



Tucker
ENERGY SERVICES

COMPENSATED NEUTRON
PEL DENSITY MICRO LOG

Company	VAL ENERGY INC.
Well	K&N #1-10
Field	KENNEDY
County	COWLEY
State	KANSAS
Country	USA
API No.	15-035-24648
File No	TUL-60781
Company	VAL ENERGY INC.
Well	K&N #1-10
Field	KENNEDY
County	COWLEY
State	KANSAS
Country	USA
API No	15-035-24648
Location	480' FNL & 2300' FWL SW NE NE NW
LSD	Sect : 10 Twp : 30S Rge : 5E

Permanent Datum:	GL	Elevations:	KB 1342.00	Ft	Services:	CNT	PIT
Drilling Measured From:	KB	DF 1341.00	Ft	LDT	MLT		
Log Measured From:	KB	GL 1334.00	Ft				
Above Permanent Datum:	8.00	Ft					
Date	10-07-2015						
Run Number	1						
Depth--Driller	3303.0	Ft					
Depth--Logger	3302.0	Ft					
First Reading	3279.0	Ft					
Last Reading	219.0	Ft					
Casing--Driller	219.0	Ft					
Casing--Logger	219.0	Ft					
Bit Size	7.875	In					
Casing Size	8.625	In					
Hole Fluid Type	WBM						
Density	9.3						
Fluid Loss	9.2						
PH/Viscosity	10.5	54.0					
Sample Source	MEASURED						
RM@Measured Temp.	2.000	@ 80 F					
RMF@Measured Temp	1.700	@ 80 F					
RMC@Measured Temp.	2.300	@ 80 F					
Source RMF/RMC	CALCULATED	CALCULATED					
RM@BHT	1.400	@ 108 F					
Time Circulation Stopped	10-07-2015 12:30 pm						
Max Recorded Temp.	110	F					
Equipment/Base	T-126	TULSA					
Recorded By	S.K. DAVIS						
Witnessed By	T. ALLAN						

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)
7.875	3302.00	8.625	15.00	219.00	0.00

Run Number	1	
Date	10-07-2015	
Date/Time On Bottom	10-07-2015 3:15 pm	
Depth to Fluid	0.0 Ft	
Salinity	2000.000	
RMF@BHT	1.200 @ 108 F	
RMC@BHT	1.700 @ 108 F	

Run Number 1

Comments

ALL PRESENTATION PER CUSTOMER REQUEST
 GRT,CNT,LDT,PIT RUN IN COMBINATION
 CALIPERS ORIENTED ON X-Y AXIS
 2.71 G/CC USED TO CALCULATE POROSITY
 ANNULAR & BOREHOLE VOLUME CALCULATED USING 5.5 PRODUCTION CASING
 PHIN IS CALIPER CORRECTED
 DETAIL IS PRESENTED FROM TD TO 2000'

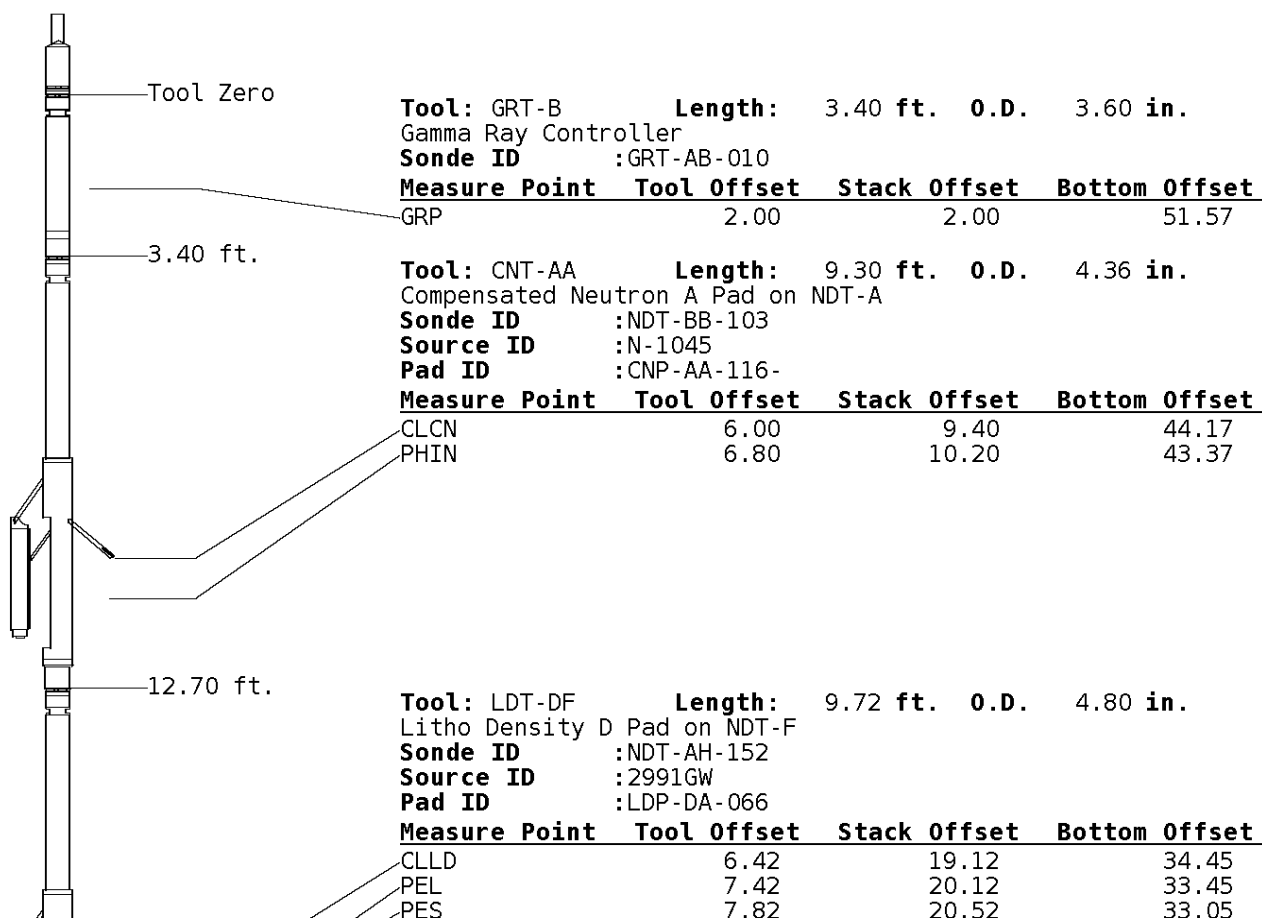
GRT; GRP,
 CNT; PHIN, CLCNIN
 LDT; PORL, LCORN, PECLN, LDENN, CLLDIN
 MLT; NOR.RF, INV.RF, MSCLPIN.
 PIT; ILD, ILM, SPU, SFLAEC, CIRD

OPERATORS;

C. GONZALES
 J. KLINE

Tool String Schematic

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



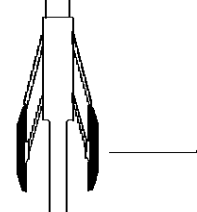


LDEN	7.62	20.32	33.25
LCOR	7.62	20.32	33.25

22.42 ft.

Tool: MST-DA **Length:** 9.66 ft. **O.D.** 6.00 in.
 Micro Spherically Focused (IC)
Sonde ID :MST-DA-057

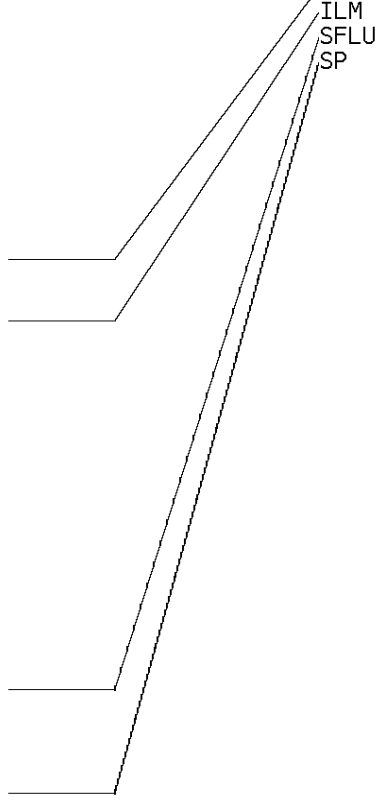
Measure Point	Tool Offset	Stack Offset	Bottom Offset
MSFL	7.60	30.02	23.55
MSCLP	7.60	30.02	23.55
INV	7.60	30.02	23.55
NOR	7.60	30.02	23.55



32.08 ft.

Tool: PIT-CA **Length:** 21.49 ft. **O.D.** 3.62 in.
 Phased Dual Induction w/ RM & D
Sonde ID :PIT-CA-077

