



**SUPERIOR**  
Hays,  
Kansas

**COMPENSATED  
DENSITY / NEUTRON  
LOG**

Company MID-CONTINENT ENERGY  
Well #1-21 SCHAUF  
Field WILDCAT  
County LANE  
State KANSAS

Company MID - CONTINENT ENERGY OPERATING CO.  
Well #1-21 SCHAUF  
Field WILDCAT  
County LANE State KANSAS

Location: 625' FSL & 1940' FWL  
API #: 15-101-22185-0000  
Other Services DIL/MEL  
SEC 21 TWP 19S RGE 27W  
Permanent Datum GROUND LEVEL Elevation 2715  
Log Measured From KELLY BUSHING 5' A.G.L.  
Drilling Measured From KELLY BUSHING  
Elevation K.B. 2720  
D.F. 2718  
G.L. 2715

Date	8/16/09		
Run Number	TWO		
Depth Driller	4700		
Depth Logger	4700		
Bottom Logged Interval	4698		
Top Log Interval	3600		
Casing Driller	8 5/8"@302'		
Casing Logger	304		
Bit Size	7 7/8		
Type Fluid In Hole	CHEMICAL MUD	CHLORIDES 1,900 PPM	
Density / Viscosity	9.2/53		
pH / Fluid Loss	10.5/8.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.750@94F		
Rmf @ Meas. Temp	.563@94F		
Rmc @ Meas. Temp	.900@94F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.578@122F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	11:30 A.M.		
Maximum Recorded Temperature	122F		
Equipment Number	0836		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	KEVIN KESSLER		

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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 SUPERIOR WELL SERVICE HAYS, KANSAS (785)628-6395  
DIRECTIONS  
NESS CITY, KS. 22W. ON HWY 96 TO "TURKEY RED" RD., 7S. TO RD. "80", 1/2W., N. INTO

