

Tucker
ENERGY SERVICES

COMPENSATED NEUTRON
PEL DENSITY MICRO LOG

Company GRAND MESA OPERATING COMPANY
Well BLYTHE #5-2
Field WILDCAT
County BOURBON
State KANSAS
Country USA
API No. 15-011-24395-0000

File No : TUL-59184
Company : GRAND MESA OPERATING COMPANY
Well : BLYTHE #5-2
Field : WILDCAT
County : BOURBON
State : KANSAS
Country : USA
API No : 15-011-24395-0000

Location :
2550' FSL & 1125' FWL
NE NE NW SW

LSD : Sect : 20 Twp : 25S Rge : 22E

Permanent Datum:	GL	Elevations:	KB	0.00	Ft	Services:	CNT	PIT
Drilling Measured From:	GL	DF	0.00	Ft	LDT	MLT		
Log Measured From:	GL	GL	980.00	Ft				
Above Permanent Datum:	0.00	Ft						
Date	12-19-2013							
Run Number	1							
Depth--Driller	842.0 Ft							
Depth--Logger	842.0 Ft							
First Reading	819.0 Ft							
Last Reading	20.0 Ft							
Casing--Driller	20.0 Ft							
Casing--Logger	20.0 Ft							
Bit Size	6.500 In							
Casing Size	8.625 In							
Hole Fluid Type	CHEM-GEL							
Density	0.0							
Fluid Loss	0.0							
PH/Viscosity	0.0 0.0							
Sample Source	MEASURED							
RM@Measured Temp.	2.000 @ 75 F							
RMF@Measured Temp	1.600 @ 75 F							
RMG@Measured Temp.	2.400 @ 75 F							
Source RMF/RMC	CALCULATED/CALCULATED							
RM@BHT	1.860 @ 81 F							
Time Circulation Stopped	12-19-2013 2:00 pm							
Max Recorded Temp.	81 F							
Equipment/Base	126 TULSA							
Recorded By	SHELDON TYLER							
Witnessed By	KENT MATSON							

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)	Top (Ft)
6.500	842.00	8.625	32.00	20.00	0.00

Run Number	1	
Date	12-19-2013	
Date/Time On Bottom	12-19-2013 3:00 pm	
Depth to Fluid	0.0	Ft
Salinity	0.000	
RMF@BHT	1.490	@ 81 F
RMC@BHT	2.230	@ 81 F

Run Number 1

Comments

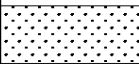
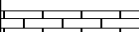
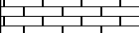
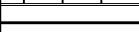
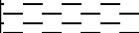
ALL PRESENTATIONS AS PER CUSTOMER REQUEST
 GRT, CNT, LDT, MLT AND PIT RUN IN COMBINATION.
 CALIPERS ORIENTED ON X-Y AXIS.
 2.71 G/CC USED TO CALCULATED POROSITY.
 ANNULAR HOLE VOLUME CALCULATED USING 4.5" PRODUCTION CASING.
 PHIN IS CALIPER CORRECTED.

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

OPERATORS:
 J.JOHNSON

D.HOPPER

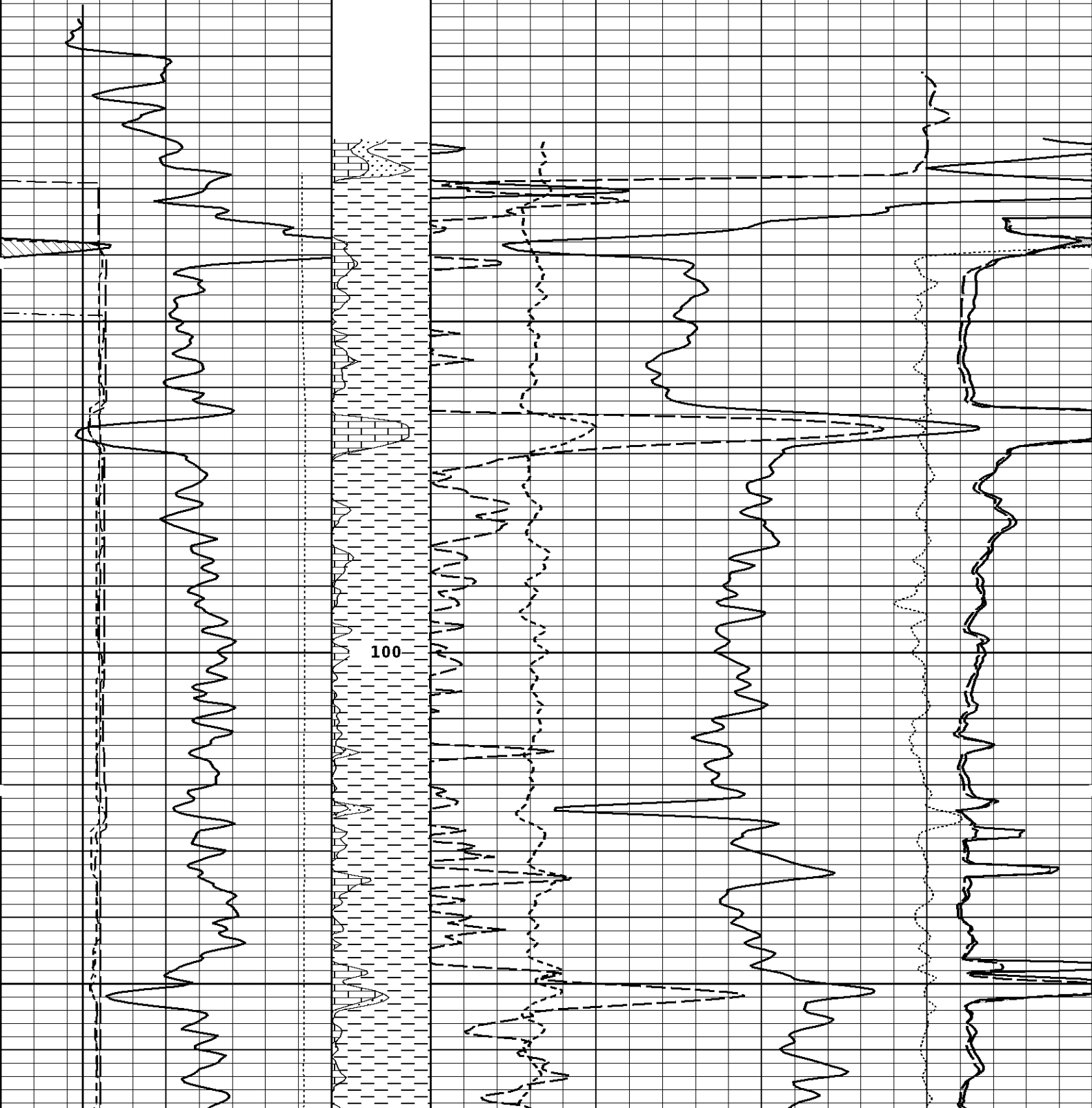
Well File: GRAND MESA BLYTHE 5-2 DEC19 MSTK **Scale:** 1:240 **Format:** NLD-240
Segment: V1.D4.S1 FINAL MAIN **Acquired:** Not Available
Reference: 0 **Processed:** Not Available

