



**COMPENSATED
DENSITY/NEUTRON
LOG**

Company	BLACK STONE PETROLEUM, LLC	Company	BLACK STONE PETROLEUM, LLC
Well	SWOB #1	Well	SWOB #1
Field	OTIS-ALBERT	Field	OTIS-ALBERT
County	RUSH	County	RUSH
State	KANSAS	State	KANSAS
Location:	AP1 # : 15-165-22144-00-00	Other Services	DIL/MEL SONIC
	405' FSL & 510' FWL	Elevation	K.B. 1971 D.F. 1969 G.L. 1962
Permanent Datum	GROUND LEVEL	Elevation	1962'
Log Measured From	KELLY BUSHING 9' A.G.L.		
Drilling Measured From	KELLY BUSHING		
	SEC 26 TWP 18S RGE 16W		

Date	04/17/17
Run Number	ONE
Depth Driller	3619
Depth Logger	3595
Bottom Logged Interval	3590
Top Log Interval	1500
Casing Driller	8 5/8" @ 374
Casing Logger	374
Bit Size	8 3/4"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.1/38
pH / Fluid Loss	9.8/6.9
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.10@70
Rmt @ Meas. Temp	.075@70
Rmc @ Meas. Temp	.12@70
Source of Rmf / Rmc	MEASURED
Rm @ BHT	.06@112
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	///
Maximum Recorded Temperature	112F
Equipment Number	4010
Location	HAYS, KANSAS
Recorded By	GUS PFANENSTIEL
Witnessed By	BOB BAYER

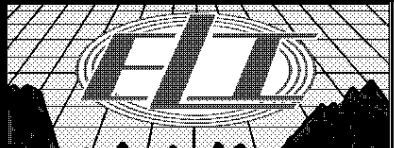
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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on 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 ELI WIRELINE, HAYS, KS. (785) 628-6395

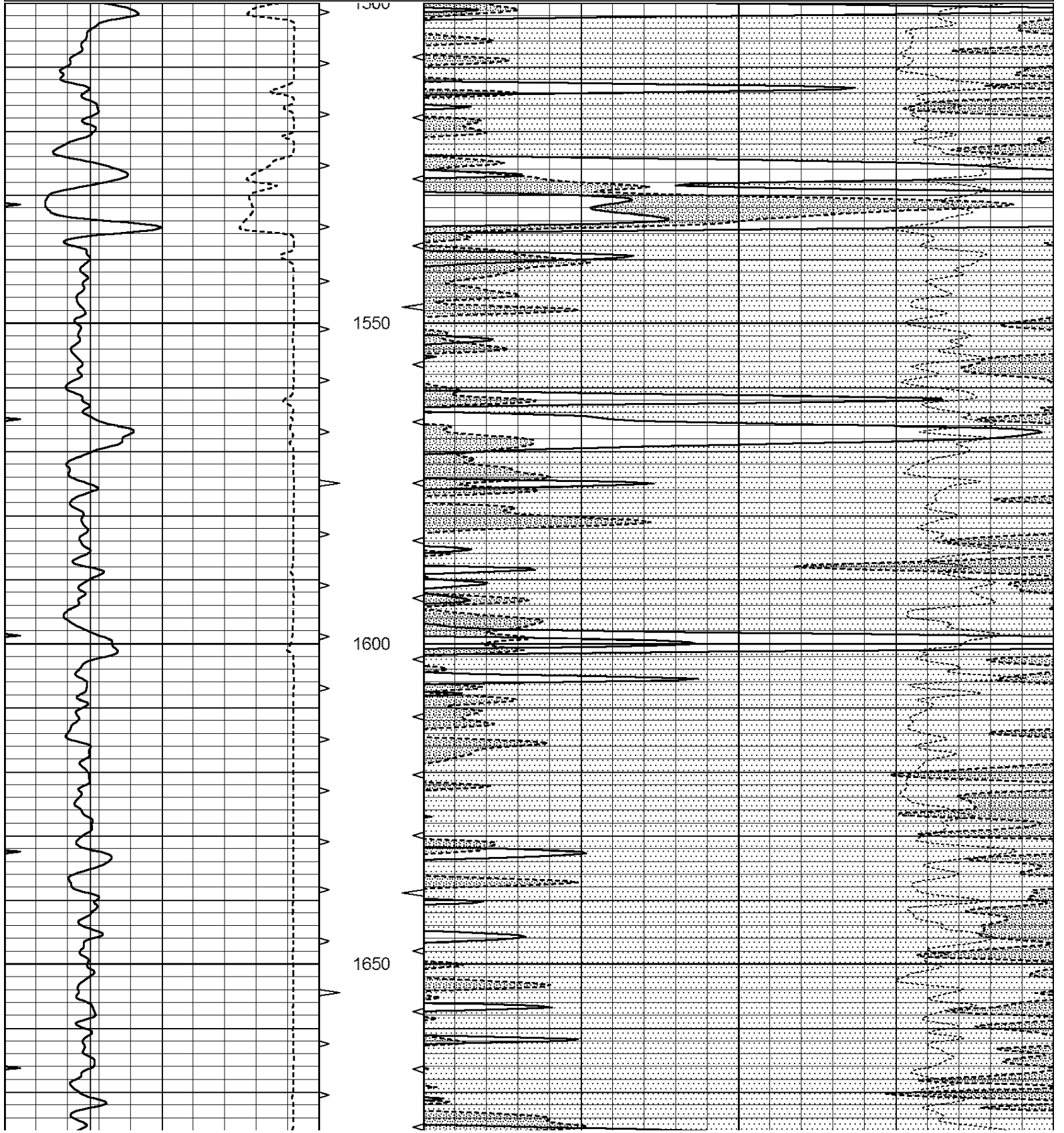
DIRECTIONS
96 HIGHWAY OUT OF RUSH CENTER EAST TO 380 RD.
SOUTH 3/4 MILE
EAST INTO.

