

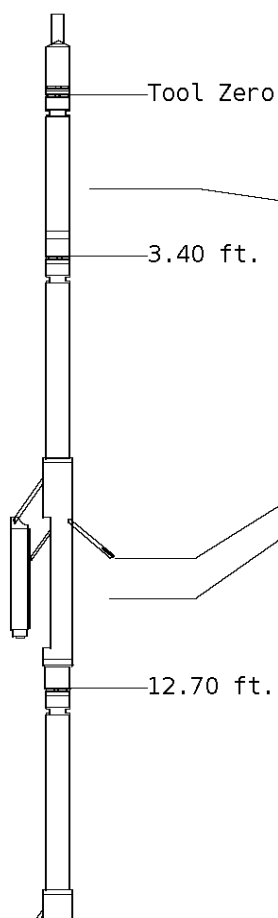
ALL PRESENTATIONS AS PER CUSTOMER REQUEST
 GRT, CNT, LDT, MLT AND PIT RUN IN COMBINATION
 CALIPERS ORIENTED ON X-Y AXIS
 2.71 G/CC USED TO CALCULATE POROSITY
 ANNULAR HOLE VOLUME CALCULATED USING 4.5" PRODUCTION CASING
 PHIN IS CALIPER CORRECTED
 NO REPEAT DUE TO CALIPERS FAILED TO CLOSE AFTER REPEAT, LOGGED OUT

GRT: GRP, GRX
 CNT: PHIN, CLCNIN, PHXN
 LDT: PORL, LCORN, PECLN, LDENN, PORLLS, CLLDIN, PRXL, PECLX, LDENNX, LCORX
 MLT: NOR_RF, INV_RF, MSCLPIN
 PIT: ILD, ILM, SPU, SFLAEC, CIRD

OPERATORS:
 J.OFFIEGBU
 R.FRANKLIN

Tool String Schematic

Total Tool Length - 53.15 ft.
Maximum Outside diameter - 6.00 in.
Net Weight in Air - 943.00 lbs.



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

Sonde ID :GRT-BA-017

Measure Point	Tool Offset	Stack Offset	Bottom Offset
GRP	2.00	2.00	51.15

Tool: CNT-AA **Length:** 9.30 ft. **O.D.** 4.36 in.
 Compensated Neutron A Pad on NDT-A

Sonde ID :NDT-BB-122

Source ID :N-1044

Pad ID :CNP-AA-115

Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLCN	6.00	9.40	43.75
PHIN	6.80	10.20	42.95

Tool: LDT-DA **Length:** 9.30 ft. **O.D.** 4.80 in.
 Litho Density D Pad on NDT-A

Sonde ID :NDT-CA-137

Source ID :CSV-587

Pad ID :LDP-DA-47

Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLLD	6.00	18.70	34.45
PEL	7.00	19.70	33.45
PES	7.40	20.10	33.05



7.20 19.90 33.25
 7.20 19.90 33.25

Tool: MST-DA **Length:** 9.66 ft. **O.D.** 6.00 in.
 Micro Spherically Focused (IC)
Sonde ID :MLT-DA-21

Measure Point	Tool Offset	Stack Offset	Bottom Offset
MSFL	7.60	29.60	23.55
MSCLP	7.60	29.60	23.55
INV	7.60	29.60	23.55
NOR	7.60	29.60	23.55

Tool: PIT-CA **Length:** 21.49 ft. **O.D.** 3.62 in.
 Phased Dual Induction w/ RM & D
Sonde ID :PIT-CA-062

Measure Point	Tool Offset	Stack Offset	Bottom Offset
ILD	8.92	40.58	12.56
ILM	10.10	41.76	11.39
SFLU	17.49	49.15	4.00
SP	20.60	52.26	0.88

Well File: PICKRELL_HIGGINS_K_3_JAN16_MSTK **Scale:** 1:240 **Format:** CAL-240
Segment: V1.D1.S7_FINAL **Acquired:** Not Available
Reference: 0 **Processed:** Not Available

BIT SIZE INCHES (IN)	
6	16

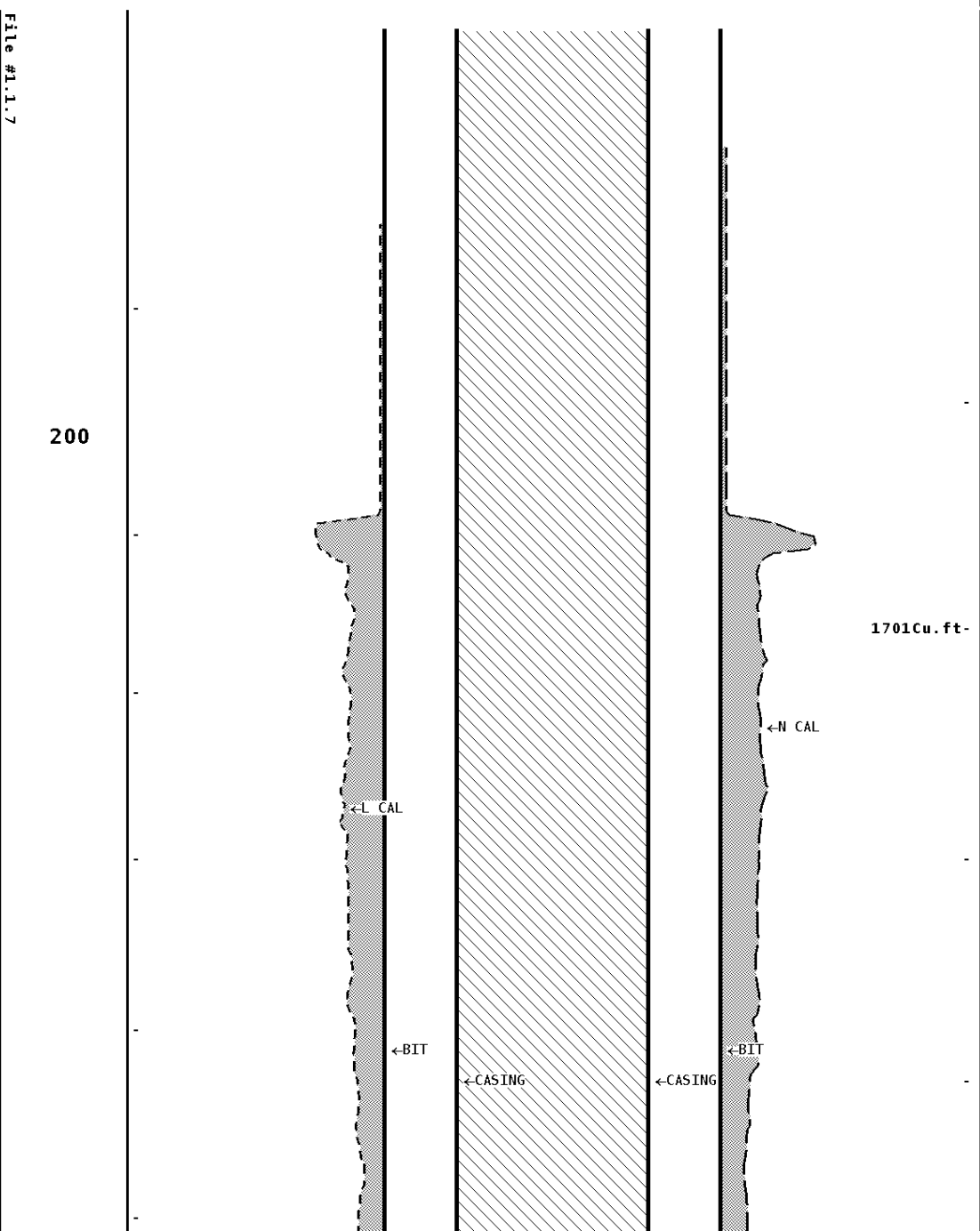
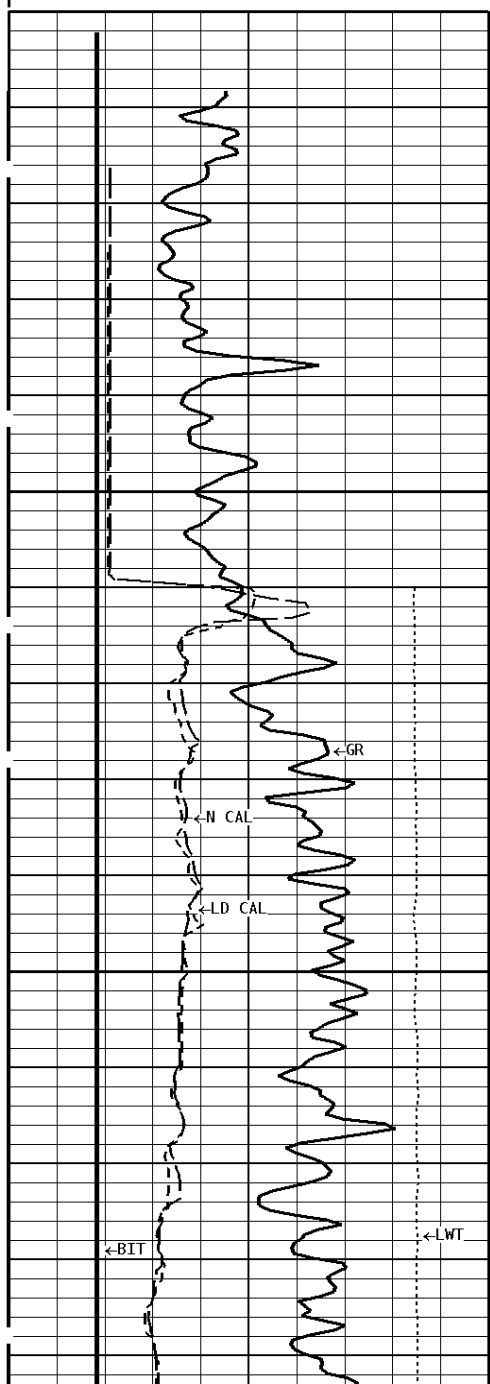
Y CALIPER INCHES (IN)	
16	26

