

COMPENSATED
DENSITY/NEUTRON
PE/LOG

Company	MULL DRILLING CO., INC.		
Well	FAGEN#1-30		
Field	WILDCAT		
County	HODGEMAN		
State	KANSAS		
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Well	FAGEN#1-30		
Field	WILDCAT		
County	HODGEMAN		
State	KANSAS		
Location:	API # : 15-083-21948-00-00 1650' FSL & 1637' FEL		
Permanent Datum	GROUND LEVEL	Elevation	2412
Log Measured From	KELLY BUSHING 5' A.G.L.	Other Services	DIL/MEL
Drilling Measured From	KELLY BUSHING		SONIC
SEC 30	TWP 24S	RGE 23W	
Date	05/16/18		
Run Number	ONE		
Depth Driller	4875		
Depth Logger	4879		
Bottom Logged Interval	4855		
Top Log Interval	3800		
Casing Driller	8 5/8" @ 218		
Casing Logger	218		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.1/54		
pH / Fluid Loss	11.0/7.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.70@74		
Rmt @ Meas. Temp	.53@74		
Rmc @ Meas. Temp	.84@74		
Source of Rmt / Rmc	MEASURED		
Rm @ BHT	.42@123		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	///		
Maximum Recorded Temperature	123F		
Equipment Number	1523		
Location	HAYS, KANSAS		
Recorded By	GUS PFANENSTIEL		
Witnessed By	PHIL ASKEY		

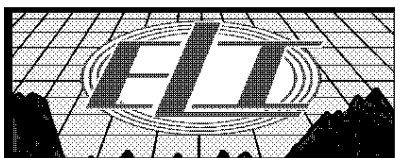
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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on 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

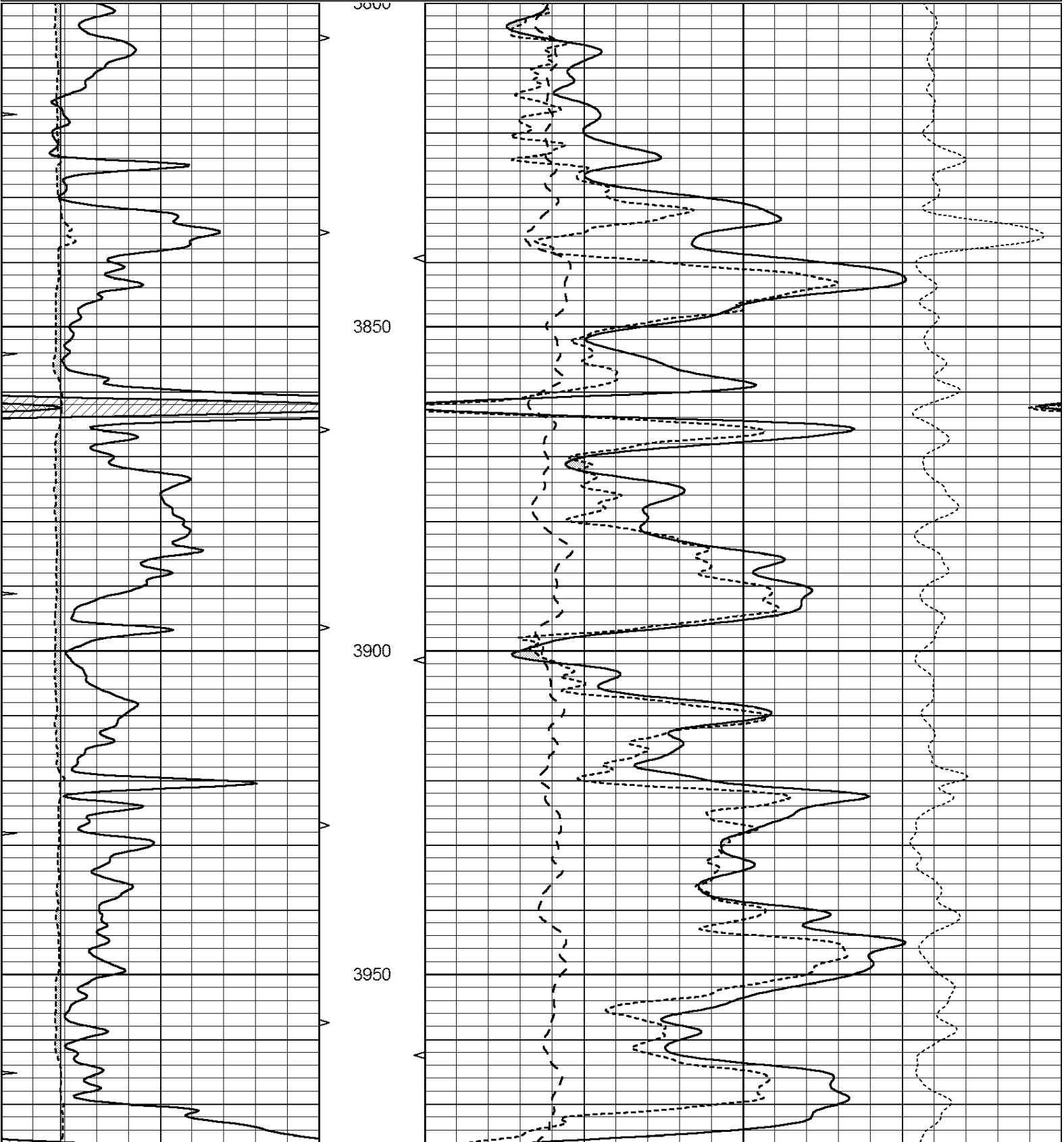
DIRECTIONS
SOUTH OF JETMORE TO B RD.(11 MILES)
1/2 MILE EAST, NORTH INTO.

