



**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company LIBERTY OPER. & COMPL. INC.
Well GANOUNG "B" #2
Field WILDCAT
County ROOKS
State KANSAS

Company LIBERTY OPERATIONS & COMPLETIONS, INC.
Well GANOUNG "B" #2
Field WILDCAT
County ROOKS State KANSAS

Location: API # : 15-163-24198-0000
770' FSL & 2310' FWL
S/2 - NE - SE - SW
SEC 28 TWP 10S RGE 17W
Permanent Datum GROUND LEVEL Elevation 2078
Log Measured From KELLY BUSHING 5' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DIL/MEL
SONIIC
Elevation
K.B. 2083
D.F. 2081
G.L. 2078

Date	3/29/14		
Run Number	ONE		
Depth Driller	3780		
Depth Logger	3780		
Bottom Logged Interval	3756		
Top Log Interval	2800		
Casing Driller	7 7/8"@220'		
Casing Logger	218		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 12,000 PPM	
Density / Viscosity	9.5/50		
pH / Fluid Loss	10.0/16.0		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.320@70F		
Rmf @ Meas. Temp	.240@70F		
Rmc @ Meas. Temp	.384@70F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.196@114F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	8:45 A.M.		
Maximum Recorded Temperature	114F		
Equipment Number	4854		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	TONY RICHARDSON	ROGER COMEAU	

<<< 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

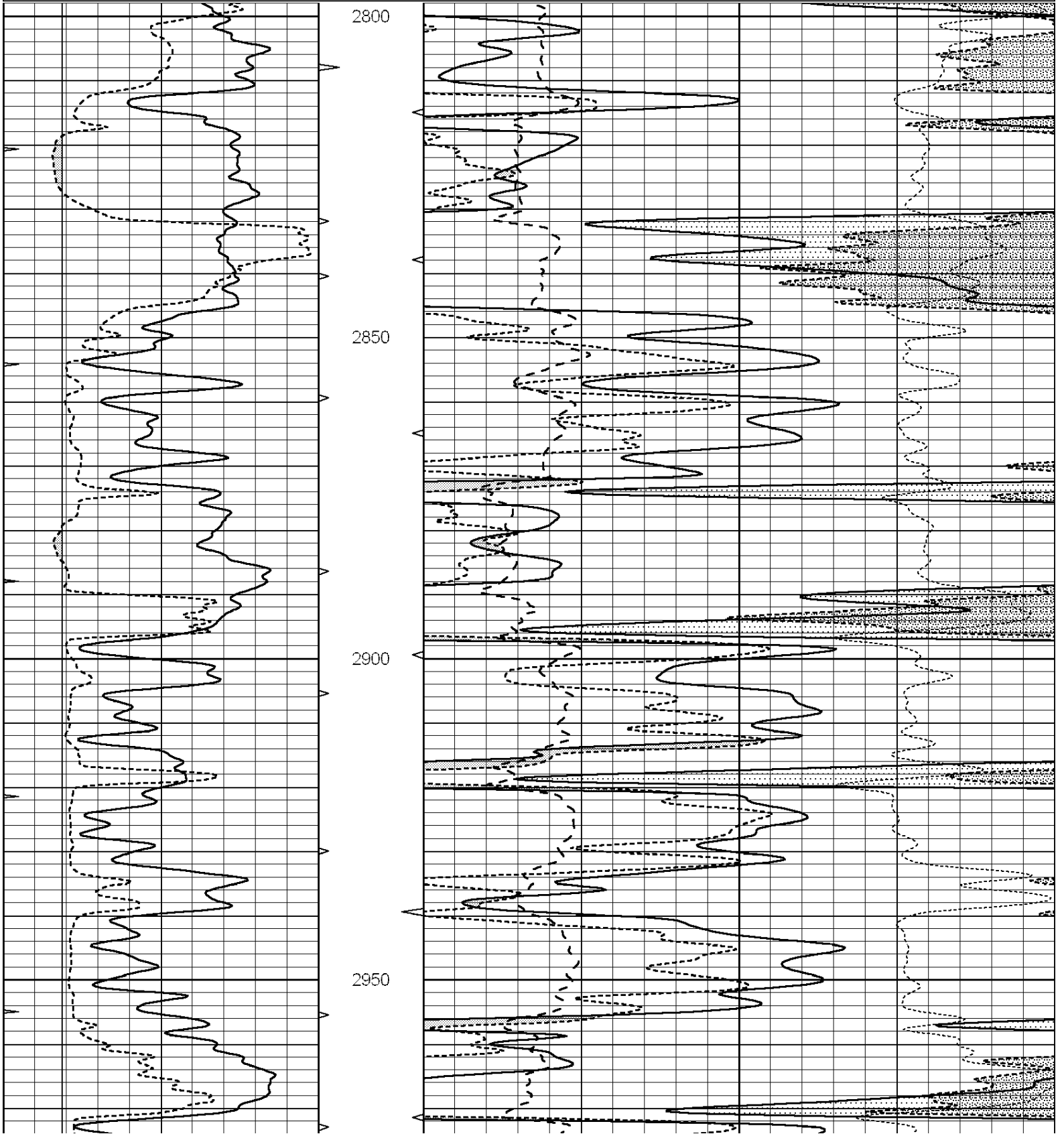
THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395
DIRECTIONS
PLAINVILLE, KS., S. ON HWY 183 TO "CC RD.", E. TO (DEAD END), 1N. TO "BB RD.", 1E. TO "RD. 21",
3/4S. TO CATTLE GUARD, 1/2 S.E.