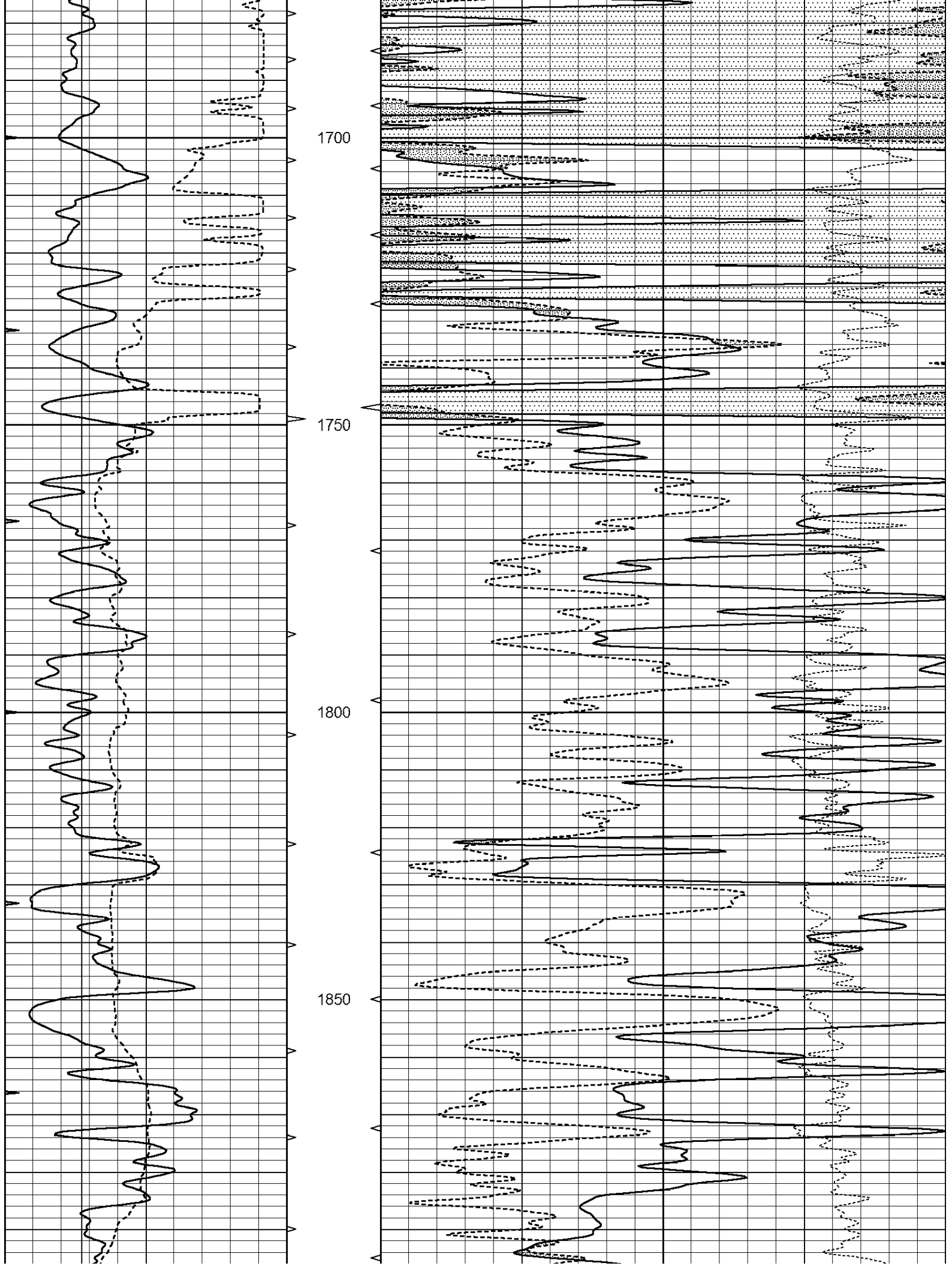


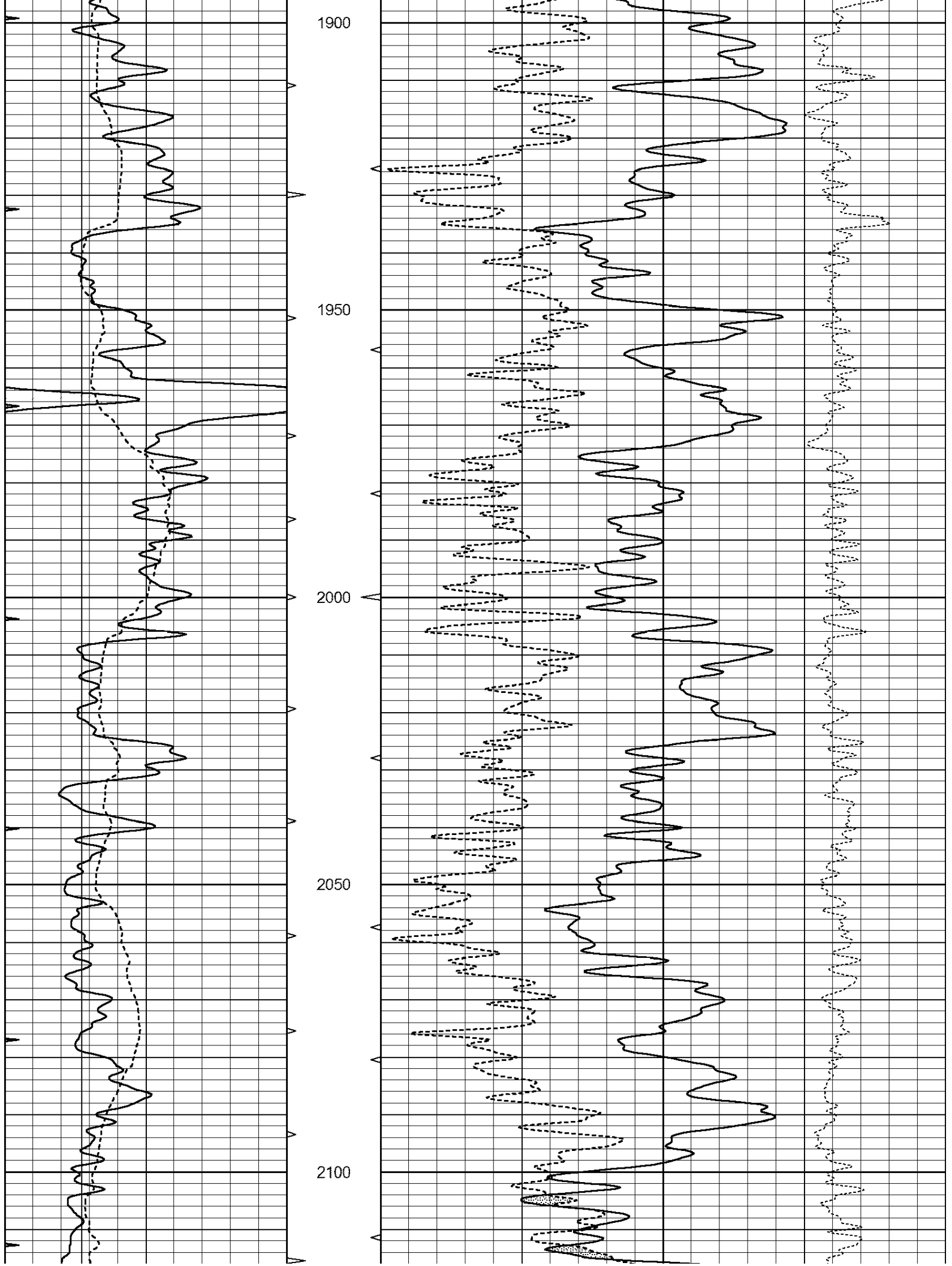
MAIN PASS

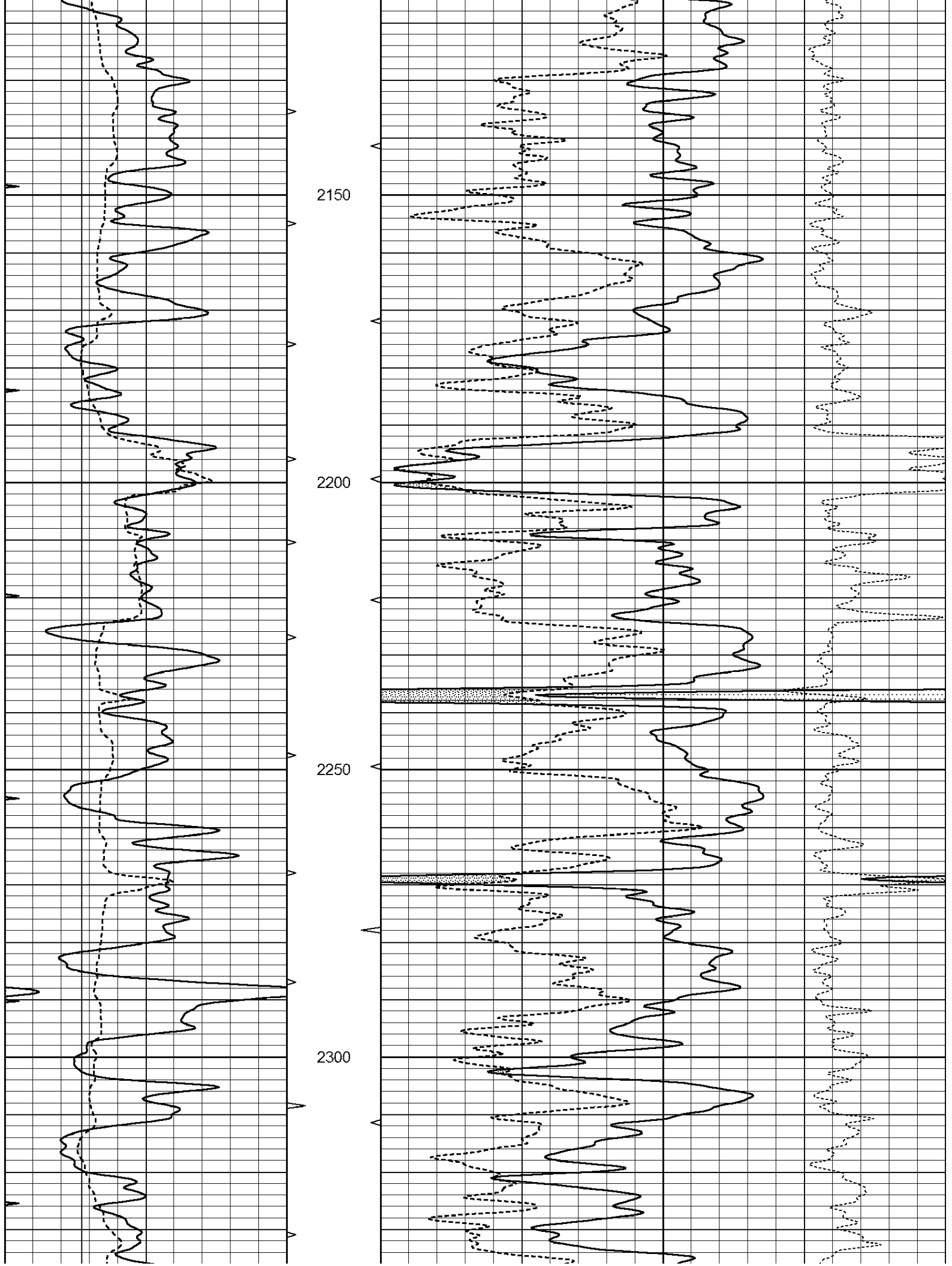
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 Dataset Pathname: pass3MPOR
 Presentation Format: den_neu
 Dataset Creation: Mon Apr 17 22:40:03 2017
 Charted by: Depth in Feet scaled 1:240