16 6	26 16
X CALIPER INCHES (IN)	
16 6	26 16
TENSION LBS	
10000	0
GAMMA RAY API UNITS	
150 0	300 150

**BOREHOLE VOLUME
CU.FT**

**ANNULAR HOLE VOLUME
CU.FT.**

1:240 MAIN SECTION

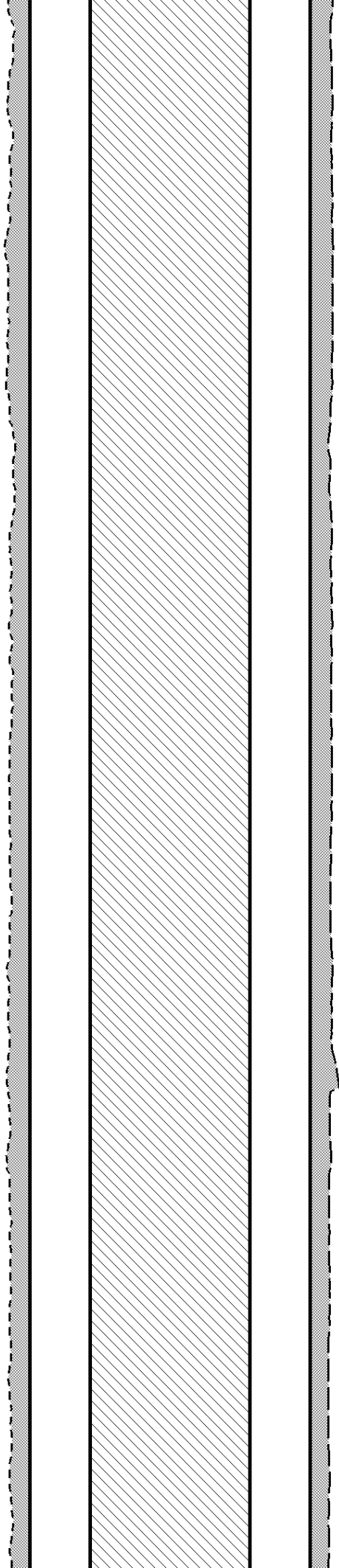
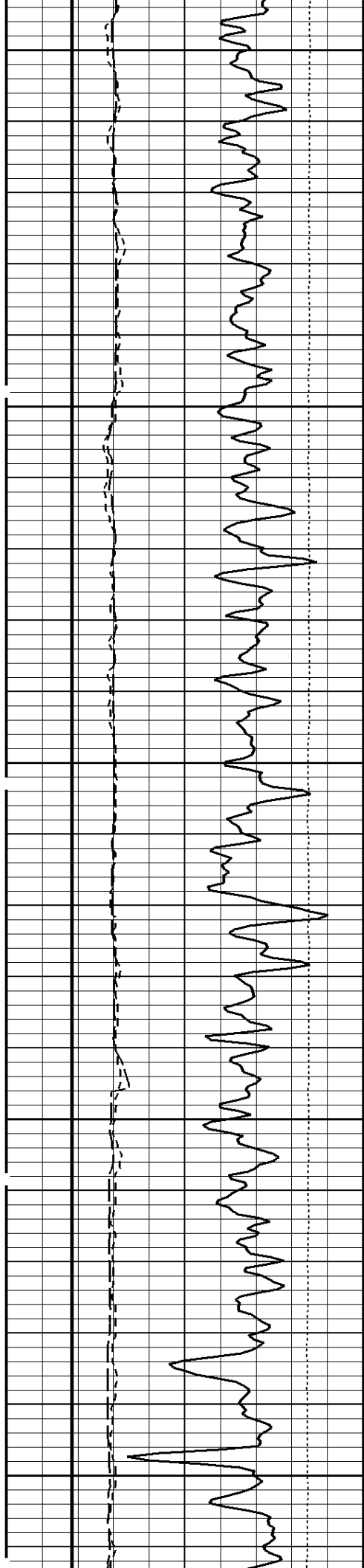


