



**SUPERIOR  
Hays,  
Kansas**

**COMPENSATED  
DENSITY / NEUTRON  
LOG**

Company RITCHIE EXPLORATION, INC.  
Well #2 NUSS FARMS 36B  
Field MAURICE N.E.  
County LOGAN State KANSAS

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County LOGAN  
State KANSAS

Location: API #: 15-109-21082  
825' FNL & 365' FWL  
SEC 36 TWP 13S RGE 32W  
Other Services  
CDL/CNL  
Elevation  
Permanent Datum GROUND LEVEL Elevation 2924  
Log Measured From KELLY BUSHING 10' A.G.L.  
Drilling Measured From KELLY BUSHING  
K.B. 2934  
D.F.  
G.L. 2924

Date	3-31-12
Run Number	ONE
Depth Driller	4720
Depth Logger	4721
Bottom Logged Interval	4697
Top Log Interval	3600
Casing Driller	213
Casing Logger	213
Bit Size	7.875
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.1 / 69
pH / Fluid Loss	10.5 / 8.0
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.60 @ 97F
Rmf @ Meas. Temp	0.45 @ 97F
Rmc @ Meas. Temp	0.72 @ 97F
Source of Rmf / Rmc	MEASURED
Rm @ BHT	.480 @ 122F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	7:30 P.M.
Maximum Recorded Temperature	122F
Equipment Number	860
Location	HAYS, KS.
Recorded By	RUPP
Witnessed By	ADAM ELDANI

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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, 16S, 1E, S INTO.

