



Company	CASILLAS PETROLEUM CORP
Well	HAMKER #20-3
Field	LETTE
County	HASKELL
State	KANSAS
Country	USA
API No.	15-081-22204-00-00

File No	:	HAYS-70387
Company	:	CASILLAS PETROLEUM CORP
Well	:	HAMKER #20-3
Field	:	LETTE
County	:	HASKELL
State	:	KANSAS
Country	:	USA
API No	:	15-081-22204-00-00

Location :	
1420' FSL & 660' FWL	
S/2 S/2 NW SW	

LSD :	Sect : 20	Twp : 30S	Rge : 31W
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Permanent Datum:	GL	Elevations:		Services:	
Drilling Measured From:	KB	KB	2858.00	Ft	CNT
Log Measured From:	KB	DF	2857.00	Ft	CST
Above Permanent Datum:	0.00	Ft	GL	2846.00	LDT
Date	12-07-2019		PIT		
Run Number	1				
Depth--Driller	5721.0	Ft			
Depth--Logger	5716.0	Ft			
First Reading	5683.0	Ft			
Last Reading	4500.0	Ft			
Casing--Driller	1823.0	Ft			
Casing--Logger	1826.0	Ft			
Bit Size	7.875	In			
Casing Size	8.625	In			
Hole Fluid Type	WBM				
Density	9.3				
Fluid Loss	4.6				
PH/Viscosity	11.0	57.0			
Sample Source	MEASURED				
RM@Measured Temp.	2.000	@ 60	F		
RMF@Measured Temp	0.850	@ 60	F		
RMCM@Measured Temp.	1.150	@ 60	F		
Source RMF/RMC	CALCULATED	CALCULATED			
RM@BHT	1.000	@ 125	F		
Time Circulation Stopped	12-07-2019 03:00				
Max Recorded Temp.	125	F			
Equipment/Base	TRK-137	HAYS			
Recorded By	B.BAILEY				
Witnessed By	DAVID				

The customer is hereby warned that by providing the log data herein, STEP Energy Services does not agree to provide any interpretation of log data, conversion of log data to physical rock parameters or recommendations. STEP Energy Services does not guarantee or warrant either expressly or impliedly, the accuracy of any interpretation of log data, conversion of log data to physical rock parameters or recommendations which may be given by STEP Energy Services personnel. Any interpretation, conversion or recommendation is not part of the consideration for the agreement between the parties and is not part of any part of the charge by STEP Energy Services for its services. Any user of the log data is warned that said user is not entitled to rely on interpretations, conversions or recommendations as aforesaid.

Bitsize Intervals		Casing Strings			
Size (In)	Bottom (Ft)	Size (In)	Weight (Lbs)	Bottom (Ft)	Top (Ft)
7.875	5721.00	8.625	32.00	1832.00	0.00

Run Number	1		
Date	12-07-2019		
Date/Time On Bottom	12-07-2019 09:45		
Depth to Fluid	0.0 Ft		
Salinity	0.000		
RMF@BHT	0.850 @ 125 F		
RMC@BHT	1.150 @ 125 F		

Run Number 1

Comments

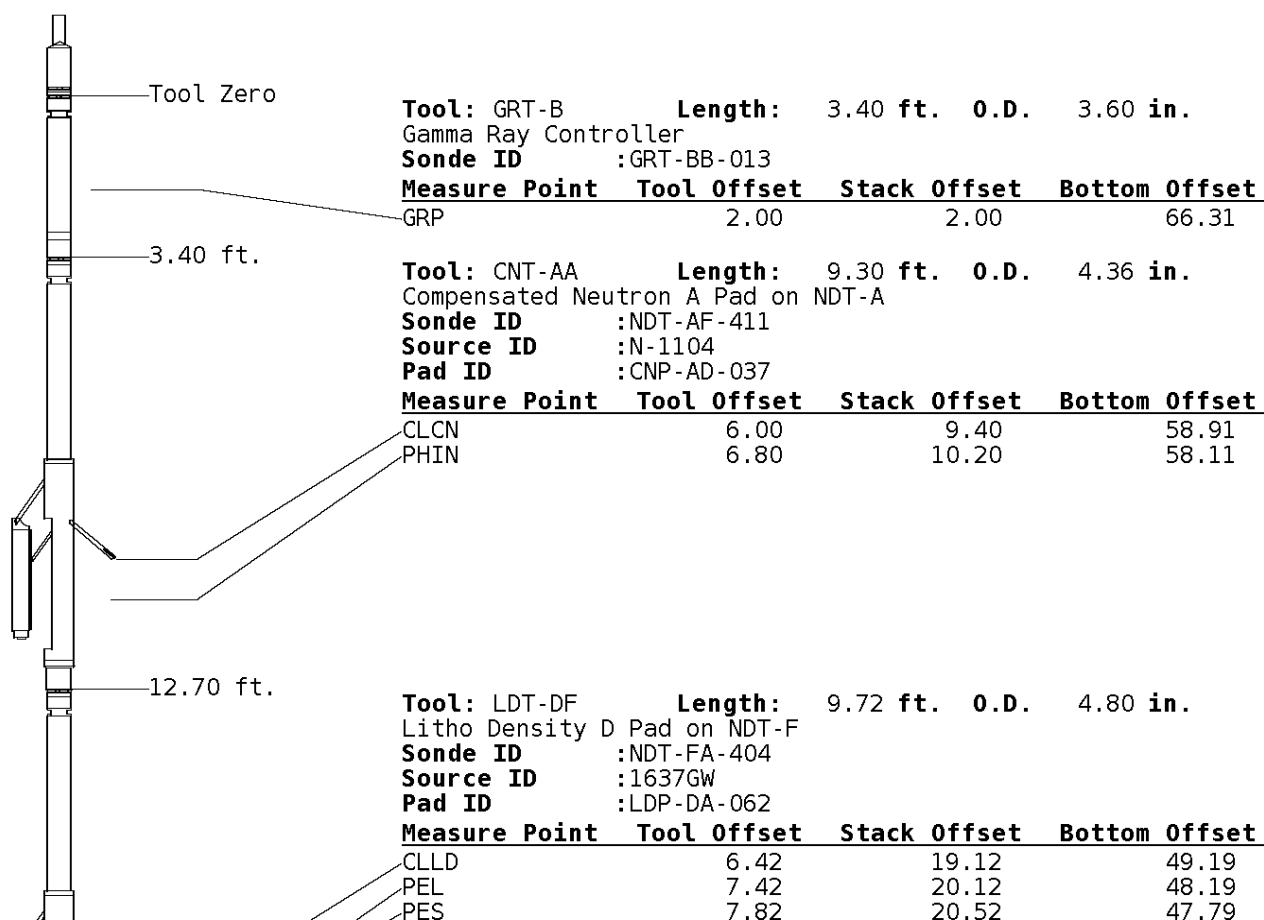
ALL PRESENTATIONS AS PER CUSTOMER REQUEST
GRT, CNT, LDT, MLT, CST, AND PIT RUN IN COMBINATION
CALIPERS ORIENTED ON X-Y AXIS
2.71 G/CC USED TO CALCULATE POROSITY
ANNULAR HOLE VOLUME CALCULATED USING 5.50" PRODUCTION CASING
PHIN IS CALIPER CORRECTED

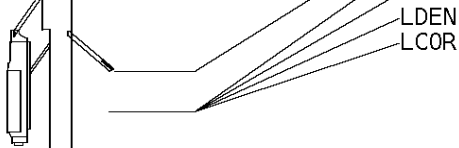
GRT: GRP.
CNT: PHIN, CLCNIN.
LDT: PORL, LCORN, PECLN, LDENN, CLLDIN.
MLT: NOR_RF, INV_RF, MSCLPIN.
CST: PORL, ITT, CDTF, TT1, TT2, TT3, TT4.
PIT: ILD, ILM, SFLAEC, CIRD, SPU

OPERATORS:

Tool String Schematic

Total Tool Length - 68.31 ft.
Maximum Outside diameter - 6.00 in.
Net Weight in Air - 1171.00 lbs.



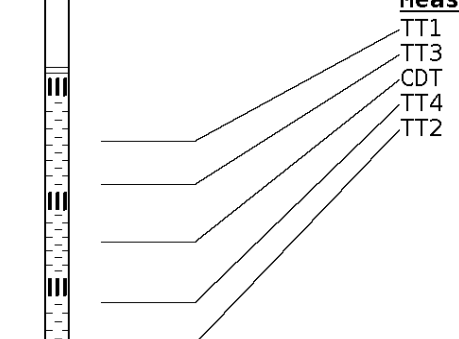


LDEN	7.62	20.32	47.99
LCOR	7.62	20.32	47.99

22.42 ft.

Tool: CST-AD **Length:** 13.80 ft. **O.D.** 3.60 in.
Open Hole Sonic
Sonde ID : CST-AB-24

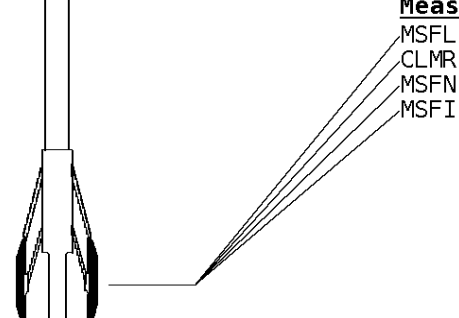
Measure Point	Tool Offset	Stack Offset	Bottom Offset
TT1	4.80	27.22	41.09
TT3	5.80	28.22	40.09
CDT	7.30	29.72	38.59
TT4	8.80	31.22	37.09
TT2	9.80	32.22	36.09



36.22 ft.

Tool: MLT-AB **Length:** 10.60 ft. **O.D.** 6.00 in.
Micro Log Tool
Sonde ID : MLT-012

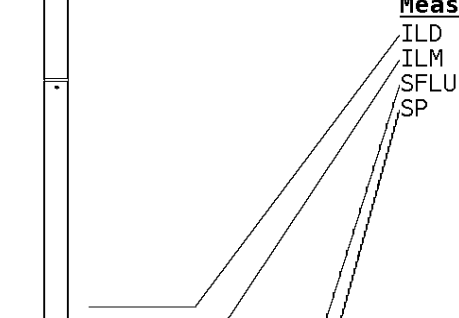
Measure Point	Tool Offset	Stack Offset	Bottom Offset
MSFL	8.90	45.12	23.19
CLMR	7.60	43.82	24.49
MSFN	8.90	45.12	23.19
MSFI	8.90	45.12	23.19



46.82 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	55.74	12.56
ILM	10.10	56.92	11.39
SFLU	17.49	64.31	4.00
SP	20.60	67.42	0.88



LWT 68.31 ft.

Well File: casillas hamker 20-3_dec-7-2019_qst

Scale: 1:240

Format: NLD-240

Segment: V1.D1.S6 mn

Acquired: 2019-12/07 11:10 3.4.1-13972

Reference: 0

Processed: 2019-12/07 11:10 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

