



COMPENSATED DENSITY/NEUTRON PE/LOG

Company	DEUTSCH OIL CO.	Company	DEUTSCH OIL CO.
Well	HETRICK-HOWELL#1-24	Well	HETRICK-HOWELL#1-24
Field	LELA	Field	LELA
County	PRATT	County	PRATT
State	KANSAS	State	KANSAS
Location:	API # : 15-151-22536-0000 1980' FSL & 2970' FEL	Other Services DIL ML/FRAC	
Permanent Datum	SEC 24 TWP 26S RGE 12W	Elevation	
Log Measured From	GROUND LEVEL Elevation 1861	K.B. 1874	
Drilling Measured From	KELLY BUSHING 13' A.G.L. KELLY BUSHING	D.F. 1872	
		G.L. 1861	
Date	08/15/21		
Run Number	ONE		
Depth Driller	4180		
Depth Logger	4179		
Bottom Logged Interval	4159		
Top Log Interval	3200		
Casing Driller	8 5/8" @ 277		
Casing Logger	277		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.3/64		
pH / Fluid Loss	11.0/8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.5@ 70F		
Rmf @ Meas. Temp	.38@ 70F		
Rmc @ Meas. Temp	.60 @ 70F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	.29@ 117F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	////		
Maximum Recorded Temperature	117F		
Equipment Number	1523		
Location	HAYS, KANSAS		
Recorded By	GUS PFANENSTIEL		
Witnessed By	AARON YOUNG		

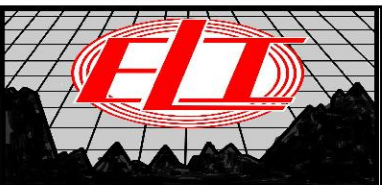
<<< Fold Here >>>

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

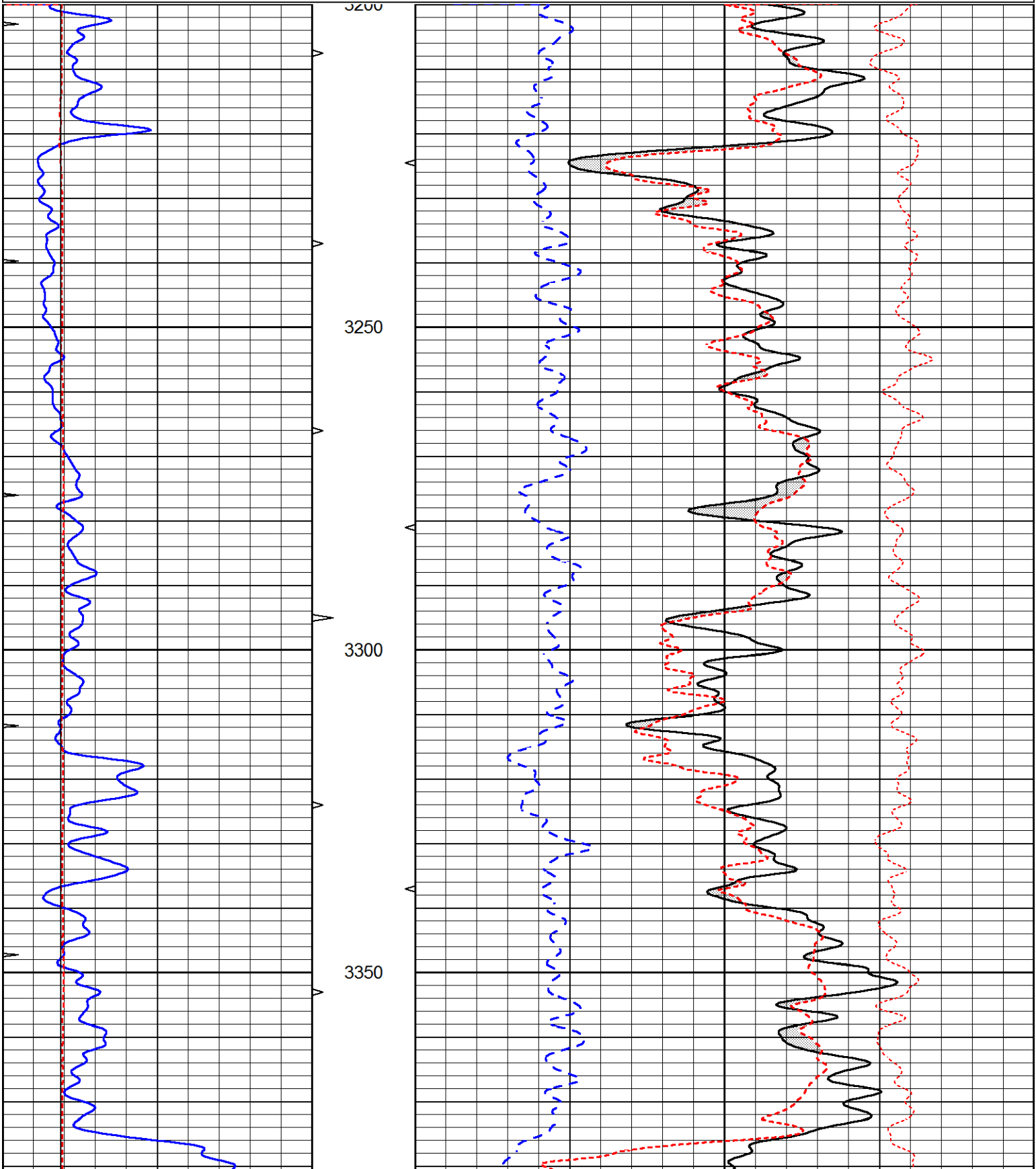
DIRECTIONS:PRESTON WEST 2 MILES ON NE 80 TH, NORTH 1/4
EAST INTO.

