



**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company CHIEFTAIN OIL COMPANY, INC.
Well MOLZ #23
Field STRANATHAN
County BARBER
State KANSAS

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Location: API #: 15-007-24101
715' FNL & 1670' FWL
SEC 10 TWP 35S RGE 12W
Permanent Datum GROUND LEVEL Elevation 1432
Log Measured From KELLY BUSHING 13' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DIL
MICRO
Elevation
K.B. 1445
D.F.
G.L. 1432

Date	11-18-13
Run Number	ONE
Depth Driller	5645
Depth Logger	5628
Bottom Logged Interval	5604
Top Log Interval	3600
Casing Driller	304
Casing Logger	305
Bit Size	7.875
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.1 / 75
pH / Fluid Loss	10.0 / 8.0
Source of Sample	FLOWLINE
Rim @ Meas. Temp	0.55 @ 78F
Rmf @ Meas. Temp	0.41 @ 78F
Rmc @ Meas. Temp	0.66 @ 78F
Source of Rmf / Rmc	MEASURED
Rim @ BHT	.330 @ 131F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	7:30 P.M.
Maximum Recorded Temperature	131F
Equipment Number	860
Location	HAYS, KS.
Recorded By	RUPP
Witnessed By	ARDEN RATZLAFF

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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 SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: HARTDNER, E TO ROWDY RD., 1N, 1W, S INTO.

