



SUPERIOR
Hays,
Kansas

COMPENSATED
DENSITY / NEUTRON
PE LOG

Company		MULL DRILLING COMPANY, INC.	
Well		#1-17 WIERMAN 'B'	
Field		WILDCAT	
County		NESS	
State		KANSAS	
Location:		API # : 15-135-25210-0000	
Permanent Datum		GROUND LEVEL	
Log Measured From		KELLY BUSHING 5' A.G.L.	
Drilling Measured From		KELLY BUSHING	
SEC 17 TWP 16S RGE 22W		Elevation	
1021' FSL & 401' FWL		DIL/MEL	
		SONIC	
2444		K.B. 2449	
		D.F. 2447	
		G.L. 2444	
Date	2/22/11		
Run Number	ONE		
Depth Driller	4530		
Depth Logger	4530		
Bottom Logged Interval	4506		
Top Log Interval	3700		
Casing Driller	8 5/8" @ 227'		
Casing Logger	224		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4,500 PPM	
Density / Viscosity	9.0/69		
pH / Fluid Loss	10.0/8.4		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.950 @ 65F		
Rmf @ Meas. Temp	.713 @ 65F		
Rmc @ Meas. Temp	1.14 @ 65F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.510 @ 121F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	1:00 P.M.		
Maximum Recorded Temperature	121F		
Equipment Number	0836		
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 SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395
DIRECTIONS
BROWNELL, KS. 2W. ON HWY 4 TO "RD. Y", 1N., E. INTO