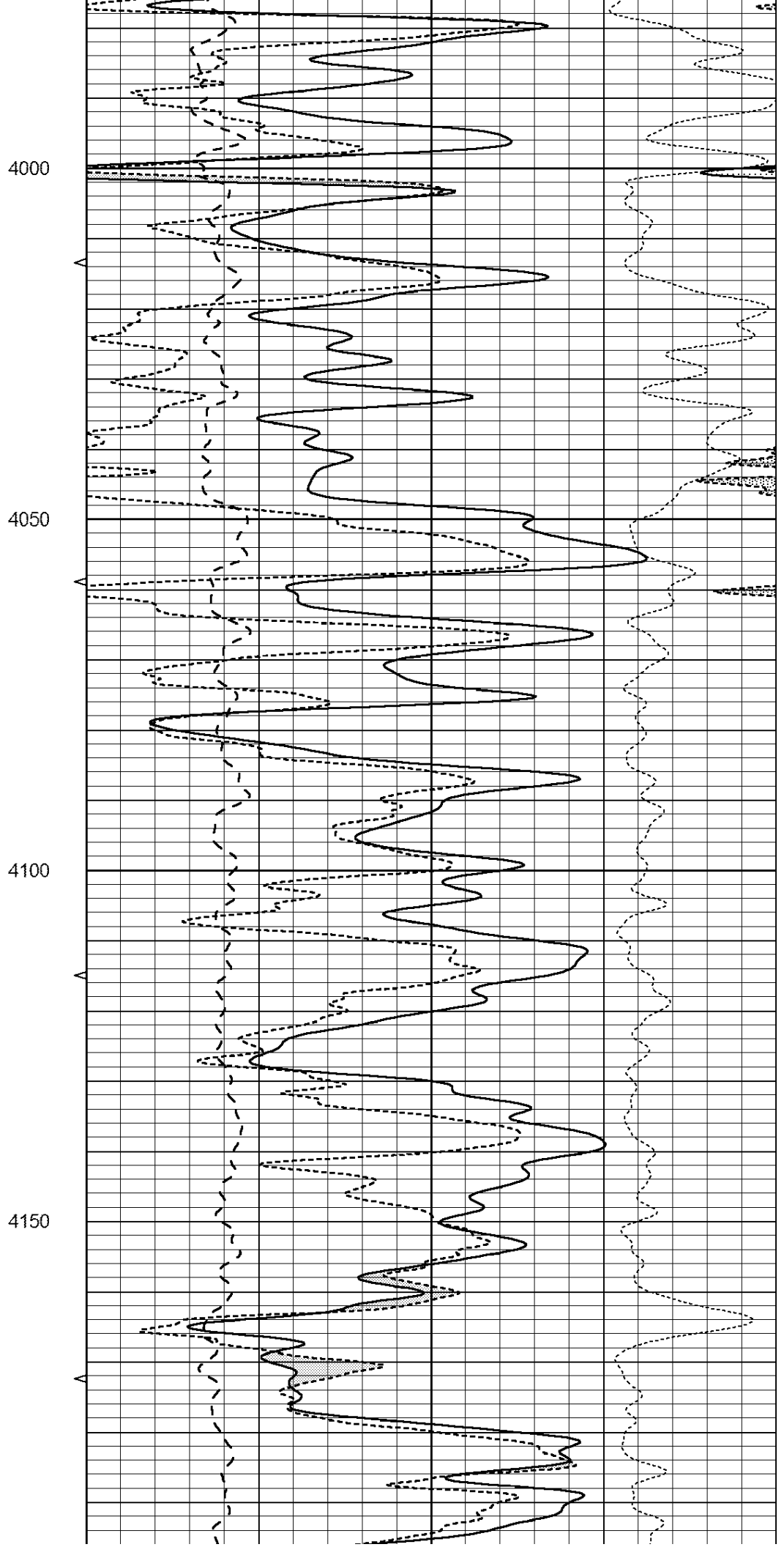
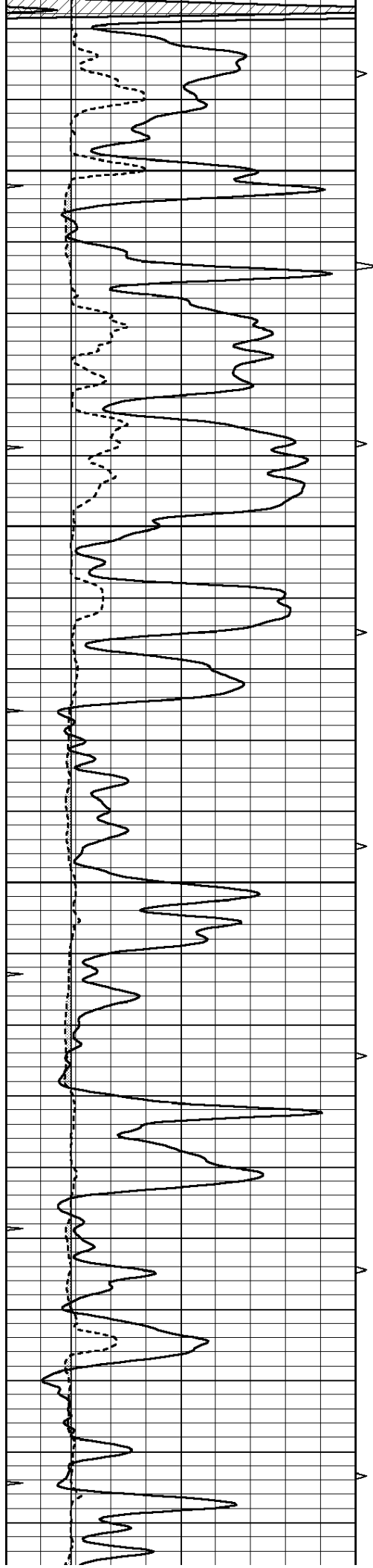


