

**Weatherford****ARRAY INDUCTION  
SHALLOW FOCUSED  
ELECTRIC LOG**

|   |               |                              |                |                |                                       |
|---|---------------|------------------------------|----------------|----------------|---------------------------------------|
| COMPANY                                   |               | GRAND MESA OPERATING COMPANY |                |                |                                       |
| WELL                                      |               | K-M #1-2                     |                |                |                                       |
| FIELD                                     |               | WILDCAT                      |                |                |                                       |
| PROVINCE/COUNTY                           |               | WASHINGTON                   |                |                |                                       |
| COUNTRY/STATE                             |               | UNITED STATES / COLORADO     |                |                |                                       |
| LOCATION                                  |               | 2384' FNL & 2540' FWL        |                |                |                                       |
| SEC                                       | TWP           | RGE                          | Other Services |                |                                       |
| 2   | 2S            | 52W                          | MPD/MDN        |                |                                       |
| API Number                                |               | 05-121-11033                 |                | MML            |                                       |
| Permit Number                             |               | MSS                          |                |                |                                       |
| Permanent Datum G.L., Elevation 4672 feet |               |                              |                |                |                                       |
| Log Measured From KB                      |               |                              |                |                | Elevations:                           |
| Drilling Measured From K.B. @ 10 FEET     |               |                              |                |                | KB<br>DF<br>GL                        |
| Date                                      | 07-OCT-2013   |                              | 02-NOV-2013    |                | feet<br>4682.00<br>4680.00<br>4672.00 |
| Run Number                                | ONE           |                              | TWO            |                |                                       |
| Service Order                             | 3541093       |                              | 3541093        |                |                                       |
| Depth Driller                             | 4485.00       | feet                         | 7720.00        | feet           |                                       |
| Depth Logger                              | 4482.00       | feet                         | 7718.00        | feet           |                                       |
| First Reading                             | 4479.00       | feet                         | 7715.00        | feet           |                                       |
| Last Reading                              | 396.00        | feet                         | 3400.00        | feet           |                                       |
| Casing Driller                            | 396.00        | feet                         | 396.00         | feet           |                                       |
| Casing Logger                             | 396.00        | feet                         | 396.00         | feet           |                                       |
| Bit Size                                  | 7.880         | inches                       | 7.880          | inches         |                                       |
| Hole Fluid Type                           | CHEMICAL      |                              | CHEMICAL       |                |                                       |
| Density / Viscosity                       | 9.30 lb/USg   | 50.00 CP                     | 9.30 lb/USg    | 67.00 CP       |                                       |
| PH / Fluid Loss                           | 8.50          | 6.40 ml/30Min                | 9.00           | 10.80 ml/30Min |                                       |
| Sample Source                             | MUDPIT        |                              | MUDPIT         |                |                                       |
| Rm @ Measured Temp                        | 2.34 @ 75.0   | ohm-m                        | 2.34 @ 75.0    | ohm-m          |                                       |
| Rmf @ Measured Temp                       | 1.87 @ 75.0   | ohm-m                        | 1.87 @ 75.0    | ohm-m          |                                       |
| Rmc @ Measured Temp                       | 2.81 @ 75.0   | ohm-m                        | 2.81 @ 75.0    | ohm-m          |                                       |
| Source Rmf / Rmc                          | CALC          | CALC                         | CALC           | CALC           |                                       |
| Rm @ BHT                                  | 1.34 @131.0   | ohm-m                        | 0.93 @189.0    | ohm-m          |                                       |
| Time Since Circulation                    | 4 HOURS       |                              | 5 HOURS        |                |                                       |
| Max Recorded Temp                         | 131.00        | deg F                        | 189.00         | deg F          |                                       |
| Equipment / Base                          | 13096         | LIB                          | 13244          |                |                                       |
| Recorded By                               | W. STAMBAUGH  |                              | W. STAMBAUGH   |                |                                       |
| Witnessed By                              | BOB SCHREIBER |                              | BOB SCHREIBER  |                |                                       |
| JOE#                                      | LB13-282      |                              | LB13-313       |                |                                       |

**BOREHOLE RECORD**

Last Edited: 02-NOV-2013 19:47

|                    |                    |                  |
|--------------------|--------------------|------------------|
| Bit Size<br>inches | Depth From<br>feet | Depth To<br>feet |
| 7.880              | 396.00             | 7270.00          |

**CASING RECORD**

|         |                |                    |                    |                     |
|---------|----------------|--------------------|--------------------|---------------------|
| Type    | Size<br>inches | Depth From<br>feet | Shoe Depth<br>feet | Weight<br>pounds/ft |
| SURFACE | 8.625          | 0.00               | 396.00             | 24.00               |

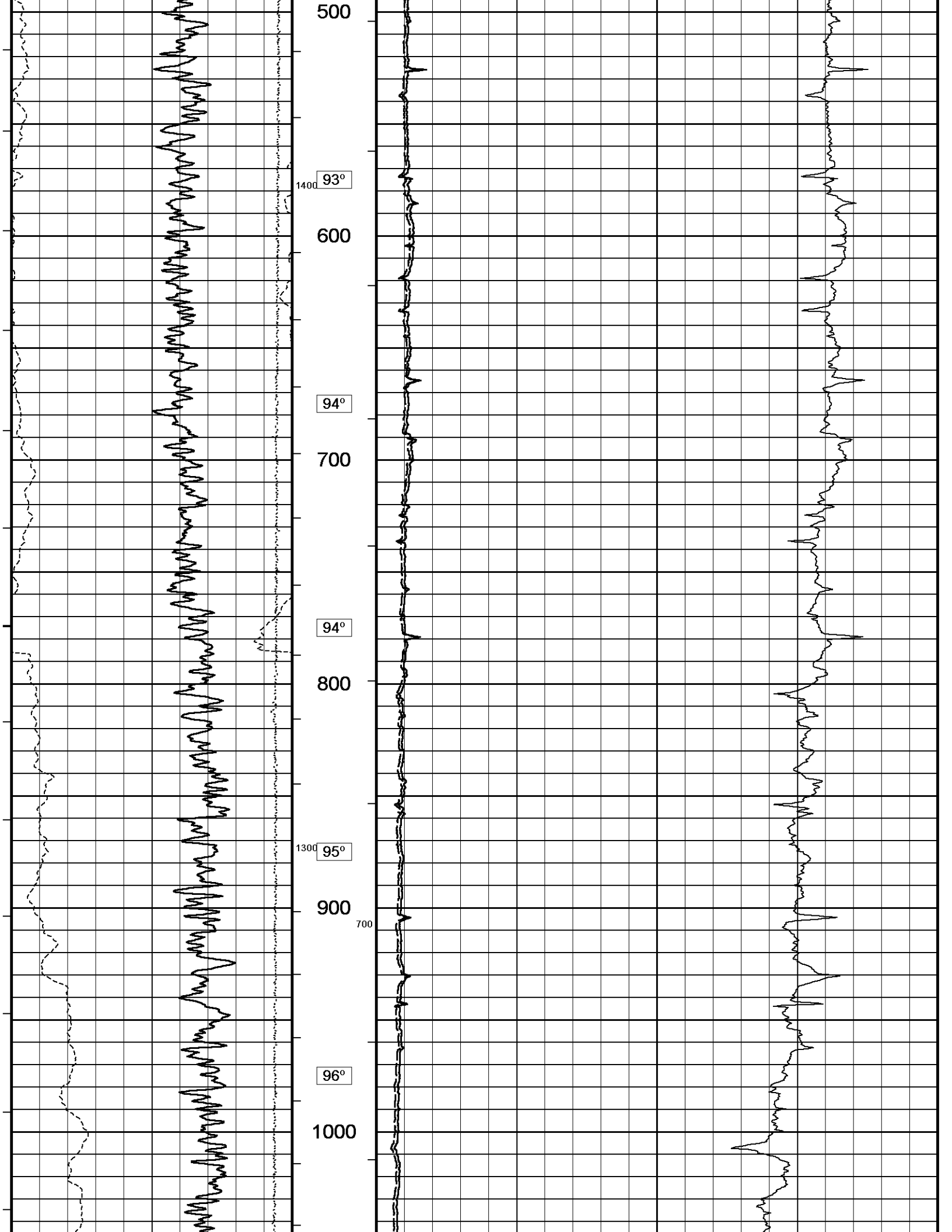
**REMARKS**

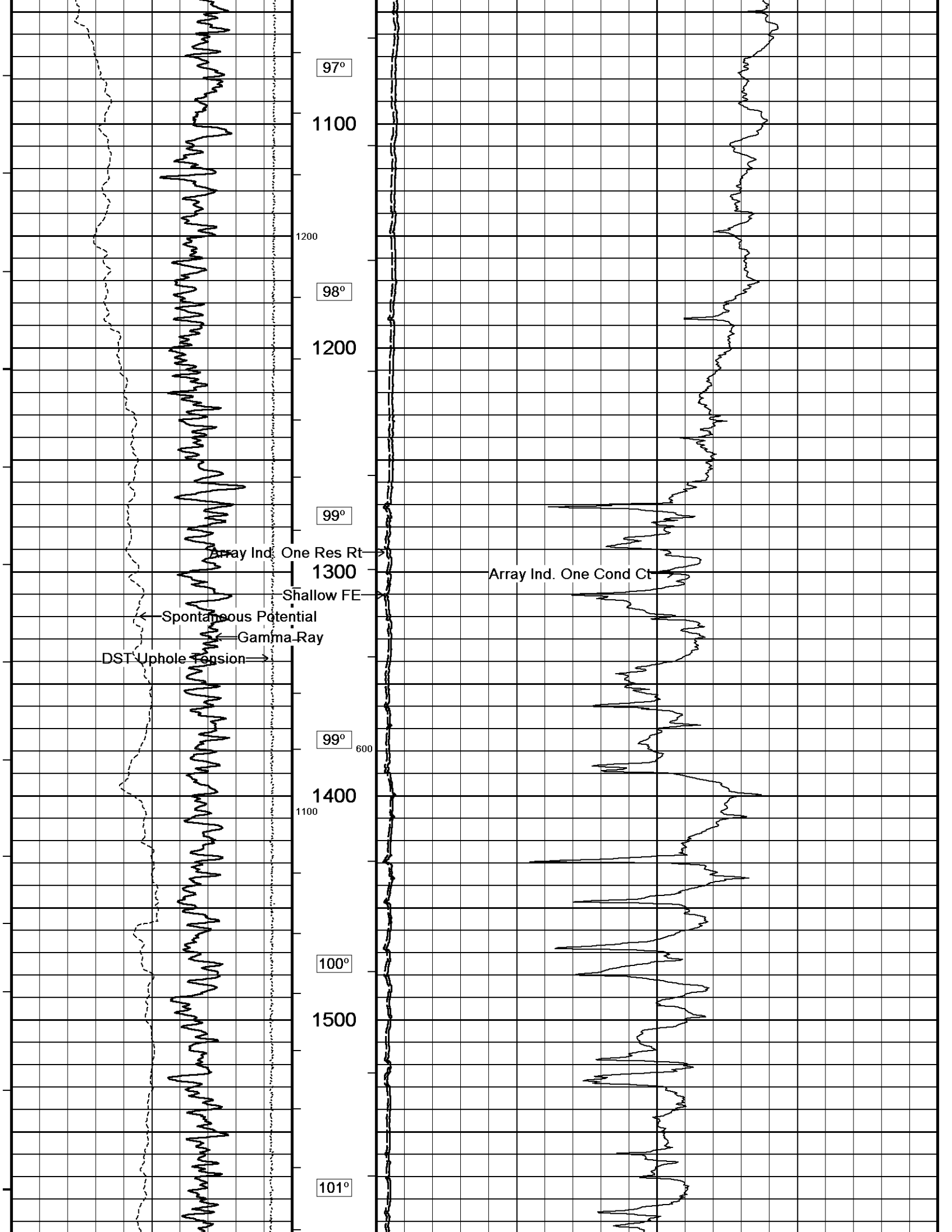
- SOFTWARE ISSUE: WLS 13.05.9583.  
- RUN #1 07-OCT-2013  
- MCG, MML, MDN, MPD, MFE, MAI RUN IN COMBINATION.  
HARDWARE: DUAL BOWSPRING USED ON MDN.  
0.5 INCH STANDOFF USED ON MFE.  
0.5 INCH STANDOFF USED ON MAI.

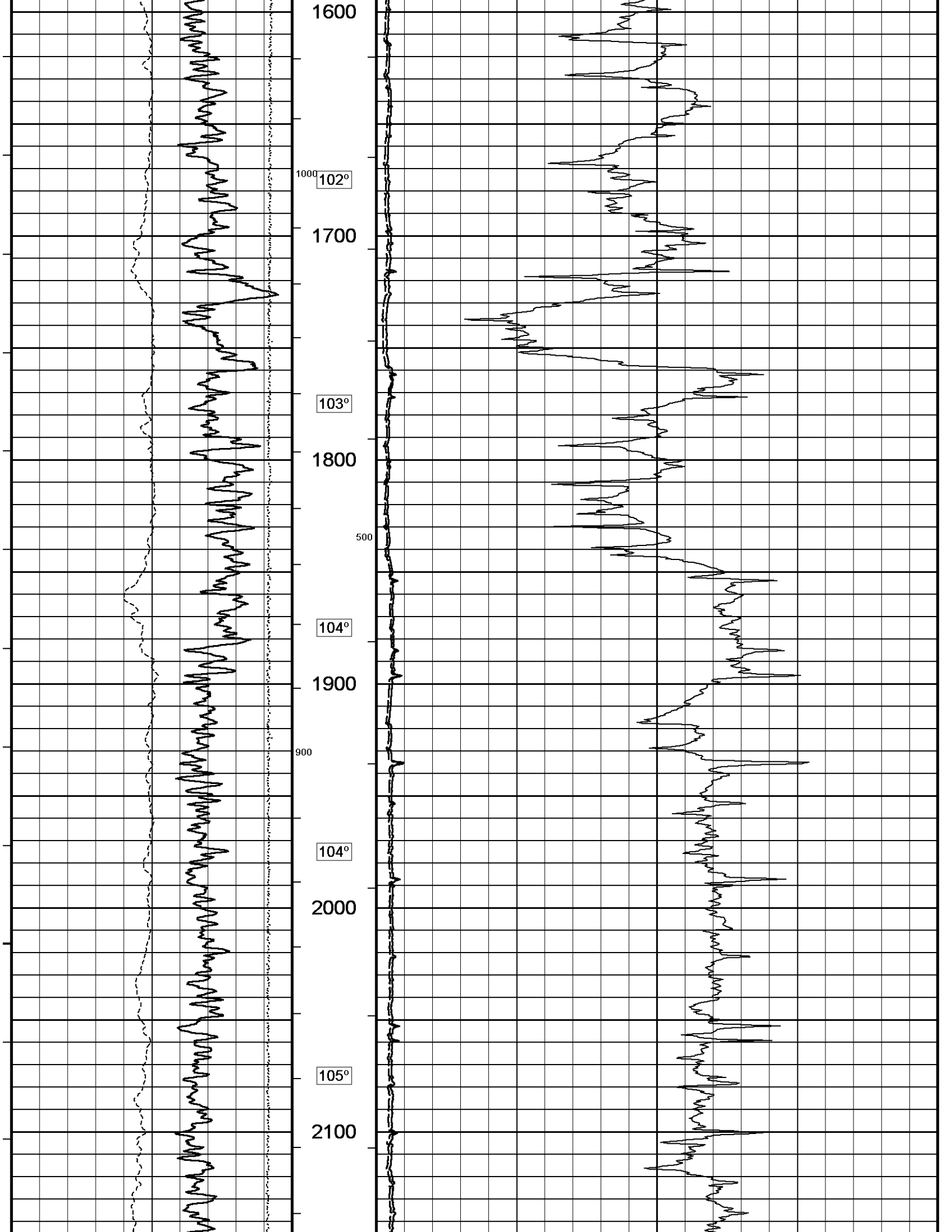
- RUN #2 02-NOV-2013  
- 4 DEGREE DEVIATION AT 4700' ANOTHER 4 DEGREE DEVIATION AT 6500' TO 6900' FEET.  
- ORIGNAL TD WAS 7433' 530' OF COLLARS SET IN HOLE,  
- WHIPSTOCK SET IN THE 6500' TO 6900' INTERVAL AND HOLE KICKED OFF AROUND 6600'.  
- MCG, MFE, MAI RUN IN COMBINATION ON FIRST RUN OF RUN #2.

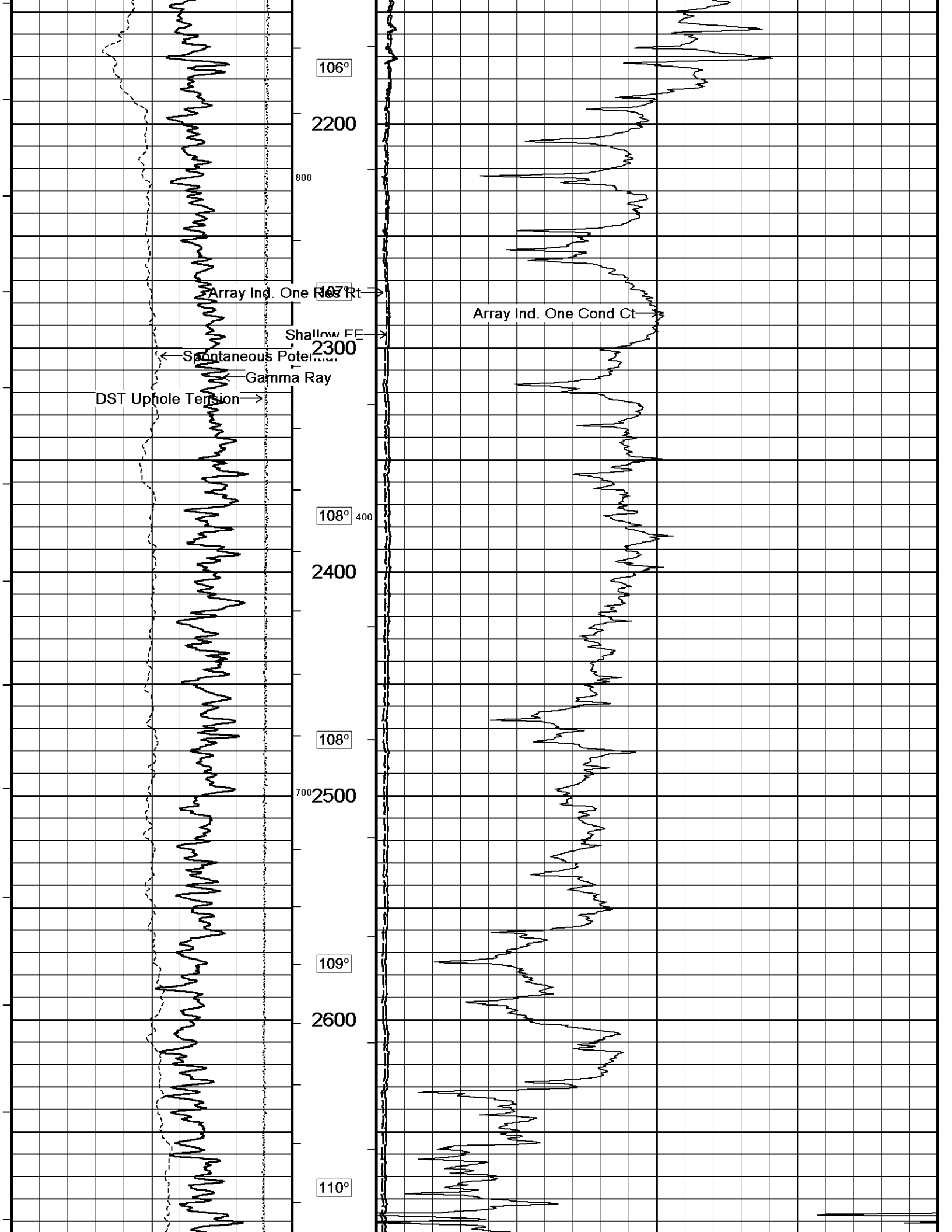
- MCG, MML, MDN, MPD, MSS RUN IN COMBINATION ON SECOND RUN OF RUN #2.  
NO REPEAT SECTION ON FINAL ATTEMPT DUE TO CUSTOMER CONCERNS ABOUT HOLE CONDITONS,  
AFTER BRIDGING OFF AT 5650' ON THE WAY IN THE HOLE.  
HARDWARE: DUAL BOWSPRING USED ON MDN.  
0.5 INCH STANDOFF USED ON MSS.

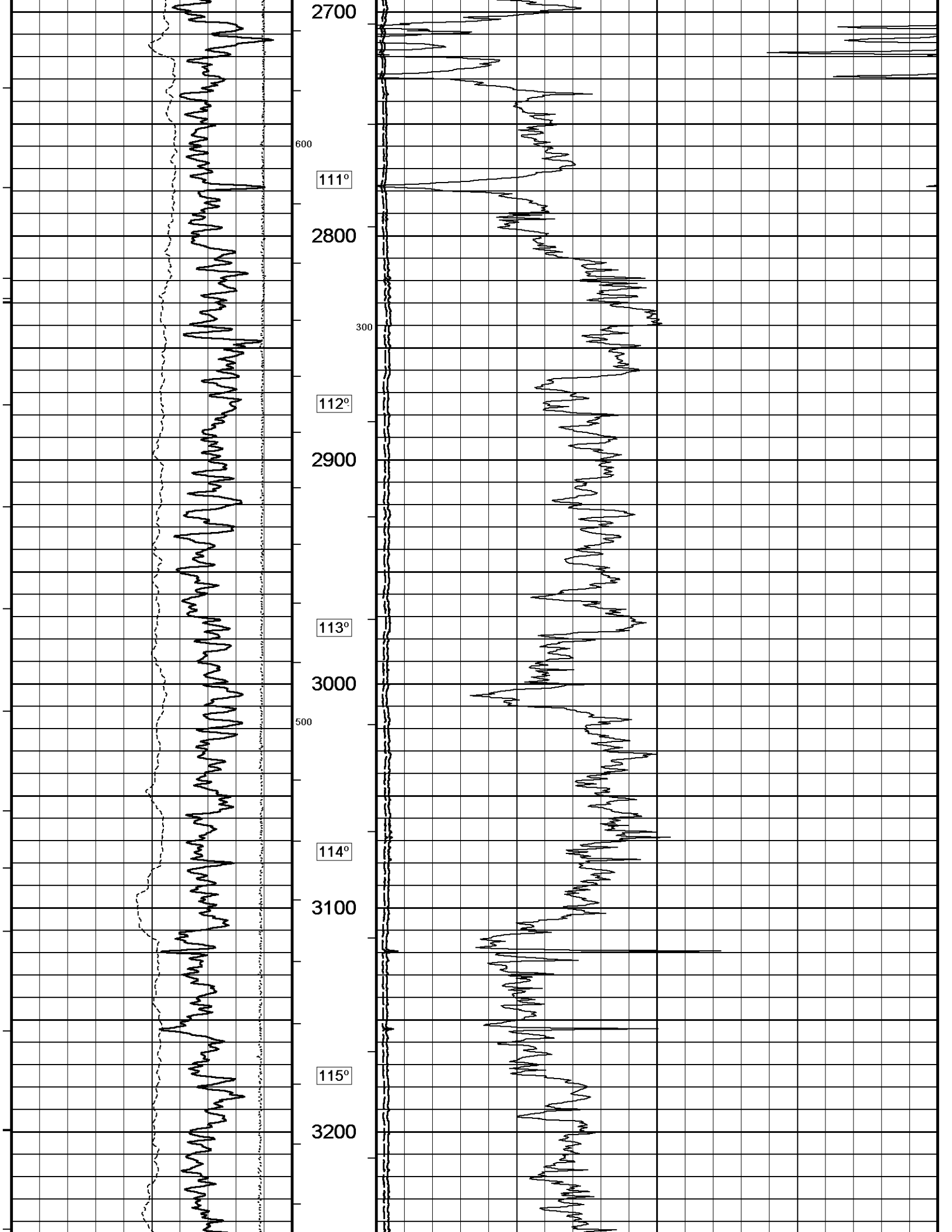


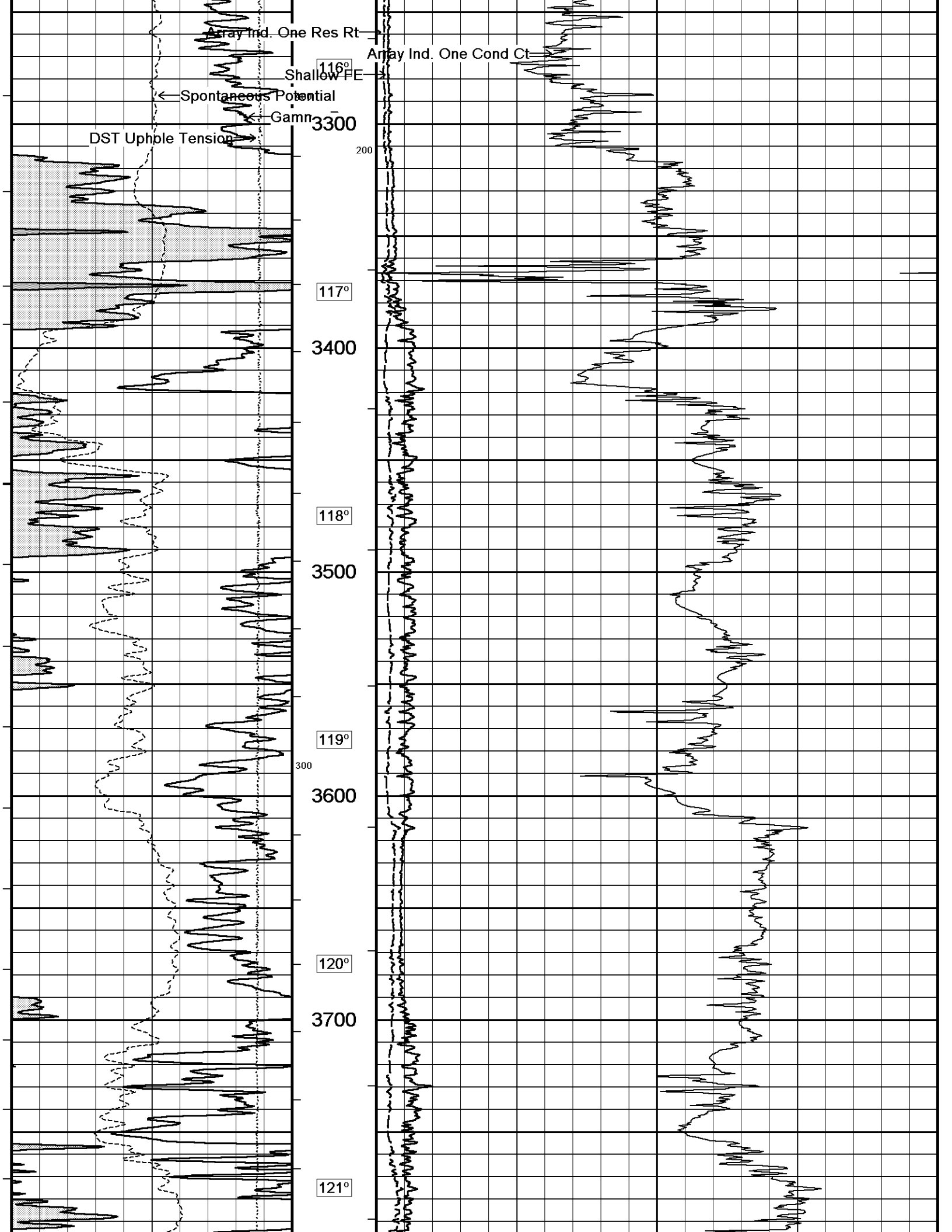




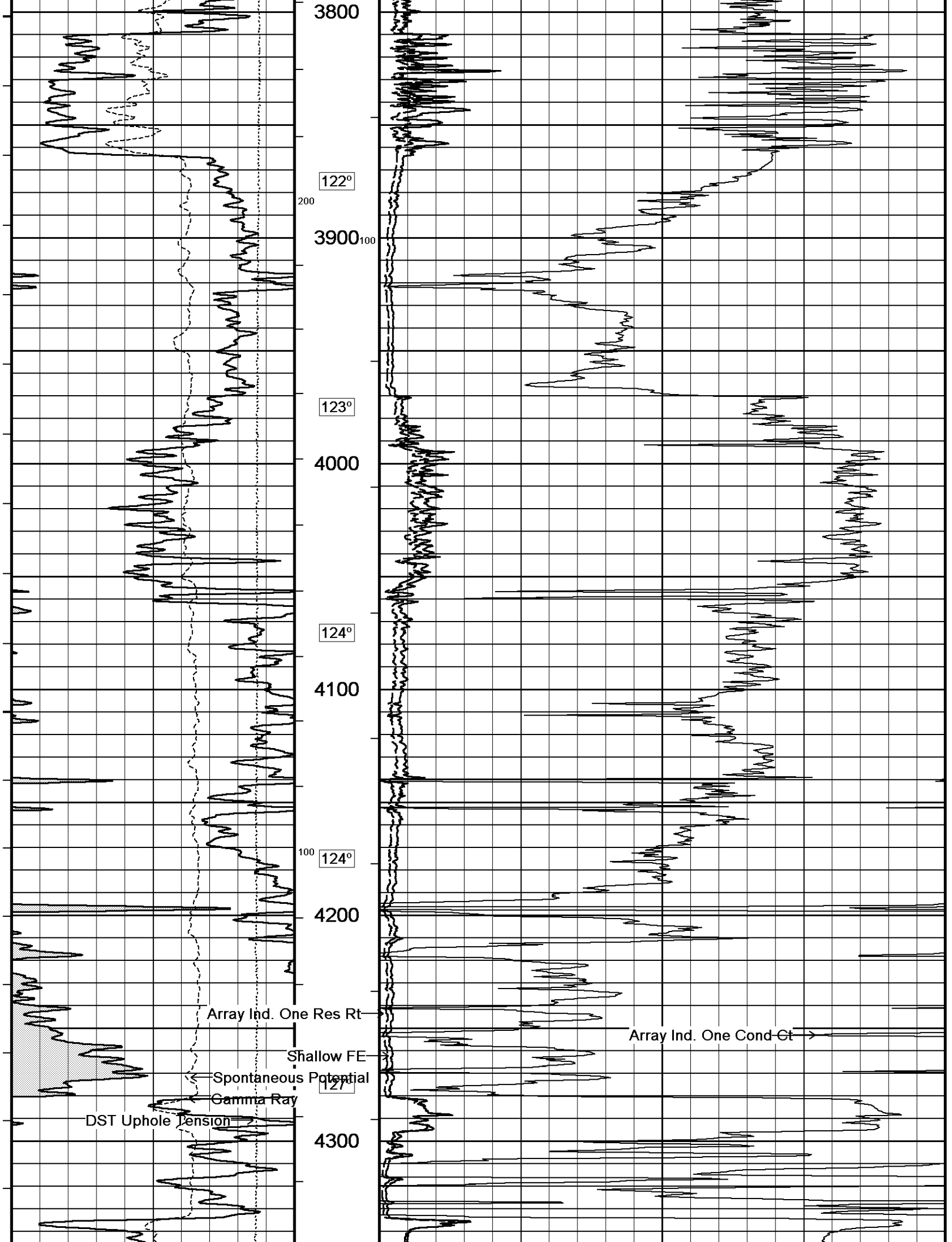


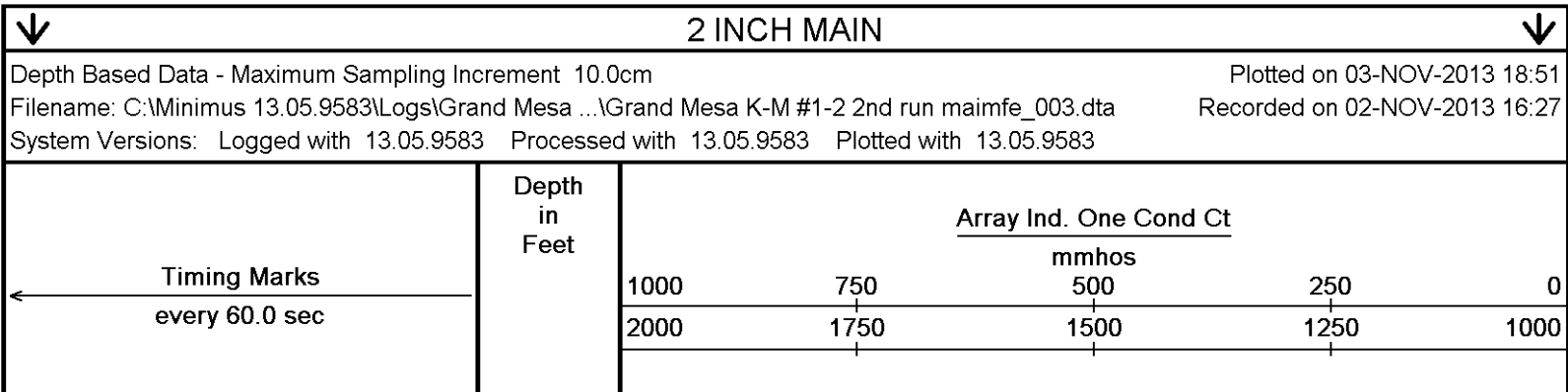
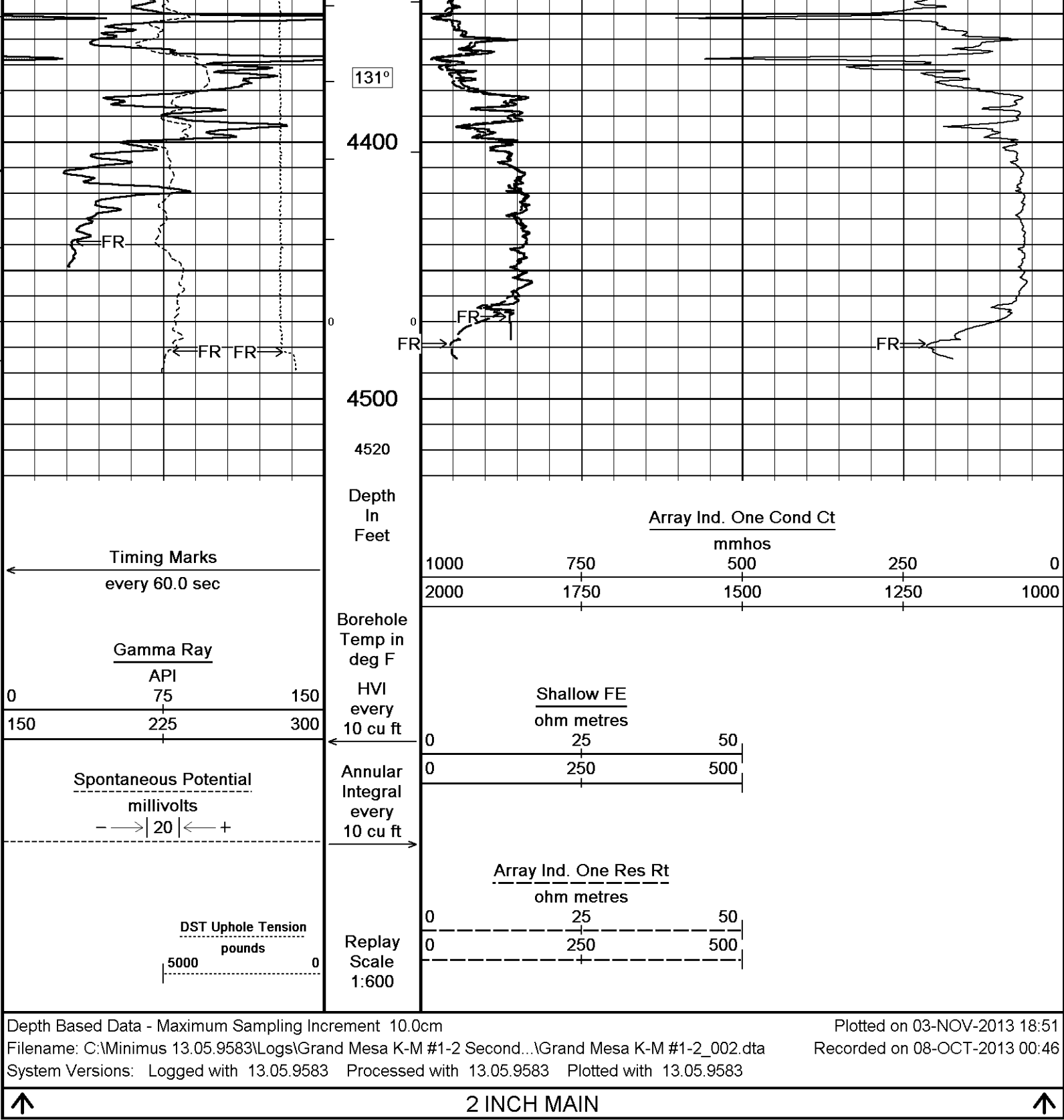