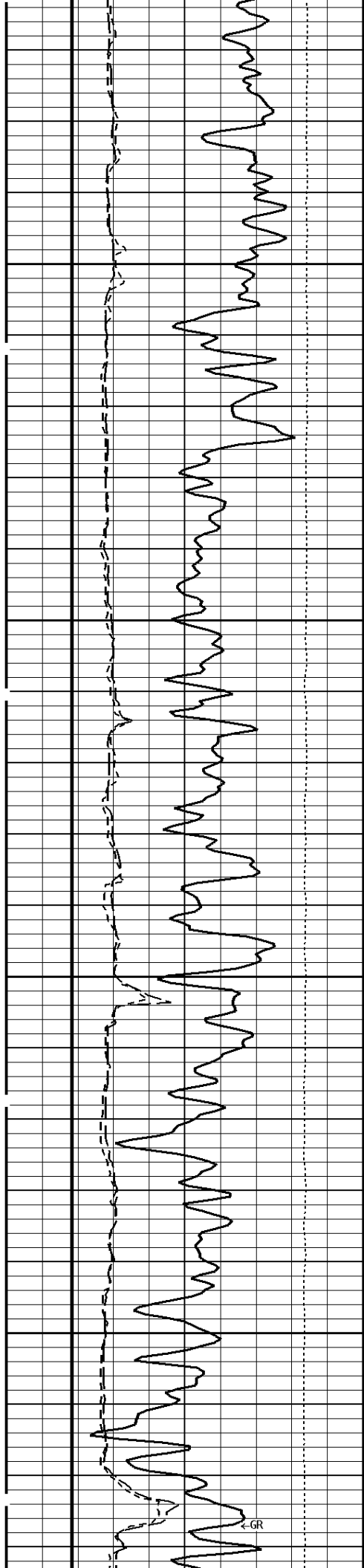
300

-2100Cu.ft

400

500

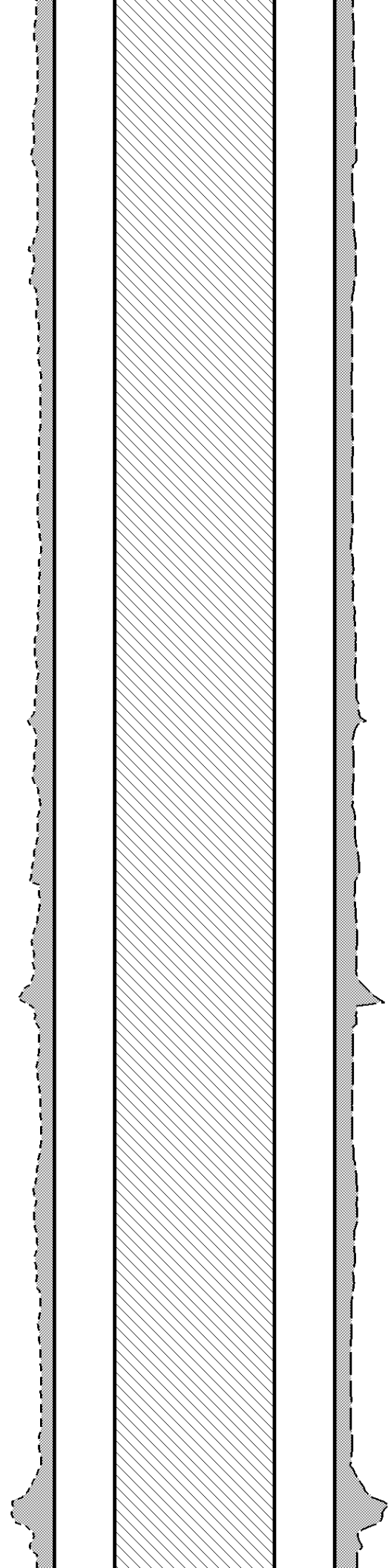


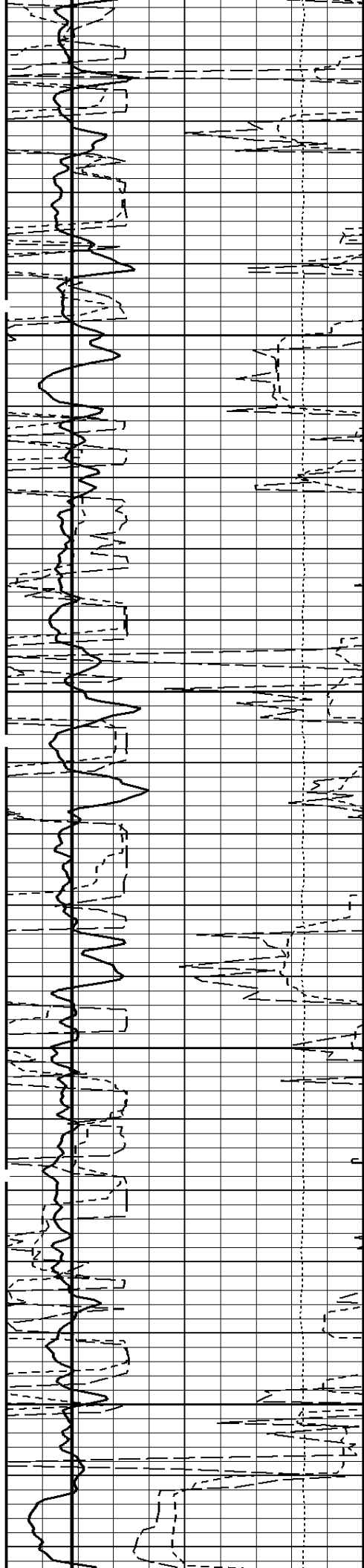


-2000Cu. ft

600

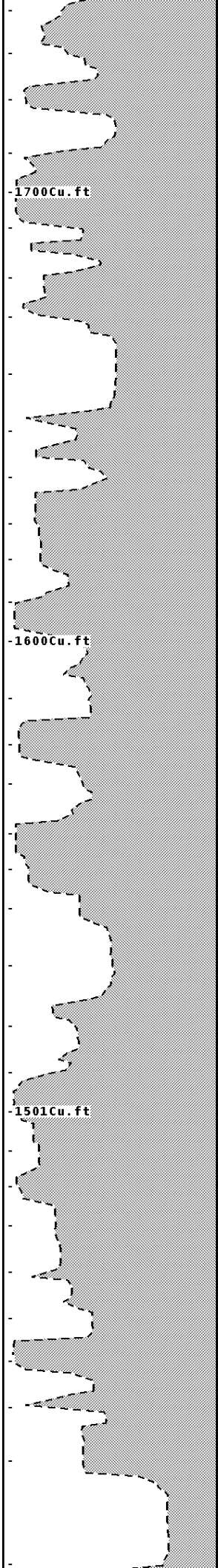
700





1000

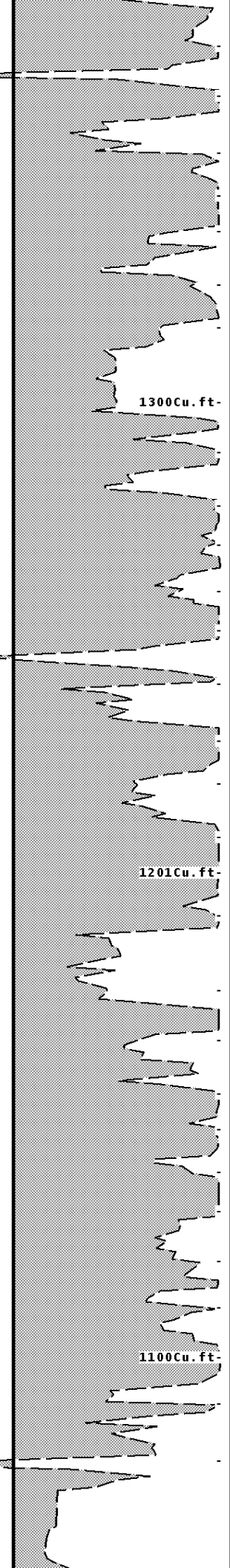
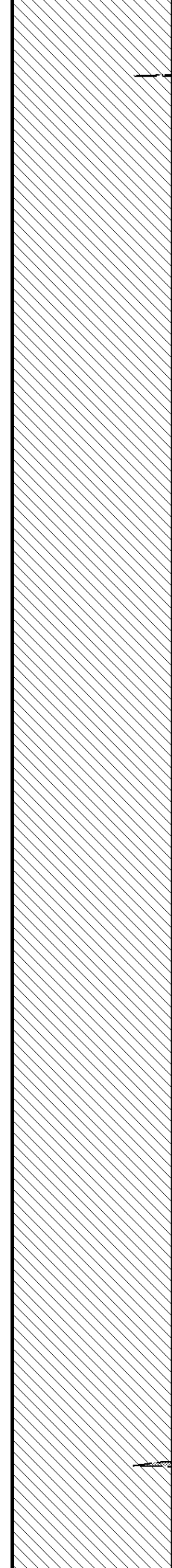
1100



