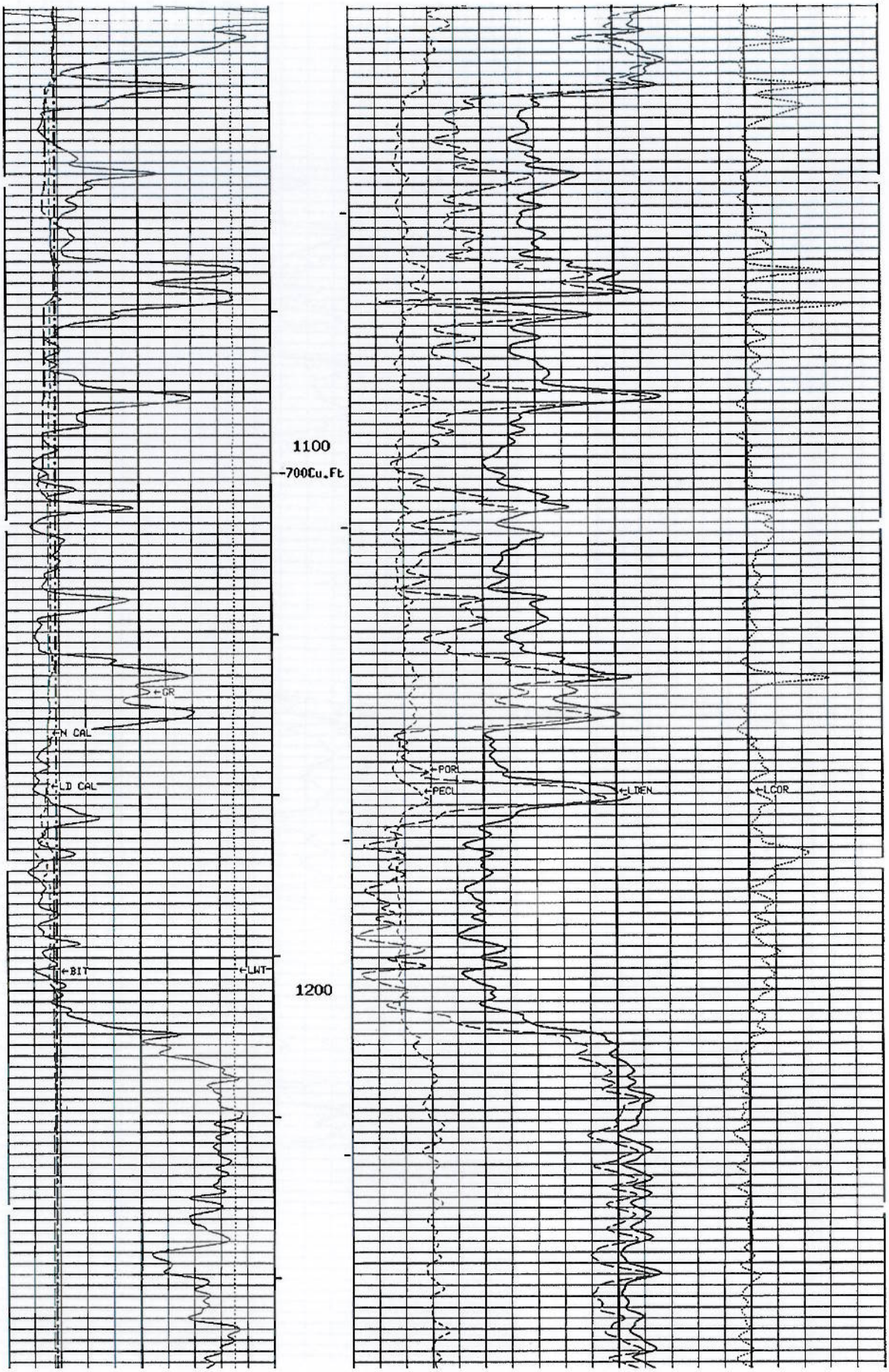
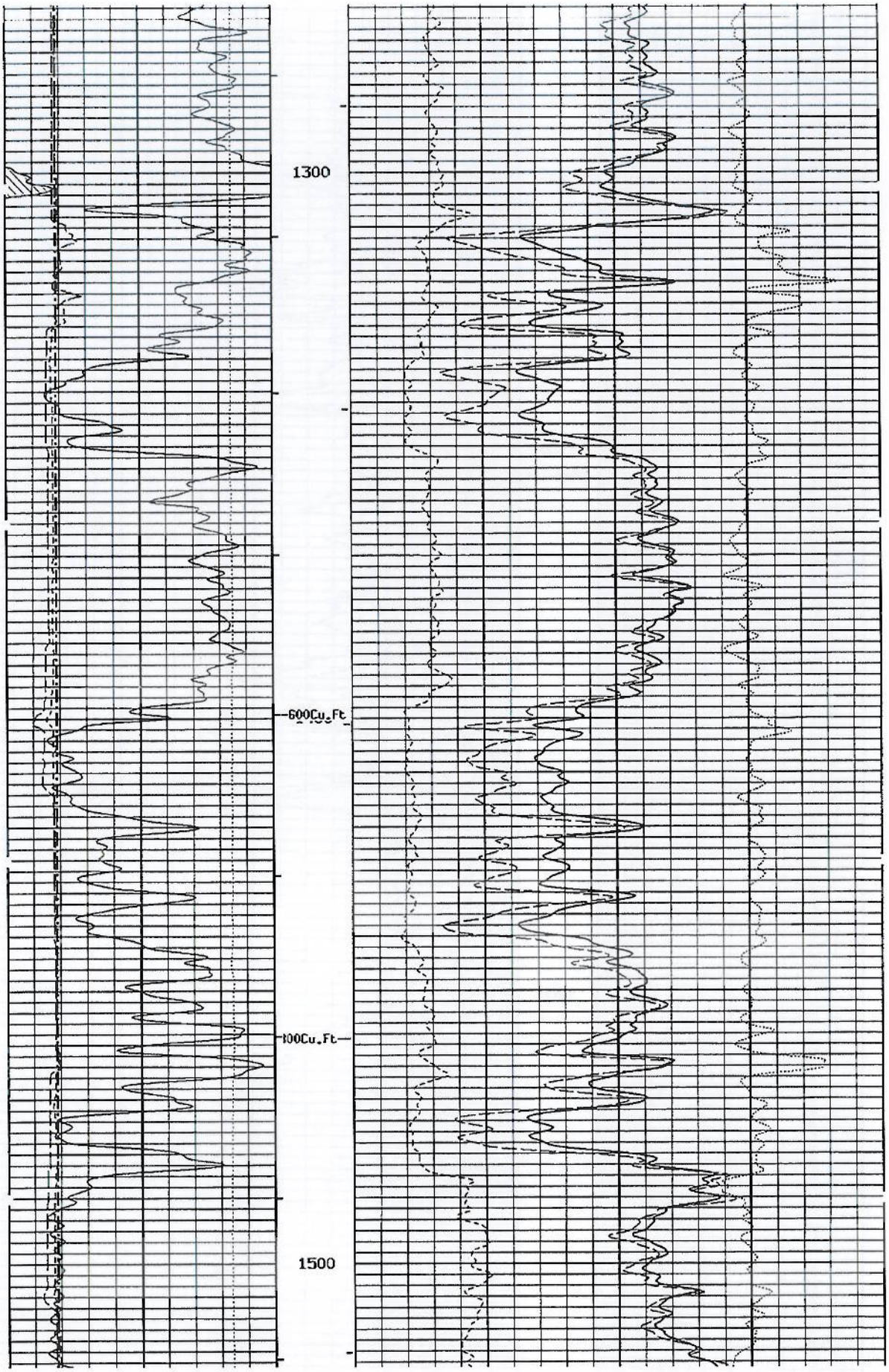