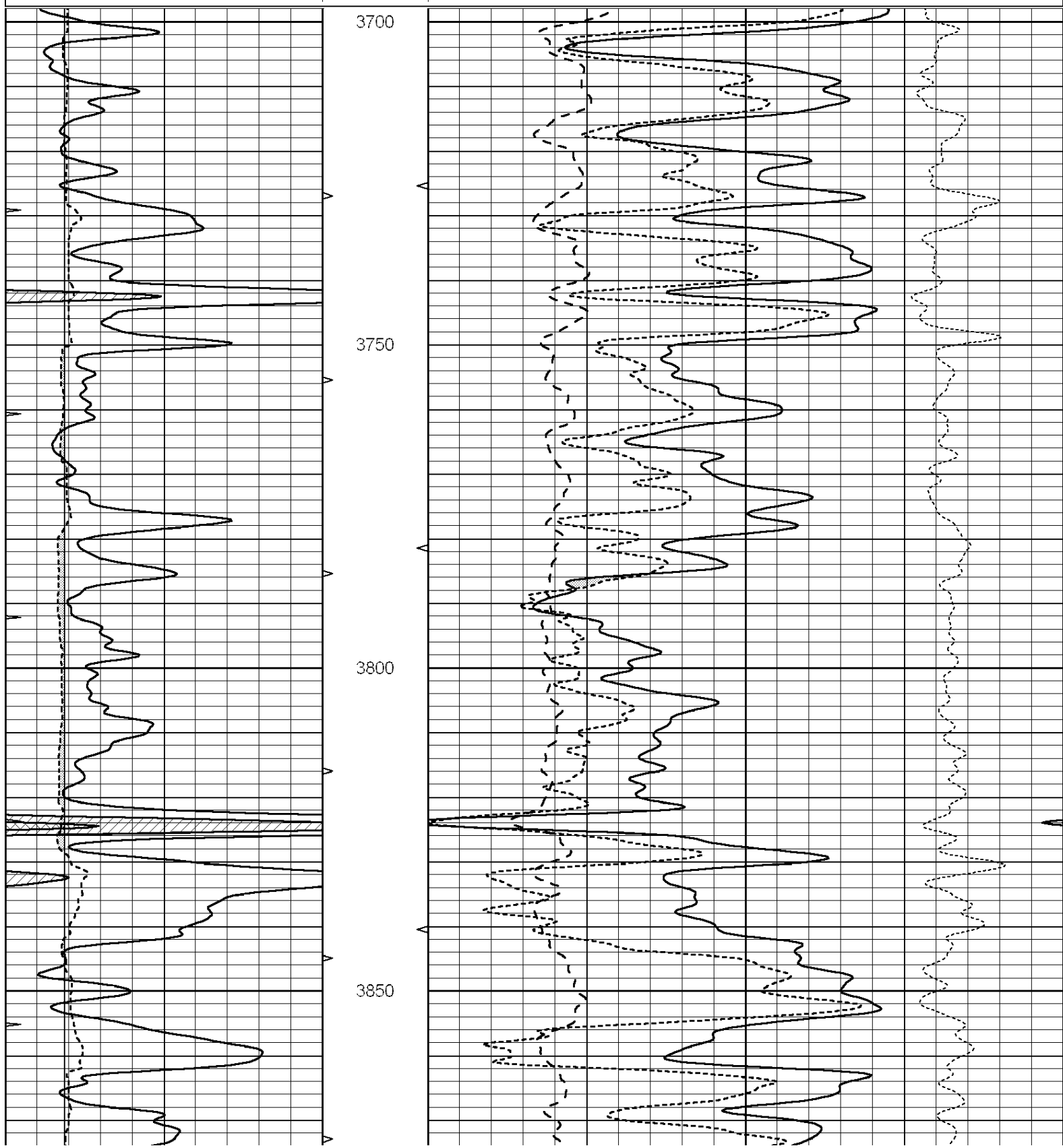


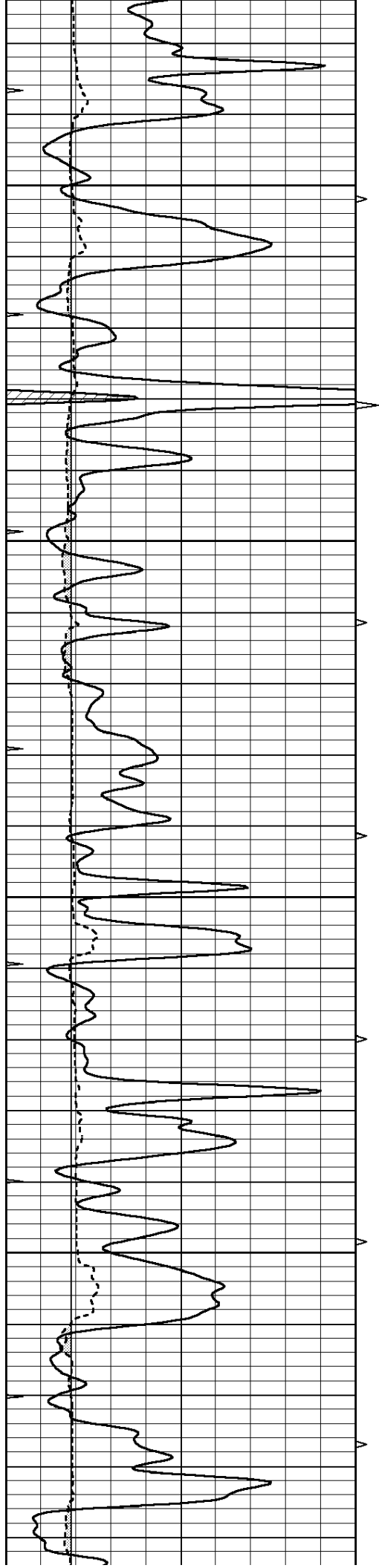
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MAIN SECTION

Database File: 006294pe.db
 Dataset Pathname: pass3.2
 Presentation Format: ldt_neu
 Dataset Creation: Tue Feb 22 13:56:56 2011 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	PE	10	-0.25	CORRECTION (g/cc)	0.25	
			0 (ft3)	10						



