

**Weatherford****ARRAY INDUCTION  
LOG**

COMPANY **LARAMIE ENERGY II**  
WELL **BRUNTON 30-02B**  
FIELD **VEGA**  
PROVINCE/COUNTY **MESA**  
COUNTRY/STATE **U.S.A. / COLORADO**  
LOCATION **SHL: 828' FSL & 1745' FWL**  
**BHL: 493' FNL & 1961' FEL**



SEC **19** TWP **9S** RGE **93W** Other Services  
API Number **50-077-10092** MPD/MDN  
Permit Number

Permanent Datum G.L., Elevation 7345 feet  
Log Measured From K.B. @ 21 FEET above Permanent Datum  
Drilling Measured From K.B.

Elevations:  
KB 7366.00  
DF 7365.00  
GL 7345.00

|                        |              |               |
|------------------------|--------------|---------------|
| Date                   | 15-JAN-2011  |               |
| Run Number             | ONE          |               |
| Depth Driller          | 7910.00      | feet          |
| Depth Logger           | 7913.00      | feet          |
| First Reading          | 7910.00      |               |
| Last Reading           | 1522.00      |               |
| Casing Driller         | 1524.00      | feet          |
| Casing Logger          | 1522.00      | feet          |
| Bit Size               | 7.875        | inches        |
| Hole Fluid Type        | GEL/CHEM     |               |
| Density / Viscosity    | 10.90 lb/USg | 50.00 CP      |
| PH / Fluid Loss        | 9.00         | 7.00 ml/30Min |
| Sample Source          | FLOWLINE     |               |
| Rm @ Measured Temp     | 2.73 @ 65.0  | ohm-m         |
| Rmf @ Measured Temp    | 2.18 @ 65.0  | ohm-m         |
| Rmc @ Measured Temp    | 3.28 @ 65.0  | ohm-m         |
| Source Rmf / Rmc       | CALC         | CALC          |
| Rm @ BHT               | 0.90 @203.0  | ohm-m         |
| Time Since Circulation | 8 HOURS      |               |
| Max Recorded Temp      | 203.00       | deg F         |
| Equipment Name         | COMPACT      |               |
| Equipment / Base       | 13037        | RK SPR        |
| Recorded By            | J. PAULSON   |               |
| Witnessed By           | K. CLAUSSEN  |               |

**BOREHOLE RECORD**

Last Edited: 15-JAN-2011 09:42

| Bit Size<br>inches | Depth From<br>feet | Depth To<br>feet |
|--------------------|--------------------|------------------|
| 7.875              | 1530.00            | 7910.00          |

**CASING RECORD**

| Type    | Size<br>inches | Depth From<br>feet | Shoe Depth<br>feet | Weight<br>pounds/ft |
|---------|----------------|--------------------|--------------------|---------------------|
| SURFACE | 8.625          | 0.00               | 1530.00            | 32.00               |

**REMARKS**

SOFTWARE VERSION: 11.01.2198

TOOLS RUN: MAI, MFE, SKJ, MPD, MDN, MCG, AND SHA RAN IN COMBINATION

HARDWARE: MPD: 8 INCH DENSITY SKID PLATE  
MDN: BOWSPRINGS  
MFE: ONE INCH STANDOFF  
MAI: 2 X ONE INCH STANDOFFS

TOTAL HOLE VOLUME TO SURFACE CASING = 2870 CUBIC FT

TOTAL HOLE VOLUME TO SURFACE CASING = 2019 CU. FT.

ANNULAR VOLUME WITH 4.5 INCH PRODUCTION CASING TO SURFACE CASING = 1960 CU. FT.

2.65 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY

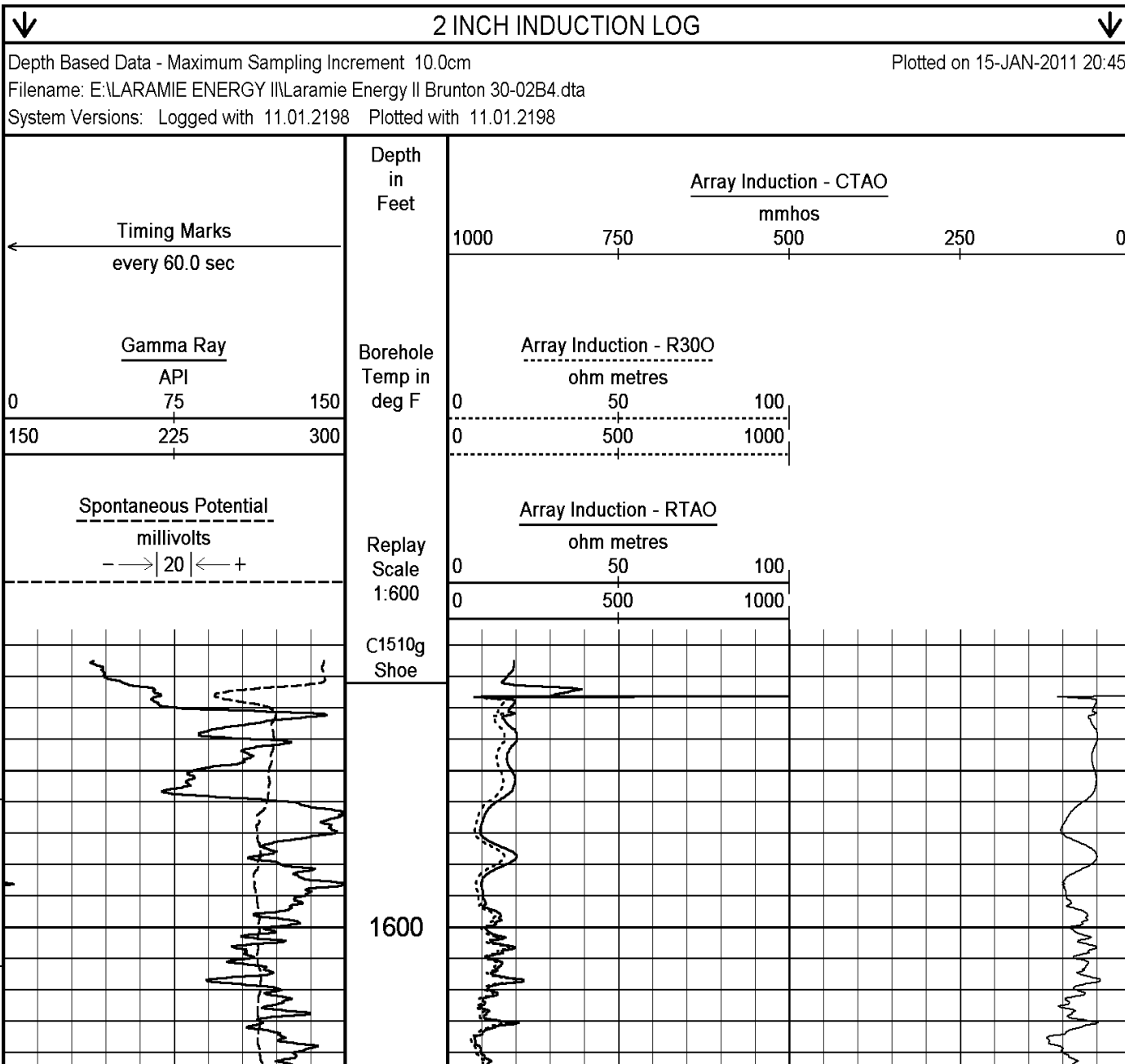
ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST

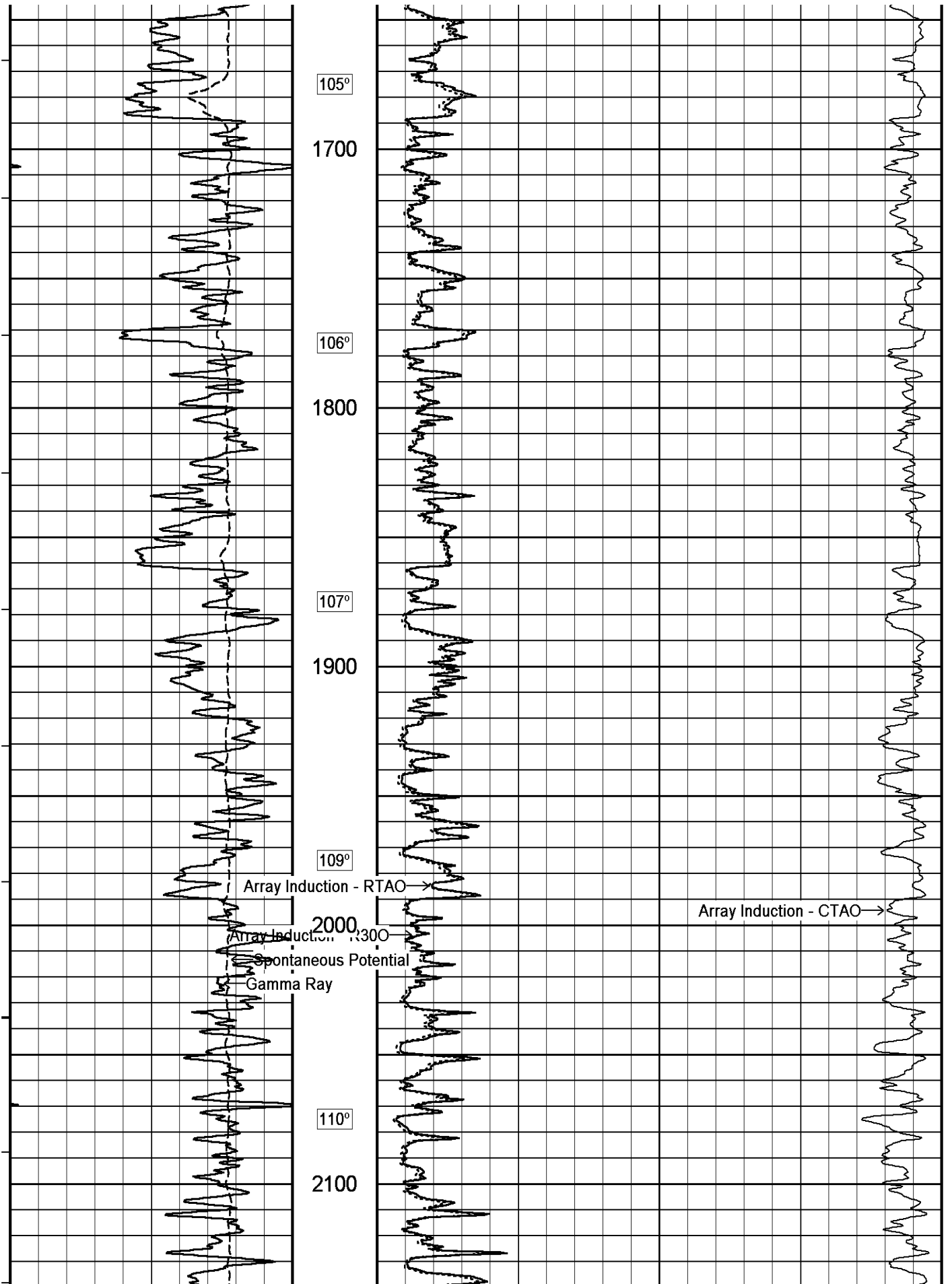
THE DENSITY READINGS CYCLED AT THE BOTTOM DUE TO BOREHOLE RUGOSITY

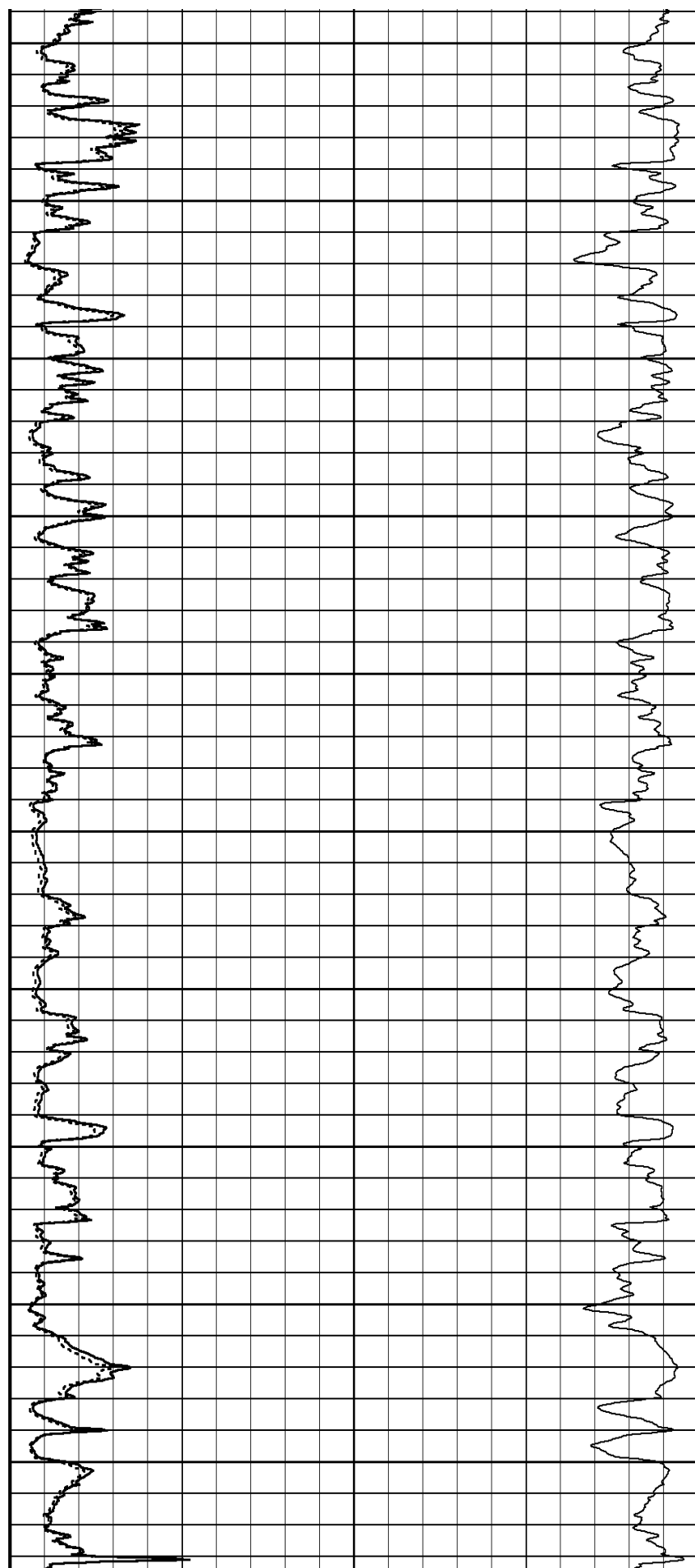
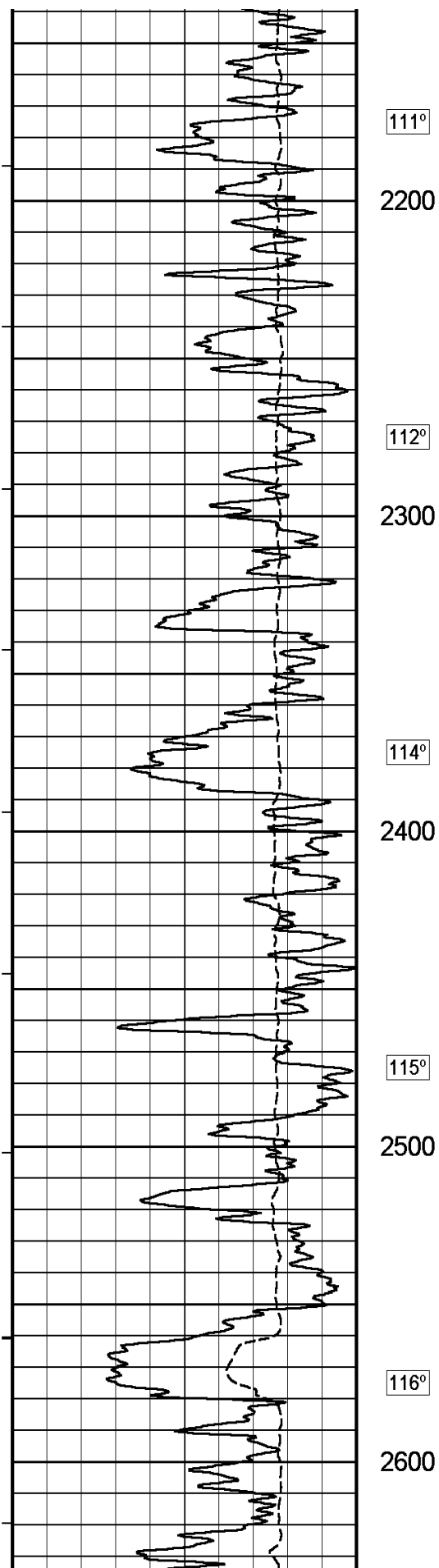
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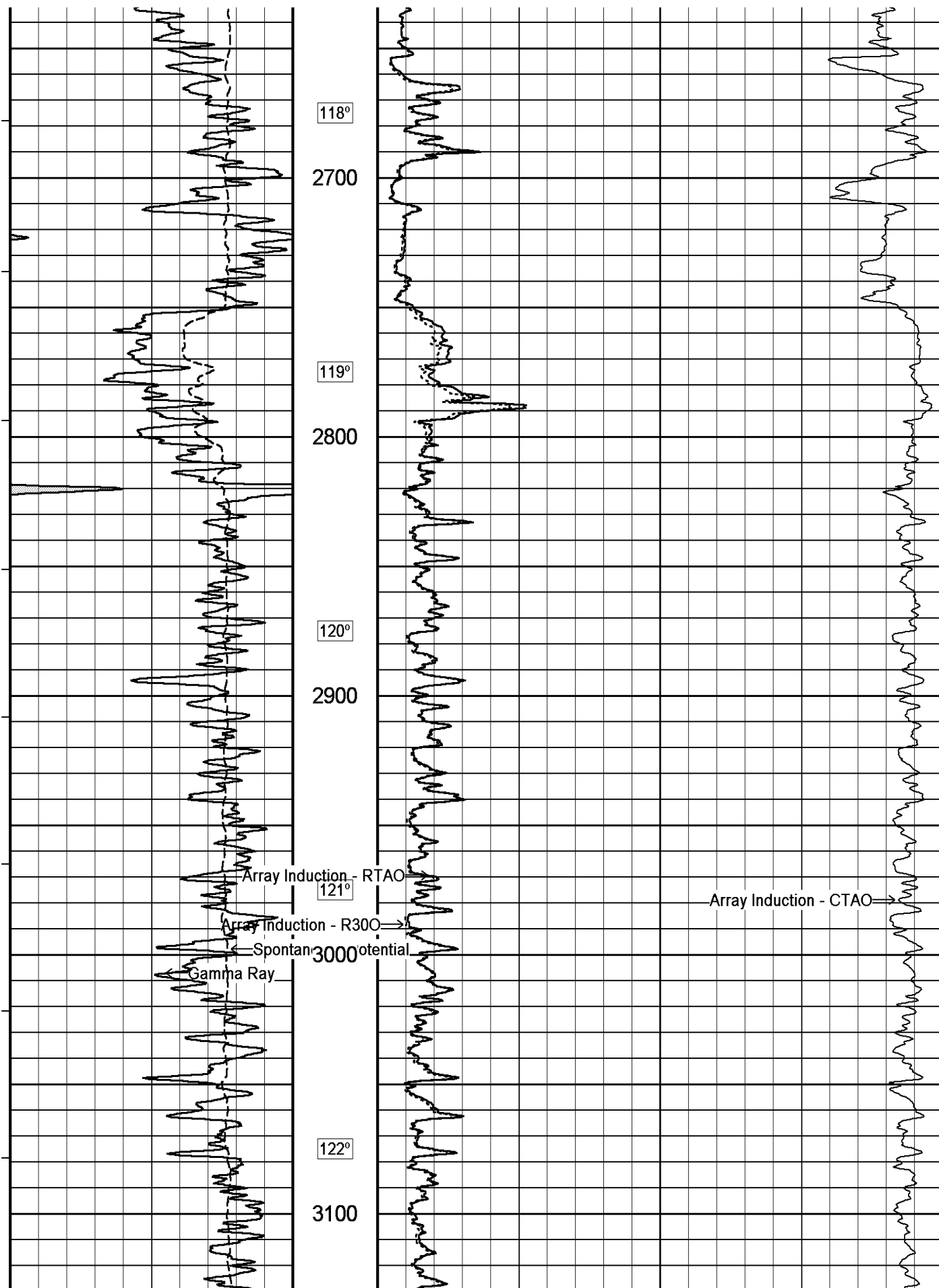
RIG: PRECISION 706

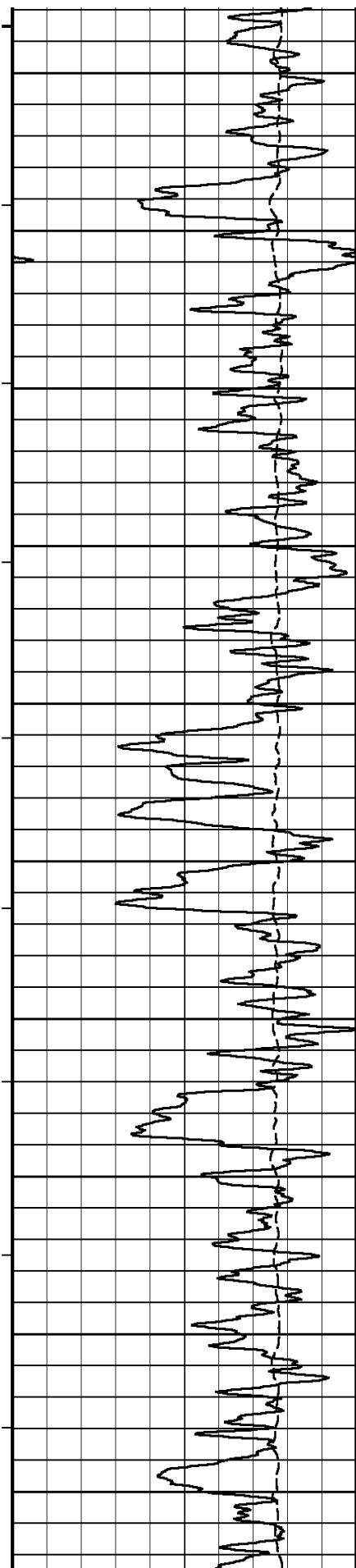
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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











124°

3200

125°

3300

126°

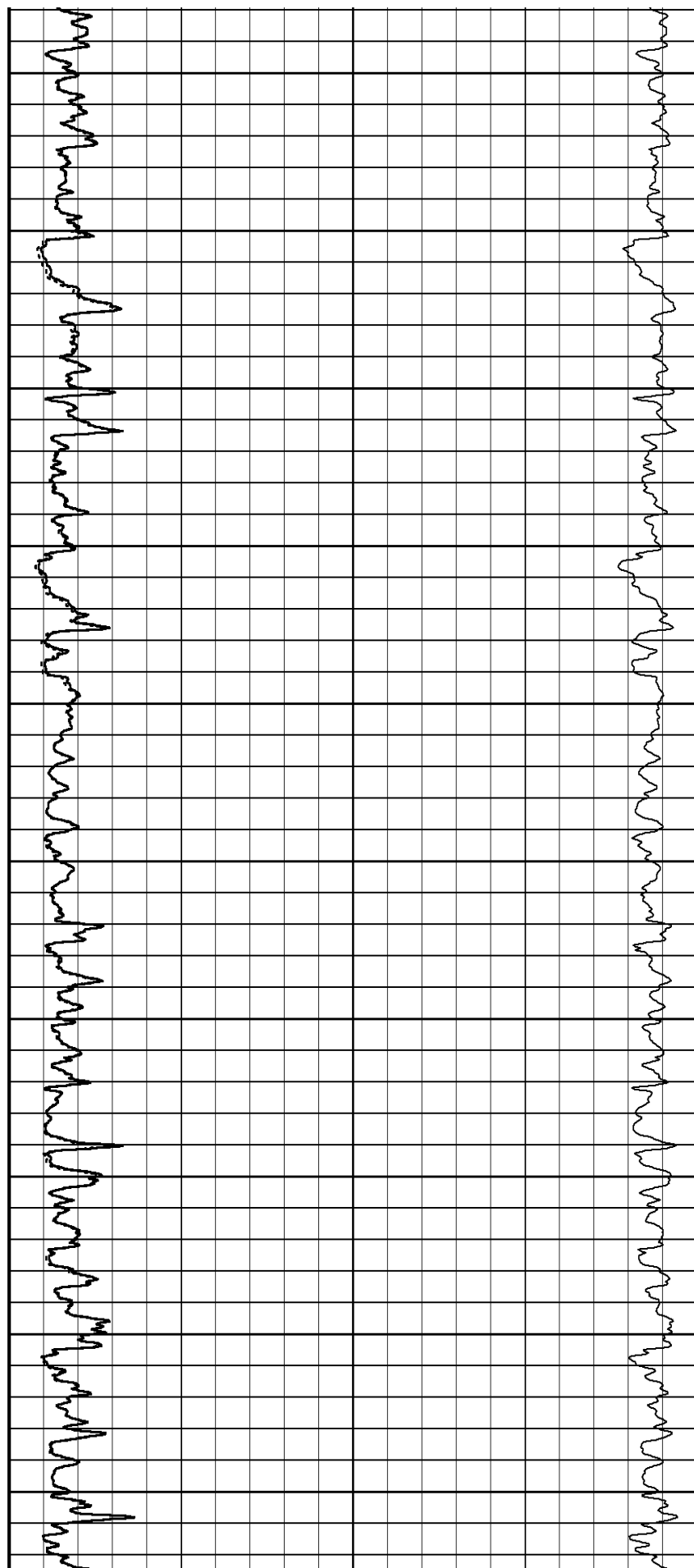
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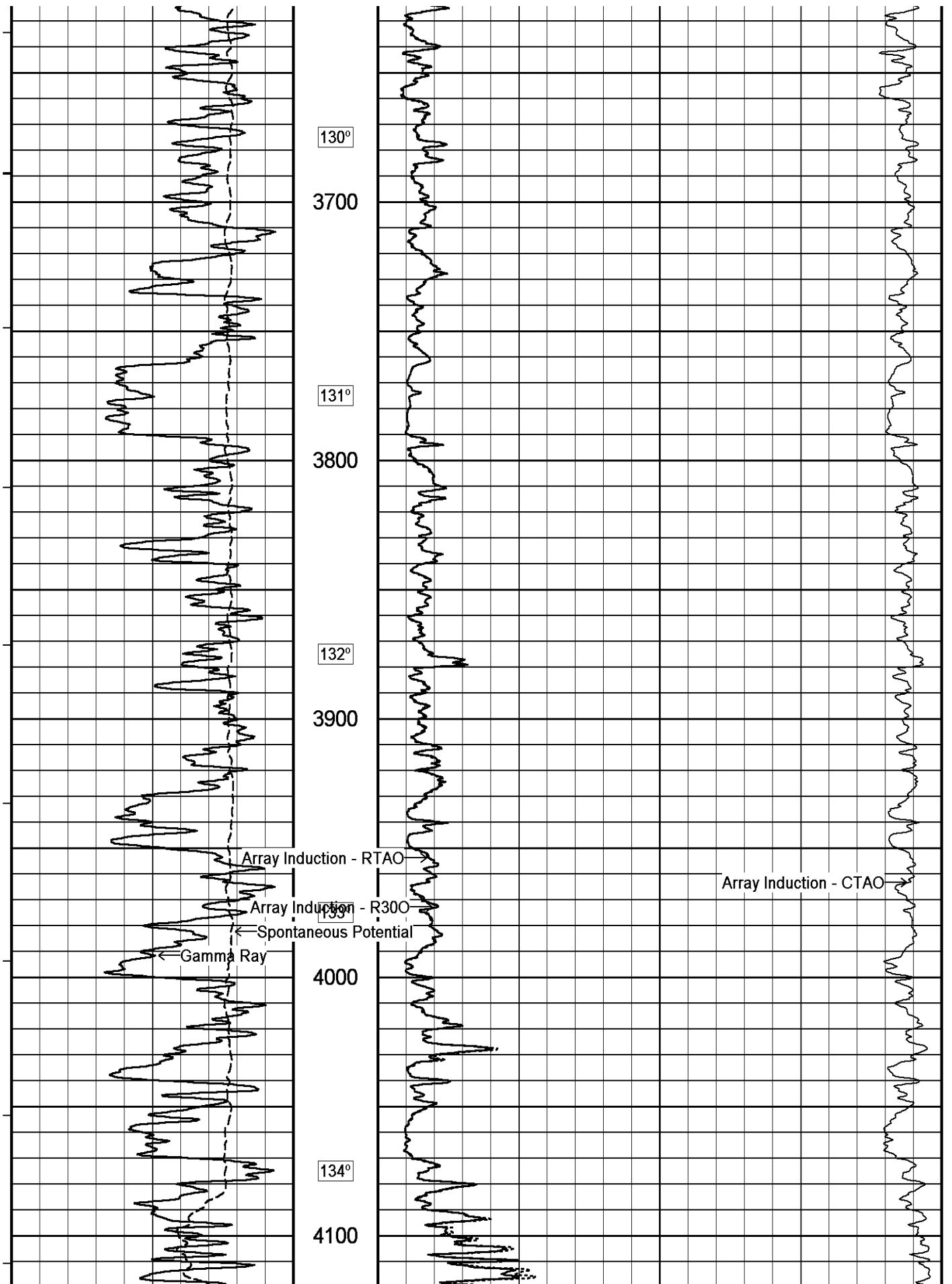
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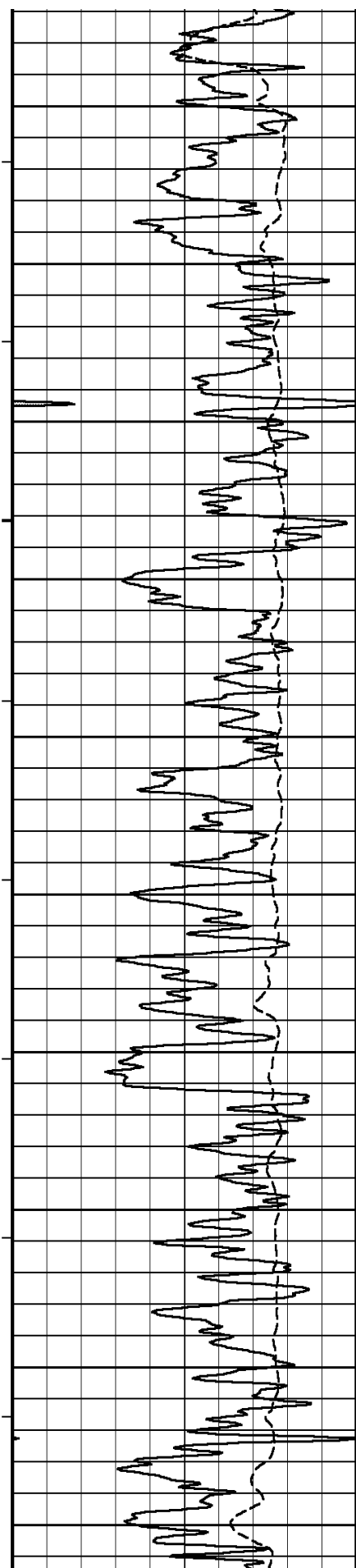
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128°

3600







136°

4200

137°

4300

138°

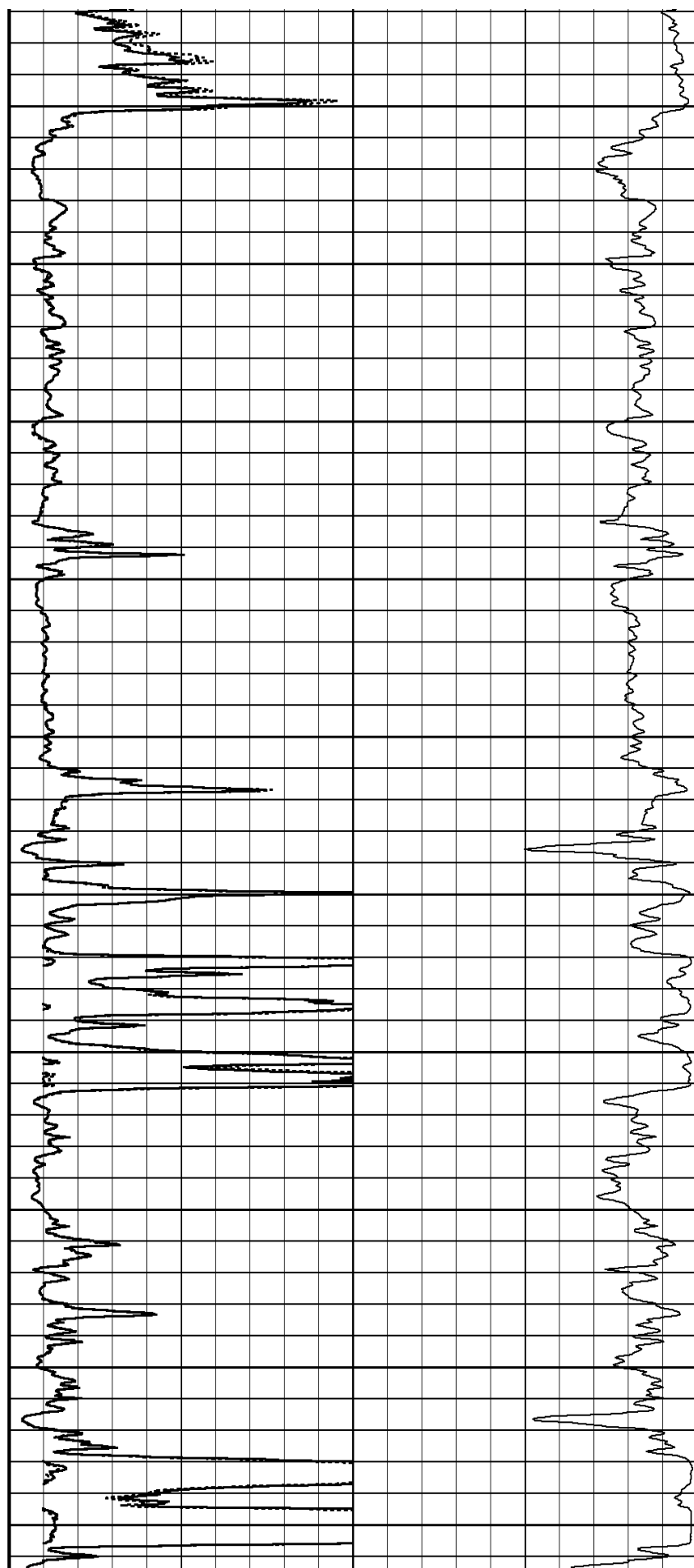
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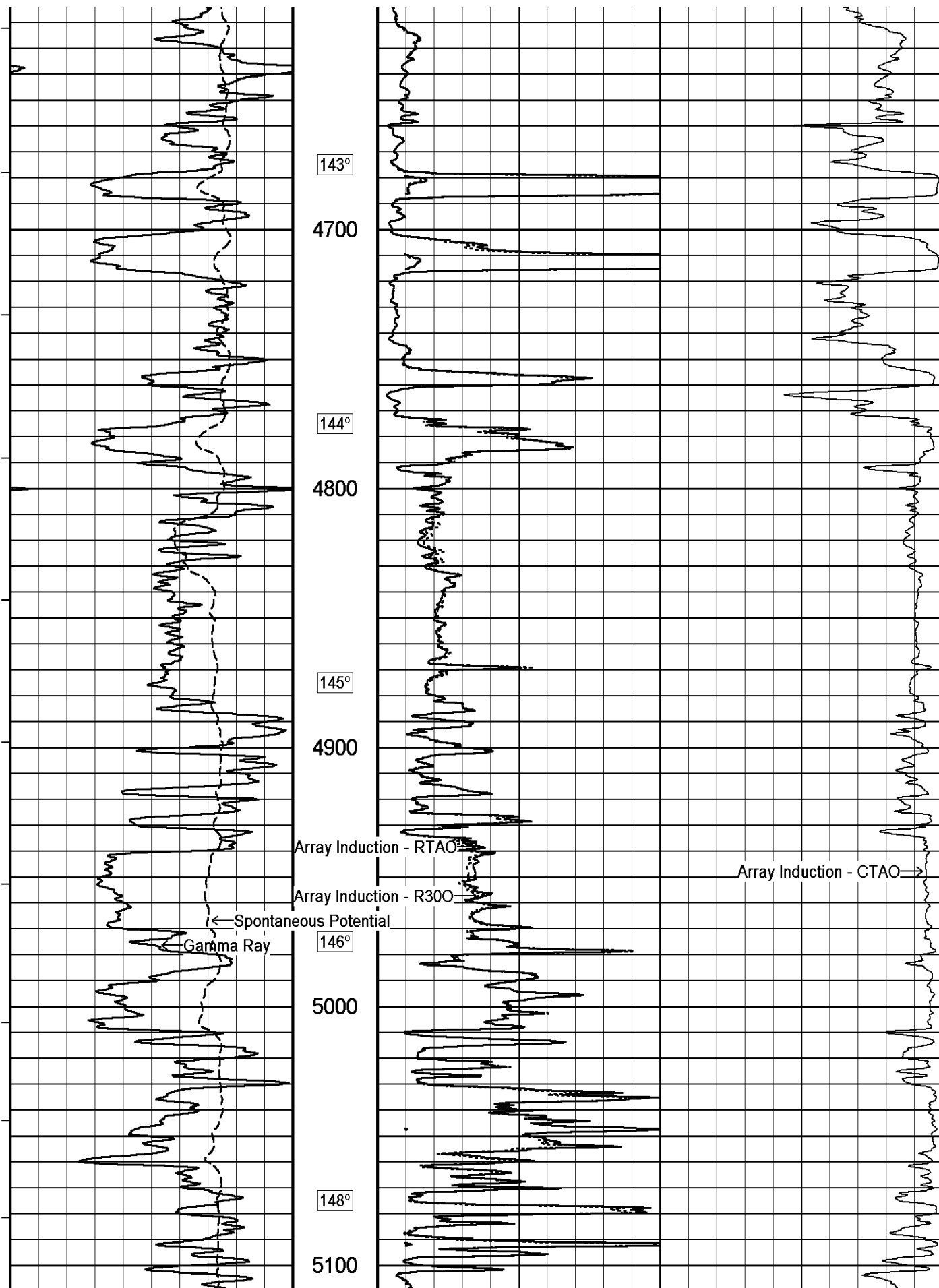
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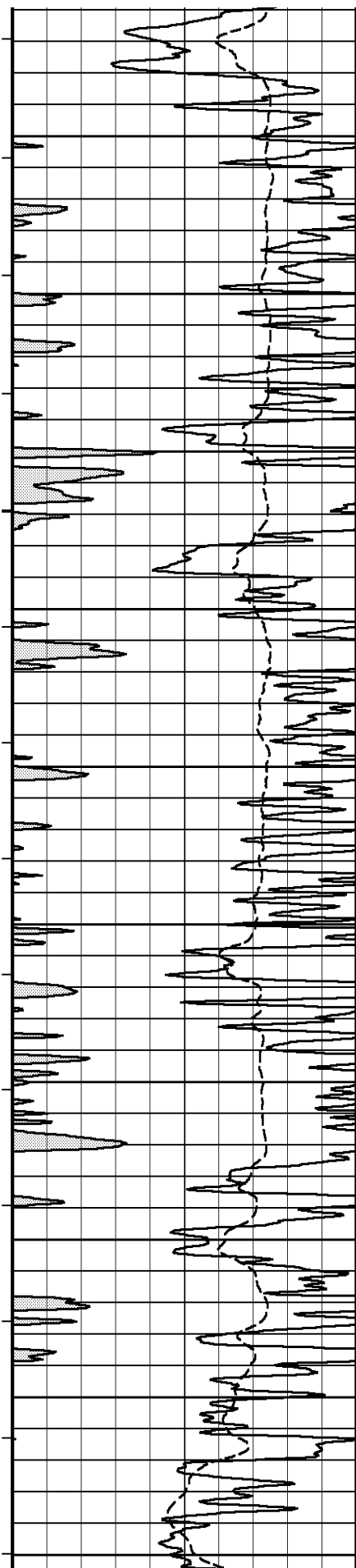
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4600









