

Reeves

DUAL LATEROLOG

GAMMA RAY
1:500 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			
API Number			COMPENSATED SONIC				
Permit Number			PHOTO DENSITY				
Permanent Datum MSL			, Elevation 0 metres				
Log Measured From 31.32, Metres			above Permanent Datum				
Drilling Measured From Drill Floor, RT							
Date	12-OCT-2002			Elevations:		KB DF GL	
Run Number	1					metres metres metres	
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.

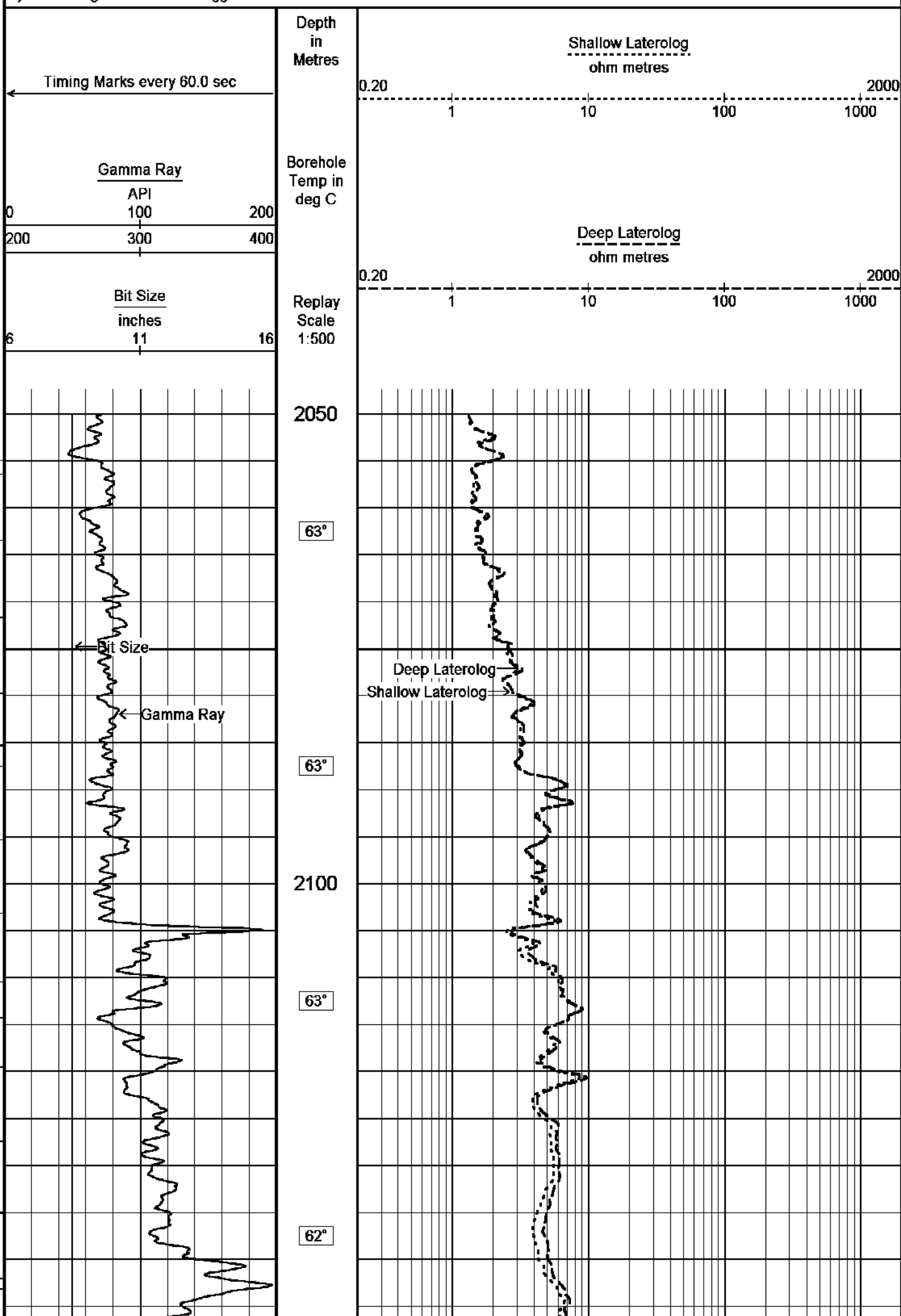
DENSITY CALIPER DID NOT OPEN, LOGS PROCESSED USING BITSIZE FOR CALIPER CORRECTIONS.

