



**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company	HERMAN L. LOEB, LLC	Location:	API # : 15-007-24122-00-00	Other Services
Well	THOMPSON C #2-16		555' FNL& 2235' FVL	DIL
Field	MEDICINE LODGE - BOGGS		SW - NE - NE - NW	MEL/SON
County	BARBER			
State	KANSAS			
Permanent Datum	GROUND LEVEL	Elevation	1811	K.B. 1820
Log Measured From	KELLY BUSHING 9' A.G.L.			D.F. 1818
Drilling Measured From	KELLY BUSHING			G.L. 1811
Date	1-6-14			
Run Number	ONE			
Depth Driller	5162			
Depth Logger	5162			
Bottom Logged Interval	5123			
Top Log Interval	3700			
Casing Driller	13 3/8" @ 258'			
Casing Logger	254'			
Bit Size	7 7/8"			
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5,000 PPM		
Density / Viscosity	9.2/54			
pH / Fluid Loss	10.5/8.8			
Source of Sample	FLOWLINE			
Rim @ Meas. Temp	0.50@65F			
Rmf @ Meas. Temp	0.38@65F			
Rmc @ Meas. Temp	0.60@65F			
Source of Rmf / Rmc	MEASUREMENT			
Rim @ BHT	0.26@126F			
Time Circulation Stopped	2 HOURS			
Time Logger on Bottom				
Maximum Recorded Temperature	126F			
Equipment Number	860			
Location	HAYS, KANSAS			
Recorded By	IAN MABB			
Witnessed By	JON CHRISTENSEN			

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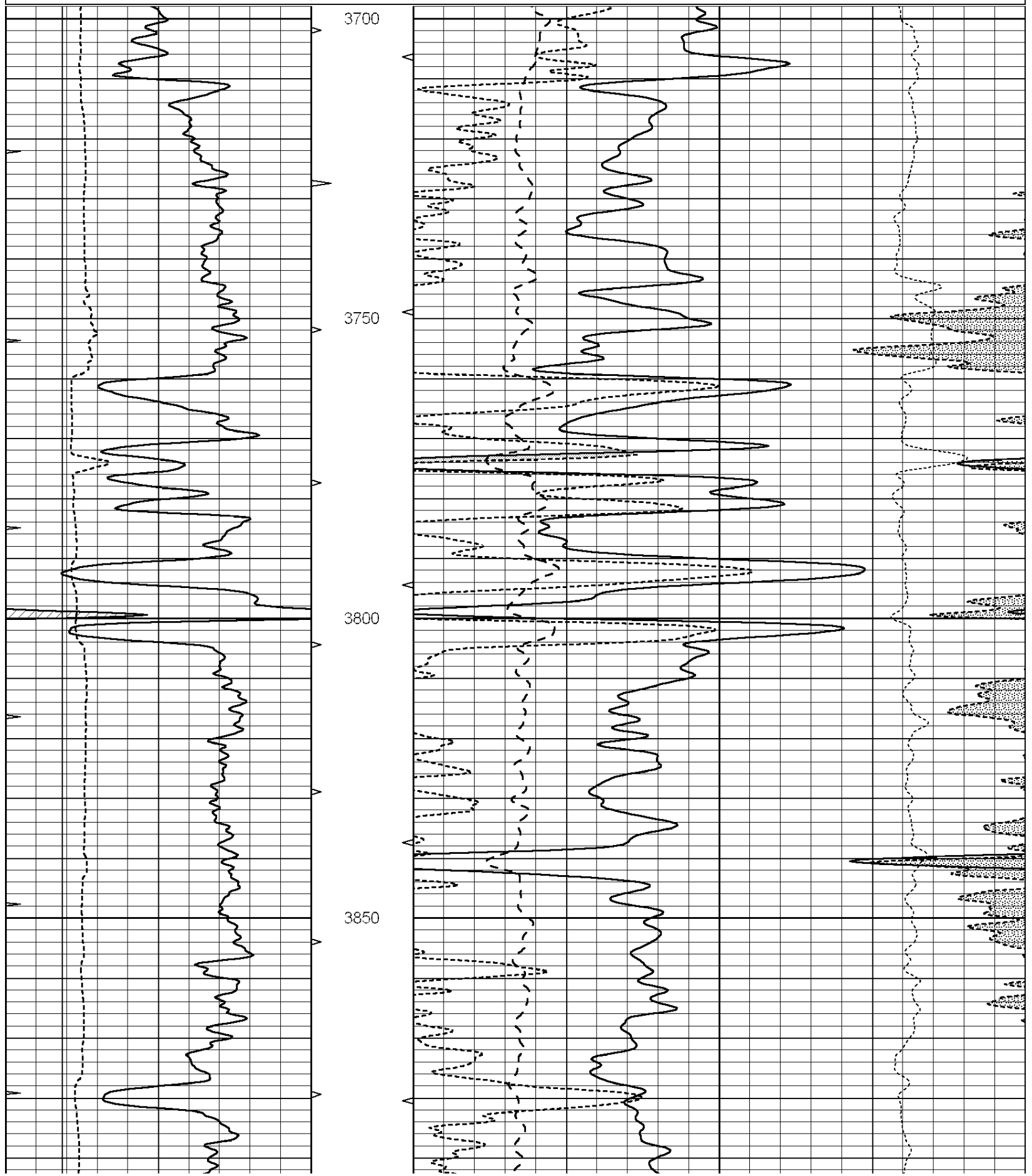
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

