

# Reeves

## DUAL LATEROLOG

GAMMA RAY  
1:500 TVD

COMPANY ESSO AUSTRALIA PTY. LTD.

WELL TUNA A-05A

FIELD GIPPSLAND BASIN

PROVINCE/COUNTY BASS STRAIT

COUNTRY/STATE AUSTRALIA

LOCATION X: 624233.40 m E, Y: 5774225.83 m N

38°10'16.282" S, 148°25'05.756" E

LSD SEC TWP RGE Other Services  
COMPENSATED SONIC

API Number PHOTO DENSITY

Permit Number COMPENSATED NEUTRON

Permanent Datum MSL, Elevation 0 metres

Log Measured From DF@ 31.32 metres above Permanent Datum

Drilling Measured From DF

Elevations:  
KB 31.32 metres  
DF 31.32 metres  
GL -59.40 metres

Date 26-Dec-2002

Run Number 1

Depth Driller 1450.68 metres

Depth Logger 1450.68 metres

First Reading 1448.70 metres

Last Reading 1319.80 metres

Casing Driller 652.00 metres

Casing Logger

Bit Size 8.50 inches

Hole Fluid Type KCL/PPH/AGLY

Density / Viscosity 10.30 lb/USg 64.00 secs/ct

PH / Fluid Loss 9.00 3.20 ml/30Min

Sample Source FLOWLINE

Rm @ Measured Temp 0.118 @ 25.0 ohm-m

Rmf @ Measured Temp 0.085 @ 25.0 ohm-m

Rmc @ Measured Temp 0.193 @ 25.0 ohm-m

Source Rmf / Rmc PRESS FILTER

Rm @ BHT 0.059 @ 73.0 ohm-m

Time Since Circulation 36:15 hrs

Max Recorded Temp 73.00 deg C

Equipment Name SHUTTLE

Equipment / Base 1 CML

Recorded By M. BARNES, B. ARNOLD

Witnessed By G. SMITH

Circ. Stopped 09:00 25-Dec

D. MACHIN, G. MCMAHUS

## BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
12.250	218.00	841.00
8.500	841.00	3257.00

## CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
	9.625	0.00	836.41	47.00

## REMARKS

DRILLING RIG: NABORS (ISDL) RIG 453.

COMPACT WIRELINE TOOLS DEPLOYED BY COMPACT WELL SHUTTLE TECHNIQUE.

MESSENGER DEPLOYED WITH RIG MUD PUMPS.

RING SHEARED AT 21:10 26-DEC-02.

SHEARING PRESSURE WAS 1200 PSI.

HTHP FILTER LOSS = 10.8 ml/30min.

CASING DETAILS:

20" 133.0 lb/ft from surface to 164.60 m.

13 3/8" 54.5 lb/ft from surface to 609.65 m (window milled from 210.39 m to 218.39 m).

9 5/8" 47.0 lb/ft from surface to 836.41 m.

CALIPER READING 8.68" ON TIME LOG IN 9 5/8" 47 LB/FT CASING.

