



**Weatherford**

ARRAY INDUCTION  
SHALLOW FOCUSED  
ELECTRIC LOG

|                                         |             |              |                |                                 |             |         |  |
|-----------------------------------------|-------------|--------------|----------------|---------------------------------|-------------|---------|--|
| COMPANY                                 |             |              |                | MCCOY PETROLEUM CORPORATION     |             |         |  |
| WELL                                    |             |              |                | MTPRC 'A' #1-27                 |             |         |  |
| FIELD                                   |             |              |                | ALFORD SOUTH                    |             |         |  |
| PROVINCE/COUNTY                         |             |              |                | KIOWA                           |             |         |  |
| COUNTRY/STATE                           |             |              |                | U.S.A. / KANSAS                 |             |         |  |
| LOCATION                                |             |              |                | 330' FNL & 330' FEL<br>NE NE NE |             |         |  |
| SEC                                     | TWP         | RGE          | Other Services |                                 | Elevations: |         |  |
| 27                                      | 30S         | 19W          | MPD/MDN        |                                 | KB          | 2224.00 |  |
| API Number                              |             | 15-097-21773 |                | MML                             | DF          | 2222.00 |  |
| Permit Number                           |             |              |                |                                 | GL          | 2213.00 |  |
| Permanent Datum GL, Elevation 2213 feet |             |              |                |                                 |             |         |  |
| Log Measured From KB                    |             |              |                |                                 |             |         |  |
| Drilling Measured From KB @ 11 FEET     |             |              |                |                                 |             |         |  |
| Date                                    | 18-NOV-2013 |              |                |                                 |             |         |  |
| Run Number                              | ONE         |              |                |                                 |             |         |  |
| Service Order                           | 3547647     |              |                |                                 |             |         |  |
| Depth Driller                           | 5200.00     |              |                | feet                            |             |         |  |
| Depth Logger                            | 5198.00     |              |                | feet                            |             |         |  |
| First Reading                           | 5195.00     |              |                | feet                            |             |         |  |
| Last Reading                            | 584.00      |              |                | feet                            |             |         |  |
| Casing Driller                          | 601.00      |              |                | feet                            |             |         |  |
| Casing Logger                           | 604.00      |              |                | feet                            |             |         |  |
| Bit Size                                | 7.875       |              |                | inches                          |             |         |  |
| Hole Fluid Type                         | CHEMICAL    |              |                |                                 |             |         |  |
| Density / Viscosity                     | 9.30 lb/USg |              | 61.00 CP       |                                 |             |         |  |
| PH / Fluid Loss                         | 10.50       |              | 9.20 ml/30Min  |                                 |             |         |  |
| Sample Source                           | FLOWLINE    |              |                |                                 |             |         |  |
| Rm @ Measured Temp                      | 0.74 @ 73.0 |              | ohm-m          |                                 |             |         |  |
| Rmf @ Measured Temp                     | 0.59 @ 73.0 |              | ohm-m          |                                 |             |         |  |
| Rmc @ Measured Temp                     | 0.89 @ 73.0 |              | ohm-m          |                                 |             |         |  |
| Source Rmf / Rmc                        | CALC        |              | CALC           |                                 |             |         |  |
| Rm @ BHT                                | 0.50 @108.0 |              | ohm-m          |                                 |             |         |  |
| Time Since Circulation                  | 4 HOURS     |              |                |                                 |             |         |  |
| Max Recorded Temp                       | 108.00      |              | deg F          |                                 |             |         |  |
| Equipment / Base                        | 13096       |              | LIB            |                                 |             |         |  |
| Recorded By                             | J. LAPOINT  |              |                |                                 | R. HOFFMAN  |         |  |
| Witnessed By                            | E. STONE    |              |                |                                 |             |         |  |
| IOB#                                    | LB13-327    |              |                |                                 |             |         |  |

| BOREHOLE RECORD    |                |                    |                    |                     | Last Edited: 18-NOV-2013 12:05 |
|--------------------|----------------|--------------------|--------------------|---------------------|--------------------------------|
| Bit Size<br>inches |                | Depth From<br>feet |                    | Depth To<br>feet    |                                |
| 7.875              |                | 604.00             |                    | 5198.00             |                                |
| CASING RECORD      |                |                    |                    |                     |                                |
| Type               | Size<br>inches | Depth From<br>feet | Shoe Depth<br>feet | Weight<br>pounds/ft |                                |
| SURFACE            | 8.625          | 0.00               | 604.00             | 24.00               |                                |

| REMARKS                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| - SOFTWARE ISSUE: WLS 13.05.9583.                                                                                                                                 |
| - MCG, MML, MDN, MPD, MFE, MAI RUN IN COMBINATION.<br>- HARDWARE: DUAL BOWSPRING USED ON MDN.<br>0.5 INCH STANDOFF USED ON MFE.<br>0.5 INCH STANDOFF USED ON MAI. |
| - 2.71 G/CC LIMESTONE DENSITY MATRIX USED TO CALCULATE POROSITY.                                                                                                  |
| - BOREHOLE RUGOSITY, TIGHT PULLS, AND WASHOUTS WILL AFFECT DATA QUALITY.                                                                                          |
| - ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST.                                                                                                         |
| - TOTAL HOLE VOLUME FROM TD TO 3900 FEET: 442 CU. FT.                                                                                                             |
| - ANNULAR HOLE VOLUME WITH 5.5 INCH CASING FROM TD TO 3900 FEET: 229 CU. FT.                                                                                      |
| - SERVICE ORDER # 3547647                                                                                                                                         |

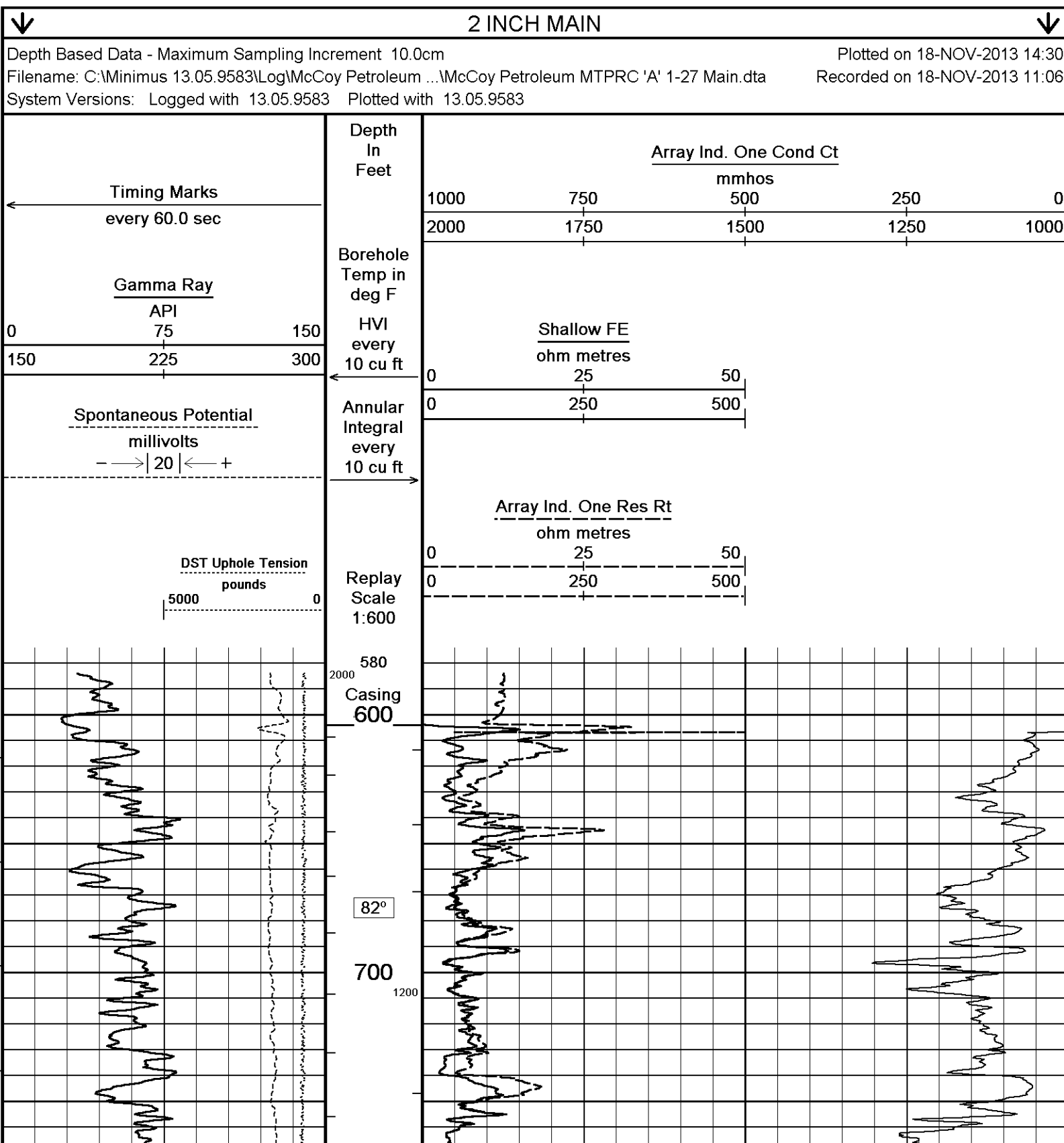
SERVICE ORDER # 0317017

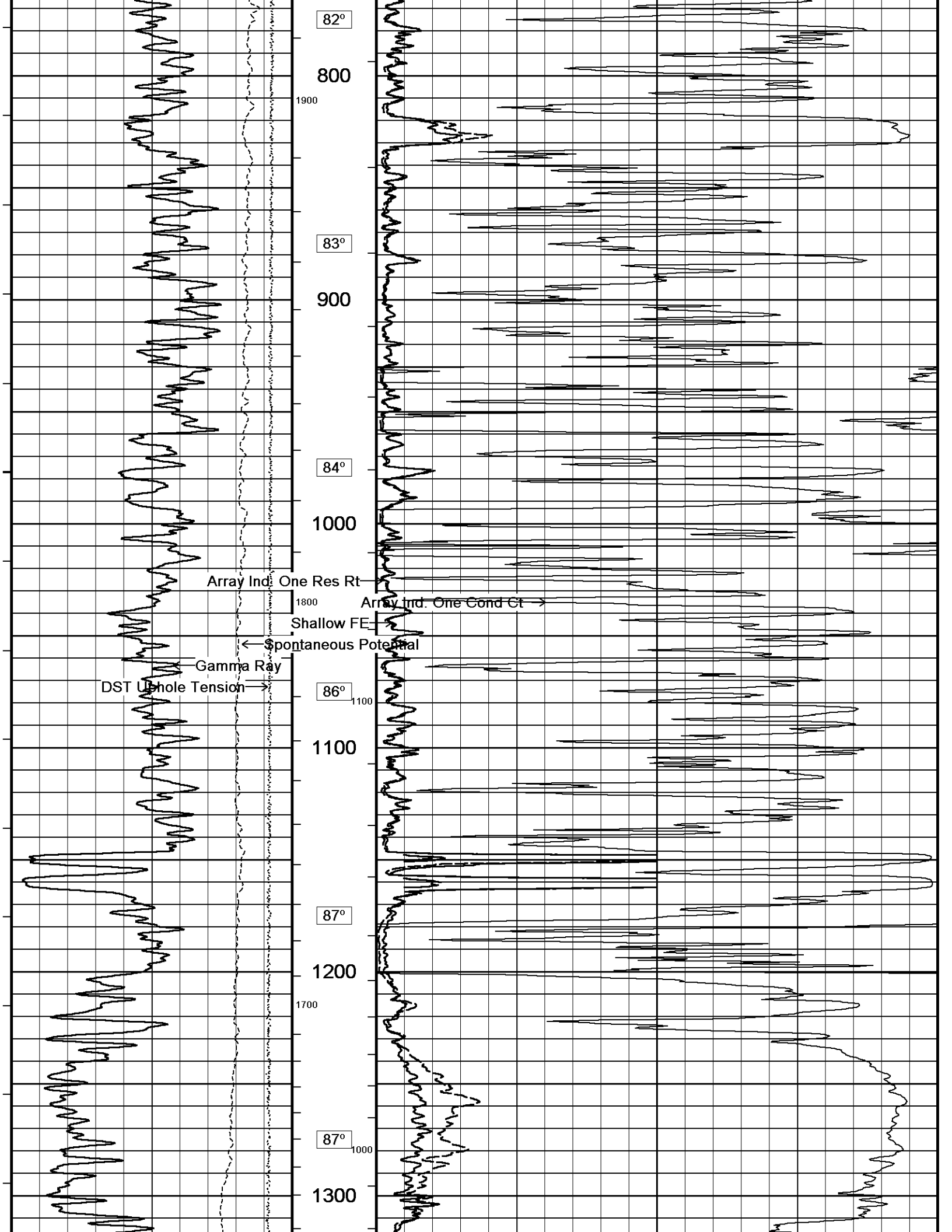
- RIG: STERLING RIG 2.

