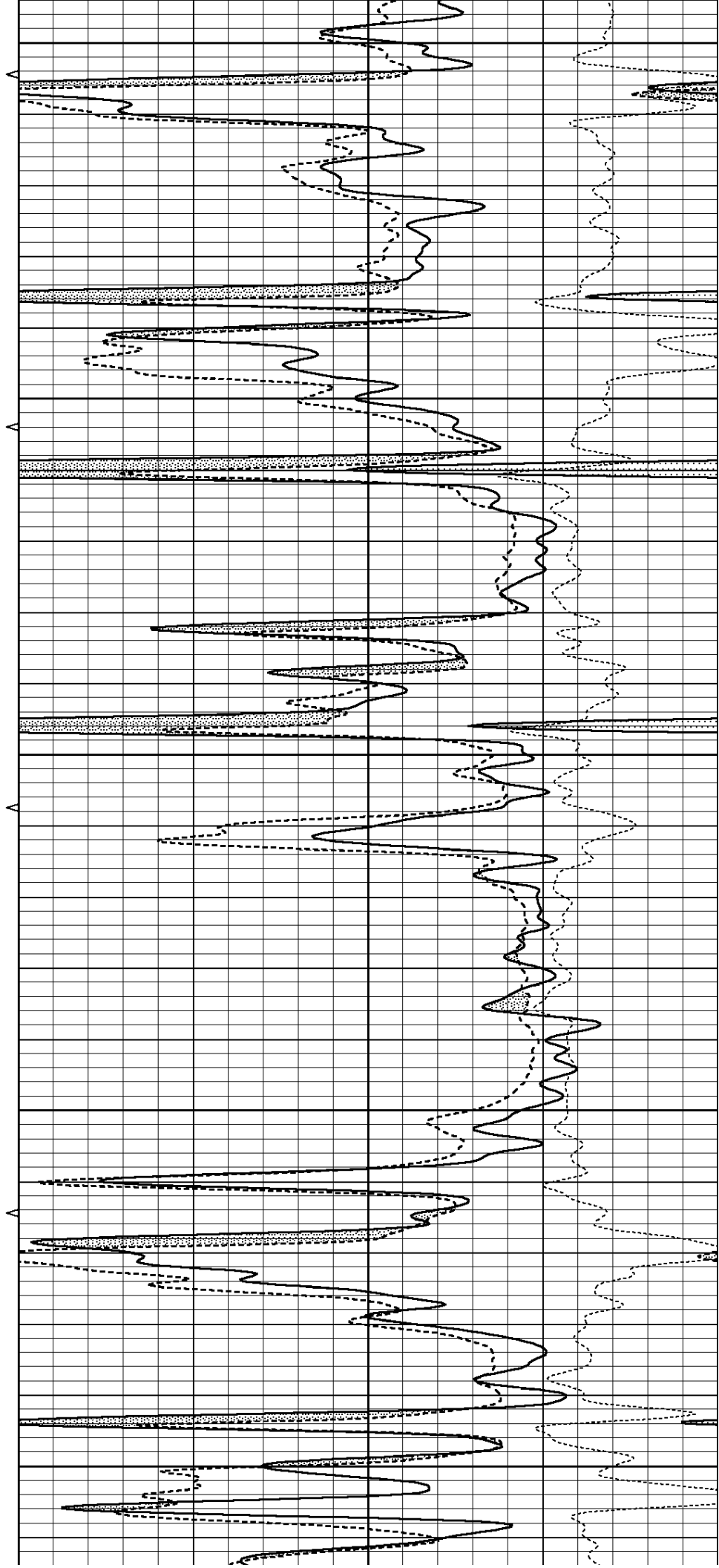
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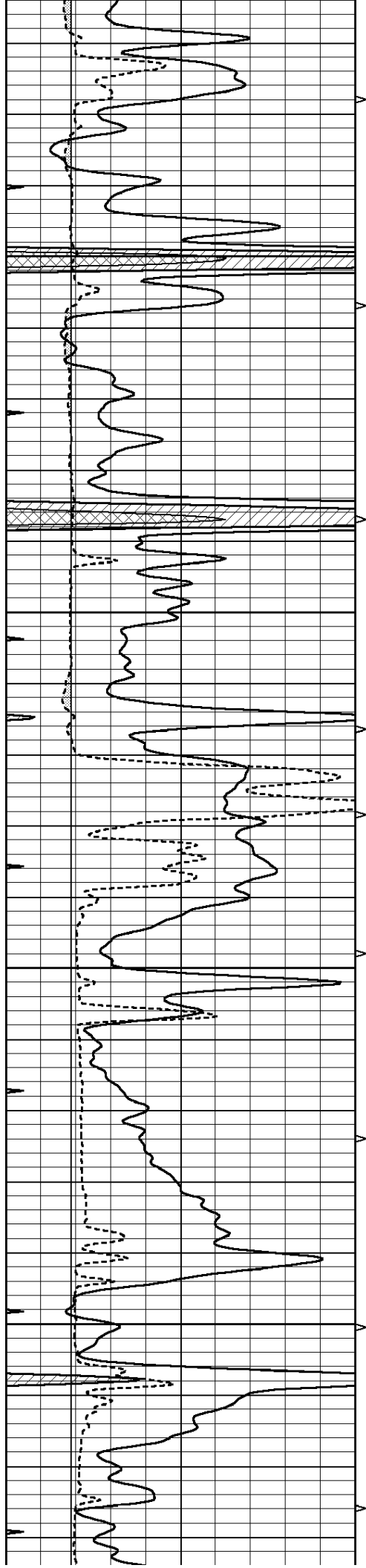
3950