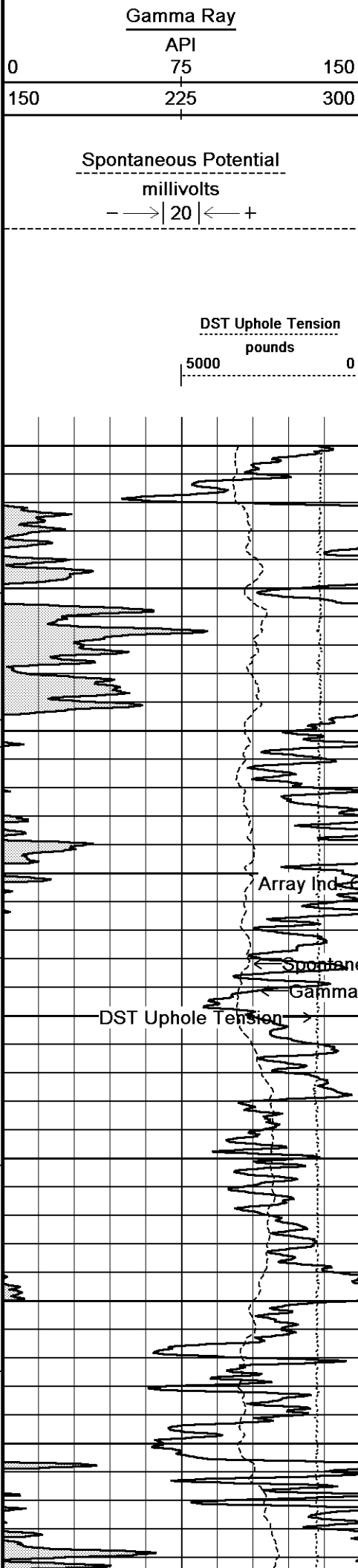












Borehole  
Temp in  
deg F

Replay  
Scale  
1:600

3400

132°

3500

Array Ind. One Res Rt →

Shallow FE  
134°

Spontaneous Potential

Gamma Ray

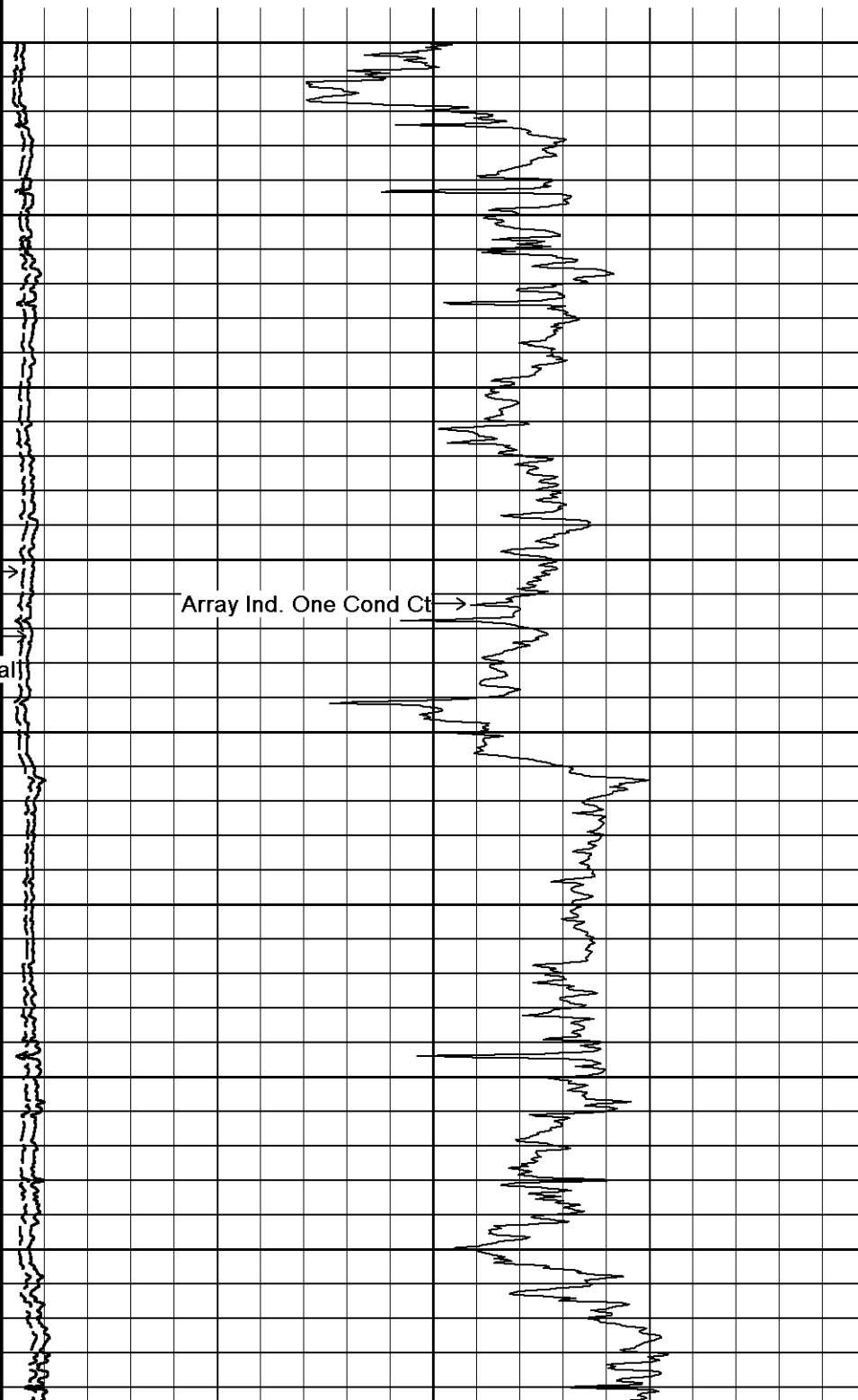
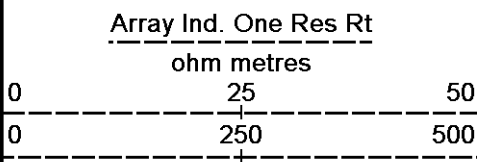
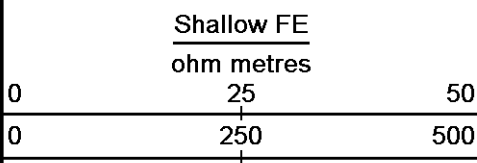
DST Uphole Tension →

3600

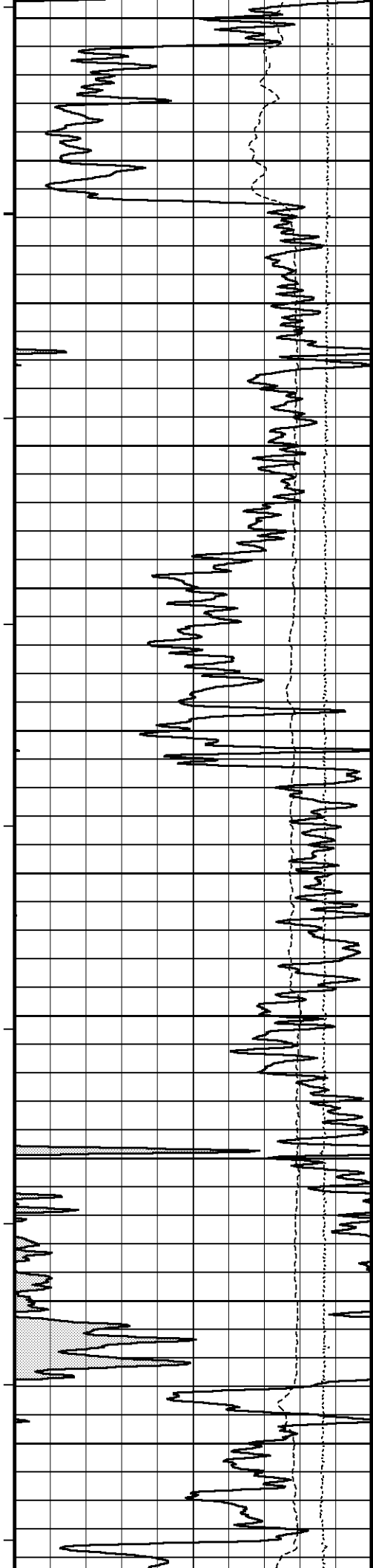
136°

3700

137°



Array Ind. One Cond Ct →



3800

138°

3900

139°

4000

140°

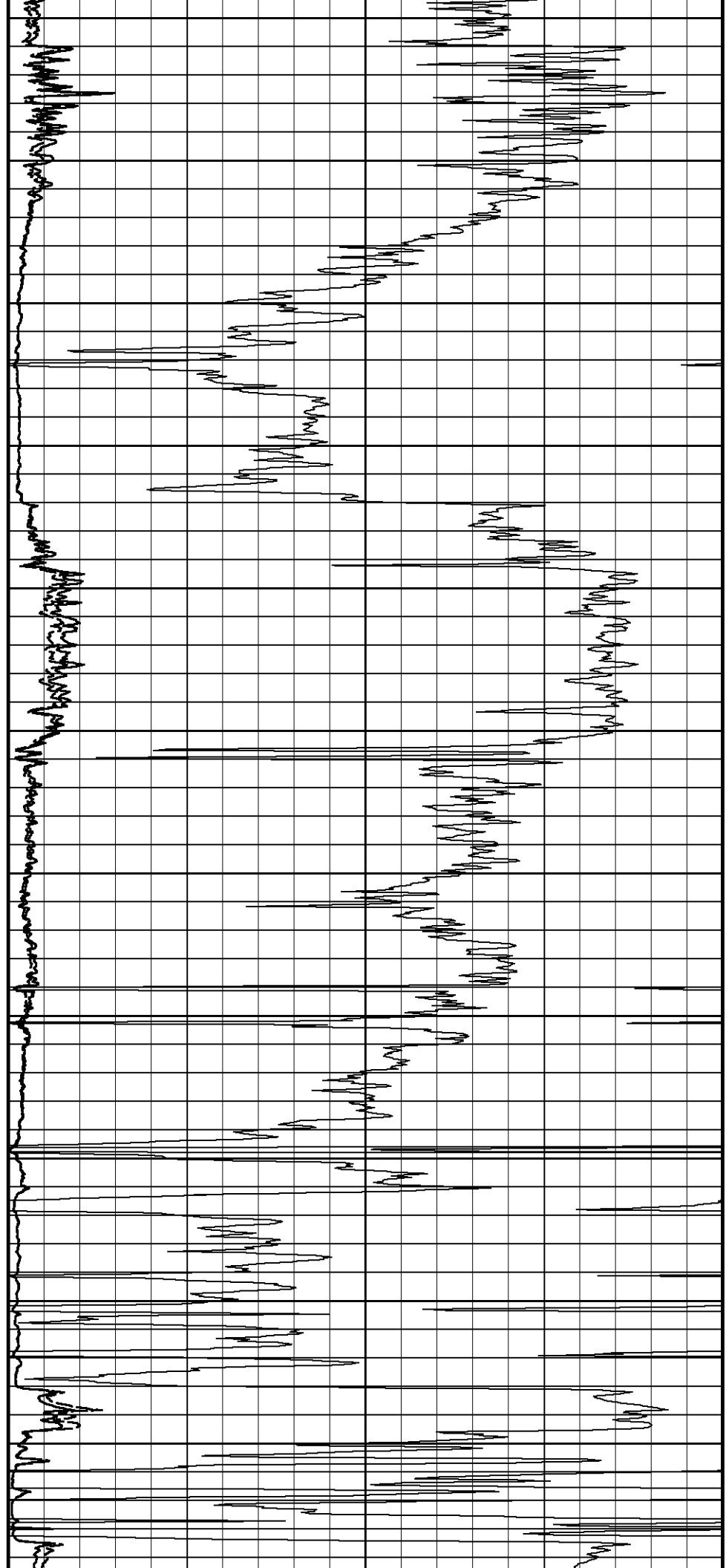
4100

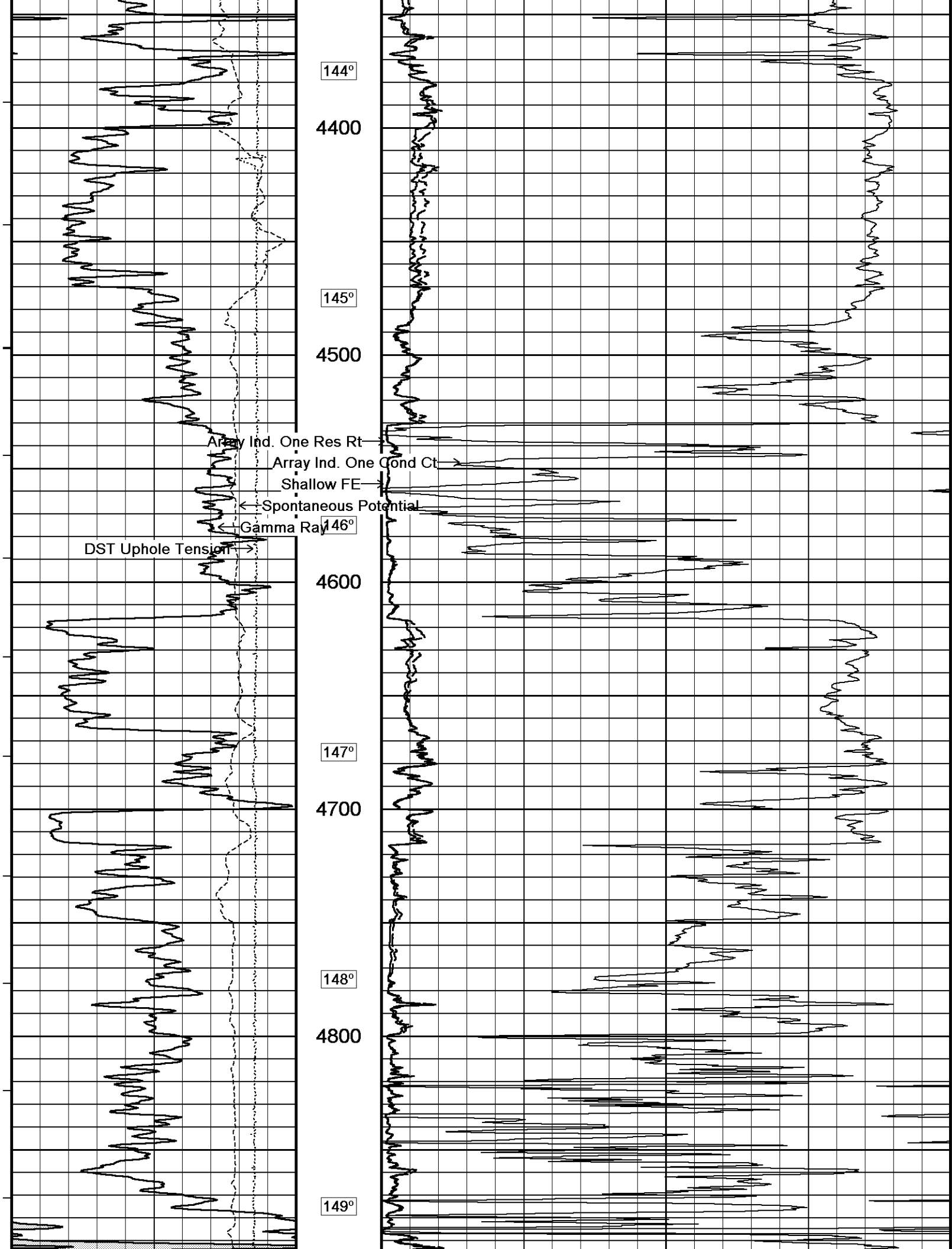
141°

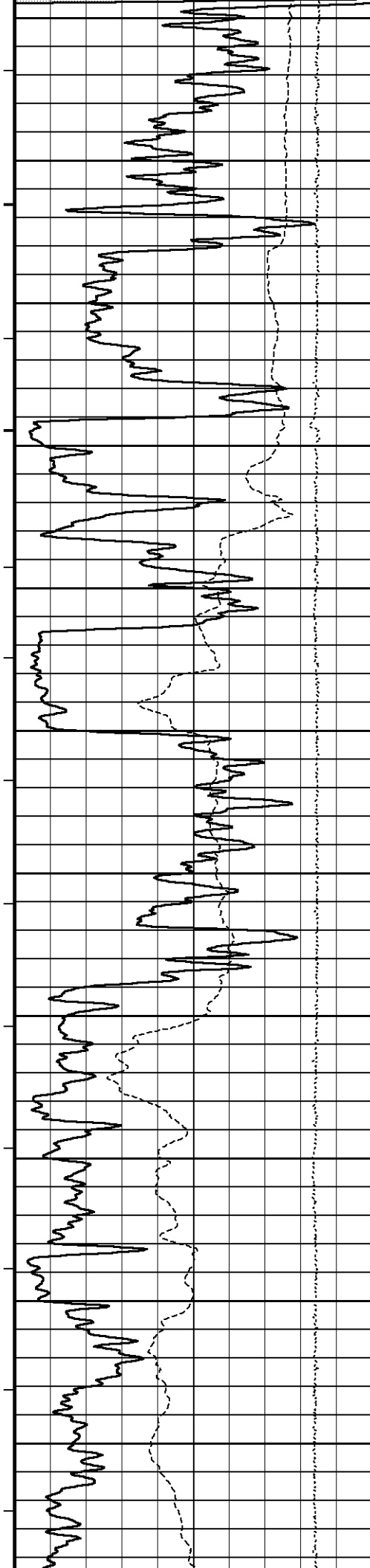
4200

143°

4300







4900

150°

5000

152°

5100

153°

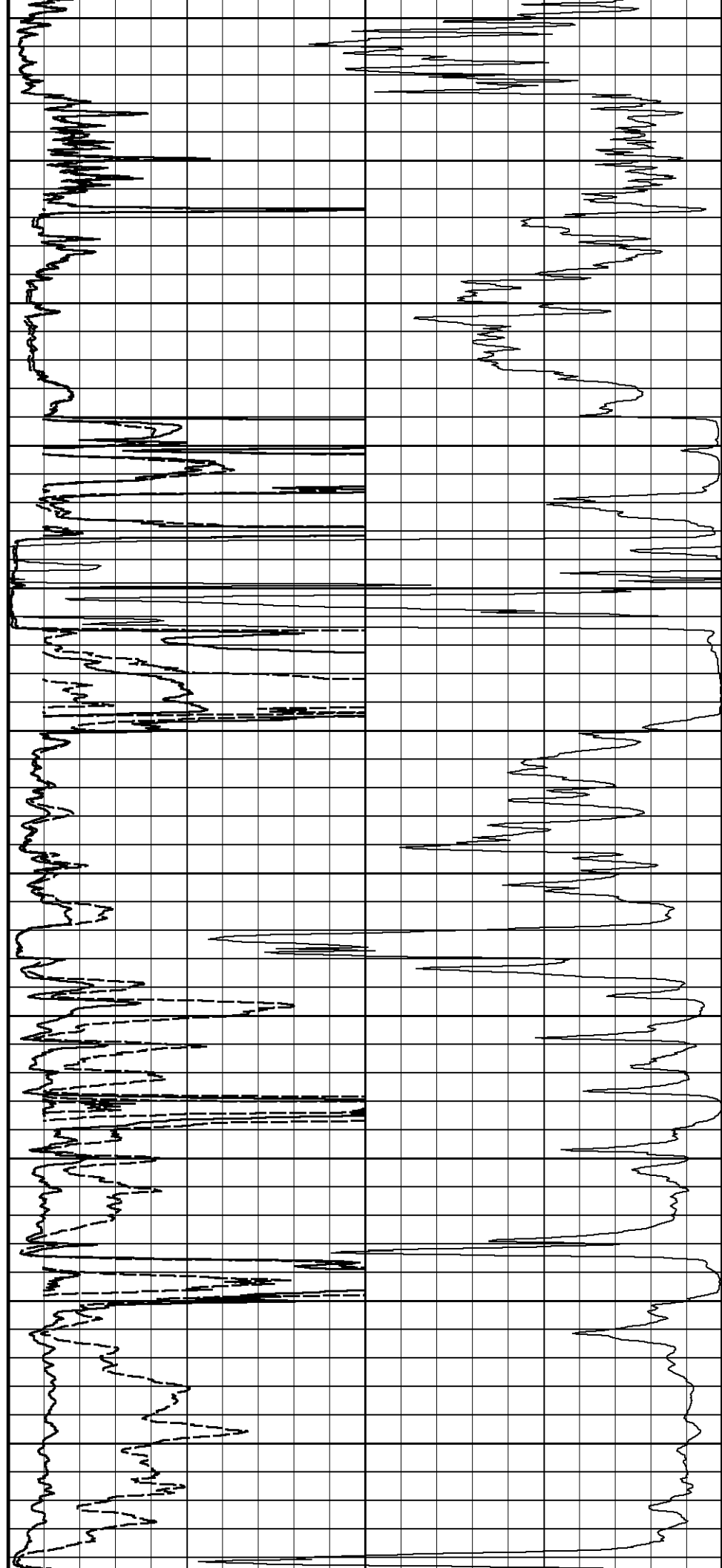
5200

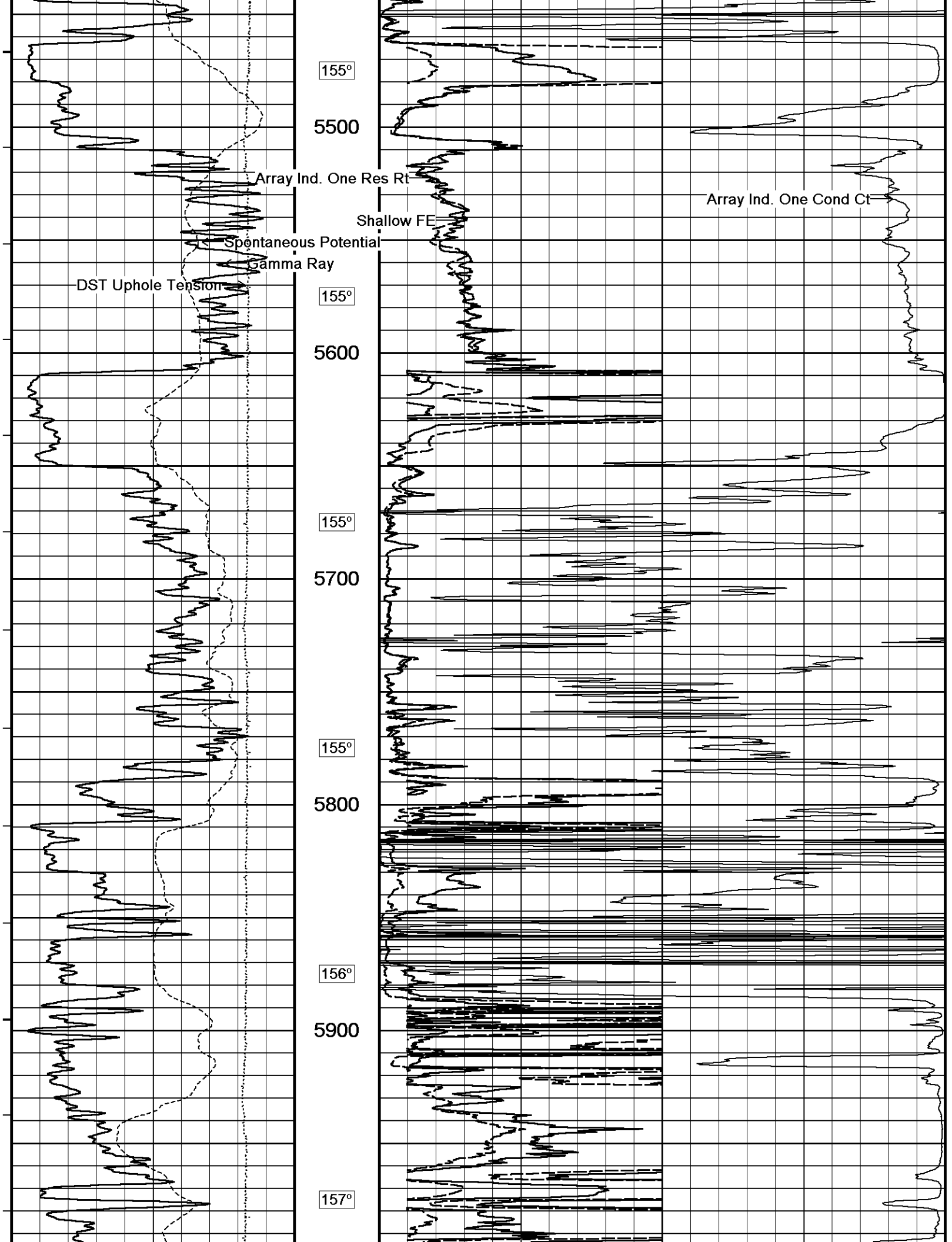
154°

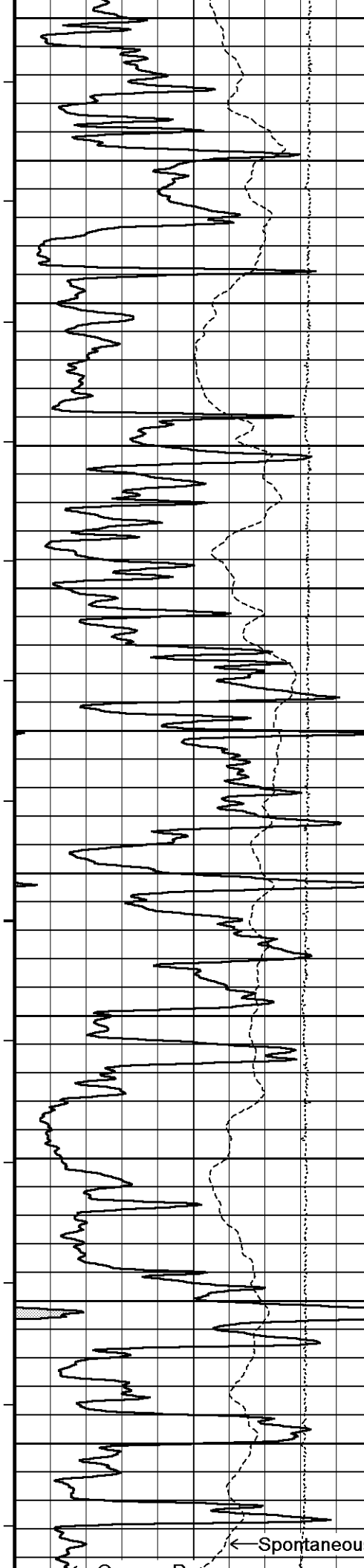
5300

155°

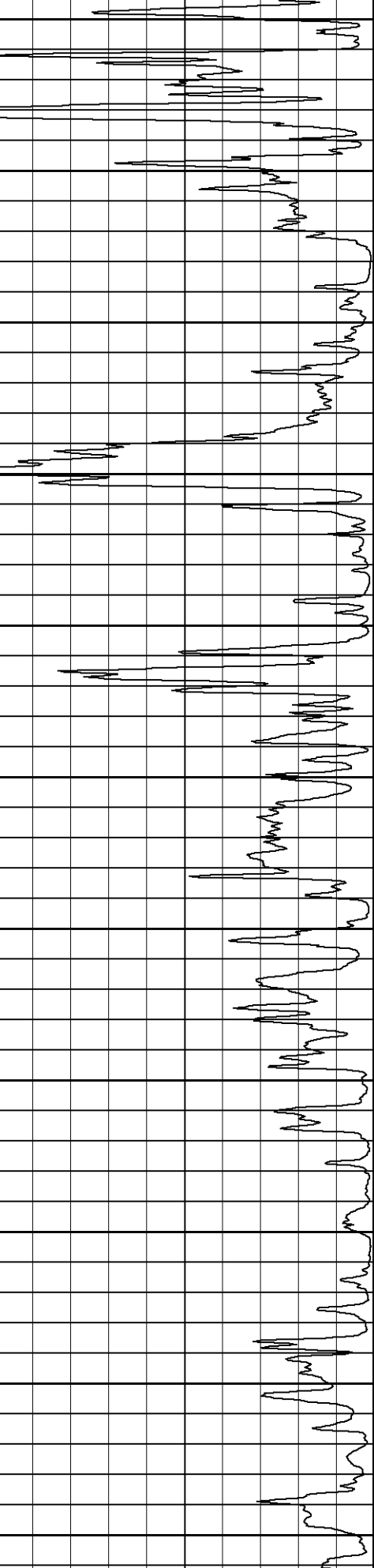
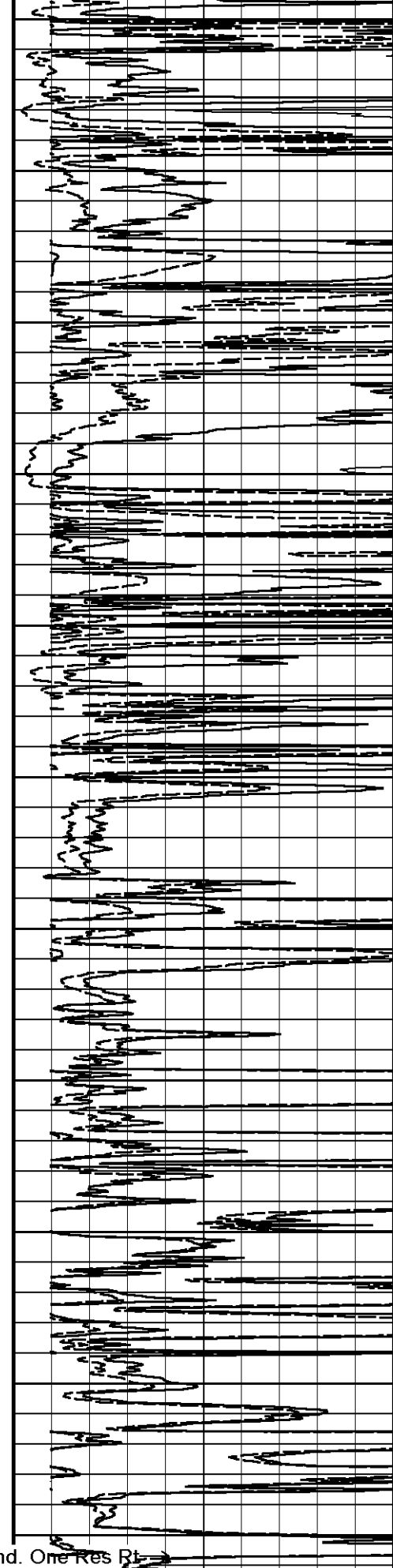
5400







6000  
158°  
6100  
157°  
6200  
158°  
6300  
159°  
6400  
160°  
6500



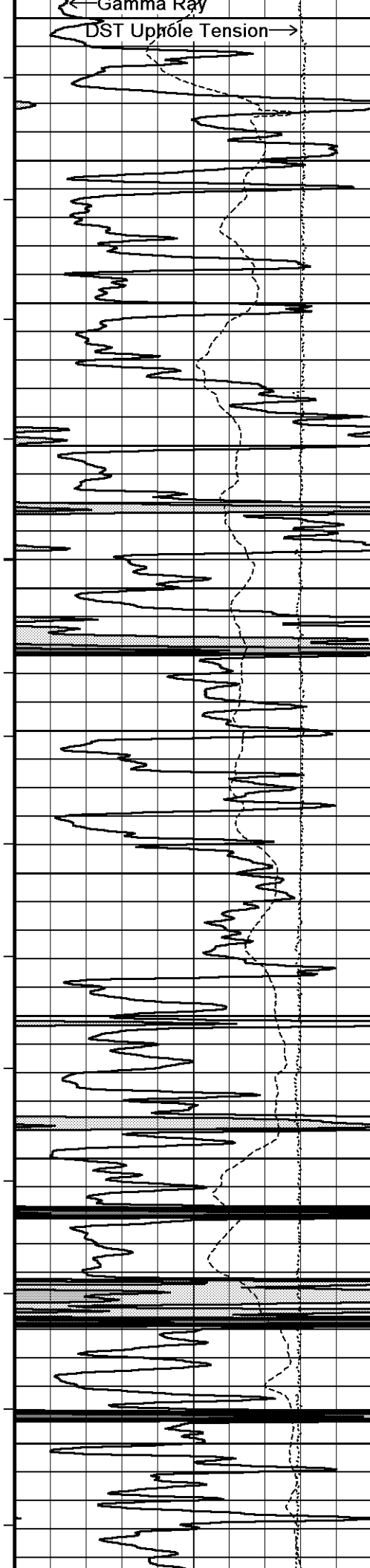
Array Ind. One Res Rt →

Array Ind. One Cond Ct →

Shallow FE →

← Spontaneous Potential





164°

6600

167°

6700

168°

6800

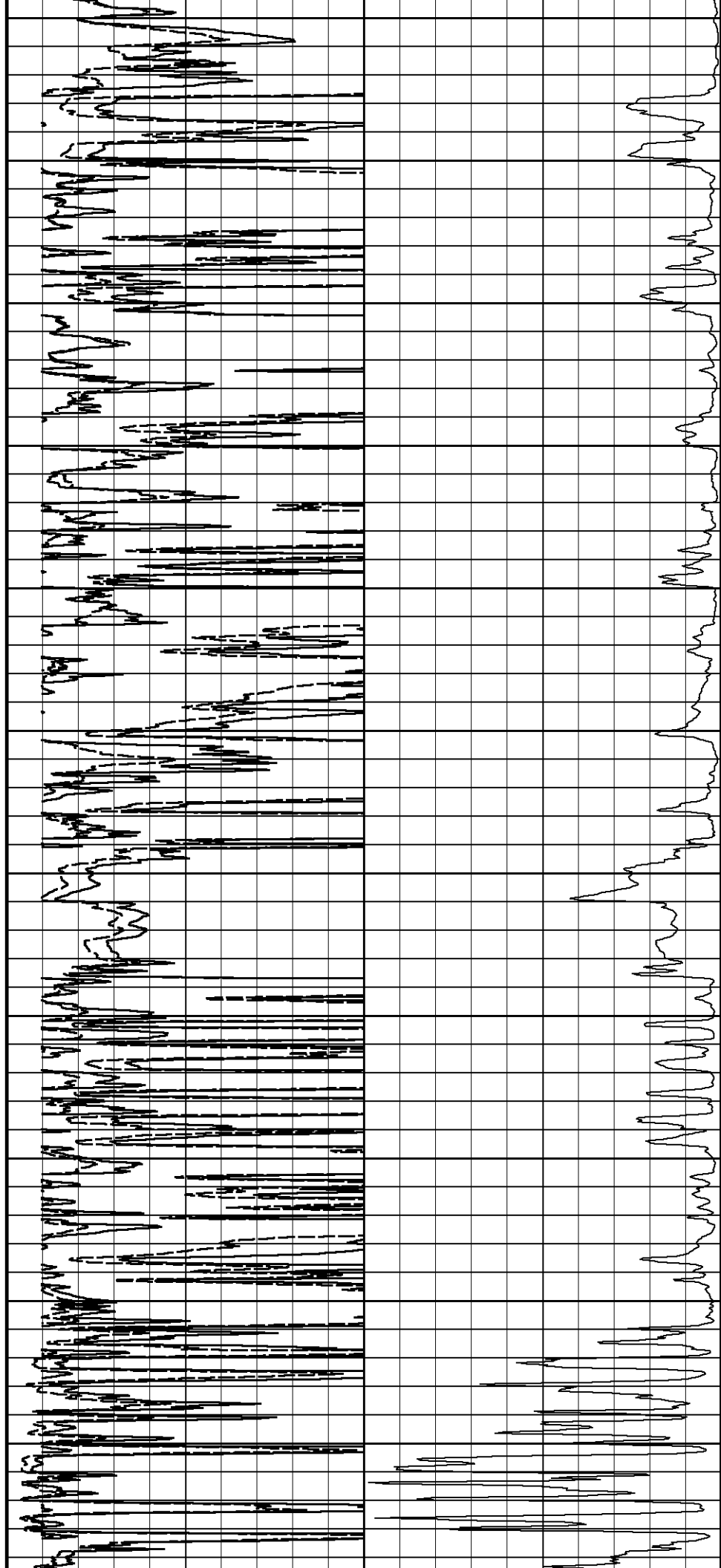
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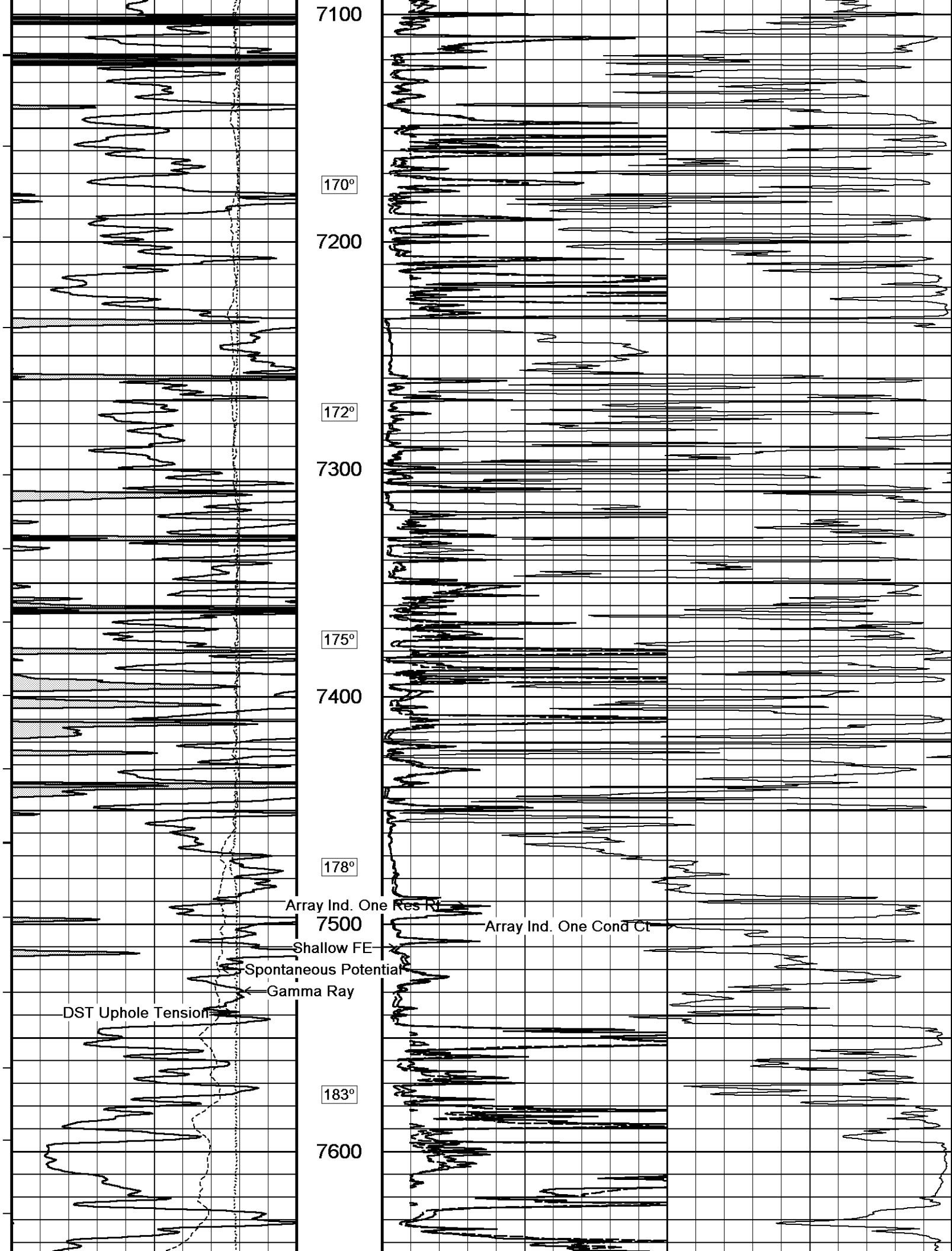
6900

