



PEL DENSITY MICRO LOG

Permanent Datum:	GL	Elevations:		Services:
Drilling Measured From:	KB	KB 2029.00	Ft	CNT PIT
Log Measured From:	KB	DF 2028.00	Ft	LDT
Above Permanent Datum:	7.00 Ft	GL 2022.00	Ft	MST

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Run Number	1		
Date	02-27-2020		
Date/Time On Bottom	02-27-2020 13:26		
Depth to Fluid	0.0 Ft		
Salinity	5000.000		
RMF@BHT	0.980 @ 0 F		
RMF@BHT	1.330 @ 0 F		

Comments

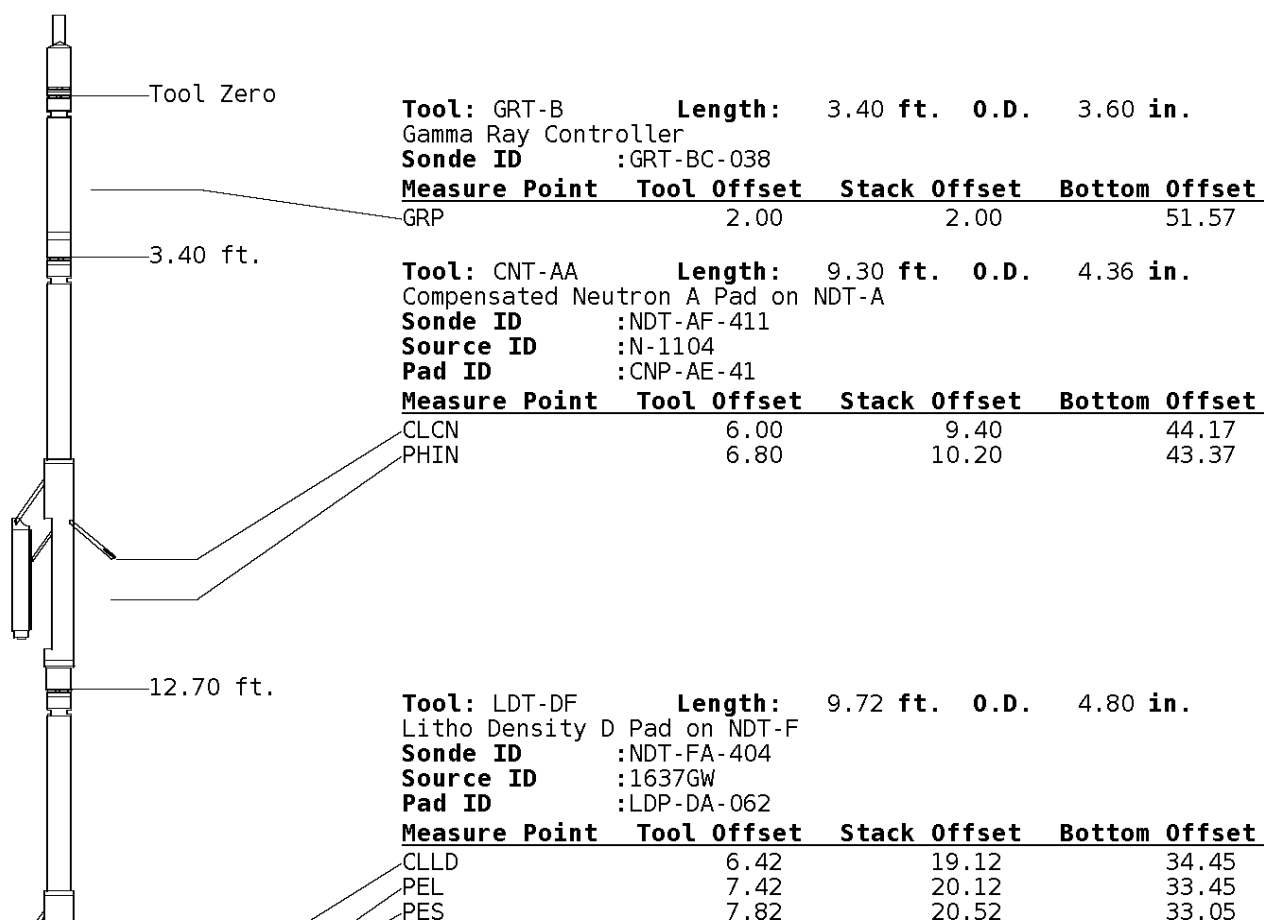
ALL PRESENTATIONS AS PER CUSTOMER REQUEST
 GRT, CNT, LDT, CST, MLT AND PIT RUN IN COMBINATION
 CALIPERS ORIENTED ON X-Y AXIS
 2.71 G/CC USED TO CALCULATE POROSITY
 ANNULAR HOLE VOLUME CALCULATED USING 5.5" PRODUCTION CASING
 PHIN IS CALIPER CORRECTED

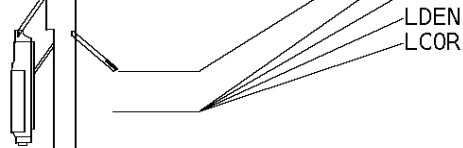
GRT: GRP
 CNT: PHIN, CLCNIN,
 LDT: PORL, LCORN, PECLN, LDENN, PORLLS, CLLDIN
 MLT: NOR_RF, INV_RF, MSCLPIN
 PIT: ILD, ILM, SPU, SFLAEC, CIRD, RXO/RT

OPERATORS:
 D. RAGSDALE
 J. VAUGHN
 D.LEGLEITER
 Z.AL SUDANI

Tool String Schematic

Total Tool Length - 53.57 ft.
Maximum Outside diameter - 6.00 in.
Net Weight in Air - 943.00 lbs.





7.62	20.32	33.25
7.62	20.32	33.25

22.42 ft.

Tool: MST-DA **Length:** 9.66 ft. **O.D.** 6.00 in.
 Micro Spherically Focused (IC)
Sonde ID :MST-DA-36

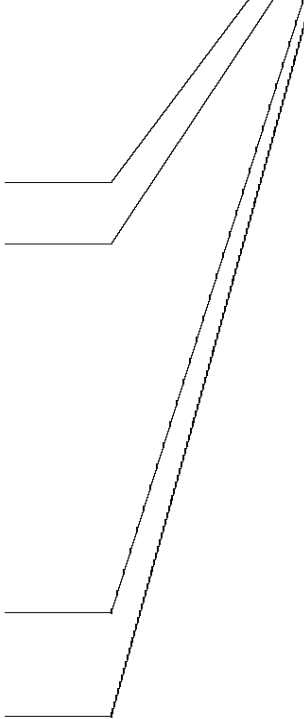
Measure Point	Tool Offset	Stack Offset	Bottom Offset
MSFL	7.60	30.02	23.55
MSCLP	7.60	30.02	23.55
INV	7.60	30.02	23.55
NOR	7.60	30.02	23.55



32.08 ft.

Tool: PIT-CA **Length:** 21.49 ft. **O.D.** 3.62 in.
 Phased Dual Induction w/ RM & D
Sonde ID :PIT-AC-043

Measure Point	Tool Offset	Stack Offset	Bottom Offset
ILD	8.92	41.00	12.56
ILM	10.10	42.18	11.39
SFLU	17.49	49.57	4.00
SP	20.60	52.68	0.88



LWT 53.57 ft.

Well File: BREXCO_PFEIFER_B_4_FEB-27_MST

Scale: 1:240 **Format:** NLD-240

Segment: V1.D1.S6 Reprocess MAIN

Acquired: 2020-02/27 13:29 3.4.1-13972

Reference: 0

Processed: 2020-02/27 14:51 3.4.1-13972

**CALIPER MICRO
INCHES (IN)**

16	26
6	16

**BIT SIZE
INCHES (IN)**

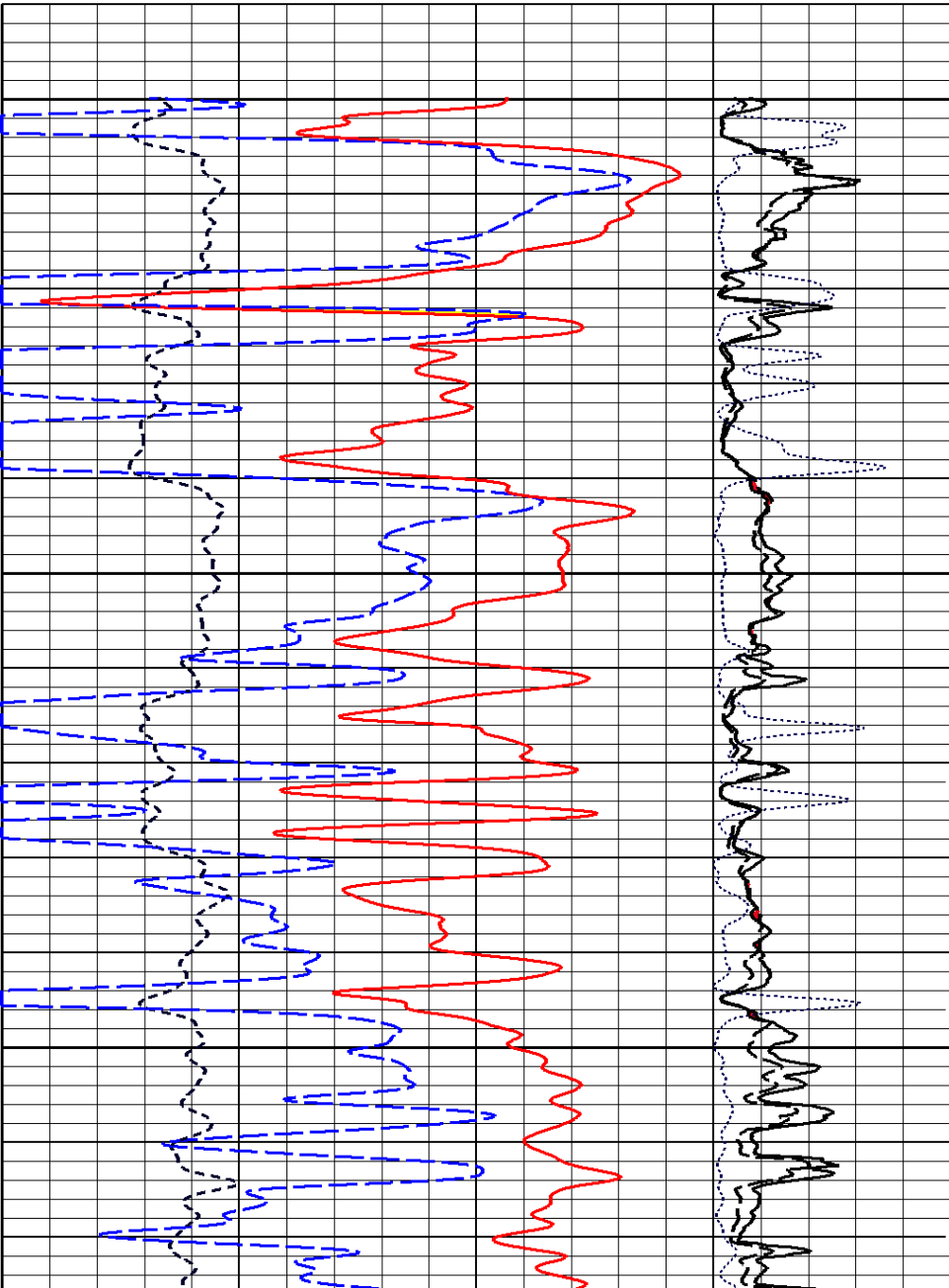
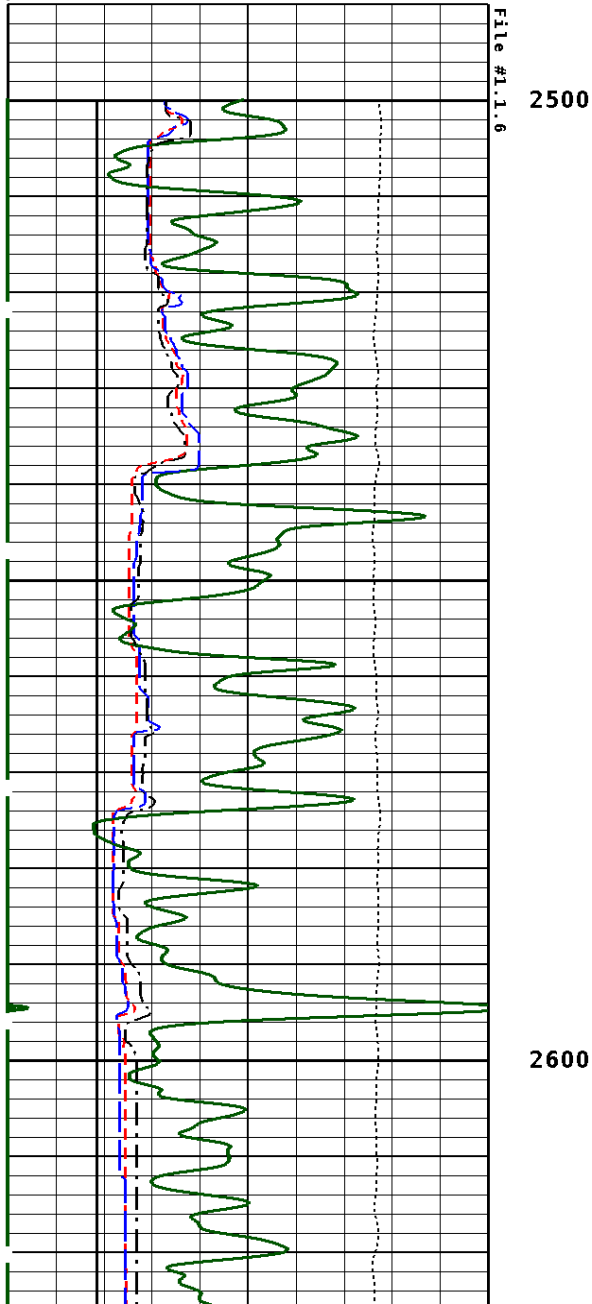
**NORMAL
OHMM**