1700 Cu. ft

1600 Cu. ft

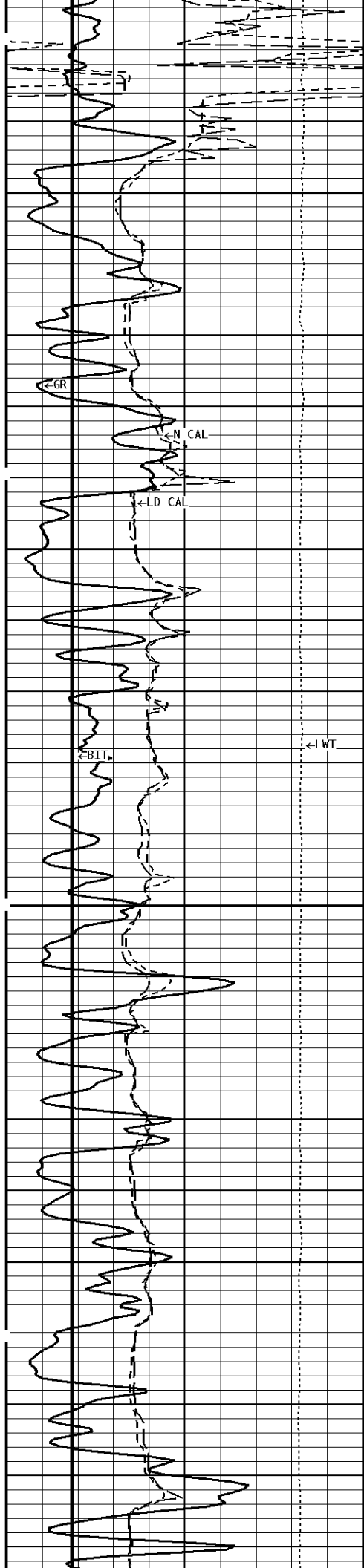
1501 Cu. ft



1300 Cu. ft

1201 Cu. ft

1100 Cu. ft



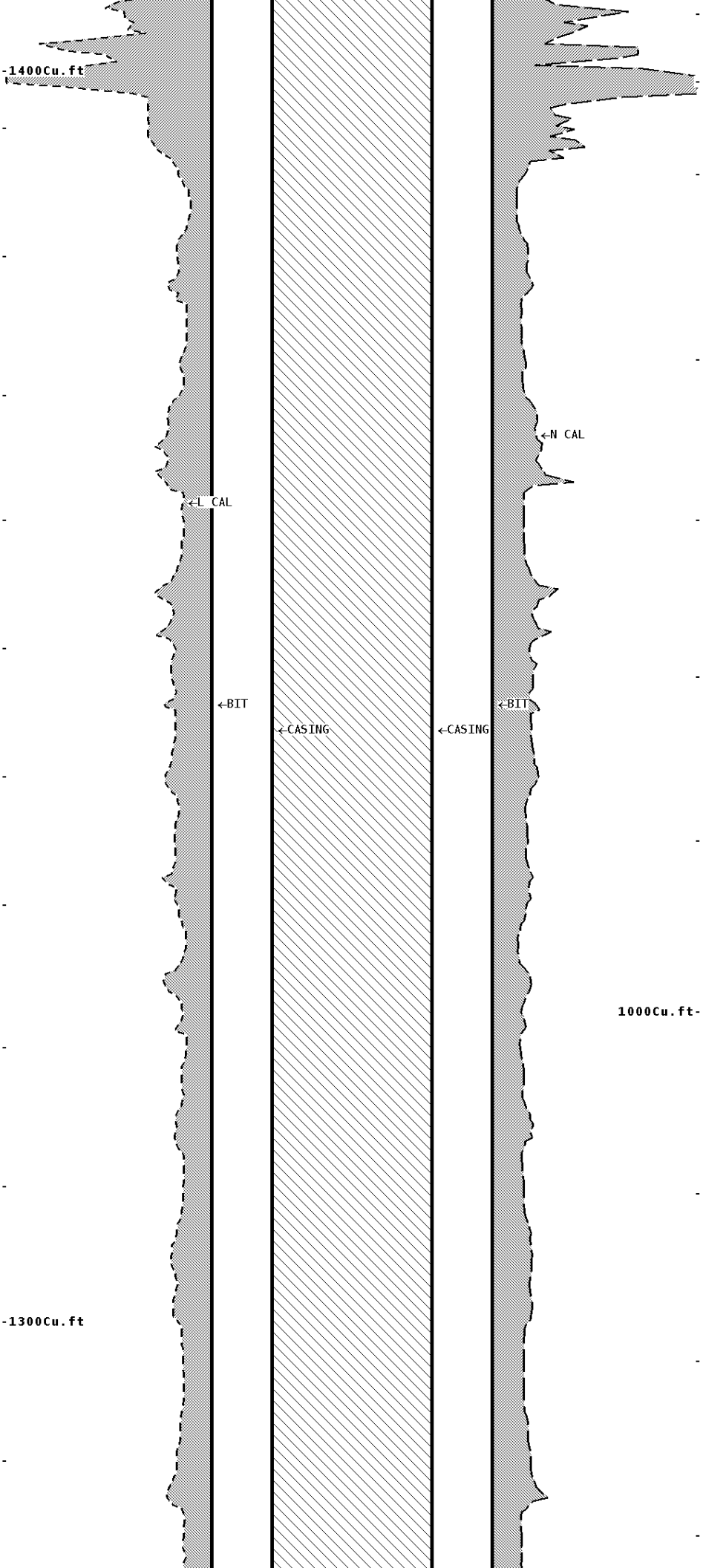
1200

1300

-1400Cu. ft

-1300Cu. ft

1000Cu. ft



←L CAL

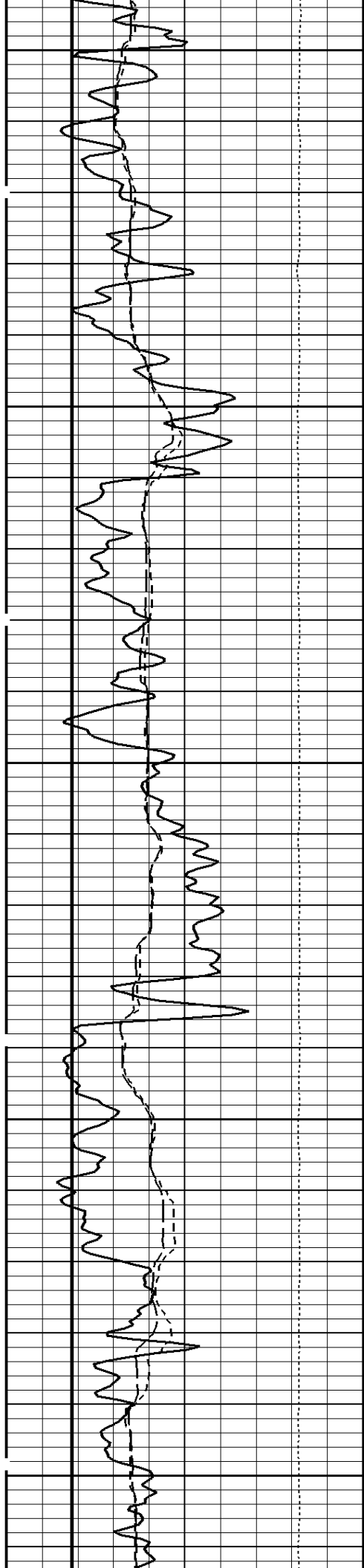
←BIT

←CASING

←CASING

←BIT

←N CAL



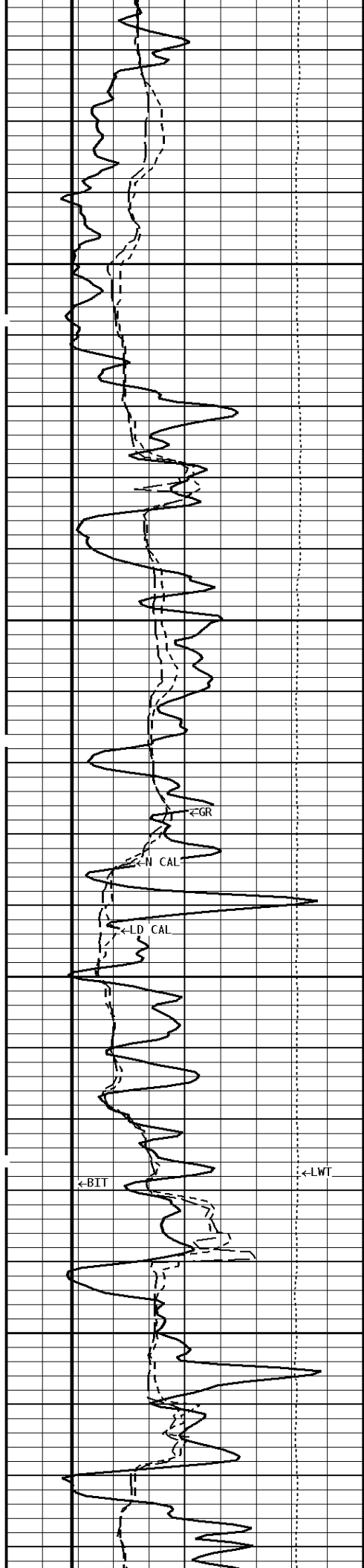
1400

1500

1600

-1200Cu. ft

900Cu. ft-

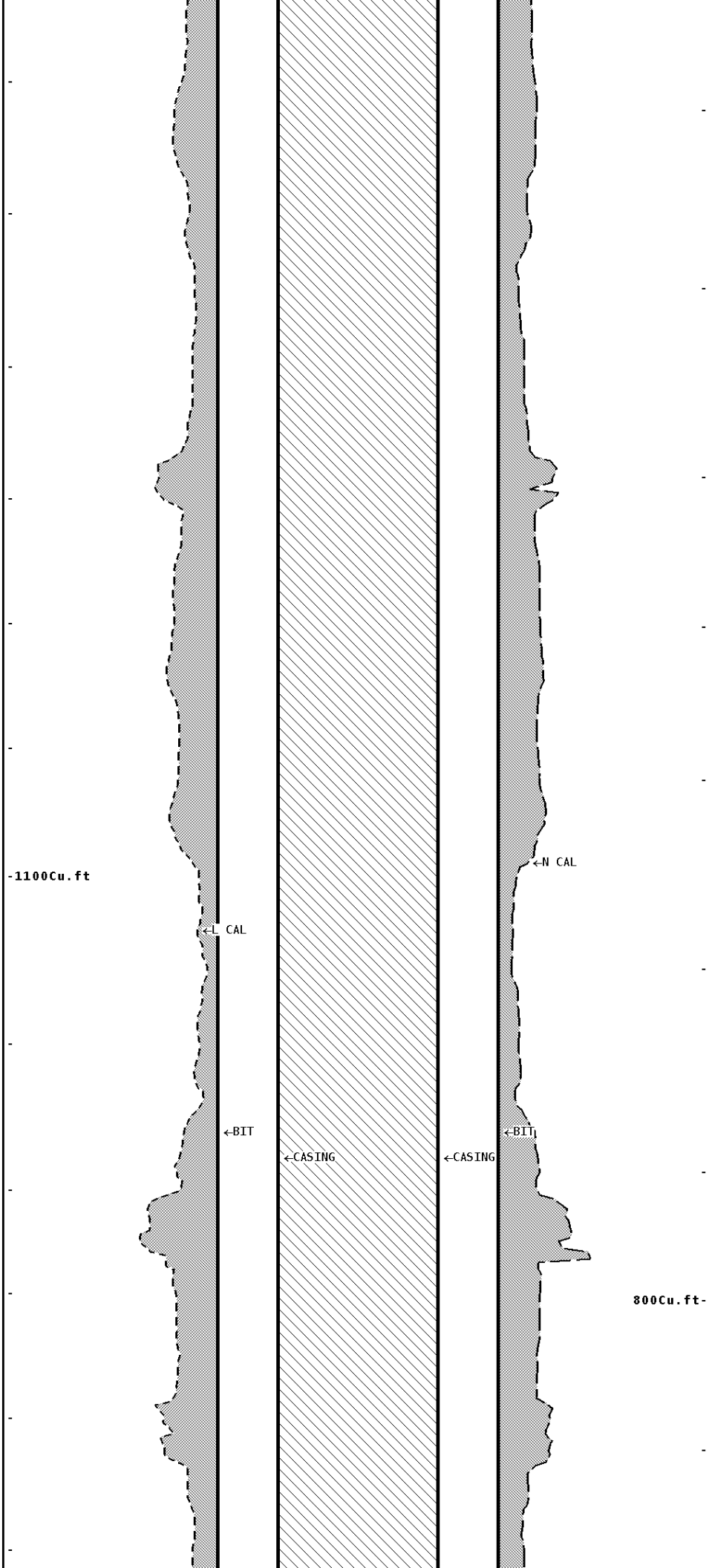


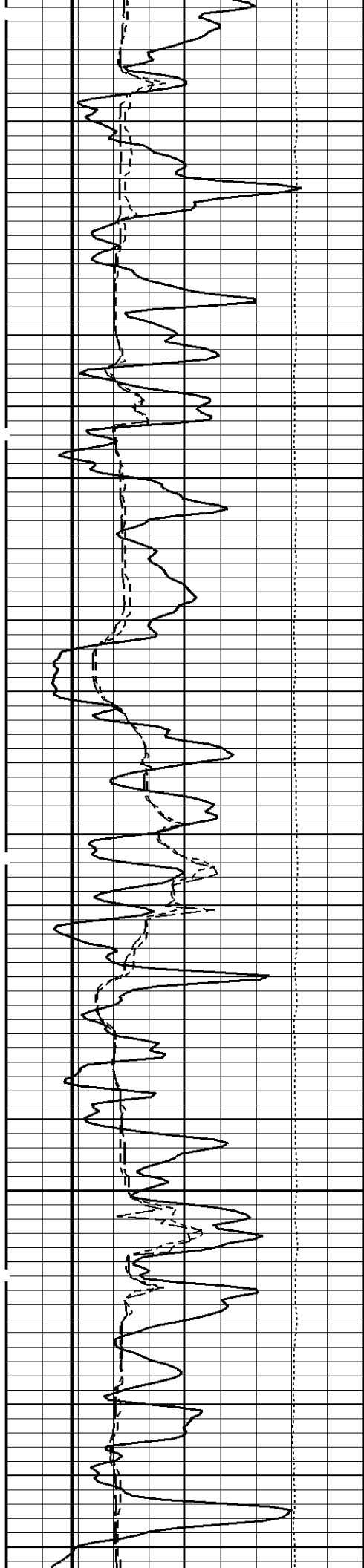
