PRECISION ENERGY SERVICES

Compact

COMPENSATED SONIC
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

API Number
Permit Number

Other Services
DUAL LATEROLOG
PHOTO DENSITY
COMPENSATED NEUTRON

Permanent Datum MSL , Elevation 0.0 metres
Log Measured From RT @ 32.82 M above Permanent Datum
Drilling Measured From RT

Elevations:
KB metres
DF 32.82 metres
GL -59.40 metres

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

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 30-NOV-2005 21:52
Filename: C:\logs\BMA_A19A\FIELD DATA\BMA_A19A_MSS.dta — Recorded on 30-NOV-2005 14:16
System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 17-JUN-2004:

Timing Marks
every 60.0 sec

Borehole Corrected Gamma
API
0 100 200
200 300 400

Density Caliper
inches
6 11 16

Bit Size
inches
6 11 16

TVD / DSC in Metres

Borehole Temp in deg C

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:500

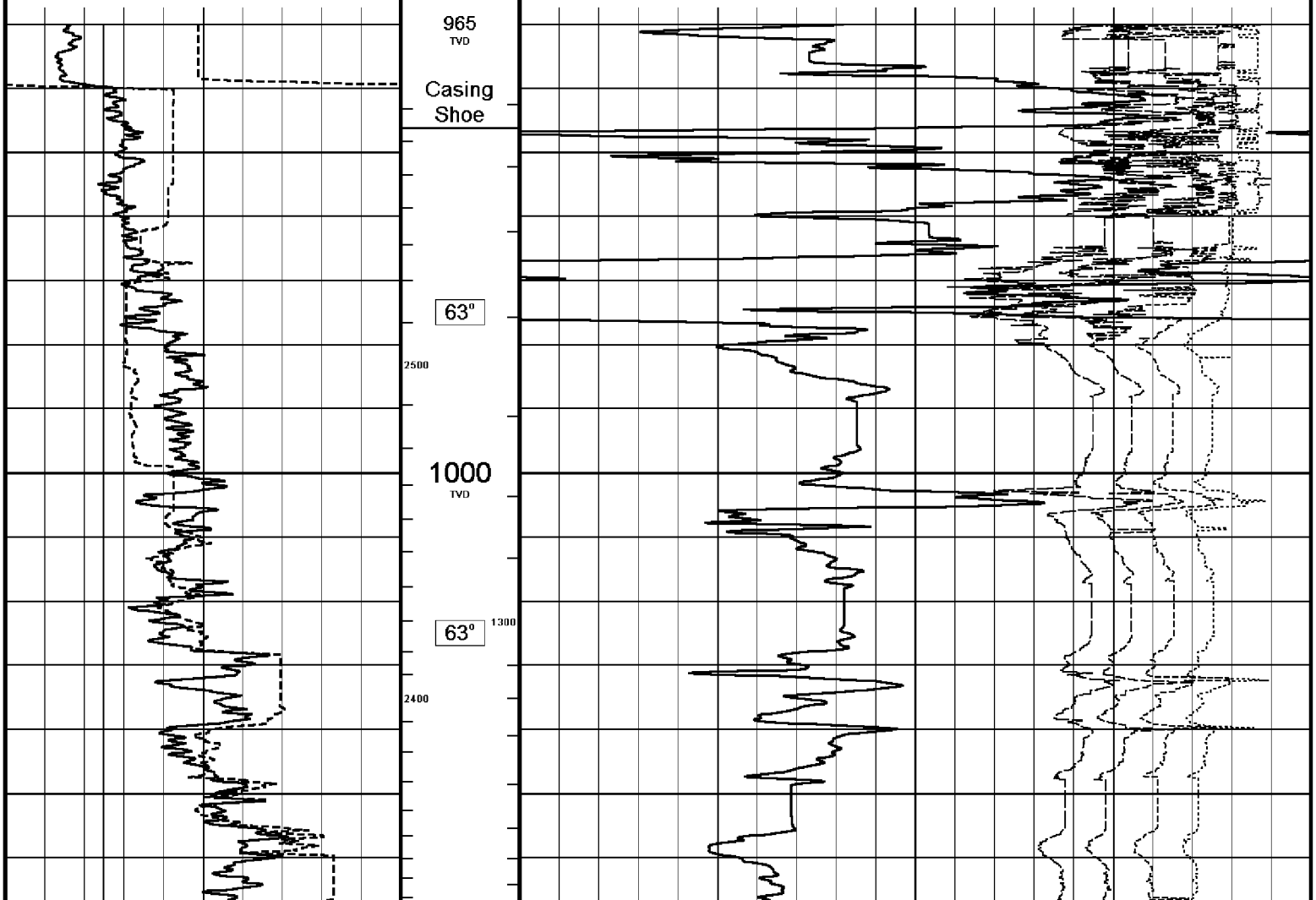
3-5' Compensated Sonic
microsec/metre
500 400 300 200 100

