

Tucker
ENERGY SERVICES

**BOREHOLE VOLUME
CALIPER LOG**

Company MTM PETROLEUM INC.
Well HUFFORD #1-23
Field
County KINGMAN
State KANSAS
Country USA
API No. 15-095-22287

File No : TUL-59782
Company : MTM PETROLEUM INC.
Well : HUFFORD #1-23
Field :
County : KINGMAN
State : KANSAS
Country : USA
API No : 15-095-22287

Location :
2310' FSL & 330' FEL
NE NE SE

LSD : Sect : 23 Twp : 30S Rge : 7W

Permanent Datum: GL Elevations: KB 1488.00 Ft CNT PIT
Drilling Measured From: KB DF 1487.00 Ft LDT
Log Measured From: KB GL 1478.00 Ft MLT
Above Permanent Datum: 10.00 Ft

Date	2014-08-19		
Run Number	1		
Depth--Driller	4282.0	Ft	
Depth--Logger	4282.0	Ft	
First Reading	4259.0	Ft	
Last Reading	3000.0	Ft	
Casing--Driller	225.0	Ft	
Casing--Logger	225.0	Ft	
Bit Size	7.875	In	
Casing Size	8.625	In	
Hole Fluid Type	WBM		
Density	9.2		
Fluid Loss	8.8		
PH/Viscosity	10.5	50.0	
Sample Source	MEASURED		
RM@Measured Temp.	1.500	@ 80 F	
RMF@Measured Temp	1.280	@ 80 F	
RMC@Measured Temp.	1.730	@ 80 F	
Source RMF/RMC	CALCULATED/CALCULATED		
RM@BHT	0.990	@ 125 F	
Time Circulation Stopped	2014-08-19 05:00		
Max Recorded Temp.	127	F	
Equipment/Base	T-126	TULSA	
Recorded By	S.K. DAVIS		
Witnessed By	A. YOUNG / N. MILLER		

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	4282.00	8.625	24.00	225.00	0.00

Run Number	1	
Date	2014-08-19	
Date/Time On Bottom	2014-08-19 09:00	
Depth to Fluid	0.0 Ft	
Salinity	4000.000	
RMF@BHT	0.840 @ 125 F	
RMC@BHT	1.140 @ 125 F	

