

**Tucker**  
WIRELINE SERVICES

COMPENSATED NEUTRON

PEL DENSITY LOG

Company: RUNNING FOXES PETROLEUM,  
Well: GROSS #11-6A-2  
Field: DEVON  
Country: BOURBON  
State: KANSAS  
Country: USA  
API No.: 15-011-23791

File No.: TUL-57537  
Company: RUNNING FOXES PETROLEUM, INC  
Well: GROSS #11-6A-2  
Field: DEVON  
Country: BOURBON  
State: KANSAS  
Country: USA  
API No.: 15-011-23791

Location:  
2,440' FSL & 2,040' FWL  
NW NE NE SW

LSD: Sect: 6 Twp: 25S Rge: 24E

Permanent Datum: GL Elevations: KB 0.00 Ft CNT  
Drilling Measured From: GL DF 0.00 Ft LDT  
Log Measured From: GL DF 0.00 Ft PIT  
Above Permanent Datum: 0.00 Ft GL 897.00 Ft

Date	2011-10-21	
Run Number	1	
Depth--Driller	515.0	Ft
Depth--Logger	511.0	Ft
First Reading	489.0	Ft
Last Reading	15.0	Ft
Casing--Driller	15.0	Ft
Casing--Logger	15.0	Ft
Bit Size	5.875	In
Casing Size	7.000	In
Hole Fluid Type	WATER	
Density	0.0 LBS/GAL	
Fluid Loss	0.0 CC	
PH/Viscosity	0.0 @ 0.0 SEC	
Sample Source	MEASURED	
RM@Measured Temp.	10.000	@ 52 F
RMF@Measured Temp	8.000	@ 52 F
RMG@Measured Temp.	12.000	@ 52 F
Source RMF/RMG	CALCULATED/CALCULATED	
RM@BHT	7.123	@ 73 F
Time Circulation Stopped	2011-10-21 08:30	
Max Recorded Temp.	73	F
Equipment/Base	TRK 127	TULSA
Recorded By	R. AUSTIN	
Witnessed By	A. GREENE	

The customer is hereby warned that by providing the log data herein, T. W. S. does not agree to provide any interpretation of log data, conversion of log data to physical rock parameters or recommendations. T. W. 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. W. 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. W. 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)
5.875	515.00	7.000	30.00	15.00

Run Number	1	
Date	2011-10-21	
Date/Time On Bottom	2011-10-21 10:45	
Depth to Fluid	0.0	Ft
Salinity	0.000	PPM
RMF@BHT	5.698	@ 73 F
RMC@BHT	8.547	@ 73 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 UISING 2.875" PRODUCTION CASING.

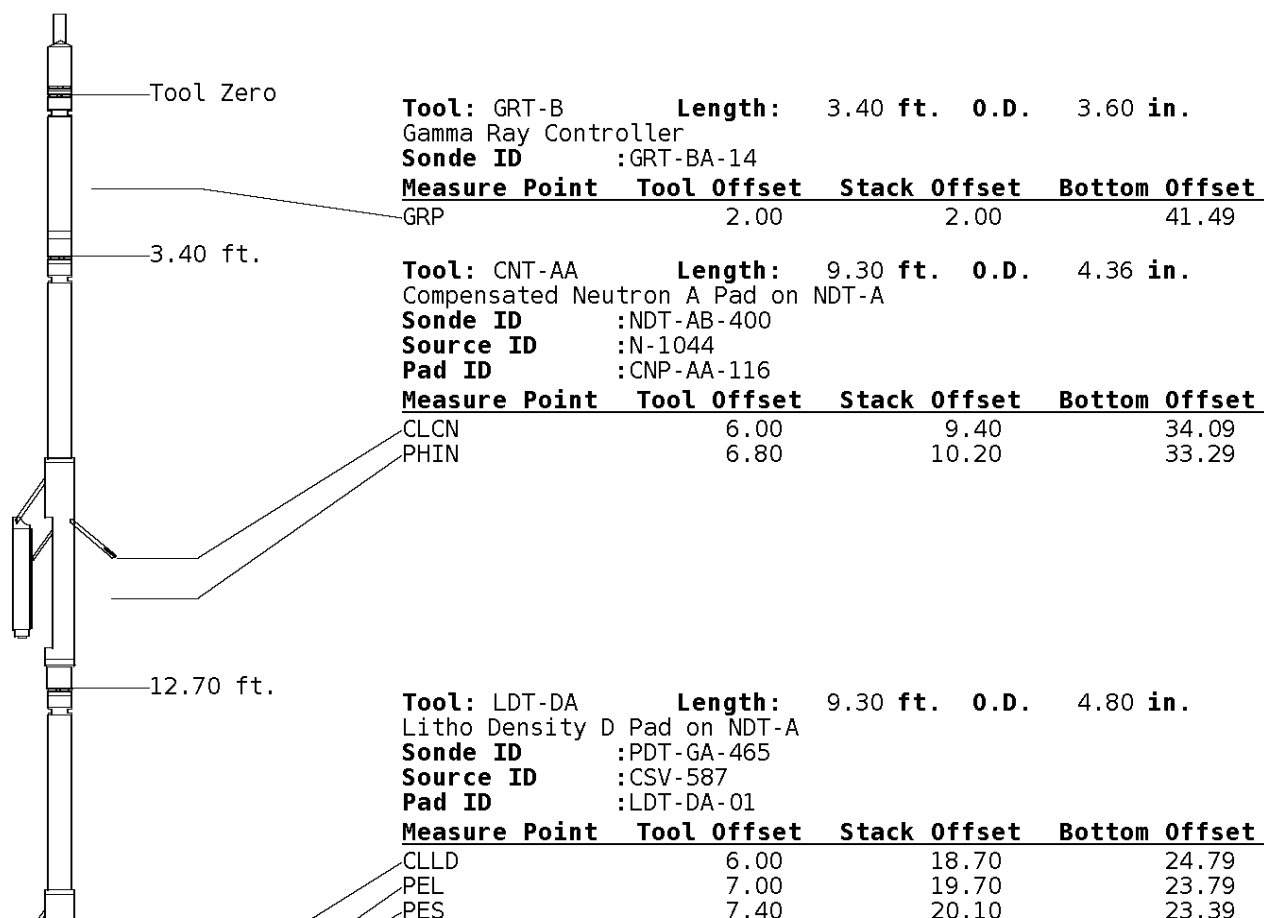
GRT: GRP.  
 CNT: PHIN, CLCNIN  
 LDT: PORL, LCORN, PECLN, LDENN, PORLLS, CLLDIN.  
 PIT: ILD, ILM, SPU, SFLAEC

