



**SUPERIOR
Hays,
Kansas**

**COMPENSATED
DENSITY
NEUTRON LOG**

Company PIONEER EXPLORATION, LLC.
Well DIRKS #4
Field SHARON NORTH
County HARPER
State KANSAS

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Location: API #: 15-077-21670
990' FSL & 580' FEL
SEC 29 TWP 31S RGE 9W
Permanent Datum GROUND LEVEL Elevation 1624
Log Measured From KELLY BUSHING 7' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DIL
MICRO
Elevation
K.B. 1631
D.F.
G.L. 1624

Date	3-27-10
Run Number	ONE
Depth Driller	4605
Depth Logger	4603
Bottom Logged Interval	4579
Top Log Interval	2400
Casing Driller	265
Casing Logger	NA
Bit Size	7.875
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.2 / 50
pH / Fluid Loss	10.0 / 8.8
Source of Sample	FLOWLINE
Rim @ Meas. Temp	0.75 @ 77F
Rmf @ Meas. Temp	0.56 @ 77F
Rmc @ Meas. Temp	0.90 @ 77F
Source of Rmf / Rmc	MEASURED
Rm @ BHT	.480 @ 121F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	9:30 P.M.
Maximum Recorded Temperature	121F
Equipment Number	860
Location	HAYS, KS.
Recorded By	RUPP
Witnessed By	SEAN DEENIHAN

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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: SHARON, E TO RD. #150, 4N, W INTO.

