



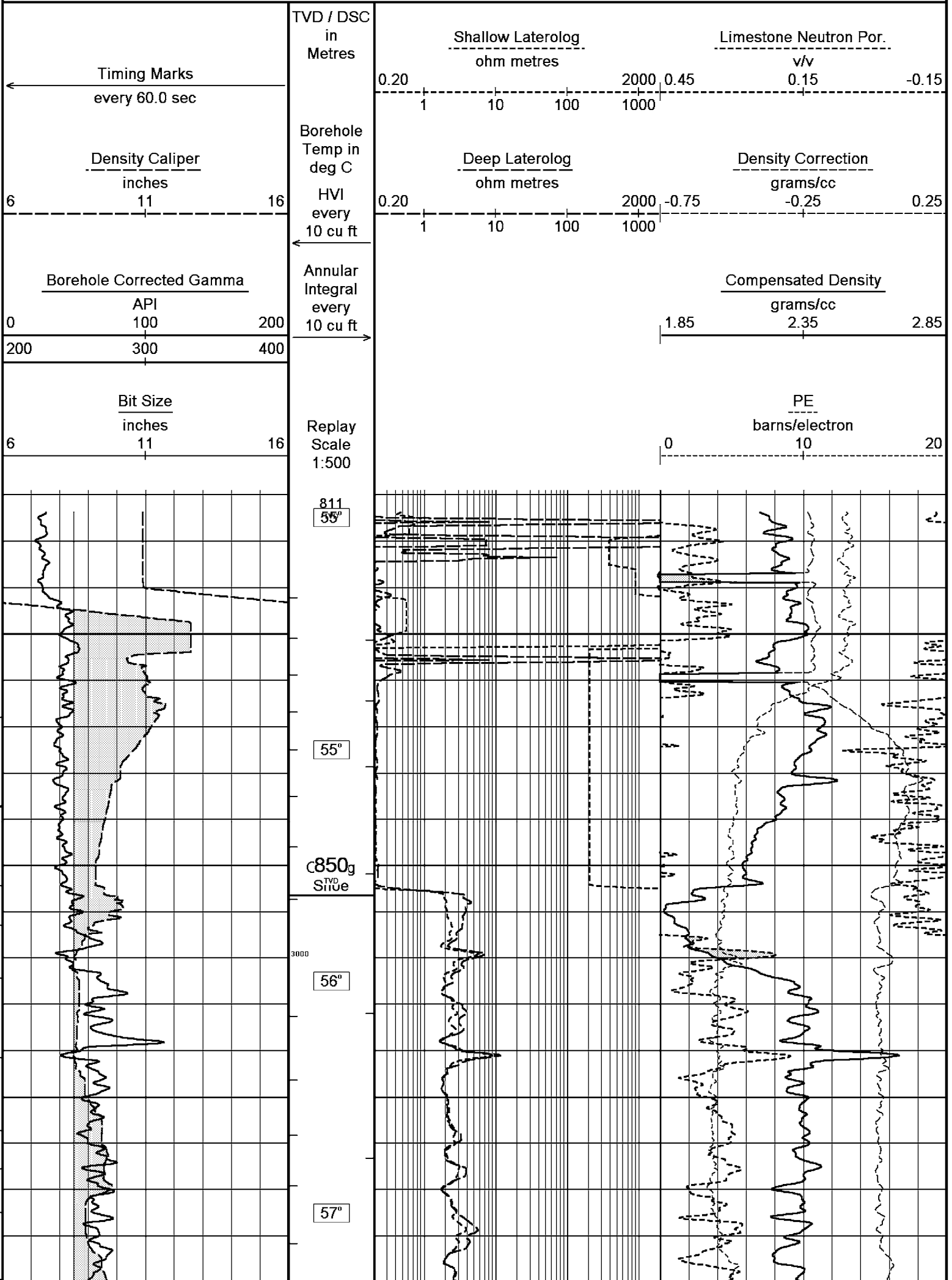
DUAL LATEROLOG - GR  
DENSITY - NEUTRON  
1:500 TVD