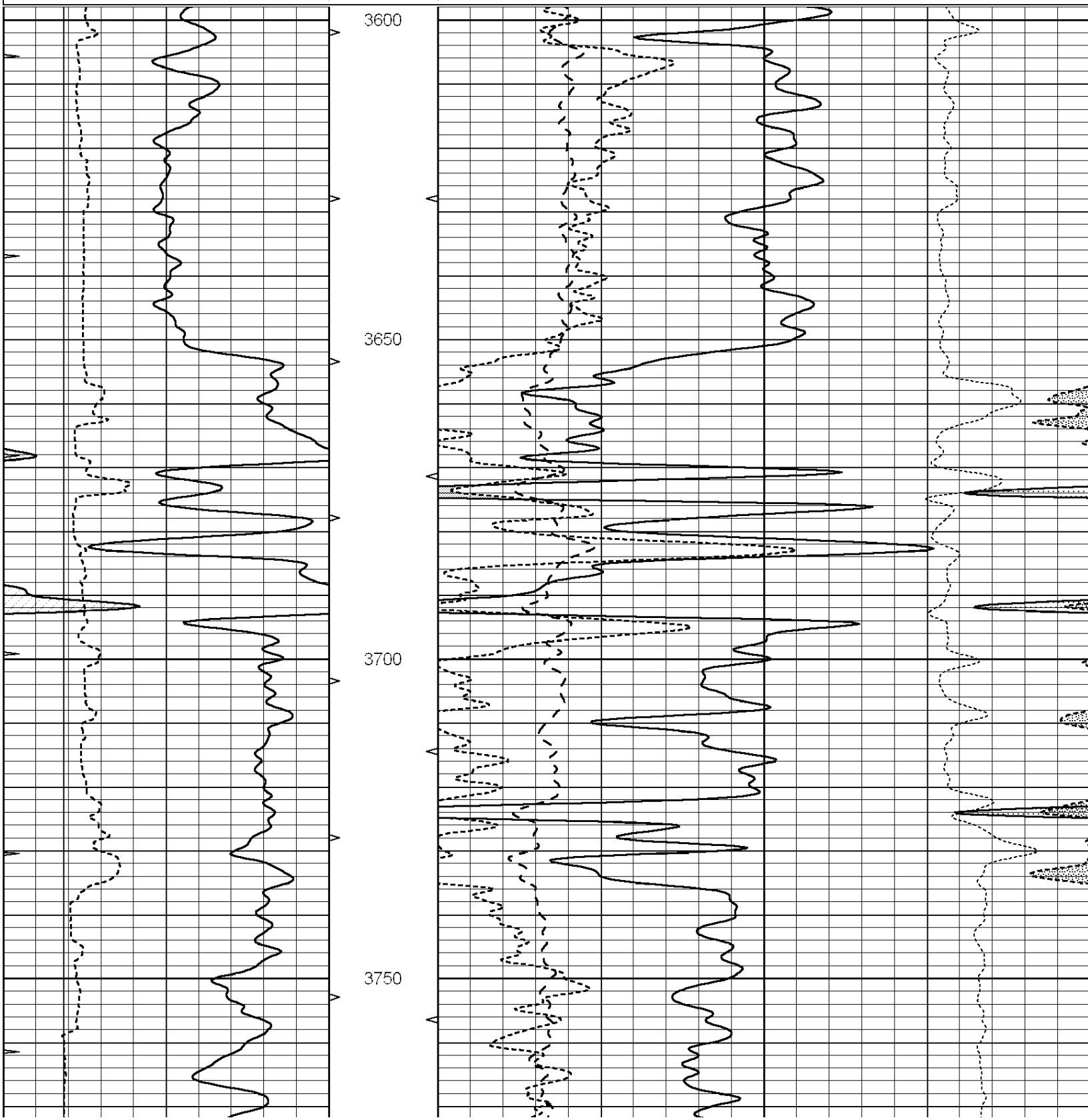


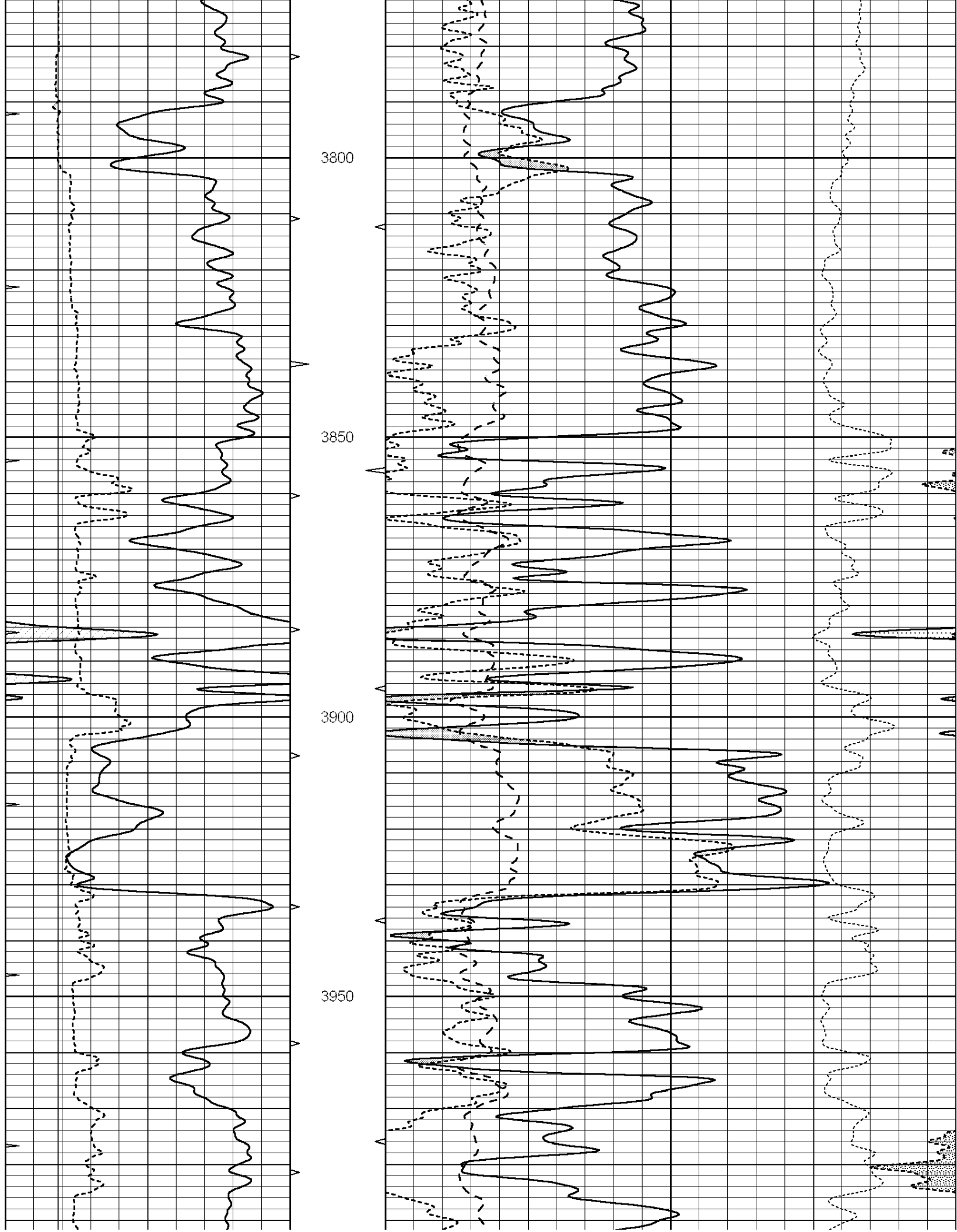
**COMPLETION
& PRODUCTION**

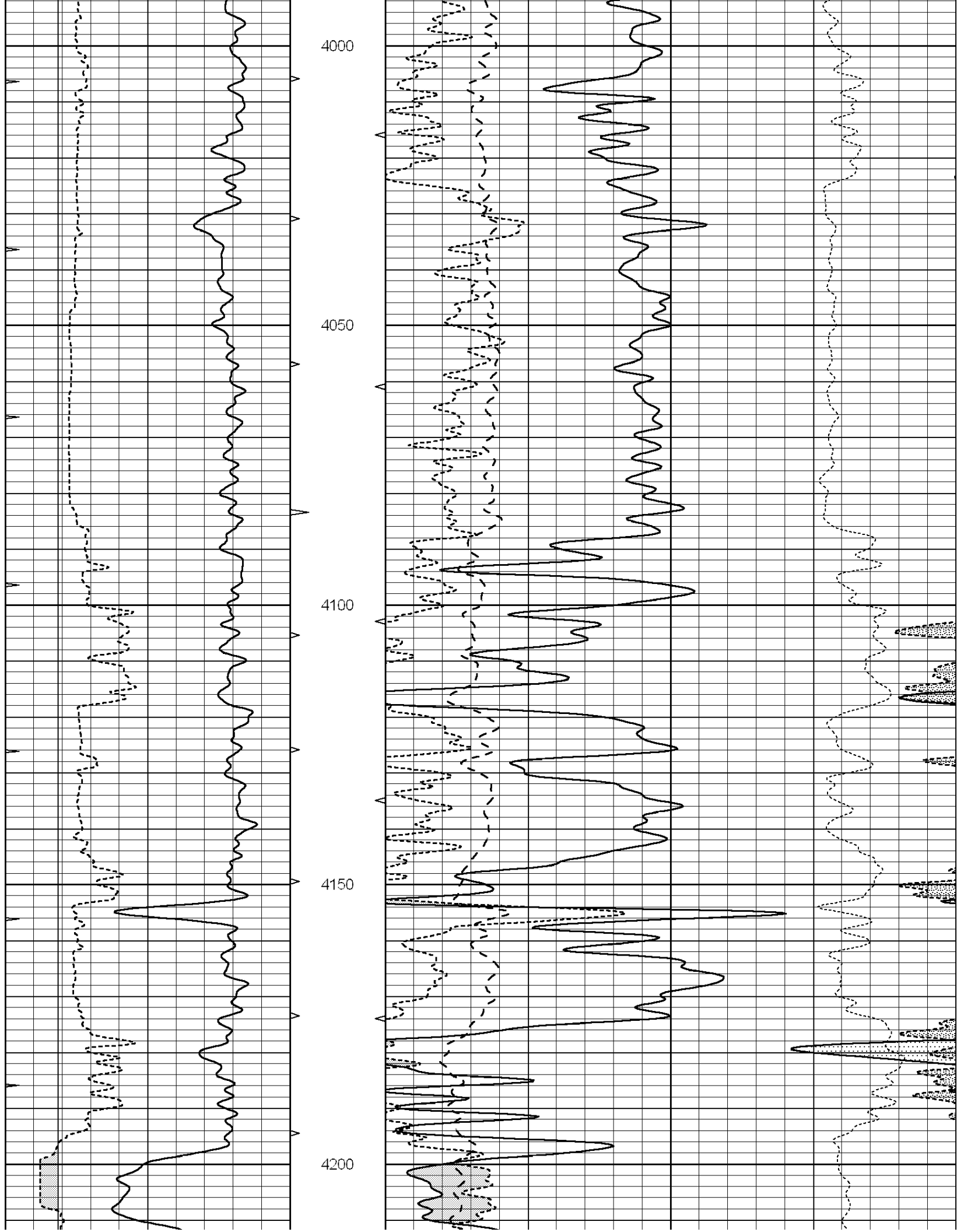
MAIN SECTION

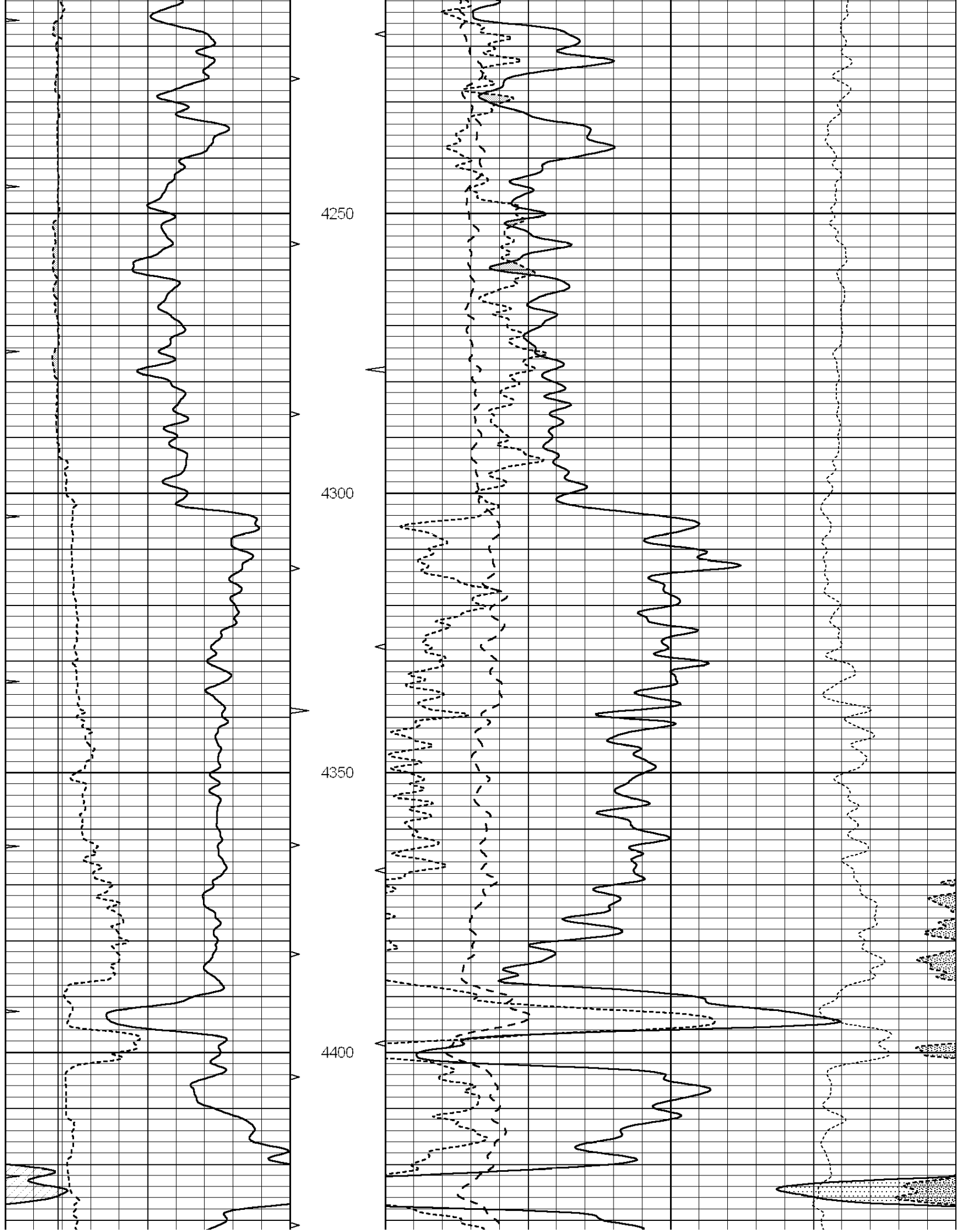
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 Presentation Format: _ldt_neu
 Dataset Creation: Tue Nov 19 03:35:51 2013
 Charted by: Depth in Feet scaled 1:240