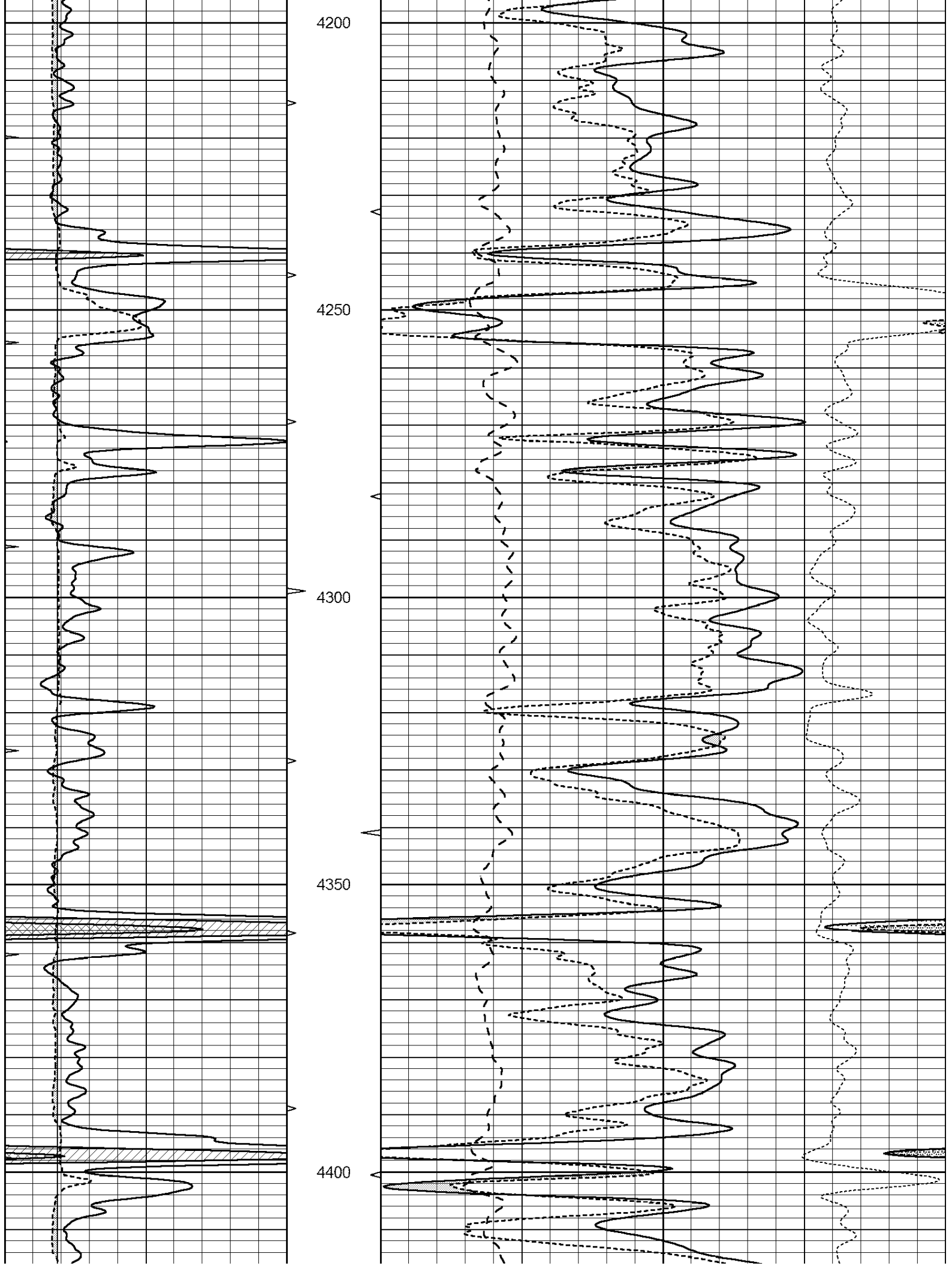
MAIN PASS

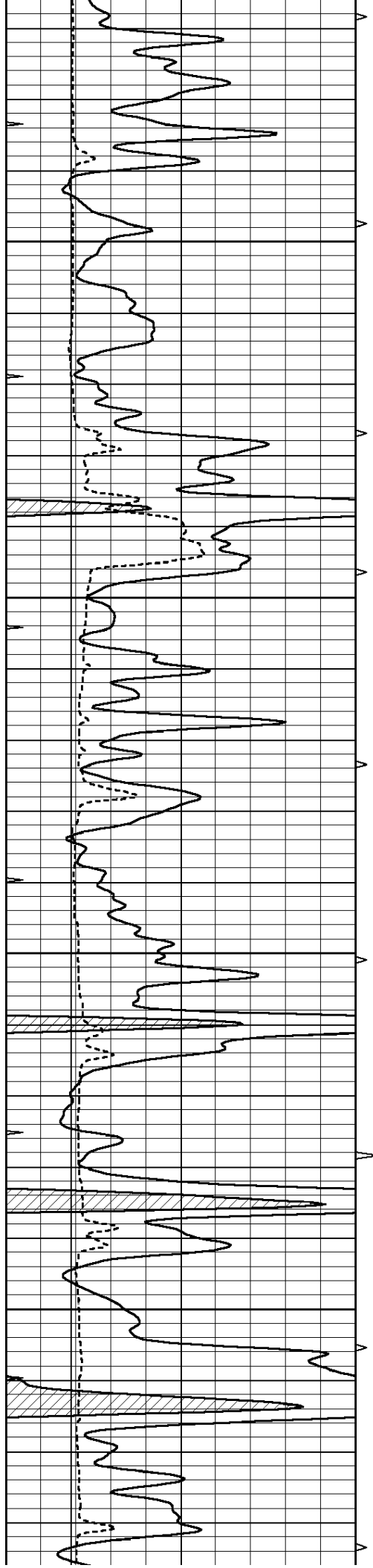
Database File: 2677pe.db
Dataset Pathname: pass4.1
Presentation Format: _ldt_neu
Dataset Creation: Wed May 16 16:37:34 2018 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

