PRECISION
Wireline Technologies

BOREHOLE COMPENSATED SONIC LOG

N.E.B. COPY

PROVINCE	NORTHWEST TERRITORIES
FIELD	NETLA
WELL	ANADARKO EMILE LAKE A-77
COMPANY	ANADARKO CANADA CORPORATION

COMPANY ANADARKO CANADA CORPORATION
WELL ANADARKO EMILE LAKE A-77
FIELD NETLA
PROVINCE NORTHWEST TERRITORIES

LSD A Sec. 77 Twp. Rge.
Perm. Datum GROUND LEVEL Elev. 624.70 m
Log measured from KB , 6.10 m above Permanent Datum.

UWI 300A776046122430
Licence 1964

Other Services: SPED/CNT/UGR/DAC STI/UGR

ELEV.K.B. 630.80 m
G.L. 624.70 m
CBF ---------

Date	11-MAR-2004
Run No.	ONE
Bot. Driller	1969.0 m
Bot. Logger	1969.4 m
First Reading	1959.1 m
Last Reading	647.6 m
Meters Meas.	1311.5 m
Csg. Driller	648.0 m 244.5mm @ 59.5Kg/m
Csg. Logger	647.6 m
Bit Size	215.9 mm
Fluid Type	INVERT
Dens. / Visc.	950 / 54
pH / Fluid Loss	N/A / N/A
Sample Source	FLOWLINE
Rm	N/A @ °C
Rmf	N/A @ °C
Rmc	N/A @ °C
Rm @ BHT	N/A @ °C
Max Rec.Temp	80 °C
Spacing	0.61m
Operating Time	5.0 HRS
Unit #	387
Location	GRANDE PRAIRIE AB
Recorded By	S. MAXWELL
Witnessed By	H. COWAN

All interpretations of log data are opinions based on inferences from electrical or other measurements. We do not guarantee the accuracy or correctness of any interpretation or recommendation and we shall not be liable or responsible for any loss, cost, damages or expenses incurred or sustained by anyone resulting from any interpretation or recommendation made by any of our employees or agents.

REMARKS Rig: AKITA 37 Service Order # 30017937

Drilling Stopped 12:45/11 Circulation Stopped 16:30/11 Tool on Bottom 01:30/12 BHT 74 °C
-STI/HBC/SPD/CNT/UGR/CAL LOGGED IN COMBINATION.

Prints: 2

CHANGES IN MUD TYPE OR NEW SAMPLE		
Date / Sample No.		
Depth - Driller		
Type Fluid in Hole		
Dens. / Visc.		
pH / Water Loss		
Source of Sample		
Rm @ Meas. Temp.	@ °C	
Rmf @ Meas. Temp.	@ °C	
Rmc @ Meas. Temp.	@ °C	
Source Rmf / Rmc		
Rm @ BHT	@ °C	
Rmf @ BHT	@ °C	
Rmc @ BHT	@ °C	

SCALE CHANGES

Type Log	Interval	Scale

EQUIPMENT DATA

Run No.	Tool Type	Tool No.	Other
ONE	HBC	149	CENTRALIZED
	UGR	211	RA-20S-335
	CAL	169	Y-AXIS