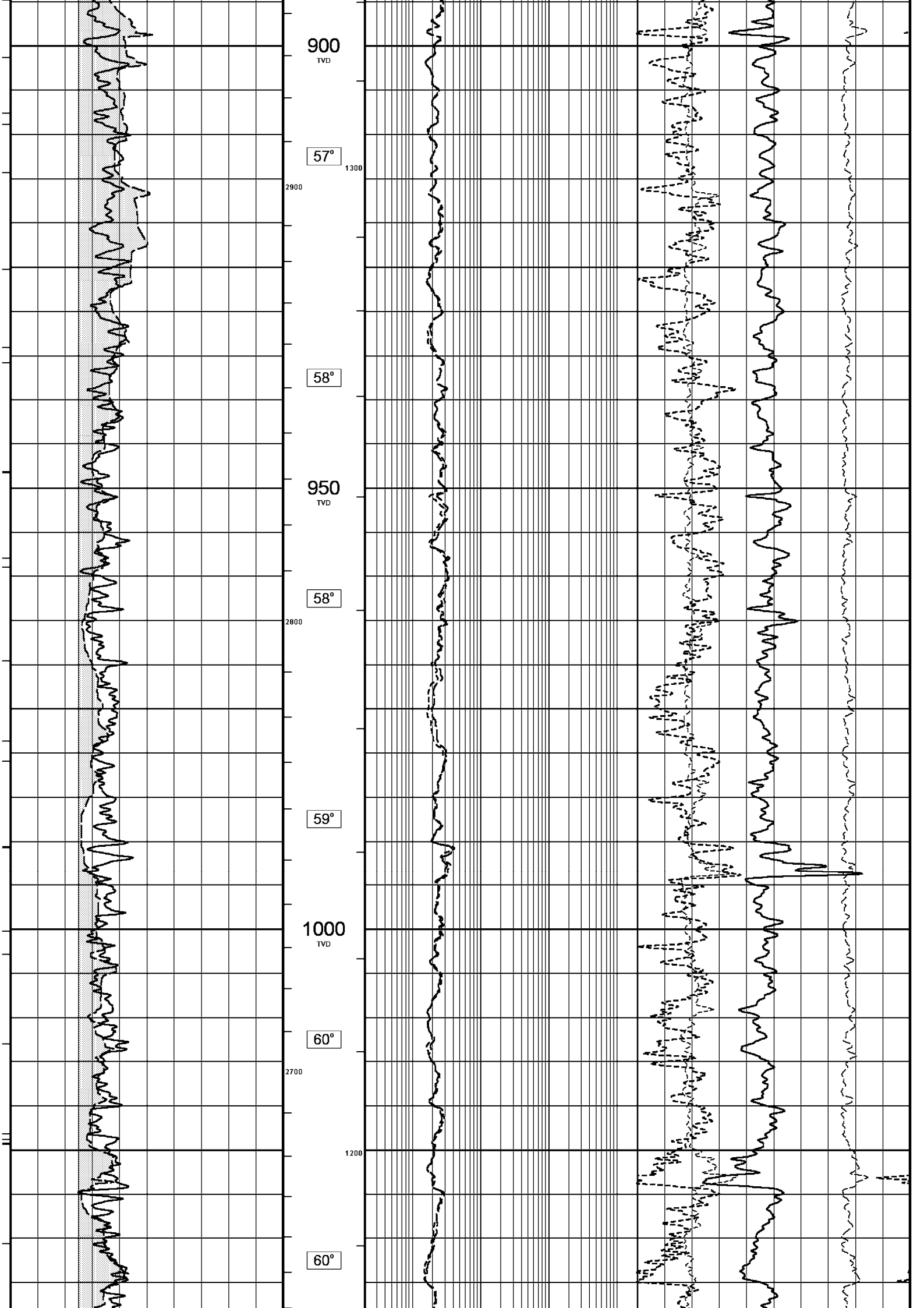
COMPANY	ESSO AUSTRILIA PTY LTD		
WELL	BREAM A5A		
FIELD	BREAM		
PROVINCE/COUNTRY	BASS STRAIT		
COUNTRY/STATE	AUSTRALIA		
LOCATION	S 38 29 58.778, E 147 46 20.334 N 5738461.680 m, E 567345.000 m		
LSD	SEC	TWP	RGE
API Number	Other Services		
Permit Number	COMPENSATED SONIC		
Permanent Datum MSL	, Elevation 0.0 metres		
Log Measured From RT @ 32.82m	above Permanent Datum		
Drilling Measured From RT			
Date	16-JUN-2005	Elevations: KB 32.82 metres DF 32.82 metres GL -59.40 metres	
Run Number	ONE		
Depth Driller	1994.50	metres	
Depth Logger	1991.30	metres	
First Reading	1984.00	metres	
Last Reading	853.30	metres	
Casing Driller	853.70	metres	
Casing Logger	853.30	metres	
Bit Size	8.50	inches	
Hole Fluid Type	KCI/POLY/GYL		
Density / Viscosity	10.10 lb/USg	28.00 cP	
PH / Fluid Loss	9.10	2.80 ml/30Min	
Sample Source	FLOWLINE		
Rm @ Measured Temp	0.115 @ 25.0	ohm-m	
Rmf @ Measured Temp	0.089 @ 25.0	ohm-m	
Rmc @ Measured Temp	0.181 @ 25.0	ohm-m	
Source Rmf / Rmc	PRESS	PRESS	
Rm @ BHT	0.052 @ 83.0	ohm-m	
Time Since Circulation	27 HOURS		
Max Recorded Temp	83.00	deg C	
Equipment Name	CWS/CML		
Equipment / Base	1	SALE	
Recorded By	R. TENCH, B. MOSS		
Witnessed By	TREVOR LOBO		
CIRC STOPPED	16:30 15-Jun		