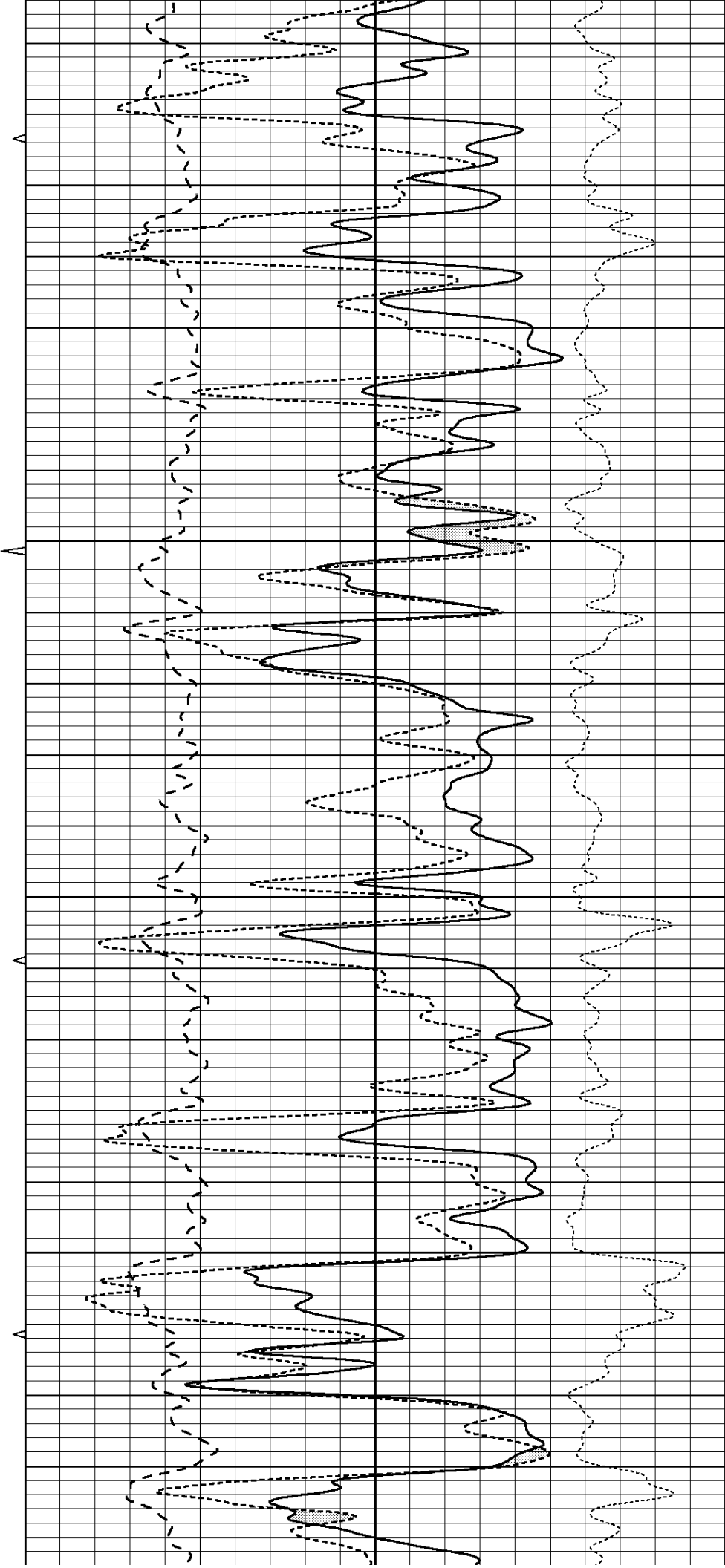


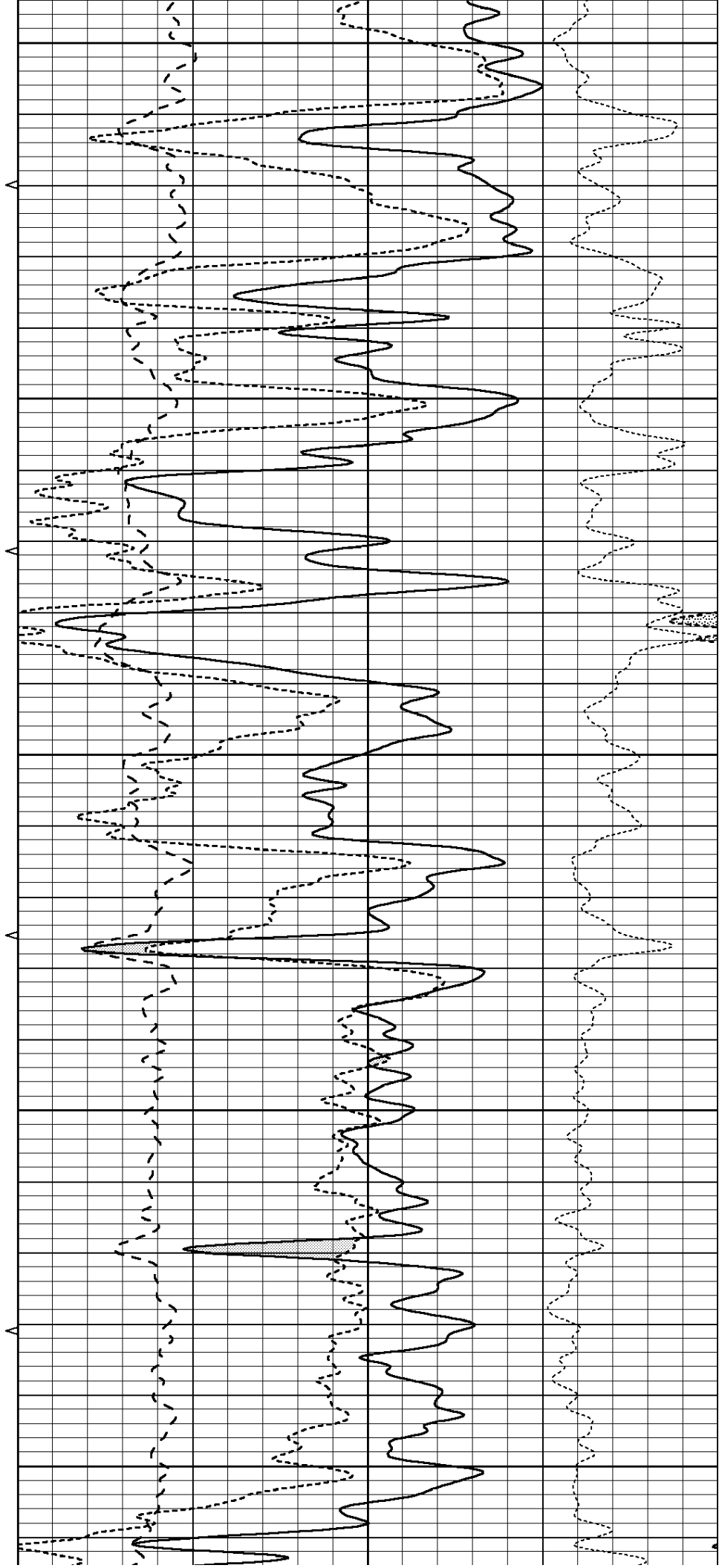