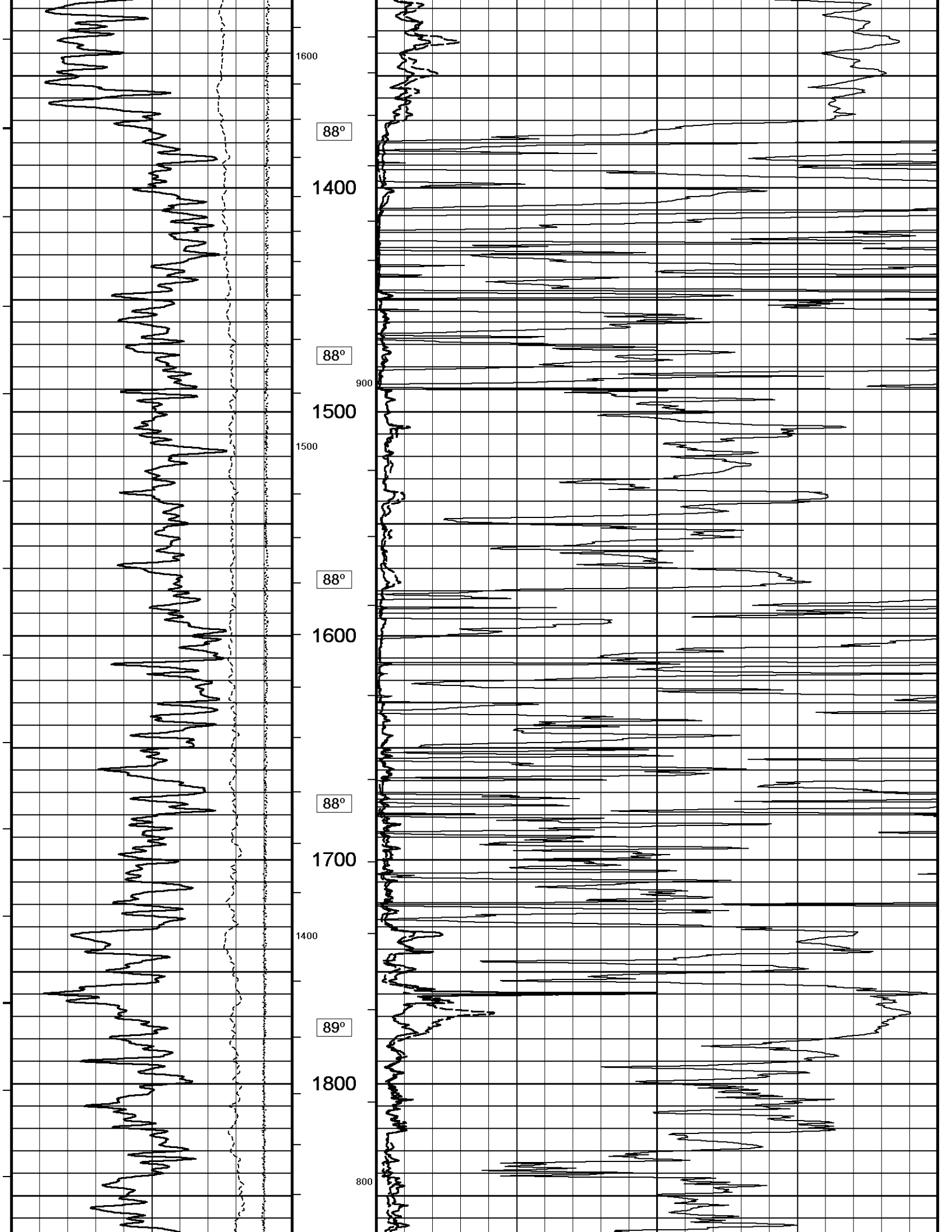
- ENGINEER: J. LAPOINT AND R. HOFFMAN

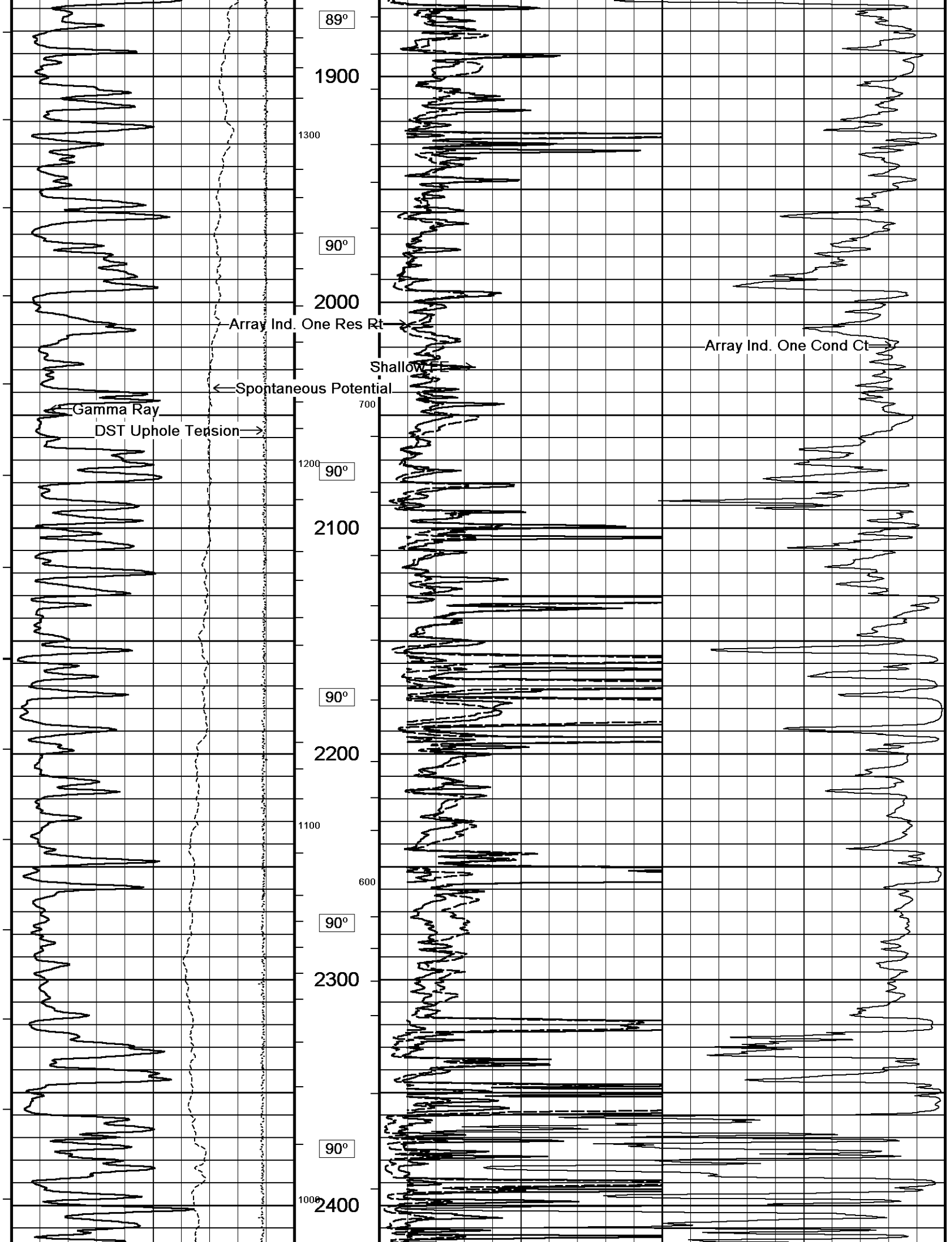
- OPERATOR(S): K. RINEHART AND D. CANADAY.

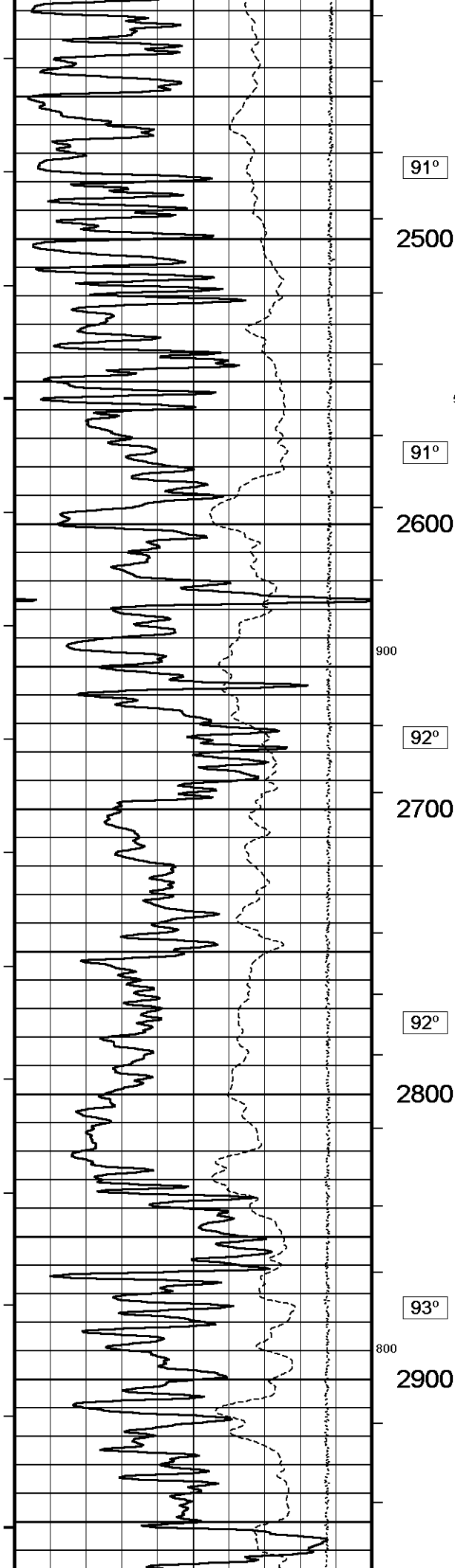
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs,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











91°

2500

500

91°

2600

900

92°

2700

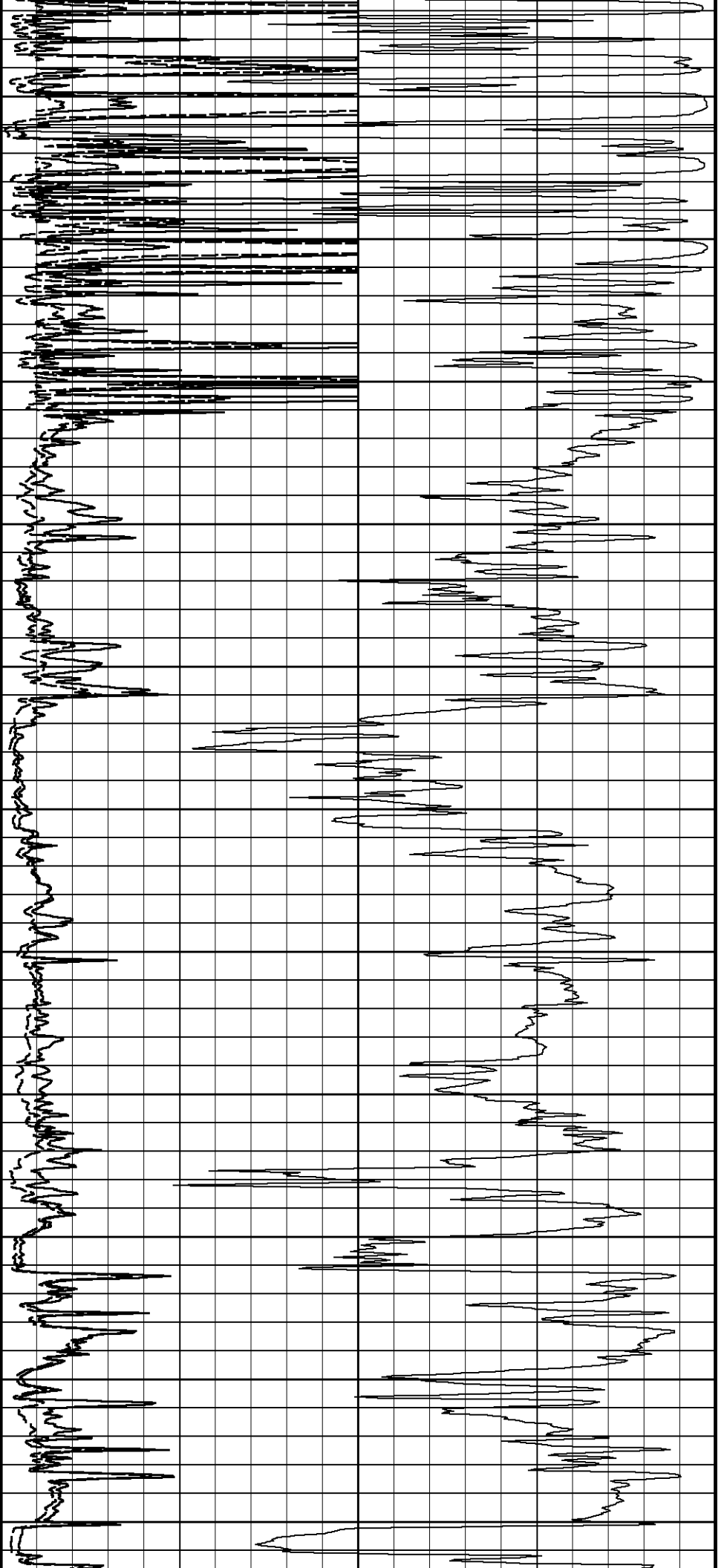
92°

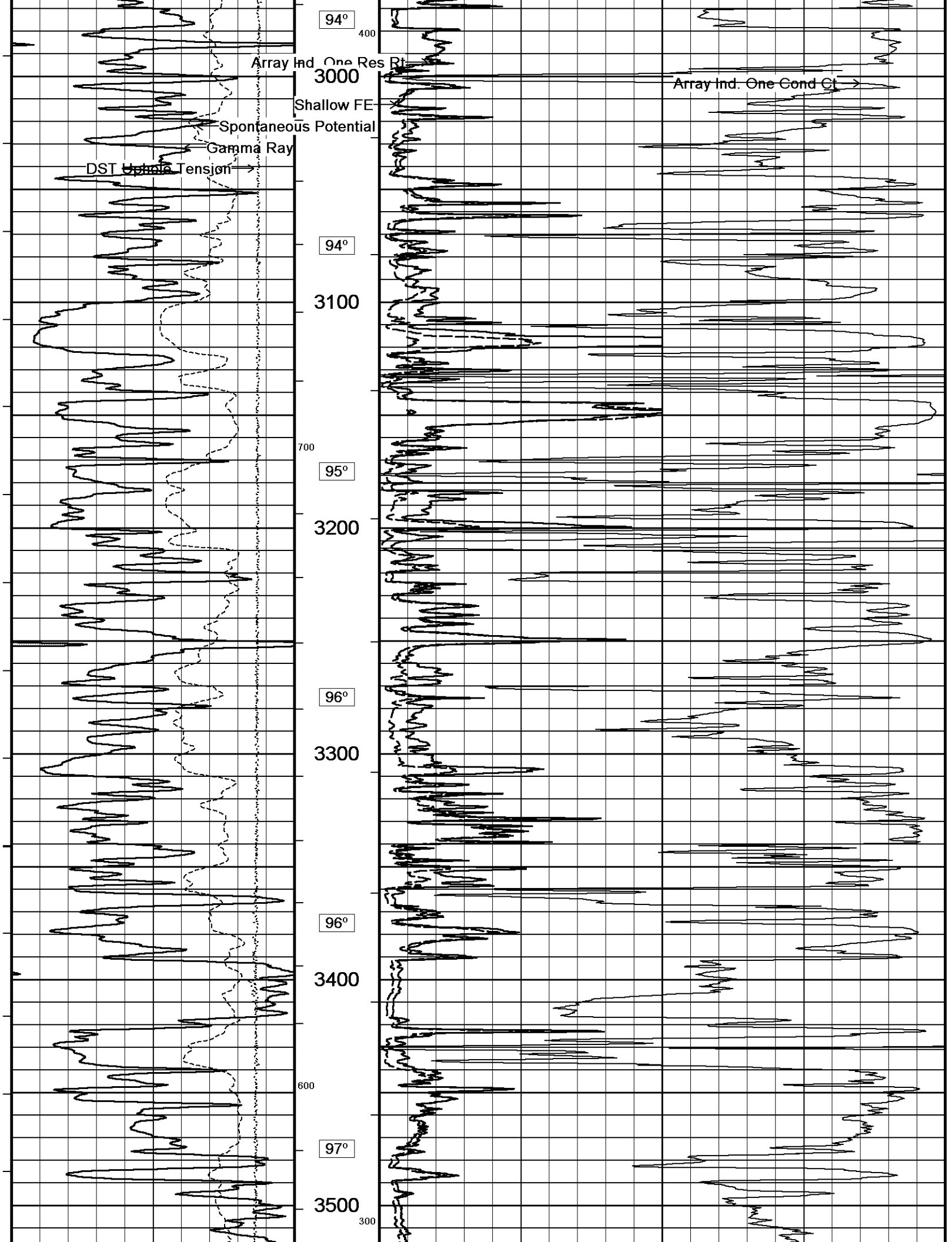
2800

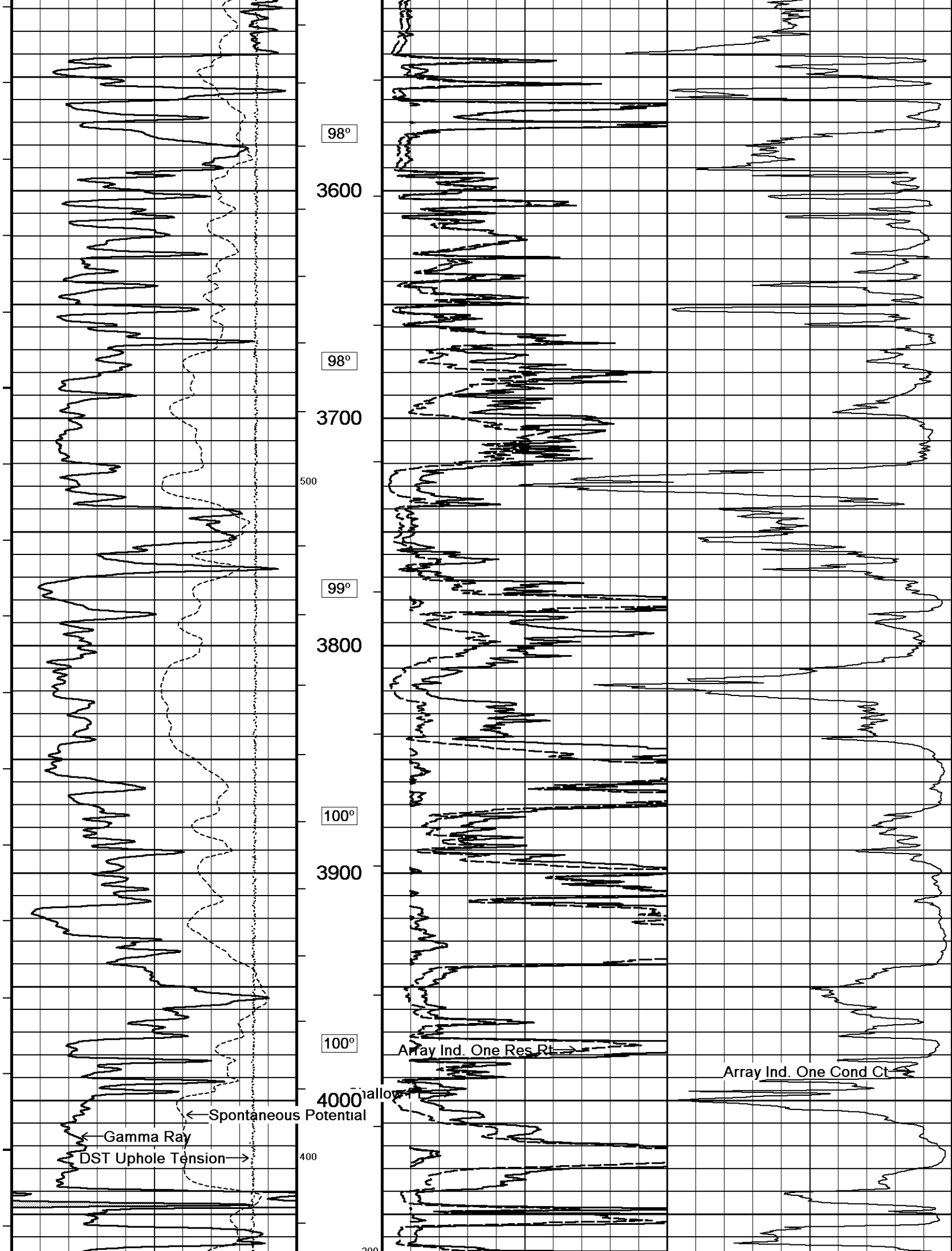
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800

