

# Reeves

## DUAL LATEROLOG

GAMMA RAY  
1:500 TVD

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	COMPENSATED NEUTRON			
Date	12-OCT-2002			
Run Number	1			
Depth Driller	1446.70 metres			
Depth Logger	1446.70 metres			
First Reading	1445.00 metres			
Last Reading	1346.00 metres			
Casing Driller	625.90 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.

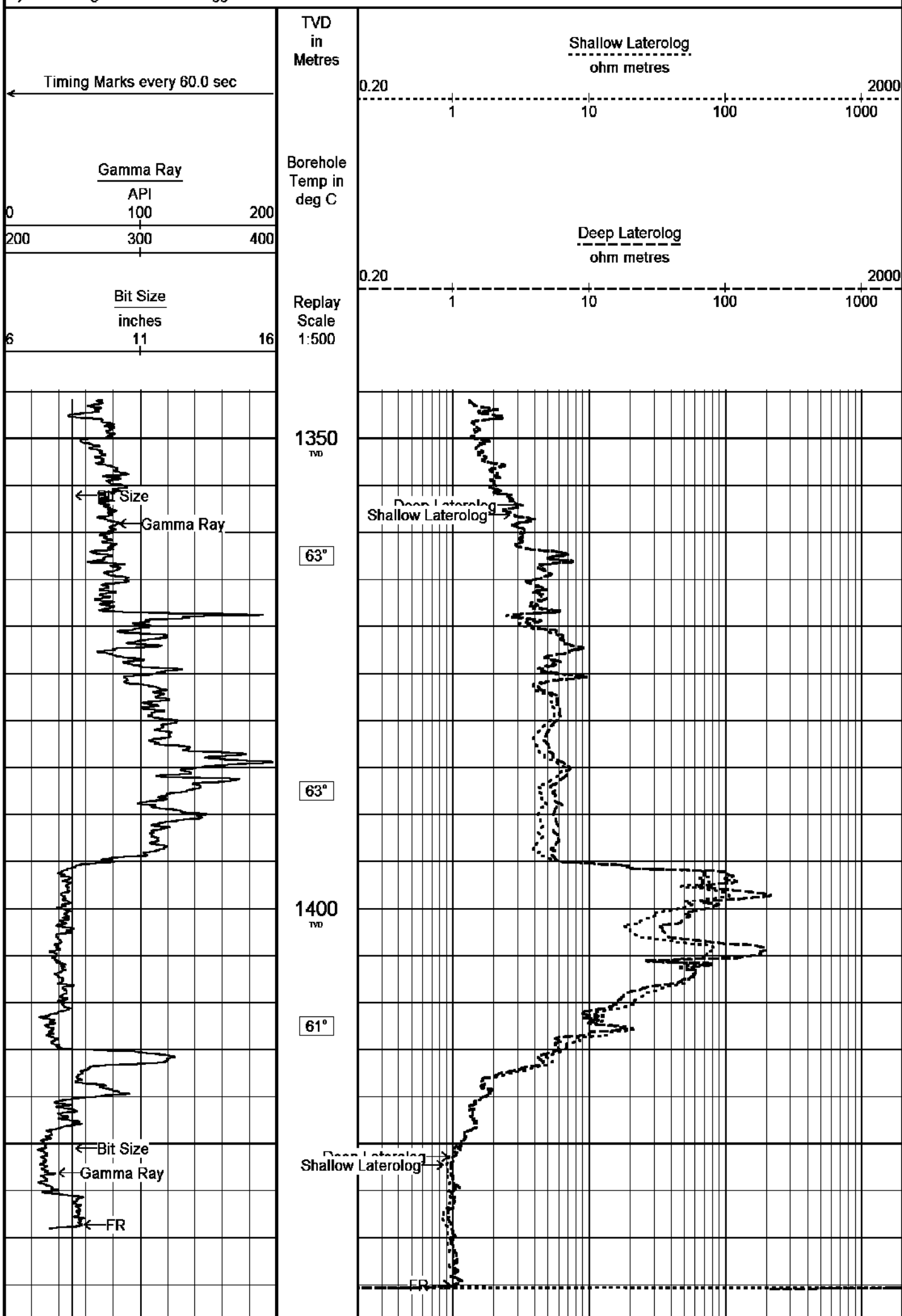
DENSITY CALIPER DID NOT OPEN, LOGS PROCESSED USING BITSIZE FOR CALIPER CORRECTIONS.

