

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 5.5" PRODUCTION CASING
 PHIN IS CALIPER CORRECTED

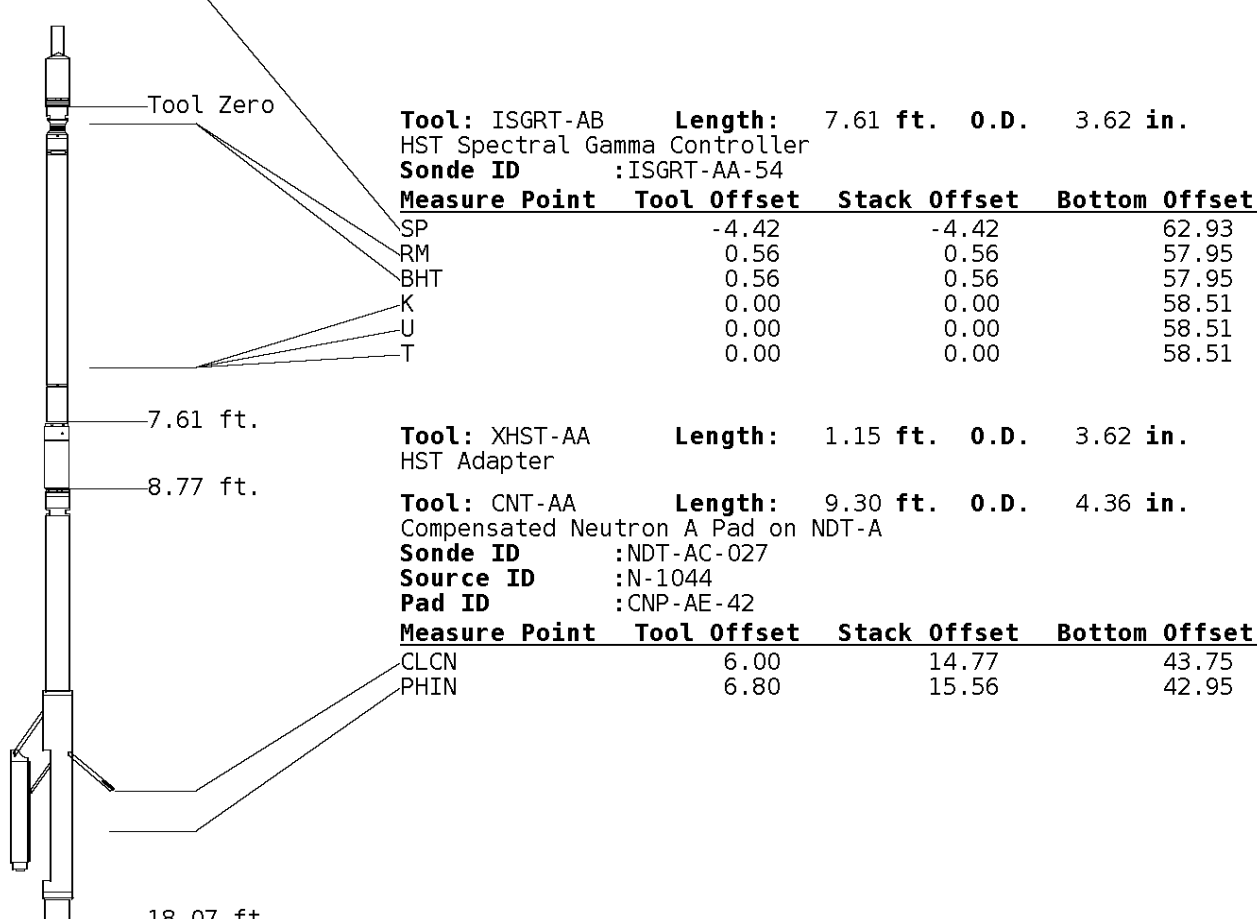
CUSTOMER REQUESTED DETAIL PULLED TO 3700'

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.JOHNSON
 B.BROWN

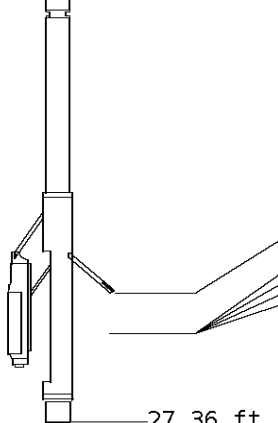
Tool String Schematic

Total Tool Length - 58.51 ft.
Maximum Outside diameter - 6.00 in.
Net Weight in Air - 1002.50 lbs.



Tool: LDI-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-02

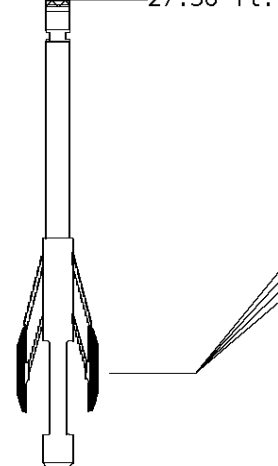
Measure Point	Tool Offset	Stack Offset	Bottom Offset
CLLD	6.00	24.07	34.45
PEL	7.00	25.07	33.45
PES	7.40	25.46	33.05
LDEN	7.20	25.27	33.25
LCOR	7.20	25.27	33.25



27.36 ft.

