

Reeves

PHOTO DENSITY COMPENSATED NEUTRON 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			
API Number				COMPENSATED SONIC			
Permit Number				DUAL LATEROLOG			
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: KB DF 31.32 GL -59.40 metres	
Run Number	1						
Depth Driller	3257.00			metres			
Depth Logger	3257.00			metres			
First Reading	3251.20			metres			
Last Reading	2900.00			metres			
Casing Driller	836.41			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			D. MACHIN, G. MCMANUS			
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

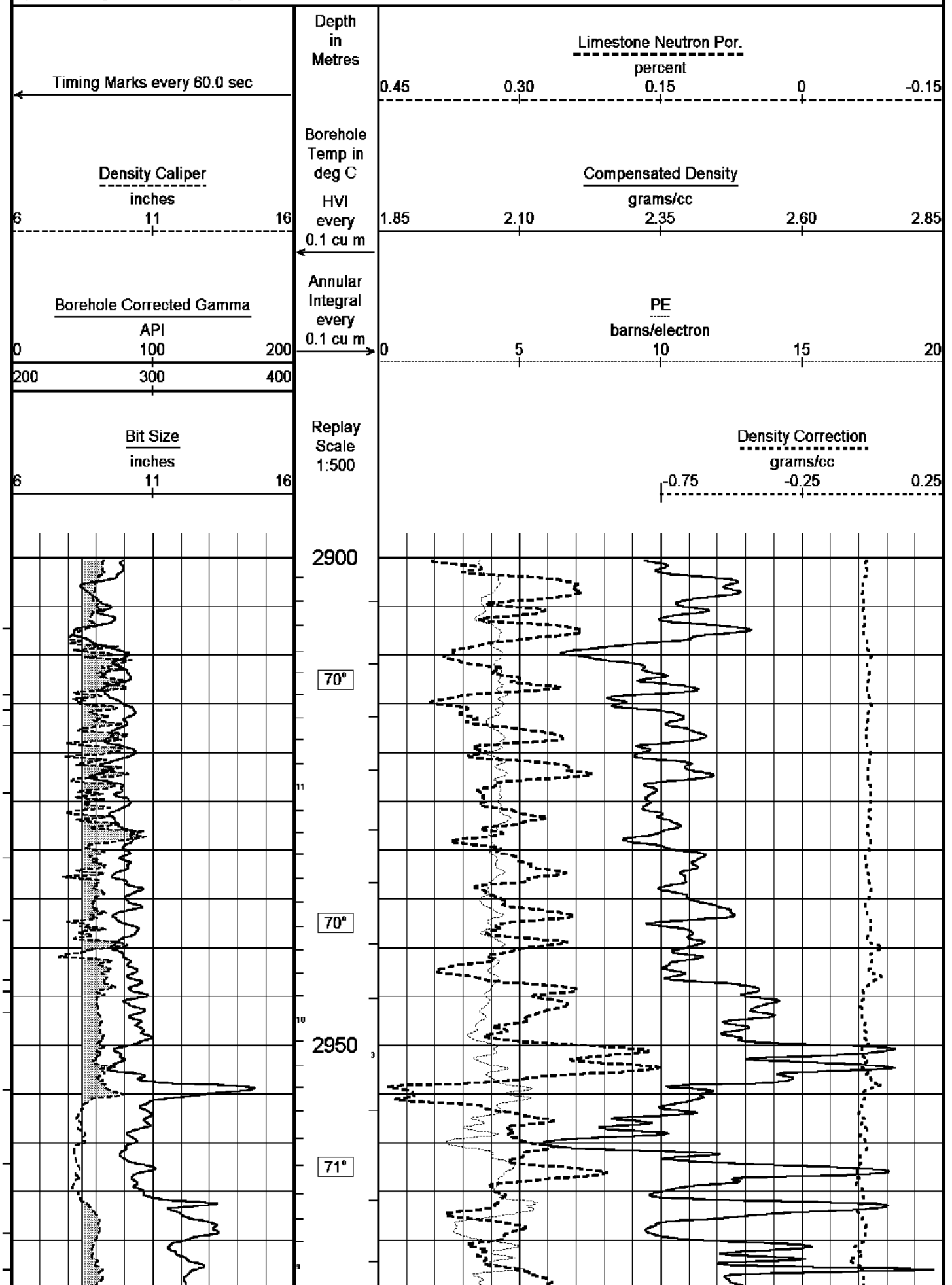
Depth Based Data - Maximum Sampling Increment 10.0cm

