



PRECISION
ENERGY SERVICES

DUAL LATEROLOG - GR
DENSITY - NEUTRON

Compact

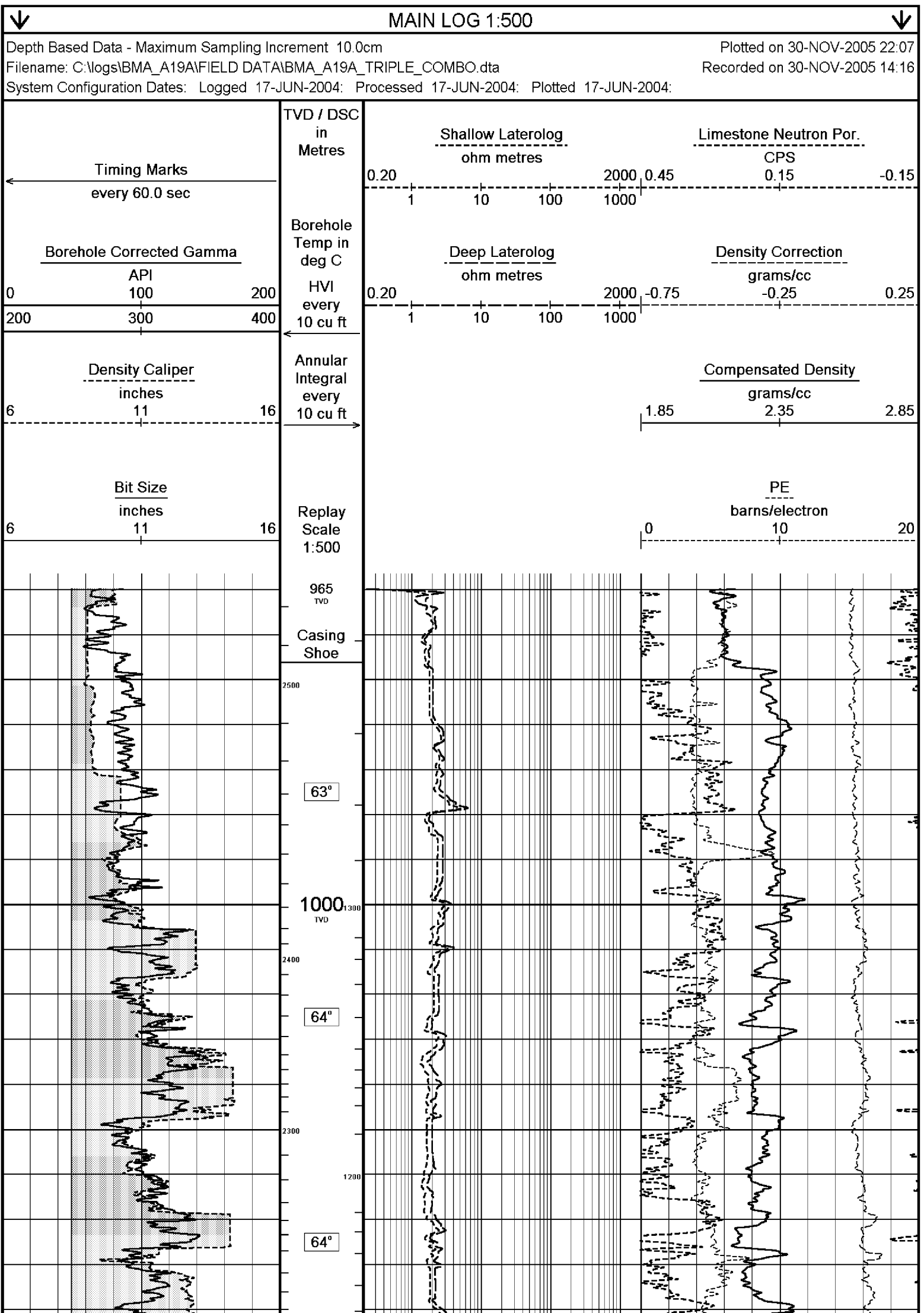
1:500 TVD

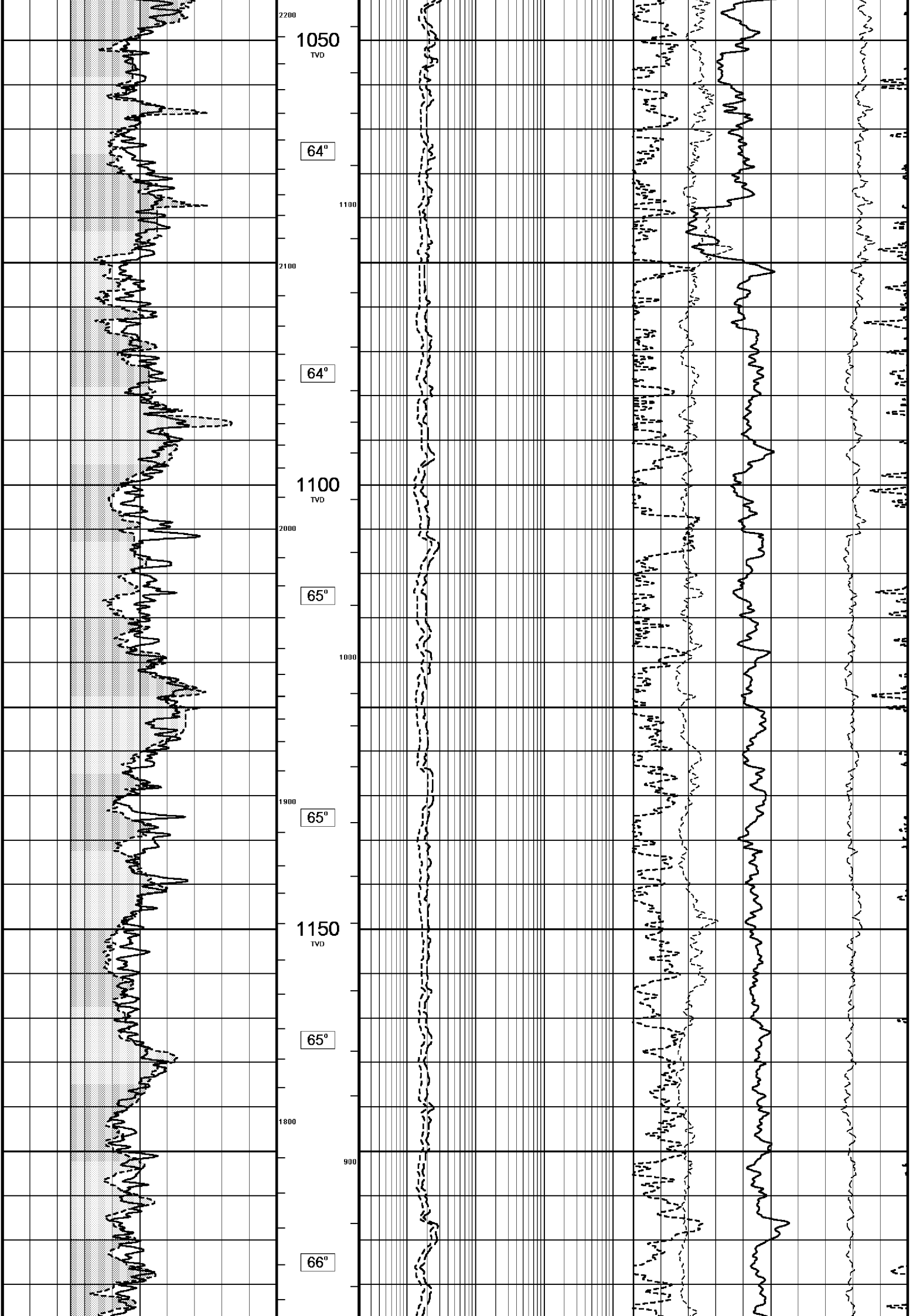
COMPANY			ESSO AUSTRALIA PTY LTD		
WELL			BREAM A19A		
FIELD			BREAM		
PROVINCE/COUNTY			BASS STRAIT		
COUNTRY/STATE			AUSTRALIA		
LOCATION			S 38 29 58.893, E 147 46 19.968		
			N 5738458.220 m, E 567336.120 m		
			FIELD PRINT		
LSD	SEC	TWP	RGE	Other Services	
				COMPENSATED SONIC	
API Number					
Permit Number					
Permanent Datum MSL			, Elevation 0.0 metres		
Log Measured From RT @ 32.82 M			above Permanent Datum		
Drilling Measured From RT					
Date	30-Nov-2005				
Run Number	ONE				
Depth Driller	2020.90		metres		
Depth Logger	2017.60		metres		
First Reading	2007.20		metres		
Last Reading	973.00		metres		
Casing Driller	973.00		metres		
Casing Logger	973.00		metres		
Bit Size	8.50		inches		
Hole Fluid Type	KCL/GYL/POLY				
Density / Viscosity	10.15 lb/USg		62.00 CP		
PH / Fluid Loss	9.00		2.60		
Sample Source	FLOWLINE				
Rm @ Measured Temp	0.228 @ 25.0		ohm-m		
Rmf @ Measured Temp	0.091 @ 25.0		ohm-m		
Rmc @ Measured Temp	0.359 @ 25.0		ohm-m		
Source Rmf / Rmc	PRESS		PRESS		
Rm @ BHT	0.119 @ 67.5		ohm-m		
Time Since Circulation	27.5 HOURS				
Max Recorded Temp	70.60		deg C		
Equipment Name	5" CWS/CML				
Equipment / Base	1		SALE		
Recorded By	R. TENCH, B. MOSS				
Witnessed By	TREVOR LOBO				
CIRC STOPPED	00:15 29/NOV				