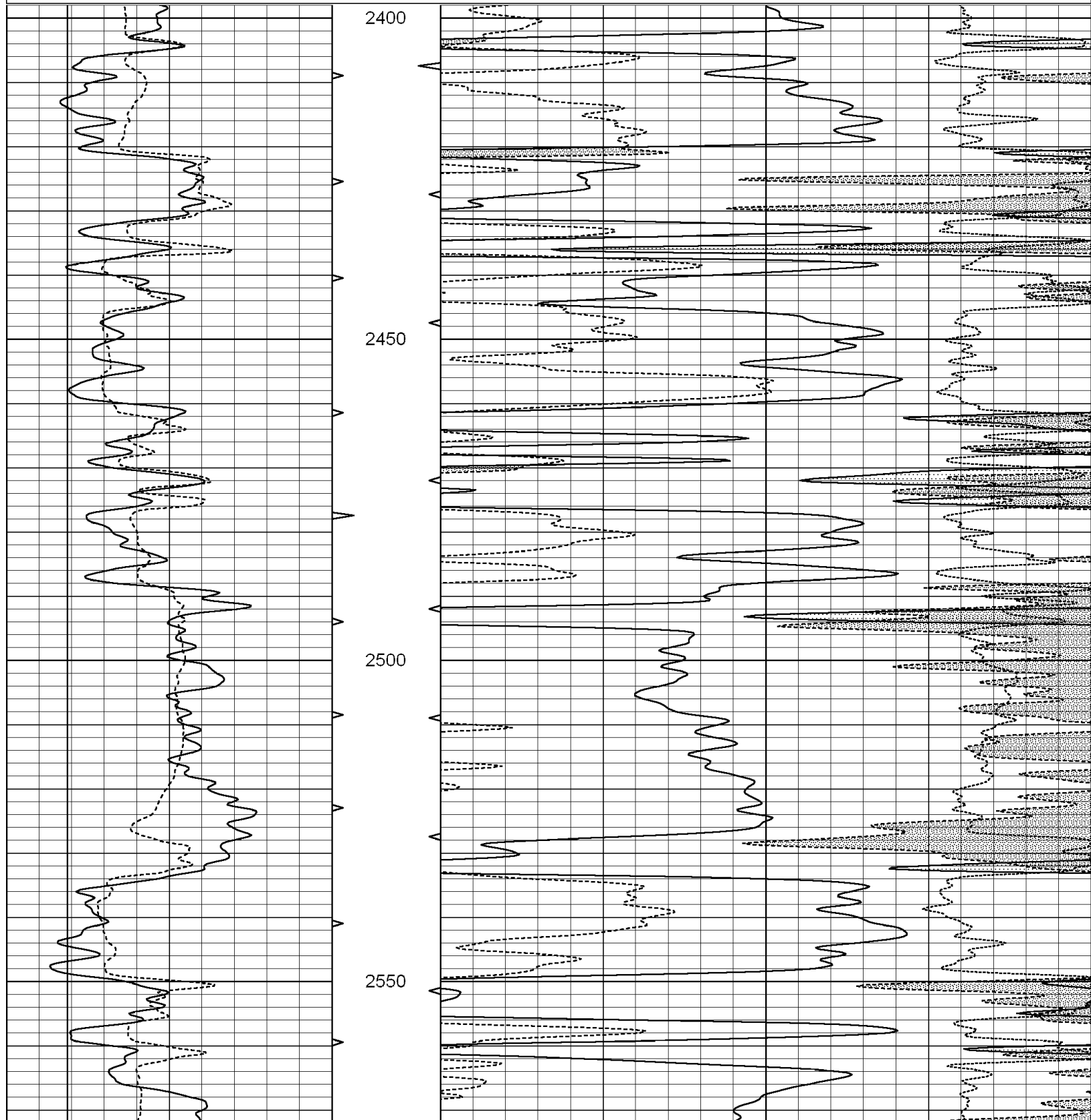


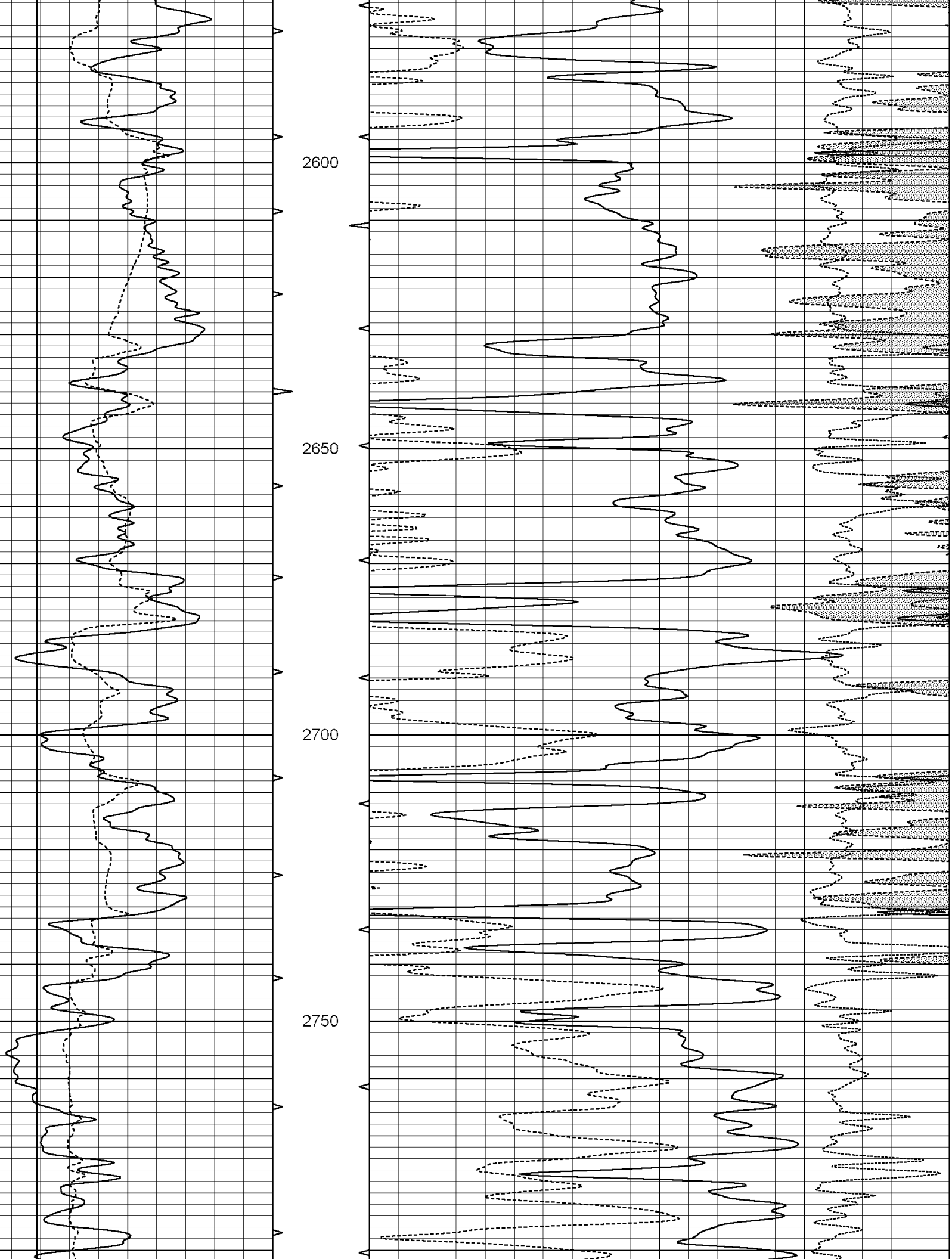
