



**PRECISION**  
ENERGY SERVICES

**COMPENSATED SONIC**

**Compact**

**1:500 MD**

COMPANY	ESSO AUSTRALIA PTY LTD			
WELL	BREAM A1A			
FIELD	BREAM			
PROVINCE/COUNTY	BASS STRAIT			
COUNTRY/STATE	AUSTRALIA			
LOCATION	S 38 29 58.755, E 147 46 19.983			
	N 5738462.460 m, E 567336.500 m			
	<b>FIELD PRINT</b>			
LSD	SEC	TWP	RGE	Other Services
				DUAL LATEROLOG
API Number	PHOTO DENSITY			
Permit Number	COMPENSATED NEUTRON			
Permanent Datum MSL	, Elevation 0.0 metres			
Log Measured From RT @ 32.82 M	above Permanent Datum			
Drilling Measured From RT				
Date	08-Nov-2005			
Run Number	ONE			
Depth Driller	2294.00 metres			
Depth Logger	2291.00 metres			
First Reading	2285.60 metres			
Last Reading	1490.00 metres			
Casing Driller	1496.00 metres			
Casing Logger	1496.00 metres			
Bit Size	8.50 inches			
Hole Fluid Type	KCL/GYL/POLY			
Density / Viscosity	10.10 lb/USg 69.00 CP			
PH / Fluid Loss	9.00 3.00			
Sample Source	FLOWLINE			
Rm @ Measured Temp	0.113 @ 25.0 ohm-m			
Rmf @ Measured Temp	0.088 @ 25.0 ohm-m			
Rmc @ Measured Temp	0.168 @ 25.0 ohm-m			
Source Rmf / Rmc	PRESS PRESS			
Rm @ BHT	0.053 @ 79.0 ohm-m			
Time Since Circulation	22 Hours			
Max Recorded Temp	82.00 deg C			
Equipment Name	5" CWS/CML			
Equipment / Base	1 SALE			
Recorded By	R. TENCH, B. MOSS			
Witnessed By	TREVOR LOBO			
CIRC STOPPED	15:30 7-NOV			

Elevations:  
KB 32.82 metres  
DF 32.82 metres  
GL -59.40 metres

BOREHOLE RECORD		
Bit Size inches	Depth From metres	Depth To metres
8.500	1496.00	2294.00

CASING RECORD				
Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	13.375	0.00	853.00	54.50
L-80	9.625	0.00	1496.00	47.00

**REMARKS**

RIG: NABORS 453

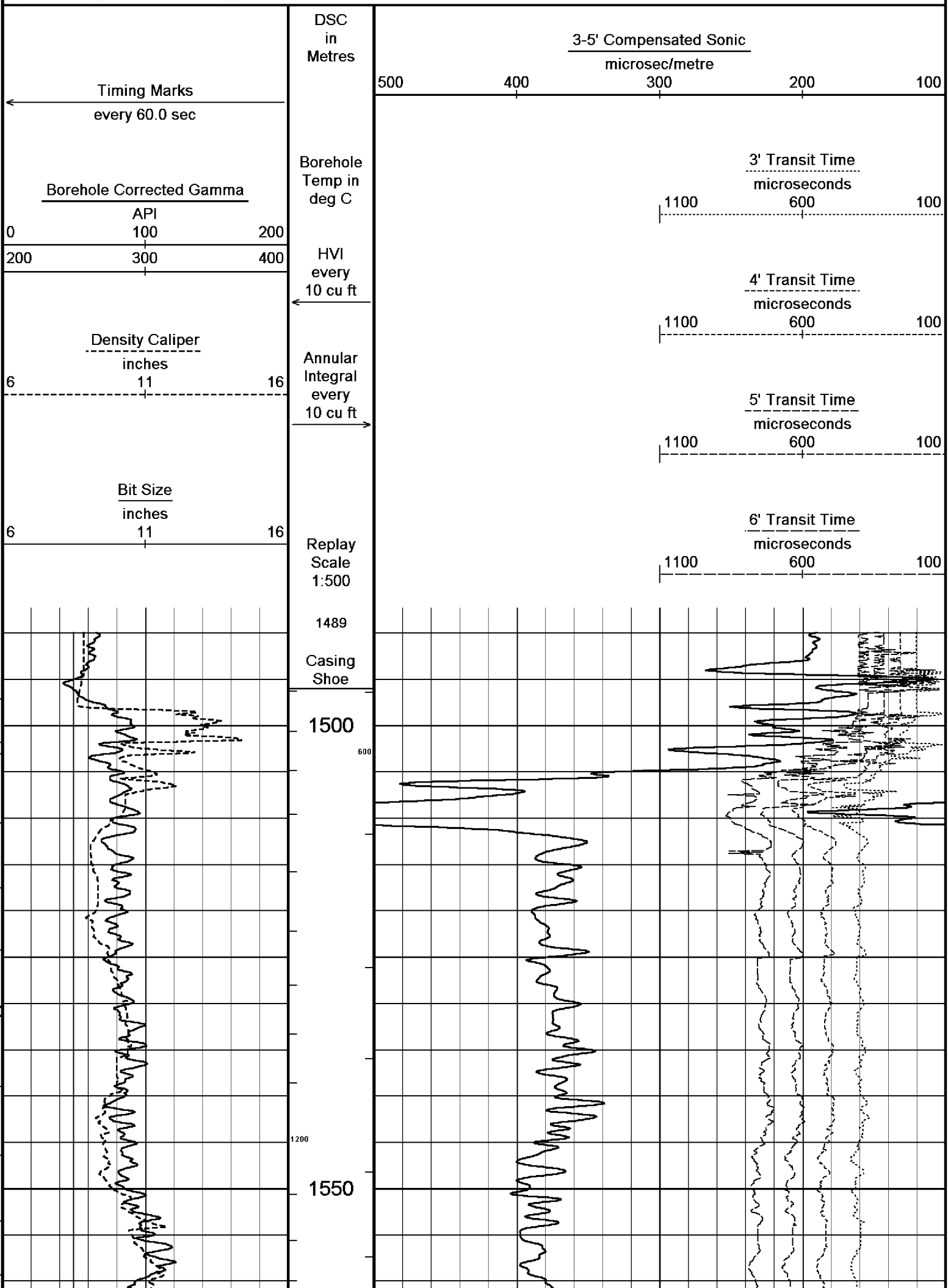
5" SHUTTLE/MEMORY COMPACT OPERATION.  
CREW: R TENCH , B MOSS , B GOODWIN, M KOLCZE.