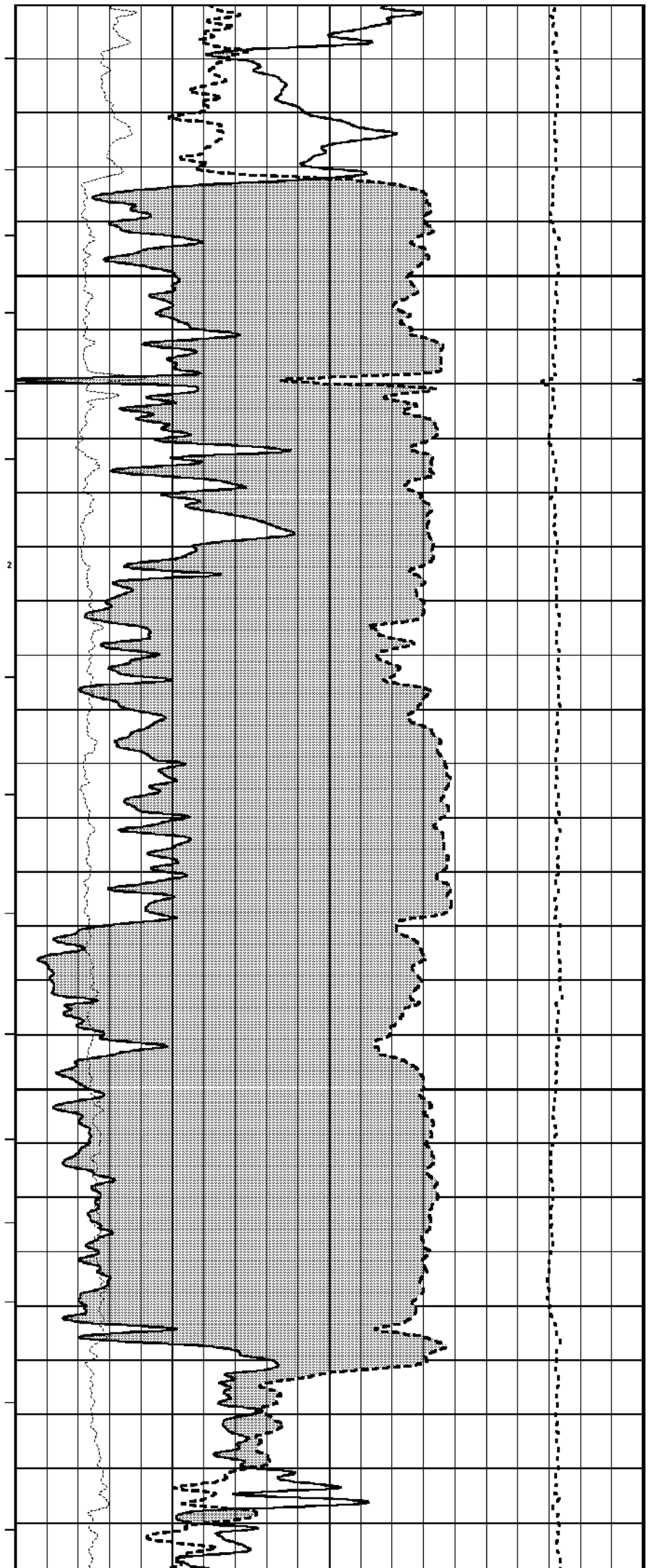
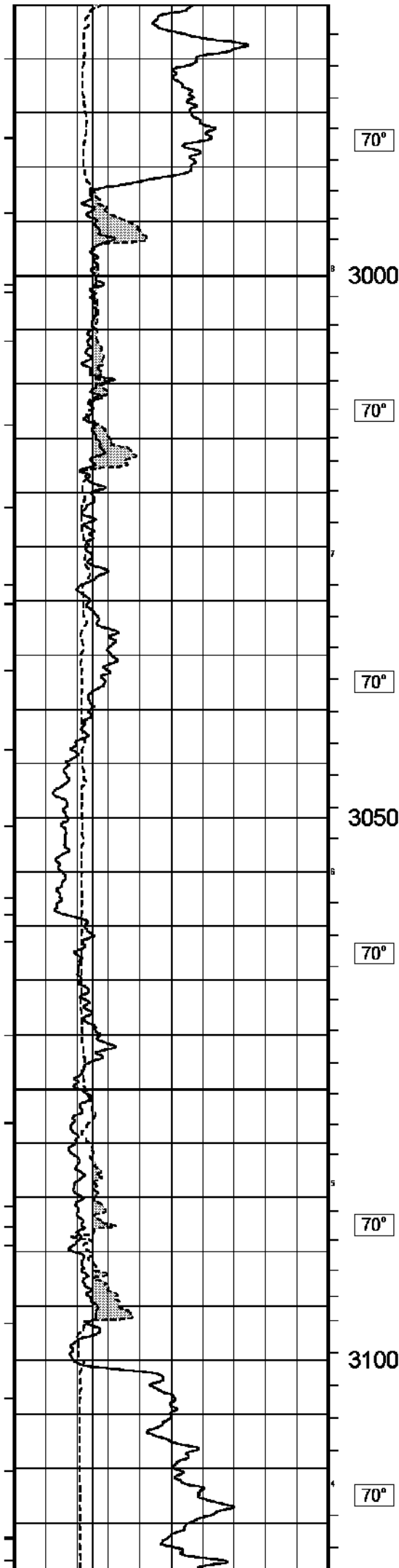
Plotted on 02-MAR-2003 18:40