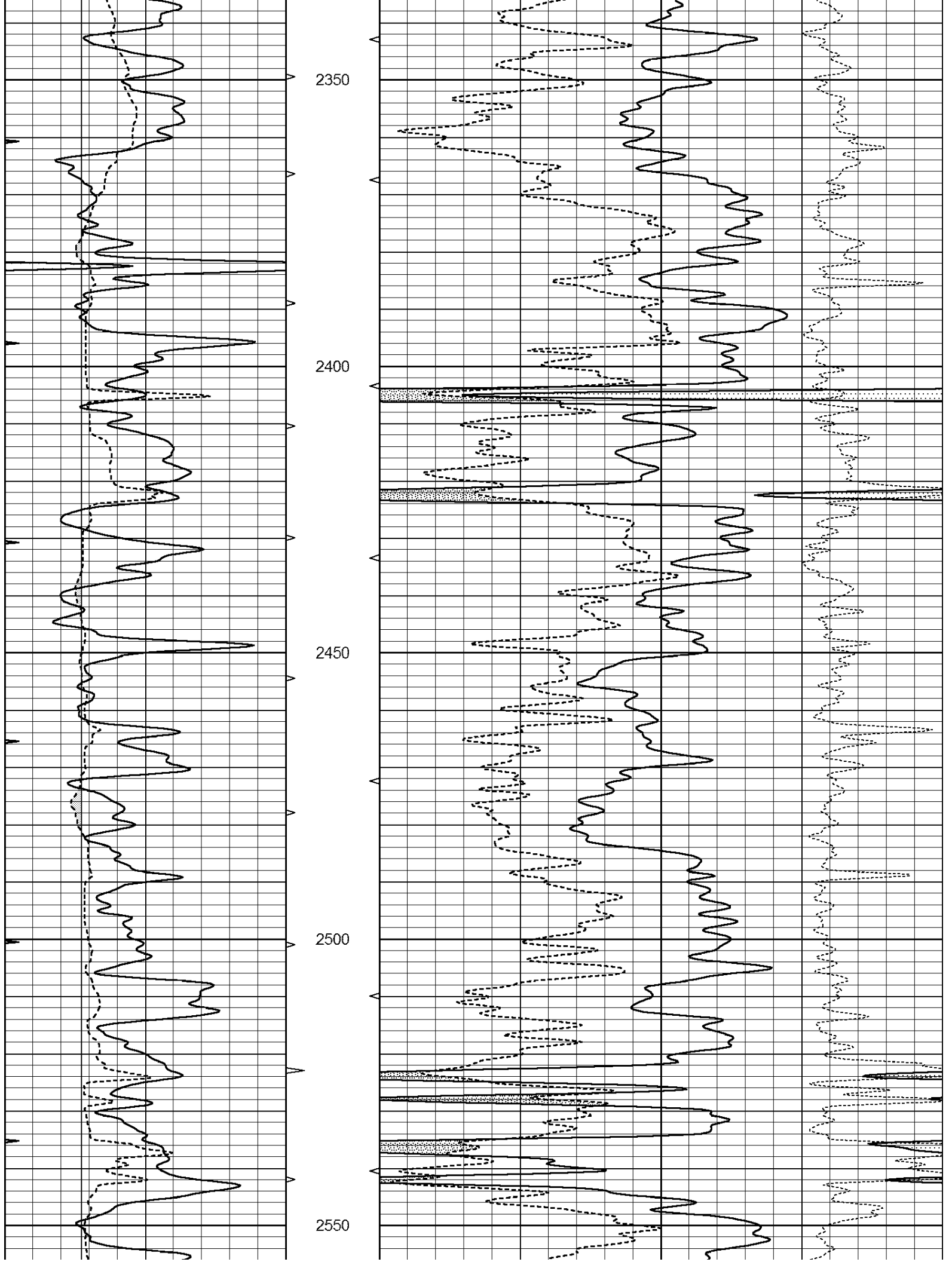
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		