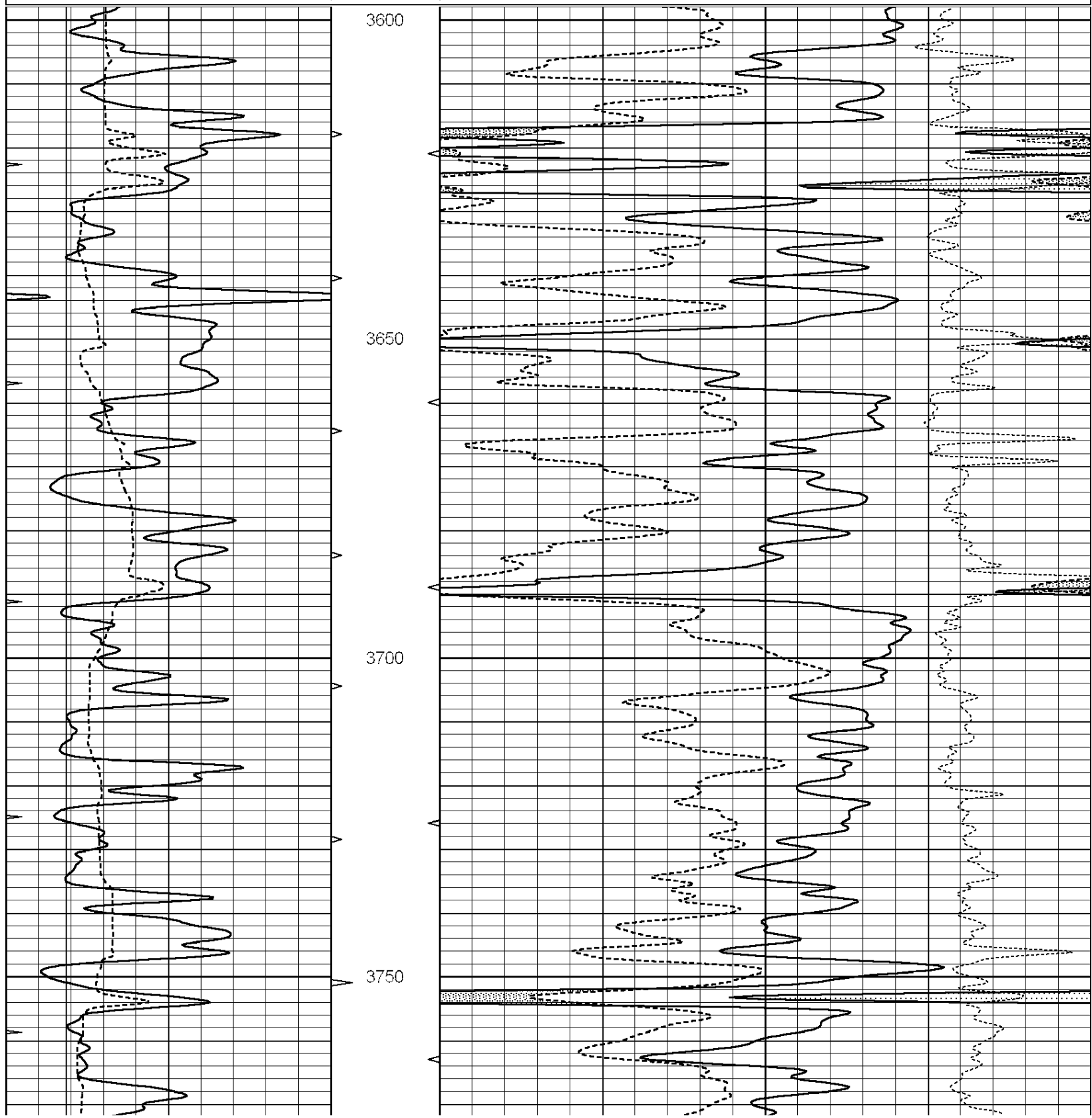


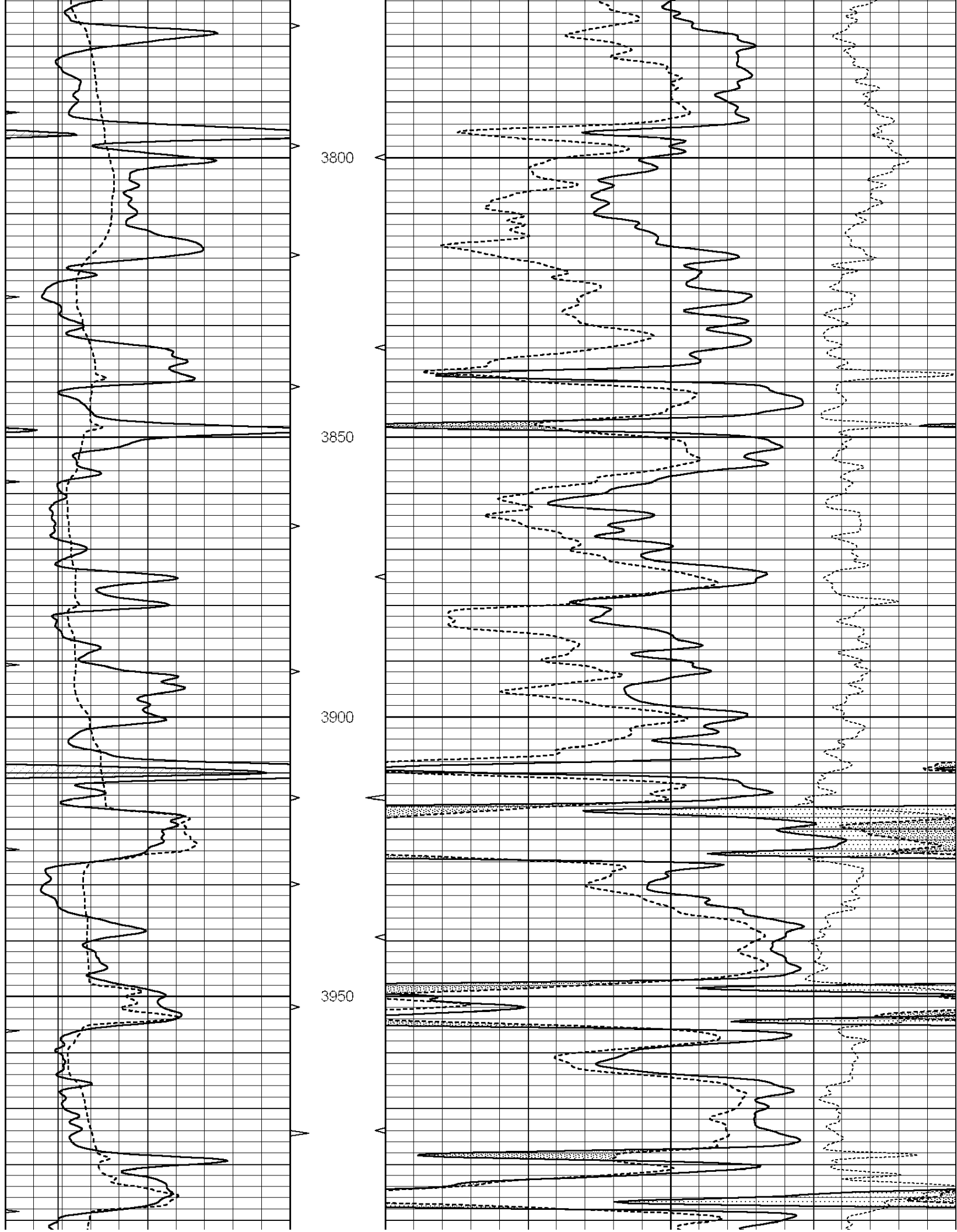