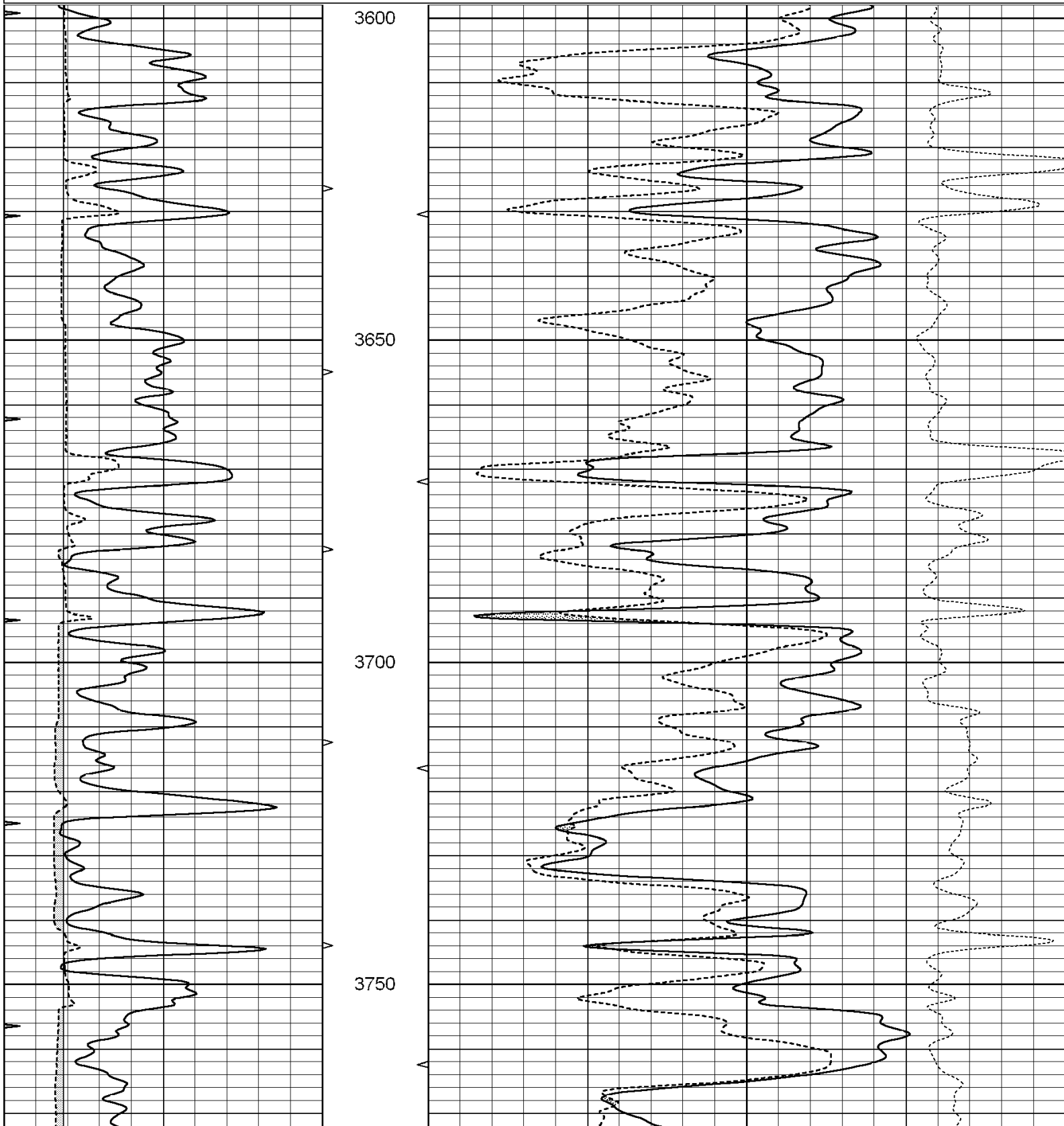


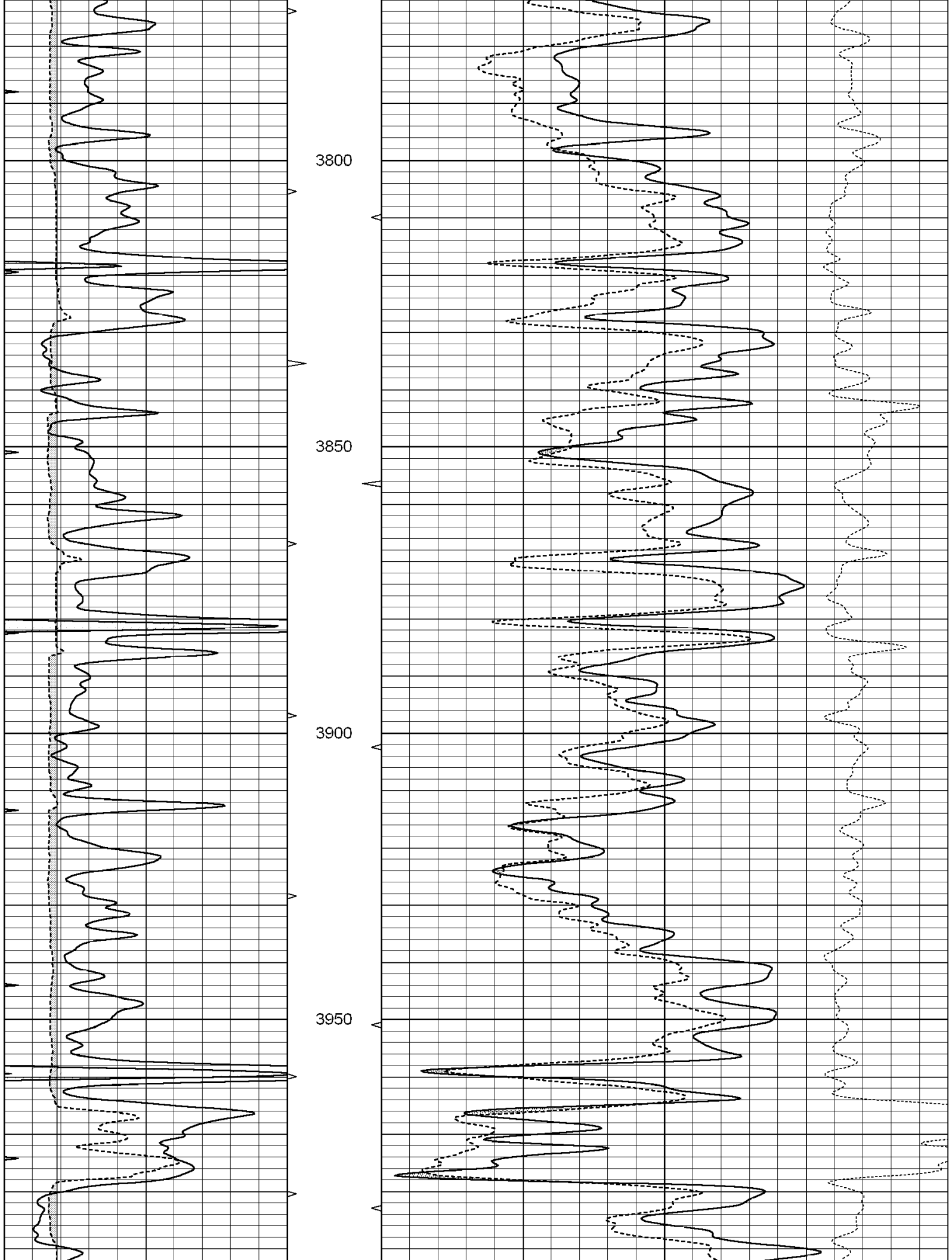
