

Reeves

DUAL LATEROLOG

GAMMA RAY
1:500 MD

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					
Date	26-Dec-2002			Elevations:	
Run Number	1			KB	metres
Depth Driller	3257.00			DF	31.32 metres
Depth Logger	3257.00			GL	-59.40 metres
First Reading	3251.20				
Last Reading	2900.00				
Casing Driller	836.41				
Casing Logger					
Bit Size	8.50				
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				D. MACHIN, G. MCWANNUS
Witnessed By	G. SMITH				
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 1:500

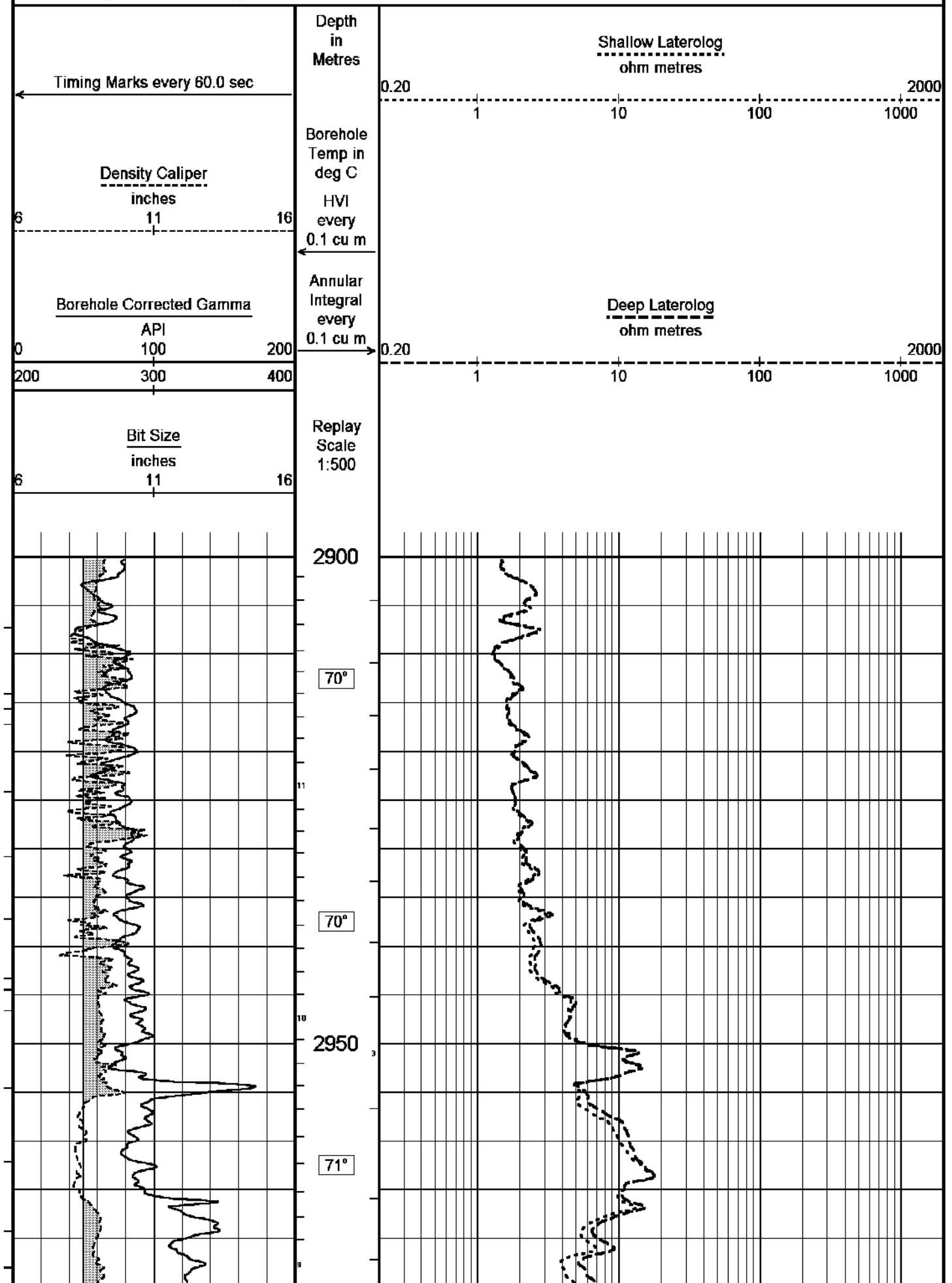
Depth Based Data - Maximum Sampling Increment 10.0cm