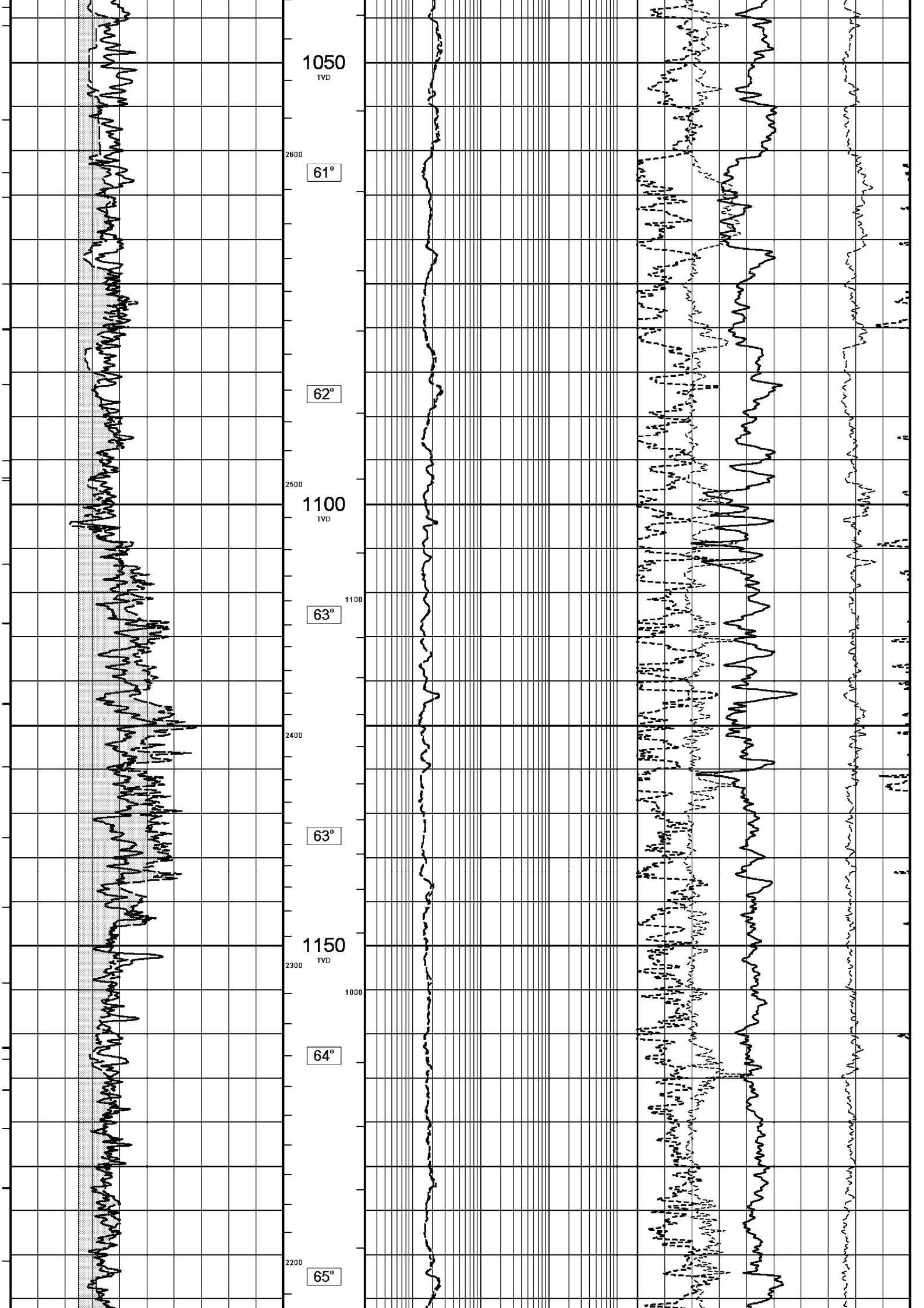
BOREHOLE RECORD				
Bit Size inches		Depth From metres		Depth To metres
8.500		895.00		2810.00
CASING RECORD				
Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	13.375	0.00	895.00	54.50

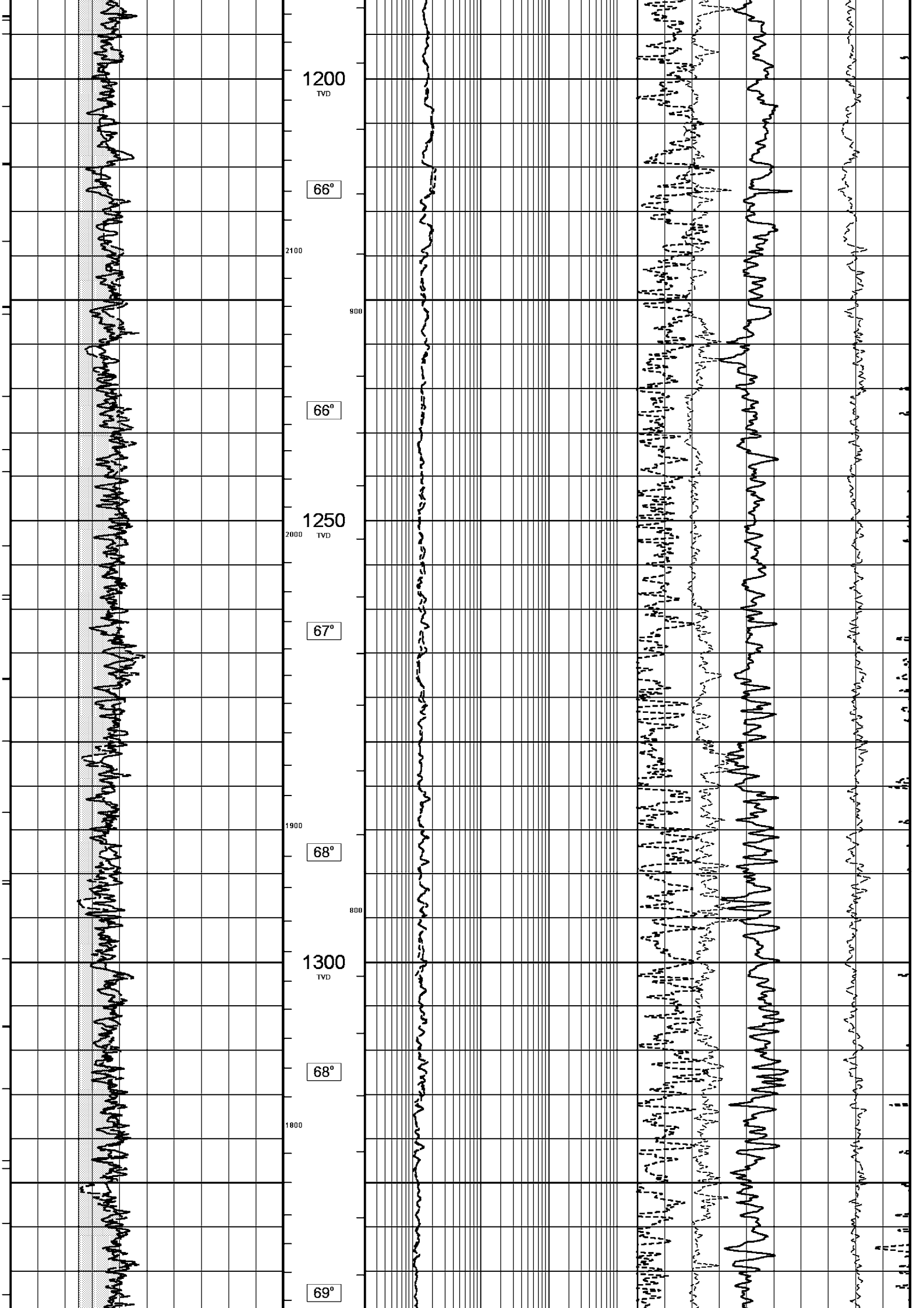
REMARKS
RIG: NABORS 453
5" SHUTTLE/MEMORY COMPACT OPERATION. CREW: R TENCH , B MOSS , B GOODWIN, K LUCIEER.
ALL LOGS DEPTH CORRELATED TO ANADRILL GAMMA LOG.
DURING TRIP IN, DRILL PIPE BRIDGED AT 2071m, REQUIRED 30RPM AND 10BLS FLOW TO REACH TD
MAX. TEMPERATURE: 83 DEG C AT 2763m MD MAX. INCLINATION: 58.40 DEG AT 2810.0m MD MAX. DOGLEG SERVERITY: 6.21 DEG/30m AT 1160.6m MD DEPLOYMENT ANGLE: 58 DEG
HVOL: 3000 FT^3 AVOL: 1330 FT^3