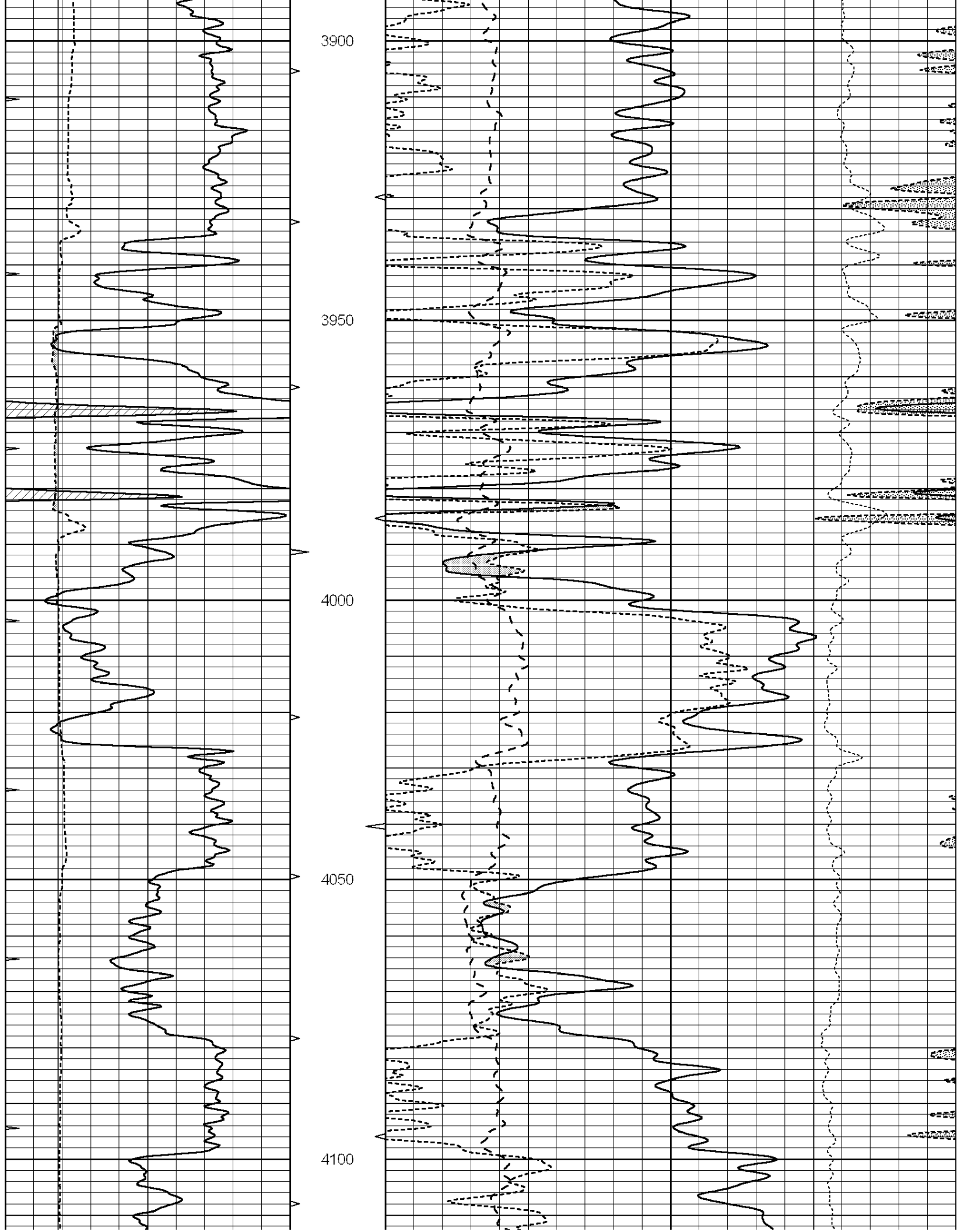
Comments

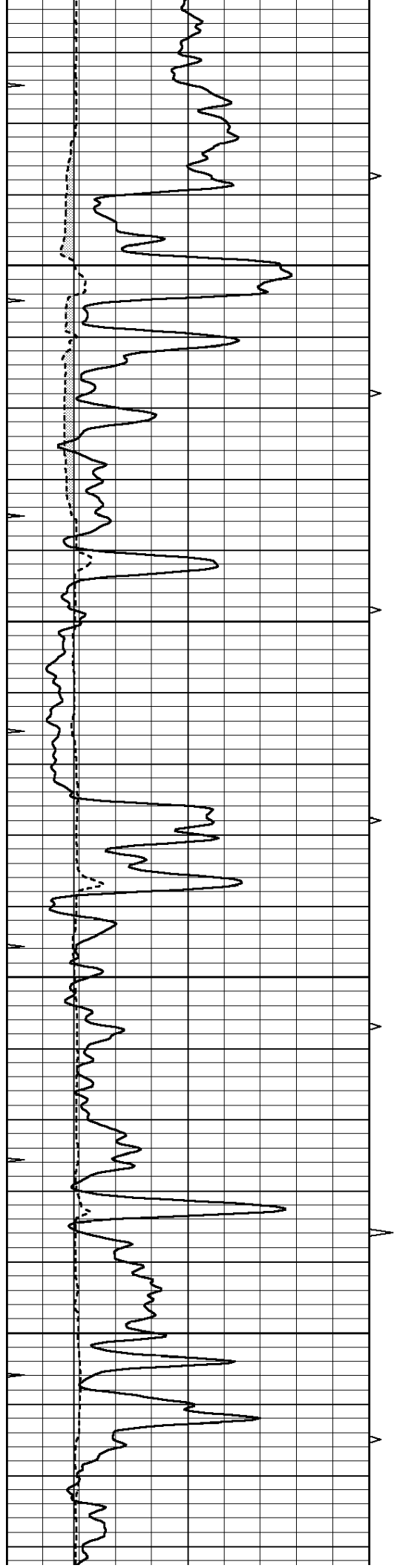
THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395
DIRECTIONS:

MEDICINE LODGE - 3 WEST ON 160 TO GYP HILL RD. - 10 SOUTH TO UNION CHAPEL CHURCH RD - WEST 2.5 MILES TO A SILO ON THE NORTH SIDE OF ROAD - 2.5 MILES NORTH ON MAIN LEASE RD.