REMARKS

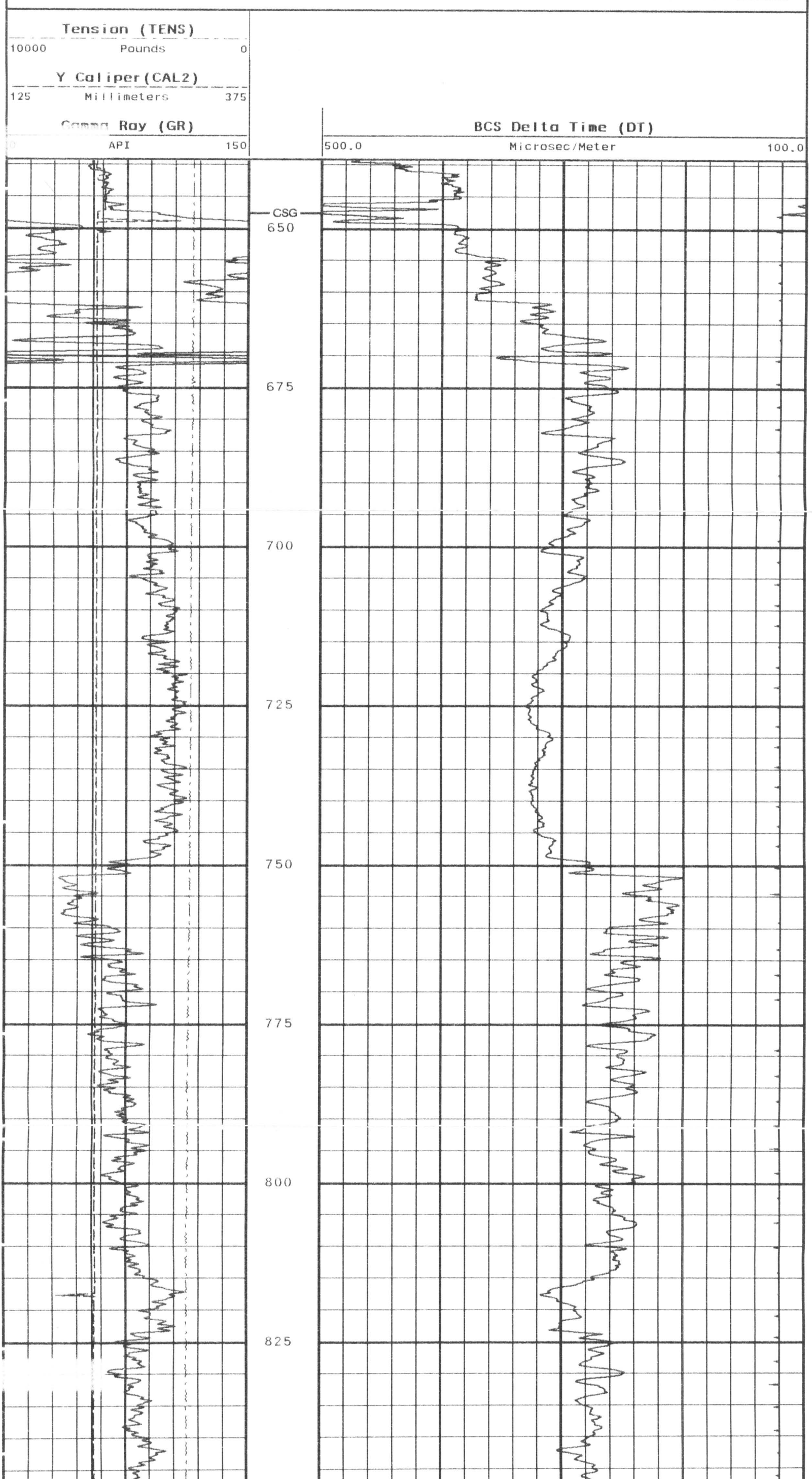
MAIN PASS
1:600 SCALE
500-100 usec/m

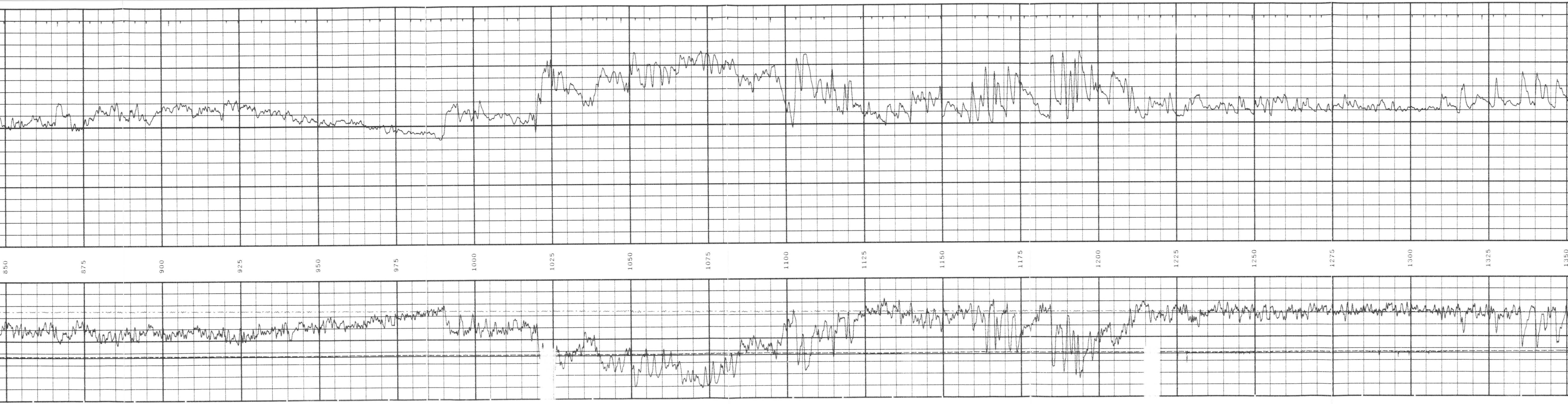
DEPTH SCALE: **1:600** VERSION: **2004.02.11.263**