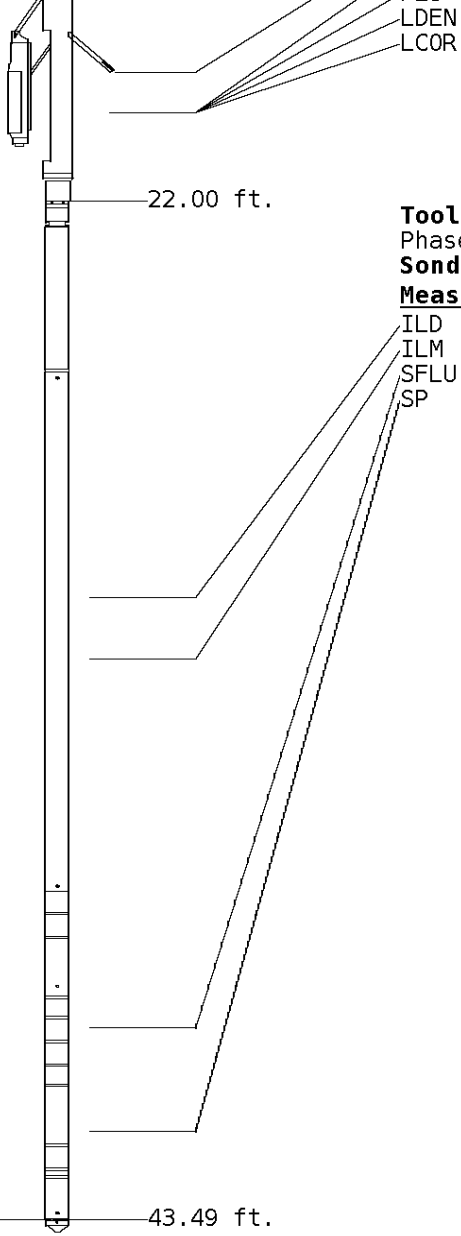
OPERATORS:

M.BURKE  
 M.GARNER

### Tool String Schematic

**Total Tool Length** - 43.49 ft.  
**Maximum Outside diameter** - 4.80 in.  
**Net Weight in Air** - 743.00 lbs.





LDEN 7.20 19.90 23.59  
 LCOR 7.20 19.90 23.59

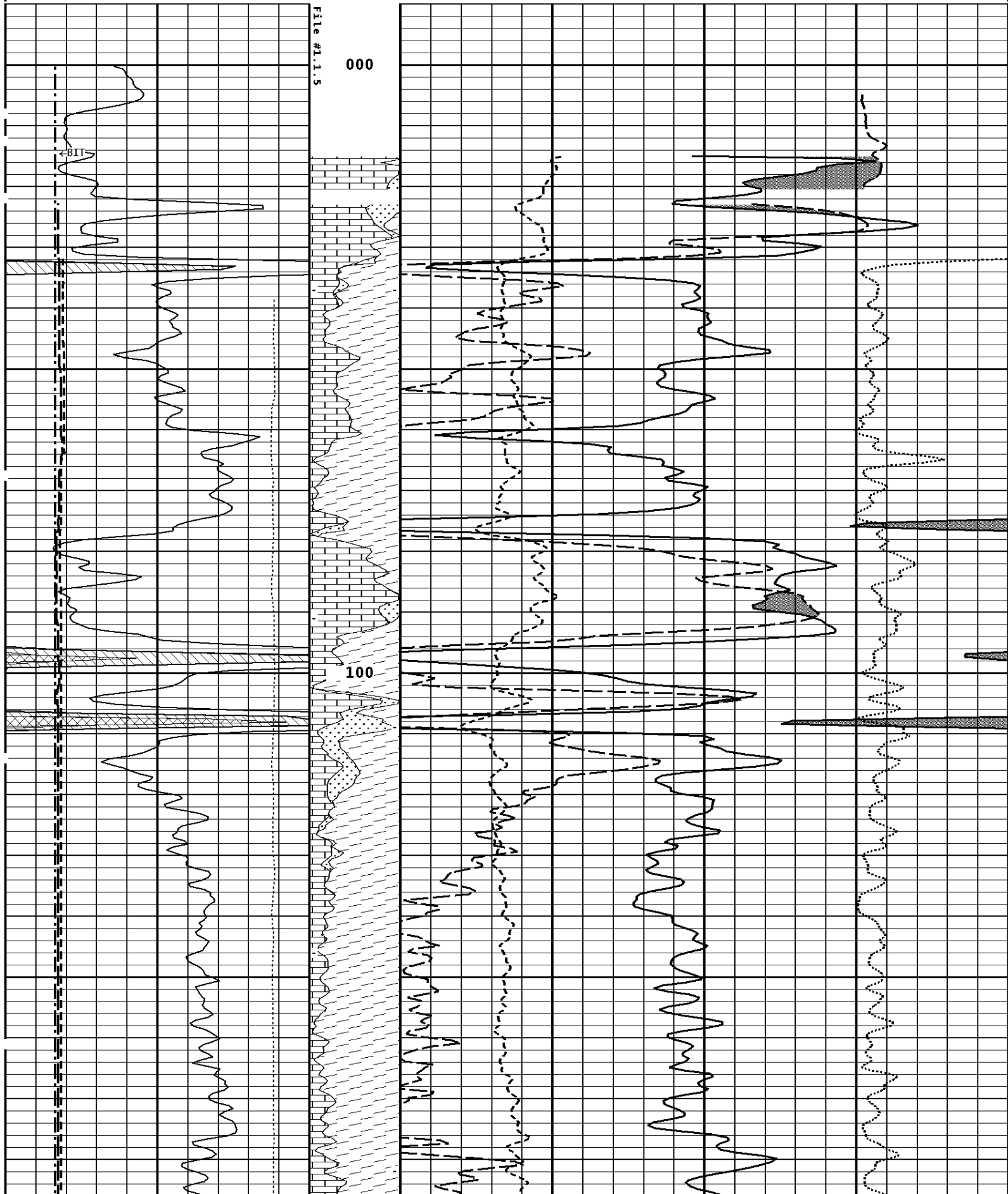
**Tool:** PIT-CA      **Length:** 21.49 ft.    **O.D.** 3.62 in.  
 Phased Dual Induction w/ RM & D  
**Sonde ID** :PIT-AB-18

