Tucker WIRELINE SERVICES

COMPENSATED NEUTRON PEL DENSITY LOG

File No. : TUL-56710
Company : RUNNING FOXES PETROLEUM, LLC
Well : MYERS 16-33
Field : CHEROKEE BASIN COAL AREA
County : BOURBON
State : KANSAS
Country : USA

Location : API#: 15-011-23755-00-00
660' FSL & 660' FEL
SE SE
Sect : 33 Twp : 23S Rge : 22W

Recorded By : B.BAILEY
Witnessed By : C.COUNTS

Date : NOV 12 2010
Run No. : 1

Permanent Datum :	GL	
Drilling Measured From :	GL	
Log Measured From:	GL	
Above Permanent Datum :	0.00	FT
Depth--Driller :	892.0	FT
Depth--Logger :	770.0	FT
Bottom Log Interval :	746.0	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. : 127
Location : TULSA

Elevations :
KB : FT
DF : FT
GL : 1041.00 FT

Additional Services

PIT

Run Number 1

Depth To Fluid	181.0	FT			
Fluid Type In Hole :	NATIVE				
Density :	0.000	SG			
Viscosity :	0.000	SEC			
pH :	0.000				
Fluid Loss :	0.000	KPPM			
Salinity :	0.000	KPPM			
RM Source :	MEASURED		CALCULATED		
RM :	10.000	OHMM at	8.500	OHMM at	11.500
RM at BHT :	8.113	OHMM at	6.896	OHMM at	9.329
RMF Source :	CALCULATED				
RMF :	8.500	OHMM at	62	F	62
RMF at BHT :	6.896	OHMM at	78	F	78
RMC Source :	CALCULATED				
RMC :	11.500	OHMM at	62	F	62
RMC at BHT :	9.329	OHMM at	78	F	78
Max Recorded Temp. :					78

Time Circulation Stopped :
Operating Rig Time, Hrs. : 2.0

- Source Serial Numbers -

Gamma	CSV-587
Neutron	N-1044

- Sonde Serial Numbers -

GRTB	GRT-BA-14
CNT	CNP-AA-116
LDTNG	LDP-NG-02
PIT	PIT-AB-14

Casing Strings

Size (IN)	Weight (LB/FT)	Bottom (FT)
8.625	32.00	20.00

- Comments -

ALL PRESENTATIONS AS PER CUSTOMER REQUEST.

GRT, CNT, LDT, PIT RAN IN COMBINATION
CALIPERS ORIENTED ON THE X-Y AXIS.
PHIN IS CALIPER CORRECTED.
2.71 G/CC USED TO CALCULATE POROSITY.
ANNULAR HOLE VOLUME CALCULATED USING 4.500" PRODUCTION CASING.
REPEAT DONE UP HOLE DUE TO DRILL PULLING TIGHT ON BOTTUM OF HOLE.
LOGGER BRIDGE AT 769.00.
SP AND SFL DISABLED AT 172' DUE TO FLUID LEVEL.
PHIN DISABLED AT 162' DUE TO FLUID LEVEL.

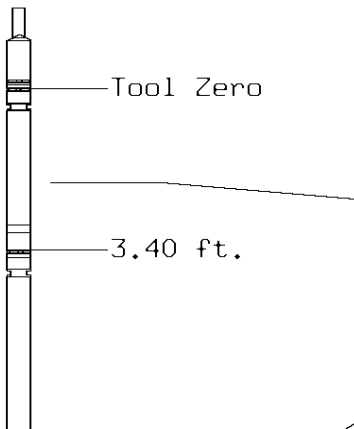
GRT: GRP.
CNT: PHIN, CLCNIN.
LDT: PORL, LCORN, PECLN, CLLDIN, LDENN, PORLLS, PECSN.
PIT: ILD, ILM, CIRD, SFLAEC, SPU.

OPERATORS:
S.DAVIS
R.AUSTIN

THANK YOU FOR USING TUCKER WIRELINE SERVICES!

Tool String Schematic

Total Tool Length - 43.29 **ft.**
Maximum Outside diameter - 4.80 **in.**
Net Weight in Air - 743.00 **lbs.**

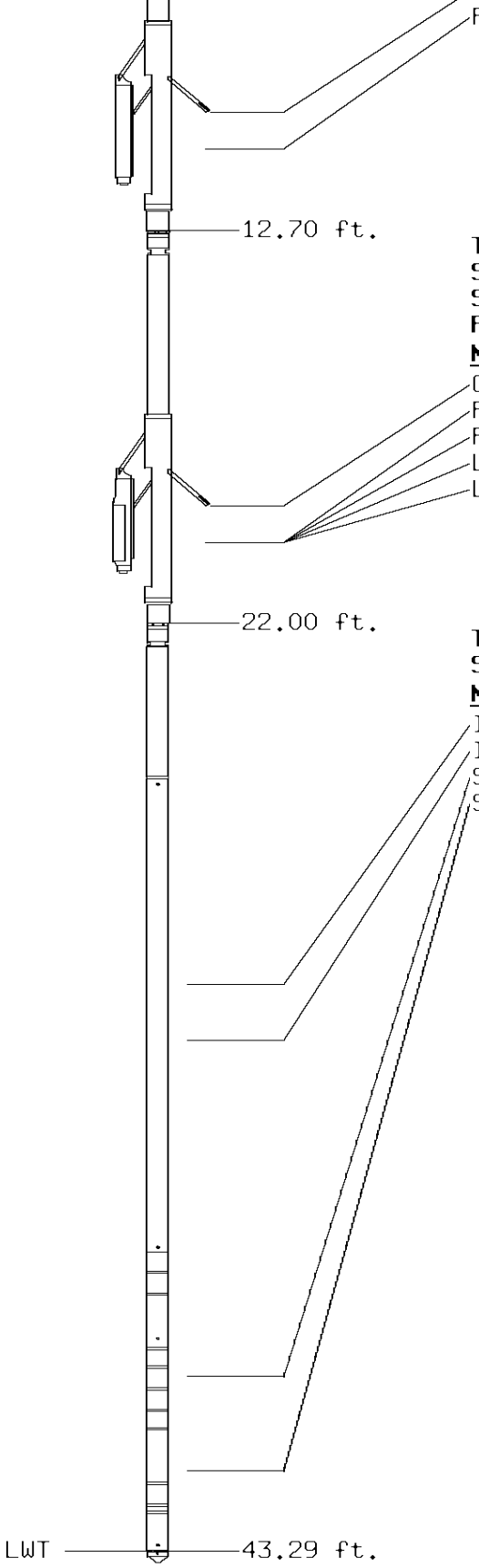


Tool: GRTB **Length:** 3.40 **ft. O.D.:** 3.60 **in.**
Sonde ID : GRT-BA-14

Measure Point	Stack Offset	Tool Offset	Bottom Offset
GRP	2.00	2.00	41.29

Tool: CNT **Length:** 9.30 **ft. O.D.:** 4.36 **in.**
Sonde ID : CNP-AA-116
Source ID : N-1044
Pad ID : CNP-AA-116

Measure Point	Stack Offset	Tool Offset	Bottom Offset
CLCN	9.40	6.00	33.89



PHIN	10.24	6.84	33.05

Tool: LDTNG **Length:** 9.30 **ft. O.D.:** 4.80 **in.**
Sonde ID : LDP-NG-02
Source ID : CSV-587
Pad ID : LDP-NG-02

