

Reeves

DUAL LATEROLOG

GAMMA RAY
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				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			
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 1:200



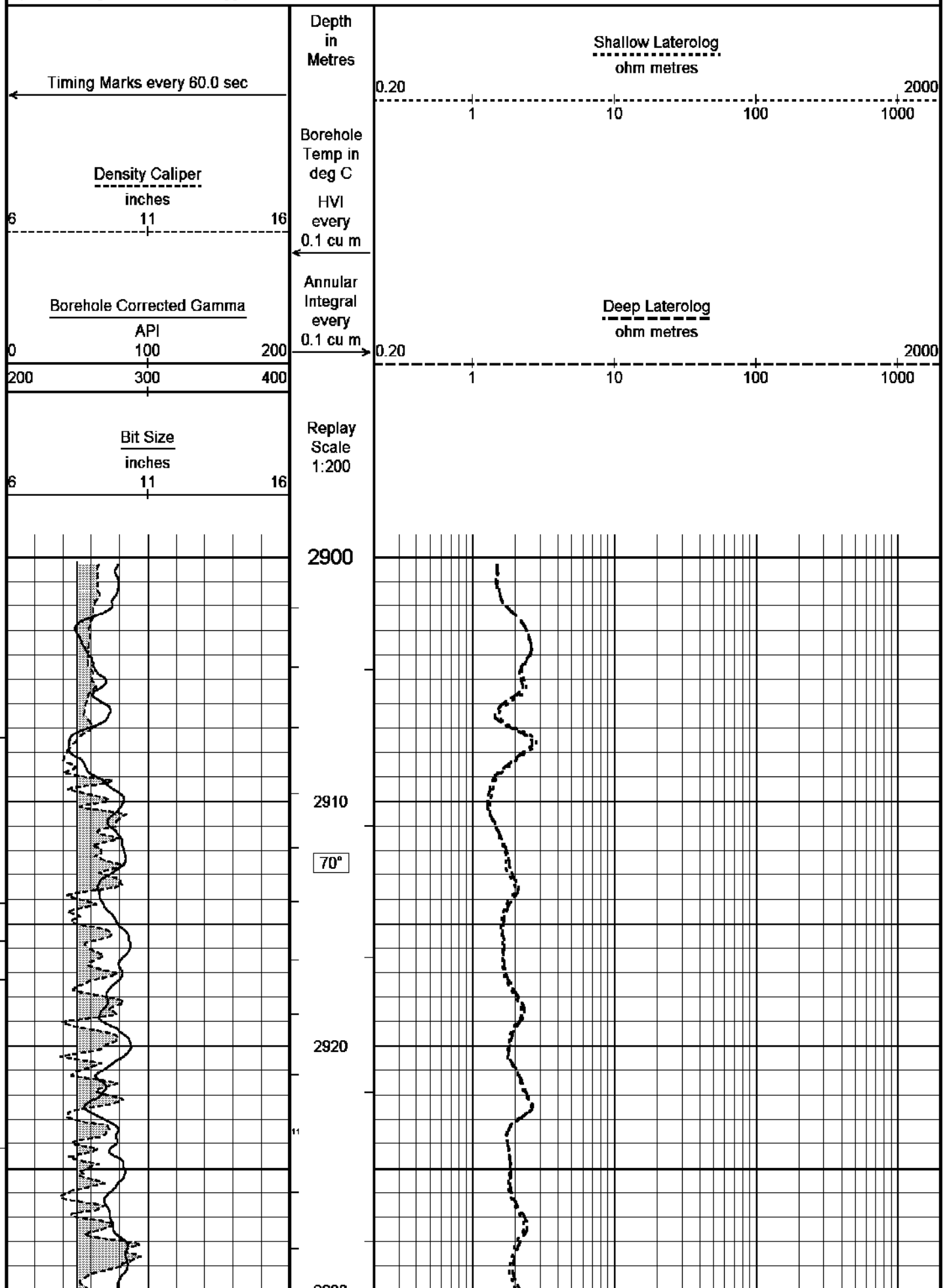
Depth Based Data - Maximum Sampling Increment 10.0cm