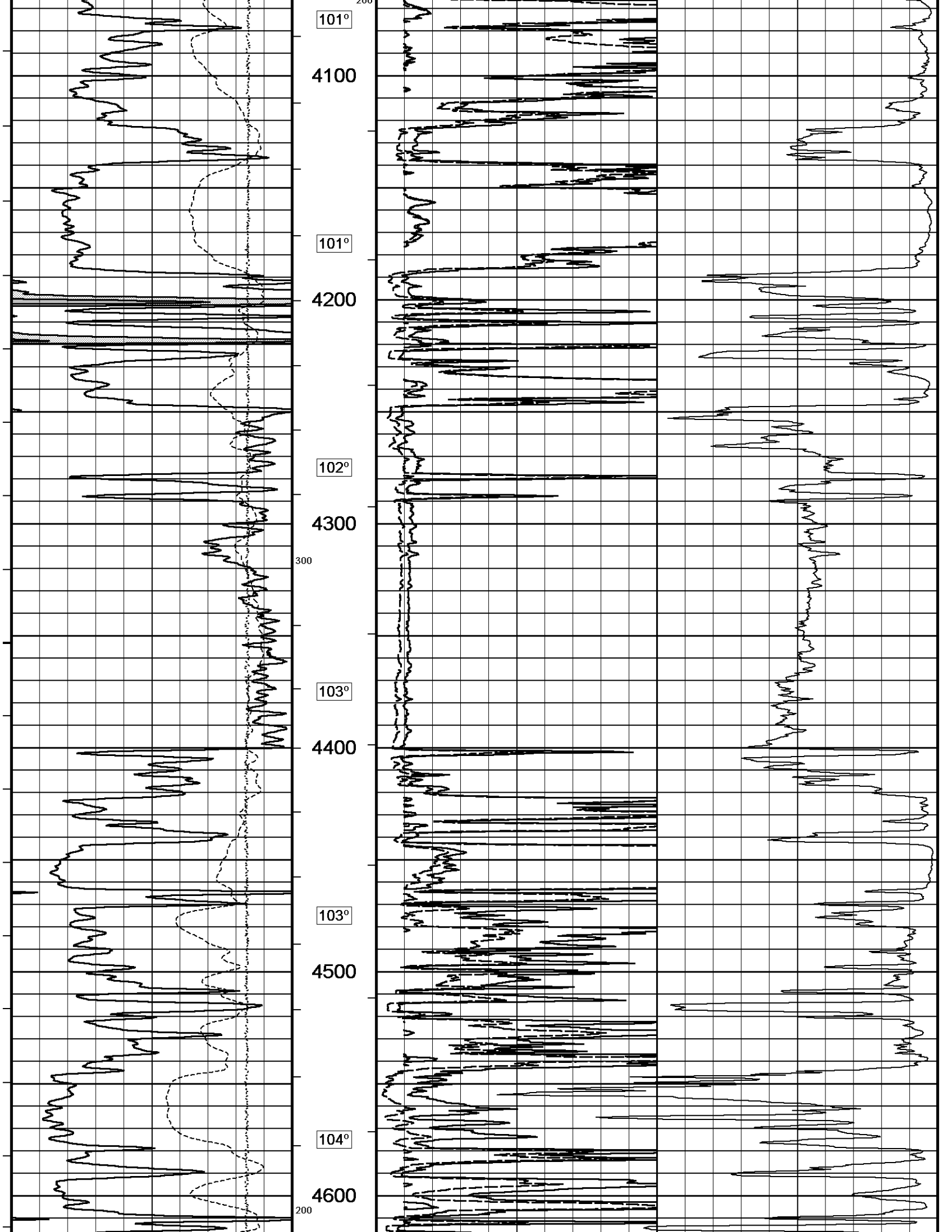
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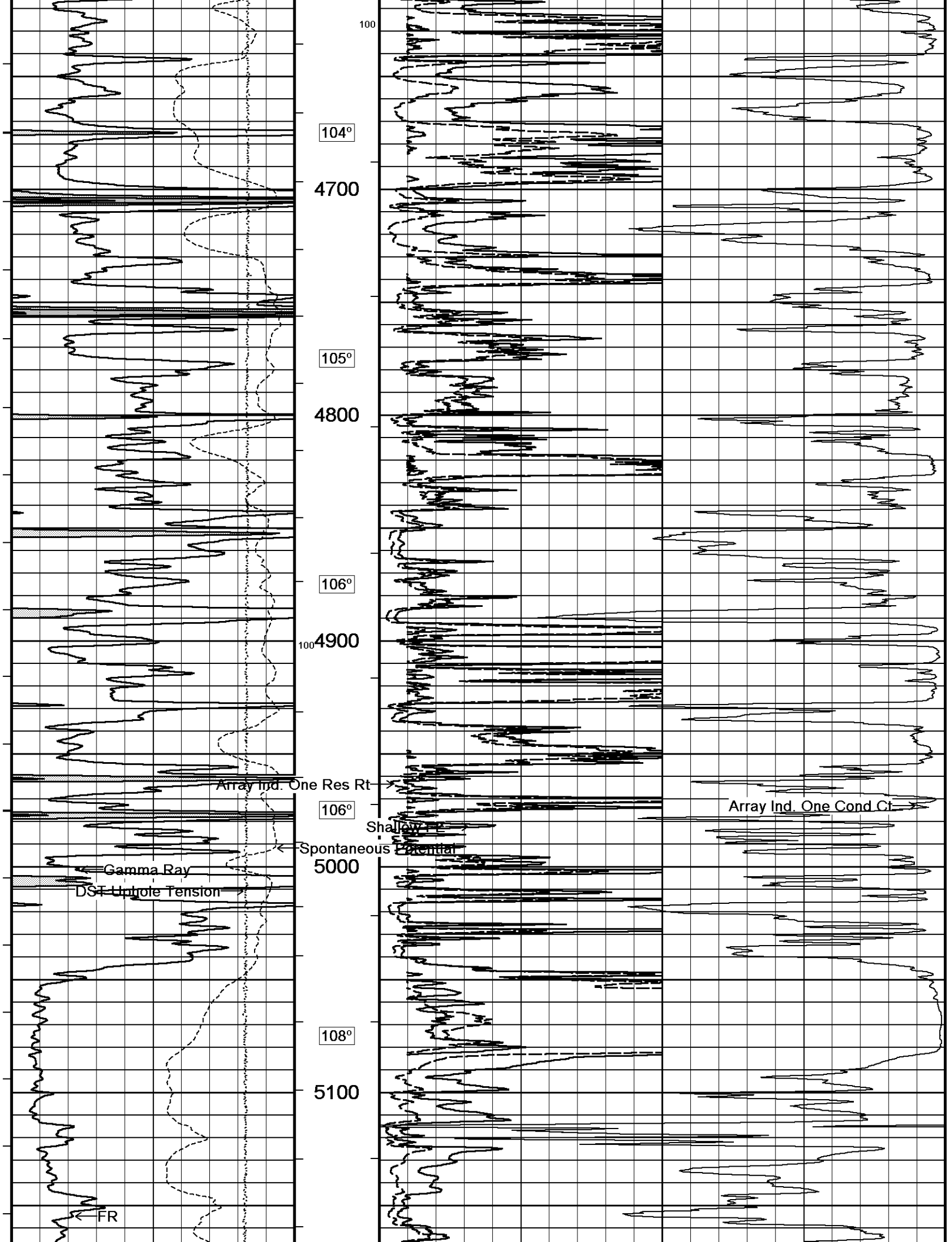


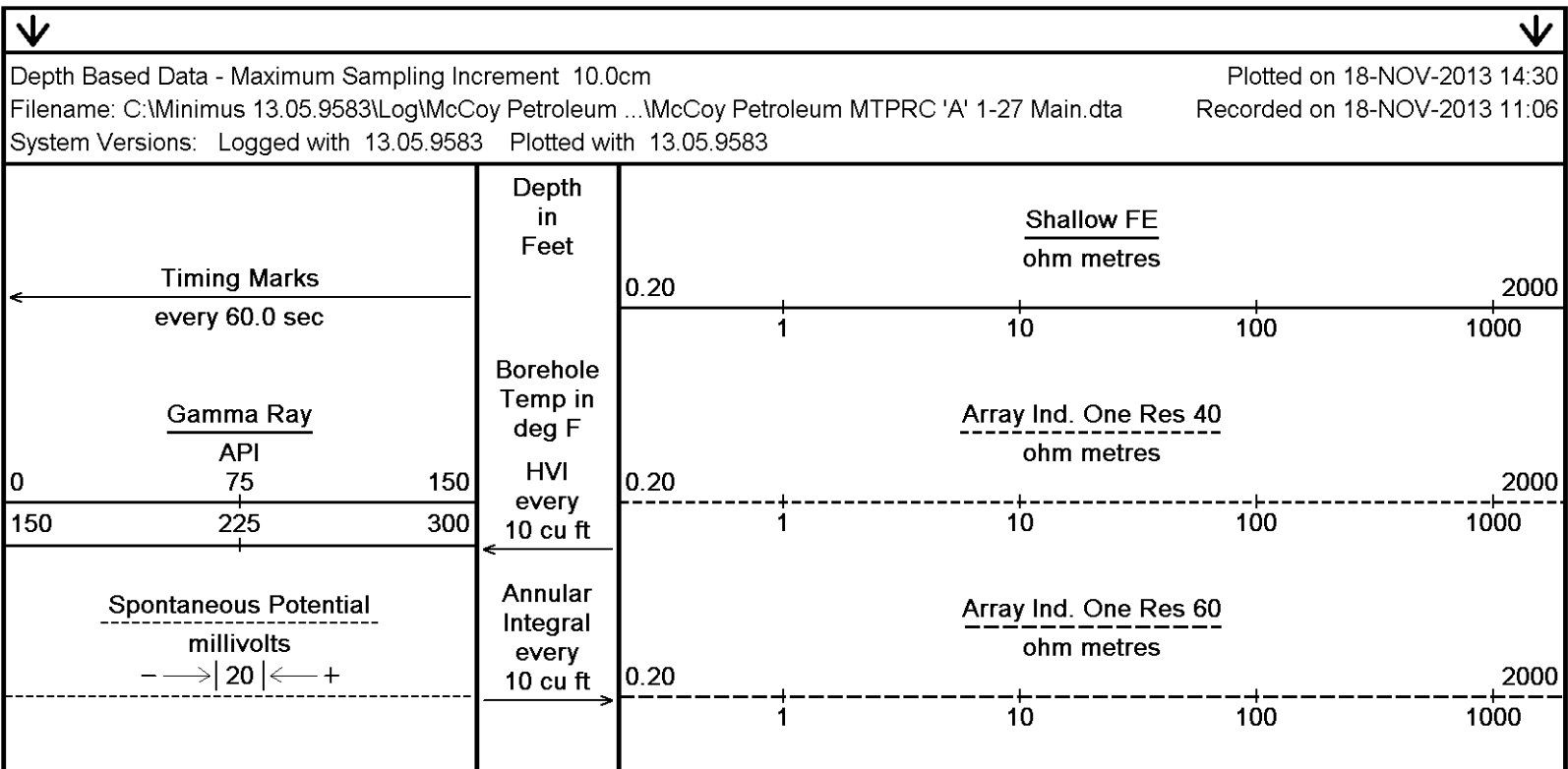
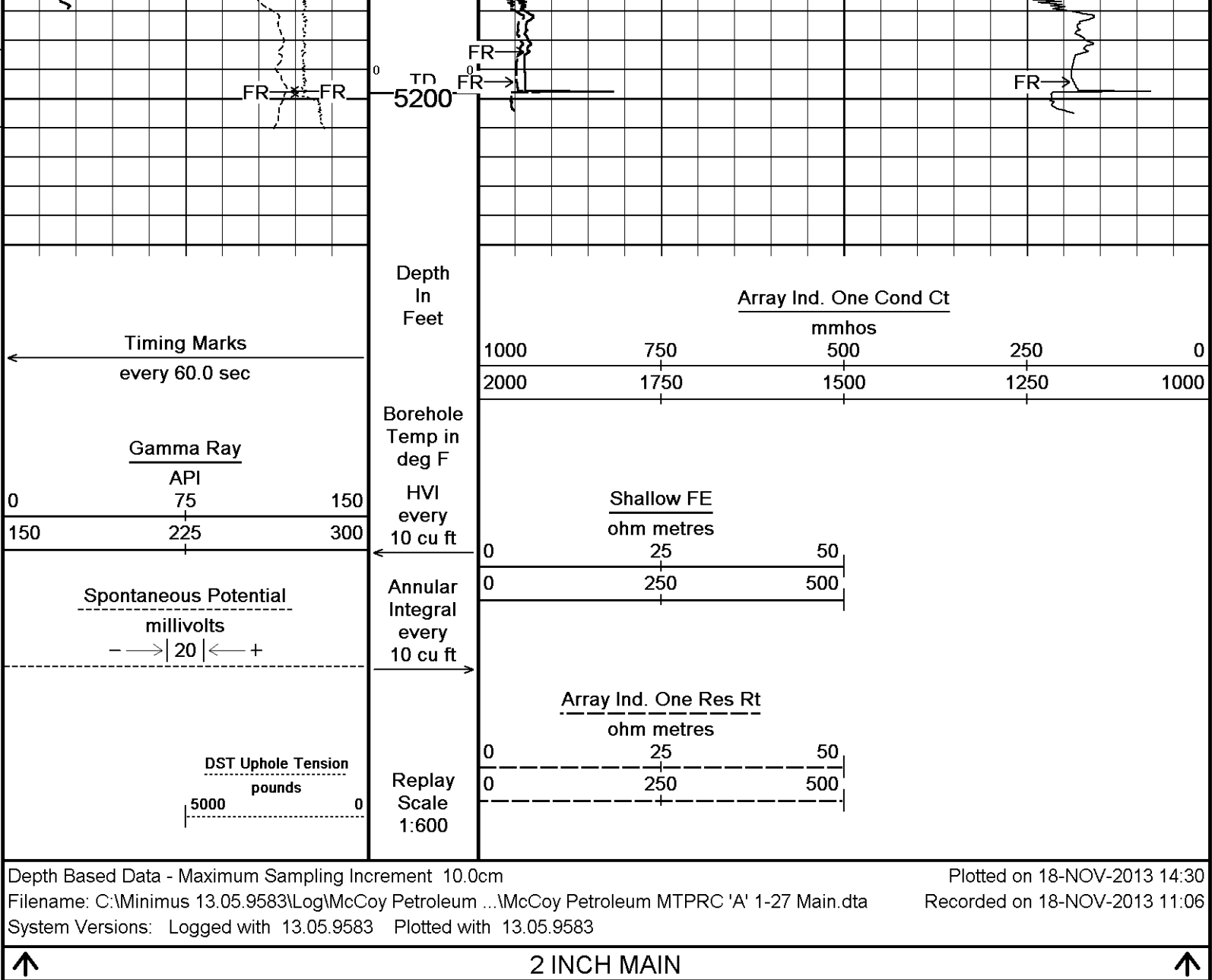


