

COMPENSATED
DENSITY / NEUTRON
PE LOG

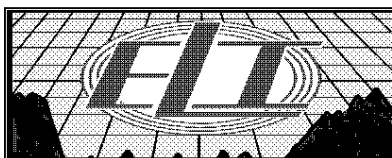
Company	DEUTSCH OIL COMPANY		
Well	TRIPLE M #1-18		
Field	STARK		
County	PRATT	State	KANSAS
Location:	APL # : 15-151-22473-0000 330' FNL & 330' FEL NE - NE - NE		Other Services DIL/MEL
Permanent Datum	GROUND LEVEL	Elevation	1858
Log Measured From	KELLY BUSHING 7' A.G.L.		
Drilling Measured From	KELLY BUSHING		
Date	7/17/18		
Run Number	ONE		
Depth Driller	4285		
Depth Logger	4285		
Bottom Logged Interval	4261		
Top Log Interval	3200		
Casing Driller	8 5/8"@304		
Casing Logger	304		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 15,000 PPM	
Density / Viscosity	8.9/65		
pH / Fluid Loss	9.0/18.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.400@80F		
Rmf @ Meas. Temp	.300@80F		
Rmc @ Meas. Temp	.480@80F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.269@119F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	12:30 P.M.		
Maximum Recorded Temperature	119F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	AARON YOUNG		

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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

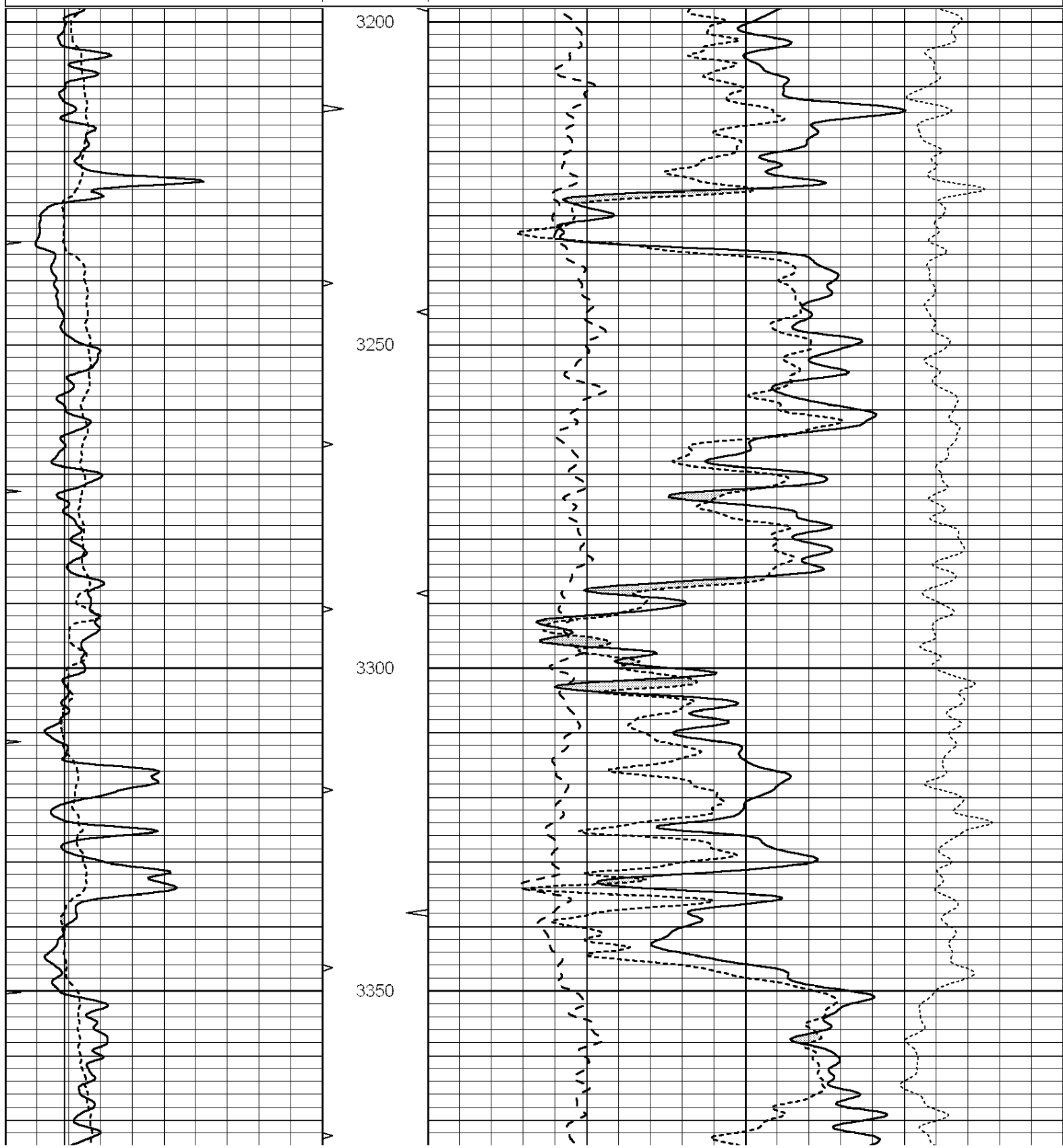
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
PRESTON, KS. (HWY 61 & 100TH AVE.) 2N., 1/4W., S. INTO

