



SUPERIOR
Hays,
Kansas

COMPENSATED
DENSITY / NEUTRON
LOG

Company	MID-CONTINENT ENERGY		
Well	HINEMAN UNIT #1-6		
Field	WILDCAT		
County	LANE		
State	KANSAS		
Company	MID-CONTINENT ENERGY OPERATING CO.		Other Services DIL/MEL
Well	HINEMAN UNIT #1-6		
Field	WILDCAT		Elevation K.B. 2762 D.F. 2760 G.L. 2757
County	LANE		
State	KANSAS		
Location:	API # : 15-101-22207-0000		
Permanent Datum	GROUND LEVEL		
Log Measured From	180' FNL & 1865' FWL NE - NW - NE - NW		
Drilling Measured From	SEC 6 TWP 19S RGE 28W		
Date	11/28/09		
Run Number	CNE		
Depth Driller	4675		
Depth Logger	4675		
Bottom Logged Interval	4651		
Top Log Interval	3600		
Casing Driller	8 5/8"@311'		
Casing Logger	305		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 2,200 PPM	
Density / Viscosity	9.4/57		
pH / Fluid Loss	10.0/8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.950@90F		
Rmf @ Meas. Temp	.713@90F		
Rmc @ Meas. Temp	1.14@90F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.701@122F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	3:30 P.M.		
Maximum Recorded Temperature	122F		
Equipment Number	0836		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	MIKE KIDWELL		

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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
DIGHTON, KS. 3S. ON HWY 23 TO FEEDLOT SIGN, 1/2 E., S. INTO