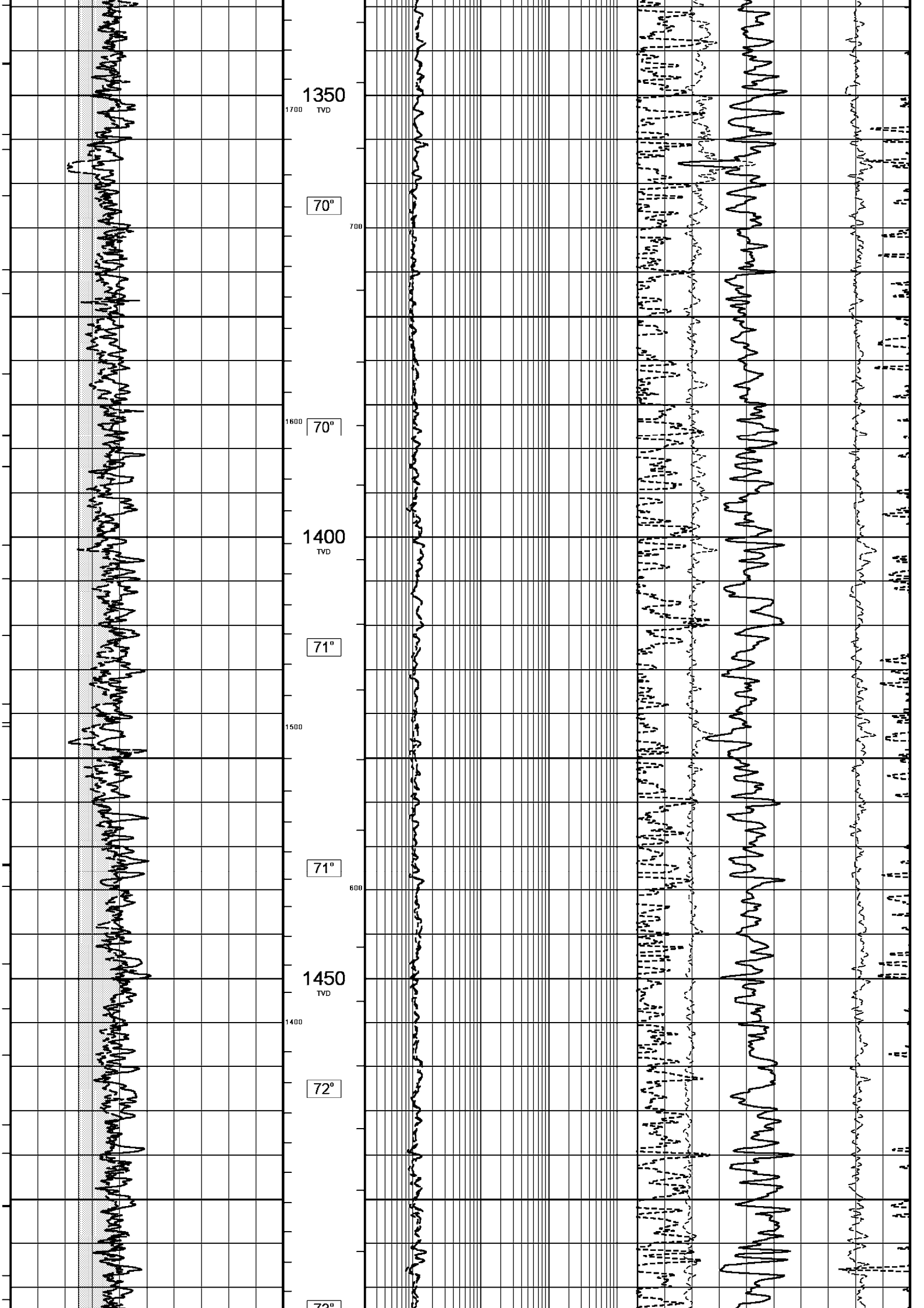
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

