



Compact

DUAL LATEROLOG - GR
DENSITY - NEUTRON
1:500 TVD

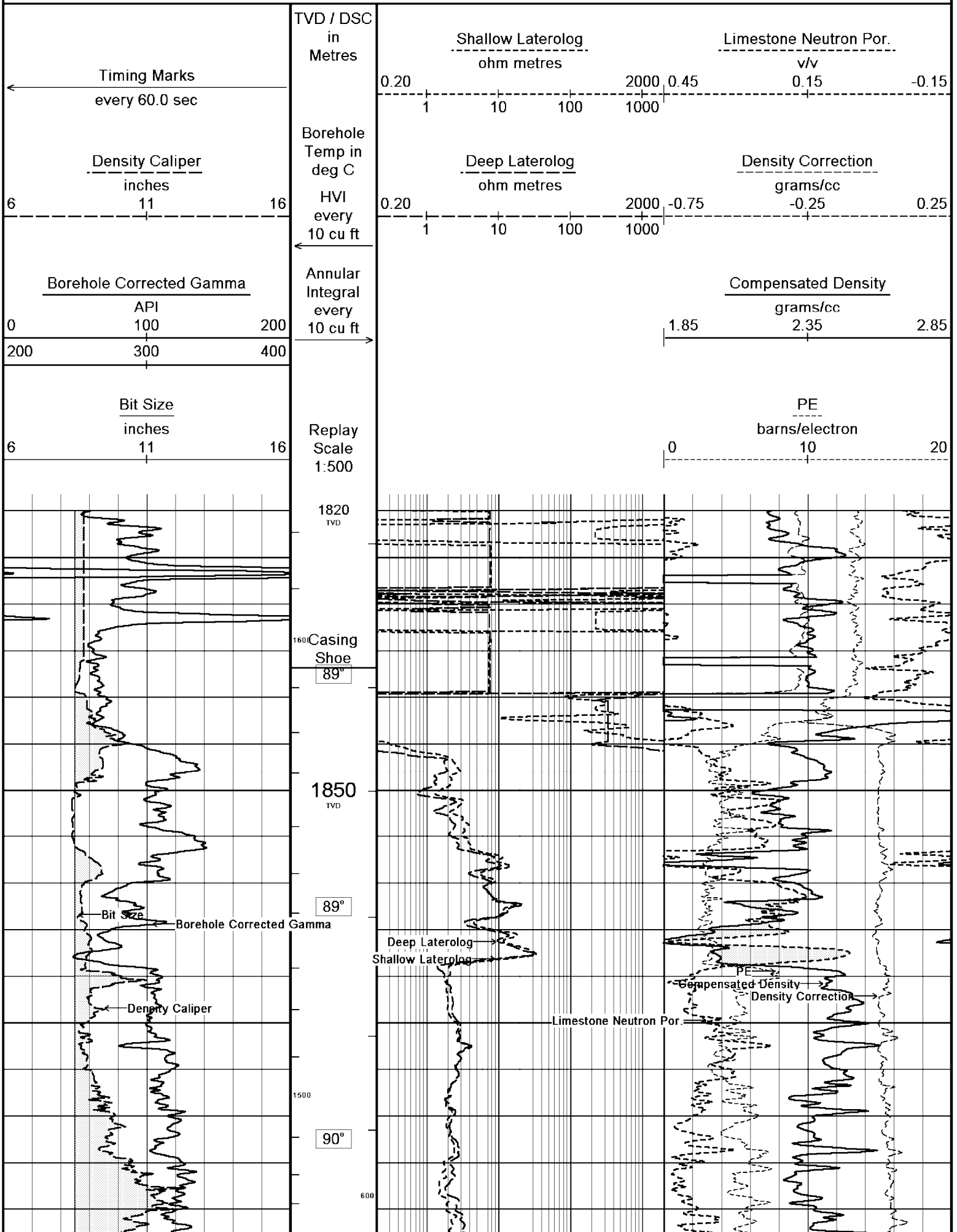
| | | | |
|-------------------------------|--|-------------------|---|
| COMPANY | ESSO AUSTRALIA PTY LTD | | |
| WELL | BREAM A10A | | |
| FIELD | BREAM | | |
| PROVINCE/COUNTRY | BASS STRAIT | | |
| COUNTRY/STATE | AUSTRALIA | | |
| LOCATION | S 38 29 58.824, E 147 46 19.976 N 5738460.340 m, E 567336.310 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 | | | Elevations: KB 32.82 metres DF 32.82 metres GL -59.40 metres |
| Date | 16-MAY-2005 | | |
| Run Number | ONE | | |
| Depth Driller | 2717.18 | metres | |
| Depth Logger | 2212.30 | metres | |
| First Reading | 2699.70 | metres | |
| Last Reading | 1836.80 | metres | |
| Casing Driller | 1836.38 | metres | |
| Casing Logger | 1836.80 | metres | |
| Bit Size | 8.50 | inches | |
| Hole Fluid Type | KC/POLY/GYL | | |
| Density / Viscosity | 10.10 lb/USg | 30.00 cP | |
| PH / Fluid Loss | 9.00 | 3.00 ml/30Min | |
| Sample Source | FLOWLINE | | |
| Rm @ Measured Temp | 0.134 @ 25.0 | ohm-m | |
| Rmf @ Measured Temp | 0.103 @ 25.0 | ohm-m | |
| Rmc @ Measured Temp | 0.236 @ 25.0 | ohm-m | |
| Source Rmf / Rmc | PRESS | PRESS | |
| Rm @ BHT | 0.053 @ 97.3 | ohm-m | |
| Time Since Circulation | 28.5 HRS | | |
| Max Recorded Temp | 104.10 | deg C | |
| Equipment Name | CWS/CML | | |
| Equipment / Base | 1 | SALE | |
| Recorded By | G. MCMANUS, B. MOSS | | |
| Witnessed By | TREVOR LOBO | | |
| CIRC STOPPED | 21:00 14-MAY | | |