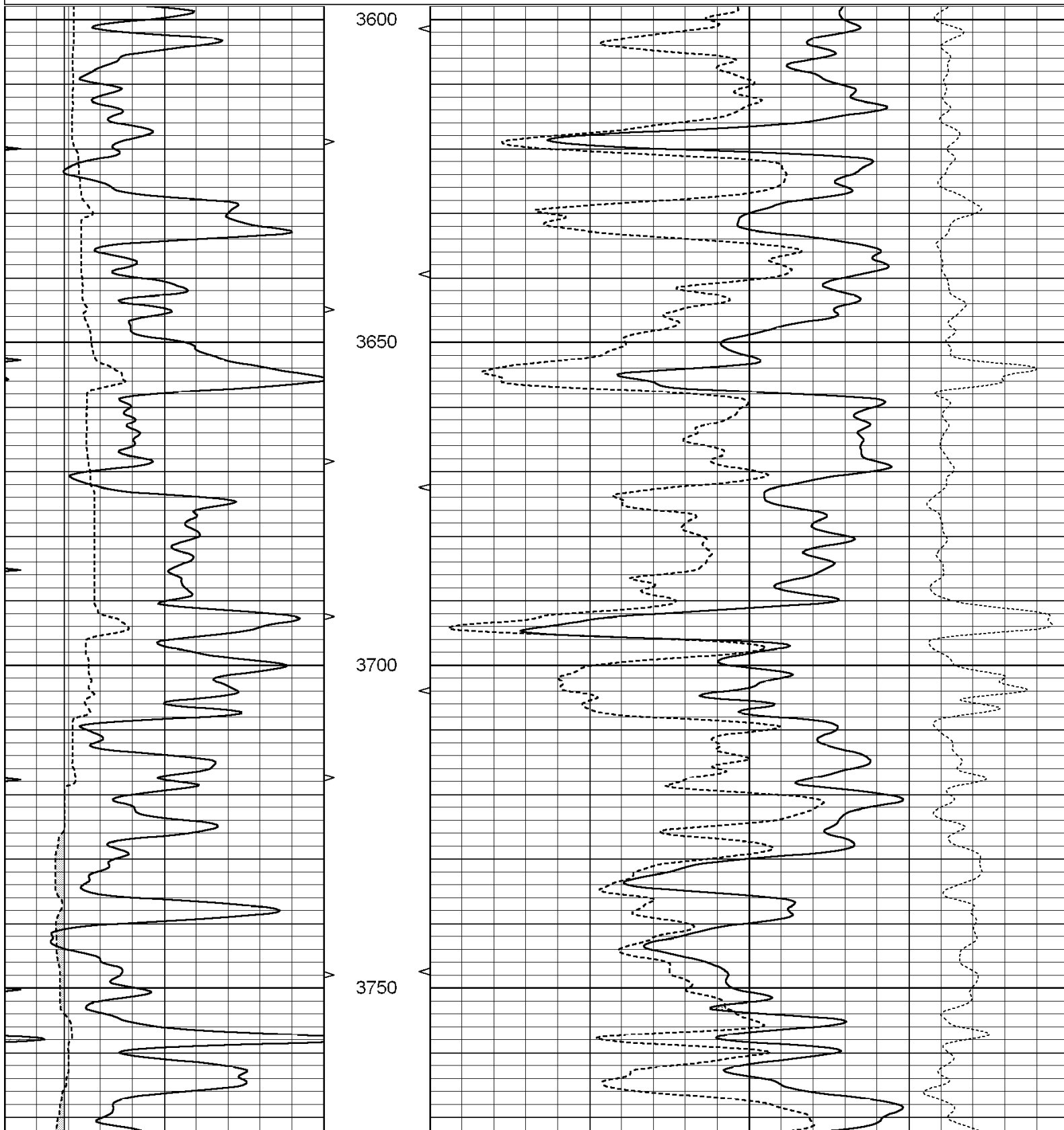


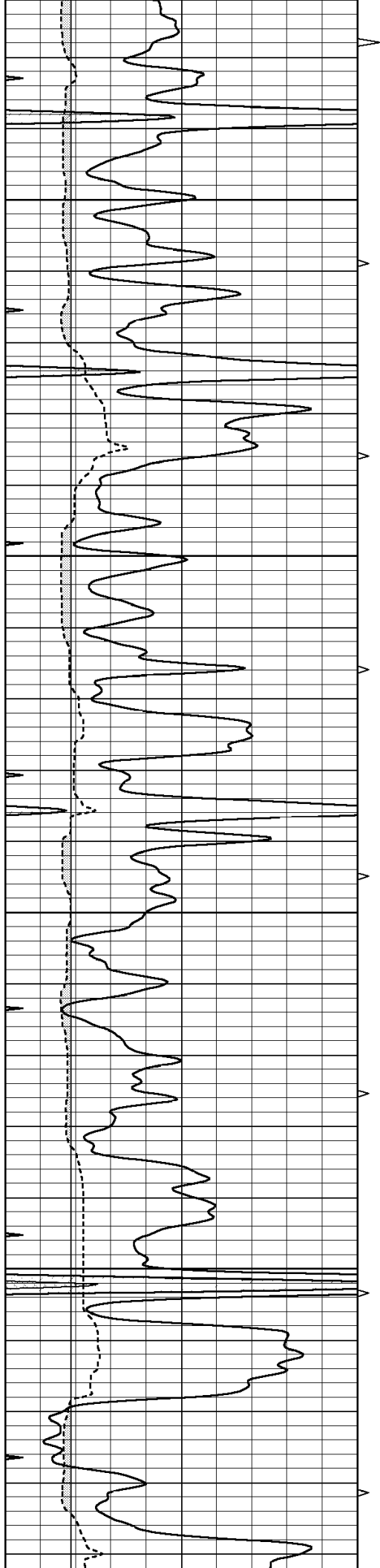
SUPERIOR
Hays,
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MAIN SECTION

Database File: 004376ddn.db
Dataset Pathname: pass4.6
Presentation Format: den_neu
Dataset Creation: Sat Nov 28 16:47:19 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	30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3) 10			