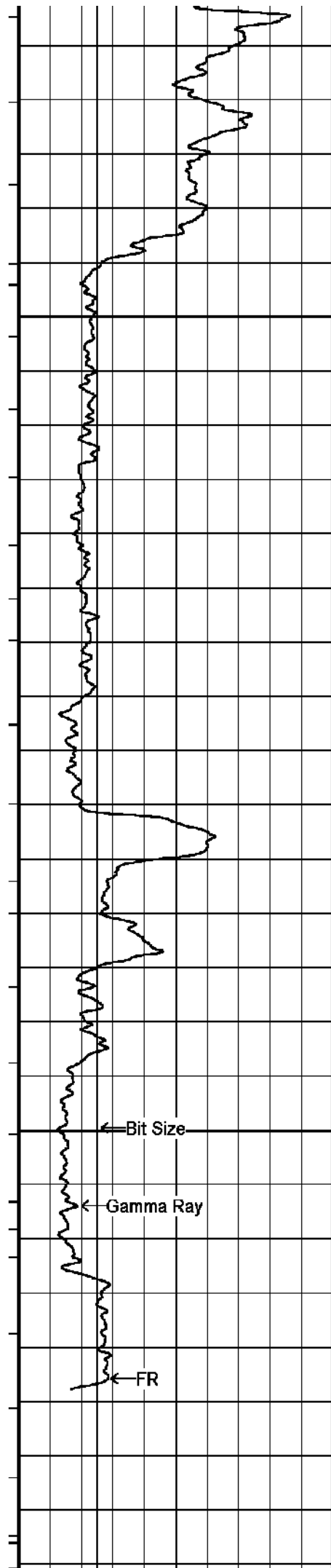
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, 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 1:500

Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 31-OCT-2002 20:29





2150

62°

62°

2200

61°

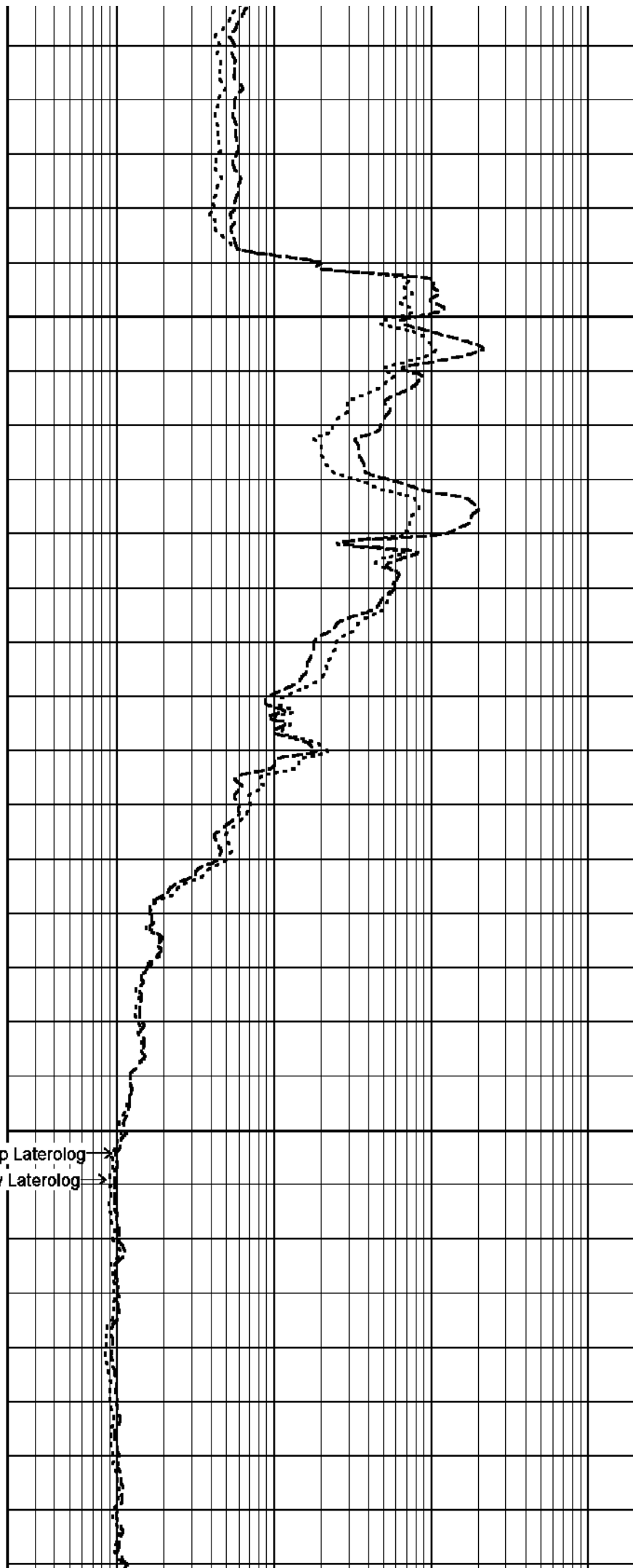
61°

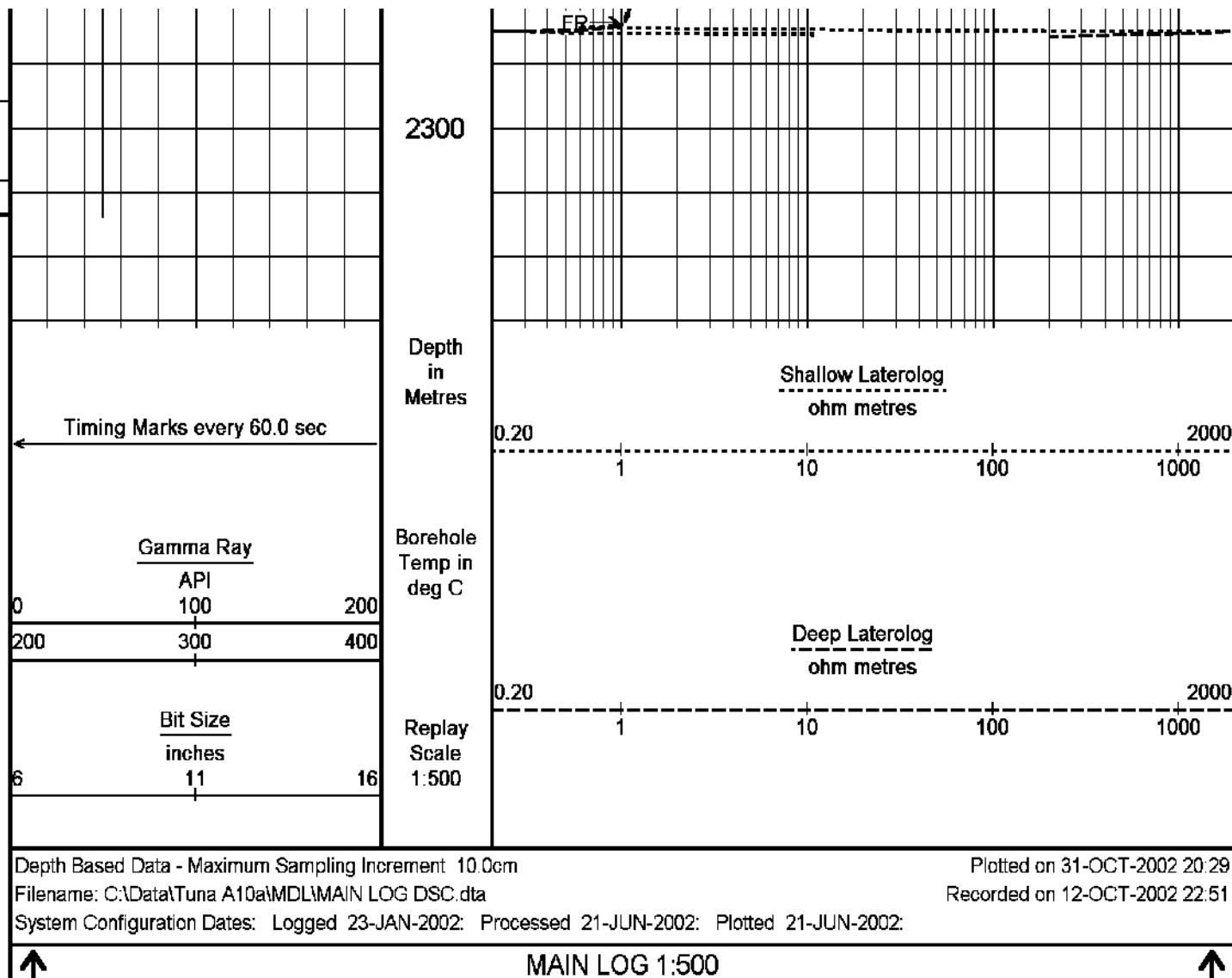
2250

Deep Laterolog

Shallow Laterolog

60°





BEFORE SURVEY CALIBRATION

C:\Data\Tuna A10a\MDL\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		
	Measured	Calibrated(Deg C)
Lower	1.00	1.00
Upper	150.00	150.00
High Resolution Temperature Constants MCG 044		
Pre-filter Length	11	
Laterolog Calibration MLE 015		Base Calibration on 4-SEP-2002,14:40 Field Check on 11-OCT-2002,11:33
Base Calibration		
	Measured	Calibrated (ohm-m)
Channel	Resistor 1 Resistor 2	Resistor 1 Resistor 2
Shallow	0.0 972.3	0.0 1327.3
Deep	0.0 972.9	0.0 852.7
Groningen	0.0 996.2	0.0 852.7