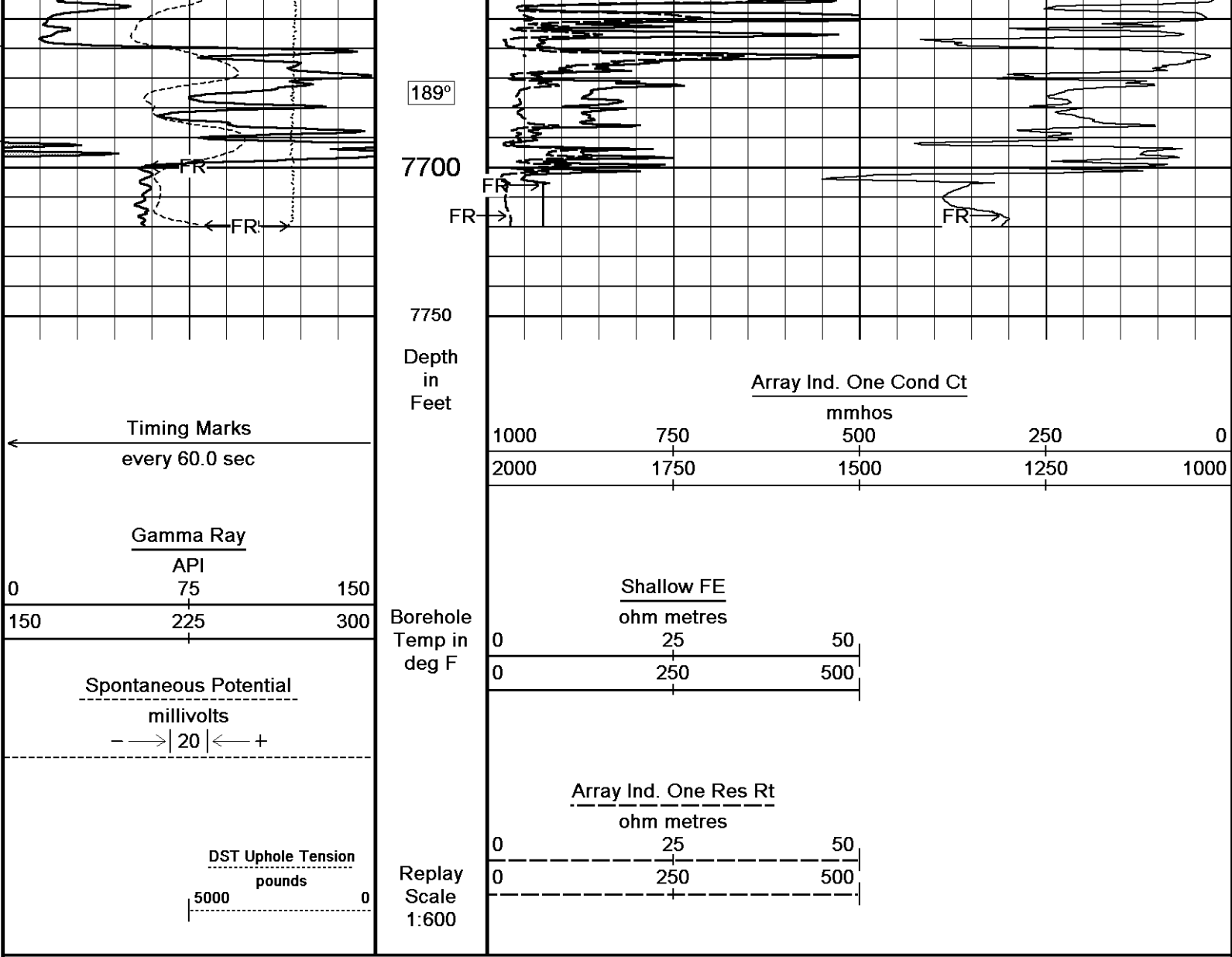
170°

7000

170°







Depth Based Data - Maximum Sampling Increment 10.0cm

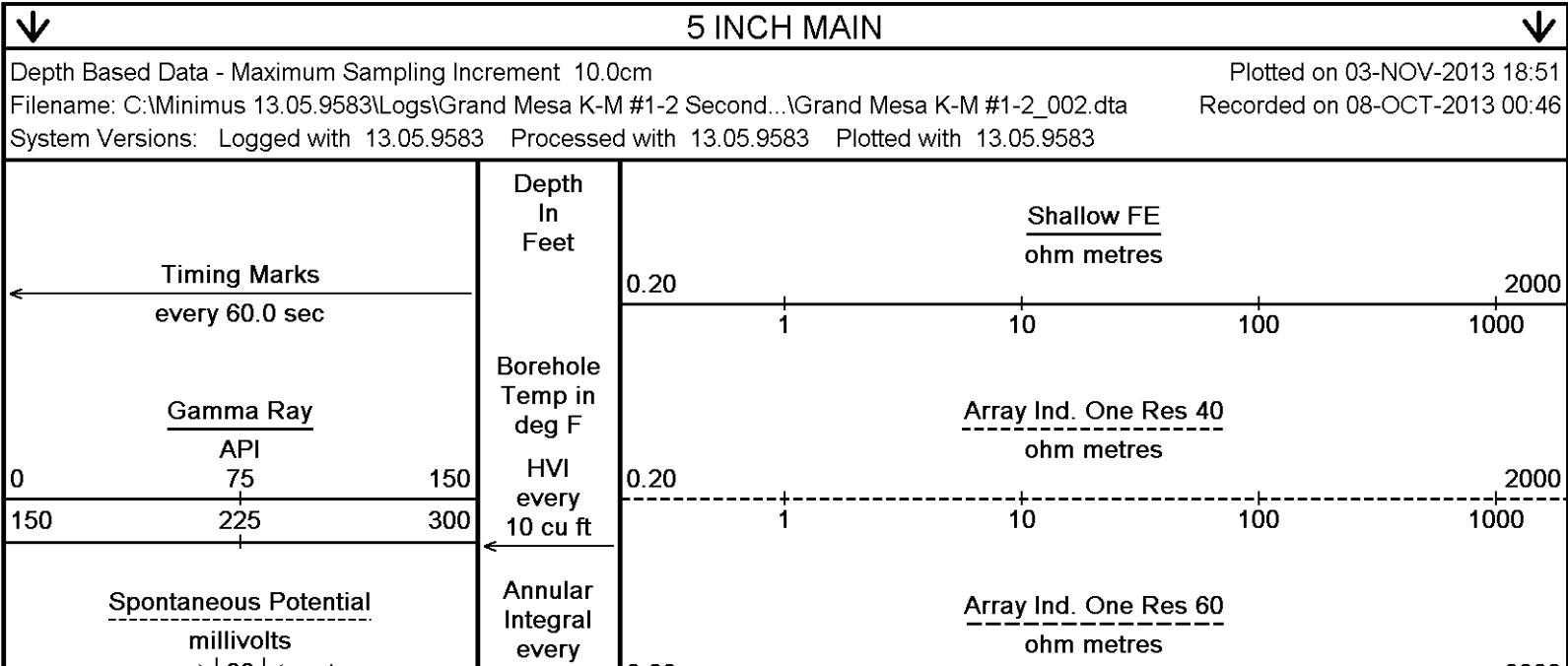
Plotted on 03-NOV-2013 18:51

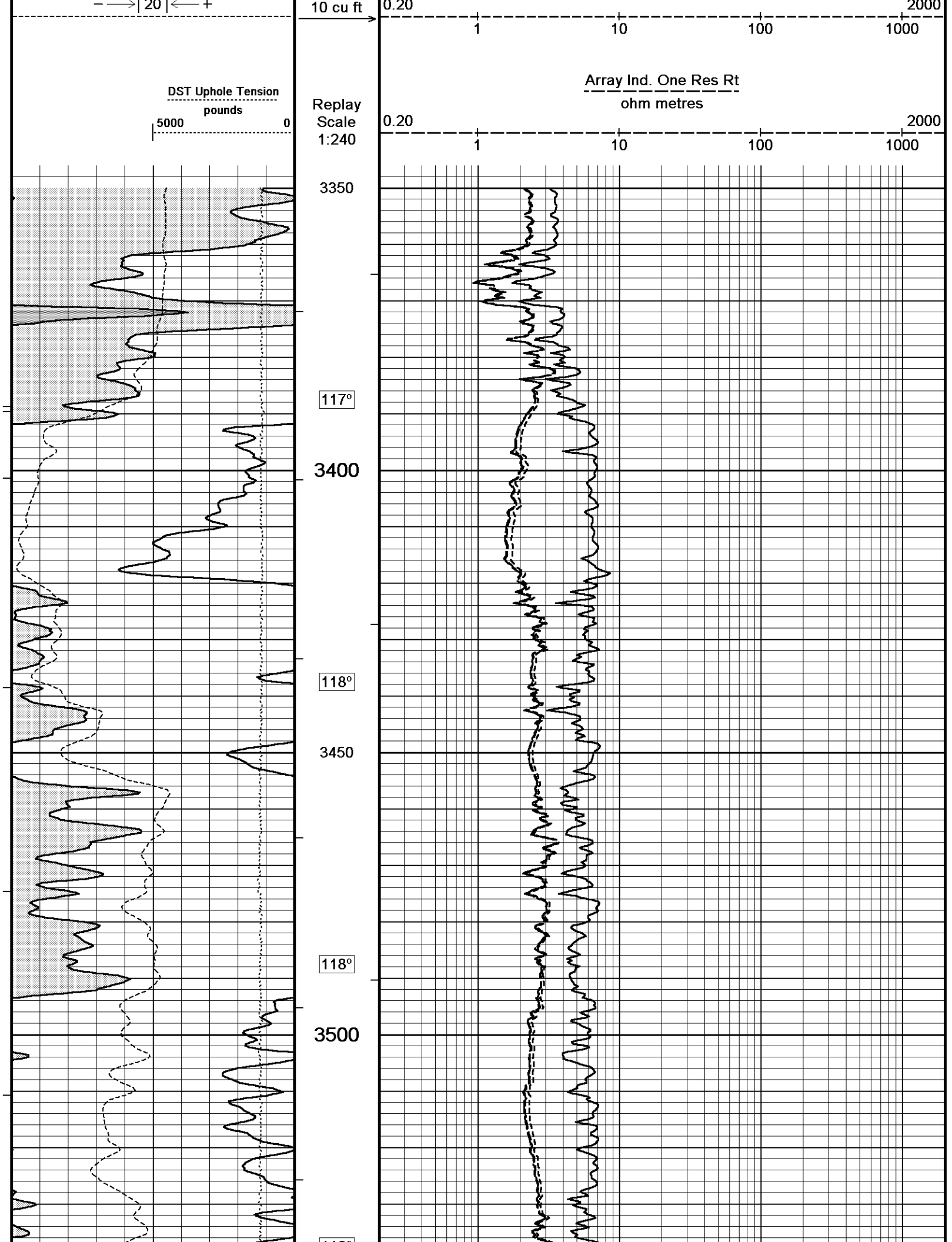
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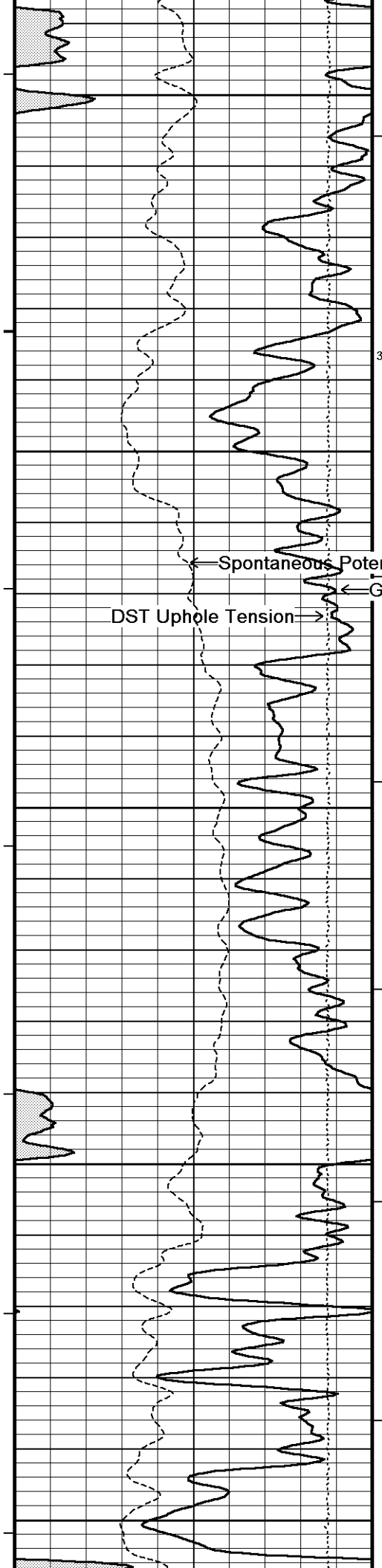
Recorded on 02-NOV-2013 16:27

System Versions: Logged with 13.05.9583 Processed with 13.05.9583 Plotted with 13.05.9583

↑ 2 INCH MAIN ↑

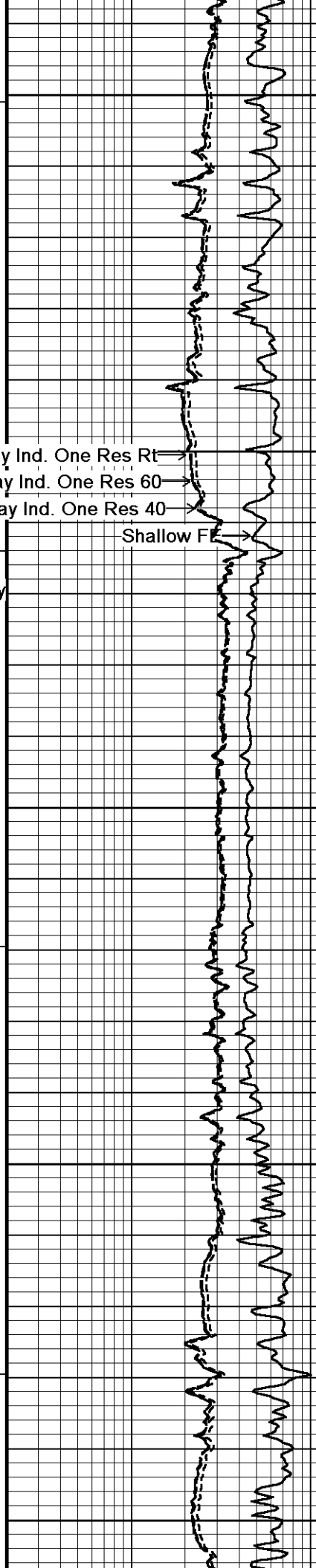




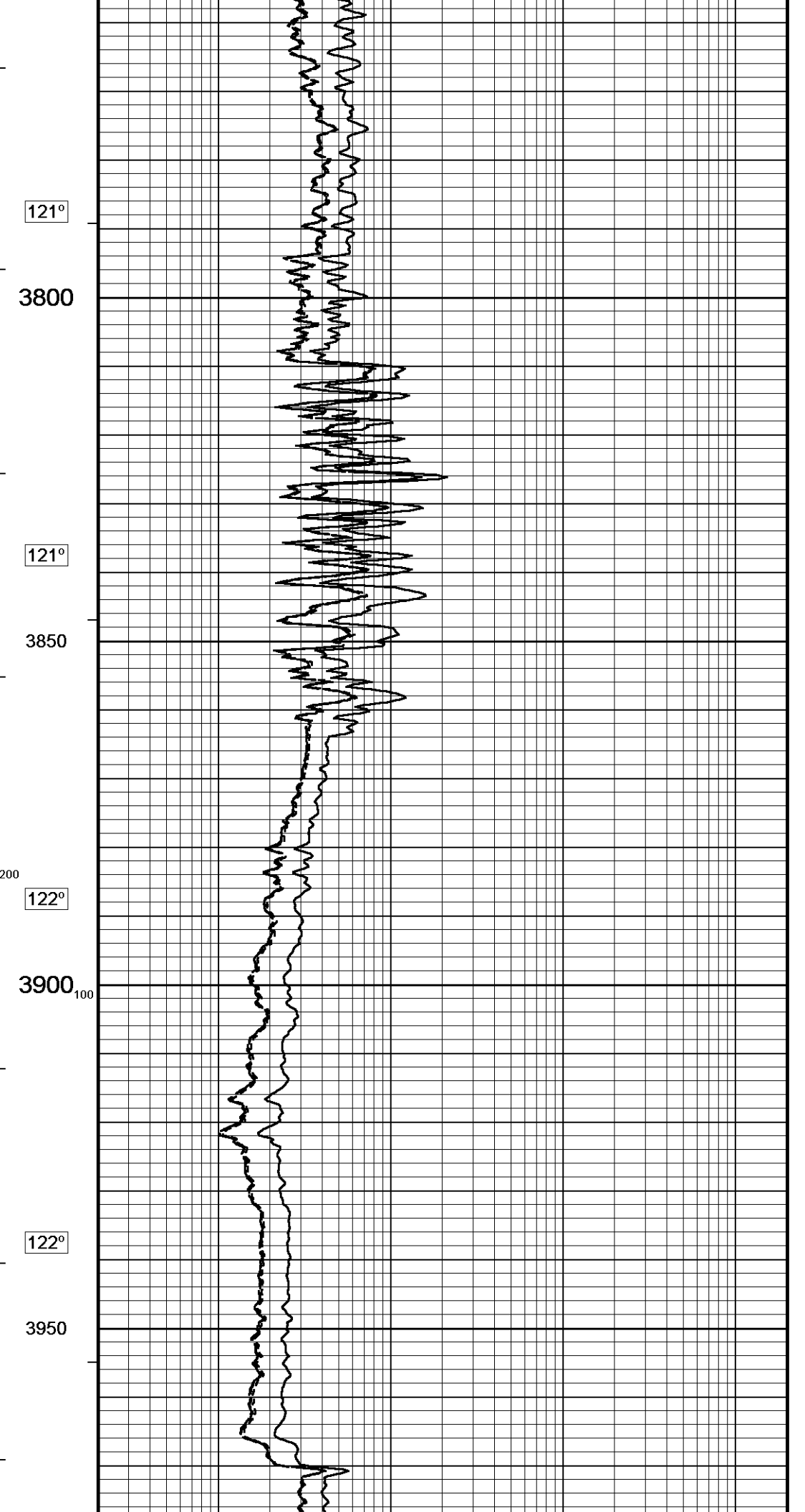
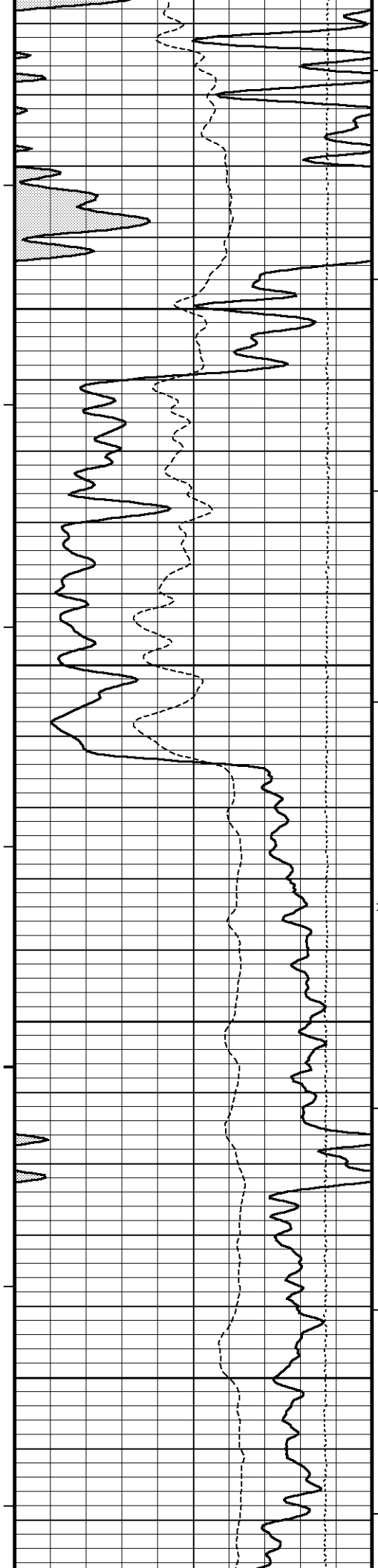


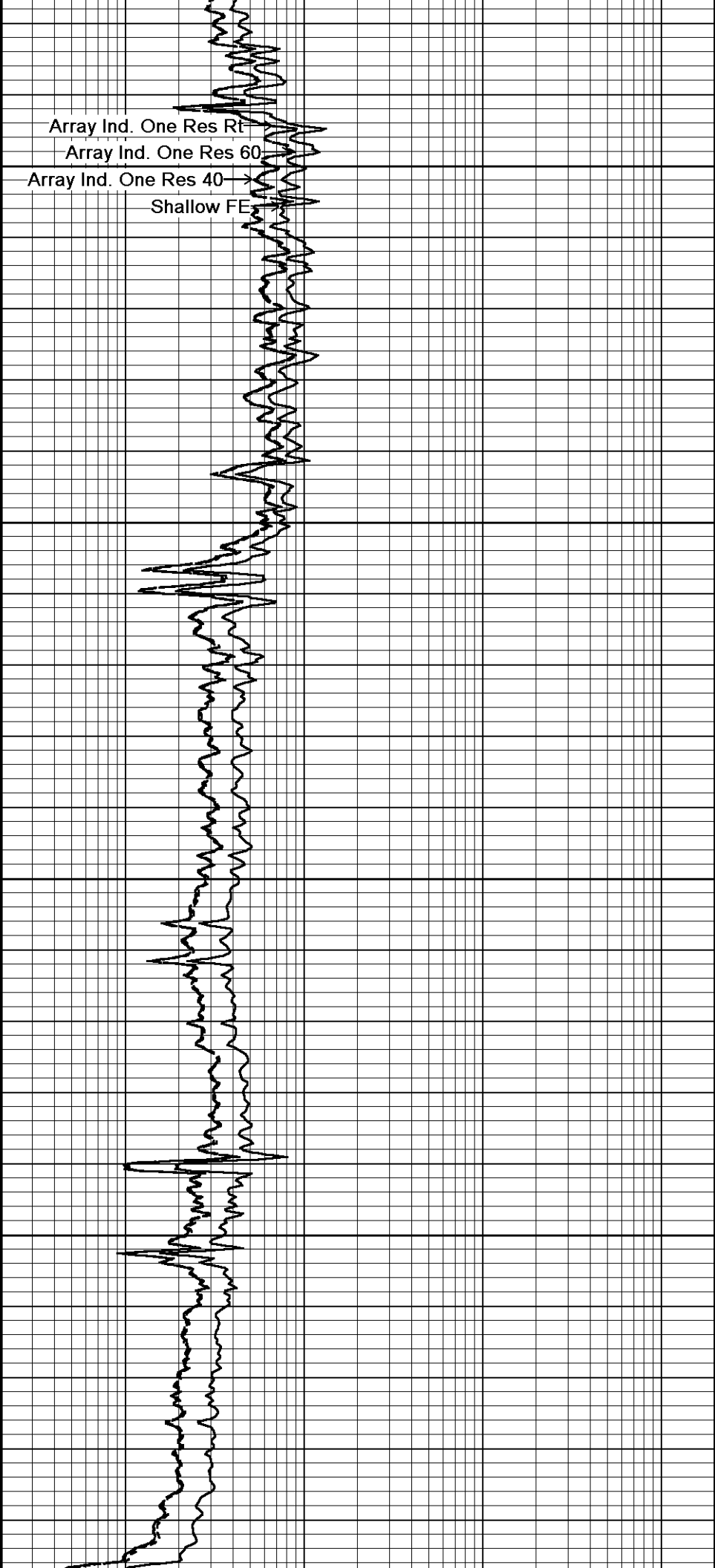
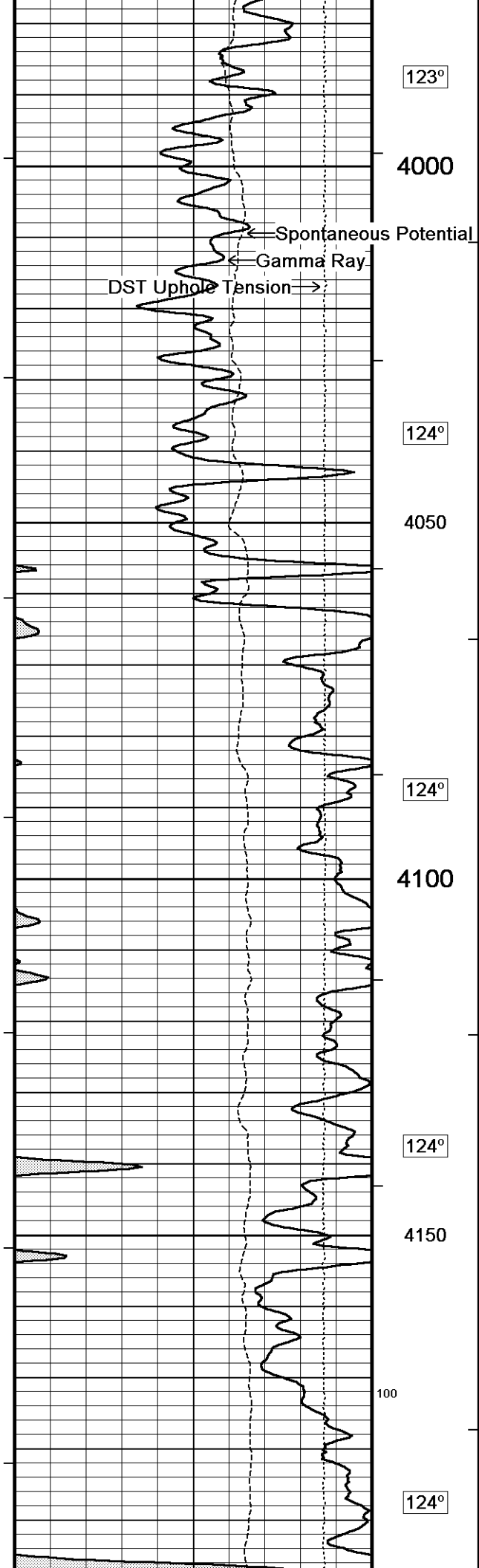
118°  
3550  
300 119°  
3600  
120°  
3650  
120°  
3700  
120°  
3750

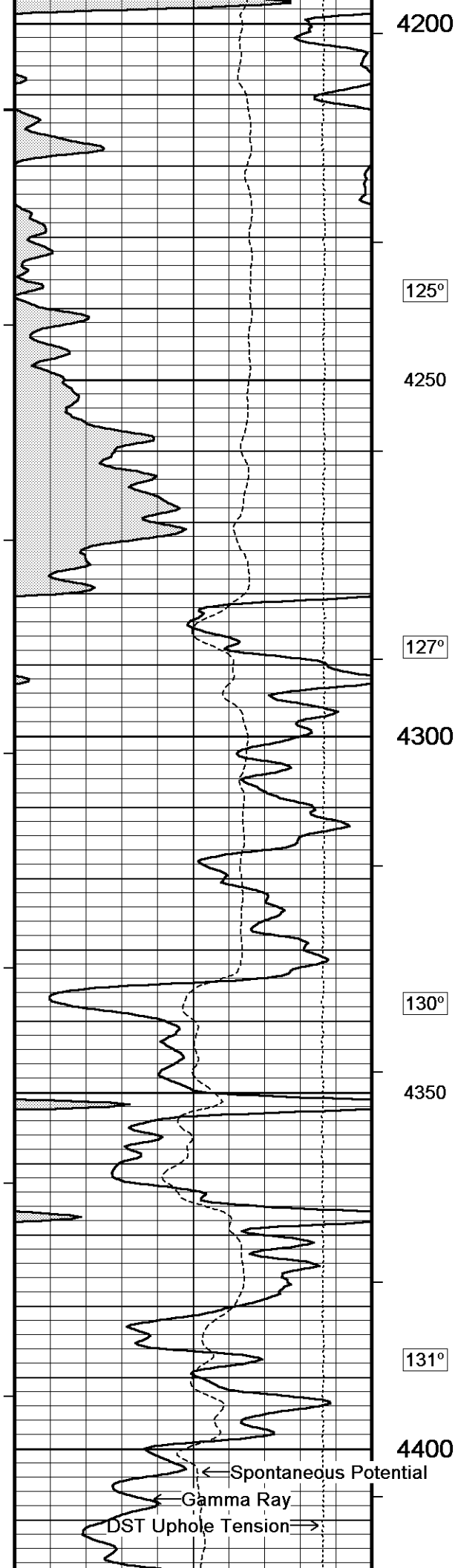
ray Ind. One Res Rt  
Array Ind. One Res 60  
Array Ind. One Res 40  
Shallow F



Spontaneous Potential  
Gamma Ray  
DST Uphole Tension







4200

125°

4250

127°

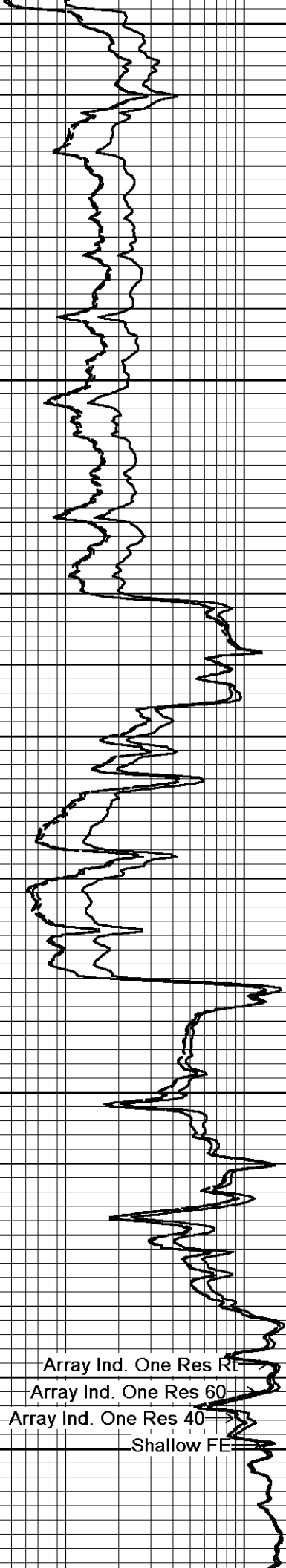
4300

130°

4350

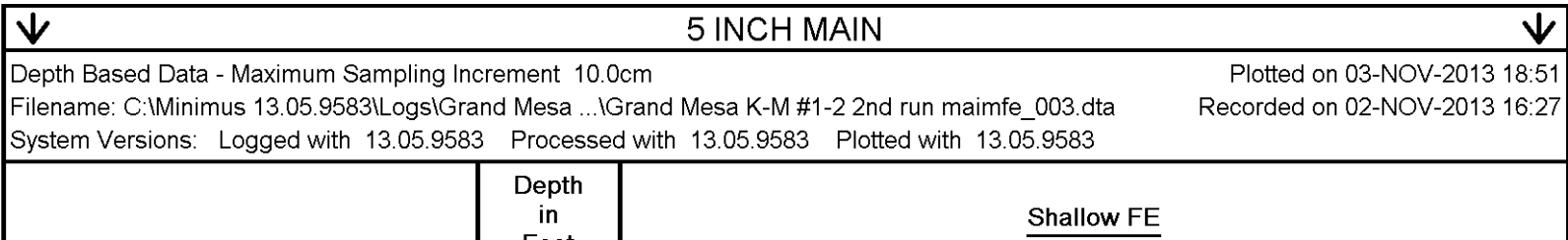
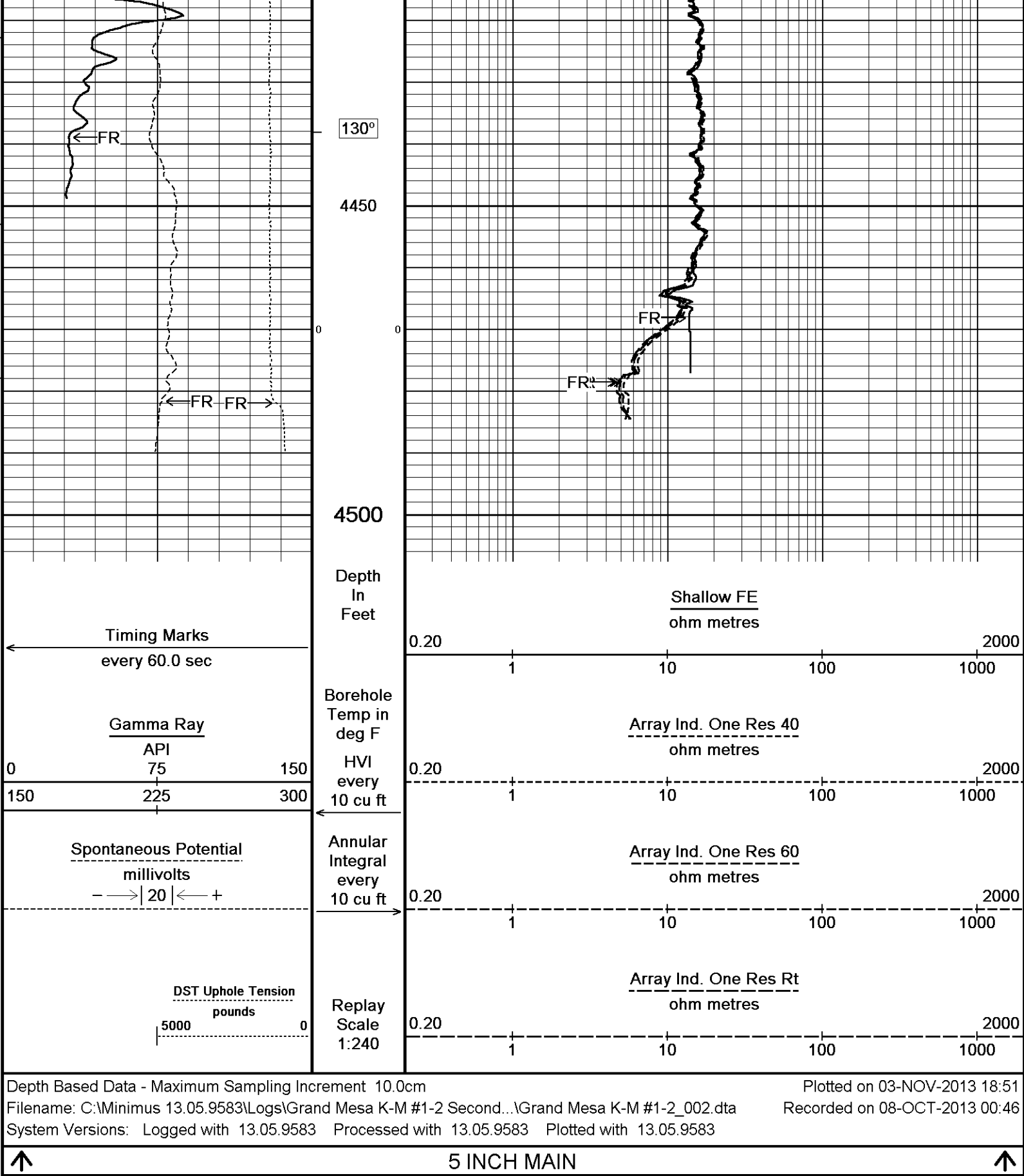
131°