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: val-kn-1-10-mstk-oct-7

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

Segment: V1.D1.S12 FINAL MN

Acquired: Not Available

Reference: 0

Processed: Not Available

**CALIPER MICRO
INCHES (IN)**

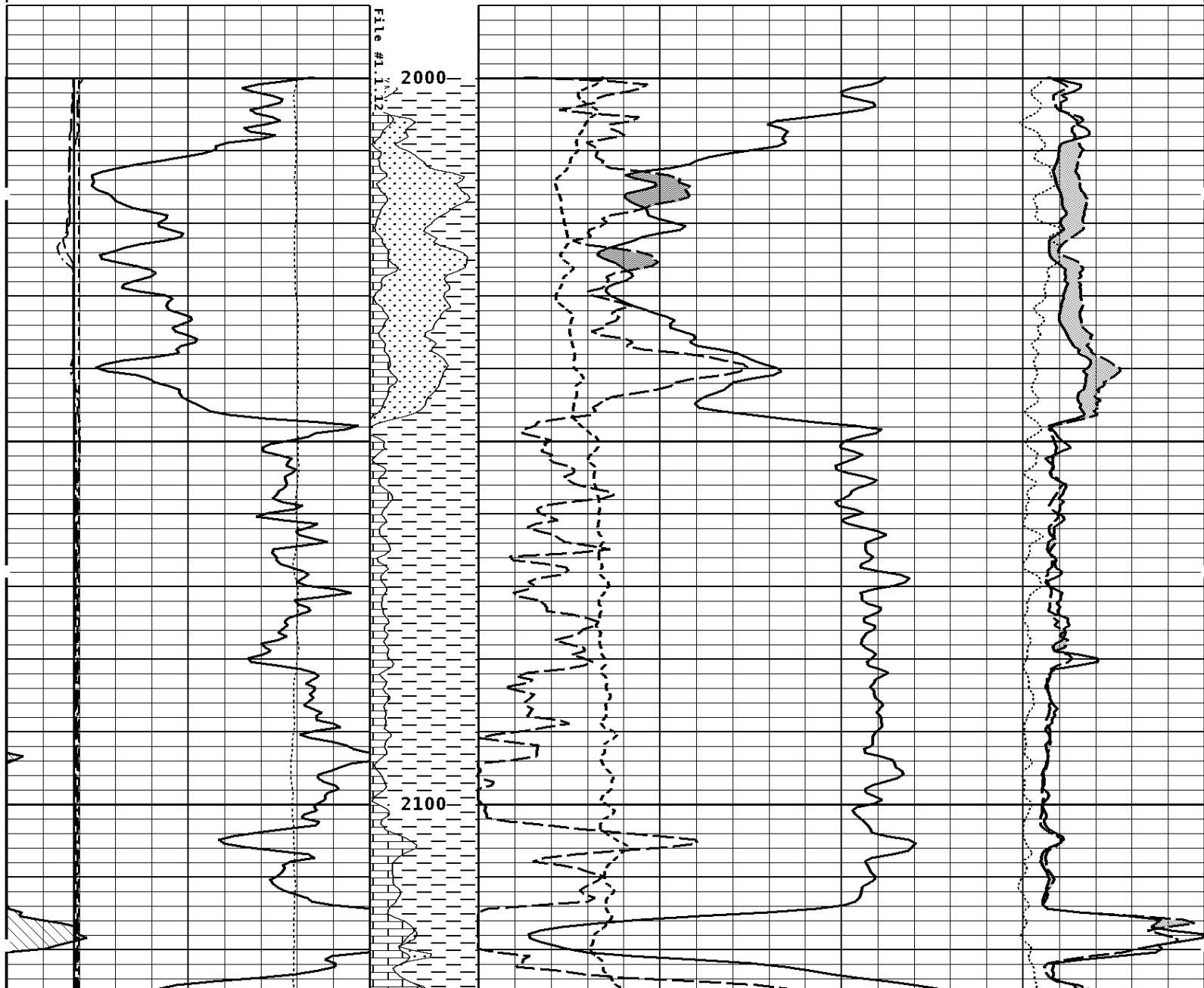
16	26
6	16

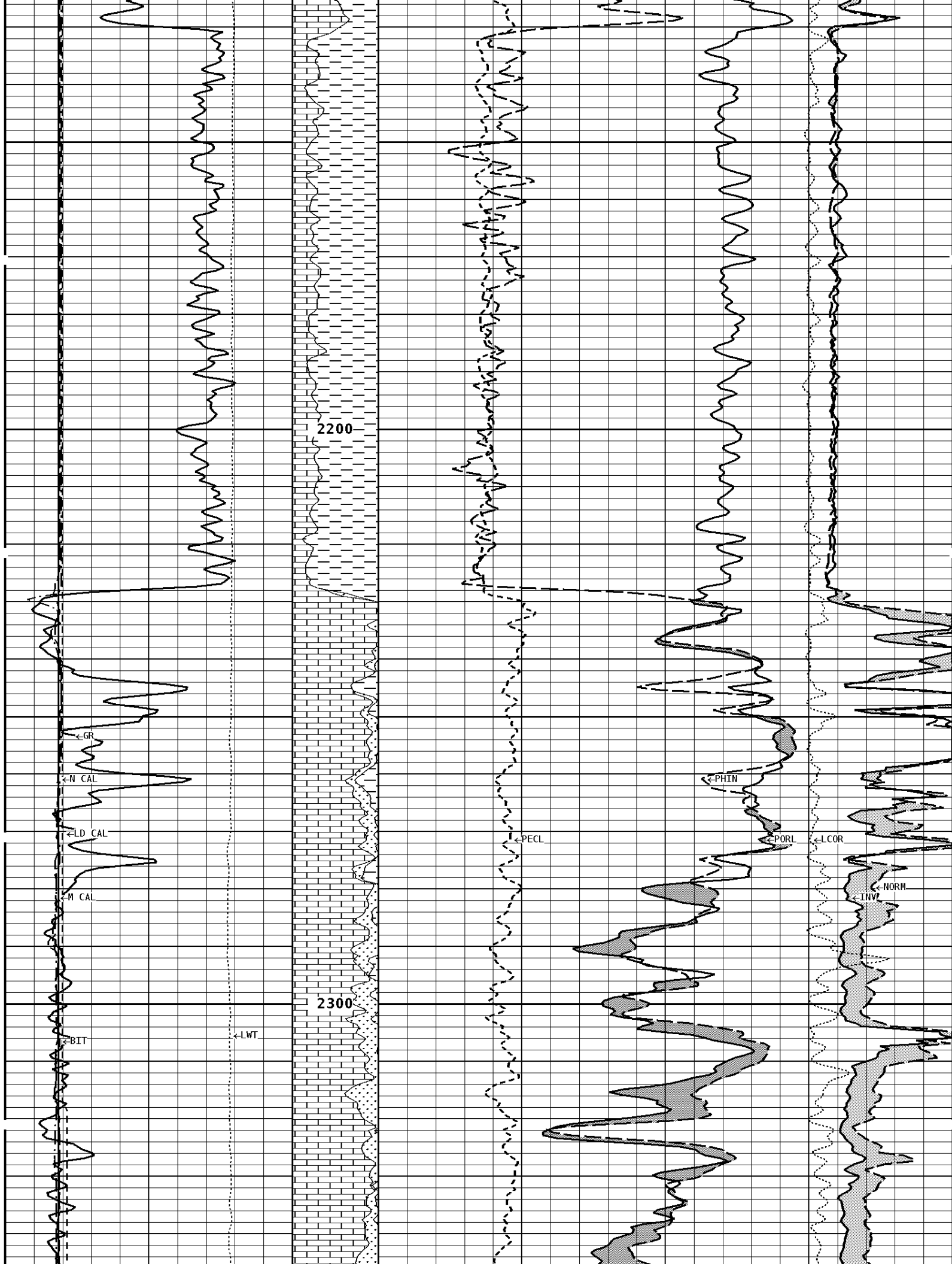
**BIT SIZE
INCHES (IN)**

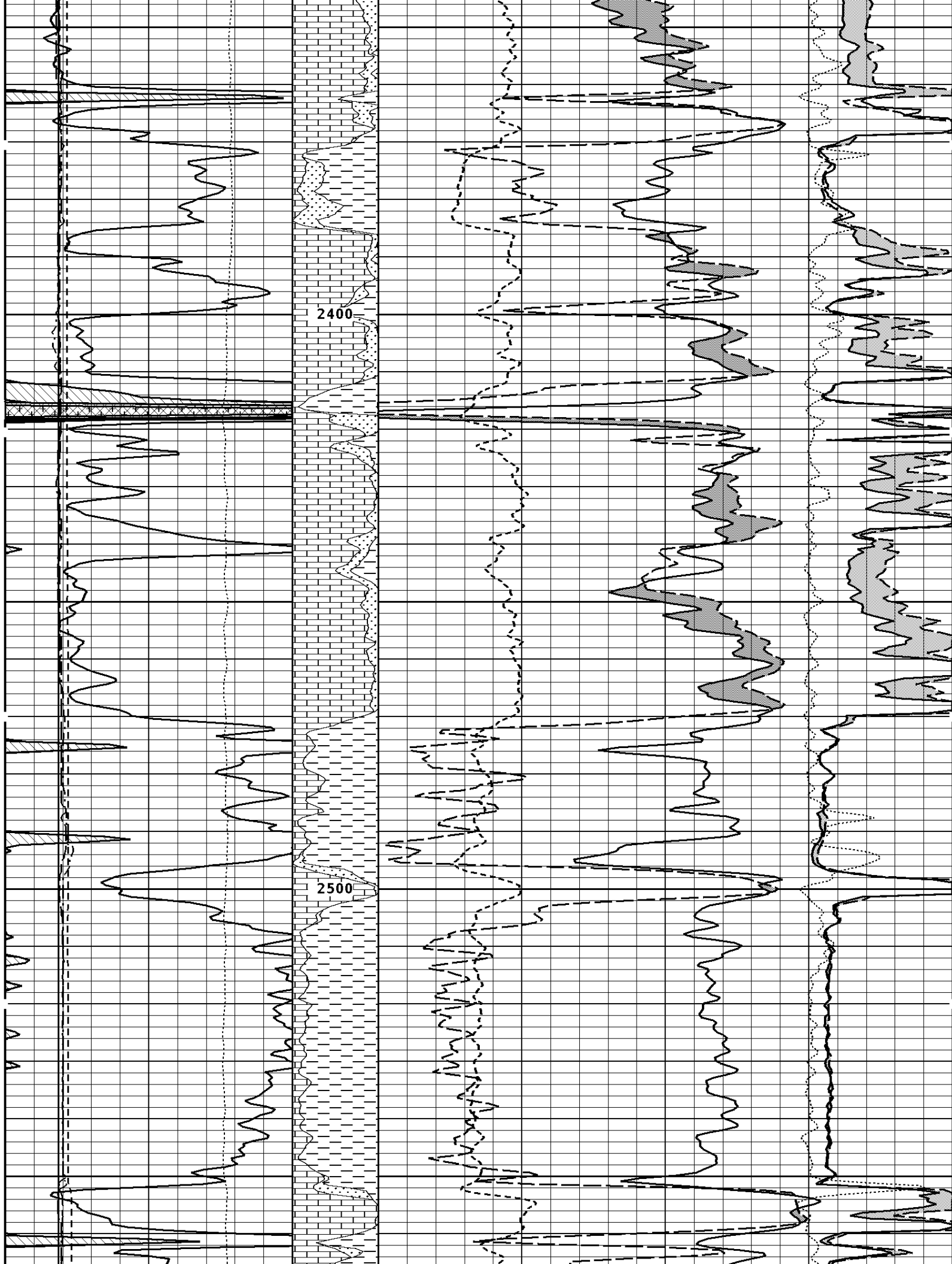
