



SUPERIOR
Hays,
Kansas

COMPENSATED
DENSITY/NEUTRON
PE LOG

Company		MULL DRILLING COMPANY, INC.	
Well		APC TALLMAN #3-3	
Field			
County		KIOWA	State
State		COLORADO	
Location:		APL # : 05-061-06864-0000 1980' FSL & 660' FEL NE/4 - SE/4	
Permanent Datum		GROUND LEVEL	Elevation
Log Measured From		KELLY BUSHING 11' A.G.L.	3986
Drilling Measured From		KELLY BUSHING	
SEC 3 TWP 18S RGE 45W		Other Services DIL MEL/SON	
Date	10/3/11		
Run Number	ONE		
Depth Driller	4990.		
Depth Logger	4993		
Bottom Logged Interval	4969		
Top Log Interval	3400		
Casing Driller	8 5/8" @ 353		
Casing Logger	349		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4500 PPM	
Density / Viscosity	9.3/56		
pH / Fluid Loss	9.5/8.8		
Source of Sample	FLOWLINE		
Rin @ Meas. Temp	1.50 @ 88F		
Rmf @ Meas. Temp	1.13 @ 88F		
Rmc @ Meas. Temp	1.80 @ 88F		
Source of Rmf / Rmc	MEASURED		
Rin @ BHT	1.06 @ 125F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	125F		
Equipment Number	680		
Location	HAYS, KS.		
Recorded By	JEFF GRONEMEG		
Witnessed By	PHIL ASKEY		

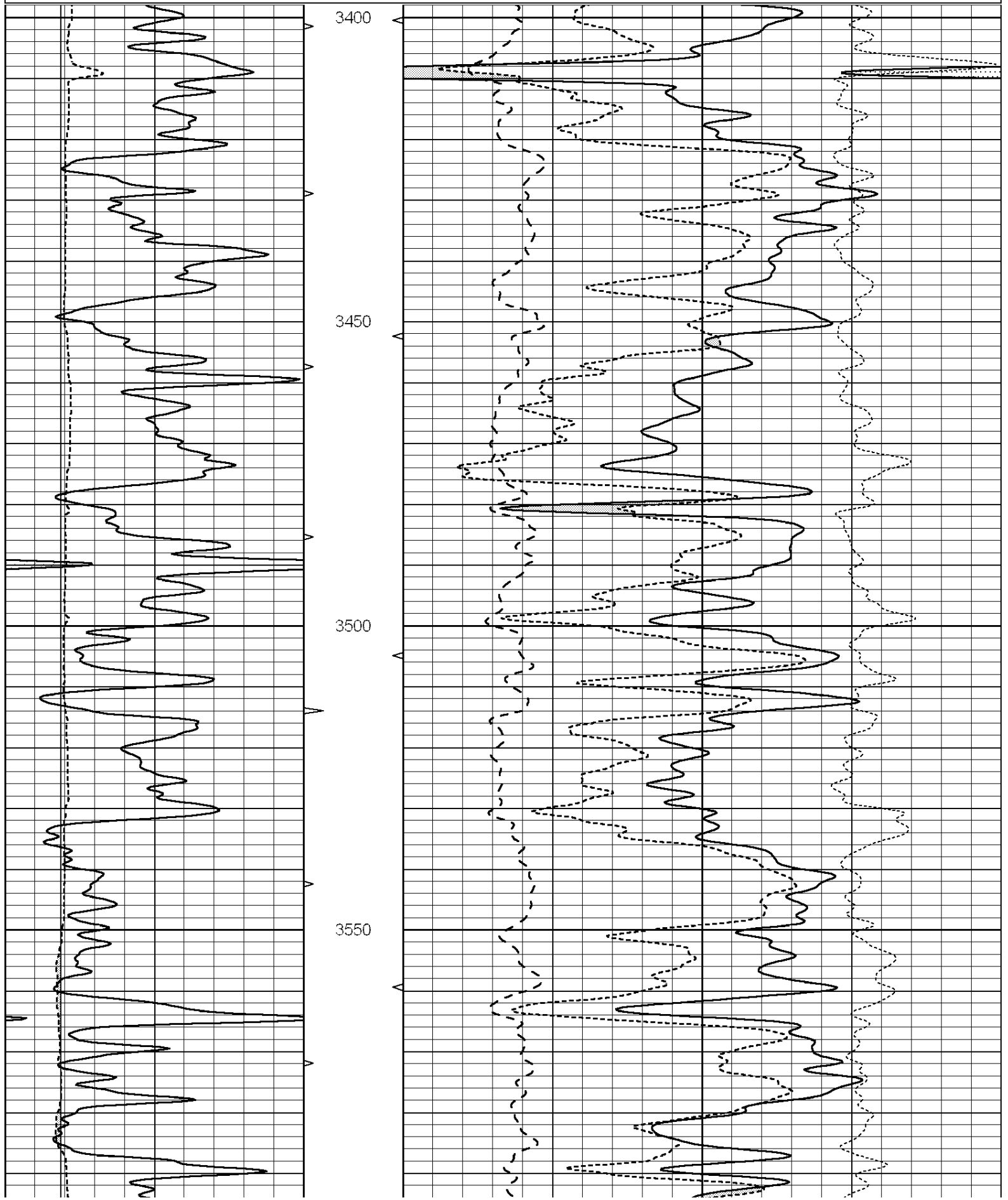
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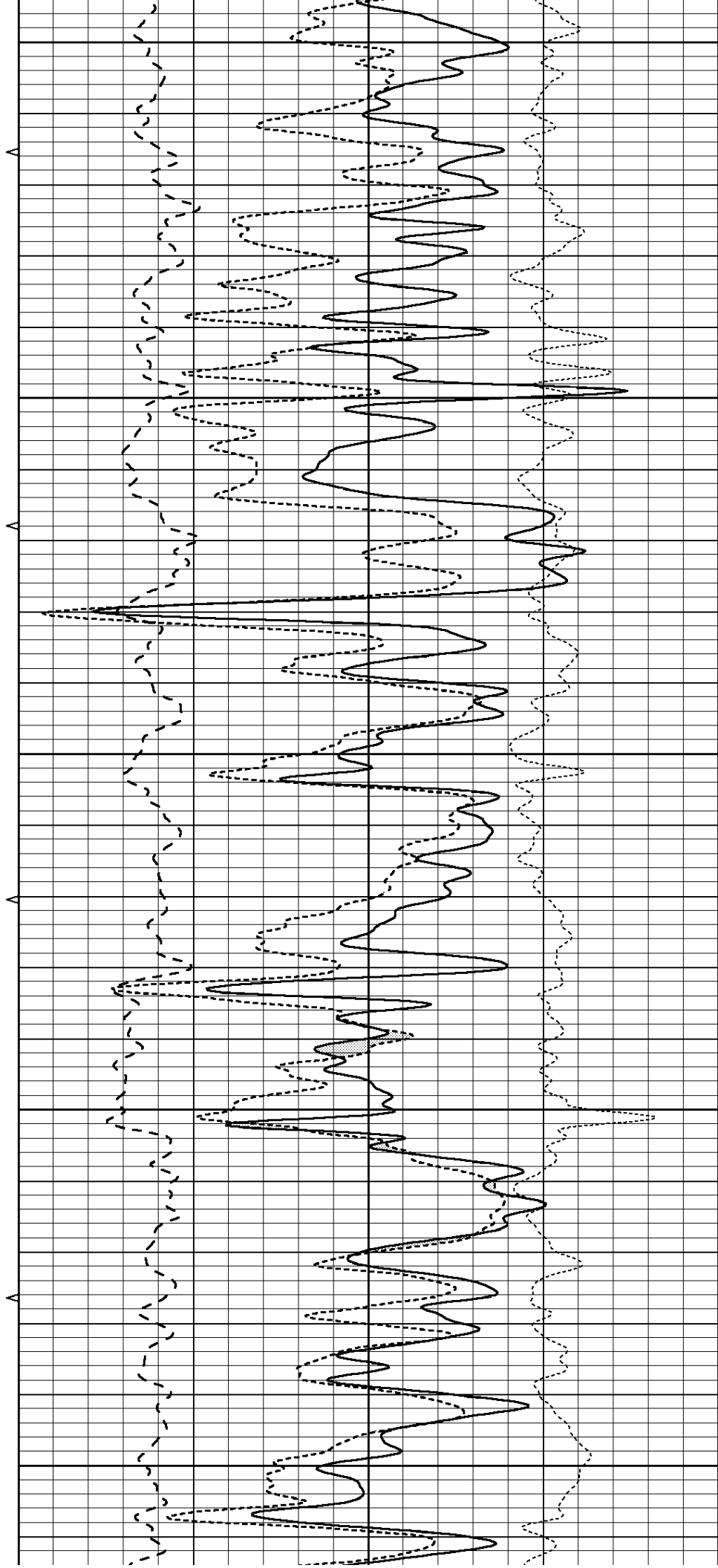
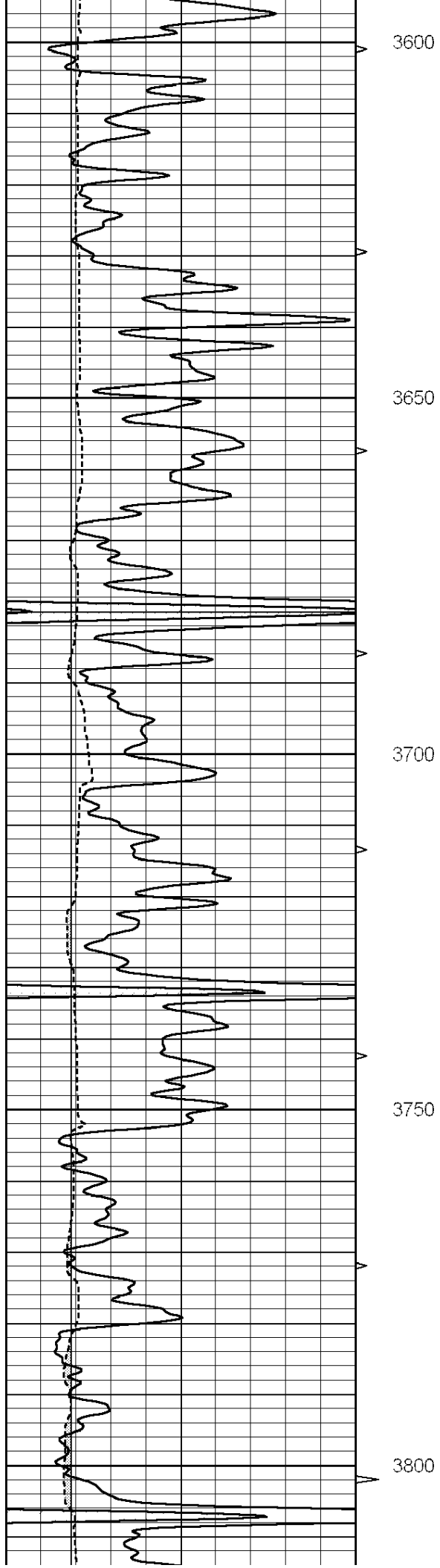
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

