



**SUPERIOR  
Hays,  
Kansas**

**COMPENSATED  
DENSITY / NEUTRON  
LOG**

Company RITCHIE EXPLORATION, INC.  
Well SELENKE-HUELSMAN #1  
Field WILDCAT  
County GOVE State KANSAS

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State KANSAS

Location: API #: 15-063-22011-0000  
1045' FNL & 2450' FEL  
55' S & 140' E OF  
SW - NW - NE  
SEC 22 TWP 13S RGE 31W  
Permanent Datum GROUND LEVEL Elevation 2936  
Log Measured From KELLY BUSHING 10' A.G.L.  
Drilling Measured From KELLY BUSHING  
Other Services  
DIL  
Elevation  
K.B. 2946  
D.F. 2944  
G.L. 2936

Date	6-29-12		
Run Number	ONE		
Depth Driller	4740		
Depth Logger	4740		
Bottom Logged Interval	4716		
Top Log Interval	3600		
Casing Driller	226		
Casing Logger	224		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.4 / 66	CHLORIDES 3.000	
pH / Fluid Loss	10.0 / 7.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.70 @ 97F		
Rmf @ Meas. Temp	0.53 @ 97F		
Rmc @ Meas. Temp	0.84 @ 97F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	0.55 @ 123F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	123F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	JEFF GRONIEWEG		
Witnessed By	MAX LOVELLY		

