

Tucker
ENERGY SERVICES

COMPENSATED NEUTRON

PEL DENSITY LOG

Company RUNNING FOXES PETROLEUM
Well WUNDERLY #11-36B-2
Field BOURBON
Country KANSAS
State USA
Country USA
API No. 15-011-23957

File No : TUL- 56902
Company : RUNNING FOXES PETROLEUM
Well : WUNDERLY #11-36B-2
Field :
Country : BOURBON
State : KANSAS
Country : USA
API No : 15-011-23957

Location :
2460' FSL & 1485" FWL
NW NW NE SW

LSD : Sect : 36 Twp : 24S Rge : 23E

Permanent Datum:	GL	Elevations:	KB	0.00	Ft	Services:	CNT
Drilling Measured From:	GL	DF	0.00	Ft	LDT	PLT	
Log Measured From:	GL	GL	896.00	Ft			
Above Permanent Datum:	0.00	Ft					
Date	2012-07-02						
Run Number	1						
Depth--Driller	570.0	Ft					
Depth--Logger	559.0	Ft					
First Reading	536.0	Ft					
Last Reading	20.0	Ft					
Casing--Driller	20.0	Ft					
Casing--Logger	20.0	Ft					
Bit Size	6.250	In					
Casing Size	8.625	In					
Hole Fluid Type	FRESH / NATIVE						
Density	0.0 LBS/GAL						
Fluid Loss	0.0 CC						
PH/Viscosity	0.0 @ 85 SEC						
Sample Source	MEASURED						
RM@Measured Temp.	10.000 @ 85 F						
RMF@Measured Temp	8.500 @ 85 F						
RMG@Measured Temp.	11.500 @ 85 F						
Source RMF/RMC	CALCULATED/CALCULATED						
RM@BHT	0.000 @ 85 F						
Time Circulation Stopped							
Max Recorded Temp.	85	F					
Equipment/Base	TRUCK 119	TULSA					
Recorded By	S. DAVIS						
Witnessed By	K. HODGES						

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)
6.250	559.00	8.625	30.00	20.00

Run Number	1		
Date	2012-07-02		
Date/Time On Bottom	2012-07-02 08:15		
Depth to Fluid	120.0	Ft	
Salinity	0.000	PPM	
RMF@BHT	0.000	@ 85 F	
RMC@BHT	0.000	@ 85 F	

Run Number 1

Comments

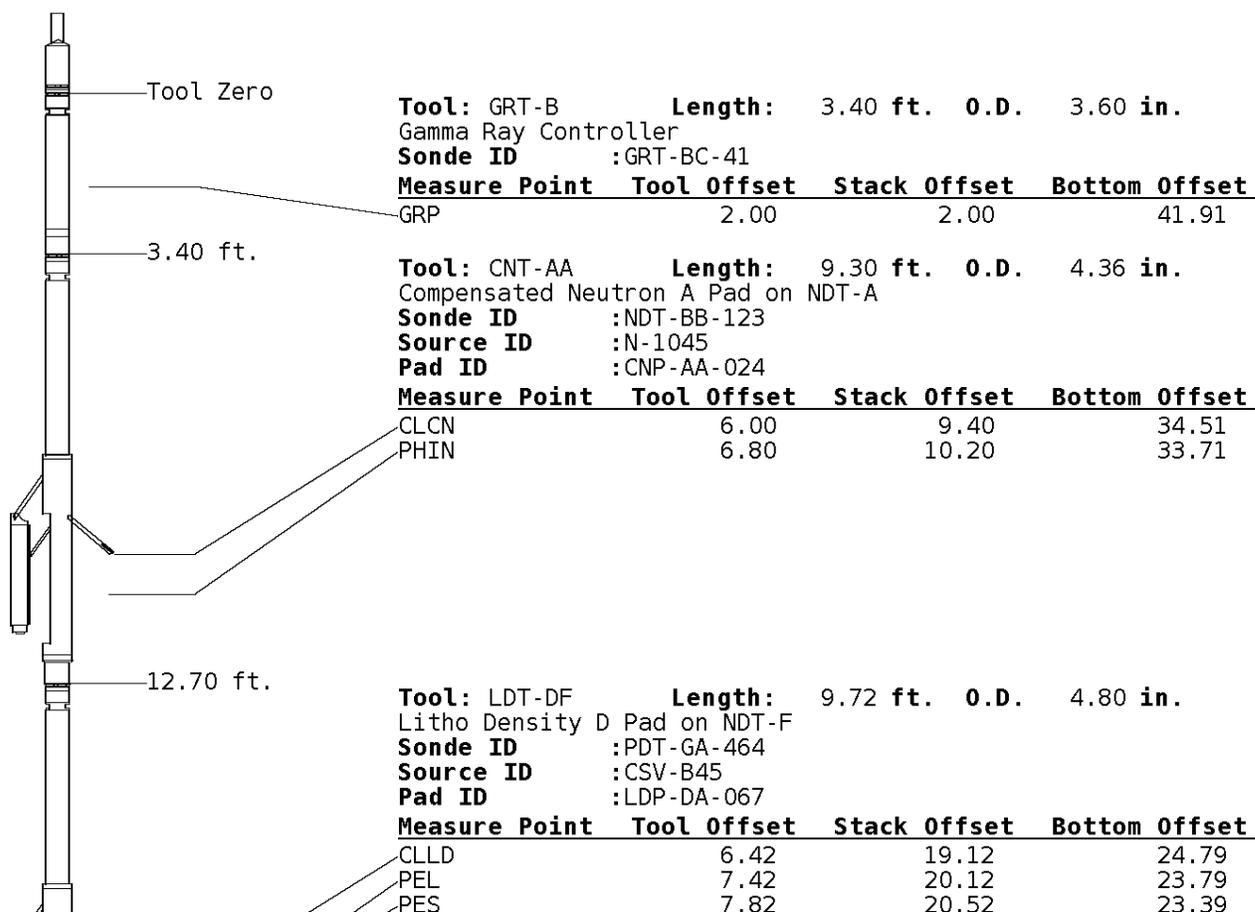
ALL PRESENTATIONS AS PER CUSTOMER REQUEST.
 GRT, CNT, LDT, AND PIT RUN IN COMBINATION.
 CALIPERS ORIENTED ON X-Y AXIS.
 2.71 G/CC USED TO CALCULATED POROSITY.
 ANNULAR HOLE VOLUME CALCULATED USING 2.875" PRODUCTION CASING.
 PHIN IS CALIPER CORRECTED.
 FLUID LEVEL @ 120'

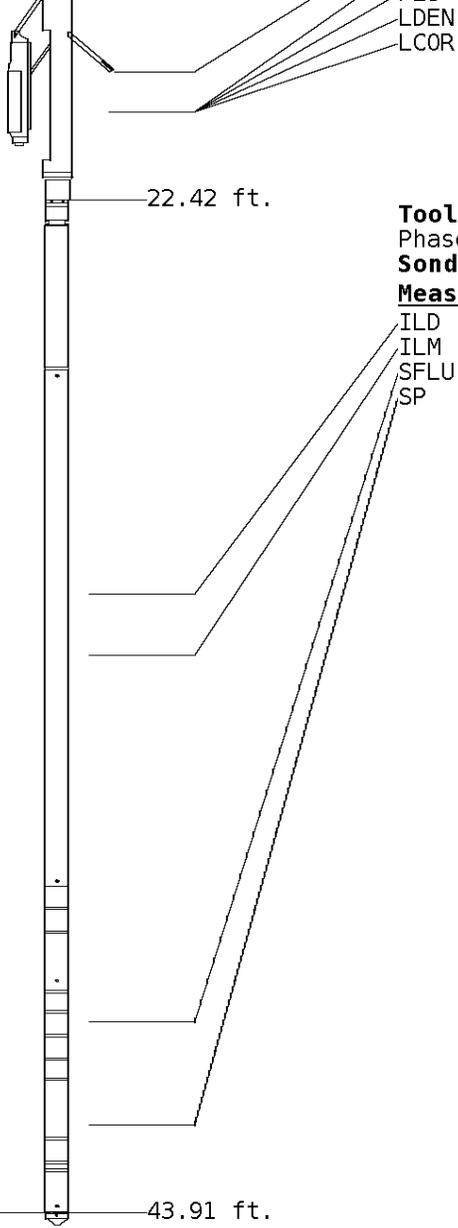
GRT: GRP.
 CNT: PHIN, CLCNIN
 LDT: PORL, LCORN, PECLN, LDENN, PORLLS, CLLDIN.
 PIT: ILD, ILM, SPU, SFLAEC.

