



MICROLOG

COMPANY
WELL
FIELD
PROVINCE
COUNTRY
LOCATION

PARAMOUNT RESOURCES LTD
PARA ET AL CAMERON L-73
CAMERON HILLS
NORTHWEST TERRITORIES
CANADA
300/L-73-60-10-117-15

NEB COPY
FINAL PRINT

LSD SEC TWP RGE PHOTO DENSITY Other Services

API Number 1159 ARRAY INDUCTION DUAL SPACED NEUTRON
Permit Number 1159 Elevation 770.8 metres XY CALIPERS
COMPENSATED SONIC

Permanent Datum QUND LEVEL Elevation 770.8 metres
Log Measured From 4.0 Above Permanent Datum
Drilling Measured From KELLY BUSHING

Date 27-FEB-2007 Elevations KB 774.80 metres
DF 770.80 metres
GL

Run Number 1 metres

Depth Driller 1450.00 metres

Depth Logger 1448.60 metres

First Reading 1436.20 metre

Last Reading 1300.00 metres

Casing Driller 436.00 metres

Casing Logger 435.00 metres

Bit Size 200.00 mm

Hole Fluid Type GEL-CHEM

Density / Viscosity 1180.0 kg/m3 85.00 sec/L

PH / Fluid Loss 10.00 8.00 ml/30Min

Sample Source FLOWLINE
Rm @ Measured Temp 0.54 @ 25.0 ohm-m
Rmt @ Measured Temp 0.41 @ 25.0 ohm-m
Rmc @ Measured Temp 0.63 @ 25.0 ohm-m
Source Rmt / Rmc PRESS FILTER
Rm @ BHT 0.36 @ 47.0 ohm-m
Time Since Circulation 8.5 HRS
Max Recorded Temp 47.00 deg C
Equipment Name 13132
Equipment / Base QUINT GPR
Recorded By L. SUTHERLAND
Witnessed By A. AHMED
CIRC STOP 06-30 FEB-27 Last Line

BOREHOLE RECORD

Last Edited 28-FEB-2007 03:49

Bit Size millimetres	Depth From metres	Depth To metres
311.000	0.00	436.00
200.000	436.00	1450.00

CASING RECORD

Type	Size millimetres	Depth From metres	Shoe Depth metres	Weight pounds/ft
SURFACE	219.100	0.00	436.00	35.70

