



CEMENT VOLUME
139.7 PRODUCTION CASING

COMPANY
WELL
FIELD
PROVINCE
COUNTRY
LOCATION
LSD SEC TWP RGE
Other Services
API Number
Permit Number
Permanent Datum
Log Measured From
Drilling Measured From
Date
Run Number
Depth Driller
Depth Logger
First Reading
Last Reading
Casing Driller
Casing Logger
Bit Size
Hole Fluid Type
Density / Viscosity
PH / Fluid Loss
Sample Source
Rm @ Measured Temp
Rm @ Measured Temp
Rm @ Measured Temp
Source Rm / Rmc
Rm @ 9HT
Time Since Circulation
Max Recorded Temp
Equipment Name
Equipment / Base
Recorded By
Witnessed By
CIRC STOP

PARAMOUNT RESOURCES LTD
PARA ET AL CAMERON L-73
CAMERON HILLS
NORTHWEST TERRITORIES
CANADA
300/L-73-60-10-117-15
Other Services
PHOTO DENSITY
MICROLOG
ARRAY INDUCTION
DUAL SPACED NEUTRON
COMPENSATED SONIC
Elevations:
KB 774.80 metres
DF 770.80 metres
GL

NEB COPY
FINAL PRINT

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

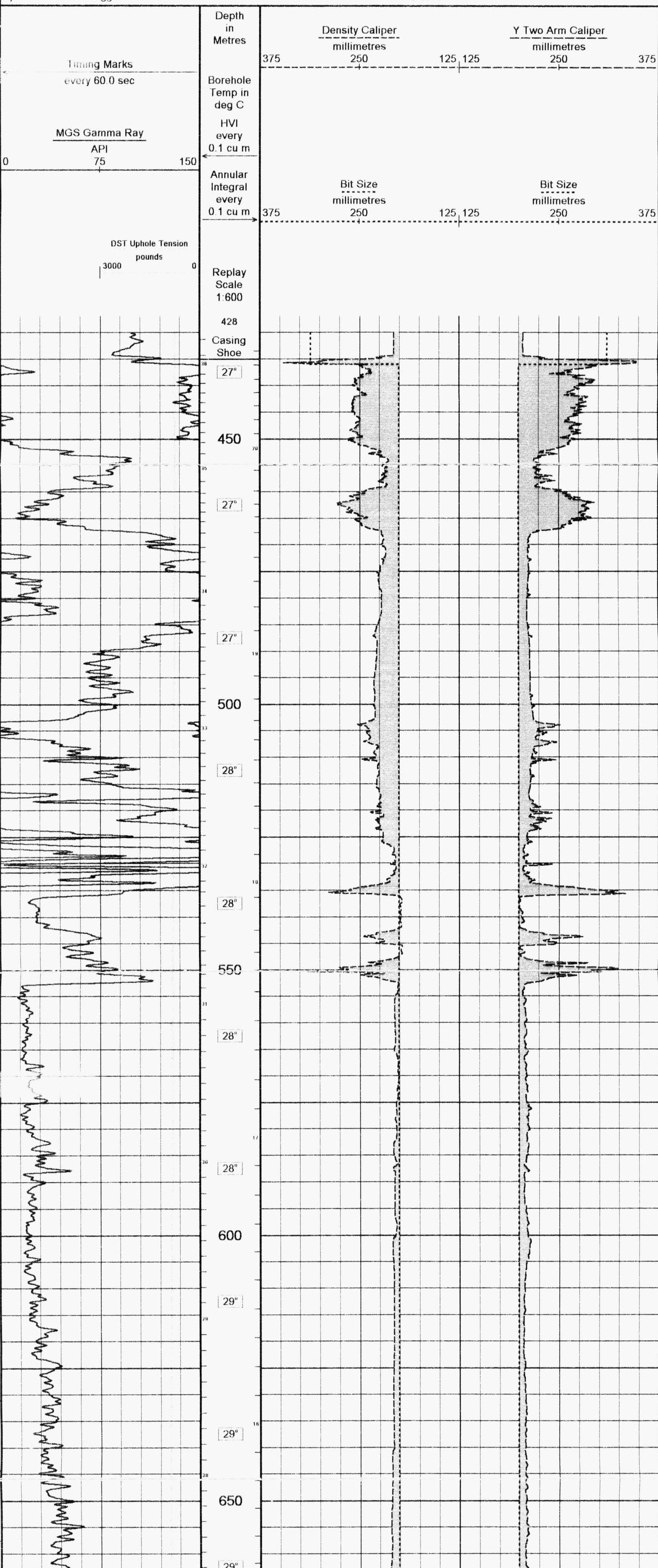
REMARKS

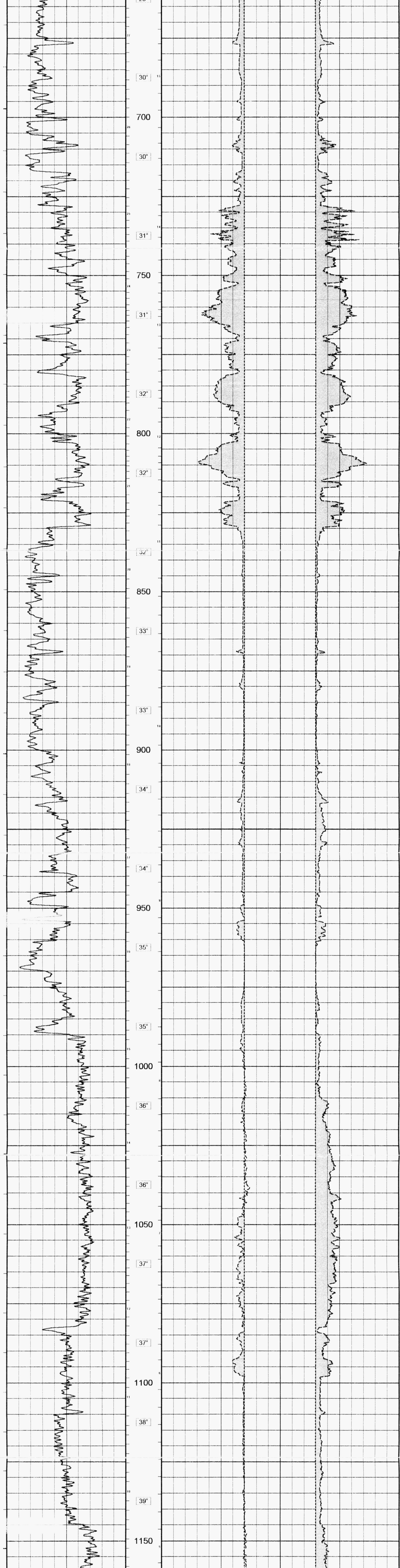
- 1) SOFTWARE ISSUE: WLS 7.01.0195
- 2) CUSTOMER SCALES AND INTERVALS LOGGED
- 3) MAI, MSS, MPD, MDN, MML, ISC, MGS, MTC, MFE, MCG RAN IN COMBINATION
- 4) HARDWARE: MAI: TWO 25.4 MM STANDOFFS
MSS: THREE 25.4 MM STANDOFFS
MDN: DUAL NEUTRON BOWSPRING
MTC: ONE SIX-LEAF CENTRALIZER
- 5) SAP# 4147855 FIELD 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

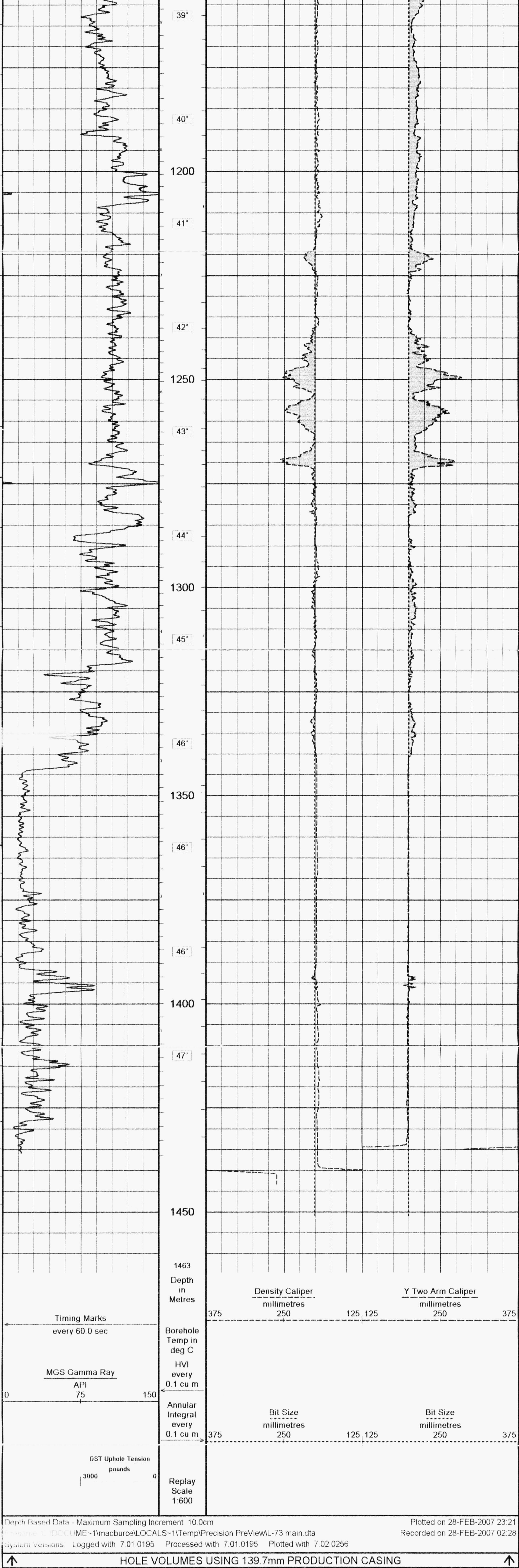
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