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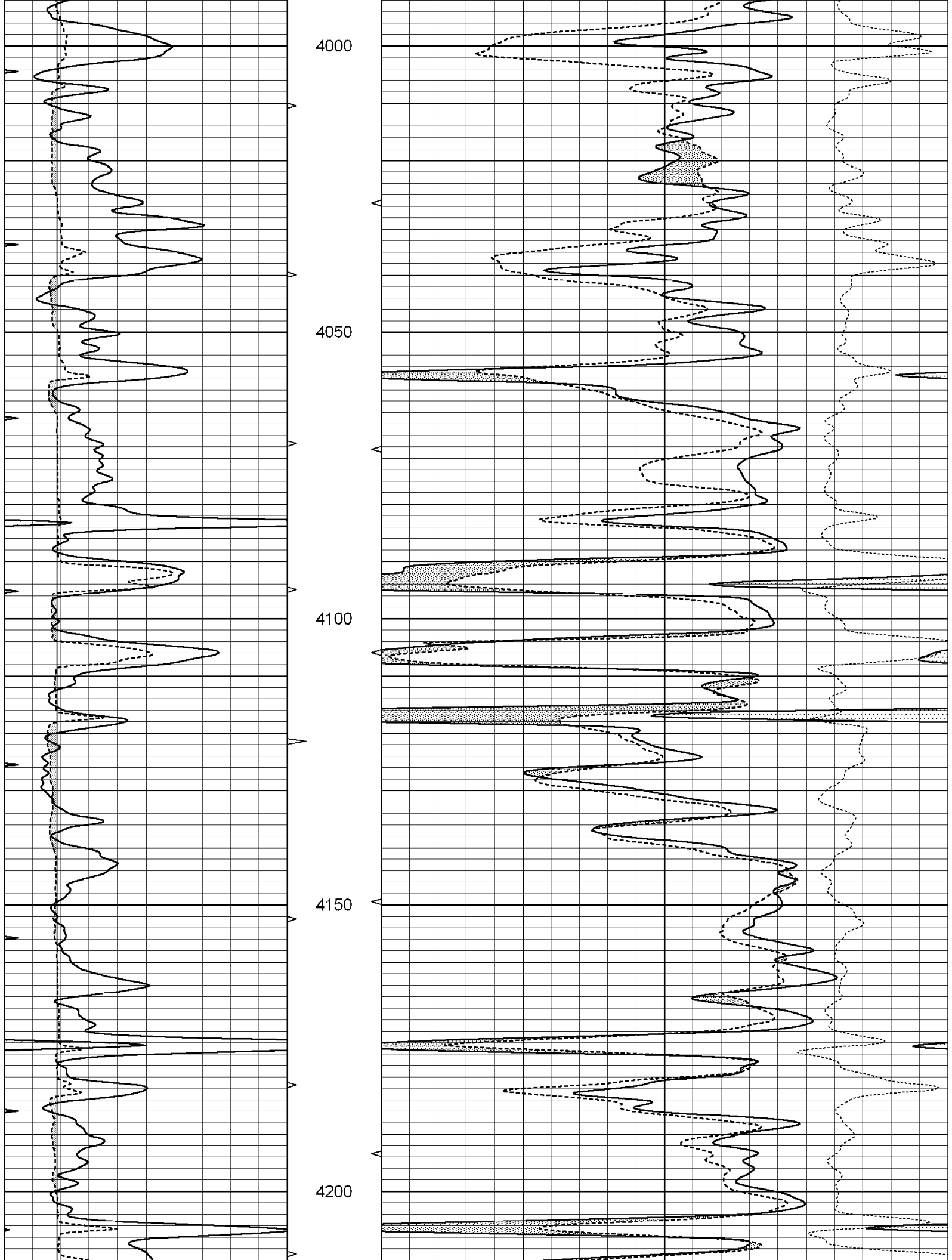
**MAIN SECTION**