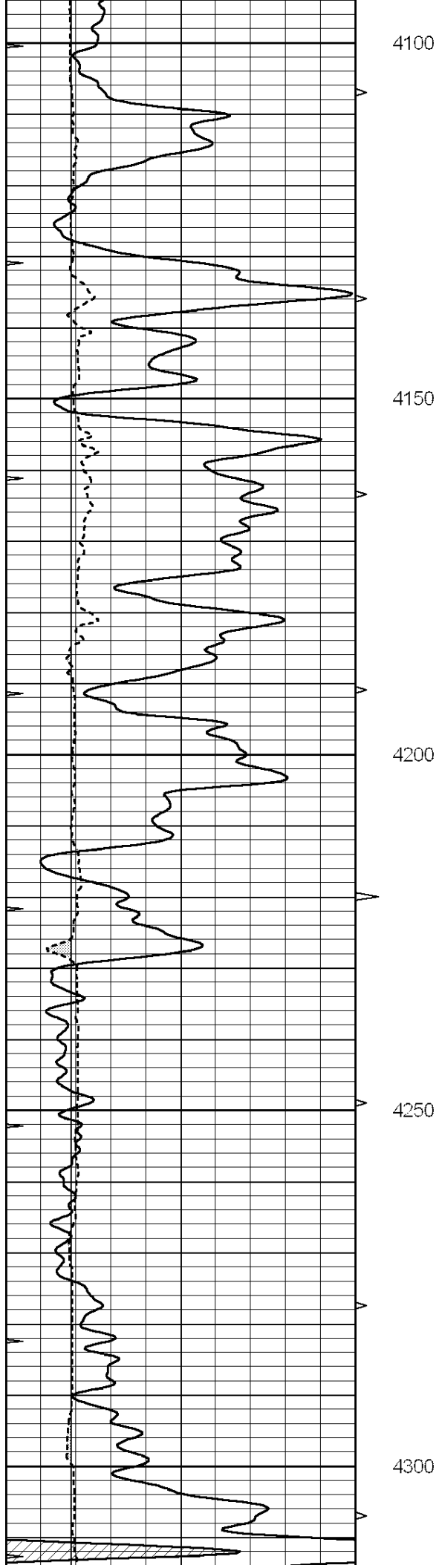
3900