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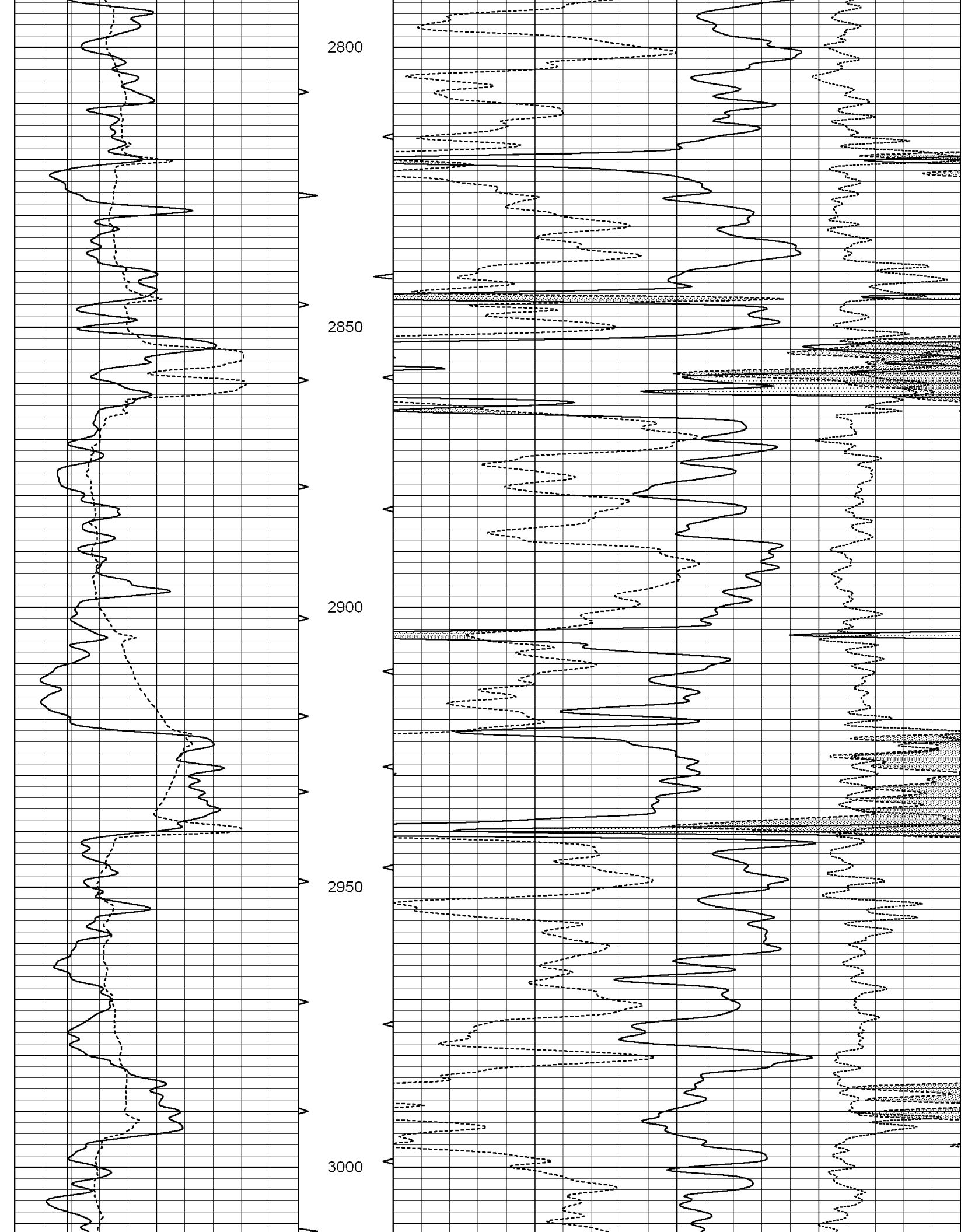
MAIN SECTION