MAIN PASS

30017937 STIMP1

FINISH DEPTH: **0.0** Meters DIRECTION: **UP** DATE: TIME: MODE: **TRACE PLAYBACK**

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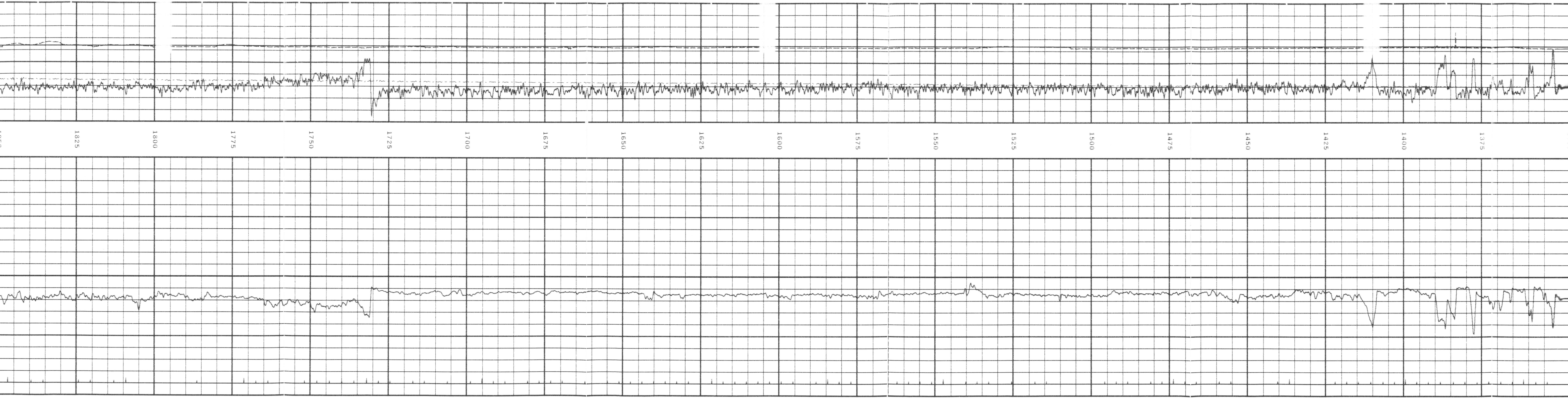
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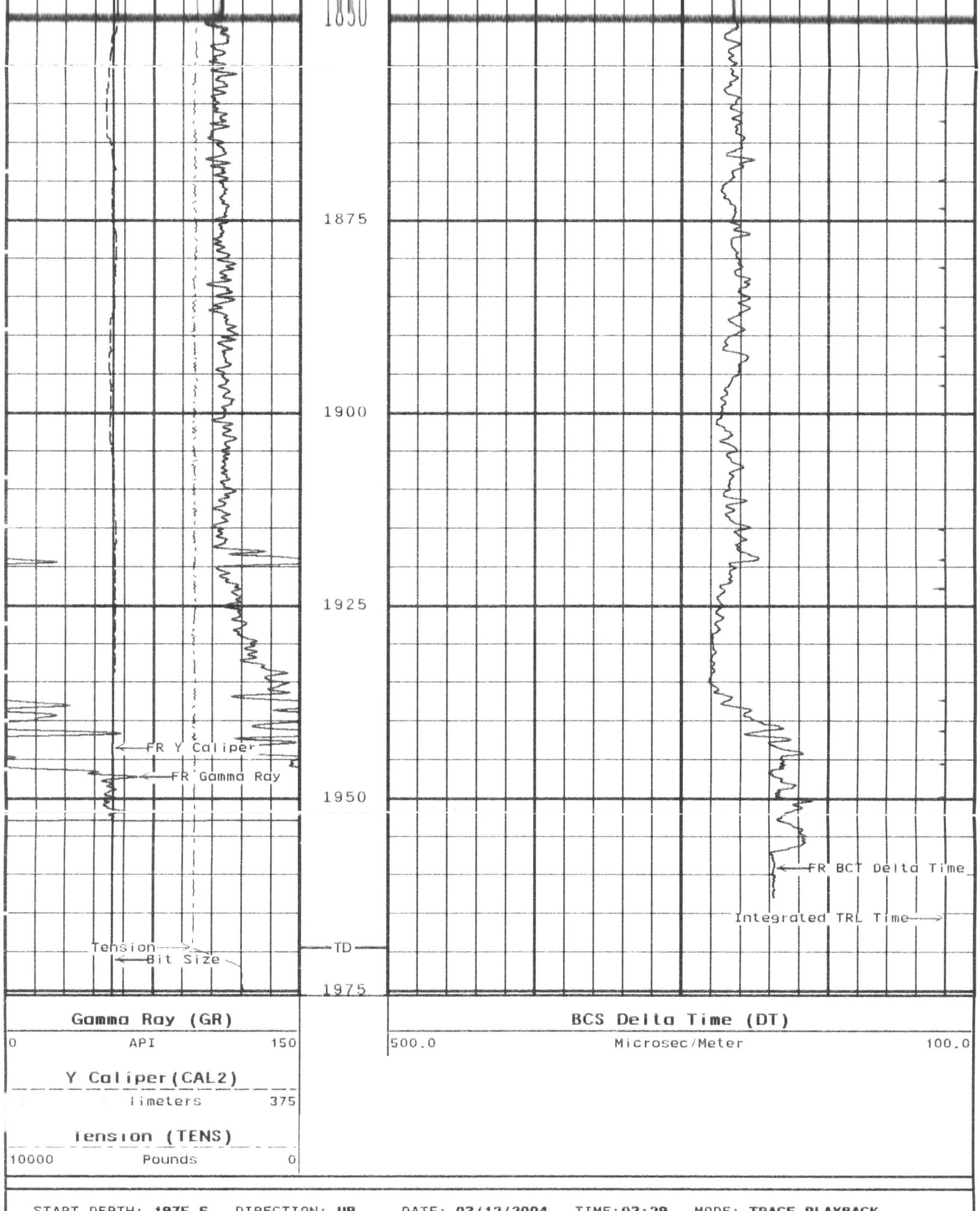