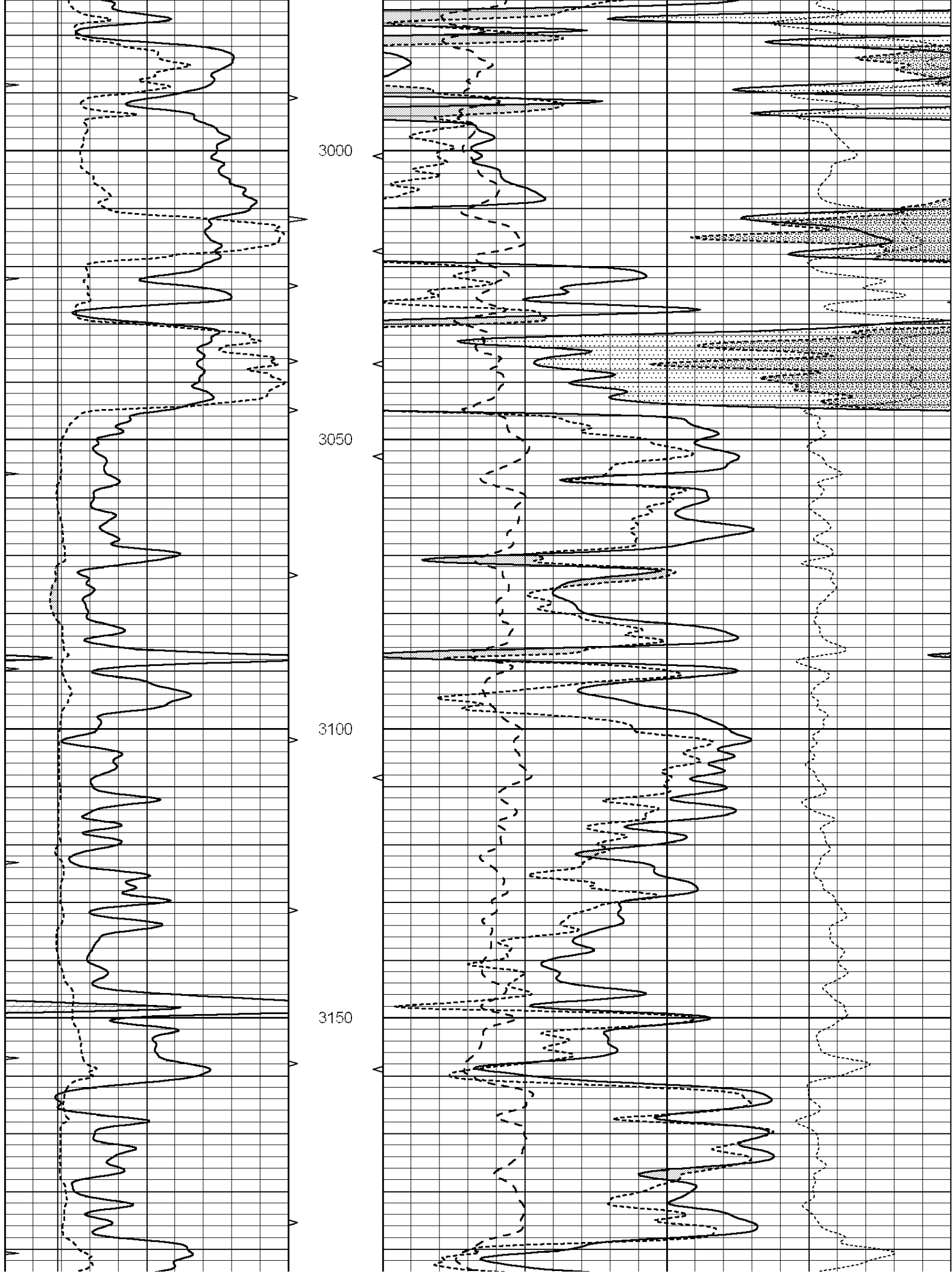


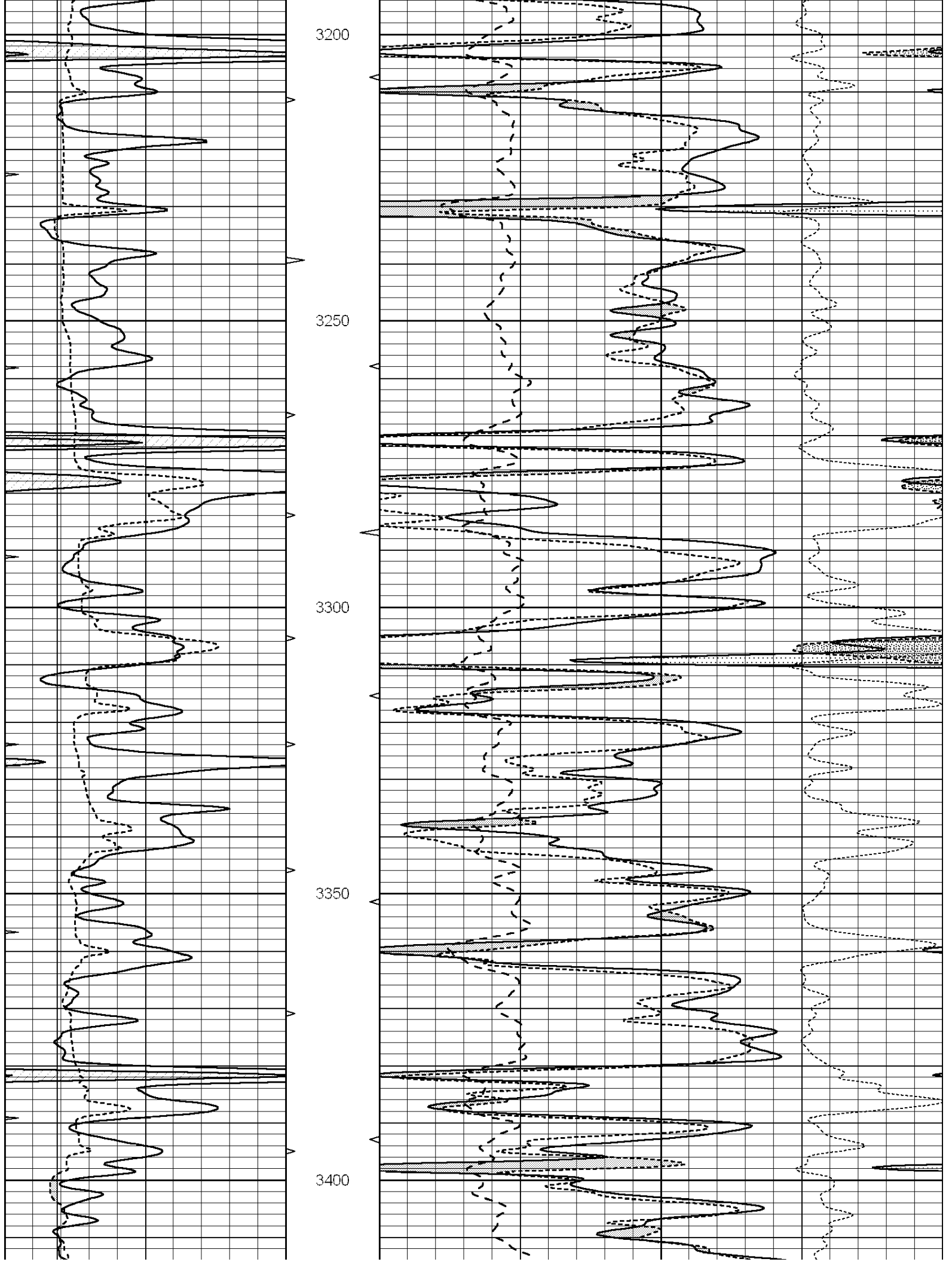
MAIN SECTION