4000

4050

4100



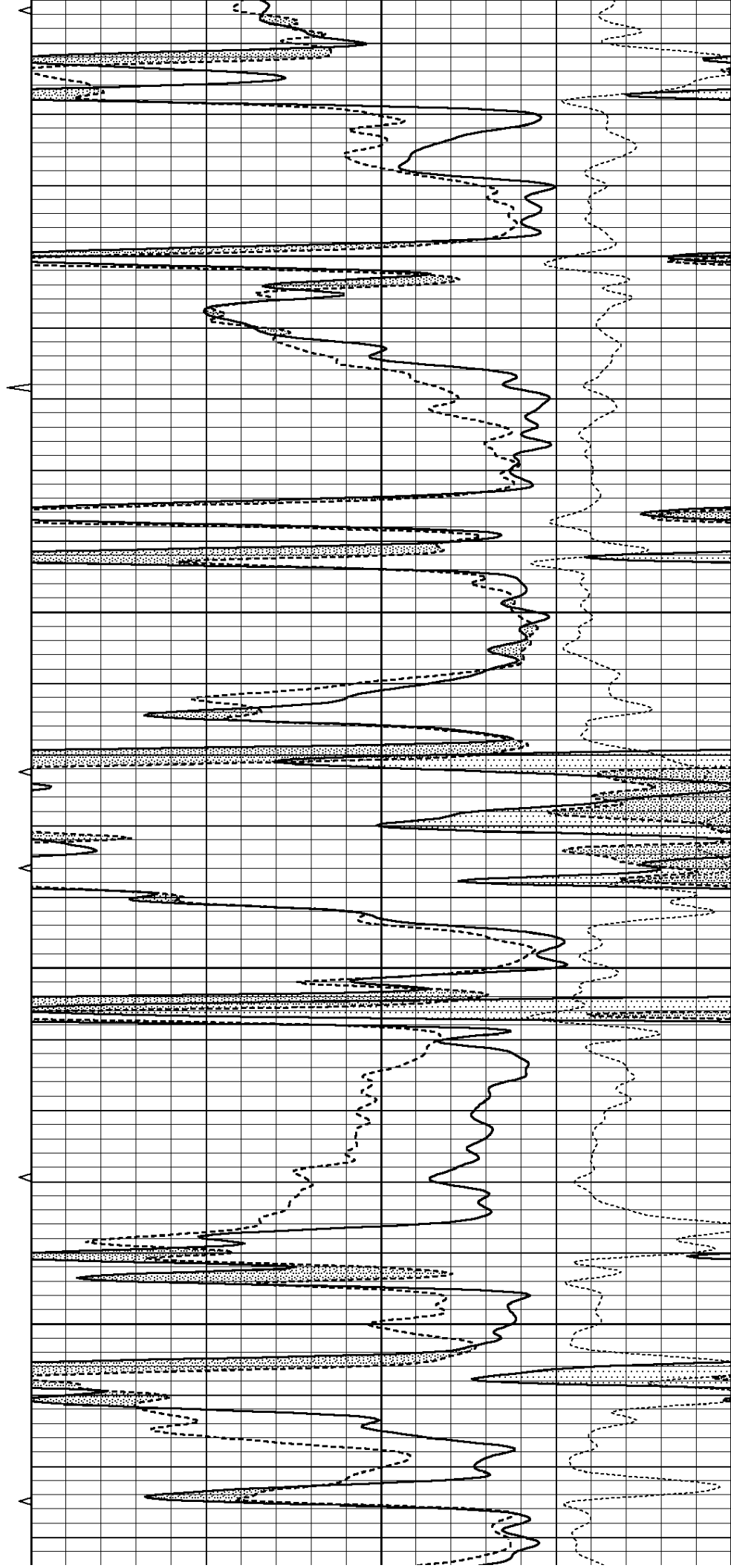


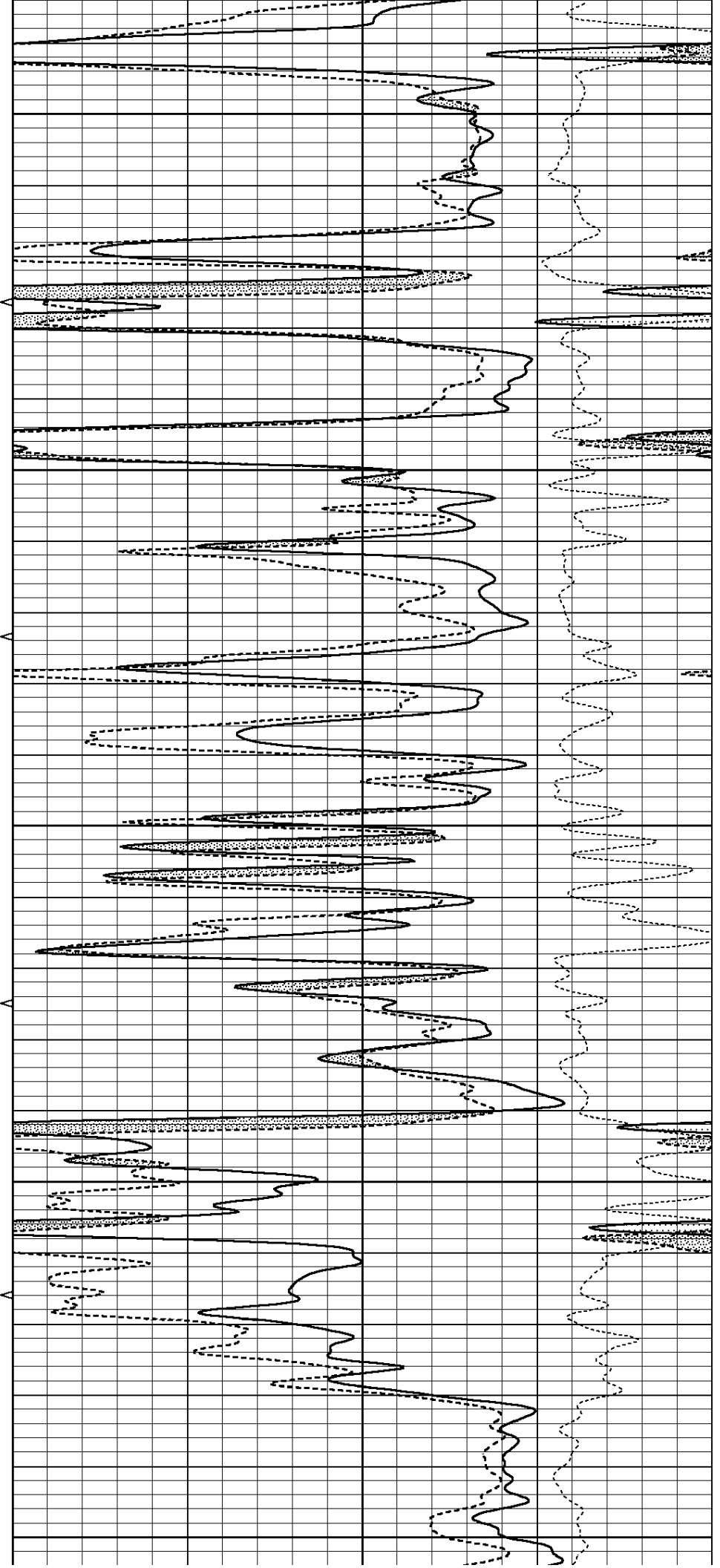
