



**SUPERIOR
Hays,
Kansas**

**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company MULL DRILLING COMPANY, INC.
Well TOKOI #1-21
Field
County NESS State KANSAS

Company MULL DRILLING CO., INC.
Well TOKOI #1-21
Field
County NESS
State KANSAS

Location: API #: 15-135-25229
1158' FNL & 1846' FEL
SEC 21 TWP 16S RGE 26W
Permanent Datum GROUND LEVEL Elevation 2632
Log Measured From KELLY BUSHING 8' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DIL
SONIC/MEL
Elevation
K.B. 2640
D.F.
G.L. 2632

Date	7-14-11
Run Number	ONE
Depth Driller	4640
Depth Logger	4640
Bottom Logged Interval	4616
Top Log Interval	3700
Casing Driller	227
Casing Logger	227
Bit Size	7.875
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.4 / 57
pH / Fluid Loss	9.0 / 8.8
Source of Sample	FLOWLINE
Rm @ Meas. Temp	1.00 @ 87F
Rmf @ Meas. Temp	0.75 @ 87F
Rmc @ Meas. Temp	1.20 @ 87F
Source of Rmf / Rmc	MEASURED
Rm @ BHT	.720 @ 121F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	12:30 P.M.
Maximum Recorded Temperature	121F
Equipment Number	860
Location	HAYS, KS.
Recorded By	RUPP
Witnessed By	BOB STOLZLE

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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

SUPERIOR WELL SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: UTICA, WEST EDGE TO RD. "D", 1N TO RD. #270, 1 1/2W, S INTO.

