



**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
LOG**

Company DOWNING - NELSON OIL CO., INC.
Well LW#1-18
Field RIGA NORTHWEST
County TREGO
State KANSAS

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Location: API #: 15-195-22817
1225' FNL & 930' FWL
SEC 18 TWP 13S RGE 21W
Permanent Datum GROUND LEVEL Elevation 2210
Log Measured From KELLY BUSHING 8' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DIL
MICRO
Elevation
K.B. 2218
D.F.
G.L. 2210

Date	10-23-12
Run Number	ONE
Depth Driller	4080
Depth Logger	4080
Bottom Logged Interval	4056
Top Log Interval	3200
Casing Driller	220
Casing Logger	219
Bit Size	7.875
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.3 / 57
pH / Fluid Loss	10.0 / 8.8
Source of Sample	FLOWLINE
Rm @ Meas. Temp	1.00 @ 62F
Rmf @ Meas. Temp	0.75 @ 62F
Rmc @ Meas. Temp	1.20 @ 62F
Source of Rmf / Rmc	MEASURED
Rm @ BHT	.530 @ 116F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	9:45 A.M.
Maximum Recorded Temperature	116F
Equipment Number	860
Location	HAYS, KS.
Recorded By	RUPP
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

NABORS COMPLETION & PRODUCTION CO.
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: ELLIS & OLD #40, W TO 360th, 2 1/8S TO TANK BATTERIES, 200'W, N & W INTO ON THE LEASE RD.