149°

5200

150°

5300

152°

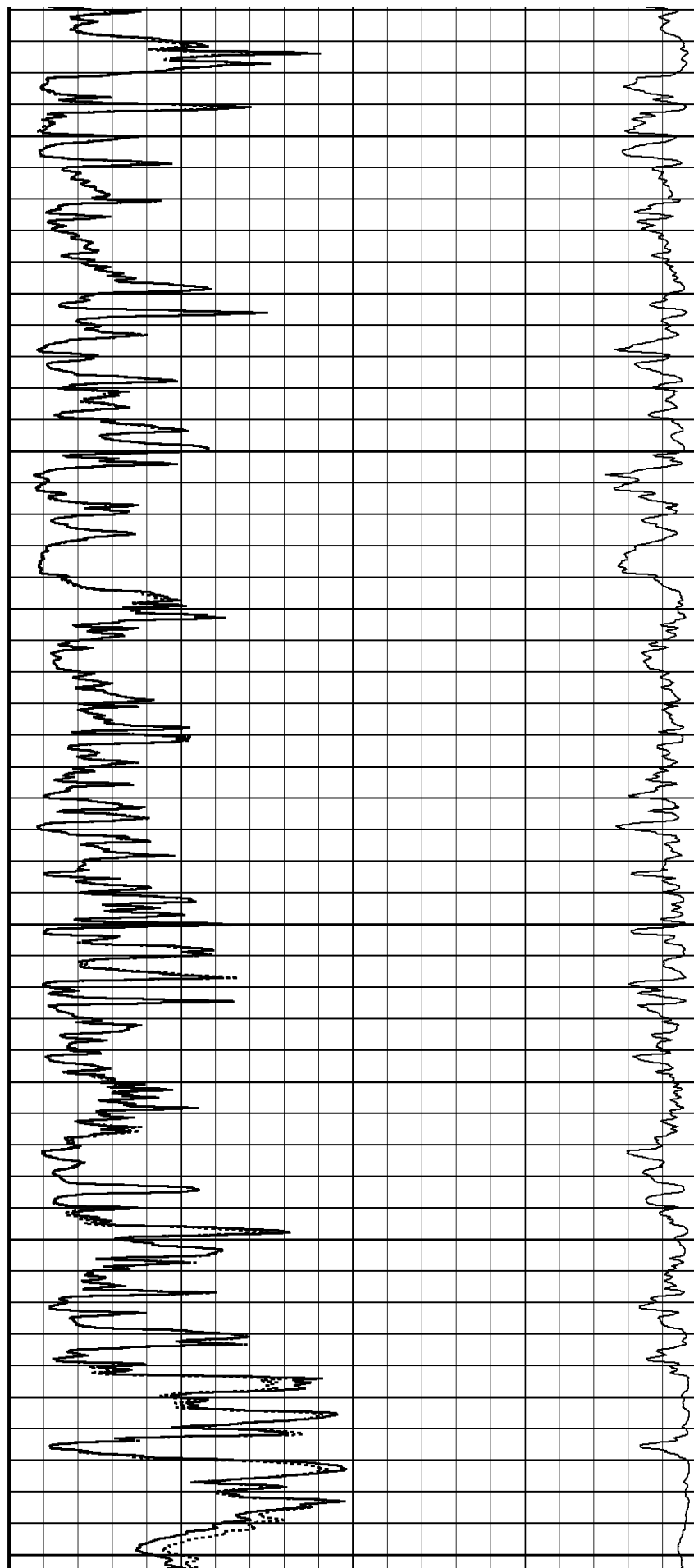
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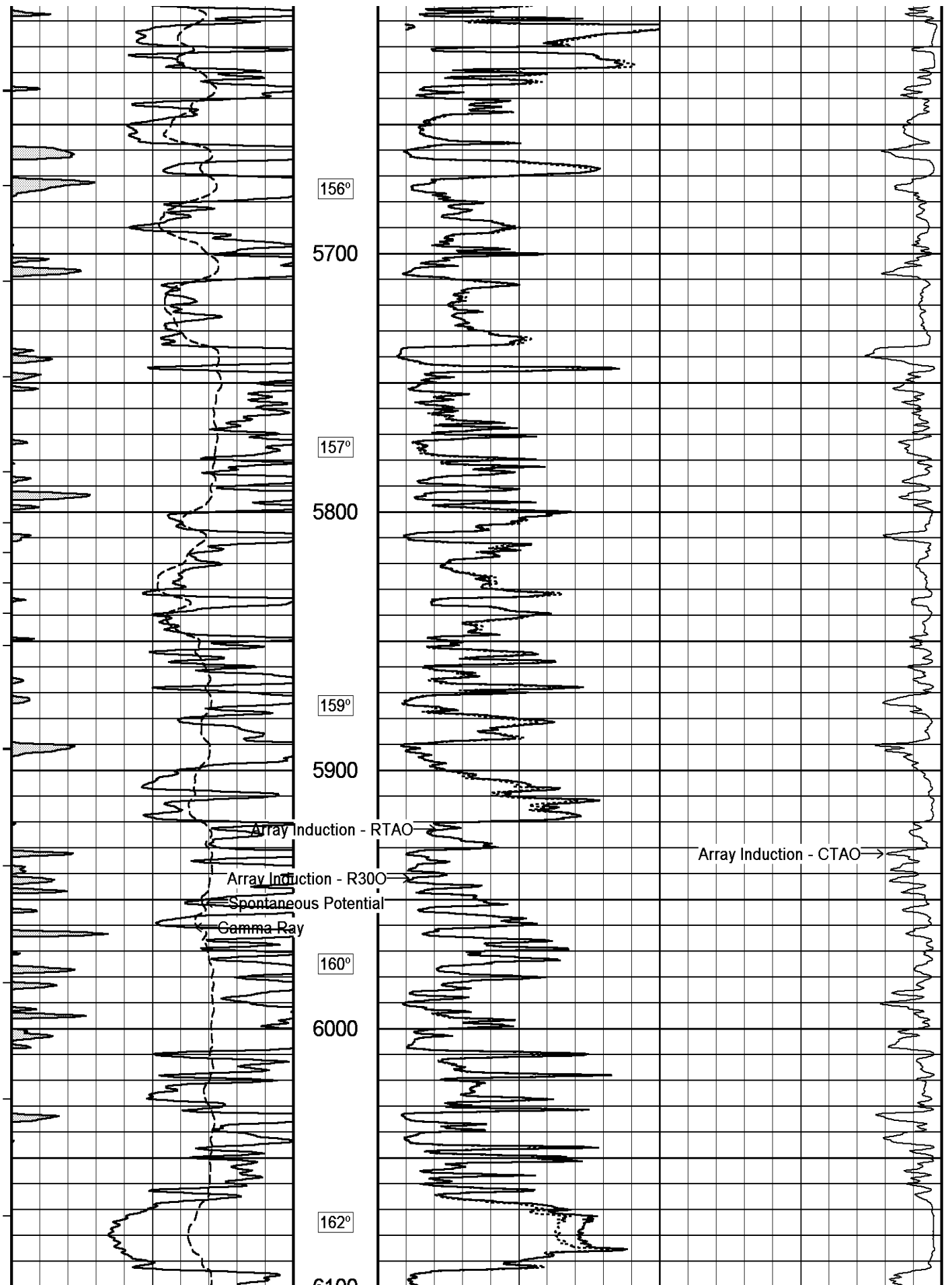
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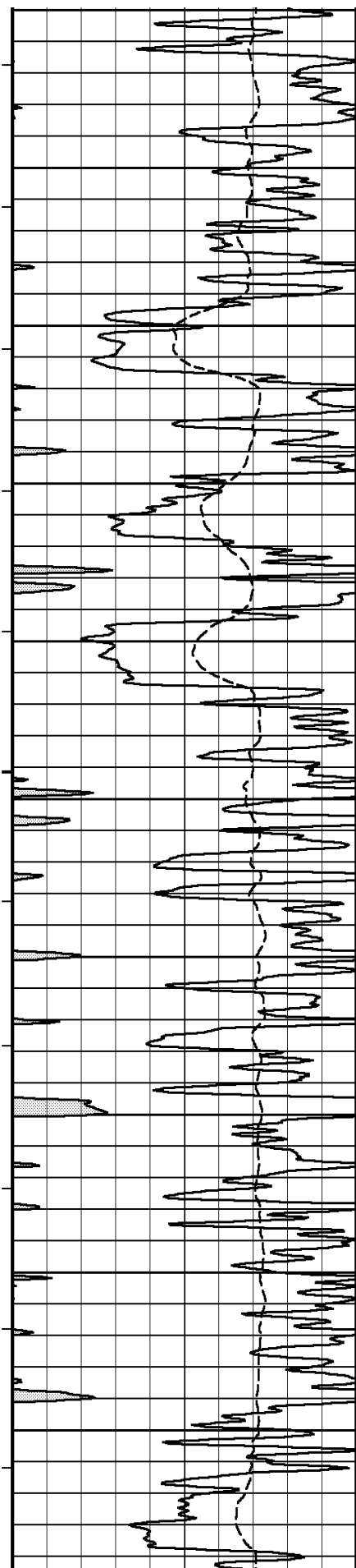
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154°

5600







6100

163°

6200

164°

6300

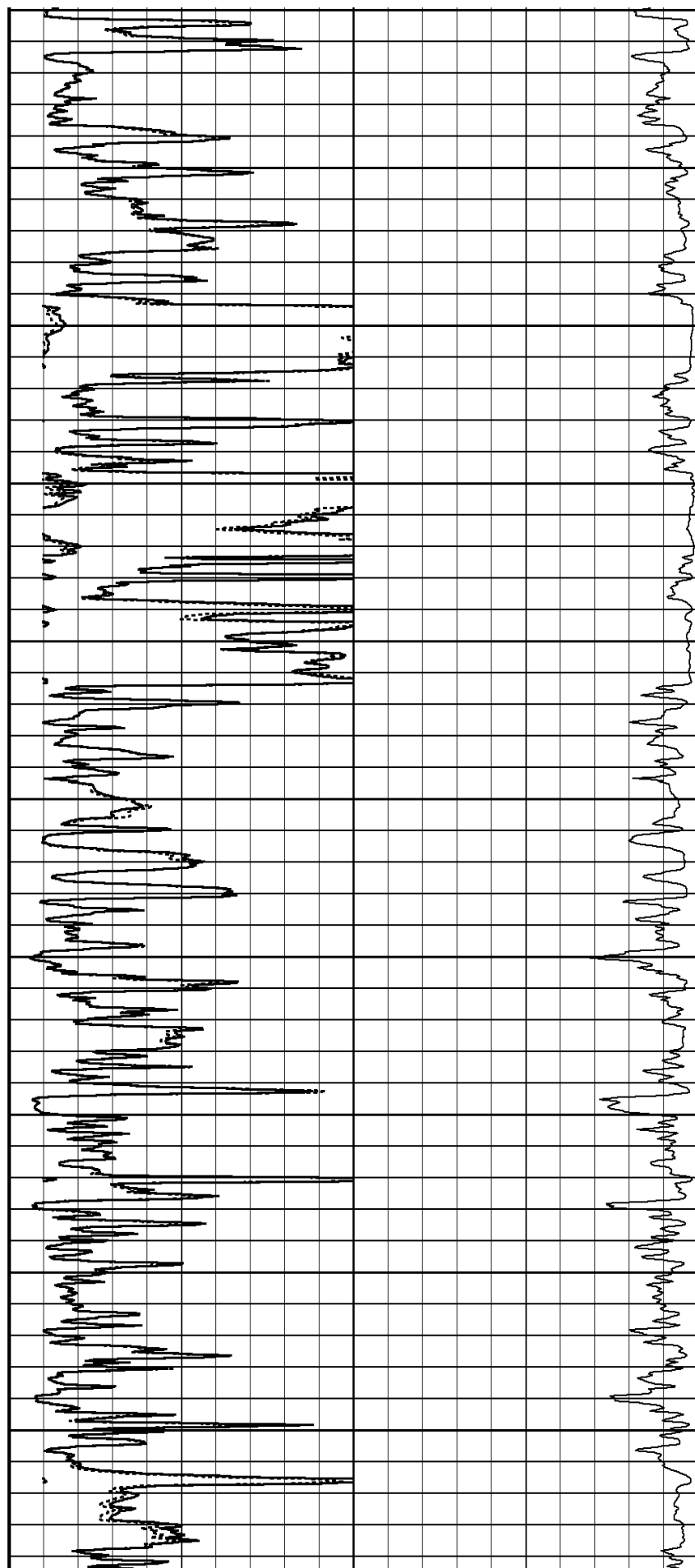
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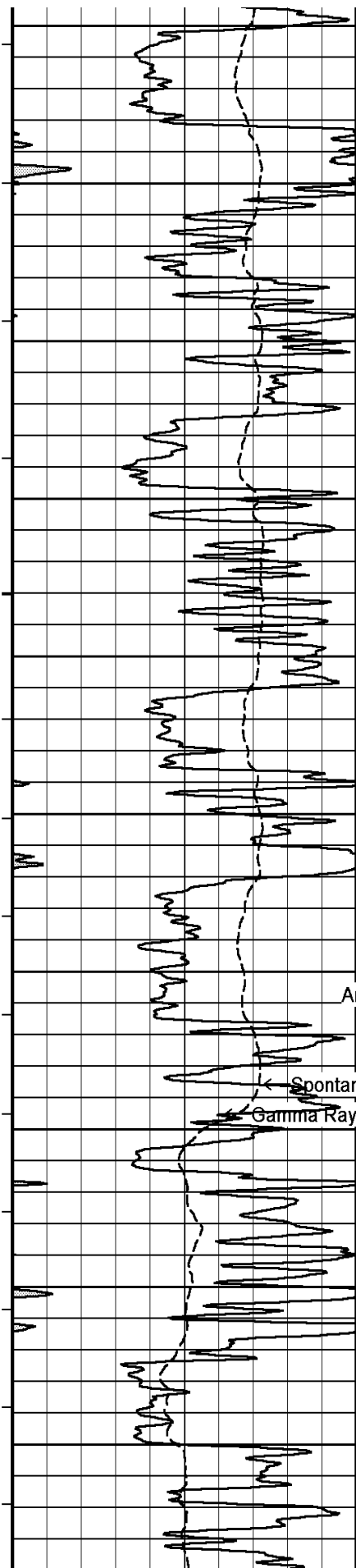
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171°

6500

174°





6600

175°

6700

177°

6800

178°

6900

Array Induction - RTAO

Array Induction - R300

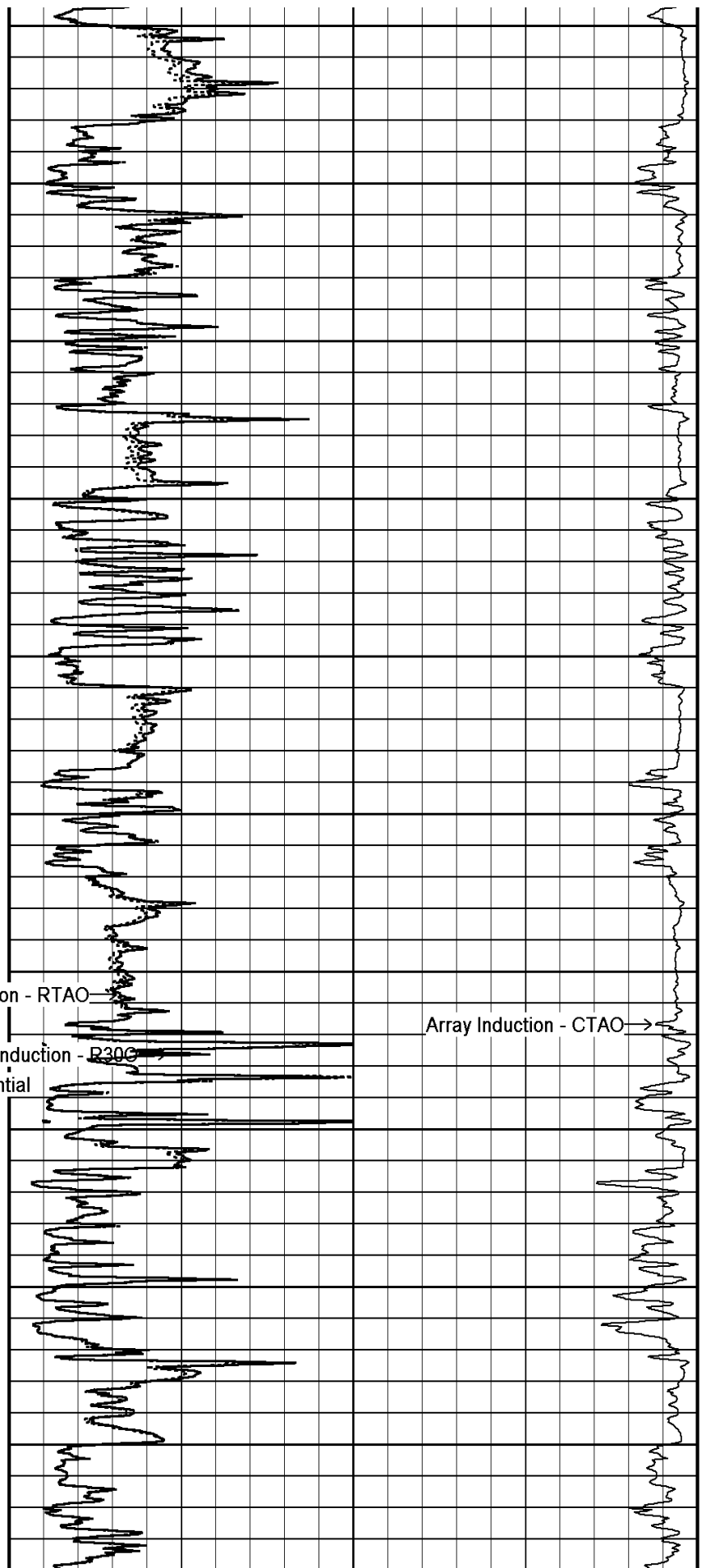
Spontaneous Potential

Gamma Ray

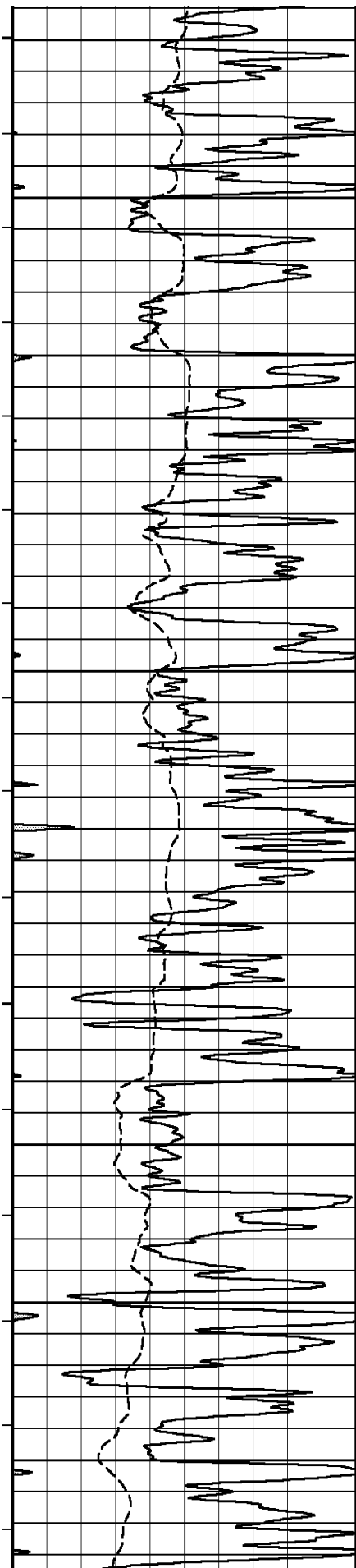
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7000

181°



Array Induction - CTAO



7100

181°

7200

183°

7300

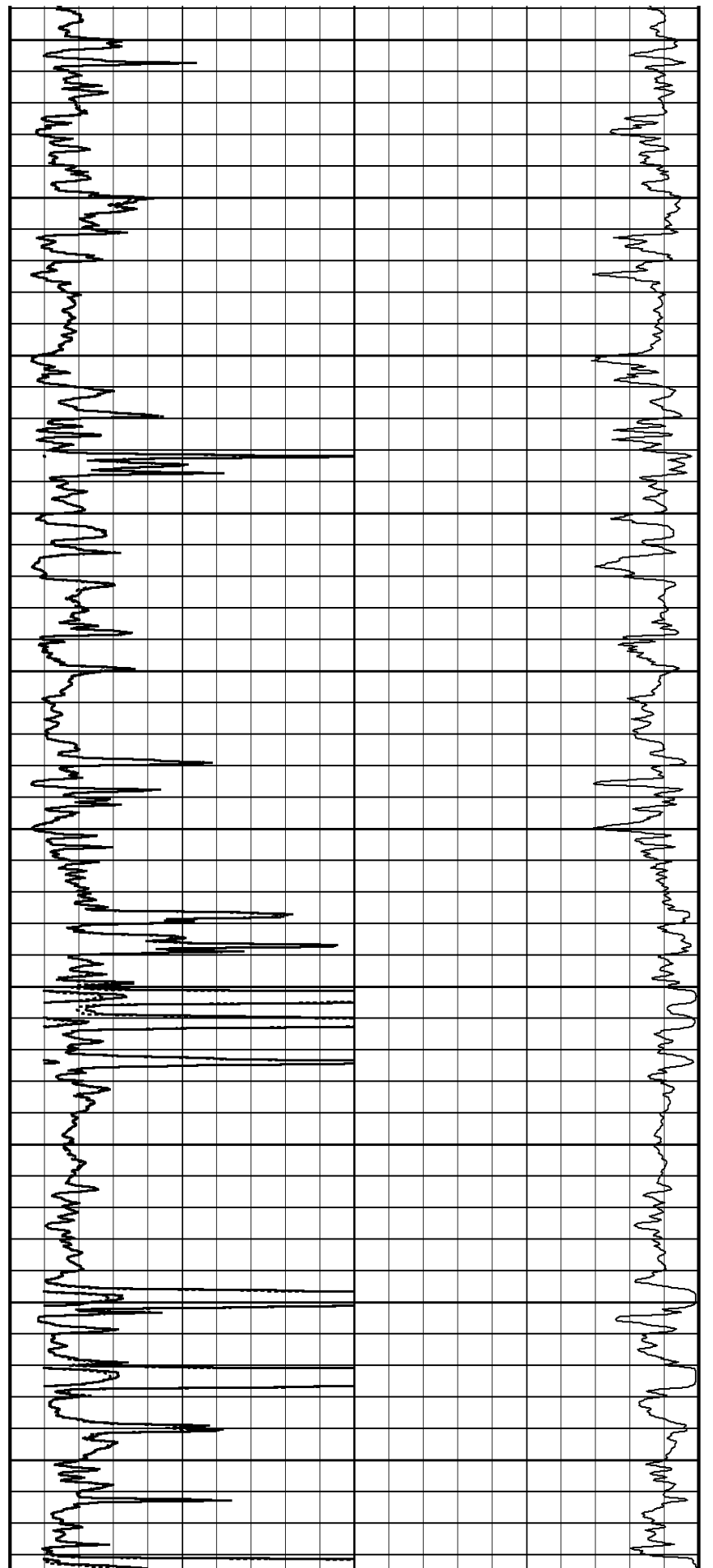
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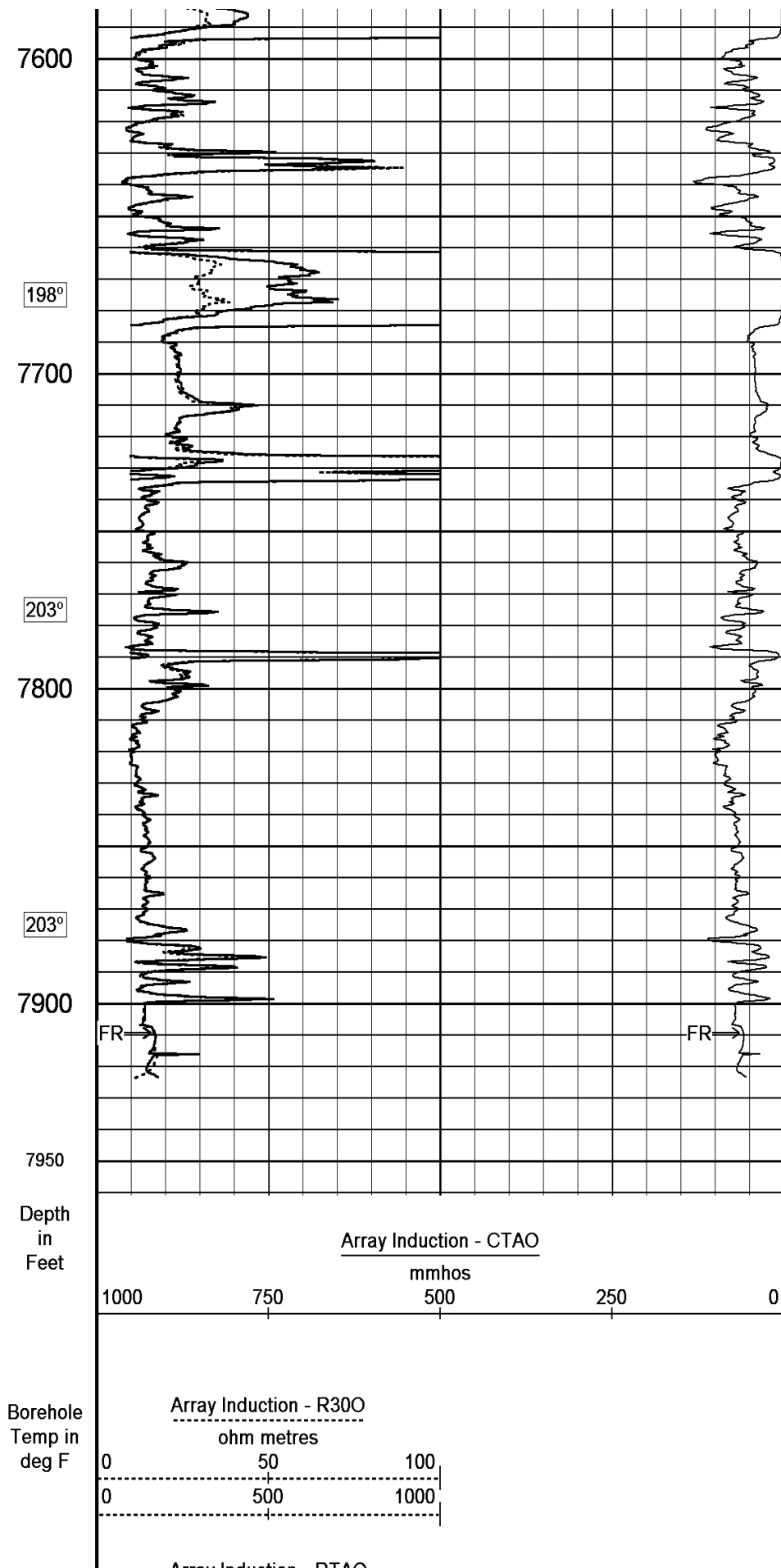
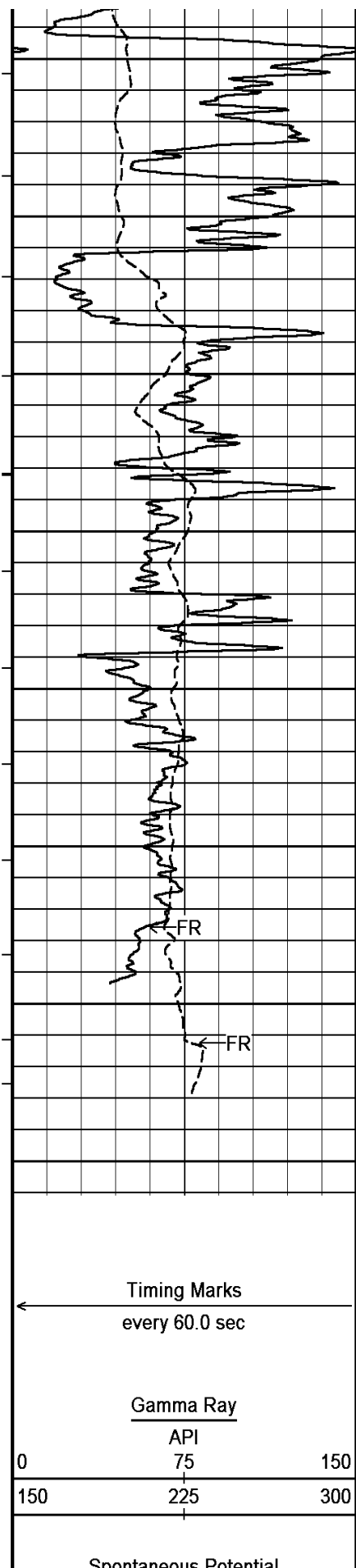
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187°

7500

192°





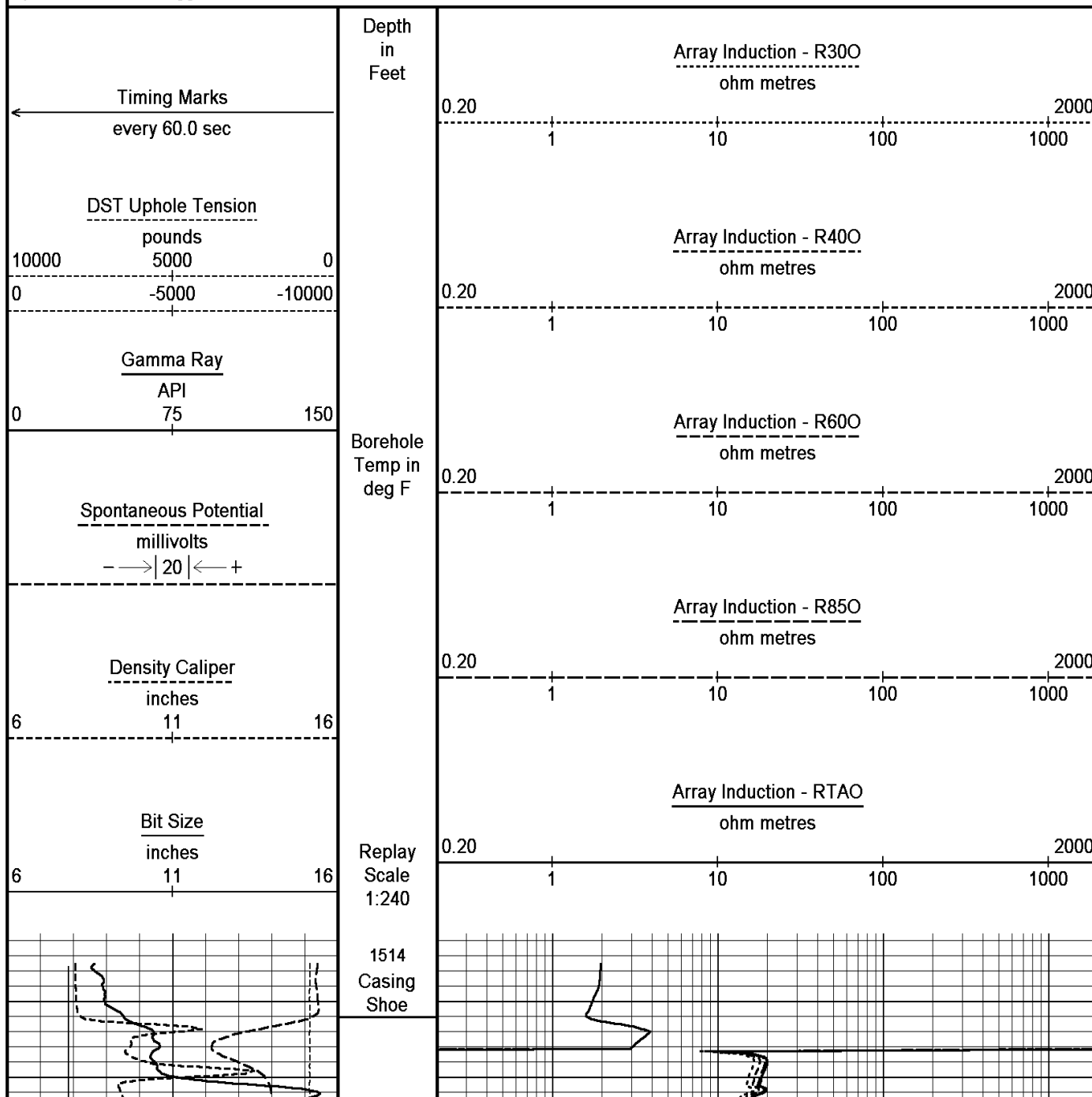
|  |                          |   |
|--|--------------------------|---|
| <u>Spontaneous Potential</u><br>millivolts<br>- →   20   ← + | Replay<br>Scale<br>1:600 | <u>Array Induction - RTAO</u><br>ohm metres<br>0      50      100<br>0      500      1000 |
|--|--------------------------|---|

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 15-JAN-2011 20:45  
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System Versions: Logged with 11.01.2198 Plotted with 11.01.2198

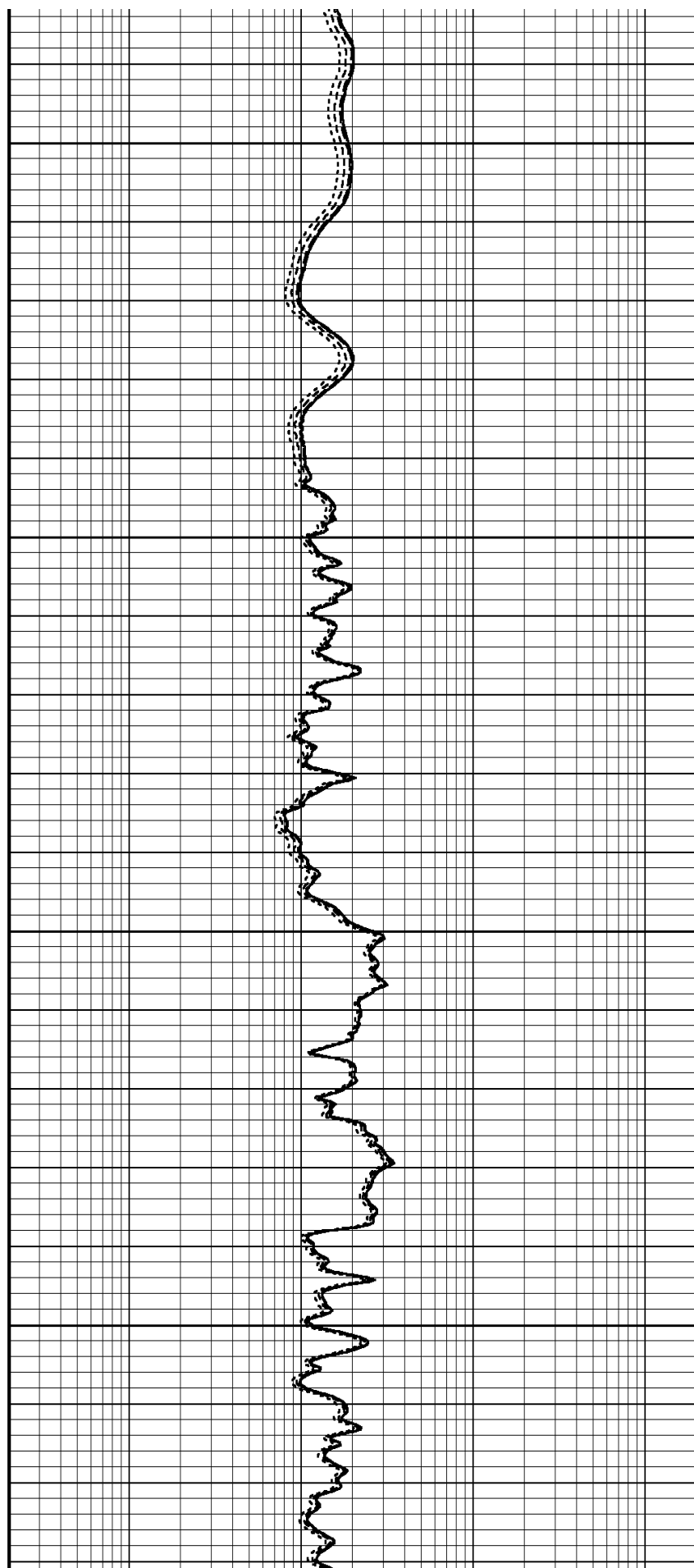
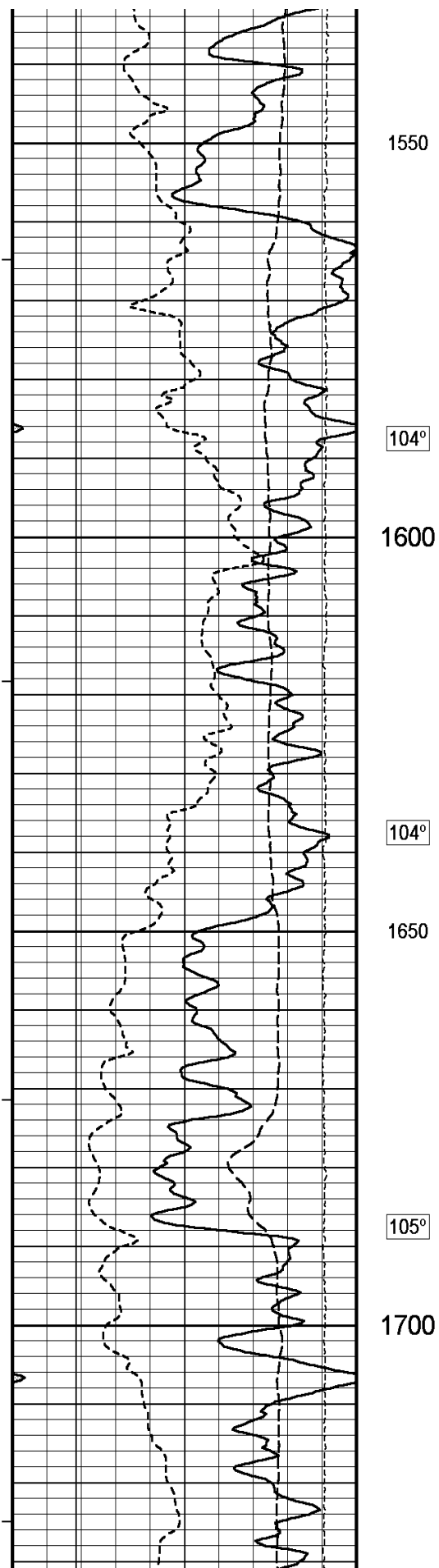
↑
2 INCH INDUCTION LOG
↑