Measure Point	Stack Offset	Tool Offset	Bottom Offset
CLLD	18.70	6.00	24.59
PEL	19.70	7.00	23.59
PES	20.10	7.40	23.19
LDEN	19.70	7.00	23.59
LCOR	19.70	7.00	23.59

Tool: PIT **Length:** 21.29 **ft. O.D.:** 3.62 **in.**
Sonde ID : PIT-AB-14

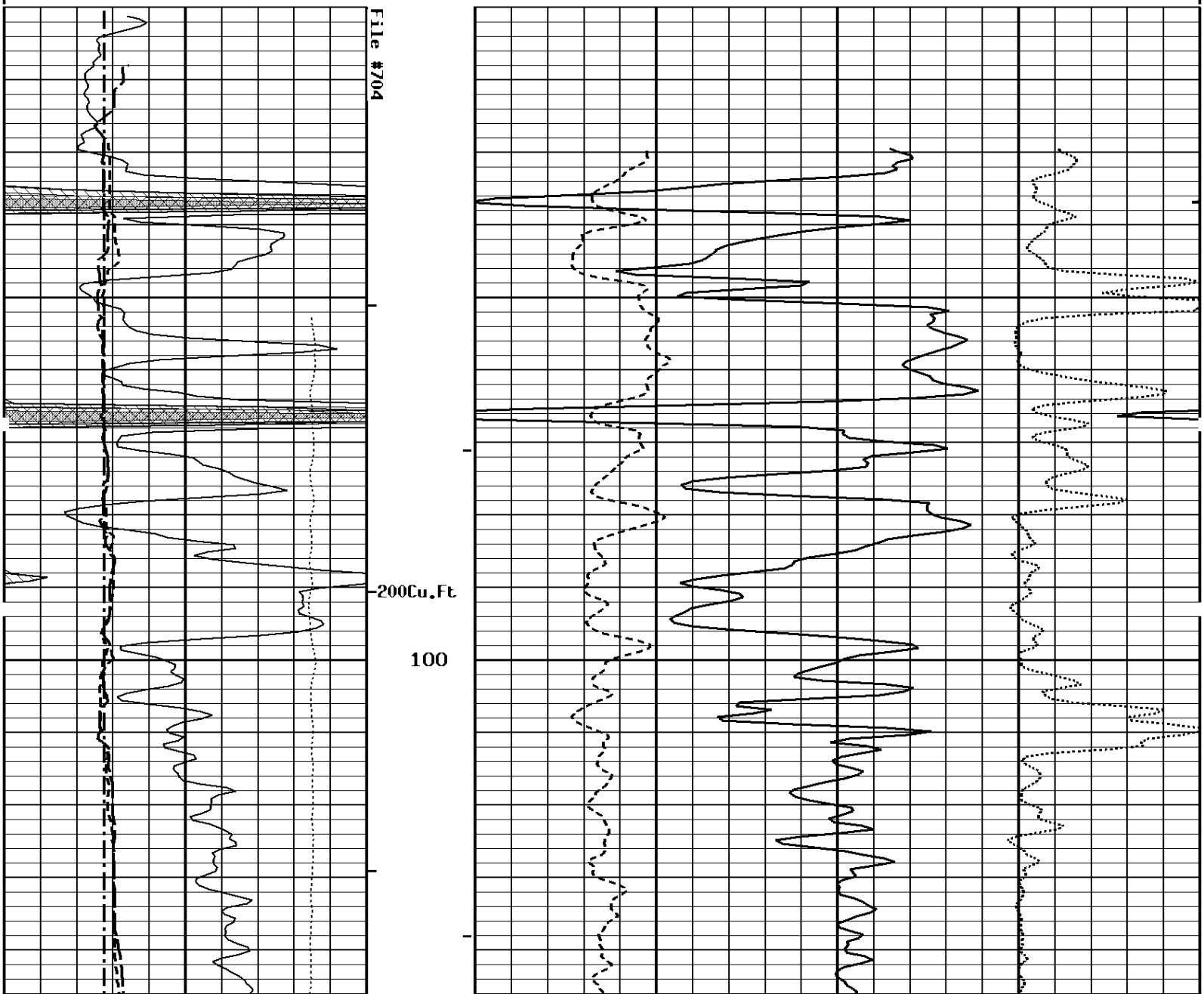
Measure Point	Stack Offset	Tool Offset	Bottom Offset
ILD	30.92	8.92	12.37
ILM	32.10	10.10	11.20
SFLU	39.49	17.49	3.81
SP	42.60	20.60	0.69

