



**COMPENSATED
DENSITY/NEUTRON
LOG**

Company L.D. DRILLING, INC.
Well MEADOW #1-29
Field WILD CAT
County THOMAS
State KANSAS

Company L.D. DRILLING, INC.
Well MEADOW #1-29
Field WILD CAT
County THOMAS State KANSAS

Location: 990' FNL & 330' FWL
API #: 15-193-21060-00-00
Other Services DILMEL
Permanent Datum GROUND LEVEL Elevation 3254
Log Measured From KELLY BUSHING 5' A.G.L.
Drilling Measured From KELLY BUSHING
Elevation
K.B. 3259
D.F. 3257
G.L. 3254

Date	11/21/19
Run Number	ONE
Depth Driller	4840
Depth Logger	4839
Bottom Logged Interval	4819
Top Log Interval	3600
Casing Driller	8 5/8" @ 338
Casing Logger	338
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.4/56
pH / Fluid Loss	10.5/8.8
Source of Sample	FLOWLINE
Rm @ Meas. Temp	1.0@60
Rmt @ Meas. Temp	.75@60
Rmc @ Meas. Temp	1.2@60
Source of Rmf / Rmc	MEASURED
Rm @ BHT	.48@124
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	///
Maximum Recorded Temperature	124F
Equipment Number	4010
Location	HAYS, KANSAS
Recorded By	GUS PFANENSTIEL
Witnessed By	KIM SHOEMAKER

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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

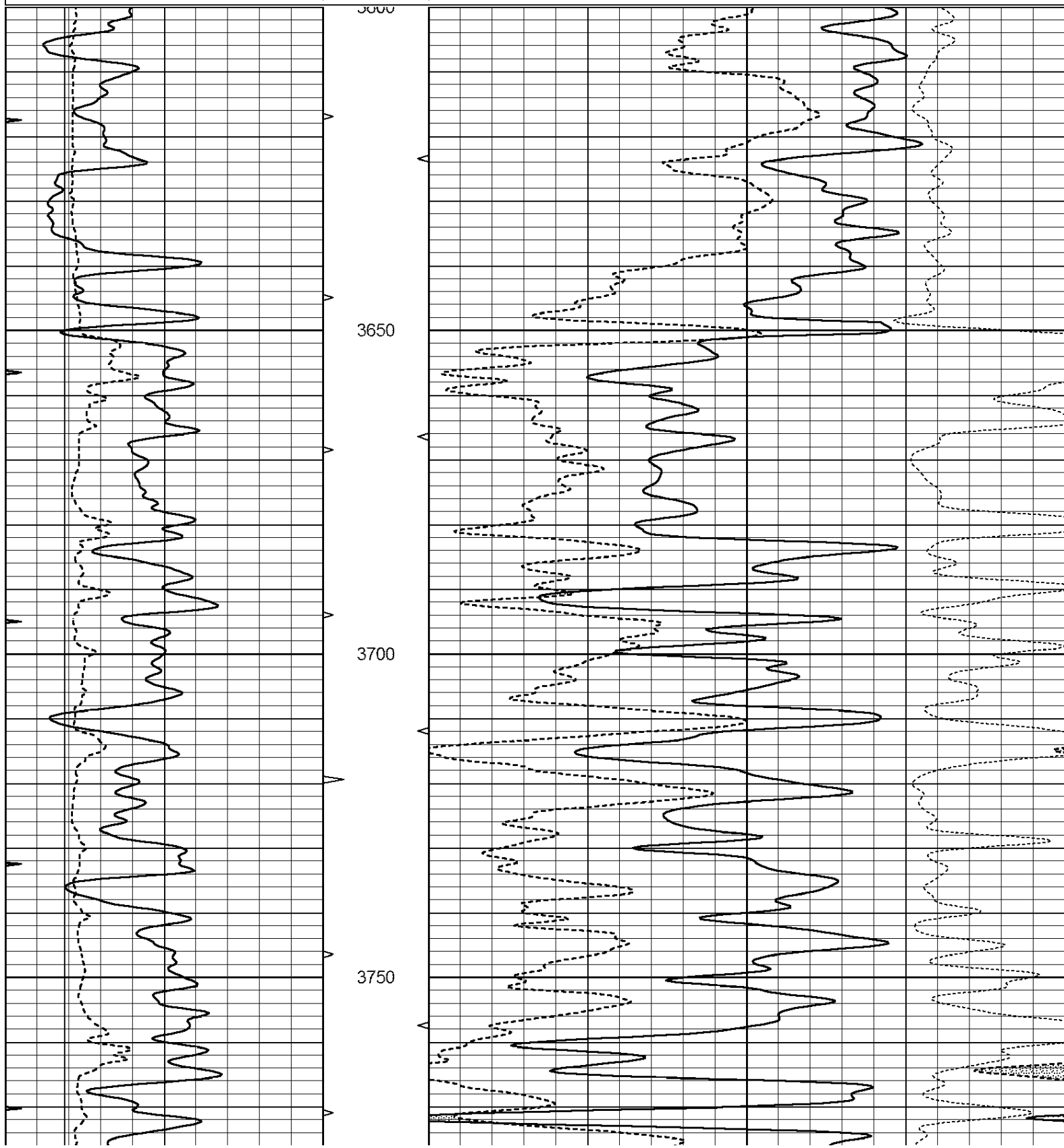
DIRECTIONS
SOUTH OF COLBY ON HWY 25 TO O RD.,
WEST 4 3/4, SOUTH INTO.