START DEPTH: **1975.6** DIRECTION: **UP** DATE: **03/12/2004** TIME: **03:29** MODE: **TRACE PLAYBACK**

30017937 STIMP1

MAIN PASS

DEPTH SCALE: **1:600** VERSION: **2004.02.11.263**

SYSTEM CONSTANTS

NAME	DESCRIPTION	VALUE	UNITS
TDD	TD-Driller	1969.00	Meters
TDL	TD-Logger	1969.40	Meters
CSIZ	Casing Size	244.5	Millimeters
CWEI	Casing Weight	59.52	Kilograms/Meter
BS	Bit Size	215.9	Millimeters
BHT	Bottom Hole Temp	80.0	DegreesCentigrade
SFT	Mean Annual Surf Temp	5.0	DegreesCentigrade
SPDD	SP Drift Corr. mV	0	Millivolts
SPBR	SP Bridle Depth Offset	0.00	Meters
SPTL	Log With SP From	STI	
STIB	STI SFL Chassis Return	ON	
STI4	STI 4 Level Average	OFF	
STIS	STI SFL Log Mode On	ON	
MDSG	Trace Signature Choice	Use Gain Scaled	
DAES	Entered Slowness	182.4	Microsec/Meter
DTF	DT Fluid	620.5	Microsec/Meter
DACP	Compaction	1.0	
WCO2	SPeD CAL Offset	5.00	Millimeters
SACC	Accumulation Time	100	Seconds
BARI	Barite Correction	OFF	
MW	Mud Weight	950.0	Kilograms/Cu.Meter
MDEN	Matrix Density	2710	Kilograms/Cu.Meter
FD	Fluid Density	1000	Kilograms/Cu.Meter
SPVS	SPeD Valve Status	IN	
NGAI	K Factor-NEU	1.000	
BHS	Open/Cased Hole	Open	
BSAL	Borehole Salinity	0	Parts/Million
FSAL	Formation Salinity	0	Parts/Million
NBCS	Bitsize/Calp Sel-CNT	Caliper	
NTLS	Tool Type-CNT	CNT-S	
TGRD	Temperature Gradient	0.555	DegC/100Meters
NTMS	Temp Source-CNT	Gradient	
NCOT	Constant Temp-CNT	21.0	DegreesCentigrade
NCOR	Cnt Ch Corr Offset	OFF	
OCOR	Cnt Environ.correction	OFF	
WCOO	Upper CAL-F Offset	-8.00	Millimeters
WSPD	WCC SPeD Pad Down	0.00	Degrees
SWAN	Sheave Wheel Angle	0.00	Degrees
NCAL	LIS Caliper Name-CNT	X Caliper	
SCAL	Density BH Diam Source	X Caliper	

