



**COMPENSATED
DENSITY/NEUTRON
PE LOG**

Company NORSTAR PETROLEUM, INC.

Well BAHM #1-16

Field

County LANE

State KANSAS

Location:

1573' FNL & 1643' FWL

SEC 16 TWP 19S RGE 27W

Permanent Datum GROUND LEVEL Elevation 2684.7
Log Measured From KELLY BUSHING 7' A.G.L
Drilling Measured From KELLY BUSHING

Other Services
DIL/MEL

Elevation

K.B. 2691.7
D.F. 2689.7
G.L. 2684.7

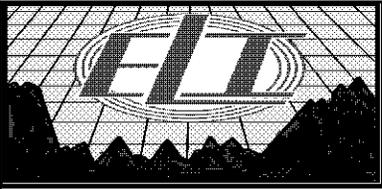
Date	2/18/19		
Run Number	ONE		
Depth Driller	4700		
Depth Logger	4700		
Bottom Logged Interval	4676		
Top Log Interval	3800		
Casing Driller	8 5/8" @ 220		
Casing Logger	220		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5300 PPM	
Density / Viscosity	9.4/62		
PH / Fluid Loss	9.5/8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.70 @ 55F		
Rmt @ Meas. Temp	.52 @ 55F		
Rmc @ Meas. Temp	.84 @ 55F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.31 @ 122F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	////		
Maximum Recorded Temperature	122F		
Equipment Number	3802		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	BRAD RINE		

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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

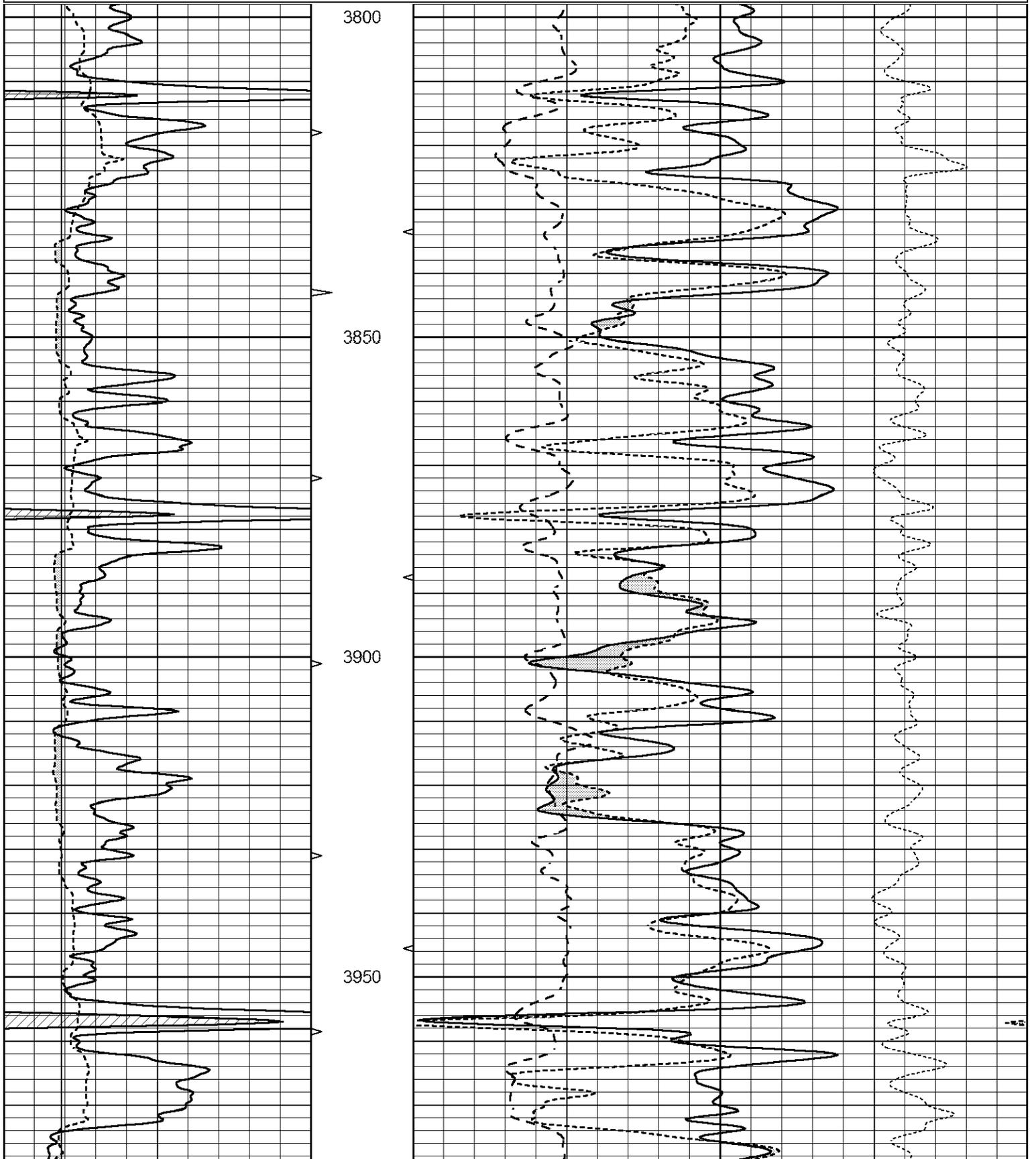
THANK YOU FOR USING ELI WIRELINE SERVICES, HAYS, KS. (785) 628-6395
DIRECTIONS
DIGHTON, KS. - 5 EAST TO QUANTUM RD. - 5 SOUTH TO RD. 100 - 2 EAST
SOUTH INTO