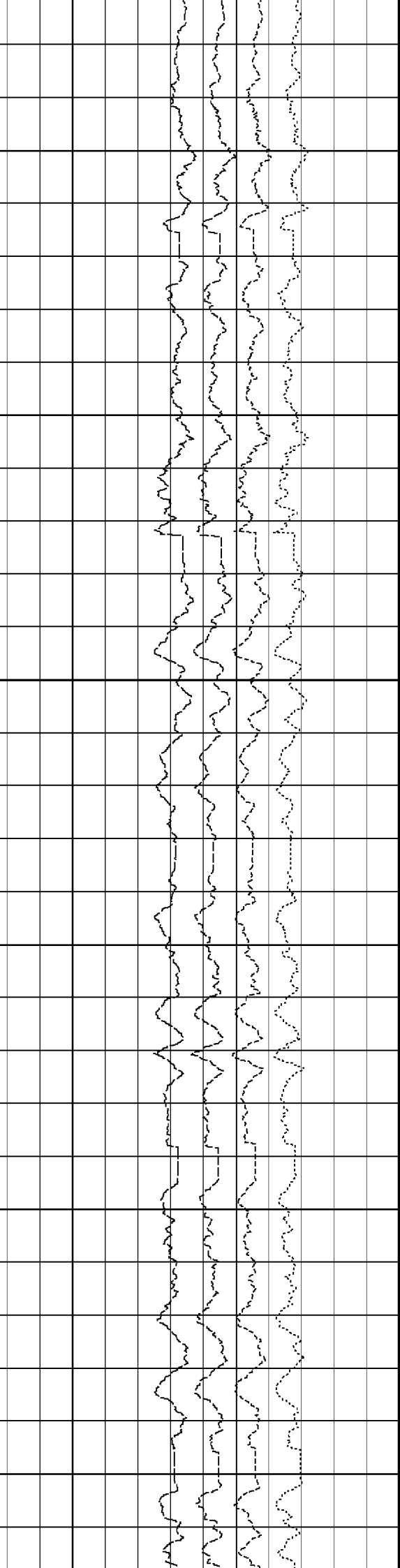
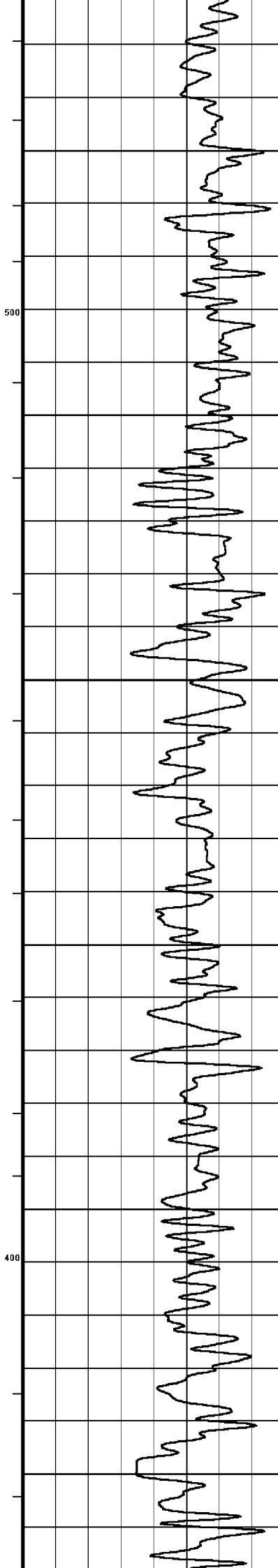
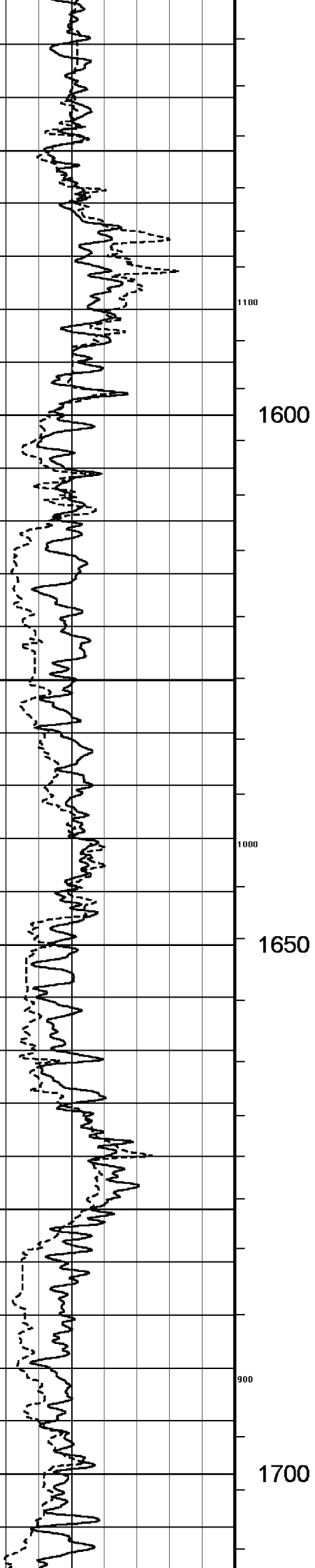
FIELD FINAL LOGS TO BE CORRELATED TO ANADRILL GAMMA LOG.