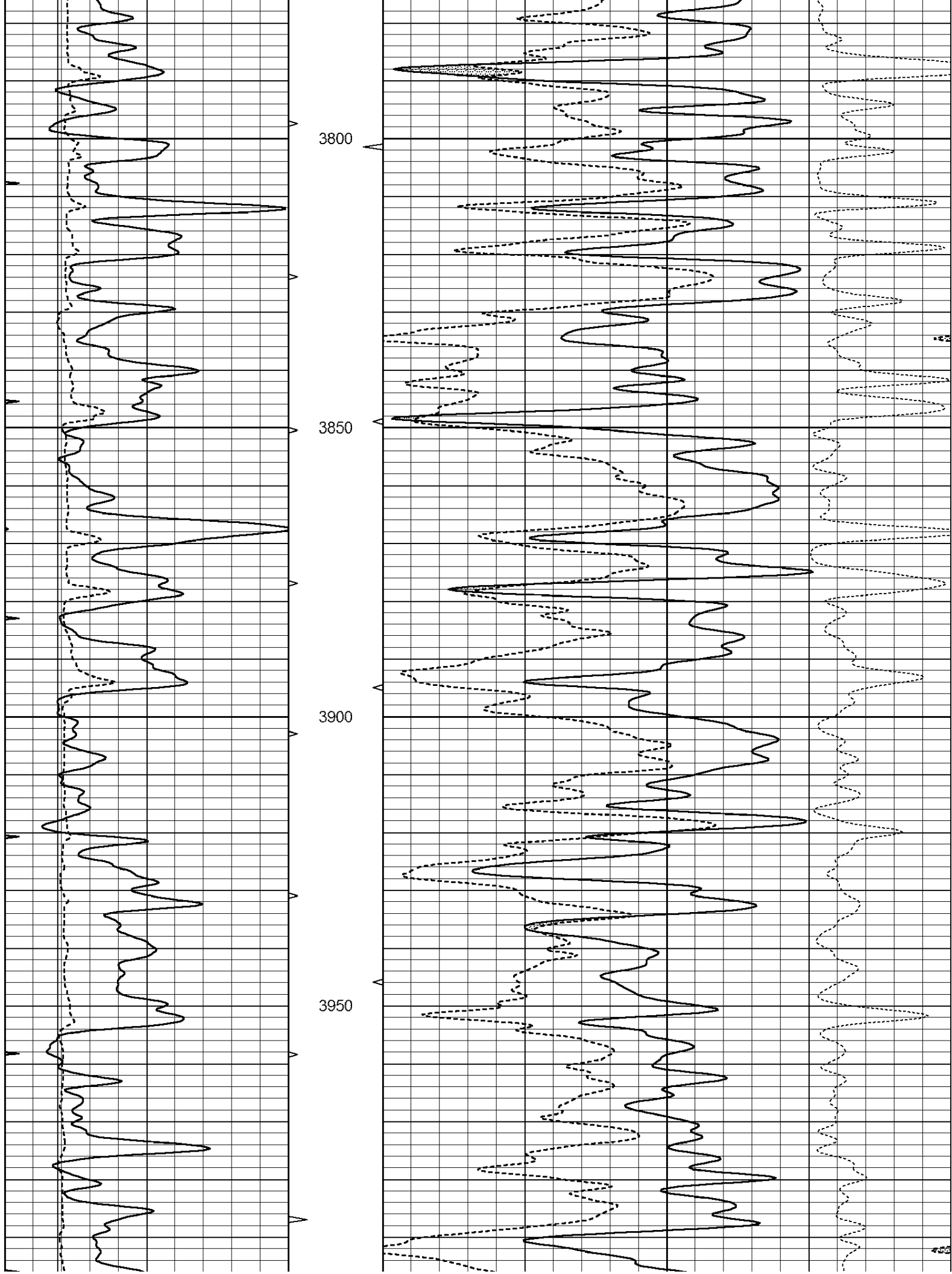


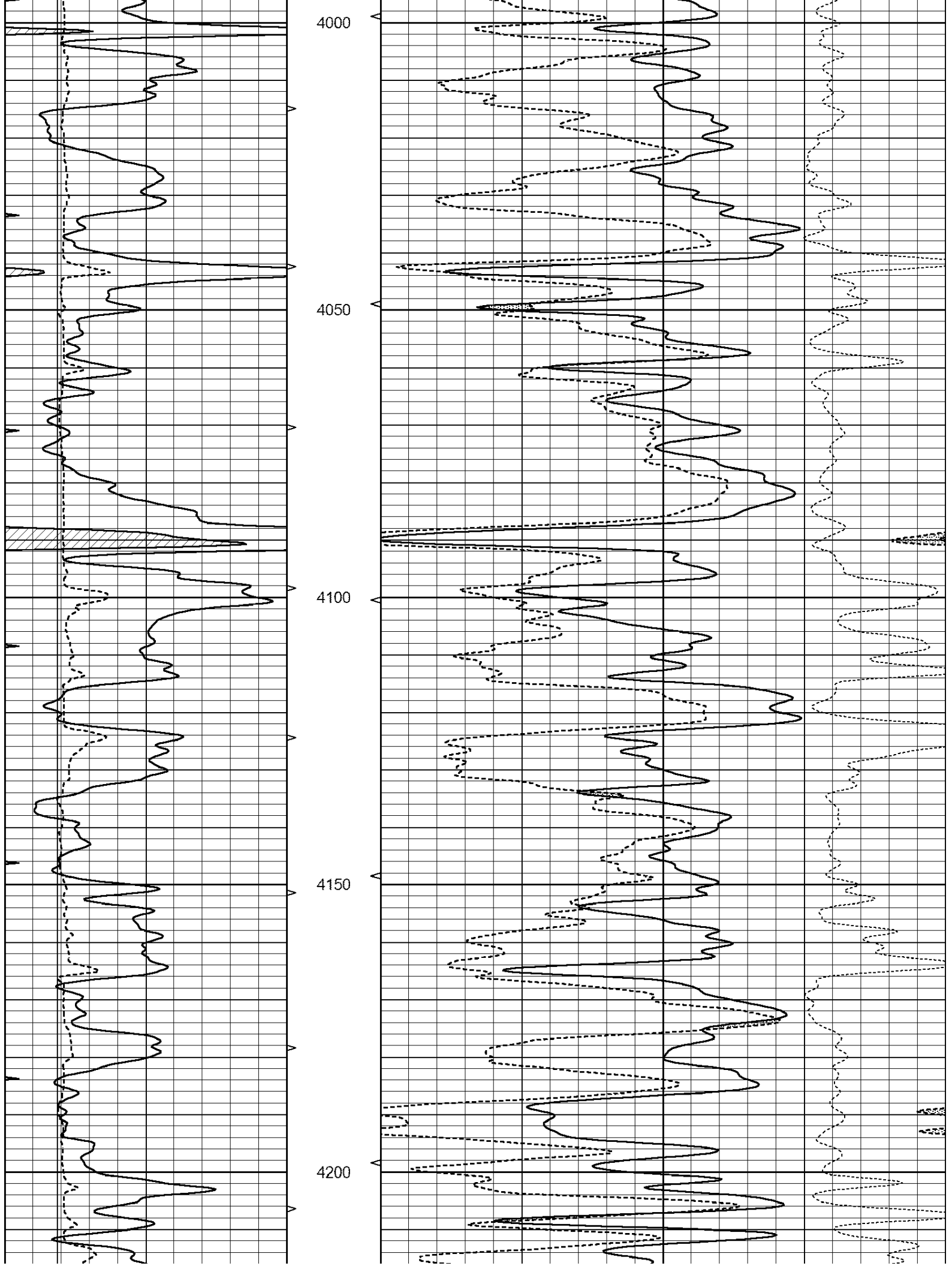
MAIN PASS