Tool: MST-DA **Length:** 9.66 ft. **O.D.:** 6.00 in.
 Micro Spherically Focused (IC,D)
Sonde ID : MST-DA-25

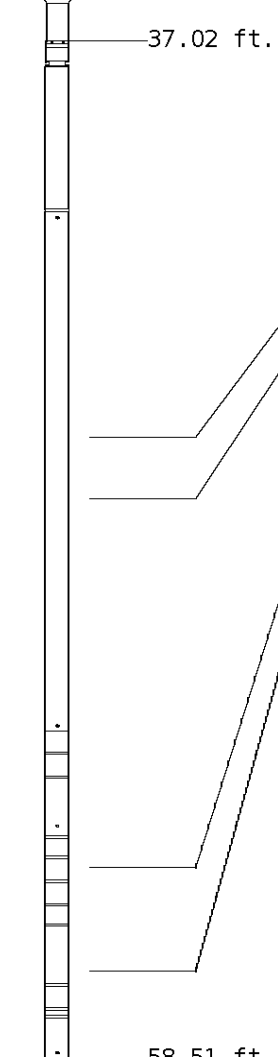
Measure Point	Tool Offset	Stack Offset	Bottom Offset
MSFL	7.60	34.97	23.55
MSCLP	7.60	34.97	23.55
INV	7.60	34.97	23.55
NOR	7.60	34.97	23.55



37.02 ft.

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	45.95	12.56
ILM	10.10	47.12	11.39
SFLU	17.49	54.51	4.00
SP	20.60	57.63	0.88



LWT 58.51 ft.

BIT SIZE
INCHES (IN)

6 16

Y CALIPER
INCHES (IN)

16 26
6 16

X CALIPER
INCHES (IN)

16 26
6 16

TENSION
LBS

10000 0

GAMMA RAY
API UNITS

150 300
0 150

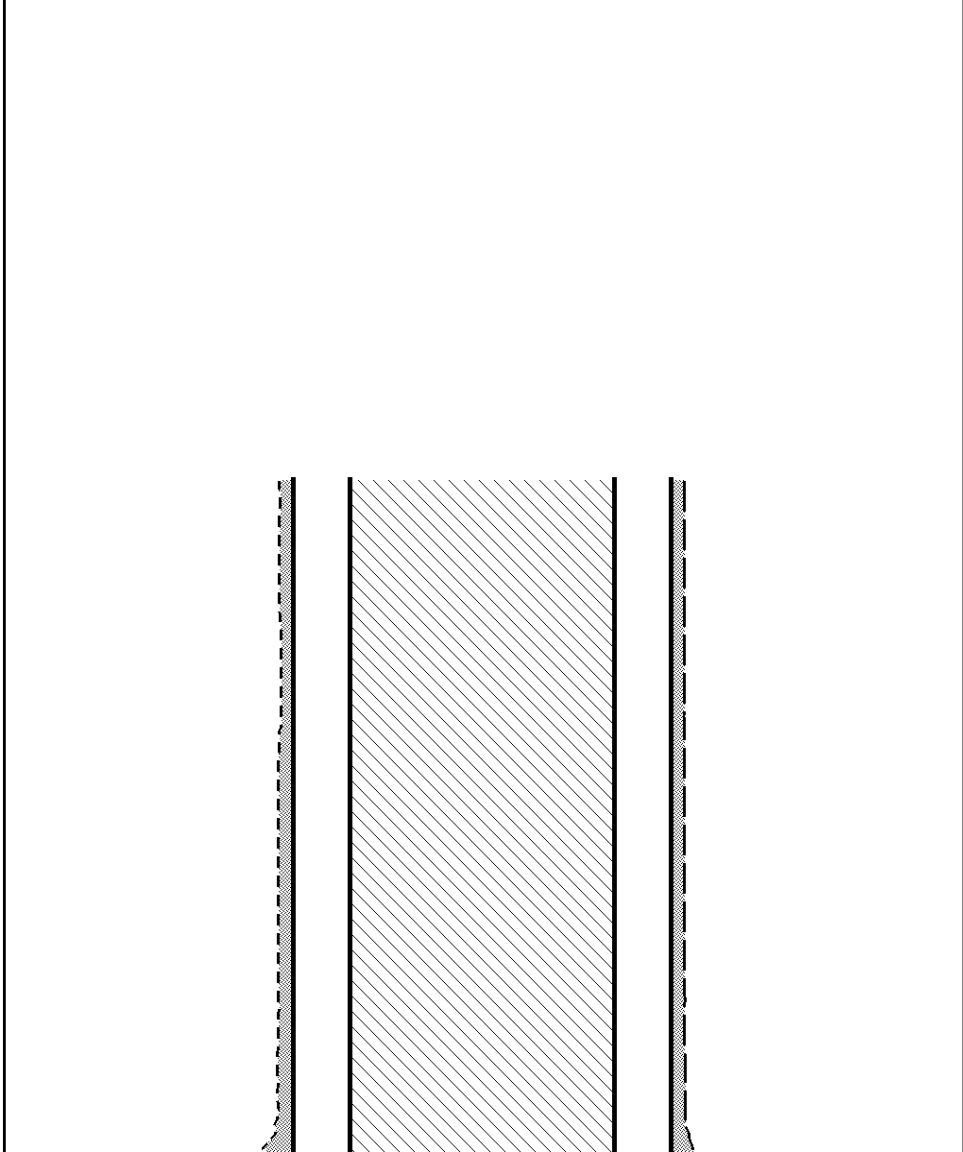
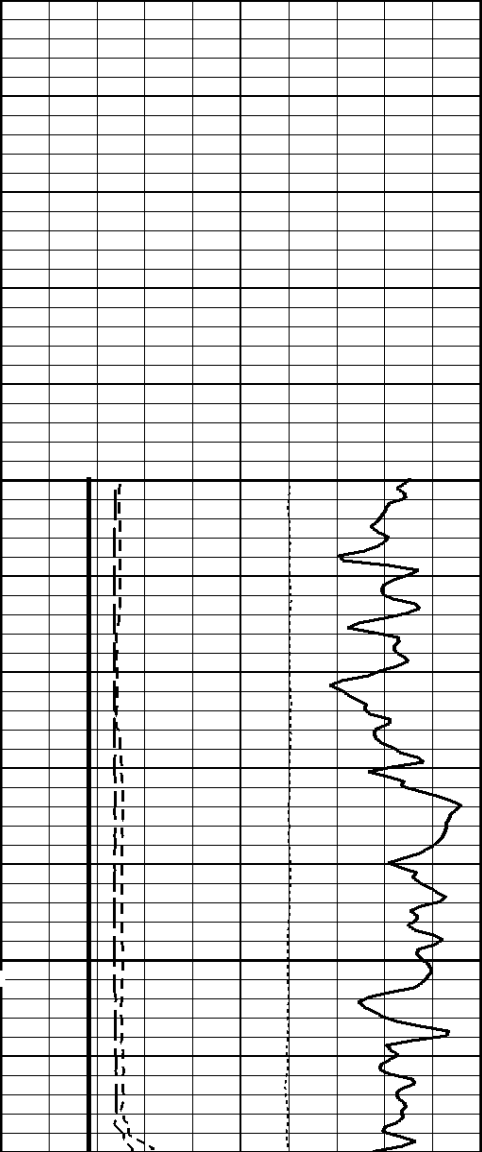
BOREHOLE VOLUME
CU. FT