REMARKS

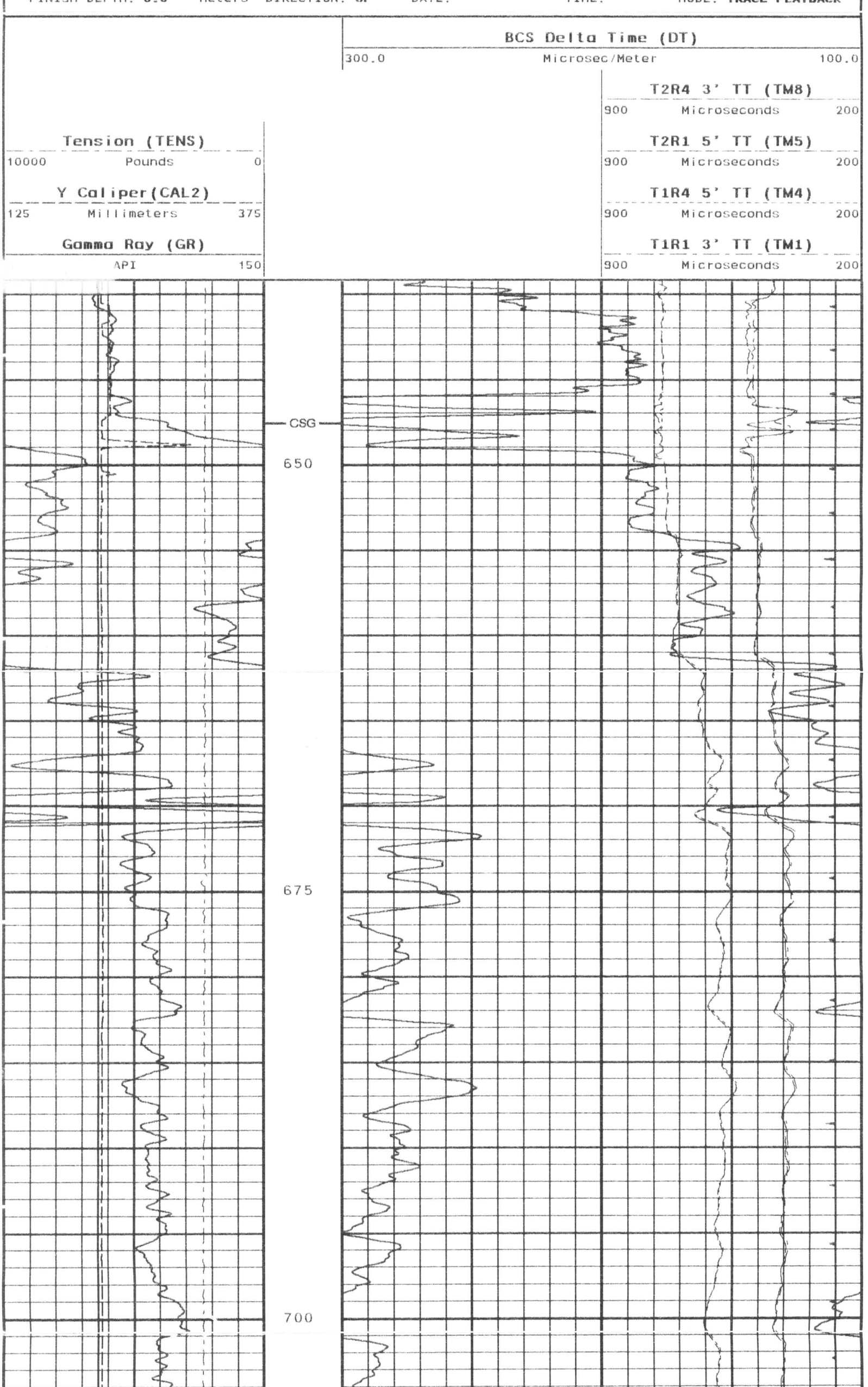
MAIN PASS
1:240 SCALE
300-100 usec/m

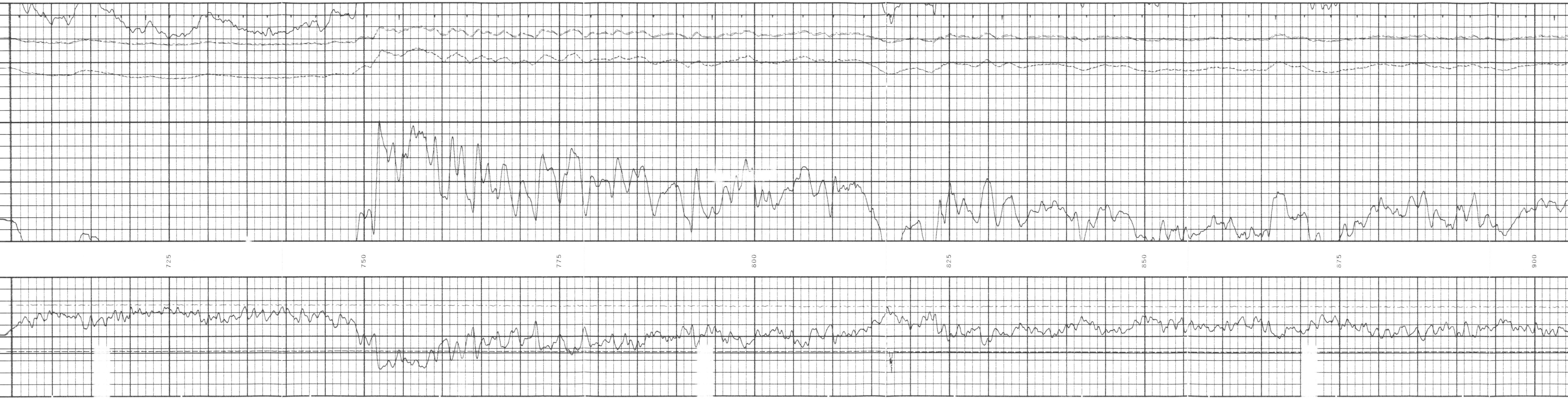
DEPTH SCALE: **1:240** VERSION: **2004.02.11.263**

MAIN PASS

30017937 STIMP1

FINISH DEPTH: **0.0** Meters DIRECTION: **UP** DATE: TIME: MODE: **TRACE PLAYBACK**

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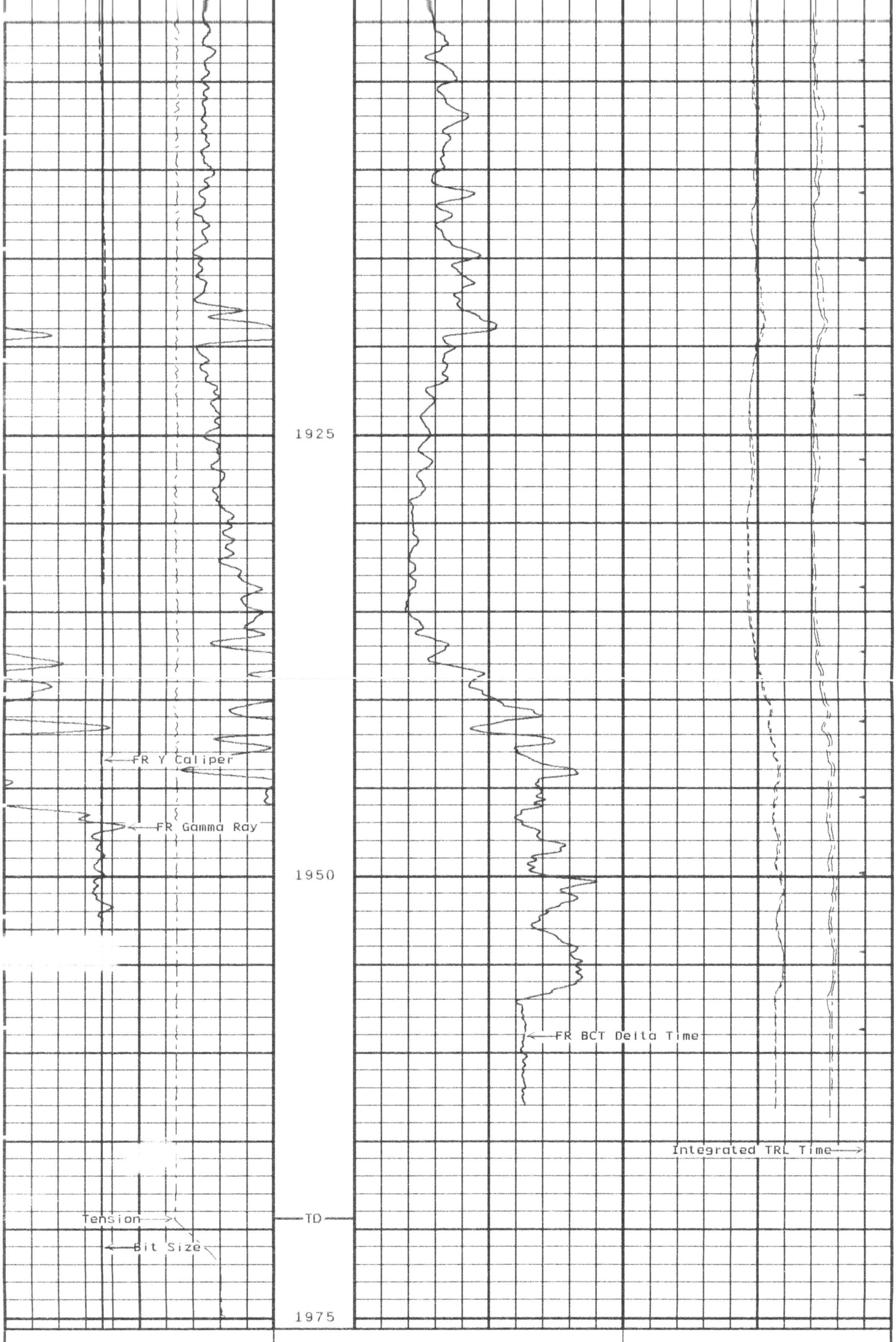