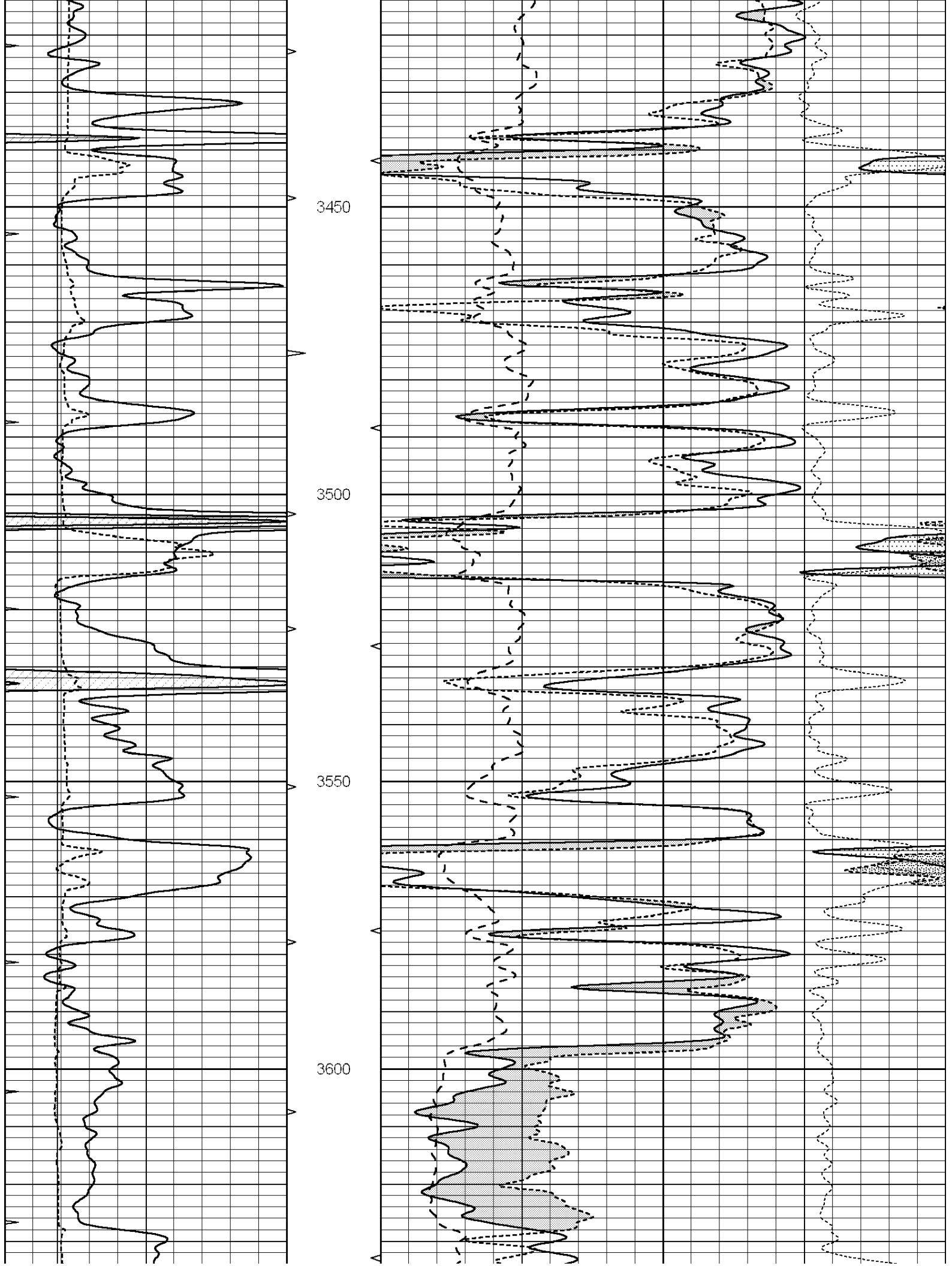
Database File: 22274pe.db
 Dataset Pathname: pass3.6
 Presentation Format: ldt_neu
 Dataset Creation: Sat Mar 29 10:19:24 2014
 Charted by: Depth in Feet scaled 1:240

