

# Reeves

## COMPENSATED SONIC 1:200 MD

COMPANY	ESSO AUSTRALIA PTY. LTD.			
WELL	TUNA A10a			
FIELD	GIPPSLAND BASIN			
PROVINCE/COUNTY	BASS STRAIT			
COUNTRY/STATE	AUSTRALIA			
LOCATION	AMG X 624224.99m E AMG Y 5774222.49m N LAT:38°10'16.394"S LONG:148°25'05.413"E			
LSD	SEC	TWP	RGE	Other Services DUAL LATEROLOG PHOTO DENSITY
API Number	COMPENSATED NEUTRON			
Permit Number				
Permanent Datum MSL	, Elevation 0 metres			Elevations: KB 31.32 metres DF 31.32 metres GL -59.40 metres
Log Measured From 31.32, Metres	above Permanent Datum			
Drilling Measured From Drill Floor, RT				
Date	12-OCT-2002			
Run Number	1			
Depth Driller	2312.00			metres
Depth Logger	2312.00			metres
First Reading	2307.00			metres
Last Reading	2050.00			metres
Casing Driller	661.20			metres
Casing Logger				
Bit Size	8.50			inches
Hole Fluid Type	KCL PHPA			
Density / Viscosity	10.30 lb/USg			57.00
PH / Fluid Loss	8.90			3.40 ml/30Min
Sample Source	FLOWLINE			
Rm @ Measured Temp	0.126 @ 25.0			ohm-m
Rmf @ Measured Temp	0.097 @ 25.0			ohm-m
Rmc @ Measured Temp	0.191 @ 25.0			ohm-m
Source Rmf / Rmc	PRESS			FILTER
Rm @ BHT	0.07 @ 63.0			ohm-m
Time Since Circulation	0.65 HRS			
Max Recorded Temp	63.00			deg C
Equipment Name	SHUTTLE			
Equipment / Base	1			CML
Recorded By	MATT BARNES			
Witnessed By	BRUCE MENZEL			
Last Title				

### BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	661.20	2312.00

### CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
	9.625	0.00	661.20	40.00

### REMARKS

DRILLING RIG: NABORS (ISDL) RIG 453.

COMPACT WIRELINE TOOLS DEPLOYED BY COMPACT WELL SHUTTLE TECHNIQUE.

MESSENGER DEPLOYED WITH HALLIBURTON CEMENT PUMP, MESSENGER DEPLOYED AT 14:35 12-OCT.  
RING SHEARED AT 15:08 12-OCT.

