



**SUPERIOR**  
Hays,  
Kansas

**COMPENSATED  
NEUTRON / DENSITY  
LOG**

Company DOWNING NELSON OIL COMPANY, INC.  
Well HOCKERSMITH-ROBBEN #1-29  
Field WILDCAT  
County THOMAS  
State KANSAS

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Location: API # : 15-193-20856-0000  
1320' FSL & 1945' FWL  
(E2 - W2 - E2 - SW)  
SEC 29 TWP 9S RGE 31W  
Permanent Datum GROUND LEVEL Elevation 3038  
Log Measured From KELLY BUSHING & A.G.L.  
Drilling Measured From KELLY BUSHING  
Other Services  
DIL  
MEL/SON  
Elevation  
K.B. 3046  
D.F. 3044  
G.L. 3038

Date	8/14/12		
Run Number	ONE		
Depth Driller	4710		
Depth Logger	4711		
Bottom Logged Interval	4687		
Top Log Interval	3600		
Casing Driller	8 5/8" @ 292'		
Casing Logger	290		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 800 PPM	
Density / Viscosity	8.9/61		
pH / Fluid Loss	11.0/7.6		
Source of Sample	FLOWLINE		
Rin @ Meas. Temp	1.0 @ 95F		
Rmf @ Meas. Temp	.75 @ 95F		
Rmc @ Meas. Temp	1.2 @ 95F		
Source of Rmf / Rmc	MEASURED		
Rin @ BHT	.76 @ 124F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	124F		
Equipment Number	680		
Location	HAYS, KS.		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	RON NELSON		

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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 (785) 628-6395  
DIRECTIONS  
I-70 & CAMPUS RD. - 8 N. TO RD. H ( FORK IN THE RD.) - 3 1/2 W. - N. INTO