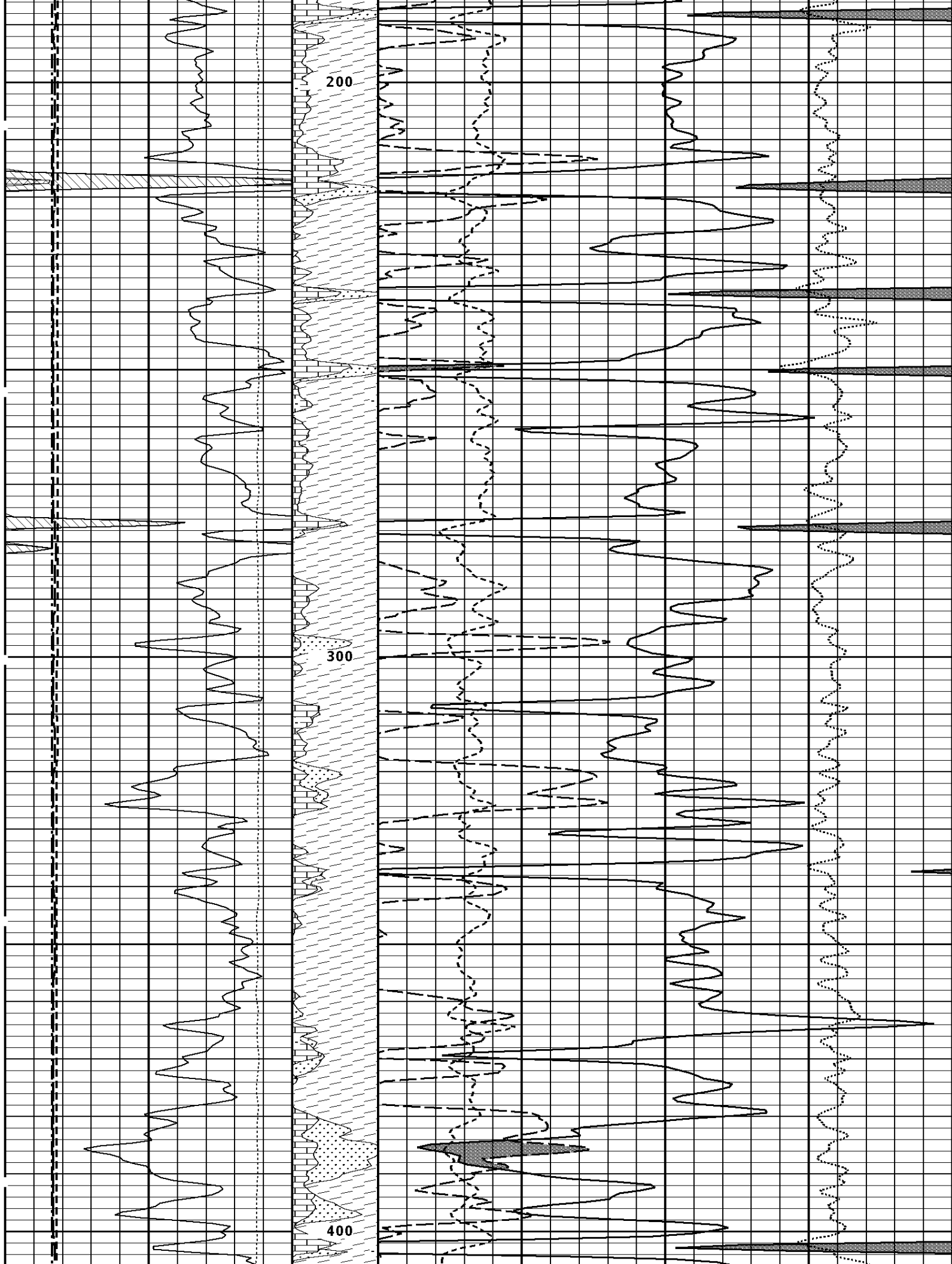
Measure Point	Tool Offset	Stack Offset	Bottom Offset
ILD	8.92	30.92	12.56
ILM	10.10	32.10	11.39
SFLU	17.49	39.49	4.00
SP	20.60	42.60	0.88

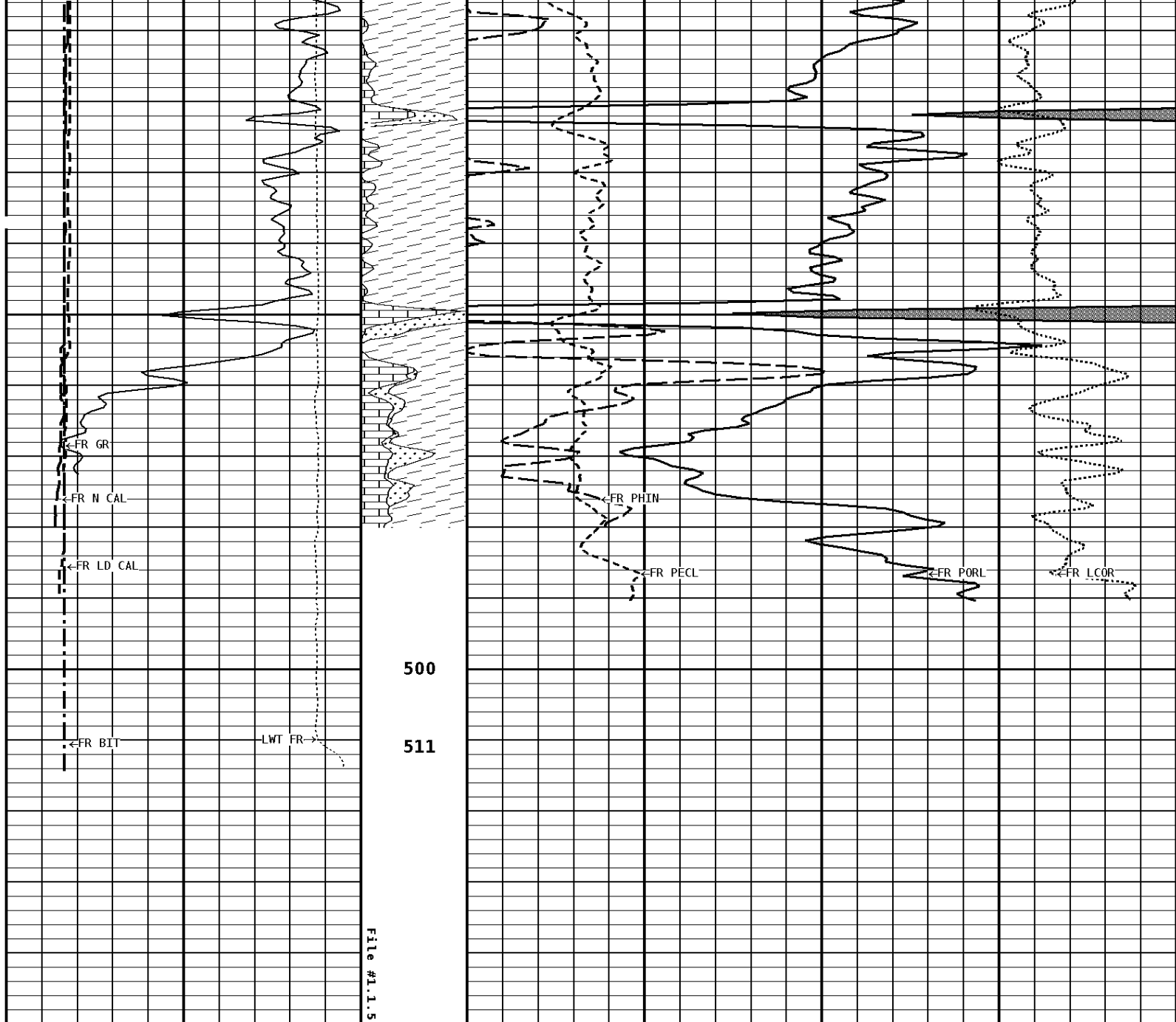
**Well File:** RFP\_GROSS 11-6A-2 OCT21\_STK      **Scale:** 1:240  
**Segment:** V1.D1.S5 Reprocess of MAIN      **Acquired:** 2011-10/21 10:52 3.2.0-10220  
**Reference:** 0      **Processed:** 2011-10/21 11:11 3.2.0-10220