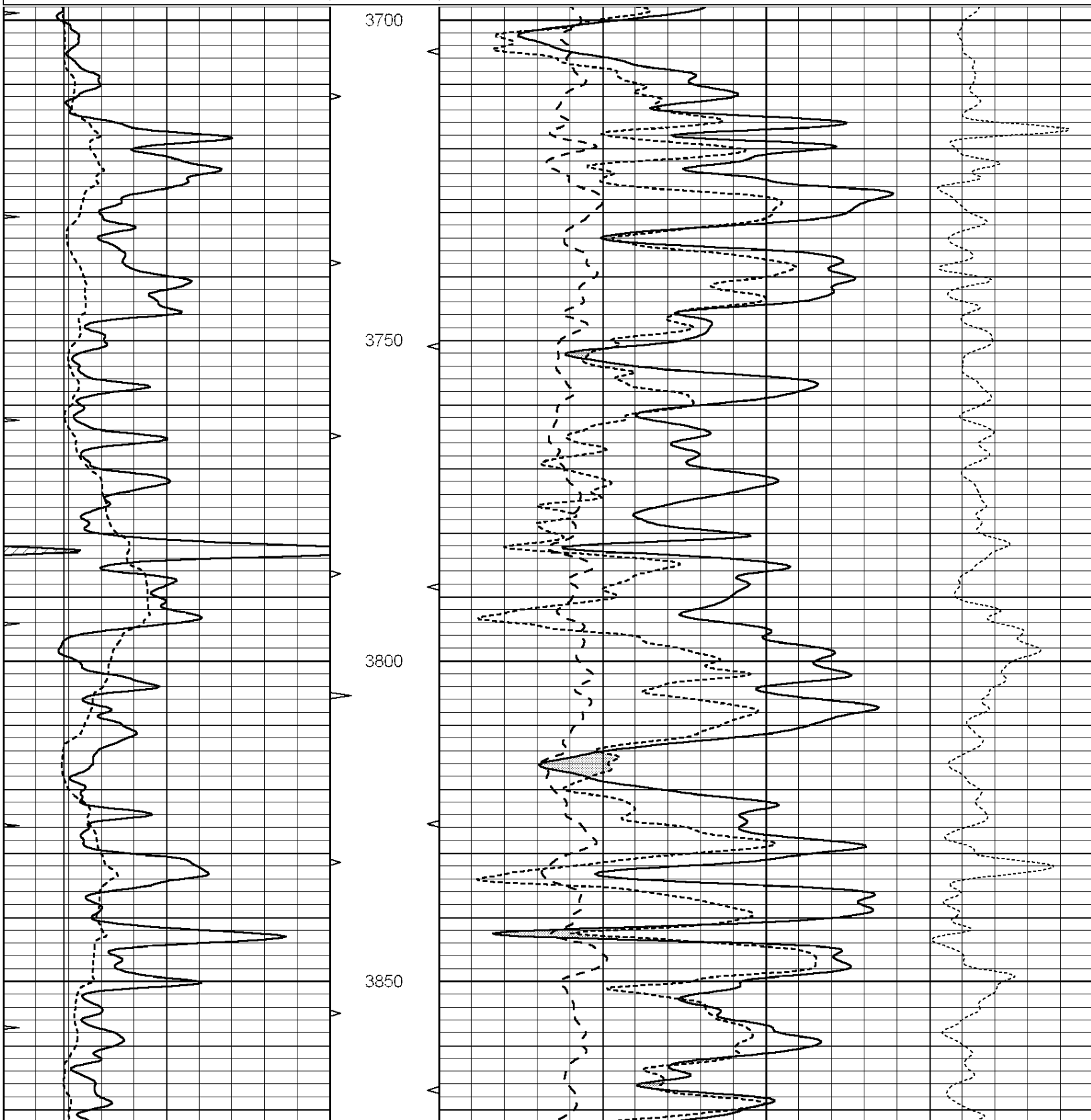


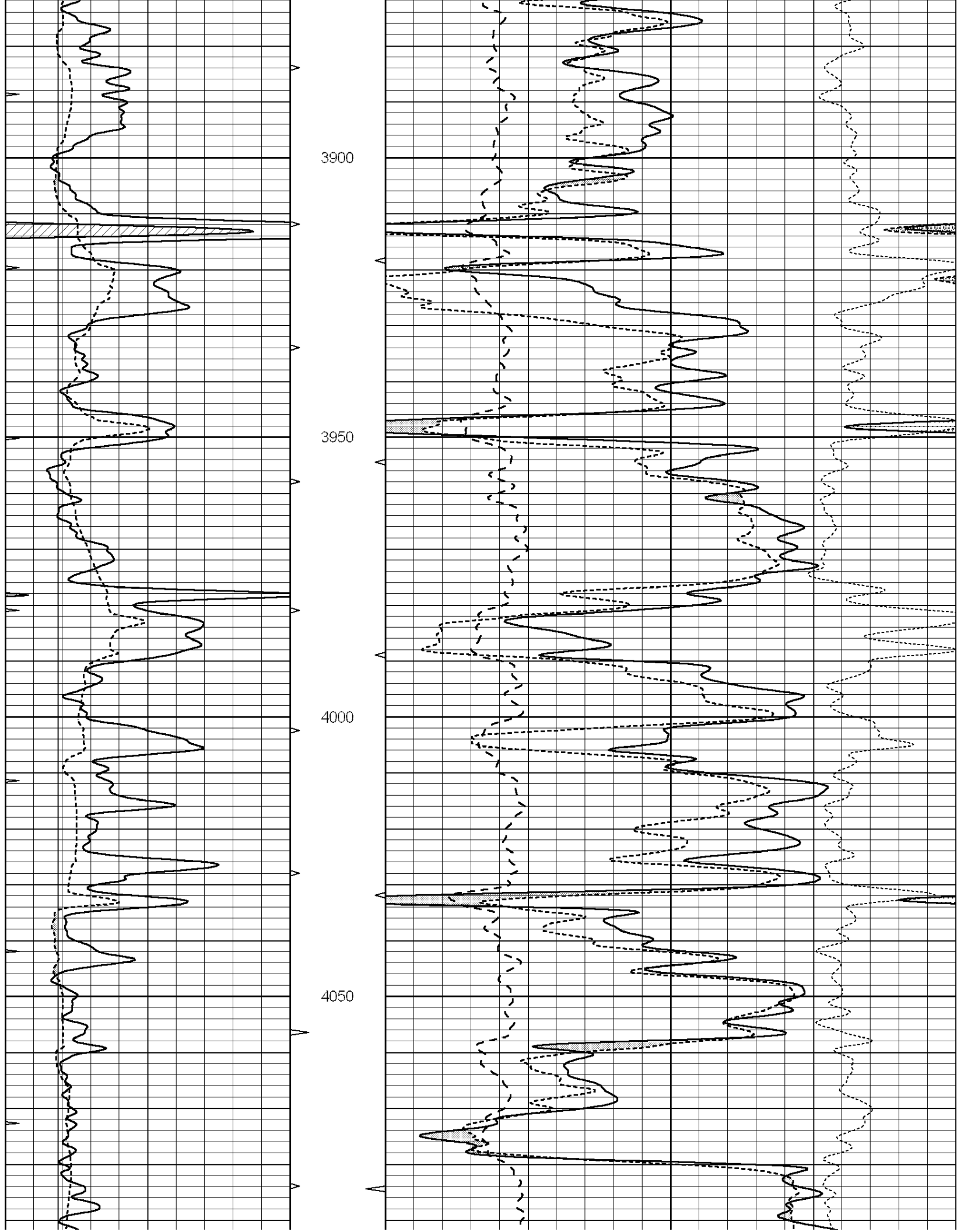