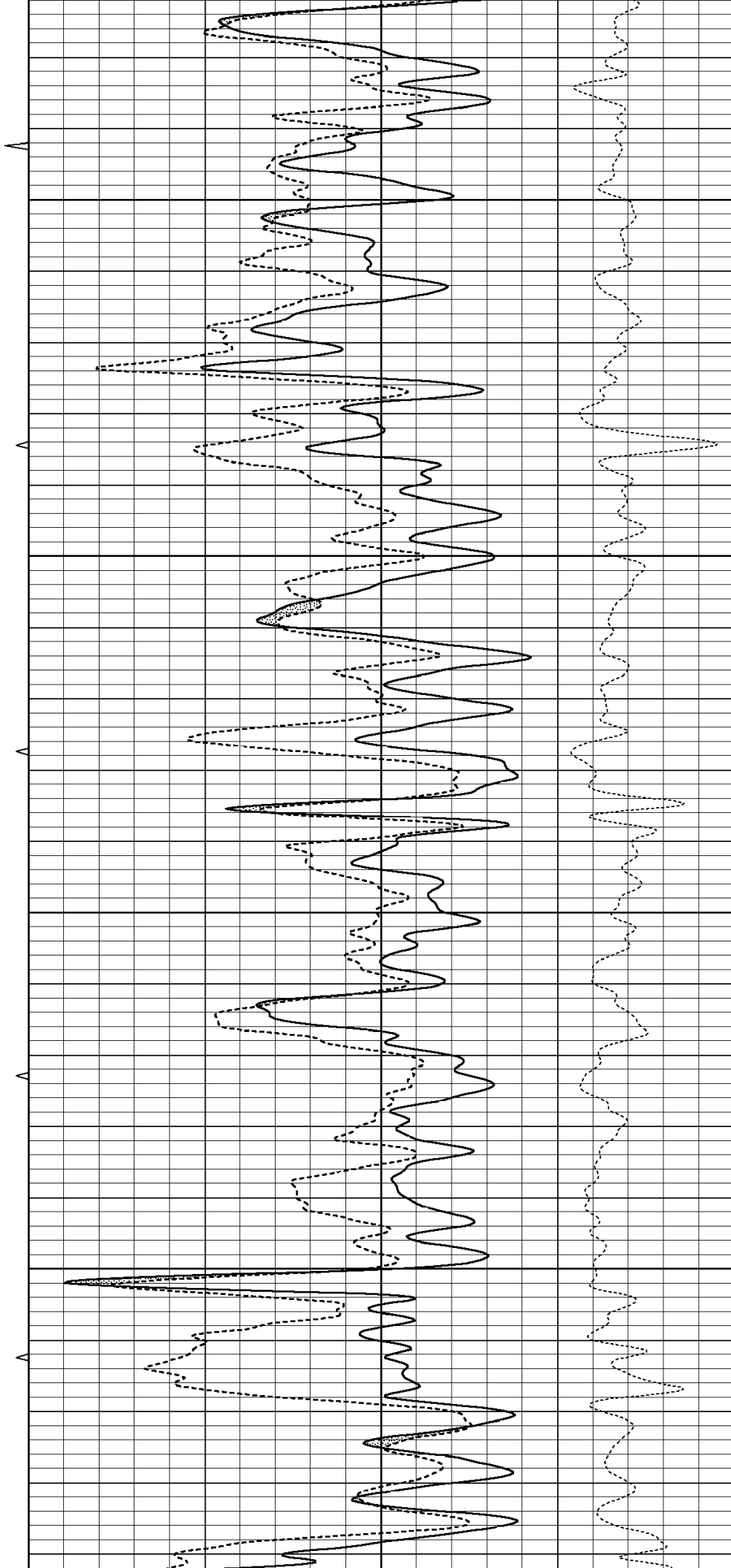


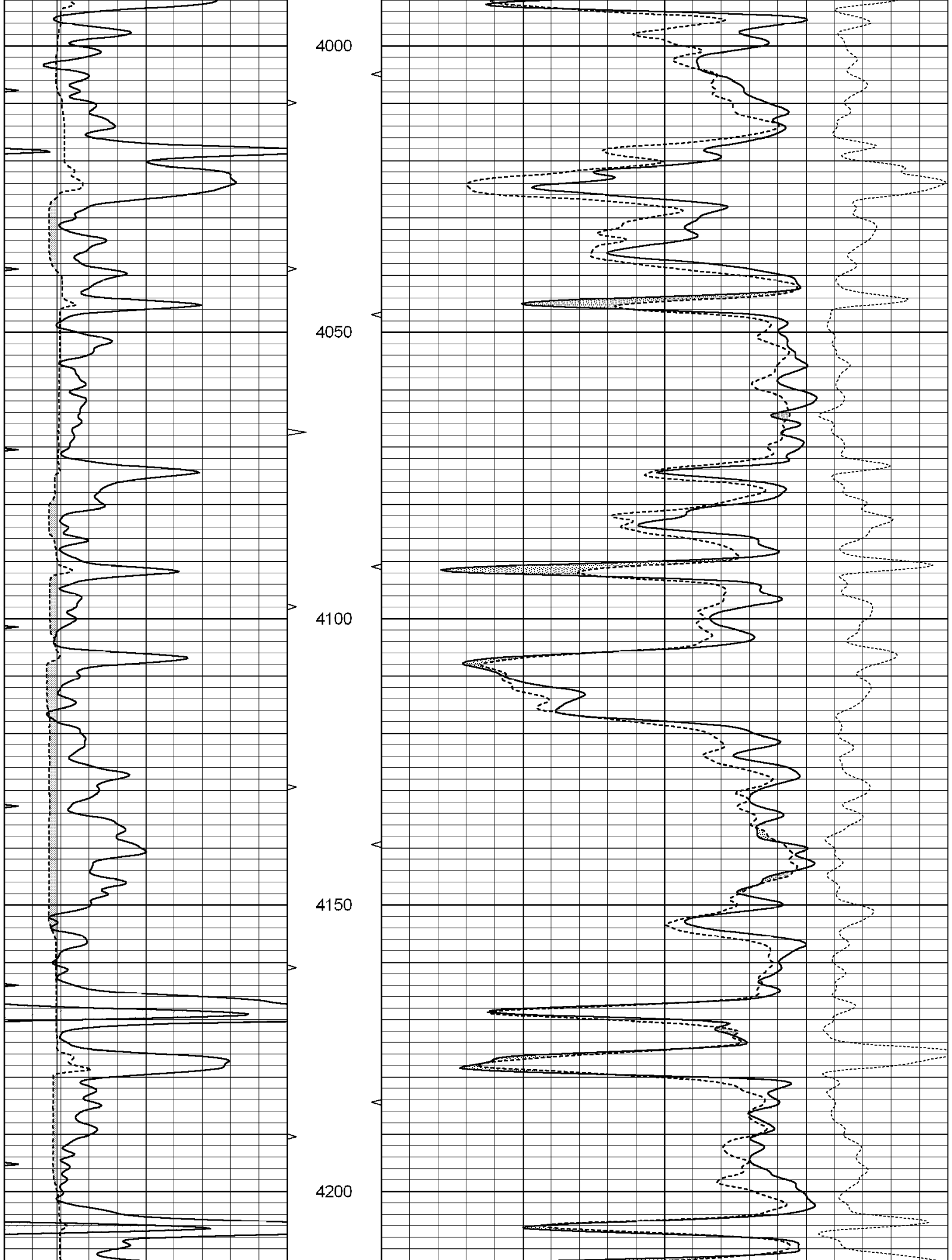
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