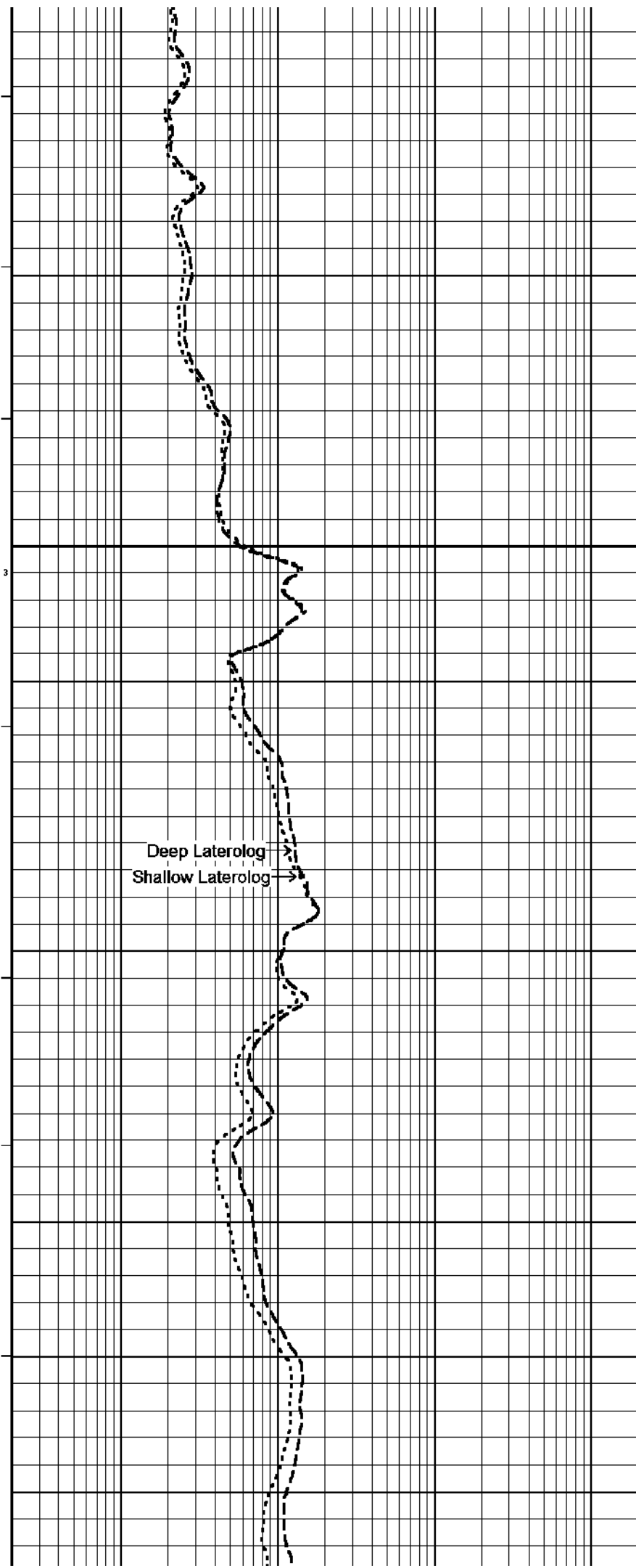
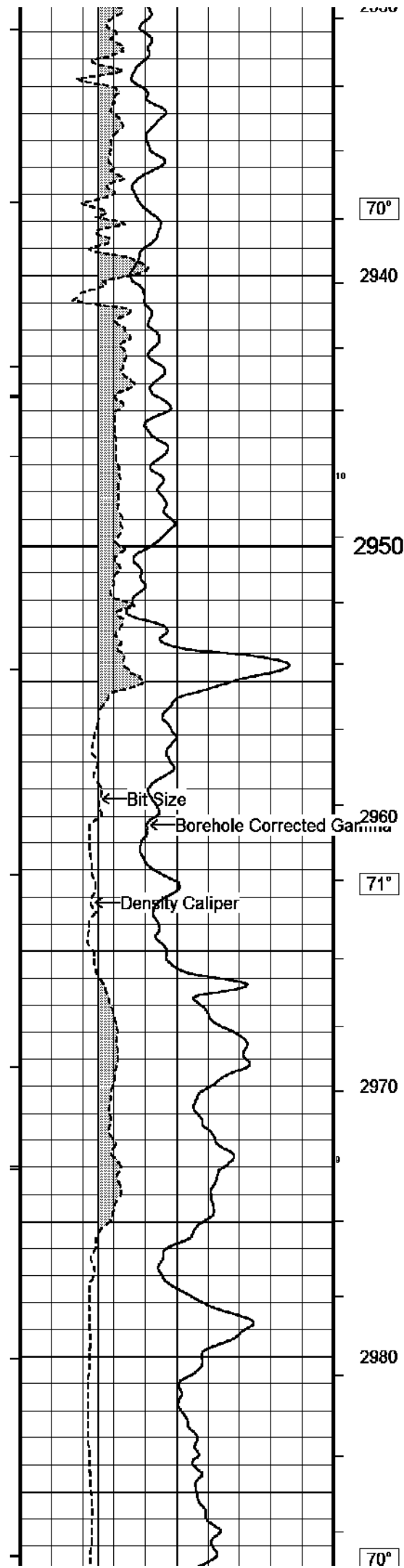
Plotted on 02-MAR-2003 18:28

