Tucker ENERGY SERVICES

COMPENSATED NEUTRON
PEL DENSITY LOG

N

Company	RUNNING FOXES PETROLEUM
Well	SNYDER #7-1C
Field	CHEROKEE BASIN COAL AREA
County	BOURBON
State	KANSAS
Country	USA
API No.	15-011-23910-0000

File No	:	TUL-57391
Company	:	RUNNING FOXES PETROLEUM INC
Well	:	SNYDER #7-1C
Field	:	CHEROKEE BASIN COAL AREA
County	:	BOURBON
State	:	KANSAS
Country	:	USA
API No	:	15-011-23910-0000

Location :
2310' FNL & 2310' FEL
SW SW NE

LSD : **Sect :** 1 **Twp :** 24S **Rge :** 23E

Permanent Datum:	GL	**Elevations:**				**Services:**
Drilling Measured From:	GL	**KB**	0.00	Ft		CNT
Log Measured From:	GL	**DF**	0.00	Ft		LDT
Above Permanent Datum:	0.00 Ft	**GL**	919.00	Ft		PIT

Date	2012-06-12					
Run Number	1					
Depth--Driller	593.0 Ft					
Depth--Logger	591.0 Ft					
First Reading	568.0 Ft					
Last Reading	38.0 Ft					
Casing--Driller	39.0 Ft					
Casing--Logger	39.0 Ft					
Bit Size	6.750 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					
RM@Measured Temp.	10.000 @ 80 F					
RMF@Measured Temp	8.000 @ 80 F					
RMC@Measured Temp.	12.000 @ 80 F					
Source RMF/RMC	CALCULATED	CALCULATED				
RM@BHT	10.100 @ 79 F					
Time Circulation Stopped	2012-06-12 10:53					
Max Recorded Temp.	79 F					
Equipment/Base	TRUCK 119	TULSA				
Recorded By	SHELDON TYLER / SEAN DAVIS					
Witnessed By	K. HODGES / BROOKE PARSONS					

Bitsize Intervals		Casing Strings		
Size (In)	Bottom (Ft)	Size (In)	Weight (Lbs)	Bottom (Ft)
6.750	593.00	8.625	32.00	39.00

Run Number	1		
Date	2012-06-12		
Date/Time On Bottom	2012-06-12 11:53		
Depth to Fluid	0.0 Ft		
Salinity	0.000 PPM		
RMF@BHT	8.080 @ 79 F		
RMC@BHT	12.120 @ 79 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 4.500" PRODUCTION CASING.

PULLED TIGHT AT 581' CLOSED CALIPER TO 570' AN OPENED CALIPERS LOGGED OUT

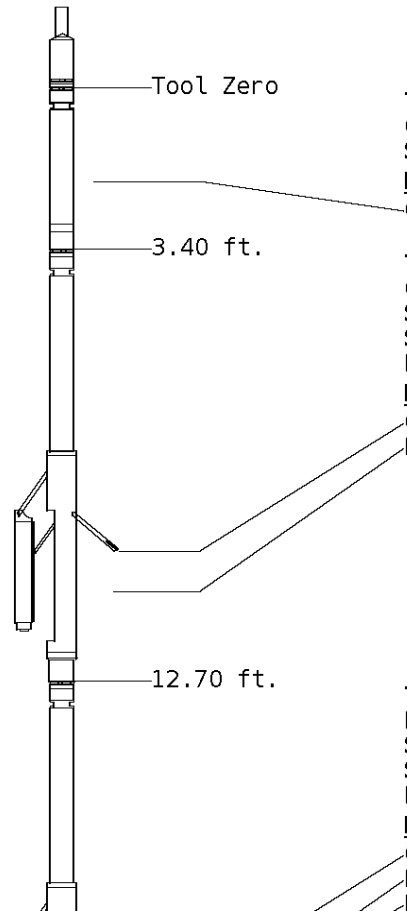
NO REPEAT PULLED TIGHT OFF BOTTOM

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

OPERATORS:
B.COLWILL

Tool String Schematic

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



Tool: GRT-B **Length:** 3.40 **ft.** **O.D.** 3.60 **in.**
Gamma Ray Controller
Sonde ID :GRT-BA-015