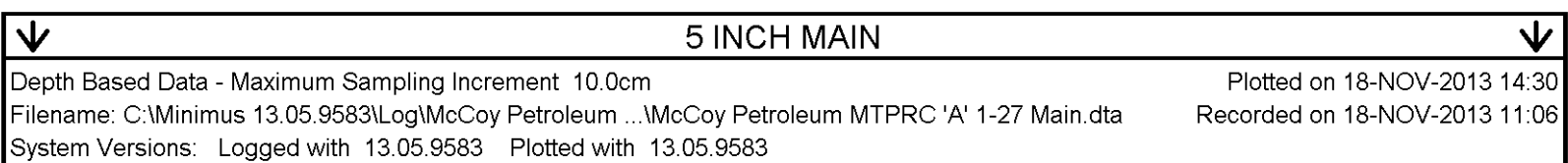
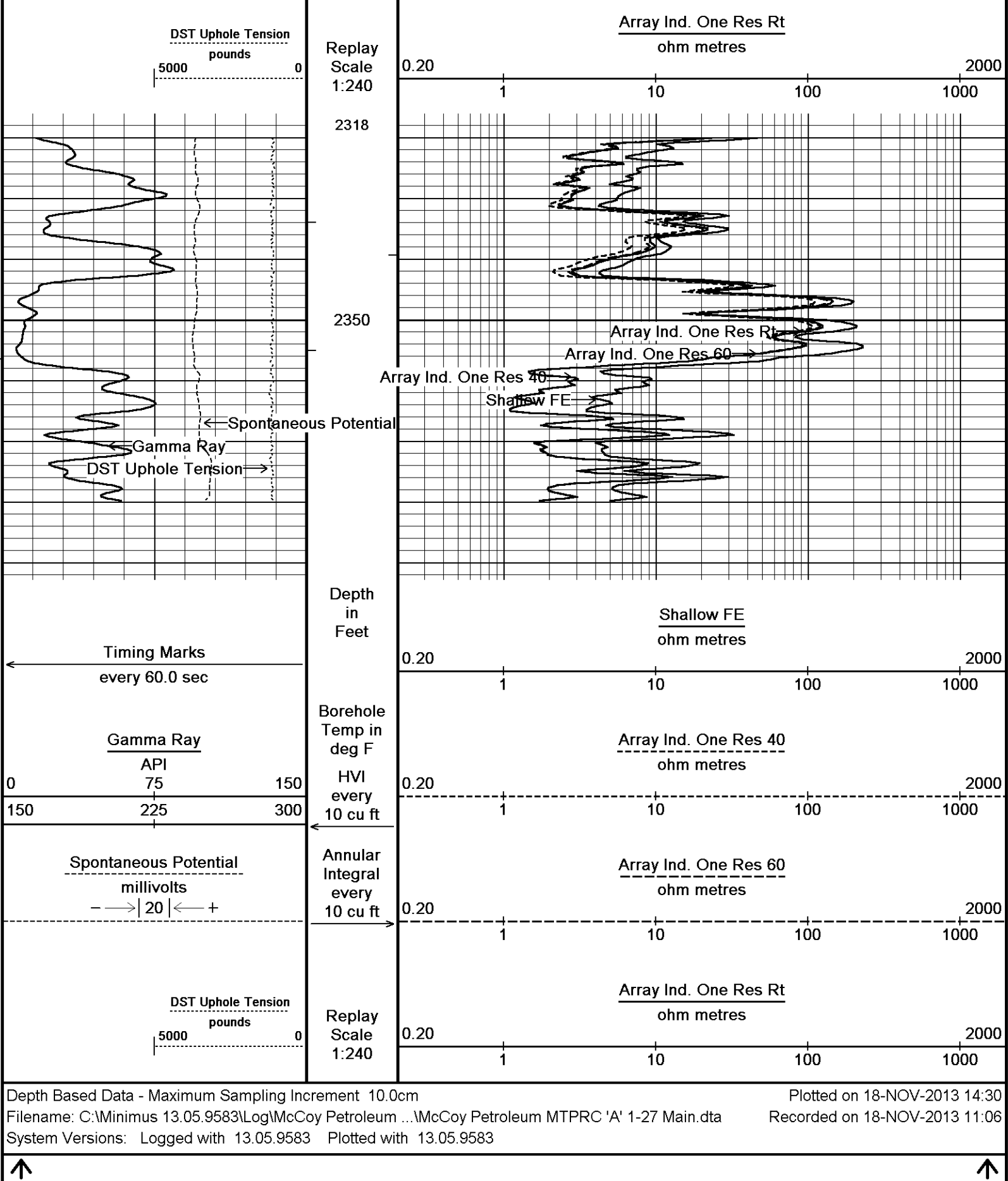


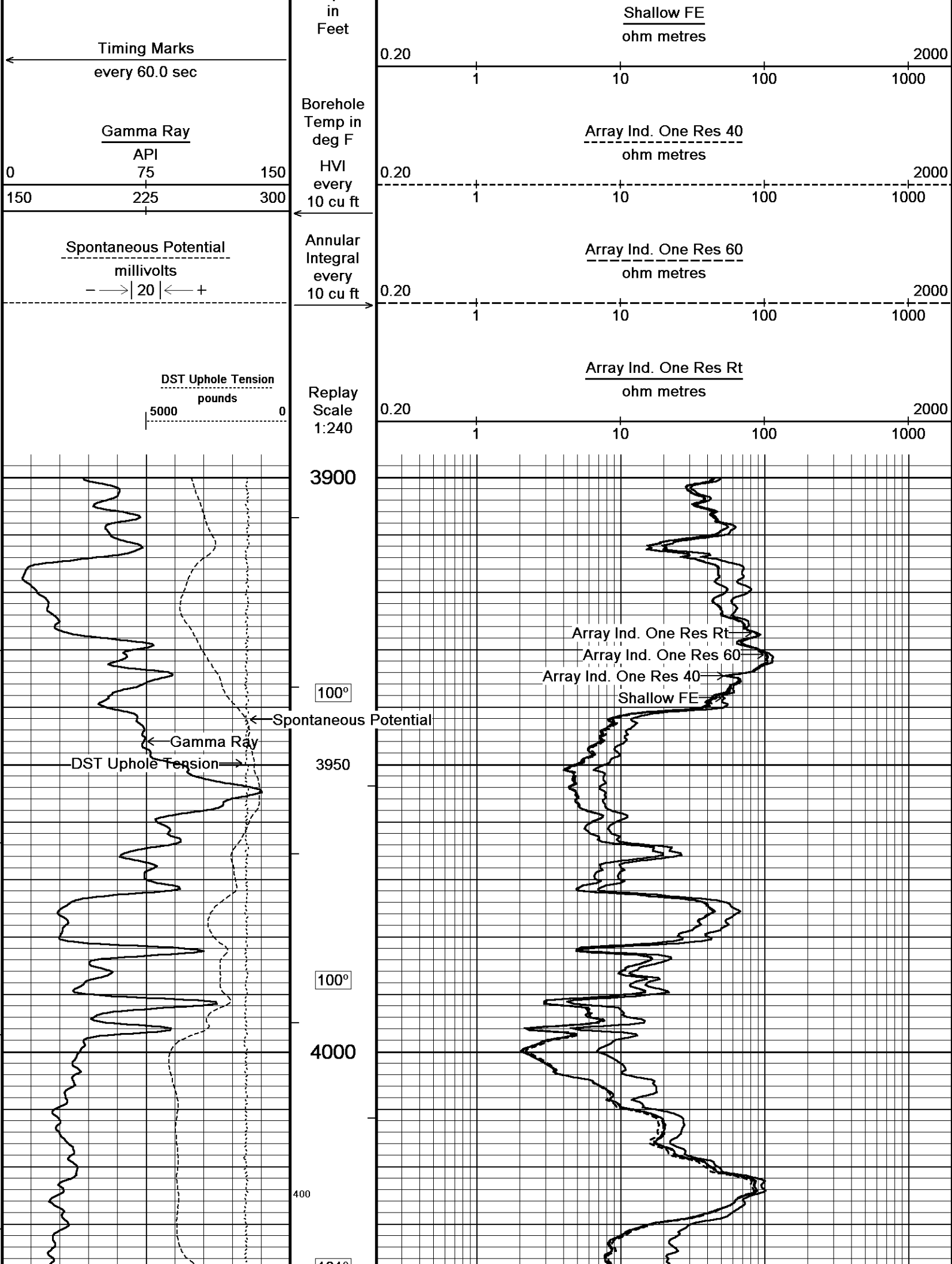


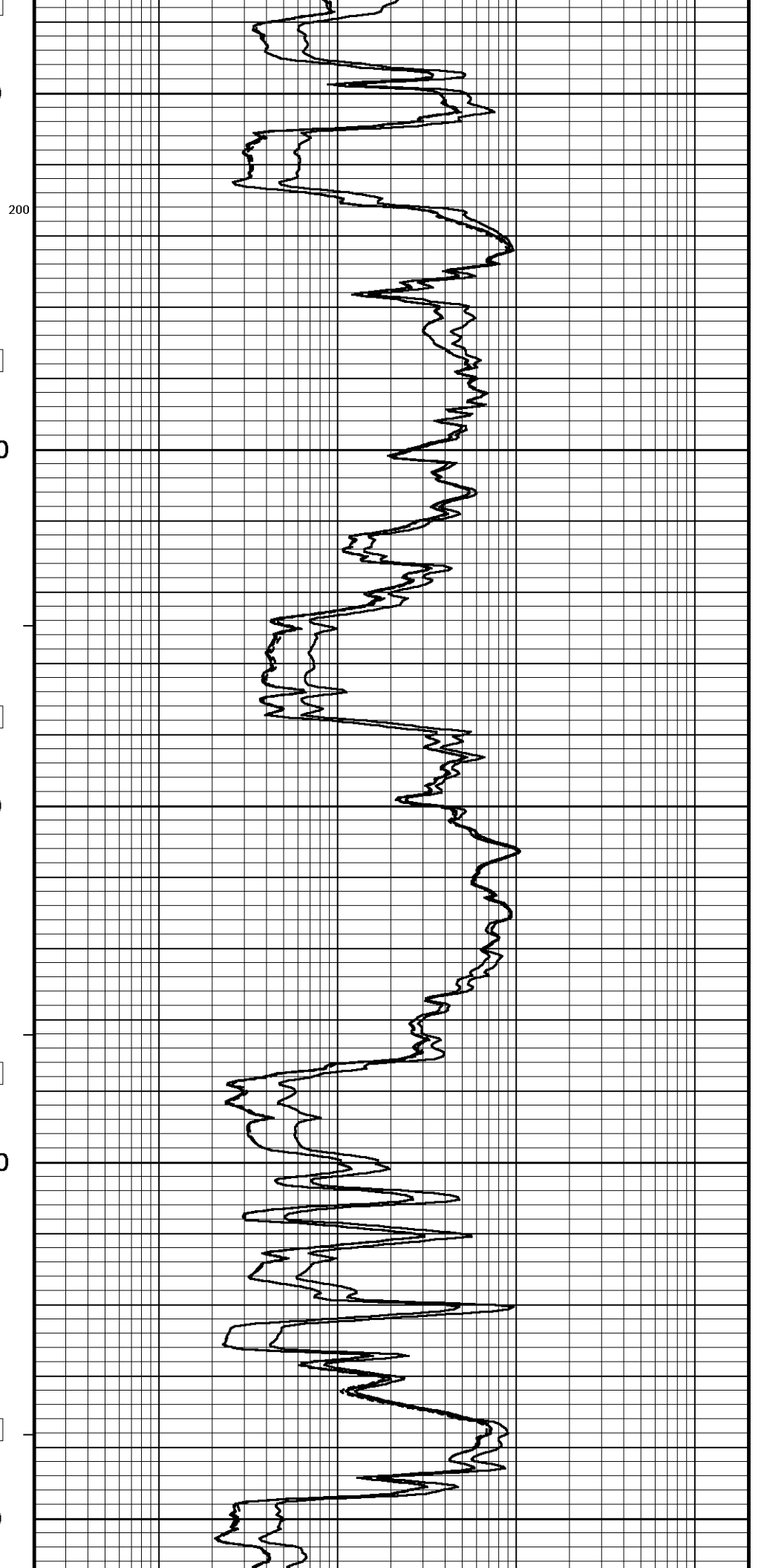
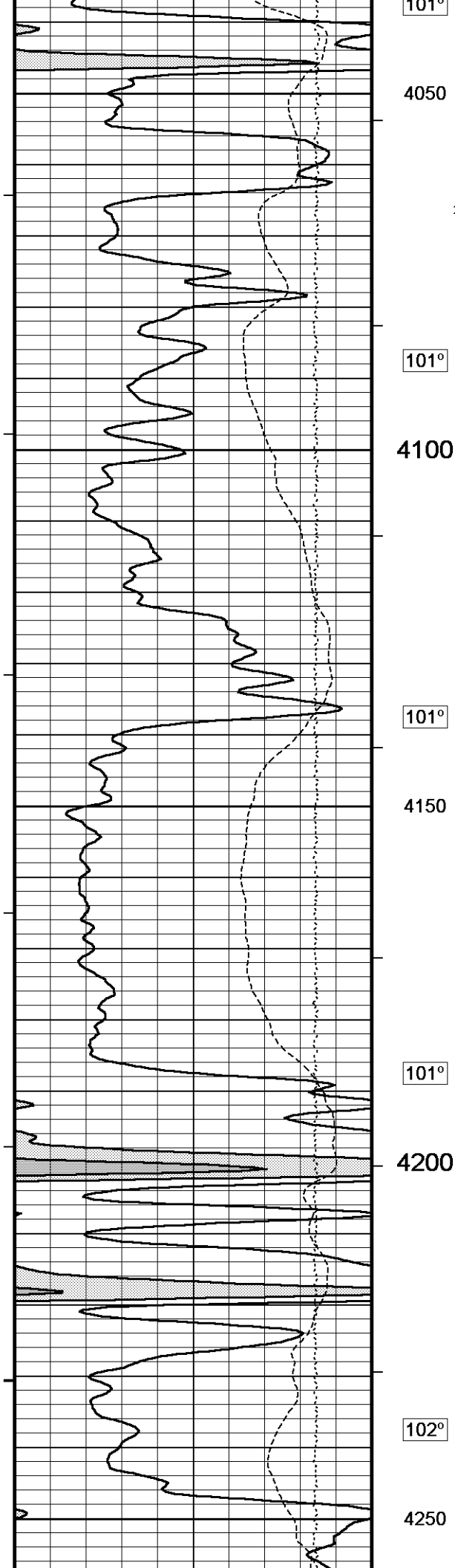


