

Tucker
ENERGY SERVICES

BOREHOLE VOLUME

CALIPER LOG

File No : TUL-59589
Company : CASTLE RESOURCES LLC
Well : RICE TANNER #1
Field : EL DORADO
County : BUTLER
State : KANSAS
Country : USA
API No : 15-015-24025

Location :
E2 SW SW
660' FSL & 990' FWL

LSD : Sect : 35 Twp : 25S Rge : 4E

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API No : 15-015-24025

Permanent Datum: GL
Drilling Measured From: GL
Log Measured From: GL
Above Permanent Datum: 0.00 Ft
Date: 05-04-2014

Elevations:
KB 0.00
DF 0.00
GL 1344.00

Services:
CNT
LDT
MLT

Run Number	1		
Depth--Driller	2470.0	Ft	
Depth--Logger	2467.0	Ft	
First Reading	2443.0	Ft	
Last Reading	211.0	Ft	
Casing--Driller	211.0	Ft	
Casing--Logger	211.0	Ft	
Bit Size	6.750	In	
Casing Size	8.625	In	
Hole Fluid Type	WBM		
Density	9.2		
Fluid Loss	0.0		
PH/Viscosity	11.0	36.0	
Sample Source	MEASURED		
RMF@Measured Temp.	1.900	@ 70 F	
RMF@Measured Temp	1.620	@ 70 F	
RMF@Measured Temp.	2.190	@ 70 F	
Source RMF/RMC	CALCULATED	CALCULATED	
RM@BHT	1.330	@ 103 F	
Time Circulation Stopped			
Max Recorded Temp.	104	F	
Equipment/Base	T-123	TULSA	
Recorded By	S. DAVIS		
Witnessed By	W. JACKSON / J. GREEN		

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)
6.750	2467.00	8.625	24.00	211.00	0.00

Run Number	1	
Date	05-04-2014	
Date/Time On Bottom	05-04-2014 7:45 pm	
Depth to Fluid	0.0 Ft	
Salinity	0.000	
RMF@BHT	1.130 @ 103 F	
RMC@BHT	1.530 @ 103 F	

Run Number 1

Comments

ALL PRESENTATION PER CUSTOMER REQUEST
 GRT,CNT,LDT,PIT RUN IN COMBINATION
 CALIPERS ORIENTED ON X-Y AXIS
 2.71 G/CC USED TO CALCULATE POROSITY
 ANNULAR & BOREHOLE VOLUME CALCULATED USING 4.5 PRODUCTION CASING
 PHIN IS CALIPER CORRECTED
 NO REPEAT PER CUSTOMER REQUEST

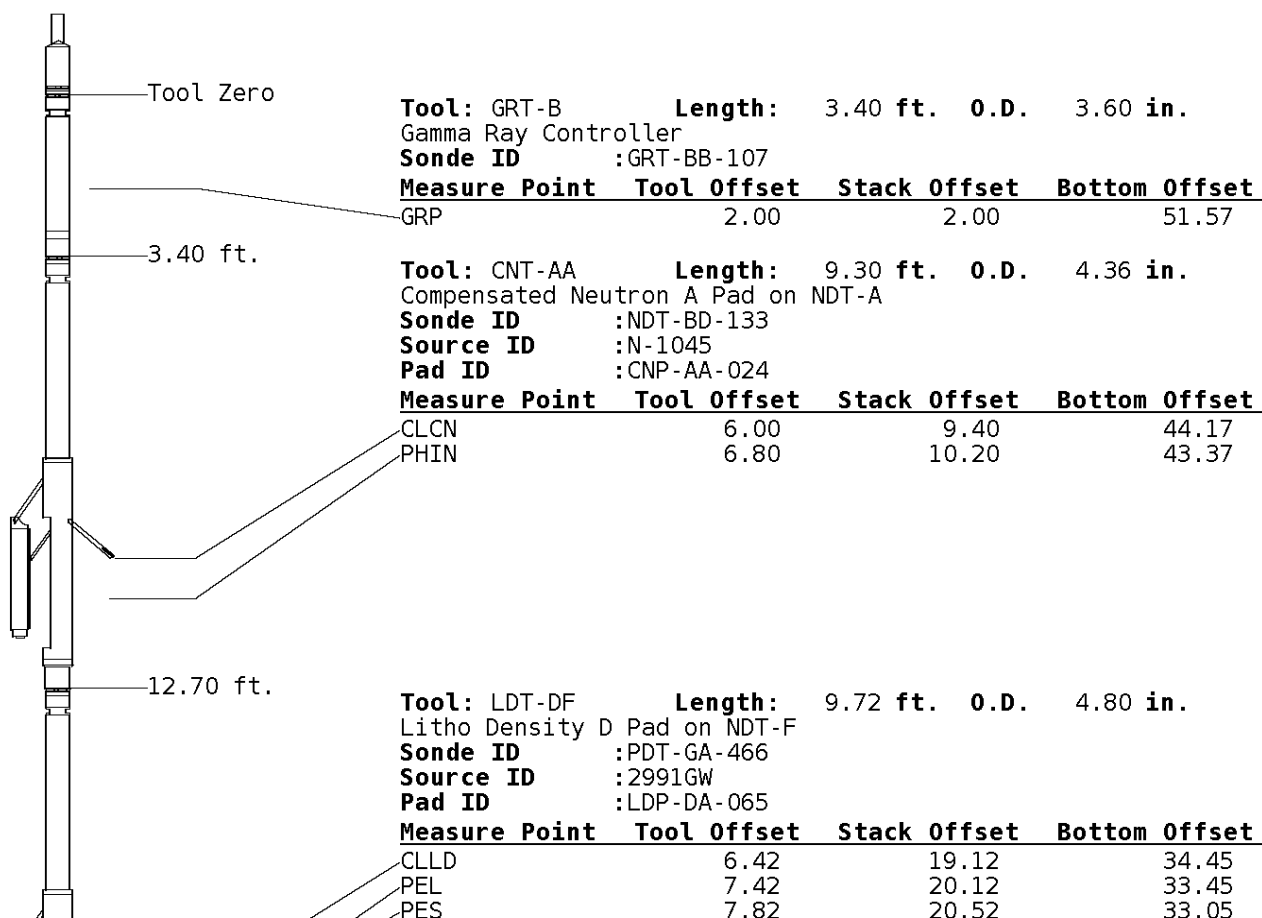
GRT; GRP,
 CNT; PHIN, CLCNIN
 LDT; PORL, LCORN, PECLN, LDENN, CLLDIN
 MLT; NOR.RF, INV.RF, MSCLPIN.
 PIT; ILD, ILM, SPU, SFLAEC, CIRD

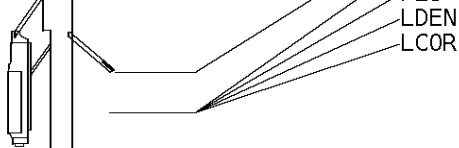
OPERATORS;

C. GONZALES
 J. THOMAS

Tool String Schematic

Total Tool Length - 53.57 ft.
Maximum Outside diameter - 6.00 in.
Net Weight in Air - 943.00 lbs.