| BOREHOLE RECORD | | | |
|--------------------|----------------|----------------------|----------------------|
| Bit Size inches | | Depth From metres | Depth To metres |
| 8.500 | | 2258.80 | 3379.50 |
| CASING RECORD | | | |
| Type | Size inches | Depth From metres | Shoe Depth metres |
| K-55 | 13.375 | 0.00 | 921.00 |
| L-80 | 9.625 | 0.00 | 2258.80 |

| REMARKS |
|---|
| RIG: NABORS 453 |
| 5" SHUTTLE/MEMORY COMPACT OPERATION. CREW: G MCMANUS , R TENCH , B MOSS , K LUCIEER. |
| ALL LOGS DEPTH CORRELATED TO ANADRILL GAMMA LOG. |
| DENSITY CALIPER CLOSED BETWEEN 2594.50m MD AND 2598.2m MD DUE TO THE INDUCTION SONDE DETECTING A PIECE OF BRASS DEBRIS IN THE WELL. DENSITY - NEUTRON DATA IN THIS INTERVAL WILL BE INACCURATE. |
| MAX. TEMPERATURE: 104.1 DEG C AT 3331.10m MD MAX. INCLINATION: 47.28 DEG AT 2315.54m MD MAX. DOGLEG SERVERITY: 4.68 DEG/30m AT 2775.31m MD DEPLOYMENT ANGLE: 24 DEG |
| HVOL: 1620 FT^3 AVOL: 865 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 any officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.



1900
TVD

91°

1400

91°

1950
TVD

92°

1300

93°

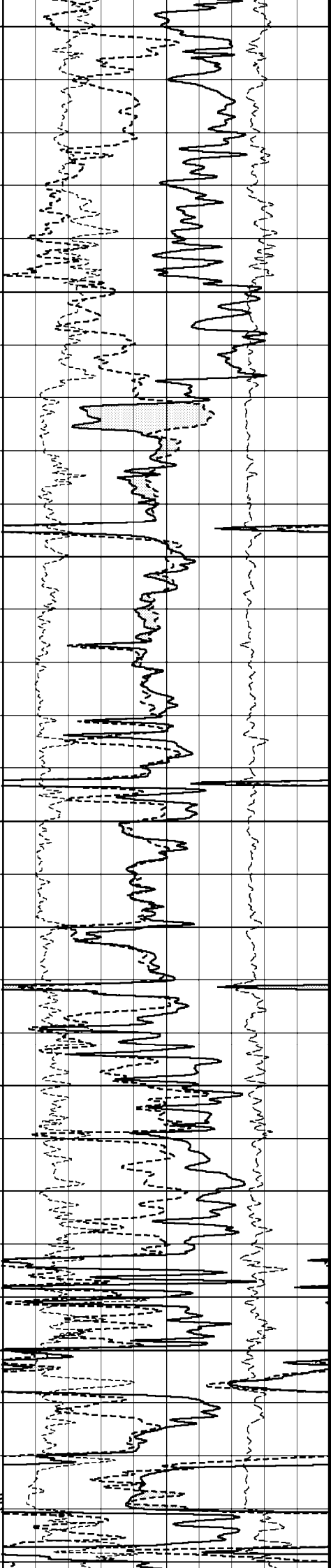
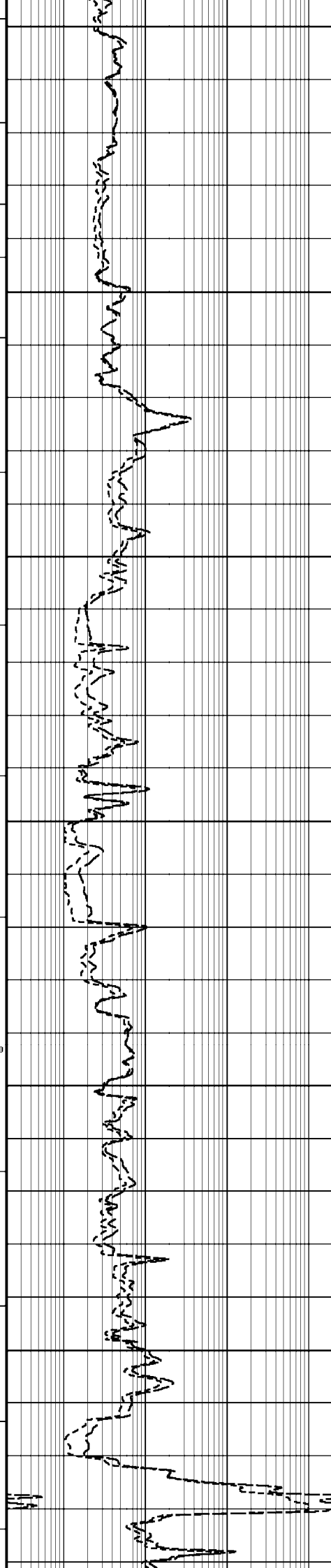
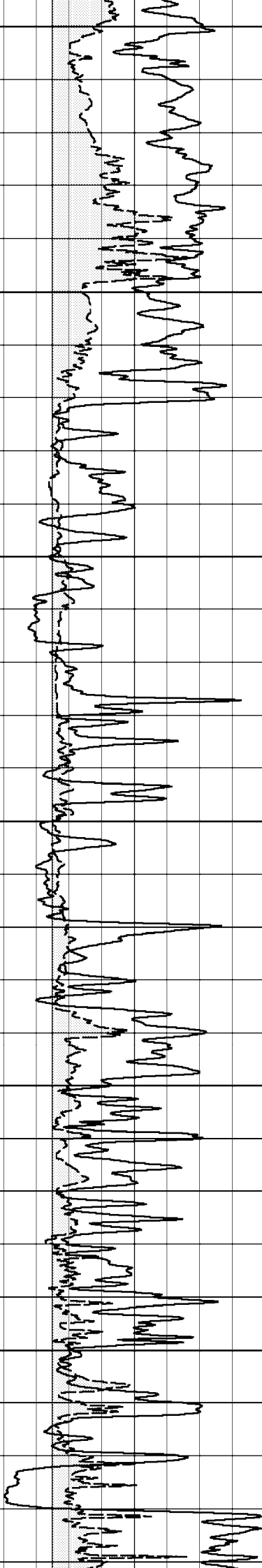
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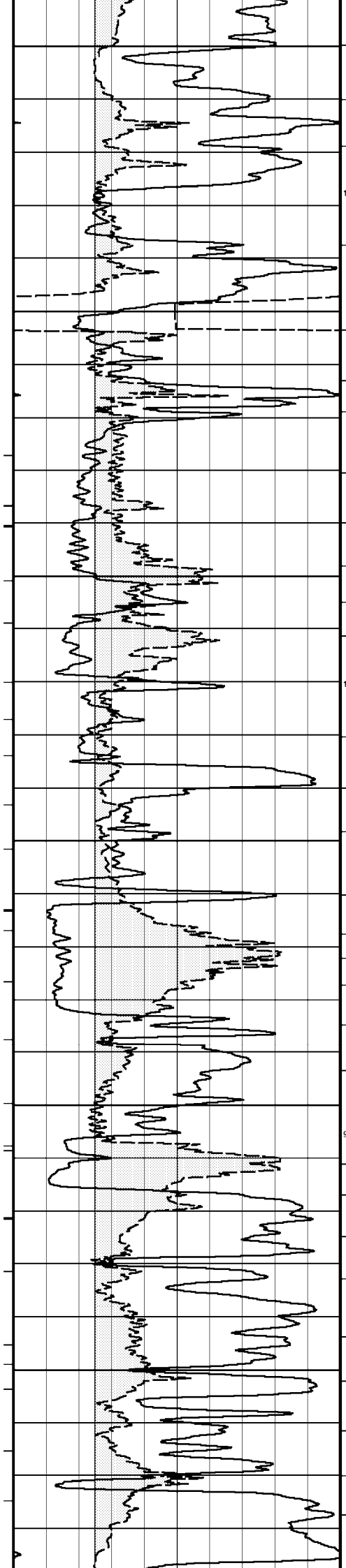
2000
TVD