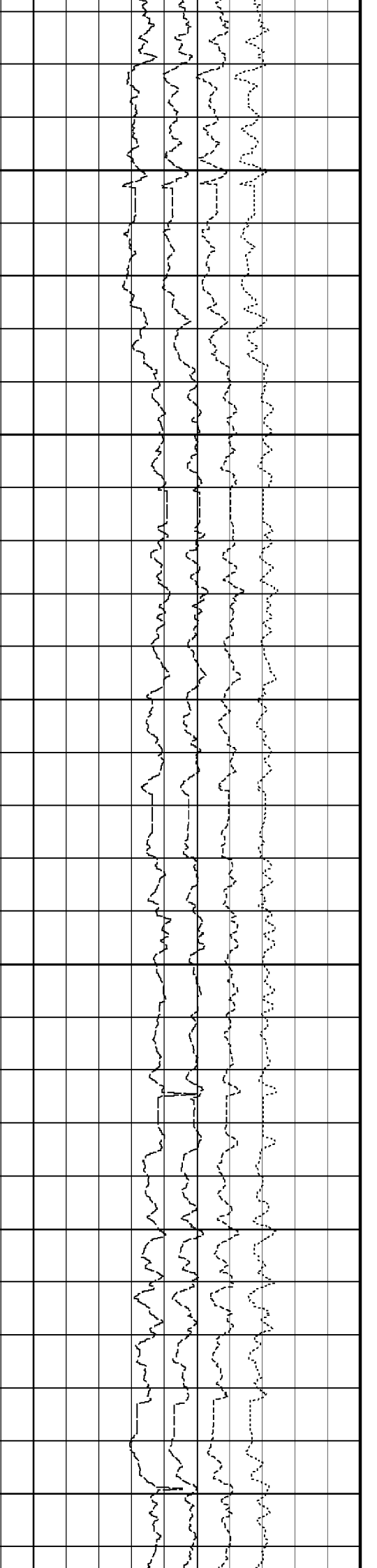
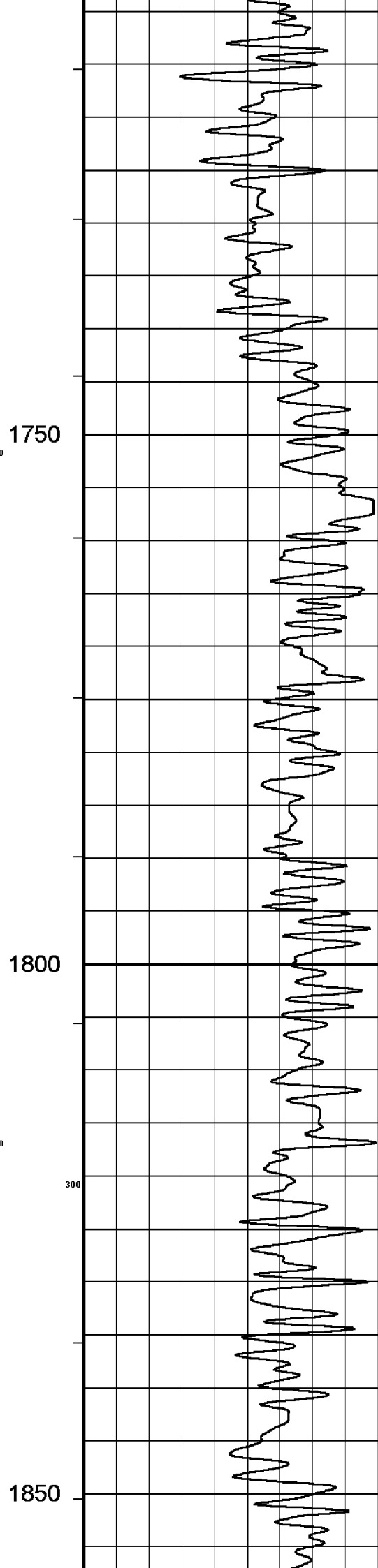
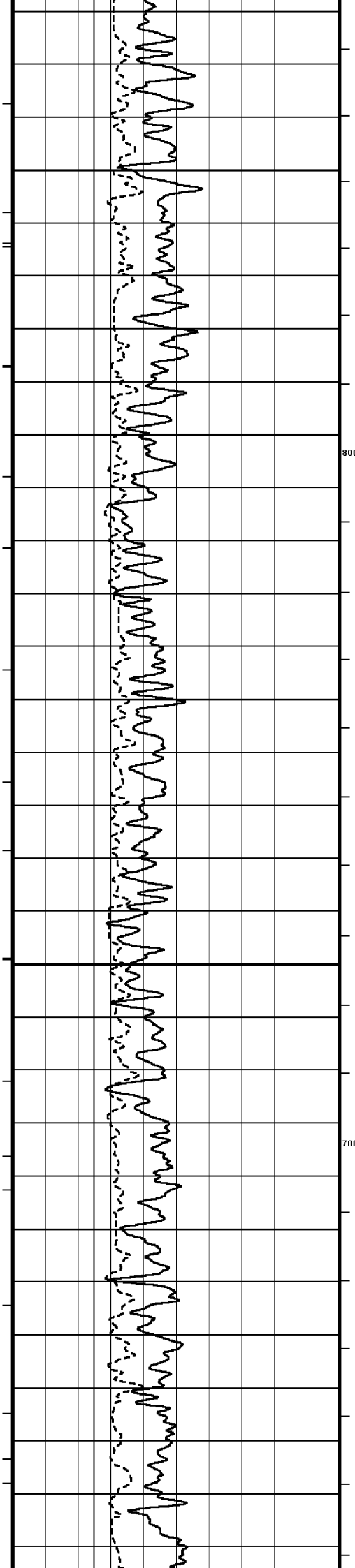
MAX. TEMPERATURE: 82DEG C AT 2249 m MD  
MAX. INCLINATION: 43.98 DEG AT 1500m MD  
MAX. DOGLEG SERVERITY: 7.58DEG/30m AT 1561.54 m MD  
DEPLOYMENT ANGLE: 14.45 DEG