**NORMAL
OHMM**

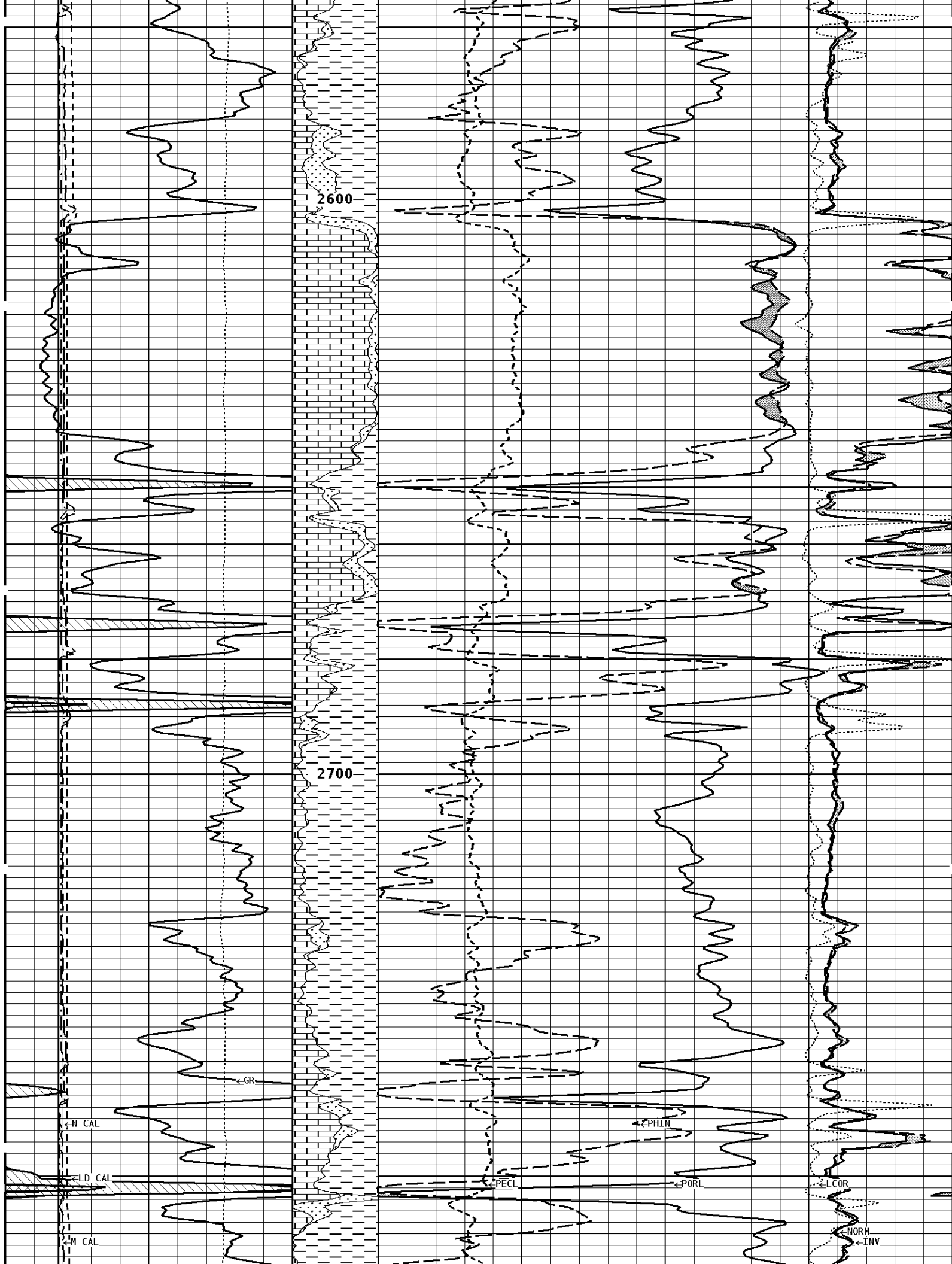
6	16			0	40
NEUTRON (Y) CALIPER INCHES (IN)				INVERSE OHMH	
16	26			0	40
6	16				
DENSITY (X) CALIPER INCHES (IN)		Volume Quartz	PE CROSS-SECTION BARNs/ELECTRON	DENSITY CORRECTION G/CC	
16	26		0	10	-0.25
6	16				0.25
TENSION LBS		Volume Calcite	DENSITY POROSITY (2.71g/cc) PERCENT		
10000	0		70		30
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