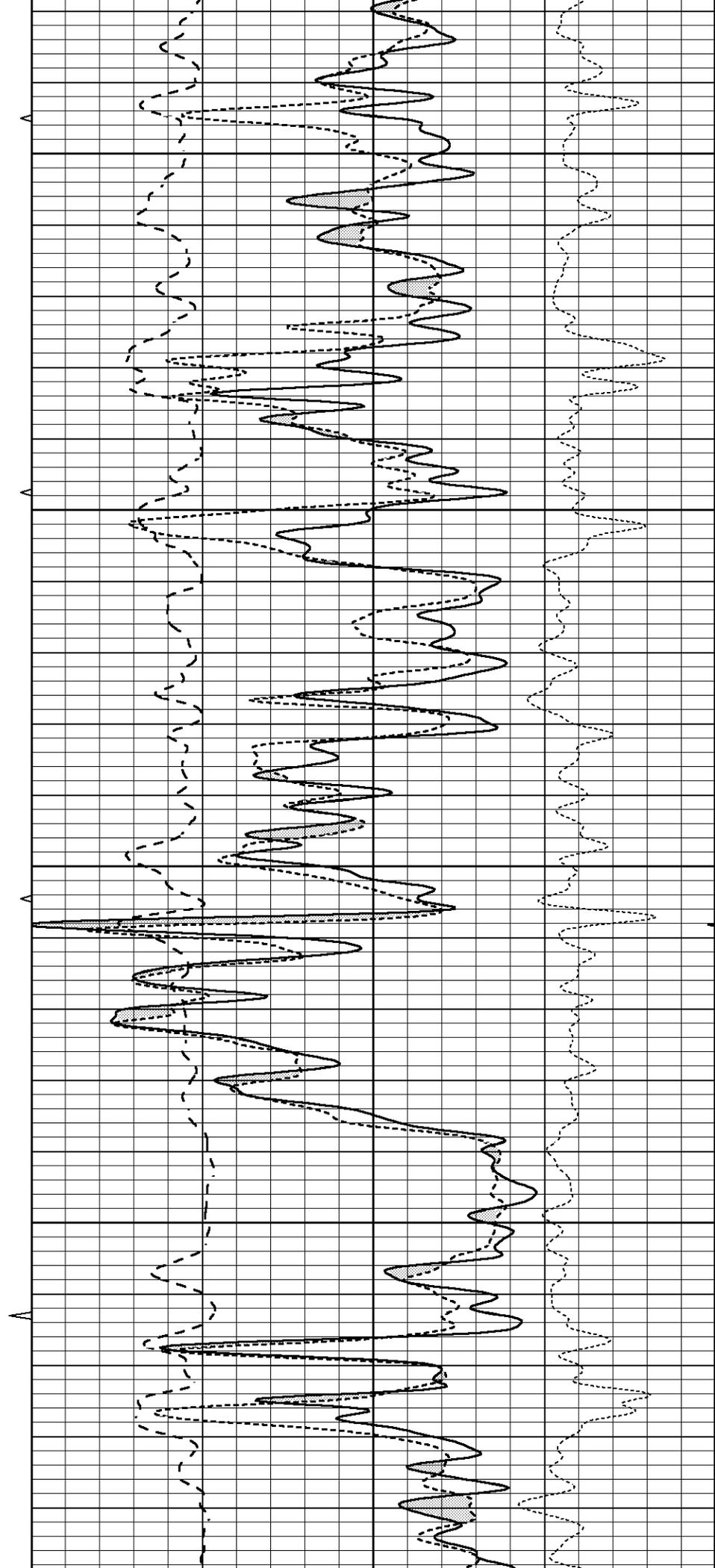
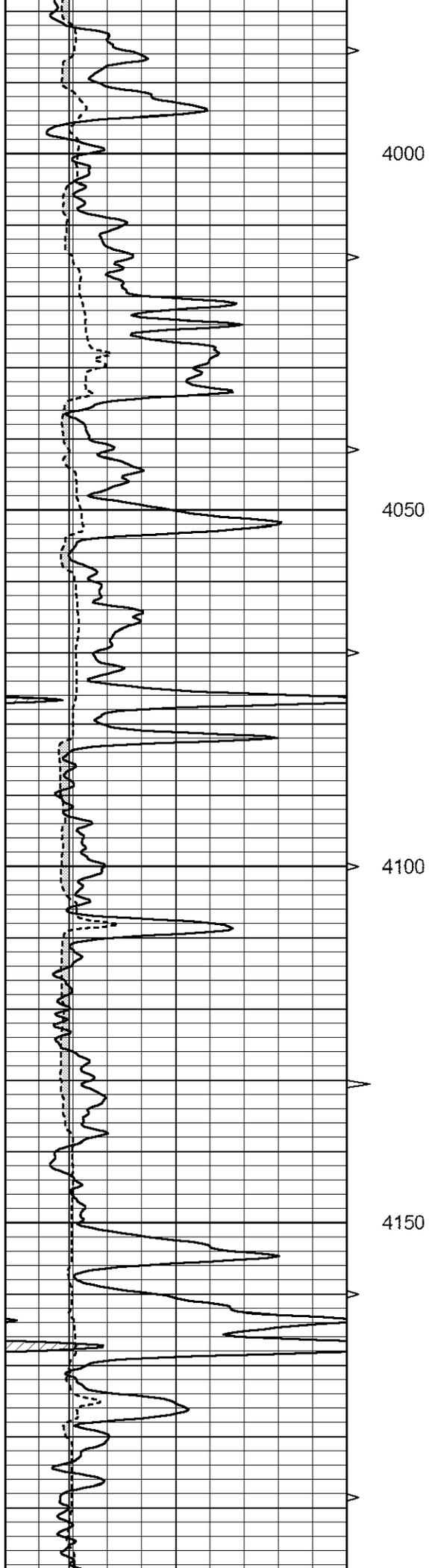