Run Number 1

Comments

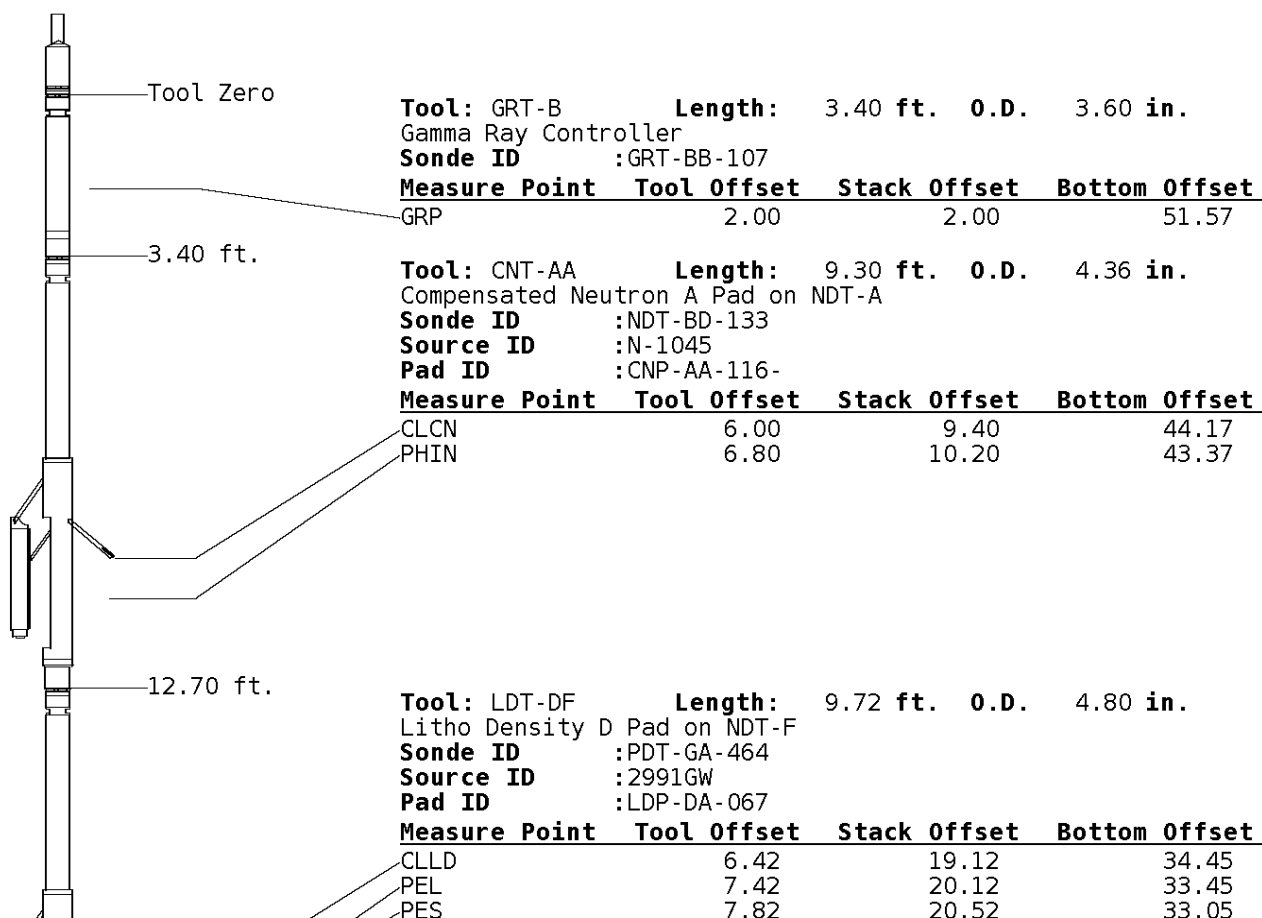
ALL PRESENTATION PER CUSTOMER REQUEST
 GRT,CNT,LDT,PIT RUN IN COMBINATION
 CALIPERS ORIENTED ON X-Y AXIS
 2.71 G/CC USED TO CALCULATE POROSITY
 ANNULAR & BOREHOLE VOLUME CALCULATED USING 5.5 PRODUCTION CASING
 PHIN IS CALIPER CORRECTED
 DETAIL SECTION FROM TD TO 3000'
 ANHYDRITE SECTION FROM 1150' TO 750'

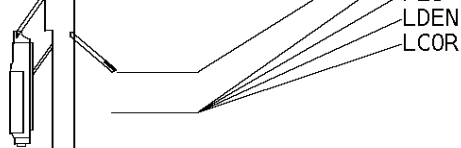
GRT; GRP,
 CNT; PHIN, CLCNIN
 LDT; PORL, LCORN, PECLN, LDENN, CLLDIN
 MLT; NOR.RF, INV.RF, MSCLPIN.
 PIT; ILD, ILM, SPU, SFLAEC, CIRD

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.



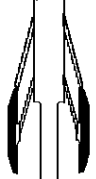


LDEN	7.62	20.32	33.25
LCOR	7.62	20.32	33.25

22.42 ft.

Tool: MST-DA **Length:** 9.66 ft. **O.D.** 6.00 in.
 Micro Spherically Focused (IC)
Sonde ID :MST-DA-057

