

Reeves

DUAL LATEROLOG

GAMMA RAY
1:200 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 8.50 inches

Bit Size 8.50 inches

Hole Fluid Type KCL/PPH/AGLY

Density / Viscosity 10.30 lb/USg 64.00 secs/cf

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

D. MACHIN, G. MCMAHUS

Circ. Stopped 09:00 25-Dec

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 1:200

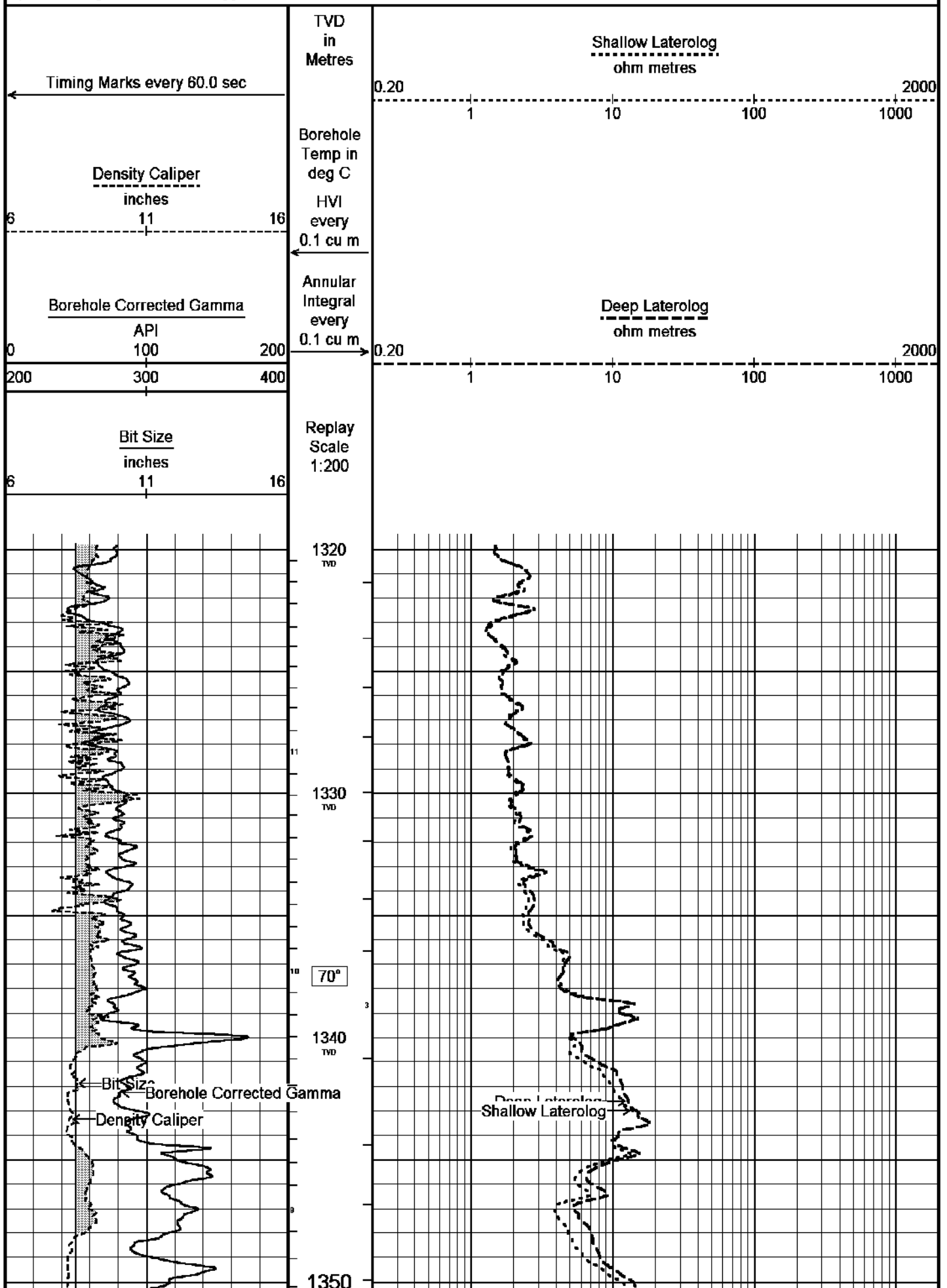
Depth Based Data - Maximum Sampling Increment 10.0cm

