Tucker WIRELINE SERVICES

COMPENSATED NEUTRON
PEL DENSITY LOG

File No. : TUL-55007
Company : RUNNING FOXES PETROLEUM, INC.
Well : VOGEL #16-36WSW
Field : WILDCAT
County : BOURBON
State : KANSAS
Country : U.S.A.

Location : API: 15-011-23704-00-00
1125' FSL & 420' FEL
NW NE SE SE
Sect : 36 Twp : 24S Rge : 23E

Recorded By : R. FRANKLIN
Witnessed By : G. BRATTON

Date : FEB 03 2010
Run No. : 1

Permanent Datum :	GL	
Drilling Measured From :	GL	
Log Measured From:	GL	
Above Permanent Datum :	0.00	FT
Depth--Driller :	622.0	FT
Depth--Logger :	621.0	FT
Bottom Log Interval :	598.0	FT
Top Log Interval :	20.0	FT
Casing Depth--Driller:	20.0	FT
Casing Depth--Logger :	20.0	FT
Casing Diameter :	8.625	IN
Bit Size :	6.750	IN

Unit No. : TRK 123
Location : TULSA

Elevations :
KB : FT
DF : FT
GL : 850.00 FT

Additional Services

PIT

Run Number 1

Depth To Fluid	0.0	FT		
Fluid Type In Hole :	FRESH / NATIVE			
Density :	0.000	LBS/GAL		
Viscosity :	0.000	SEC/QT		
pH :	0.000			
Fluid Loss :	0.000	CC		
Salinity :	0.000	KPPM		
			55	F
RM Source :	MEASURED			
RM :	1.300	OHMM at	55	F
RM at BHT :	1.050	OHMM at	70	F
RMF Source :	CALCULATED			
RMF :	1.100	OHMM at	55	F
RMF at BHT :	0.889	OHMM at	70	F
RMC Source :	CALCULATED			

RMC :	1.490	OHMM at	55	F
RMC at BHT :	1.200	OHMM at	70	F
Max Recorded Temp. :			70	F
Time Circulation Stopped :				
Operating Rig Time, Hrs. :			1.5	

- Source Serial Numbers -

Gamma	2991GW
Neutron	N-1046

- Sonde Serial Numbers -

GRTB	GRT-BC-41
CNT	CNP-AA-112
LDTNG	LDP-DA-067
PIT_B	PIT-BA-21

Casing Strings

Size (IN)	Weight (LB/FT)	Bottom (FT)
8.625	36.00	20.00

- Comments -

ALL PRESENTATIONS AS PER CLIENTS REQUEST

GRT, CNT, LDT, AND PIT RAN IN COMBINATION.
CALIPERS ORIENTED X-Y AXIS.
2.71 G/CC USED TO CALCULATE PORSITY.
PHIN IS CALIPER CORRECTED.
ANNULAR HOLE VOLUME CALCULATED USING 4.5" PRODUCTION CASING.

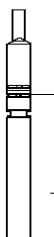
GRT: GRP.
CNT: PHIN, CLCNIN.
LDT: PORL, LCORN, PECLN, LDENN, CLLDIN.
PIT: ILD, ILM, CIRD, SPU, SFLAEC.

OPERATORS:
S. DAVIS
M. GARNER

THANK YOU FOR USING TUCKER WIRELINE SERVICES!

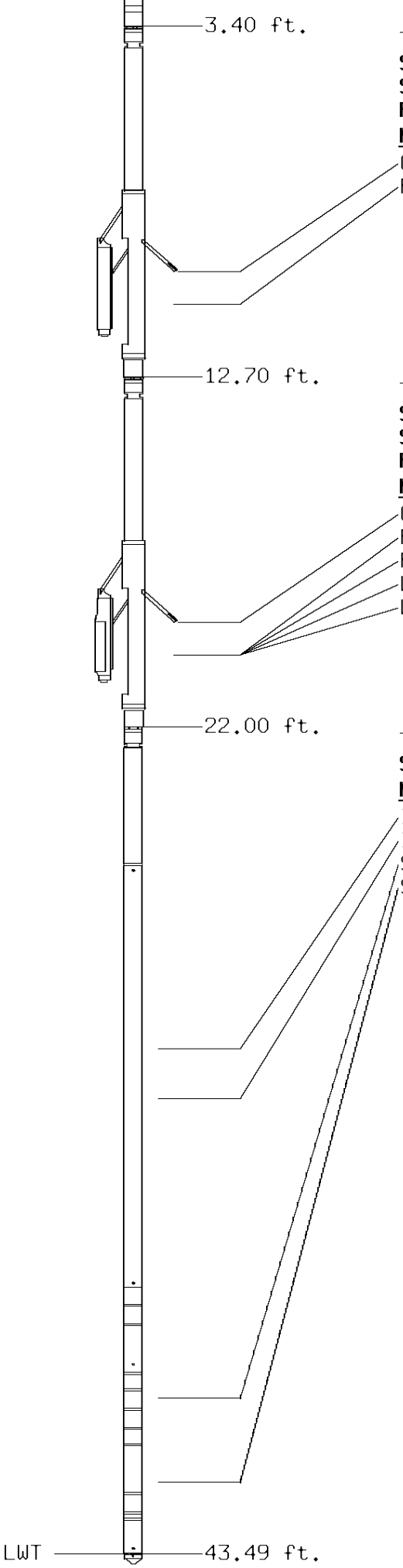
Tool String Schematic

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



Tool: GRTB **Length:** 3.40 **ft. O.D.:** 3.60 **in.**
Sonde ID : GRT-BC-41

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



Tool: CNT **Length:** 9.30 **ft. O.D.:** 4.36 **in.**
Sonde ID : CNP-AA-112
Source ID : N-1046
Pad ID : CNP-AA-112

Measure Point	Stack Offset	Tool Offset	Bottom Offset
CLCN	9.40	6.00	34.09
PHIN	10.24	6.84	33.25

Tool: LDTNG **Length:** 9.30 **ft. O.D.:** 4.80 **in.**
Sonde ID : LDP-DA-067
Source ID : 2991GW
Pad ID : LDP-DA-067

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

Tool: PIT **Length:** 21.49 **ft. O.D.:** 3.62 **in.**
Sonde ID : PIT-BA-21

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

TENSION
LBS

10000 0

BIT SIZE
INCHES (IN)