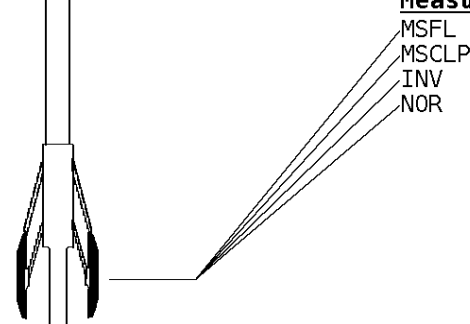


7.62	20.32	33.25
7.62	20.32	33.25

22.42 ft.

Tool: MST-DA **Length:** 9.66 ft. **O.D.** 6.00 in.
 Micro Spherically Focused (IC)
Sonde ID :MST-DA-30

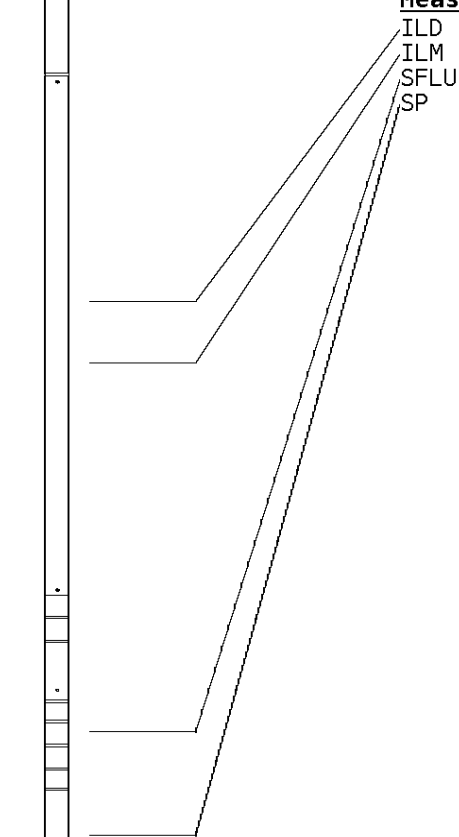
Measure Point	Tool Offset	Stack Offset	Bottom Offset
MSFL	7.60	30.02	23.55
MSCLP	7.60	30.02	23.55
INV	7.60	30.02	23.55
NOR	7.60	30.02	23.55



32.08 ft.

Tool: PIT-CA **Length:** 21.49 ft. **O.D.** 3.62 in.
 Phased Dual Induction w/ RM & D
Sonde ID :PIT-AB-005

Measure Point	Tool Offset	Stack Offset	Bottom Offset
ILD	8.92	41.00	12.56
ILM	10.10	42.18	11.39
SFLU	17.49	49.57	4.00
SP	20.60	52.68	0.88



LWT 53.57 ft.