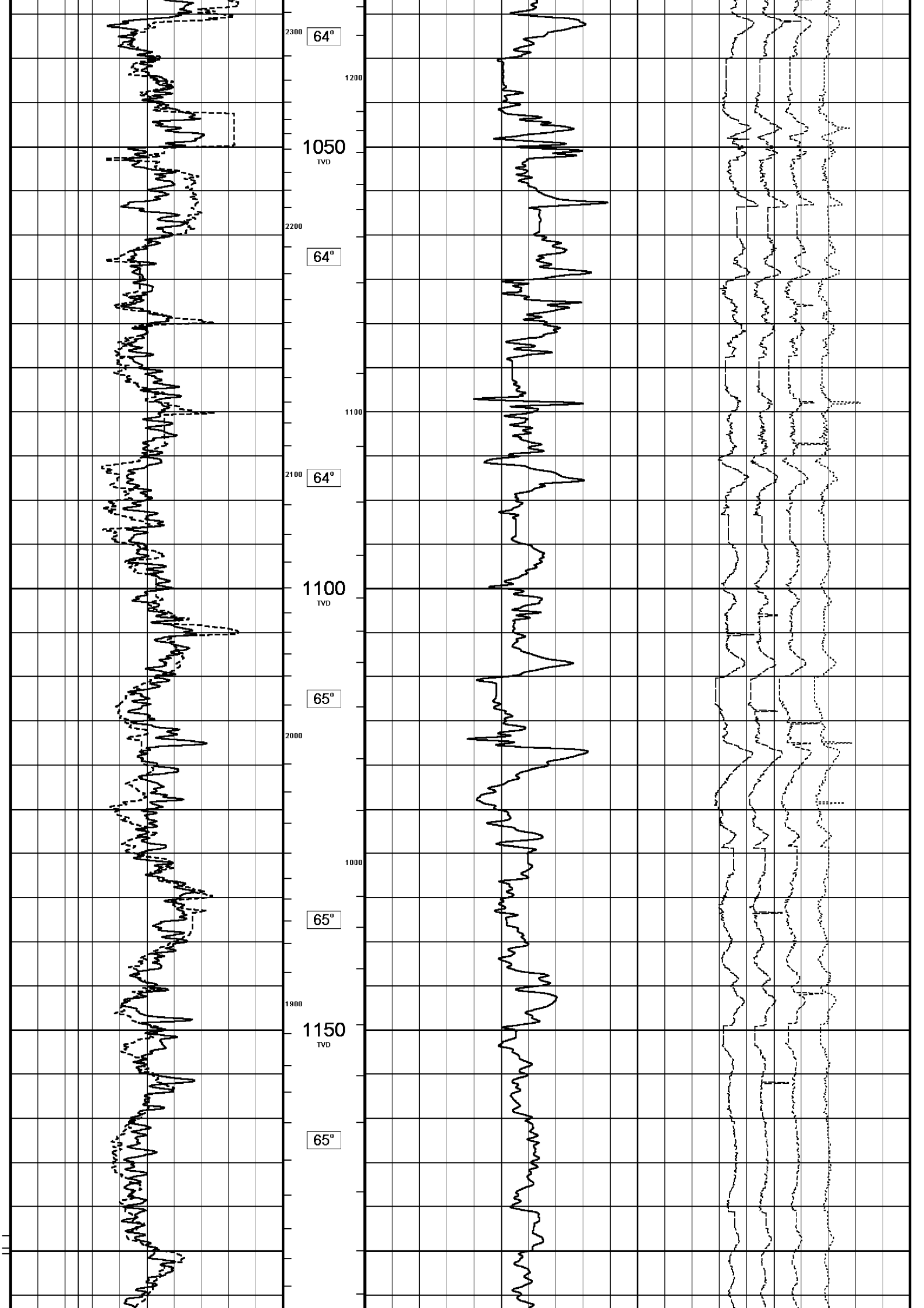
3' Transit Time
microseconds
1100 600 100