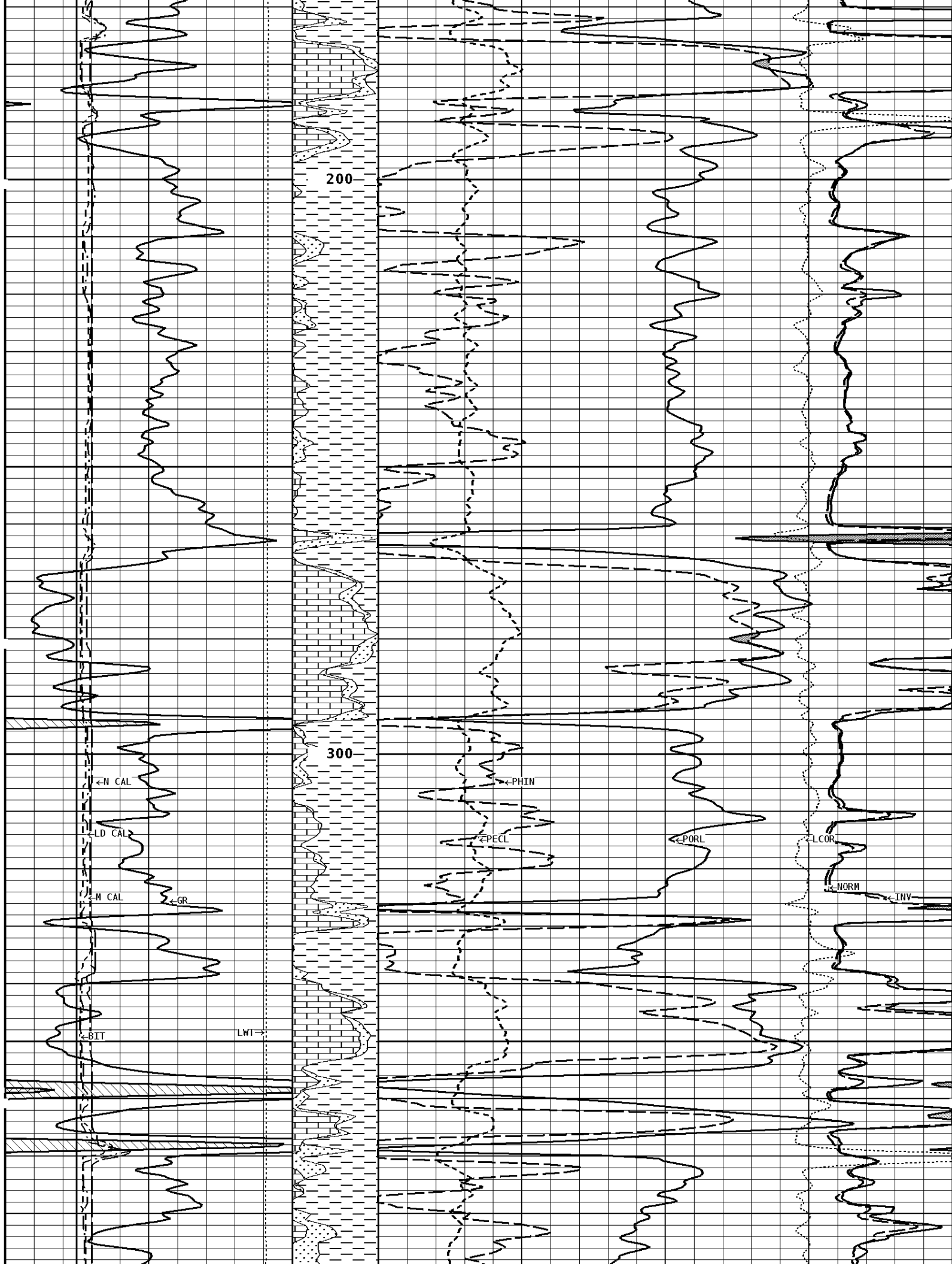
CALIPER MICRO INCHES (IN)					
14	24				
4	14				
BIT SIZE INCHES (IN)				NORMAL OHMM	
4	14			0	40
NEUTRON (Y) CALIPER INCHES (IN)				INVERSE OHMM	
14	24			0	40
4	14				
DENSITY (X) CALIPER INCHES (IN)		Volume Quartz	PE CROSS-SECTION BARN/ELECTRON	DENSITY CORRECTION G/CC	
14	24		0	10	-0.25
4	14				0.25
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		
200	400		30	-10	
0	200				