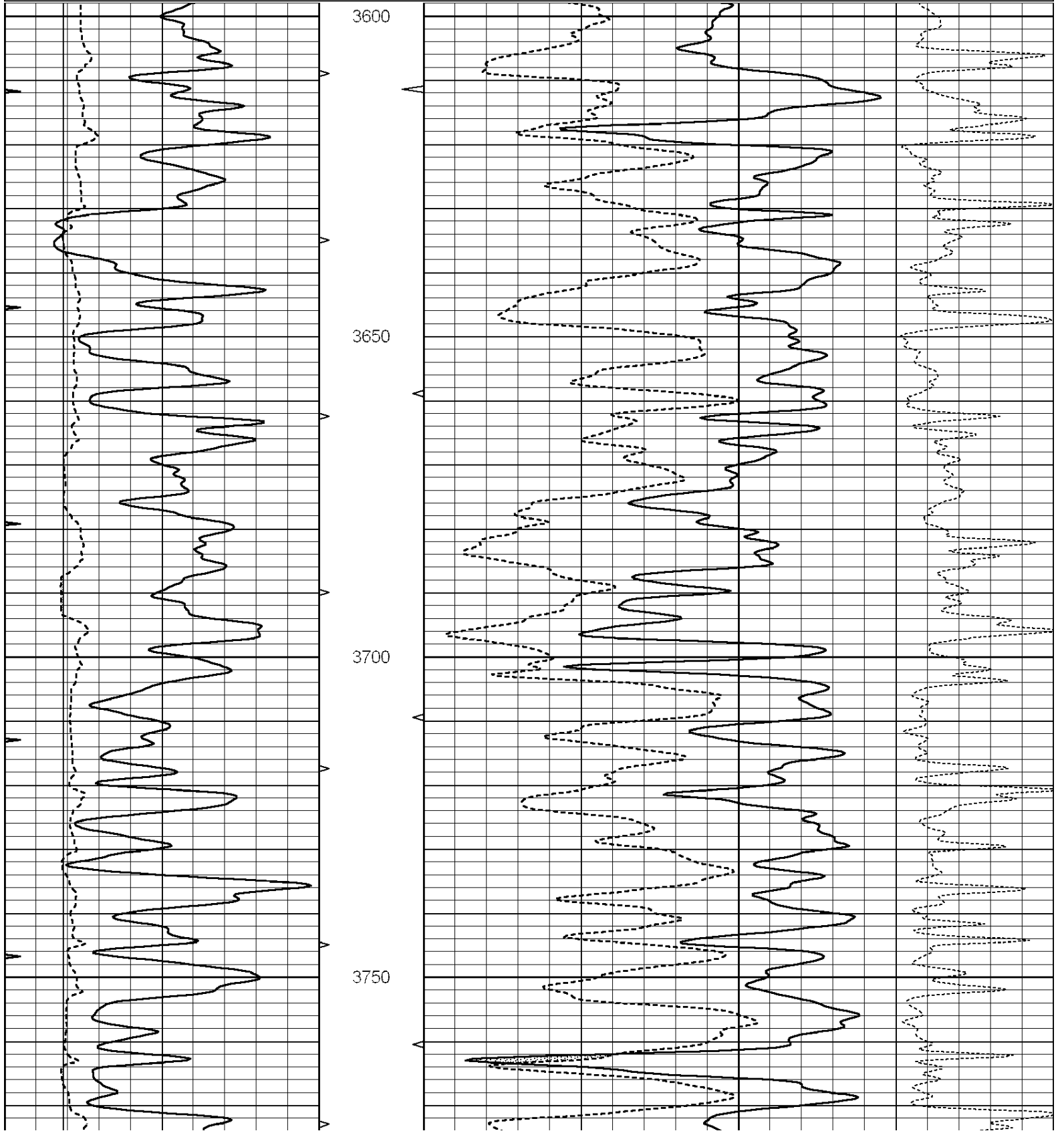


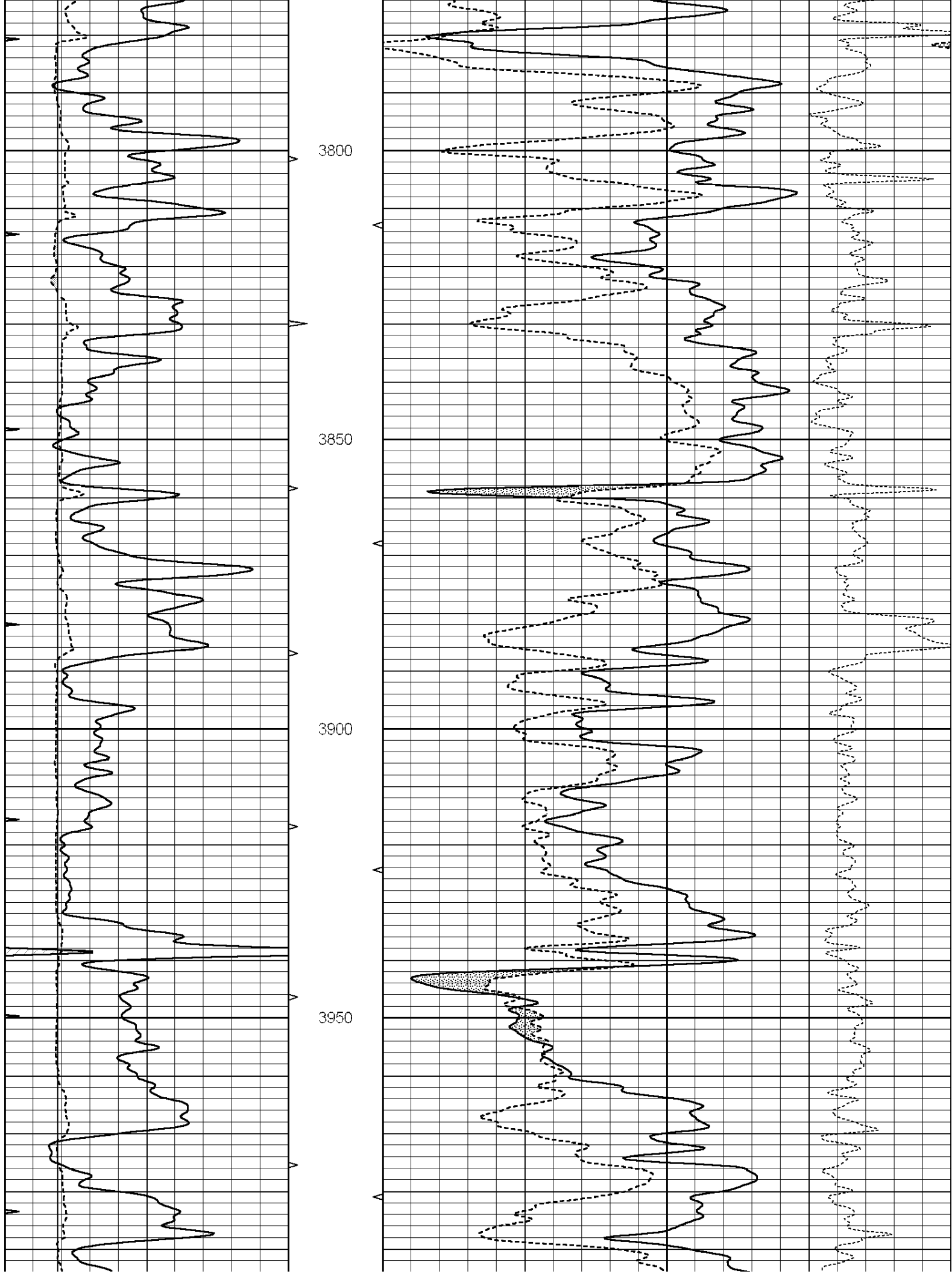