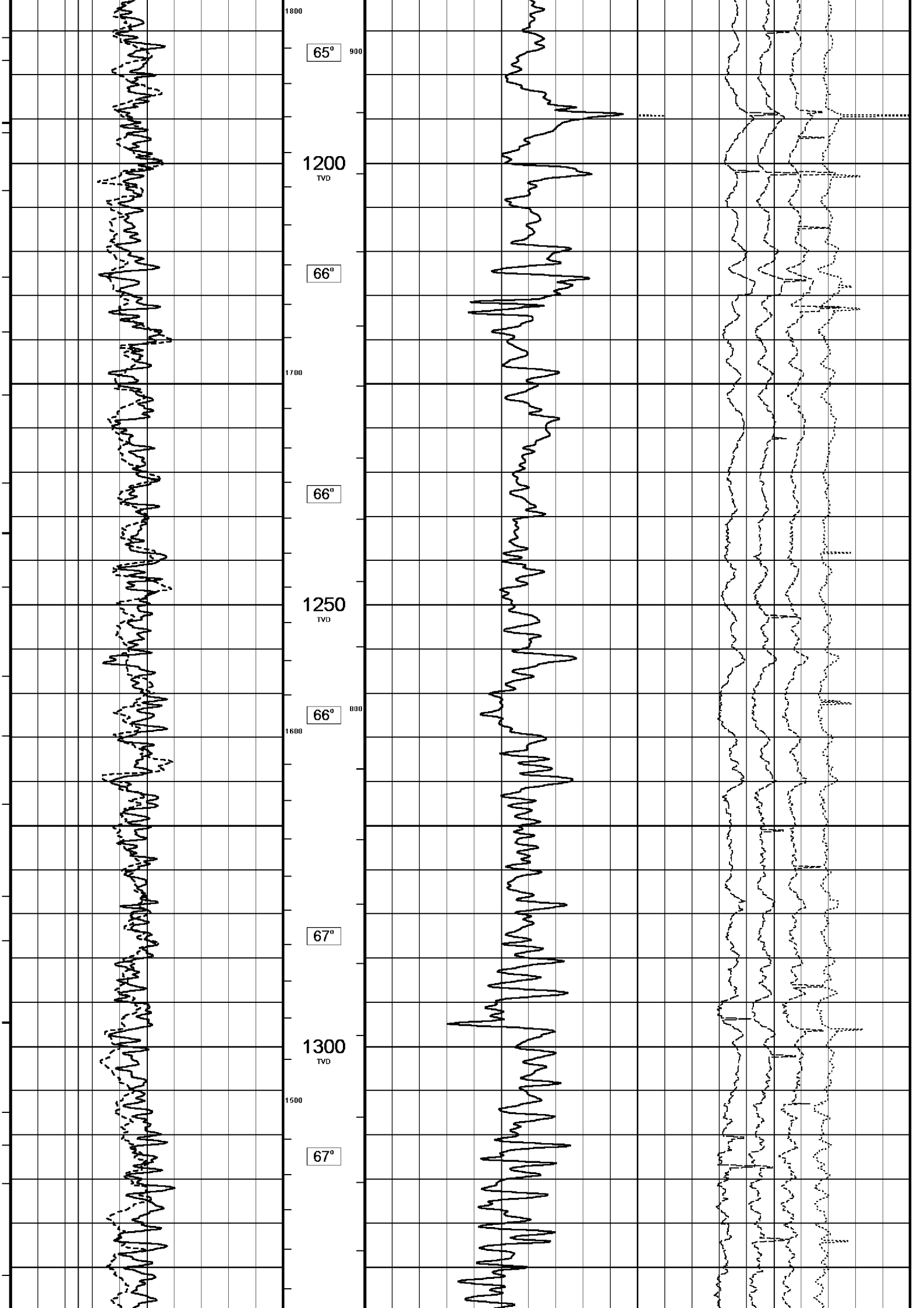
4' Transit Time
microseconds
1100 600 100