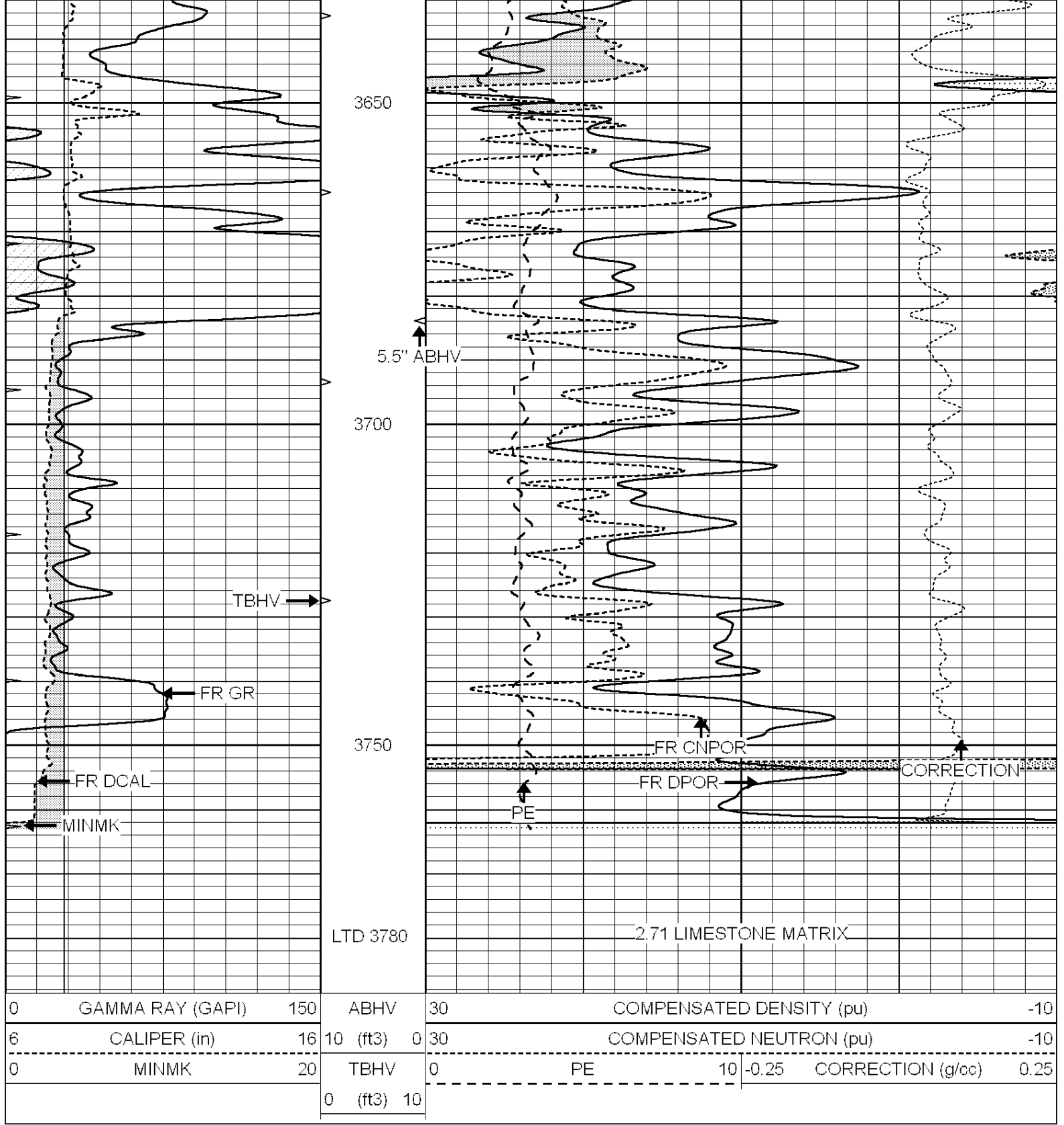
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)		-10
6	CALIPER (in)	16	10 (ft3)	0	COMPENSATED NEUTRON (pu)		-10
0	MINMK	20	TBHV	0	PE	10	-0.25 CORRECTION (g/cc) 0.25
			0 (ft3)	10			