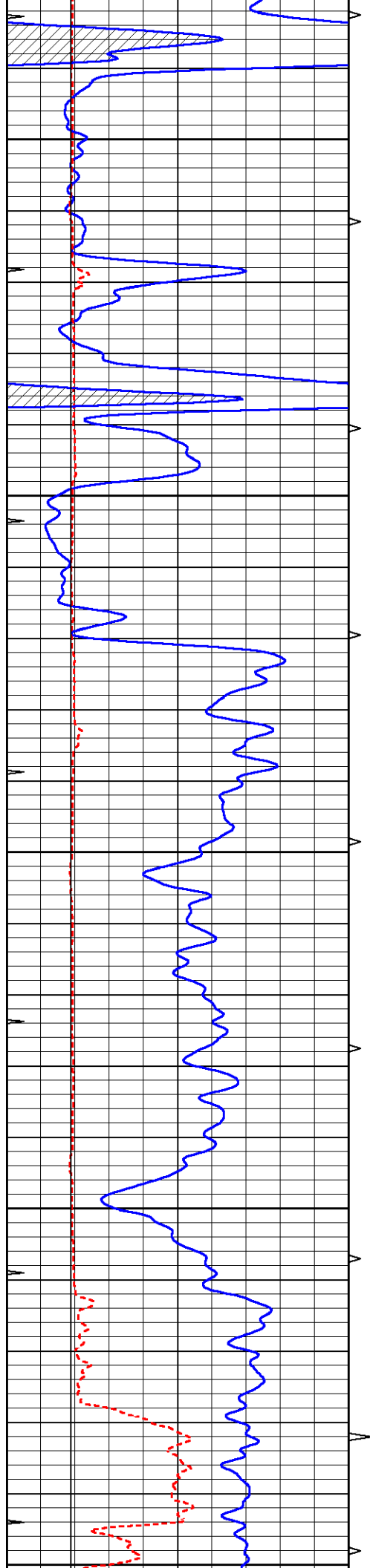


MAIN PASS

Database File	5615pe.db
Dataset Pathname	pass3.1
Presentation Format	_ldt_neu
Dataset Creation	Sun Aug 15 15:47:27 2021
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		