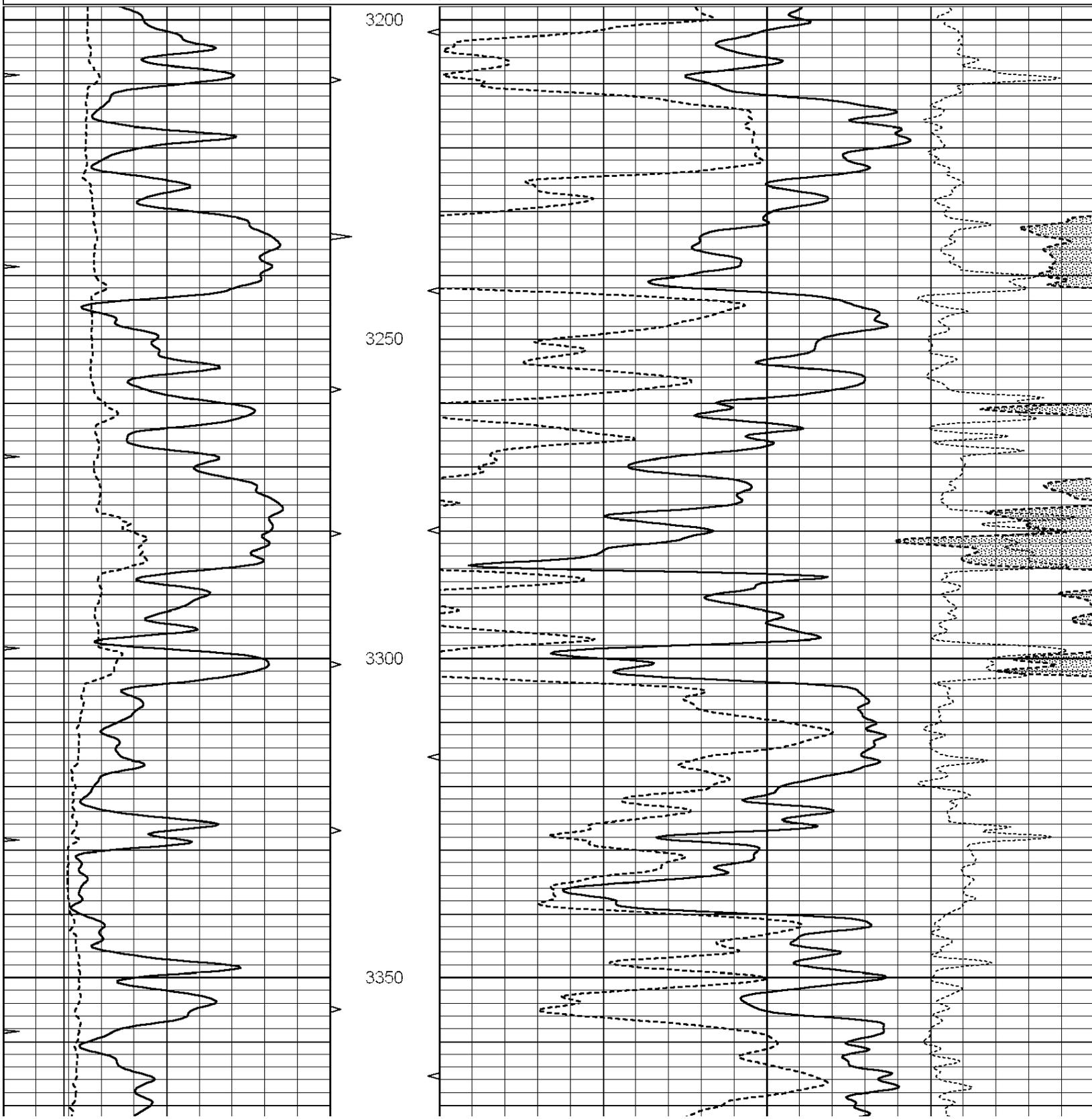


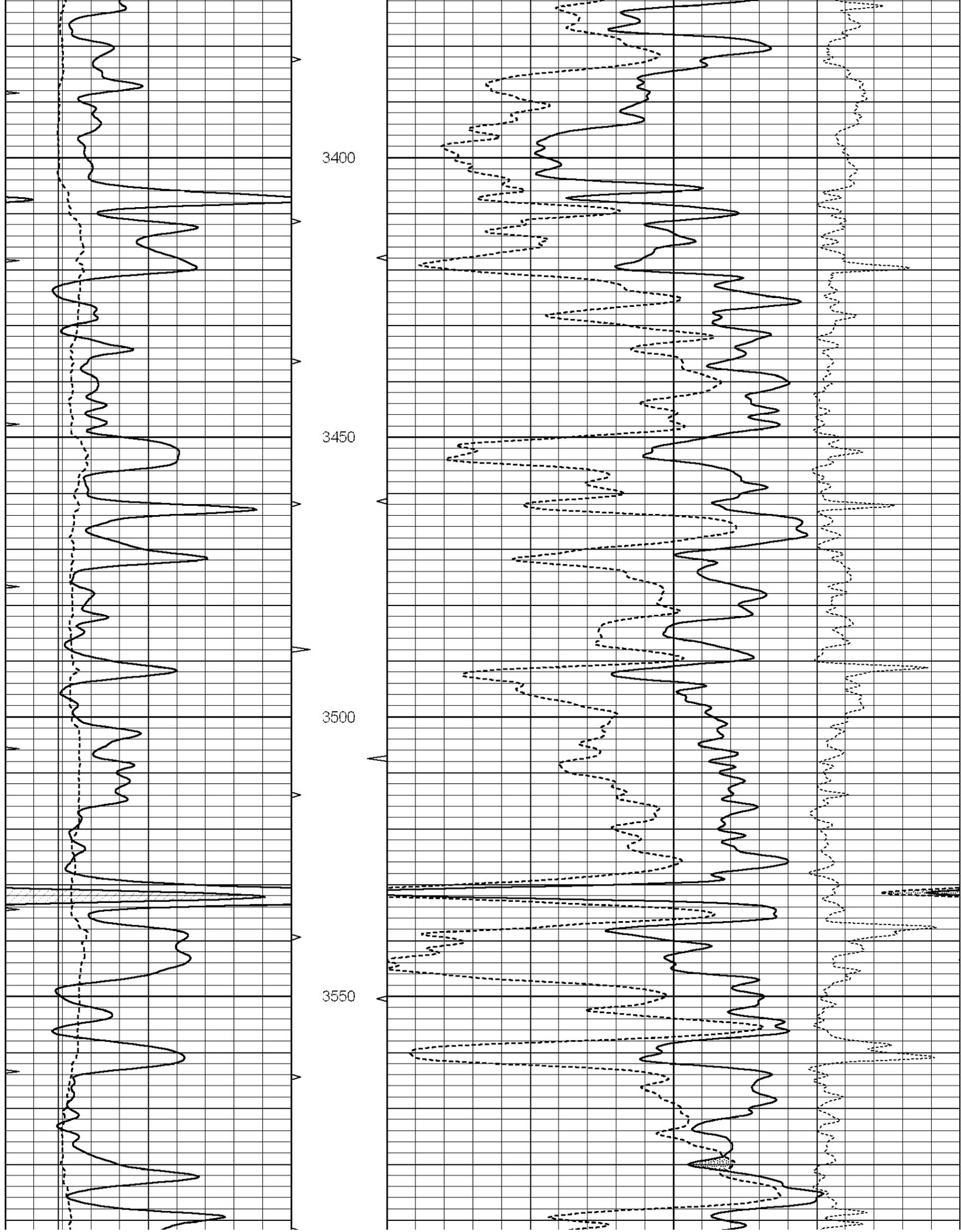
**COMPLETION
