



**COMPENSATED
DENSITY/NEUTRON
LOG**

Company L.D. DRILLING, INC.
Well VANDENBERG #1-8
Field BROWNS GROVE
County PAWNEE
State KANSAS

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Field BROWNS GROVE
County PAWNEE State KANSAS

Location: 1750' FSL & 2310' FWL
API #: 15-145-21863-0000
Other Services DIL
Permanent Datum GROUND LEVEL Elevation 2196
Log Measured From KELLY BUSHING 5' A.G.L
Drilling Measured From KELLY BUSHING
Elevation K.B. 2201
D.F. 2199
G.L. 2196

Date	11/11/20
Run Number	ONE
Depth Driller	4359
Depth Logger	4348
Bottom Logged Interval	4345
Top Log Interval	3500
Casing Driller	8 5/8" @ 476
Casing Logger	476
Bit Size	7 7/8
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.3/61
pH / Fluid Loss	10.0/12.0
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.65 @ 65F
Rmf @ Meas. Temp	.49 @ 65F
Rmc @ Meas. Temp	.78 @ 65F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	.35 @ 119F
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	////
Maximum Recorded Temperature	119F
Equipment Number	3802
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

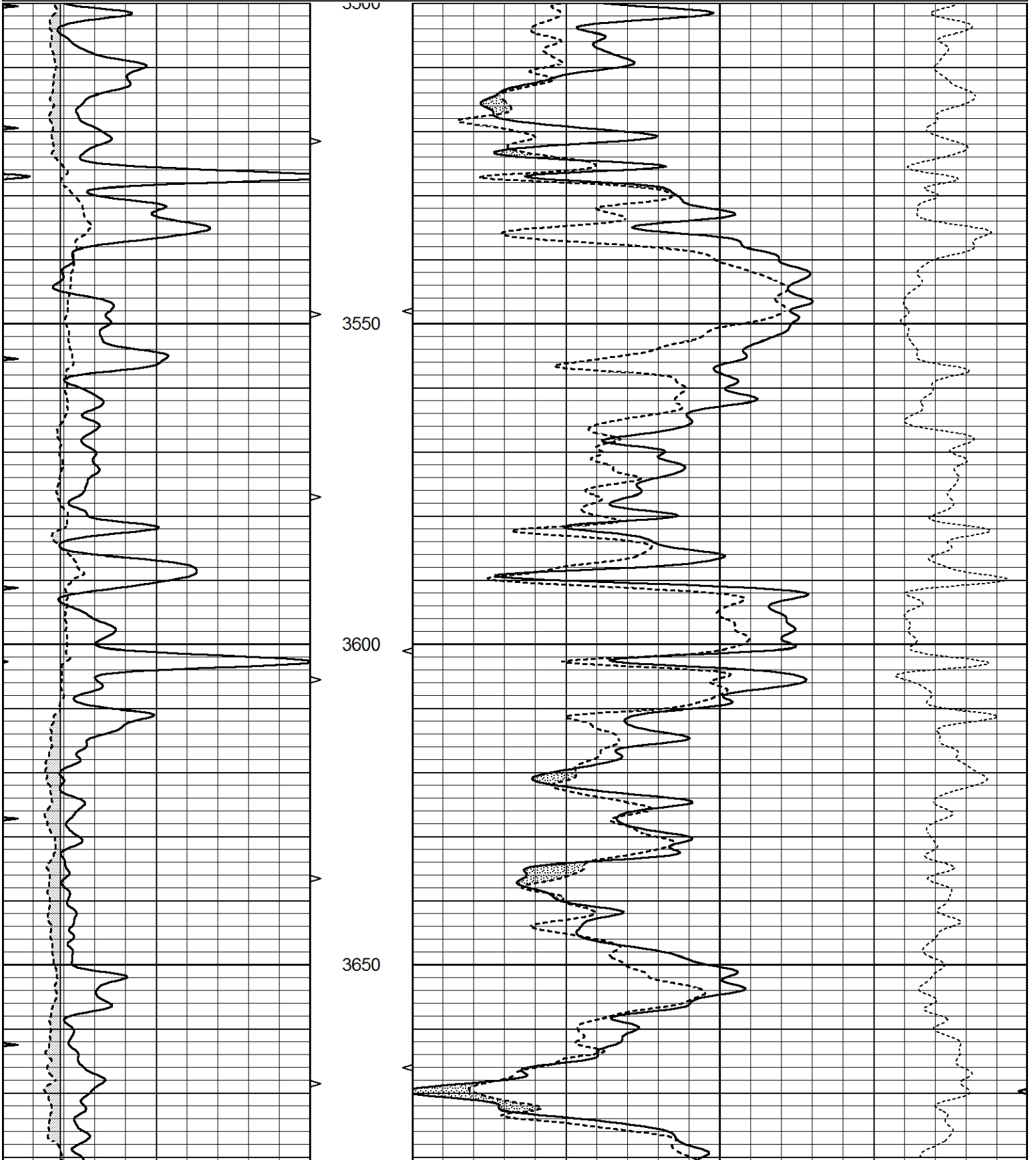
THANK YOU FOR USING ELI WIRELINE SERVICES, HAYS, KS. (785) 628-6395
DIRECTIONS
ALEXANDER TO X RD. 1/2 EAST, NORTH INTO.