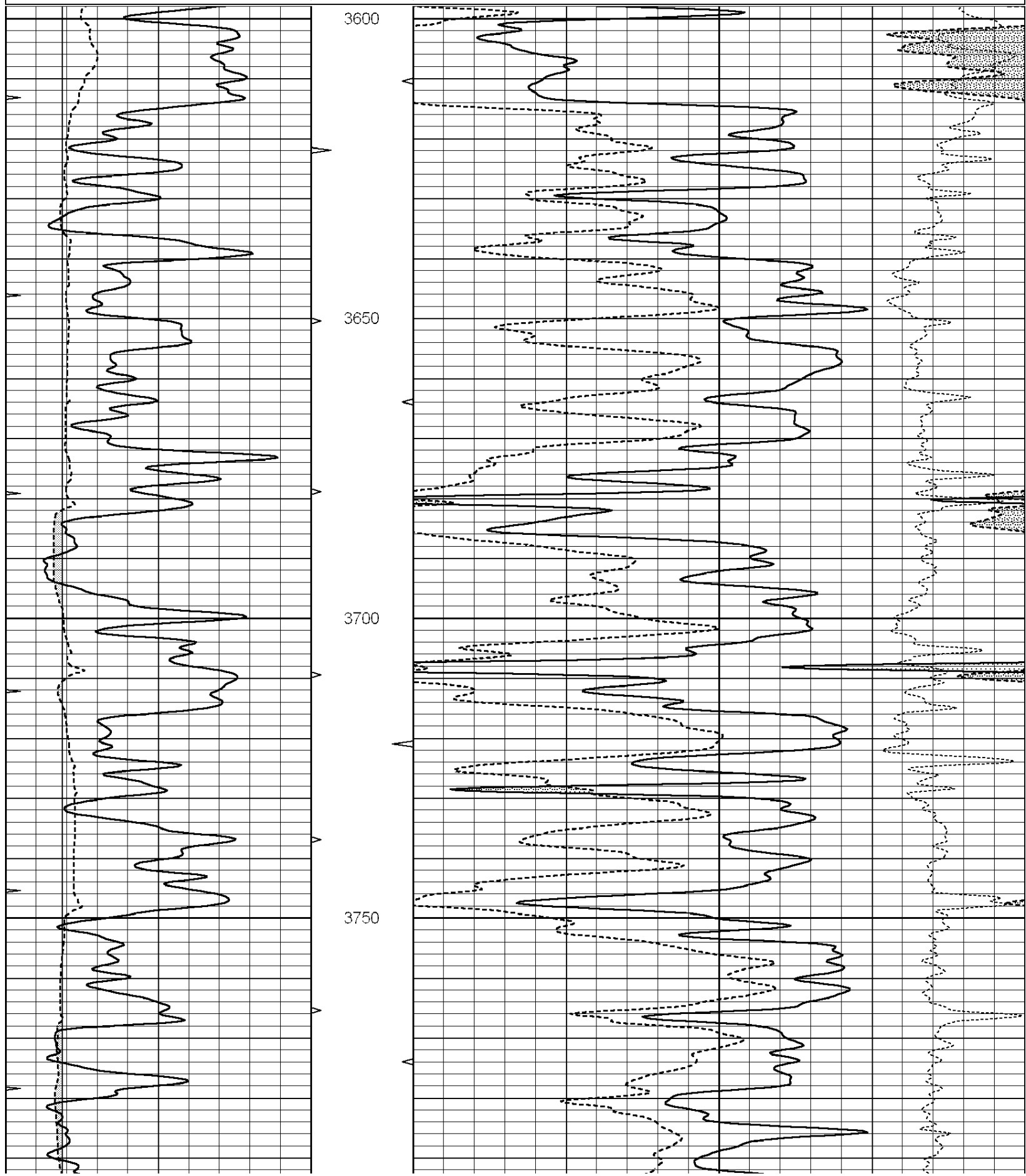
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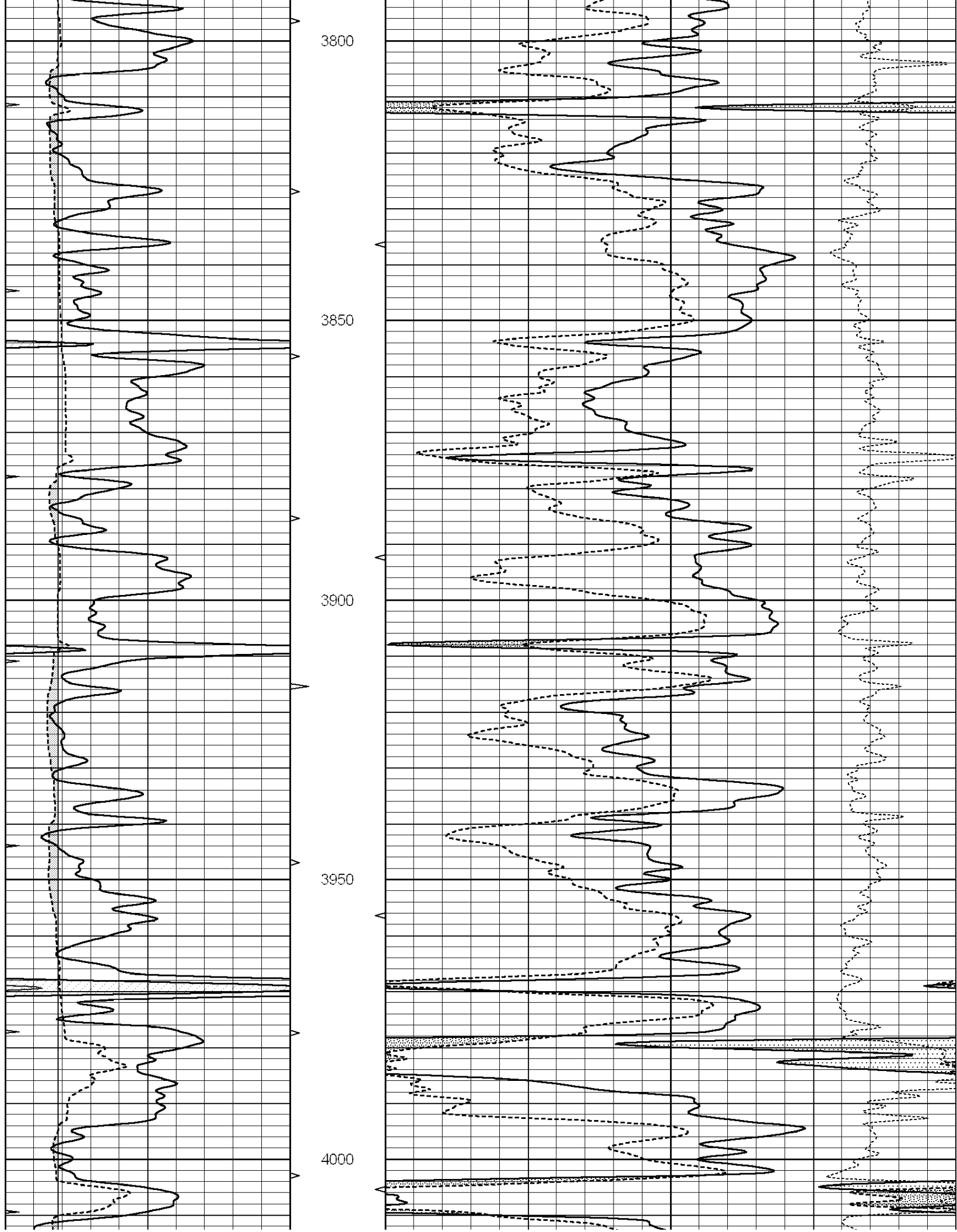
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