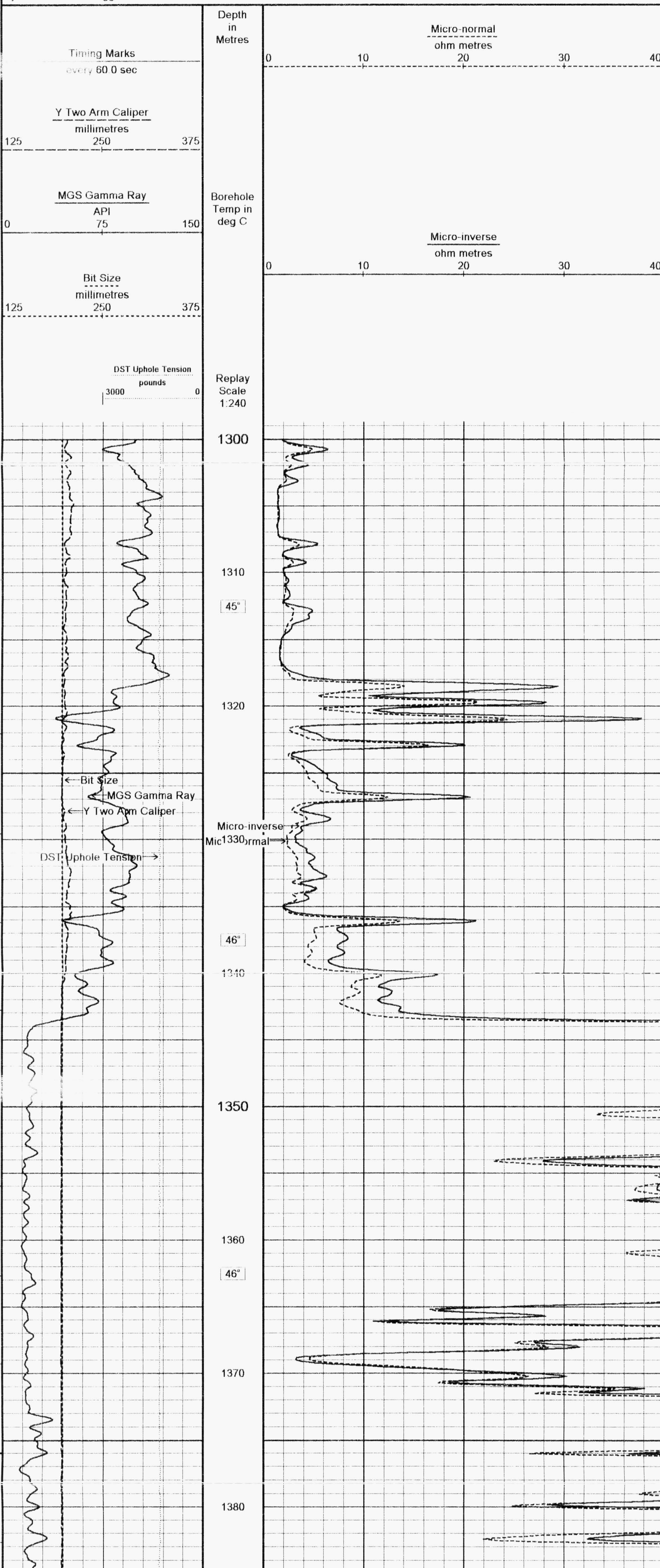
REMARKS

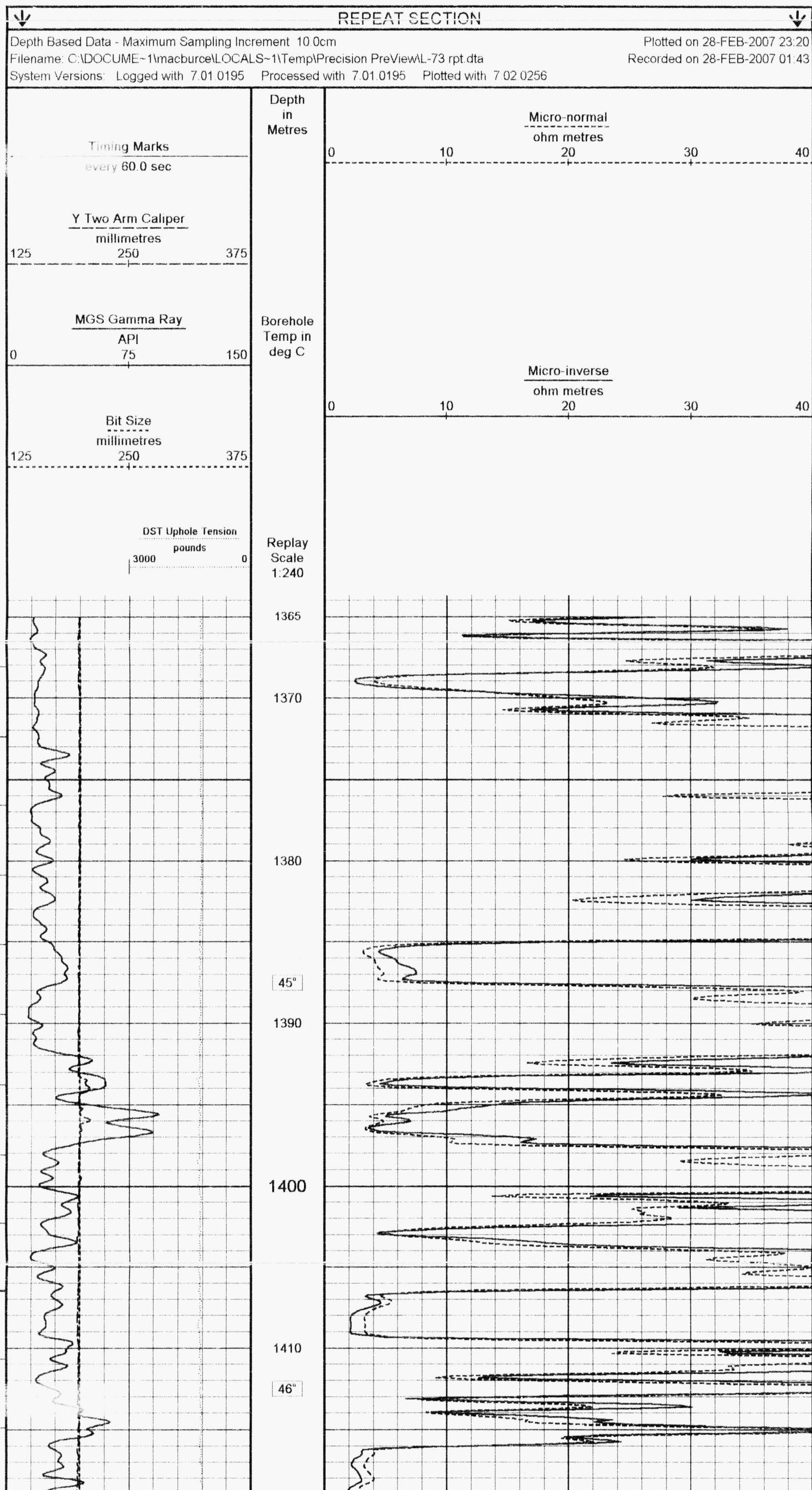
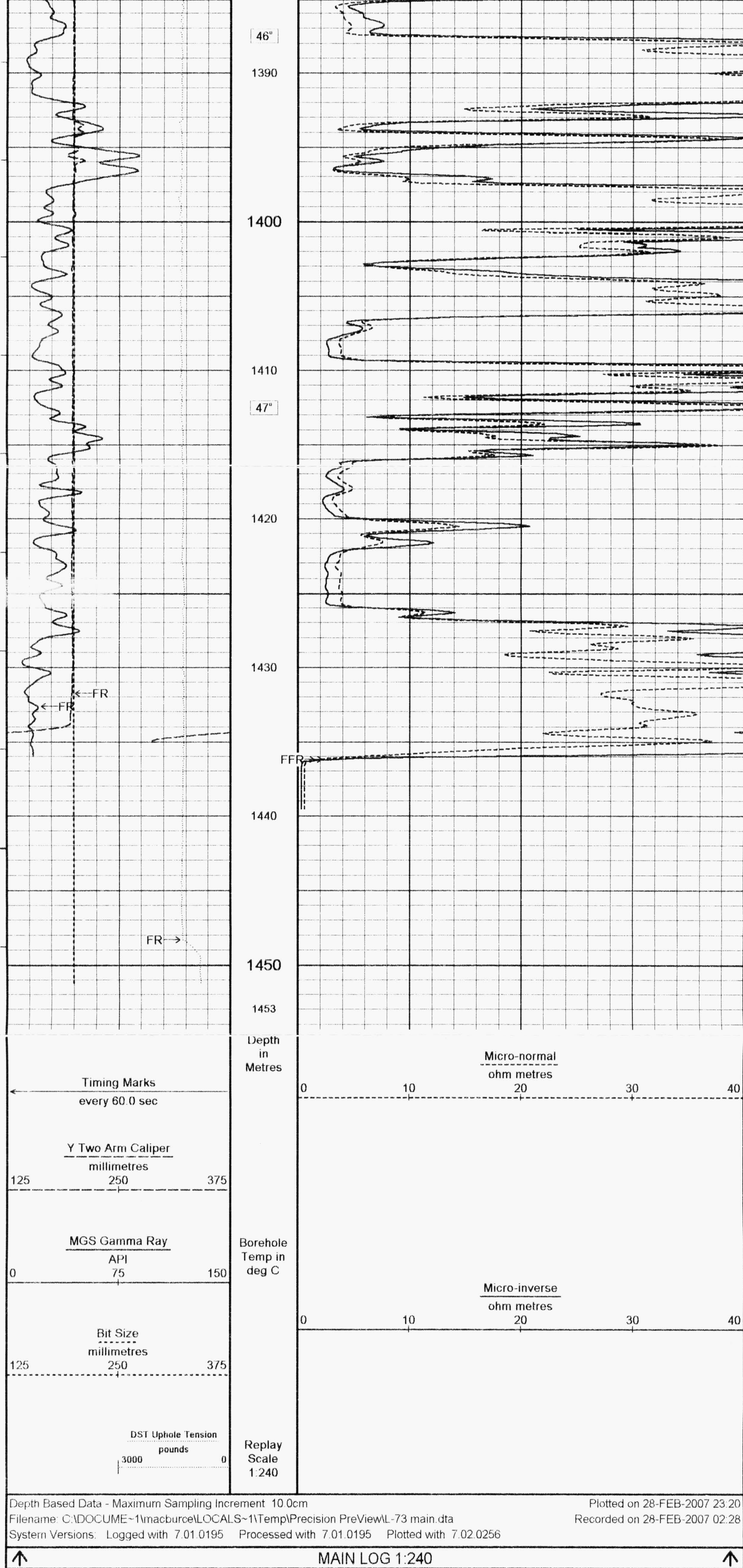
- 1) SOFTWARE ISSUE: WLS 7.01.0195
- 2) CUSTOMER SCALES AND INTERVALS LOGGED
- 3) MAI, MSS, MPD, MDN, MML, ISC, MGS, MTC, MFE, MCG RAN IN COMBINATION
- 4) HARDWARE: MAI: TWO 25.4 MM STANDOFFS
MSS: THREE 25.4 MM STANDOFFS
MDN: DUAL NEUTRON BOWSPRING
MTC: ONE SIX-LEAF CENTRALIZER
- 5) SAP# 4147855 FIELD TICKET # 30074798
- 6) # FIELD PRINTS = 3 # FINAL PRINTS = UNKNOWN
- 7) RIG: PD # 129
- 8) HOLE CEMENT VOLUMES CALCULATED USING DENSITY CALIPER AND TWO ARM CALIPER IN COMBINATION.
HOLE VOLUME = 36.05 CU.M.
ANNULAR VOLUME USING 139.7 MM PRODUCTION CASING = 20.65 CU.M
- 9) AREAS OF BOREHOLE RUGOSITY MAY CAUSE POOR DENSITY PAD CONTACT RESULTING IN HIGH DENSITY CORRECTION AND THUS INVALID DENSITY POROSITY DATA AT THOSE INTERVALS.
- 10) SONIC FREE PIPE: 378M