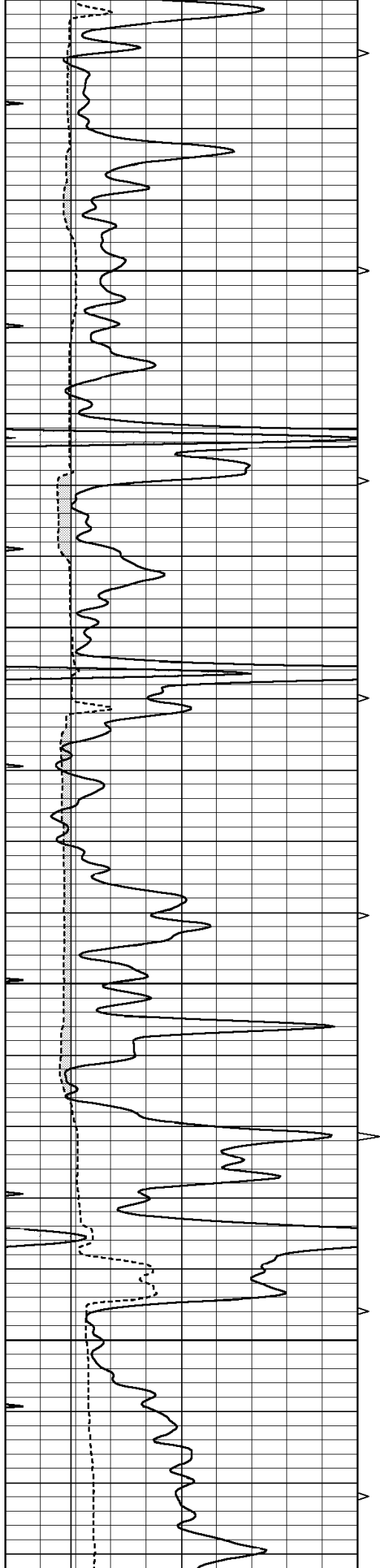
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3900