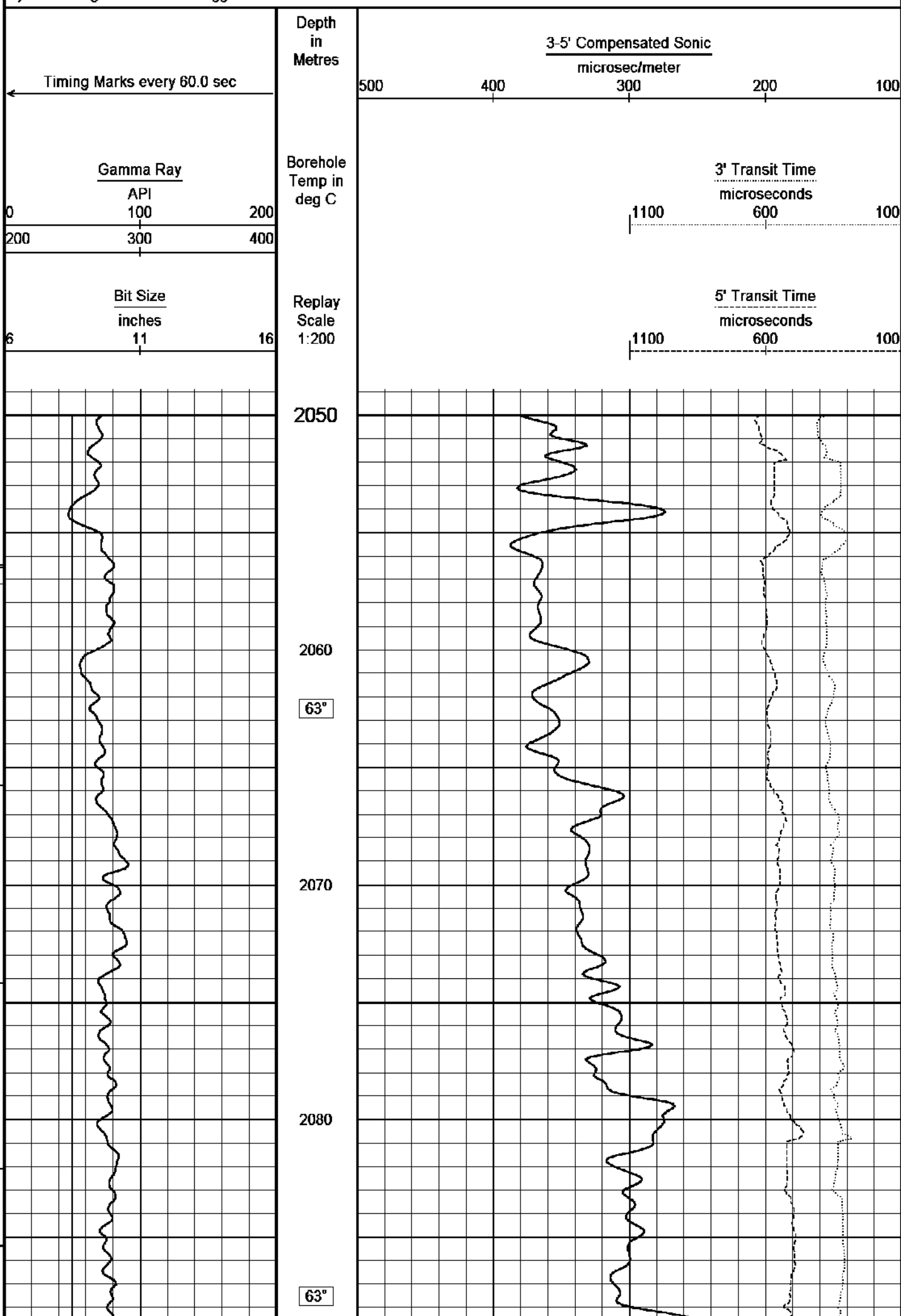
DENSITY CALIPER DID NOT OPEN, LOGS PROCESSED USING BITSIZE FOR CALIPER CORRECTIONS.

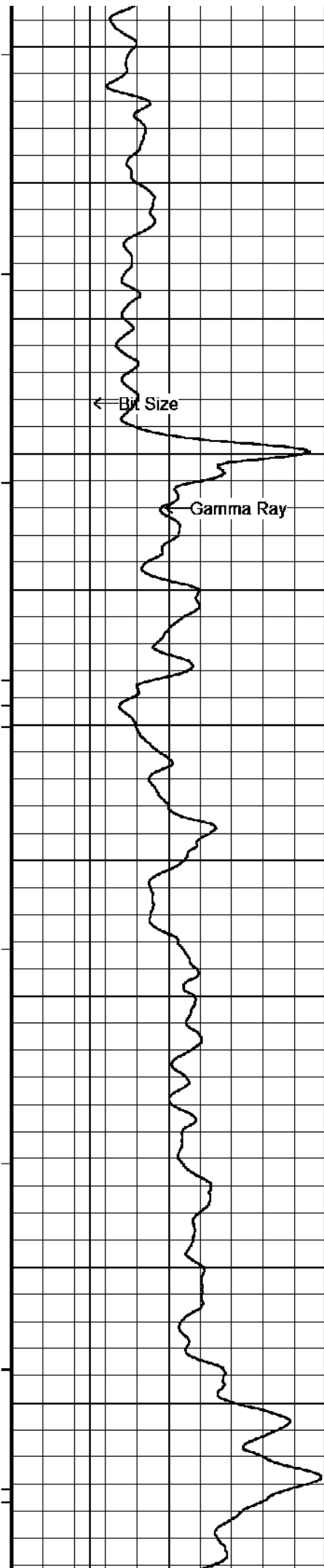
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, 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 1:200

Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 31-OCT-2002 20:54





2090

2100

2110

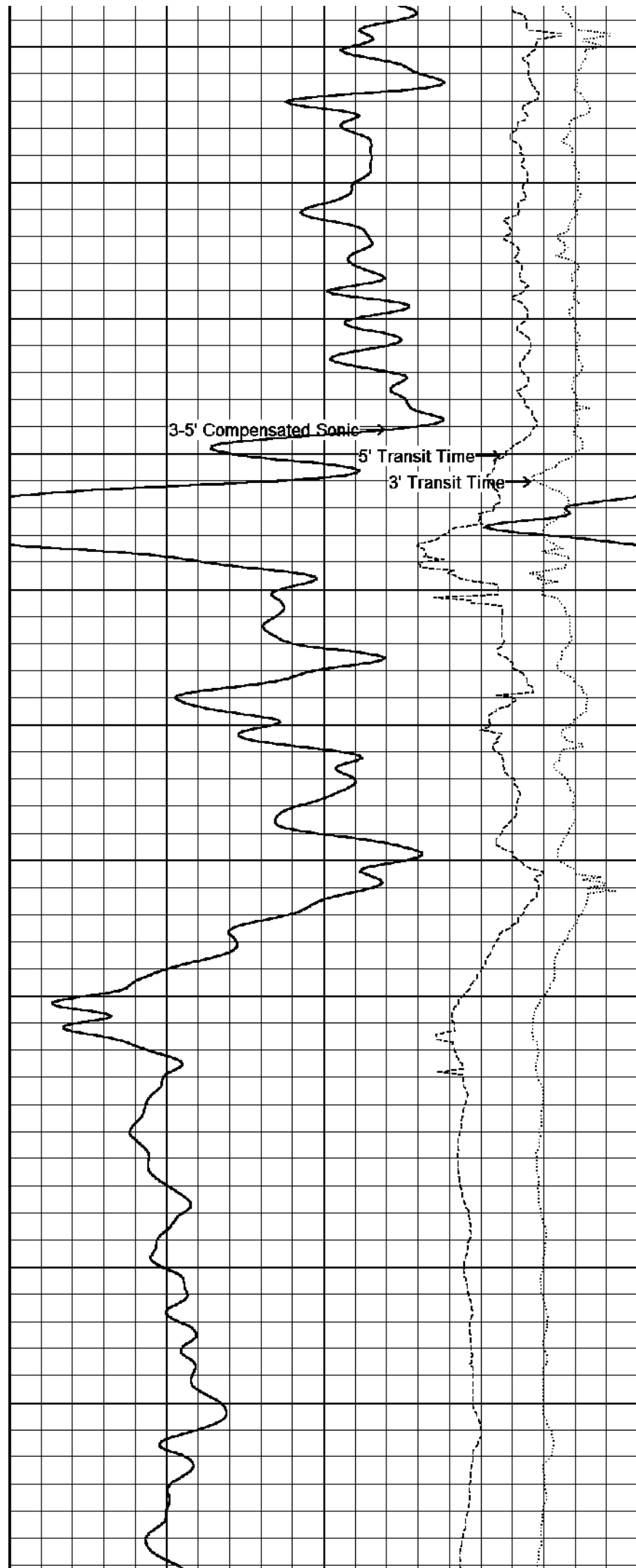
63°

2120

2130

62°

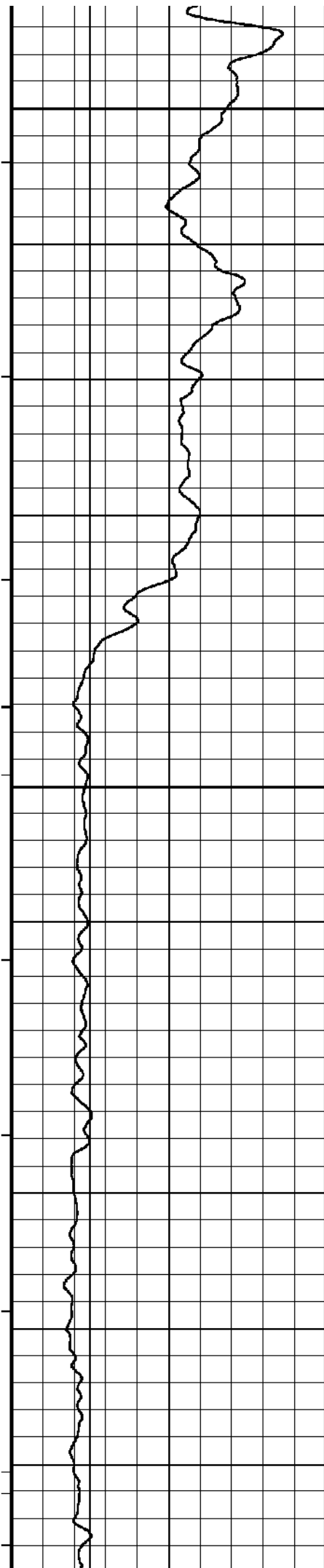
2140