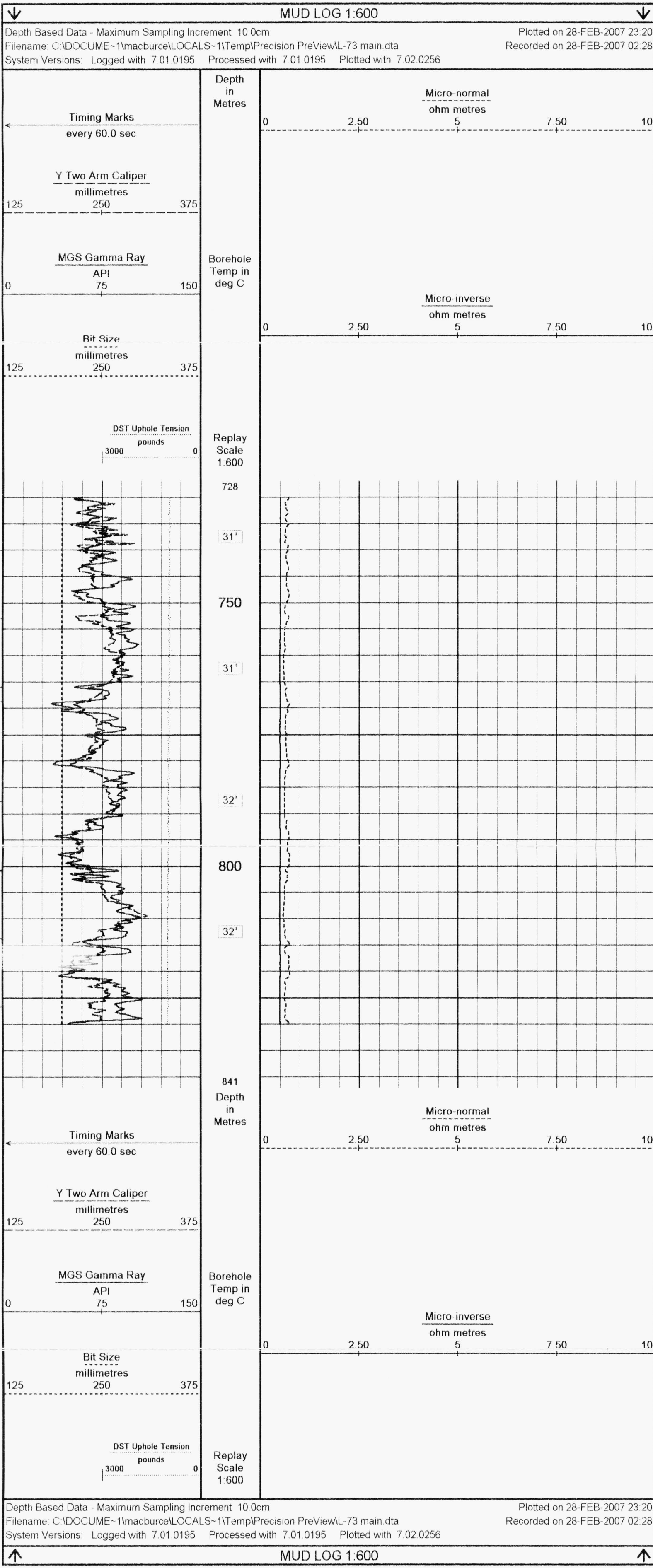
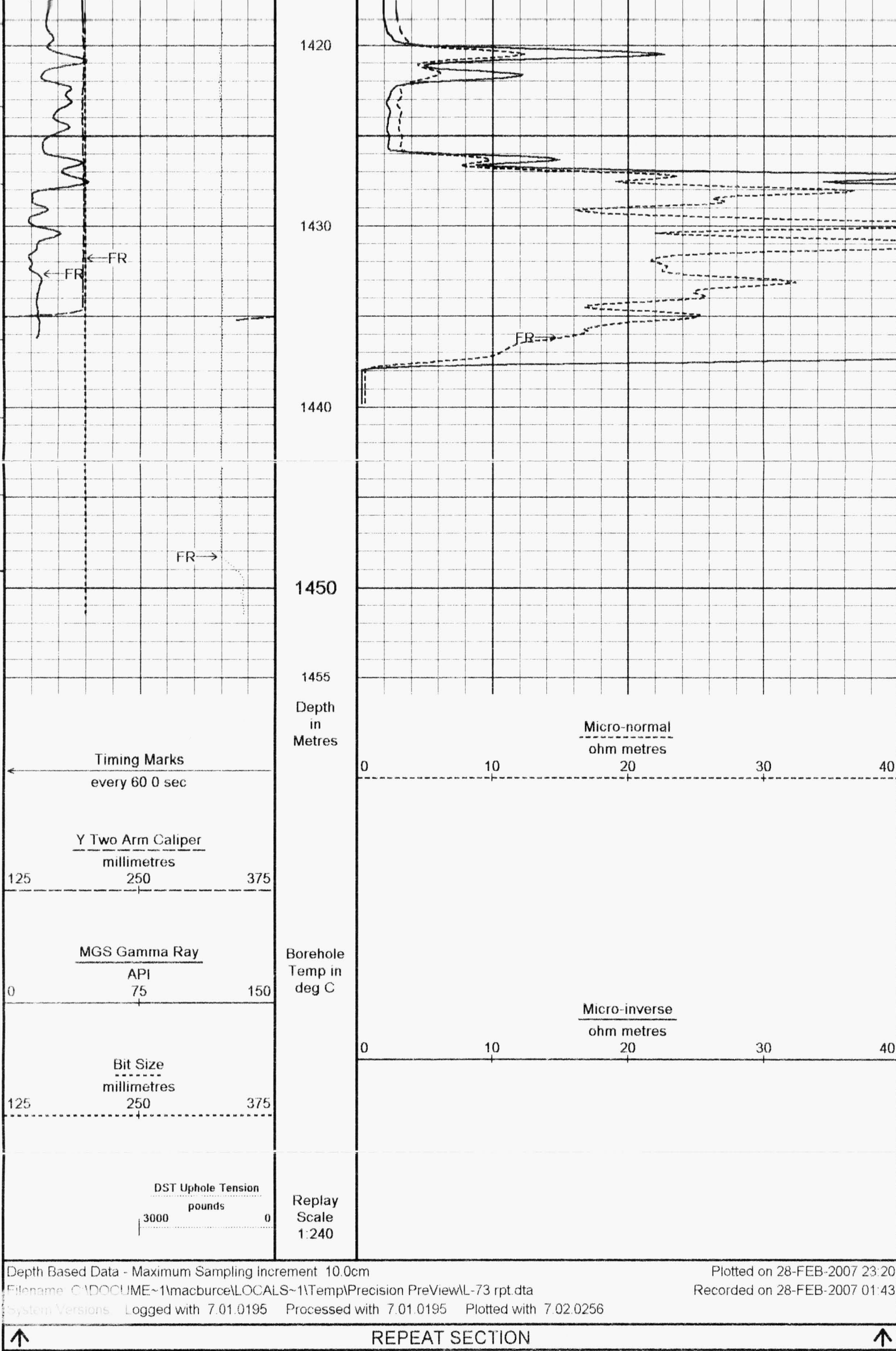
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, 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.