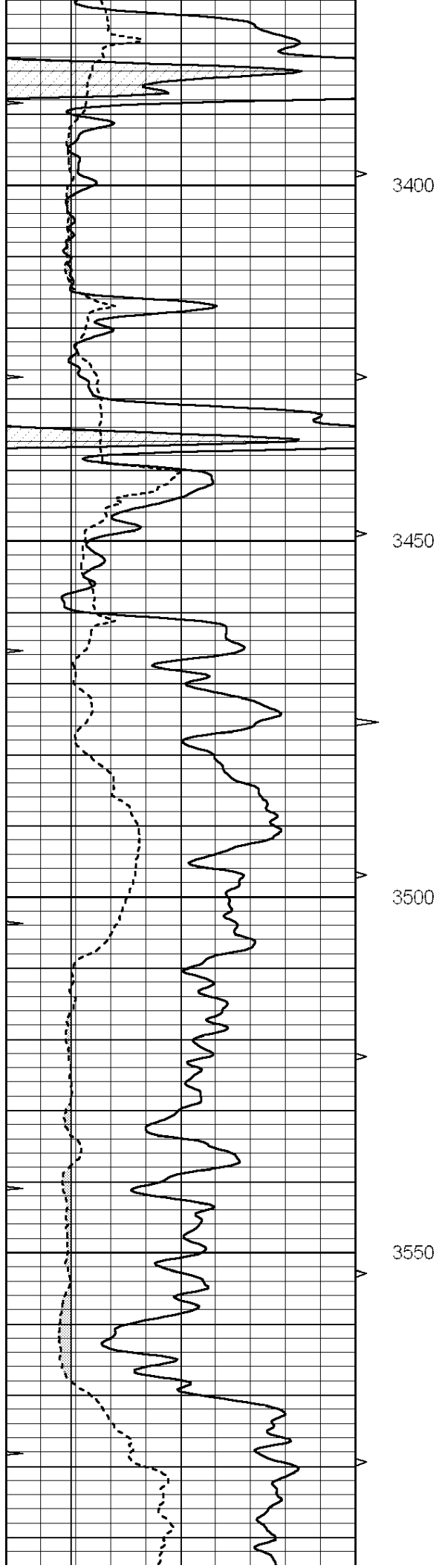


MAIN SECTION

Database File: 2663pe.db
Dataset Pathname: pass3.5
Presentation Format: ldt_neu
Dataset Creation: Tue Jul 17 14:04:22 2018 by Calc SOC 120430
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
0	MINMK	20	TBHV	0	PE	10
			0 (ft3)	10	-0.25	CORRECTION (g/cc)
					0.25	