4 14

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

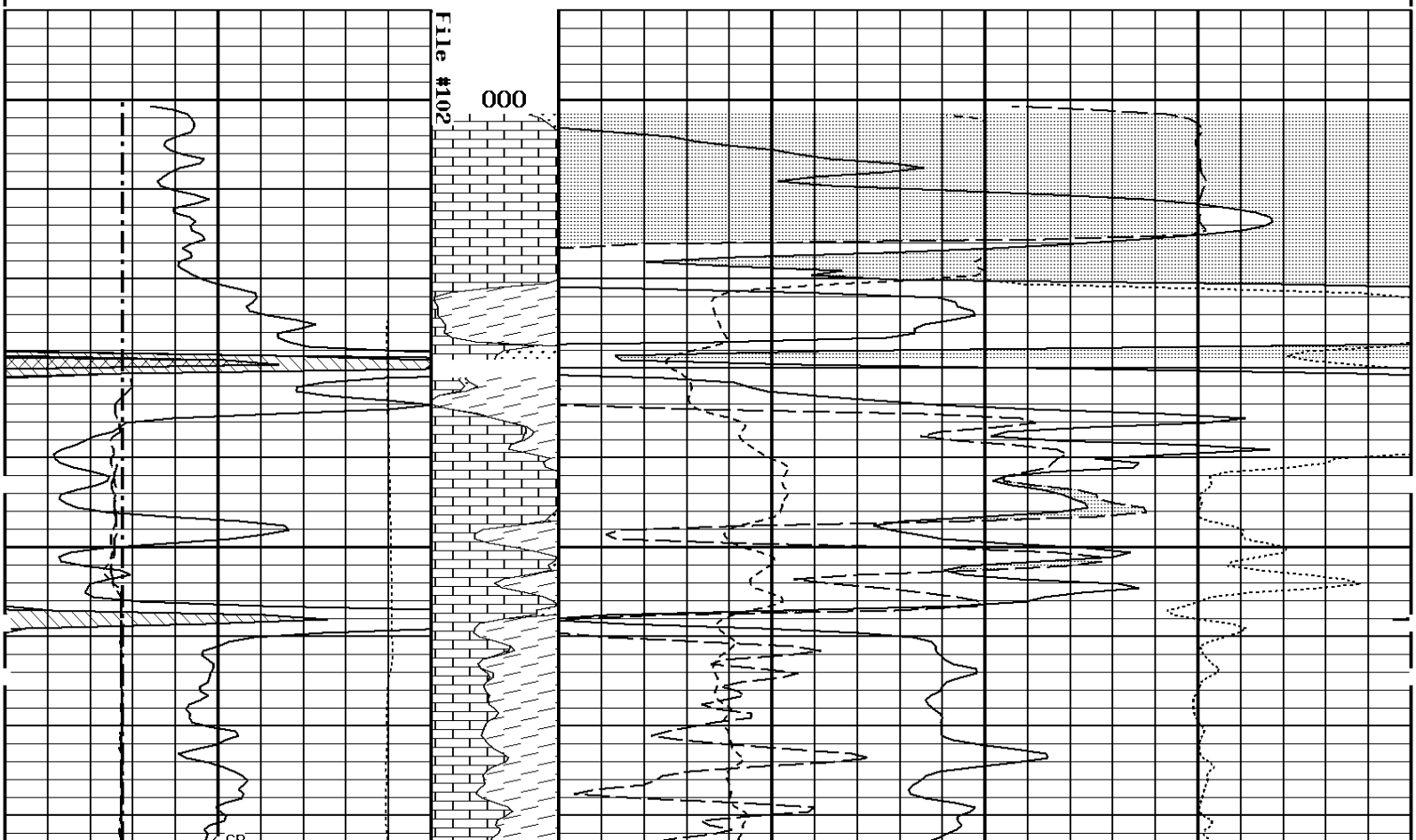
200 400
0 200

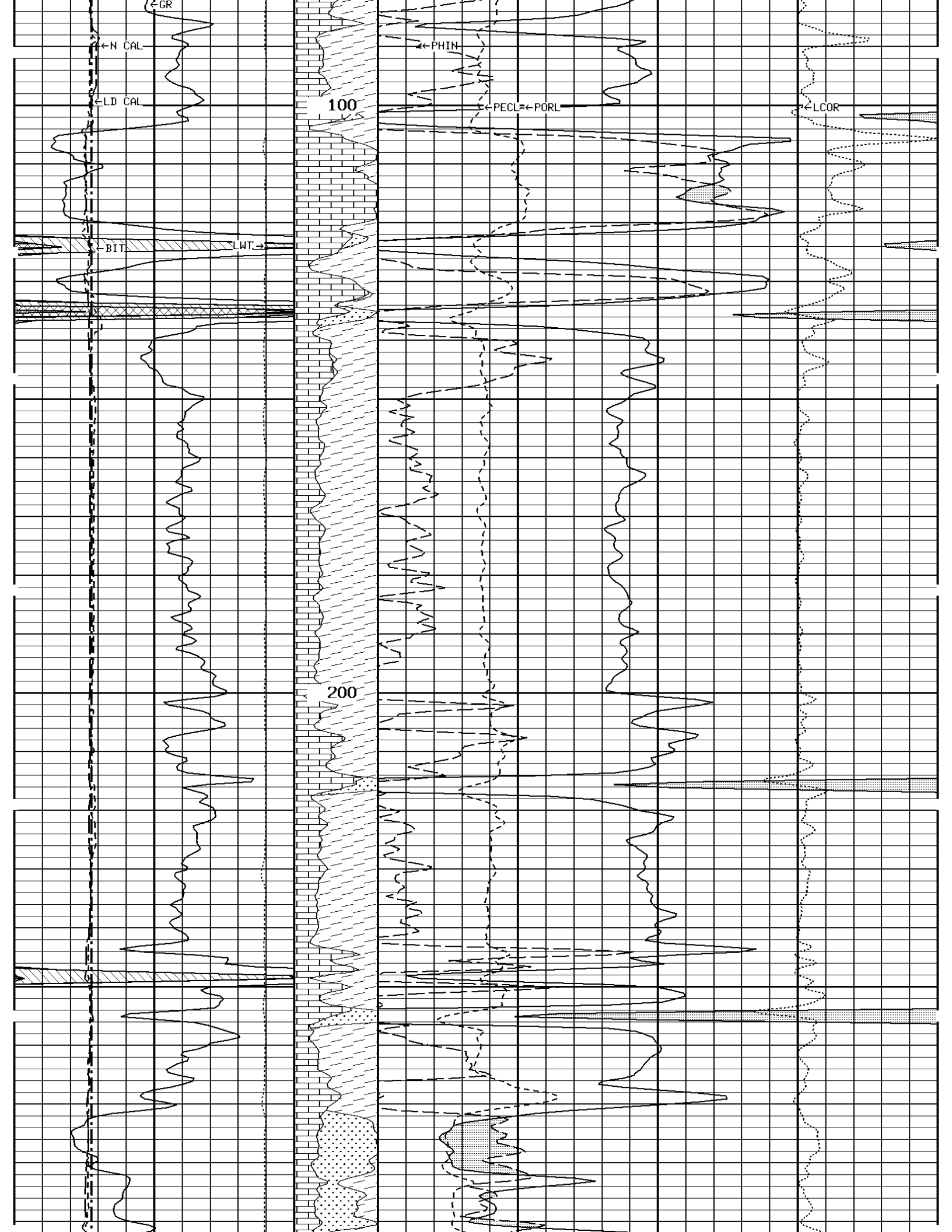
Volume
Dolo/Shale

DENSITY POROSITY
PERCENT (2.71 g/cc)

70 30
30 -10

1:240 MAIN SECTION