HOLE VOLUMES USING 139.7mm PRODUCTION CASING

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\DOCUME~1\macburce\LOCALS~1\Temp\Precision PreView\L-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 23:21
Recorded on 28-FEB-2007 02:28







BEFORE SURVEY CALIBRATION			
C:\DOCUME~1\macburce\LOCALS~1\Temp\Precision PreView\L-73 main.dta			
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		Measured	Calibrator Size (mm)	
Reading No				
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		Measured	Calibrator Size (mm)	
Reading No				
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		Measured	Calibrated (sdu)	
Base Calibration				
	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		Measured	Calibrated	
Base Calibration	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		
Aluminium/Fe 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		
Caliper Calibration MPD 093			Base Calibration on 11-JAN-2007 21:58 Field Calibration on 28-FEB-2007,00:44	
Base Calibration		Measured	Calibrator Size (mm)	
Reading No				
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	

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	
MIN3FT	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		Measured		Calibrated (mmho/m)	
Test Loop Calibration		Low	High	Low	High
Channel					
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
		Base Check (mmho/m)		Field Check (mmho/m)	
Channel		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	
Stand-off		25.40	
Number of Fins on Stand-off		5.0000	
Stand-off Fin Width		25.4000	
Borehole Corr. Rm Source		Temperature Corr	
Temp. for Rm Corr.		MCG External Temperature	
Squasher Start		0.0020	
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
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DOWNHOLE EQUIPMENT

C:\DOCUME~1\macburce\LOCALS~1\Temp\Precision PreView\L-73 main.dta

Compact Gamma MCG 131 Length: 2.65 m	Weight: 63.9 lb	20.98 m GRGC - Gamma Ray 20.10 m CGXT - MCG External Temperature
Compact Focussed Electric MFE 111 Length: 1.84 m	Weight: 48.5 lb	18.98 m FEFE - Shallow FE
Compact Two Arm Caliper MTC 24 Length: 2.17 m	Weight: 61.7 lb	16.53 m CLYC - Y Two Arm Caliper
Compact Short Gamma MGS 29 Length: 1.04 m	Weight: 24.3 lb	15.66 m GRGM - MGS Gamma Ray
Compact InterSonde Crank ISC 151 Length: 0.71 m	Weight: 24.3 lb	
Compact Micro-Resistivity MMR 31 Length: 2.62 m	Weight: 81.6 lb	12.10 m MBTC - MMR Caliper 12.10 m MINV - MMR MicroLog Inverse 12.10 m MNRL - MMR MicroLog Normal
Compact Neutron MDN 16 Length: 1.53 m	Weight: 50.7 lb	10.64 m NPRS - Sandstone Neutron Por.
Compact Density/Caliper MPD 93 Length: 2.92 m	Weight: 90.4 lb	8.06 m AVOL - Annular Volume 8.06 m HVOL - Hole Volume 8.06 m CLDC - Density Caliper 7.85 m DCOR - Density Correction 7.85 m DPRS - Sandstone Density Por. 7.83 m PDPE - PE
Compact Sonic MSS 3 Length: 3.82 m	Weight: 72.8 lb	3.95 m TR21 - 3' Transit Time 3.95 m TR11 - 4' Transit Time 3.95 m DT35 - 3-5' Compensated Sonic 3.95 m TR12 - 6' Transit Time 3.95 m TR22 - 5' Transit Time 3.95 m DT34 - 3-4' Compensated Sonic
Compact Induction MAI 154 Length: 3.29 m	Weight: 48.5 lb	0.79 m RILM - Medium Induction 0.79 m RILD - Deep Induction 0.07 m SPCG - Spontaneous Potential Tool Zero (0.28m from bottom)
Compact Hole Finder HFS 1 Length: 0.24 m	Weight: 2.2 lb	All measurements relative to tool zero.
Total	Length: 22.83 m Weight: 568.8 lb	

COMPANY

PARAMOUNT RESOURCES LTD

WELL

PARA ET AL CAMERON L-73

FIELD

CAMERON HILLS

PROVINCE

NORTHWEST TERRITORIES

COUNTRY

CANADA

COUNTRY			CANADA		
Elevation Kelly Bushing	774.80	metres	First Reading	1440.20	metre
Elevation Drill Floor		metres	Depth Driller	1450.00	metres
Elevation Ground Level	770.80	metres	Depth Logger	1448.60	metres
Weatherford[®] CEMENT VOLUME 139.7 PRODUCTION CASING					