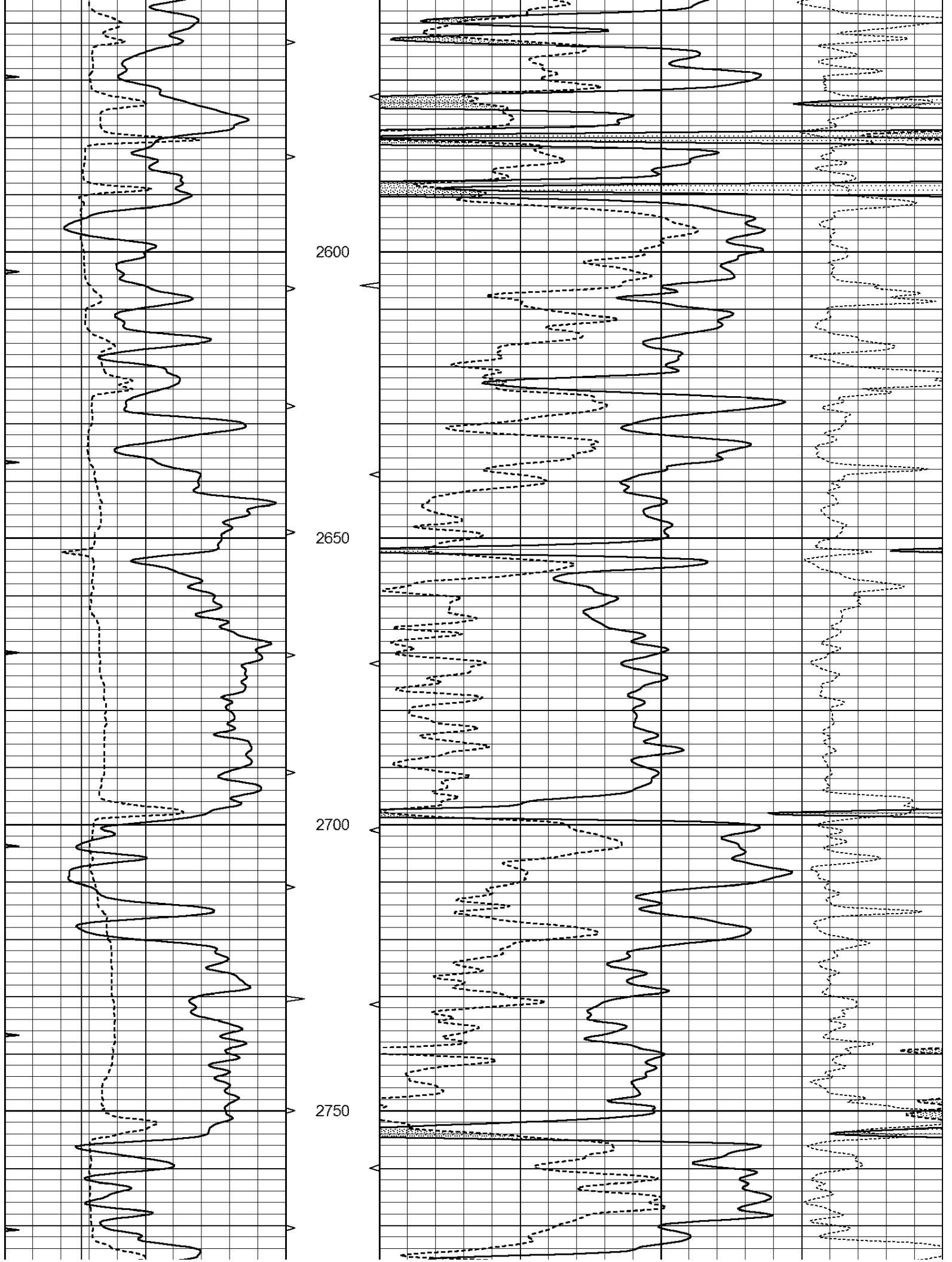


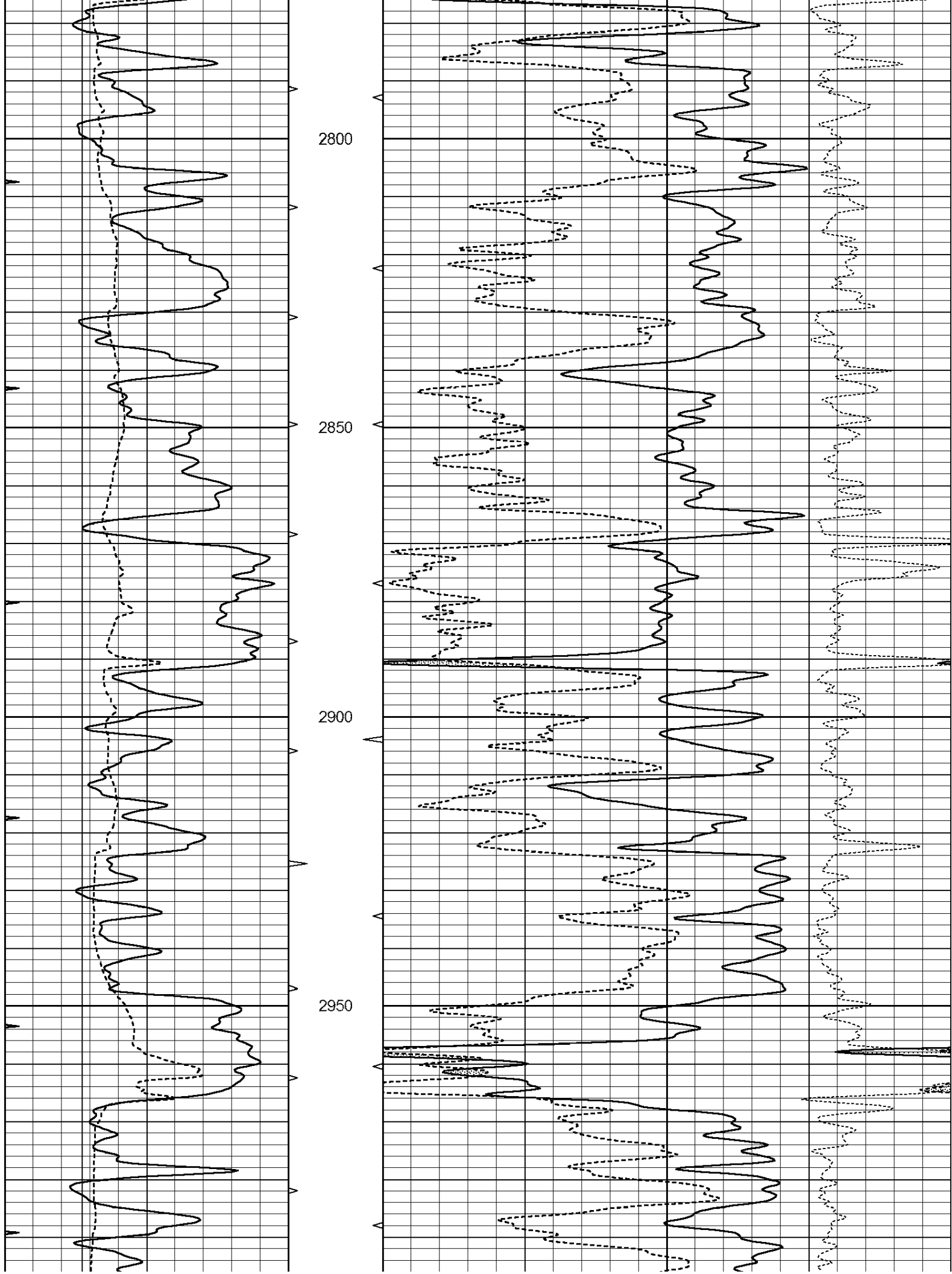