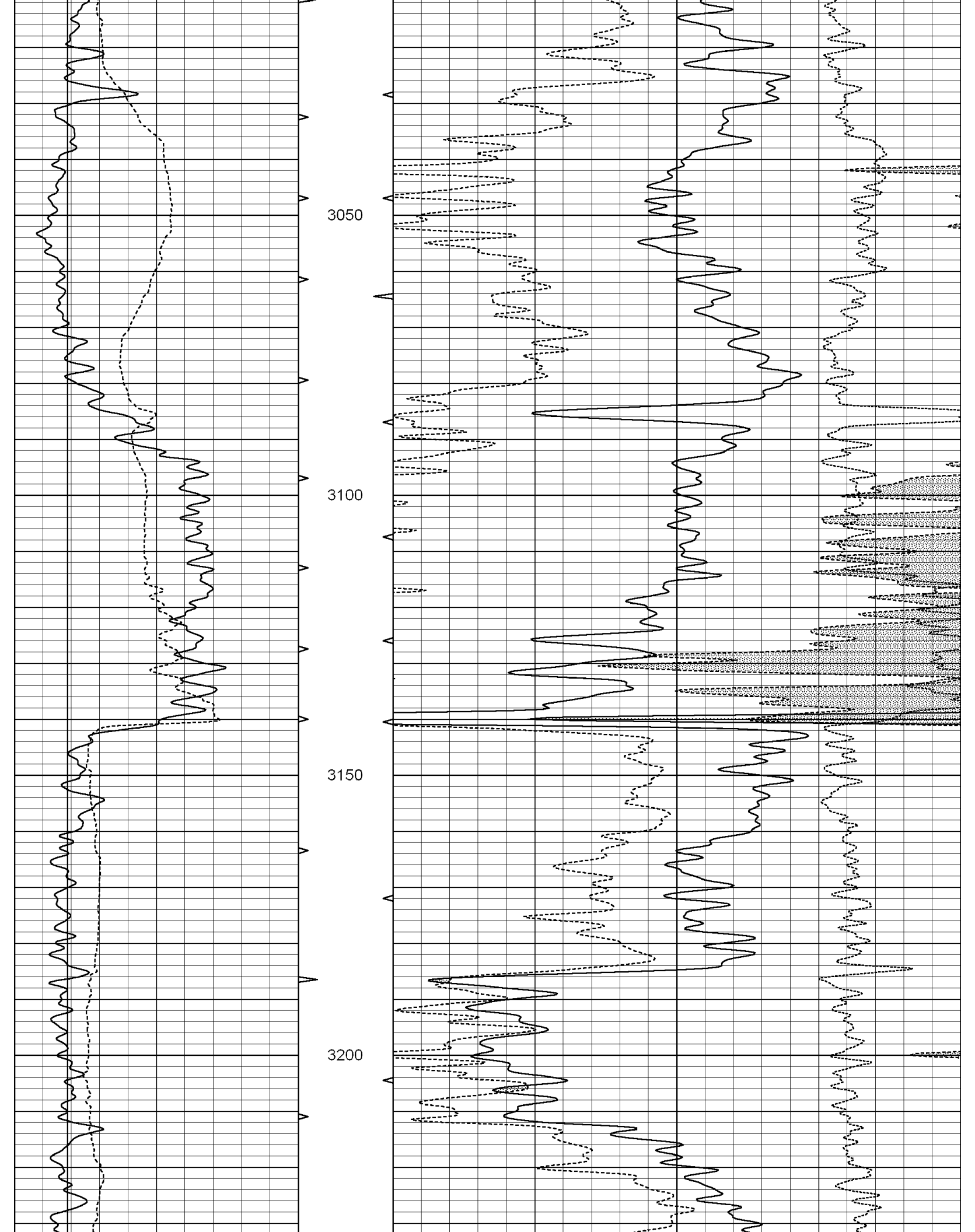
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 Presentation Format: den_neu
 Dataset Creation: Sat Mar 27 12:12:06 2010 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

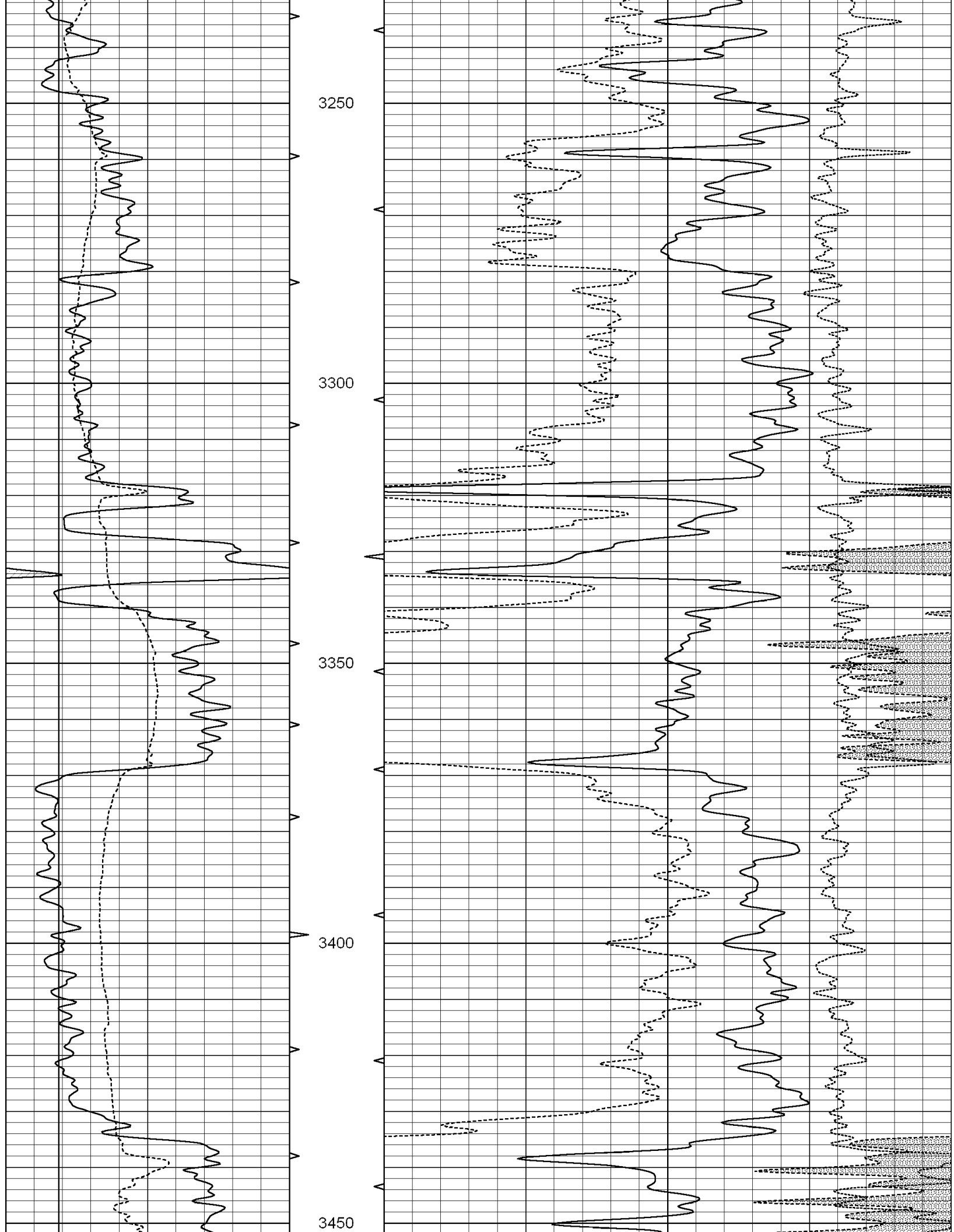
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10	
6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)	-10
			TBHV		-0.25	CORRECTION (g/cc)	0.25
			0 (ft3)	10			

