



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company MULL DRILLING COMPANY, INC. Well #1-3 GLASIR UNIT Field WILDCAT County SCOTT State KANSAS		Company MULL DRILLING COMPANY, INC. Well #1-3 GLASIR UNIT Field WILDCAT County SCOTT State KANSAS		Location: API # : 15-171-20934-00-00 110' FSL & 2530' FWL SE - SE - SE-SW SEC 3 TWP 16S RGE 32W Permanent Datum GROUND LEVEL Elevation 2994 Log Measured From KELLY BUSHING 5' A.G.L. Drilling Measured From KELLY BUSHING Other Services DIL/MEL SONIC Elevation K.B. 2989 D.F. 2987 G.L. 2994	
Date	3/19/13				
Run Number	ONE				
Depth Driller	4740				
Depth Logger	4740				
Bottom Logged Interval	4715				
Top Log Interval	3800				
Casing Driller	8 5/8" @ 222'				
Casing Logger	220				
Bit Size	7 7/8"				
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 3,800 PPM			
Density / Viscosity	9.3/55				
pH / Fluid Loss	10.5/4.8				
Source of Sample	FLOWLINE				
Rim @ Meas. Temp	.95 @ 72F				
Rmf @ Meas. Temp	.71 @ 72F				
Rmc @ Meas. Temp	1.14 @ 72F				
Source of Rmf / Rmc	MEASUREMENT				
Rim @ BHT	.56 @ 123F				
Time Circulation Stopped	2.5 HOURS				
Time Logger on Bottom					
Maximum Recorded Temperature	123F				
Equipment Number	4854				
Location	HAYS, KANSAS				
Recorded By	IAN MABB				
Witnessed By	KEVIN KESSLER				

<<< Fold Here >>>

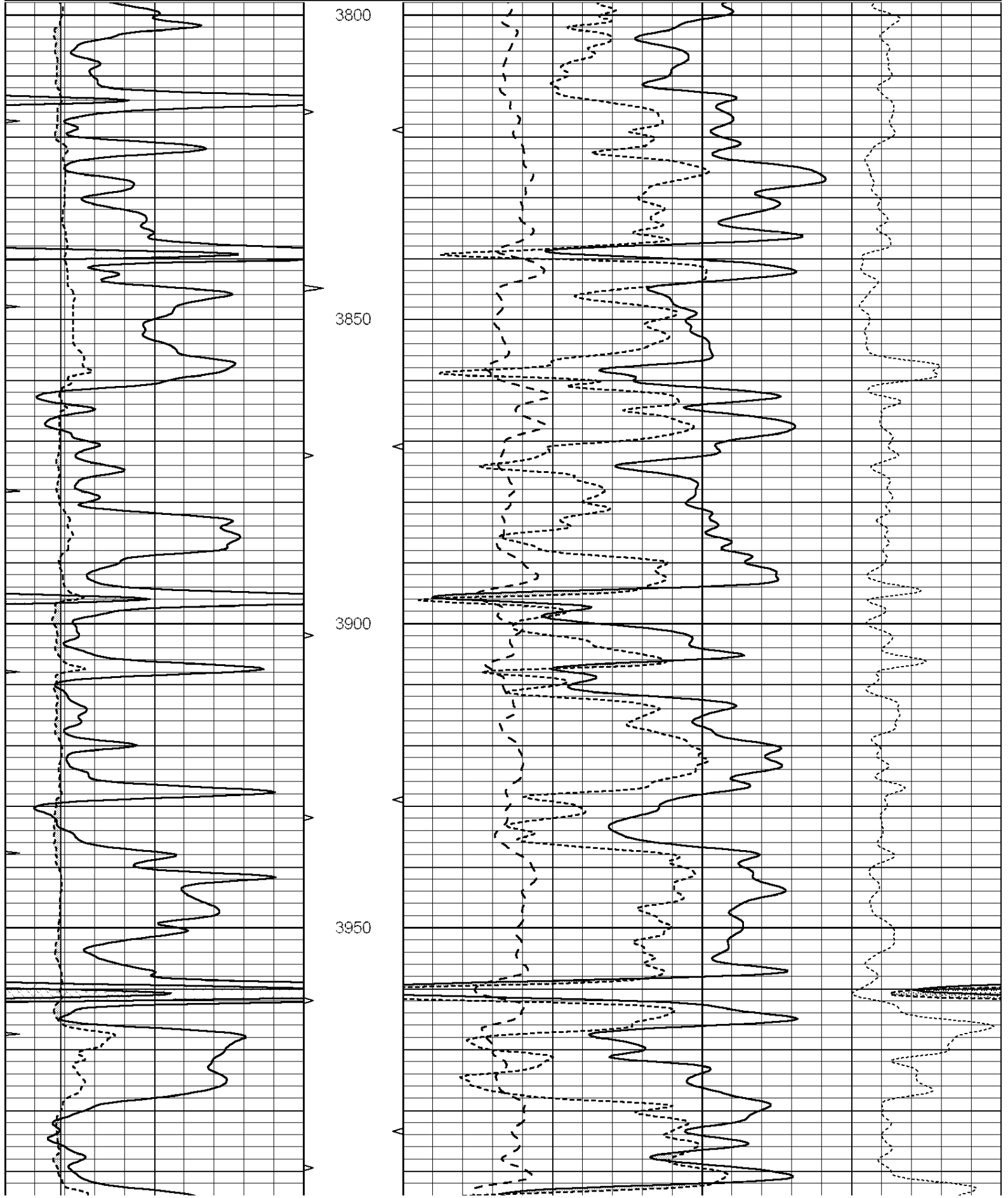
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