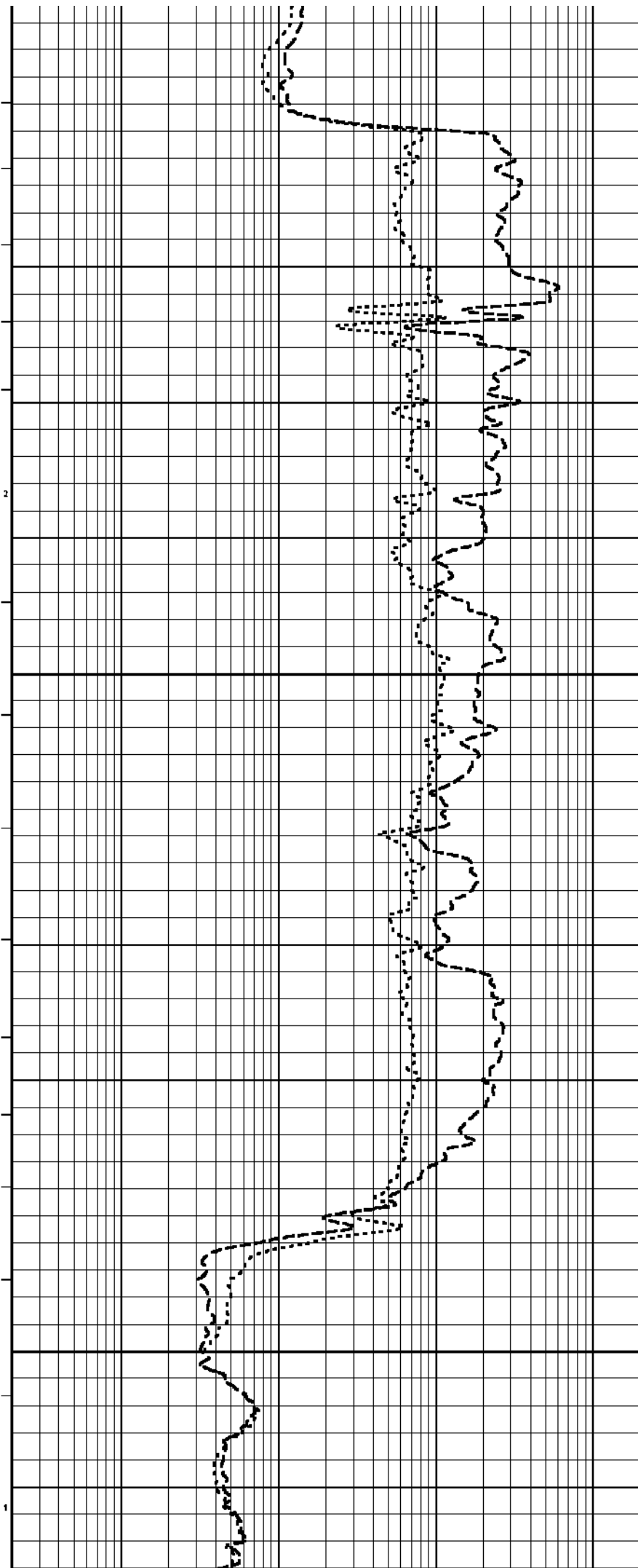
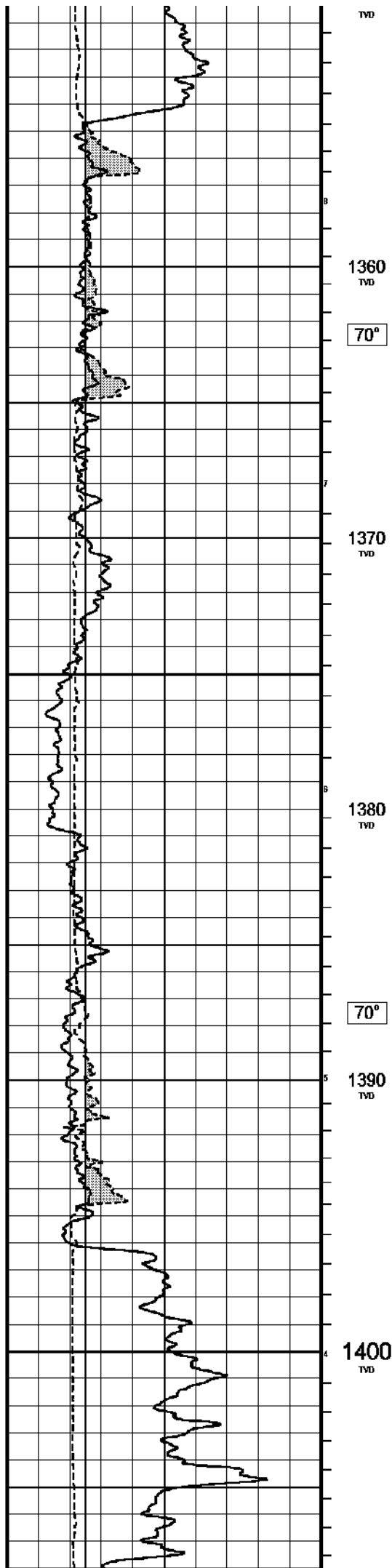
