

**Tucker**  
WIRELINER SERVICES

COMPENSATED NEUTRON

PEL DENSITY LOG

Company: RUNNING FOXES PETROLEUM  
Well: EMMERSON FARMS #16-15A-4  
Field: OSAGE  
County: BOURBON  
State: KANSAS  
Country: USA  
API No.: 15-011-24033-0000

File No.: TUL-58632  
Company: RUNNING FOXES PETROLEUM INC.  
Well: EMMERSON FARMS #16-15A-4  
Field: OSAGE  
County: BOURBON  
State: KANSAS  
Country: USA  
API No.: 15-011-24033-0000

Location:  
700' FSL & 300' FEL  
SE NE SE SE

LSD: Sect: 15 Twp: 24S Rge: 25E

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 PTT  
Above Permanent Datum: 0.00 Ft GL 893.00 Ft

Date	2012-07-10	
Run Number	1	
Depth--Driller	500.0	Ft
Depth--Logger	497.0	Ft
First Reading	474.0	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	
Density	0.0 LBS/GAL	
Fluid Loss	0.0 CC	
PH/Viscosity	0.0 @ 0.0 SEC	
Sample Source	MEASURED	
RMF@Measured Temp.	0.800	@ 80 F
RMF@Measured Temp	0.640	@ 80 F
RMF@Measured Temp.	0.960	@ 80 F
Source RMF/RMC	CALCULATED/CALCULATED	
RM@BHT	0.820	@ 78 F
Time Circulation Stopped	2012-07-10 10:35	
Max Recorded Temp.	78	F
Equipment/Base	TRK 127	TULSA
Recorded By	SHELDON TYLER	
Witnessed By	K. HODGES	

The customer is hereby warned that by providing the log data herein, Tucker Technologies, Inc. does not agree to provide any interpretation of log data, conversion of log data to physical rock parameters or recommendations. Tucker Technologies, Inc. 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 Tucker Technologies, Inc. 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 Tucker Technologies, Inc. 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	500.00	8.625	32.00	20.00

Run Number	1	
Date	2012-07-10	
Date/Time On Bottom	2012-07-10 11:35	
Depth to Fluid	0.0	Ft
Salinity	0.000	PPM
RMF@BHT	0.650	@ 78 F
RMC@BHT	0.980	@ 78 F

Run Number 1

Comments

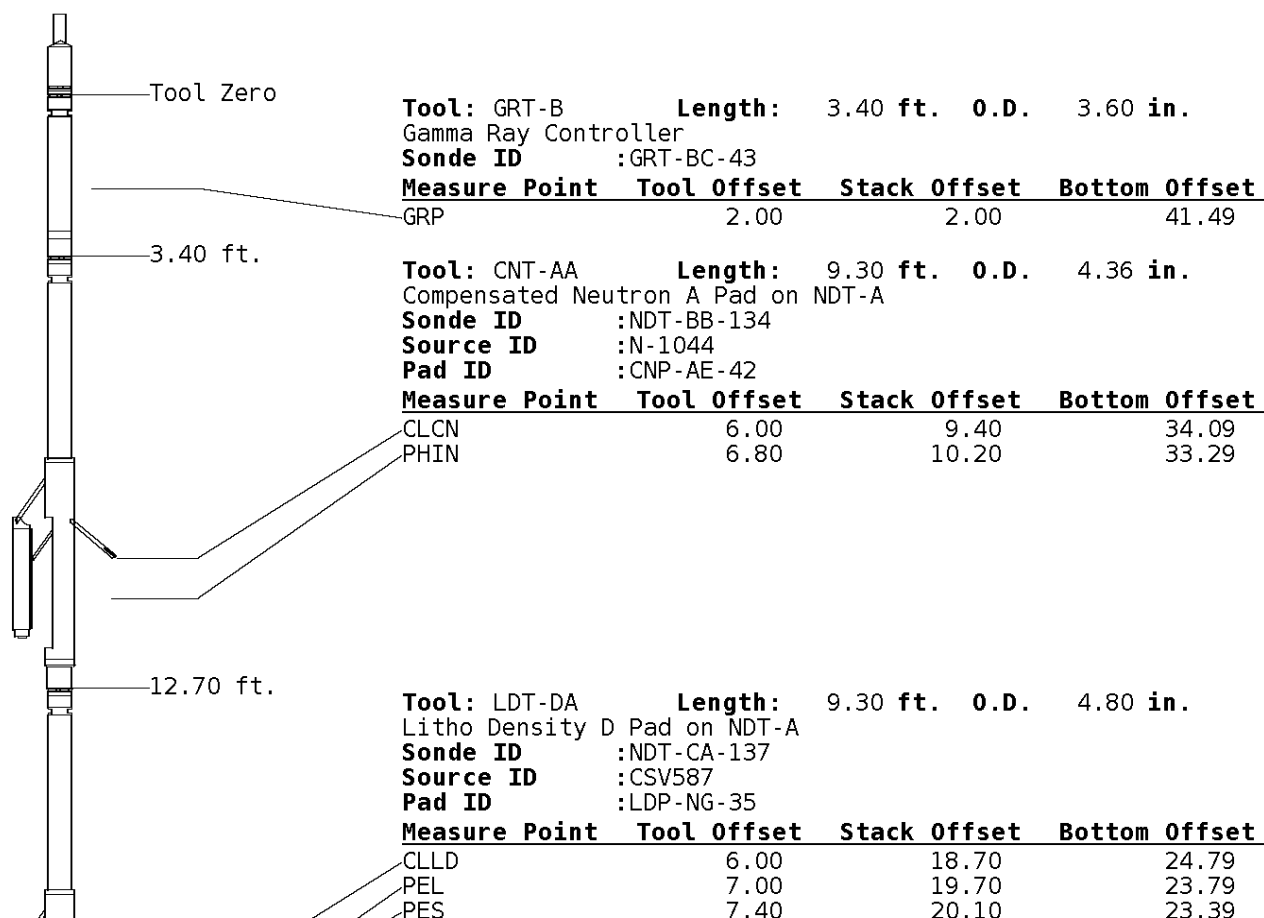
ALL PRESENTATIONS AS PER CUSTOMER REQUEST  
 GRT, CNT, LDT, MLT AND PIT RUN IN COMBINATION.  
 CALIPERS ORIENTED ON X-Y AXIS.  
 2.71 G/CC USED TO CALCULATED POROSITY.  
 ANNULAR HOLE VOLUME CALCULATED UISING 2.875" PRODUCTION CASING.