MAIN LOG 1:240

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\DOCUME~1\macburce\LOCALS~1\Temp\Precision PreView\WL-73 main dta
System Versions: Logged with 7.01.0195 Processed with 7.01.0195 Plotted with 7.02.0256
Plotted on 28-FEB-2007 23:20
Recorded on 28-FEB-2007 02:28







BEFORE SURVEY CALIBRATION

General Constants All 000			Last Edited on 28-FEB-2007,00:23		
General Parameters					
Mud Resistivity	0.540	ohm-metres			
Mud Resistivity Temperature	25.000	degrees C			
Water Level	0.000	metres			
Density/Neutron Processing	Wet Hole				
Hole/Annular Volume and Differential Caliper Parameters					
HVOL Caliper 1	Density Caliper				
HVOL Caliper 2	Y Two Arm Caliper				
Annular Volume Diameter	139.700	mm			
Caliper for Differential Caliper	Density Caliper				
Rwa Parameters					
Porosity used	Base Density Porosity				
Resistivity used	Deep Induction				
RWA Constant A	0.610				
RWA Constant M	2.150				

Gamma Calibration MCG 131			Field Calibration on 26-FEB-2007 10:56		
	Measured	Calibrated (API)			
Background	56	35			
Calibrator (Gross)	1332	829			
Calibrator (Net)	1277	794			

Gamma Constants MCG 131			Last Edited on 27-FEB-2007,23:06		
Gamma Calibrator Number	GRC 095				
Mud Density	1180.00	kg/m3			
Caliper Source for Processing	Density Caliper				
Tool Position	Centred				
Concentration of KCl	0.00	kppm			

SP Calibration MCG 131			Field Calibration on 24-FEB-2007 11:45		
	Measured	Calibrated (mV)			
Reference 1	101.0	100.0			
Reference 2	-99.3	-100.0			

High Resolution Temperature Calibration MCG 131			Field Calibration on 15-DEC-2006,15:05		
	Measured	Calibrated(Deg C)			
Lower	1.00	1.00			
Upper	10.00	10.00			

High Resolution Temperature Constants MCG 131	
Pre-filter Length	11

FE Calibration MFE 111			Base Calibration on 15-FEB-2007 19:40 Field Check on 28-FEB-2007 00:16		
Base Calibration					
	Measured	Calibrated (ohm-m)			
Reference 1	0.0	0.0			
Reference 2	983.2	126.8			
Base Check		278.8			
Field Check		279.0			

FE Constants MFE 111				Last Edited on 25-FEB-2007,03:56	
Caliper Source for FE correction		Density Caliper			
Rm Source for FE correction		Temperature Corr			
Temp. for Rm Corr		MCG External Temperature			
Stand-off	Centred	millimetres			

Caliper Calibration MTC 024			Base Calibration on 6-FEB-2007 10:21 Field Calibration on 28-FEB-2007,00:43		
Base Calibration					
Reading No	Measured	Calibrator Size (mm)			
1	15472	110.00			
2	18252	162.00			
3	21045	212.00			
4	23841	262.00			
5	26691	311.00			
6	N/A	N/A			
Field Calibration					
	Measured Caliper (mm)	Actual Caliper (mm)			
	210.30	205.70			

Gamma Calibration MGS 029			Field Calibration on 20-FEB-2007,01:19		
	Measured	Calibrated (API)			
Background	58	38			
Calibrator (Gross)	1286	832			
Calibrator (Net)	1228	794			

Gamma Constants MGS 029			Last Edited on 27-FEB-2007,23:06		
Gamma Calibrator Number	GRCC095				
Mud Density	1180.00	kg/m3			
Caliper Source for Processing	Density Caliper				
Tool Position	Centred				
Concentration of KCl	0.00	kppm			

SP Calibration MGS 029			Field Calibration on 7-DEC-2006,17:01		
	Measured	Calibrated (mV)			
Reference 1	100.0	100.0			
Reference 2	-100.0	-100.0			

High Resolution Temperature Calibration MGS 029			Field Calibration on 7-DEC-2006,17:01		
	Measured	Calibrated(Deg C)			
Lower	1.00	1.00			
Upper	5.00	5.00			

High Resolution Temperature Constants MGS 029	
Pre-filter Length	11

Micro Laterolog Constants MMR 031		
Micro Laterolog K Factor	0.0128	
Standoff Offset	0.0000	inches
Borehole Correction Constants		
Mud Cake Source	Constant Value	
Mud Cake Thickness	0.4000	inches
Mud Cake Thickness Caliper	0	
Mud Cake Resistivity	0.1500	ohm-m

Caliper Calibration MMR 031			Base Calibration on 27-FEB-2007,13:43 Field Calibration on 28-FEB-2007,00:43		
Base Calibration					
Reading No	Measured		Calibrator Size (mm)		
1	14876		162.00		
2	17978		212.00		
3	21602		262.00		
4	24308		311.00		
5	0		0.00		
6	N/A		N/A		
Field Calibration					
	Measured Caliper (mm)		Actual Caliper (mm)		
	205.60		205.70		

Micro Normal and Micro Inverse Calibration MMR 031					Base Calibration on 27-FEB-2007,13:43 Field Check on 28-FEB-2007 00:34	
Base Calibration						
		Measured		Calibrated (ohm-m)		
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2		
Micro Normal	9.8	49.9	5.1	25.6		
Micro Inverse	9.8	49.8	3.4	16.9		
Channel	Base Check (ohm-m)			Field Check (ohm-m)		
Micro Normal	94.7			92.9		
Micro Inverse	61.6			61.6		