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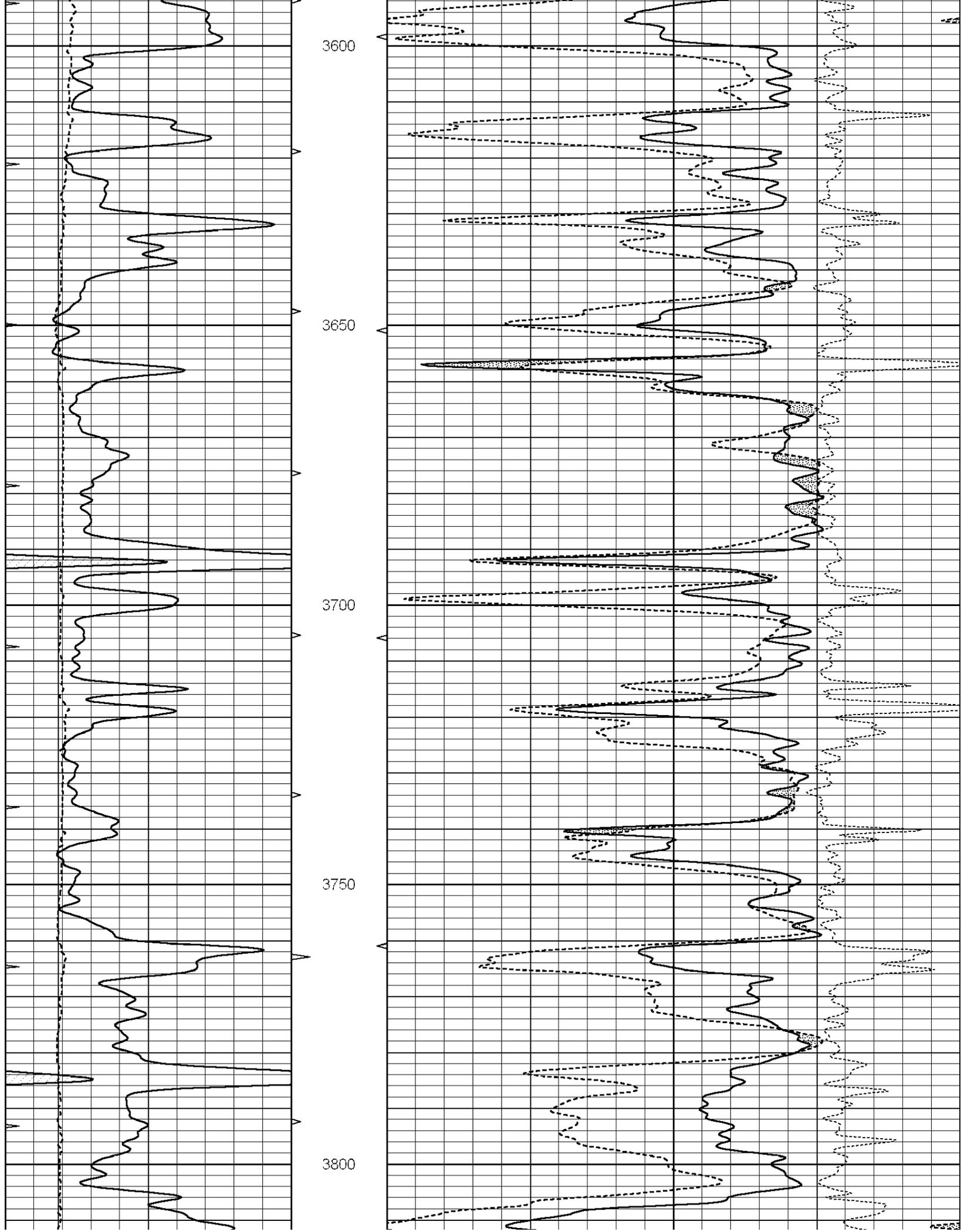
MAIN SECTION