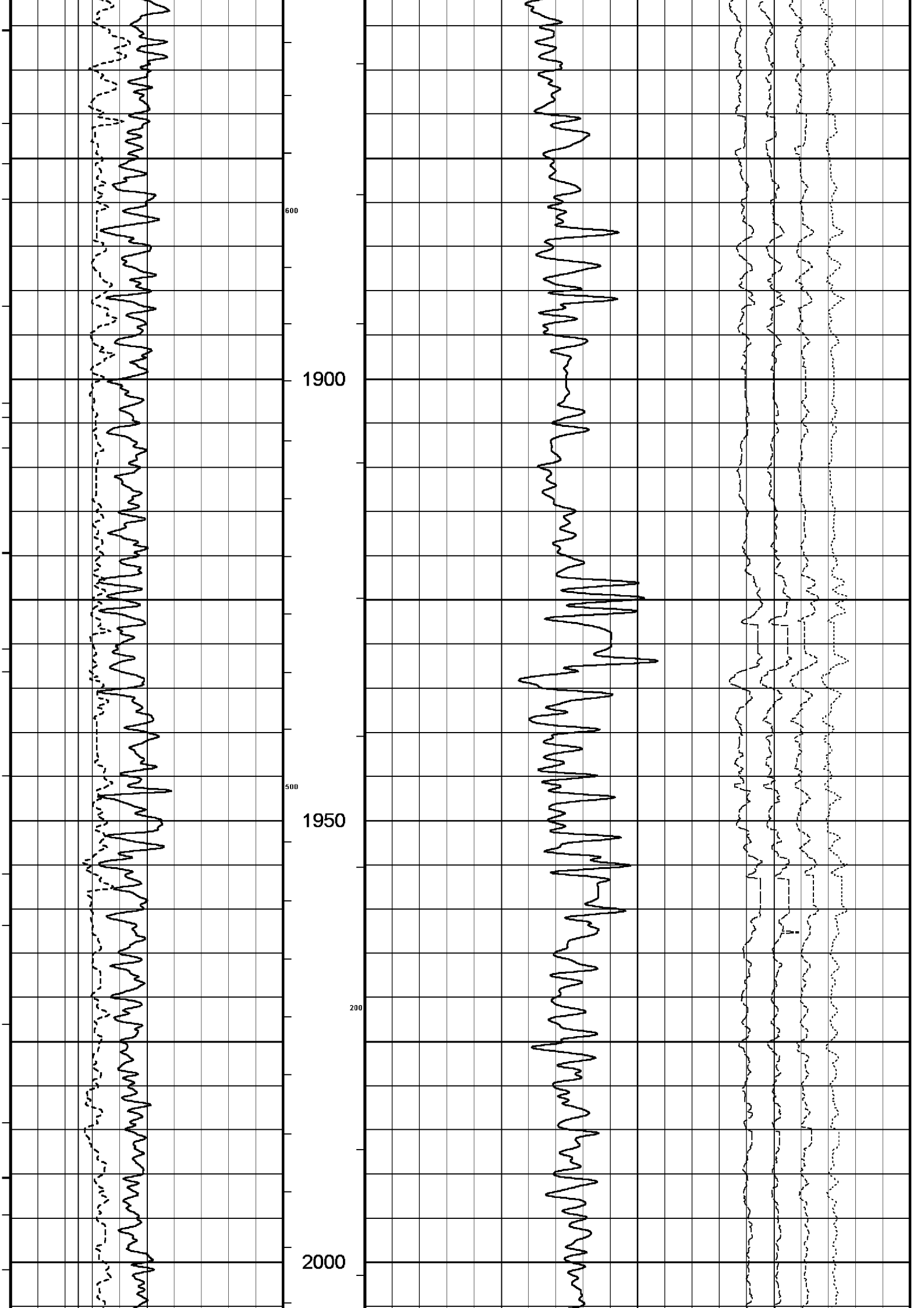
HVOL: 1290 FT^3  
AVOL: 610 FT^3

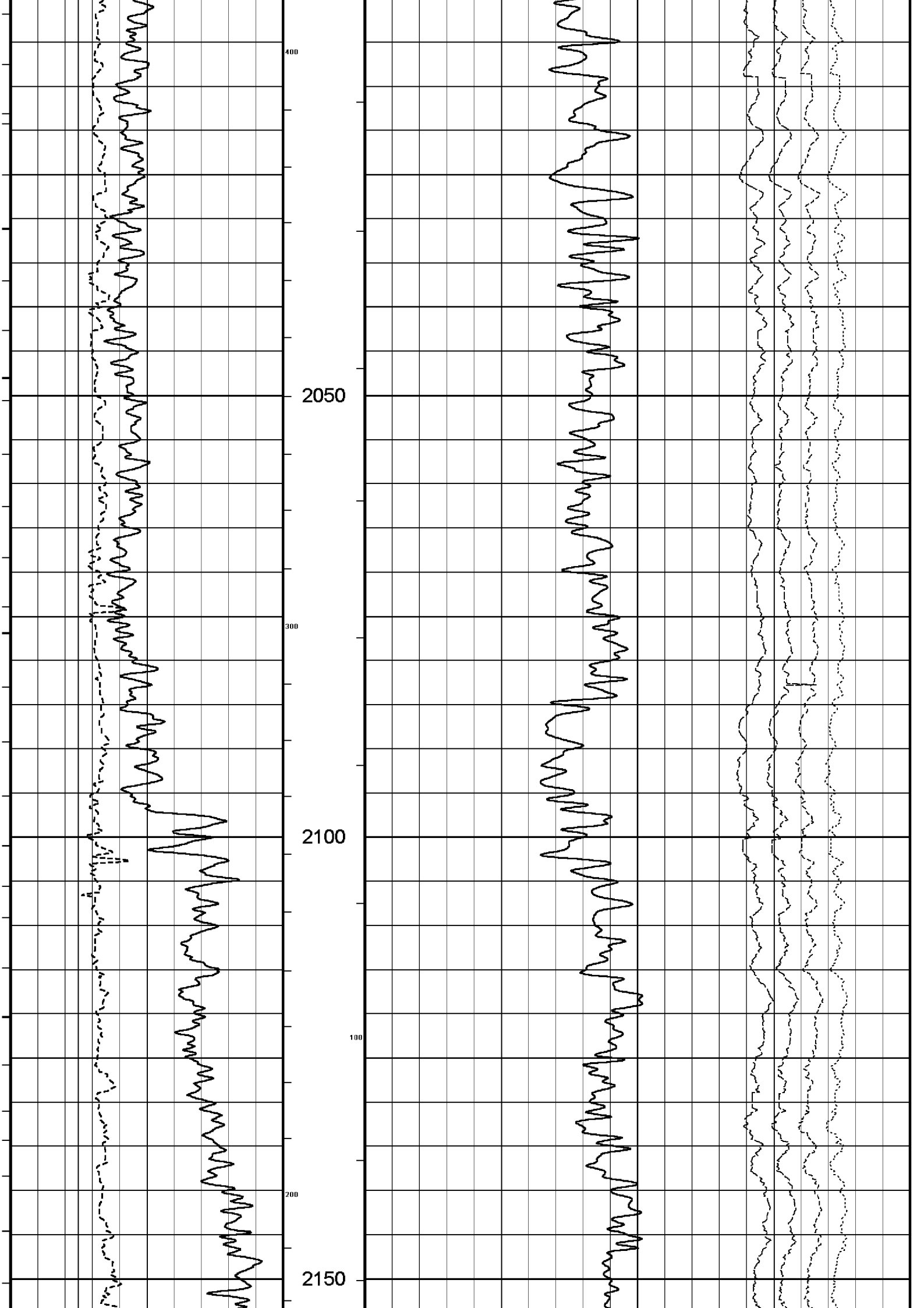
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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

