



Weatherford[®]

MICRORESISTIVITY LOG

COMPANY		O'BRIEN RESOURCES, LLC	
WELL		PRATHER FARMS 22 #1	
FIELD		WILDCAT	
PROVINCE/COUNTY GOVE		U.S.A. / KANSAS	
COUNTRY/STATE		1002' FSL & 1965' FEL	
LOCATION		Permanent Datum GL, Elevation 2778 feet	
SEC	TWP	Other Services	Elevations:
22	14S	MAI/MFE	KB 2788.00
		MDN/MPD	DF 2786.00
		MSS	GL 2778.00
API Number	15-063-22108		
Permit Number			
Log Measured From	KB		
Drilling Measured From	KB @ 10 FEET		
Date	23-MAY-2013		
Run Number	ONE		
Service Order	3539055		
Depth Driller	4650.00	feet	
Depth Logger	4651.00	feet	
First Reading	4605.00	feet	
Last Reading	3500.00	feet	
Casing Driller	258.00	feet	
Casing Logger	260.00	feet	
Bit Size	7.875	inches	
Hole Fluid Type	CHEMICAL		
Density / Viscosity	9.30 lb/USg	53.00 CP	
PH / Fluid Loss	9.50	6.80 ml/30Min	
Sample Source	FLOWLINE		
Rm @ Measured Temp	1.43 @ 80.0	ohm-m	
Rmf @ Measured Temp	1.14 @ 80.0	ohm-m	
Rmc @ Measured Temp	1.72 @ 80.0	ohm-m	
Source Rmf / Rmc	CALC	CALC	
Rm @ BHT	0.93 @123.0	ohm-m	
Time Since Circulation	4 HOURS		
Max Recorded Temp	123.00	deg F	
Equipment / Base	13057	LIB	
Recorded By	ROB HOFFMAN		DEREK CARTER
Witnessed By	SEAN DEENIHAN		
JOB #	LIB13-147		

BOREHOLE RECORD			Last Edited: 23-MAY-2013 13:40
Bit Size inches	Depth From feet	Depth To feet	
7.875	260.00	4651.00	
CASING RECORD			
Type	Size inches	Depth From feet	Shoe Depth feet
SURFACE	8.625	0.00	260.00
			Weight pounds/ft
			24.00

REMARKS

- SOFTWARE ISSUE: WLS 13.05.9583.

- RUN 1: MCG, MML, MDN, MPD, MFE, MSS, MAI RUN IN COMBINATION.
 - HARDWARE: DUAL ECCENTRALISER USED ON MDN
 0.5 INCH STANDOFF USED ON MFE.
 TWO 0.5 INCH STANDOFFS USED ON MSS.
 0.5 INCH STANDOFF USED ON MAI.

- 2.71 G/CC LIMESTONE DENSITY MATRIX USED TO CALCULATE POROSITY.

- BOREHOLE RUGOSITY, TIGHT PULLS, AND WASHOUTS WILL AFFECT DATA QUALITY.

- ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.

- TOTAL HOLE VOLUME FROM TD TO 260 FEET: 1565 CU. FT.

- ANNULAR HOLE VOLUME WITH 4.5 INCH PRODUCTION CASING FROM TD TO 3500 FEET: 259 CU. FT.

- RIG: MAVERICK DRILLING #106

- ENGINEER: ROB HOFFMAN, DEREK CARTER

- OPERATOR(S): DAVID CANADAY

****SONIC WAS WORKING ON CASING CHECK, AFTER GOING DOWNHOLE, SONIC QUIT WORKING PROPERLY BEFORE WE RAN THE REPEAT. TRANSIT TIME READINGS WERE ERRATIC****

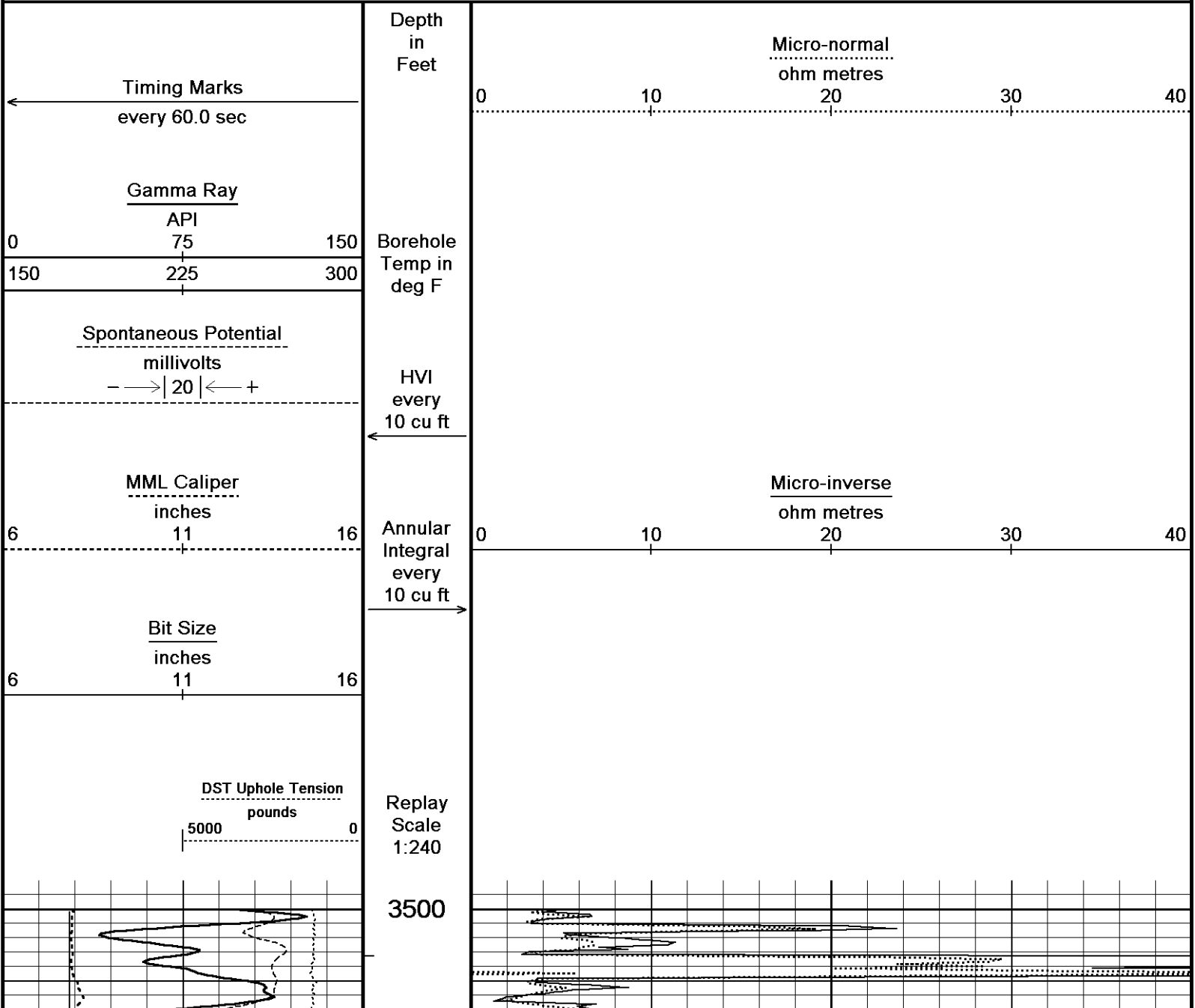
****CUSTOMER DECIDED THEY DID NOT WANT US TO RUN ANOTHER SONIC****