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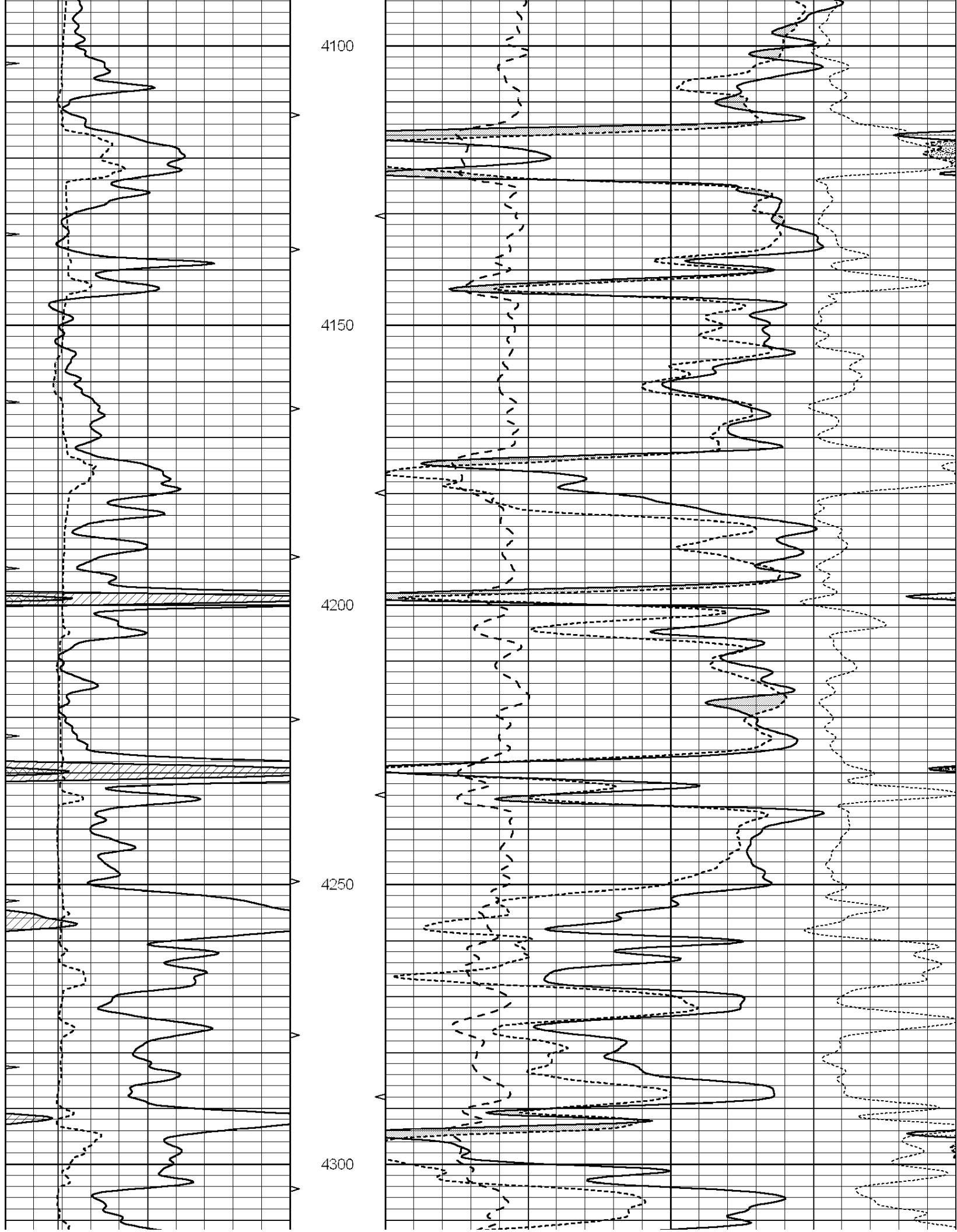
MAIN SECTION