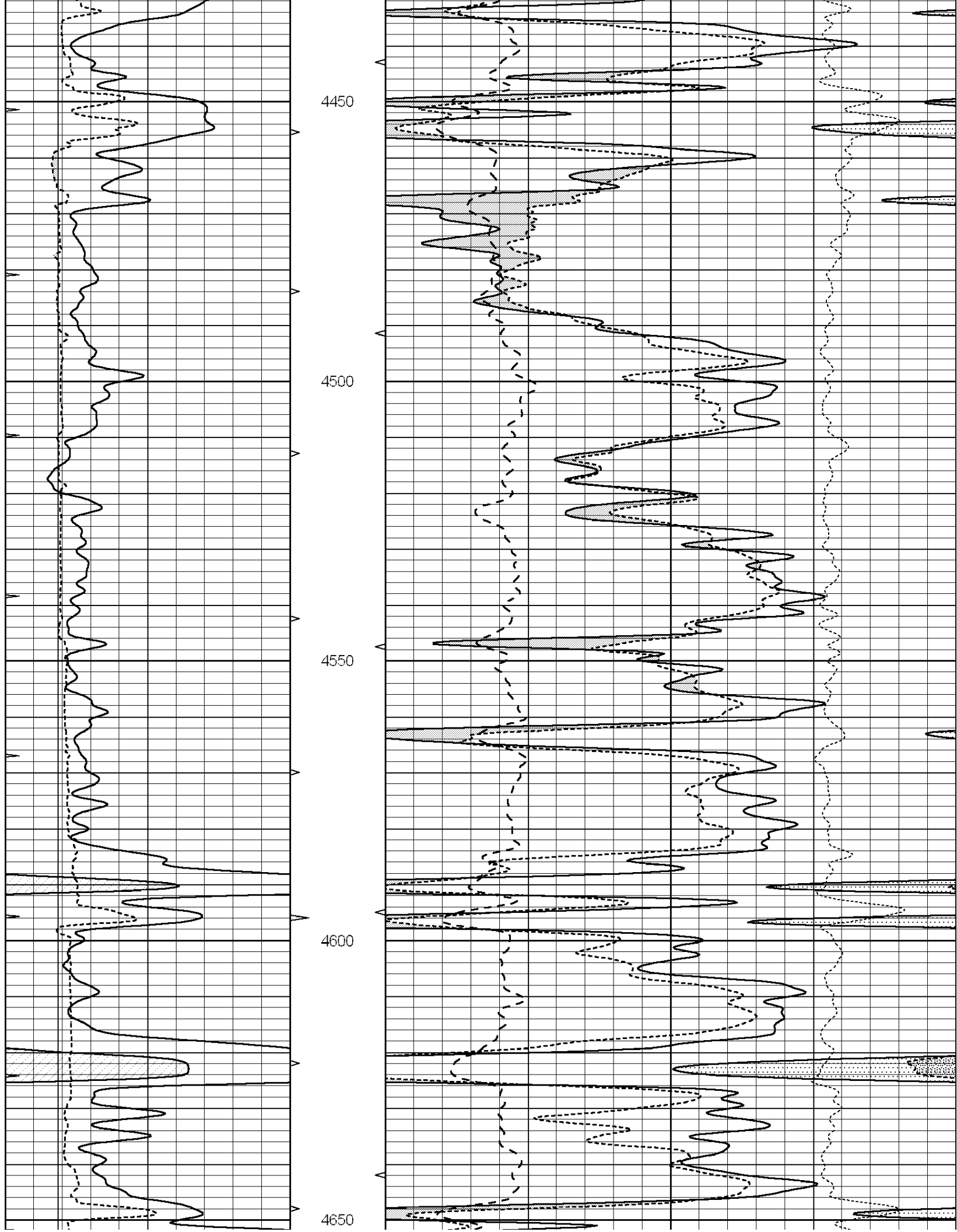
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6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV	0	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3) 10			