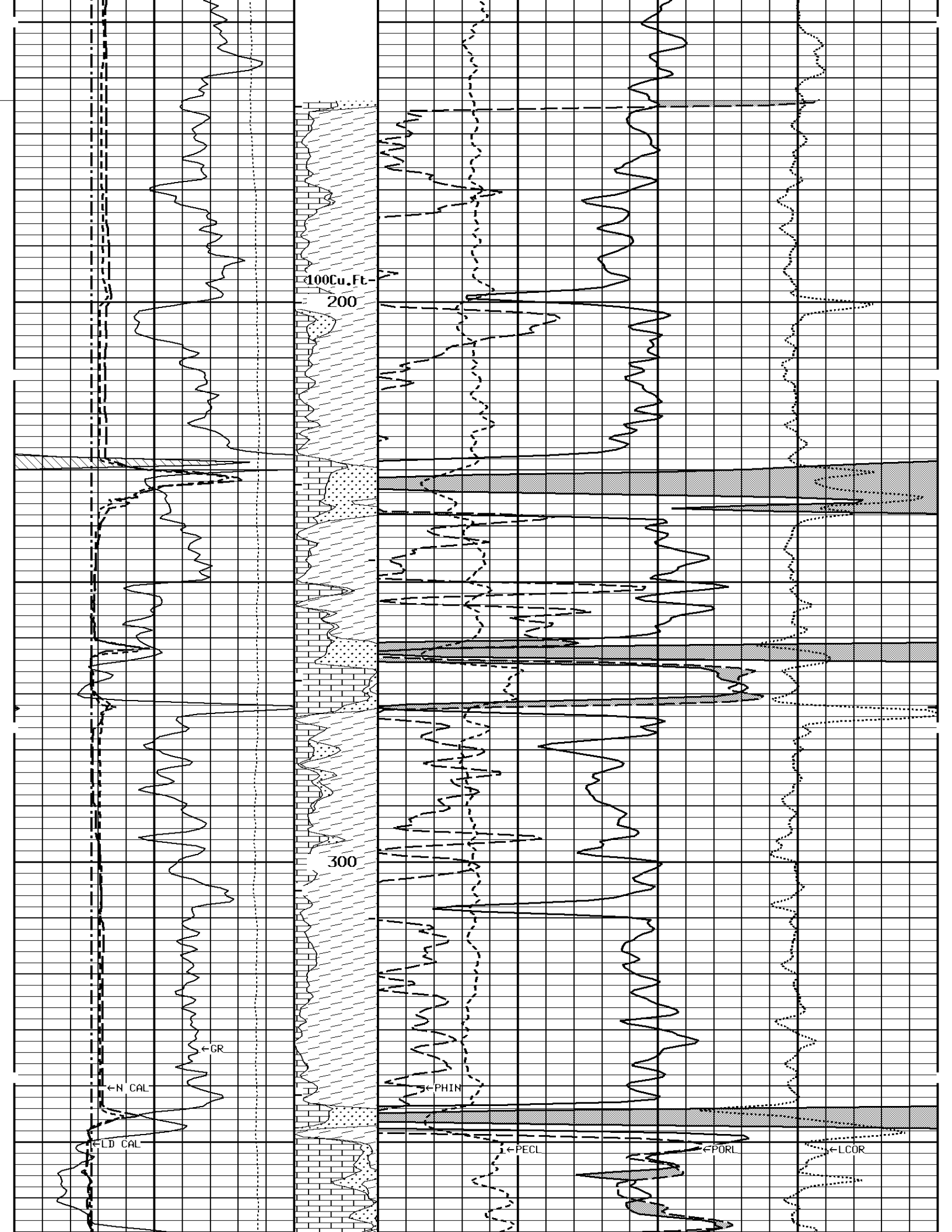
TENSION LBS	
10000	0

BIT SIZE INCHES (IN)	Volume Dolo/Shale
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	-BHV AHV- CU.FT	DENSITY POROSITY PERCENT (2.71 g/cc) 70 — 30 30 — -10 -10 — -50	

1:240 MAIN SECTION