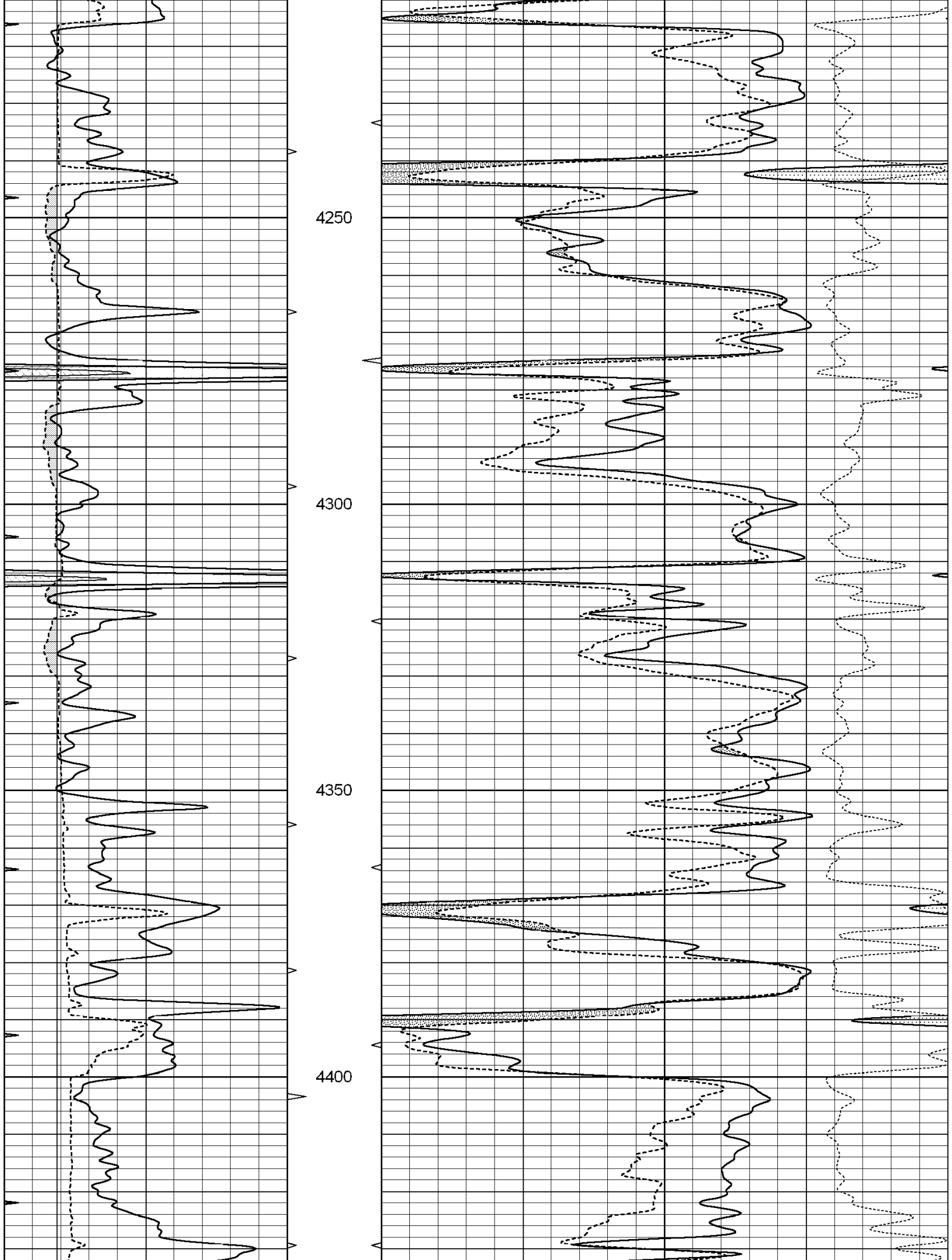
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 Dataset Pathname: pass6.1  
 Presentation Format: den\_neu  
 Dataset Creation: Sun Aug 16 14:28:19 2009 by Calc Open-Cased 060407  
 Charted by: Depth in Feet scaled 1:240

