

**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
LOG**

Company RITCHIE EXPLORATION, INC.
Well #1 KUHN 19A
Field WILDCAT
County GOVE State KANSAS

Company RITCHIE EXPLORATION, INC.
Well #1 KUHN 19A
Field WILDCAT
County GOVE
State KANSAS

Location: API #: 15-063-22065
1900' FNL & 1490' FEL
SEC 19 TWP 12S RGE 28W
Permanent Datum GROUND LEVEL Elevation 2747
Log Measured From KELLY BUSHING 8' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DIL
Elevation
K.B. 2755
D.F.
G.L. 2747

Date	12-13-12
Run Number	ONE
Depth Driller	4616
Depth Logger	4616
Bottom Logged Interval	4614
Top Log Interval	3400
Casing Driller	235
Casing Logger	235
Bit Size	7.875
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.3 / 55
pH / Fluid Loss	11.0 / 7.2
Source of Sample	FLOWLINE
Rm @ Meas. Temp	1.20 @ 70F
Rmf @ Meas. Temp	0.90 @ 70F
Rmc @ Meas. Temp	1.44 @ 70F
Source of Rmf / Rmc	MEASURED
Rm @ BHT	.690 @ 121F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	4:45 P.M.
Maximum Recorded Temperature	121F
Equipment Number	860
Location	HAYS, KS.
Recorded By	RUPP
Witnessed By	MIKE ENGELBRECHT

<<< Fold Here >>>

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

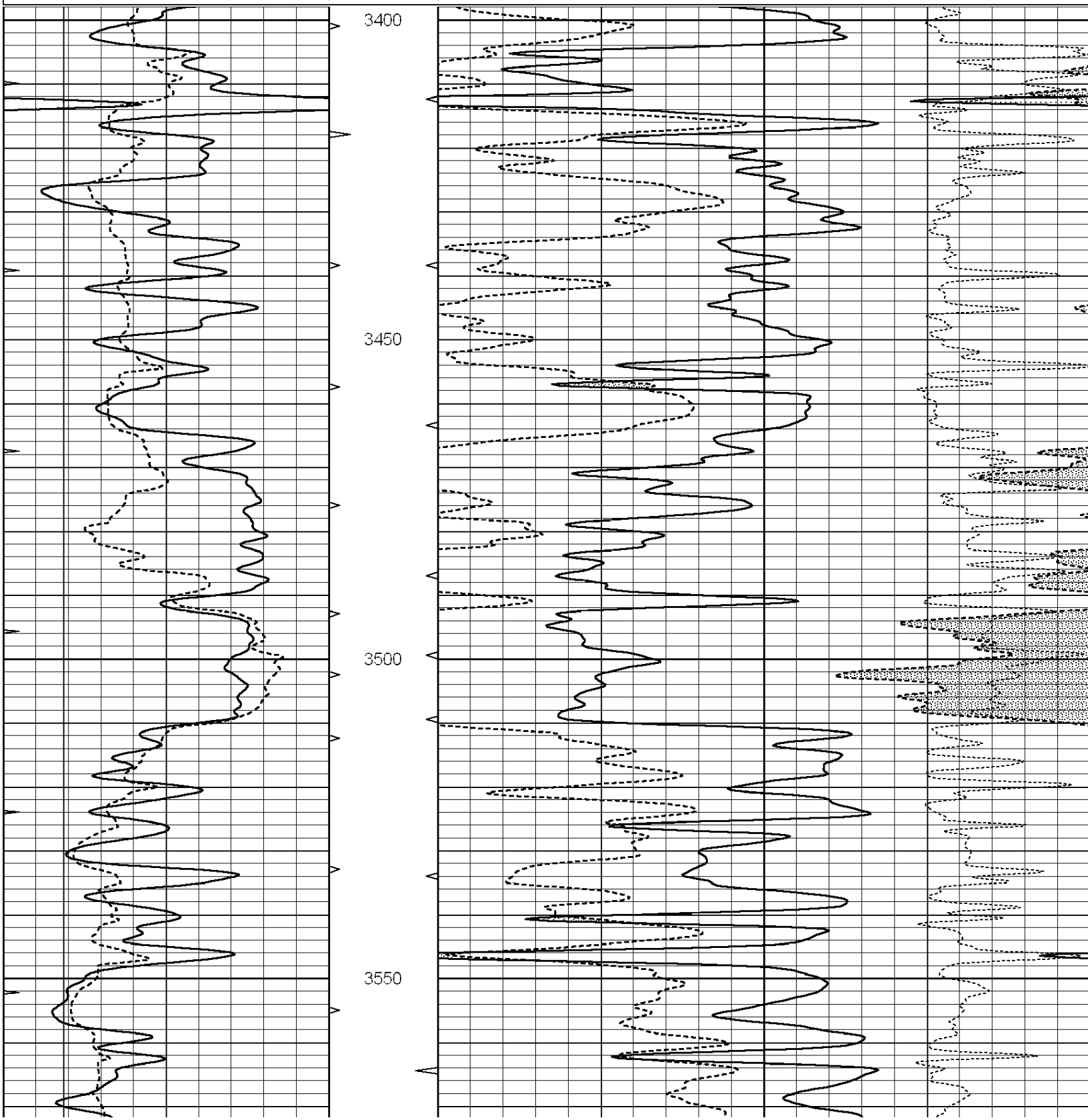
NABORS COMPLETION & PRODUCTION CO.
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: GOVE, 3N, 1/2E, S INTO.