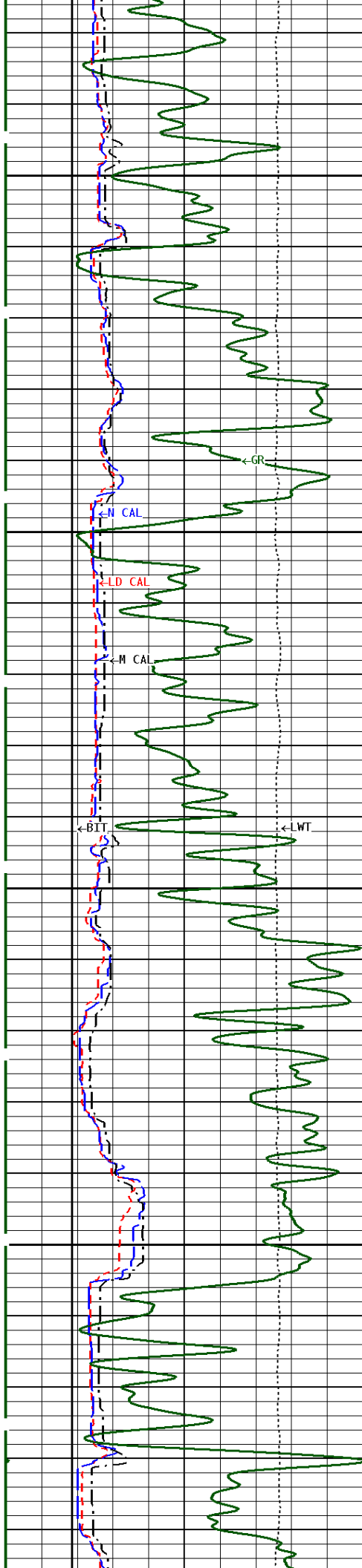
6	16
NEUTRON (Y) CALIPER INCHES (IN)	
16 6	26 16
DENSITY (X) CALIPER INCHES (IN)	
16 6	26 16
TENSION LBS	
10000	0
GAMMA RAY API UNITS	
150 0	300 150

0	40
INVERSE OHMM	
0	40

PE CROSS-SECTION BARNs/ELECTRON		DENSITY CORRECTION G/CC	
0	10	-0.25	0.25
DENSITY POROSITY (2.71g/cc) PERCENT			
70			30
30			-10
-10			-50
NEUTRON POROSITY (LIMESTONE) PERCENT			
30			-10