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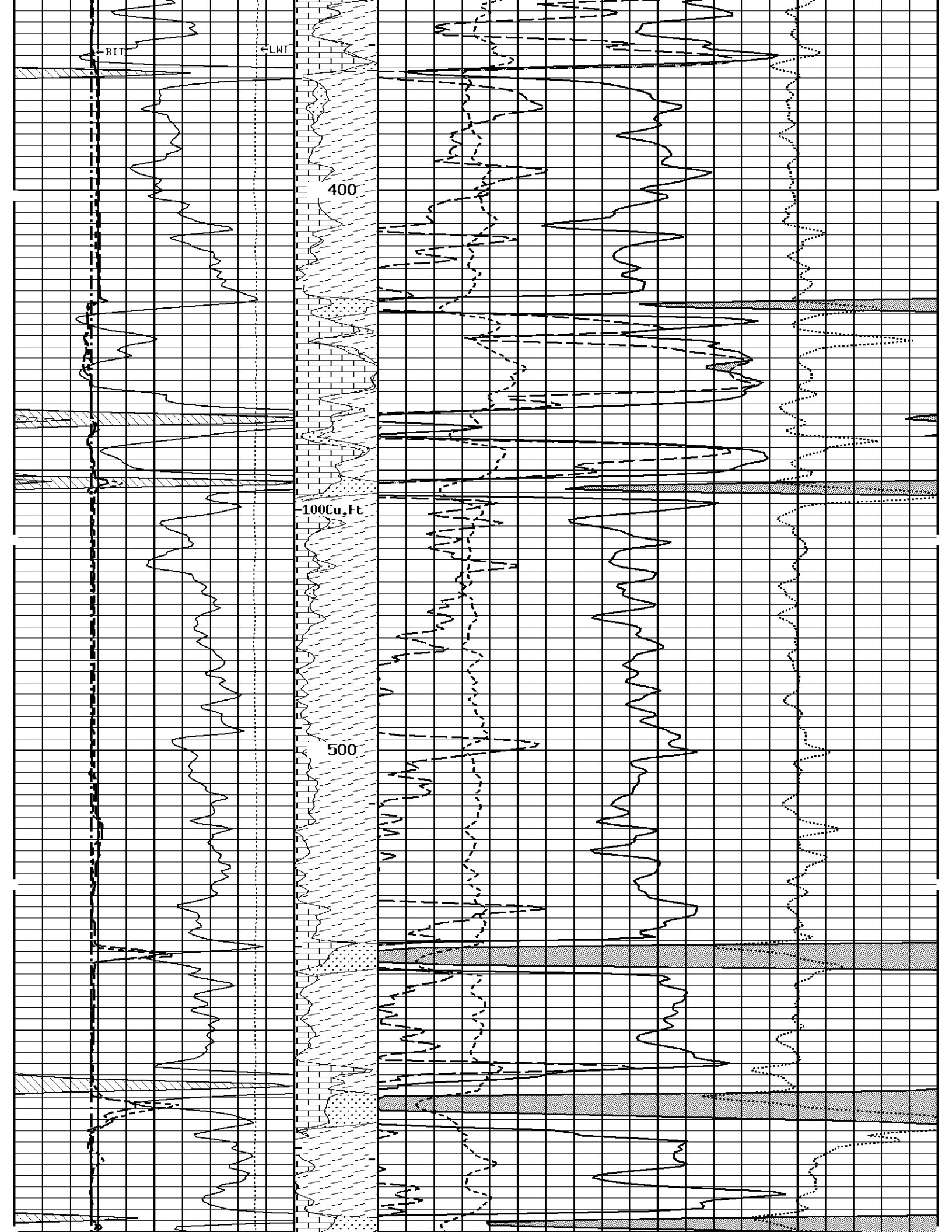
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←LWT
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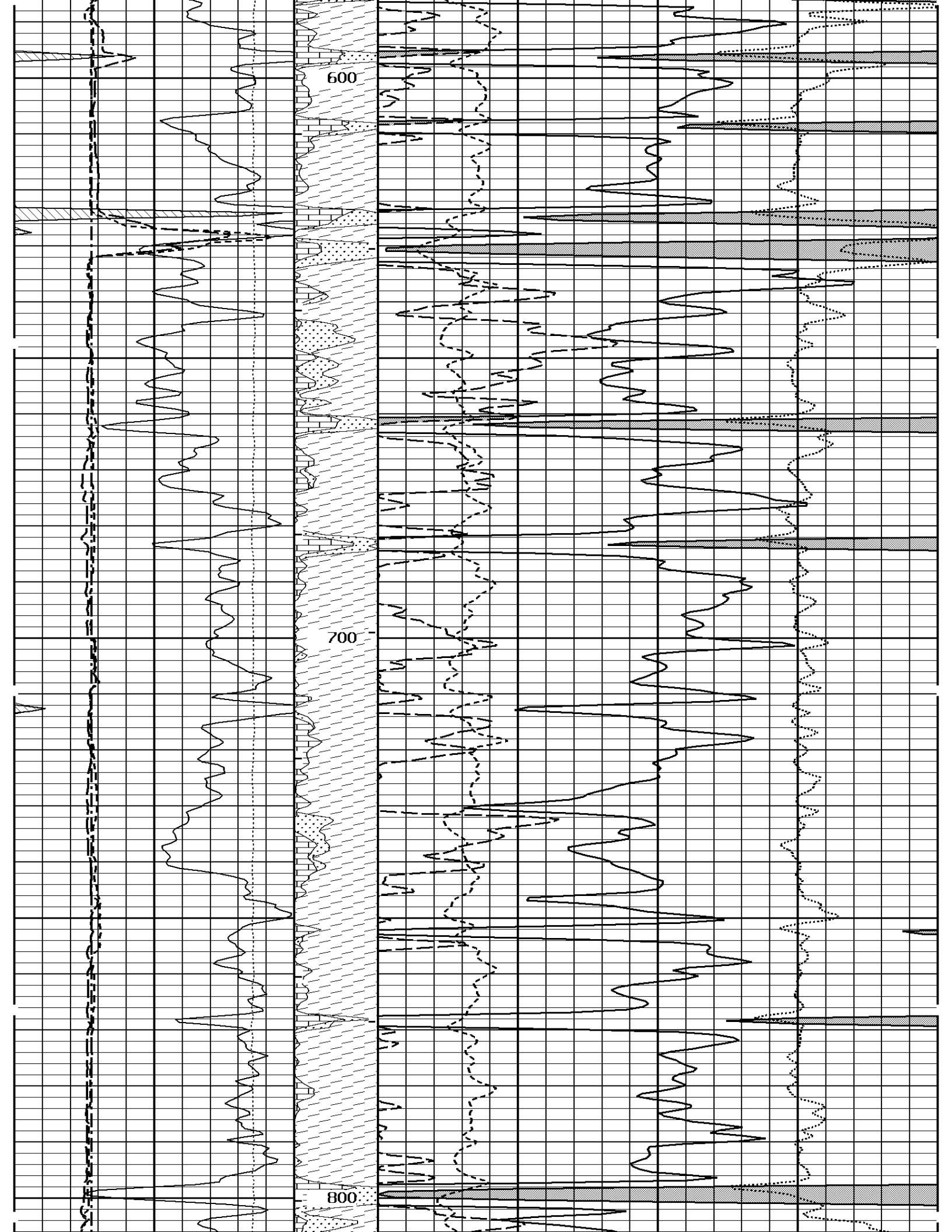
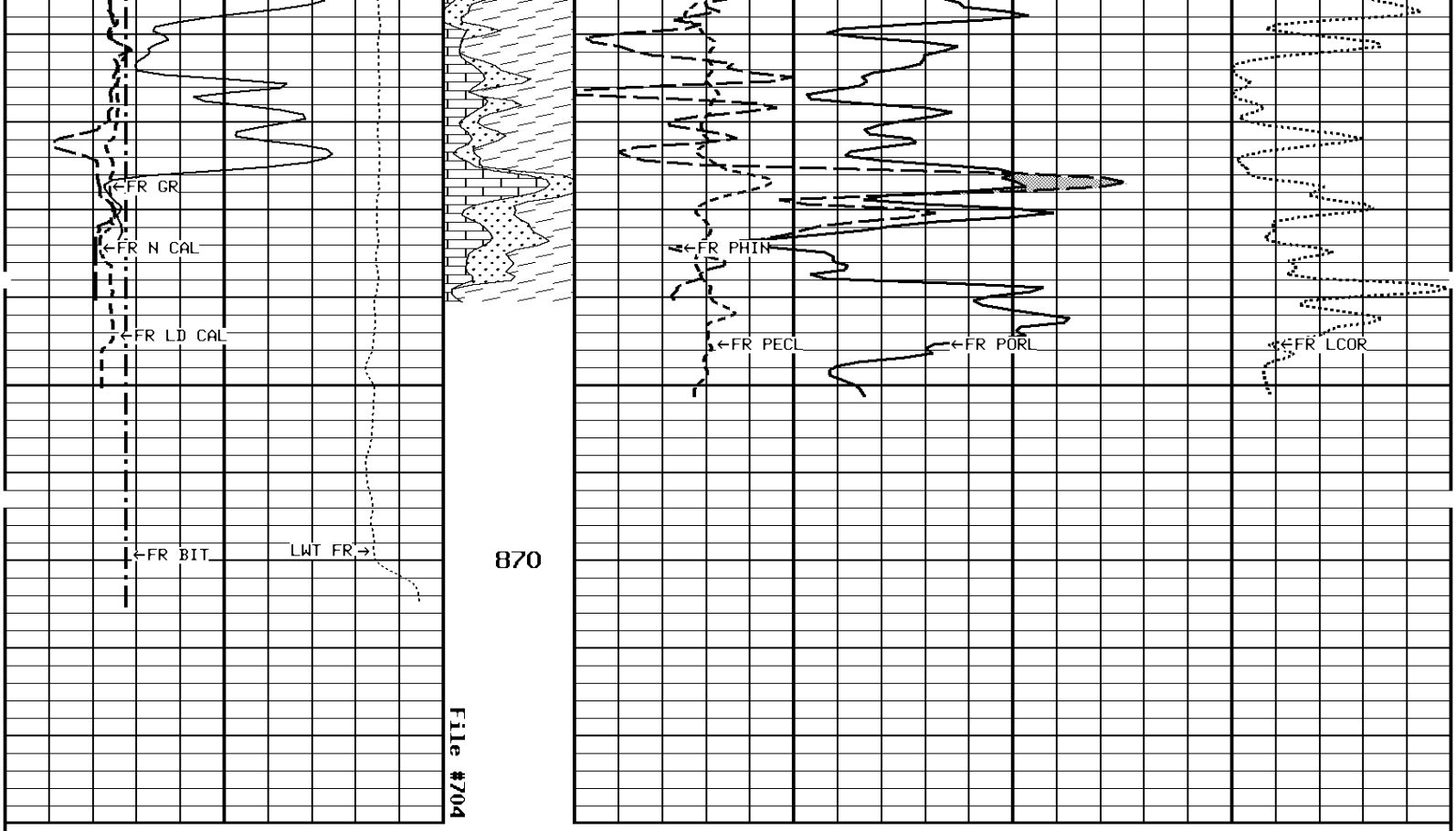
100Cu.Ft
500


