

Tucker
ENERGY SERVICES

BOREHOLE VOLUME

CALIPER LOG

Company LASSO ENERGY LLC Well RENICK #1 Field INGALLS County GRAY State KANSAS Country USA API No. 15-069-20446-0000		File No : TUL-57210 Company : LASSO ENERGY LLC Well : RENICK #1 Field : INGALLS County : GRAY State : KANSAS Country : USA API No : 15-069-20446-0000	
Location : 1650' FNL & 330' FEL C NE SE NE		LSD : Sect : 29 Twp : 25S Rge : 29W	
Permanent Datum:	GL	Elevations:	Services:
Drilling Measured From:	KB	KB 2694.00	CNT
Log Measured From:	KB	DF 2693.00	PIT
Above Permanent Datum:	1200 Ft	GL 2682.00	MLT
Date	11-26-2013		
Run Number	1		
Depth--Driller	5870.0 Ft		
Depth--Logger	5866.0 Ft		
First Reading	5832.0 Ft		
Last Reading	1670.0 Ft		
Casing--Driller	1670.0 Ft		
Casing--Logger	1670.0 Ft		
Bit Size	7.875 In		
Casing Size	8.625 In		
Hole Fluid Type	CHEM-GEL		
Density	9.5 lb/gal		
Fluid Loss	8.8 ml/30min		
PH/Viscosity	9.5 57.0 sec/qt		
Sample Source	MEASURED		
RM@Measured Temp.	2.200 @ 45 F		
RMF@Measured Temp	1.760 @ 45 F		
RMG@Measured Temp.	2.640 @ 45 F		
Source RMF/RMC	CALCULATED/CALCULATED		
RM@BHT	0.790 @ 137 F		
Time Circulation Stopped	11-26-2013 9:00 pm		
Max Recorded Temp.	137 F		
Equipment/Base	127 TULSA		
Recorded By	J. ADAMS R. KING		
Witnessed By	M. BURTON		

The customer is hereby warned that by providing the log data herein, T. E. S. does not agree to provide any interpretation of log data, conversion of log data to physical rock parameters or recommendations. T. E. 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. E. 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. E. 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.

Bitsize Intervals		Casing Strings			
Size (In)	Bottom (Ft)	Size (In)	Weight (Lbs)	Bottom (Ft)	Top (Ft)
7.875	5866.00	8.625	24.00	1670.00	0.00

Run Number	1	
Date	11-26-2013	
Date/Time On Bottom		
Depth to Fluid	0.0 Ft	
Salinity	3800.000	
RMF@BHT	0.630 @ 137 F	
RMC@BHT	0.950 @ 137 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 5.5" PRODUCTION CASING.
 PHIN IS CALIPER CORRECTED.

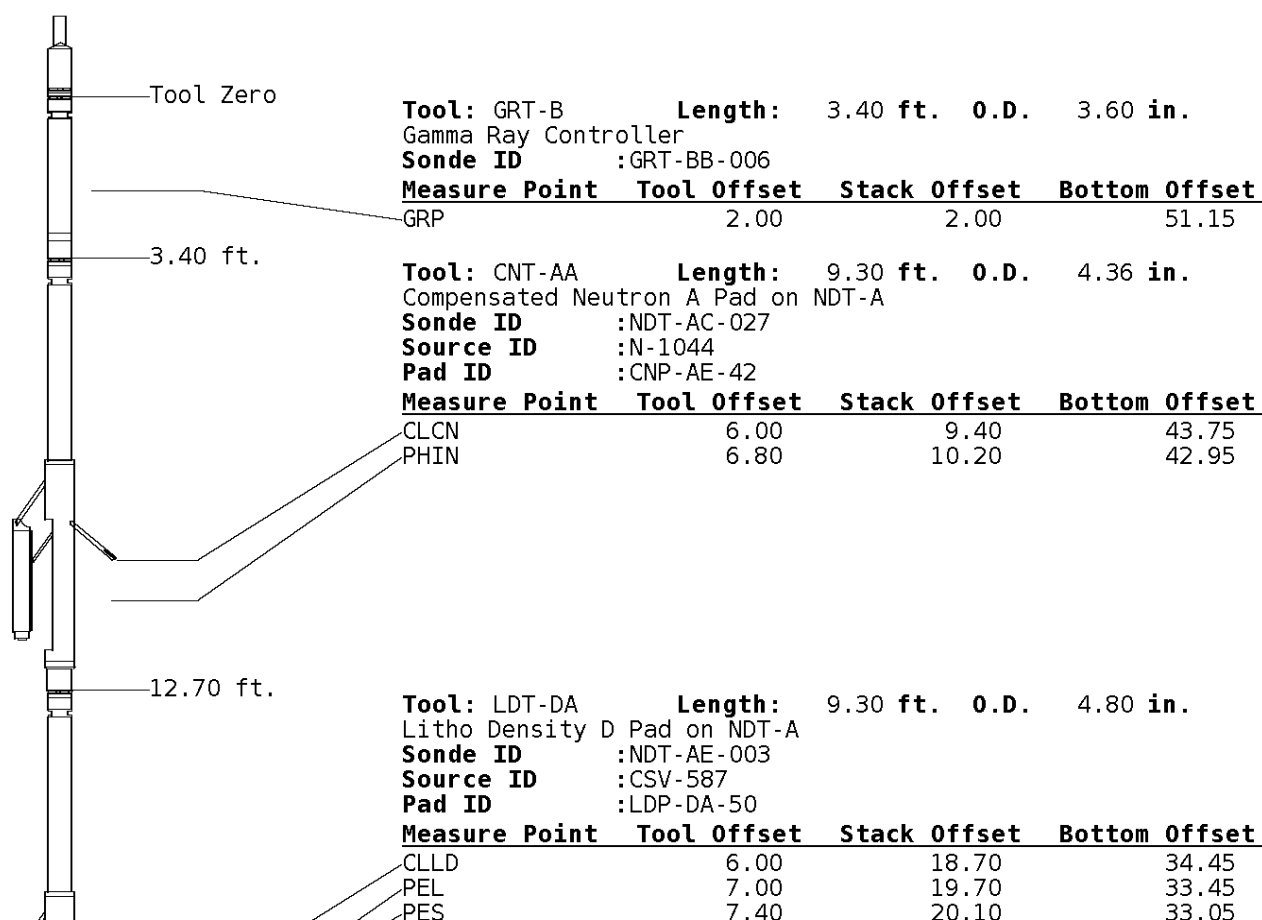
CUSTOMER REQUEST DETAIL PULLED FROM TD-3950'
 CUSTOMER REQUEST HIRES PULLED FROM TD-4700'

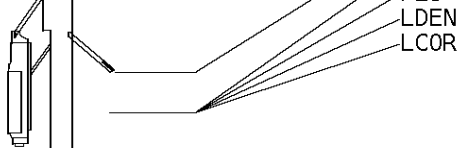
GRT: GRP, GRX
 CNT: PHIN, CLCNIN, PHXN
 LDT: PORL, LCORN, PECLN, LDENN, PORLLS, CLLDIN, PRXL, PECLX, LDENNX, LCORX
 MLT: NOR_RF, INV_RF, MSCLPIN.
 PIT: ILD, ILM, SPU, SFLAEC, CIRD.

OPERATORS:
 D. HOPPER
 A.DJAH

Tool String Schematic

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

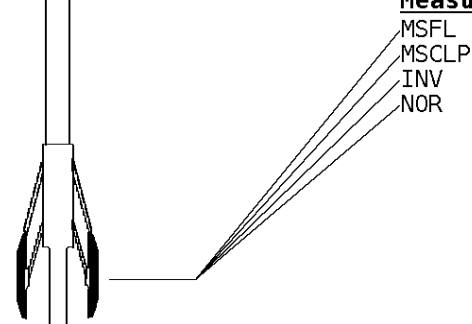




7.20	19.90	33.25
7.20	19.90	33.25

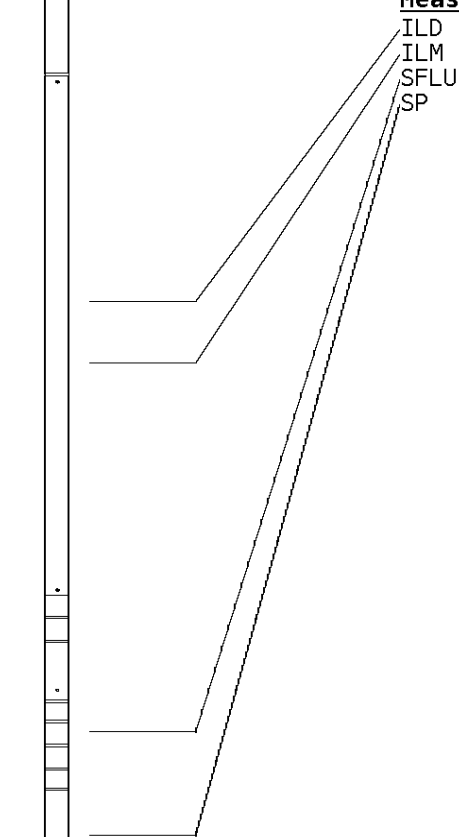
Tool: MST-DA **Length:** 9.66 ft. **O.D.** 6.00 in.
 Micro Spherically Focused (IC)
Sonde ID :MST-DA-32