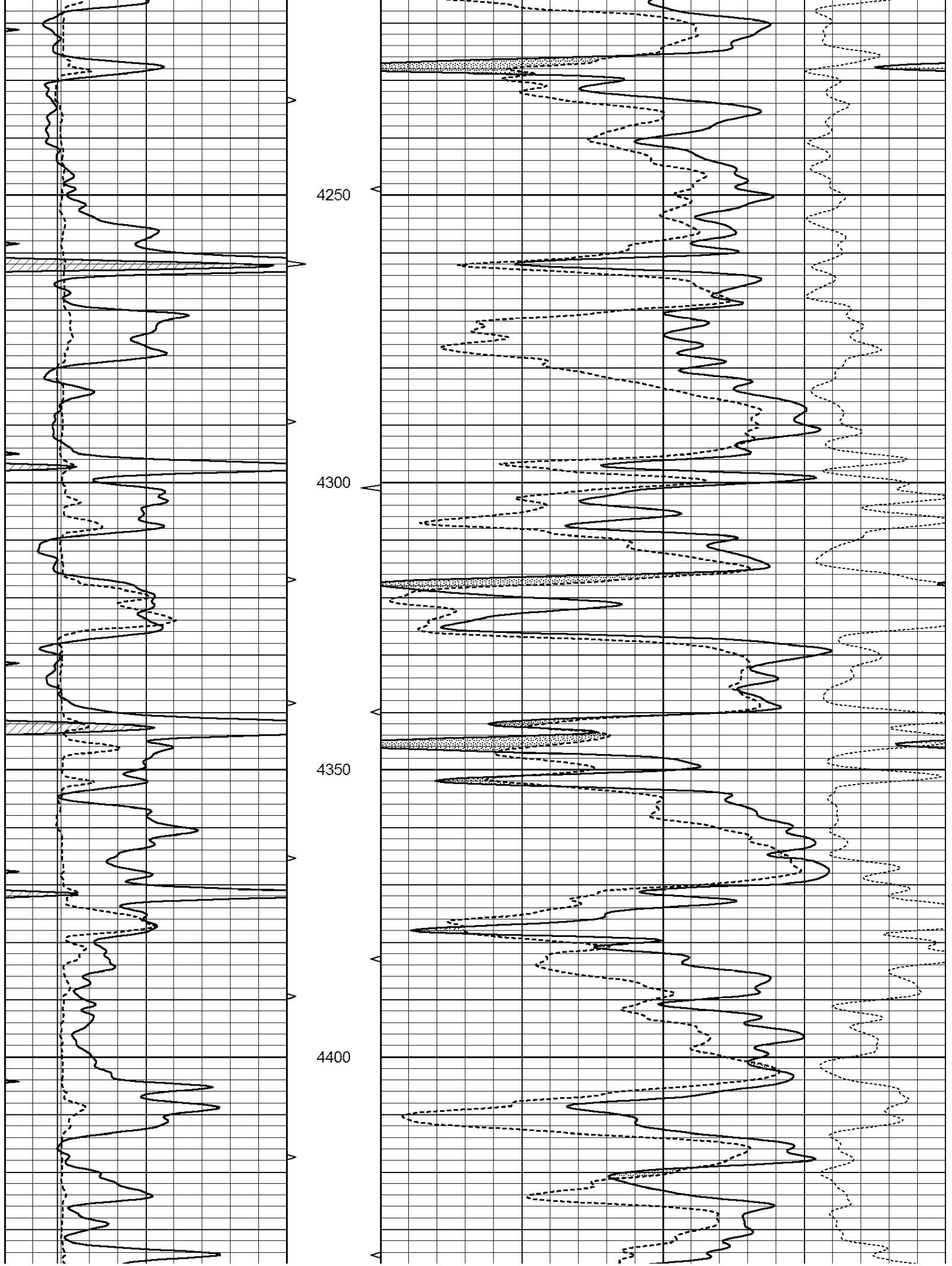
Database File: 4460ddn.db
 Dataset Pathname: pass4POR
 Presentation Format: den_neu
 Dataset Creation: Thu Nov 21 05:12:00 2019
 Charted by: Depth in Feet scaled 1:240