600
700
800



1:240 MAIN SECTION

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
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	F

Matrix Density	2.71	G/C3
Fluid Density	1.00	G/C3
Formation Matrix	Limestone	
Drill Bit Size	6.750	IN
Production Casing Diameter	4.500	IN
Casing Correction (PHI N)	Disable	

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

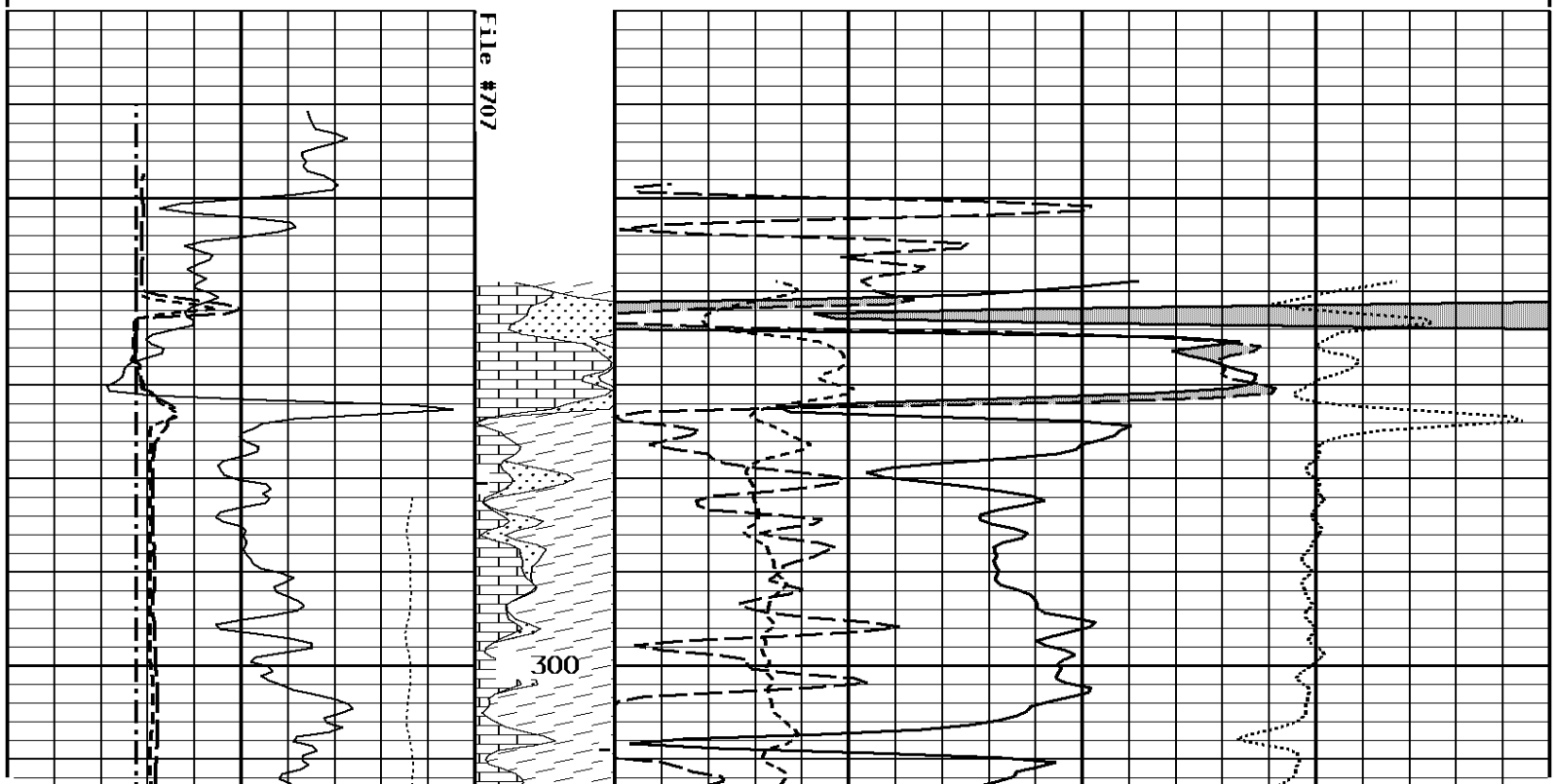
NEUTRON POROSITY
PERCENT (LIMESTONE MATRIX)
30 -10

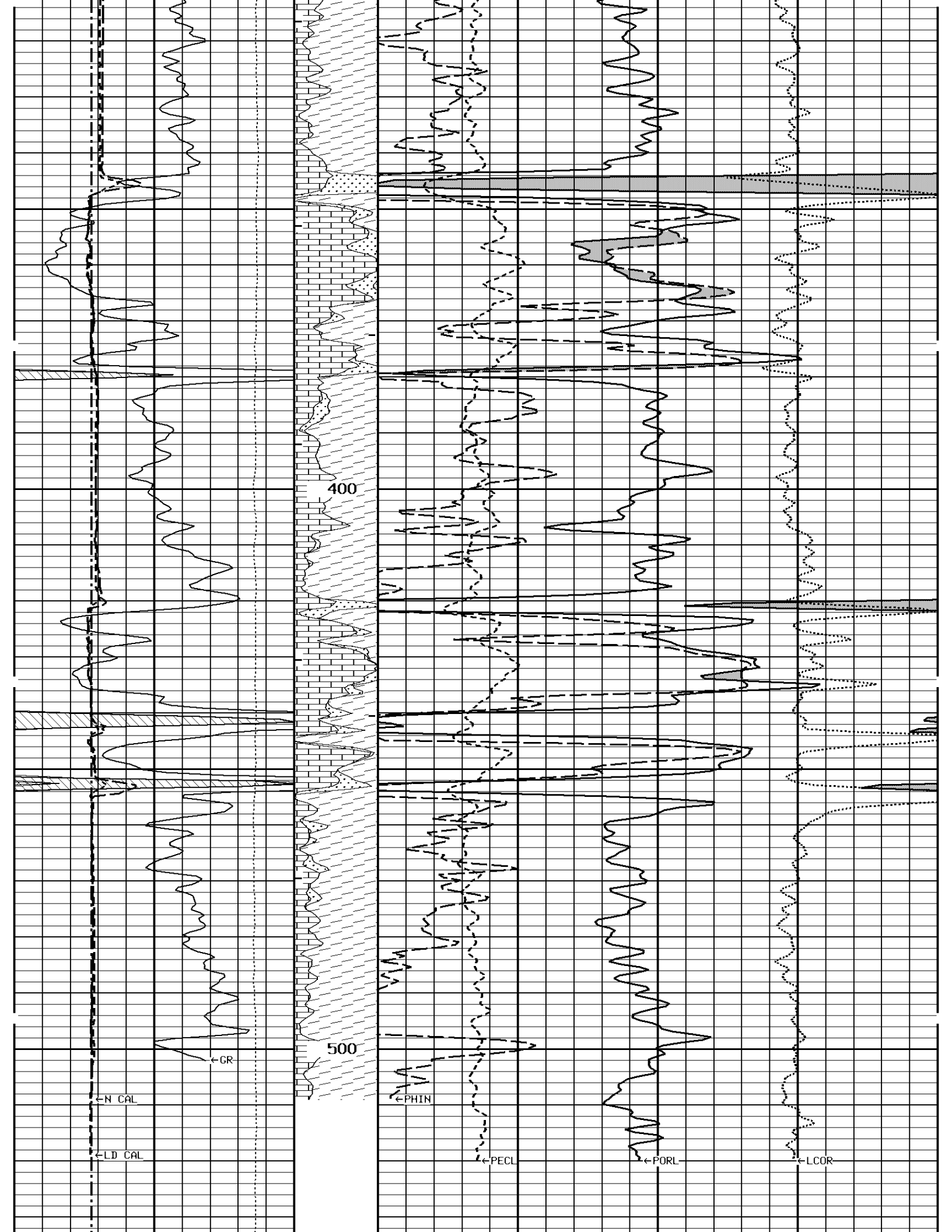
GAMMA RAY
API UNITS
200 400
0 200

-BHV AHV-
CU.FT

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

1:240 REPEAT SECTION

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500
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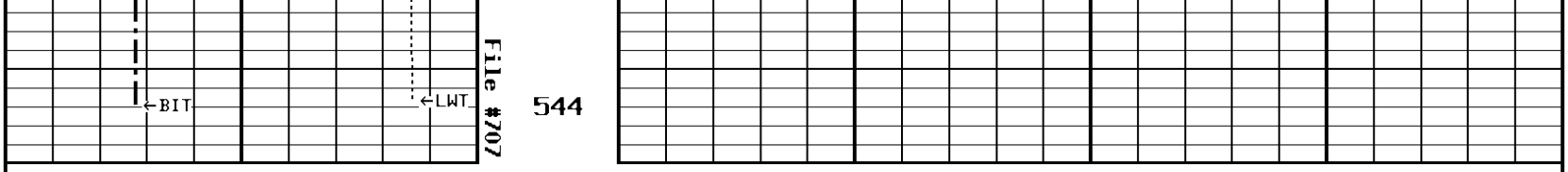
←N CAL
←LD CAL
←PHIN
←PECL
←PORL
←LCOR



1:240 REPEAT SECTION

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

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 F

Matrix Density	2.71	G/C3
Fluid Density	1.00	G/C3
Formation Matrix	Limestone	
Drill Bit Size	6.750	IN
Production Casing Diameter	4.500	IN
Casing Correction (PHI N)	Disable	