OPERATORS:
 B. COWILL
 R. BAKE

Tool String Schematic

Total Tool Length - 43.91 ft.
Maximum Outside diameter - 4.80 in.
Net Weight in Air - 743.00 lbs.





7.62 20.32 23.59
7.62 20.32 23.59

Tool: PIT-CA **Length:** 21.49 ft. **O.D.** 3.62 in.
 Phased Dual Induction w/ RM & D
Sonde ID :PIT-AC-22

Measure Point	Tool Offset	Stack Offset	Bottom Offset
ILD	8.92	31.34	12.56
ILM	10.10	32.52	11.39
SFLU	17.49	39.91	4.00
SP	20.60	43.02	0.88

Well File: rfp-wun-11-36b-2-stk-jul-2

Scale: 1:240

Segment: V1.D1.S5 MN

Acquired: 2012-07/02 08:30 3.2.0-10932

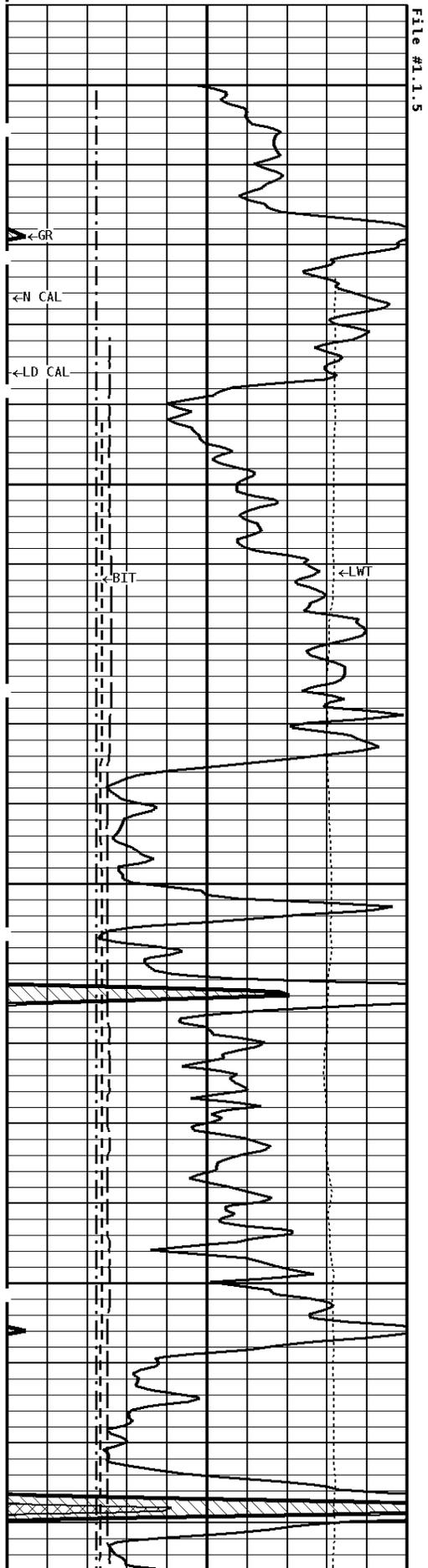
Reference: 0

Processed: 2012-07/02 08:50 3.2.0-10932

TENSION LBS	
10000	0
BIT SIZE INCHES (IN)	
4	14
DENSITY (X) CALIPER INCHES (IN)	
14	24
4	14
NEUTRON (Y) CALIPER INCHES (IN)	
14	24
4	14
GAMMA RAY API UNITS	
200	400
0	200

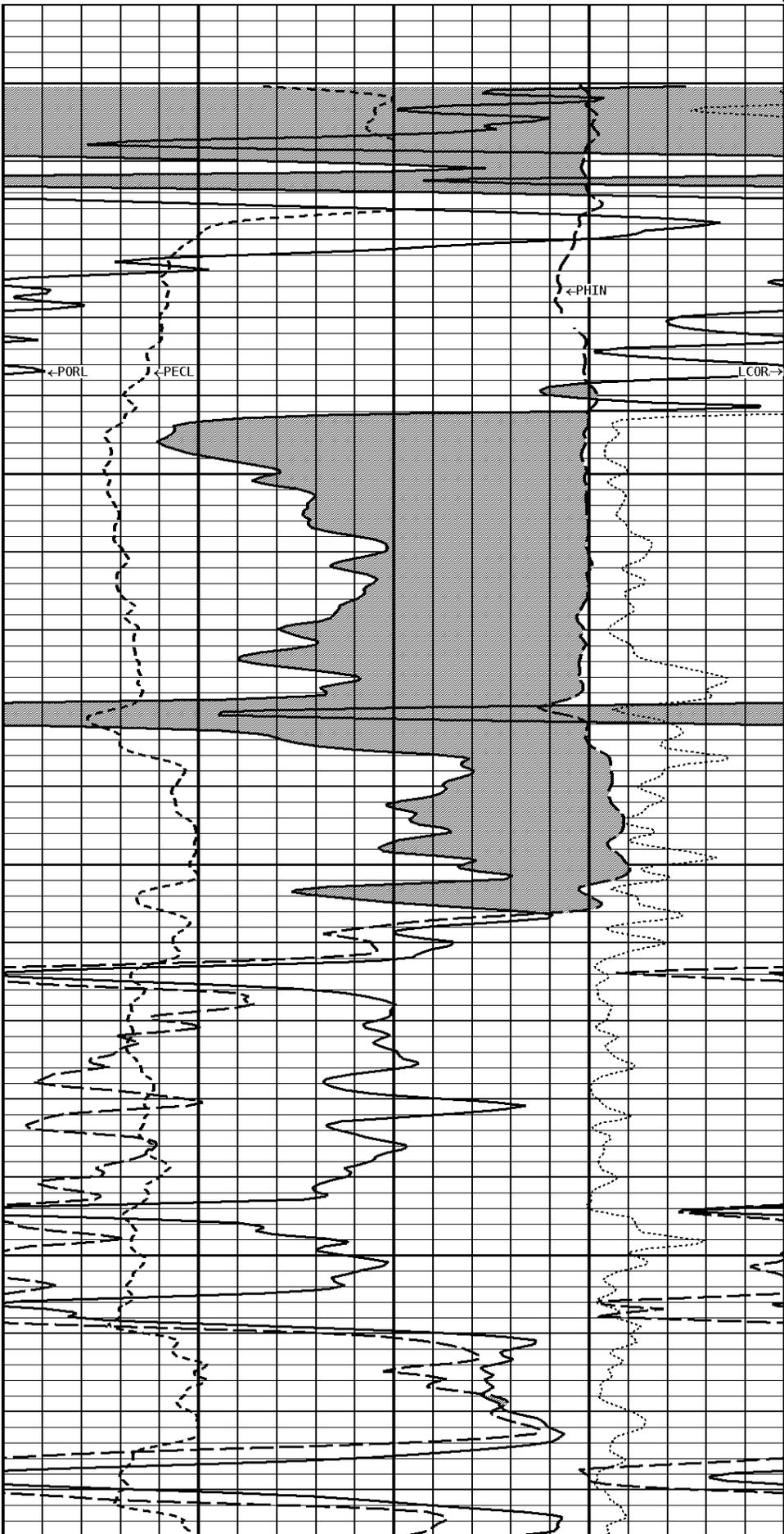
PE CROSS-SECTION BARNs/ELECTRON		DENSITY CORRECTION G/CC	
0	10	-0.25	0.25
NEUTRON POROSITY PERCENT (LIMESTONE MATRIX)			
70			30
30			-10
-10			-50
DENSITY POROSITY PERCENT (2.71 g/cc)			
70			30
30			-10
-10			-50