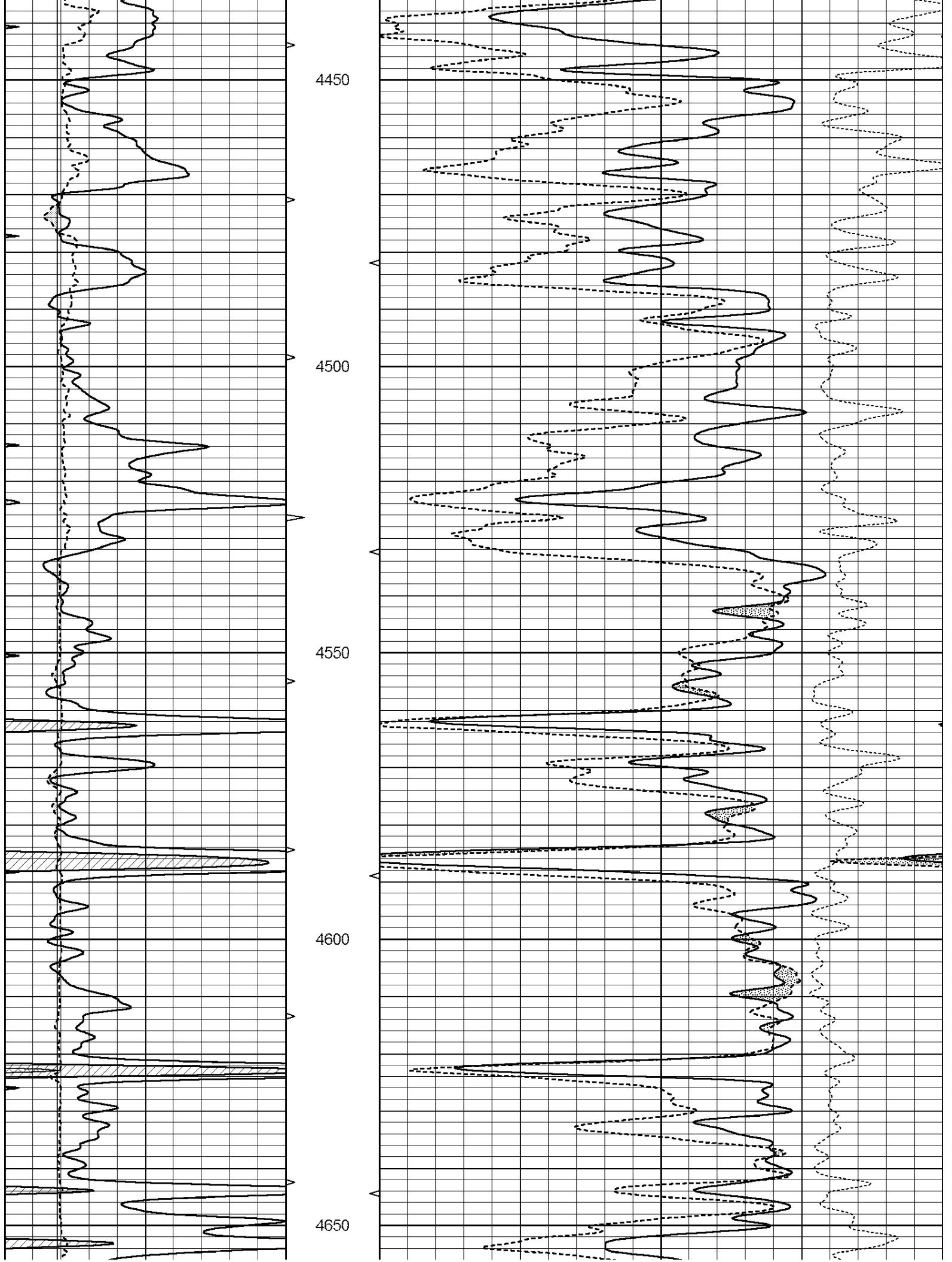
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		