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			





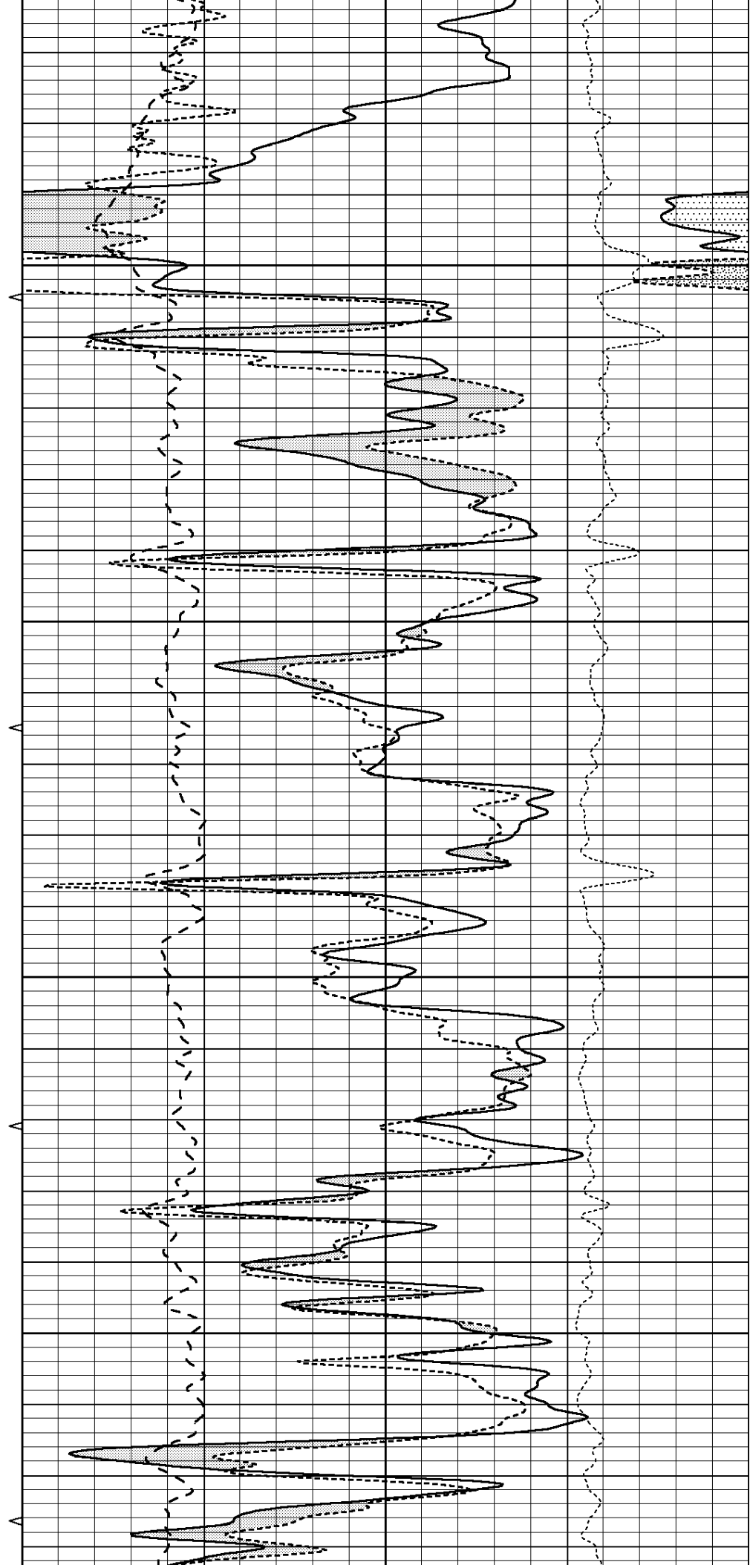


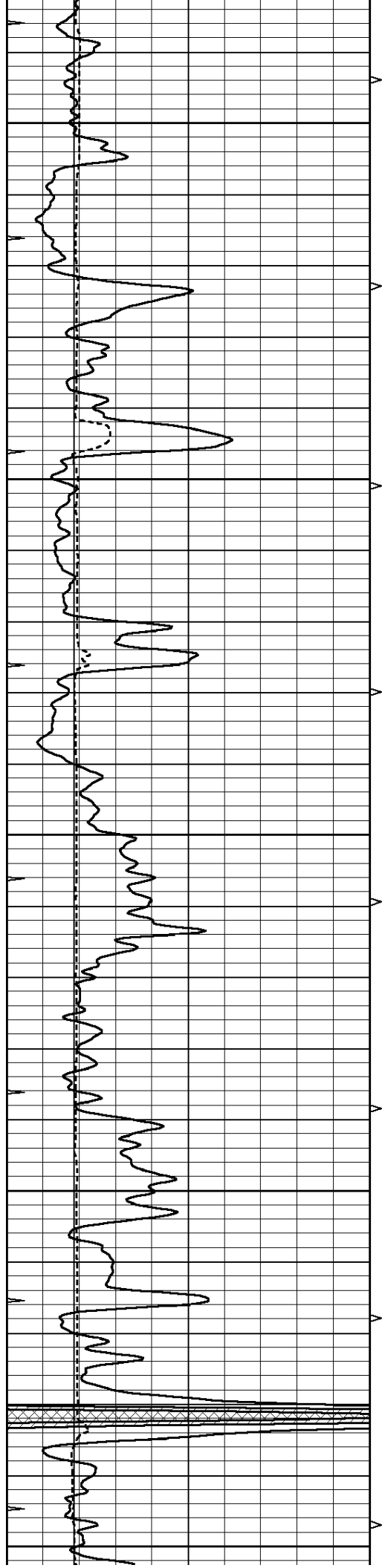
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4250