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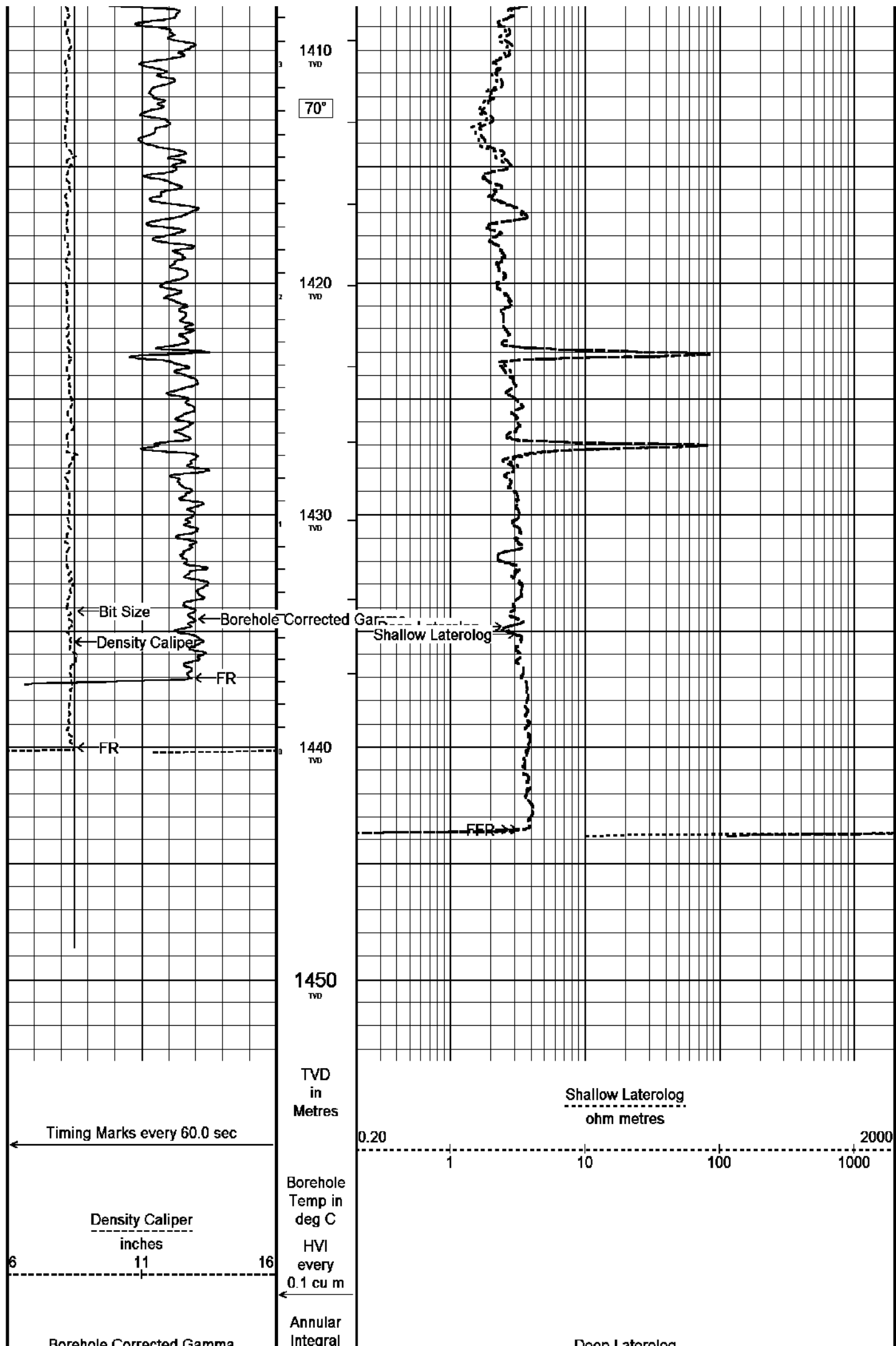