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-BA-20

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: LASSO RENICK_1 NOV26 MSTK

Scale: 1:240 **Format:** CAL-240

Segment: V1.D1.S14 AS FINAL MAIN

Acquired: Not Available

Reference: 0

Processed: 2013-11/27 03:29 3.3.0-12261

**BIT SIZE
INCHES (IN)**

6 16

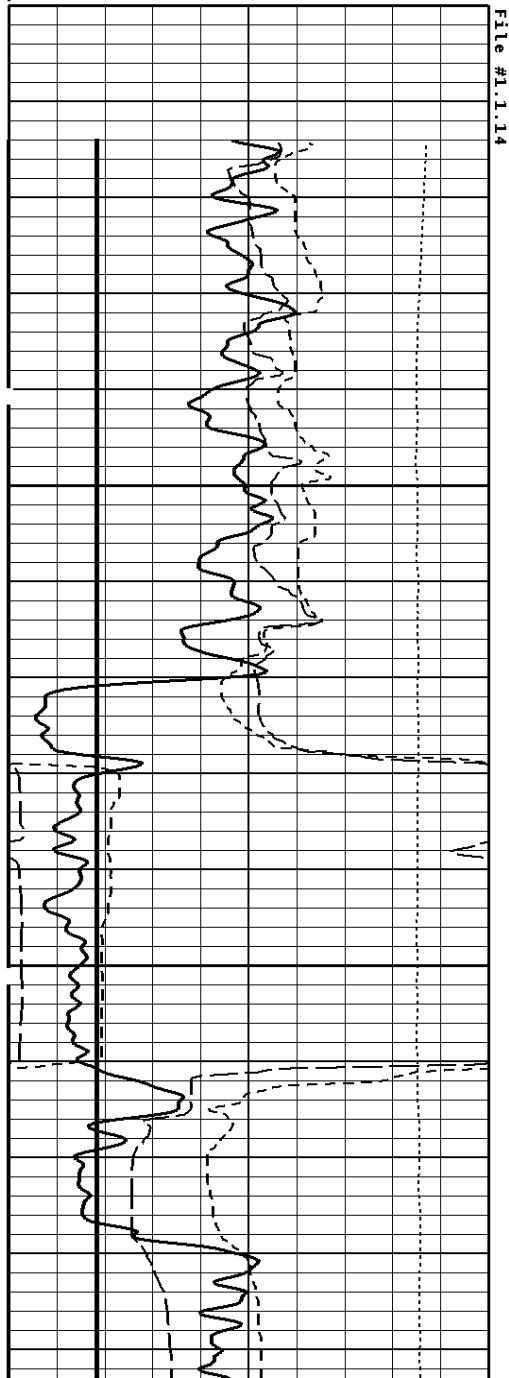
**Y CALIPER
INCHES (IN)**

16 26

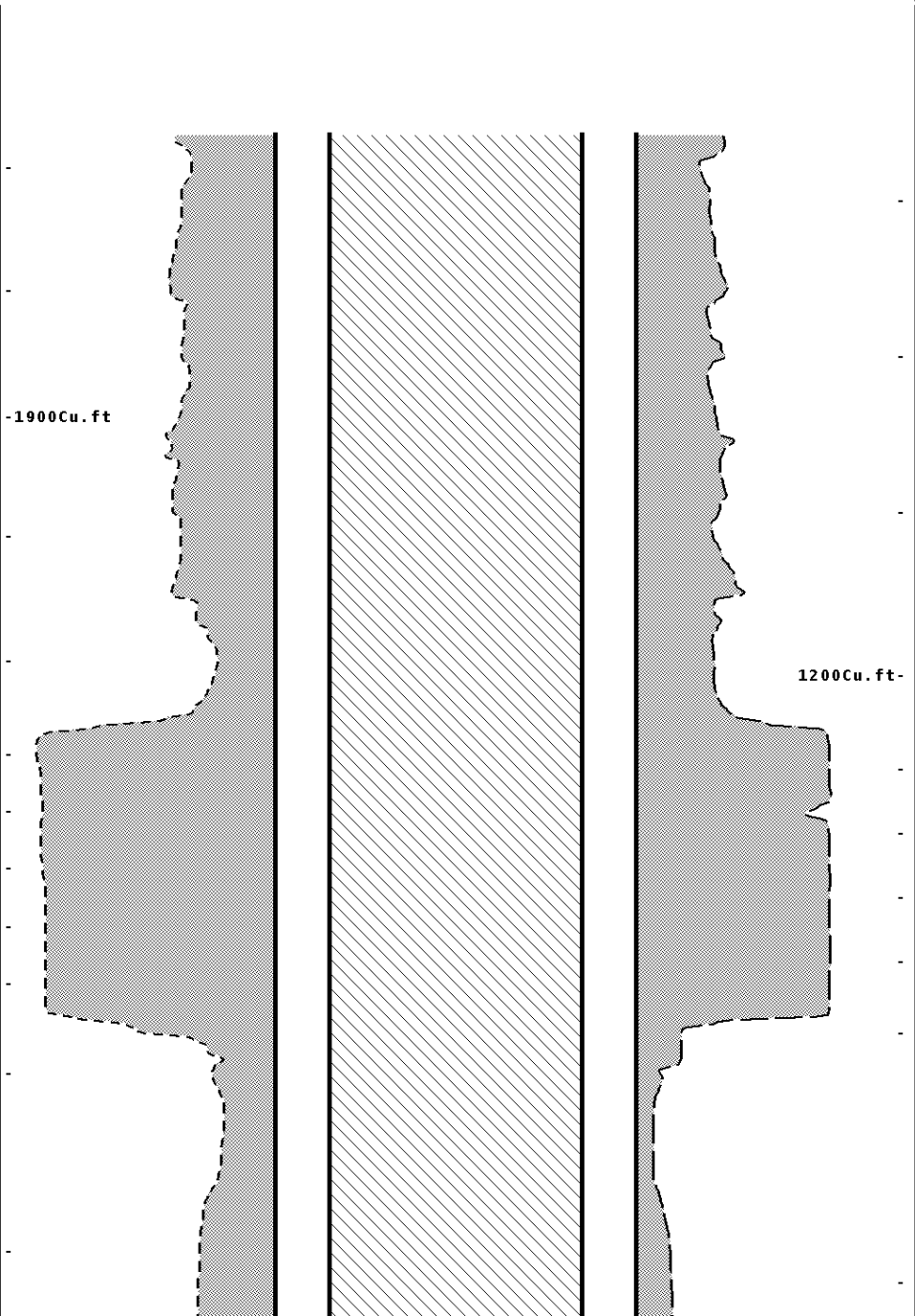
16	26
6	16
X CALIPER INCHES (IN)	
16	26
6	16
TENSION LBS	
10000	0
GAMMA RAY API UNITS	
150	300
0	150

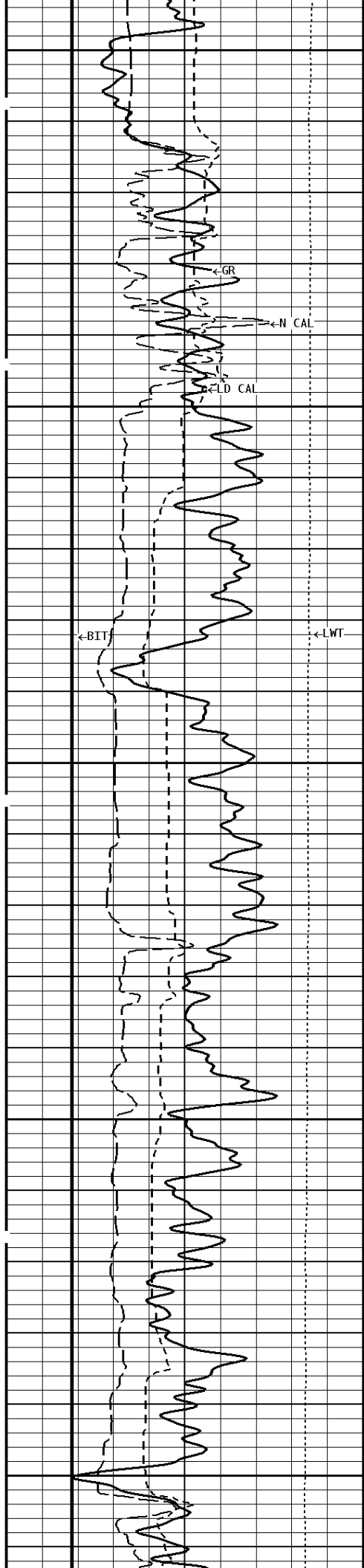
BOREHOLE VOLUME CU.FT	ANNULAR HOLE VOLUME CU.FT.
--------------------------	-------------------------------