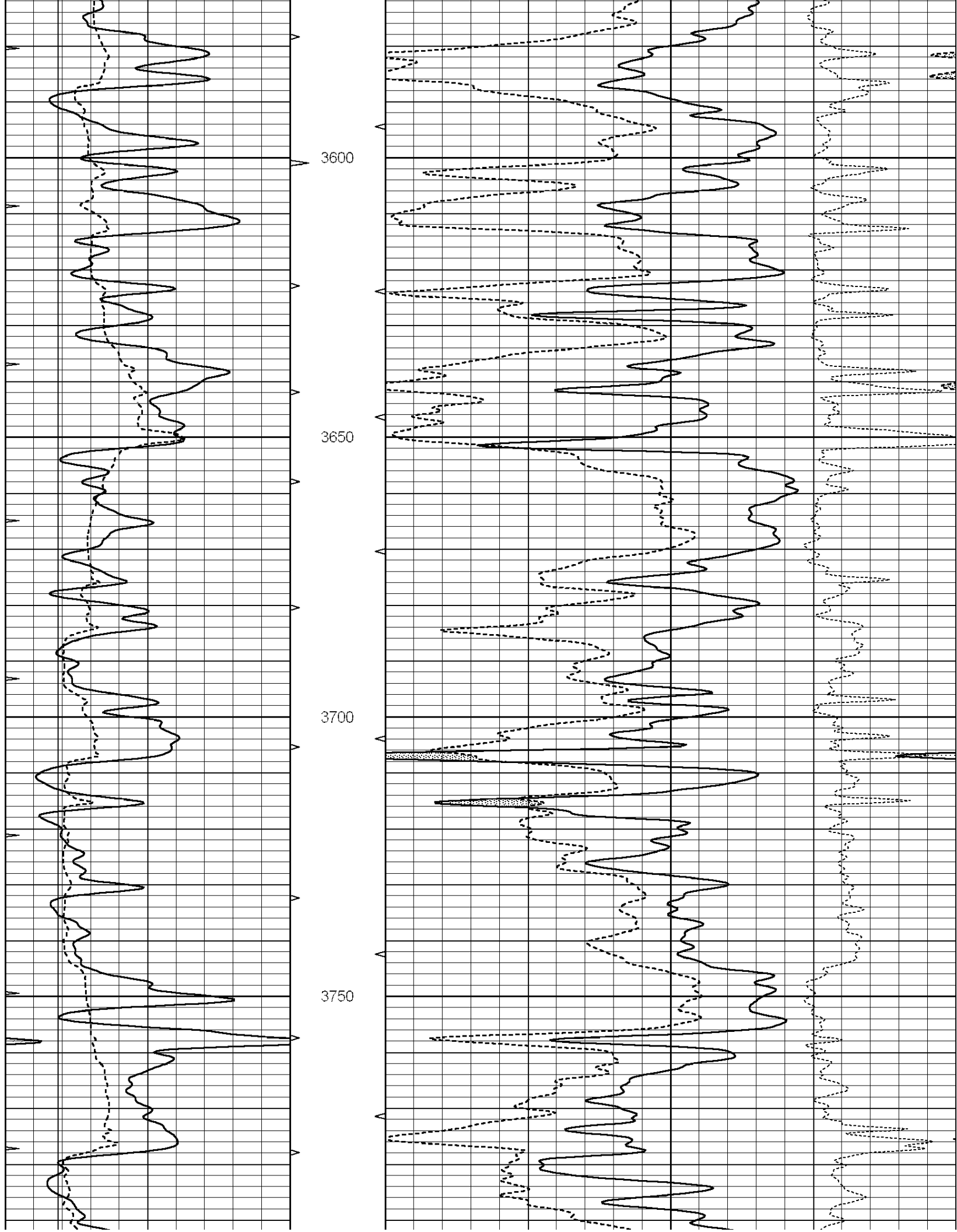


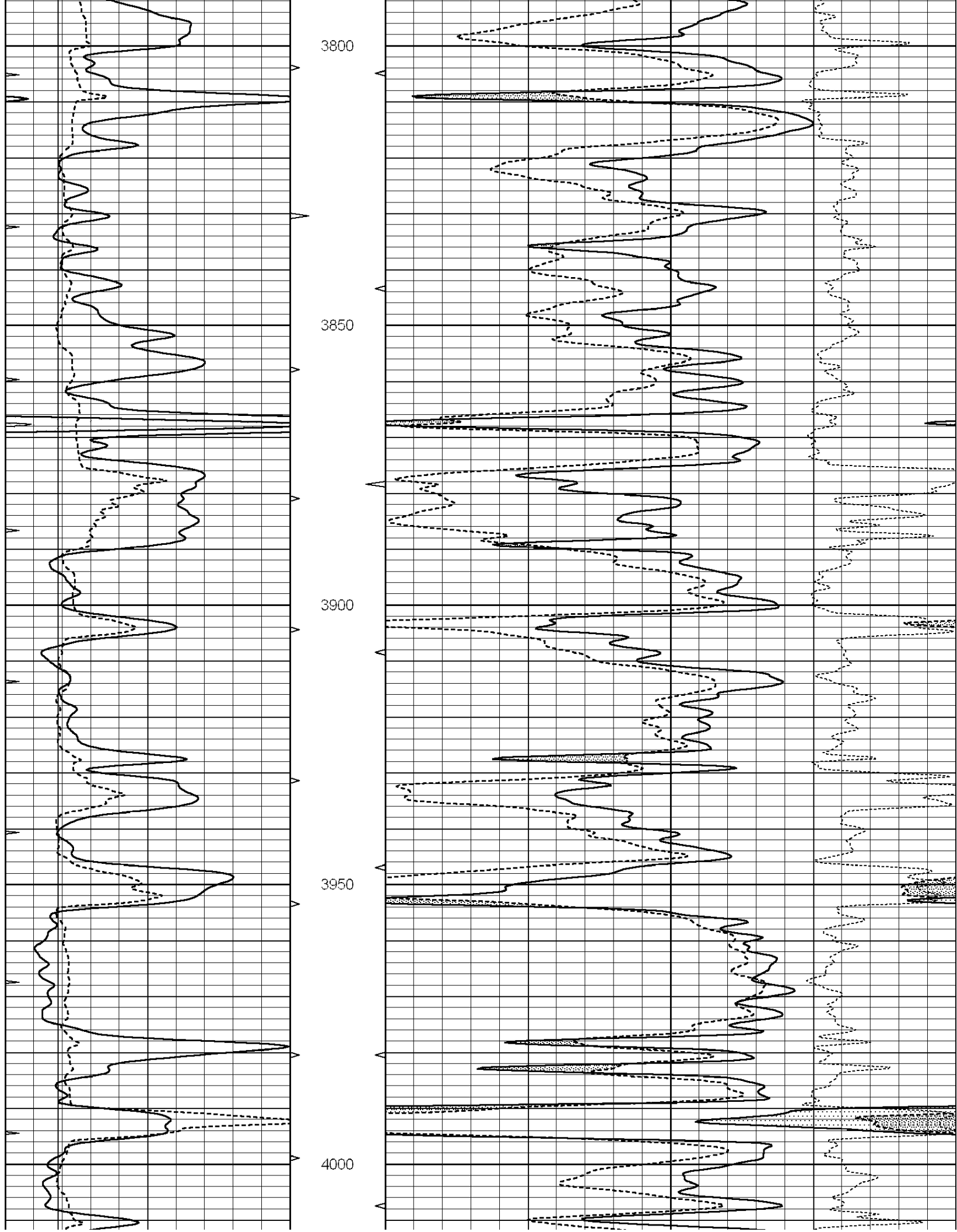
MAIN SECTION