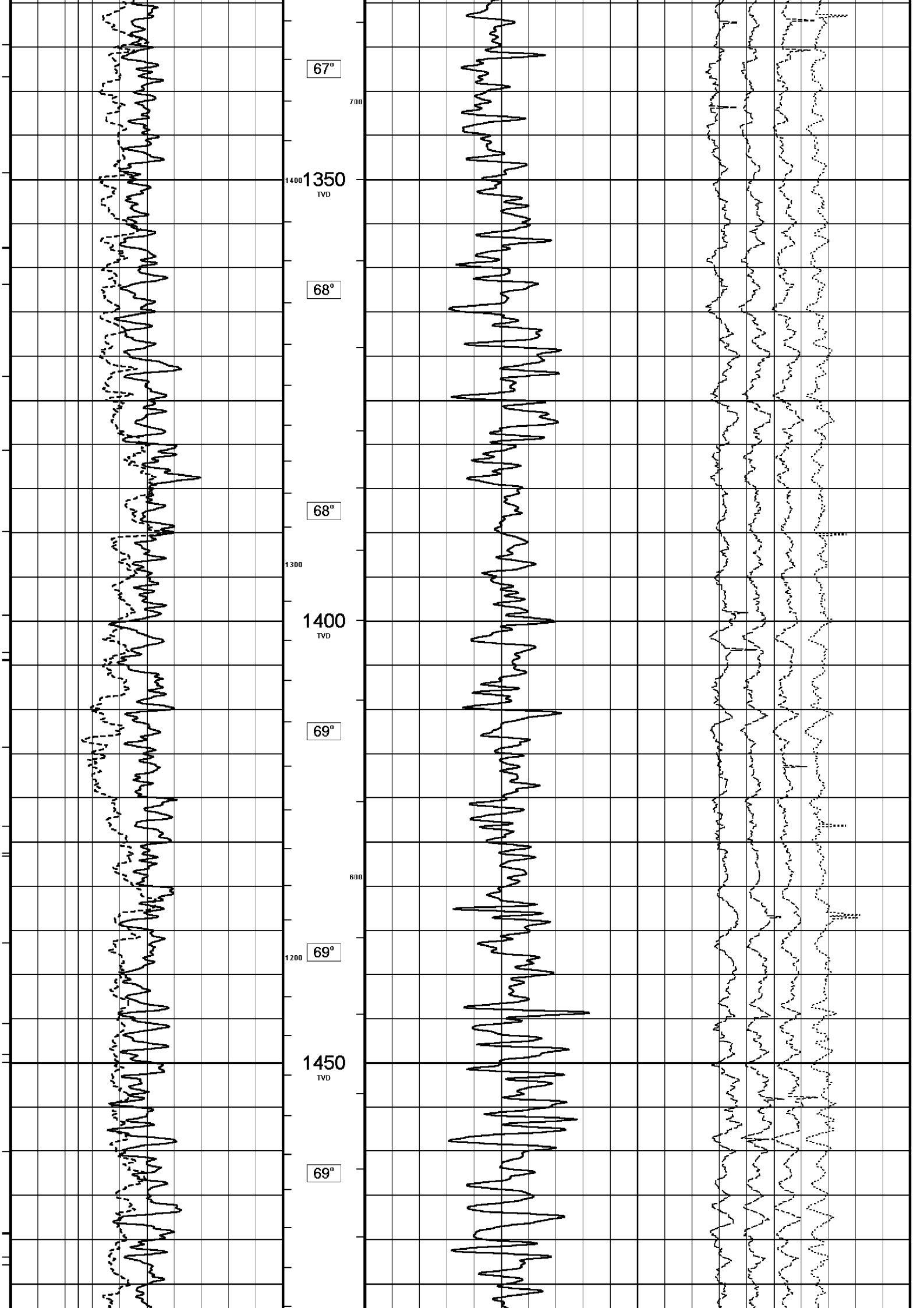
5' Transit Time
microseconds
1100 600 100