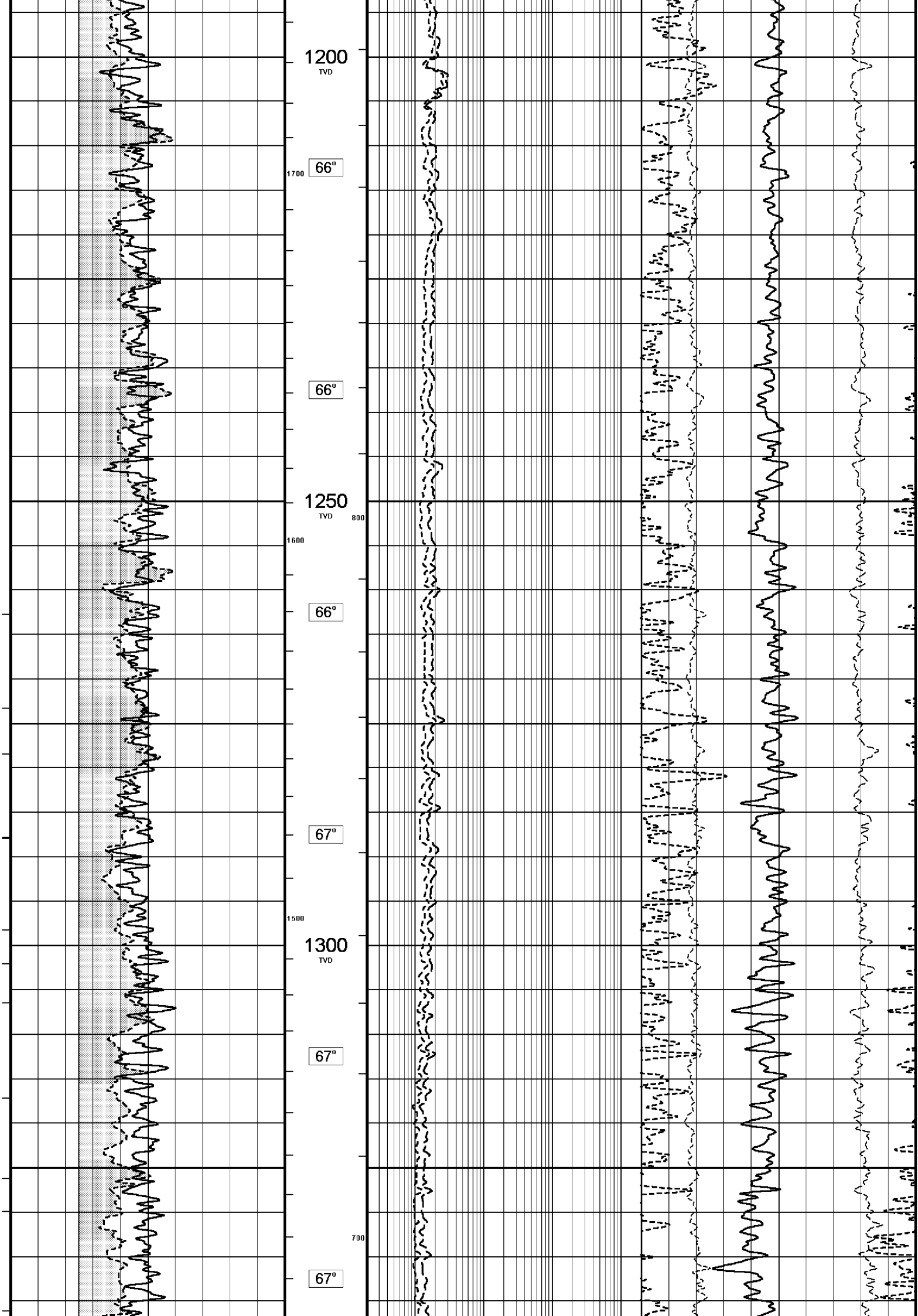
BOREHOLE RECORD				
Bit Size inches		Depth From metres		Depth To metres
8.500		1434.00		2804.00
CASING RECORD				
Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	10.750	0.00	1434.00	40.50