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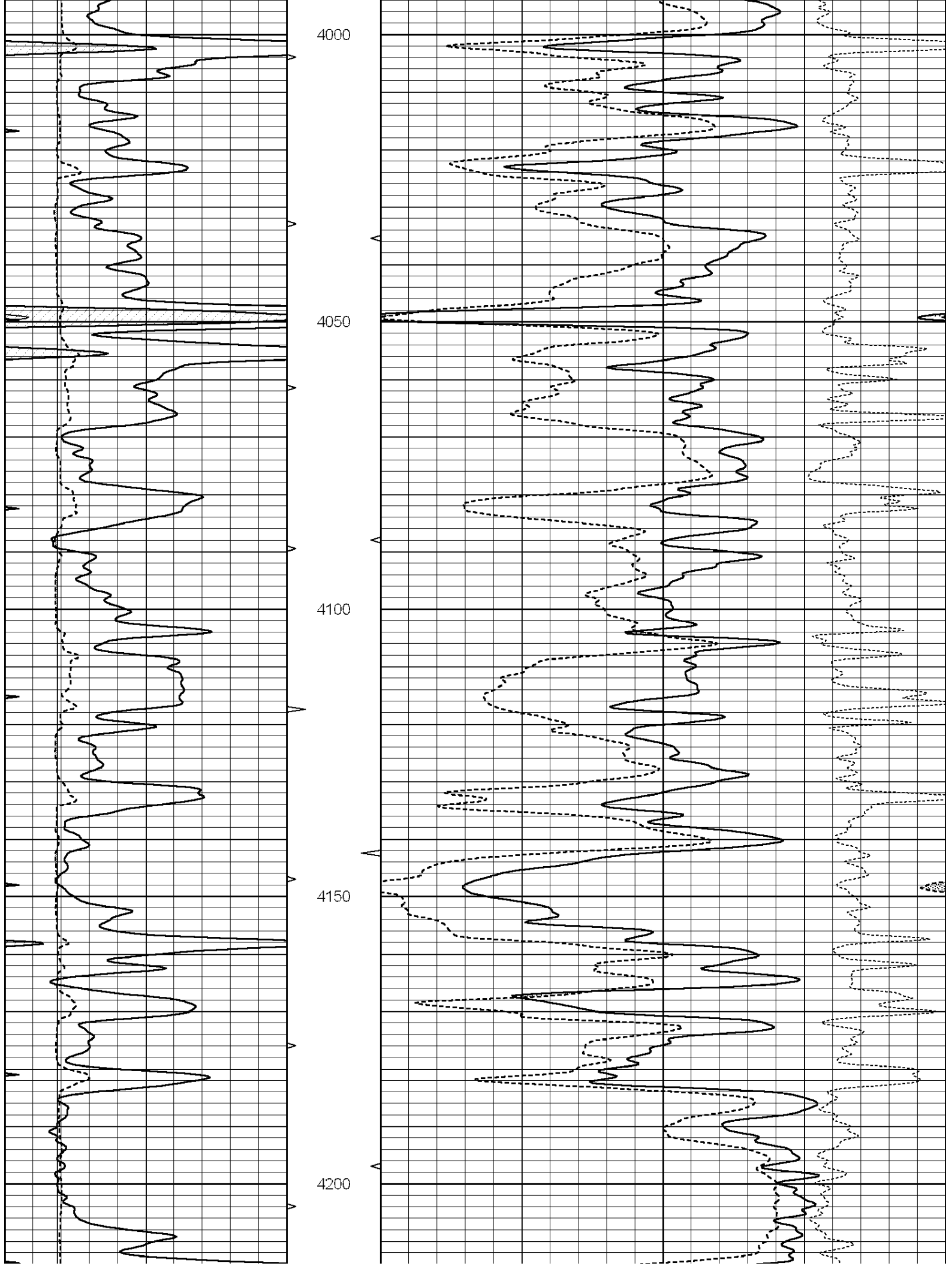
**MAIN SECTION**