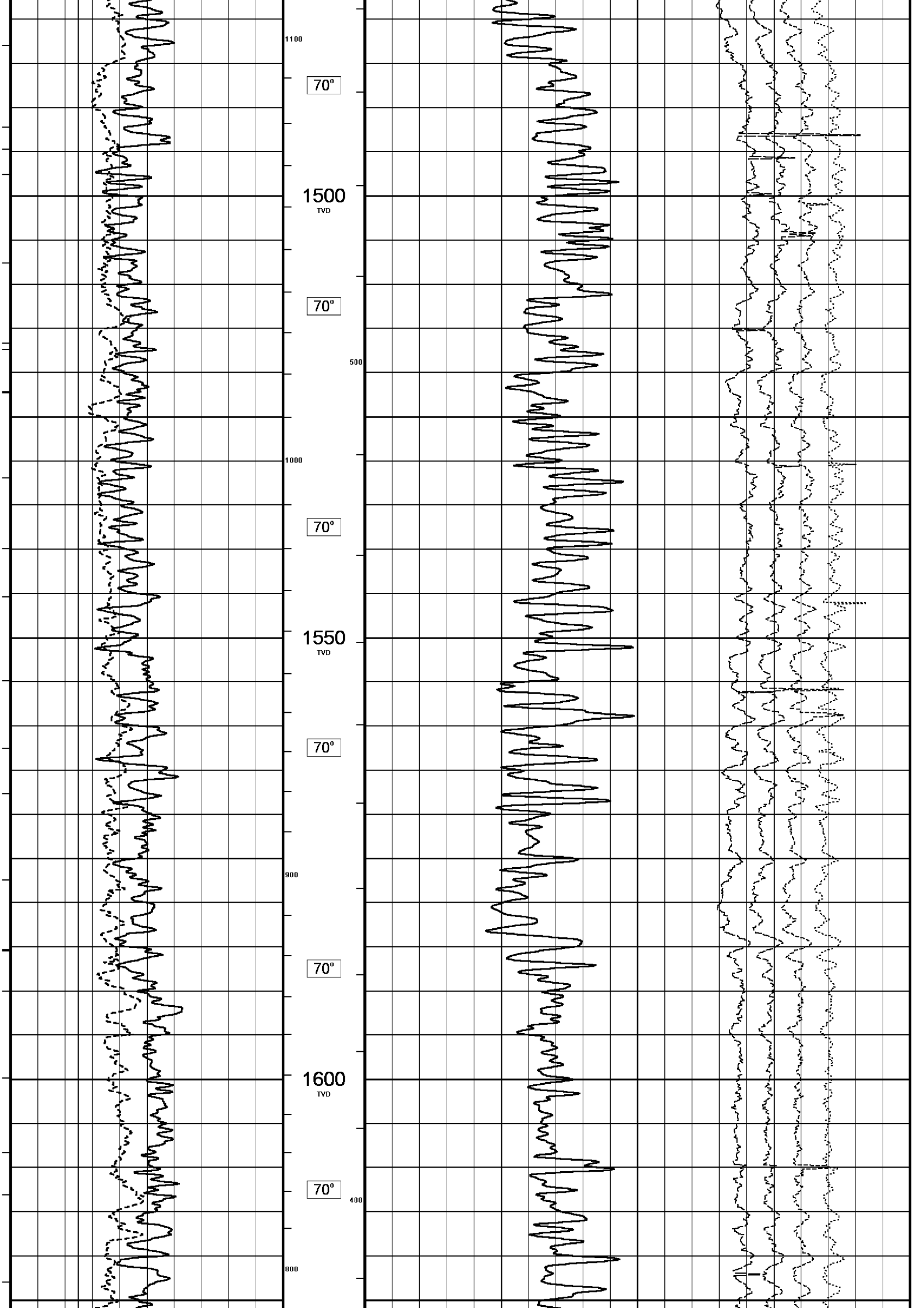
6' Transit Time
microseconds
1100 600 100