Measure Point	Tool Offset	Stack Offset	Bottom Offset
GRP	2.00	2.00	41.49

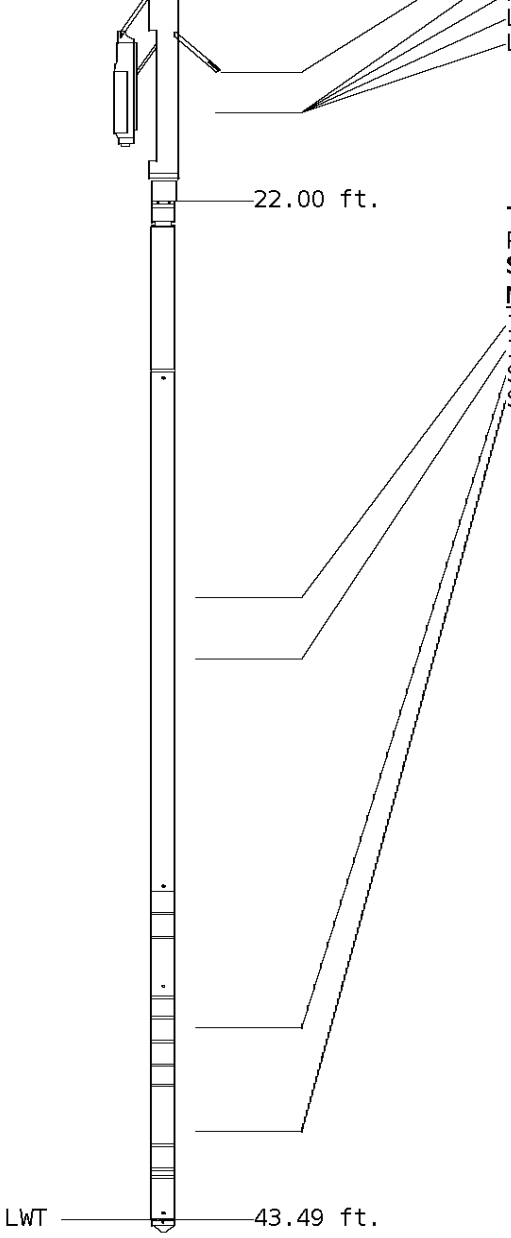
Tool: CNT-AA **Length:** 9.30 **ft.** **O.D.** 4.36 **in.**
Compensated Neutron A Pad on NDT-A
Sonde ID :NDT-BB-123
Source ID :N-1045
Pad ID :CNP-AA-024

Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLCN	6.00	9.40	34.09
PHIN	6.80	10.20	33.29

Tool: LDT-DA **Length:** 9.30 **ft.** **O.D.** 4.80 **in.**
Litho Density D Pad on NDT-A
Sonde ID :PDT-GA-464
Source ID :CSV-B45
Pad ID :LDP-DA-067

Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLLD	6.00	18.70	24.79
PEL	7.00	19.70	23.79
PES	7.40	20.10	23.39

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-AC-022

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_SNYDER_7-1C_JUNE12_STK **Scale:** 1:240
Segment: V1.D1.S4 Reprocess of MAIN **Acquired:** 2012-06/12 12:11 3.2.0-10932
Reference: 0 **Processed:** 2012-06/12 12:37 3.2.0-10932