Gamma Ray (GR)		
0	API	150

Y Caliper(CAL2)		
125	Millimeters	375

Tension (TENS)		
10000	Pounds	0

T1R1 3' TT (TM1)		
900	Microseconds	200

T1R4 5' TT (TM4)		
900	Microseconds	200

T2R1 5' TT (TM5)		
900	Microseconds	200

T2R4 3' TT (TM8)		
900	Microseconds	200

BCS Delta Time (DT)		
300.0	Microsec/Meter	100.0

START DEPTH: **1975.6** DIRECTION: **UP** DATE: **03/12/2004** TIME: **03:29** MODE: **TRACE PLAYBACK**

30017937 STIMP1

MAIN PASS

DEPTH SCALE: **1:240** VERSION: **2004.02.11.263**

SYSTEM CONSTANTS

NAME	DESCRIPTION	VALUE	UNITS
TDD	TD-Driller	1969.00	Meters
TDL	TD-Logger	1969.40	Meters
CSIZ	Casing Size	244.5	Millimeters
CWEI	Casing Weight	59.52	Kilograms/Meter
BS	Bit Size	215.9	Millimeters
BHT	Bottom Hole Temp	80.0	DegreesCentigrade
SFT	Mean Annual Surf Temp	5.0	DegreesCentigrade
SPDD	SP Drift Corr. mV	0	Millivolts
SPBR	SP Bridle Depth Offset	0.00	Meters
SPTL	Log With SP From	STI	
STIB	STI SFL Chassis Return	ON	
STI4	STI 4 Level Average	OFF	
STIS	STI SFL Log Mode On	ON	
MDSG	Trace Signature Choice	Use Gain Scaled	
DAES	Entered Slowness	182.4	Microsec/Meter
DTF	DT Fluid	620.5	Microsec/Meter
DACP	Compaction	1.0	
WCO2	SPeD CAL Offset	5.00	Millimeters
SACC	Accumulation Time	100	Seconds
BARI	Barite Correction	OFF	
MW	Mud Weight	950.0	Kilograms/Cu.Meter
MDEN	Matrix Density	2710	Kilograms/Cu.Meter
FD	Fluid Density	1000	Kilograms/Cu.Meter
SPVS	SPeD Valve Status	IN	
NGAI	K Factor-NEU	1.000	
BHS	Open/Cased Hole	Open	
BSAL	Borehole Salinity	0	Parts/Million
FSAL	Formation Salinity	0	Parts/Million
NBCS	Bitsize/Calp Sel-CNT	Caliper	
NTLS	Tool Type-CNT	CNT-S	
TGRD	Temperature Gradient	0.555	DegC/100Meters
NTMS	Temp Source-CNT	Gradient	
NCOT	Constant Temp-CNT	21.0	DegreesCentigrade
NCOR	Cnt Ch Corr Offset	OFF	
OCOR	Cnt Environ.correction	OFF	
WCOO	Upper CAL-F Offset	-8.00	Millimeters
WSPD	WCC SPeD Pad Down	0.00	Degrees
SWAN	Sheave Wheel Angle	0.00	Degrees
NCAL	LIS Caliper Name-CNT	X Caliper	
SCAL	Density BH Diam Source	X Caliper	

