

# HALLIBURTON

## ARRAY COMPENSATED TRUE RESISTIVITY LOG

|                                                                |                 |            |          |                |                |  |  |
|----------------------------------------------------------------|-----------------|------------|----------|----------------|----------------|--|--|
| COMPANY                                                        |                 |            |          | OXY USA INC    |                |  |  |
| WELL                                                           |                 |            |          | TURRENTINE A 4 |                |  |  |
| FIELD                                                          |                 |            |          | AZAMON DITCH   |                |  |  |
| COUNTY                                                         |                 |            |          | FINNEY         |                |  |  |
| STATE                                                          |                 |            |          | KANSAS         |                |  |  |
| Permanent Datum<br>Log measured from<br>Drilling measured from | GL<br>KB<br>KB  | Sect. 23   | Twp. 30S | Rge. 33W       | COMPANY        |  |  |
|                                                                |                 |            |          |                | OXY USA INC    |  |  |
| Date                                                           | 12-Aug-12       | ONE        |          |                | WELL           |  |  |
|                                                                |                 |            |          |                | TURRENTINE A 4 |  |  |
| Depth - Driller                                                | 4920.00 ft      |            |          |                | FIELD          |  |  |
|                                                                |                 |            |          |                | AZAMON DITCH   |  |  |
| Depth - Logger                                                 | 4906.0 ft       |            |          |                | COUNTY         |  |  |
|                                                                |                 |            |          |                | FINNEY         |  |  |
| Bottom - Logged Interval                                       | 4897.0 ft       |            |          |                | STATE          |  |  |
|                                                                |                 |            |          |                | KANSAS         |  |  |
| Top - Logged Interval                                          | 1810.0 ft       |            |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |
| Casing - Driller                                               | 8.625 in        | @          |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |
| Casing - Logger                                                | 1810.0 ft       |            |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |
| Bit Size                                                       | 7.875 in        | @          |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |
| Type Fluid in Hole                                             | WATER BASED MUD |            |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |
| Density                                                        | 9.6 ppg         | 32.00 s/qt |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |
| PH                                                             | 8.50 pH         | 12.0 cp/m  |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |
| Source of Sample                                               | FLOWLINE        |            |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |
| Rm @ Meas. Temperature                                         | 0.400 ohmm      | @          |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |
| Rmf @ Meas. Temperature                                        | 0.36 ohmm       | @          |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |
| Rmc @ Meas. Temperature                                        | 0.430 ohmm      | @          |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |
| Source Rmf                                                     | MEASURED        | MEASURED   |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |
| Rm @ BHT                                                       | 0.35 ohmm       | @          |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |
| Time Since Circulation                                         | 10.5 hr         |            |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |
| Time on Bottom                                                 | 12-Aug-12 22:27 |            |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |
| Max. Rec. Temperature                                          | 128.0 degF      | @          |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |
| Equipment                                                      | 10782954        | LIBERAL    |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |
| Recorded By                                                    | C. HAVERKAMP    |            |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |
| Witnessed By                                                   | A. HOWSON       |            |          |                |                |  |  |
|                                                                |                 |            |          |                |                |  |  |

Fold here

|                                         |  |            |  |   |  |                              |  |   |  |  |  |                                         |  |                 |  |               |  |             |  |                 |  |           |  |  |  |       |  |  |  |
|-----------------------------------------|--|------------|--|---|--|------------------------------|--|---|--|--|--|-----------------------------------------|--|-----------------|--|---------------|--|-------------|--|-----------------|--|-----------|--|--|--|-------|--|--|--|
| Service Ticket No.: 738587              |  |            |  |   |  | API Serial No.: 15-055-22171 |  |   |  |  |  | PGM Version: WL INSITE R3.6.0 (Build 3) |  |                 |  |               |  |             |  |                 |  |           |  |  |  |       |  |  |  |
| CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE |  |            |  |   |  |                              |  |   |  |  |  | RESISTIVITY SCALE CHANGES               |  |                 |  |               |  |             |  |                 |  |           |  |  |  |       |  |  |  |
| Date                                    |  | Sample No. |  |   |  |                              |  |   |  |  |  | Type Log                                |  | Depth           |  | Scale Up Hole |  |             |  | Scale Down Hole |  |           |  |  |  |       |  |  |  |
| Depth-Driller                           |  |            |  |   |  |                              |  |   |  |  |  |                                         |  |                 |  |               |  |             |  |                 |  |           |  |  |  |       |  |  |  |
| Type Fluid in Hole                      |  |            |  |   |  |                              |  |   |  |  |  |                                         |  |                 |  |               |  |             |  |                 |  |           |  |  |  |       |  |  |  |
| Density                                 |  | Viscosity  |  |   |  |                              |  |   |  |  |  |                                         |  |                 |  |               |  |             |  |                 |  |           |  |  |  |       |  |  |  |
| Ph                                      |  | Fluid Loss |  |   |  |                              |  |   |  |  |  |                                         |  |                 |  |               |  |             |  |                 |  |           |  |  |  |       |  |  |  |
| Source of Sample                        |  |            |  |   |  |                              |  |   |  |  |  | RESISTIVITY EQUIPMENT DATA              |  |                 |  |               |  |             |  |                 |  |           |  |  |  |       |  |  |  |
| Rm @ Meas. Temp                         |  |            |  | @ |  |                              |  | @ |  |  |  | Run No.                                 |  | Tool Type & No. |  |               |  | Pad Type    |  |                 |  | Tool Pos. |  |  |  | Other |  |  |  |
| Rmf @ Meas. Temp.                       |  |            |  | @ |  |                              |  | @ |  |  |  | ONE                                     |  | ACRT            |  |               |  | N/A         |  |                 |  | 1.5" S.O. |  |  |  | N/A   |  |  |  |
| Rmc @ Meas. Temp.                       |  |            |  | @ |  |                              |  | @ |  |  |  |                                         |  | I1256_S0784     |  |               |  |             |  |                 |  |           |  |  |  |       |  |  |  |
| Source Rmf                              |  | Rmc        |  |   |  |                              |  |   |  |  |  |                                         |  |                 |  |               |  |             |  |                 |  |           |  |  |  |       |  |  |  |
| Rm @ BHT                                |  |            |  | @ |  |                              |  | @ |  |  |  |                                         |  |                 |  |               |  |             |  |                 |  |           |  |  |  |       |  |  |  |
| Rmf @ BHT                               |  |            |  | @ |  |                              |  | @ |  |  |  |                                         |  |                 |  |               |  |             |  |                 |  |           |  |  |  |       |  |  |  |
| Rmc @ BHT                               |  |            |  | @ |  |                              |  | @ |  |  |  |                                         |  |                 |  |               |  |             |  |                 |  |           |  |  |  |       |  |  |  |
| EQUIPMENT DATA                          |  |            |  |   |  |                              |  |   |  |  |  |                                         |  |                 |  |               |  |             |  |                 |  |           |  |  |  |       |  |  |  |
| GAMMA                                   |  |            |  |   |  | ACOUSTIC                     |  |   |  |  |  | DENSITY                                 |  |                 |  |               |  | NEUTRON     |  |                 |  |           |  |  |  |       |  |  |  |
| Run No.                                 |  | ONE        |  |   |  | Run No.                      |  |   |  |  |  | Run No.                                 |  |                 |  |               |  | Run No.     |  |                 |  |           |  |  |  |       |  |  |  |
| Serial No.                              |  | 10811258   |  |   |  | Serial No.                   |  |   |  |  |  | Serial No.                              |  |                 |  |               |  | Serial No.  |  |                 |  |           |  |  |  |       |  |  |  |
| Model No.                               |  | GTET       |  |   |  | Model No.                    |  |   |  |  |  | Model No.                               |  |                 |  |               |  | Model No.   |  |                 |  |           |  |  |  |       |  |  |  |
| Diameter                                |  | 3.625      |  |   |  | No. of Cent.                 |  |   |  |  |  | Diameter                                |  |                 |  |               |  | Diameter    |  |                 |  |           |  |  |  |       |  |  |  |
| Detector Model No.                      |  | T-102      |  |   |  | Spacing                      |  |   |  |  |  | Log Type                                |  |                 |  |               |  | Log Type    |  |                 |  |           |  |  |  |       |  |  |  |
| Type                                    |  | SCINT      |  |   |  |                              |  |   |  |  |  | Source Type                             |  |                 |  |               |  | Source Type |  |                 |  |           |  |  |  |       |  |  |  |
| Length                                  |  | 8"         |  |   |  | LSA [Y/N]                    |  |   |  |  |  | Serial No.                              |  |                 |  |               |  | Serial No.  |  |                 |  |           |  |  |  |       |  |  |  |
| Distance to Source                      |  | 10'        |  |   |  | FWDA [Y/N ]                  |  |   |  |  |  | Strength                                |  |                 |  |               |  | Strength    |  |                 |  |           |  |  |  |       |  |  |  |

| GENERAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |       | GAMMA  |       | ACOUSTIC |       | DENSITY |        | NEUTRON |   |        |       |   |        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|--------|-------|----------|-------|---------|--------|---------|---|--------|-------|---|--------|
| Run                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Depth |       | Speed  | Scale |          | Scale |         | Matrix | Scale   |   | Matrix | Scale |   | Matrix |
| No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | From  | To    | ft/min | L     | R        | L     | R       |        | L       | R |        | L     | R |        |
| ONE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 4906' | 1810' | REC    | 0     | 150      |       |         |        |         |   |        |       |   |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |       |        |       |          |       |         |        |         |   |        |       |   |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |       |        |       |          |       |         |        |         |   |        |       |   |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |       |        |       |          |       |         |        |         |   |        |       |   |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |       |        |       |          |       |         |        |         |   |        |       |   |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |       |        |       |          |       |         |        |         |   |        |       |   |        |
| DIRECTIONAL INFORMATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |       |       |        |       |          |       |         |        |         |   |        |       |   |        |
| Maximum Deviation @                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |       |        |       |          |       |         | KOP @  |         |   |        |       |   |        |
| Remarks: SP-GTET-HFDT-DSNT-SDLT-BSAT-ACRT RAN IN COMBINATION.                                                                                                                                                                                                                                                                                                                                                                                                                                           |       |       |        |       |          |       |         |        |         |   |        |       |   |        |
| ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING.                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |       |        |       |          |       |         |        |         |   |        |       |   |        |
| CHLORIDES REPORTED AT 8000 MG/L.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |       |       |        |       |          |       |         |        |         |   |        |       |   |        |
| LCM REPORTED AT 2 LB/BBL.                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |       |       |        |       |          |       |         |        |         |   |        |       |   |        |
| POST TOOL SURVEYS NOT PERFORMED DUE TO WELLSITE CONDITIONS.                                                                                                                                                                                                                                                                                                                                                                                                                                             |       |       |        |       |          |       |         |        |         |   |        |       |   |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |       |        |       |          |       |         |        |         |   |        |       |   |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |       |        |       |          |       |         |        |         |   |        |       |   |        |
| YOUR CREW: A. VAQUERA, B. TERRELL                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |       |       |        |       |          |       |         |        |         |   |        |       |   |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |       |        |       |          |       |         |        |         |   |        |       |   |        |
| THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES. LIBERAL, KS 620-624-8123                                                                                                                                                                                                                                                                                                                                                                                                                            |       |       |        |       |          |       |         |        |         |   |        |       |   |        |
| HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF. |       |       |        |       |          |       |         |        |         |   |        |       |   |        |
| HALLIBURTON                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |       |       |        |       |          |       |         |        |         |   |        |       |   |        |



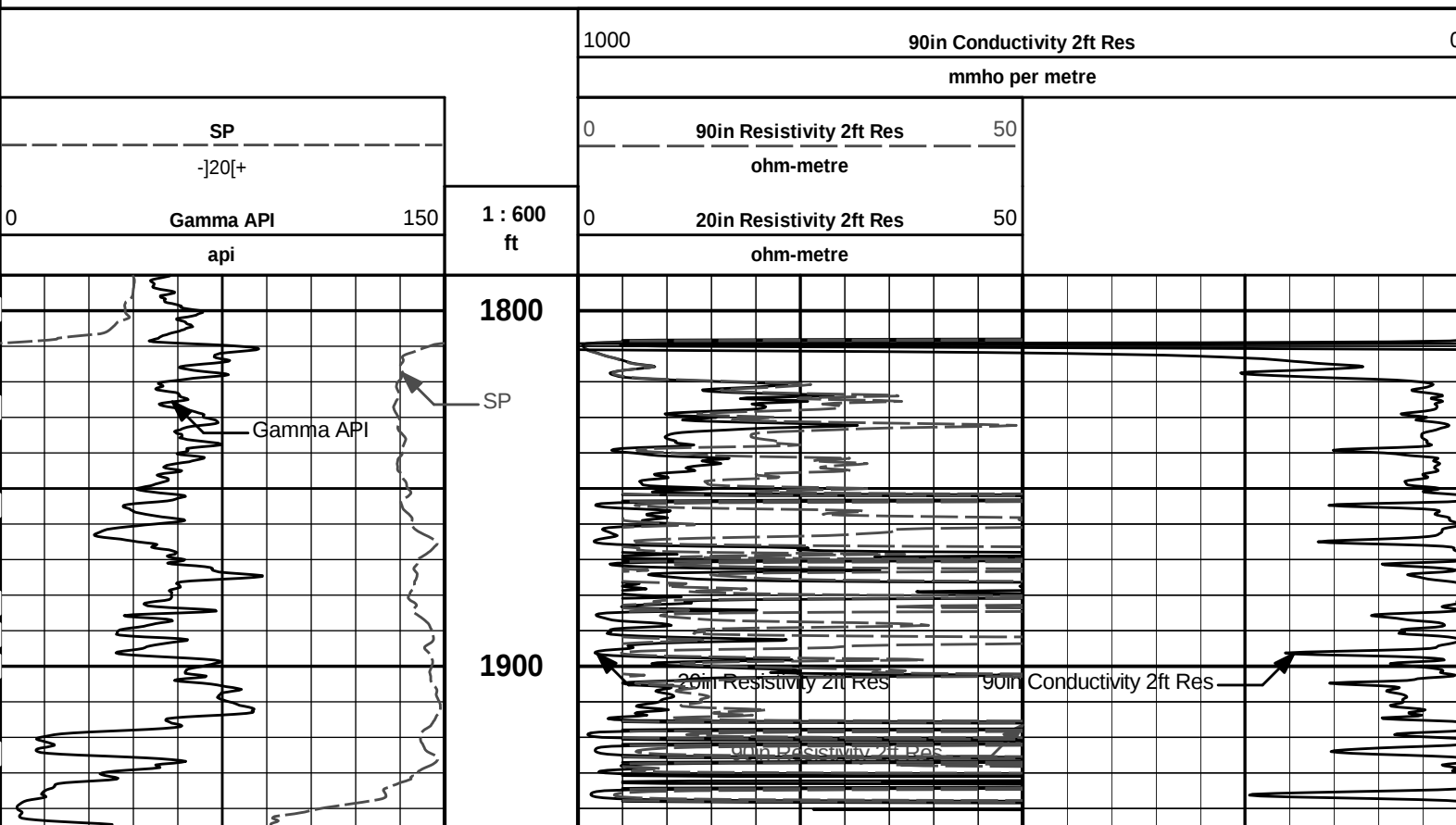
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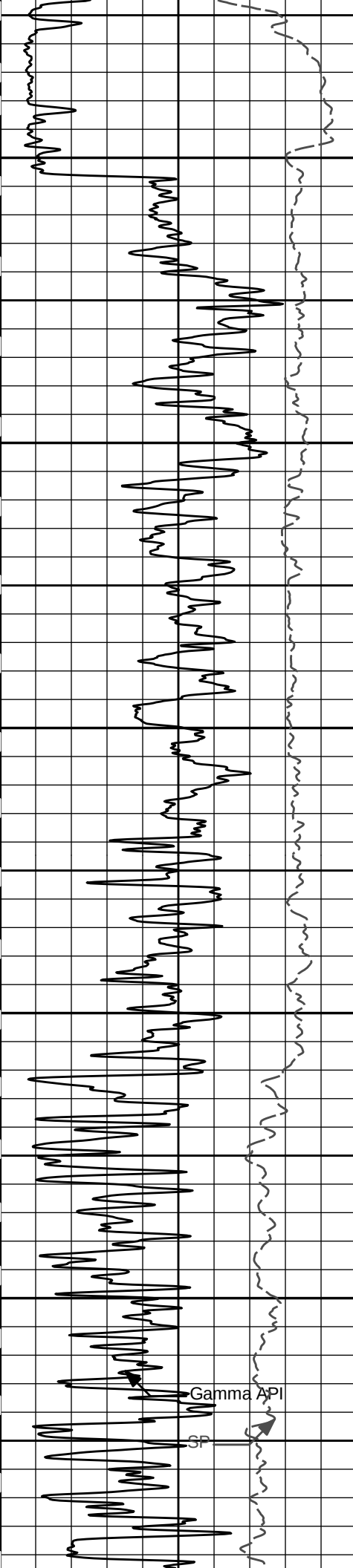
Plot Range: 1790 ft to 4909.83 ft