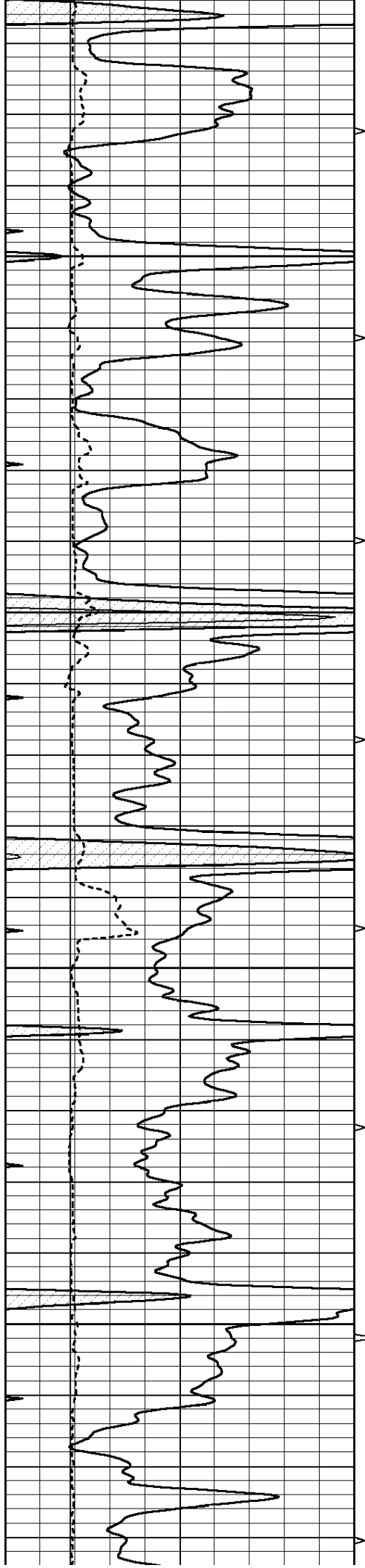
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 Presentation Format: \_den\_neu  
 Dataset Creation: Tue Aug 14 17:54:55 2012 by Calc Open-Cased 090629  
 Charted by: Depth in Feet scaled 1:240