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

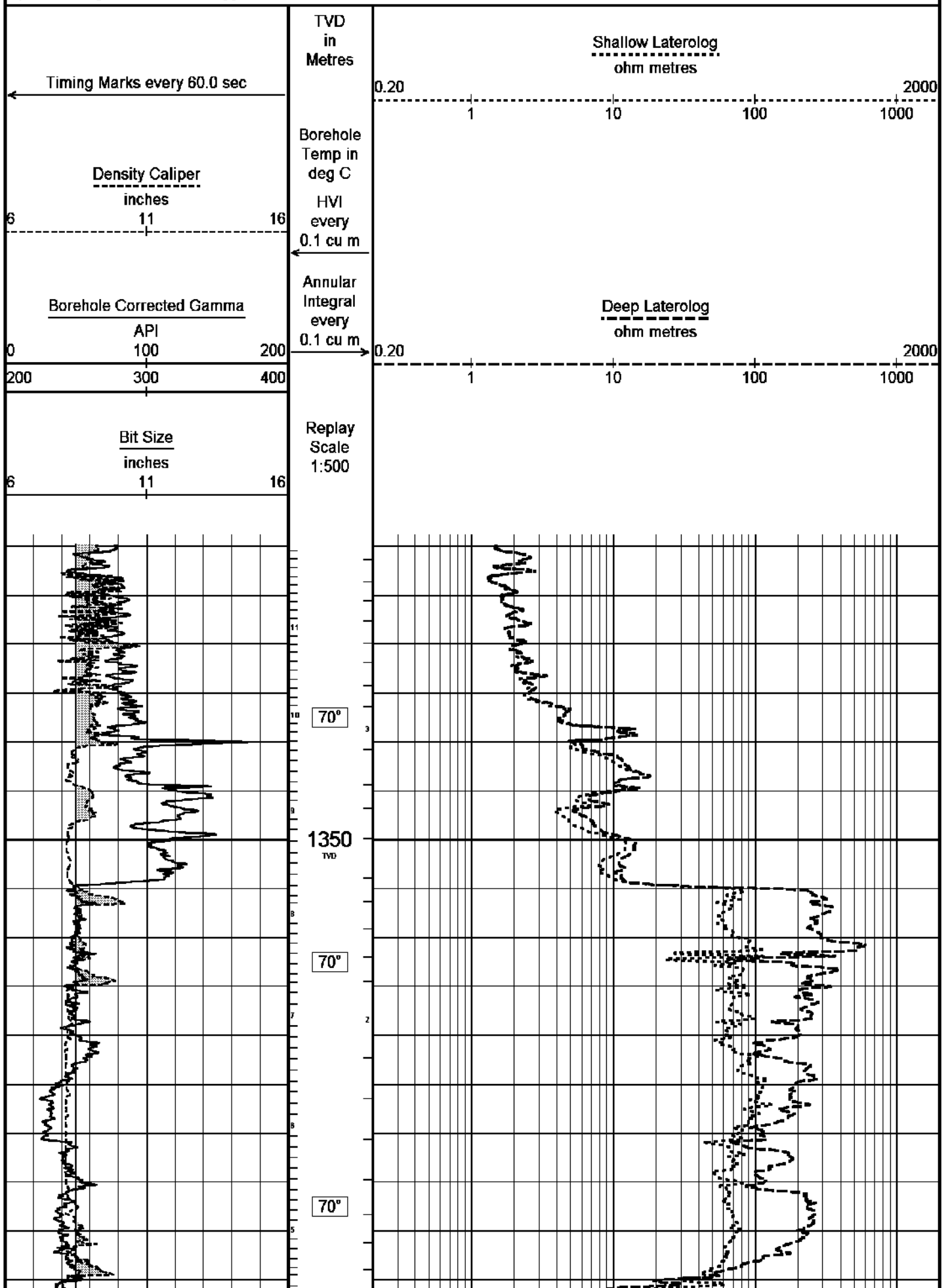
Depth Based Data - Maximum Sampling Increment 10.0cm