3950





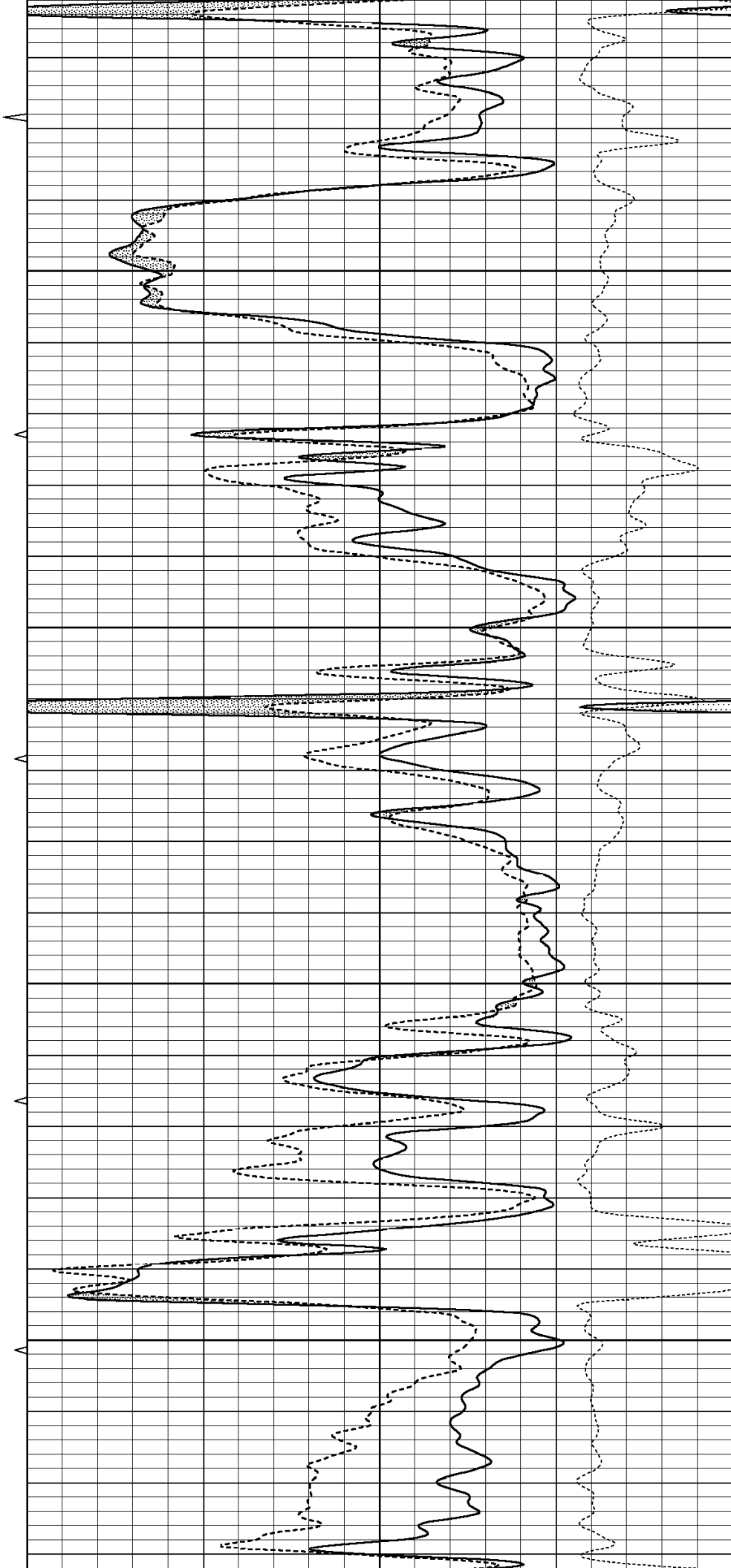


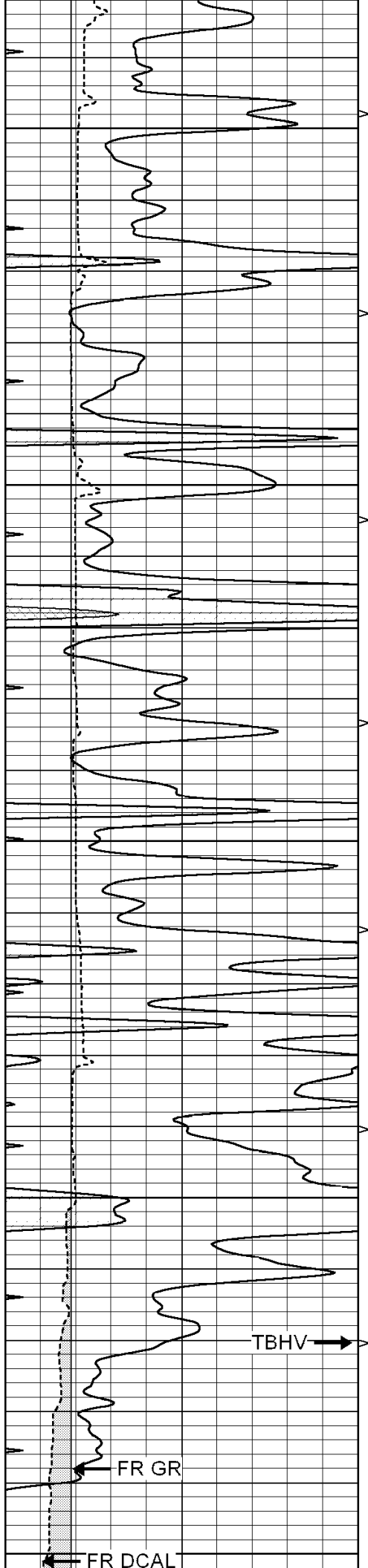
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4300

