



DUAL LATEROLOG - GR
DENSITY - NEUTRON

1:500 MD

Compact

COMPANY ESSO AUSTRALIA PTY LTD

WELL BREAM A9B

FIELD BREAM

PROVINCE/COUNTY BASS STRAIT

COUNTRY/STATE AUSTRALIA

LOCATION 38DEG 29' 58.800"S 147DEG 46' 20.685"E

5738460.920 N 567353.500 E **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

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

Date 05-MAR-2006

Run Number ONE metres

Depth Driller 2283.00 metres

Depth Logger 2280.00 metres

First Reading 2273.00 metres

Last Reading 1756.00 metres

Casing Driller 1756.00 metres

Casing Logger 1756.00 metres

Bit Size 8.50 inches

Hole Fluid Type KCL/GYL/POLY

Density / Viscosity 10.00 lb/USg 75.00 CP

PH / Fluid Loss 8.90 2.80

Sample Source FLOWLINE

Rm @ Measured Temp 0.095 @ 25.0 ohm-m

Rmf @ Measured Temp 0.072 @ 25.0 ohm-m

Rmc @ Measured Temp 0.099 @ 25.0 ohm-m

Source Rmf / Rmc PRESS PRESS

Rm @ BHT 0.043 @ 82.4 ohm-m

Time Since Circulation 0.5 HRS

Max Recorded Temp 82.40 deg C

Equipment Name 5" CWS/CML

Equipment / Base 1 SALE

Recorded By R. TENCH, B. MOSS

Witnessed By TREVOR LOBO

CIRC STOPPED 22:00 4/03

BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	1756.00	2283.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	13.375	0.00	797.00	54.50
K-55	9.625	797.00	1756.00	47.00

REMARKS

RIG: NABORS 453

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

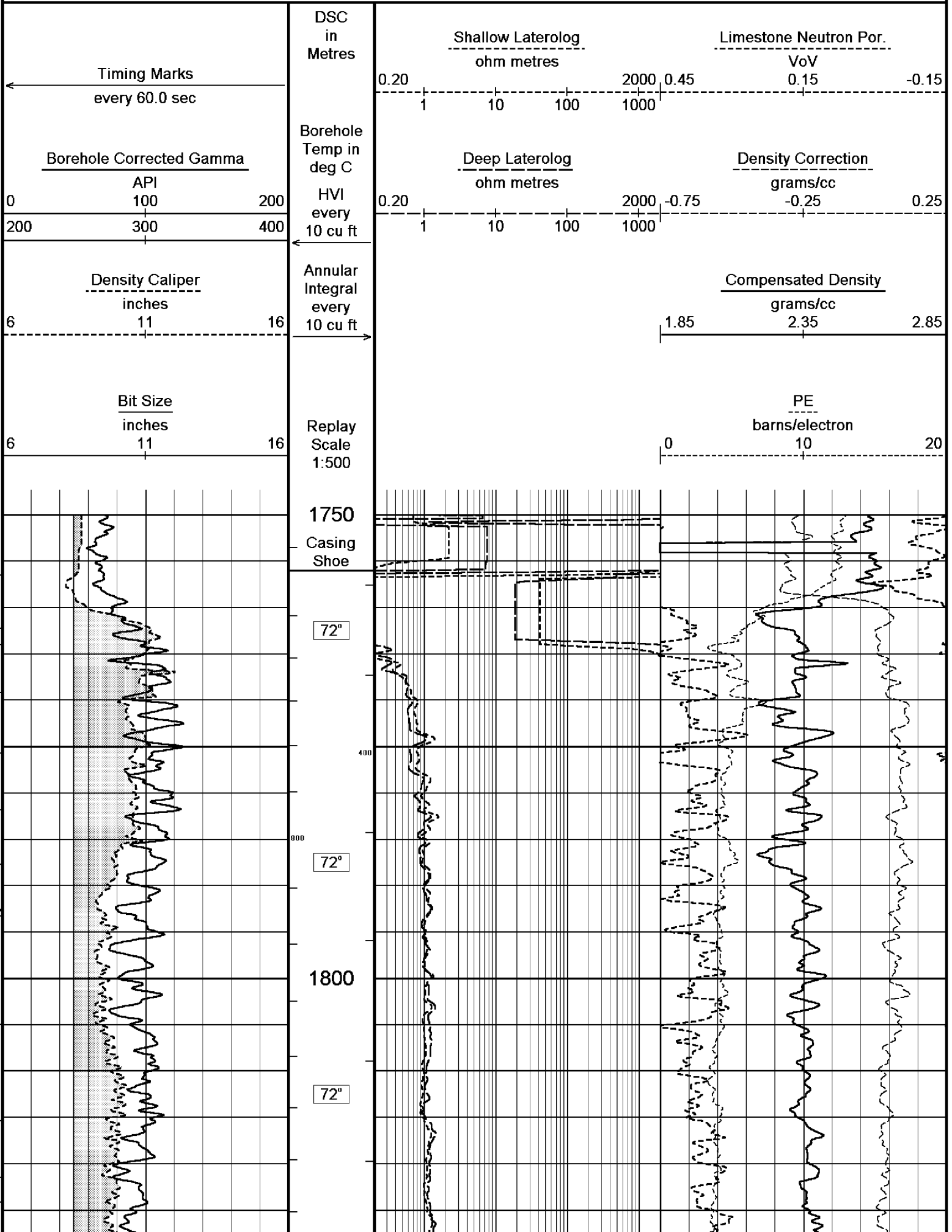
FIELD FINAL LOGS TO BE CORRELATED TO ANADRILL GAMMA LOG.