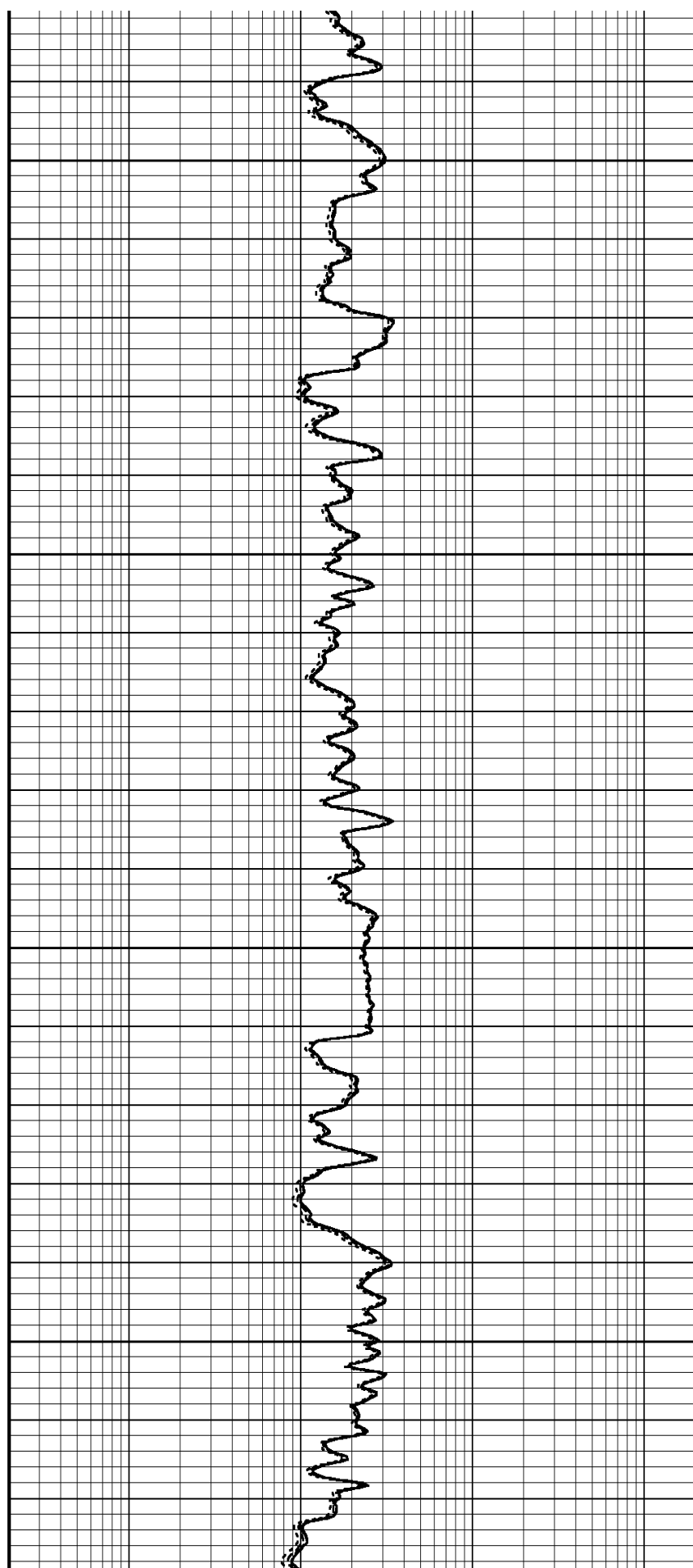
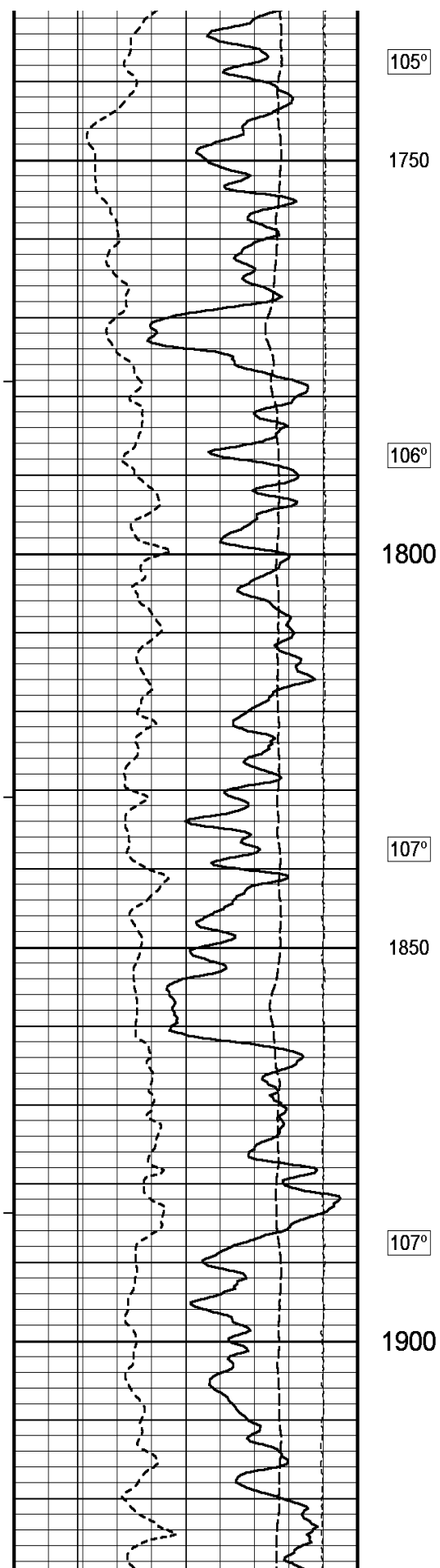
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5 INCH INDUCTION LOG
↓

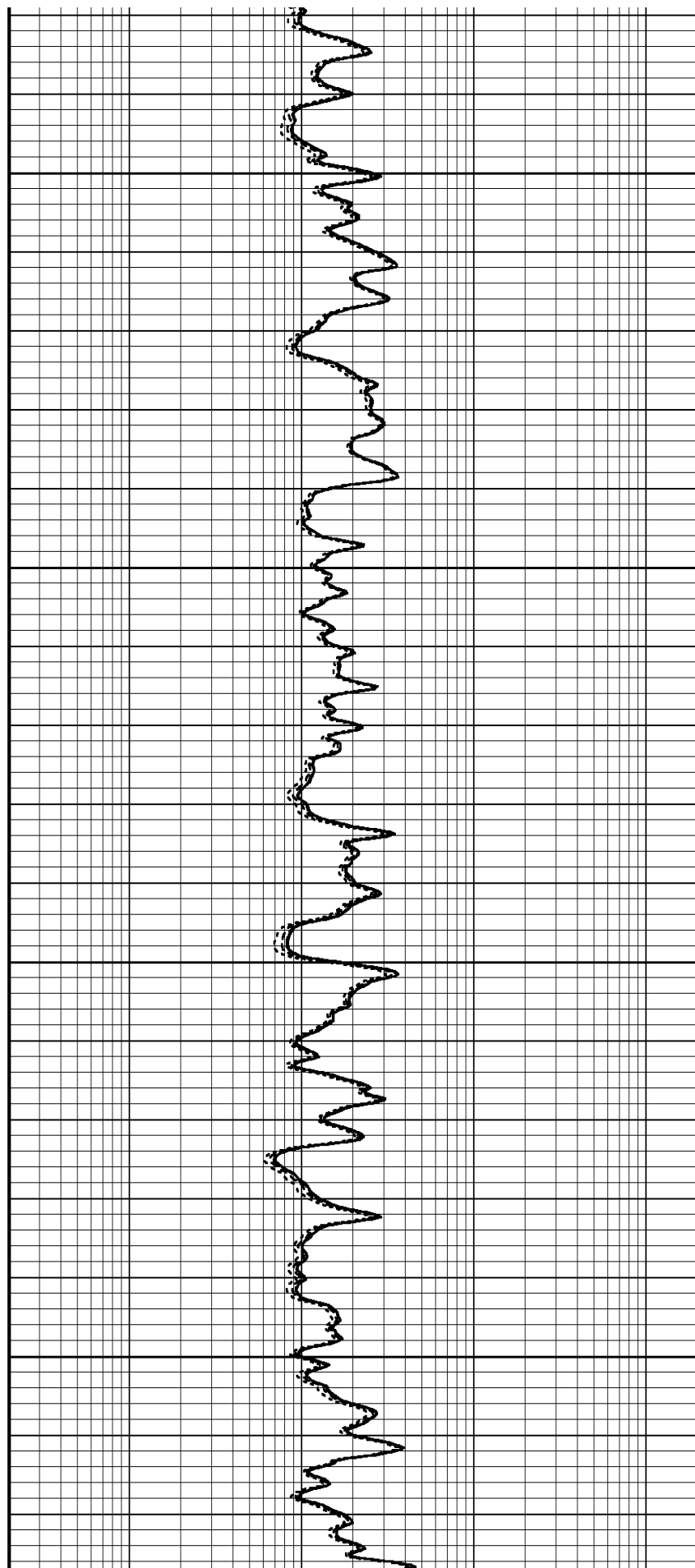
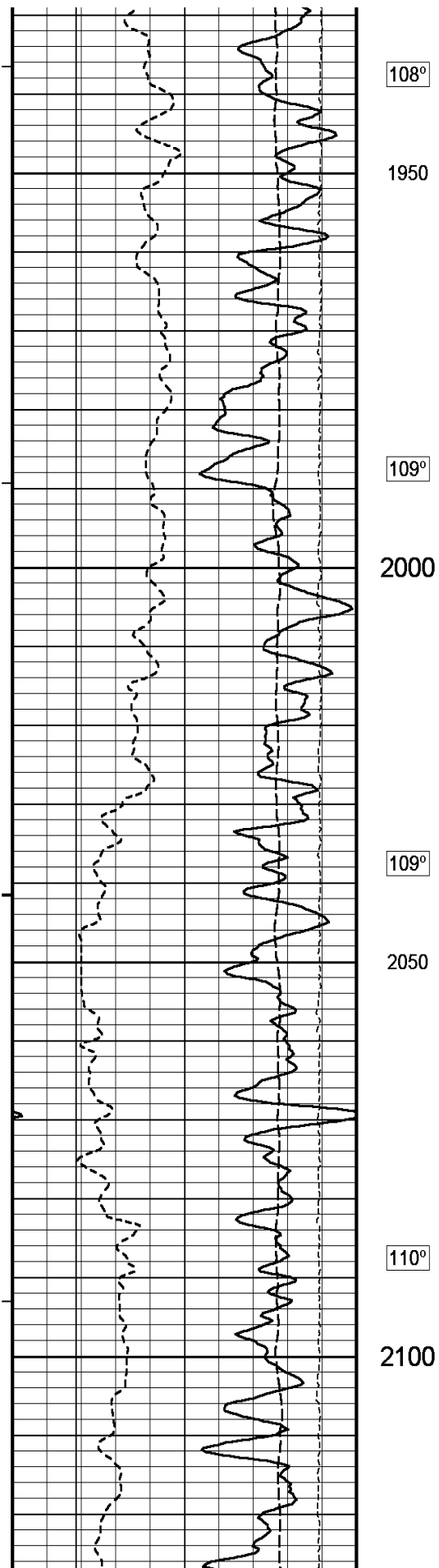
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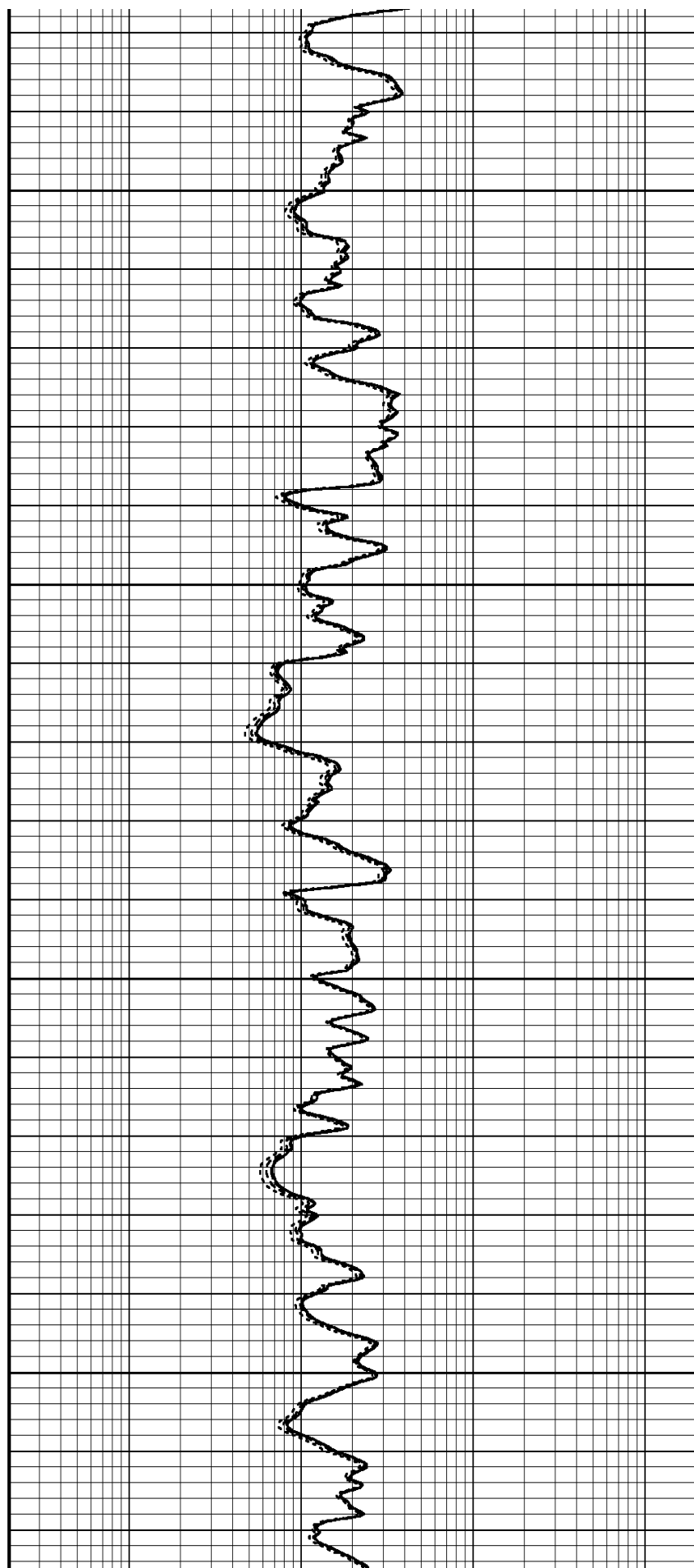
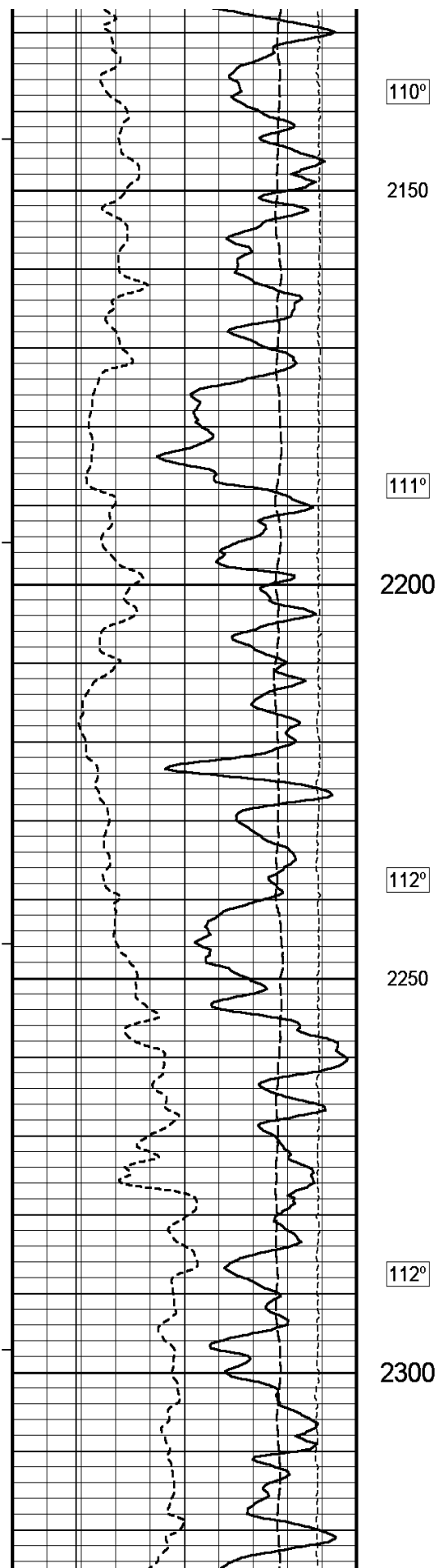


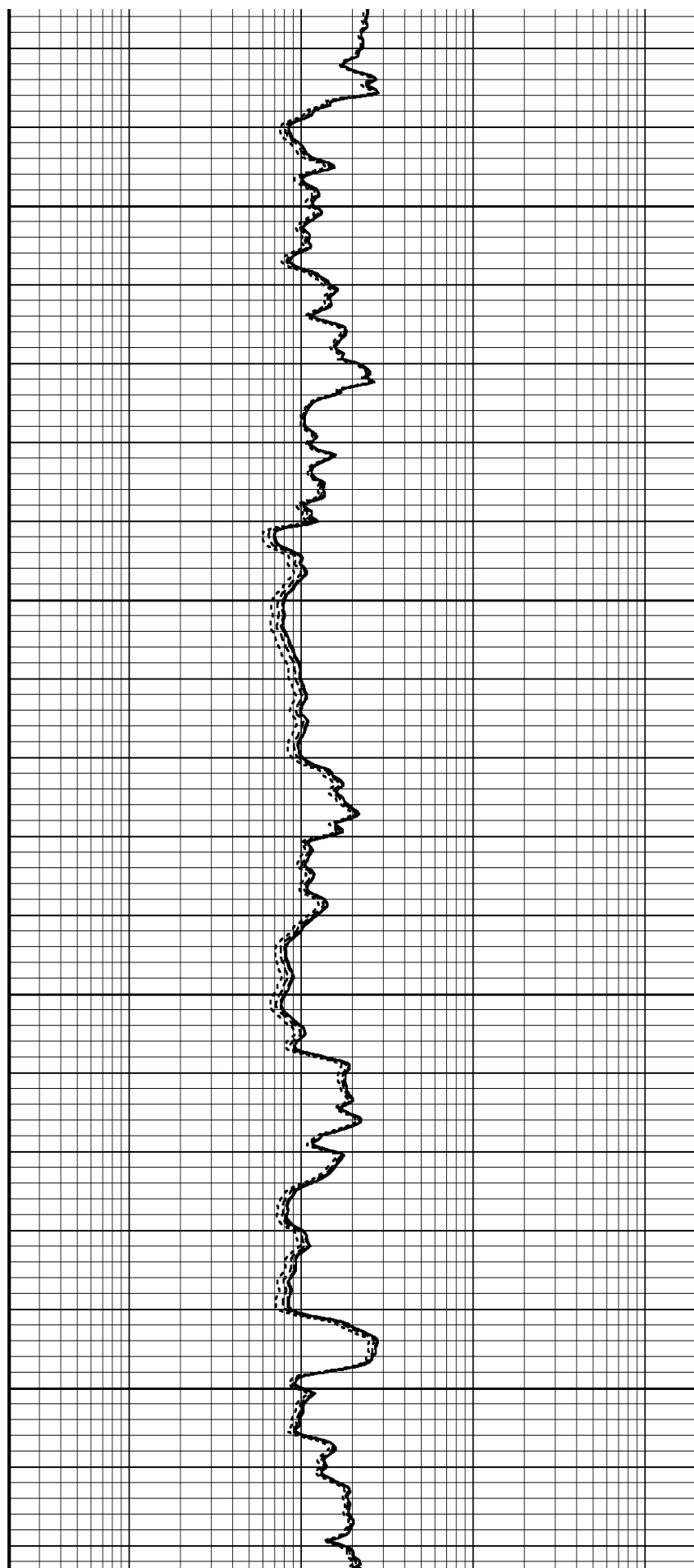
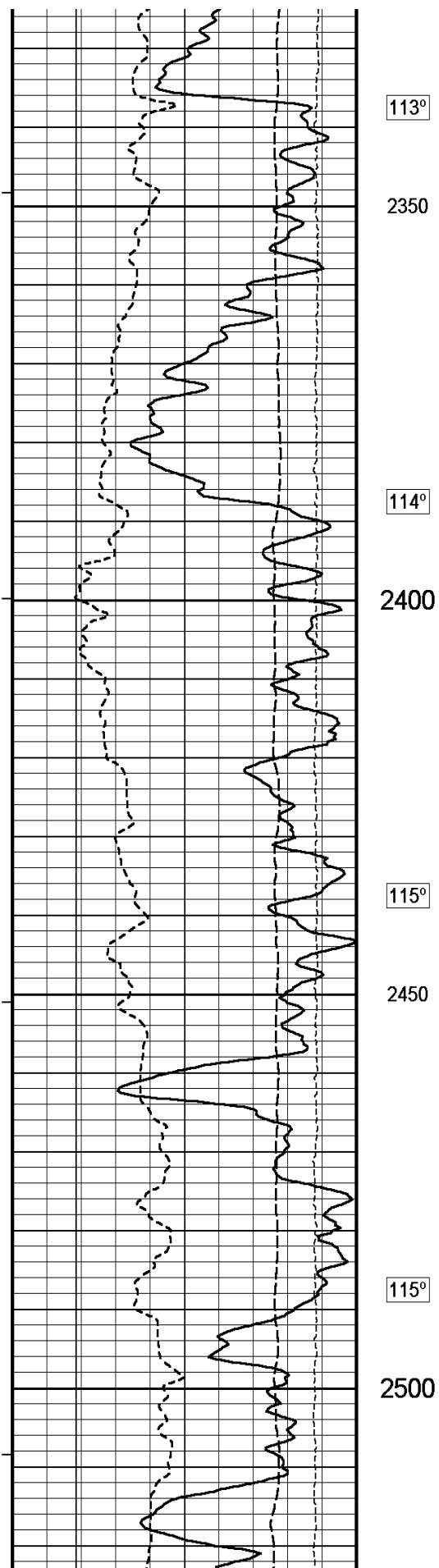


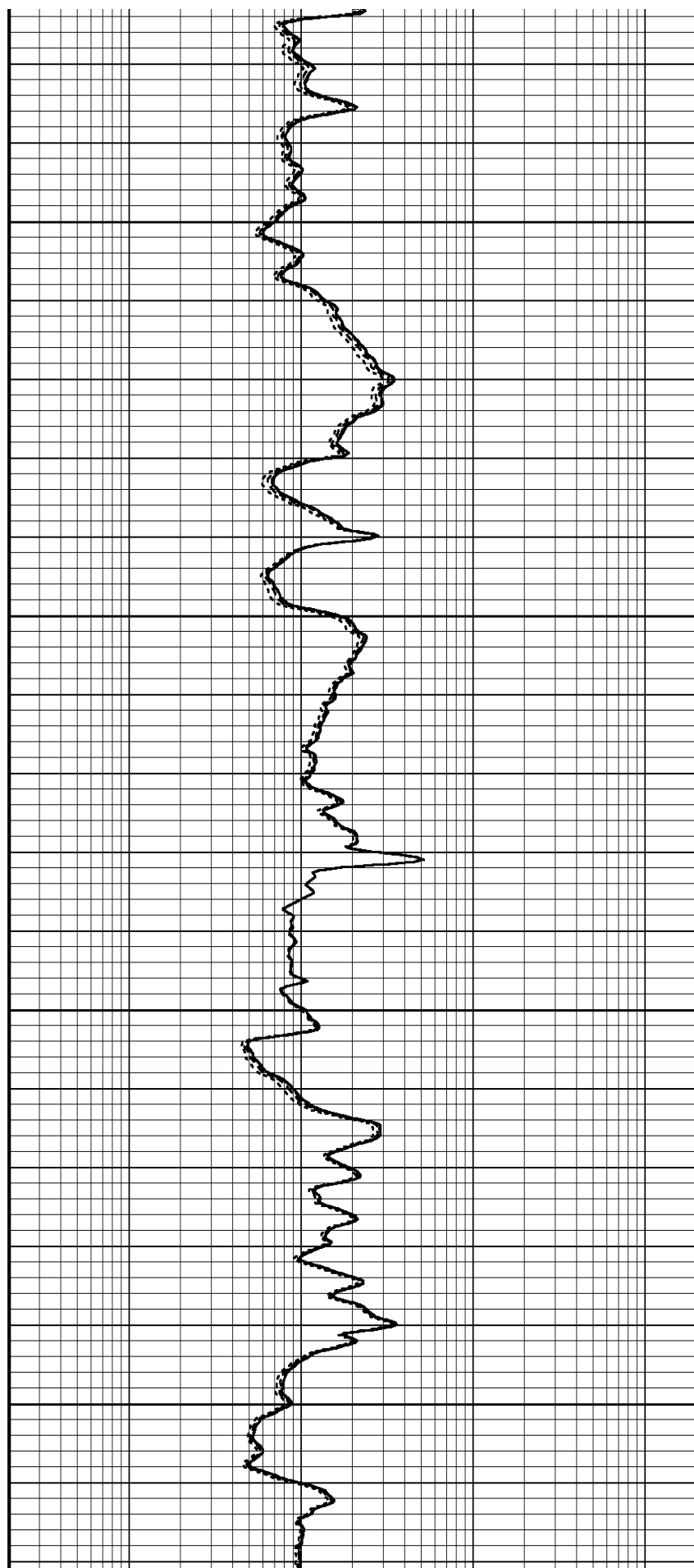
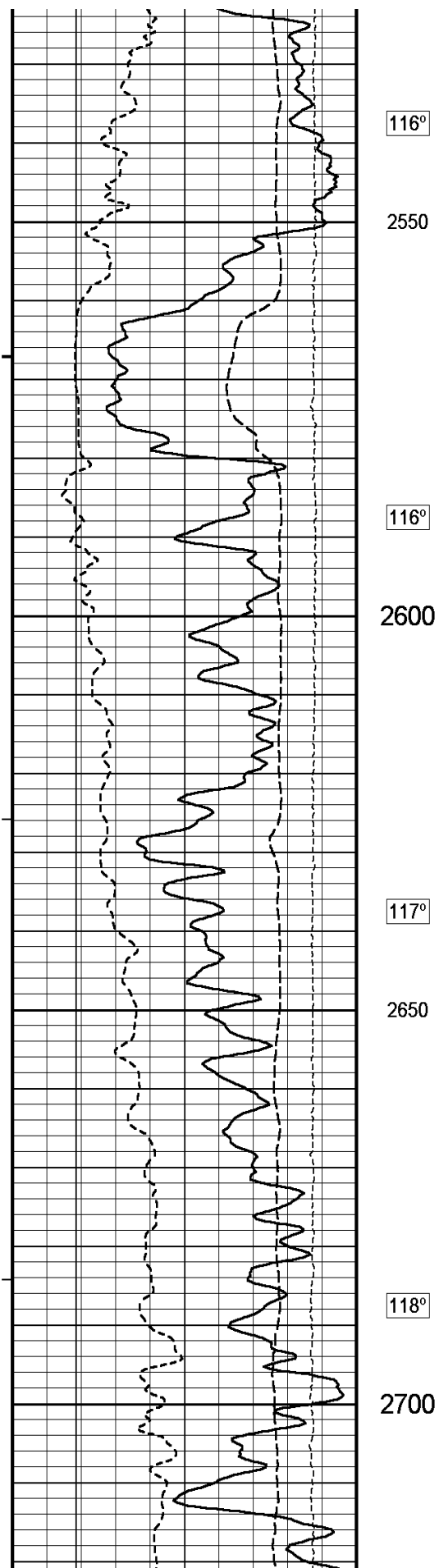


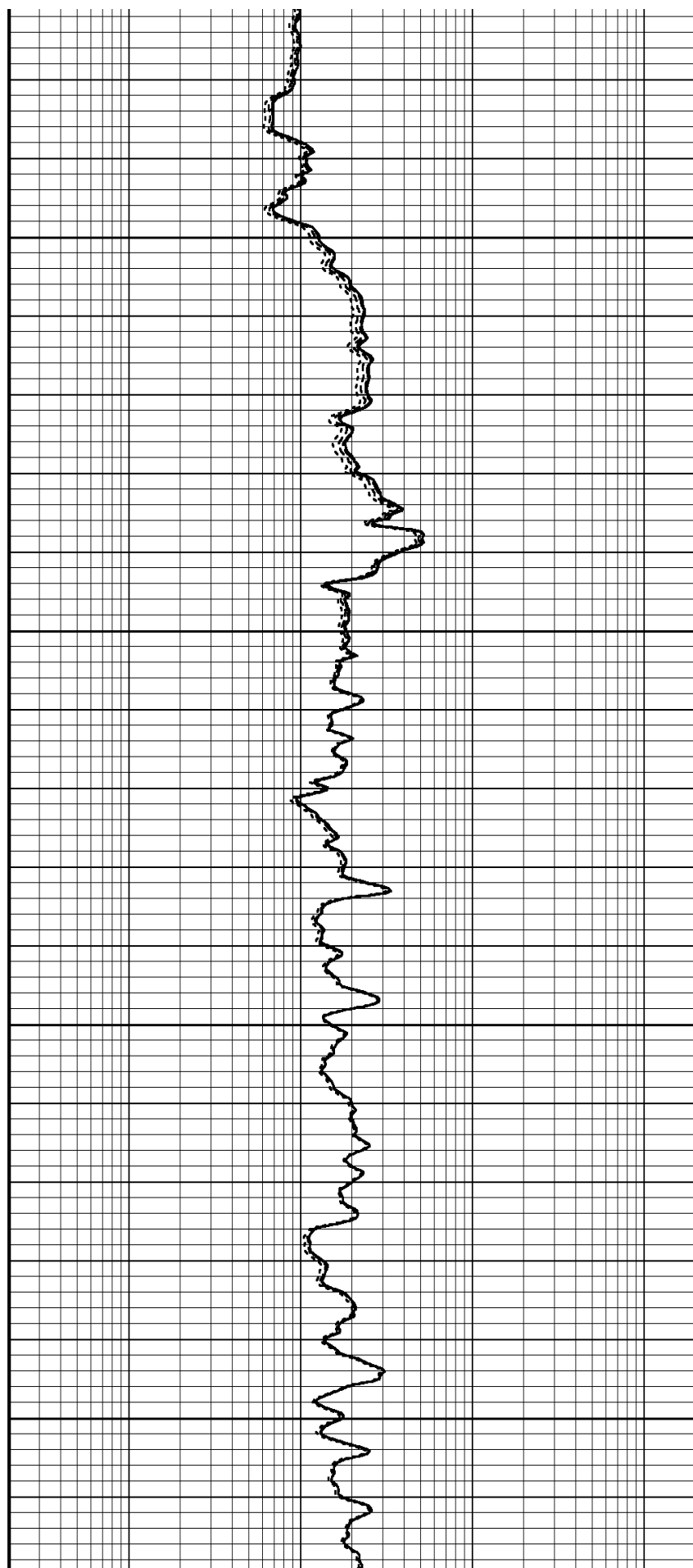
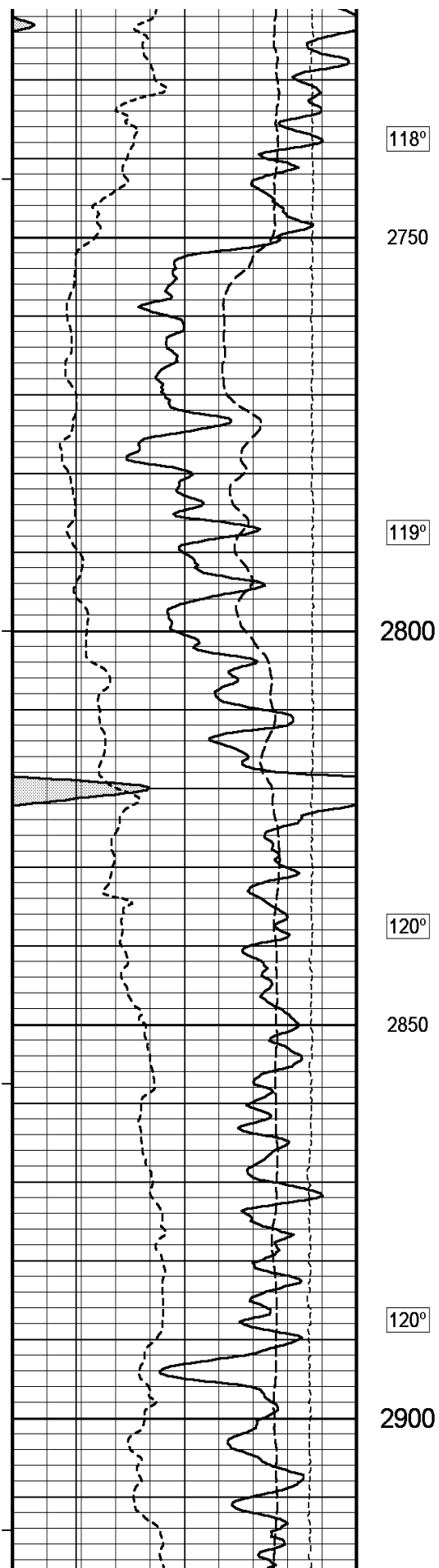


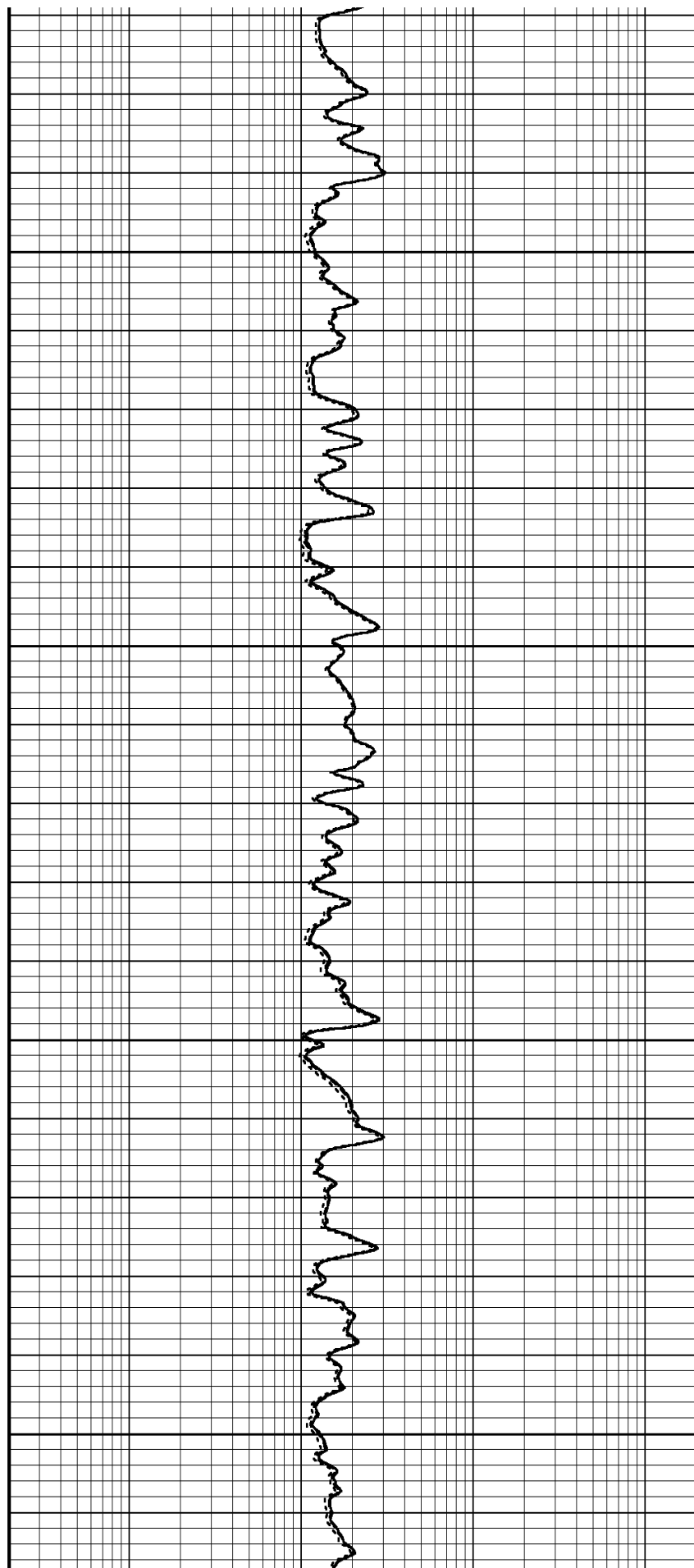
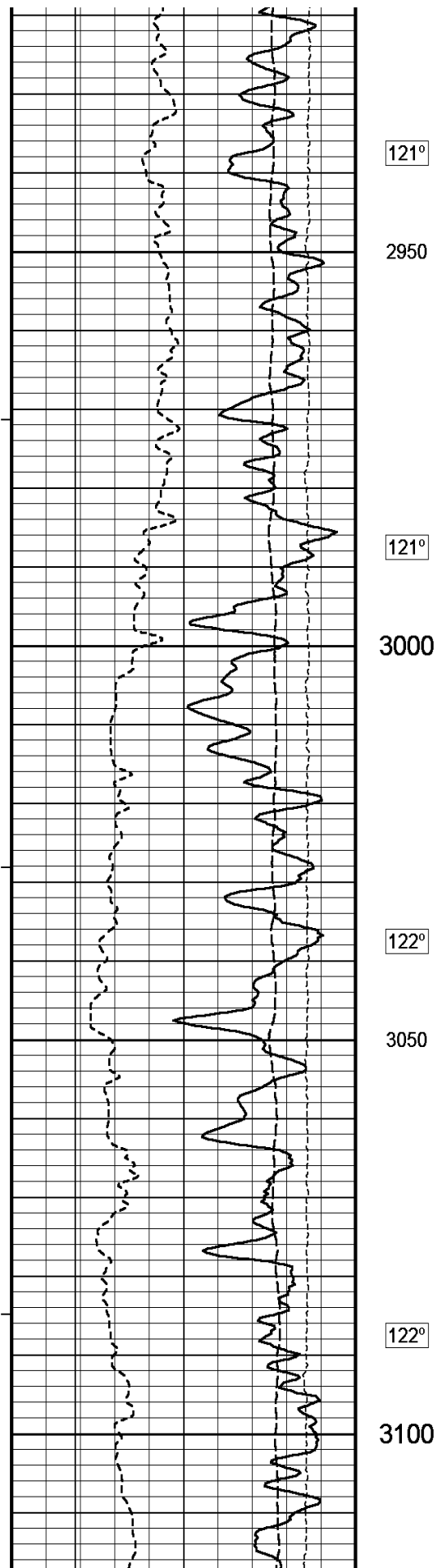