TENSION LBS
10000 — 0

BIT SIZE INCHES (IN)
4 — 14

Volume Dolo/Shale

DENSITY (X) CALIPER INCHES (IN)
14 — 24
4 — 14

Volume Quartz

PE CROSS-SECTION BARNS/ELECTRON
0 — 10

DENSITY CORRECTION G/CC
-0.25 — 0.25

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

Volume Calcite

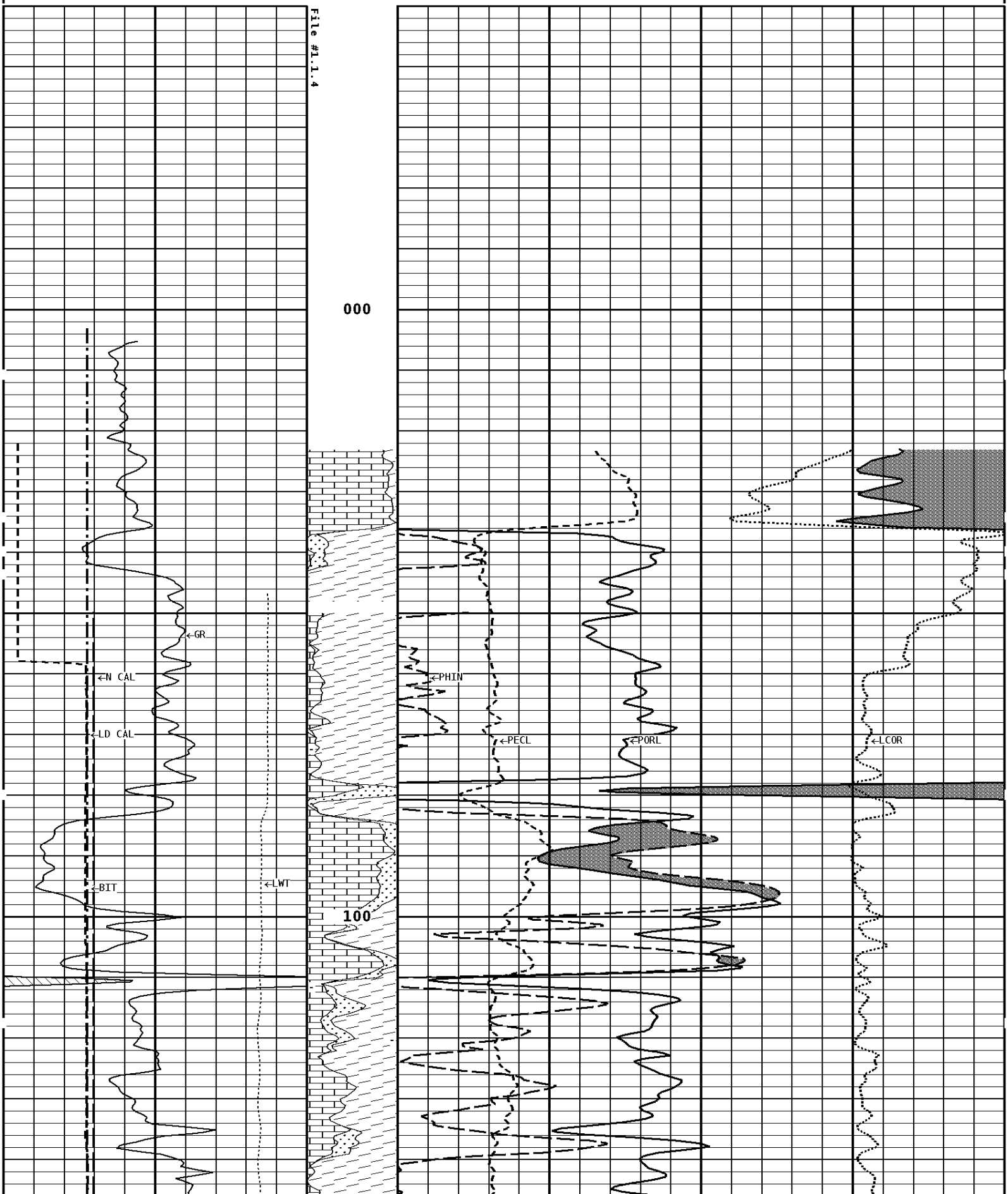
NEUTRON POROSITY PERCENT (LIMESTONE MATRIX)
30 — -10

