



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company	HERMAN L. LOEB, LLC	Location:	API # : 15-191-22747-00-00	Other Services
Well	CLARK #7		2970' FSL & 1650' FEL	DIL/MEL
Field	MOYER NORTHWEST		SE - SW - NE	
County	SUMNER			
State	KANSAS			
Permanent Datum	SEC 2 TWP 31S RGE 3W			Elevation
Log Measured From	GROUND LEVEL	Elevation	1289	K.B. 1288
Drilling Measured From	KELLY BUSHING 9' A.G.L.			D.F. 1286
	KELLY BUSHING			G.L. 1289
Date	5-26-14			
Run Number	ONE			
Depth Driller	3400			
Depth Logger	3399			
Bottom Logged Interval	3375			
Top Log Interval	1900			
Casing Driller	8 5/8" @ 260'			
Casing Logger	260'			
Bit Size	7 7/8"			
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 3,200 PPM		
Density / Viscosity	9.2/50			
pH / Fluid Loss	10.5/8.8			
Source of Sample	FLOWLINE			
Rim @ Meas. Temp	0.90 @ 88F			
Rinf @ Meas. Temp	0.68 @ 88F			
Rinc @ Meas. Temp	1.08 @ 88F			
Source of Rinf / Rinc	MEASUREMENT			
Rim @ BHT	0.74 @ 108F			
Time Circulation Stopped	2 HOURS			
Time Logger on Bottom				
Maximum Recorded Temperature	108F			
Equipment Number	860			
Location	HAYS, KANSAS			
Recorded By	IAN MABB			
Witnessed By	DOUG DAVIS			