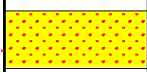
TENSION
LBS

10000 0

GAMMA RAY
API UNITS

150 300
0 150

Volume
Quartz



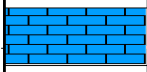
PE CROSS-SECTION
BARNS/ELECTRON

0 10

DENSITY CORRECTION
G/CC

-0.25 0.25

Volume
Calcite



DENSITY POROSITY (2.71g/cc)
PERCENT

70 30
30 -10
-10 -50

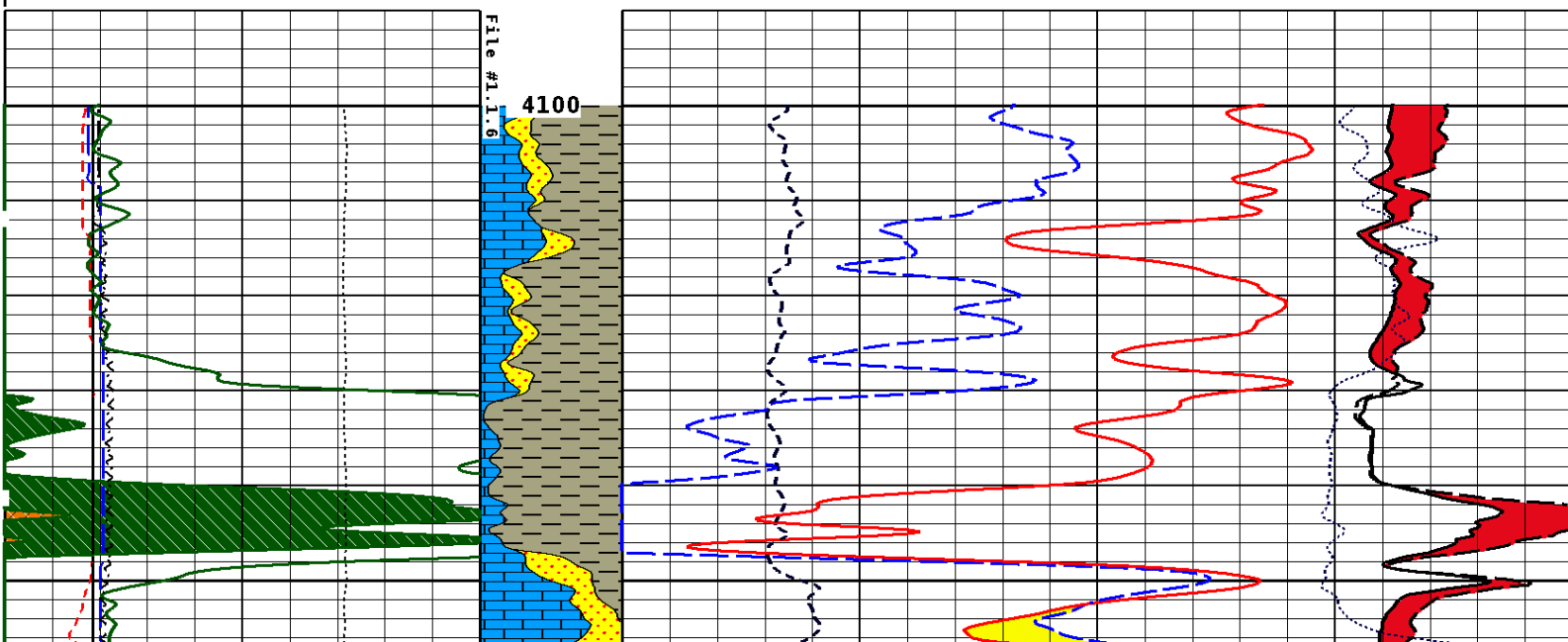
Volume
Dolo/Shale

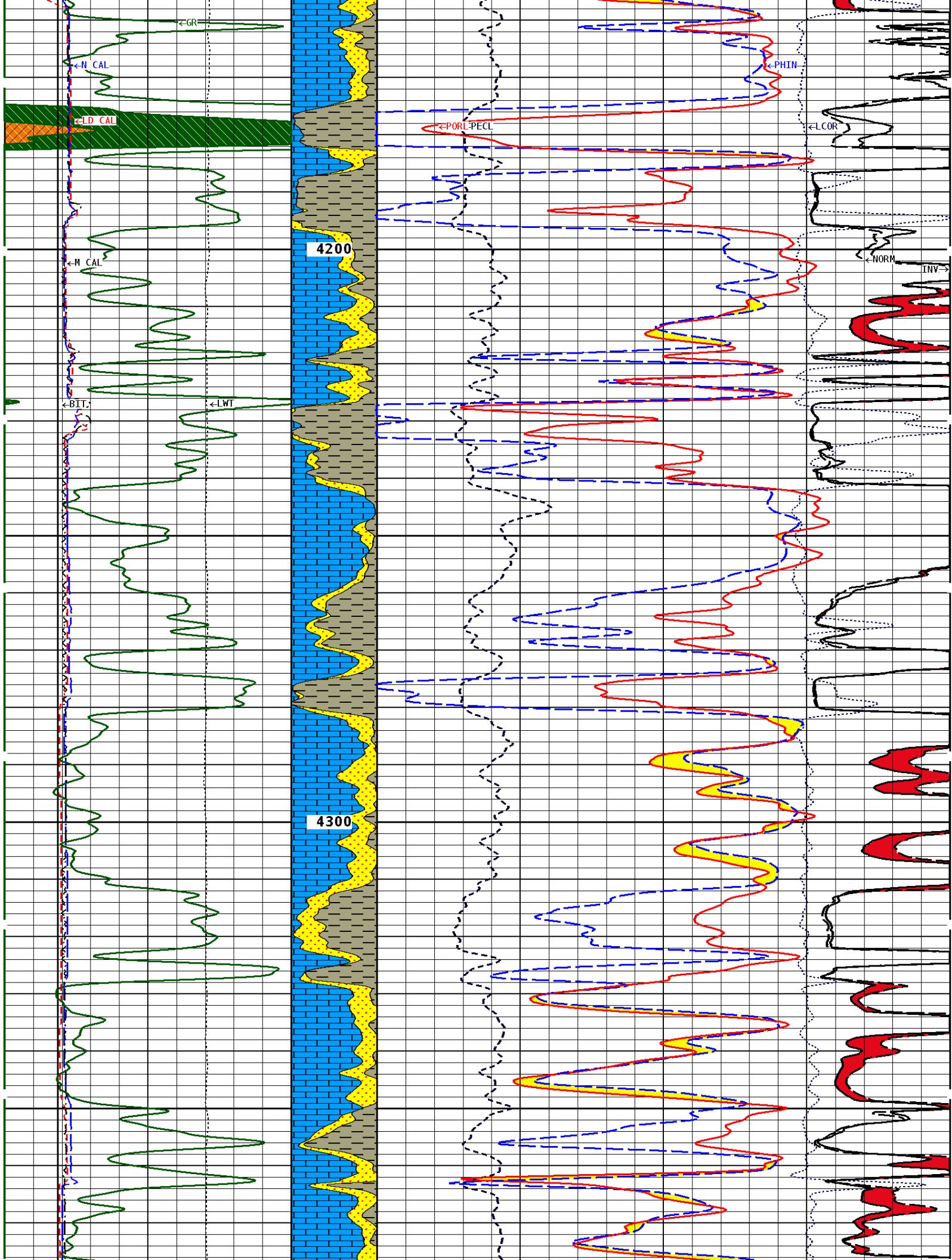


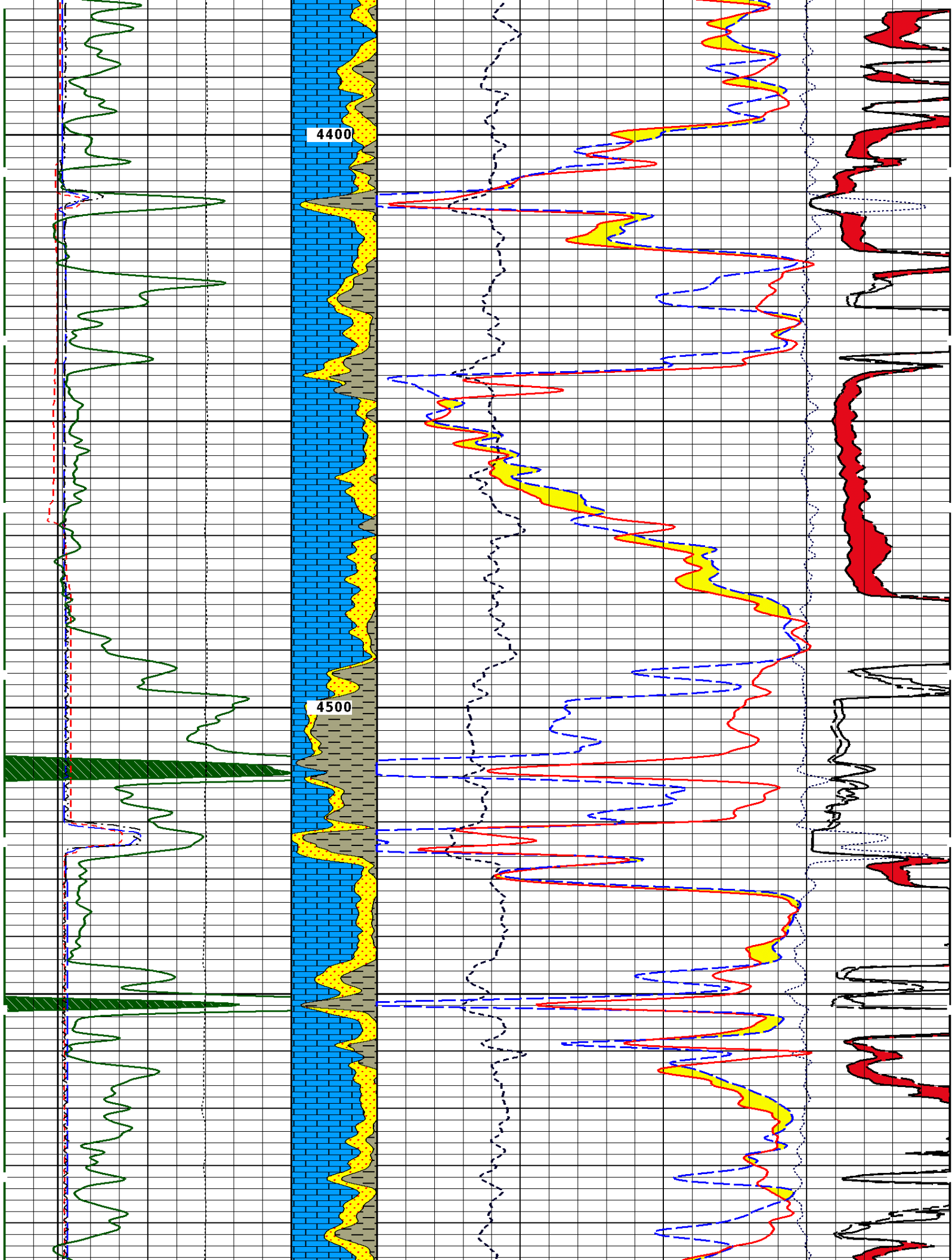
