



Tucker
ENERGY SERVICES

BOREHOLE VOLUME

CALIPER LOG

Company: CHIEFTAIN OIL COMPANY INC.
Well: DIEL #6
Field: ROUNDUP SOUTH
County: BARBER
State: KANSAS
Country: USA
API No.: 15-00724245

File No.: TUL-58479
Company: CHIEFTAIN OIL COMPANY INC.
Well: DIEL #6
Field: ROUNDUP SOUTH
County: BARBER
State: KANSAS
Country: USA
API No.: 15-00724245

Location:
3058 FSL & 2996 FEL
NW SE SE NW

LSD: Sect: 3 Twp: 34S Rge: 11W

Permanent Datum: GL
Drilling Measured From: KB
Log Measured From: KB
Above Permanent Datum: 10.00 Ft
Date: 10-21-2014

Elevations:
KB 1362.00 Ft
DF 1361.00 Ft
GL 1352.00 Ft
Services:
CNT
LDT
MLT

Run Number	1		
Depth--Driller	5165.0	Ft	
Depth--Logger	5166.0	Ft	
First Reading	5143.0	Ft	
Last Reading	333.0	Ft	
Casing--Driller	329.0	Ft	
Casing--Logger	333.0	Ft	
Bit Size	7.875	In	
Casing Size	13.375	In	
Hole Fluid Type	WBM		
Density	9.3		
Fluid Loss	8.0		
PH/Viscosity	10.0	59.0	
Sample Source	MEASURED		
RM@Measured Temp.	0.900	@ 70 F	
RMF@Measured Temp	0.770	@ 70 F	
RMC@Measured Temp.	1.090	@ 70 F	
Source RMF/RMC	CALCULATED	CALCULATED	
RM@BHT	0.510	@ 130 F	
Time Circulation Stopped	10-21-2014 7:30 pm		
Max Recorded Temp.	133	F	
Equipment/Base	T-126	TULSA	
Recorded By	S.K. DAVIS		
Witnessed By	D. BARKER		

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	5166.00	13.375	24.00	333.00	0.00

Run Number	1	
Date	10-21-2014	
Date/Time On Bottom	10-22-2014 12:45 am	
Depth to Fluid	0.0 Ft	
Salinity	6000.000	
RMF@BHT	0.430 @ 130 F	
RMC@BHT	0.580 @ 130 F	

Run Number 1

Comments

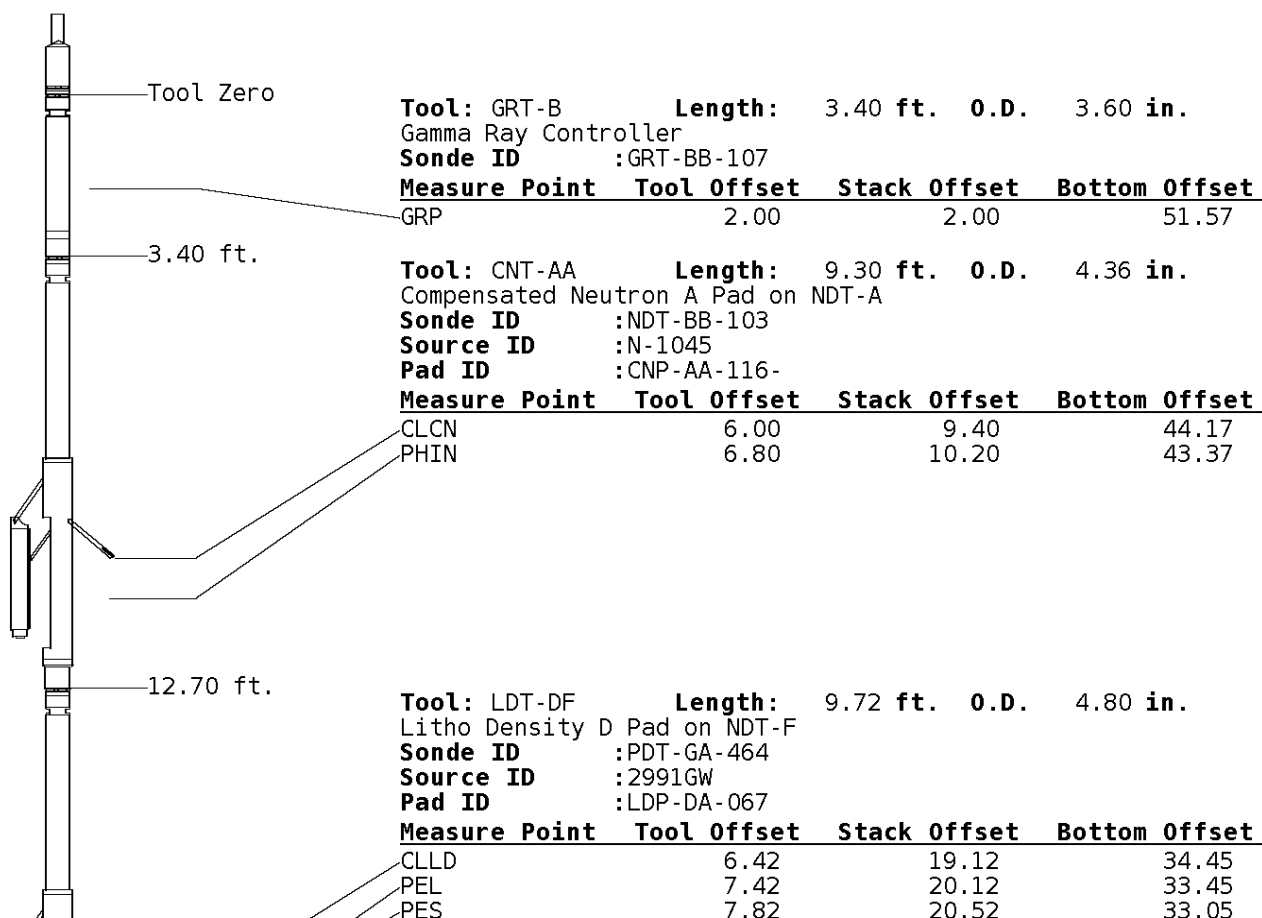
ALL PRESENTATION PER CUSTOMER REQUEST
 GRT,CNT,LDT,PIT RUN IN COMBINATION
 CALIPERS ORIENTED ON X-Y AXIS
 2.71 G/CC USED TO CALCULATE POROSITY
 ANNULAR & BOREHOLE VOLUME CALCULATED USING 5.5 PRODUCTION CASING
 PHIN IS CALIPER CORRECTED
 DETAIL IS PRESENTED FROM TD TO 3400'
 SALT/ANHYDRITE SECTION 1750' TO 1050' & 650' TO 530'
 MLT CUT OFF AT 4418' 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;
 M. DRUEPPEL
 C. GONZALES

