



Tucker
ENERGY SERVICES

COMPENSATED NEUTRON

PEL DENSITY LOG

Company DAYSTAR PETROLEUM LLC.
Well MCGINNIS-FEE #20
Field FANCY
County GREENWOOD
State KANSAS
Country USA
API No. 15-073-24185

File No : TUL-58207
Company : DAYSTAR PETROLEUM LLC.
Well : MCGINNIS-FEE #20
Field : FANCY
County : GREENWOOD
State : KANSAS
Country : USA
API No : 15-073-24185

Location :
1980' FSL & 4290' FEL
E2 NW SW

LSD : Sect : 25 Twp : 26S Rge : 12E

Permanent Datum: GL Elevations: KB 0.00 Ft CNT PIT
Drilling Measured From: GL DF 0.00 LDT
Log Measured From: GL 1059.00 Ft MLT
Above Permanent Datum: 0.00 Ft

Date 2013-03-30

Run Number	1		
Depth--Driller	2196.0	Ft	
Depth--Logger	2194.0	Ft	
First Reading	2161.0	Ft	
Last Reading	233.0	Ft	
Casing--Driller	225.0	Ft	
Casing--Logger	233.0	Ft	
Bit Size	9.500	In	
Casing Size	10.750	In	
Hole Fluid Type	WBM		
Density	9.1	LBS/GAL	
Fluid Loss	8.2	CC	
PH/Viscosity	9.0	37.0 SEC	
Sample Source	MEASURED		
RM@Measured Temp.	3.500 @ 70	F	
RMF@Measured Temp	2.980 @ 70	F	
RMC@Measured Temp.	4.030 @ 70	F	
Source RMF/RMC	CALCULATED/CALCULATED		
RM@BHT	2.720 @ 91	F	
Time Circulation Stopped			
Max Recorded Temp.	91	F	
Equipment/Base	TRK 123	TULSA	
Recorded By	S. DAVIS		
Witnessed By	S. EVENSON		

The customer is hereby warned that by providing the log data herein, T. E. S. does not agree to provide any interpretation of log data, conversion of log data to physical rock parameters or recommendations. T. E. S. 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 T. E. S. 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 T. E. S. 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)
9.500	2194.00	10.750	30.00	233.00

Run Number	1	
Date	2013-03-30	
Date/Time On Bottom	2013-03-30 15:15	
Depth to Fluid	0.0 Ft	
Salinity	0.000 PPM	
RMF@BHT	2.310 @ 91 F	
RMC@BHT	3.130 @ 91 F	

Run Number 1

Comments

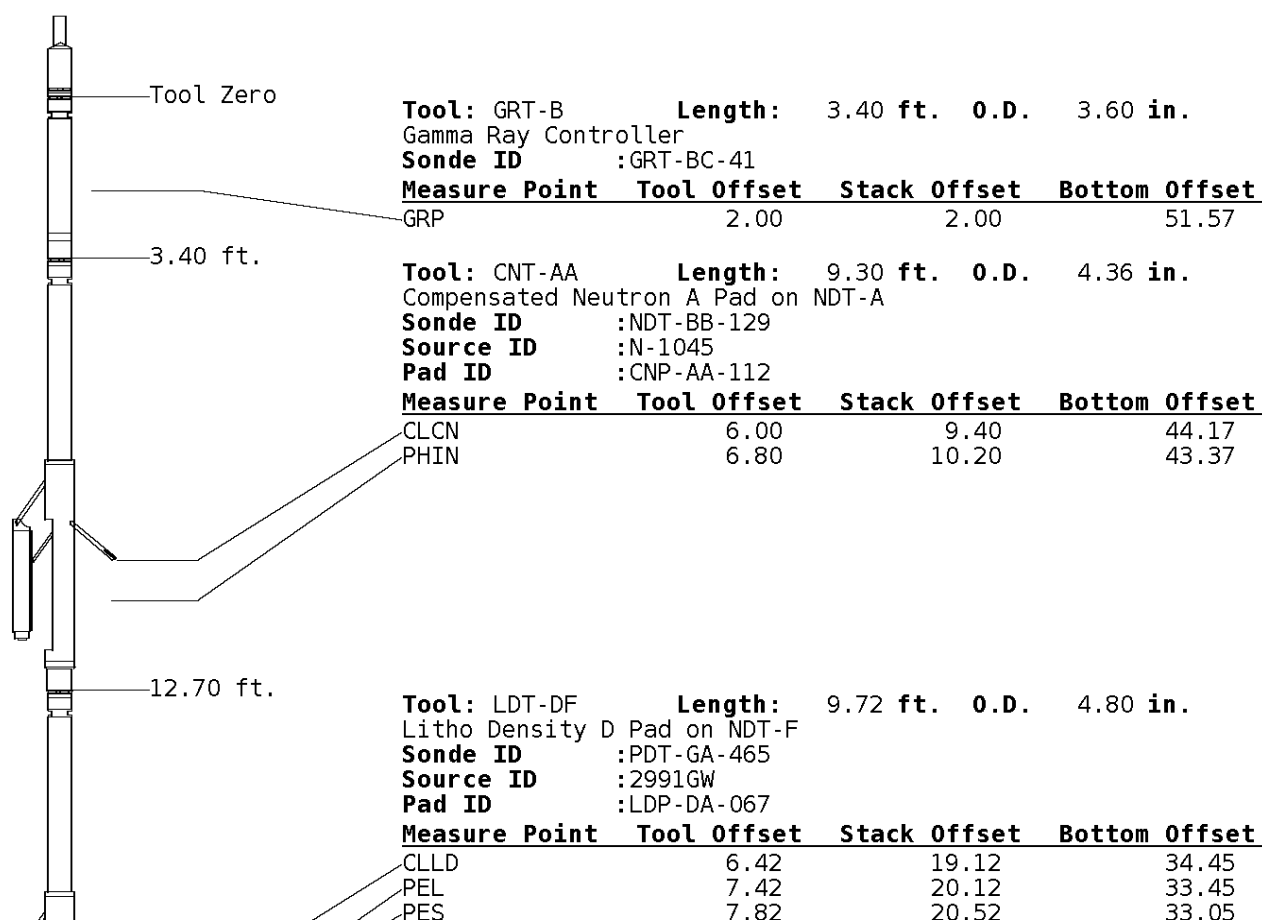
ALL PRESENTATIONS AS PER CUSTOMER REQUEST.
 GRT, CNT, LDT, MLT, AND PIT RUN IN COMBINATION.
 CALIPERS ORIENTED ON X-Y AXIS.
 2.71 G/CC USED TO CALCULATED POROSITY.
 ANNULAR HOLE VOLUME CALCULATED USING 7.0" PRODUCTION CASING.
 PHIN IS CALIPER CORRECTED

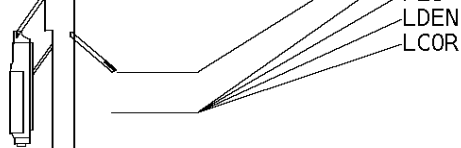
GRT: GRP.
 CNT: PHIN, CLCNIN.
 LDT: PORL, LCORN, PECLN, LDENN, PORLLS, CLLDIN.
 MLT: NOR_RF, INV_RF, MSCLPIN.
 PIT: ILD, ILM, SPU, SFLAEC, CIRD.

OPERATORS:
 B. COLWILL
 J. THOMAS

Tool String Schematic

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



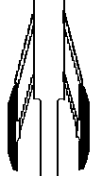


Measure Point	Tool Offset	Stack Offset	Bottom Offset
LDEN	7.62	20.32	33.25
LCOR	7.62	20.32	33.25

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-AB-005

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: day-pet-mcg-20-mstk-mar-30

Scale: 1:240

Segment: V1.D1.S5 MN

Acquired: 2013-03/30 15:30 3.2.0-11401

Reference: 0

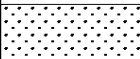
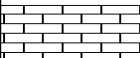
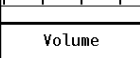
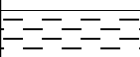
Processed: 2013-03/30 16:23 3.2.0-11401