Data: TURRENTINE\_A4\Well Based\IR1\_CASING\

Plot File: \\LOCAL-ITURRENTINE\_A4\0001 SP-GTET-HFDT-DSNT-SDLT-FLEX-BSAT-ACRT-CH\ACRT\ACRT\_2.lib

## 2 INCH MAIN LOG





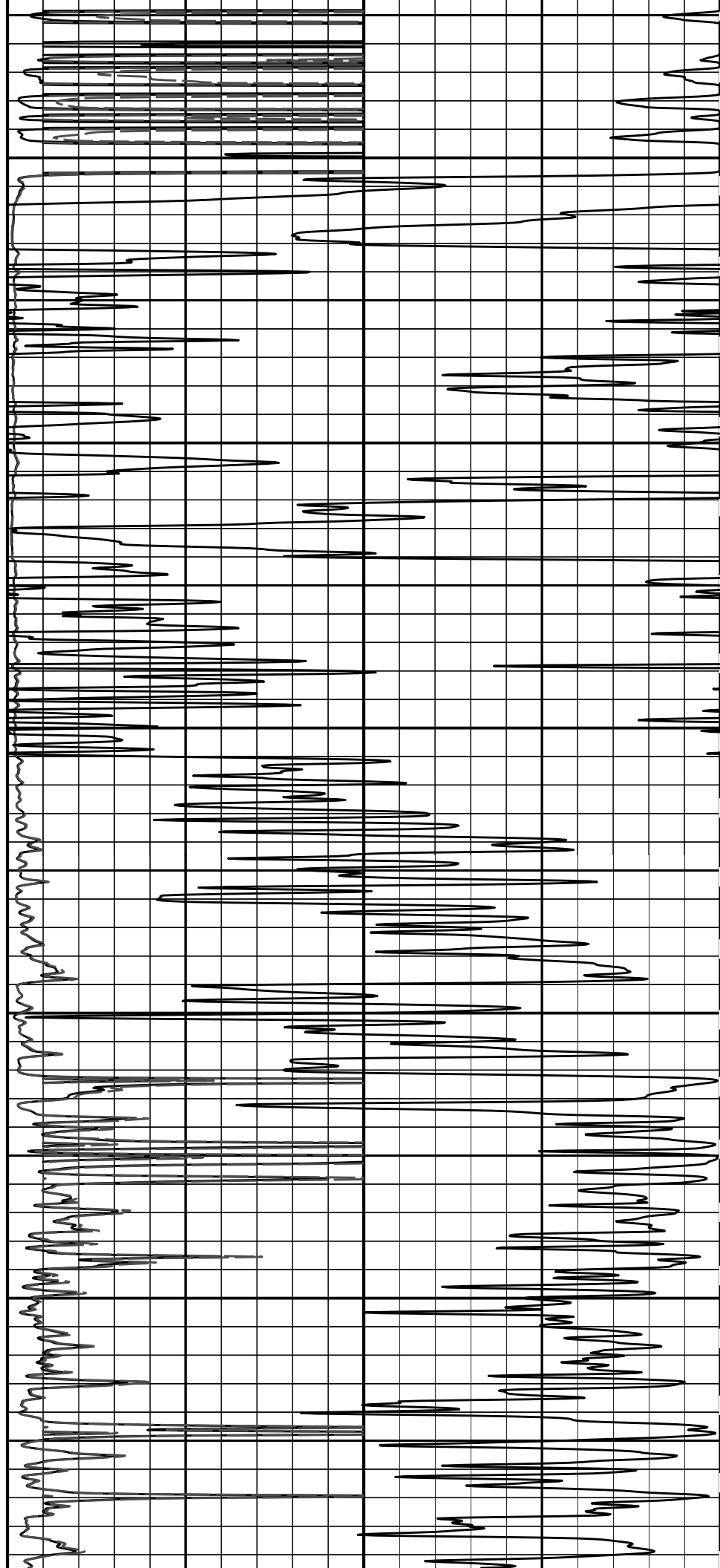
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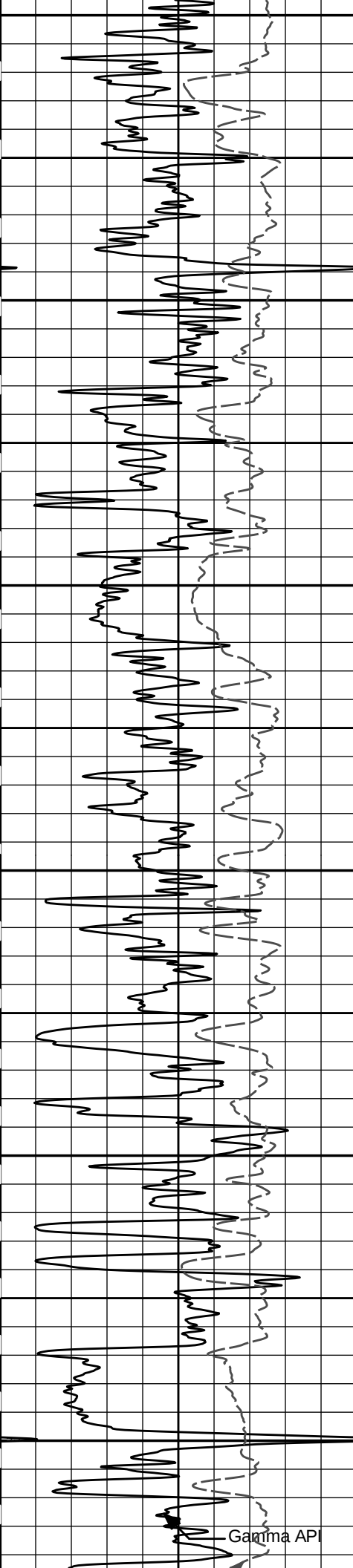
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2300

2400





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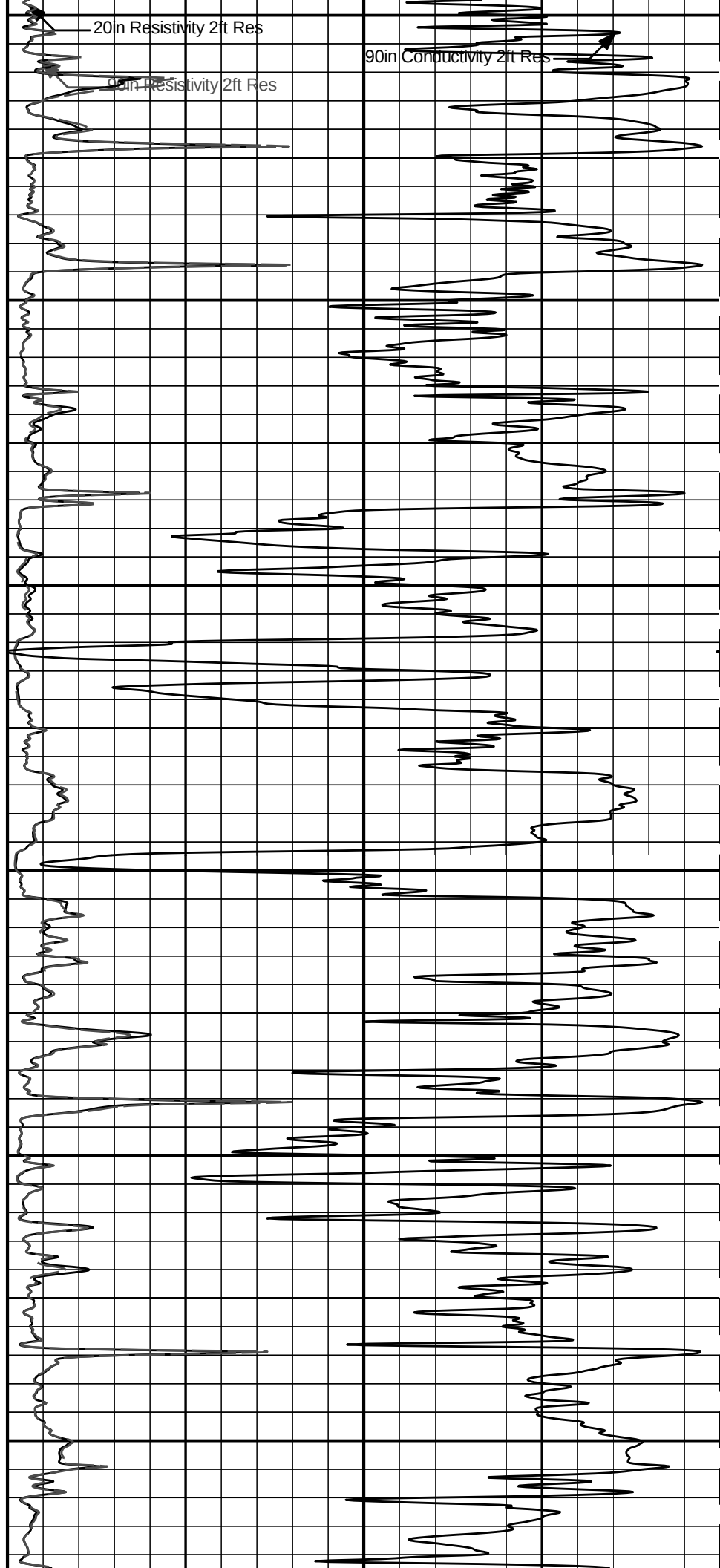
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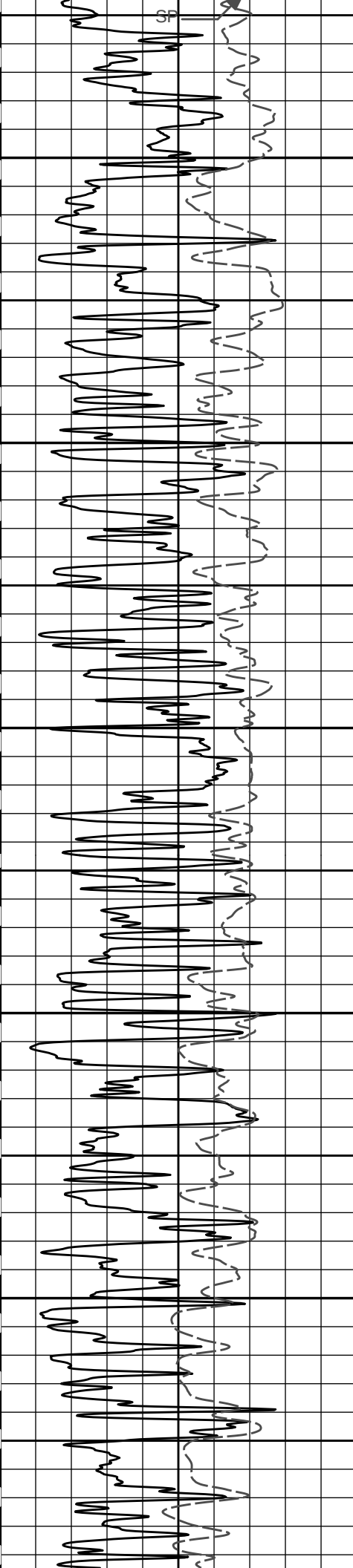
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20in Resistivity 2ft Res