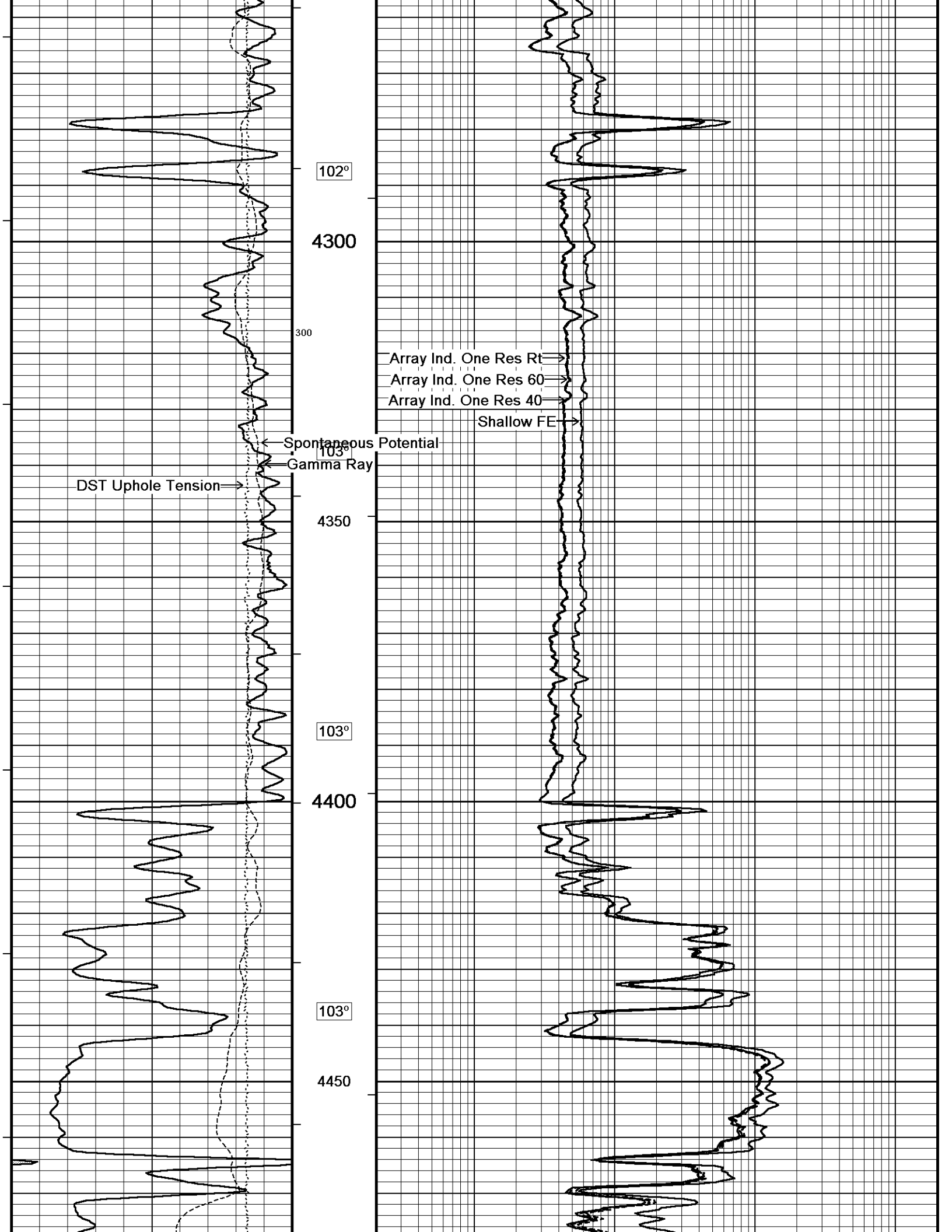


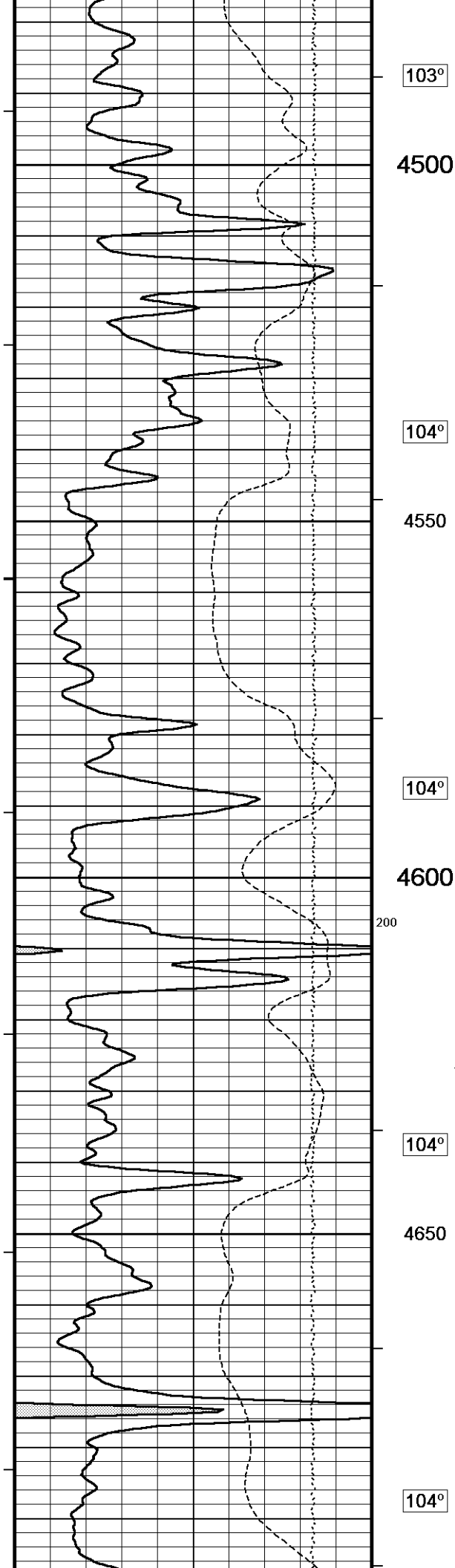












103°

4500

104°

4550

104°

4600

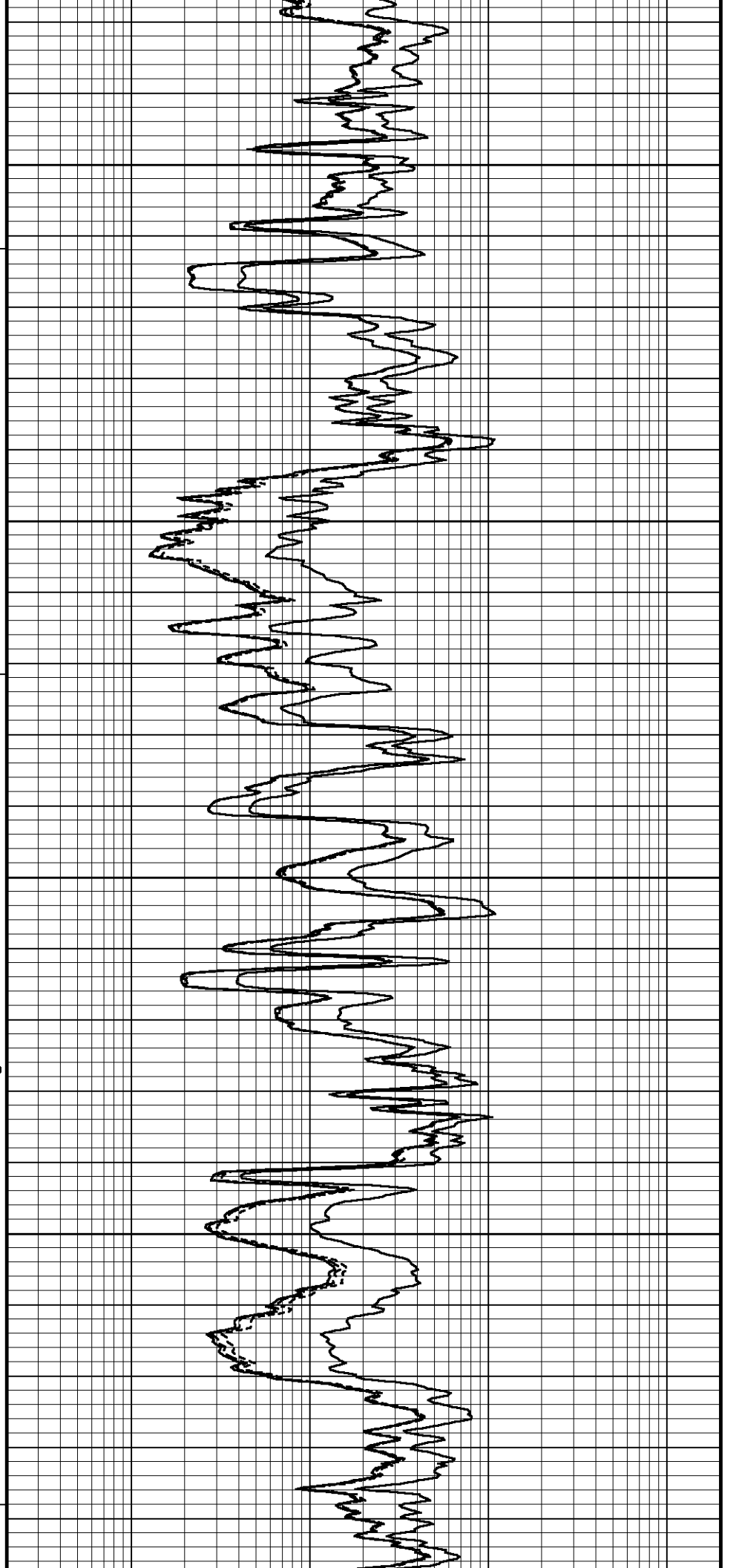
200

104°

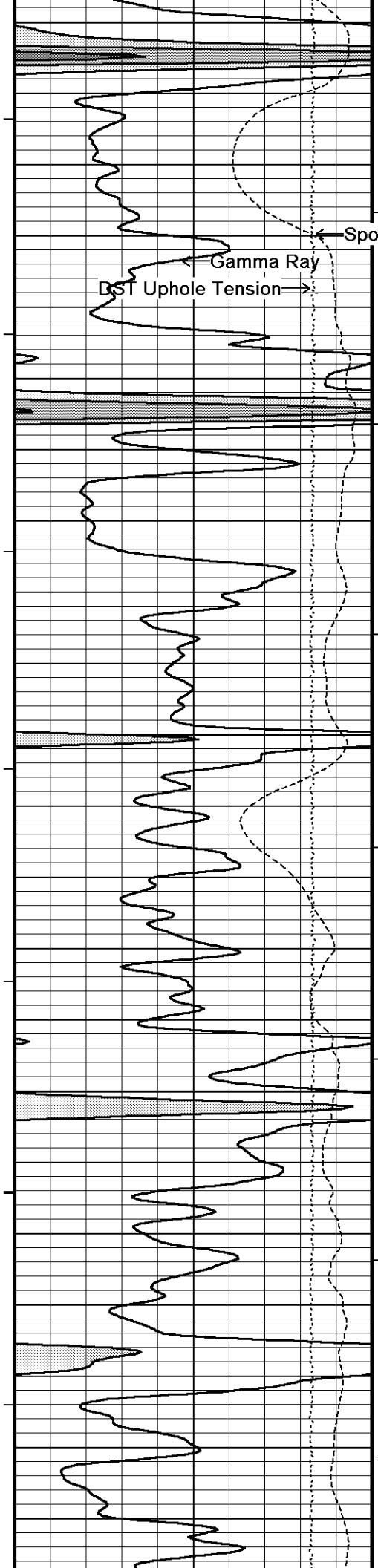
4650

104°

100







4700

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

Shallow FE

Spontaneous Potential

Gamma Ray

DST Uphole Tension

105°

4750

105°

4800

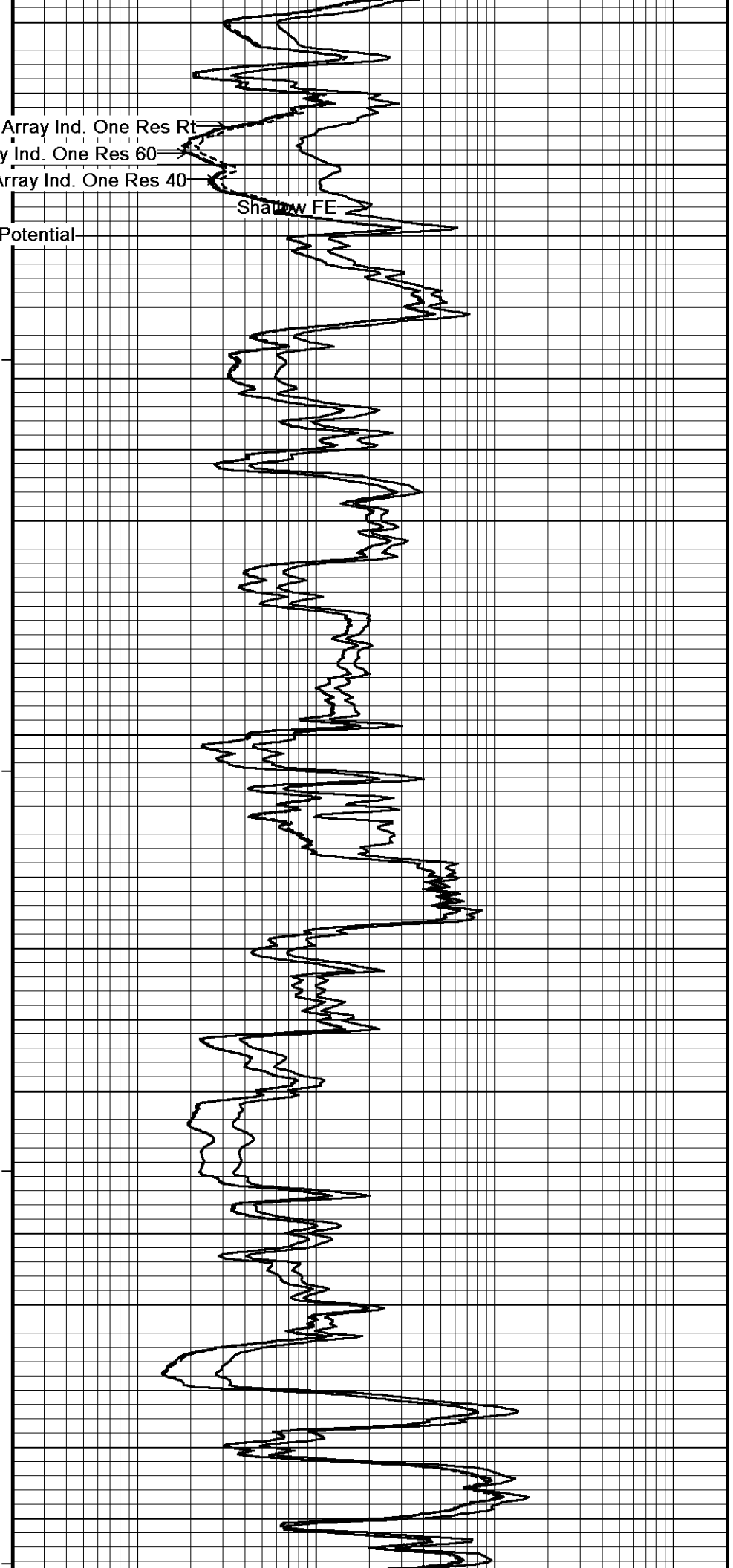
105°

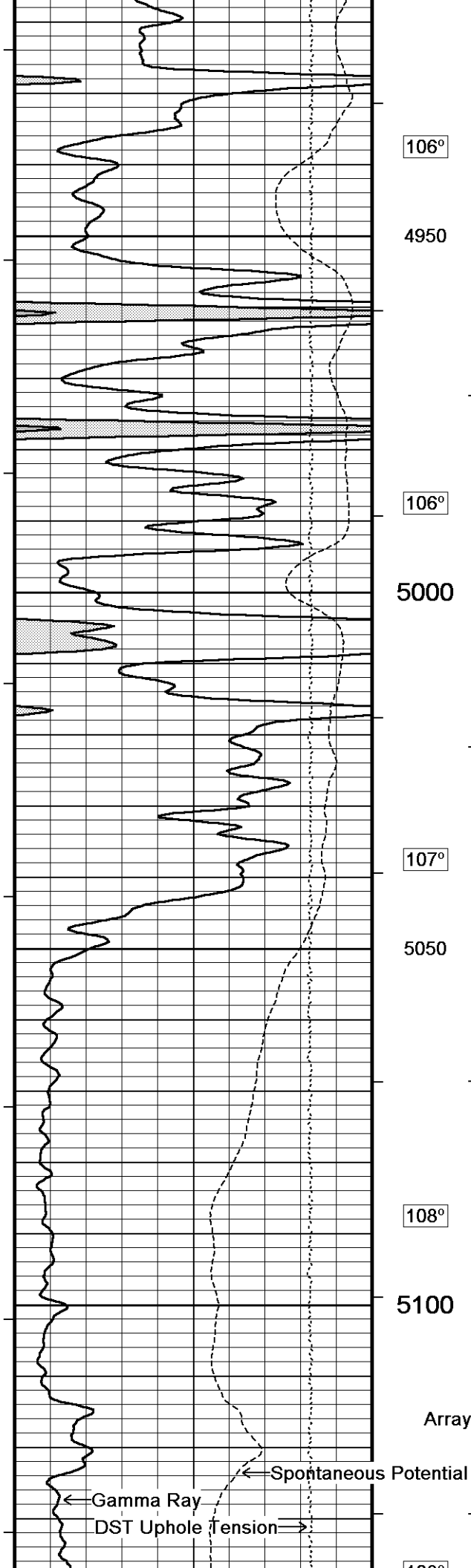
4850

106°

4900

100





106°

4950

106°

5000

107°

5050

108°

5100

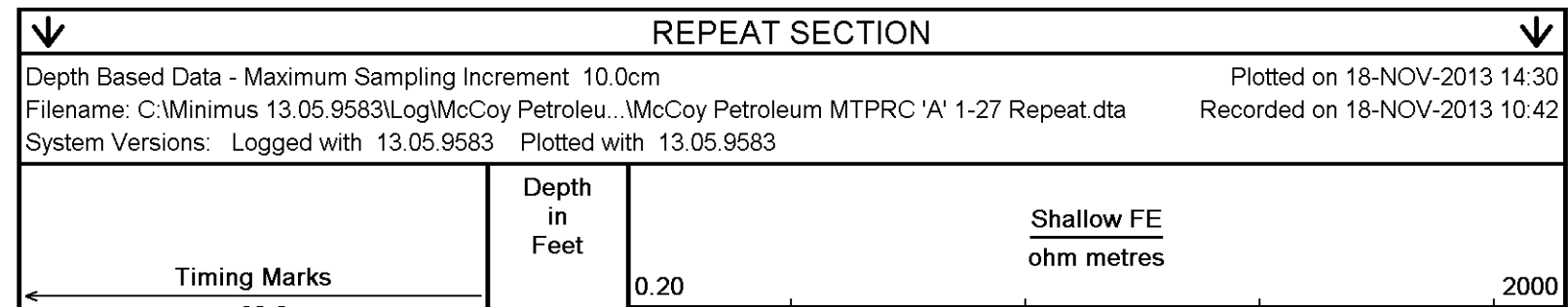
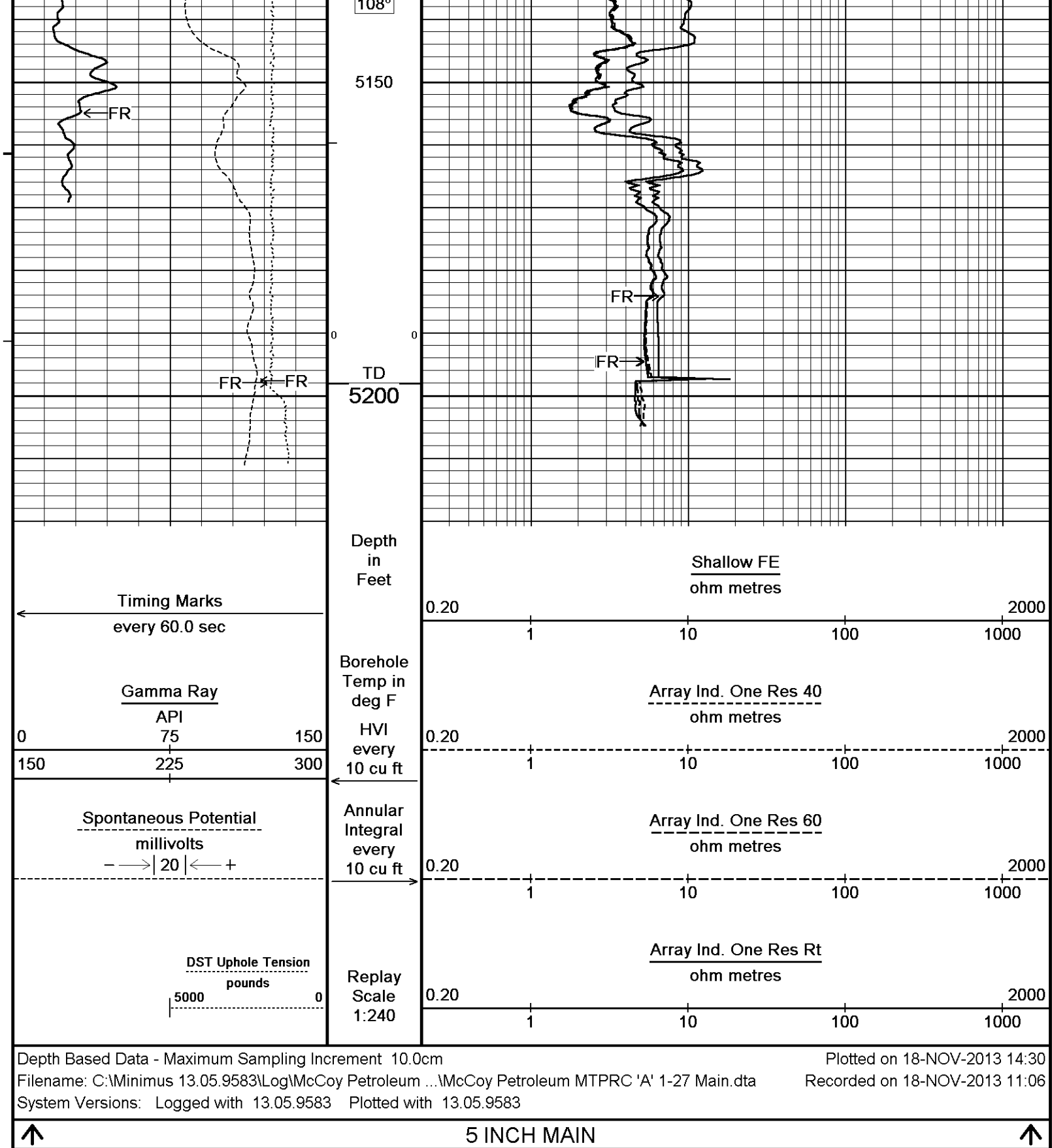
Array Ind. One Res Rt

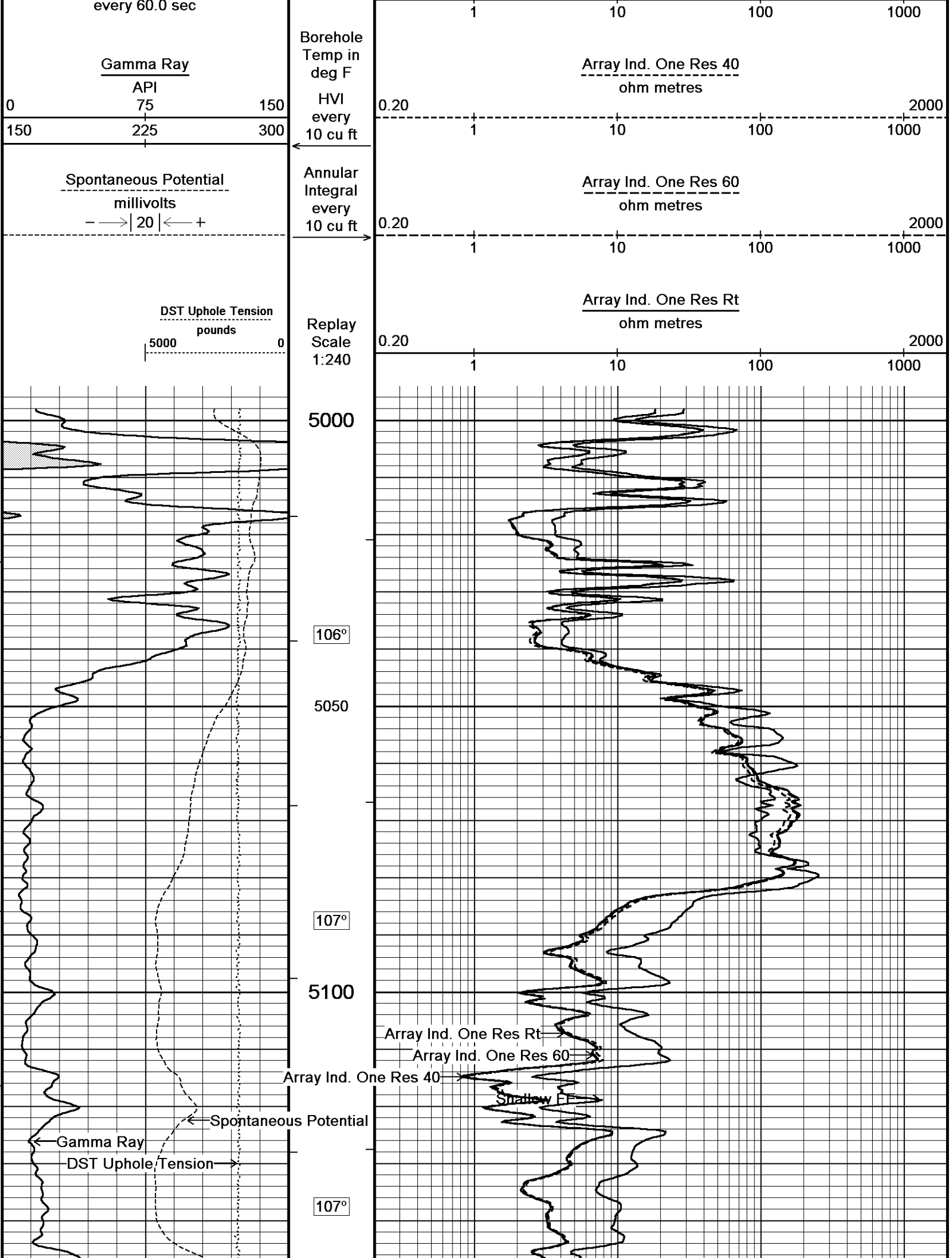
Array Ind. One Res 60

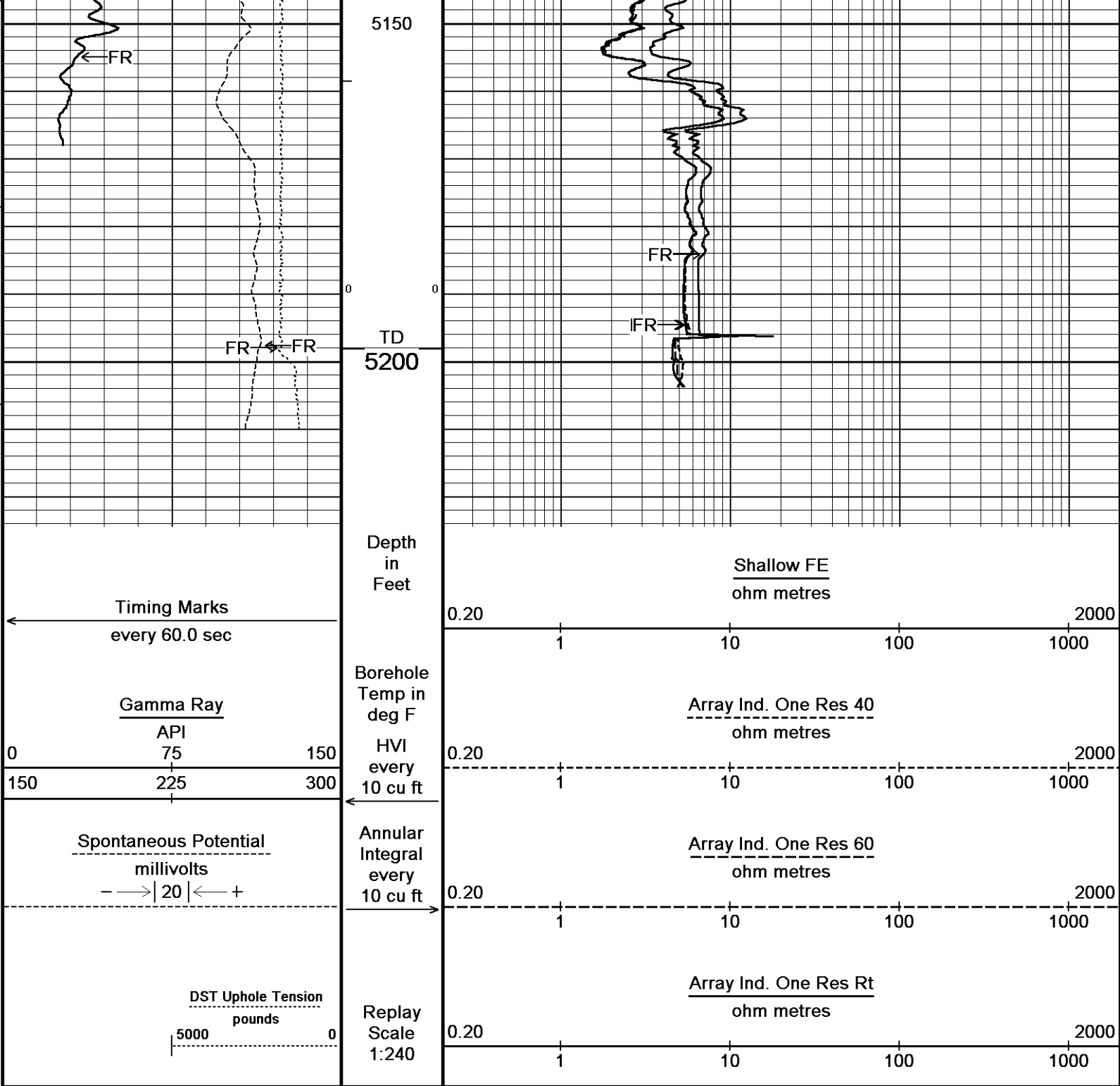
Array Ind. One Res 40

Shallow FE

108°







Depth Based Data - Maximum Sampling Increment 10.0cm

Filename: C:\Minimus 13.05.9583\Log\McCoy Petroleum MTPRC 'A' 1-27 Repeat.dta

System Versions: Logged with 13.05.9583 Plotted with 13.05.9583

Plotted on 18-NOV-2013 14:30

Recorded on 18-NOV-2013 10:42

↑ REPEAT SECTION ↑

### BEFORE SURVEY CALIBRATION

C:\Minimus 13.05.9583\Log\McCoy Petroleum MTPRC 'A' 1-27\McCoy Petroleum MTPRC 'A' 1-27 Repeat.dta

|                             |          |            |                                  |  |  |
|-----------------------------|----------|------------|----------------------------------|--|--|
| General Constants All 000   |          |            | Last Edited on 18-NOV-2013,08:56 |  |  |
| General Parameters          |          |            |                                  |  |  |
| Mud Resistivity             | 0.740    | ohm-metres |                                  |  |  |
| Mud Resistivity Temperature | 73.000   | degrees F  |                                  |  |  |
| Water Level                 | 0.000    | feet       |                                  |  |  |
| Borehole Fluid Processing   | Wet Hole |            |                                  |  |  |