3-5' Compensated Sonic

5' Transit Time

3' Transit Time



2150

2160

62°

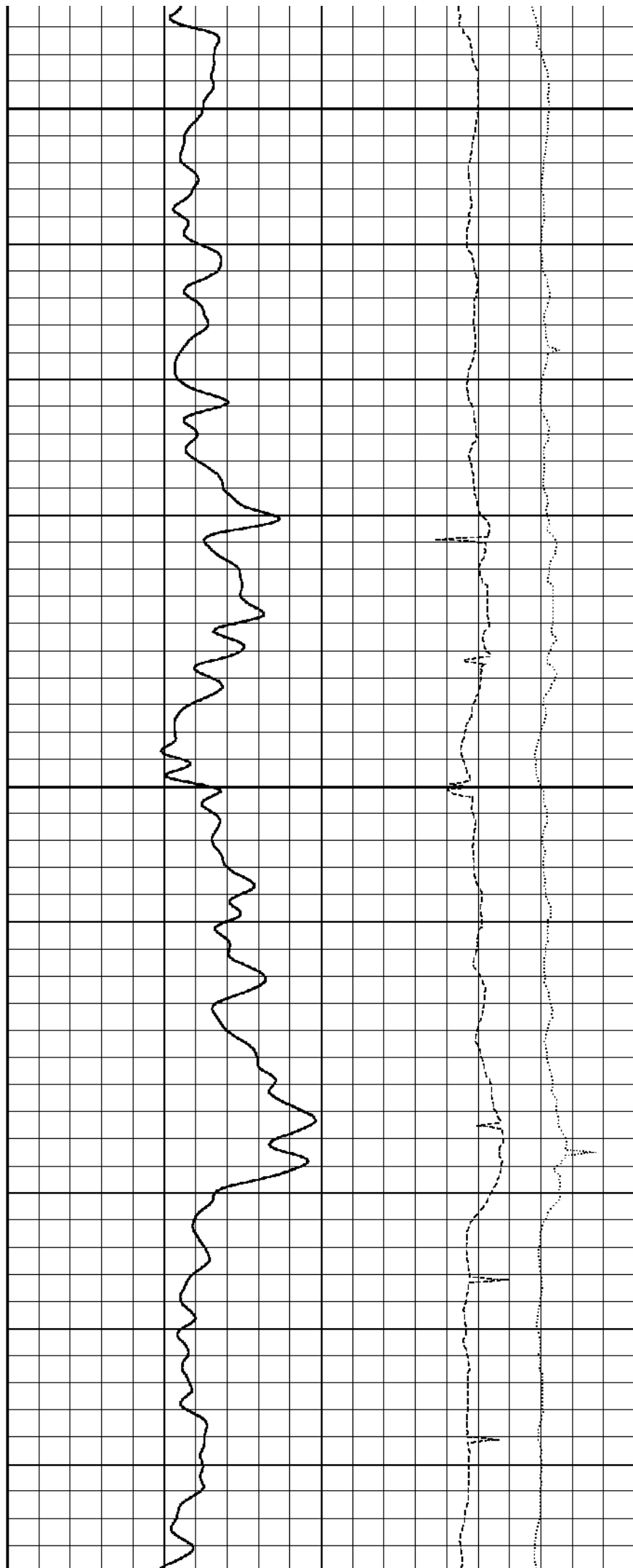
2170

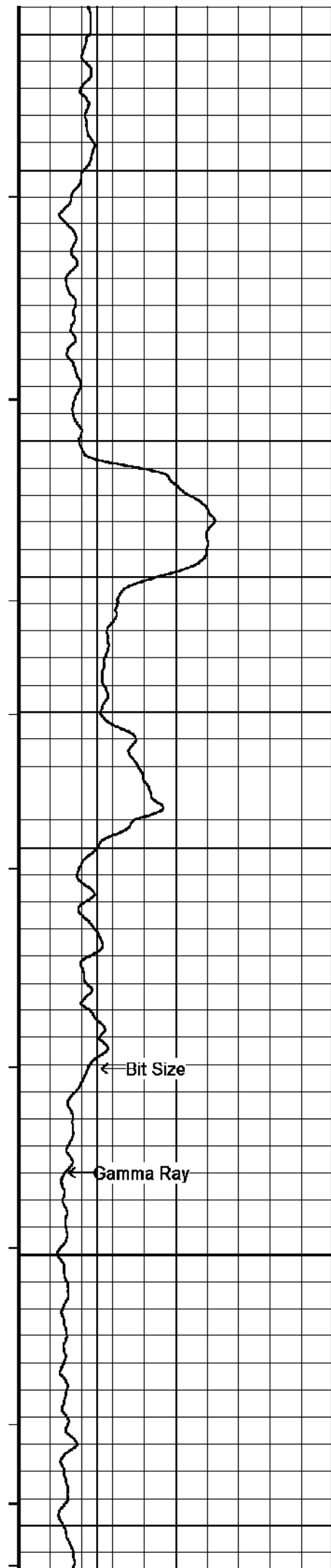
2180

62°

2190

2200





2210

61°

2220

2230