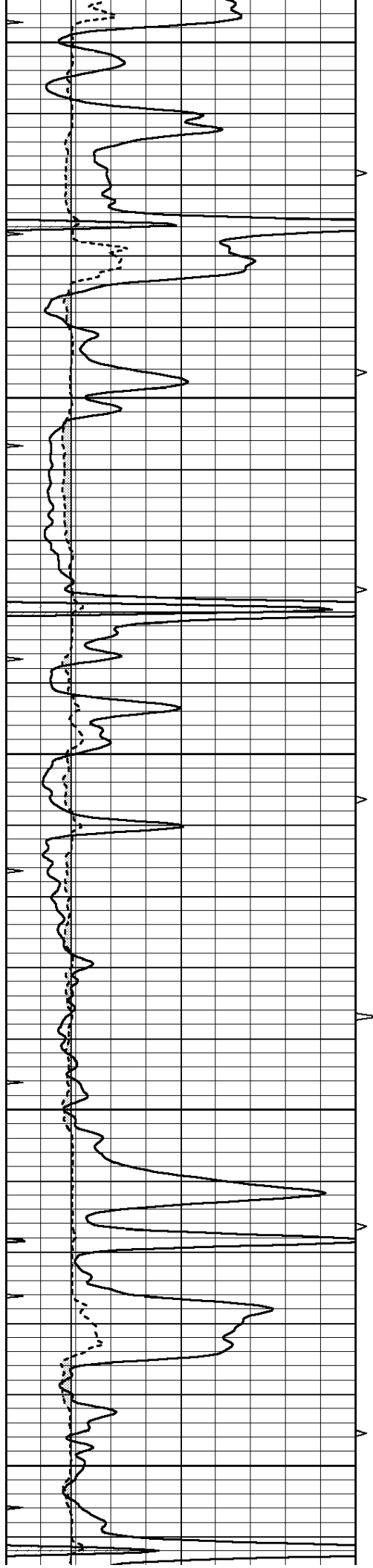
Comments

THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395
 DIRECTIONS
 SCOTT CITY, KS. - 15 MILES NORTH TO RD 290 - 1 1/2 MILES EAST - NORTH INTO

Database File: 010727pe.db
 Dataset Pathname: pass3.2
 Presentation Format: _ldt_neu
 Dataset Creation: Tue Mar 19 03:30:31 2013 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

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)	
-----				-----			
0	MINMK	20	TBHV	0	PE	10	-0.25 CORRECTION (g/cc) 0.25
			0 (ft3) 10	-----			