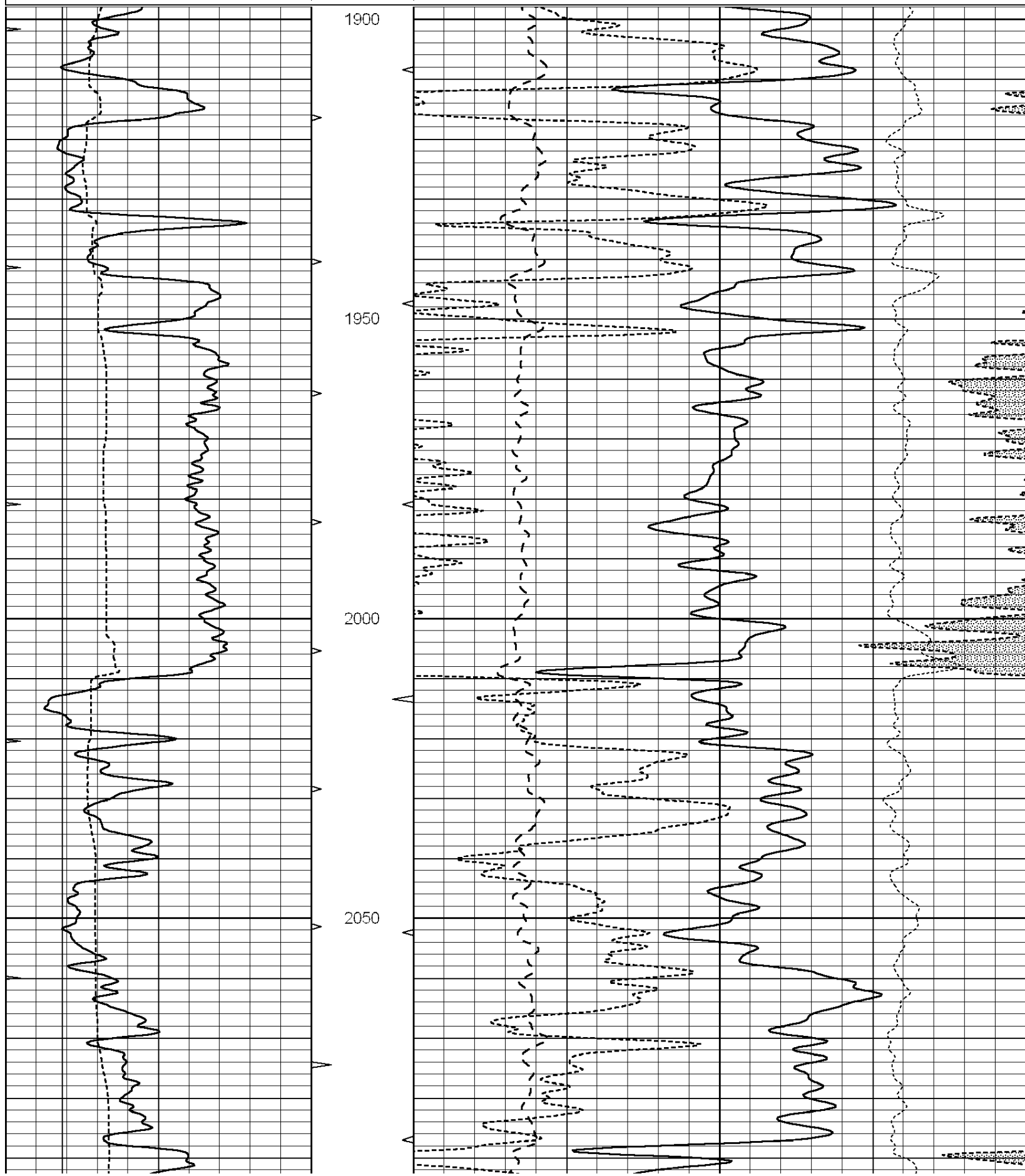
<<< Fold Here >>>

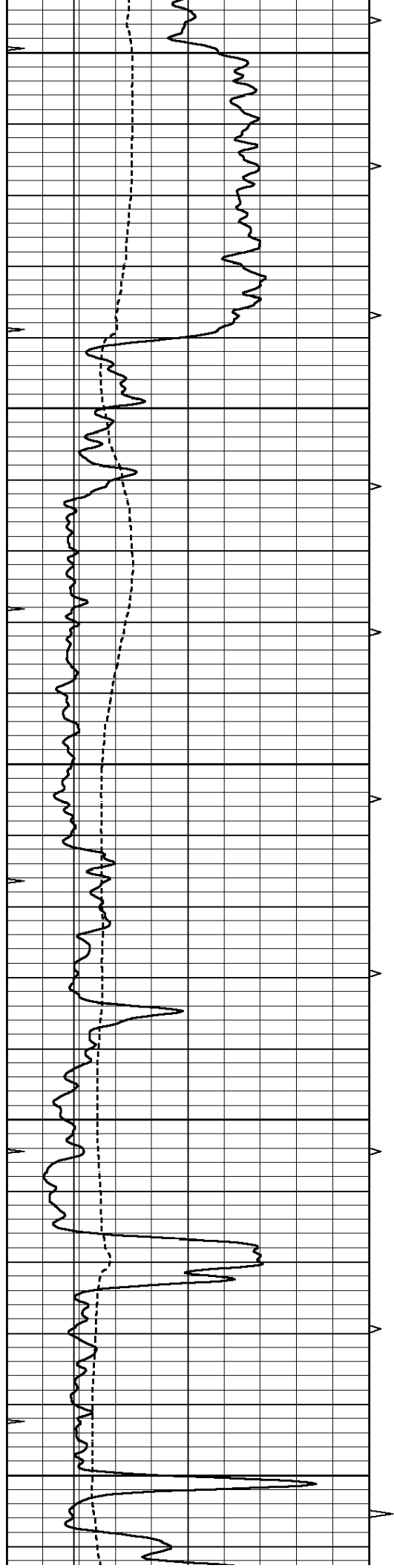
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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:
PLAINVILLE, KS - 2 MILES SOUTH TO BB RD
2 3/4 MILES EAST - SOUTH & EAST INTO