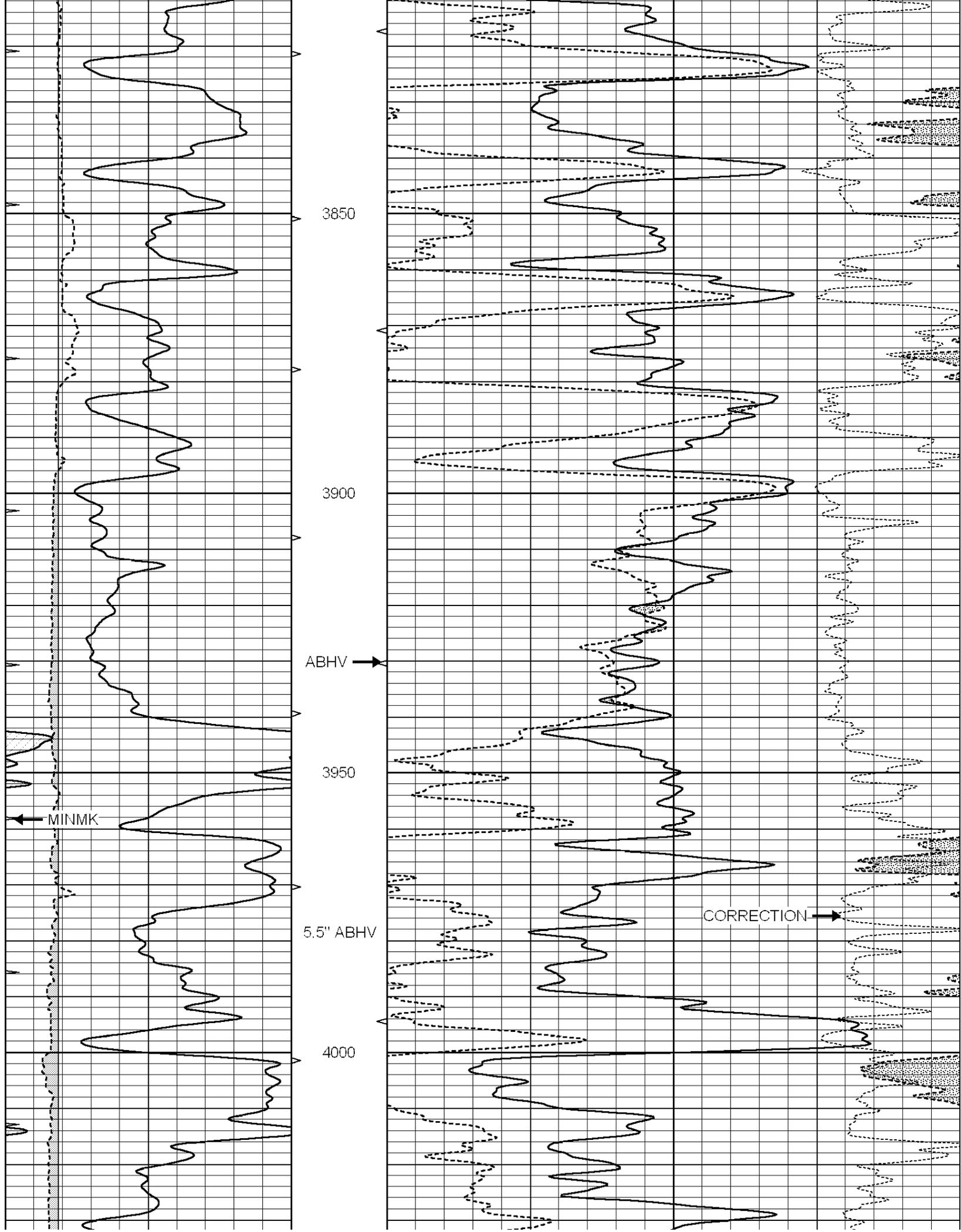
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 Dataset Pathname: pass3.2
 Presentation Format: den_neu
 Dataset Creation: Tue Oct 23 11:40:11 2012
 Charted by: Depth in Feet scaled 1:240