90in Resistivity 2ft Res

90in Conductivity 2ft Res



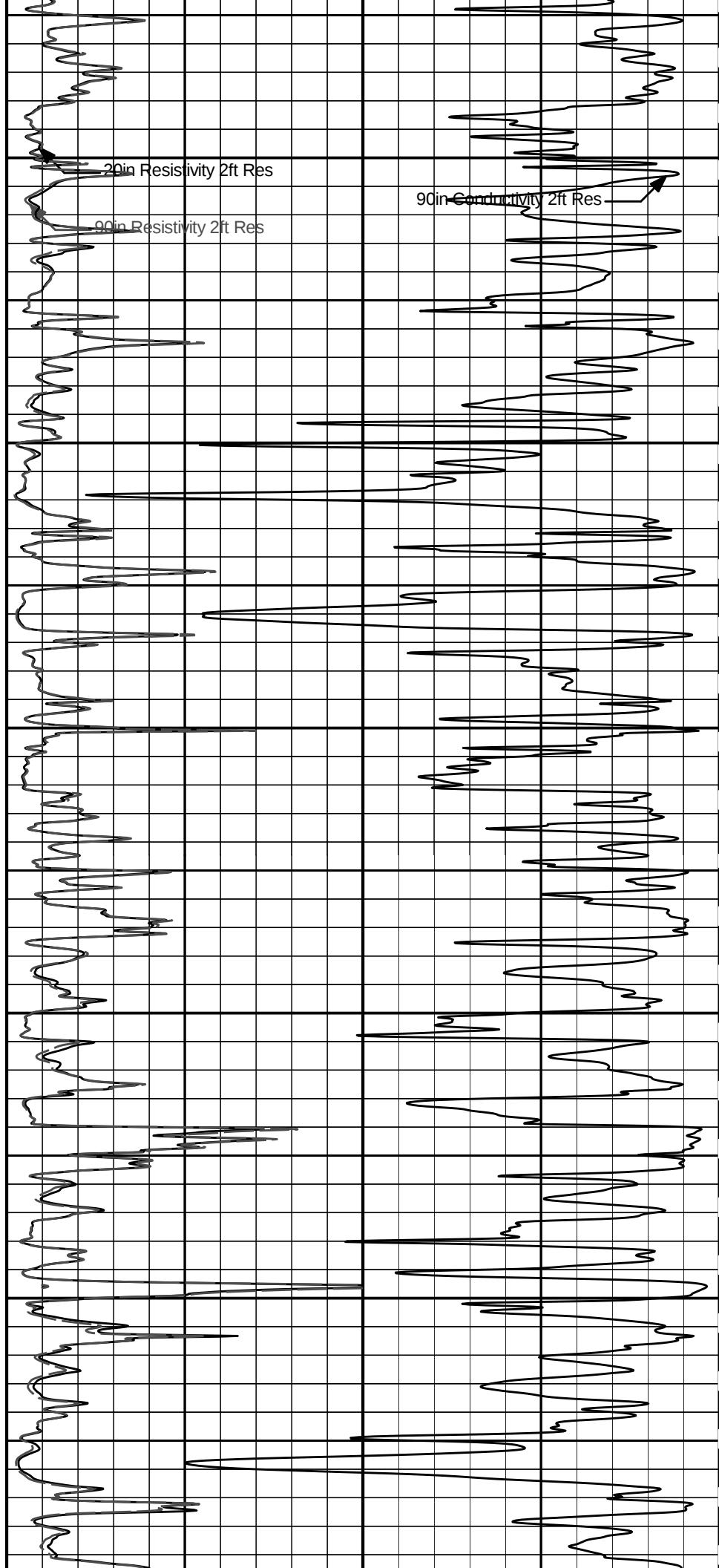
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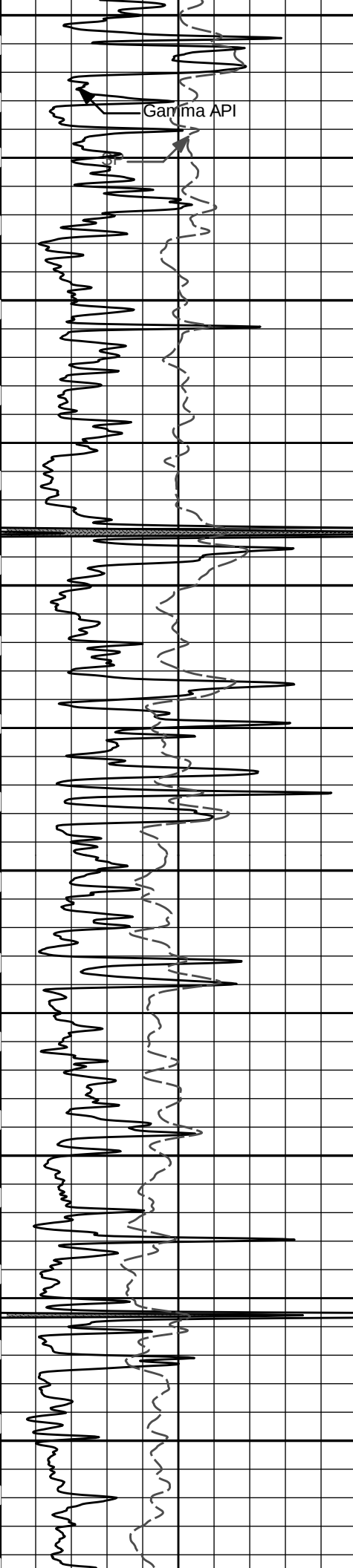
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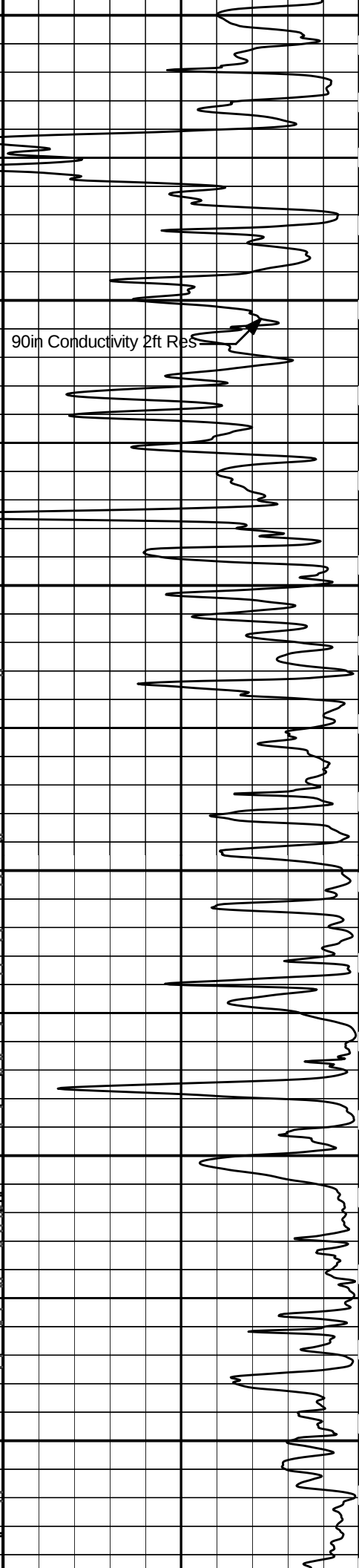
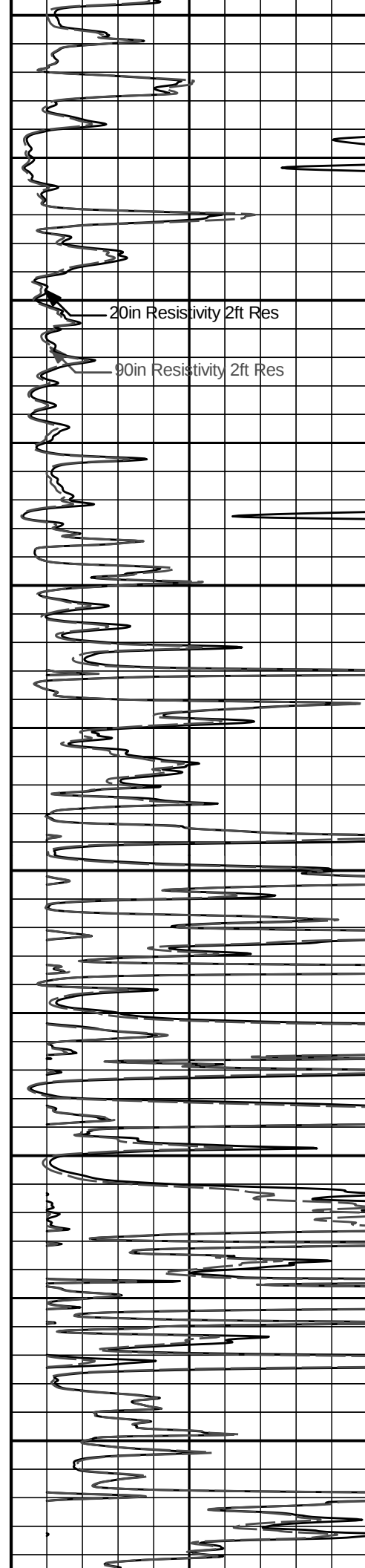
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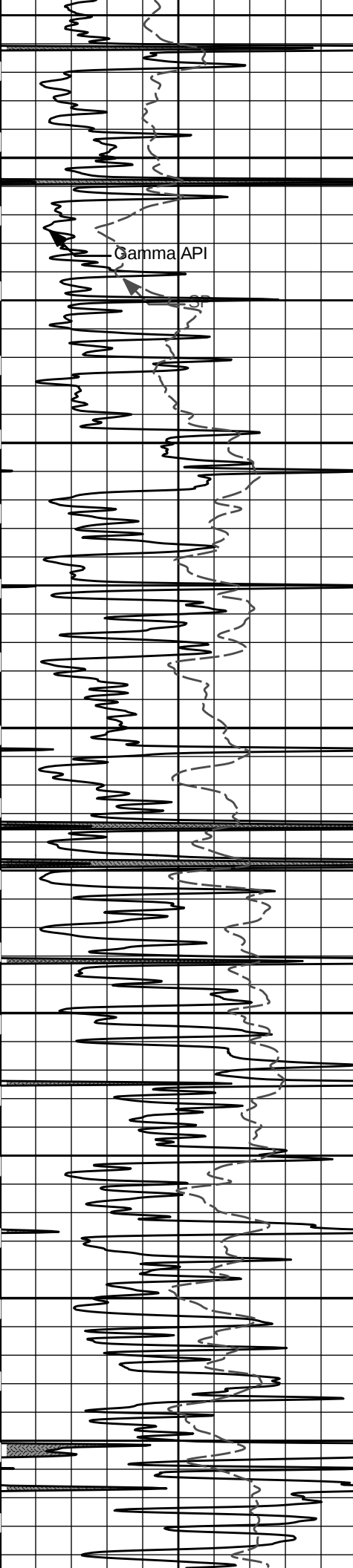
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3600  
3700  
3800  
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4100





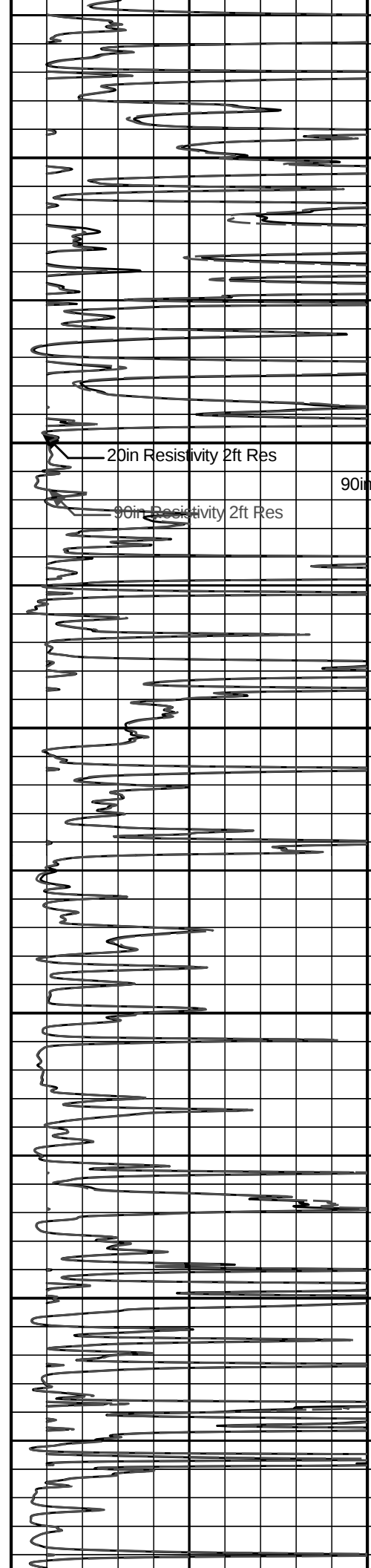
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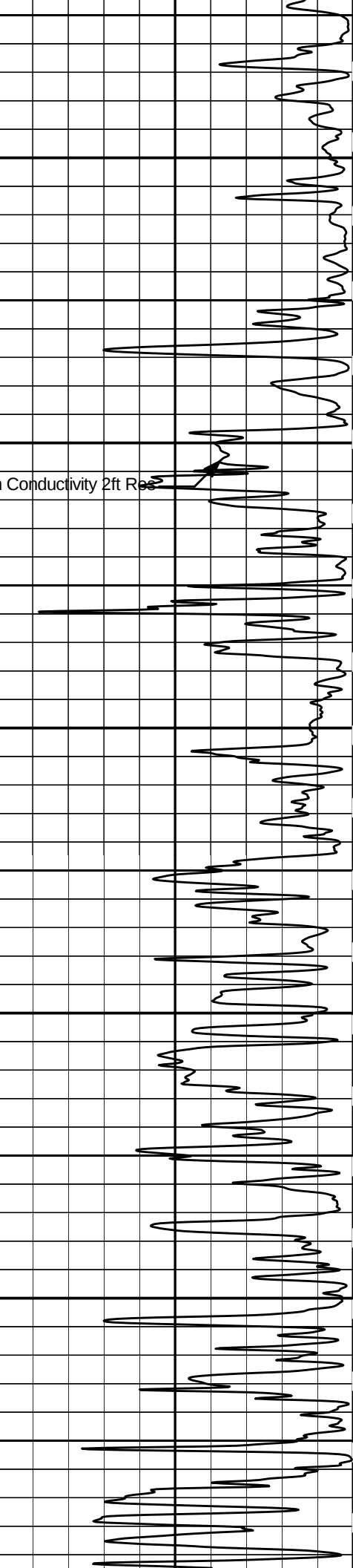
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4600

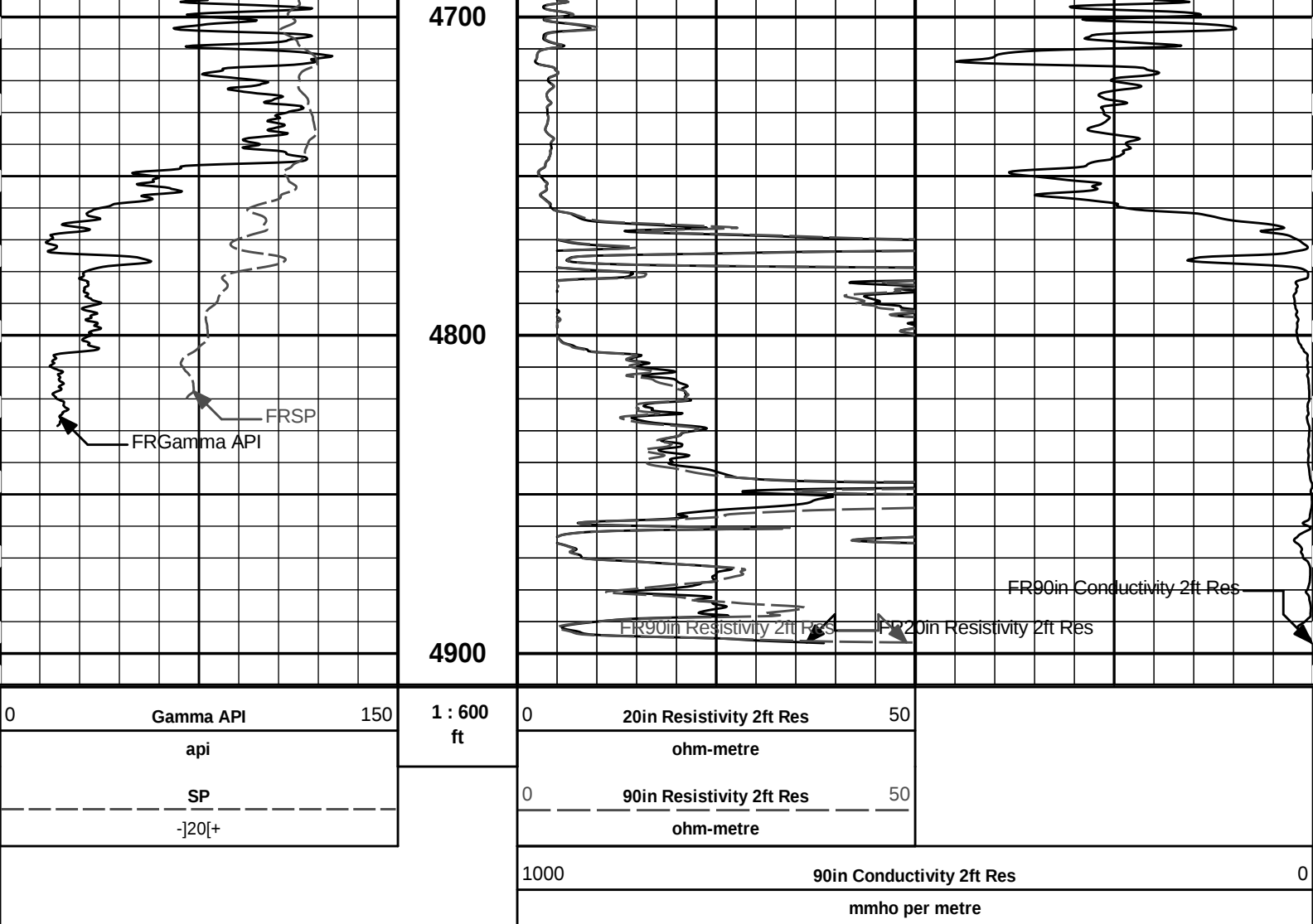


20in Resistivity 2ft Res

90in Resistivity 2ft Res



90in Conductivity 2ft Res



HALLIBURTON

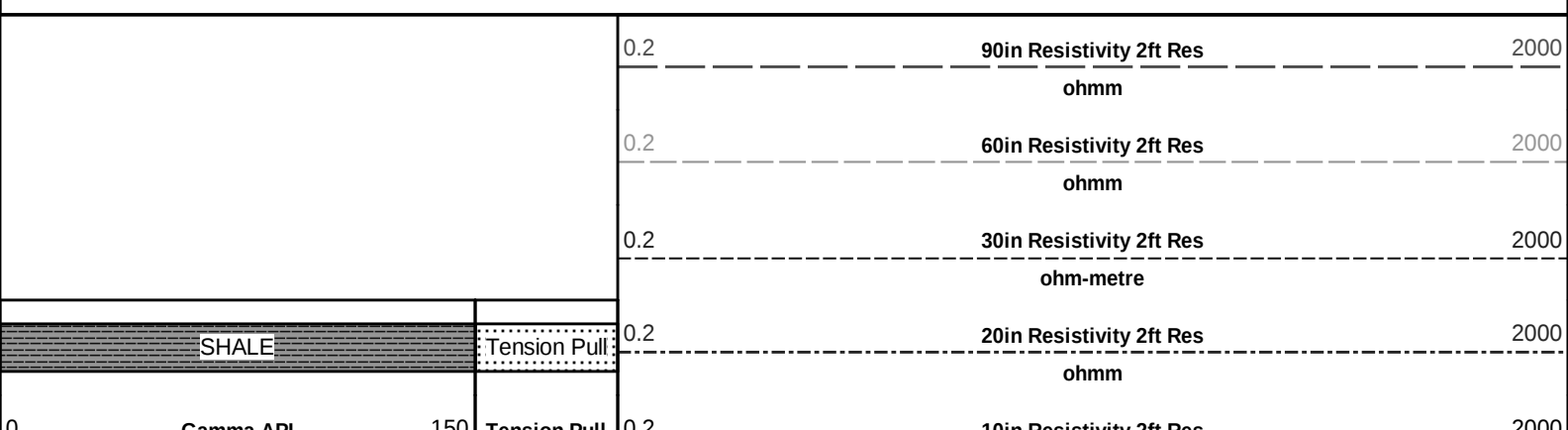
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Plot Range: 1790 ft to 4909.83 ft  
Data: TURRENTINE\_A4\Well Based\IR1\_CASING\  
Plot File: \\LOCAL-ITURRENTINE\_A4\0001 SP-GTET-HFDT-DSNT-SDLT-FLEX-BSAT-ACRT-CHACRT\ACRT\_2\_lib