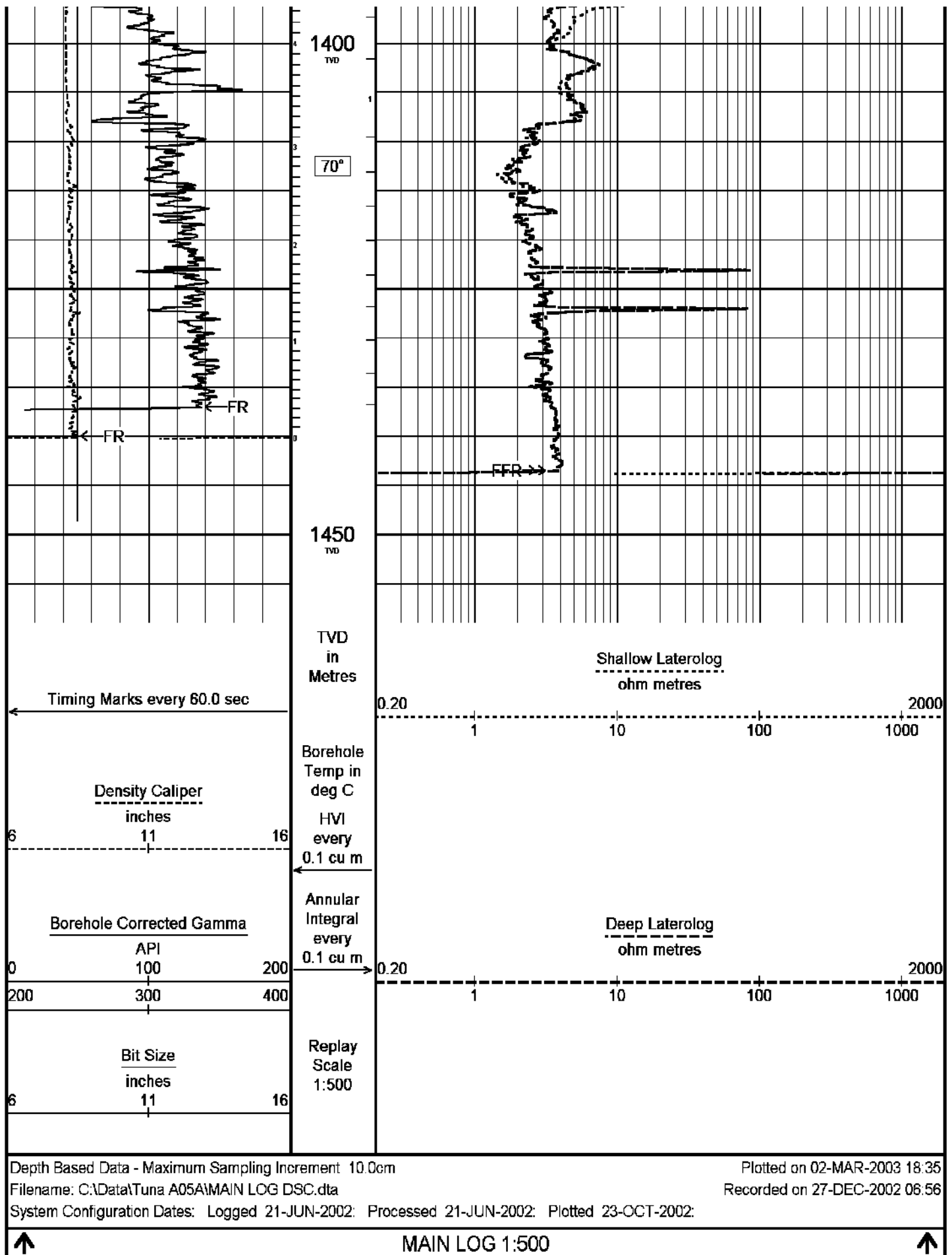
Plotted on 02-MAR-2003 18:35

Filename: C:\Data\Tuna A05A\MAIN LOG DSC.dta

Recorded on 27-DEC-2002 06:56

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





# BEFORE SURVEY CALIBRATION

C:\Data\Tuna A05A\MAIN LOG DSC.dta

## General Constants All 000

### General Parameters

Mud Resistivity 0.06 ohm-metres

Mud Resistivity Temperature	73.00	degrees C
Water Level	0.00	metres
Density/Neutron Processing	Wet Hole	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	Density Caliper	
Annular Volume Diameter	7.00	inches
Caliper for Differential Caliper	0	
Rwa Parameters		
Porosity used	Base Density Porosity	
Resistivity used	Deep Induction	
RWA Constant A	0.61	
RWA Constant M	2.15	

Gamma Calibration MCG 044			Field Calibration on 24-DEC-2002 10:04
	Measured	Calibrated (API)	
Background	11	7	
Calibrator (Gross)	1439	916	
Calibrator (Net)	1428	909	

Gamma Constants MCG 044		
Gamma Calibrator Number	060	
Mud Density	1.24	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
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	

Caliper Calibration MPD 066			Base Calibration on 27-DEC-2002,09:09
			Field Calibration on
Base Calibration			
Reading No	Measured	Calibrator Size (in)	
1	11999	4.31	
2	20143	6.29	
3	28915	8.28	
4	37314	10.24	
5	46672	12.31	
6	N/A	N/A	
Field Calibration			
	0	0	
	0.00	0.00	

Laterolog Calibration MLE 015					Base Calibration on 4-SEP-2002,14:40
					Field Check on 24-DEC-2002,10:46
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	

Groningen Laterolog R Factor  
Interference Rejection  
SP Connection  
Groningen Connection

0.6327  
50 Hz  
SP Bridle Electrode  
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 B

MIS 52 Length: 0.65 m

Weight: 15.43 lb

Compact Stiff Bridle Electrode Sub.

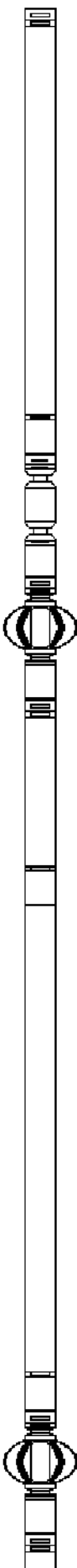
MBE 9 Length: 3.76 m

Weight: 94.80 lb

Compact Inline Standoff B

MIS 77 Length: 0.65 m

Weight: 15.43 lb



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

Compact Inline Standoff B  
MIS 31      Length: 0.65 m      Weight: 15.43 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

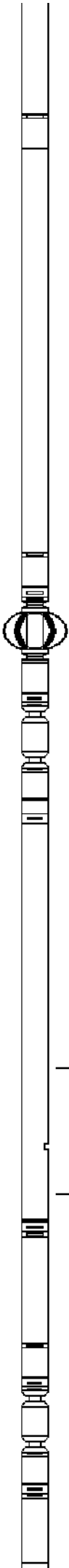
33.53 m      GRGC - Gamma Ray

32.64 m      CGXT - MCG External Temperature

Compact Memory Sub.  
MMS 24      Length: 0.95 m      Weight: 22.05 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 A  
MIS 24    Length: 1.74 m    Weight: 33.07 lb