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







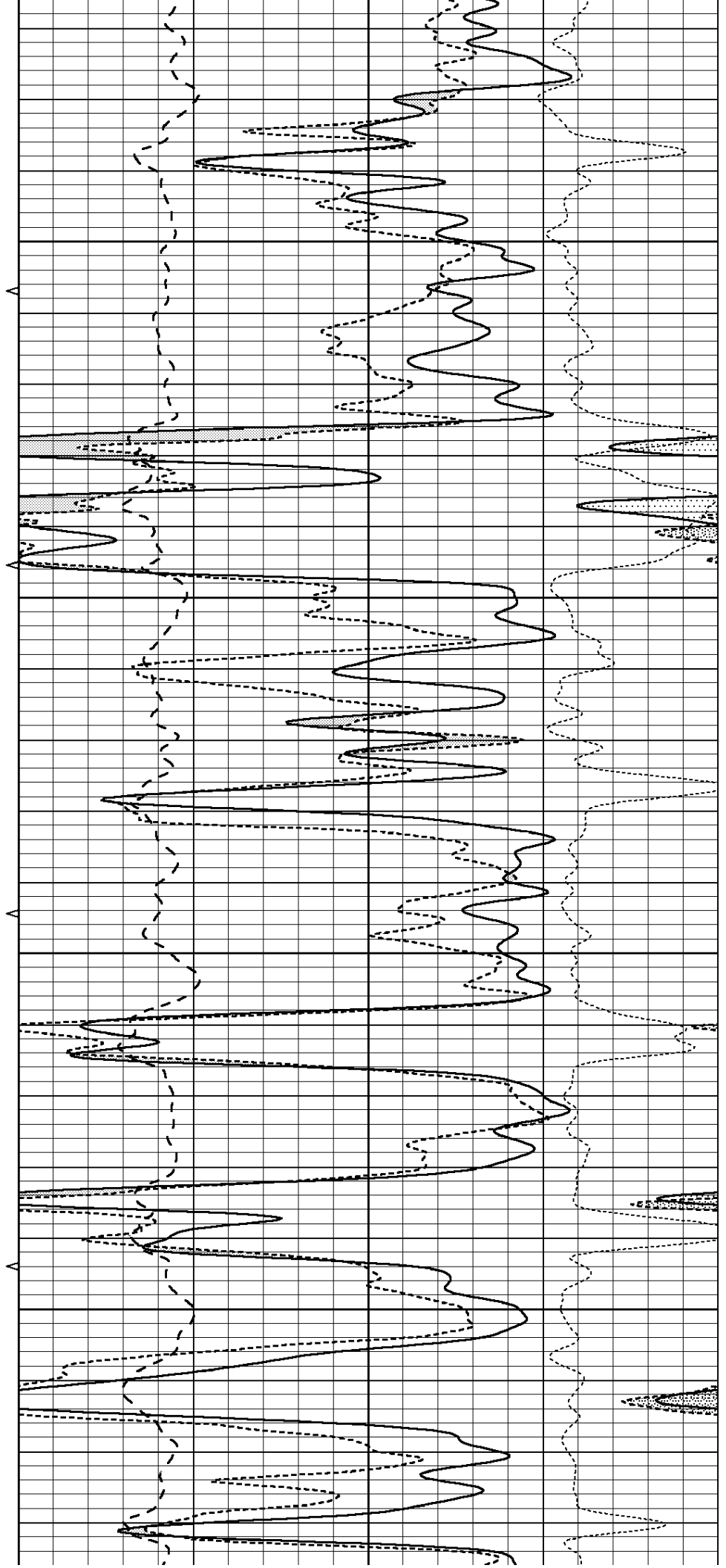


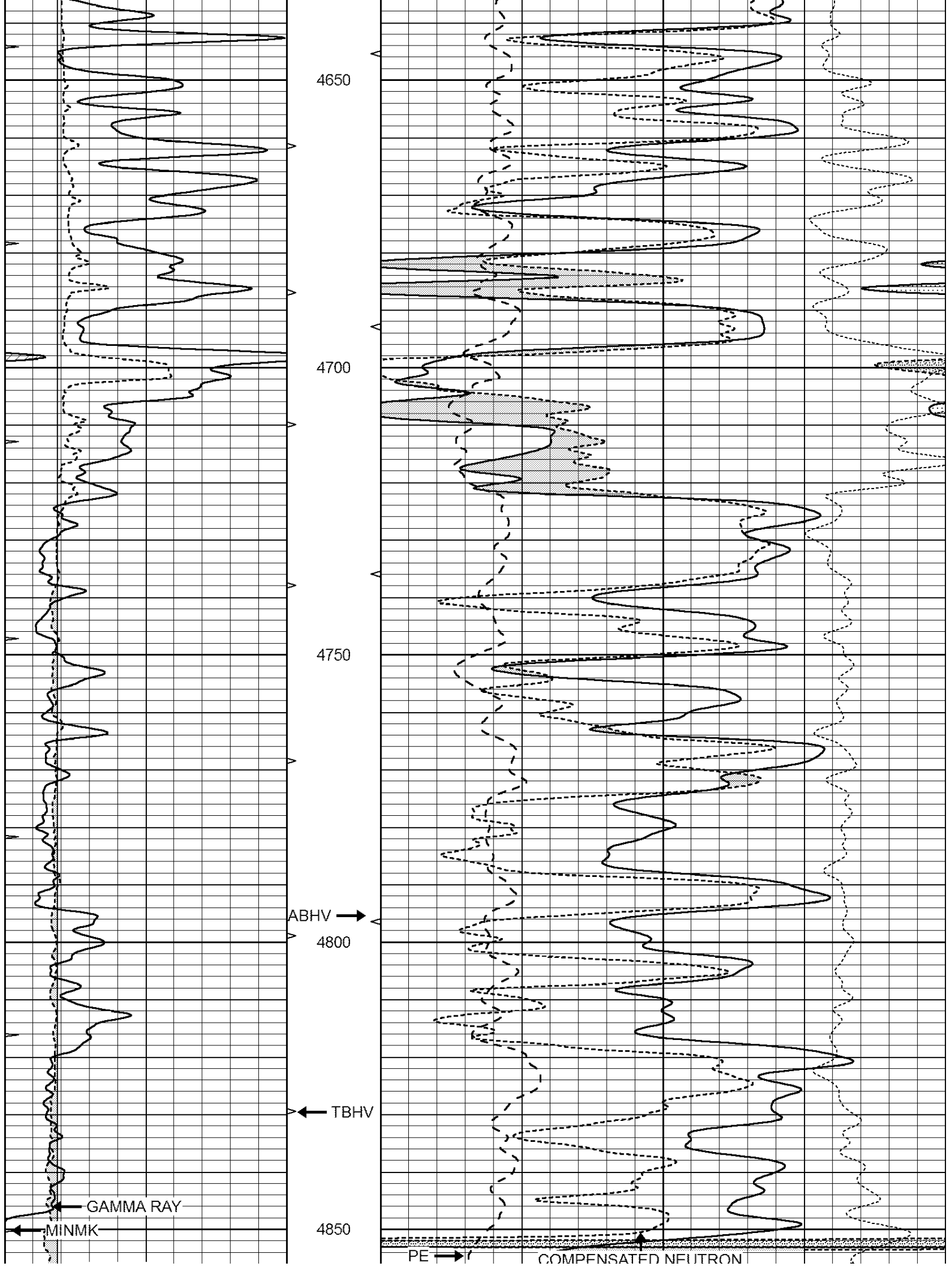