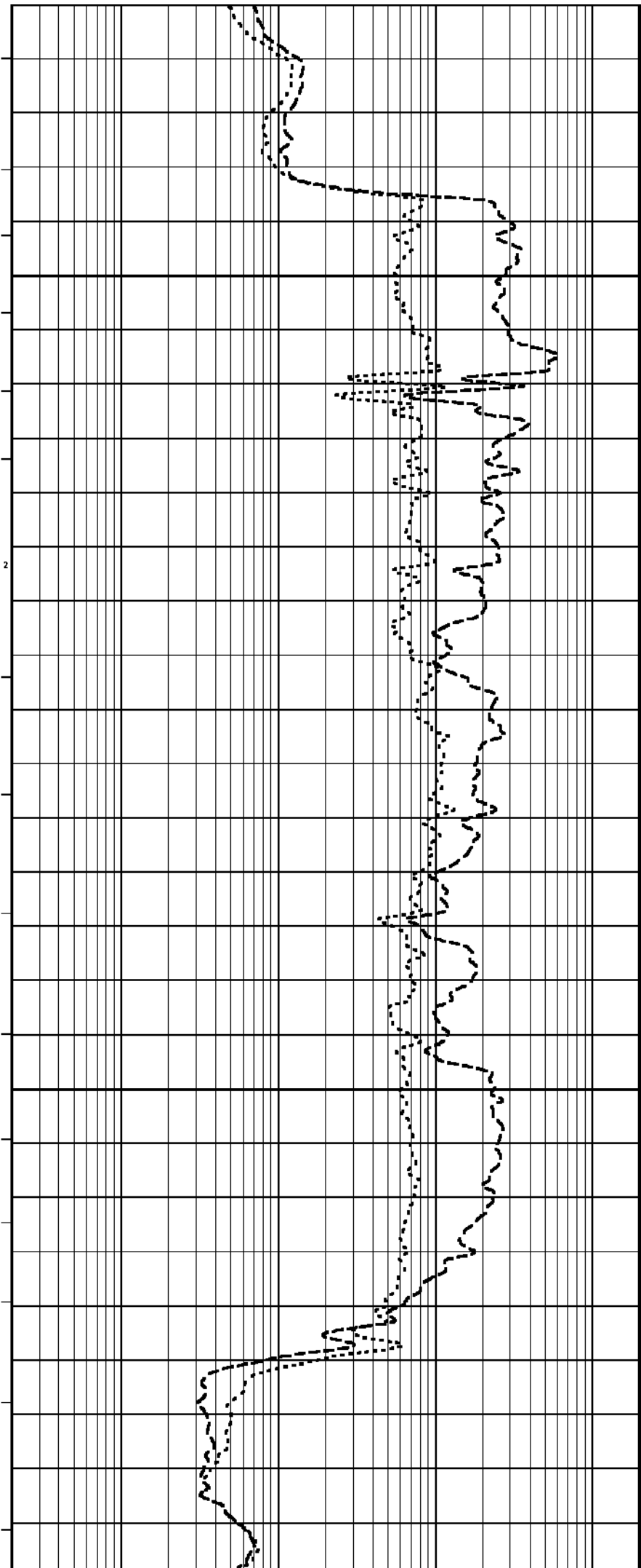
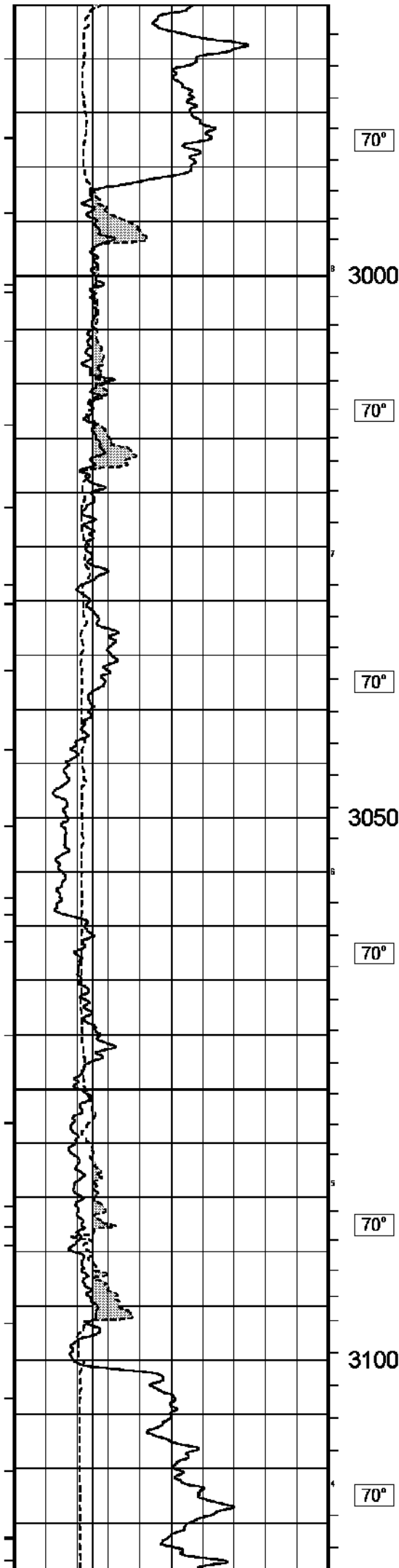
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