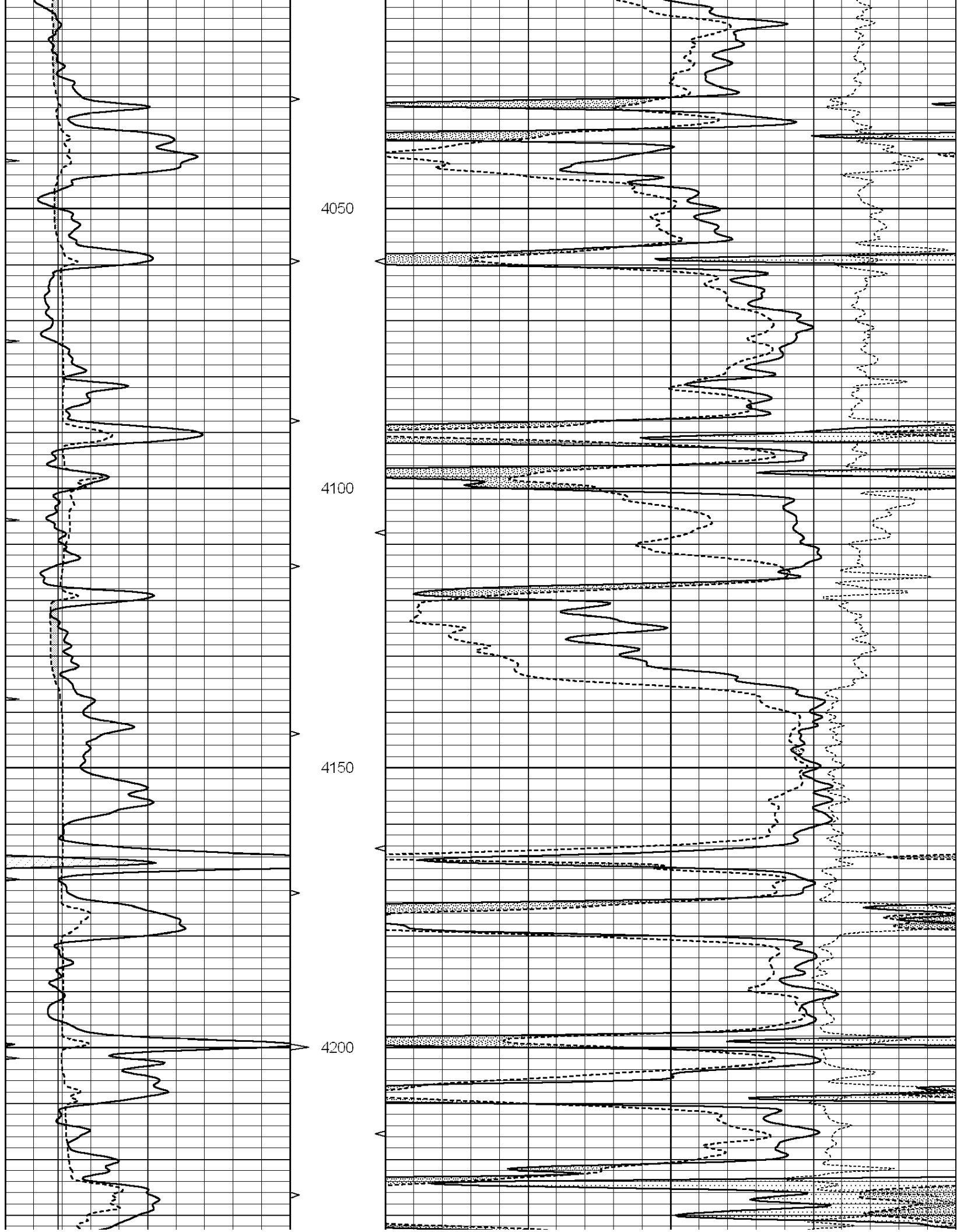
Comments

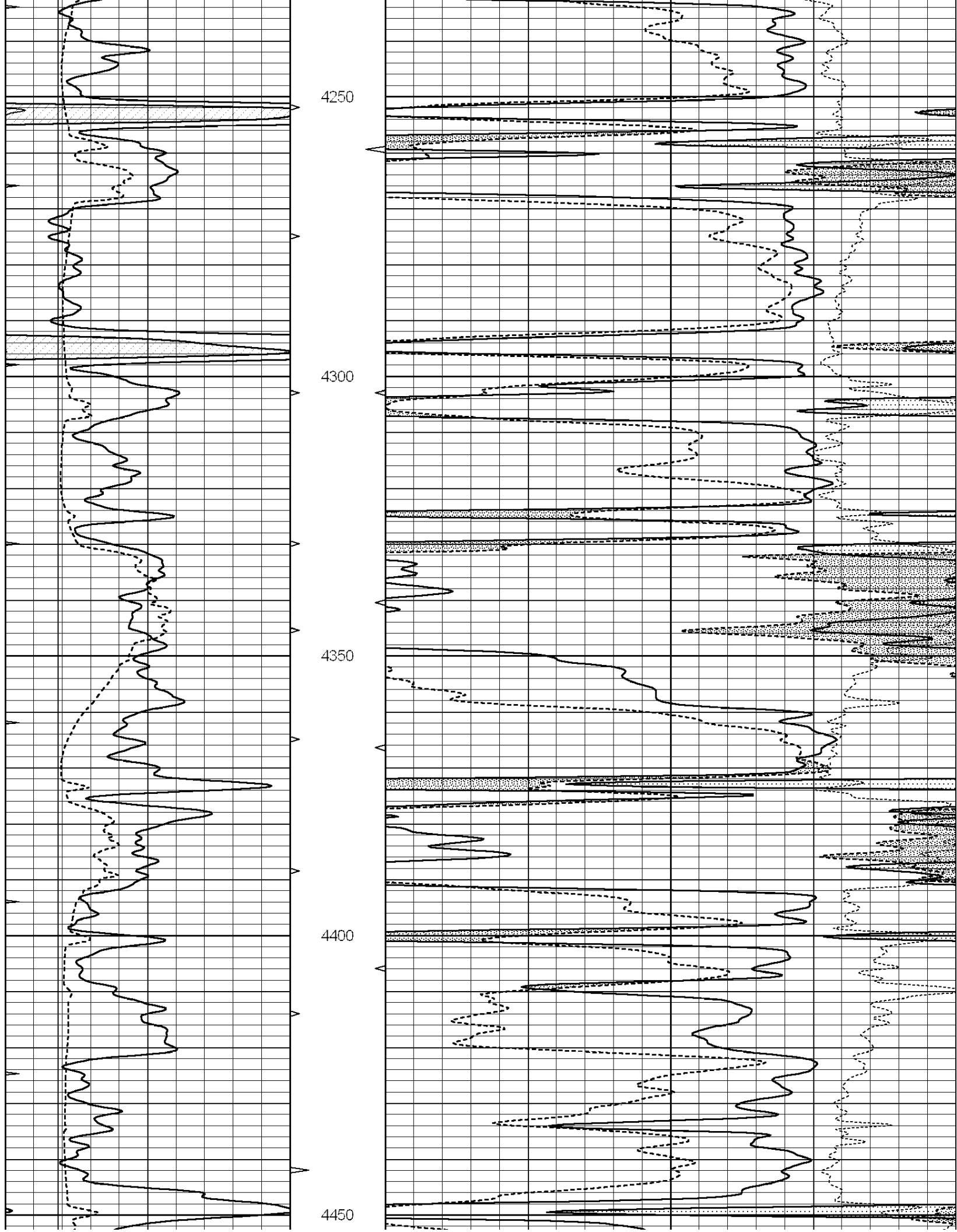
**SUPERIOR WELL SERVICES**  
 785-628-6395  
**THANK YOU FOR YOUR BUSINESS**  
 DIRECTIONS: OAKLEY, KS - 11 MILES SOUTH TO GOVE RD - 5 MILES EAST TO RD 16  
 3 MILES SOUTH TO RD P - 1/2 MILE EAST - SOUTH INTO