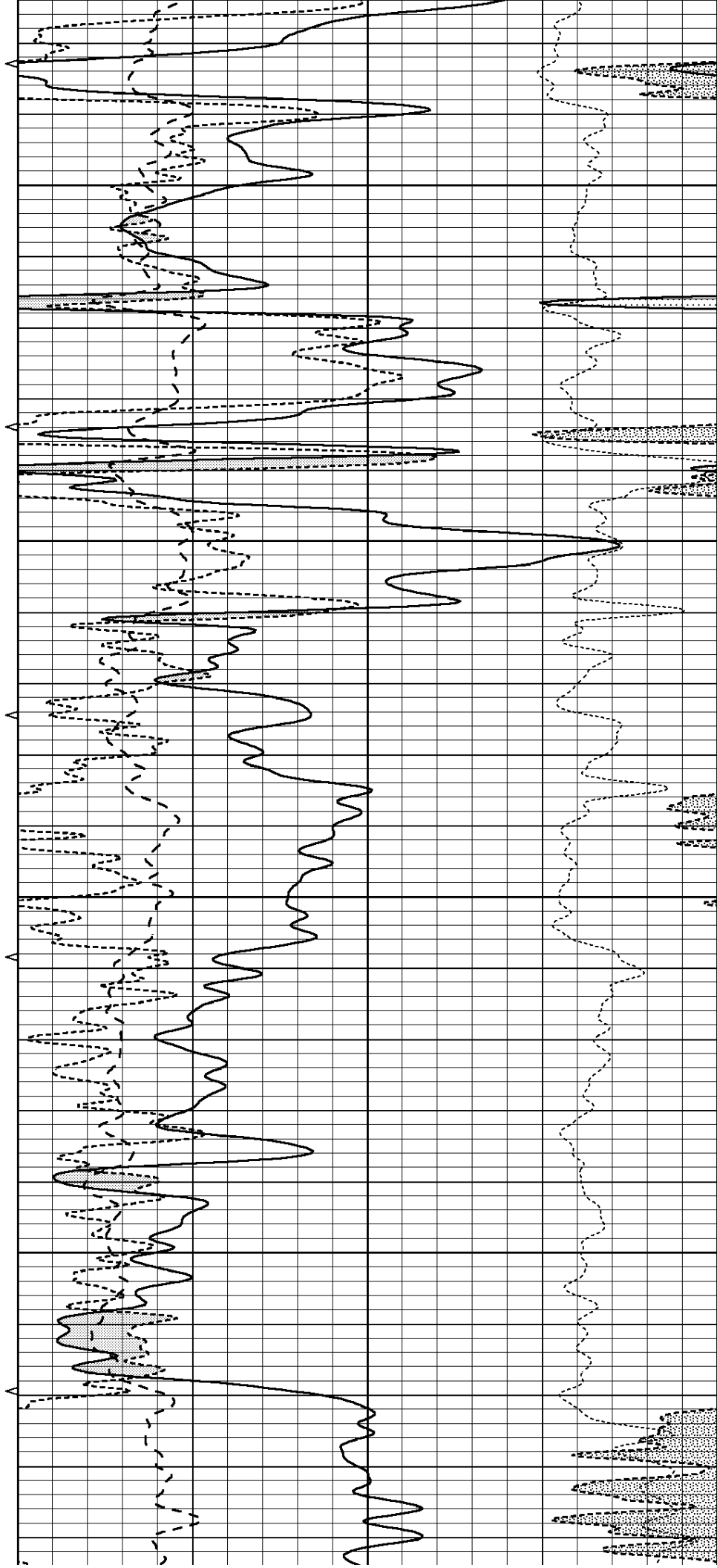


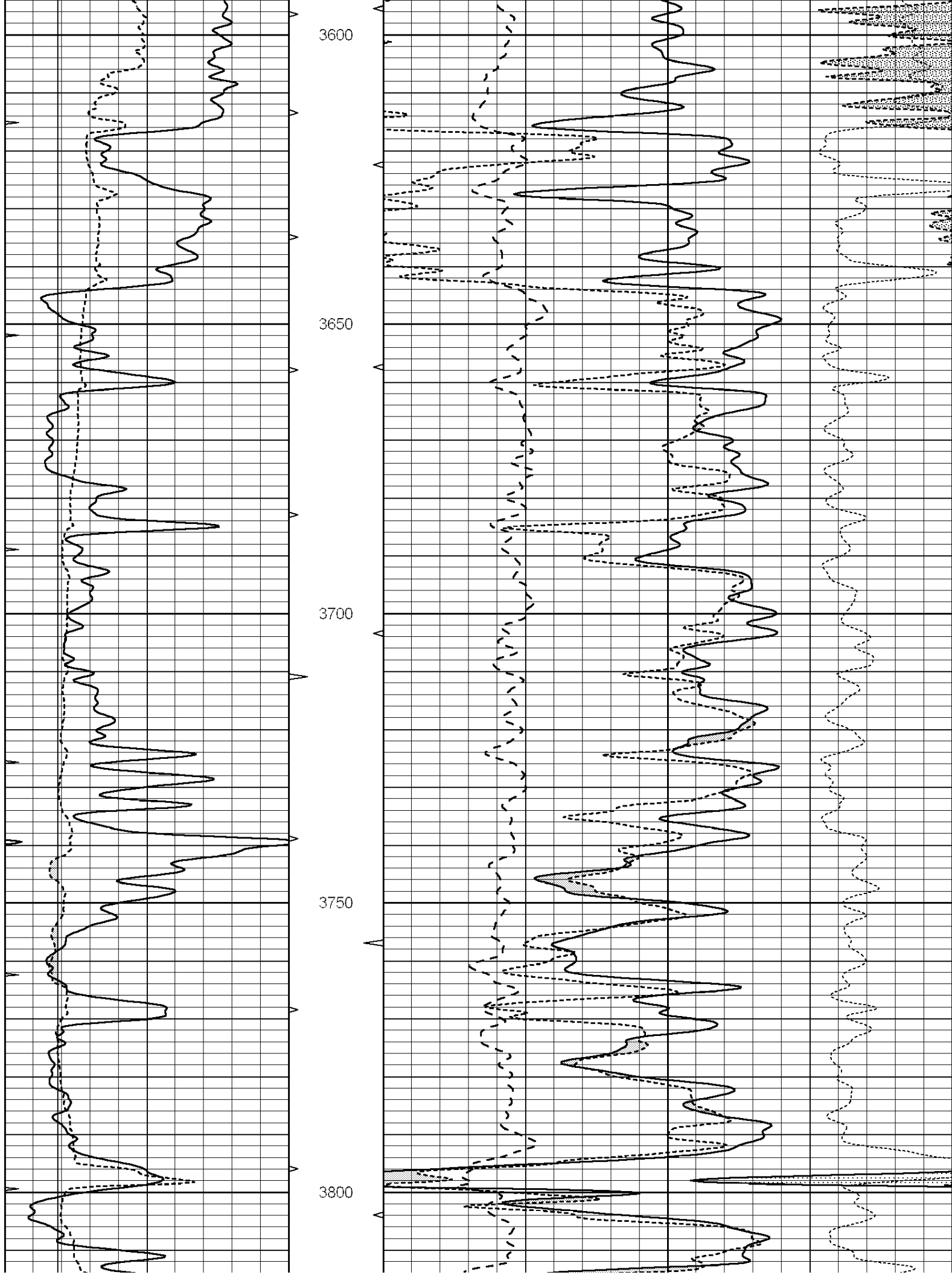
3400