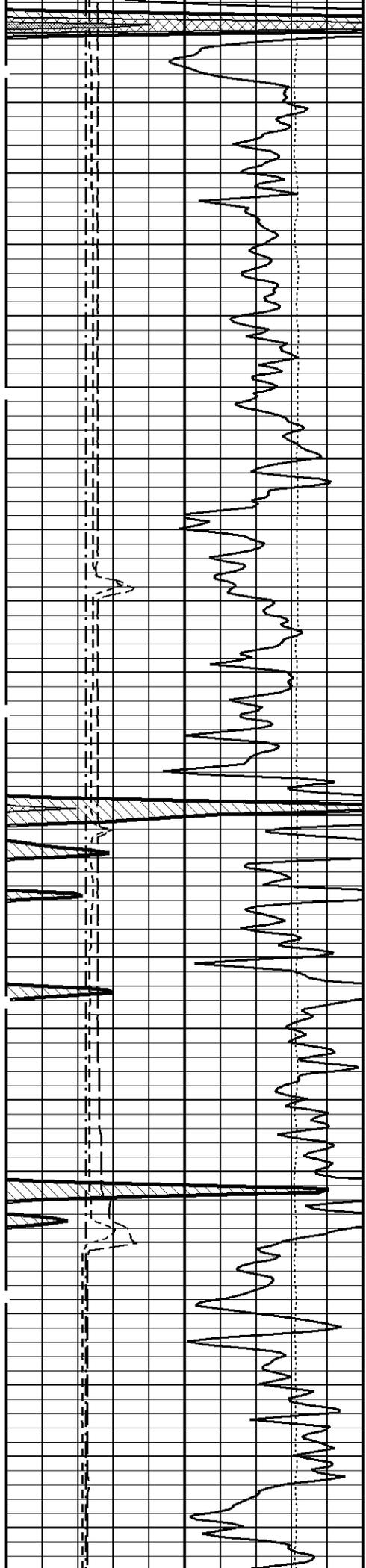
1:240 MAIN SECTION



000

100

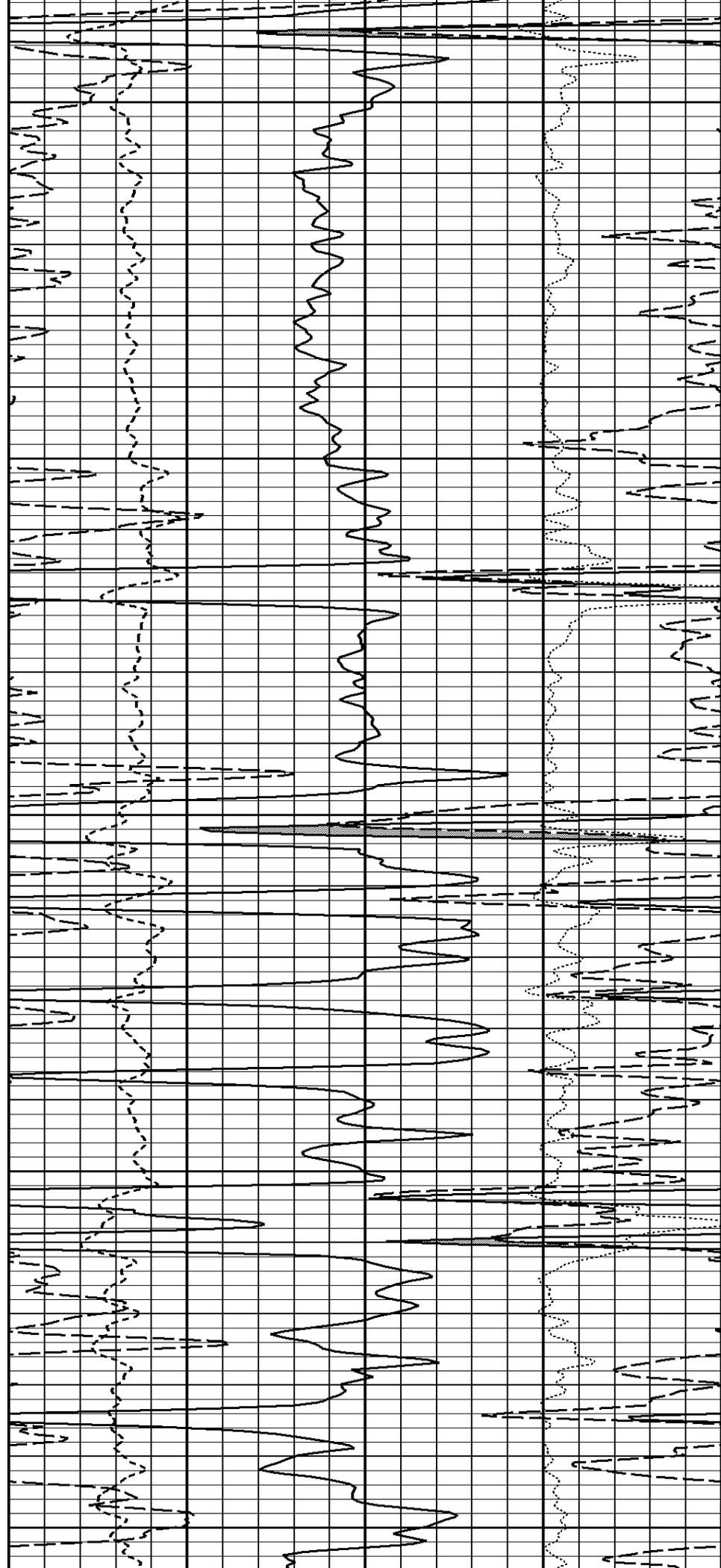


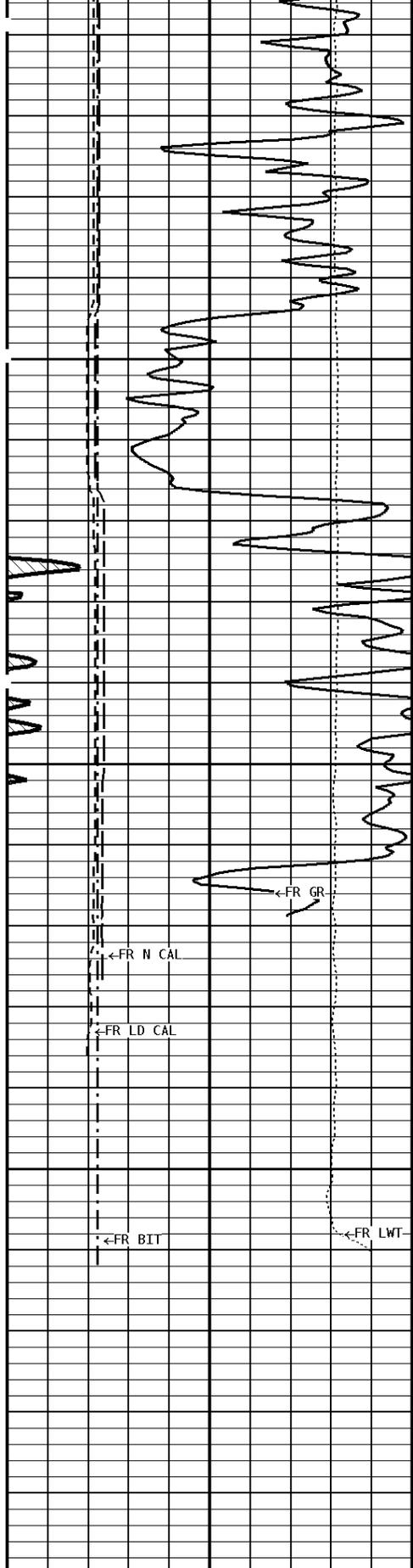


200

300

400

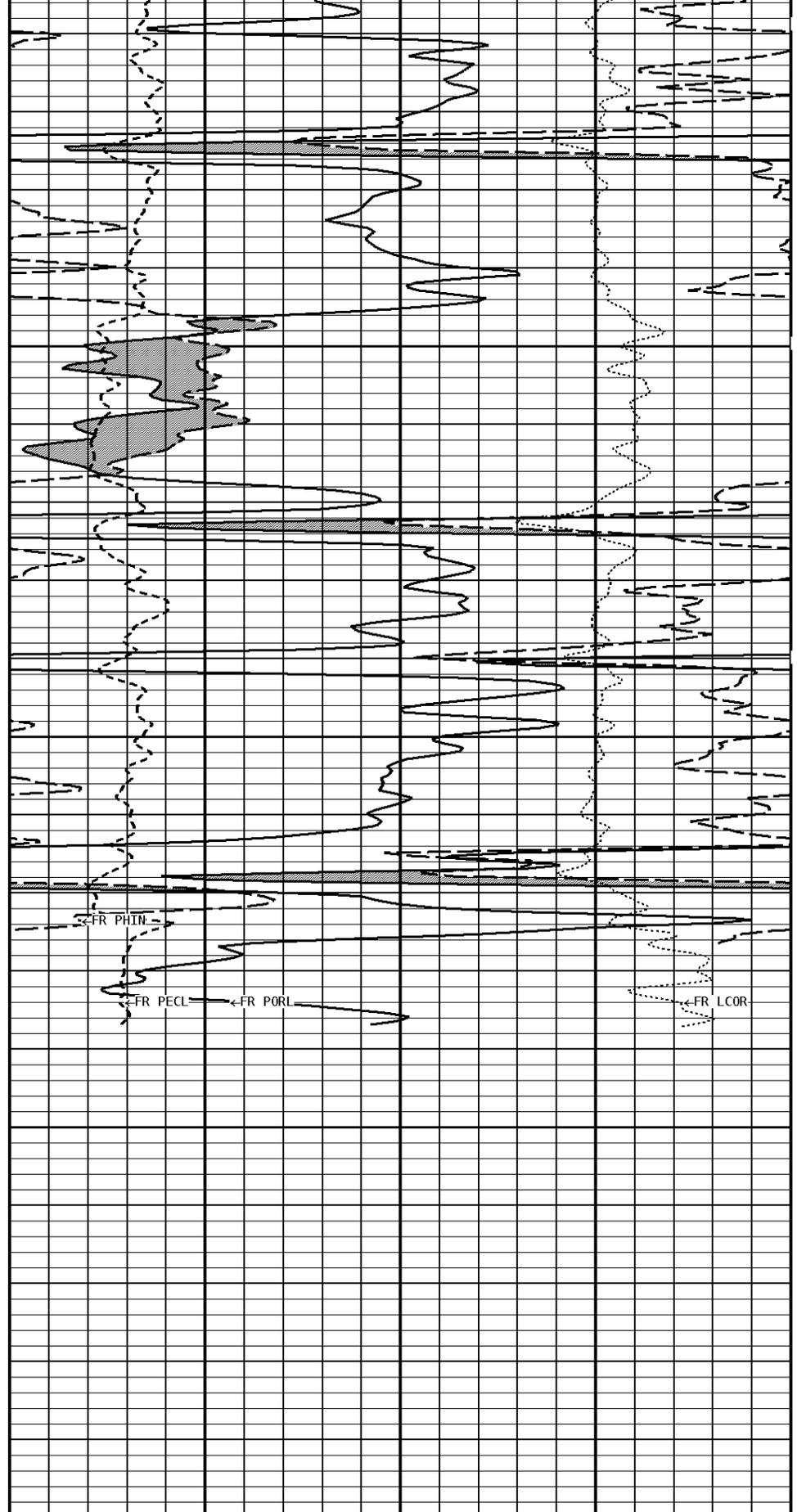




File #1.1.5

500

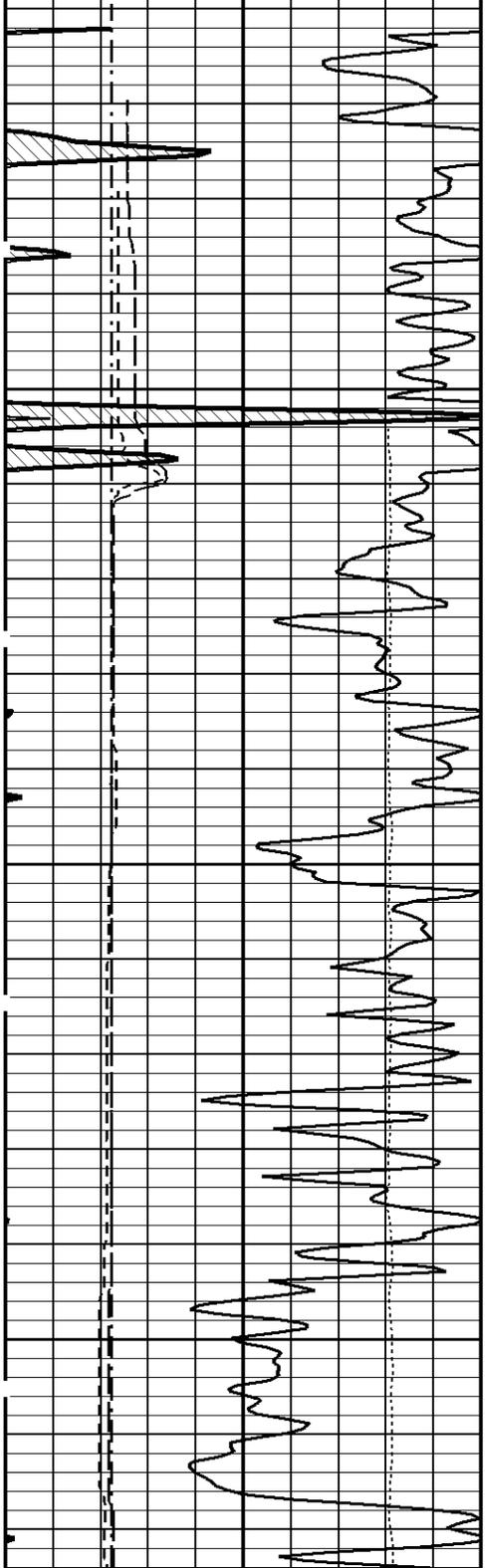