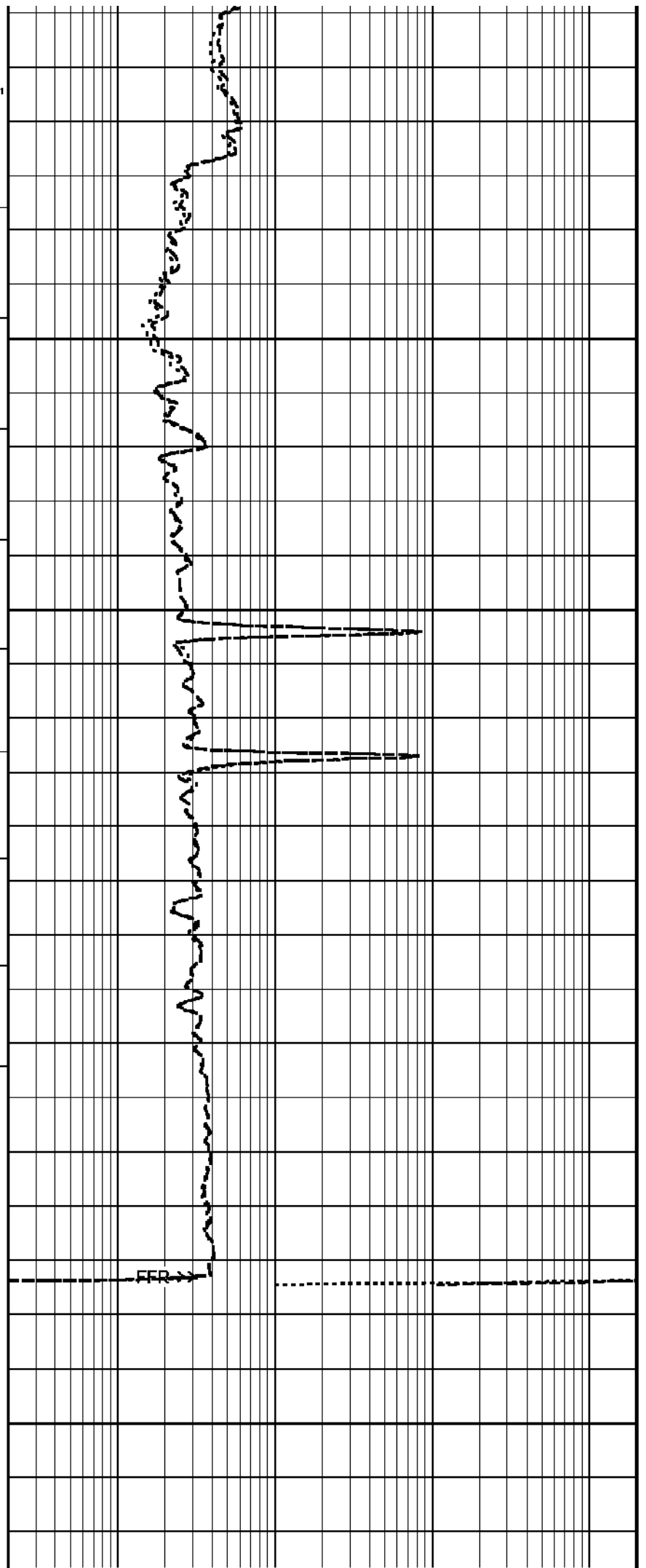
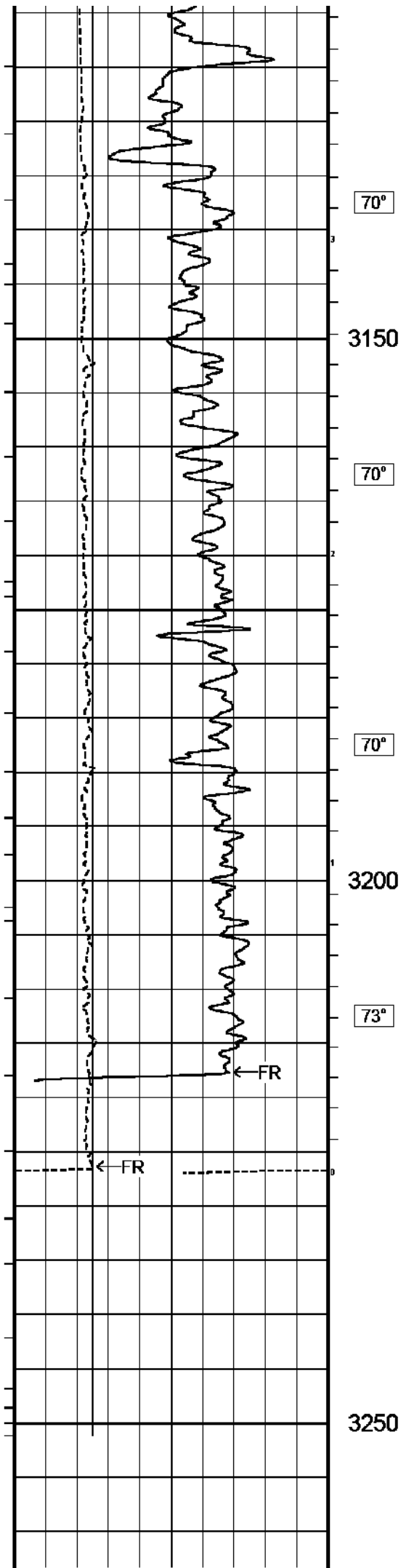