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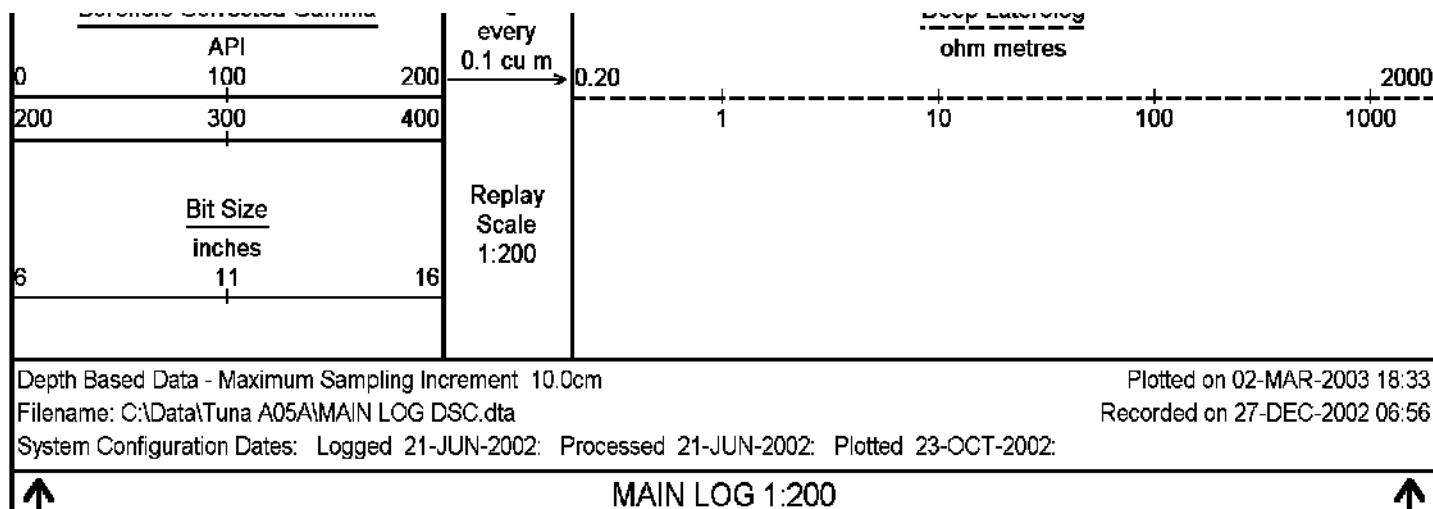
Recorded on 27-DEC-2002 06:56