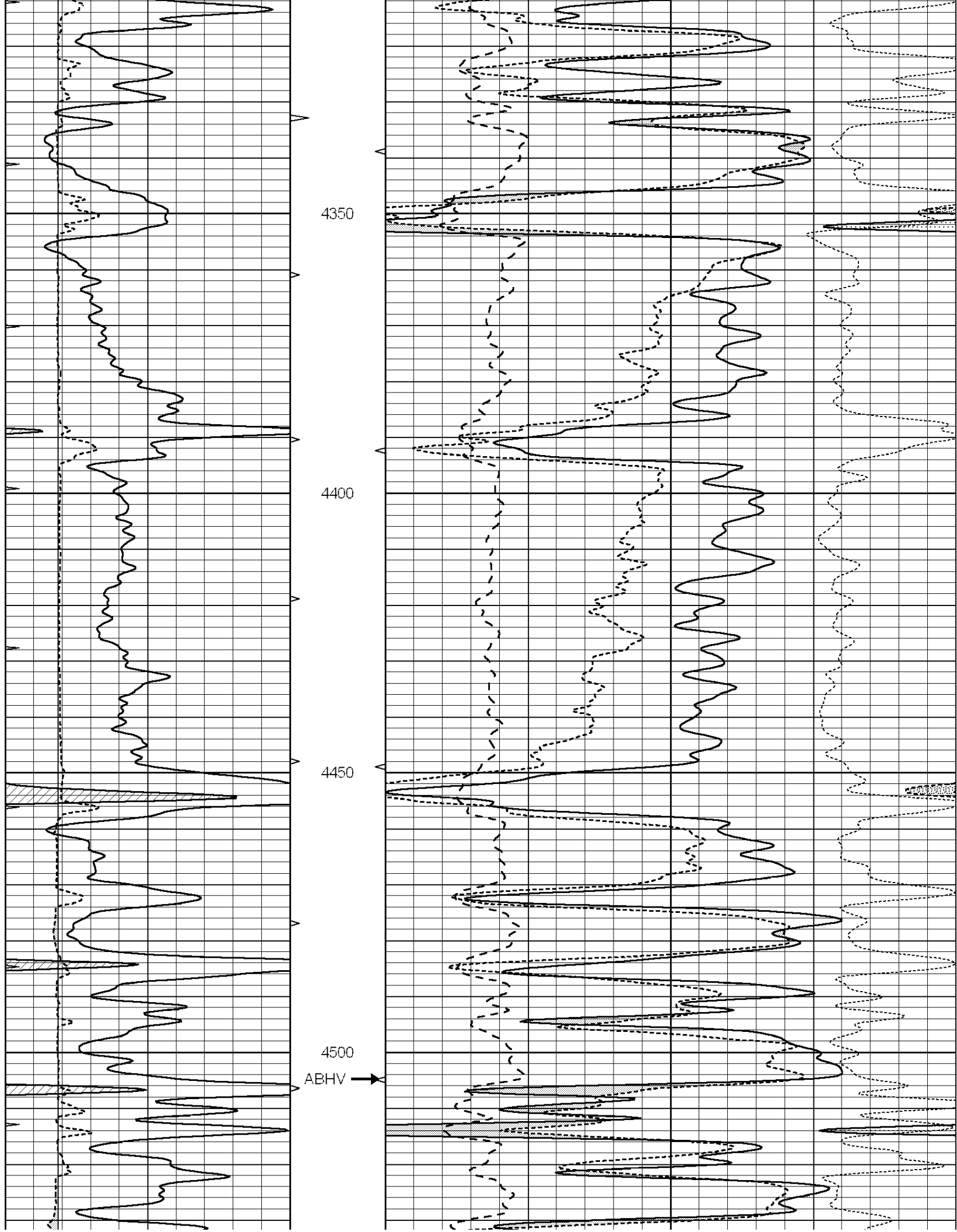
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 Dataset Pathname: pass3.2
 Presentation Format: ldt_neu
 Dataset Creation: Thu Jul 14 14:29:54 2011
 Charted by: Depth in Feet scaled 1:240