**BIT SIZE
INCHES (IN)**

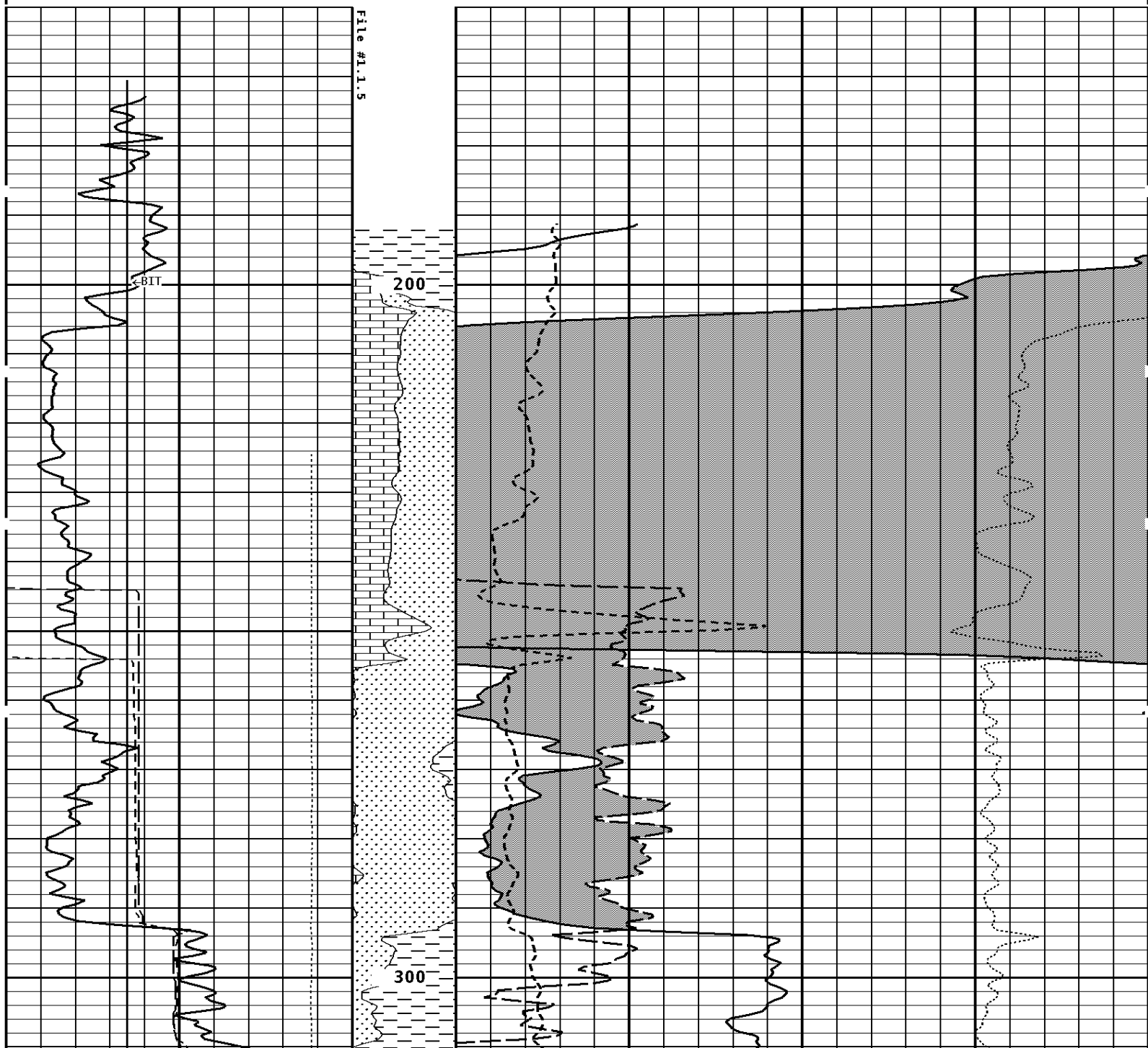
6 16

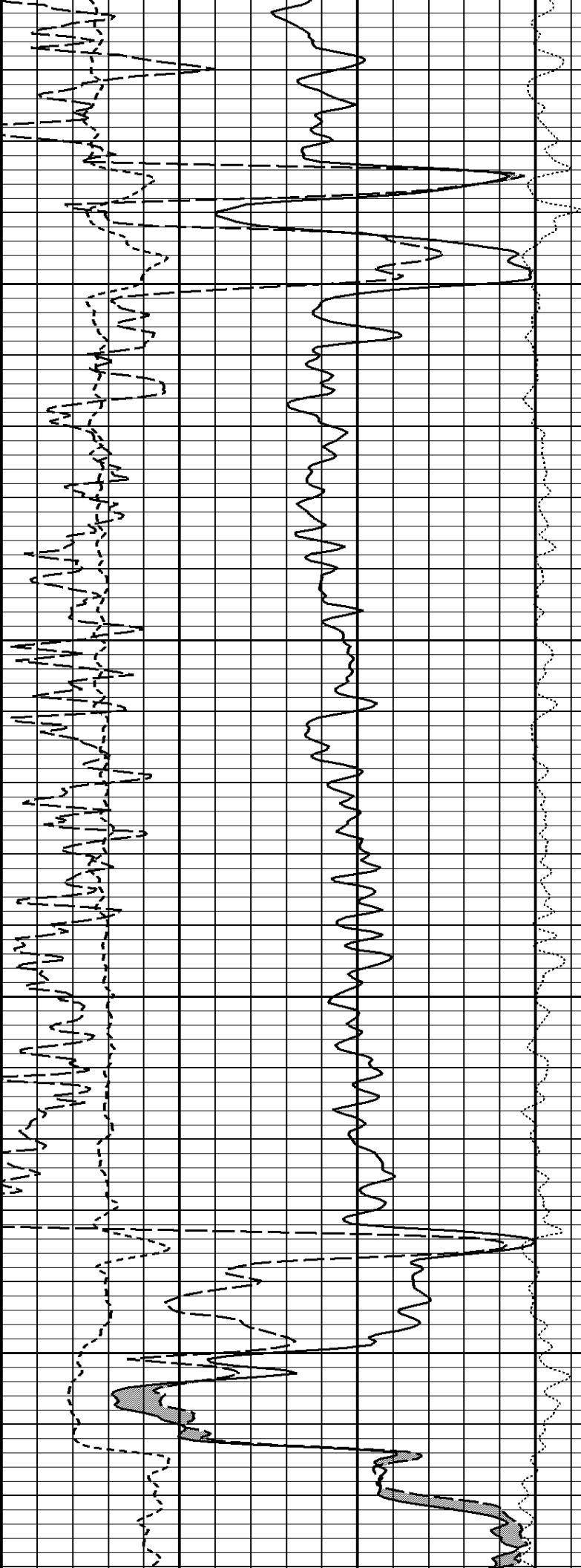
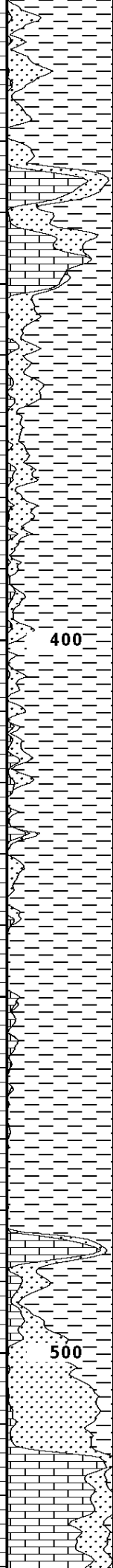
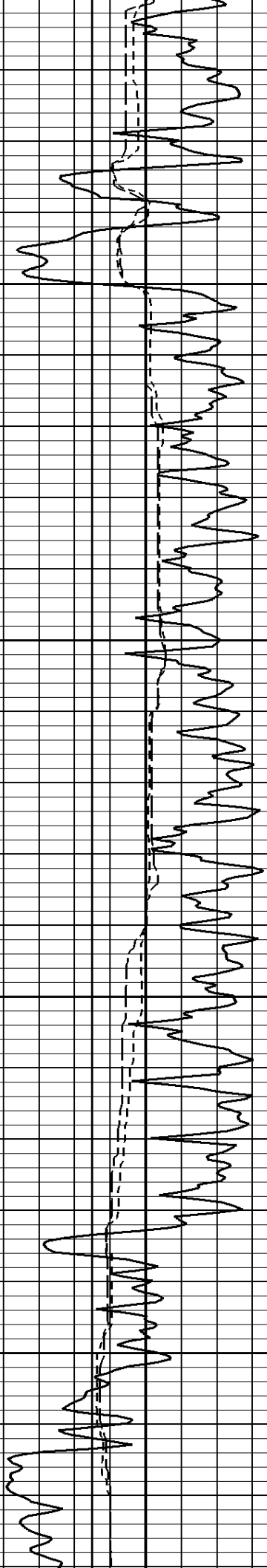
**NEUTRON (Y) CALIPER
INCHES (IN)**

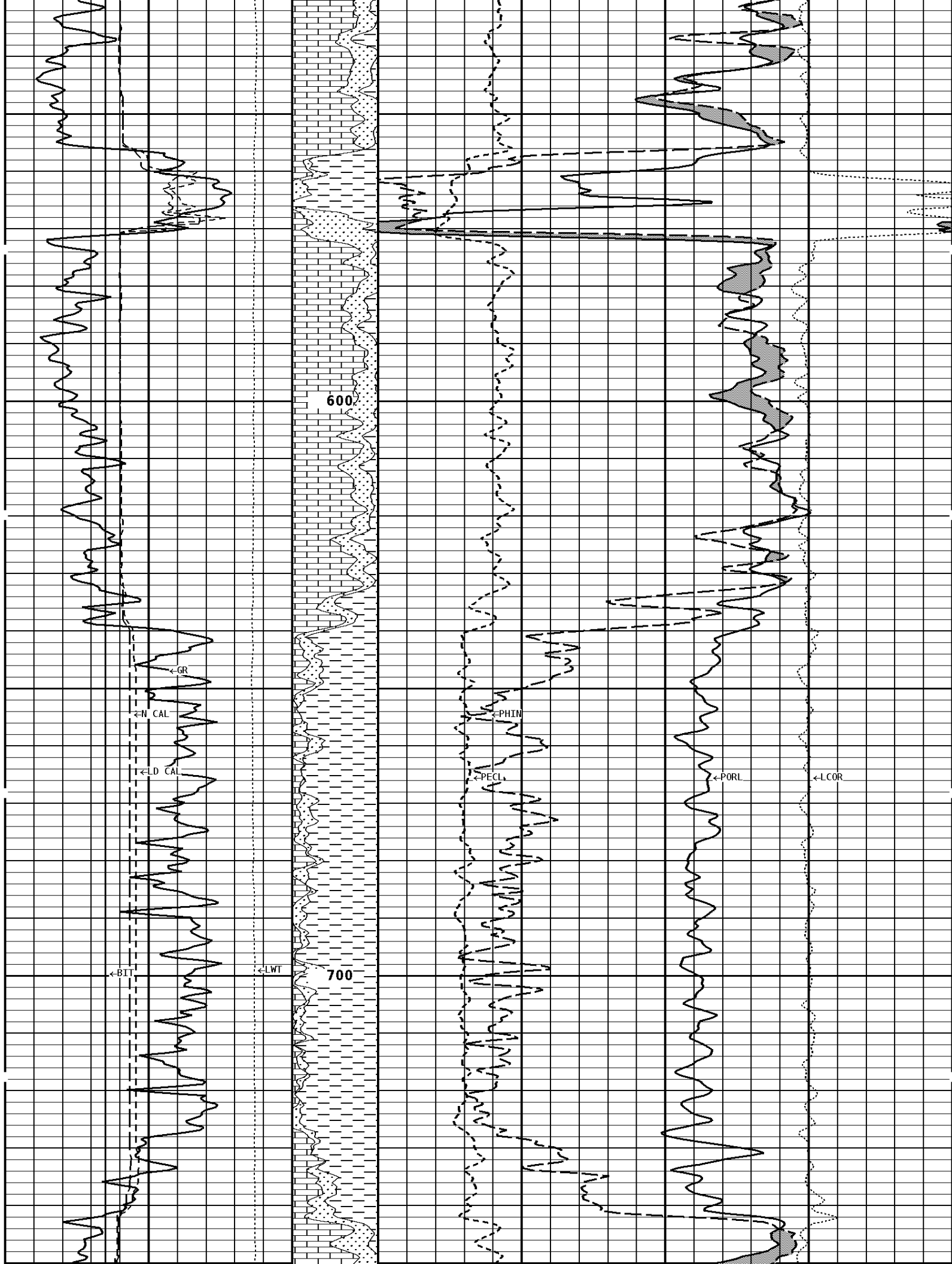
16 26

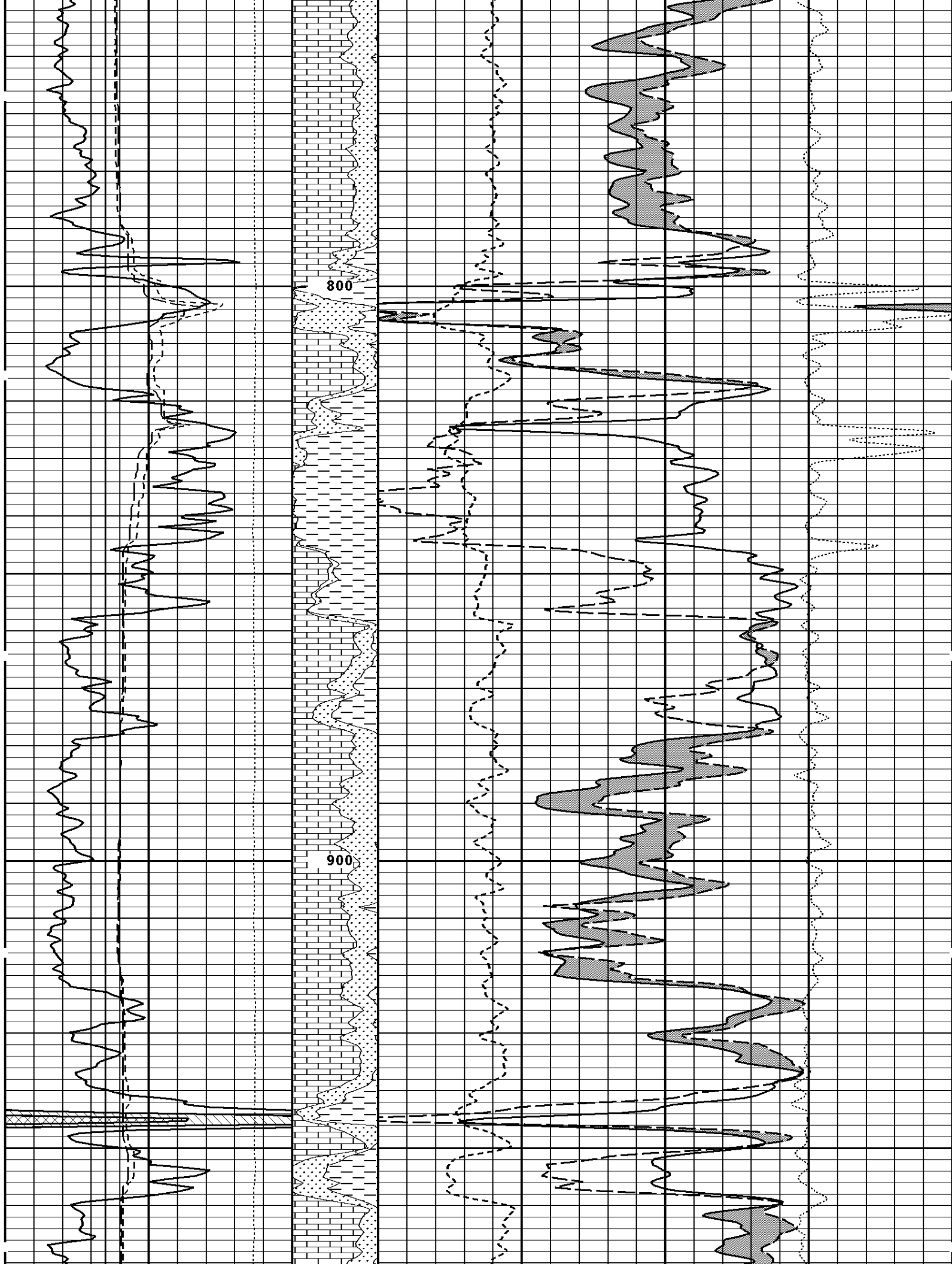
16 6	26 16				
DENSITY (X) CALIPER INCHES (IN)		Volume Quartz	PE CROSS-SECTION BARNS/ELECTRON		DENSITY CORRECTION G/CC
16 6	26 16		0	10	-0.25 0.25
TENSION LBS		Volume Calcite	DENSITY POROSITY (2.71g/cc) PERCENT		
10000	0		70 30		30 -10
			-10		-50
GAMMA RAY API UNITS		Volume Dolo/Shale	NEUTRON POROSITY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