1:240 MAIN SECTION



1700





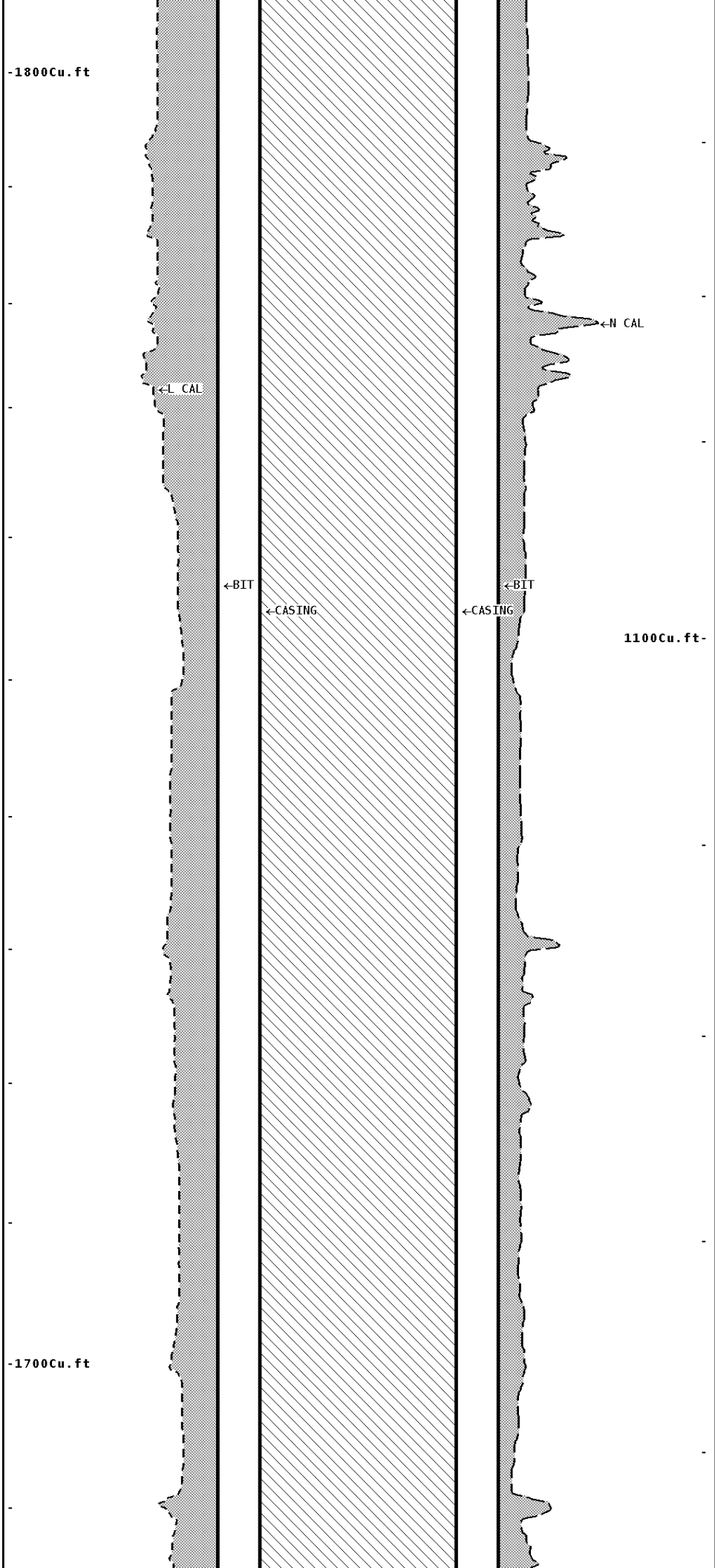
1800

-1800Cu.ft

1900

-1700Cu.ft

2000



←N CAL

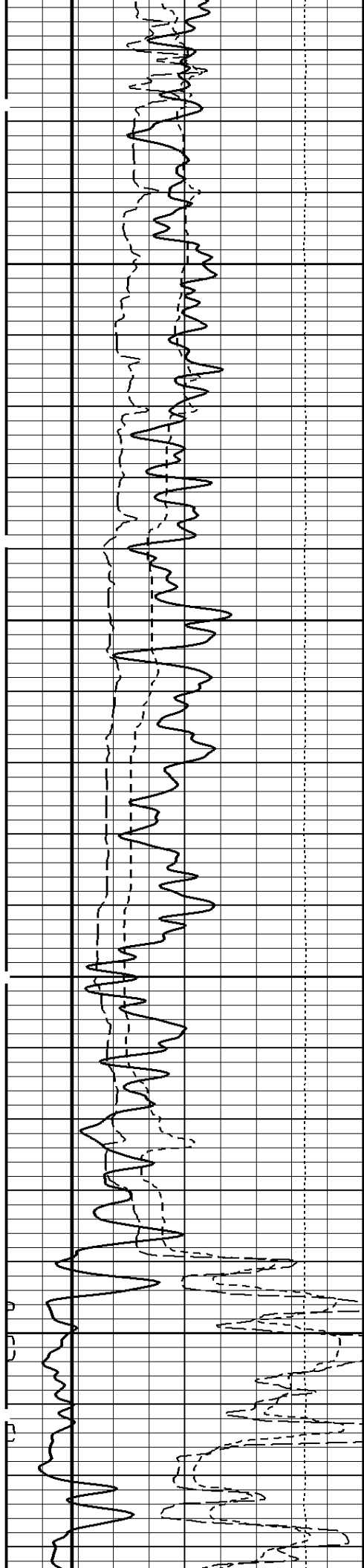
←BIT

←CASING

←BIT

←CASING

1100Cu.ft-

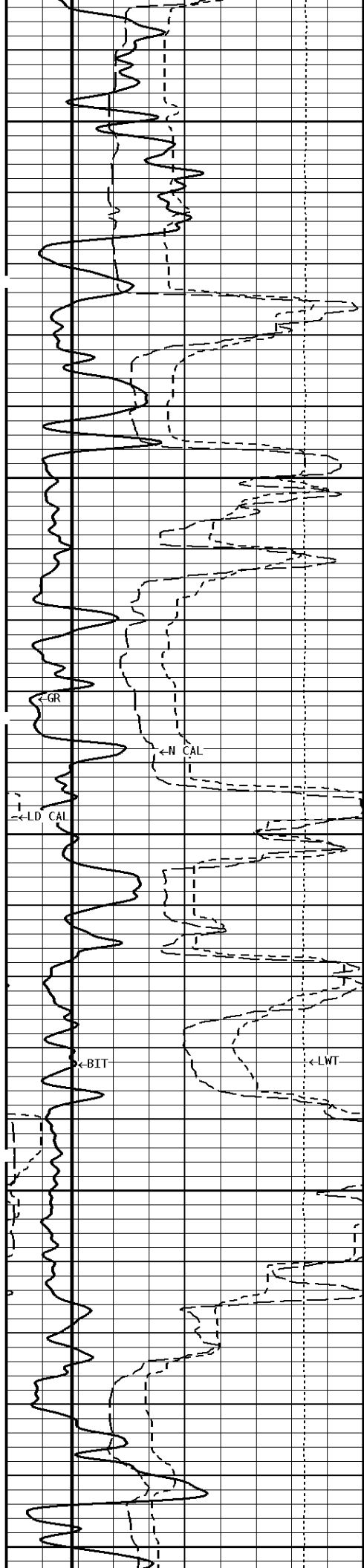


2100

2200

-1600Cu.ft

1000Cu.ft-

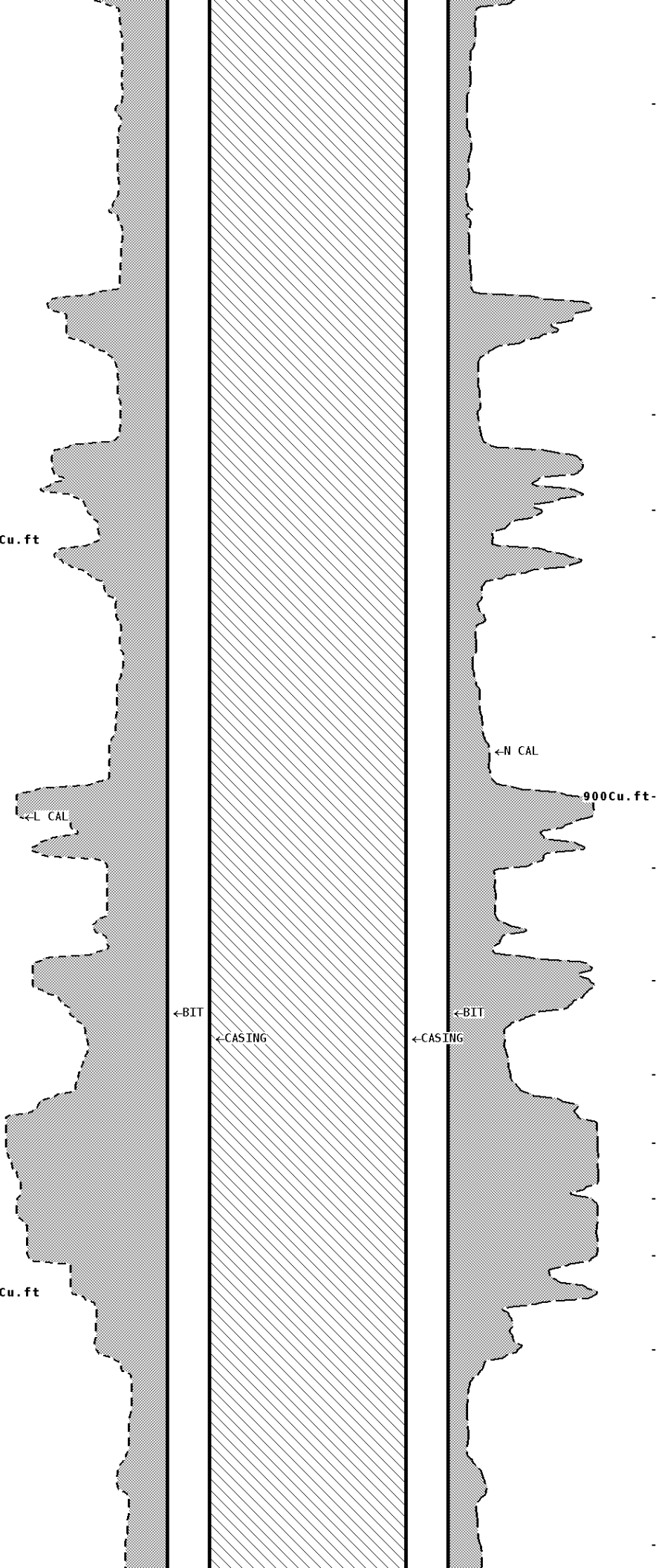


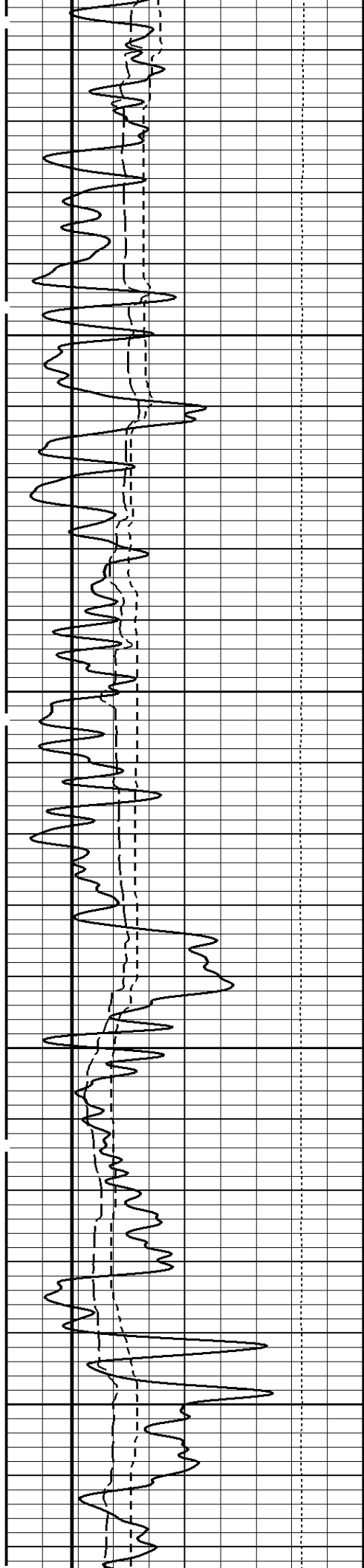
2300

-1500Cu.ft

2400

-1400Cu.ft



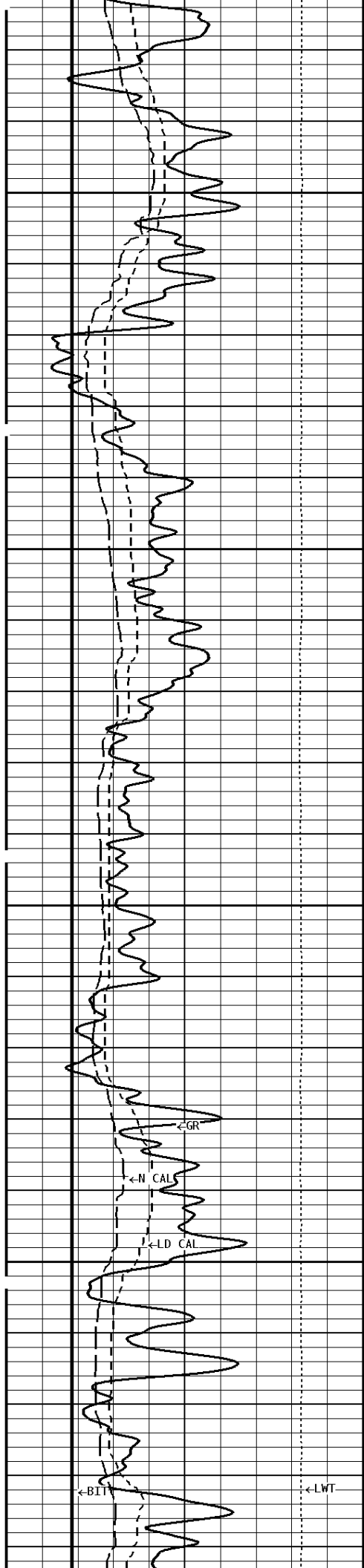


2500

2600

-1300Cu.ft

800Cu.ft-



2700

2800

-1200Cu.ft

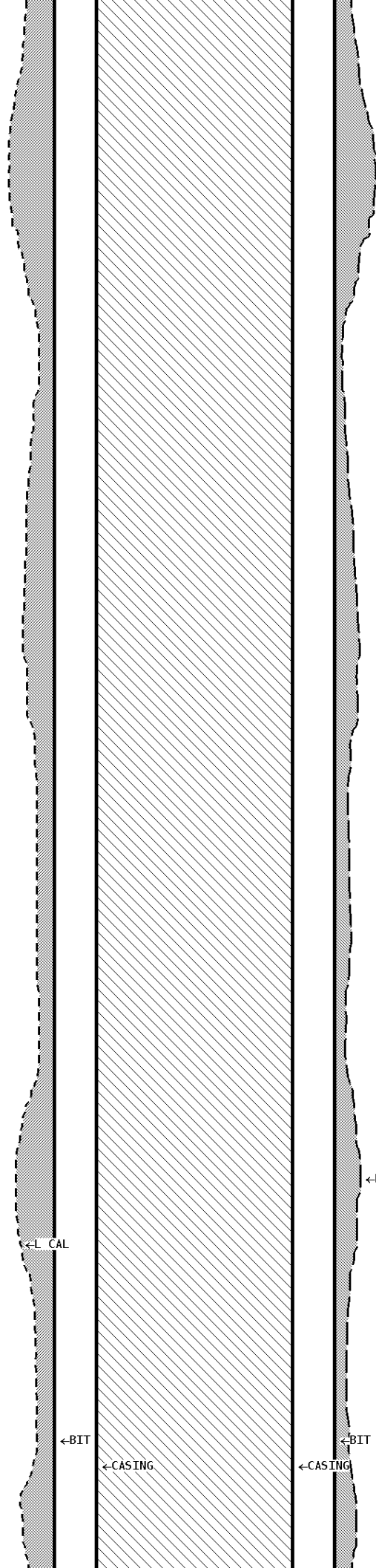