93°

1200

94°





2050
TVD

95°

1100

95°

2100
TVD

1000

96°

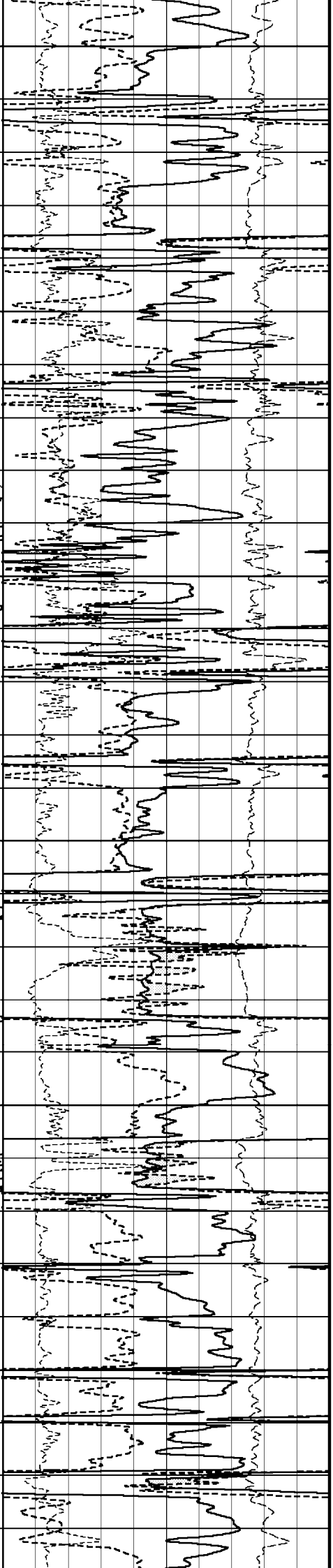
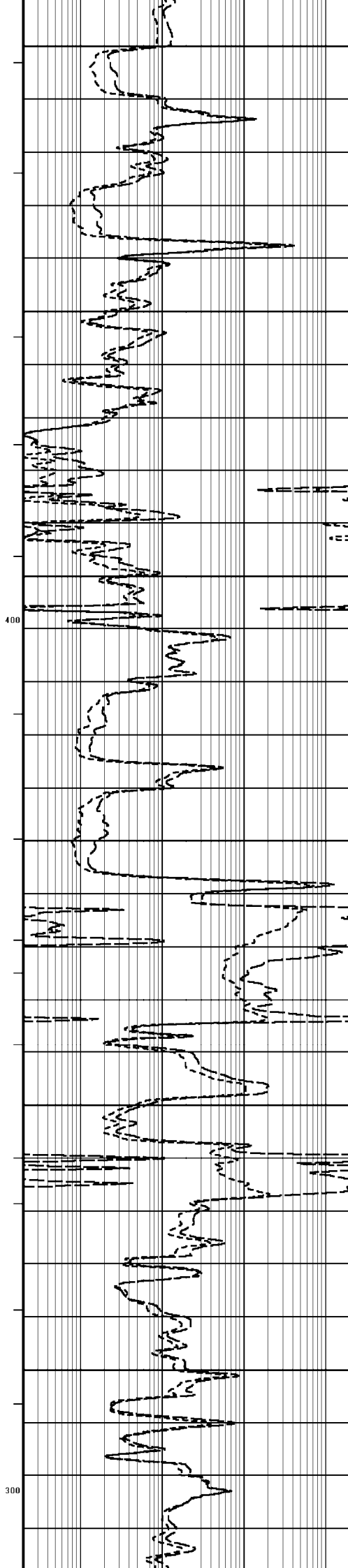
97°