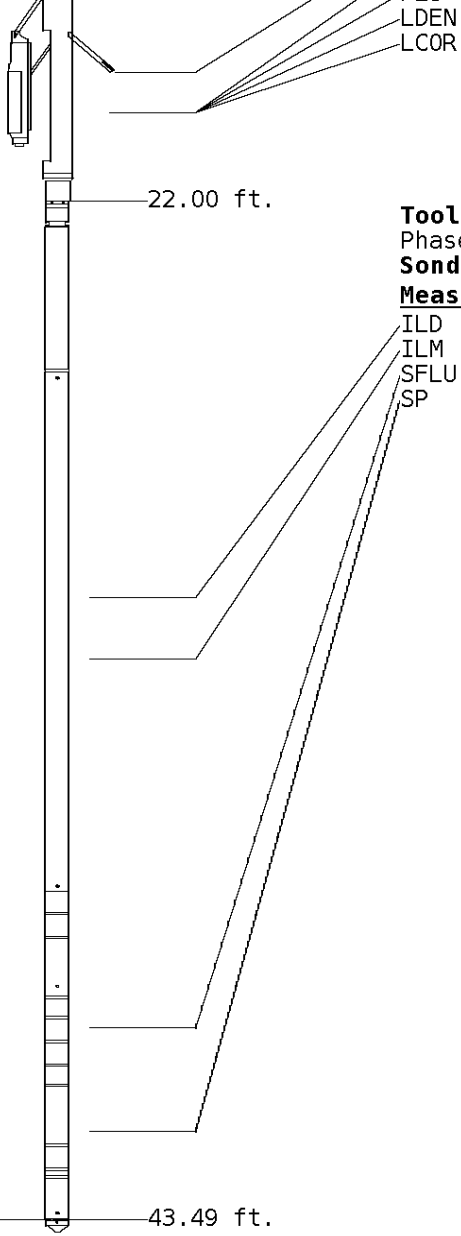
GRT: GRP.  
 CNT: PHIN, CLCNIN  
 LDT: PORL, LCORN, PECLN, LDENN, PORLLS, CLLDIN.  
 MLT: NOR\_R, INV\_R, MSCLPIN.  
 PIT: ILD, ILM, SPU, SFLAEC

OPERATORS:  
 J.T  
 A.DJAHO  
 D.HOPPER

### Tool String Schematic

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





7.20 19.90 23.59  
 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-AC-13

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 EMMERSON 16-15A-4 JULY10 STK

**Scale:** 1:240

**Segment:** V1.D1.S5 Reprocess of MAIN

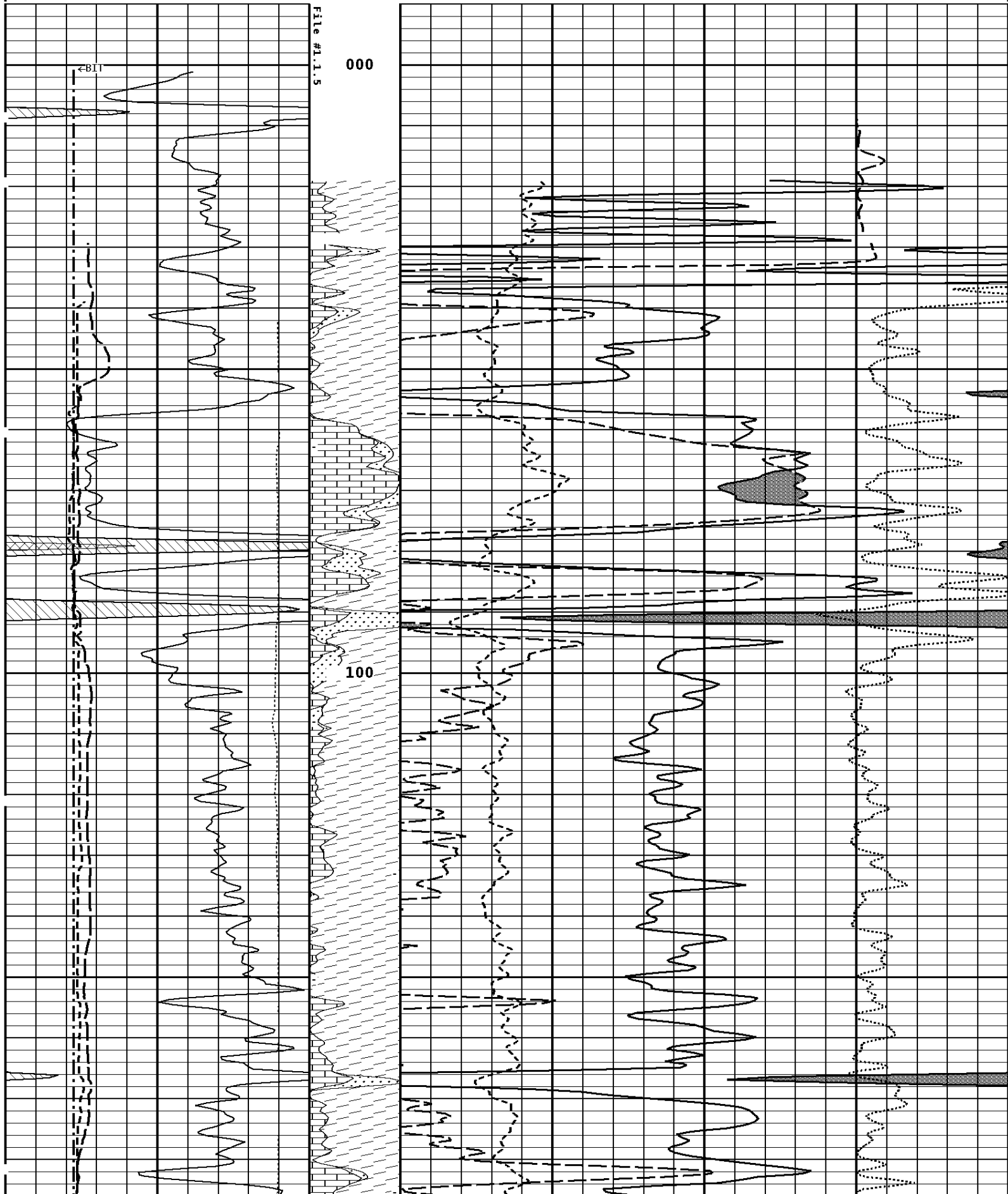
**Acquired:** 2012-07/10 12:11 3.2.0-10990