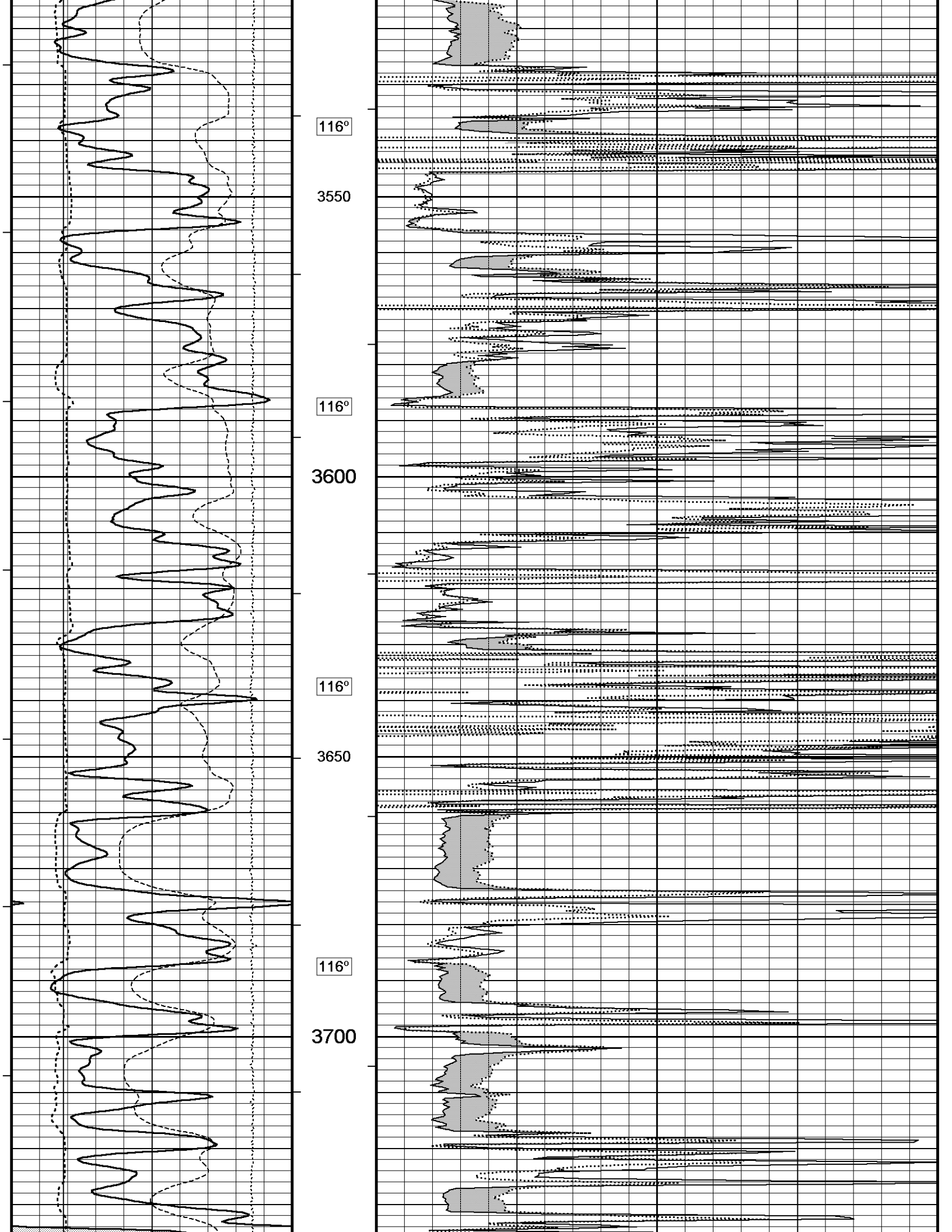
****NO SONIC DATA IS BEING PRESENTED****

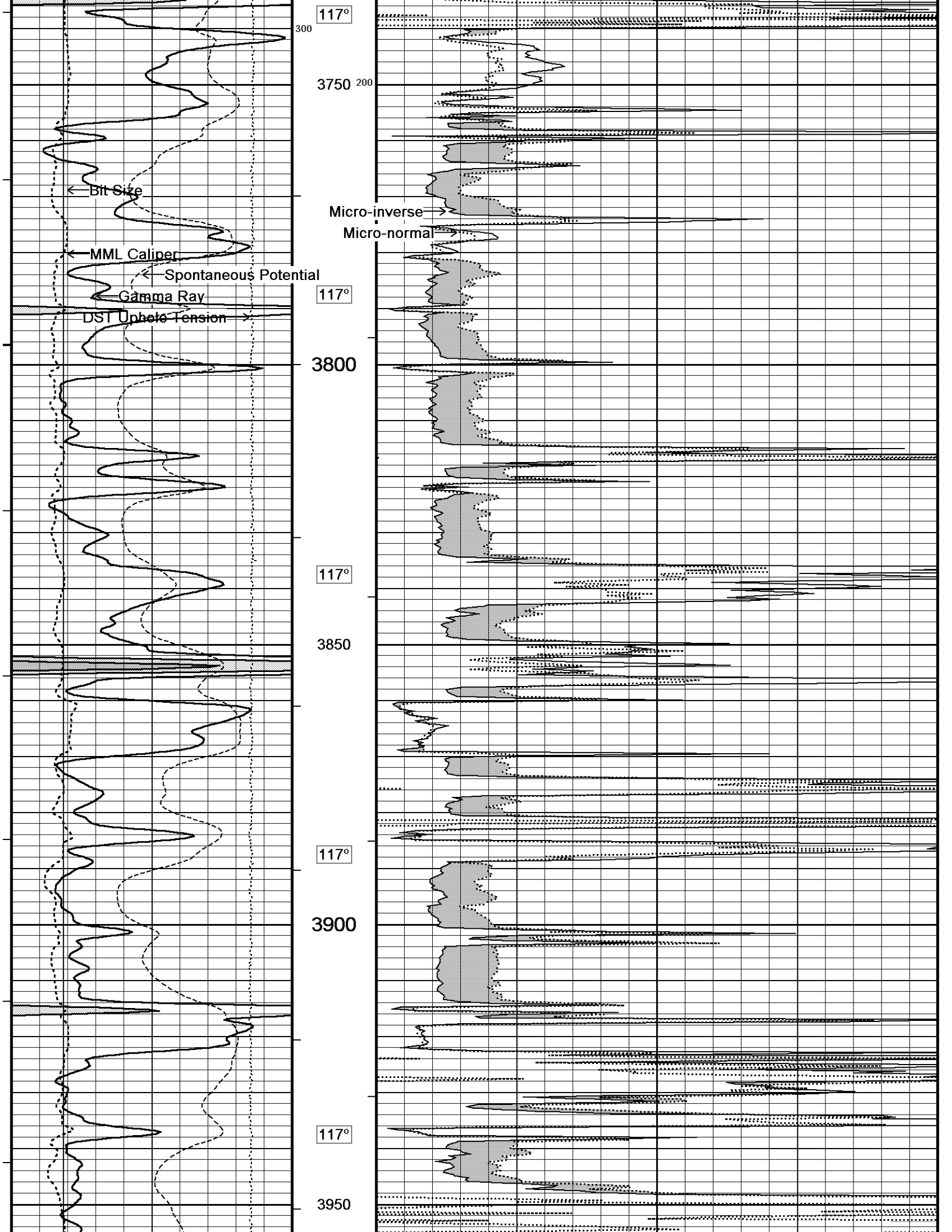
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

