



**COMPENSATED  
DENSITY/NEUTRON  
PE/LOG**

Company AGV CORPORATION  
Well SPRAGUE #1  
Field PAUL SOUTH  
County BUTLER  
State KANSAS

Company AGV CORPORATION  
Well SPRAGUE #1  
Field PAUL SOUTH  
County BUTLER State KANSAS

Location: API # : 15-015-24136-0000  
1310' FSL & 1395' FEL  
SEC 35 TWP 25S RGE 3E  
Permanent Datum GROUND LEVEL Elevation 1304  
Log Measured From KELLY BUSHING 9' A.G.L.  
Drilling Measured From KELLY BUSHING  
Elevation  
K.B. 1313  
D.F. 1311  
G.L. 1304

Date	11/01/19
Run Number	ONE
Depth Driller	2830
Depth Logger	2832
Bottom Logged Interval	2812
Top Log Interval	1650
Casing Driller	8 5/8" @ 265
Casing Logger	265
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.6/50
pH / Fluid Loss	9.5/8.8
Source of Sample	FLOWLINE
Rm @ Meas. Temp	1.1 @ 55F
Rmt @ Meas. Temp	.83 @ 55F
Rmc @ Meas. Temp	1.32 @ 55F
Source of Rmf / Rmc	MEASURED
Rm @ BHT	.57 @ 106F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	////
Maximum Recorded Temperature	106F
Equipment Number	1523
Location	HAYS, KANSAS
Recorded By	GUS PFANENSTIEL
Witnessed By	KENT ROBERTS

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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

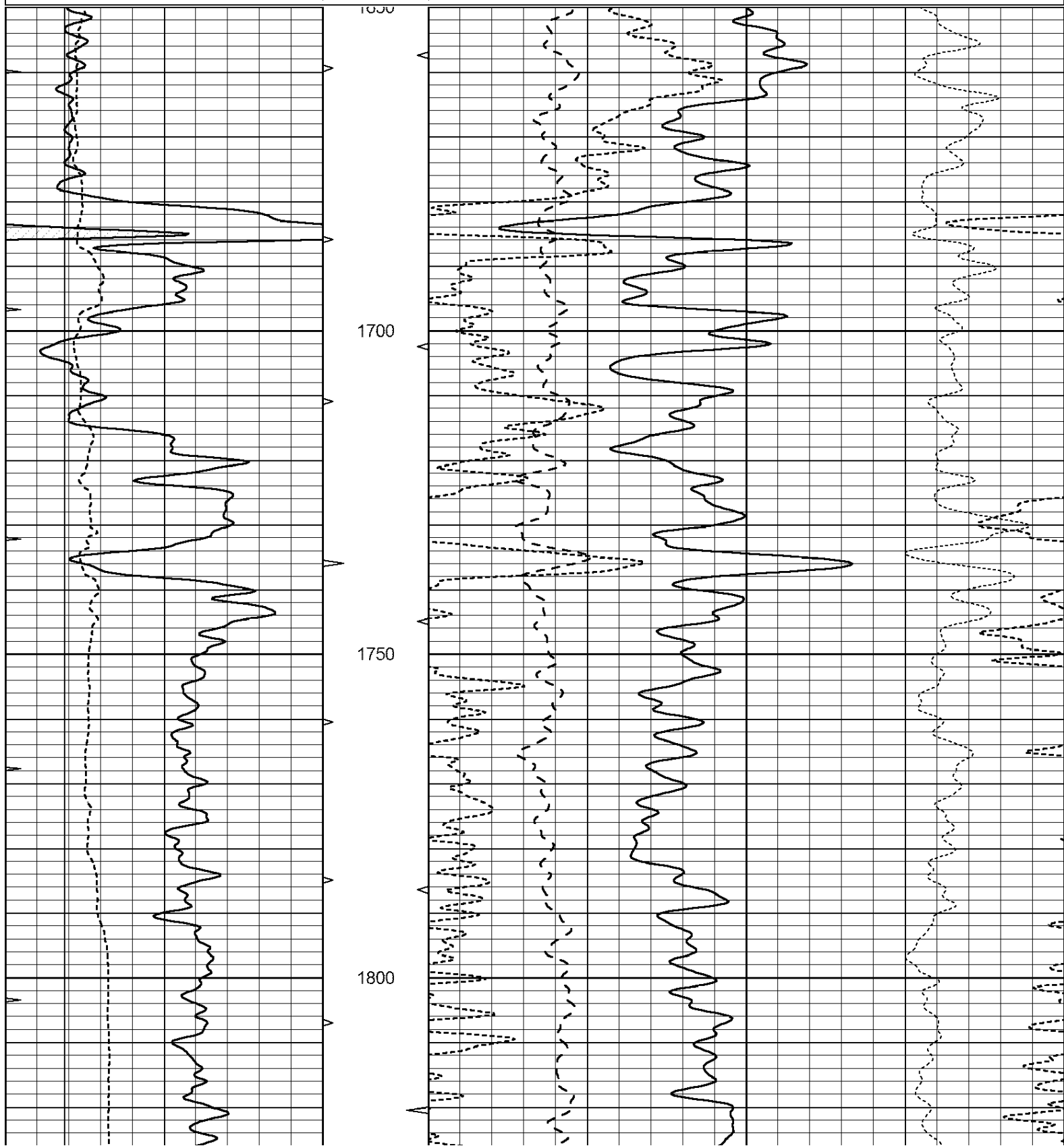
DIRECTIONS  
WEST SIDE OF BENTON TO MEADOWLARK RD., 2 NORTH,  
1 1/2 E, NORTH INTO.