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			





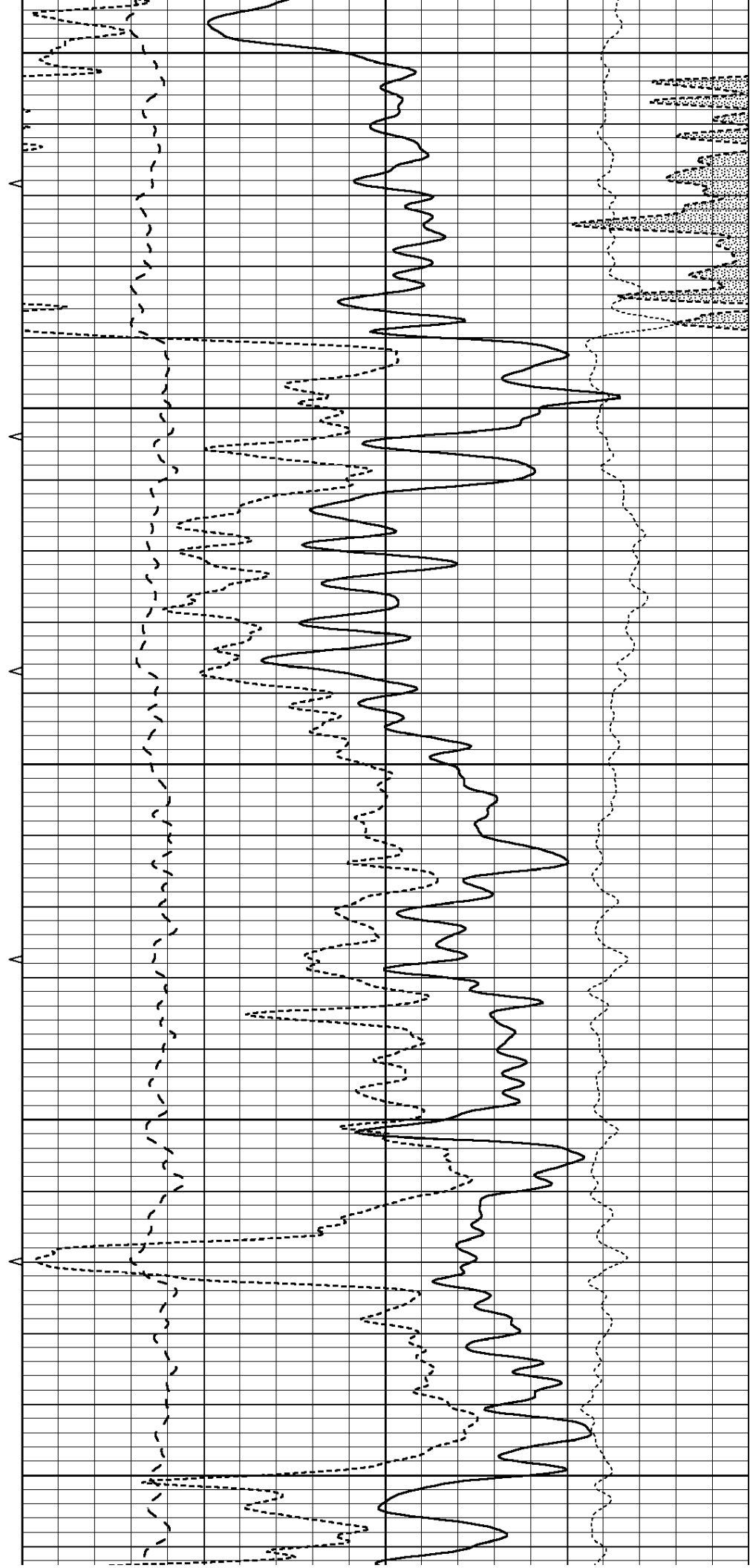