REMARKS

REPEAT PASS/MAIN PASS OVERLAY
1:240 SCALE
300-100 usec/m
MAIN PASS = LIGHT LINES
REPEAT PASS = MEDIUM LINES

DEPTH SCALE: **1:240** VERSION: **2004.02.11.263**

30017937

FINISH DEPTH: **1889.4** Meters DIRECTION: **UP** DATE: **03/12/2004** TIME: **02:06** MODE: **TRACE PLAYBACK**

BCS Delta Time (DT)		
300.0	Microsec/Meter	100.0

T2R4 3' TT (TM8)		
900	Microseconds	200

T2R1 5' TT (TM5)		
900	Microseconds	200

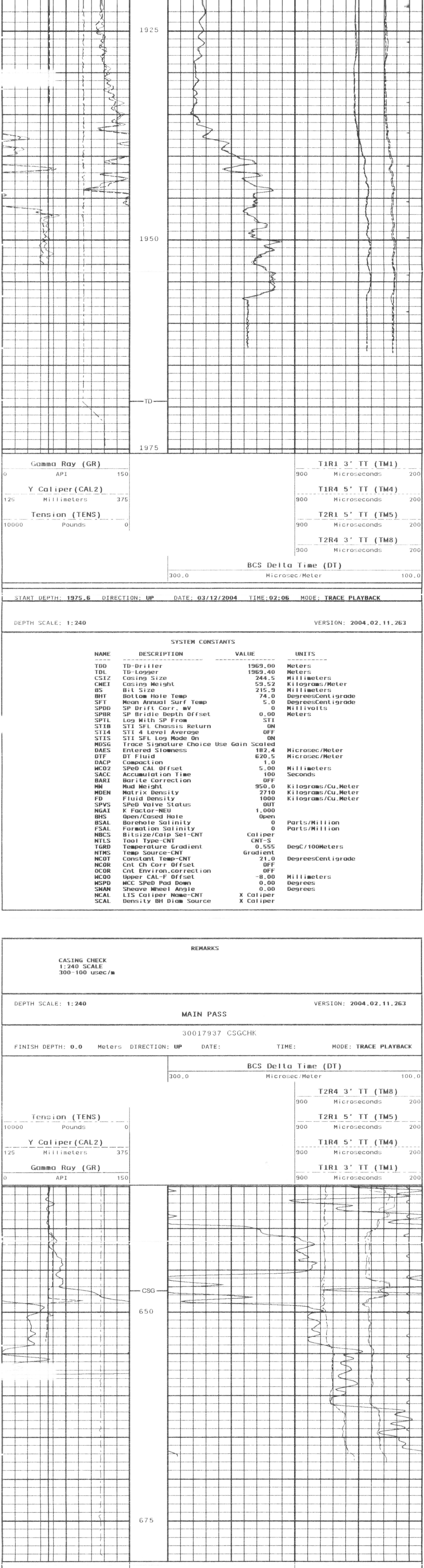
T1R4 5' TT (TM4)		
900	Microseconds	200

T1R1 3' TT (TM1)		
900	Microseconds	200

Tension (TENS)		
10000	Pounds	0

Y Caliper(CAL2)		
125	Millimeters	375

Gamma Ray (GR)		
0	API	150



START DEPTH: **1975.6** DIRECTION: **UP** DATE: **03/12/2004** TIME: **02:06** MODE: **TRACE PLAYBACK**

DEPTH SCALE: **1:240** VERSION: **2004.02.11.263**

SYSTEM CONSTANTS

NAME	DESCRIPTION	VALUE	UNITS
TDD	TD-Driller	1969.00	Meters
TDL	TD-Logger	1969.40	Meters
CSIZ	Casing Size	244.5	Millimeters
CWEI	Casing Weight	59.52	Kilograms/Meter
BS	Bit Size	215.9	Millimeters
BHT	Bottom Hole Temp	74.0	DegreesCentigrade
SFT	Mean Annual Surf Temp	5.0	DegreesCentigrade
SPDD	SP Drift Corr. mV	0	Millivolts
SPBR	SP Bridle Depth Offset	0.00	Meters
SPTL	Log With SP From	STI	
STIB	STI SFL Chassis Return	ON	
STI4	STI 4 Level Average	OFF	
STIS	STI SFL Log Mode On	ON	
MDSG	Trace Signature Choice	Use Gain Scaled	
DAES	Entered Slowness	182.4	Microsec/Meter
DTF	DT Fluid	620.5	Microsec/Meter
DACP	Compaction	1.0	
WCO2	SPeD CAL Offset	5.00	Millimeters
SACC	Accumulation Time	100	Seconds
BARI	Barite Correction	OFF	
MW	Mud Weight	950.0	Kilograms/Cu.Meter
MDEN	Matrix Density	2710	Kilograms/Cu.Meter
FD	Fluid Density	1000	Kilograms/Cu.Meter
SPVS	SPeD Valve Status	OUT	
NGAI	K Factor-NEU	1.000	
BHS	Open/Cased Hole	Open	
BSAL	Borehole Salinity	0	Parts/Million
FSAL	Formation Salinity	0	Parts/Million
NBCS	Bitsize/Calp Sel-CNT	Caliper	
NTLS	Tool Type-CNT	CNT-S	
TGRD	Temperature Gradient	0.555	DegC/100Meters
NTMS	Temp Source-CNT	Gradient	
NCOT	Constant Temp-CNT	21.0	DegreesCentigrade
NCOR	Cnt Ch Corr Offset	OFF	
OCOR	Cnt Environ.correction	OFF	
WCOO	Upper CAL-F Offset	-8.00	Millimeters
WSPD	WCC SPeD Pad Down	0.00	Degrees
SWAN	Sheave Wheel Angle	0.00	Degrees
NCAL	LIS Caliper Name-CNT	X Caliper	
SCAL	Density BH Diam Source	X Caliper	