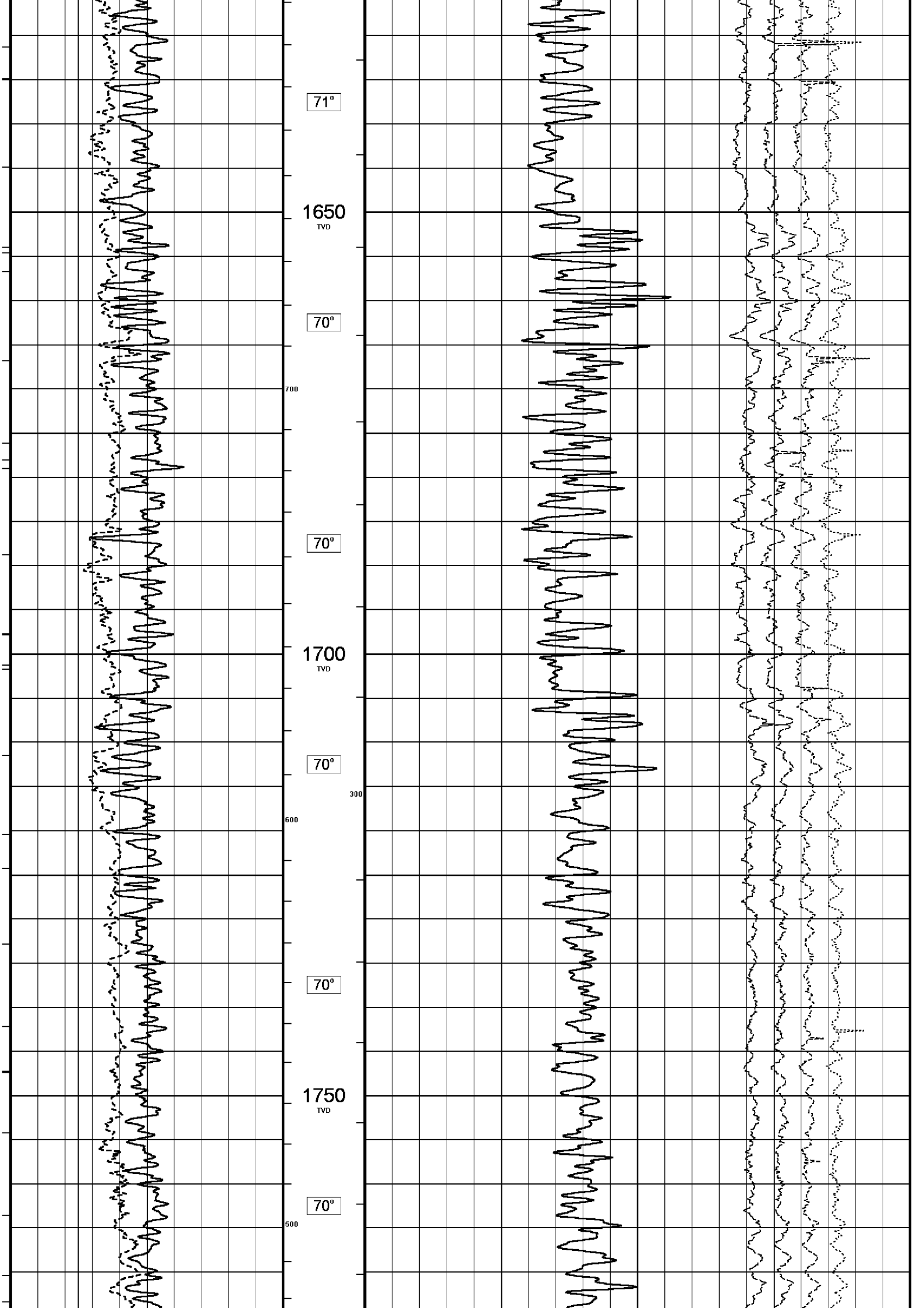


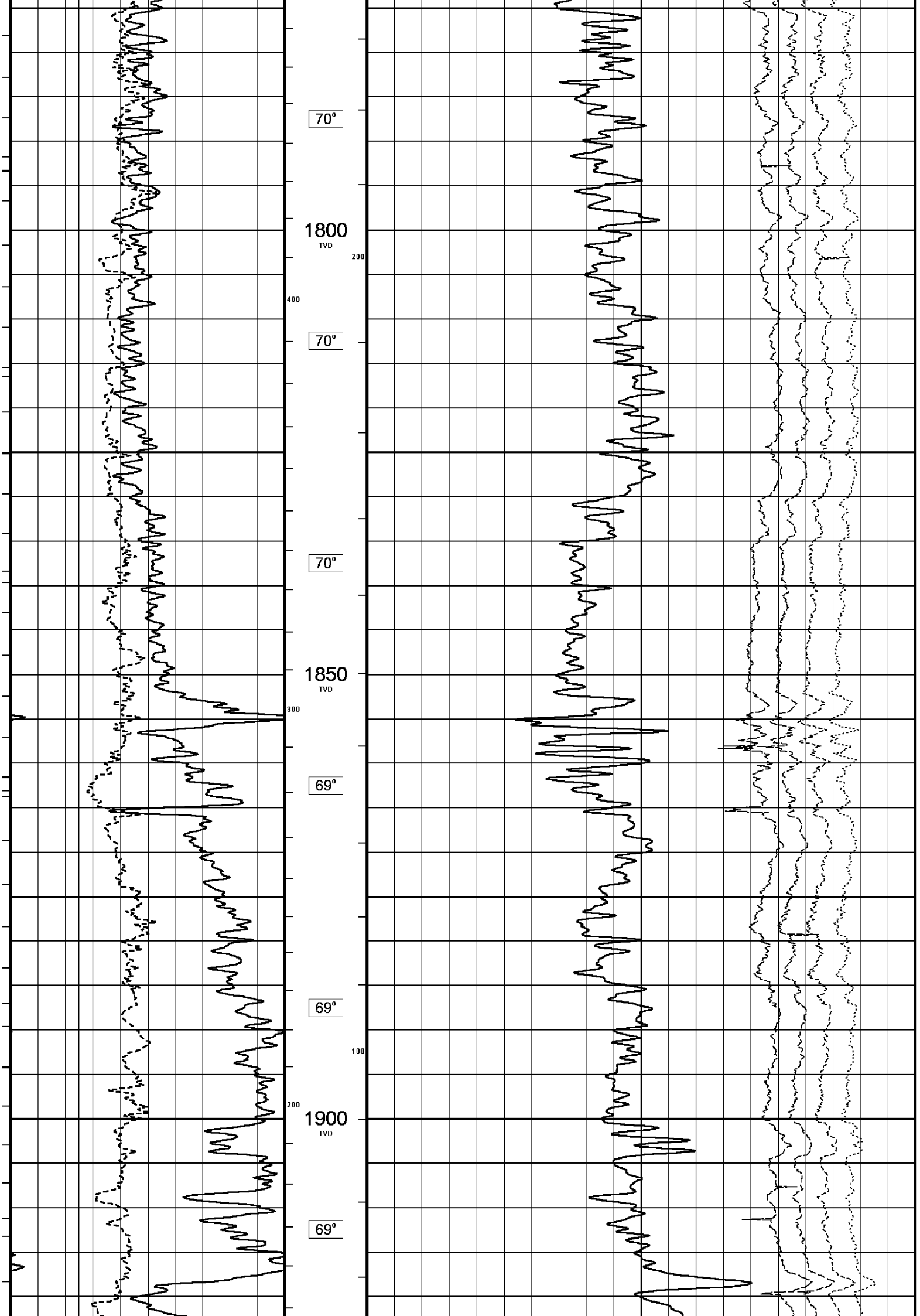

2300
64°
1200
1050
TVD
2200
64°
1100
2100
64°
1100
TVD
65°
2000
1000
65°
1900
1150
TVD
65°

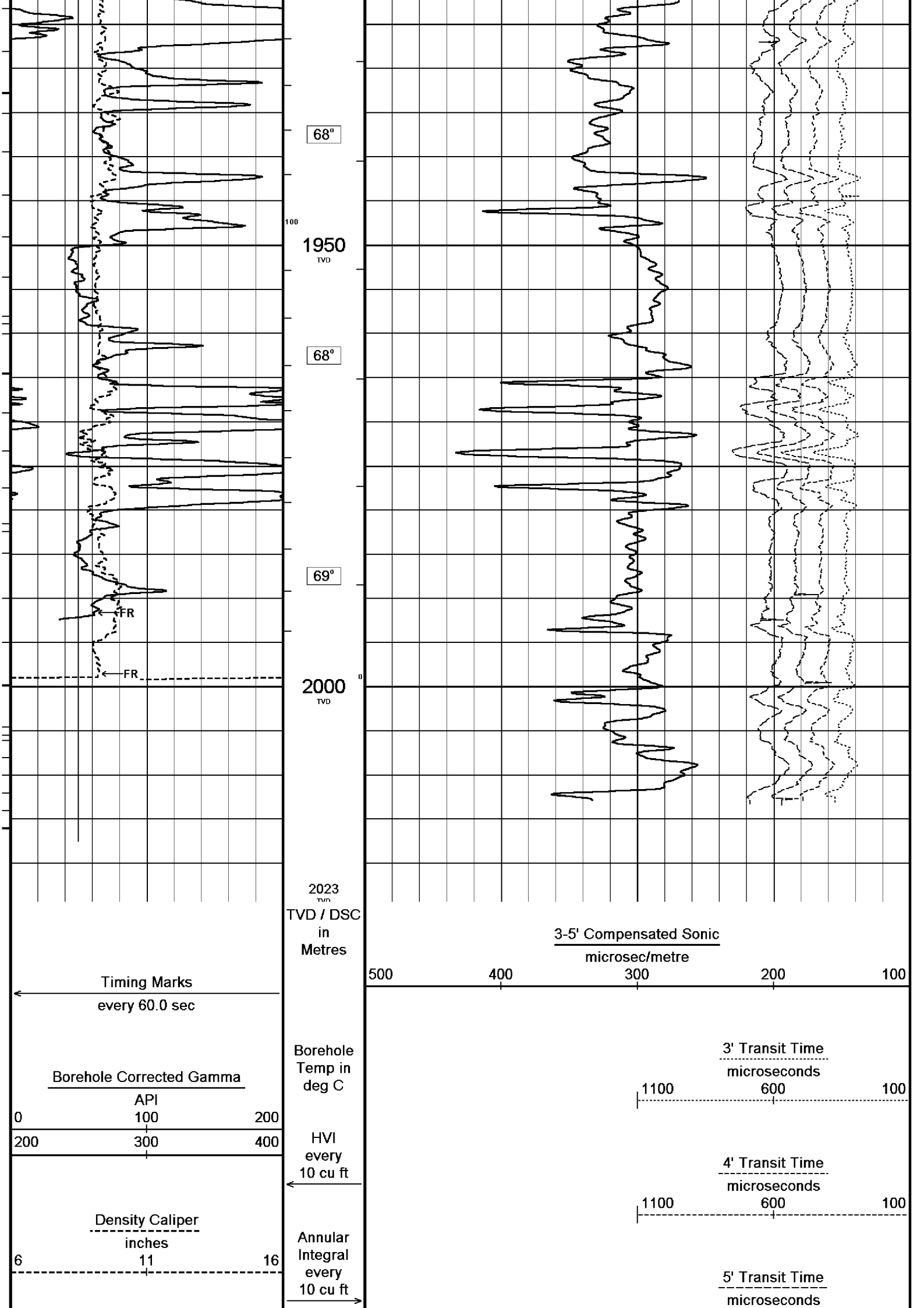

1800
65°
900
1200
TVD
66°
1700
66°
1250
TVD
66°
800
1600
67°
1300
TVD
1500
67°


67°
1400
1350
TVD
700
68°
68°
1300
1400
TVD
69°
600
1200
69°
1450
TVD
69°


1100
70°
1500
TVD
70°
500
1000
70°
1550
TVD
70°
900
70°
1600
TVD
70°
400
800


71°
1650
TVD
70°
700
70°
1700
TVD
70°
300
600
70°
1750
TVD
70°
500


70°
1800
TVD
200
400
70°
70°
1850
TVD
300
69°
69°
100
200
1900
TVD
69°


68°
100
1950
TVD
68°
69°
FR
FR
2000
TVD
0
2023
TVD
TVD / DSC
in
Metres
3-5' Compensated Sonic
microsec/metre
500
400
300
200
100
Timing Marks
every 60.0 sec
Borehole
Temp in
deg C
3' Transit Time
microseconds
1100
600
100
Borehole Corrected Gamma