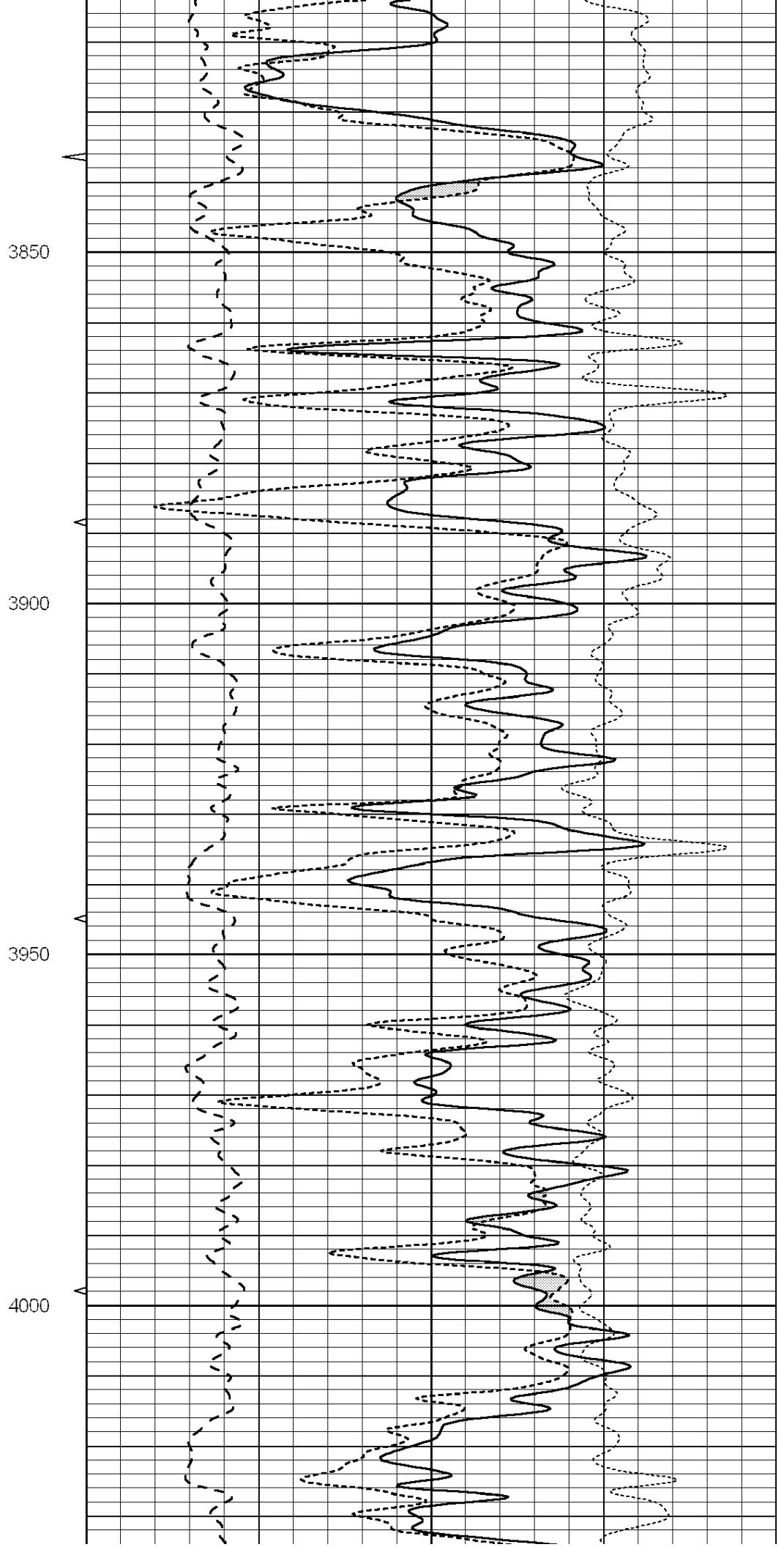
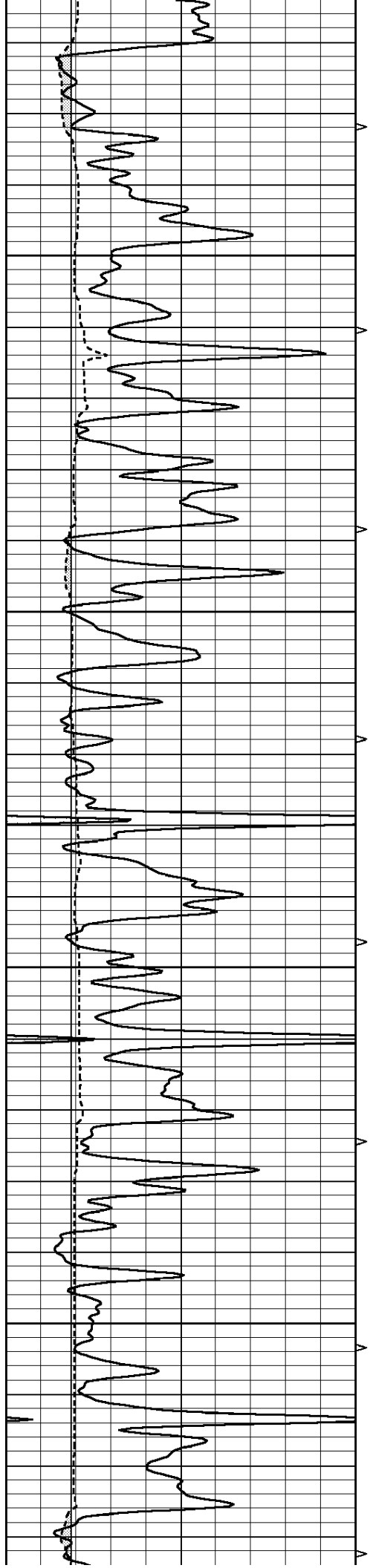
Comments