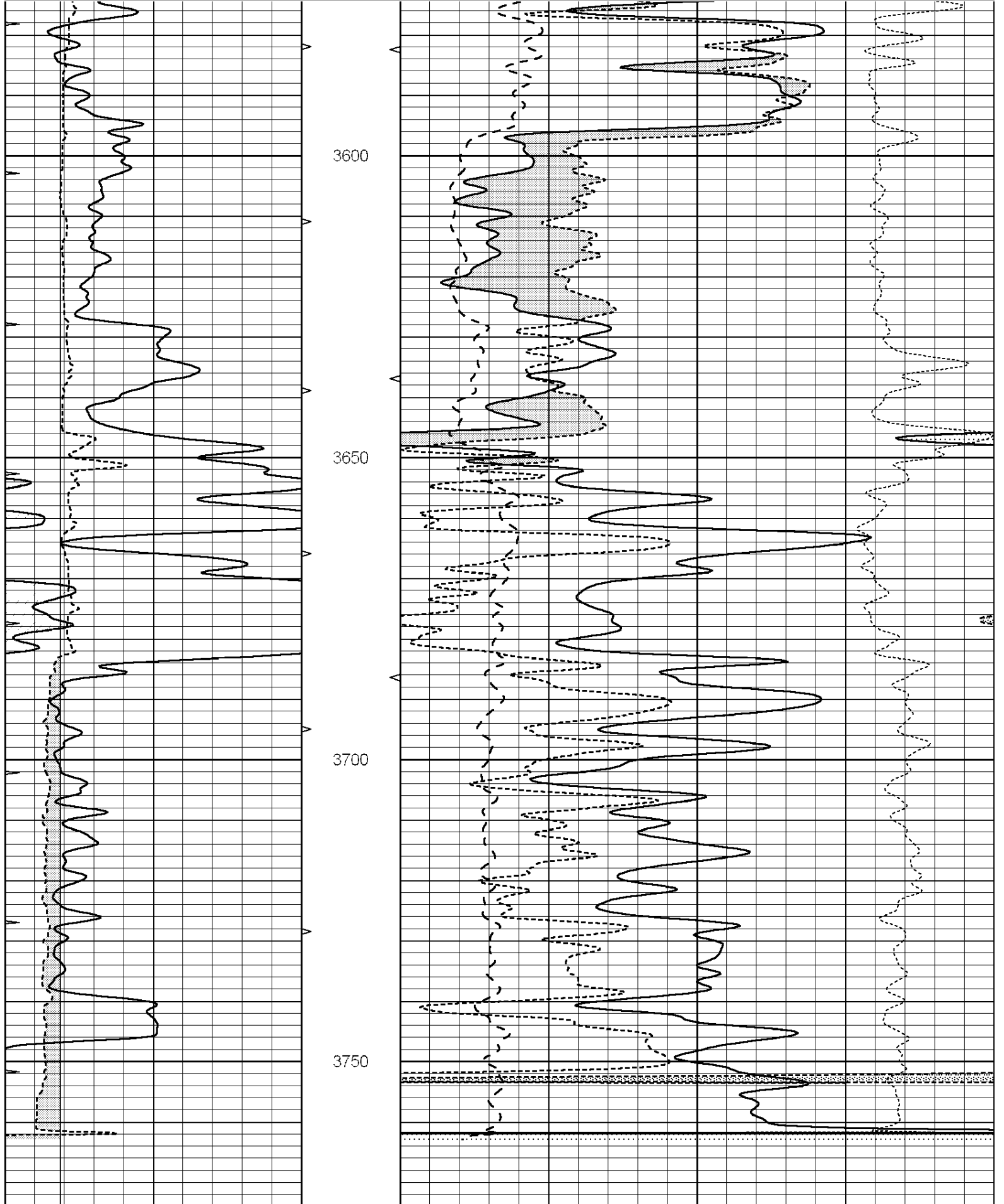




REPEAT SECTION

Database File: 22274pe.db
 Dataset Pathname: pass2.3
 Presentation Format: ldt_neu
 Dataset Creation: Sat Mar 29 10:20:52 2014 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					