NEUTRON POROSITY (LIMESTONE)
PERCENT

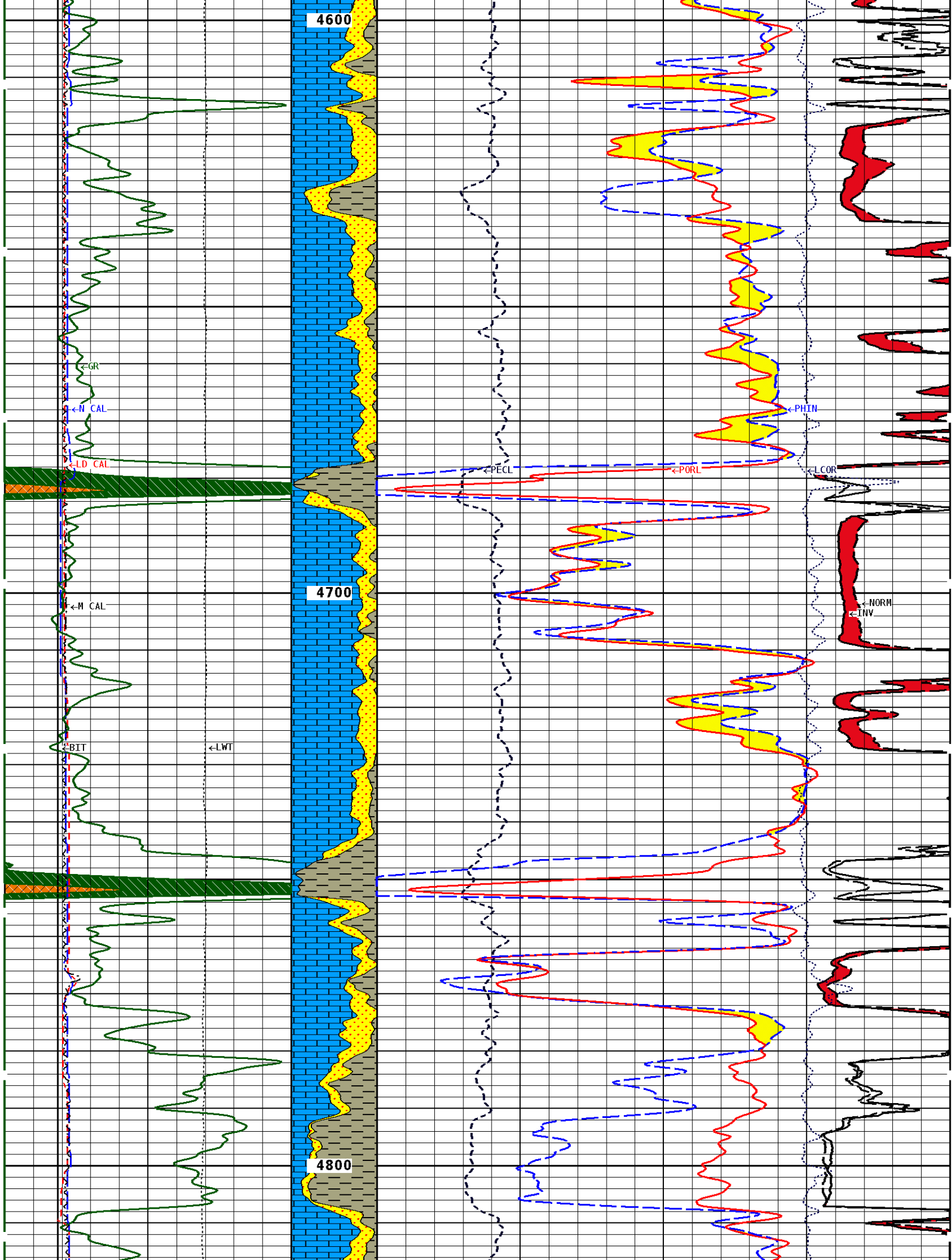
30 -10

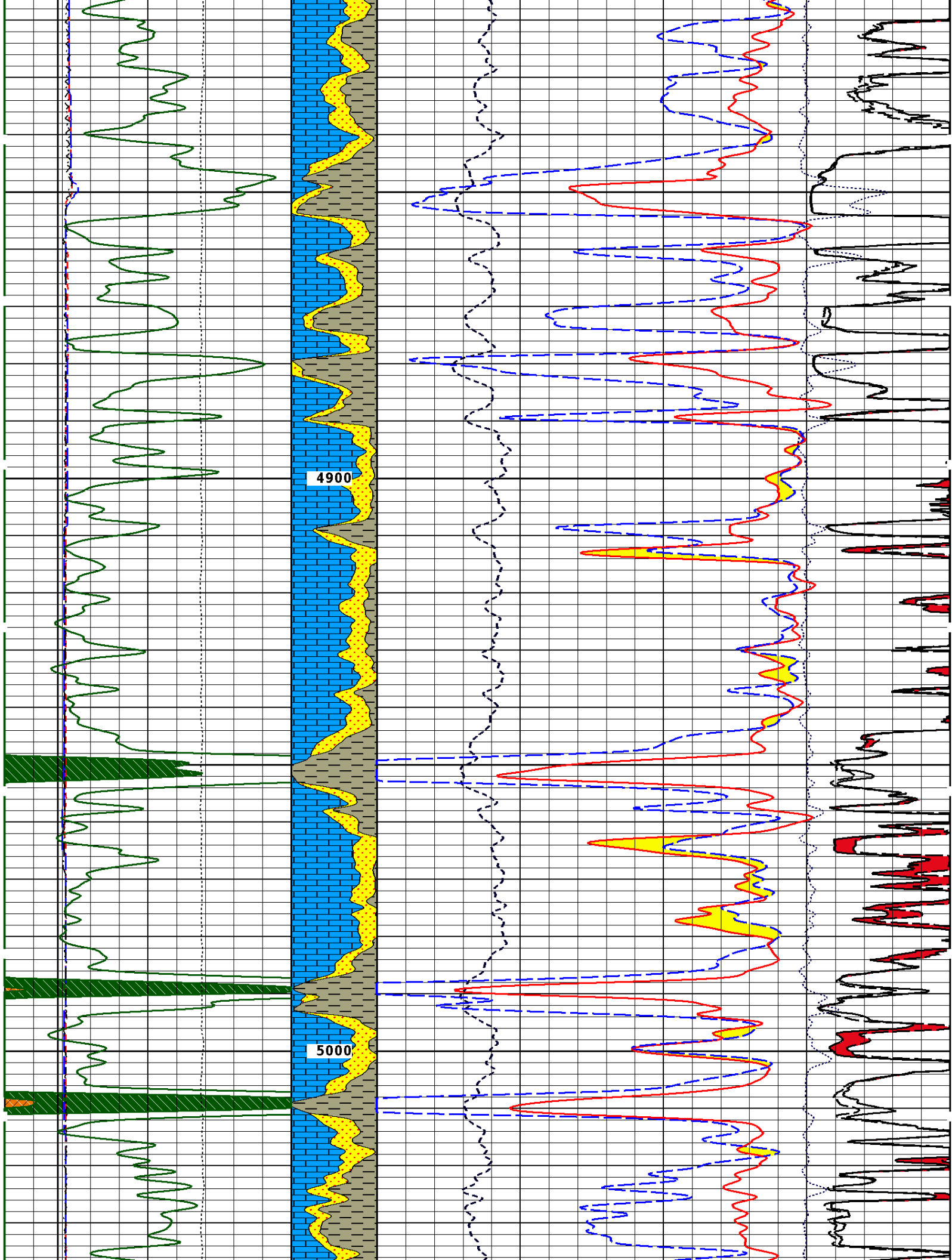
1:240 MAIN SECTION

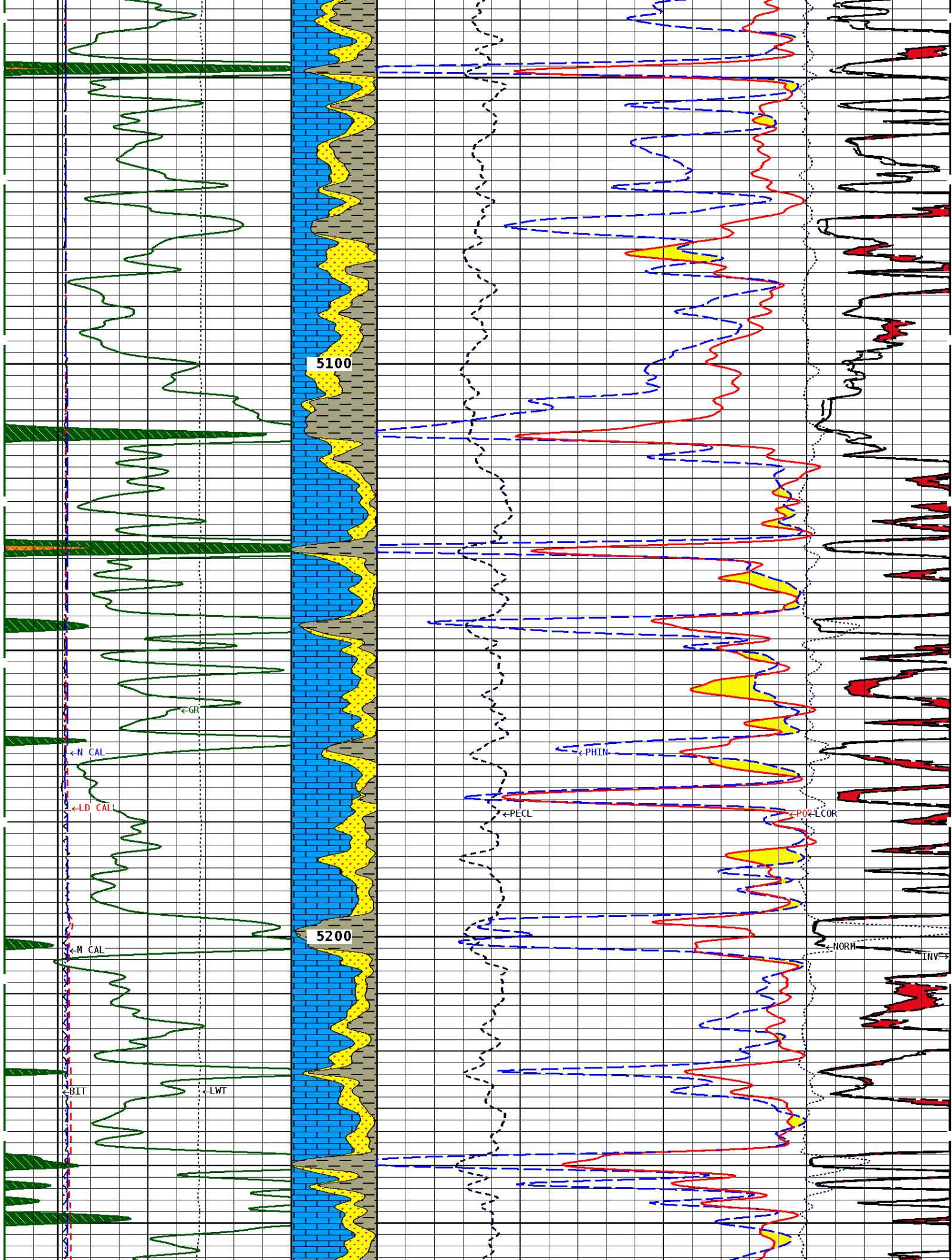


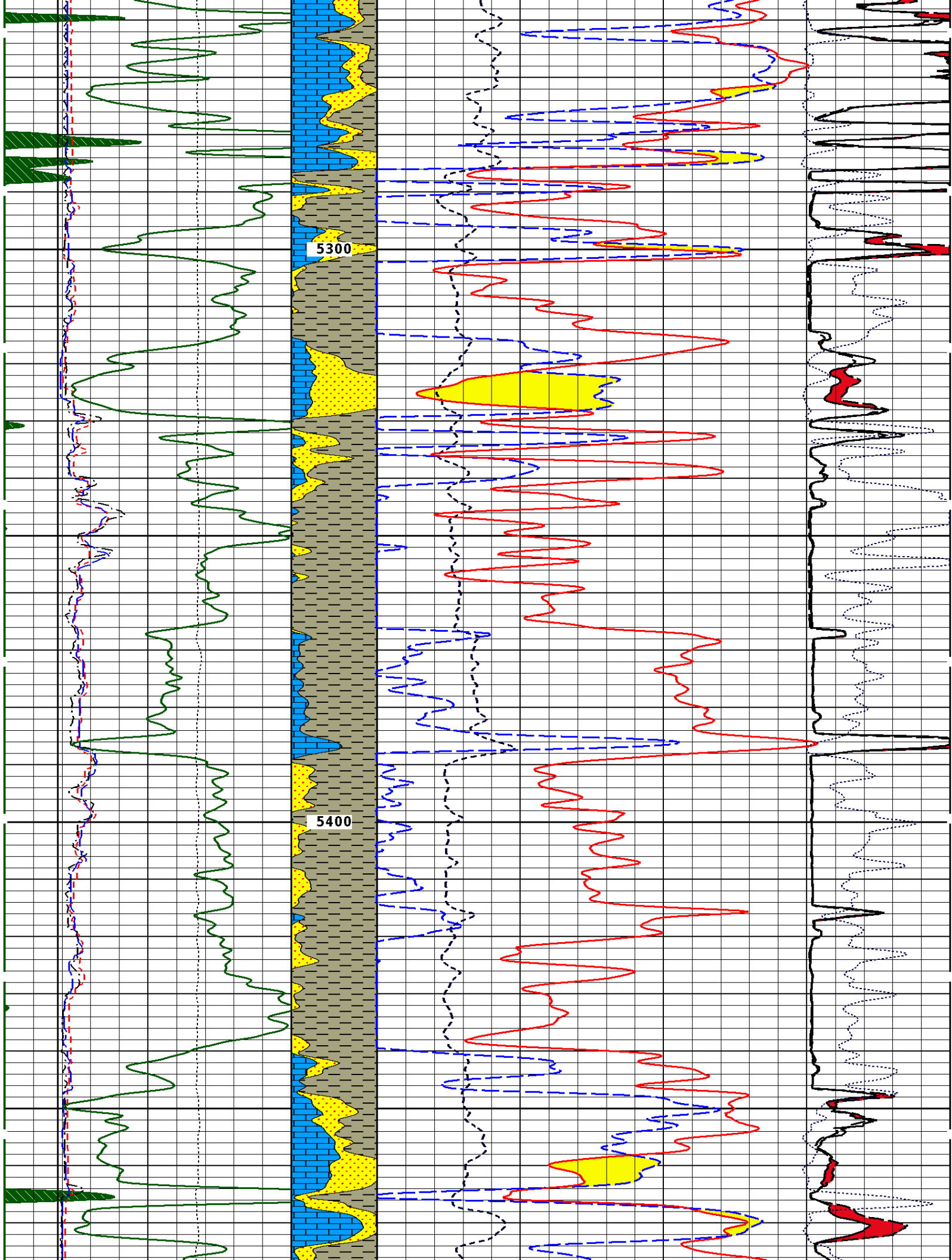


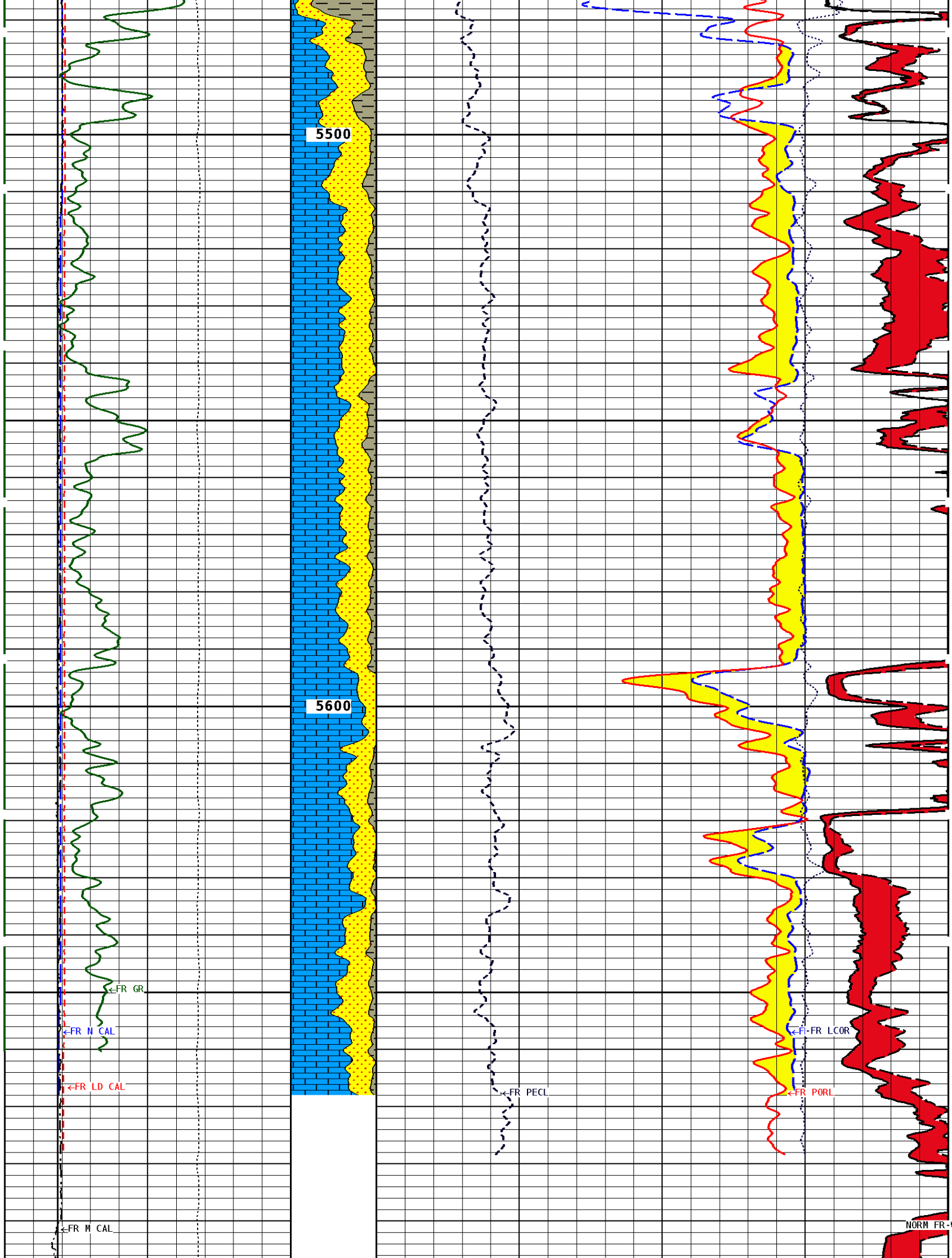


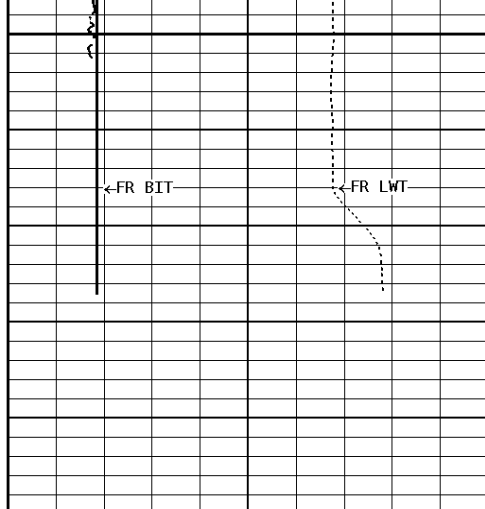












File #1.1.6

5700

5716

1:240 MAIN SECTION

GAMMA RAY API UNITS 150 0 300 150		Volume Dolo/Shale	NEUTRON POROSITY (LIMESTONE) PERCENT 30 -10	
TENSION LBS 10000 0		Volume Calcite	DENSITY POROSITY (2.71g/cc) PERCENT 70 30 -10 -50	
DENSITY (X) CALIPER INCHES (IN) 16 6 26 16		Volume Quartz	PE CROSS-SECTION BARNS/ELECTRON 0 10	DENSITY CORRECTION G/CC -0.25 0.25
NEUTRON (Y) CALIPER INCHES (IN) 16 6 26 16		INVERSE OHMM 0 40		
BIT SIZE INCHES (IN) 6 16		NORMAL OHMM 0 40		
CALIPER MICRO INCHES (IN) 16 6 26 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: casillas_hamker_20-3 dec-7-2019_qst