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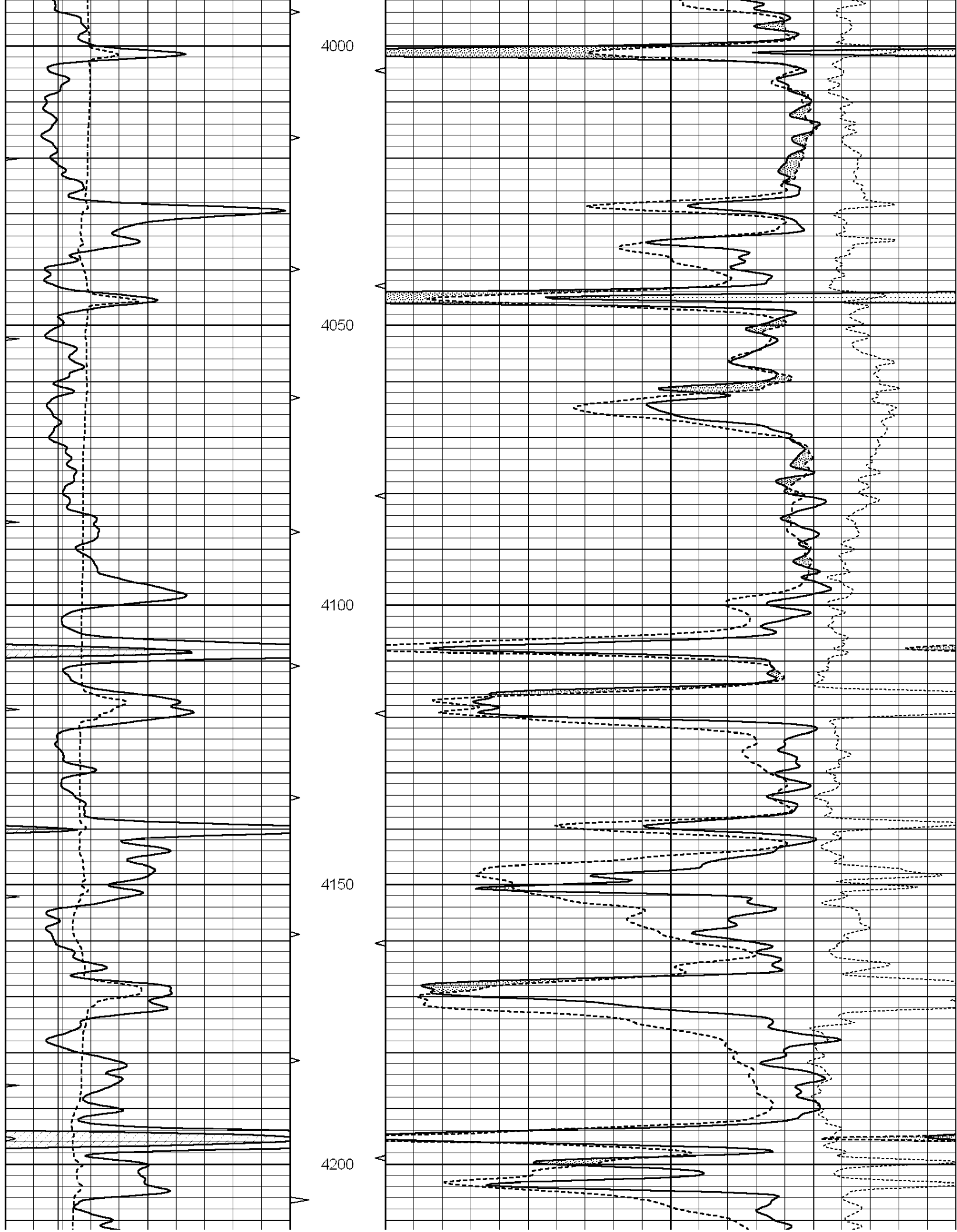
**MAIN SECTION**