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←LD CAL
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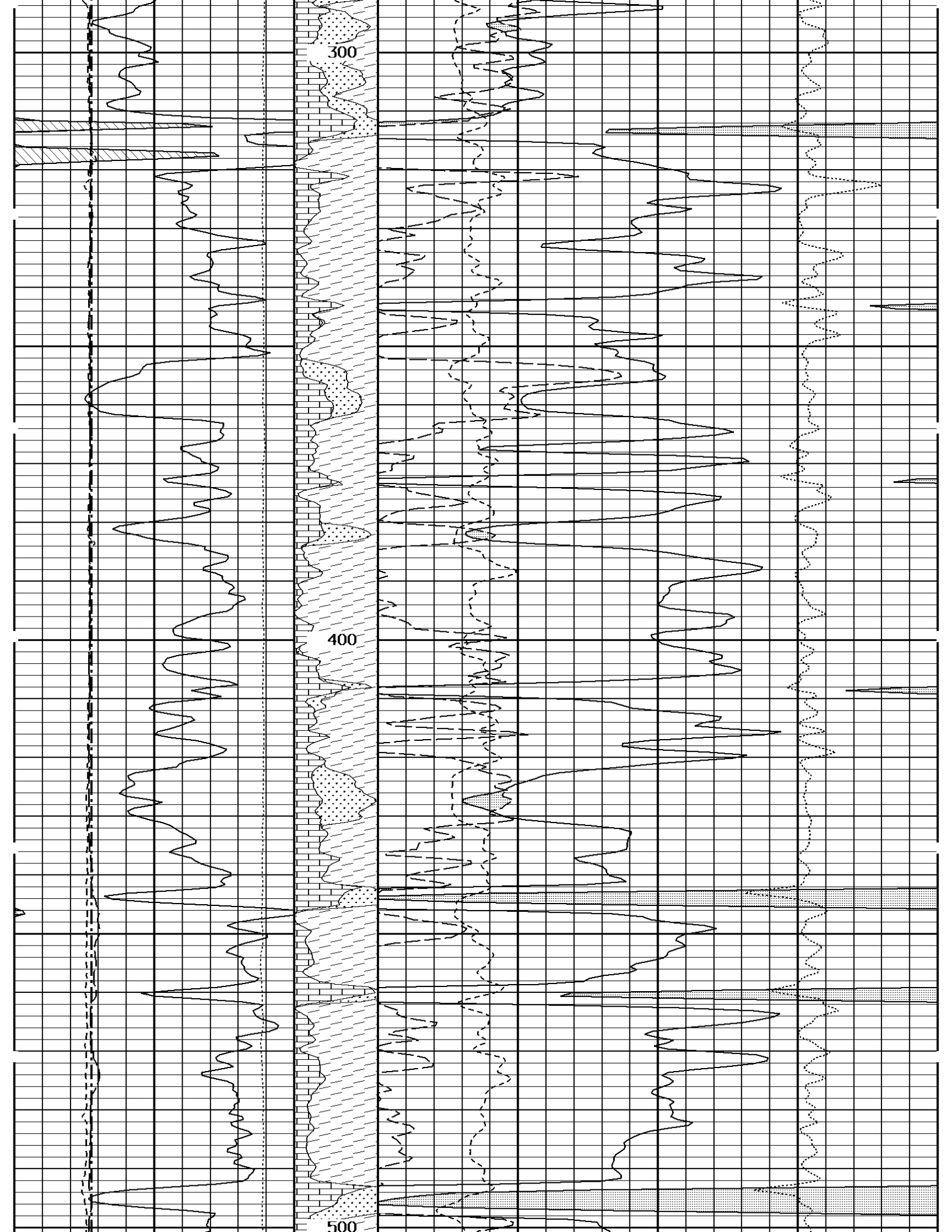
←PHIN
←PECL←PORL
←LCOR
←BIT
LWT→
200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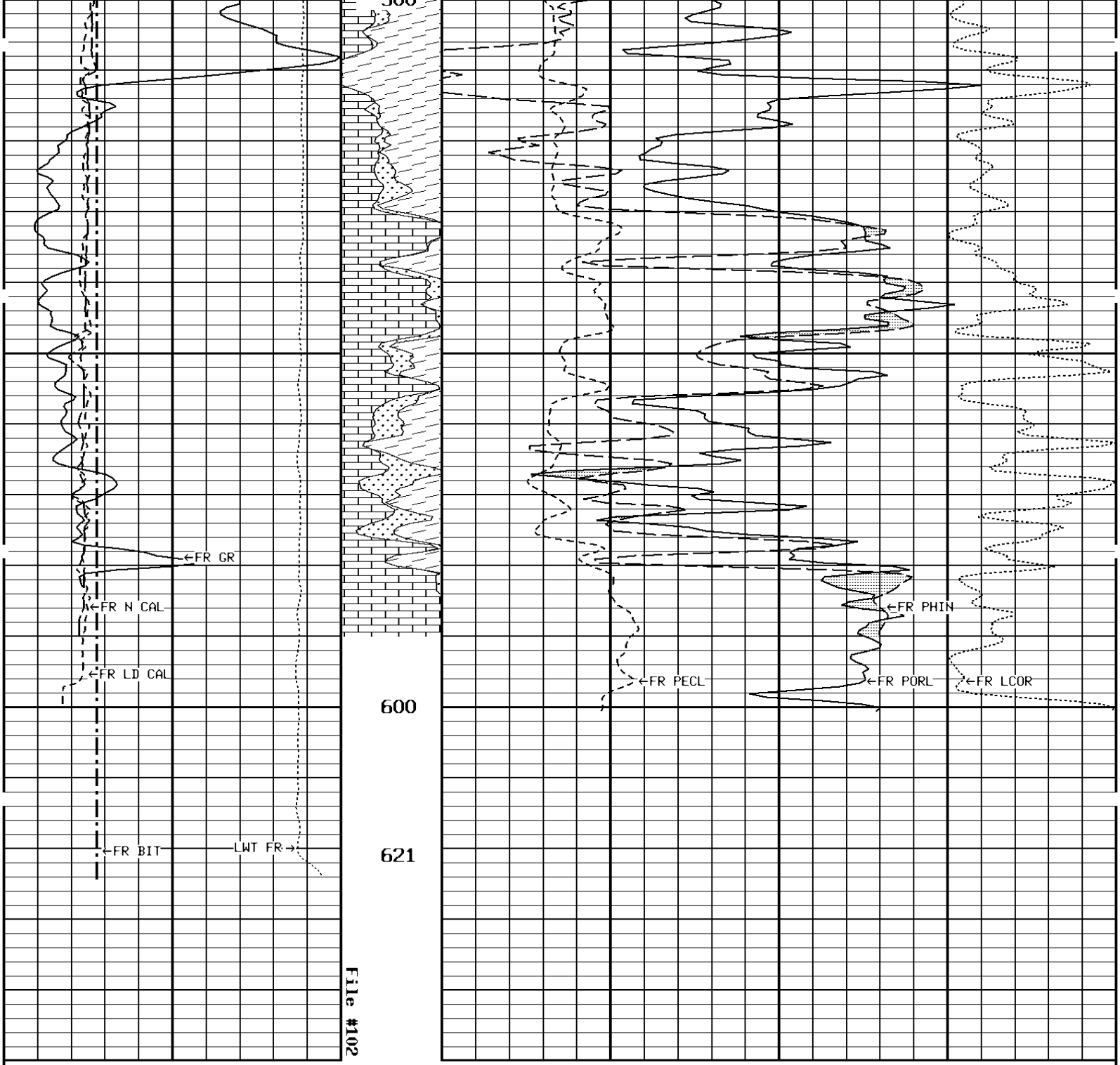
400
500