←GR

←N CAL

←LD CAL

←BIT

←LWT



←L CAL

←BIT

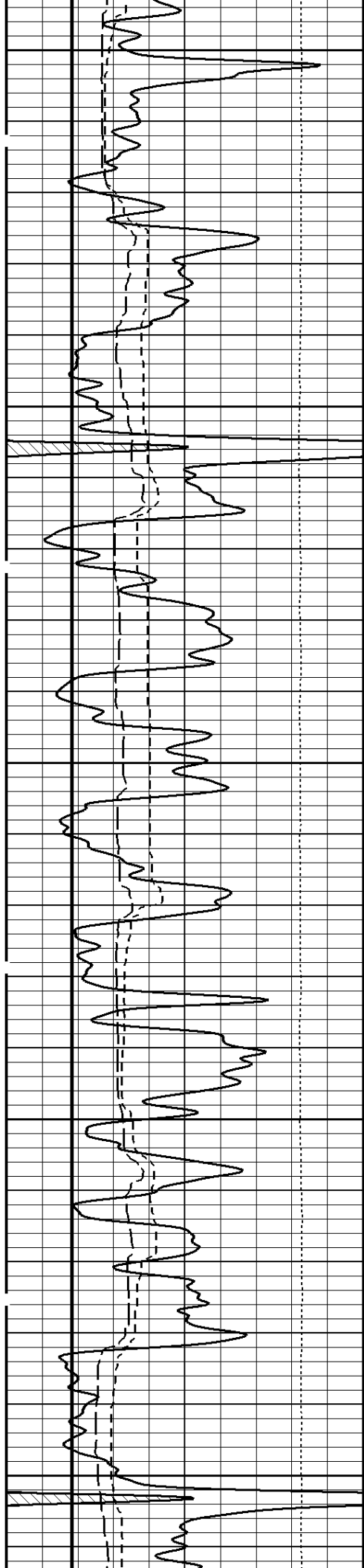
←CASING

←N CAL

700Cu.ft-

←BIT

←CASING

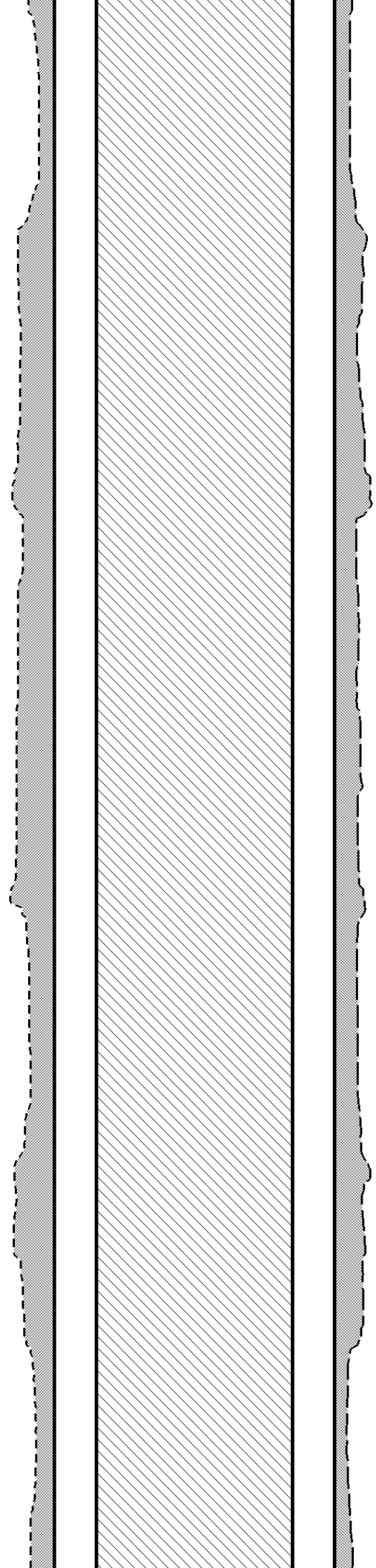


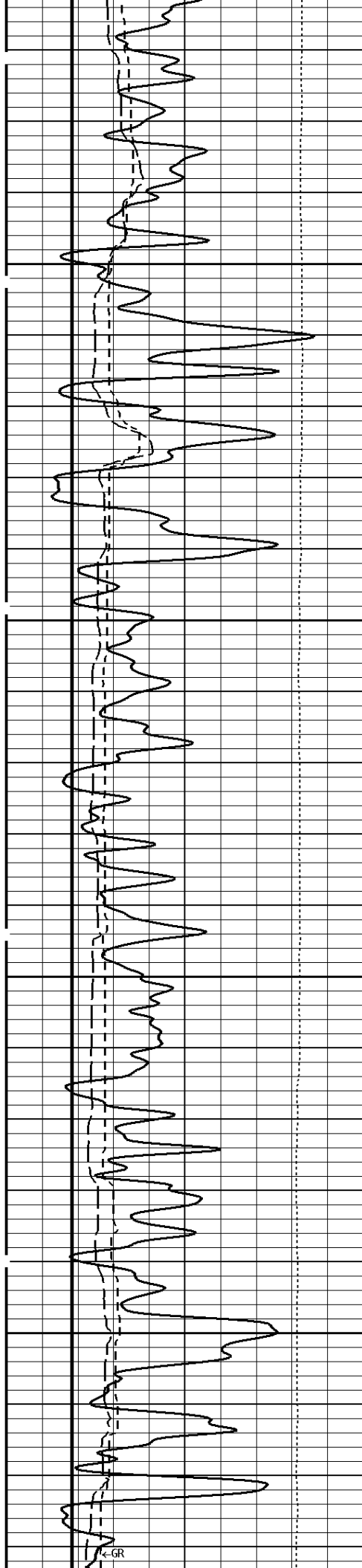
2900

3000

3100

-1100Cu.ft

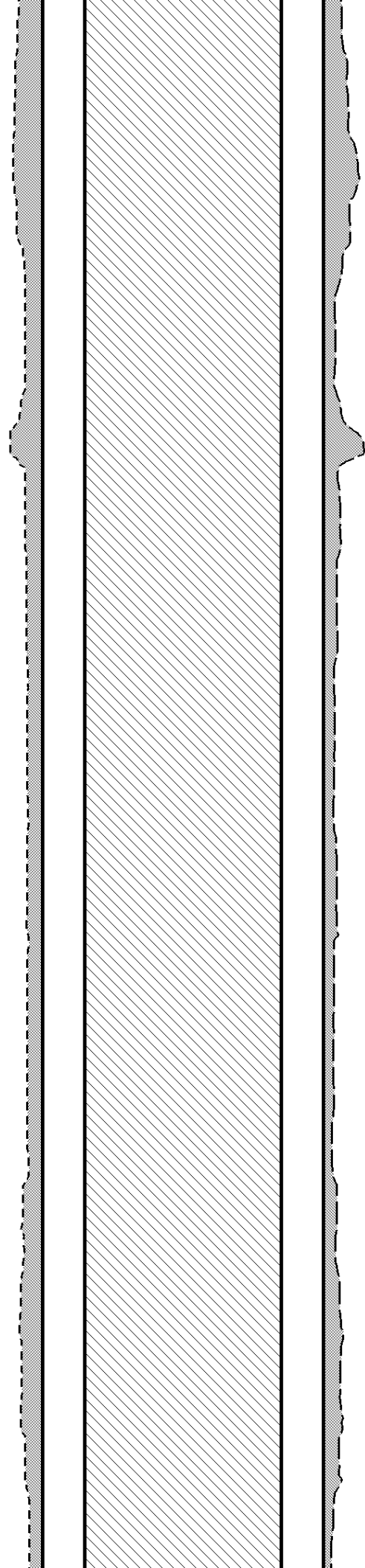




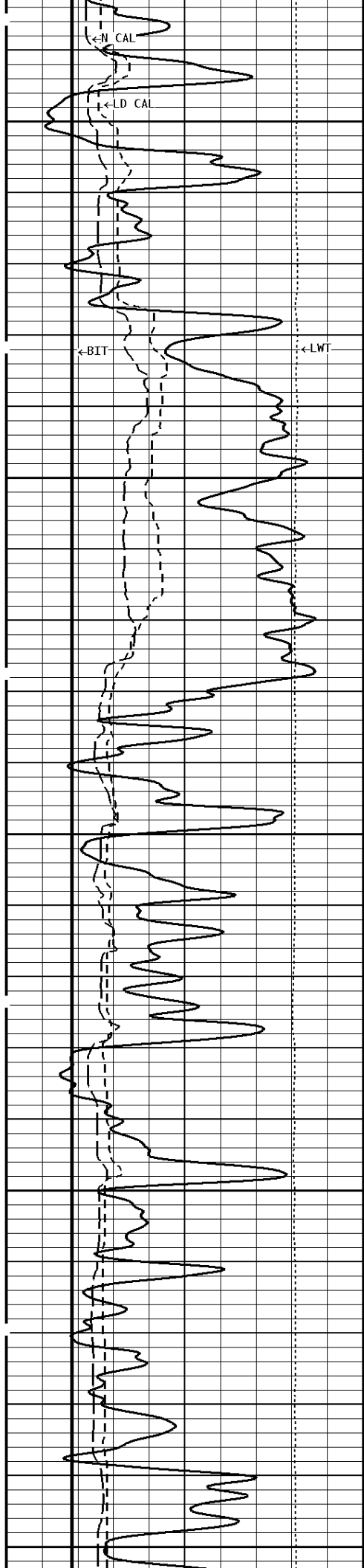
3200

3300

-1000Cu.ft



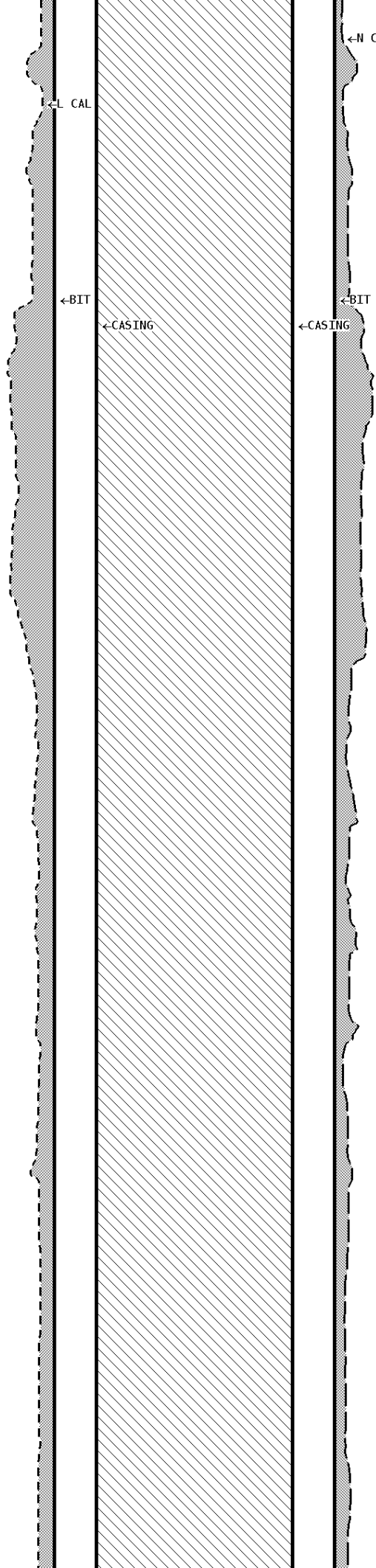
600Cu.ft-



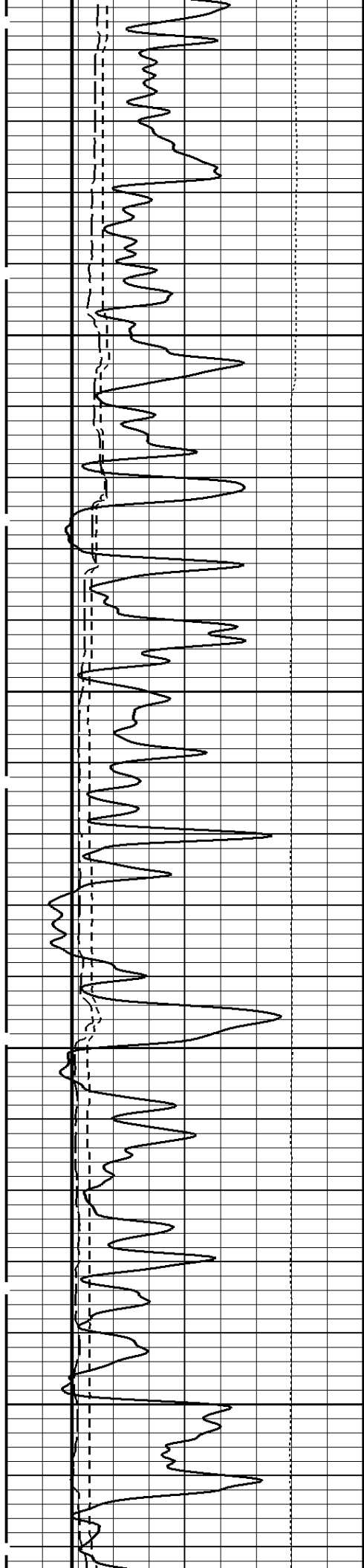
3400

3500

-900Cu.ft



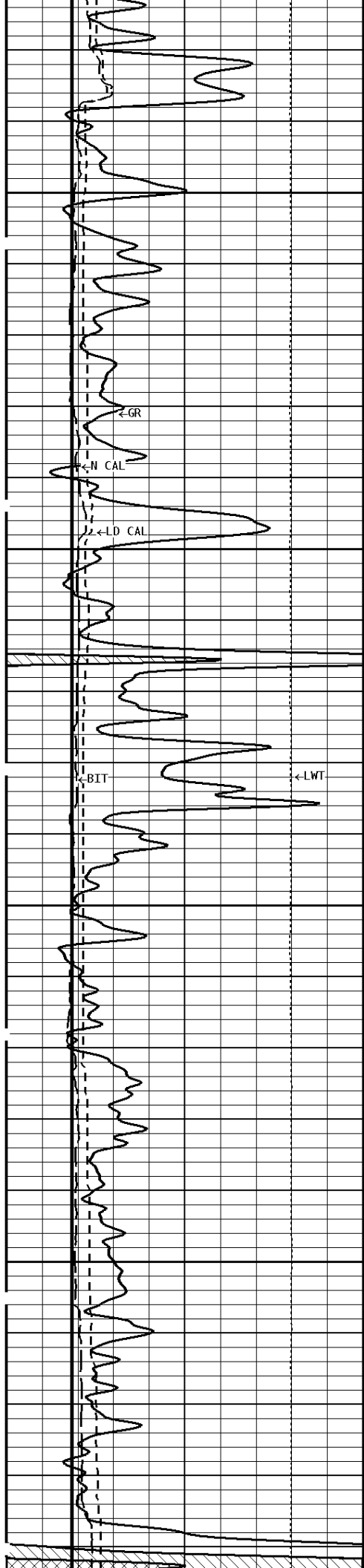