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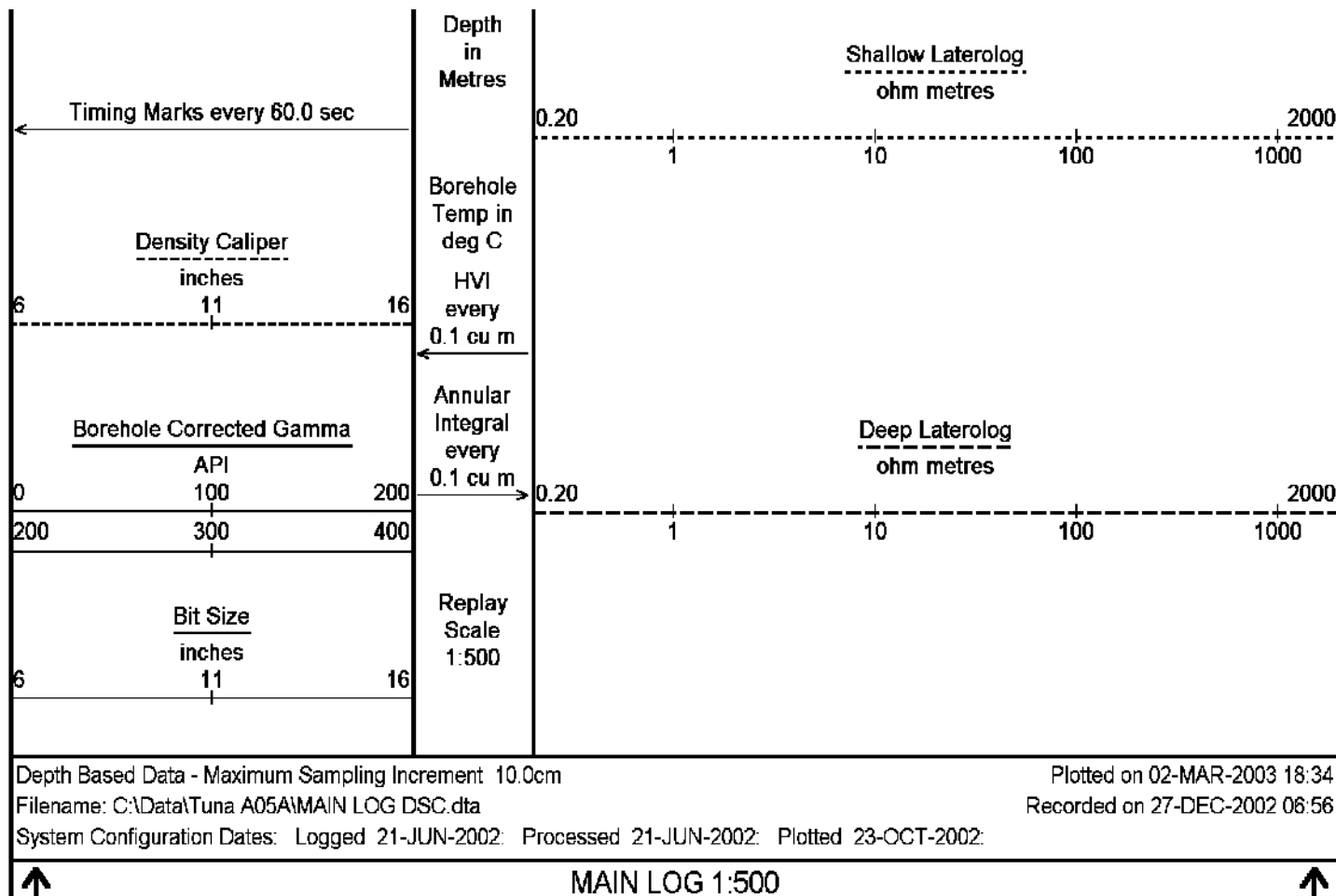
Recorded on 27-DEC-2002 06:56