4300





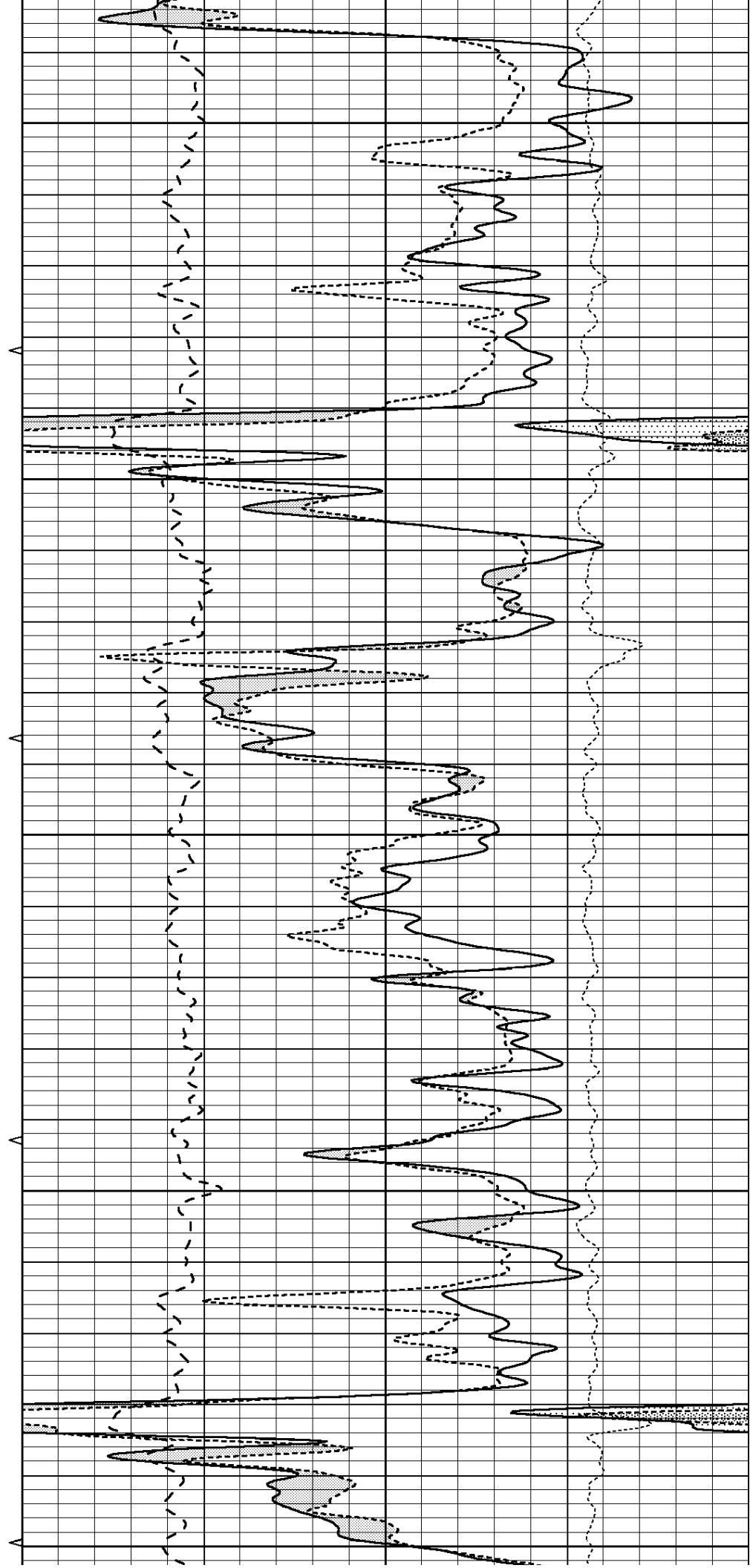
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