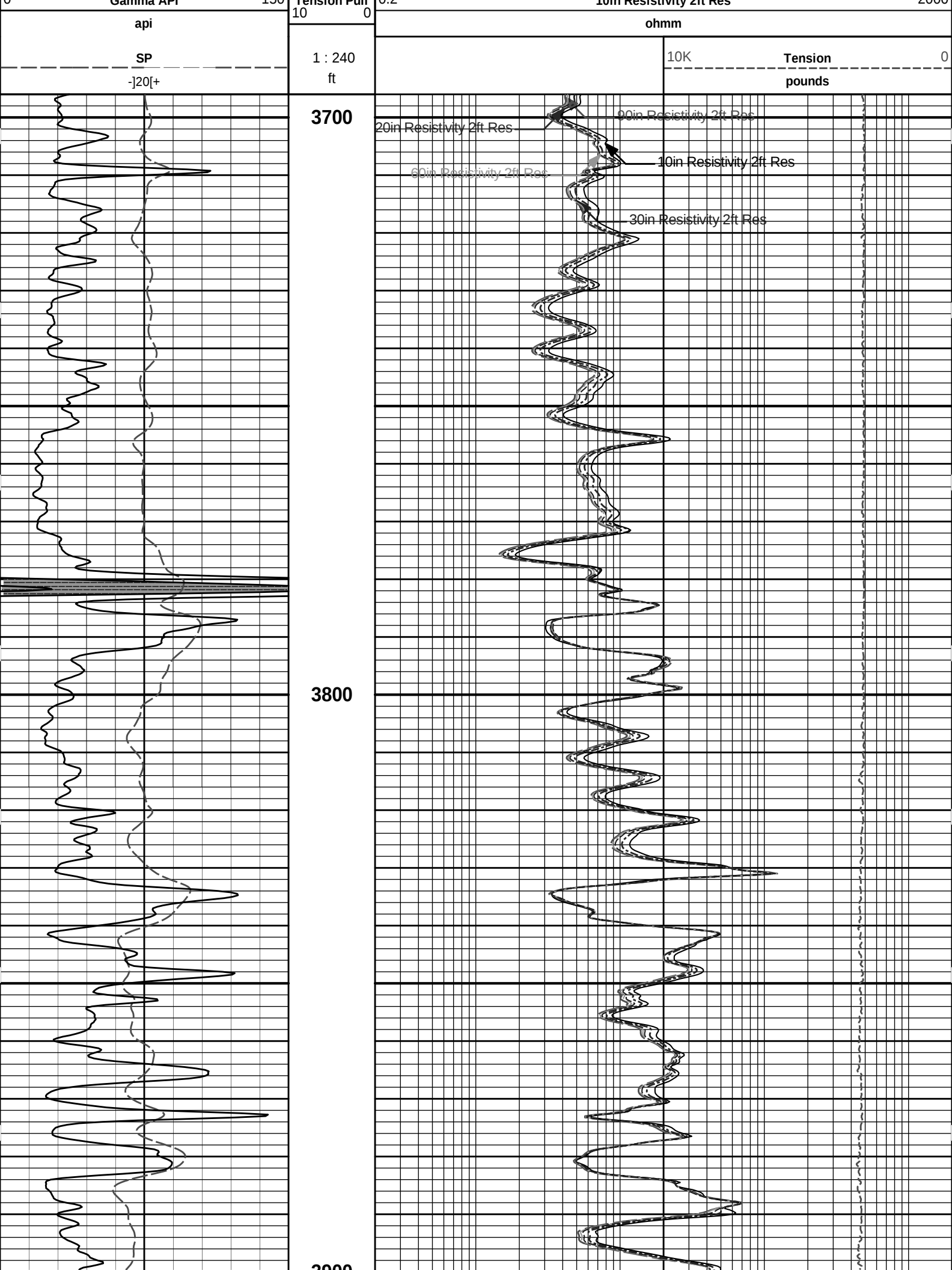
2 INCH MAIN LOG

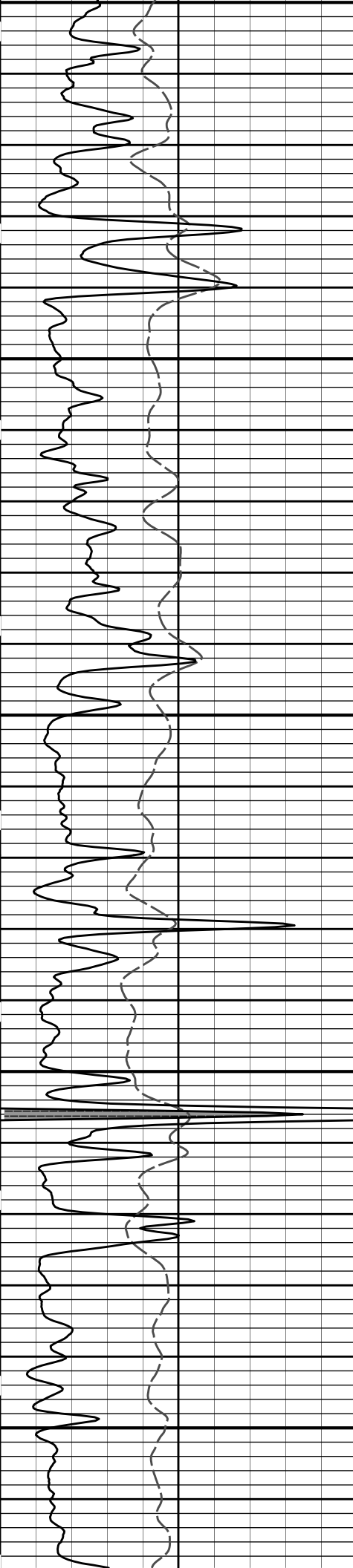
HALLIBURTON

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5 INCH MAIN LOG



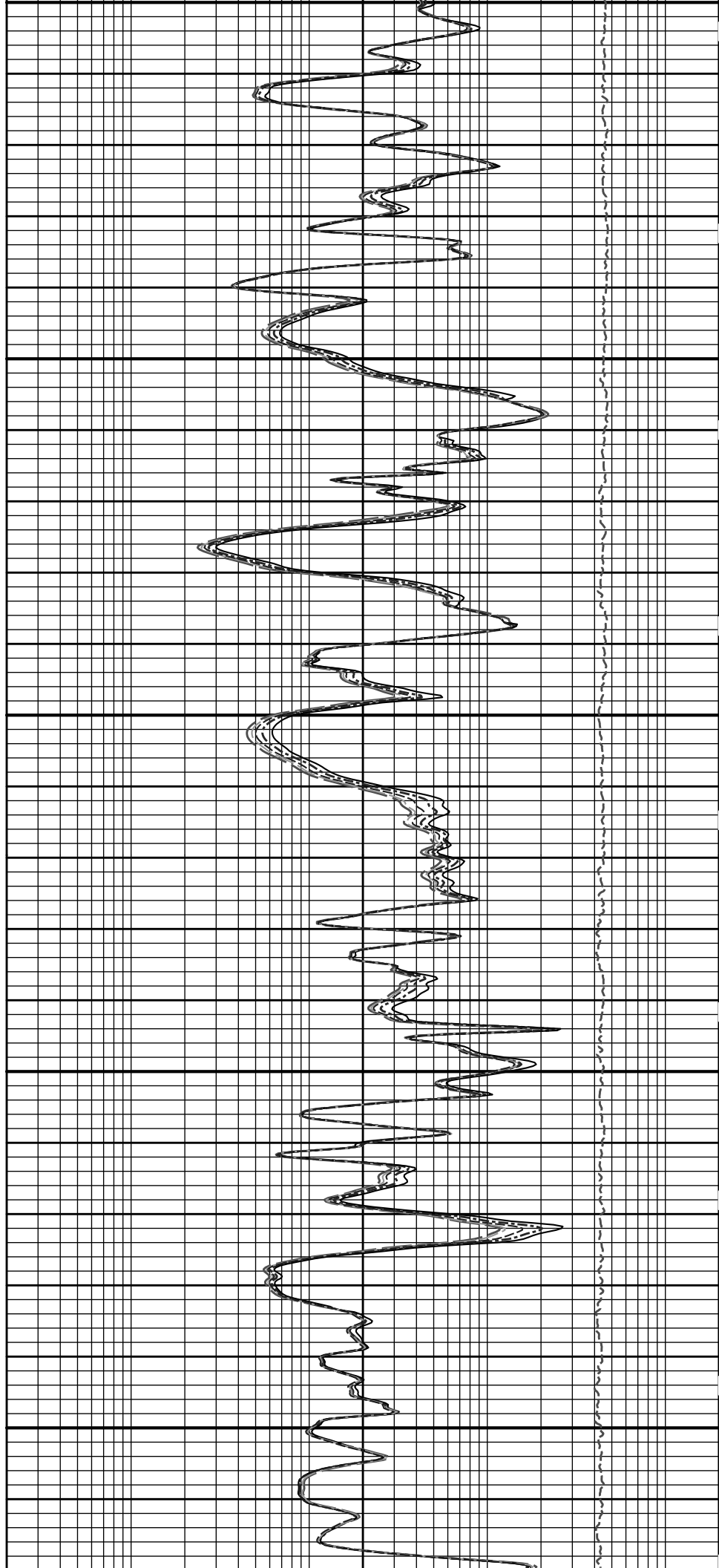


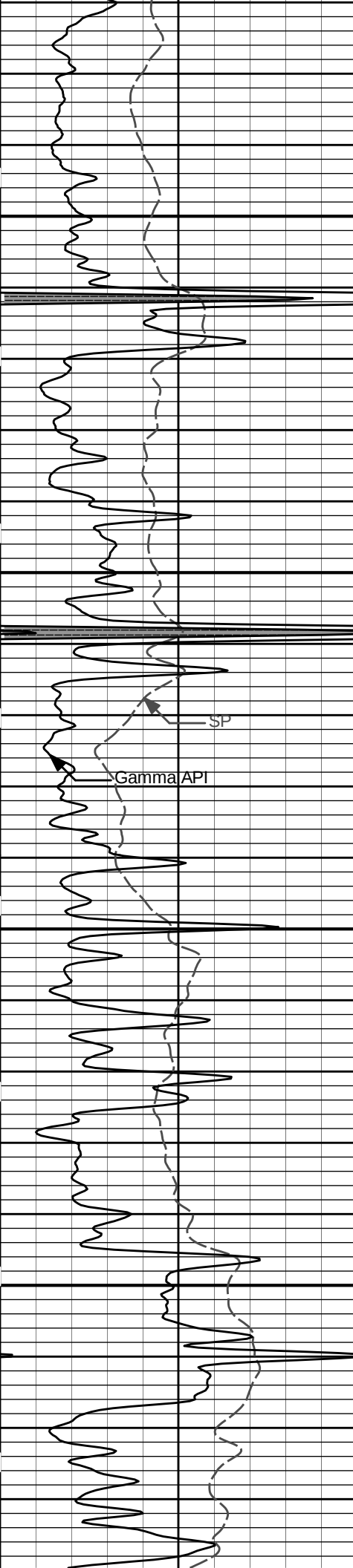


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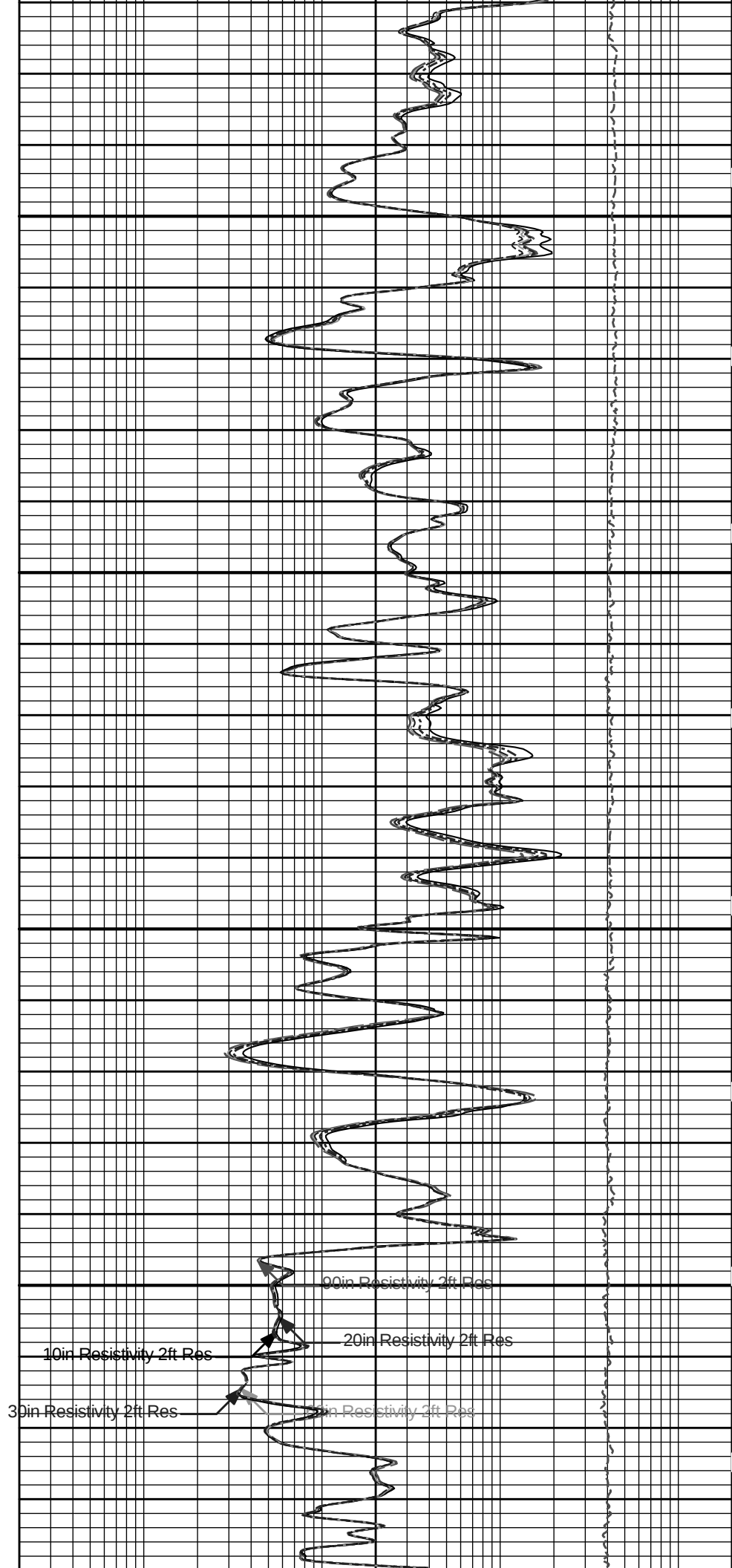
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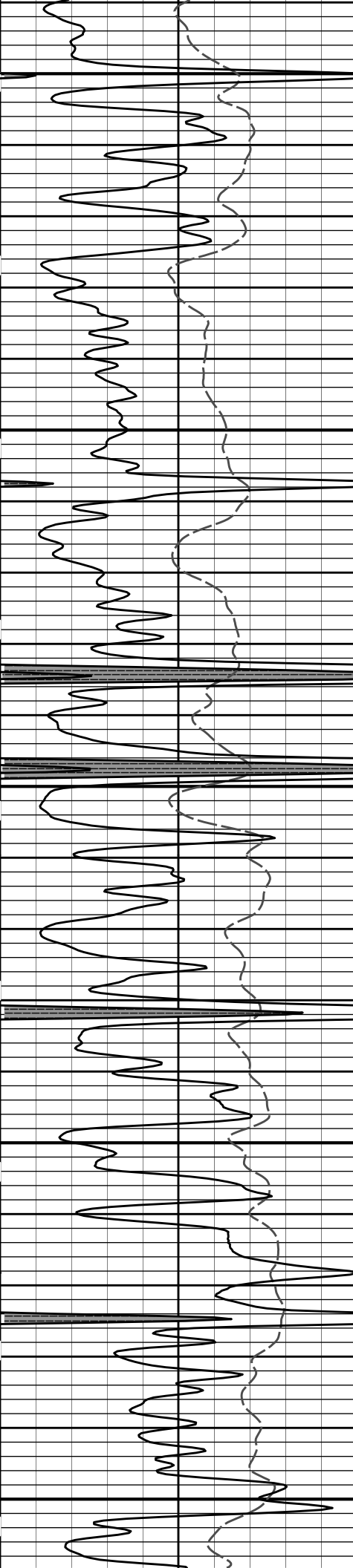
10in Resistivity 2ft Res