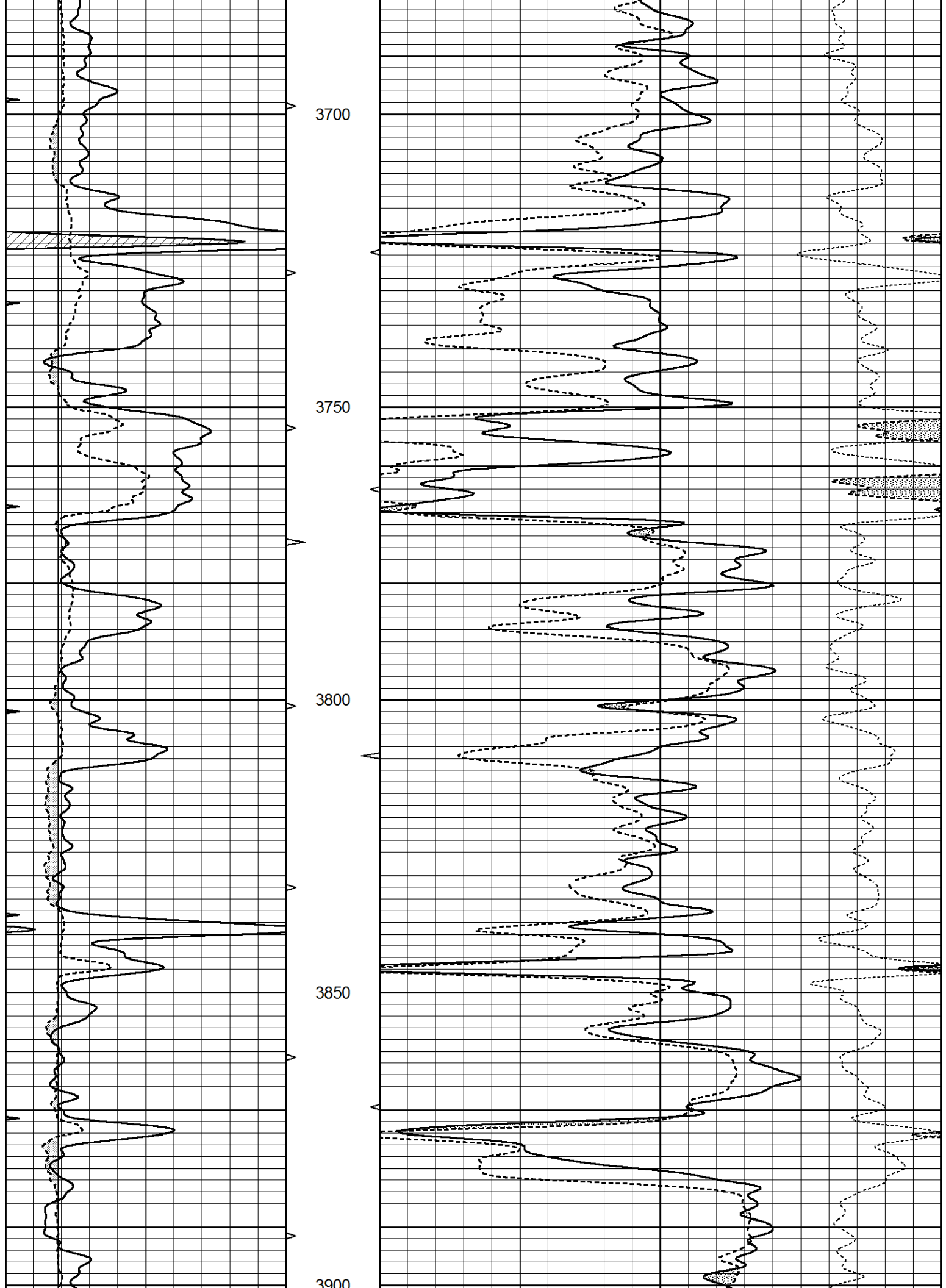


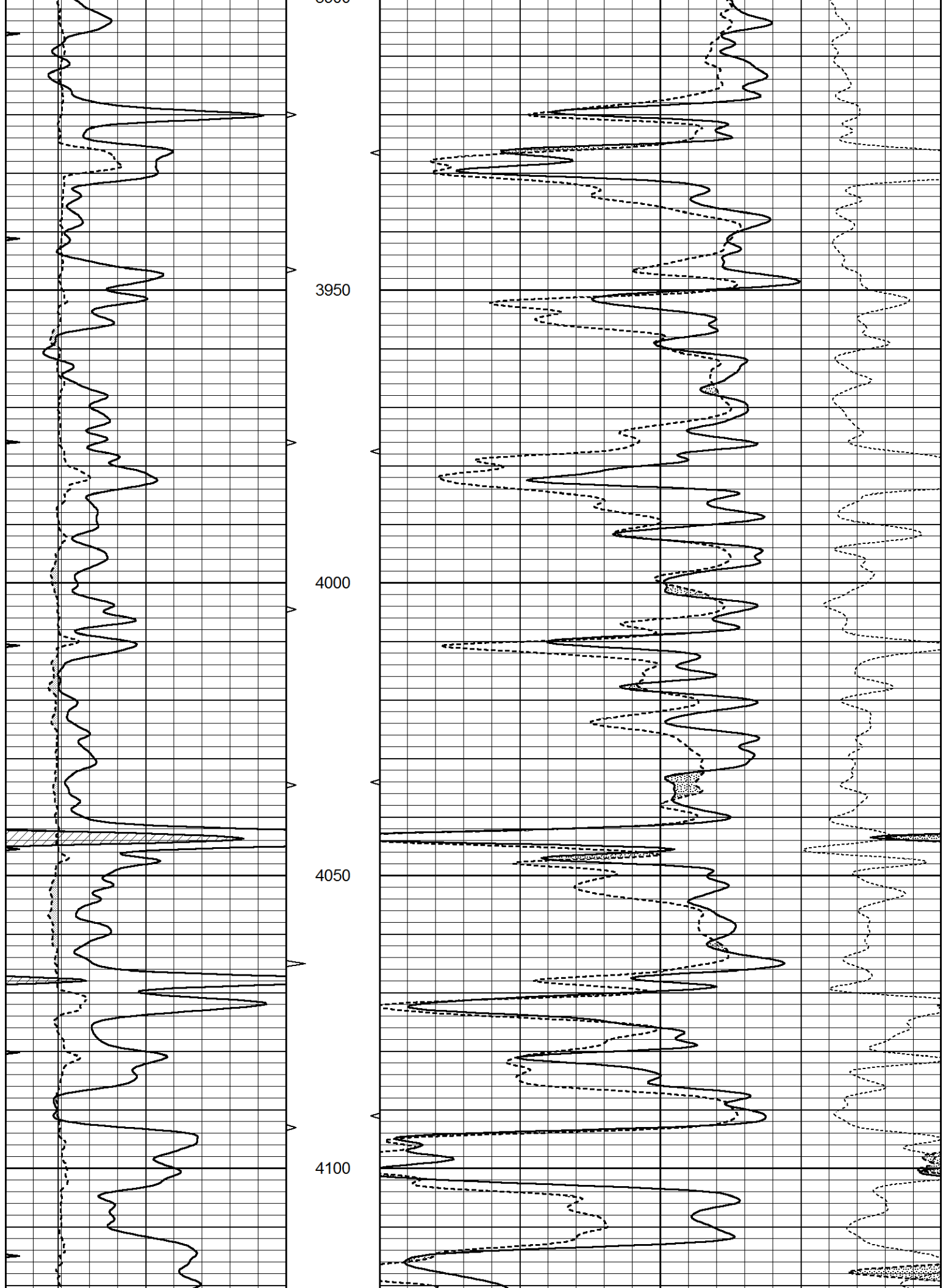
MAIN PASS