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: mtm-huff-1-23-mstk-aug-19

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

Segment: V1.D1.S7 Accordion Shift main 10 td

Acquired: 2014-08/19 09:07 3.3.0-12594

Reference: 0

Processed: 2014-08/19 10:22 3.3.0-12594

**BIT SIZE
INCHES (IN)**

6 16

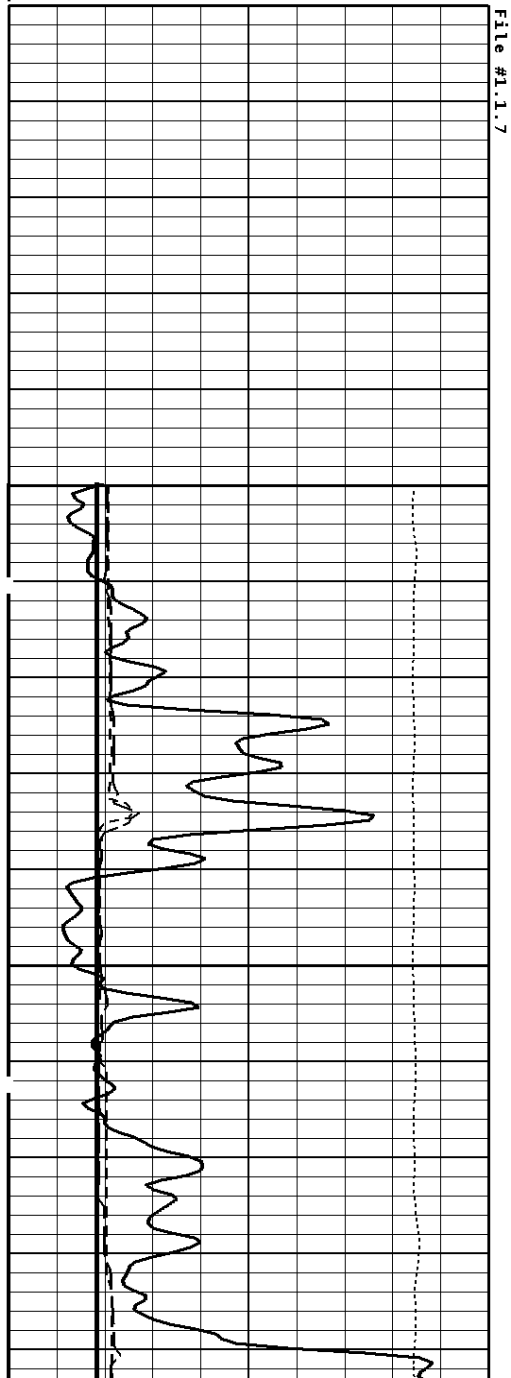
**Y CALIPER
INCHES (IN)**

16 26

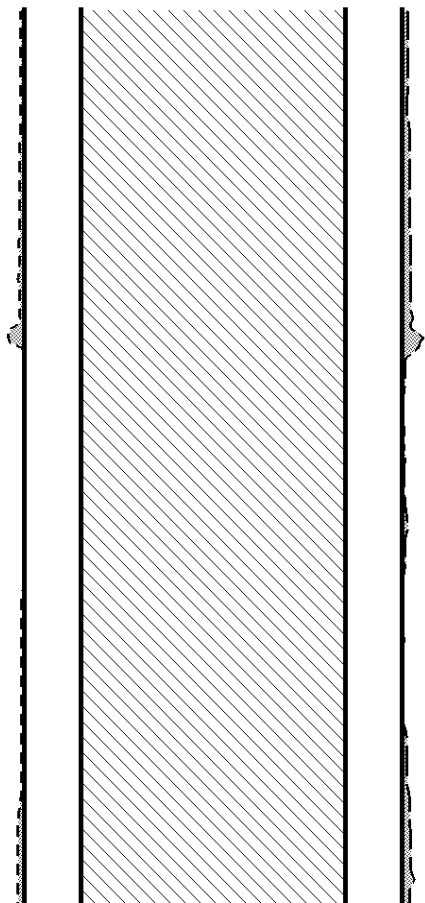
16	26
6	16
X CALIPER INCHES (IN)	
16	26
6	16
TENSION LBS	
10000	0
GAMMA RAY API UNITS	
150	300
0	150