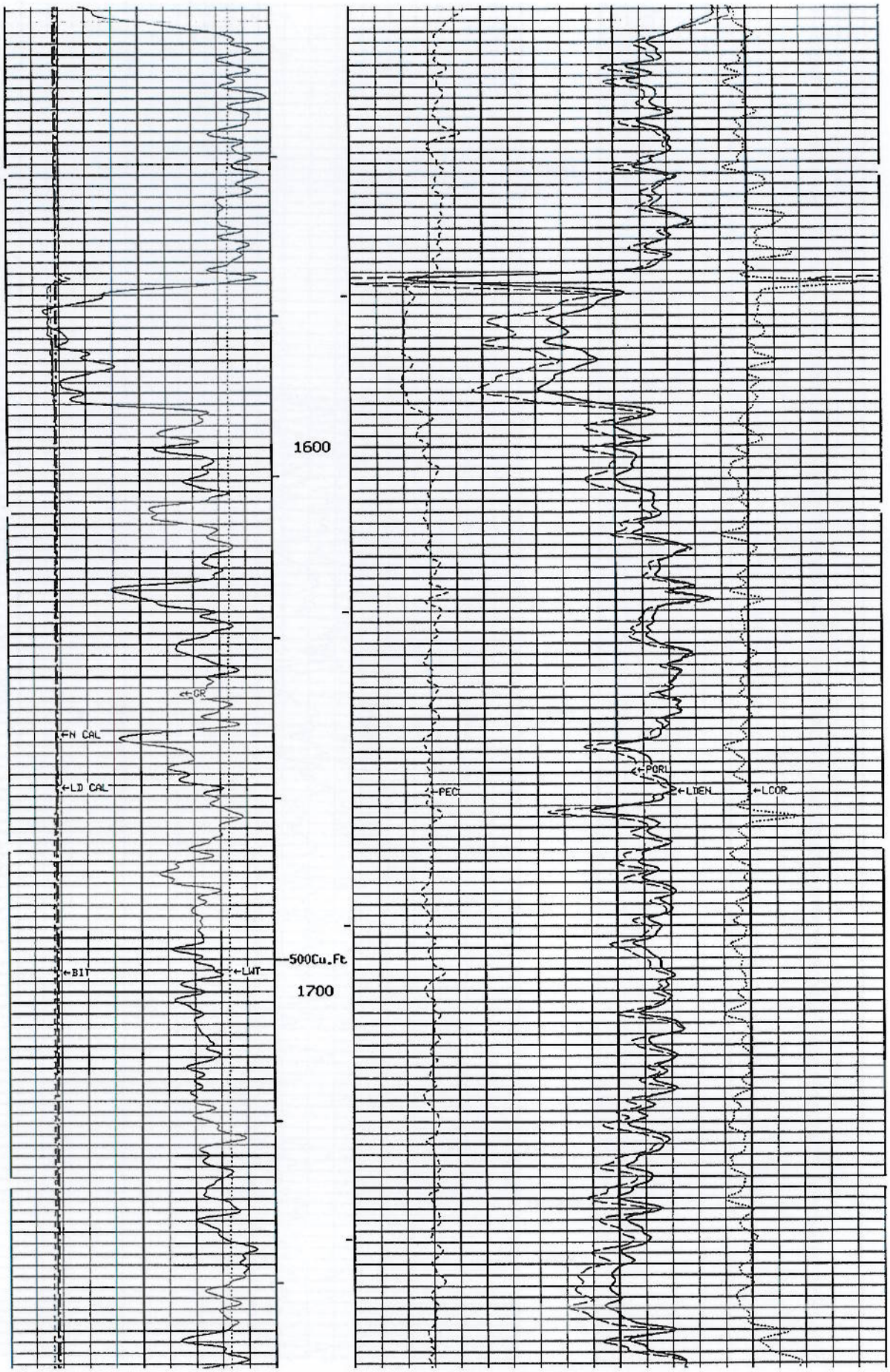
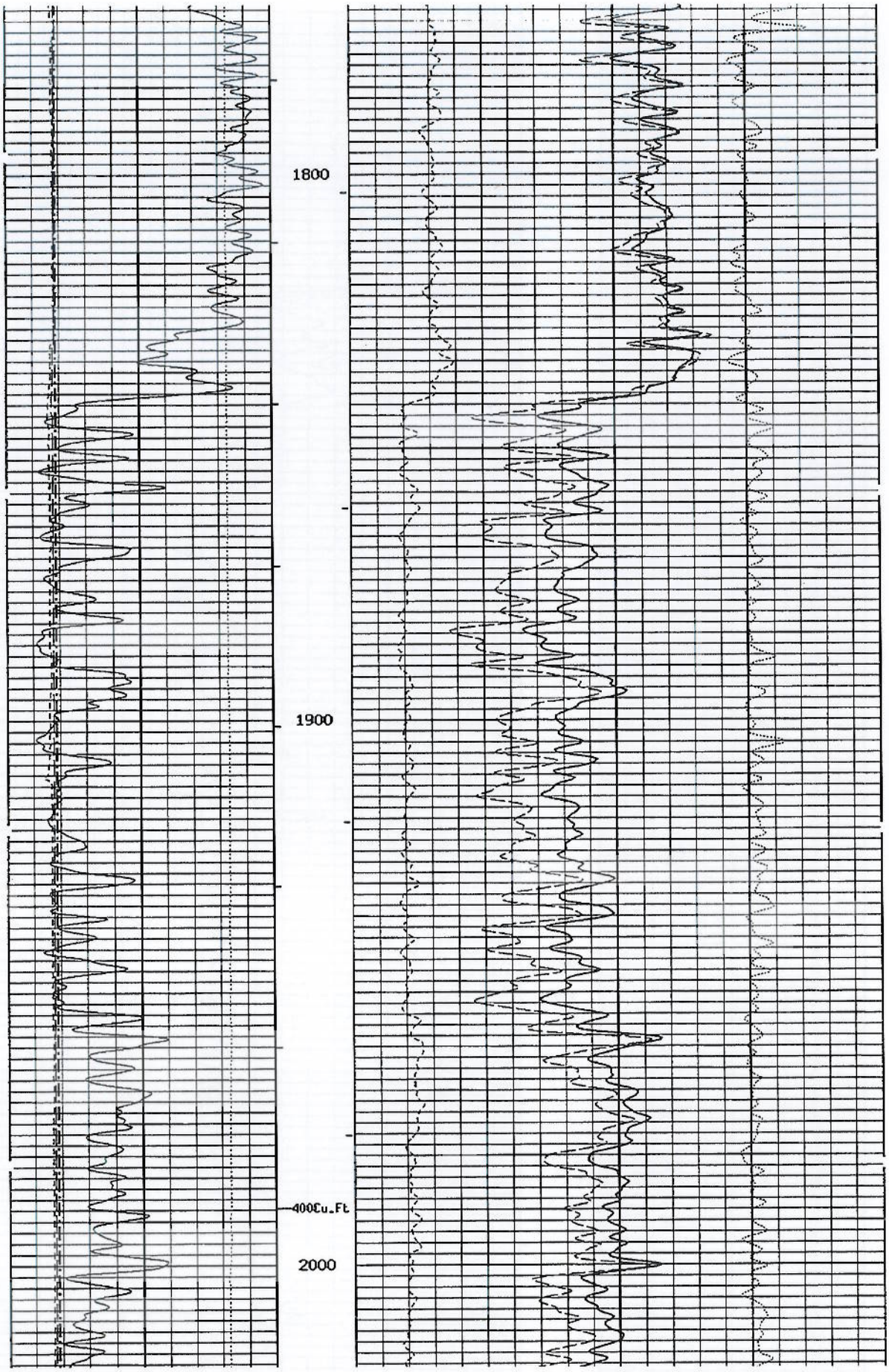