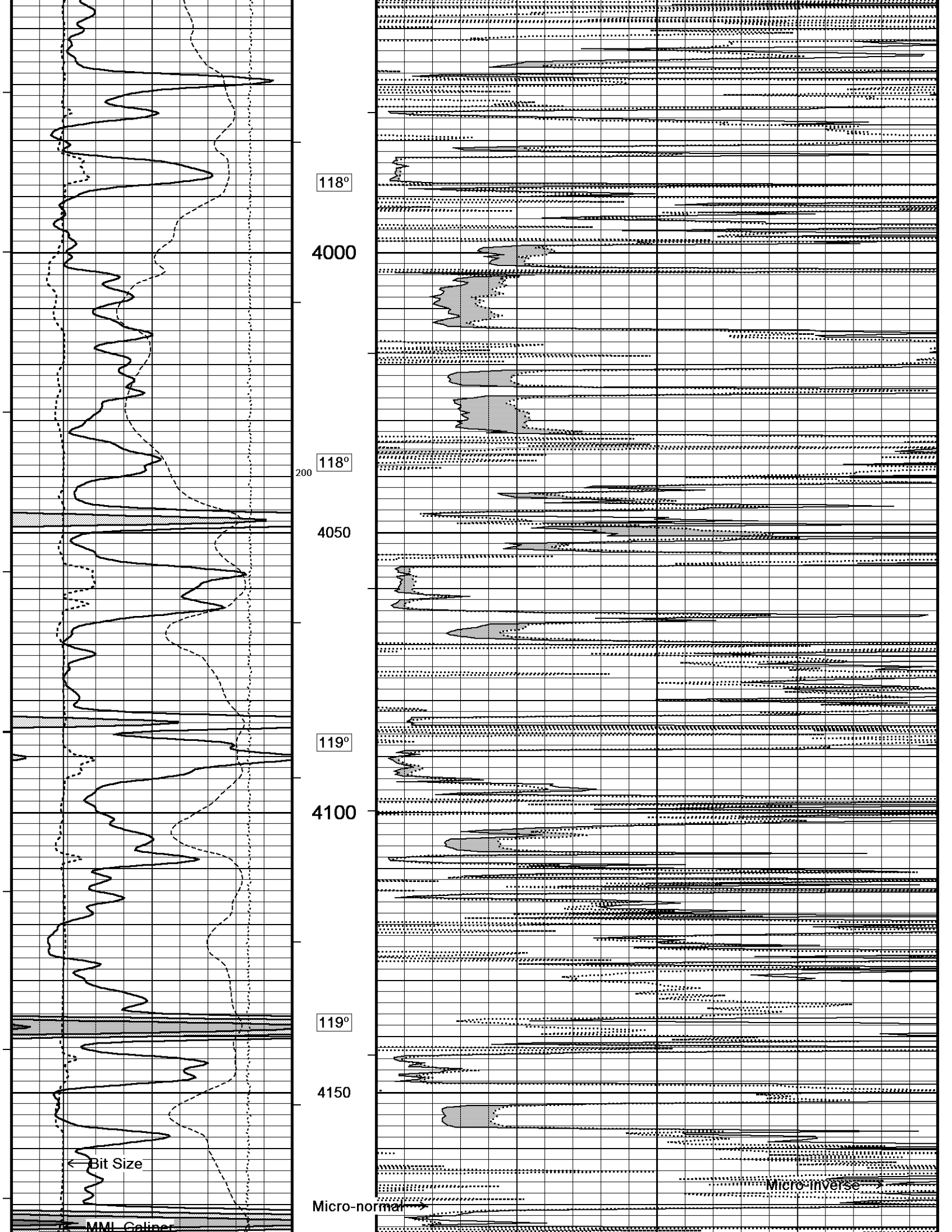
5 INCH MAIN

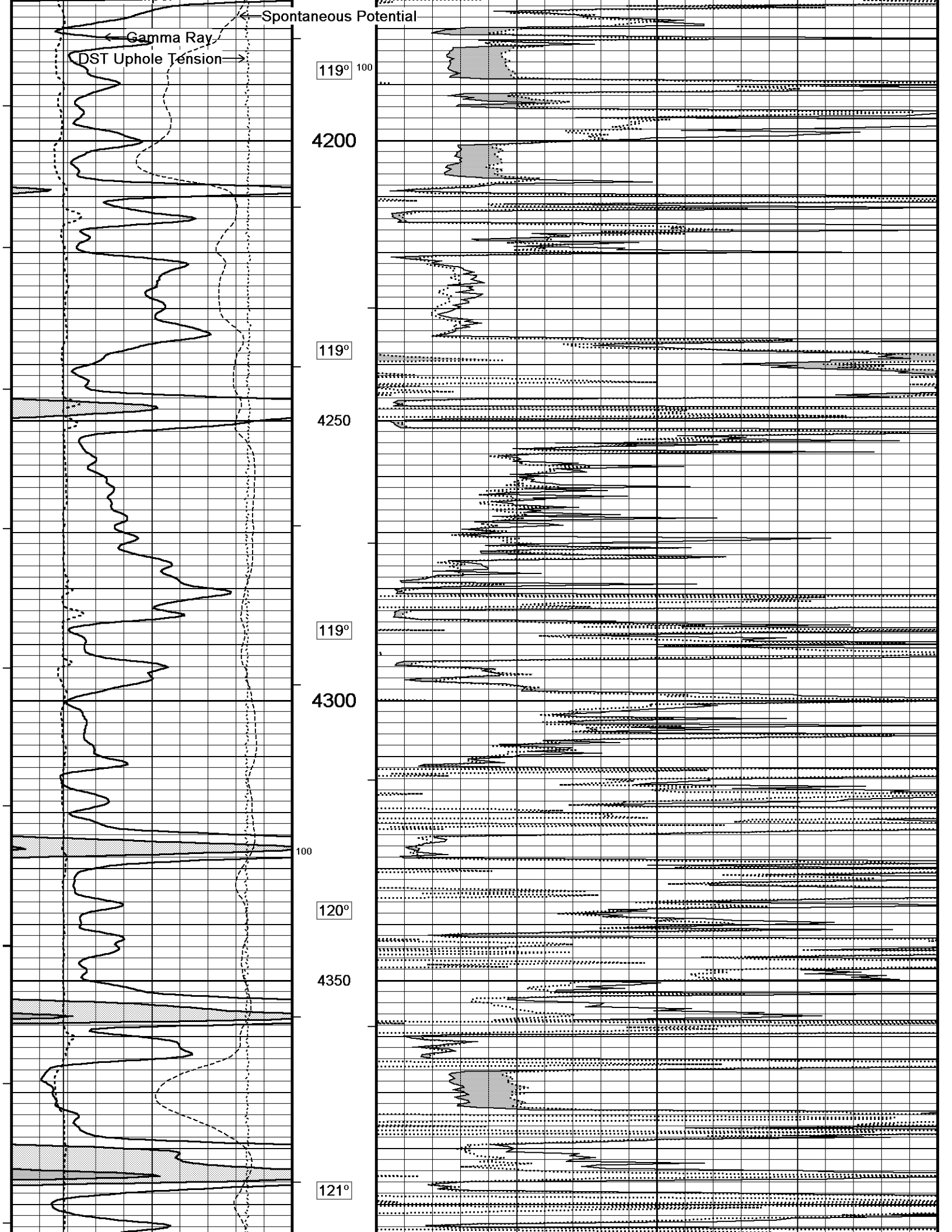
Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 23-MAY-2013 15:16
Filename: C:\Minimus 13.05.9583\L...\O'Brien Resources Prather Farms 22 #1_002 spooled section.dta Recorded on 23-MAY-2013 13:20
System Versions: Logged with 13.05.9583 Plotted with 13.05.9583