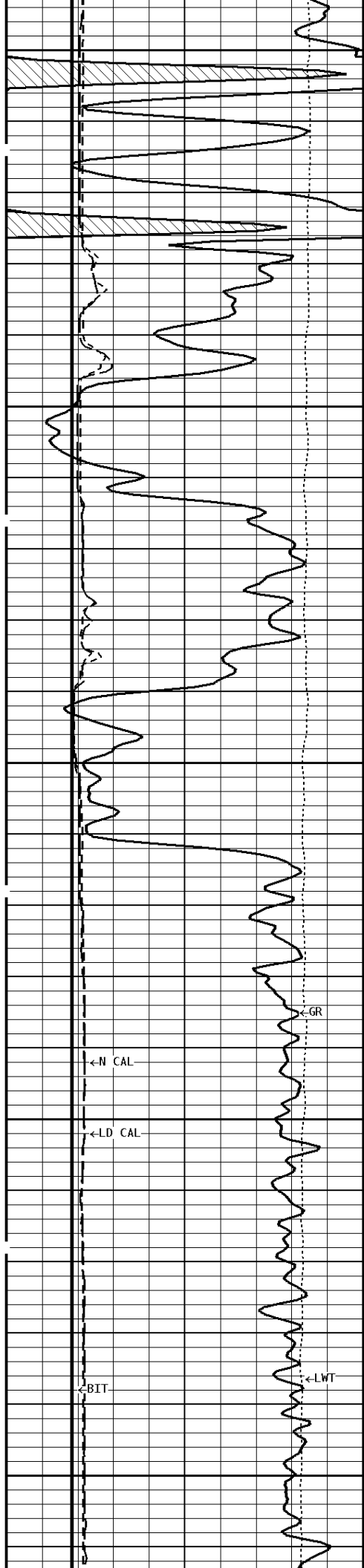
BOREHOLE VOLUME CU.FT	ANNULAR HOLE VOLUME CU.FT.
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1:240 MAIN SECTION