1:240 MAIN SECTION

GAMMA RAY API UNITS	Volume Dolo/Shale	DENSITY POROSITY PERCENT (2.71 g/cc)
200 400		70 30
0 200		30 -10
NEUTRON (Y) CALIPER INCHES (IN)	Volume Calcite	NEUTRON POROSITY PERCENT (LIMESTONE MATRIX)
14 24		30 -10
4 14		

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)
4 14

TENSION LBS
10000 0

* Borehole Zone Factors *

Zone 1 99999.0 to 0.0 F

Matrix Density	2.71	G/C3
Fluid Density	1.00	G/C3
Formation Matrix	Limestone	
Drill Bit Size	6.750	IN
Casing Correction (PHI N)	Disable	

TENSION LBS
10000 0

BIT SIZE INCHES (IN)
4 14

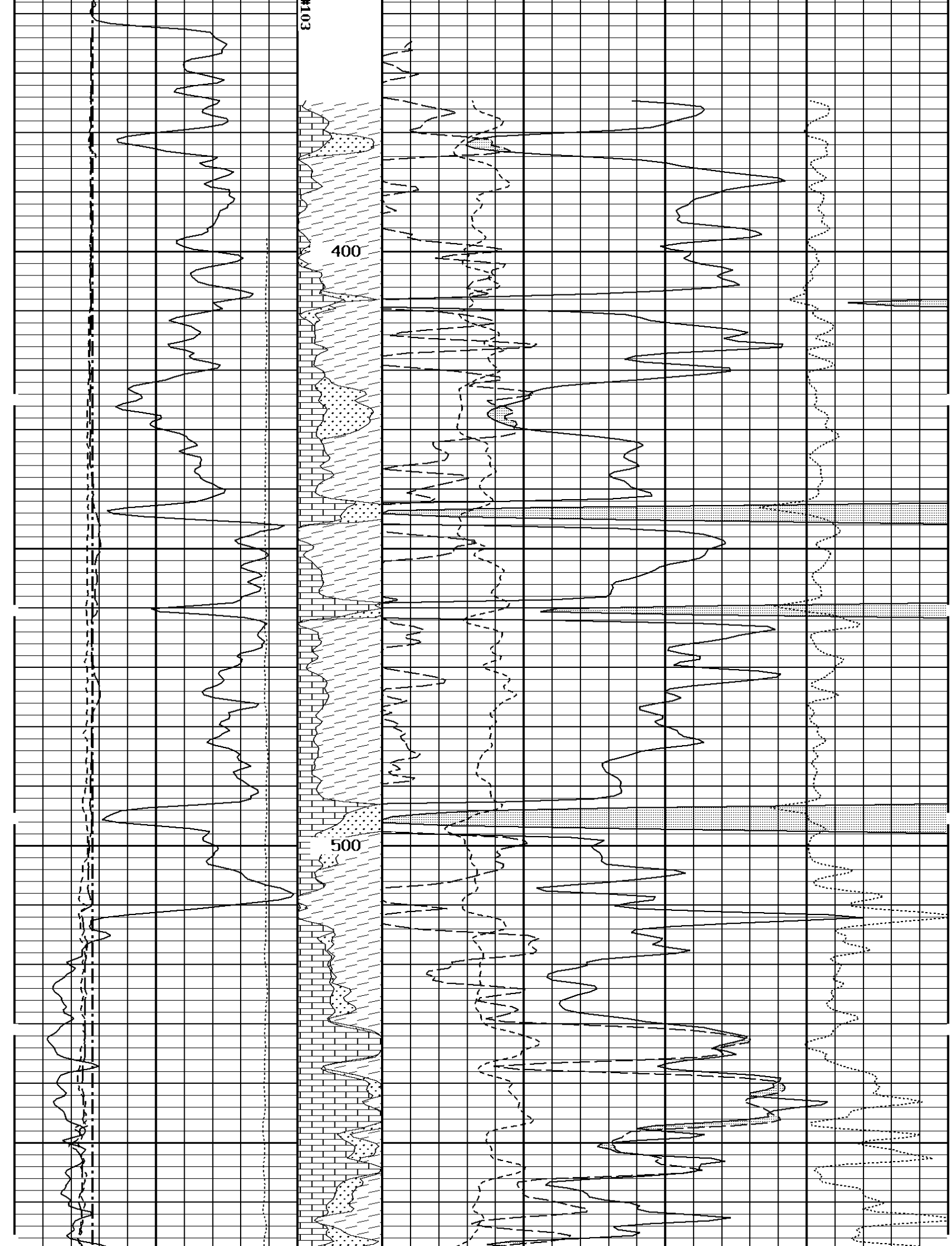
DENSITY (X) CALIPER INCHES (IN)	Volume Quartz	PE CROSS-SECTION BARNS/ELECTRON	DENSITY CORRECTION G/CC
14 24 4 14		0 10	-0.25 0.25