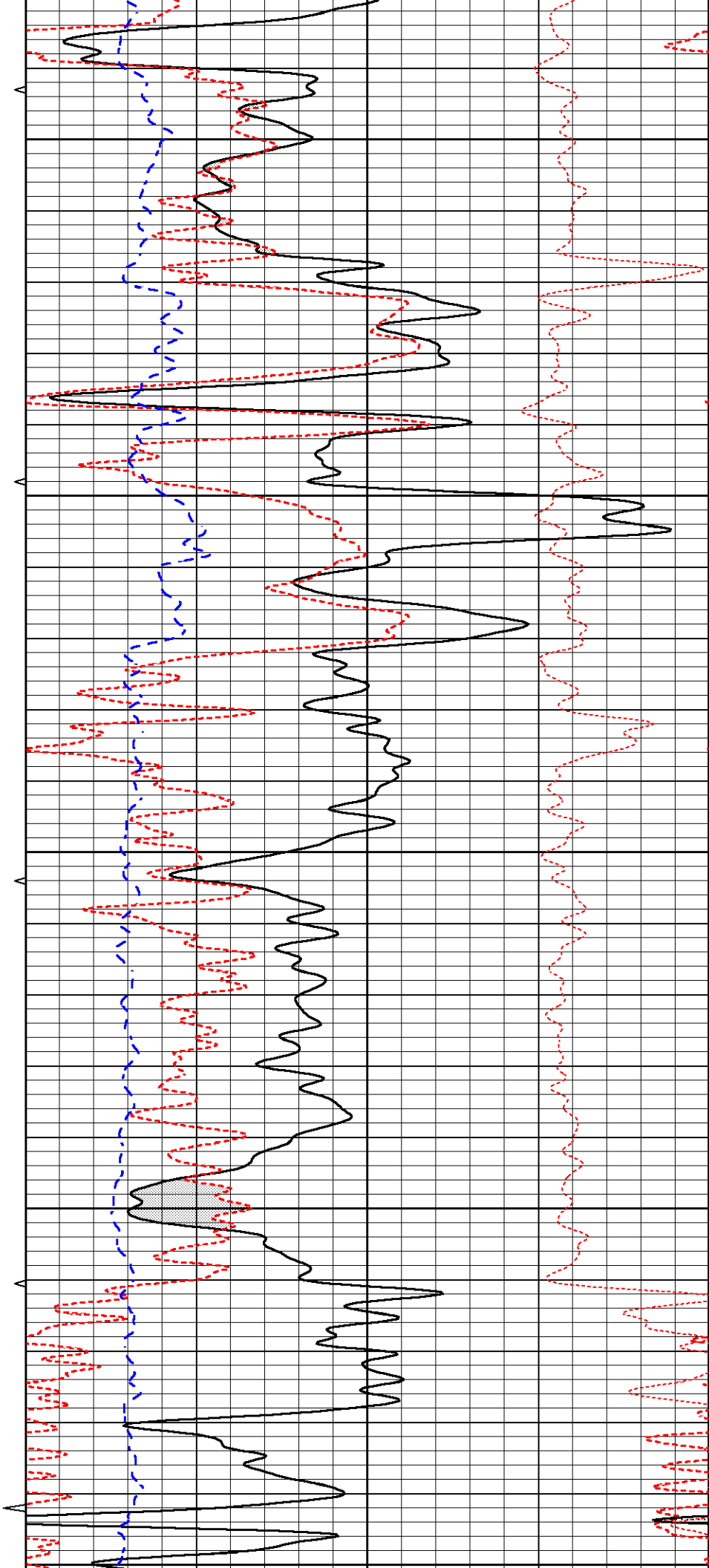
3400

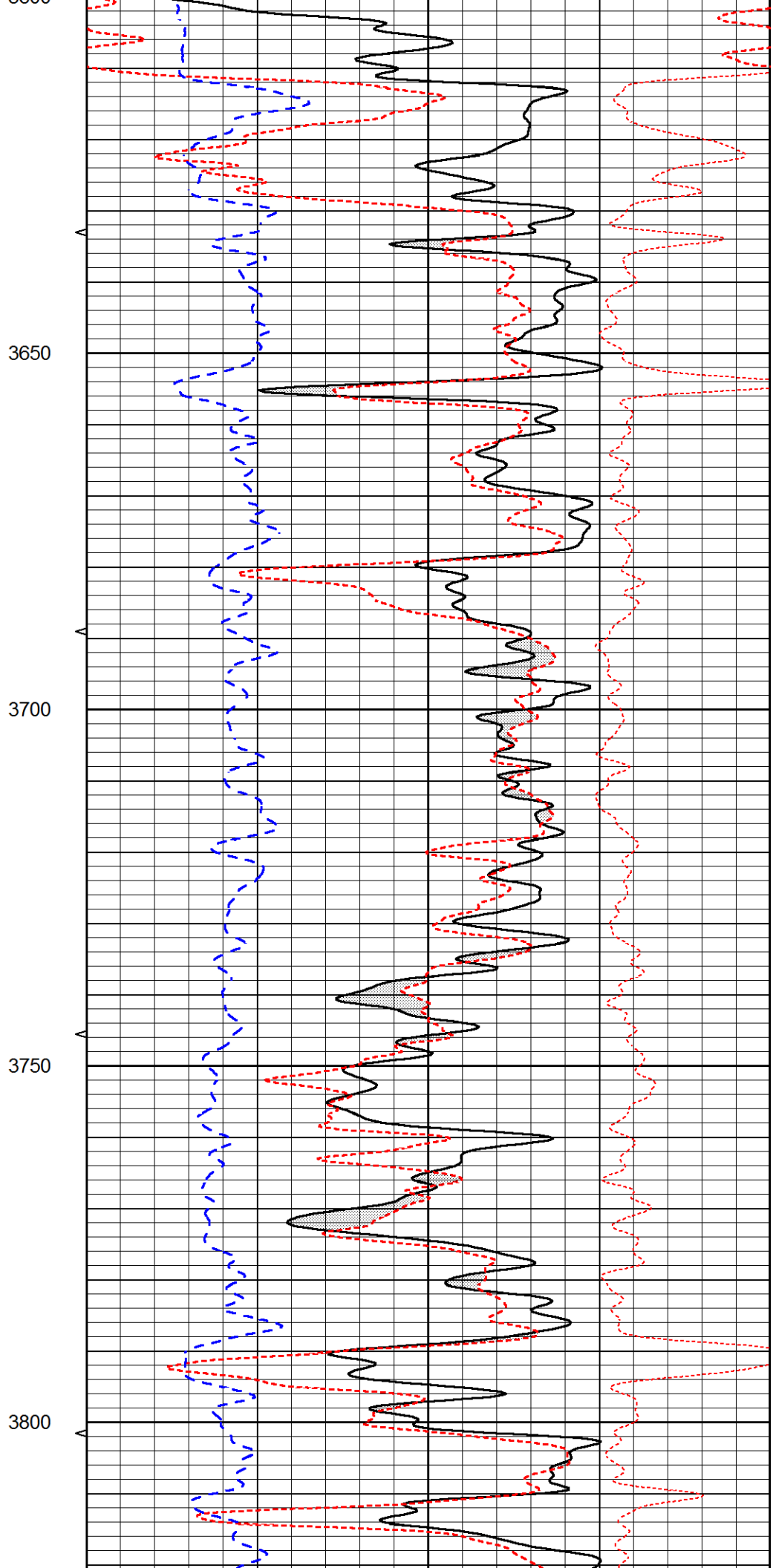