<b>TENSION LBS</b>			
10000	0		
<b>BIT SIZE INCHES (IN)</b>		Volume Dolo/Shale	
4	14		
<b>DENSITY (X) CALIPER INCHES (IN)</b>		Volume Quartz	<b>PE CROSS-SECTION BARNs/ELECTRON</b>
14	24		<b>DENSITY CORRECTION G/CC</b>
4	14	0	10 -0.25 0.25
<b>NEUTRON (Y) CALIPER INCHES (IN)</b>		Volume Calcite	<b>NEUTRON POROSITY PERCENT (LIMESTONE MATRIX)</b>
14	24		
4	14	30	-10
<b>GAMMA RAY API UNITS</b>		- BHV AHV - CU. FT	<b>DENSITY POROSITY PERCENT (2.71 g/cc)</b>
200	400		
0	200	70	30
		30	-10
		-10	-50

# 1:240 MAIN SECTION







**1:240 MAIN SECTION**

<b>GAMMA RAY</b> <b>API UNITS</b> 200 0 400 200	-BHV AHV- CU.FT	<b>DENSITY POROSITY</b> <b>PERCENT (2.71 g/cc)</b>	
		70	30
<b>NEUTRON (Y) CALIPER</b> <b>INCHES (IN)</b> 14 4 24 14		<b>NEUTRON POROSITY</b> <b>PERCENT (LIMESTONE MATRIX)</b>	
Volume Calcite		30	-10
<b>DENSITY (X) CALIPER</b> <b>INCHES (IN)</b> 14 4 24 14		<b>PE CROSS-SECTION</b> <b>BARNS/ELECTRON</b>	
Volume Quartz		10	-0.25
<b>BIT SIZE</b> <b>INCHES (IN)</b>		<b>DENSITY CORRECTION</b> <b>G/CC</b>	
Volume DoLo/Shale			0.25

4	14
TENSION LBS	
10000	0

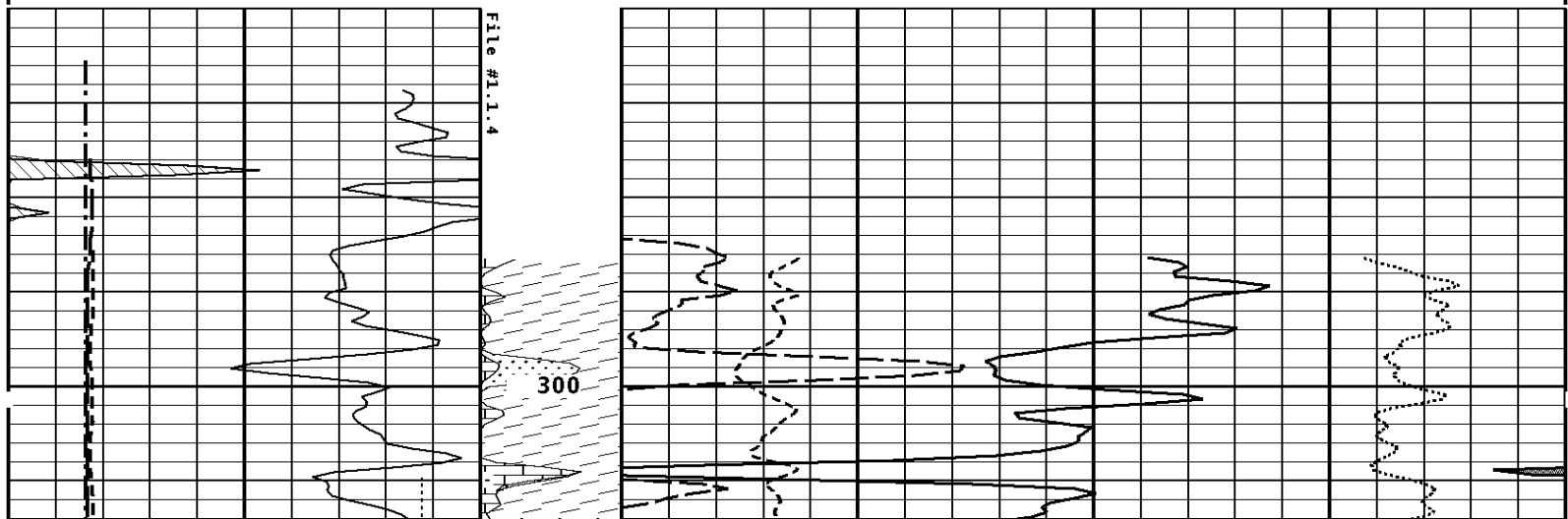
\* Borehole Zone Factors \*

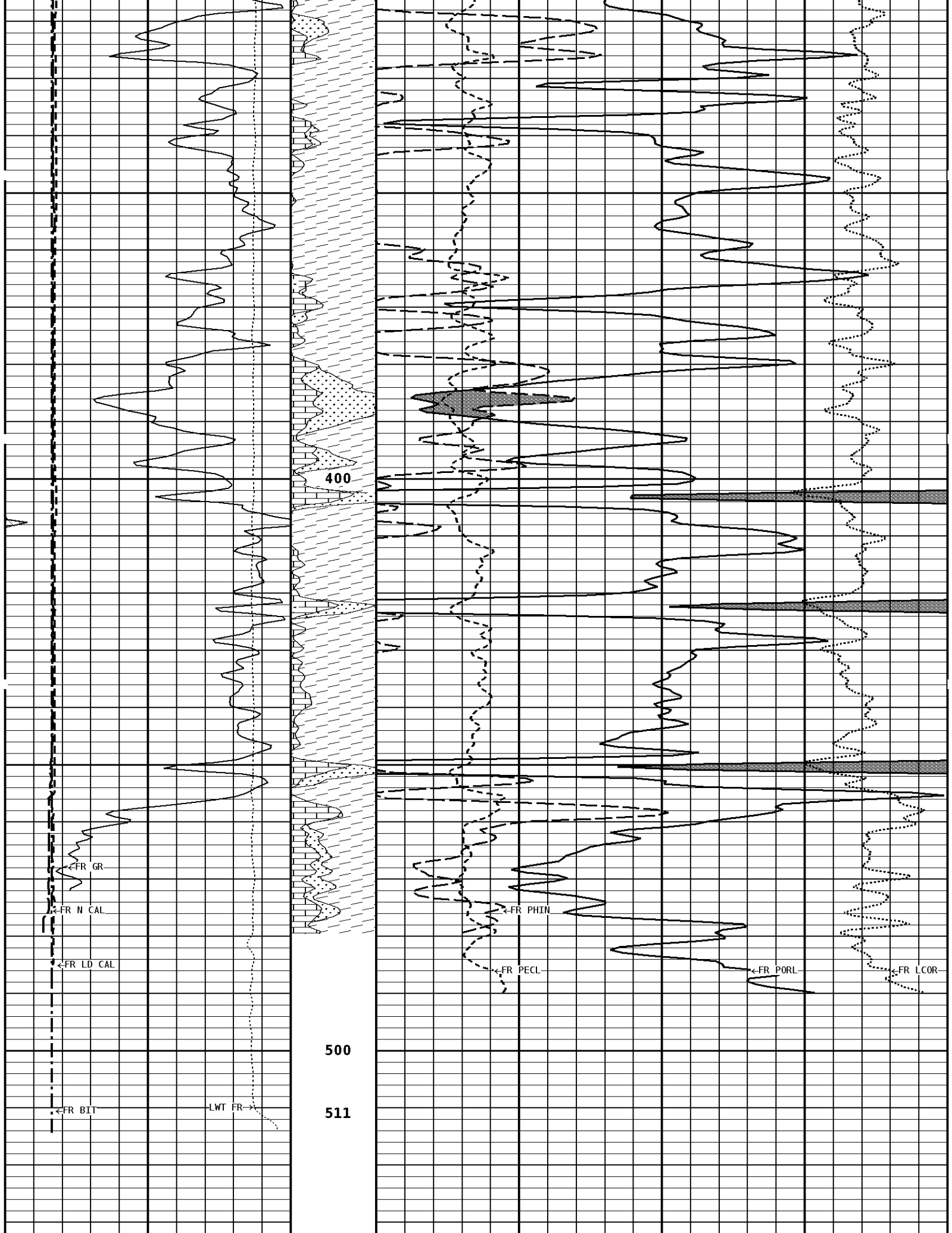
Zone 1 99999.0 to 0.0 Feet		
Matrix Density	2.71	g/cc
Fluid Density	1.00	g/cc
Formation Matrix	Limestone	
Drill Bit Size	5.625	in
Casing Diameter	2.875	in
Casing Correction (PHI N)	Disable	