Well File: cast-rice-1-mstk-may-4

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

Segment: V1.D1.S3 MN

Acquired: 2014-05/04 19:38 3.3.0-12594

Reference: 0

Processed: 2014-05/04 20:39 3.3.0-12594

**BIT SIZE
INCHES (IN)**

4 14

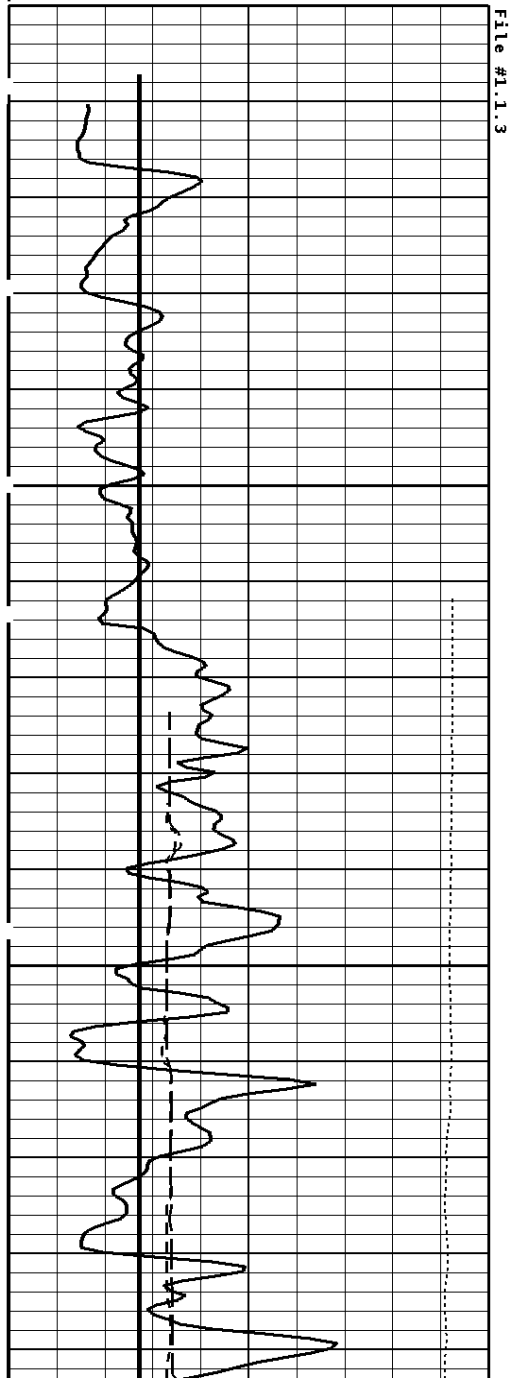
**Y CALIPER
INCHES (IN)**

14 24

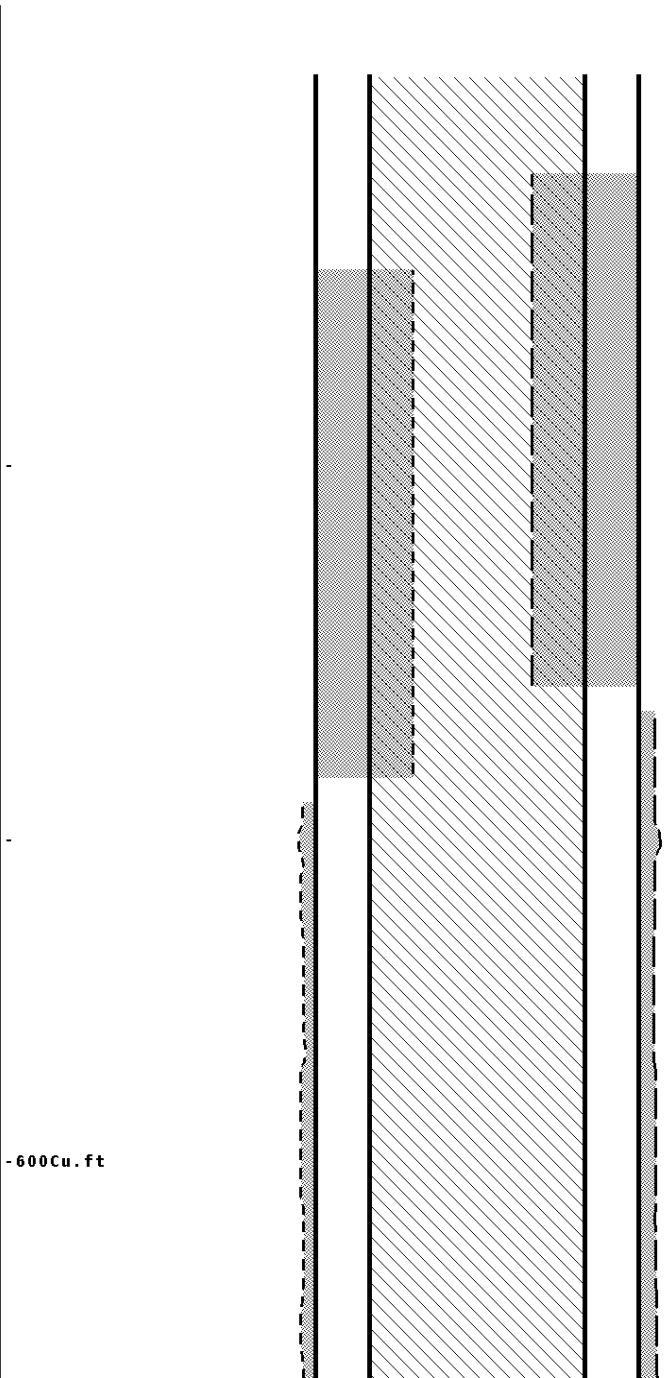
14	24
4	14
X CALIPER INCHES (IN)	
14	24
4	14
TENSION LBS	
10000	0
GAMMA RAY API UNITS	
200	400
0	200

BOREHOLE VOLUME CU.FT	ANNULAR HOLE VOLUME CU.FT.
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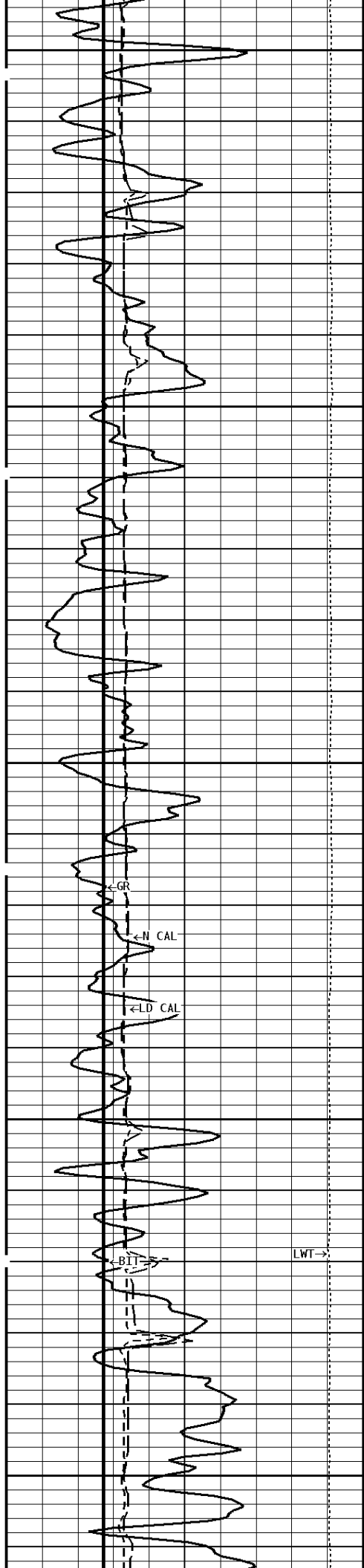
1:240 MAIN SECTION