40in Resistivity 2ft Res

20in Resistivity 2ft Res

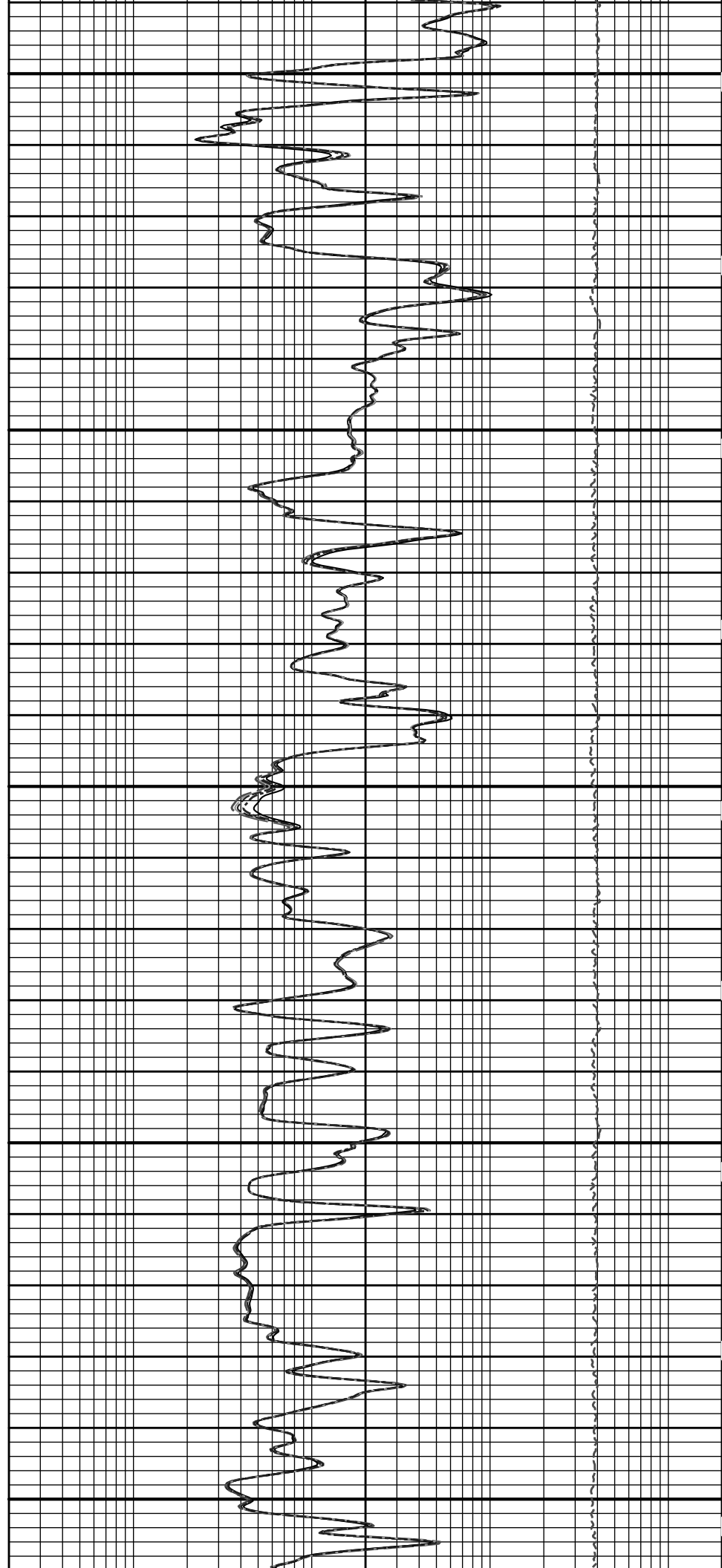
30in Resistivity 2ft Res

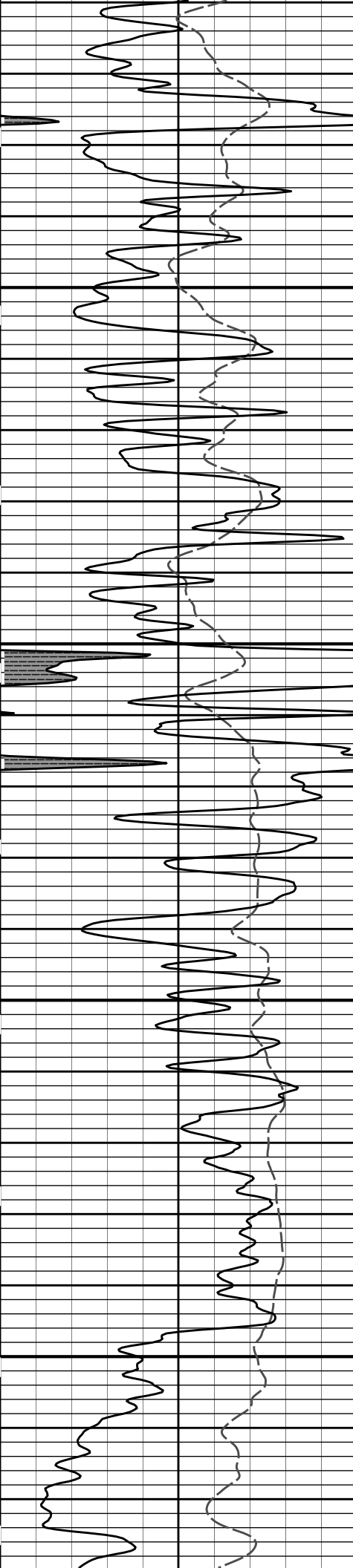
40in Resistivity 2ft Res



4400

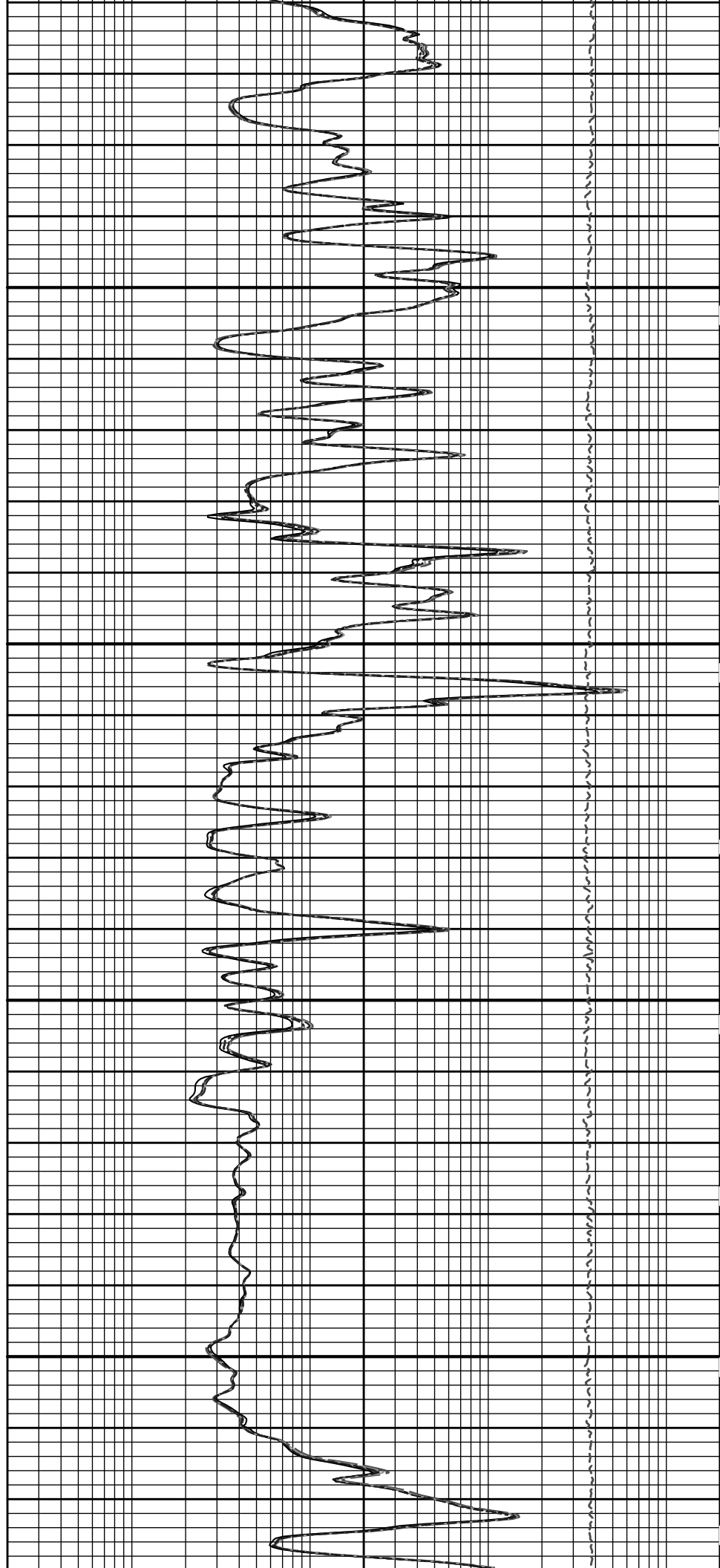
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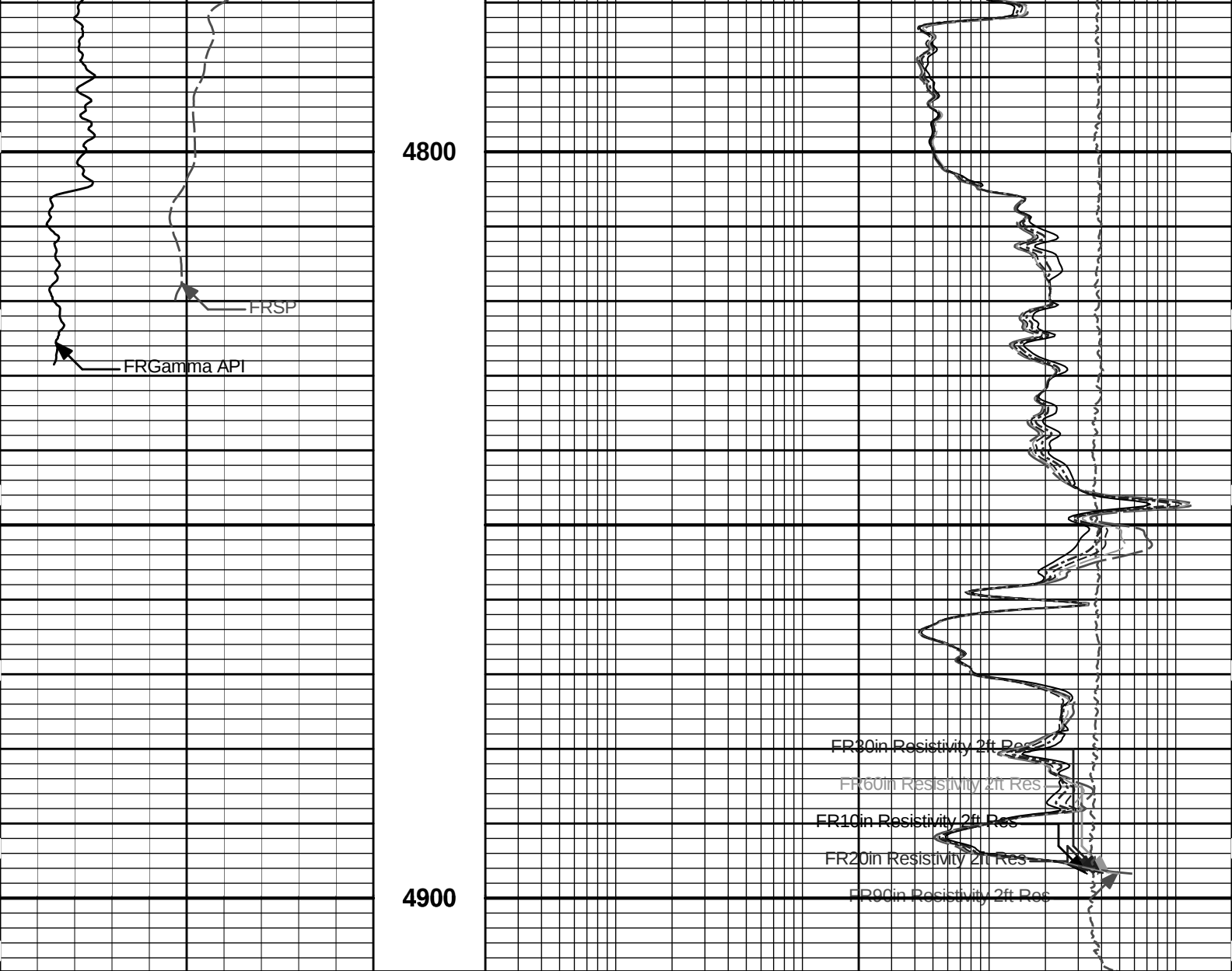




4600

4700





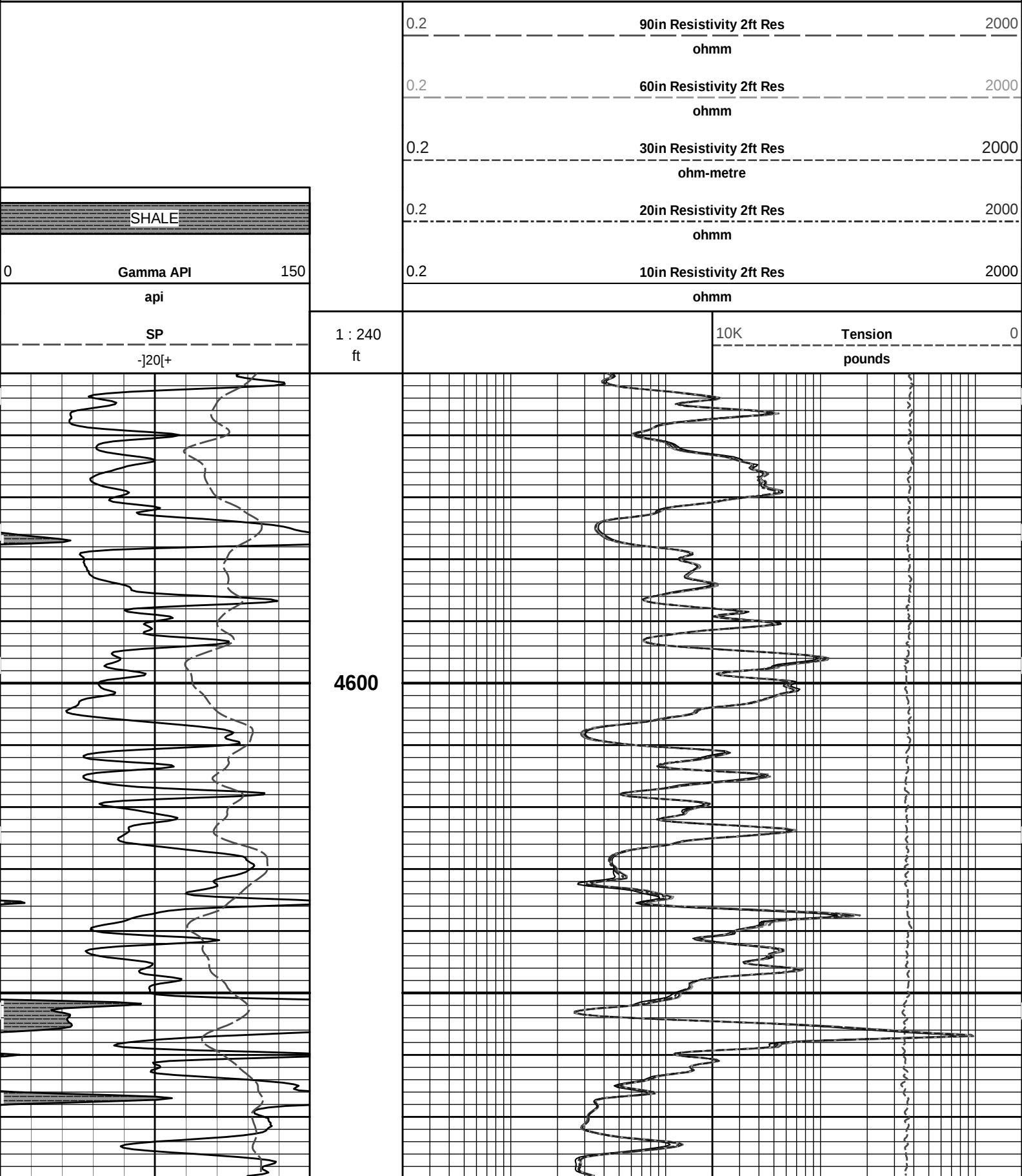
|        |               |                   |                               |                               |
|--------|---------------|-------------------|-------------------------------|-------------------------------|
| SP     |               | 1 : 240<br>ft     | 10K Tension 0                 |                               |
| -]20[+ |               |                   | pounds                        |                               |
| 0      | Gamma API 150 | Tension Pull 10 0 | 0.2                           | 10in Resistivity 2ft Res 2000 |
| api    |               |                   | ohmm                          |                               |
| SHALE  |               | Tension Pull :    | 0.2                           | 20in Resistivity 2ft Res 2000 |
|        |               |                   | ohmm                          |                               |
|        |               |                   | 0.2                           | 30in Resistivity 2ft Res 2000 |
|        |               |                   | ohm-metre                     |                               |
|        |               | 0.2               | 60in Resistivity 2ft Res 2000 |                               |
|        |               | ohmm              |                               |                               |
|        |               | 0.2               | 90in Resistivity 2ft Res 2000 |                               |
|        |               |                   | ohmm                          |                               |