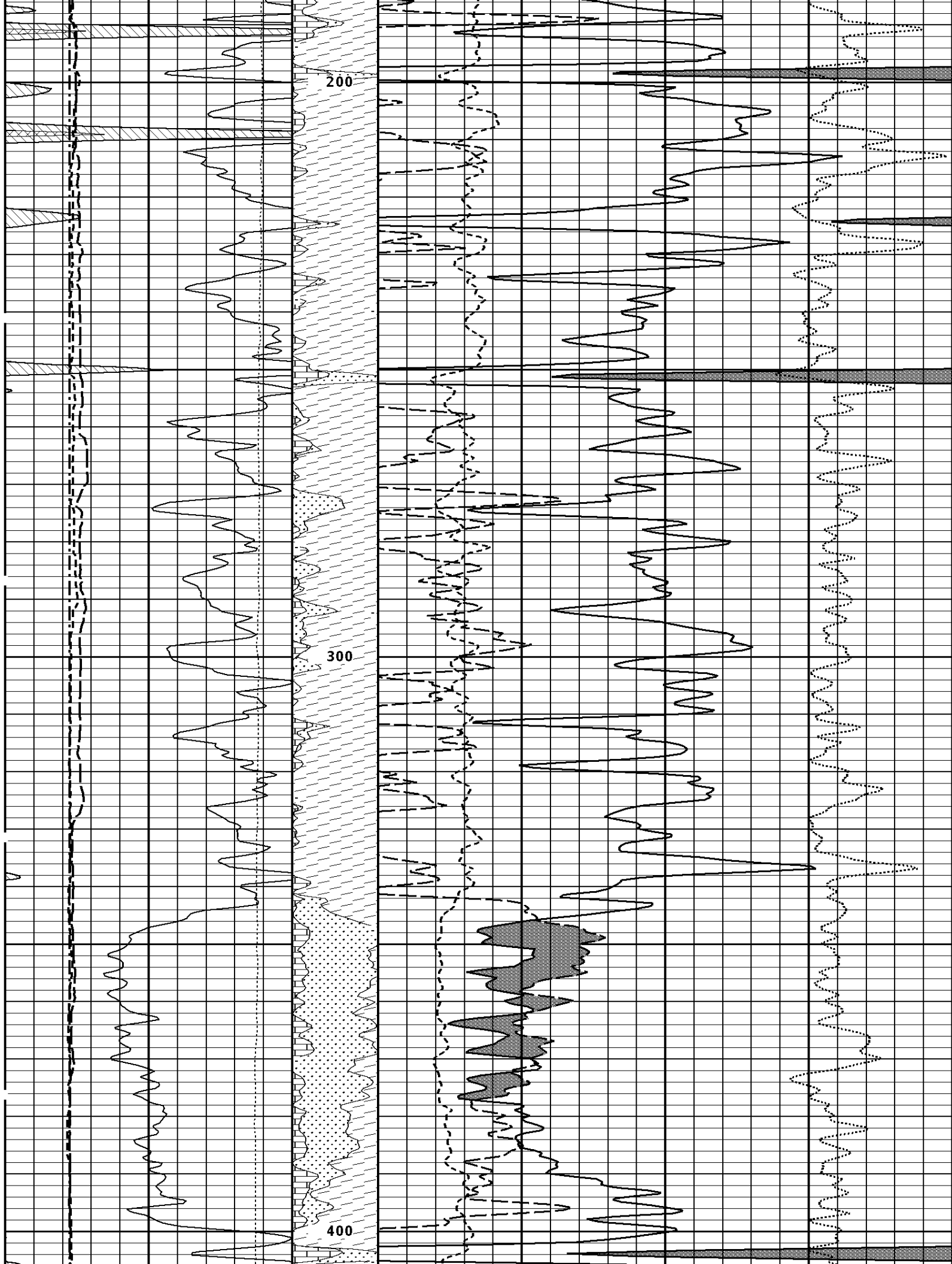
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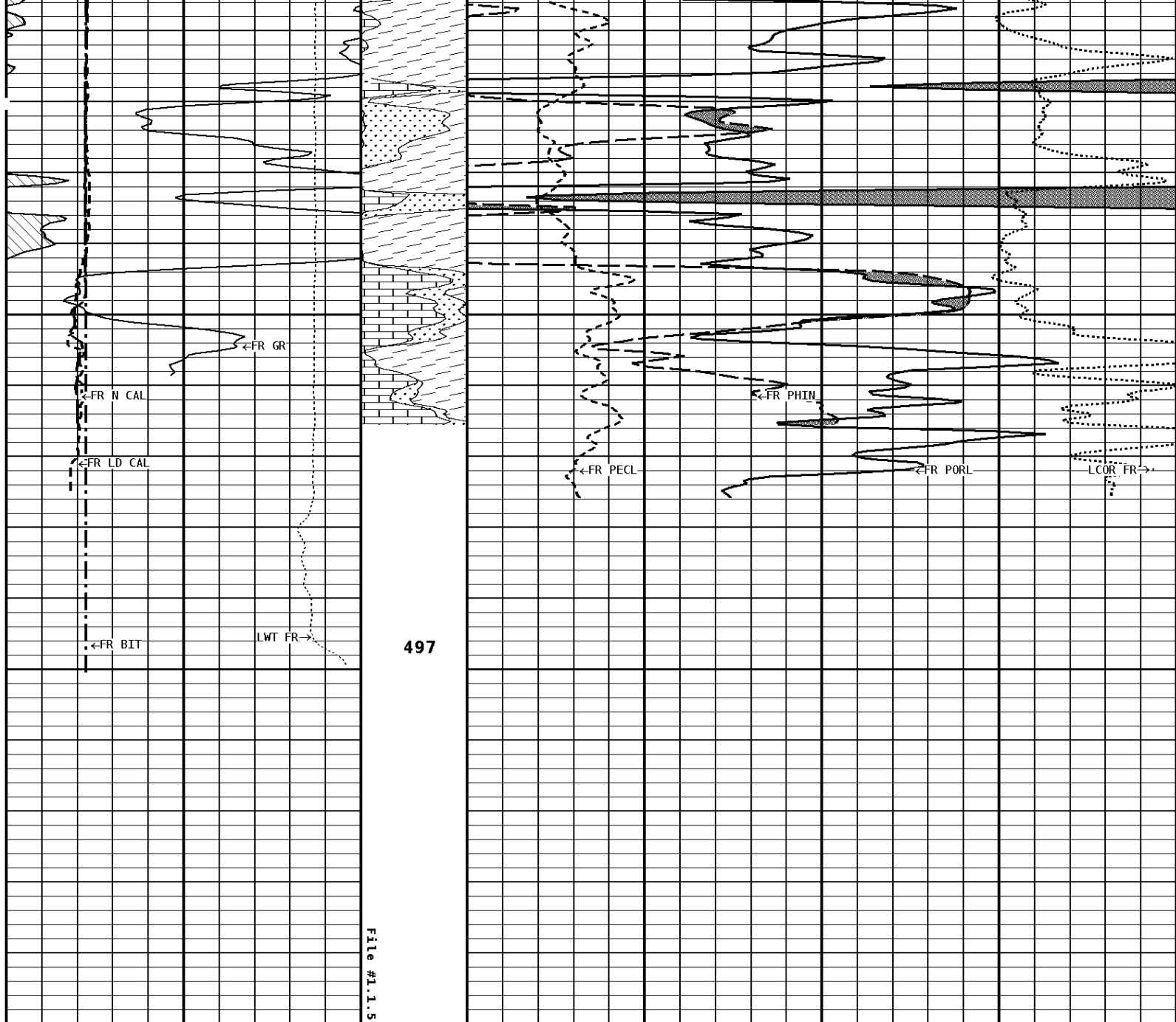
**Processed:** 2012-07/10 12:21 3.2.0-10990