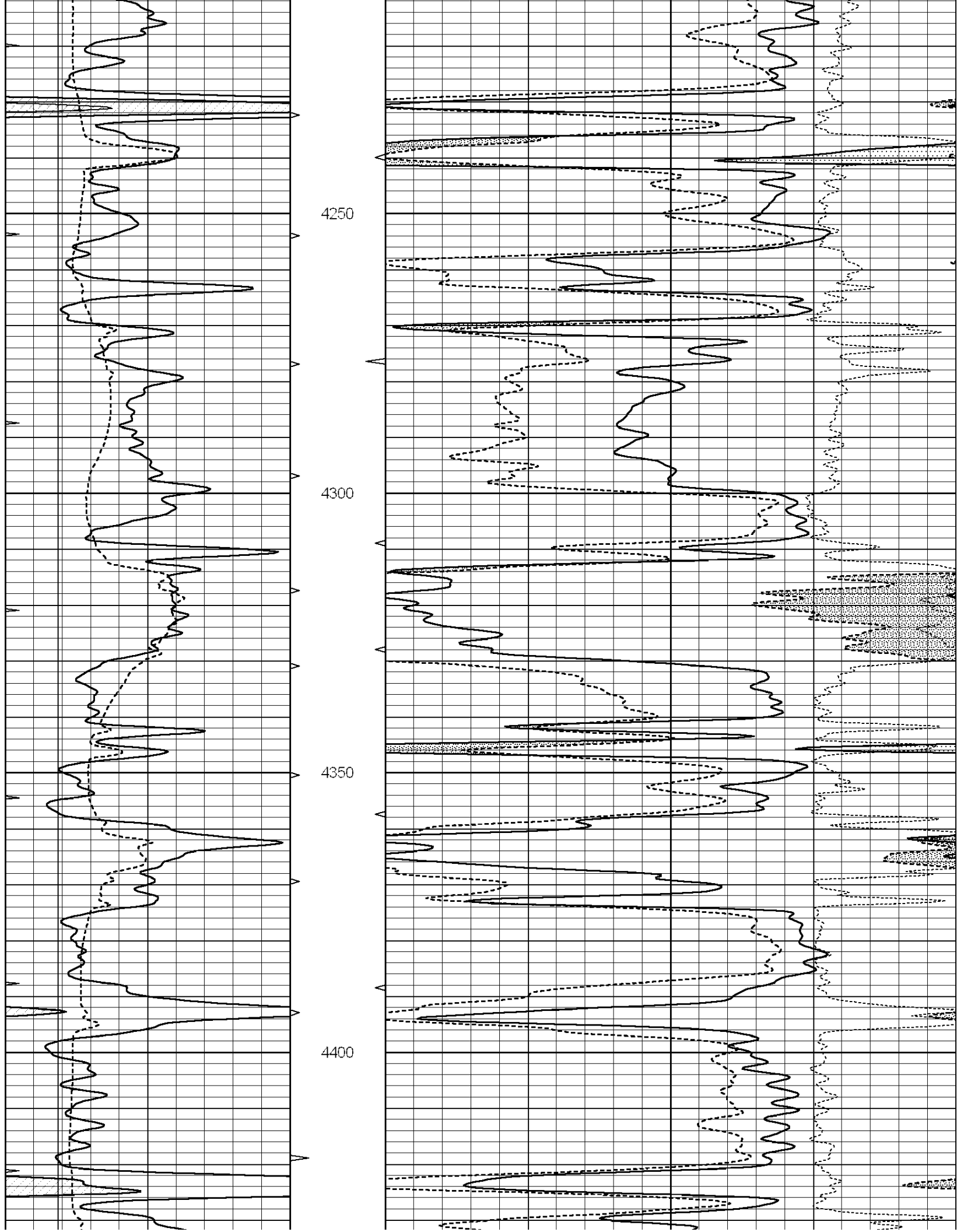
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 Dataset Creation: Sun Apr 01 09:10:44 2012 by Calc Open-Cased 090629  
 Charted by: Depth in Feet scaled 1:240