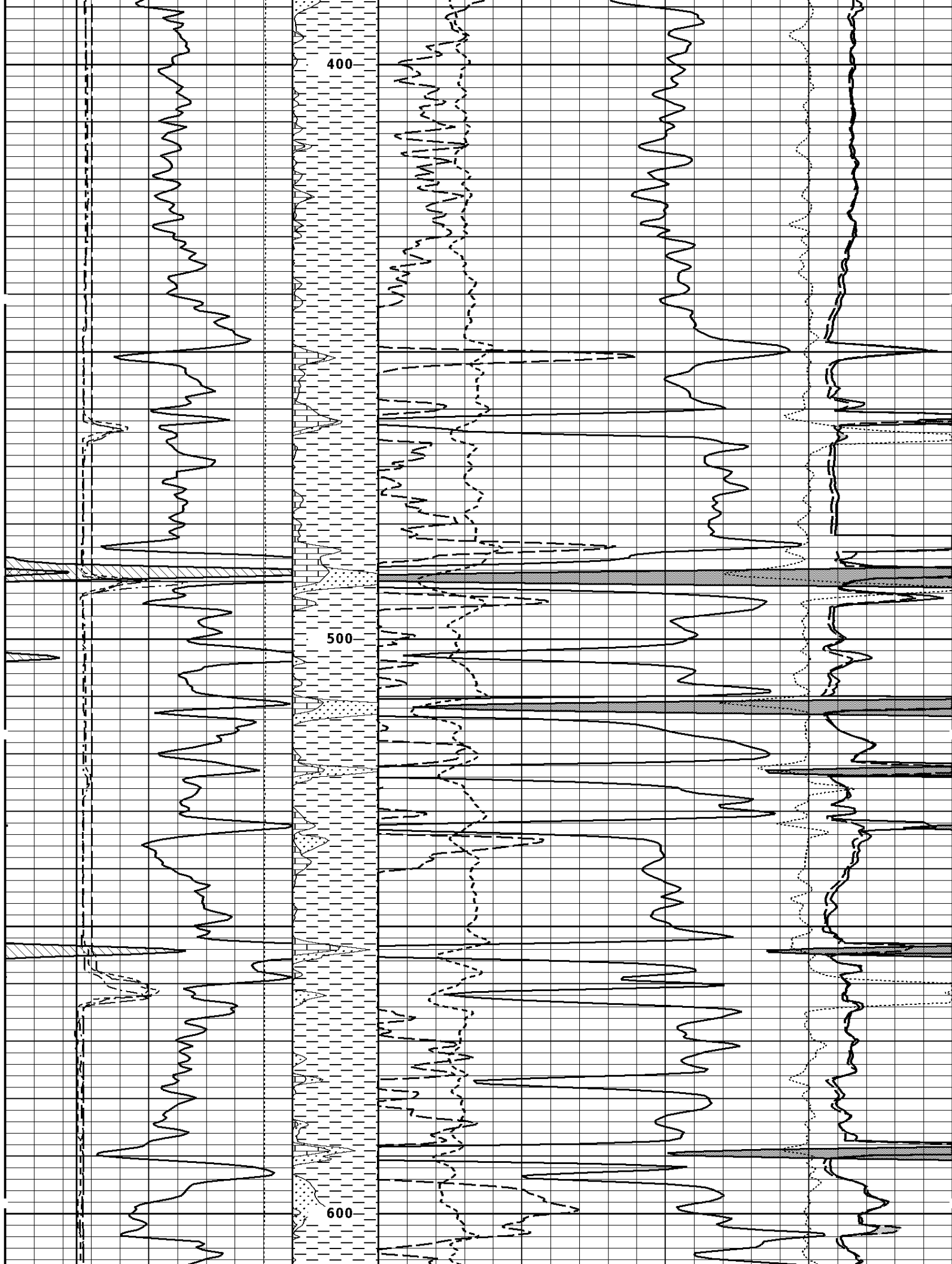
1:240 MAIN SECTION

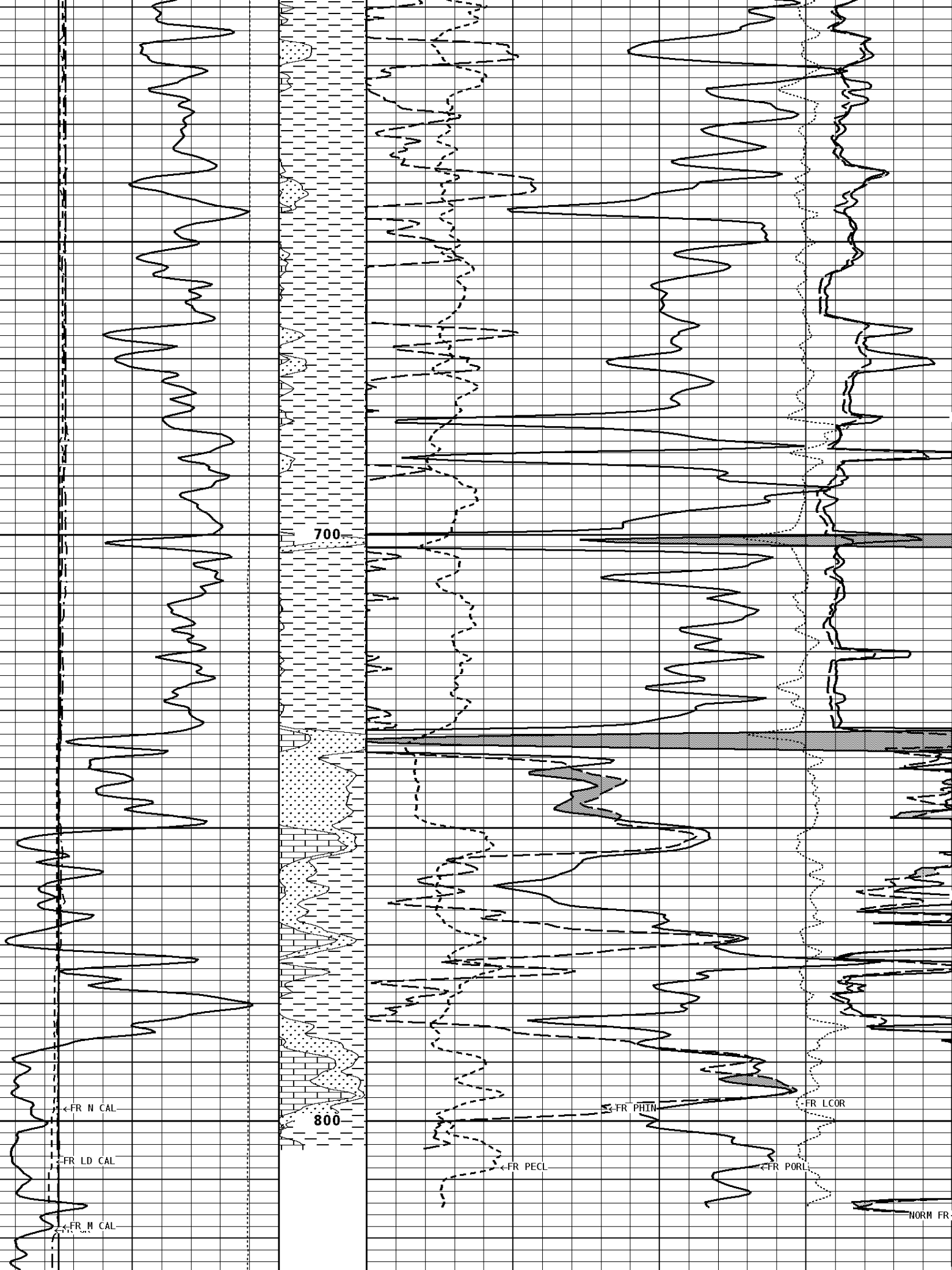
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100