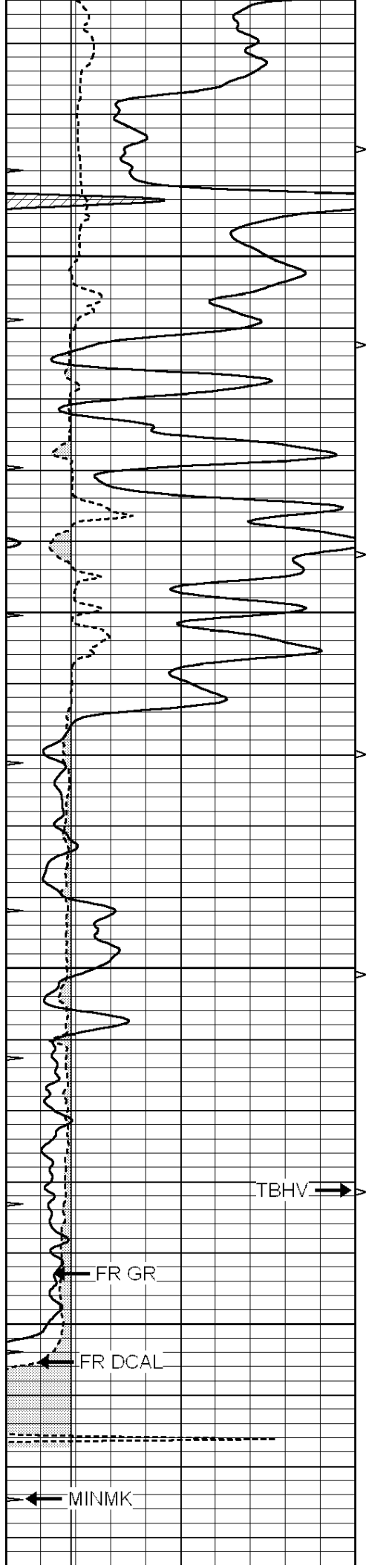
3950

4000

4050







4350

4400

4450

4500

LTD 4530

5.5" ABHV

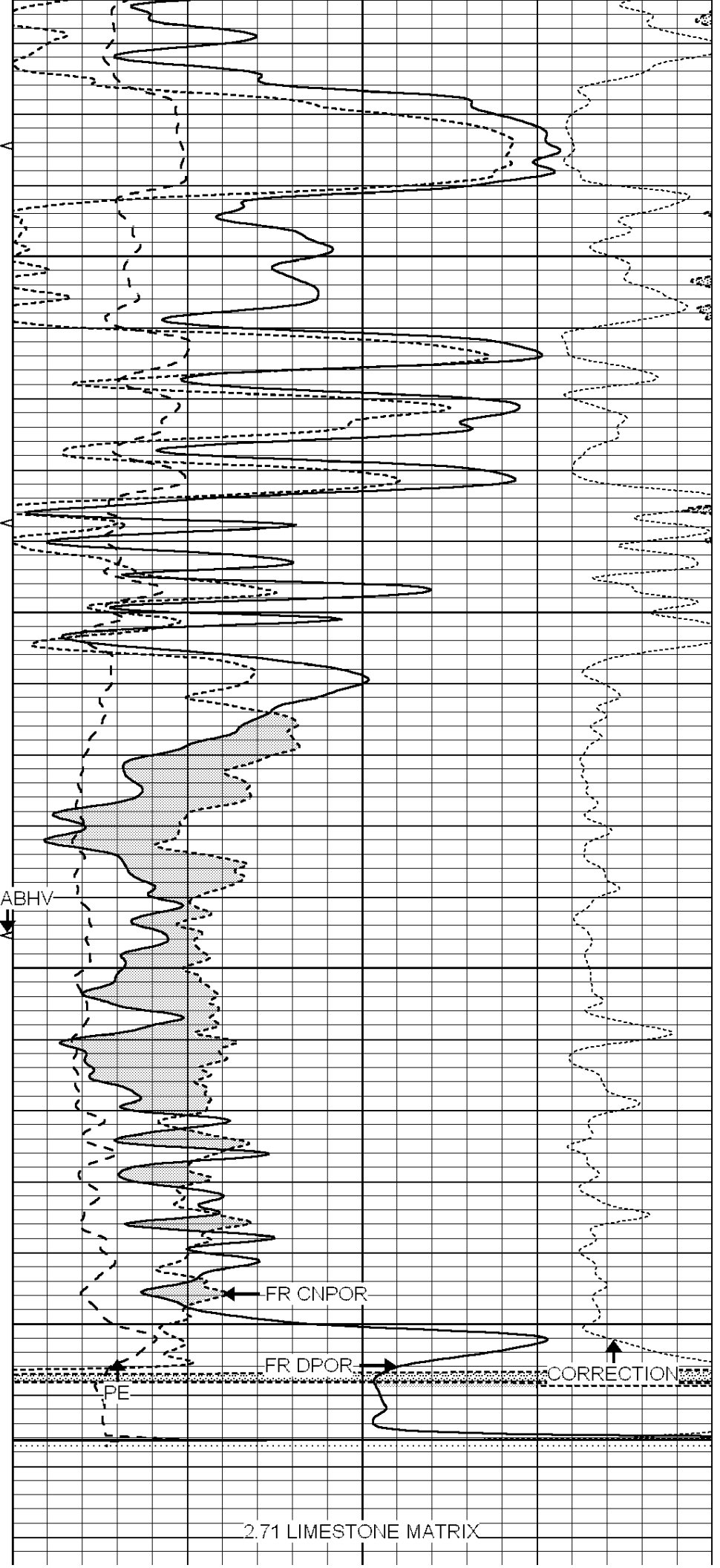


TBHV →

FR GR

FR DCAL

MINMK



FR CNPOR

FR DPOR

CORRECTION

PE

2.71 LIMESTONE MATRIX

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			

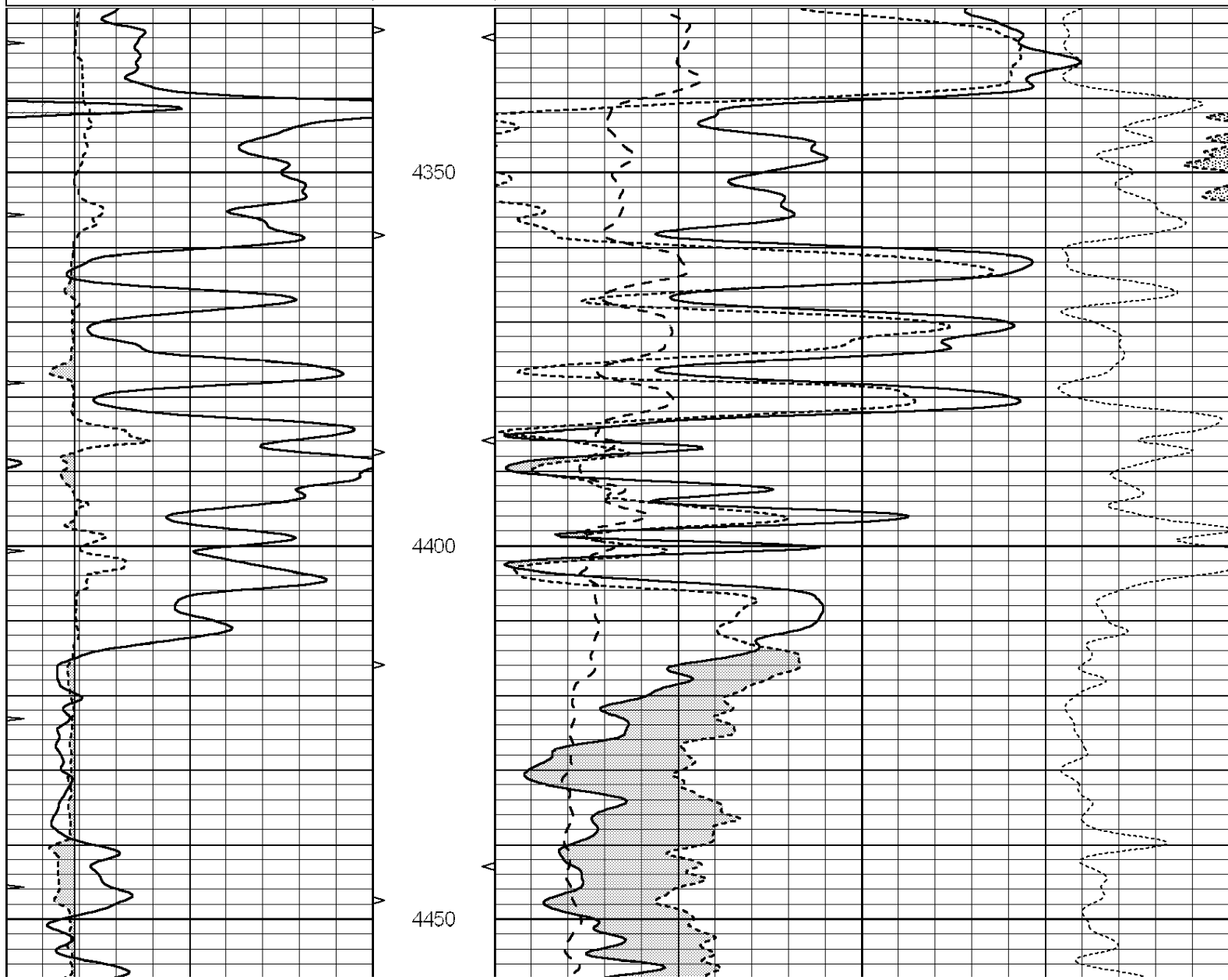


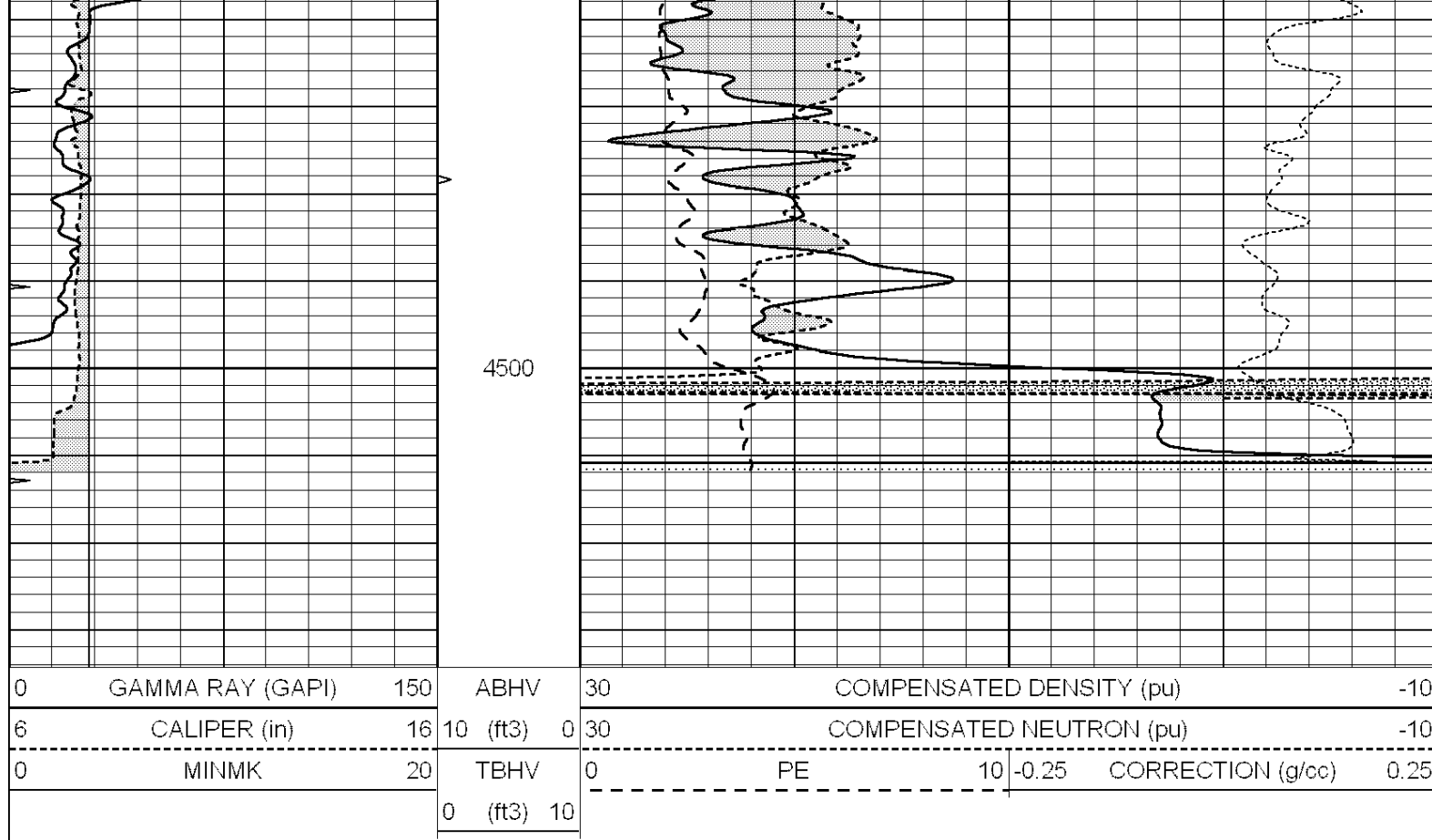
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REPEAT SECTION

Database File: 006294pe.db
