

Reeves

PHOTO DENSITY COMPENSATED NEUTRON 1:200 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				DUAL LATEROLOG			
Permit Number							
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			metres		DF	31.32 metres
Depth Logger	3257.00			metres		GL	-59.40 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:

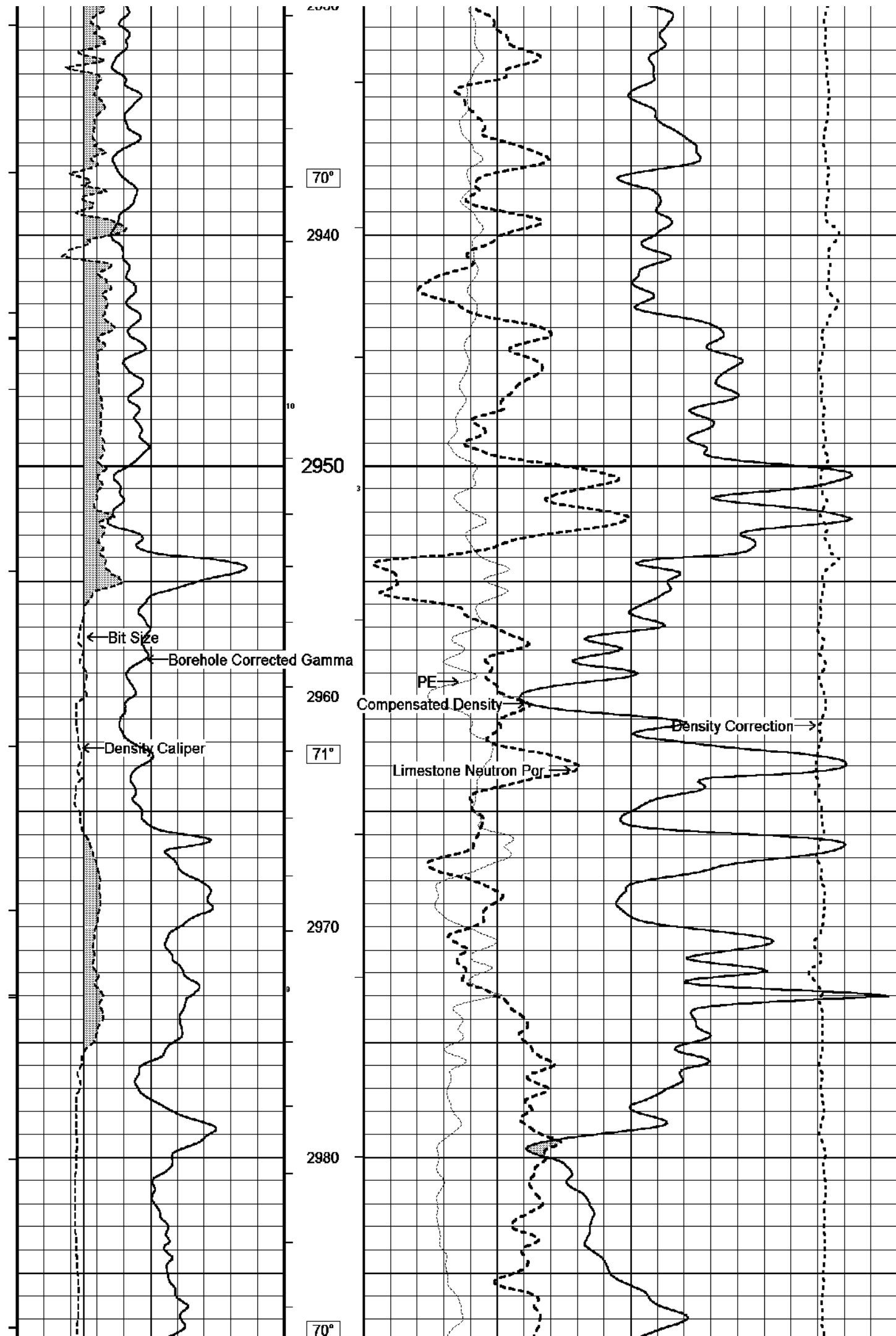
20" 133.0 lb/ft from surface to 164.60 m.