Scale: 1:240

Format: NLD-240

Segment: V1.D1.S5 Reprocess REPEAT

Acquired: 2019-12/07 10:48 3.4.1-13972

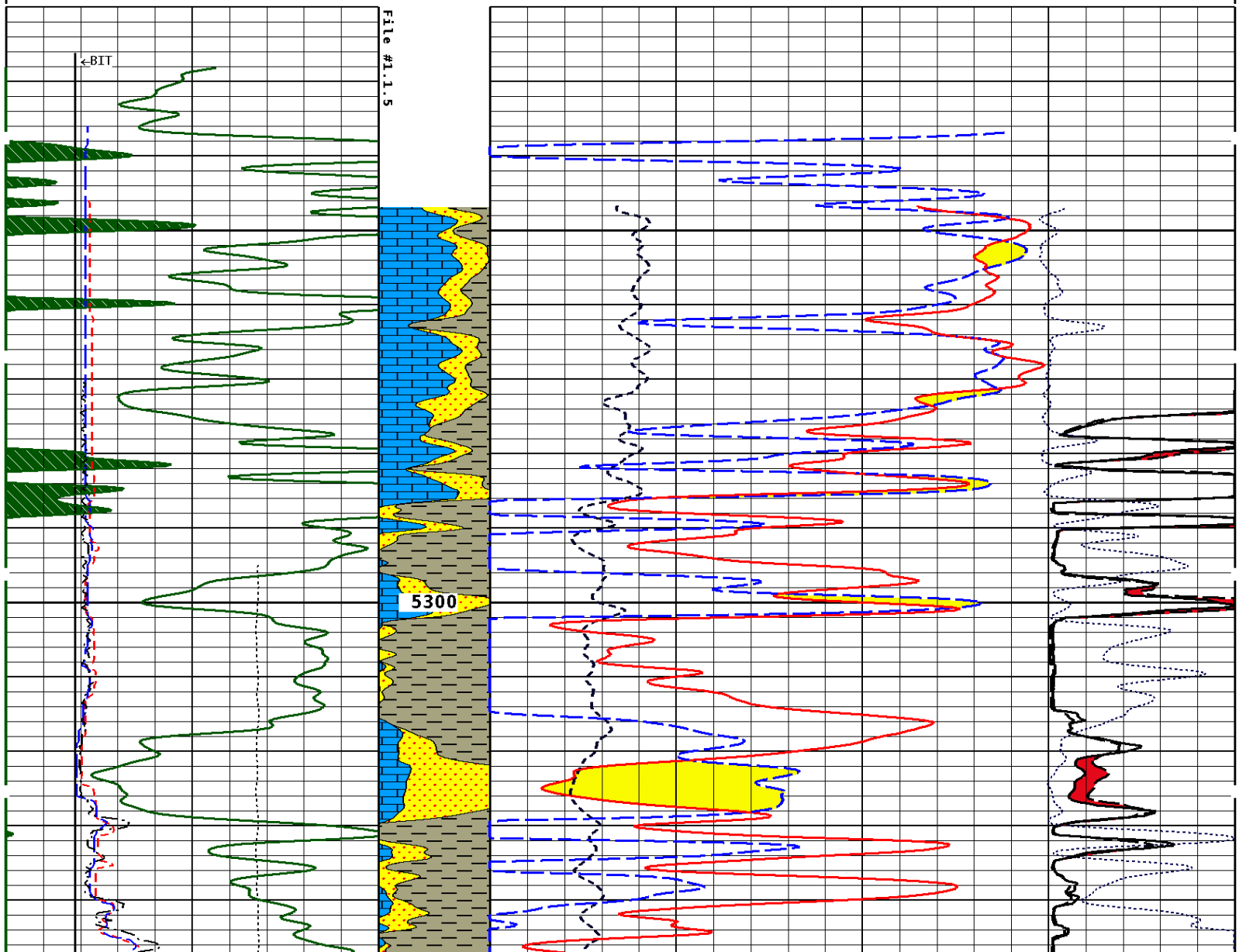
Reference: 0

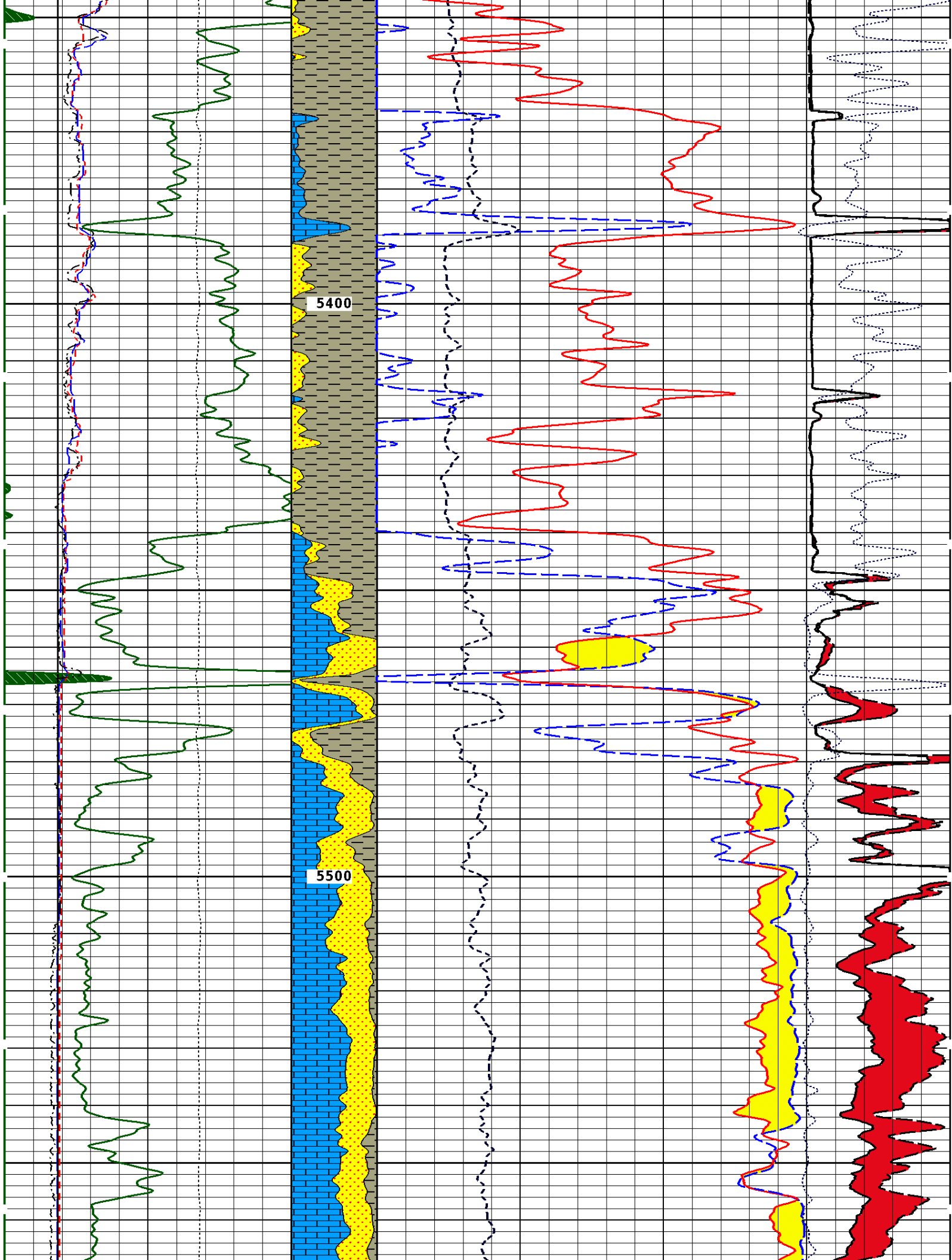
Processed: 2019-12/07 11:08 3.4.1-13972

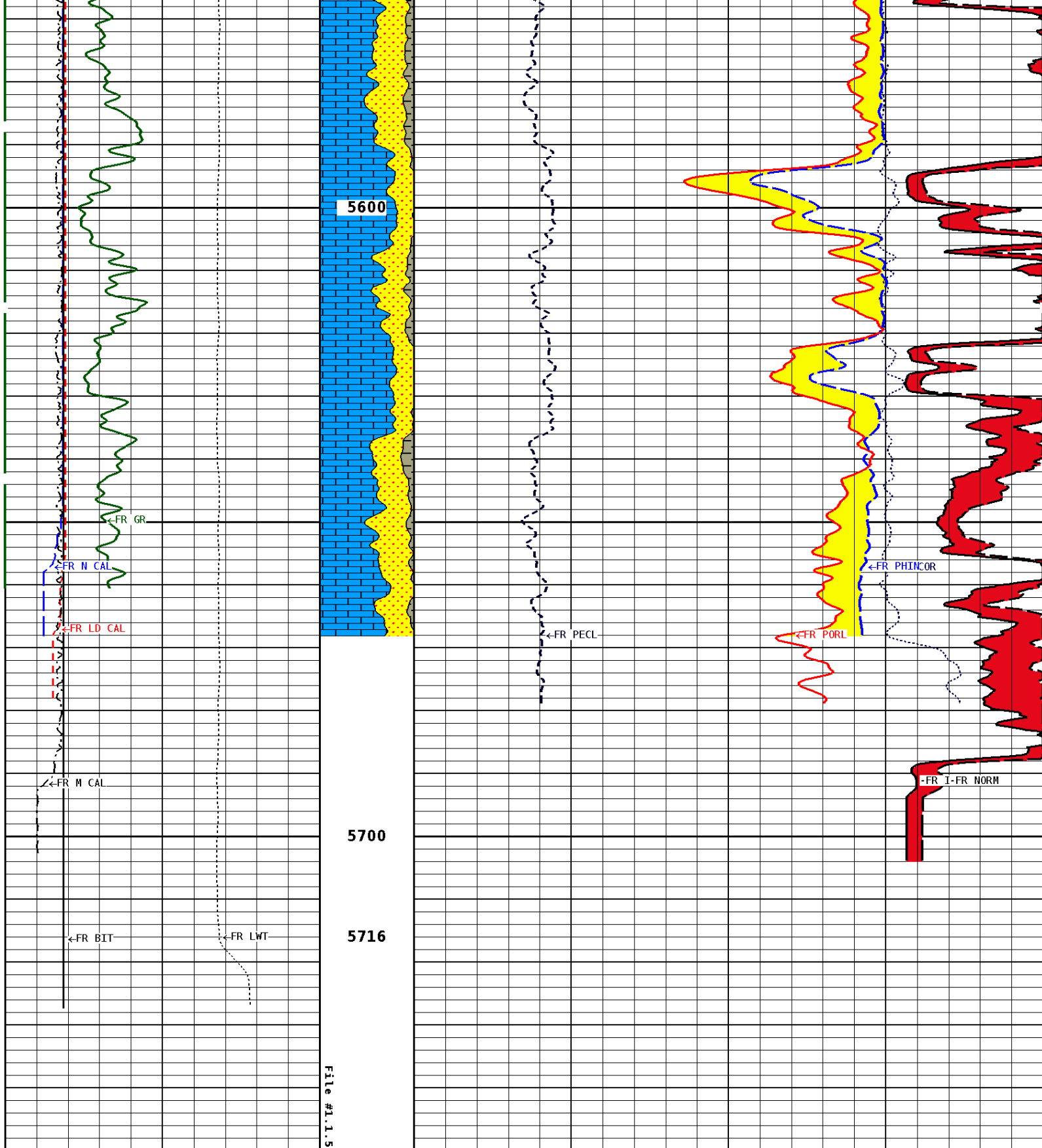
CALIPER MICRO INCHES (IN) 16 6 26 16	
--	--

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

1:240 REPEAT SECTION

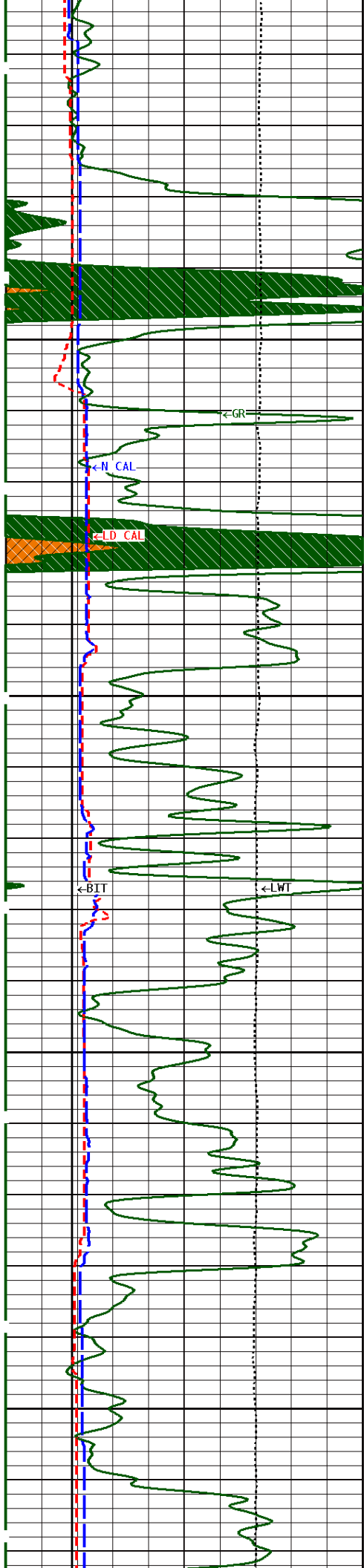






1:240 REPEAT SECTION

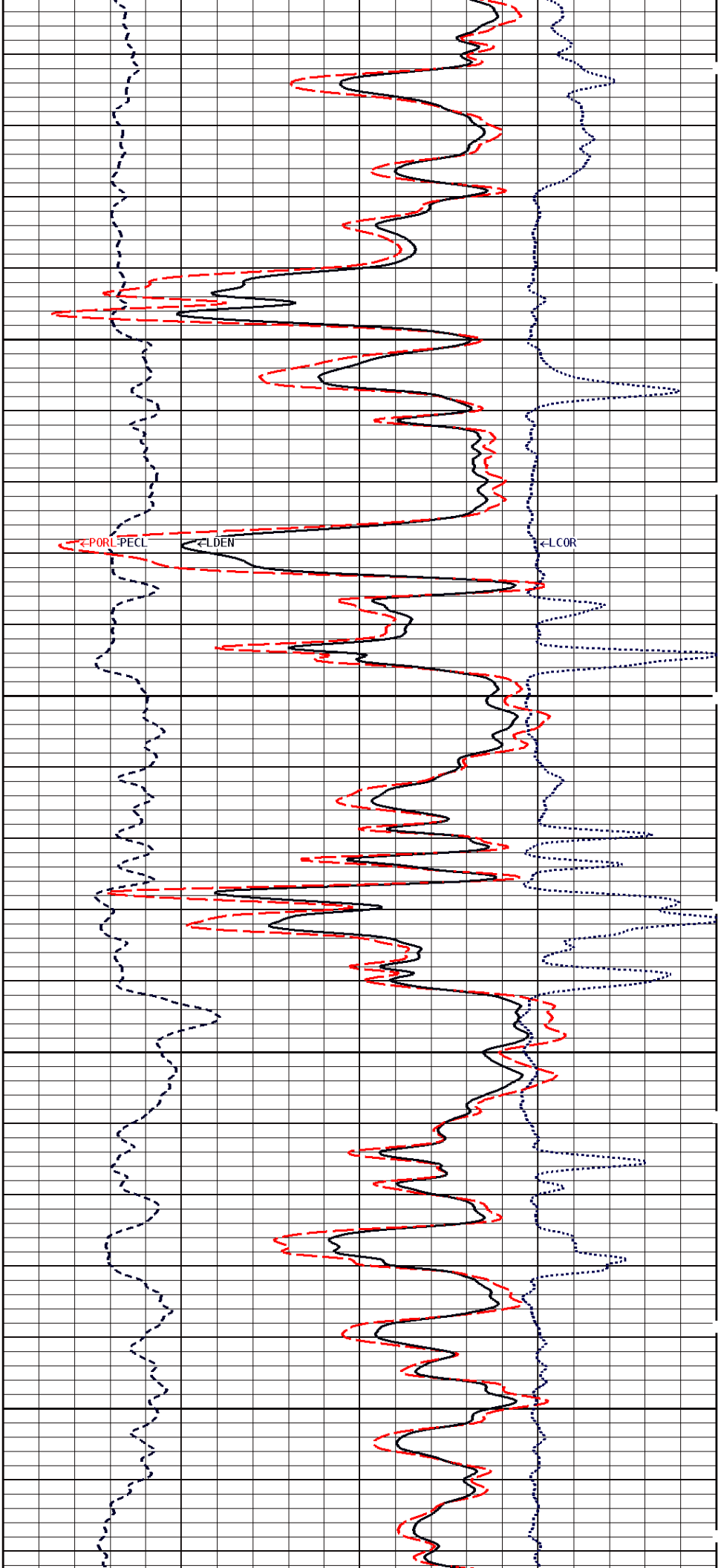
GAMMA RAY API UNITS 150 0 300 150	Volume Dolo/Shale	NEUTRON POROSITY (LIMESTONE) PERCENT 30 -10
TENSION LBS	Volume Calcite	DENSITY POROSITY (2.71g/cc) PERCENT

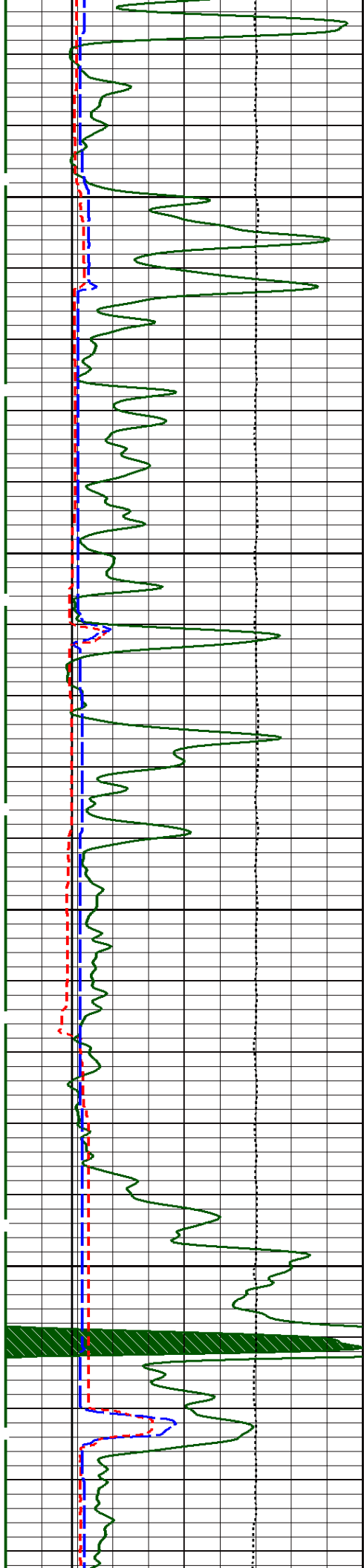


300Cu.Ft.