1700

-1100Cu. ft

1800

300Cu. ft-

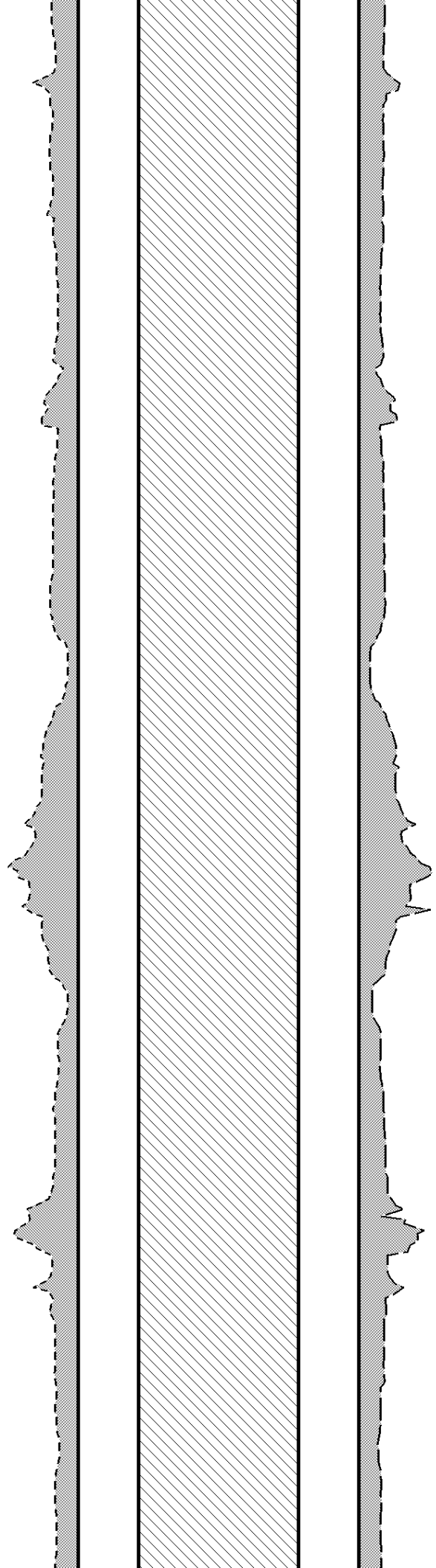


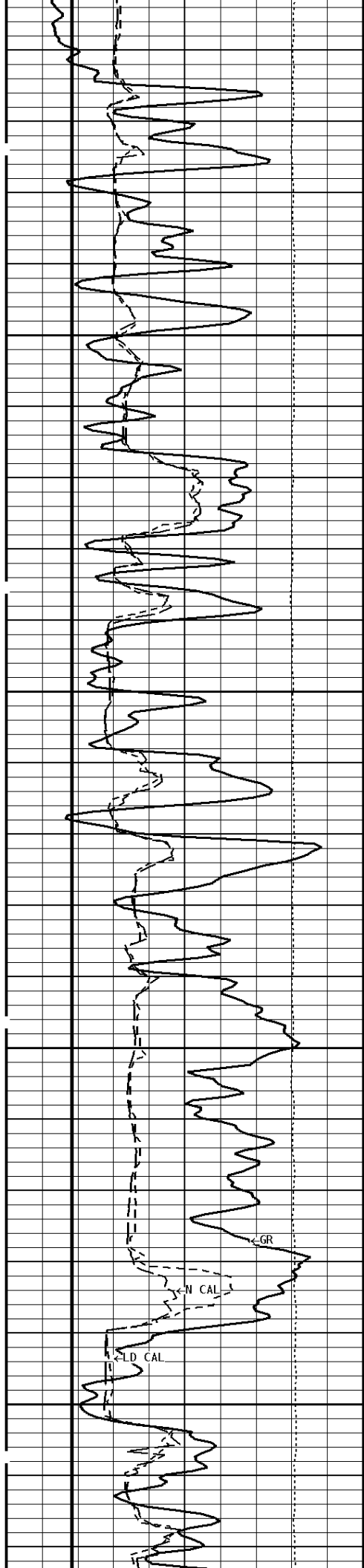


1900

2000

-1000Cu. ft





2100

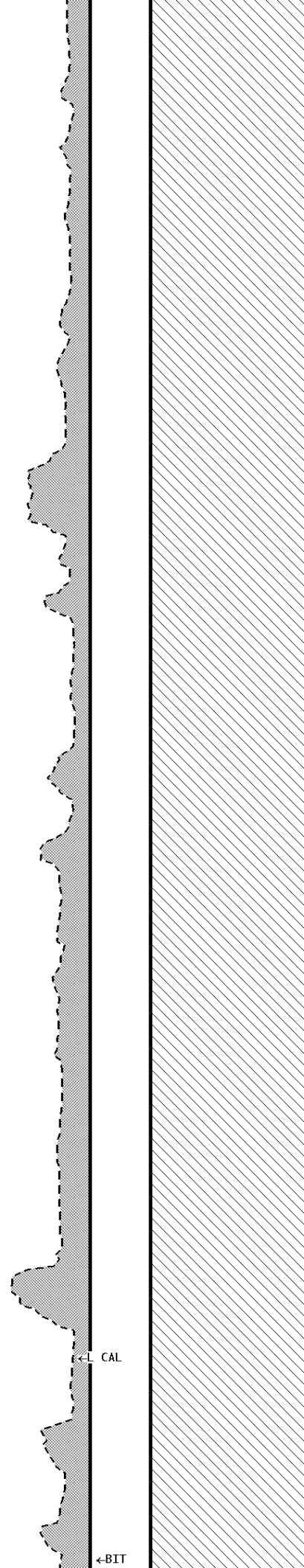
-900Cu.ft

2200

←LD CAL

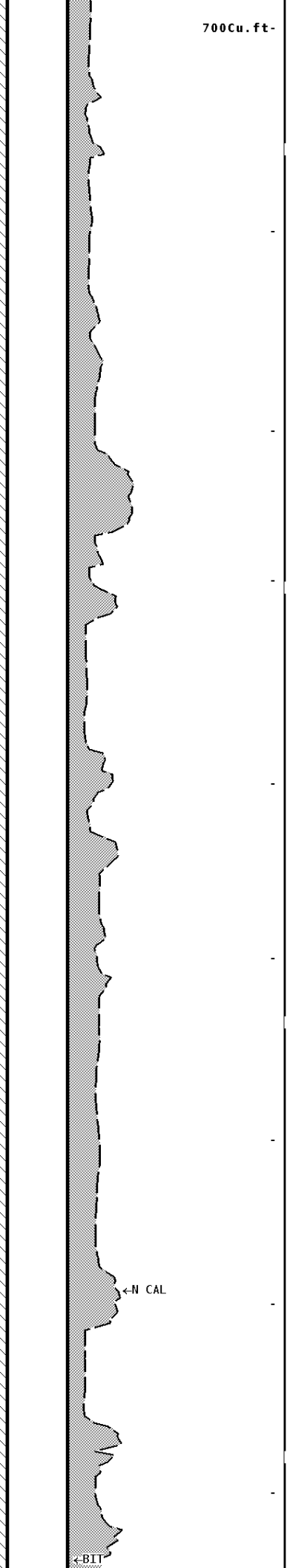
←N CAL

←GR



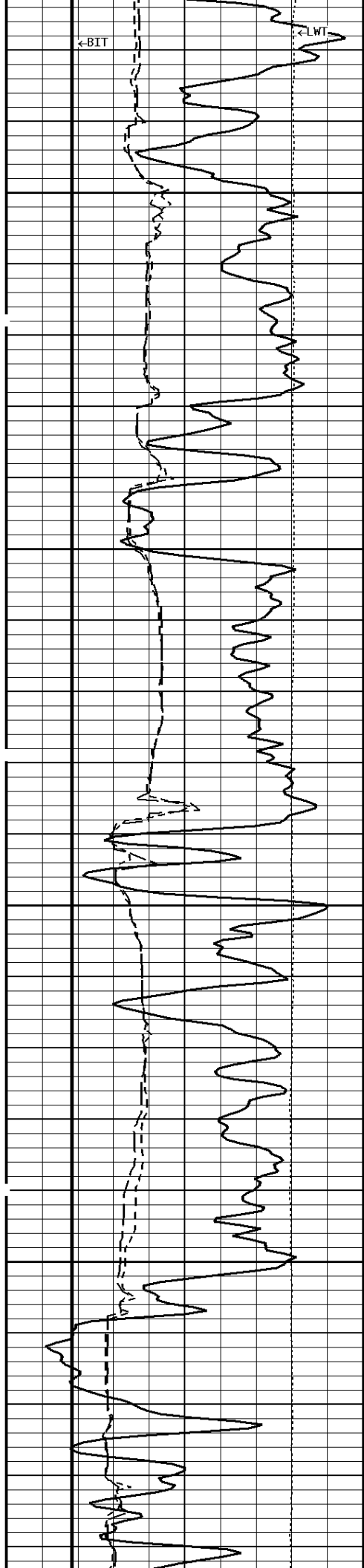
←CAL

←BIT



←N CAL

←BIT



2300

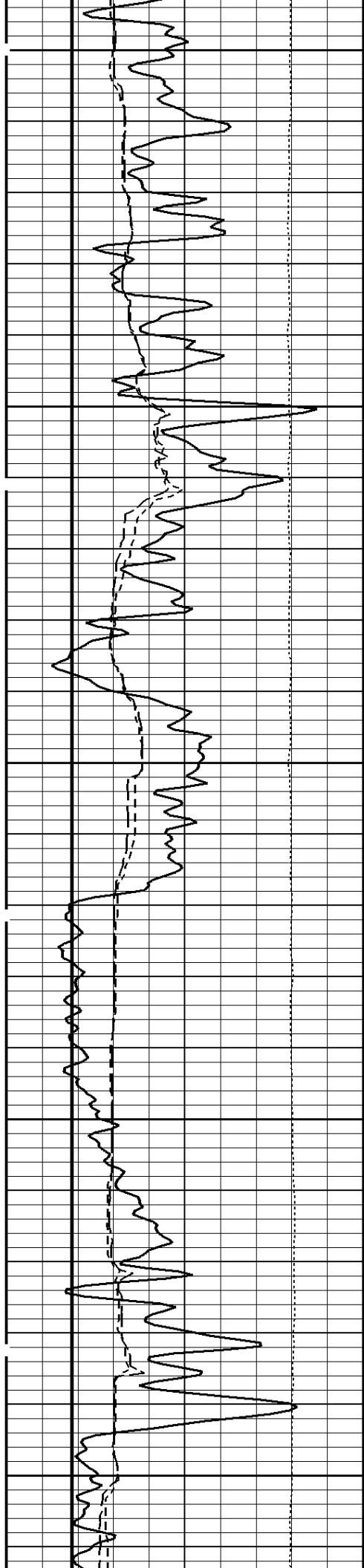
800Cu. ft

2400

← CASING

← CASING

600Cu. ft



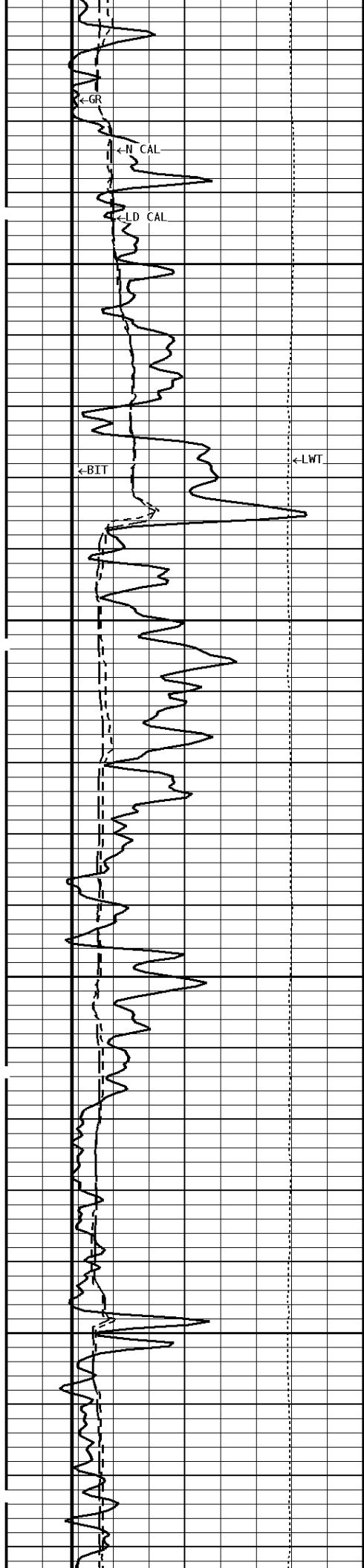