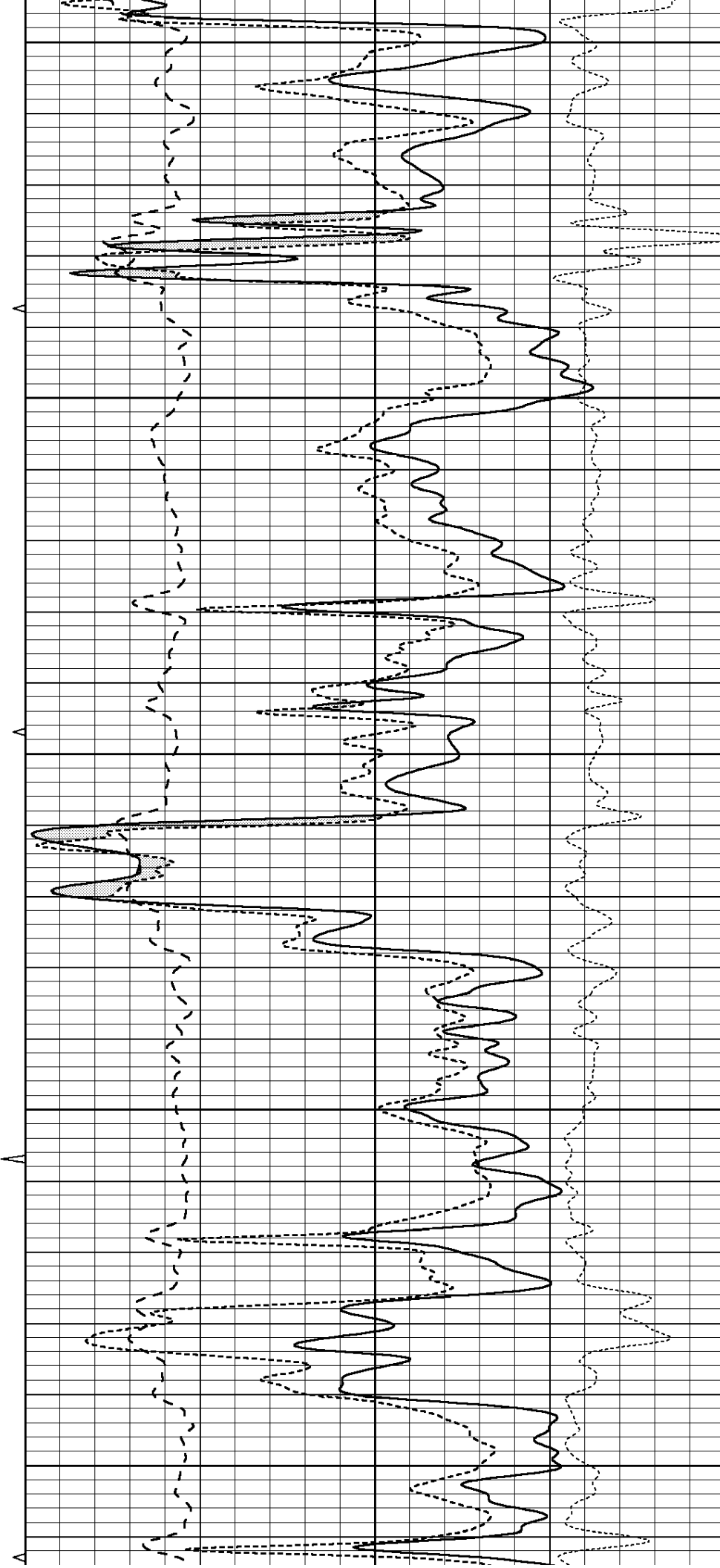
4000

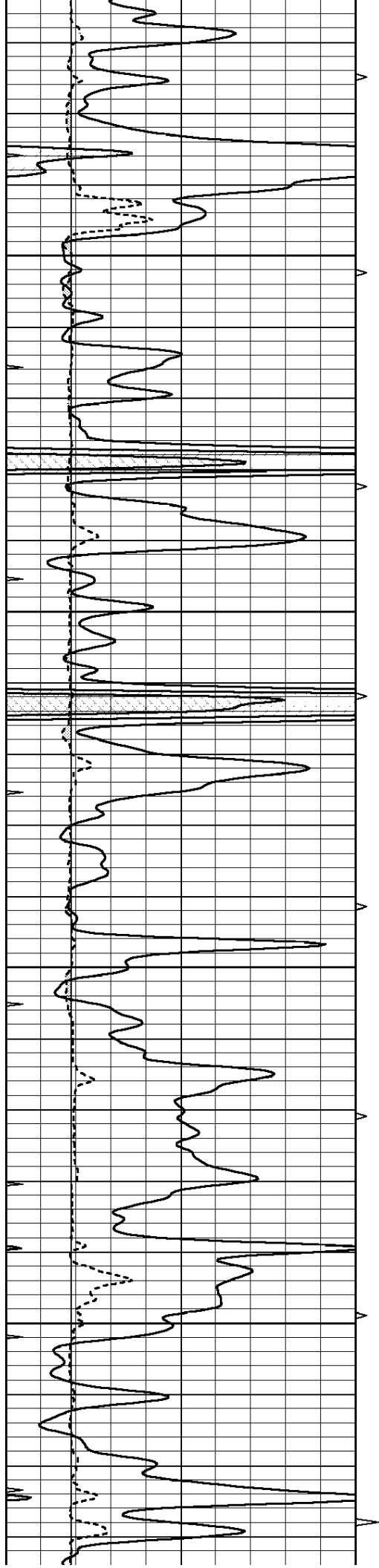