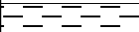

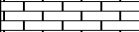
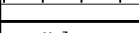
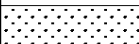
←FR BIT

LWT FR→

842

File #1.4.1

1:240 MAIN SECTION

GAMMA RAY API UNITS 200 0  400 0 200		Volume Dolo/Shale  30	NEUTRON POROSITY (LIMESTONE) PERCENT ----- -10	
TENSION LBS 10000 0		Volume Calcite  70  30  -10	DENSITY POROSITY (2.71g/cc) PERCENT ----- 30 ----- -10 ----- -50	
DENSITY (X) CALIPER INCHES (IN) 14 4 ----- 24 14		Volume Quartz  0	PE CROSS-SECTION BARN/ELECTRON ----- 10	DENSITY CORRECTION G/CC ----- -0.25 ----- 0.25
NEUTRON (Y) CALIPER INCHES (IN) 14 4 ----- 24 14				INVERSE OHMH 0 ----- 40
BIT SIZE INCHES (IN) 4 ----- 14				NORMAL OHMH 0 ----- 40
CALIPER MICRO INCHES (IN) 14 4 ----- 24 14				

Well File: GRAND_MESA_BLYTHE_5-2_DEC19_MSTK

Scale: 1:240

Format: NLD-240

Segment: V1.D3.S1 FINAL REPEAT

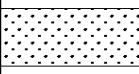
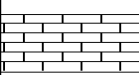

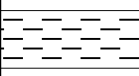
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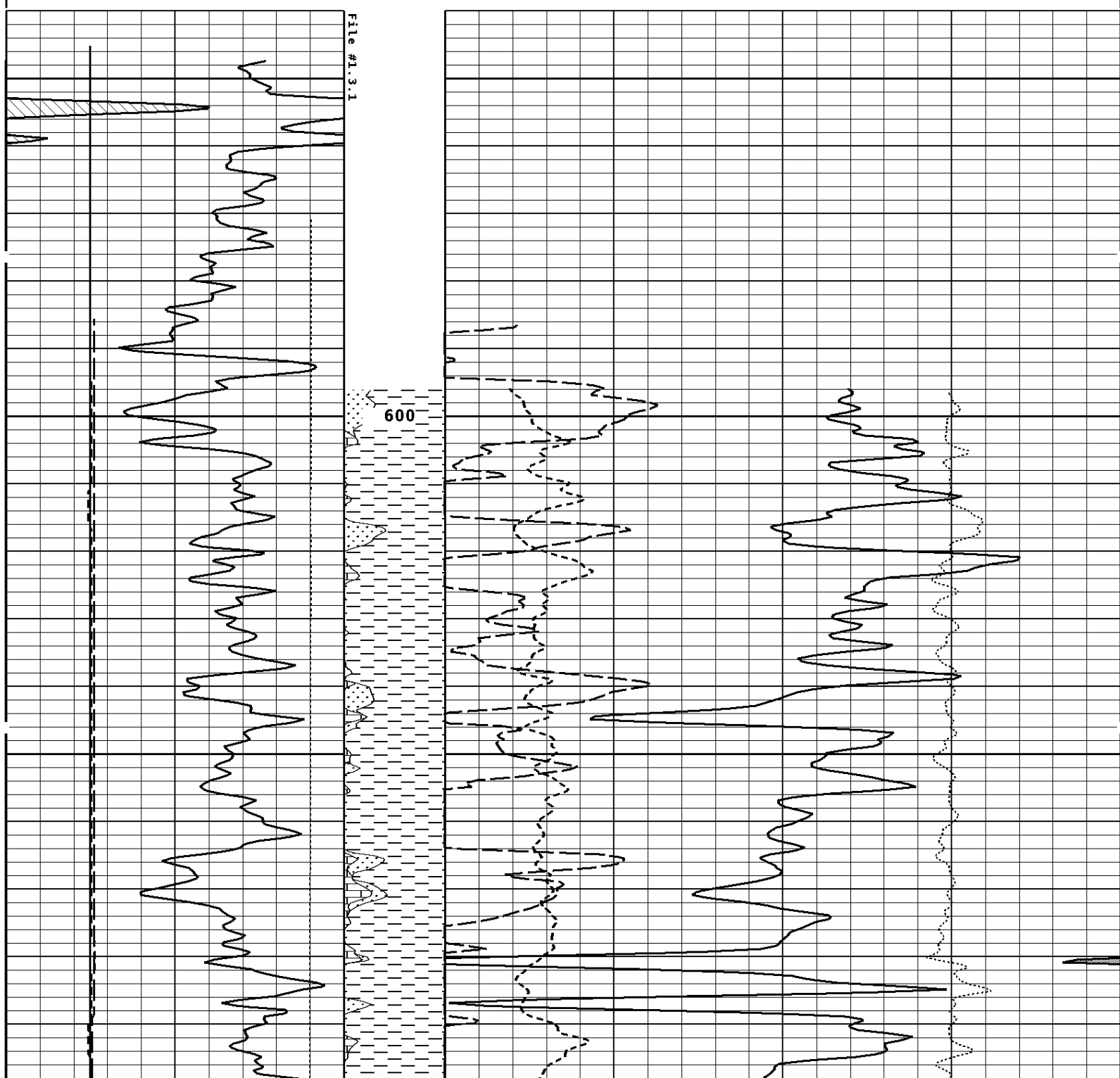
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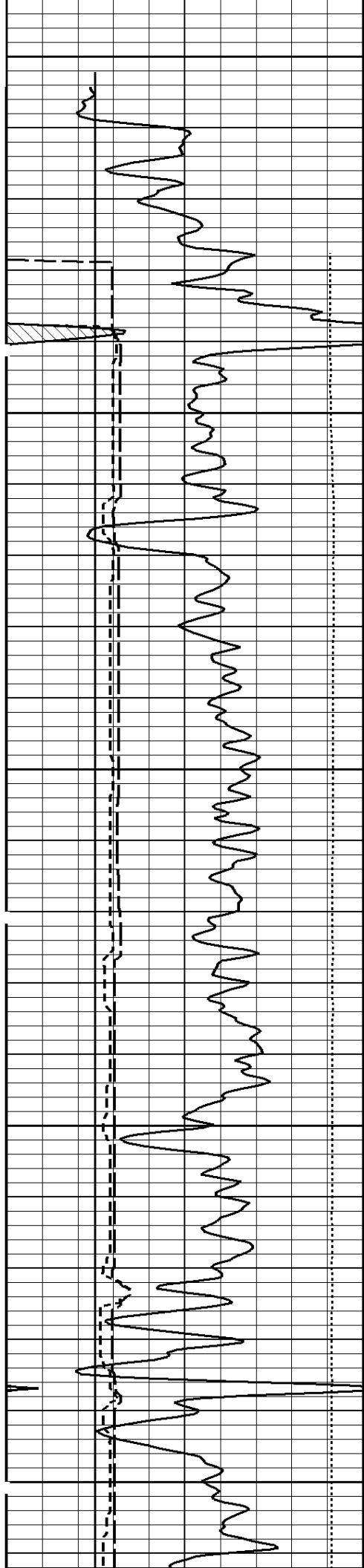
BIT SIZE INCHES (IN)	
4	14