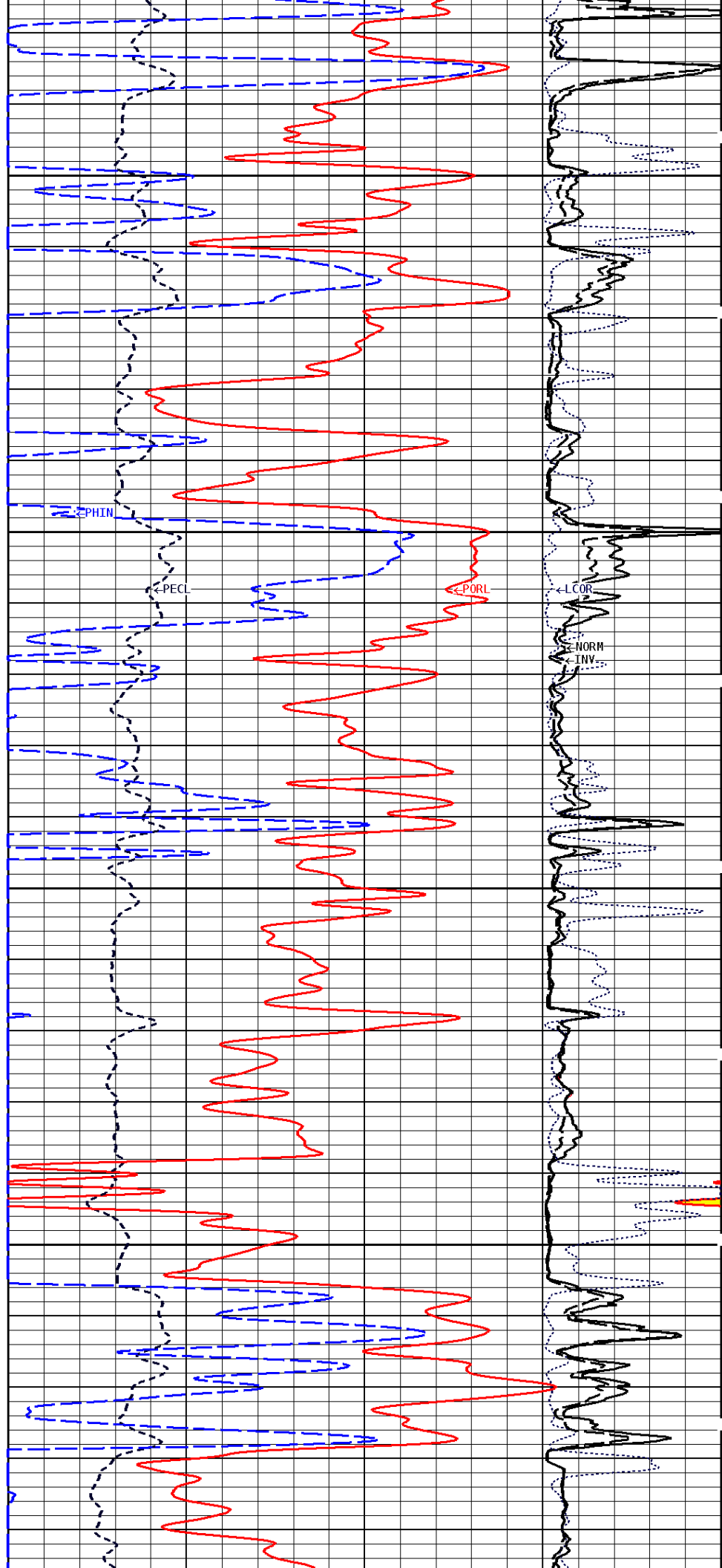
1:240 MAIN SECTION

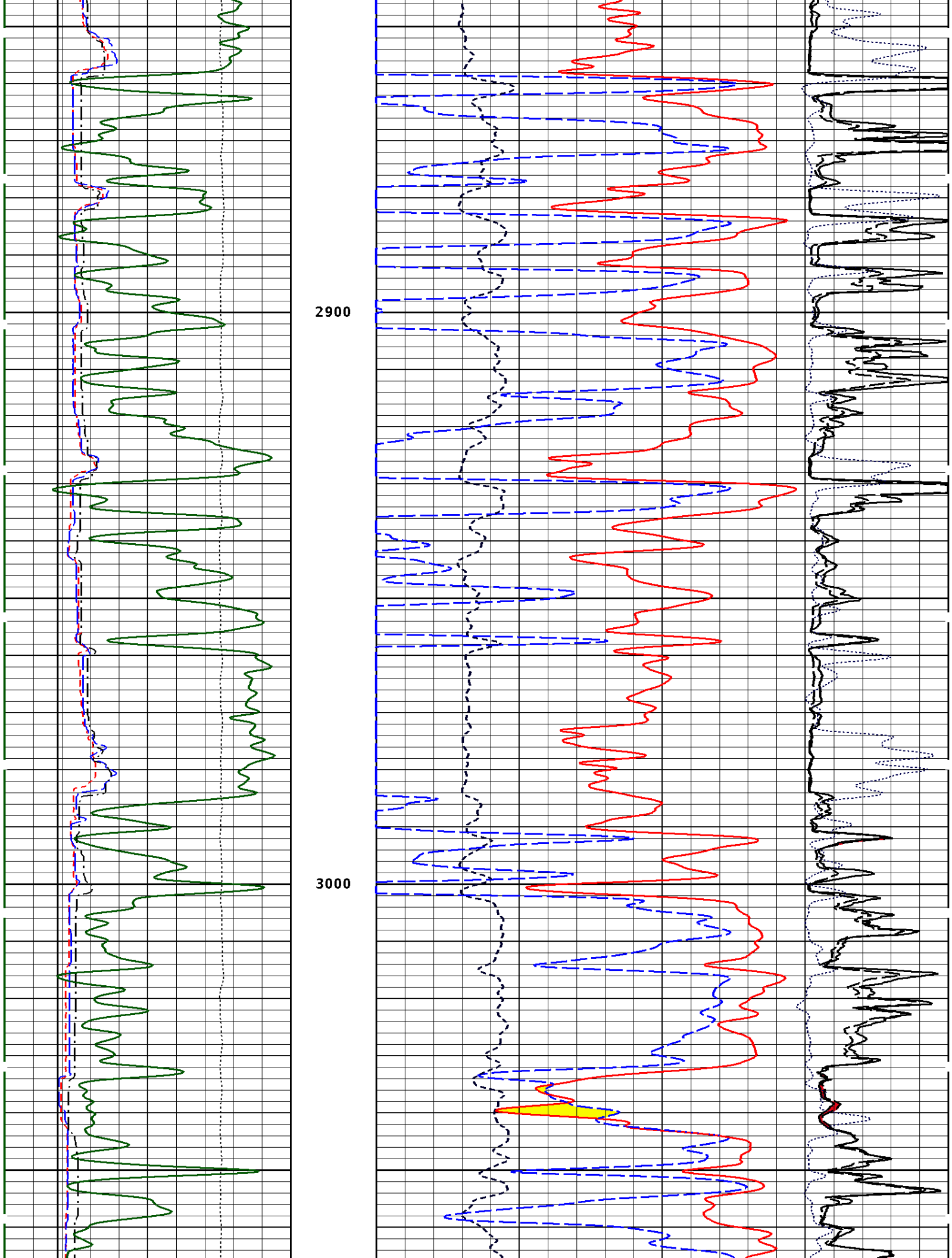


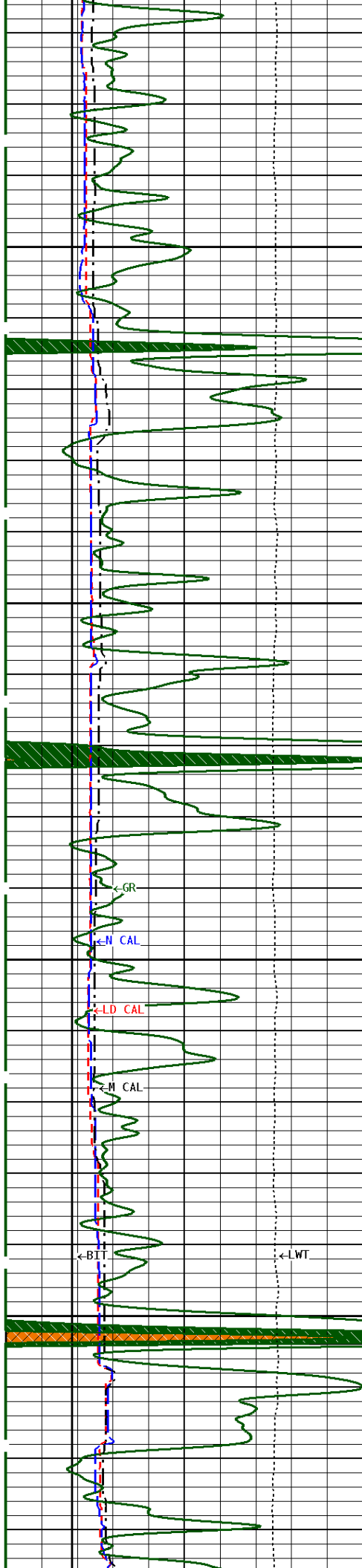


2700

2800

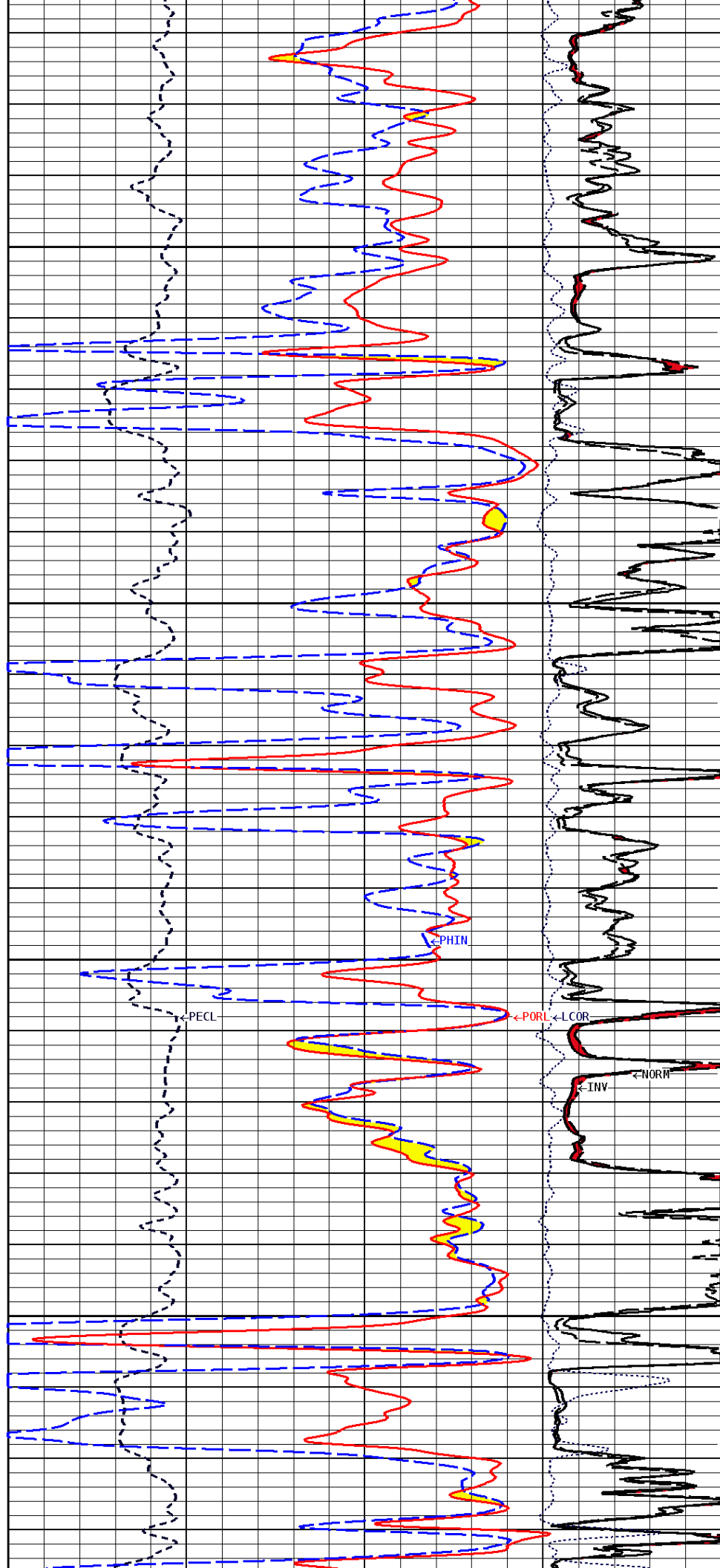


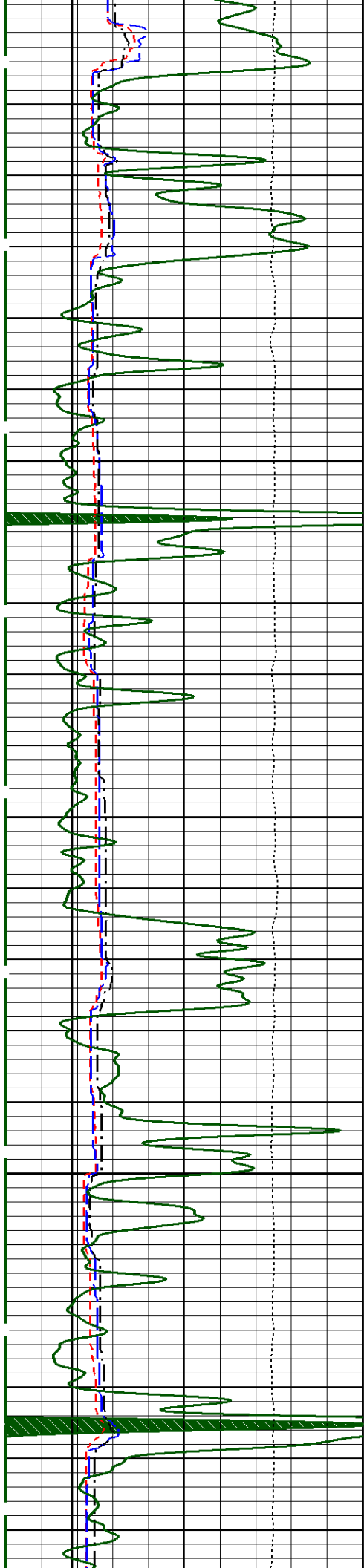




3100

3200

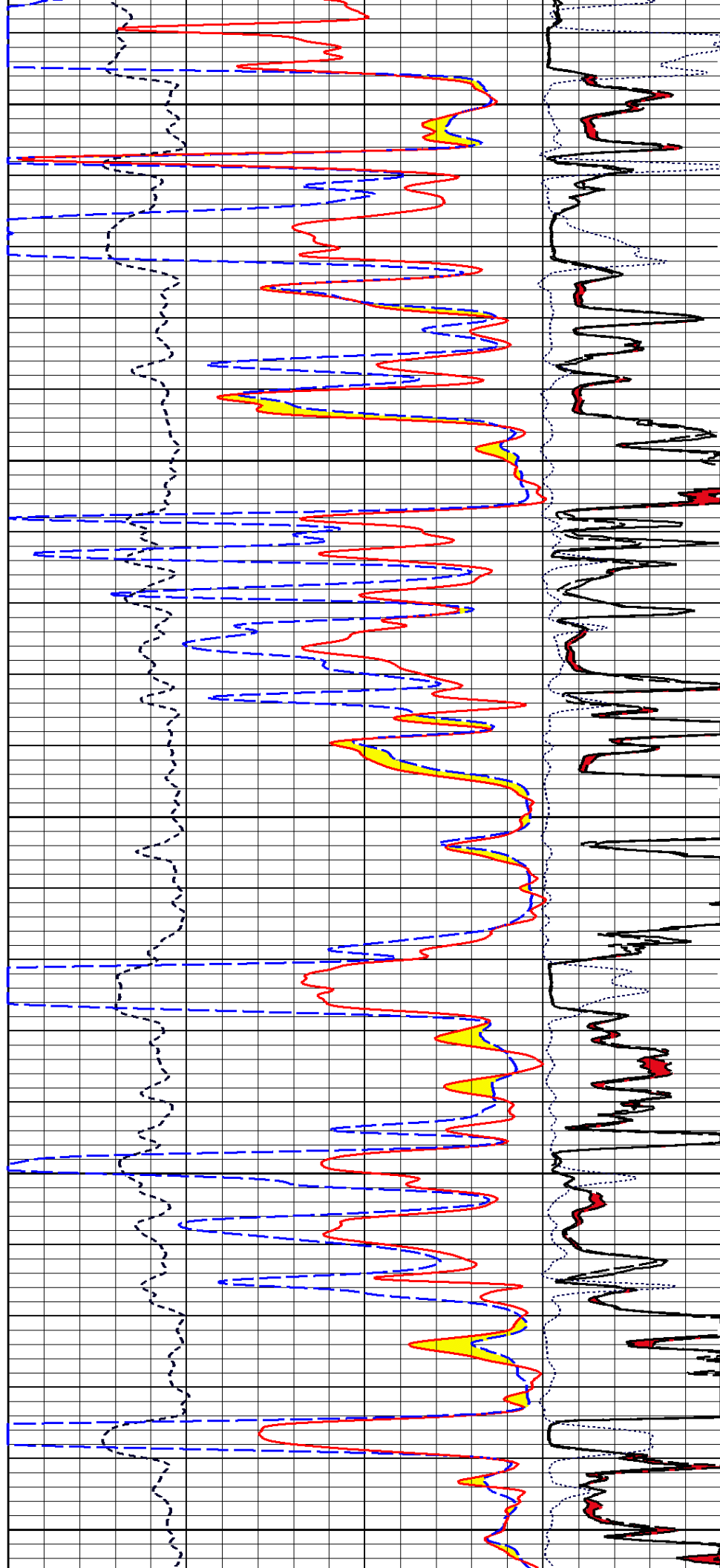


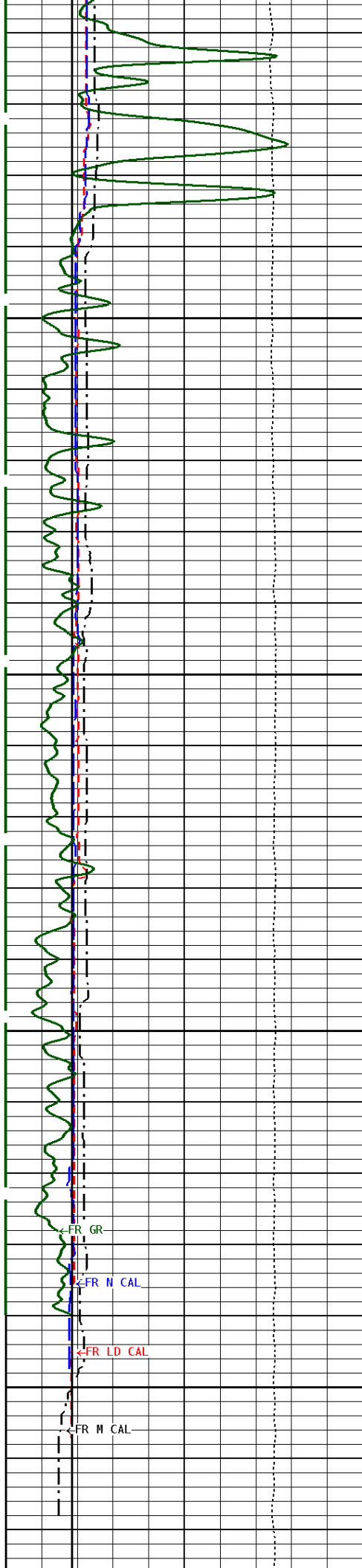


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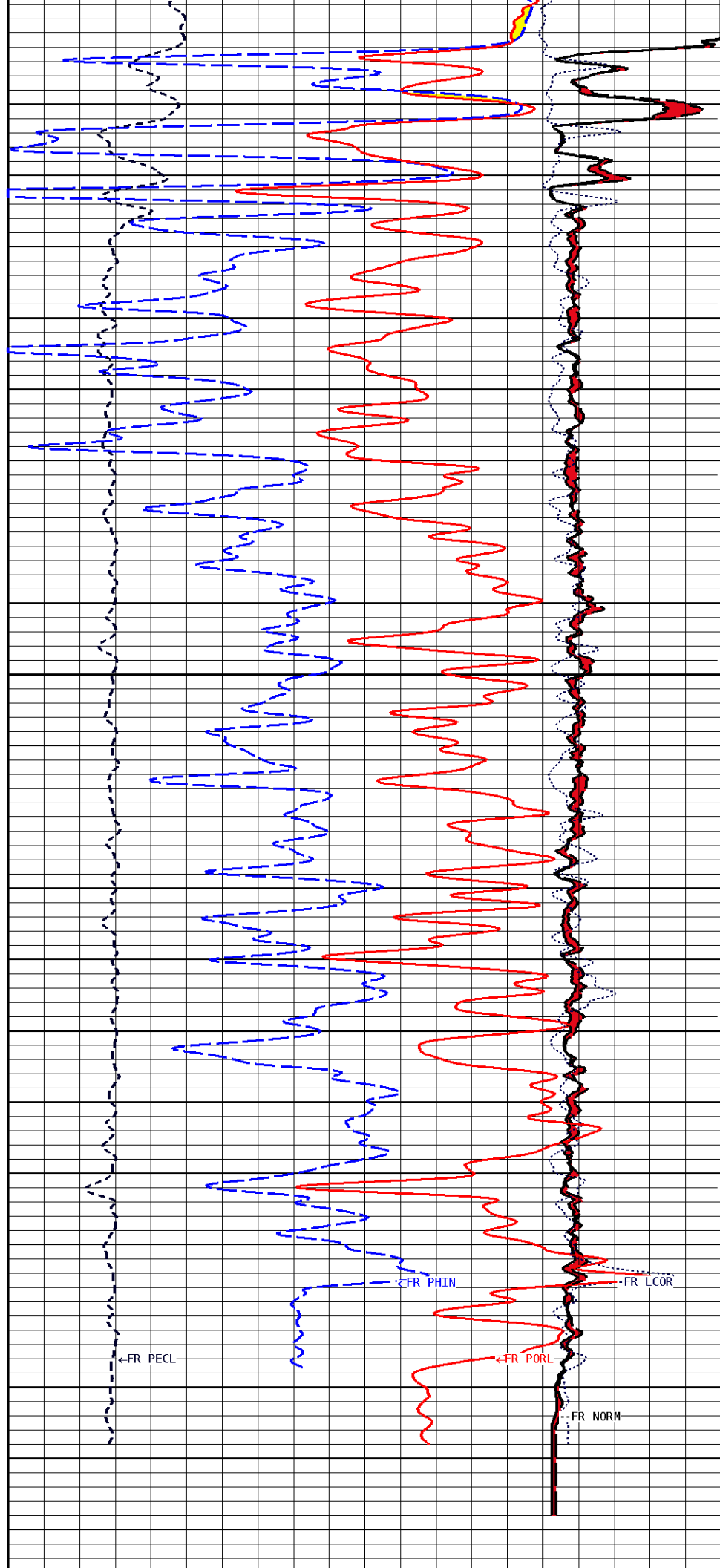
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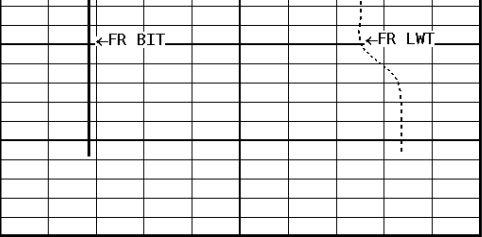




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3730

1:240 MAIN SECTION

GAMMA RAY API UNITS	
150 0	300 150
TENSION LBS	
10000	0
DENSITY (X) CALIPER INCHES (IN)	
16 6	26 16
NEUTRON (Y) CALIPER INCHES (IN)	
16 6	26 16
BIT SIZE INCHES (IN)	
6	16
CALIPER MICRO INCHES (IN)	
16 6	26 16

NEUTRON POROSITY (LIMESTONE) PERCENT	
30	-10
DENSITY POROSITY (2.71g/cc) PERCENT	
70 30 -10	30 -10 -50
PE CROSS-SECTION BARN/ ELECTRON	DENSITY CORRECTION G/CC
0 10	-0.25 0.25
INVERSE OHMM	
0 40	
NORMAL OHMM	
0 40	

* Borehole Zone Factors *

Zone 1 99999.0 to 0.0 Feet		
Matrix Density	2.71	g/cc
Fluid Density	1.00	g/cc
Formation Matrix	Limestone	
Drill Bit Size	7.875	in
Casing Diameter	5.500	in
Casing Thickness	0.250	in
Casing Correction (PHI N)	Disable	

Well File: BREXCO PFEIFER B 4 FEB-27 MST Scale: 1:240 Format: NLD-240
Segment: V1.D1.S8 MAIN DOLIMITE 2.87 Acquired: Not Available
Reference: 0 Processed: 2020-02/27 15:01 3.4.1-13972