2500

-700Cu. ft

2600

500Cu. ft-

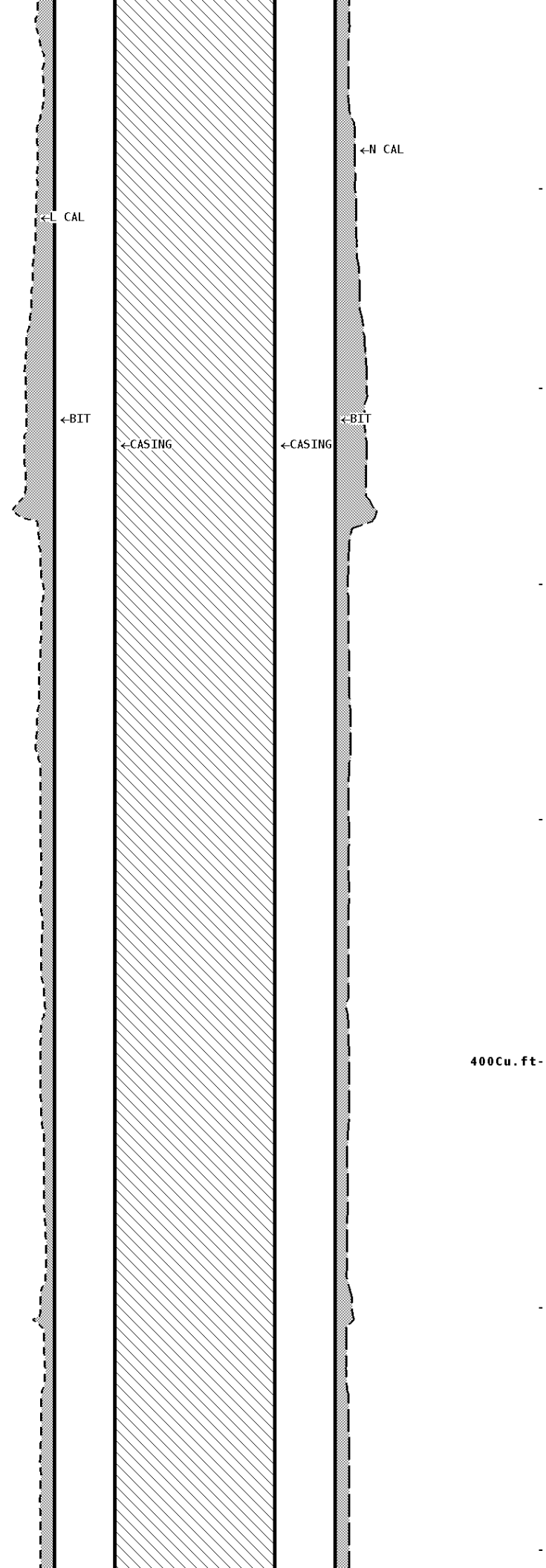
2700



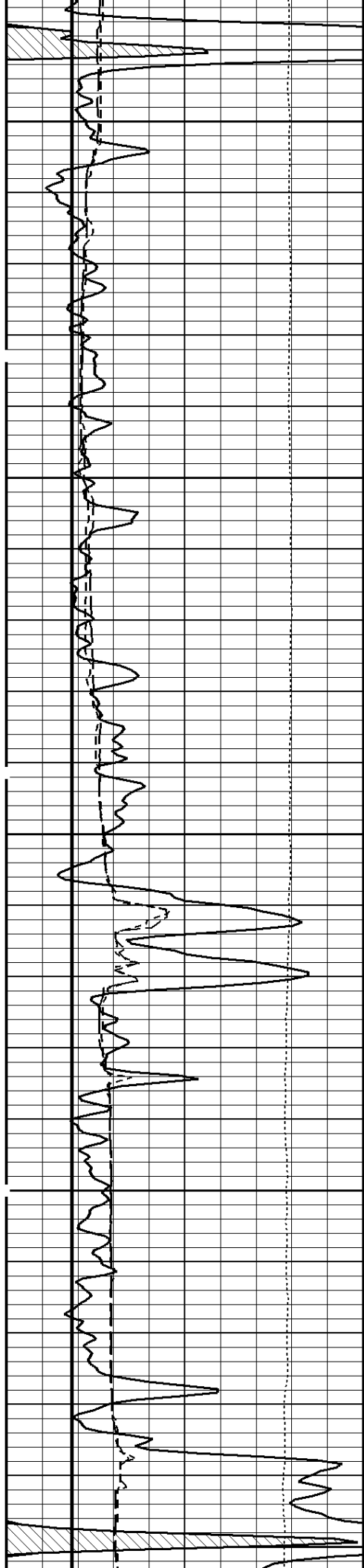
-600Cu. ft

2800

2900



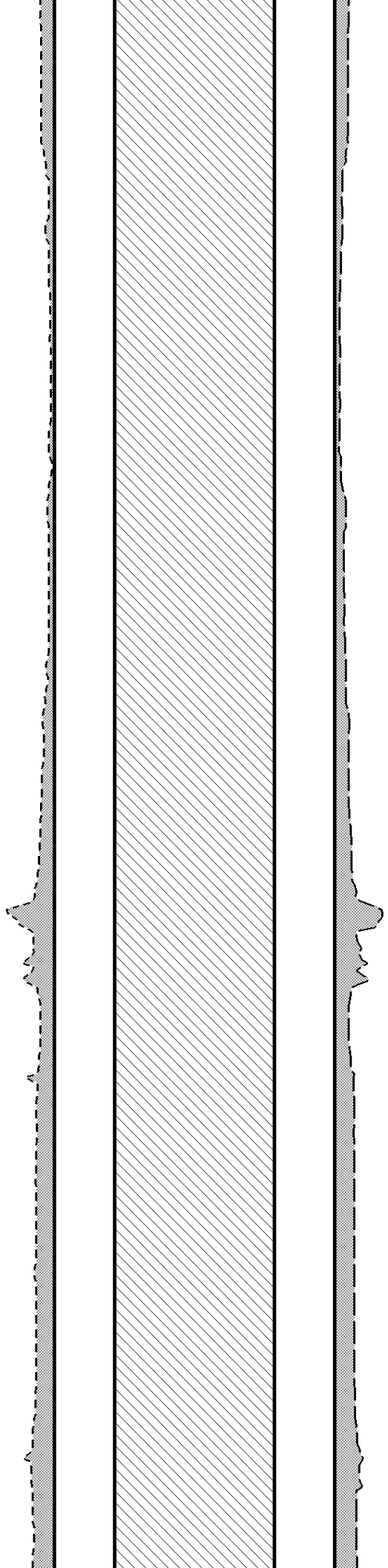
400Cu. ft

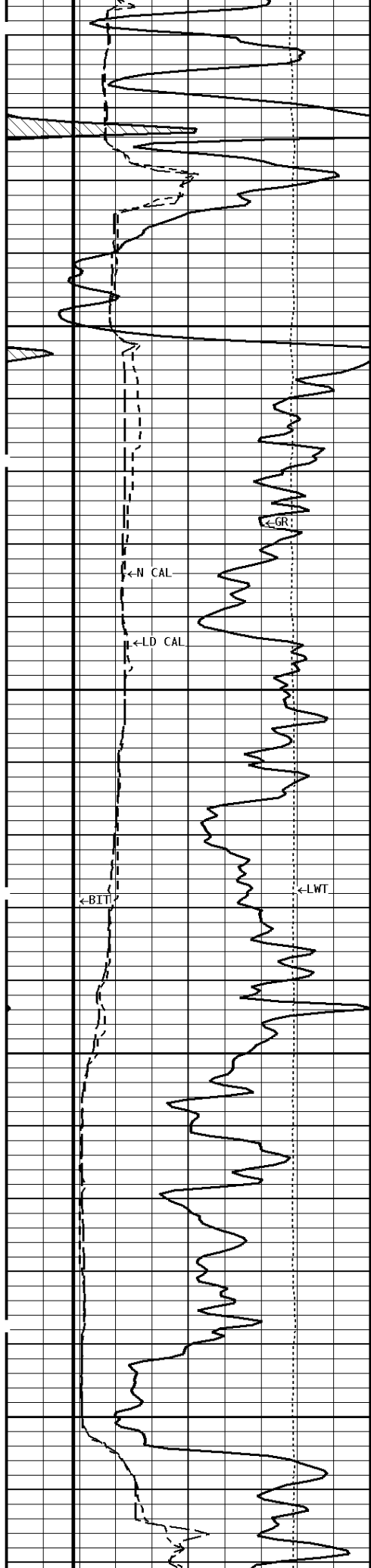


3000

3100

-500Cu.ft

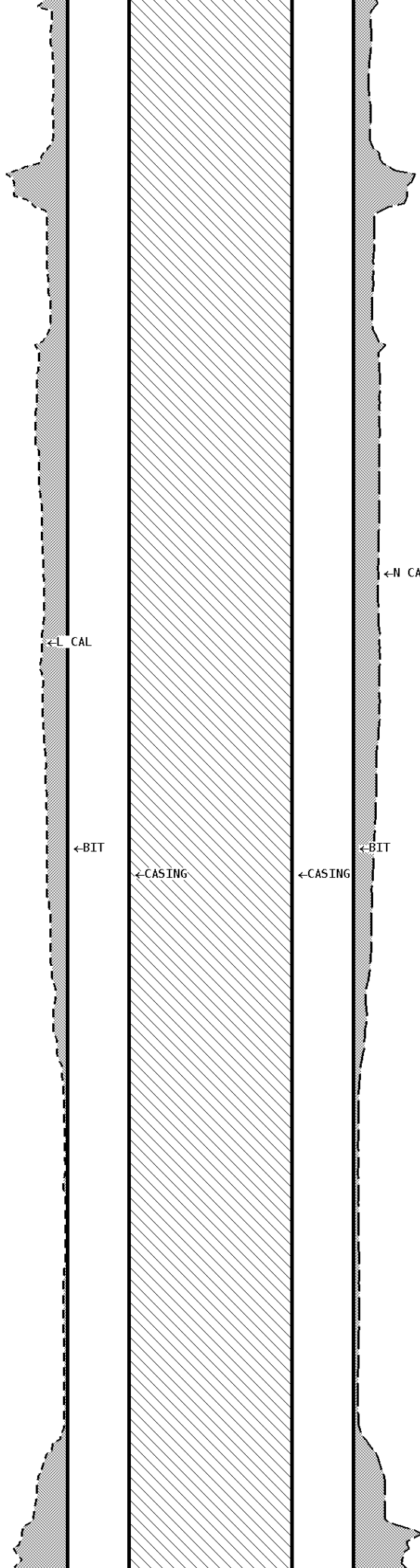




3200

-400Cu. ft

3300



300Cu. ft-

<N CAL

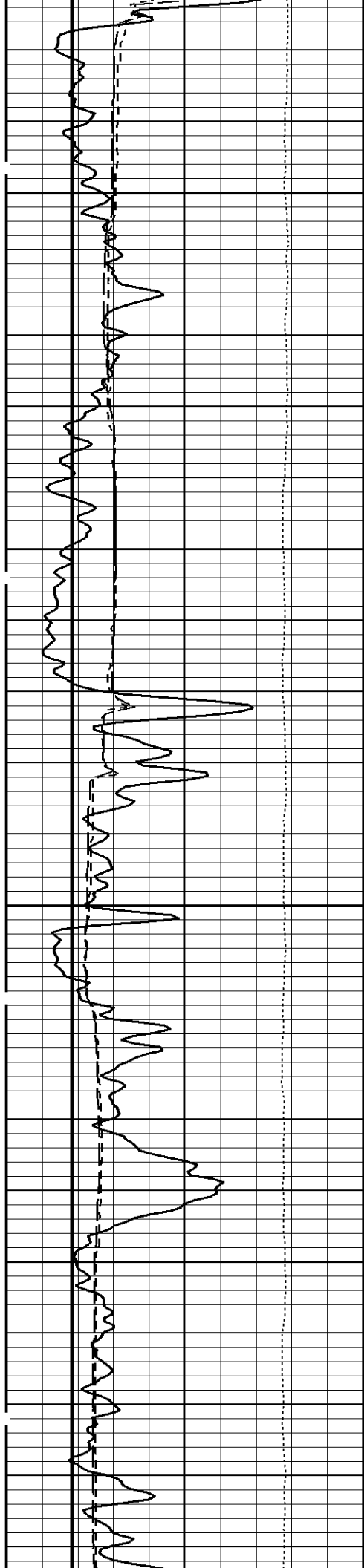
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<BIT