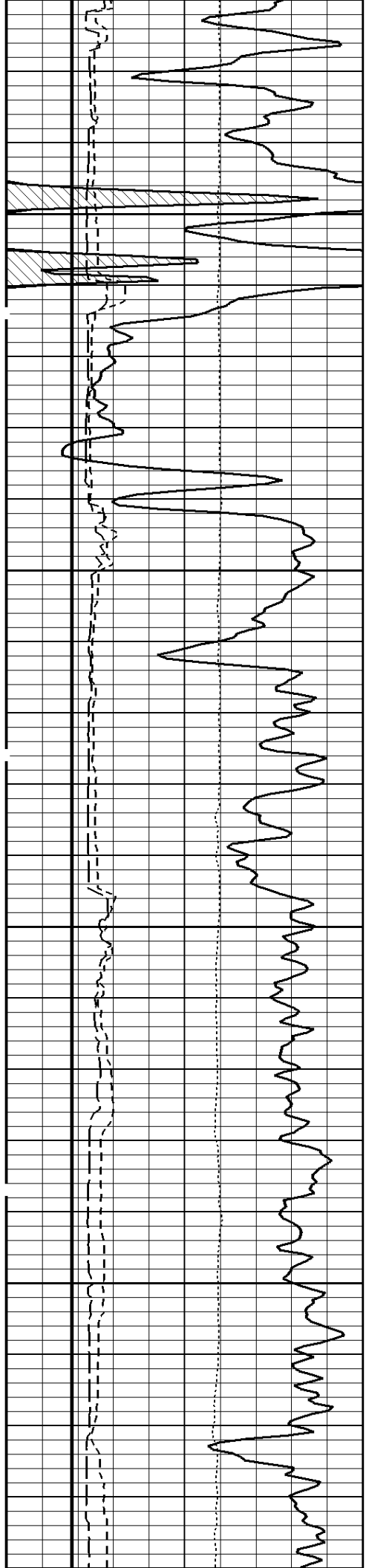
ANNULAR HOLE VOLUME
CU. FT.