4050

4100

4150

4200



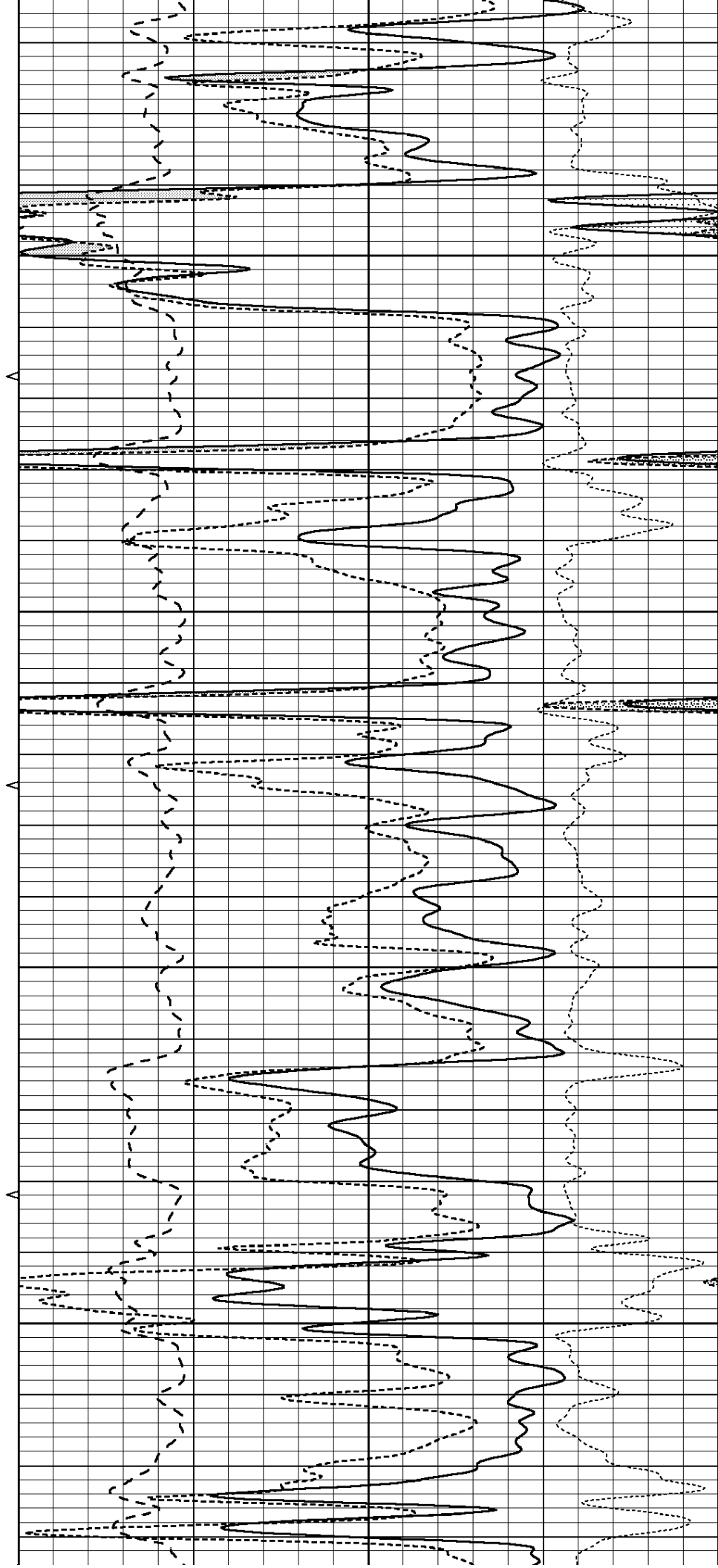