200



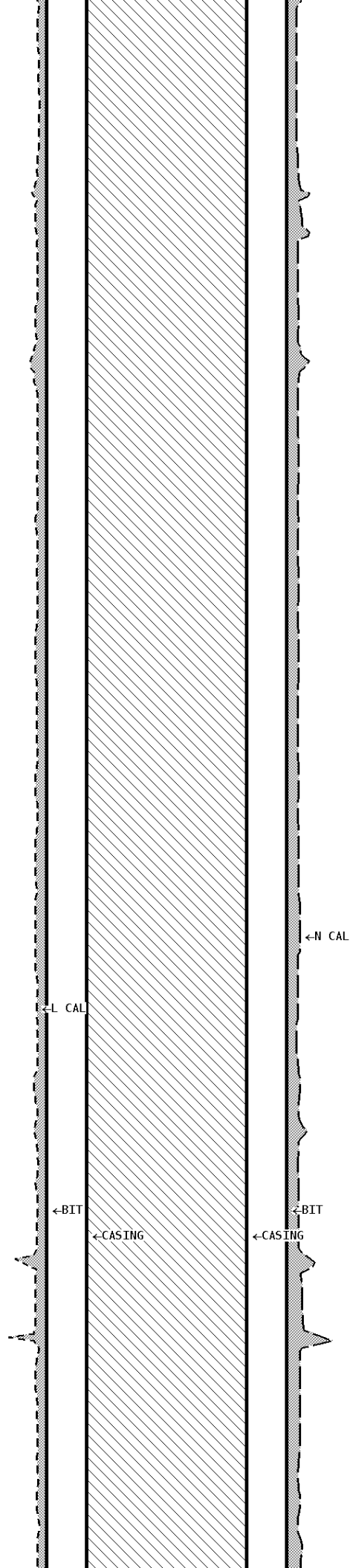
-600Cu.ft

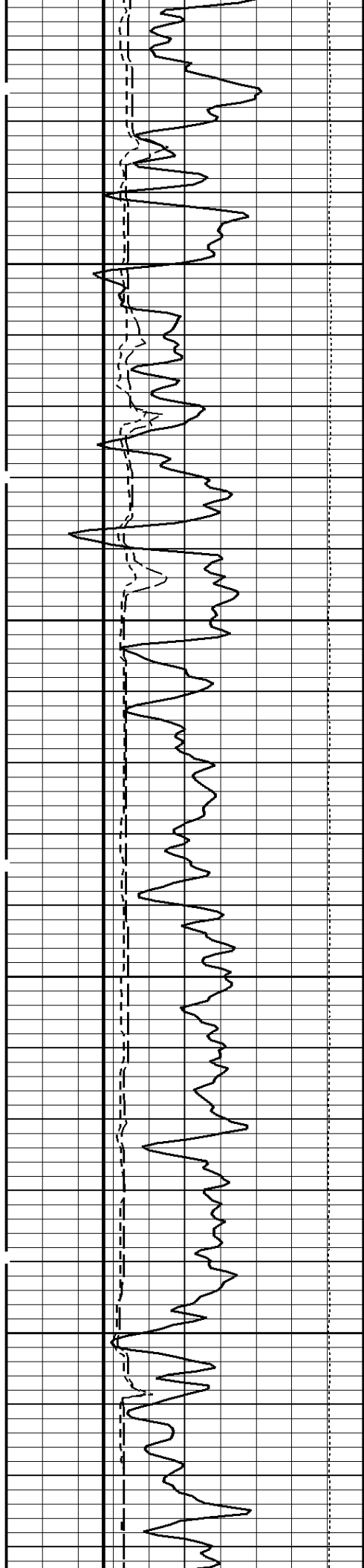


300

400

500

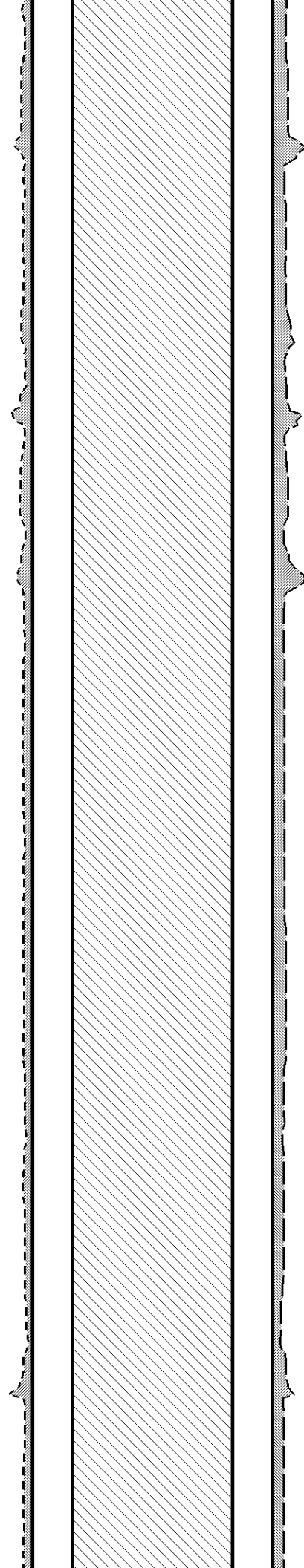




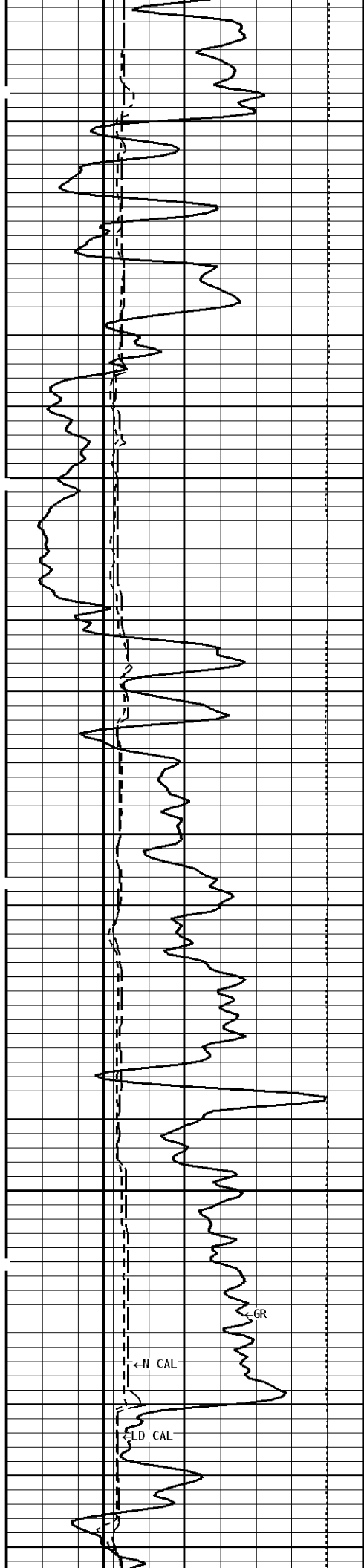
600

-500Cu.ft