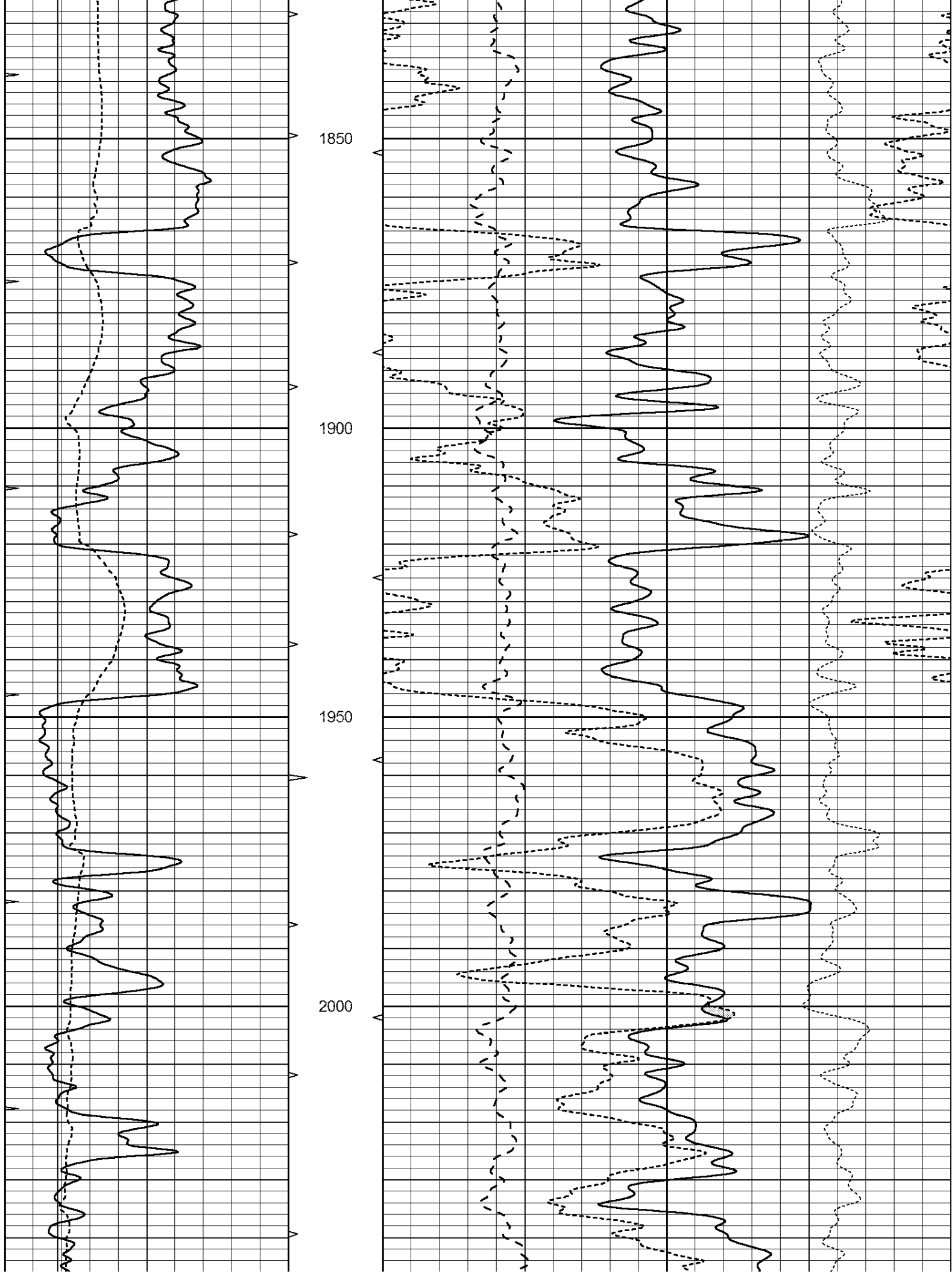


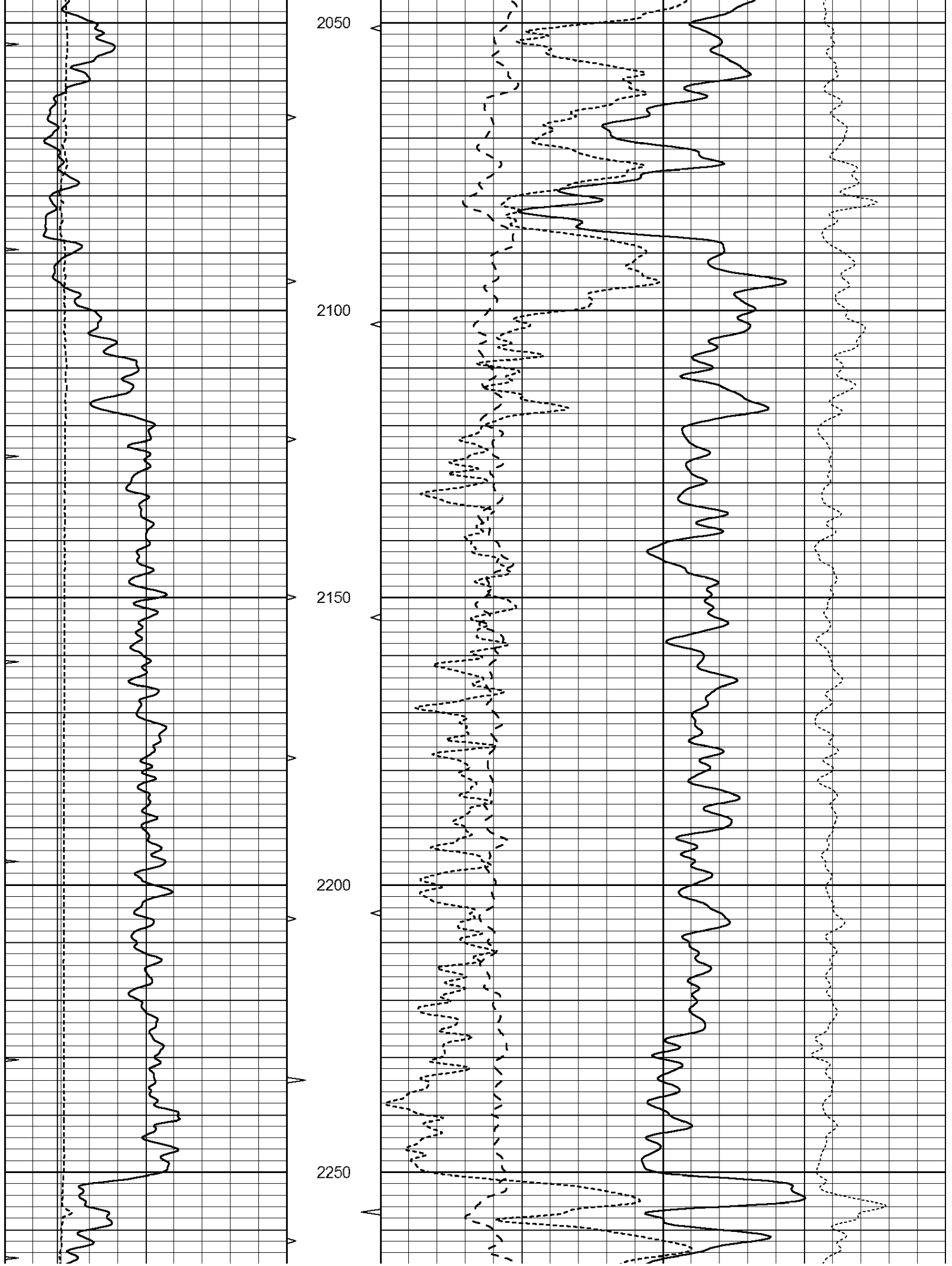
**MAIN PASS**