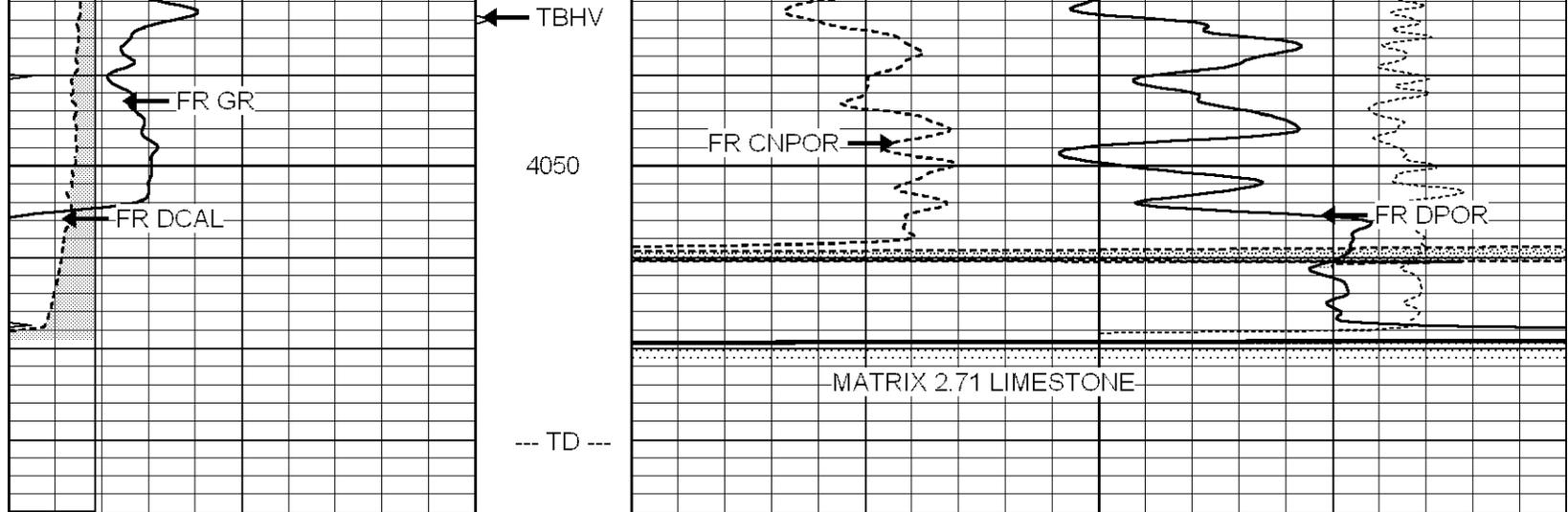
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		