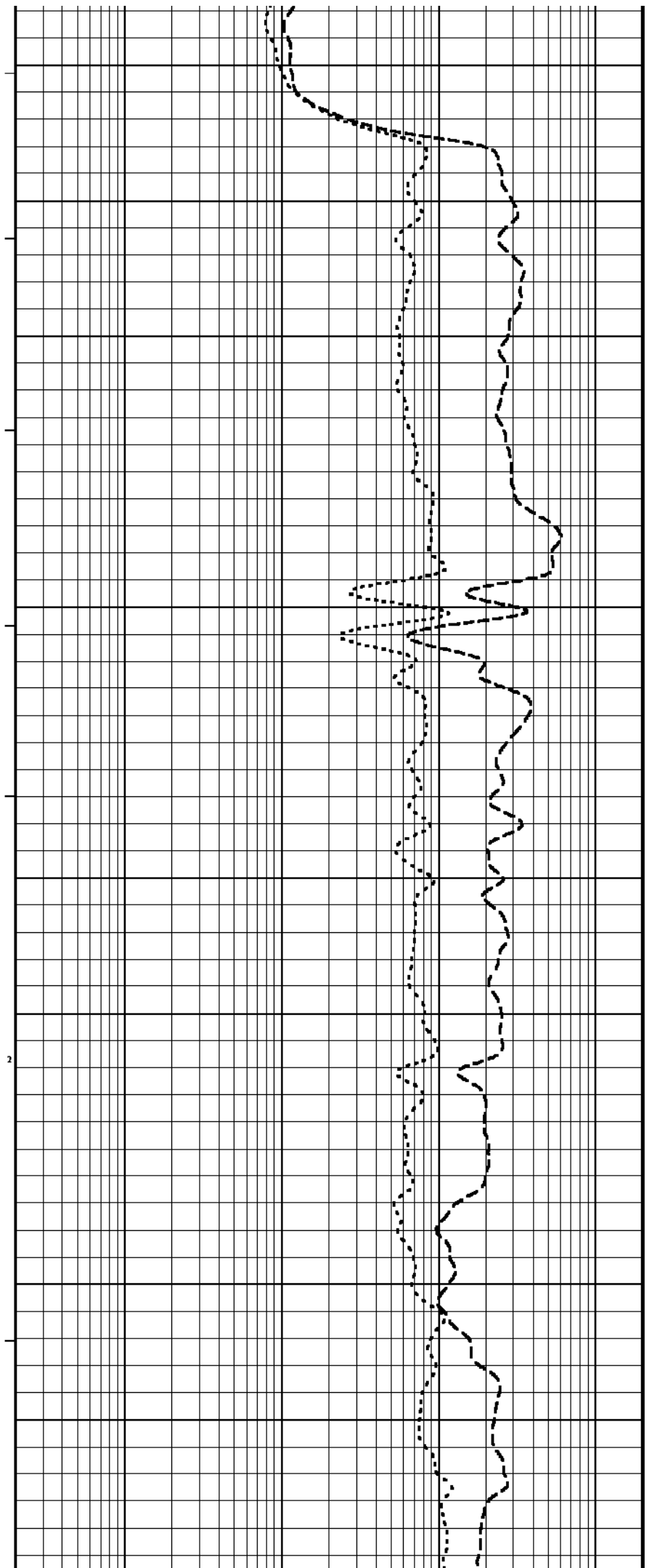
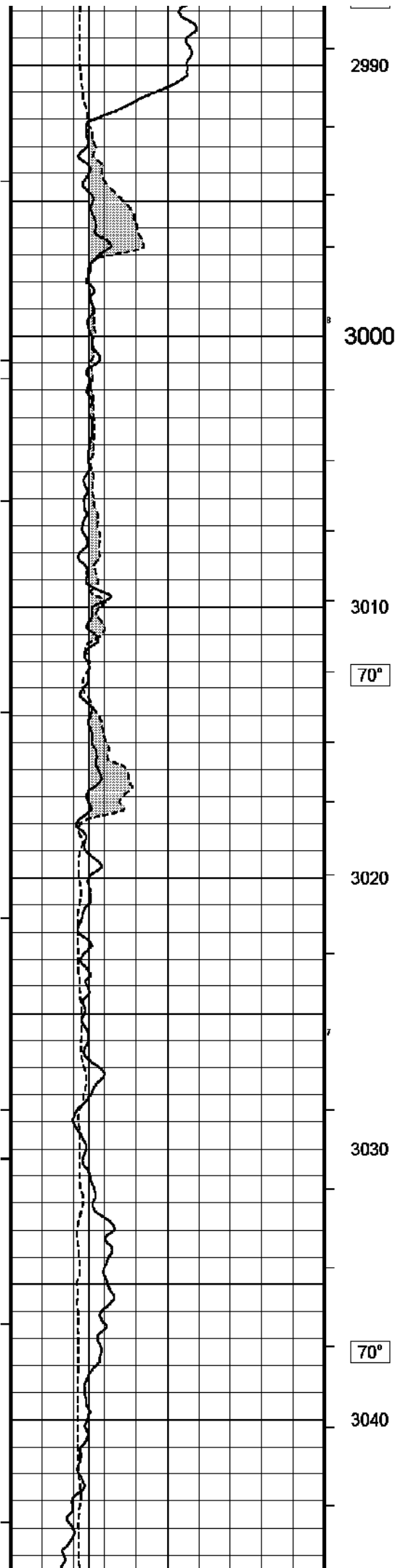
Filename: C:\Data\Tuna A05A\MAIN LOG DSC.dta