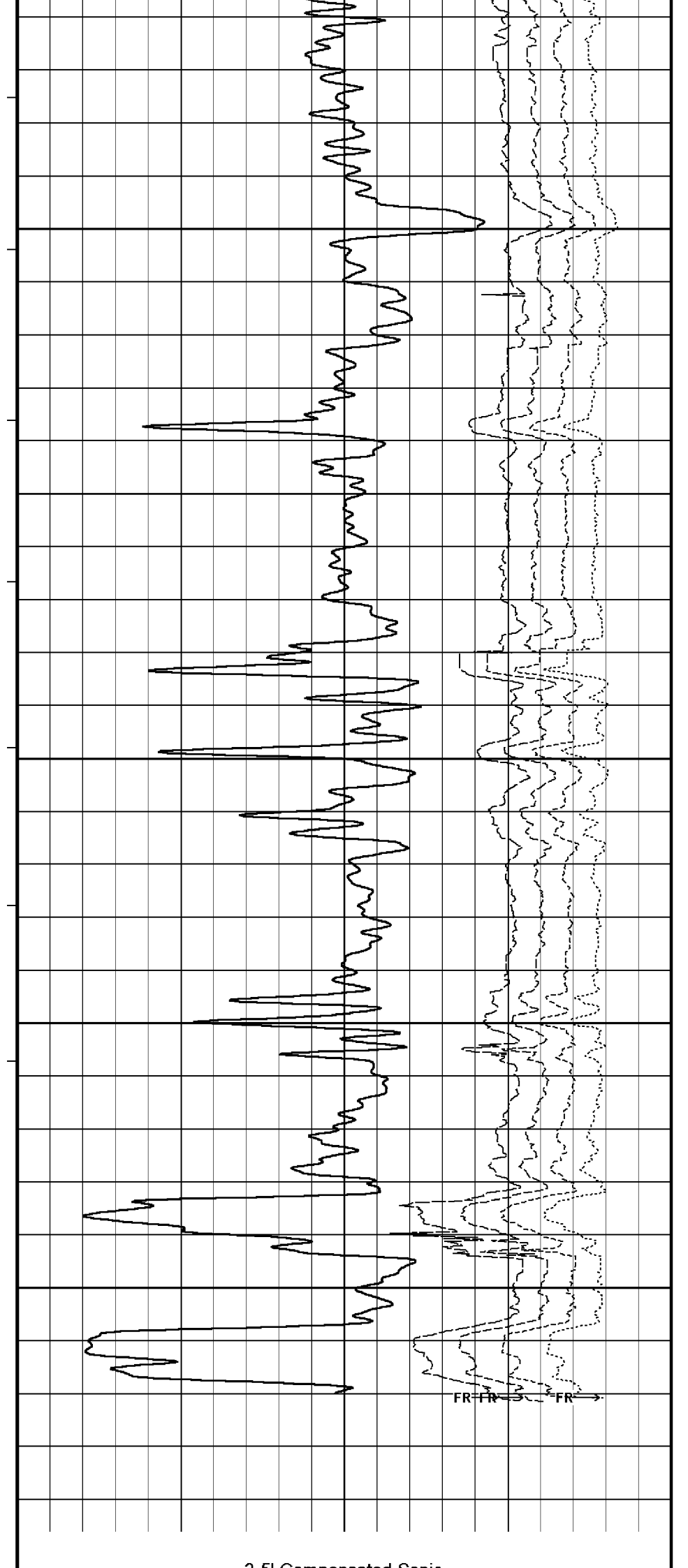
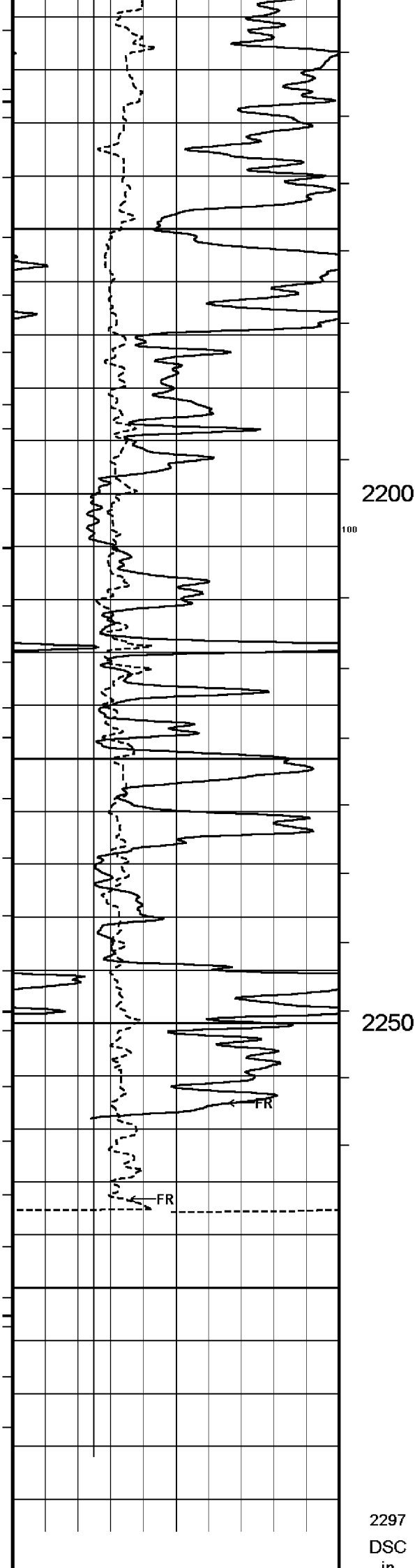