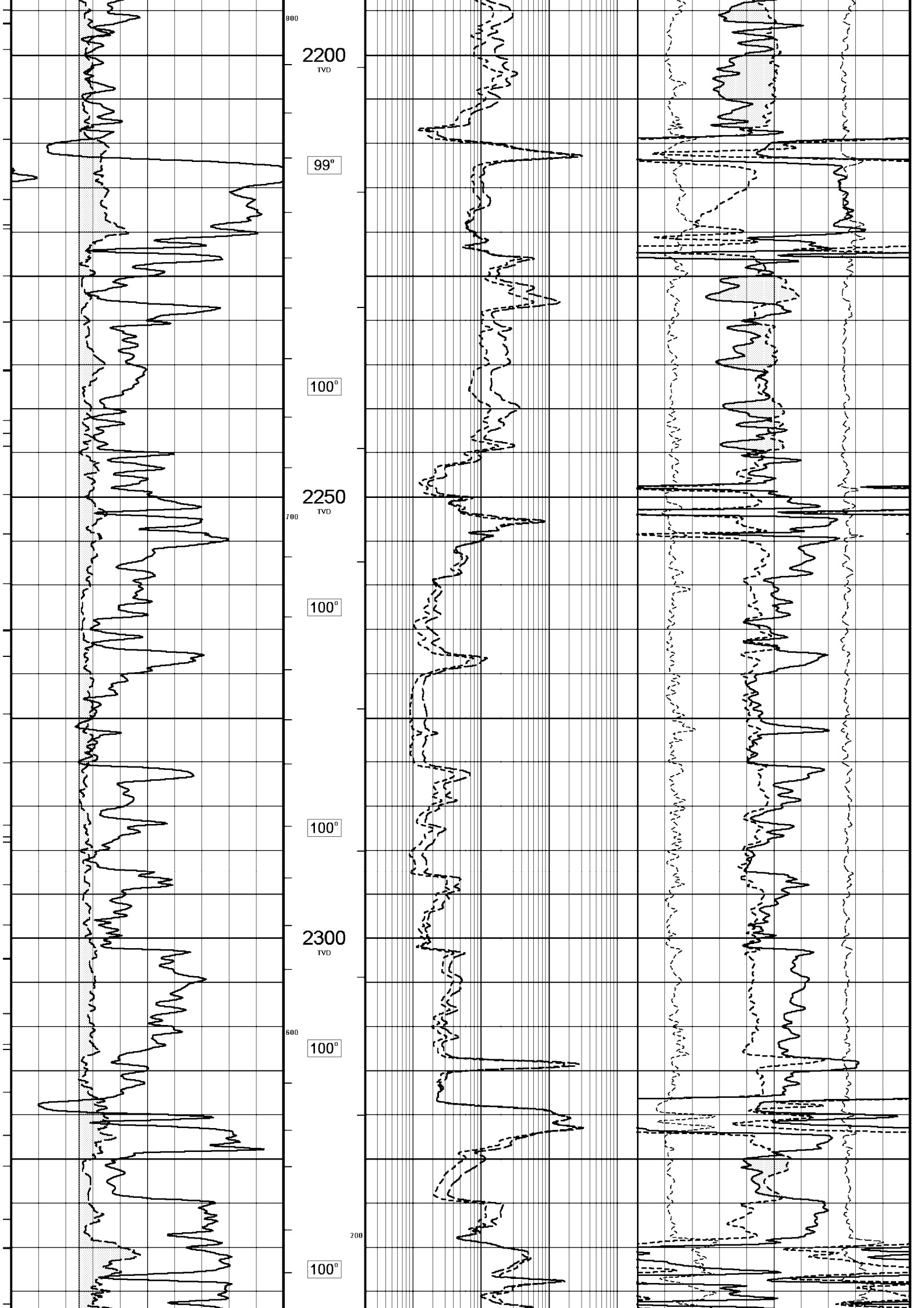
2150
TVD

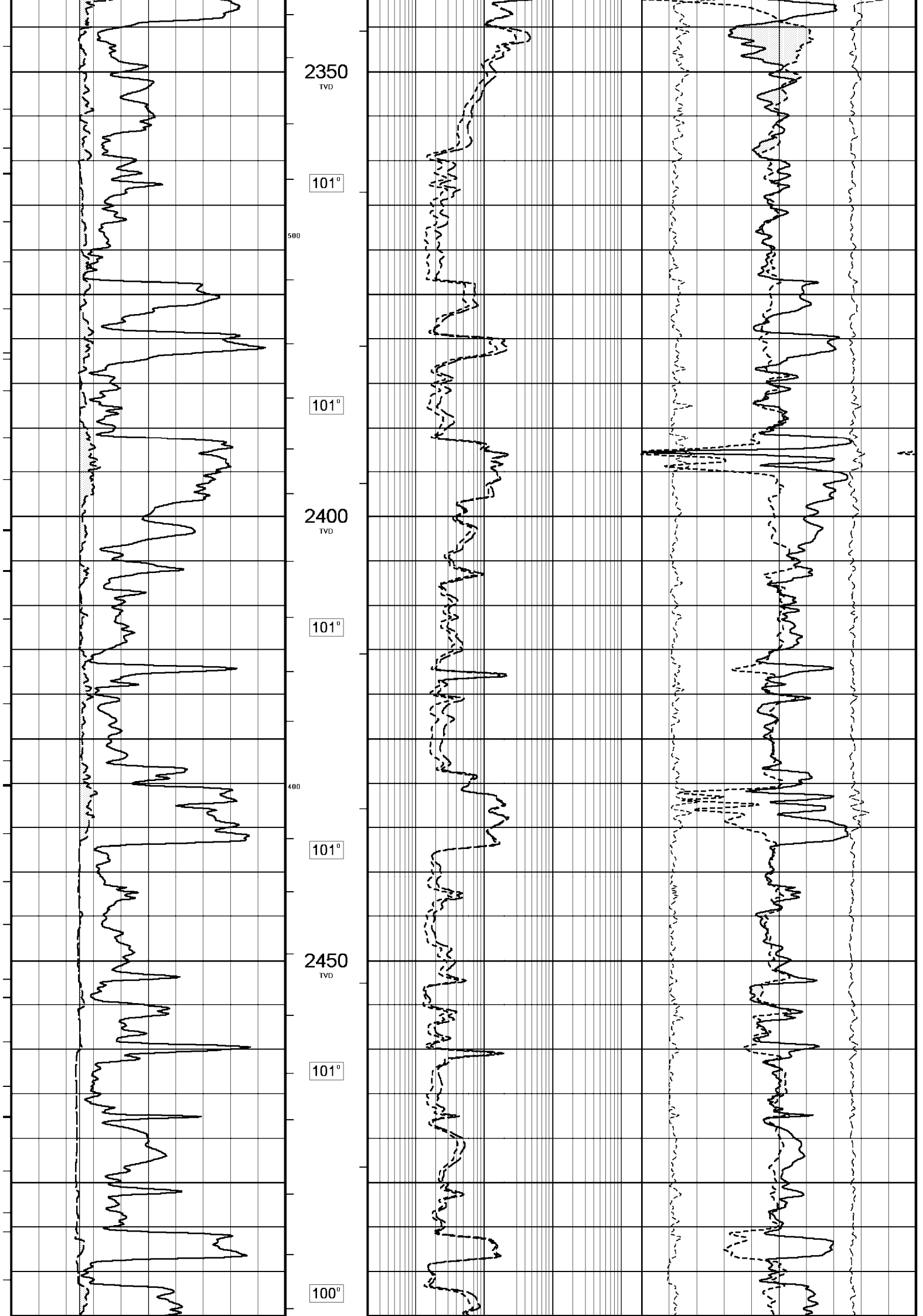