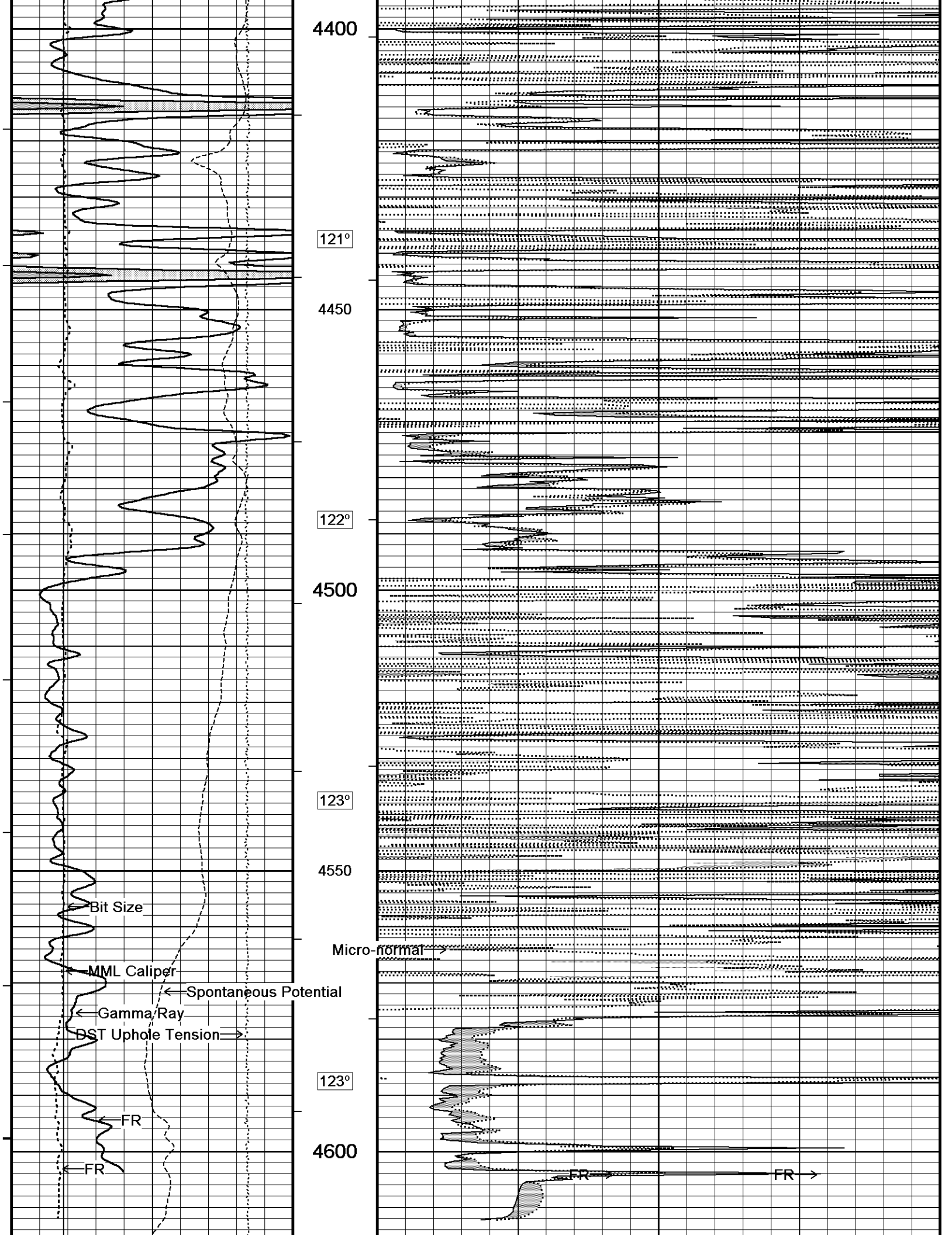






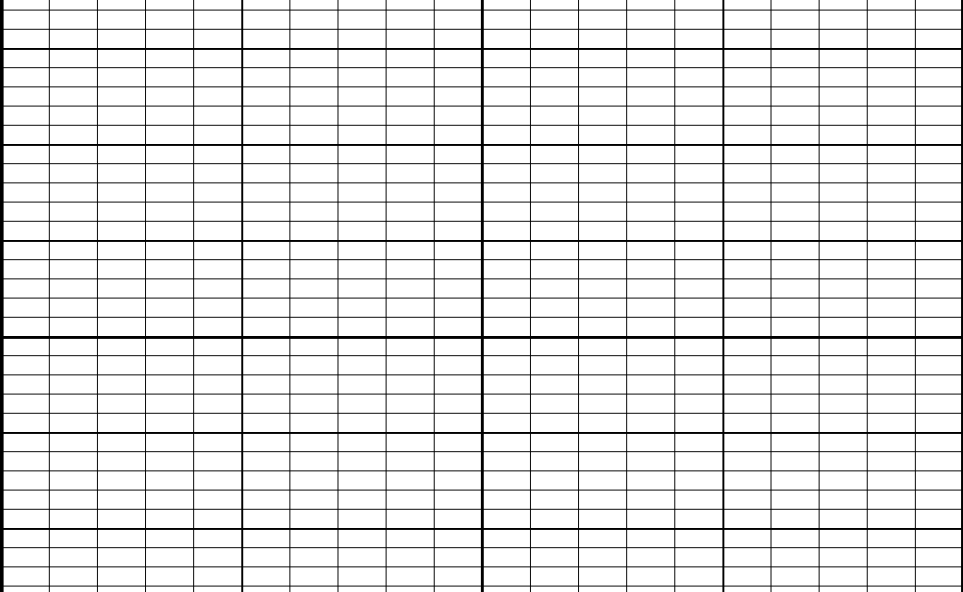






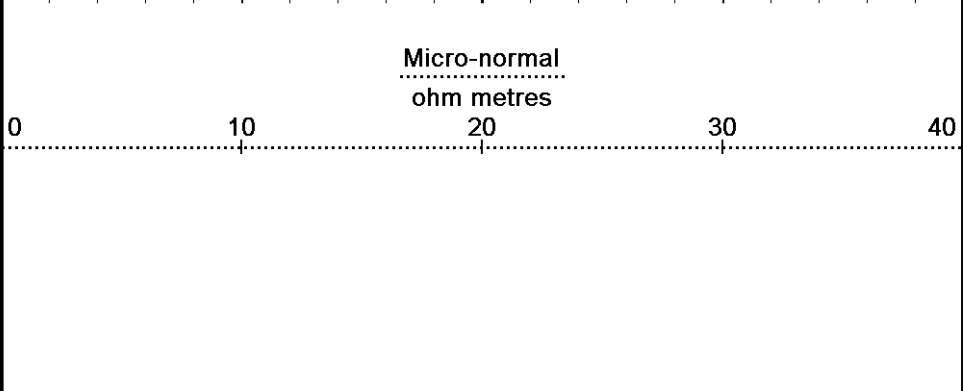


0
4650
4674
Depth in Feet



Timing Marks every 60.0 sec
Gamma Ray API
0 75 150
150 225 300

Borehole Temp in deg F



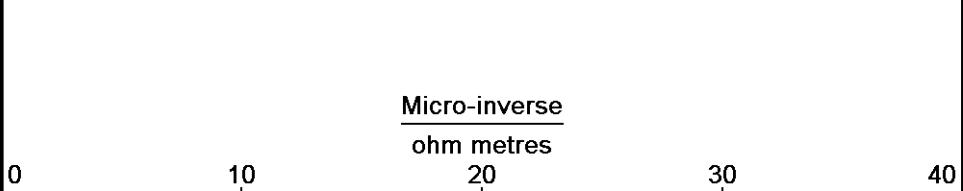
Spontaneous Potential millivolts
- - -> | 20 | <- - +