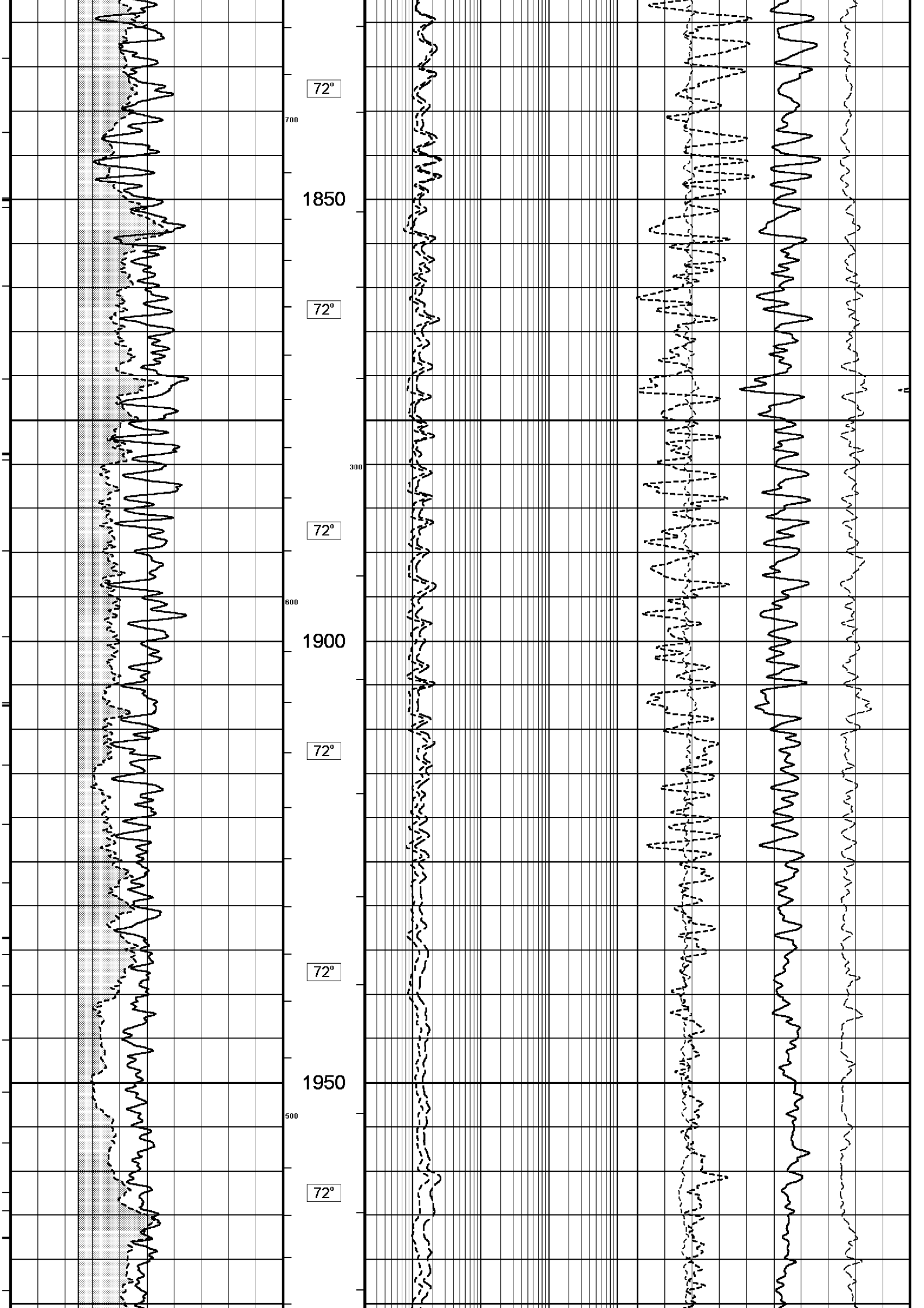
MAX. TEMPERATURE: 82.4 DEG C AT 2226.5 m MD
MAX. INCLINATION: 47.9 DEG AT 1750 m MD
MAX. DOGLEG SERVERITY: 6.15 DEG/30m AT 1802.19 m MD
DEPLOYMENT ANGLE: 33.7 DEG