559



1:240 MAIN SECTION

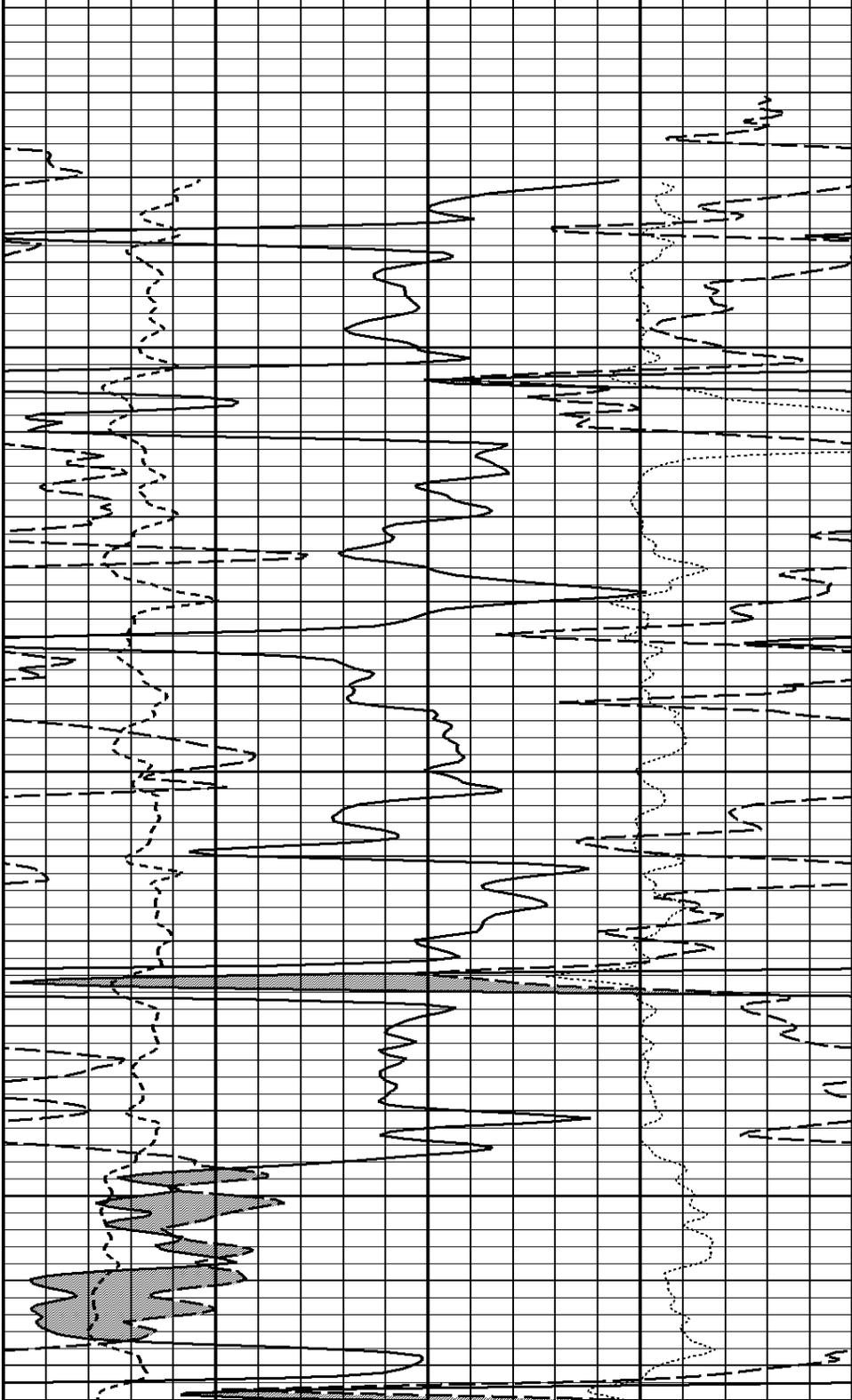
GAMMA RAY

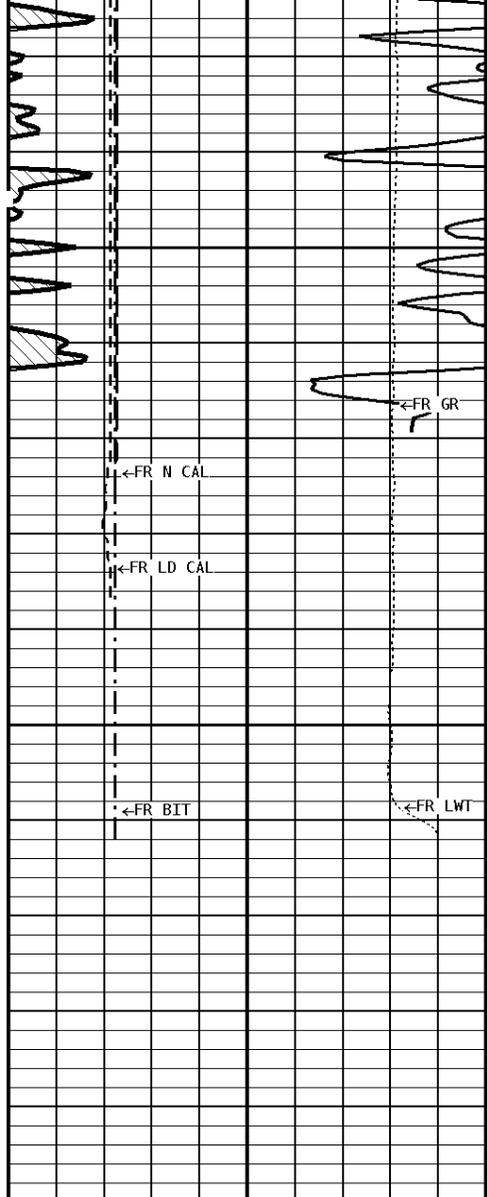
DENSITY POROSITY



300

400

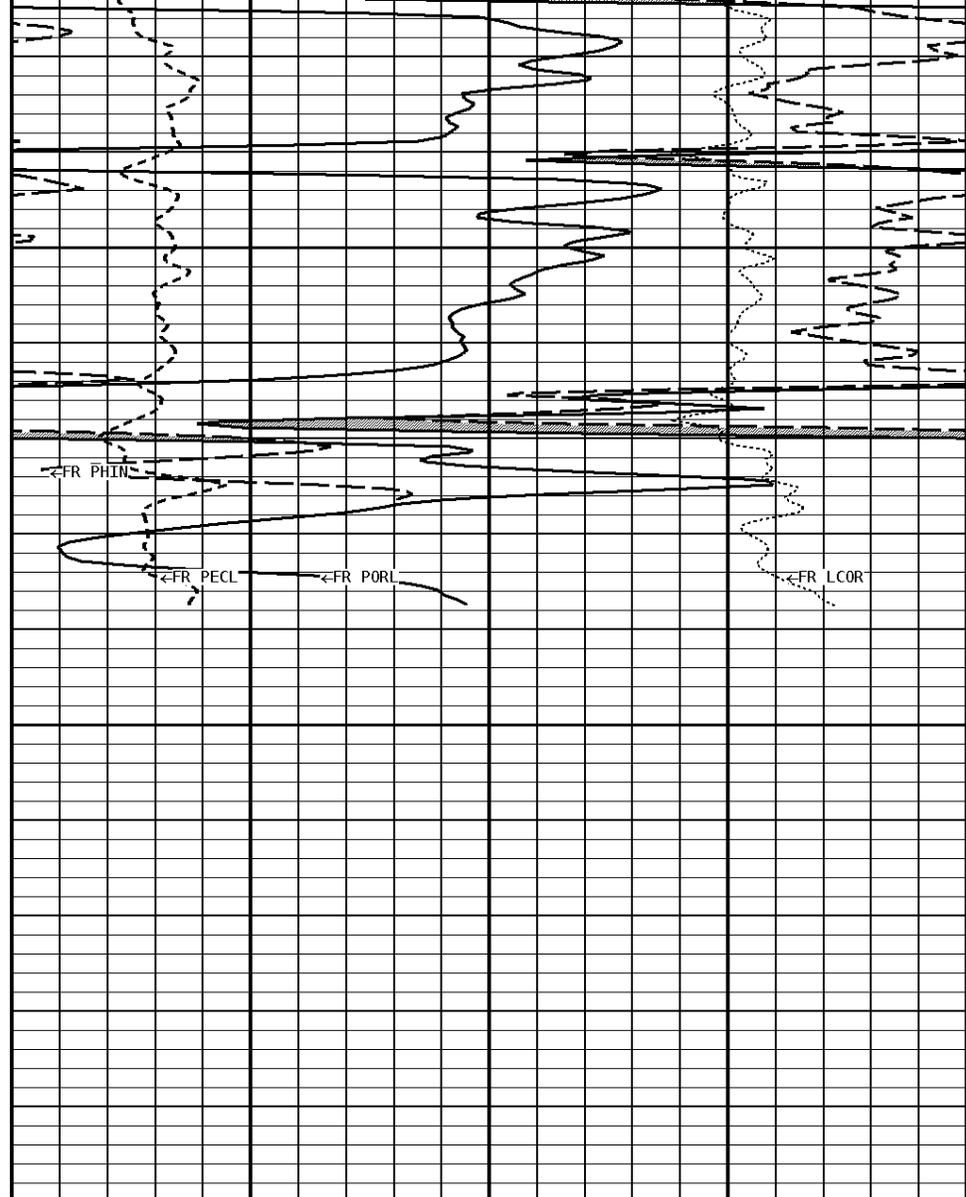




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1:240 REPEAT SECTION