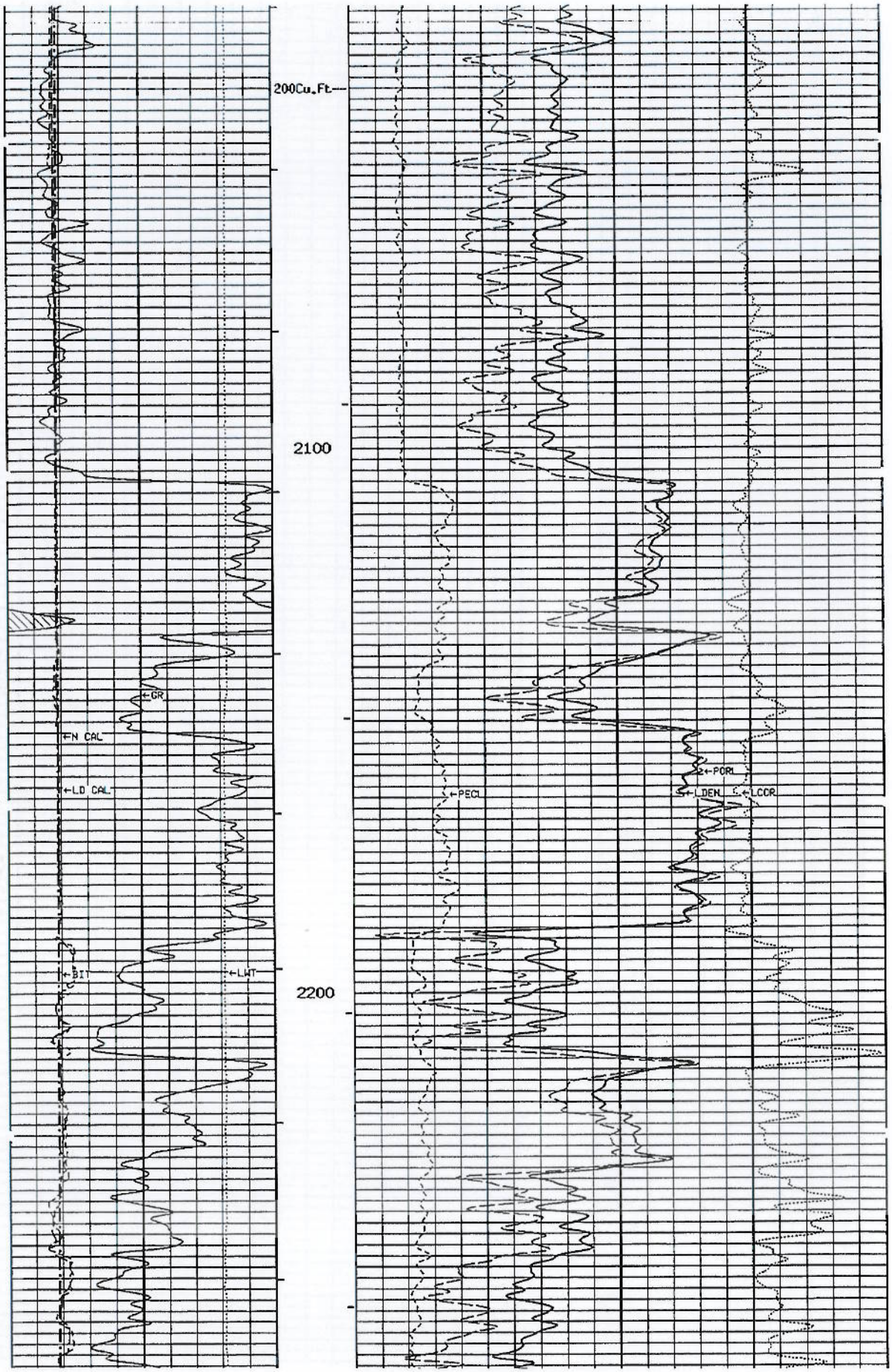
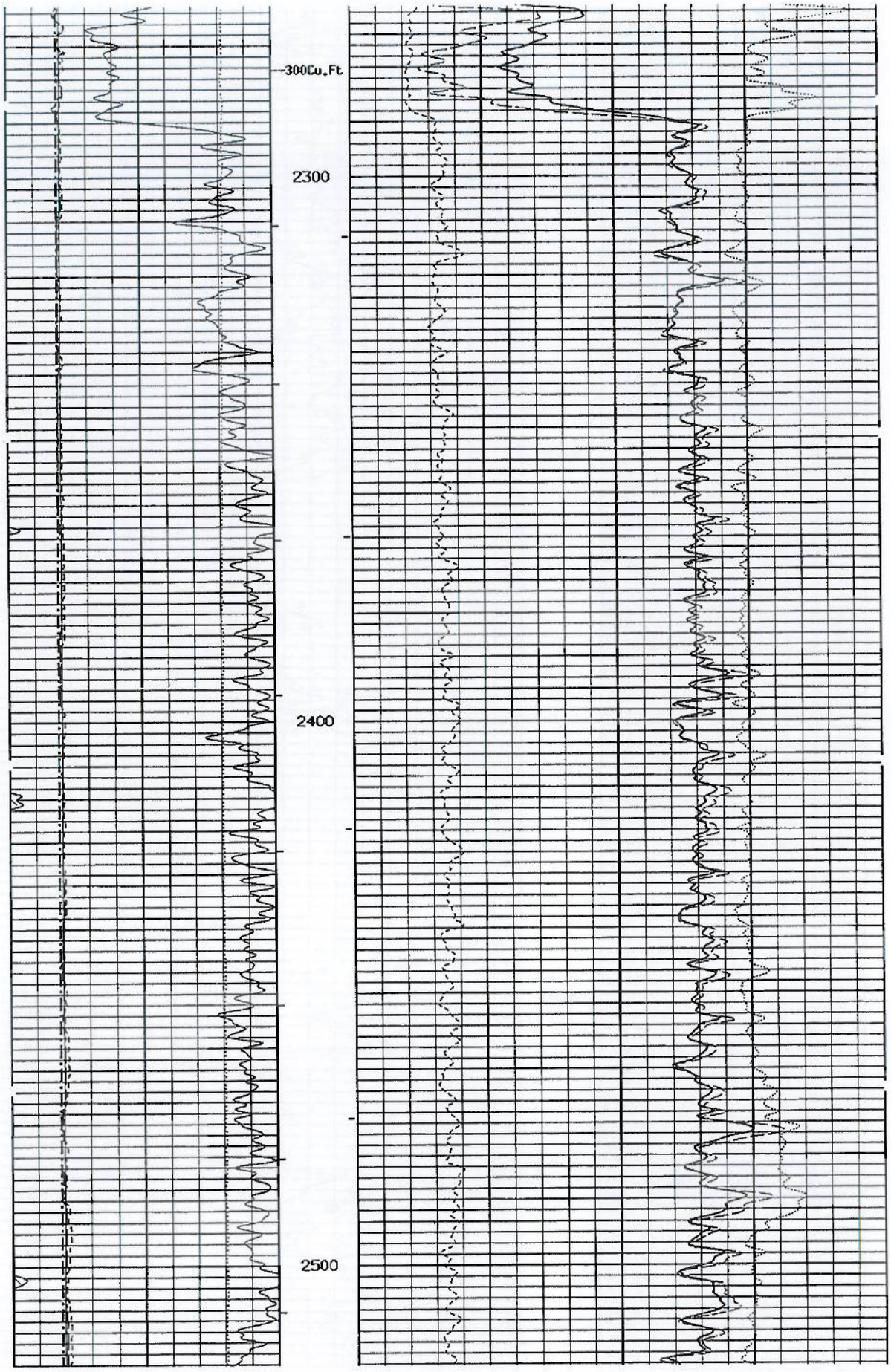