4200

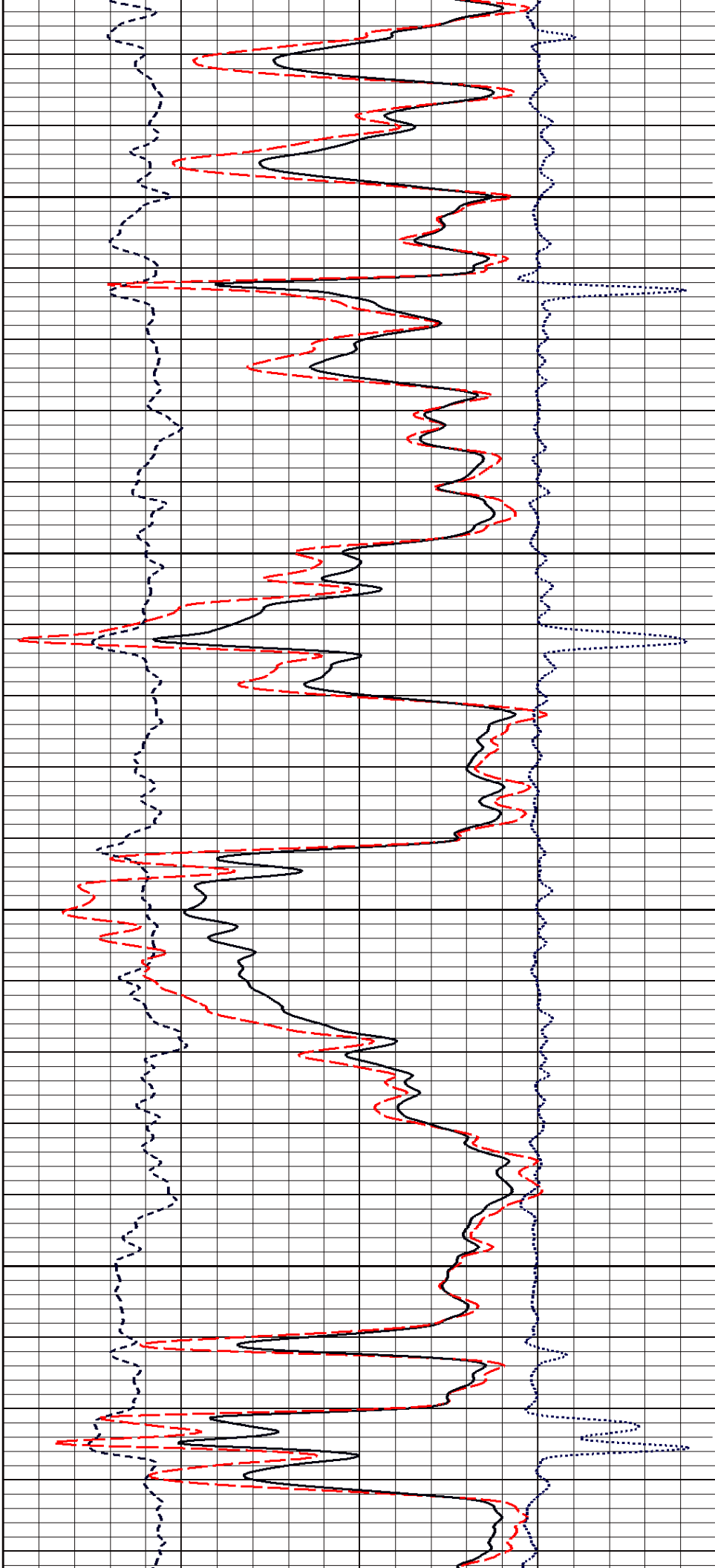
4300

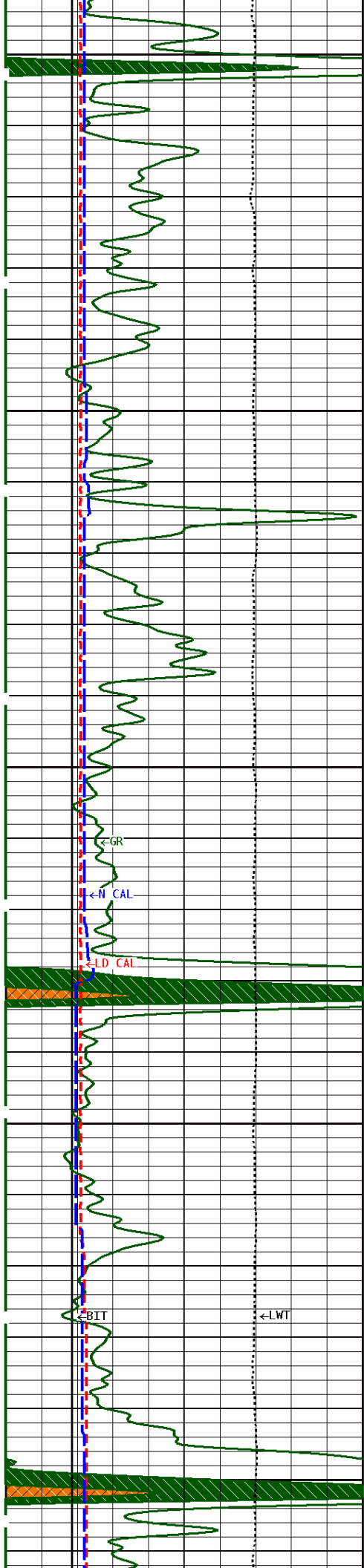




4400

4500



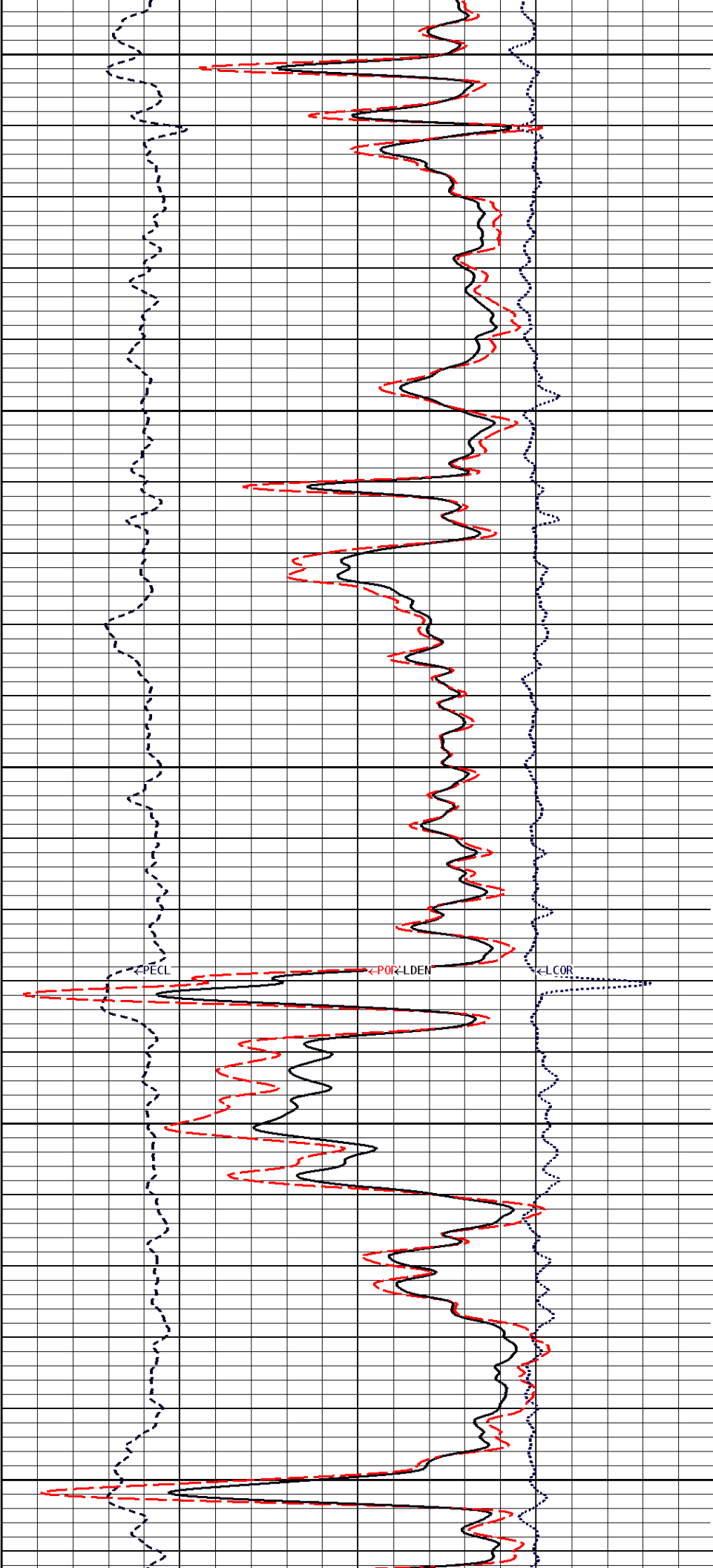


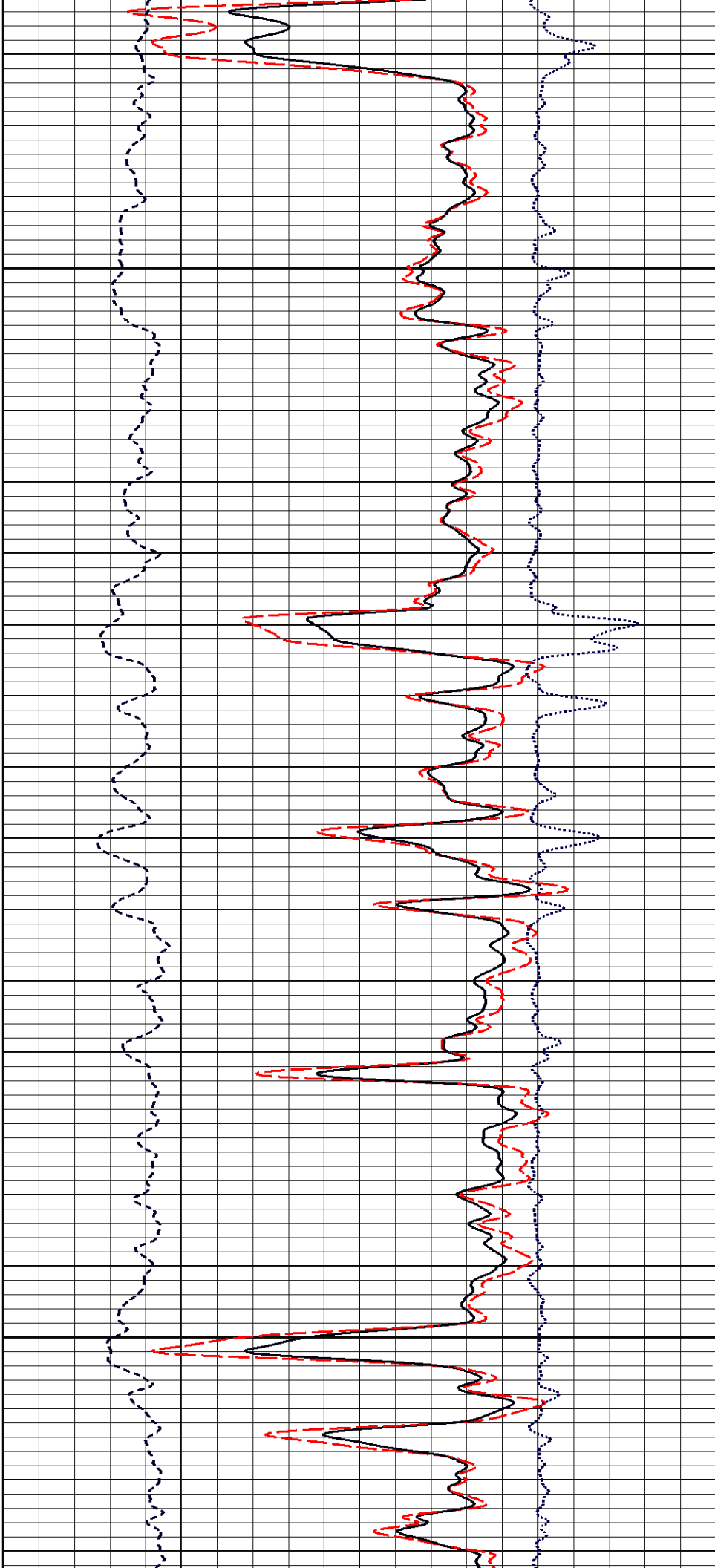
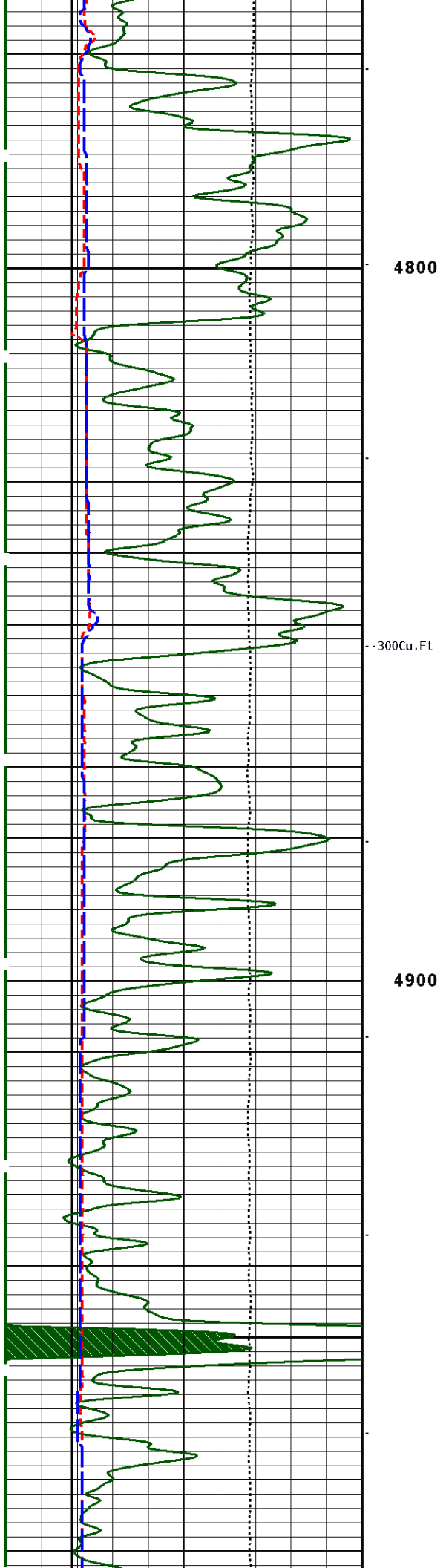
--400Cu.Ft