NEUTRON (Y) CALIPER INCHES (IN)	Volume Calcite	NEUTRON POROSITY PERCENT (LIMESTONE MATRIX)
14 24 4 14		30 -10

GAMMA RAY API UNITS	Volume Dolo/Shale	DENSITY POROSITY PERCENT (2.71 g/cc)
200 400 0 200		70 30 30 -10

1:240 REPEAT SECTION

File #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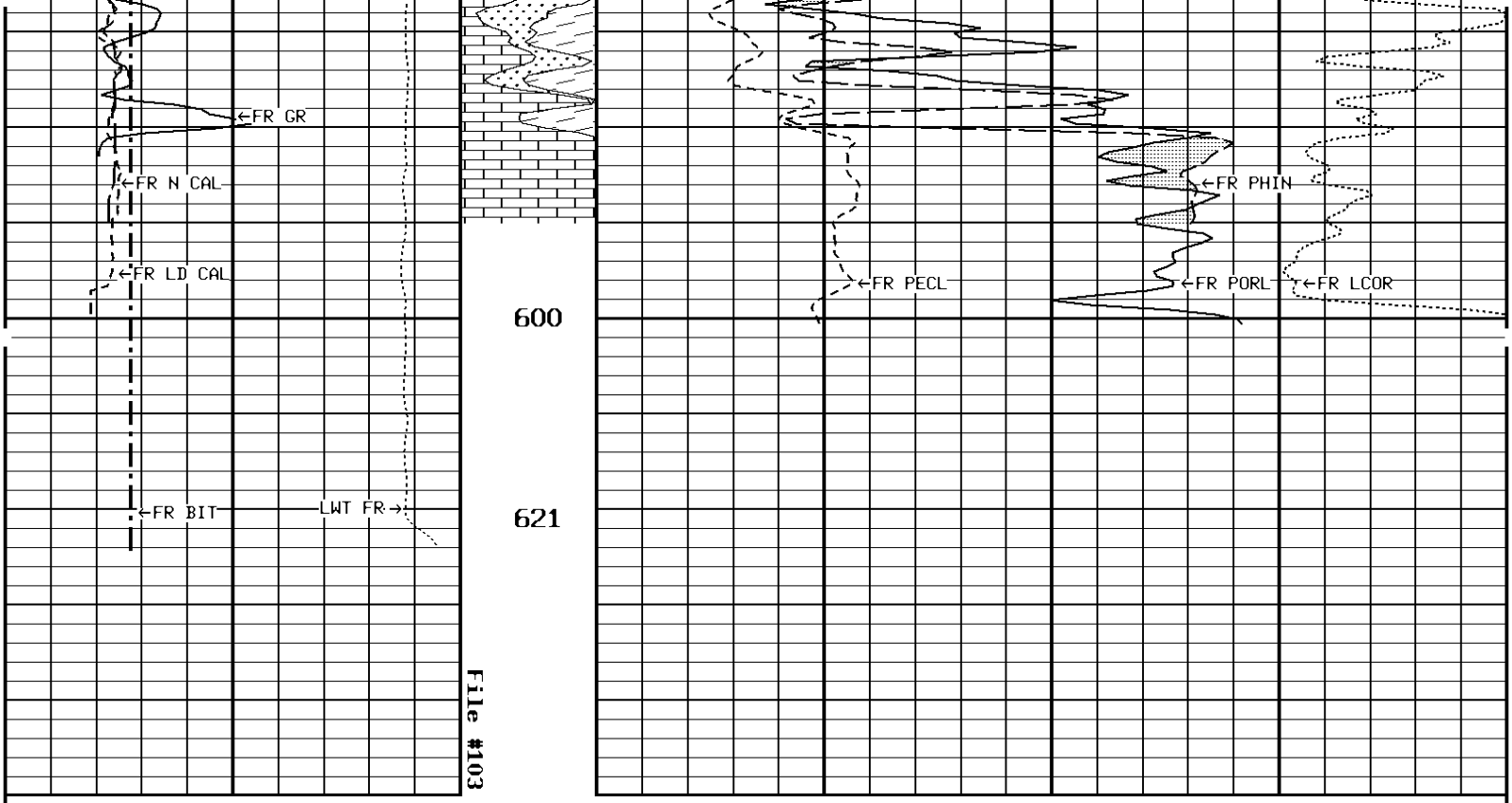
500



1:240 REPEAT SECTION

GAMMA RAY API UNITS 200 400 0 200	Volume Dolo/Shale 70 30	DENSITY POROSITY PERCENT (2.71 g/cc) 30 −10
NEUTRON (Y) CALIPER INCHES (IN) 14 24 4 14	Volume Calcite 30	NEUTRON POROSITY PERCENT (LIMESTONE MATRIX) −10
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
BIT SIZE INCHES (IN) 4 14		
TENSION LBS 10000 0		