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

4	14
TENSION LBS	
10000	0

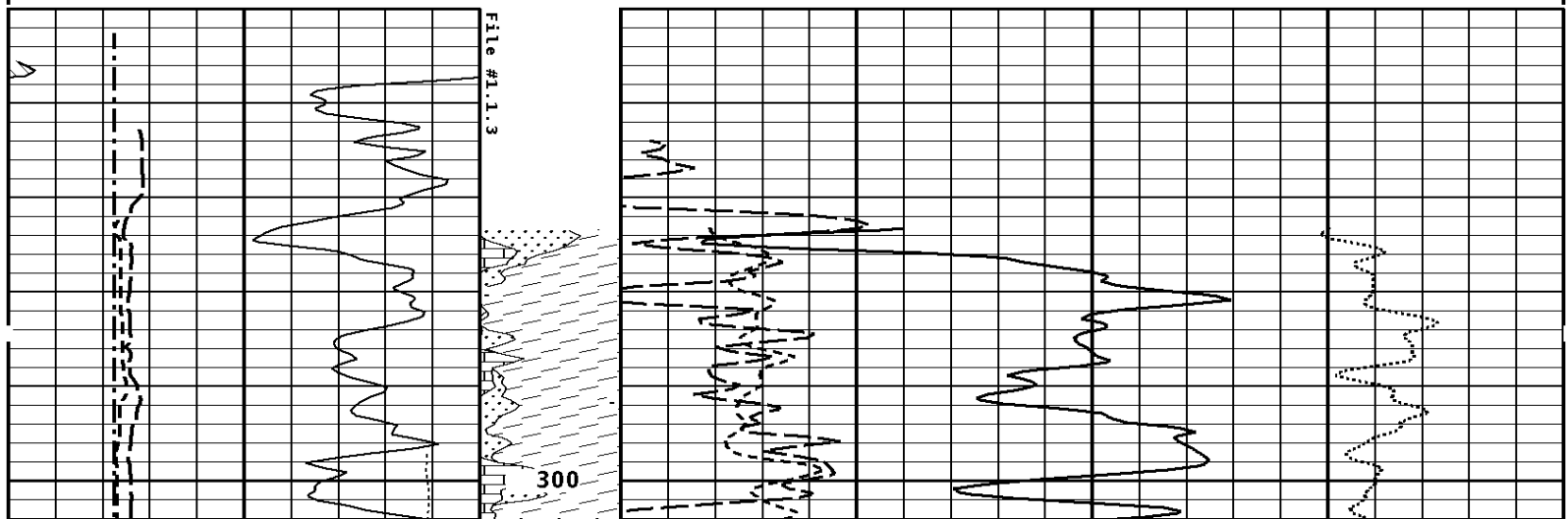
\* Borehole Zone Factors \*

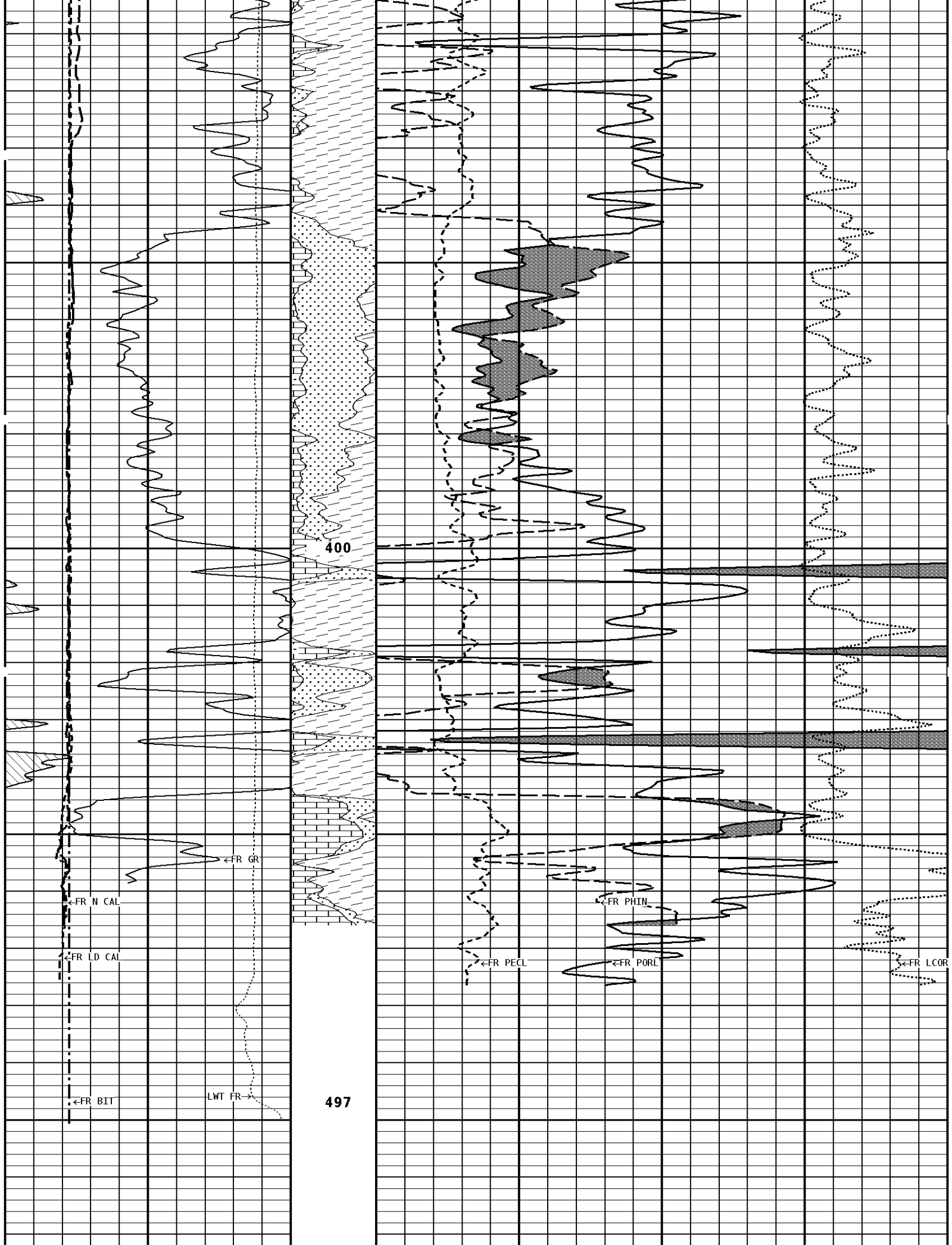
Zone 1 99999.0 to 0.0 Feet	
Matrix Density _____	2.71 g/cc
Fluid Density _____	1.00 g/cc
Formation Matrix _____	Limestone
Drill Bit Size _____	6.250 in
Casing Diameter _____	2.785 in
Casing Correction (PHI N) _____	Disable