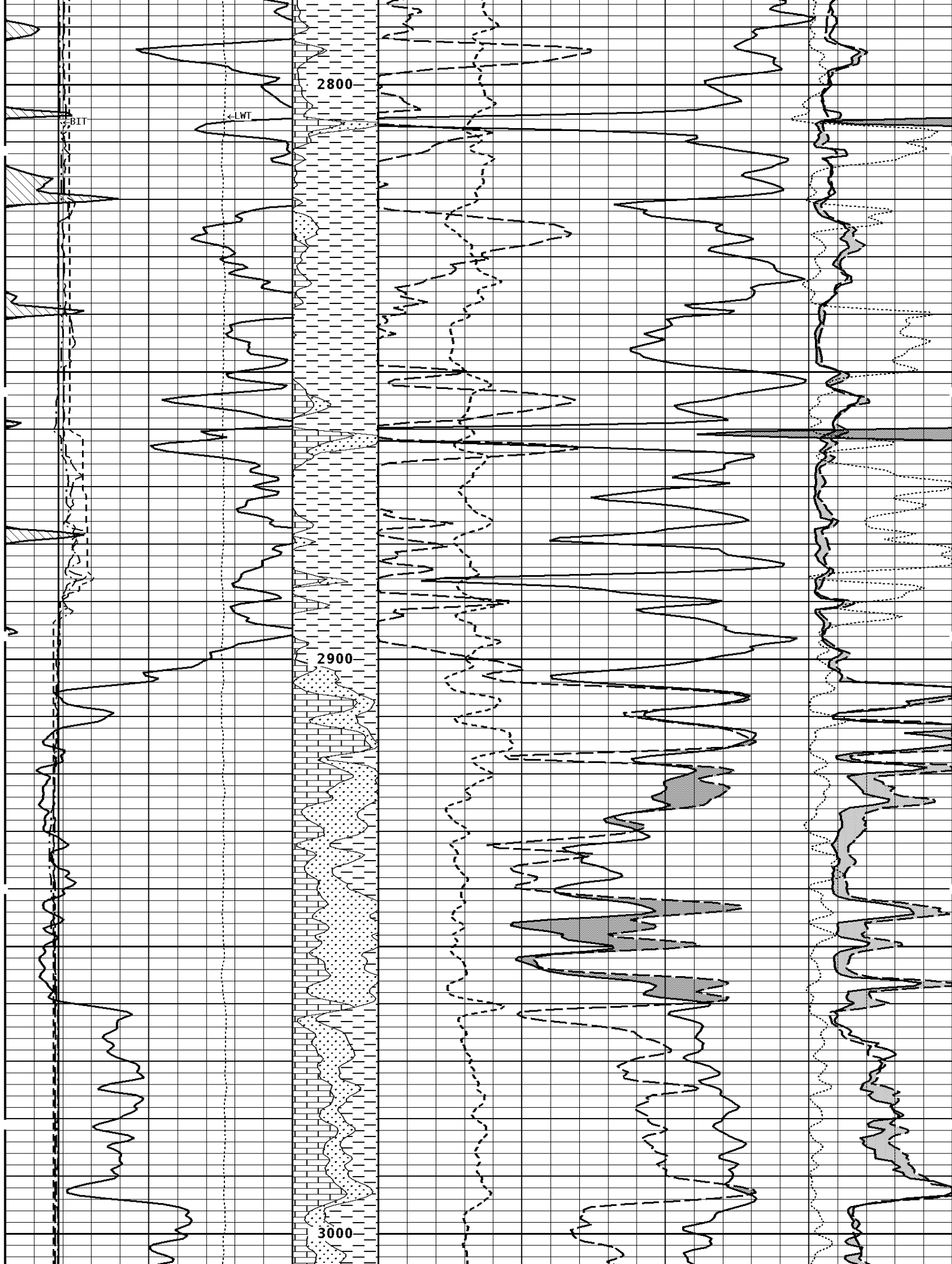
1:240 MAIN SECTION

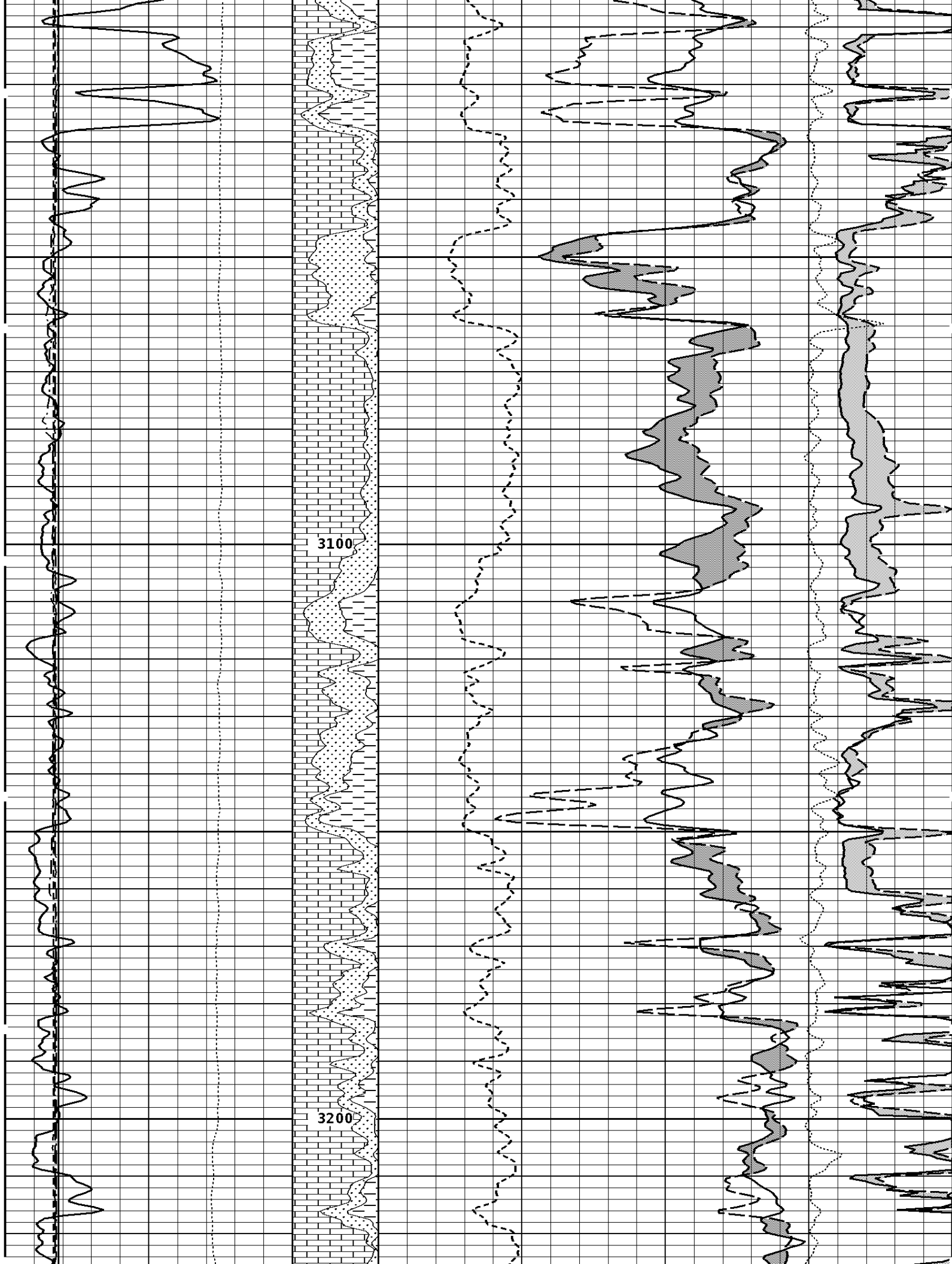


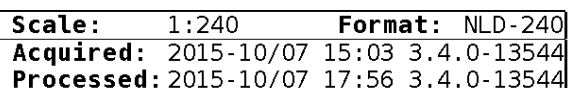








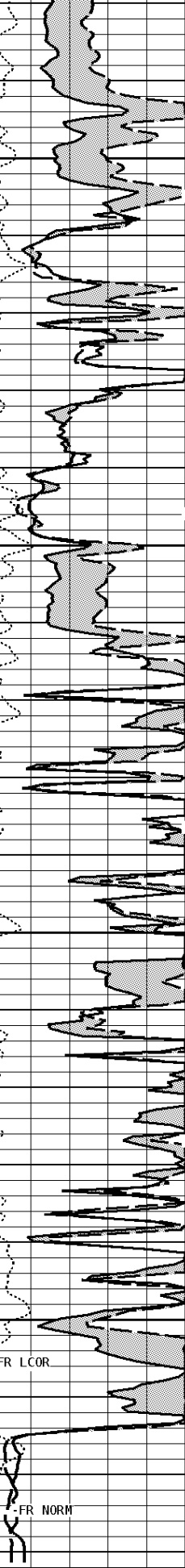
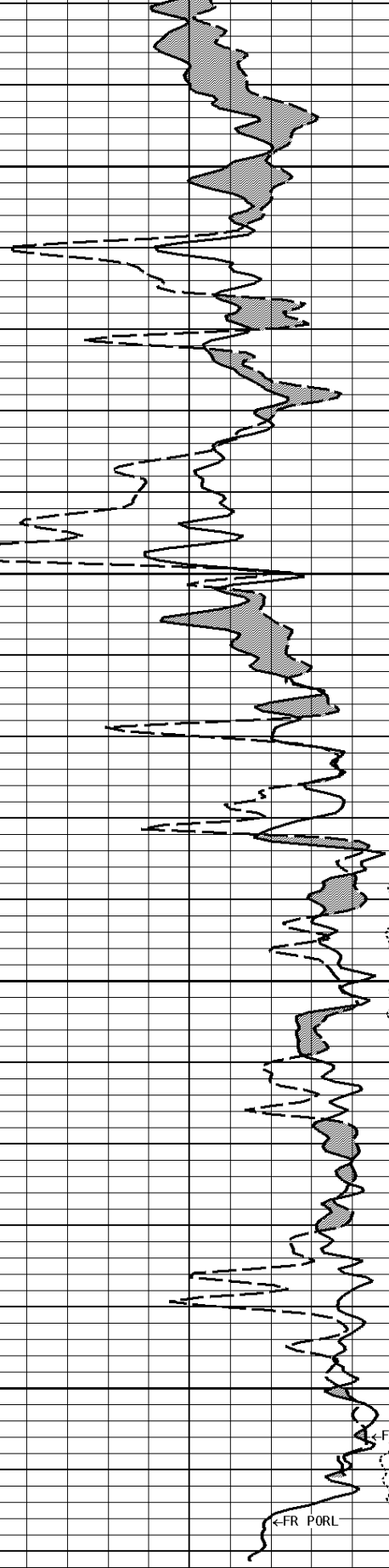
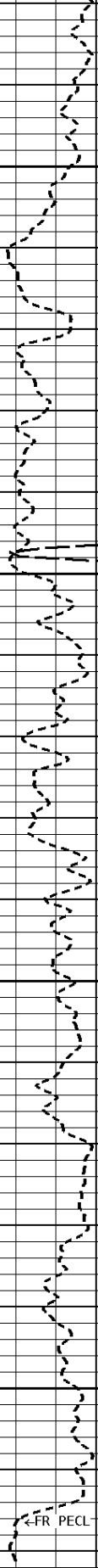
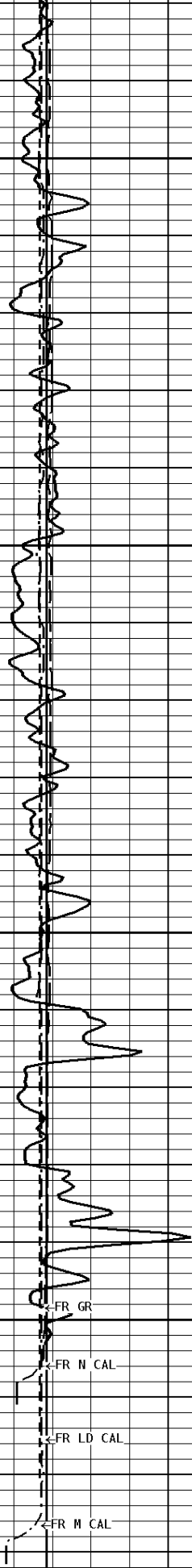