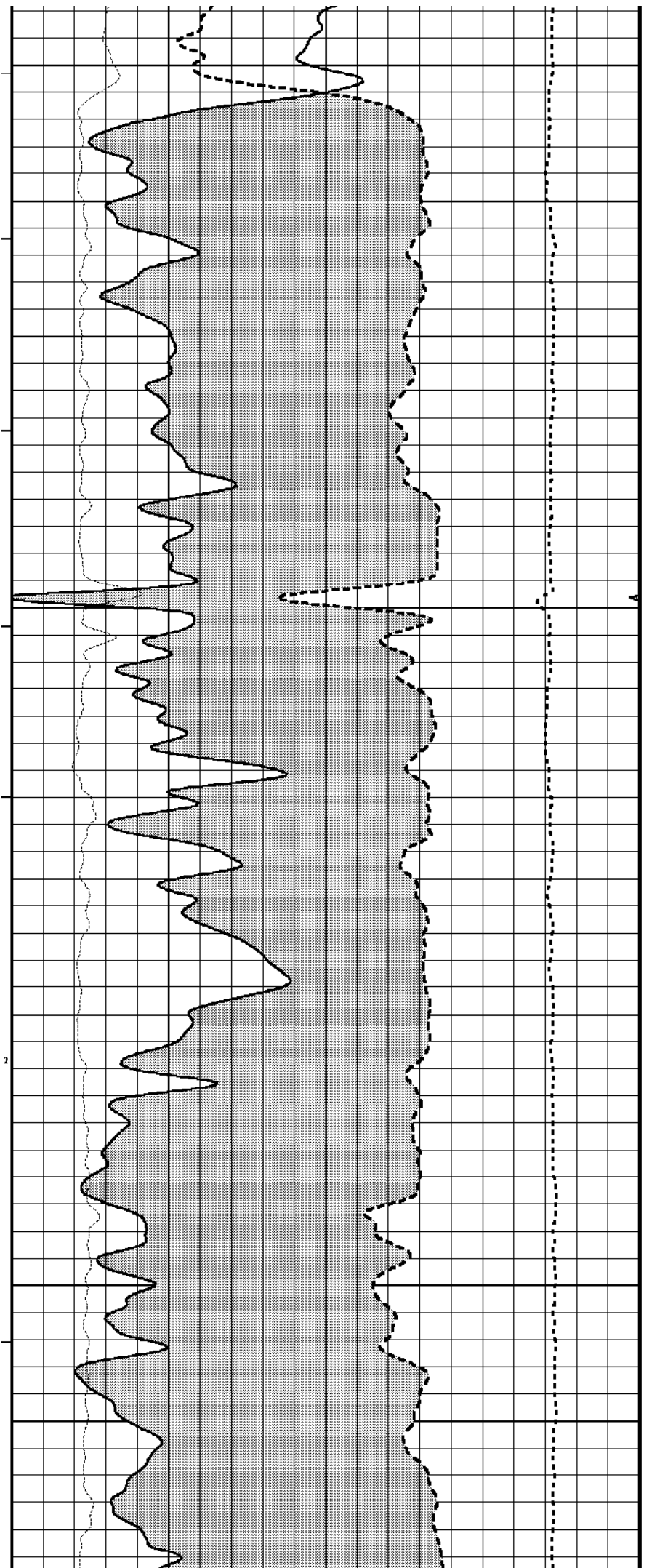
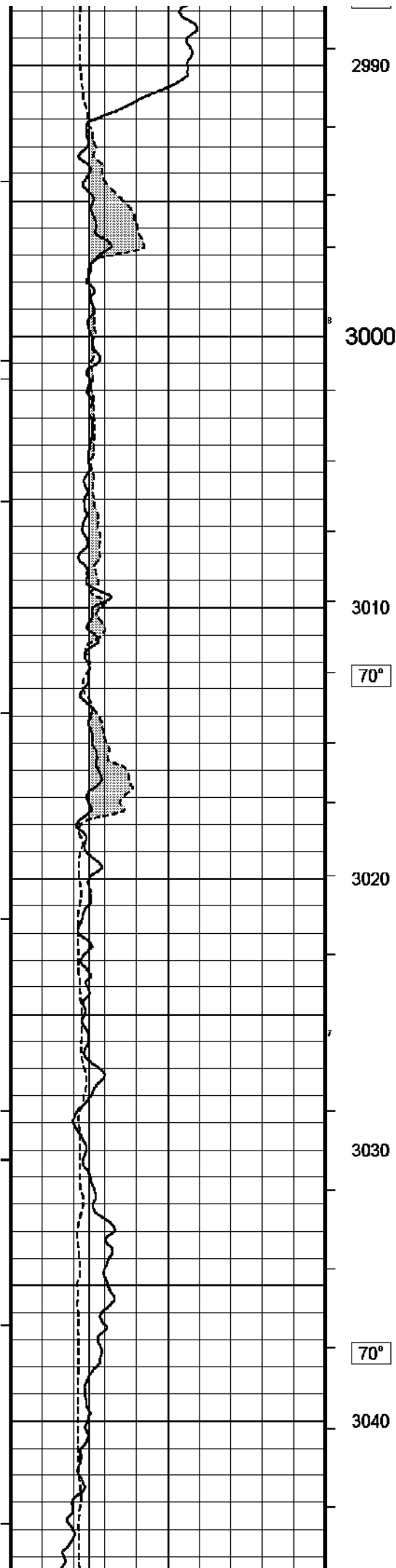
13 3/8" 54.5 lb/ft from surface to 609.65 m (window milled from 210.39 m to 218.39 m).