4450

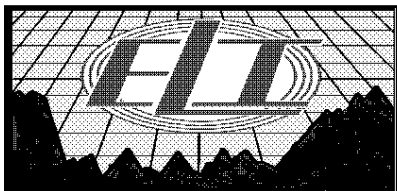
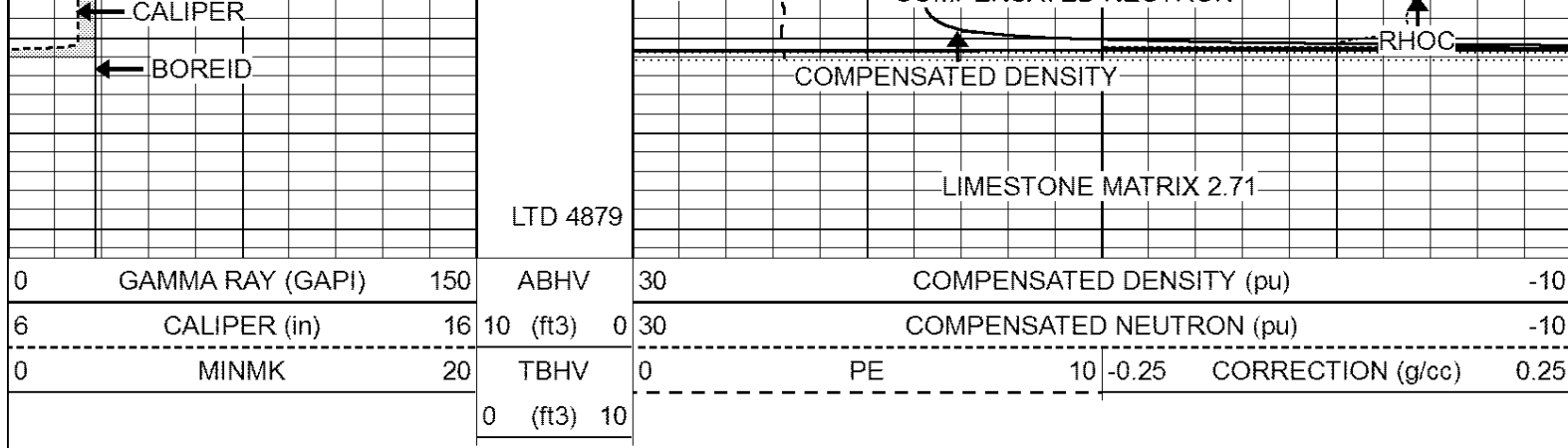
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4550