NEUTRON (Y) CALIPER INCHES (IN)	
14	24
4	14

DENSITY (X) CALIPER INCHES (IN)		Volume Quartz	PE CROSS-SECTION BARNs/ELECTRON		DENSITY CORRECTION G/CC	
14 4	24 14		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			
200 0	 400 200		30			-10

1:240 REPEAT SECTION



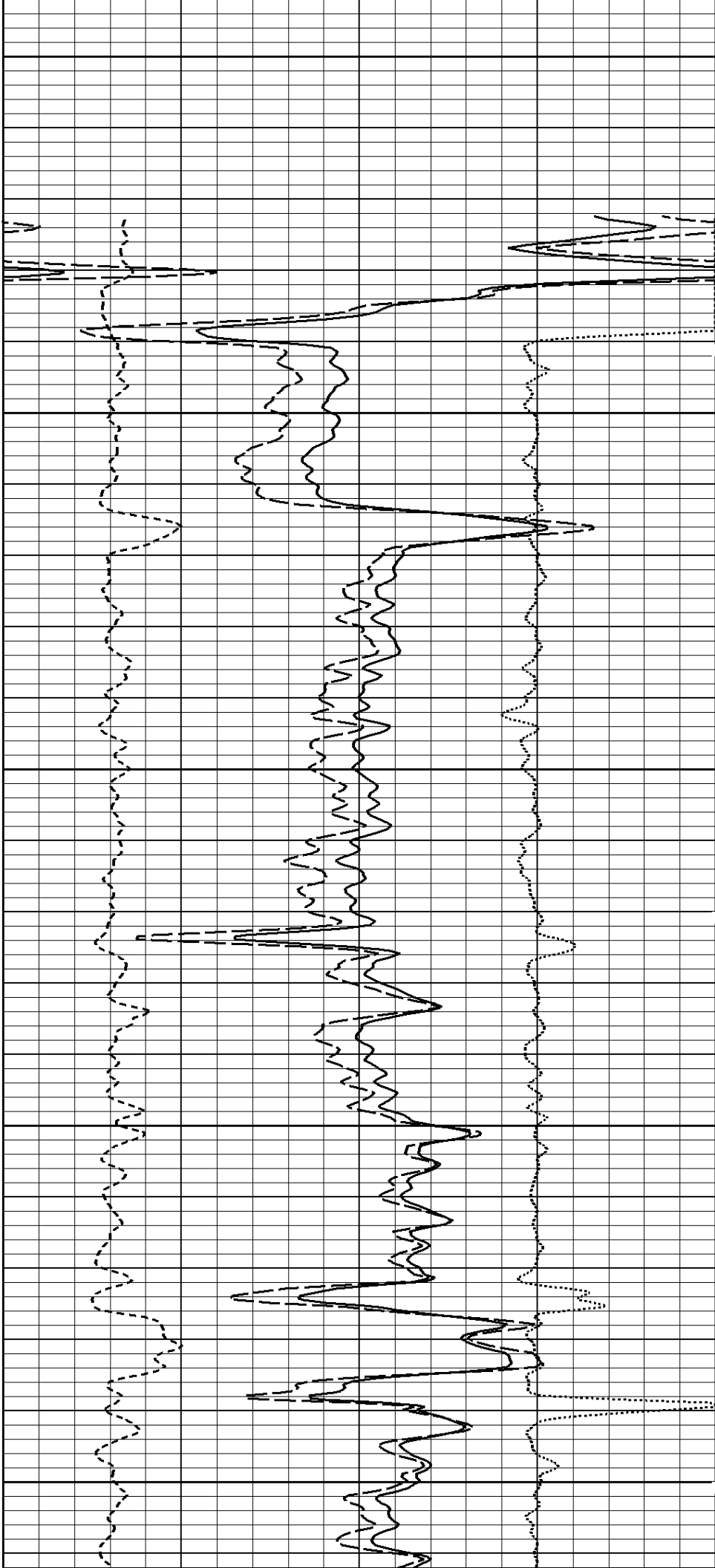


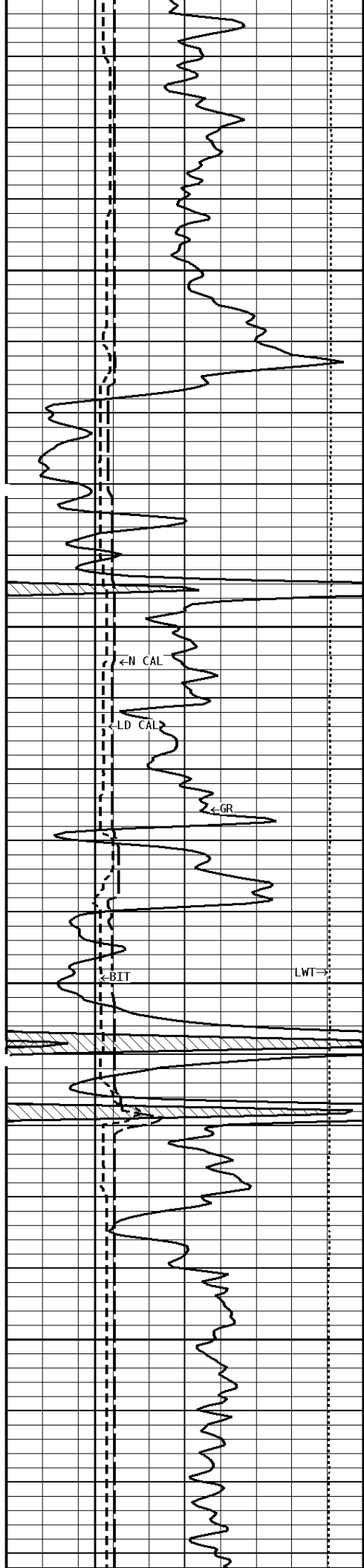
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100