* Borehole Zone Factors *

Zone 1	99999.0	to	0.0	F

Matrix Density	2.71	G/C3
Fluid Density	1.00	G/C3
Formation Matrix	Limestone	
Drill Bit Size	6.750	IN
Casing Correction (PHI N)	Disable	

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

-BHV AHV-
CU.FT

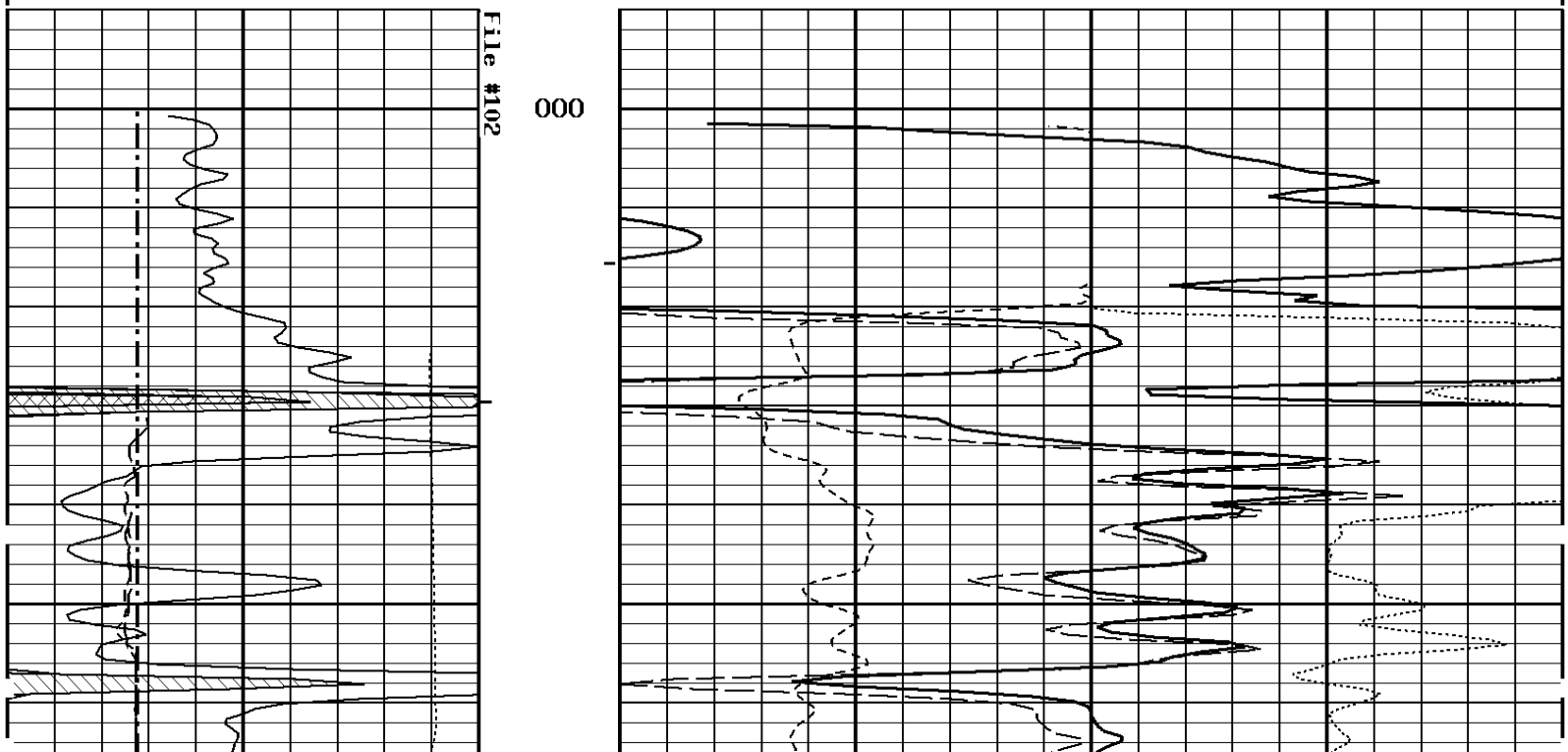
PE CROSS-SECTION
BARNS/ELECTRON
0 10

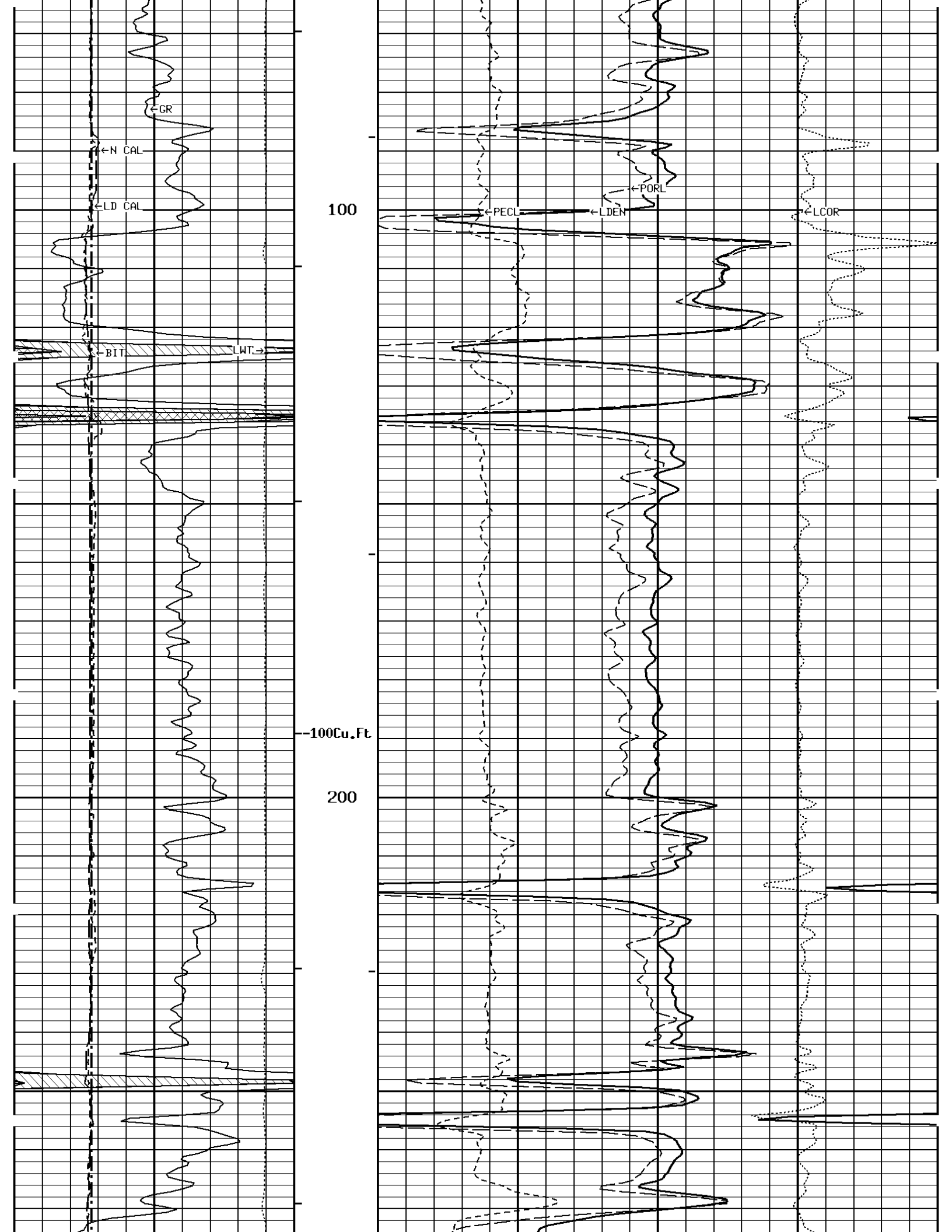
DENSITY CORRECTION