1100
700Cu.Ft
GR
N CAL
LD CAL
BIT
LWT
1200
POR
PECL
LDEN
LCOR

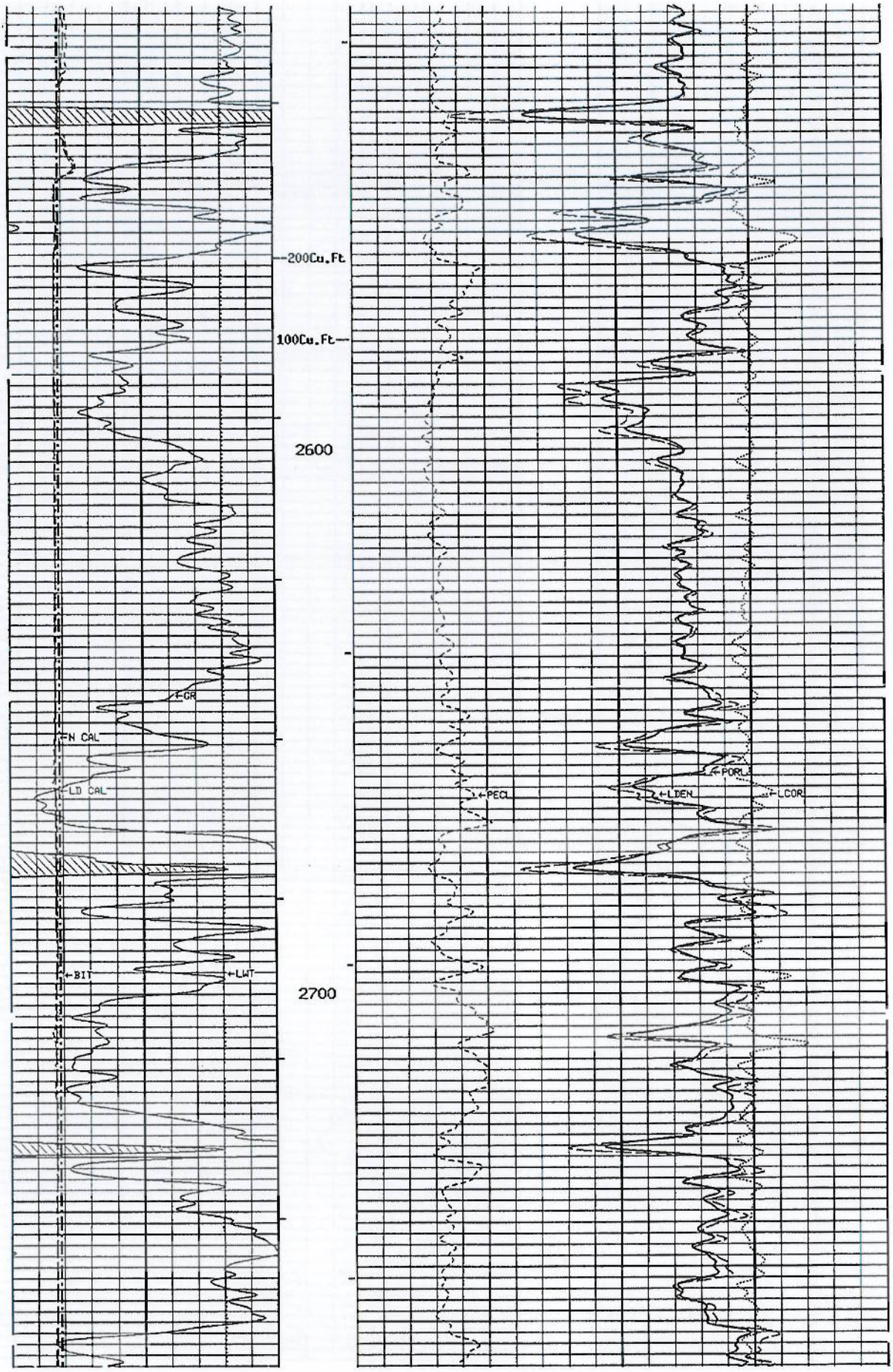

1300
600Cu.Ft
100Cu.Ft
1500

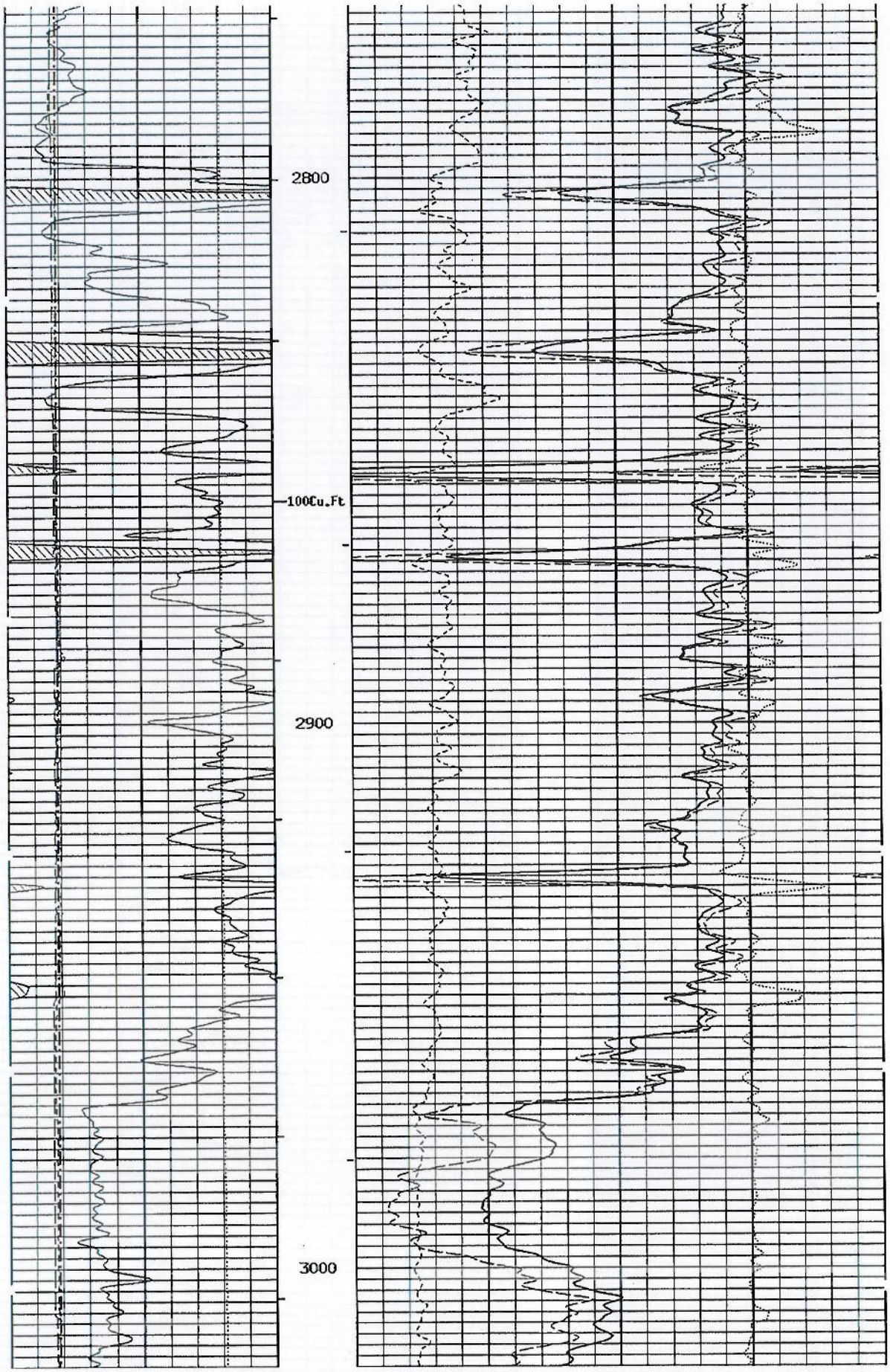

1600
GR
N CAL
LD CAL
BIT
LWT
500Cu.Ft
1700
PEC
PORL
LDEN
LCOR

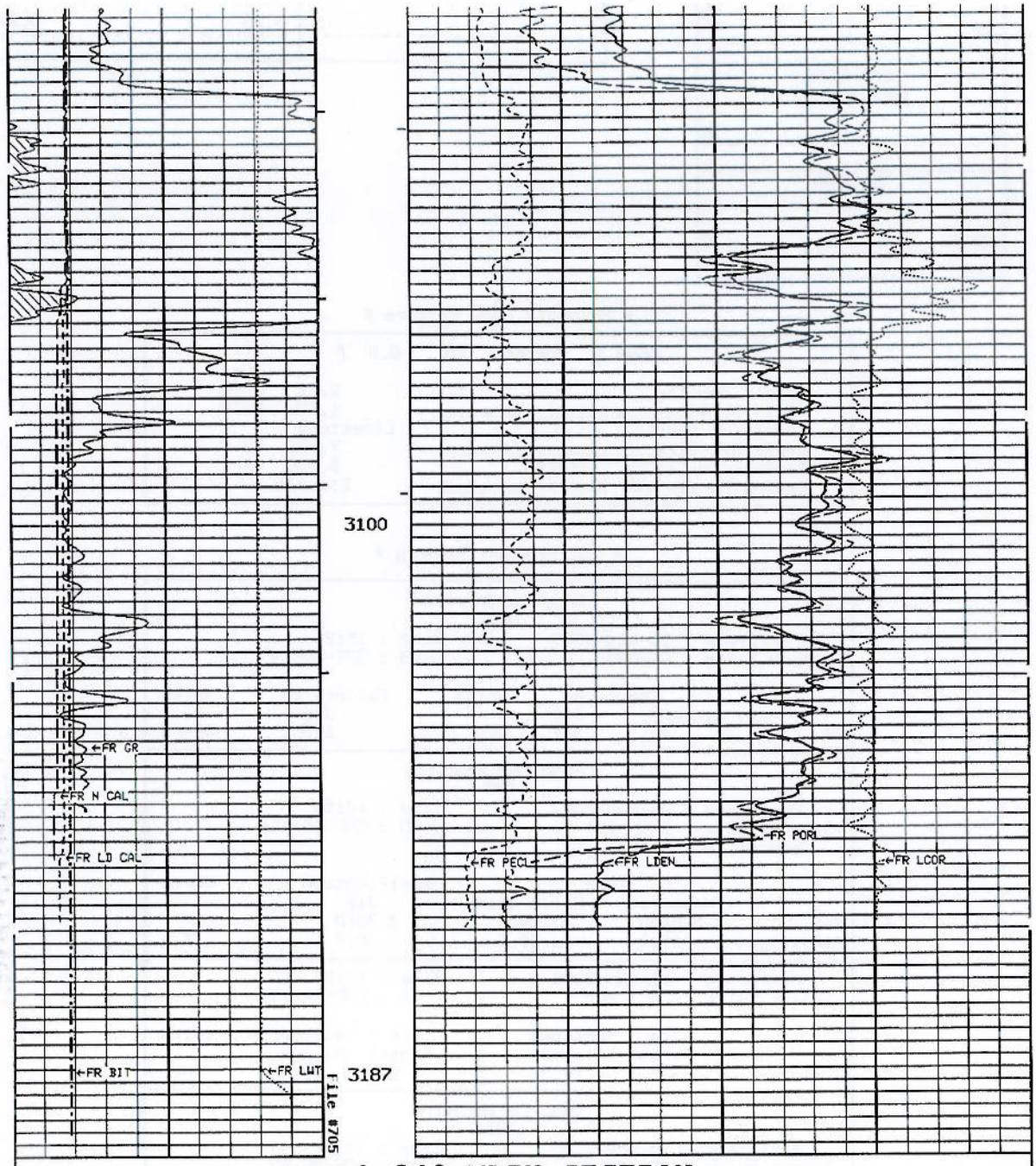

1800
1900
4000Cu.Ft
2000


200Cu.Ft
2100
2200
GR
FN CAL
LD CAL
BIT
LWT
PEC
PORI
LDEN
LCOR


300Cu.Ft
2300
2400
2500


200Cu.Ft
100Cu.Ft
2600
2700
GR
N CAL
LD CAL
BIT
LWT
PECL
PORL
LDEN
LCOR


2800
100Cu.Ft
2900
3000



1:240 MAIN SECTION
BULK DENSITY

GAMMA RAY API UNITS	-BHV AHV- CU.FT	COMPENSATED BULK DENSITY G/CC
150 300		3.0 4.0
0 150		2.0 3.0
		1.0 2.0
NEUTRON (Y) CALIPER INCHES (IN)		DENSITY POROSITY PERCENT (2.71 g/cc)
16 26		70 30
6 16		30 -10
		-10 -50
DENSITY (X) CALIPER INCHES (IN)		PE CROSS-SECTION BARNS/ELECTRON / DENSITY CORRECTION G/CC

6	16

BIT SIZE
INCHES (IN)

6	16

TENSION
LBS

10000	0

0	10

-0.25	0.25

*** 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	7.875	IN
Production Casing Diameter	5.500	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 : 05-May-2010 Time : 10:50
Sensor Suite : BHC NEUT ID : CNP-AA-111
Source ID : N-1044

	Tank Measured	Tank Calibrated	Verification Jig	Units
N/F	3.6456	3.6902	3.7010	
Porosity	19.8	20.5	20.7	%

Performed : 16-AUG-2009 Time : 10:24