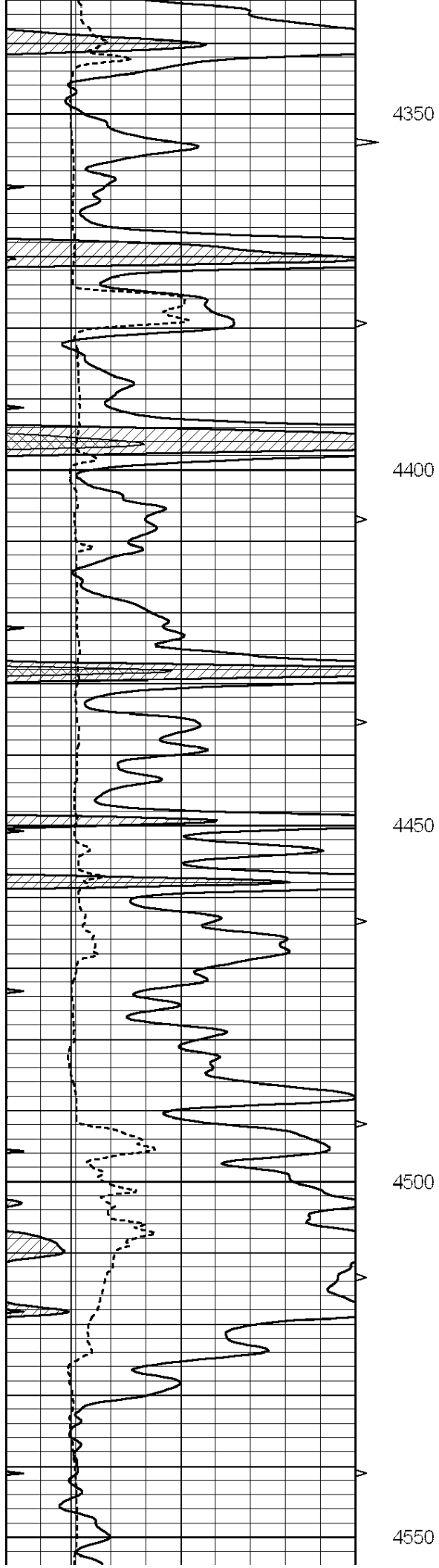
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