HVI every 10 cu ft



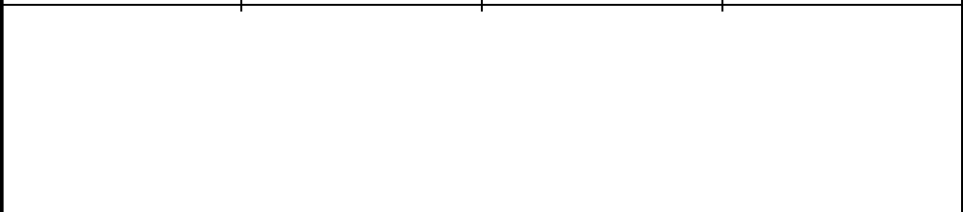
MML Caliper inches
6 11 16

Annular Integral every 10 cu ft



Bit Size inches
6 11 16

Replay Scale 1:240



DST Uphole Tension pounds
5000 0

Replay Scale 1:240

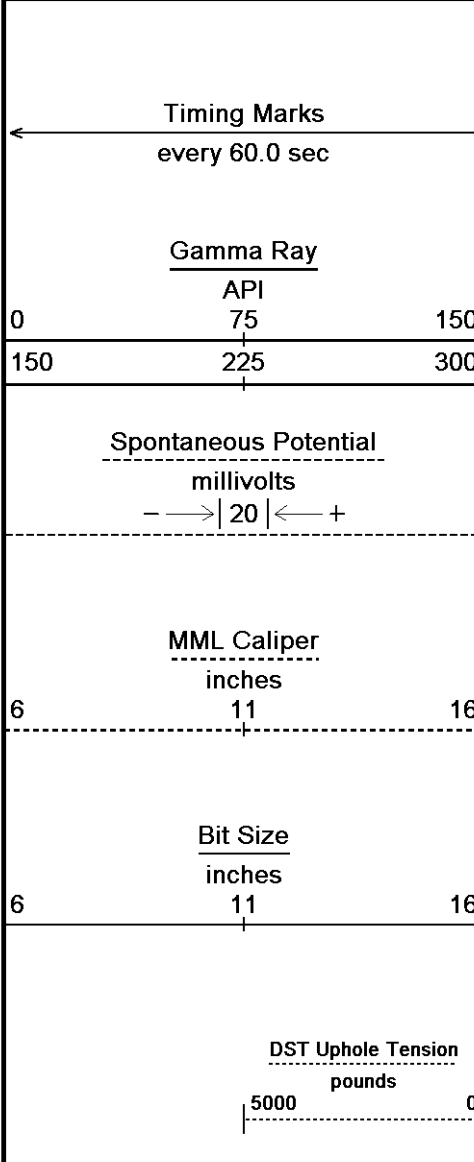


Depth Based Data - Maximum Sampling Increment 10.0cm
 Filename: C:\Minimus 13.05.9583\Logs\O'Brien Resources Prather Farms 22 #1_002 spooled section.dta
 System Versions: Logged with 13.05.9583 Plotted with 13.05.9583
 Plotted on 23-MAY-2013 15:16
 Recorded on 23-MAY-2013 13:20

↑ 5 INCH MAIN ↑

↓ REPEAT SECTION ↓

Depth Based Data - Maximum Sampling Increment 10.0cm
 Filename: C:\Minimus 13.05.9583\Logs\O'Brien Res... \O'Brien Resources Prather Farms 22 #1_001.dta
 System Versions: Logged with 13.05.9583 Plotted with 13.05.9583
 Plotted on 23-MAY-2013 15:16
 Recorded on 23-MAY-2013 11:55