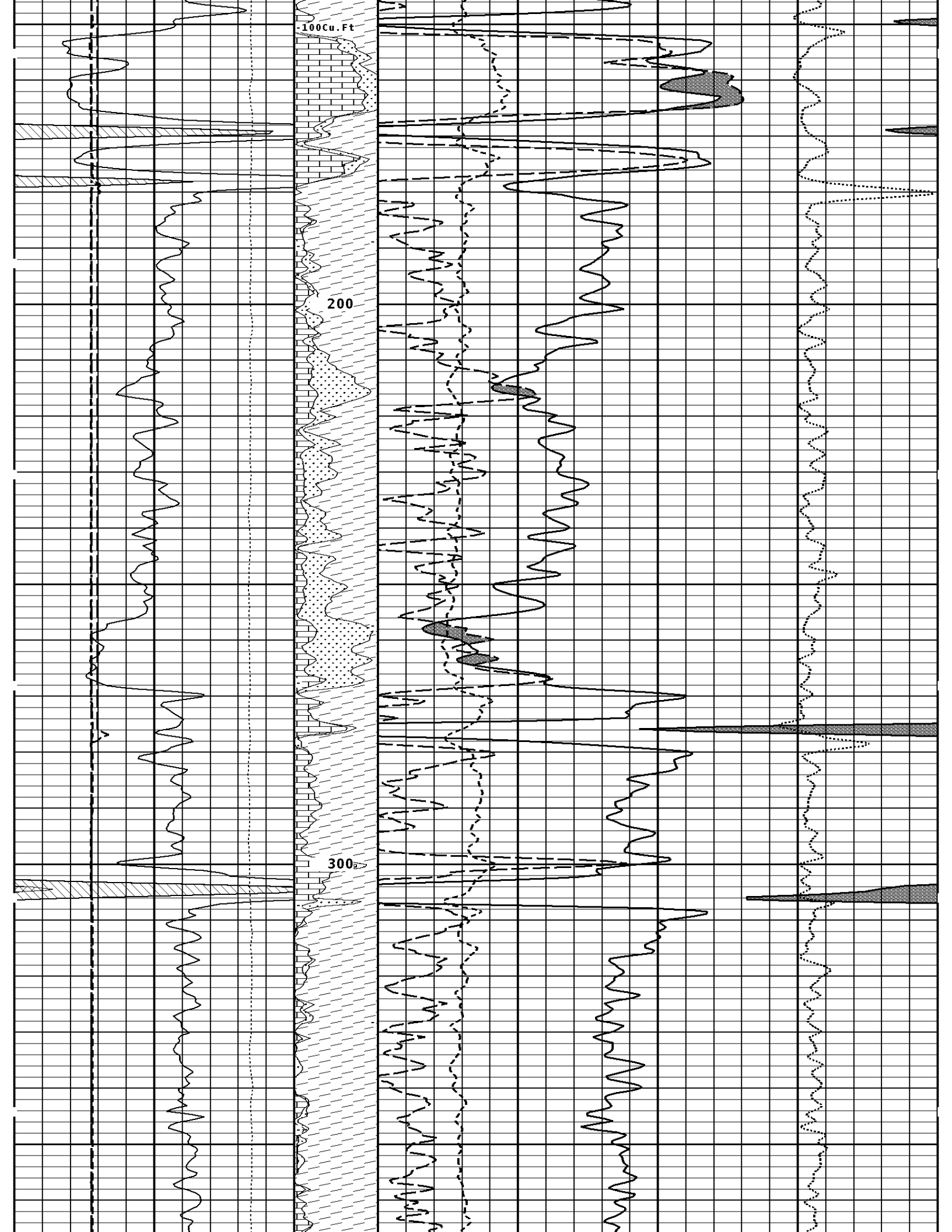
GAMMA RAY API UNITS
200 — 400
0 — 200

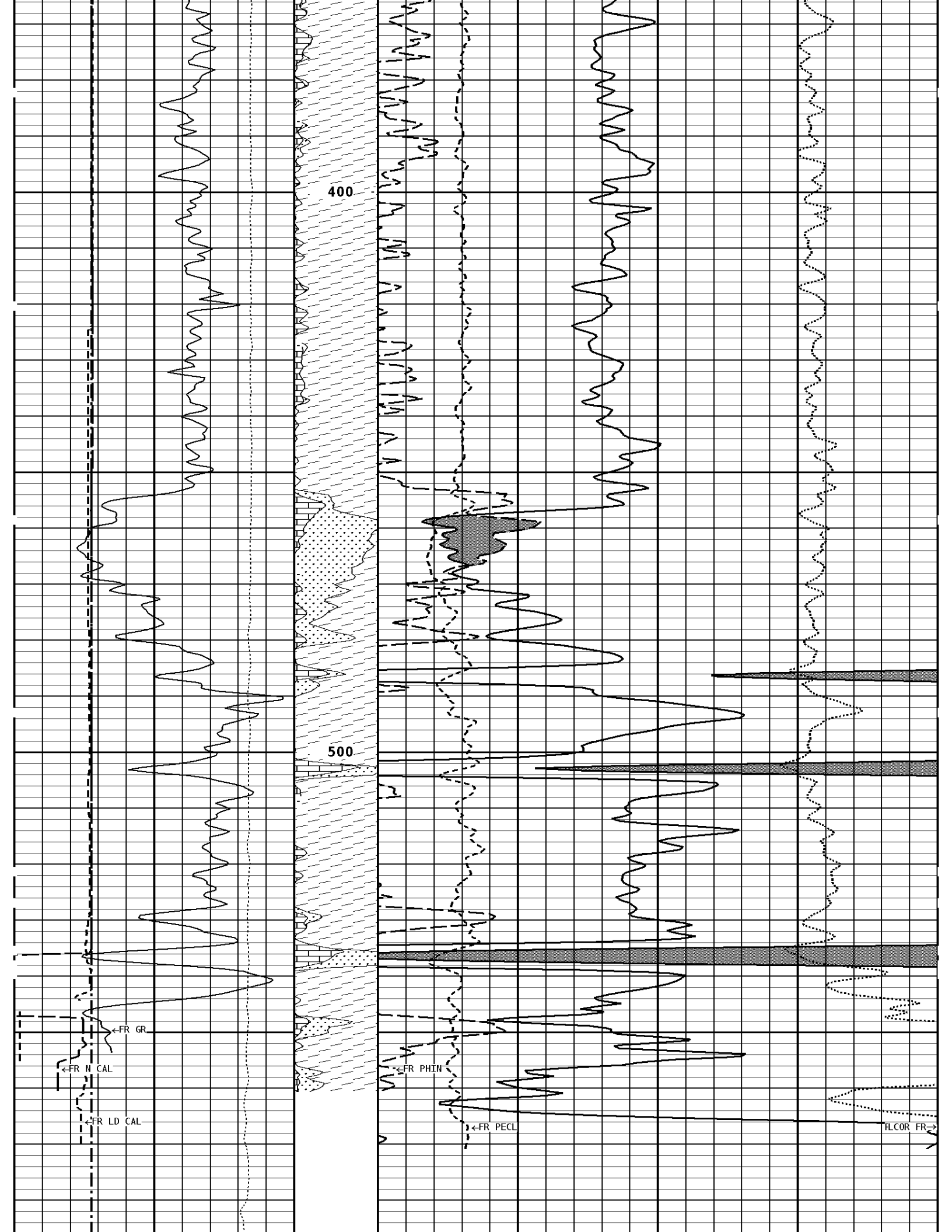
-BHV AHV- CU.FT

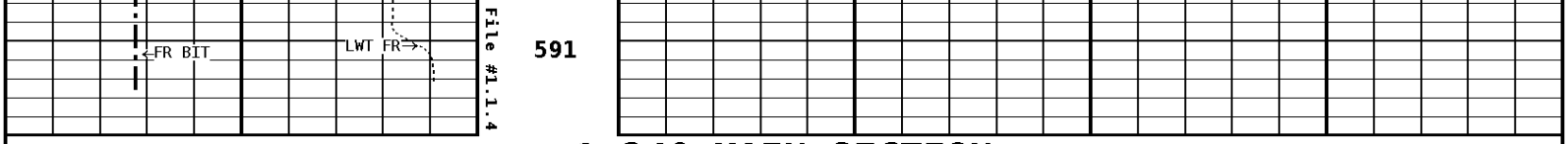
DENSITY POROSITY PERCENT (2.71 g/cc)
70 — 30
30 — -10
-10 — -50

1:240 MAIN SECTION




-100Cu.Ft
200
300


400
500
←FR GR
←FR N CAL
←FR LD CAL
←FR PHIN
←FR PECL
FLCOR FR→



1:240 MAIN SECTION

GAMMA RAY API UNITS	-BHV AHV- CU.FT	DENSITY POROSITY PERCENT (2.71 g/cc)
200 400 / 0 200		70 30 / 30 -10 / -10 -50
NEUTRON (Y) CALIPER INCHES (IN)	Volume Calcite	**NEUTRON POROSITY PERCENT (LIMESTONE MATRIX)**
14 24 / 4 14		30 -10
DENSITY (X) CALIPER INCHES (IN)	Volume Quartz	**PE CROSS-SECTION BARNS/ELECTRON** / **DENSITY CORRECTION G/CC**
14 24 / 4 14		0 10 / -0.25 0.25
BIT SIZE INCHES (IN)	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	6.750	in
Casing Diameter	4.500	in
Casing Correction (PHI N)	Disable	

Well File: RFP_SNYDER_7-1C_JUNE12_STK **Scale:** 1:240
Segment: V1.D1.S4 Reprocess of MAIN **Acquired:** 2012-06/12 12:11 3.2.0-10932
Reference: 0 **Processed:** 2012-06/12 12:37 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 / 4 14		0 10 / -0.25 0.25
NEUTRON (Y) CALIPER INCHES (IN)		**DENSITY POROSITY PERCENT (2.71 g/cc)**
14 24 / 4 14		70 30 / 30 -10 / -10 -50
GAMMA RAY	-BHV AHV-	**COMPENSATED BULK DENSITY**