Channel	Base Check (ohm-m)	Field Check (ohm-m)
Shallow	49.1	49.1
Deep	31.5	31.5
Groningen	246.3	246.3
Laterolog Constants MLE 015		
Squasher Start	40000	ohm-m
Shallow Laterolog K Factor	1.3273	
Deep Laterolog K Factor	0.8527	
Groningen Laterolog K Factor	0.8527	
Interference Rejection	50 Hz	
SP Connection	SP Bridle Electrode	
Groningen Connection	Groningen Electrode	

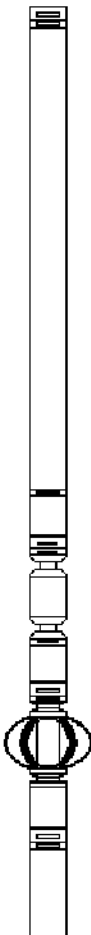
DOWNHOLE EQUIPMENT
All measurements relative to tool zero.

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



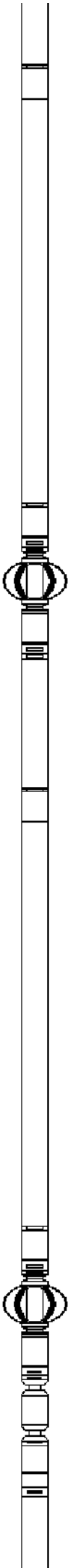
Compact Inline Standoff
MIS 77 Length: 0.65 m Weight: 30.86 lb

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



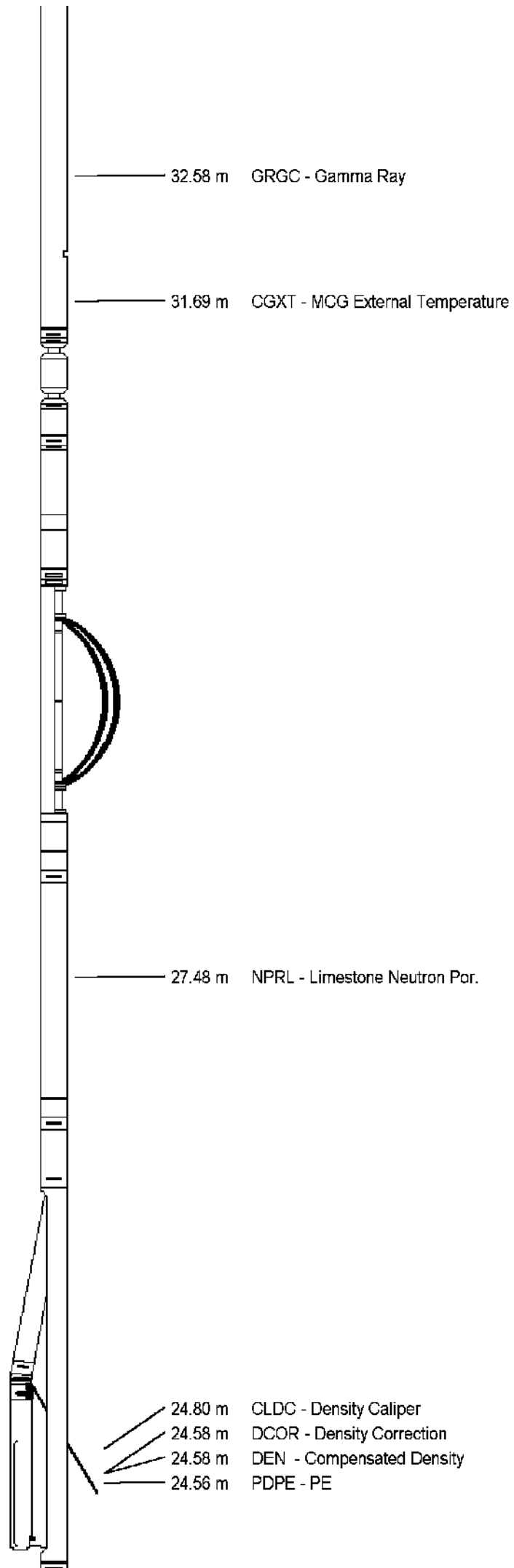
Compact Knuckle Joint
SKJ 48 Length: 0.66 m Weight: 24.25 lb