Sensor Suite : CALI-BCN ID : CNP-AA-111

	Jig - Measured Ring#1	Jig - Measured Ring#2	Jig - Calibrated Ring#1	Jig - Calibrated Ring#2	Units
CL # 1	8.3	14.3	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	6.6	11.6	6.0	12.0	IN.

Performed : 05-May-2010 Time : 09:47
Sensor Suite : BHCPELNG ID : LDP-NG-02
Source ID : CSV-5B7

Short Space

	BKGD	Al	Mg	Al+Fe	Units
LSW1	71	482	772	323	CPS
LSW2	73	584	933	417	CPS
LSW3	292	1457	2281	1232	CPS
LSW4	370	1392	1931	1232	CPS
LSW5	35	45	46	44	CPS
LSW6	96	97	97	98	CPS
LSW7	60	62	61	61	CPS
LSW8	2	3	3	3	CPS
QS	0.231	0.220	0.228	0.233	
PES			2.778	5.967	

LSDN		2.600	1.680		G/CC

Long Space

	BKGD	Al	Mg	Al+Fe	Units
LLW1	109	629	2543	392	CPS
LLW2	123	1084	4422	784	CPS
LLW3	456	2105	7702	1817	CPS
LLW4	600	1229	3164	1132	CPS
LLW5	66	71	87	70	CPS
LLW6	197	190	184	191	CPS
LLW7	119	122	116	121	CPS
LLW8	3	5	10	5	CPS
QL	0.247	0.218	0.227	0.224	
PEL			2.697	5.458	
LSDN		2.600	1.680		G/CC

pr
#20

Tucker
WIRELINE SERVICES

DUAL INDUCTION RESISTIVITY LOG

File No.	:	TUL-55648
Company	:	CHAPARRAL ENERGY
Well	:	NBU #14-41W
Field	:	
County	:	OSAGE
State	:	OKLAHOMA
Country	:	USA

Location :
660' FEL & 2310' FSL
SE

Sect : 10 Twp : 27N Rge : 5E

Recorded By : B.BAILEY
Witnessed By : V.COGGINS

Date : JUN 22 2010
Run No. : 1

Permanent Datum :	GL	
Drilling Measured From :	KB	