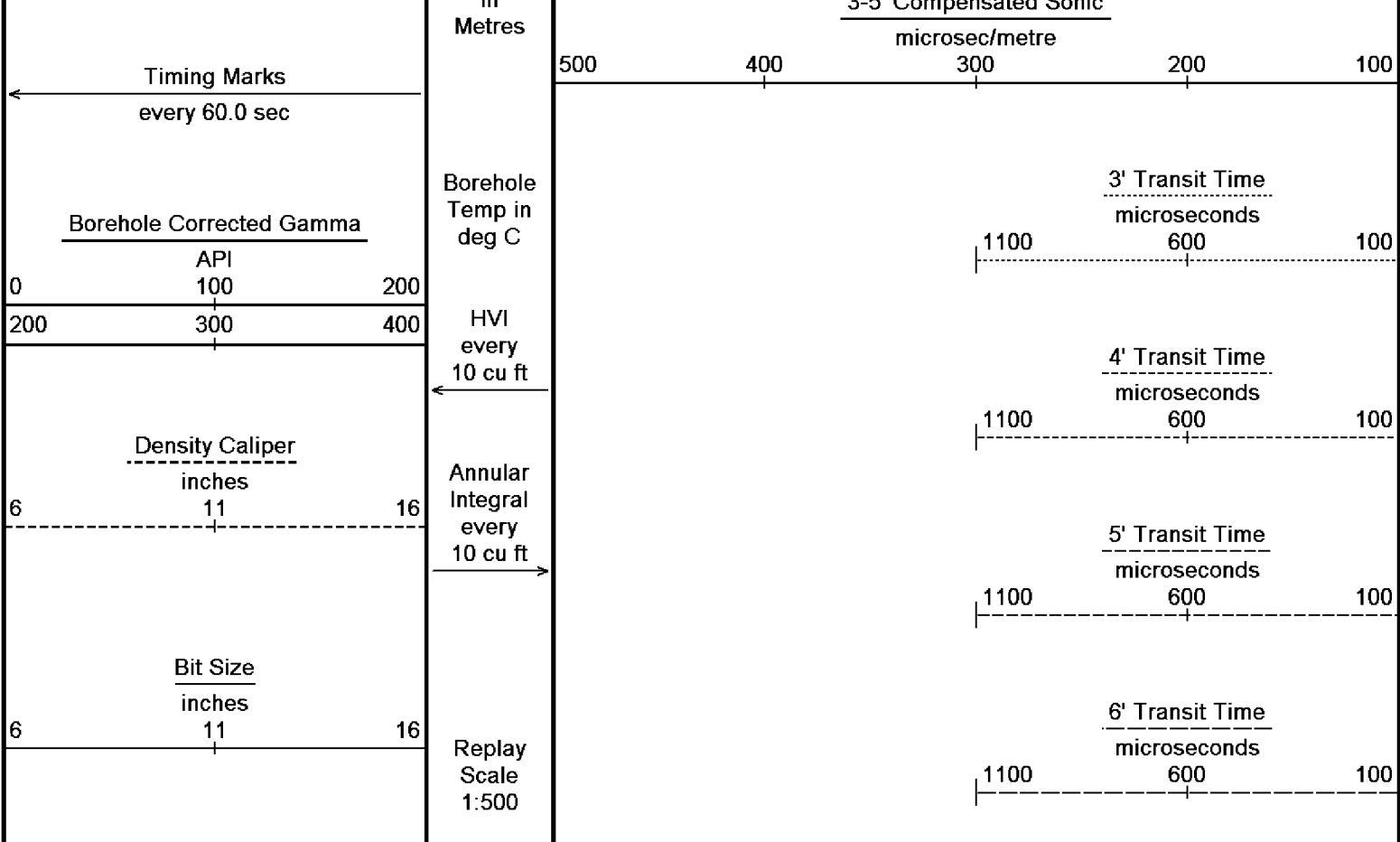












Depth Based Data - Maximum Sampling Increment 10.0cm  
Plotted on 09-NOV-2005 04:04  
Filename: C:\logs\BMA\_A1A\BMA\_A1A\_TC\_200.dta  
Recorded on 08-NOV-2005 21:51  
System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 17-JUN-2004:

BEFORE SURVEY CALIBRATION

C:\logs\BMA\_A1A\BMA\_A1A\_TC\_200.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

#### Caliper Calibration MPD 083

Base Calibration on 28-OCT-2005 18:13  
Field Calibration on 7-NOV-2005 03:20

##### Base Calibration

Reading No	Measured	Calibrator Size (in)
1	13616	4.01
2	21847	5.99
3	30336	7.98
4	38762	9.94
5	47872	12.01
6	N/A	N/A

##### Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.94	7.98

#### Sonic Constants MSS 066

Maximum Boundary Contrast	100.00	micro-sec/ft
Fluid Transit Time	189.00	micro-sec/ft
Limestone Transit Time	47.50	micro-sec/ft
Sandstone Transit Time	55.50	micro-sec/ft
Dolomite Transit Time	43.50	micro-sec/ft
Sonic used for Porosities	3-5' Compensated Sonic	
Correction for Sonde Skew	Applied	
Cycle Stretch Algorithm	Applied	
MN3FT	N/A	micro-sec
MX3FT	N/A	micro-sec