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	
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	
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

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 46 Length: 0.66 m Weight: 24.25 lb

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

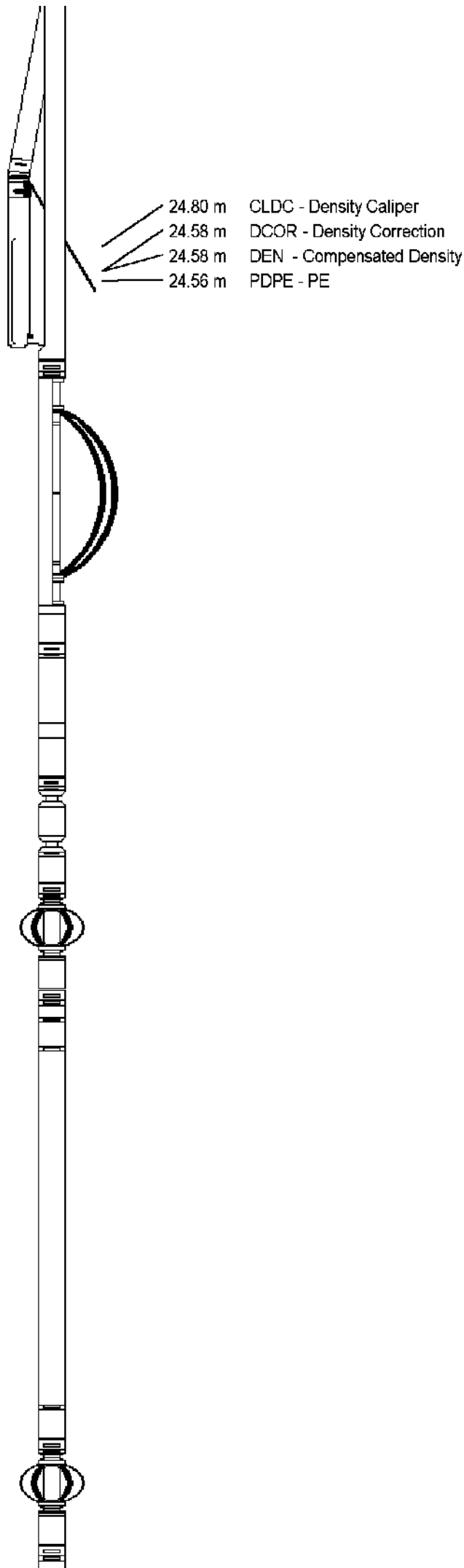
Compact Inline Bowspring A
MIS 24 Length: 1.74 m Weight: 33.07 lb

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

27.48 m NPRL - Limestone Neutron Por.