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
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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
646672
N/A12.31
N/A

Field Calibration

0
0.000
0.00

Laterolog Calibration MLE 015

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

Base Calibration

Channel	Measured		Calibrated (ohm-m)	
	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 B

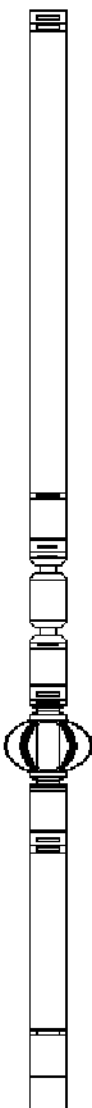
MIS 52 Length: 0.65 m

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



Compact Memory Sub.
MMS 24 Length: 0.95 m Weight: 22.05 lb

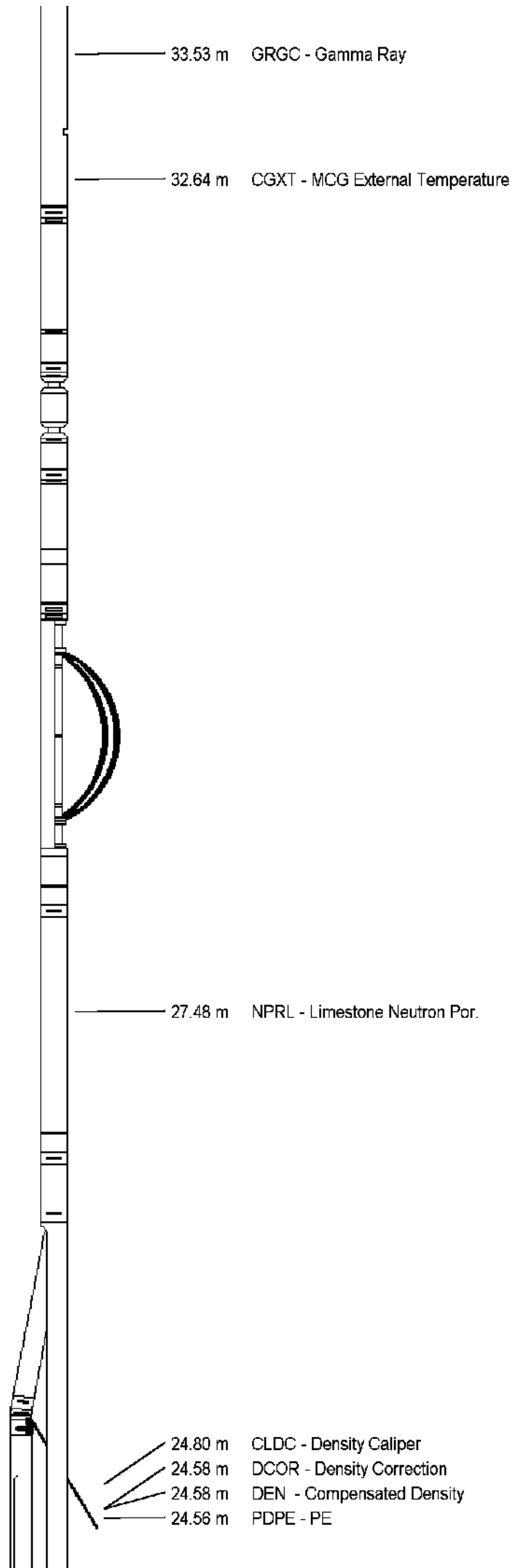
Compact Knuckle Joint
SKJ 46 Length: 0.66 m Weight: 24.25 lb

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

Compact Inline Bowspring 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

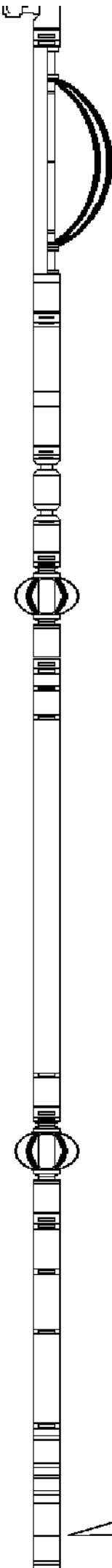
Compact Knuckle Joint
SKJ 45 Length: 0.66 m Weight: 24.25 lb

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 DSLL - Shallow Laterolog
14.66 m DGLL - 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



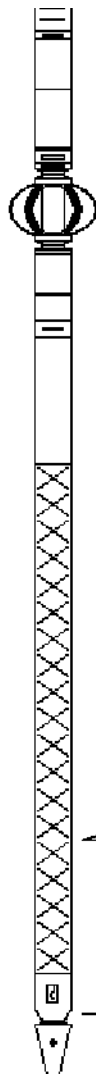
Compact Inline Standoff B
MIS 30 Length: 0.65 m Weight: 15.43 lb

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

	DUAL LATEROLOG
	GAMMA RAY
	1:200 TVD