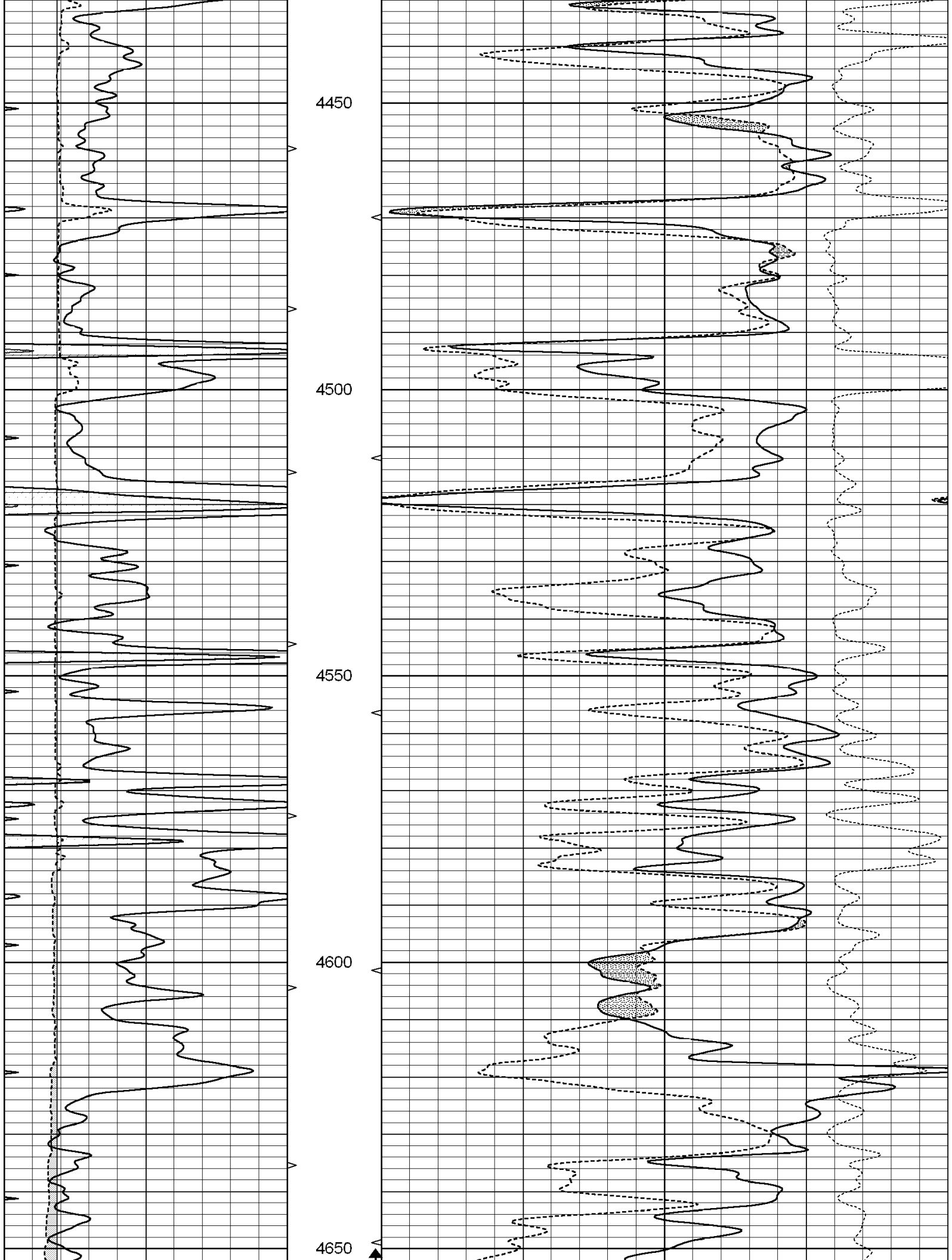
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		