<CASING

<CASING

<BIT

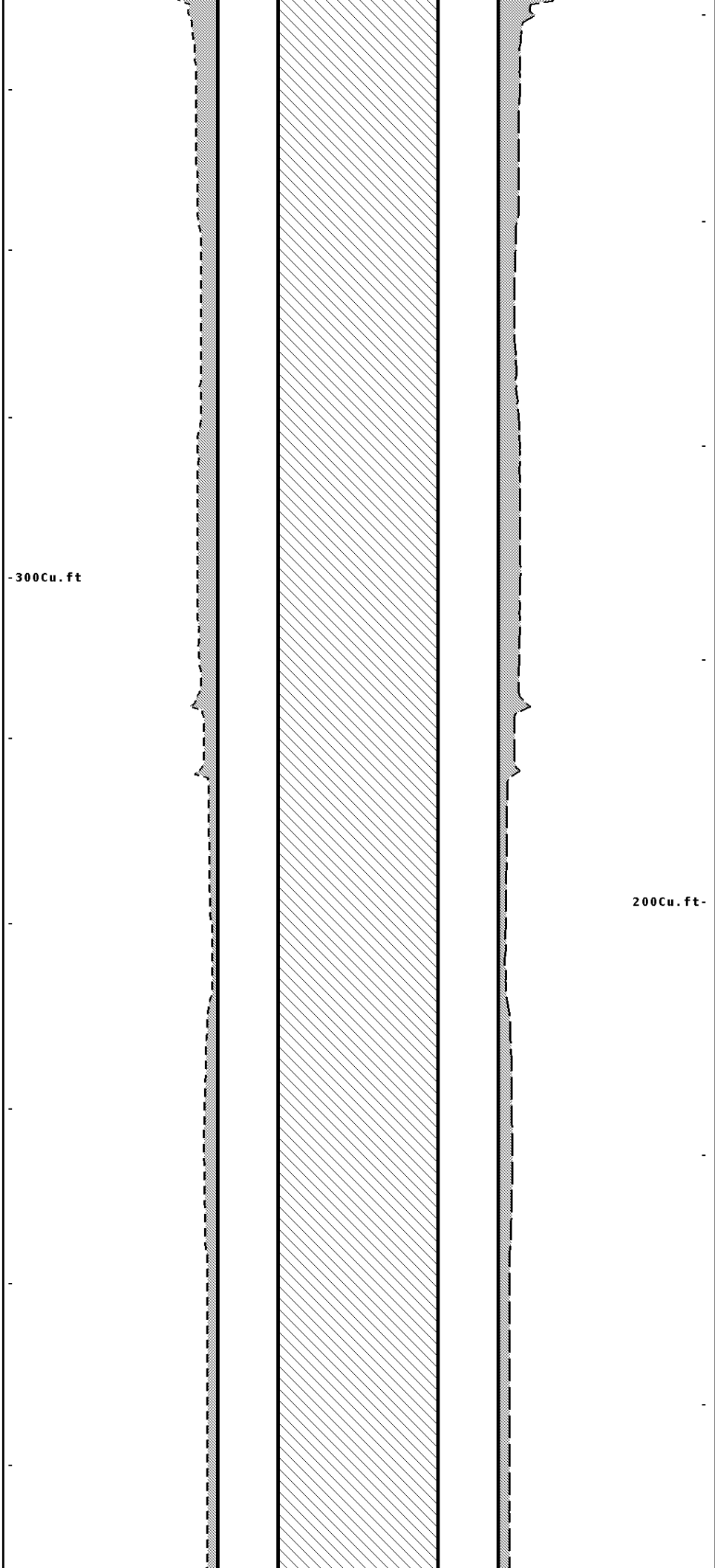


3400

-300Cu.ft

3500

200Cu.ft-

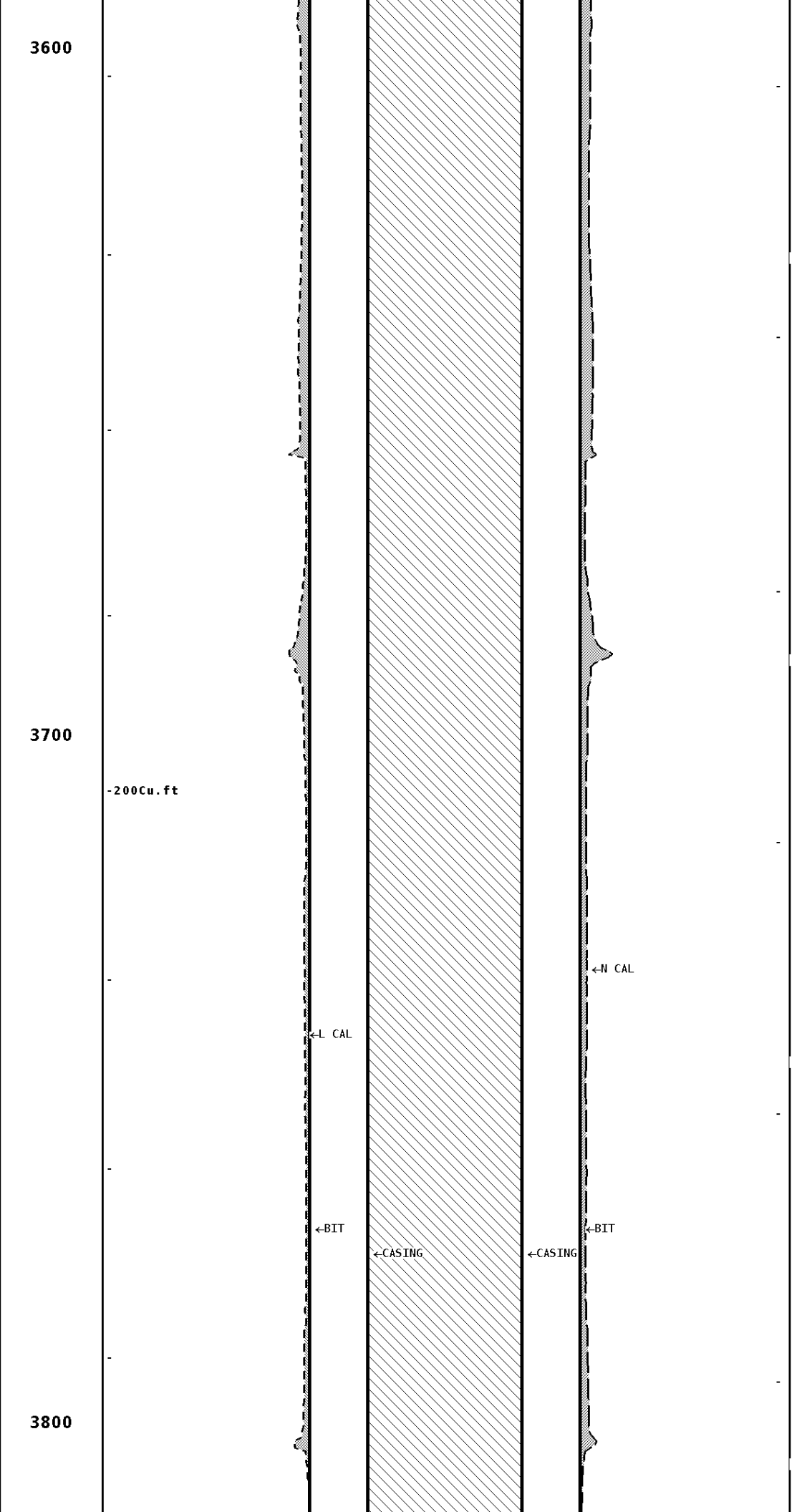
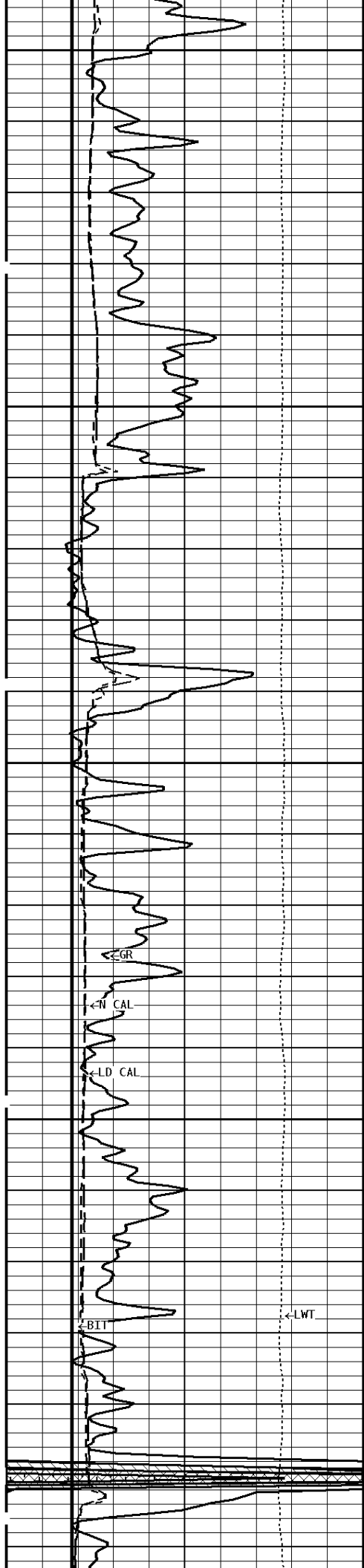