1:240 MAIN SECTION

File #1.2.3

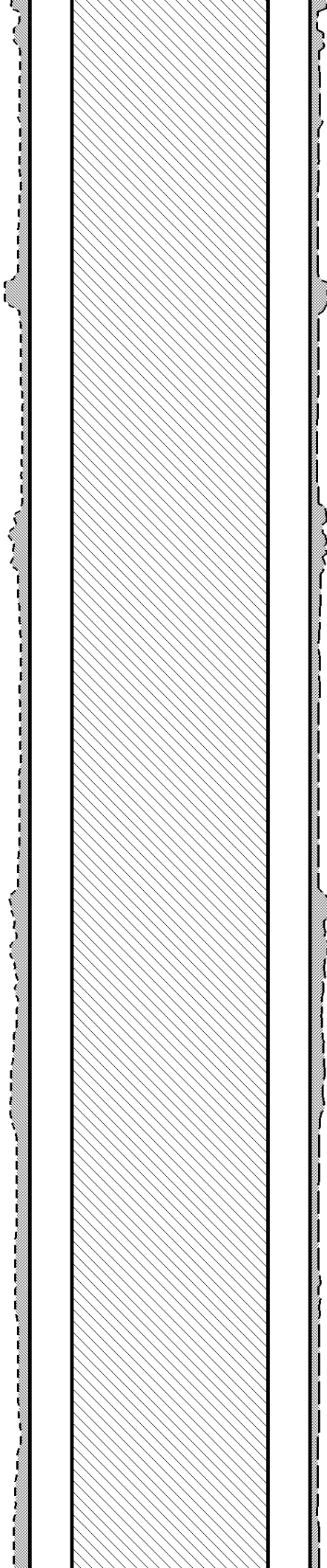
3700

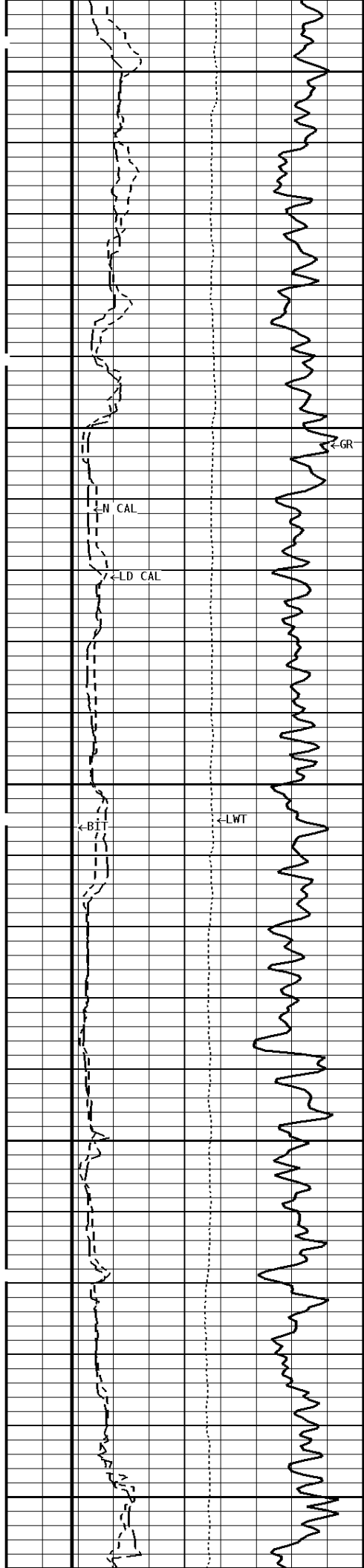




3800

3900

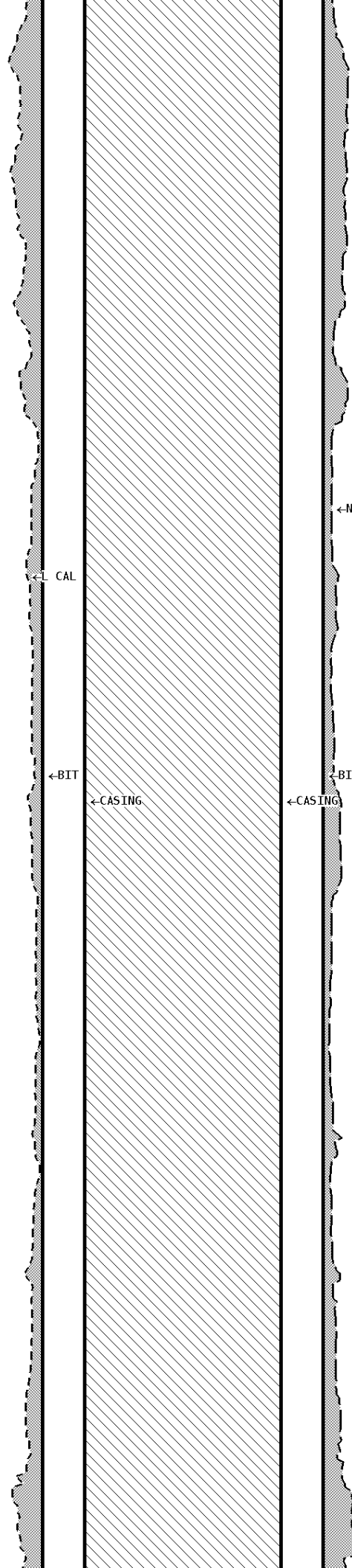




4000

4100

4200



← CAL

← BIT

← CASING

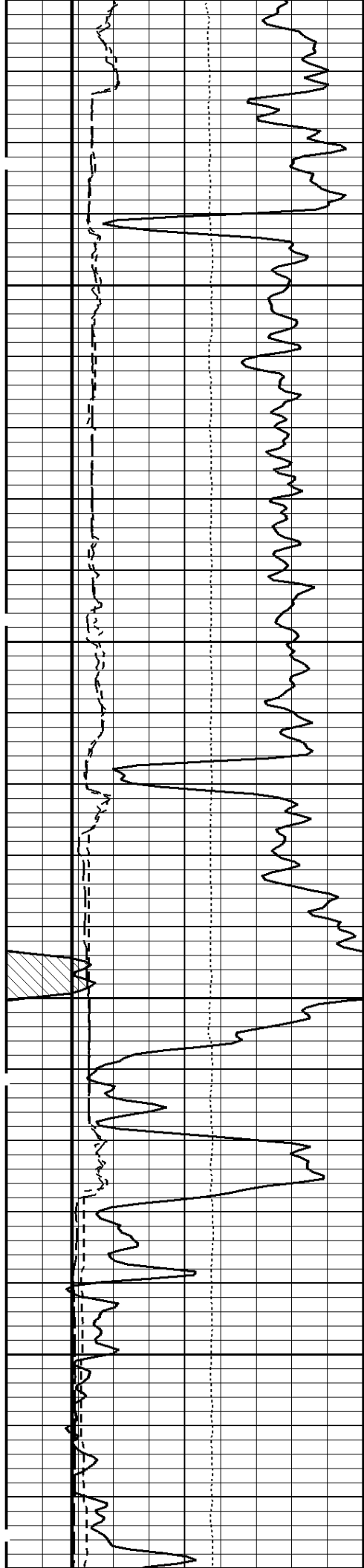
← N CAL

← BIT

← CASING

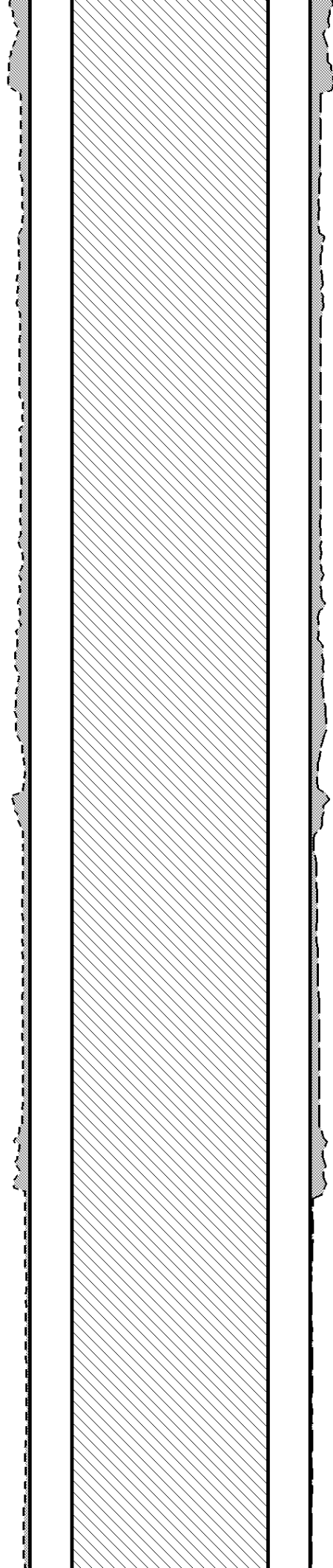
300Cu. ft.