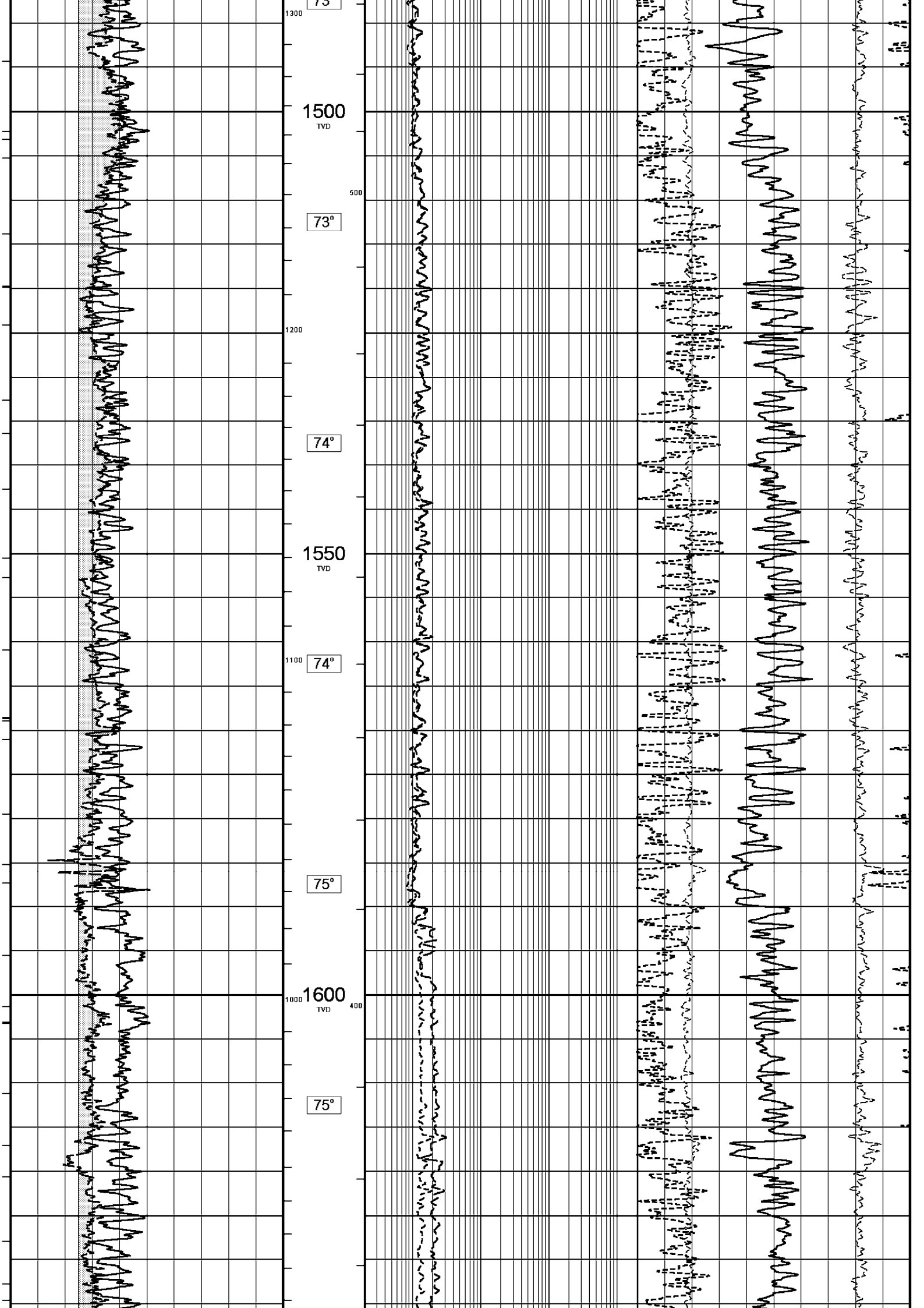


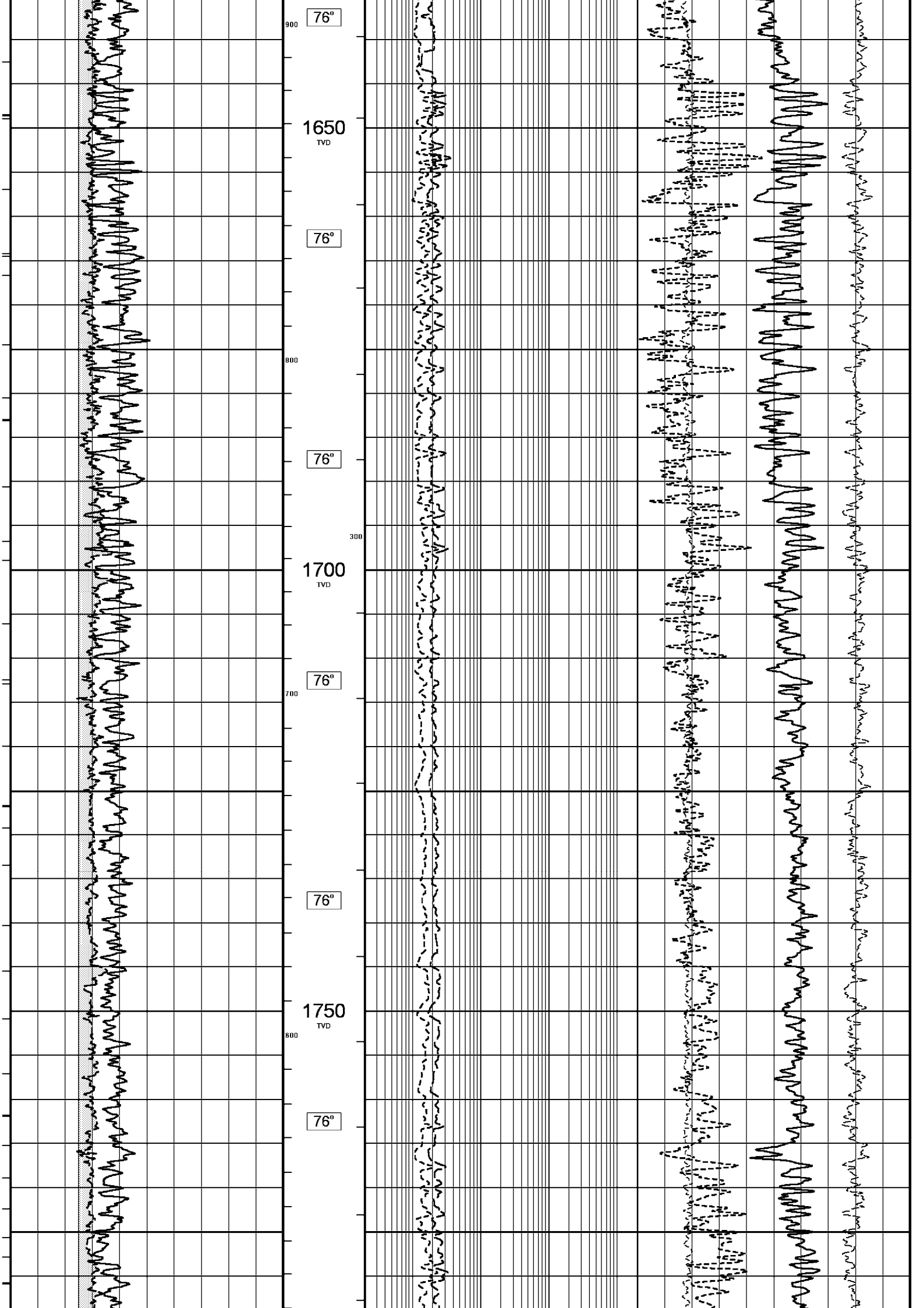




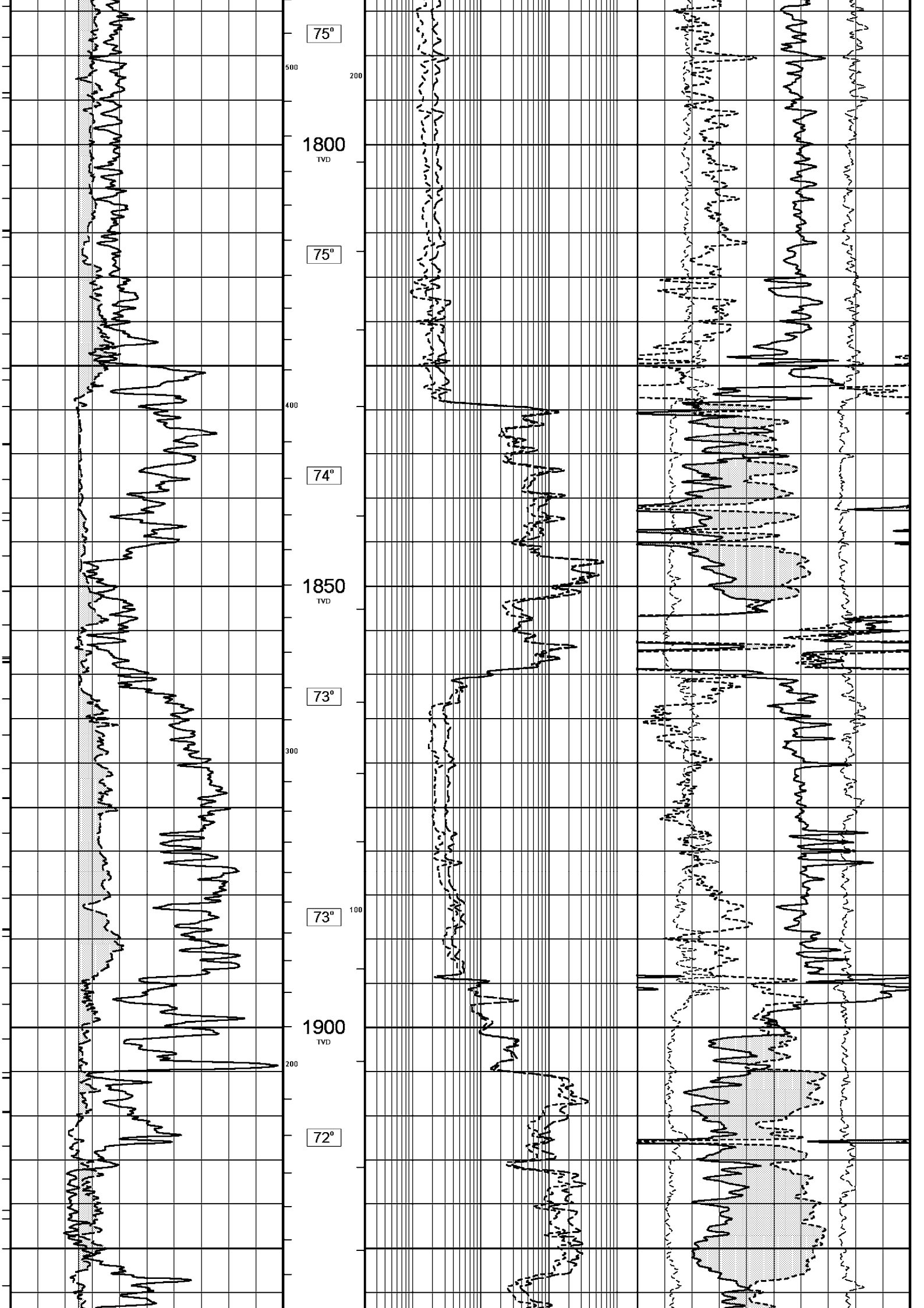


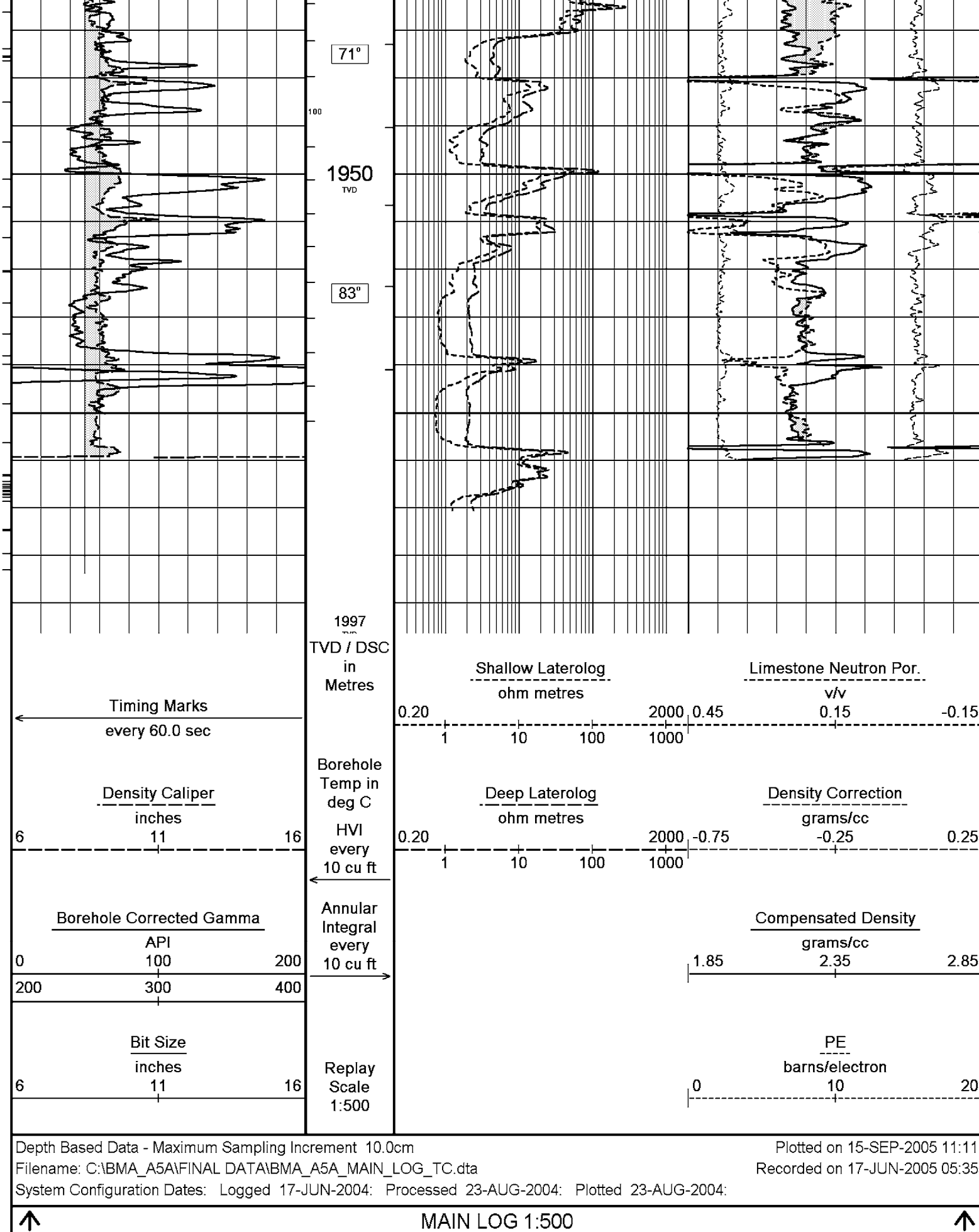












## BEFORE SURVEY CALIBRATION

C:\BMA\_A5A\FINAL DATA\BMA\_A5A\_MAIN\_LOG\_TC.dta

### General Constants All 000

#### General Parameters

Mud Resistivity

0.115

ohm-metres

Mud Resistivity Temperature	25.000	degrees C
Water Level	0.000	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	7.000	inches
Caliper for Differential Caliper	Density Caliper	
Rwa Parameters		
Porosity used	Base Density Porosity	
Resistivity used	Deep Induction	
RWA Constant A	0.610	
RWA Constant M	2.150	

High Resolution Temperature Calibration MCG 098			Field Calibration on 15-JUN-2005,19:09
	Measured	Calibrated(Deg C)	
Lower	0.00	0.00	
Upper	100.00	100.00	

High Resolution Temperature Constants MCG 098	
Pre-filter Length	11

Gamma Calibration MCG 098			Field Calibration on 15-JUN-2005 19:08
	Measured	Calibrated (API)	
Background	12	8	