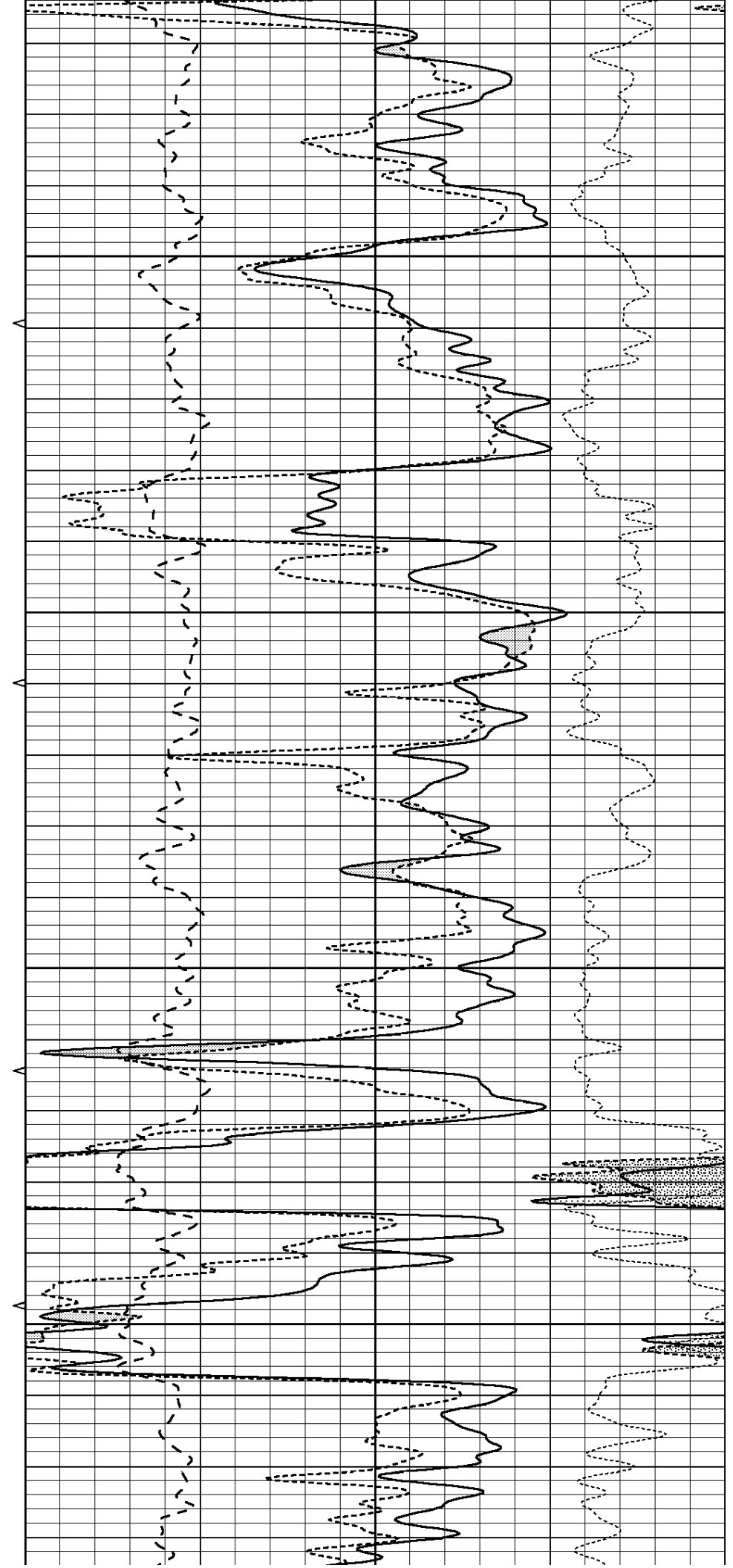
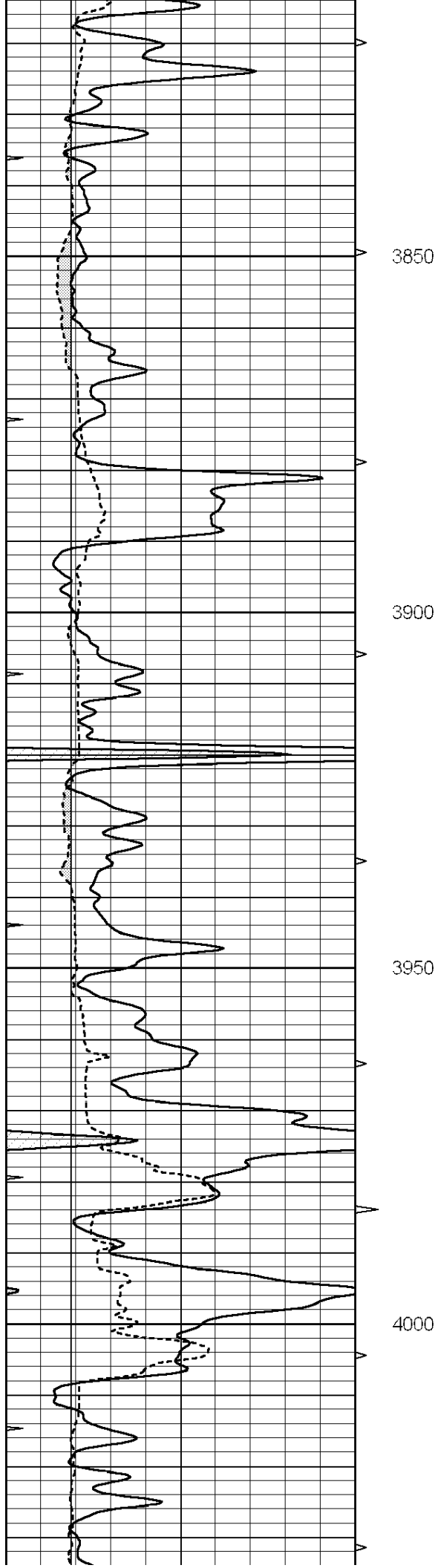
3450