GAMMA RAY API UNITS	
200 0	400 200
NEUTRON (Y) CALIPER INCHES (IN)	
14 4	24 14
DENSITY (X) CALIPER INCHES (IN)	
14 4	24 14
BIT SIZE INCHES (IN)	
4	14
TENSION LBS	
10000	0

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

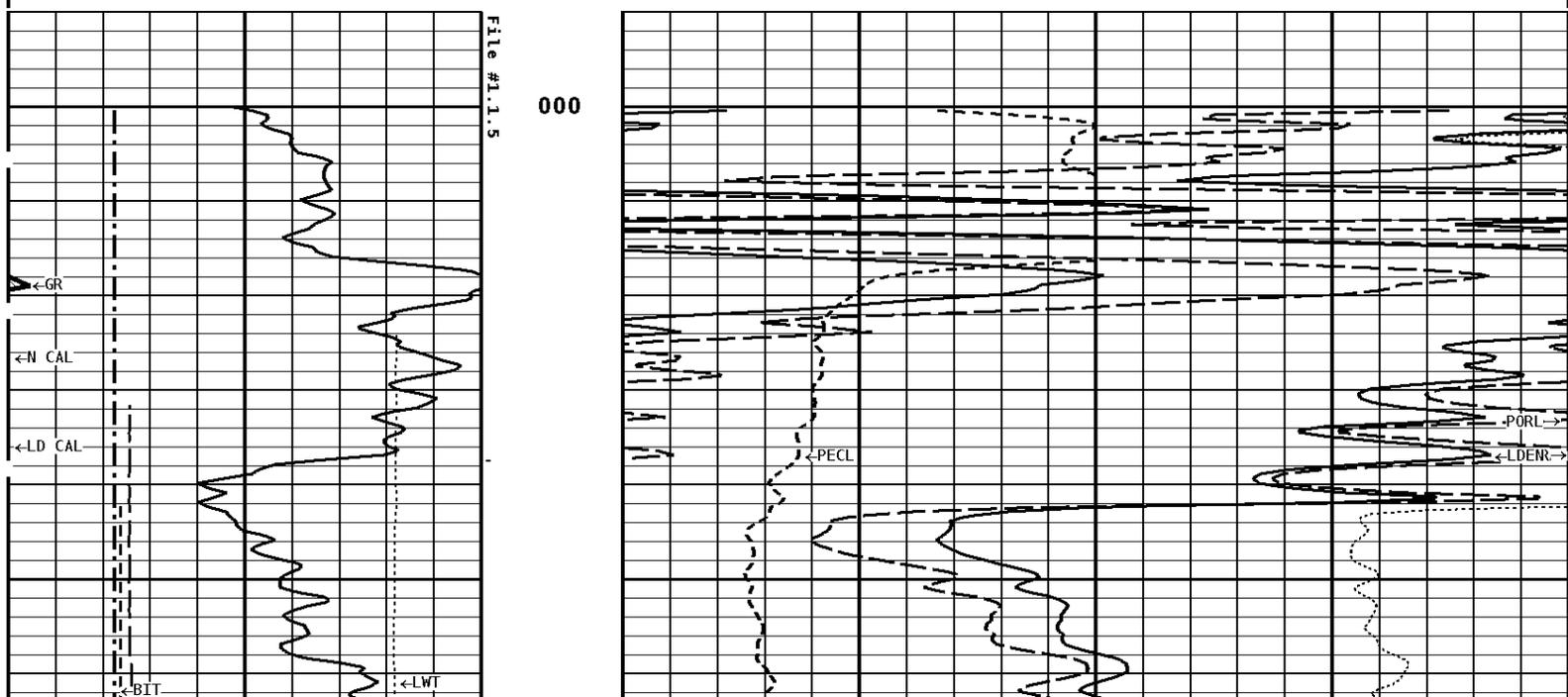