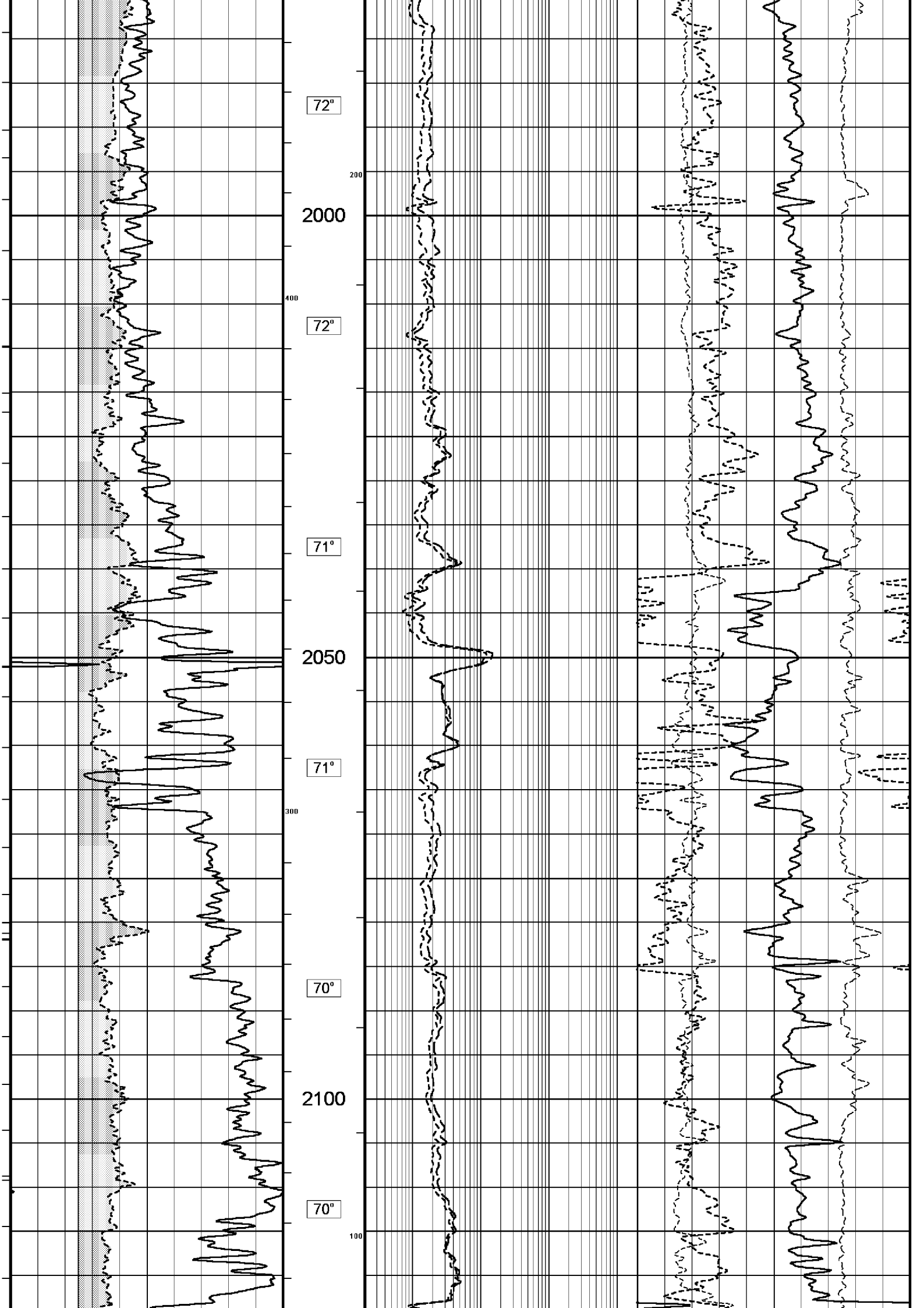
HVOL: 850 FT^3
AVOL: 415 FT^3