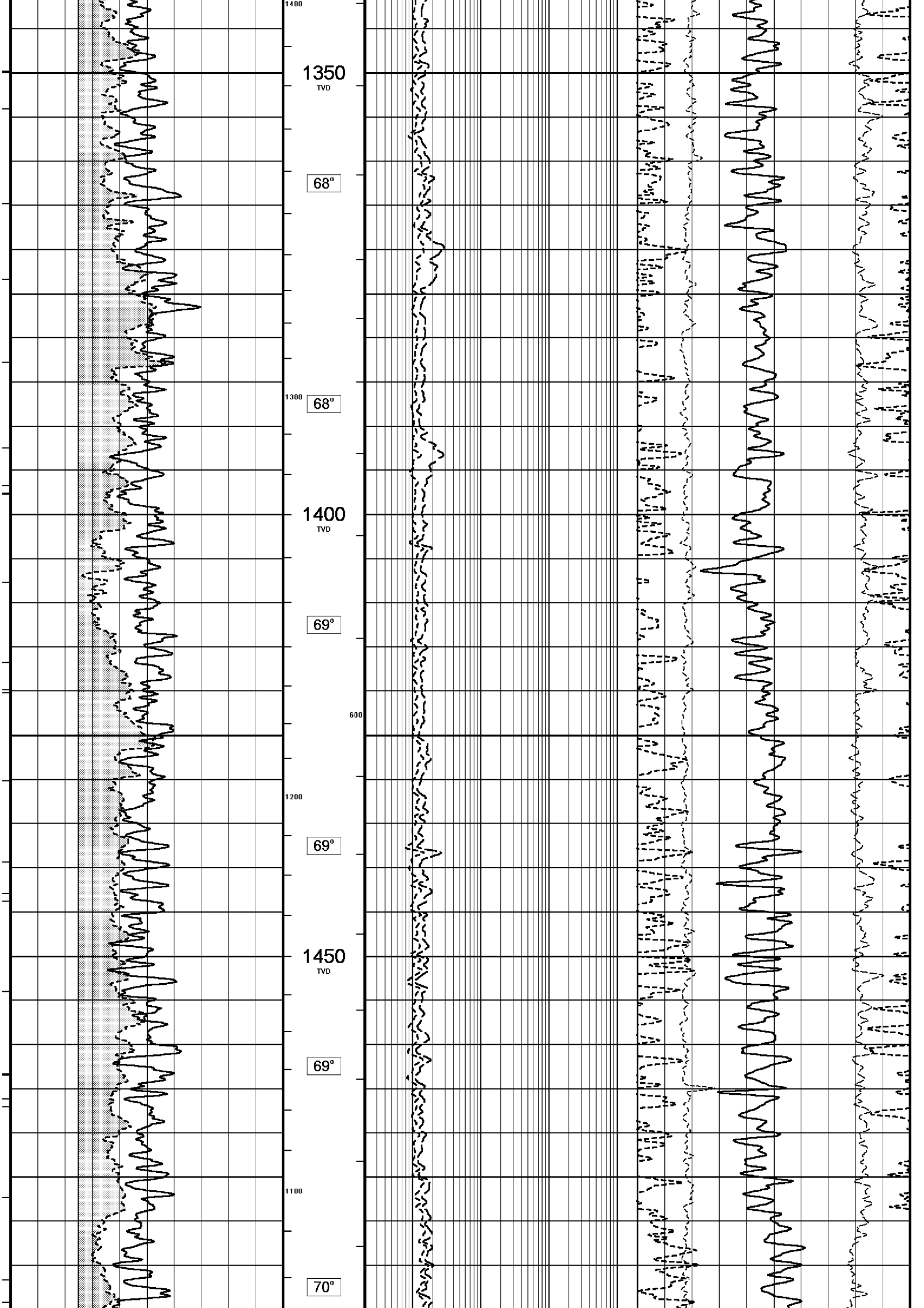
REMARKS
RIG: NABORS 453
5" SHUTTLE/MEMORY COMPACT OPERATION. CREW: R TENCH , B MOSS , B GOODWIN, M KOLCZE.
FIELD FINAL LOGS TO BE CORRELATED TO ANADRILL GAMMA LOG. FIELD FINALS REQUIRE CORRECTION TO TIME DEPTH CORRELATION ABOVE 1800mMD.
BRIDGED OF AT 2786mMD ON TRIP IN, REQUIRED 60RPM AND 10BBL/MIN TO ALLOW PIPE TO BE WASHED TO TD.
MAX. TEMPERATURE: 70.6 DEG C AT 2379m MD MAX. INCLINATION: 60.56 DEG AT 1478.37m MD MAX. DOGLEG SERVERITY: 6.78DEG/30m AT 1478.37m MD DEPLOYMENT ANGLE: 32.90DEG
HVOL: 2524 FT^3 AVOL: 1346 FT^3