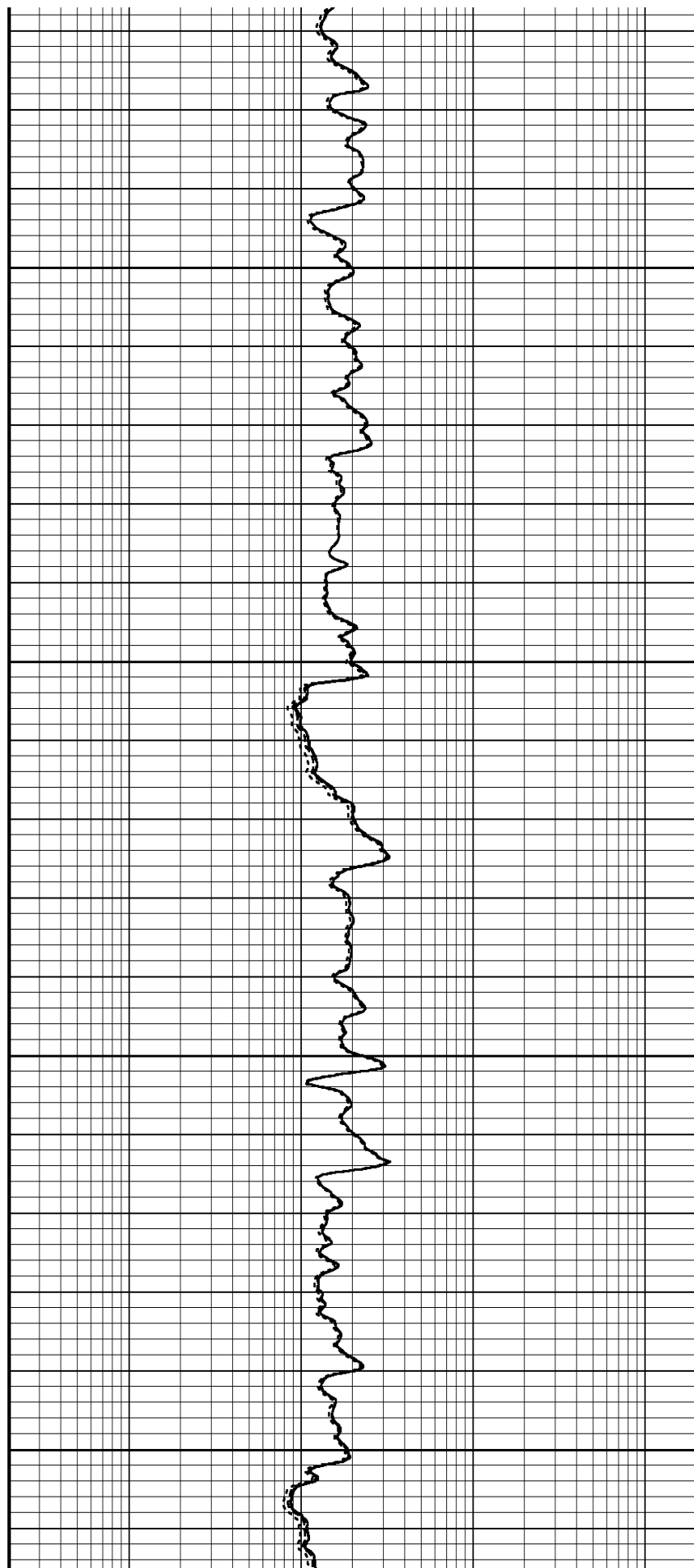
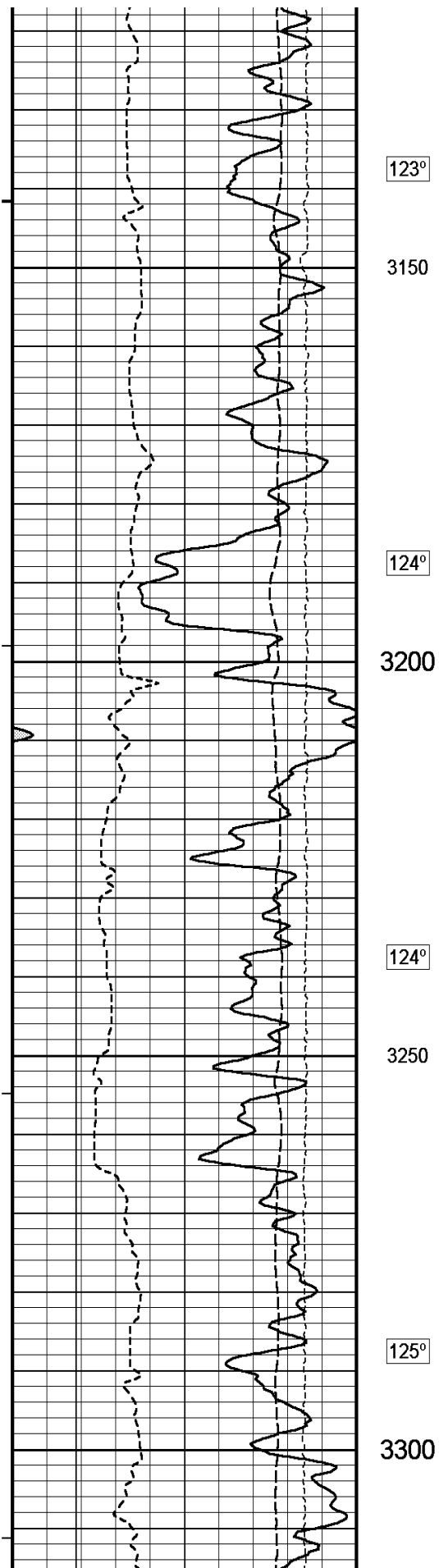


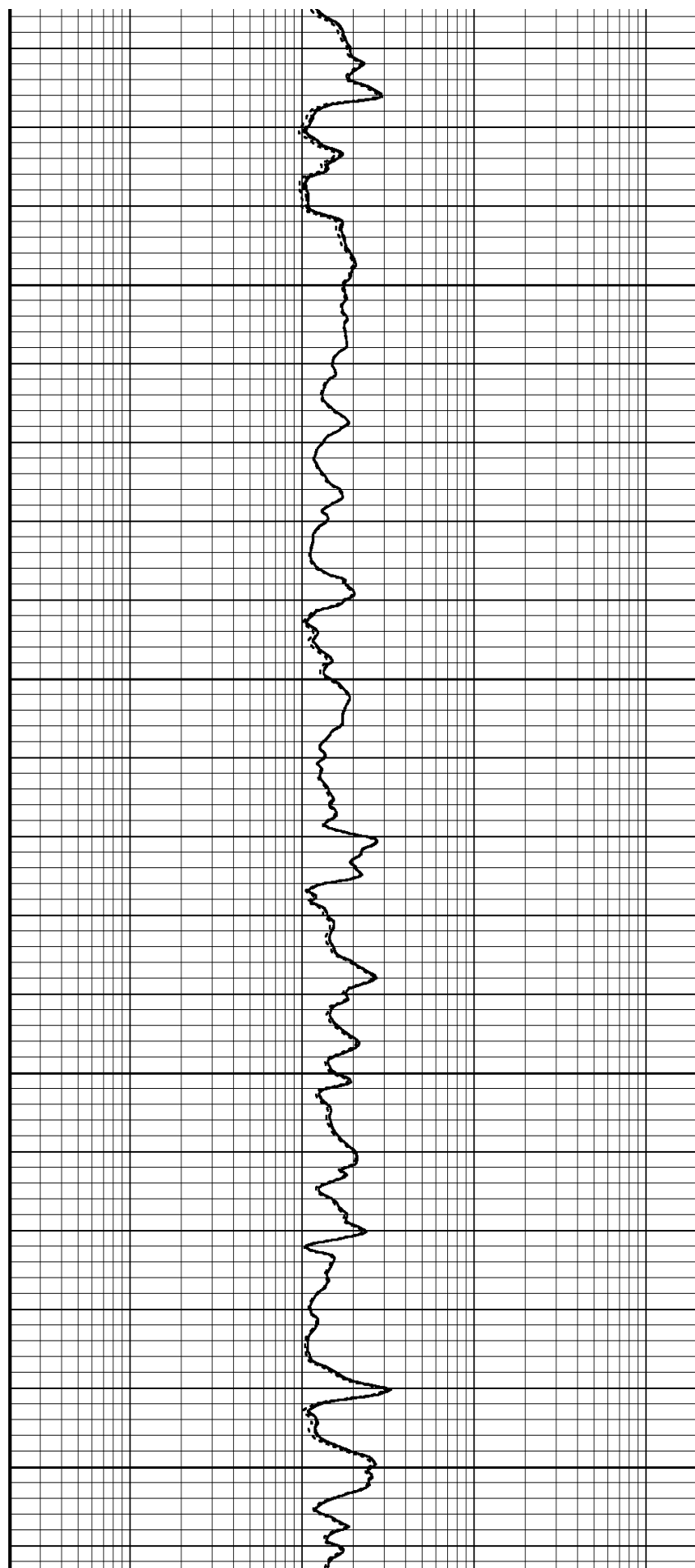
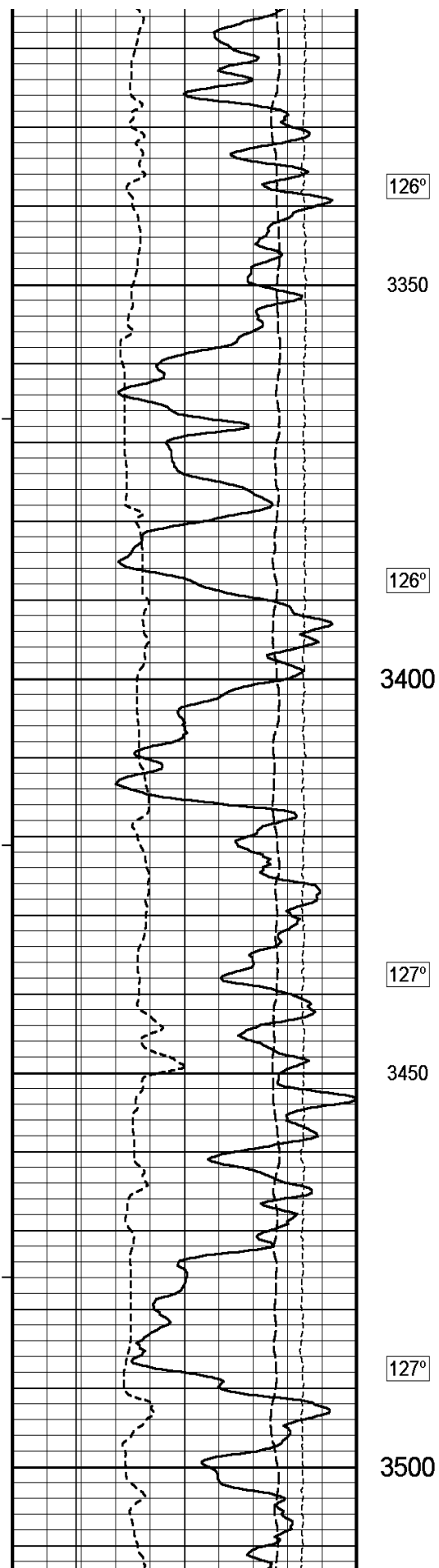


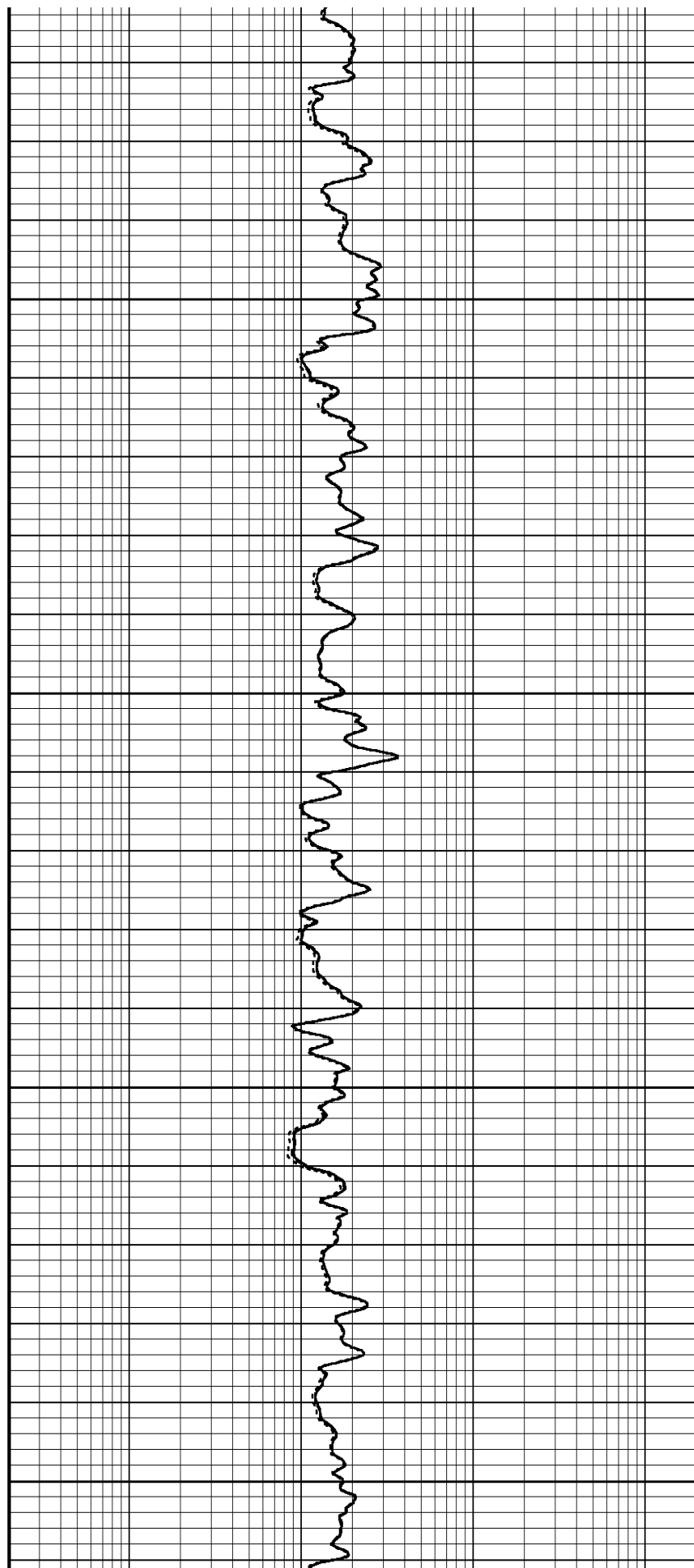
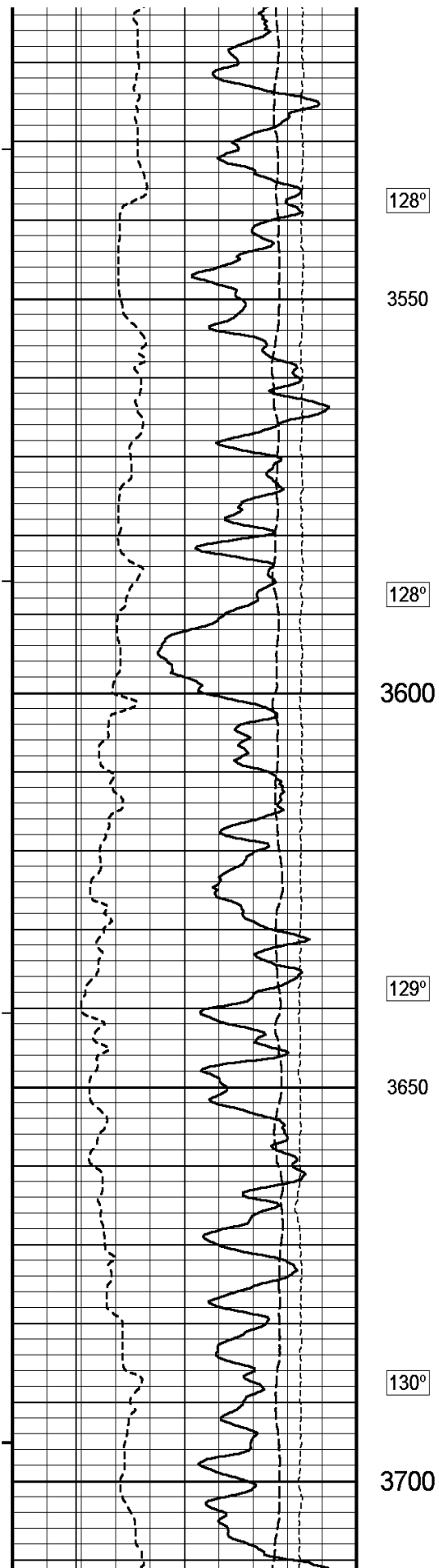


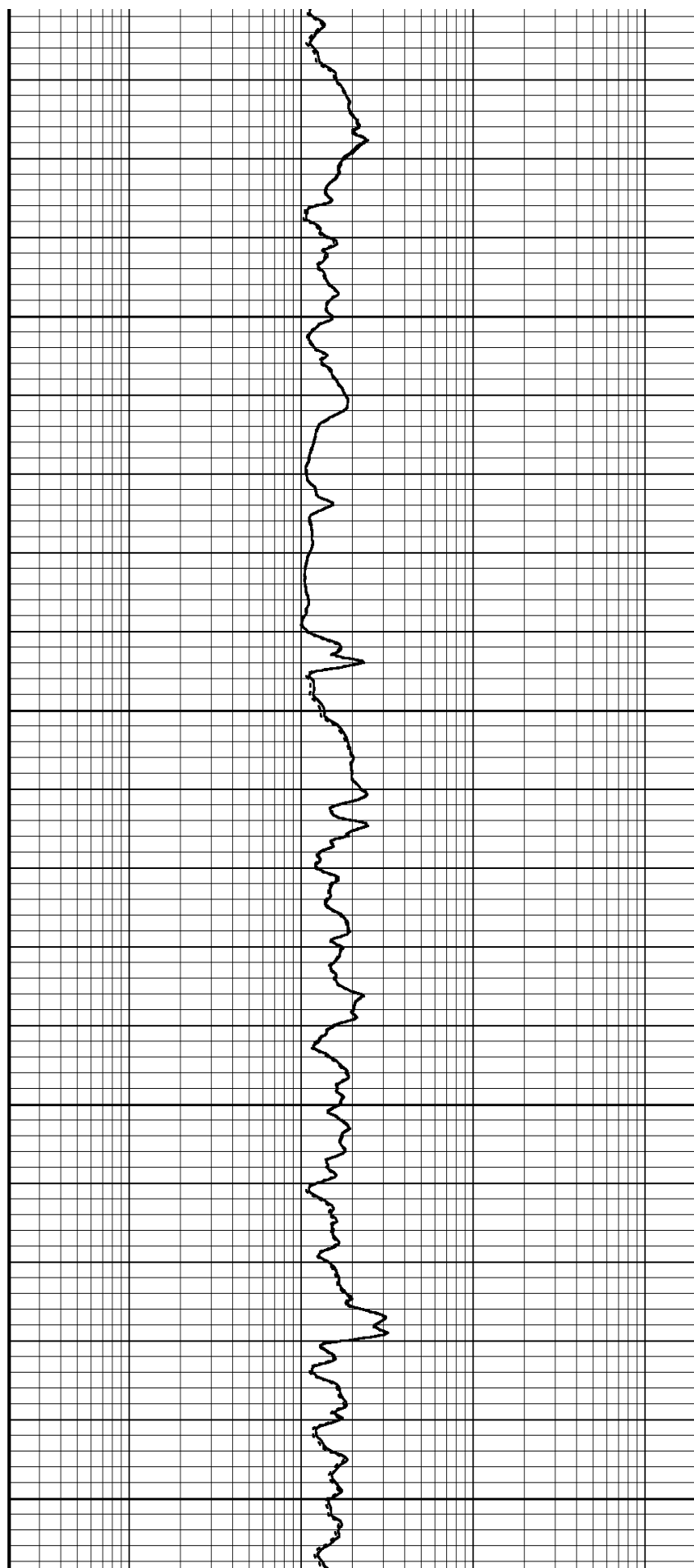
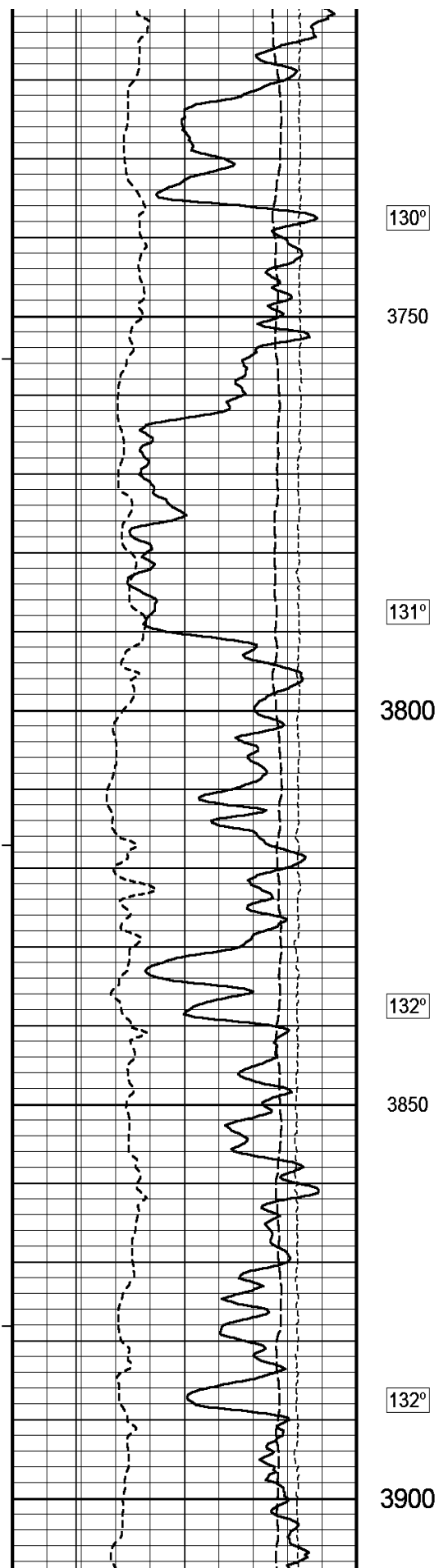


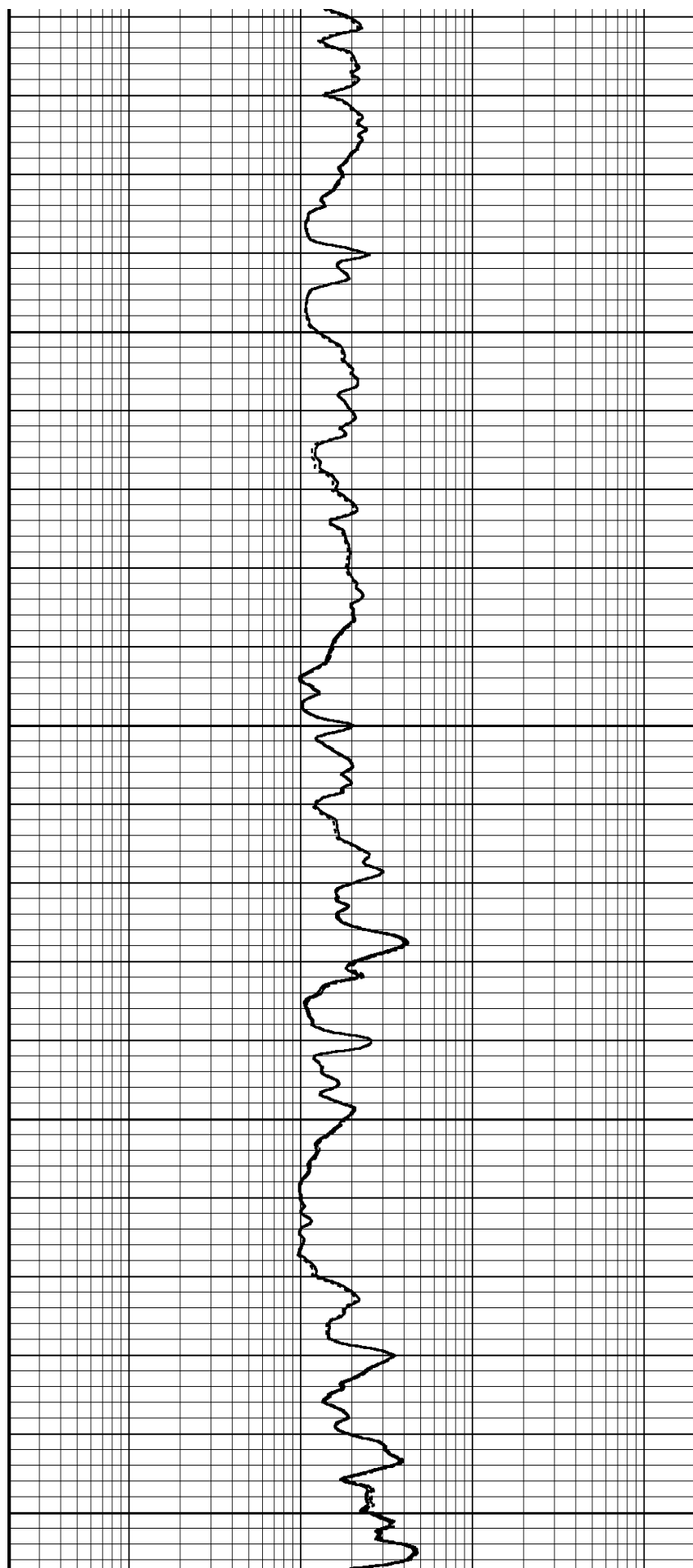
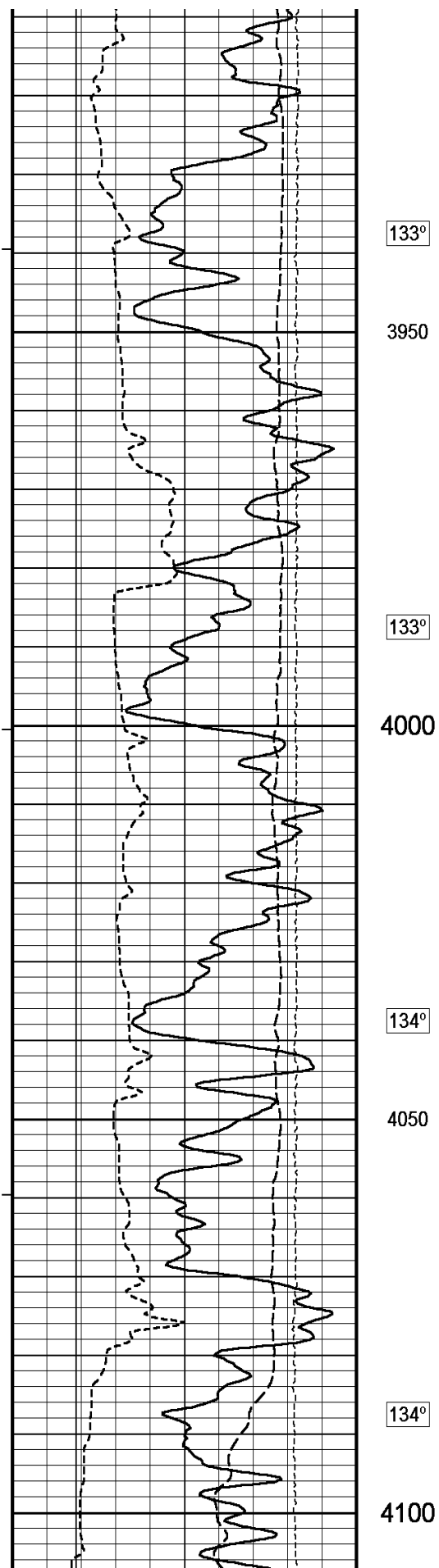


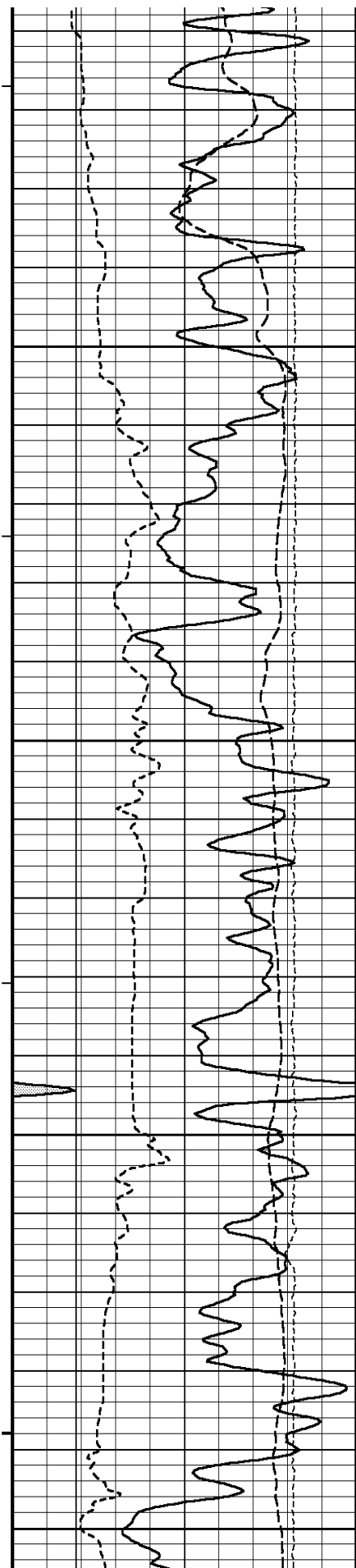












135°

4150

136°

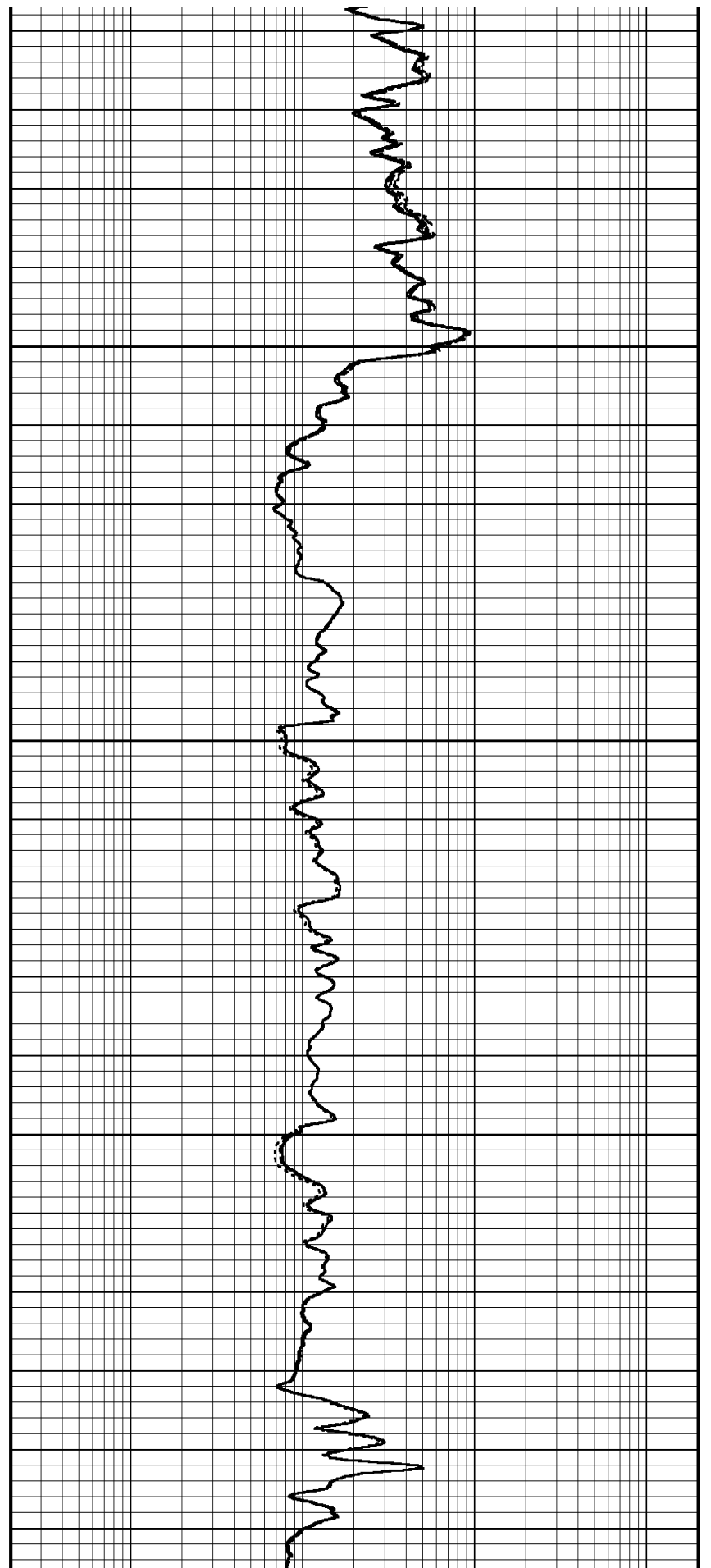
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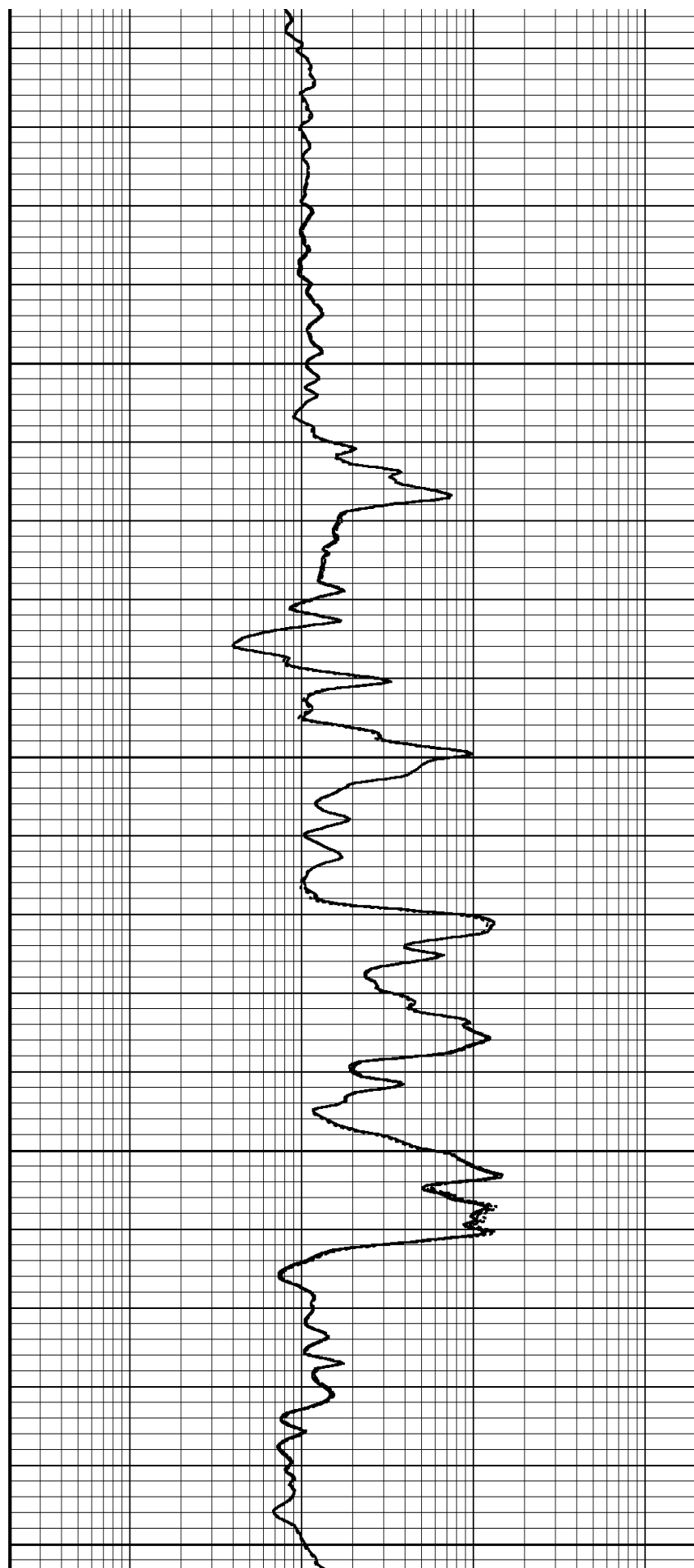
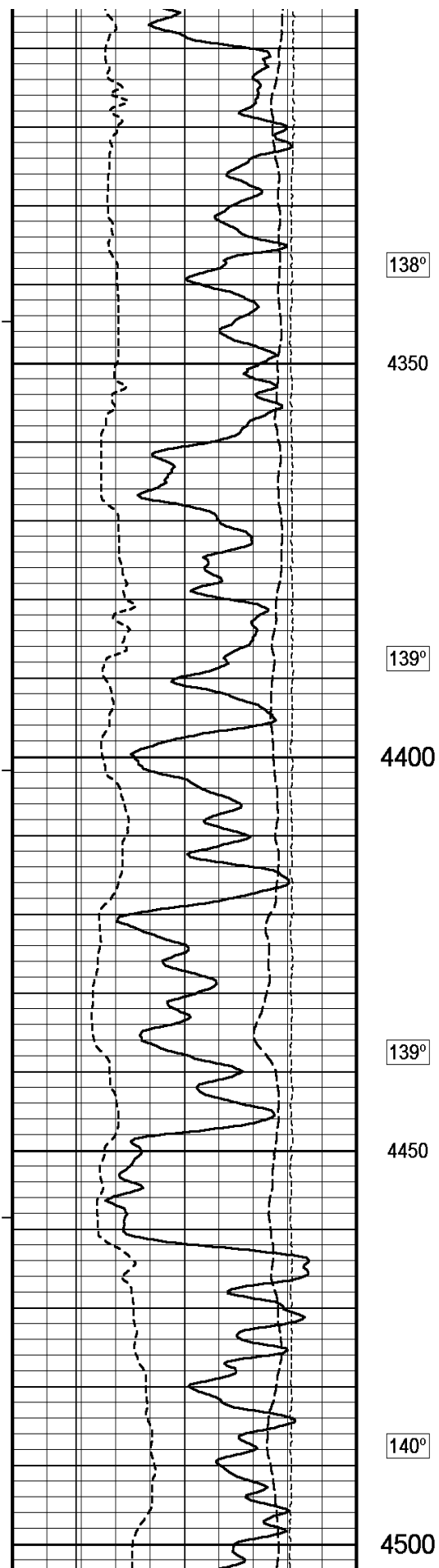
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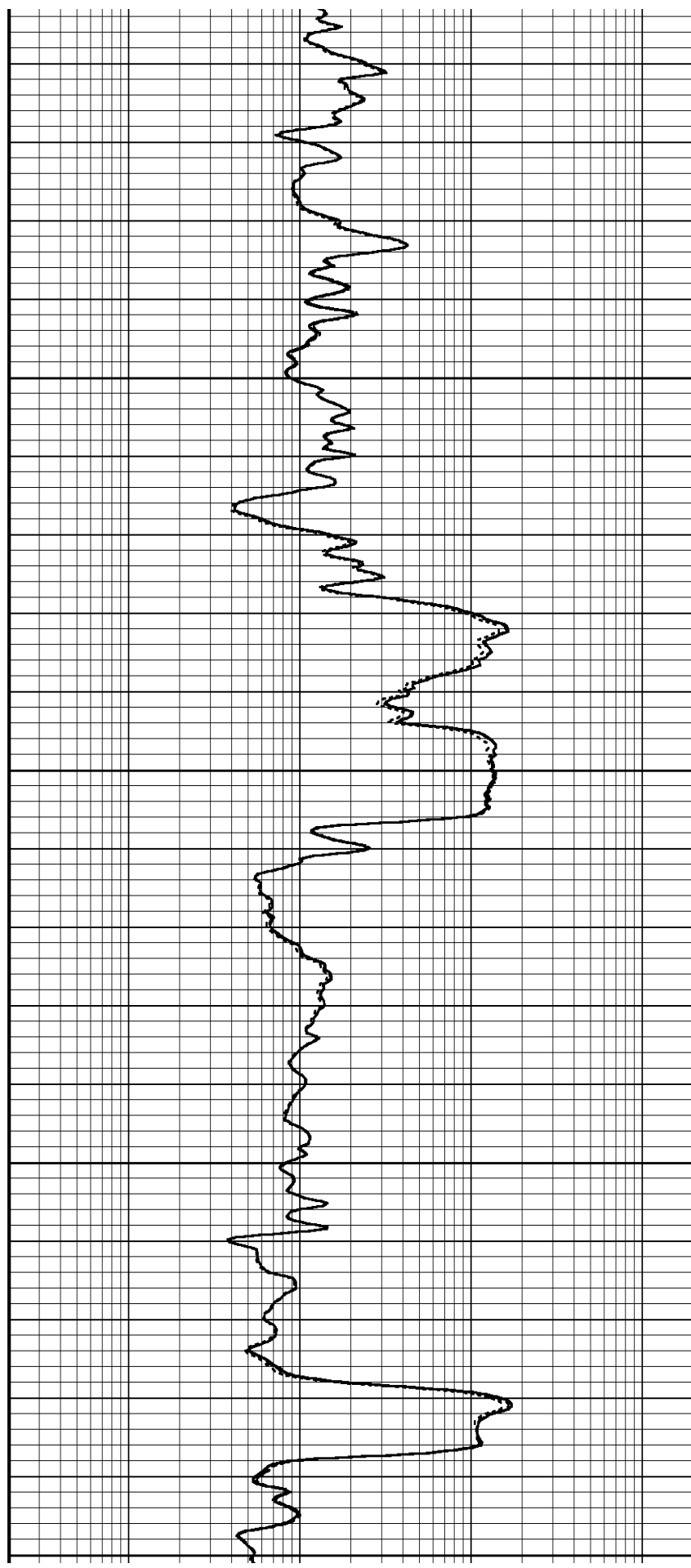
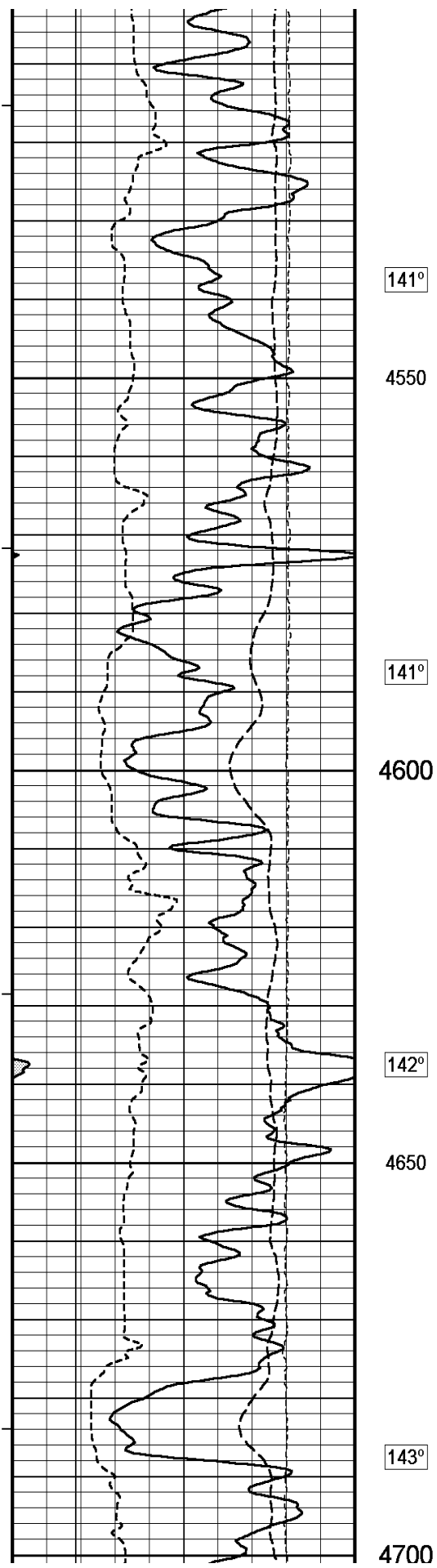
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137°