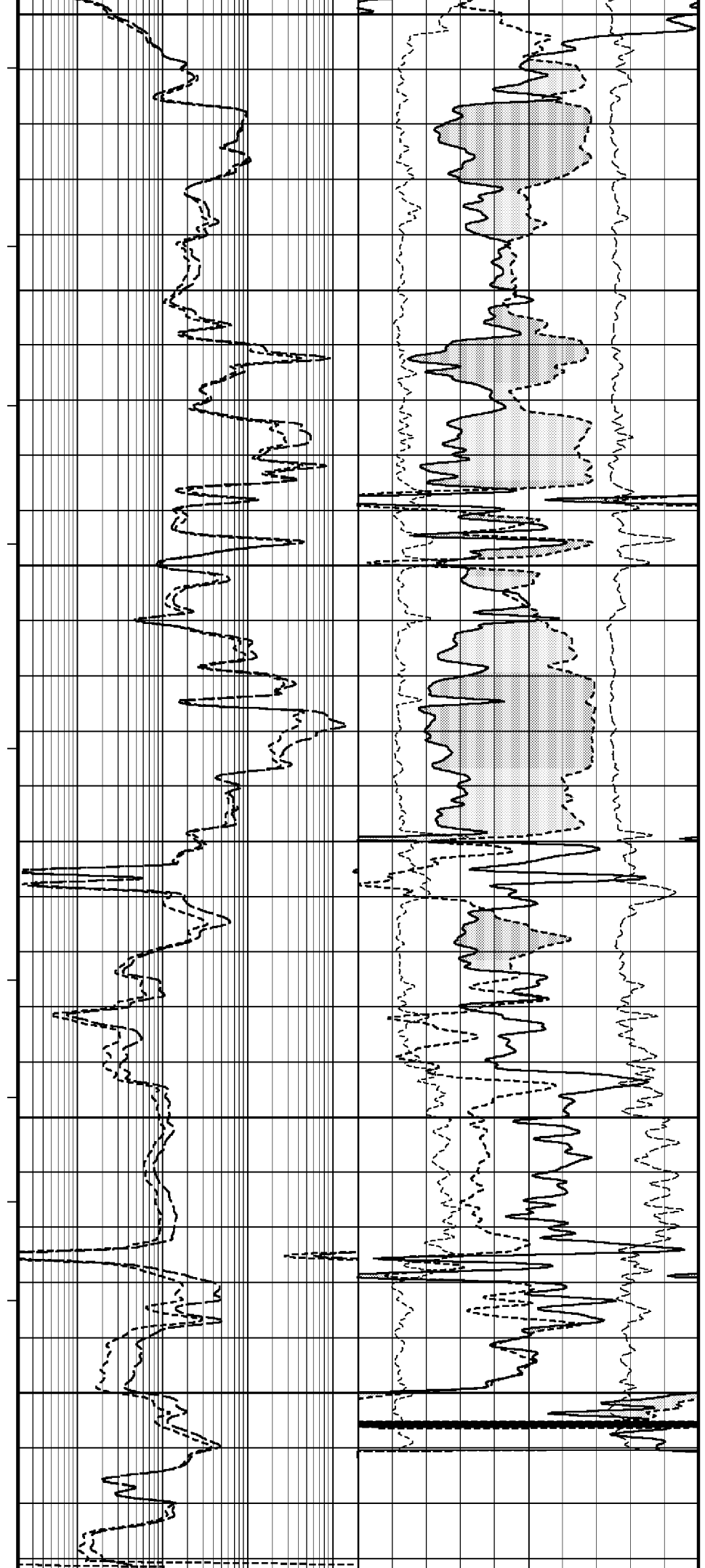
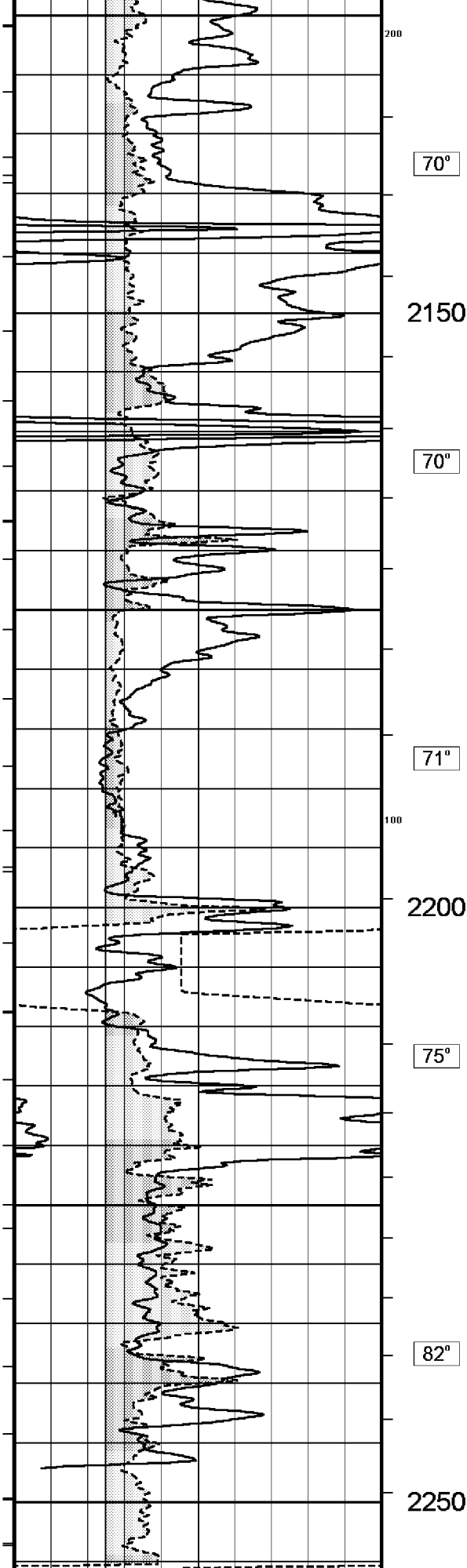
LOGGING SPEED 6M/MIN FROM TD TO 1937.52
LOGGING SPEED 12M/MIN FROM 1937.52 TO 1735.6