Calibrator (Gross)	1353	917	
Calibrator (Net)	1341	909	

Gamma Constants MCG 098		
Gamma Calibrator Number	060	
Mud Density	1.21	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Neutron Calibration MDN 085			Base Calibration on 8-JUN-2005,17:33
Base Calibration			Field Check on 15-JUN-2005 17:51
	Measured	Calibrated (cps)	
	Near Far	Near Far	
	3147 97	3714 110	
Ratio	32.530	33.764	
Field Calibrator at Base			Calibrated (cps)
		1655 2423	
Ratio		0.683	
Field Check			Calibrated (cps)
		1533 2252	
Ratio		0.681	

Neutron Constants MDN 085		
Neutron Source Id	NSN-E-739	
Neutron Jig Number	NEC-C-052	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.21	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	N/A	degrees C
Mud Salinity	58.30	kppm
Formation Fluid Salinity Source	None	
Formation Fluid Salinity	N/A	kppm
Barite Mud Correction	Not Applied	

Caliper Calibration MPD 083	Base Calibration on 8-JUN-2005 17:33
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## Base Calibration

Reading No	Measured	Calibrator Size (in)
1	13504	4.01
2	21630	5.99
3	30082	7.98
4	38559	9.94
5	48000	12.01
6	N/A	N/A

## Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.00	7.99

## Photo Density Calibration MPD 083

Base Calibration on 8-JUN-2005,17:32  
Field Check on 15-JUN-2005 17:38

## Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	54308	18863	53111	19310
Reference 2	25580	2509	24951	2530

## Field Check at Base

960.0 1111.9

## Field Check

951.7 1109.8

## PE Calibration

Base Calibration	Measured			Calibrated
	WS	WH	Ratio	Ratio
Background	181	824		
Reference 1	17282	54115	0.321	0.320
Reference 2	6883	25434	0.272	0.273

## Field Check at Base

181.5 823.9

## Field Check

180.9 819.0

## Density Constants MPD 083

Density Source Id	242
Nylon Calibrator Number	536
Aluminium/Fe Calibrator Number	536
Density Shoe Profile	4 inch
Caliper Source for Processing	Density Caliper
PE Correction to Density	Not Applied
Mud Density	1.21 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