Hole/Annular Volume and Differential Caliper Parameters

|                                                         |                       |                      |                                                                                 |            |
|---------------------------------------------------------|-----------------------|----------------------|---------------------------------------------------------------------------------|------------|
| HVOL/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                        | MML Caliper           |                      |                                                                                 |            |
| Rwa Parameters                                          |                       |                      |                                                                                 |            |
| Porosity used                                           | Base Density Porosity |                      |                                                                                 |            |
| Resistivity used                                        | Array Ind. Six Res Rt |                      |                                                                                 |            |
| RWA Constant A                                          | 1.000                 |                      |                                                                                 |            |
| RWA Constant M                                          | 2.000                 |                      |                                                                                 |            |
| SW/APOR Tool Source                                     | 0.000                 |                      |                                                                                 |            |
| Down-hole Tension Calibration SMS 0                     |                       |                      | Field Calibration on 18-NOV-2013 09:50                                          |            |
| Reading No                                              | Measured              | Calibrated (lbs)     |                                                                                 |            |
| 1                                                       | 15856.10              | 0.00                 |                                                                                 |            |
| 2                                                       | 16183.53              | 383.60               |                                                                                 |            |
| Gamma Calibration MCG-D.K 469                           |                       |                      | Field Calibration on 17-NOV-2013 01:27                                          |            |
|                                                         | Measured              | Calibrated (API)     |                                                                                 |            |
| Background                                              | 67                    | 46                   |                                                                                 |            |
| Calibrator (Gross)                                      | 1139                  | 771                  |                                                                                 |            |
| Calibrator (Net)                                        | 1072                  | 725                  |                                                                                 |            |
| Gamma Constants MCG-D.K 469                             |                       |                      | Last Edited on 17-NOV-2013,05:35                                                |            |
| Gamma Calibrator Number                                 | GRC38                 |                      |                                                                                 |            |
| Mud Density                                             | 1.12                  | 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                    |                      |                                                                                 |            |
| SP Calibration MCG-D.K 469                              |                       |                      | Field Calibration on 12-SEP-2013 15:11                                          |            |
|                                                         | Measured              | Calibrated (mV)      |                                                                                 |            |
| Reference 1                                             | 100.2                 | 100.0                |                                                                                 |            |
| Reference 2                                             | -99.2                 | -100.1               |                                                                                 |            |
| Caliper Calibration MML-A 3                             |                       |                      | Base Calibration on 07-OCT-2013 08:47<br>Field Calibration on 17-NOV-2013 01:22 |            |
| Base Calibration                                        |                       |                      |                                                                                 |            |
| Reading No                                              | Measured              | Calibrator Size (in) |                                                                                 |            |
| 1                                                       | 14962                 | 5.98                 |                                                                                 |            |
| 2                                                       | 18212                 | 7.97                 |                                                                                 |            |
| 3                                                       | 21407                 | 9.86                 |                                                                                 |            |
| 4                                                       | 25492                 | 11.92                |                                                                                 |            |
| 5                                                       | 0                     | 0.00                 |                                                                                 |            |
| 6                                                       | N/A                   | N/A                  |                                                                                 |            |
| Field Calibration                                       |                       |                      |                                                                                 |            |
|                                                         | Measured Caliper (in) | Actual Caliper (in)  |                                                                                 |            |
|                                                         | 7.96                  | 7.97                 |                                                                                 |            |
| Micro Normal and Micro Inverse Calibration MML-A 3      |                       |                      | Base Calibration on 07-OCT-2013 08:36<br>Field Check on 17-NOV-2013 01:20       |            |
| Base Calibration                                        |                       |                      |                                                                                 |            |
|                                                         |                       | Measured             | Calibrated (ohm-m)                                                              |            |
| Channel                                                 | Resistor 1            | Resistor 2           | Resistor 1                                                                      | Resistor 2 |
| Micro Normal                                            | 12.1                  | 60.1                 | 5.0                                                                             | 25.0       |
| Micro Inverse                                           | 15.7                  | 78.1                 | 5.0                                                                             | 25.0       |

|                                                  |                                             |                  |                     |                                                                           |
|--------------------------------------------------|---------------------------------------------|------------------|---------------------|---------------------------------------------------------------------------|
| Micro Inverse                                    | 15.7                                        | 78.4             | 5.0                 | 25.0                                                                      |
| Channel                                          | Base Check (ohm-m)                          |                  | Field Check (ohm-m) |                                                                           |
| Micro Normal                                     | 63.0                                        |                  | 63.0                |                                                                           |
| Micro Inverse                                    | 48.2                                        |                  | 48.2                |                                                                           |
| Micro Normal and Micro Inverse Constants MML-A 3 |                                             |                  |                     | Last Edited on 17-NOV-2013,05:28                                          |
| Pad Type                                         | 8-12 in Soft Rubber Inflatable 006-9011-159 |                  |                     |                                                                           |
| Micro Normal K Factor                            | 1.0000                                      |                  |                     |                                                                           |
| Micro Inverse K Factor                           | 1.0000                                      |                  |                     |                                                                           |
| Standoff Offset                                  | N/A                                         |                  | inches              |                                                                           |
| Neutron Calibration MDN-A.B 66                   |                                             |                  |                     | Base Calibration on 02-OCT-2013 18:04<br>Field Check on 17-NOV-2013 01:32 |
| Base Calibration                                 |                                             |                  |                     |                                                                           |
|                                                  |                                             | Measured         | Calibrated (cps)    |                                                                           |
|                                                  | Near                                        | Far              | Near                | Far                                                                       |
|                                                  | 3184                                        | 99               | 3714                | 110                                                                       |
| Ratio                                            | 32.303                                      |                  | 33.764              |                                                                           |
| Field Calibrator at Base                         |                                             | Calibrated (cps) |                     |                                                                           |
|                                                  |                                             |                  | 1612                | 2330                                                                      |
| Ratio                                            | 0.692                                       |                  |                     |                                                                           |
| Field Check                                      |                                             | Calibrated (cps) |                     |                                                                           |
|                                                  |                                             |                  | 1609                | 2335                                                                      |
| Ratio                                            | 0.692                                       |                  |                     |                                                                           |
| Neutron Constants MDN-A.B 66                     |                                             |                  |                     | Last Edited on 18-NOV-2013,08:27                                          |
| Neutron Source Id                                | P0204NN                                     |                  |                     |                                                                           |
| Neutron Jig Number                               | 5824NE                                      |                  |                     |                                                                           |
| 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                                  | 4.26                                        |                  | cu                  |                                                                           |
| Dolomite Sigma                                   | 4.70                                        |                  | cu                  |                                                                           |
| Formation Pressure Source                        | None                                        |                  |                     |                                                                           |
| Formation Pressure                               | N/A                                         |                  | kpsi                |                                                                           |
| Temperature Source                               | Constant Value                              |                  |                     |                                                                           |
| Temperature                                      | 68.00                                       |                  | degrees F           |                                                                           |
| Mud Salinity                                     | 0.00                                        |                  | kppm                |                                                                           |
| Salinity Correction                              | Not Applied                                 |                  |                     |                                                                           |
| Formation Fluid Salinity Source                  | None                                        |                  |                     |                                                                           |
| Formation Fluid Salinity                         | N/A                                         |                  | kppm                |                                                                           |
| Barite Mud Correction                            | Not Applied                                 |                  |                     |                                                                           |
| FE Calibration MFE-B.J 353                       |                                             |                  |                     | Base Calibration on 07-OCT-2013 09:02<br>Field Check on 17-NOV-2013 01:12 |
| Base Calibration                                 |                                             |                  |                     |                                                                           |
|                                                  |                                             | Measured         | Calibrated (ohm-m)  |                                                                           |
| Reference 1                                      | 0.0                                         |                  | 0.0                 |                                                                           |
| Reference 2                                      | 964.2                                       |                  | 126.8               |                                                                           |
| Base Check                                       |                                             | 281.0            |                     |                                                                           |
| Field Check                                      |                                             | 281.2            |                     |                                                                           |
| FE Constants MFE-B.J 353                         |                                             |                  |                     | Last Edited on 18-NOV-2013,08:26                                          |
| 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                                        | 0.5                                         |                  | inches              |                                                                           |
| Induction Calibration MAI-A.A 167                |                                             |                  |                     | Base Calibration on 02-OCT-2013,14:21<br>Field Check on 17-NOV-2013 01:11 |

| Base Calibration      |  | Measured            |       | Calibrated (mmho/m)  |        |
|-----------------------|--|---------------------|-------|----------------------|--------|
| Test Loop Calibration |  | Low                 | High  | Low                  | High   |
| Channel               |  |                     |       |                      |        |
| 1                     |  | 17.3                | 474.2 | 9.3                  | 966.2  |
| 2                     |  | 6.3                 | 388.4 | 7.6                  | 821.4  |
| 3                     |  | 3.3                 | 259.4 | 5.2                  | 566.0  |
| 4                     |  | 1.9                 | 133.0 | 2.6                  | 279.2  |
| Array Temperature     |  | 76.8                |       | Deg F                |        |
|                       |  | Base Check (mmho/m) |       | Field Check (mmho/m) |        |
| Channel               |  | Low                 | High  | Low                  | High   |
| 1                     |  |                     |       | 12.3                 | 3840.3 |
| 2                     |  |                     |       | 29.4                 | 3478.6 |
| 3                     |  |                     |       | 29.1                 | 3054.7 |
| 4                     |  |                     |       | 19.8                 | 2082.8 |
| Deep                  |  |                     |       | 18.5                 | 2050.2 |
| Medium                |  |                     |       | 42.2                 | 3993.6 |
| Shallow               |  |                     |       | 42.7                 | 5056.3 |
| Array Temperature     |  |                     |       | 60.4                 | Deg F  |

|                                                  |        |                          |             |                                  |  |
|--------------------------------------------------|--------|--------------------------|-------------|----------------------------------|--|
| Induction Constants MAI-A.A 167                  |        |                          |             | Last Edited on 18-NOV-2013,08:26 |  |
| 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                                        |        | 0.50                     |             | inches                           |  |
| Number of Fins on Stand-off                      |        | 8.0000                   |             |                                  |  |
| 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-A.A 167 |          |                   | Field Calibration on 18-AUG-2013,02:21 |
|                                                     | Measured | Calibrated(Deg F) |                                        |
| Lower                                               | 50.00    | 50.00             |                                        |
| Upper                                               | 75.00    | 75.00             |                                        |

|                                                   |    |                                  |  |
|---------------------------------------------------|----|----------------------------------|--|
| High Resolution Temperature Constants MAI-A.A 167 |    | Last Edited on 15-SEP-2013,16:14 |  |
| Pre-filter Length                                 | 11 |                                  |  |



## Density Calibration

## Base Calibration

|             | Measured |       | Calibrated (sdu) |       |
|-------------|----------|-------|------------------|-------|
|             | Near     | Far   | Near             | Far   |
| Reference 1 | 53102    | 19935 | 52888            | 19096 |
| Reference 2 | 25779    | 2814  | 25270            | 2567  |

## Field Check at Base

|        |        |
|--------|--------|
| 1121.7 | 1316.5 |
|--------|--------|

## Field Check

|        |        |
|--------|--------|
| 1117.6 | 1313.8 |
|--------|--------|

## PE Calibration

## Base Calibration

|             | WS    | Measured<br>WH | Ratio | Calibrated<br>Ratio |
|-------------|-------|----------------|-------|---------------------|
| Background  | 205   | 1001           |       |                     |
| Reference 1 | 18282 | 52929          | 0.348 | 0.309               |
| Reference 2 | 7413  | 25647          | 0.292 | 0.273               |

## Field Check at Base

|       |        |
|-------|--------|
| 204.5 | 1000.7 |
|-------|--------|

## Field Check

|       |       |
|-------|-------|
| 203.9 | 997.5 |
|-------|-------|

## Density Constants MPD-C.A 216

Last Edited on 17-NOV-2013,05:27

|                               |                 |
|-------------------------------|-----------------|
| Density Source Id             | 18235B          |
| Nylon Calibrator Number       | DNCE528         |
| Aluminium Calibrator Number   | DACD528         |
| Density Shoe Profile          | 8 inch          |
| Caliper Source for Processing | Density Caliper |
| PE Correction to Density      | Not Applied     |
| Mud Density                   | 1.12 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      |

## Caliper Calibration MPD-C.A 216

Base Calibration on 03-NOV-2013 23:03

Field Calibration on 17-NOV-2013 01:14

## Base Calibration

| Reading No | Measured | Calibrator Size (in) |
|------------|----------|----------------------|
| 1          | 16494    | 4.01                 |
| 2          | 26560    | 5.96                 |
| 3          | 36690    | 7.98                 |
| 4          | 46752    | 9.95                 |
| 5          | 57360    | 11.91                |
| 6          | N/A      | N/A                  |

## Field Calibration

|                       |                     |
|-----------------------|---------------------|
| Measured Caliper (in) | Actual Caliper (in) |
| 7.95                  | 7.97                |

## DOWNHOLE EQUIPMENT

|                                                                                     |                     |                    |  |
|-------------------------------------------------------------------------------------|---------------------|--------------------|--|
|  |                     | <b>Weatherford</b> |  |
| COMPANY                                                                             | MCCOY PETROLEUM     |                    |  |
| WELL                                                                                | MTPRC - A - #1-27   |                    |  |
| FIELD                                                                               | ALFORD SOUTH        |                    |  |
| COUNTY/COUNTRY                                                                      | KIOWA               |                    |  |
| CONTRACT/STATE                                                                      | U.S.A. / KANSAS     |                    |  |
| LOCATION                                                                            | 330' FN. & 330' F   |                    |  |
|                                                                                     | NE NE NE            |                    |  |
| Log Measured from KB                                                                | Elevation 2213 feet |                    |  |
| Drilling Measured from KB @ 11 FEET                                                 |                     |                    |  |
| Date                                                                                | 18-NOV-2013         |                    |  |
| Run Number                                                                          | ONE                 |                    |  |
| Service Order                                                                       | 52347647            |                    |  |
| Depth Driller                                                                       | 5200.00             |                    |  |
| Depth Logger                                                                        | 5198.00             |                    |  |
| First Reading                                                                       | 5195.00             |                    |  |
| Last Reading                                                                        | 584.00              |                    |  |
| Casing Driller                                                                      | 600.00              |                    |  |
| Casing Logger                                                                       | 604.00              |                    |  |
| Bit Size                                                                            | 7 7/8               |                    |  |
| Hot Fluid Type                                                                      | CHEMICAL            |                    |  |
| Density/Viscosity                                                                   | 9.30 lbu/S          |                    |  |
| FH/Fluid Loss                                                                       | 10.50               |                    |  |
| Sample Source                                                                       | FLOWLINE            |                    |  |
| Run @ Measured Temp                                                                 | 0.74 @ 73.0         |                    |  |
| Run @ Measured Temp                                                                 | 0.59 @ 73.0         |                    |  |
| Source @ Measured Temp                                                              | 0.98 @ 73.0         |                    |  |
| Run @ Bit Rate                                                                      | CALC                |                    |  |
| Run @ BHT                                                                           | 0.50 @ 108.0        |                    |  |
| Time since Circulation                                                              | 14.40ORS            |                    |  |
| Area Recorded Temp                                                                  | 108.00              |                    |  |
| Equipment Base                                                                      | 13398               |                    |  |
| Recorded by                                                                         | J LAFONT            |                    |  |
| Witnessed By                                                                        | E STONE             |                    |  |
| Job#                                                                                | LB13-327            |                    |  |

## EUM CORPORATION

cas

| Elevations: | feet    |
|-------------|---------|
| KB          | 2224.00 |
| Of          | 2222.00 |
| GL          | 2213.00 |

|        |  |
|--------|--|
| feet   |  |
| feet   |  |
| feet   |  |
| feet   |  |
| feet   |  |
| inches |  |

|       |          |
|-------|----------|
| 01.00 | CF       |
| 03.20 | m1r30Min |