HALLIBURTON

Plot Time: 13-Aug-12 01:12:37  
Plot Range: 3696 ft to 4909.83 ft  
Data: TURRENTINE\_A4\Well Based\R1\_DETAIL\  
Plot File: \\LOCAL-TURRENTINE\_A4\0001 SP-GTET-HFDT-DSNT-SDLT-FLEX-BSAT-ACRT-CH\ACRT\ACRT\_5\_main.lib

5 INCH MAIN LOG

REPEAT SECTION



4700

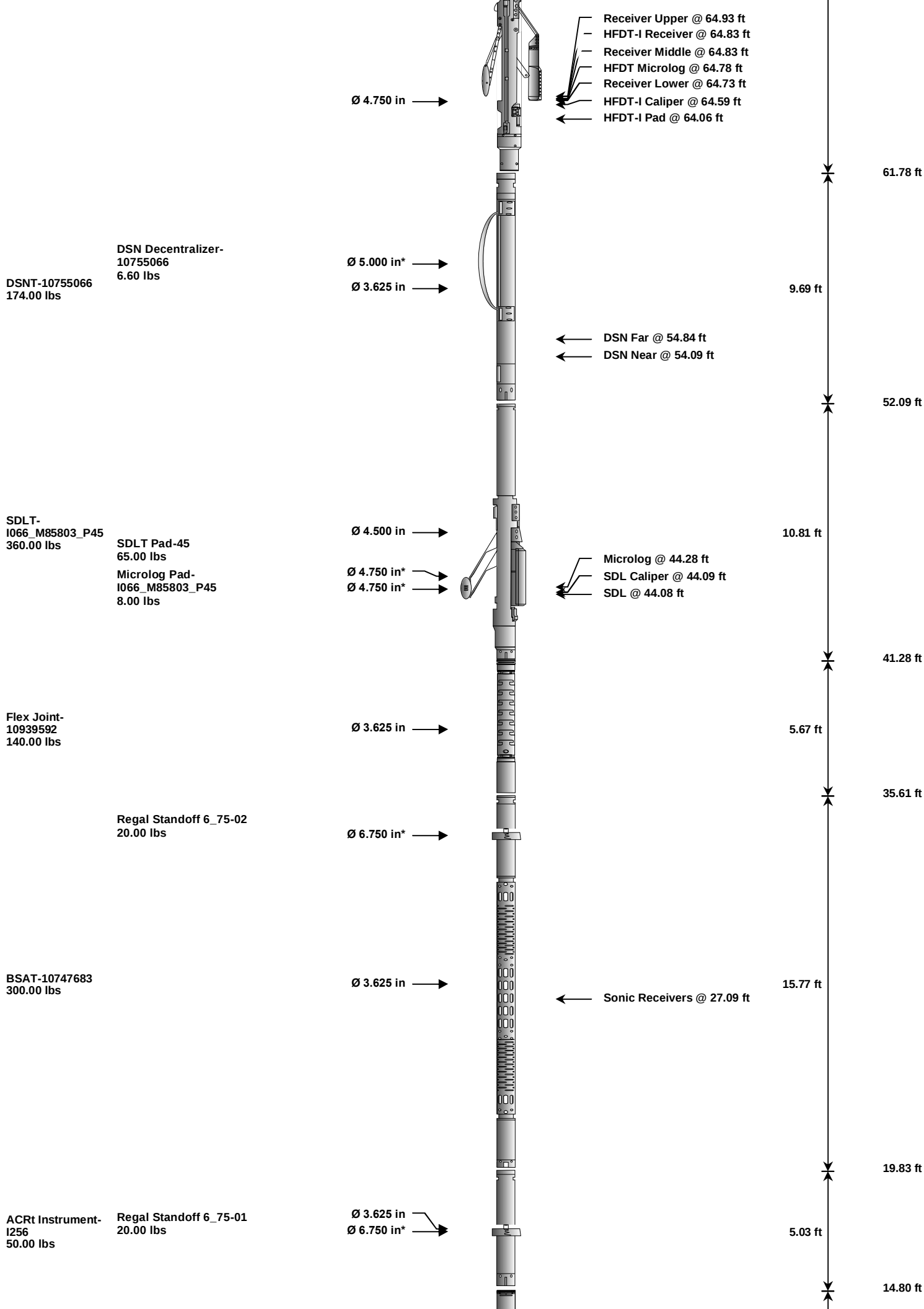
4800

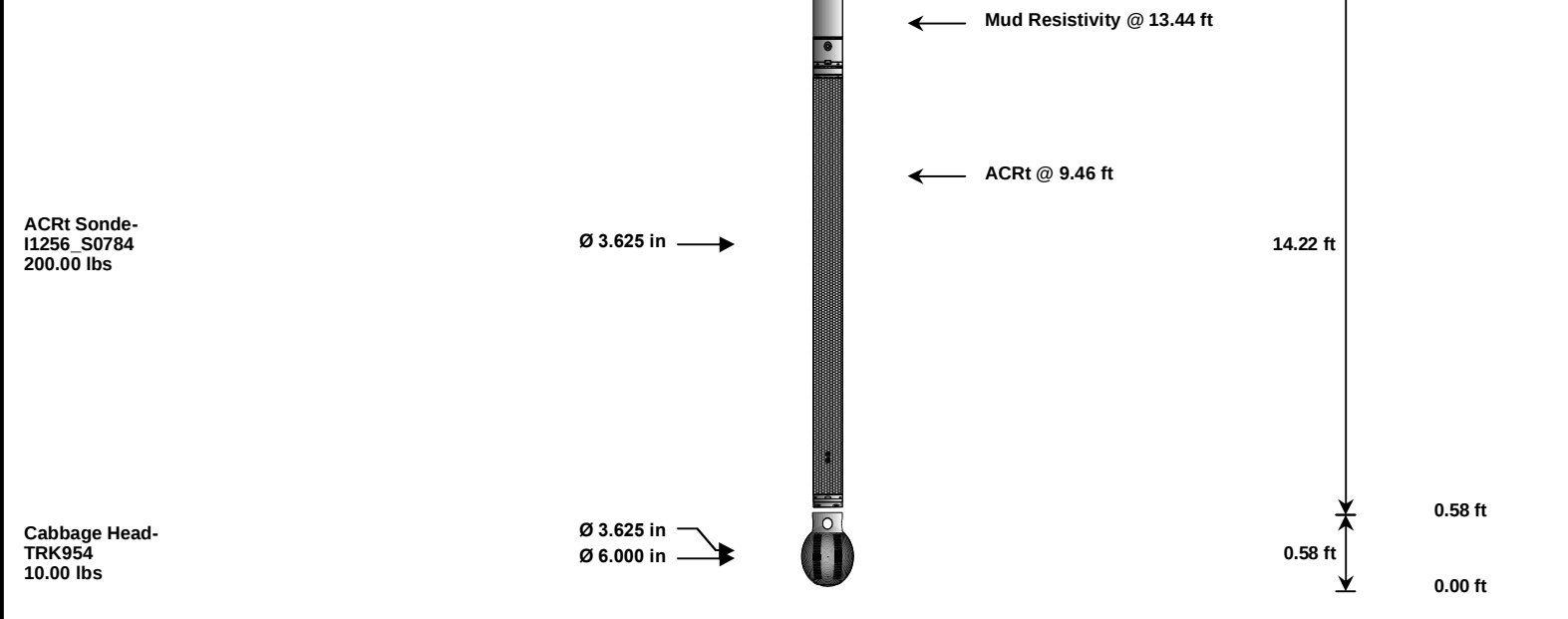
4900

Gamma API  
SP

90in Resistivity 2ft Res  
20in Resistivity 2ft Res  
10in Resistivity 2ft Res  
60in Resistivity 2ft Res  
30in Resistivity 2ft Res







| Mnemonic                                                               |                                                       | Tool Name | Serial Number   | Weight (lbs) | Length (ft) | Accumulated Length (ft) | Max.Log. Speed (fpm) |        |
|------------------------------------------------------------------------|-------------------------------------------------------|-----------|-----------------|--------------|-------------|-------------------------|----------------------|--------|
| CH                                                                     | Standard OH Cable Head                                |           | PROT01          | 30.00        | 1.92        | 90.17                   | 300.00               |        |
| SP                                                                     | SP Sub                                                |           | 11441709        | 60.00        | 3.74        | 86.43                   | 300.00               |        |
| GTET                                                                   | Gamma Telemetry Tool                                  |           | 10811258        | 165.00       | 8.52        | 77.91                   | 60.00                |        |
| HFDT                                                                   | High Frequency Dielectric Tool                        |           | I258M331P434    | 435.00       | 16.14       | 61.78                   | 30.00                |        |
| DSNT                                                                   | Dual Spaced Neutron                                   |           | 10755066        | 174.00       | 9.69        | 52.09                   | 60.00                |        |
| DCNT                                                                   | DSN Decentralizer                                     |           | 10755066        | 6.60         | 5.13        | *                       | 55.42                | 300.00 |
| SDLT                                                                   | Spectral Density Tool                                 |           | I066_M85803_P45 | 360.00       | 10.81       | 41.28                   | 60.00                |        |
| MICP                                                                   | Microlog Pad                                          |           | I066_M85803_P45 | 8.00         | 1.00        | *                       | 43.78                | 60.00  |
| SDLP                                                                   | Density Insite Pad                                    |           | 45              | 65.00        | 2.55        | *                       | 43.49                | 60.00  |
| FLEX                                                                   | Flex Joint                                            |           | 10939592        | 140.00       | 5.67        | 35.61                   | 300.00               |        |
| BSAT                                                                   | Borehole Sonic Array Tool                             |           | 10747683        | 300.00       | 15.77       | 19.83                   | 60.00                |        |
| RSOF                                                                   | Regal Standoff 6.75in                                 |           | 02              | 20.00        | 0.52        | *                       | 33.69                | 300.00 |
| ACRt                                                                   | Array Compensated True Resistivity Instrument Section |           | I256            | 50.00        | 5.03        | 14.80                   | 300.00               |        |
| RSOF                                                                   | Regal Standoff 6.75in                                 |           | 01              | 20.00        | 0.52        | *                       | 17.02                | 300.00 |
| ACRt                                                                   | Array Compensated True Resistivity Sonde Section      |           | I1256_S0784     | 200.00       | 14.22       | 0.58                    | 300.00               |        |
| CBHD                                                                   | Cabbage Head                                          |           | TRK954          | 10.00        | 0.58        | 0.00                    | 300.00               |        |
| Total                                                                  |                                                       |           |                 | 2,043.60     | 92.09       |                         |                      |        |
| * Not included in Total Length and Length Accumulation.                |                                                       |           |                 |              |             |                         |                      |        |
| Data: TURRENTINE_A4\0001 SP-GTET-HFDT-DSNT-SDLT-FLEX-BSAT-ACRT-CH\IDLE |                                                       |           |                 |              |             |                         |                      |        |
| Date: 12-Aug-12 21:23:08                                               |                                                       |           |                 |              |             |                         |                      |        |

# HALLIBURTON

## PARAMETERS REPORT

| Depth ((ft)) | Tool Name | Mnemonic | Description                                           | Value   | Units |
|--------------|-----------|----------|-------------------------------------------------------|---------|-------|
| TOP          |           |          |                                                       |         |       |
|              | SHARED    | BS       | Bit Size                                              | 7.875   | in    |
|              | SHARED    | UBS      | Use Bit Size instead of Caliper for all applications. | No      |       |
|              | SHARED    | MDBS     | Mud Base                                              | Water   |       |
|              | SHARED    | MDWT     | Borehole Fluid Weight                                 | 9.600   | ppg   |
|              | SHARED    | WAGT     | Weighting Agent                                       | Natural |       |
|              | SHARED    | BSAL     | Borehole salinity                                     | 8000.00 | ppm   |
|              | SHARED    | FSAL     | Formation Salinity NaCl                               | 0.00    | ppm   |
|              | SHARED    | KPCT     | Percent K in Mud by Weight?                           | 0.00    | %     |
|              | SHARED    | RMUD     | Mud Resistivity                                       | 0.400   | ohmm  |
|              | SHARED    | TRM      | Temperature of Mud                                    | 89.0    | degF  |
|              | SHARED    | CSD      | Logging Interval is Cased?                            | No      |       |

|                 |      |                                              |            |      |
|-----------------|------|----------------------------------------------|------------|------|
| SHARED          | ICOD | AHV Casing OD                                | 5.500      | in   |
| SHARED          | ST   | Surface Temperature                          | 75.0       | degF |
| SHARED          | TD   | Total Well Depth                             | 4920.00    | ft   |
| SHARED          | BHT  | Bottom Hole Temperature                      | 120.0      | degF |
| SHARED          | SVTM | Navigation and Survey Master Tool            | NONE       |      |
| SHARED          | AZTM | High Res Z Accelerometer Master Tool         | GTET       |      |
| SHARED          | TEMM | Temperature Master Tool                      | NONE       |      |
| SHARED          | BHSM | Borehole Size Master Tool                    | NONE       |      |
| Rwa / CrossPlot | XPOK | Process Crossplot?                           | Yes        |      |
| Rwa / CrossPlot | FCHO | Select Source of F                           | Automatic  |      |
| Rwa / CrossPlot | AFAC | Archie A factor                              | 0.6200     |      |
| Rwa / CrossPlot | MFAC | Archie M factor                              | 2.1500     |      |
| Rwa / CrossPlot | RMFR | Rmf Reference                                | 0.10       | ohmm |
| Rwa / CrossPlot | TMFR | Rmf Ref Temp                                 | 75.00      | degF |
| Rwa / CrossPlot | RWA  | Resistivity of Formation Water               | 0.05       | ohmm |
| Rwa / CrossPlot | ADP  | Use Air Porosity to calculate CrossplotPhi   | No         |      |
| GTET            | GROK | Process Gamma Ray?                           | Yes        |      |
| GTET            | GRSO | Gamma Tool Standoff                          | 0.000      | in   |
| GTET            | GEOK | Process Gamma Ray EVR?                       | No         |      |
| GTET            | TPOS | Tool Position for Gamma Ray Tools.           | Eccentered |      |
| HFDT-I          | HFOK | Do HFDT Calculations?                        | Yes        |      |
| HFDT-I          | RMF  | Mud Filtrate Resistivity                     | 0.10       | ohmm |
| HFDT-I          | RMFT | Temperature of Mud Filtrate                  | 175.00     | degF |
| HFDT-I          | MDIL | Matrix Dielectric Constant                   | 4.650      |      |
| HFDT-I          | HRTC | HFDT Insite Temperature Correction Source    | PADTEMP1   |      |
| HFDT-I          | CLOK | Process Caliper Outputs?                     | Yes        |      |
| HFDT-I          | SAO  | SDL Backup Arm Offset                        | 0.00       | in   |
| HFDT-I          | PAO  | Pad Arm Offset                               | 0.00       | in   |
| HFDT-I          | MLOK | Process MicroLog Outputs?                    | Yes        |      |
| HFDT-I          | MINO | Microlog Lateral Offset                      | 0.00       | ohmm |
| HFDT-I          | MNOO | Microlog Normal Offset                       | 0.00       | ohmm |
| DSNT            | DNOK | Process DSN?                                 | Yes        |      |
| DSNT            | DEOK | Process DSN EVR?                             | No         |      |
| DSNT            | NLIT | Neutron Lithology                            | Limestone  |      |
| DSNT            | DNSO | DSN Standoff - 0.25 in (6.35 mm) Recommended | 0.250      | in   |
| DSNT            | DNTP | Temperature Correction Type                  | None       |      |
| DSNT            | DPRS | DSN Pressure Correction Type                 | None       |      |
| DSNT            | SHCO | View More Correction Options                 | No         |      |
| DSNT            | UTVD | Use TVD for Gradient Corrections?            | No         |      |
| DSNT            | LHWT | Logging Horizontal Water Tank?               | No         |      |
| SDLT            | CLOK | Process Caliper Outputs?                     | Yes        |      |
| SDLT Pad        | DNOK | Process Density?                             | Yes        |      |
| SDLT Pad        | DNOK | Process Density EVR?                         | No         |      |
| SDLT Pad        | CB   | Logging Calibration Blocks?                  | No         |      |
| SDLT Pad        | SPVT | SDLT Pad Temperature Valid?                  | Yes        |      |
| SDLT Pad        | DTWN | Disable temperature warning                  | No         |      |
| SDLT Pad        | DMA  | Formation Density Matrix                     | 2.710      | g/cc |
| SDLT Pad        | DFL  | Formation Density Fluid                      | 1.000      | g/cc |
| Microlog Pad    | MLOK | Process MicroLog Outputs?                    | Yes        |      |
| BSAT            | MBOK | Compute BCAS Results?                        | Yes        |      |
| BSAT            | FLLO | Frequency Filter Low Pass Value?             | 5000       | Hz   |