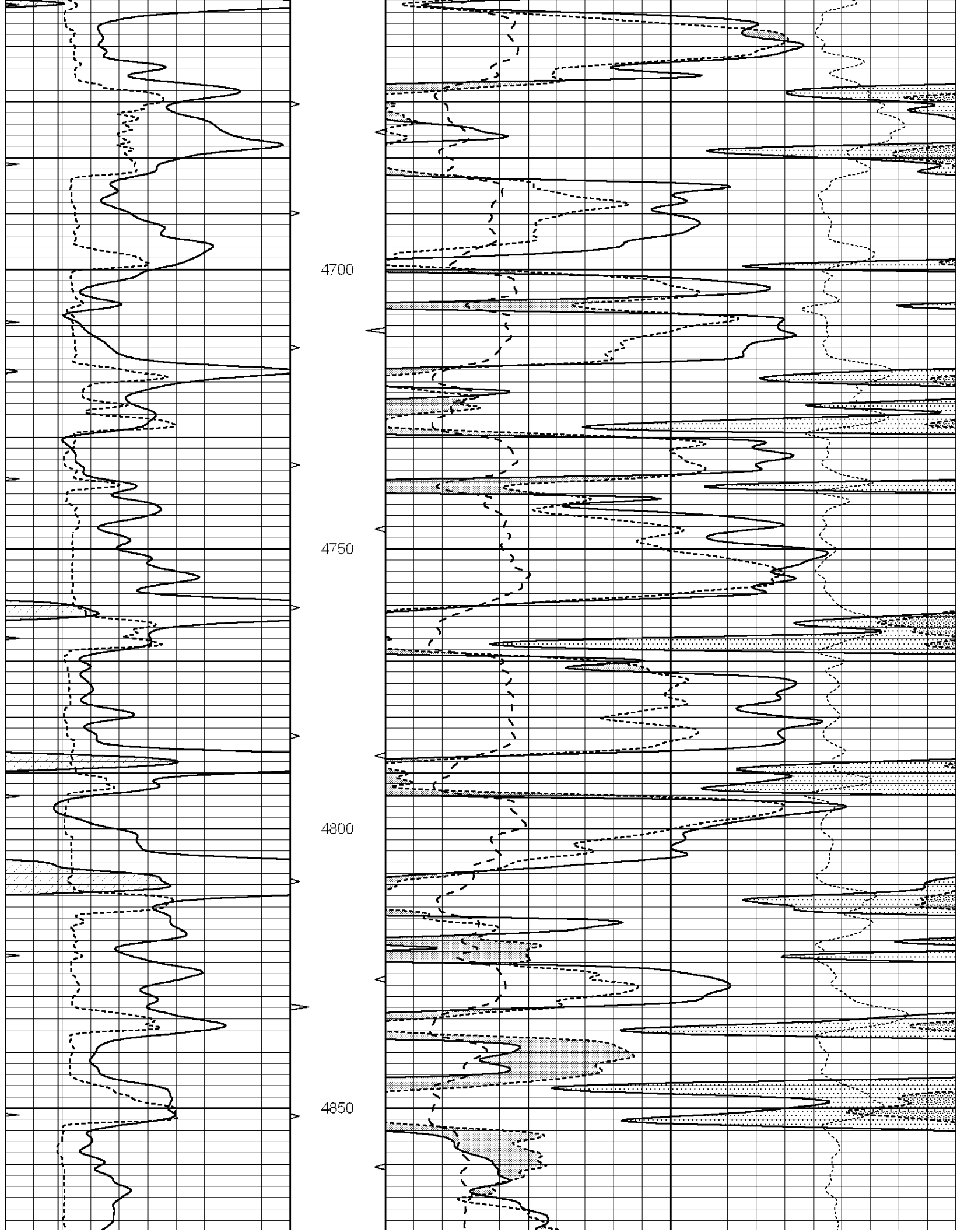


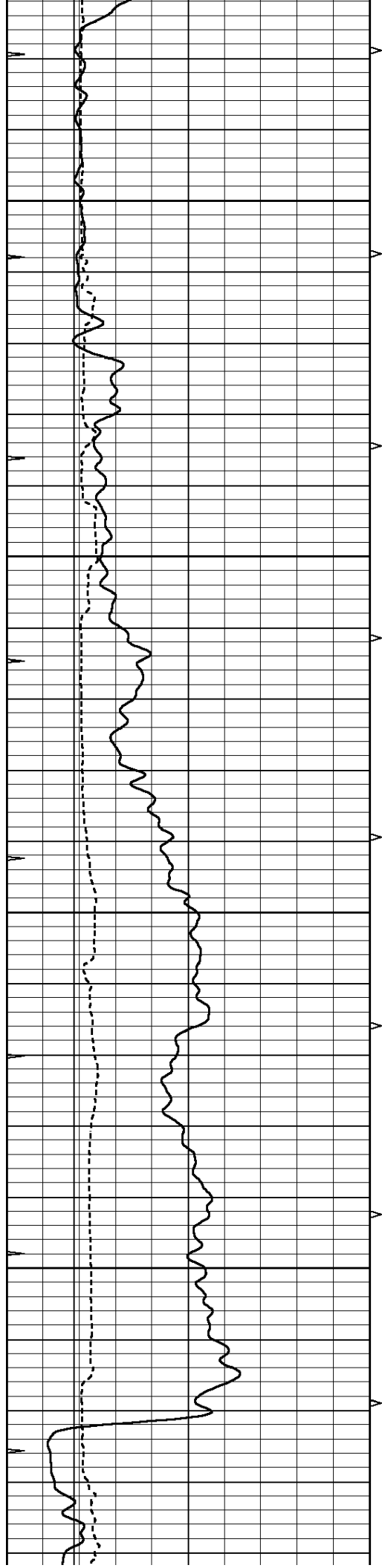










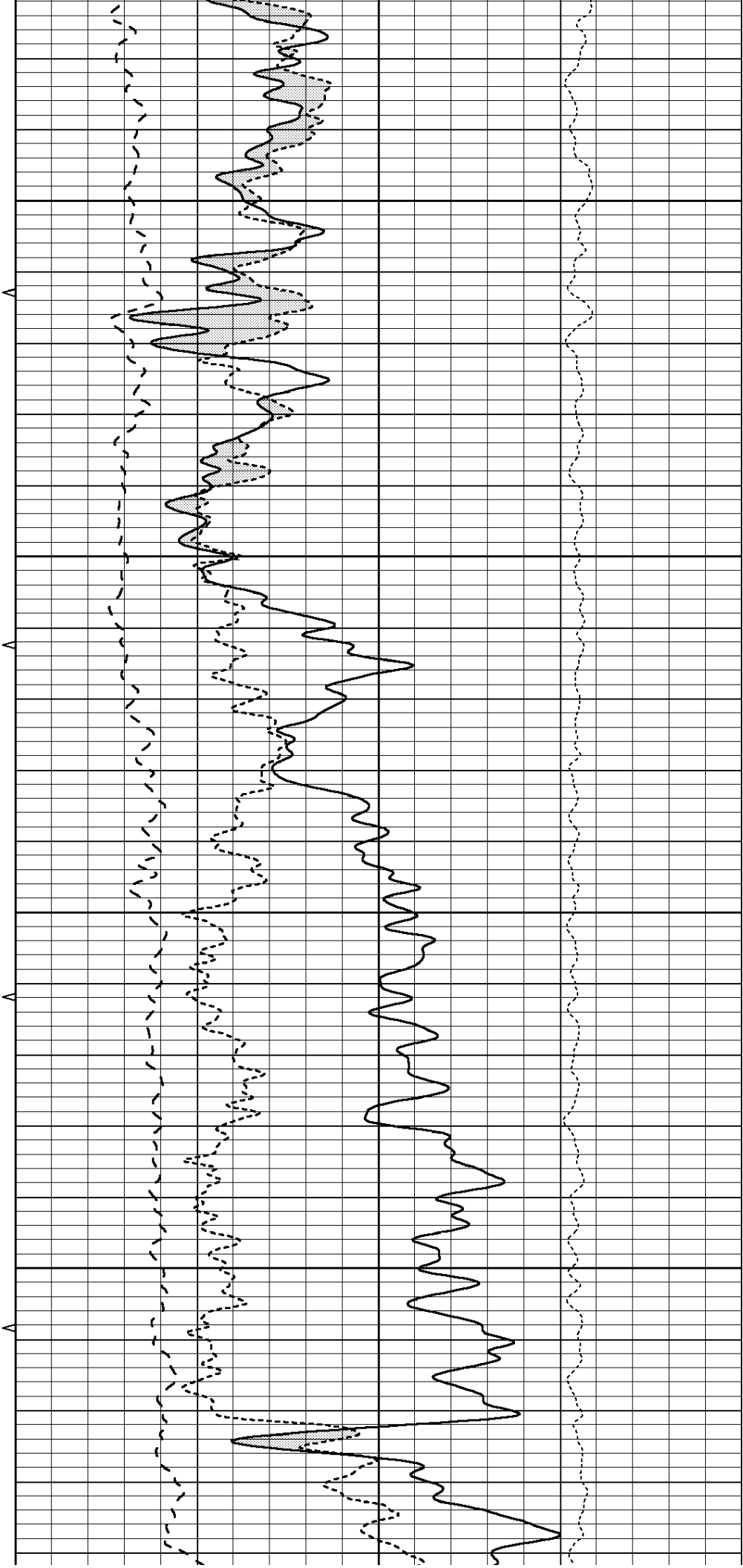