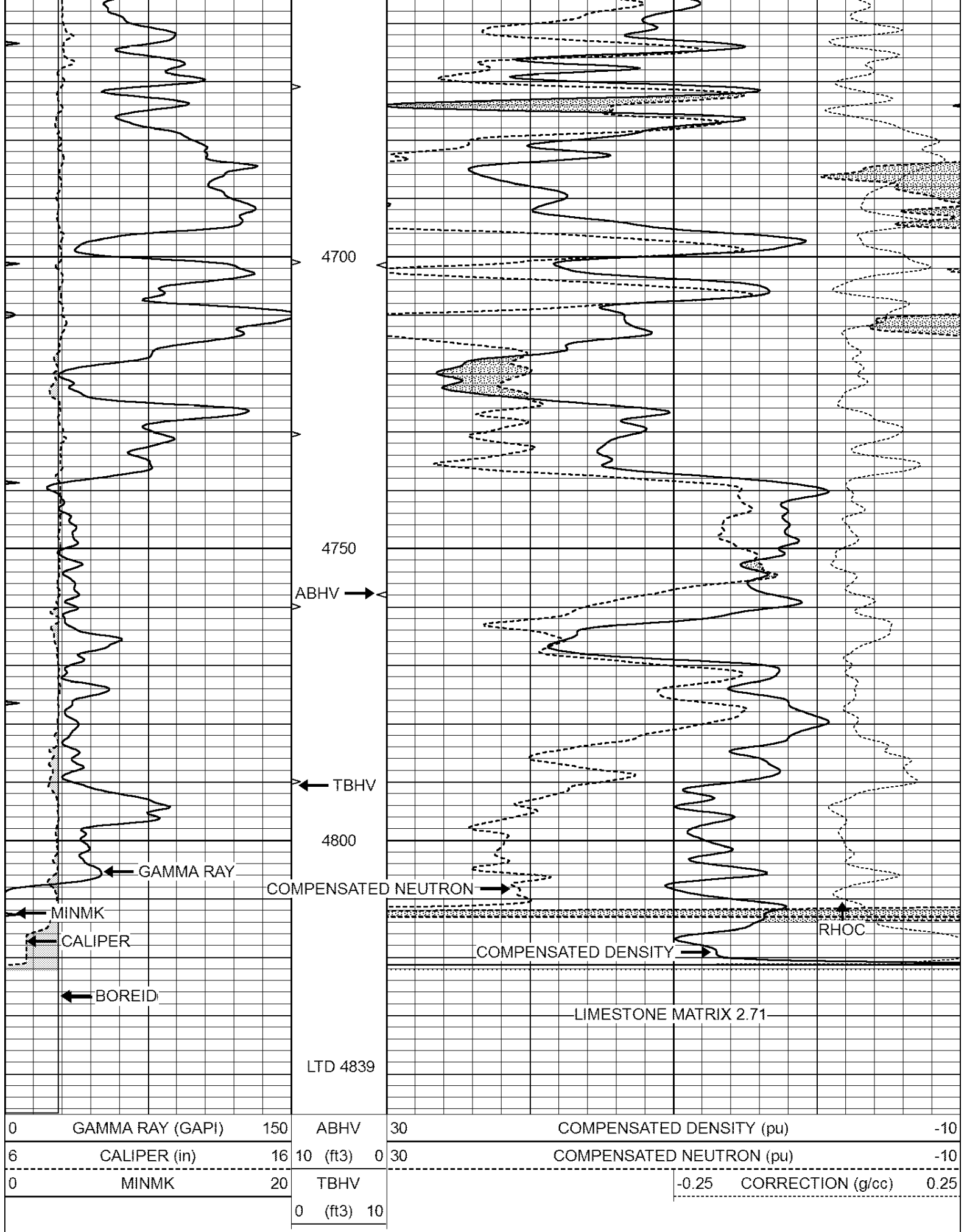


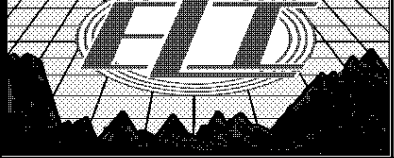








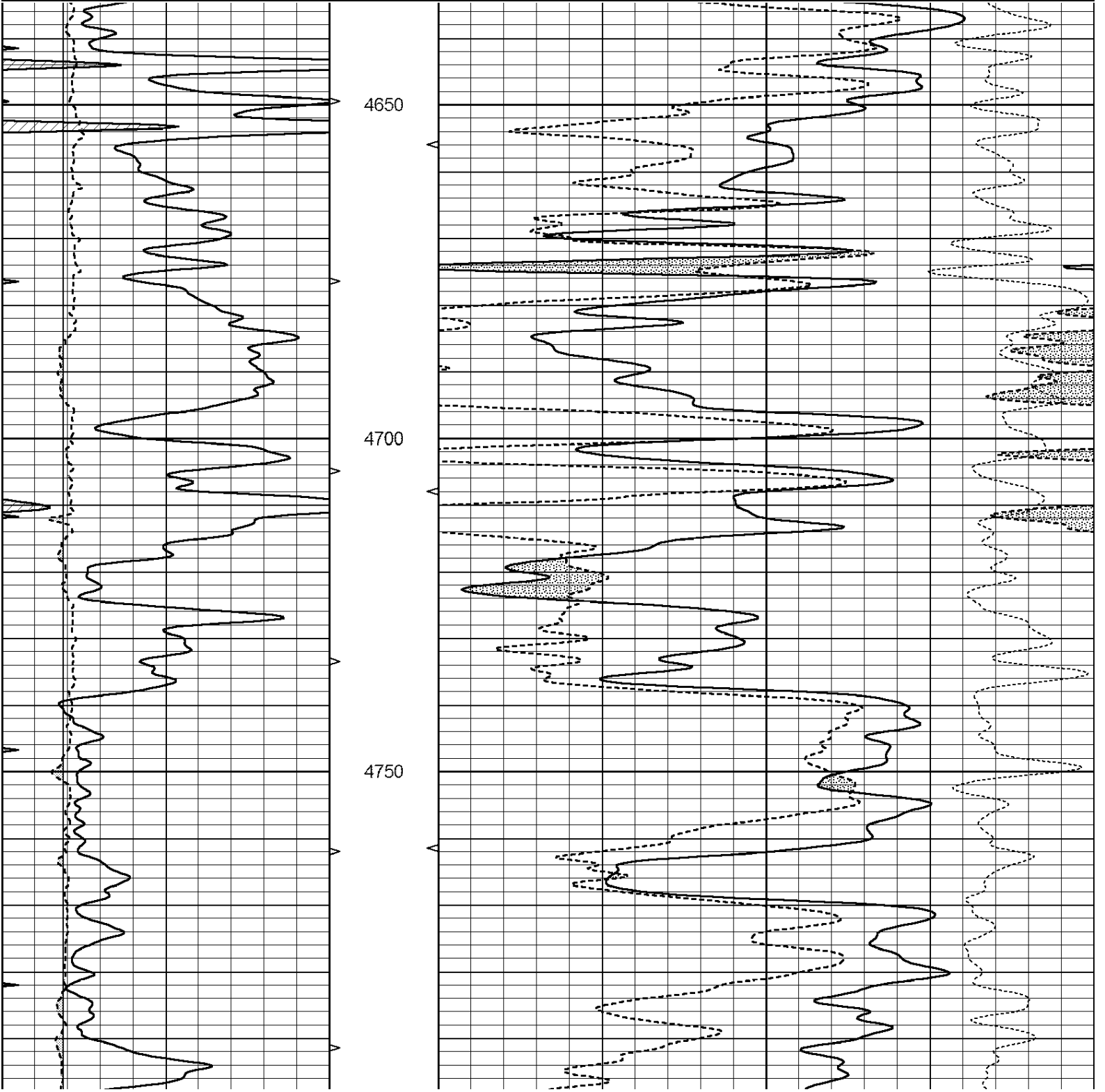


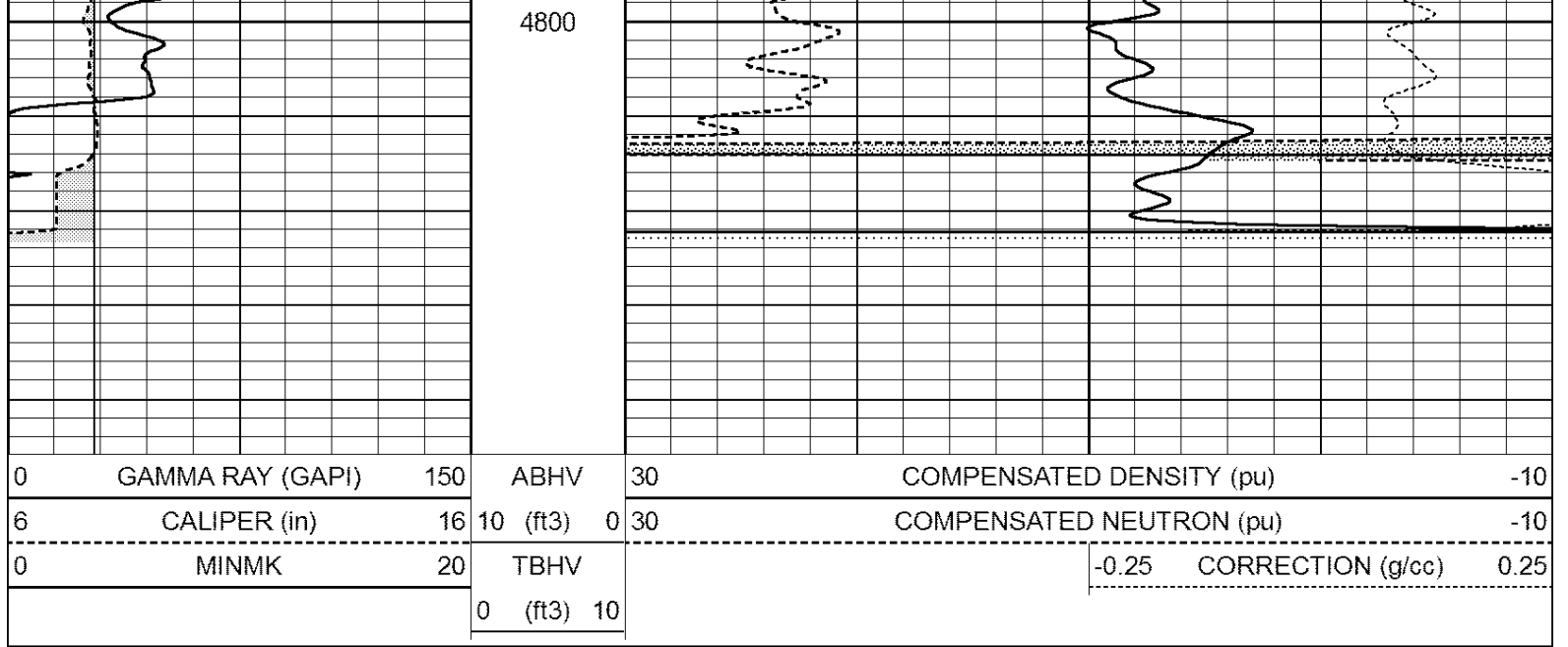


REPEAT SECTION

Database File: 4460ddn.db
 Dataset Pathname: pass3RP
 Presentation Format: den_neu
 Dataset Creation: Thu Nov 21 04:44:02 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		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		





Calibration Report

Database File: 4460ddn.db
 Dataset Pathname: pass3RP
 Dataset Creation: Thu Nov 21 04:44:02 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	V	Air	Loop	mmho/m	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	V	Zero	Cal	mmho/m	m'	b'
Deep	0.000	0.000	V	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	V	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	V	Zero	Cal	mmho/m	m'	b'
Deep	0.000	0.000	V	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	V	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	V		1.000	Ohm-m		
		0.000	V		0.000	Ohm-m		
		1.000	V		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

Before Survey Verification

Performed Wed Dec 31 18:00:00 1969

	Background	Magnesium	Aluminum	Sandstone	
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

	Background	Magnesium	Aluminum	Sandstone	
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: 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 Long Space	cps cps	pu	
3)	Short Space Long Space	cps cps	pu	

POST-SURVEY VERIFICATION

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

Gamma Ray Calibration Report

Serial Number:	GR6	
Tool Model:	OPEN	
Performed:	Wed Jul 03 12:57:34 2019	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.5700	GAPI/cps