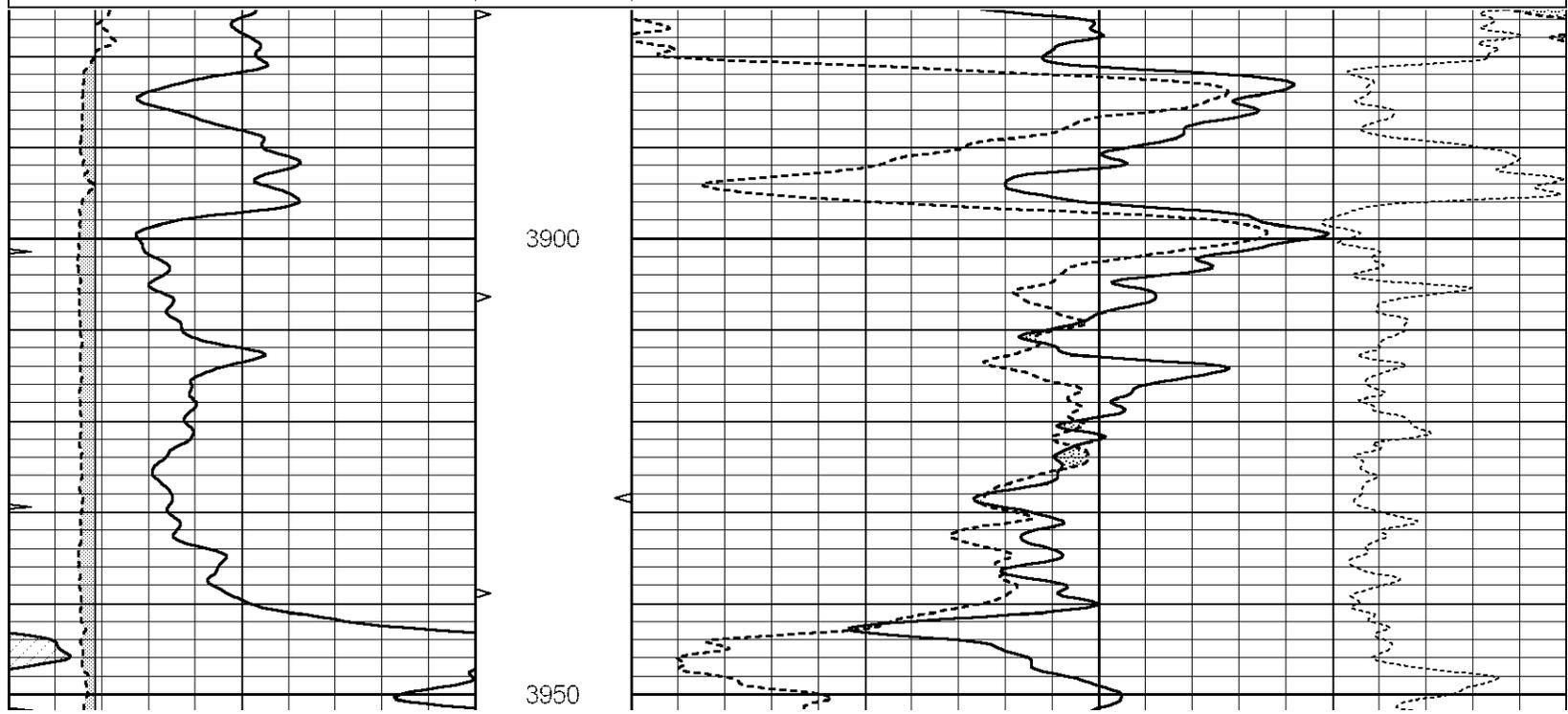
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		