4600

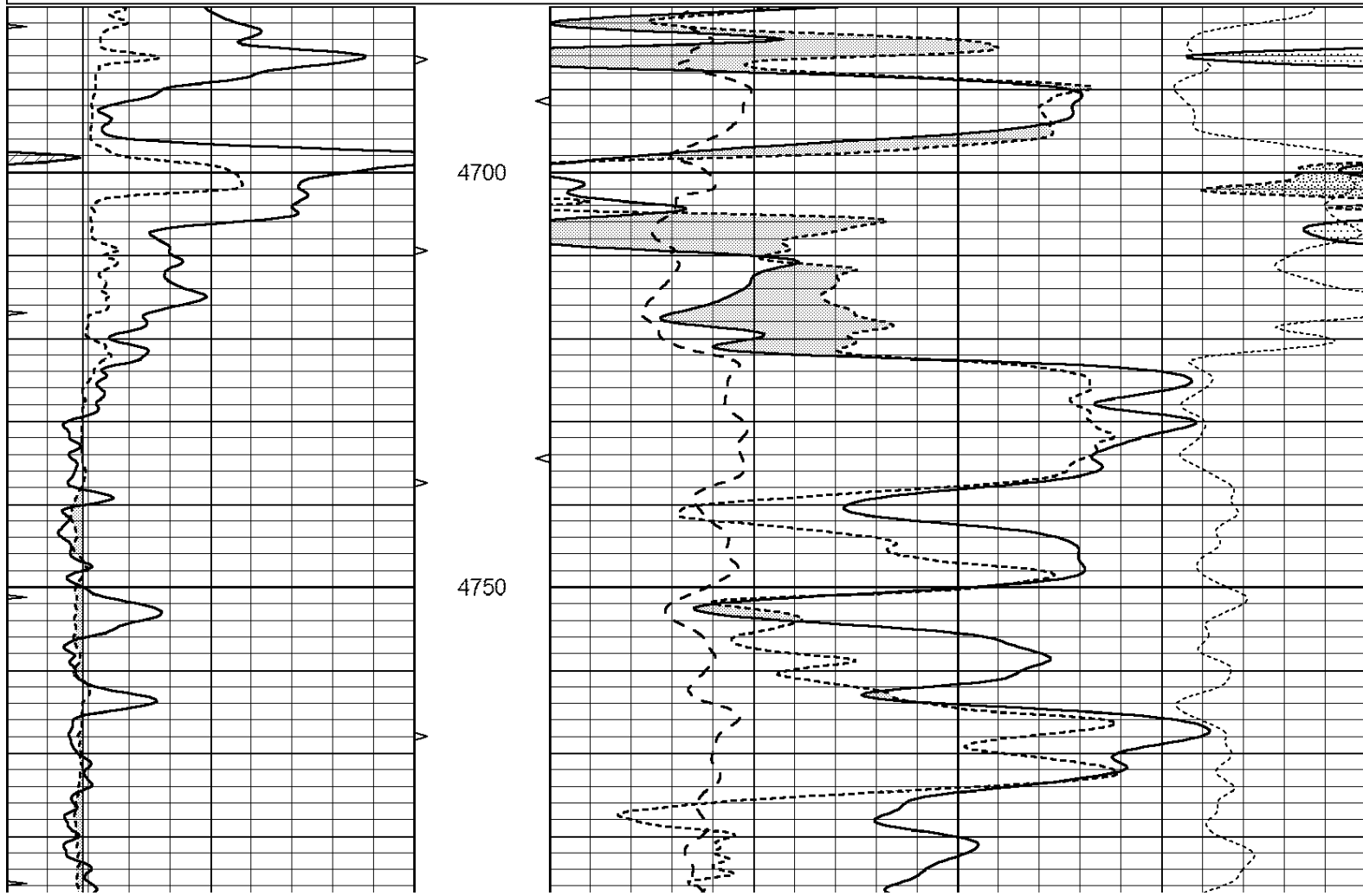
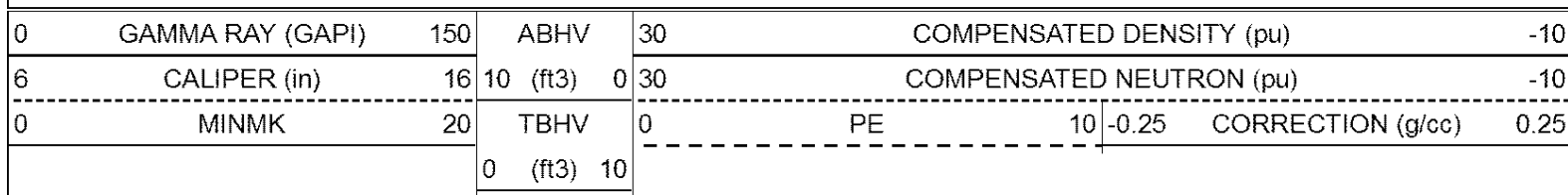