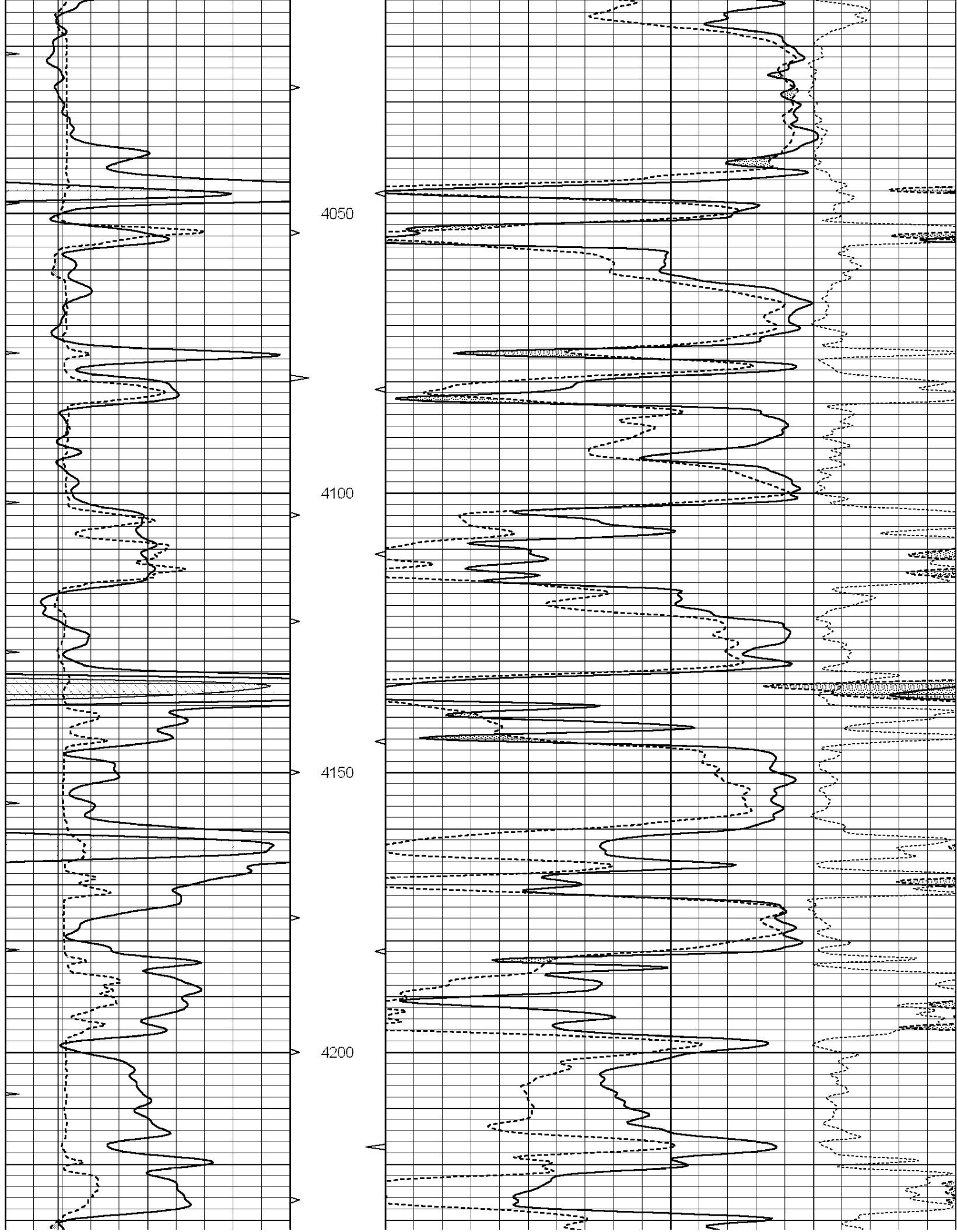
Database File: 01063ddn.db
 Dataset Pathname: pass3.1
 Presentation Format: den_neu
 Dataset Creation: Thu Dec 13 19:12:12 2012
 Charted by: Depth in Feet scaled 1:240