G/CC
-0.25 0.25

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

COMPENSATED BULK DENSITY
G/CC
3.0 4.0
2.0 3.0
1.0 2.0

1:240 MAIN SECTION
BULK DENSITY

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LWT.→
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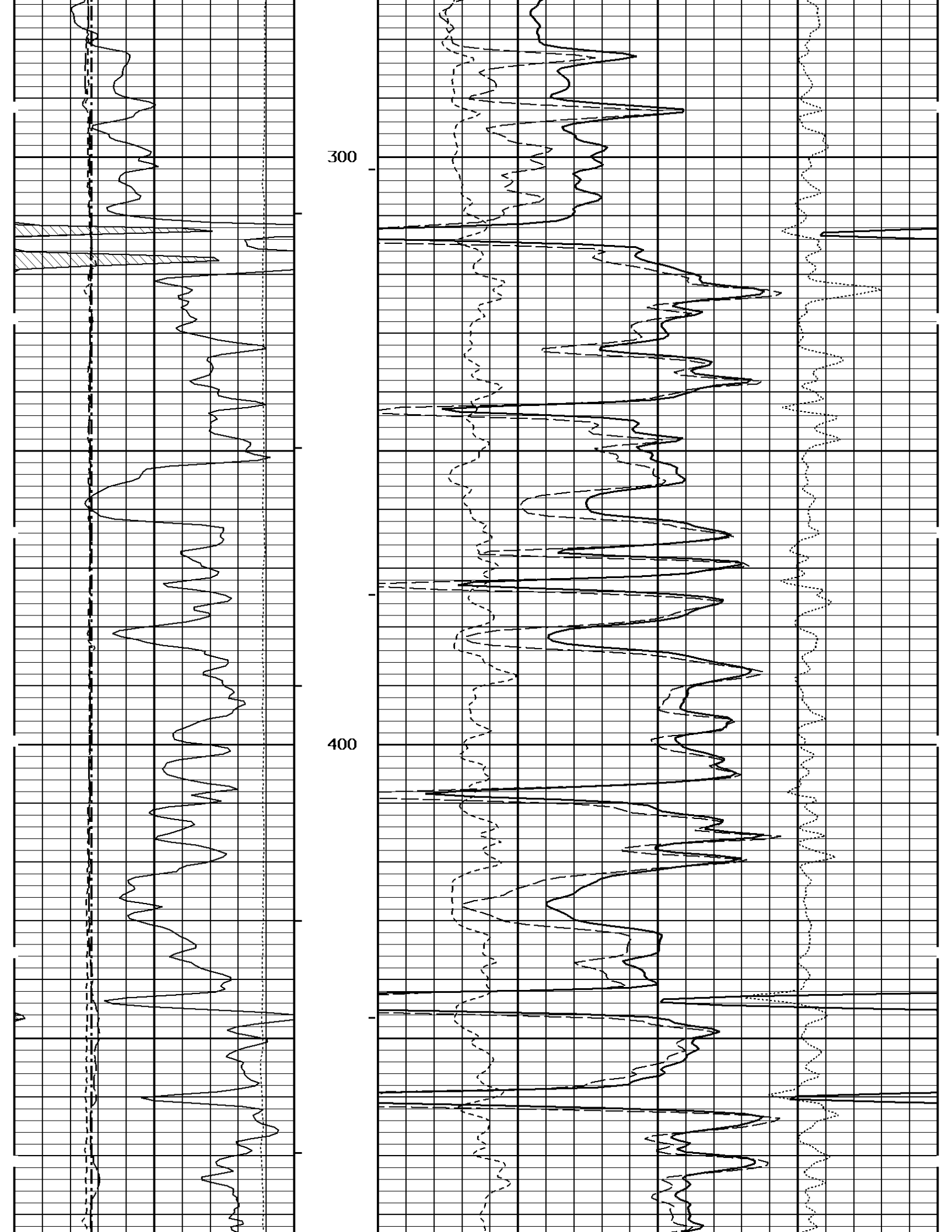
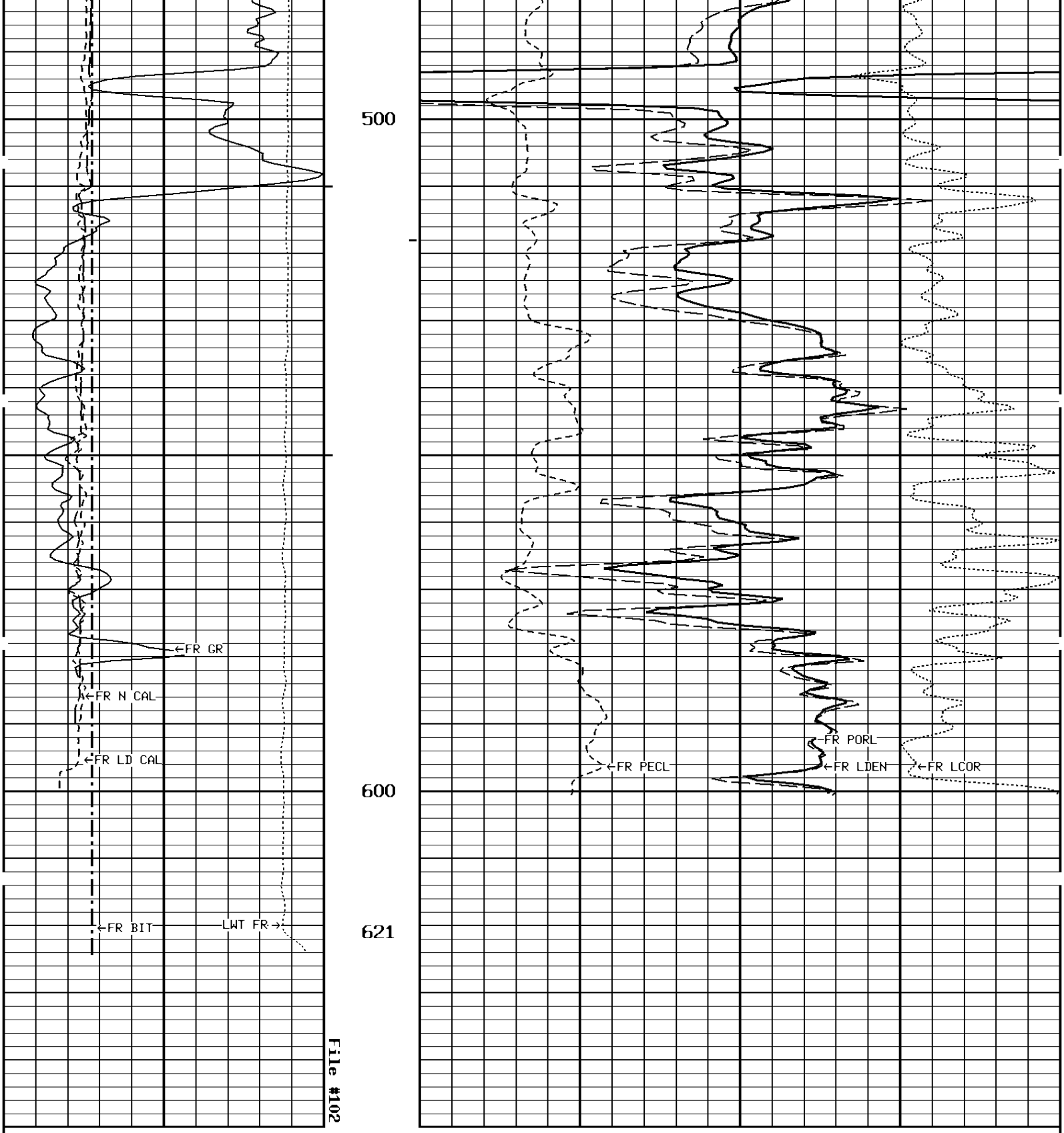
←PORL
←PECL
←LDEN
←LCOR
--100Cu.Ft
200