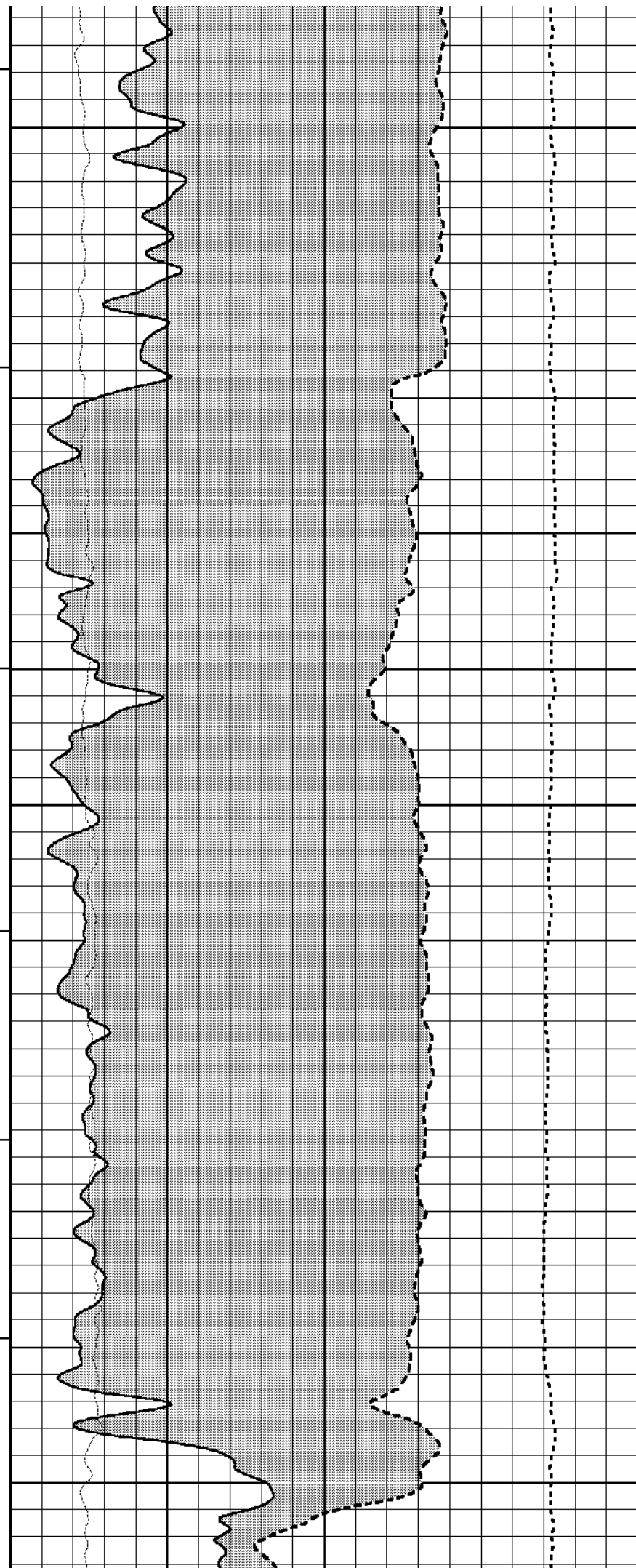
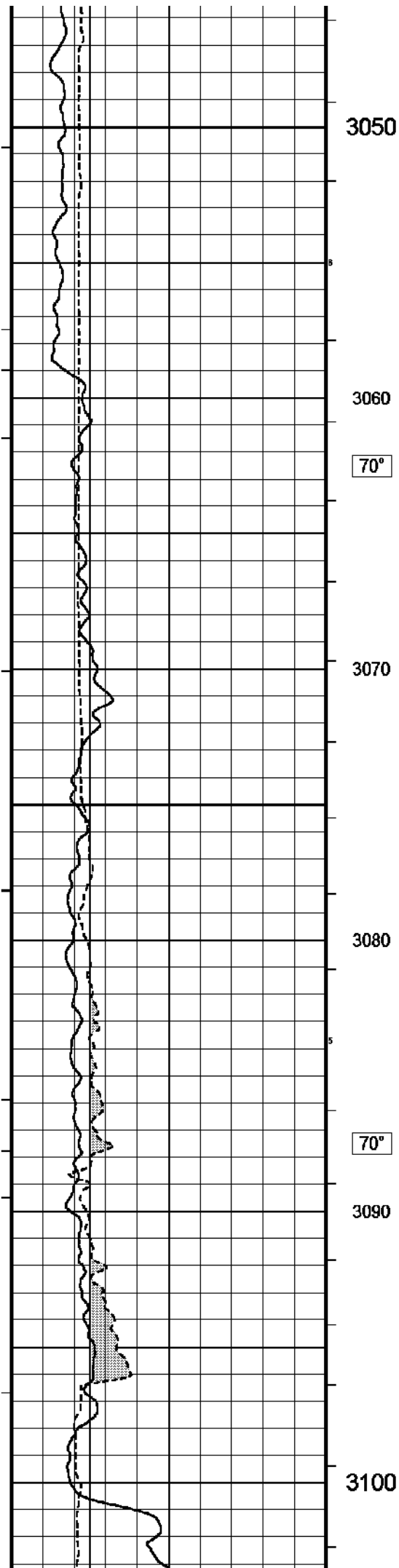
9 5/8" 47.0 lb/ft from surface to 836.41 m.