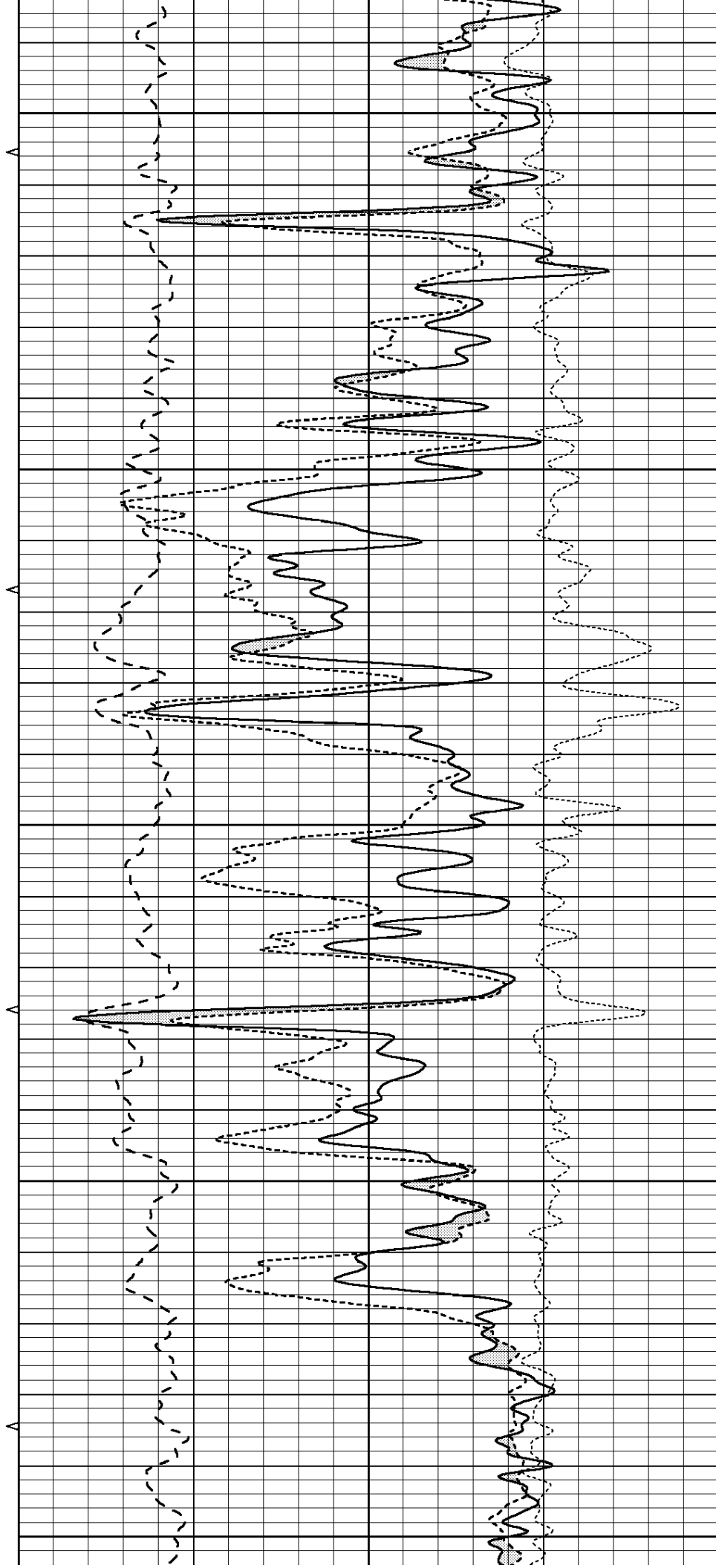
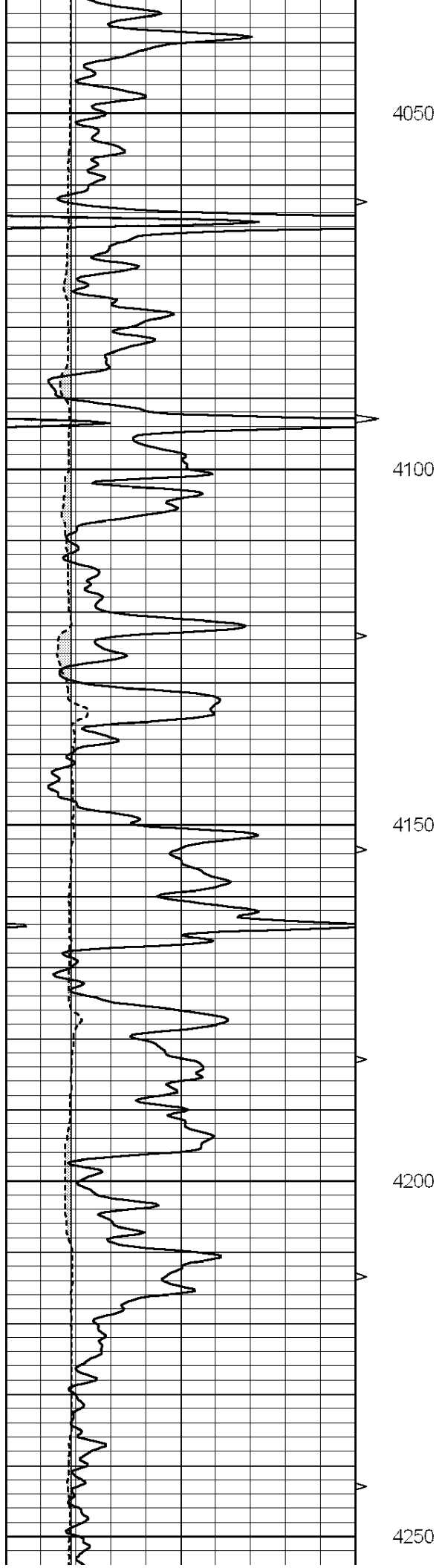
THANK YOU FOR USING SUPERIOR WELL SERVICE (785) 628-6395
DIRECTIONS
BRANDON, CO - 5 MILES NORTH - WEST INTO