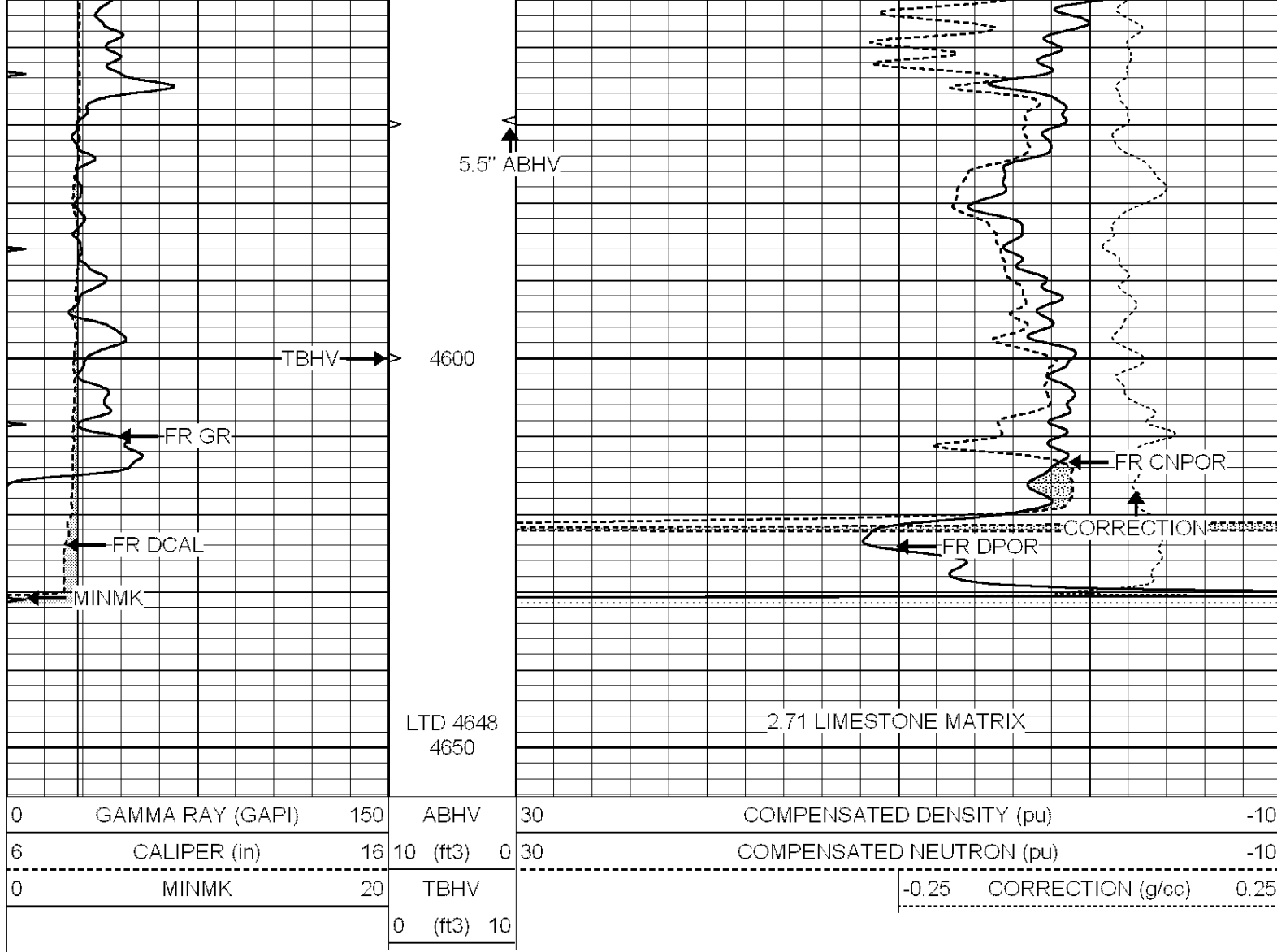
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4250