*** Borehole Zone Factors ***

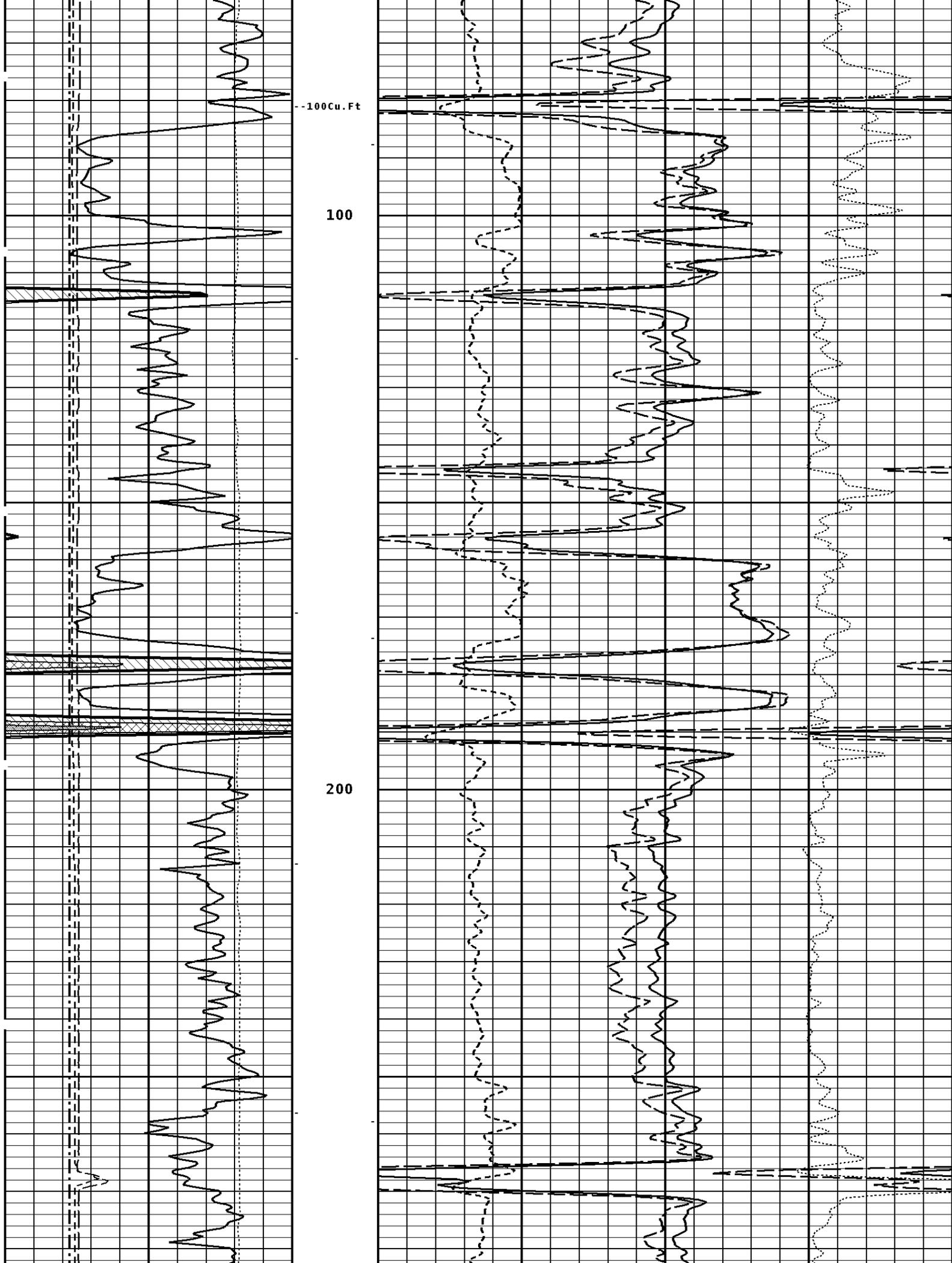
Zone 1 99999.0 to 0.0 Feet		
Matrix Density _____	2.71	g/cc
Fluid Density _____	1.00	g/cc
Formation Matrix _____	Limestone	
Drill Bit Size _____	6.250	in
Casing Diameter _____	4.500	in
Casing Correction (PHI N) _____	Disable	