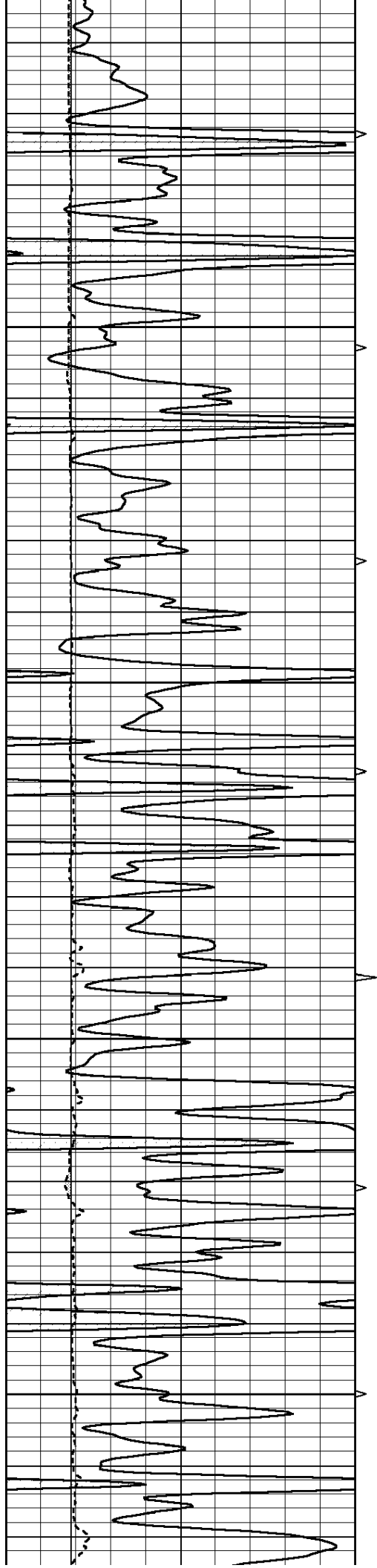
Charted by:		Depth in Feet scaled 1:2.15							
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)		-10		
6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)		-10	
			TBHV	0	PE	10	-0.25	CORRECTION (g/cc)	0.25
			0 (ft3)	10					