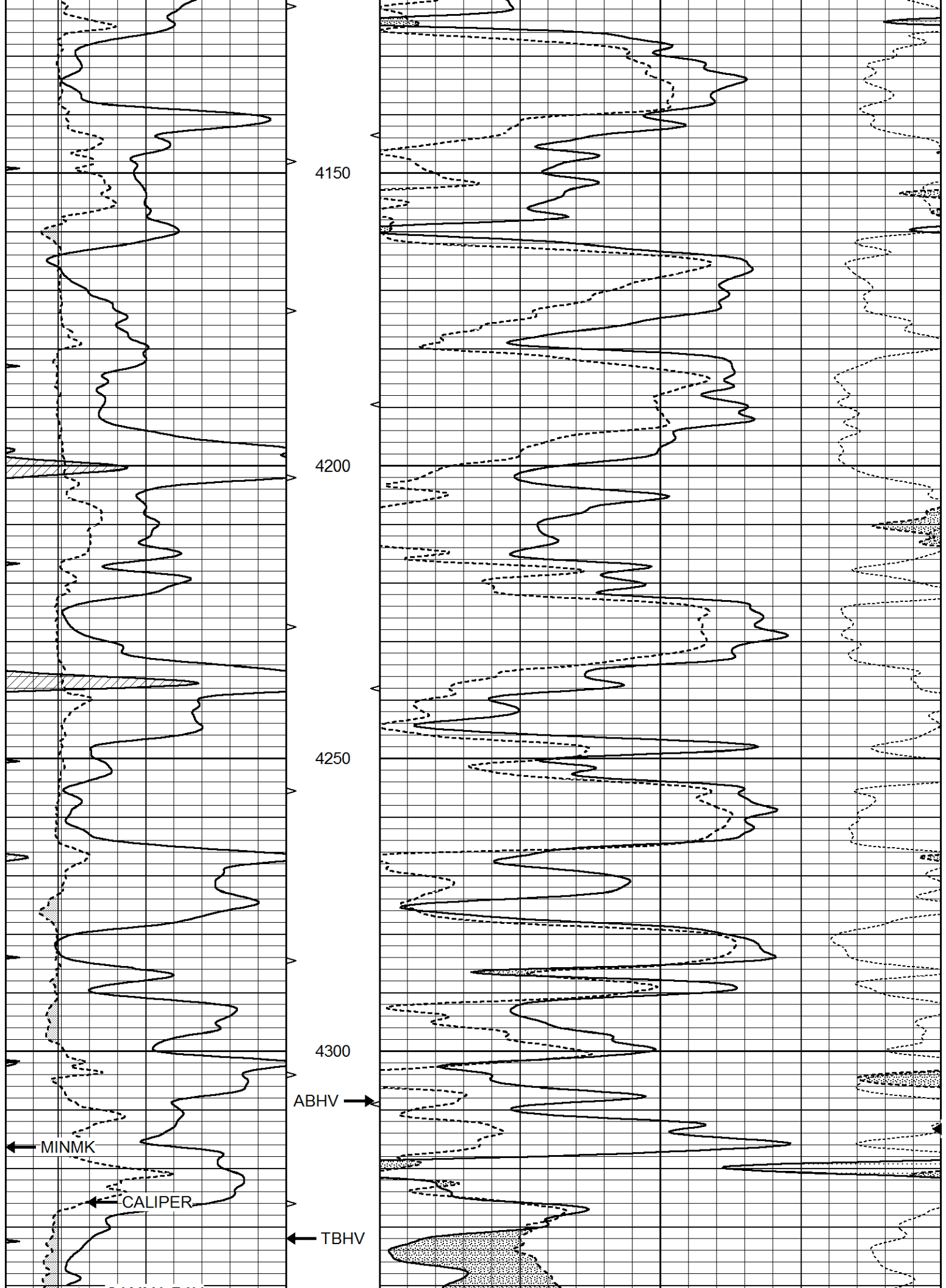
Database File 5237ddn.db
 Dataset Pathname pass3.1
 Presentation Format den_neu
 Dataset Creation Wed Nov 11 07:53:23 2020
 Charted by Depth in Feet scaled 1:240