<b>Well File:</b> RFP EMMERSON 16-15A-4 JULY10 STK	<b>Scale:</b> 1:240
<b>Segment:</b> V1.D1.S3 Reprocess of REPEAT	<b>Acquired:</b> 2012-07/10 12:02 3.2.0-10990
<b>Reference:</b> 0	<b>Processed:</b> 2012-07/10 12:07 3.2.0-10990

TENSION LBS			
10000	0		
BIT SIZE INCHES (IN)	Volume Dolo/Shale		
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
NEUTRON (Y) CALIPER INCHES (IN)	Volume Calcite	NEUTRON POROSITY PERCENT (LIMESTONE MATRIX)	
14	24	30	
4	14	-10	
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

497

<FR PECL

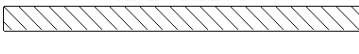
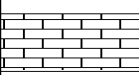
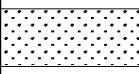

<FR PHIN

<FR PORL

<FR LCOR

File #1.1.3

## 1:240 REPEAT SECTION

<b>GAMMA RAY API UNITS</b> 	- BHV AHV - CU. FT	<b>DENSITY POROSITY PERCENT (2.71 g/cc)</b> 70 30 -10	30 -10 -50
<b>NEUTRON (Y) CALIPER INCHES (IN)</b> 14 4 ----- 14	Volume Calcite 	<b>NEUTRON POROSITY PERCENT (LIMESTONE MATRIX)</b> 30 ----- -10	-10
<b>DENSITY (X) CALIPER INCHES (IN)</b> 14 4 ----- 14	Volume Quartz 	<b>PE CROSS-SECTION BARNS/ELECTRON</b> 0 ----- 10	<b>DENSITY CORRECTION G/CC</b> -0.25 ----- 0.25
<b>BIT SIZE INCHES (IN)</b> 4 ----- 14	Volume DoLo/Shale 		
<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 _____ 6.250 in Casing Diameter _____ 2.785 in Casing Correction (PHI N) _____ Disable

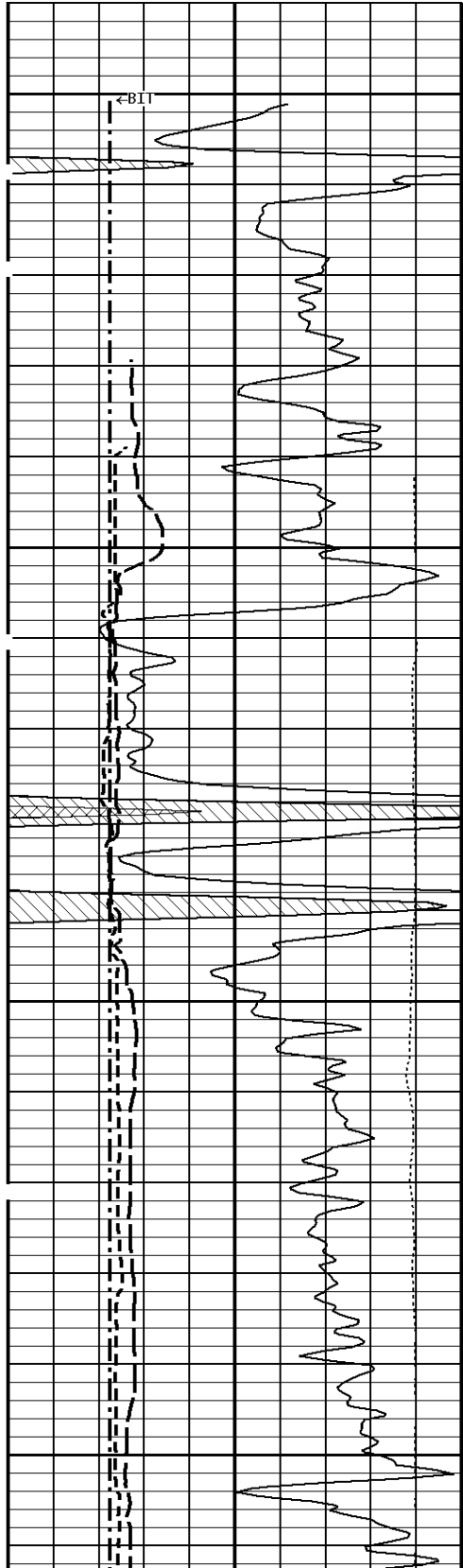
<b>Well File:</b> RFP_EMMERSON_16-15A-4_JULY10_STK	<b>Scale:</b> 1:240
<b>Segment:</b> V1.D1.S5 Reprocess of MAIN	<b>Acquired:</b> 2012-07/10 12:11 3.2.0-10990
<b>Reference:</b> 0	<b>Processed:</b> 2012-07/10 12:21 3.2.0-10990