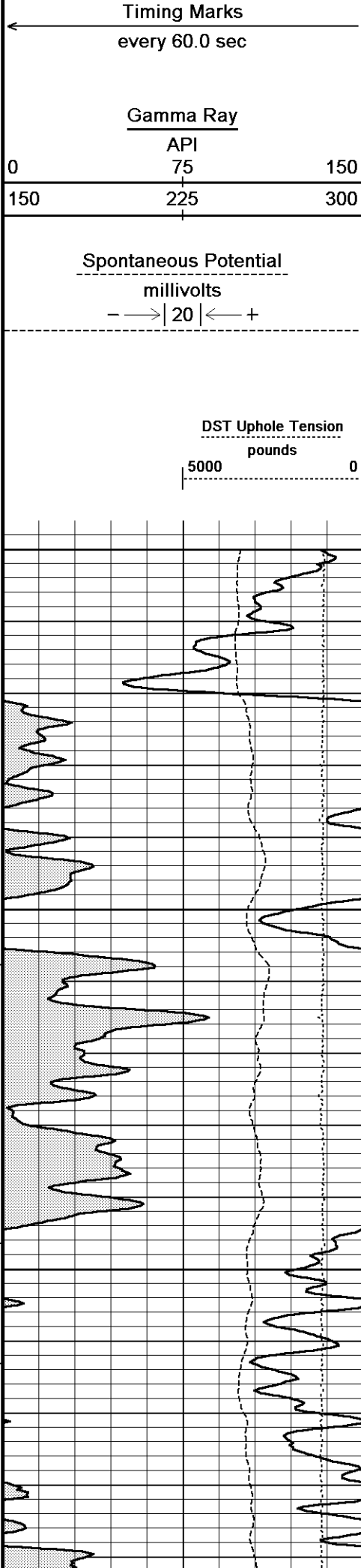
4400



Shallow FE







Feet

Borehole Temp in deg F

Replay Scale 1:240

3400

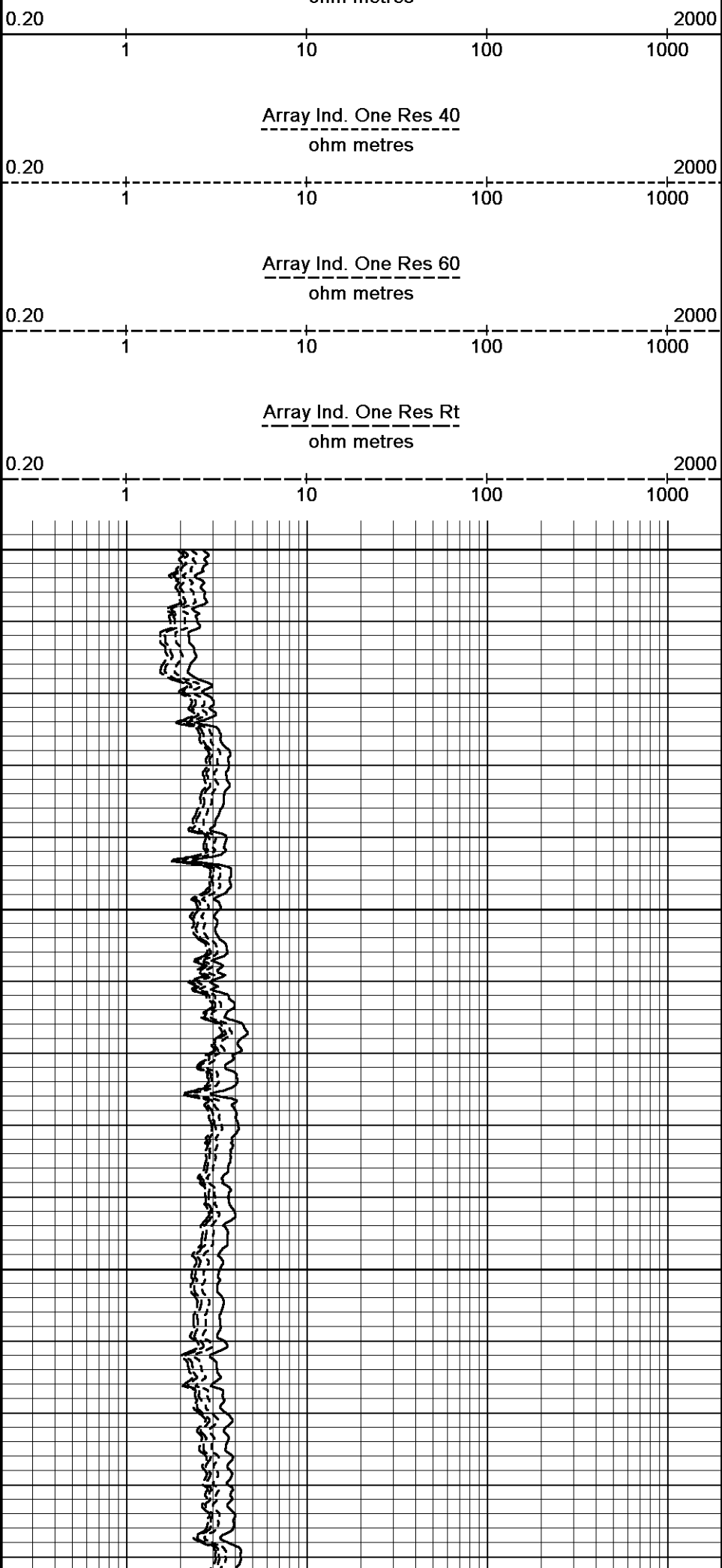
132°

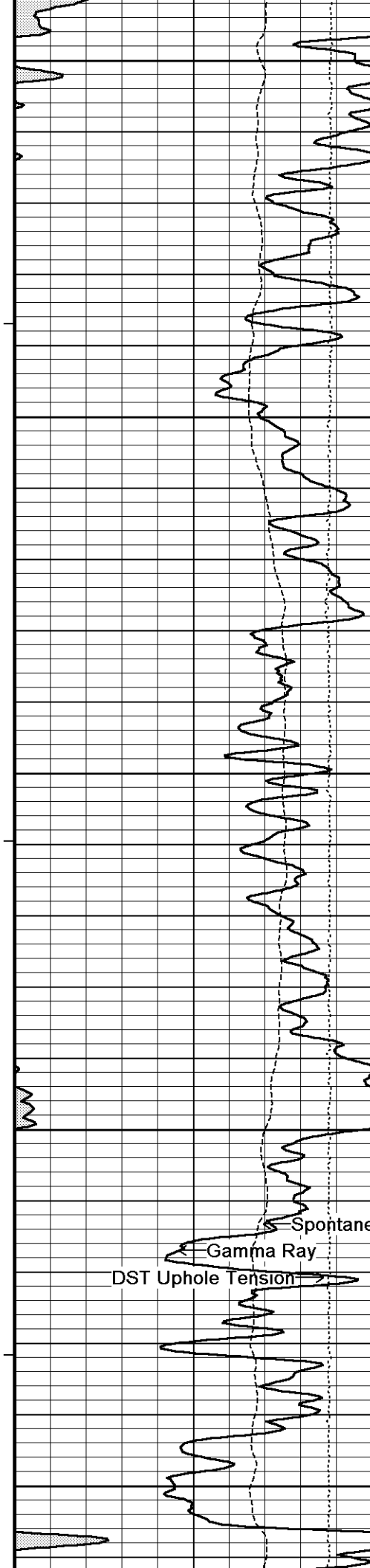
3450

132°

3500

133°





3550

134°

3600

135°

3650

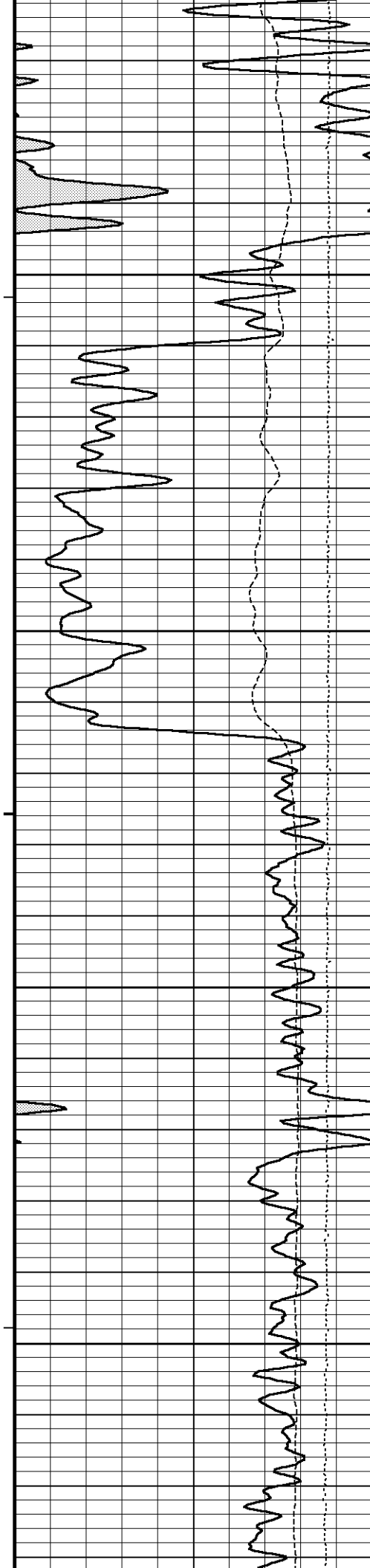
136°

3700

136°

3750

Array Ind. One Res Rt  
Array Ind. One Res 60  
Array Ind. One Res 40  
Shallow FE



137°

3800

138°

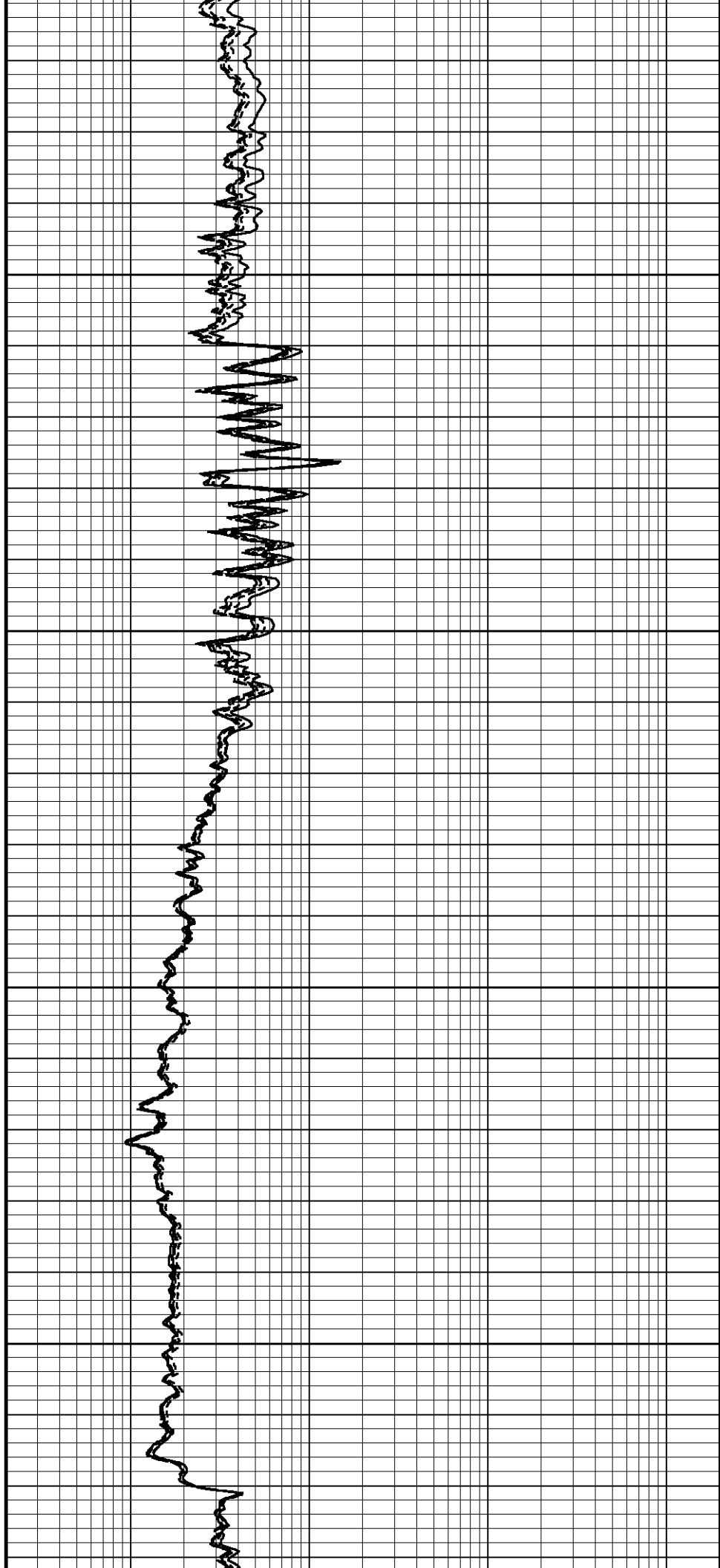
3850

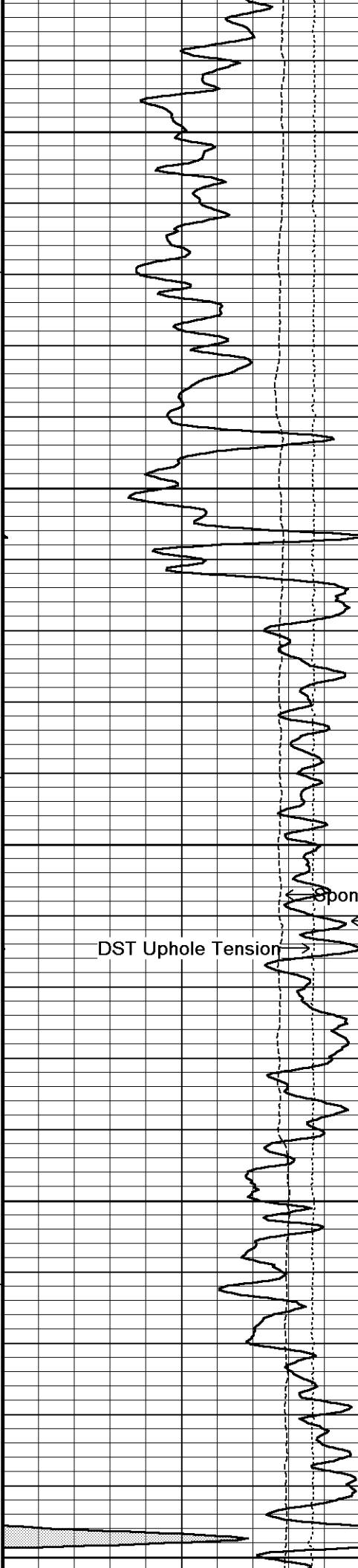
138°

3900

139°

3950





139°

4000

140°

4050

140°

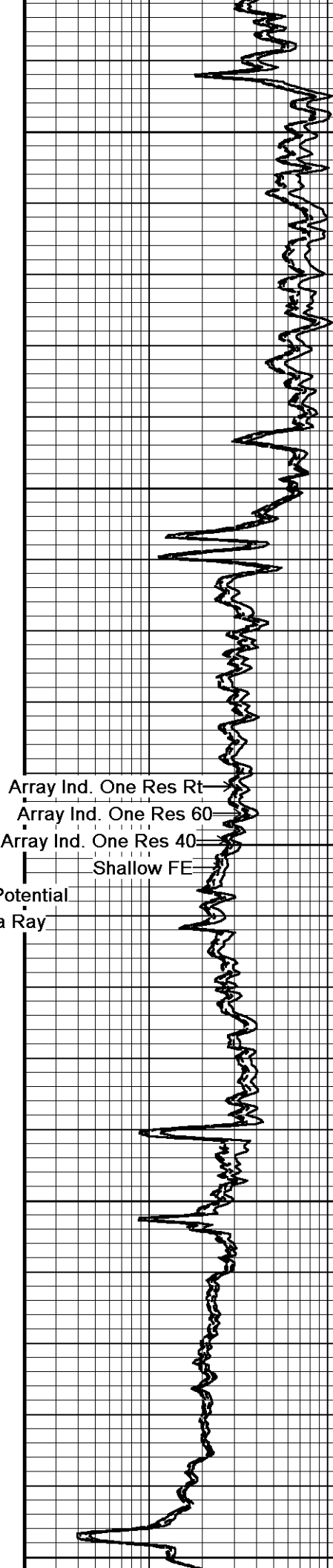
4100

141°

4150

141°

4200



Array Ind. One Res Rt

Array Ind. One Res 60

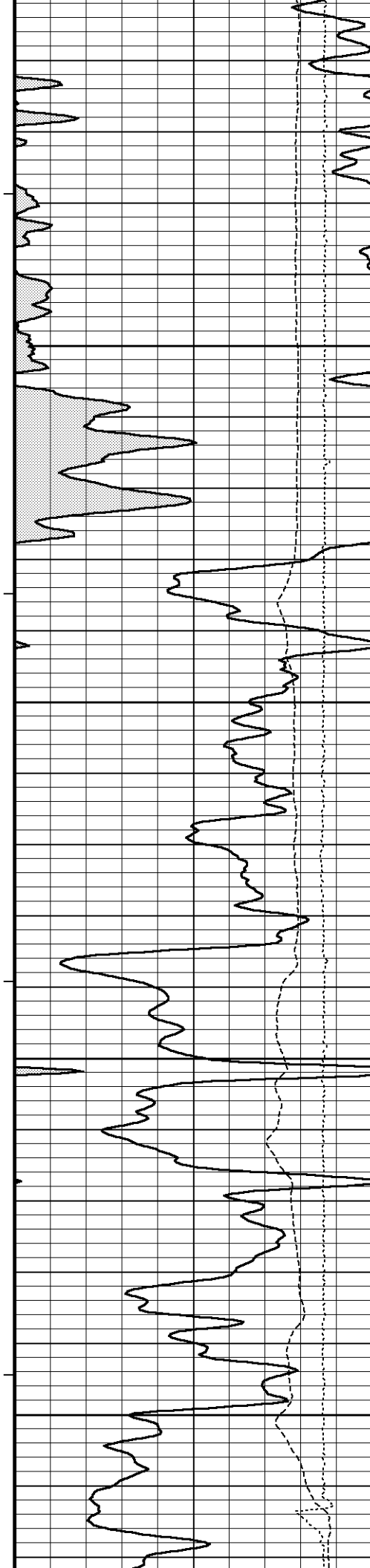
Array Ind. One Res 40

Shallow FE

Spontaneous Potential

Gamma Ray

DST Uphole Tension



142°

4250

143°

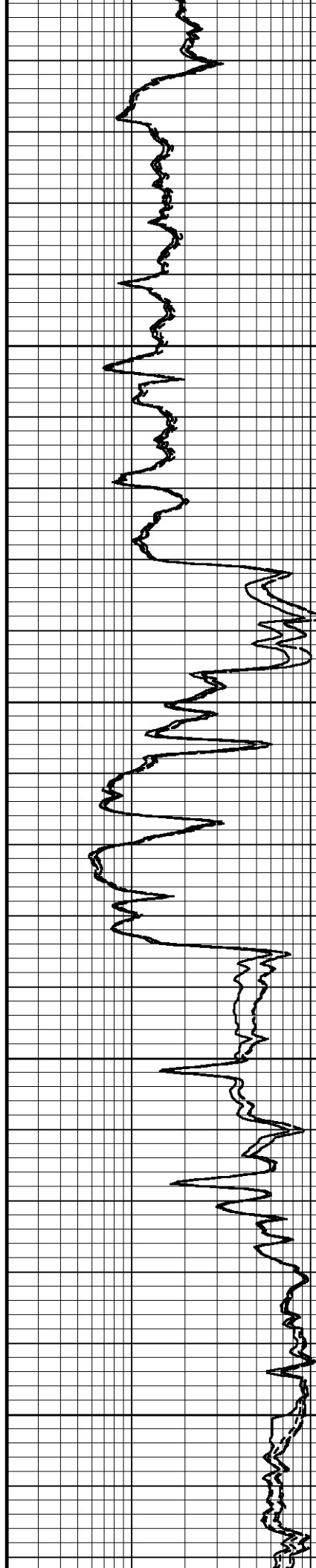
4300

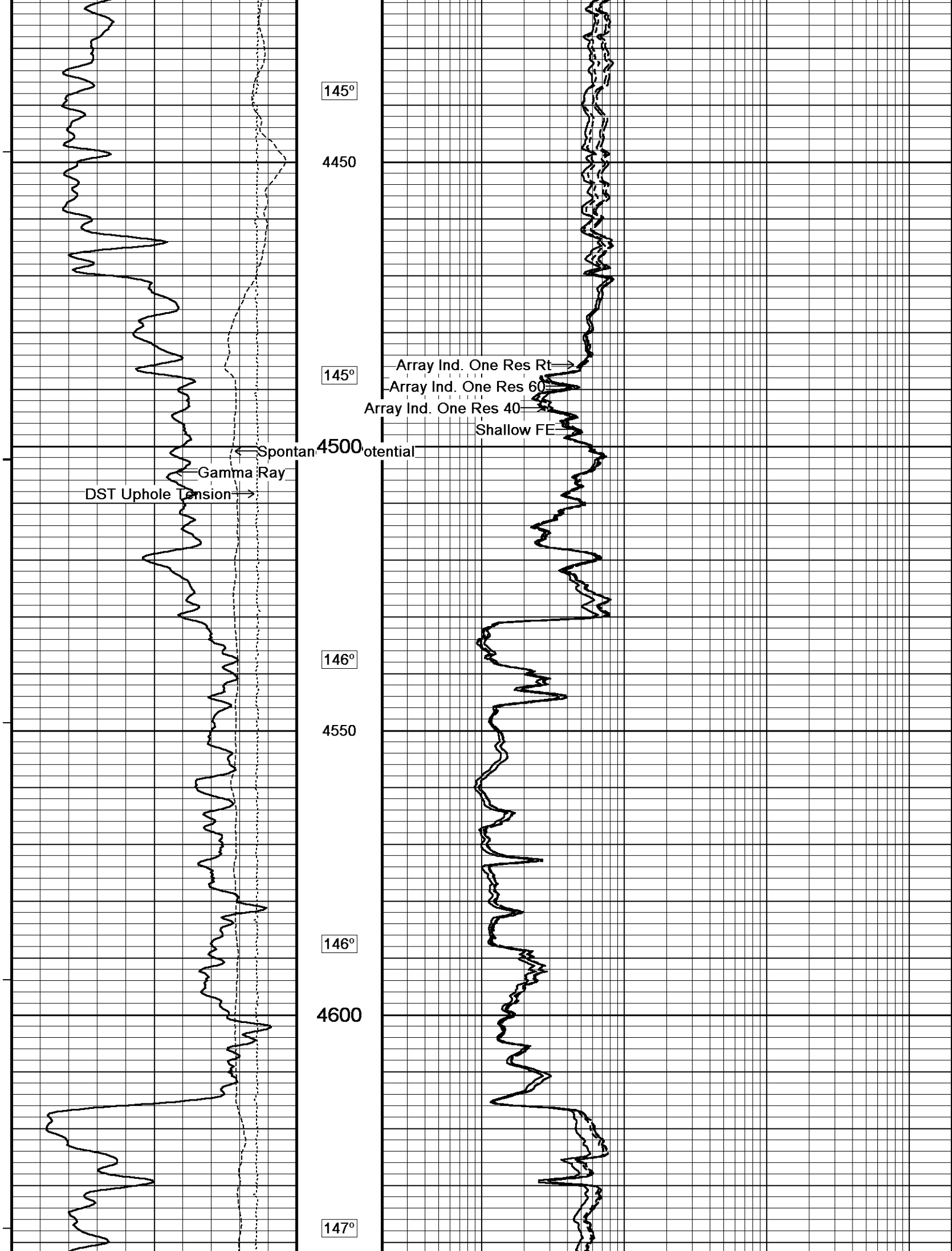
144°

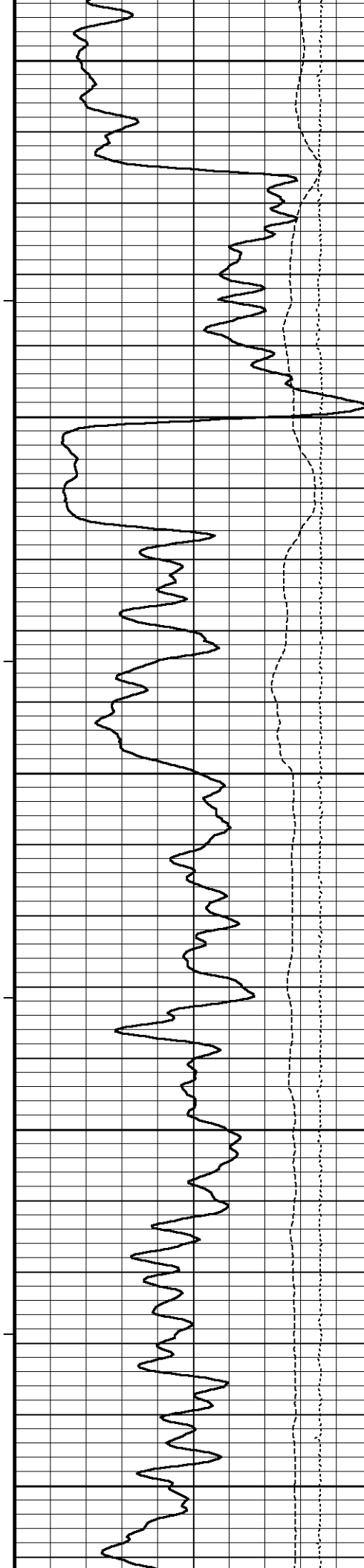
4350

145°

4400







4650

147°

4700

148°

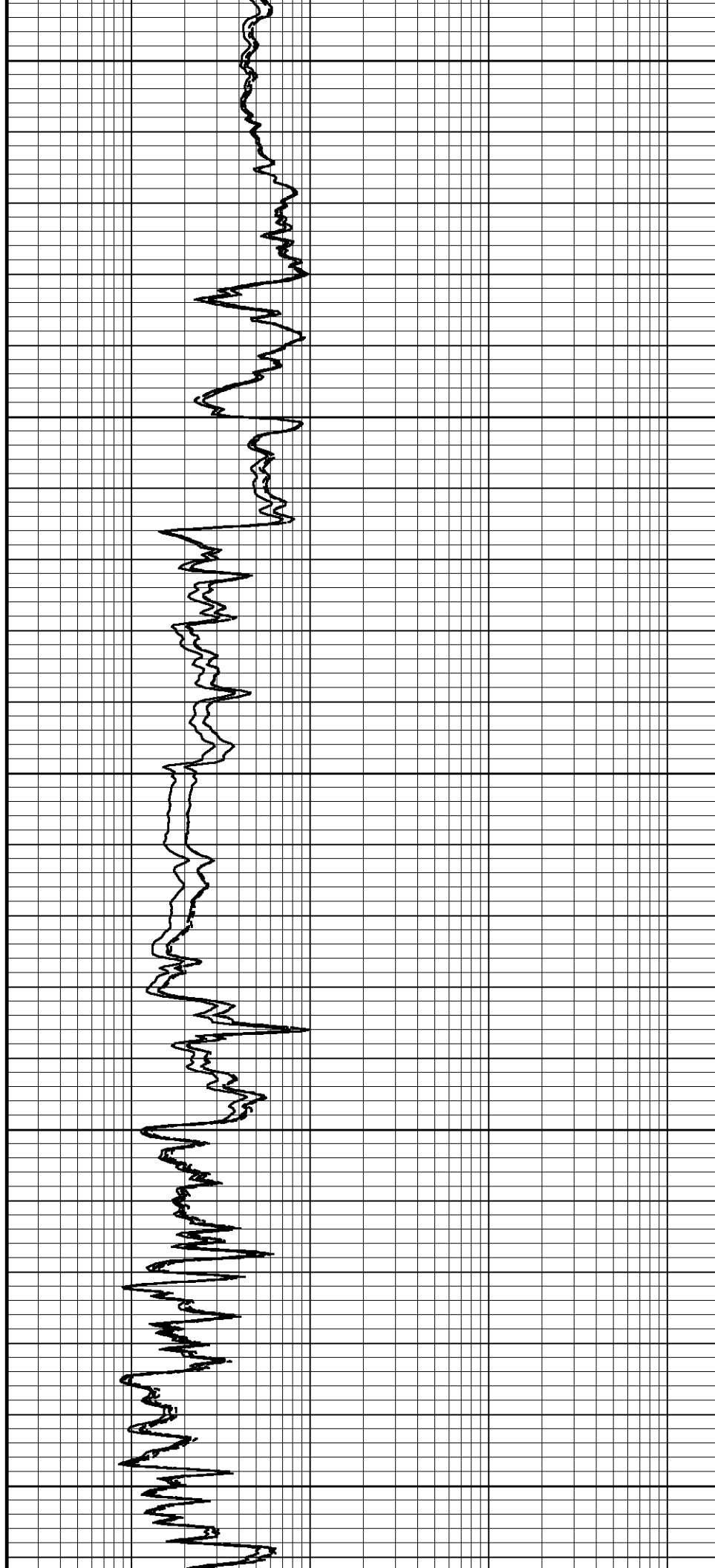
4750

148°

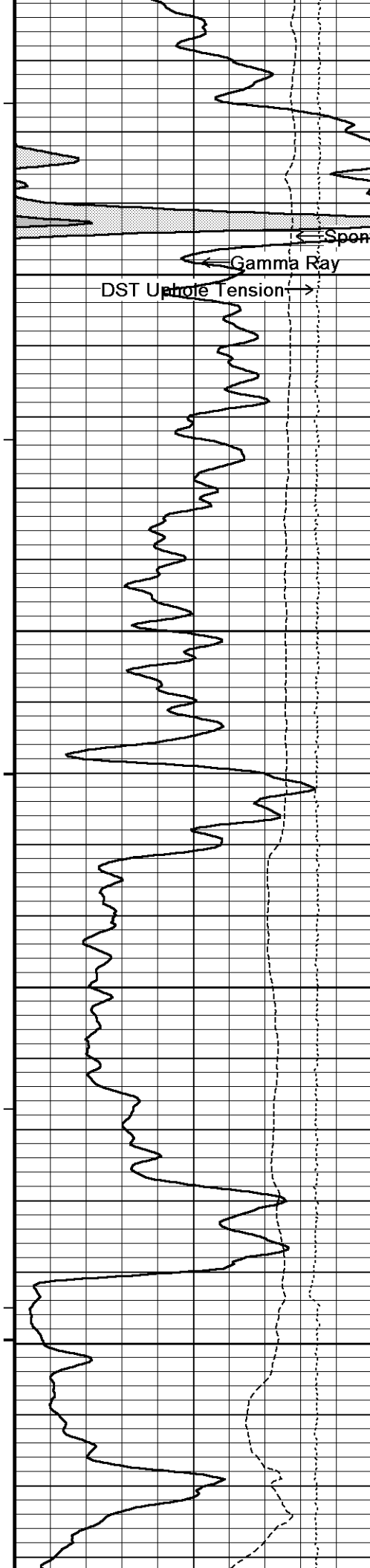
4800

149°

4850







Array Ind. One Res Rt  
Array Ind. One Res 60  
149° Array Ind. One Res 40  
Shallow FE