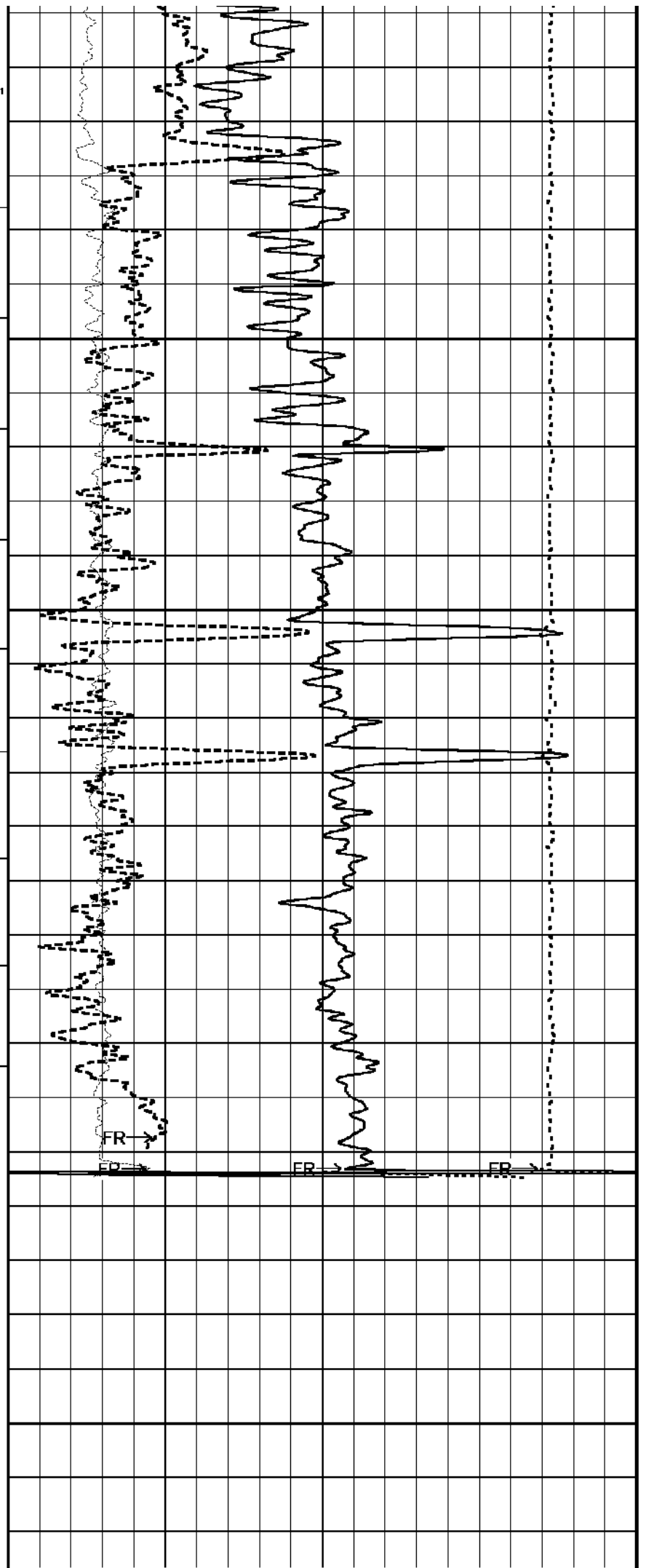
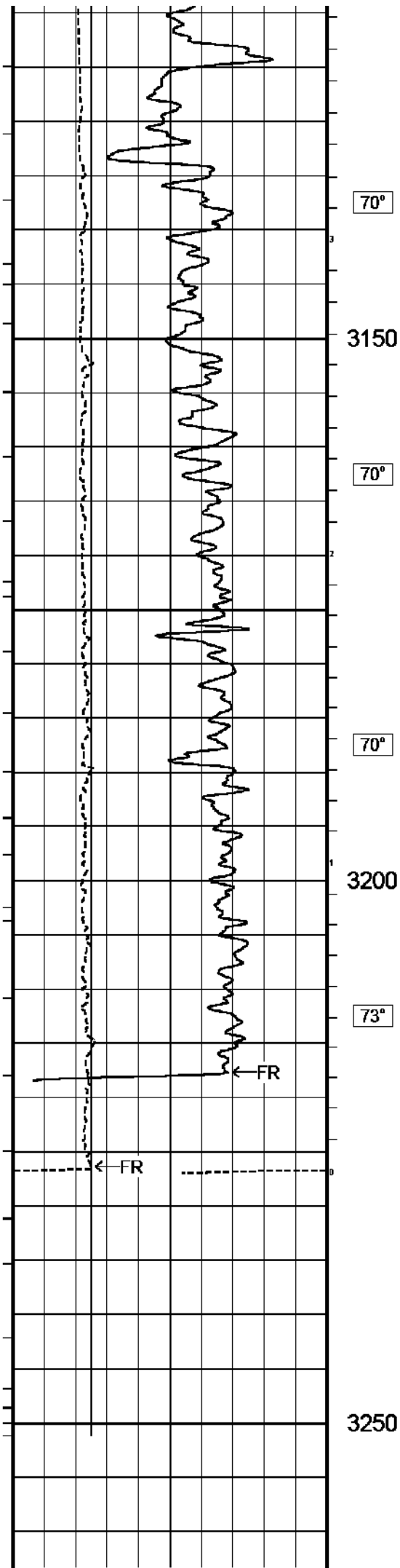