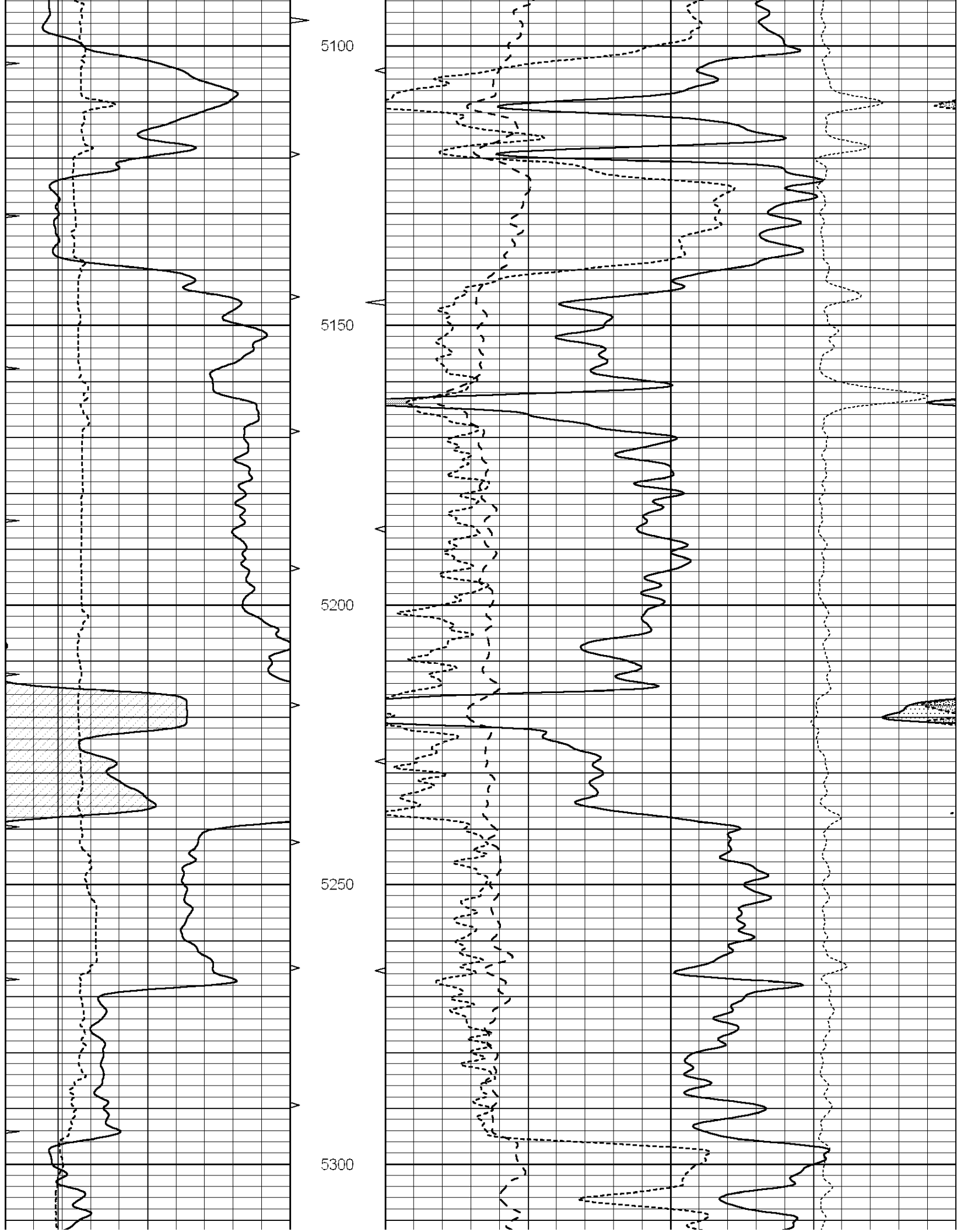
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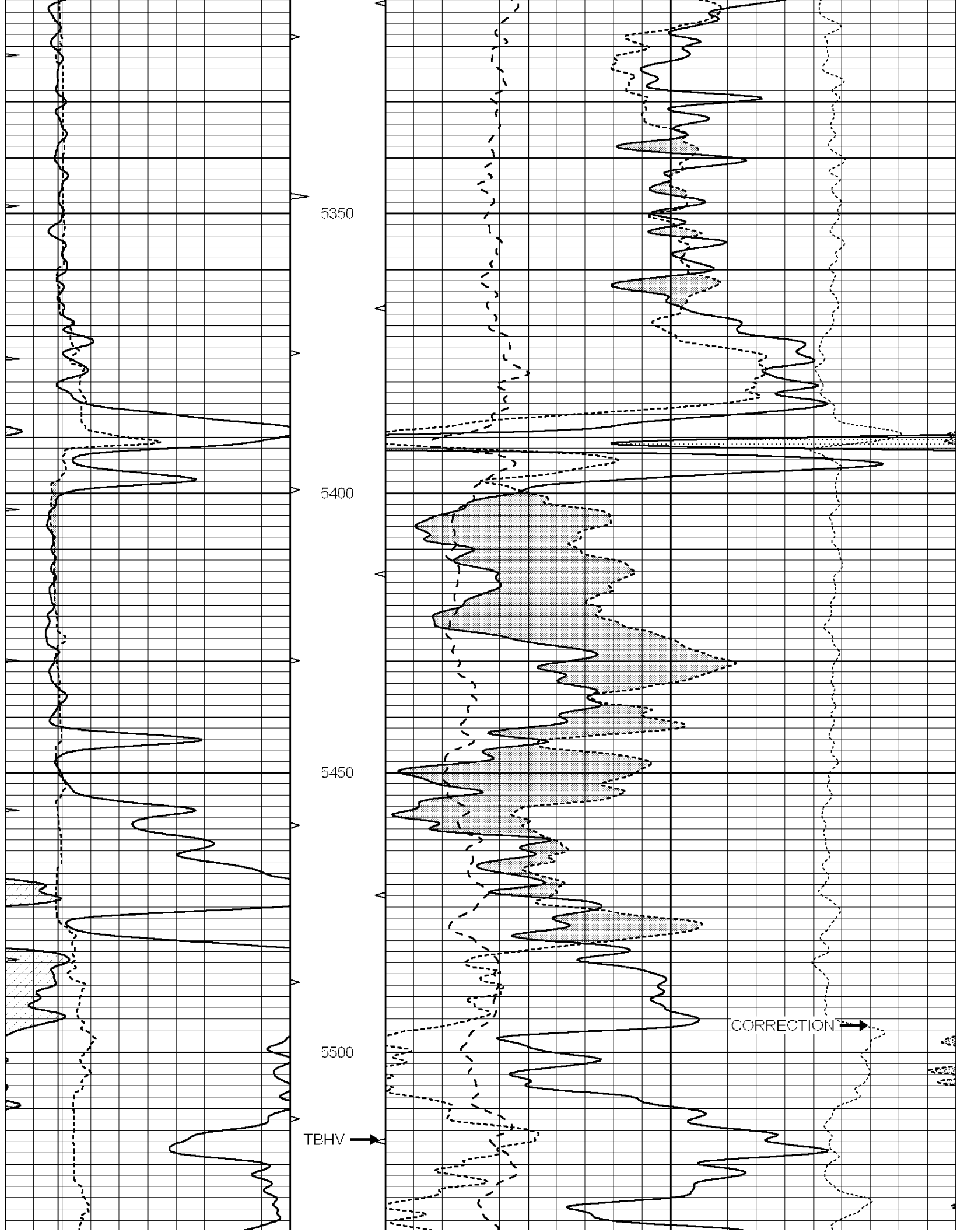
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