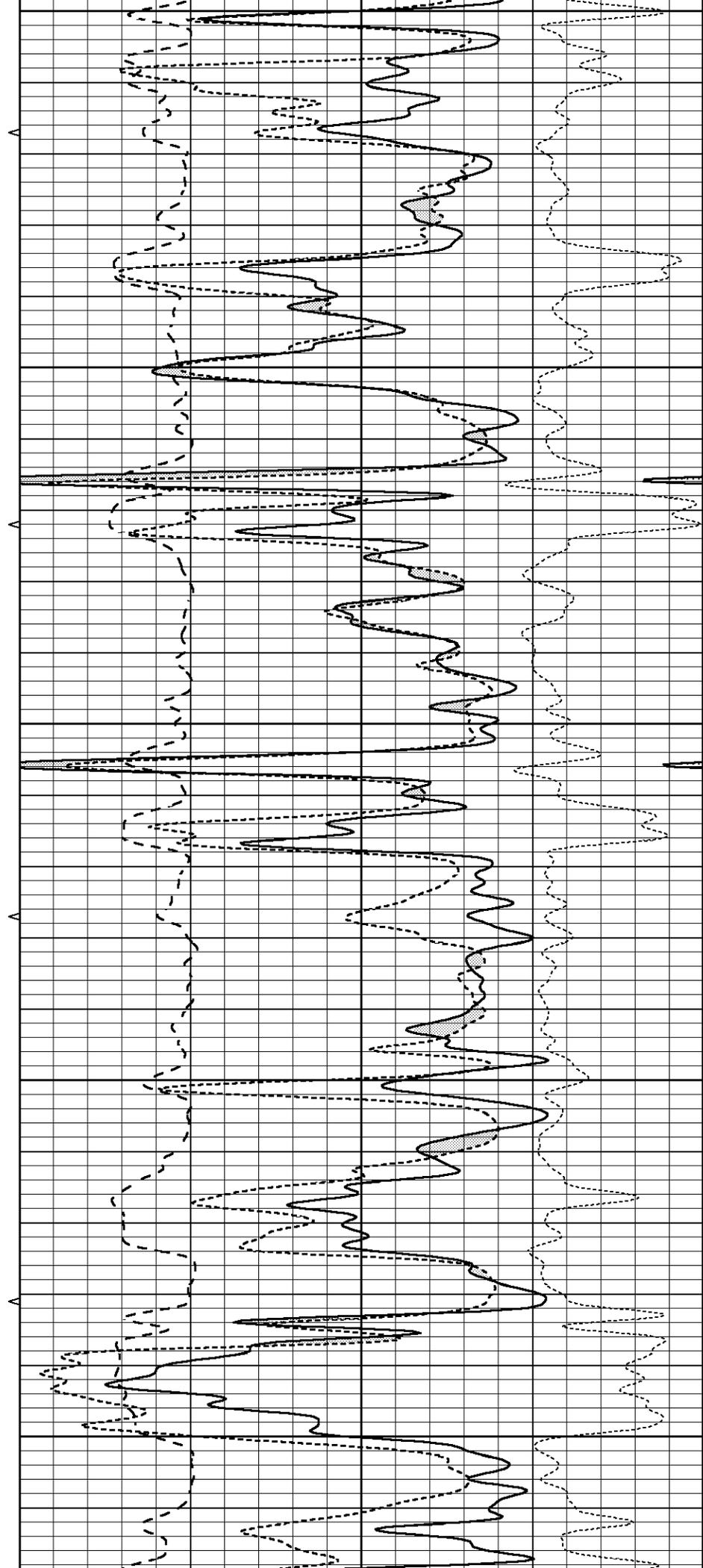
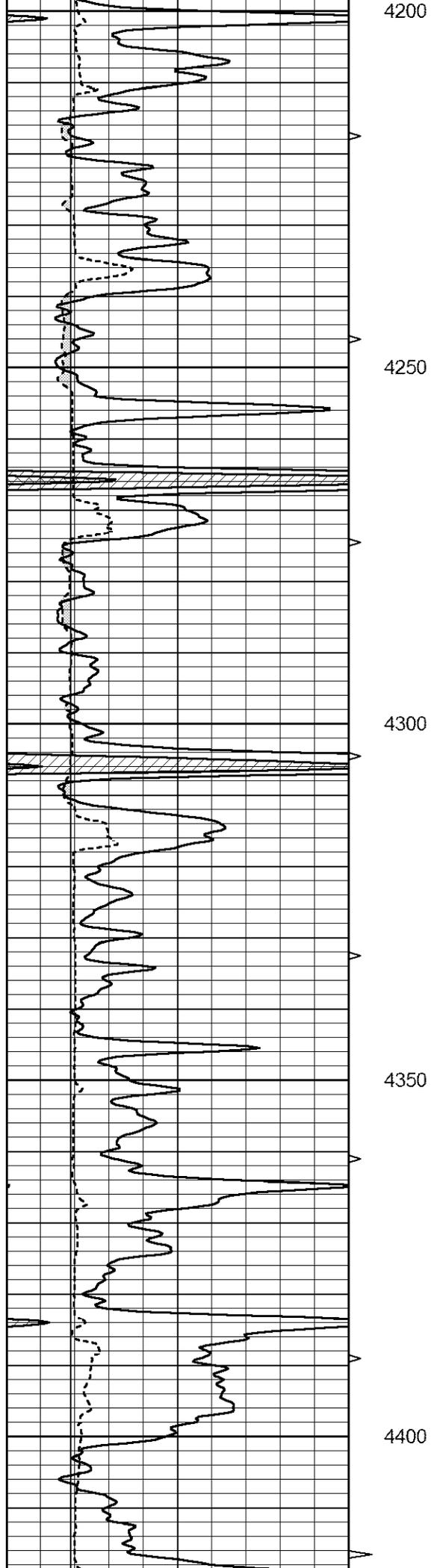
MAIN SECTION