4300



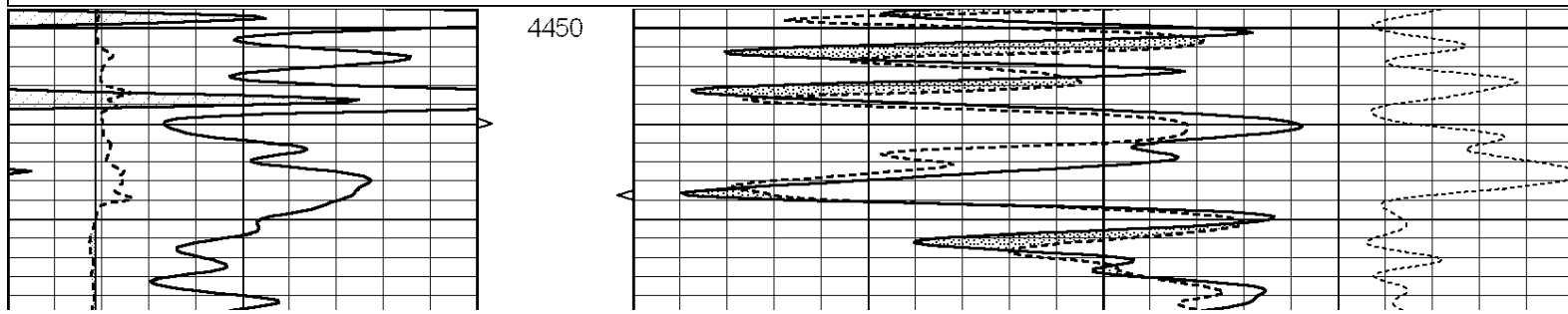


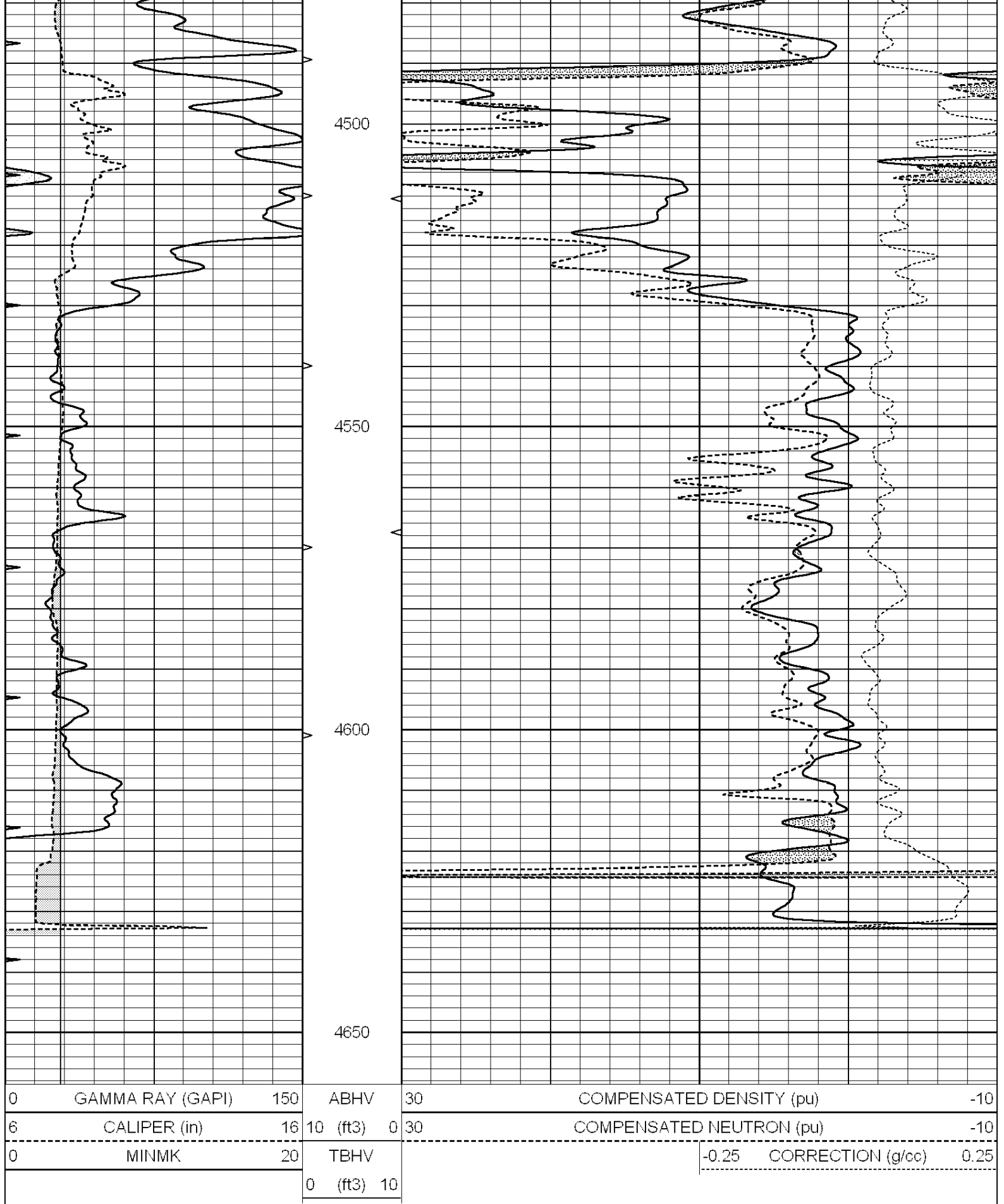


REPEAT SECTION

Database File: 011198ddn.db
 Dataset Pathname: pass2.7
 Presentation Format: den_neu
 Dataset Creation: Sun Aug 04 07:42:58 2013
 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: 011198ddn.db
 Dataset Pathname: pass3.8
 Dataset Creation: Sun Aug 04 07:36:45 2013

Dual Induction Calibration Report								
Serial-Model:			PROBE9-DILG					
Surface Cal Performed:			Thu Jul 11 13:14:55 2013					
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	621.923	-3.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	640.000	-9.000
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: 004N			Model: PRB					
Master Calibration			Performed Mon Jun 03 09:36:56 2013					
	Background	Magnesium		Aluminum		Sandstone		
Window 1	1417.6	10391.4		3464.6		11537.5		cps
Window 2	1295.0	8959.7		3050.1		9816.4		cps
Window 3	1105.1	5464.2		2051.0		5838.8		cps
Window 4	315.0	317.7		312.9		319.8		cps
Long Space	0.0	7664.6		1755.0		8521.3		cps
Short Space	1.8	1582.4		1040.8		1699.4		cps
Rho		1.7100		2.5900		1.3800		g/cc
Pe		0.0000		2.5700		1.5500		
Rib Angle	: 44.1	Rib Slope	: 0.970	Density/Spine Ratio			: 0.574	
Spine Angle	: 74.1	Spine Slope	: 3.519	Spine Intercept			: -17.0	
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

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

Serial Number:	070559	
Tool Model:	OPEN_GR	
Performed:	Wed Jun 12 18:25:42 2013	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.3500	GAPI/cps