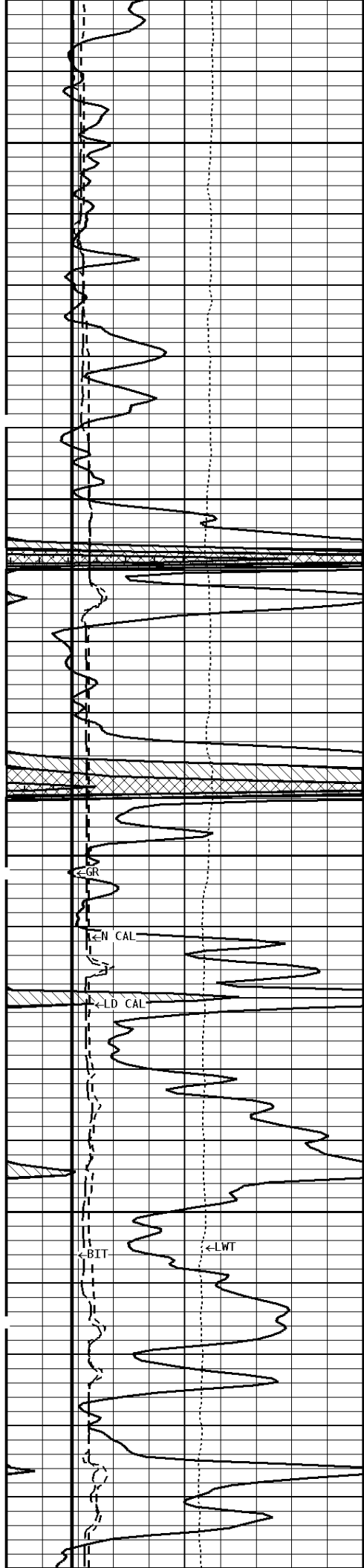
-500Cu. ft.