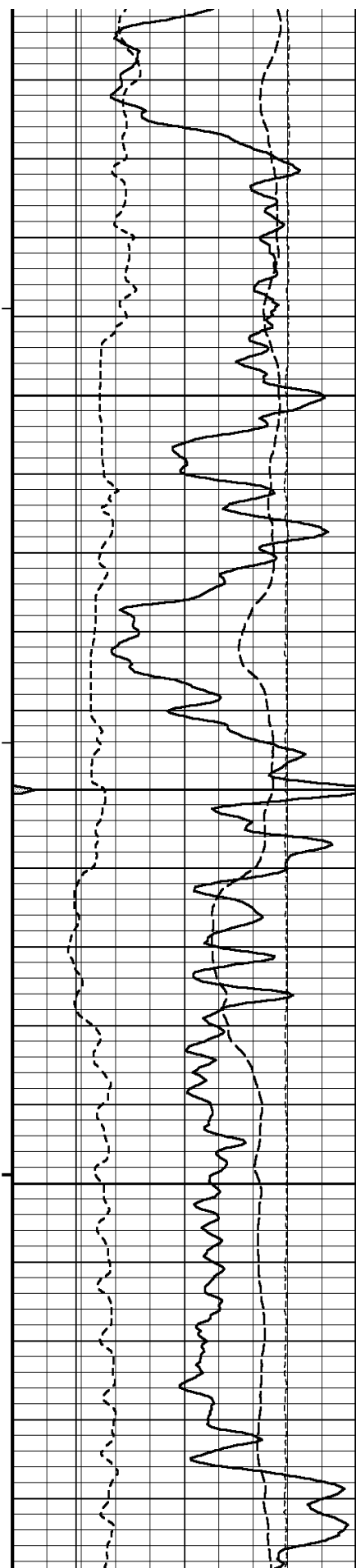
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144°

4750

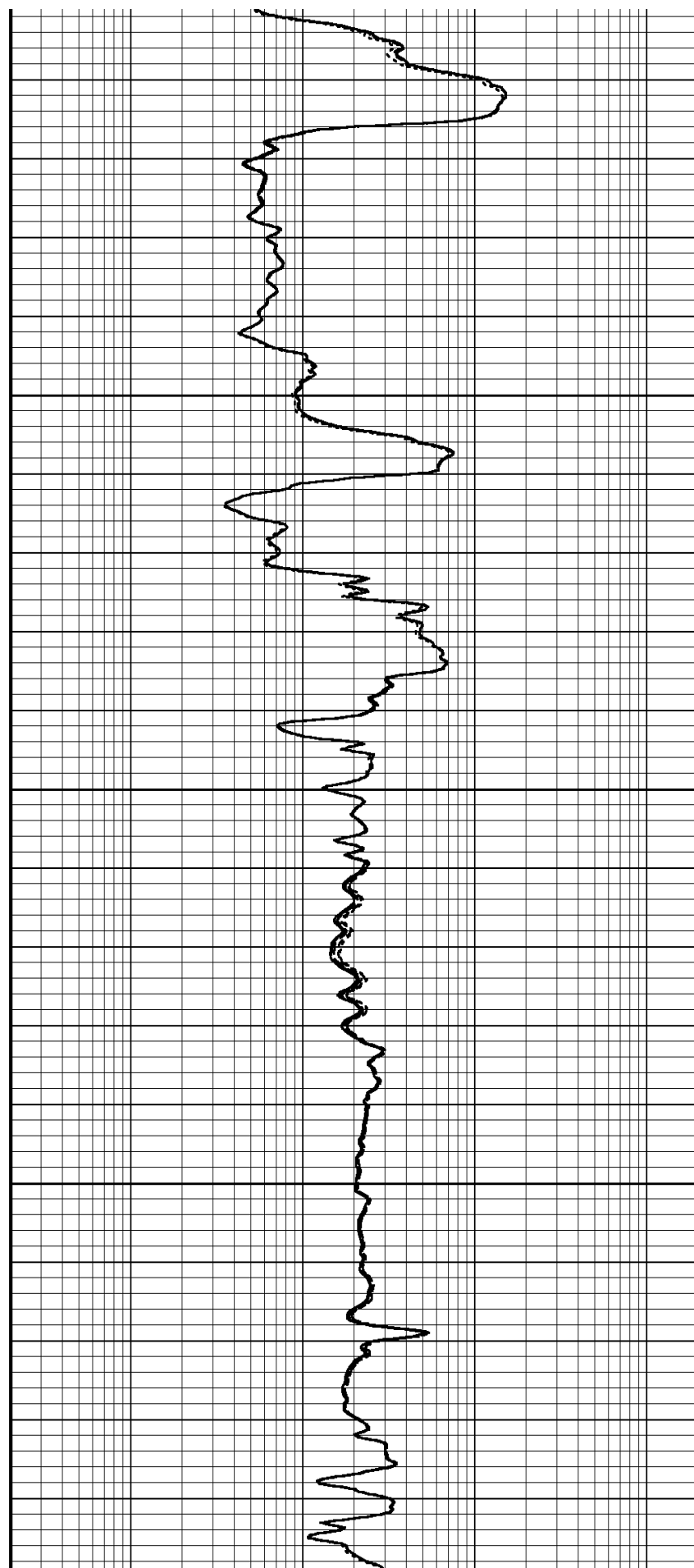
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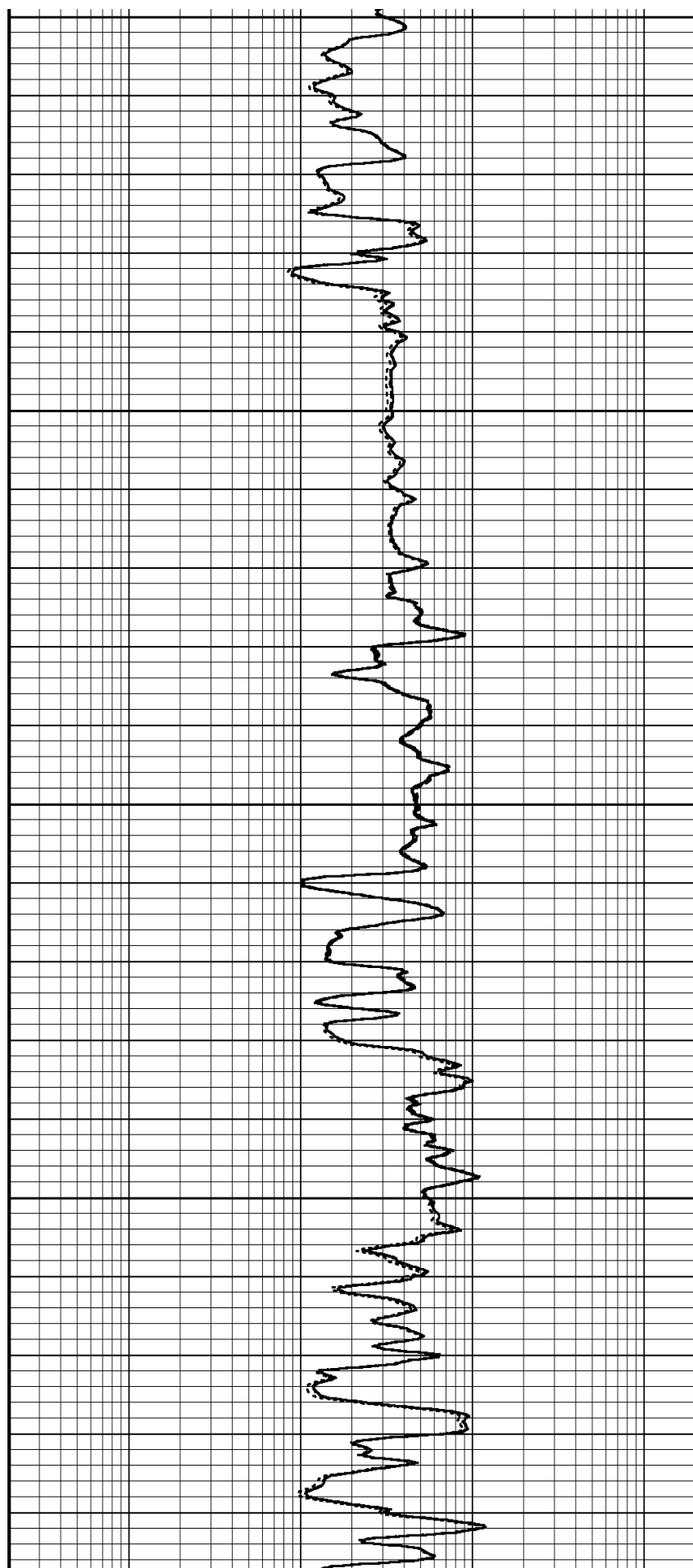
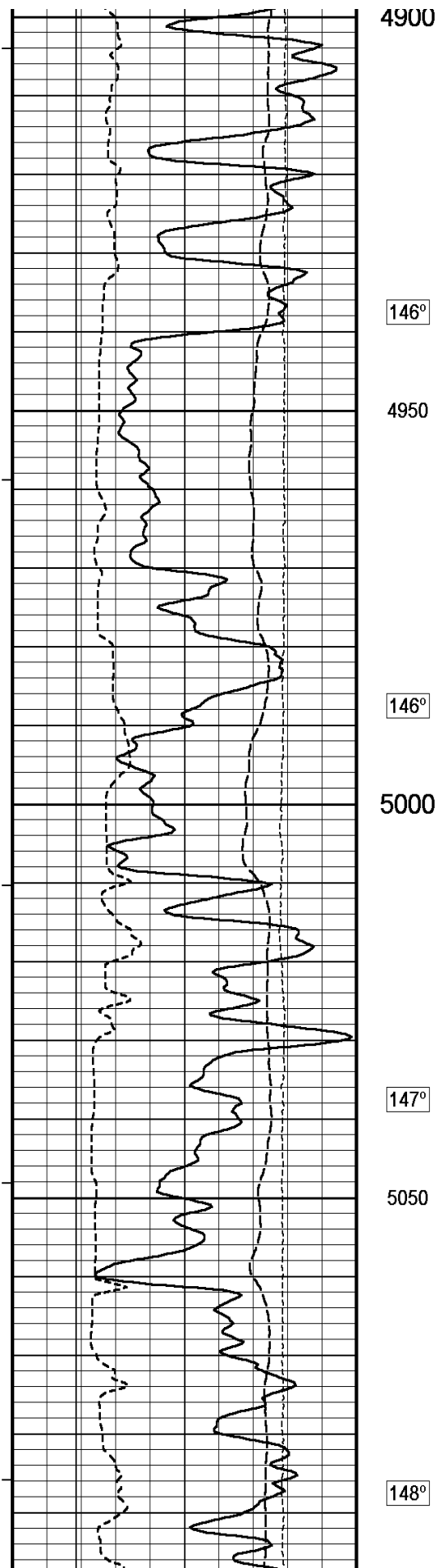
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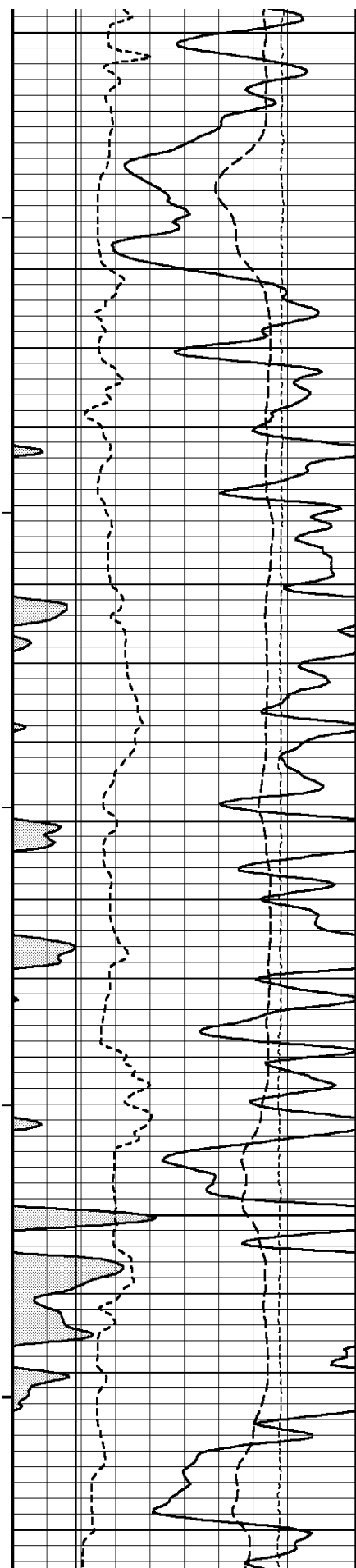
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4850

145°







5100

148°

5150

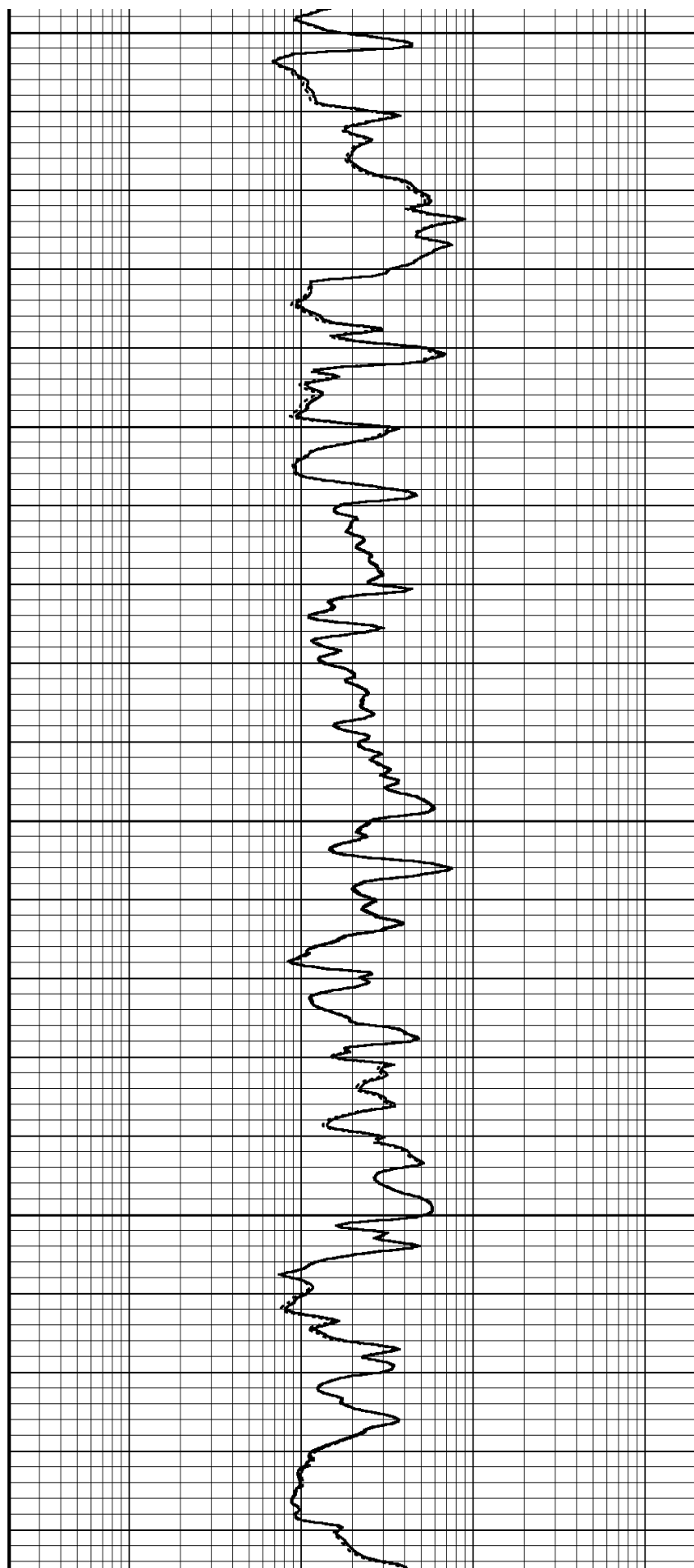
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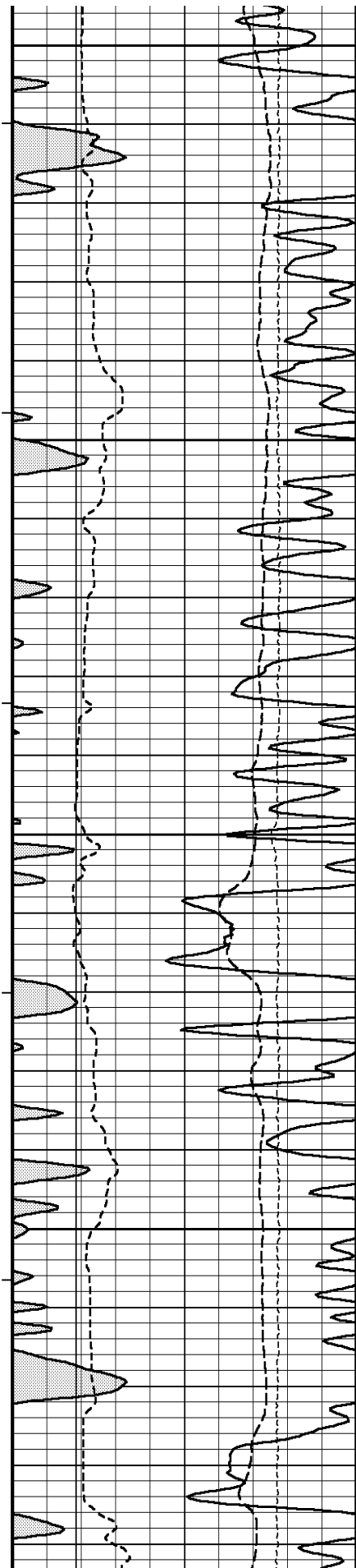
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150°

5250

151°





5300

151°

5350

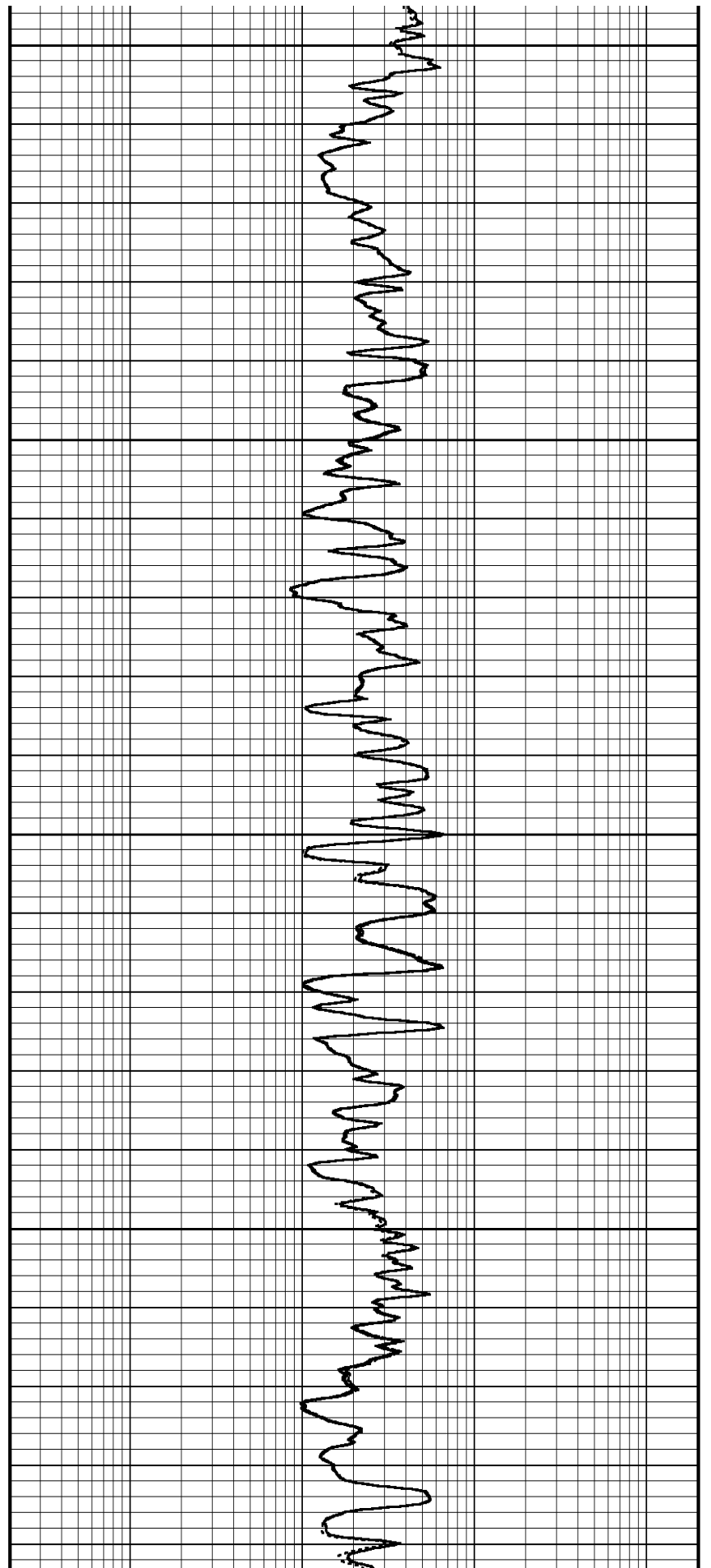
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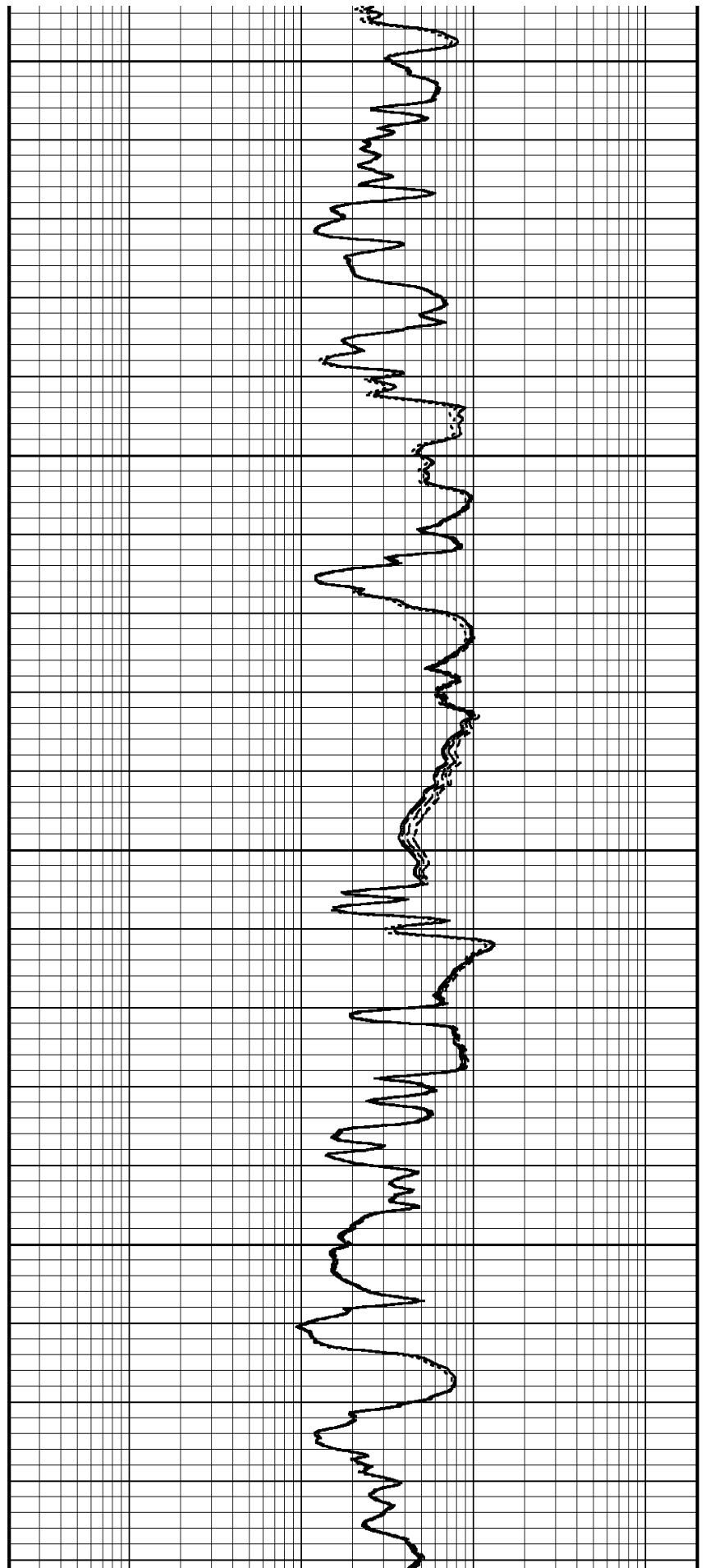
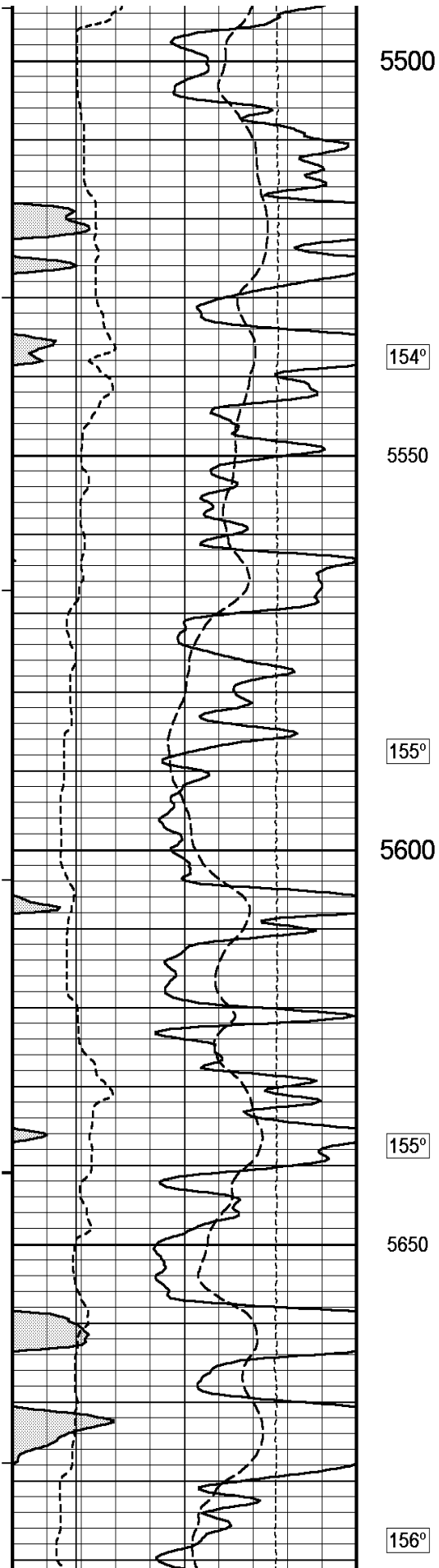
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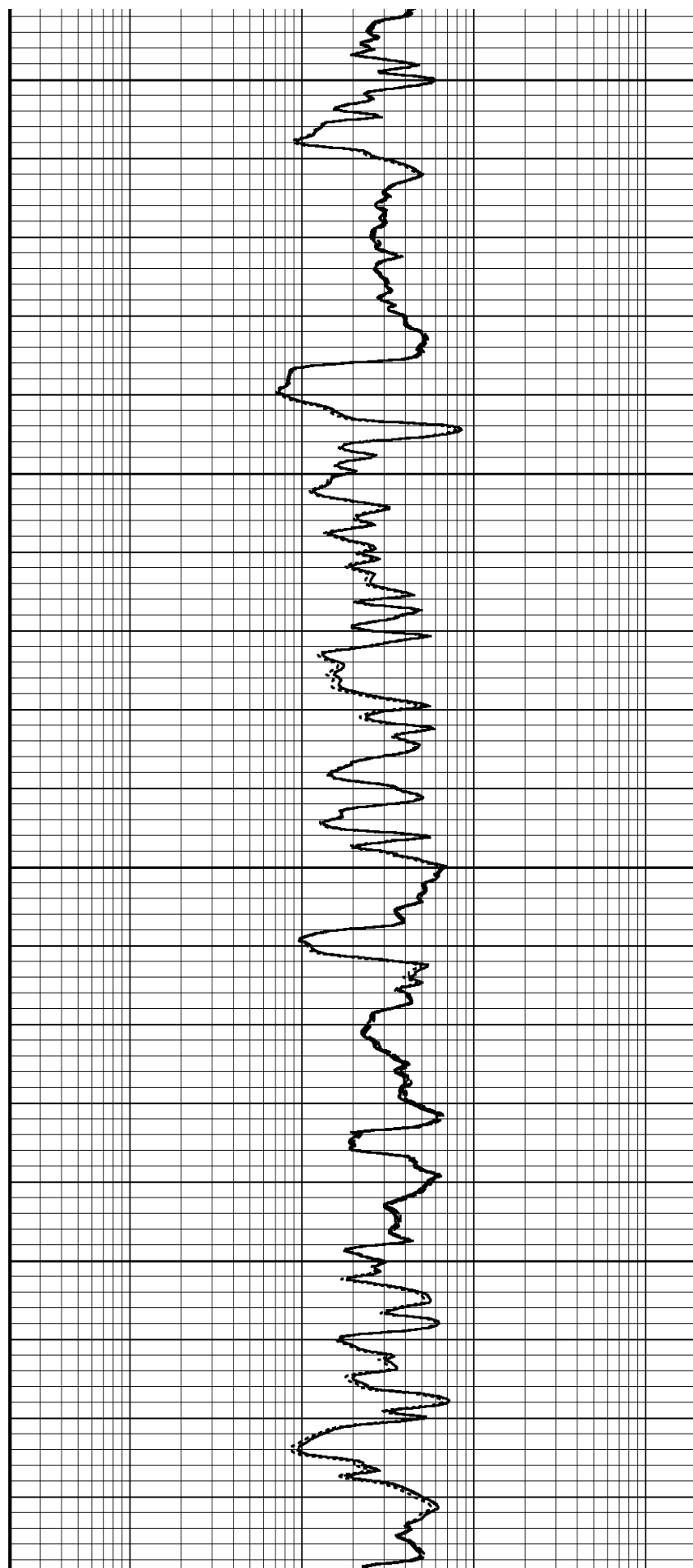
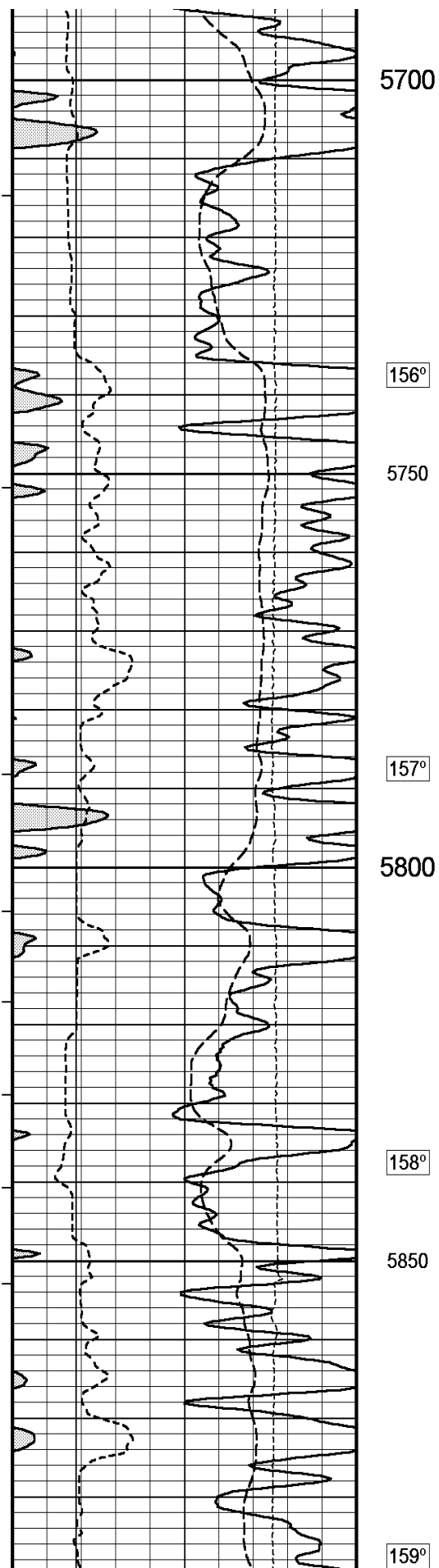
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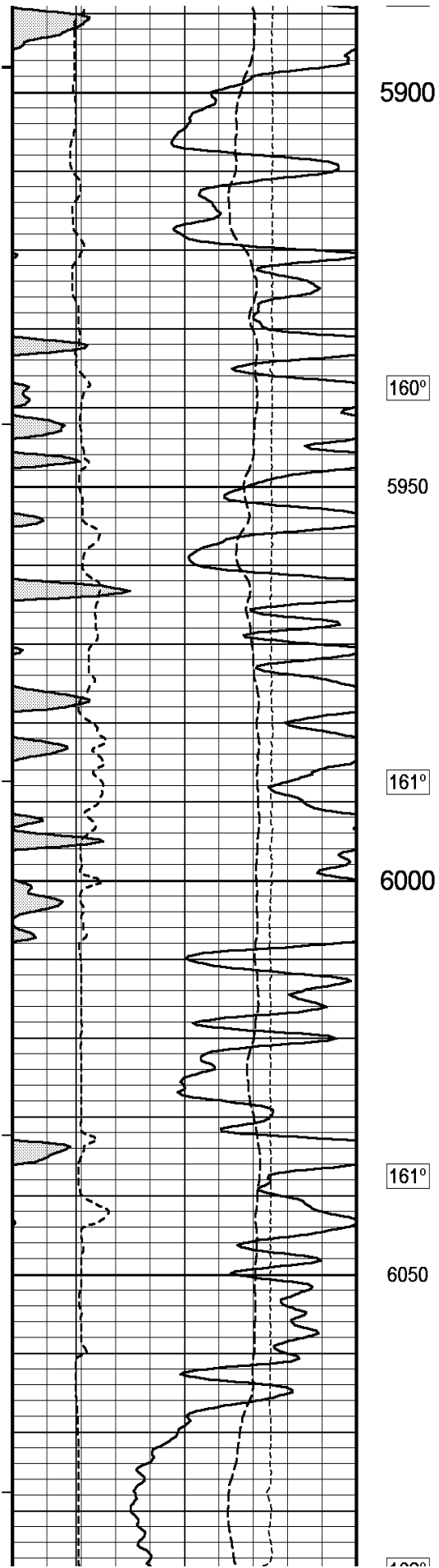
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153°