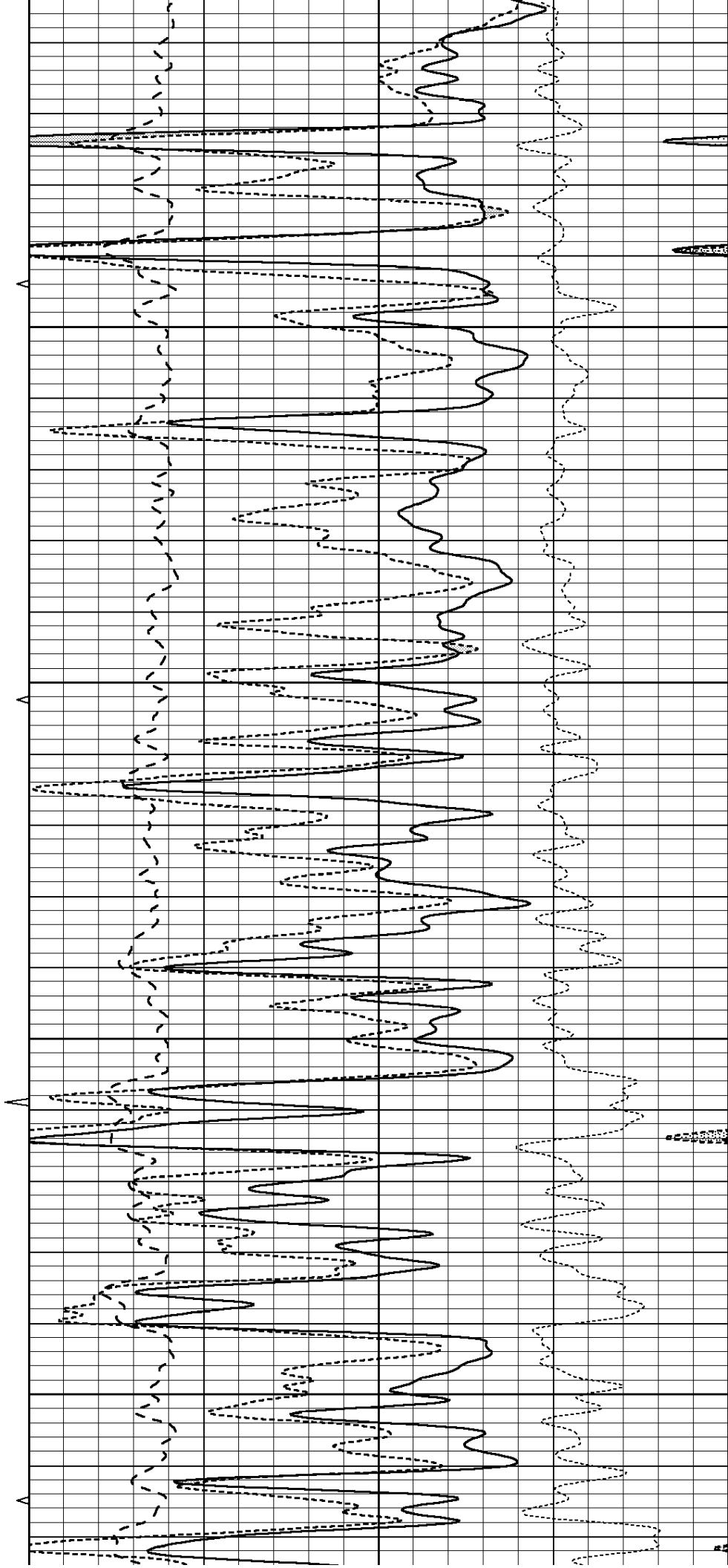


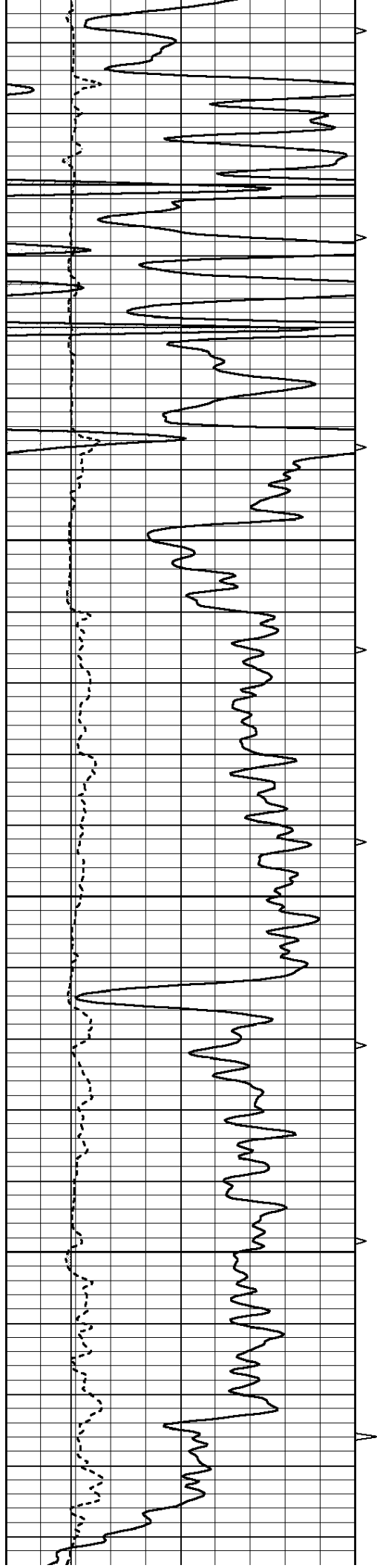
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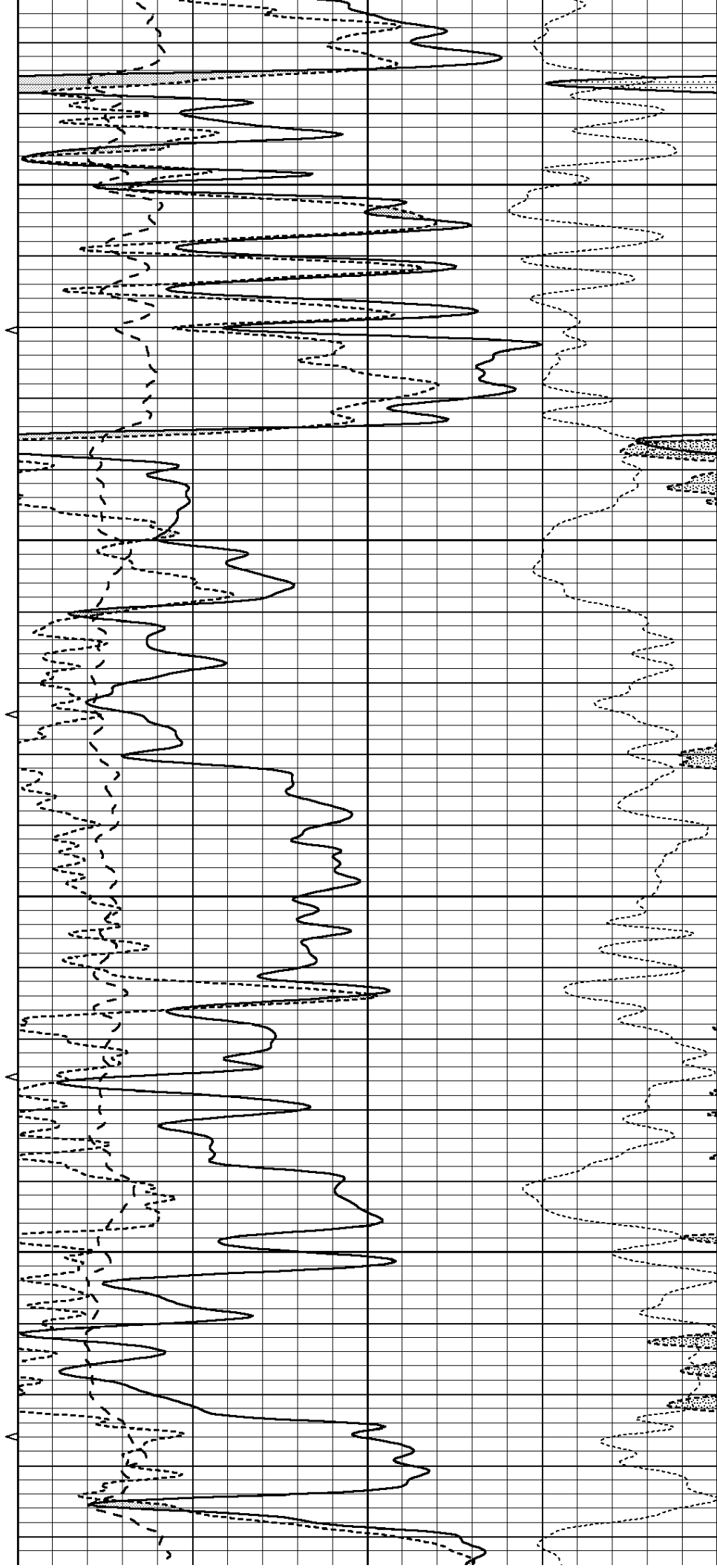