3000





3100

-400Cu.ft

3200

GR

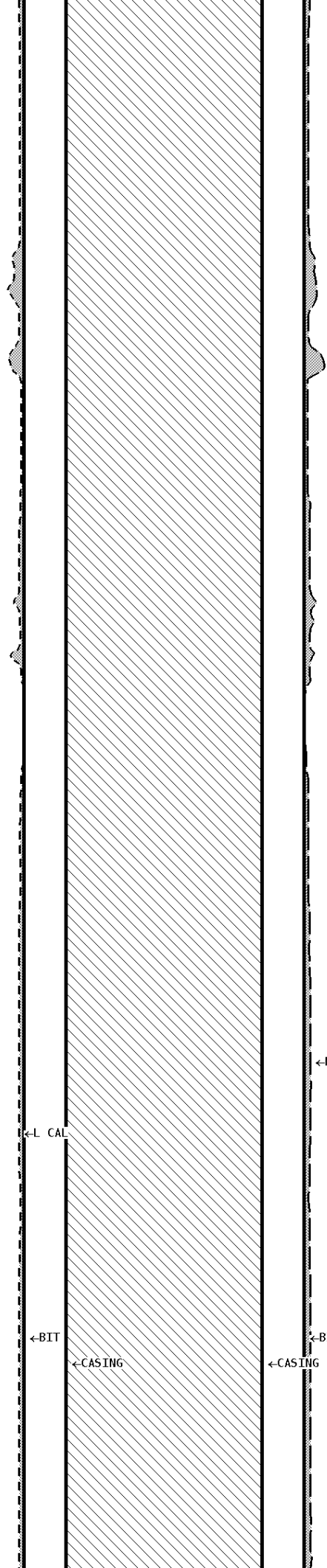
←N CAL

←LD CAL

←BIT

←LWT

3300



200Cu.ft

←N CAL

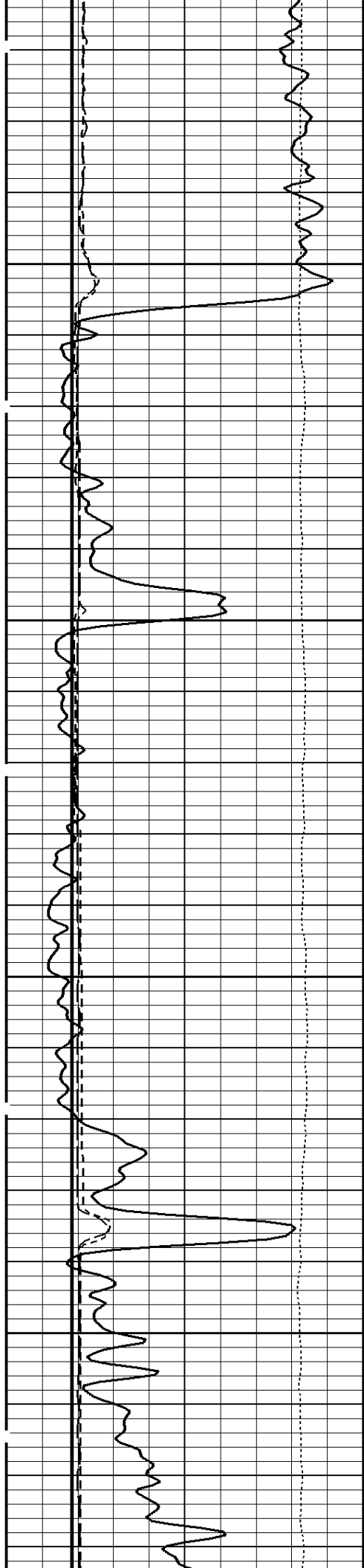
←L CAL

←BIT

←CASING

←BIT

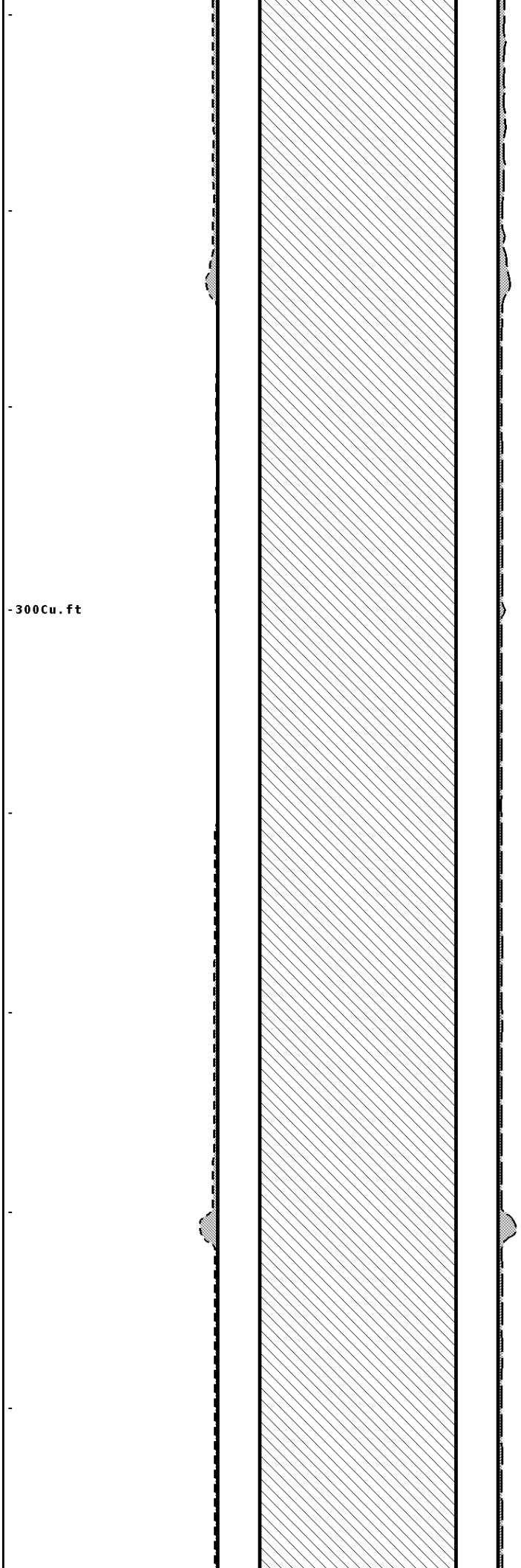
←CASING

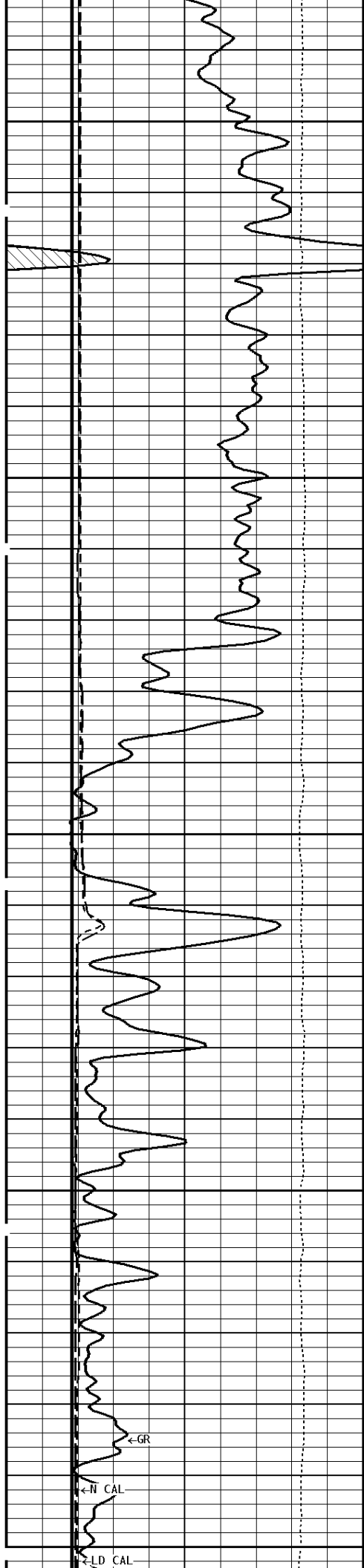


3400

-300Cu.ft

3500





3600

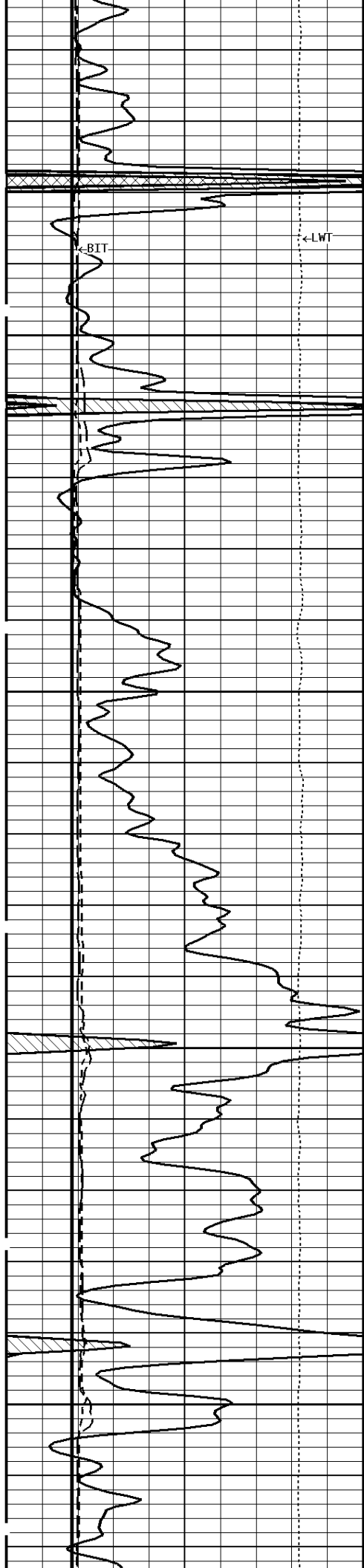