API
0
100
200
200
300
400
HVI
every
10 cu ft
4' Transit Time
microseconds
1100
600
100
Density Caliper
inches
6
11
16
Annular
Integral
every
10 cu ft
5' Transit Time
microseconds

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 30-NOV-2005 21:52
Filename: C:\logs\BMA_A19A\FIELD DATA\BMA_A19A_MSS.dta — Recorded on 30-NOV-2005 14:16
System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 17-JUN-2004:

MAIN LOG 1:200

BEFORE SURVEY CALIBRATION

C:\logs\BMA_A19A\FIELD DATA\BMA_A19A_TIME_LOG14.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	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_A19A\FIELD DATA\BMA_A19A_TIME_LOG14.dta

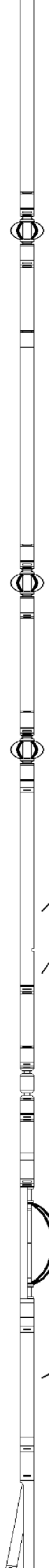
Compact Swivel Head Adaptor F
SHA 71 Length: 0.83 m Weight: 26.5 lb

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

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: 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

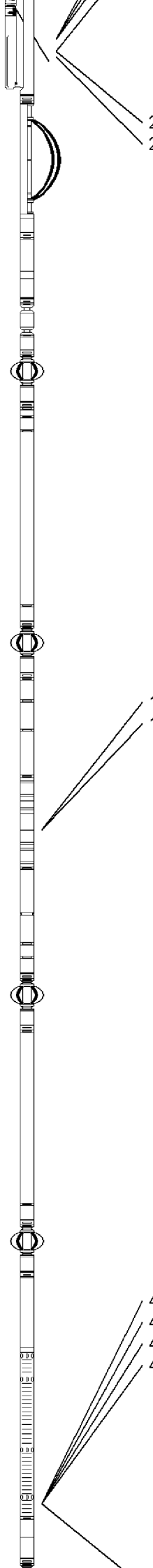
Compact Inline Bowspring A
MIS 94 Length: 1.74 m Weight: 33.1 lb

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

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 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

13.35 m DDLL - Deep Laterolog
13.35 m DSLL - Shallow 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

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

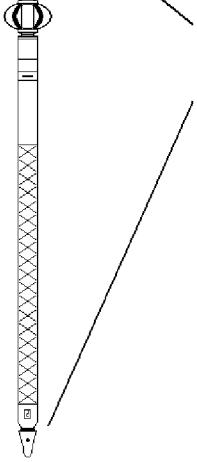
Compact Inline Standoff B

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



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 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

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1:500 TVD