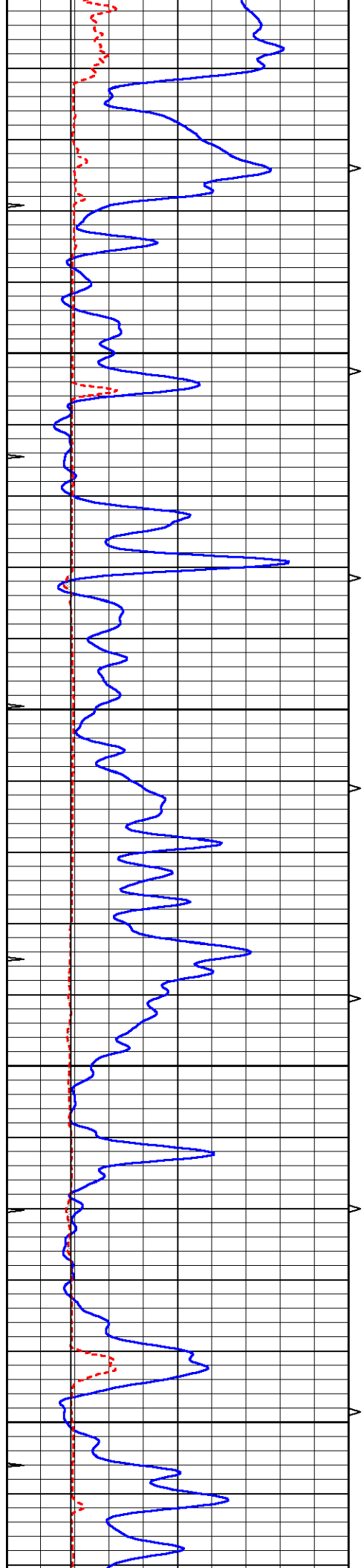
3450