Dataset Pathname: pass2.2
Presentation Format: ldt_neu
Dataset Creation: Tue Feb 22 14:01:32 2011 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	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3) 10			





Calibration Report

Database File: 006294pe.db
 Dataset Pathname: pass3.2
 Dataset Creation: Tue Feb 22 13:56:56 2011 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Tue Feb 22 12:38:57 2011

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	-1.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-13.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	622.059	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	631.393	-4.555

Litho Density Calibration Report

Serial: 003N Model: PRB
 Performed Tue Sep 08 14:14:44 2009

Litho Density Calibration

	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

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	
Caliper					
Low Ref	Readings	Reference			
High Ref	1.8	5.6			
	4.6	14.0			
	Gain: 3.0			Offset: 0.4	
Compensated Neutron Calibration Report					
		Serial Number:		NEU_3I	
		Tool Model:		G	
CALIBRATION					
Detector		Readings		Target	
				Normalization	
Short Space		997.00 cps		1000.00 cps	
Long Space		986.00 cps		1000.00 cps	
				1.0000	
				1.0000	
Gamma Ray Calibration Report					
Serial Number:		GR3			
Tool Model:		OPEN			
Performed:		Tue Feb 22 12:38:38 2011			
Calibrator Value:		200.0		GAPI	
Background Reading:		3.0		cps	
Calibrator Reading:		186.0		cps	
Sensitivity:		0.6000		GAPI/cps	