5900

$160^\circ$

5950

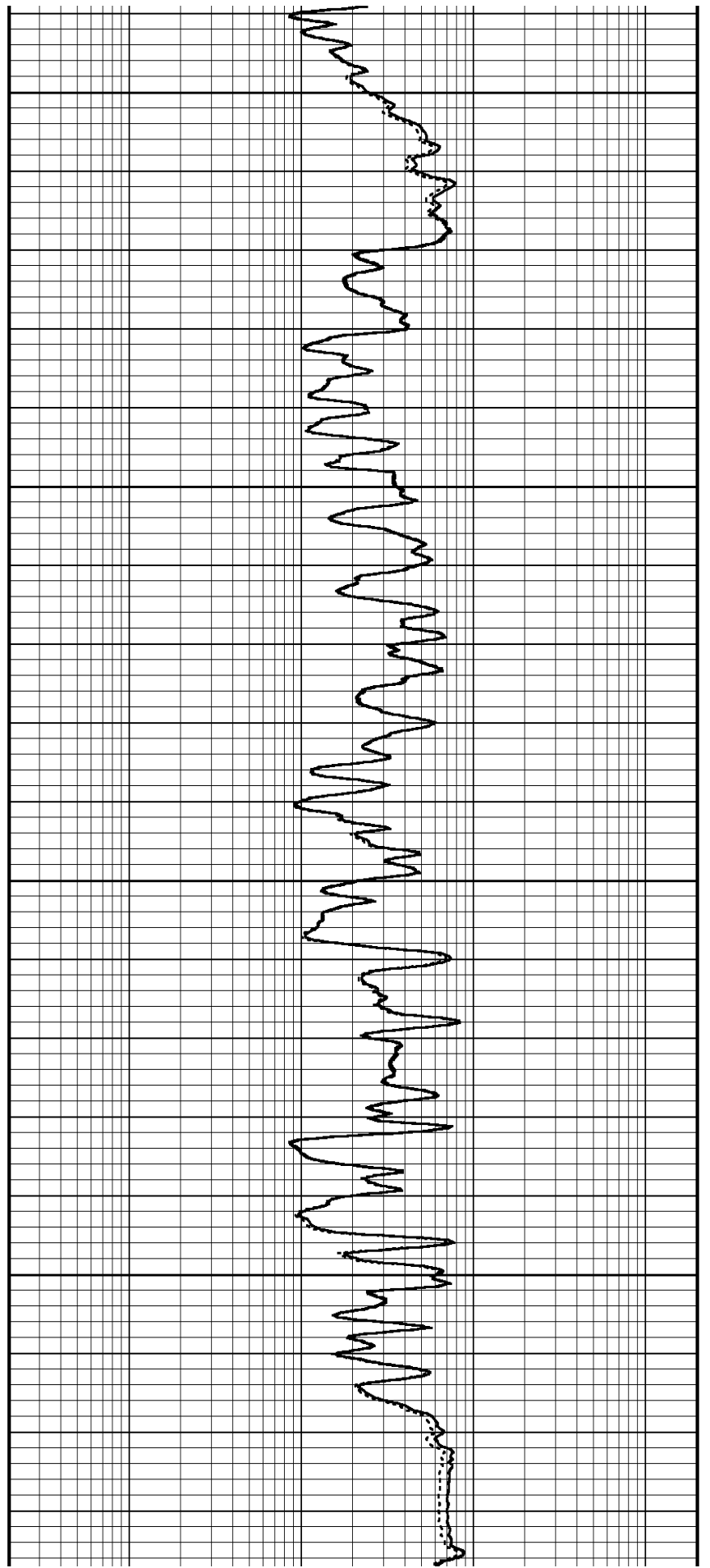
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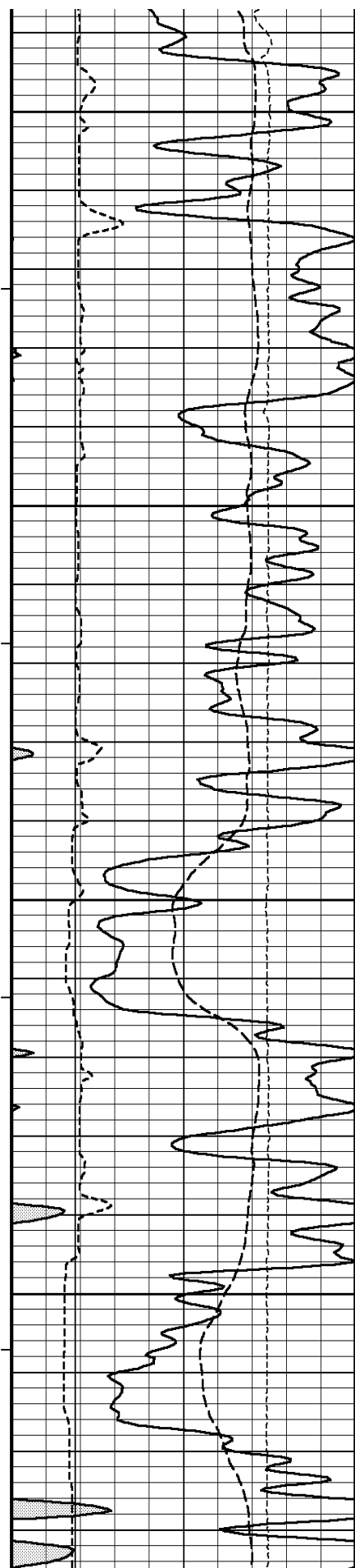
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$161^\circ$

6050

1600





162°

6100

163°

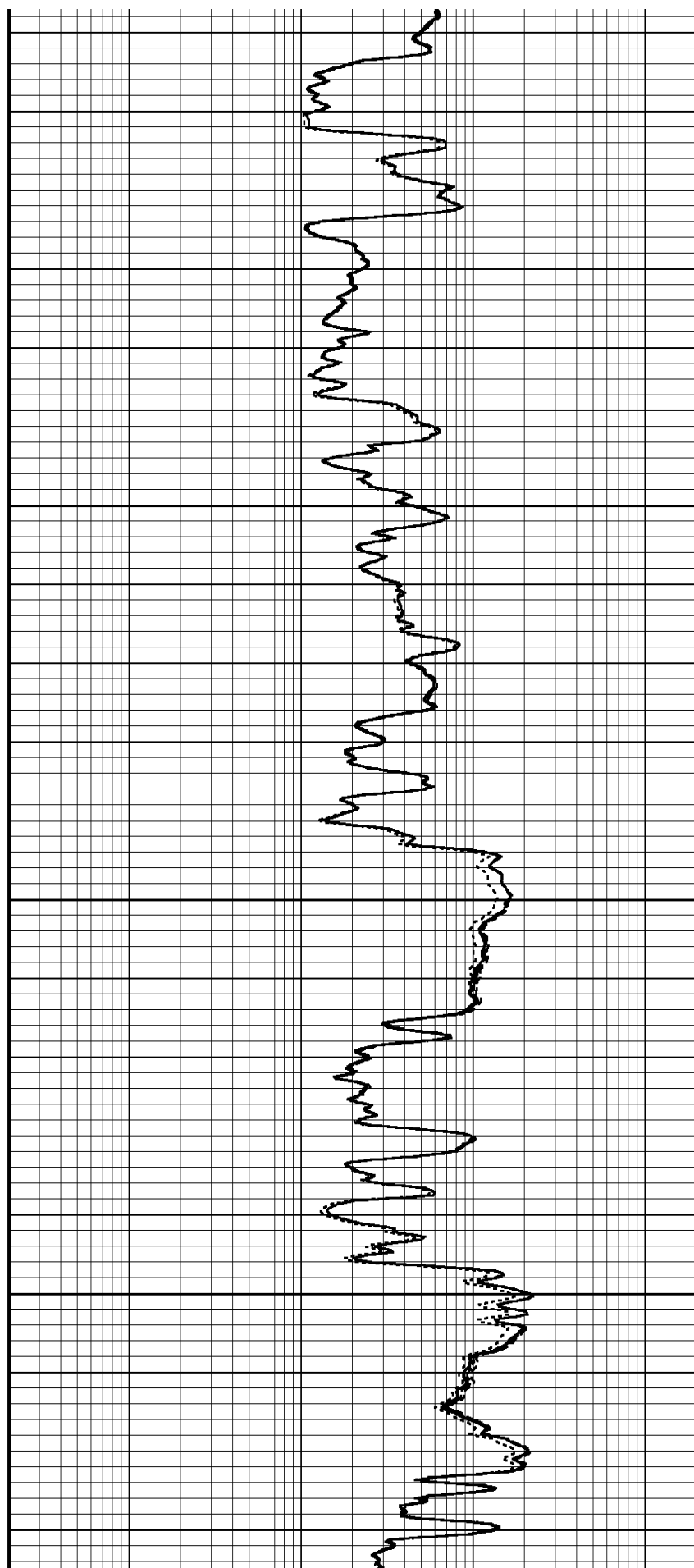
6150

163°

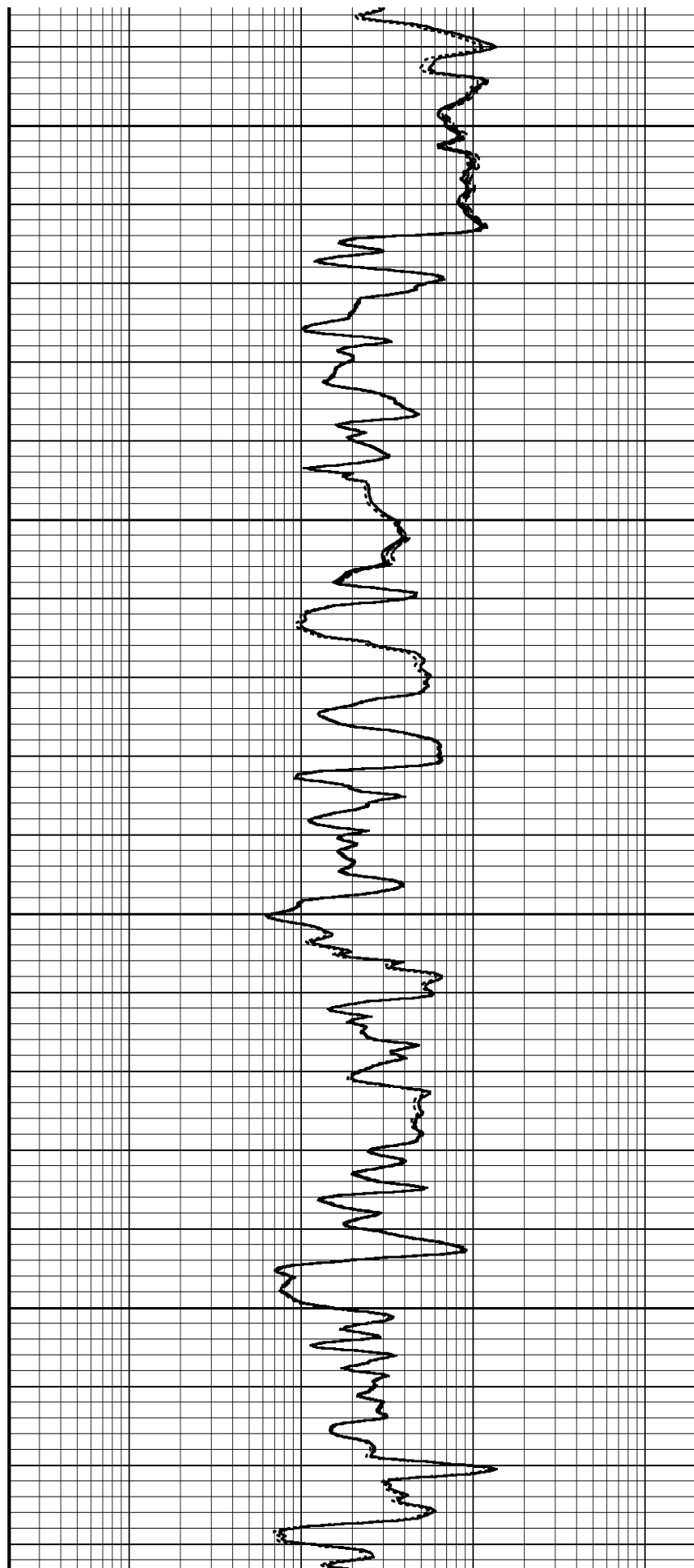
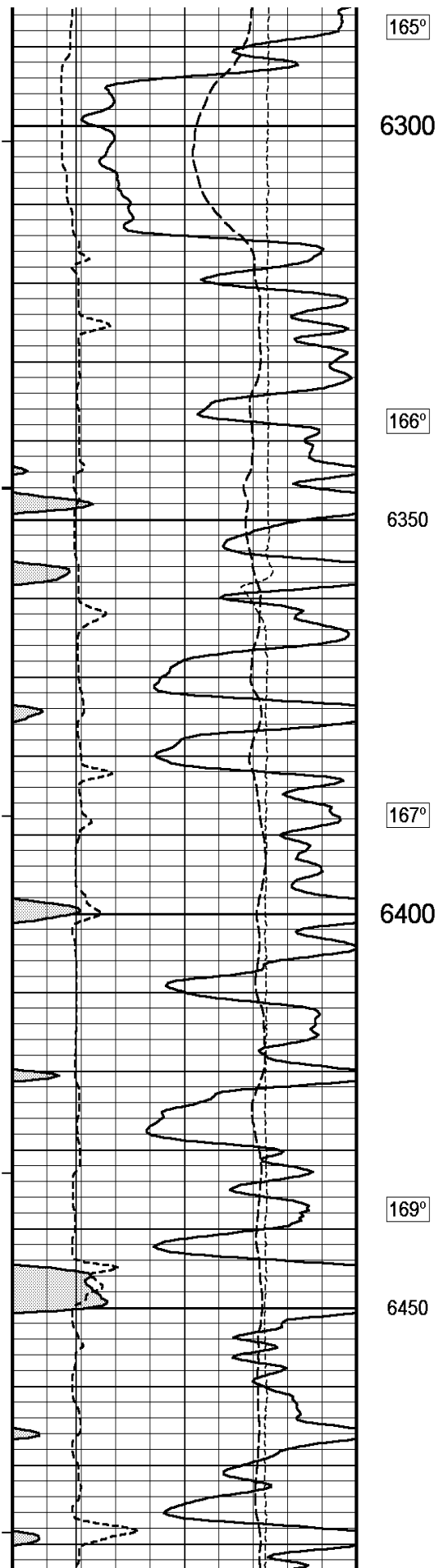
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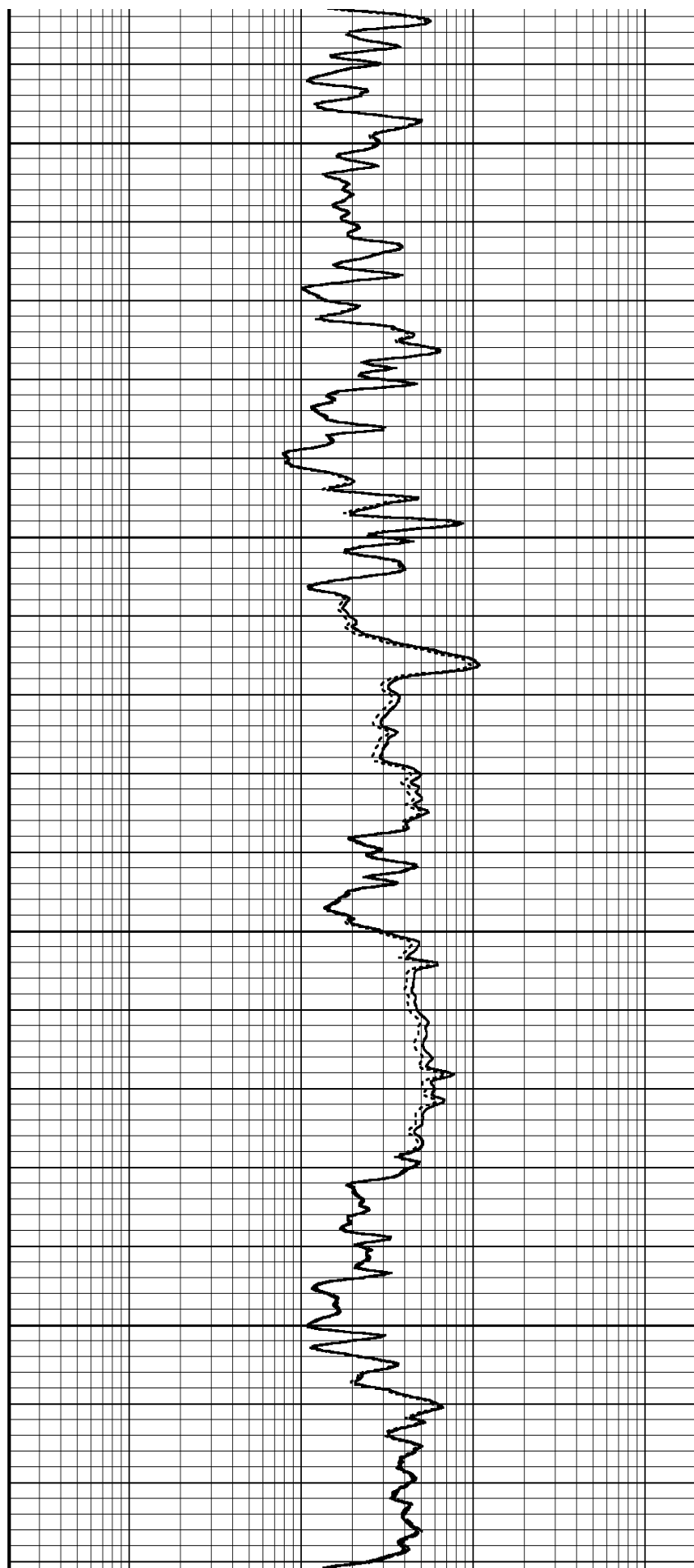
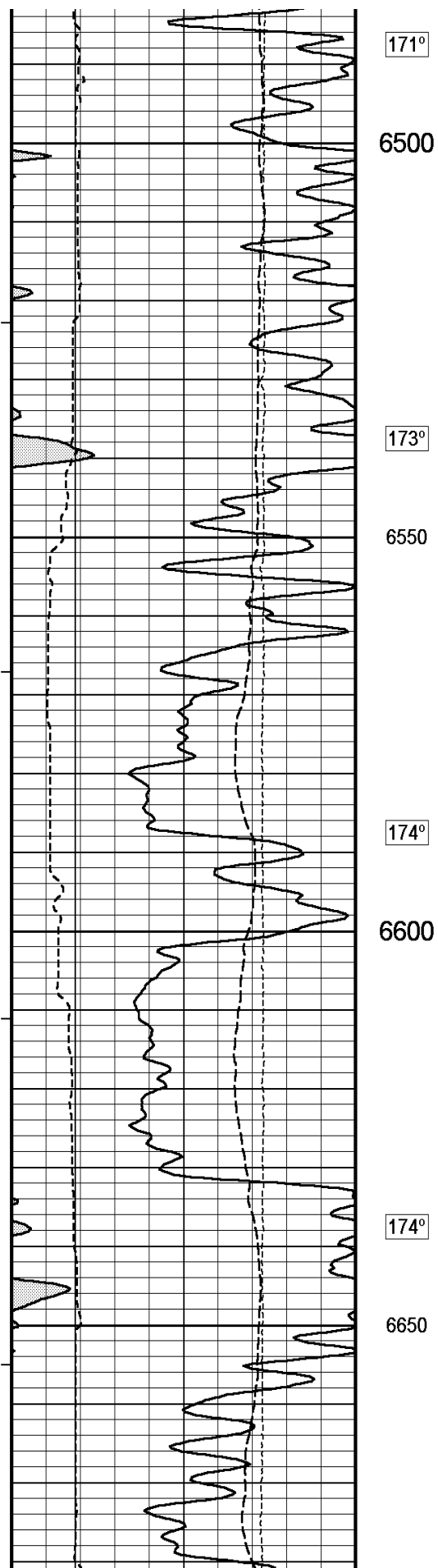
164°

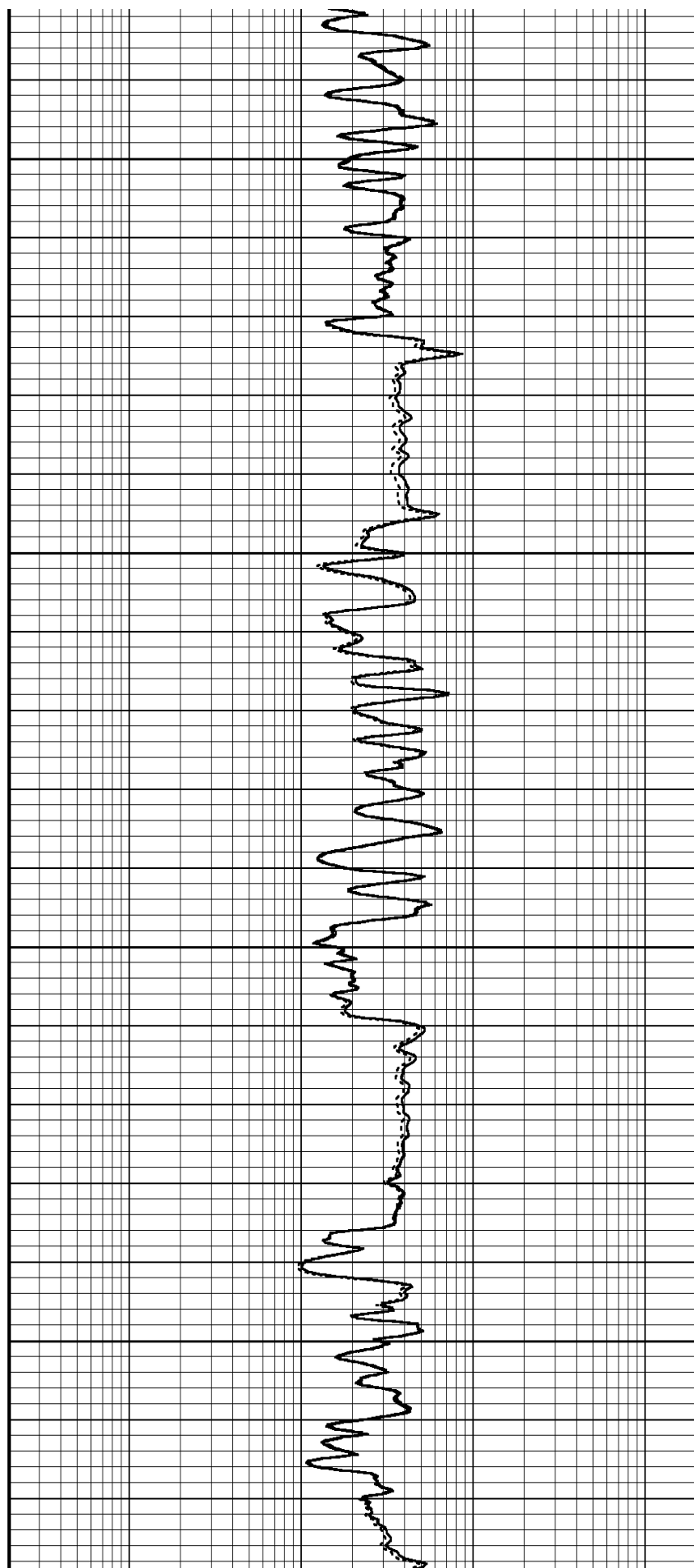
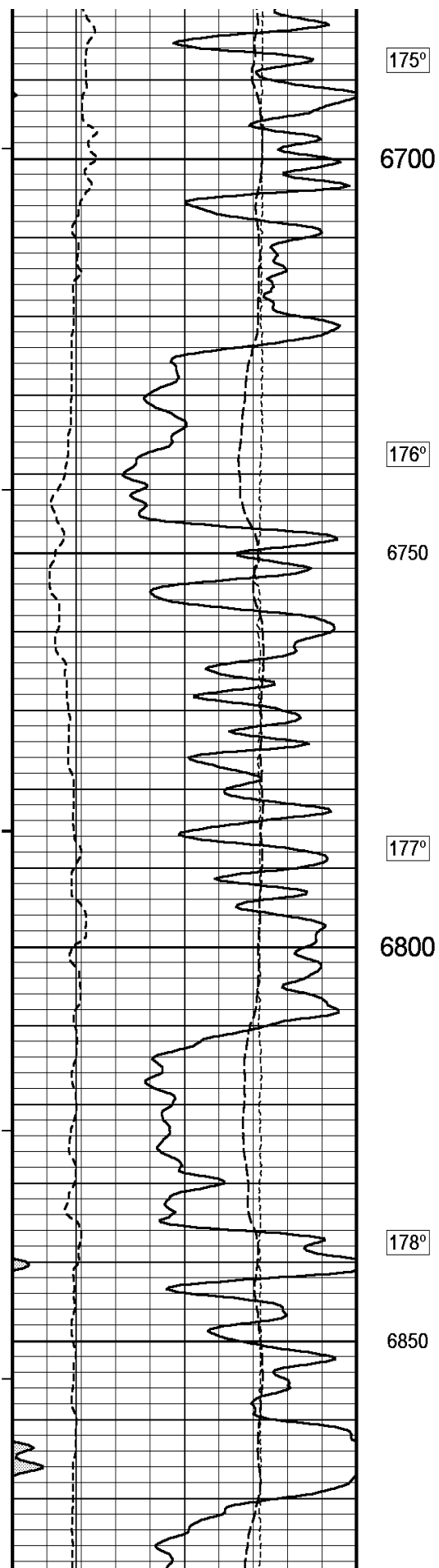
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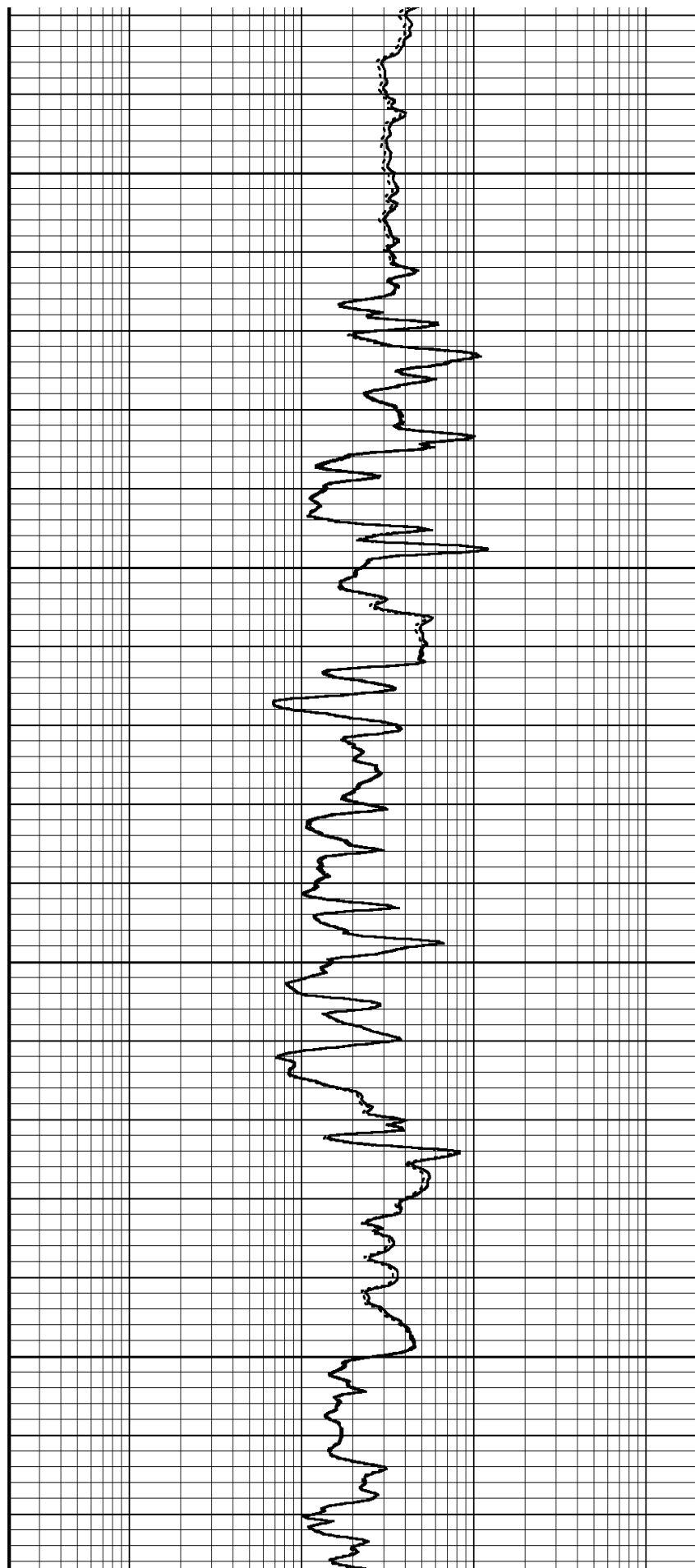
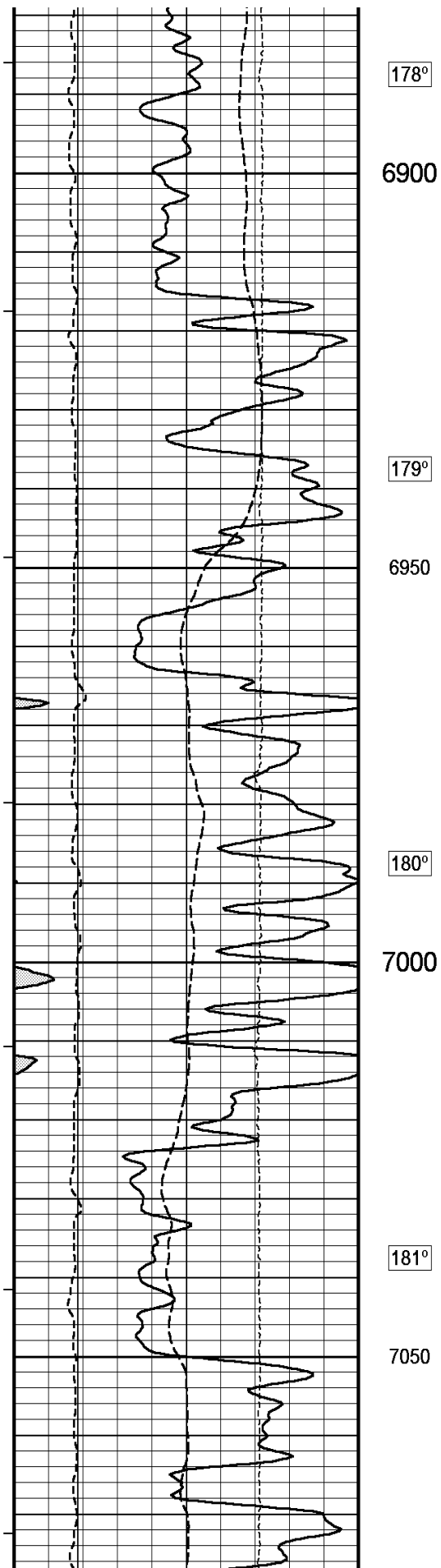


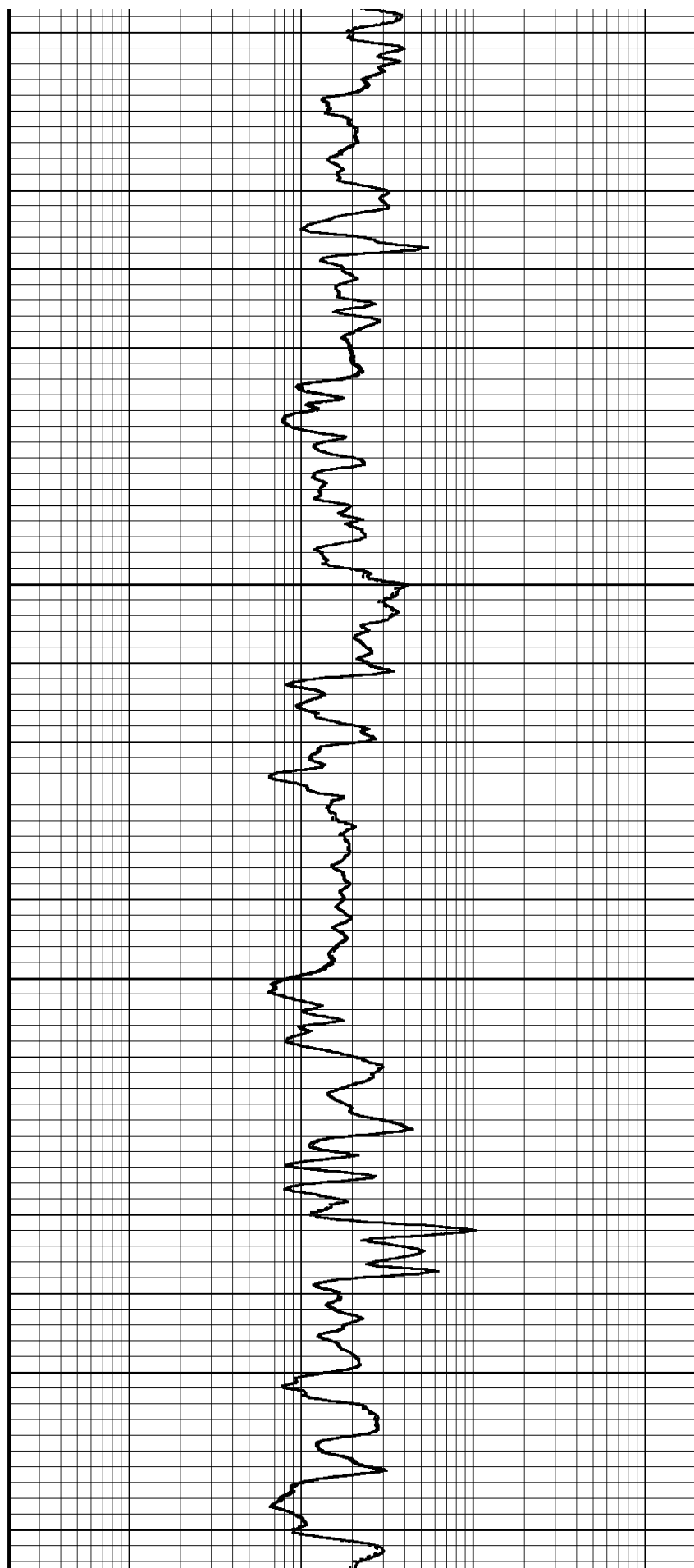
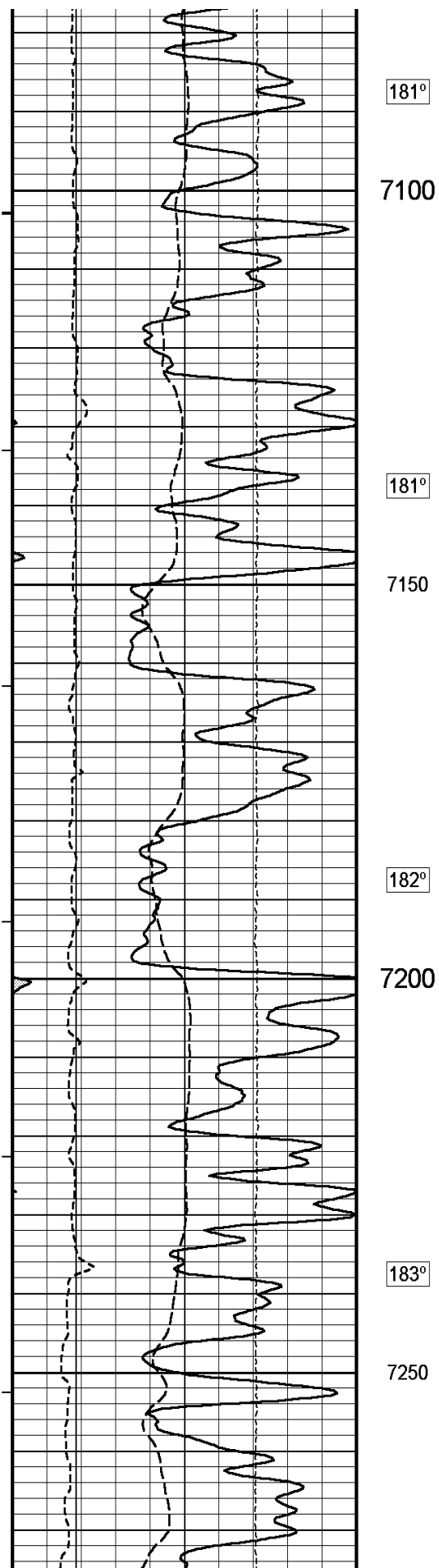