Tool String Schematic

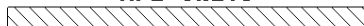
Total Tool Length - 53.57 ft.
Maximum Outside diameter - 6.00 in.
Net Weight in Air - 943.00 lbs.

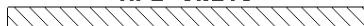




Y CALIPER	
INCHES (IN)	
16	26

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

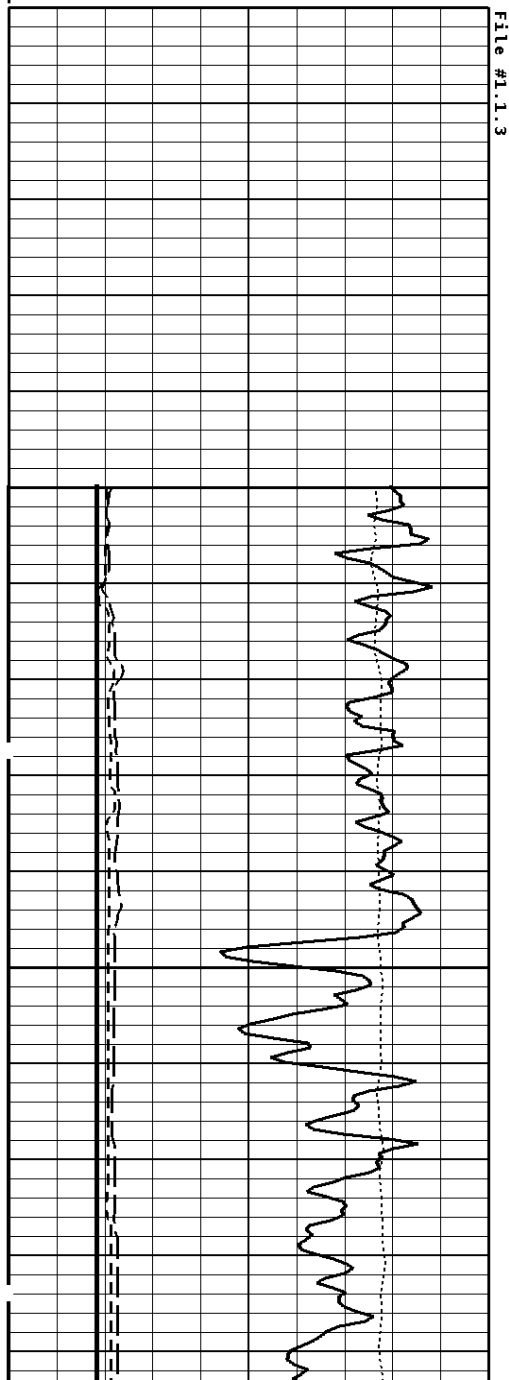
16 6		26 16
X CALIPER INCHES (IN)		
16 6		26 16
TENSION LBS		
10000		0
GAMMA RAY API UNITS		
150 0		300 150