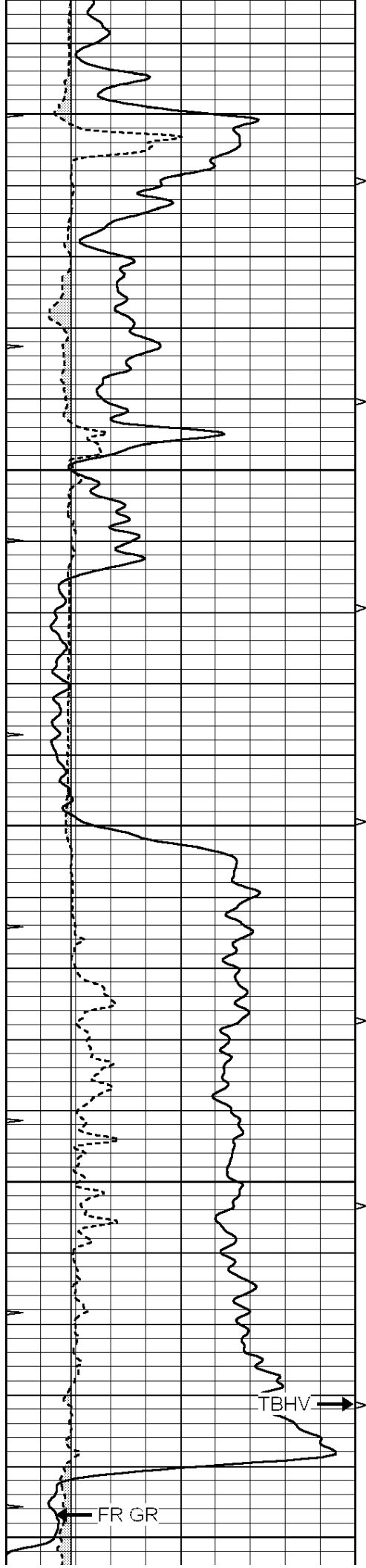
3500

3550









4050

4100

4150

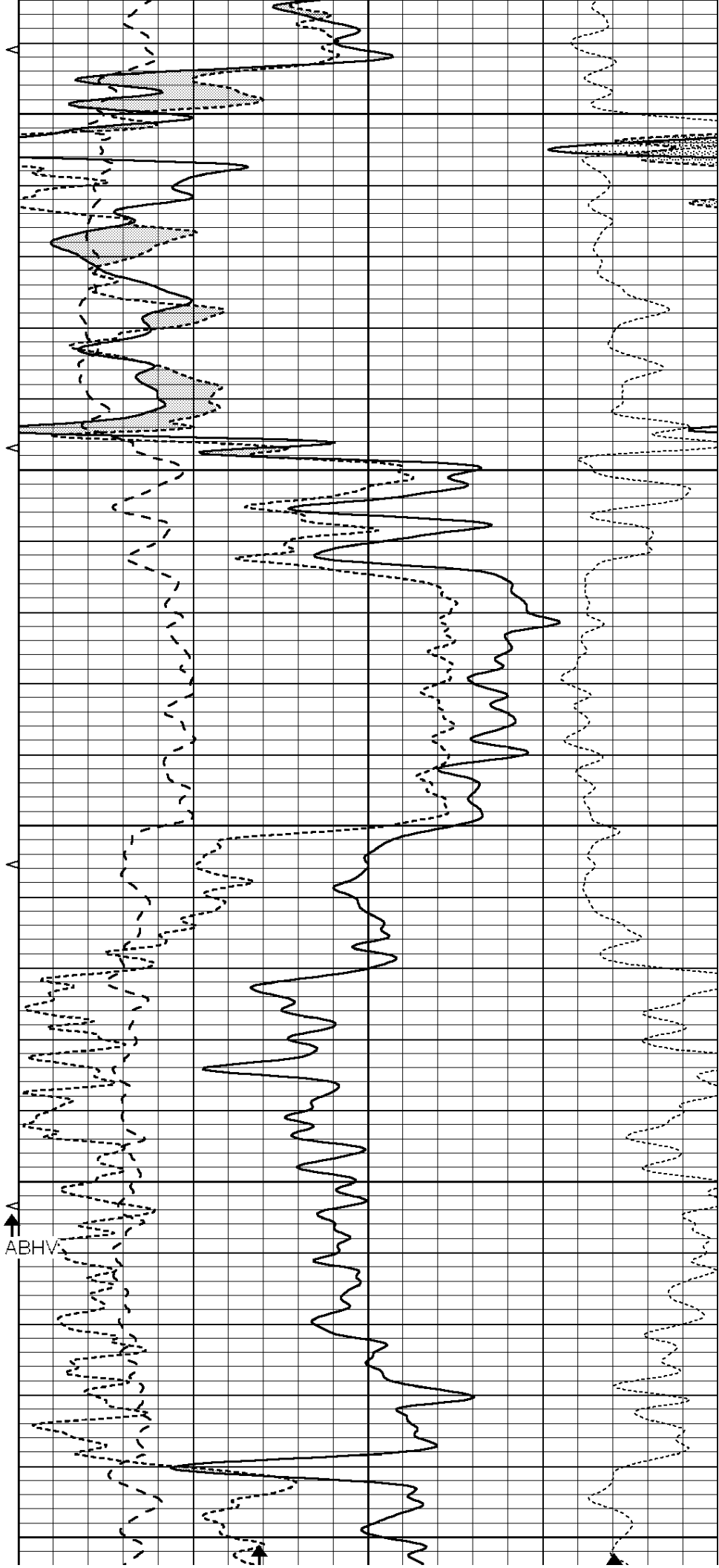