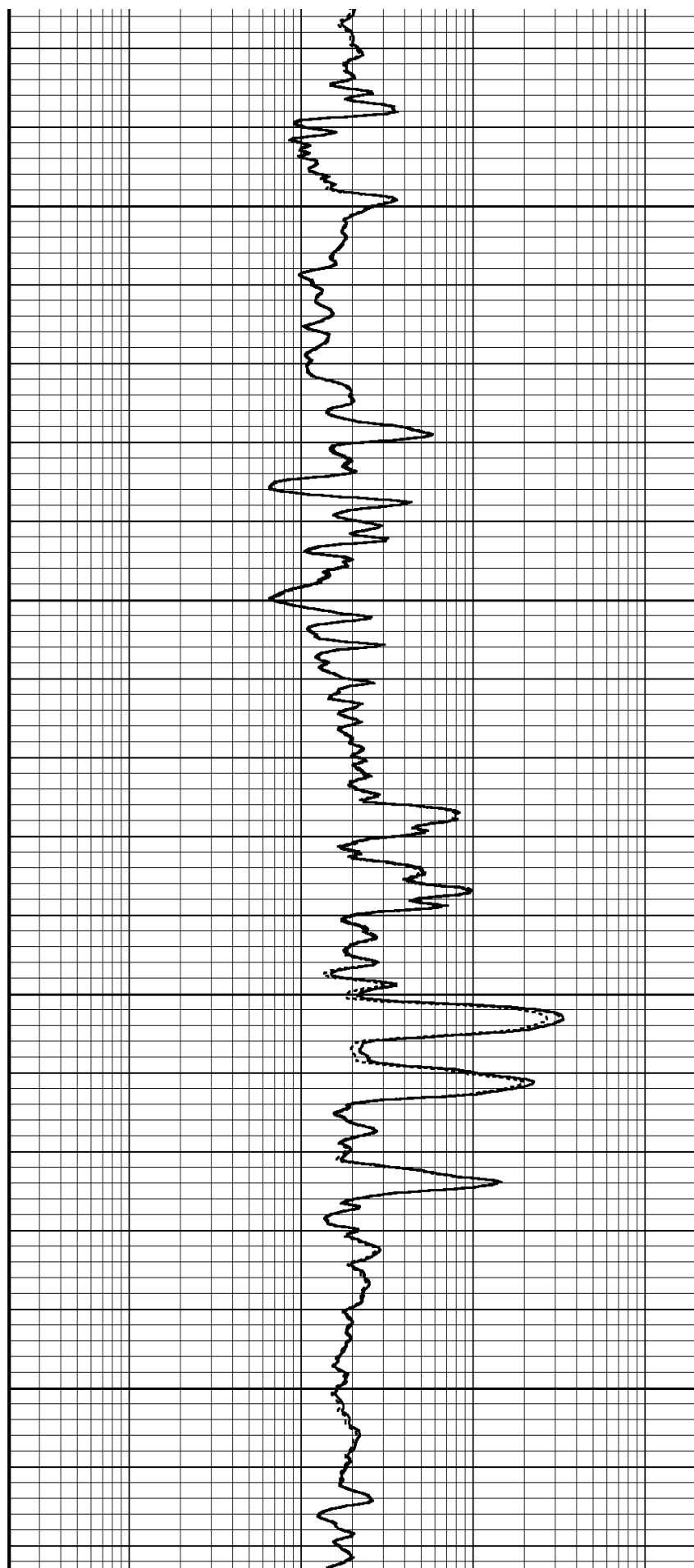
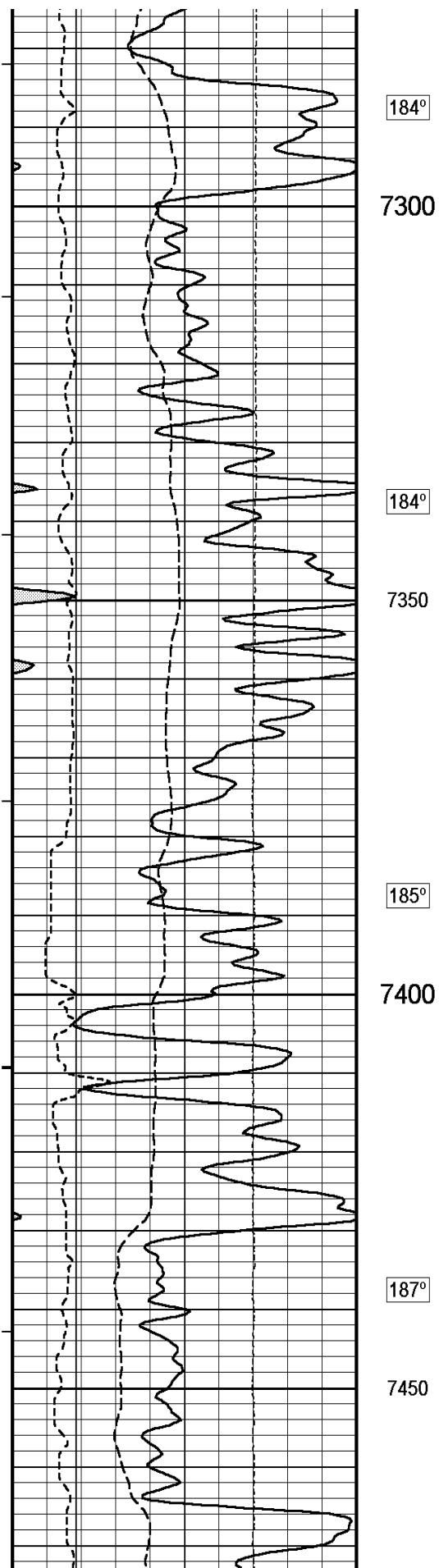


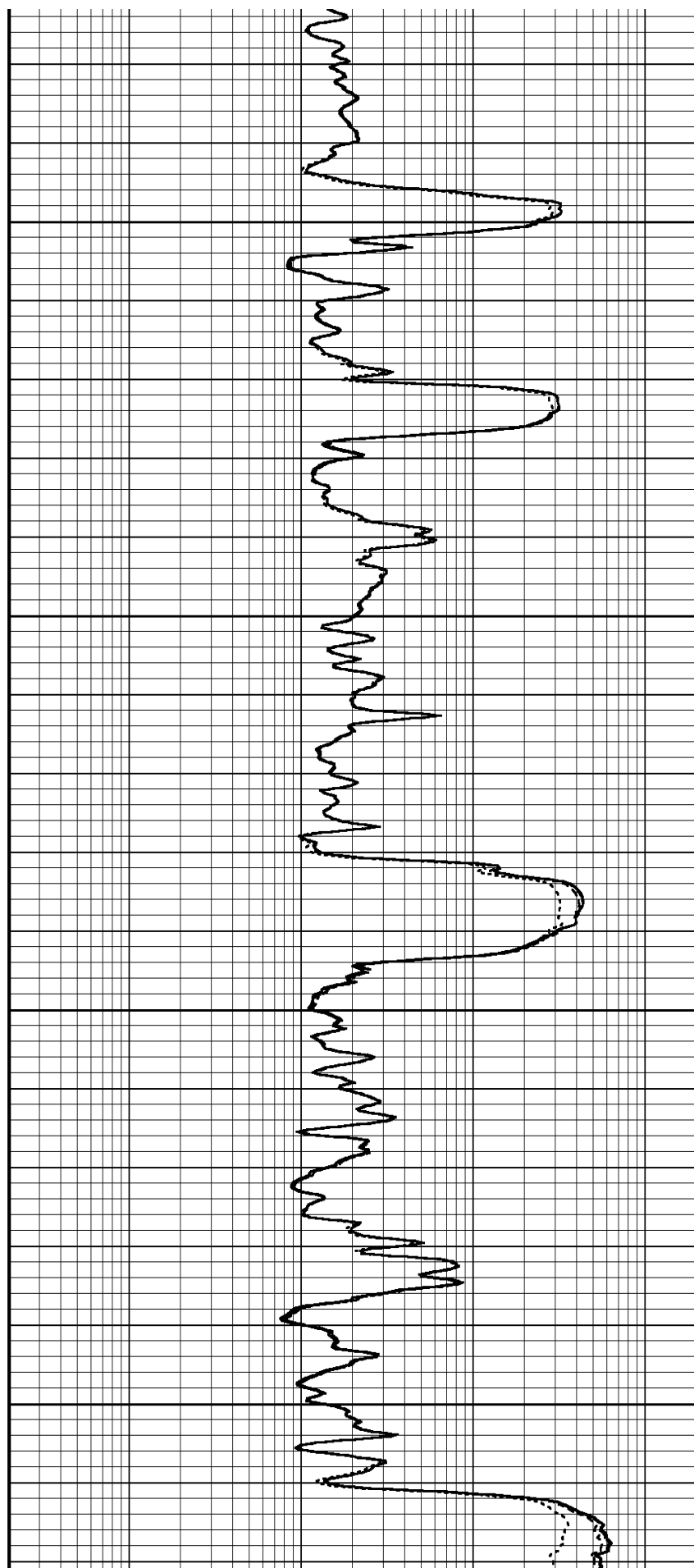
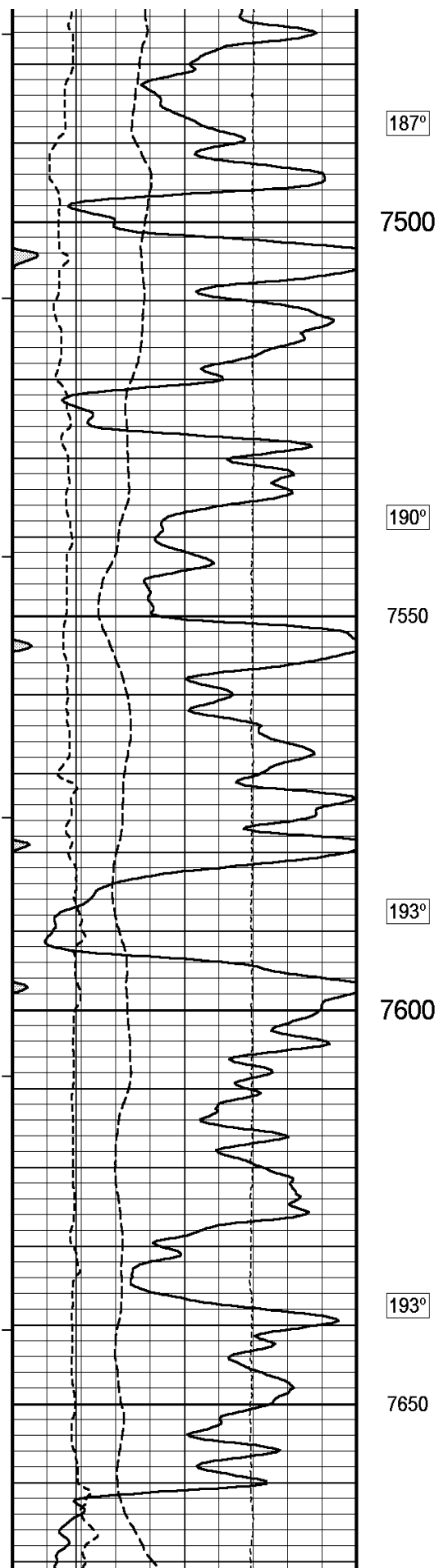


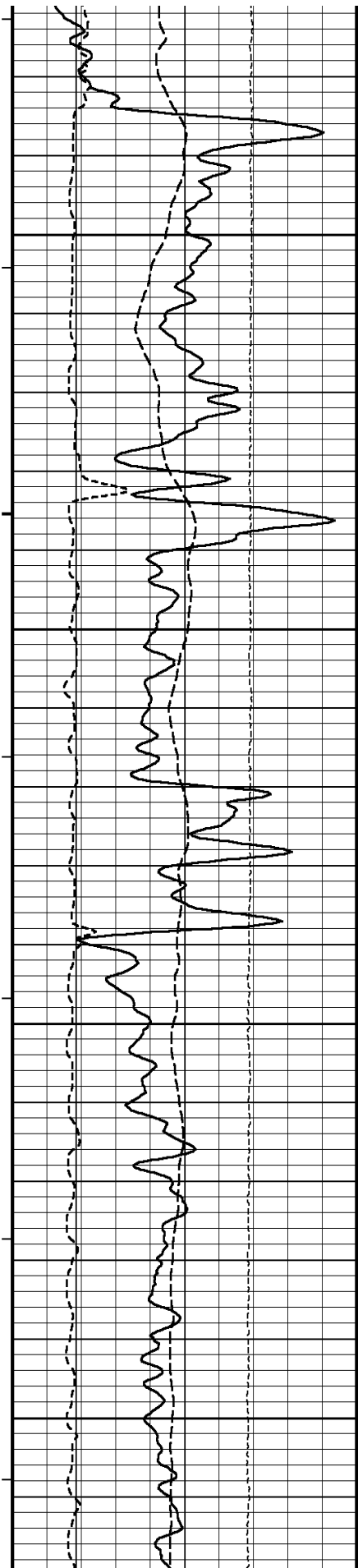












200°

7700

202°

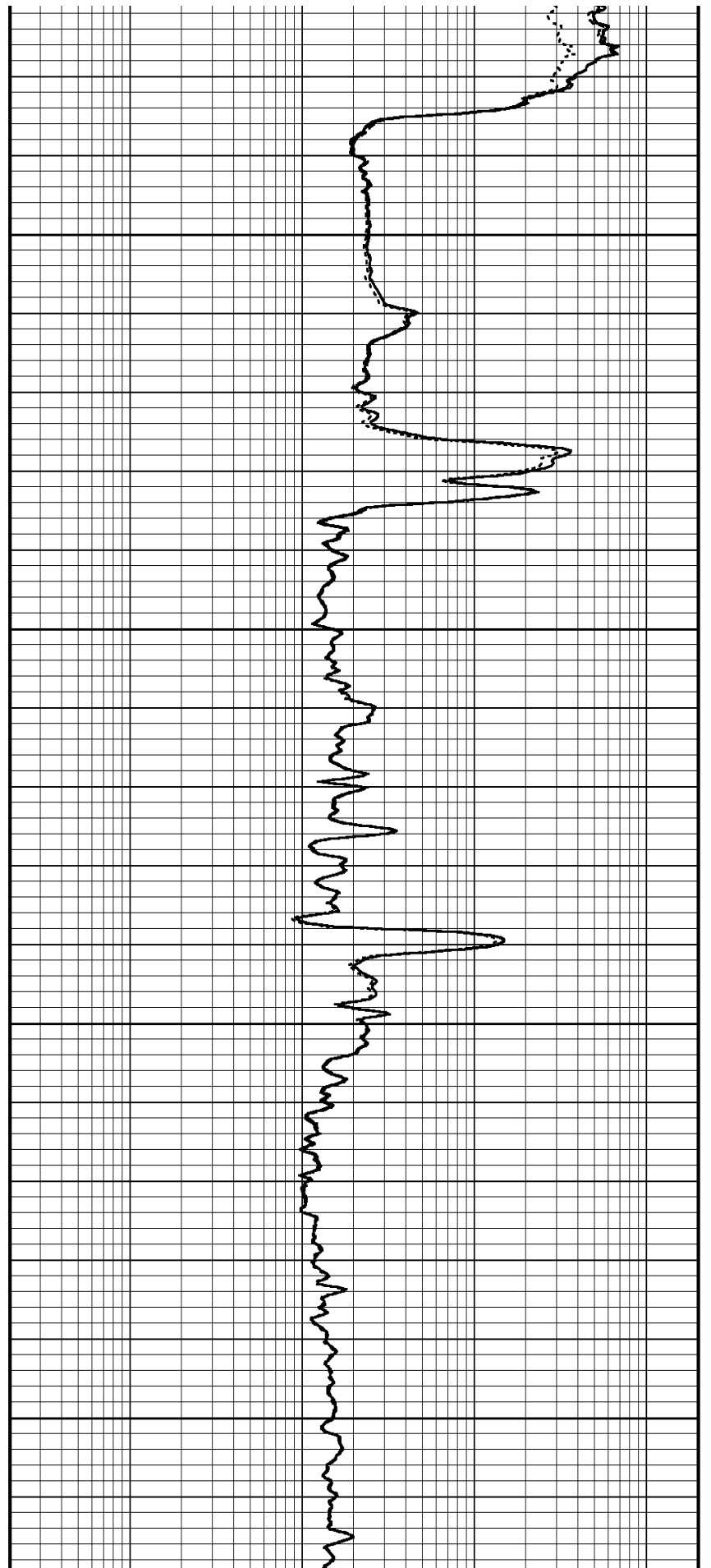
7750

204°

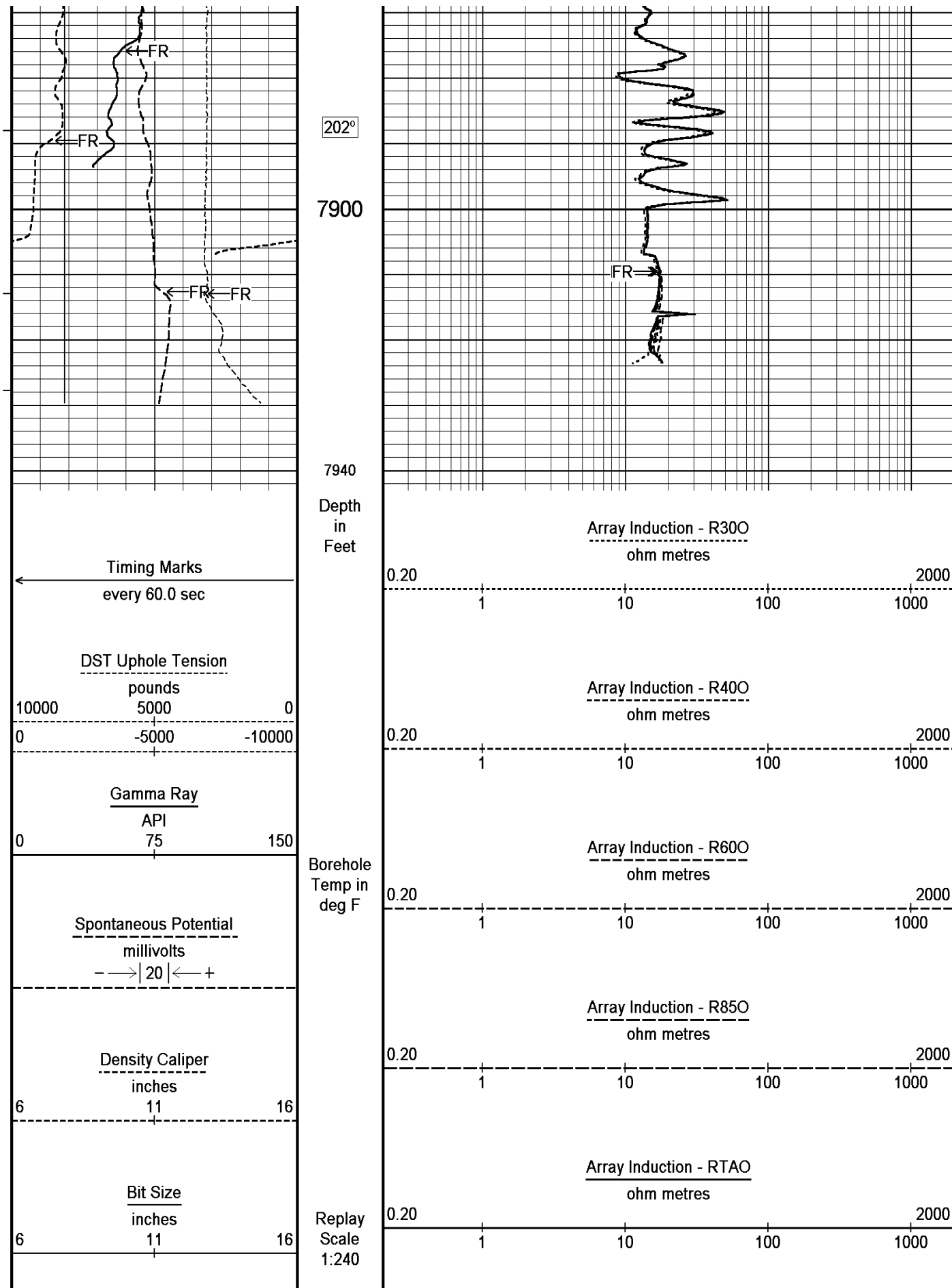
7800

203°

7850





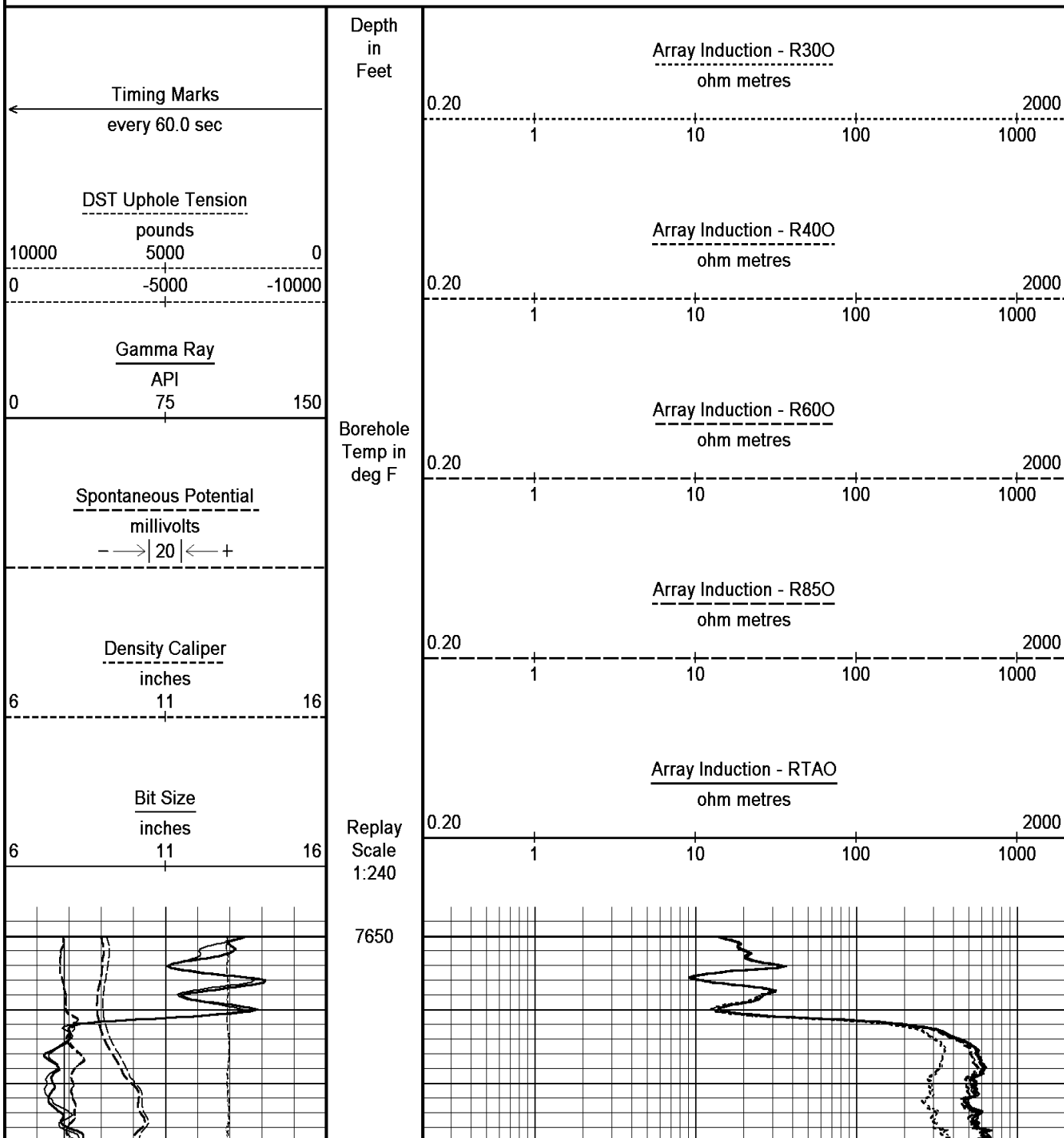


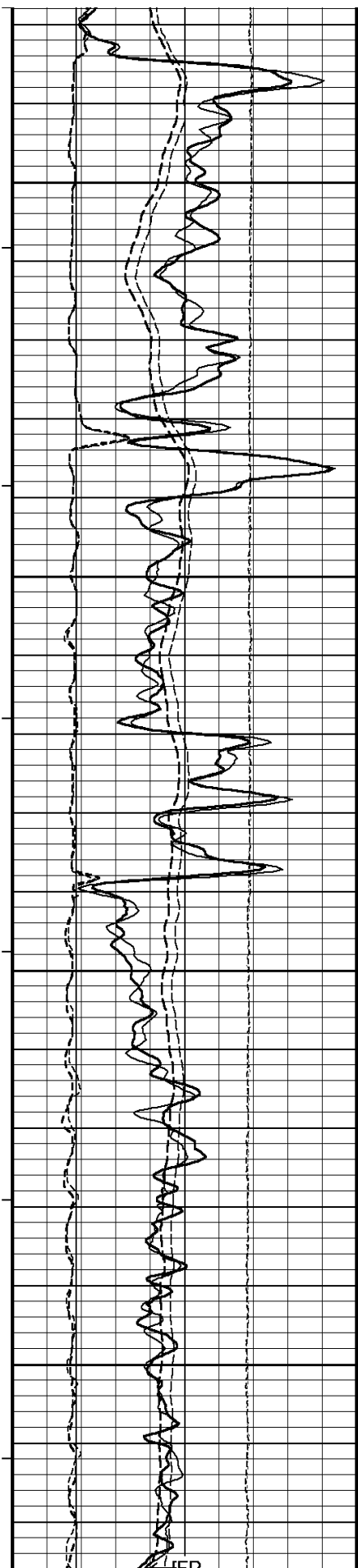
↑ 5 INCH INDUCTION LOG ↑

↓ REPEAT SECTION OVERLAY REPEAT SECTION ↓

Depth Based Data - Maximum Sampling Increment 10.0cm  
 Filename: E:\LARAMIE ENERGY II\Laramie Energy II Brunton 30-02B3.dta  
 Filename: E:\LARAMIE ENERGY II\Laramie Energy II Brunton 30-02B4.dta  
 System Versions: Logged with 11.01.2198 Plotted with 11.01.2198

Plotted on 15-JAN-2011 20:45  
 Recorded on 15-JAN-2011 13:34





198°

7700

200°

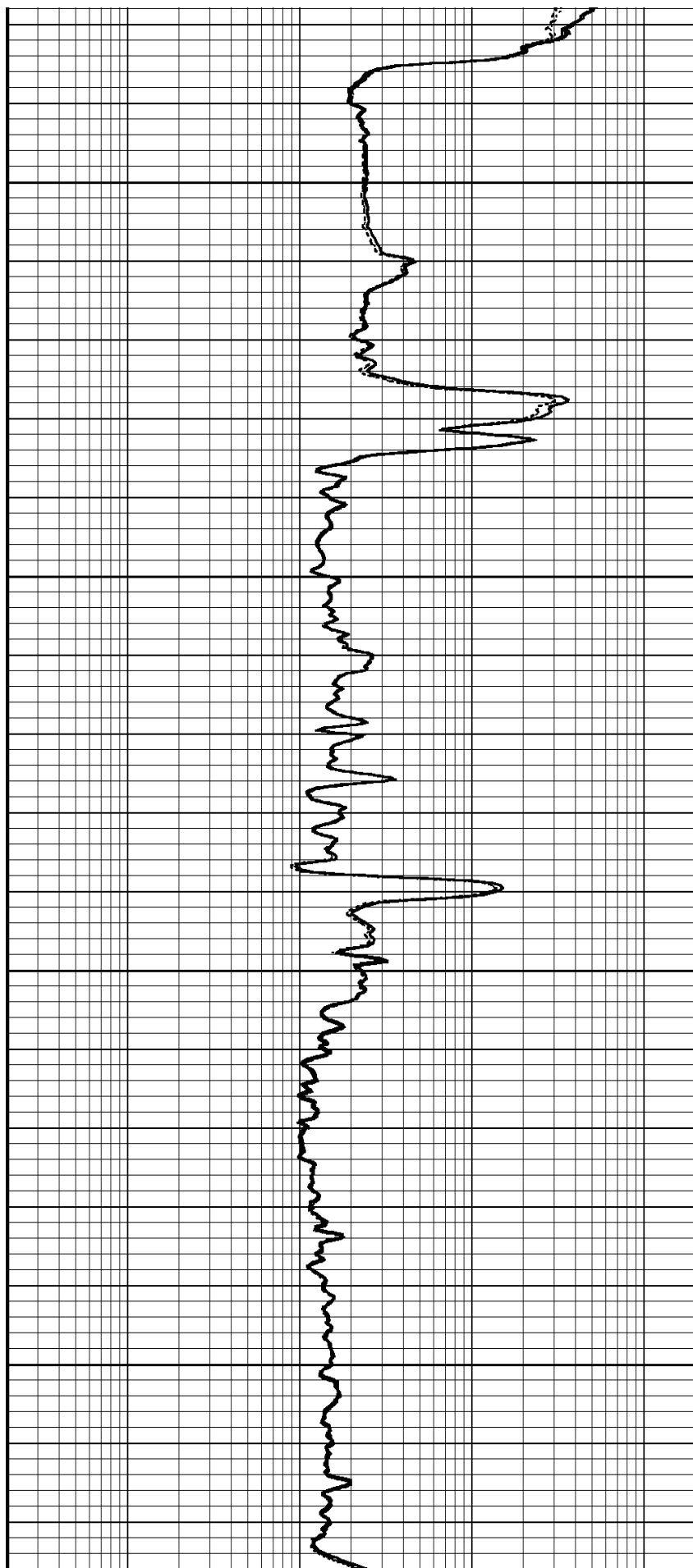
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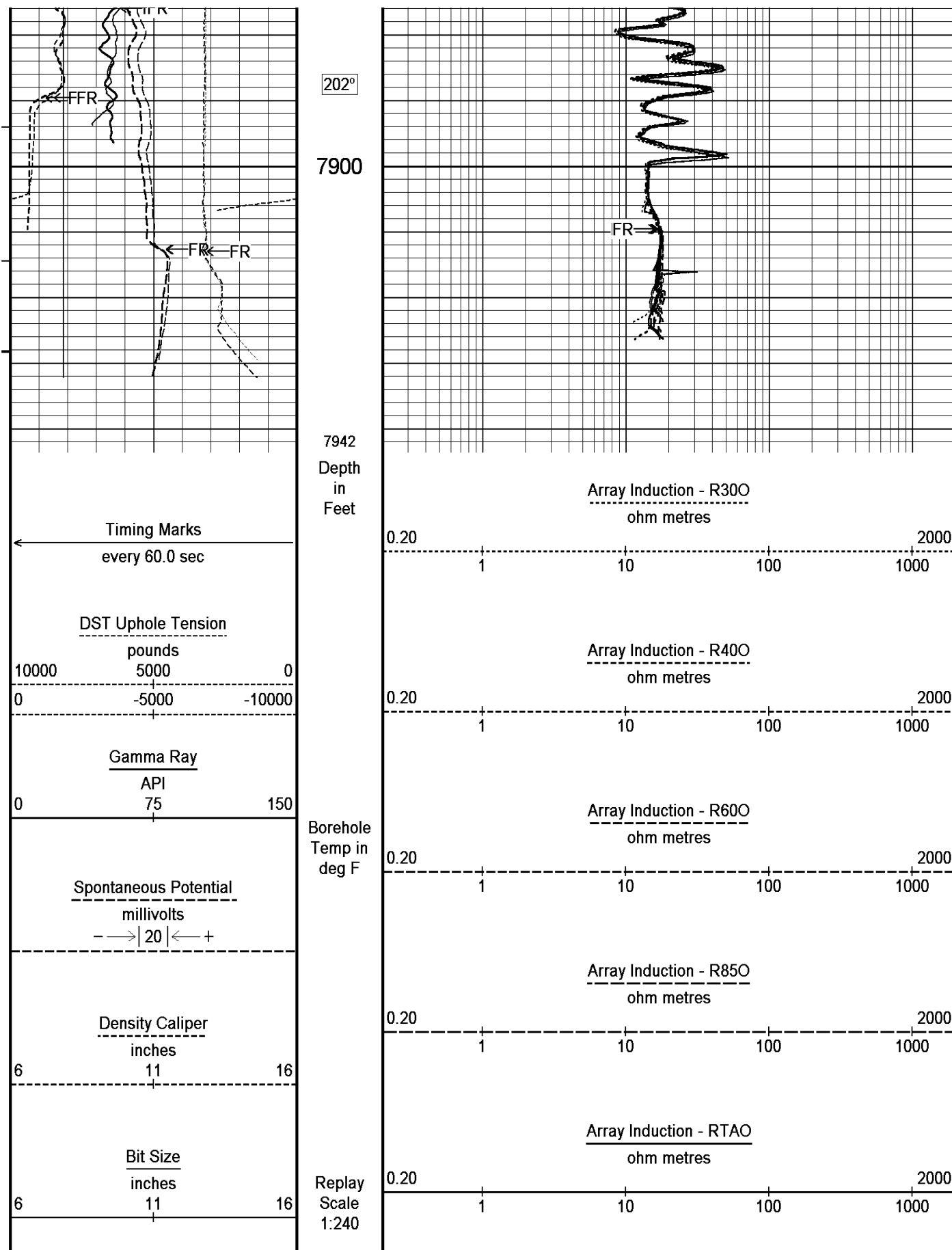
202°

7800

202°

7850







# REPEAT SECTION OVERLAY REPEAT SECTION



## BEFORE SURVEY CALIBRATION

E:\LARAMIE ENERGY II\Laramie Energy II Brunton 30-02B.dta

### General Constants All 000

Last Edited on 15-JAN-2011,10:00

#### General Parameters

|                             |          |            |
|-----------------------------|----------|------------|
| Mud Resistivity             | 2.730    | ohm-metres |
| Mud Resistivity Temperature | 65.000   | degrees F  |
| Water Level                 | 0.000    | feet       |
| Density/Neutron Processing  | Wet Hole |            |

#### Hole/Annular Volume and Differential Caliper Parameters

|                                  |                 |        |
|----------------------------------|-----------------|--------|
| HVOL Method                      | Single Caliper  |        |
| HVOL Caliper 1                   | Density Caliper |        |
| HVOL Caliper 2                   | N/A             |        |
| Annular Volume Diameter          | 4.500           | inches |
| Caliper for Differential Caliper | None            |        |

#### Rwa Parameters

|                  |                       |  |
|------------------|-----------------------|--|
| Porosity used    | Base Density Porosity |  |
| Resistivity used | Array Ind. One Res Rt |  |
| RWA Constant A   | 0.610                 |  |
| RWA Constant M   | 2.150                 |  |

### Down-hole Tension Calibration SMS 0

Field Calibration on 15-JAN-2011 12:18

| Reading No | Measured | Calibrated (lbs) |
|------------|----------|------------------|
| 1          | 14531.91 | 0.00             |
| 2          | 16112.13 | 370.00           |

### High Resolution Temperature Calibration MCG-C 145

Field Calibration on 17-NOV-2010,12:09

|       | Measured | Calibrated(Deg F) |
|-------|----------|-------------------|
| Lower | 50.00    | 50.00             |
| Upper | 75.00    | 75.00             |

### High Resolution Temperature Constants MCG-C 145

Last Edited on 24-NOV-2009,08:49

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

### SP Calibration MCG-C 145

Field Calibration on 27-DEC-2010 14:53

|             | Measured | Calibrated (mV) |
|-------------|----------|-----------------|
| Reference 1 | 103.2    | 100.1           |
| Reference 2 | -96.7    | -100.1          |

### Gamma Calibration MCG-C 145

Field Calibration on 12-JAN-2011 11:33

|                    | Measured | Calibrated (API) |
|--------------------|----------|------------------|
| Background         | 81       | 58               |
| Calibrator (Gross) | 753      | 538              |
| Calibrator (Net)   | 672      | 480              |