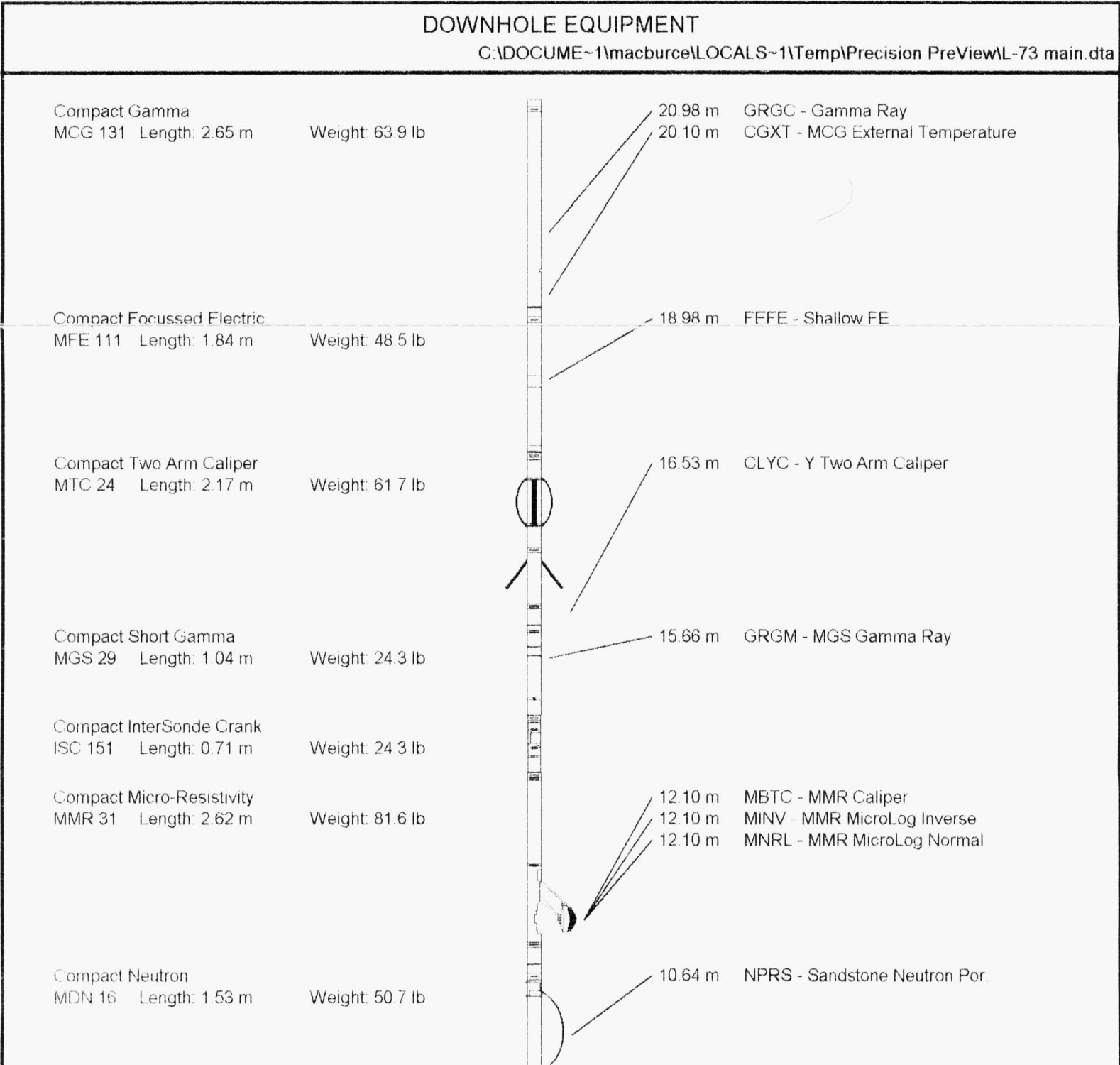
Micro Normal and Micro Inverse Constants MMR 031			Last Edited on 25-NOV-2006,14:14		
Micro Normal K Factor	0.5110				
Micro Inverse K Factor	0.3380				
Standoff Offset	0.0000	millimetres			