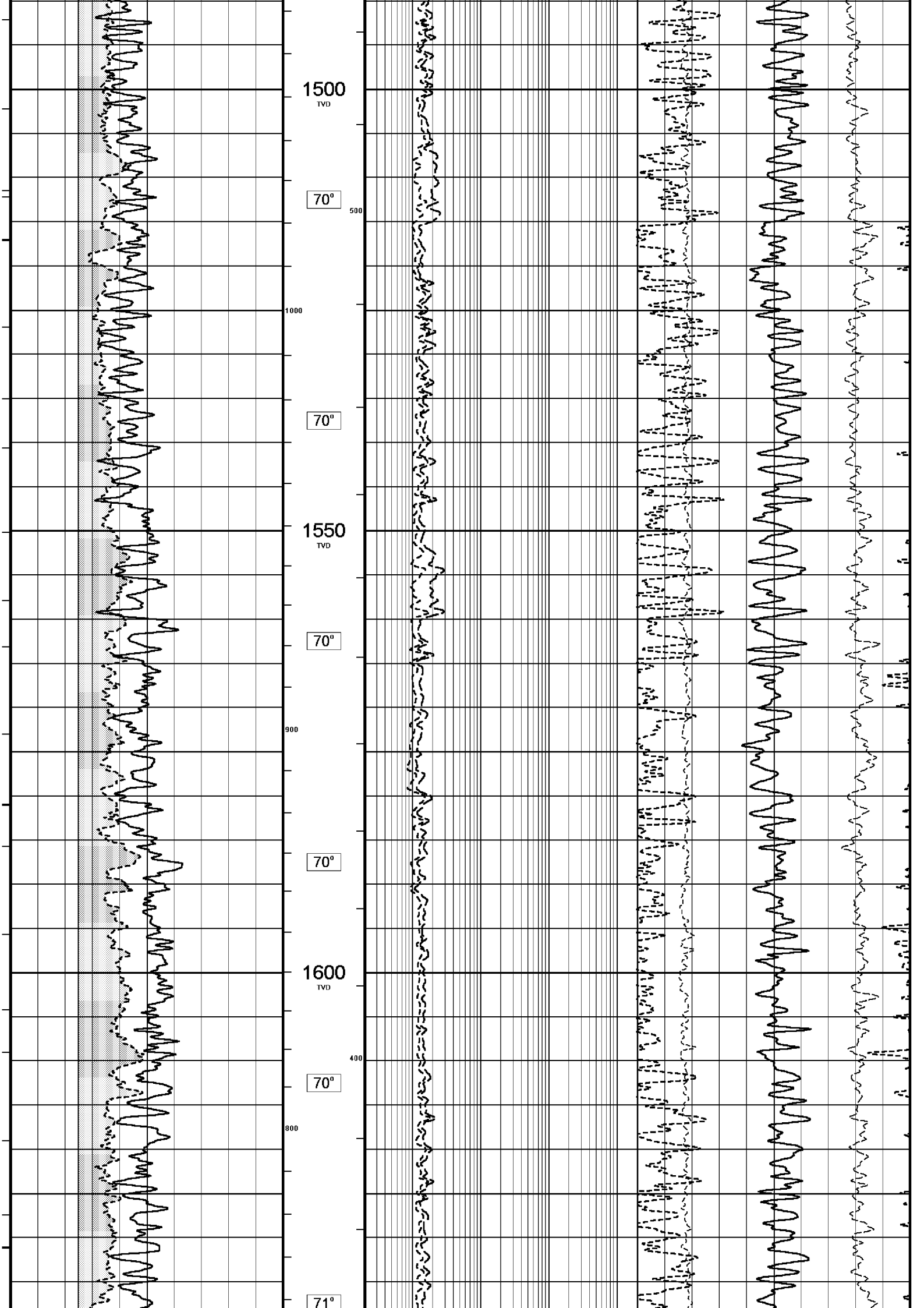
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