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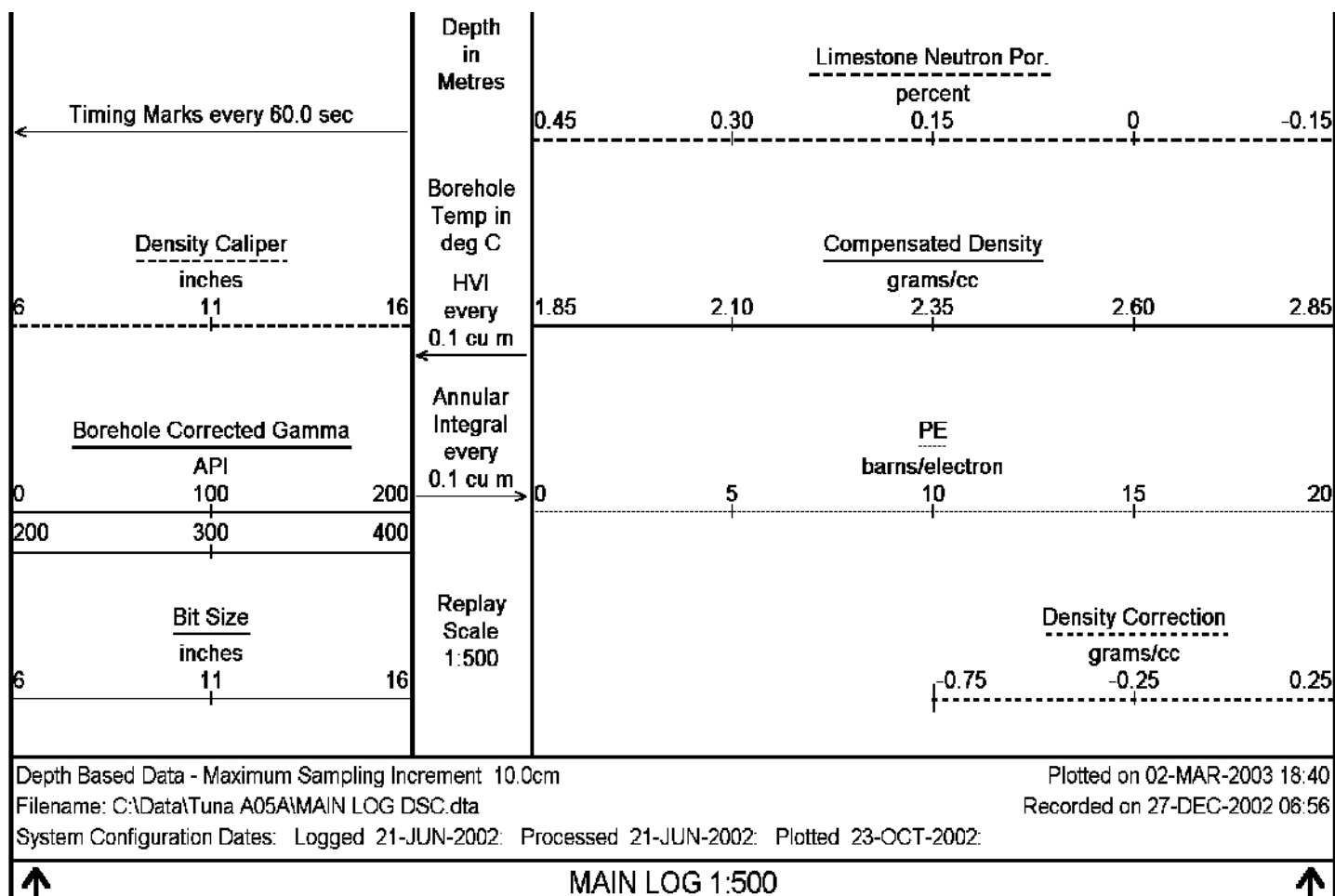
Recorded on 27-DEC-2002 06:56