500Cu.ft



3600

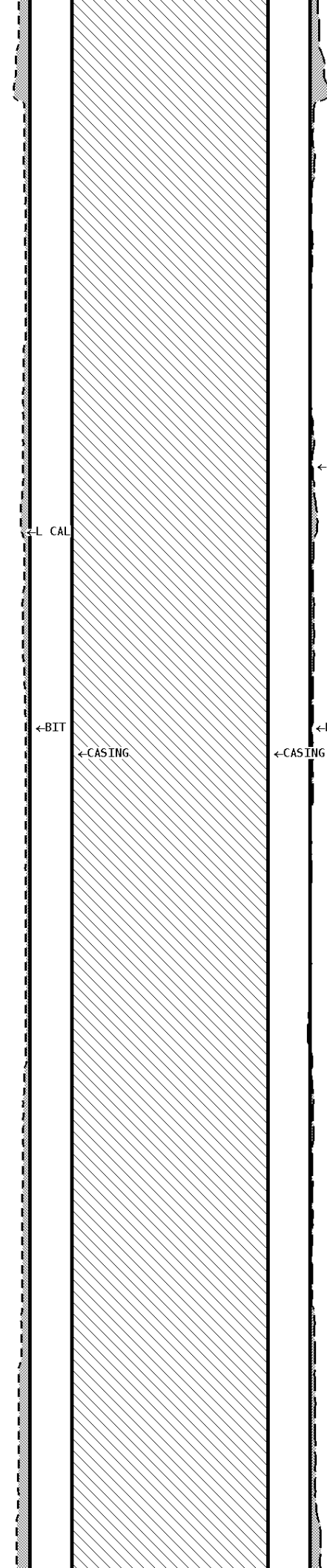
3700

-800Cu.ft



3800

3900



←N CAL

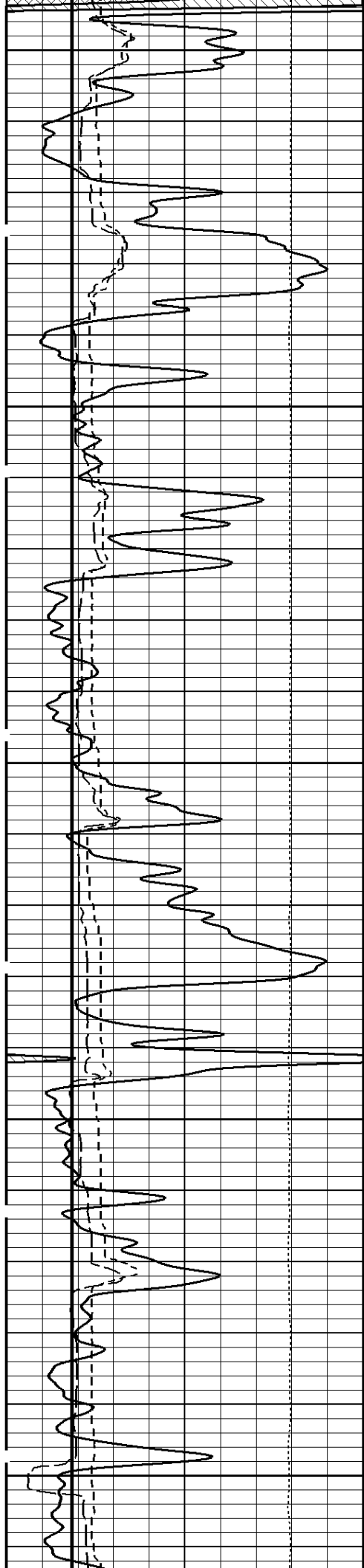
←L CAL

←BIT

←CASING

←BIT

←CASING

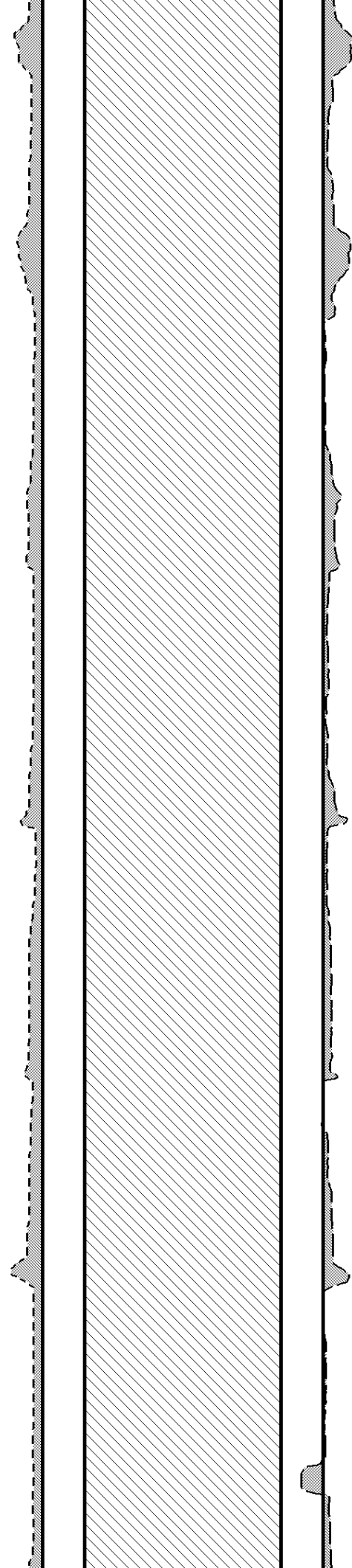


4000

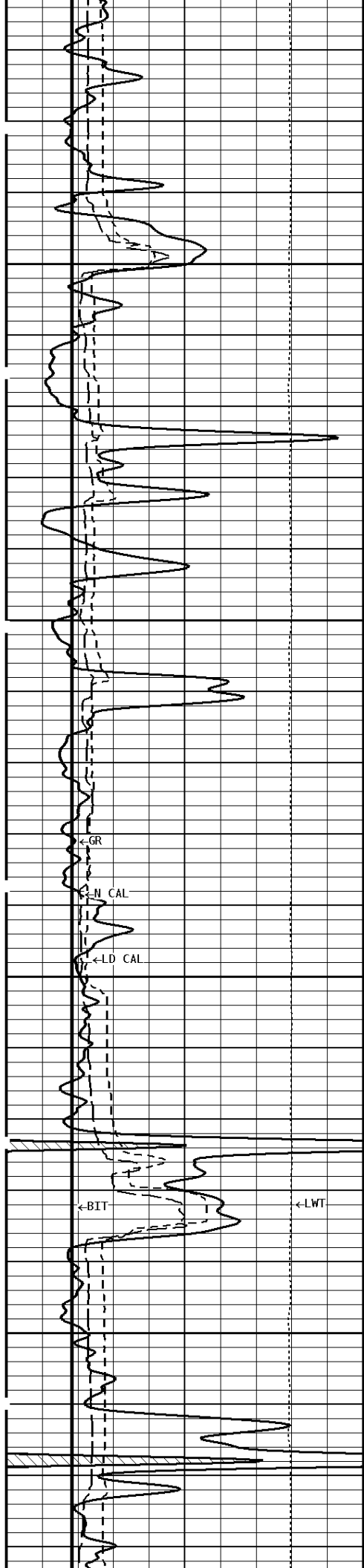
-700Cu.ft

4100

4200



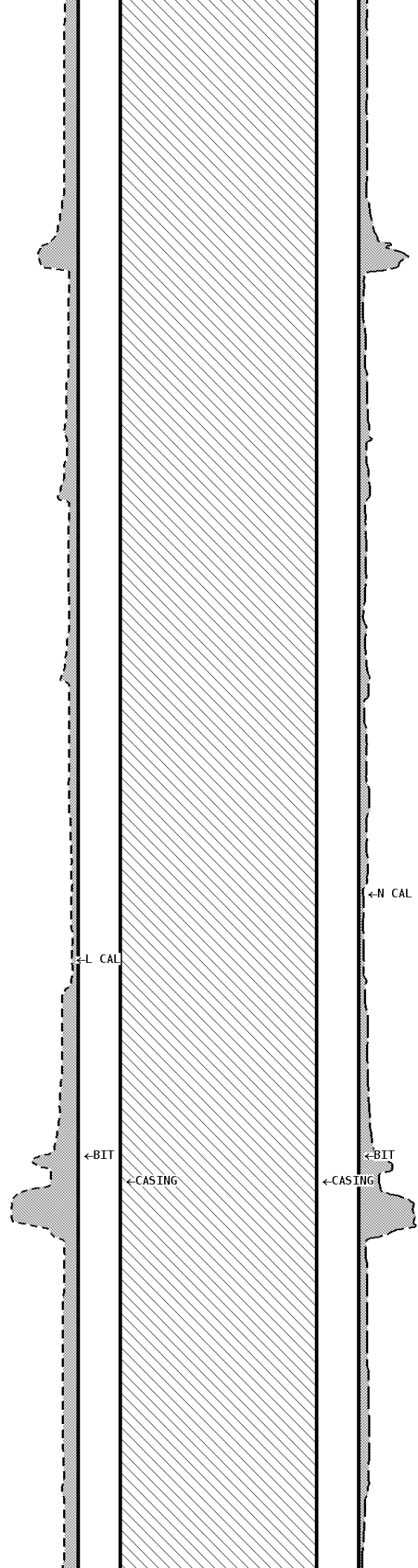
400Cu.ft-

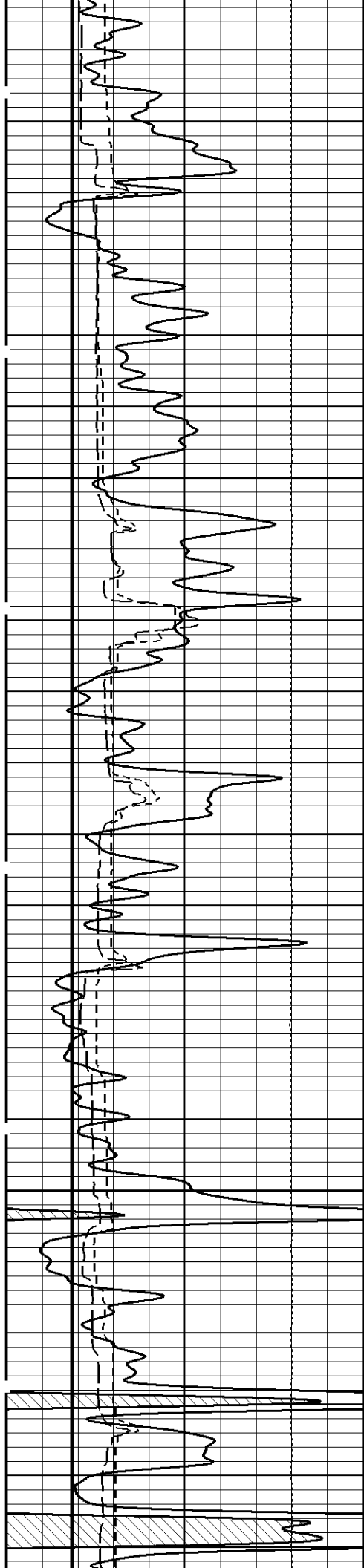


4300

4400

-600Cu.ft

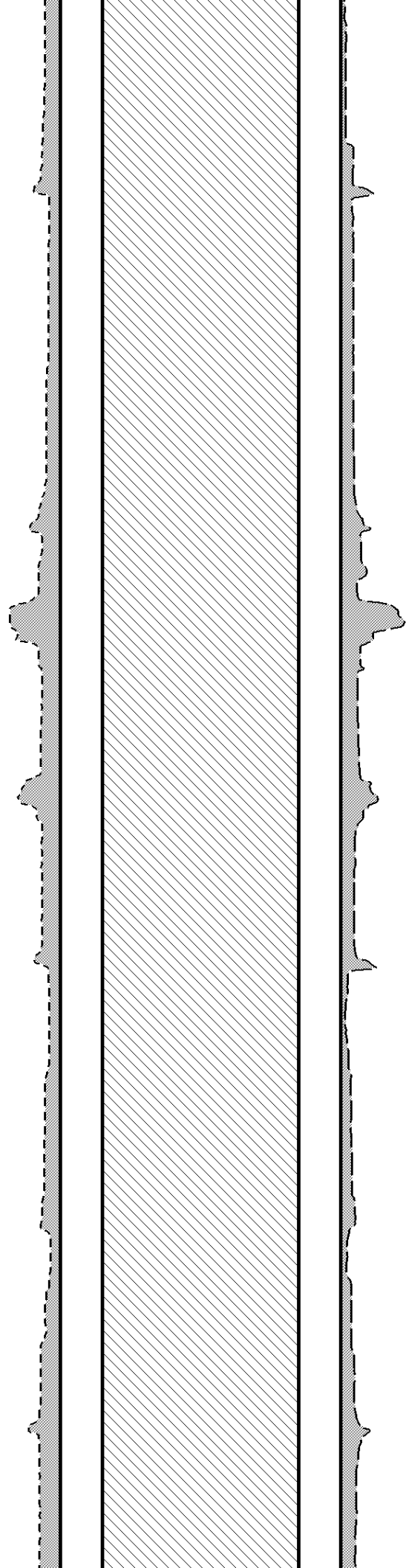




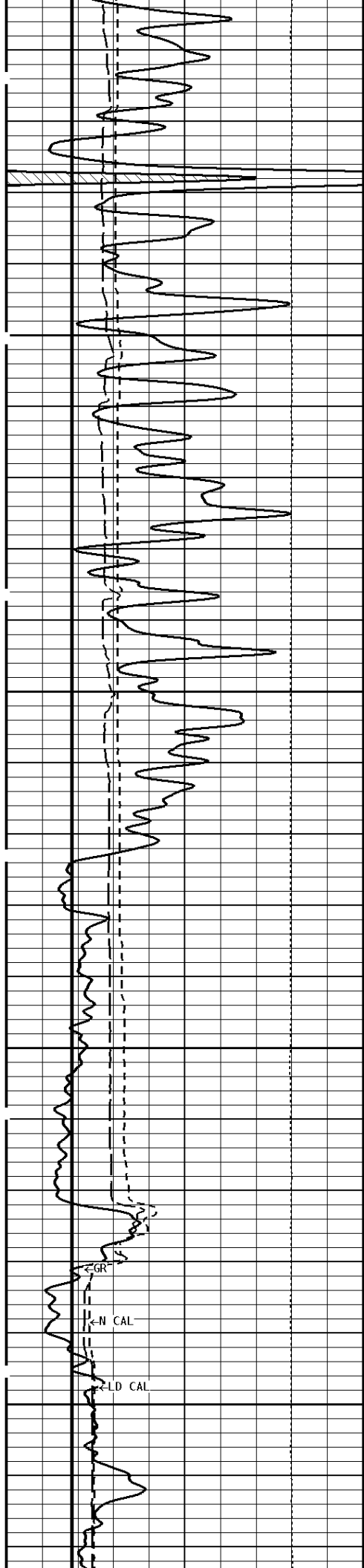
4500

-500Cu.ft

4600



300Cu.ft-