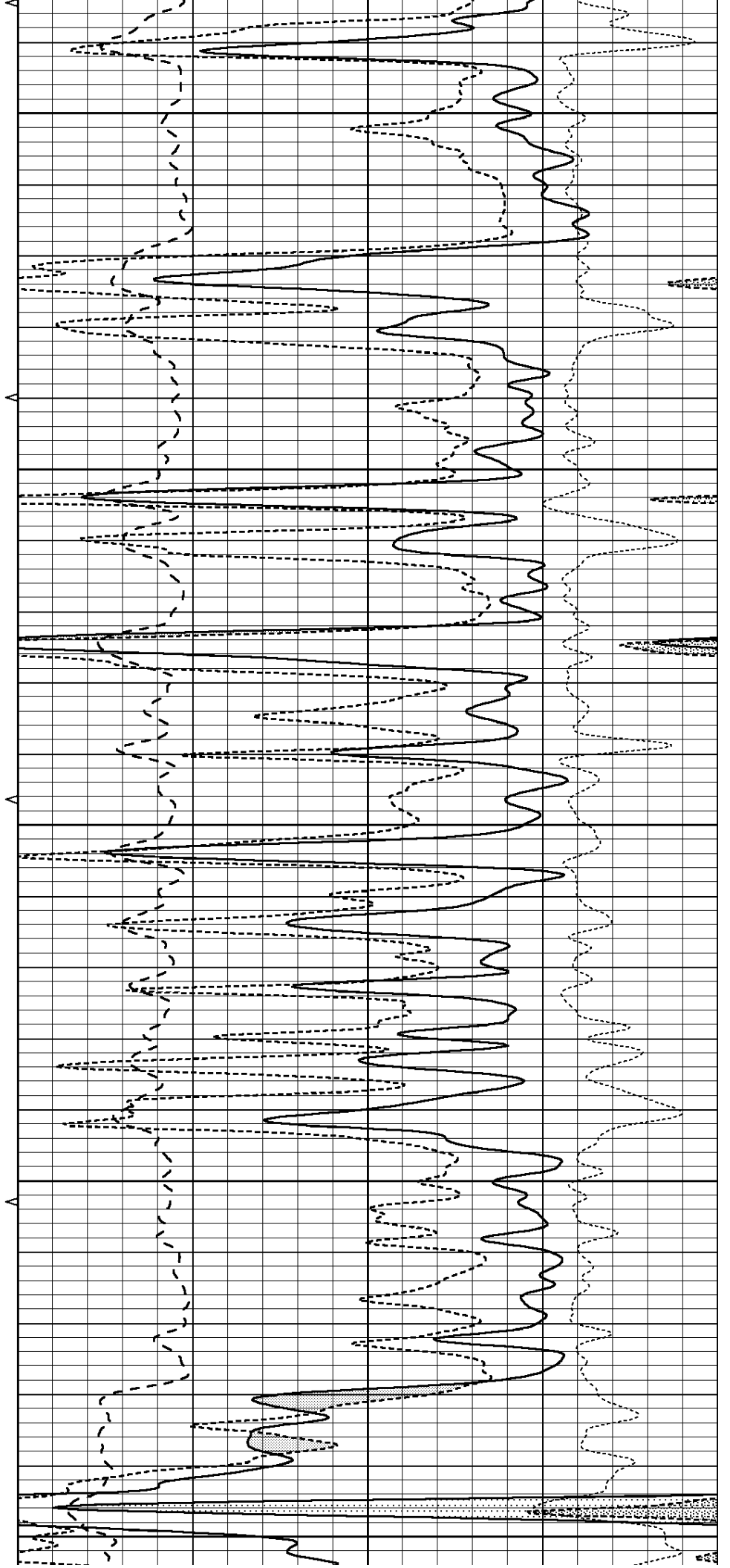
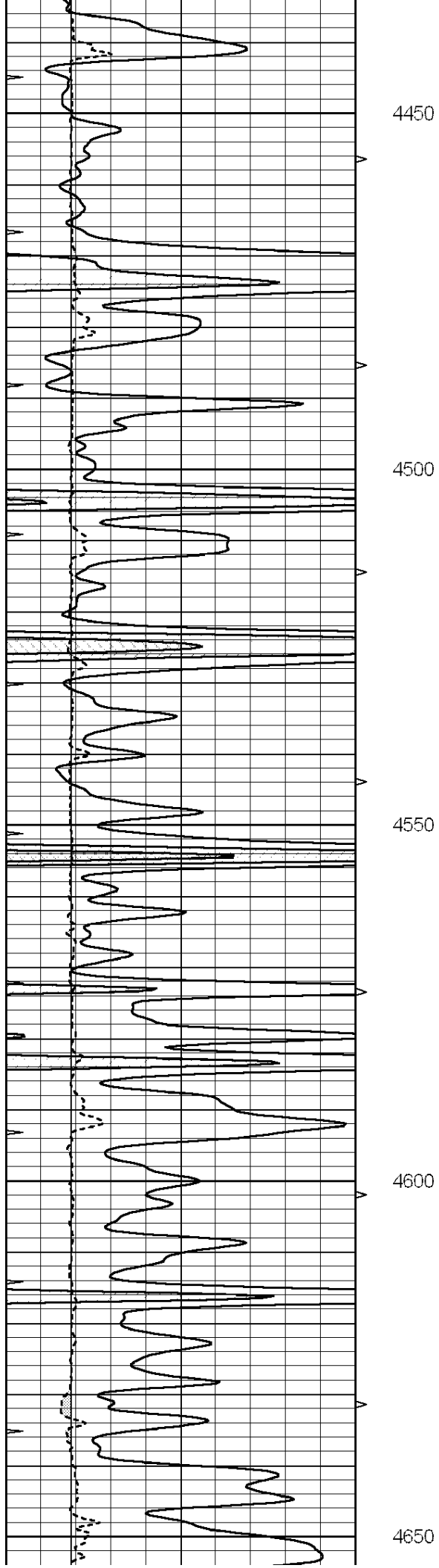
4250