2100

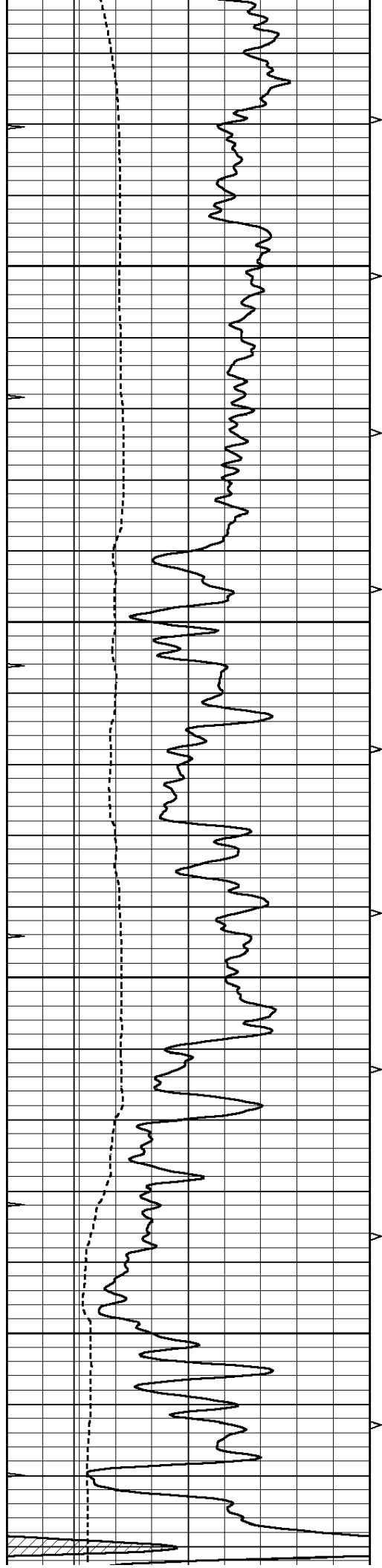
2150

2200

2250

2300



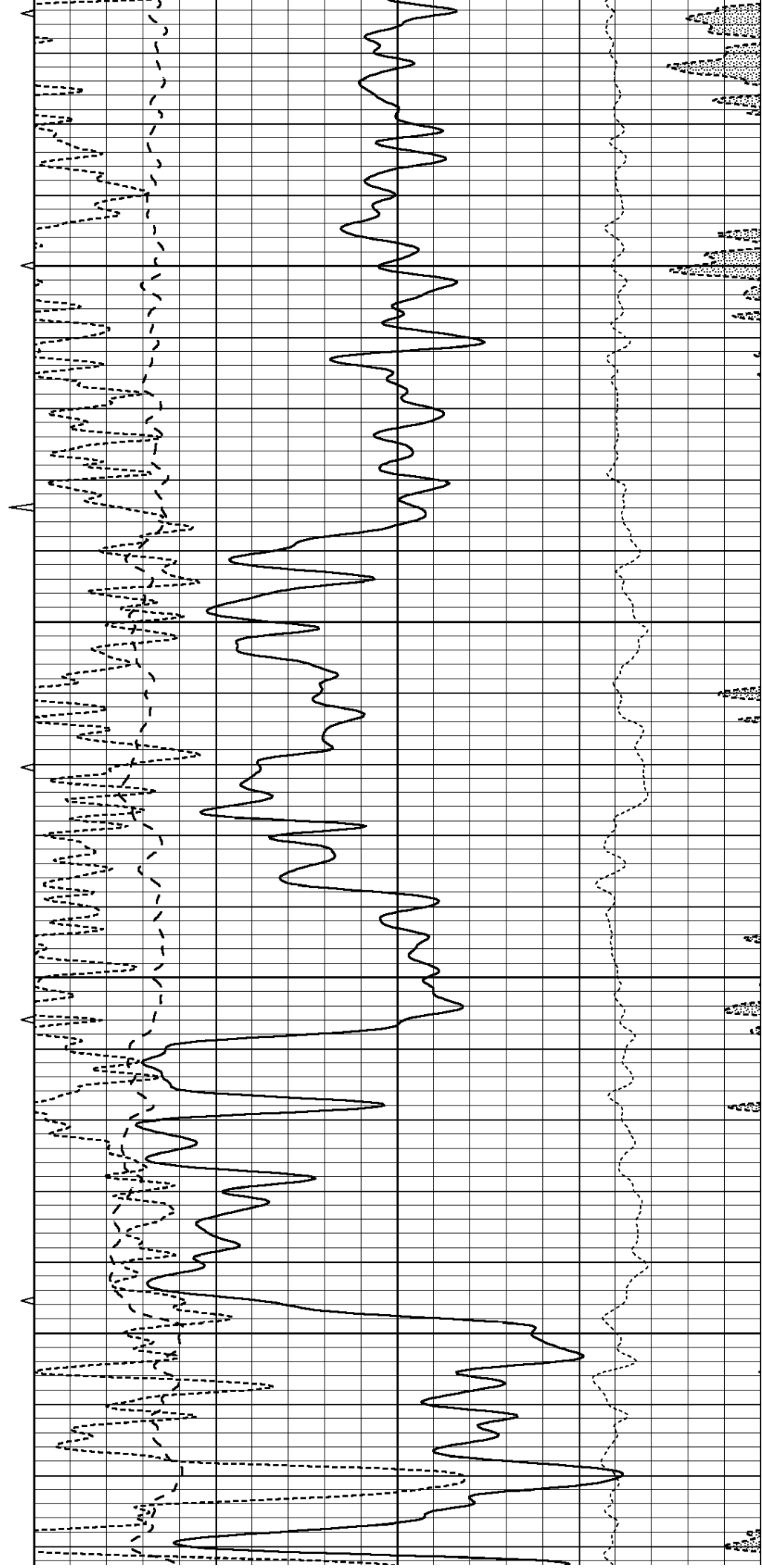