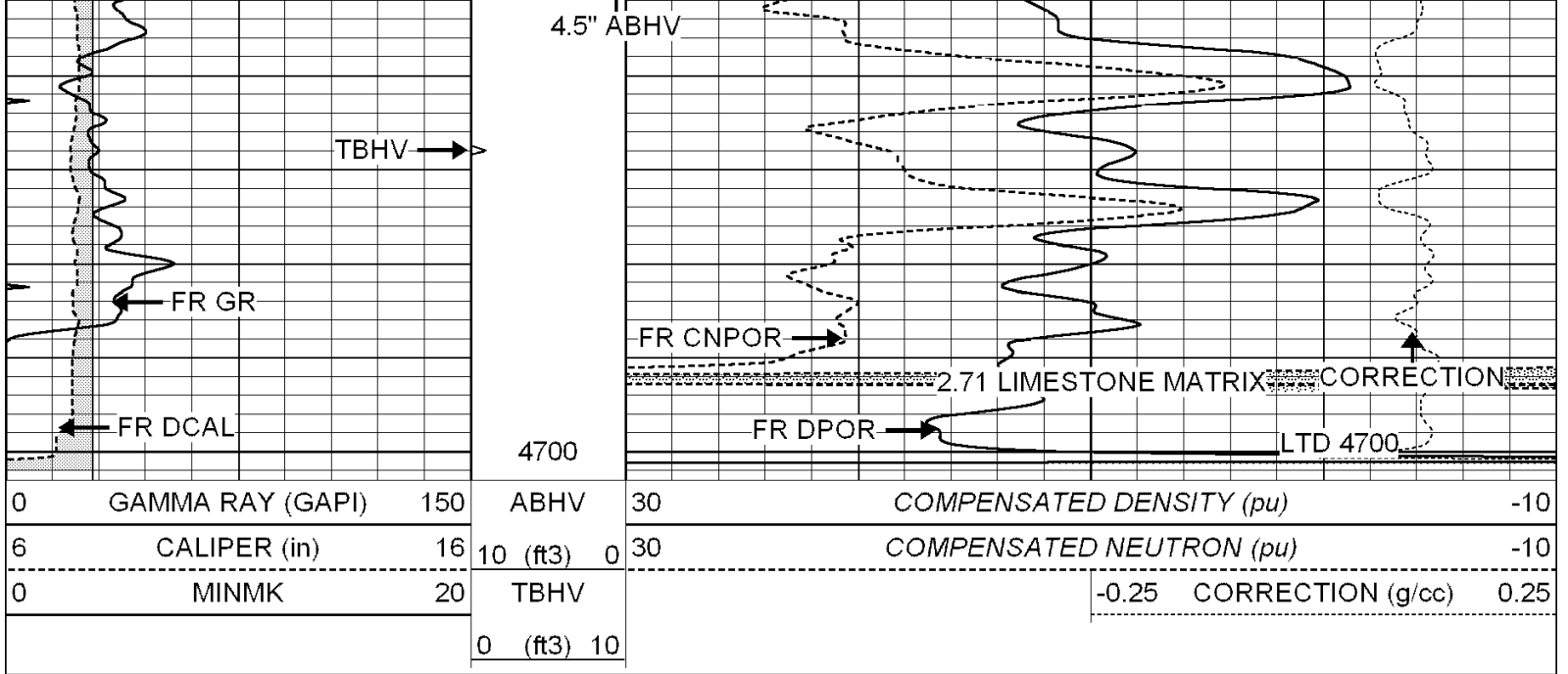










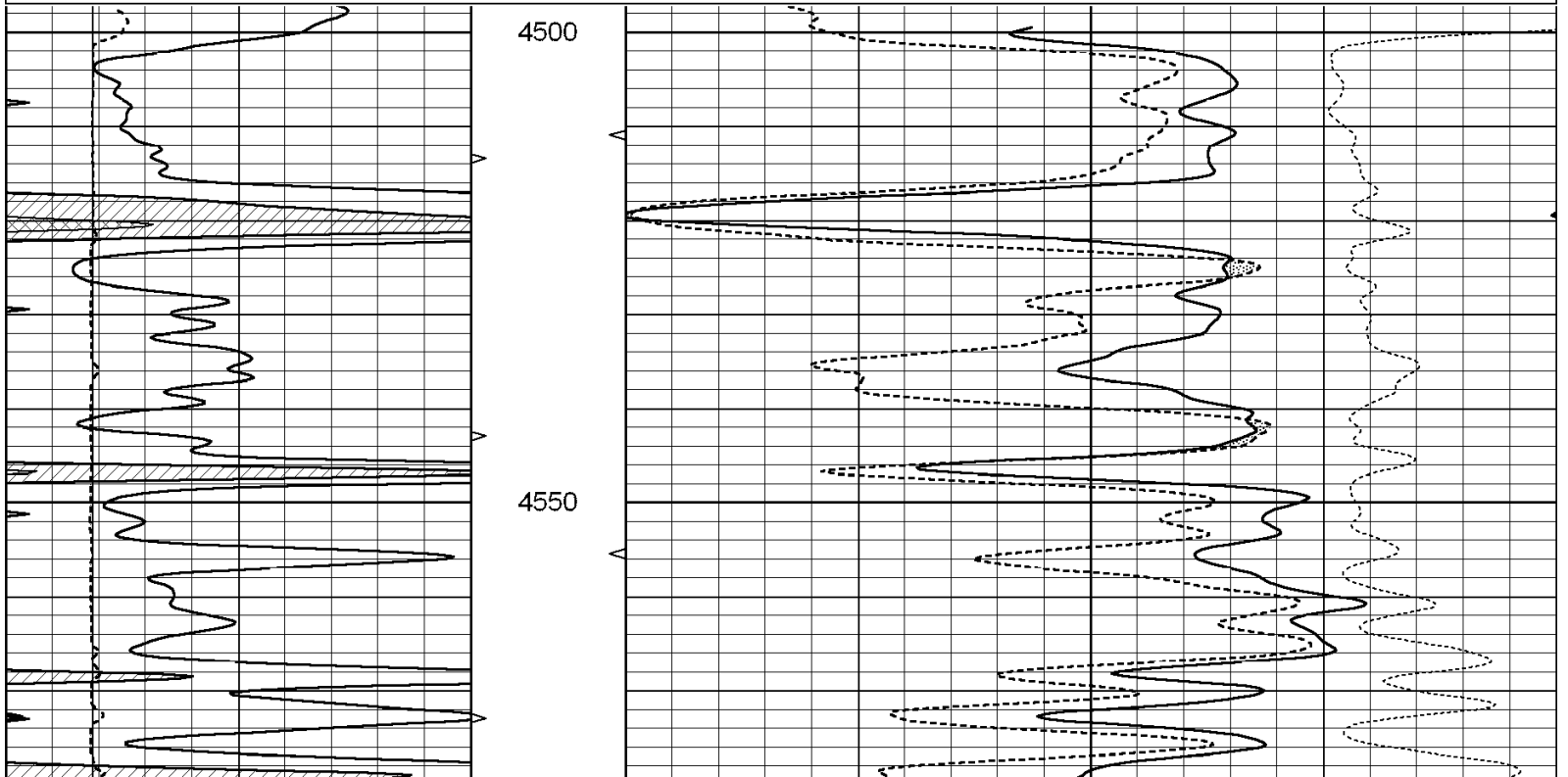


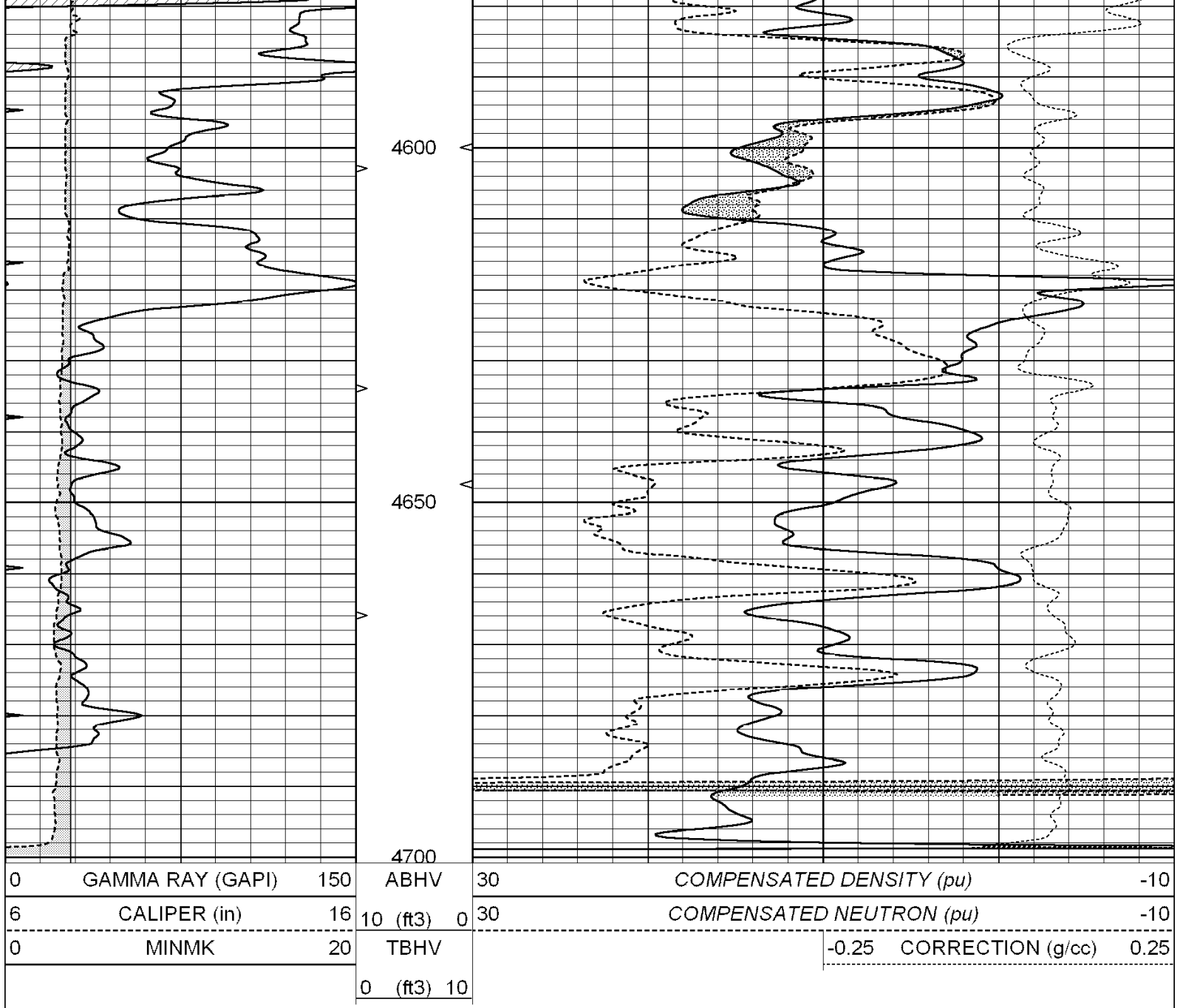
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# REPEAT SECTION

Database File: 004055ddn.db  
 Dataset Pathname: pass5.2  
 Presentation Format: den\_neu  
 Dataset Creation: Sun Aug 16 13:56:49 2009 by Calc Open-Cased 060407  
 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		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		





### Calibration Report

Database File: 004055ddn.db  
 Dataset Pathname: pass6.1  