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

14	24
4	14
GAMMA RAY API UNITS	
200	400
0	200

70	30	30
30	-10	-10
-10	-50	-50
- BHV AHV - CU. FT		COMPENSATED BULK DENSITY G/CC
3.0		4.0
2.0		3.0
1.0		2.0

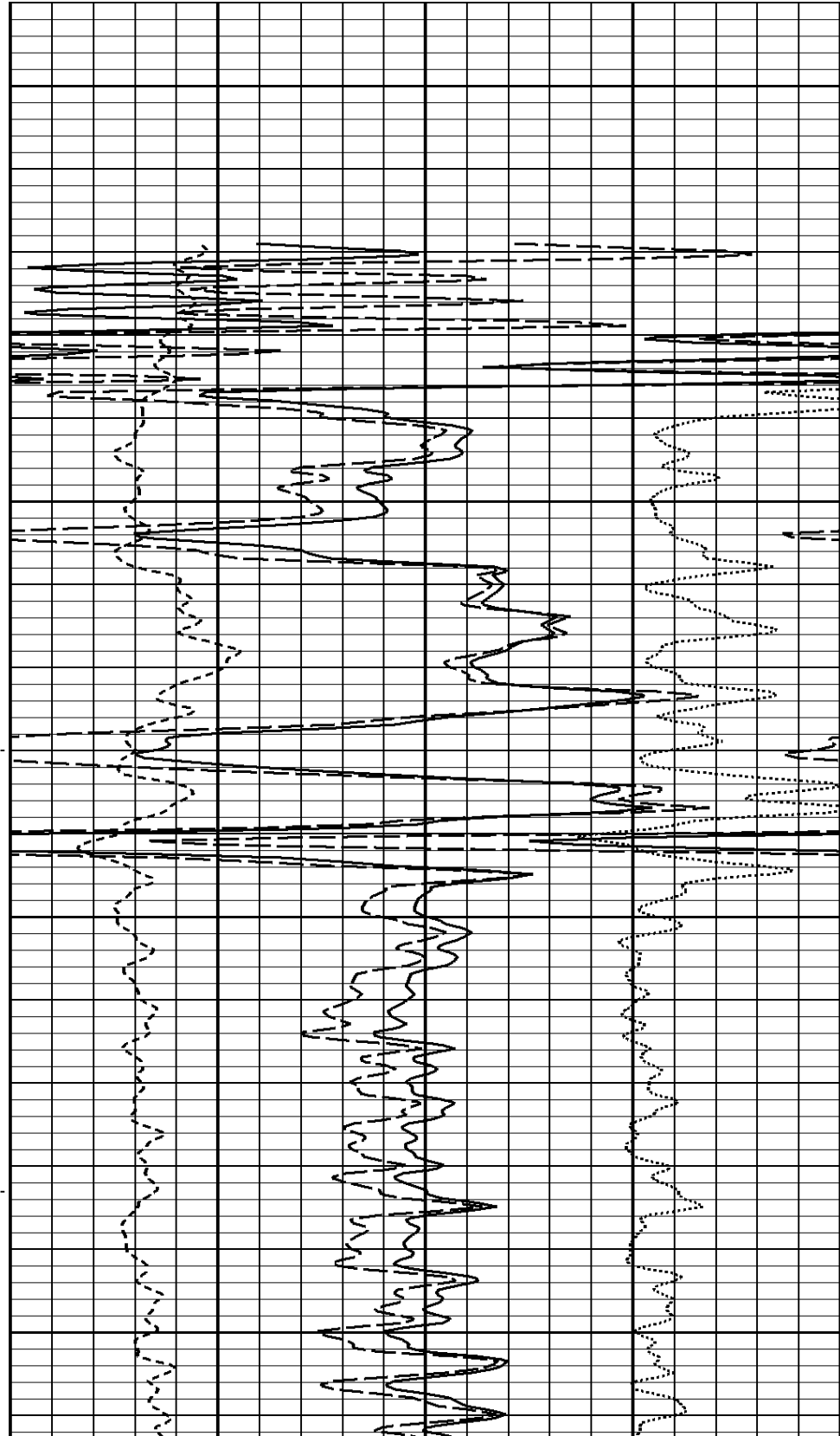