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

Lower	Measured	Calibrated(Deg C)
Upper	1.00	1.00
	150.00	150.00
High Resolution Temperature Constants MCG 044		
Pre-filter Length	11	
Neutron Calibration MDN 068		Base Calibration on 5-DEC-2002 18:20 Field Check on 24-DEC-2002 10:24
Base Calibration		
	Measured	Calibrated (cps)
	Near Far	Near Far
	2886 90	3714 110
Ratio	32.026	33.764
Field Calibrator at Base		Calibrated (cps)
		1833 2640
Ratio		0.694
Field Check		Calibrated (cps)
		1849 2675
Ratio		0.691
Neutron Constants MDN 068		
Neutron Source Id	724	
Neutron Jig Number	52	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.24	gm/cc
Limestone Sigma	7.10	cu
Sandstone Sigma	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	None	
Formation Pressure	N/A	kpsi
Temperature Source	MCG External Temperature	
Temperature	20.00	degrees C
Mud Salinity	56.00	kppm
Formation Fluid Salinity Source	None	
Formation Fluid Salinity	N/A	kppm
Barite Mud Correction	Not Applied	
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
Photo Density Calibration MPD 066		Base Calibration on 4-DEC-2002 16:29 Field Check on 26-DEC-2002 05:42
Density Calibration		
Base Calibration	Measured	Calibrated (sdu)
	Near Far	Near Far
Reference 1	54476 19731	53282 19349
Reference 2	29983 2875	25298 2555
Field Check at Base		
	993.0 1165.2	
Field Check		
	990.1 1159.3	
PE Calibration		
Base Calibration	Measured	Calibrated