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

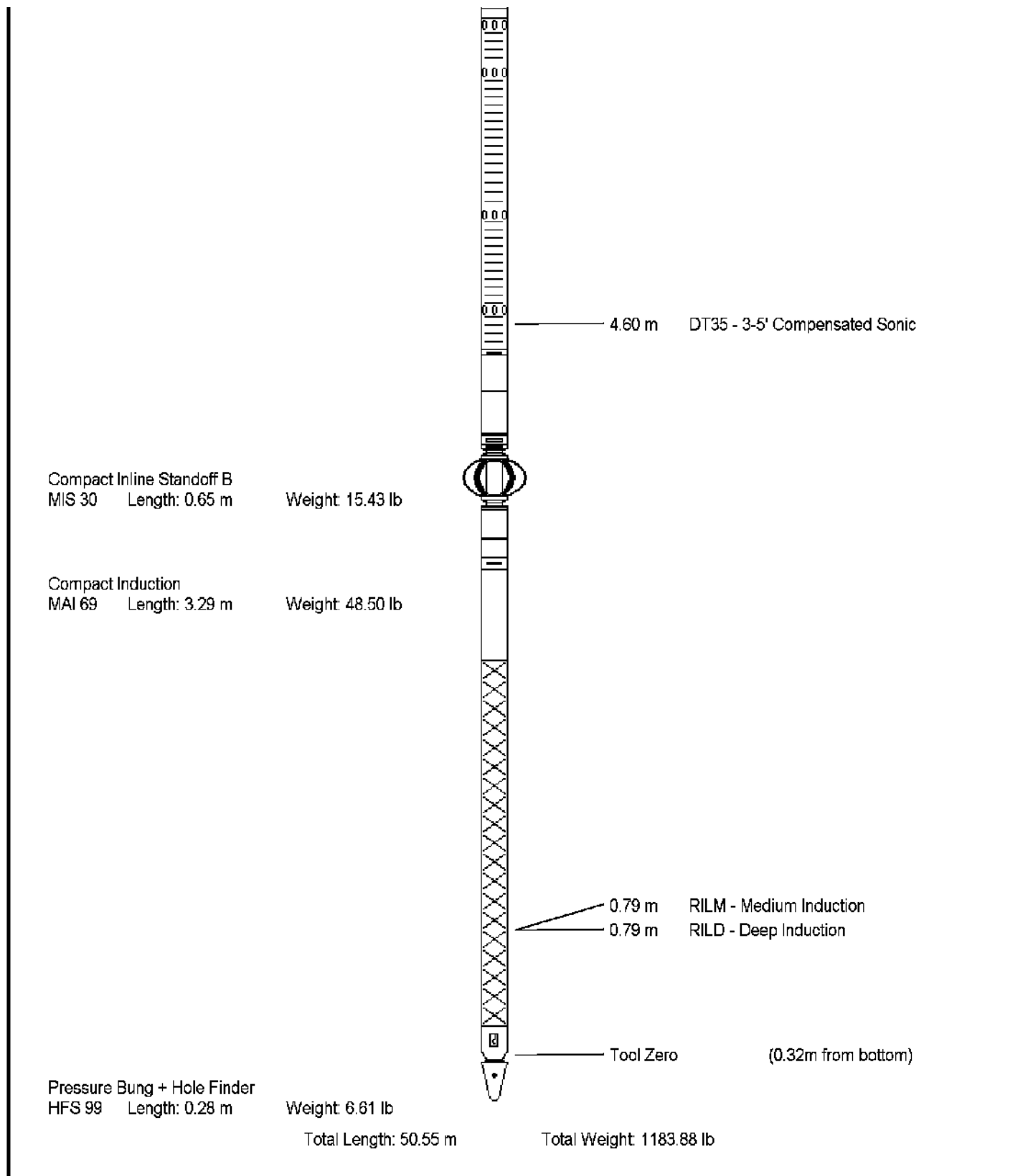
Compact Inline Standoff B
MIS 73 Length: 0.65 m Weight: 15.43 lb

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





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	3251.20	metres
Elevation Drill Floor	31.32 metres	Depth Driller	3257.00	metres
Elevation Ground Level	-59.40 metres	Depth Logger	3257.00	metres

Reeves

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GAMMA RAY**



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