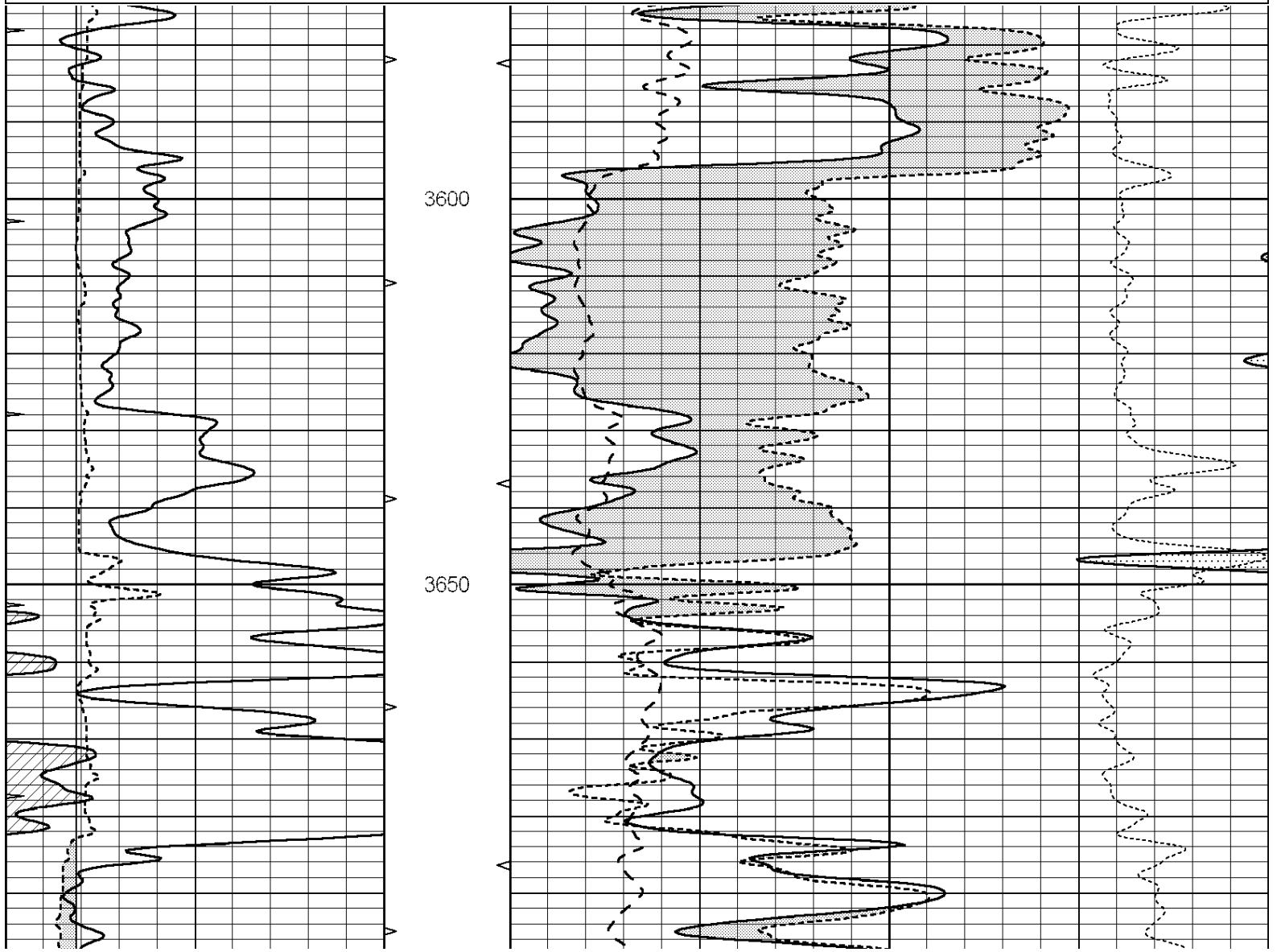
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV	0	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3)	10		