4700

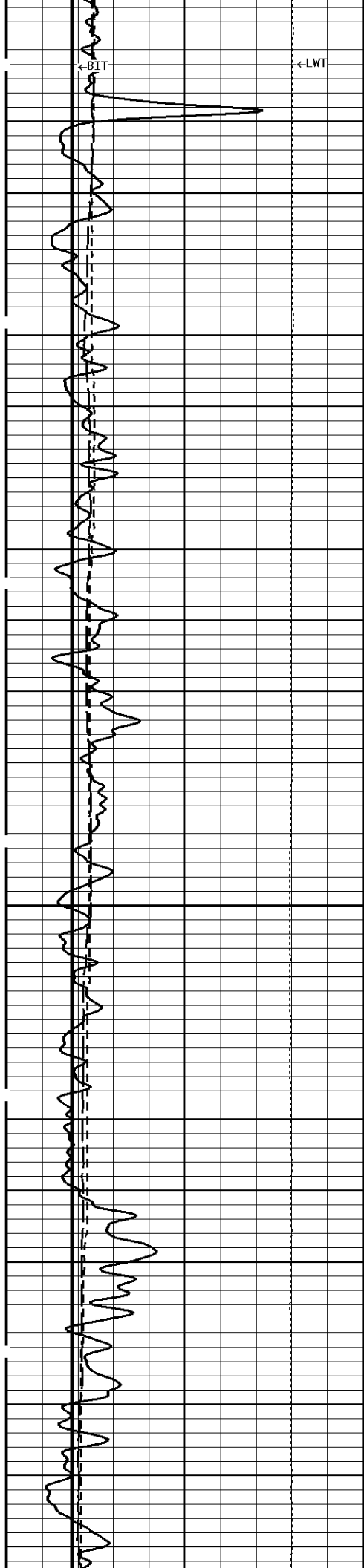
-400Cu.ft

4800

200Cu.ft-

←N CAL

←L CAL



4900

5000

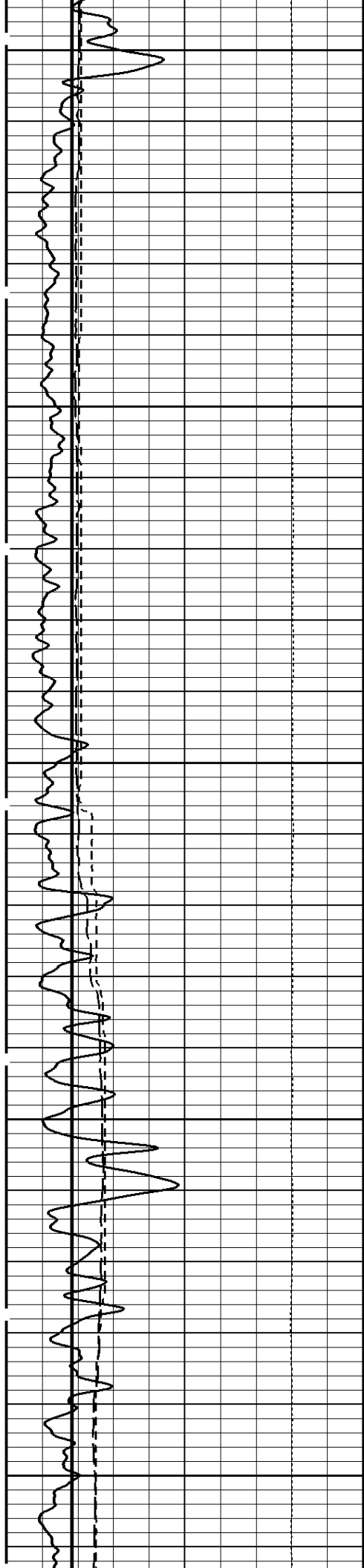
-300Cu.ft

←BIT

←CASING

←BIT

←CASING



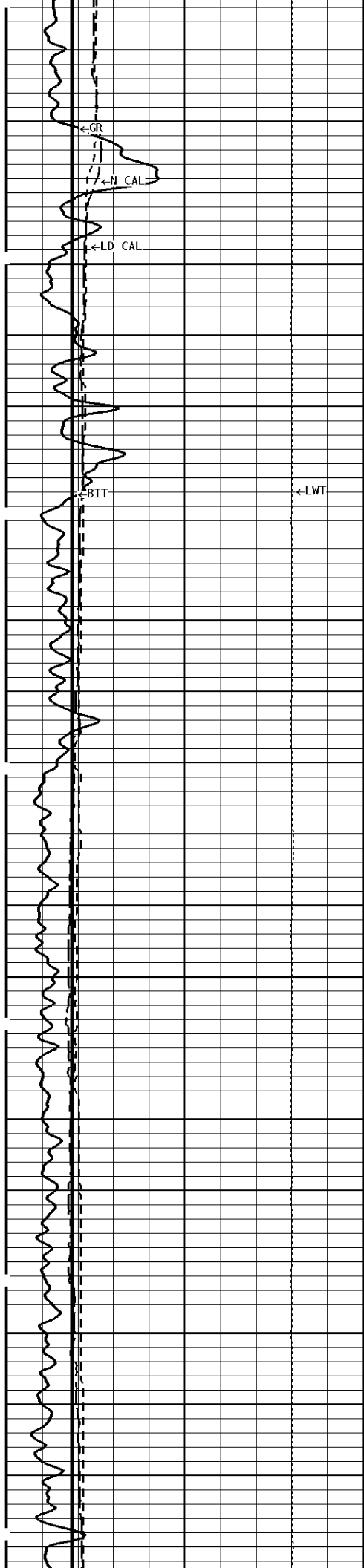
5100

5200

5300

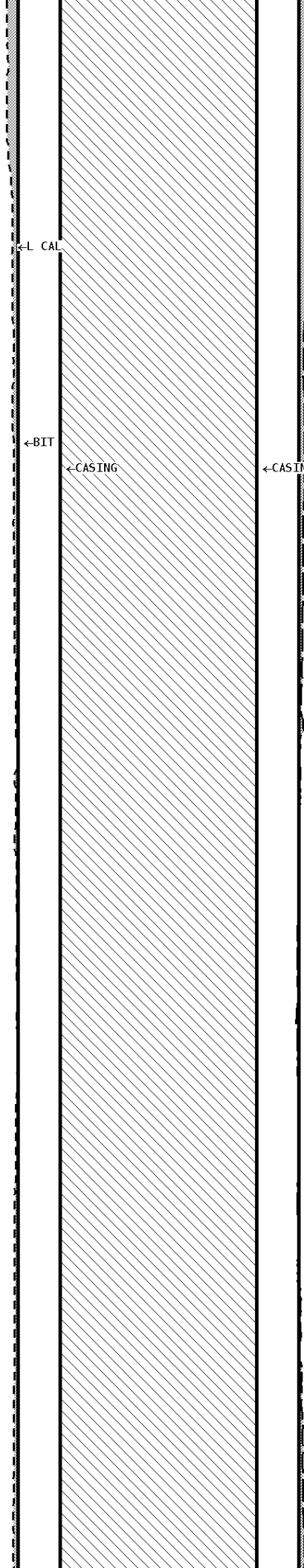
-200Cu.ft

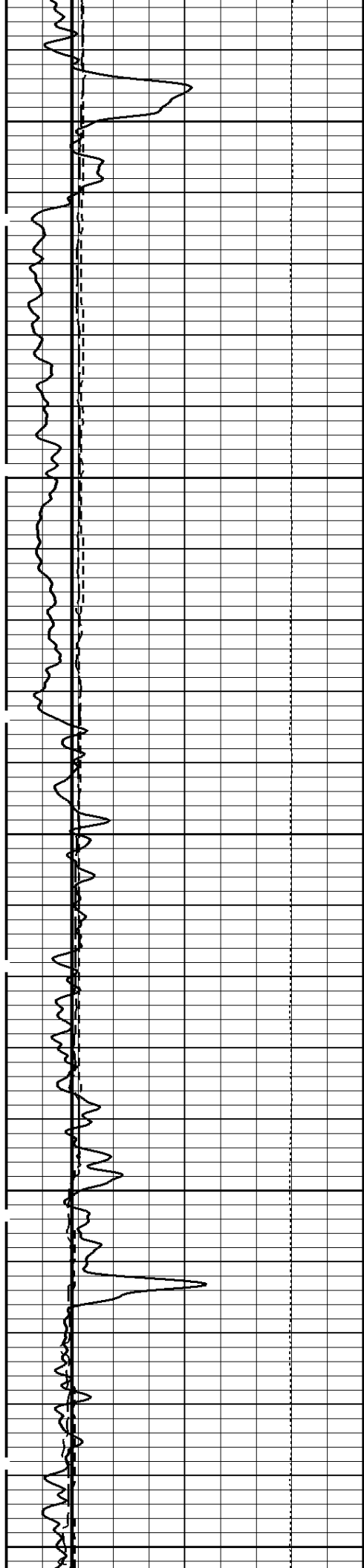
100Cu.ft-



5400

5500

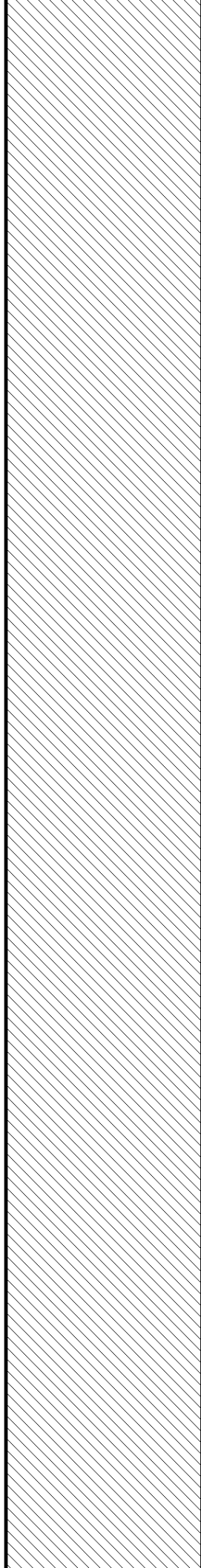


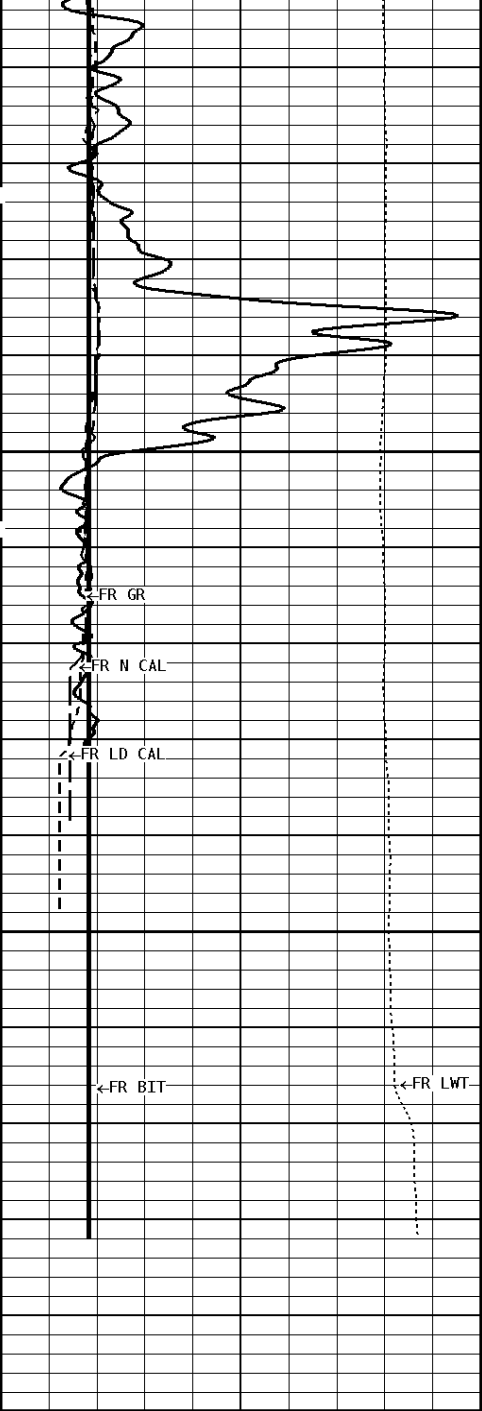


5600

5700

-100Cu.ft

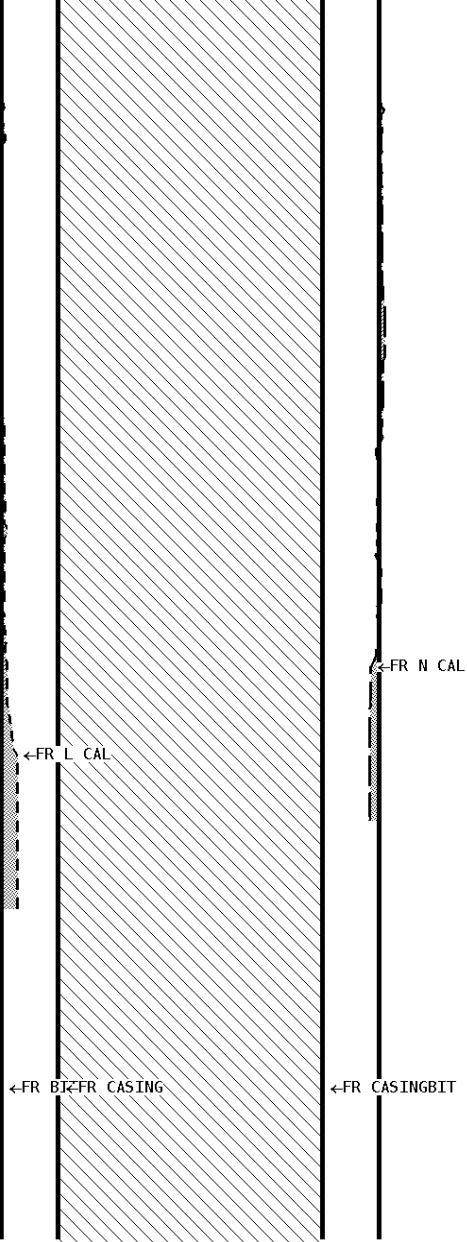




5800

5866