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			









4150

4200

4250

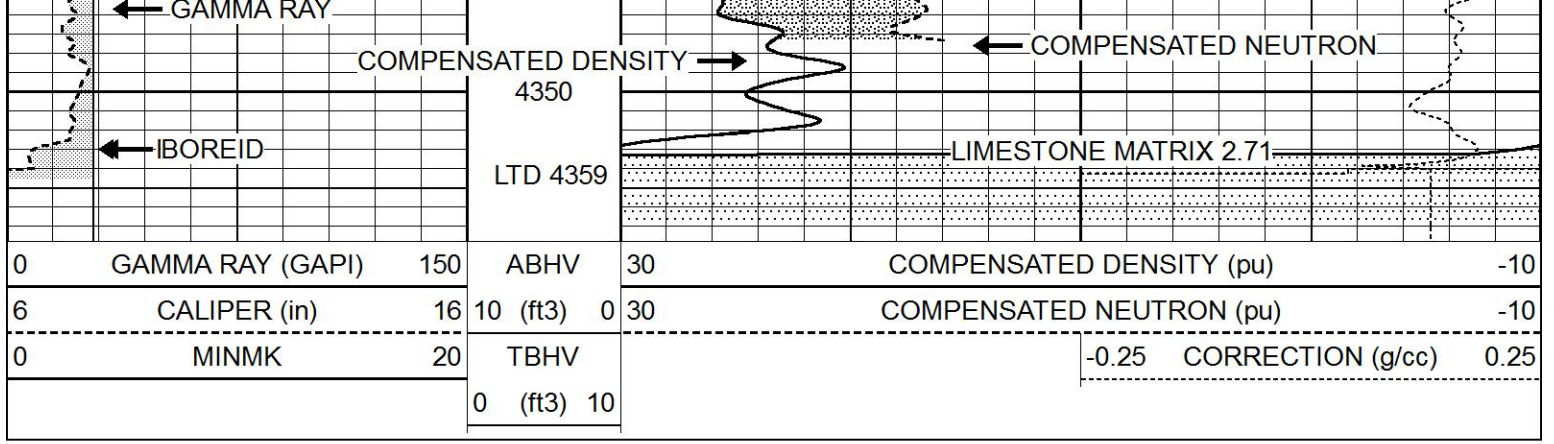
4300

ABHV

MINMK

CALIPER

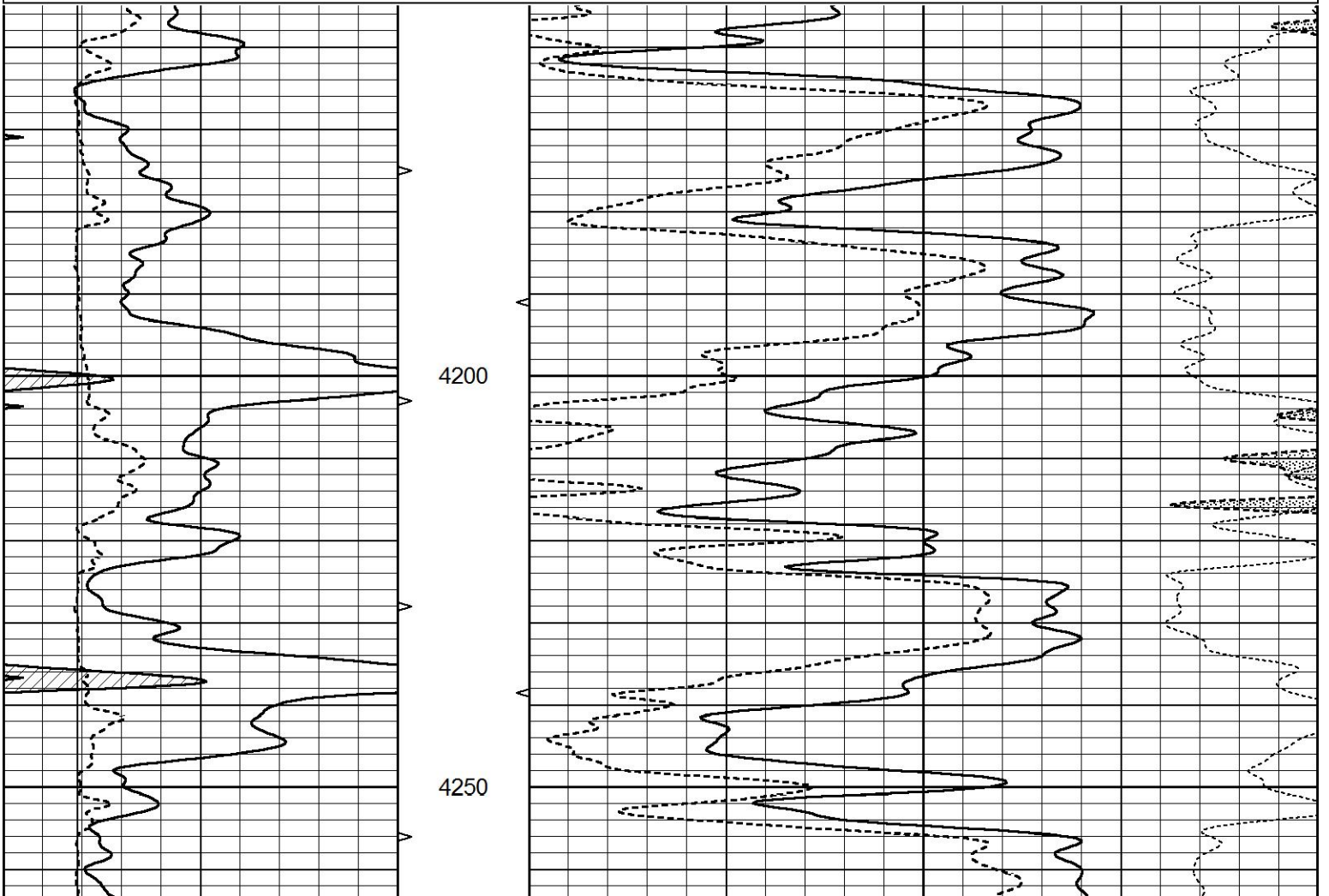
TBHV

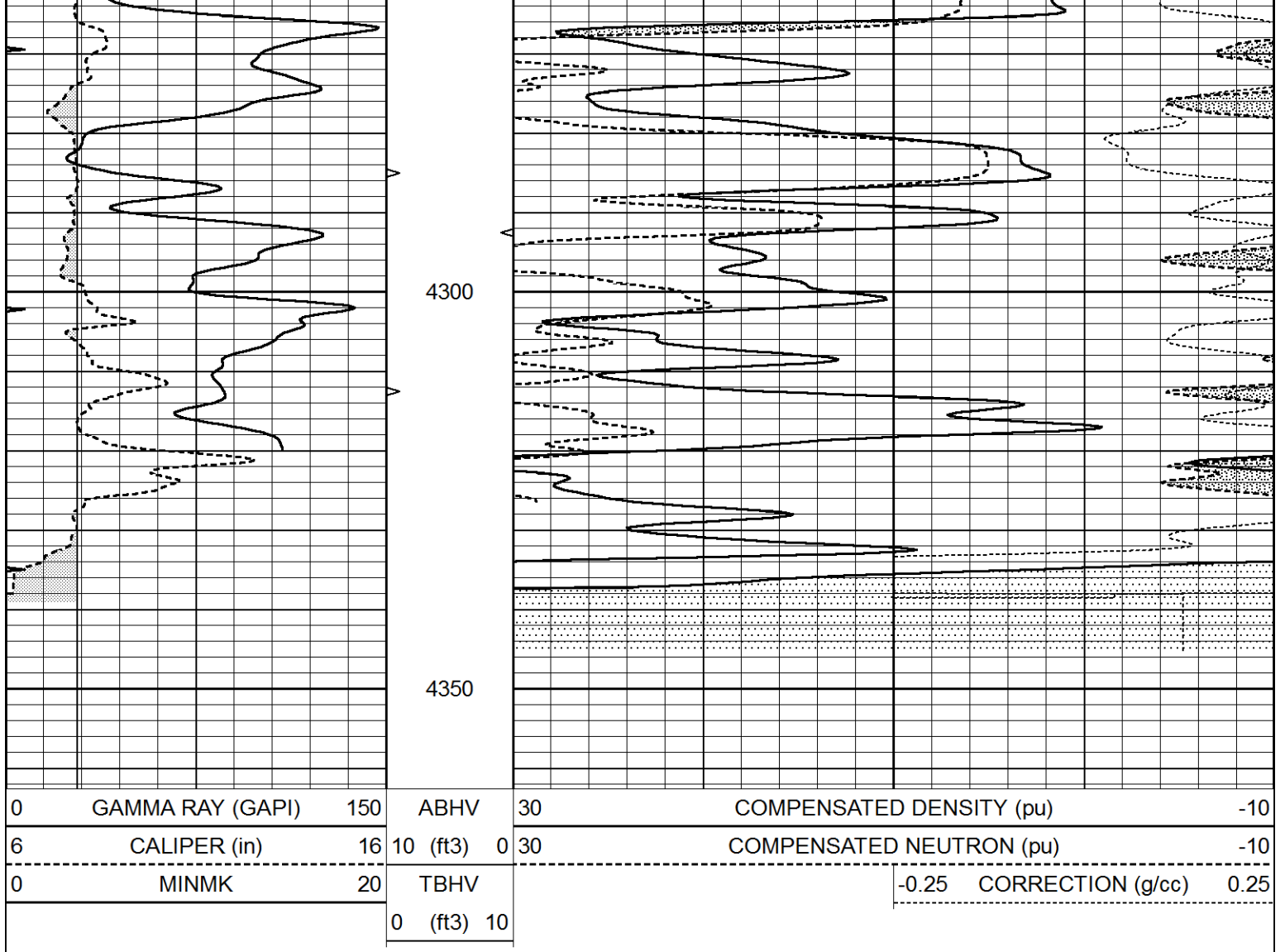


REPEAT SECTION

Database File 5237ddn.db
 Dataset Pathname pass2.1
 Presentation Format den_neu
 Dataset Creation Wed Nov 11 07:59:03 2020
 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 5237ddn.db
 Dataset Pathname pass2.1
 Dataset Creation Wed Nov 11 07:59:03 2020

Dual Induction Calibration Report

Serial-Model: FW1410-55-Probe
 Surface Cal Performed: Tue Feb 19 11:44:18 2019