Base Calibration	WS	measured WH	Ratio	Calibrated Ratio
Background	189	869		
Reference 1	17146	54295	0.317	0.318
Reference 2	7927	29843	0.267	0.273
Field Check at Base				
	189.1	868.6		
Field Check				
	187.7	868.8		

Density Constants MPD 066

Density Source Id	226	
Nylon Calibrator Number	517	
Aluminium/Fe Calibrator Number	517	
Density Shoe Profile	4 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.24	gm/cc
Mud Density Z/A Correction	1.11	
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate Density	1.00	gm/cc
DNCT	0.00	gm/cc
CRCT	0.00	gm/cc
Matrix Density (gm/cc)	Depth (m)	
2.71	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	

DOWNHOLE EQUIPMENT

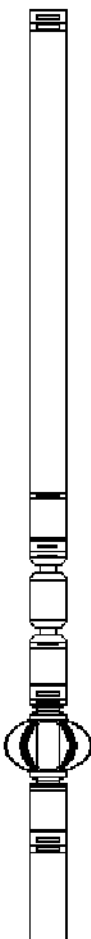
All measurements relative to tool zero.

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



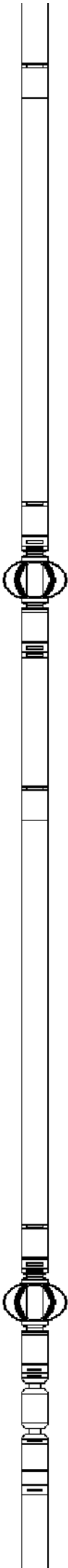
Compact Inline Standoff B
MIS 77 Length: 0.65 m Weight: 15.43 lb

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

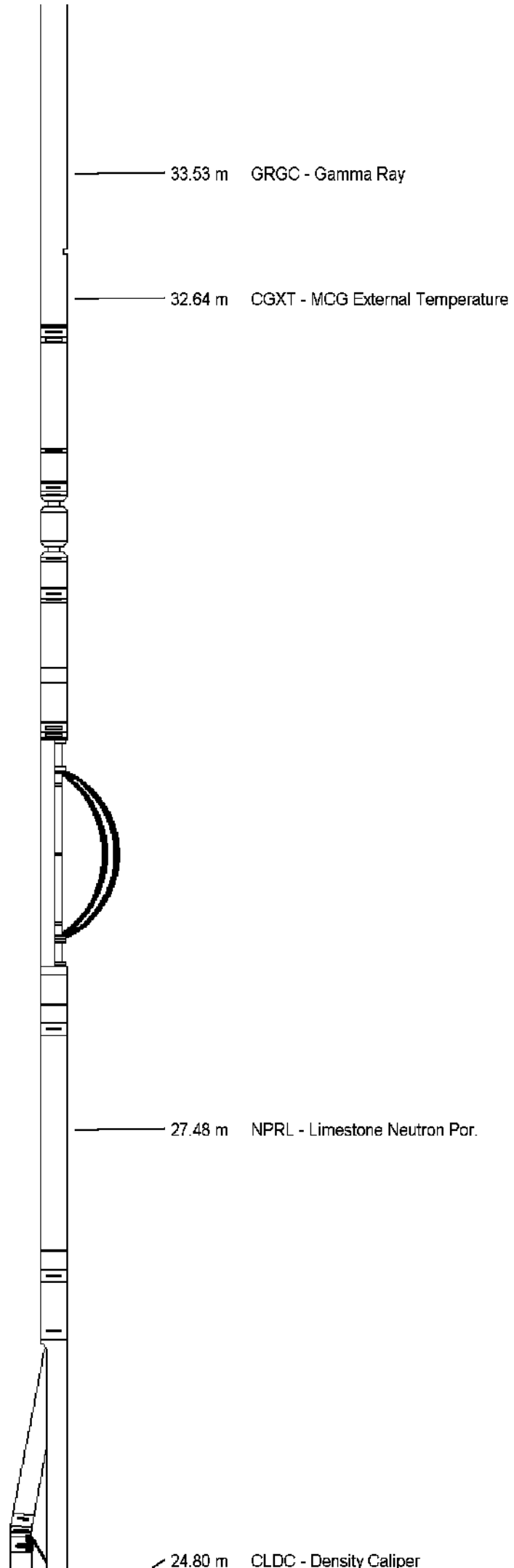
Compact Knuckle Joint
SKJ 46 Length: 0.66 m Weight: 24.25 lb