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







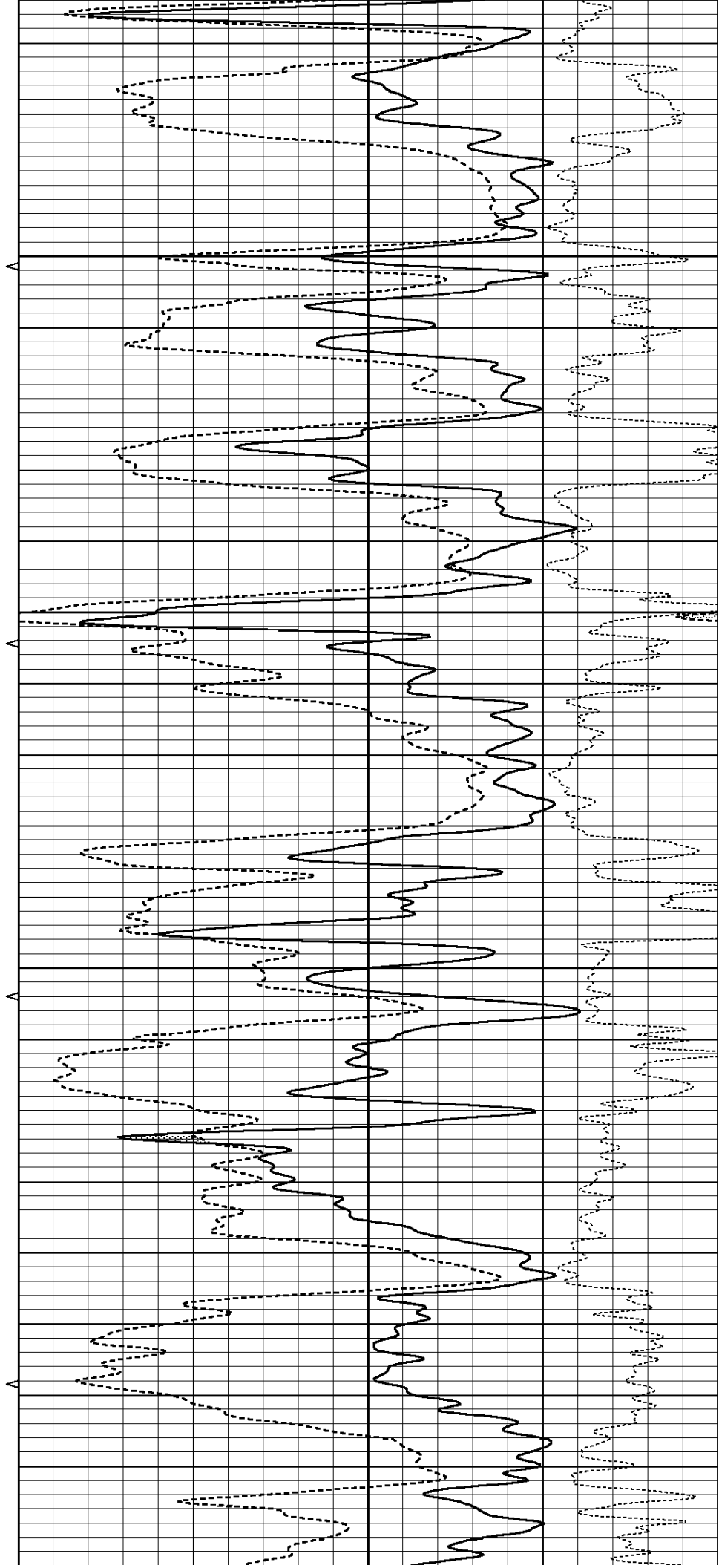


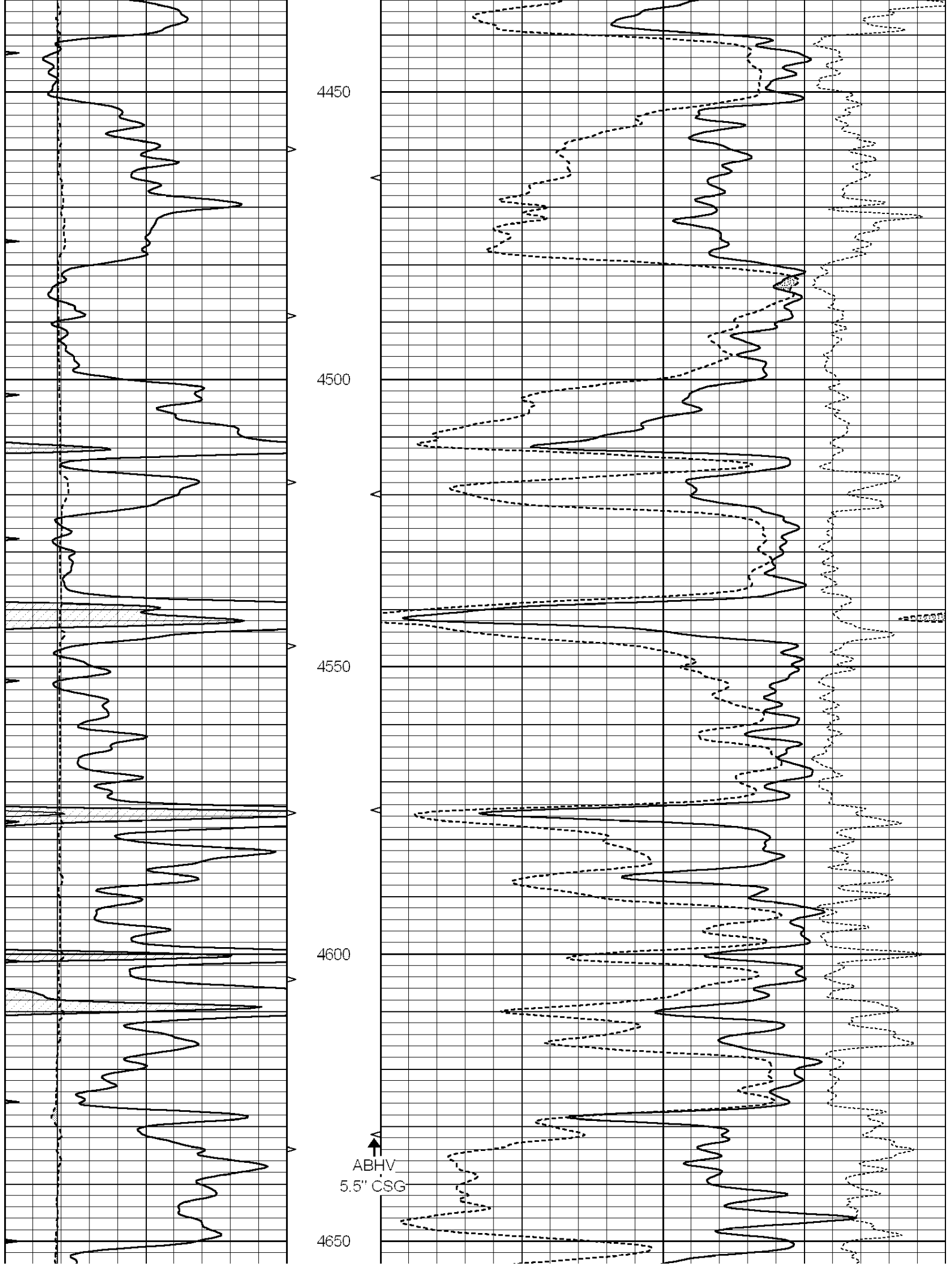