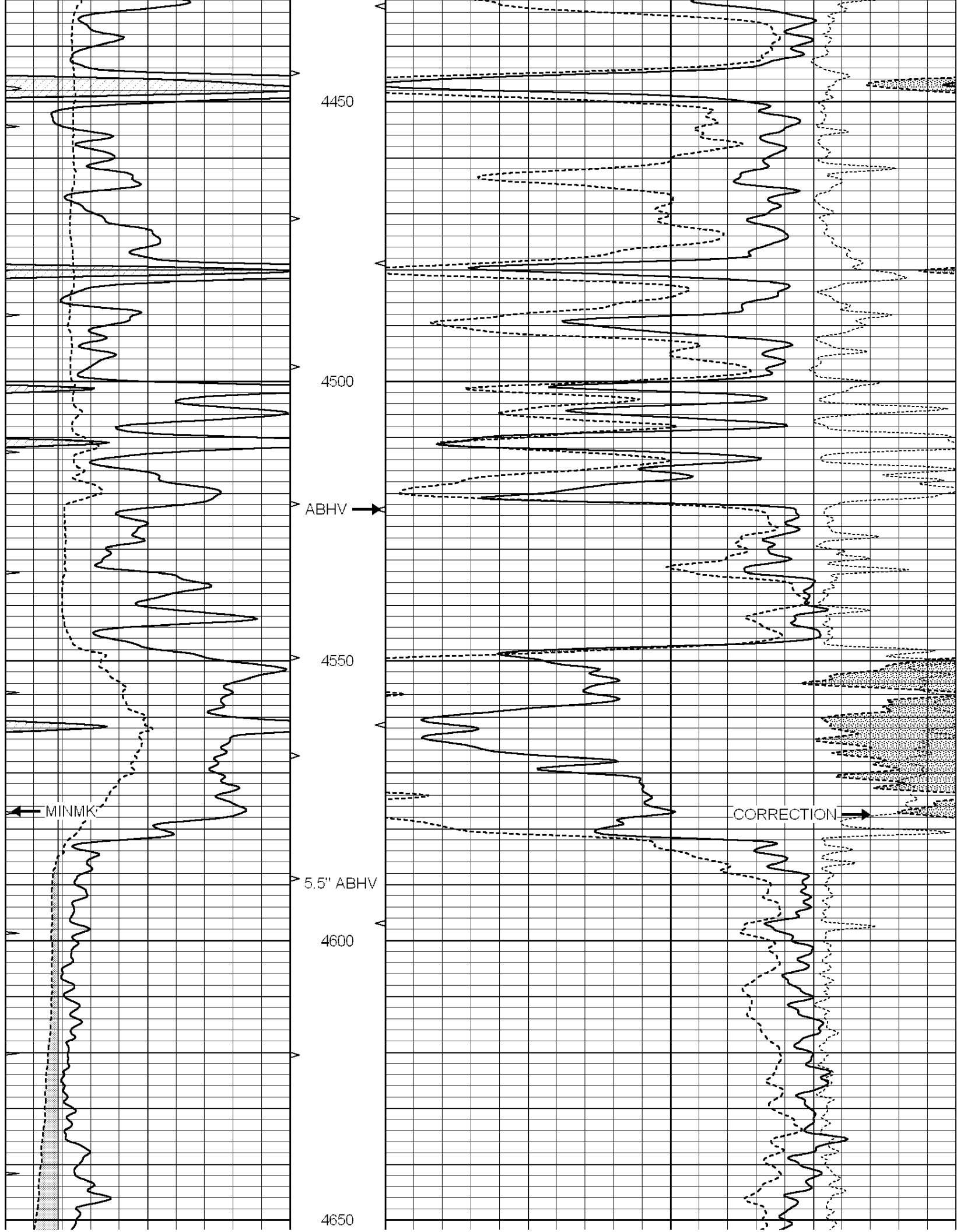
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		