TENSION LBS
10000 0

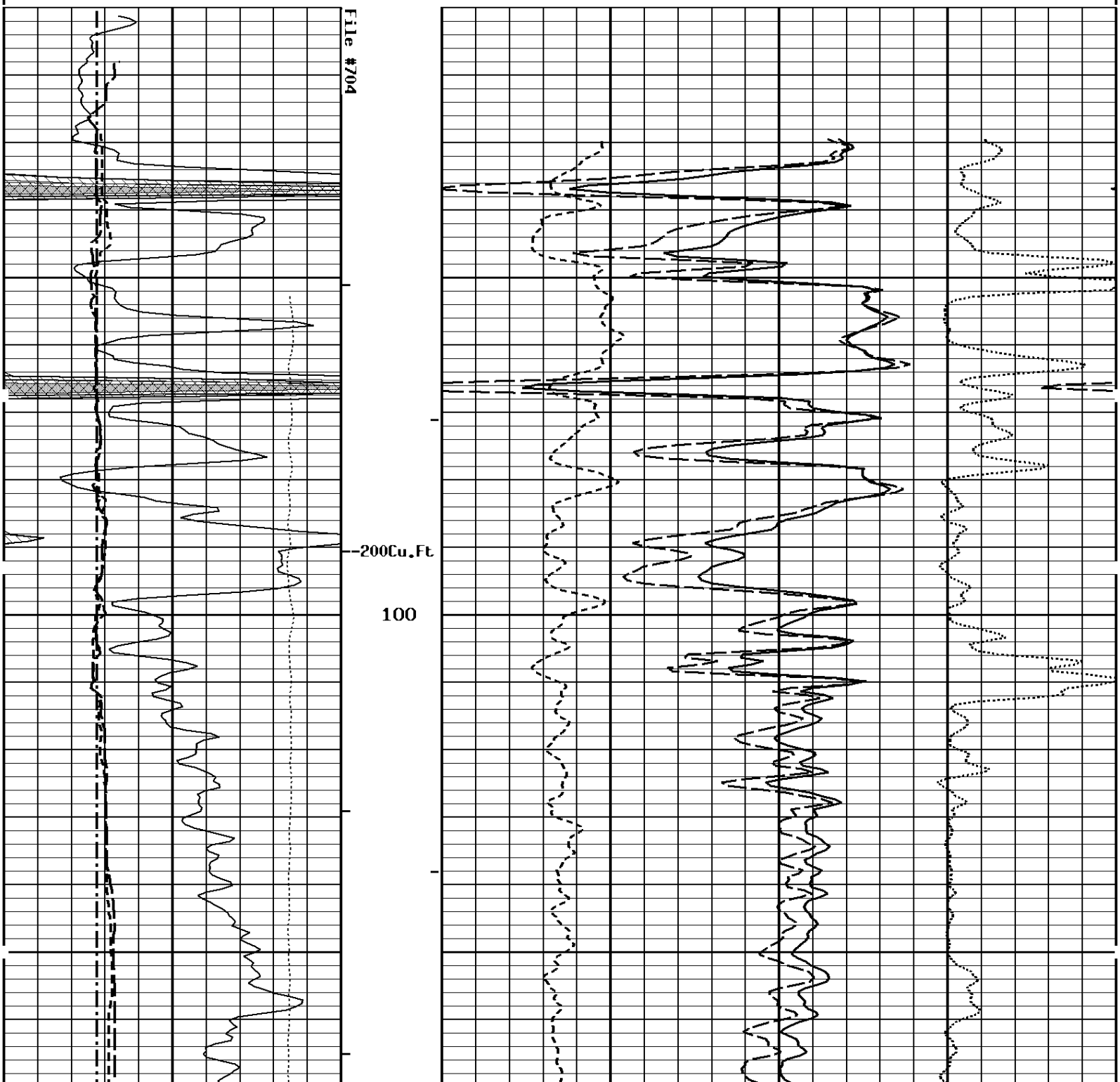
BIT SIZE INCHES (IN)
4 14

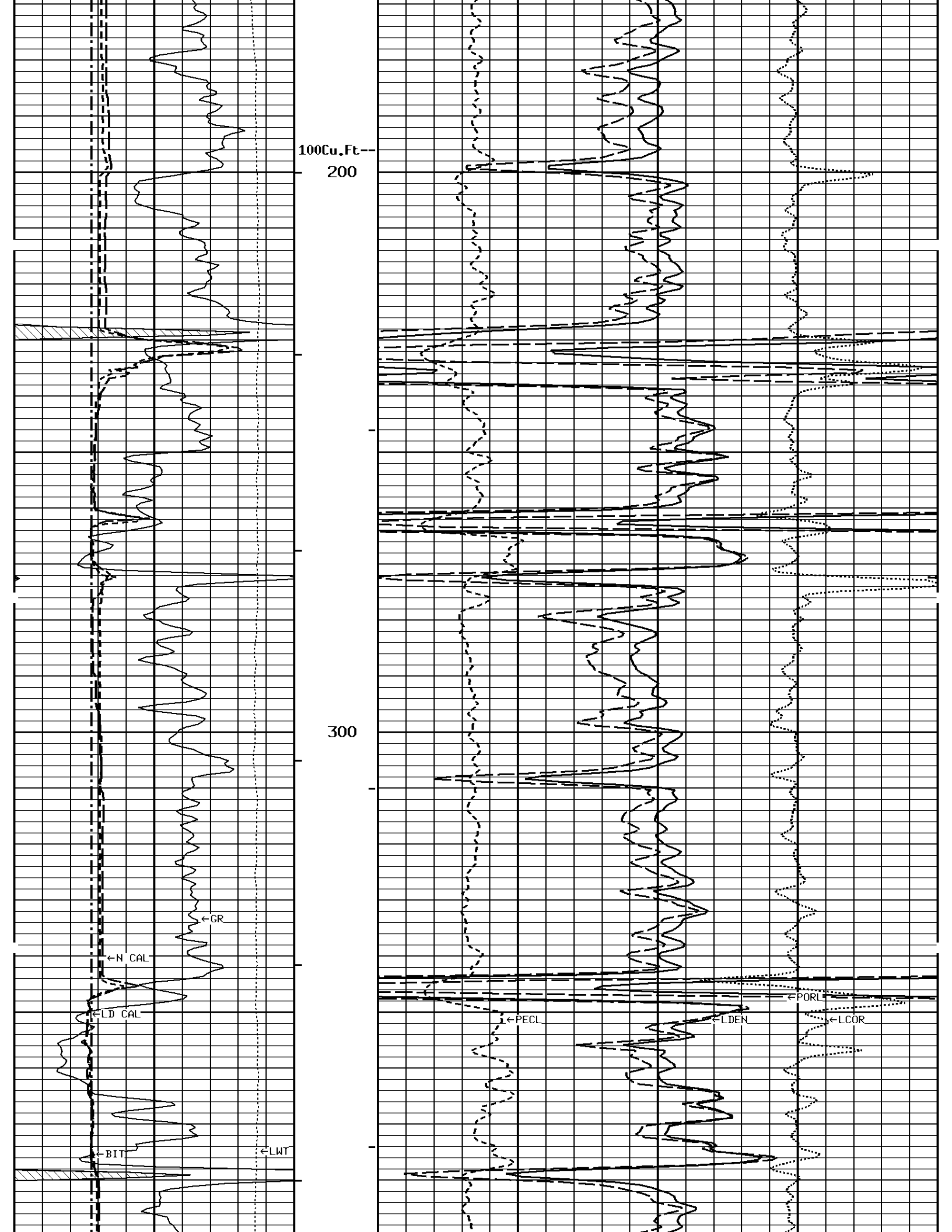
DENSITY (X) CALIPER INCHES (IN)
14 24
4 14