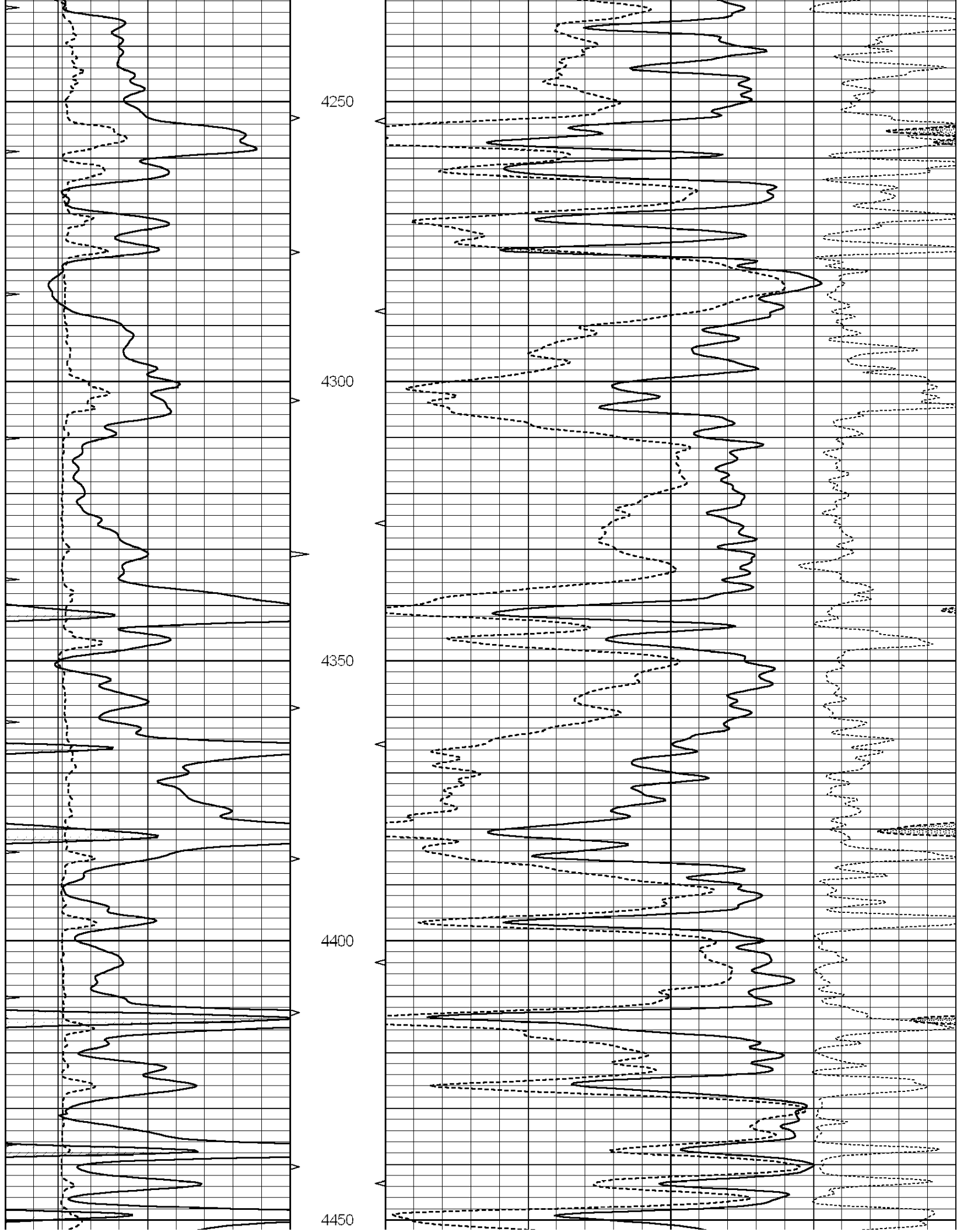
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		