Log Measured From:	KB	
Above Permanent Datum :	12.000	FT
Depth--Driller :	3193.0	FT
Depth--Logger :	3187.0	FT
Bottom Log Interval :	3186.0	FT
Top Log Interval :	282.0	FT
Casing Depth--Driller:	315.0	FT
Casing Depth--Logger :	282.0	FT
Casing Diameter :	8.625	IN
Bit Size :	7.875	IN

Unit No. : 122
Location : TULSA

Elevations :

KB :	1114.00	FT
DF :	1113.00	FT
GL :	1102.00	FT

Additional Services

CNT
LDT
MLT

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.

Run Number 1

Depth To Fluid	0.0	FT			
Fluid Type In Hole : WBM					
Density :	9.100	SG			
Viscosity :	50.000	SEC			
pH :	9.500				
Fluid Loss :	5.700				
Salinity :	0.000	KPPM			
RM Source :	MEASURED				
RM :	1.900	OHMM at	90	F	
RM at BHT :	1.474	OHMM at	118	F	
RMF Source :	CALCULATED				
RMF :	1.615	OHMM at	90	F	
RMF at BHT :	1.253	OHMM at	118	F	
RMC Source :	CALCULATED				
RMC :	2.185	OHMM at	90	F	
RMC at BHT :	1.695	OHMM at	118	F	
Max Recorded Temp. :			118	F	
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-111
LDTNG	LDP-NG-02
MSTNG	MST-DA-36
PIT	PIT-AB-14

Casing Strings

Size (IN)	Weight (LB/FT)	Bottom (FT)
8.625	32.00	315.00

- Comments -

ALL PRESENTATIONS AS PER CUSTOMER REQUEST.

GRT, CNT, LDT, MLT, 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 5.500" PRODUCTION CASING.
REPEAT ABOVE BURBANK AS PER CUSTOMER REQUEST.