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.
--------------------------	-------------------------------

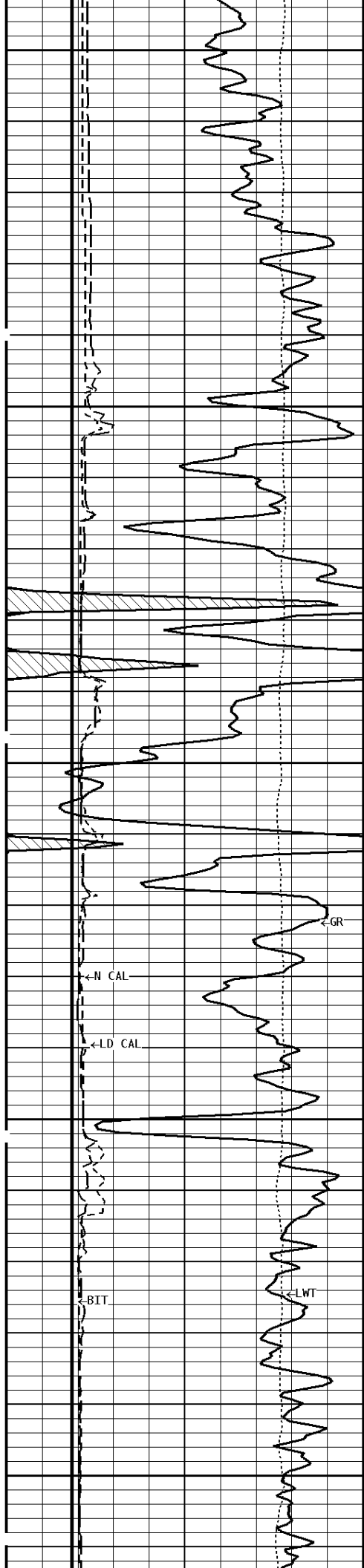
BOREHOLE VOLUME CU.FT	ANNULAR HOLE VOLUME CU.FT.
--------------------------	-------------------------------