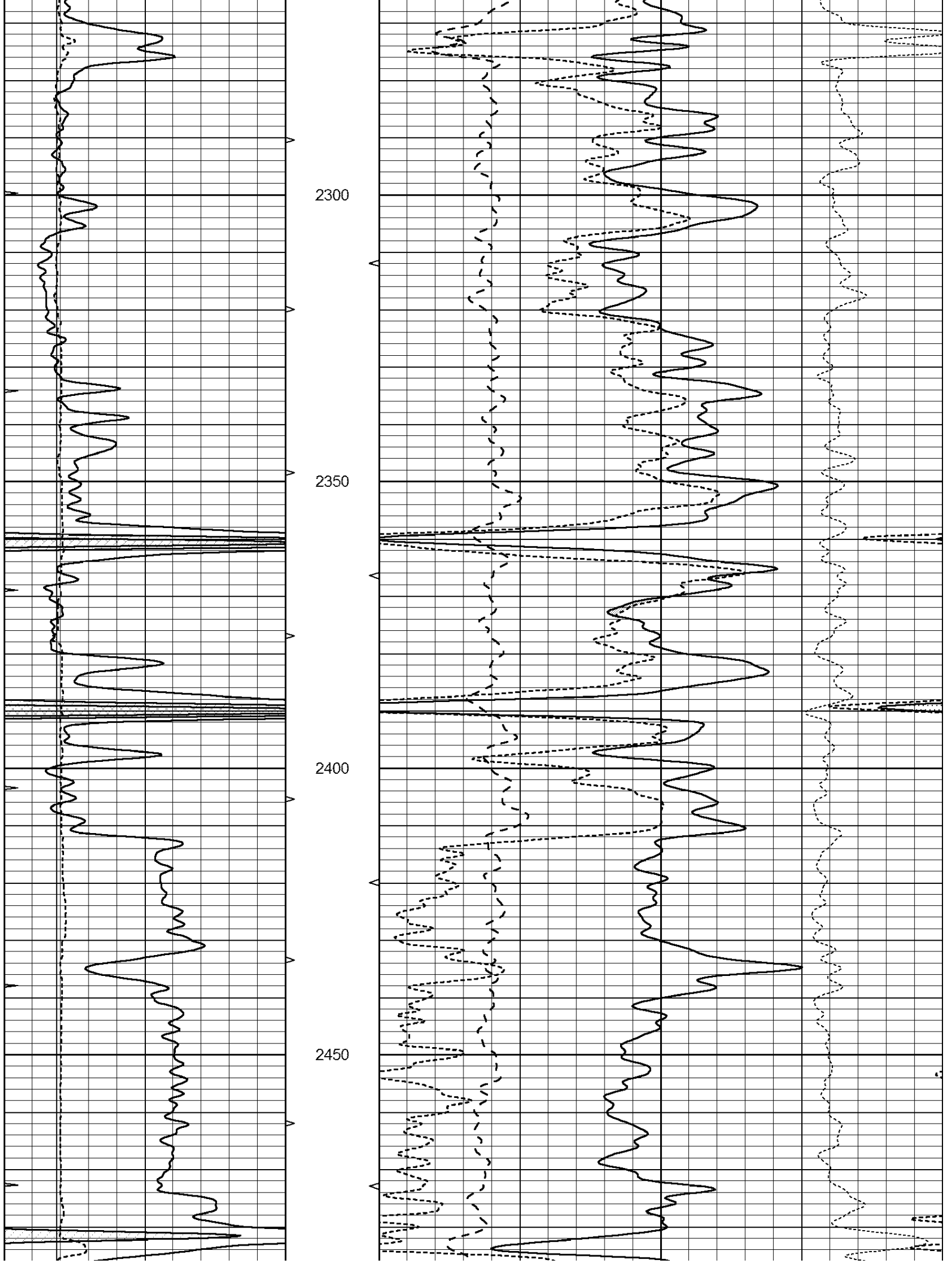
Database File: 4455pe.db  
 Dataset Pathname: pass6.1  
 Presentation Format: \_ldt\_neu  
 Dataset Creation: Fri Nov 01 11:43:17 2019  
 Charted by: Depth in Feet scaled 1:240