Spontaneous Potential

4900

150°

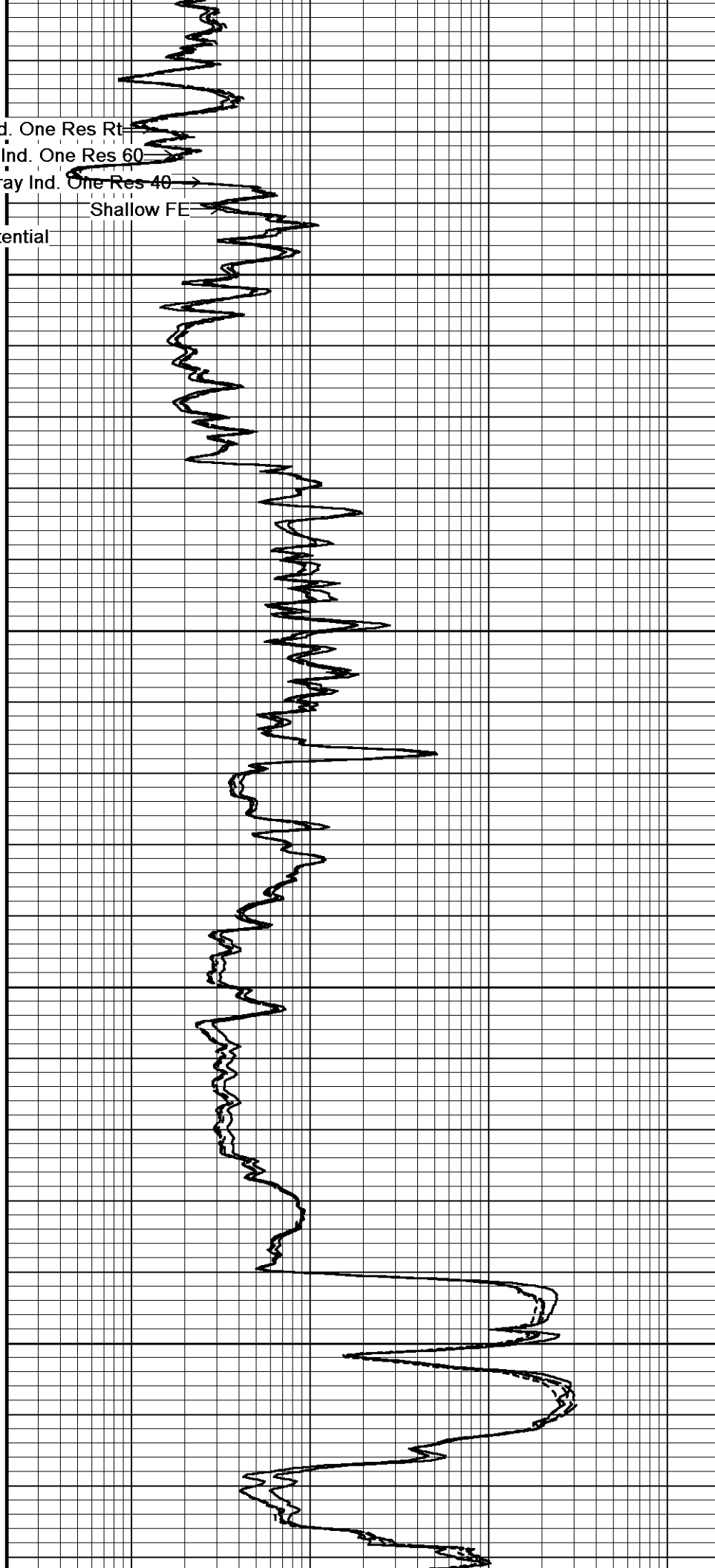
4950

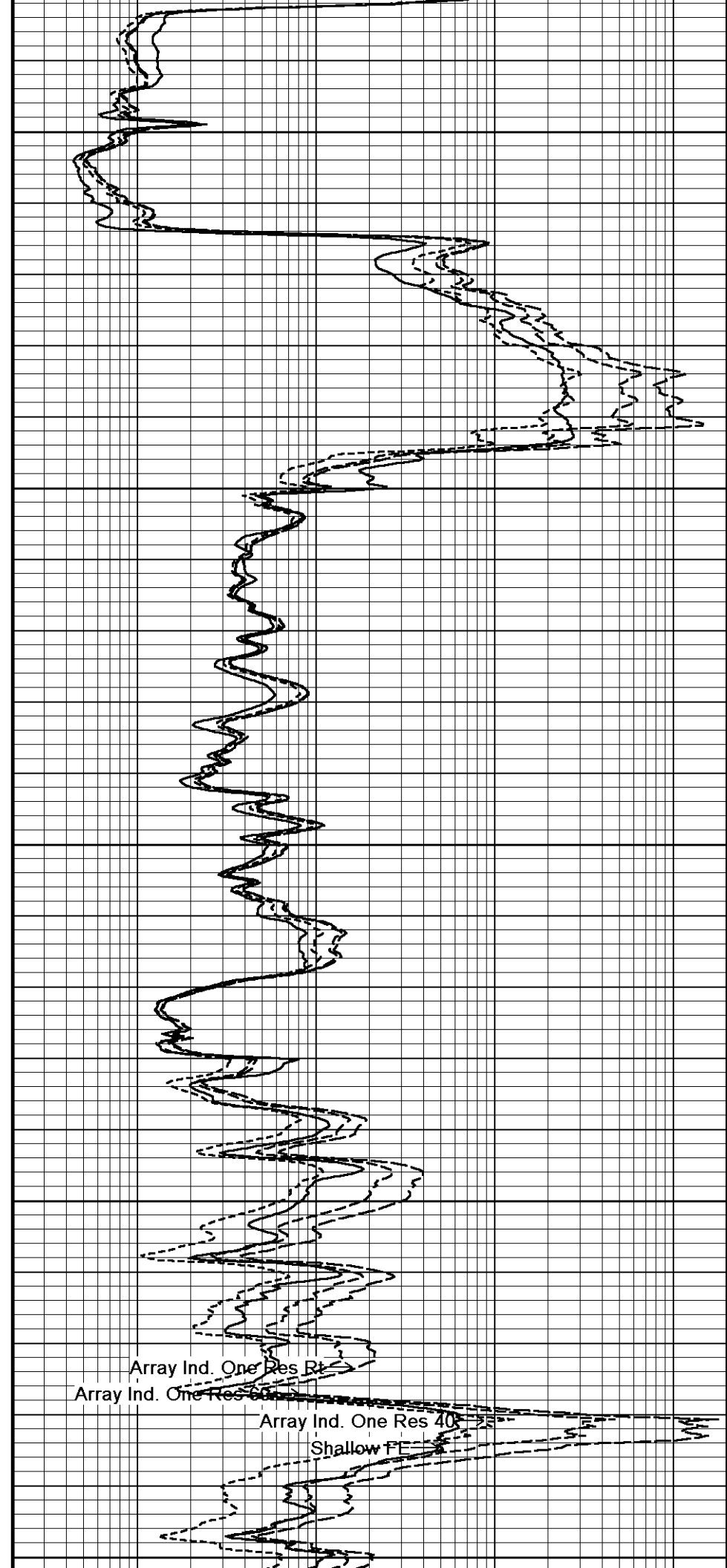
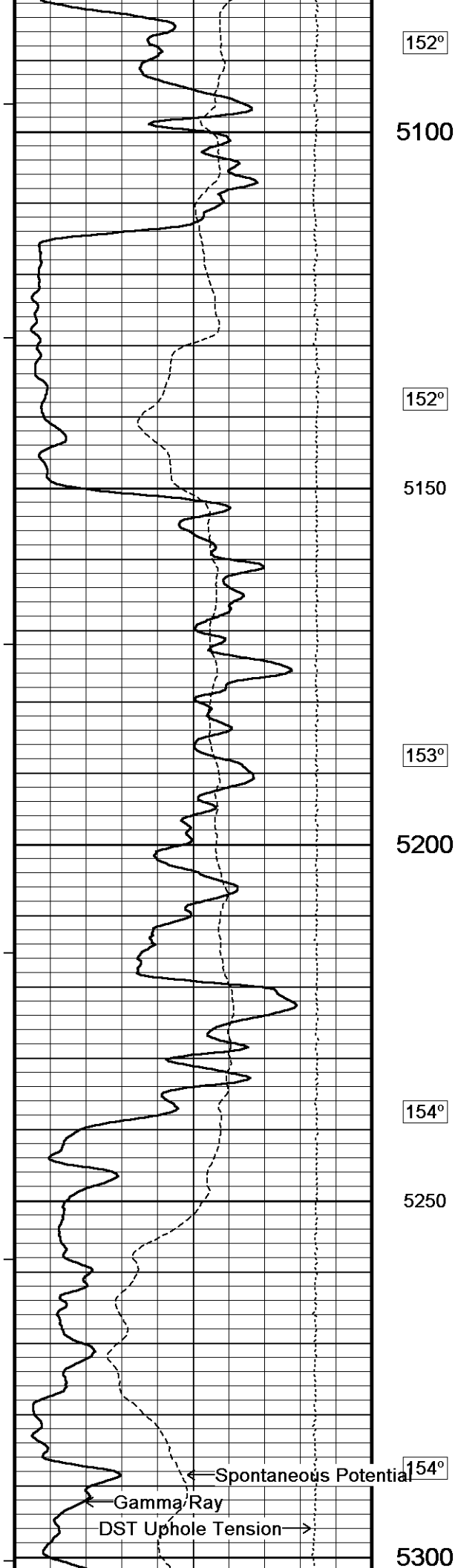
151°

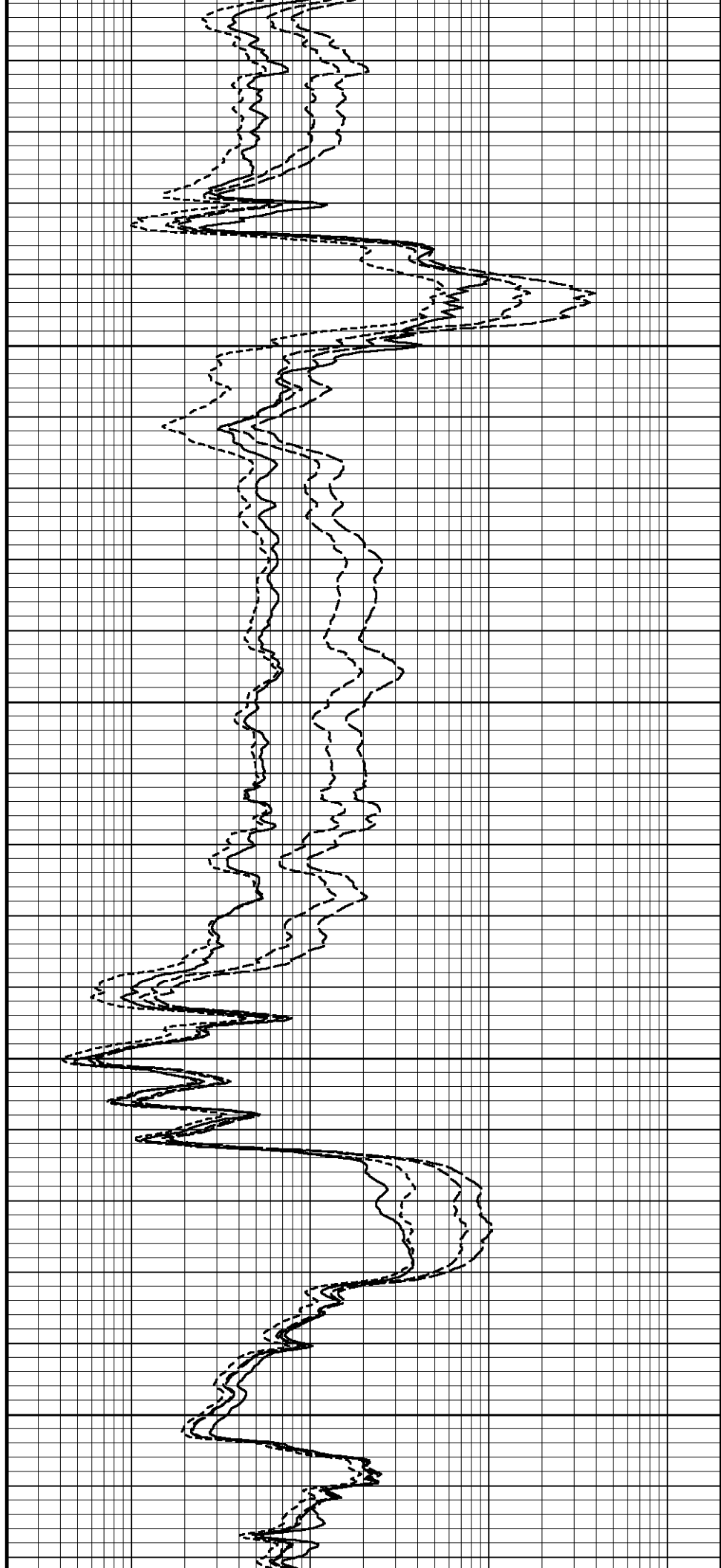
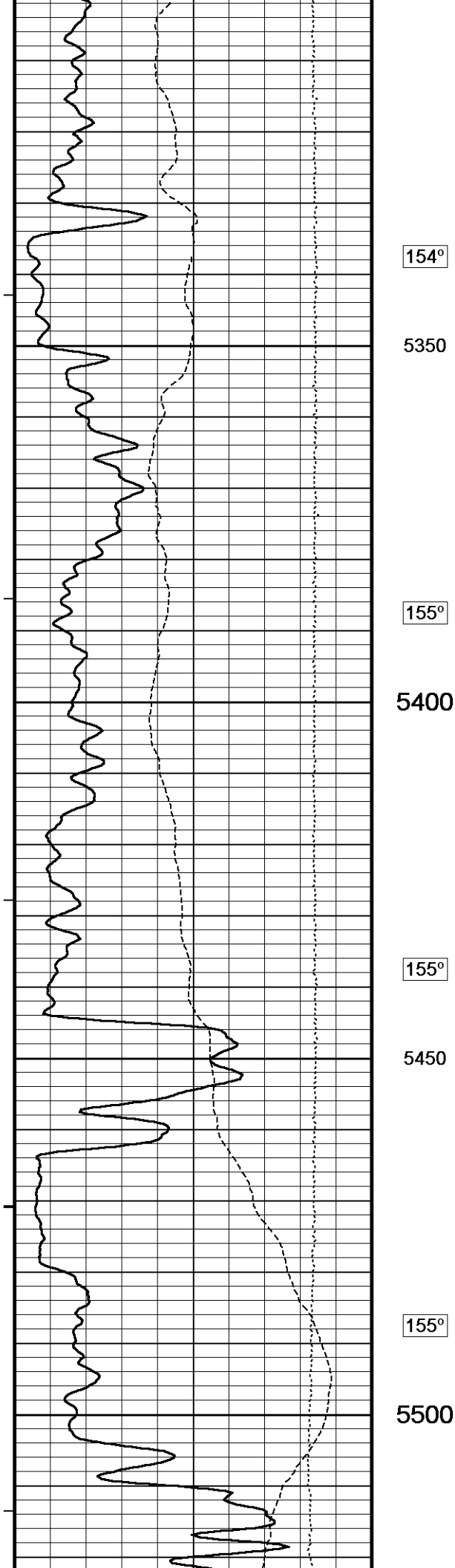
5000