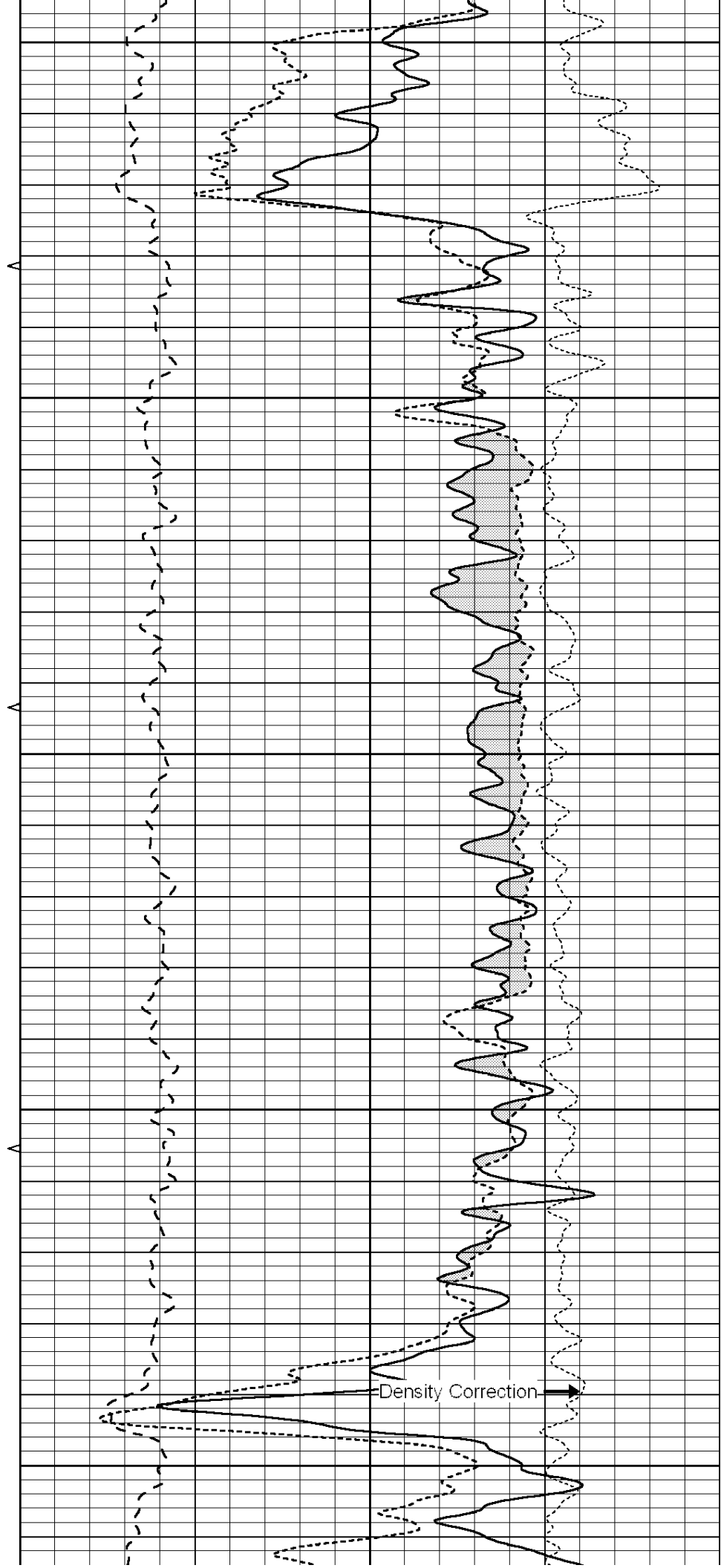
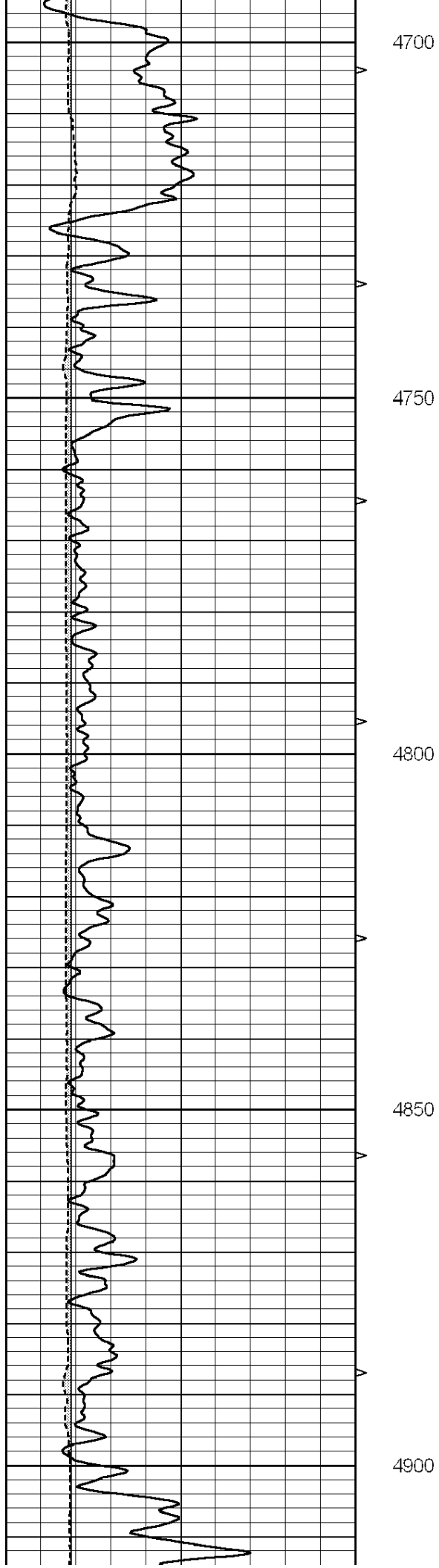
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