700

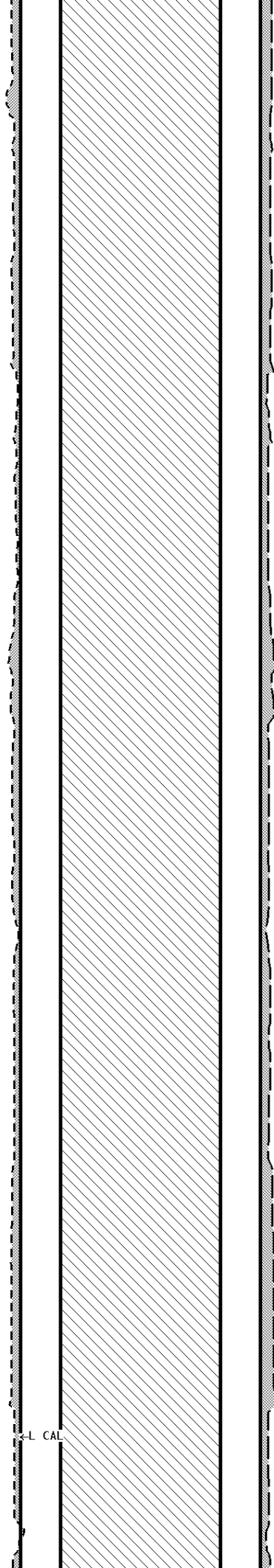


300Cu.ft-

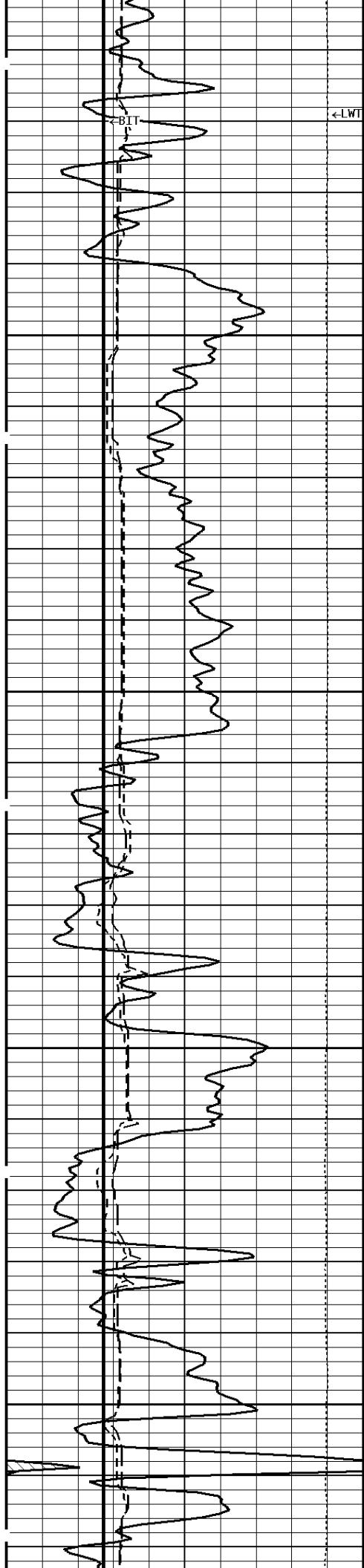


800

900



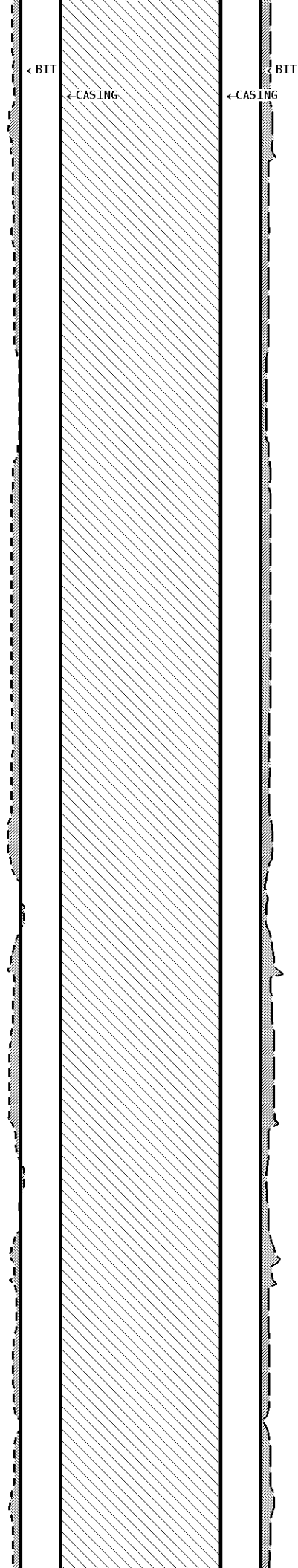
←N CAL

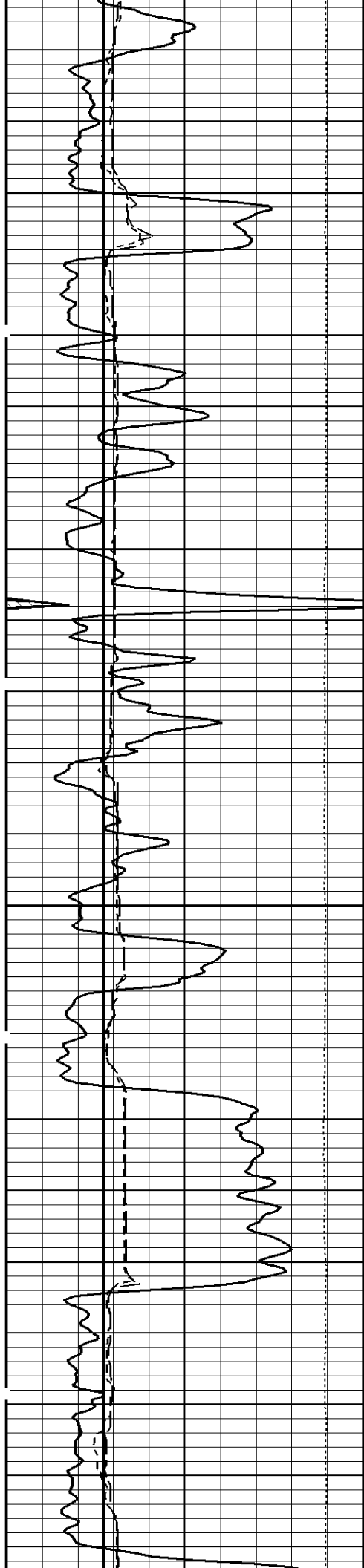


1000

1100