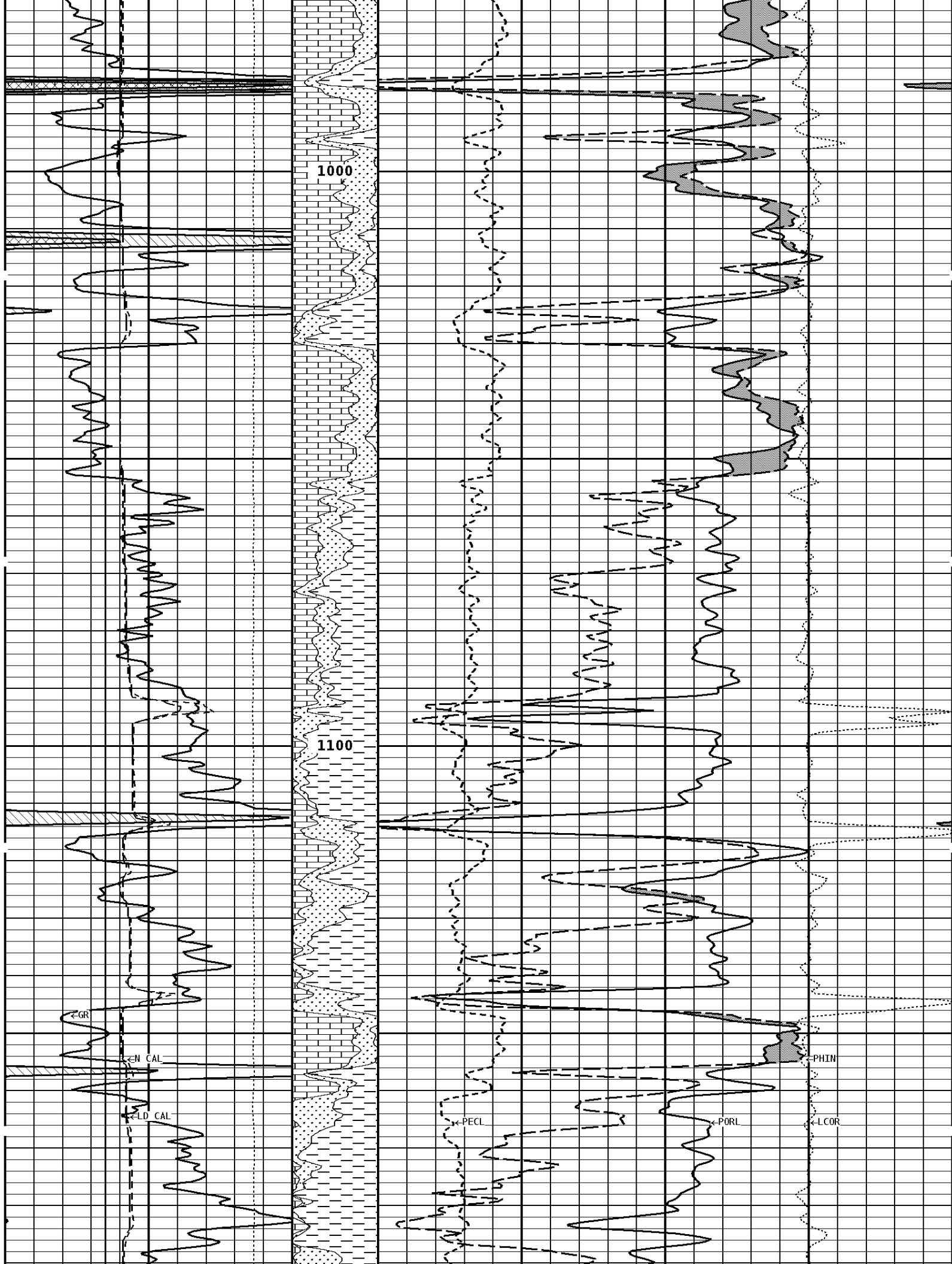
1:240 MAIN SECTION

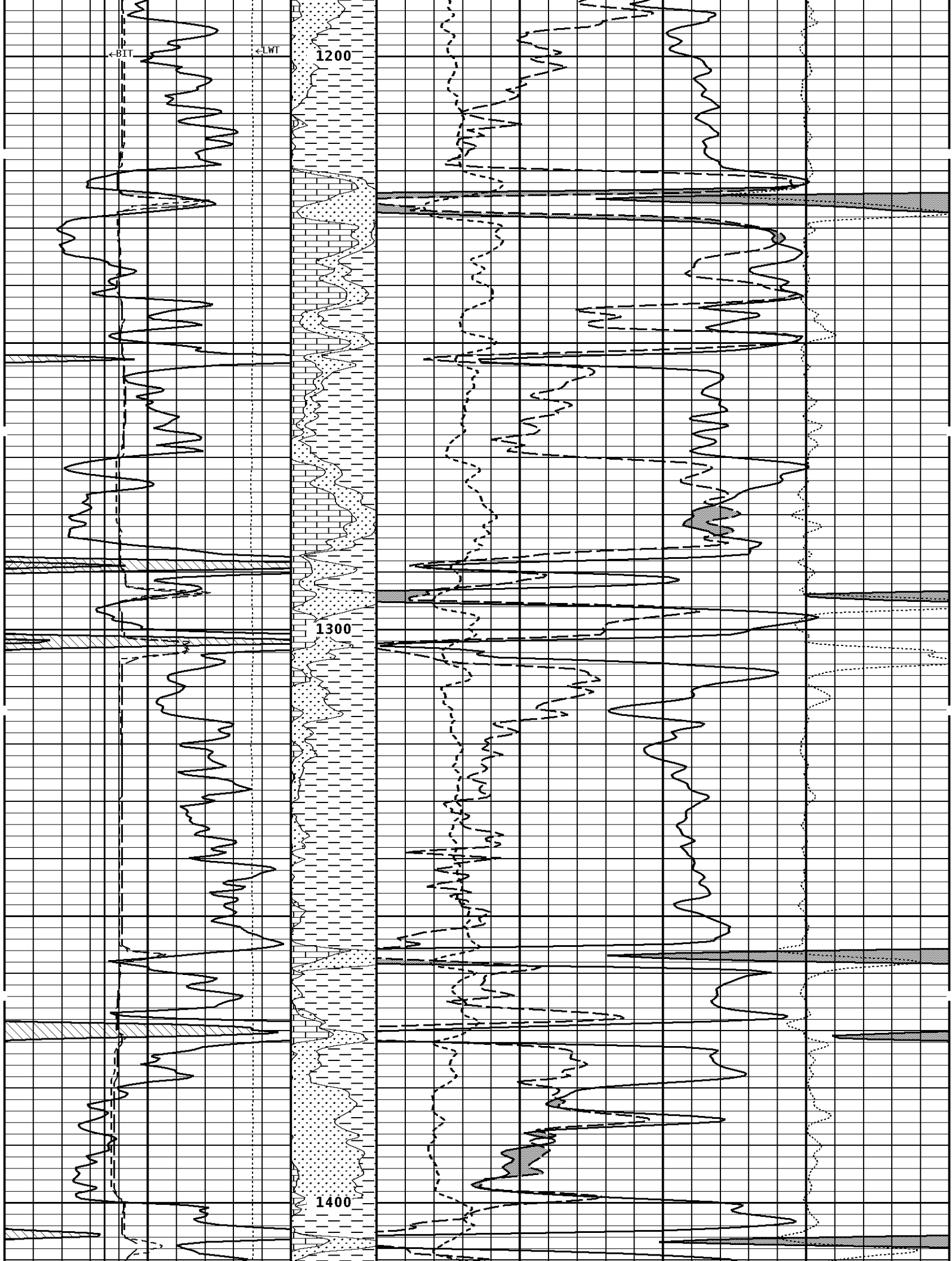


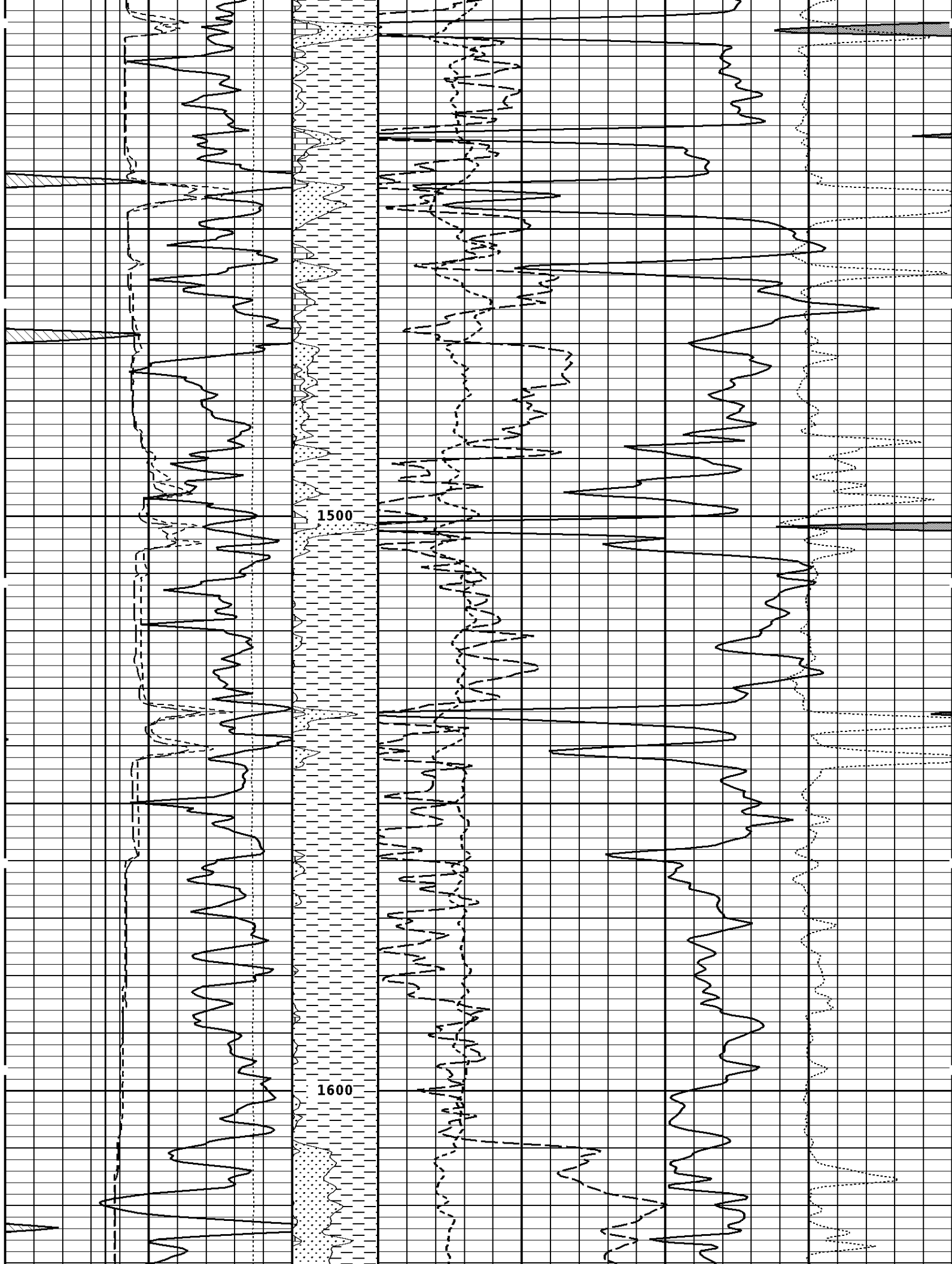


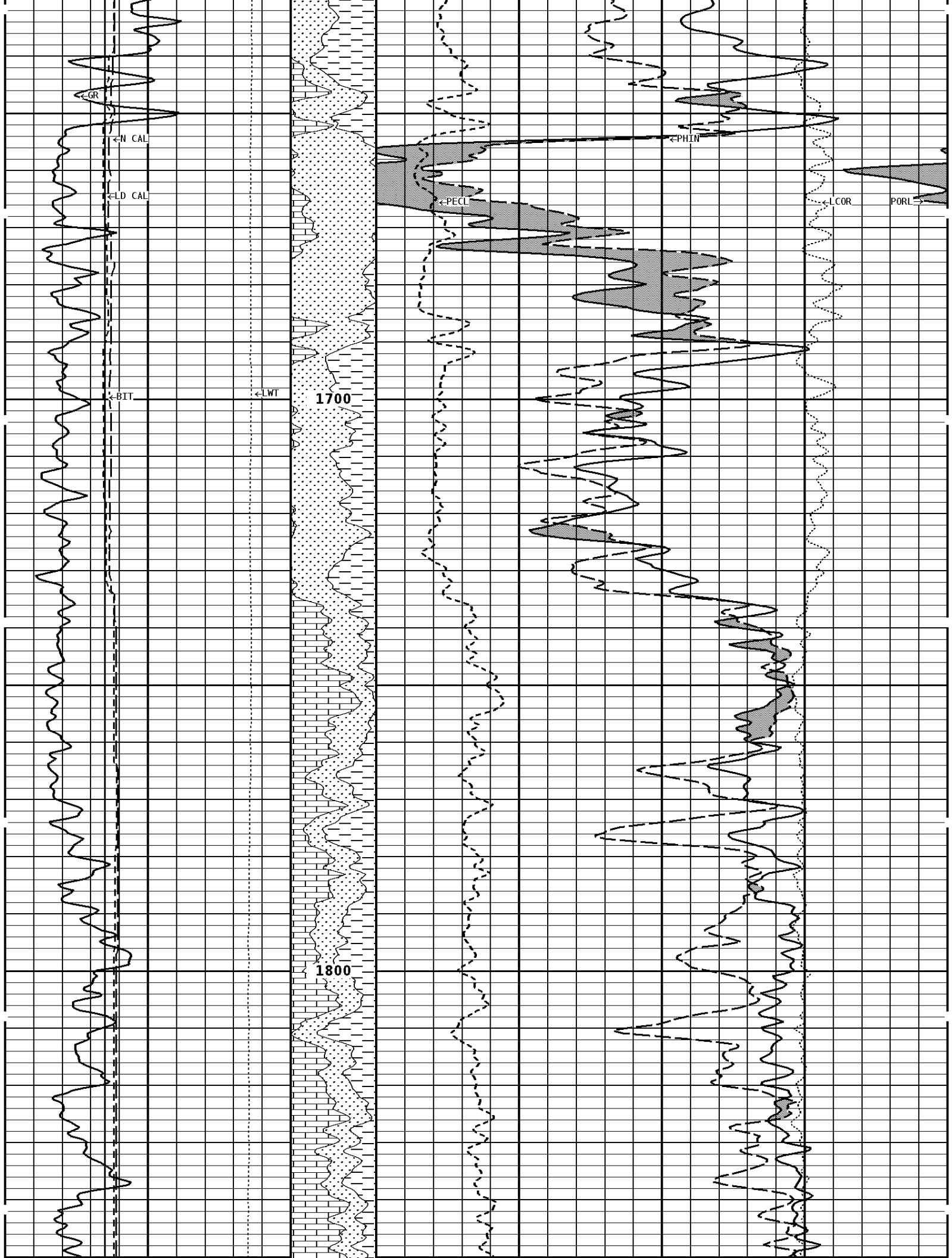


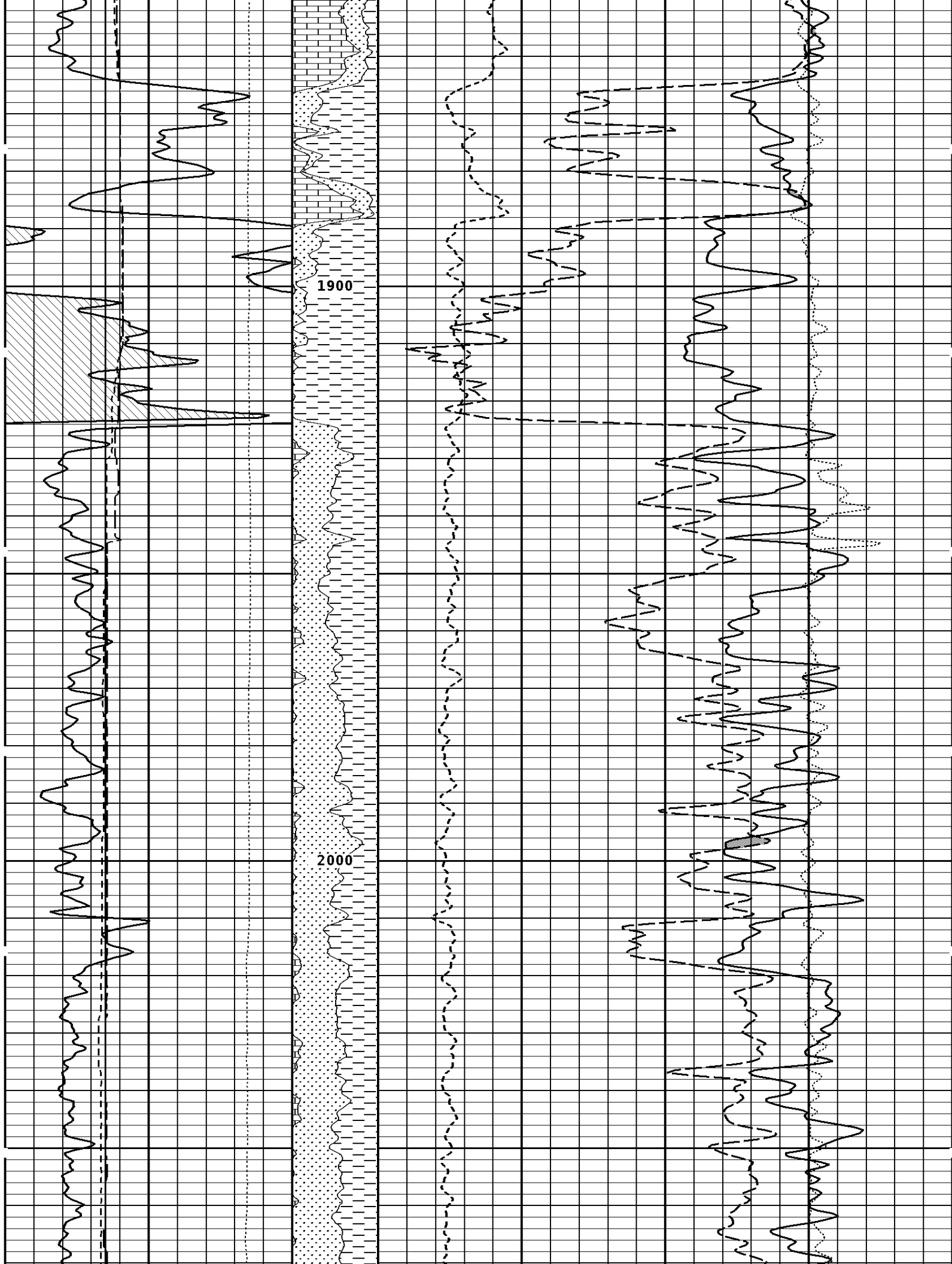


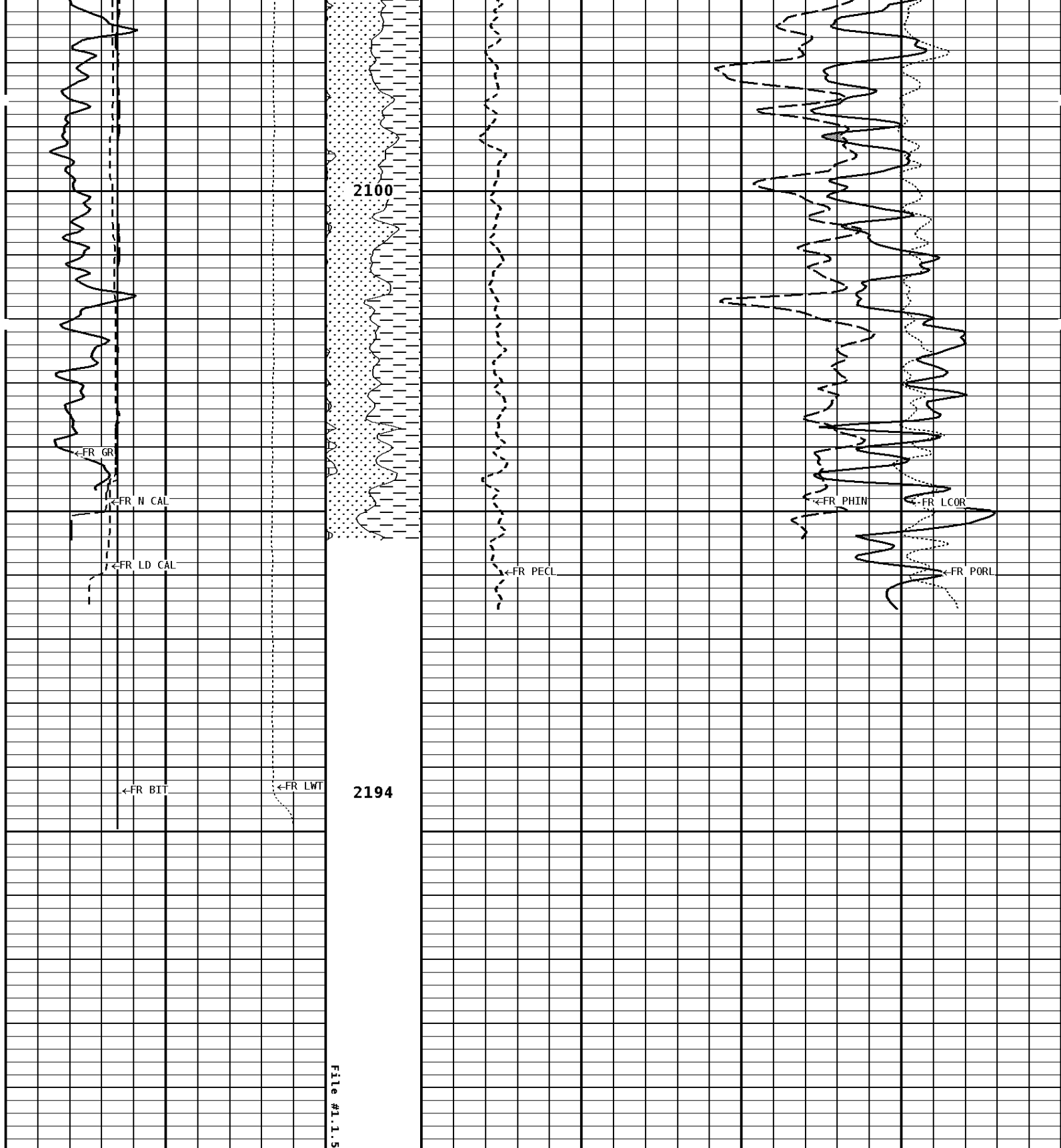






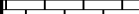






1:240 MAIN SECTION

GAMMA RAY API UNITS 150 0 300 150	Volume Dolo/Shale 30	NEUTRON POROSITY (LIMESTONE) PERCENT -10
TENSION LBS	Volume Calcite 70	DENSITY POROSITY (2.71g/cc) PERCENT 30

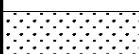
10000	0		30	-10
			-10	-50
DENSITY (X) CALIPER INCHES (IN)		Volume Quartz	PE CROSS-SECTION BARNs/ELECTRON	DENSITY CORRECTION G/CC
16	26		0	10
6	16			