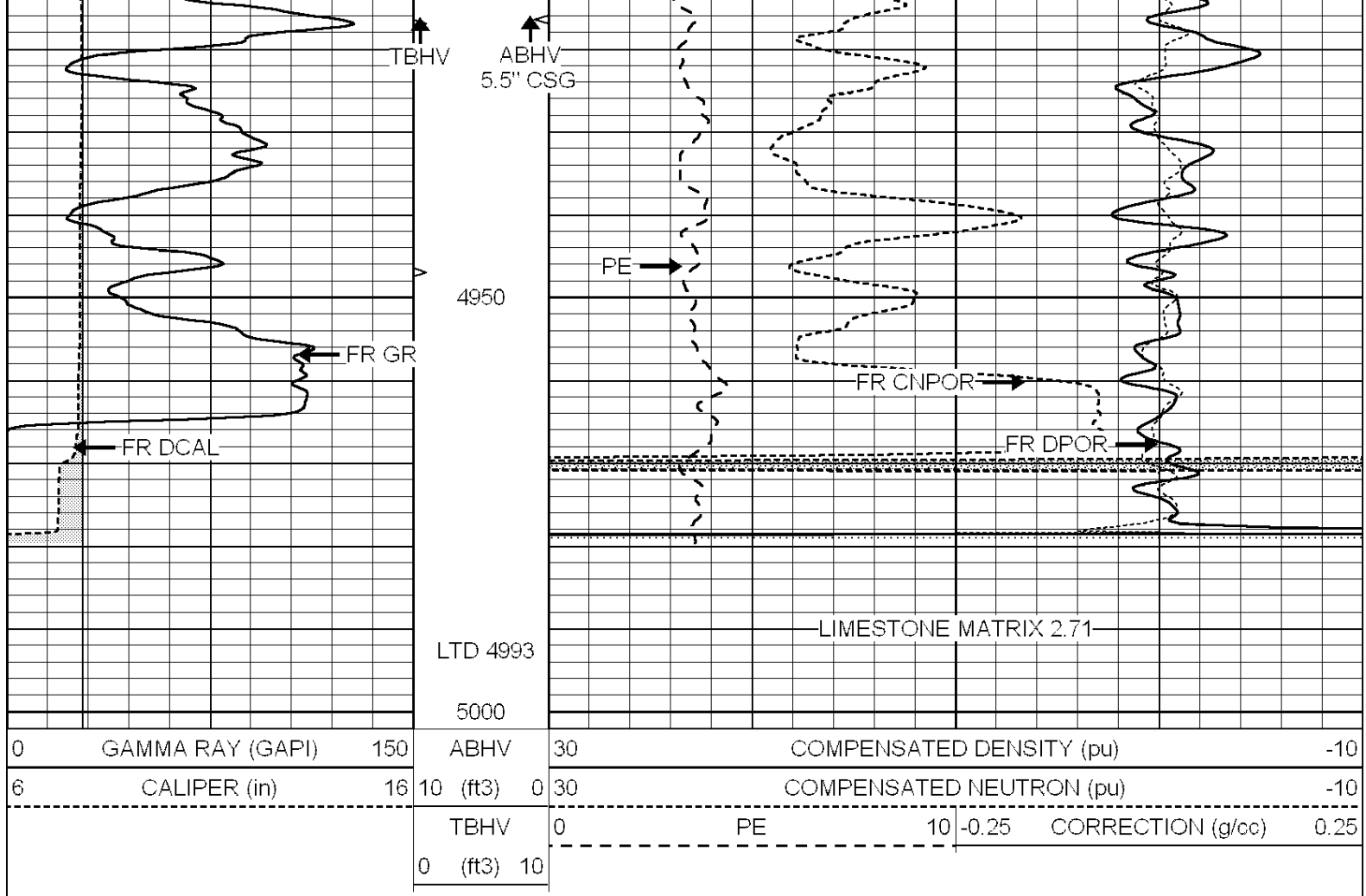
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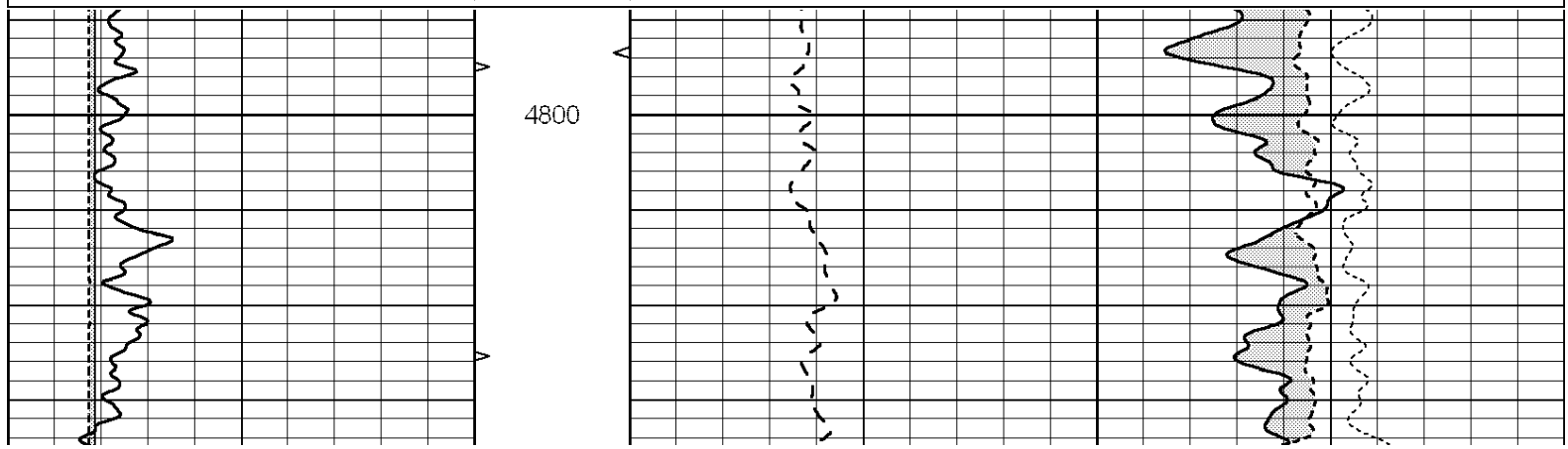