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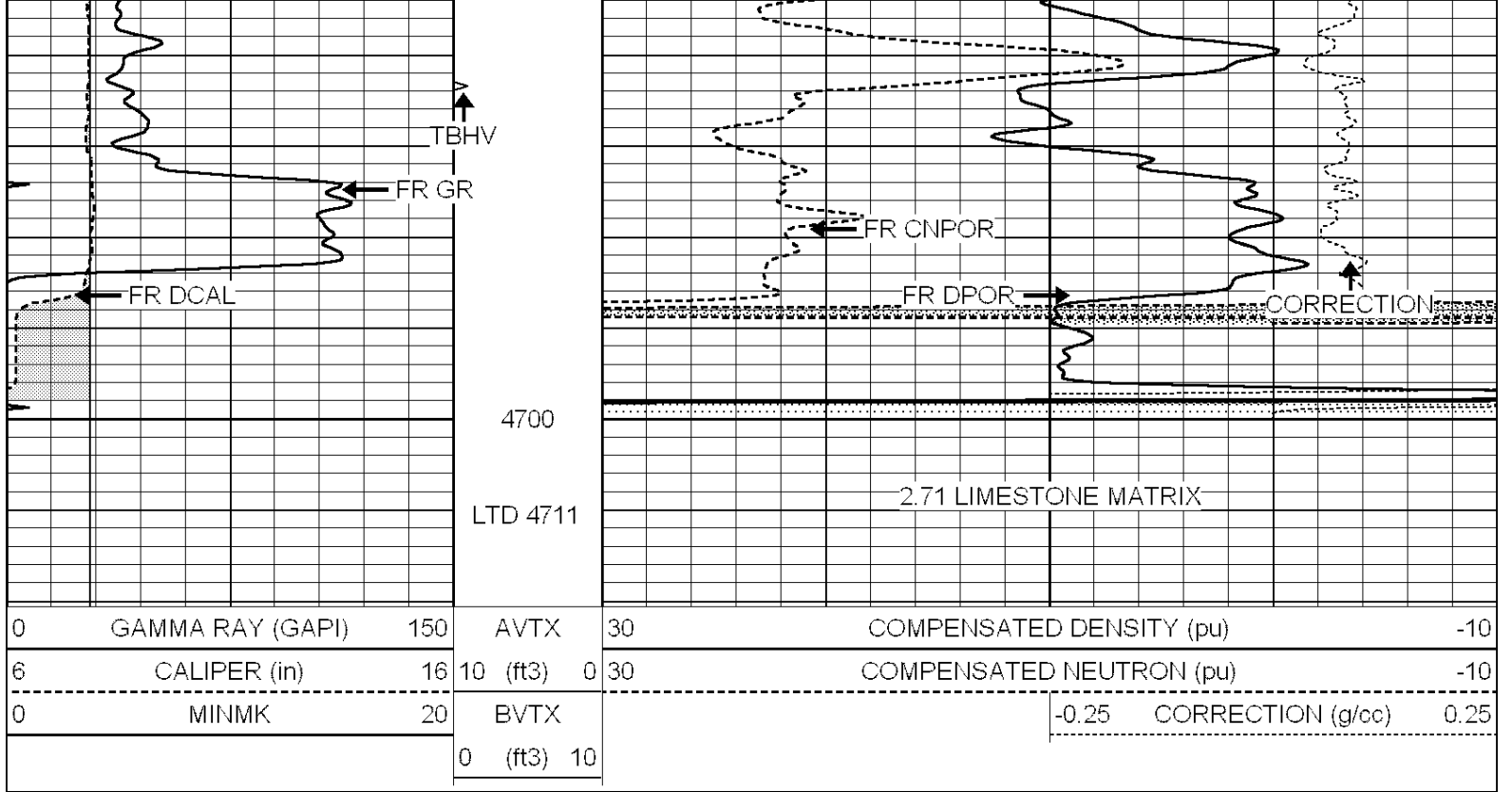
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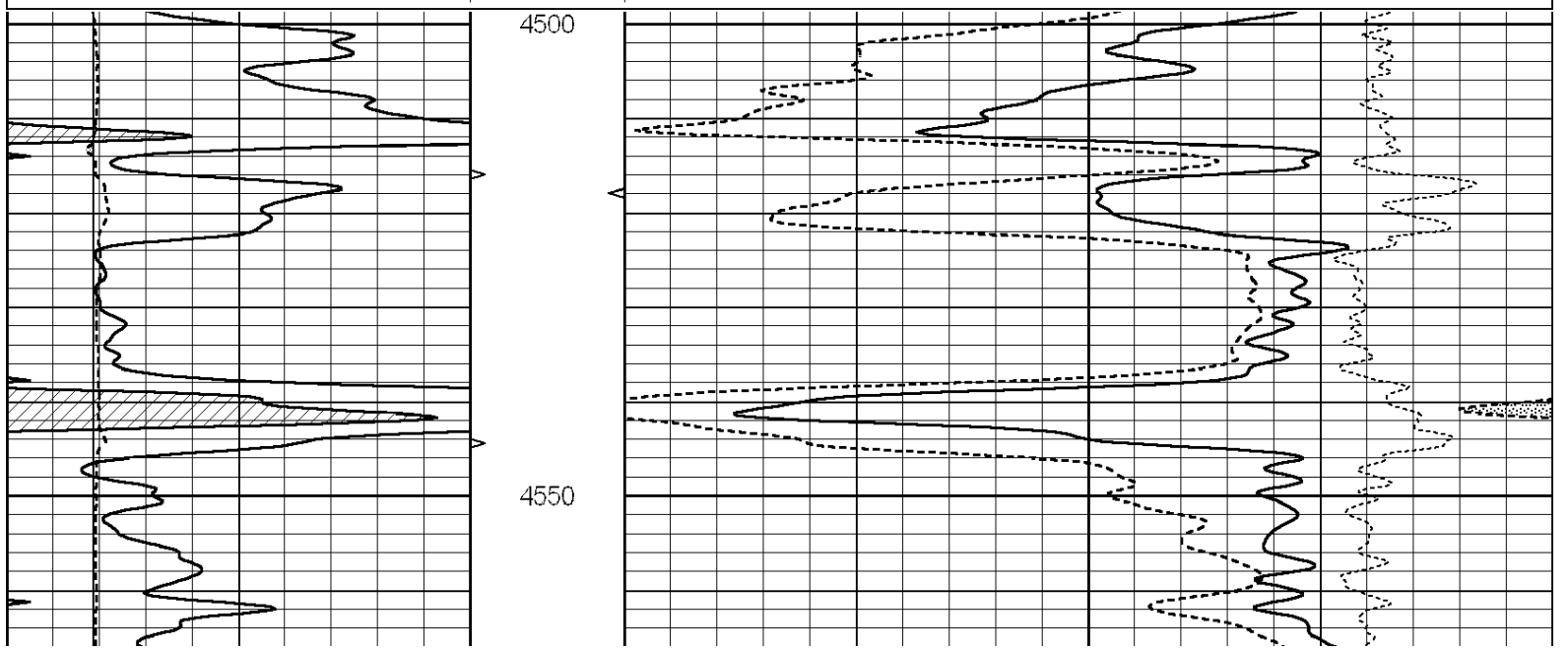