3100

3200

3300



1:240 REPEAT SECTION

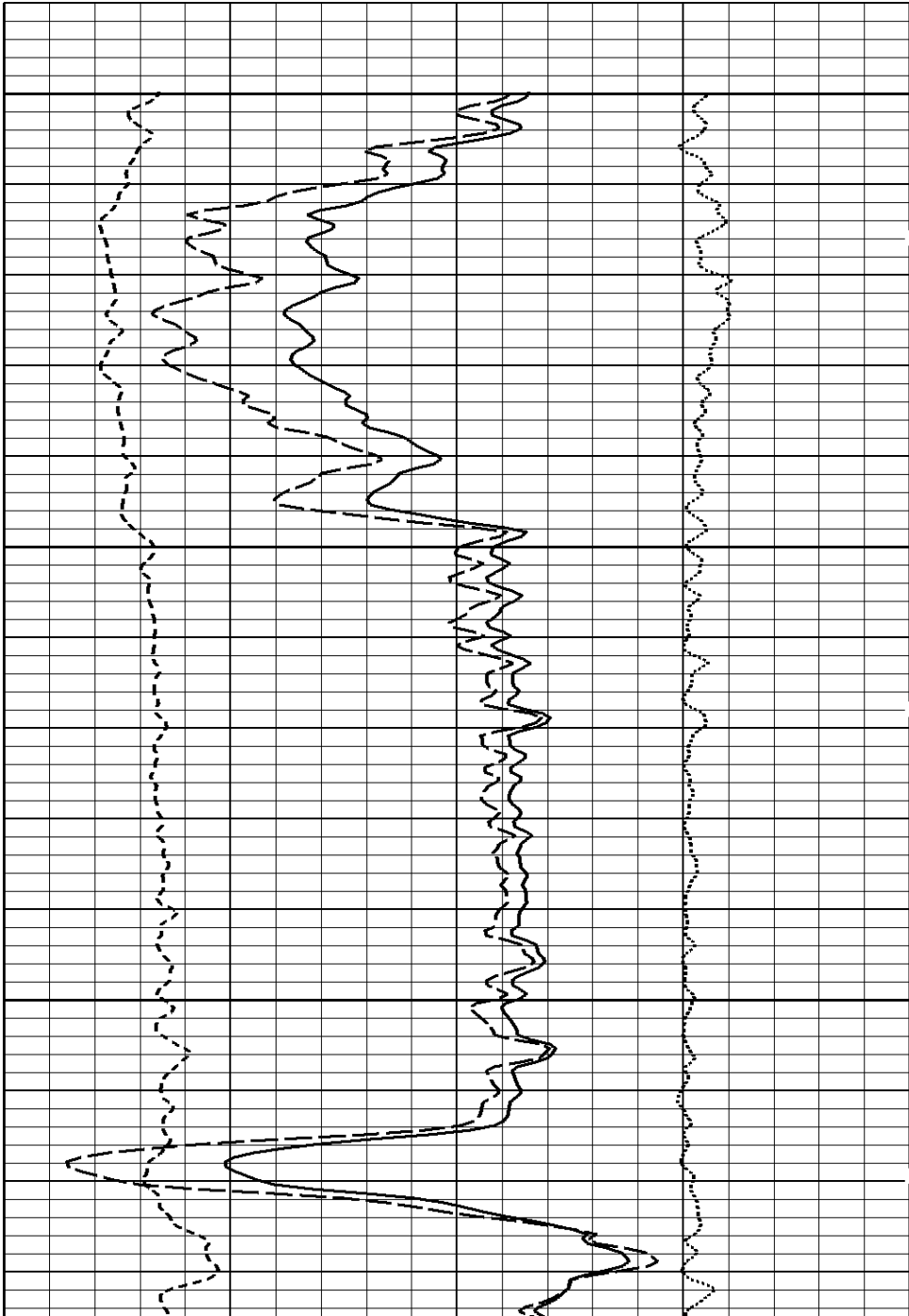
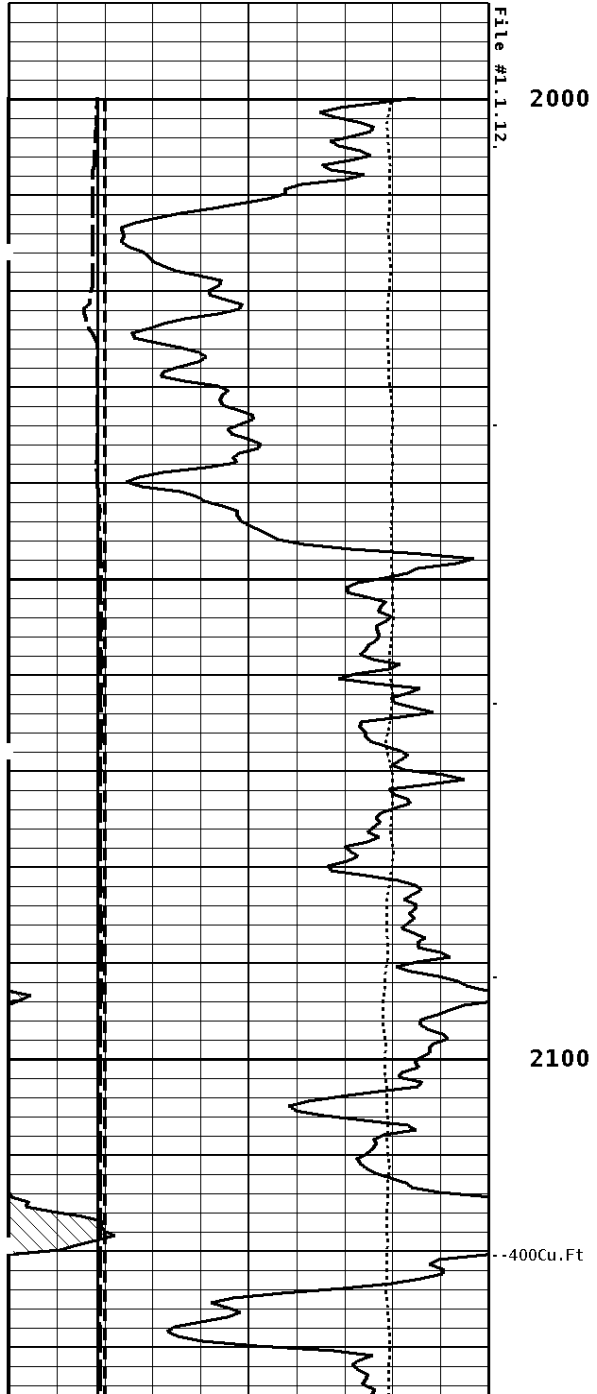
*** Borehole Zone Factors ***