61°

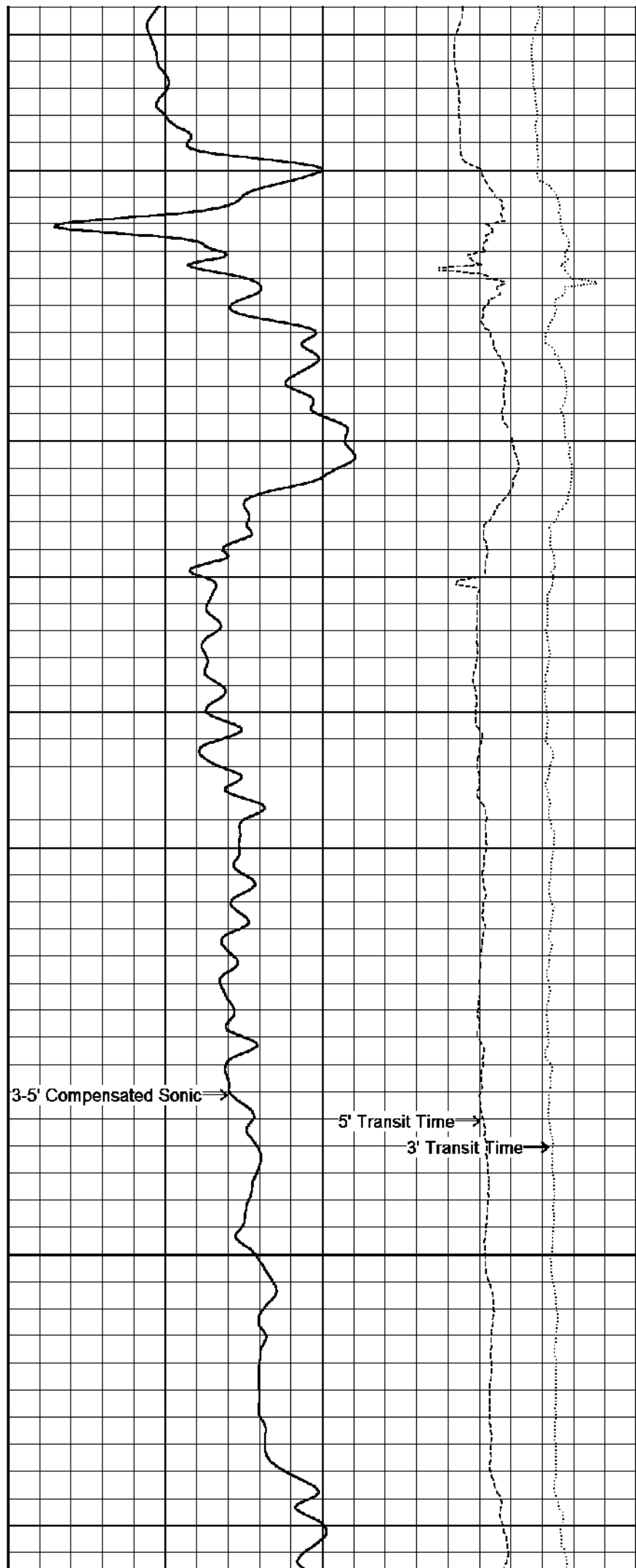
2240

← Bit Size

← Gamma Ray

2250

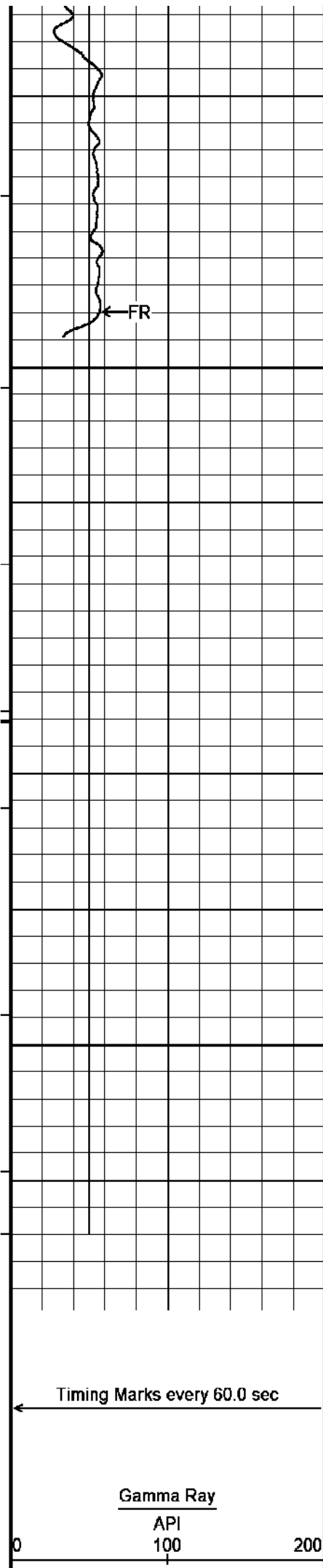
2260



→ 3-5' Compensated Sonic

→ 5' Transit Time

→ 3' Transit Time



60°

2270