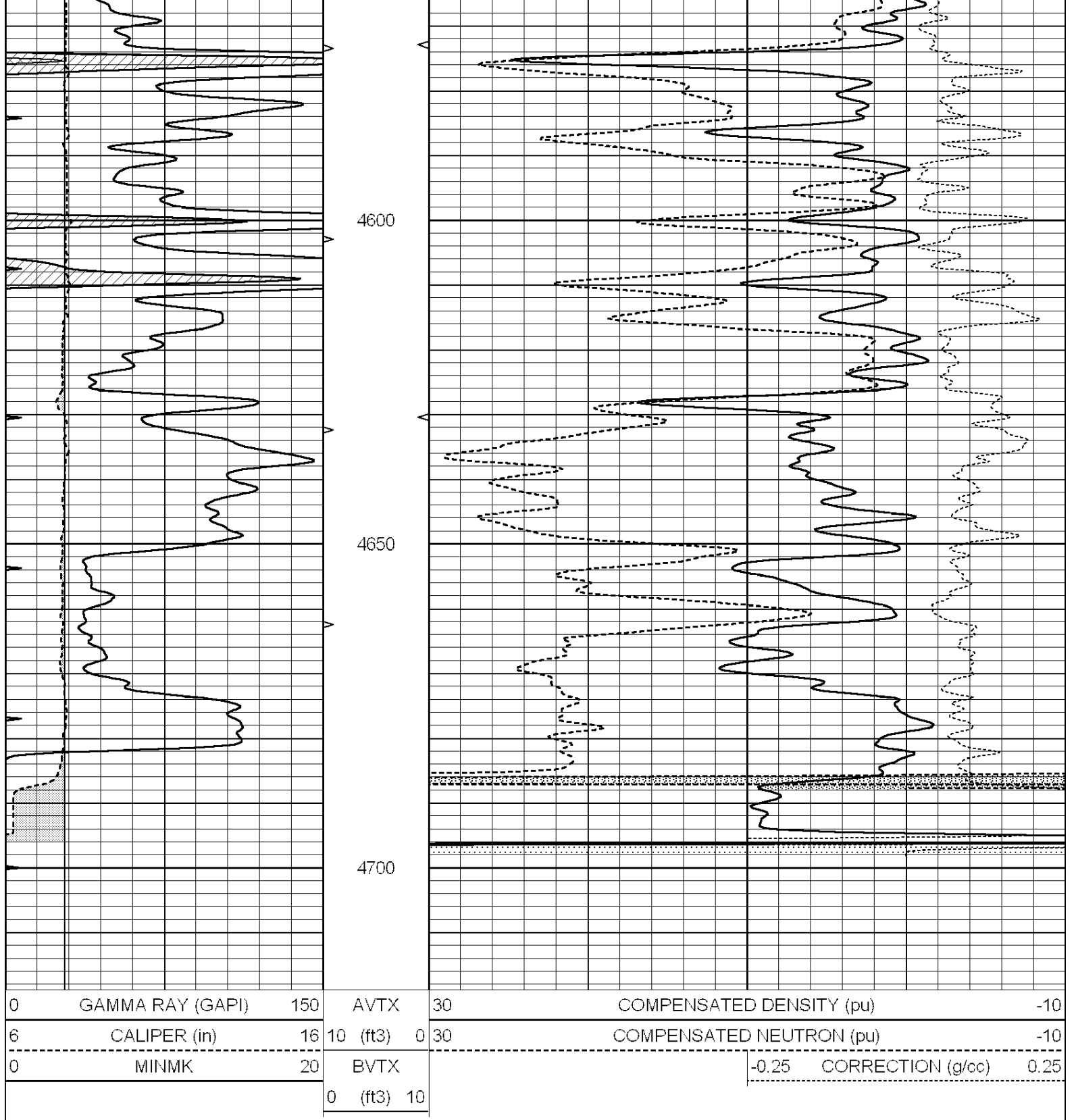
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# REPEAT SECTION