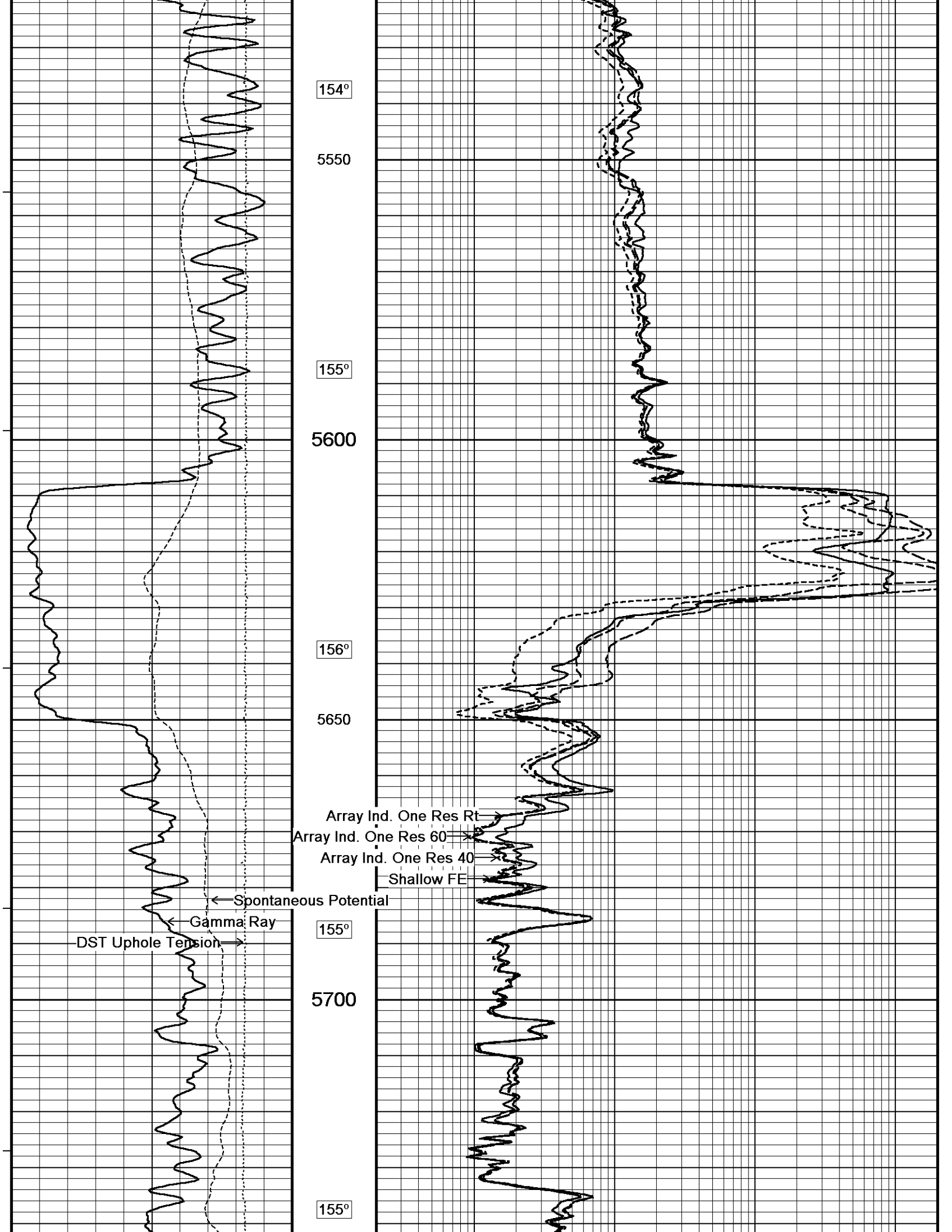
152°

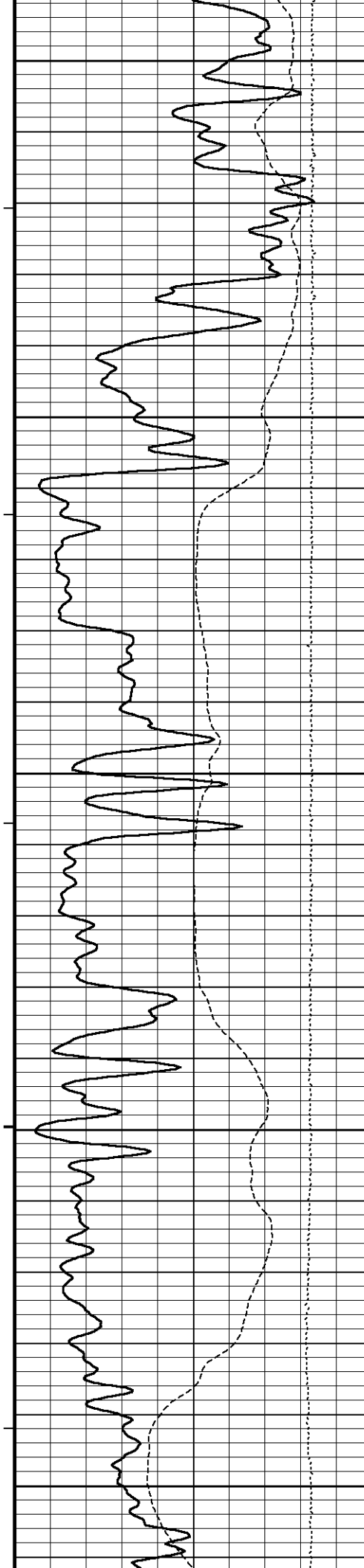
5050











5750

155°

5800

156°

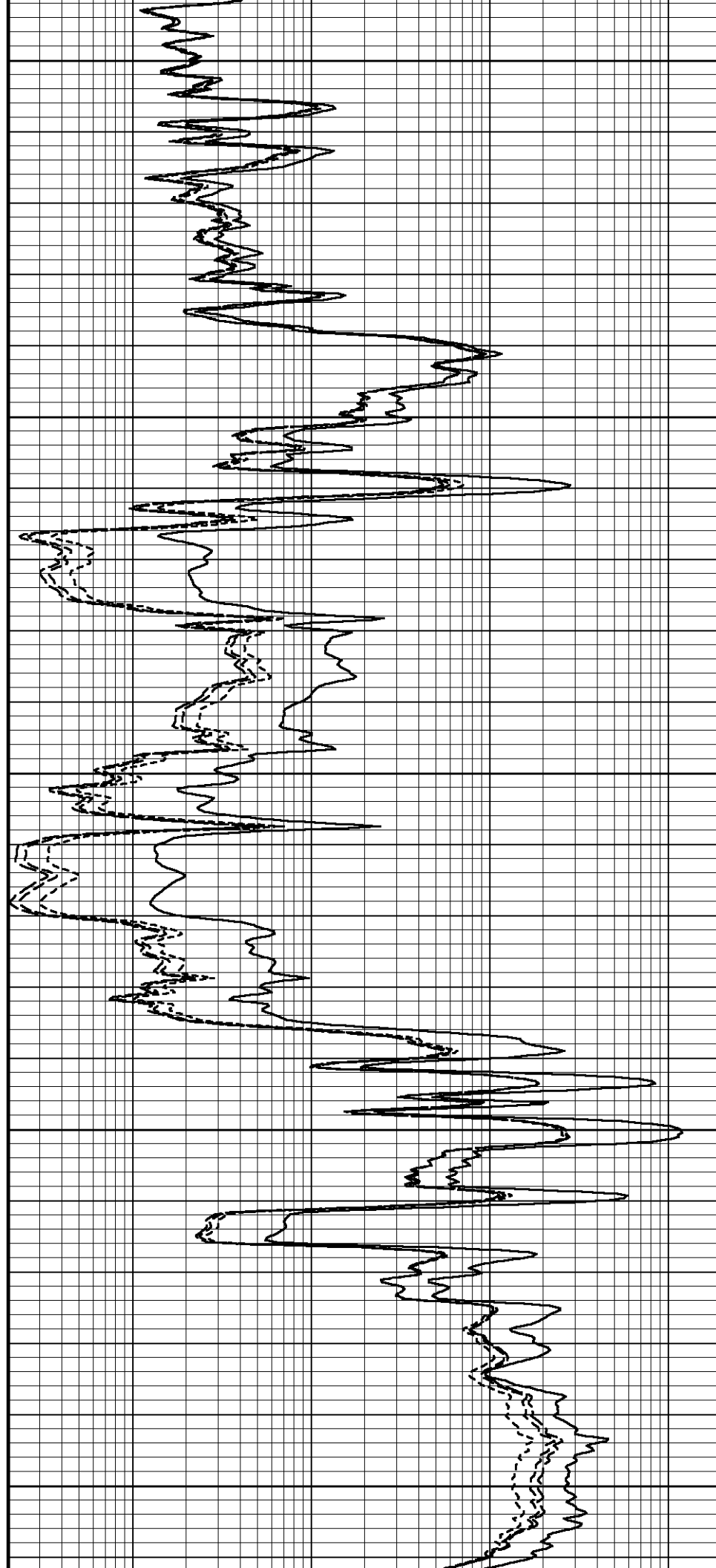
5850

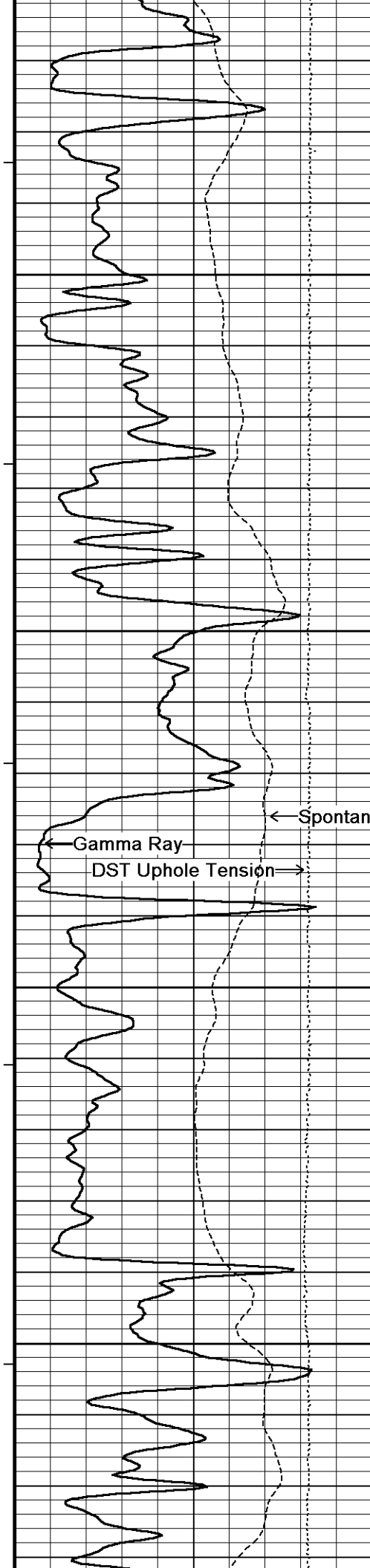
156°

5900

156°

5950





157°

6000

157°

6050

← Spontaneous Potential

← Gamma Ray

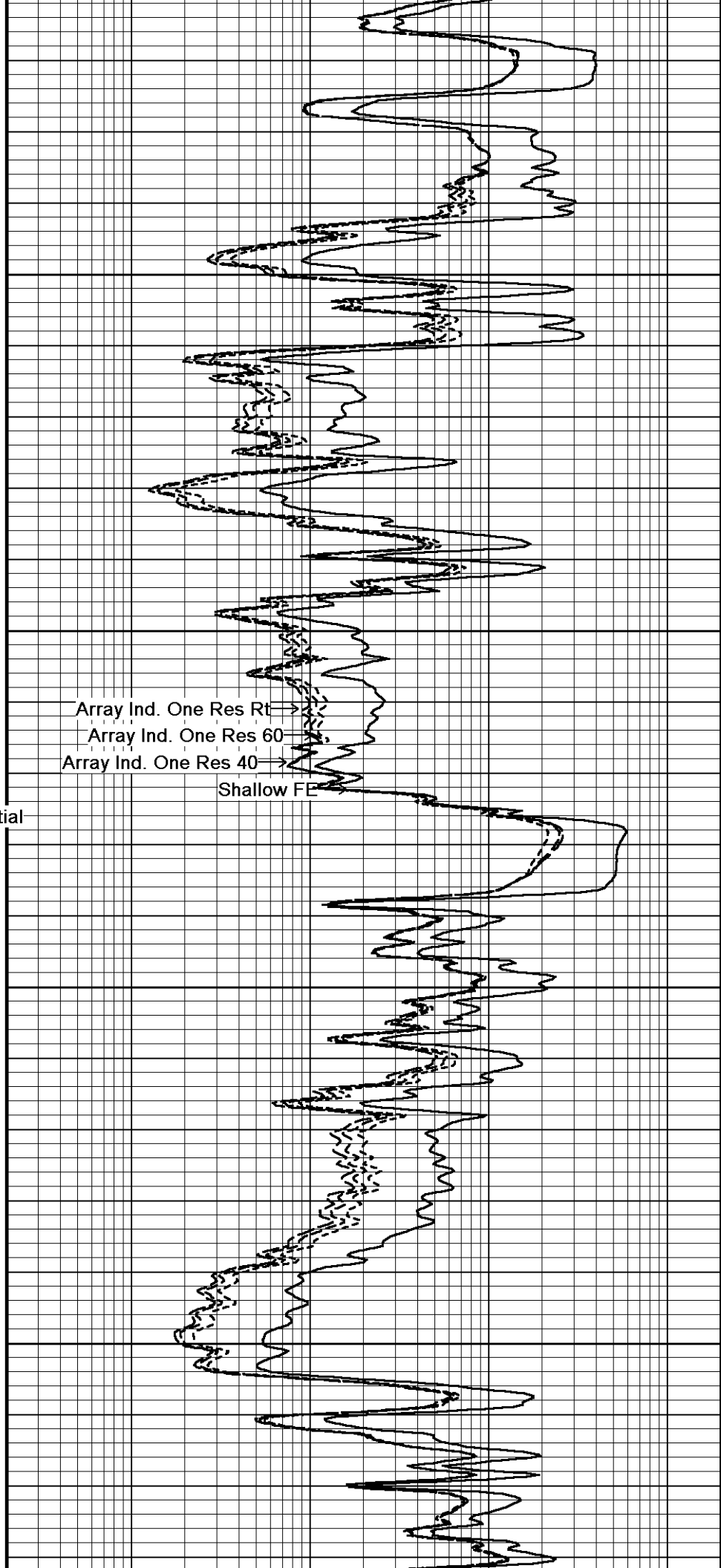
DST Uphole Tension →

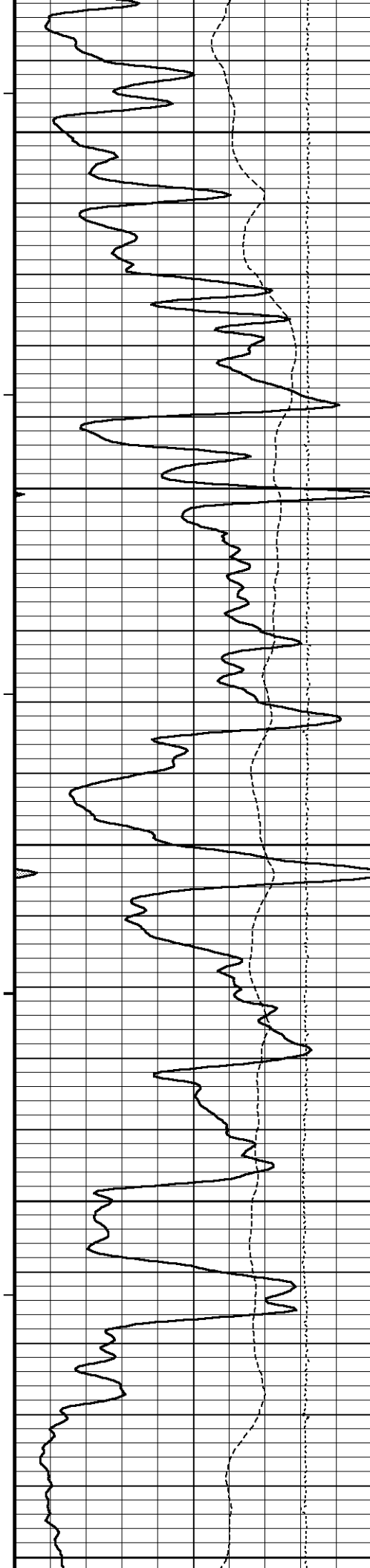
158°

6100

157°

6150





157°

6200

158°

6250

158°

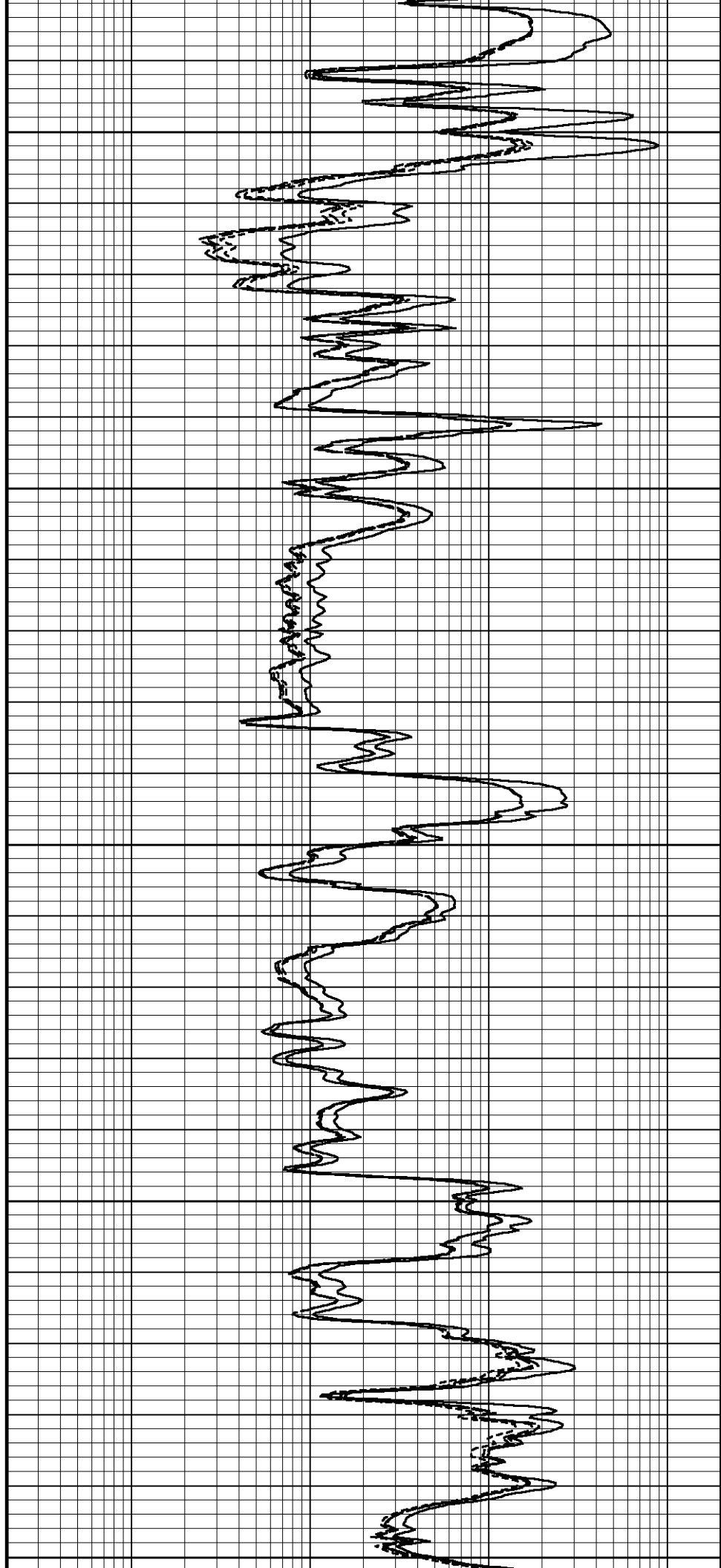
6300

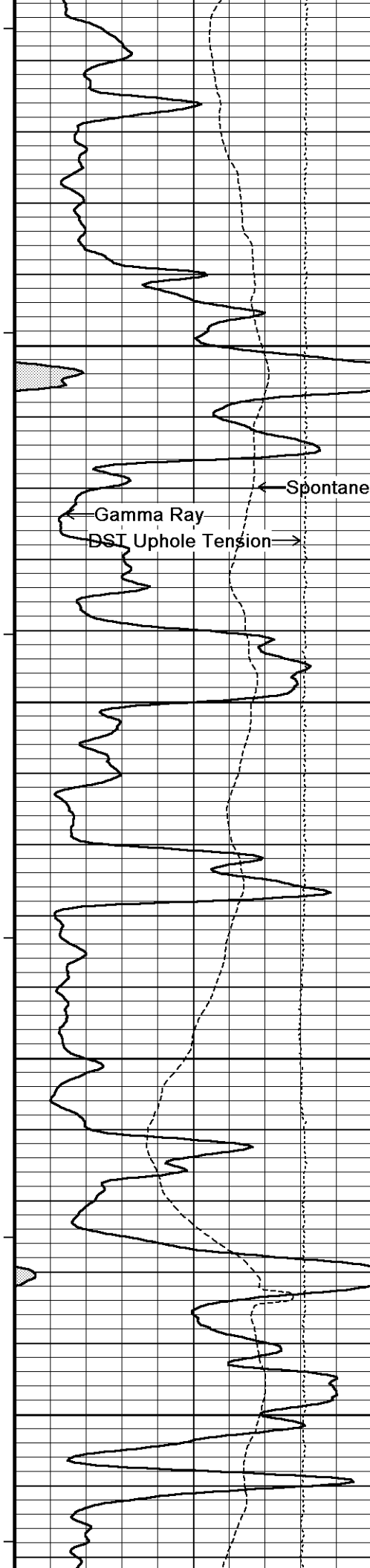
158°

6350

159°

6400





159°

6450

Array Ind. One Res Rt

Array Ind. One Res 60

Array Ind. One Res 40

Shallow FE

← Spontaneous Potential

← Gamma Ray

→ DST Uphole Tension

160°

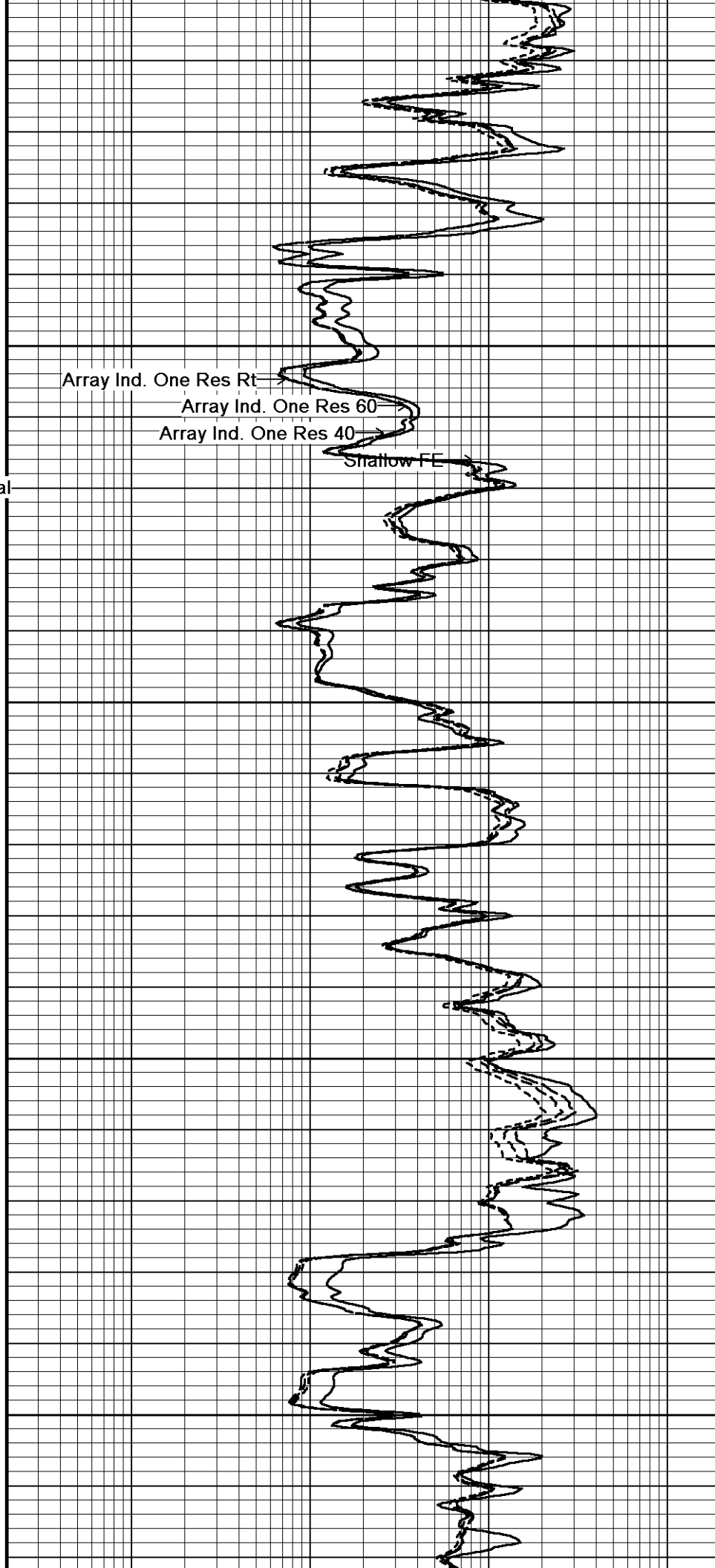
6500

162°

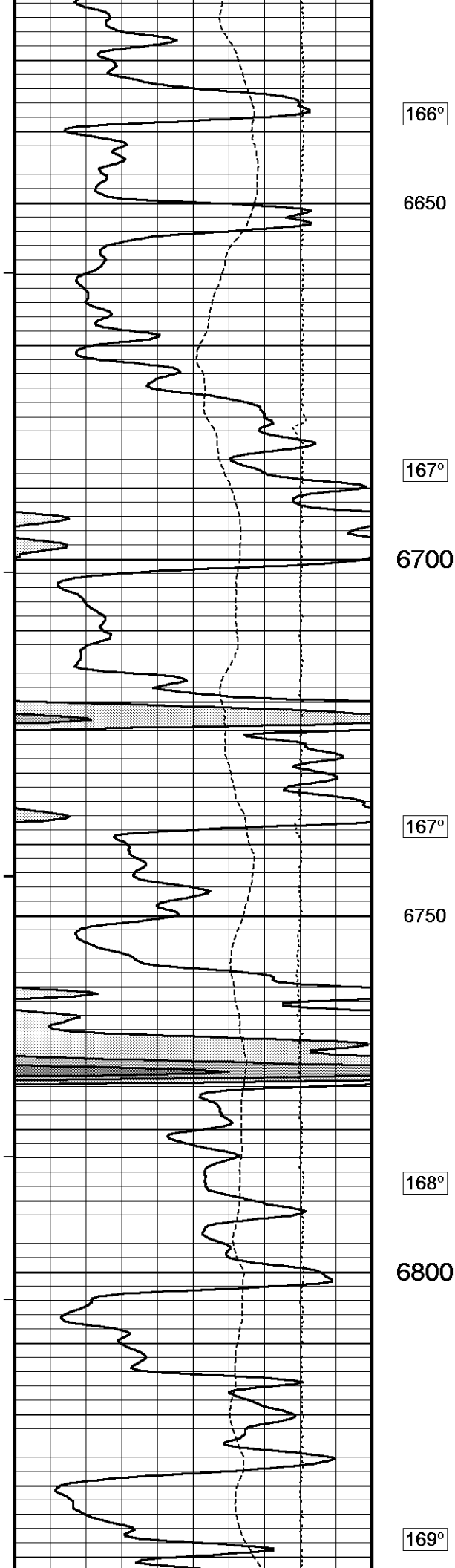
6550

164°

6600







166°

6650

167°

6700

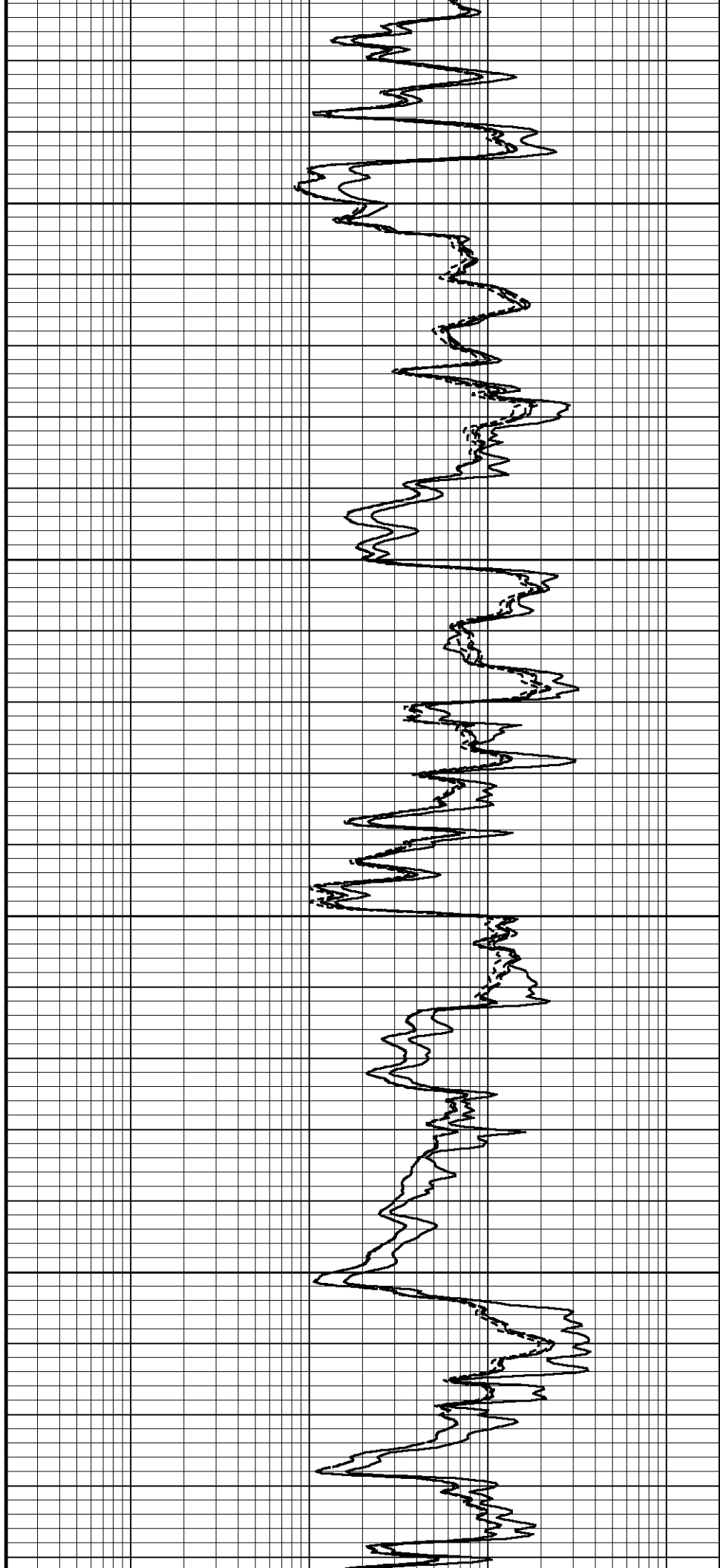
167°

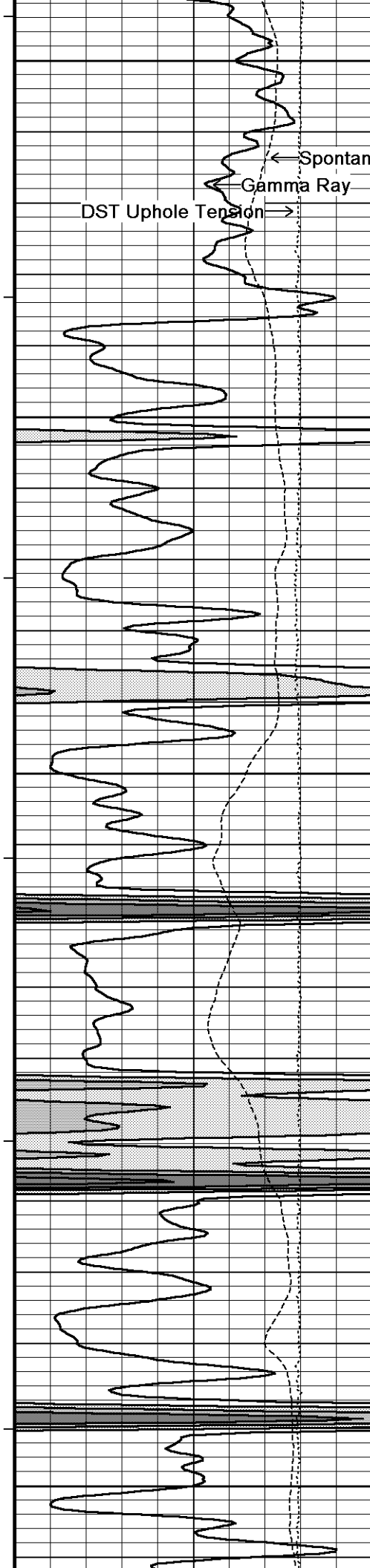
6750

168°

6800

169°





6850

169°

6900

169°

6950

169°

7000

170°

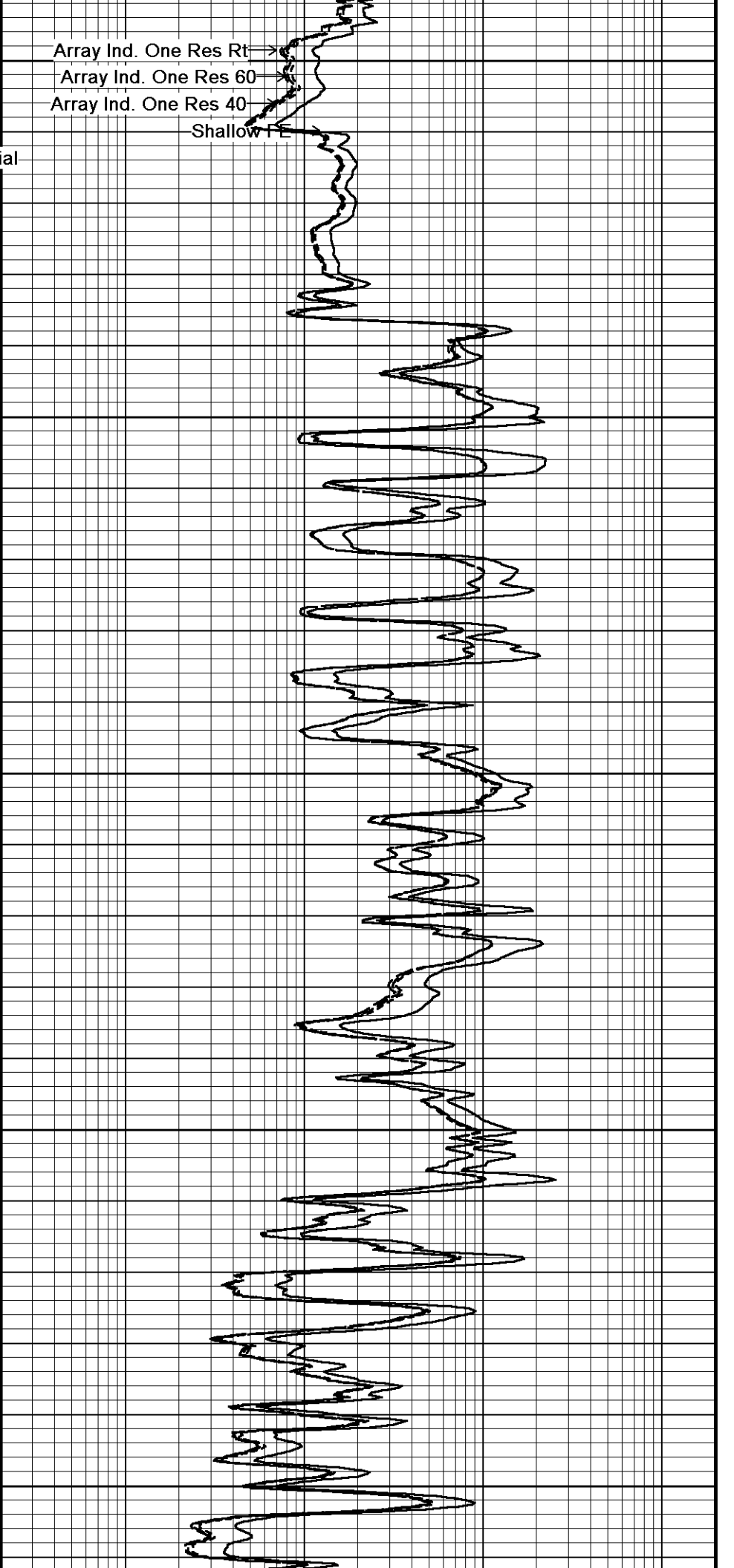
7050

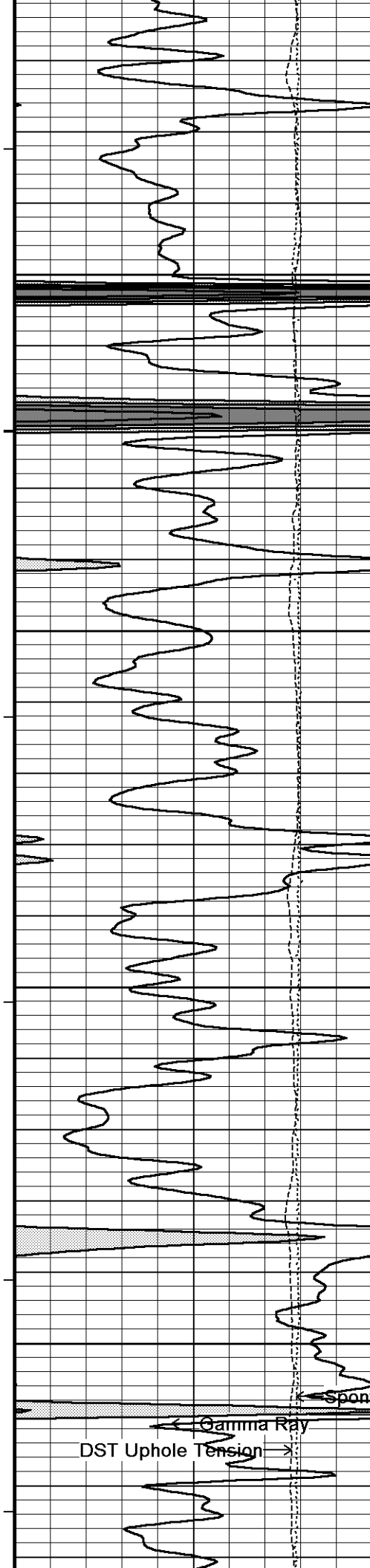
Array Ind. One Res Rt

Array Ind. One Res 60

Array Ind. One Res 40

Shallow IE





170°

7100

169°

7150

170°

7200

171°

Array Ind. One Res Rt →

Array Ind. One Res 60 →

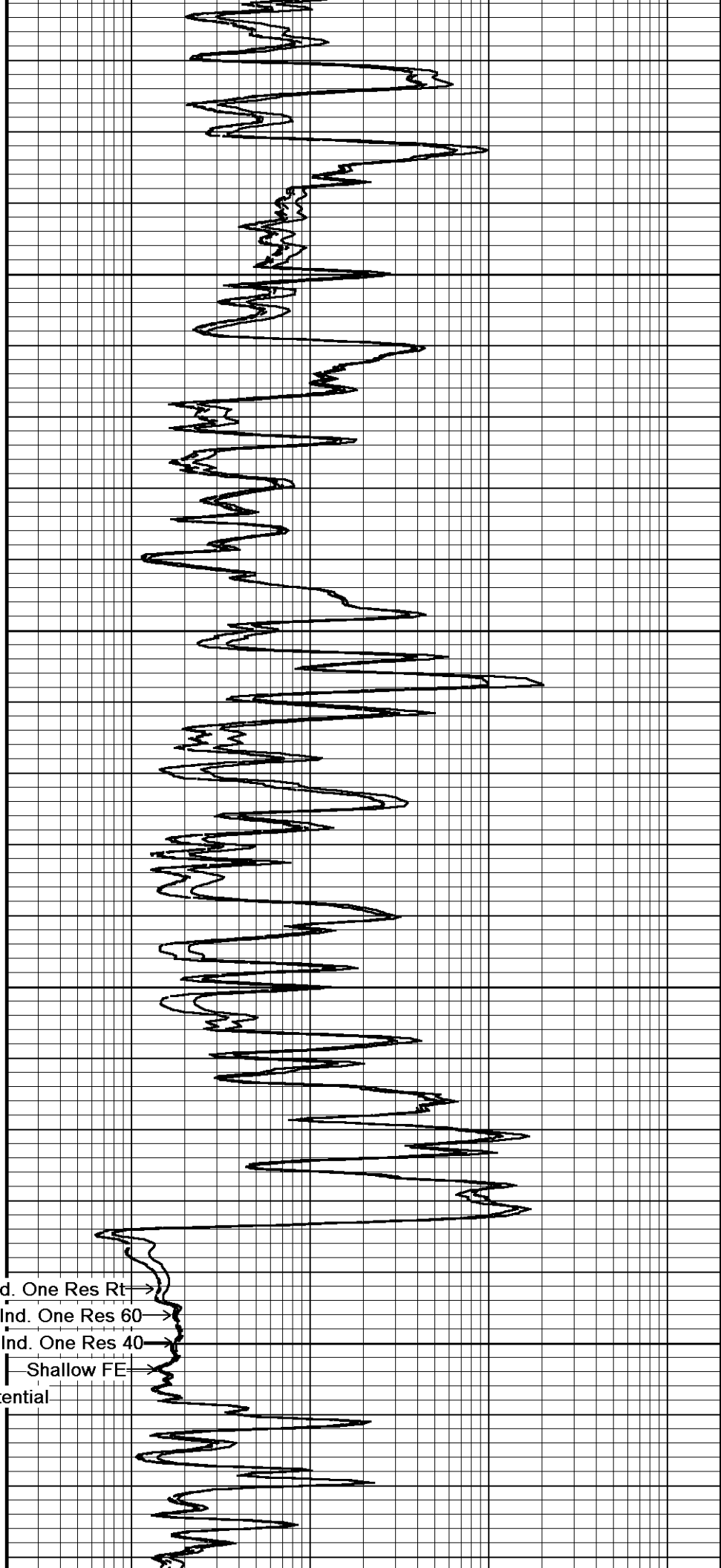
7250ay Ind. One Res 40 →

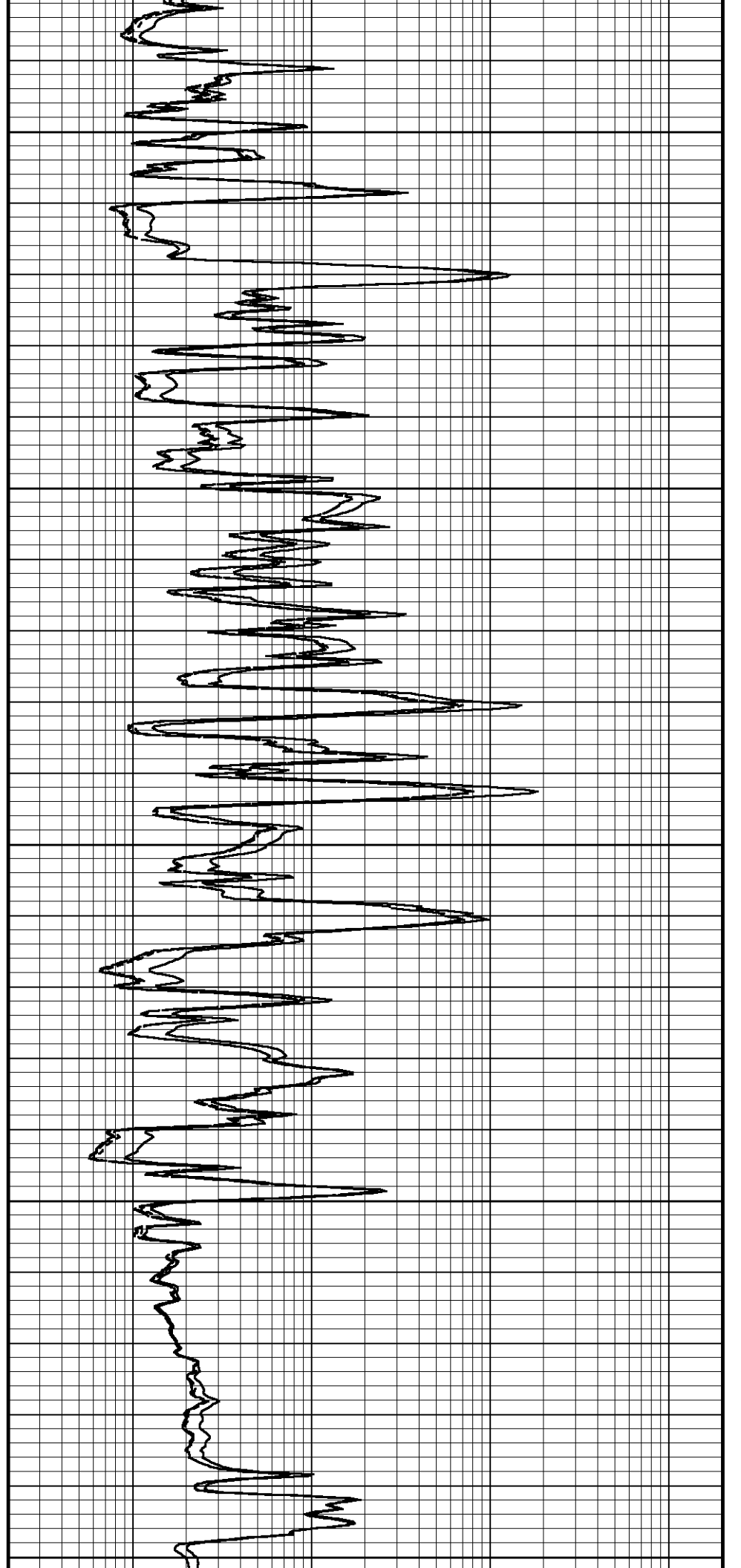
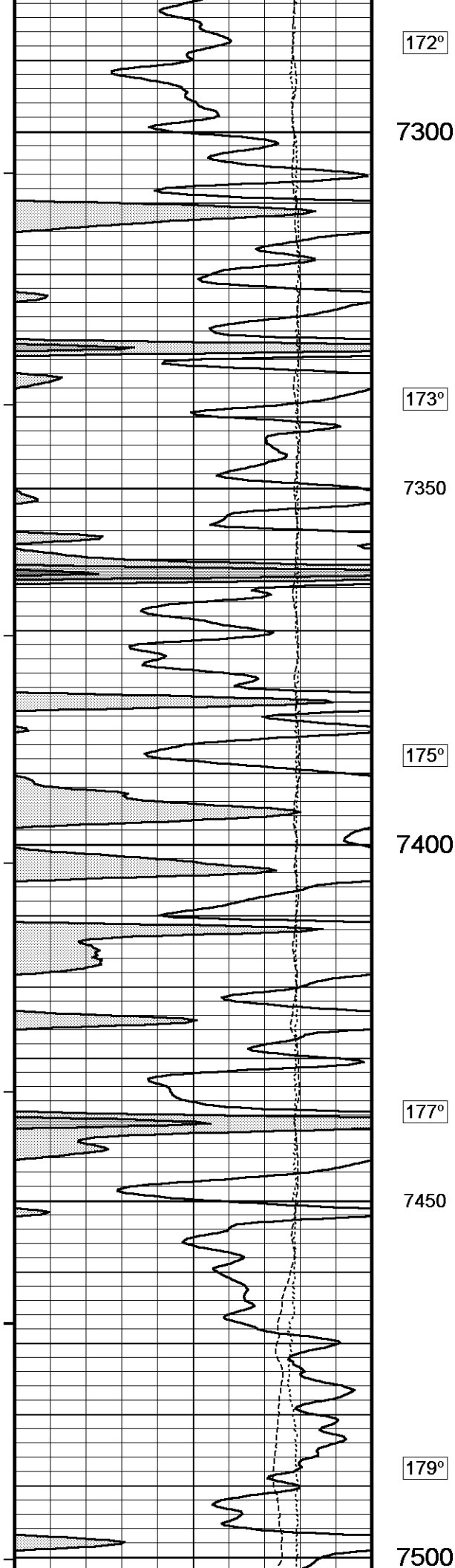
Shallow FE →

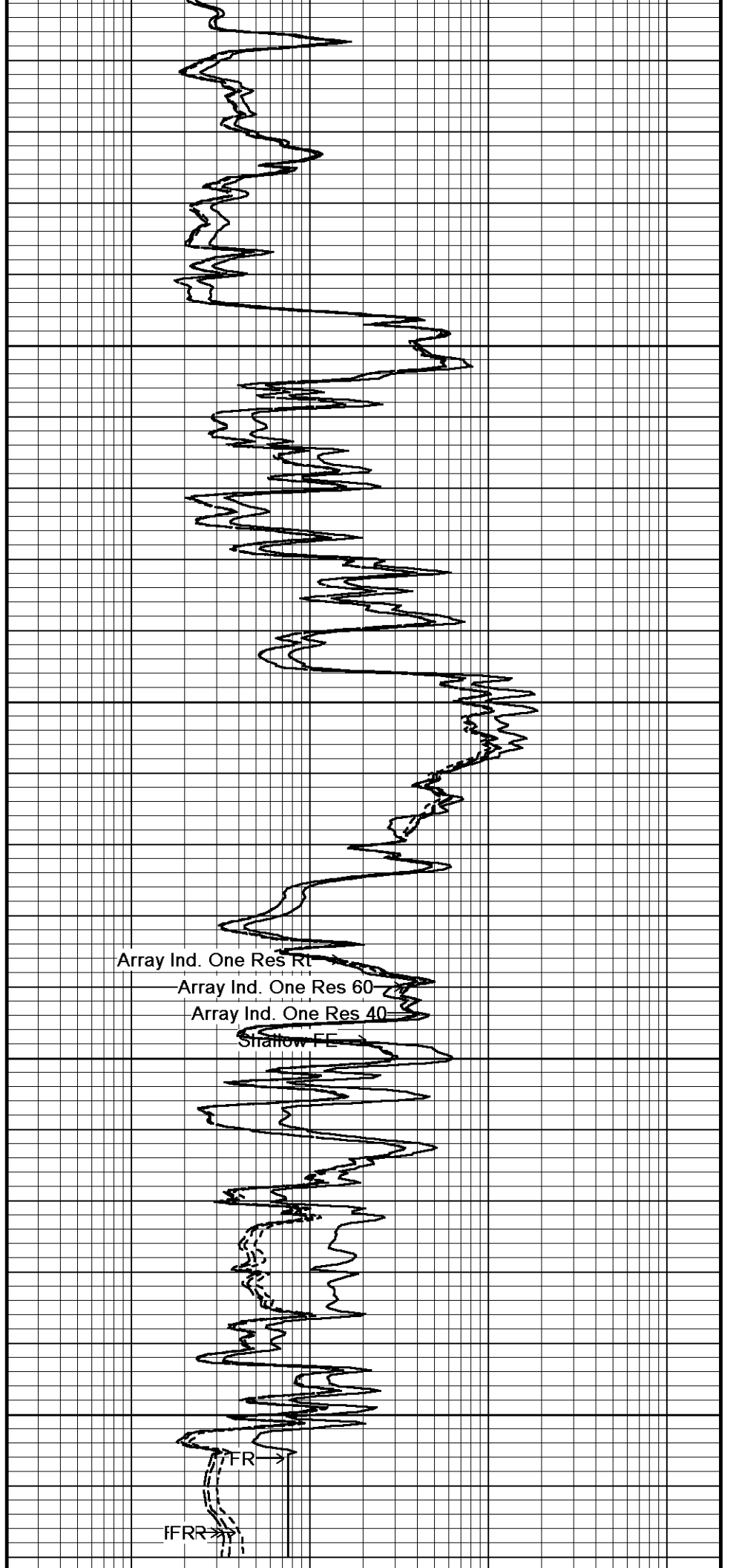
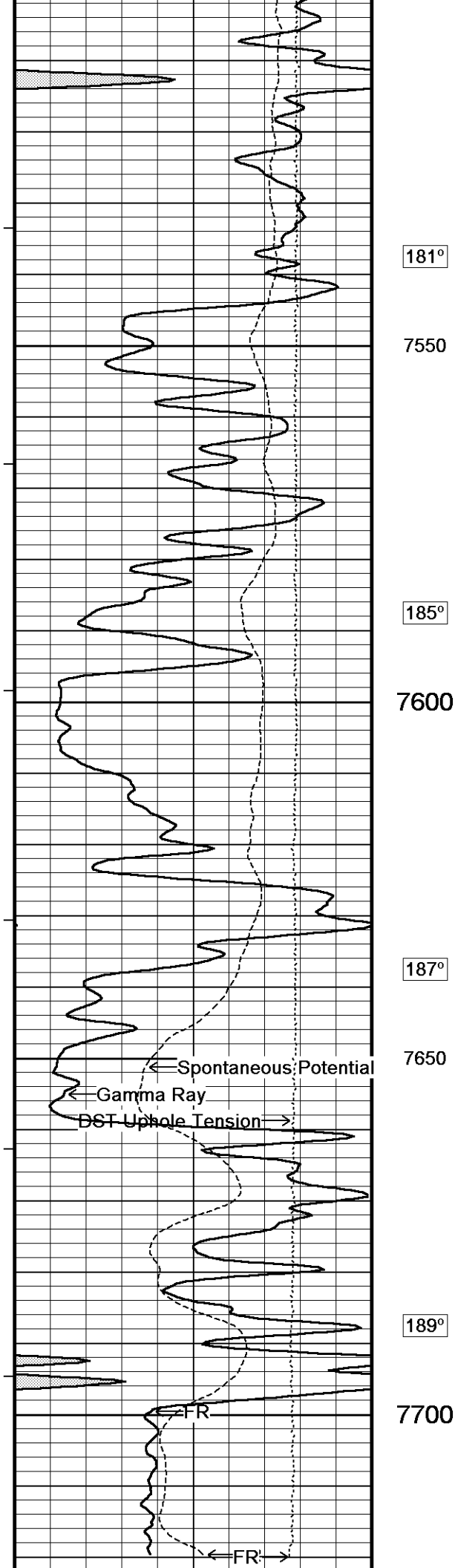
← Spontaneous Potential

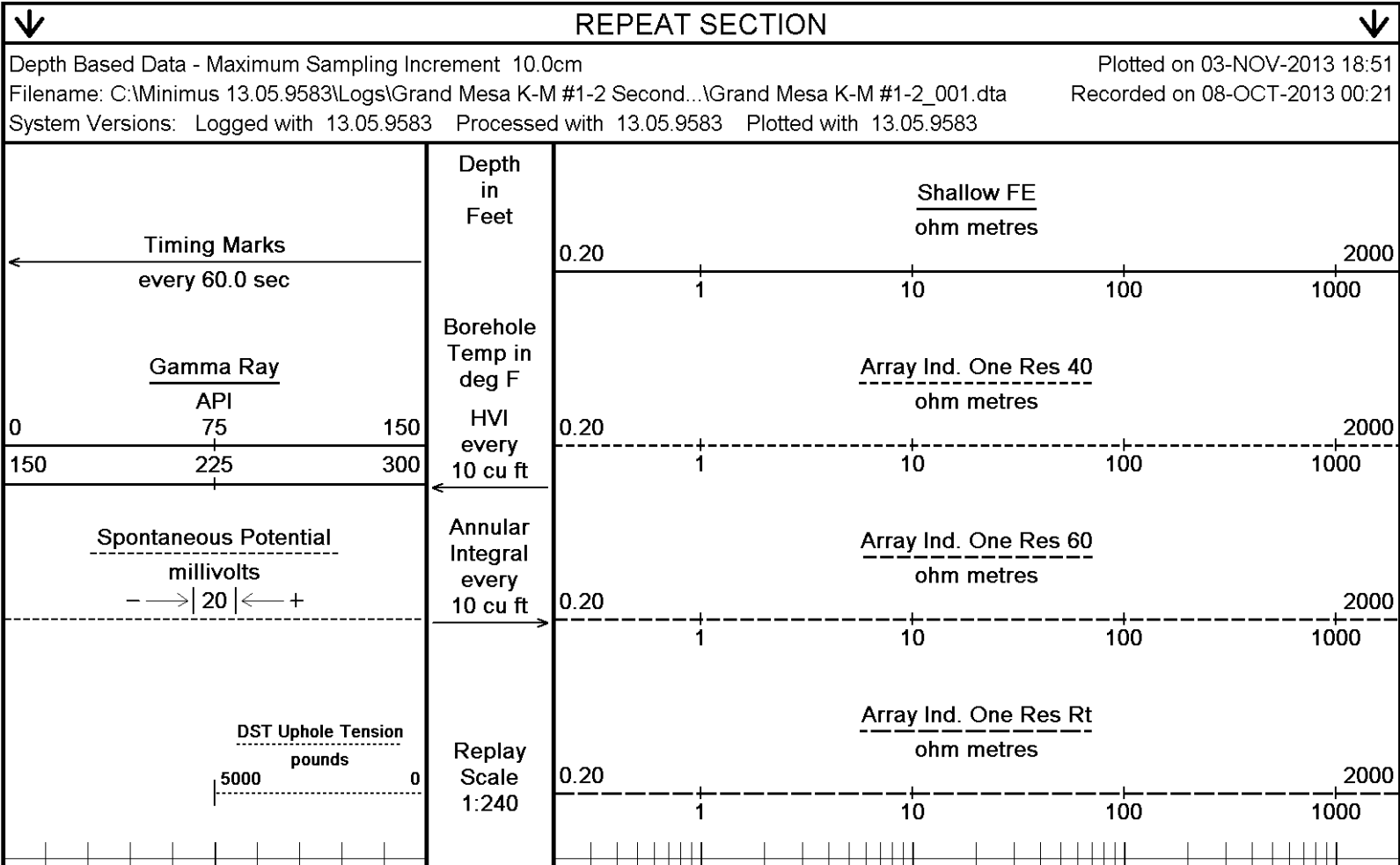
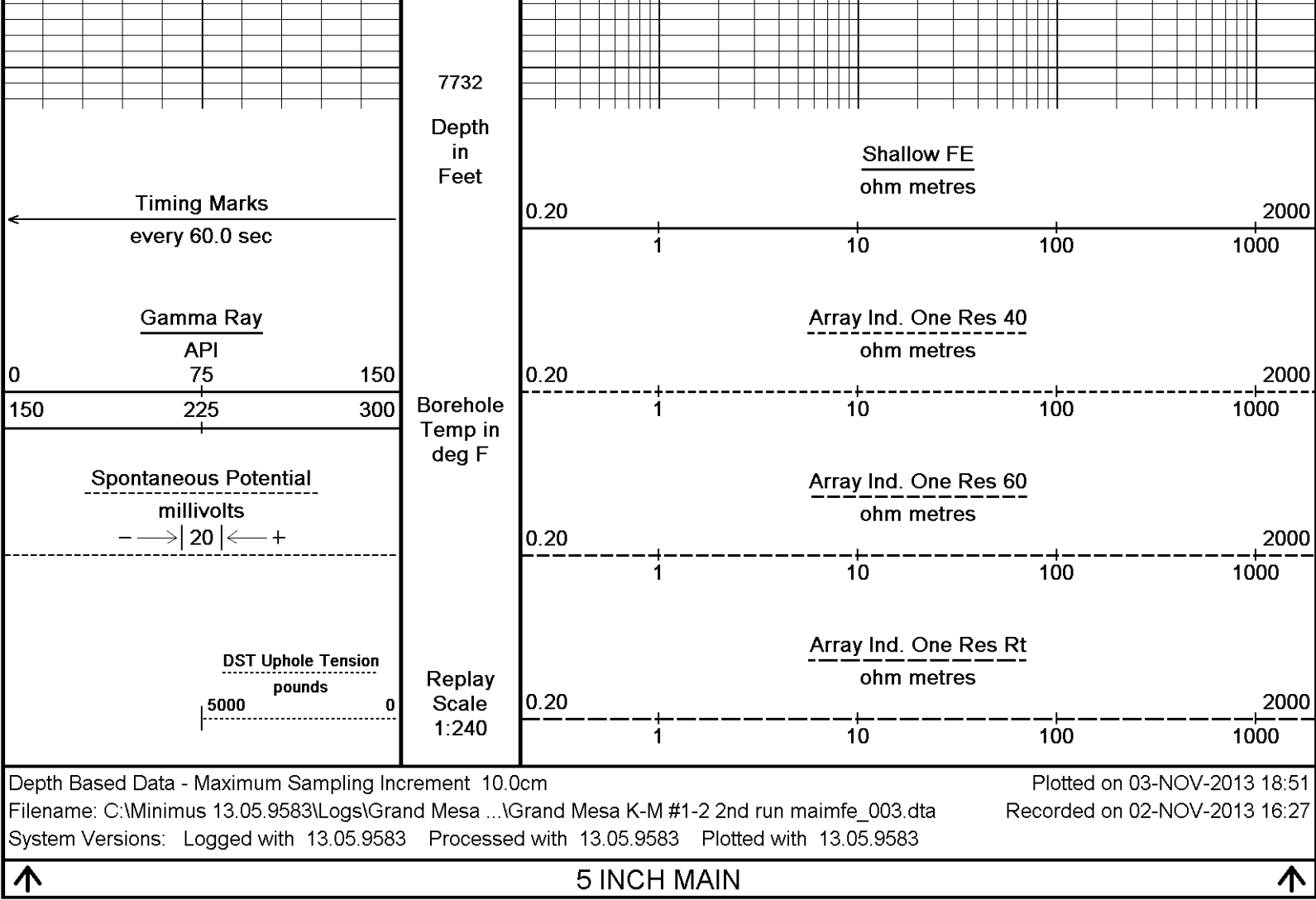
← Gamma Ray