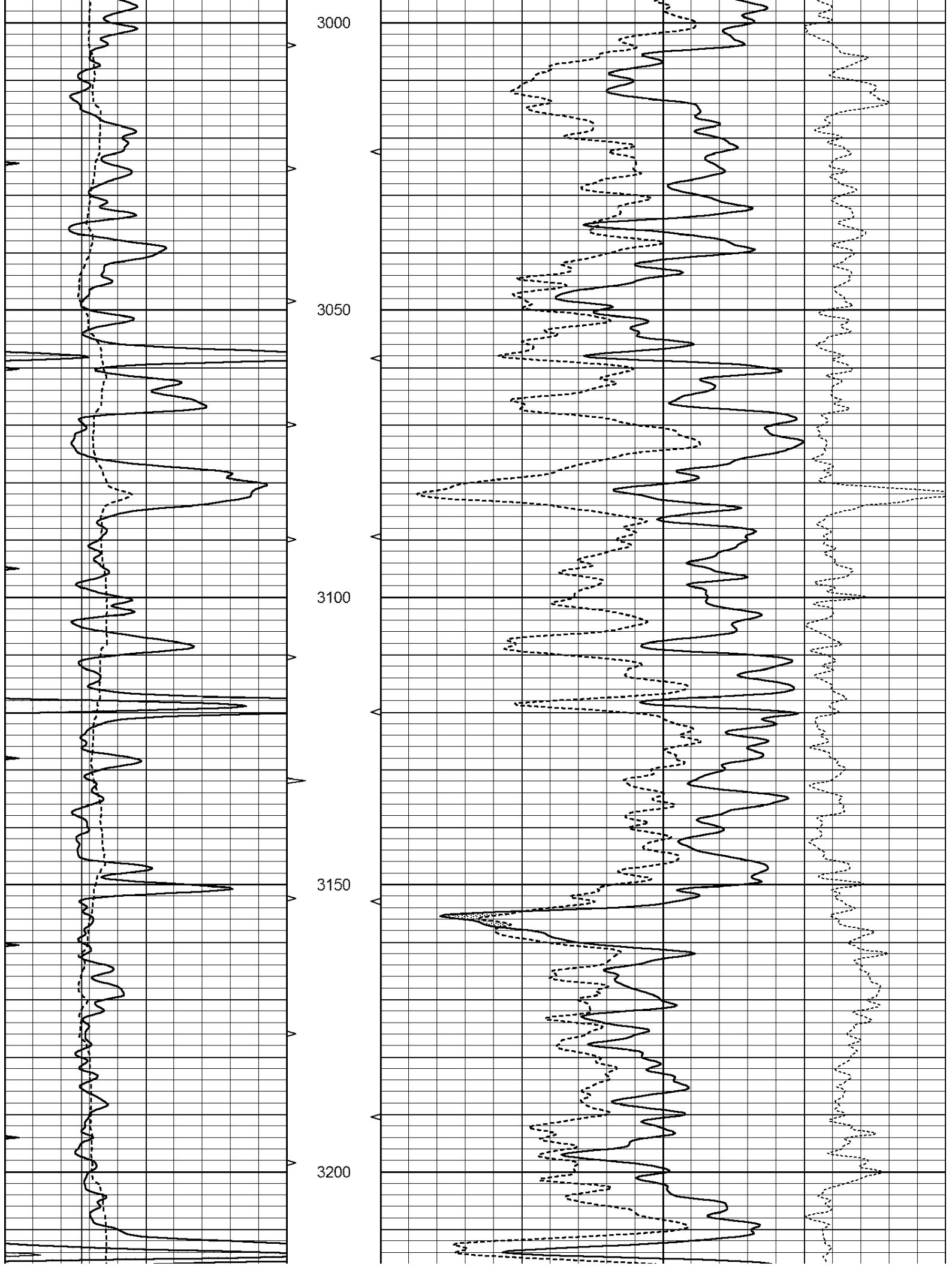


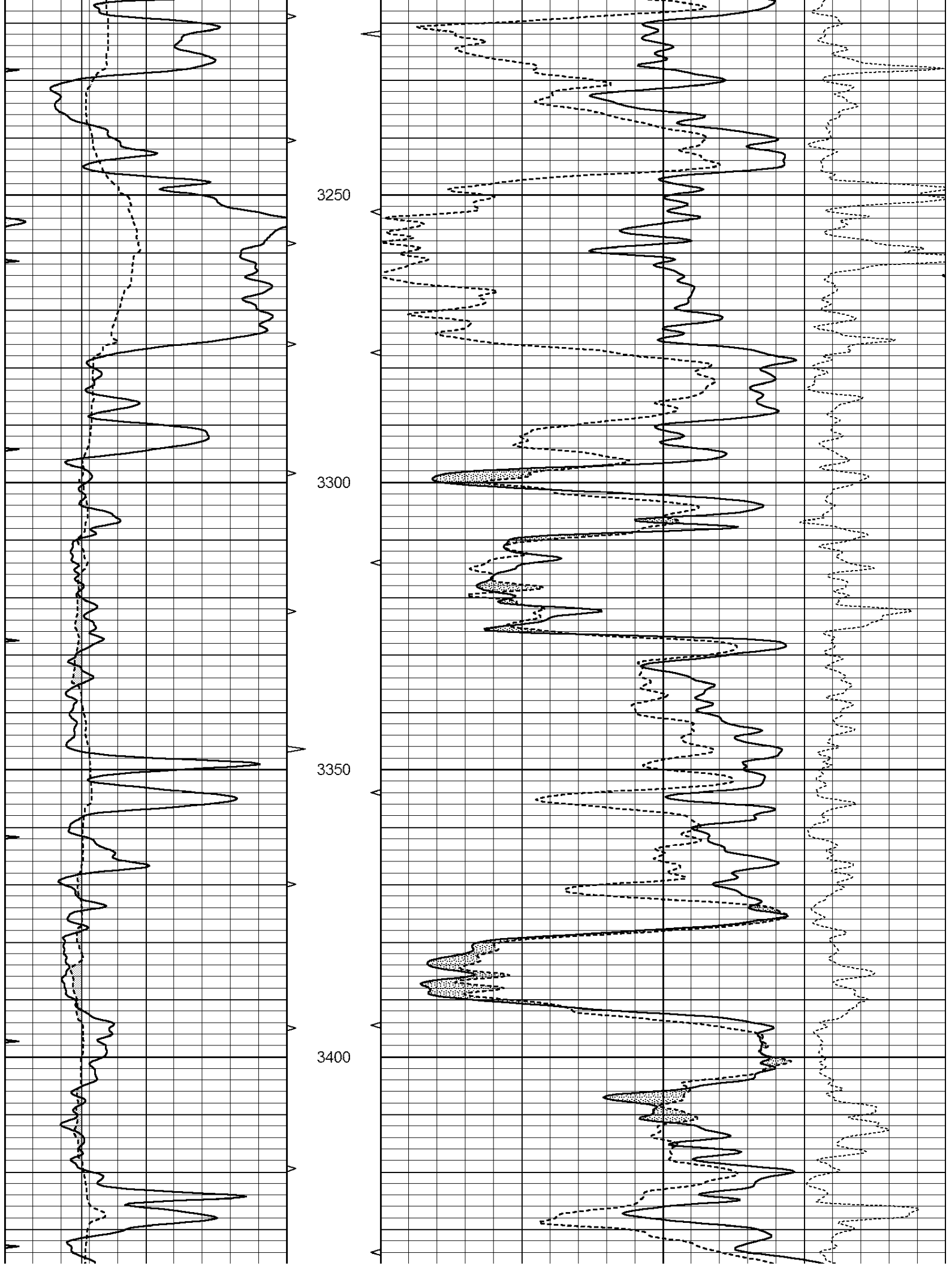