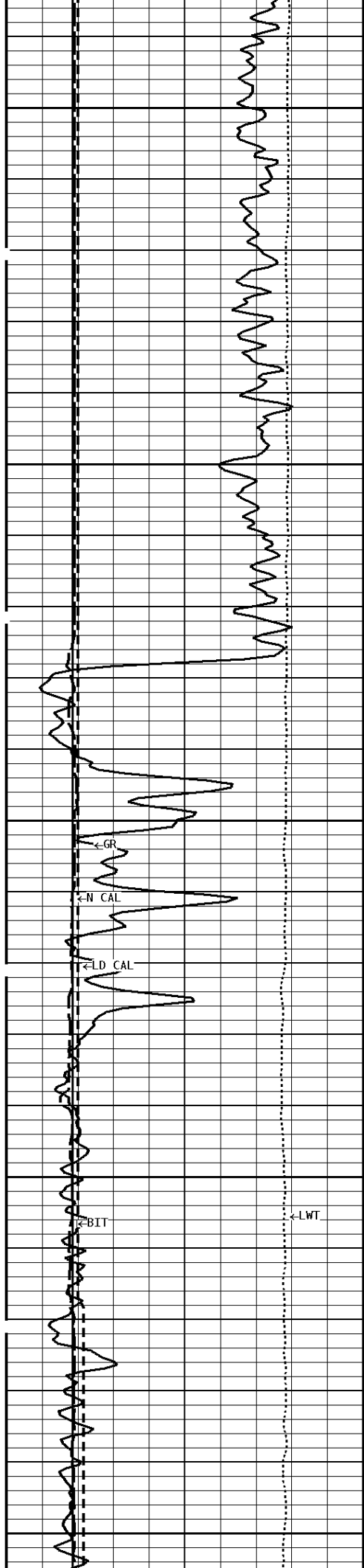
NEUTRON (Y) CALTRIP

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

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

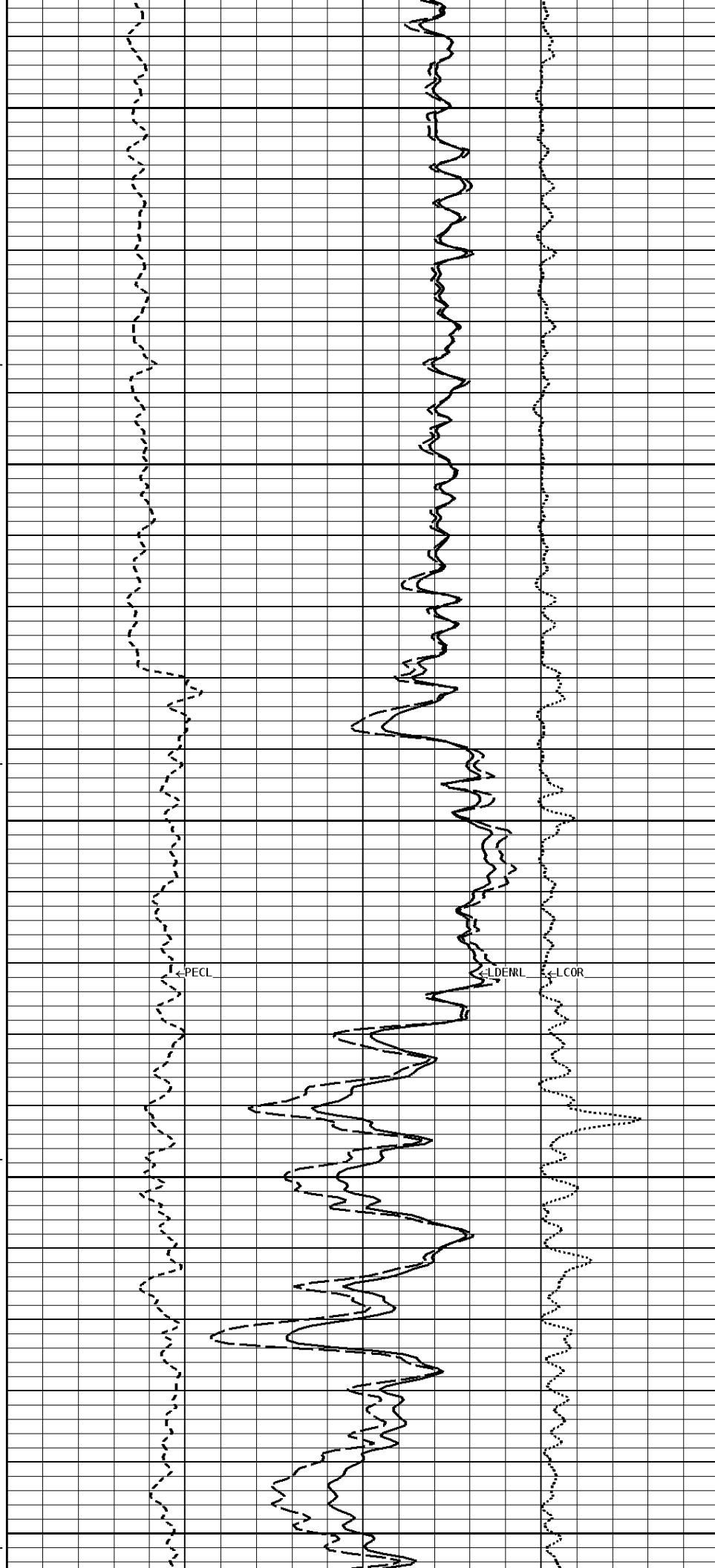


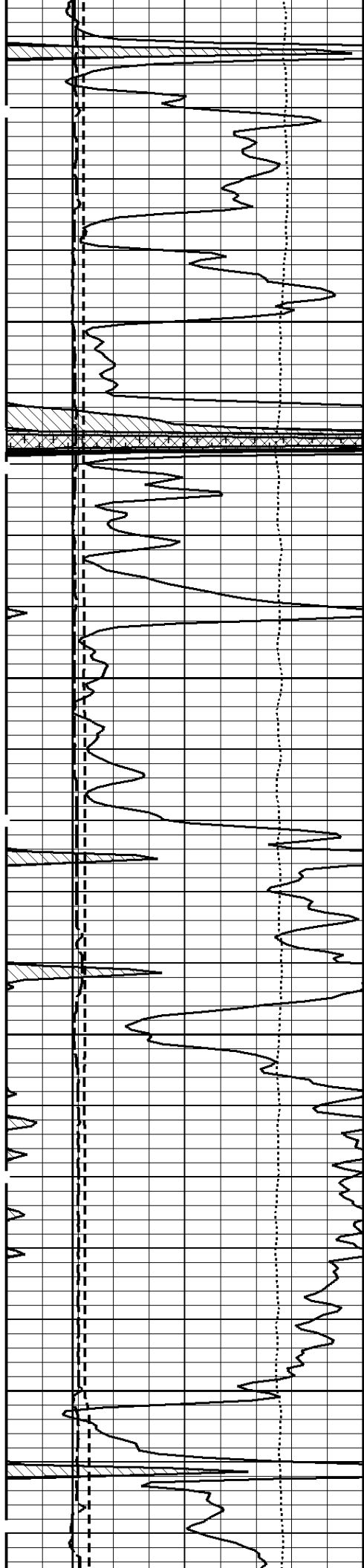