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

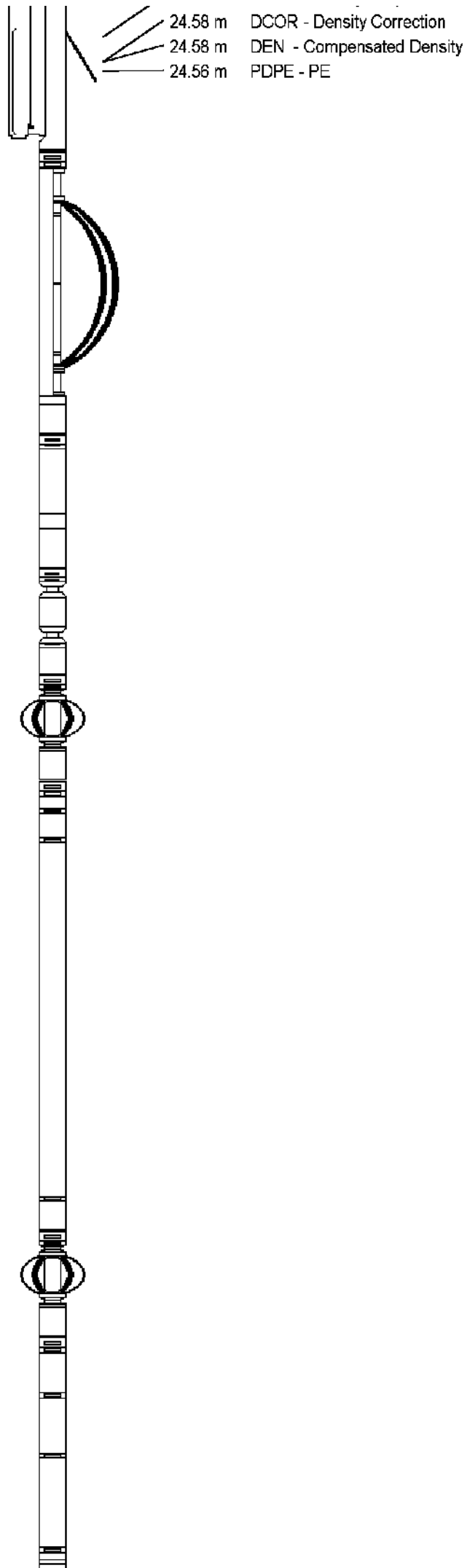
Compact Inline Bowspring A
MIS 24 Length: 1.74 m Weight: 33.07 lb

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



24.80 m CLDC - Density Caliper



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

Compact Inline Standoff B
MIS 76 Length: 0.65 m Weight: 15.43 lb

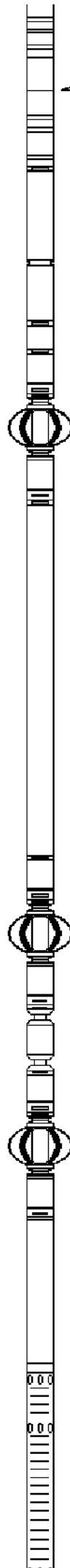
Compact Lower Guard Sub.
MLG 7 Length: 2.44 m Weight: 55.12 lb