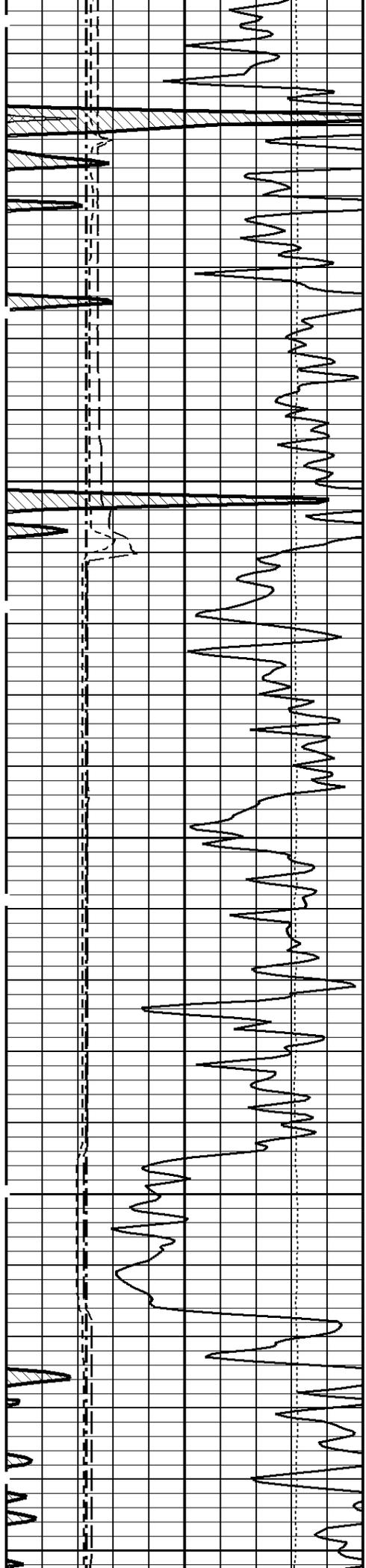
Well File: rfp-wun-11-36b-2-stk-jul-2	Scale: 1:240
Segment: V1.D1.S5 MN	Acquired: 2012-07/02 08:30 3.2.0-10932
Reference: 0	Processed: 2012-07/02 08:50 3.2.0-10932