200Cu.Ft--

2200

2300

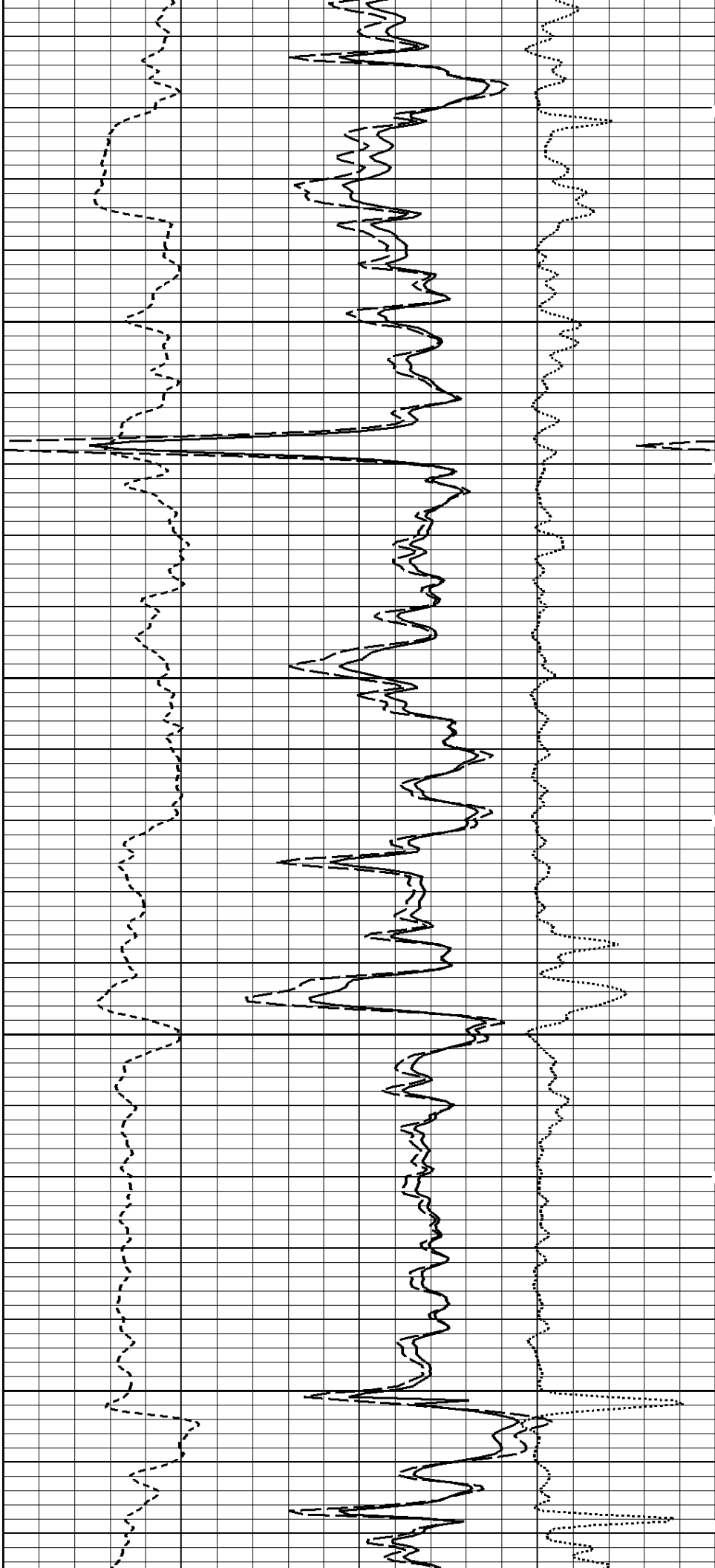


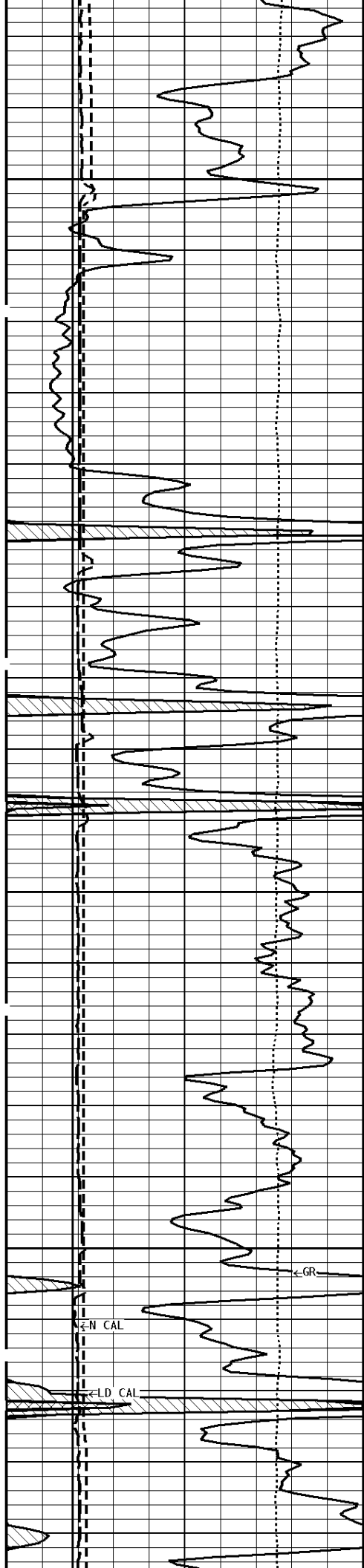


2400

--300Cu.Ft

2500



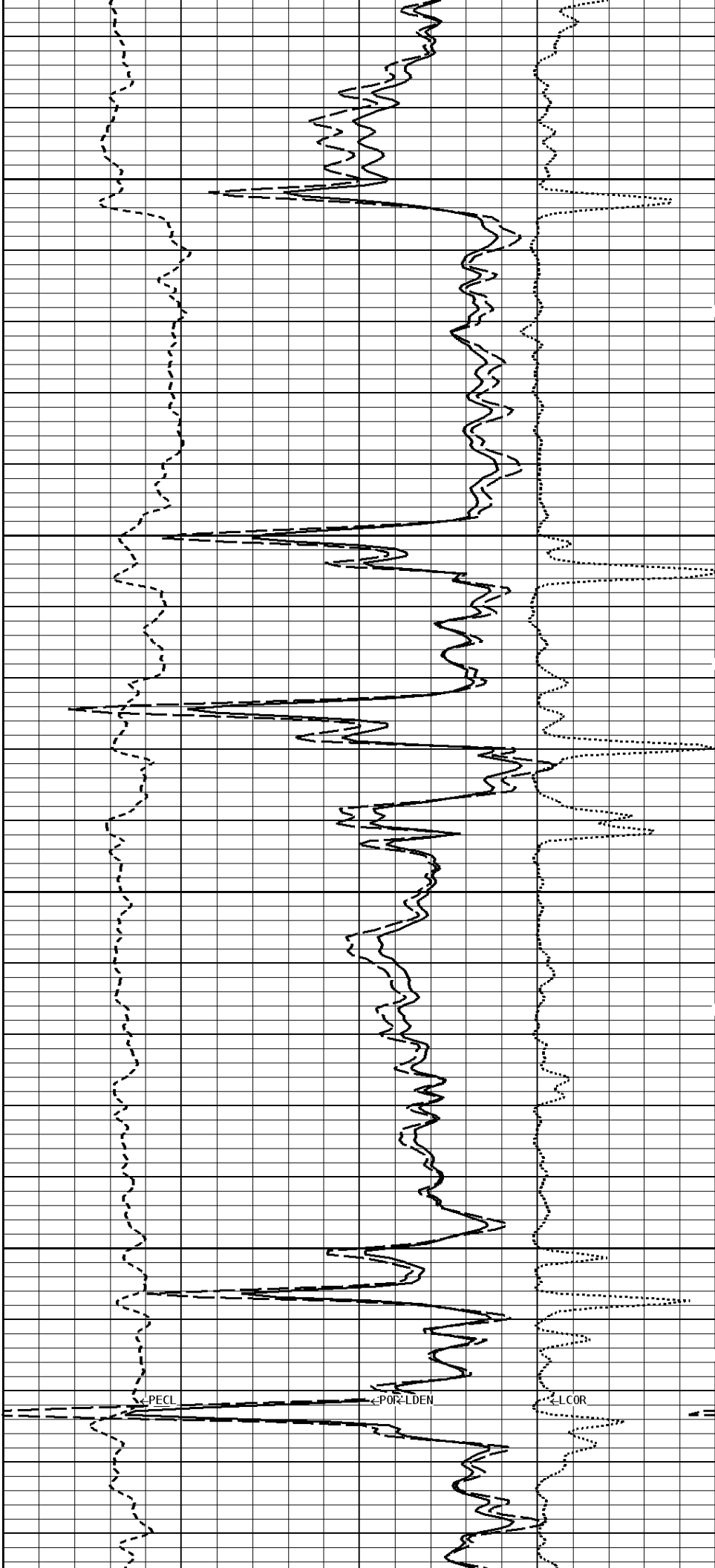


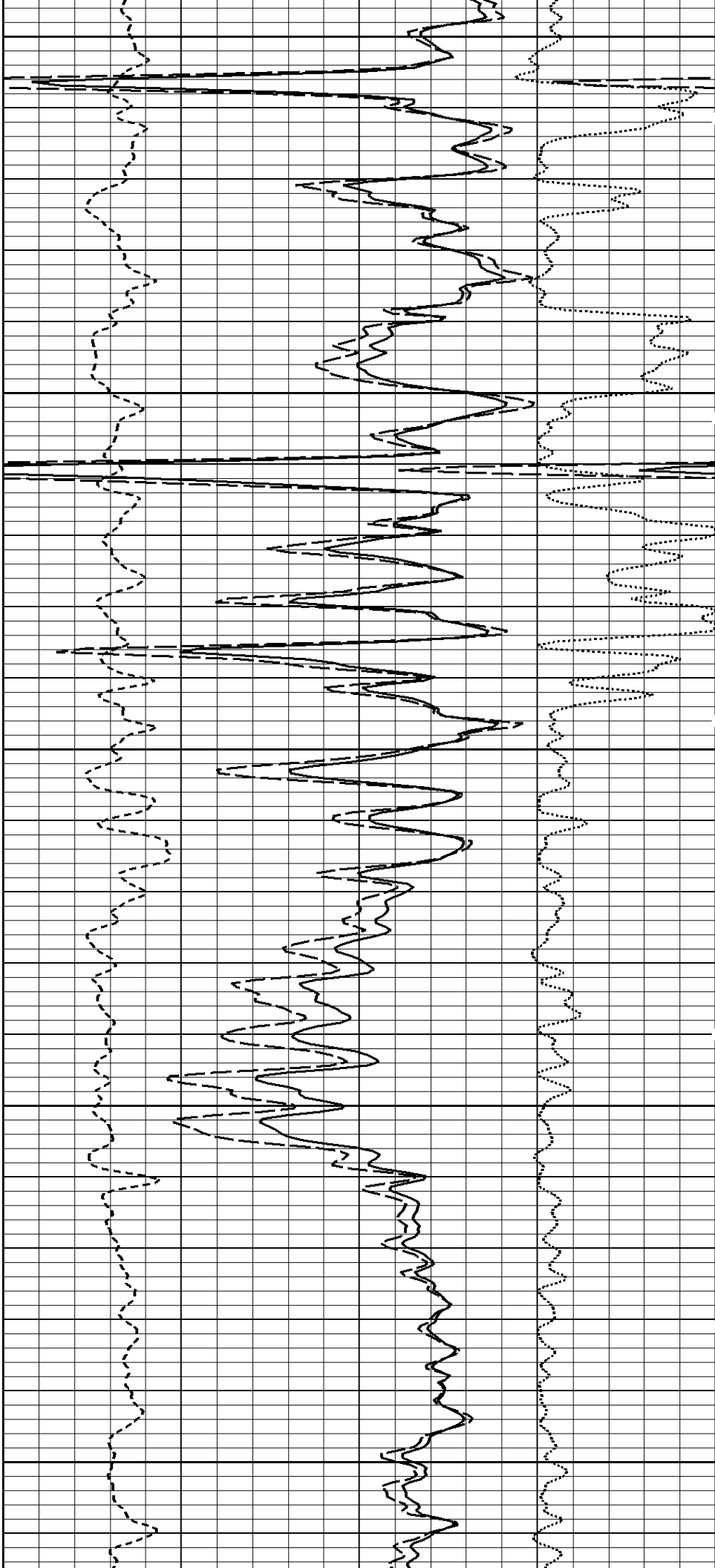
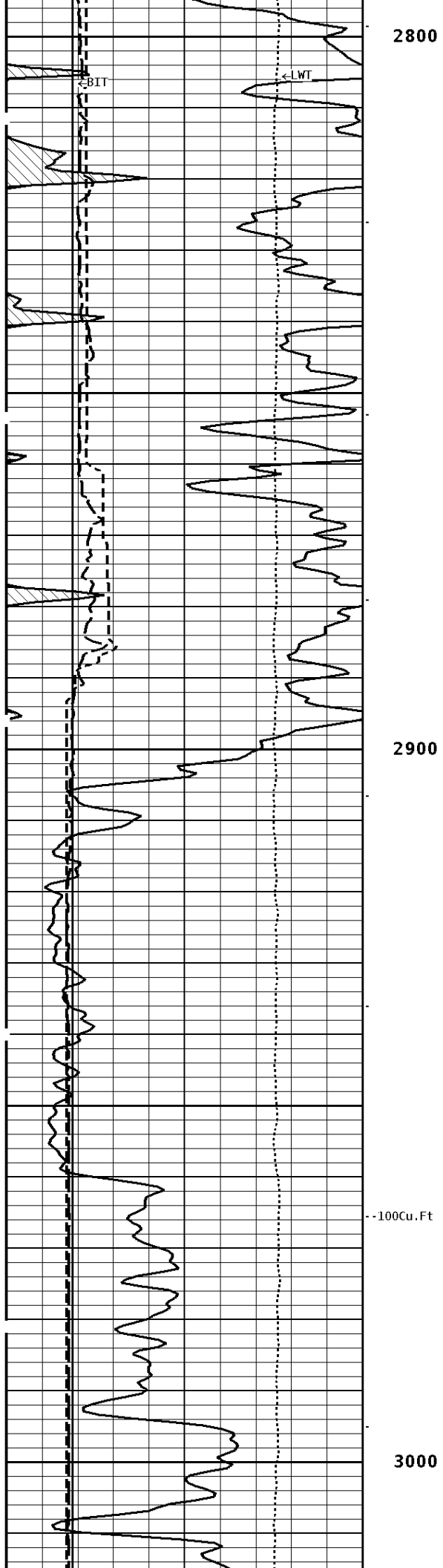
2600