4300

4400



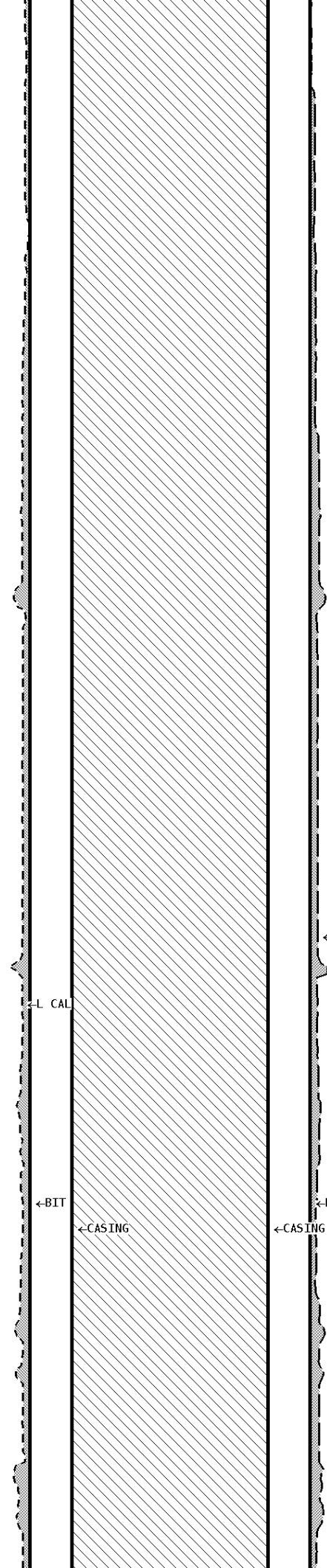


4500

4600

-400Cu. ft

200Cu. ft-



←N CAL

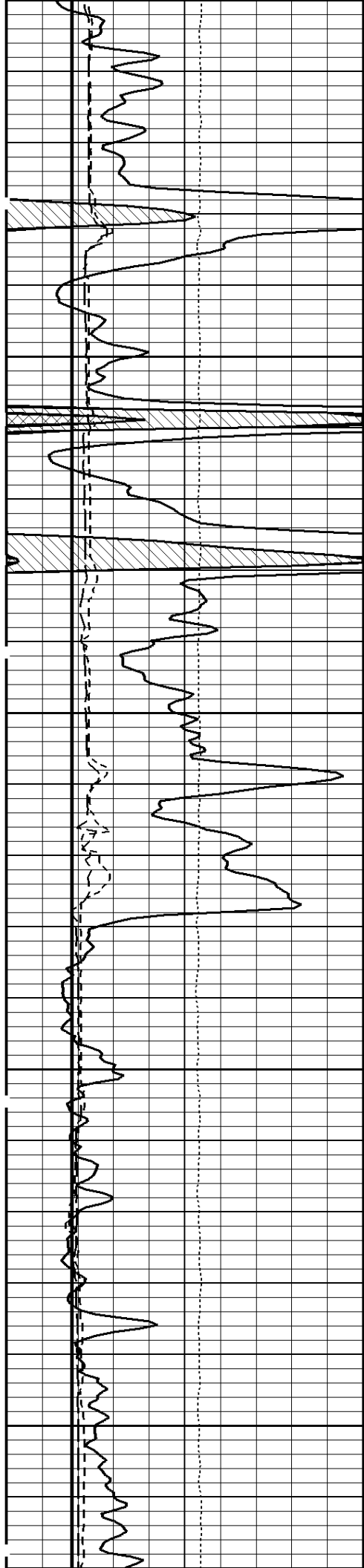
←LD CAL

←BIT

←CASING

←BIT

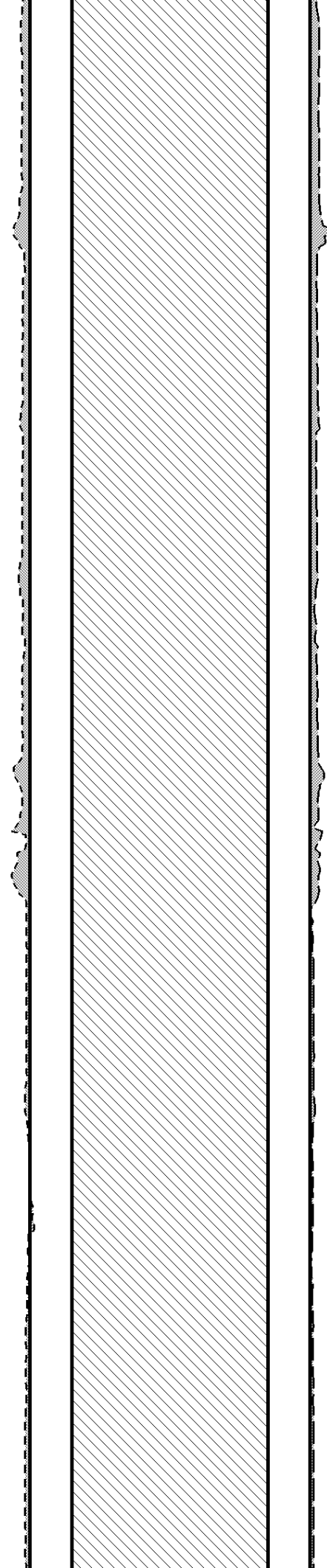
←CASING



4700

-300Cu.ft

4800



4900

5000

-200Cu. ft

100Cu. ft-

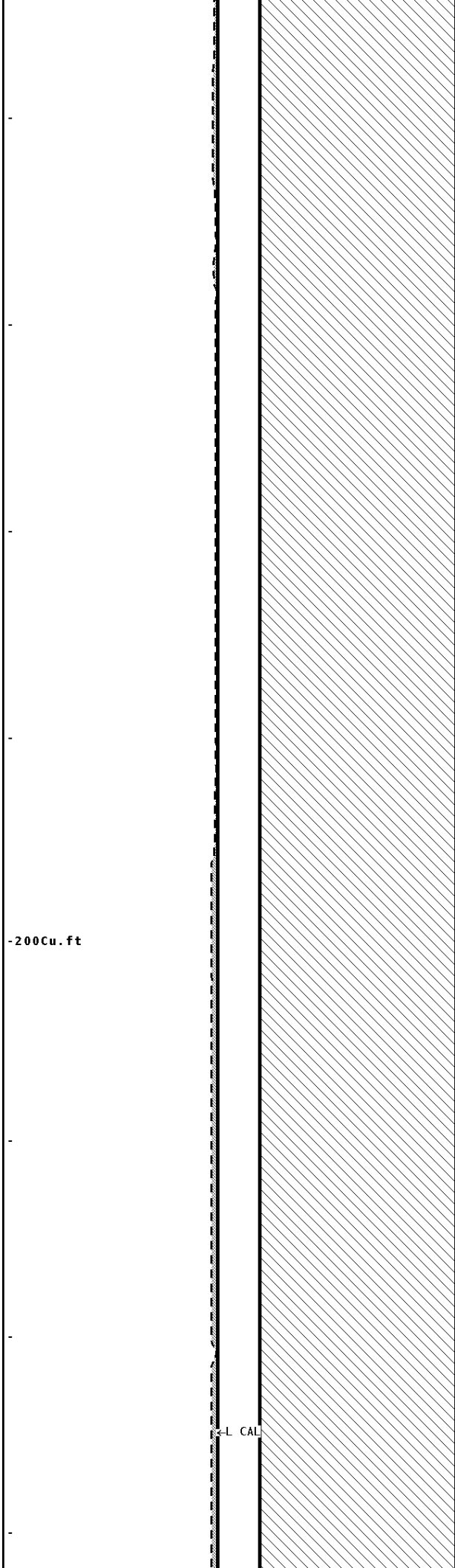
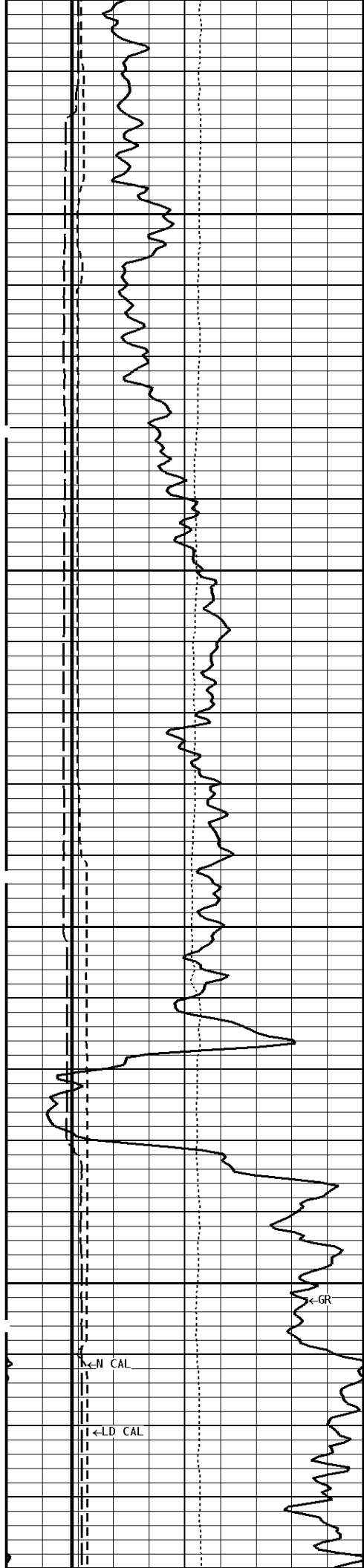
←N CAL