### Gamma Constants MCG-C 145

Last Edited on 15-JAN-2011,08:50

|                               |                 |       |
|-------------------------------|-----------------|-------|
| Gamma Calibrator Number       | GRCC 112        |       |
| Mud Density                   | 1.00            | gm/cc |
| Caliper Source for Processing | Density Caliper |       |
| Tool Position                 | Eccentred       |       |

|  |  |                    |            |                     |            |   |  |
|--|--|--------------------|------------|---------------------|------------|---|--|
| Tool Position  |  | Logged             |            | 0.00                |            | kppm  |  |
| Concentration of KCl                                   |  |                    |            |                     |            |   |  |
| Neutron Calibration MDN-B.A 191                        |  |                    |            |                     |            | Base Calibration on 22-DEC-2010 16:27<br>Field Check on 12-JAN-2011 11:40 |  |
| Base Calibration                                       |  |                    |            |                     |            |   |  |
|  |  | Measured           |            | Calibrated (cps)    |            |   |  |
|  |  | Near               | Far        | Near                | Far        |   |  |
|  |  | 2878               | 90         | 3714                | 110        |   |  |
| Ratio  |  | 32.150             |            | 33.764              |            |   |  |
| Field Calibrator at Base                               |  |                    |            | Calibrated (cps)    |            |   |  |
|  |  |                    |            | 1662                | 2415       |   |  |
| Ratio  |  |                    |            | 0.688               |            |   |  |
| Field Check  |  |                    |            | Calibrated (cps)    |            |   |  |
|  |  |                    |            | 1658                | 2417       |   |  |
| Ratio  |  |                    |            | 0.686               |            |   |  |
| Neutron Constants MDN-B.A 191                          |  |                    |            |                     |            | Last Edited on 15-JAN-2011,08:49  |  |
| Neutron Source Id                                      |  | P44382B            |            |                     |            |   |  |
| Neutron Jig Number                                     |  | 6531NK             |            |                     |            |   |  |
| Epithermal Neutron                                     |  | No                 |            |                     |            |   |  |
| Caliper Source for Processing                          |  | Density Caliper    |            |                     |            |   |  |
| Stand-off  |  | 0.00               |            | inches              |            |   |  |
| Mud Density  |  | 1.00               |            | gm/cc               |            |   |  |
| Limestone Sigma  |  | 7.10               |            | cu                  |            |   |  |
| Sandstone Sigma  |  | 7.00               |            | cu                  |            |   |  |
| Dolomite Sigma   |  | 4.70               |            | cu                  |            |   |  |
| Formation Pressure Source                              |  | None               |            |                     |            |   |  |
| Formation Pressure                                     |  | N/A                |            | kpsi                |            |   |  |
| Temperature Source                                     |  | None               |            |                     |            |   |  |
| Temperature  |  | N/A                |            | degrees F           |            |   |  |
| Mud Salinity   |  | 0.00               |            | kppm                |            |   |  |
| Formation Fluid Salinity Source                        |  | None               |            |                     |            |   |  |
| Formation Fluid Salinity                               |  | N/A                |            | kppm                |            |   |  |
| Barite Mud Correction                                  |  | Not Applied        |            |                     |            |   |  |
| Micro Normal and Micro Inverse Calibration MDN-B.A 191 |  |                    |            |                     |            | Base Calibration on 3-MAY-2007 19:21<br>Field Check on                    |  |
| Base Calibration                                       |  |                    |            |                     |            |   |  |
|  |  | Measured           |            | Calibrated (ohm-m)  |            |   |  |
| Channel  |  | Resistor 1         | Resistor 2 | Resistor 1          | Resistor 2 |   |  |
| Micro Normal   |  | 8.2                | 41.0       | 10.0                | 50.0       |   |  |
| Micro Inverse  |  | 8.2                | 41.2       | 10.0                | 50.0       |   |  |
| Channel  |  | Base Check (ohm-m) |            | Field Check (ohm-m) |            |   |  |
| Micro Normal   |  | 0.0                |            | 0.0                 |            |   |  |
| Micro Inverse  |  | 0.0                |            | 0.0                 |            |   |  |
| Micro Normal and Micro Inverse Constants MDN-B.A 191   |  |                    |            |                     |            | Last Edited on 13-FEB-2007,11:14  |  |
| Pad Type   |  |                    |            | 0                   |            |   |  |
| Micro Normal K Factor                                  |  |                    |            | 1.0000              |            |   |  |
| Micro Inverse K Factor                                 |  |                    |            | 1.0000              |            |   |  |
| Standoff Offset  |  |                    |            | N/A                 |            | inches  |  |
| FE Calibration MFE-B.A 220                             |  |                    |            |                     |            | Base Calibration on 27-DEC-2010 16:26<br>Field Check on 12-JAN-2011 11:28 |  |
| Base Calibration                                       |  |                    |            |                     |            |   |  |
|  |  | Measured           |            | Calibrated (ohm-m)  |            |   |  |
| Reference 1  |  | 0.0                |            | 0.0                 |            |   |  |
| Reference 2  |  | 964.5              |            | 126.8               |            |   |  |
| Base Check   |  |                    |            | 280.9               |            |   |  |

Field Check

281.1

## FE Constants MFE-B.A 220

Last Edited on 15-JAN-2011,08:49

|                                  |                          |        |
|----------------------------------|--------------------------|--------|
| Running Mode                     | No Sleeve                |        |
| MFE K Factor                     | 0.1268                   |        |
| Caliper Source for FE correction | Density Caliper          |        |
| Caliper Value for FE correction  | N/A                      | inches |
| Rm Source for FE correction      | Temperature Corr         |        |
| Temp. for Rm Corr.               | MCG External Temperature |        |
| Stand-off                        | 1.0                      | inches |

## Induction Calibration MAI-B.J 362

Base Calibration on 27-DEC-2010,15:17

Field Check on 12-JAN-2011 11:25

## Base Calibration

## Test Loop Calibration

| Channel | Measured |       | Calibrated (mmho/m) |       |
|---------|----------|-------|---------------------|-------|
|         | Low      | High  | Low                 | High  |
| 1       | 16.0     | 468.7 | 9.3                 | 966.2 |
| 2       | 6.2      | 374.5 | 7.6                 | 821.4 |
| 3       | 3.6      | 258.3 | 5.2                 | 566.0 |
| 4       | 1.8      | 133.1 | 2.6                 | 279.2 |

|                   |      |       |
|-------------------|------|-------|
| Array Temperature | 74.8 | Deg F |
|-------------------|------|-------|

| Channel | Base Check (mmho/m) |        | Field Check (mmho/m) |        |
|---------|---------------------|--------|----------------------|--------|
|         | Low                 | High   | Low                  | High   |
| 1       | 14.0                | 3874.1 | 14.6                 | 3875.2 |
| 2       | 30.3                | 3606.6 | 30.4                 | 3606.9 |
| 3       | 28.3                | 3070.1 | 28.4                 | 3070.1 |
| 4       | 19.7                | 2079.7 | 19.7                 | 2079.7 |
| Deep    | 17.4                | 1954.7 | 17.4                 | 1954.7 |
| Medium  | 41.1                | 4078.2 | 41.1                 | 4078.1 |
| Shallow | 45.3                | 5402.0 | 45.3                 | 5402.4 |

|                   |      |      |       |
|-------------------|------|------|-------|
| Array Temperature | 46.1 | 56.4 | Deg F |
|-------------------|------|------|-------|

## Induction Constants MAI-B.J 362

Last Edited on 15-JAN-2011,08:47

|                                   |                          |            |
|-----------------------------------|--------------------------|------------|
| Induction Model                   | RtAP-WBM                 |            |
| Caliper for Borehole Corr.        | Density Caliper          |            |
| Hole Size for Borehole Correction | N/A                      | inches     |
| Tool Centred                      | No                       |            |
| Stand-off Type                    | Fins                     |            |
| Stand-off                         | 1.00                     | inches     |
| Number of Fins on Stand-off       | 6.0000                   |            |
| Stand-off Fin Angle               | 60.00                    | degrees    |
| Stand-off Fin Width               | 0.5000                   | inches     |
| Borehole Corr. Rm Source          | Temperature Corr         |            |
| Temp. for Rm Corr.                | MCG External Temperature |            |
| Squasher Start                    | 0.0020                   | mhos/metre |
| Squasher Offset                   | N/A                      | mhos/metre |

## Borehole Normalisation

|      |        |      |        |
|------|--------|------|--------|
| DRM1 | 0.0000 | DRC1 | 0.0000 |
| DRM2 | 0.0000 | DRC2 | 0.0000 |
| MRM1 | 0.0000 | MRC1 | 0.0000 |
| MRM2 | 0.0000 | MRC2 | 0.0000 |
| SRM1 | 0.0000 | SRC1 | 0.0000 |
| SRM2 | 0.0000 | SRC2 | 0.0000 |

## Calibration Site Corrections

|           |      |             |
|-----------|------|-------------|
| Channel 1 | 0.00 | mmhos/metre |
| Channel 2 | 0.00 | mmhos/metre |
| Channel 3 | 0.00 | mmhos/metre |

|   |                       |  |
|---|-----------------------|--|
| Channel 4   | 0.00                  | mmhos/metre                            |
| Apparent Porosity and Water Saturation Constants    |                       |  |
| Archie Constant (A)                                 | 1.00                  |  |
| Cementation Exponent (M)                            | 2.00                  |  |
| Saturation Exponent (N)                             | 2.00                  |  |
| Saturation of Water for Apor                        | 100.00                | percent                                |
| Resistivity of Water for Apor and Sw                | 0.05                  | ohm-m                                  |
| Resistivity of Mud Filtrate for Sw                  | 0.00                  | ohm-m                                  |
| Source for Rt                                       | 0.00                  |  |
| Source for Rxo                                      | 0.00                  |  |
| High Resolution Temperature Calibration MAI-B.J 362 |                       |  |
|   | Measured              | Calibrated(Deg F)                      |
| Lower   | 10.00                 | 50.00                                  |
| Upper   | 100.00                | 212.00                                 |
| High Resolution Temperature Constants MAI-B.J 362   |                       |  |
| Pre-filter Length                                   |                       | 11                                     |
| Caliper Calibration MPD-C.A 215                     |                       |  |
| Base Calibration                                    |                       | Base Calibration on 07-JAN-2011 01:06  |
| Field Calibration                                   |                       | Field Calibration on 12-JAN-2011 11:19 |
| Reading No  | Measured              | Calibrator Size (in)                   |
| 1   | 15212                 | 3.99                                   |
| 2   | 23984                 | 5.96                                   |
| 3   | 32799                 | 7.99                                   |
| 4   | 40800                 | 9.86                                   |
| 5   | 50187                 | 11.93                                  |
| 6   | N/A                   | N/A                                    |
| Field Calibration                                   |                       |  |
|   | Measured Caliper (in) | Actual Caliper (in)                    |
|   | 7.93                  | 7.99                                   |
| Photo Density Calibration MPD-C.A 215               |                       |  |
| Density Calibration                                 |                       | Base Calibration on 07-JAN-2011 01:23  |
| Base Calibration                                    |                       | Field Check on 12-JAN-2011 11:17       |
|   | Measured              | Calibrated (sdu)                       |
|   | Near                  | Far                                    |
| Reference 1   | 43536                 | 15059                                  |
| Reference 2   | 20646                 | 2470                                   |
| Field Check at Base                                 |                       |  |
|   | 1316.1                | 1398.6                                 |
| Field Check   |                       |  |
|   | 1314.3                | 1384.5                                 |
| PE Calibration                                      |                       |  |
| Base Calibration                                    |                       | Measured                               |
|   | WS                    | WH                                     |
| Background  | 239                   | 1177                                   |
| Reference 1   | 14681                 | 43360                                  |
| Reference 2   | 5763                  | 20497                                  |
| Field Check at Base                                 |                       |  |
|   | 239.0                 | 1176.6                                 |
| Field Check   |                       |  |
|   | 240.0                 | 1176.9                                 |
| Density Constants MPD-C A 215                       |                       |  |



|                               |                 |       |
|-------------------------------|-----------------|-------|
| Density Source Id             | 2859GW          |       |
| Nylon Calibrator Number       | DNC-E-527       |       |
| Aluminium Calibrator Number   | DAC-D-527       |       |
| Density Shoe Profile          | 8 inch          |       |
| Caliper Source for Processing | Density Caliper |       |
| PE Correction to Density      | Not Applied     |       |
| Mud Density                   | 1.31            | gm/cc |
| Mud Density Z/A Multiplier    | 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 |
| Density Z/A Correction        | Hybrid          |       |
| Matrix Density (gm/cc)        | Depth (ft)      |       |
| 2.68                          | 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            |       |
| 0.00                          | 0.00            |       |

## DOWNHOLE EQUIPMENT

E:\LARAMIE ENERGY II\Laramie Energy II Brunton 30-02B.dta

MCB-A.A 11B Tension Cablehead  
MCB-A.A 102 LG: 2.40 ft WT: 19.8 lb OD: 2.24 in

SHA-F Compact Swivel Head Adaptor  
SHA-F 38 LG: 2.74 ft WT: 26.5 lb OD: 2.24 in

Compact Comms Gamma  
MCG-C 145 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Neutron  
MDN-B.A 191 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

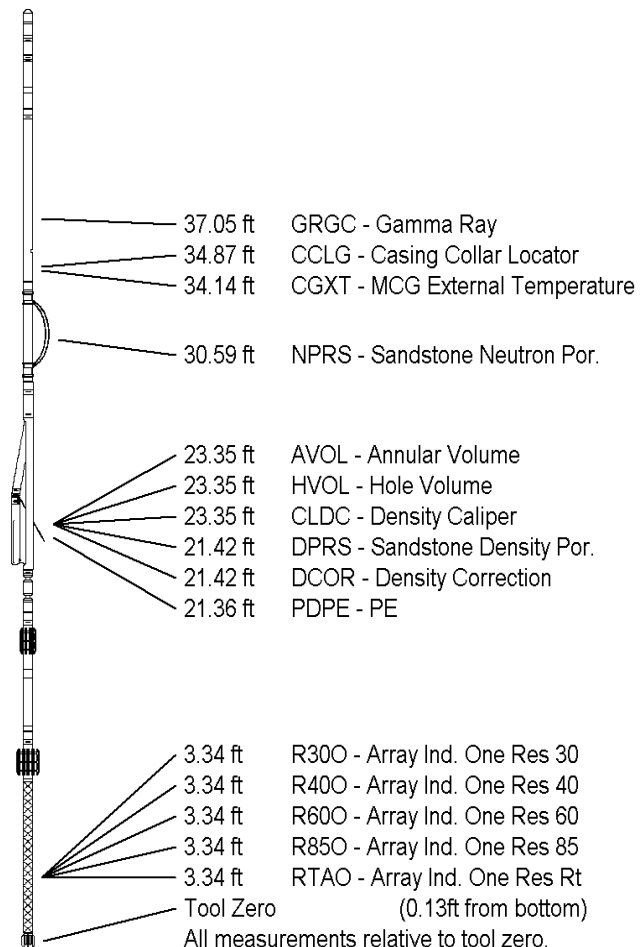
Compact Density/Caliper  
MPD-C.A 215 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

SKJ-D.A Compact Knuckle Joint  
SKJ-D.A 66 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Compact Focussed Electric  
MFE-B.A 220 LG: 6.03 ft WT: 48.5 lb OD: 2.24 in

Compact Induction  
MAI-B.J 362 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 47.47 ft Weight: 372.6 lb



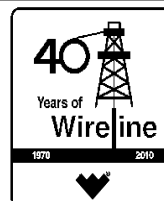
COMPANY LARAMIE ENERGY II  
WELL BRUNTON 30-02B  
FIELD VEGA  
PROVINCE/COUNTY MESA  
COUNTRY/STATE U.S.A. / COLORADO

|                         |         |      |               |         |      |
|-------------------------|---------|------|---------------|---------|------|
| Elevation Kelly Bushing | 7366.00 | feet | First Reading | 7910.00 |      |
| Elevation Drill Floor   | 7365.00 | feet | Depth Driller | 7910.00 | feet |
| Elevation Ground Level  | 7345.00 | feet | Depth Logger  | 7913.00 | feet |

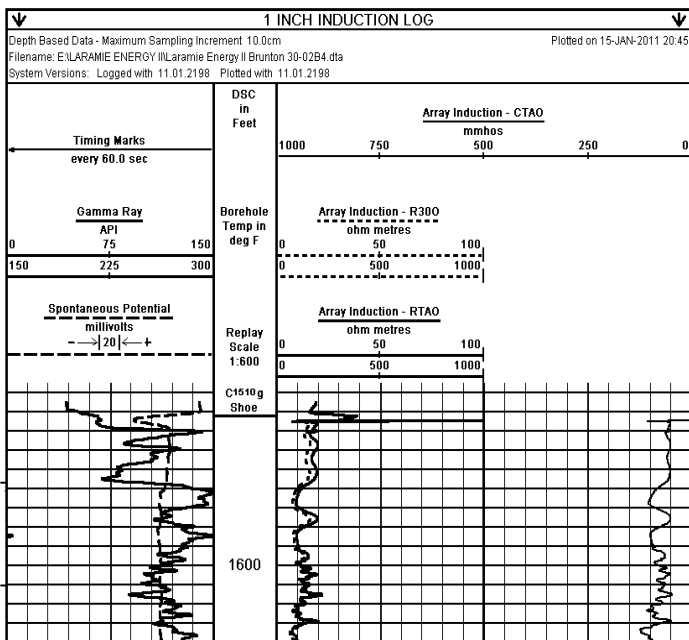


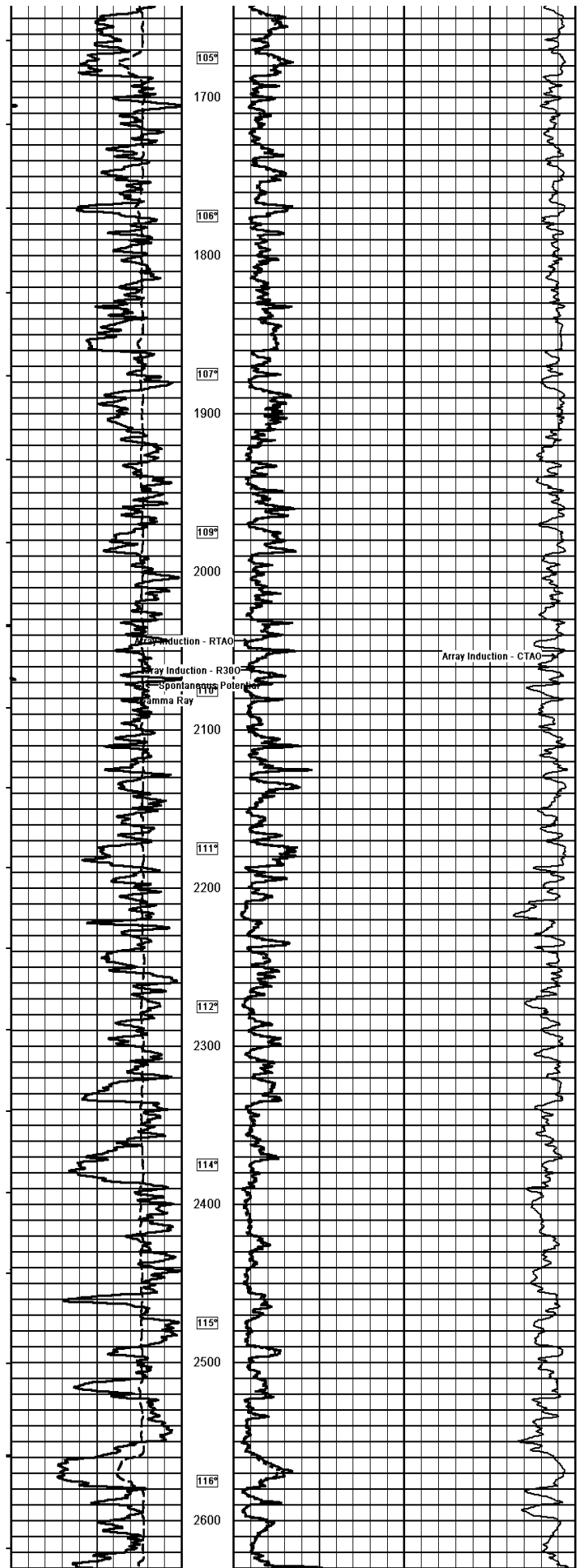
**Weatherford**

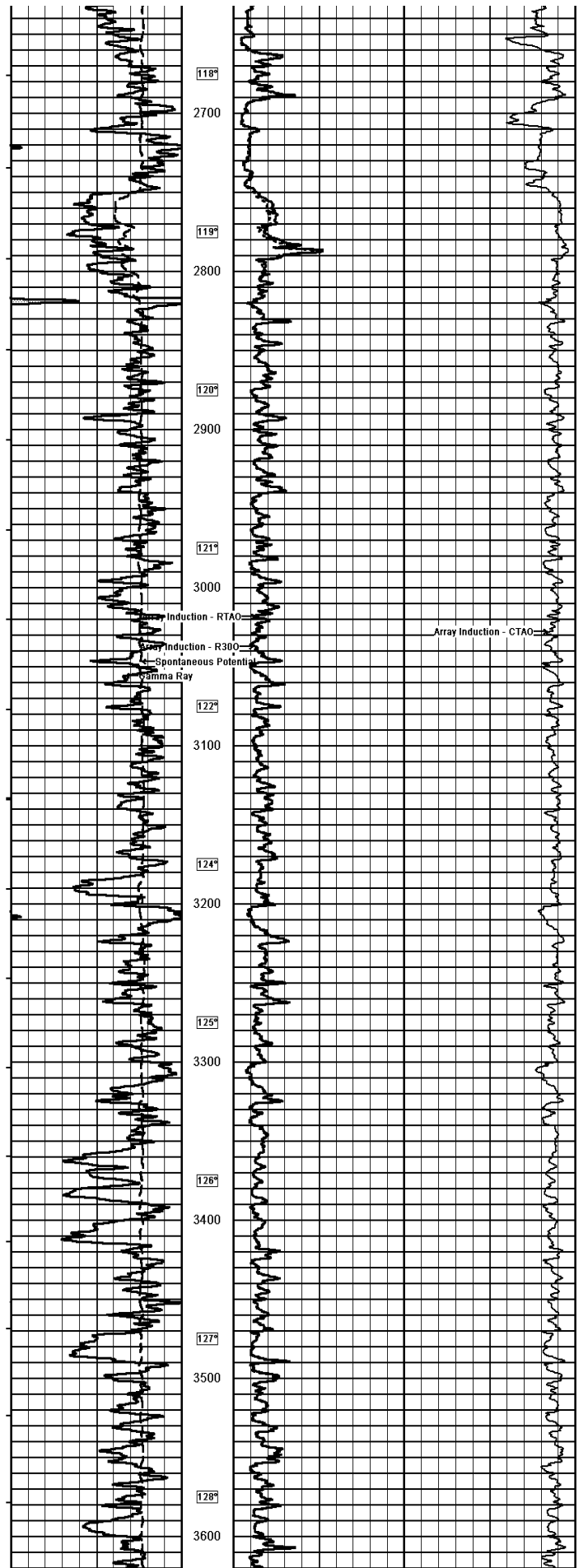
# ARRAY INDUCTION LOG

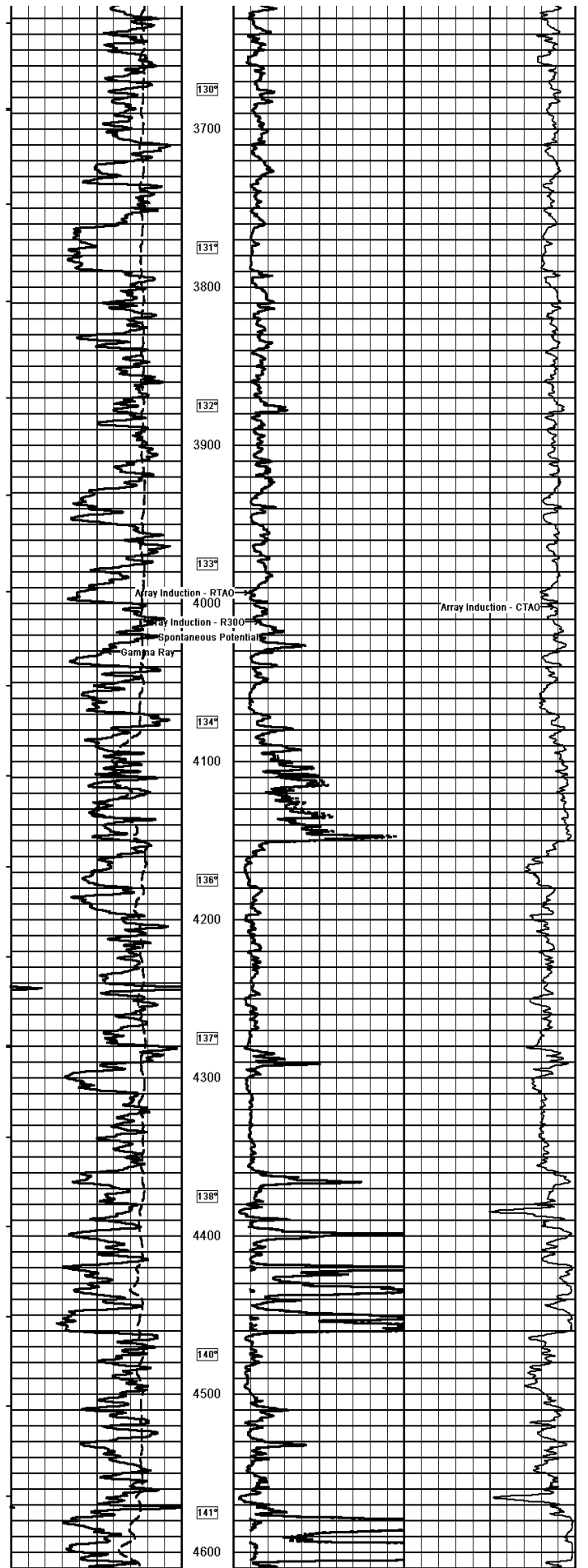


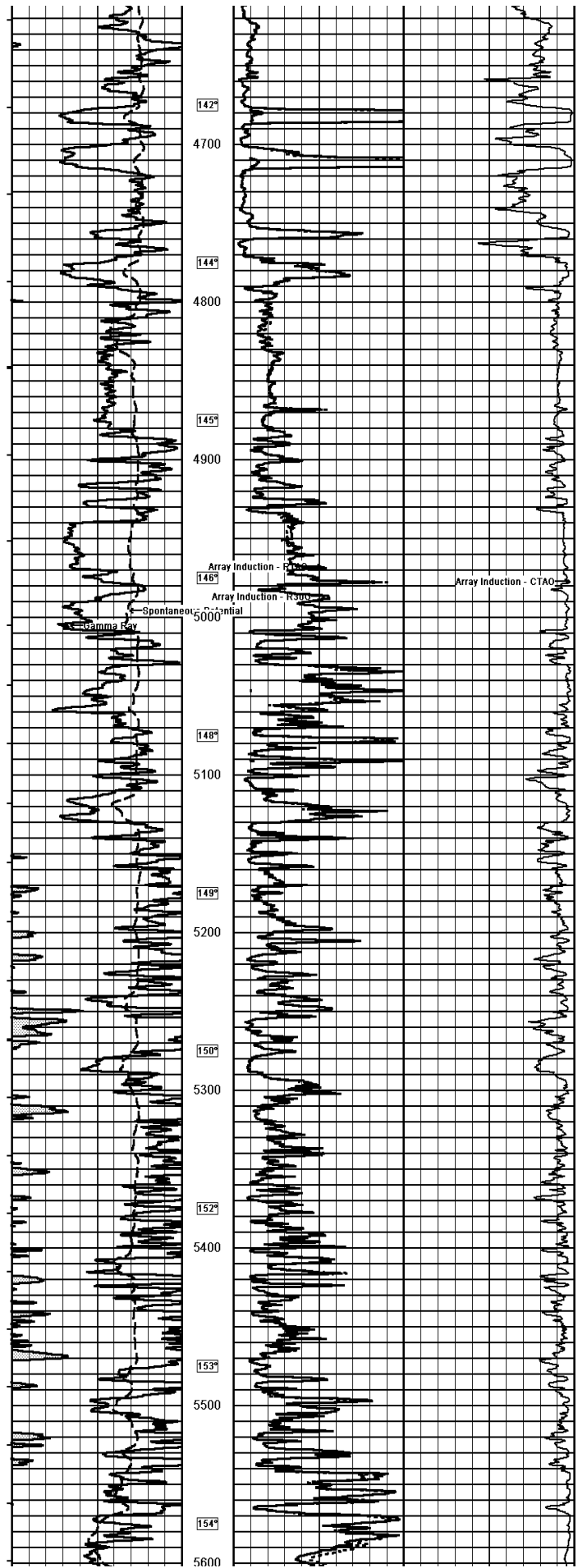
|                              |  |                              |                                     |
|------------------------------|--|------------------------------|-------------------------------------|
| <b>Weatherford</b>           |  | <b>ARRAY INDUCTION LOG</b>   |                                     |
| COMPANY                      | LARAMIE ENERGY II                        | WELL                         | BRUNTON 30-02B                      |
| FIELD                        | VEGA                                     | PROVINCE/COUNTY              | MESA                                |
| COUNTRY/STATE                | U.S.A. / COLORADO                        | SHL                          | 828' FSL & 1745' FWL                |
| LOCATION                     | BHL: 493' FSL & 1961' FEL                |                              |                                     |
| LOG NUMBER                   | 50-077-10992                             | DATE                         | 15-JAN-2011                         |
| PERMIT NUMBER                | 95                                       | TIME                         | 1334                                |
| LOG MEASURED FROM            | Permanent Datum 0 L, Elevation 7345 feet | LOG MEASURED FROM            | K-B @ 21 FEET above Permanent Datum |
| DRILLING MEASURED FROM       | K-B                                      |                              |                                     |
| Run Number                   | ONE                                      | Depth Driller                | 7910.00 feet                        |
| Depth Driller                | 7910.00                                  | Depth Logger                 | 7910.00 feet                        |
| First Reading                | 7910.00                                  | Last Reading                 | 1522.00 feet                        |
| Casing Driller               | 1524.00                                  | Casing Logger                | 1522.00 feet                        |
| BIT Size                     | 7.875                                    | Flow Fluid Type              | GEL/CHEN                            |
| Flow Fluid Type              | GEL/CHEN                                 | Flow Fluid Viscosity         | 100 cP                              |
| Flow Fluid Viscosity         | 100 cP                                   | Flow Fluid Density           | 7.00 g/cc                           |
| Flow Fluid Density           | 7.00 g/cc                                | Flow Fluid Solids            | 0.00                                |
| Flow Fluid Solids            | 0.00                                     | Flow Fluid Temperature       | 273 @ 65.0 ohm-m                    |
| Flow Fluid Temperature       | 273 @ 65.0 ohm-m                         | Flow Fluid Measured Temp     | 218 @ 65.0 ohm-m                    |
| Flow Fluid Measured Temp     | 218 @ 65.0 ohm-m                         | Flow Fluid Source Temp       | 3.28 @ 65.0 ohm-m                   |
| Flow Fluid Source Temp       | 3.28 @ 65.0 ohm-m                        | Flow Fluid Source Rmt / Rmtc | CALC                                |
| Flow Fluid Source Rmt / Rmtc | CALC                                     | Flow Fluid Rmt @ BHT         | 0.90 @ 203.0 ohm-m                  |
| Flow Fluid Rmt @ BHT         | 0.90 @ 203.0 ohm-m                       | Time Since Circulation       | 203.00                              |
| Time Since Circulation       | 203.00                                   | Max Recorded Temp            | 130.37 deg F                        |
| Max Recorded Temp            | 130.37 deg F                             | Equipment Name               | COMPACT                             |
| Equipment Name               | COMPACT                                  | Equipment Base               | 13037                               |
| Equipment Base               | 13037                                    | Recorded By                  | J. PAULSEN                          |
| Recorded By                  | J. PAULSEN                               | Witnessed By                 | K. CLAUSSEN                         |
| Witnessed By                 | K. CLAUSSEN                              |                              |                                     |

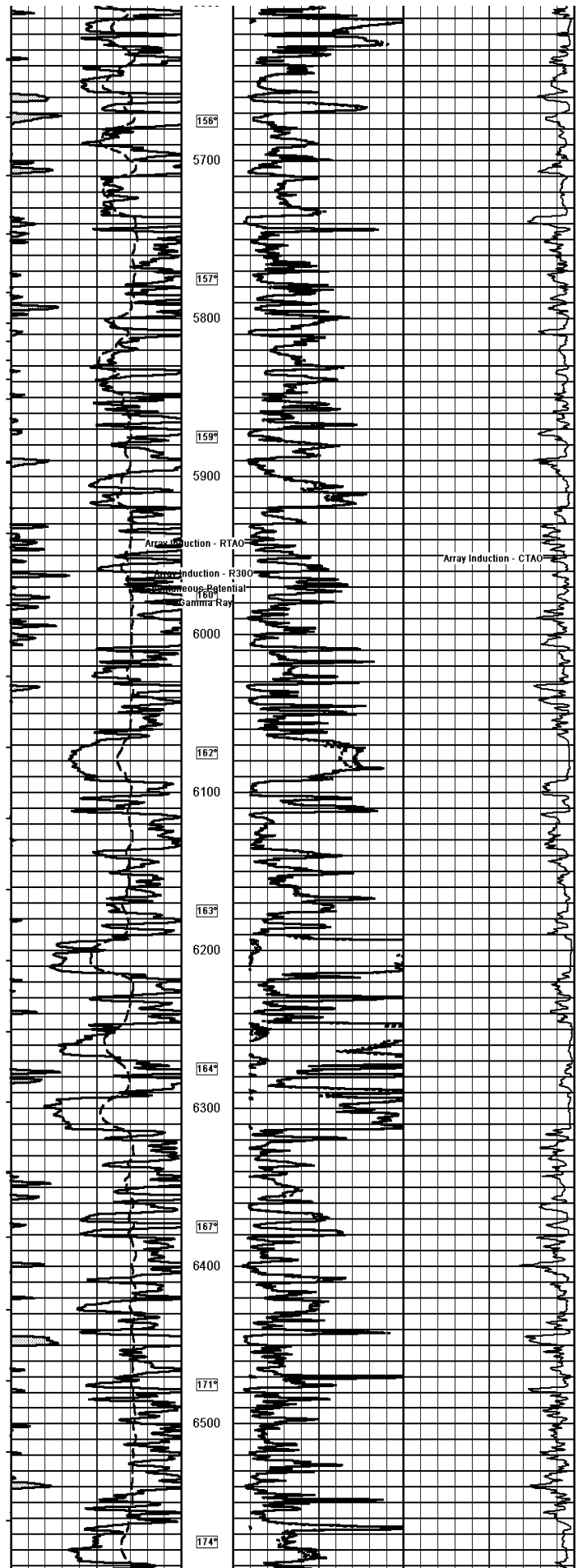


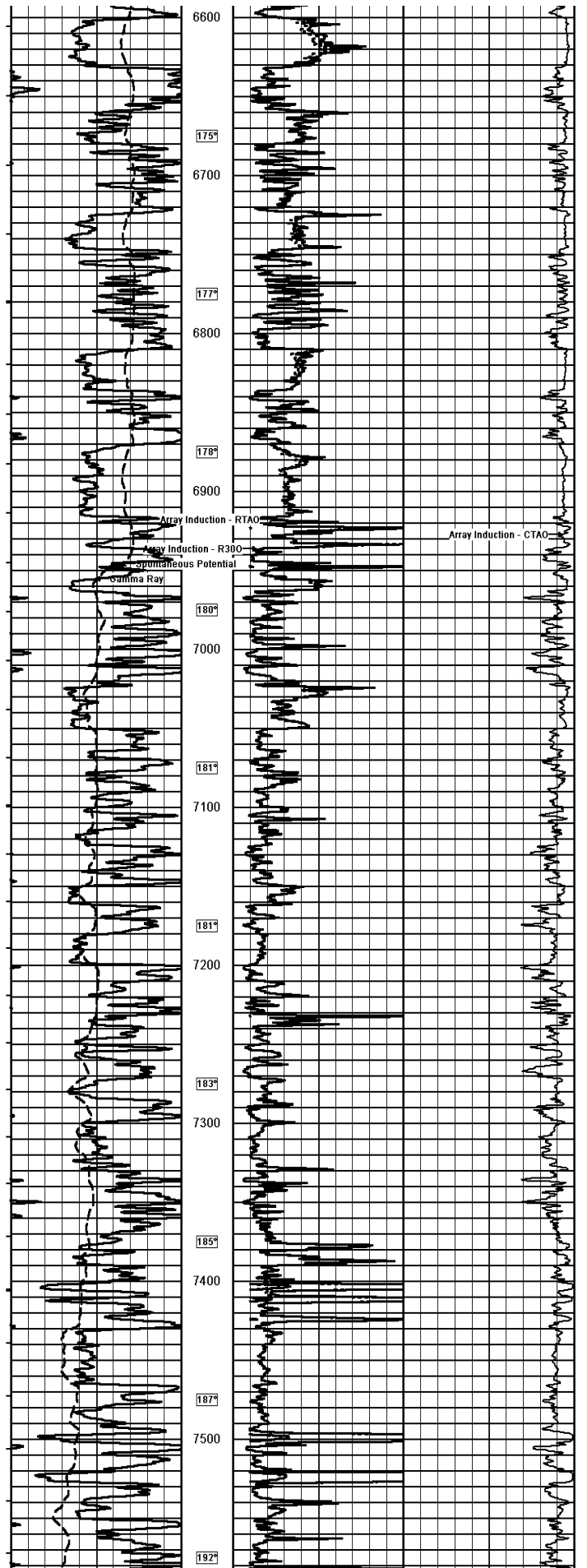




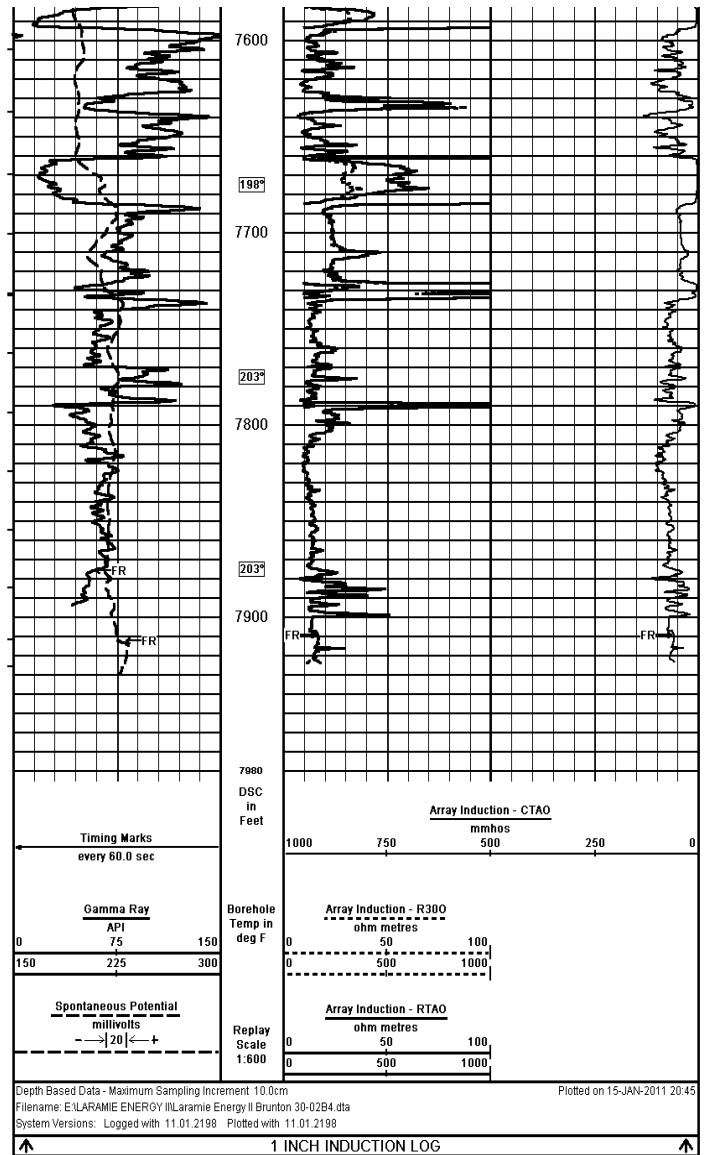













|                         |         |                   |               |         |      |
|-------------------------|---------|-------------------|---------------|---------|------|
| COMPANY                 |         | LARAMIE ENERGY II |               |         |      |
| WELL                    |         | BRUNTON 30-02B    |               |         |      |
| FIELD                   |         | VEGA              |               |         |      |
| PROVINCE/COUNTY         |         | MESA              |               |         |      |
| COUNTRY/STATE           |         | U.S.A. / COLORADO |               |         |      |
| Elevation Kelly Bushing | 7366.00 | feet              | First Reading | 7910.00 |      |
| Elevation Drill Floor   | 7365.00 | feet              | Depth Driller | 7910.00 | feet |
| Elevation Ground Level  | 7345.00 | feet              | Depth Logger  | 7913.00 | feet |

  
**Weatherford**

ARRAY INDUCTION  
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