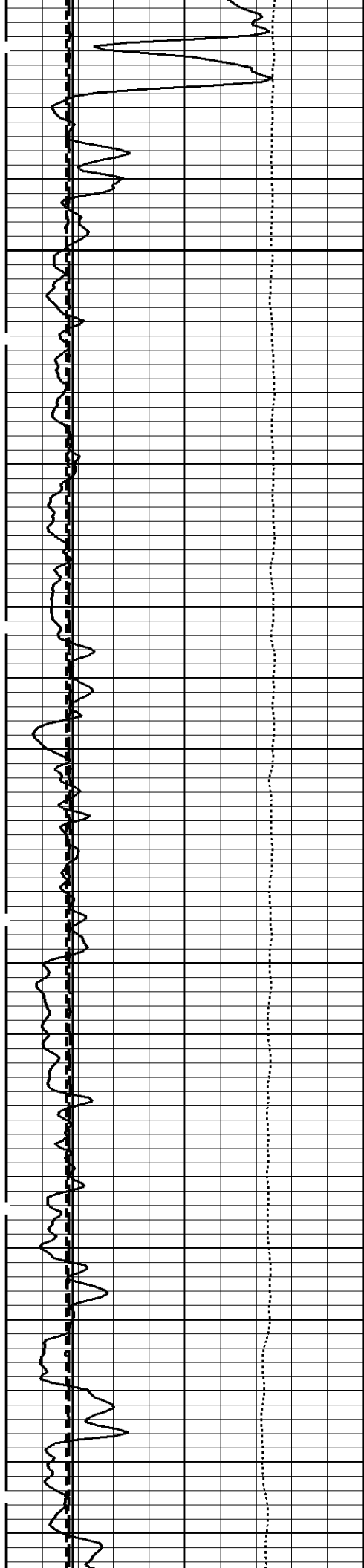
200Cu.Ft

2700

100Cu.Ft

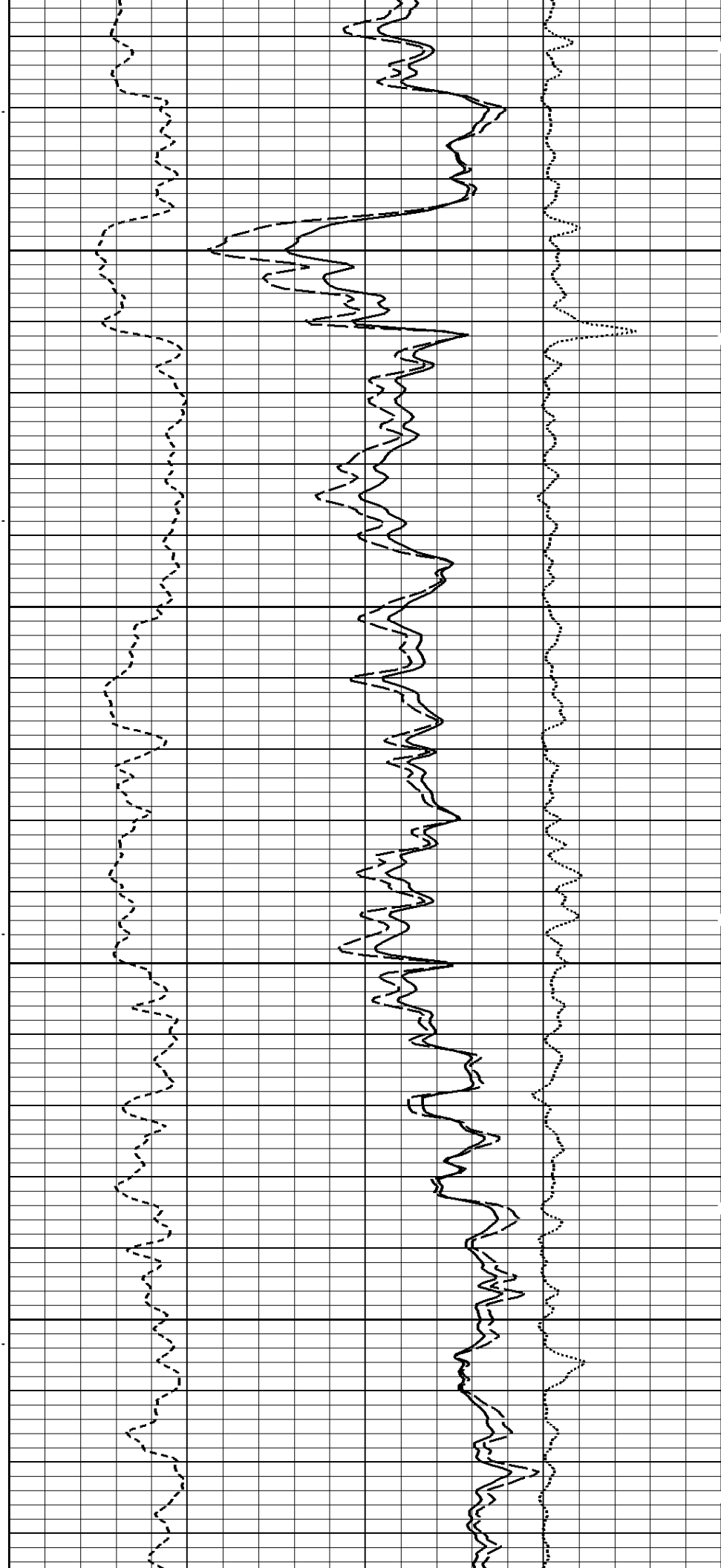


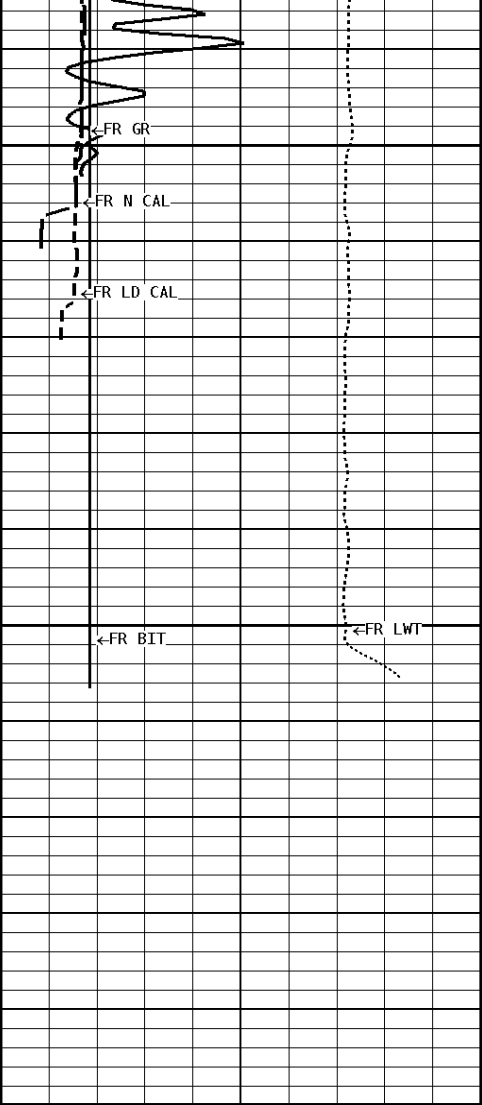




3100

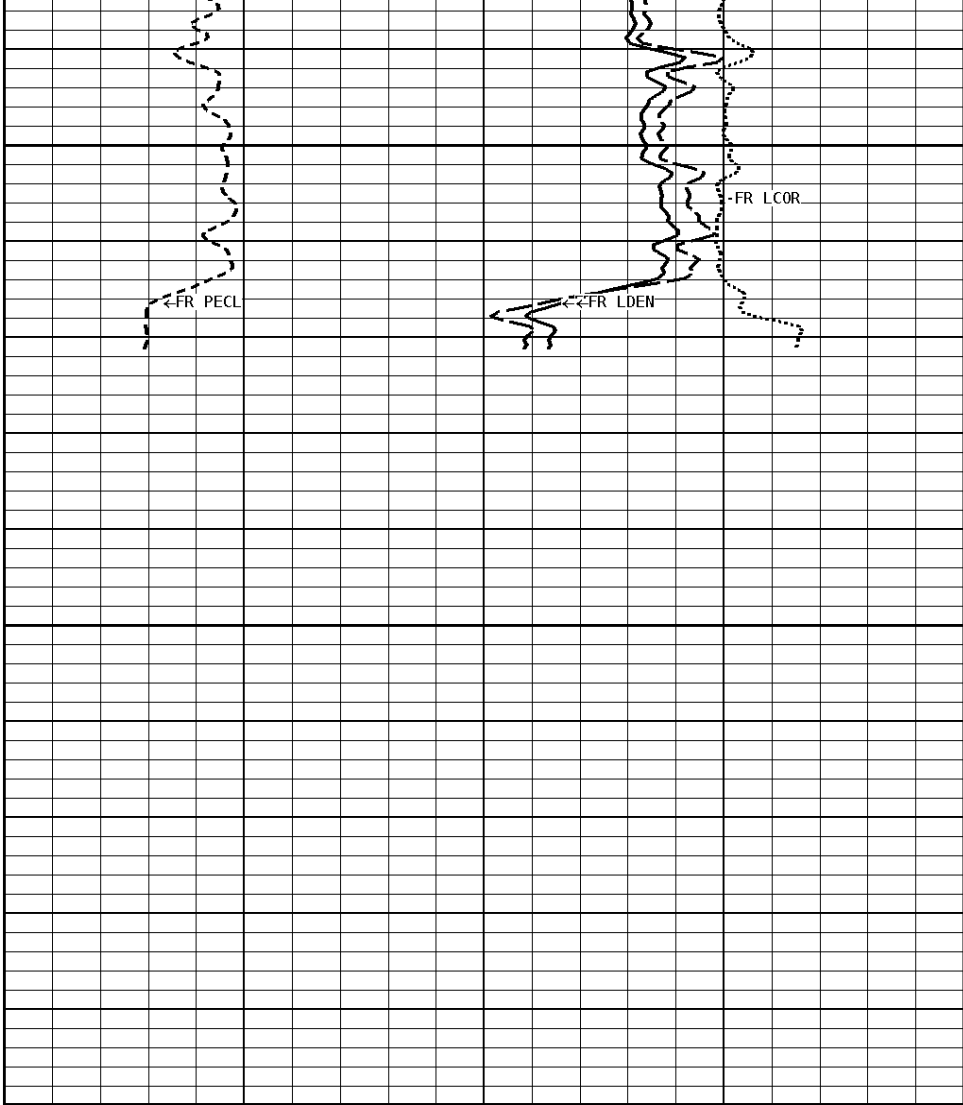
3200





File #1.1.12

3300
3302



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/ELECTRON	DENSITY CORRECTION G/CC
16	26		0	10
6	16		-0.25	0.25
NEUTRON (Y) CALIPER INCHES (IN)				
16	26			
6	16			
BIT SIZE INCHES (IN)				
6	16			

* Calibration Summary *

Shop Calibration

		Shop		GRT-B	
Performed : 02-JUN-2014		Time : 09:56			
Sensor Suite : GR-GR5		ID : GRT-AB-010			
		Measured	Units	Calibrated	Units
Background		Jig		Jig	
GR	53	341	CPS	175	GRAPI
Shop Calibration					
CNT-AA					
Performed : 04-AUG-2015		Time : 09:42			
Sensor Suite : CALI-BCN		ID : NDT-BB-103			
		Jig - Measured		Jig - Calibrated	Units
		Ring#1 Ring#2		Ring#1 Ring#2	
CL # 1		9.0 13.9		6.0 12.0	IN.
Performed : 08-Sep-2015		Time : 13:45			
Sensor Suite : BHC NEUT		ID : CNP-AA-116-			
Source ID : N-1045					
		Tank		Verification	Units
		Measured	Calibrated	Jig	
N/F	3.8414	3.6893	3.7120		
Porosity	22.9	20.5	20.8		%
Shop Calibration					
LDT-DF					
Performed : 08-SEP-2015		Time : 11:01			
Sensor Suite : CALI-LTH		ID : NDT-AH-152			
		Jig - Measured		Jig - Calibrated	Units
		Ring#1 Ring#2		Ring#1 Ring#2	
CL # 1		8.6 12.3		6.0 12.0	IN.
Performed : 08-Sep-2015		Time : 11:21			
Sensor Suite : BHCPELNG		ID : LDP-DA-066			
Source ID : 2991GW					
Short Space					
	BKGD	Al	Mg	Al+Fe	Units
LSW1	64	1030	1677	672	CPS
LSW2	68	1209	1921	889	CPS
LSW3	242	2771	4508	2371	CPS
LSW4	303	2466	3574	2182	CPS
LSW5	28	51	57	49	CPS
LSW6	85	87	84	86	CPS
LSW7	53	56	58	56	CPS
LSW8	2	4	5	4	CPS
QS	0.235	0.213	0.186	0.216	
PES			2.778	5.967	
SSDN		2.600	1.680		G/CC
Long Space					
	BKGD	Al	Mg	Al+Fe	Units
LLW1	94	1185	4900	718	CPS
LLW2	106	2018	8038	1495	CPS
LLW3	395	3718	14274	3234	CPS
LLW4	505	1773	5640	1613	CPS
LLW5	56	65	111	63	CPS
LLW6	165	161	154	162	CPS
LLW7	105	102	101	104	CPS
LLW8	3	6	16	6	CPS
QL	0.220	0.225	0.208	0.221	
PEL			2.697	5.458	
LSDN		2.600	1.680		G/CC
Shop Calibration					
MST-DA					
Performed : 04-AUG-2015		Time : 10:32			
Sensor Suite : CALI-MSN		ID : MST-DA-057			
		Jig - Measured		Jig - Calibrated	Units
		Ring#1 Ring#2		Ring#1 Ring#2	
CL # 1		7.3 11.5		6.0 12.0	IN.
Performed : 04-Aug-2015		Time : 10:29			
Sensor Suite : MSTDA-NI		ID : MST-DA-057			
Internal					
	Measured		Calibrated		Units
	Zero Reference	Units	Zero Reference		
INV-V	292.9 30430.6		0.00 1536.00		MV
NOR-V	165.6 30359.9		0.00 1636.00		MV
IN-C	164.8 30678.0		0.00 15.46		UA

IN-C	164.0	30678.0		0.00	15.46	UA
INV-R					32.14	OHMM
NOR-R					58.31	OHMM
Performed : 04-Aug-2015			Time : 10:31			
Sensor Suite : MSTDAMSF			ID : MST-DA-057			
Internal						
	Measured			Calibrated		
	Zero	Reference	Units	Zero	Reference	Units
MSFC	19.3	42591.5		0.00	1522.00	UA
MSFB	32762.0	52824.9		0.00	1522.00	MA
MOM1	0.0	42310.8		0.00	1522.00	MV
MSFRA					43.30	OHMM



Tucker
ENERGY SERVICES

Company: VAL ENERGY INC.

Well: K&N #1-10

Location: 480' FNL & 2300' FWL

Logged: 10-07-2015

K.B. Elev: 1342.0 Ft