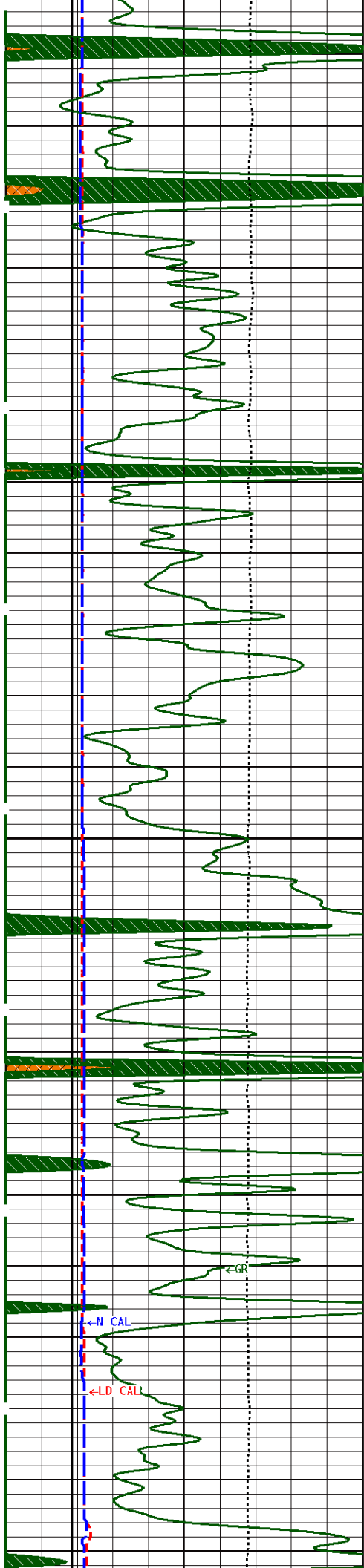
4600

200Cu.Ft--

4700







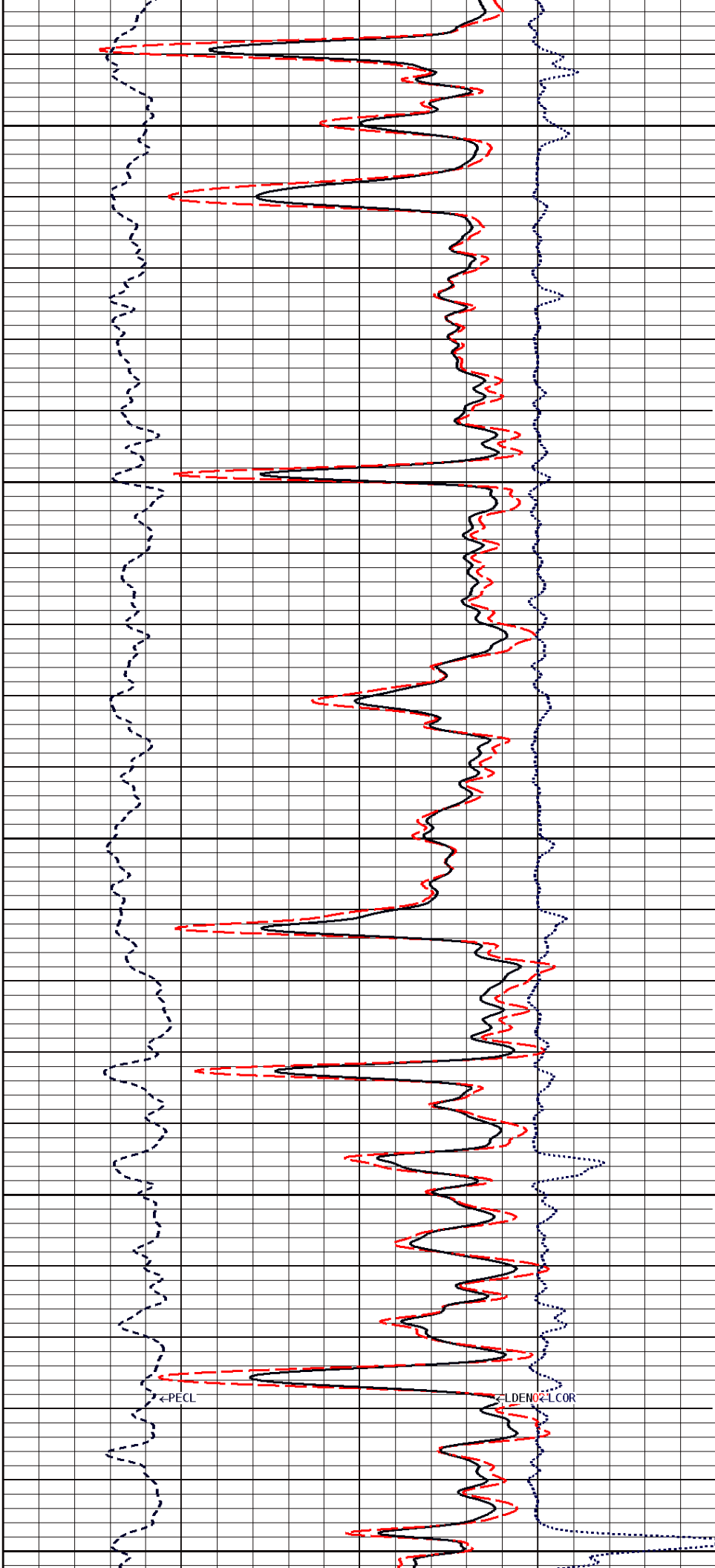
5000

5100

200Cu.Ft

100Cu.Ft

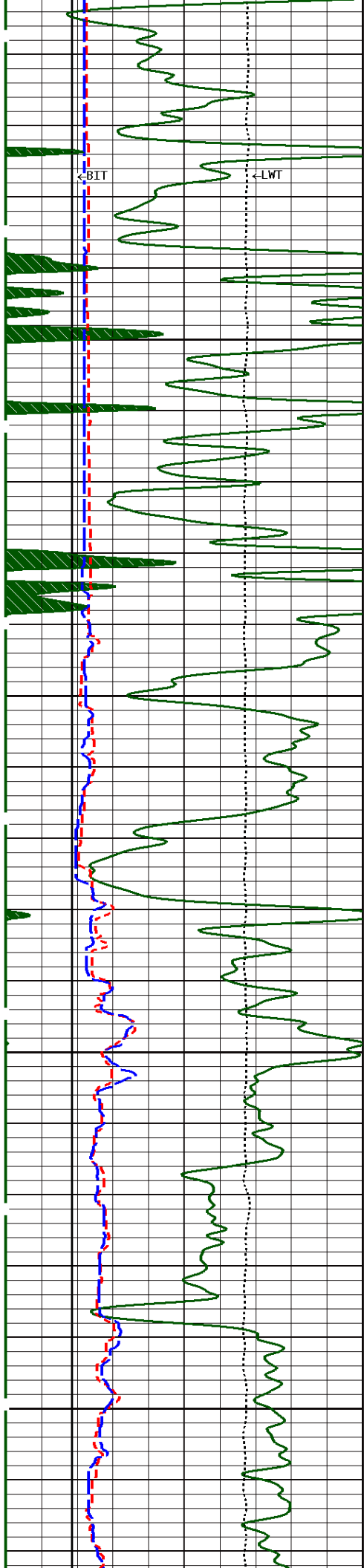
5200



←PECL

←LDEN

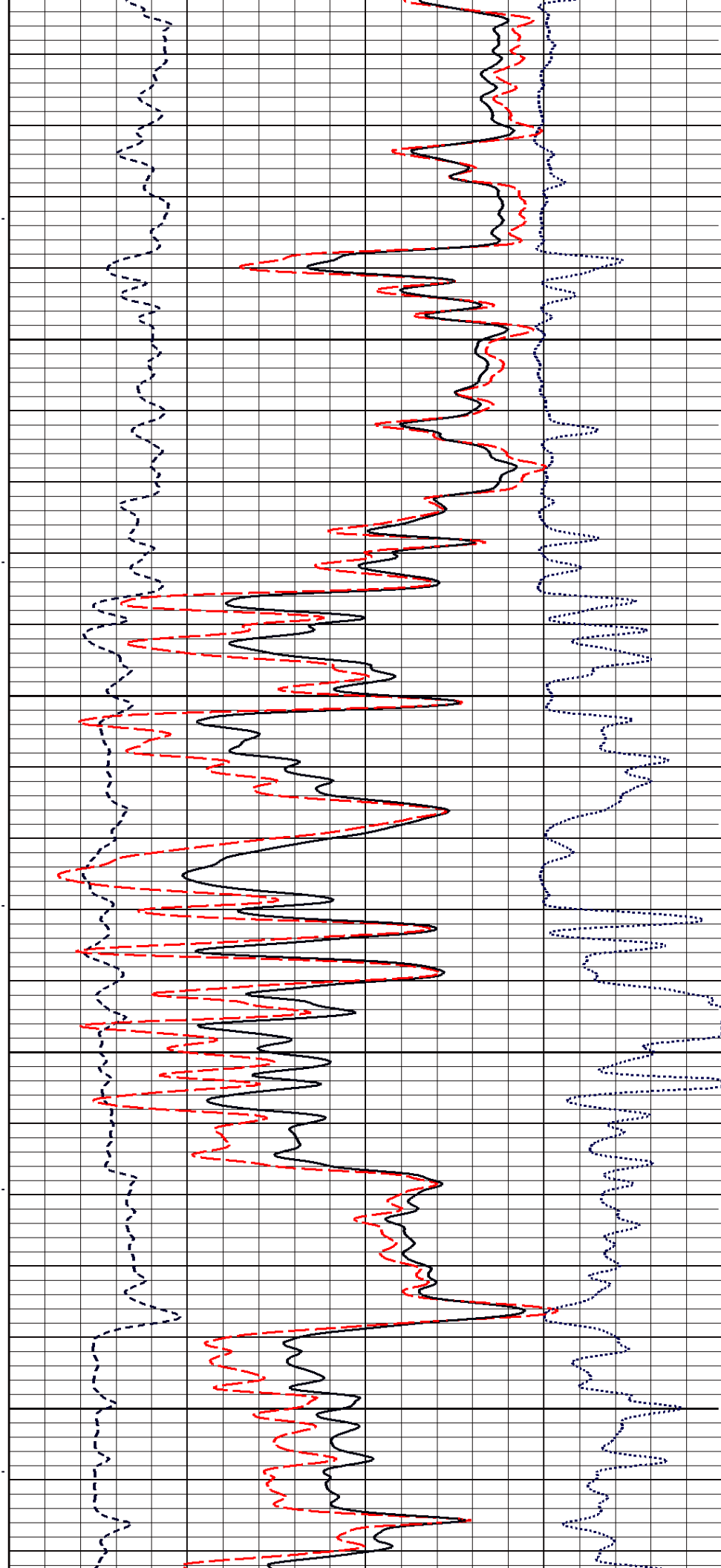
←L COR

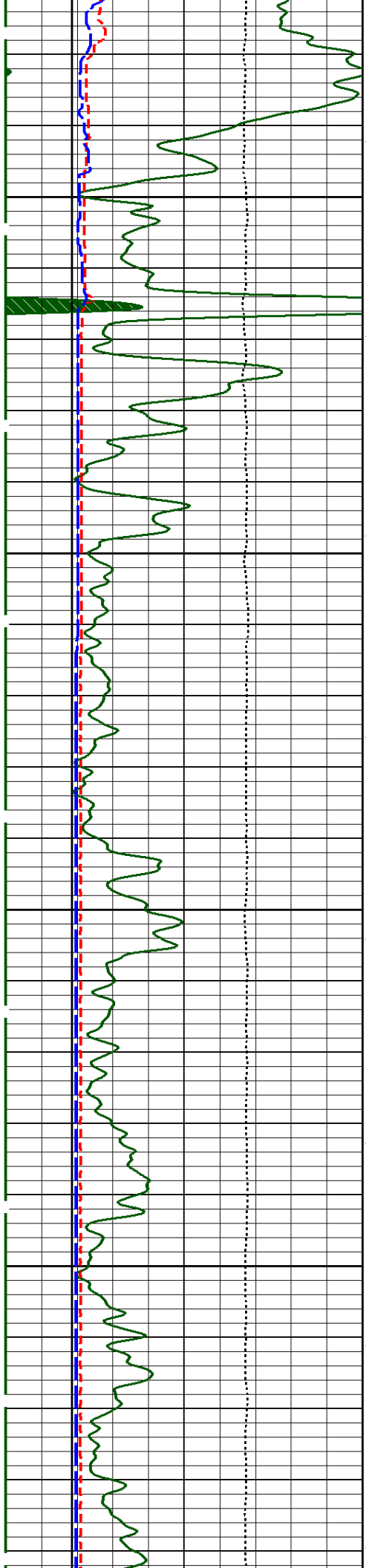


5300

--100Cu.Ft

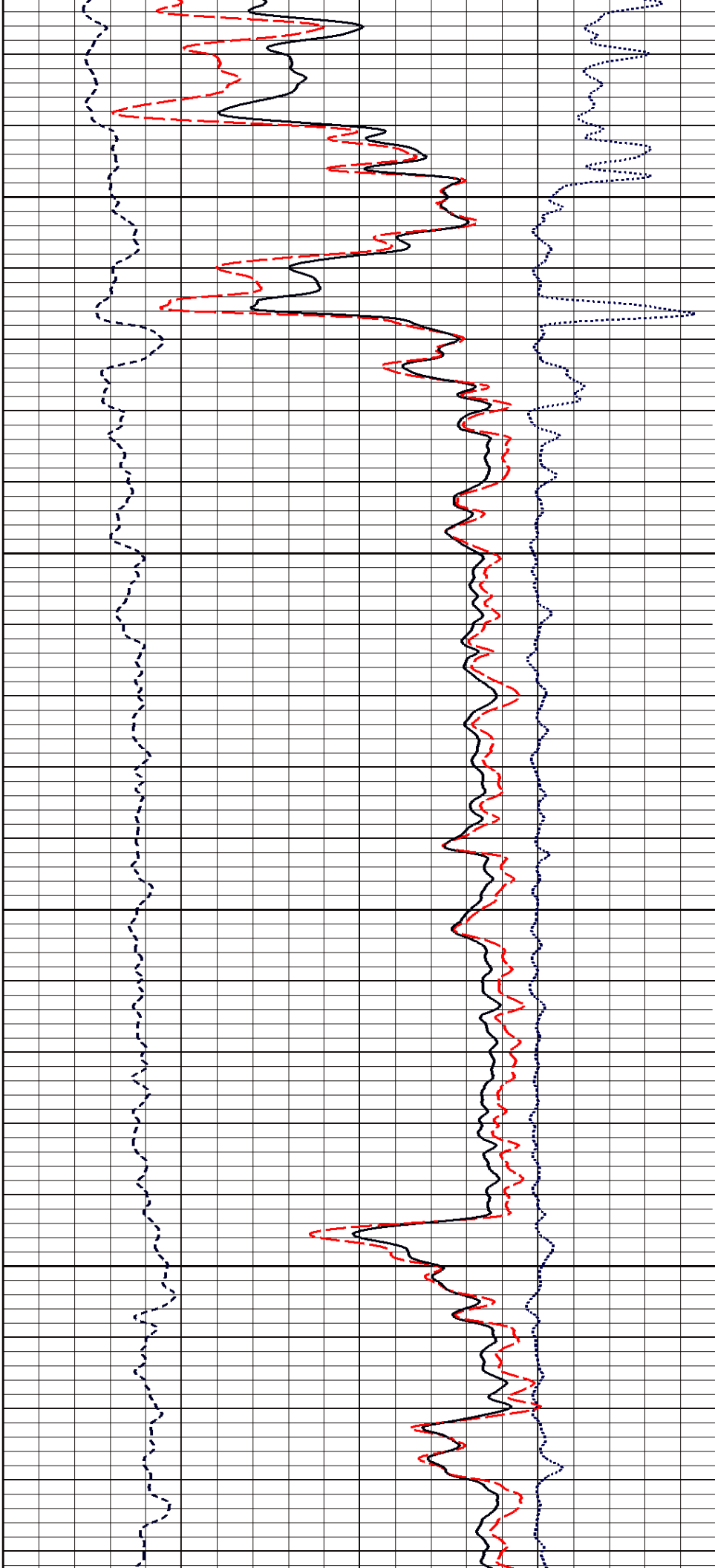
5400

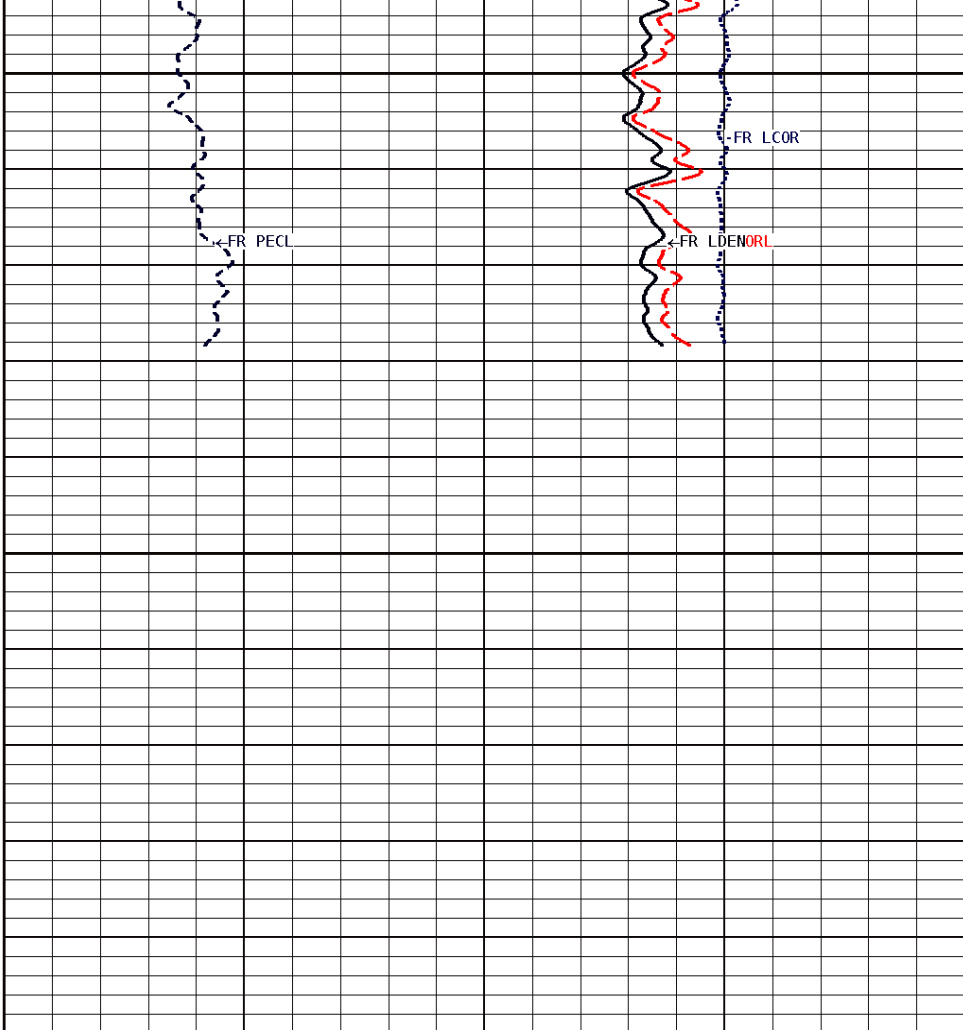
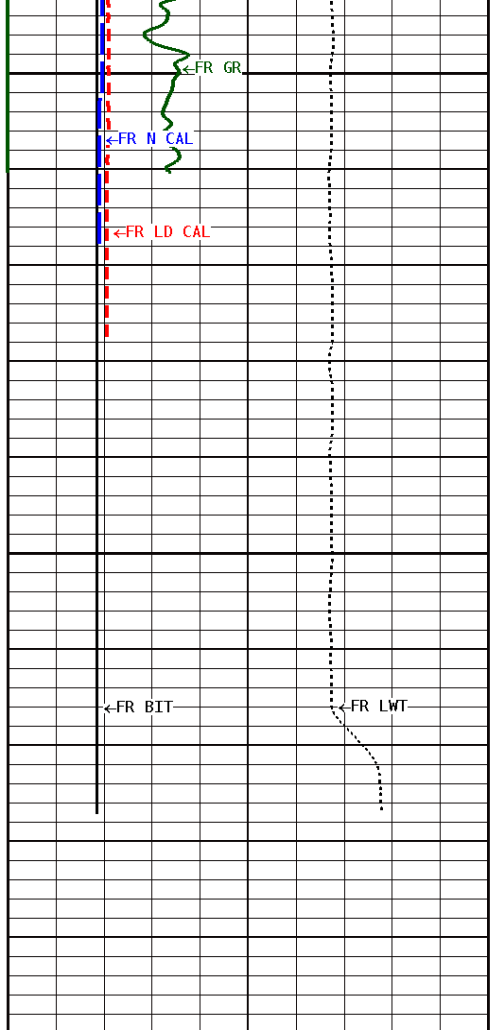




5500

5600





1:240 MAIN SECTION

BULK DENSITY

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

- BNH ANH - CU. FT		DENSITY POROSITY (2.71g/cc) PERCENT	
		70 30 -10	30 -10 -50
TENSION LBS		COMPENSATED BULK DENSITY G/CC	
10000		3.0 2.0 1.0	4.0 3.0 2.0
DENSITY (X) CALIPER INCHES (IN)		PE CROSS-SECTION BARN/ ELECTRON	DENSITY CORRECTION G/CC
16 6		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 : 04-Jun-2019			Time : 09:53		
Sensor Suite : GR-GR5			ID : GRT-BB-013		
	Measured	Units	Calibrated	Units	
GR	Background	Jig	Jig		
	44	314	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.	
Shop Calibration LDT-DF					
Performed : 08-AUG-2019			Time : 16:18		
Sensor Suite : BHC NEUT			ID : CNP-AD-037		