## Laterolog Calibration MLE 016

Base Calibration on 9-JUN-2005,19:41  
Field Check on 15-JUN-2005,19:44

## Base Calibration

Channel	Measured		Calibrated (ohm-m)	
	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Shallow	9.7	960.9	13.2	1321.0
Deep	9.7	985.3	7.5	755.0
Groningen	9.7	966.7	8.5	854.0


## Channel

## Base Check (ohm-m)

## Field Check (ohm-m)

Shallow	49.4	49.4
Deep	27.7	27.7
Groningen	254.2	254.2

Laterolog Constants MLE 016		
Squasher Start	40000	ohm-m
Shallow Laterolog K Factor	1.3210	
Deep Laterolog K Factor	0.7550	
Groningen Laterolog K Factor	0.8540	
Interference Rejection	50 Hz	
SP Connection	SP Bridle Electrode	
Groningen Connection	Groningen Electrode	

DOWNHOLE EQUIPMENT			
Compact Swivel Head Adaptor F			
SHA 71	Length: 0.83 m	Weight: 26.5 lb	
Compact Knuckle Joint			
SKJ 100	Length: 0.66 m	Weight: 24.3 lb	
Compact Battery Sub.			
MBS 99	Length: 4.41 m	Weight: 90.4 lb	
Compact Inline Standoff B			
MIS 73	Length: 0.65 m	Weight: 15.4 lb	
Compact Stiff Bridle Electrode Sub.			
MBE 18	Length: 3.76 m	Weight: 94.8 lb	
Compact Inline Standoff B			
MIS 139	Length: 0.65 m	Weight: 15.4 lb	
Compact Stiff Bridle Electrode Sub.			
MBE 19	Length: 3.76 m	Weight: 94.8 lb	
Compact Inline Standoff B			
MIS 136	Length: 0.65 m	Weight: 15.4 lb	
MBE 21 - THIRD BRIDLE			
MLK 111	Length: 3.76 m	Weight: 30.9 lb	

Compact Gamma  
MCG 98 Length: 2.65 m Weight: 63.9 lb

32.22 m GGCE - Borehole Corrected Gamma  
31.33 m CGXT - MCG External Temperature

Compact Memory Sub A.C  
MMS 38 Length: 0.95 m Weight: 22.0 lb

Compact Knuckle Joint  
SKJ 46 Length: 0.66 m Weight: 24.3 lb

Compact Swivel Head Adaptor F  
SHA 64 Length: 0.83 m Weight: 26.5 lb

Compact Inline Bowspring A  
MIS 94 Length: 1.74 m Weight: 33.1 lb

Compact Neutron  
MDN 85 Length: 1.53 m Weight: 50.7 lb

26.17 m NPRL - Limestone Neutron Por.

Compact Density/Caliper  
MPD 83 Length: 2.92 m Weight: 90.4 lb

23.48 m AVOL - Annular Volume  
23.48 m HVOL - Hole Volume  
23.48 m CLDC - Density Caliper  
23.27 m DEN - Compensated Density

Compact Inline Bowspring A  
MIS 24 Length: 1.74 m Weight: 33.1 lb

23.27 m DCOR - Density Correction  
23.25 m PDPE - PE

Compact Swivel Head Adaptor  
SHA 28 Length: 0.83 m Weight: 26.5 lb

Compact Knuckle Joint  
SKJ 110 Length: 0.66 m Weight: 24.3 lb

Compact Inline Standoff B  
MIS 140 Length: 0.65 m Weight: 15.4 lb

Compact Upper Guard Sub.  
MUG 20 Length: 2.74 m Weight: 68.3 lb

Compact Inline Standoff B  
MIS 129 Length: 0.65 m Weight: 15.4 lb

Compact Laterolog Electrode Sub.  
MLE 16 Length: 3.76 m Weight: 92.6 lb

13.35 m DSLL - Shallow Laterolog  
13.35 m DDLL - Deep Laterolog

Compact Inline Standoff B  
MIS 127 Length: 0.65 m Weight: 15.4 lb

Compact Lower Guard Sub.  
MLG 7 Length: 2.44 m Weight: 55.1 lb

Compact Inline Standoff B  
MIS 133 Length: 0.65 m Weight: 15.4 lb

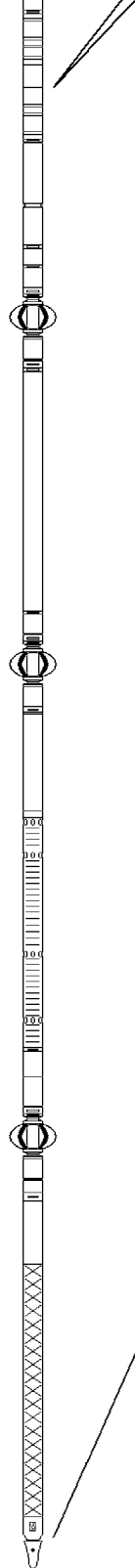
Compact Sonic  
MSS 66 Length: 3.82 m Weight: 72.8 lb

Compact Inline Standoff B  
MIS 128 Length: 0.65 m Weight: 15.4 lb

Compact Induction  
MAI 39 Length: 3.29 m Weight: 48.5 lb

Induction Standoff  
HFS 4 Length: 0.40 m Weight: 6.6 lb

Total Length: 53.36 m Weight: 1223.6 lb



Tool Zero (0.44m from bottom)

All measurements relative to tool zero.

COMPANY	ESSO AUSTRLIA PTY LTD
WELL	BREAM A5A
FIELD	BREAM
PROVINCE/COUNTY	BASS STRAIT
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing	metres	First Reading	1984.00	metres	
Elevation Drill Floor	32.82	metres	Depth Driller	1994.50	metres
Elevation Ground Level	-59.40	metres	Depth Logger	1991.30	metres



DUAL LATEROLOG - GR  
DENSITY - NEUTRON  
1:500 TVD