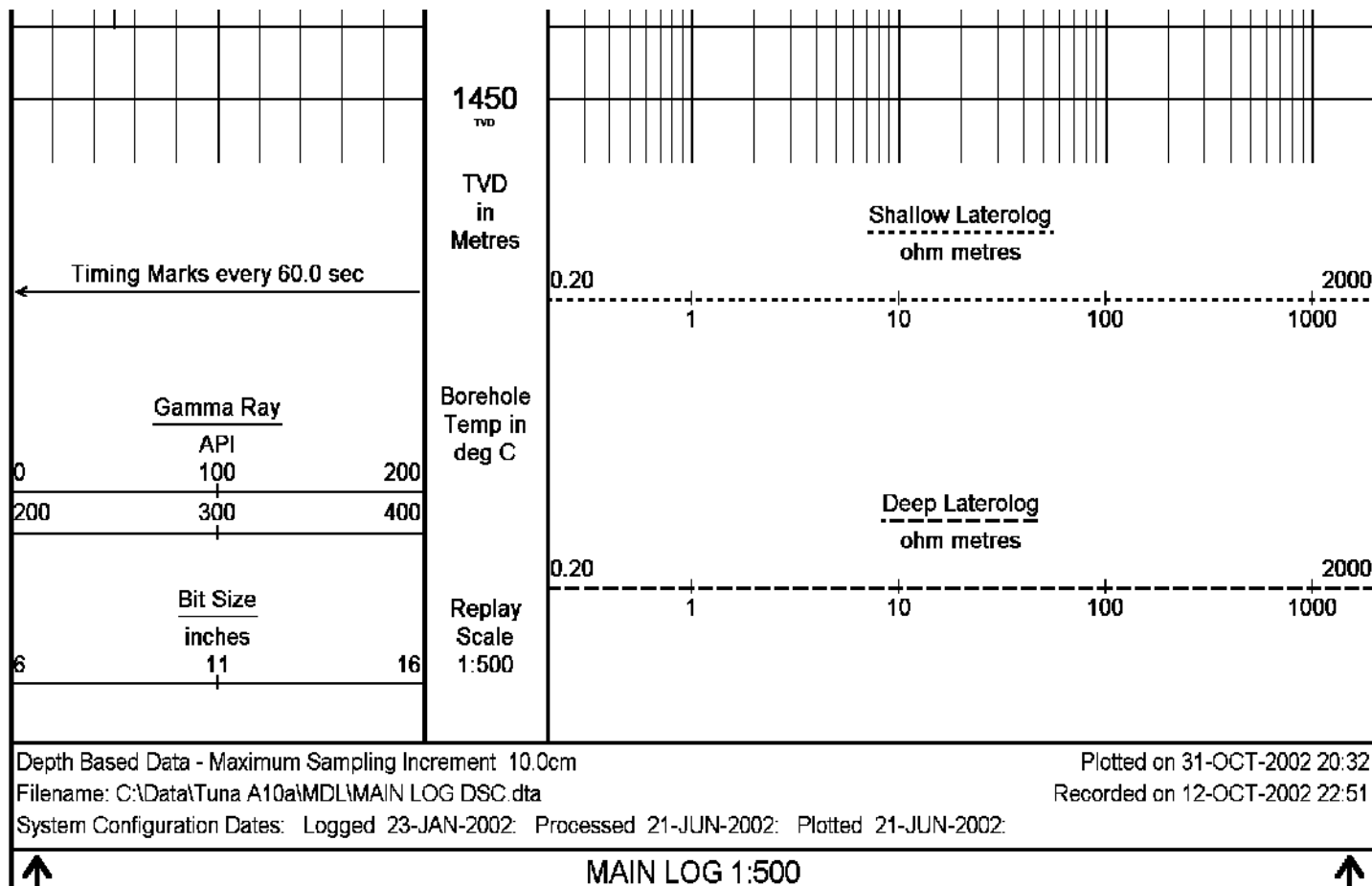
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, 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 20:32