Well File: RFP_GROSS 11-6A-2_OCT21_STK	Scale: 1:240
Segment: V1.D1.S4 Reprocess of REPEAT	Acquired: 2011-10/21 10:41 3.2.0-10220
Reference: 0	Processed: 2011-10/21 11:11 3.2.0-10220

TENSION LBS			
10000	0		
BIT SIZE INCHES (IN)		Volume Dolo/Shale	
4	14		
DENSITY (X) CALIPER INCHES (IN)		Volume Quartz	PE CROSS-SECTION BARNs/ELECTRON
14	24	0	10 -0.25 0.25
4	14		
NEUTRON (Y) CALIPER INCHES (IN)		Volume Calcite	NEUTRON POROSITY PERCENT (LIMESTONE MATRIX)
14	24	30	-10
4	14		
GAMMA RAY API UNITS		- BHV AHV - CU. FT	DENSITY POROSITY PERCENT (2.71 g/cc)
200	400	70	30
0	200	30	-10
		-10	-50

1:240 REPEAT SECTION





400

←FR GR

←FR N CAL

←FR LD CAL

←FR BIT

LWT FR→

500

511

←FR PHIN


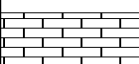
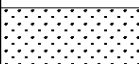
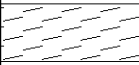
←FR PECL

←FR PORL

←FR LCOR

File #1.1.4

# 1:240 REPEAT SECTION

<b>GAMMA RAY API UNITS</b> 	- BHV AHV - CU. FT	<b>DENSITY POROSITY PERCENT (2.71 g/cc)</b>	
200 0		70 30 -10	30 -10 -50
<b>NEUTRON (Y) CALIPER INCHES (IN)</b>	Volume Calcite 	<b>NEUTRON POROSITY PERCENT (LIMESTONE MATRIX)</b>	
14 4	24 14	30	-10
<b>DENSITY (X) CALIPER INCHES (IN)</b>	Volume Quartz 	<b>PE CROSS-SECTION BARNS/ELECTRON</b>	<b>DENSITY CORRECTION G/CC</b>
14 4	24 14	0 10	-0.25 0.25
<b>BIT SIZE INCHES (IN)</b>	Volume DoLo/Shale 		
4	14		
<b>TENSION LBS</b>			
10000	0		

**\* Borehole Zone Factors \***

<b>Zone 1 99999.0 to 0.0 Feet</b>	
Matrix Density _____	2.71 g/cc
Fluid Density _____	1.00 g/cc
Formation Matrix _____	Limestone
Drill Bit Size _____	5.625 in
Casing Diameter _____	2.875 in
Casing Correction (PHI N) _____	Disable

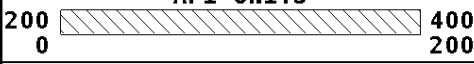
<b>Well File:</b> RFP_GROSS 11-6A-2_OCT21_STK	<b>Scale:</b> 1:240
<b>Segment:</b> V1.D1.S5 Reprocess of MAIN	<b>Acquired:</b> 2011-10/21 10:52 3.2.0-10220
<b>Reference:</b> 0	<b>Processed:</b> 2011-10/21 11:11 3.2.0-10220

<b>TENSION LBS</b> 10000 ----- 0	
<b>BIT SIZE INCHES (IN)</b> 4 ----- 14	
<b>DENSITY (X) CALIPER INCHES (IN)</b> 14 ----- 24 4 ----- 14	<b>PE CROSS-SECTION BARNS/ELECTRON</b>
<b>NEUTRON (Y) CALIPER INCHES (IN)</b> 14 ----- 24 4 ----- 14	<b>DENSITY CORRECTION G/CC</b>
	0 ----- 10 -0.25 ----- 0.25
	<b>DENSITY POROSITY PERCENT (2.71 g/cc)</b>
	70 ----- 30 -10 ----- -50
<b>GAMMA RAY</b>	<b>COMPENSATED BULK DENSITY</b>