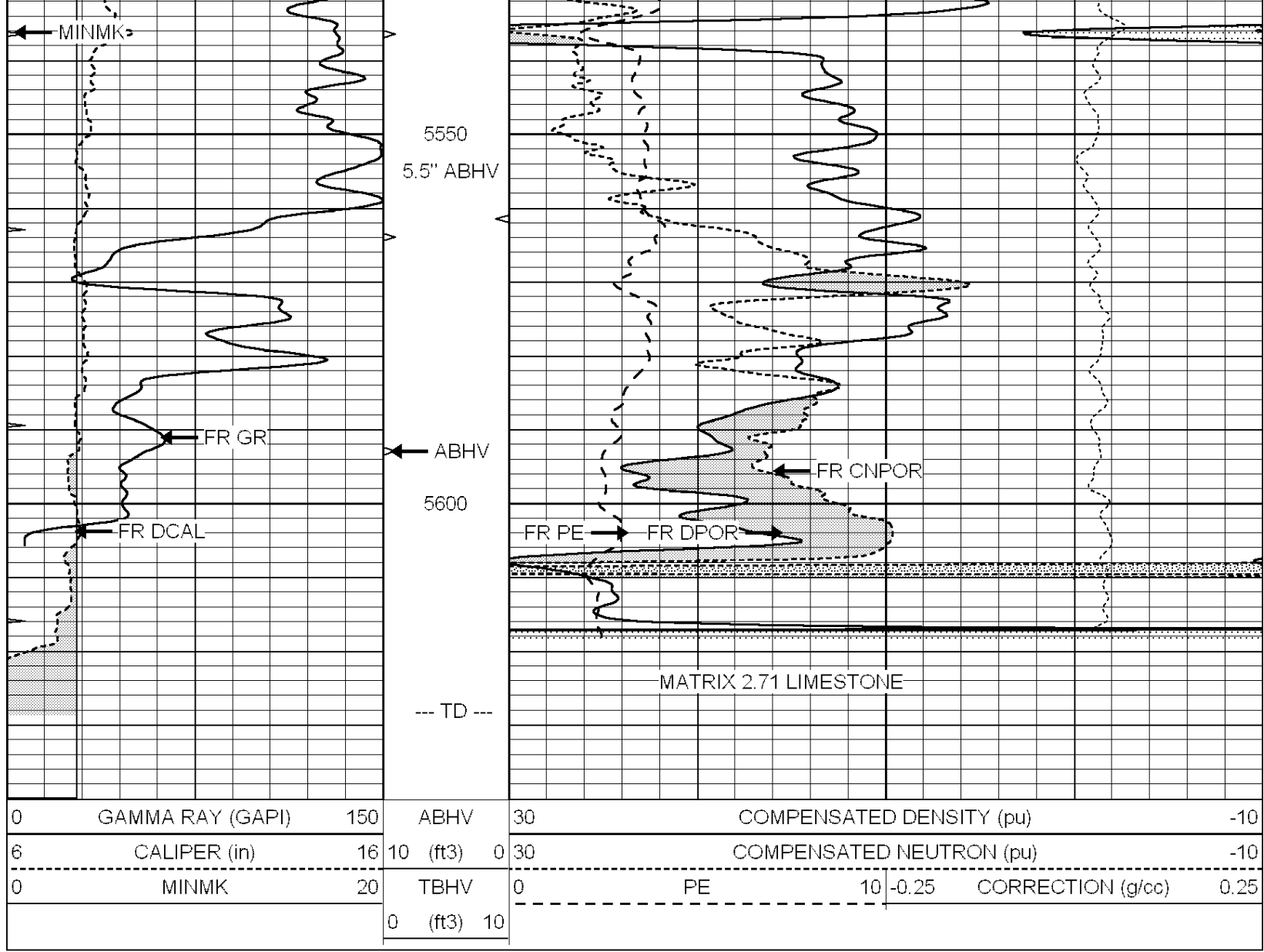
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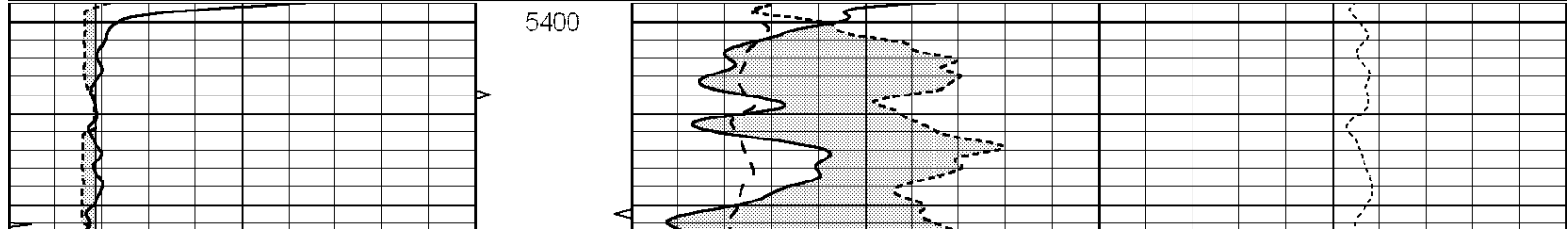