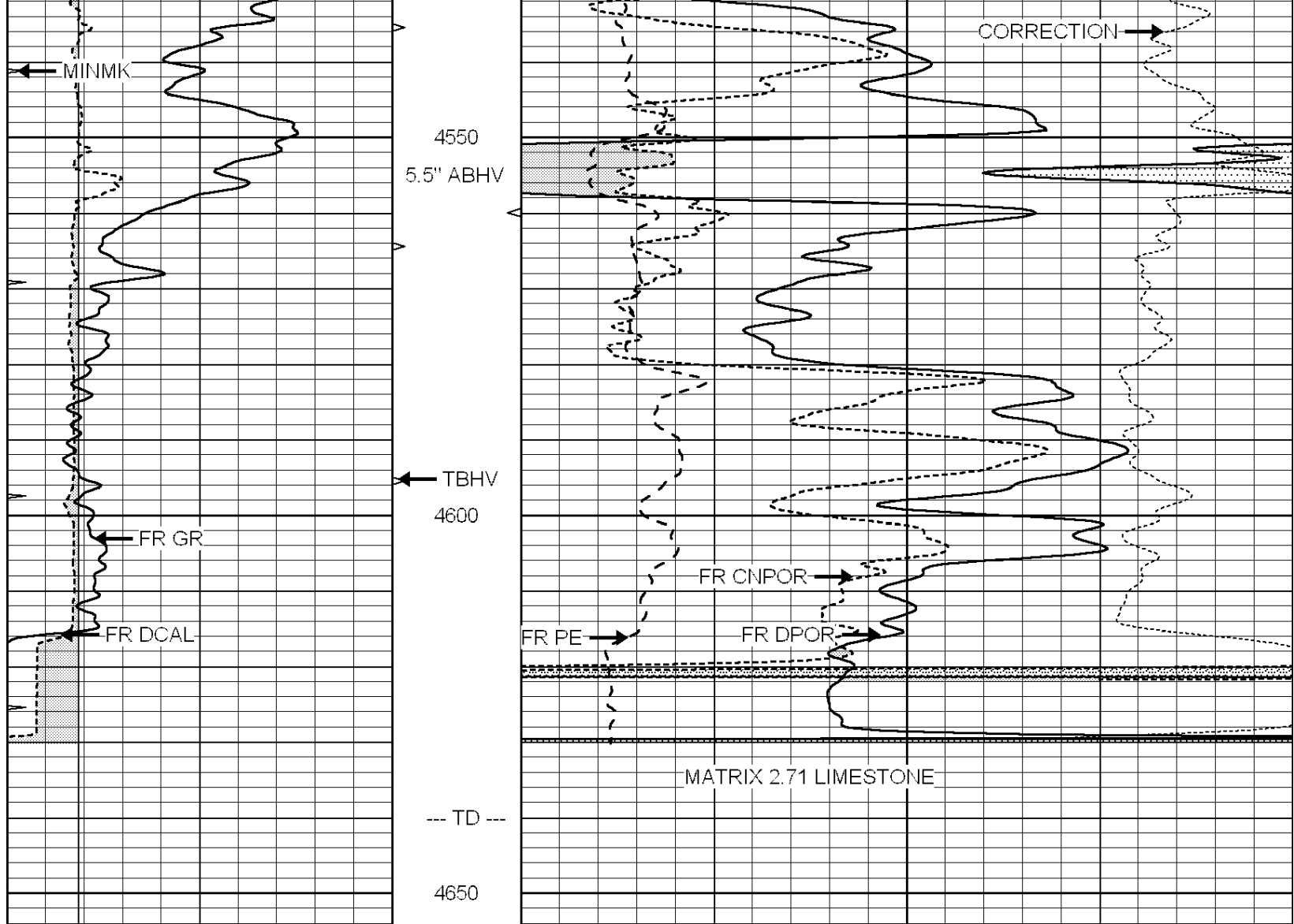
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)		-10
6	CALIPER (in)	16	10 (ft3)	0	COMPENSATED NEUTRON (pu)		-10
0	MINMK	20	TBHV	0	PE	10	-0.25 CORRECTION (g/cc) 0.25
			0 (ft3)	10			