GAMMA RAY  
API UNITS

-BHV ARV-  
CU. FT

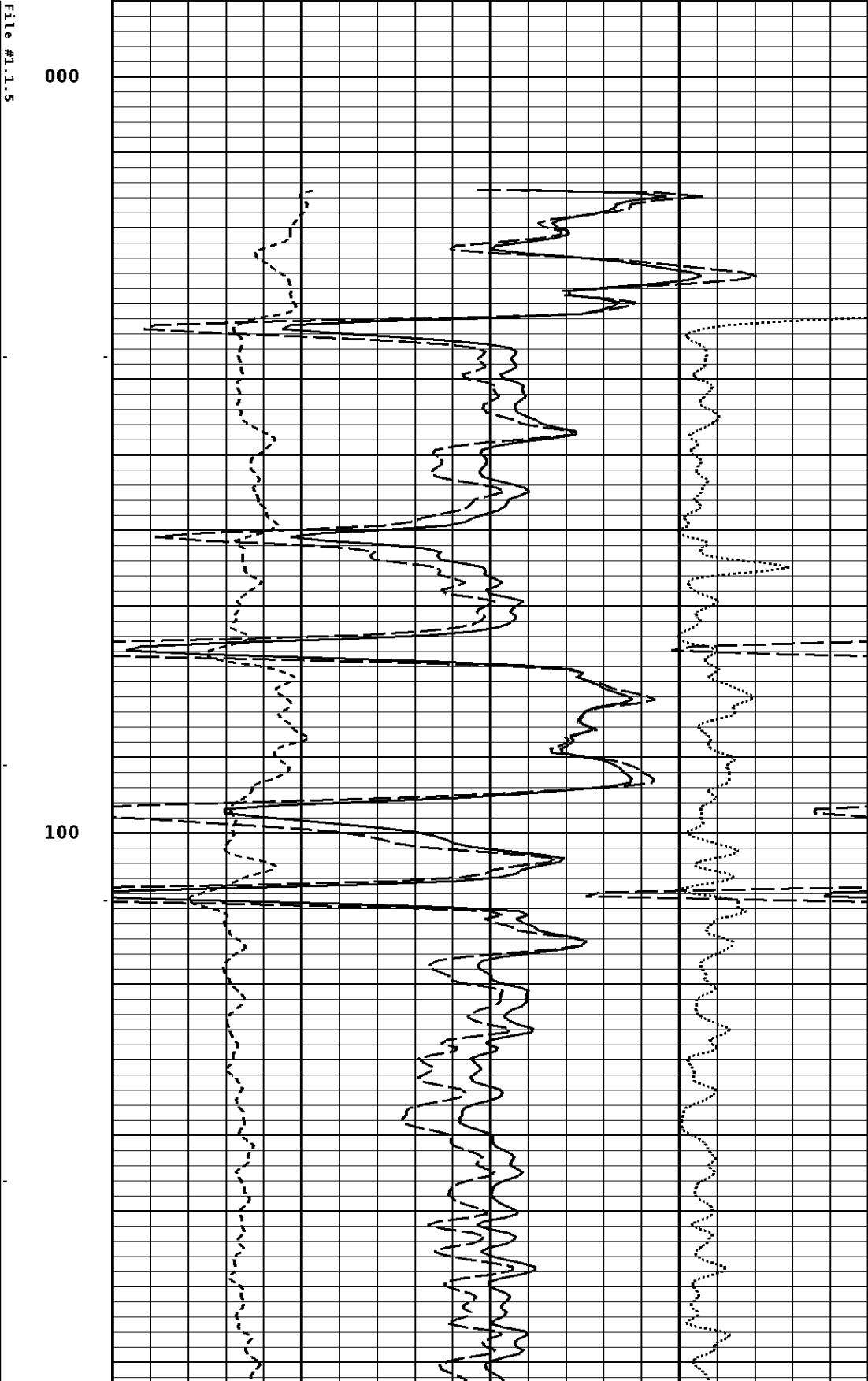
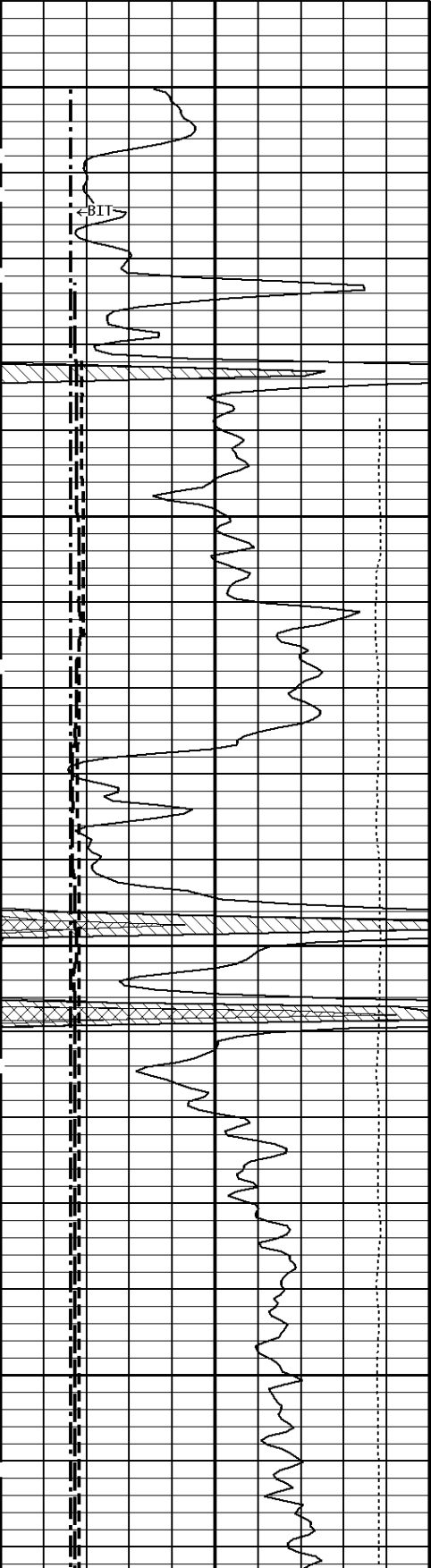
COMPENSATED BULK DENSITY  
G/CC