|                                                                        |      |                                   |                          |      |
|------------------------------------------------------------------------|------|-----------------------------------|--------------------------|------|
| BSAT                                                                   | FLHI | Frequency Filter High Pass Value? | 27000                    | Hz   |
| BSAT                                                                   | DTFL | Delta -T Fluid                    | 189.00                   | uspf |
| BSAT                                                                   | DTMT | Delta -T Matrix Type              | User define              |      |
| BSAT                                                                   | DTMA | Delta -T Matrix                   | 47.60                    | uspf |
| BSAT                                                                   | DTSH | Delta -T Shale                    | 100.00                   | uspf |
| BSAT                                                                   | SPEQ | Acoustic Porosity Equation        | Wylie                    |      |
| ACRt Sonde                                                             | RTOK | Process ACRt?                     | Yes                      |      |
| ACRt Sonde                                                             | MNSO | Minimum Tool Standoff             | 1.50                     | in   |
| ACRt Sonde                                                             | TCS1 | Temperature Correction Source     | FP Lwr & FP Upr          |      |
| ACRt Sonde                                                             | TPOS | Tool Position                     | Free Hanging             |      |
| ACRt Sonde                                                             | RMOP | Rmud Source                       | Mud Cell                 |      |
| ACRt Sonde                                                             | RMIN | Minimum Resistivity for MAP       | 0.20                     | ohmm |
| ACRt Sonde                                                             | RMIN | Maximum Resistivity for MAP       | 200.00                   | ohmm |
| ACRt Sonde                                                             | THQY | Threshold Quality                 | 0.50                     |      |
| ACRt Sonde                                                             | MRFX | Fixed mud resistivity             | 2000                     | ohmm |
| BOTTOM                                                                 |      |                                   |                          |      |
| Data: TURRENTINE_A4I0001 SP-GTET-HFDT-DSNT-SDLT-FLEX-BSAT-ACRT-CHUIDLE |      |                                   | Date: 12-Aug-12 21:25:18 |      |

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CALIBRATION REPORT

| ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION |                            |  |                             |                    |
|-----------------------------------------------------|----------------------------|--|-----------------------------|--------------------|
| Tool Name:                                          | ACRt Sonde - I1256_S0784   |  | Reference Calibration Date: | 07-Jul-12 12:08:04 |
| Engineer:                                           | T. HYDE                    |  | Calibration Date:           | 11-Jul-12 09:38:13 |
| Software Version:                                   | WL INSITE R3.6.0 (Build 3) |  | Calibration Version:        | 1                  |
| Host Tool Name:                                     | ACRt Instrument - I256     |  |                             |                    |

| TYPICAL GAIN RANGE |        |          |       |        |          |       |        |          |       |
|--------------------|--------|----------|-------|--------|----------|-------|--------|----------|-------|
| Subarray           | R12KHz |          |       | R36KHz |          |       | R72KHz |          |       |
|                    | Lower  | (mmho/m) | Upper | Lower  | (mmho/m) | Upper | Lower  | (mmho/m) | Upper |
| A1 (80")           | 0.95   | 1.01     | 1.05  | 0.95   | 1.01     | 1.05  | 0.95   | 1.00     | 1.05  |
| A2 (50")           | 0.95   | 1.01     | 1.05  | 0.95   | 1.01     | 1.05  | 0.95   | 1.00     | 1.05  |
| A3 (29")           | 0.95   | 1.01     | 1.05  | 0.95   | 1.01     | 1.05  | 0.95   | 1.00     | 1.05  |
| A4 (17")           | 0.95   | 1.01     | 1.05  | 0.95   | 1.01     | 1.05  | 0.95   | 1.00     | 1.05  |
| A5 (10")           | N/A    | N/A      | N/A   | 0.95   | 1.00     | 1.05  | 0.95   | 0.99     | 1.05  |
| A6 (6")            | N/A    | N/A      | N/A   | 0.95   | 0.98     | 1.05  | 0.95   | 0.98     | 1.05  |

| TYPICAL SONDE OFFSET RANGE |        |          |       |        |          |       |        |          |       |
|----------------------------|--------|----------|-------|--------|----------|-------|--------|----------|-------|
| Subarray                   | R12KHz |          |       | R36KHz |          |       | R72KHz |          |       |
|                            | Lower  | (mmho/m) | Upper | Lower  | (mmho/m) | Upper | Lower  | (mmho/m) | Upper |
| A1 (80")                   | -5     | -0.61    | 2     | -6     | -4.02    | -2    | -8     | -5.17    | -2    |
| A2 (50")                   | -7     | -1.85    | 0     | -7     | -3.61    | 0     | -7     | -4.31    | 0     |
| A3 (29")                   | -27    | -16.24   | -9    | -9     | -4.70    | -3    | -7     | -3.29    | -1    |
| A4 (17")                   | -180   | -98.13   | -60   | -45    | -32.80   | -15   | -39    | -26.77   | -13   |
| A5 (10")                   | N/A    | N/A      | N/A   | -150   | -97.06   | -50   | -80    | -48.76   | -10   |
| A6 (6")                    | N/A    | N/A      | N/A   | 175    | 293.49   | 525   | 90     | 155.40   | 270   |

| TRANSMITTER CURRENT GAIN |       |      |       |  | R-MUD VERIFICATION |               |                  |               |
|--------------------------|-------|------|-------|--|--------------------|---------------|------------------|---------------|
| Signal                   | Lower | R    | Upper |  | Signal             | Lower (ohm-m) | Measured (ohm-m) | Upper (ohm-m) |
| 12K                      | 0.6   | 0.88 | 1.3   |  | Mud Cell           | 0.95          | 1.00             | 1.05          |

|                                                                                                                                                                                                                                                                      |     |      |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|-----|
| 36K                                                                                                                                                                                                                                                                  | 1.0 | 1.20 | 2.0 |
| 72K                                                                                                                                                                                                                                                                  | 1.0 | 1.54 | 2.0 |
| <div>PASS/FAIL SUMMARY</div> <div> <div>GAIN RANGE CHK</div> <div>PASS</div> </div> <div> <div>SONDE OFFSET RANGE CHK</div> <div>PASS</div> </div> <div> <div>Tx CURRENT GAIN</div> <div>PASS</div> </div> <div> <div>Rmud VERIFICATION</div> <div>PASS</div> </div> |     |      |     |
| TOOL OK TO LOG                                                                                                                                                                                                                                                       |     |      |     |

| CALIBRATION SUMMARY                                                   |      |       |       |            |                          |       |
|-----------------------------------------------------------------------|------|-------|-------|------------|--------------------------|-------|
| Sensor                                                                | Shop | Field | Post  | Difference | Tolerance                | Units |
| ACRt Sonde-I1256_S0784                                                |      |       |       |            |                          |       |
| Mud Cell                                                              | 1.00 | ----- | ----- | 0.00       | -----                    | ohm-m |
| Data: TURRENTINE_A4I0001 SP-GTET-HFDT-DSNT-SDLT-FLEX-BSAT-ACRT-CHIDLE |      |       |       |            | Date: 12-Aug-12 21:28:34 |       |

| HALLIBURTON                      |                                                                 |                   |            |             |                    |
|----------------------------------|-----------------------------------------------------------------|-------------------|------------|-------------|--------------------|
| INPUTS, DELAYS AND FILTERS TABLE |                                                                 |                   |            |             |                    |
| Mnemonic                         |                                                                 | Input Description | Delay (ft) | Filter Type | Filter Length (ft) |
| Depth Panel                      |                                                                 |                   |            |             |                    |
| TENS                             | Tension                                                         |                   | 0.00       | NO          |                    |
| SP Sub                           |                                                                 |                   |            |             |                    |
| PLTC                             | Plot Control Mask                                               |                   | 88.39      | NO          |                    |
| SP                               | Spontaneous Potential                                           |                   | 88.39      | BLK         | 1.250              |
| SPR                              | Raw Spontaneous Potential                                       |                   | 88.39      | NO          |                    |
| SPO                              | Spontaneous Potential Offset                                    |                   | 88.39      | NO          |                    |
| GTET                             |                                                                 |                   |            |             |                    |
| TPUL                             | Tension Pull                                                    |                   | 80.37      | NO          |                    |
| GR                               | Natural Gamma Ray API                                           |                   | 80.37      | TRI         | 1.750              |
| GRU                              | Unfiltered Natural Gamma Ray API                                |                   | 80.37      | NO          |                    |
| EGR                              | Natural Gamma Ray API with Enhanced Vertical Resolution         |                   | 80.37      | W           | 1.416 , 0.750      |
| ACCZ                             | Accelerometer Z                                                 |                   | 0.00       | BLK         | 0.083              |
| DEVI                             | Inclination                                                     |                   | 0.00       | NO          |                    |
| HFDT-I                           |                                                                 |                   |            |             |                    |
| TPUL                             | Tension Pull                                                    |                   | 64.83      | NO          |                    |
| IUXU                             | HFDT Insite In-phase Component of Upper Receiver - TXUon TXLoff |                   | 64.83      | NO          |                    |
| QUXU                             | HFDT Insite Quadrture Component of Upper Receiver - TXUon TXLof |                   | 64.83      | NO          |                    |
| IMXU                             | HFDT Insite In-phase Component of Middle Receiver TXUon TXLoff  |                   | 64.83      | NO          |                    |
| QMXU                             | HFDT Insite Quadrture Component of Middle Receiver TXUon TXLof  |                   | 64.83      | NO          |                    |
| ILXU                             | HFDT Insite In-phase Component of Lower Receiver TXUon TXLoff   |                   | 64.83      | NO          |                    |
| QLXU                             | HFDT Insite Quadrture Component of Lower Receiver TXUon TXLoff  |                   | 64.83      | NO          |                    |
| IUXL                             | HFDT Insite In-phase Component of Upper Receiver TXUoff TXLon   |                   | 64.83      | NO          |                    |
| QUXL                             | HFDT Insite Quadrture Component of Upper Receiver TXUoff TXLon  |                   | 64.83      | NO          |                    |

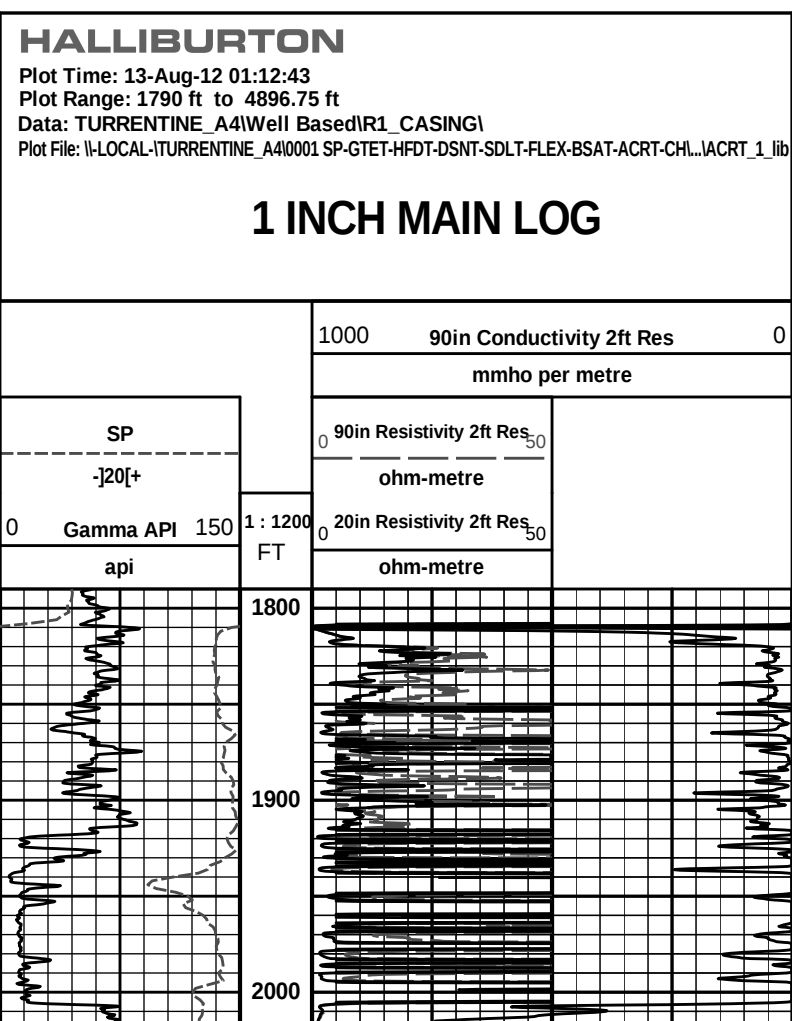
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|------------|----------------------------------------------------------------|-------|-----|-------|
| IMXL       | HFDT Insite In-phase Component of Middle Receiver TXUoff TXLon | 64.83 | NO  |       |
| QMXL       | HFDT Insite Quadrture Component of Middle Receiver TXUoff TXLo | 64.83 | NO  |       |
| ILXL       | HFDT Insite In-phase Component of Lower Receiver TXUoff TXLon  | 64.83 | NO  |       |
| QLXL       | HFDT Insite Quadrture Component of Lower Receiver TXUoff TXLon | 64.83 | NO  |       |
| TEX1       | HFDTInsite External Pad Temperature Measurement 1              | 64.06 | NO  |       |
| TEX2       | HFDTInsite External Pad Temperature Measurement 2              | 64.06 | NO  |       |
| STAT       | HFDT Insite Pad Status Word                                    | 64.83 | NO  |       |
| TPUL       | Tension Pull                                                   | 64.59 | NO  |       |
| PCAL       | Pad Caliper                                                    | 64.59 | TRI | 0.250 |
| ACAL       | Arm Caliper                                                    | 64.59 | TRI | 0.250 |
| TPUL       | Tension Pull                                                   | 64.78 | NO  |       |
| MINV       | Microlog Lateral                                               | 64.78 | BLK | 0.750 |
| MNOR       | Microlog Normal                                                | 64.78 | BLK | 0.750 |
| DSNT       |                                                                |       |     |       |
| TPUL       | Tension Pull                                                   | 53.99 | NO  |       |
| RNDS       | Near Detector Telemetry Counts                                 | 54.09 | BLK | 1.417 |
| RFDS       | Far Detector Telemetry Counts                                  | 54.84 | TRI | 0.583 |
| DNTT       | DSN Tool Temperature                                           | 54.09 | NO  |       |
| DSNS       | DSN Tool Status                                                | 53.99 | NO  |       |
| ERND       | Near Detector Telemetry Counts EVR                             | 54.09 | BLK | 0.000 |
| ERFD       | Far Detector Telemetry Counts EVR                              | 54.84 | BLK | 0.000 |
| ENTM       | DSN Tool Temperature EVR                                       | 54.09 | NO  |       |
| SDLT       |                                                                |       |     |       |
| TPUL       | Tension Pull                                                   | 44.09 | NO  |       |
| PCAL       | Pad Caliper                                                    | 44.09 | TRI | 0.250 |
| ACAL       | Arm Caliper                                                    | 44.09 | TRI | 0.250 |
| BSAT       |                                                                |       |     |       |
| TPUL       | Tension Pull                                                   | 27.09 | NO  |       |
| STAT       | Status                                                         | 27.09 | NO  |       |
| DLYT       | Delay Time                                                     | 27.09 | NO  |       |
| SI         | Sample Interval                                                | 27.09 | NO  |       |
| TXRX       | Raw Telemetry 10 Receivers                                     | 27.09 | NO  |       |
| FRMC       | Tool Frame Count                                               | 27.09 | NO  |       |
| GMOD       | Gain processing mode                                           | 19.83 | NO  |       |
| ACRt Sonde |                                                                |       |     |       |
| TPUL       | Tension Pull                                                   | 2.97  | NO  |       |
| F1R1       | ACRT 12KHz - 80in R value                                      | 9.22  | BLK | 0.000 |
| F1X1       | ACRT 12KHz - 80in X value                                      | 9.22  | BLK | 0.000 |
| F1R2       | ACRT 12KHz - 50in R value                                      | 6.72  | BLK | 0.000 |
| F1X2       | ACRT 12KHz - 50in X value                                      | 6.72  | BLK | 0.000 |
| F1R3       | ACRT 12KHz - 29in R value                                      | 5.22  | BLK | 0.000 |
| F1X3       | ACRT 12KHz - 29in X value                                      | 5.22  | BLK | 0.000 |
| F1R4       | ACRT 12KHz - 17in R value                                      | 4.22  | BLK | 0.000 |
| F1X4       | ACRT 12KHz - 17in X value                                      | 4.22  | BLK | 0.000 |
| F1R5       | ACRT 12KHz - 10in R value                                      | 3.72  | BLK | 0.000 |
| F1X5       | ACRT 12KHz - 10in X value                                      | 3.72  | BLK | 0.000 |
| F1R6       | ACRT 12KHz - 6in R value                                       | 3.47  | BLK | 0.000 |
| F1X6       | ACRT 12KHz - 6in X value                                       | 3.47  | BLK | 0.000 |
| F2R1       | ACRT 36KHz - 80in R value                                      | 9.22  | BLK | 0.000 |
| F2X1       | ACRT 36KHz - 80in X value                                      | 9.22  | BLK | 0.000 |