900

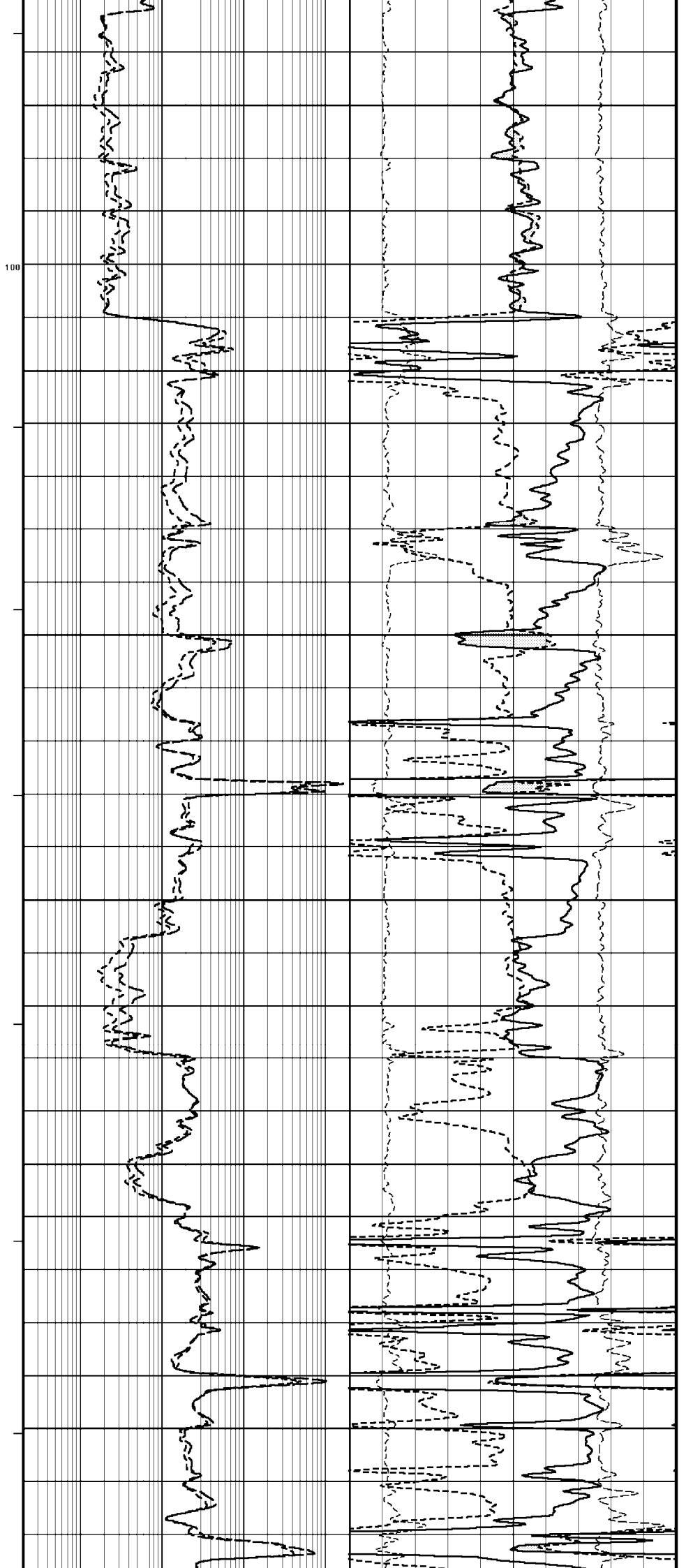
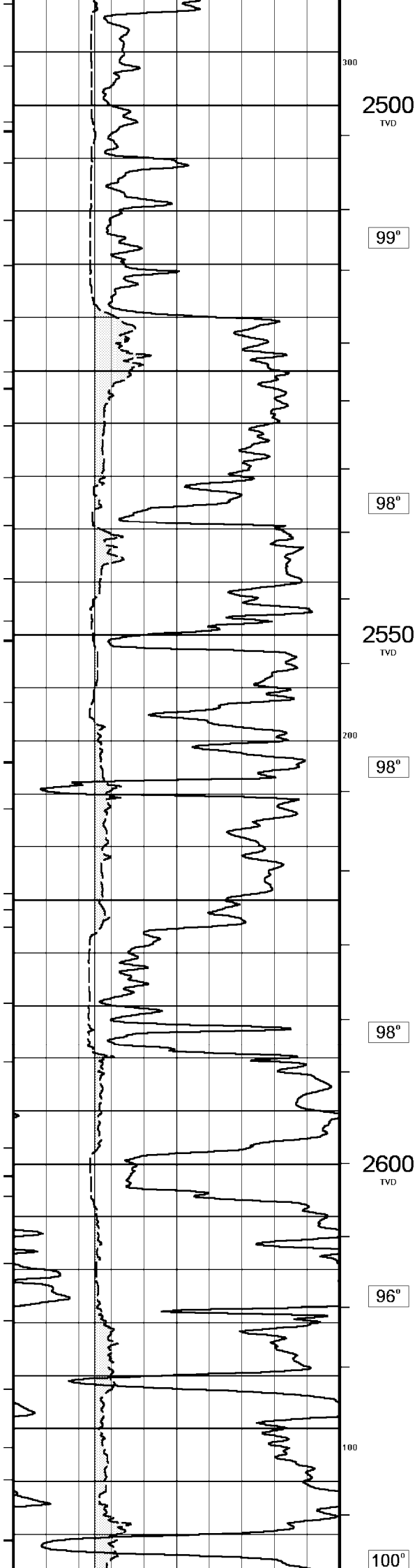
98°