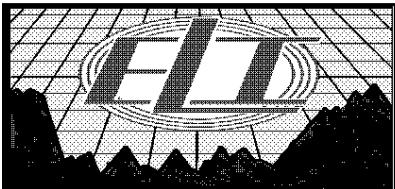
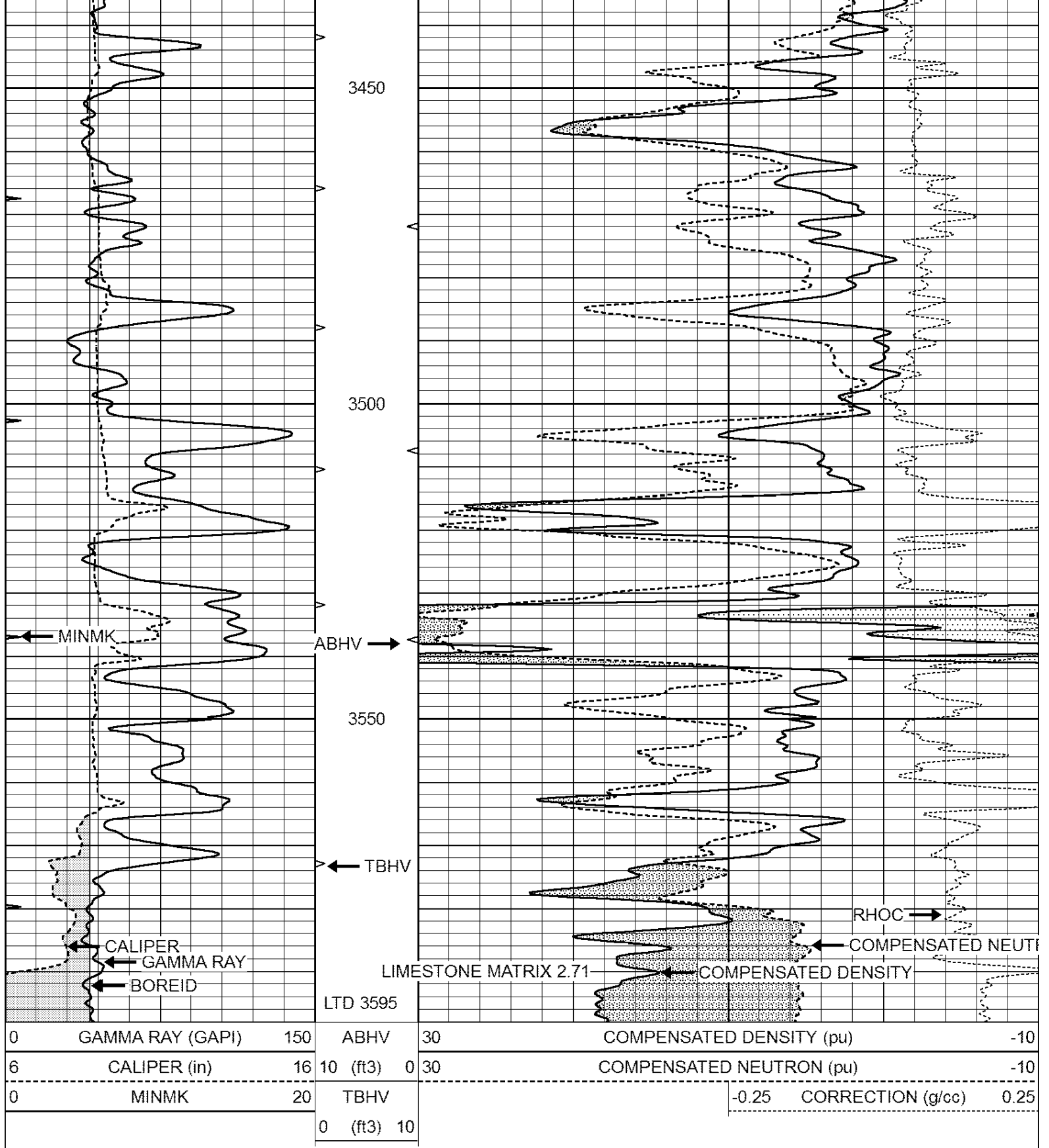