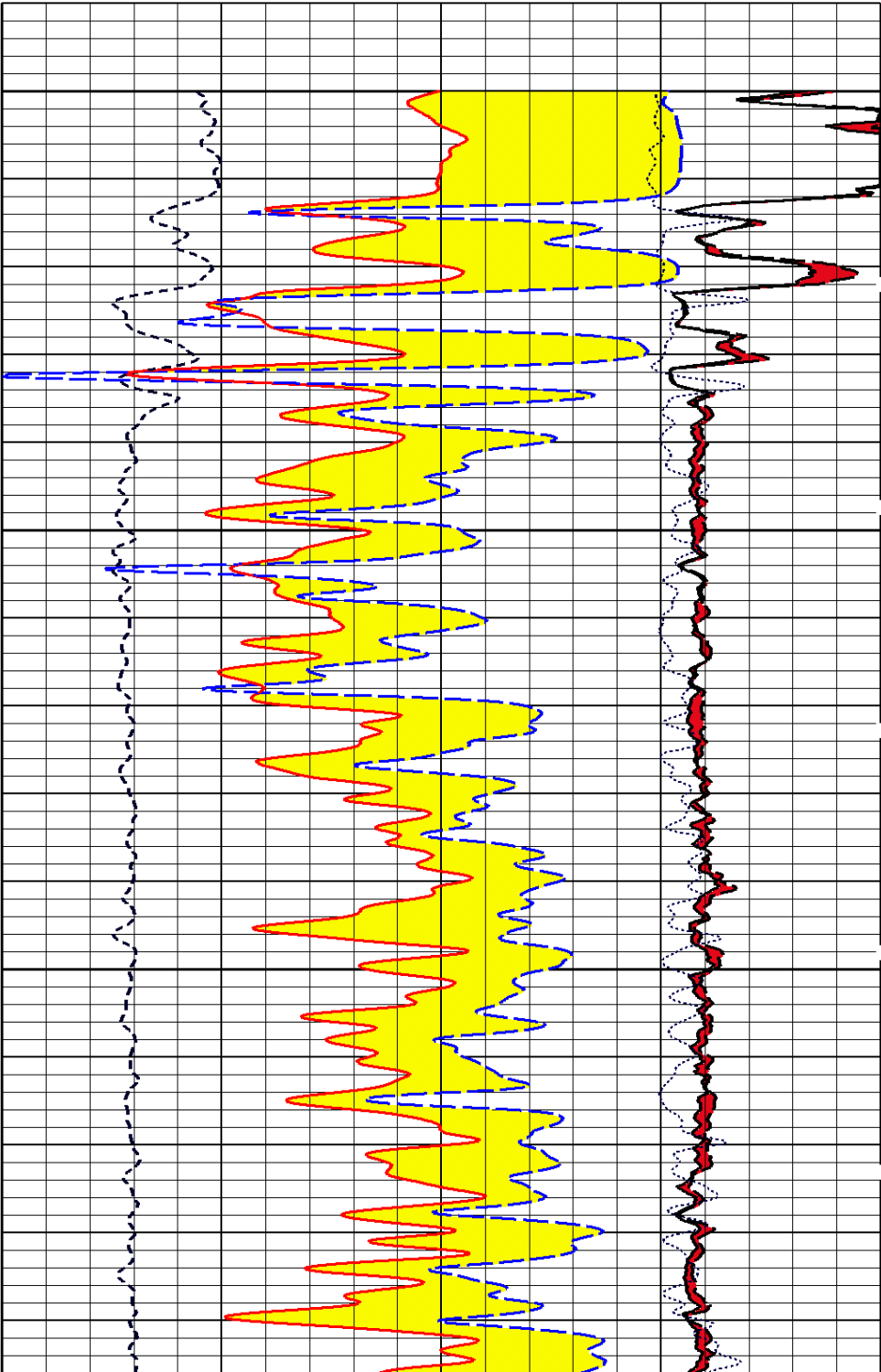
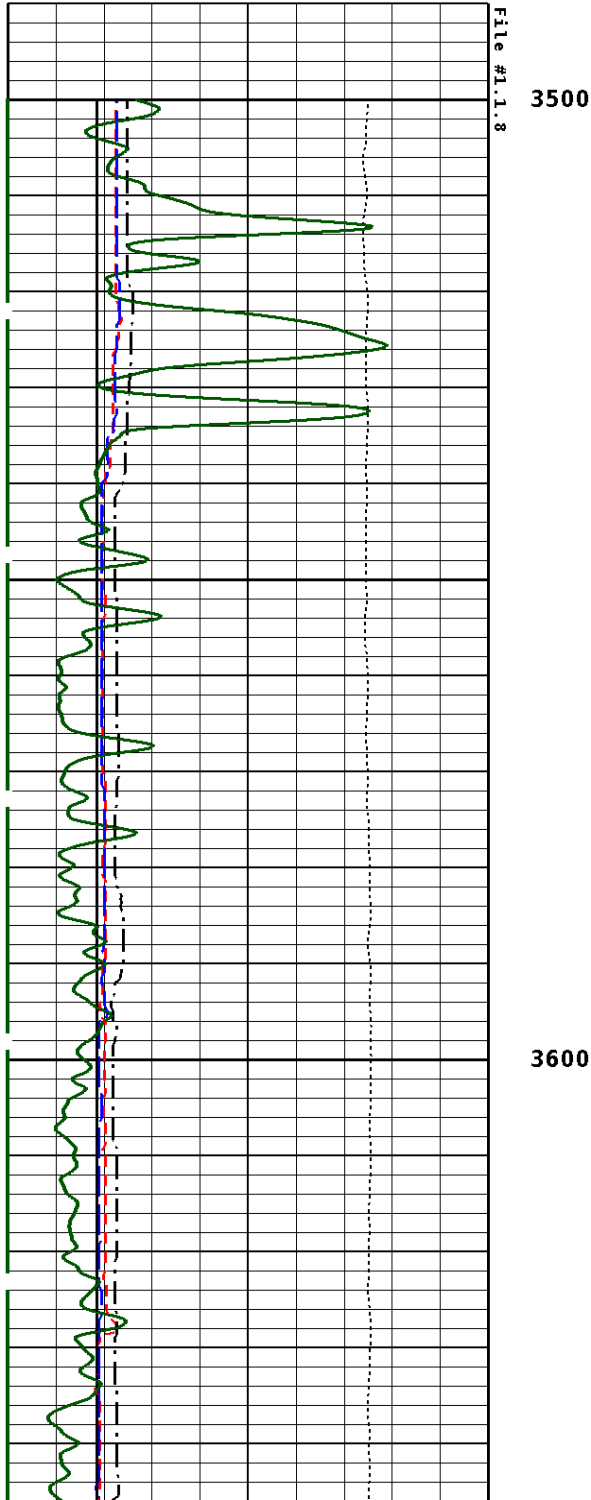
CALIPER MICRO INCHES (IN)	
16 6	26 16
BIT SIZE INCHES (IN)	
6	16
NEUTRON (Y) CALIPER INCHES (IN)	
16 6	26 16

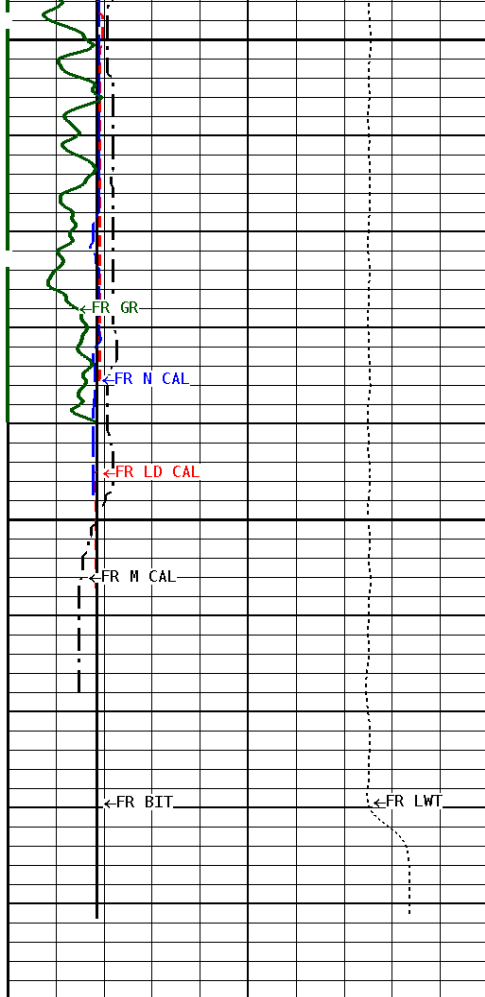
NORMAL OHMM	
0 40	
INVERSE OHMM	
0 40	

DENSITY (X) CALIPER INCHES (IN)	
16	26
6	16
TENSION LBS	
10000	0
GAMMA RAY API UNITS	
150	300
0	150

PE CROSS-SECTION BARNs/ELECTRON		DENSITY CORRECTION G/CC	
0	10	-0.25	0.25
DENSITY POROSITY (2.87g/cc) PERCENT			
70			30
30			-10
-10			-50
NEUTRON POROSITY (DOLOMITE) PERCENT			
30			-10

1:240 MAIN SECTION
DOLOMITE PLAYBACK 2.87 g/cc

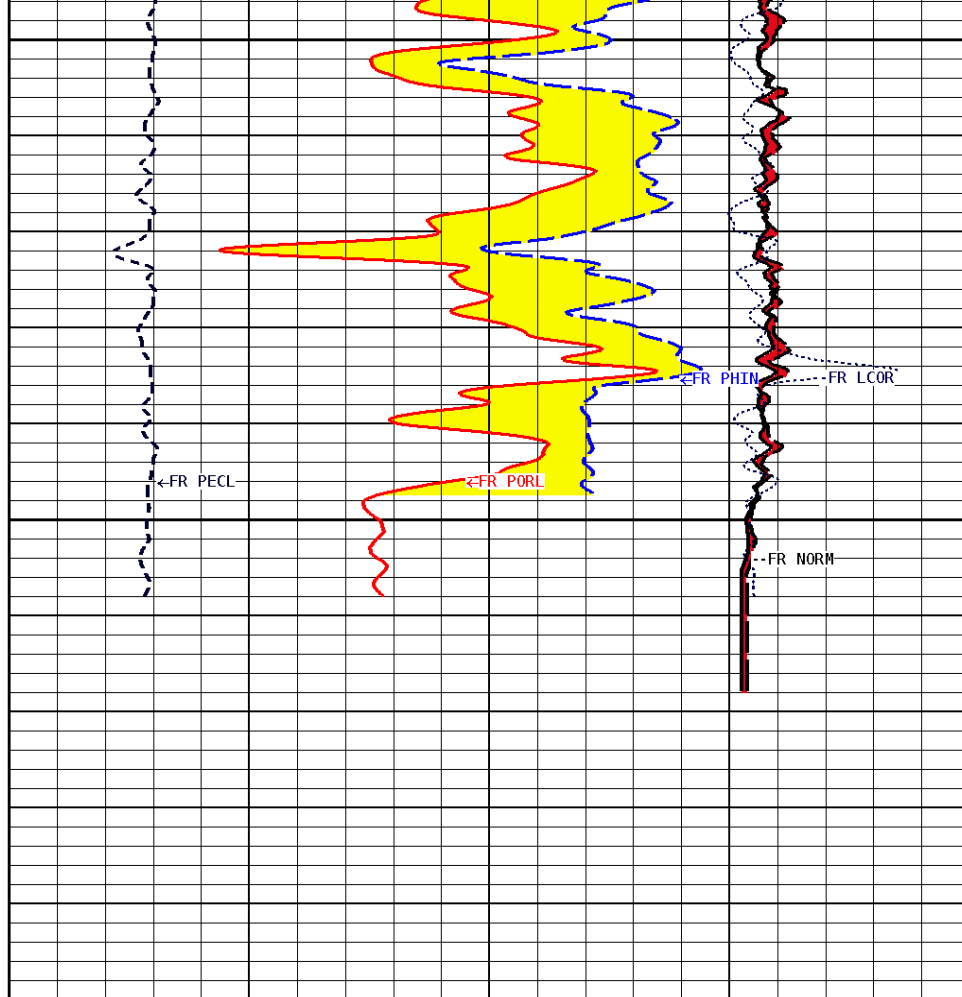




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File #1.1.8



1:240 MAIN SECTION

DOLOMITE PLAYBACK 2.87 g/cc

GAMMA RAY API UNITS 150 0 300 150	
TENSION LBS 10000 0	
DENSITY (X) CALIPER INCHES (IN) 16 26 6 16	
NEUTRON (Y) CALIPER INCHES (IN) 16 26 6 16	
BIT SIZE INCHES (IN) 6 16	
CALIPER MICRO INCHES (IN) 16 26 6 16	

NEUTRON POROSITY (DOLOMITE) PERCENT 30 -10	
DENSITY POROSITY (2.87g/cc) PERCENT 70 30 30 -10 -10 -50	
PE CROSS-SECTION BARNS/ELECTRON 0 10	DENSITY CORRECTION G/CC -0.25 0.25
INVERSE OHMM 0 40	
NORMAL OHMM 0 40	

* Borehole Zone Factors *

Zone 1 99999.0 to 0.0 Feet

Matrix Density	2.87	g/cc
Fluid Density	1.00	g/cc
Formation Matrix	Dolomite	
Drill Bit Size	7.875	in
Casing Diameter	5.500	in
Casing Thickness	0.250	in
Casing Correction (PHI N)	Disable	