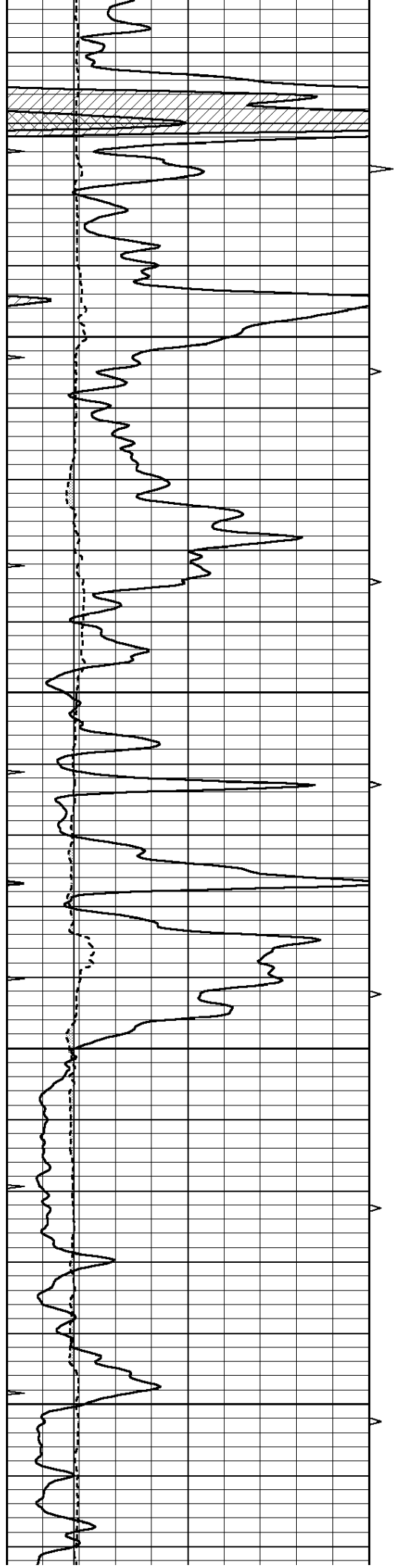
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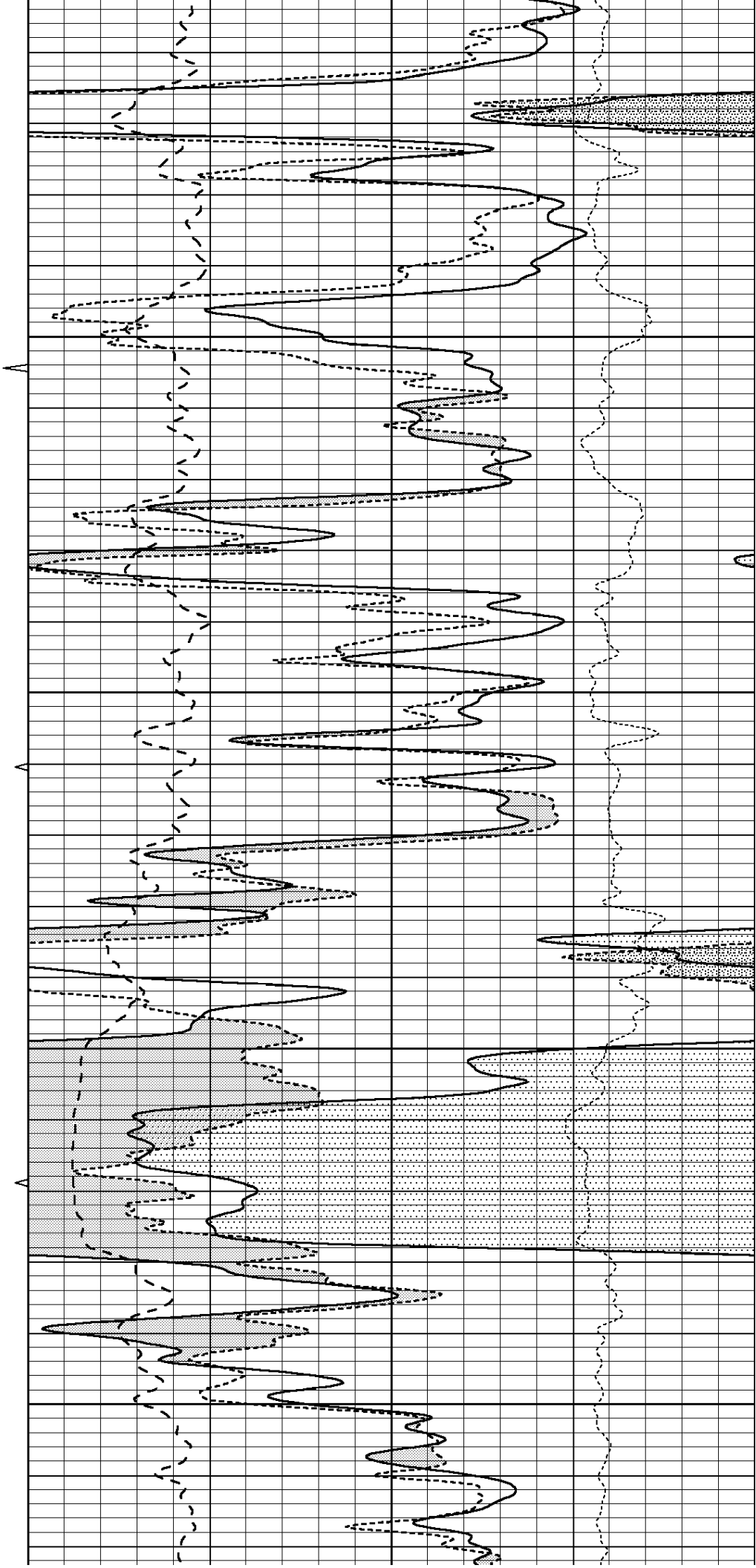