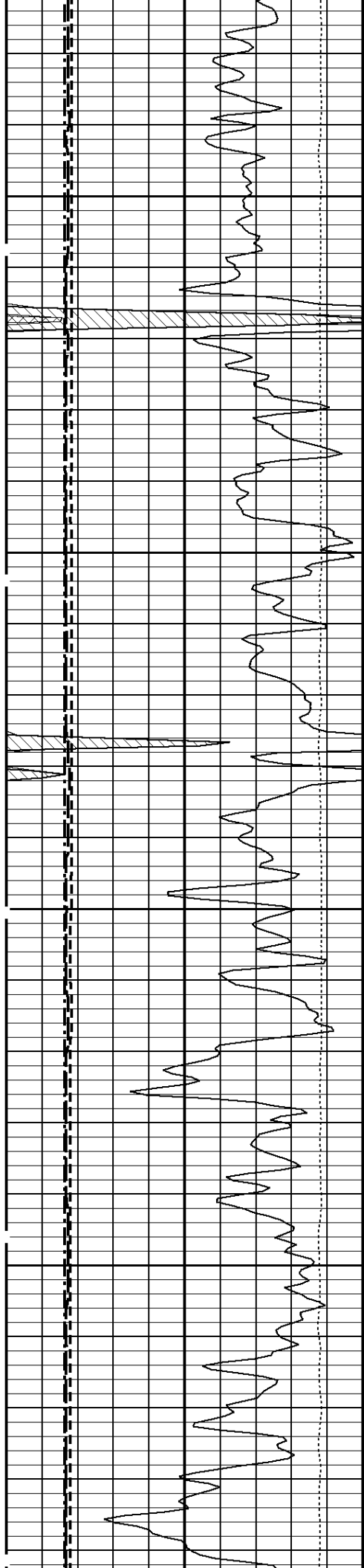


3.0  
2.0  
1.0

4.0  
3.0  
2.0

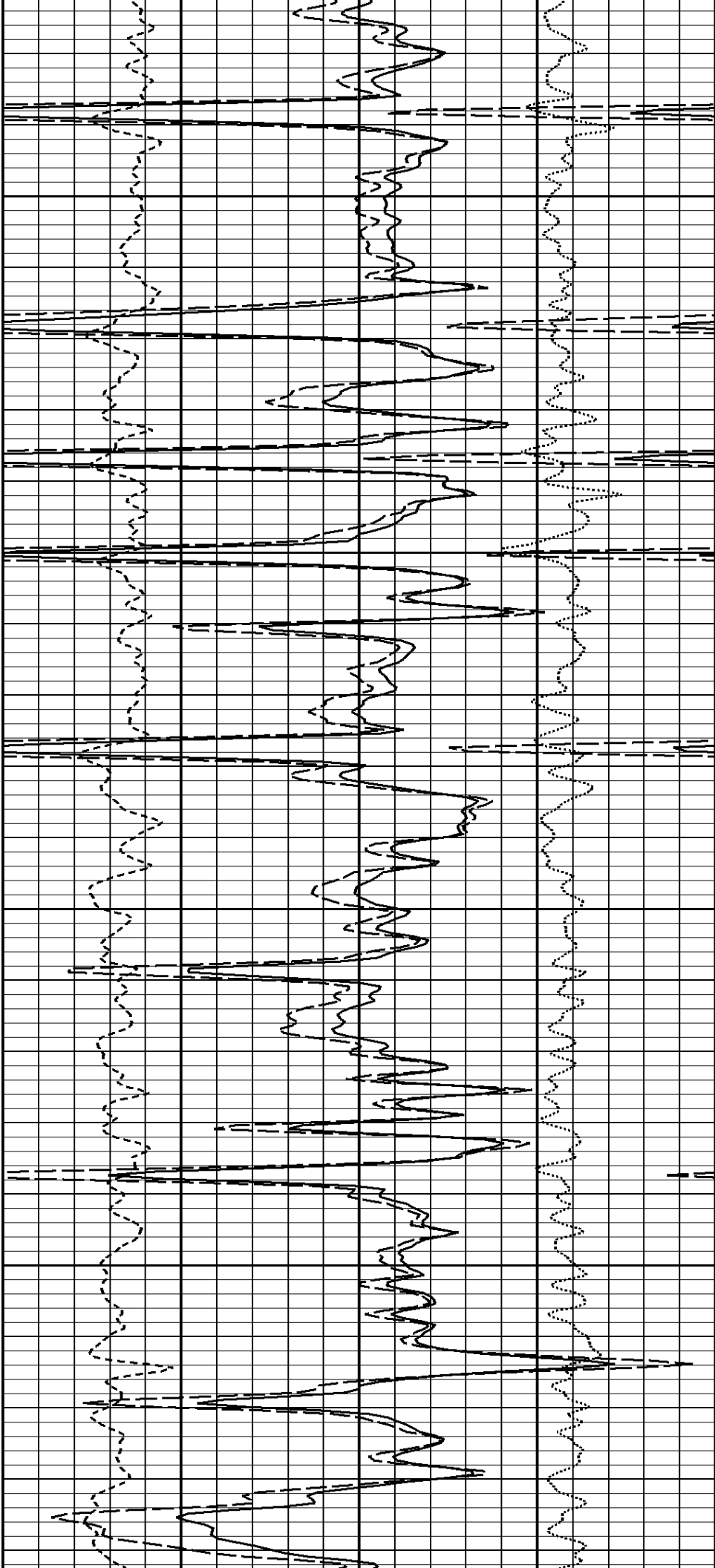
# 1:240 MAIN SECTION BULK DENSITY

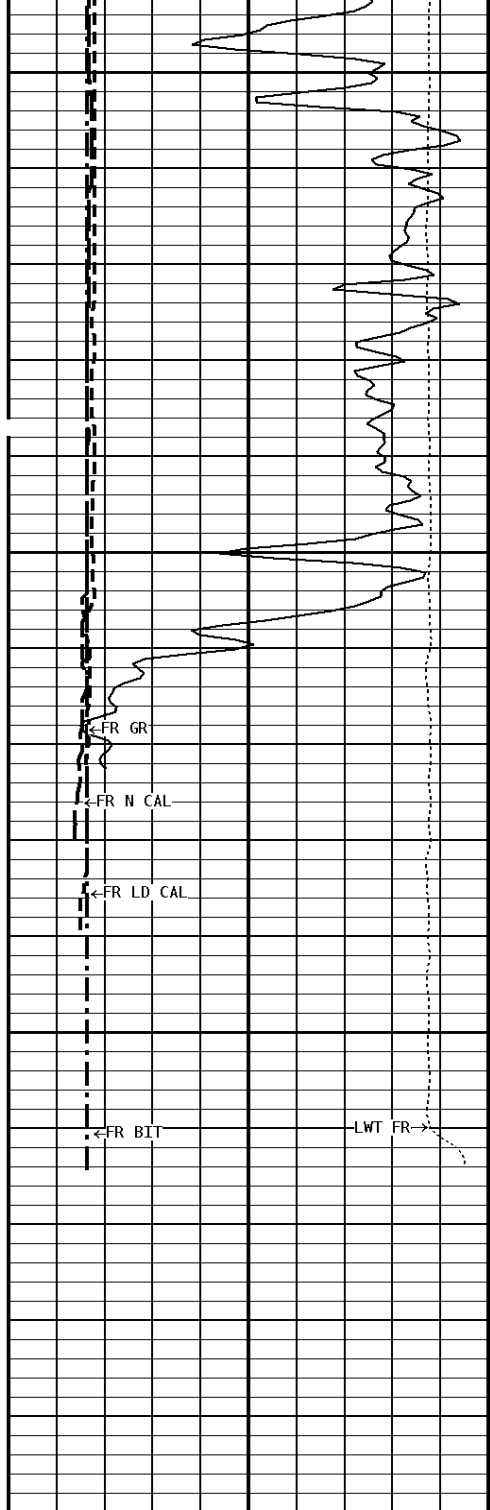




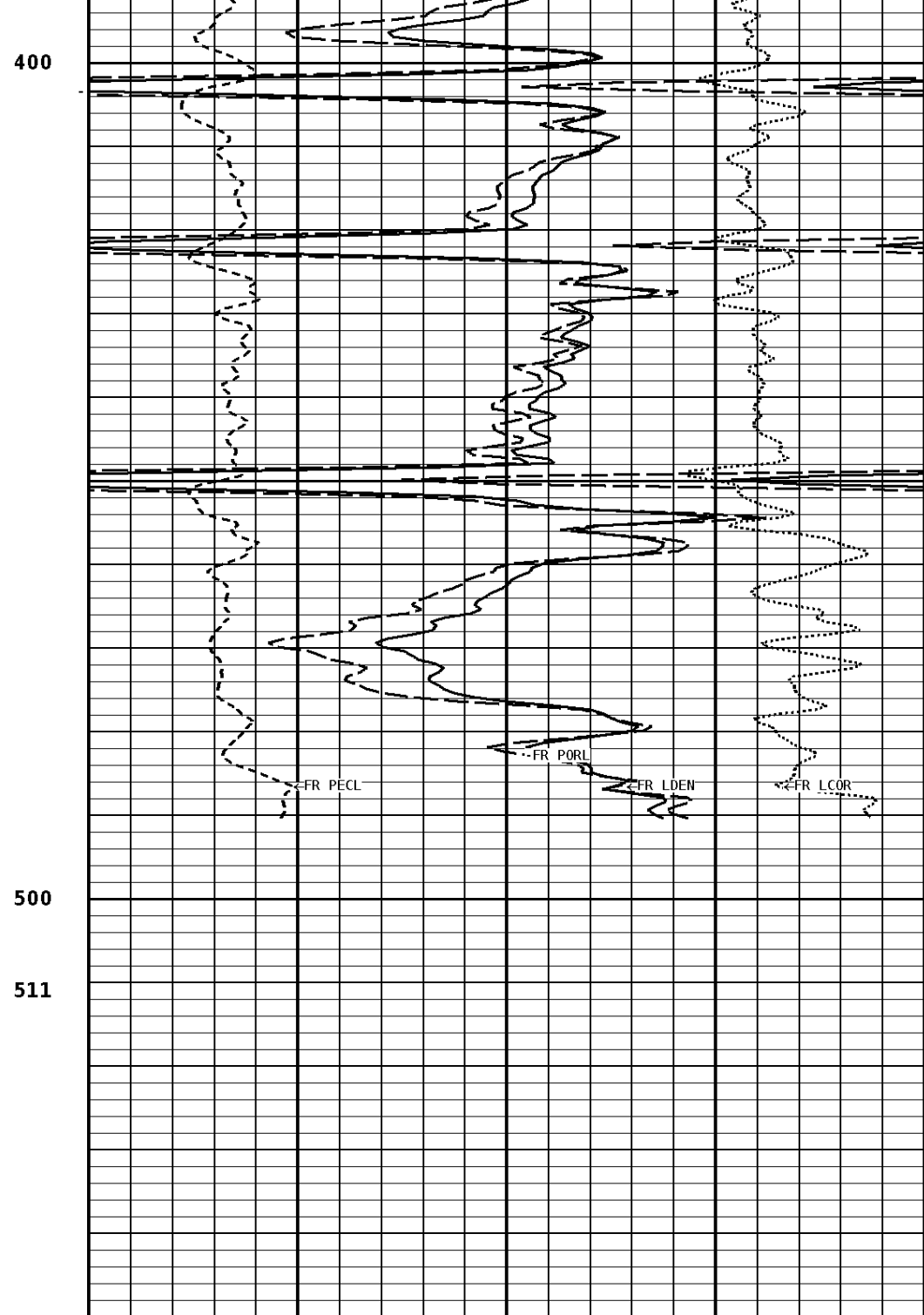
200

300





File #1.1.5



**1:240 MAIN SECTION  
BULK DENSITY**

<b>GAMMA RAY API UNITS</b> 200 0 400 200	
<b>NEUTRON (Y) CALIPER INCHES (IN)</b> 14 4 24 14	
<b>DENSITY (X) CALIPER INCHES (IN)</b> 14 24	

<b>-BHV AHV- CU. FT</b> 3.0 2.0 1.0	<b>COMPENSATED BULK DENSITY G/CC</b> 4.0 3.0 2.0
70 30 -10	<b>DENSITY POROSITY PERCENT (2.71 g/cc)</b> 30 -10 -50
<b>PE CROSS-SECTION BARN/ELECTRON</b>	<b>DENSITY CORRECTION G/CC</b>

4	14
<b>BIT SIZE INCHES (IN)</b>	
4	14
<b>TENSION LBS</b>	
10000	0

0	10	-0.25	0.25
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**\* Borehole Zone Factors \***

<b>Zone 1 99999.0 to 0.0 Feet</b>			
Matrix Density	_____	2.71	g/cc
Fluid Density	_____	1.00	g/cc
Formation Matrix	_____	Limestone	
Drill Bit Size	_____	5.625	in
Casing Diameter	_____	2.875	in
Casing Correction (PHI N)	_____	Disable	

**\* Calibration Summary \***

<b>Shop Calibration GRT-B</b>						
Performed : 16-MAY-2011			Time : 09:49			
Sensor Suite : GR-GR5			ID : GRT-BA-14			
	Background	Measured Jig	Units	Calibrated Jig	Units	
GR	50	361	CPS	175	GRAPI	
<b>Shop Calibration CNT-AA</b>						
Performed : 21-MAR-2011			Time : 11:09			