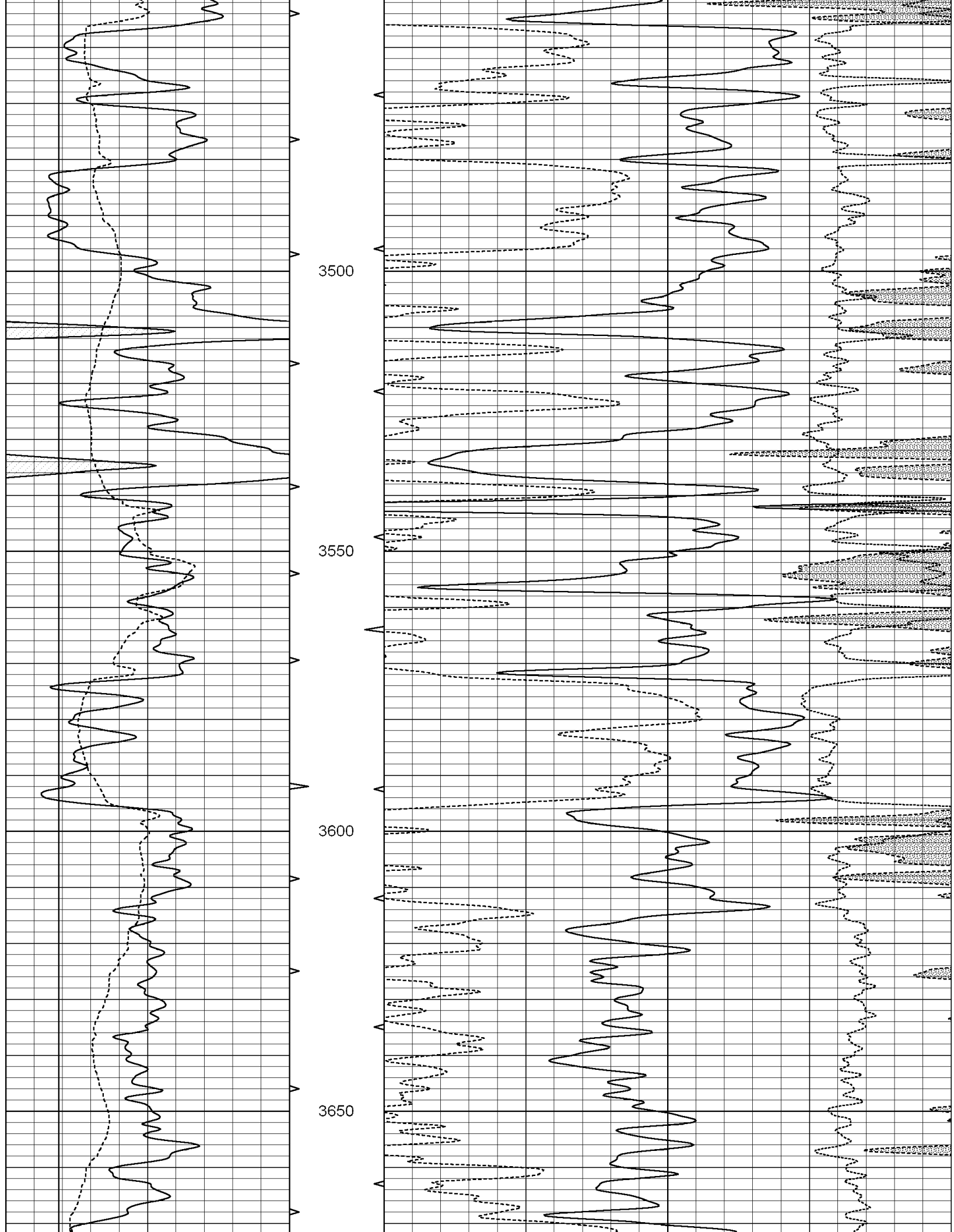


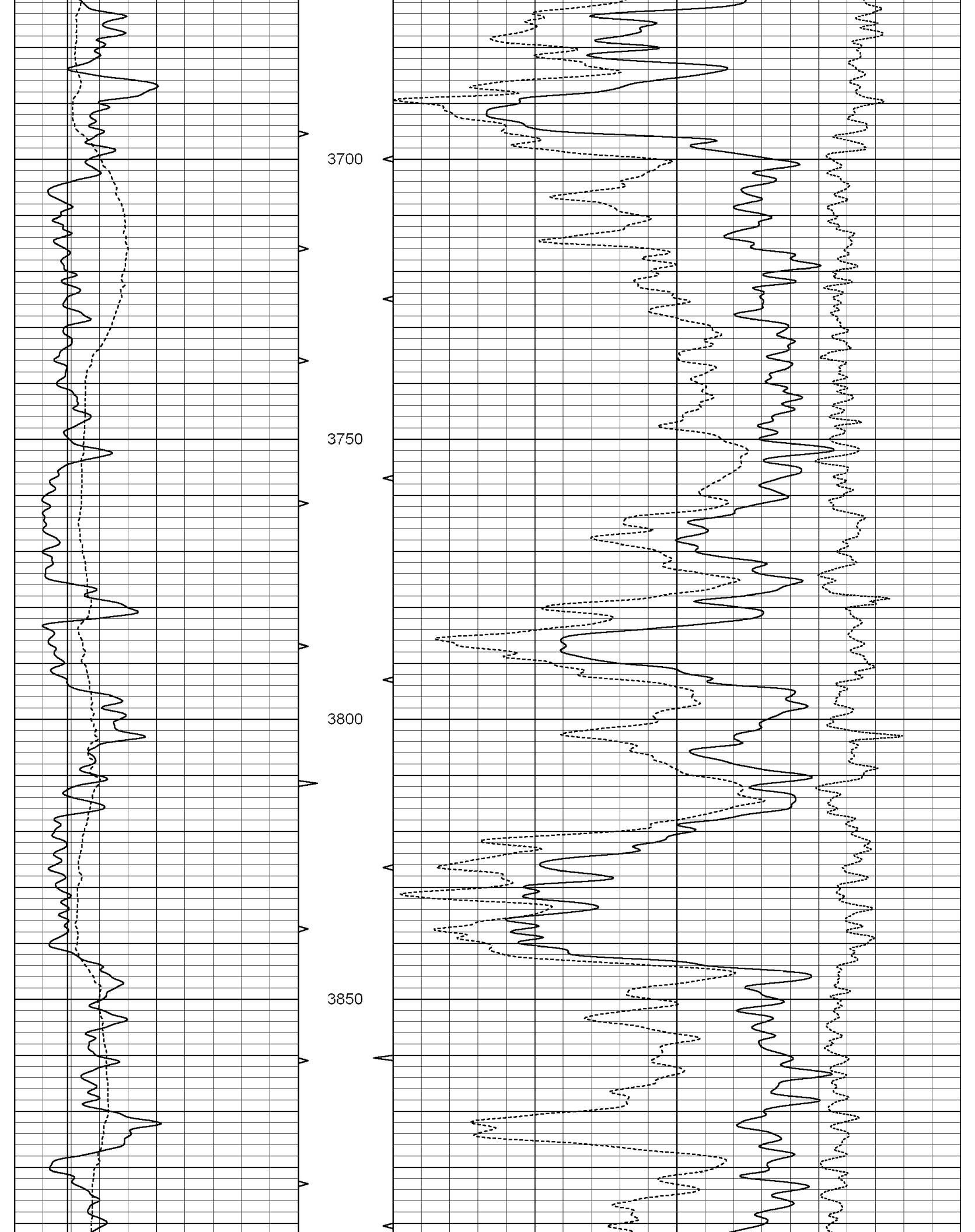


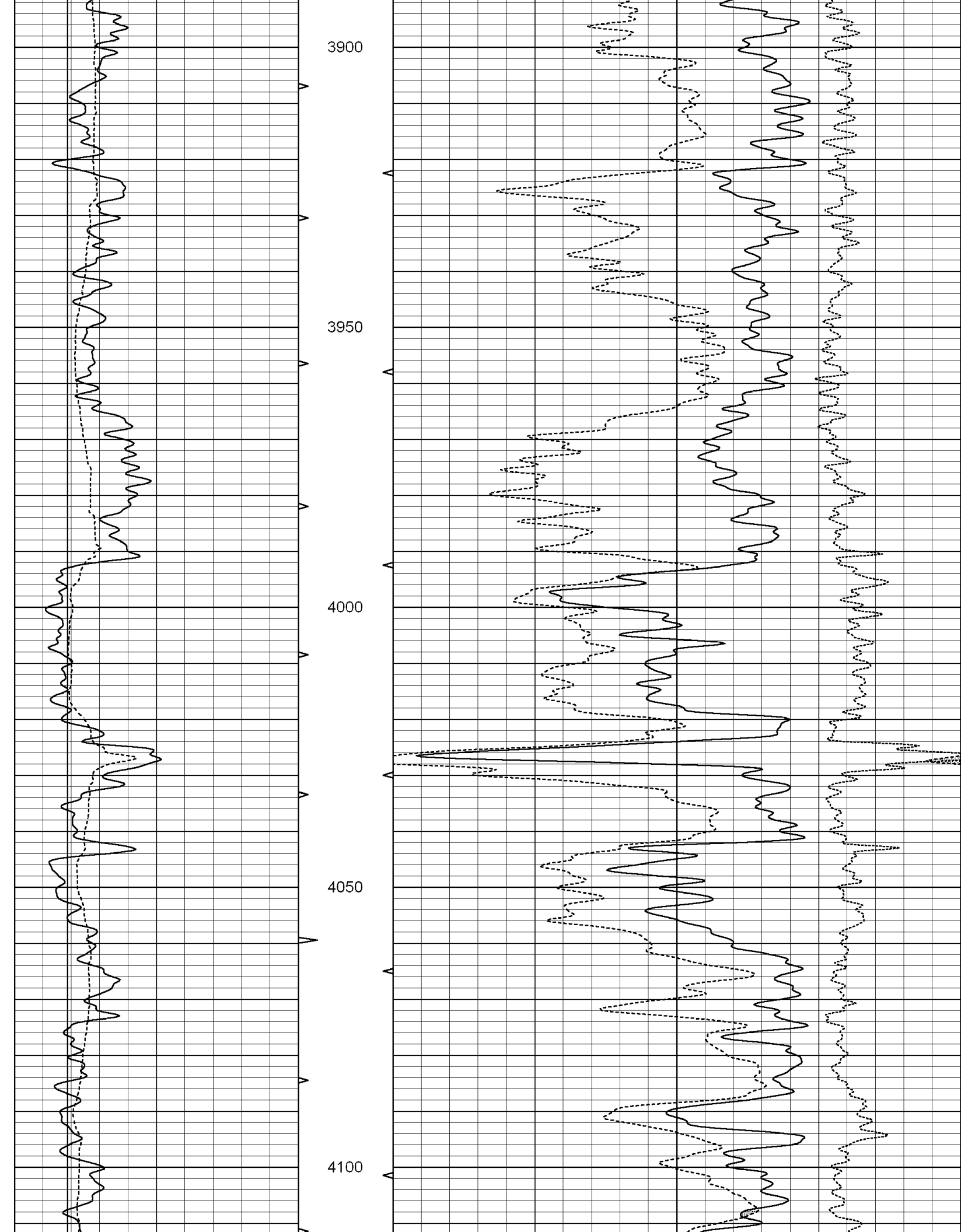