100Cu.Ft--

200

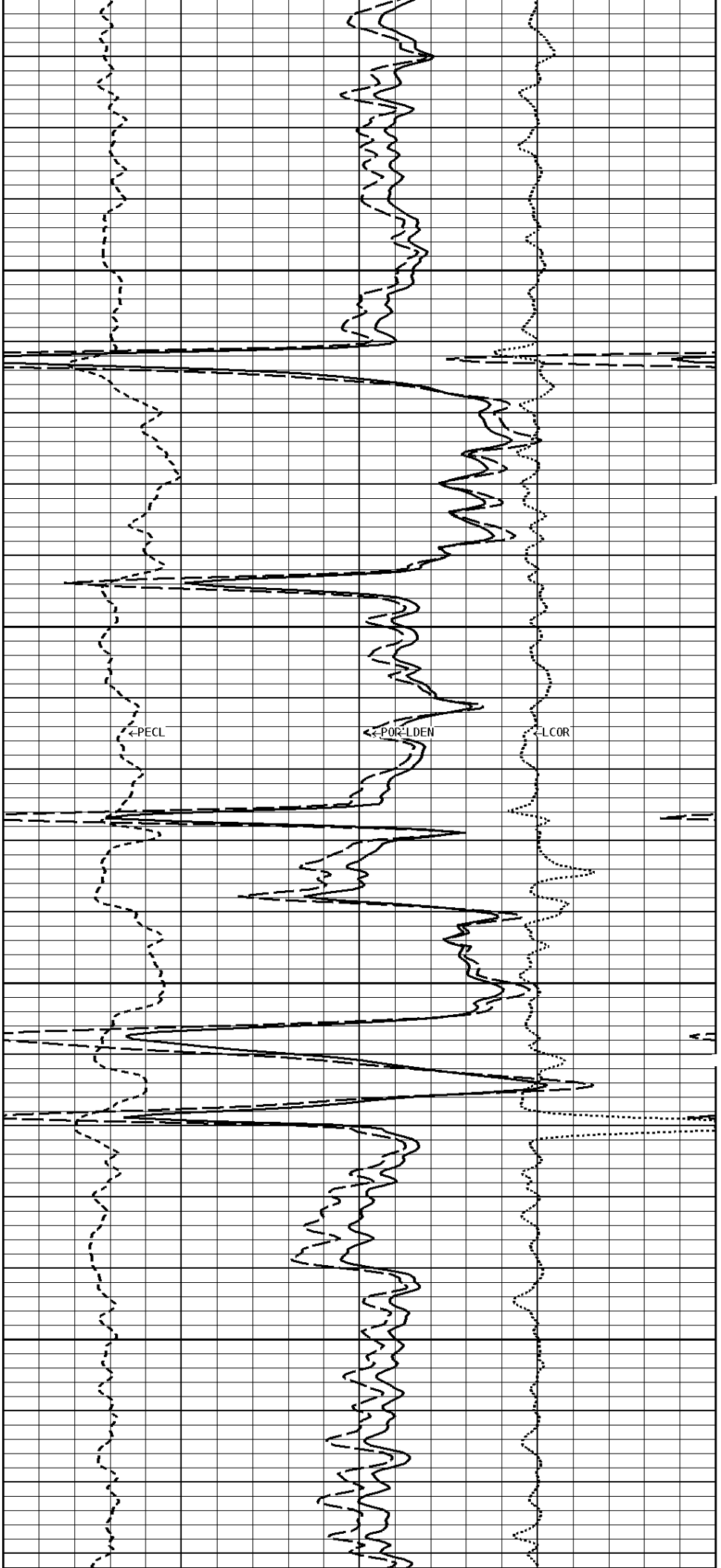


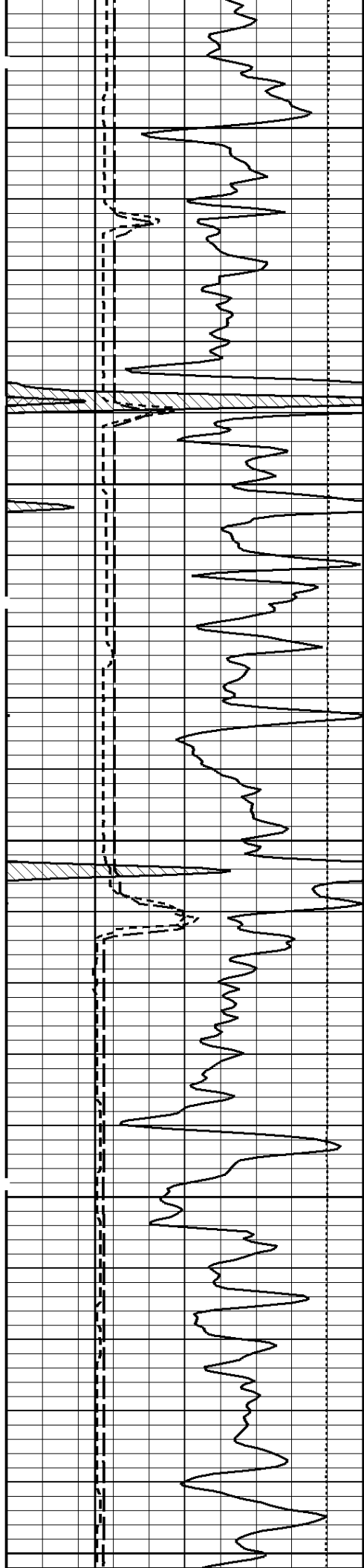


300

400

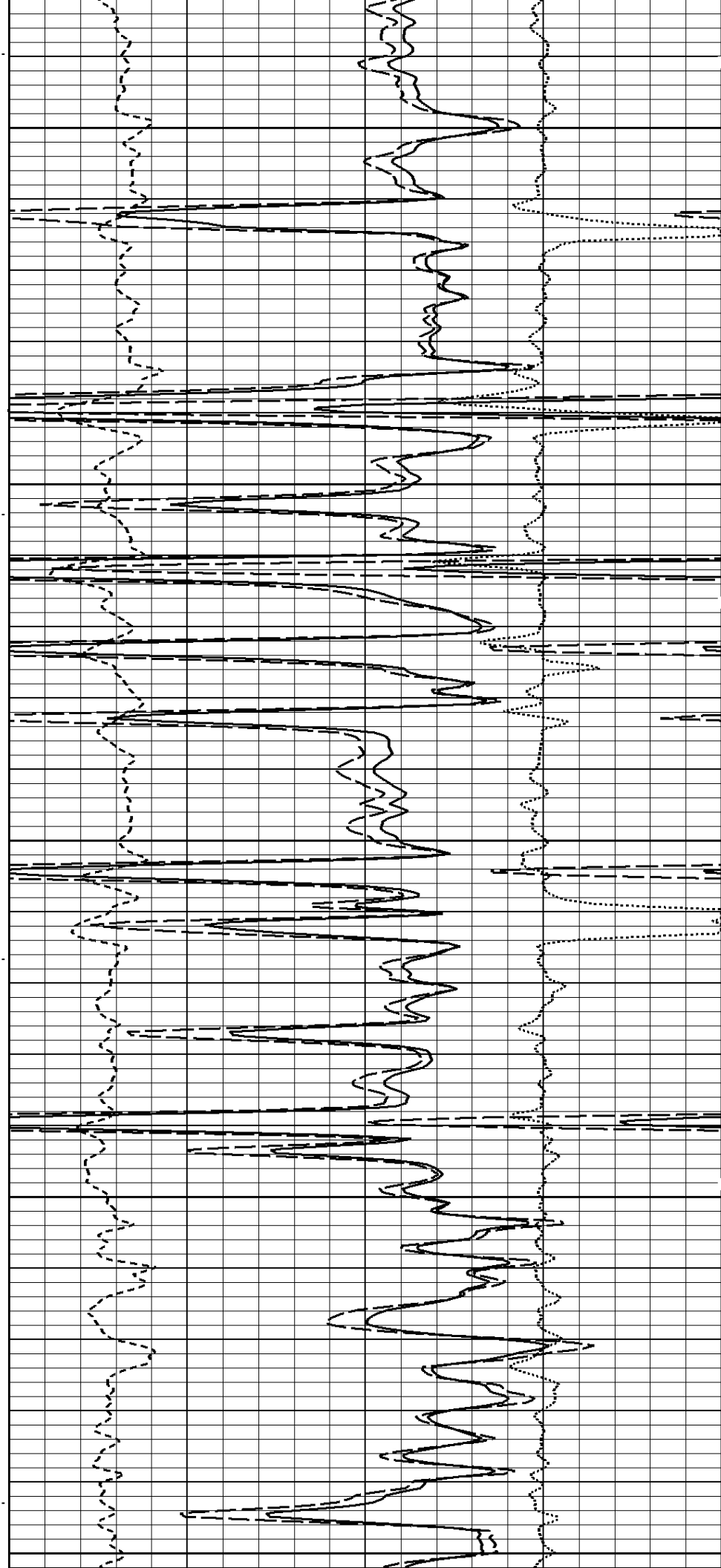
-100Cu.Ft

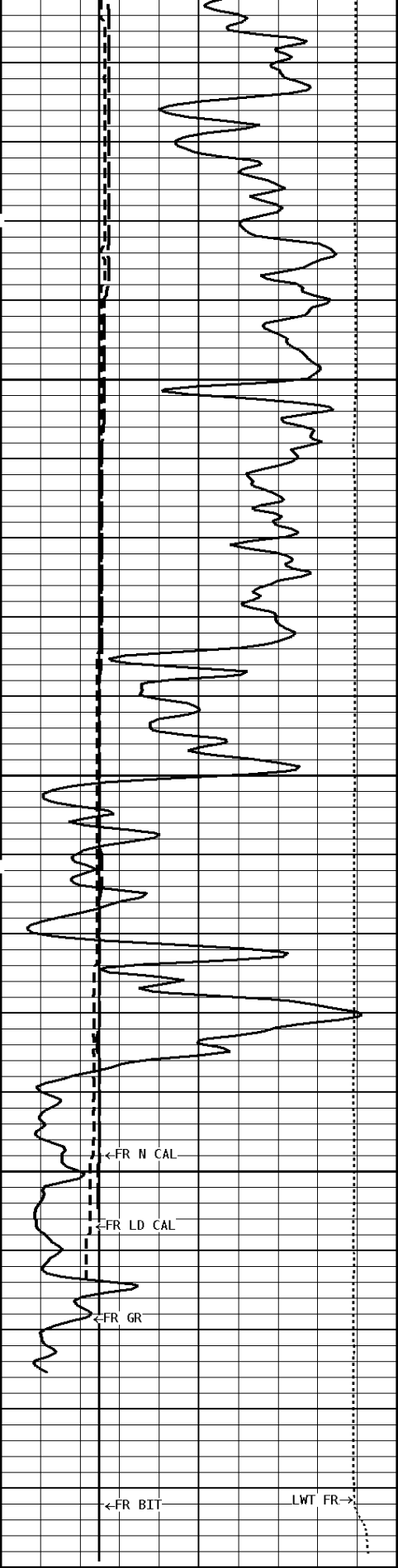




500

600

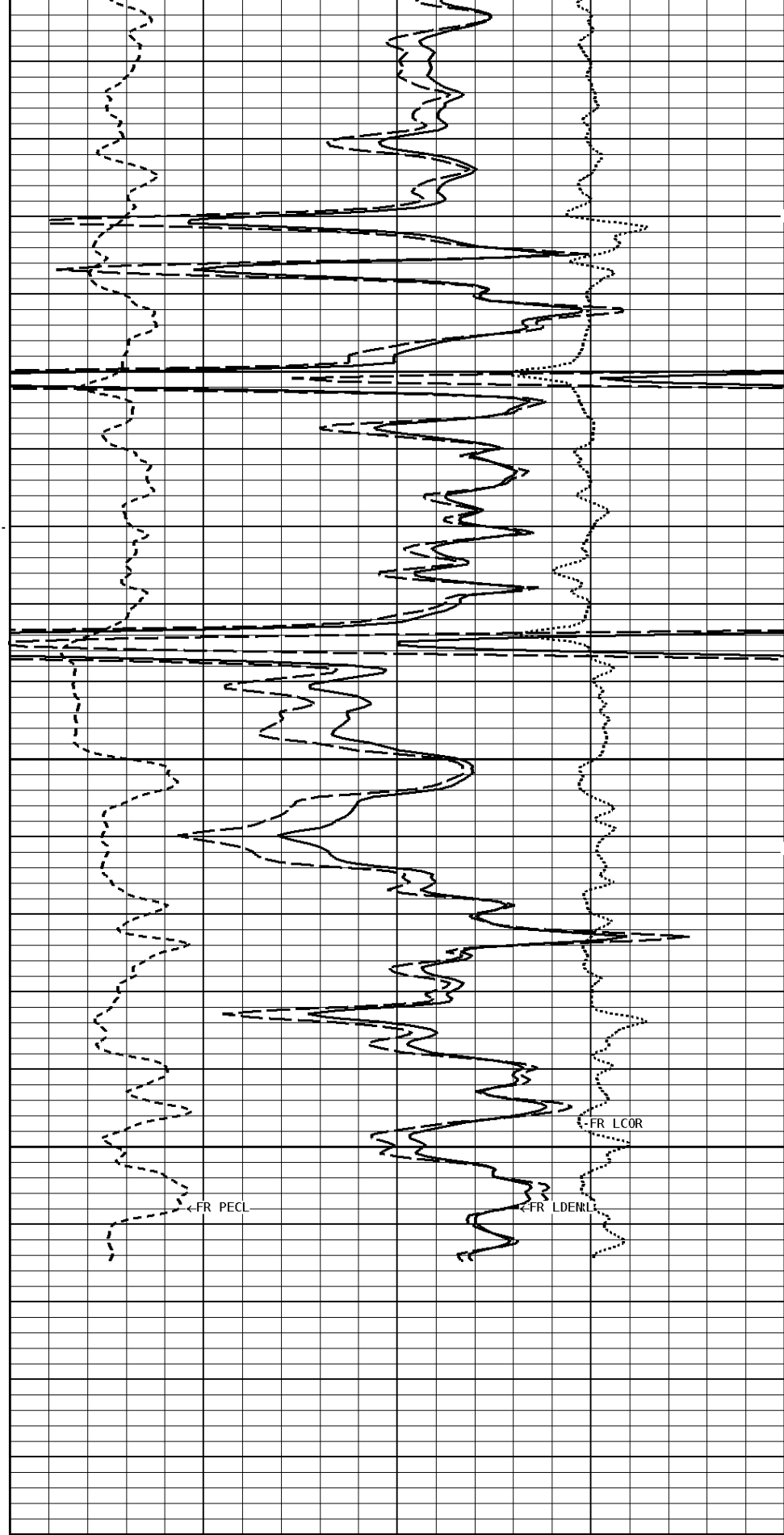




700

800

842



File #1.4.1

1:240 MAIN SECTION

BULK DENSITY

GAMMA RAY API UNITS 200 400 0 200	- BHV AHV - CU. FT	DENSITY POROSITY (2.71g/cc) PERCENT 70 30 30 -10 ----- -10 -50	
TENSION LBS 10000 0		COMPENSATED BULK DENSITY G/CC 3.0 4.0 2.0 3.0 1.0 2.0	
DENSITY (X) CALIPER INCHES (IN) 14 24 4 14 -----		PE CROSS-SECTION BARNS/ELECTRON 0 10	DENSITY CORRECTION G/CC -0.25 0.25 -----
NEUTRON (Y) CALIPER INCHES (IN) 14 24 4 14 -----			
BIT SIZE INCHES (IN) 4 14			



Company: GRAND MESA OPERATING COMPANY
 Well: BLYTHE #5-2
 Location: 2550' FSL & 1125' FWL
 Logged: 12-19-2013
 K.B. Elev: 0.0 Ft