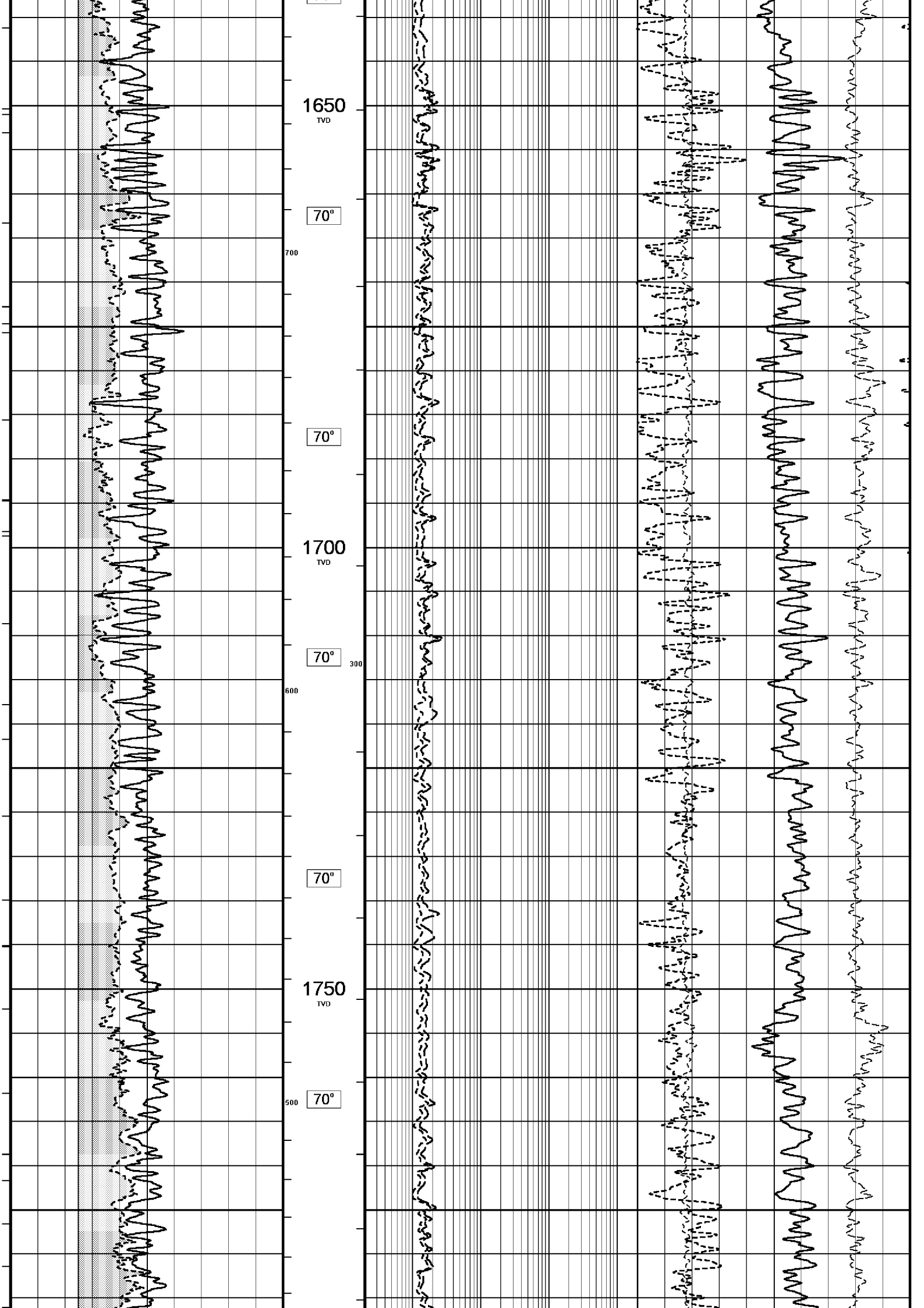


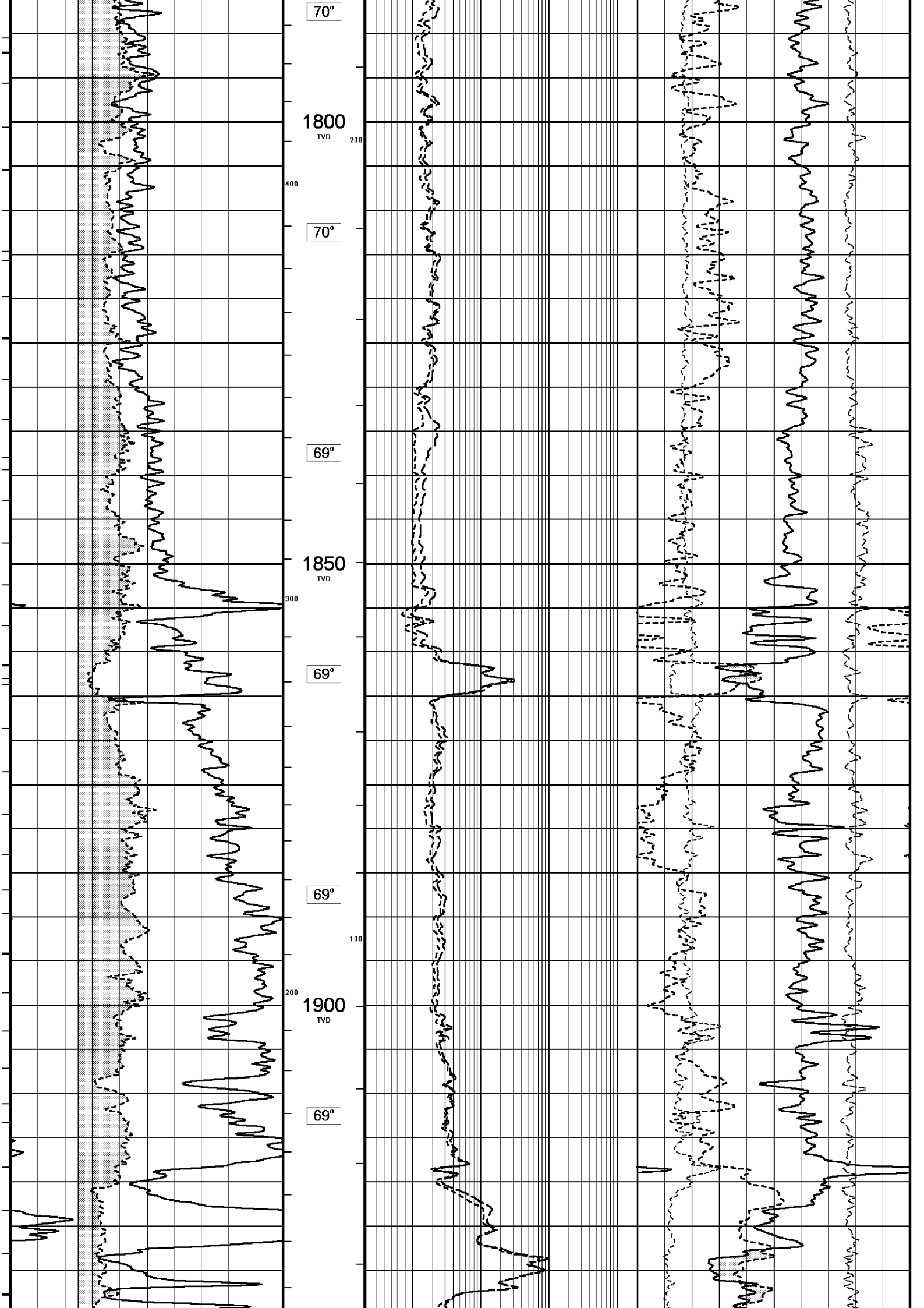


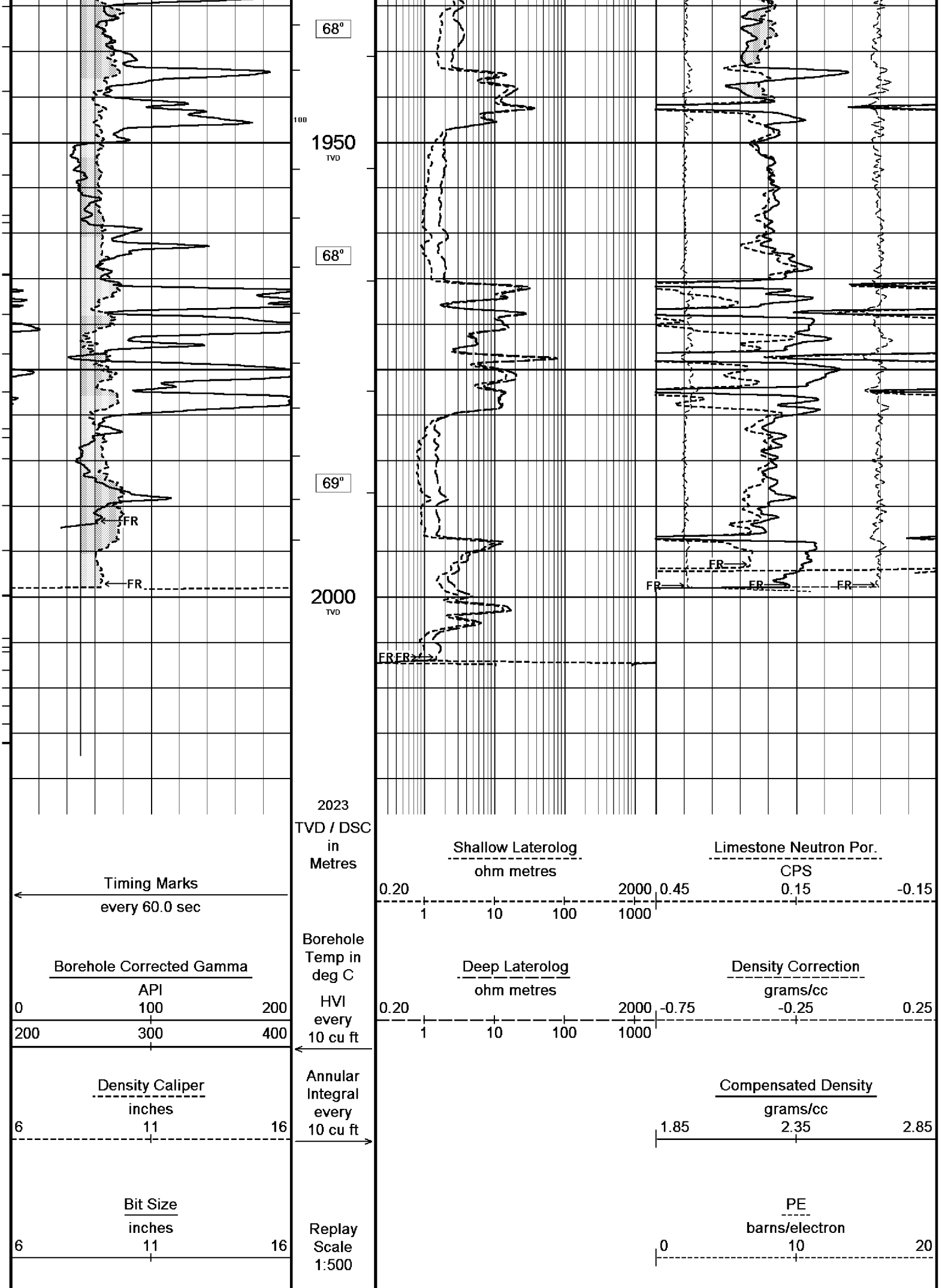














BEFORE SURVEY CALIBRATION

C:\logs\BMA_A19A\FIELD DATA\BMA_A19A_TRIPLE_COMBO.dta

General Constants All 000

General Parameters

Mud Resistivity	0.113	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	None	

Rwa Parameters

Porosity used	Limestone Sonic Porosity
Resistivity used	Deep Induction
RWA Constant A	0.610
RWA Constant M	2.150