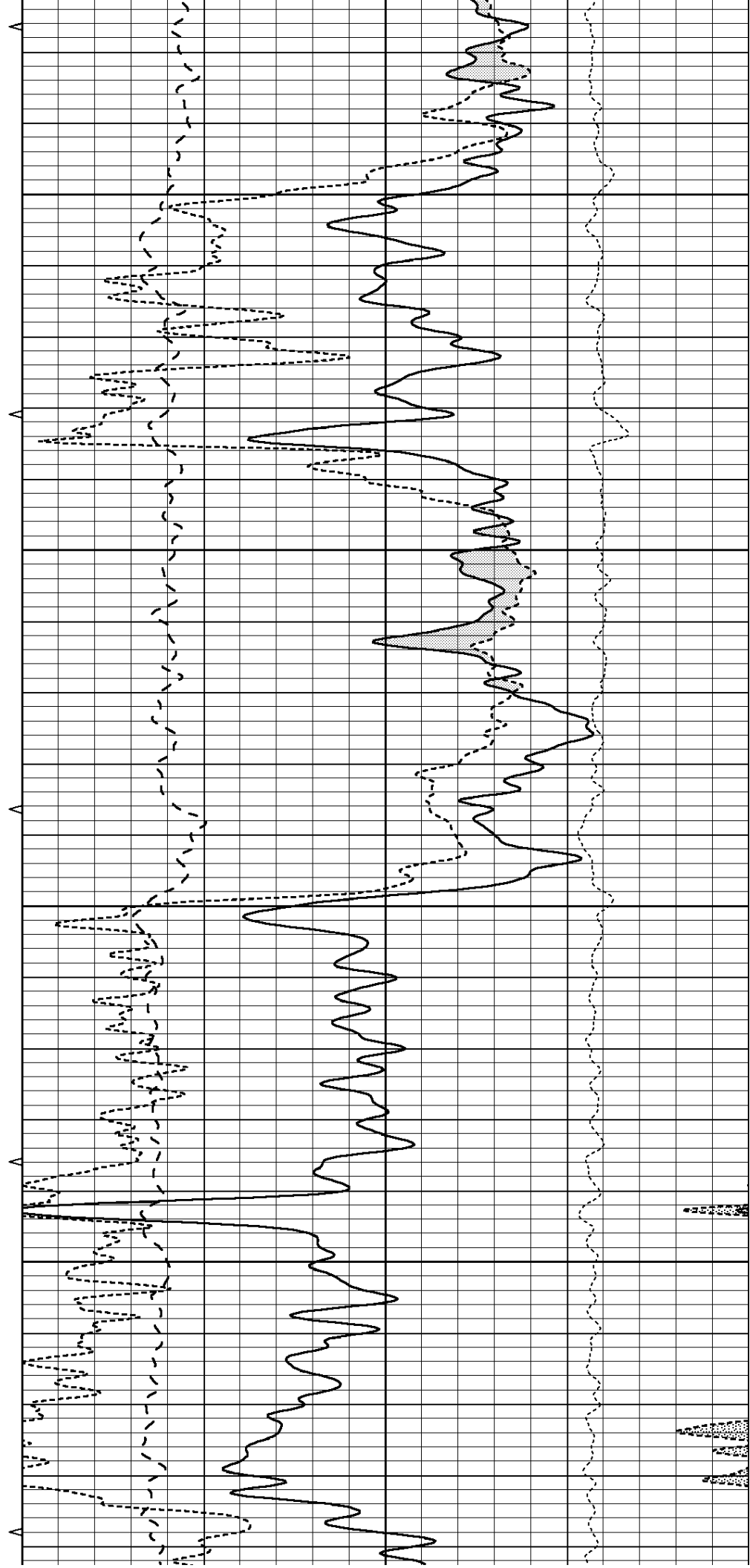
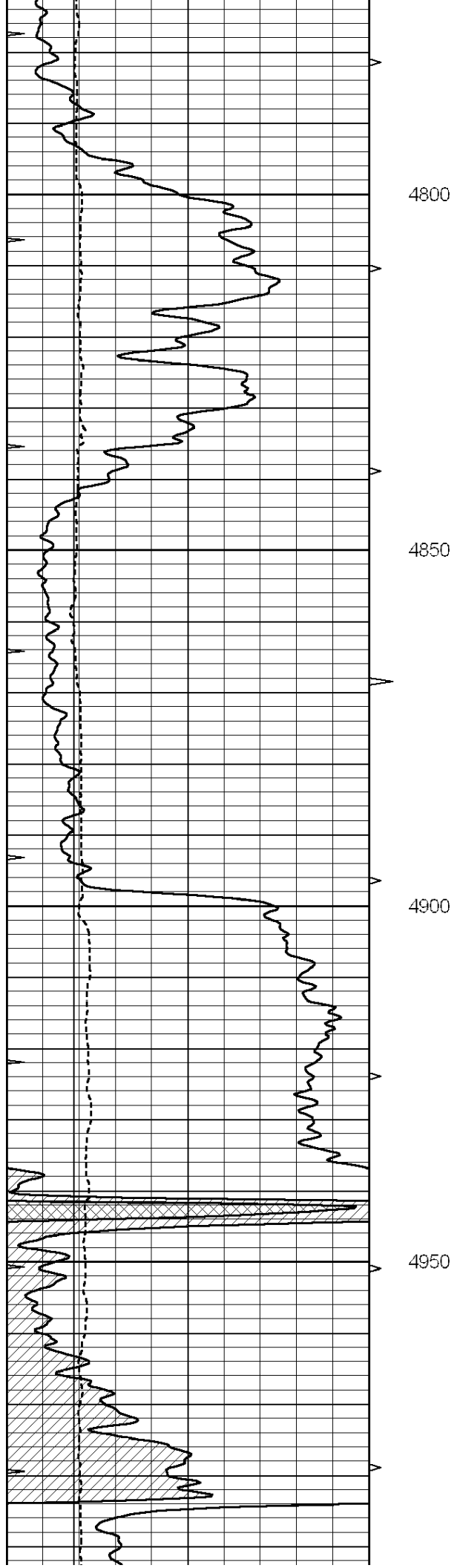
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