Source ID : N-1104					
	Tank		Verification	Units	
	Measured	Calibrated	Jig		
N/F	3.7594	3.6893	3.6944		
Porosity	21.6	20.5	20.6	%	
Shop Calibration LDT-DF					
Performed : 03-Jun-2019			Time : 14:53		
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.	
Shop Calibration LDP-DA					
Performed : 03-Dec-2019			Time : 19:18		
Sensor Suite : BHCPELNG			ID : LDP-DA-062		
Source ID : 1637GW					
Short Space					
	BKGD	Al	Mg	Al+Fe	Units
LSW1	59	994	1604	617	CPS
LSW2	58	1159	1848	809	CPS
LSW3	218	2640	4281	2191	CPS
LSW4	272	2262	3264	1957	CPS
LSW5	26	44	49	42	CPS
LSW6	76	80	79	79	CPS
LSW7	48	52	54	51	CPS
LSW8	1	3	4	3	CPS
QS	0.224	0.208	0.191	0.214	
PES			2.778	5.967	
SSDN		2.600	1.680		G/CC
Long Space					
	BKGD	Al	Mg	Al+Fe	Units
LLW1	89	1139	4703	663	CPS
LLW2	98	2033	7985	1435	CPS
LLW3	372	3656	13901	3102	CPS
LLW4	483	1704	5322	1526	CPS
LLW5	54	65	108	65	CPS
LLW6	152	153	144	154	CPS
LLW7	99	102	99	102	CPS
LLW8	4	6	16	6	CPS
QL	0.210	0.200	0.185	0.199	
PEL			2.697	5.458	
LSDN		2.600	1.680		G/CC



Company: CASILLAS PETROLEUM CORP
Well: HAMKER #20-3
Location: 1420' FSL & 660' FWL
Logged: 12-07-2019

energy services

K.B. Elev: 2858.0 Ft