300
400



1:240 MAIN SECTION
BULK DENSITY

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

1.0	2.0

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

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

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

PE CROSS-SECTION BARNS/ELECTRON		DENSITY CORRECTION G/CC	
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 F

Matrix Density	2.71	G/C3
Fluid Density	1.00	G/C3
Formation Matrix	Limestone	
Drill Bit Size	6.750	IN
Casing Correction (PHI N)	Disable	

* Calibration Summary *

Shop Calibration
GRTB

Performed : 16-Sep-2009 Time : 11:46
Sensor Suite : GR-GR5 ID : GRT-BC-41

	Measured Background	Measured Jig	Units	Calibrated Jig	Units
GR	54	342	CPS	175	GRAPI

Shop Calibration
CNT

Performed : 30-Dec-2009 Time : 11:26
Sensor Suite : BHC NEUT ID : CNP-AA-112
Source ID : N-1046

	Tank Measured	Tank Calibrated	Verification Jig	Units
N/F	4.0266	3.6893	3.6902	
Porosity	26.0	20.5	20.5	%

Performed : 18-Jan-2010 Time : 10:24
Sensor Suite : CALI-BCN ID : CNP-AA-112

	Jig - Measured Ring#1	Jig - Measured Ring#2	Jig - Calibrated Ring#1	Jig - Calibrated Ring#2	Units
CL # 1	11.3	16.2	6.0	12.0	IN.

Shop Calibration
LDTNG

Performed : 18-Jan-2010 Time : 10:34
Sensor Suite : CALIPEL ID : LDP-DA-067

	Jig - Measured		Jig - Calibrated		Units
	Ring#1	Ring#2	Ring#1	Ring#2	
CL # 1	7.3	12.3	6.0	12.0	IN.

Performed : 17-Jan-2010 Time : 10:55
Sensor Suite : BHCPELNG ID : LDP-DA-067
Source ID : 2991GW

Short Space

	BKGD	Al	Mg	Al+Fe	Units
LSW1	70	1192	1916	768	CPS
LSW2	75	1368	2162	990	CPS
LSW3	269	3135	5036	2673	CPS
LSW4	330	2856	4145	2518	CPS
LSW5	37	65	72	62	CPS
LSW6	82	87	87	88	CPS
LSW7	59	62	61	62	CPS
LSW8	4	7	9	7	CPS
QS	0.163	0.168	0.176	0.173	
PES			2.778	5.967	
SSDN		2.600	1.680		G/CC

Long Space

	BKGD	Al	Mg	Al+Fe	Units
LLW1	99	1335	5419	810	CPS
LLW2	110	2298	8887	1696	CPS
LLW3	417	4241	15910	3655	CPS
LLW4	539	2018	6466	1834	CPS
LLW5	57	69	136	67	CPS
LLW6	176	173	165	173	CPS
LLW7	111	109	106	110	CPS
LLW8	3	7	20	6	CPS
QL	0.226	0.227	0.218	0.223	
PEL			2.697	5.458	
LSDN		2.600	1.680		G/CC