Well File: BREXCO_PFEIFER_B_4 FEB-27_MST

Scale: 1:240

Format: NLD-240

Segment: V1.D1.S5 Reprocess REPEAT

Acquired: 2020-02/27 13:03 3.4.1-13972

Reference: 0

Processed: 2020-02/27 14:51 3.4.1-13972

CALIPER MICRO INCHES (IN)		
16		26
6		16

BIT SIZE INCHES (IN)		
6		16

NEUTRON (Y) CALIPER INCHES (IN)		
16		26
6		16

DENSITY (X) CALIPER INCHES (IN)		
16		26
6		16

TENSION LBS		
10000		0

GAMMA RAY API UNITS		
150		300
0		150

NORMAL OHMM	
0	40

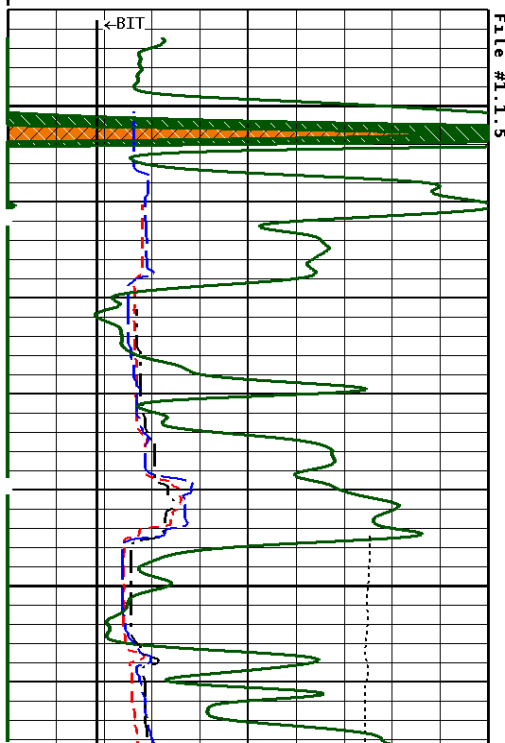
INVERSE OHMM	
0	40

PE CROSS-SECTION BARNS/ELECTRON		DENSITY CORRECTION G/CC	
0	10	-0.25	0.25

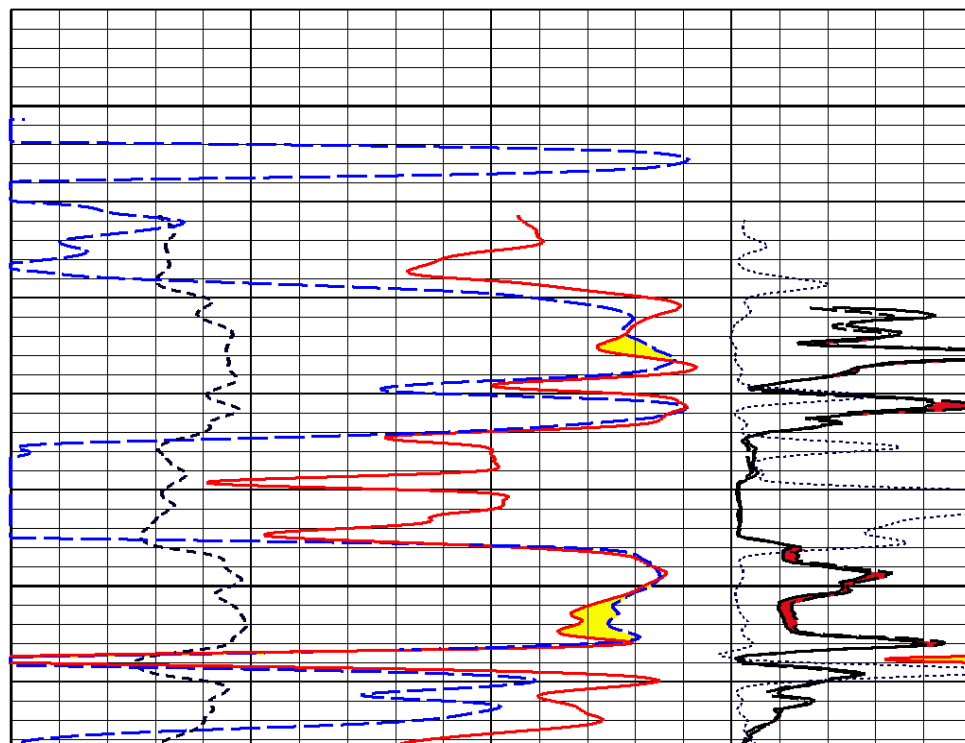
DENSITY POROSITY (2.71g/cc) PERCENT			
70			30
30			-10
-10			-50

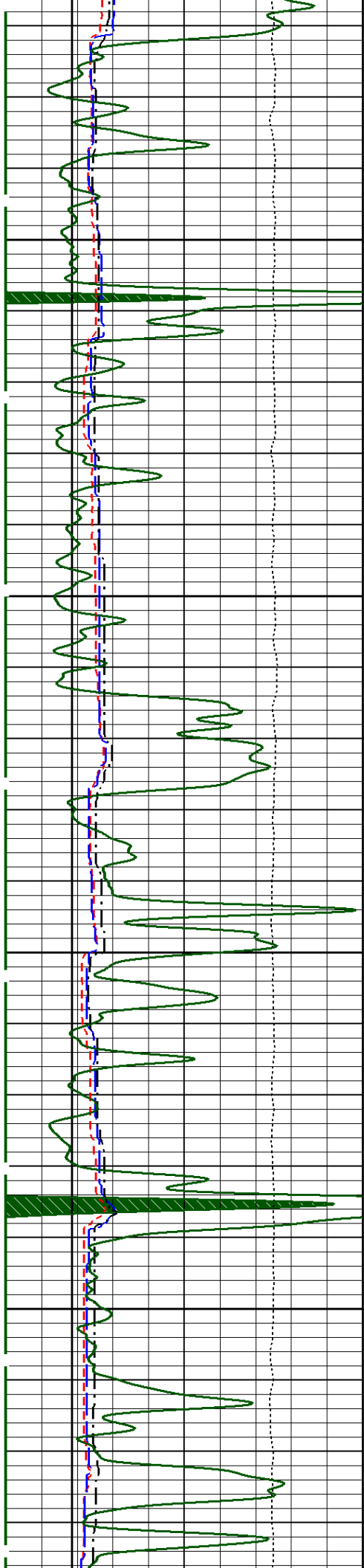
NEUTRON POROSITY (LIMESTONE) PERCENT			
30			-10

1:240 REPEAT SECTION



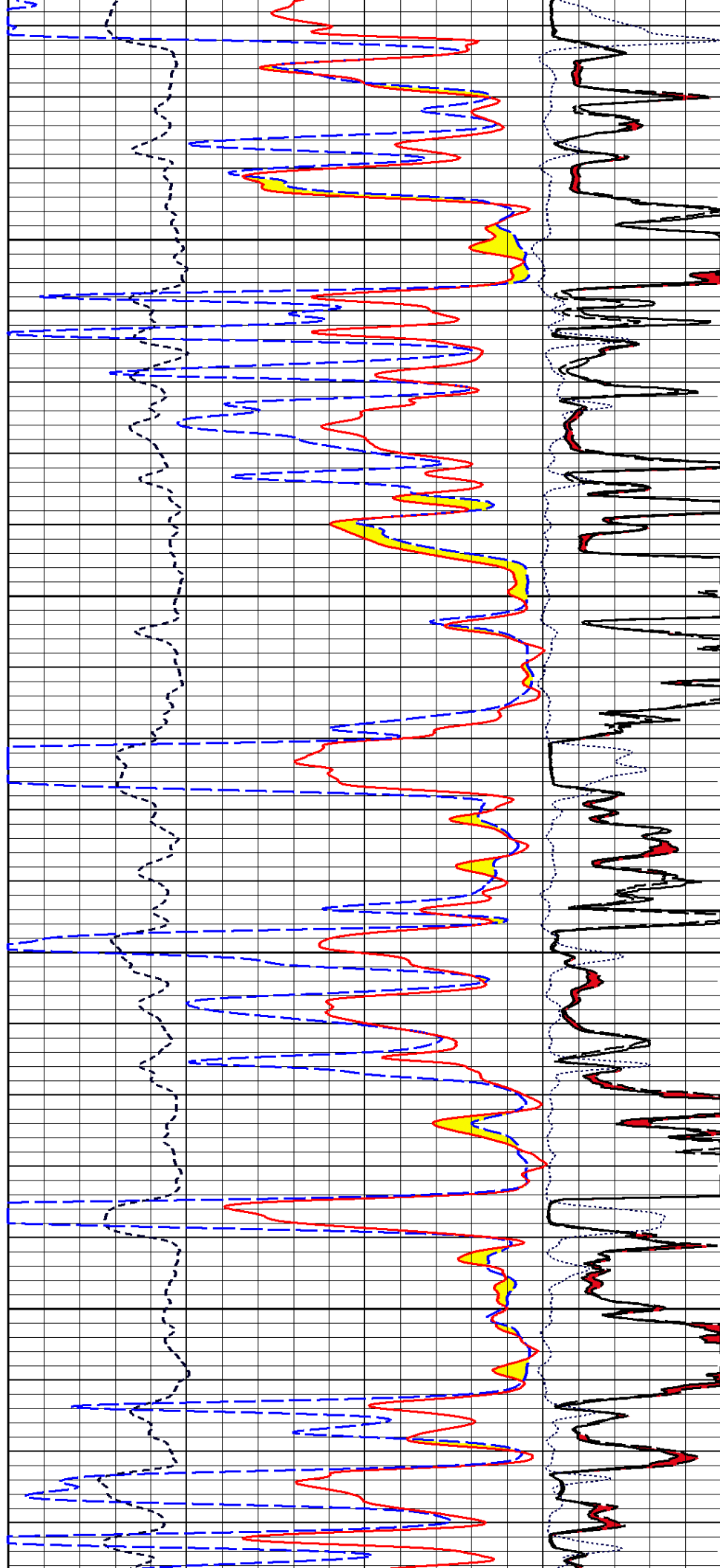
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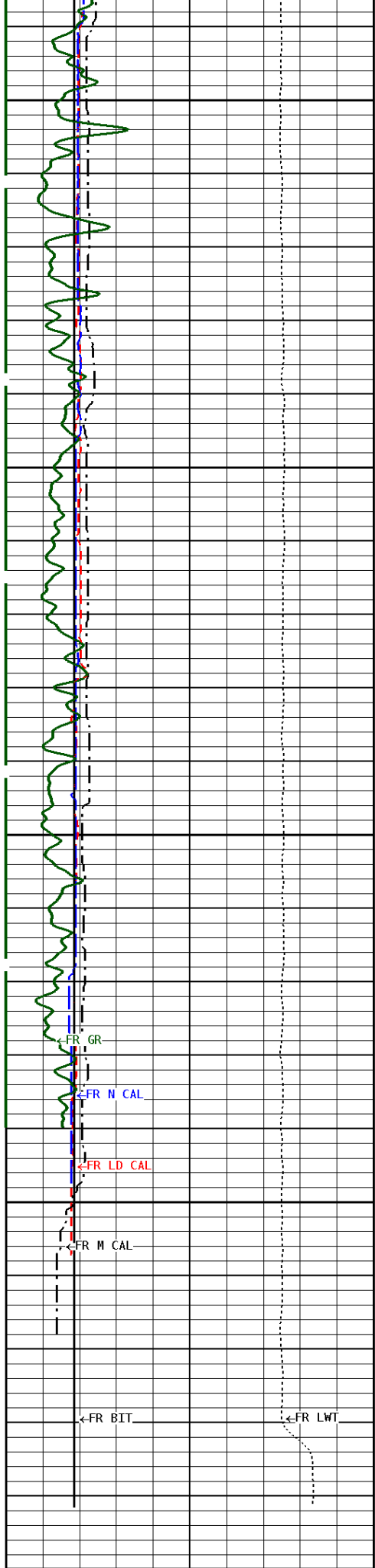




3400

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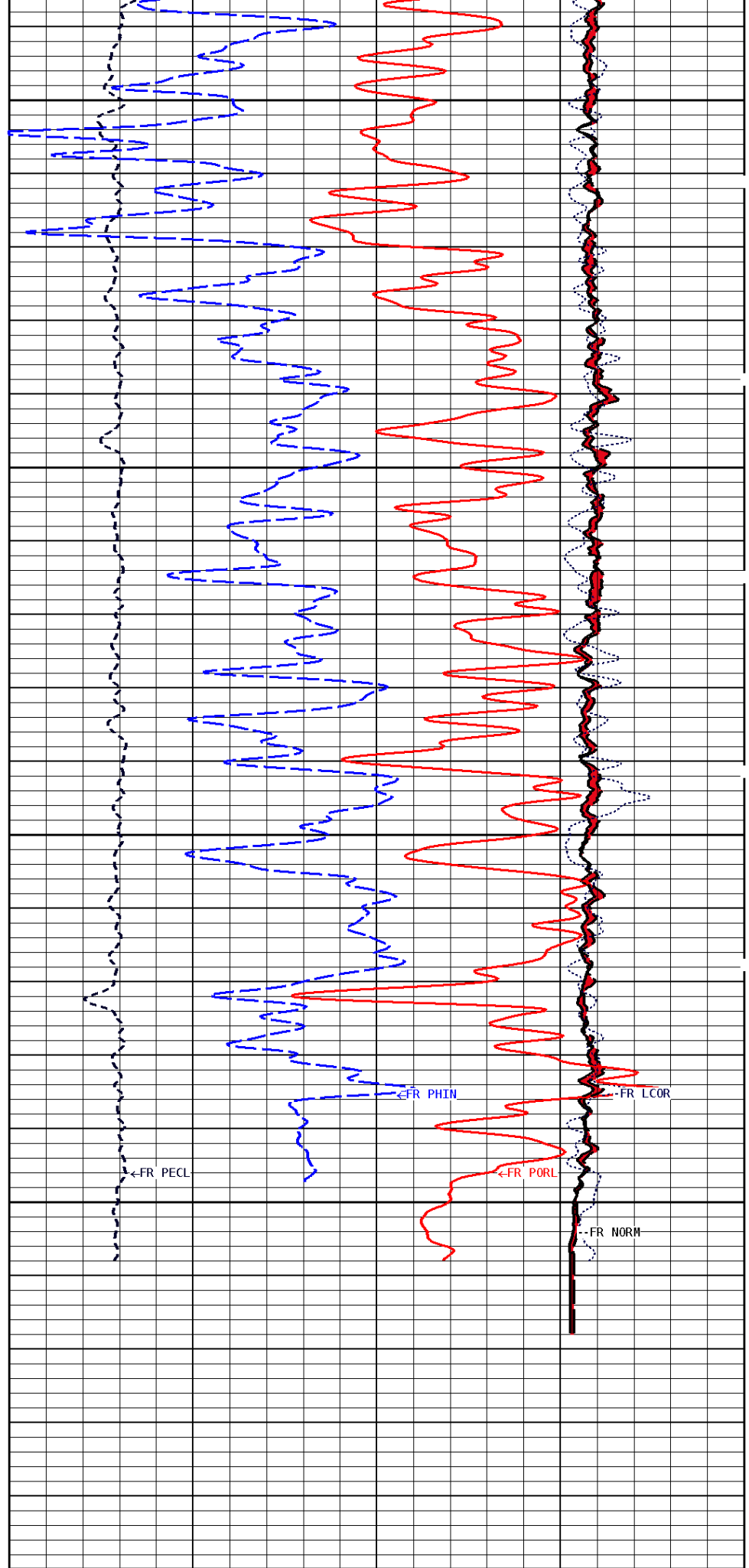