High Resolution Temperature Calibration MCG 142

Field Calibration on 7-NOV-2005,03:12

	Measured	Calibrated(Deg C)
Lower	0.00	0.00
Upper	100.00	100.00

High Resolution Temperature Constants MCG 142

Pre-filter Length	11
-------------------	----

Gamma Calibration MCG 142

Field Calibration on 7-NOV-2005 03:17

	Measured	Calibrated (API)
Background	21	14
Calibrator (Gross)	1367	923
Calibrator (Net)	1346	909

Gamma Constants MCG 142

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

Neutron Calibration MDN 085

Base Calibration on 28-OCT-2005 16:16

Field Check on 7-NOV-2005 03:32

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
Ratio	3202	100	3714	110
	32.170		33.764	

Field Calibrator at Base

	Calibrated (cps)	
Ratio	1608	2344
	0.686	

Field Check

	Calibrated (cps)	
Ratio	1577	2339
	0.674	

Neutron Constants MDN 085

Neutron Source Id	NSN-E-729	
Neutron Jig Number	NEC-C-052	
Epithermal Neutron	No	
Caliper Source for Processing	Bit Size	
Stand-off	0.00	inches
Mud Density	1.21	gm/cc






0.00	0.00
0.00	0.00

Laterolog Constants MLE 031

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

C:\logs\BMA_A19A\FIELD DATA\BMA_A19A_TRIPLE_COMBO.dta

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: 44.1 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 138	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	
MBE21 - THIRD BRIDLE MLK 111	Length: 3.76 m	Weight: 30.9 lb	
Compact Inline Standoff B			

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

Compact Gamma
MCG 142 Length: 2.65 m Weight: 63.9 lb

Compact Memory Sub A.C
MMS 38 Length: 0.95 m Weight: 30.9 lb

Compact Knuckle Joint
SKJ 45 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

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

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

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 72 Length: 0.65 m Weight: 15.4 lb

Compact Upper Guard Sub.
MUG 30 Length: 2.74 m Weight: 68.3 lb

Compact Inline Standoff B
MIS 141 Length: 0.65 m Weight: 15.4 lb

Compact Laterolog Electrode Sub.
MLE 31 Length: 3.76 m Weight: 92.6 lb

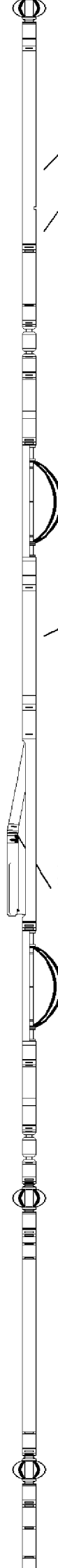
32.22 m GGCE - Borehole Corrected Gamma
31.33 m CGXT - MCG External Temperature

26.17 m NPRL - Limestone Neutron Por.

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

23.27 m DCOR - Density Correction
23.25 m PDPE - PE

13.35 m DSLL - Shallow Laterolog
13.35 m DLLL - 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 129 Length: 0.65 m Weight: 15.4 lb

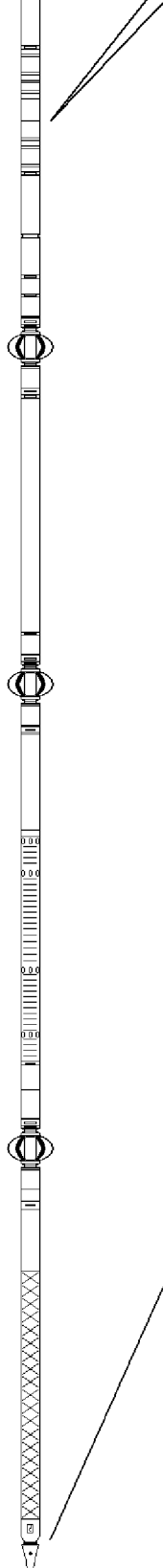
Compact Sonic
MSS 66 Length: 3.82 m Weight: 72.8 lb

Compact Inline Standoff B
MIS 126 Length: 0.65 m Weight: 15.4 lb

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

Pressure Bung + Hole Finder
HFS 4 Length: 0.40 m Weight: 6.6 lb

Total Length: 54.01 m Weight: 1201.5 lb



Tool Zero (0.44m from bottom)

All measurements relative to tool zero.

COMPANY	ESSO AUSTRALIA PTY LTD
WELL	BREAM A19A
FIELD	BREAM
PROVINCE/COUNTY	BASS STRAIT
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing	metres	First Reading	2007.20	metres	
Elevation Drill Floor	32.82	metres	Depth Driller	2020.90	metres
Elevation Ground Level	-59.40	metres	Depth Logger	2017.60	metres



DUAL LATEROLOG - GR
DENSITY - NEUTRON

Compact

1-500 TVD