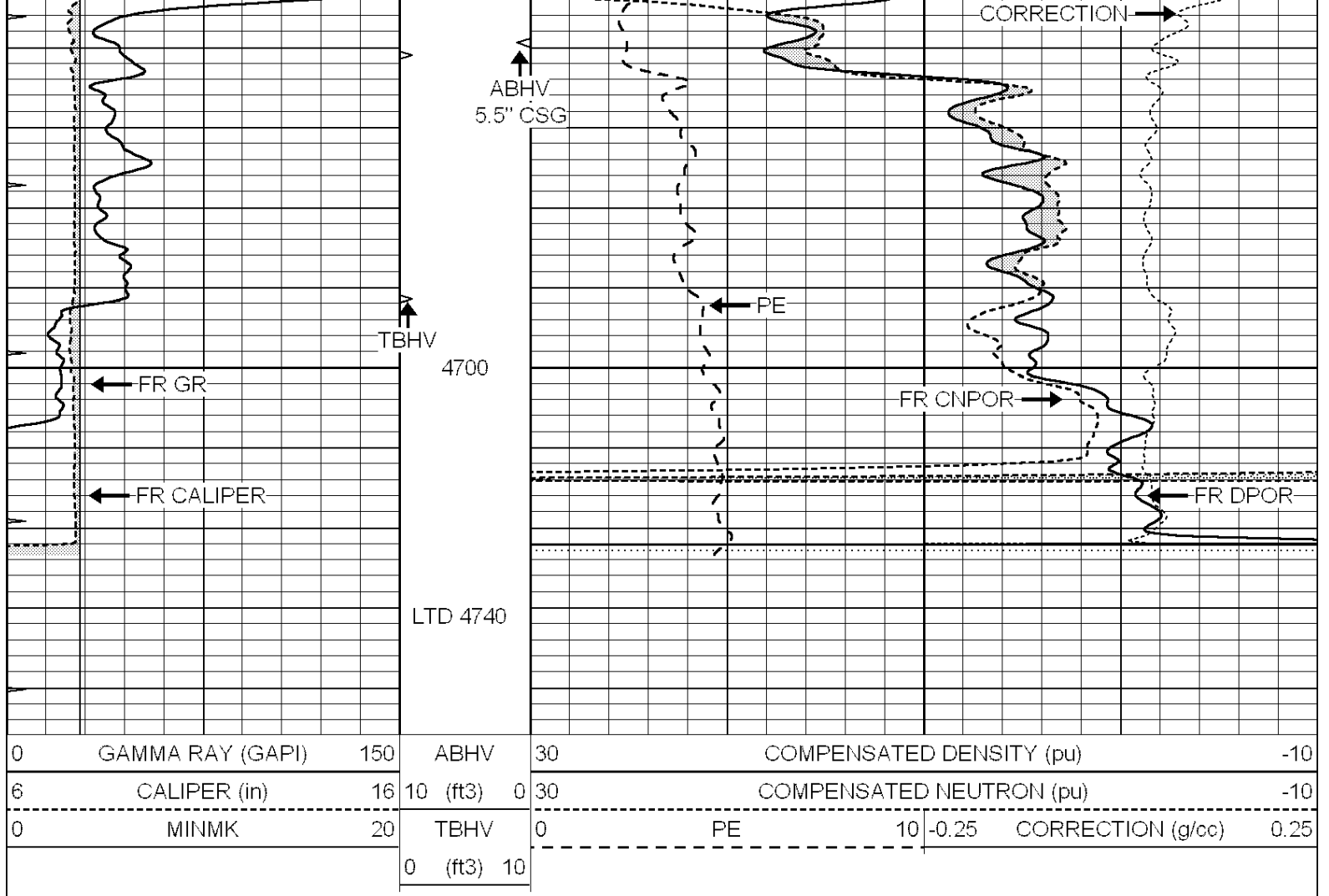
4300

4350

4400





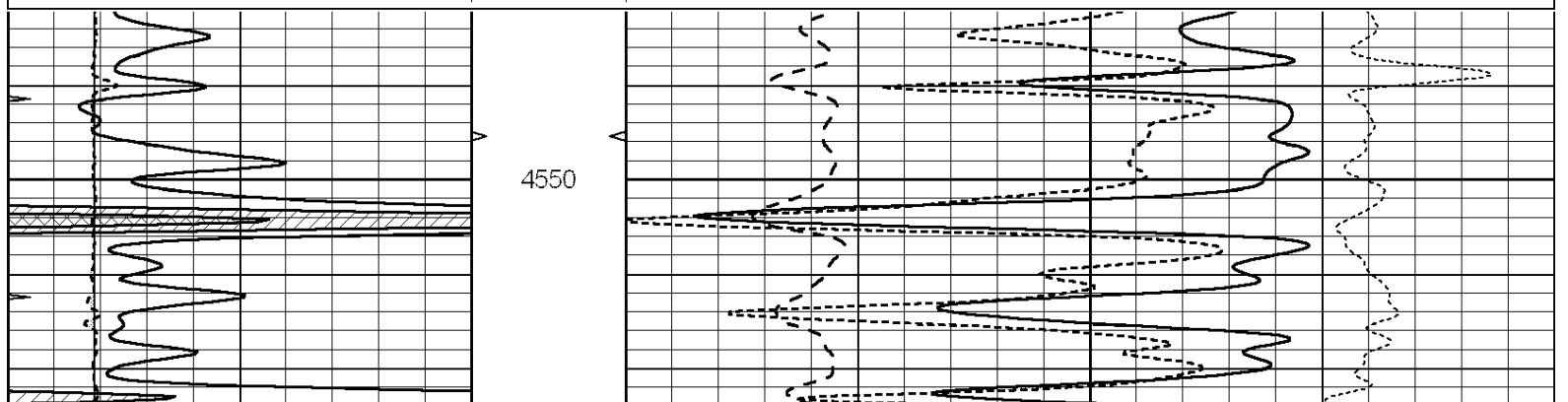


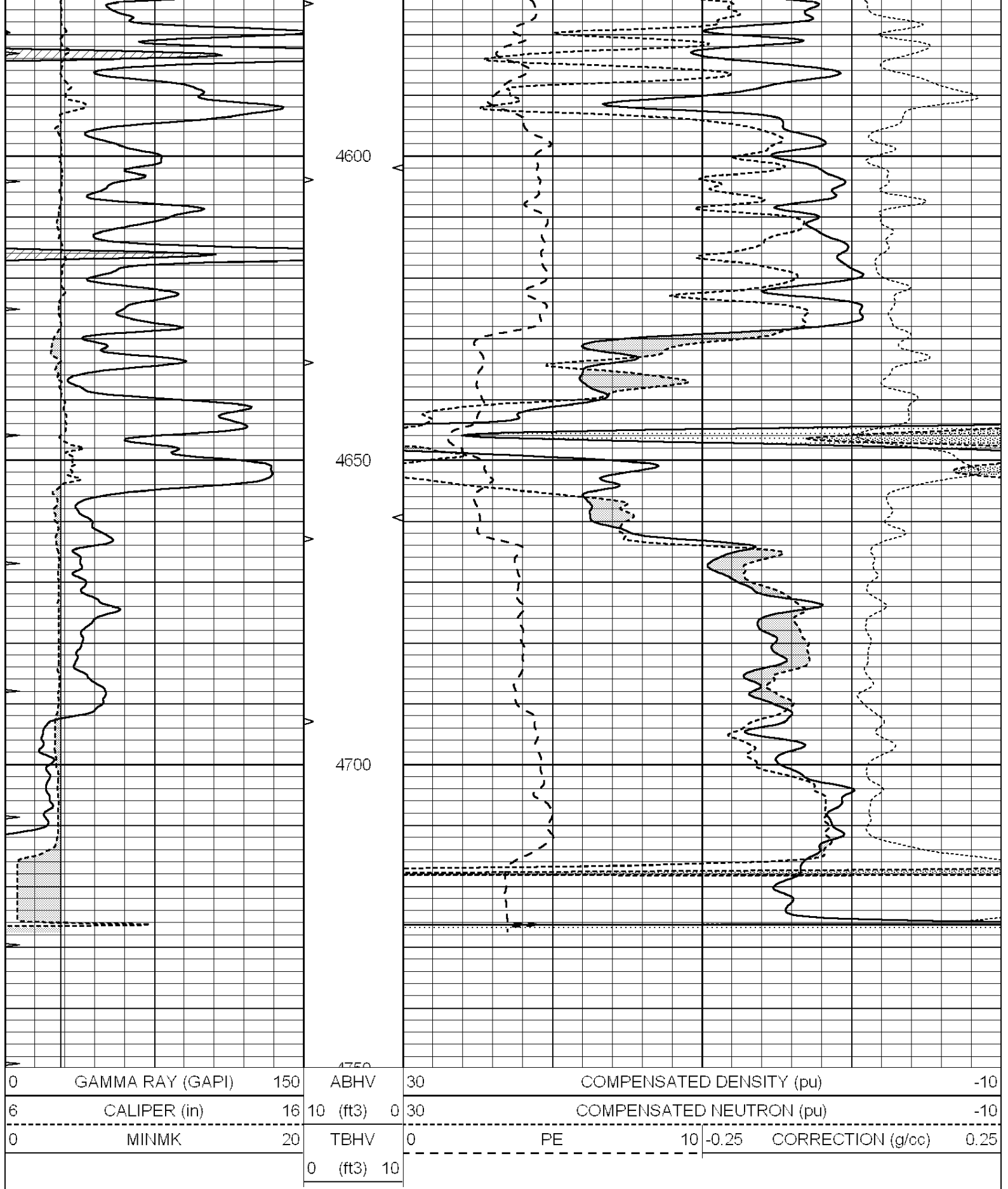
NABORS
COMPLETION
& PRODUCTION
SERVICES CO.

REPEAT SECTION

Database File: 010727pe.db
Dataset Pathname: pass2.8
Presentation Format: _ldt_neu
Dataset Creation: Tue Mar 19 03:14:17 2013 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	10	-0.25	CORRECTION (g/cc)	0.25
			0 (ft3)	10				





Calibration Report

Database File: 010727pe.db
Dataset Pathname: pass3.2
Dataset Creation: Tue Mar 19 03:30:31 2013 by Calc SOC 120430

Serial-Model:
 Surface Cal Performed:
 Downhole Cal Performed:
 After Survey Verification Performed:

PROBE9-DILG
 Sun Mar 10 00:44:14 2013
 Mon Jul 28 12:02:56 2008
 Mon Jul 28 12:02:56 2008

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	-11.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	640.000	-19.000
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: 006 Model: PRB

Master Calibration

Performed Sun Aug 15 09:48:41 2010

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1686.6	11612.8	3932.0	12718.8	cps
Window 2	1531.4	9204.7	3267.8	9851.9	cps
Window 3	1198.3	4733.6	1952.5	4920.6	cps
Window 4	317.3	321.2	325.9	303.6	cps
Long Space	0.0	7673.3	1736.4	8320.4	cps
Short Space	1.7	2548.5	1657.2	2628.8	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	
Rib Angle	: 43.8	Rib Slope	: 0.961	Density/Spine Ratio	: 0.569
Spine Angle	: 73.8	Spine Slope	: 3.453	Spine Intercept	: -18.1

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	
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:		070559			
Tool Model:		OPEN_GR			
Performed:		Sun Mar 10 00:43:54 2013			
Calibrator Value:		1.0	GAPI		
Background Reading:		0.0	cps		
Calibrator Reading:		1.0	cps		
Sensitivity:		0.3500	GAPI/cps		