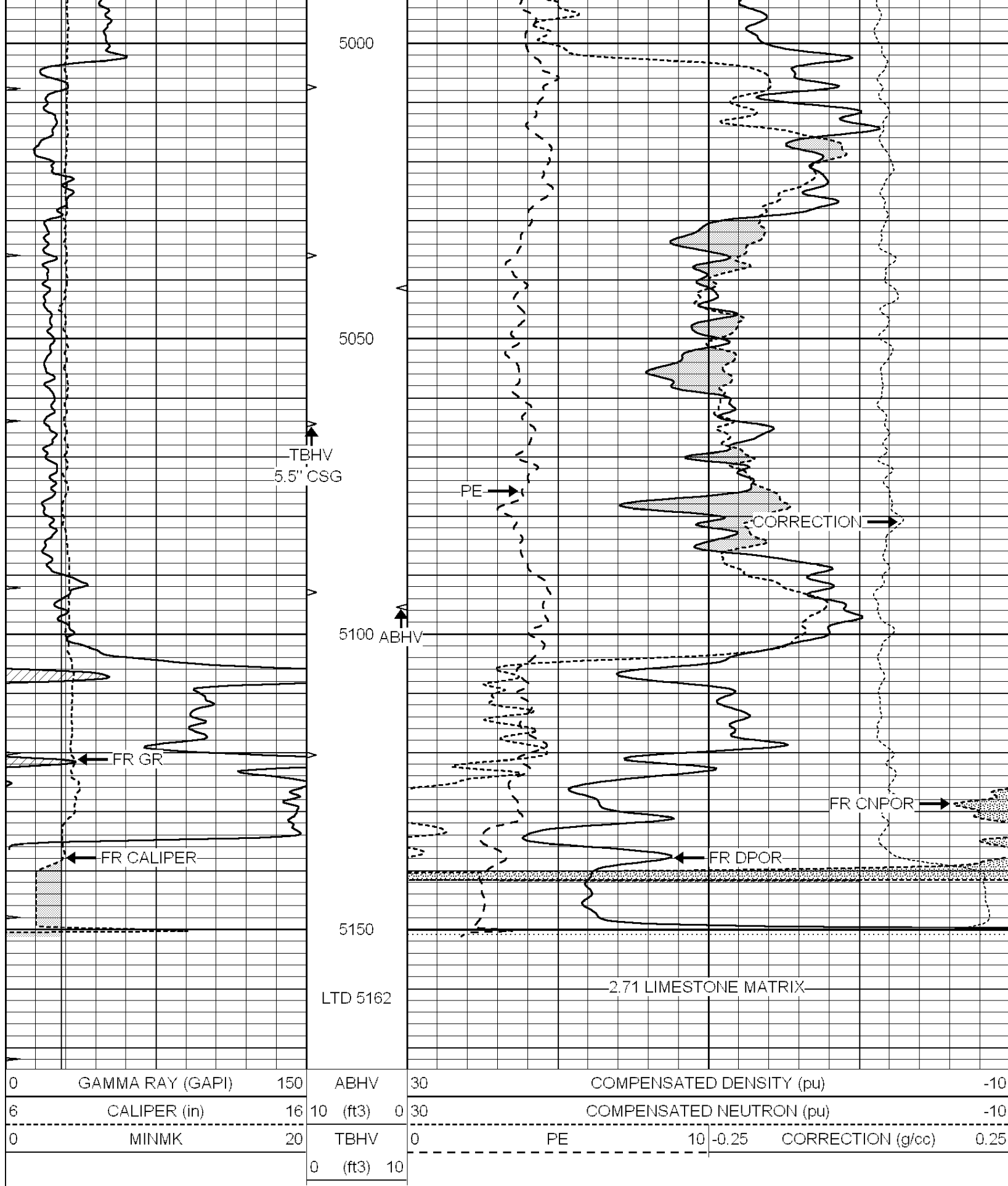
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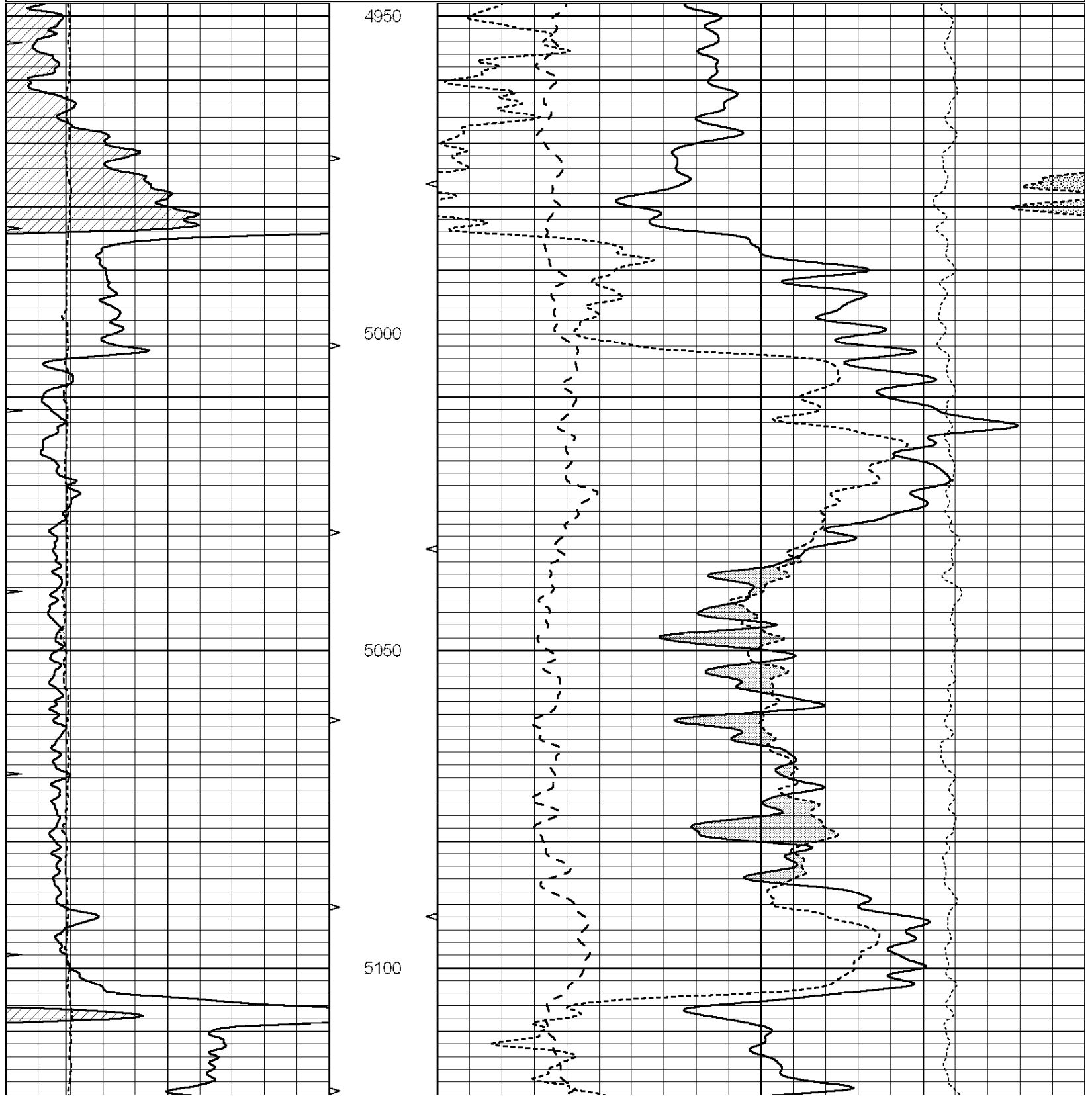