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)	

BOREHOLE VOLUME CU.FT

ANNULAR HOLE VOLUME CU.FT.

16	INCHES (IN)	26
6		16

BIT SIZE INCHES (IN)		
6		16

*** Borehole Zone Factors ***

Zone 1 99999.0 to 1662.1 Feet		
Drill Bit Size	_____	7.875 in
Casing Diameter	_____	5.500 in

*** Calibration Summary ***

Shop Calibration GRT-B					
Performed : 30-OCT-2013			Time : 14:06		
Sensor Suite : GR-GR5			ID : GRT-BB-006		
	Measured	Units	Calibrated	Units	
GR	Background	Jig	Jig		
	60	375	175	GRAPI	
Shop Calibration CNT-AA					
Performed : 30-Oct-2013			Time : 11:57		
Sensor Suite : CALI-BCN			ID : NDT-AC-027		
	Jig - Measured		Jig - Calibrated		Units
	Ring#1	Ring#2	Ring#1	Ring#2	
CL # 1	8.3	14.5	6.0	12.0	IN.
Shop Calibration LDT-DA					
Performed : 30-OCT-2013			Time : 11:04		
Sensor Suite : CALI-LTH			ID : NDT-AE-003		
	Jig - Measured		Jig - Calibrated		Units
	Ring#1	Ring#2	Ring#1	Ring#2	
CL # 1	9.4	13.8	6.0	12.0	IN.



Tucker
ENERGY SERVICES

Company: LASSO ENERGY LLC
Well: RENICK #1
Location: 1650' FNL & 330' FEL
Logged: 11-26-2013
K.B. Elev: 2694.0 Ft