API UNITS

200 400

0 200

CU.FT

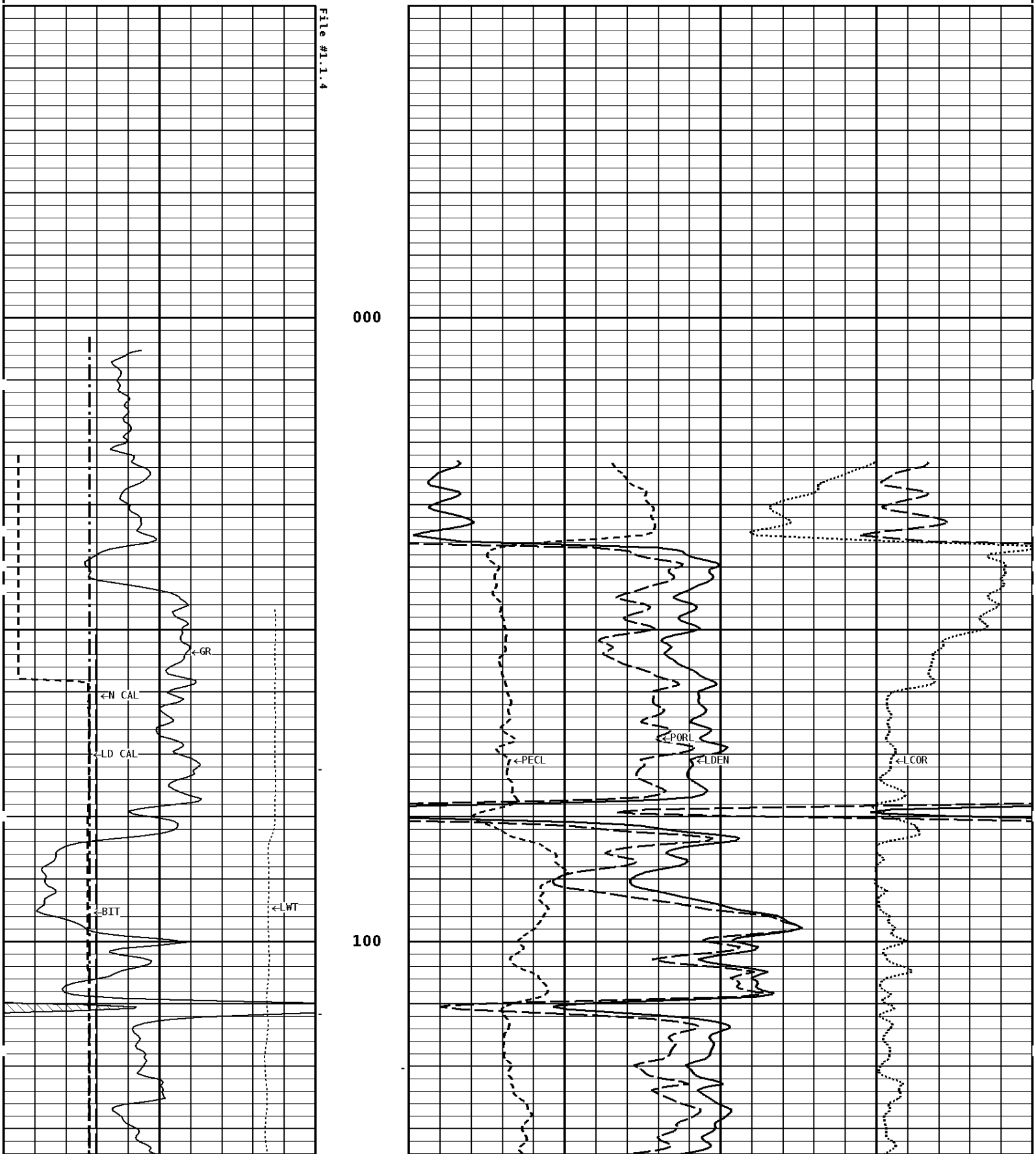
G/CC

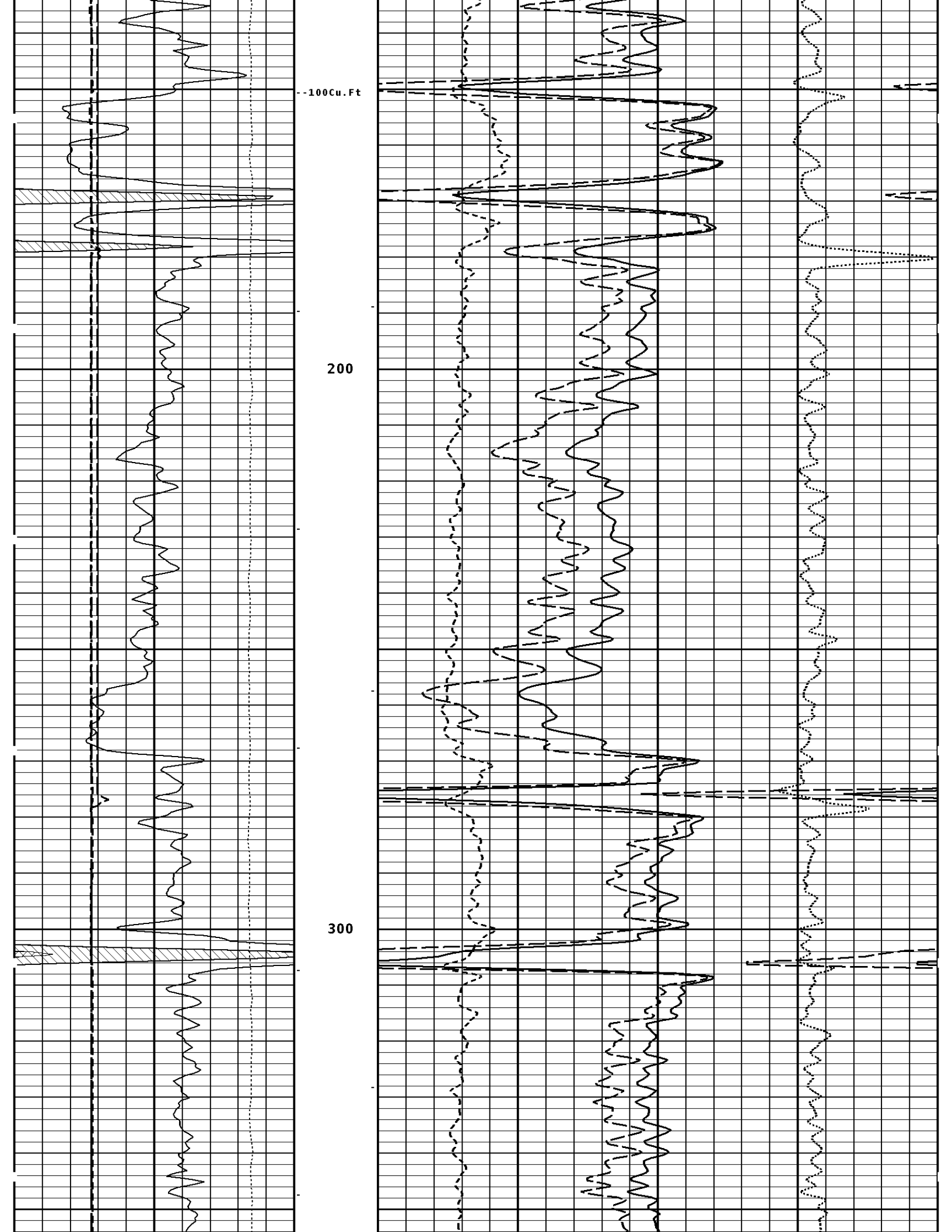
3.0 4.0

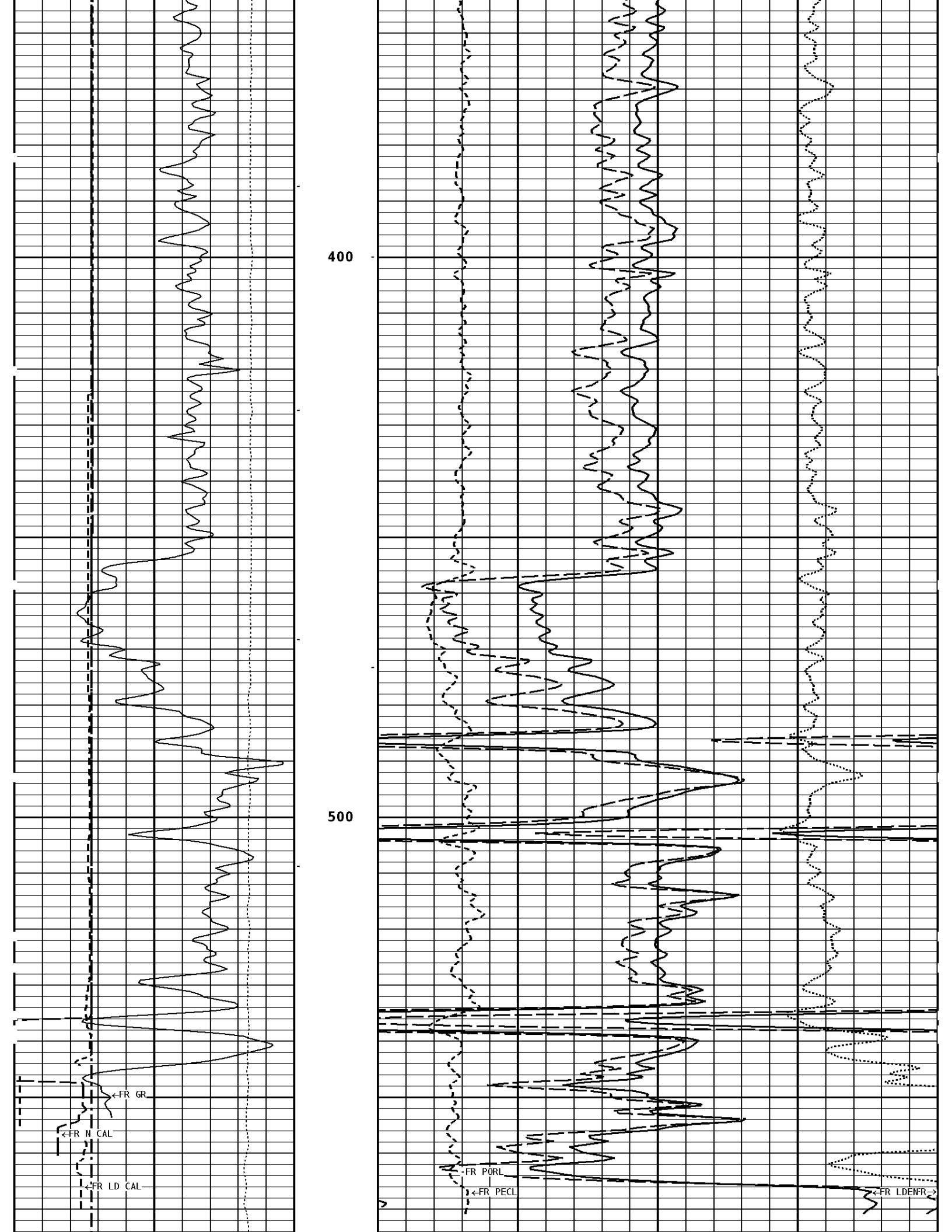
2.0 3.0

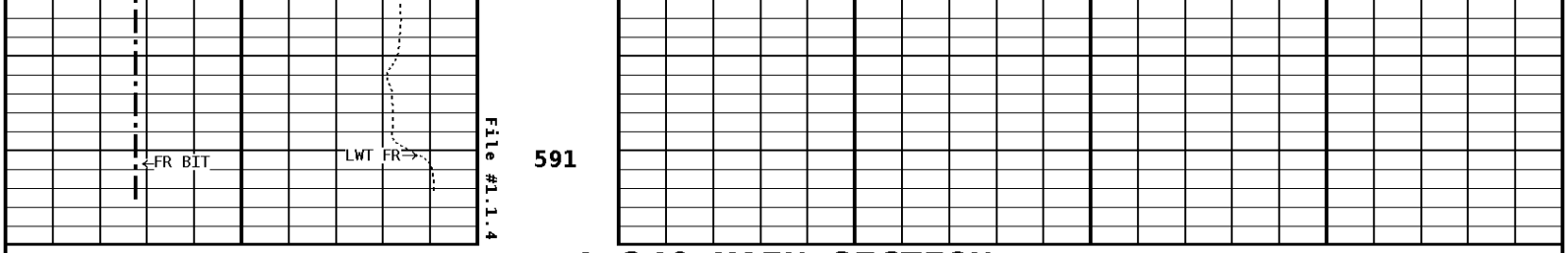
1.0 2.0

1:240 MAIN SECTION
BULK DENSITY




--100Cu.Ft
200
300


400
500
←FR GR
←FR N CAL
←FR LD CAL
FR PORL
←FR PECL
←FR LDENFR→



1:240 MAIN SECTION
BULK DENSITY

GAMMA RAY API UNITS	-BHV AHV- CU.FT	COMPENSATED BULK DENSITY G/CC
200 400		3.0 4.0
0 200		2.0 3.0
		1.0 2.0

NEUTRON (Y) CALIPER INCHES (IN)	DENSITY POROSITY PERCENT (2.71 g/cc)
14 24	70 30
4 14	30 -10
	-10 -50