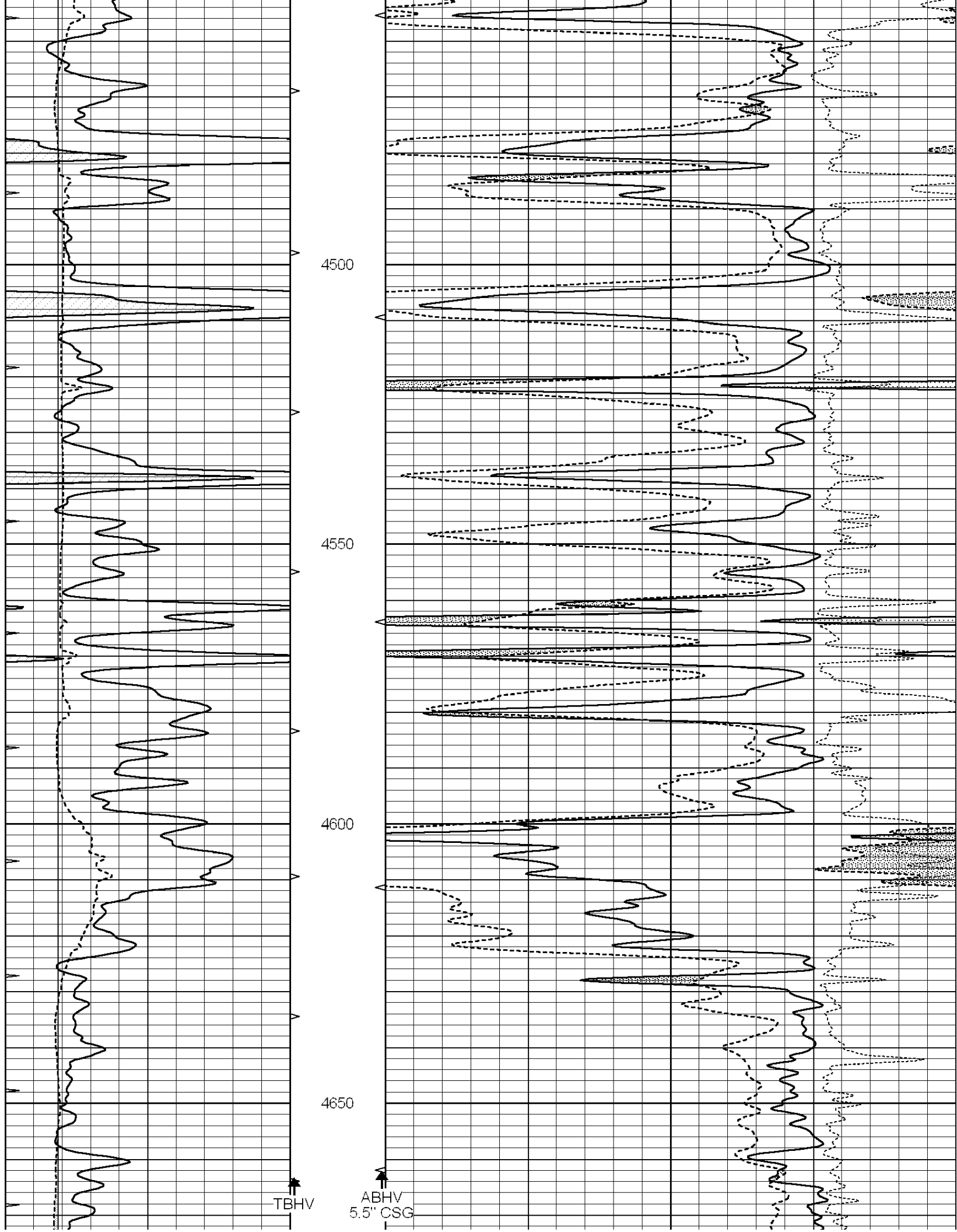
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		