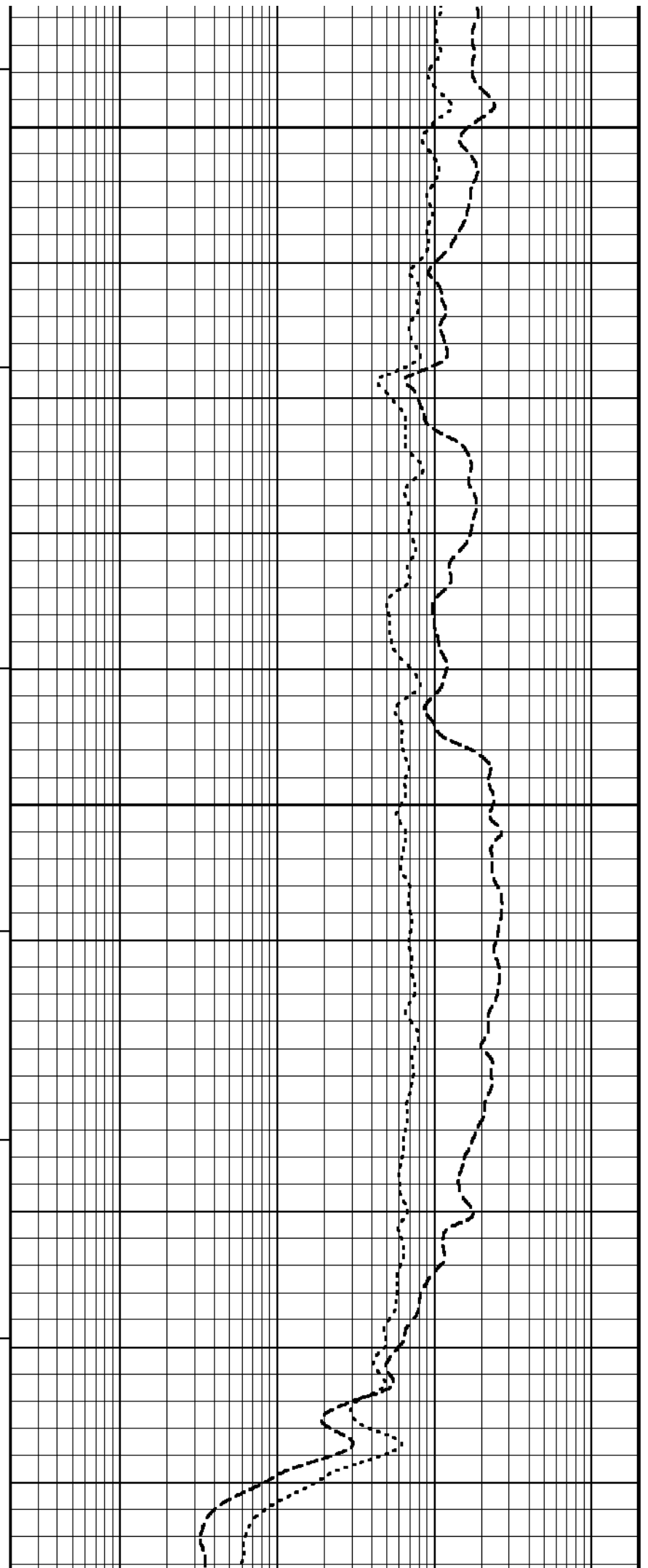
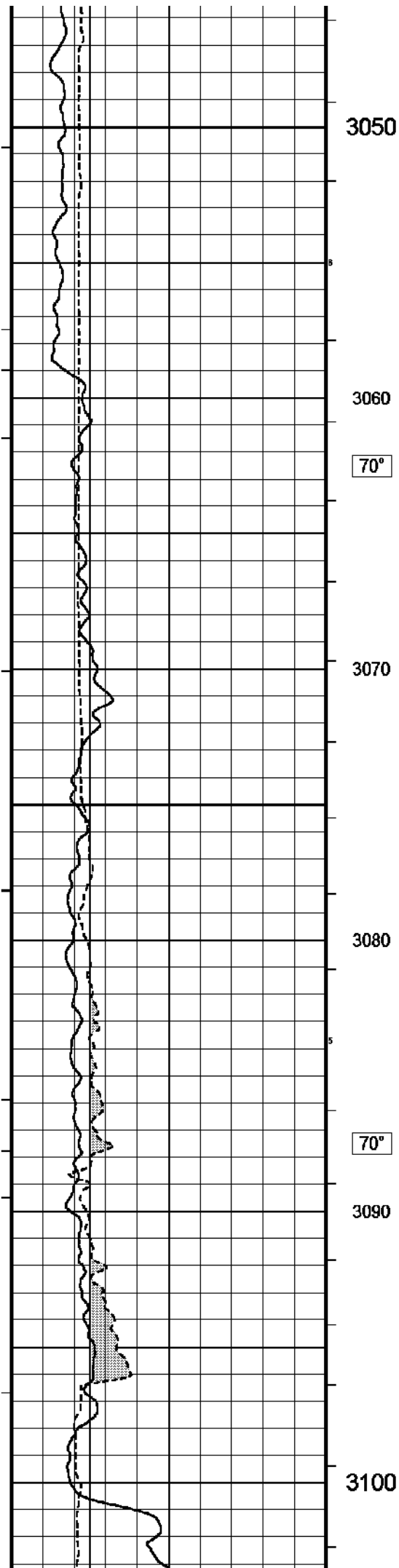
Recorded on 27-DEC-2002 06:56