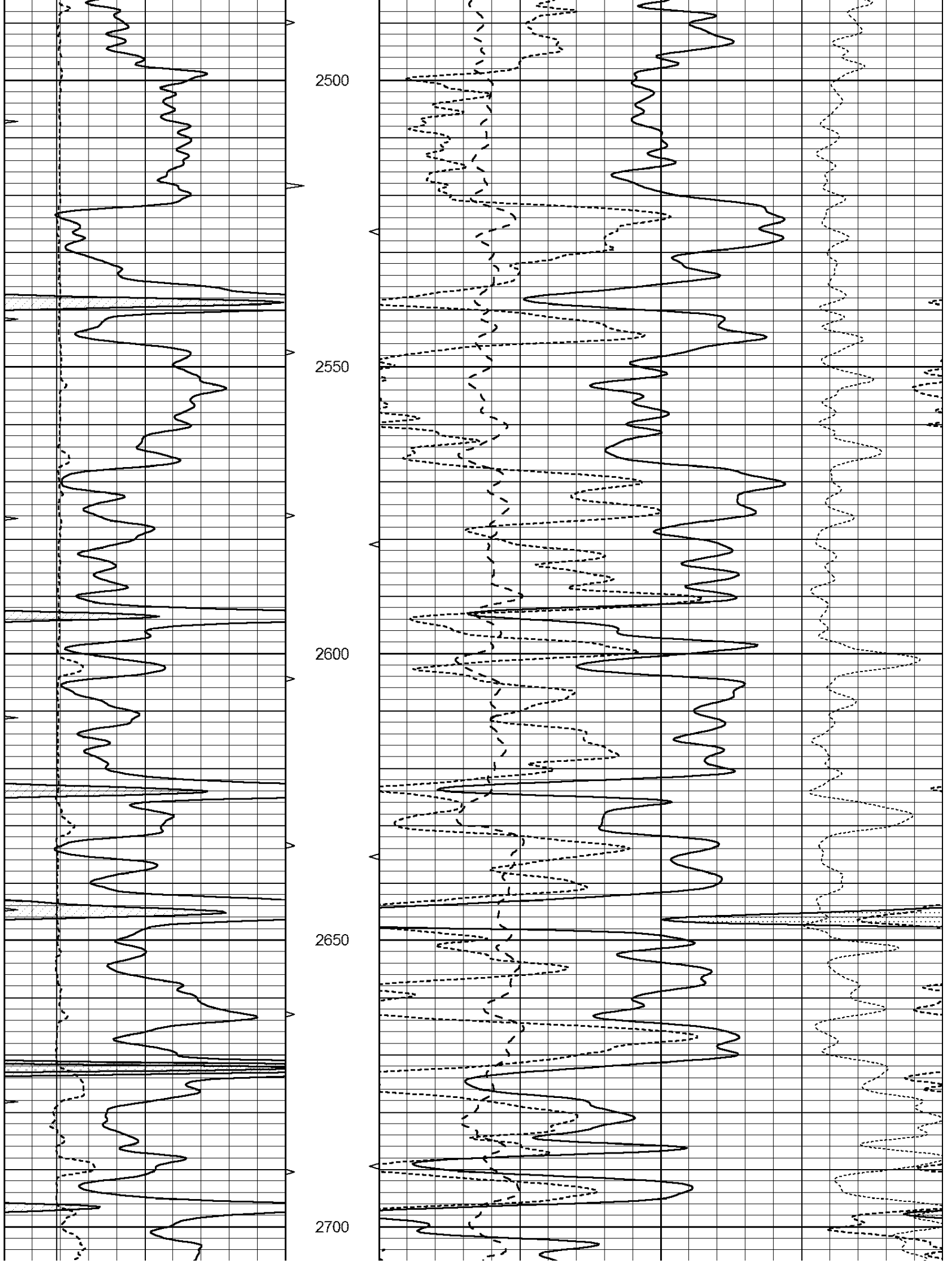
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)		-10
6	CALIPER (in)	16	10 (ft3)	0	COMPENSATED NEUTRON (pu)		-10
0	MINMK	20	TBHV	0	PE	10	-0.25 CORRECTION (g/cc) 0.25
			0 (ft3)	10			