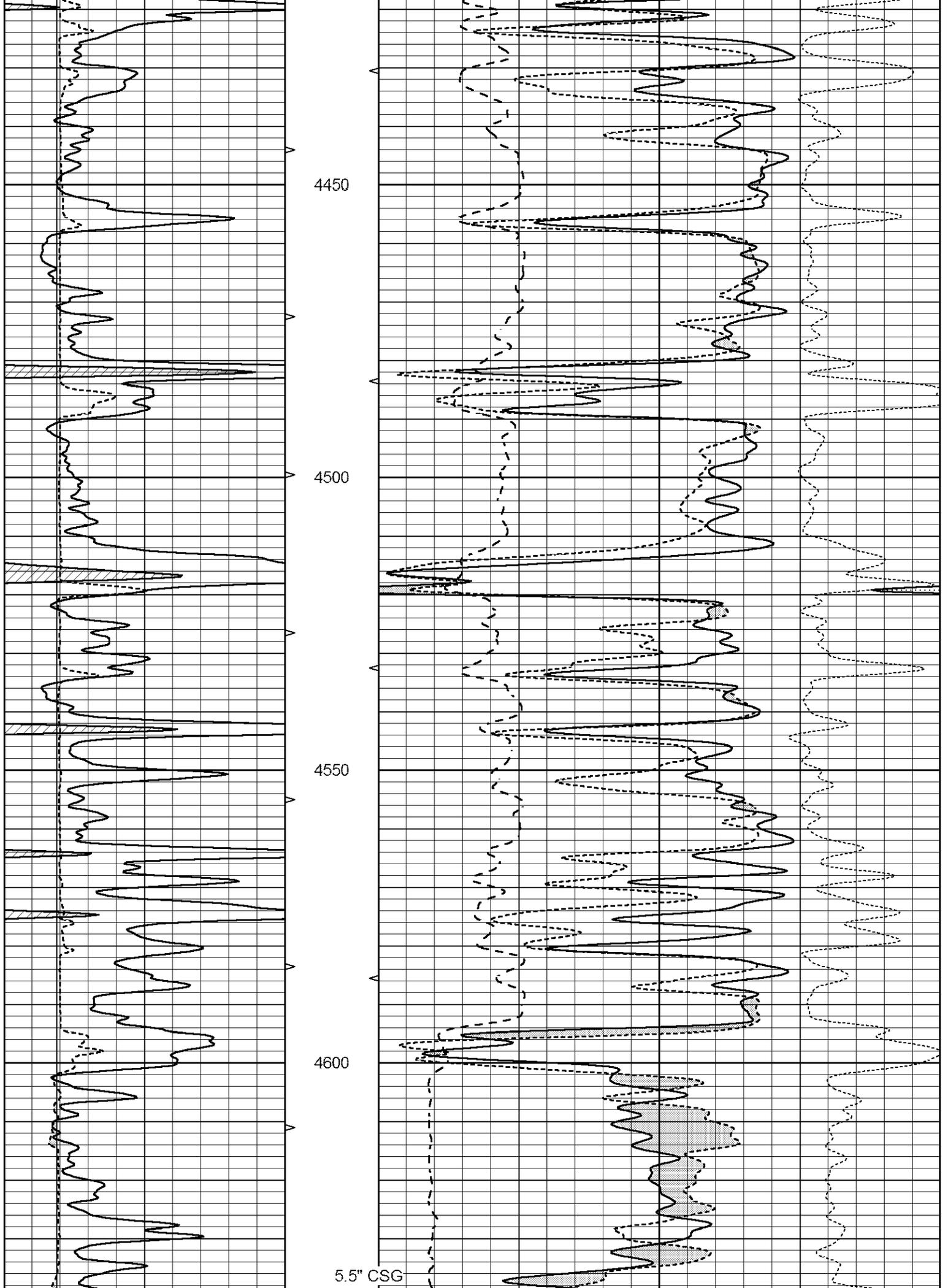
Database File 3444pe8.db
 Dataset Pathname pass3.1
 Presentation Format _ldt_neu
 Dataset Creation Mon Feb 18 16:37:56 2019
 Charted by Depth in Feet scaled 1:240