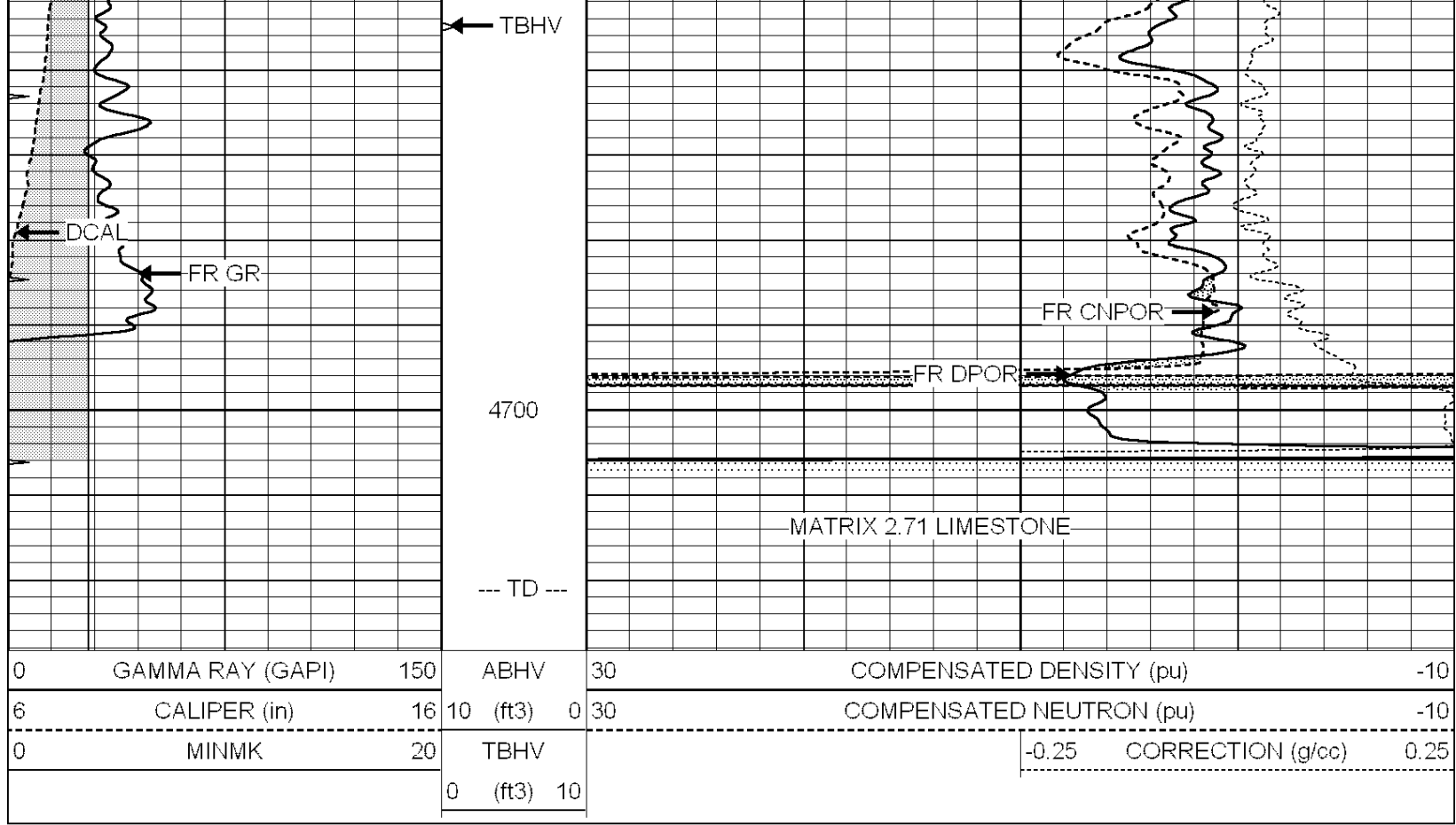










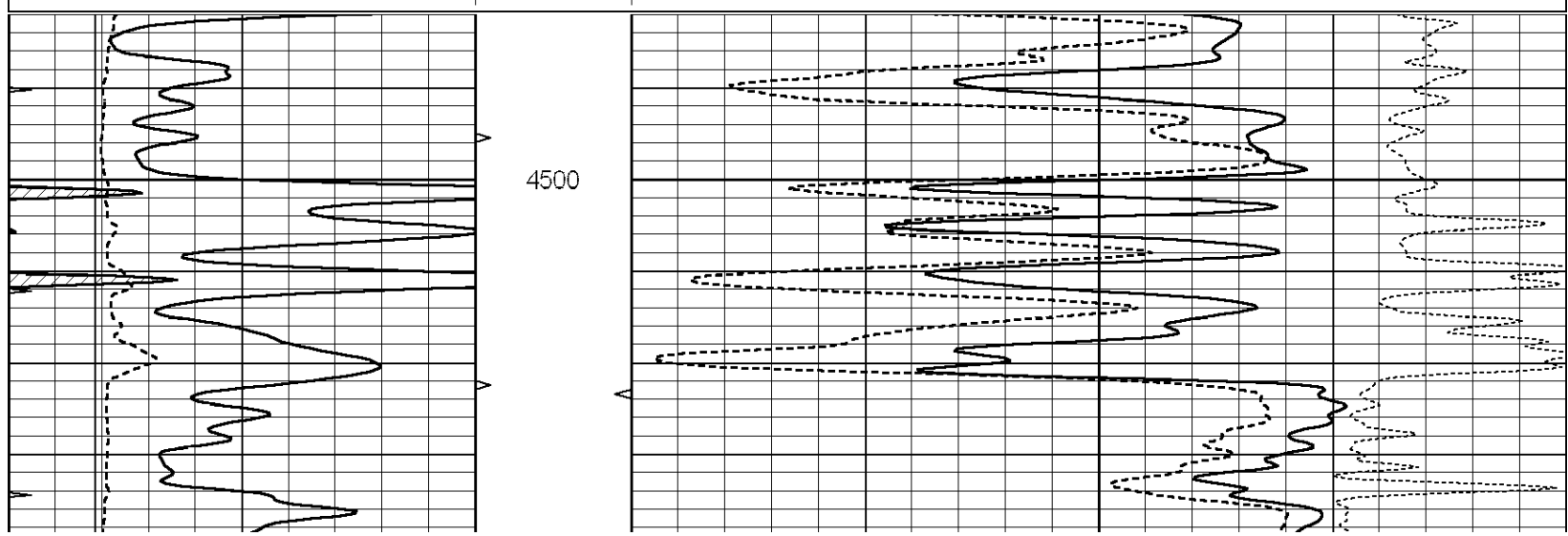


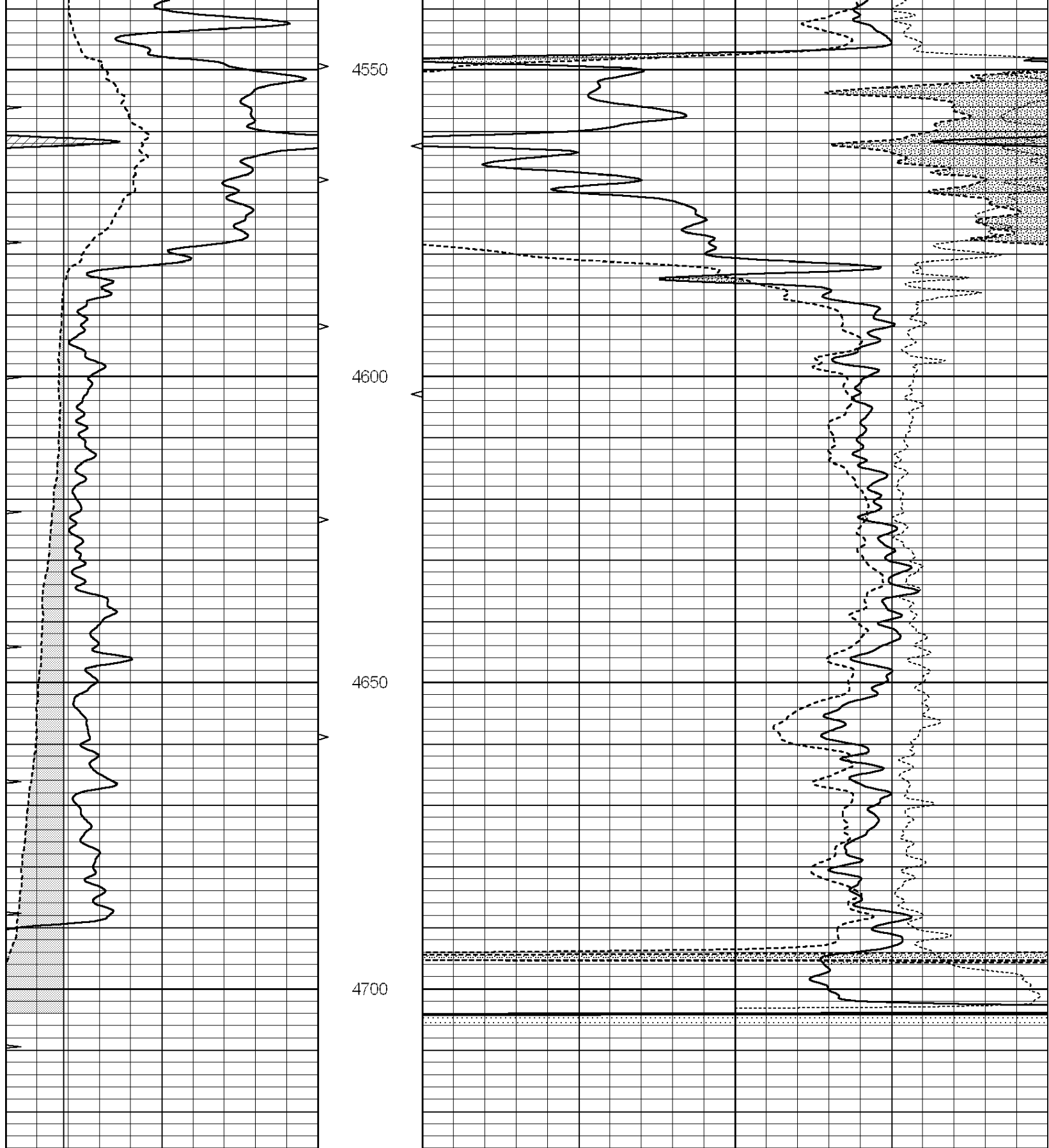
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Hays,  
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# REPEAT SECTION

Database File: 008709ddn.db  
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 Presentation Format: den\_neu  
 Dataset Creation: Sun Apr 01 08:53:19 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			

### Dual Induction Calibration Report

Serial-Model: PROBE9-DILG  
 Surface Cal Performed: Sat Mar 31 19:59:40 2012  
 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	V	Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	550.000	-8.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	540.000	-10.000
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: GEAR1-GEARHART  
 Source / Verifier: 147 / 147  
 Master Calibration Performed: Sat Mar 31 19:39:14 2012

#### Master Calibration

	Density		Far Detector		Near Detector	
		g/cc				cps
Magnesium	1.710	g/cc	1243.76		629.14	cps
Aluminum	2.590	g/cc	282.16		435.01	cps
Spine Angle = 76.03			Density/Spine Ratio = 0.576			
	Size		Reading			
Small Ring	9.20	in	3.50	V		
Large Ring	14.00	in	5.30	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: Sat Mar 31 19:25:22 2012

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
Calibrator Reading: 1.0 cps

Sensitivity: 0.6500 GAPI/cps