-200Cu.ft

3700

100Cu.ft-

←N CAL

←L CAL



3800

3900

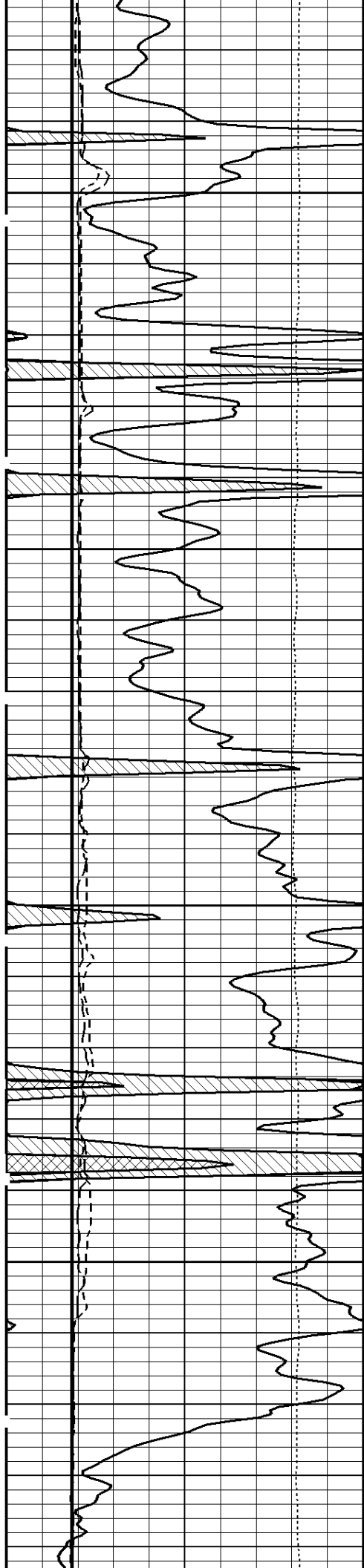
-100Cu.ft

←BIT

←CASING

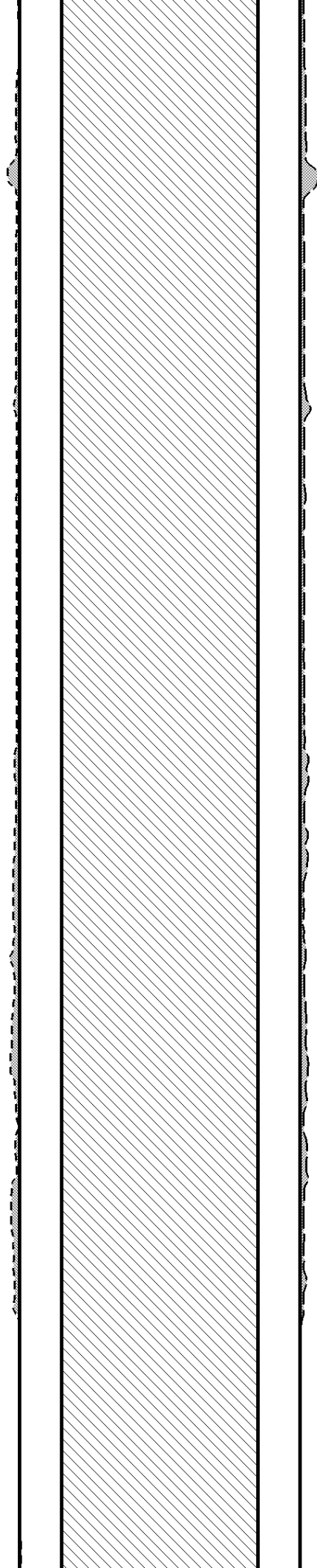
←BIT

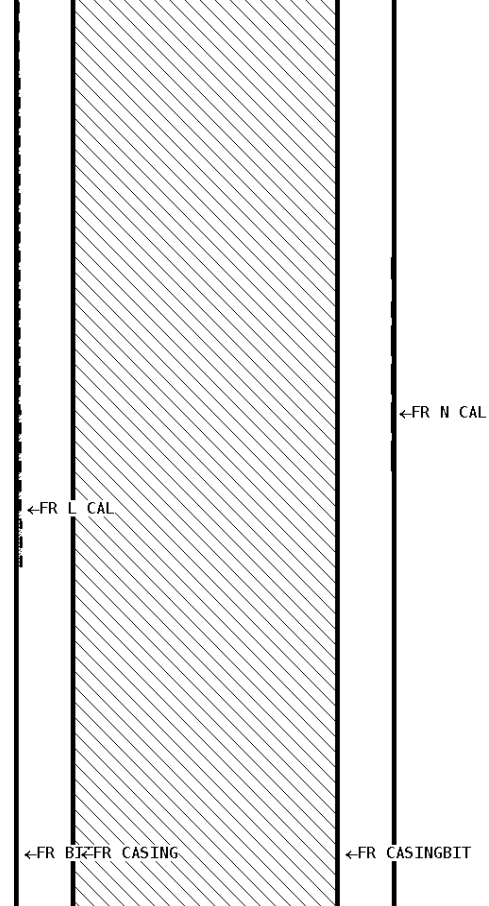
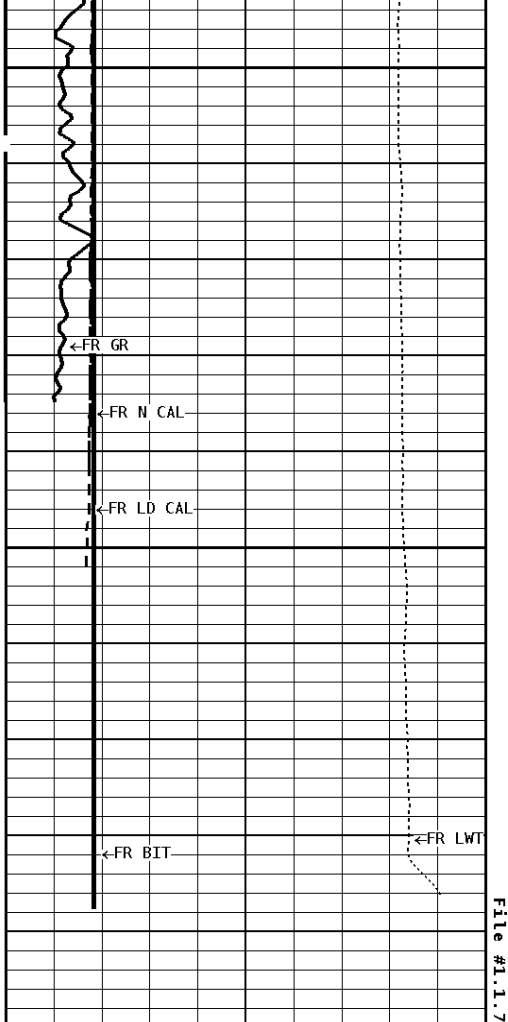
←CASING



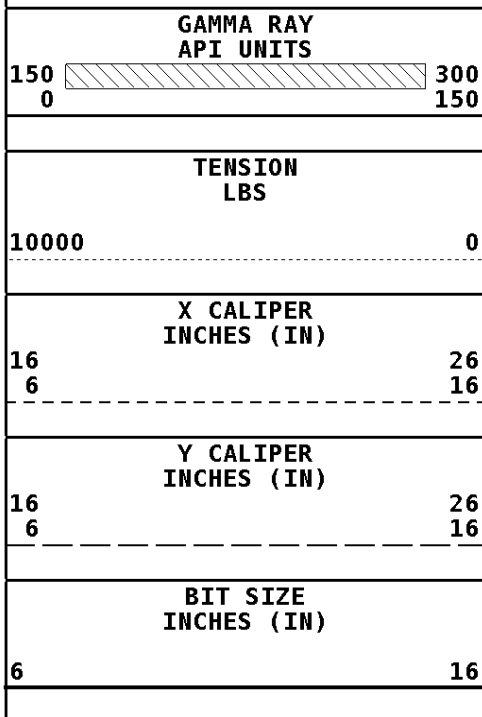
4000

4100





1:240 MAIN SECTION

BOREHOLE VOLUME
CU.FT

ANNULAR HOLE VOLUME
CU.FT.

*** 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		
	Background	Jig	Jig			
GR	75	381	175		GRAPI	
	CPS					
Shop Calibration CNT-AA						
Performed : 04-AUG-2014			Time : 11:39			
Sensor Suite : CALI-BCN			ID : NDT-BD-133			
	Jig - Measured		Jig - Calibrated		Units	
	Ring#1	Ring#2	Ring#1	Ring#2		
CL # 1	9.3	13.8	6.0	12.0	IN.	
Shop Calibration LDT-DF						
Performed : 04-AUG-2014			Time : 09:37			
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	11.2	6.0	12.0	IN.	



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ENERGY SERVICES

Company: MTM PETROLEUM INC.
Well: HUFFORD #1-23
Location: 2310' FSL & 330' FEL
Logged: 2014-08-19
K.B. Elev: 1488.0 Ft