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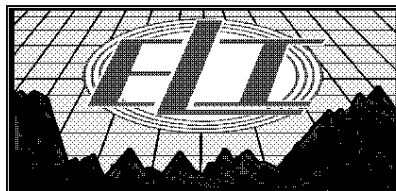
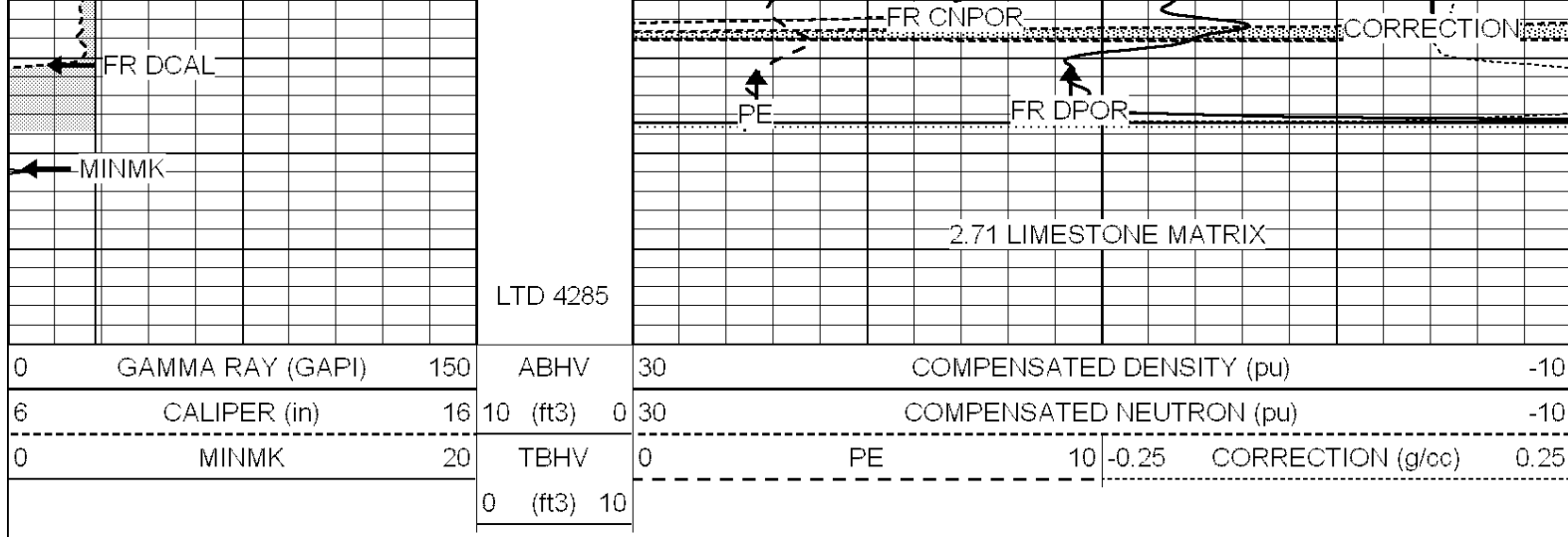
4250