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

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

1:240 MAIN SECTION
BULK DENSITY

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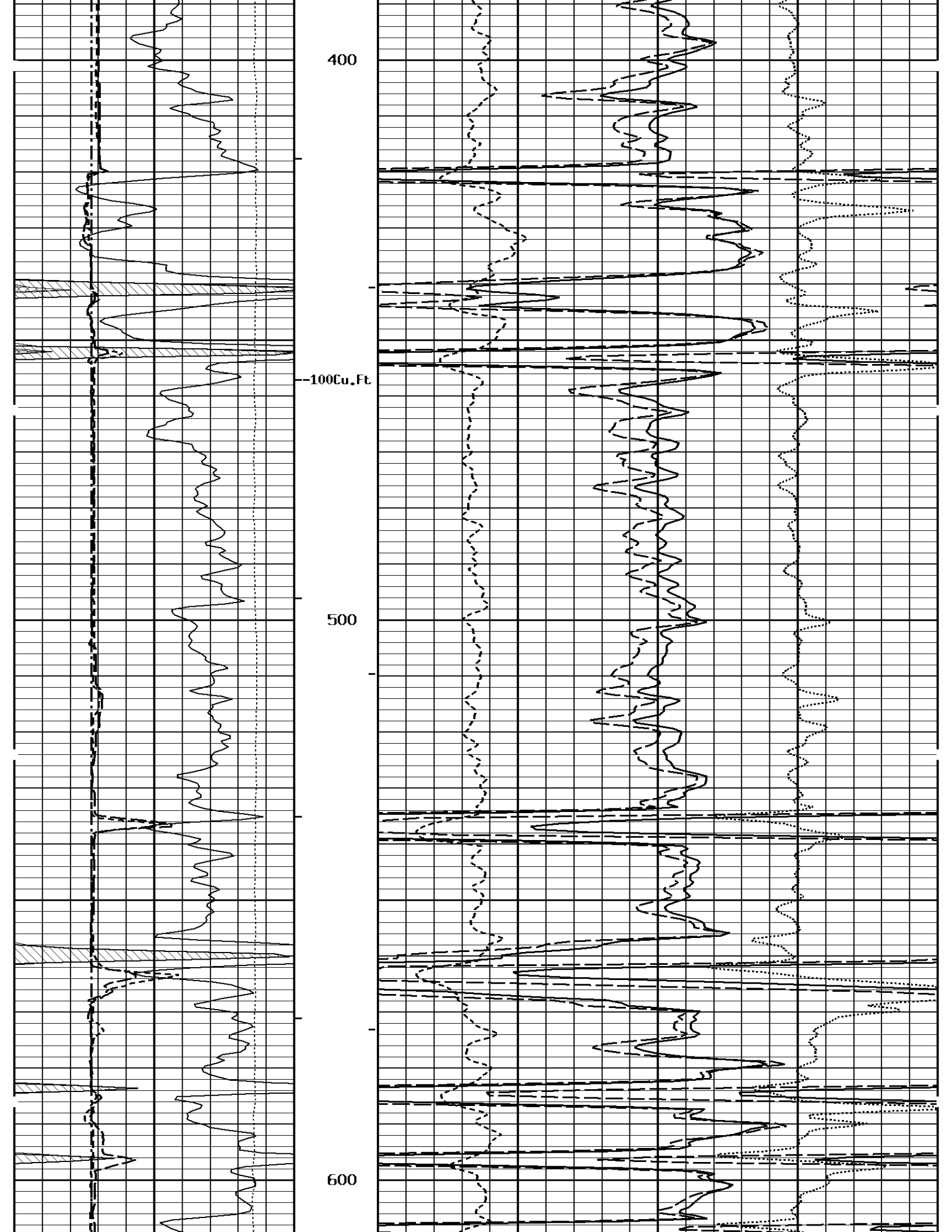
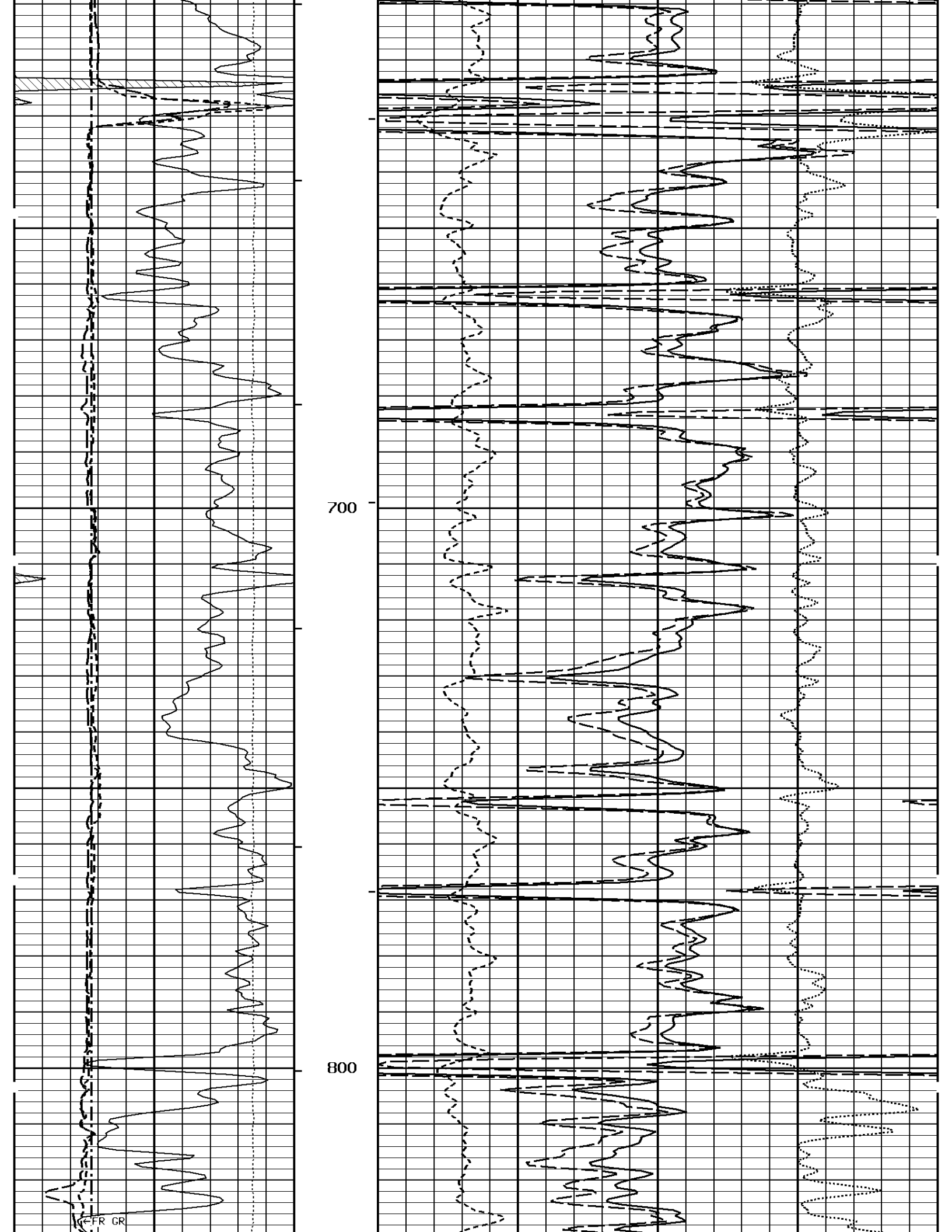
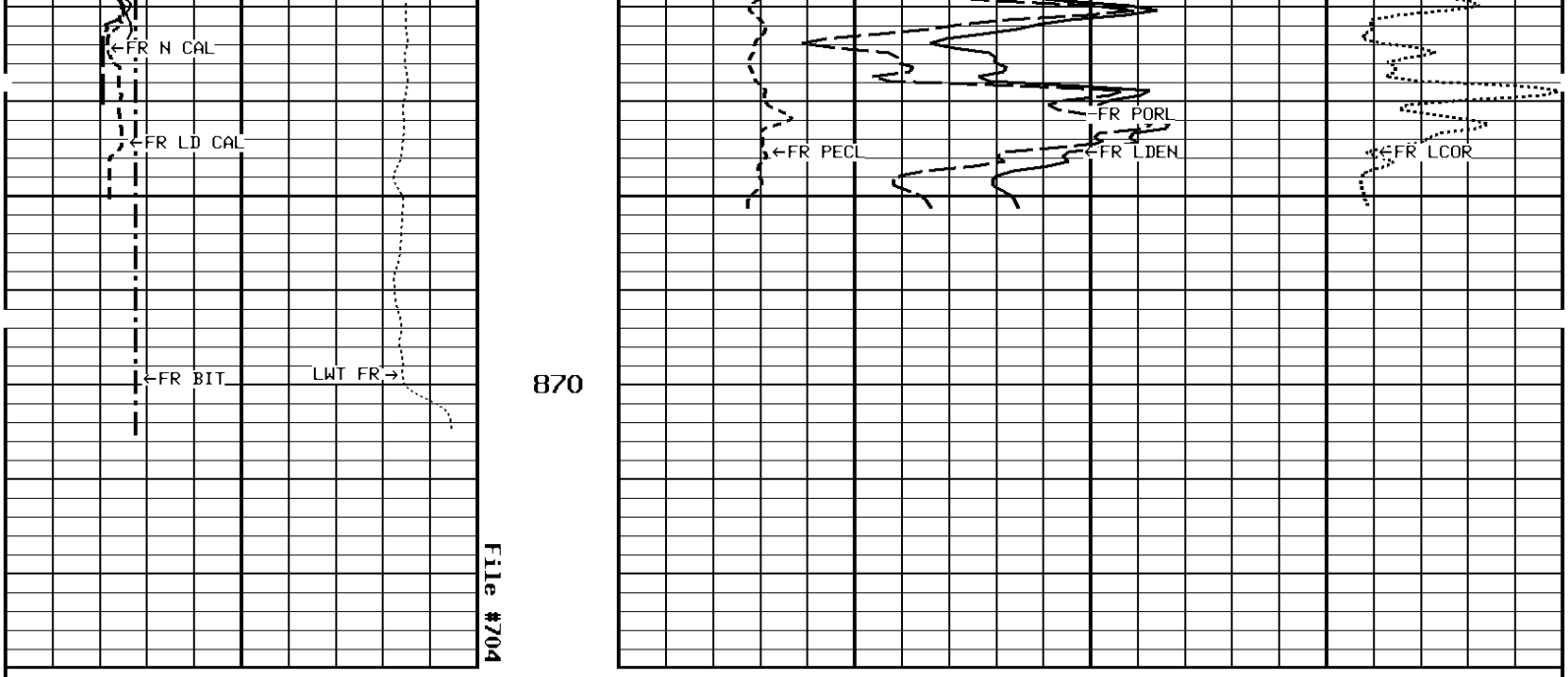