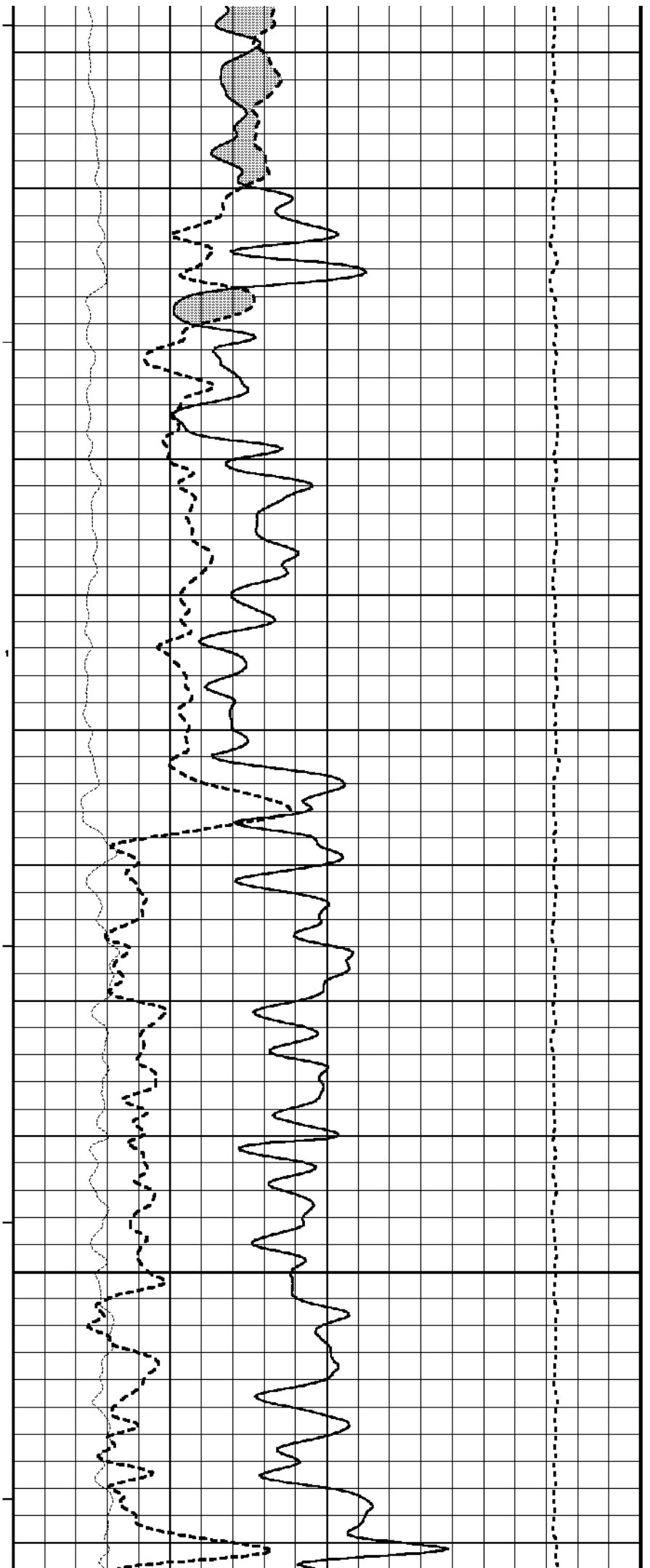
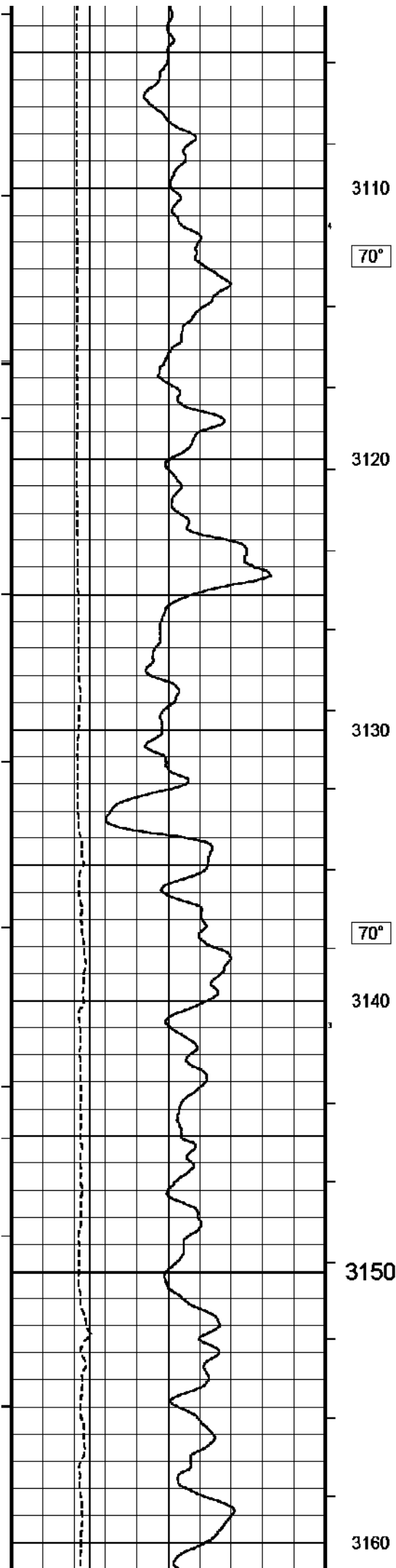
CALIPER READING 8.68" ON TIME LOG IN 9 5/8" 47 LB/FT CASING.