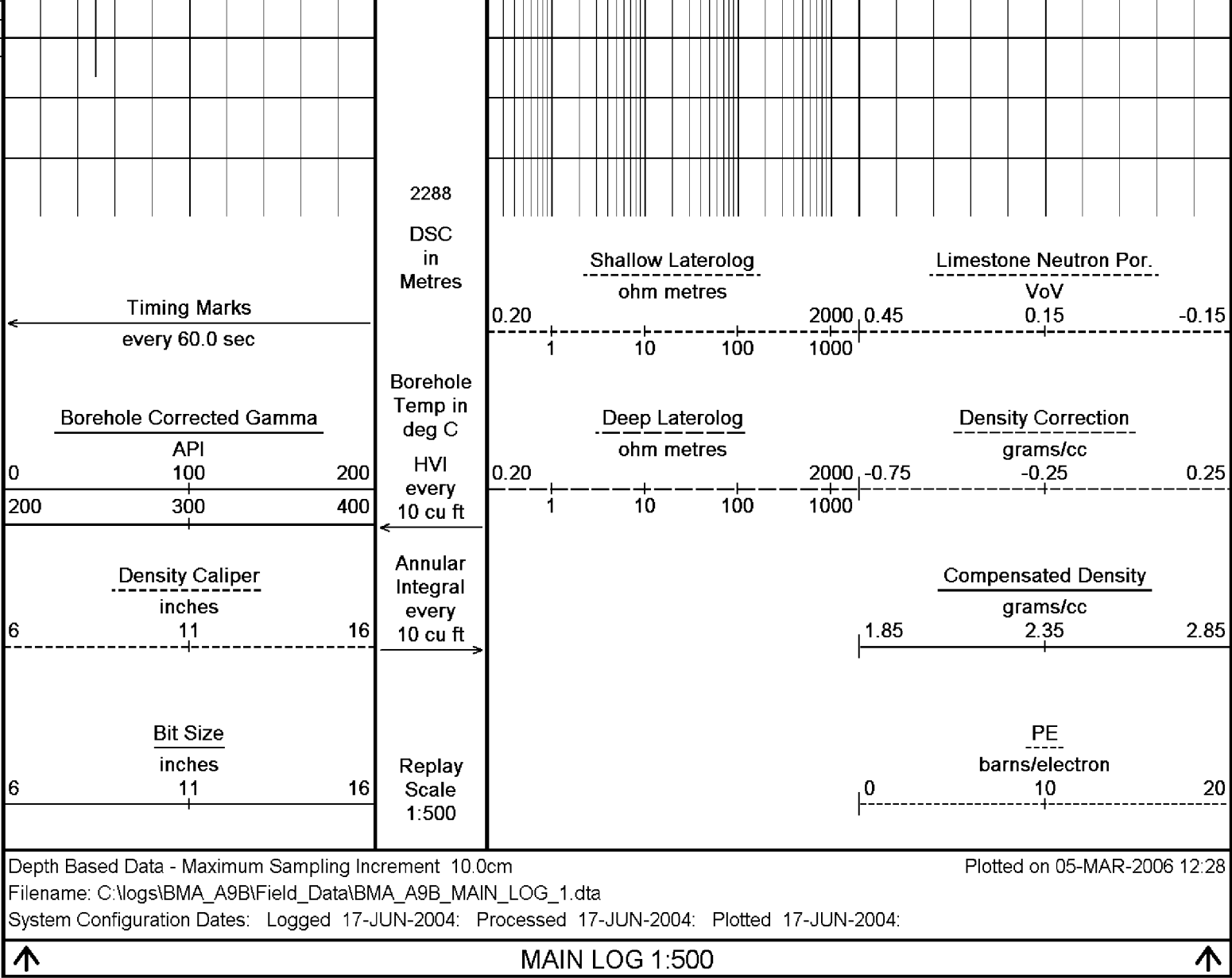
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or











BEFORE SURVEY CALIBRATION				C:\logs\BMA_A9B\Field_Data\DSC3.dta	
General Constants All 000					
General Parameters					
Mud Resistivity	0.108	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 3-MAR-2006,18:44	
	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 3-MAR-2006 18:49