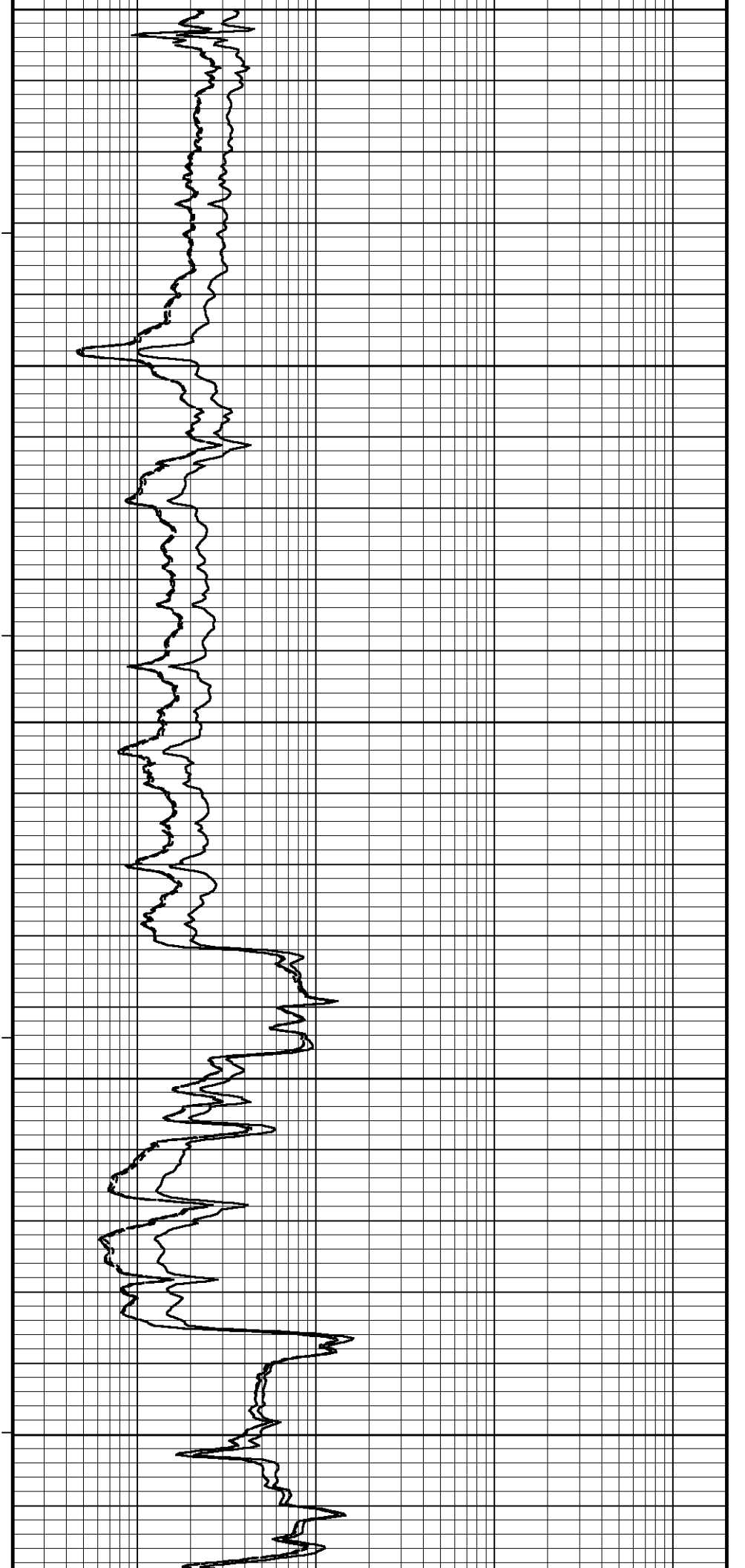
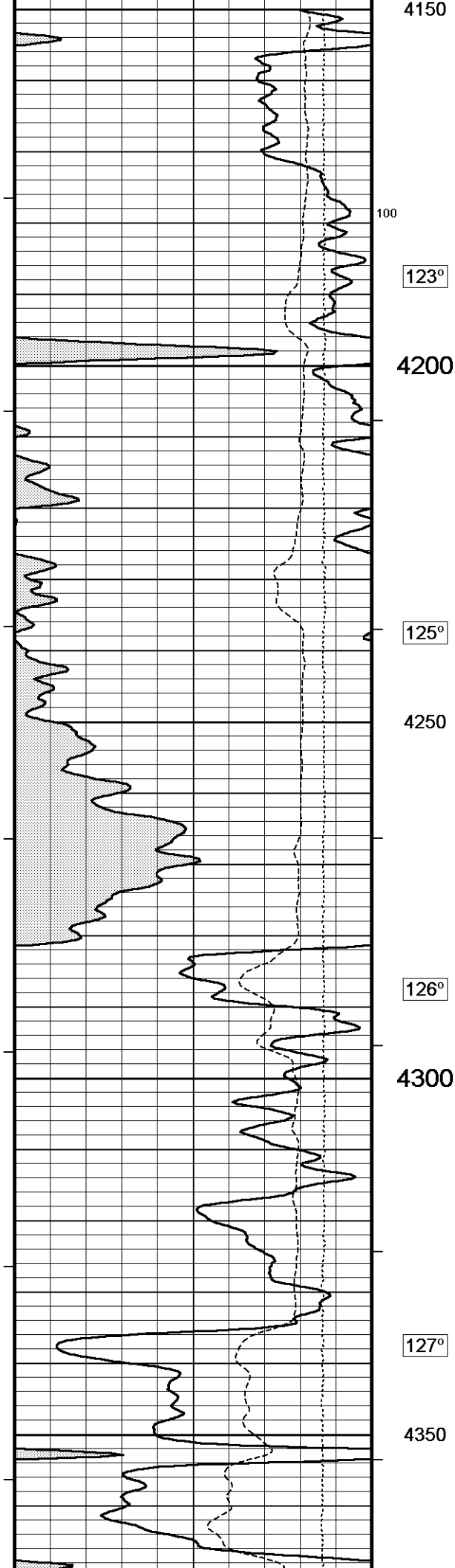
DST Uphole Tension →

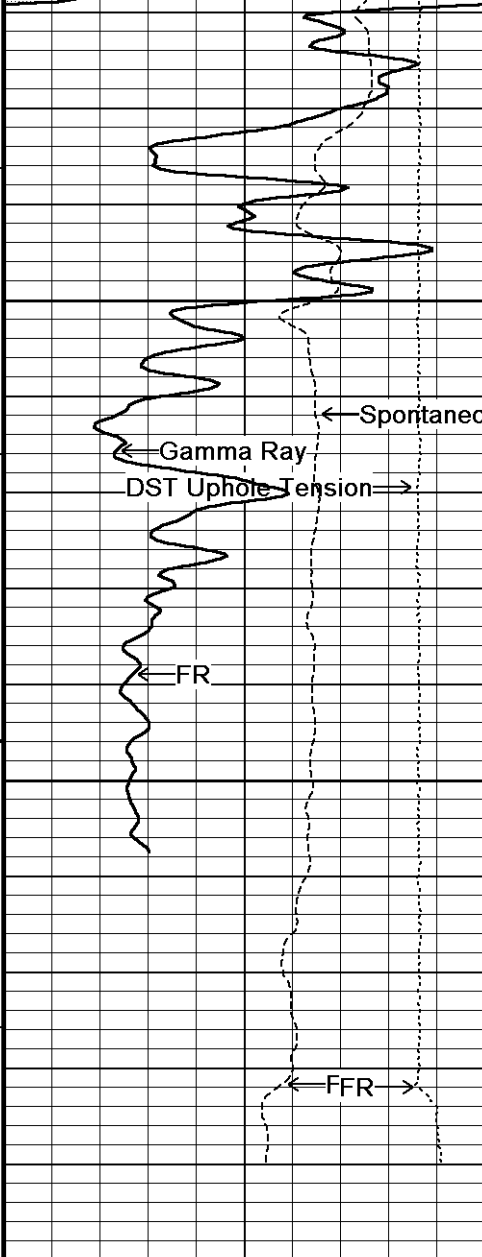












128°

4400

← Spontaneous Potential

← Gamma Ray

DST Uphole Tension →

← FR

128°

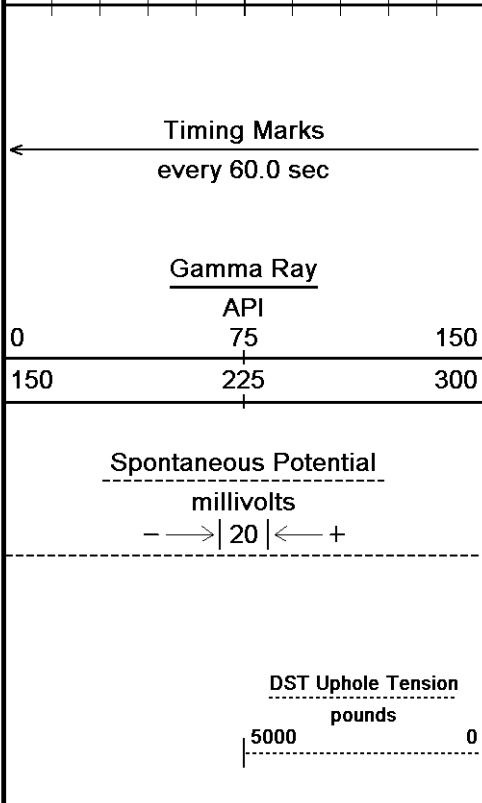
4450

0

← FFR →

4500

Depth in Feet



Timing Marks  
every 60.0 sec

Gamma Ray

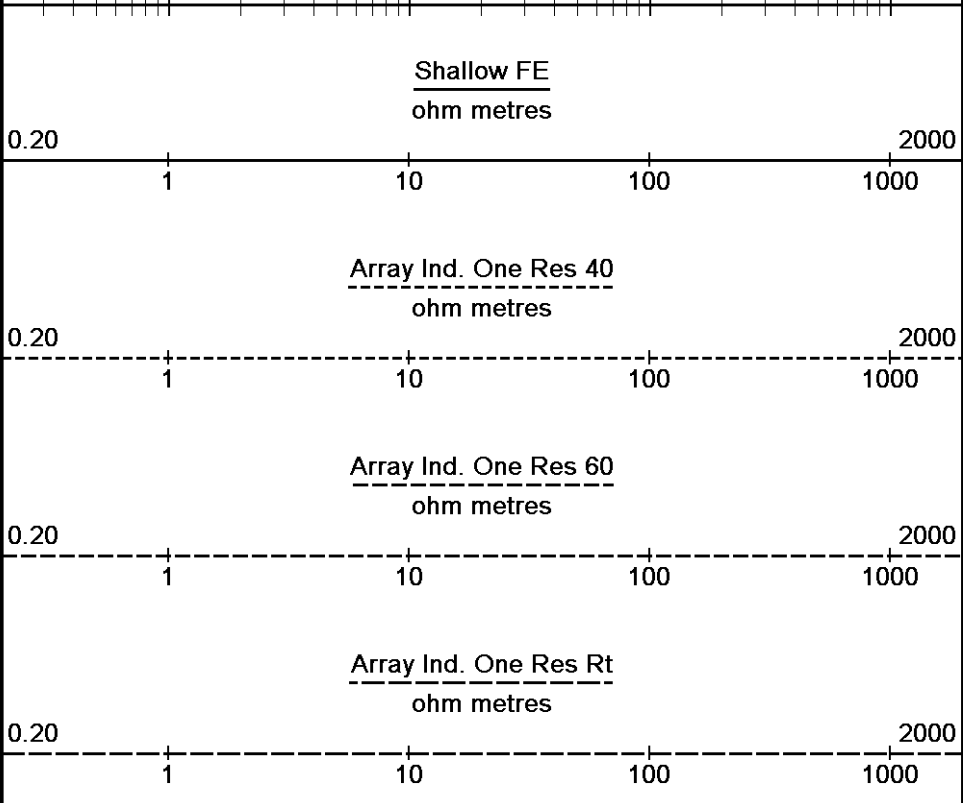
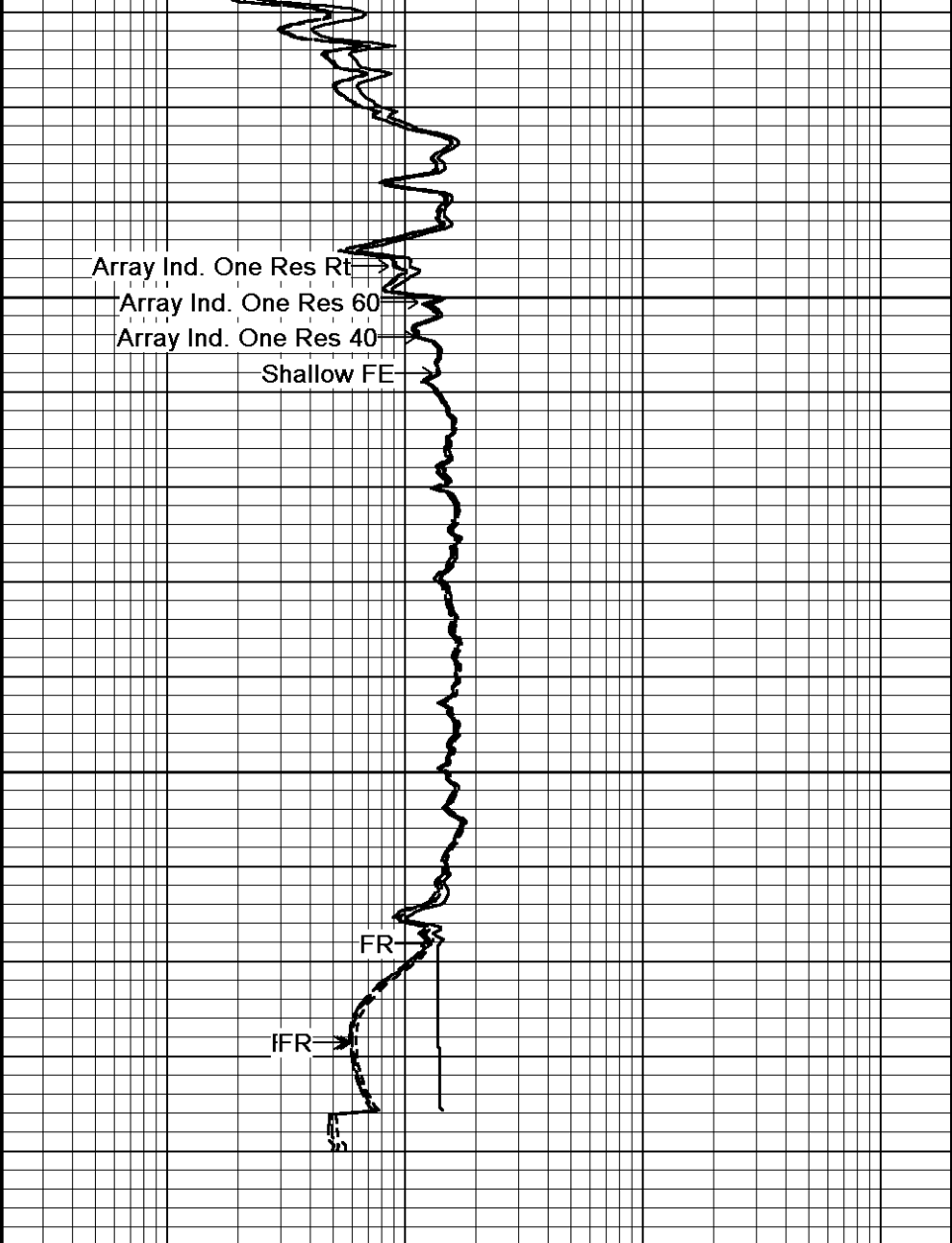
API 0 75 150

HVI 150 225 300

Spontaneous Potential  
millivolts  
- → | 20 | ← +

DST Uphole Tension  
pounds  
5000 0

Replay Scale  
1:240





↑

REPEAT SECTION

↑

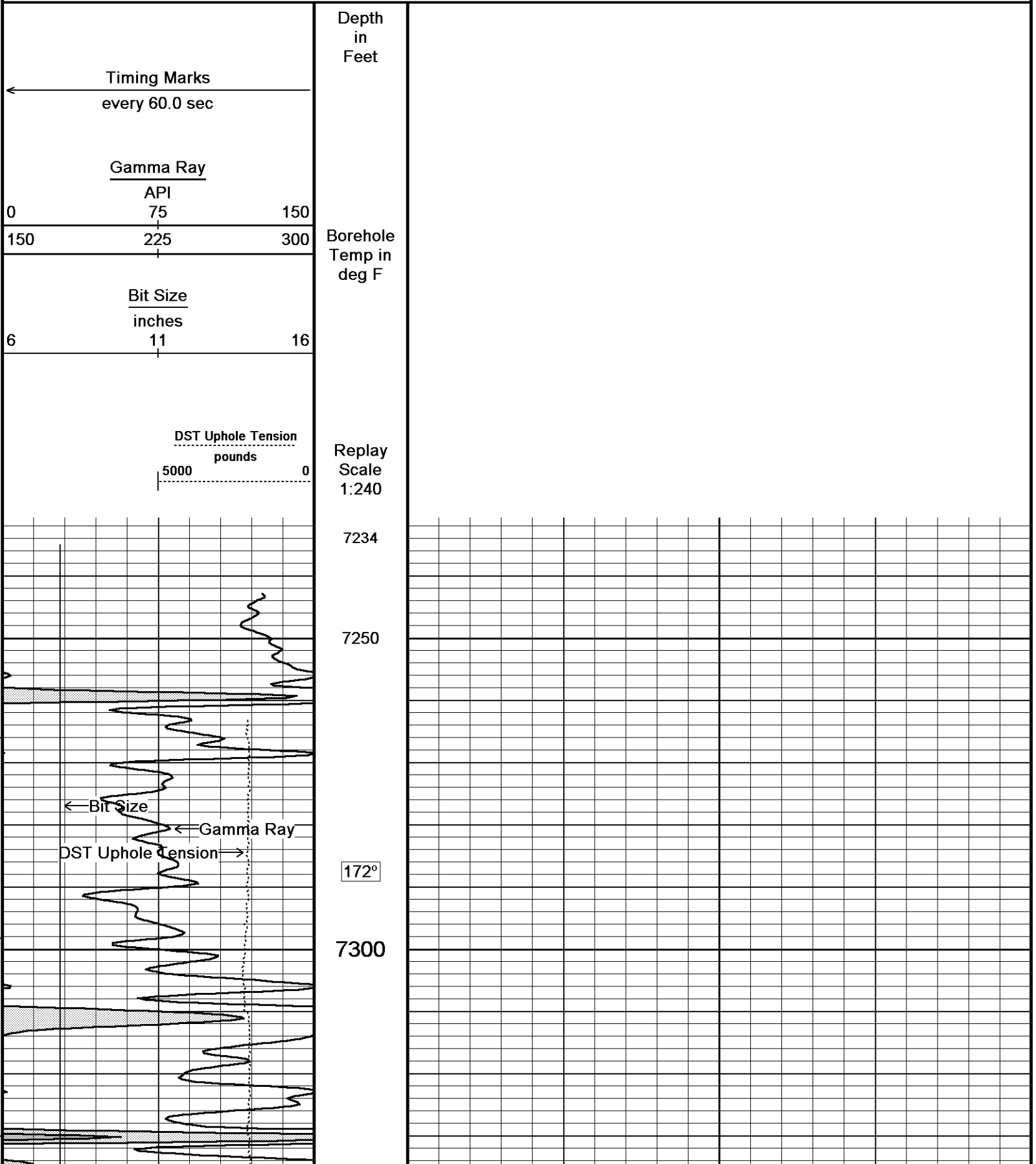
↓

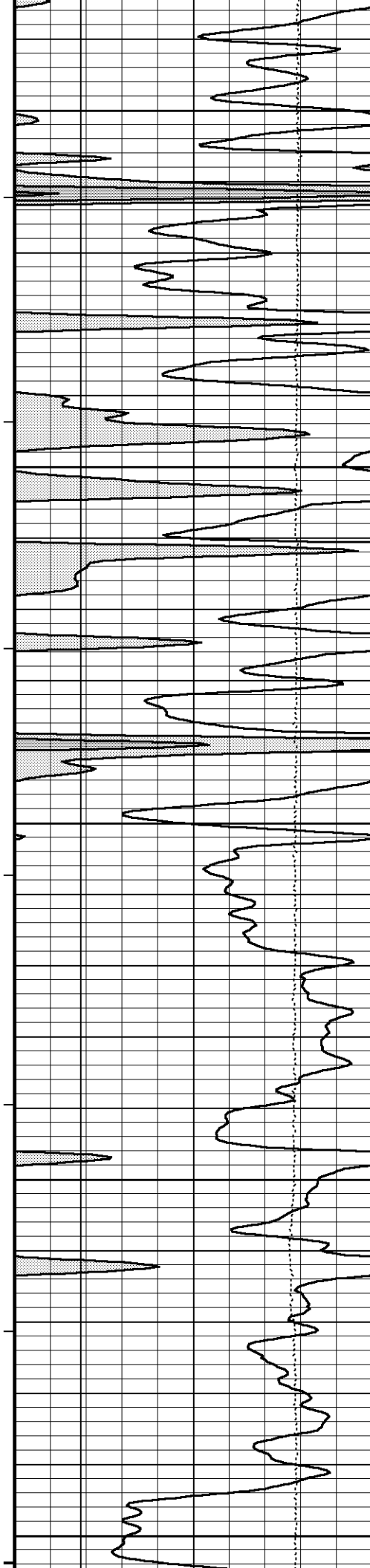
REPEAT SECTION

↓

Depth Based Data - Maximum Sampling Increment 10.0cm  
Filename: C:\Minimus 13.05.9583\Logs\Grand Mesa ...\Grand Mesa K-M #1-2 2nd run maimfe\_002.dta  
System Versions: Logged with 13.05.9583 Processed with 13.05.9583 Plotted with 13.05.9583

Plotted on 03-NOV-2013 18:51  
Recorded on 02-NOV-2013 15:59





172°

7350

174°

7400

176°

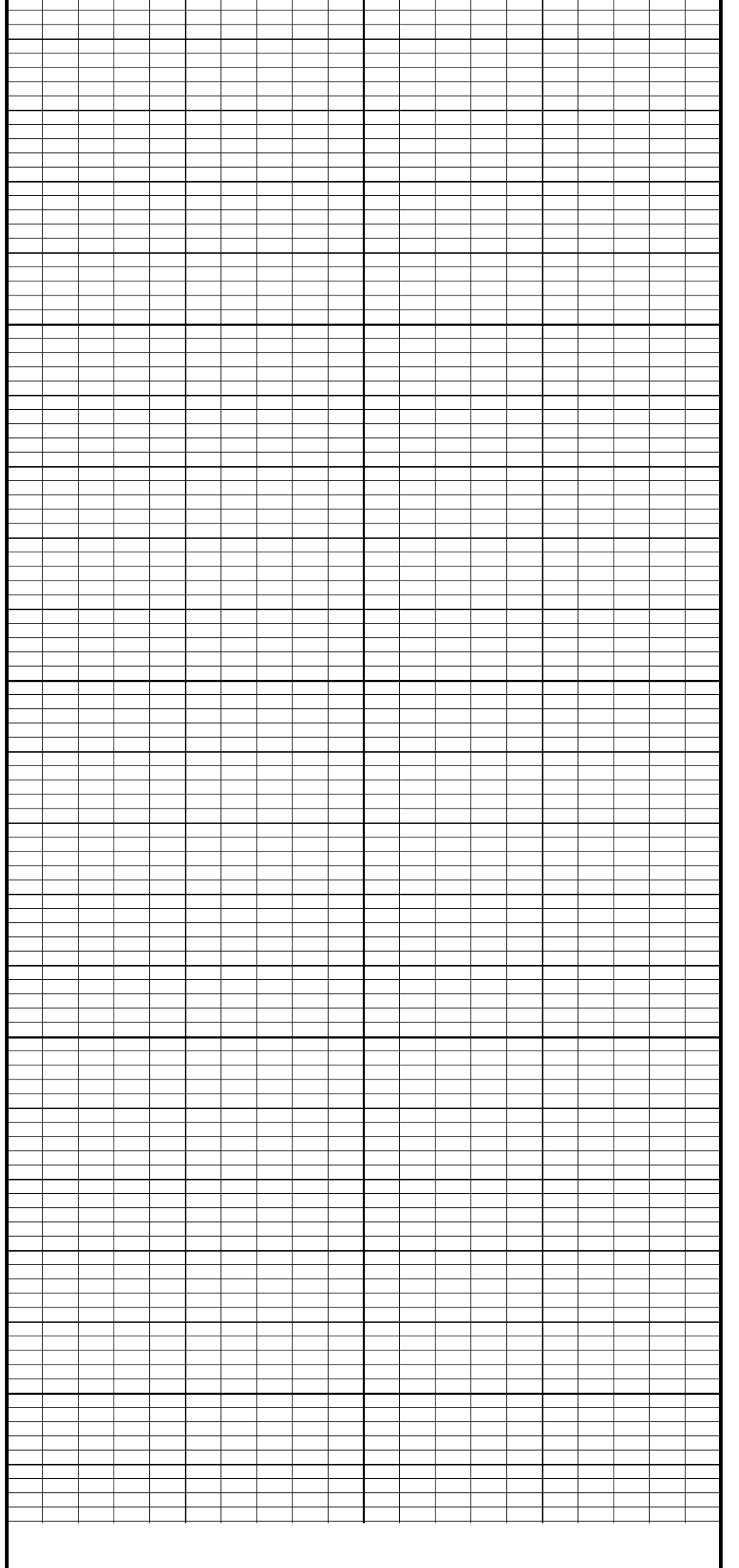
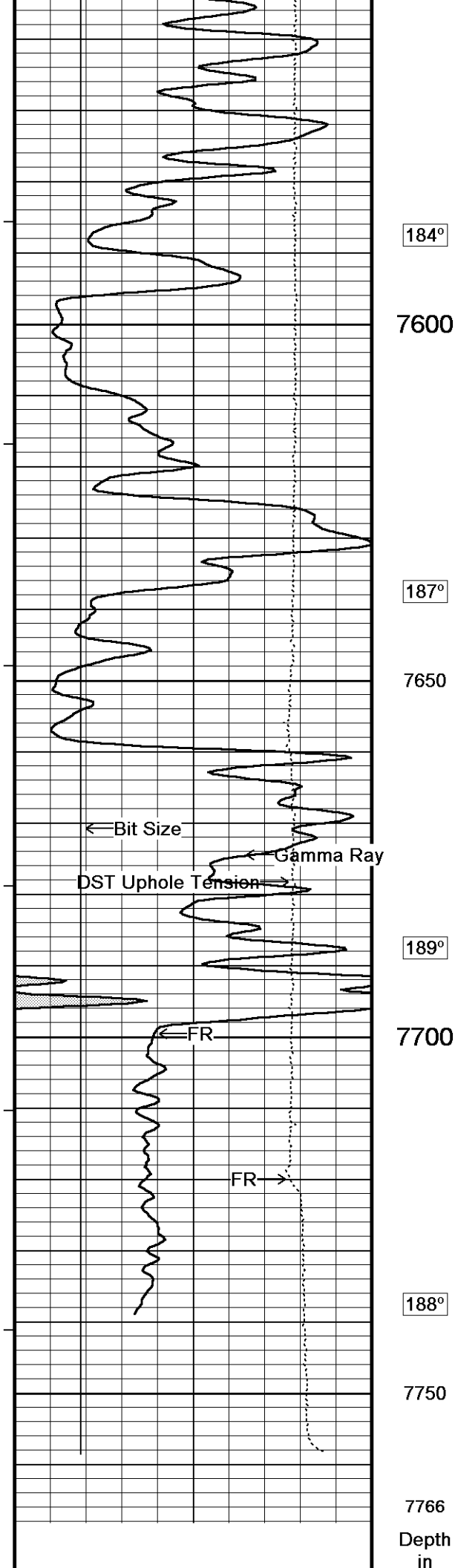
7450

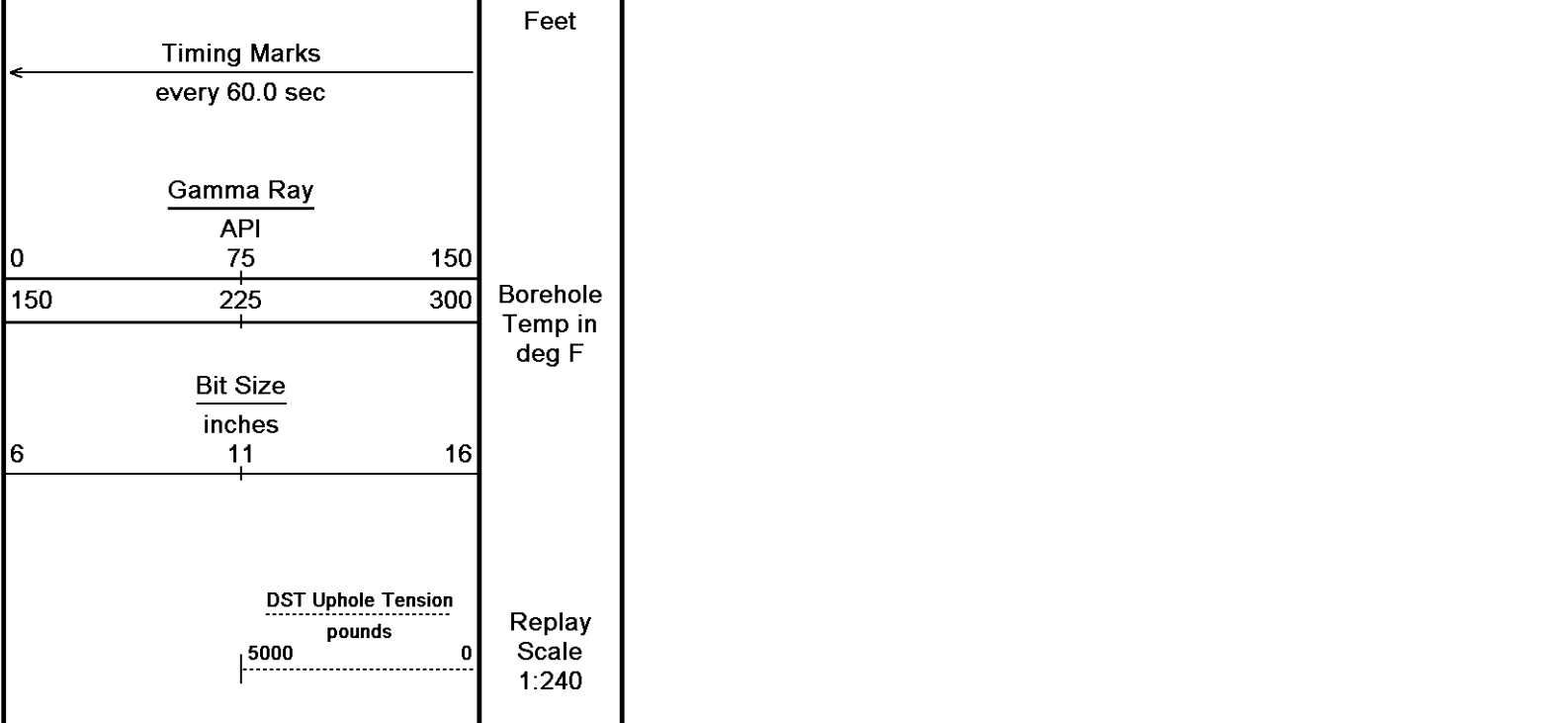
178°

7500

181°

7550





Depth Based Data - Maximum Sampling Increment 10.0cm  
 Plotted on 03-NOV-2013 18:51  
 Filename: C:\Minimus 13.05.9583\Logs\Grand Mesa ...\Grand Mesa K-M #1-2 2nd run maimfe\_002.dta  
 Recorded on 02-NOV-2013 15:59  
 System Versions: Logged with 13.05.9583 Processed with 13.05.9583 Plotted with 13.05.9583

↑ REPEAT SECTION ↑

# BEFORE SURVEY CALIBRATION

C:\Minimus 13.05.9583\Logs\Grand Mesa K-M #1-2 Second Run\K-M #1-2 First Run data\Grand Mesa K-M #1-2\_002.dta

|   |                       |            |                                  |
|---|-----------------------|------------|----------------------------------|
| General Constants All 000                               |                       |            | Last Edited on 07-OCT-2013,23:46 |
| General Parameters                                      |                       |            |                                  |
| Mud Resistivity   | 2.340                 | ohm-metres |                                  |
| Mud Resistivity Temperature                             | 75.000                | degrees F  |                                  |
| Water Level   | 0.000                 | feet       |                                  |
| Borehole Fluid 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                                 | 5.500                 | inches     |                                  |
| Caliper for Differential Caliper                        | Density Caliper       |            |                                  |
| Rwa Parameters  |                       |            |                                  |
| Porosity used   | Base Density Porosity |            |                                  |
| Resistivity used  | Array Ind. Six Res Rt |            |                                  |
| RWA Constant A  | 0.610                 |            |                                  |
| RWA Constant M  | 2.150                 |            |                                  |
| SW/APOR Tool Source                                     | 0.000                 |            |                                  |

|                               |          |                  |  |
|-------------------------------|----------|------------------|--|
| Gamma Calibration MCG-D.K 469 |          |                  | Field Calibration on 01-OCT-2013 14:45 |
|                               | Measured | Calibrated (API) |  |
| Background                    | 67       | 45               |  |
| Calibrator (Gross)            | 1147     | 770              |  |
| Calibrator (Net)              | 1079     | 725              |  |

|                               |                 |       |                                  |
|-------------------------------|-----------------|-------|----------------------------------|
| Gamma Constants MCG-D.K 469   |                 |       | Last Edited on 07-OCT-2013,21:36 |
| Gamma Calibrator Number       | GRC38           |       |                                  |
| Mud Density                   | 1.11            | gm/cc |                                  |
| Caliper Source for Processing | Density Caliper |       |                                  |
| Tool Position                 | Eccentred       |       |                                  |
| Concentration of KCl          |                 | kppm  |                                  |

|   |                       |                      |   |
|---|-----------------------|----------------------|---|
| K Mud Type  |                       | Chloride             |   |
| K Mud Concentration                                 |                       | 0.00                 | %   |
| High Resolution Temperature Calibration MCG-D.K 469 |                       |                      | Field Calibration on 18-AUG-2013,02:35  |
|   | Measured              | Calibrated(Deg F)    |   |
| Lower   | 50.00                 | 50.00                |   |
| Upper   | 100.00                | 100.00               |   |
| High Resolution Temperature Constants MCG-D.K 469   |                       |                      | Last Edited on 18-AUG-2013,02:35  |
| Pre-filter Length                                   |                       | 11                   |   |
| Caliper Calibration MPD-B 64                        |                       |                      | Base Calibration on 02-OCT-2013 15:52<br>Field Calibration on 02-OCT-2013 15:54 |
| Base Calibration                                    |                       |                      |   |
| Reading No  | Measured              | Calibrator Size (in) |   |
| 1   | 16381                 | 3.99                 |   |
| 2   | 25151                 | 5.98                 |   |
| 3   | 33629                 | 7.97                 |   |
| 4   | 41918                 | 9.86                 |   |
| 5   | 51268                 | 11.92                |   |
| 6   | N/A                   | N/A                  |   |
| Field Calibration                                   |                       |                      |   |
|   | Measured Caliper (in) | Actual Caliper (in)  |   |
|   | 5.96                  | 5.98                 |   |
| Photo Density Calibration MPD-B 64                  |                       |                      | Base Calibration on 02-OCT-2013 16:14<br>Field Check on 02-OCT-2013 16:22       |
| Density Calibration                                 |                       |                      |   |
| Base Calibration                                    |                       |                      |   |
|   | Measured              | Calibrated (sdu)     |   |
|   | Near                  | Far                  |   |
| Reference 1   | 60377                 | 33815                | 59556 30836   |
| Reference 2   | 25205                 | 2910                 | 24941 2541  |
| Field Check at Base                                 |                       |                      |   |
|   | 1160.4                | 1343.0               |   |
| Field Check   |                       |                      |   |
|   | 1163.9                | 1347.8               |   |
| PE Calibration                                      |                       |                      |   |
| Base Calibration                                    |                       |                      |   |
|   | WS                    | Measured             | Calibrated  |
|   |                       | WH                   | Ratio   |
| Background  | 209                   | 1031                 |   |
| Reference 1   | 22936                 | 60176                | 0.384 0.371   |
| Reference 2   | 6851                  | 25064                | 0.276 0.272   |
| Field Check at Base                                 |                       |                      |   |
|   | 209.0                 | 1030.6               |   |
| Field Check   |                       |                      |   |
|   | 209.9                 | 1032.6               |   |
| Density Constants MPD-B 64                          |                       |                      | Last Edited on 07-OCT-2013,21:36  |
| Density Source Id                                   |                       | 18235B               |   |
| Nylon Calibrator Number                             |                       | DNCE695              |   |
| Aluminium Calibrator Number                         |                       | DACD698              |   |
| Density Shoe Profile                                |                       | 8 inch               |   |
| Caliper Source for Processing                       |                       | Density Caliper      |   |
| PE Correction to Density                            |                       | Not Applied          |   |
| Mud Density   |                       | 1.11                 | 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 (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 |
| 0.00 | 0.00 |

### DOWNHOLE EQUIPMENT

C:\Minimus 13.05.9583\Logs\Grand Mesa K-M #1-2 Second Run\K-M #1-2 First Run data\Grand Mesa K-M #1-2\_002.dta

3/8" Triple Cone Cable Head (MCB C A)  
MCB-C.A 5   LG: 1.58 ft   WT: 15.4 lb   OD: 2.24 in

Compact Comms Gamma  
MCG-D.K 469   LG: 8.70 ft   WT: 63.9 lb   OD: 2.24 in

Compact Micro-log  
MML-A 3   LG: 7.97 ft   WT: 81.6 lb   OD: 2.24 in

Compact Neutron  
MDN-A.B 66   LG: 5.04 ft   WT: 50.7 lb   OD: 2.24 in

Compact Density/Caliper  
MPD-B 64   LG: 9.59 ft   WT: 90.4 lb   OD: 2.45 in

Compact Focussed Electric  
MFE-B.J 353   LG: 6.05 ft   WT: 48.5 lb   OD: 2.24 in

Compact Induction  
MAI-A.A 167   LG: 10.81 ft   WT: 48.5 lb   OD: 2.24 in

Total

Length: 49.73 ft

Weight: 399.0 lb

42.87 ft

39.96 ft

33.24 ft

33.24 ft

34.24 ft

28.45 ft

21.21 ft

21.21 ft

21.21 ft

19.28 ft

19.28 ft

19.28 ft

19.28 ft

13.72 ft

3.34 ft

3.34 ft

3.34 ft

0.23 ft

Tool Zero

-0.13 ft

GRGC - Gamma Ray

CGXT - MCG External Temperature

MINV - Micro-inverse

MNRL - Micro-normal

MLTC - MML Caliper

NPRL - Limestone Neutron Por.