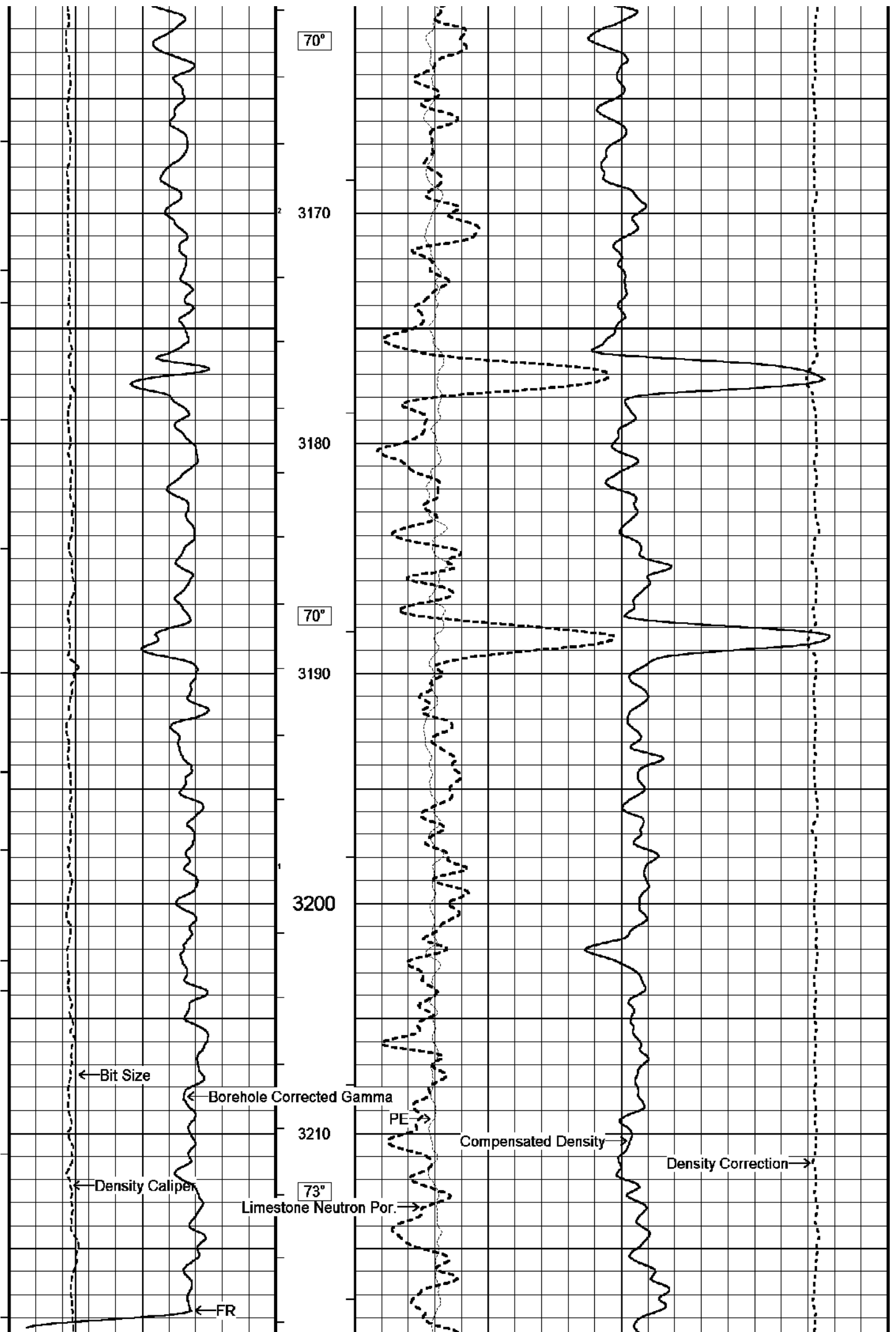
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