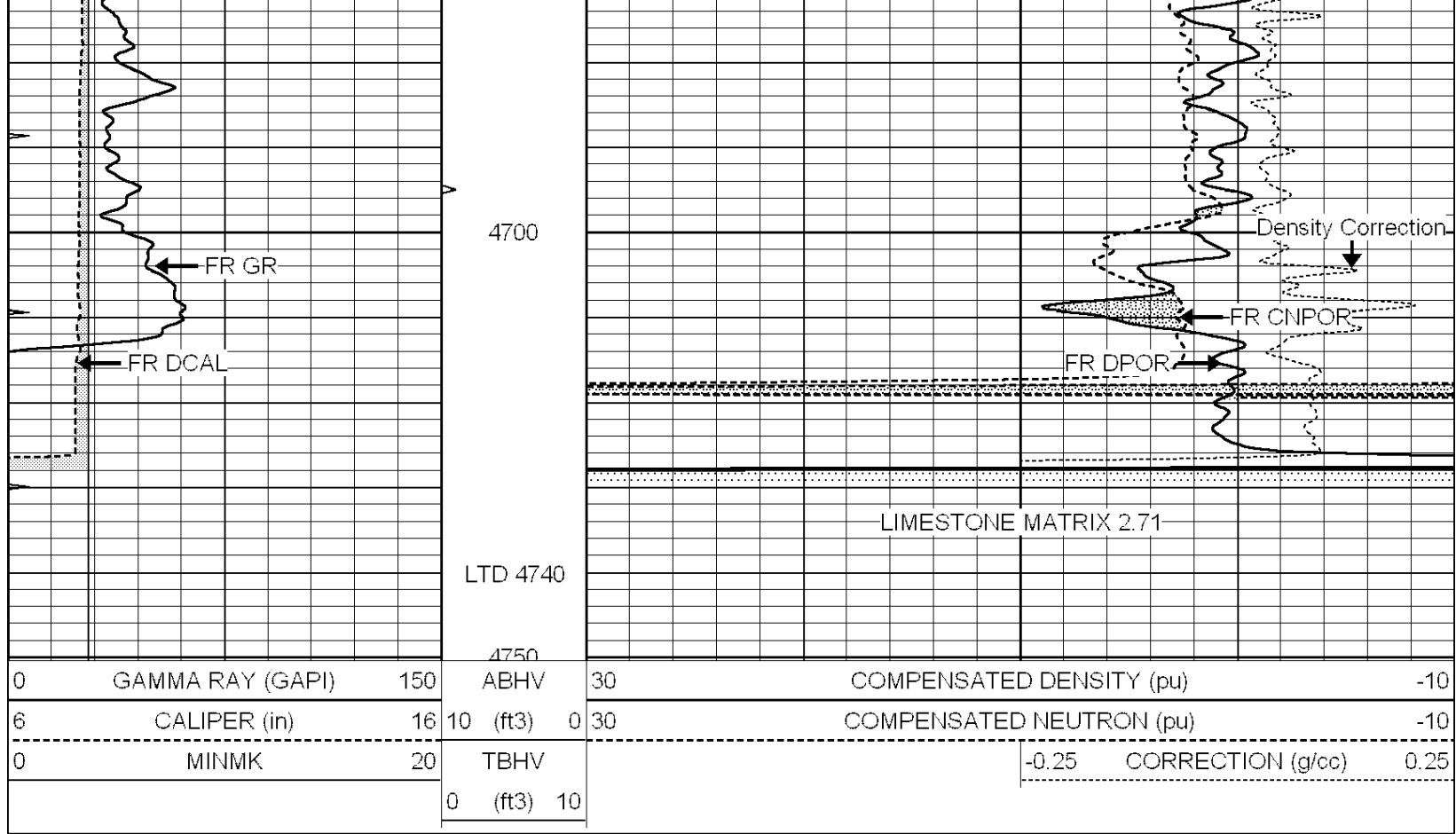










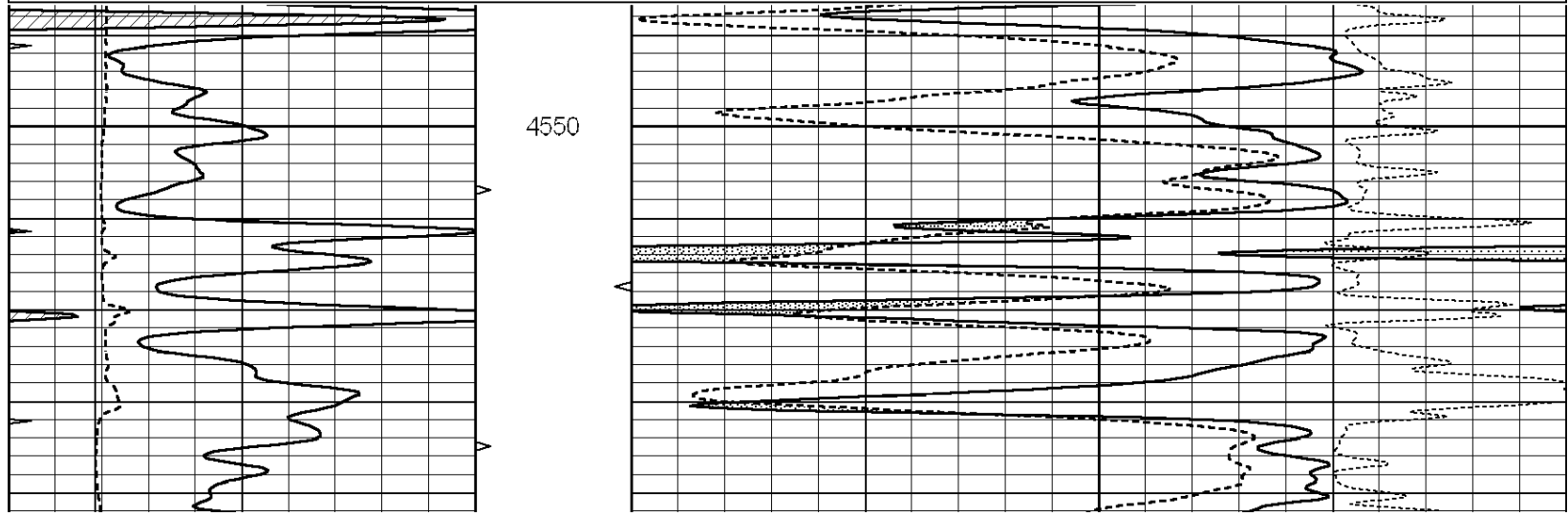


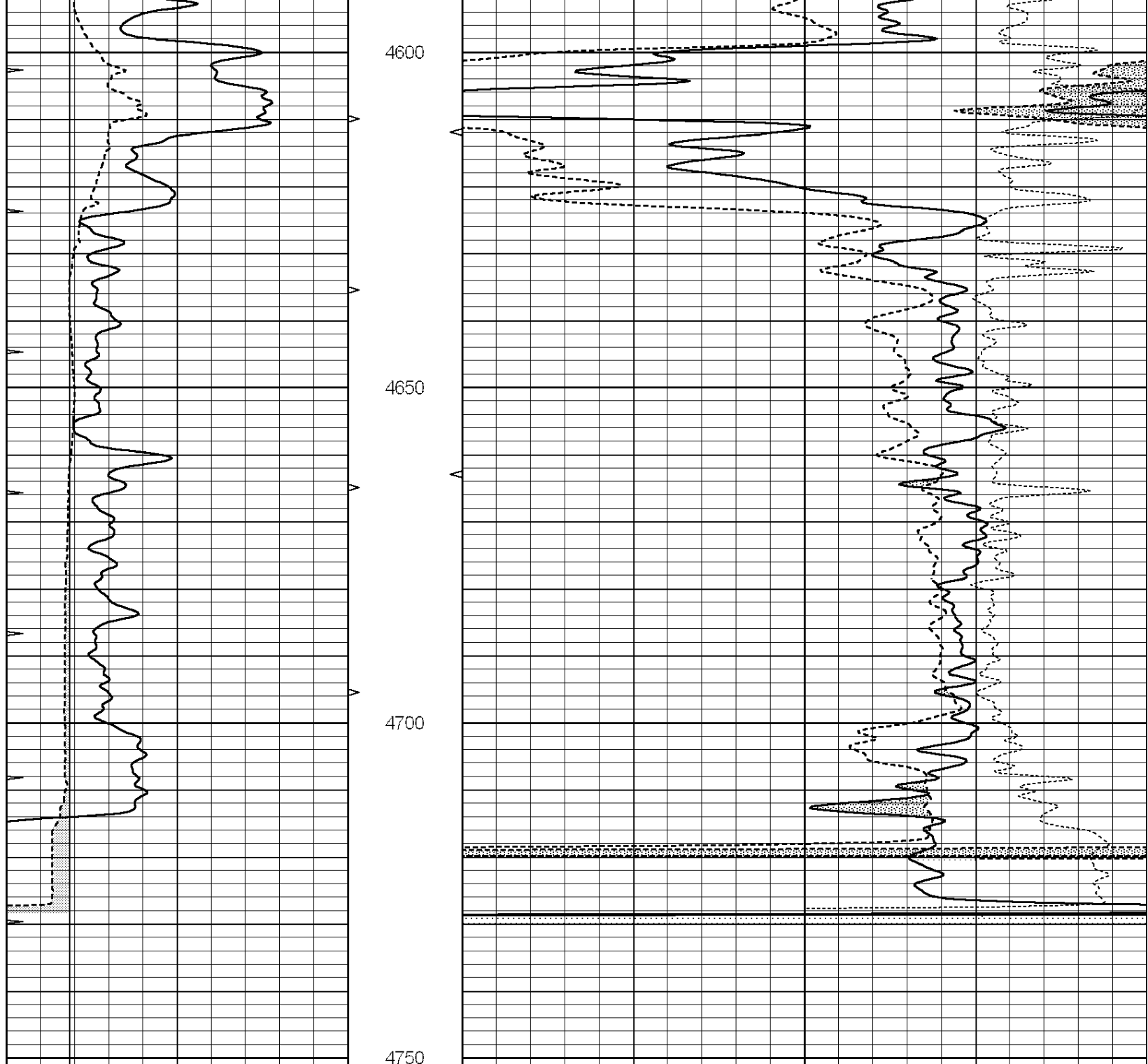
SUPERIOR  
Hays,  
Kansas

# REPEAT SECTION

Database File: 008797ddn.db  
 Dataset Pathname: pass2.4  
 Presentation Format: den\_neu  
 Dataset Creation: Fri Jun 29 08:58:29 2012 by Calc Open-Cased 090629  
 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			





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: 008797ddn.db  
 Dataset Pathname: pass3.1  
 Dataset Creation: Fri Jun 29 09:46:22 2012 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model:	PROBE9-DILG
Surface Cal Performed:	Wed Jun 27 05:24:36 2012
Downhole Cal Performed:	Mon Jul 28 12:02:56 2008
After Survey Verification Performed:	Fri Jun 01 07:32:39 2012

Surface Calibration									
		Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b	
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	540.000	-14.000	
Medium	0.039	0.728	V	0.000	464.000	mmho/m	540.000	-16.000	
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			3970.000	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		

Compensated Density Calibration Report

Serial-Model:	GEAR2-GEARHART
Source / Verifier:	147 / 147
Master Calibration Performed:	Wed Jun 27 04:03:46 2012

Master Calibration						
		Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc		1203.63	642.89	cps
Aluminum	2.590	g/cc		267.51	439.63	cps
Spine Angle = 75.82			Density/Spine Ratio = 0.567			
		Size	Reading			
Small Ring	7.90	in	4.59	V		
Large Ring	14.00	in	6.70	V		

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:	Wed Jun 27 23:28:08 2012

Calibrator Value:	1.0	GAPI
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Background Reading:	0.0	cps
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Calibrator Reading:	1.0	cps
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Sensitivity:	0.7500	GAPI/cps
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