AVOL - Annular volume

HVOL - Hole Volume

CLDC - Density Caliper

DEN - Compensated Density

DCOR - Density Correction

DPRL - Limestone Density Por.

DPDF - PF

FEFE - Shallow FE

R400 - Array Ind. One Res 40

R140 - Array ind. One Res 40

R600 - Array Ind. One Res 60

SPCG - Spontaneous Potential

(0.13ft from bottom)

SMTU - DST Uphole Tension

All measurements relative to tool zero.

### DOWNHOLE EQUIPMENT

C:\Minimus 13.05.9583\Logs\Grand Mesa K-M #1-2 Second Run\K-M #1-2 First Ru...\Grand Mesa K-M #1-2 2nd run maimfe\_003.dta

3/8" Triple Cone Cable Head (MCB F B)  
MCB-F.B 9   LG: 1.58 ft   WT: 15.4 lb   OD: 2.24 in

Compact Comms Gamma  
MCG-D.K 443   LG: 8.70 ft   WT: 63.9 lb   OD: 2.24 in

Compact Focussed Electric  
MFE-A.A 55   LG: 6.05 ft   WT: 48.5 lb   OD: 2.24 in

20.28 ft

17.37 ft

13.72 ft

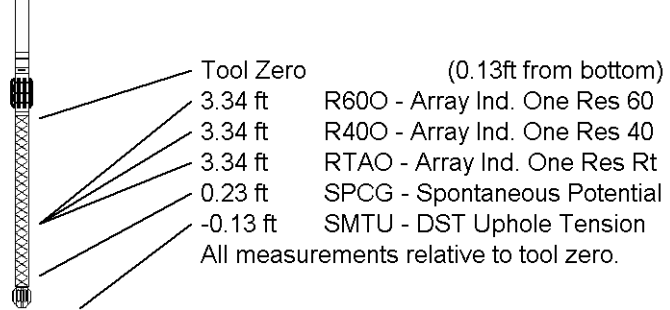
GRGC - Gamma Ray

CGXT - MCG External Temperature

FEFE - Shallow FE

Compact Induction  
MAI-A.A 178 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 27.14 ft Weight: 176.4 lb



COMPANY GRAND MESA OPERATING COMPANY  
WELL K-M #1-2  
FIELD WILDCAT  
PROVINCE/COUNTY WASHINGTON  
COUNTRY/STATE UNITED STATES / COLORADO

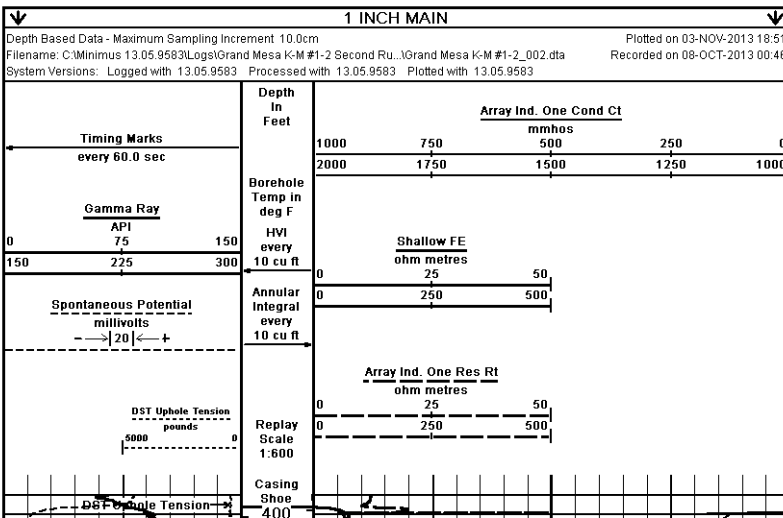
|                         |         |      |               |         |      |
|-------------------------|---------|------|---------------|---------|------|
| Elevation Kelly Bushing | 4682.00 | feet | First Reading | 4479.00 | feet |
| Elevation Drill Floor   | 4680.00 | feet | Depth Driller | 4485.00 | feet |
| Elevation Ground Level  | 4672.00 | feet | Depth Logger  | 4482.00 | feet |

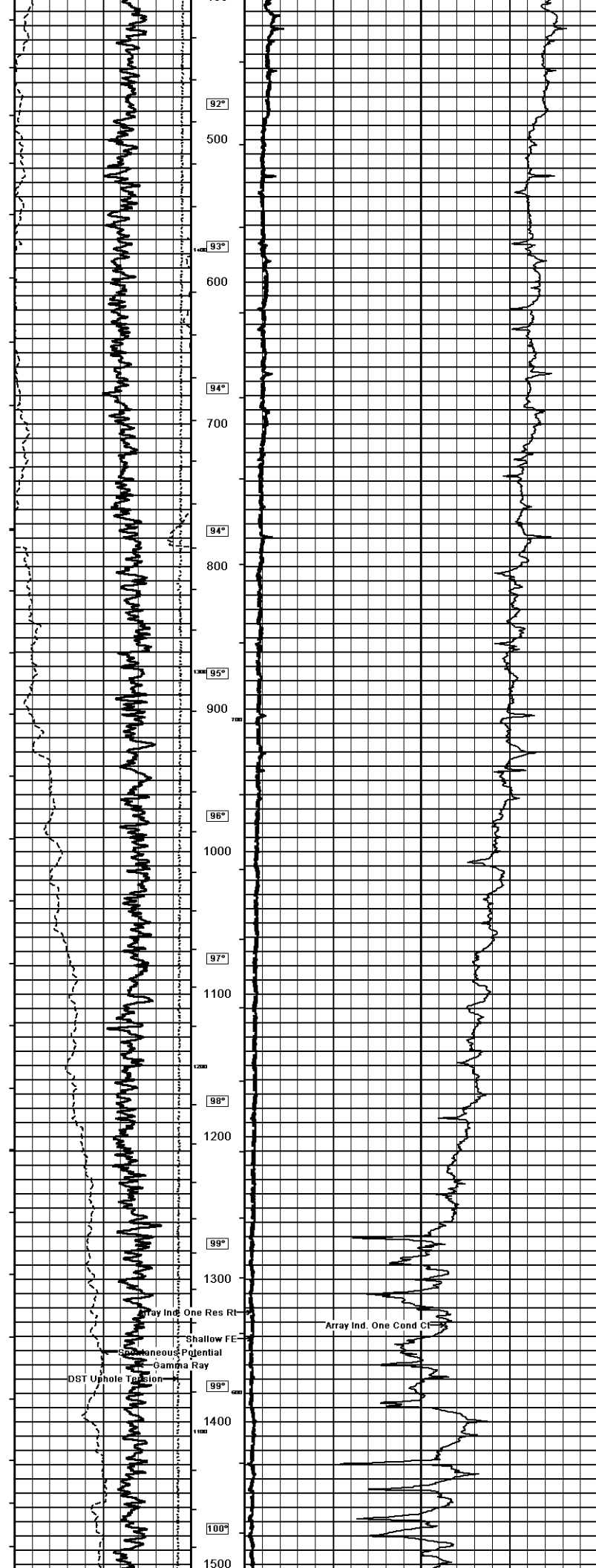


## ARRAY INDUCTION SHALLOW FOCUSED ELECTRIC LOG

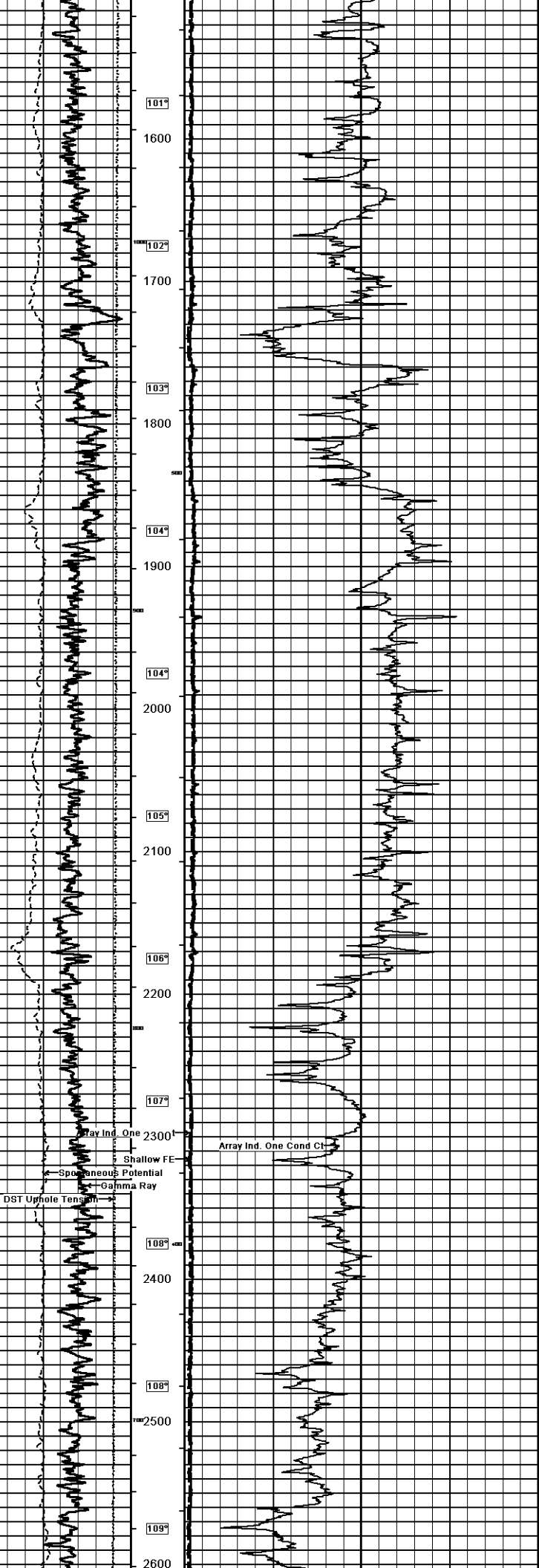
# Weatherford®

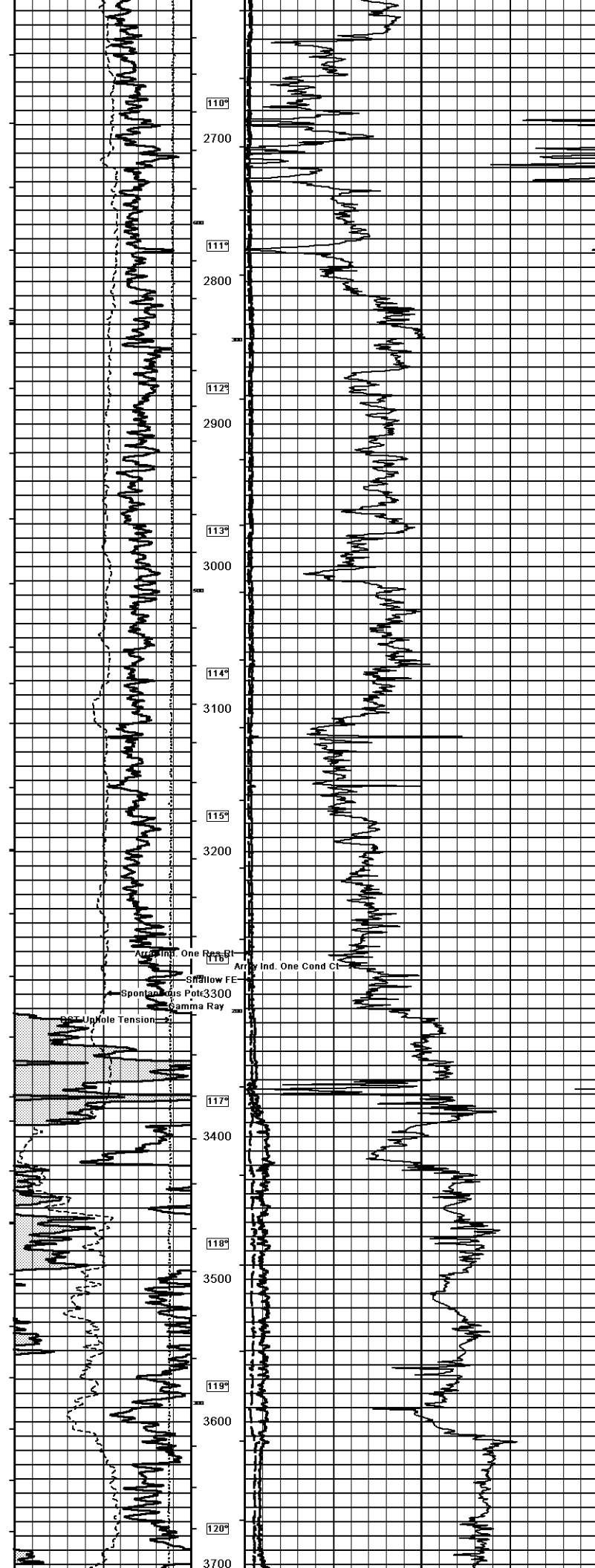
| Weatherford            |                              | ARRAY INDUCTION<br>SHALLOW FOCUSED<br>ELECTRIC LOG |                       |
|------------------------|------------------------------|--|-----------------------|
| COMPANY                | GRAND MESA OPERATING COMPANY | WELL   | K-M #1-2              |
| FIELD                  | WILDCAT                      | PROVINCE/COUNTY                                    | WASHINGTON            |
| COUNTRY/STATE          | UNITED STATES / COLORADO     | LOCATION   | 2384' FNL & 2540' FNL |
| SEC                    | 2                            | TYPE   | 152M                  |
| DATE                   | 05-12-11033                  | DATE SERVICES                                      | 02-NOV-2013           |
| PERMIT NUMBER          | 05-12-11033                  | PERMIT   | MMS                   |
| LOG MEASURED FROM      | KB @ 10 FEET                 | LOG MEASURED FROM                                  | KB @ 10 FEET          |
| DATE                   | 07-OCT-2013                  | DATE   | 02-NOV-2013           |
| RUN NUMBER             | ONE                          | RUN NUMBER   | TWO                   |
| SERVICE ORDER          | 3541093                      | SERVICE ORDER                                      | 3541093               |
| DEPTH DRILLER          | 4485.00                      | DEPTH DRILLER                                      | 7720.00               |
| DEPTH LOGGER           | 4482.00                      | DEPTH LOGGER                                       | 7718.00               |
| FIRST READING          | 4479.00                      | FIRST READING                                      | 7715.00               |
| CASING DRILLER         | 396.00                       | CASING DRILLER                                     | 396.00                |
| CASING LOGGER          | 396.00                       | CASING LOGGER                                      | 396.00                |
| BIT SIZE               | 7.880                        | BIT SIZE   | 7.880                 |
| HOLE FLUID TYPE        | CHEMICAL                     | HOLE FLUID TYPE                                    | CHEMICAL              |
| DENSITY/VISCOSITY      | 9.30 lb/USG                  | DENSITY/VISCOSITY                                  | 9.30 lb/USG           |
| PT/FH/LOSS             | 8.50                         | PT/FH/LOSS   | 9.00                  |
| SAMPLE SOURCE          | MUDPIT                       | SAMPLE SOURCE                                      | MUDPIT                |
| RMT @ MEASURED TEMP    | 2.34 @ 75.0                  | RMT @ MEASURED TEMP                                | 2.34 @ 75.0           |
| RMT @ MEASURED TEMP    | 1.87 @ 75.0                  | RMT @ MEASURED TEMP                                | 1.87 @ 75.0           |
| RMT @ MEASURED TEMP    | 2.81 @ 75.0                  | RMT @ MEASURED TEMP                                | 2.81 @ 75.0           |
| SOURCE RMT/RMC         | CALC                         | SOURCE RMT/RMC                                     | CALC                  |
| RMT @ BHT              | 1.34 @ 311.0                 | RMT @ BHT  | 0.93 @ 89.0           |
| TIME SINCE CIRCULATION | 4 HOURS                      | TIME SINCE CIRCULATION                             | 5 HOURS               |
| MAX RECORDED TEMP      | 131.00                       | MAX RECORDED TEMP                                  | 180.00                |
| EQUIPMENT BASE         | 13096                        | EQUIPMENT BASE                                     | 13244                 |
| RECORDED BY            | BOB SCHREIBER                | RECORDED BY  | BOB SCHREIBER         |
| WITNESSED BY           | BOB SCHREIBER                | WITNESSED BY                                       | BOB SCHREIBER         |
| LOG#                   | LB13-202                     | LOG#   | LB13-313              |

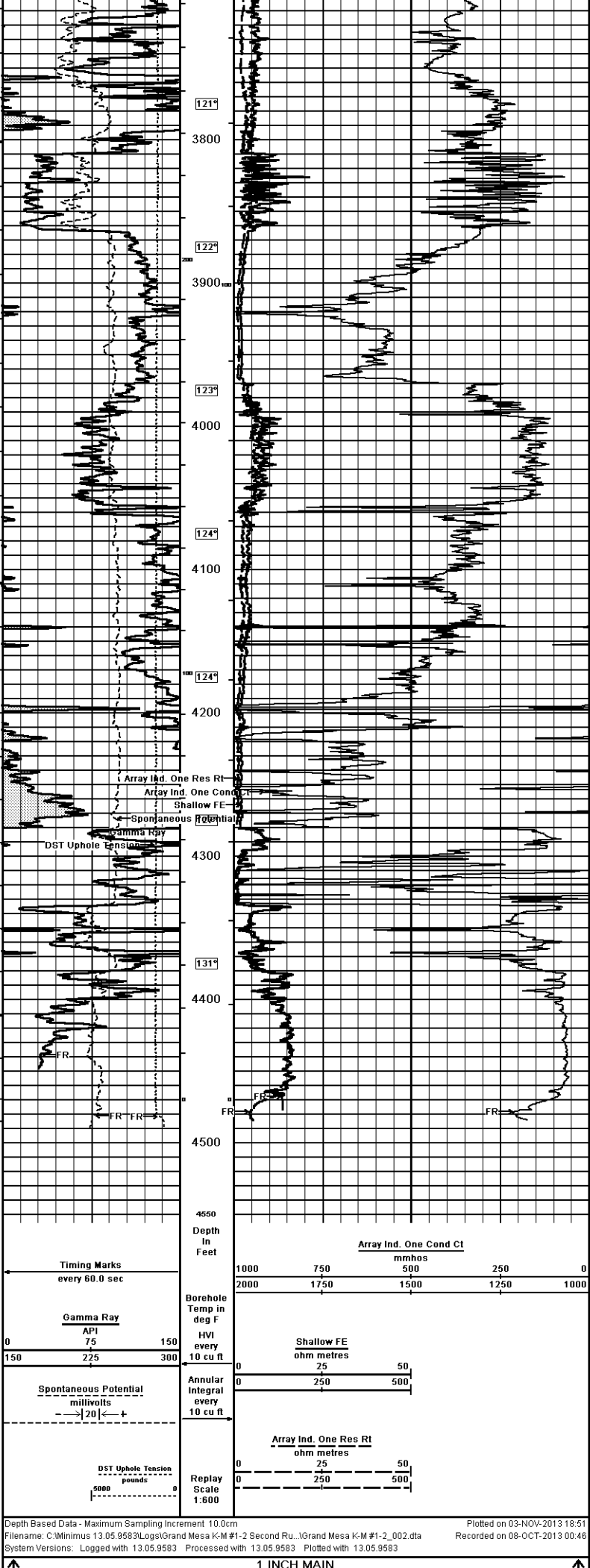


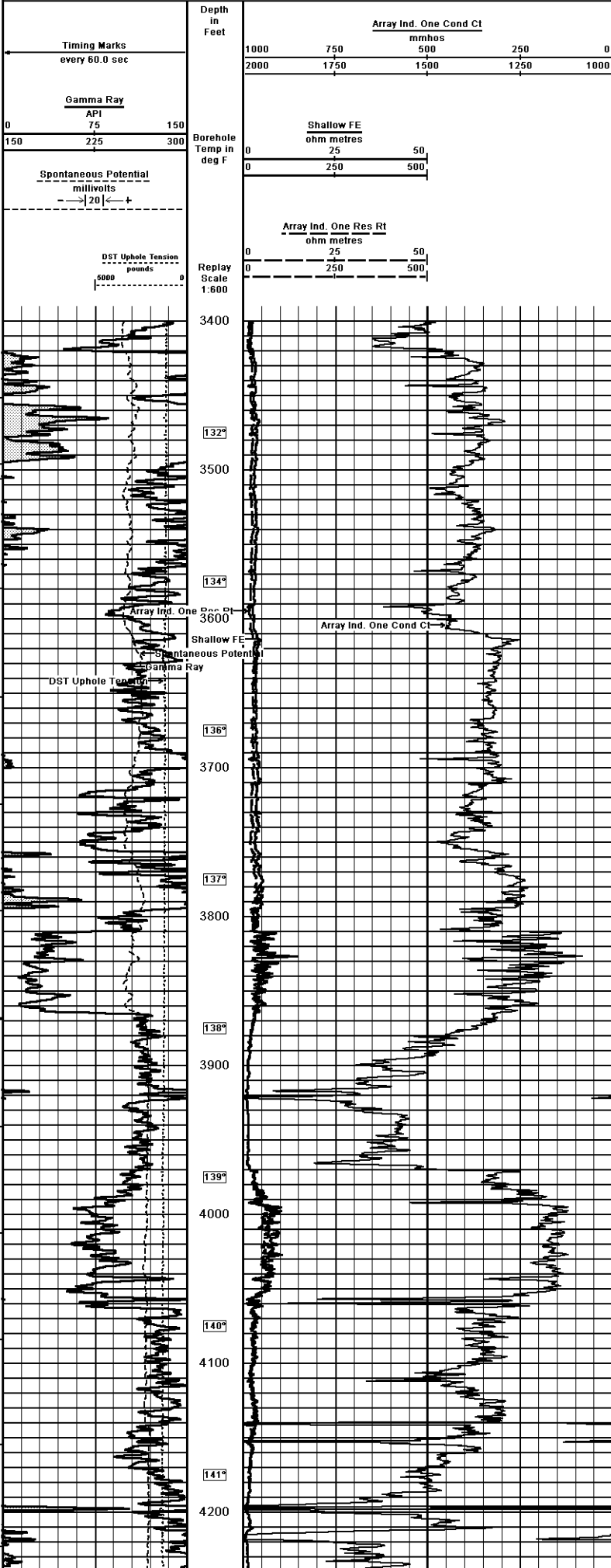


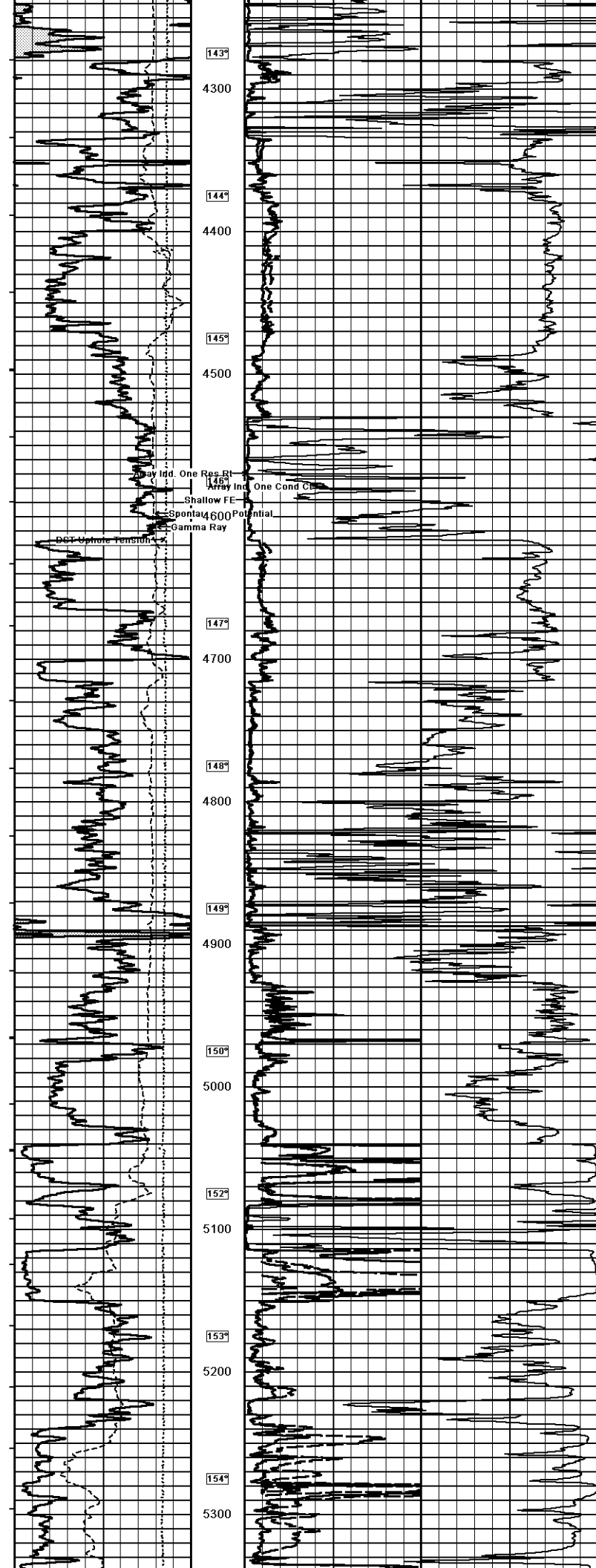


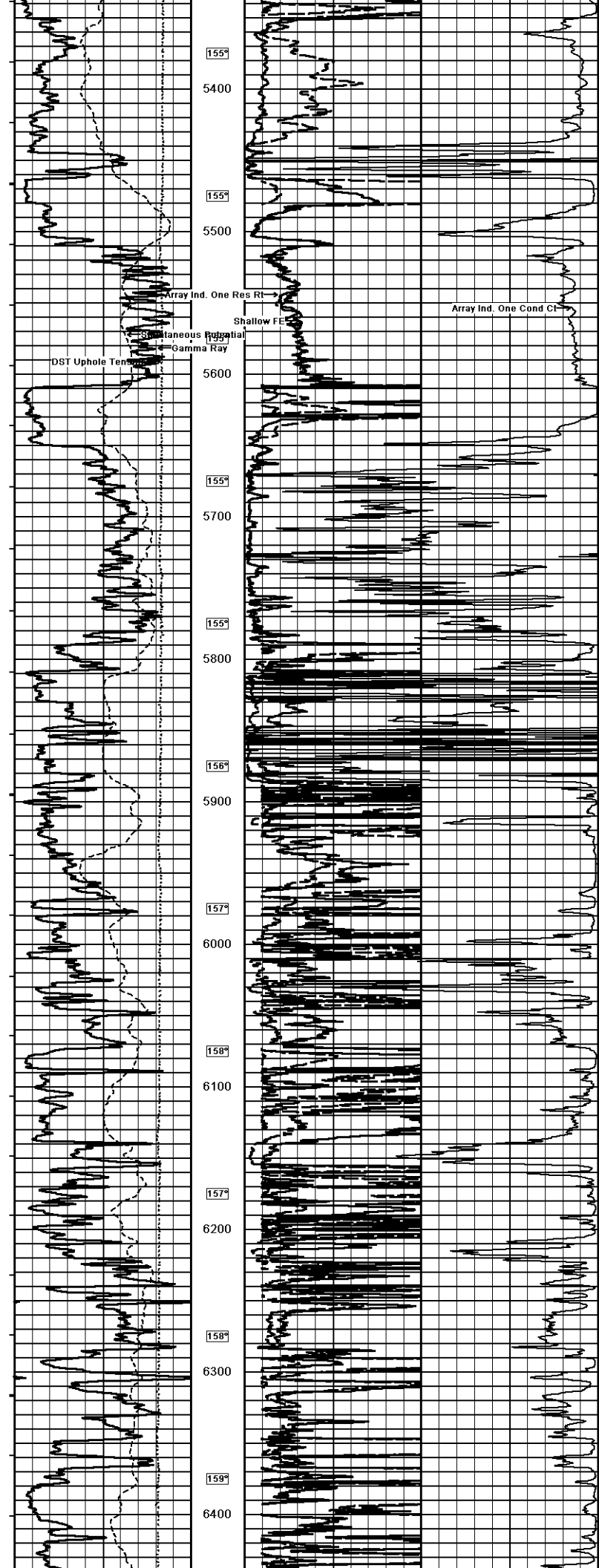


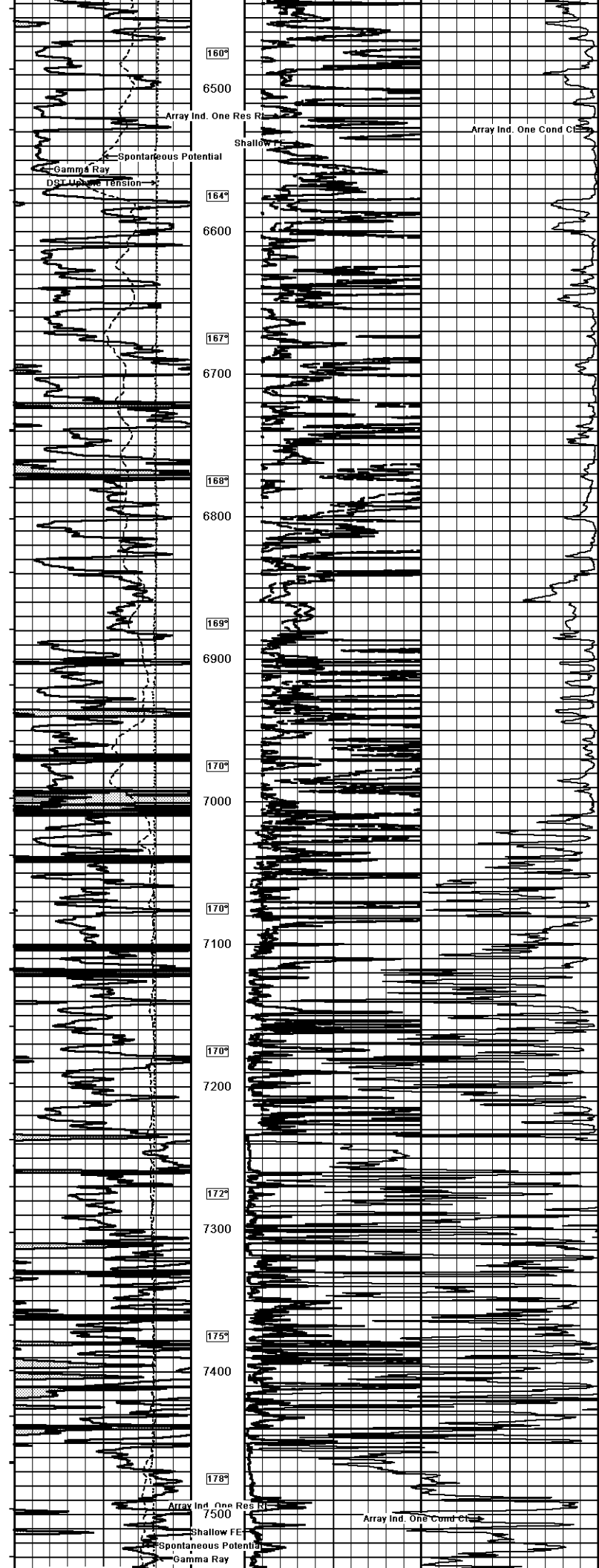


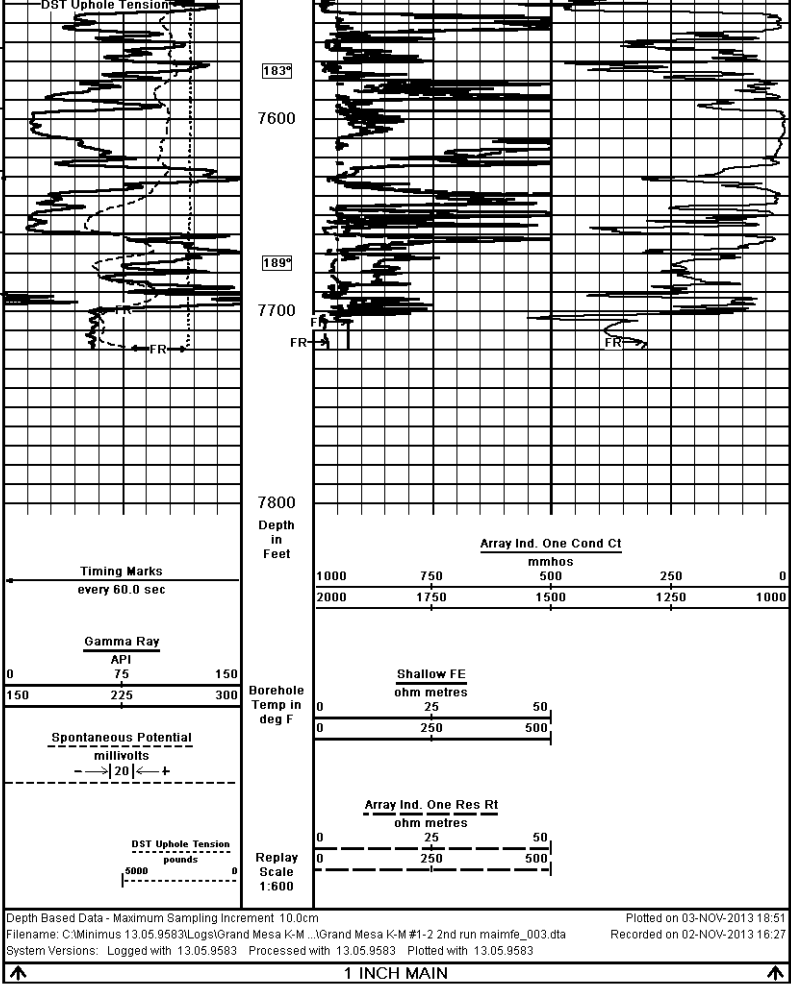













|   |         |                              |               |         |      |
|---|---------|------------------------------|---------------|---------|------|
| COMPANY   |         | GRAND MESA OPERATING COMPANY |               |         |      |
| WELL  |         | K-M #1-2                     |               |         |      |
| FIELD   |         | WILDCAT                      |               |         |      |
| PROVINCE/COUNTY   |         | WASHINGTON                   |               |         |      |
| COUNTRY/STATE   |         | UNITED STATES / COLORADO     |               |         |      |
| Elevation Kelly Bushing   | 4682.00 | feet                         | First Reading | 4479.00 | feet |
| Elevation Drill Floor   | 4680.00 | feet                         | Depth Driller | 4485.00 | feet |
| Elevation Ground Level  | 4672.00 | feet                         | Depth Logger  | 4482.00 | feet |
|  |         | ARRAY INDUCTION              |               |         |      |
| <b>Weatherford</b>  |         | SHALLOW FOCUSED              |               |         |      |
|   |         | ELECTRIC LOG                 |               |         |      |