##### Fixed Gate Parameters

Start Time (micro-sec)	End Time (micro-sec)	Discriminator (mV)	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

##### Down Hole Fixed Gate Parameters

Gate Start	N/A	micro-sec
Gate Width	N/A	micro-sec
Initial Discriminator Level	0.0000	mVolts

##### Full Waveform Parameters

Use 3' Waveform to derive TR	No	
Use 4' Waveform to derive TR	No	
Use 5' Waveform to derive TR	No	
Use 6' Waveform to derive TR	No	
3' Waveform Discriminator Level	0.45	mV
4' Waveform Discriminator Level	0.45	mV
5' Waveform Discriminator Level	0.35	mV
6' Waveform Discriminator Level	0.35	mV
3' Waveform Filter	None	
4' Waveform Filter	None	
5' Waveform Filter	None	
6' Waveform Filter	None	
Semblance Level	0.50	
Semblance Window Width	120.00	micro-sec
Sonic 1 Despiker	100.00	micro-sec/ft
Sonic 2 Despiker	100.00	micro-sec/ft

#### DOWNHOLE EQUIPMENT

C:\logs\BMA\_A1A\BMA\_A1A\_TC\_200.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

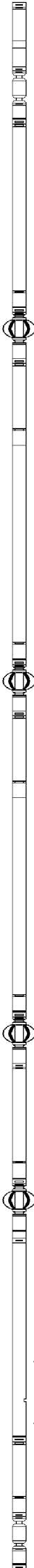
MBE21 - THIRD BRIDLE  
MLK 111    Length: 3.76 m    Weight: 30.9 lb

Compact Inline Standoff B  
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: 1.37 m    Weight: 30.9 lb

Compact Knuckle Joint  
SKJ 45    Length: 0.66 m    Weight: 24.3 lb



32.63 m    GGCE - Borehole Corrected Gamma  
31.75 m    CGXT - MCG External Temperature

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

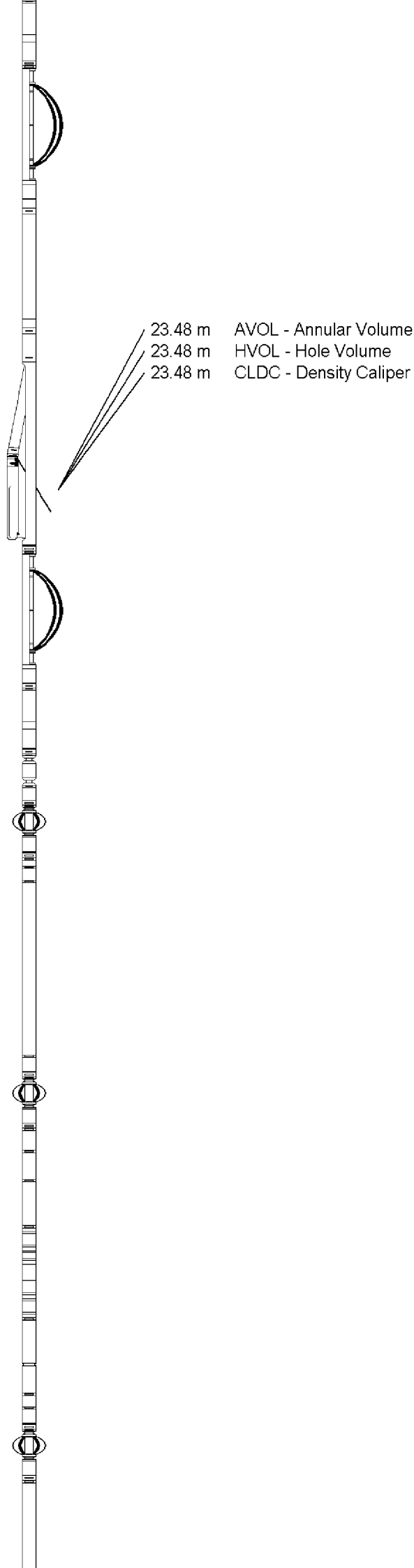
Compact Upper Guard Sub.  
MUG 30    Length: 2.74 m    Weight: 68.3 lb

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

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: 54.43 m Weight: 1201.5 lb



4.60 m TR21 - 3' Transit Time  
4.60 m TR12 - 6' Transit Time  
4.60 m TR22 - 5' Transit Time  
4.60 m TR11 - 4' Transit Time

4.60 m DT35 - 3-5' Compensated Sonic

Tool Zero (0.44m from bottom)

All measurements relative to tool zero.

COMPANY	ESSO AUSTRALIA PTY LTD
WELL	BREAM A1A
FIELD	BREAM
PROVINCE/COUNTY	BASS STRAIT
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing	metres	First Reading	2285.60	metres
Elevation Drill Floor	32.82 metres	Depth Driller	2294.00	metres
Elevation Ground Level	-59.40 metres	Depth Logger	2291.00	metres



COMPENSATED SONIC  
1:500 MD