NEUTRON (Y) CALIPER INCHES (IN)				
16	26			
6	16			
BIT SIZE INCHES (IN)				
6	16			

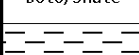
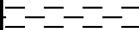
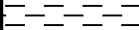
* Borehole Zone Factors *

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		9.500	in
Casing Diameter		7.000	in
Casing Thickness		0.250	in
Casing Correction (PHI N)		Disable	

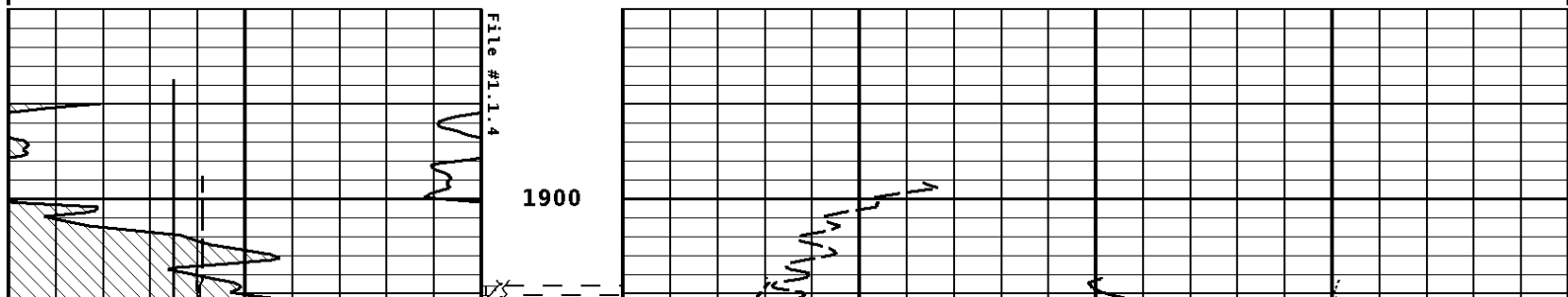
Well File:	day-pet-mcg-20-mstk-mar-30	Scale:	1:240
Segment:	V1.D1.S4 RP	Acquired:	2013-03/30 15:15 3.2.0-11401
Reference:	0	Processed:	2013-03/30 16:23 3.2.0-11401

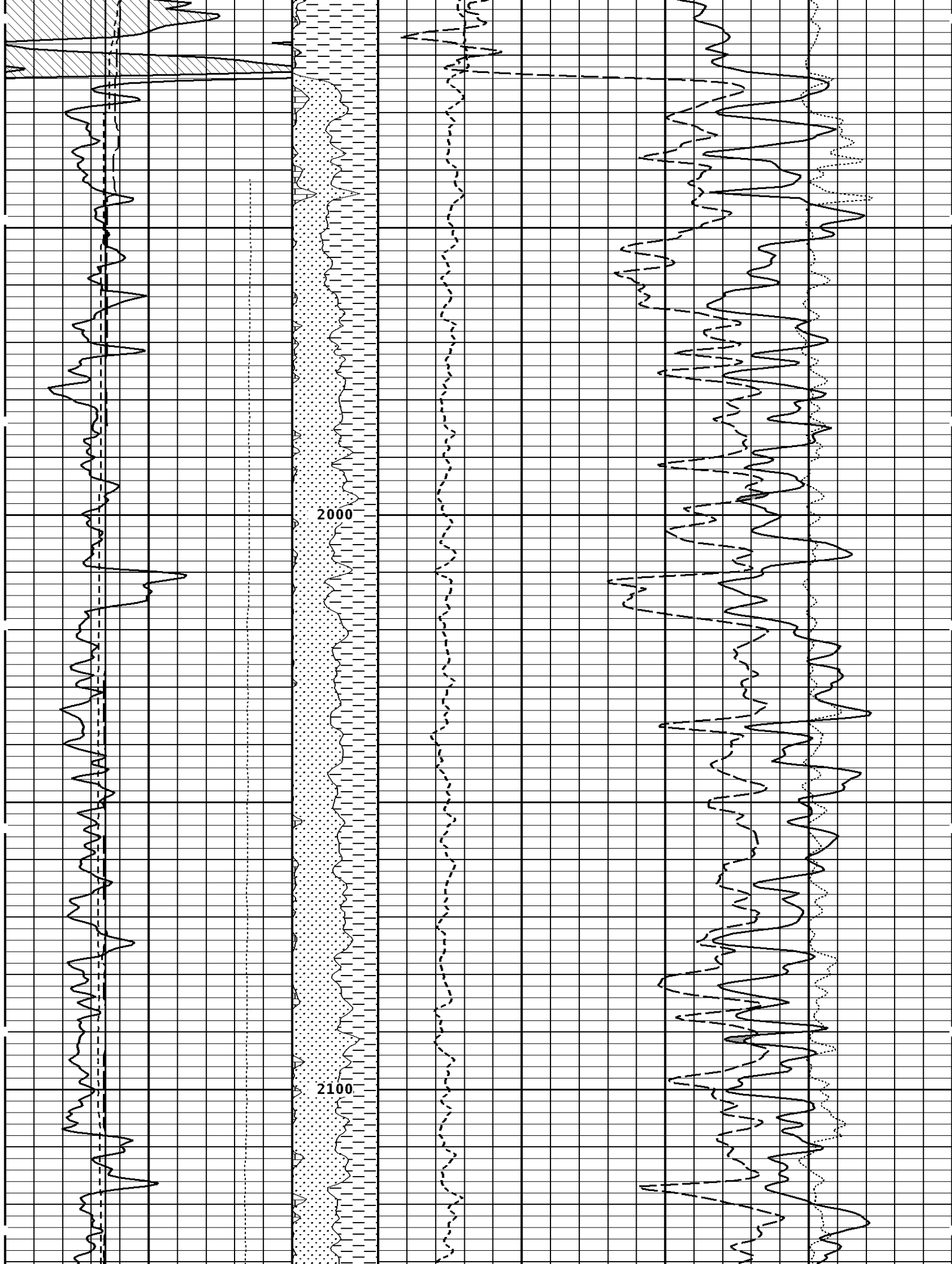
BIT SIZE INCHES (IN)				
6	16			
NEUTRON (Y) CALIPER INCHES (IN)				
16	26			
6	16			