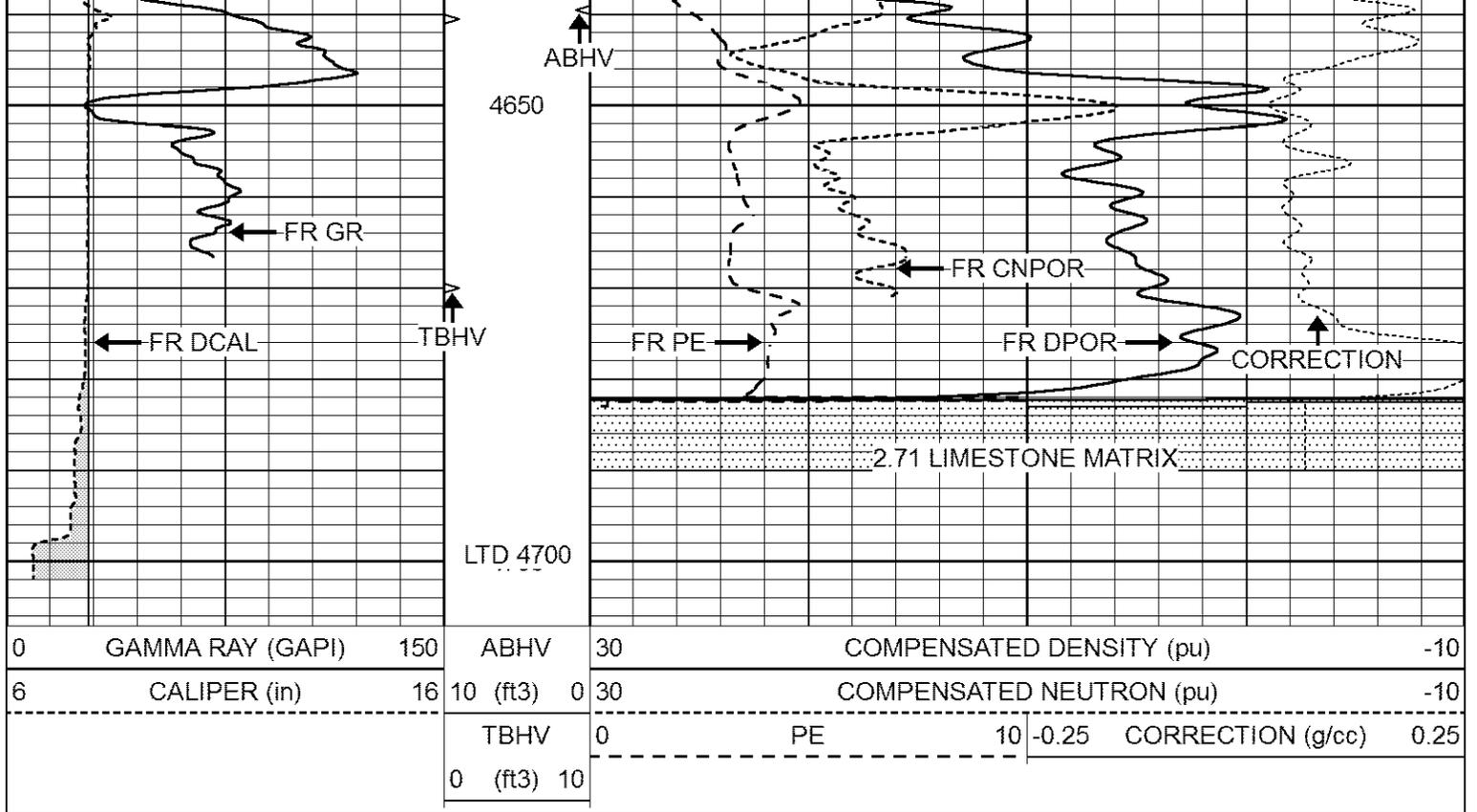
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)		-10
6	CALIPER (in)	16	10 (ft3)	0	COMPENSATED NEUTRON (pu)		-10
			TBHV	0	PE	10 -0.25	CORRECTION (g/cc) 0.25
			0 (ft3)	10			