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					

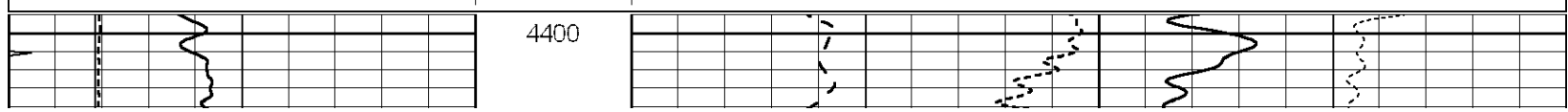


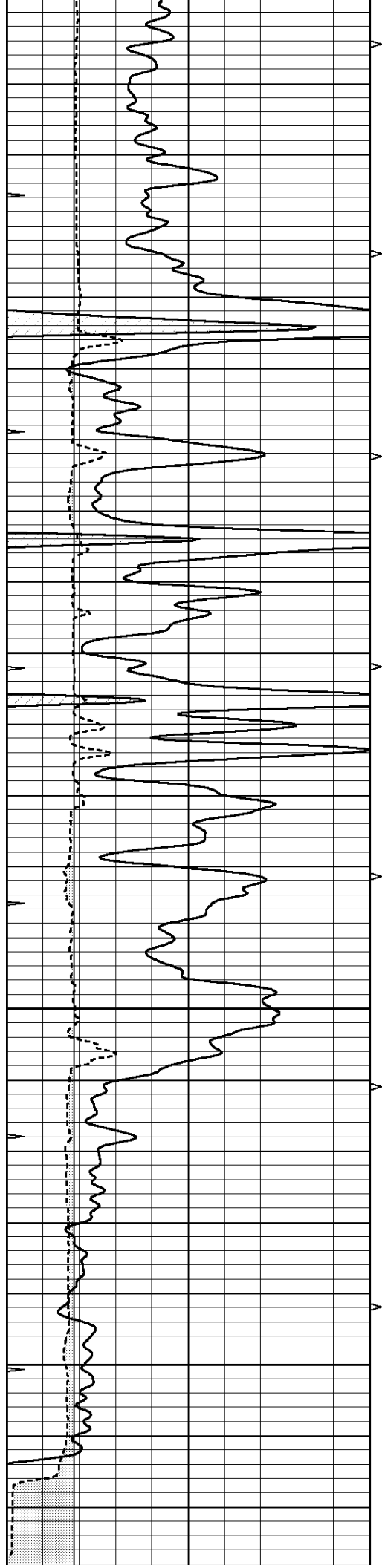
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REPEAT SECTION

Database File: 007329pdn.db
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 Presentation Format: ldt_neu
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 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					