Sensor Suite : CALI-BCN			ID : NDT-AB-400			
	Jig - Measured Ring#1 Ring#2			Jig - Calibrated Ring#1 Ring#2	Units	
CL # 1	8.7 14.7			6.0 12.0	IN.	
<b>Shop Calibration LDT-DA</b>						
Performed : 18-Oct-2011			Time : 10:20			
Sensor Suite : BHC NEUT			ID : CNP-AA-116			
Source ID : N-1044						
	Measured	Tank Calibrated	Verification Jig	Units		
N/F	3.8665	3.6893	3.6928			
Porosity	23.3	20.5	20.6			%
<b>Shop Calibration LDT-DA</b>						
Performed : 15-MAY-2011			Time : 08:26			
Sensor Suite : CALI-LTH			ID : PDT-GA-465			
	Jig - Measured Ring#1 Ring#2			Jig - Calibrated Ring#1 Ring#2	Units	
CL # 1	6.3 12.3			6.0 12.0	IN.	
<b>Shop Calibration LDT-DA</b>						
Performed : 20-Oct-2011			Time : 09:51			
Sensor Suite : BHCPELNG			ID : LDT-DA-01			
Source ID : CSV-587						
	Short Space				Units	
	BKGD	Al	Mg	Al+Fe		
LSW1	63	483	799	320	CPS	
LSW2	69	552	901	401	CPS	
LSW3	251	1315	2101	1118	CPS	
LSW4	310	1201	1691	1068	CPS	
LSW5	30	39	40	38	CPS	
LSW6	76	77	78	79	CPS	
LSW7	51	50	50	50	CPS	
LSW8	2	3	4	4	CPS	
QS	0.200	0.214	0.220	0.220		
PES			2.778	5.967		
SSDN		2.600	1.680		G/CC	

	BKGD	Al	Mg	Al+Fe	Units
LLW1	108	616	2525	389	CPS
LLW2	121	1040	4296	757	CPS
LLW3	471	2001	7326	1743	CPS
LLW4	597	1171	2979	1090	CPS
LLW5	68	73	89	73	CPS
LLW6	185	187	179	186	CPS
LLW7	125	122	115	121	CPS
LLW8	7	8	14	8	CPS
QL	0.193	0.211	0.216	0.211	
PEL			2.697	5.458	
LSDN		2.600	1.680		G/CC