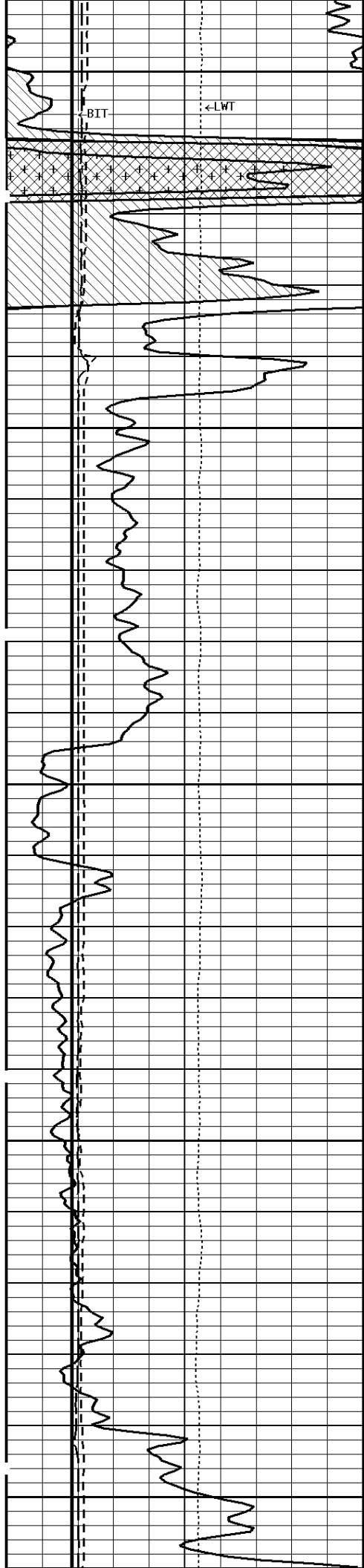
←LD CAL

←GR

←L CAL

←N CAL





5100

5200

5300

←BIT

←LWT

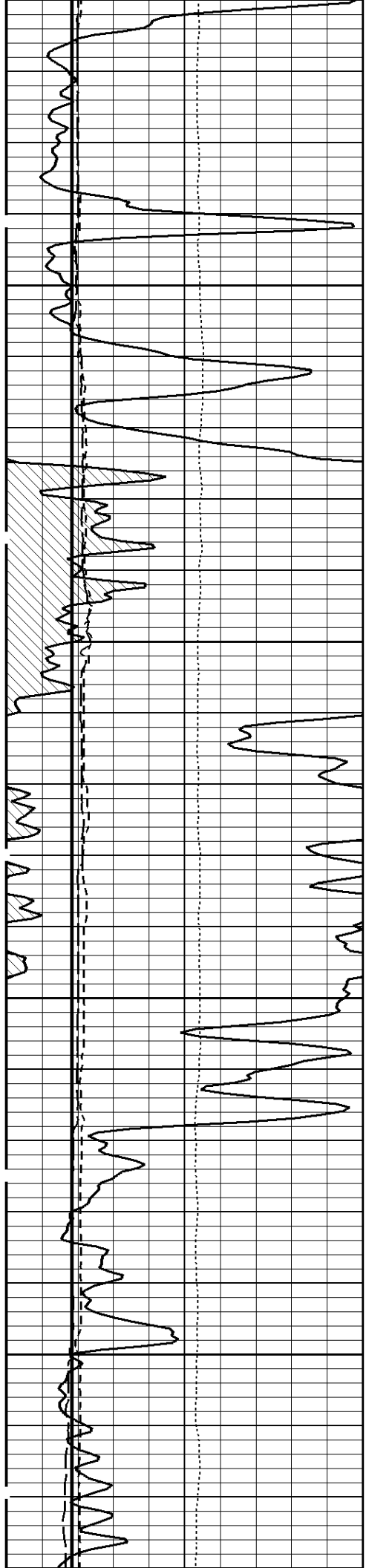
←BIT

←CASING

←BIT

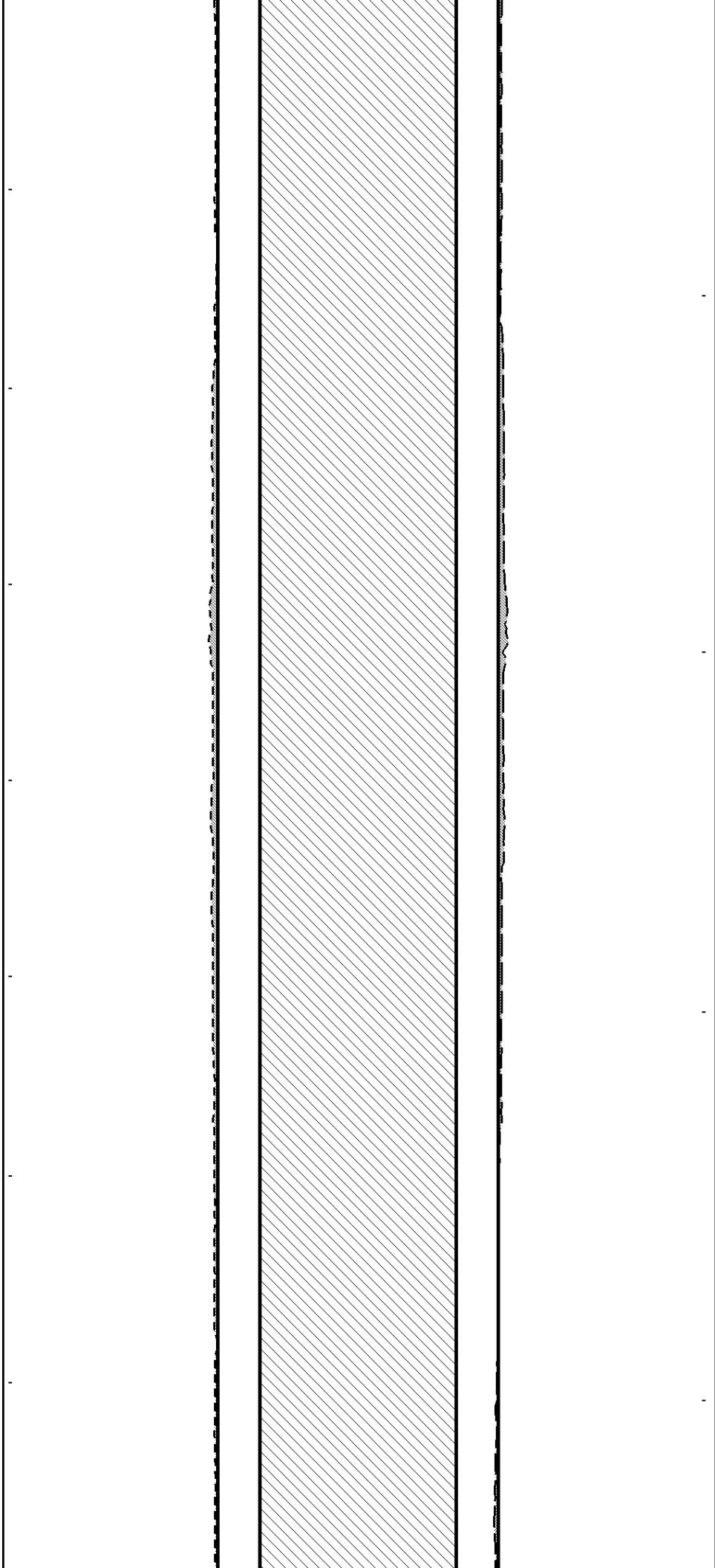
←CASING

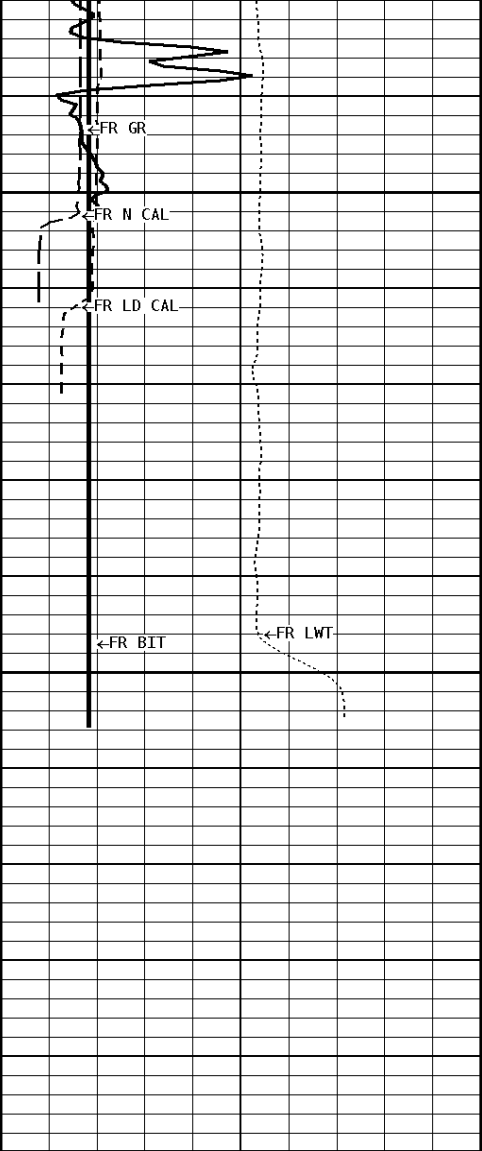
-100Cu. ft



5400

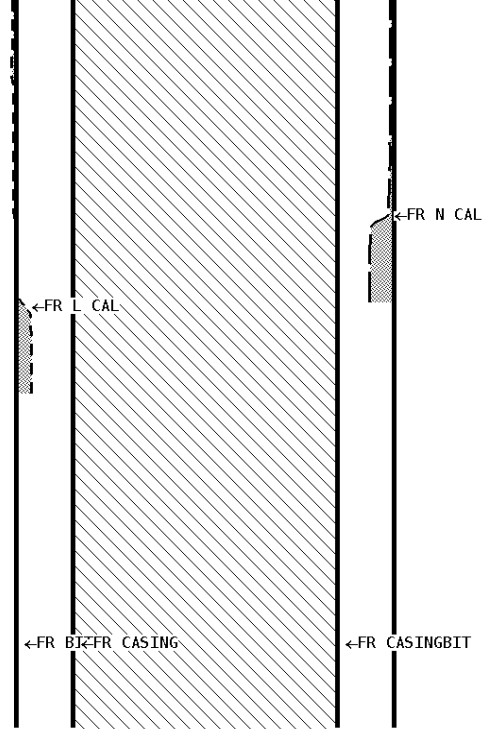
5500





5597
5600

File #1.2.3



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.
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*** 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					
CNT-AA					
Performed : 28-MAY-2014		Time : 10:00			
Sensor Suite : CALI-BCN		ID : NDT-AC-027			
	Jig - Measured		Jig - Calibrated		Units
	Ring#1	Ring#2	Ring#1	Ring#2	
CL # 1	8.0	14.6	6.0	12.0	IN.

Shop Calibration					
LDT-DA					
Performed : 28-May-2014		Time : 11:43			
Sensor Suite : CALI-LTH		ID : NDT-CA-137			
	Jig - Measured		Jig - Calibrated		Units
	Ring#1	Ring#2	Ring#1	Ring#2	
CL # 1	7.9	11.3	6.0	12.0	IN.



Company: CHIEFTAIN OIL CO., INC.
Well: ACHENBACH B #5
Location: 2970' FSL & 2310' FWL
Logged: 06-13-2014
K.B. Elev: 1413.0 Ft