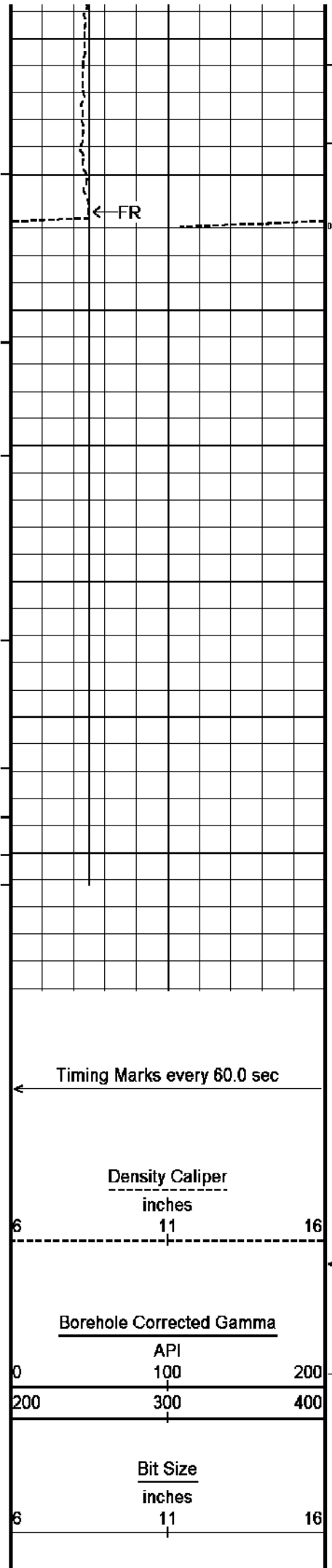










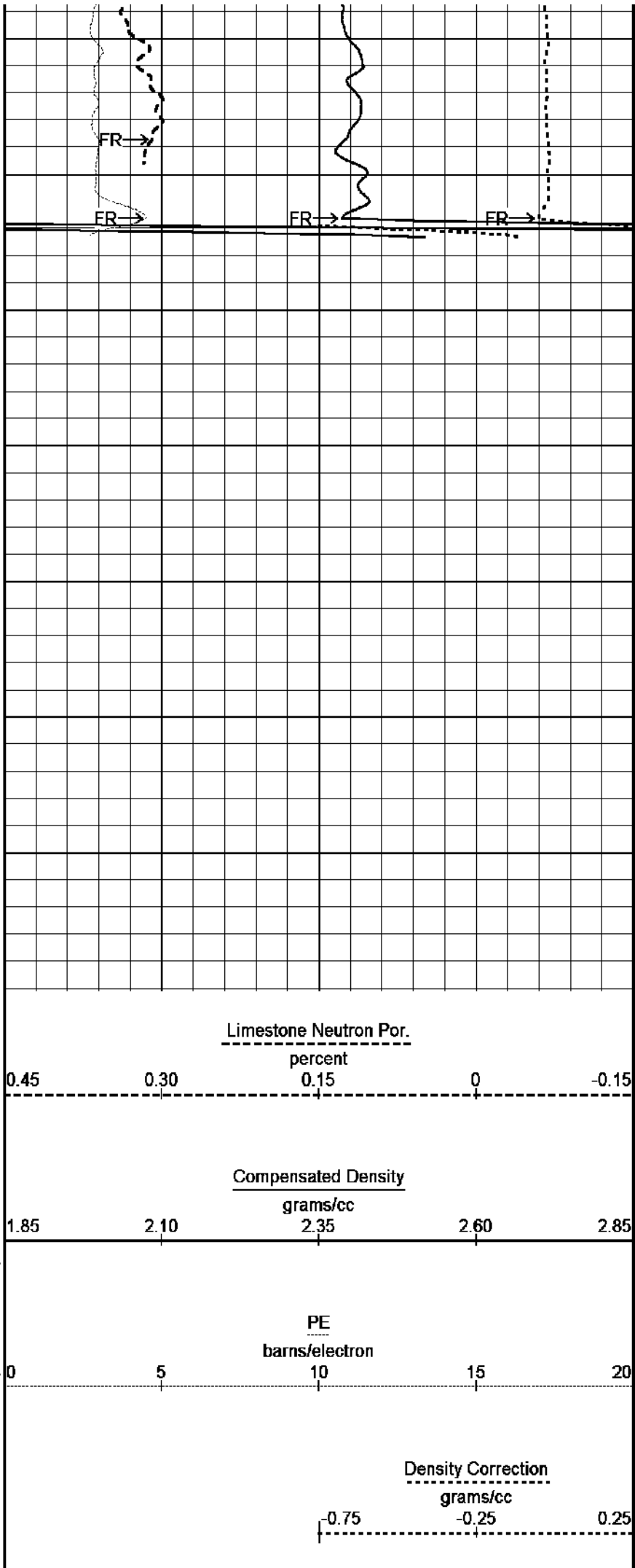


Depth in Metres

Borehole Temp in deg C
HVI every 0.1 cu m

Annular Integral every 0.1 cu m

Replay Scale 1:200



Depth Based Data - Maximum Sampling Increment: 10.0cm

Plotted on 02-MAR-2003 18:39

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:



MAIN LOG 1:200



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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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
Ratio	2886	90	3714	110
	32.026		33.764	

Field Calibrator at Base

	Calibrated (cps)
Ratio	1833 2640
	0.694