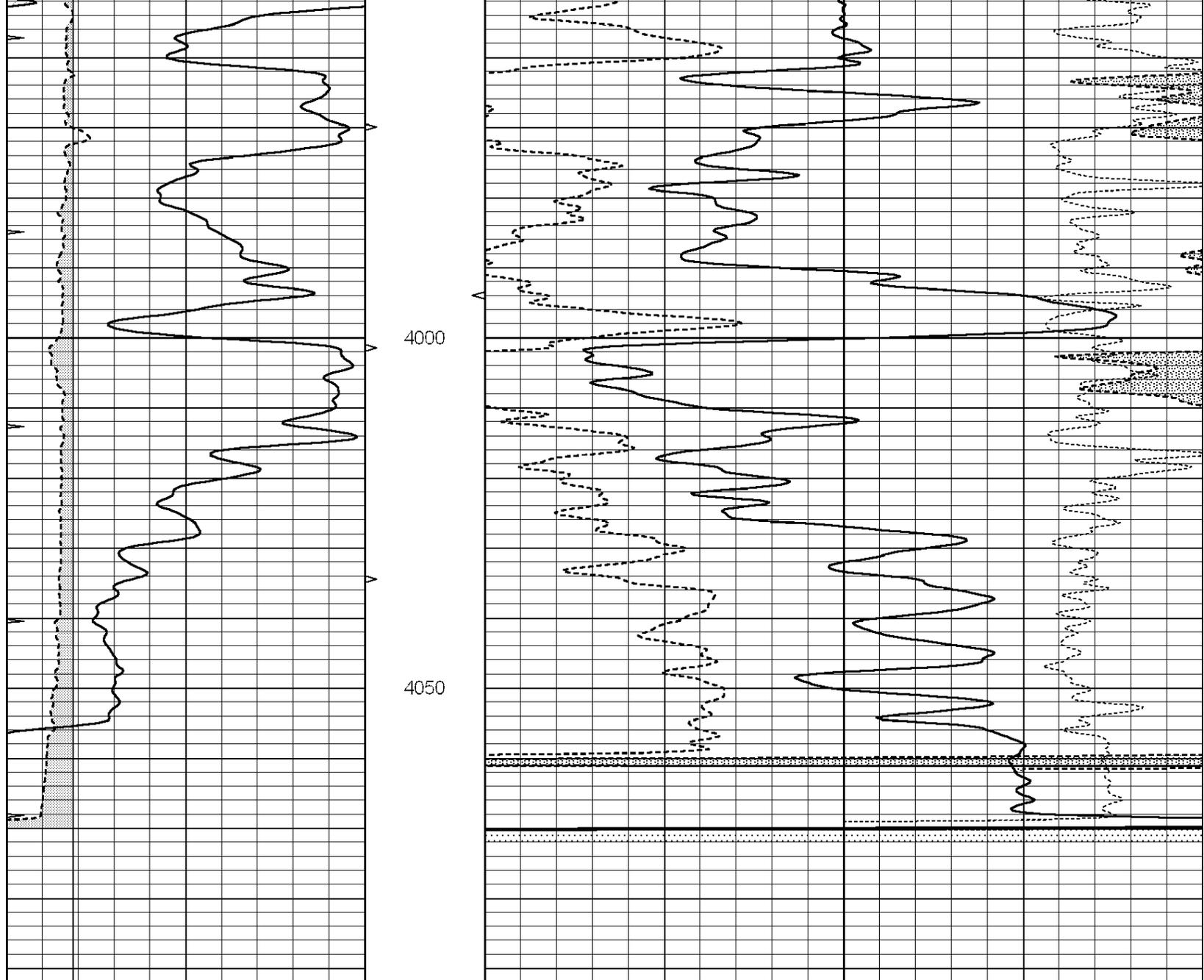


REPEAT SECTION

Database File: 009937ddn.db
 Dataset Pathname: pass2.2
 Presentation Format: den_neu
 Dataset Creation: Tue Oct 23 11:15:56 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: 009937ddn.db
 Dataset Pathname: pass3.2
 Dataset Creation: Tue Oct 23 11:40:11 2012

Dual Induction Calibration Report

Serial-Model: DIL5-GEAR
 Performed: Tue Oct 23 09:24:49 2012

Loop:	Readings			References			Results	
	Air	Loop	V	Air	Loop	mmho/m	m	b
Deep	0.004	0.654	V	0.000	400.000	mmho/m	470.000	-11.000
Medium	-0.005	0.737	V	0.000	462.500	mmho/m	500.000	-7.000

Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.006	0.655	V	0.000	400.000	mmho/m	615.668	-3.483
Medium	0.010	0.747	V	0.000	462.500	mmho/m	627.607	-6.064

Compensated Density Calibration Report

Serial-Model: GEAR1-GEARHART
Source / Verifier: 147 / 147
Master Calibration Performed: Tue Oct 23 10:17:51 2012

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1205.67	613.10	cps
Aluminum	2.590	g/cc	277.64	430.46	cps
Spine Angle = 76.46			Density/Spine Ratio = 0.583		
	Size		Reading		
Small Ring	9.50	in	4.69	V	
Large Ring	14.00	in	6.52	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: Tue Oct 23 09:24:00 2012

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.7500 GAPI/cps