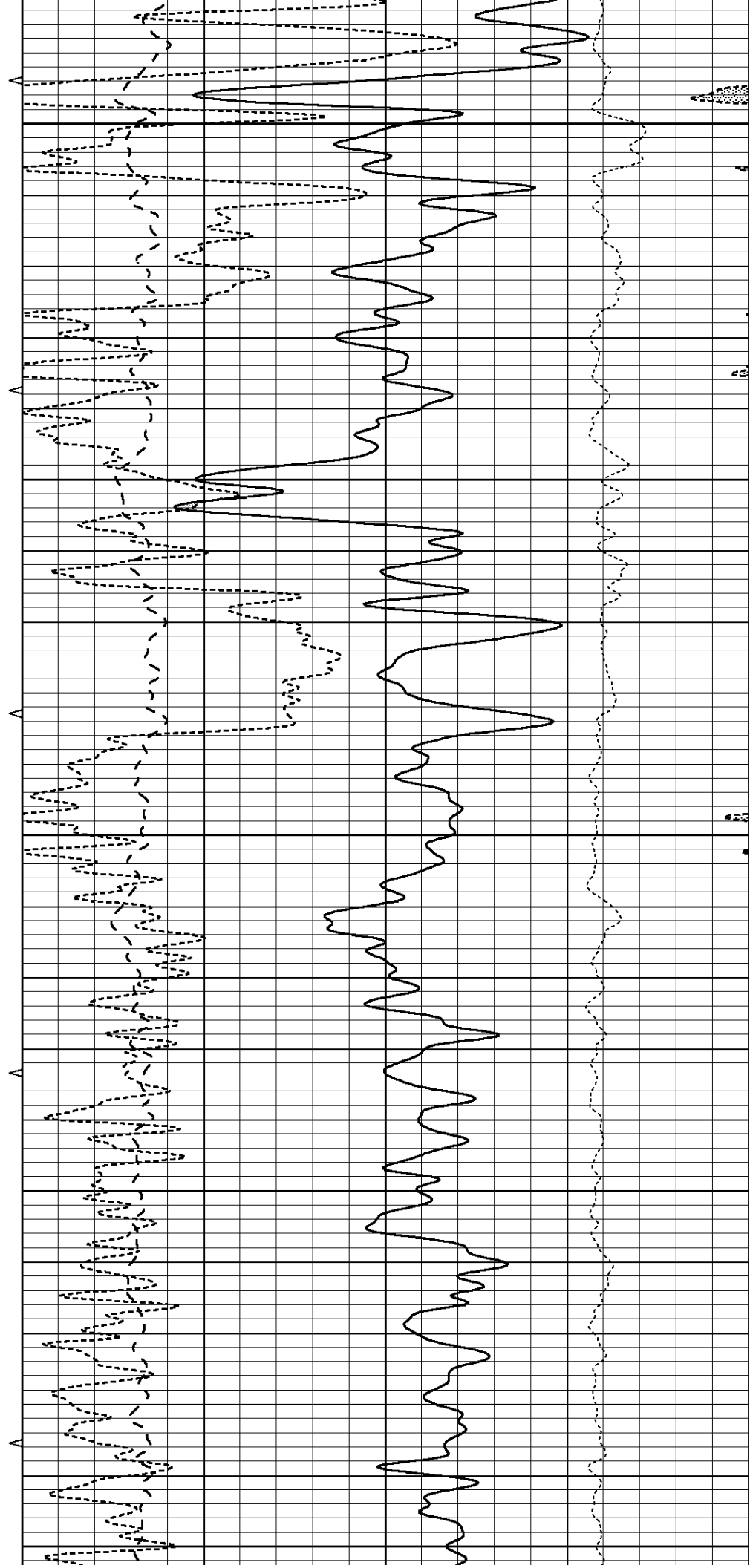
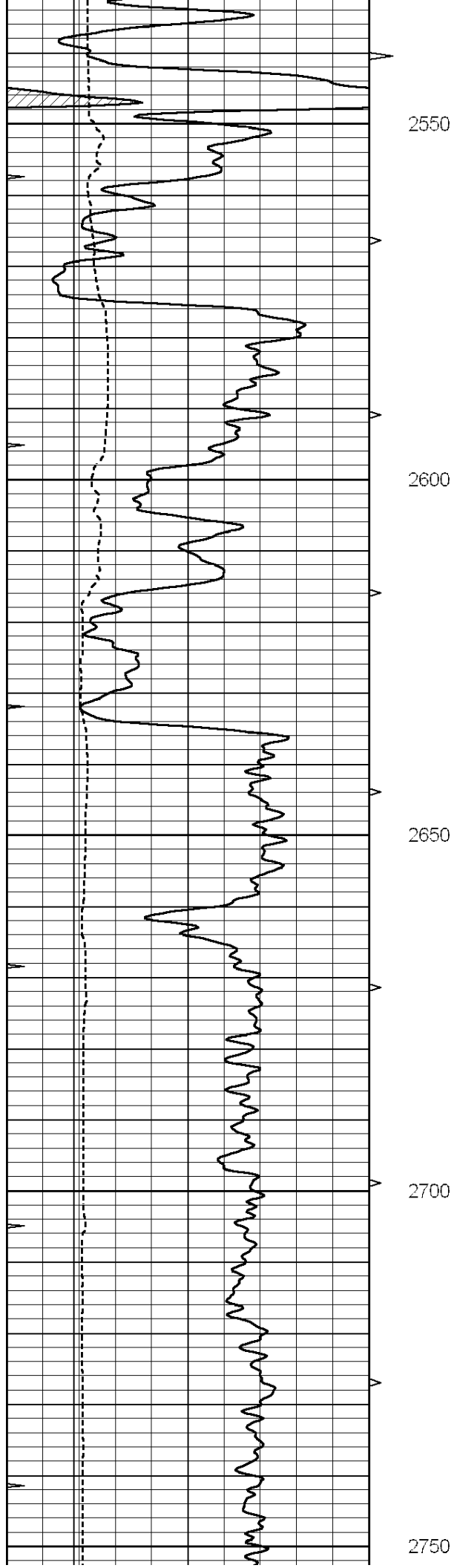
2350