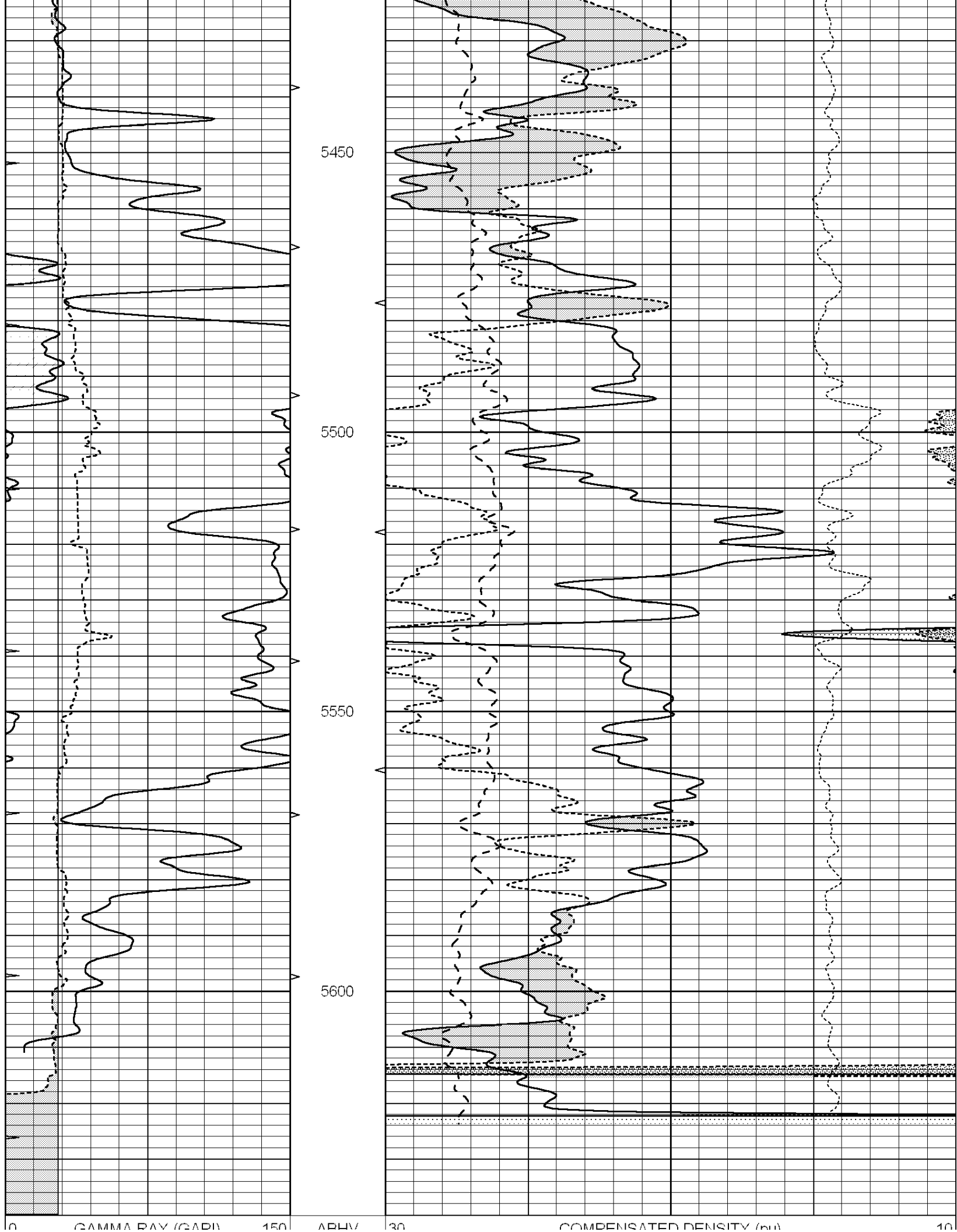


REPEAT SECTION

Database File: 012040pdn.db
 Dataset Pathname: pass5A
 Presentation Format: _ldt_neu
 Dataset Creation: Tue Nov 19 03:32:22 2013
 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	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3) 10			





6	CALIPER (in)	16	10	(ft3)	0	30	COMPENSATED NEUTRON (pu)		-10	
0	MINMK	20	TBHV	0	0	PE	10	-0.25	CORRECTION (g/cc)	0.25
			0	(ft3)	10					

Calibration Report

Database File: 012040pdm.db
 Dataset Pathname: pass7.AA
 Dataset Creation: Tue Nov 19 03:35:51 2013

Dual Induction Calibration Report

Serial-Model: DIL1-GEAR
 Performed: Mon Nov 18 21:56:55 2013

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.004	0.658	V	0.000	400.000	mmho/m	540.000	-2.508
Medium	0.022	0.694	V	0.000	464.000	mmho/m	560.000	-38.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.015	0.658	V	0.000	500.000	mmho/m	778.152	0.000
Medium	0.014	0.750	V	0.000	500.000	mmho/m	680.048	0.000

Litho Density Calibration Report
 Serial: 001 Model: PRB
 Performed Tue Jul 03 11:37:32 2007

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	2170.6	9915.1	3855.3	11241.6	cps
Window 2	2029.2	8716.5	3483.5	9750.8	cps
Window 3	1665.0	4929.7	2356.8	5332.0	cps
Window 4	493.3	492.1	490.0	486.8	cps
Long Space	0.0	6687.3	1454.3	7721.6	cps
Short Space	1.9	2149.3	1403.9	2354.5	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 44.4	Rib Slope	: 0.979	Density/Spine Ratio	: 0.556
Spine Angle	: 74.4	Spine Slope	: 3.583	Spine Intercept	: -18.7

Caliper

	Readings	Reference	
Low Ref	3.5	8.3	
High Ref	5.4	14.0	
	Gain: 2.9		Offset: 7.0

Compensated Neutron Calibration Report

Serial Number: NEU_3I
 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

Gamma Ray Calibrator Report

Serial Number:	GR1	
Tool Model:	OPEN	
Performed:	Mon Nov 18 22:37:02 2013	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.1700	GAPI/cps