1000000

---

ohm-m

ohm-m

|       |
|-------|
| CALC  |
| ohm-m |

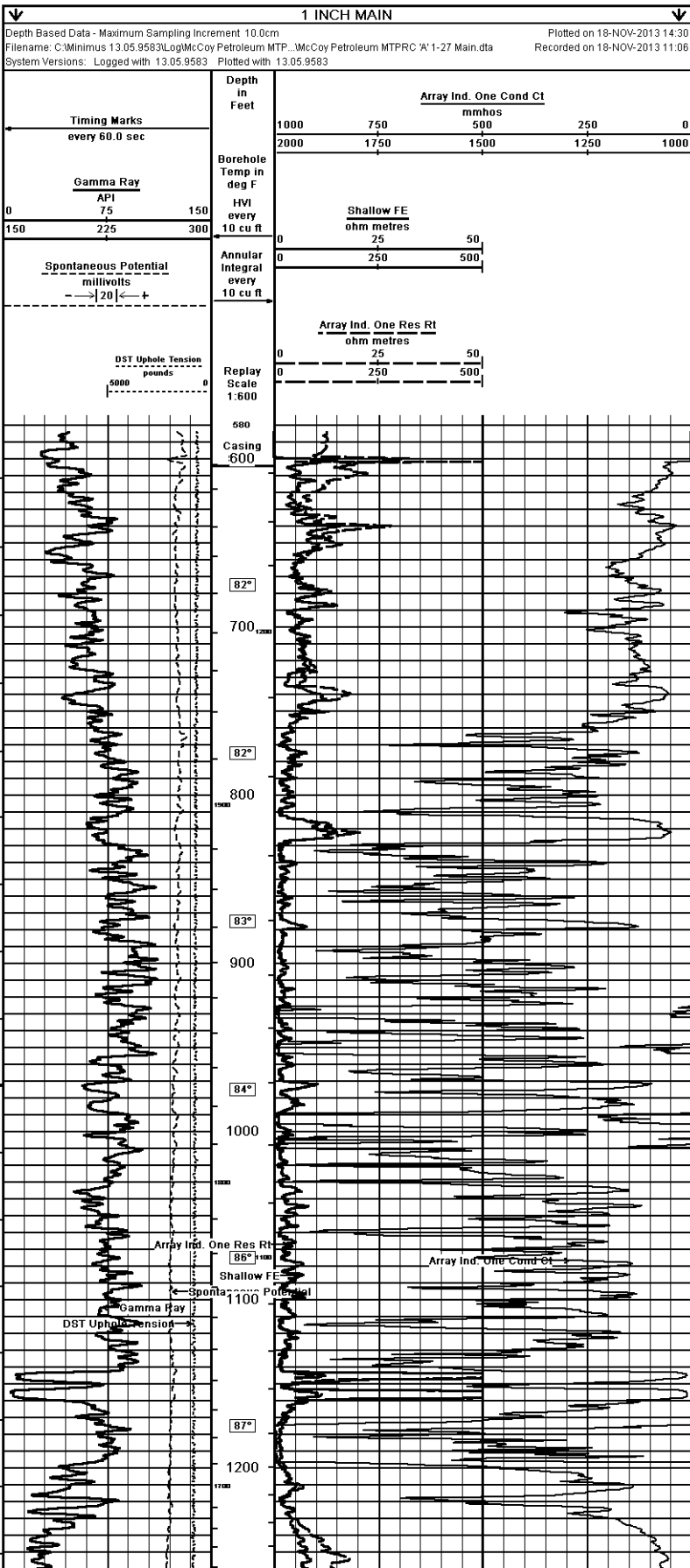
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

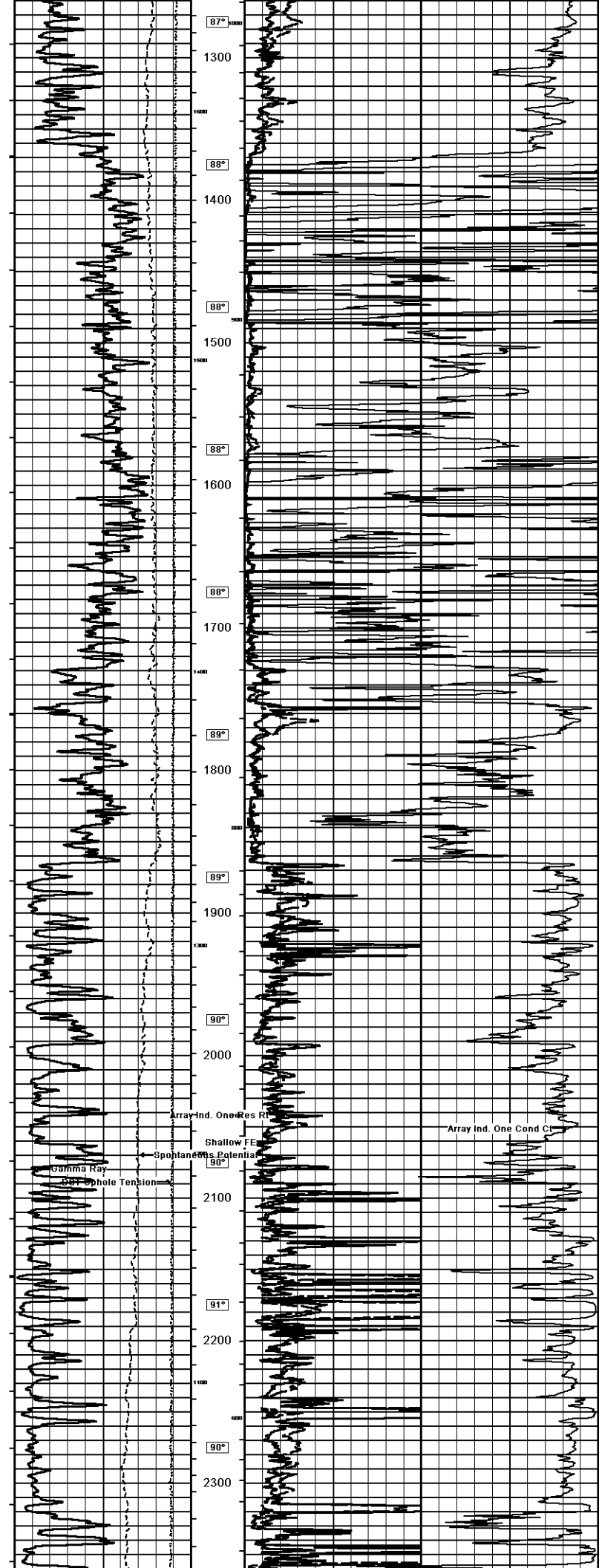
| deg F |
|-------|
| 19    |

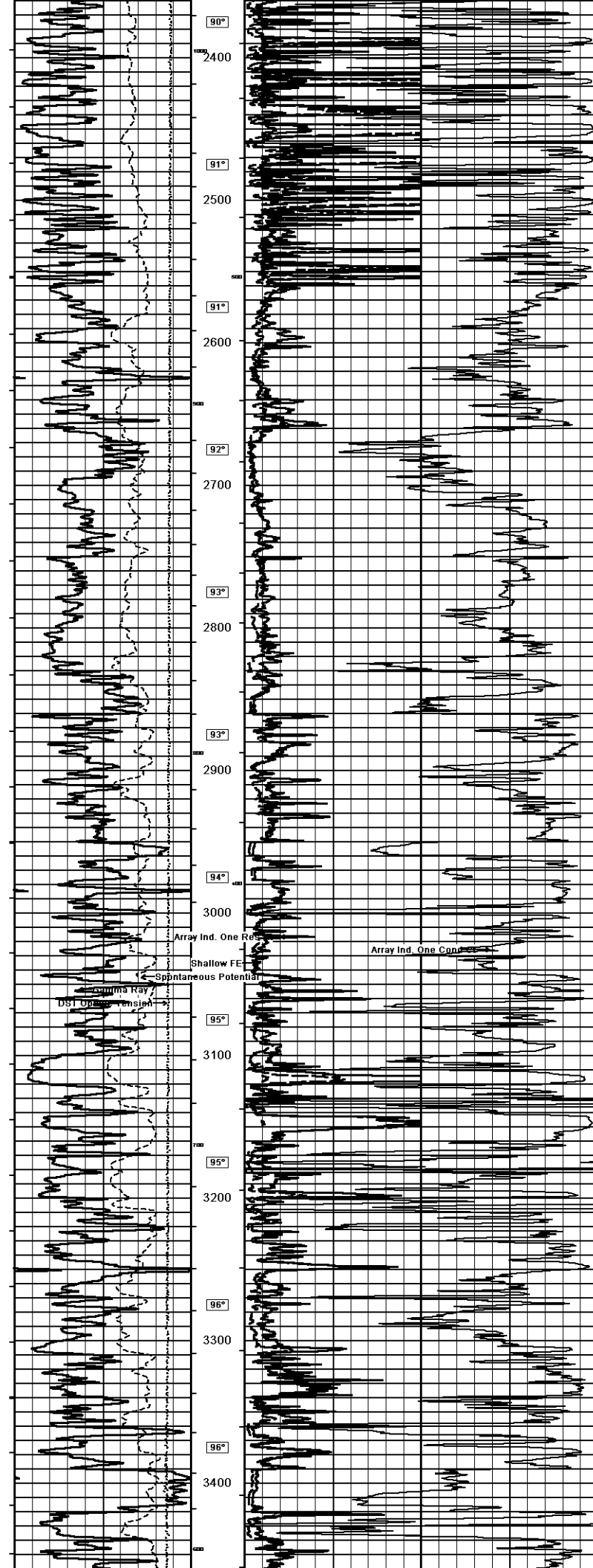
119

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R. HOFFMAN





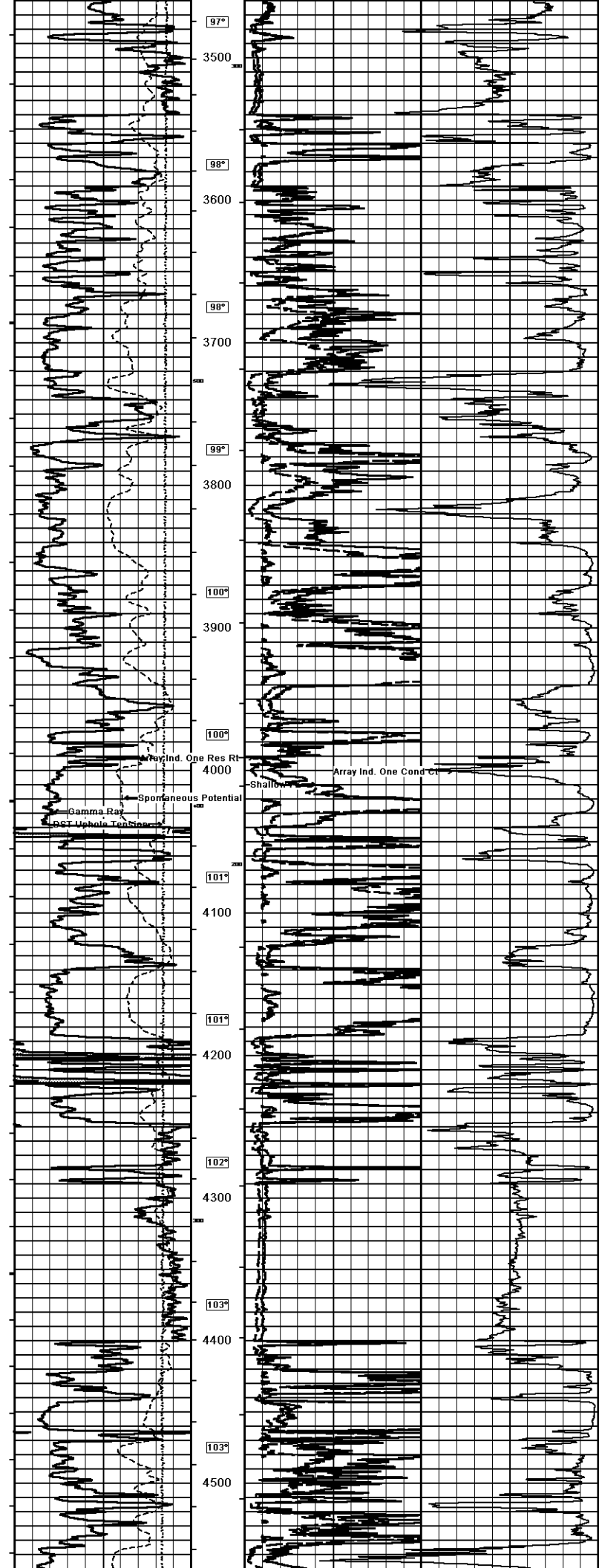


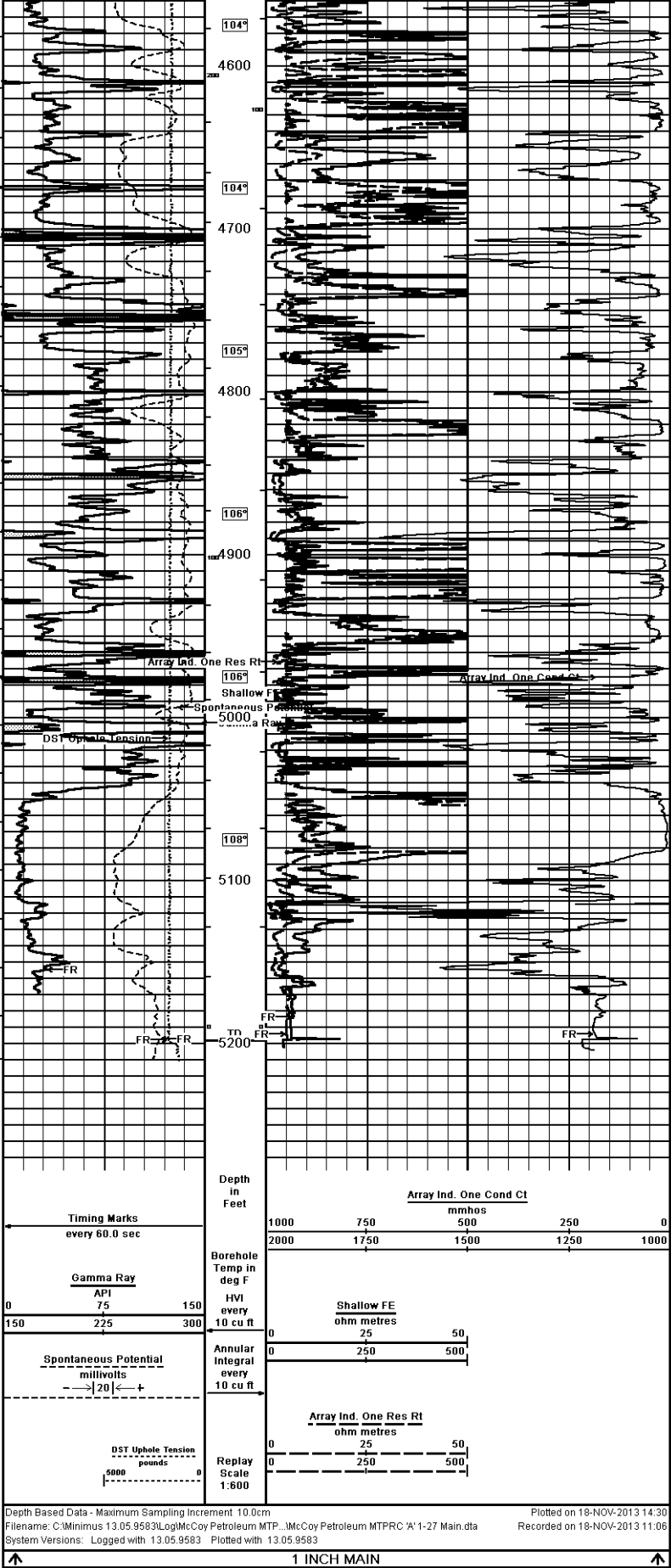
90°  
2400  
91°  
2500  
91°  
2600  
92°  
2700  
93°  
2800  
93°  
2900  
94°  
3000  
95°  
3100  
95°  
3200  
96°  
3300  
96°  
3400

Array Ind. One Res  
Shallow FE  
Spontaneous Potential

Array Ind. One Cond

Gamma Ray  
DST Open Censor





|                         |                             |      |               |         |      |
|-------------------------|-----------------------------|------|---------------|---------|------|
| COMPANY                 | MCCOY PETROLEUM CORPORATION |      |               |         |      |
| WELL                    | MTPRC 'A' #1-27             |      |               |         |      |
| FIELD                   | ALFORD SOUTH                |      |               |         |      |
| PROVINCE/COUNTY         | KIOWA                       |      |               |         |      |
| COUNTRY/STATE           | U.S.A. / KANSAS             |      |               |         |      |
| Elevation Kelly Bushing | 2224.00                     | feet | First Reading | 5195.00 | feet |
| Elevation Drill Floor   | 2222.00                     | feet | Depth Driller | 5200.00 | feet |
| Elevation Ground Level  | 2213.00                     | feet | Depth Logger  | 5198.00 | feet |

ARRAY INDUCTION  
SHALLOW FOCUSED