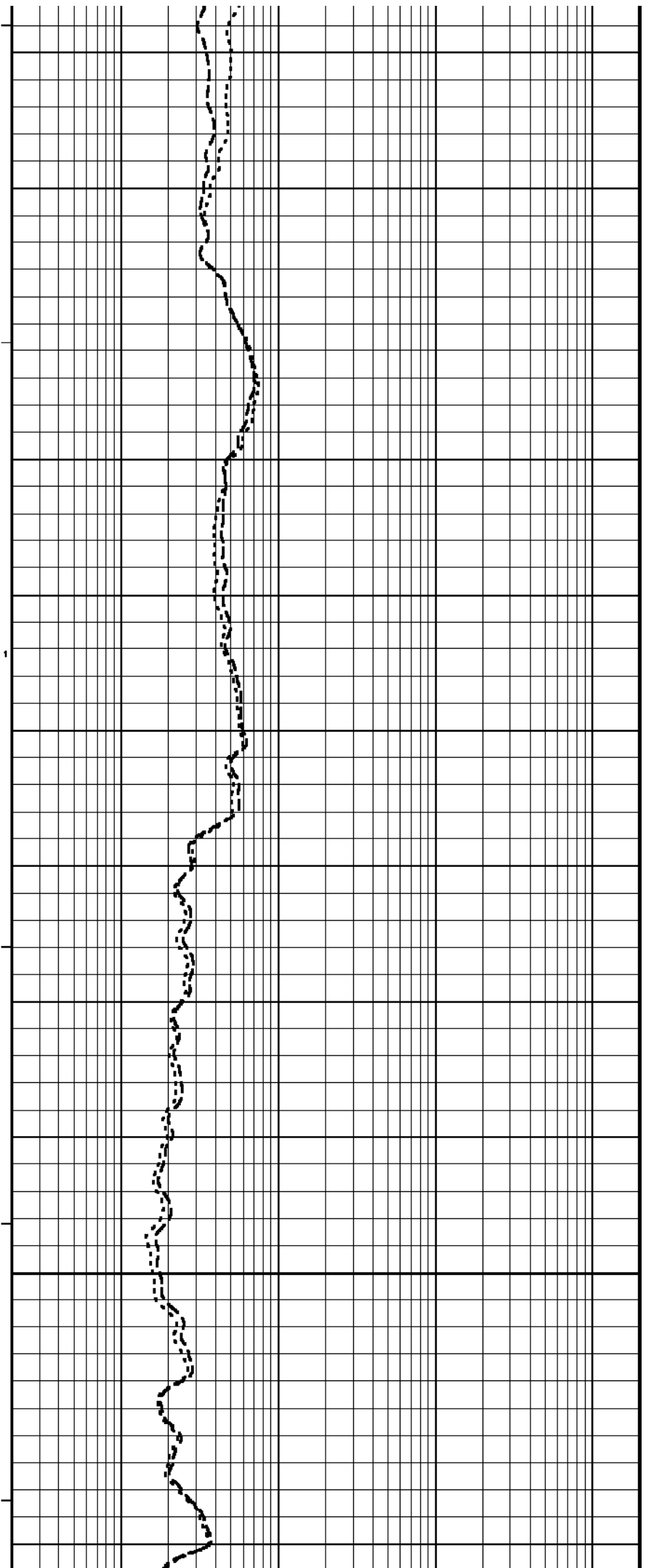
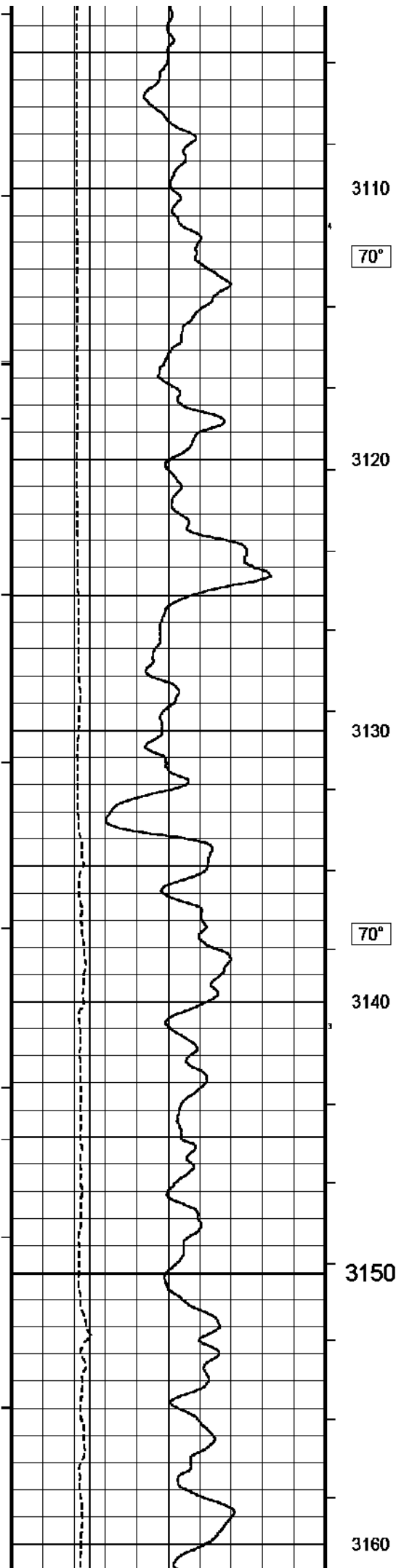
System Configuration Dates: Logged 21-JUN-2002: Processed 21-JUN-2002: Plotted 23-OCT-2002:

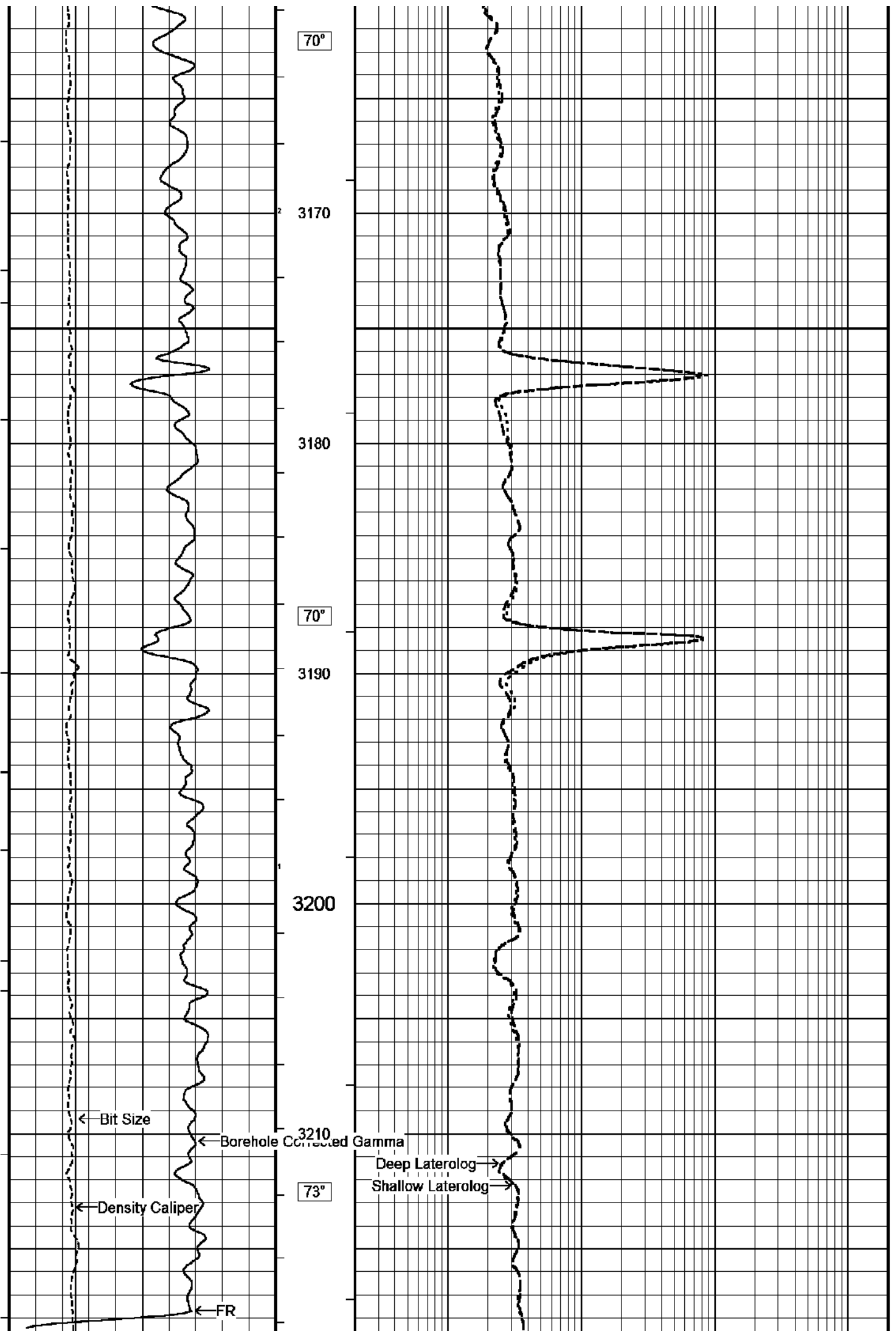


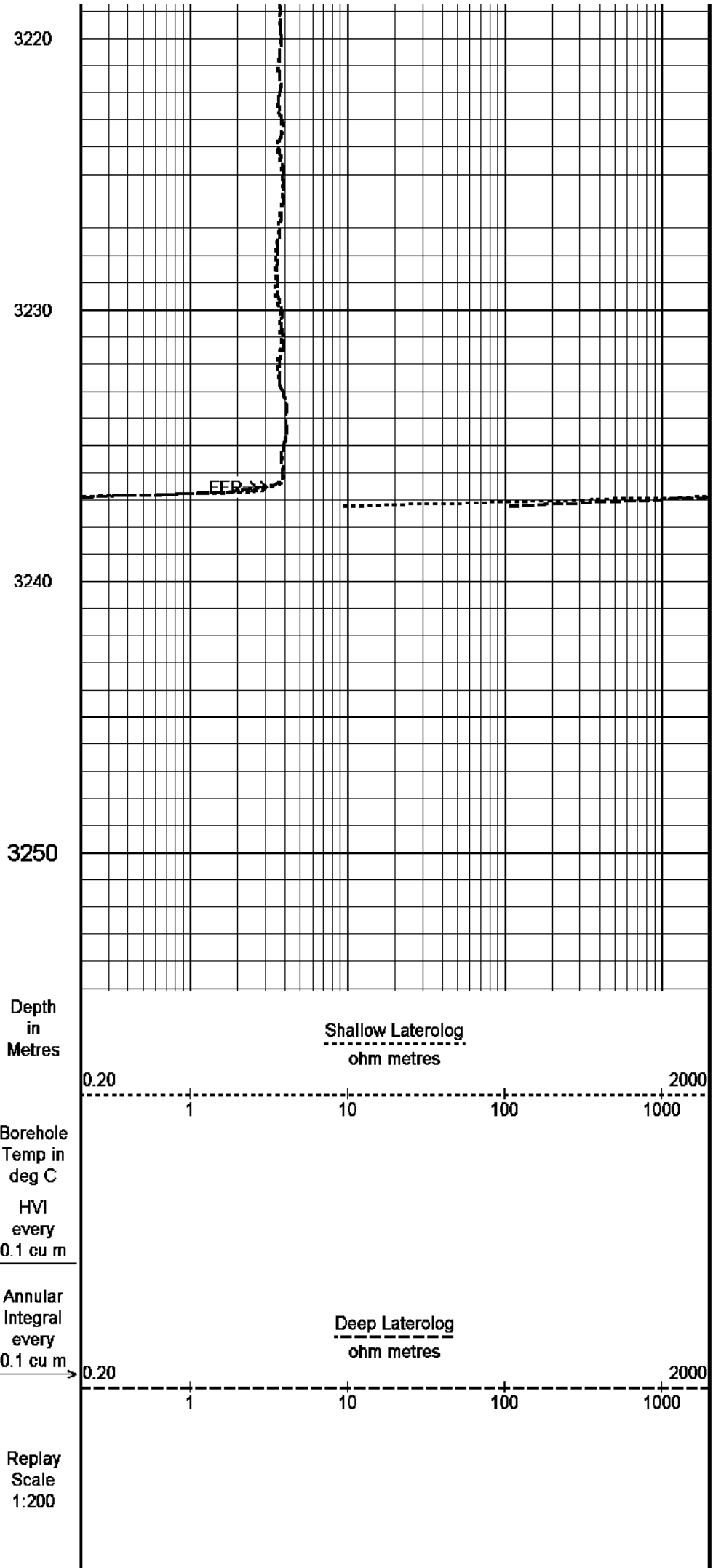