DENSITY (X) CALIPER INCHES (IN)	PE CROSS-SECTION BARNS/ELECTRON	DENSITY CORRECTION G/CC
14 24		
4 14	0 10	-0.25 0.25

BIT SIZE INCHES (IN)
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	6.750	in
Casing Diameter	4.500	in
Casing Correction (PHI N)	Disable	

* Calibration Summary *

Shop Calibration
GRT-B

Performed : 29-APR-2010 Time : 15:43
Sensor Suite : GR-GR5 ID : GRT-BA-015

	Measured Background	Measured Jig	Units	Calibrated Jig	Units
GR	54	409	CPS	175	GRAPI

Shop Calibration
CNT-AA

Performed : 24-OCT-2011 Time : 08:41
Sensor Suite : CALI-BCN ID : NDT-BB-123

	Jig - Measured Ring#1	Jig - Measured Ring#2	Jig - Calibrated Ring#1	Jig - Calibrated Ring#2	Units
CL # 1	6.4	12.4	6.0	12.0	IN.

Performed : 17-May-2012 Time : 12:59
Sensor Suite : BHC NEUT ID : CNP-AA-024

Source ID : N-1045

	Tank Measured	Tank Calibrated	Verification Jig	Units
N/F	3.8748	3.6893	3.6852	
Porosity	23.4	20.5	20.4	%

Shop Calibration
LDT-DA

Performed : 01-MAR-2011 Time : 04:24
Sensor Suite : CALI-LTH ID : PDT-GA-464

	Jig - Measured Ring#1	Jig - Measured Ring#2	Jig - Calibrated Ring#1	Jig - Calibrated Ring#2	Units
CL # 1	6.9	12.9	6.0	12.0	IN.

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