1:240 MAIN SECTION



-600 Cu. ft

-600 Cu. ft



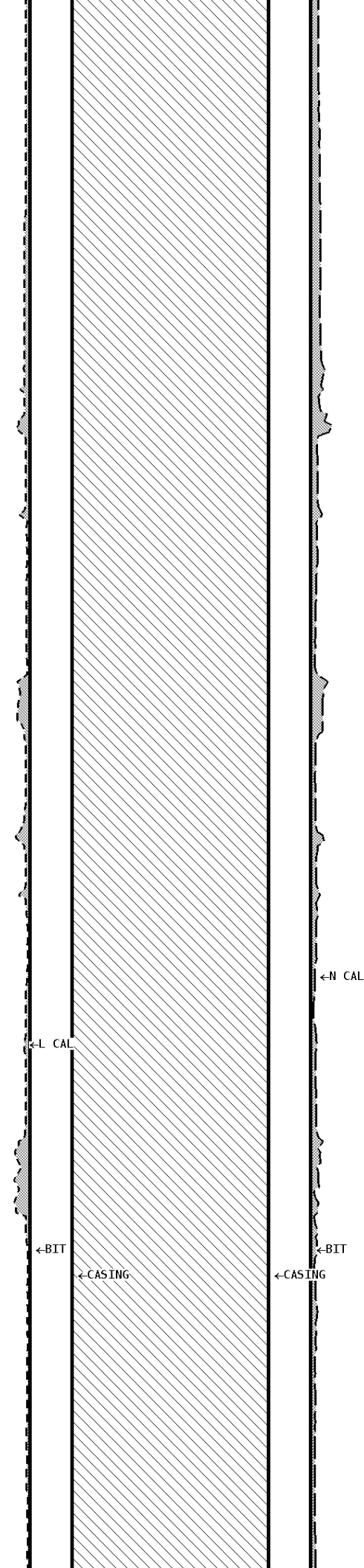
3500

3600

3700

-500Cu.ft

300Cu.ft-



←N CAL

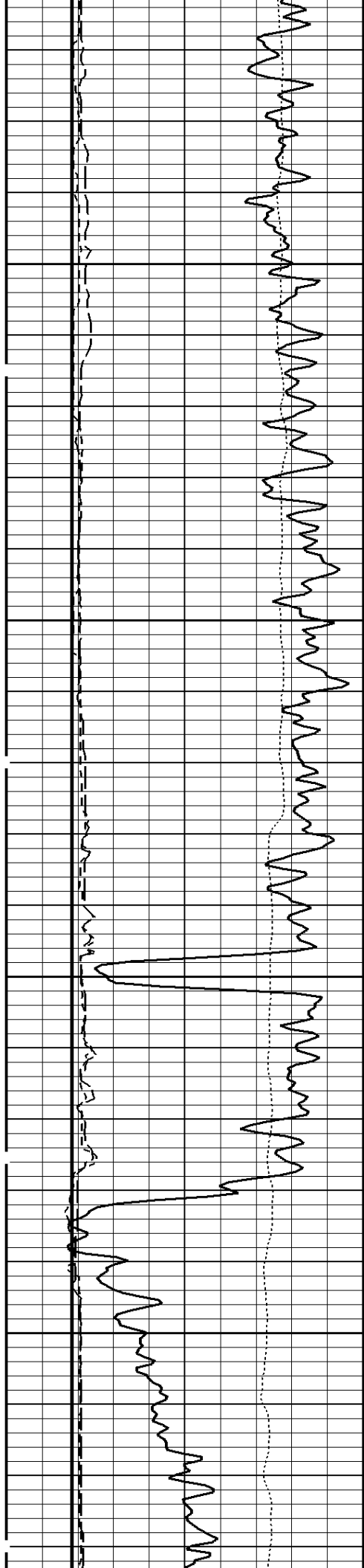
←L CAL

←BIT

←CASING

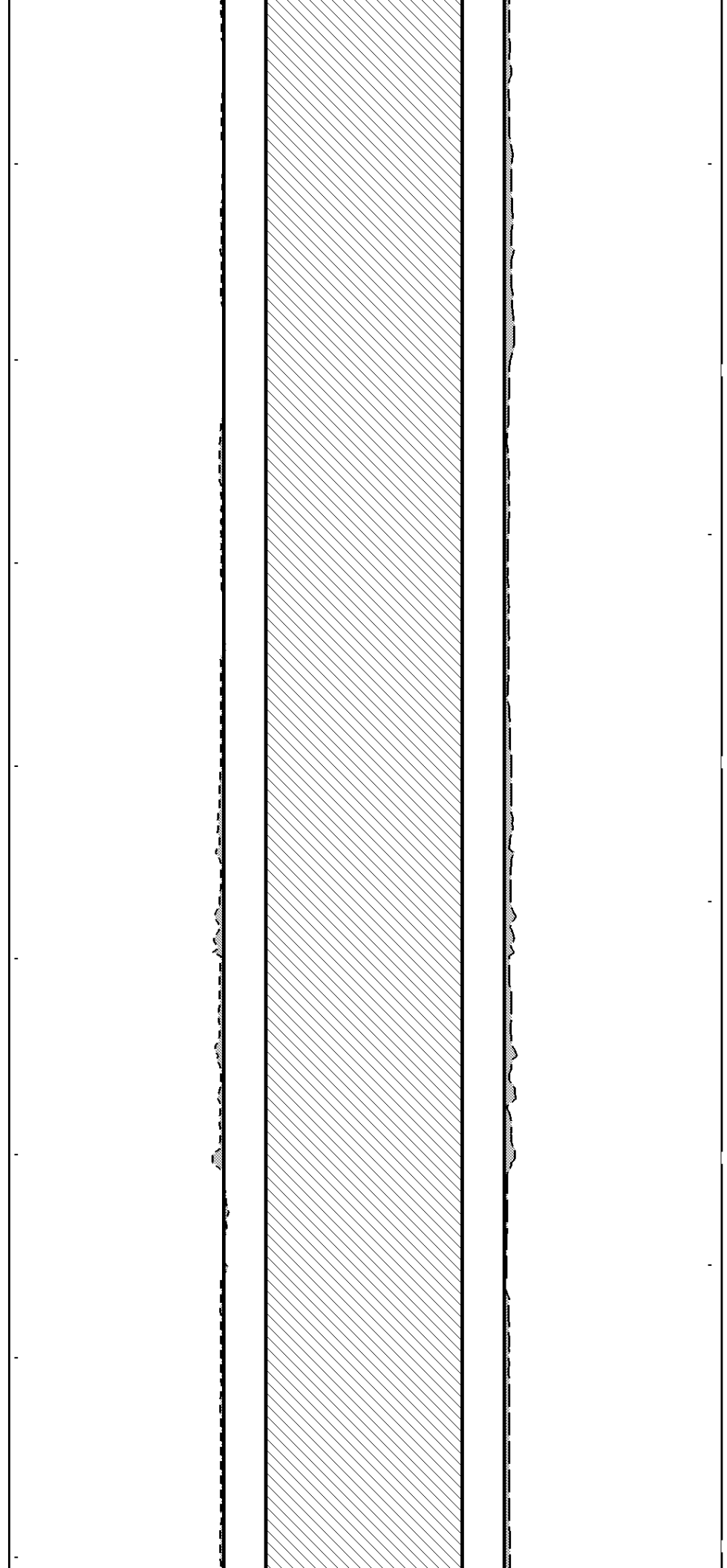
←BIT

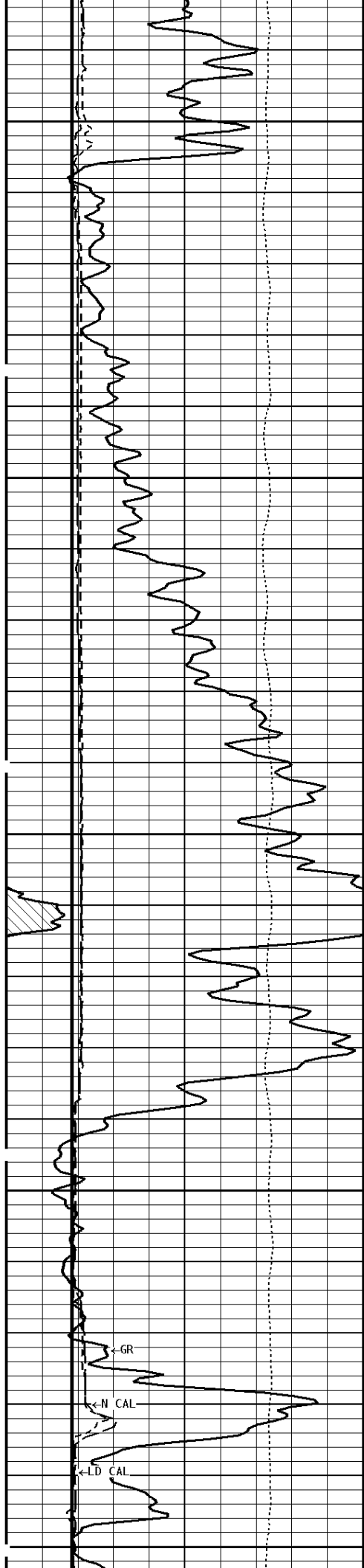
←CASING



3800

3900





4000

4100

-400Cu.ft

200Cu.ft-

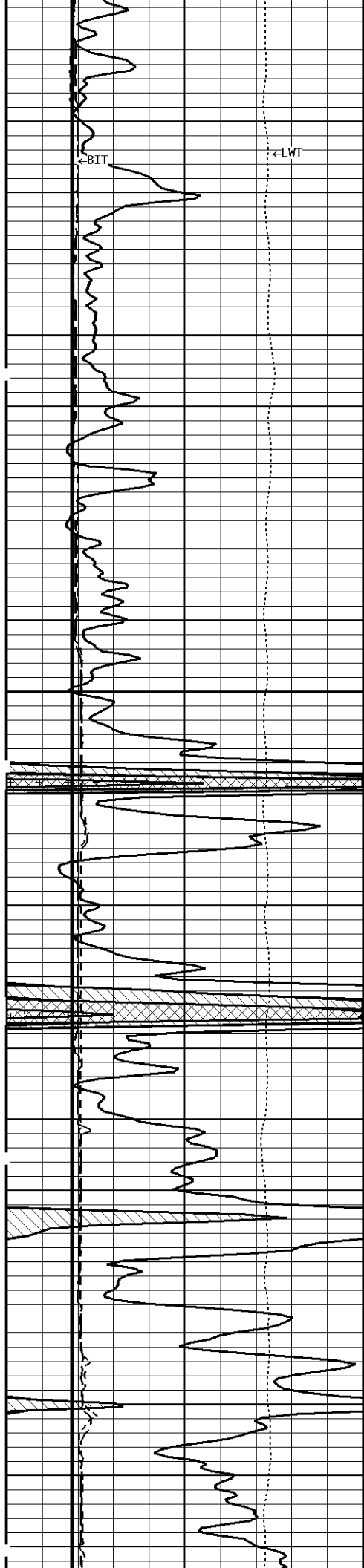