GRT: GRP, GRX.
CNT: PHIN, CLCDIN.
LDT: PORL, LCORN, PECLN, CLLDIN, LDENN, PORLLS, PECSN.
MLT: INV_R, NOR_R, MSCLPIN.
PIT: ILD, ILM, CIRD, SFLAEC, SPU.
MINERAL VOLUME: VM31, VM32, VM33.

OPERATORS:
S.DAVIS
M.BURKE

THANK YOU FOR USING TUCKER WIRELINE SERVICES!!!!!!!!!!!

Tool String Schematic

Total Tool Length - 52.95 ft.
Maximum Outside diameter - 6.00 in.
Net Weight in Air - 943.00 lbs.

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

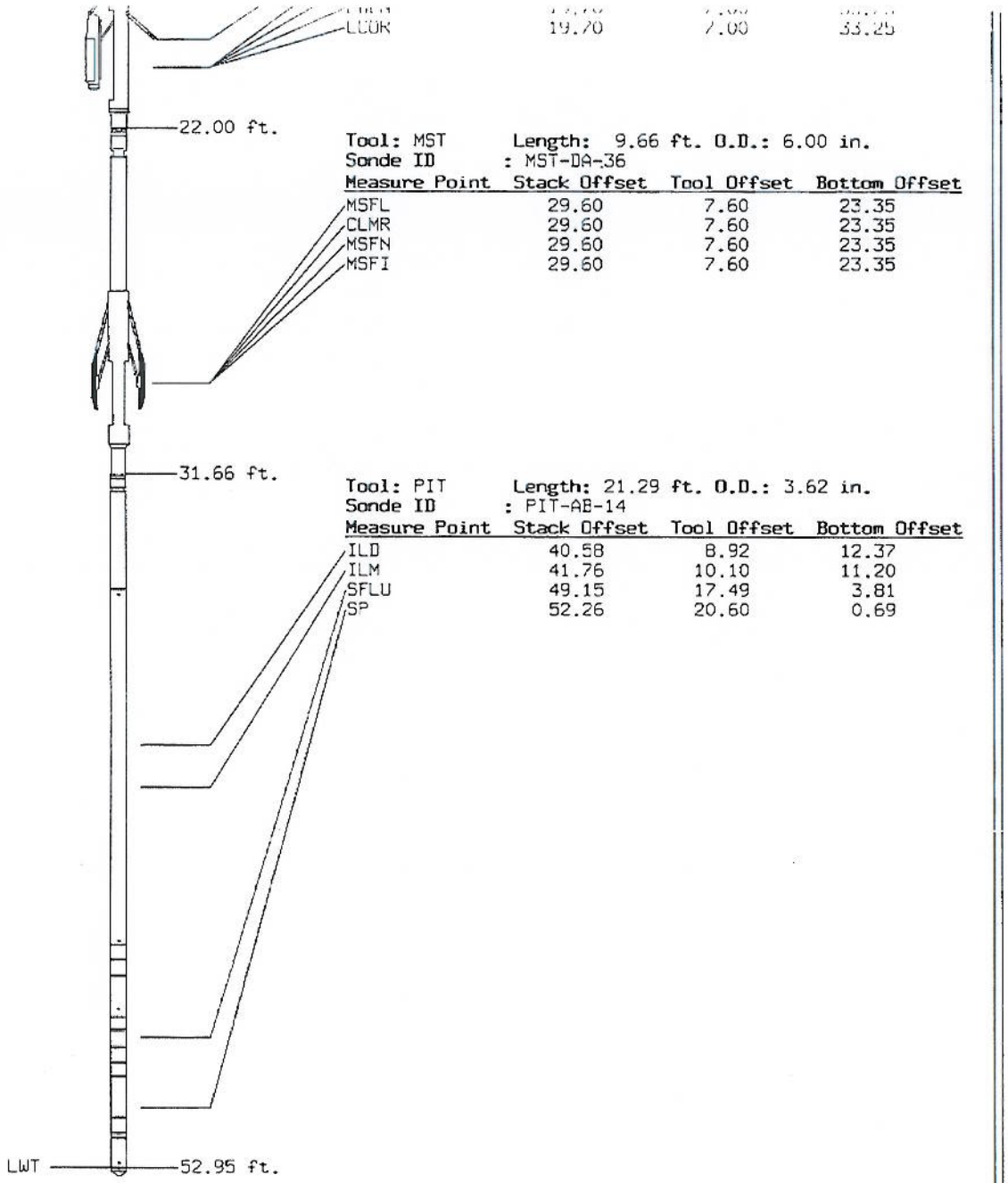
Measure Point	Stack Offset	Tool Offset	Bottom Offset
GRP	2.00	2.00	50.95

Tool: CNT Length: 9.30 ft. O.D.: 4.36 in.
Sonde ID : CNP-AA-111
Source ID : N-1044
Pad ID : CNP-AA-111

Measure Point	Stack Offset	Tool Offset	Bottom Offset
CLCN	9.40	6.00	43.55
PHIN	10.24	6.84	42.71

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	34.25
PEL	19.70	7.00	33.25
PES	20.10	7.40	32.85
LDEN	19.70	7.00	33.25