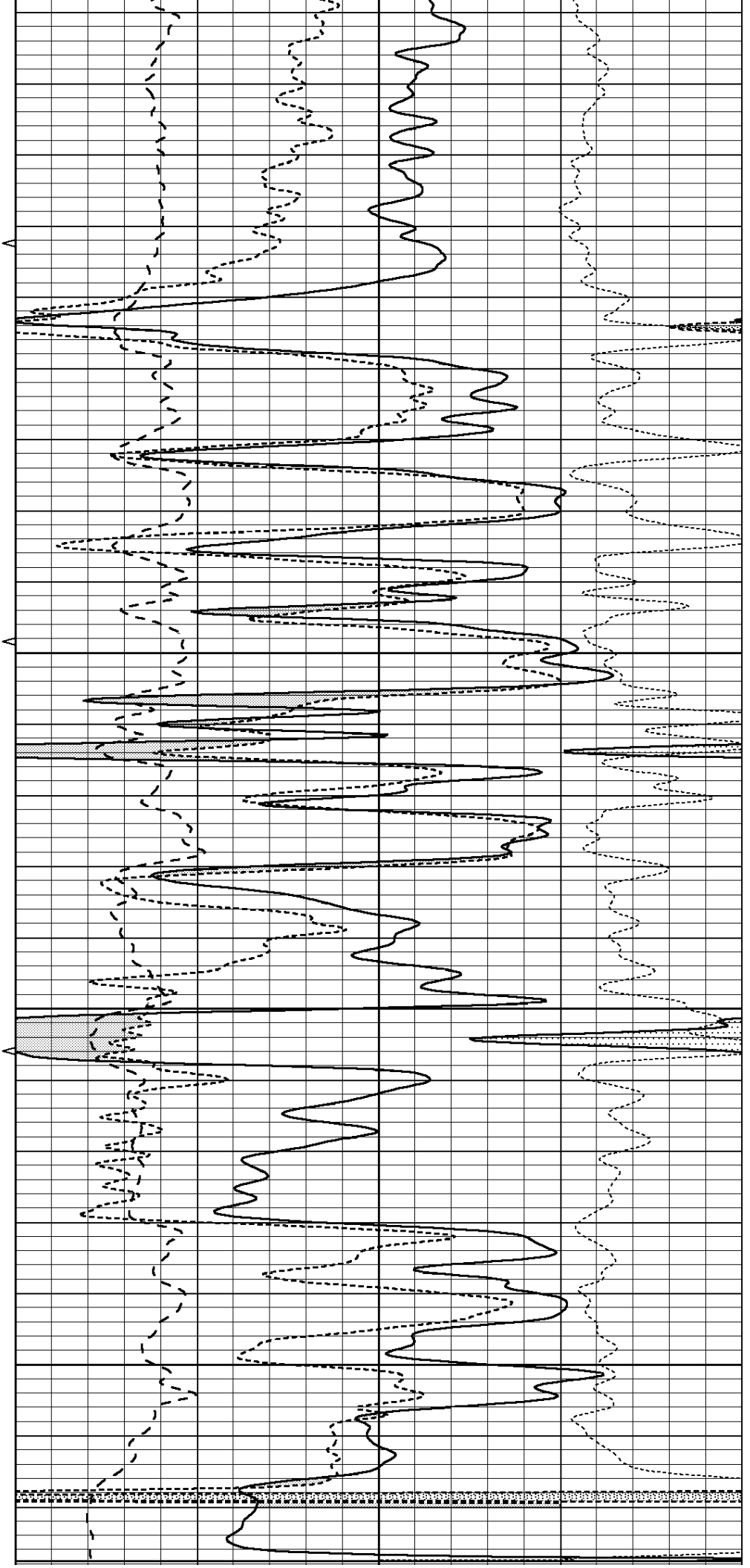


4450

4500

4550

4600



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: 007329pdn.db
 Dataset Pathname: pass3.2
 Dataset Creation: Thu Jul 14 14:29:54 2011

Dual Induction Calibration Report

Serial-Model: DIL5-GEAR
 Performed: Thu Jul 14 12:52:50 2011

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.004	0.654	V	0.000	400.000	mmho/m	520.000	-20.000
Medium	-0.005	0.737	V	0.000	462.500	mmho/m	560.000	-11.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.006	0.655	V	0.000	400.000	mmho/m	615.668	-3.483
Medium	0.010	0.747	V	0.000	462.500	mmho/m	627.607	-6.064

Litho Density Calibration Report
 Serial: 002 Model: PRB
 Performed Tue Jul 03 11:12:28 2007

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1059.5	9172.0	2859.6	10210.6	cps
Window 2	976.0	7793.2	2486.1	8515.6	cps
Window 3	689.8	2930.5	1159.0	3096.2	cps
Window 4	231.9	237.2	231.1	234.0	cps
Long Space	0.0	6817.1	1510.1	7539.6	cps
Short Space	1.6	1758.1	1188.6	1898.8	cps
Rho		1.7100	2.5960	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 45.4	Rib Slope	: 1.015	Density/Spine Ratio	: 0.569
Spine Angle	: 75.4	Spine Slope	: 3.850	Spine Intercept	: -19.9

Caliper

	Readings	Reference	
Low Ref	3.8	9.1	
High Ref	5.9	14.0	
Gain:	2.3		Offset: 0.4

Compensated Neutron Calibration Report

Serial Number: NUE_2I
 Tool Model: G

CALIBRATION

Detector	Readings		Target		Normalization
Short Space	1.00	cps	1.00	cps	1.0000
Long Space	1.00	cps	1.00	cps	1.0000

Gamma Ray Calibration Report

Serial Number:	GR5	
Tool Model:	OPEN	
Performed:	Thu Jul 14 12:51:35 2011	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6500	GAPI/cps