## 1:240 MAIN SECTION BULK DENSITY

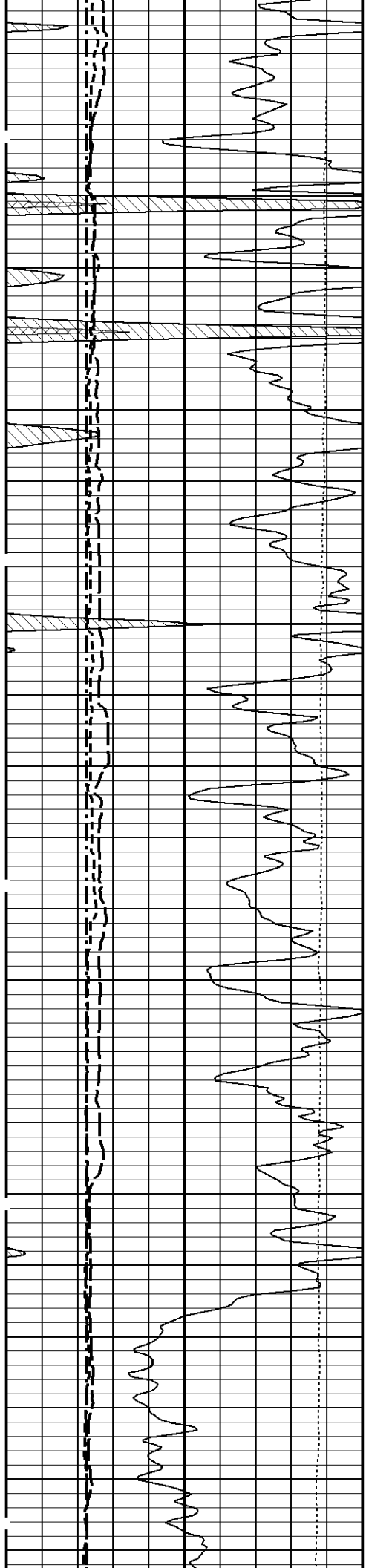


File #1.1.5

000

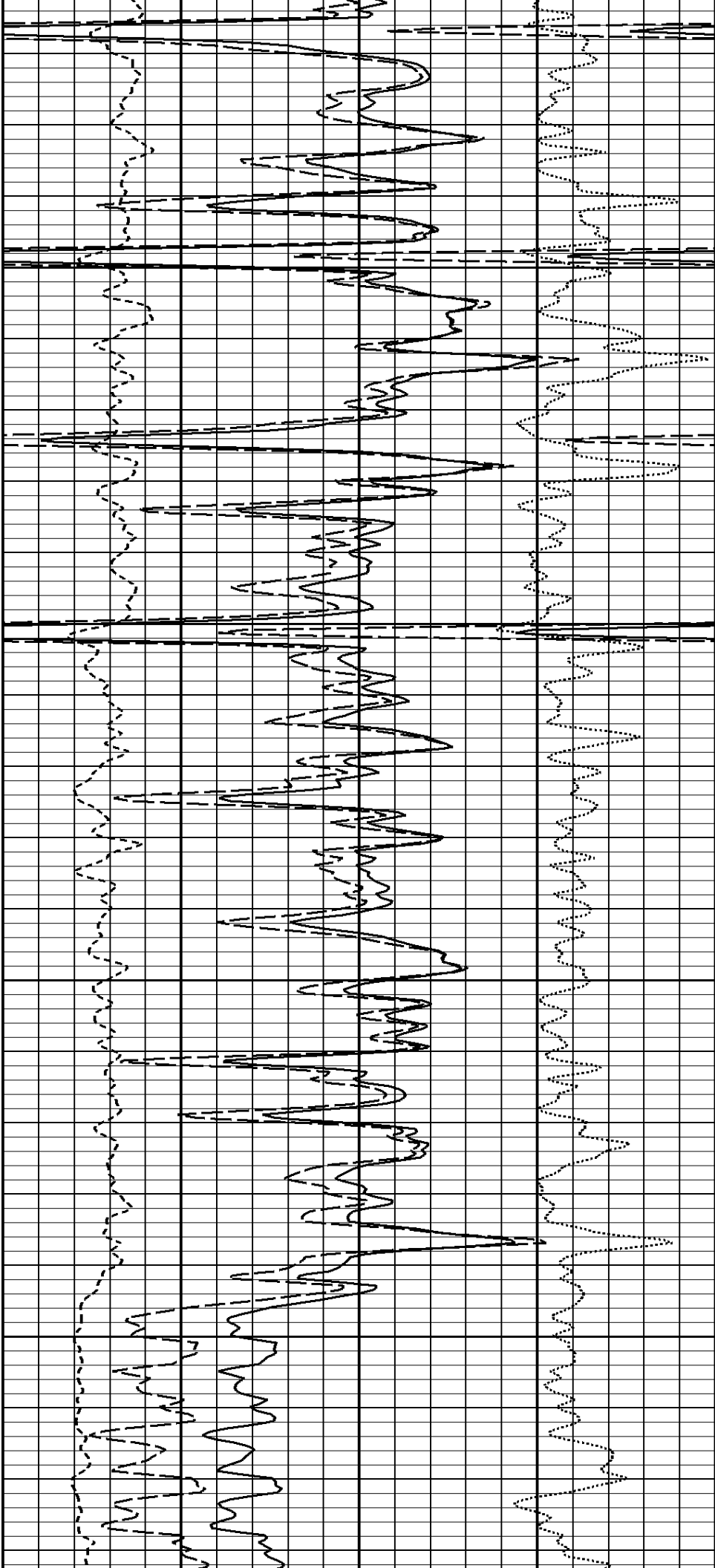
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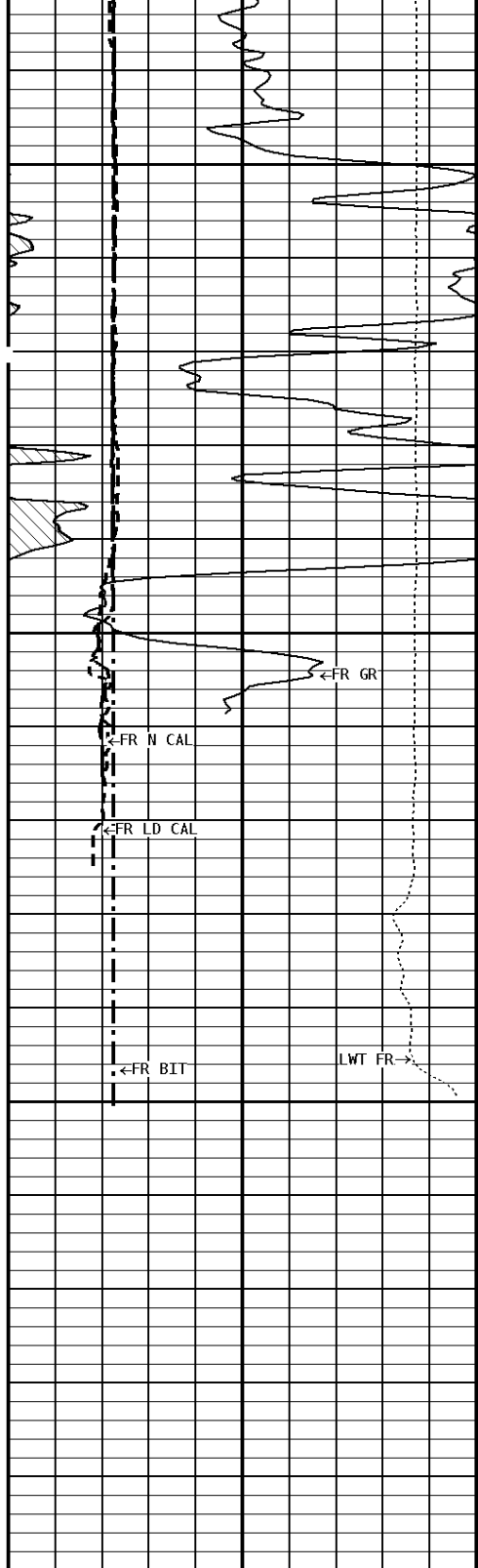