File #1.1.5

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1:240 REPEAT SECTION

GAMMA RAY API UNITS 150  300 0 150		NEUTRON POROSITY (LIMESTONE) PERCENT 30 ----- -10	
TENSION LBS 10000 ----- 0		DENSITY POROSITY (2.71g/cc) PERCENT 70 30 -10 ----- -50	
DENSITY (X) CALIPER INCHES (IN) 16 26 6 16 -----		PE CROSS-SECTION BARNS/ELECTRON 0 ----- 10	DENSITY CORRECTION G/CC -0.25 ----- 0.25
NEUTRON (Y) CALIPER INCHES (IN) 16 26 6 16 -----		INVERSE OHMM 0 ----- 40	
BIT SIZE INCHES (IN) 6 ----- 16		NORMAL OHMM 0 ----- 40	
CALIPER MICRO INCHES (IN) 16 26 6 16 -----			

*** Borehole Zone Factors ***

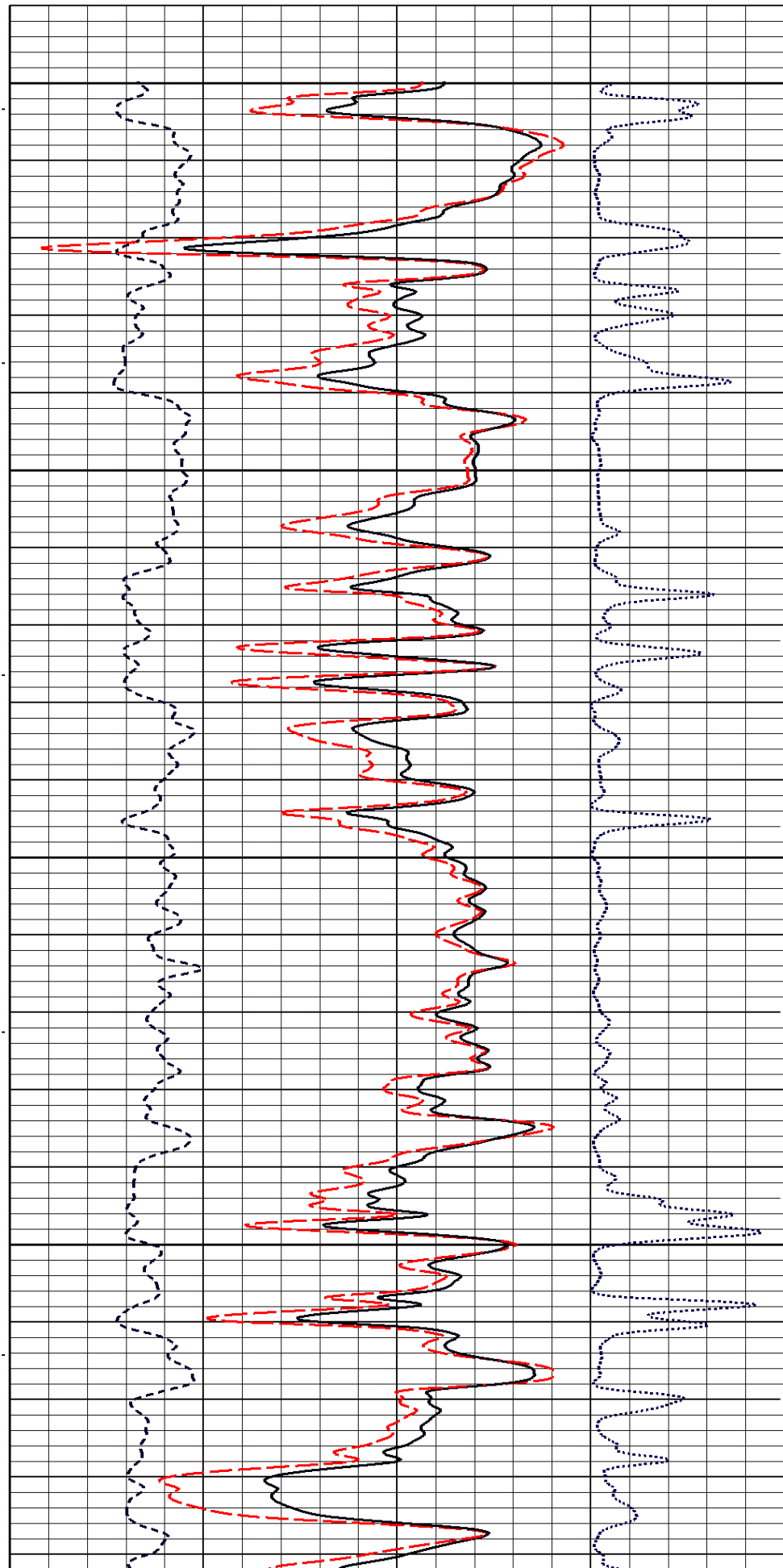
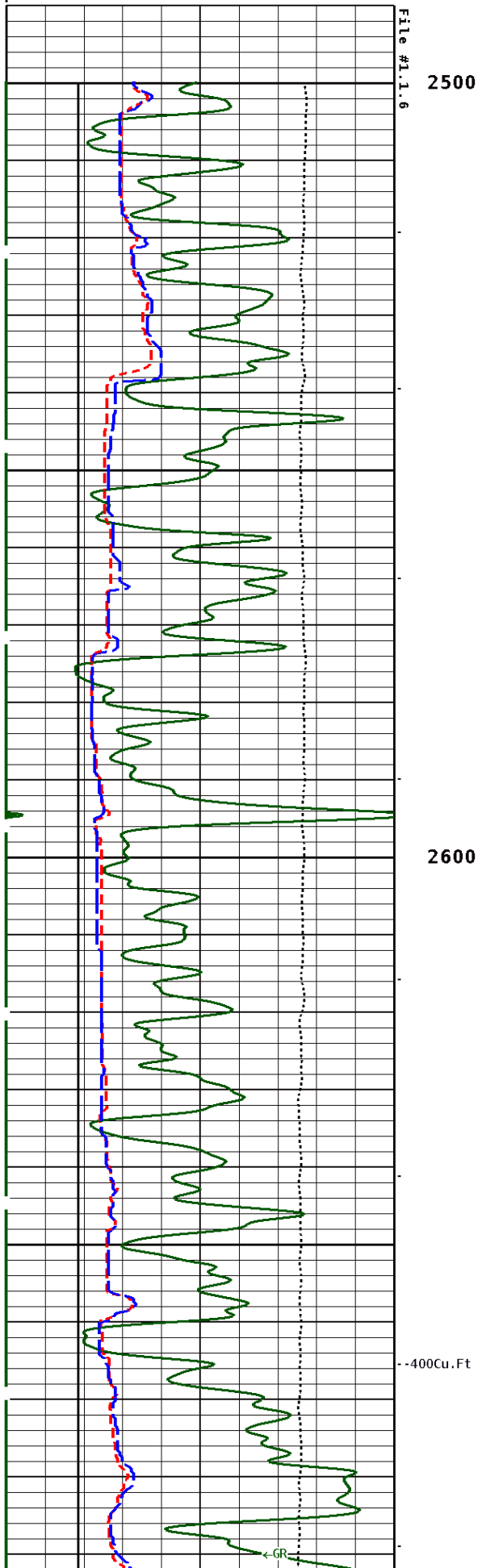
Zone 1 99999.0 to 0.0 Feet			
Matrix Density	_____	2.71	g/cc
Fluid Density	_____	1.00	g/cc
Formation Matrix	_____	Limestone	
Drill Bit Size	_____	7.875	in
Casing Diameter	_____	5.500	in
Casing Thickness	_____	0.250	in
Casing Correction (PHI N)	_____	Disable	

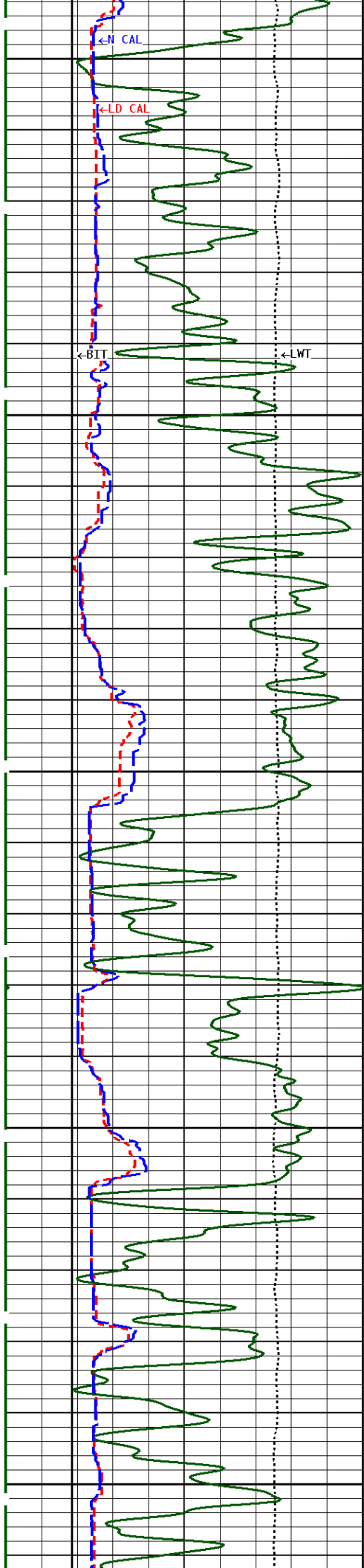
Well File: BREXCO PFEIFER B 4 FEB-27_MST	Scale: 1:240	Format: LDT-240
Segment: V1.D1.S6 Reprocess MAIN	Acquired: 2020-02/27 13:29 3.4.1-13972	
Reference: 0	Processed: 2020-02/27 14:51 3.4.1-13972	

BIT SIZE INCHES (IN) 6 ----- 16		PE CROSS-SECTION BARNS/ELECTRON 0 ----- 10		DENSITY CORRECTION G/CC -0.25 ----- 0.25
NEUTRON (Y) CALIPER INCHES (IN) 16 26 6 16 -----		COMPENSATED BULK DENSITY G/CC 3.0 4.0 2.0 3.0 1.0 2.0		
DENSITY (X) CALIPER INCHES (IN) 16 26 6 16 -----		DENSITY POROSITY (2.71g/cc) PERCENT 70 30 -10 ----- -50		
TENSION LBS 10000 ----- 0				
GAMMA RAY API UNITS 150  300 0 150		- BHV AHV - CU. FT		

1:240 MAIN SECTION

BULK DENSITY



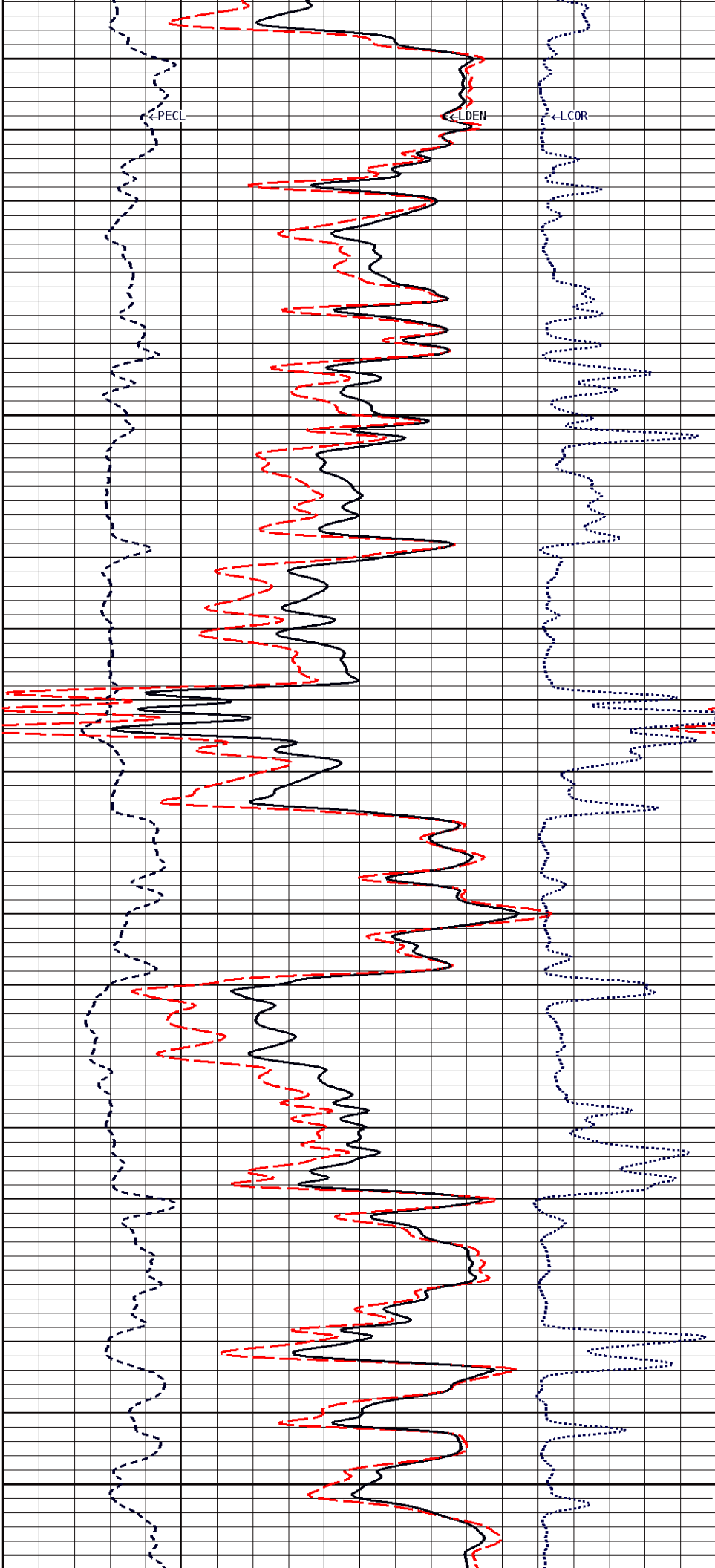


2700

2800

2900

300Cu.Ft.