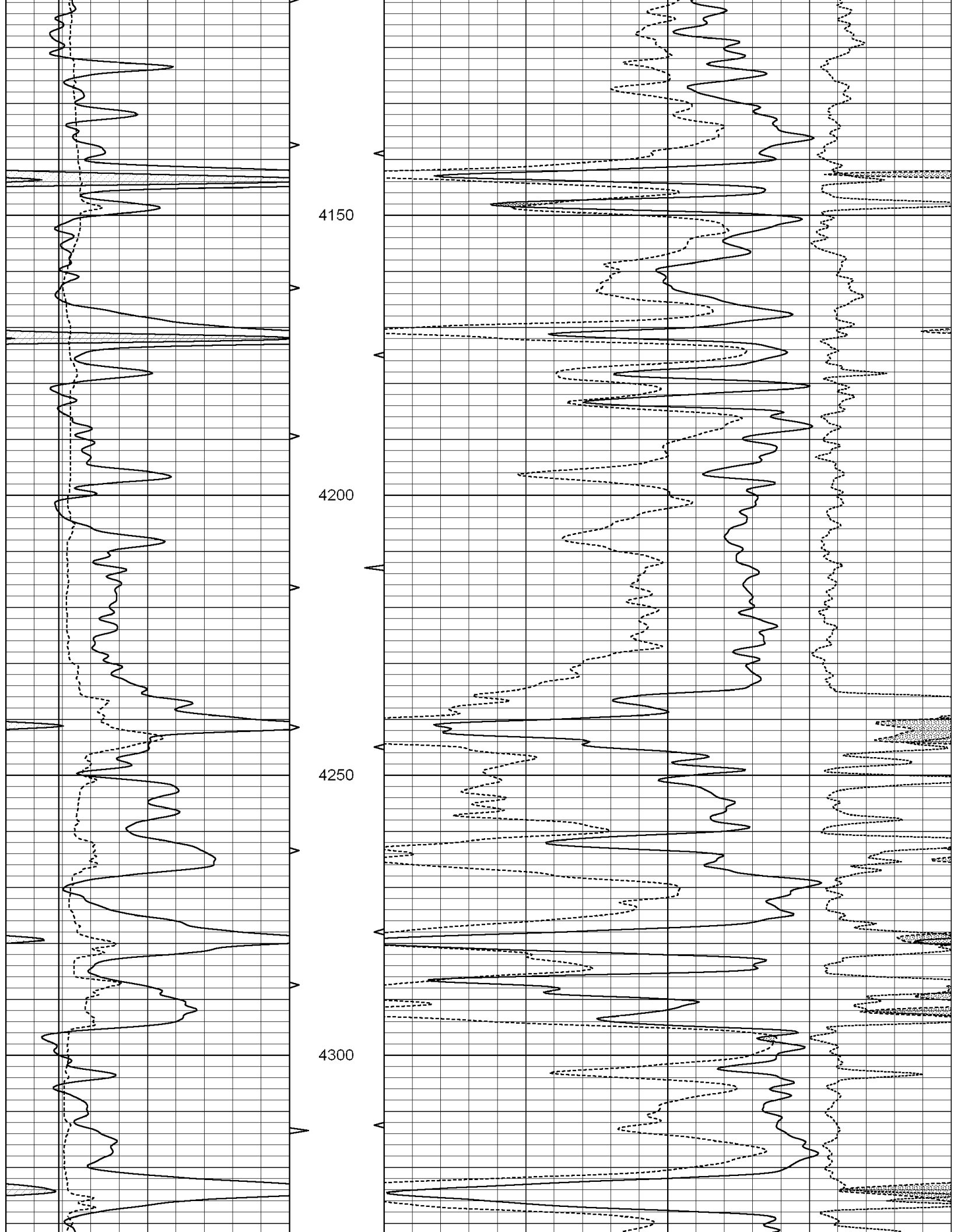


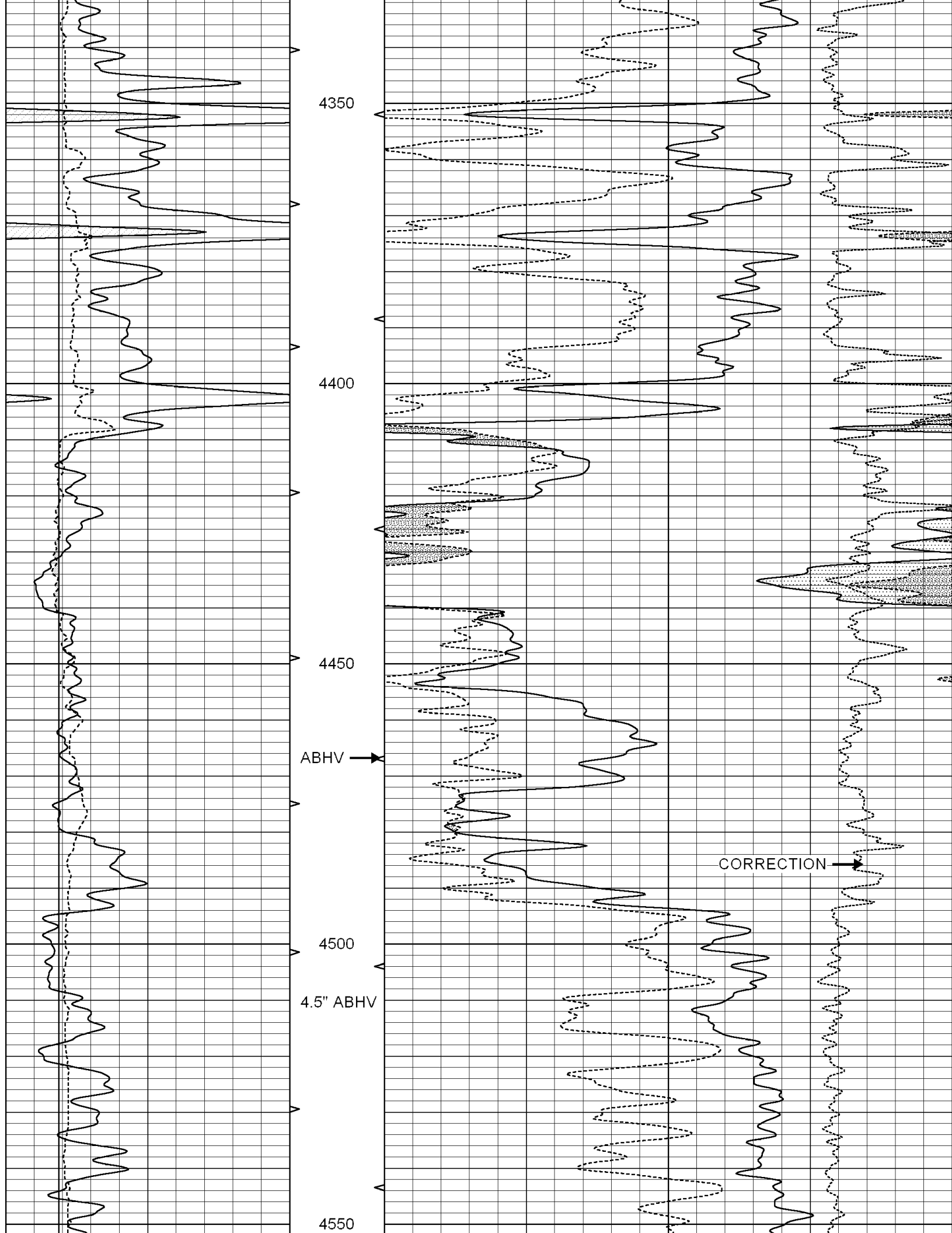


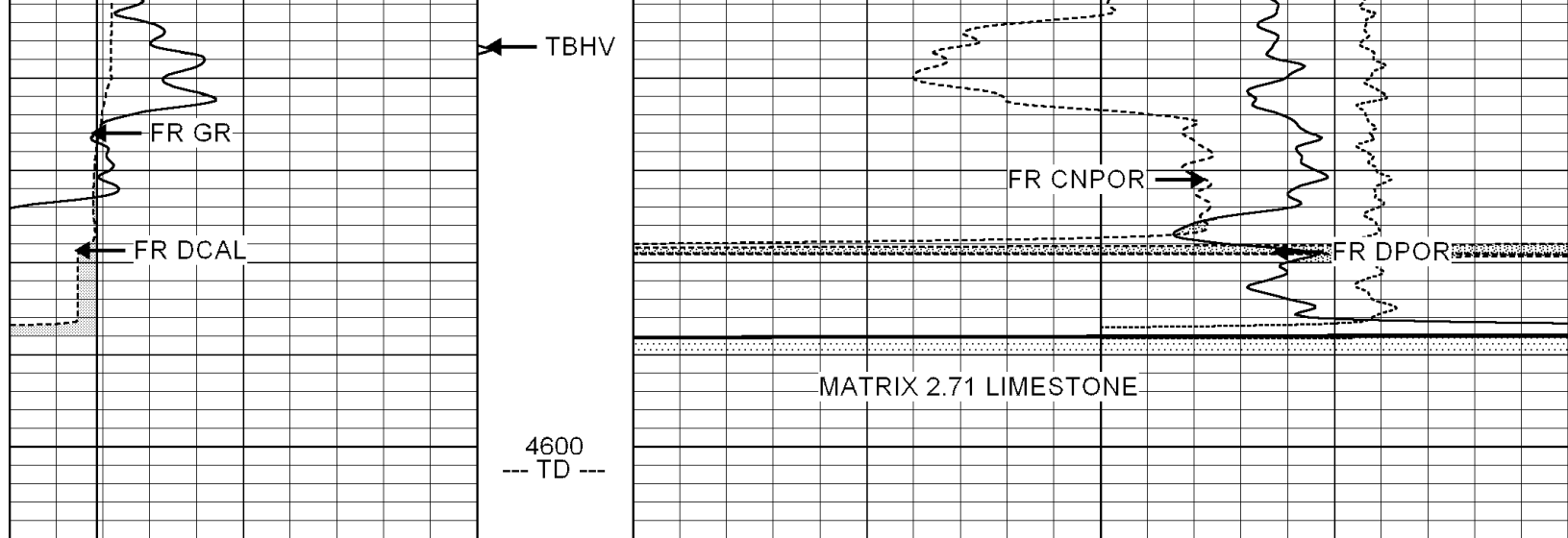












0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
			TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		