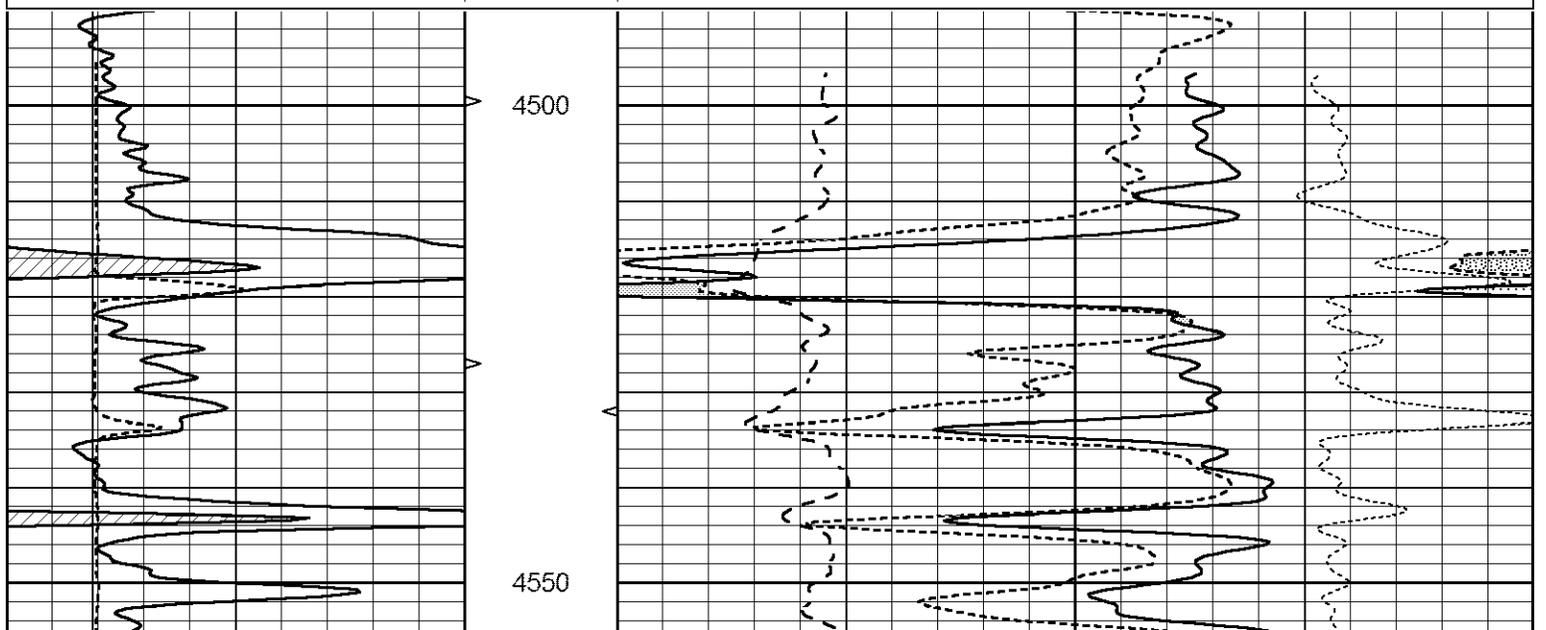


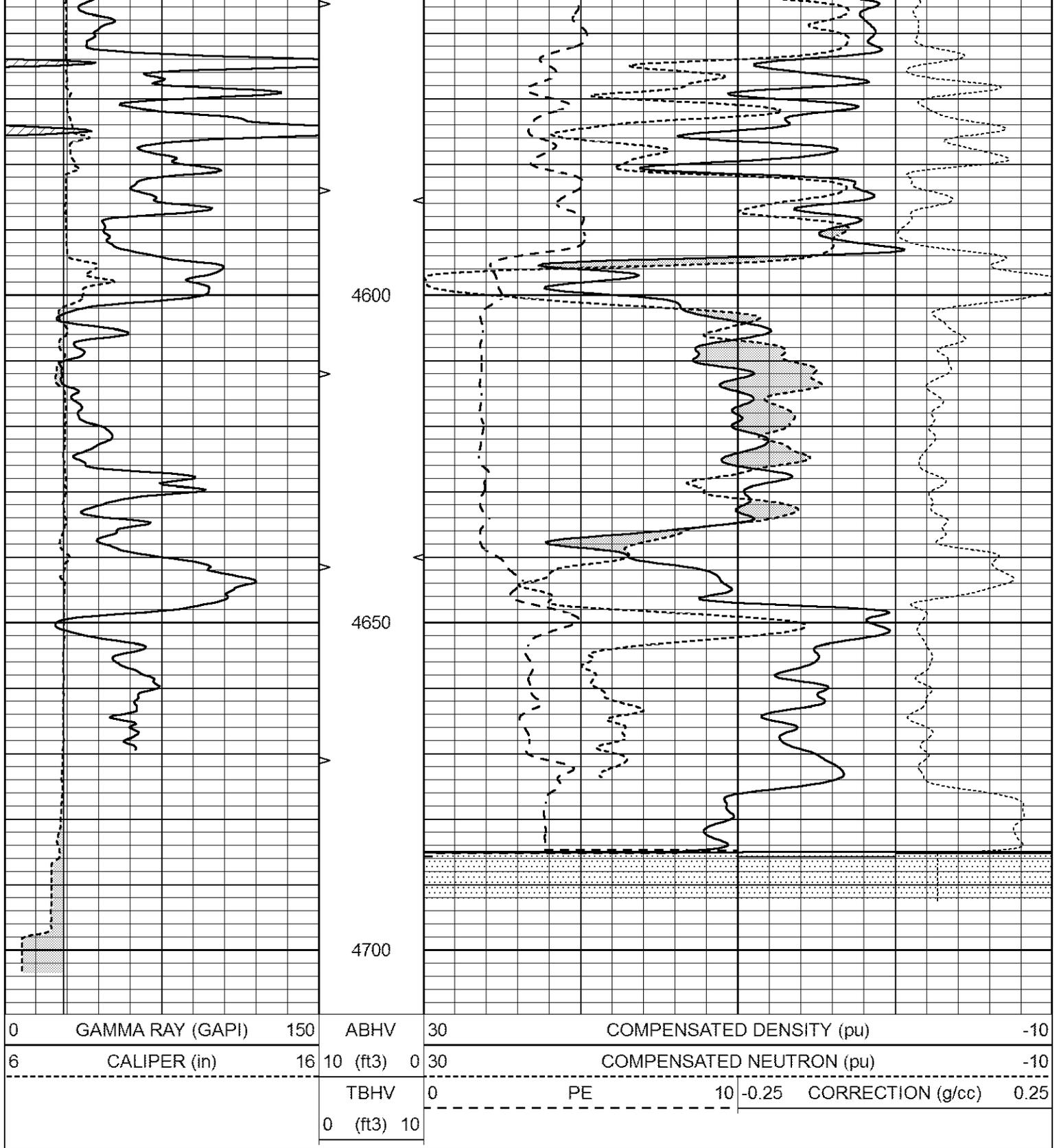


REPEAT SECTION

Database File 3444pe8.db
 Dataset Pathname pass2.1
 Presentation Format _ldt_neu
 Dataset Creation Mon Feb 18 16:28:32 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		
			TBHV	0	PE	10	-0.25	CORRECTION (g/cc)	0.25
			0 (ft3)	10					





Calibration Report

Database File 3444pe8.db
 Dataset Pathname pass2.1
 Dataset Creation Mon Feb 18 16:28:32 2019

Dual Induction Calibration Report

Serial-Model: FW1410-55-Probe
 Surface Cal Performed: Mon May 22 14:23:32 2017
 Downhole Cal Performed: Thu Mar 12 09:29:20 2015
 After Survey Verification Performed: Thu Mar 12 09:29:20 2015

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

Downhole Calibration				References			Results	
	Readings			References			m'	b'
	Zero	Cal		Zero	Cal			
Deep	-0.824	395.917	mmho/m	-0.976	397.550	mmho/m	1.004	-0.149
Medium	3.565	471.327	mmho/m	3.468	471.590	mmho/m	1.001	-0.099
LL3		7.503	V		1500.000	Ohm-m		
		0.001	V		20.000	Ohm-m		
		-7.481	V		3745.000	mmho-m		