REMARKS

CASING CHECK
1:240 SCALE
300-100 usec/m

DEPTH SCALE: **1:240** VERSION: **2004.02.11.263**

MAIN PASS

30017937 CSGCHK

FINISH DEPTH: **0.0** Meters DIRECTION: **UP** DATE: TIME: MODE: **TRACE PLAYBACK**

300.0	Microsec/Meter	100.0

START DEPTH: **679.1** DIRECTION: **UP** DATE: **03/12/2004** TIME: **01:40** MODE: **TRACE PLAYBACK**

30017937 CSGCHK

MAIN PASS

DEPTH SCALE: **1:240** VERSION: **2004.02.11.263**

SYSTEM CONSTANTS

NAME	DESCRIPTION	VALUE	UNITS
TDD	TD-Driller	1969.00	Meters
TDL	TD-Logger	1969.40	Meters
CSIZ	Casing Size	244.5	Millimeters
CWEI	Casing Weight	59.52	Kilograms/Meter
BS	Bit Size	215.9	Millimeters
BHT	Bottom Hole Temp	74.0	DegreesCentigrade
SFT	Mean Annual Surf Temp	5.0	DegreesCentigrade
SPDD	SP Drift Corr. mV	0	Millivolts
SPBR	SP Bridle Depth Offset	0.00	Meters
SPTL	Log With SP From	STI	
STIB	STI SFL Chassis Return	ON	
STI4	STI 4 Level Average	OFF	
STIS	STI SFL Log Mode On	ON	
MDSG	Trace Signature Choice	Use Gain Scaled	
DAES	Entered Slowness	182.4	Microsec/Meter
DTF	DT Fluid	620.5	Microsec/Meter
DACP	Compaction	1.0	
NCO2	SPeD CAL Offset	2.00	Millimeters
SACC	Accumulation Time	100	Seconds
BARI	Barite Correction	OFF	
MW	Mud Weight	950.0	Kilograms/Cu.Meter
MDEN	Matrix Density	2710	Kilograms/Cu.Meter
FD	Fluid Density	1000	Kilograms/Cu.Meter
SPVS	SPeD Valve Status	IN	
NGAI	K Factor-NEU	1.000	
BHS	Open/Cased Hole	Open	
BSAL	Borehole Salinity	0	Parts/Million
FSAL	Formation Salinity	0	Parts/Million
NBCS	Bitsize/Calp Sel-CNT	Caliper	
NTLS	Tool Type-CNT	CNT-S	
TGRD	Temperature Gradient	0.555	DegC/100Meters
NTMS	Temp Source-CNT	Gradient	
NCOT	Constant Temp-CNT	21.0	DegreesCentigrade
NCOR	Cnt Ch Corr Offset	OFF	
OCOR	Cnt Environ.correction	OFF	
WCOO	Upper CAL-F Offset	-12.00	Millimeters
WSPD	WCC SPeD Pad Down	0.00	Degrees
SWAN	Sheave Wheel Angle	0.00	Degrees
NCAL	LIS Caliper Name-CNT	X Caliper	
SCAL	Density BH Diam Source	X Caliper	

03/11/04	21:31	0.0 M	Ver 40211263	Job 30017937

Caliper Before Survey Calibration

Tool Type: CAL-FA Serial No:CALF169

	Measured Small	Measured Large	Units	Calibrated Small	Calibrated Large	Units
WCLO	773.9	1419.6	mv	177.8	355.6	mm

03/11/04	21:42	0.0 M	Ver 40211263	Job 30017937

Gamma Ray Before Survey Calibration

Tool Type: UGR-JA Serial No: UGRJ211
Calibrator No: RA-20S-335

Background	Calibrator	Standard	Units
118.6	734.7	140.0	API

Delta Counts Per Sec: 616.1 CPS/API = 4.401

O.H. Adaptor Head

Weight 18.0 kg
Length 0.74 m
Max. Diameter 8.9 cm

Total Stack Weight 793.9 kg in air
Total Stack Length 32.34 m

Crossover

Weight 6.8 kg
Length 0.27 m

Downhole Tension/Compression

Weight 34.9 kg
Length 1.47 m
Max. Diameter 8.6 cm

Wireline Communications Cartridge

Weight 53.6 kg
Length 2.31 m
Max. Diameter 8.6 cm

Arm Caliper

Weight 79.4 kg
Length 2.40 m
Max. Diameter 10.2 cm

SPeD 400 Electronics

Weight 56.7 kg
Length 2.92 m
Max. Diameter 8.6 cm

Universal GR

Weight 37.3 kg
Length 1.40 m
Max. Diameter 8.6 cm

Mandrel Neutron

Weight 45.4 kg
Length 2.07 m
Max. Diameter 8.6 cm

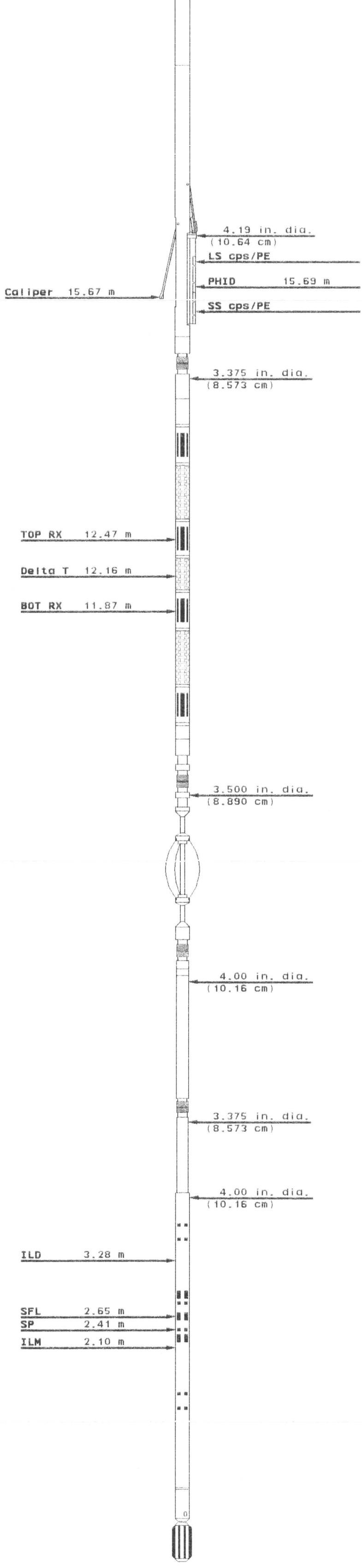
Offset Joint

Weight 3.0 kg
Length 0.36 m
Max. Diameter 8.6 cm

SPeD 400 Pad Section

Weight 141.5 kg

Weight 141.5 kg
Length 3.38 m
Max. Diameter 11.4 cm



Borehole Compensated Sonic

Weight 104.0 kg
Length 4.67 m
Max. Diameter 8.6 cm

Centralizer

Weight 30.9 kg
Length 1.39 m
Max. Diameter 8.9 cm

Simultaneous Triple Induction

Weight 176.9 kg
Length 8.75 m
Max. Diameter 10.2 cm

Stand - Off

Weight 5.5 kg
Length 0.20 m

COMPANY ANADARKO CANADA CORPORATION

WELL ANADARKO EMILE LAKE A-77

FIELD NETLA PROVINCE N.W.T.

PRECISION
Wireline Technologies