	Measured	Calibrated (API)
Background	9	6
Calibrator (Gross)	1351	915
Calibrator (Net)	1342	909

Gamma Constants MCG 142

Gamma Calibrator Number	060	
Mud Density	1.20	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Centred	
Concentration of KCl	0.00	kppm

Neutron Calibration MDN 085

Base Calibration on 26-FEB-2006 12:49

Field Check on 3-MAR-2006 19:08

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3227	100	3714	110
Ratio	32.429		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	1596	2305
Ratio	0.693	

Field Check

	Calibrated (cps)	
	1618	2365
Ratio	0.684	

Neutron Constants MDN 085

Neutron Source Id	NSN-E-739	
Neutron Jig Number	052	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.20	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	52.00	kppm
Formation Fluid Salinity Source	None	
Formation Fluid Salinity	N/A	kppm
Barite Mud Correction	Not Applied	

Caliper Calibration MPD 083

Base Calibration on 26-FEB-2006 16:04

Field Calibration on 3-MAR-2006 19:00

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	14260	4.01
2	22438	5.99
3	30914	7.98
4	39296	9.94
5	48592	12.01
6	N/A	N/A

Field Calibration

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

Photo Density Calibration MPD 083

Base Calibration on 25-FEB-2006 16:41

Field Check on 3-MAR-2006 19:04

Density Calibration

	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	55488	18799	53111	19310
Reference 2	26049	2473	24951	2530

Field Check at Base

943.9	1098.3
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Field Check

941.8 1097.2

PE Calibration

Base Calibration

Measured

Calibrated

WS

WH

Ratio

Ratio

Background

177

809

Reference 1

17358

55293

0.315

0.320

Reference 2

6860

25903

0.266

0.273

Field Check at Base

176.9

808.9

Field Check

177.4

806.5

Density Constants MPD 083

Density Source Id

NSD-L-242

Nylon Calibrator Number

DNC-D-536

Aluminium/Fe Calibrator Number

DAC-D-536

Density Shoe Profile

4 inch

Caliper Source for Processing

Density Caliper

PE Correction to Density

Not Applied

Mud Density

1.20

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

0.00

Laterolog Calibration MLE 031

Base Calibration on 25-FEB-2006 11:11

Field Check on 3-MAR-2006,18:52

Base Calibration

Measured

Calibrated (ohm-m)

Channel

Resistor 1

Resistor 2

Resistor 1

Resistor 2

Shallow

9.9

975.5

13.2

1321.0

Deep

9.9

975.6

7.5

755.0

Groningen

9.9

975.9

8.5

854.0

Channel

Base Check (ohm-m)

Field Check (ohm-m)

Shallow

48.5

48.5

Deep

27.7

27.7

Groningen

251.7

251.7

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

None

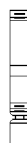
DOWNHOLE EQUIPMENT

C:\logs\BMA_A9B\Field_Data\DSC3.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: 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

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

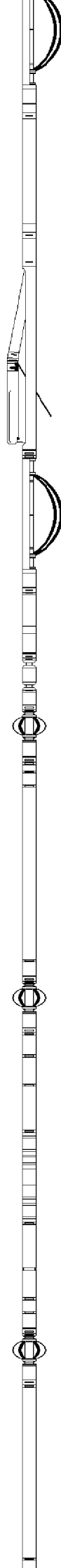
Compact Upper Guard Sub.
MUG 30 Length: 2.74 m Weight: 68.3 lb

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: 54.01 m Weight: 1201.5 lb



Tool Zero (0.44m from bottom)

All measurements relative to tool zero.

COMPANY	ESSO AUSTRALIA PTY LTD
WELL	BREAM A9B
FIELD	BREAM
PROVINCE/COUNTY	BASS STRAIT
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing	metres	First Reading	2273.00	metres
Elevation Drill Floor	32.82 metres	Depth Driller	2283.00	metres
Elevation Ground Level	59.40 metres	Depth Logger	2280.00	metres



DUAL LATEROLOG - GR
DENSITY - NEUTRON
1:500 MD

Compact