After Survey Verification				Targets			Results	
	Readings			Targets			m'	b'
	Zero	Cal		Zero	Cal			
Deep	0.000	0.000	mmho/m	-0.824	395.917	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	3.565	471.327	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1500.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		3745.000	mmho-m		

Litho Density Calibration Report
Serial: 140704
Model: V4_10P
Source Number: 74GBq-19

Master Calibration				Performed: Fri Jan 18 10:53:52 2019			
	Background	Aluminum		Magnesium			
Window 1	563.20	5403.39		24190.50		cps	
Window 2	44.78	1243.51		6049.93		cps	
Window 4	247.62	1222.40		5239.60		cps	
Window 5	568.17	8975.27		17094.80		cps	
Window 6	44.48	1484.88		2922.28		cps	
Window 8	270.82	2877.34		5377.89		cps	
Bulk Density	-	2.6020		1.6830		g/cc	
Pe	-	3.0000		2.5070		b/e	
LS Alpha:	: -1.8641	SS Alpha:	: -0.7692	LS CPE:		: 1.1004	
LS Beta:	: 127931.7253	SS Beta:	: 20075.8142	SS CPE:		: 1.5209	

Before Survey Background Counts Verification			Performed: Wed Dec 31 18:00:00 1969		
Window 1	0.00	cps			
Window 2	0.00	cps			
Window 4	0.00	cps			
Window 5	0.00	cps			
Window 6	0.00	cps			
Window 8	0.00	cps			

After Survey Background Counts Verification

Performed: Wed Dec 31 18:00:00 1969

Window 1	0.00	cps
Window 2	0.00	cps
Window 4	0.00	cps
Window 5	0.00	cps
Window 6	0.00	cps
Window 8	0.00	cps

Lithodensity Caliper Calibration

Performed: Fri Jan 18 10:53:52 2019

Results		Readings		References (in)		Gain	Offset
Low	High	Low	High	Low	High		
90.2	3611.6	8.0	14.0			0.0	7.8

Before Survey Caliper Verification

Performed:

	Reference	Reading
Caliper (in)	_____	_____

After Survey Caliper Verification

Performed:

	Reference	Reading
Caliper (in)	_____	_____

Compensated Neutron Calibration Report

Serial Number: 080621PMC
 Tool Model: NABORS

PRE-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

POST-SURVEY VERIFICATION

Detector	Readings	Measured	Target
Short Space	cps		
Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number: 7
 Tool Model: Probe1
 Performed: Wed Dec 05 01:26:33 2018

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.4300 GAPI/cps