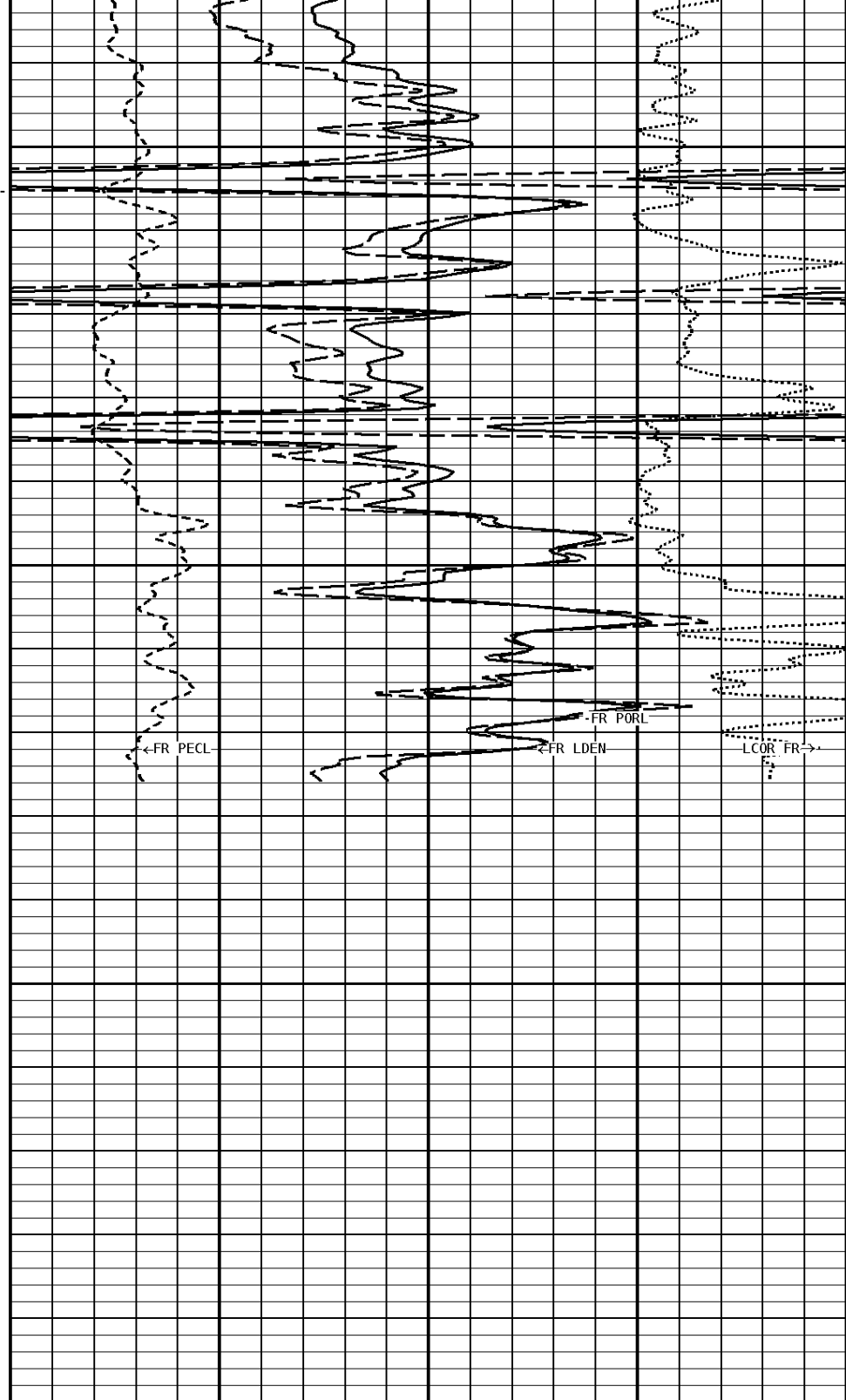
200

300





File #1.1.5



**1:240 MAIN SECTION  
BULK DENSITY**

<b>GAMMA RAY API UNITS</b> 200  400 0 <span style="float: right;">200</span>	-BHV AHV- CU. FT	<b>COMPENSATED BULK DENSITY G/CC</b> 3.0 <span style="float: right;">4.0</span> 2.0 <span style="float: right;">3.0</span> 1.0 <span style="float: right;">2.0</span>
<b>NEUTRON (Y) CALIPER INCHES (IN)</b> 14 <span style="float: right;">24</span> 4 <span style="float: right;">14</span>		<b>DENSITY POROSITY PERCENT (2.71 g/cc)</b> 70 <span style="float: right;">30</span> 30 <span style="float: right;">-10</span> -10 <span style="float: right;">-50</span>

<b>DENSITY (X) CALIPER INCHES (IN)</b>	
14	24
4	14
-----	
<b>BIT SIZE INCHES (IN)</b>	
4	14
-----	
<b>TENSION LBS</b>	
10000	0
-----	

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

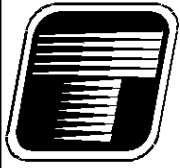
**\* Borehole Zone Factors \***

<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	_____	6.250	in
Casing Diameter	_____	2.785	in
Casing Correction (PHI N)	_____	Disable	

**\* Calibration Summary \***

<b>Shop Calibration GRT-B</b>					
Performed : 25-MAY-2012			Time : 12:22		
Sensor Suite : GR-GR5			ID : GRT-BC-43		
	Measured	Units	Calibrated	Units	
GR	Background	Jig	Jig		
	45	315	175	GRAPI	
<b>Shop Calibration CNT-AA</b>					
Performed : 17-JUN-2012			Time : 10:19		
Sensor Suite : CALI-BCN			ID : NDT-BB-134		
	Jig - Measured		Jig - Calibrated	Units	
	Ring#1	Ring#2	Ring#1	Ring#2	
CL # 1	11.6	17.6	6.0	12.0	IN.
<b>Shop Calibration LDT-DA</b>					
Performed : 20-JUN-2012			Time : 13:21		
Sensor Suite : CALI-LTH			ID : NDT-CA-137		
	Jig - Measured		Jig - Calibrated	Units	
	Ring#1	Ring#2	Ring#1	Ring#2	
CL # 1	7.5	13.5	6.0	12.0	IN.
<b>Shop Calibration LDP-NG</b>					
Performed : 02-Jul-2012			Time : 10:18		
Sensor Suite : BHCPELNG			ID : LDP-NG-35		
Source ID : CSV587					
	<b>Short Space</b>				
	BKGD	Al	Mg	Al+Fe	Units
LSW1	69	488	795	326	CPS
LSW2	74	575	927	418	CPS
LSW3	278	1382	2176	1185	CPS
LSW4	346	1275	1754	1127	CPS
LSW5	36	47	47	45	CPS
LSW6	86	87	85	86	CPS
LSW7	57	59	58	59	CPS
LSW8	3	4	4	3	CPS
CS	0.202	0.186	0.186	0.187	

QS	0.202	0.188	0.188	0.187	
PES			2.778	5.967	
SSDN		2.600	1.680		G/CC
		Long Space			
	BKGD	Al	Mg	Al+Fe	Units
LLW1	111	561	2274	360	CPS
LLW2	116	999	4162	725	CPS
LLW3	452	1978	7258	1723	CPS
LLW4	582	1158	2921	1069	CPS
LLW5	65	69	82	68	CPS
LLW6	186	183	176	184	CPS
LLW7	117	117	110	117	CPS
LLW8	4	5	9	5	CPS
QL	0.230	0.218	0.231	0.222	
PEL			2.697	5.458	
LSDN		2.600	1.680		G/CC



**Tucker**  
WIRELINE SERVICES

Company: RUNNING FOXES PETROLEUM INC.

Well: EMMERSON FARMS #16-15A-4

Location: 700' FSL & 300' FEL

Logged: 2012-07-10

K.B. Elev: 0.0