2280

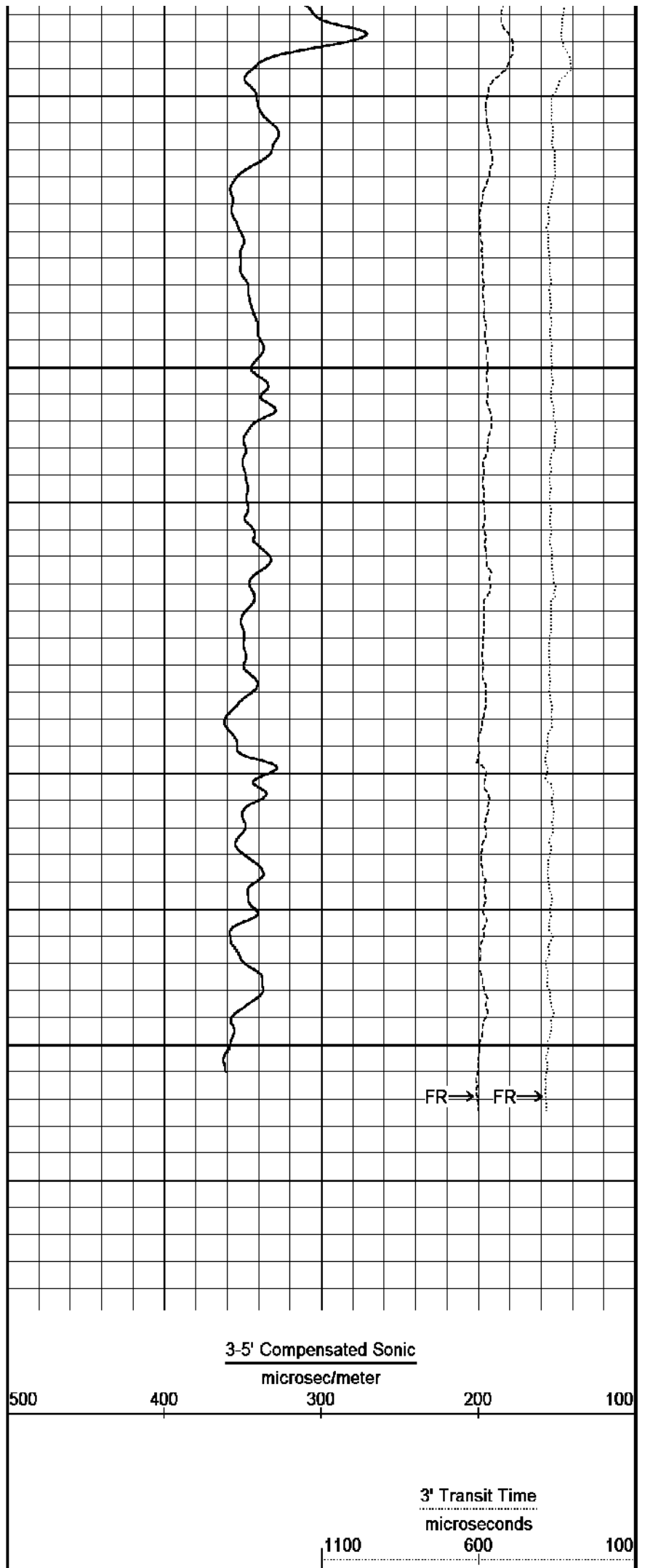
2290

2300

Depth in Metres

Borehole Temp in deg C

← FR



200	300	400			
Bit Size inches			Replay Scale 1:200	5' Transit Time microseconds	
6	11	16		1100	600 100

Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 31-OCT-2002 20:54

Filename: C:\Data\Tuna A10a\MSS\MAIN LOG DSC.dta

Recorded on 12-OCT-2002 22:51

System Configuration Dates: Logged 23-JAN-2002: Processed 21-JUN-2002: Plotted 21-JUN-2002:

↑ MAIN LOG 1:200 ↑

## BEFORE SURVEY CALIBRATION

C:\Data\Tuna A10a\MSS\MAIN LOG DSC.dta

### General Constants All 000

#### General Parameters

Mud Resistivity	0.07	ohm-metres
Mud Resistivity Temperature	63.00	degrees C
Water Level	0.00	metres
Density/Neutron Processing	Wet Hole	

#### Hole/Annular Volume Parameters

HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	None	
Annular Volume Diameter	7.00	inches

#### Rwa Parameters

Porosity used	Base Density Porosity
Resistivity used	Deep Laterolog
RWA Constant A	0.61
RWA Constant M	2.15

### Gamma Calibration MCG 044

Field Calibration on 10-OCT-2002 15:55

	Measured	Calibrated (API)
Background	12	8
Calibrator (Gross)	1440	917
Calibrator (Net)	1428	909

### Gamma Constants MCG 044

Gamma Calibrator Number	060	
Mud Density	1.24	gm/cc
Caliper Source for Processing	Bit Size	
Tool Position	Centred	
Concentration of KCl	0.00	kppm

### High Resolution Temperature Calibration MCG 044

Field Calibration on 4-SEP-2002,14:58

	Measured	Calibrated(Deg C)
Lower	1.00	1.00
Upper	150.00	150.00

### High Resolution Temperature Constants MCG 044

Pre-filter Length	11
-------------------	----

### Sonic Constants MSS 045

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	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

# Full Waveform Parameters

Use derived TR for 3' Waveform	N/A
Use derived TR for 4' Waveform	N/A
Use derived TR for 5' Waveform	N/A
Use derived TR for 6' Waveform	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

# DOWNHOLE EQUIPMENT

All measurements relative to tool zero.

Compact Battery Sub.  
MBS 99 Length: 4.34 m Weight: 44.09 lb

Compact Knuckle Joint  
SKJ 47 Length: 0.66 m Weight: 24.25 lb

Compact Inline Standoff  
MIS 52 Length: 0.65 m Weight: 30.86 lb

Compact Stiff Bridle Electrode Sub.  
MBE 9 Length: 3.76 m Weight: 94.80 lb





Compact Inline Standoff  
MIS 77      Length: 0.65 m      Weight: 30.86 lb

Compact Stiff Bridle Electrode Sub.  
MBE 5      Length: 3.76 m      Weight: 94.80 lb