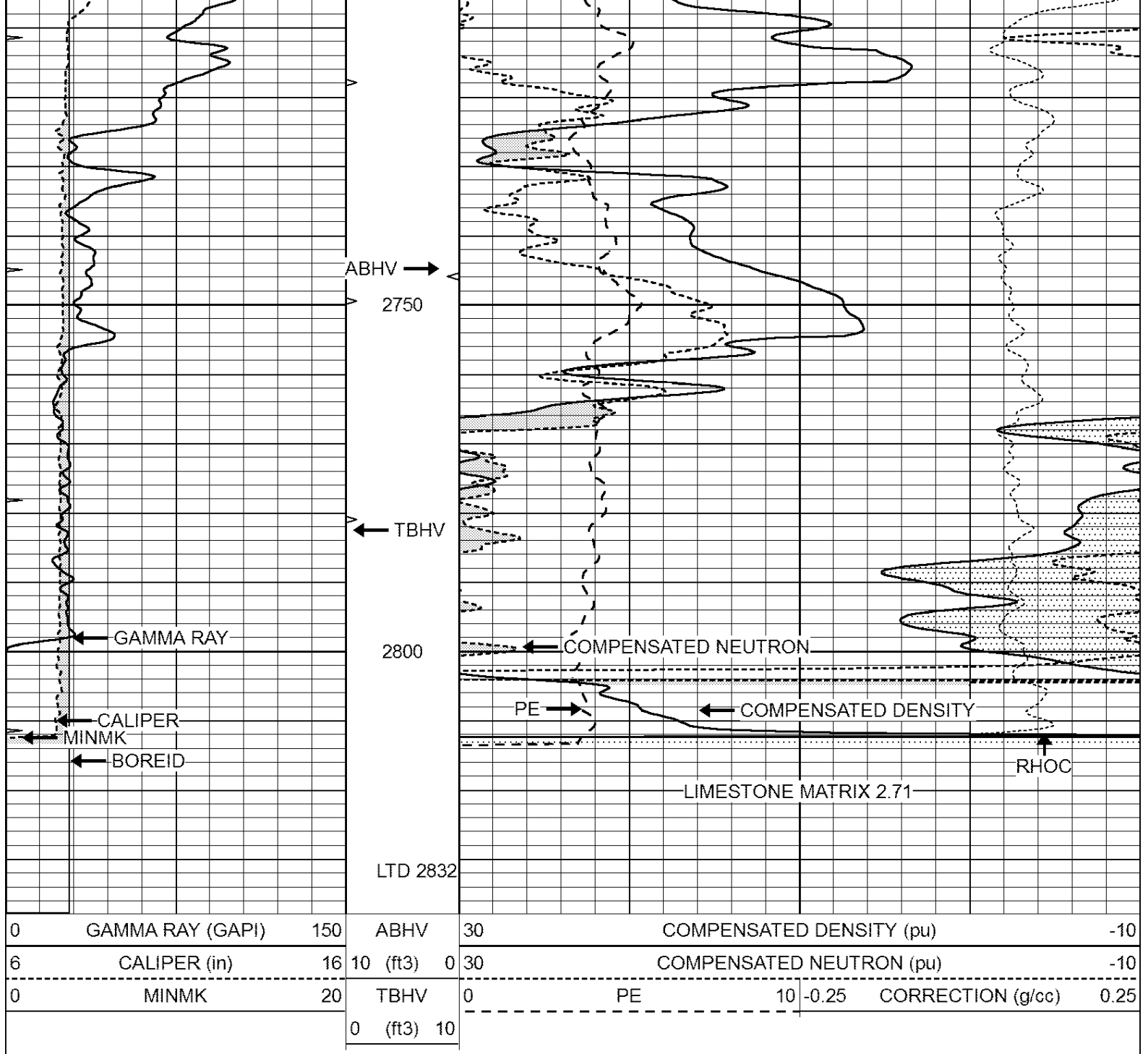




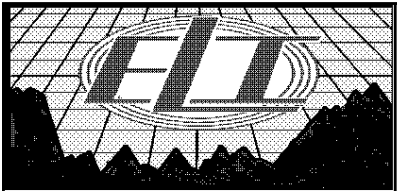








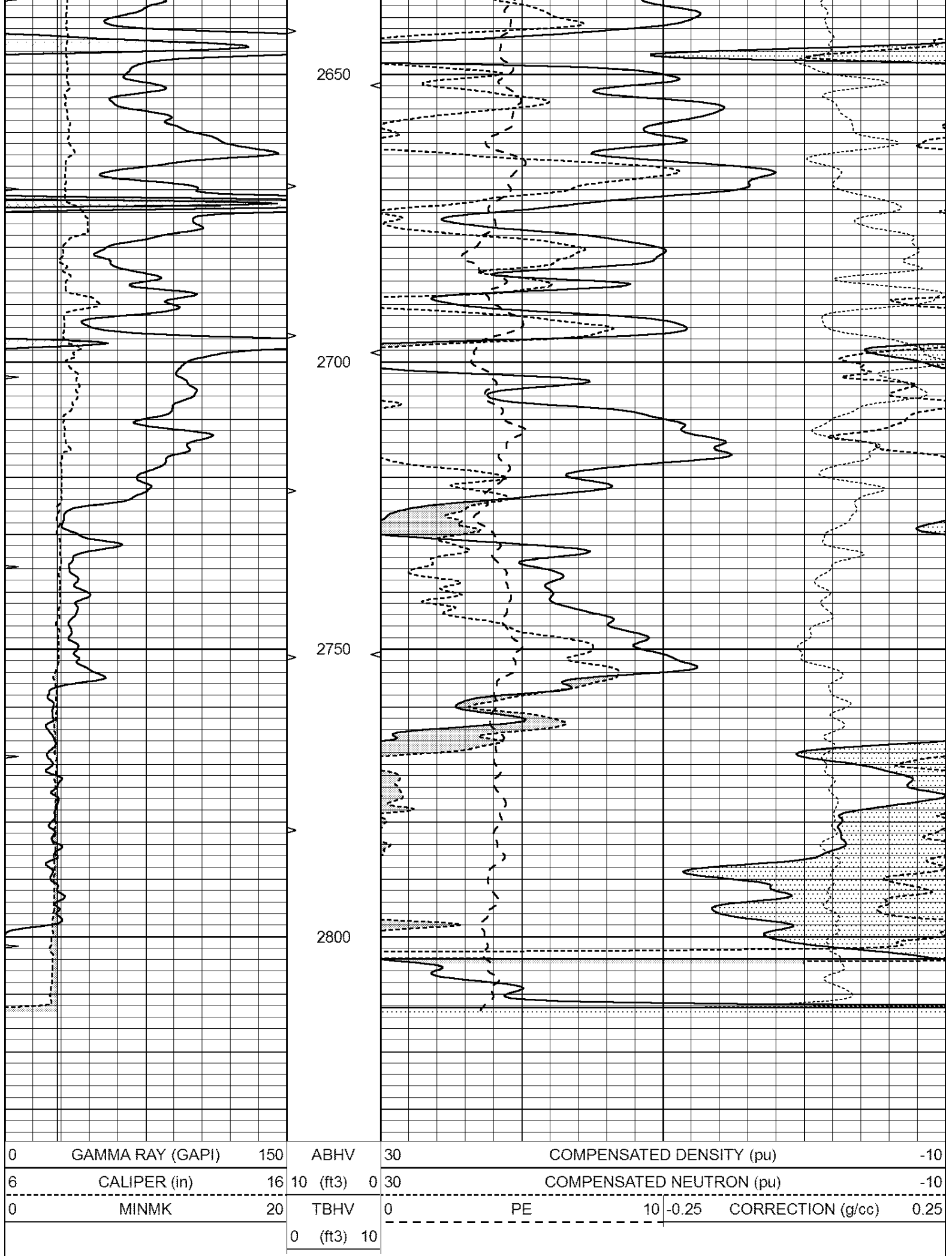
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV	0	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3)	10		



# REPEAT SECTION

Database File: 4455pe.db  
 Dataset Pathname: pass5.1  
 Presentation Format: \_ldt\_neu  
 Dataset Creation: Fri Nov 01 11:08:37 2019 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	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3)	10		



Calibration Report

Database File: 4455pe.db  
 Dataset Pathname: pass5.1  
 Dataset Creation: Fri Nov 01 11:08:37 2019 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG  
 Surface Cal Performed: Mon Sep 10 14:28:35 2018  