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

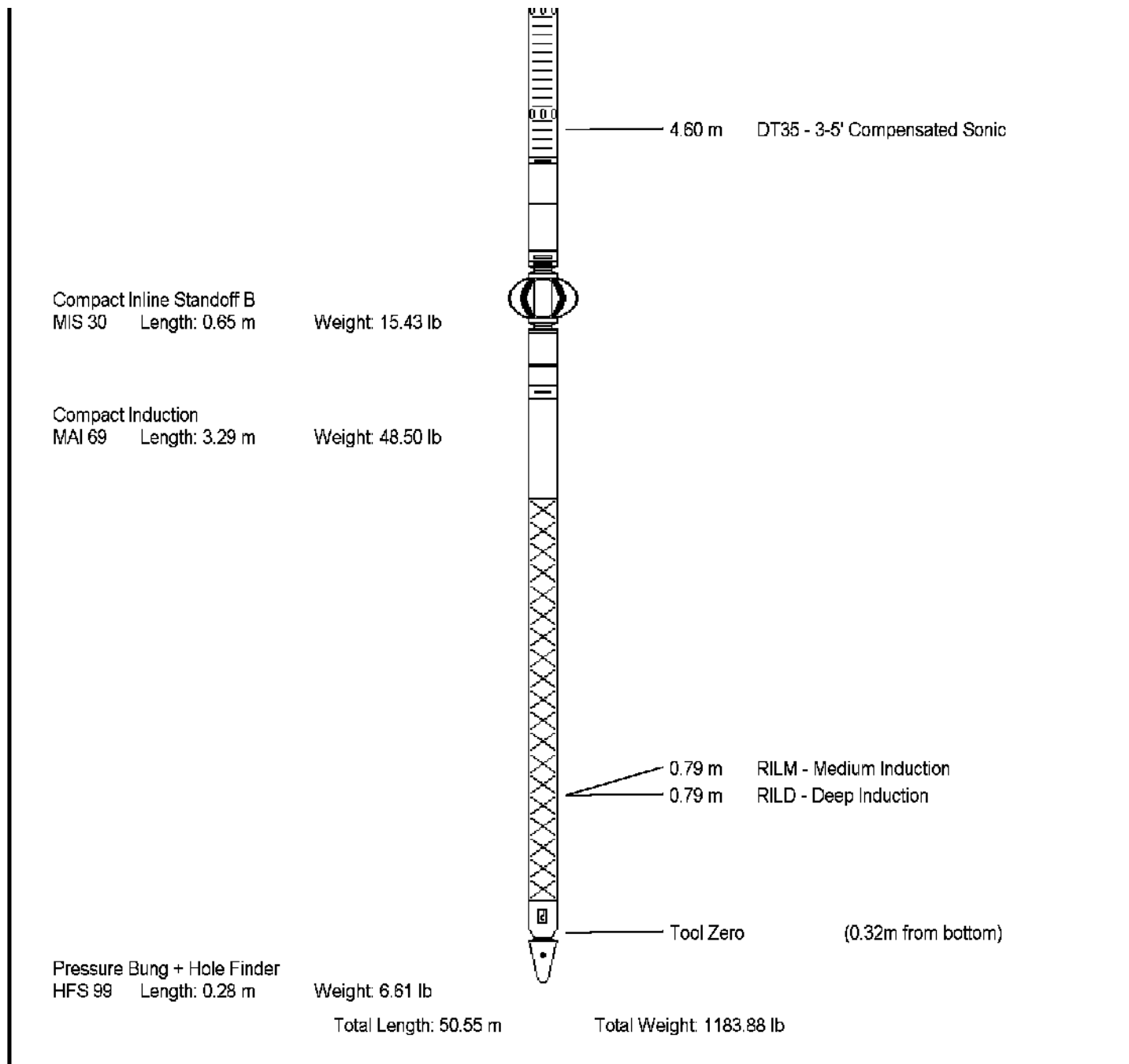
Compact Knuckle Joint
SKJ 48 Length: 0.66 m Weight: 24.25 lb

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



14.66 m DSLL - Shallow Laterolog
14.66 m DGLL - Groningen Laterolog



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
<div> <div>Reeves</div> <div> PHOTO DENSITY COMPENSATED NEUTRON 1:500 MD </div> </div>					