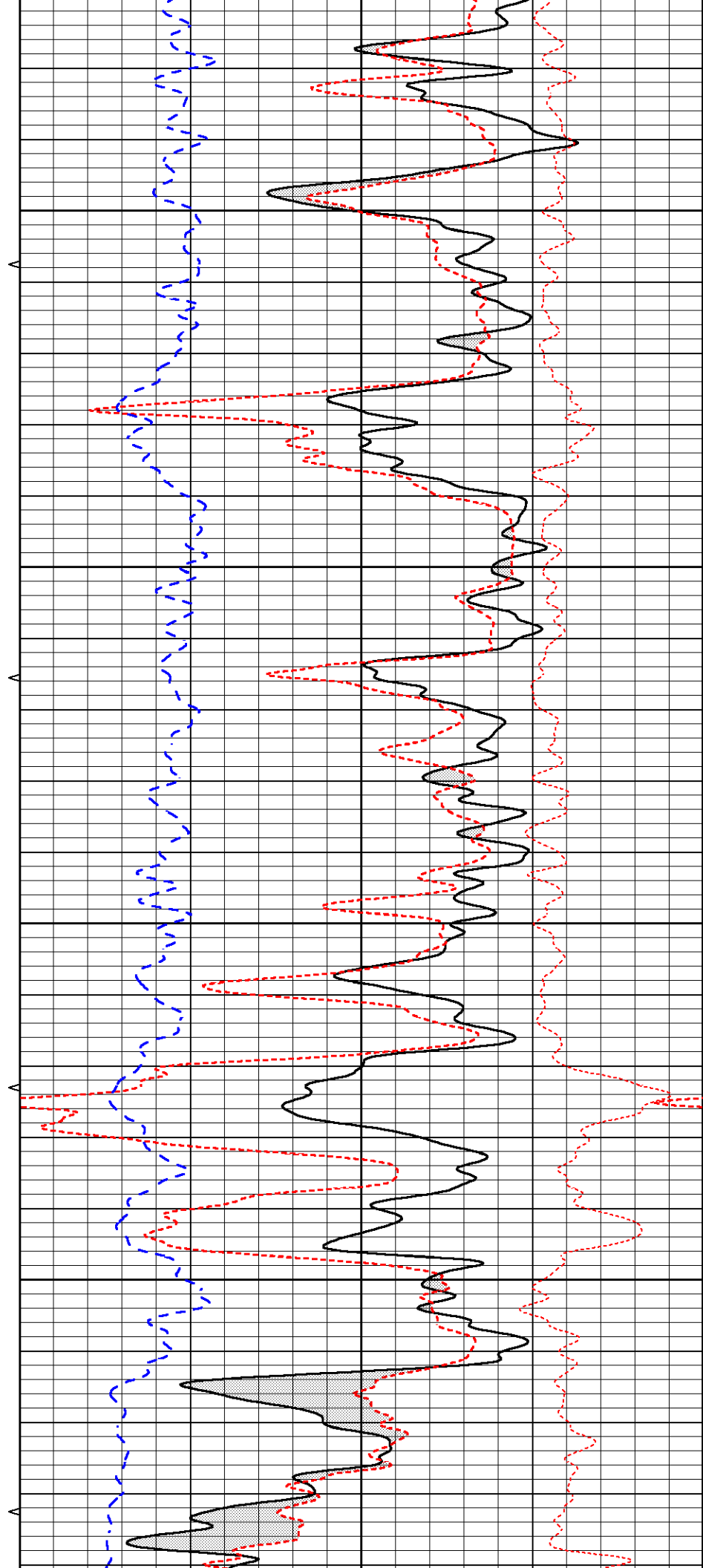
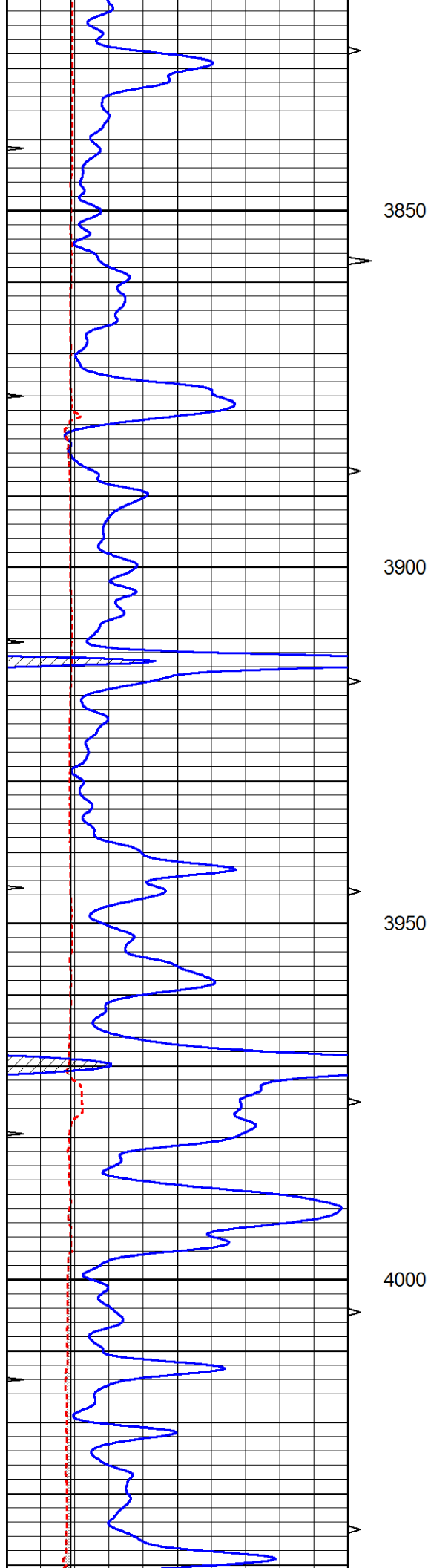
3500