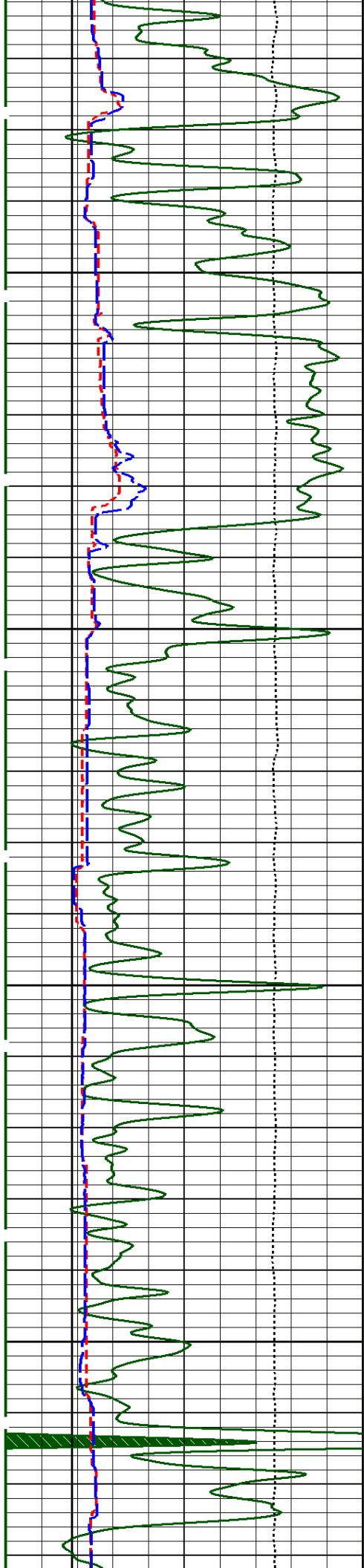


PECL

LDEN

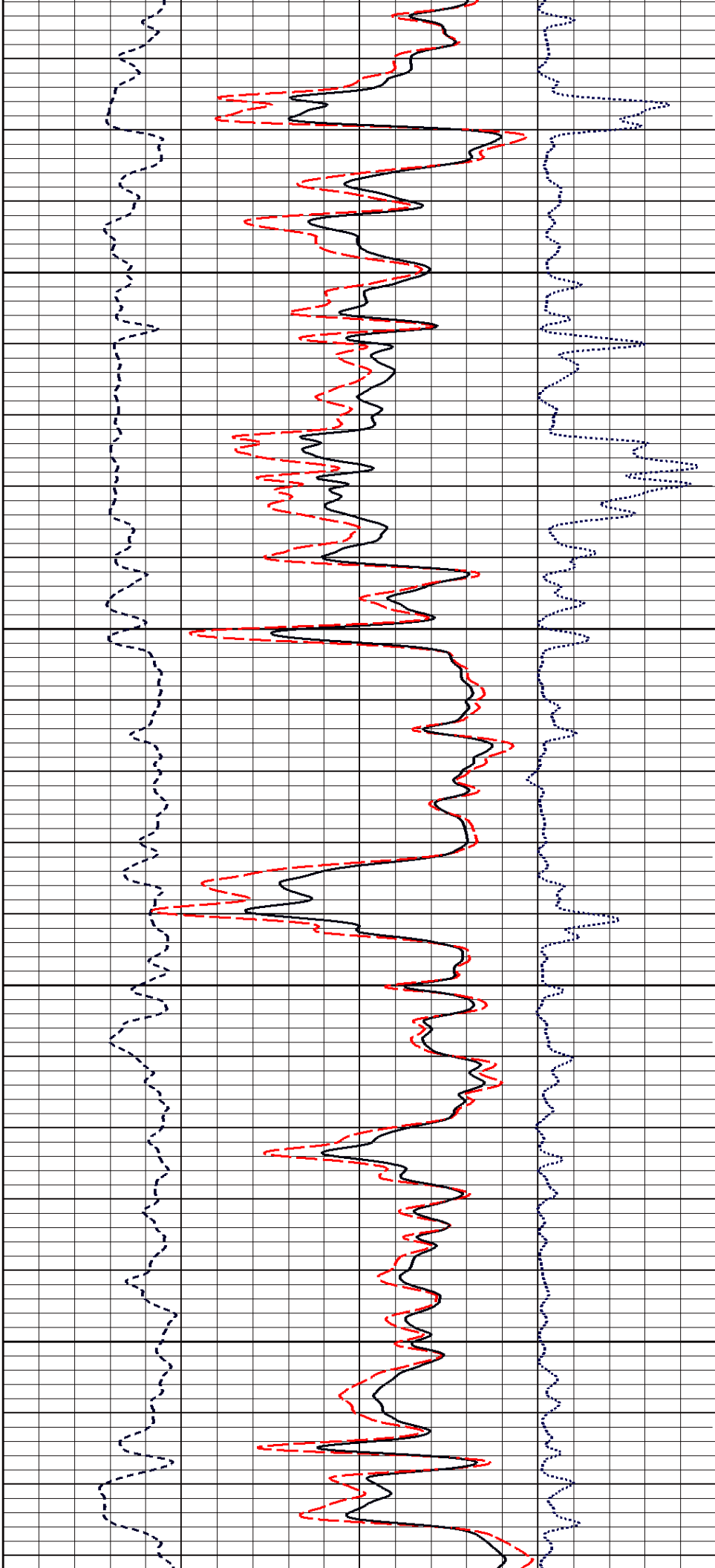
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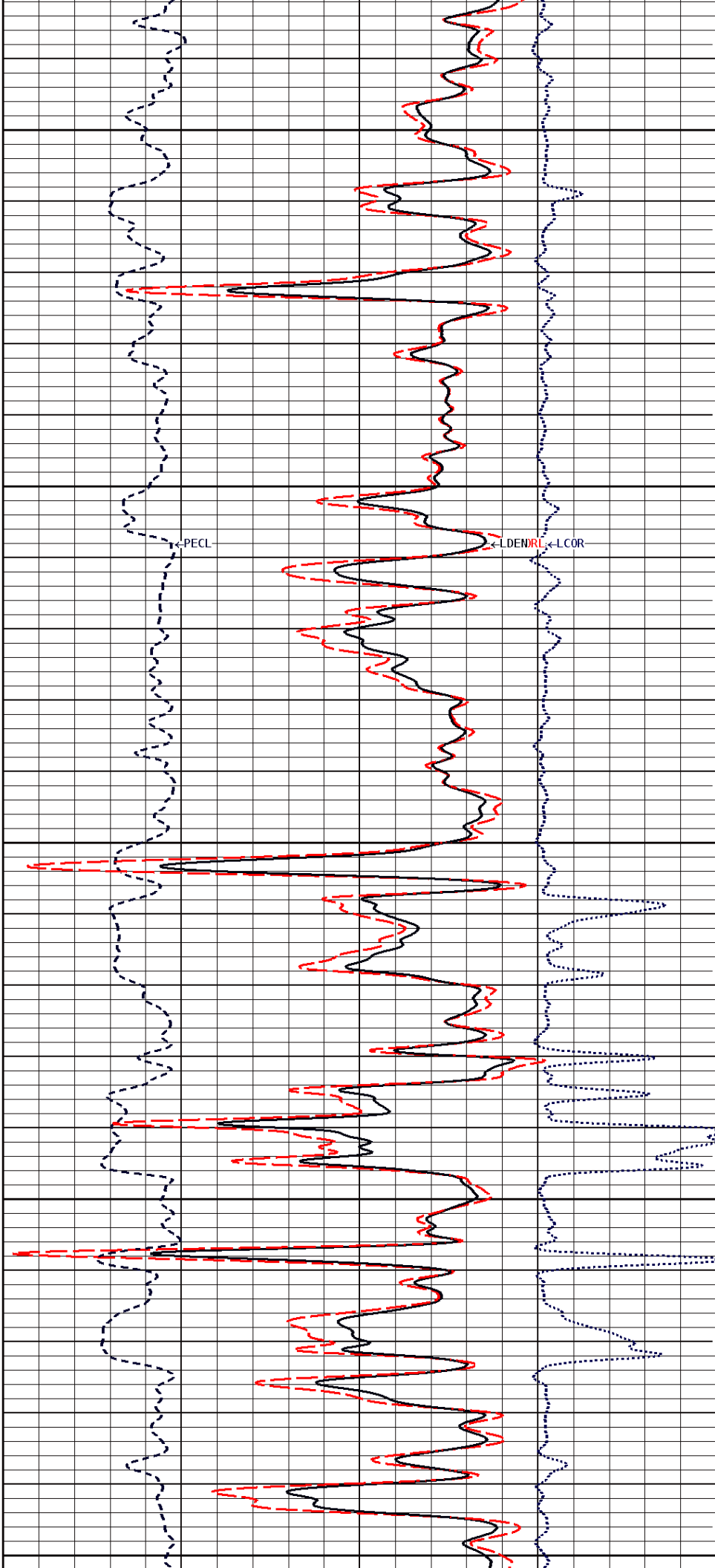
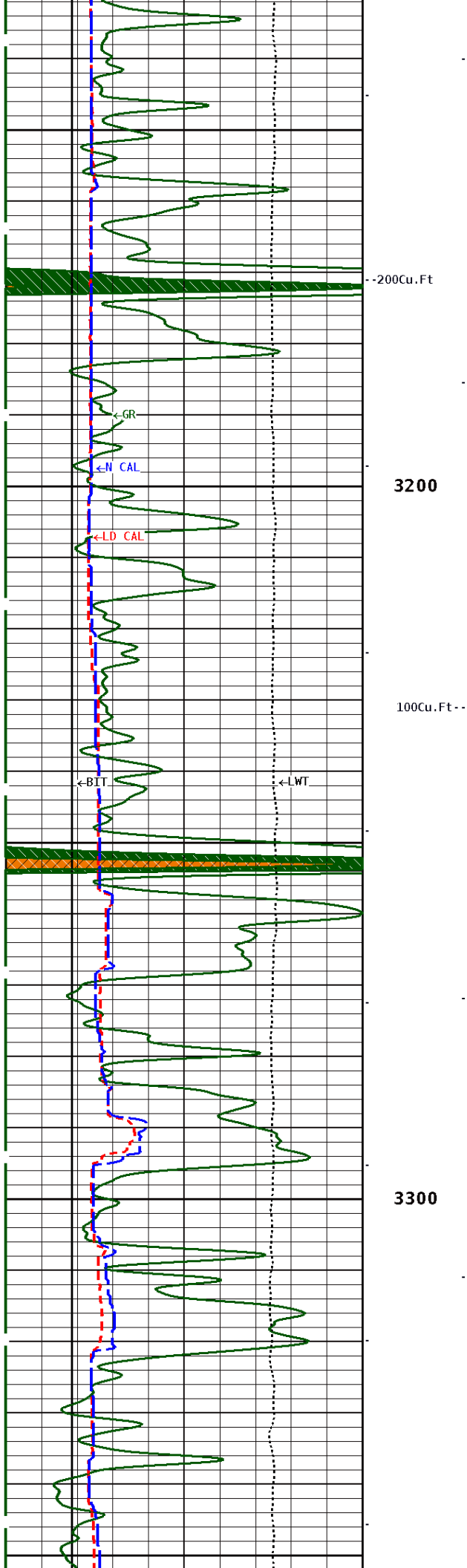
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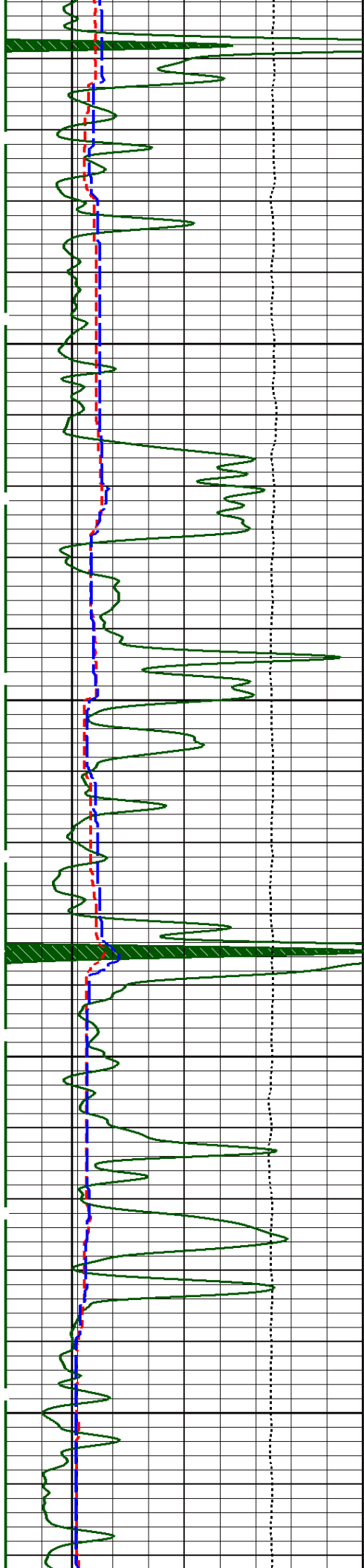