 Downhole Cal Performed: Tue Feb 19 11:44:24 2019
 After Survey Verification Performed: Tue Feb 19 11:44:27 2019

Surface Calibration

Loop:	Readings			V	References			Results	
	Air	Loop			Air	Loop	mmho/m	m	b
Deep	0.011	0.656			1.000	400.000	mmho/m	618.595	-5.524
Medium	-0.000	0.731			1.000	464.000	mmho/m	632.856	1.197
Internal:	Zero	Cal			Zero	Cal		m	b
Deep	0.007	0.649			0.000	400.000	mmho/m	623.784	-4.595
Medium	0.004	0.743			0.000	464.000	mmho/m	627.284	-2.251

Downhole Calibration

Readings		References		Results	
Zero	Cal	Zero	Cal	m'	b'

4564.4

7712.2

8.0

14.0

0.0

-0.9

Before Survey Caliper Verification

Performed:

Reference

Reading

Caliper (in)

After Survey Caliper Verification

Performed:

Reference

Reading

Caliper (in)

Compensated Neutron Calibration Report

Serial Number:
Tool Model:

080621PMC
NABORS

PRE-SURVEY VERIFICATION

Detector

Readings

Measured

Target

Short Space
Long Space

cps
cps

pu

pu

POST-SURVEY VERIFICATION

Detector

Readings

Measured

Target

Short Space
Long Space

cps
cps

pu

pu

Gamma Ray Calibration Report

Serial Number:
Tool Model:
Performed:

7
Probe1
Tue Dec 10 10:02:55 2019

Calibrator Value:

1.0

GAPI

Background Reading:
Calibrator Reading:

0.0
1.0

cps
cps

Sensitivity:

0.4800

GAPI/cps