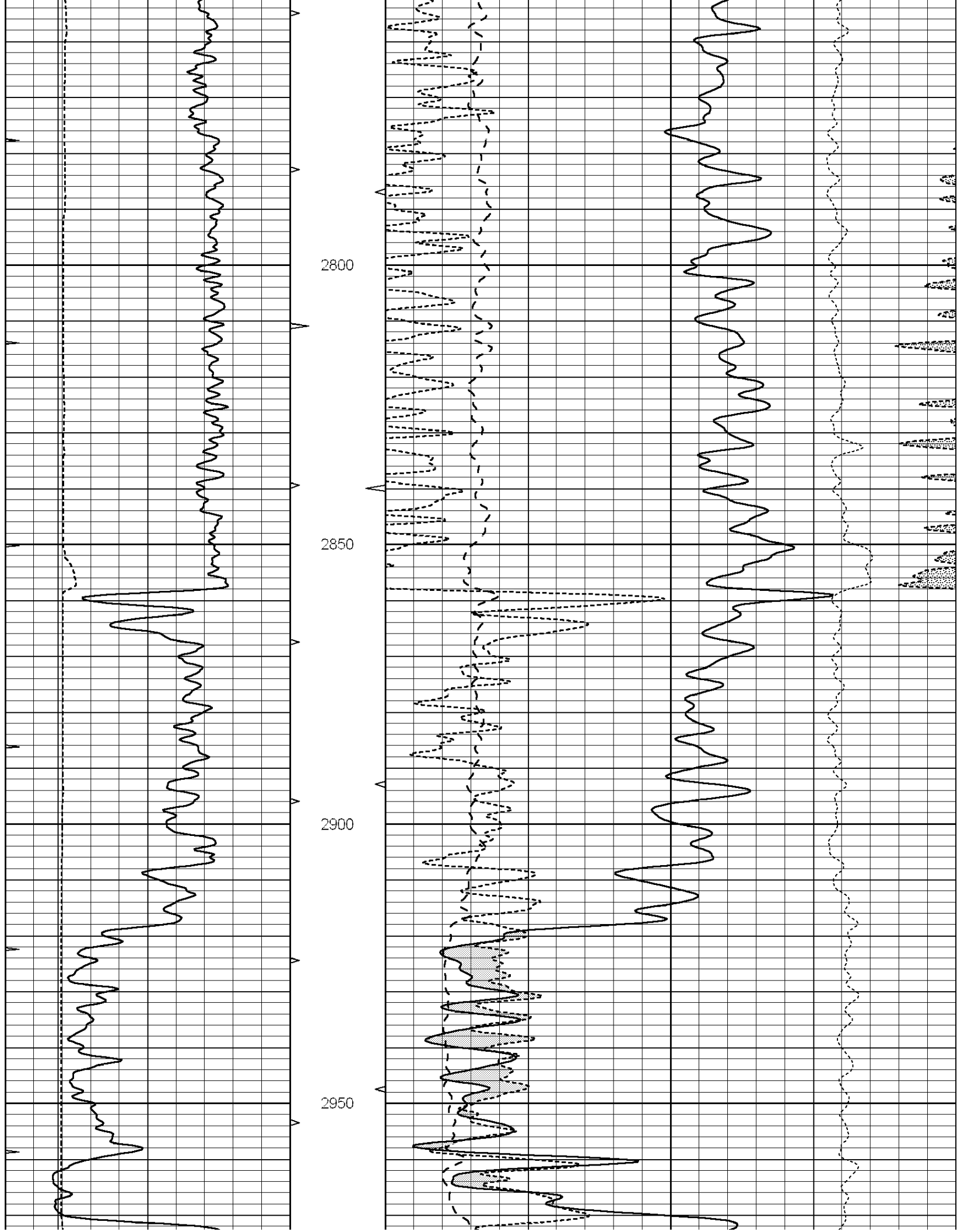
2400

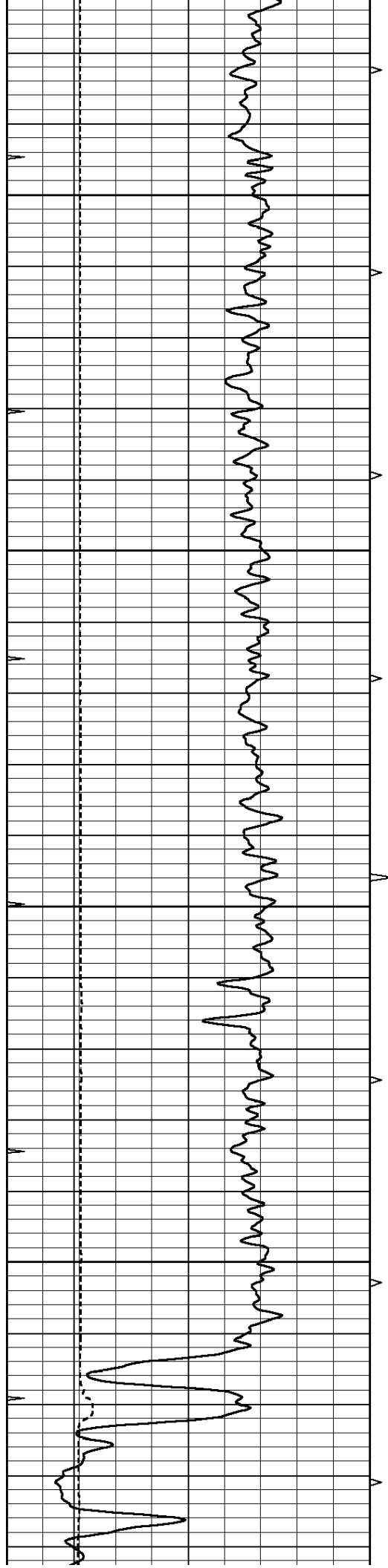
2450

2500







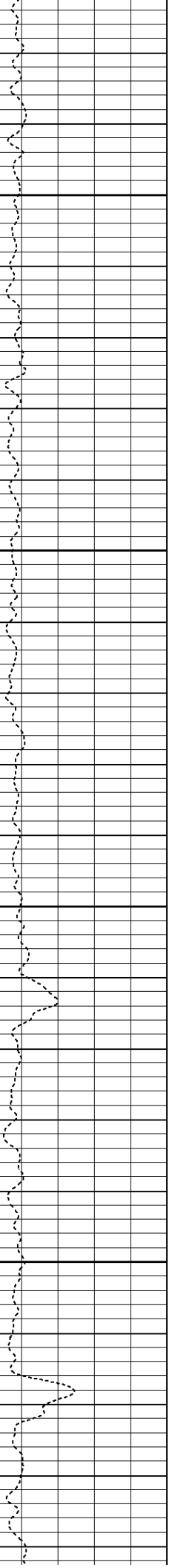
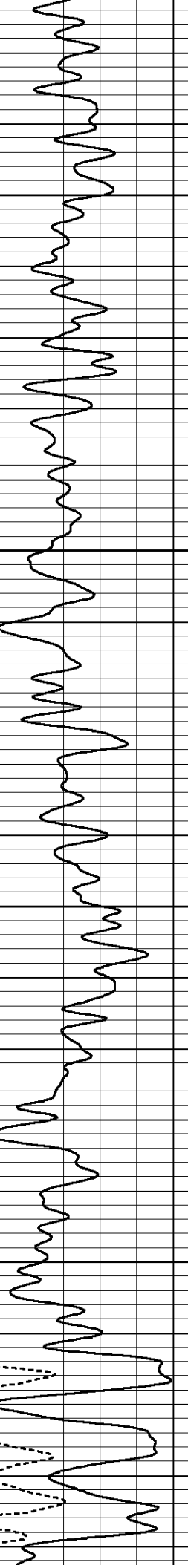
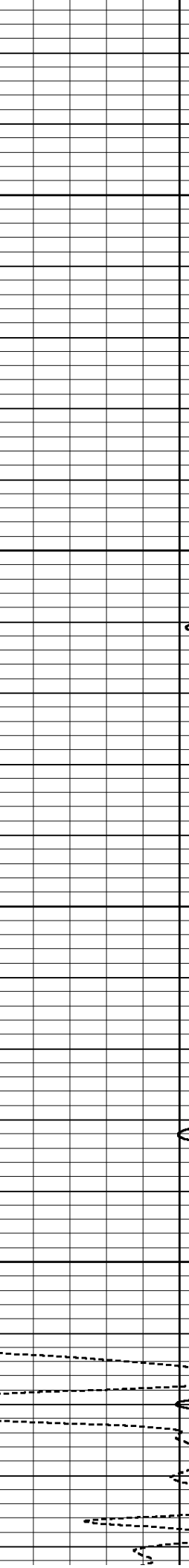
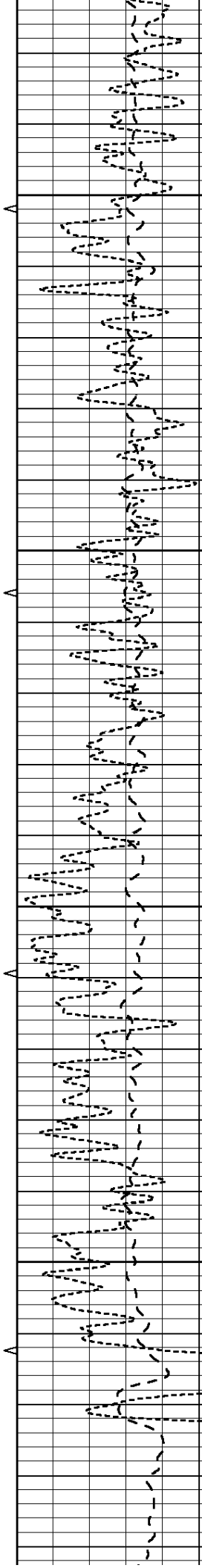