## 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

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			
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			
Groningem 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 46    Length: 0.66 m    Weight: 24.25 lb

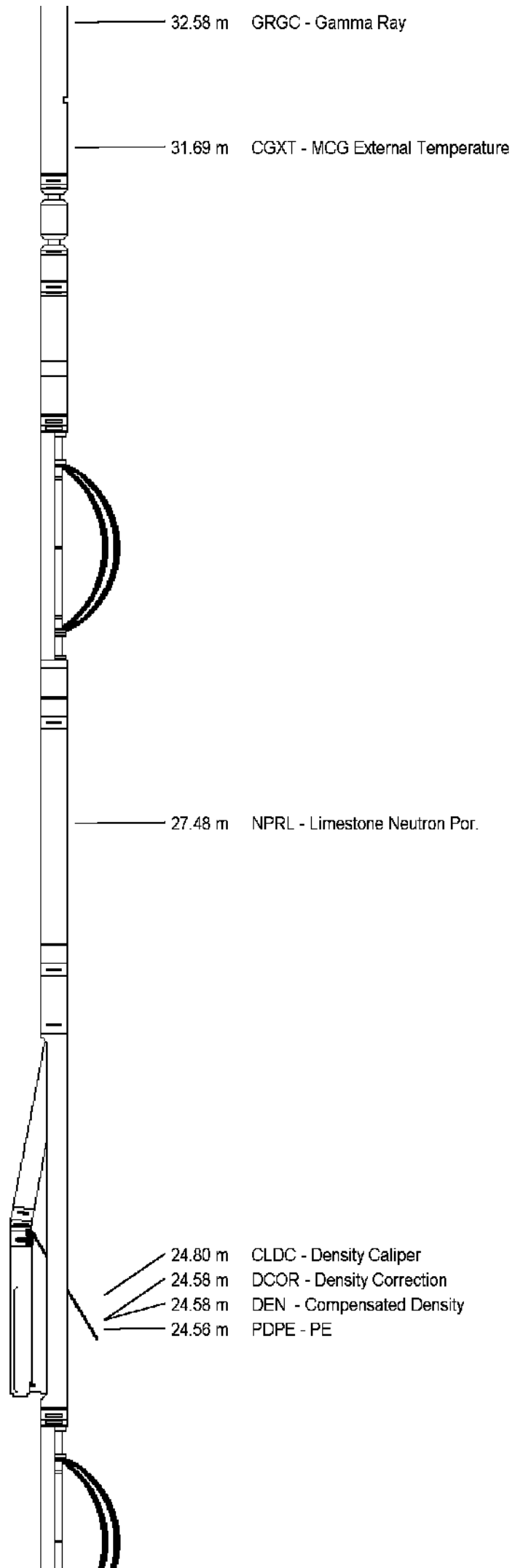
Compact Swivel Head Adaptor  
SHA 27    Length: 0.83 m    Weight: 26.46 lb

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

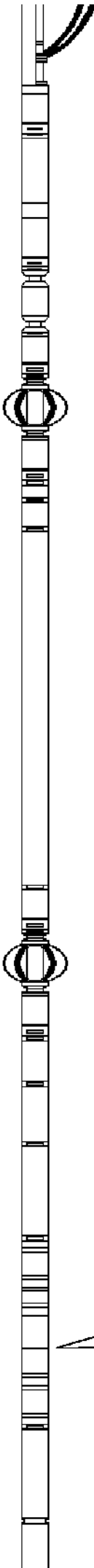
Compact Knuckle Joint  
SKJ 45    Length: 0.66 m    Weight: 24.25 lb

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    DSLL - Shallow Laterolog  
14.66 m    DGLL - 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



0.79 m      RILM - Medium Induction

0.79 m      RILD - Deep Induction

Tool Zero      (0.65m from bottom)

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

Elevation Kelly Bushing	metres	First Reading	1445.00	metres
Elevation Drill Floor      31.32	metres	Depth Driller	1446.70	metres
Elevation Ground Level      -59.40	metres	Depth Logger	1446.70	metres



**DUAL LATEROLOG**  
**GAMMA RAY**  
**1:500 TVD**