 Dataset Creation: Sun Aug 16 14:28:19 2009 by Calc Open-Cased 060407

Litho Density Calibration Report  
 Serial: 003N Model: PRB  
 Performed Mon Jun 08 10:53:05 2009

#### Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	2028.8	12047.1	4181.3	13199.9	cps
Window 2	1822.8	9337.8	3431.4	10000.3	cps
Window 3	1564.8	5811.2	2442.8	6095.5	cps
Window 4	469.1	474.6	468.9	469.9	cps
Long Space	0.0	7514.9	1608.6	8177.4	cps
Short Space	1.9	2397.2	1539.5	2522.0	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	

Rib Angle : 44.0 Rib Slope : 0.965 Density/Spine Ratio : 0.549  
Spine Angle : 74.0 Spine Slope : 3.481 Spine Intercept : -18.2

Caliper  
Low Ref Readings 2.1 Reference 6.2  
High Ref Readings 4.4 Reference 14.0  
Gain: 3.3 Offset: -0.7

Compensated Neutron Calibration Report

Serial Number: NEU\_3I  
Tool Model: G

CALIBRATION

Detector	Readings	Target	Normalization
Short Space	997.00 cps	1000.00 cps	1.0000
Long Space	986.00 cps	1000.00 cps	1.0000

Gamma Ray Calibration Report

Serial Number: GR4  
Tool Model: OPEN  
Performed: Sun Aug 16 14:04:51 2009  
Calibrator Value: 200.0 GAPI  
Background Reading: 0.0 cps  
Calibrator Reading: 189.0 cps  
Sensitivity: 0.3000 GAPI/cps