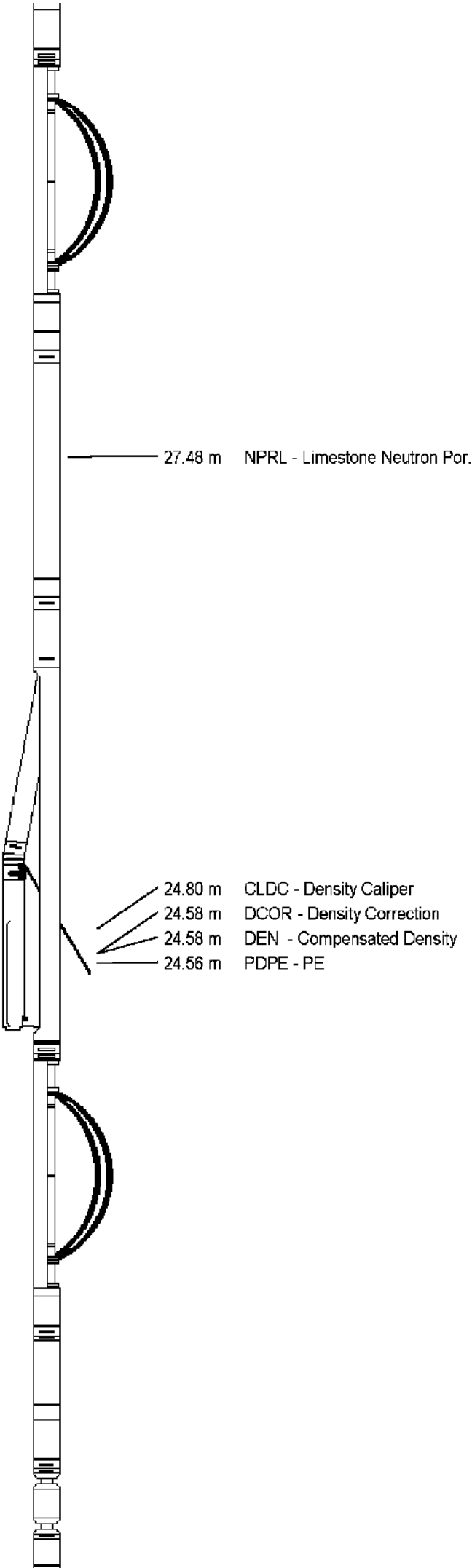
Compact Neutron  
MDN 68    Length: 1.53 m    Weight: 50.71 lb

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

Compact Inline Bowspring A  
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 B  
MIS 53    Length: 0.65 m    Weight: 15.43 lb

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

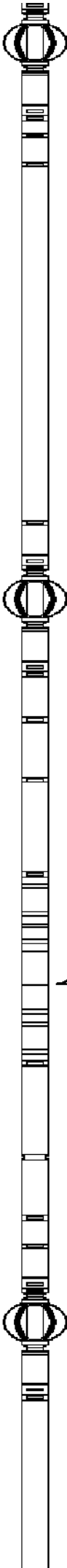
Compact Inline Standoff B  
MIS 49    Length: 0.65 m    Weight: 15.43 lb

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 B  
MIS 76    Length: 0.65 m    Weight: 15.43 lb

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





Compact Inline Standoff B  
MIS 73    Length: 0.65 m    Weight: 15.43 lb

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

Compact Inline Standoff B  
MIS 75    Length: 0.65 m    Weight: 15.43 lb

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



4.60 m    DT35 - 3-5' Compensated Sonic

Compact Inline Standoff B  
MIS 30    Length: 0.65 m    Weight: 15.43 lb

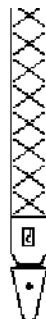
Compact Induction  
MAI 69    Length: 3.29 m    Weight: 48.50 lb

Pressure Bung + Hole Finder  
HFS 99 Length: 0.28 m

Weight: 6.61 lb

Total Length: 50.55 m

Total Weight: 1183.88 lb



0.79 m

RILM - Medium Induction

0.79 m

RILD - Deep Induction

Tool Zero

(0.32m from bottom)

**COMPANY**

**ESSO AUSTRALIA PTY. LTD.**

**WELL**

**TUNA A-05A**

**FIELD**

**GIPPSLAND BASIN**

**PROVINCE/COUNTY**

**BASS STRAIT**

**COUNTRY/STATE**

**AUSTRALIA**

Elevation Kelly Bushing

metres

First Reading

1448.70

metres

Elevation Drill Floor

31.32

metres

Depth Driller

1450.68

metres

Elevation Ground Level

-59.40

metres

Depth Logger

1450.68

metres

**Reeves**

**DUAL LATEROLOG**

**GAMMA RAY**

**1:500 TVD**