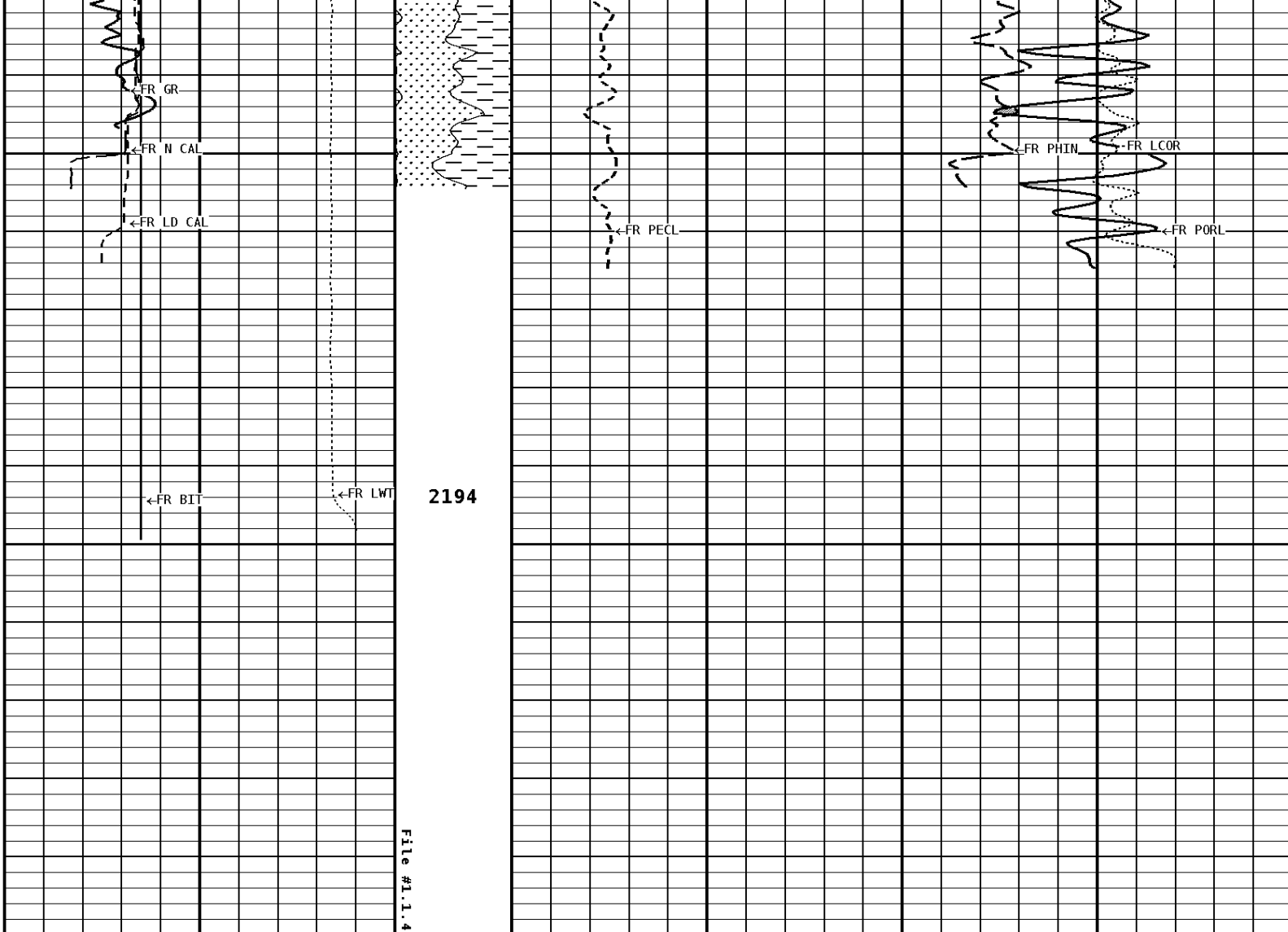
DENSITY (X) CALIPER INCHES (IN)		Volume Quartz	PE CROSS-SECTION BARNs/ELECTRON	DENSITY CORRECTION G/CC
16	26			
6	16		0	10 -0.25 0.25
-----		-----		
TENSION LBS		Volume Calcite	DENSITY POROSITY (2.71g/cc) PERCENT	
10000	0		70	30
-----			30	-10
			-10	-50

GAMMA RAY API UNITS		Volume Dolo/Shale	NEUTRON POROSITY (LIMESTONE) PERCENT	
150	300			
0	150		30	-10
			-----	
				

1:240 REPEAT SECTION







1:240 REPEAT SECTION

GAMMA RAY API UNITS		Volume Dolo/Shale	NEUTRON POROSITY (LIMESTONE) PERCENT	
150	300		30	-10
0	150			
TENSION LBS		Volume Calcite	DENSITY POROSITY (2.71g/cc) PERCENT	
10000	0	70	30	30
		30	-10	-10
		-10		-50
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
NEUTRON (Y) CALIPER INCHES (IN)				
16	26			
6	16			
BIT SIZE INCHES (IN)				
6	16			

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	9.500	in
Casing Diameter	7.000	in
Casing Thickness	0.250	in
Casing Correction (PHI N)	Disable	

Well File: day-pet-mcg-20-mstk-mar-30

Scale: 1:240

Segment: V1.D1.S5 MN

Acquired: 2013-03/30 15:30 3.2.0-11401

Reference: 0

Processed: 2013-03/30 16:23 3.2.0-11401

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

PE CROSS-SECTION
BARN/ ELECTRON

0 10 -0.25 0.25

DENSITY CORRECTION
G/CC

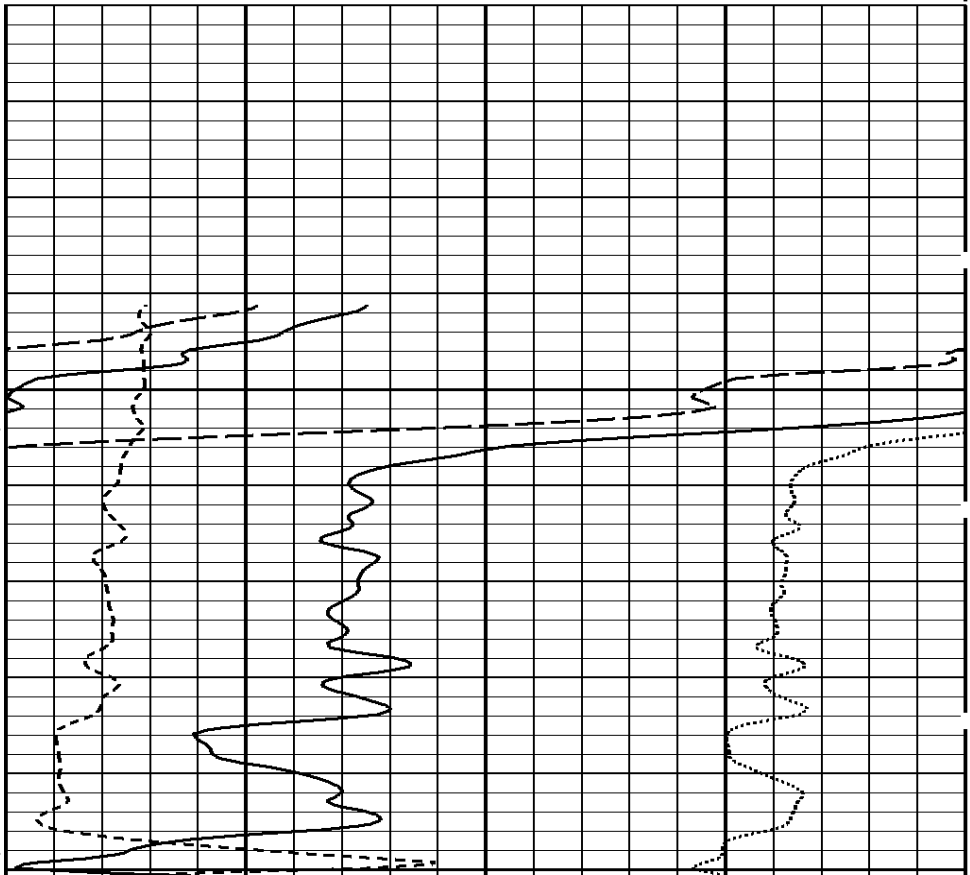
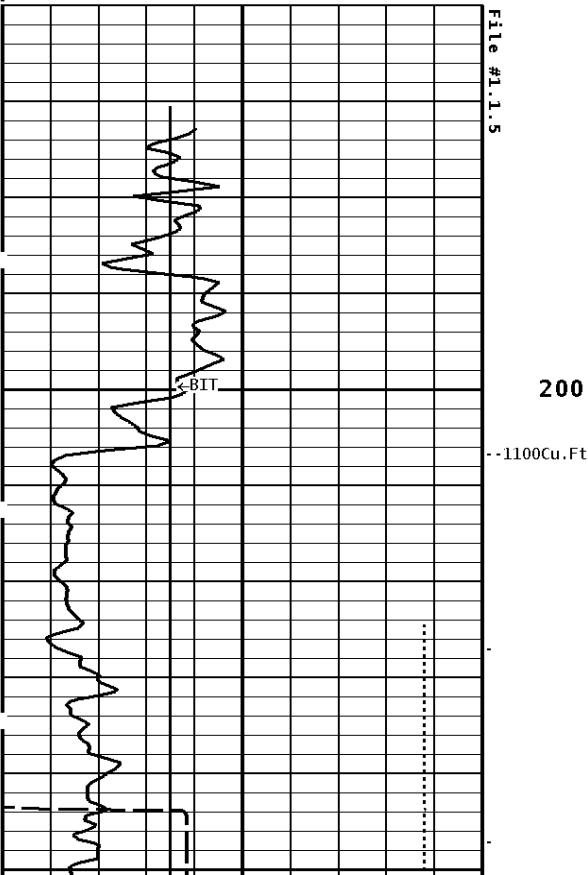
COMPENSATED BULK DENSITY
G/CC

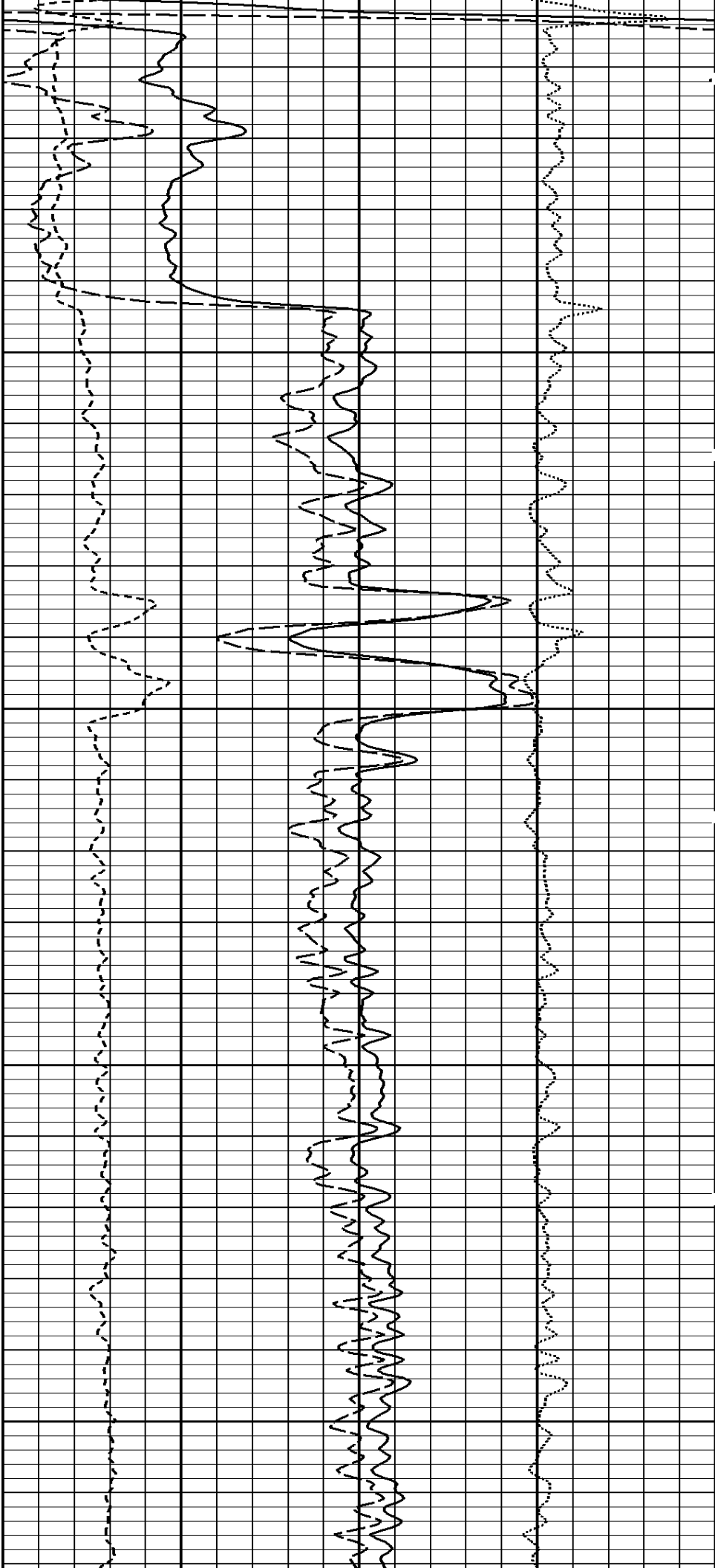
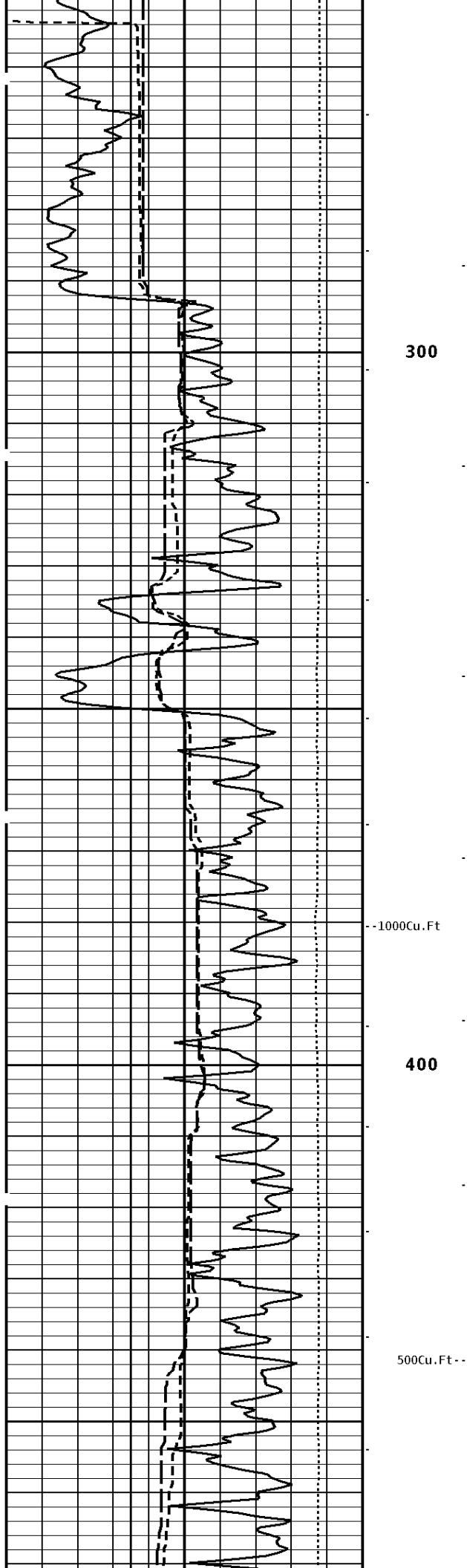
3.0 4.0
2.0 3.0
1.0 2.0