Compact Inline Standoff  
MIS 31      Length: 0.65 m      Weight: 30.86 lb

Compact Knuckle Joint  
SKJ 44      Length: 0.66 m      Weight: 24.25 lb

Compact Gamma  
MCG 44      Length: 2.65 m      Weight: 63.93 lb



Compact Knuckle Joint  
SKJ 46    Length: 0.66 m    Weight: 24.25 lb

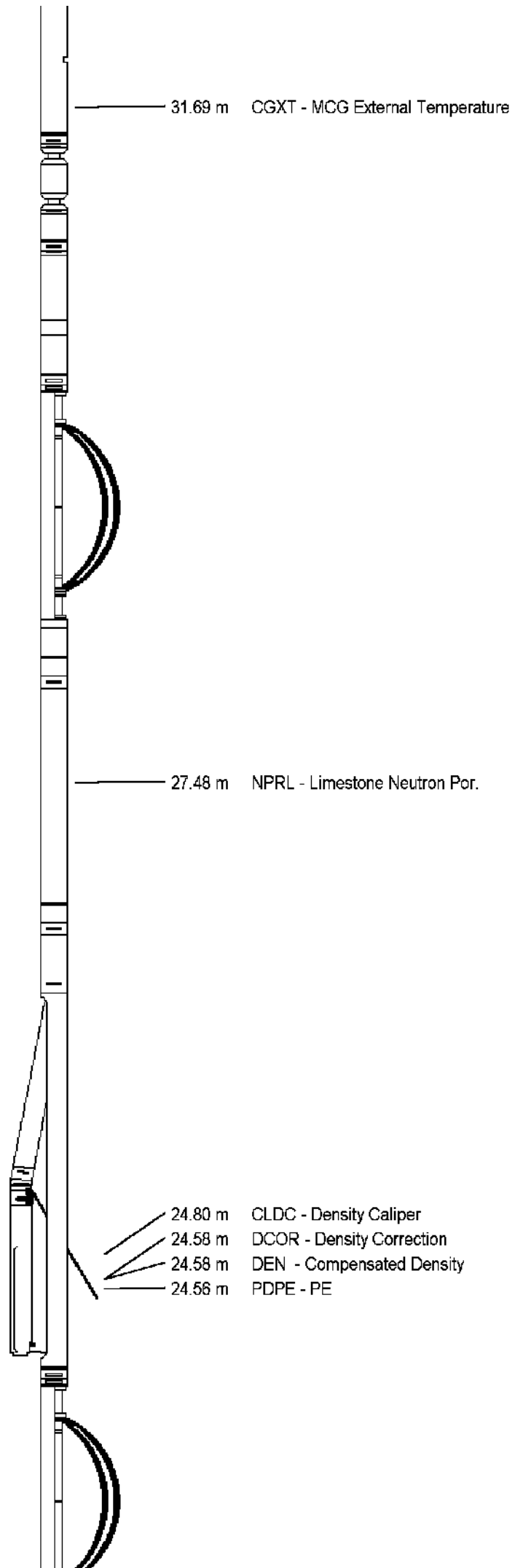
Compact Swivel Head Adaptor  
SHA 27    Length: 0.83 m    Weight: 26.46 lb

Compact Inline Bowspring  
MIS 24    Length: 1.74 m    Weight: 33.07 lb

Compact Neutron  
MDN 68    Length: 1.53 m    Weight: 50.71 lb

Compact Density/Caliper  
MPD 66    Length: 2.92 m    Weight: 90.39 lb

Compact Inline Bowspring  
MIS 25    Length: 1.74 m    Weight: 33.07 lb



Compact Swivel Head Adaptor  
SHA 28    Length: 0.83 m    Weight: 26.46 lb

Compact Knuckle Joint  
SKJ 45    Length: 0.66 m    Weight: 24.25 lb

Compact Inline Standoff  
MIS 53    Length: 0.65 m    Weight: 30.86 lb

Compact Upper Guard Sub.  
MUG 17    Length: 2.74 m    Weight: 68.34 lb

Compact Inline Standoff  
MIS 49    Length: 0.65 m    Weight: 30.86 lb

Compact Laterolog Electrode Sub.  
MLE 15    Length: 3.76 m    Weight: 92.59 lb



14.66 m    DSL - Shallow Laterolog  
14.66 m    DGL - Groningen Laterolog

Compact Inline Standoff  
MIS 76    Length: 0.65 m    Weight: 30.86 lb

Compact Lower Guard Sub.  
MLG 7    Length: 2.44 m    Weight: 55.12 lb

Compact Inline Standoff  
MIS 73    Length: 0.65 m    Weight: 30.86 lb

Compact Knuckle Joint  
SKJ 48    Length: 0.66 m    Weight: 24.25 lb

Compact Inline Standoff  
MIS 75    Length: 0.65 m    Weight: 30.86 lb

Compact Sonic  
MSS 45    Length: 3.82 m    Weight: 72.75 lb

Compact Inline Standoff  
MIS 30    Length: 0.65 m    Weight: 30.86 lb



4.60 m    DT35 - 3-5' Compensated Sonic

Compact Induction  
 MAI 69 Length: 3.29 m Weight: 48.50 lb

Compact Hole Finder  
 HFS 99 Length: 0.61 m

Weight: 2.20 lb

Total Length: 49.93 m

Total Weight: 1296.32 lb



**COMPANY** ESSO AUSTRALIA PTY. LTD.  
**WELL** TUNA A10a  
**FIELD** GIPPSLAND BASIN  
**PROVINCE/COUNTY** BASS STRAIT  
**COUNTRY/STATE** AUSTRALIA

Elevation Kelly Bushing		metres	First Reading	2307.00	metres
Elevation Drill Floor	31.32	metres	Depth Driller	2312.00	metres
Elevation Ground Level	-59.40	metres	Depth Logger	2312.00	metres

**Reeves**

COMPENSATED SONIC  
 1:200 MD