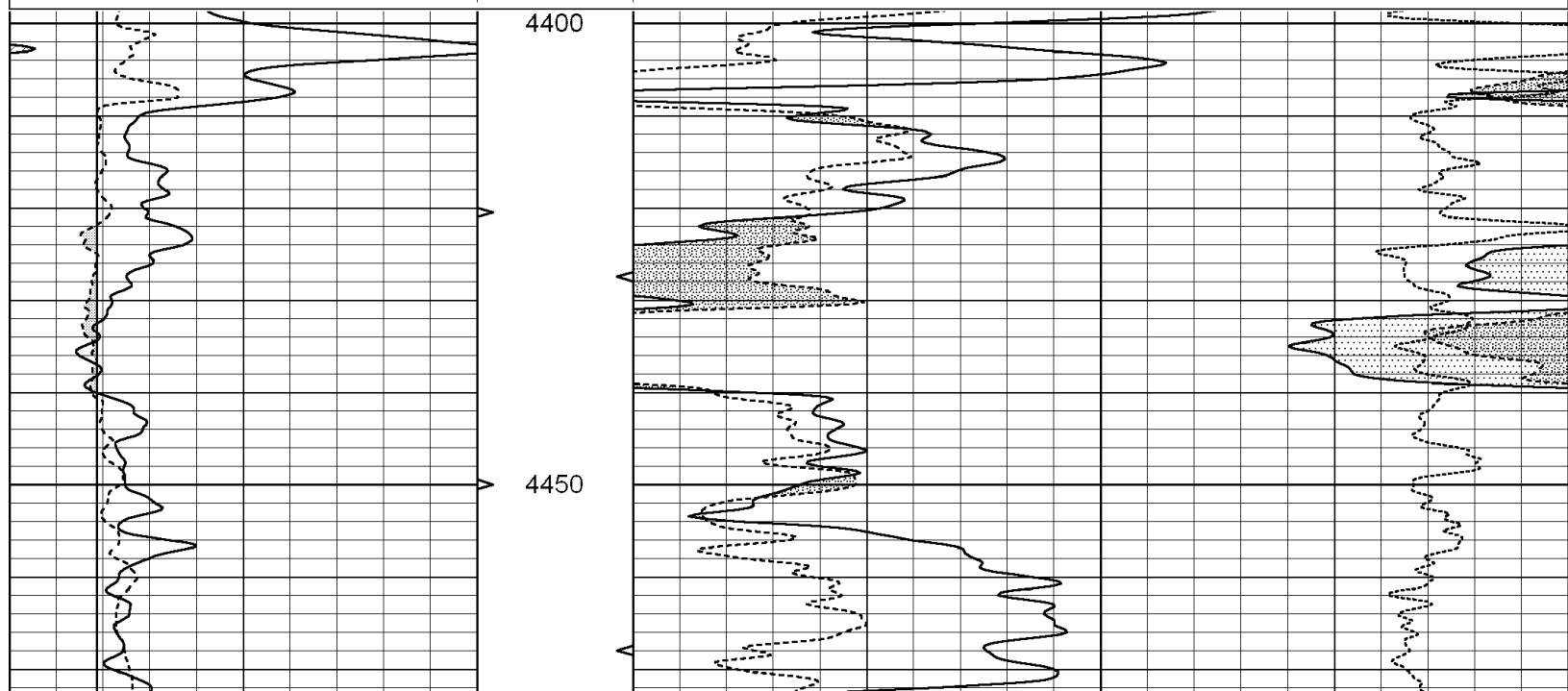


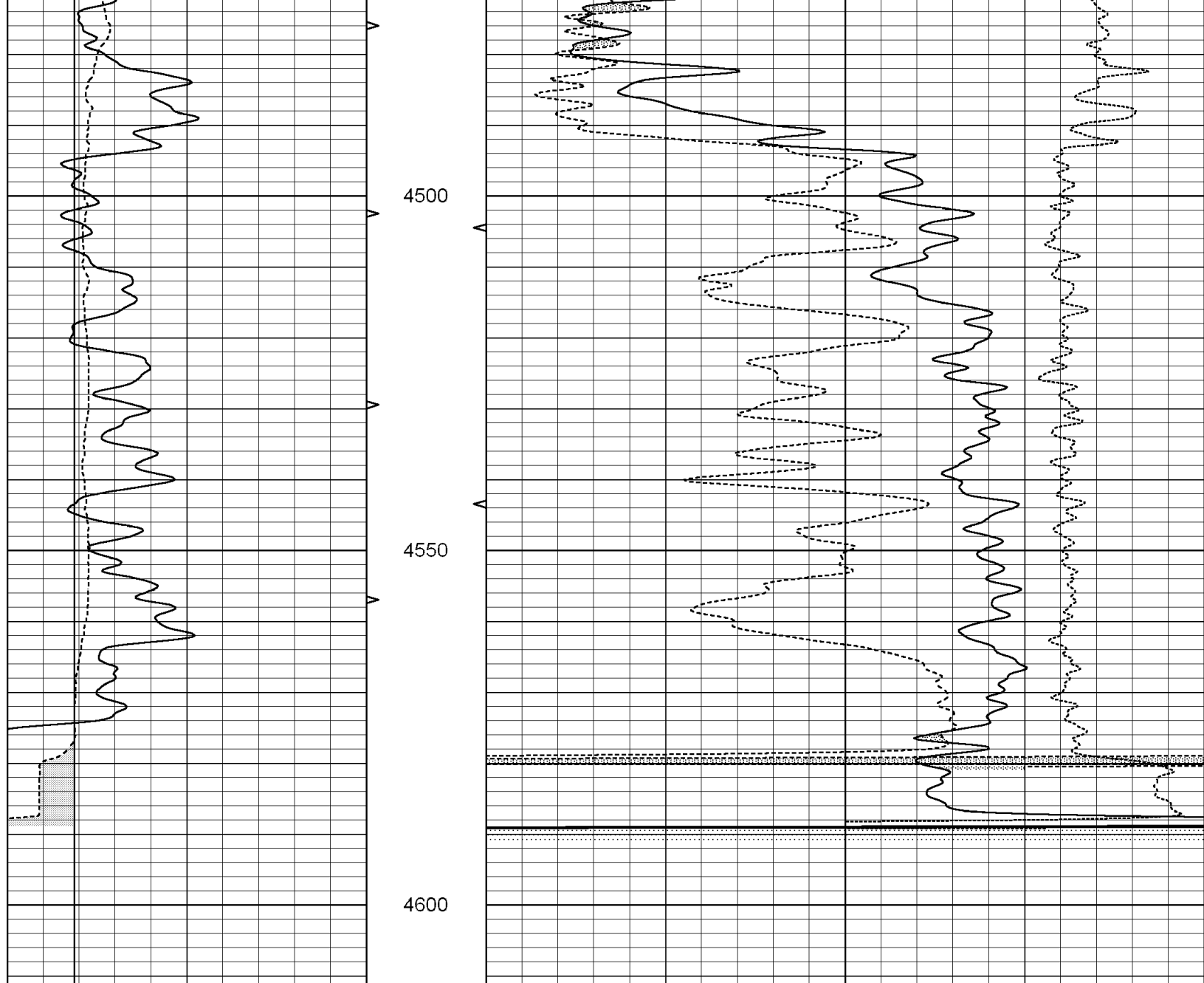
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REPEAT SECTION

Database File: 004621ddn.db
 Dataset Pathname: pass2A
 Presentation Format: den_neu
 Dataset Creation: Sat Mar 27 11:39:00 2010 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
			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
			TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		

Calibration Report

Database File: 004621ddn.db
 Dataset Pathname: pass3A
 Dataset Creation: Sat Mar 27 12:12:06 2010 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL5-GEAR
 Performed: Sat Mar 27 10:26:36 2010

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.004	0.654	V	0.000	400.000	mmho/m	550.000	-14.000
Medium	-0.005	0.737	V	0.000	462.500	mmho/m	530.000	-16.000

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: Sat Mar 27 10:26:17 2010

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1243.76	629.14	cps
Aluminum	2.580	g/cc	282.16	435.01	cps
Spine Angle = 76.03			Density/Spine Ratio = 0.569		
	Size		Reading		
Small Ring	7.90	in	3.68	V	
Large Ring	14.00	in	6.06	V	

Compensated Neutron Calibration Report

Serial Number: NEU_11
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 27 08:47:01 2010

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.6000 GAPI/cps