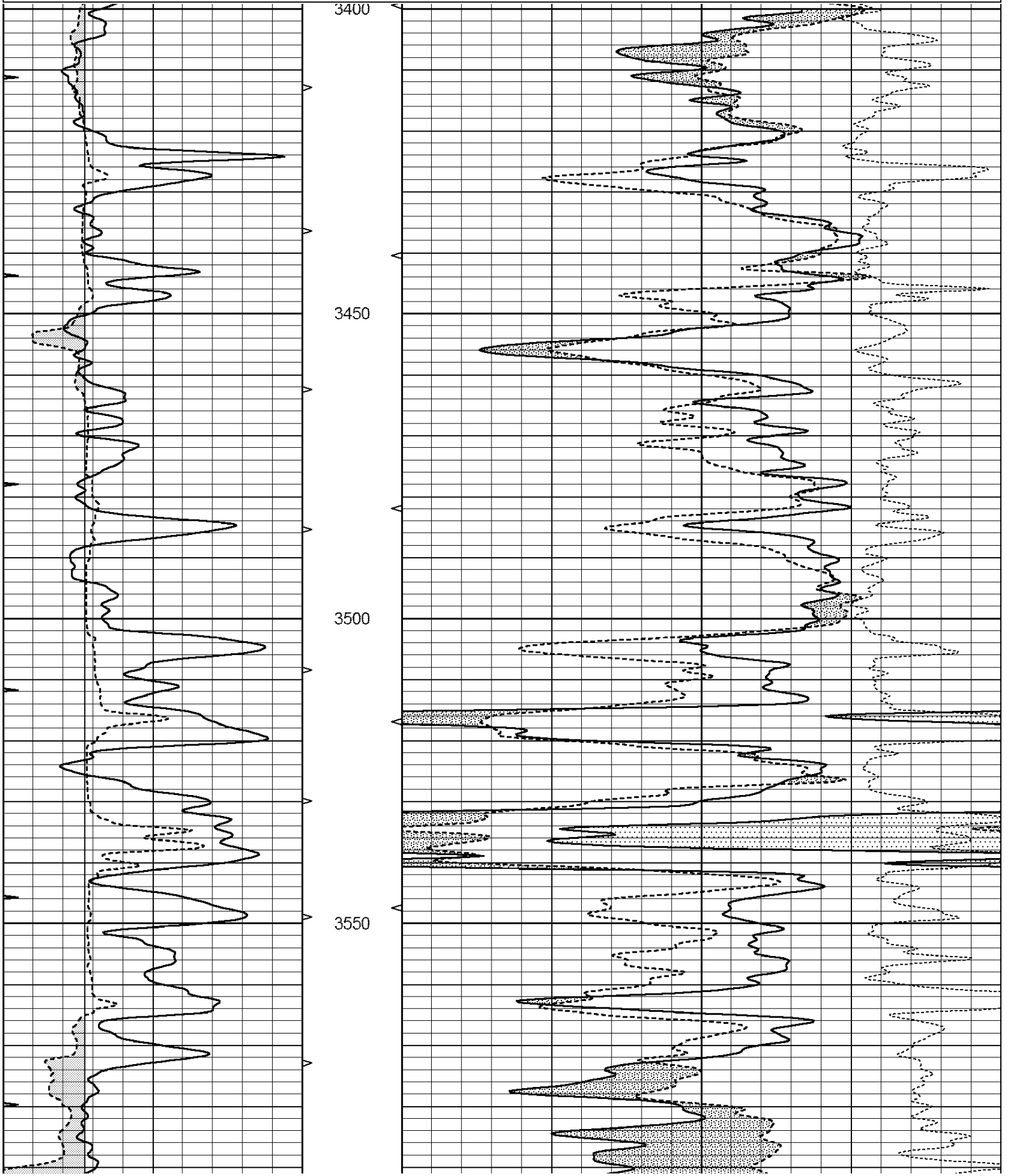


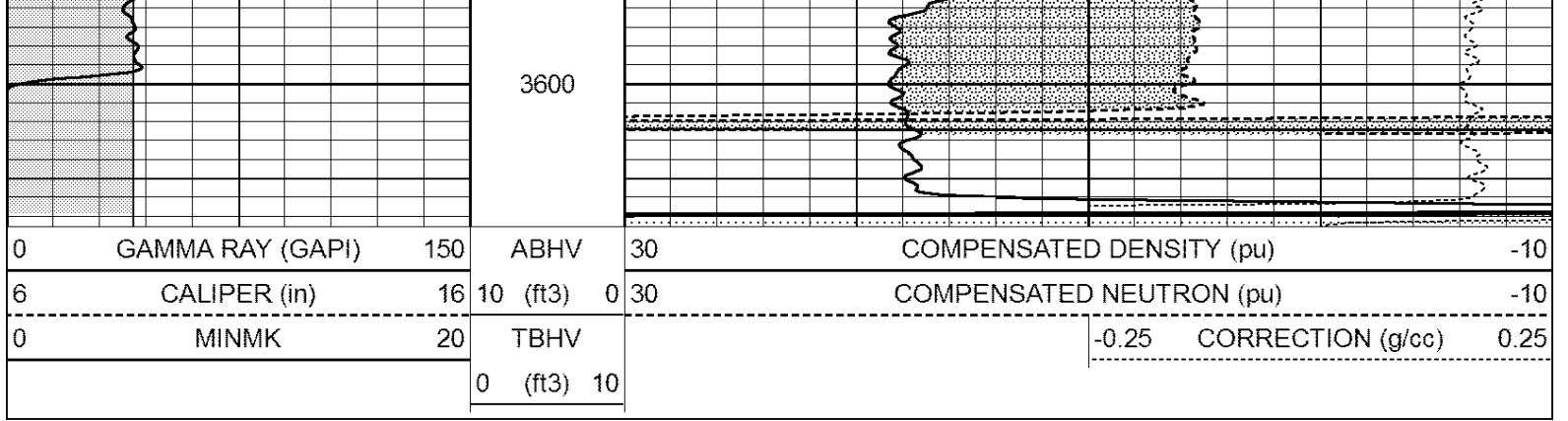
REPEAT SECTION

Database File: 1462ddn.db
 Dataset Pathname: pass4.3
 Presentation Format: den_neu

11/11/11 15:22:00 00 00171 0 1 0 0 1000000

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: 1462ddn.db
 Dataset Pathname: pass4.3
 Dataset Creation: Mon Apr 17 22:33:29 2017 by Calc Open-Cased 090629

Compensated Density Calibration Report

Serial-Model: GEAR5-GEARHART
 Source / Verifier: /
 Master Calibration Performed: Tue Mar 21 18:56:14 2017
 Before Survey Verification Performed:
 After Survey Verification Performed:

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	798.83	465.02	cps
Aluminum	2.570	g/cc	178.16	318.19	cps
Spine Angle = 75.81			Density/Spine Ratio = 0.556		
	Size		Reading		
Small Ring	7.15	in	1.47	V	
Large Ring	14.00	in	3.01	V	

Before Survey Verification

Target	Measured
g/cc	g/cc
g/cc	g/cc
g/cc	g/cc

After Survey Verification

Target	Measured
g/cc	g/cc
g/cc	g/cc
g/cc	g/cc

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

PRE-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space	cps		
	Long Space	cps	pu	pu
2)	Short Space	cps		
	Long Space	cps	pu	
3)	Short Space	cps		
	Long Space	cps	pu	

POST-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space	cps		
	Long Space	cps	pu	pu
2)	Short Space	cps		
	Long Space	cps	pu	pu
3)	Short Space	cps		
	Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number: GR6
 Tool Model: OPEN
 Performed: Tue Mar 21 18:56:51 2017

Calibrator Value: 150.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 276.0 cps

Sensitivity: 0.6000 GAPI/cps