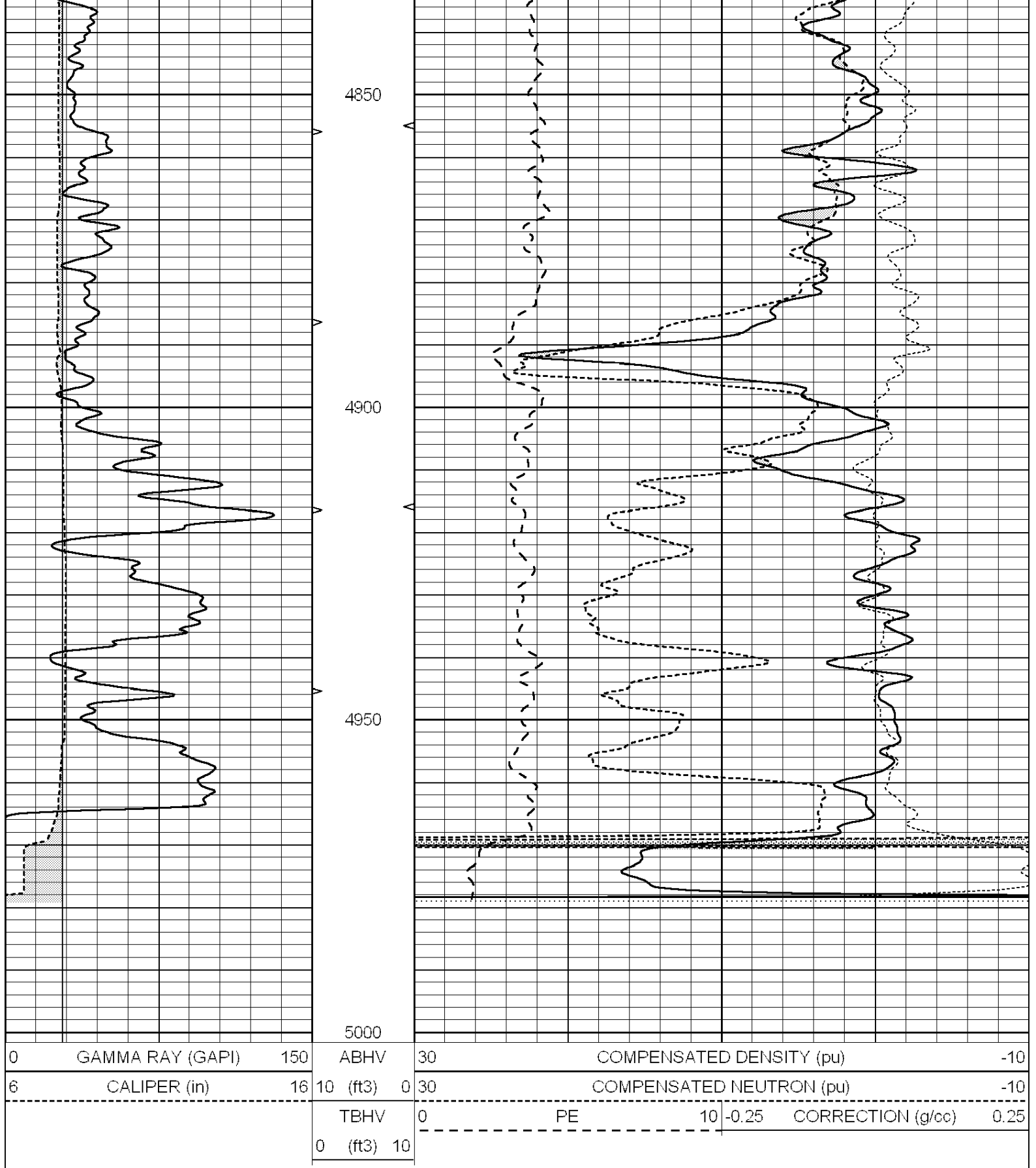
SUPERIOR
Hays,
Kansas

REPEAT SECTION

Database File: 007876pe.db
 Dataset Pathname: pass2.4
 Presentation Format: _ldt_neu
 Dataset Creation: Mon Oct 03 05:45:32 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	COMPENSATED NEUTRON (pu)	-10
			TBHV	0	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3)	10		





Calibration Report

Database File: 007876pe.db
Dataset Pathname: pass3.4
Dataset Creation: Mon Oct 03 08:01:45 2011 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model:

PROBE7-DILG

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	8.759
Medium	0.039	0.728	V	0.000	464.000	mmho/m	673.322	-26.058
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: 002			Model: PRB			Performed Mon Oct 29 15:40:49 2007		

Litho Density Calibration					
	Background	Magnesium	Aluminum	Sandstone	
Window 1	1056.3	9118.0	2809.7	10378.4	cps
Window 2	969.9	7671.9	2431.6	8565.8	cps
Window 3	683.8	2939.8	1161.0	3161.8	cps
Window 4	231.4	231.6	226.7	230.8	cps
Long Space	0.0	6702.0	1461.7	7595.9	cps
Short Space	1.2	1433.6	959.4	1568.6	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 45.2	Rib Slope	: 1.008	Density/Spine Ratio	: 0.559
Spine Angle	: 75.2	Spine Slope	: 3.791	Spine Intercept	: -18.7

Caliper		
Low Ref	Readings	Reference
High Ref	3.7	8.0
	6.1	14.0
	Gain: 2.5	Offset: -1.2

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	cps	1.0000
Long Space		1.00	cps	1.00	cps	1.0000
Gamma Ray Calibration Report						
Serial Number:		#8				
Tool Model:		OPEN				
Performed:		Mon Jun 13 16:56:43 2011				
Calibrator Value:		150.0		GAPI		
Background Reading:		0.0		cps		
Calibrator Reading:		175.0		cps		
Sensitivity:		0.8371		GAPI/cps		