Field Check

	Calibrated (cps)
Ratio	1849 2675
	0.691

Neutron Constants MDN 068

Neutron Source Id	724
Neutron Jia 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	
	WS	WH	Ratio	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
0.00	0.00

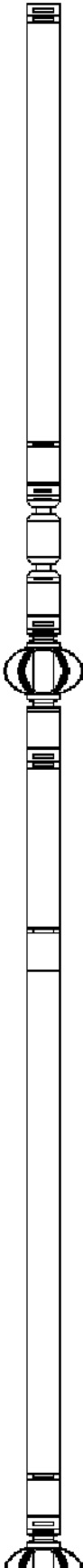
DOWNHOLE EQUIPMENT
All measurements relative to tool zero.

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



33.53 m GRGC - Gamma Ray

32.64 m CGXT - MCG External Temperature

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

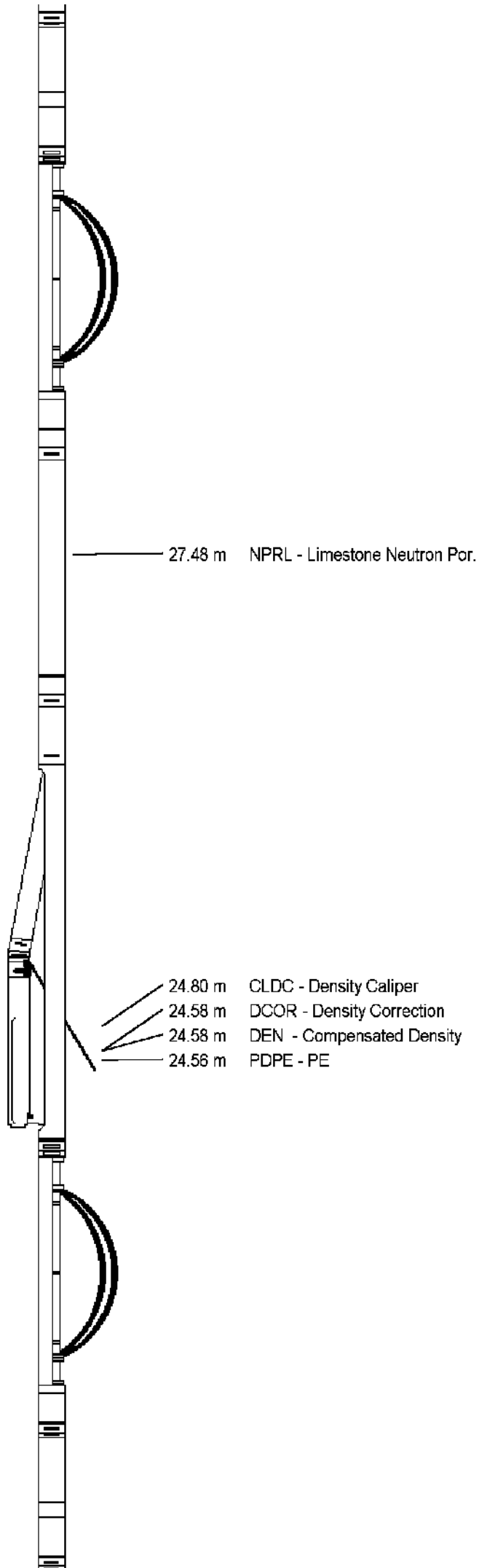
Compact Inline Bowspring A
MIS 24 Length: 1.74 m Weight: 33.07 lb