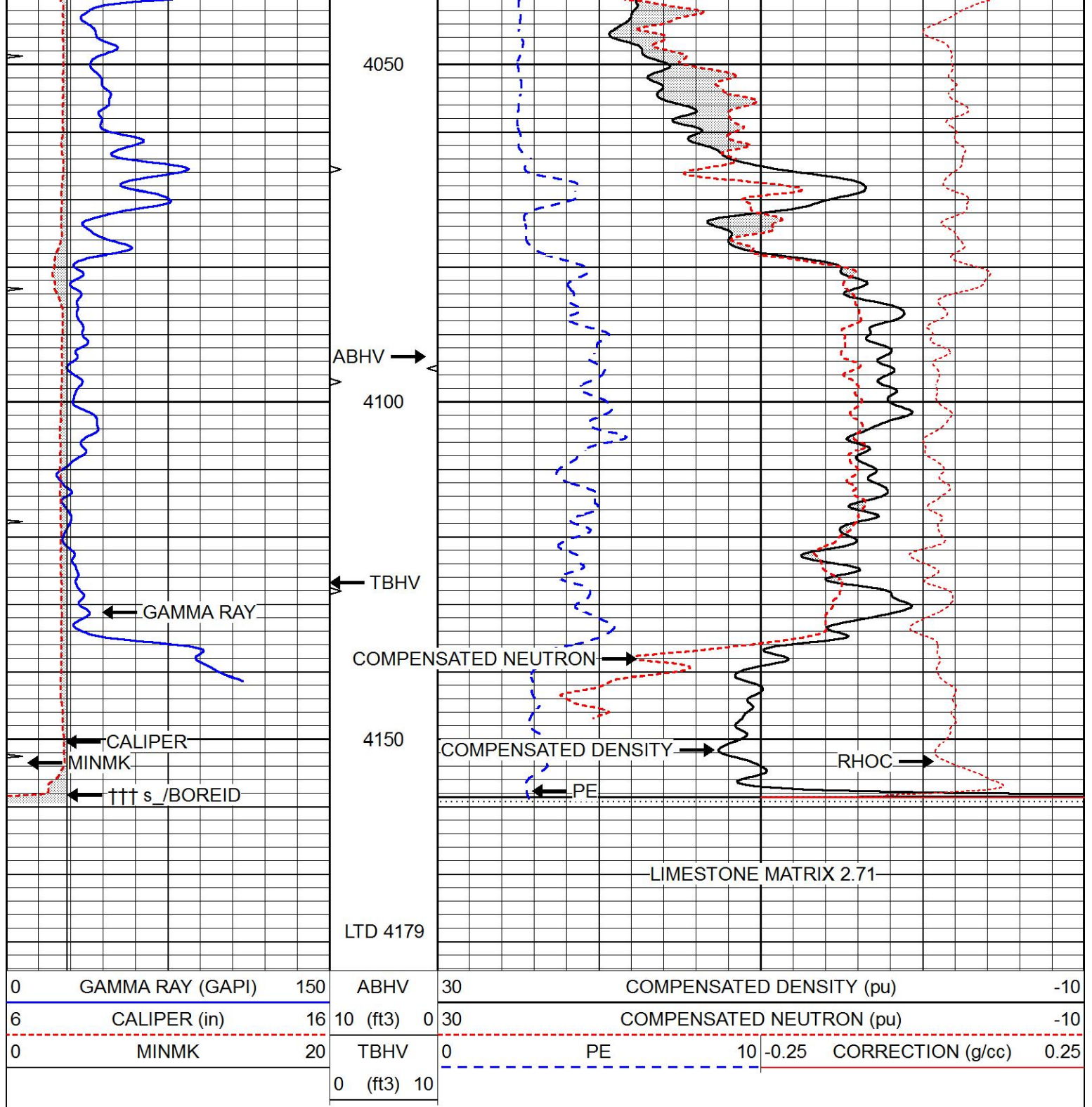
3550

3600







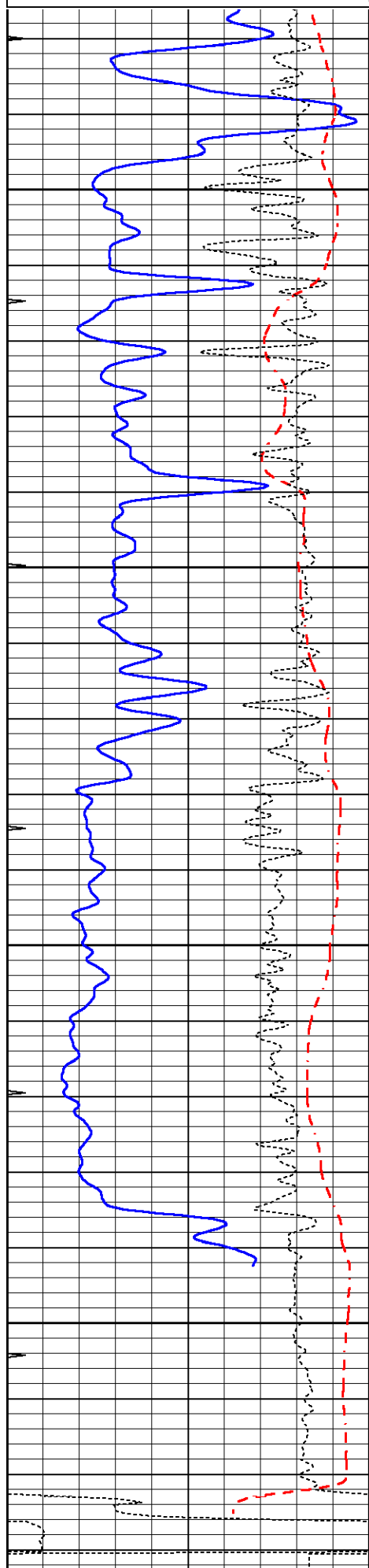


REPEAT SECTION

Database File 5615pe.db
 Dataset Pathname pass2.1
 Presentation Format _ldt_neu
 Dataset Creation Sun Aug 15 16:19:00 2021
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000