- 400 Cu. ft

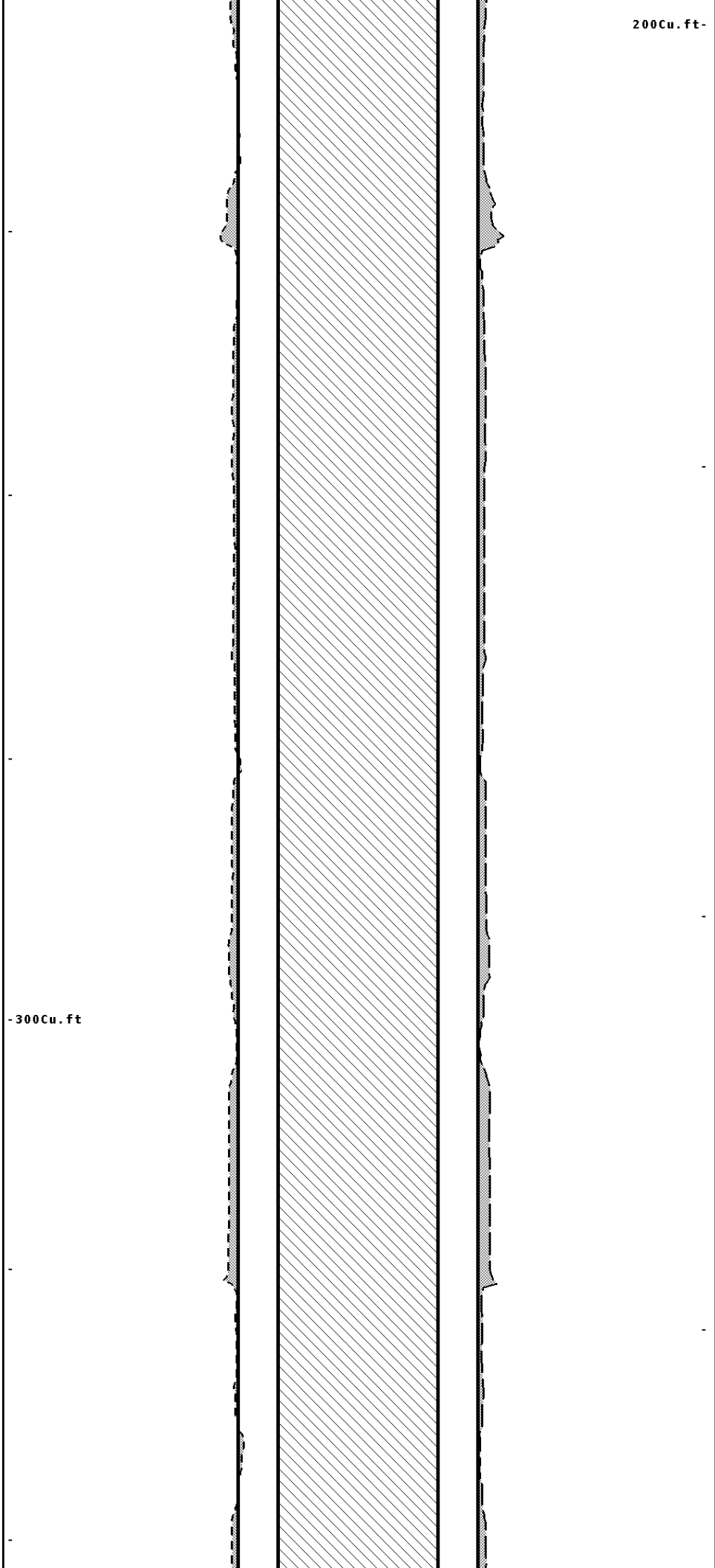


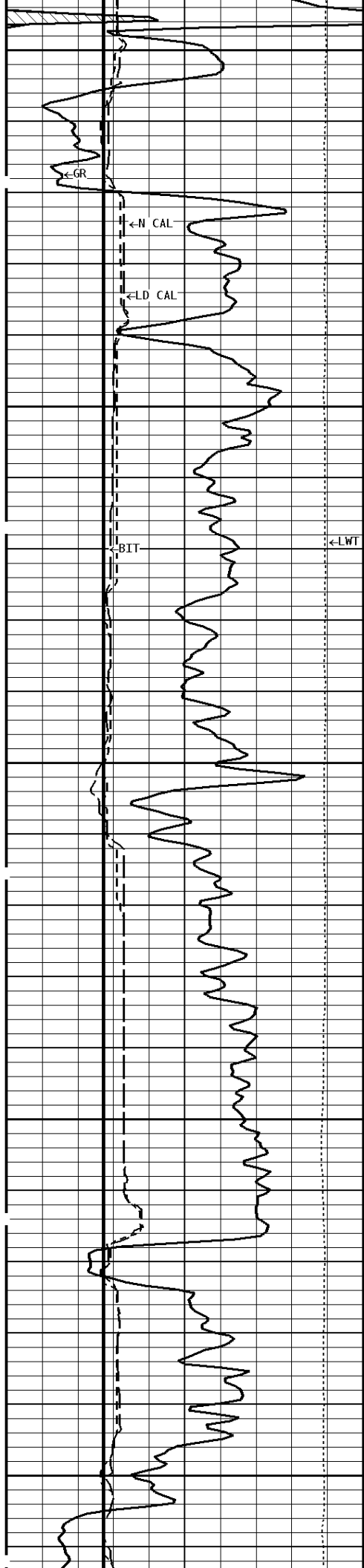


1200

1300

-300Cu.ft

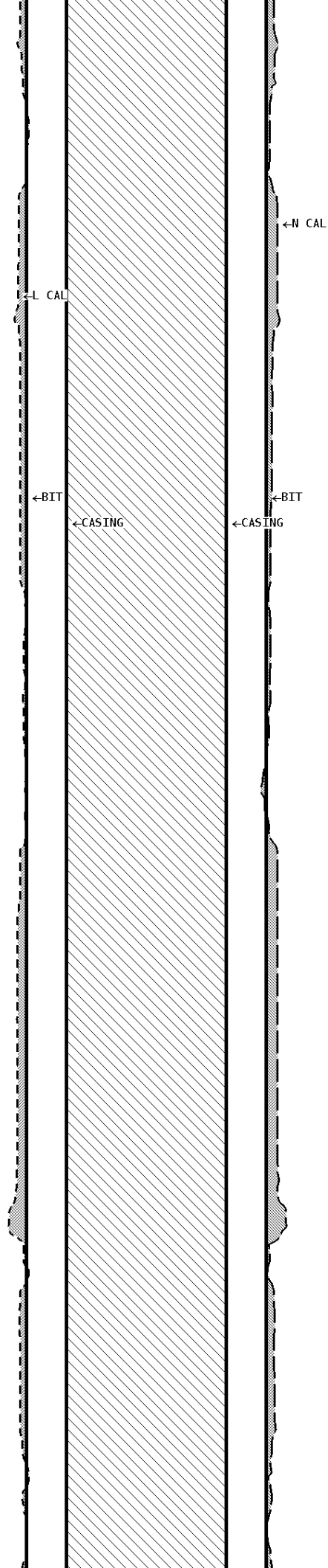


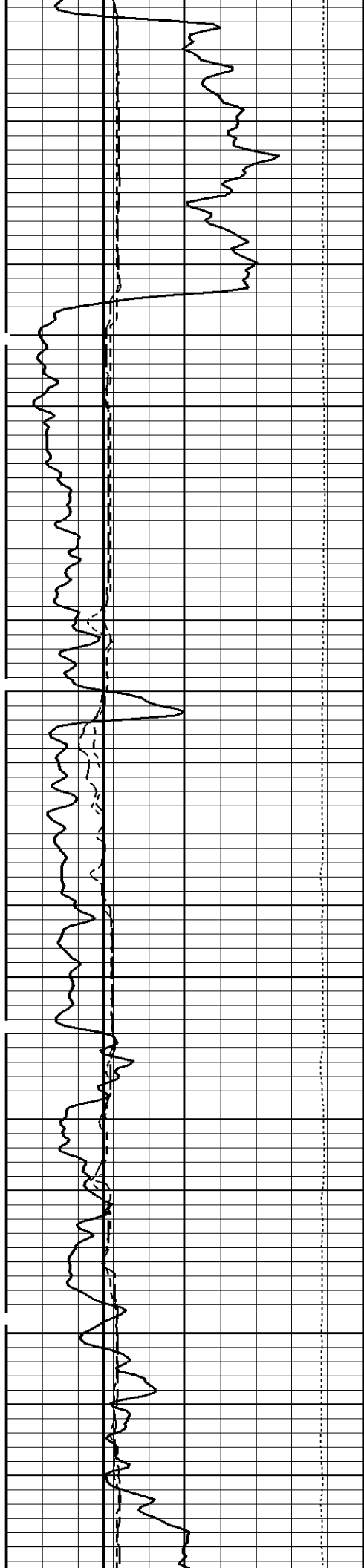


1400

1500