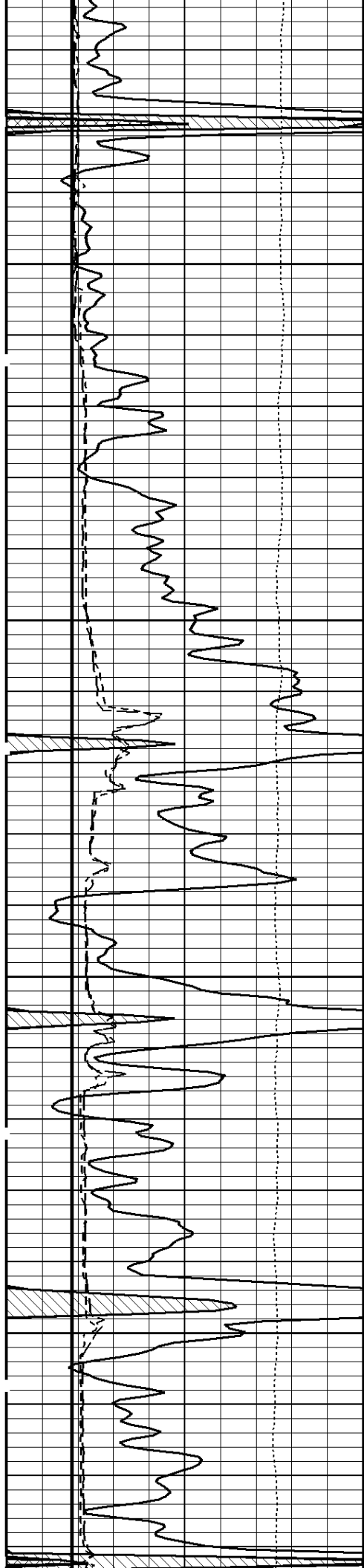
3600

3700

3800

-200Cu.ft



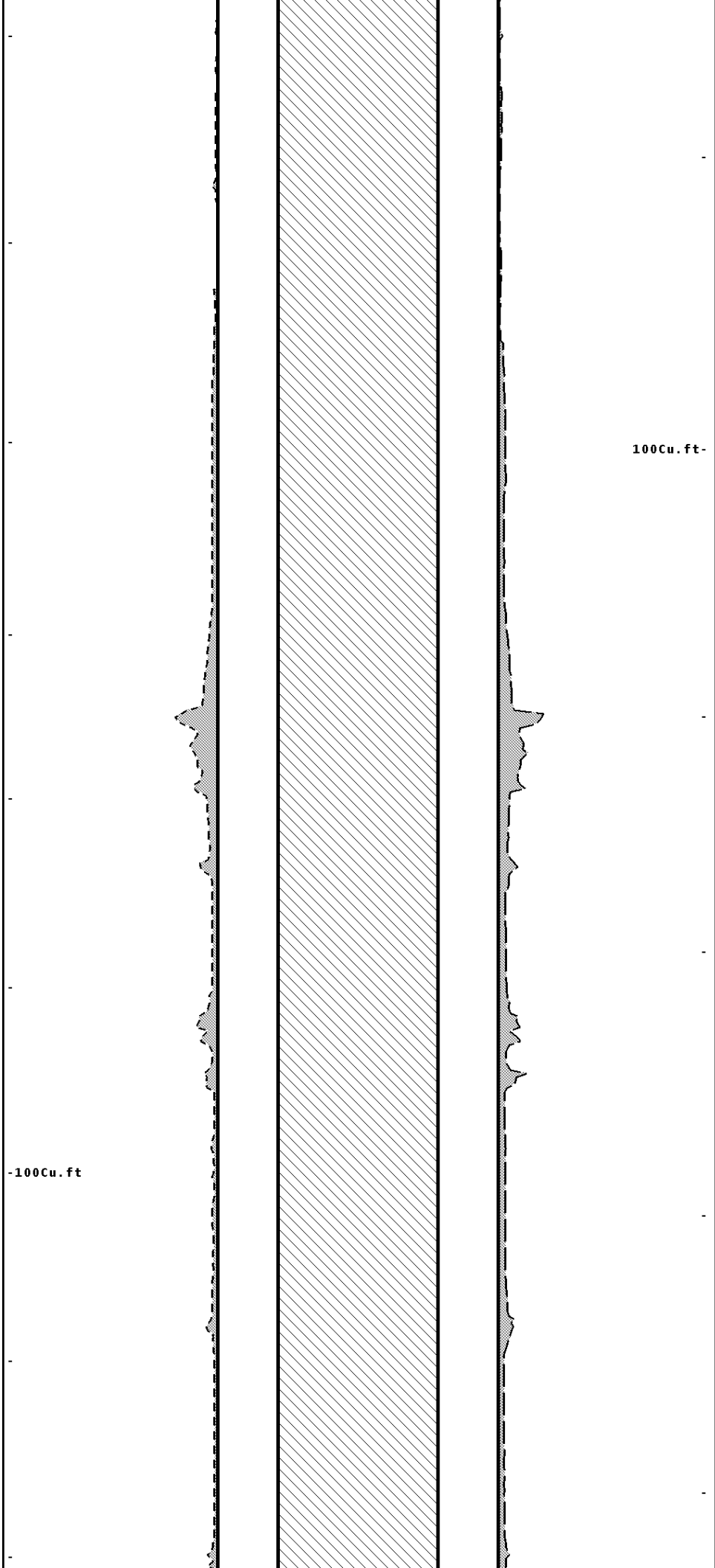


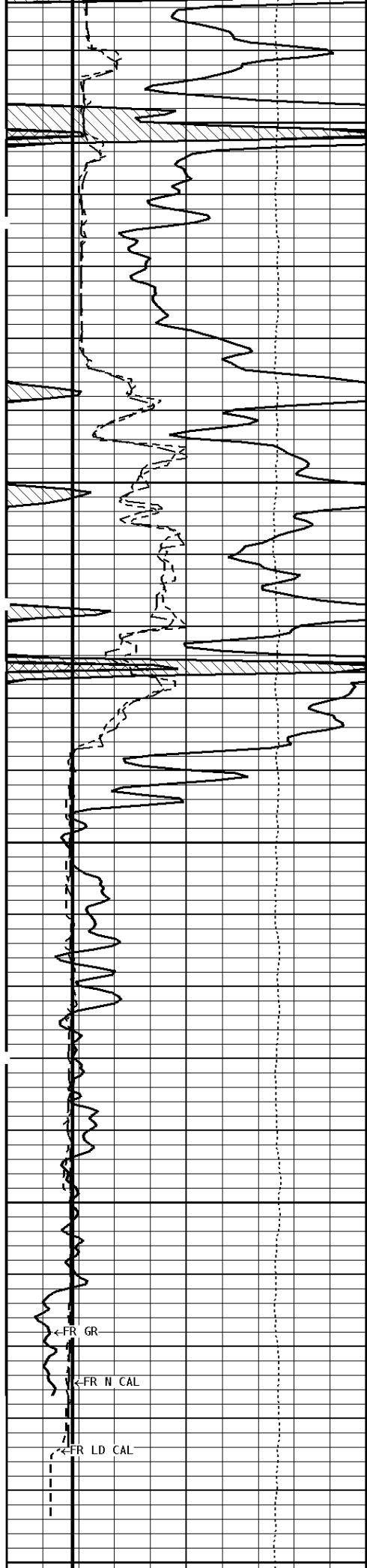
3900

-100Cu.ft

4000

100Cu.ft-





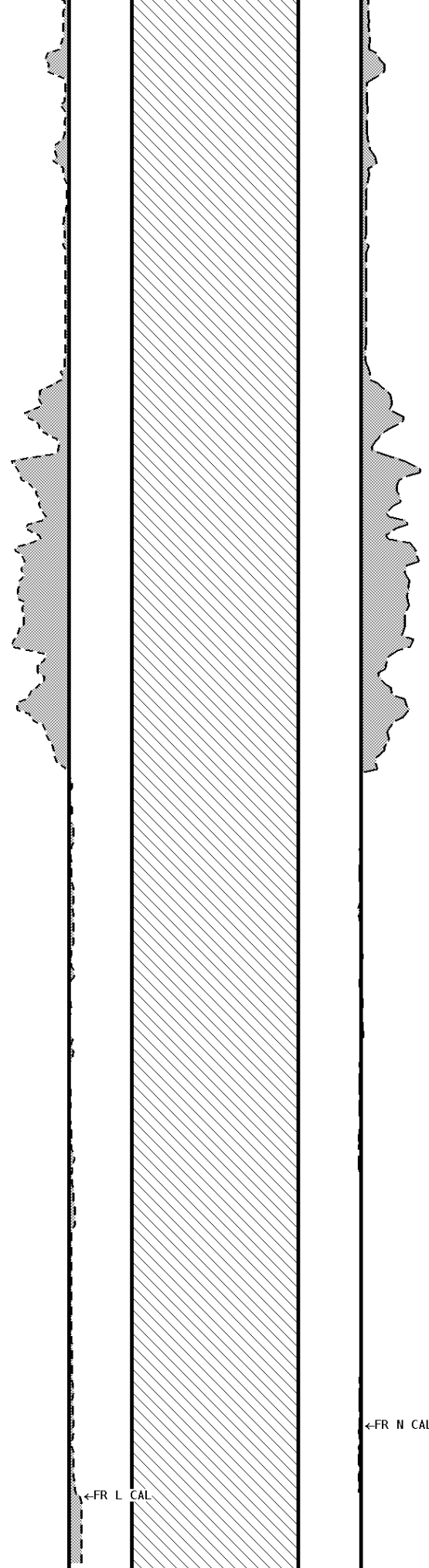
4100

4200

←FR GR

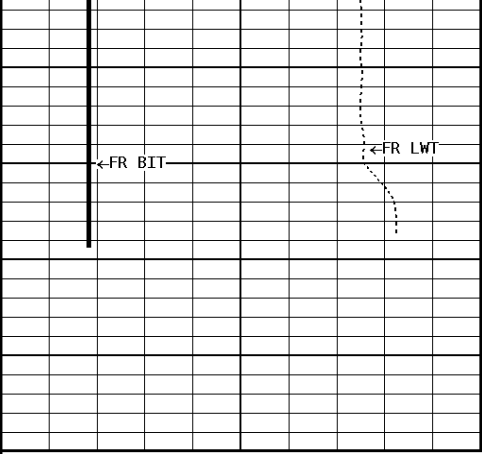
←FR N CAL

←FR LD CAL

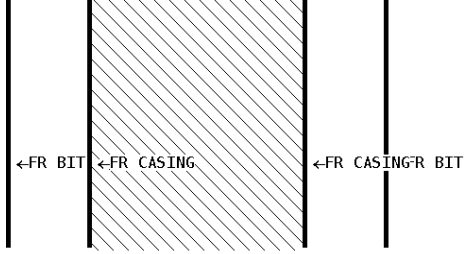


←FR L CAL

←FR N CAL



4270



1:240 MAIN SECTION

GAMMA RAY API UNITS	
150 0	300 150
TENSION LBS	
10000	0
X CALIPER INCHES (IN)	
16 6	26 16
Y CALIPER INCHES (IN)	
16 6	26 16
BIT SIZE INCHES (IN)	
6	16

BOREHOLE VOLUME CU.FT

ANNULAR HOLE VOLUME CU.FT.

*** Calibration Summary ***

Shop Calibration GRT-B					
Performed : 02-Jan-2015			Time : 13:01		
Sensor Suite : GR-GR5			ID : GRT-BA-017		
	Measured	Units	Calibrated	Units	
GR	Background	Jig	Jig	GR-API	
	61	378	175		
Shop Calibration CNT-AA					
Performed : 02-Jan-2015			Time : 13:12		
Sensor Suite : CALI-BCN			ID : NDT-BB-122		
	Jig - Measured		Jig - Calibrated		Units
CL # 1	Ring#1	Ring#2	Ring#1	Ring#2	IN.
	9.0	13.7	6.0	12.0	
Shop Calibration LDT-DA					
Performed : 02-Jan-2015			Time : 13:15		
Sensor Suite : CALI-LTH			ID : NDT-CA-137		
	Jig - Measured		Jig - Calibrated		Units

CL # 1	Ring#1 8.0	Ring#2 12.1	Ring#1 6.0	Ring#2 12.0	IN.
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Tucker
ENERGY SERVICES

Company: PICKRELL DRILLING COMPANY, INC.
Well: HIGGINS K #3
Location: 1320' FNL & 2310' FWL
Logged: 01-15-2015
K.B. Elev: 1504.0 Ft