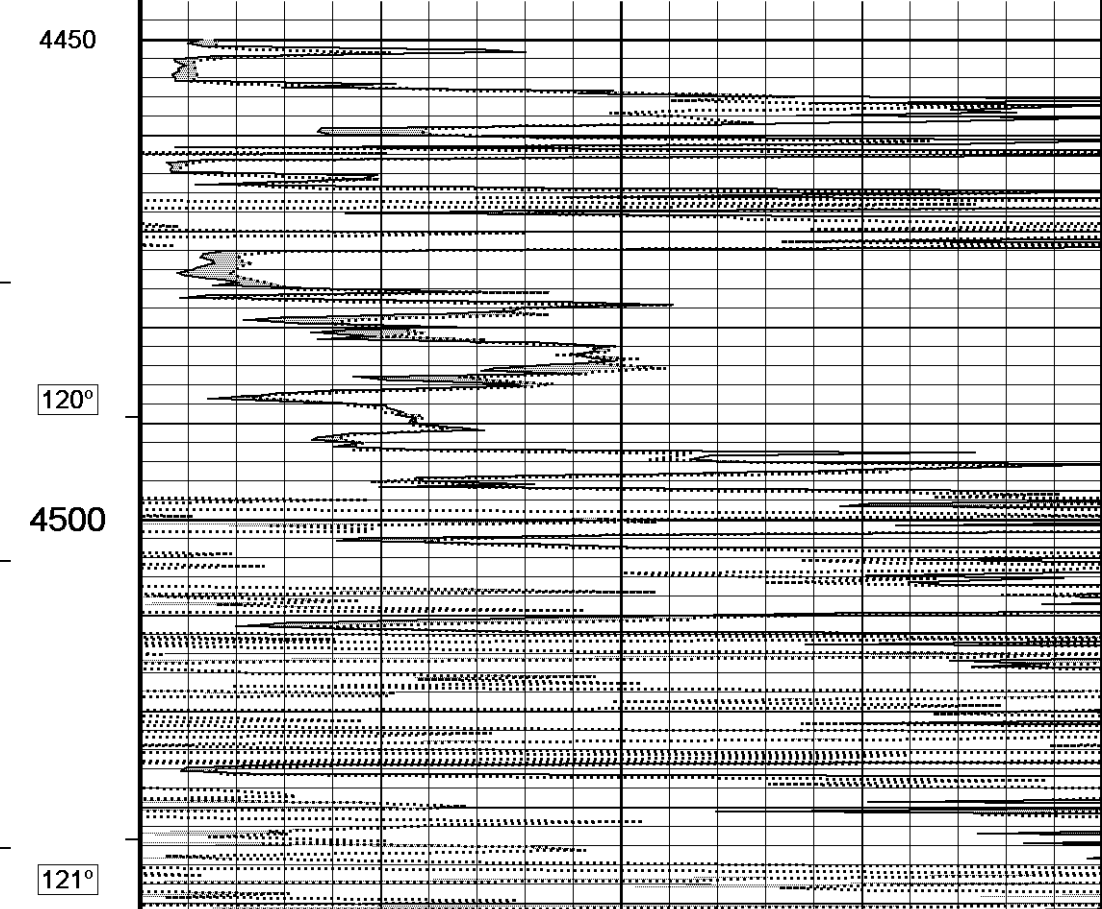
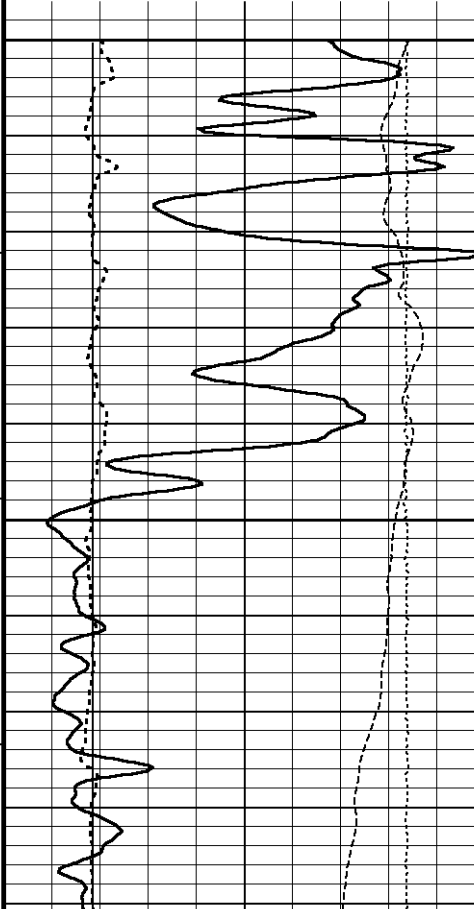
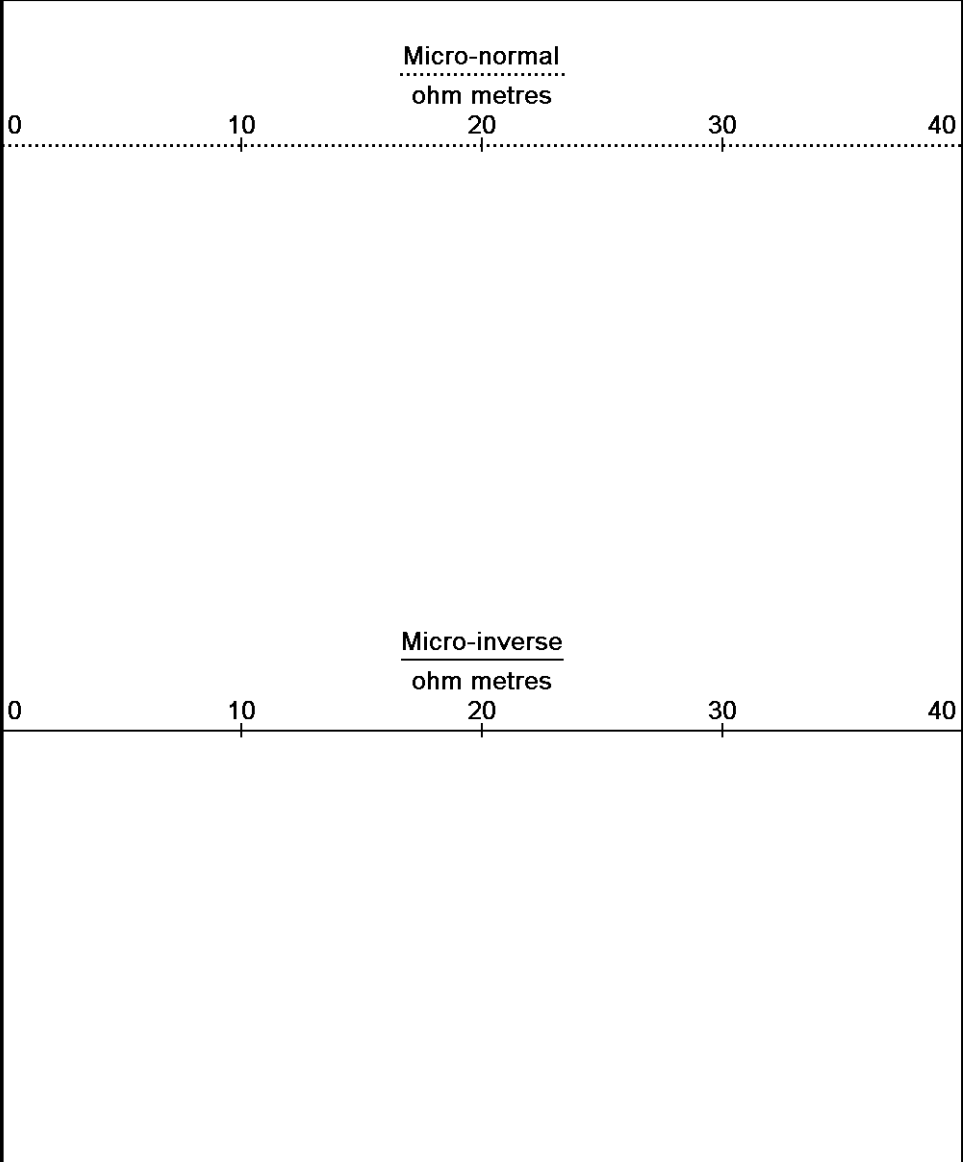
Depth in Feet