TENSION LBS	
10000	0

SHALLOW FOCUSED RESISTIVITY OHMM	
0.0	500.0
0.0	50.0

SPONTANEOUS POTENTIAL mV
→| |← 20

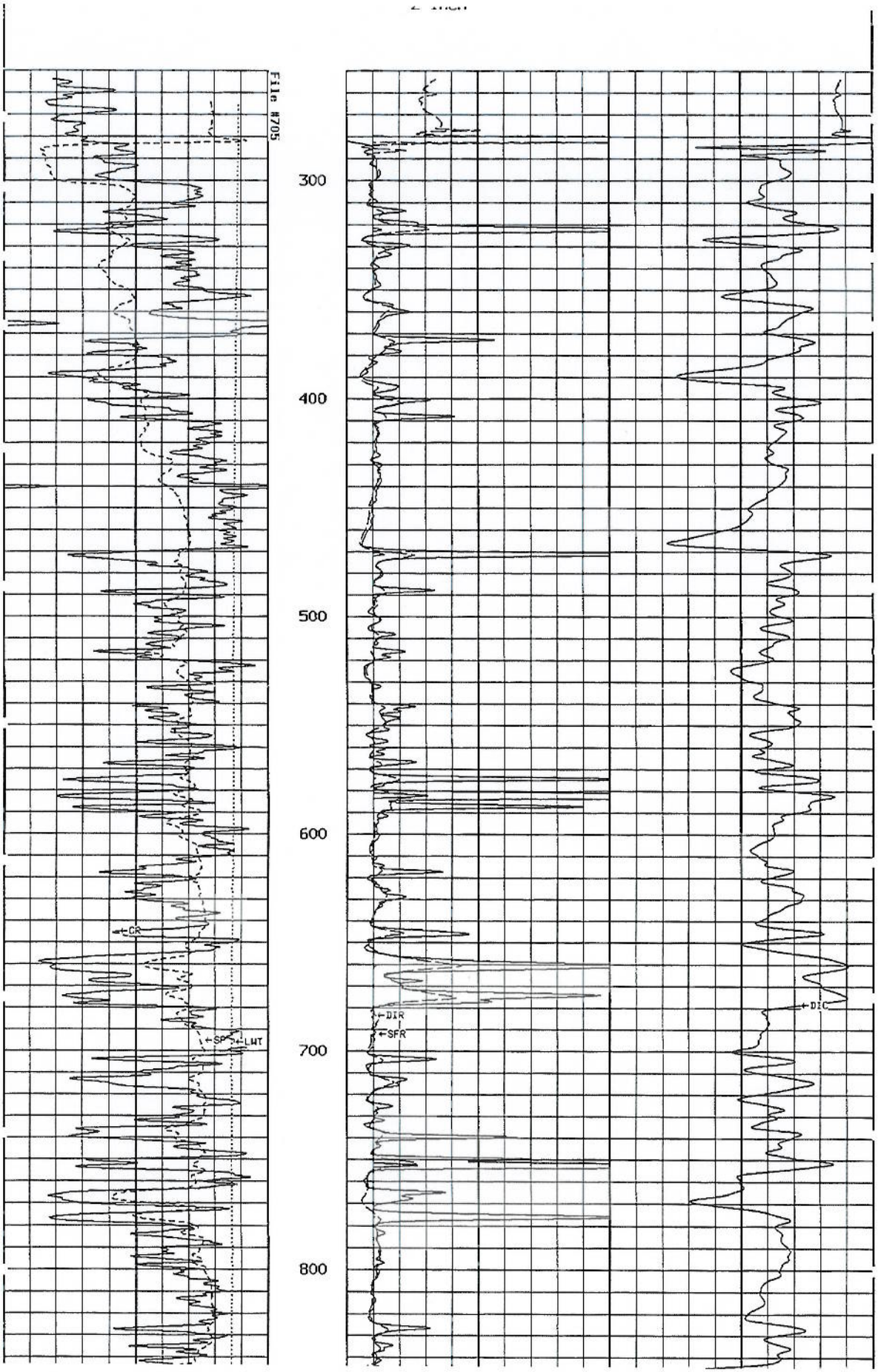
DEEP INDUCTION OHMM	
0.0	500.0
0.0	50.0

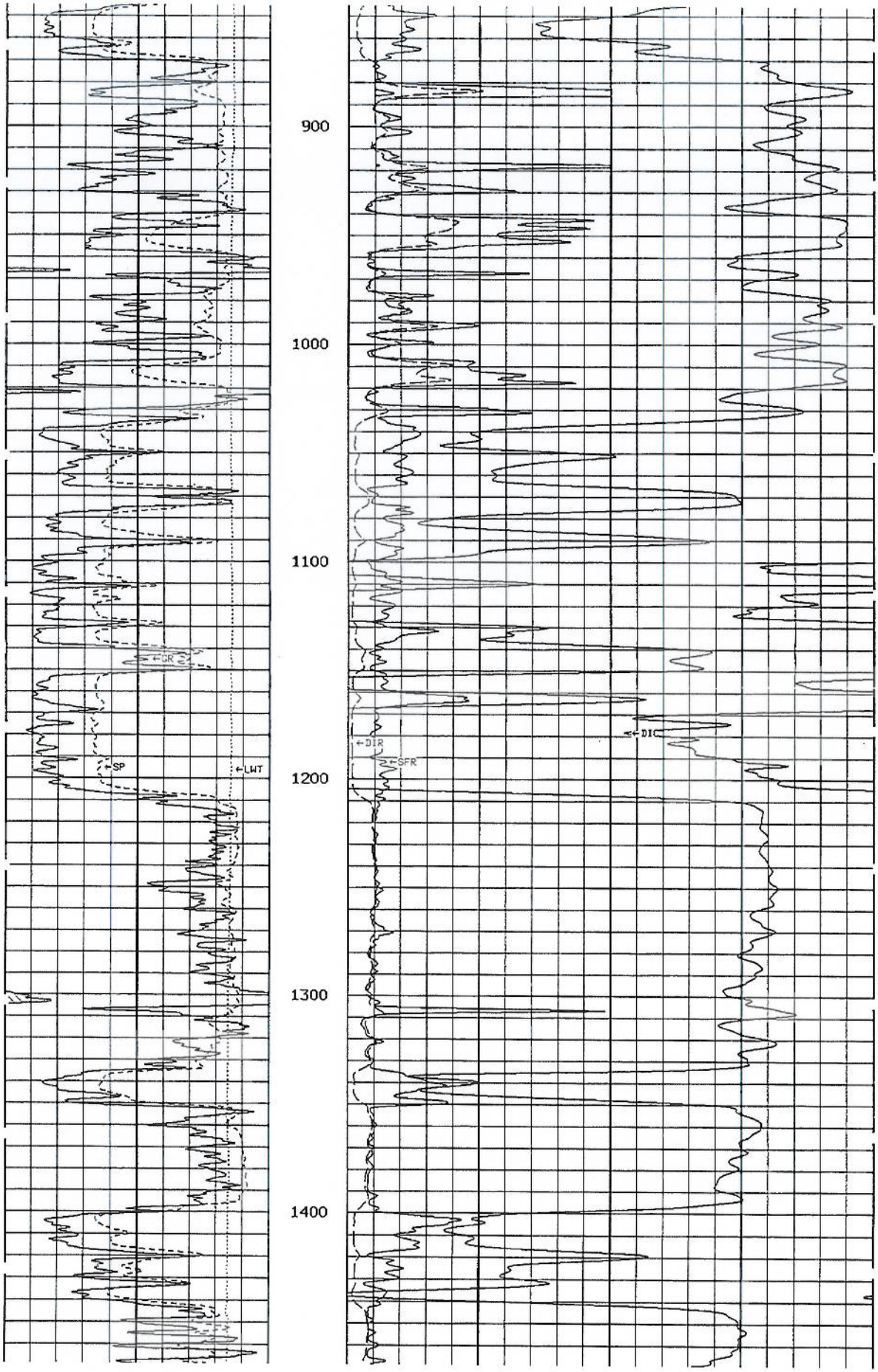
GAMMA RAY API UNITS	
150	300
0	150

DEEP CONDUCTIVITY MMHO	
2000	1000
1000	0

1:600 SECTION

2 INCH


File #705
300
400
500
600
700
800
CR
SP
LWT
DIR
SFR
DIC


900
1000
1100
1200
1300
1400
←GR
←SP
←LWT
←DIR
←SFR
←DIC