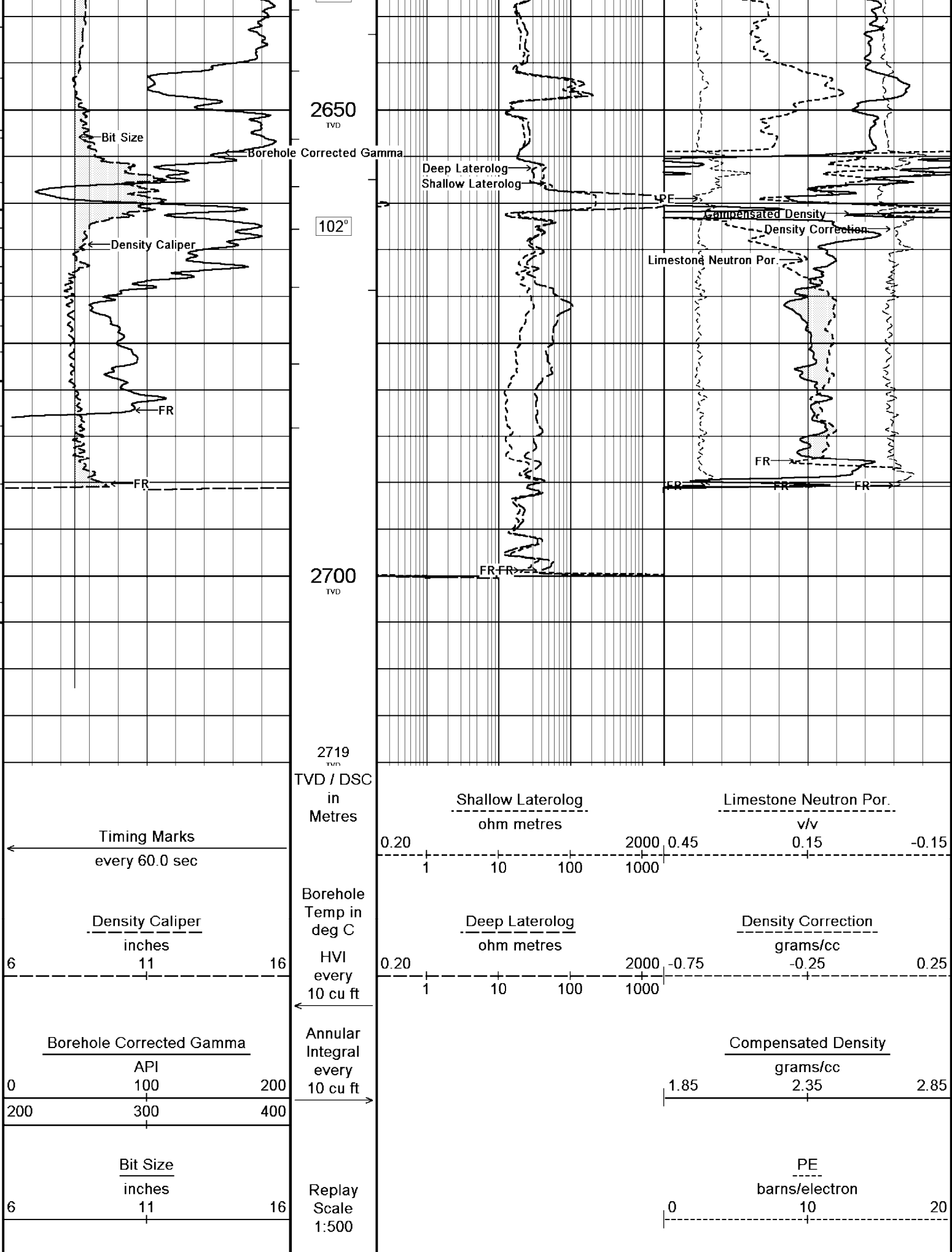
98°











Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\logs\BMA_A10A\BMA_A10A_MAIN_LOG_TC_Remake_2JUNE05.dta
System Configuration Dates: Logged : Processed 23-AUG-2004: Plotted 17-JUN-2004:

Plotted on 15-AUG-2005 12:08
Recorded on 16-MAY-2005 12:18

BEFORE SURVEY CALIBRATION

C:\logs\BMA_A10A\BMA_A10A_MAIN_LOG_TC_Remake_2JUNE05.dta

General Constants All 000

General Parameters

| | | |
|-----------------------------|----------|------------|
| Mud Resistivity | 0.134 | 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 8-MAY-2005,02:39

| | | |
|-------|----------|-------------------|
| | 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 8-MAY-2005 02:39

| | | |
|--------------------|----------|------------------|
| | Measured | Calibrated (API) |
| Background | 9 | 6 |
| Calibrator (Gross) | 1373 | 915 |
| Calibrator (Net) | 1364 | 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 3-MAY-2005 14:38

Field Check on 8-MAY-2005 02:26

Base Calibration

| | | |
|-------|----------|------------------|
| | Measured | Calibrated (cps) |
| | Near Far | Near Far |
| | 3175 99 | 3714 110 |
| Ratio | 32.086 | 33.764 |

Field Calibrator at Base

| | |
|-------|------------------|
| | Calibrated (cps) |
| | 1662 2343 |
| Ratio | 0.709 |

Field Check

| | |
|-------|------------------|
| | Calibrated (cps) |
| | 1642 2394 |
| Ratio | 0.686 |

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 | inpsi |

| | | |
|---------------------------------|--------------------------|-----------|
| Formation Pressure | N/A | kpsi |
| Temperature Source | MCG External Temperature | |
| Temperature | N/A | degrees C |
| Mud Salinity | 48.80 | kppm |
| Formation Fluid Salinity Source | None | |
| Formation Fluid Salinity | N/A | kppm |
| Barite Mud Correction | Not Applied | |

Caliper Calibration MPD 083

Base Calibration on 29-APR-2005 11:31
Field Calibration on 8-MAY-2005 02:30

Base Calibration

| Reading No | Measured | Calibrator Size (in) |
|------------|----------|----------------------|
| 1 | 13428 | 4.01 |
| 2 | 21585 | 5.99 |
| 3 | 30000 | 7.98 |
| 4 | 38511 | 9.94 |
| 5 | 47824 | 12.01 |
| 6 | N/A | N/A |

Field Calibration

| Measured Caliper (in) | Actual Caliper (in) |
|-----------------------|---------------------|
| 8.03 | 7.98 |

Photo Density Calibration MPD 083

Base Calibration on 29-APR-2005 12:03
Field Check on 8-MAY-2005 02:34

Density Calibration

| Base Calibration | | Measured | | Calibrated (sdu) | |
|------------------|-------|----------|-------|------------------|-----|
| | | Near | Far | Near | Far |
| Reference 1 | 54668 | 18905 | 53111 | 19310 | |
| Reference 2 | 25684 | 2508 | 24951 | 2530 | |

Field Check at Base

| | |
|-------|--------|
| 961.4 | 1114.9 |
|-------|--------|

Field Check

| | |
|-------|--------|
| 959.5 | 1116.1 |
|-------|--------|

PE Calibration

| Base Calibration | WS | Measured | | Calibrated Ratio |
|------------------|-------|----------|-------|------------------|
| | | WH | Ratio | |
| Background | 183 | 826 | | |
| Reference 1 | 17043 | 54473 | 0.314 | 0.320 |
| Reference 2 | 6783 | 25540 | 0.267 | 0.273 |

Field Check at Base

| | |
|-------|-------|
| 182.7 | 825.8 |
|-------|-------|

Field Check

| | |
|-------|-------|
| 182.5 | 824.4 |
|-------|-------|

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 | 0.00 |

Laterolog Calibration MLE 016

Base Calibration on 29-APR-2005 15:49
Field Check on

Base Calibration

| Channel | Measured | | Calibrated (ohm-m) | |
|-----------|------------|------------|--------------------|------------|
| | Resistor 1 | Resistor 2 | Resistor 1 | Resistor 2 |
| Shallow | 9.7 | 965.8 | 13.2 | 1321.0 |
| Deep | 9.9 | 965.6 | 7.5 | 755.0 |
| Groningen | 9.7 | 966.4 | 8.5 | 854.0 |

| Channel | Base Check (ohm-m) | Field Check (ohm-m) |
|-----------|--------------------|---------------------|
| Shallow | 49.2 | 0.0 |
| Deep | 27.9 | 0.0 |
| Groningen | 254.2 | 0.0 |

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

C:\logs\BMA_A10A\BMA_A10A_MAIN_LOG_TC_Remark_2JUNE05.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: 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: 88.2 lb

Compact Gamma
MCG 98 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 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

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

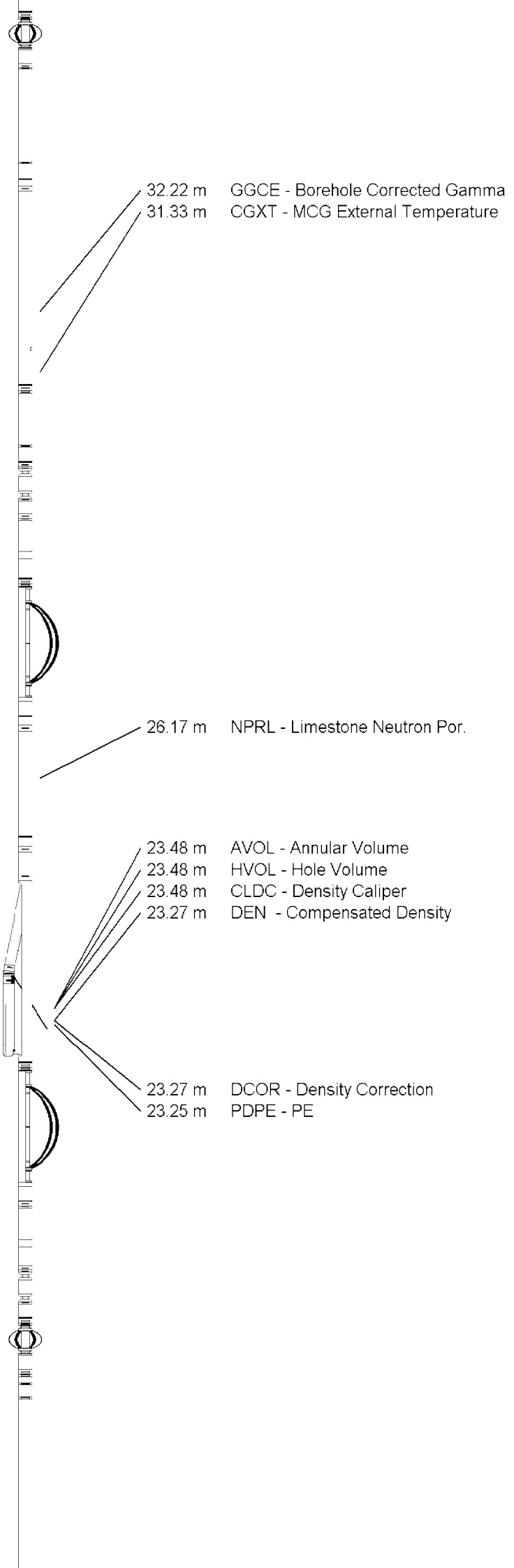
Compact Inline Bowspring A
MIS 24 Length: 1.74 m Weight: 33.1 lb