←GR

←N CAL

←LD CAL

←L CAL

←N CAL



4200

4300

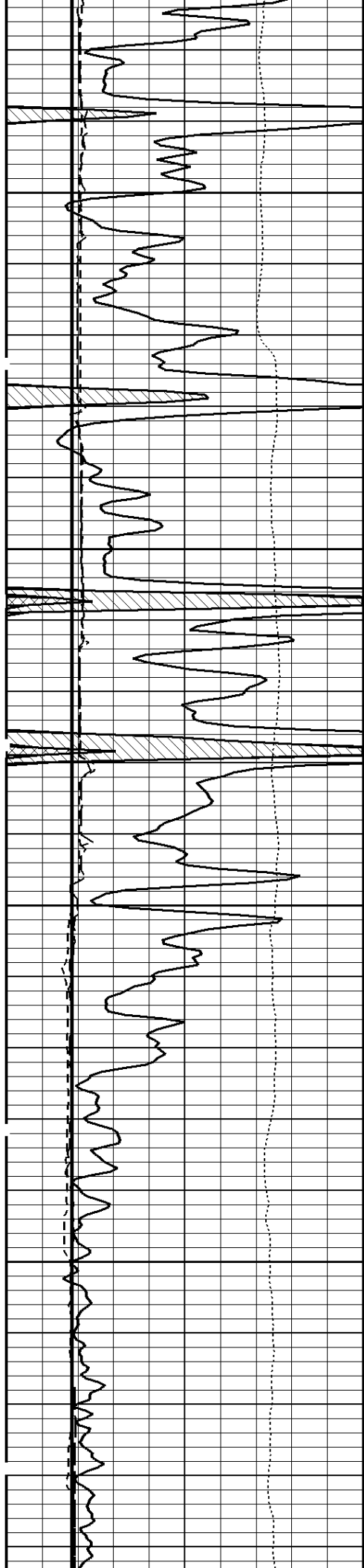
- 300 Cu. ft

← BIT

← CASING

← BIT

← CASING

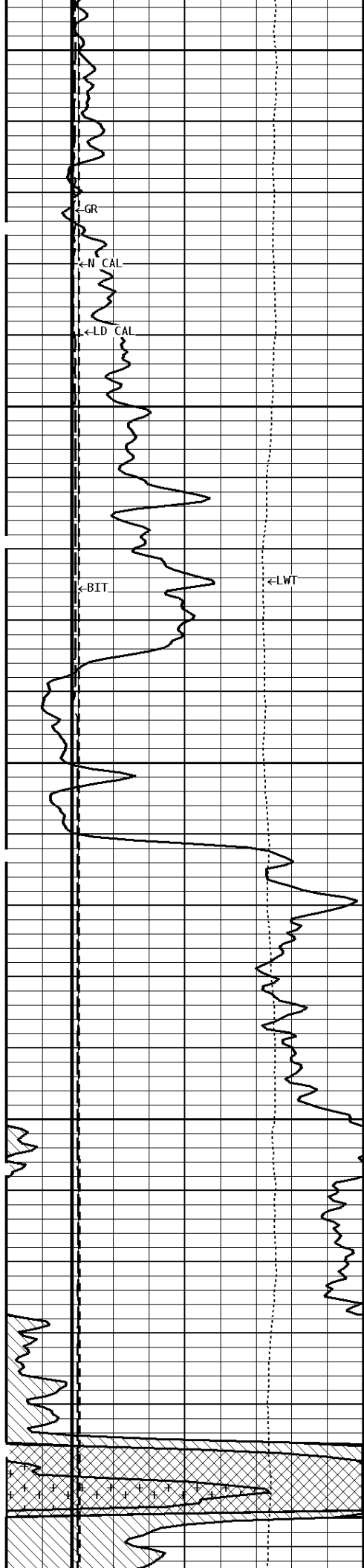


4400

4500

-200Cu.ft

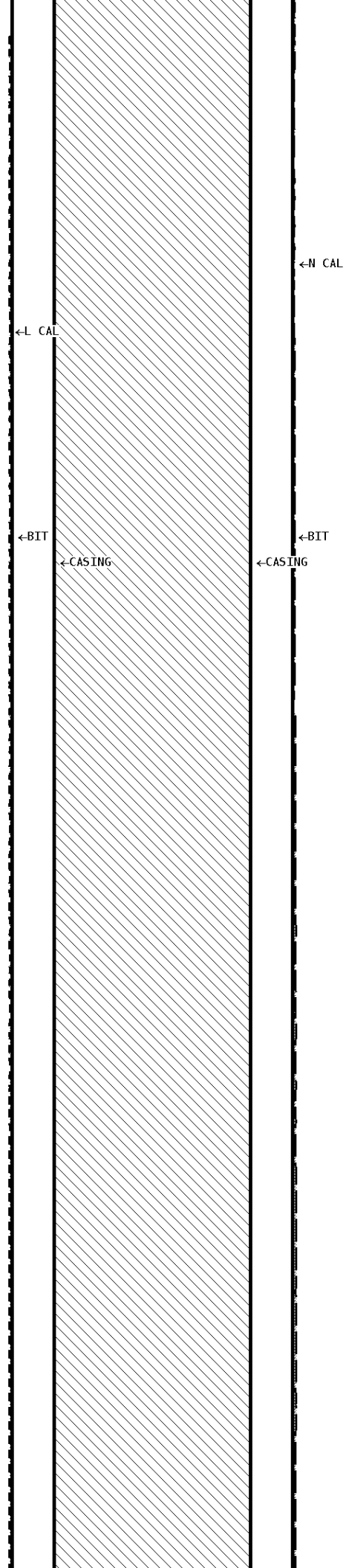
100Cu.ft-

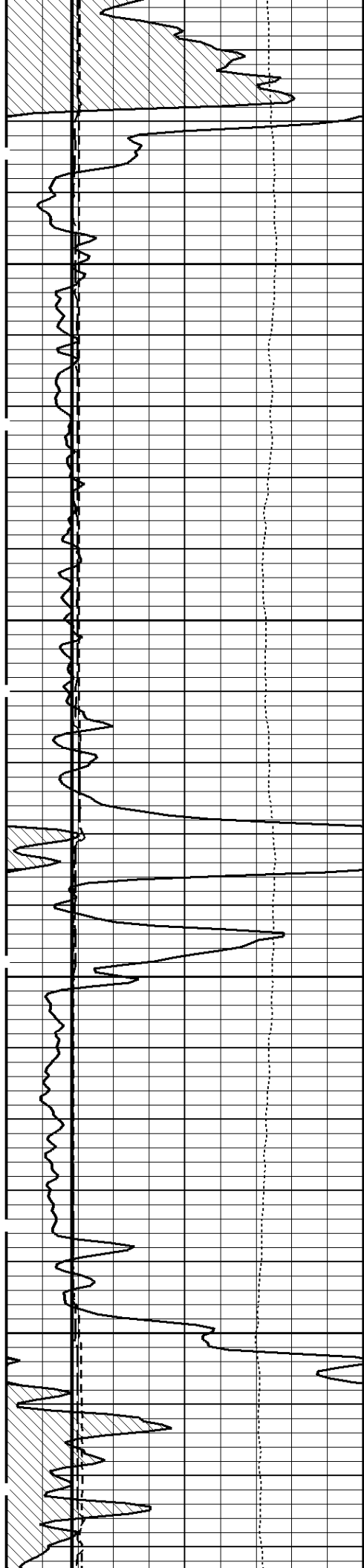


4600

4700

4800

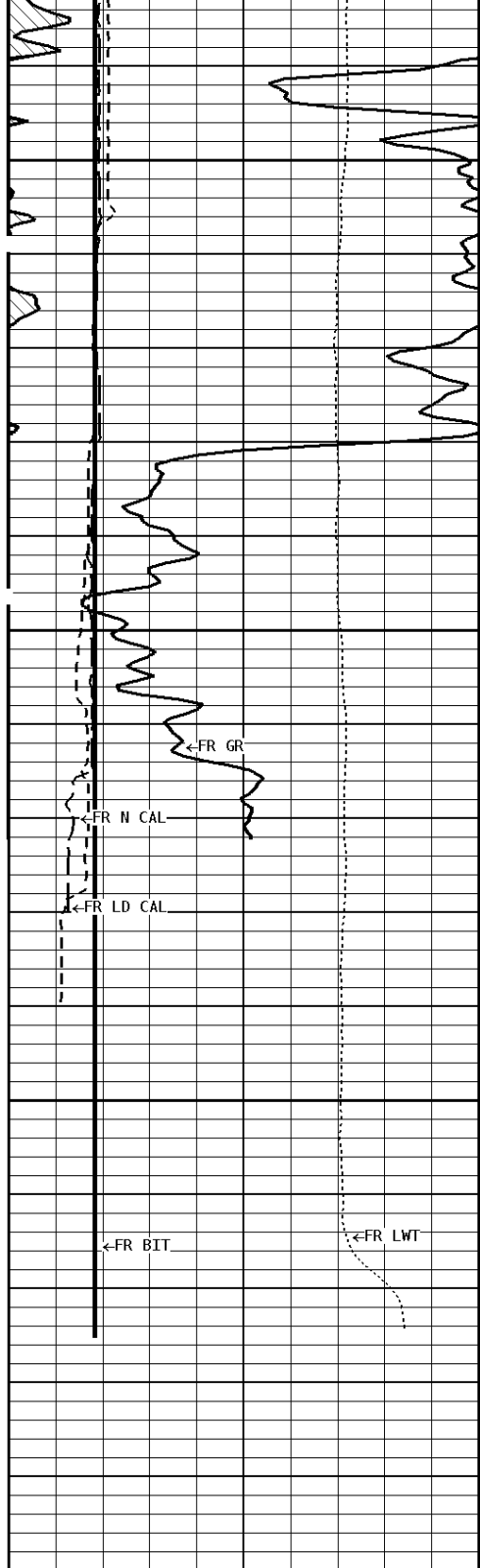




-100Cu.ft

4900