1600



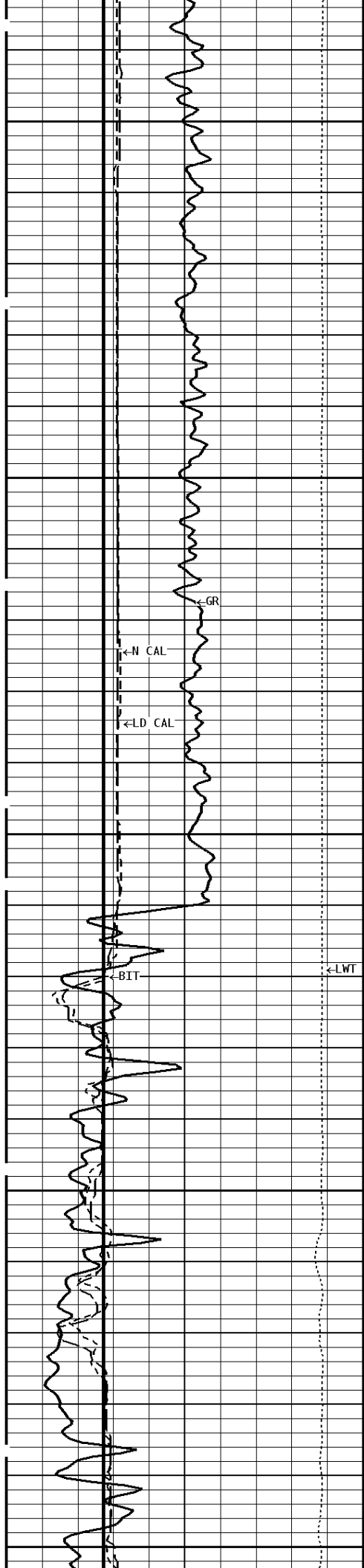


1700

1800

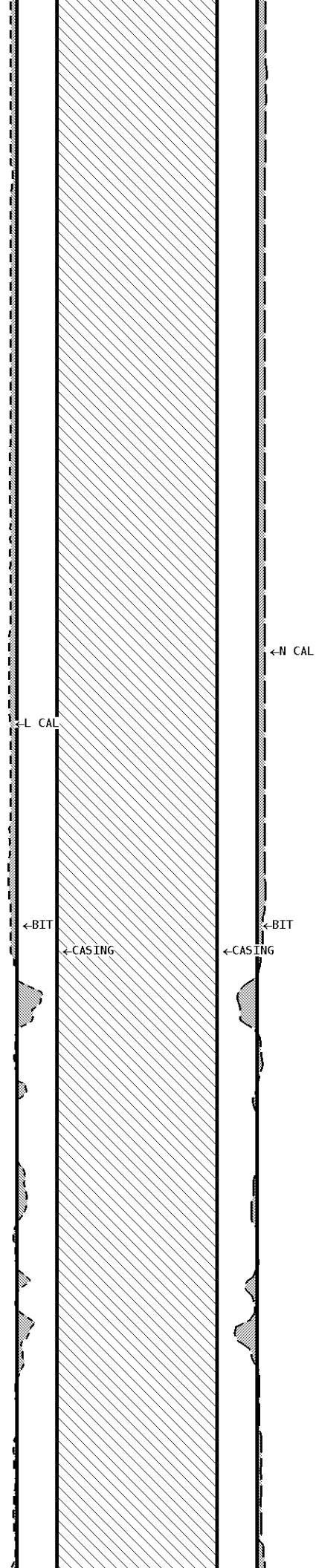
-200Cu.ft

100Cu.ft-



1900

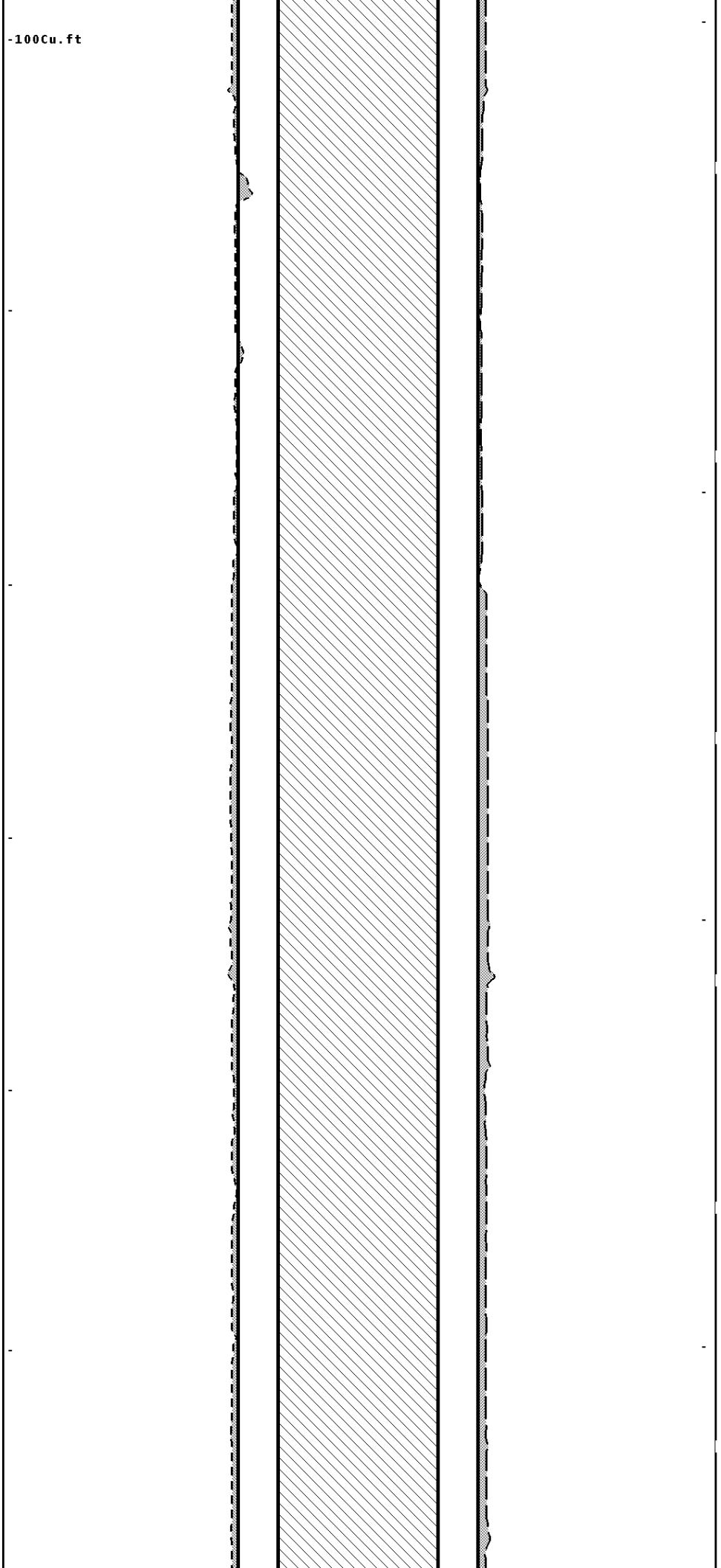
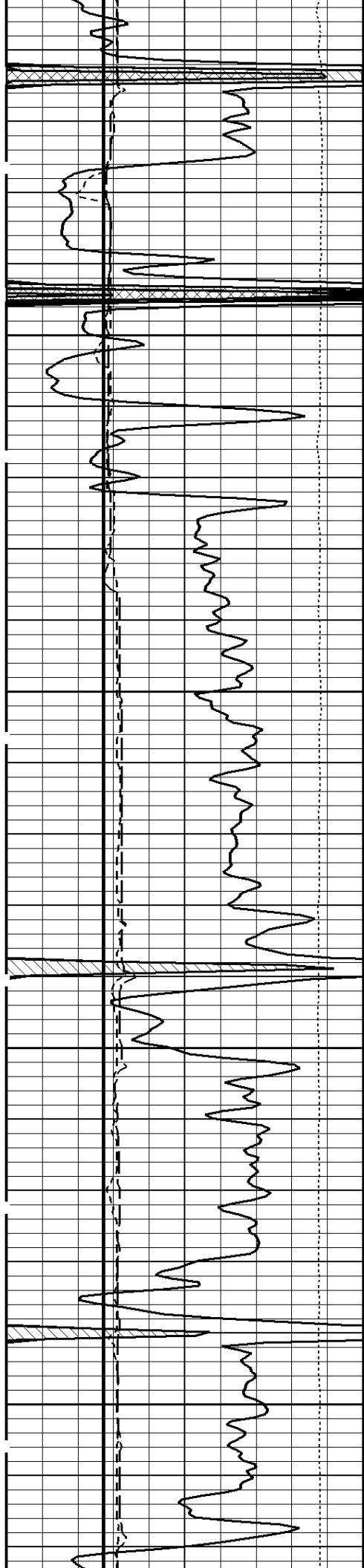
2000