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

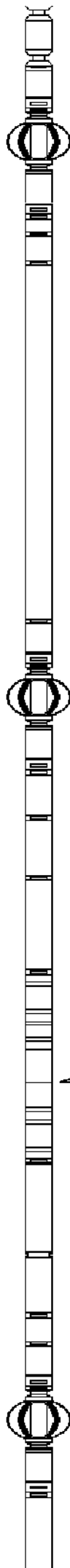
Compact Inline Standoff B
MIS 49 Length: 0.65 m Weight: 15.43 lb

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

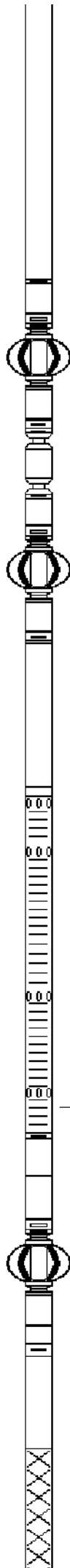


Compact Inline Standoff B
MIS 73 Length: 0.65 m Weight: 15.43 lb

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

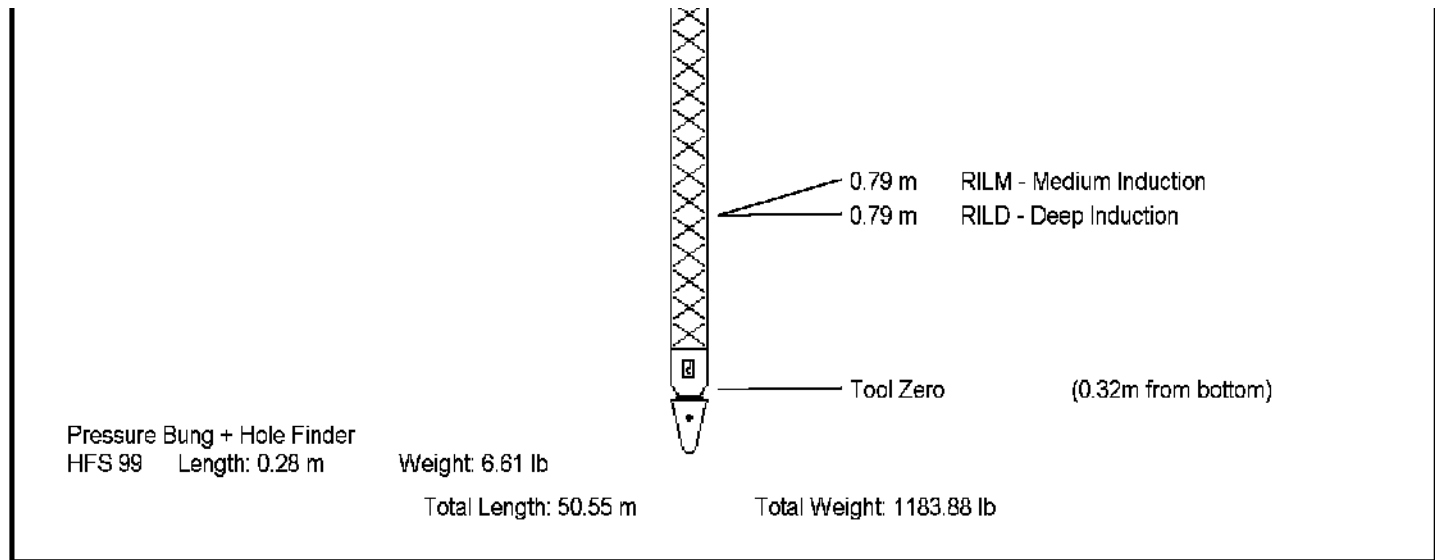
Compact Sonic
MSS 45 Length: 3.82 m Weight: 72.75 lb



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



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>Reeves</div>		PHOTO DENSITY			
		COMPENSATED NEUTRON			
		1:200 MD			