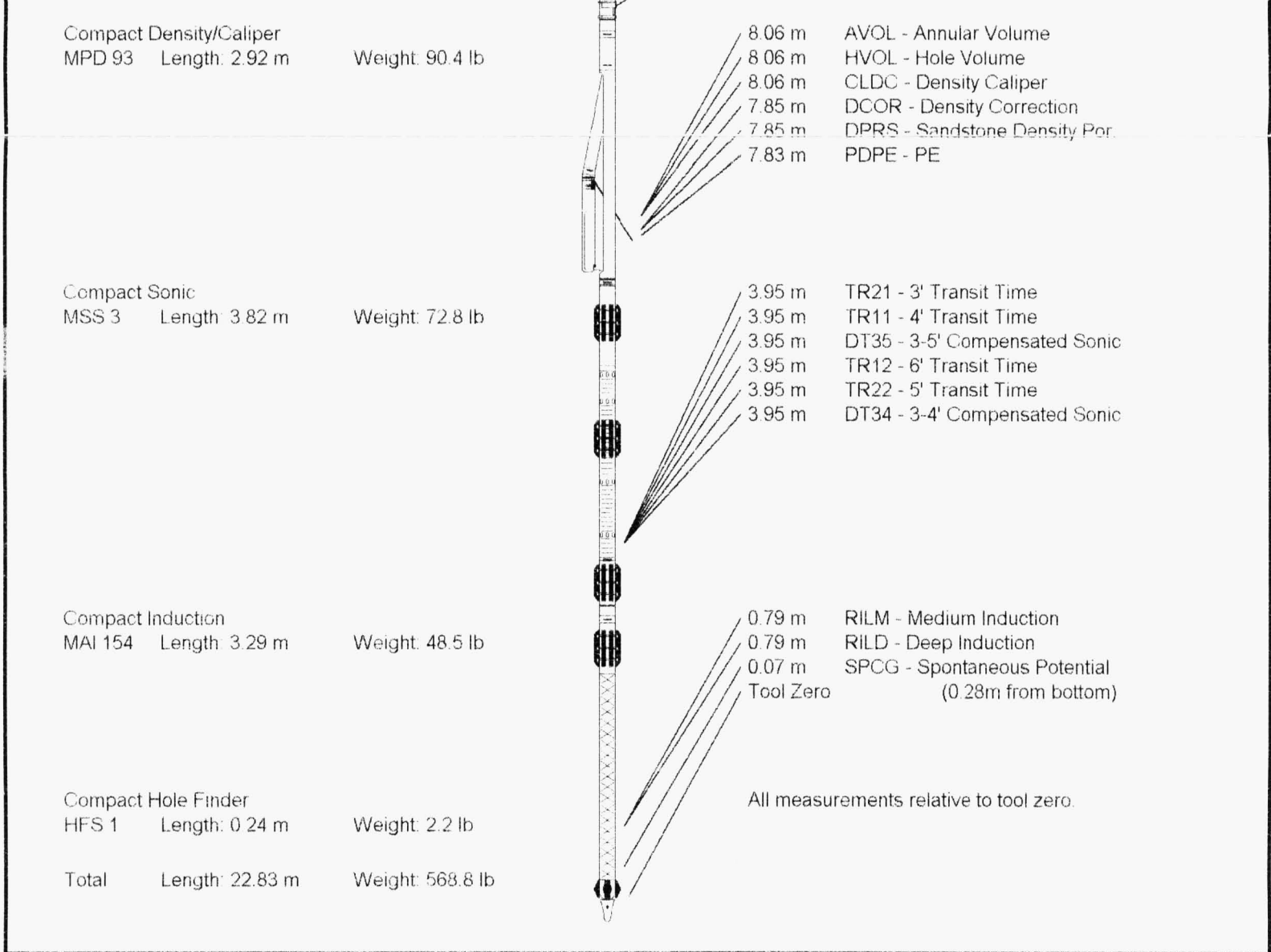
Neutron Calibration MDN 016					Base Calibration on 11-JAN-2007 20:47	
					Field Check on 27-FEB-2007 23:30	
Base Calibration						
		Measured		Calibrated (cps)		
	Near		Far	Near	Far	
	3219		98	3714	110	
Ratio	32.703			33.764		
Field Calibrator at Base						
				Calibrated (cps)		
				2486	3648	
Ratio				0.681		
Field Check						
				Calibrated (cps)		
				2568	3767	
Ratio				0.682		

Neutron Constants MDN 016			Last Edited on 25-FEB-2007,03:55		
Neutron Source Id	277				
Neutron Jig Number	N636				
Epithermal Neutron	No				
Caliper Source for Processing	Density Caliper				
Stand-off	0.00	mm			
Mud Density	1000.00	kg/m3			
Limestone Sigma	7.10	cu			
Sandstone Sigma	4.26	cu			
Dolomite Sigma	4.70	cu			
Formation Pressure Source	Constant Value				
Formation Pressure	0.00	kPa			
Temperature Source	Constant Value				
Temperature	20.00	degrees C			
Mud Salinity	0.00	kppm			
Formation Fluid Salinity Source	Constant Value				
Formation Fluid Salinity	0.00	kppm			
Barite Mud Correction	Not Applied				

Photo Density Calibration MPD 093				Base Calibration on 21-FEB-2007 18:37 Field Check on 27-FEB-2007 23:24	
Density Calibration					
Base Calibration		Measured		Calibrated (sdu)	
		Near	Far	Near	Far
	Reference 1	66461	35432	60352	31615
	Reference 2	27582	2460	25043	2540
Field Check at Base					
		738.4	855.4		
Field Check					
		743.9	865.6		
PE Calibration					
Base Calibration		Measured		Calibrated	
	WS	WH	Ratio	Ratio	
	Background	135	656		
	Reference 1	27020	66295	0.410	0.400