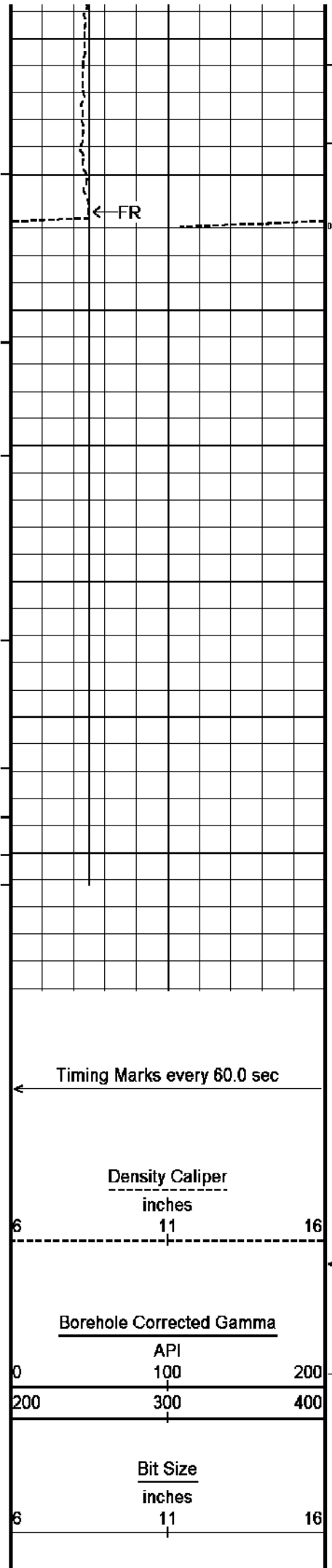