-250 Rxo/Rt 50
0 MINMK 20



4000

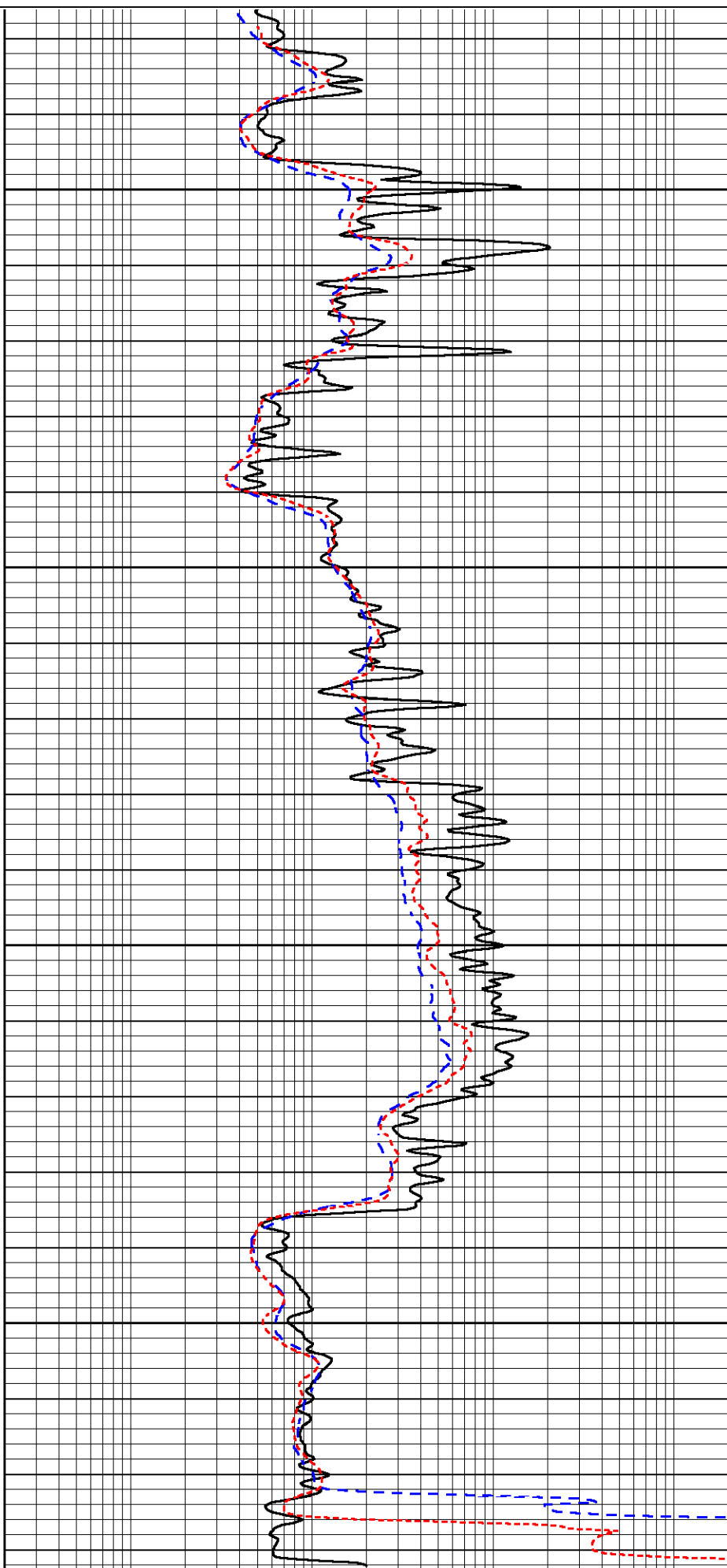
4050

4100

4150

0 GAMMA RAY (GAPI) 150

0.2 MEDIUM INDUCTION (Ohm-m) 2000



0.2 SHALLOW GUARD (Ohm-m) 2000

0.2	SHALLOW COARD (Ohm-m)	2000
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

Calibration Report									
Database File		5615pe.db							
Dataset Pathname		pass2.1							
Dataset Creation		Sun Aug 15 16:19:00 2021							
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									
		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: 002N		Model: PRB							

Master Calibration					Performed Tue Mar 10 15:08:00 2020				
	Background	Magnesium	Aluminum	Aluminum+Fe					
Window 1	780.1	6981.9	2088.6	1871.2				cps	
Window 2	718.6	5898.2	1813.8	1664.1				cps	
Window 3	580.0	2989.5	1088.0	1039.1				cps	
Window 4	172.8	175.7	175.3	173.5				cps	
Long Space	0.0	5179.6	1095.2	945.5				cps	
Short Space	1.1	1228.6	821.2	690.4				cps	
Rho		1.7100	2.5900	0.0000				g/cc	

Pe	2.0000		2.7500		5.7900	
Rib Angle	: 45.5	Rib Slope	: 1.016	Density/Spine Ratio	: 0.548	
Spine Angle	: 75.5	Spine Slope	: 3.857	Spine Intercept	: -18.9	
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:			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		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:		Thu Jul 30 20:04:35 2020		
Calibrator Value:		150.0	GAPI	
Background Reading:		0.0	cps	
Calibrator Reading:		276.0	cps	
Sensitivity:		0.7500	GAPI/cps	