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

1:240 MAIN SECTION BULK DENSITY



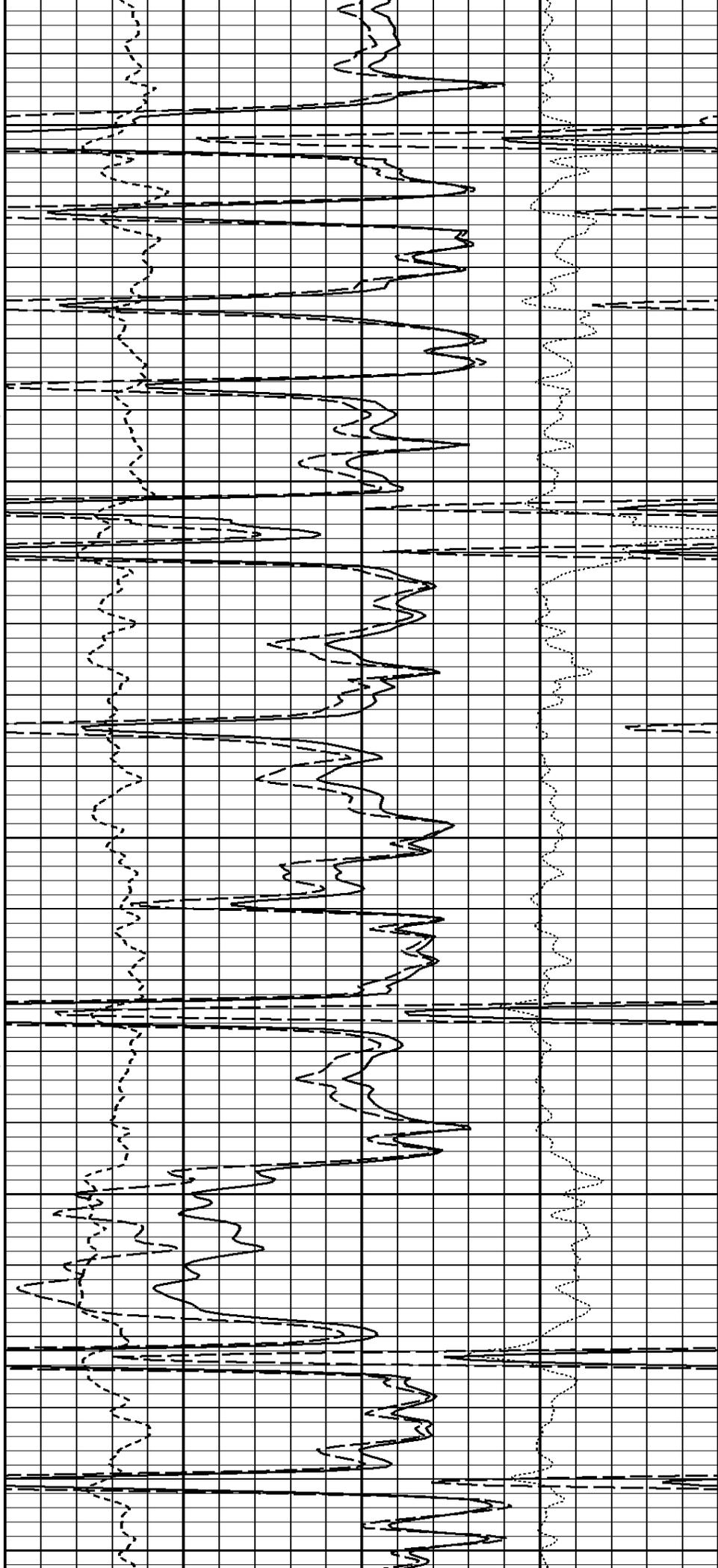


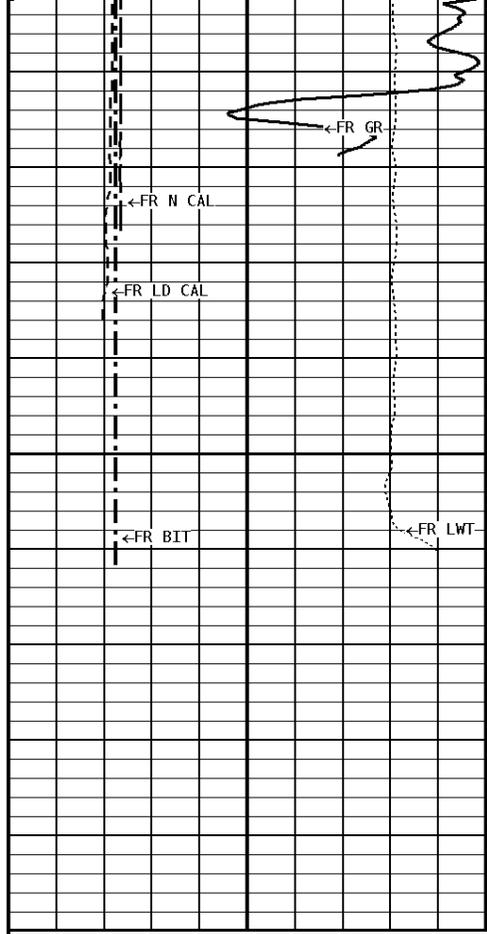


300

400

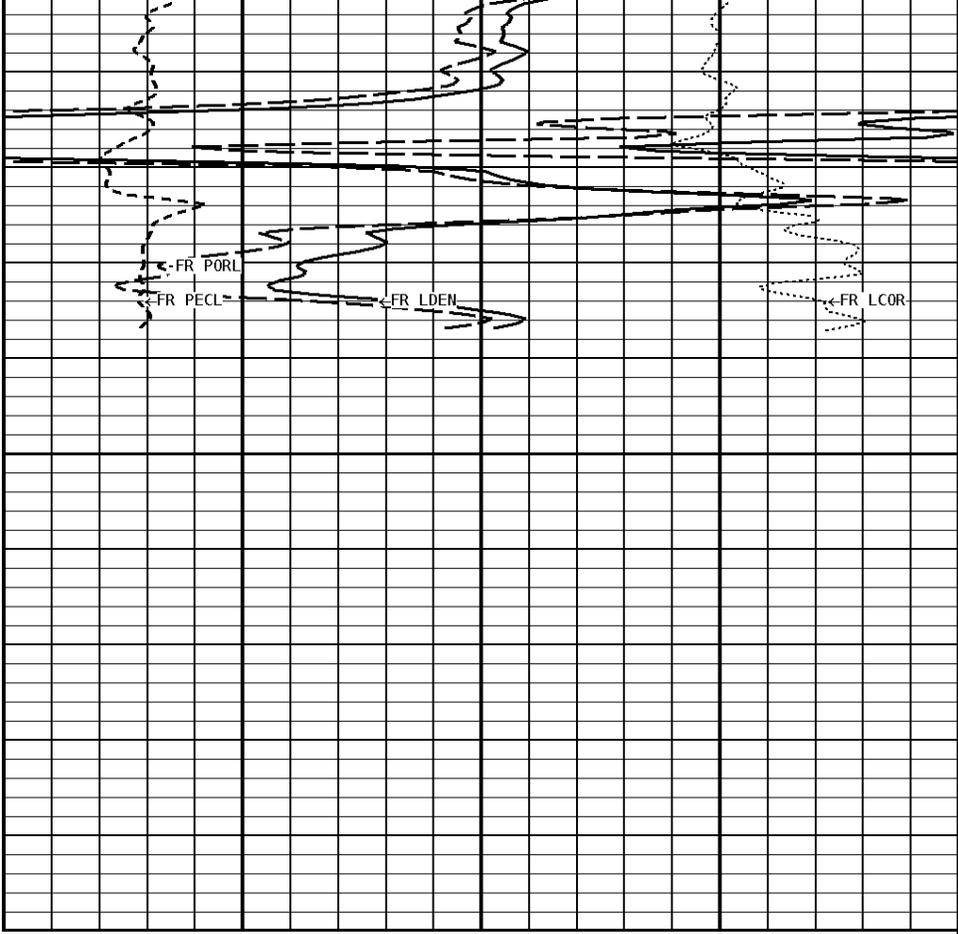
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**1:240 MAIN SECTION
BULK DENSITY**

GAMMA RAY API UNITS 200 0 400 0 200	
NEUTRON (Y) CALIPER INCHES (IN) 14 4 24 14	
DENSITY (X) CALIPER INCHES (IN) 14 4 24 14	
BIT SIZE INCHES (IN) 4 14	
TENSION LBS 10000 0	

-BHV AHV- CU. FT	COMPENSATED BULK DENSITY G/CC	
3.0 2.0 1.0		4.0 3.0 2.0
	DENSITY POROSITY PERCENT (2.71 g/cc)	
70 30 -10		30 -10 -50
	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	_____	6.250 in

*** Calibration Summary ***

Shop Calibration						
GRT-B						
Performed : 04-APR-2011			Time : 19:28			
Sensor Suite : GR-GR5			ID : GRT-BC-41			
	Measured	Units	Calibrated	Units		
GR	Background	Jig	Jig			
	46	346	175		GRAPI	
Shop Calibration						
CNT-AA						
Performed : 24-OCT-2011			Time : 08:41			
Sensor Suite : CALI-BCN			ID : NDT-BB-123			
	Jig - Measured	Units	Jig - Calibrated	Units		
	Ring#1 Ring#2		Ring#1 Ring#2			
CL # 1	6.8 12.8		6.0 12.0		IN.	
Shop Calibration						
LDT-DF						
Performed : 17-May-2012			Time : 12:59			
Sensor Suite : BHC NEUT			ID : CNP-AA-024			
Source ID : N-1045						
	Measured	Tank	Verification	Units		
N/F	3.8748	Calibrated	Jig			
Porosity	23.4	3.6893	3.6852		%	
		20.5	20.4			
Shop Calibration						
LDT-DF						
Performed : 01-MAR-2011			Time : 04:24			
Sensor Suite : CALI-LTH			ID : PDT-GA-464			
	Jig - Measured	Units	Jig - Calibrated	Units		
	Ring#1 Ring#2		Ring#1 Ring#2			
CL # 1	7.6 13.6		6.0 12.0		IN.	
Shop Calibration						
LDP-DA-067						
Performed : 17-May-2012			Time : 10:51			
Sensor Suite : BHCPELNG			ID : LDP-DA-067			
Source ID : CSV-B45						
Short Space						
	BKGD	Al	Mg	Al+Fe	Units	
LSW1	65	919	1491	593		CPS
LSW2	70	1027	1644	747		CPS
LSW3	256	2342	3792	1992		CPS
LSW4	308	2114	3072	1858		CPS
LSW5	42	61	63	58		CPS
LSW6	70	73	73	73		CPS
LSW7	52	55	55	54		CPS
LSW8	9	10	11	10		CPS
QS	0.144	0.134	0.137	0.144		
PES			2.778	5.967		
SSDN		2.600	1.680			G/CC
Long Space						
	BKGD	Al	Mg	Al+Fe	Units	
LLW1	94	1117	4649	667		CPS
LLW2	103	1826	7322	1336		CPS
LLW3	397	3225	12338	2778		CPS
LLW4	503	1553	4739	1418		CPS
LLW5	54	62	97	61		CPS
LLW6	172	169	157	166		CPS
LLW7	105	103	100	105		CPS
LLW8	3	5	14	5		CPS
QL	0.243	0.241	0.221	0.226		
PEL			2.697	5.458		
LSDN		2.600	1.680			G/CC