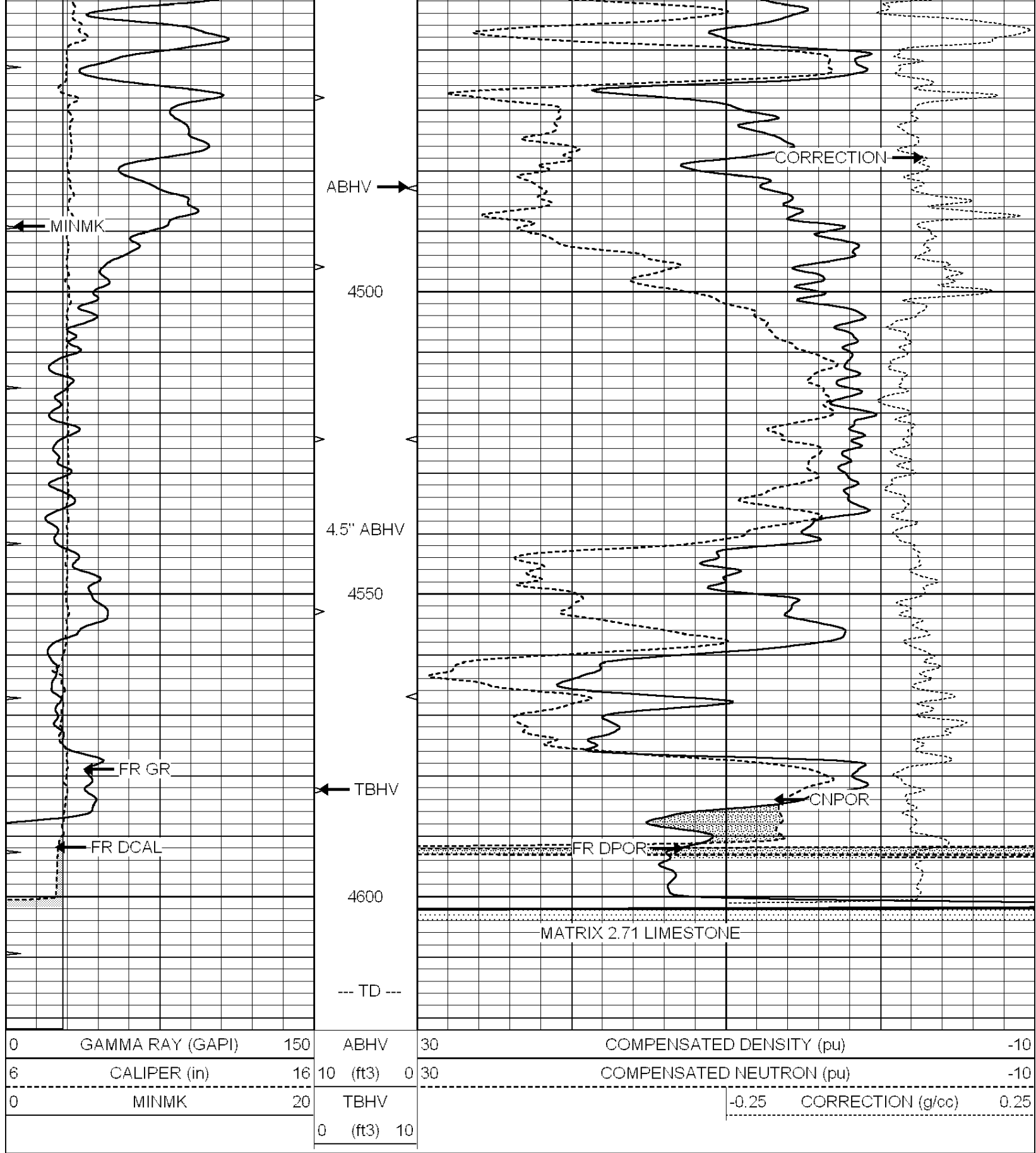








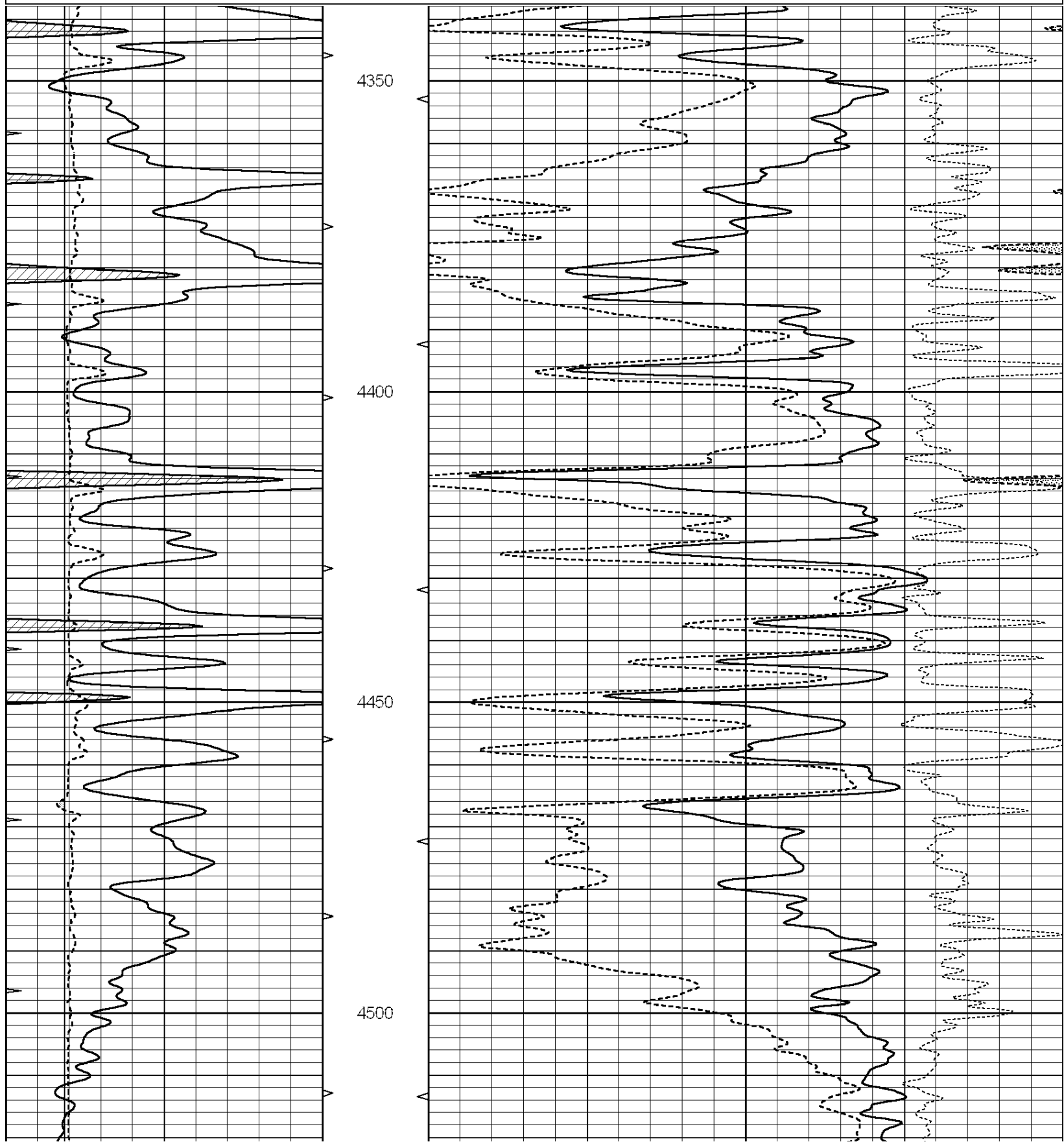


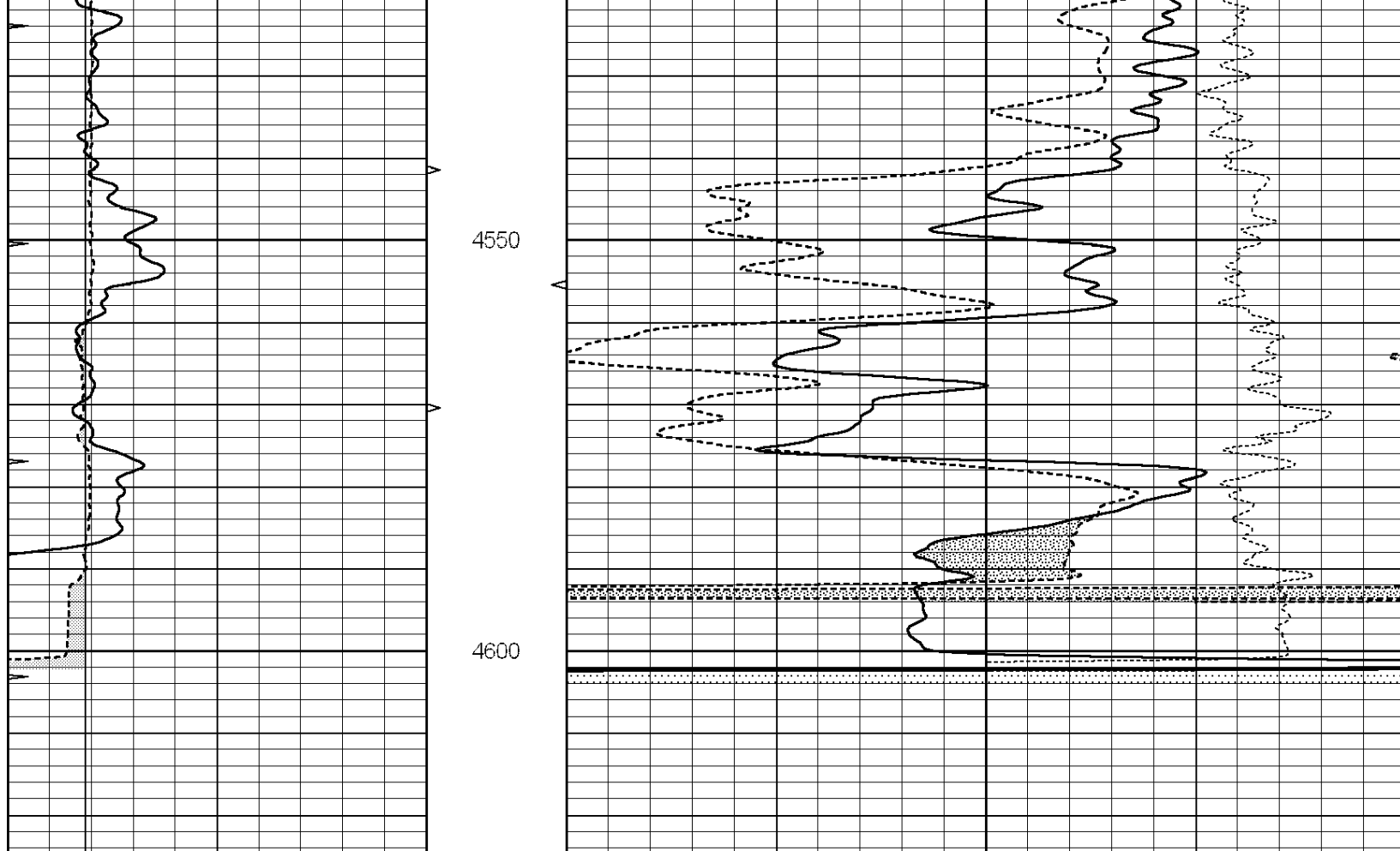


REPEAT SECTION

Database File: 01065dun.db
 Dataset Pathname: pass2.1
 Presentation Format: den_neu
 Dataset Creation: Thu Dec 13 17:35:44 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		





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: 01063ddn.db
 Dataset Pathname: pass3.1
 Dataset Creation: Thu Dec 13 19:12:12 2012

Dual Induction Calibration Report

Serial-Model: DIL5-GEAR
 Performed: Thu Dec 13 16:41:19 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	-13.000
Medium	-0.005	0.737	V	0.000	462.500	mmho/m	490.000	-8.000
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: Thu Dec 13 16:41:05 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	7.70	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: Thu Dec 13 17:42:20 2012

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.7500 GAPI/cps