4350

4400





4450

4500

4550

4600

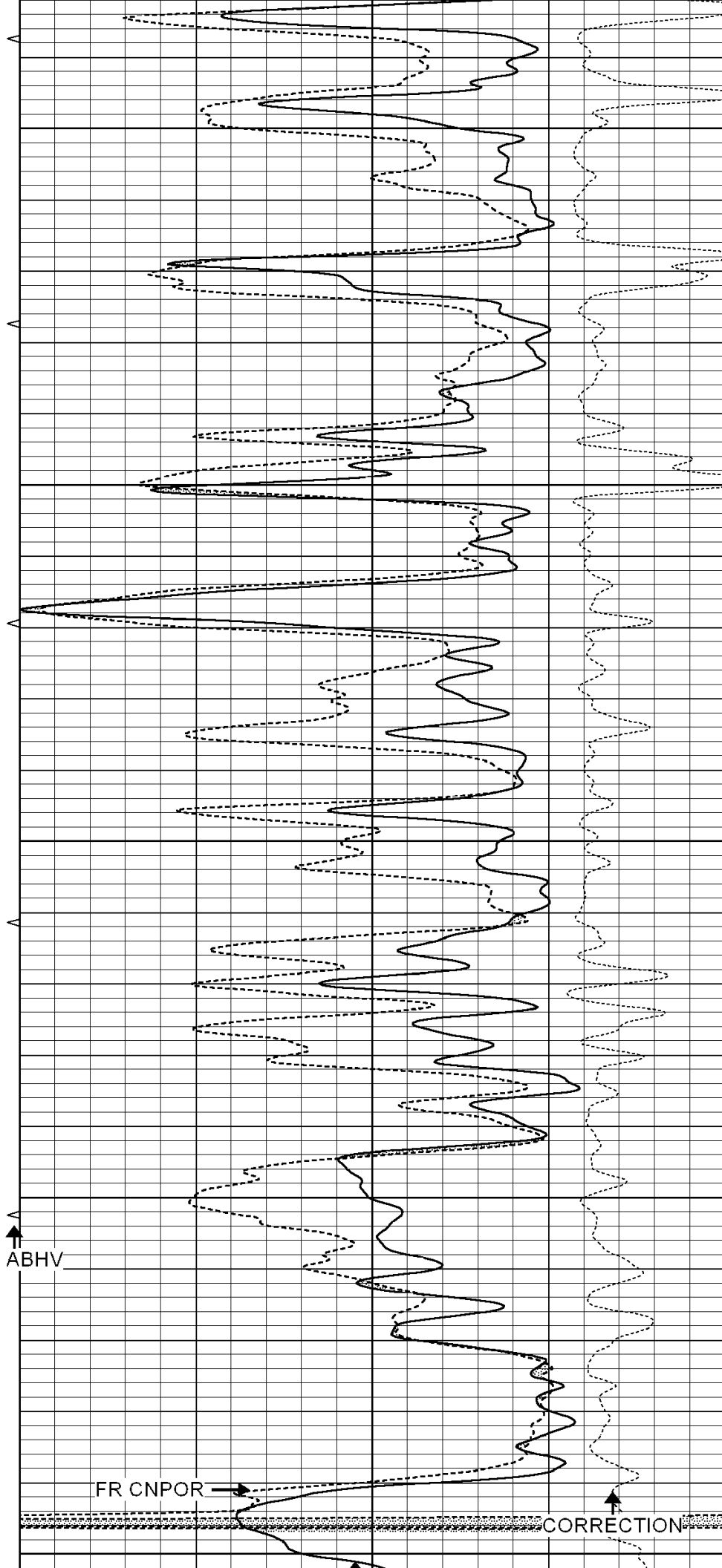
4.5" ABHV

→

←

←

4650



← MINMK			FR DPOR		
			2.71 LIMESTONE MATRIX		
LTD 4675					
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		