400
100Cu.Ft
500
600


700
800
FR GR



1:240 MAIN SECTION
BULK DENSITY

GAMMA RAY API UNITS	-BHV AHV- CU.FT	COMPENSATED BULK DENSITY G/CC
200 — 400 0 — 200		3.0 — 4.0 2.0 — 3.0 1.0 — 2.0
NEUTRON (Y) CALIPER INCHES (IN)		**DENSITY POROSITY PERCENT (2.71 g/cc)**
14 — 24 4 — 14		70 — 30 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 F

Matrix Density	2.71	G/C3
Fluid Density	1.00	G/C3
Formation Matrix	Limestone	
Drill Bit Size	6.750	IN
Production Casing Diameter	4.500	IN
Casing Correction (PHI N)	Disable	

* Calibration Summary *

Shop Calibration
GRTB

Performed : 21-Aug-2009 Time : 15:26
Sensor Suite : GR-GR5 ID : GRT-BA-14

	Measured Background	Measured Jig	Units	Calibrated Jig	Units
GR	49	347	CPS	175	GRAPI

Shop Calibration
CNT

Performed : 26-Aug-2010 Time : 10:32
Sensor Suite : BHC NEUT ID : CNP-AA-116
Source ID : N-1044

	Tank Measured	Tank Calibrated	Verification Jig	Units
N/F	3.8824	3.6889	3.6916	
Porosity	23.6	20.5	20.5	%

Performed : 07-MAR-2010 Time : 09:04
Sensor Suite : CALI-BCN ID : CNP-AA-116

	Jig - Measured Ring#1	Jig - Measured Ring#2	Jig - Calibrated Ring#1	Jig - Calibrated Ring#2	Units
CL # 1	8.6	14.6	6.0	12.0	IN.

Shop Calibration
LDTNG

Performed : 14-APR-2009 Time : 14:57
Sensor Suite : CALIPEL ID : LDP-NG-02

	Jig - Measured Ring#1	Jig - Measured Ring#2	Jig - Calibrated Ring#1	Jig - Calibrated Ring#2	Units
CL # 1	6.7	12.7	6.0	12.0	IN.

Performed : 02-Sep-2010 Time : 10:41
Sensor Suite : BHCPELNG ID : LDP-NG-02
Source ID : CSV-587

Short Space

	BKGD	Al	Mg	Al+Fe	Units
LSW1	70	487	788	328	CPS
LSW2	73	579	915	419	CPS
LSW3	283	1424	2236	1218	CPS
LSW4	362	1356	1872	1207	CPS
LSW5	36	44	46	43	CPS
LSW6	95	96	96	95	CPS
LSW7	60	61	59	61	CPS
LSW8	2	3	3	3	CPS
QS	0.226	0.223	0.239	0.218	
PES			2.778	5.967	
SSDN		2.600	1.680		G/CC

Long Space

	BKGD	Al	Mg	Al+Fe	Units
LLW1	110	657	2747	420	CPS
LLW2	122	1071	4344	788	CPS
LLW3	457	2034	7421	1767	CPS
LLW4	588	1191	3019	1108	CPS
LLW5	65	69	85	68	CPS
LLW6	194	189	182	189	CPS
LLW7	118	120	112	119	CPS
LLW8	4	5	10	5	CPS
QL	0.244	0.223	0.238	0.227	
PEL			2.697	5.458	
LSDN		2.600	1.680		G/CC