TBHV →

FR GR →

5.5" ABHV ↑

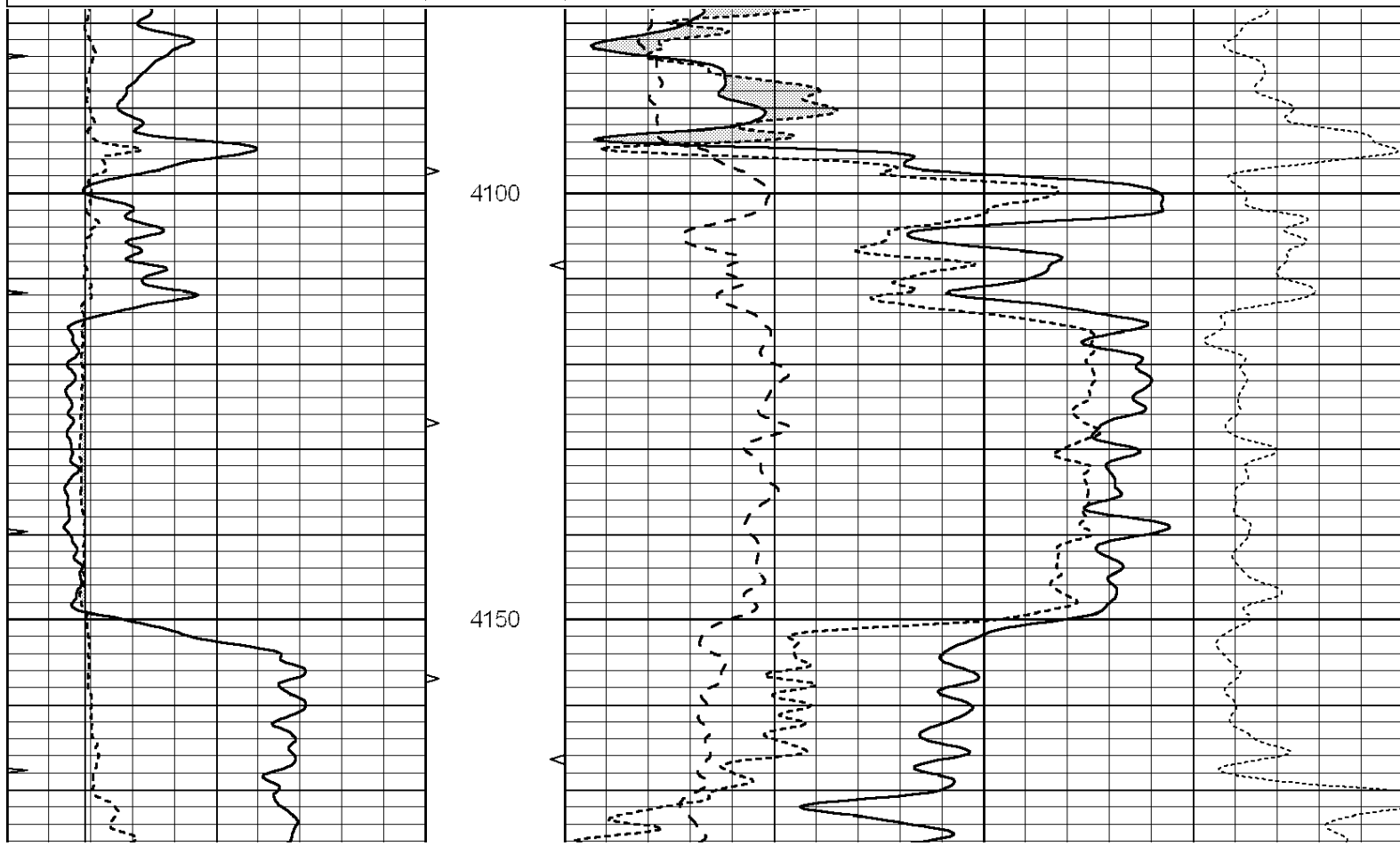


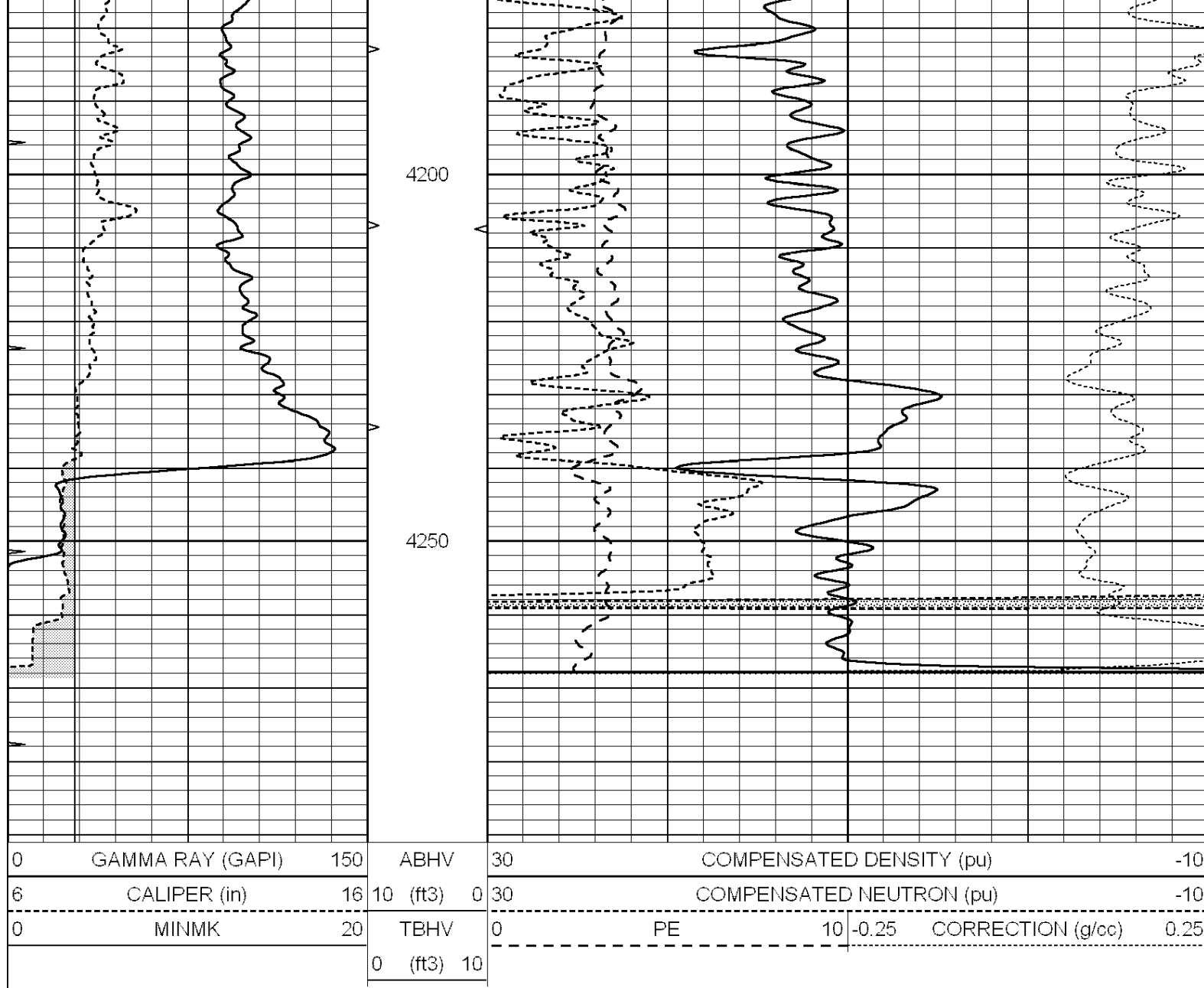


REPEAT SECTION

Database File: 2663pe.db
 Dataset Pathname: pass2.2
 Presentation Format: ldt_neu
 Dataset Creation: Tue Jul 17 12:59:46 2018 by Calc SOC 120430
 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: 1598ddn.db
Dataset Pathname: pass4
Dataset Creation: Wed Aug 30 02:13:00 2017 by Log SOC 120430

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
Surface Cal Performed: Wed Aug 30 00:06:33 2017
Downhole Cal Performed: Mon Jul 28 12:02:56 2008
After Survey Verification Performed: Mon Jul 28 12:02:56 2008

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	620.000	0.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-44.000
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: 002			Model: PRB					

Master Calibration			Performed Mon Aug 21 11:27:42 2017					
	Background		Magnesium		Aluminum		Sandstone	
Window 1	837.1		10632.5		2945.1		12110.1	cps
Window 2	772.0		9117.4		2570.1		10197.3	cps
Window 3	631.7		4669.0		1481.9		5042.9	cps
Window 4	187.0		187.5		185.9		189.9	cps
Long Space	0.0		8345.4		1798.1		9425.3	cps
Short Space	1.1		1927.9		1285.9		2050.2	cps
Rho			1.7100		2.5960		1.3800	g/cc
Pe			0.0000		2.5700		1.5500	
Rib Angle	: 45.2		Rib Slope	: 1.008	Density/Spine Ratio		: 0.558	
Spine Angle	: 75.2		Spine Slope	: 3.790	Spine Intercept		: -19.6	

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	

Measured Pe	0.0000	0.0000
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:	070558	
Tool Model:	OPEN_GR	
Performed:	Wed May 31 00:09:32 2017	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.2800	GAPI/cps