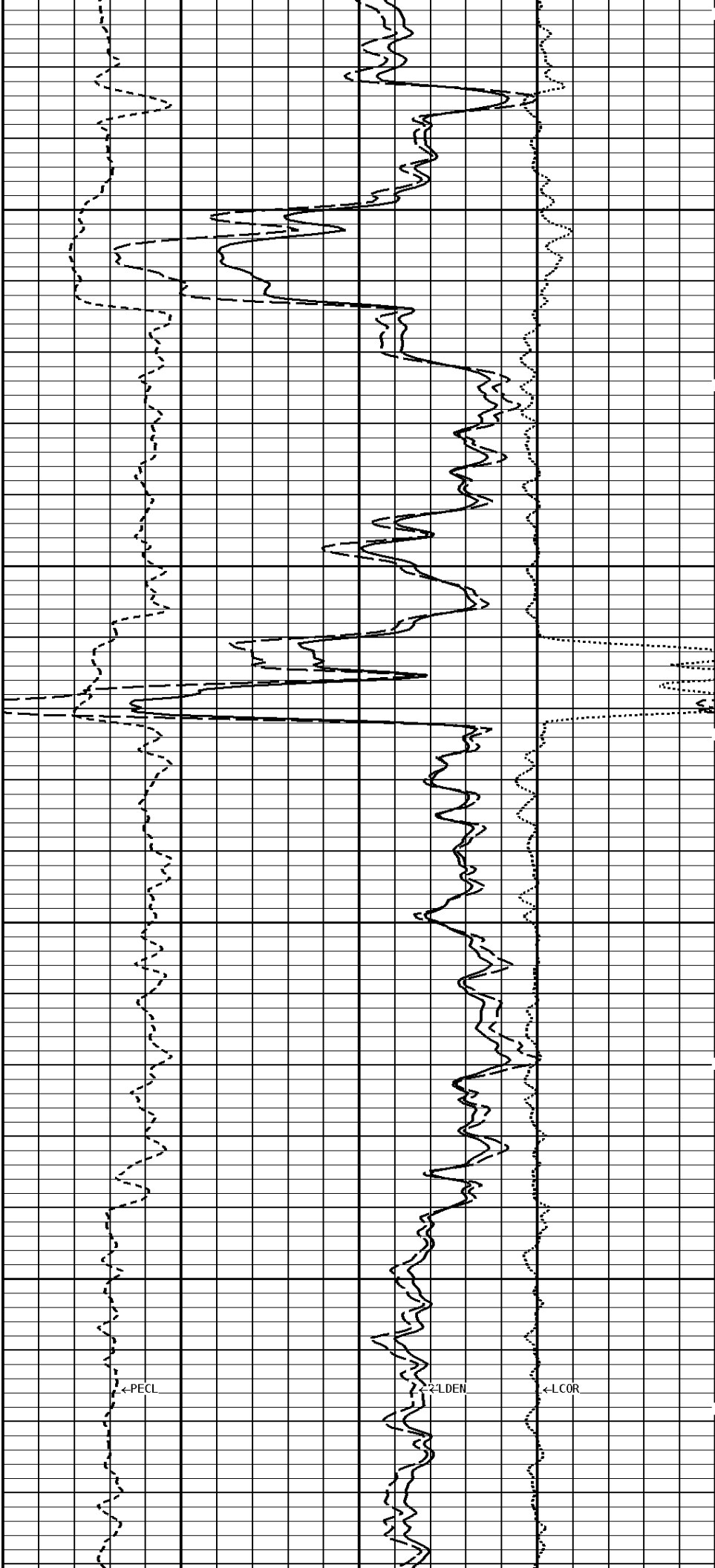
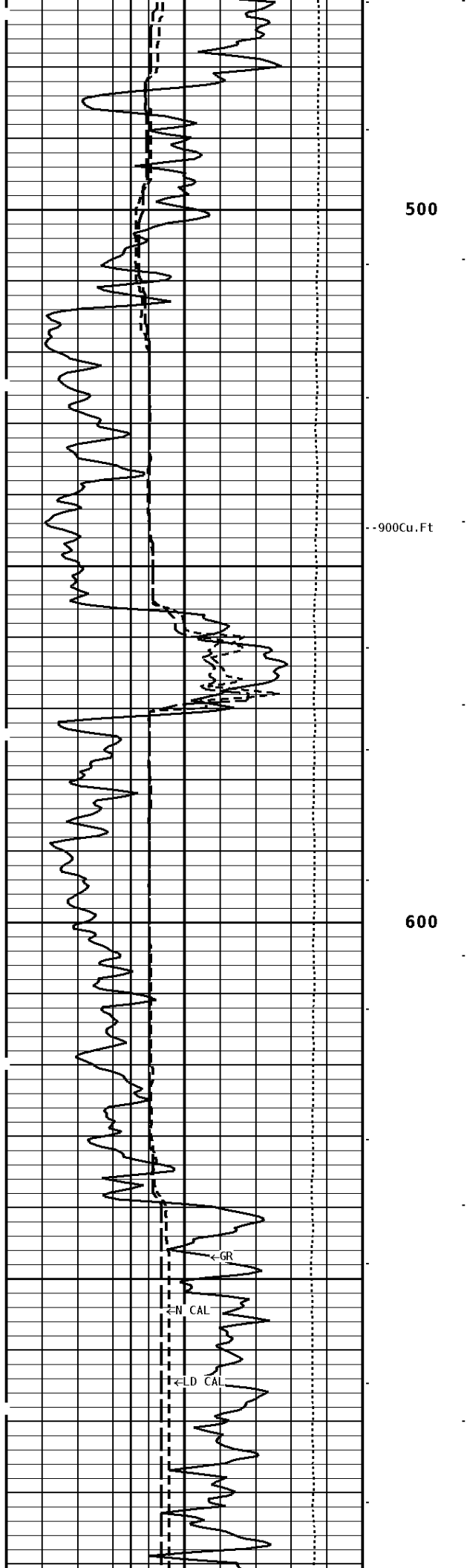
DENSITY POROSITY (2.71g/cc)
PERCENT

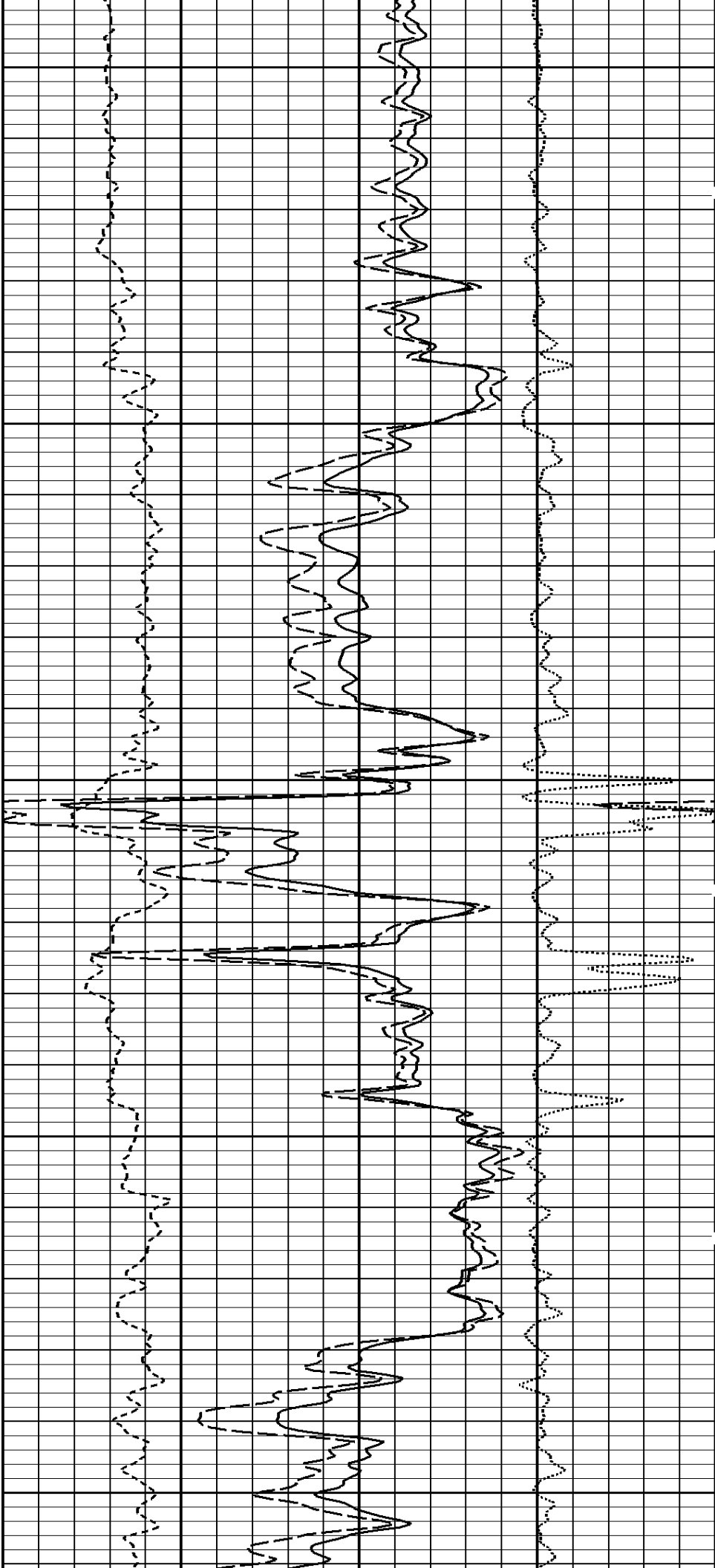
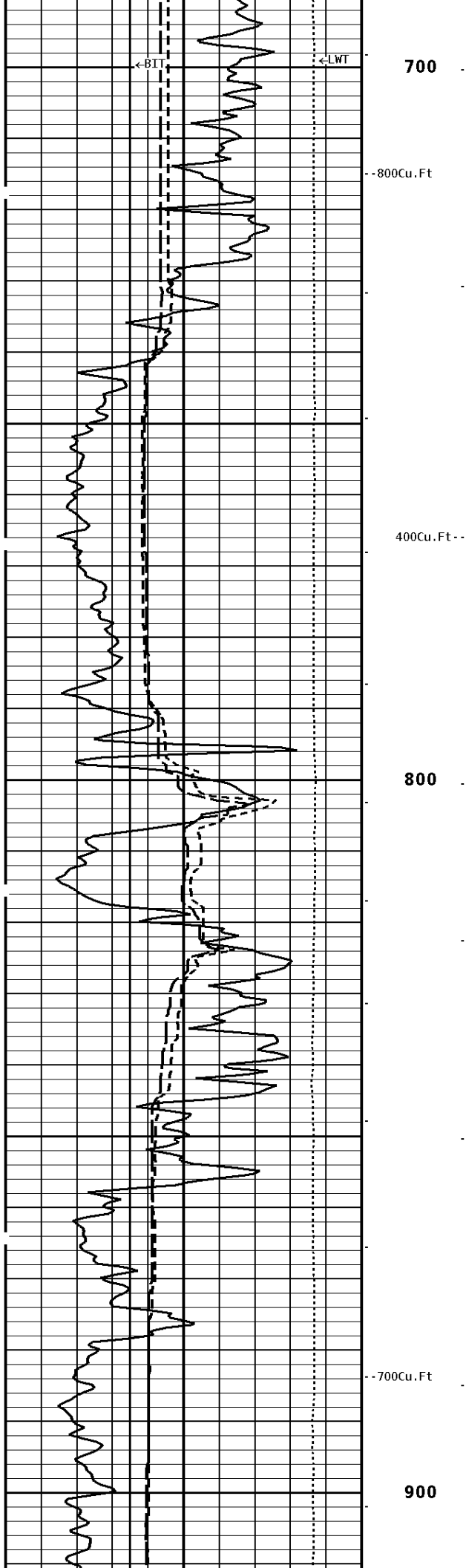
70 30
30 -10
-10 -50