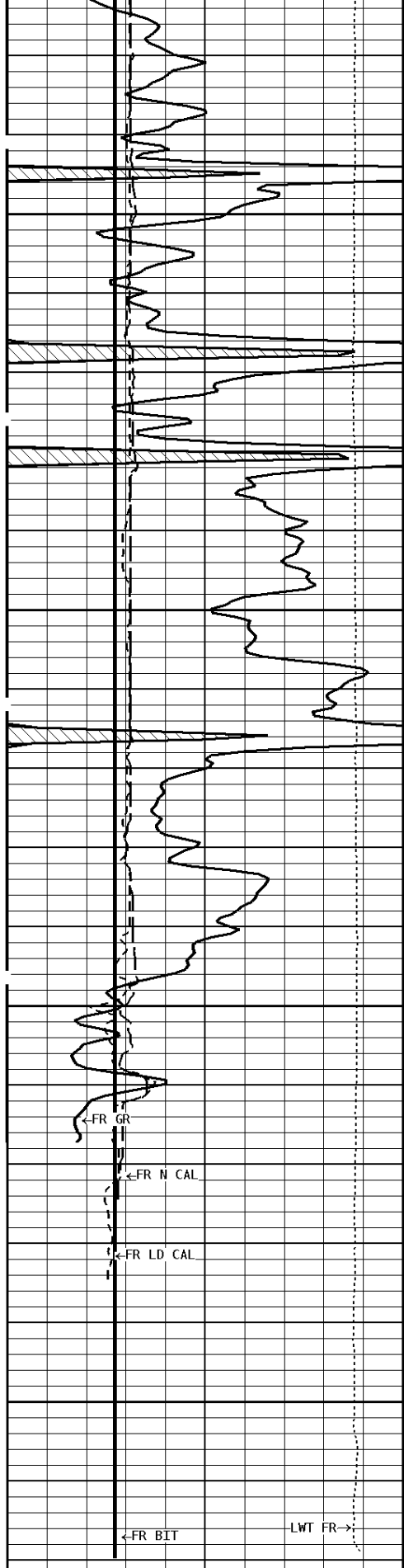


-100Cu.ft

2100

2200





2300

2400

←FR GR

←FR N CAL

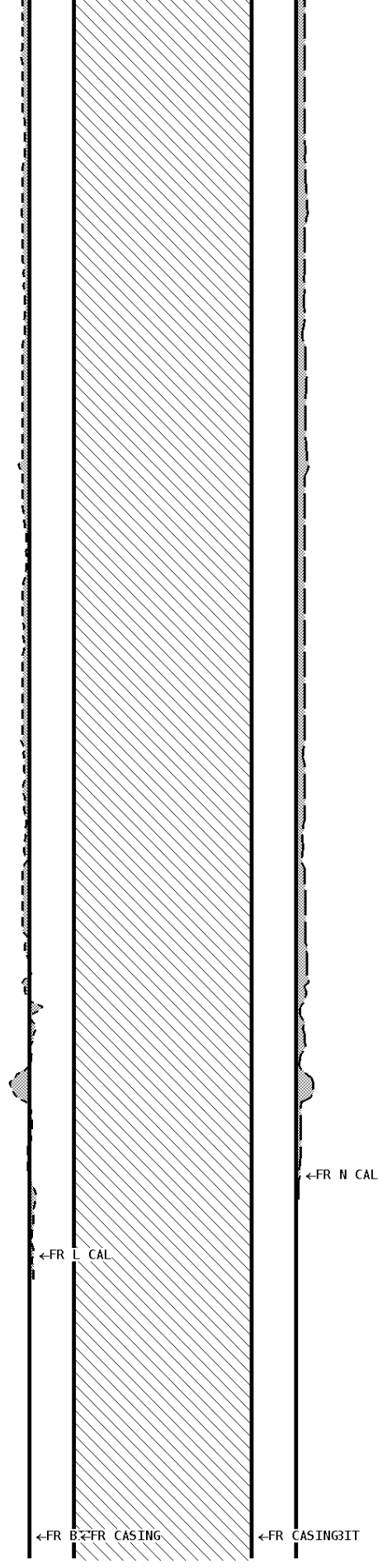
←FR LD CAL

←FR BIT

LWT FR→

2467

File #



←FR L CAL

←FR N CAL

←FR B2FR CASING

←FR CASING3IT

1:240 MAIN SECTION

GAMMA RAY API UNITS 200 0 400 200	BOREHOLE VOLUME CU.FT	ANNULAR HOLE VOLUME CU.FT.
TENSION LBS 10000 0		
X CALIPER INCHES (IN) 14 4 24 14		
Y CALIPER INCHES (IN) 14 4 24 14		
BIT SIZE INCHES (IN) 4 14		

* Borehole Zone Factors *

Zone 1	99999.0	to	0.0	Feet
Drill Bit Size			6.750	in
Casing Diameter			4.500	in

* Calibration Summary *

Shop Calibration GRT-B Performed : 21-APR-2014 Time : 11:21 Sensor Suite : GR-GR5 ID : GRT-BB-107						
GR	Background	Measured Jig 75	Units CPS	Calibrated Jig 175	Units GR-API	
Shop Calibration CNT-AA Performed : 28-APR-2014 Time : 11:56 Sensor Suite : CALI-BCN ID : NDT-BD-133						
CL # 1	Jig - Measured Ring#1 Ring#2 9.0 13.6	Jig - Calibrated Ring#1 Ring#2 6.0 12.0	Units IN.			
Shop Calibration LDT-DF Performed : 29-APR-2014 Time : 09:48 Sensor Suite : CALI-LTH ID : PDT-GA-466						
CL # 1	Jig - Measured Ring#1 Ring#2 6.7 9.9	Jig - Calibrated Ring#1 Ring#2 6.0 12.0	Units IN.			

Company: CASTLE RESOURCES LLC
Well: RICE TANNER #1





Tucker
ENERGY SERVICES

Location: E2 SW SW
Logged: 05-04-2014
K.B. Elev: 0.0 Ft