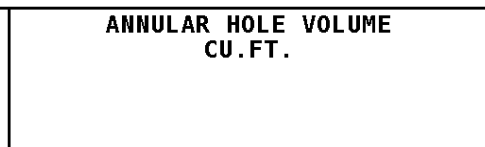
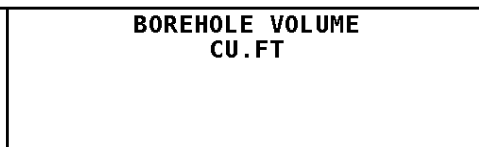
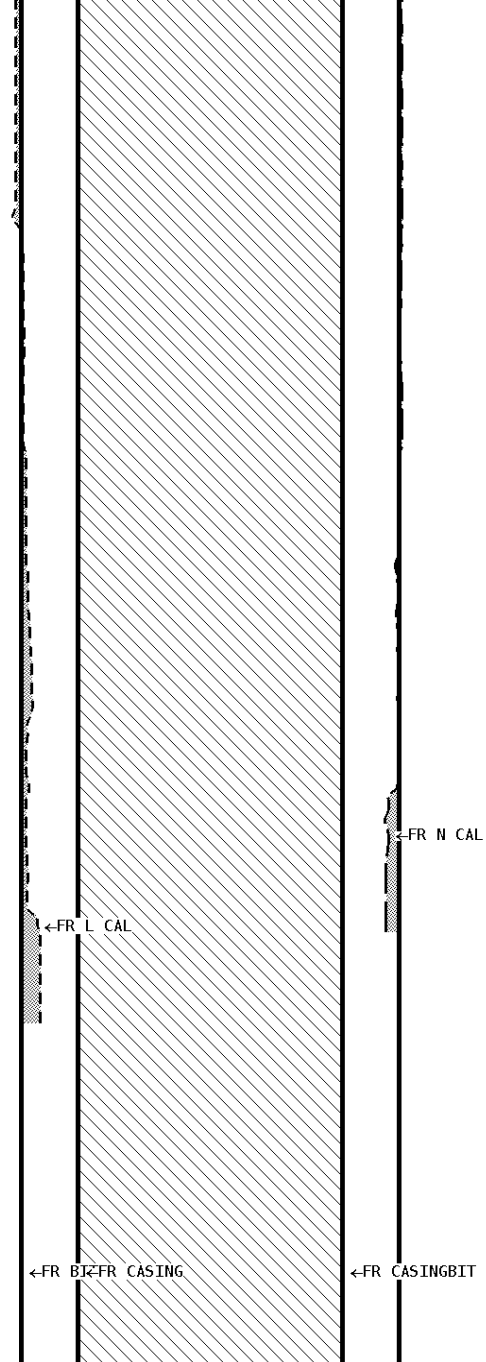
5000



5100

5166

1:240 MAIN SECTION



X CALIPER INCHES (IN)	
16	26
6	16

Y CALIPER INCHES (IN)	
16	26
6	16

BIT SIZE INCHES (IN)	
6	16

*** Borehole Zone Factors ***

Zone 1	99999.0	to	0.0	Feet
Drill Bit Size				7.875 in
Casing Diameter				5.500 in

*** Calibration Summary ***

Shop Calibration GRT-B					
Performed : 21-APR-2014			Time : 11:21		
Sensor Suite : GR-GR5			ID : GRT-BB-107		
	Measured	Units	Calibrated	Units	
GR	Background	Jig	Jig		
	75	381	175	GRAPI	
Shop Calibration CNT-AA					
Performed : 22-SEP-2014			Time : 10:50		
Sensor Suite : CALI-BCN			ID : NDT-BB-103		
	Jig - Measured		Jig - Calibrated	Units	
	Ring#1	Ring#2	Ring#1	Ring#2	
CL # 1	9.1	14.0	6.0	12.0	IN.
Shop Calibration LDT-DF					
Performed : 07-OCT-2014			Time : 10:30		
Sensor Suite : CALI-LTH			ID : PDT-GA-464		
	Jig - Measured		Jig - Calibrated	Units	
	Ring#1	Ring#2	Ring#1	Ring#2	
CL # 1	7.8	11.3	6.0	12.0	IN.



Tucker
ENERGY SERVICES

Company: CHIEFTAIN OIL COMPANY INC.
Well: DIEL #6
Location: 3058' FSL & 2996' FEL
Logged: 10-21-2014
K.B. Elev: 1362.0 Ft