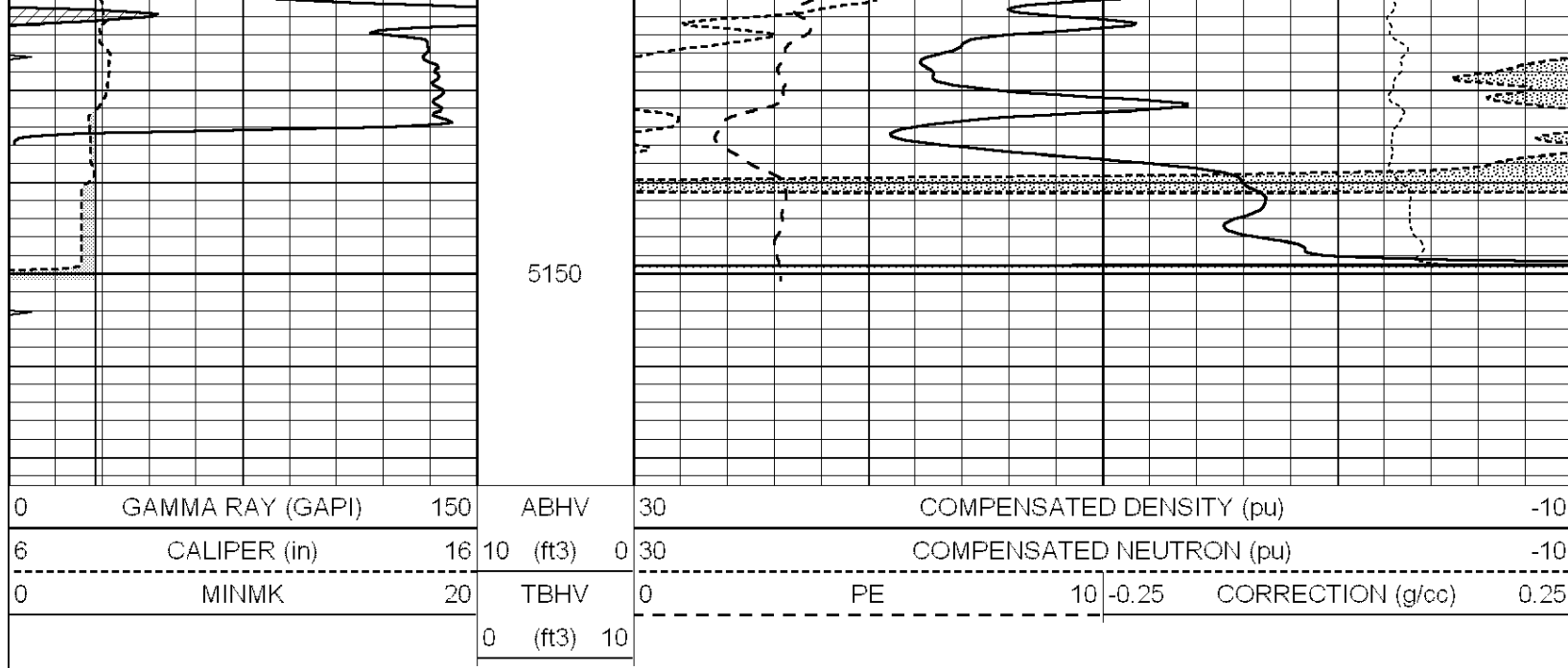


& PRODUCTION
 SERVICES CO.

Database File: 22210pe.db
 Dataset Pathname: pass2.1.1
 Presentation Format: _ldt_neu
 Dataset Creation: Mon Jan 06 21:11:39 2014 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	





Calibration Report

Database File: 22210pe.db
 Dataset Pathname: pass3.2
 Dataset Creation: Mon Jan 06 22:08:33 2014 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Sat Jan 04 10:54:27 2014

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	500.000	2.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	580.000	3.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	560.000	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	540.000	-4.000

Litho Density Calibration Report

Serial: 001 Model: PRB
 Performed Tue Jul 03 11:37:32 2007

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	2170.6	9915.1	3855.3	11241.6	cps
Window 2	2029.2	8716.5	3483.5	9750.8	cps
Window 3	1665.0	4929.7	2356.8	5332.0	cps
Window 4	493.3	492.1	490.0	486.8	cps
Long Space	0.0	6687.3	1454.3	7721.6	cps
Short Space	1.9	2149.3	1403.9	2354.5	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 44.4	Rib Slope	: 0.979	Density/Spine Ratio	: 0.556
Spine Angle	: 74.4	Spine Slope	: 3.583	Spine Intercept	: -18.7

Caliper

Low Ref	Readings	Reference		
High Ref	3.5	8.3		
	5.4	14.0		
	Gain: 2.9		Offset: -1.0	
Compensated Neutron Calibration Report				
		Serial Number:	080620	
		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:		7		
Tool Model:		Probe1		
Performed:		Sat Jan 04 10:53:32 2014		
Calibrator Value:		1.0	GAPI	
Background Reading:		0.0	cps	
Calibrator Reading:		1.0	cps	
Sensitivity:		0.4600	GAPI/cps	