Depth Based Data - Maximum Sampling Increment: 10.0cm

Plotted on 02-MAR-2003 18:28

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
-------------------	----

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 48 Length: 0.66 m Weight: 24.25 lb

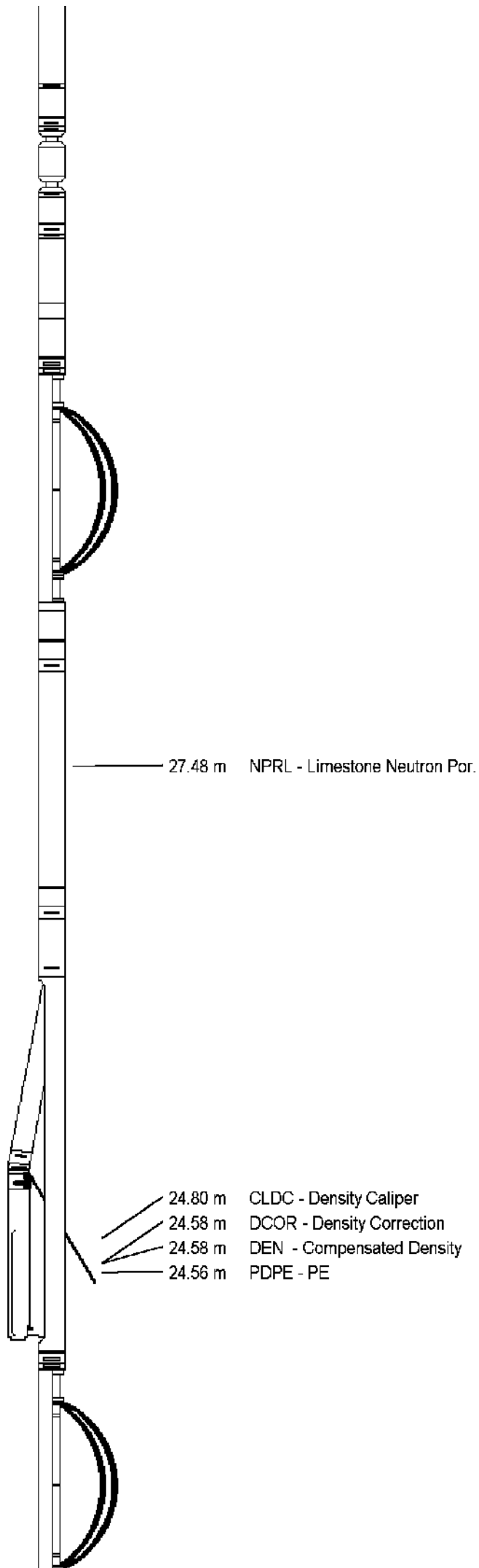
Compact Swivel Head Adaptor
SHA 27 Length: 0.83 m Weight: 26.46 lb

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 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



4.60 m DT35 - 3-5' Compensated Sonic

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

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

DUAL LATEROLOG
GAMMA RAY
1:200 MD