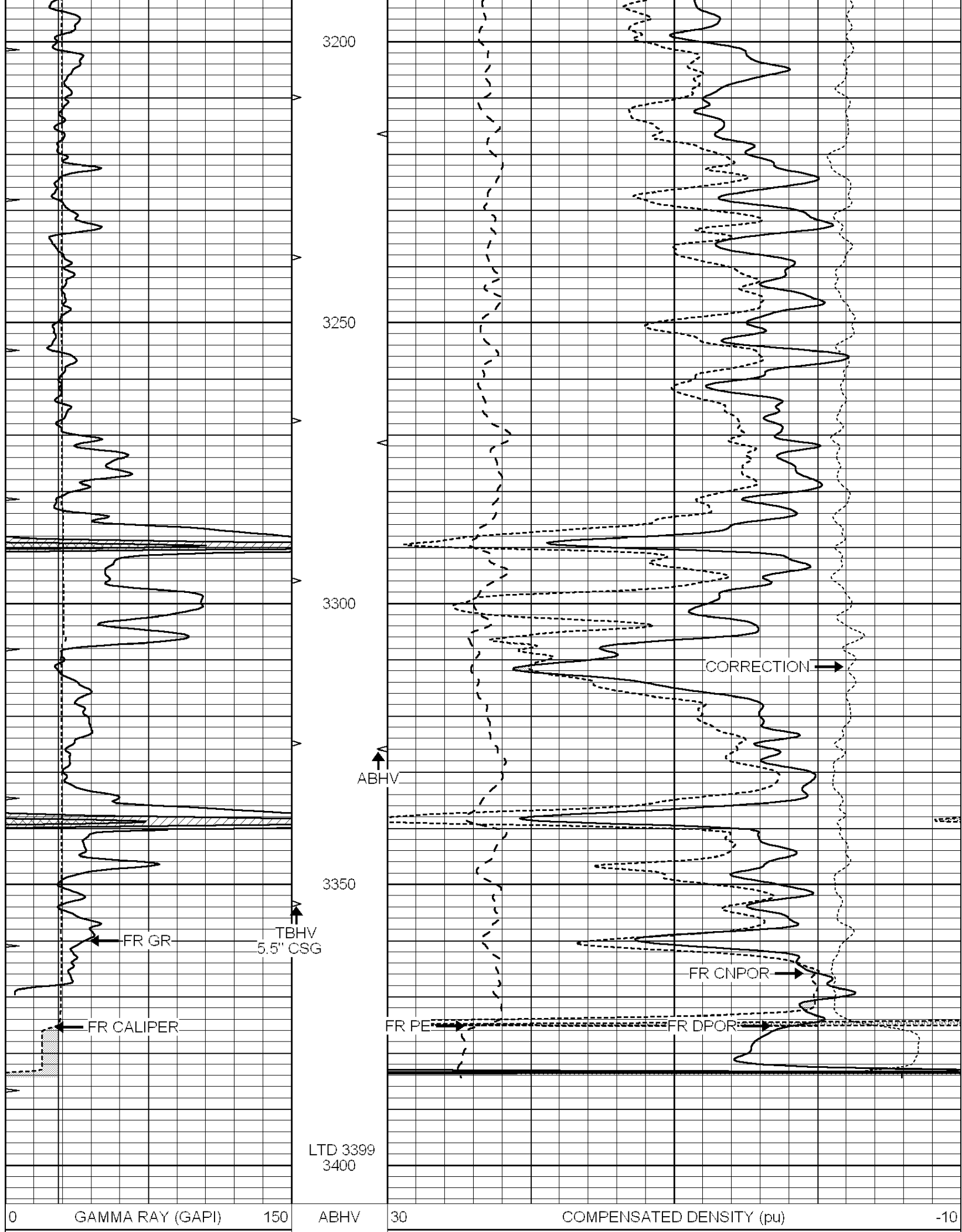
3000

3050

3100

3150





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					

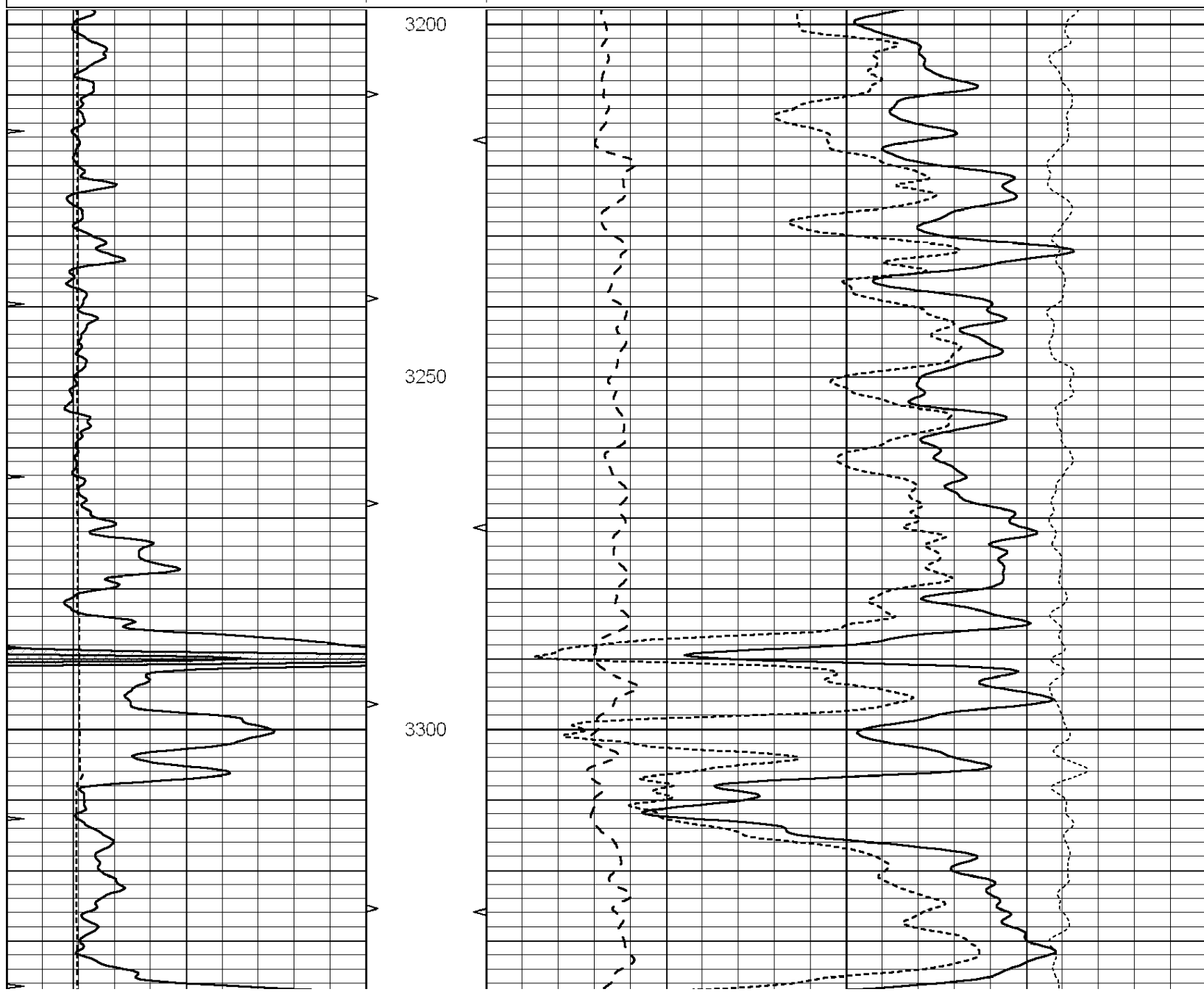


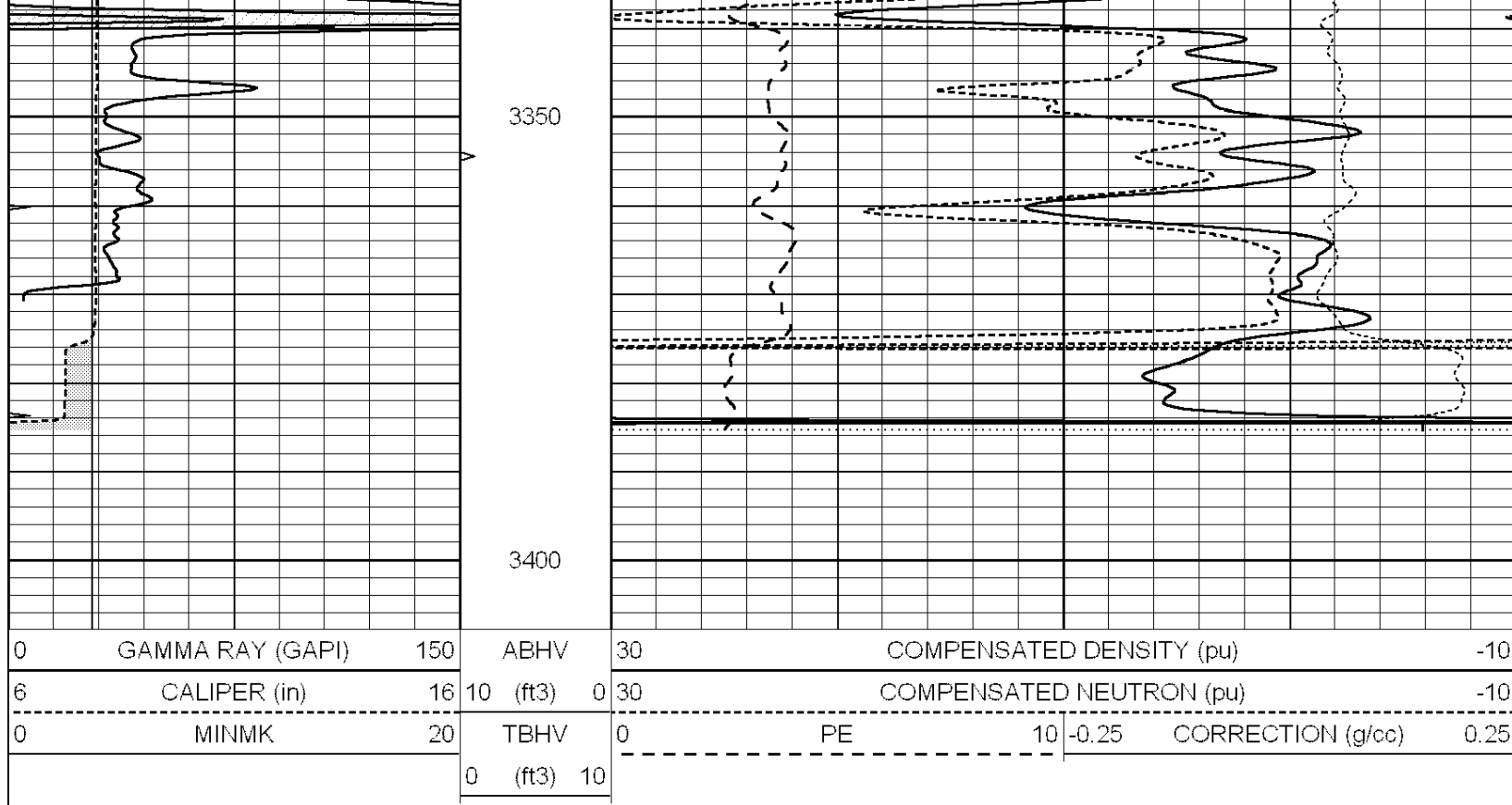
**COMPLETION
& PRODUCTION
SERVICES CO.**

REPEAT SECTION

Database File: 24440pe.db
Dataset Pathname: pass2.1
Presentation Format: _ldt_neu
Dataset Creation: Mon May 26 13:40:48 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
			0 (ft3) 10					





Calibration Report

Database File: 24440pe.db
 Dataset Pathname: pass4.1
 Dataset Creation: Mon May 26 14:27:22 2014 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Mon May 26 12:35:07 2014

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	475.000	8.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	540.000	100.000
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: 002 Model: PRB
 Performed Thu Feb 20 13:15:40 2014

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	838.1	7256.9	2235.8	7989.6	cps
Window 2	793.3	6009.5	1923.3	6534.3	cps
Window 3	675.6	3641.9	1293.0	3880.0	cps
Window 4	191.0	190.0	189.0	190.4	cps
Long Space	0.0	5216.1	1130.0	5740.9	cps
Short Space	1.1	1324.1	886.6	1421.3	cps
Rho		1.7100	2.5960	1.3800	g/cc
Pe			2.5700	1.5500	

Rib Angle	: 45.3	Rib Slope	: 1.011	Density/Spine Ratio	: 0.560
Spine Angle	: 75.3	Spine Slope	: 3.813	Spine Intercept	: -18.9
Caliper					
	Readings	Reference			
Low Ref	1.8	8.4			
High Ref	6.1	14.0			
	Gain: 1.3		Offset: 3.0		
Compensated Neutron Calibration Report					
		Serial Number:	080621		
		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:	080328			
	Tool Model:	Probe1			
	Performed:	Mon May 26 12:35:22 2014			
	Calibrator Value:	1.0	GAPI		
	Background Reading:	0.0	cps		
	Calibrator Reading:	1.0	cps		
	Sensitivity:	0.2500	GAPI/cps		