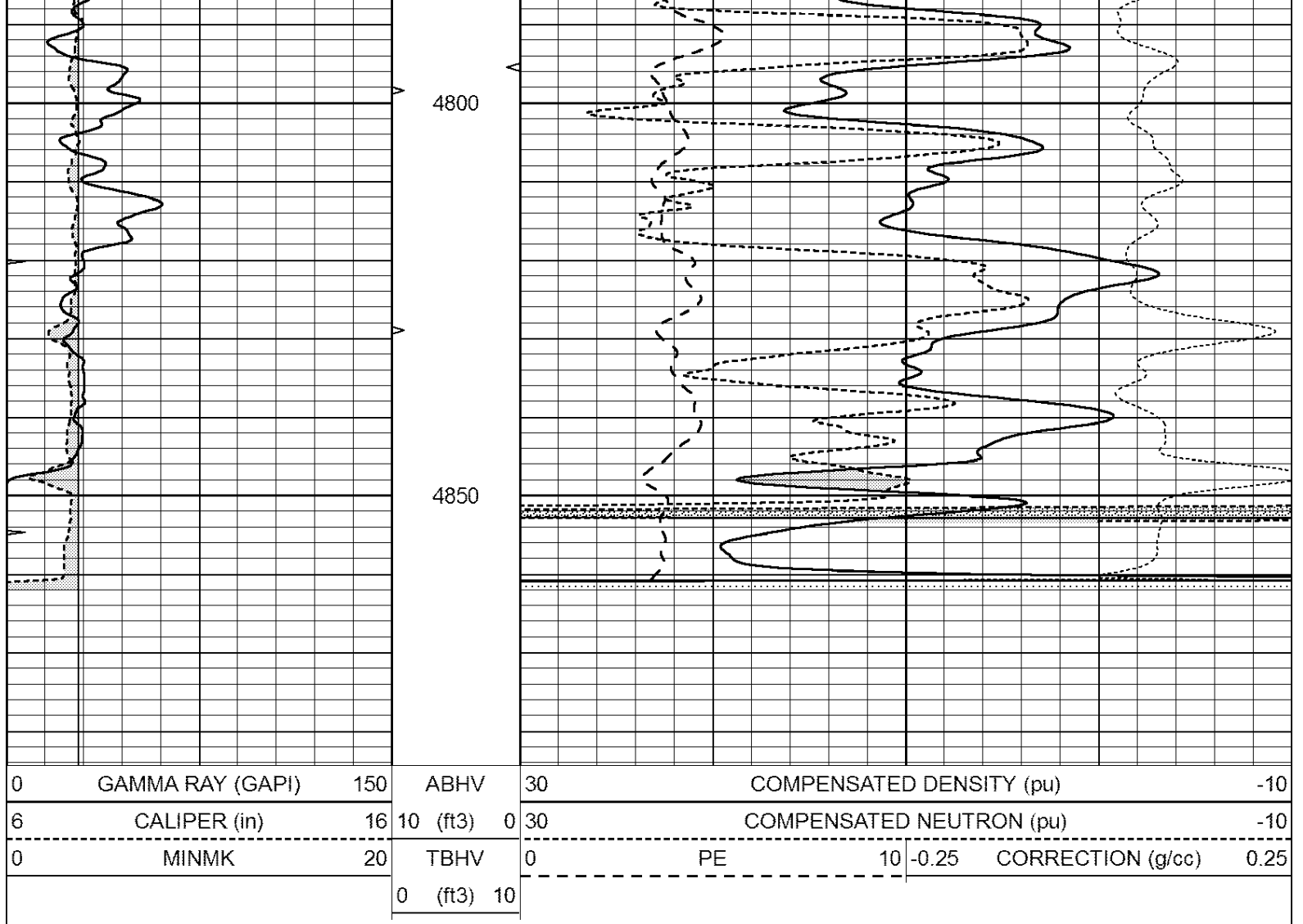




REPEAT SECTION

Database File: 2677pe.db
 Dataset Pathname: pass3.1
 Presentation Format: _ldt_neu
 Dataset Creation: Wed May 16 15:56:38 2018 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240





Calibration Report

Database File: pe2.db
Dataset Pathname: pass2
Dataset Creation: Mon Aug 21 11:58:02 2017 by Log Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
Surface Cal Performed: Mon Aug 21 11:58:18 2017
Downhole Cal Performed: Mon Aug 21 11:58:21 2017
After Survey Verification Performed: Mon Aug 21 11:58:23 2017

Surface Calibration

Readings				References			Results	
Loop:	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: 002 Model: PRB

Master Calibration		Performed Mon Aug 21 11:56:41 2017			
	Background	Magnesium	Aluminum	Sandstone	
Window 1	833.6	7394.2	2287.3	8111.8	cps
Window 2	768.9	6322.3	1995.6	6800.0	cps
Window 3	621.5	3261.9	1186.4	3380.9	cps
Window 4	184.2	185.7	184.9	184.8	cps
Long Space	0.0	5553.4	1226.6	6031.1	cps
Short Space	1.2	1307.5	903.9	1387.7	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	
Rib Angle	: 46.3	Rib Slope	: 1.045	Density/Spine Ratio	: 0.566
Spine Angle	: 76.3	Spine Slope	: 4.090	Spine Intercept	: -20.7

Before 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	

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: Tool Model:		6I 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:	Mon Aug 21 11:59:01 2017				
	Calibrator Value:	150.0		GAPI		
	Background Reading:	0.0		cps		
	Calibrator Reading:	276.0		cps		
	Sensitivity:	0.5500		GAPI/cps		