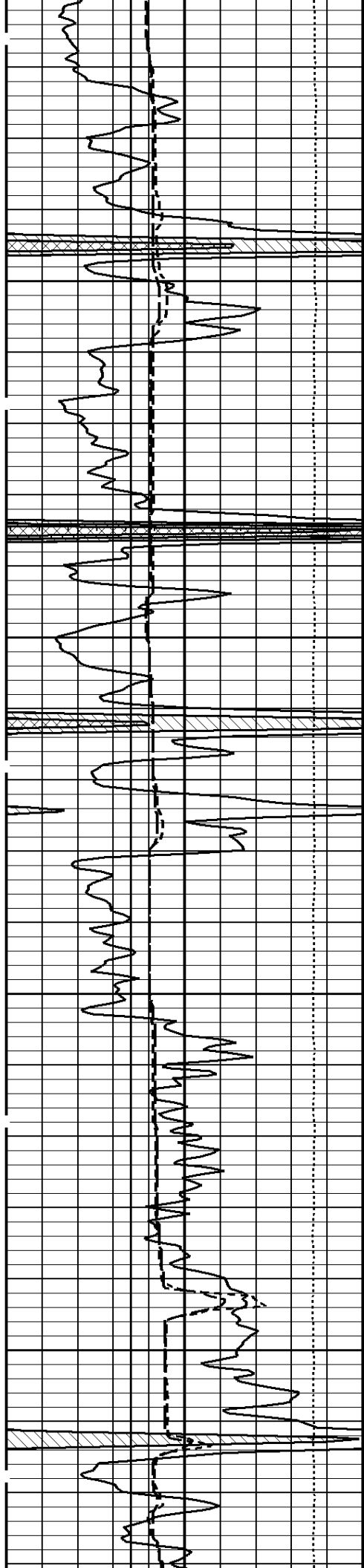
1:240 MAIN SECTION
BULK DENSITY









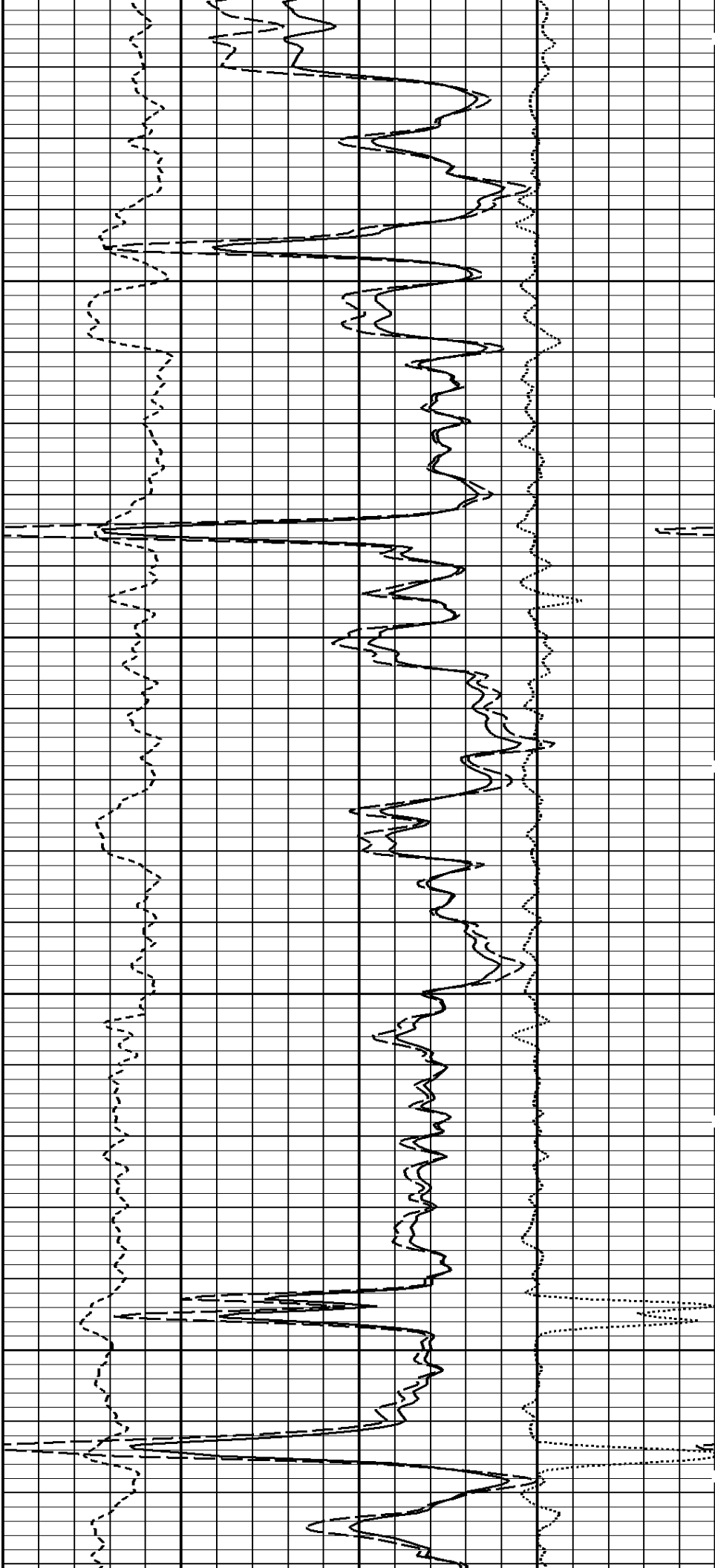


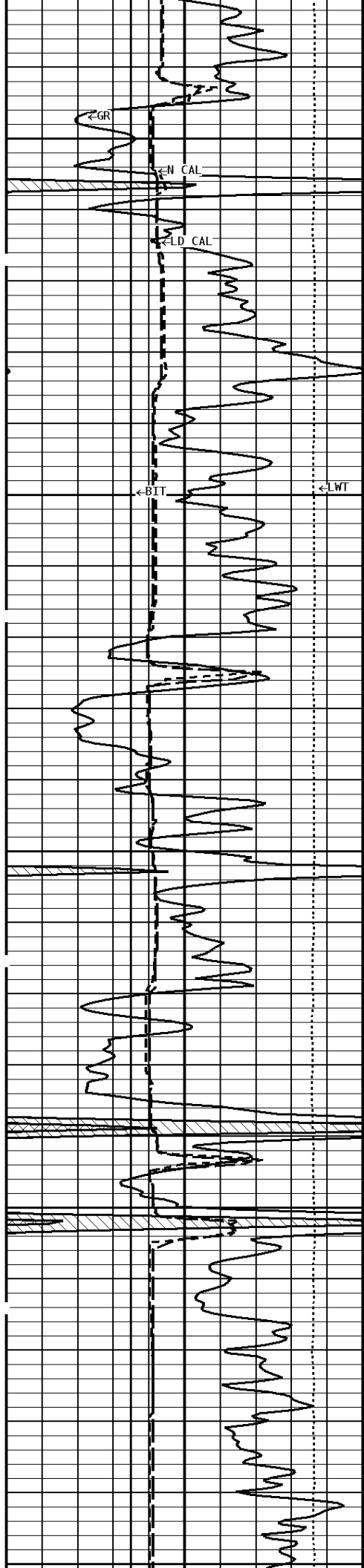
1000

--600Cu.Ft--

300Cu.Ft--

1100



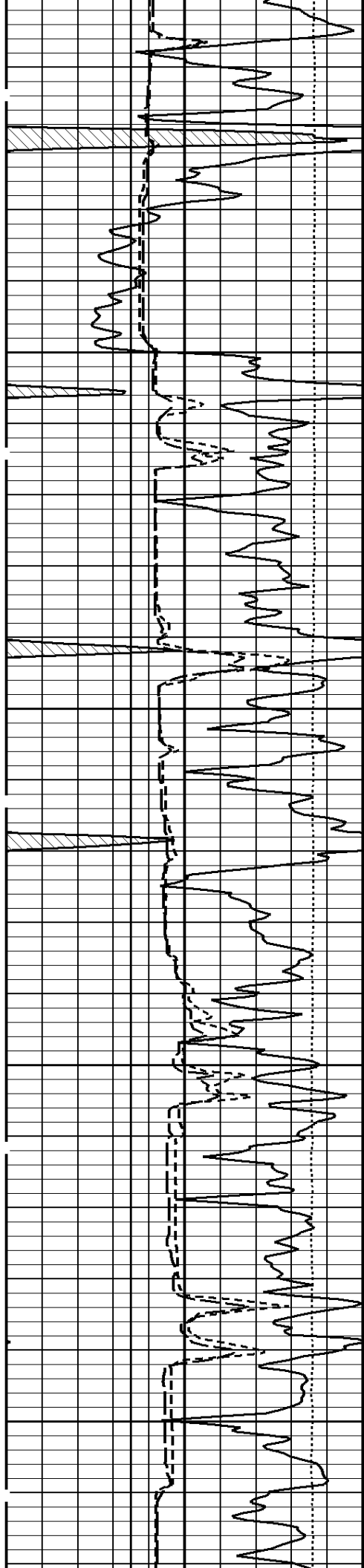


1200

--500Cu.Ft

1300



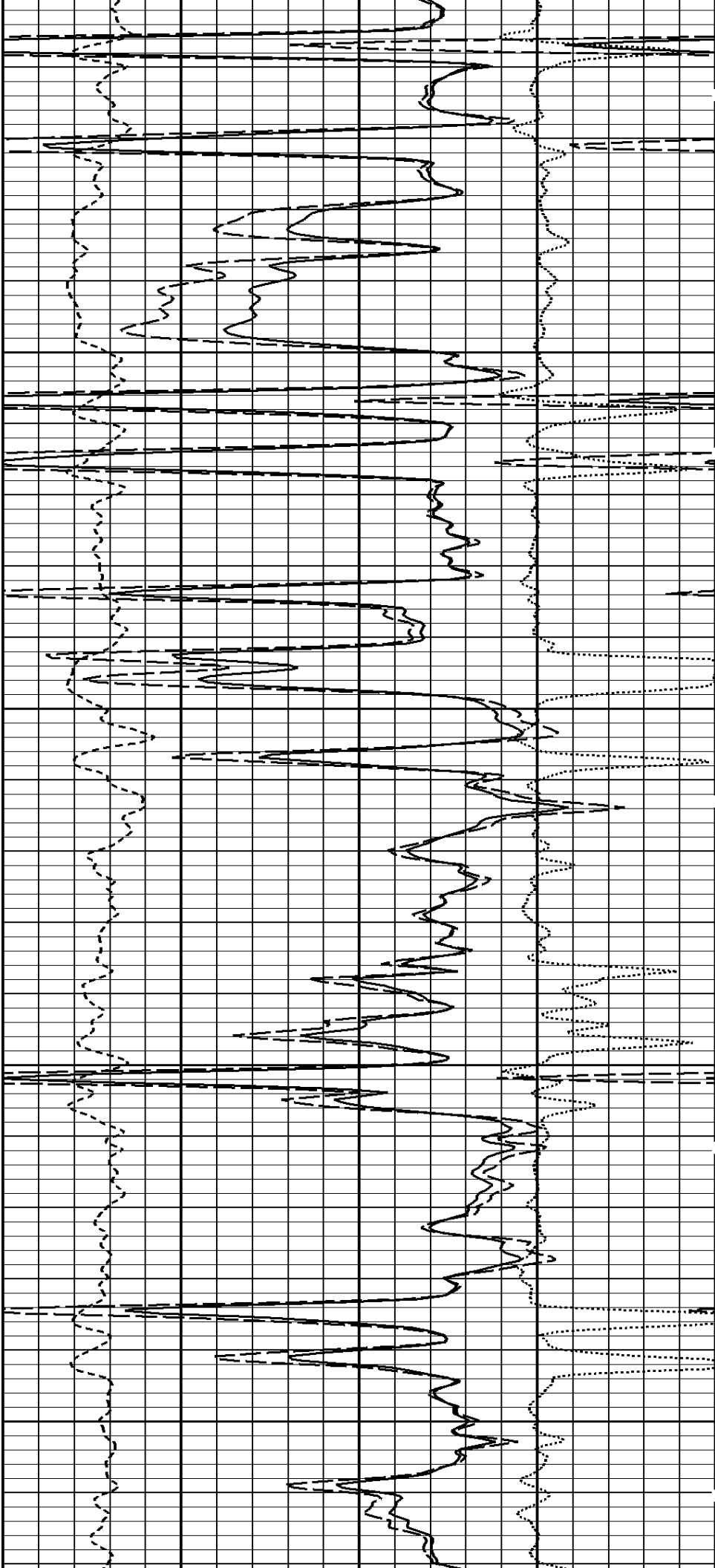


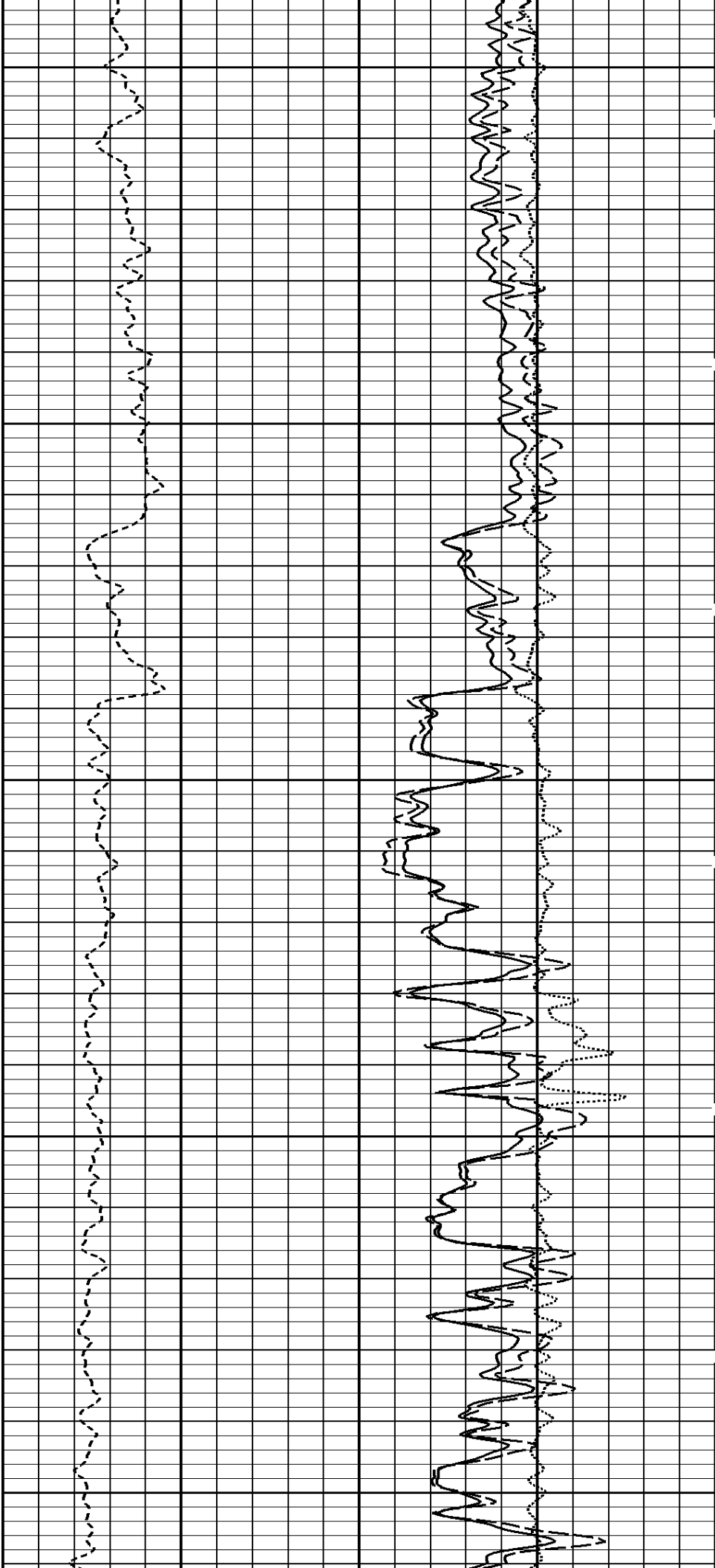
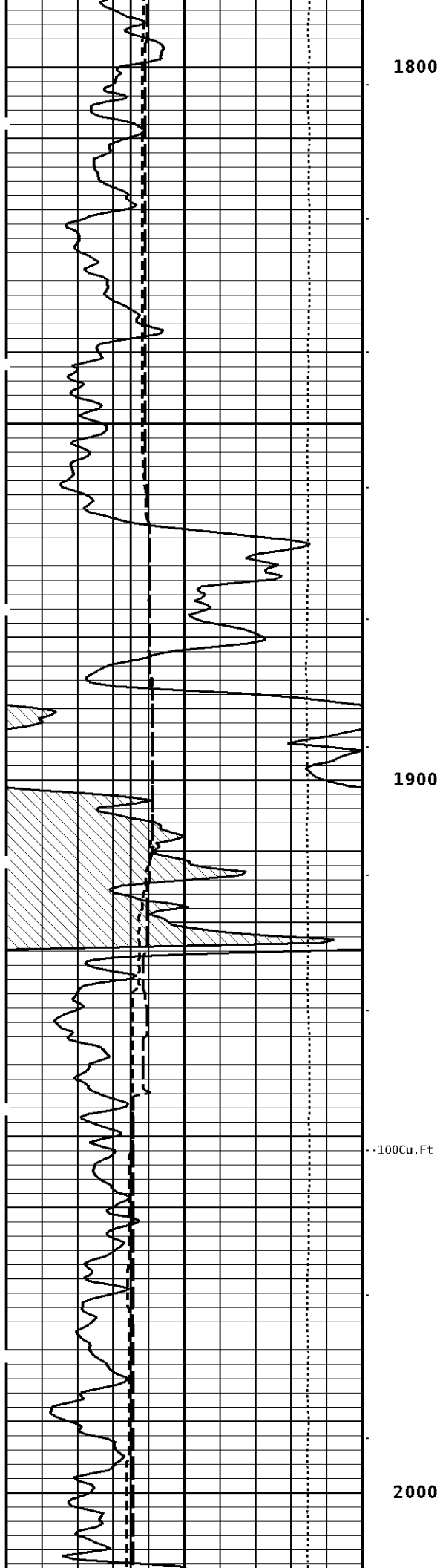
1400

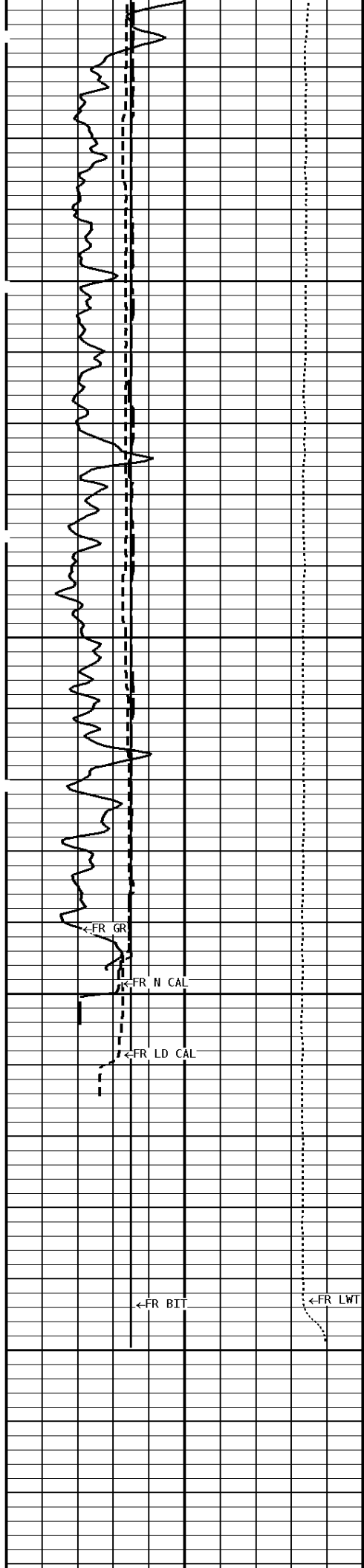
--400Cu.Ft

200Cu.Ft--

1500

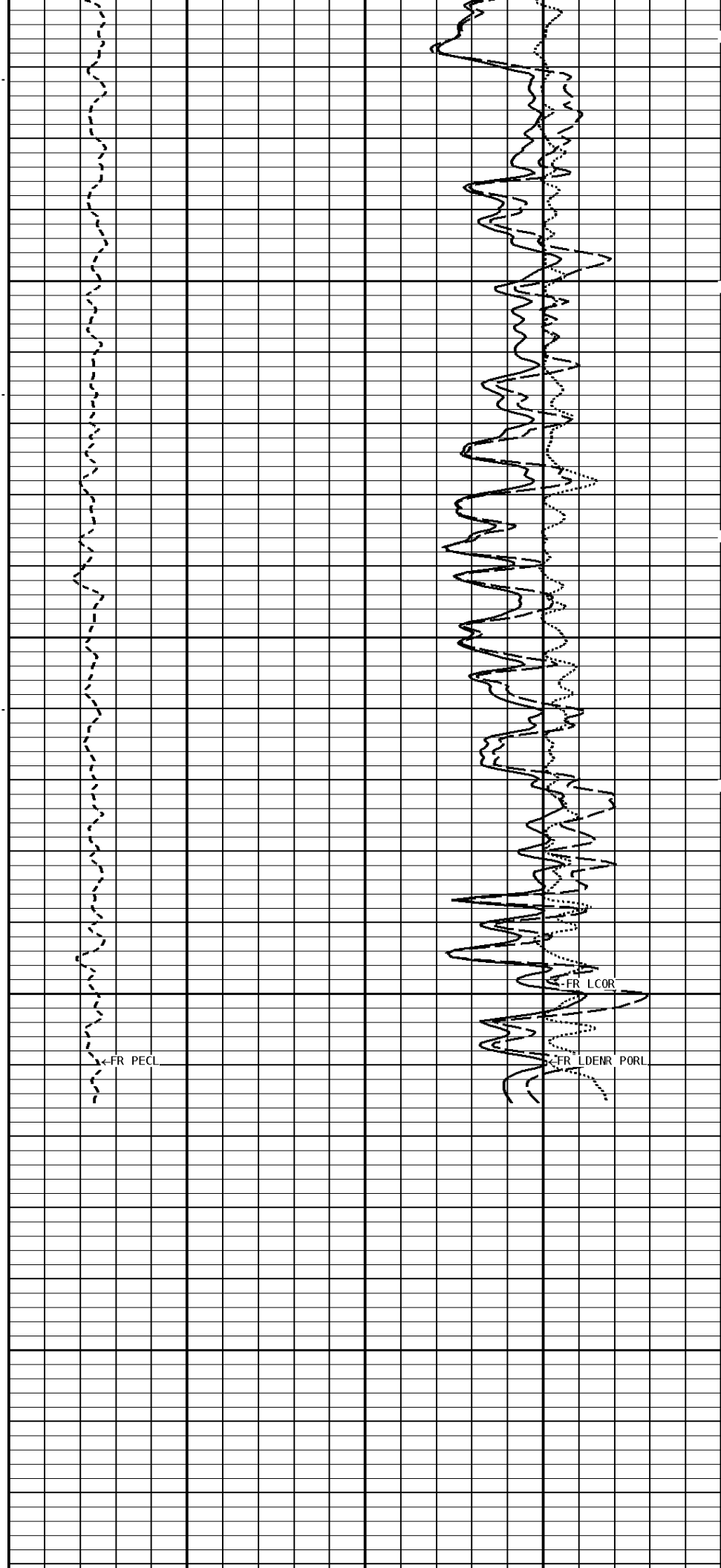






2100

2194



File #1.1.5

1:240 MAIN SECTION

BULK DENSITY

GAMMA RAY API UNITS		- BHV AHV - CU. FT	DENSITY POROSITY (2.71g/cc) PERCENT	
150	300		70	30
0	150		30	-10
			-10	-50
TENSION LBS			COMPENSATED BULK DENSITY G/CC	
10000	0		3.0	4.0
			2.0	3.0
			1.0	2.0
DENSITY (X) CALIPER INCHES (IN)		PE CROSS-SECTION BARN/SECTRON		DENSITY CORRECTION G/CC
16	26	0		0.25
6	16	10		0.25
NEUTRON (Y) CALIPER INCHES (IN)				
16	26			
6	16			
BIT SIZE INCHES (IN)				
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	9.500	in
Casing Diameter	7.000	in
Casing Correction (PHI N)	Disable	

* Calibration Summary *

Shop Calibration GRT-B					
Performed : 15-Mar-2013			Time : 11:26		
Sensor Suite : GR-GR5			ID : GRT-BC-41		
	Measured	Units	Calibrated	Units	
GR	Background	Jig	Jig		
	54	360	175	GRAPI	
Shop Calibration CNT-AA					
Performed : 28-MAR-2013			Time : 09:54		
Sensor Suite : CALI-BCN			ID : NDT-BB-129		