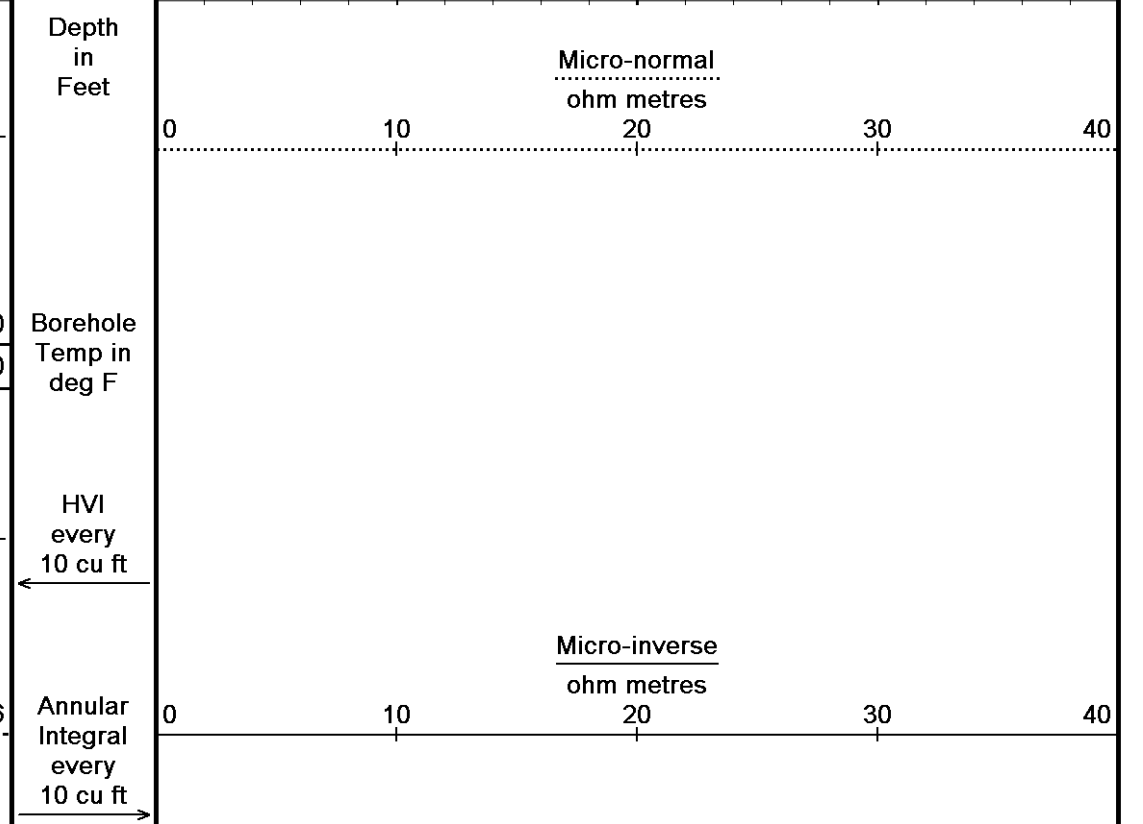
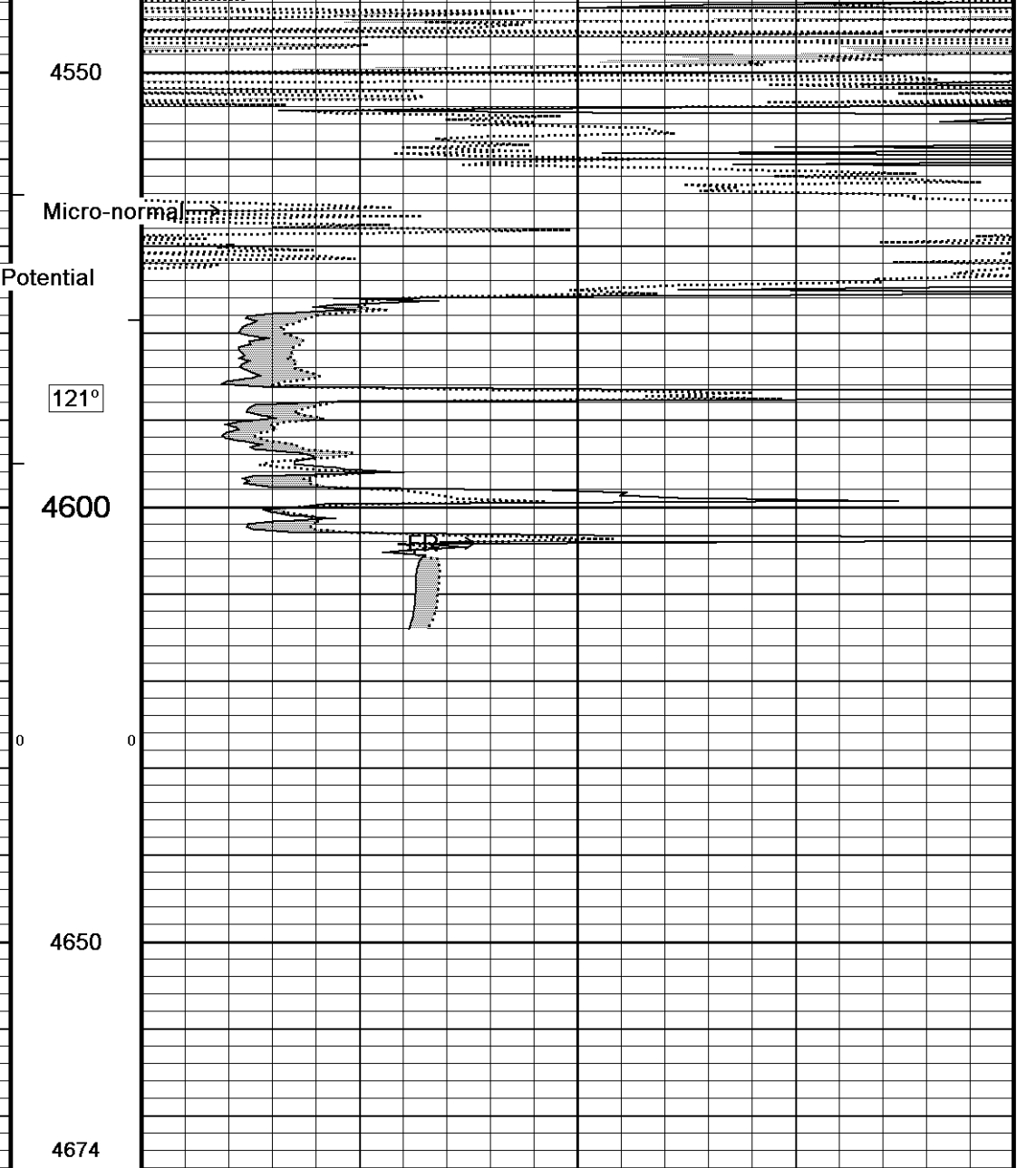
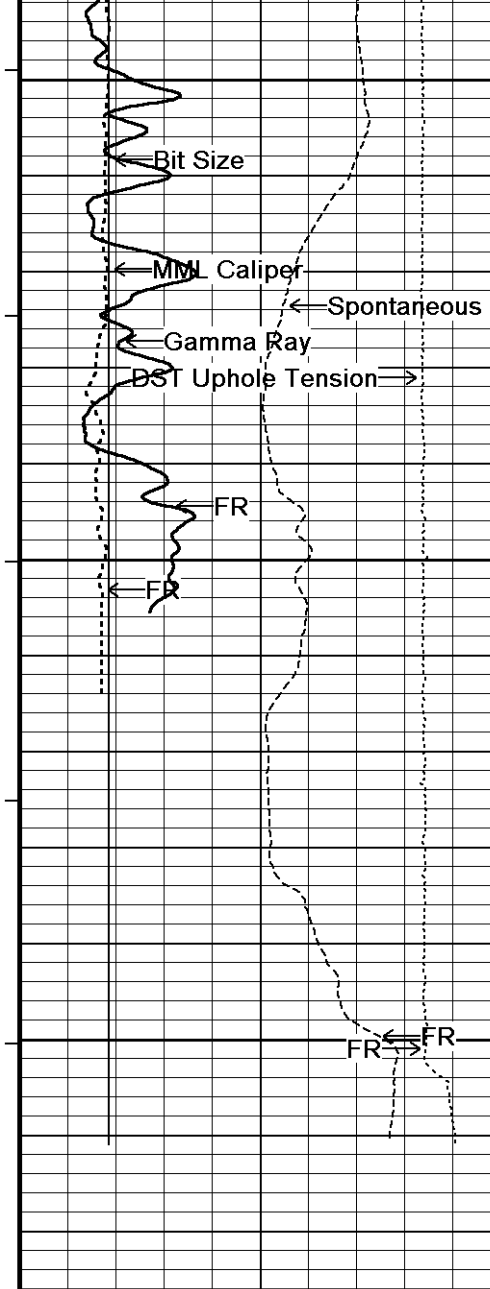
Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240





Timing Marks every 60.0 sec

Gamma Ray
 API
 0 75 150
 150 225 300

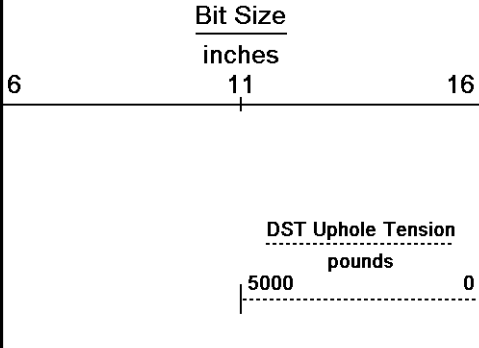
Spontaneous Potential
 millivolts
 - -> | 20 | <- +

MML Caliper
 inches
 6 11 16

Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft



Replay
Scale
1:240

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 23-MAY-2013 15:16
 Filename: C:\Minimus 13.05.9583\Log\O'Brien Res...\O'Brien Resources Prather Farms 22 #1_001.dta Recorded on 23-MAY-2013 11:55
 System Versions: Logged with 13.05.9583 Plotted with 13.05.9583

↑ **REPEAT SECTION** ↑

BEFORE SURVEY CALIBRATION

C:\Minimus 13.05.9583\Log\O'Brien Resources Prather Farms 2...\O'Brien Resources Prather Farms 22 #1_002 spooled section.dta

General Constants All 000

Last Edited on 23-MAY-2013,09:24

General Parameters

Mud Resistivity	1.430	ohm-metres
Mud Resistivity Temperature	80.000	degrees F
Water Level	0.000	feet
Borehole Fluid Processing	Wet Hole	

Hole/Annular Volume and Differential Caliper Parameters

HVOL Method	Single Caliper	
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	N/A	
Annular Volume Diameter	4.500	inches
Caliper for Differential Caliper	Density Caliper	