Database File: 009580ddn.db  
 Dataset Pathname: pass2.1  
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 Dataset Creation: Tue Aug 14 17:33:26 2012 by Calc Open-Cased 090629  
 Charted by: Depth in Feet scaled 1:240

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





### Calibration Report

Database File: 009580ddn.db  
 Dataset Pathname: pass2.1  
 Dataset Creation: Tue Aug 14 17:33:26 2012 by Calc Open-Cased 090629

### Dual Induction Calibration Report

Serial-Model:	PROBE8-DILG
Surface Cal Performed:	Fri Aug 01 06:33:19 2008
Downhole Cal Performed:	Mon Jul 28 11:08:27 2008
After Survey Verification Performed:	Mon Jul 28 11:08:27 2008



Surface Calibration			Readings		References		Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	632.616	-9.730
Medium	0.029	0.796	V	0.000	464.000	mmho/m	605.049	-17.680
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration								
			Readings		References		Results	
			Zero	Cal	Zero	Cal	m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	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:	GEAR4-GEARHART
Source / Verifier:	143 / 143
Master Calibration Performed:	Mon Mar 19 19:07:19 2012

Master Calibration						
			Density	Far Detector	Near Detector	
Magnesium	1.710	g/cc	1015.91	497.51	cps	
Aluminum	2.600	g/cc	227.67	350.20	cps	
Spine Angle = 76.79			Density/Spine Ratio = 0.579			
			Size	Reading		
Small Ring	8.00	in	3.21	V		
Large Ring	14.00	in	5.46	V		

**Compensated Neutron Calibration Report**

Serial Number:	6I
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:	#8
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Tool Model: OPEN  
Performed: Mon Jun 13 16:56:43 2011

Calibrator Value: 150.0 GAPI

Background Reading: 0.0 cps

Calibrator Reading: 175.0 cps

Sensitivity: 0.8371 GAPI/cps