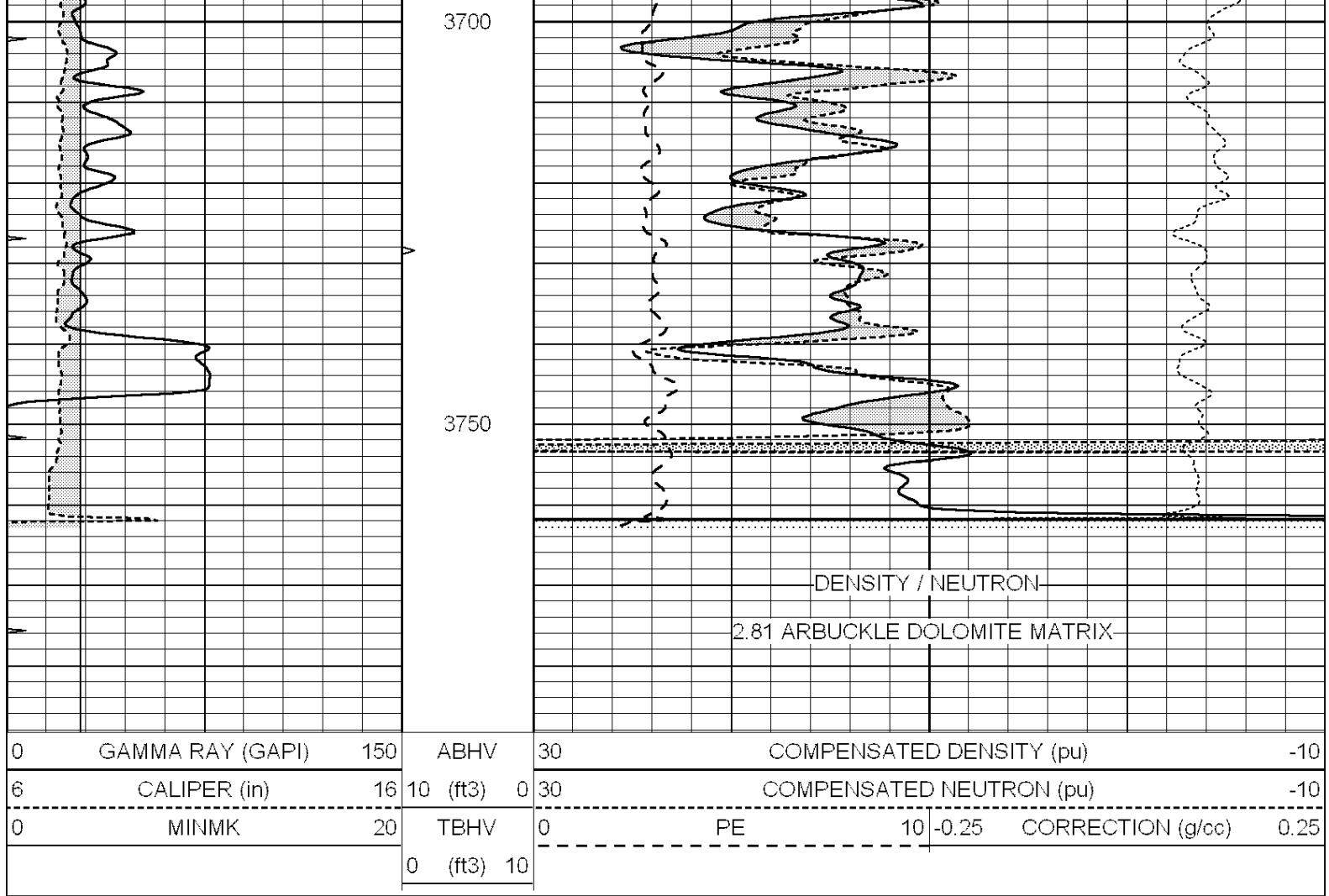


DOLOMITE MATRIX

Database File: 22274pe.db
 Dataset Pathname: pass2.5
 Presentation Format: ldt_neu
 Dataset Creation: Sat Mar 29 10:22:52 2014
 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: 22274pe.db
 Dataset Pathname: pass3.6
 Dataset Creation: Sat Mar 29 10:19:24 2014

Dual Induction Calibration Report

Serial-Model: PROBE9-DILG
 Surface Cal Performed: Sat Mar 08 04:15:46 2014
 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	650.000	-16.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	660.000	-31.000
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: 003N Model: PRB

Master Calibration		Performed Tue Sep 08 14:14:44 2009			
	Background	Magnesium	Aluminum	Sandstone	
Window 1	2042.6	12312.8	4225.8	13758.4	cps
Window 2	1855.8	10134.7	3624.2	11113.1	cps
Window 3	1639.4	6760.2	2716.3	7260.3	cps
Window 4	466.4	469.2	466.1	476.5	cps
Long Space	0.0	8278.9	1768.4	9257.4	cps
Short Space	2.2	2377.3	1544.1	2574.2	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	
Rib Angle	: 44.4	Rib Slope	: 0.979	Density/Spine Ratio	: 0.549
Spine Angle	: 74.4	Spine Slope	: 3.577	Spine Intercept	: -18.8

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:	070558		
Tool Model:	OPEN_GR		
Performed:	Mon Mar 24 01:53:40 2014		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.3000	GAPI/cps	