 Downhole Cal Performed: Mon Sep 10 14:28:38 2018  
 After Survey Verification Performed: Mon Sep 10 14:28:40 2018

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	620.000	0.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-12.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	mmho-m		

After Survey Verification

	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		

Litho Density Calibration Report

Serial: 006 Model: PRB

Master Calibration

Performed Fri Feb 22 09:59:16 2019

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1164.1	7287.2	2529.1	8656.3	cps
Window 2	1091.2	5350.1	2037.8	6279.8	cps
Window 3	821.7	2635.2	1183.7	2961.9	cps
Window 4	277.9	276.4	275.2	279.7	cps
Long Space	0.0	4355.6	946.5	5188.6	cps
Short Space	1.6	1496.1	994.4	1563.6	cps
Rho		1.7100	2.5960	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	

Rib Angle	: 44.8	Rib Slope	: 0.993	Density/Spine Ratio	: 0.569
Spine Angle	: 74.8	Spine Slope	: 3.682	Spine Intercept	: -18.6

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

After Survey Verification

Performed Wed Dec 31 18:00:00 1969

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

Compensated Neutron Calibration Report

Serial Number: 61  
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

Serial Number:	GR6
Tool Model:	OPEN
Performed:	Wed Jul 03 12:57:34 2019

Calibrator Value:	150.0	GAPI
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Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps

Sensitivity:	0.5700	GAPI/cps
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