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

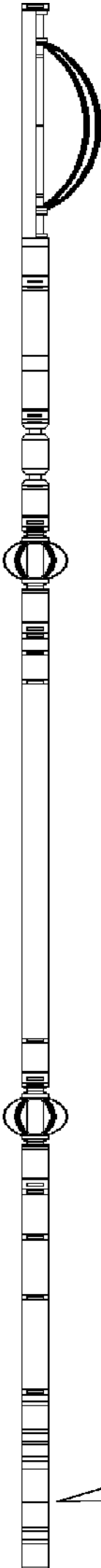
Compact Knuckle Joint
SKJ 45 Length: 0.66 m Weight: 24.25 lb

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



4.60 m DT35 - 3-5' Compensated Sonic

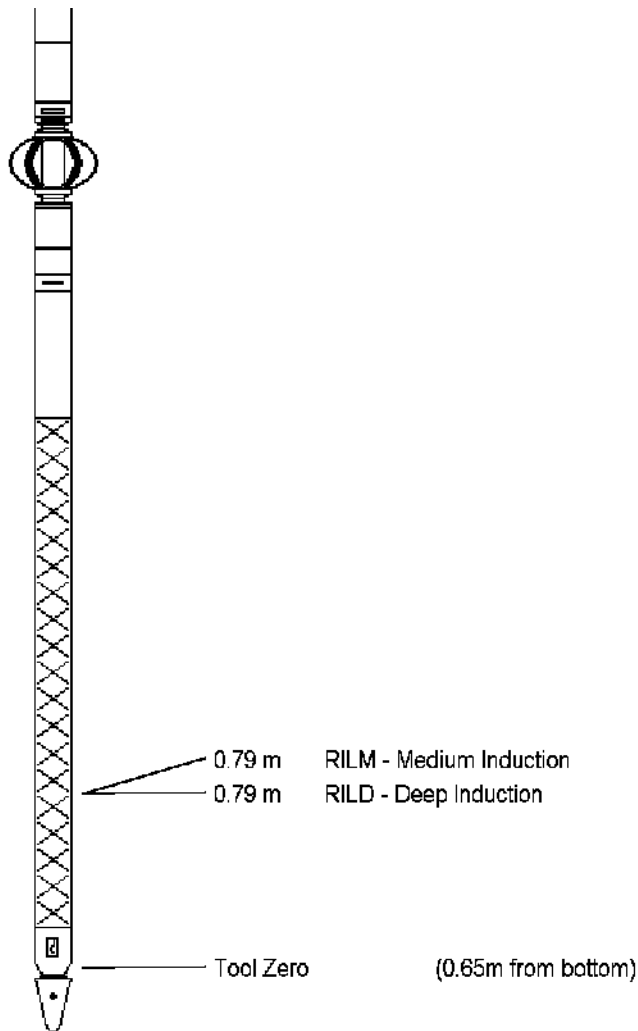
Compact Inline Standoff
MIS 30 Length: 0.65 m Weight: 30.86 lb

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

	DUAL LATEROLOG
	GAMMA RAY
	1:500 MD