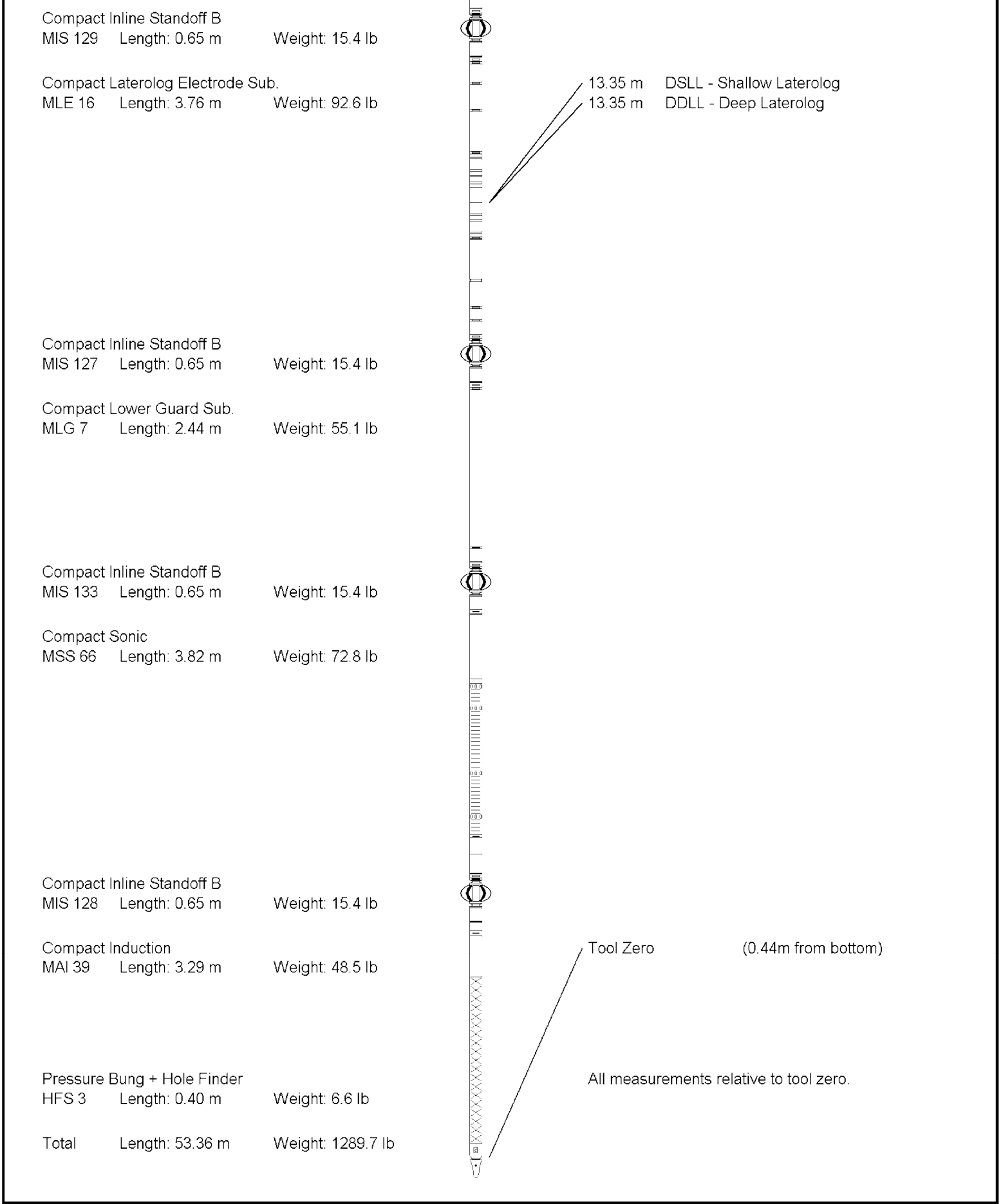
Compact Swivel Head Adaptor
SHA 28 Length: 0.83 m Weight: 26.5 lb

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

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

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





| | |
|-----------------|------------------------|
| COMPANY | ESSO AUSTRALIA PTY LTD |
| WELL | BREAM A10A |
| FIELD | BREAM |
| PROVINCE/COUNTY | BASS STRAIT |
| COUNTRY/STATE | AUSTRALIA |

| | | | | |
|-------------------------|--------------|---------------|---------|--------|
| Elevation Kelly Bushing | metres | First Reading | 2699.70 | metres |
| Elevation Drill Floor | 32.82 metres | Depth Driller | 2717.18 | metres |

Elevation Ground Level -59.40 metres

Depth Logger 2212.30 metres



DUAL LATEROLOG - GR
DENSITY - NEUTRON
1:500 TVD