	Jig - Measured	Units	Jig - Calibrated	Units	
	Ring#1 Ring#2		Ring#1 Ring#2		
CL # 1	8.9 13.7		6.0 12.0	IN.	
Performed : 28-Mar-2013			Time : 09:35		
Sensor Suite : BHC NEUT			ID : CNP-AA-112		
Source ID : N-1045					
	Tank	Verification	Units		
	Measured	Calibrated	Jig		
N/F	4.0509	3.6893	3.6894		
Porosity	26.4	20.5	20.5	%	

Shop Calibration					
LDT-DF					
Performed : 26-MAR-2013			Time : 09:47		
Sensor Suite : CALI-LTH			ID : PDT-GA-465		
Jig - Measured			Jig - Calibrated		Units
	Ring#1	Ring#2	Ring#1	Ring#2	
CL # 1	7.6	10.5	6.0	12.0	IN.
Performed : 25-Mar-2013			Time : 10:15		
Sensor Suite : BHCPELNG			ID : LDP-DA-067		
Source ID : 2991GW					
Short Space					
	BKGD	Al	Mg	Al+Fe	Units
LSW1	63	1080	1757	701	CPS
LSW2	70	1291	2082	909	CPS
LSW3	250	2966	4802	2482	CPS
LSW4	309	2811	4154	2455	CPS
LSW5	45	81	89	75	CPS
LSW6	62	68	69	66	CPS
LSW7	52	52	53	53	CPS
LSW8	12	16	17	16	CPS
QS	0.089	0.136	0.136	0.116	
PES			2.778	5.967	
SSDN		2.600	1.680		G/CC
Long Space					
	BKGD	Al	Mg	Al+Fe	Units
LLW1	92	1260	5124	755	CPS
LLW2	100	2328	9132	1657	CPS
LLW3	391	4208	16115	3589	CPS
LLW4	505	1966	6476	1759	CPS
LLW5	56	67	129	64	CPS
LLW6	163	161	151	163	CPS
LLW7	105	101	100	101	CPS
LLW8	3	6	18	5	CPS
QL	0.215	0.230	0.205	0.231	
PEL			2.697	5.458	
LSDN		2.600	1.680		G/CC



Tucker
ENERGY SERVICES

Company: DAYSTAR PETROLEUM LLC.
Well: MCGINNIS-FEE #20
Location: 1980' FSL & 4290' FEL
Logged: 2013-03-30
K.B. Elev: 0.0 Ft