Reference 2 7311 27477 0.268 0.272			
Field Check at Base			
	135.0	656.2	
Field Check			
	134.5	658.1	
Density Constants MPD 093		Last Edited on 27-FEB-2007,23:07	
Density Source Id		1615B	
Nylon Calibrator Number		608	
Aluminum Foil Calibrator Number		608	
Density Shoe Profile		4 inch	
Caliper Source for Processing		Density Caliper	
PE Correction to Density		Not Applied	
Mud Density		1180.00	kg/m3
Mud Density Z/A Correction		1.11	
Mud Filtrate Density		1000.00	kg/m3
Dry Hole Mud Filtrate Density		1000.00	kg/m3
DNCT		0.00	kg/m3
CRCT		0.00	kg/m3
Matrix Density (kg/m3)		Depth (m)	
2710.00		0.00	
0.00		0.00	
0.00		0.00	
0.00		0.00	
0.00		0.00	
0.00		0.00	
0.00		0.00	
0.00		0.00	
Caliper Calibration MPD 093		Base Calibration on 11-JAN-2007 21:58 Field Calibration on 28-FEB-2007,00:44	
Base Calibration			
Reading No		Measured	Calibrator Size (mm)
1		15040	110.00
2		23085	162.00
3		31440	212.00
4		40233	262.00
5		49152	311.00
6		N/A	N/A
Field Calibration			
		Measured Caliper (mm)	Actual Caliper (mm)
		207.70	205.70
Sonic Constants MSS 003		Last Edited on 27-FEB-2007,23:07	
Maximum Boundary Contrast		328.08	micro-sec/m
Fluid Transit Time		620.08	micro-sec/m
Limestone Transit Time		155.84	micro-sec/m
Sandstone Transit Time		182.09	micro-sec/m
Dolomite Transit Time		142.72	micro-sec/m
Sonic used for Porosities		3-5' Compensated Sonic	
Correction for Sonde Skew		Applied	
Cycle Stretch Algorithm		Applied	
MN3FT		N/A	micro-sec
MX3FT		N/A	micro-sec
Fixed Gate Parameters			
Start Time (micro-sec)		End Time (micro-sec)	Discriminator (mV)
N/A		N/A	N/A
N/A		N/A	N/A
N/A		N/A	N/A
N/A		N/A	N/A
N/A		N/A	N/A
Down Hole Fixed Gate Parameters			
Gate Start		N/A	micro-sec
Gate Width		N/A	micro-sec
Initial Discriminator Level		0.0000	mVolts
Full Waveform Parameters			
Use 3' Waveform to derive TR		N/A	
Use 4' Waveform to derive TR		N/A	
Use 5' Waveform to derive TR		N/A	
Use 6' Waveform to derive TR		N/A	
3' Waveform Discriminator Level		N/A	mV
4' Waveform Discriminator Level		N/A	mV
5' Waveform Discriminator Level		N/A	mV
6' Waveform Discriminator Level		N/A	mV
3' Waveform Filter		N/A	
4' Waveform Filter		N/A	
5' Waveform Filter		N/A	
6' Waveform Filter		N/A	
Semblance Level		N/A	
Semblance Window Width		N/A	micro-sec
Sonic 1 Despiker		N/A	N/A
Sonic 2 Despiker		N/A	N/A
Induction Calibration MAI 154		Base Calibration on 14-JAN-2007 01:38 Field Check on 28-FEB-2007 00:33	
Base Calibration			
Test Loop Calibration		Measured	Calibrated (mmho/m)
Channel		Low High	Low High
1		16.6 470.6	9.3 966.2
2		6.3 383.0	7.6 821.4
3		4.0 264.7	5.2 566.0
4		2.3 136.2	2.6 279.2
Array Temperature		22.3	Deg C
Channel		Base Check (mmho/m)	Field Check (mmho/m)
		Low High	Low High
1		13.1 3867.2	15.3 3866.9
2		29.6 3530.7	30.2 3528.9
3		26.8 3001.8	27.1 2999.9
4		18.4 2040.8	18.6 2039.5
Deep		15.3 1926.8	15.7 1925.6
Medium		39.6 3962.8	39.7 3960.1
Shallow		45.8 5270.7	46.6 5268.1
Array Temperature		12.1	28.0 Deg C
Induction Constants MAI 154		Last Edited on 27-FEB-2007,23:07	
Induction Model		VECTAR	
Caliper for Borehole Corr.		Density Caliper	
Hole Size for Borehole Correction		N/A	millimetres
Stand-off		25.40	millimetres
Number of Fins on Stand-off		5.0000	
Stand-off Fin Width		25.4000	millimetres
Borehole Corr. Rm Source		Temperature Corr	
Temp. for Rm Corr.		MCG External Temperature	
Squasher Start		0.0020	mhos/metre
Borehole Normalisation			
DRM1		0.0000	DRC1 0.0000
DRM2		0.0000	DRC2 0.0000
MRM1		0.0000	MRC1 0.0000
MRM2		0.0000	MRC2 0.0000
SRM1		0.0000	SRC1 0.0000
SRM2		0.0000	SRC2 0.0000
Calibration Site Corrections			
Channel 1		0.00	mmhos/metre
Channel 2		0.00	mmhos/metre
Channel 3		0.00	mmhos/metre
Channel 4		0.00	mmhos/metre
Apparent Porosity and Water Saturation Constants			
Archie Constant (A)		1.00	
Cementation Exponent (M)		2.00	
Saturation Exponent (N)		2.00	
Saturation of Water for Apor		100.00	percent
Resistivity of Water for Apor and Sw		0.05	ohm-m
Resistivity of Mud Filtrate for Sw		0.00	ohm-m
High Resolution Temperature Calibration MAI 154		Field Calibration on 16-DEC-2006,08:07	
		Measured	Calibrated(Deg C)
Lower		1.00	1.00
Upper		10.00	10.00
High Resolution Temperature Constants MAI 154			
Pre-filter Length		11	





COMPANY	PARAMOUNT RESOURCES LTD				
WELL	PARA ET AL CAMERON L-73				
FIELD	CAMERON HILLS				
PROVINCE	NORTHWEST TERRITORIES				
COUNTRY	CANADA				
Elevation Kelly Bushing	774.80	metres	First Reading	1436.20	metre
Elevation Drill Floor		metres	Depth Driller	1450.00	metres
Elevation Ground Level	770.80	metres	Depth Logger	1448.60	metres
 Weatherford[®] MICROLOG					