Rwa Parameters

Porosity used	Crossplot Porosity
Resistivity used	Array Ind. Six Res Rt
RWA Constant A	1.000
RWA Constant M	2.000
SW/APOR Tool Source	0.000

Gamma Calibration MCG-B 34

Field Calibration on 21-MAY-2013 10:30

	Measured	Calibrated (API)
Background	72	49
Calibrator (Gross)	1130	774
Calibrator (Net)	1058	725

Gamma Constants MCG-B 34

Last Edited on 21-MAY-2013,10:05

Gamma Calibrator Number	GRC38	
Mud Density	1.00	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl		kppm
K Mud Type	Chloride	
K Mud Concentration	0.00	%

High Resolution Temperature Calibration MCG-B 34

Field Calibration on 19-APR-2013,18:21

	Measured	Calibrated(Deg F)
Lower	50.00	50.00
Upper	75.00	75.00

High Resolution Temperature Constants MCG-B 34

Last Edited on 24-APR-2013,09:25

Pre-filter Length	11
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Micro Normal and Micro Inverse Calibration MML-A 16

Base Calibration on 16-MAY-2013 12:07

Base Calibration

Channel	Measured		Calibrated (ohm-m)	
	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	12.1	60.2	5.0	25.0
Micro Inverse	15.6	78.4	5.0	25.0
Channel	Base Check (ohm-m)		Field Check (ohm-m)	
Micro Normal	62.9		62.9	
Micro Inverse	48.2		48.2	

Micro Normal and Micro Inverse Constants MML-A 16

Last Edited on 23-MAY-2013,09:23

Pad Type	8-12 in Soft Rubber Inflatable 006-9011-159		
Micro Normal K Factor	1.0000		
Micro Inverse K Factor	1.0000		
Standoff Offset	N/A	inches	

Caliper Calibration MML-A 16

Base Calibration on 16-MAY-2013 11:56
Field Calibration on 21-MAY-2013 10:04

Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	14258	5.98
2	17442	7.97
3	20671	9.86
4	24432	11.92
5	0	0.00
6	N/A	N/A
Field Calibration		
	Measured Caliper (in)	Actual Caliper (in)
	6.07	5.98

Caliper Calibration MPD-B 31

Base Calibration on 19-MAY-2013 17:48
Field Calibration on 21-MAY-2013 09:59

Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	17088	3.99
2	25888	5.98
3	34607	7.97
4	42944	9.86
5	52301	11.92
6	N/A	N/A
Field Calibration		
	Measured Caliper (in)	Actual Caliper (in)
	6.04	5.98

DOWNHOLE EQUIPMENT

C:\Minimus 13.05.9583\Log\O'Brien Resources Prather Farms 2...\O'Brien Resources Prather Farms 22 #1_002 spooled section.dta

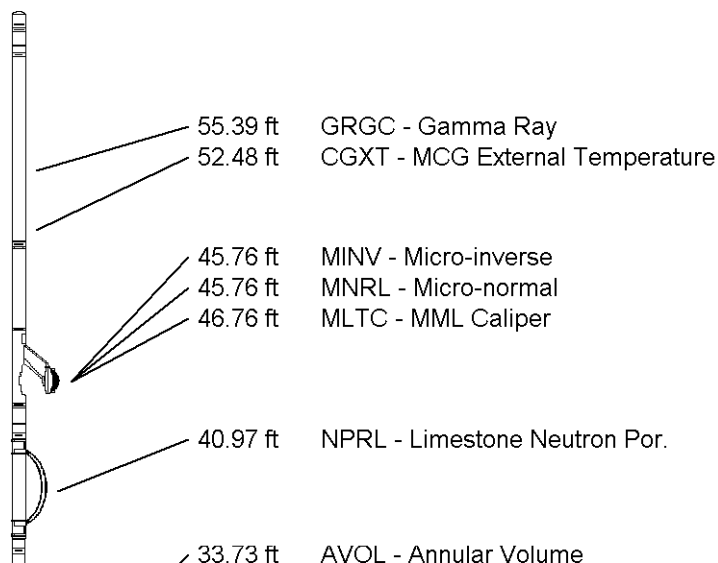
3/8" Triple Cone Cable Head (MCB C A)
MCB-C.A.5 LG: 1.58 ft WT: 15.4 lb OD: 2.24 in

Compact Comms Gamma
MCG-B 34 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Micro-log
MML-A 16 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Neutron
MDN-A.B 65 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

Compact Density/Caliper



55.39 ft GRGC - Gamma Ray
52.48 ft CGXT - MCG External Temperature

45.76 ft MINV - Micro-inverse
45.76 ft MNRL - Micro-normal
46.76 ft MLTC - MML Caliper

40.97 ft NPRL - Limestone Neutron Por.

33.73 ft AVOL - Annular Volume

MPD-B 31 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

Compact Focused Electric

MFE-B.J 352 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

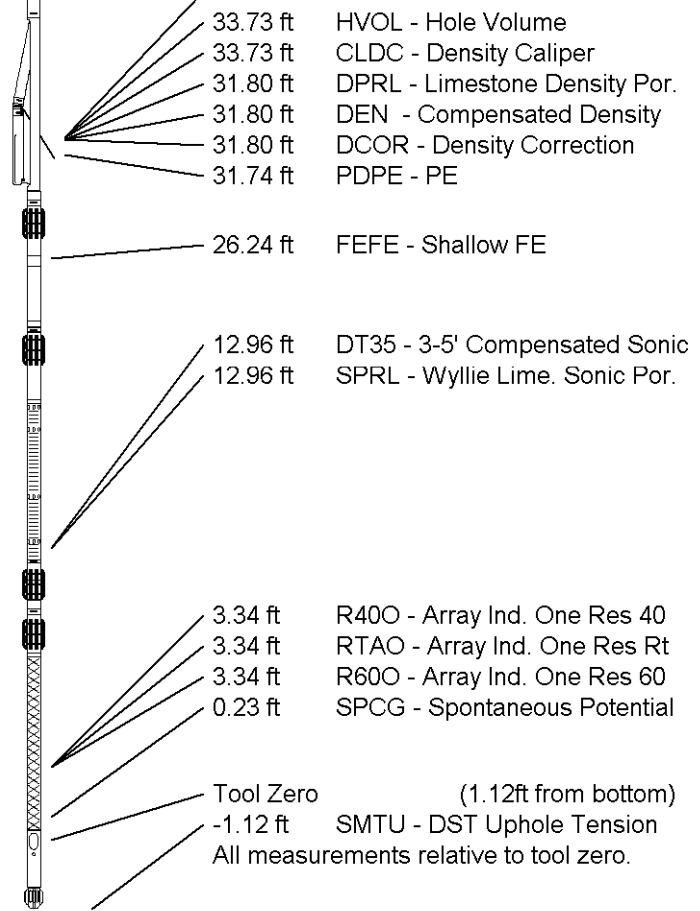
Compact Sonic

MSS-C.K 330 LG: 12.52 ft WT: 72.8 lb OD: 2.24 in

Compact Induction

MAI-A.A 45 LG: 11.79 ft WT: 48.5 lb OD: 2.24 in

Total Length: 63.24 ft Weight: 471.8 lb



COMPANY O'BRIEN RESOURCES, LLC
 WELL PRATHER FARMS 22 #1
 FIELD WILDCAT
 PROVINCE/COUNTY GOVE
 COUNTRY/STATE U.S.A. / KANSAS

Elevation Kelly Bushing	2788.00	feet	First Reading	4605.00	feet
Elevation Drill Floor	2786.00	feet	Depth Driller	4650.00	feet
Elevation Ground Level	2778.00	feet	Depth Logger	4651.00	feet



Weatherford[®]

MICRORESISTIVITY LOG