3000

3100



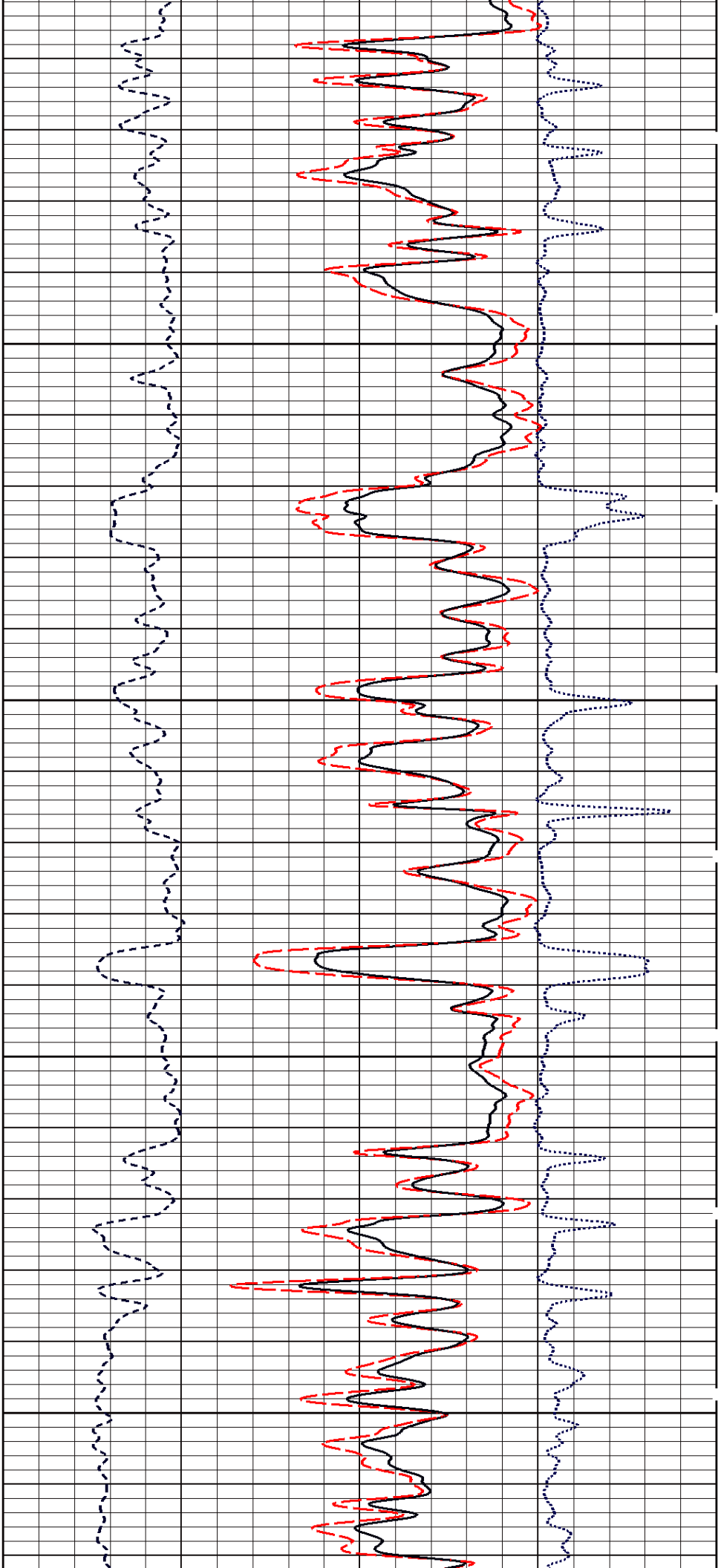


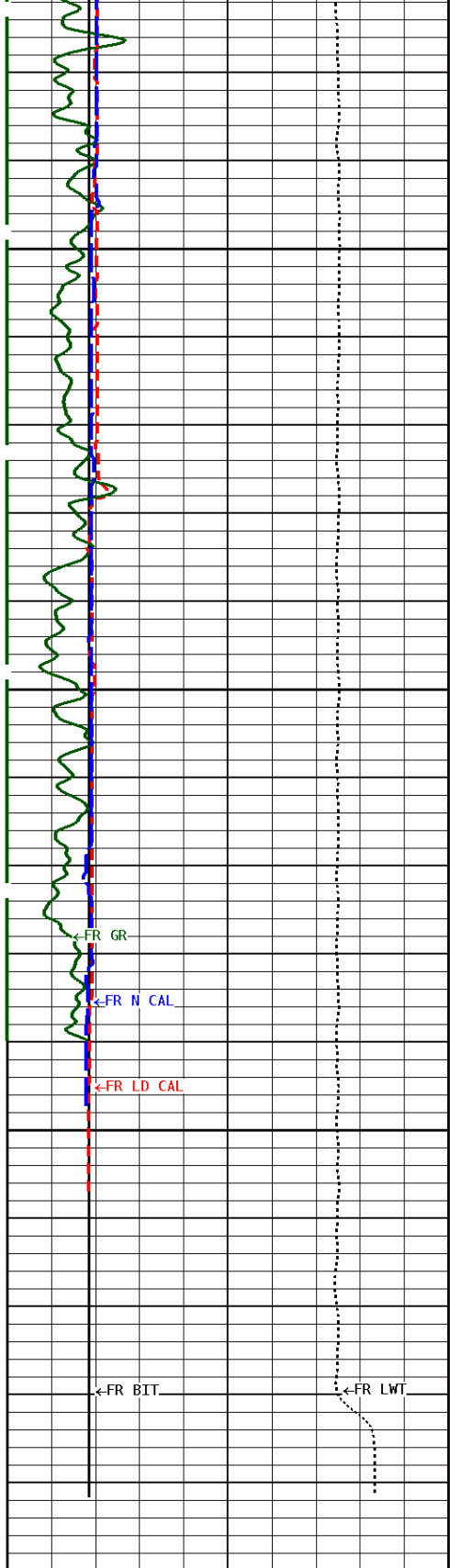


3400

-100Cu.Ft

3500





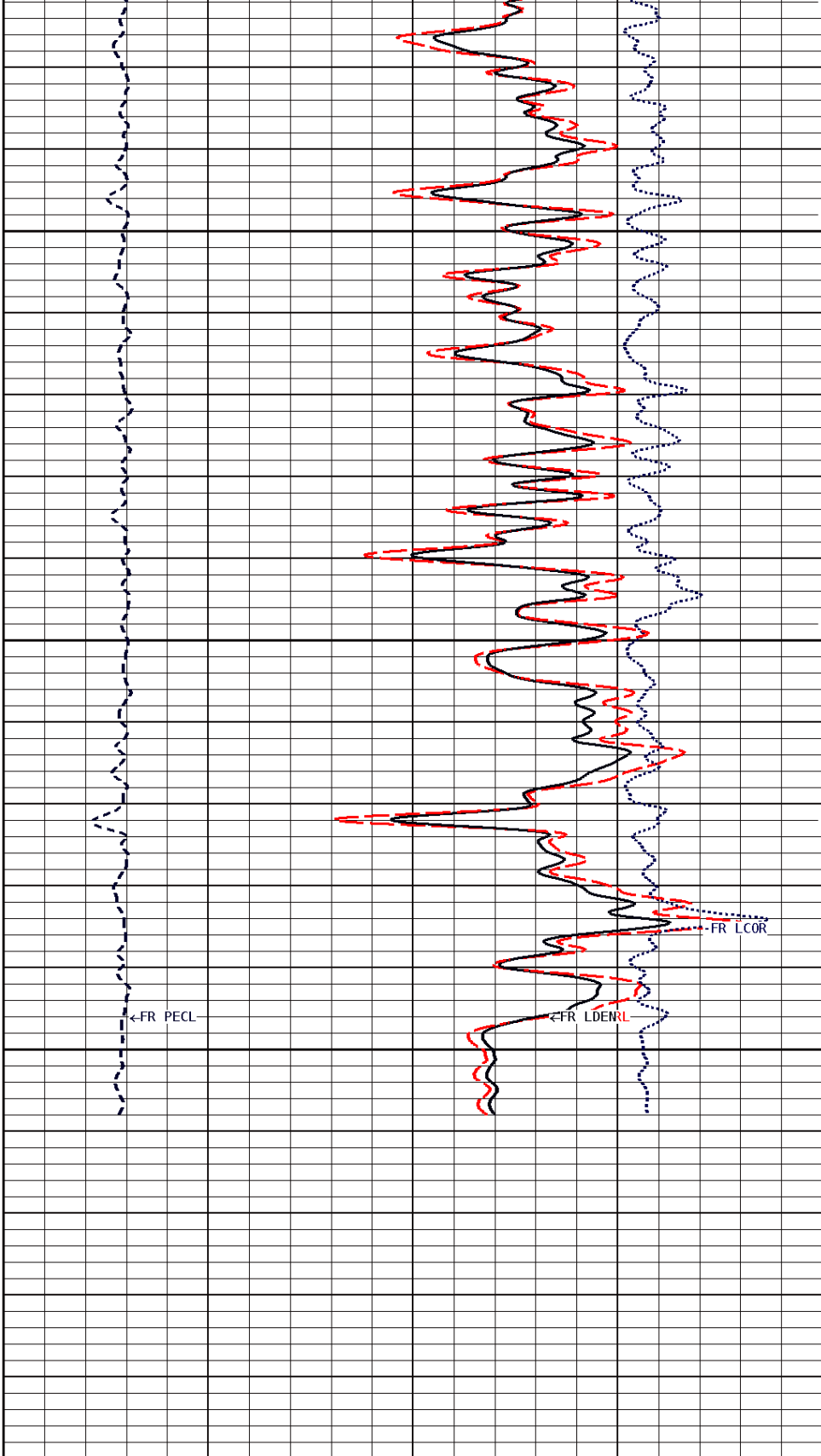
file #1.1.6

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1:240 MAIN SECTION BULK DENSITY



- BHV AHV -
CU. FT

DENSITY POROSITY (2.71g/cc)
PERCENT

70 30 -10
-10 -50



DENSITY (X) CALIPER INCHES (IN)	
16	26
6	16
NEUTRON (Y) CALIPER INCHES (IN)	
16	26
6	16
BIT SIZE INCHES (IN)	
6	16

1.0	2.0
PE CROSS-SECTION BARNs/ELECTRON	DENSITY CORRECTION G/CC
0	10 -0.25 0.25

*** Borehole Zone Factors ***

Zone 1	99999.0	to	0.0	Feet
Matrix Density			2.71	g/cc
Fluid Density			1.00	g/cc
Formation Matrix			Limestone	
Drill Bit Size			7.875	in
Casing Diameter			5.500	in
Casing Correction (PHI N)			Disable	

*** Calibration Summary ***

Shop Calibration GRT-B					
Performed : 24-JUN-2019			Time : 12:20		
Sensor Suite : GR-GR5			ID : GRT-BC-038		
	Measured	Units	Calibrated	Units	
	Background	Jig	Jig		
GR	36	266	160	GRAPI	
Shop Calibration CNT-AA					
Performed : 03-Jun-2019			Time : 11:01		
Sensor Suite : CALI-BCN			ID : NDT-AF-411		
	Jig - Measured		Jig - Calibrated		Units
	Ring#1	Ring#2	Ring#1	Ring#2	
CL # 1	7.5	12.5	6.0	12.0	IN.
Performed : 12-FEB-2020			Time : 10:01		
Sensor Suite : BHC NEUT			ID : CNP-AE-41		
Source ID : N-1104					
	Tank	Verification	Units		
	Measured	Calibrated	Jig		
N/F	3.5474	3.6893	3.6873		
Porosity	18.4	20.5	20.5		%
Shop Calibration LDT-DF					
Performed : 21-DEC-2019			Time : 21:43		
Sensor Suite : CALI-LTH			ID : NDT-FA-404		
	Jig - Measured		Jig - Calibrated		Units
	Ring#1	Ring#2	Ring#1	Ring#2	
CL # 1	8.3	13.2	6.0	12.0	IN.
Performed : 29-Jan-2020			Time : 14:42		
Sensor Suite : BHCPELNG			ID : LDP-DA-062		
Source ID : 1637GW					
	Short Space				
	BKGD	Al	Mg	Al+Fe	Units
LSW1	59	960	1557	625	CPS
LSW2	61	1121	1778	816	CPS
LSW3	228	2554	4127	2191	CPS
LSW4	286	2191	3138	1951	CPS
LSW5	25	44	49	41	CPS
LSW6	79	82	79	83	CPS
LSW7	50	54	53	53	CPS

LSW8	1	3	4	3	CPS
QS	0.227	0.208	0.194	0.217	
PES			2.778	5.967	
SSDN		2.600	1.680		G/CC
Long Space					
	BKGD	Al	Mg	Al+Fe	Units
LLW1	84	1100	4544	670	CPS
LLW2	94	1944	7684	1420	CPS
LLW3	352	3530	13460	3067	CPS
LLW4	463	1657	5105	1519	CPS
LLW5	52	64	102	63	CPS
LLW6	146	154	134	154	CPS
LLW7	95	101	92	101	CPS
LLW8	3	6	14	6	CPS
QL	0.213	0.209	0.187	0.205	
PEL			2.697	5.458	
LSDN		2.600	1.680		G/CC



Company: BEREXCO LLC
 Well: PFEIFER "B" #4
 Location: 2310' FNL & 2310' FWL
 Logged: 02-27-2020
 K.B. Elev: 2029.0 Ft