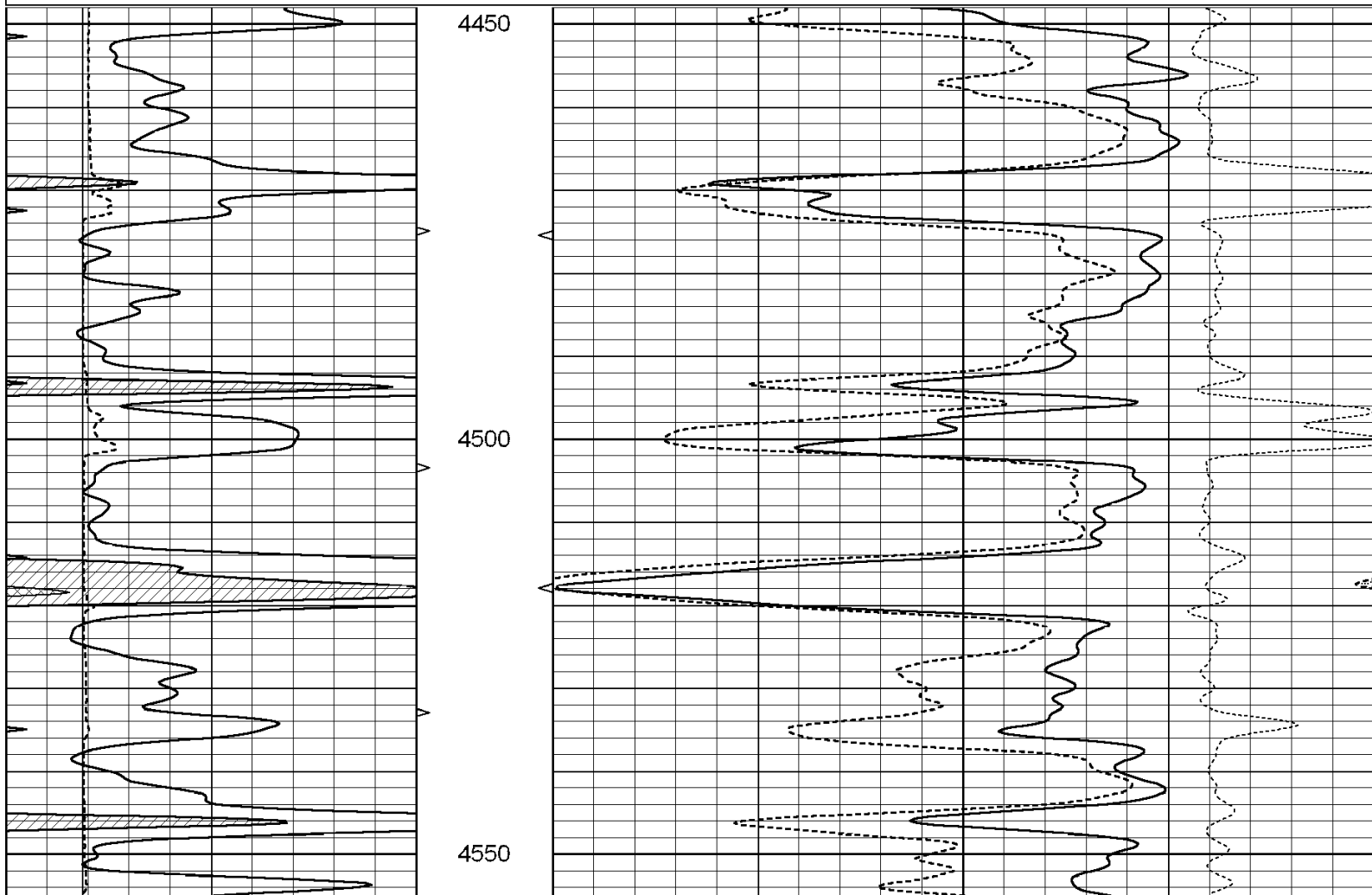


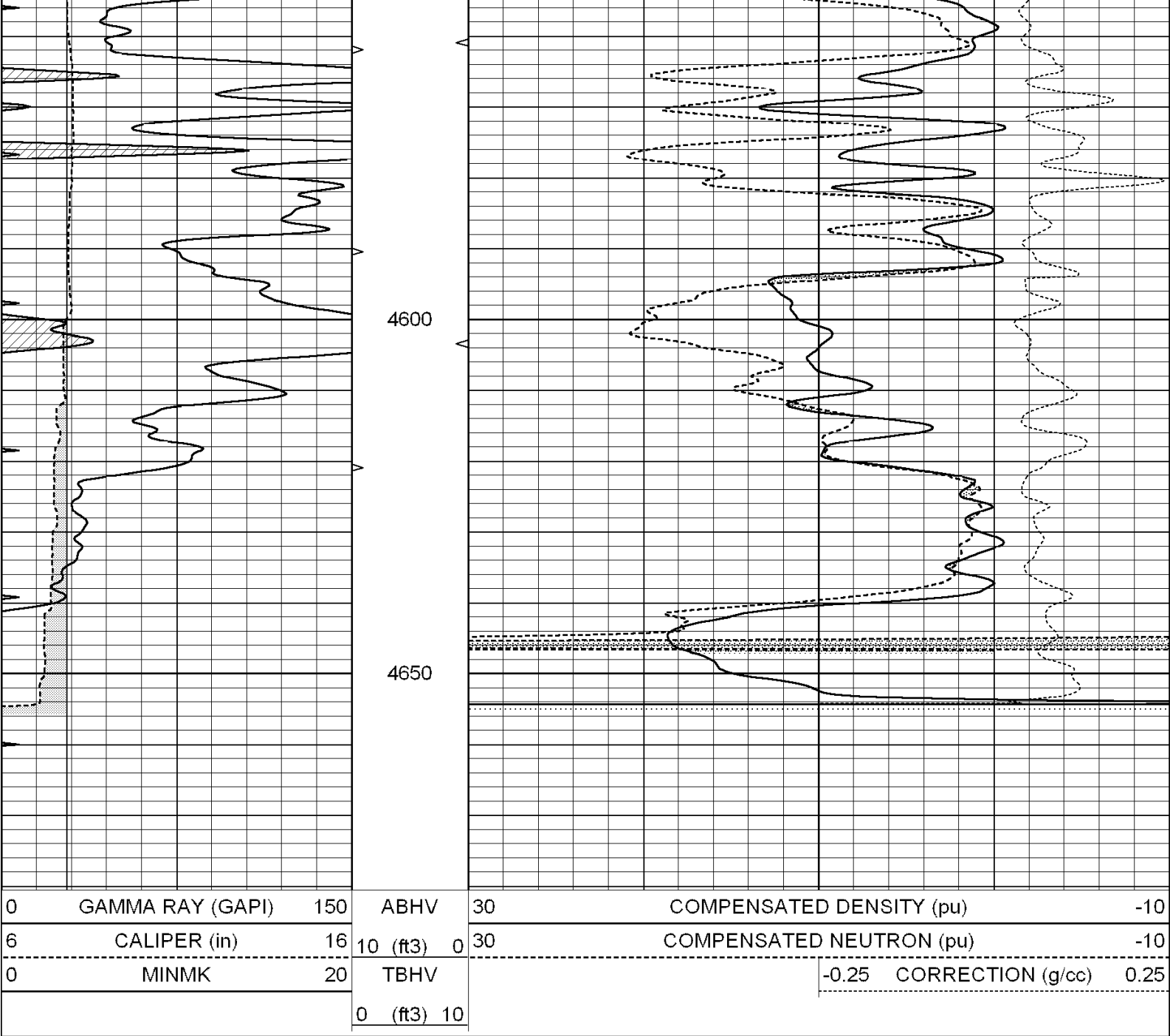
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REPEAT SECTION

Database File: 004376ddn.db
Dataset Pathname: pass3.8
Presentation Format: den_neu
Dataset Creation: Sat Nov 28 17:04:57 2009
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:		004376ddn.db						
Dataset Pathname:		pass4.6						
Dataset Creation:		Sat Nov 28 16:47:19 2009 by Calc Open-Cased 060407						
Dual Induction Calibration Report								
Serial-Model: Performed:				DIL3-GEAR Sat Nov 28 15:48:25 2009				
Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho-m	640.000	-2.000
Medium	0.013	0.740	V	0.000	462.500	mmho-m	675.000	-11.500
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho-m	622.059	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho-m	631.393	-4.555

Litho Density Calibration Report
Serial: 003N Model: PRB
Performed Tue Sep 08 14:14:44 2009

Litho Density Calibration

	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			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

Caliper

	Readings	Reference	
Low Ref	1.8	7.0	
High Ref	4.2	14.0	
	Gain: 3.0		Offset: 1.6

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:	GR3
Tool Model:	OPEN
Performed:	Sat Nov 28 15:48:04 2009
Calibrator Value:	200.0 GAPI
Background Reading:	3.0 cps
Calibrator Reading:	186.0 cps
Sensitivity:	0.6500 GAPI/cps