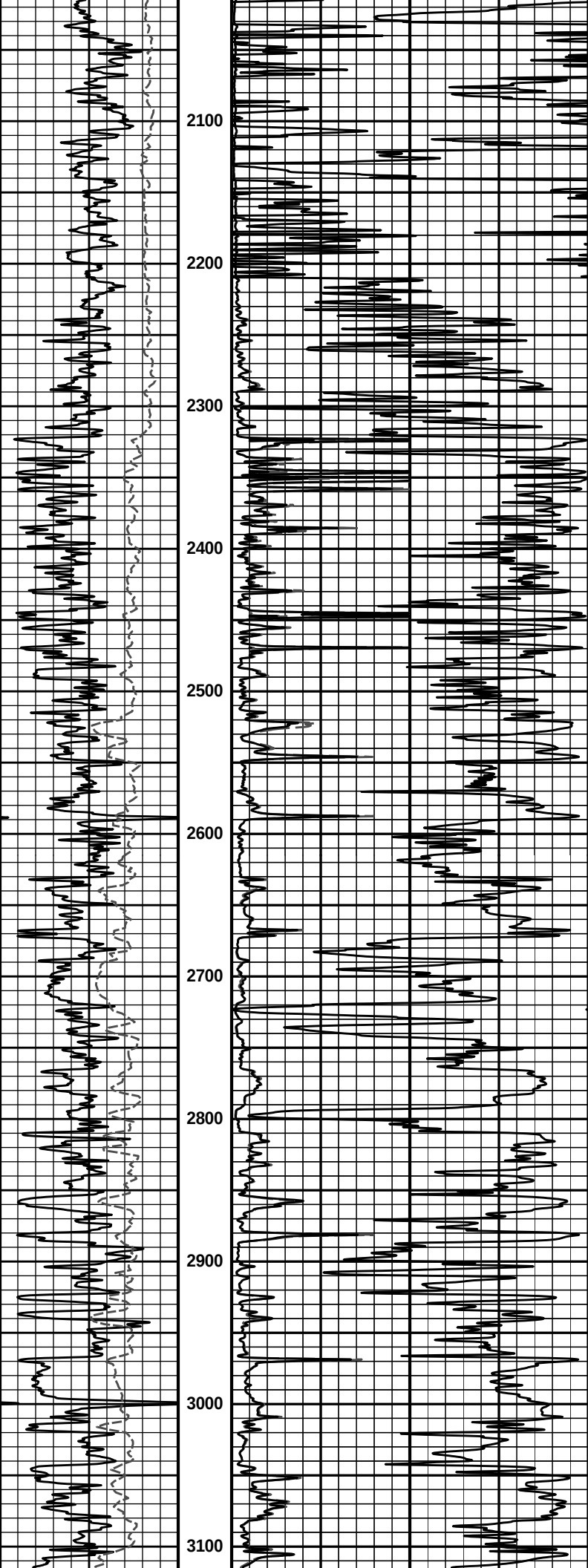
|          |                                               |       |     |       |
|----------|-----------------------------------------------|-------|-----|-------|
| F2R2     | ACRT 36KHz - 50in R value                     | 6.72  | BLK | 0.000 |
| F2X2     | ACRT 36KHz - 50in X value                     | 6.72  | BLK | 0.000 |
| F2R3     | ACRT 36KHz - 29in R value                     | 5.22  | BLK | 0.000 |
| F2X3     | ACRT 36KHz - 29in X value                     | 5.22  | BLK | 0.000 |
| F2R4     | ACRT 36KHz - 17in R value                     | 4.22  | BLK | 0.000 |
| F2X4     | ACRT 36KHz - 17in X value                     | 4.22  | BLK | 0.000 |
| F2R5     | ACRT 36KHz - 10in R value                     | 3.72  | BLK | 0.000 |
| F2X5     | ACRT 36KHz - 10in X value                     | 3.72  | BLK | 0.000 |
| F2R6     | ACRT 36KHz - 6in R value                      | 3.47  | BLK | 0.000 |
| F2X6     | ACRT 36KHz - 6in X value                      | 3.47  | BLK | 0.000 |
| F3R1     | ACRT 72KHz - 80in R value                     | 9.22  | BLK | 0.000 |
| F3X1     | ACRT 72KHz - 80in X value                     | 9.22  | BLK | 0.000 |
| F3R2     | ACRT 72KHz - 50in R value                     | 6.72  | BLK | 0.000 |
| F3X2     | ACRT 72KHz - 50in X value                     | 6.72  | BLK | 0.000 |
| F3R3     | ACRT 72KHz - 29in R value                     | 5.22  | BLK | 0.000 |
| F3X3     | ACRT 72KHz - 29in X value                     | 5.22  | BLK | 0.000 |
| F3R4     | ACRT 72KHz - 17in R value                     | 4.22  | BLK | 0.000 |
| F3X4     | ACRT 72KHz - 17in X value                     | 4.22  | BLK | 0.000 |
| F3R5     | ACRT 72KHz - 10in R value                     | 3.72  | BLK | 0.000 |
| F3X5     | ACRT 72KHz - 10in X value                     | 3.72  | BLK | 0.000 |
| F3R6     | ACRT 72KHz - 6in R value                      | 3.47  | BLK | 0.000 |
| F3X6     | ACRT 72KHz - 6in X value                      | 3.47  | BLK | 0.000 |
| RMUD     | Mud Resistivity                               | 12.76 | BLK | 0.000 |
| F1RT     | Transmitter Reference 12 KHz Real Signal      | 2.97  | BLK | 0.000 |
| F1XT     | Transmitter Reference 12 KHz Imaginary Signal | 2.97  | BLK | 0.000 |
| F2RT     | Transmitter Reference 36 KHz Real Signal      | 2.97  | BLK | 0.000 |
| F2XT     | Transmitter Reference 36 KHz Imaginary Signal | 2.97  | BLK | 0.000 |
| F3RT     | Transmitter Reference 72 KHz Real Signal      | 2.97  | BLK | 0.000 |
| F3XT     | Transmitter Reference 72 KHz Imaginary Signal | 2.97  | BLK | 0.000 |
| TFPU     | Upper Feedpipe Temperature Calculated         | 2.97  | BLK | 0.000 |
| TFPL     | Lower Feedpipe Temperature Calculated         | 2.97  | BLK | 0.000 |
| ITMP     | Instrument Temperature                        | 2.97  | BLK | 0.000 |
| TCVA     | Temperature Correction Values Loop Off        | 2.97  | NO  |       |
| TIDV     | Instrument Temperature Derivative             | 2.97  | NO  |       |
| TUDV     | Upper Temperature Derivative                  | 2.97  | NO  |       |
| TLDV     | Lower Temperature Derivative                  | 2.97  | NO  |       |
| TRBD     | Receiver Board Temperature                    | 2.97  | NO  |       |
| SDLT Pad |                                               |       |     |       |
| TPUL     | Tension Pull                                  | 44.08 | NO  |       |
| NAB      | Near Above                                    | 43.90 | BLK | 0.920 |
| NHI      | Near Cesium High                              | 43.90 | BLK | 0.920 |
| NLO      | Near Cesium Low                               | 43.90 | BLK | 0.920 |
| NVA      | Near Valley                                   | 43.90 | BLK | 0.920 |
| NBA      | Near Barite                                   | 43.90 | BLK | 0.920 |
| NDE      | Near Density                                  | 43.90 | BLK | 0.920 |
| NPK      | Near Peak                                     | 43.90 | BLK | 0.920 |
| NLI      | Near Lithology                                | 43.90 | BLK | 0.920 |
| NBAU     | Near Barite Unfiltered                        | 43.90 | BLK | 0.250 |
| NLIU     | Near Lithology Unfiltered                     | 43.90 | BLK | 0.250 |
| FAB      | Far Above                                     | 44.26 | BLK | 0.250 |
| FHI      | Far Cesium High                               | 44.26 | BLK | 0.250 |
| FLO      | Far Cesium Low                                | 44.26 | BLK | 0.250 |
| FVA      | Far Valley                                    | 44.26 | BLK | 0.250 |
| FBA      | Far Barite                                    | 44.26 | BLK | 0.250 |
| FDE      | Far Density                                   | 44.26 | BLK | 0.250 |

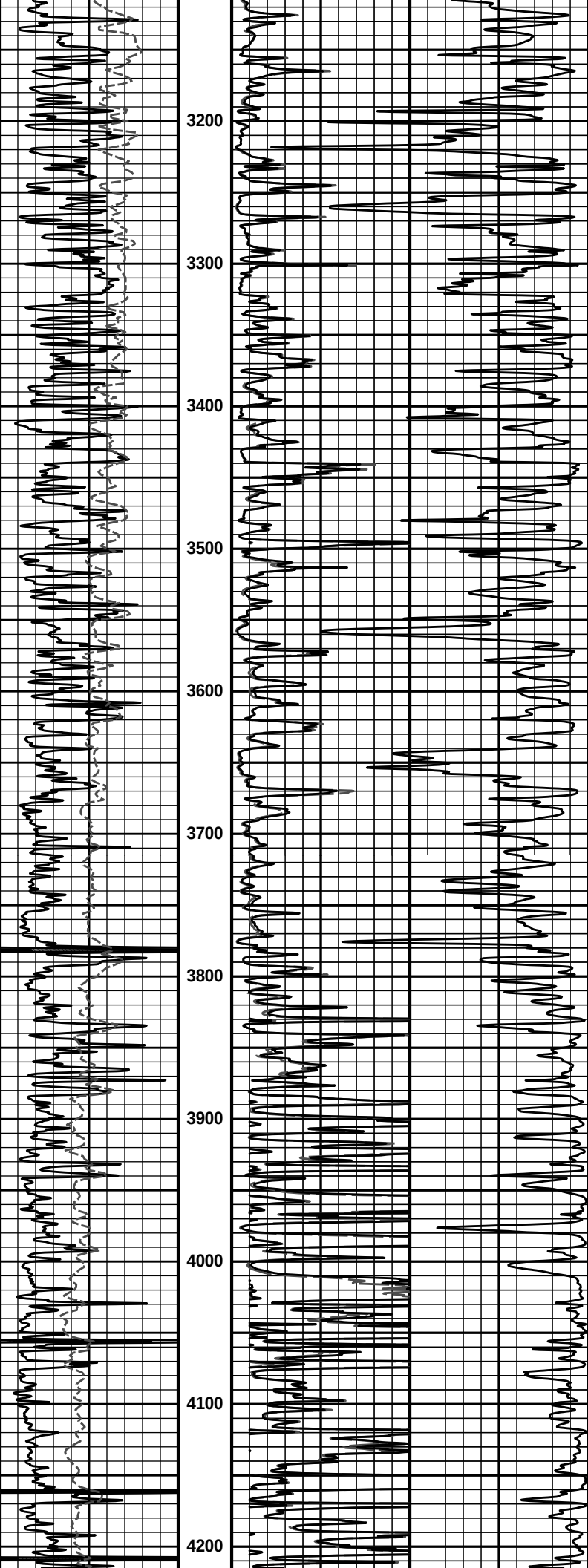
|      |                            |       |     |       |
|------|----------------------------|-------|-----|-------|
| FPK  | Far Peak                   | 44.26 | BLK | 0.250 |
| FLI  | Far Lithology              | 44.26 | BLK | 0.250 |
| PTMP | Pad Temperature            | 44.09 | BLK | 0.920 |
| NHV  | Near Detector High Voltage | 43.49 | NO  |       |
| FHV  | Far Detector High Voltage  | 43.49 | NO  |       |
| ITMP | Instrument Temperature     | 43.49 | NO  |       |
| DDHV | Detector High Voltage      | 43.49 | NO  |       |

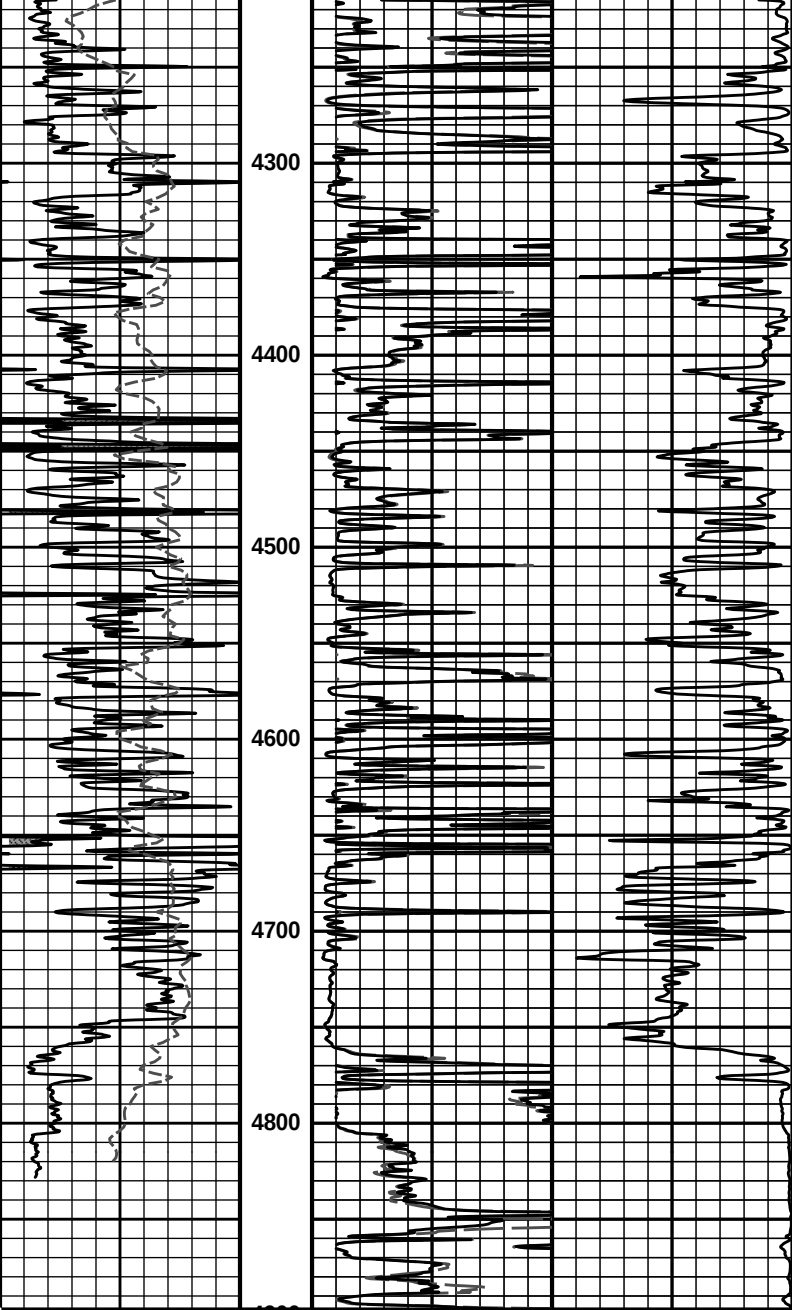
| Microlog Pad                                                          |                  |       |                          |       |
|-----------------------------------------------------------------------|------------------|-------|--------------------------|-------|
| TPUL                                                                  | Tension Pull     | 44.28 | NO                       |       |
| MINV                                                                  | Microlog Lateral | 44.28 | BLK                      | 0.750 |
| MNOR                                                                  | Microlog Normal  | 44.28 | BLK                      | 0.750 |
| Data: TURRENTINE_A4I0001 SP-GTET-HFDT-DSNT-SDLT-FLEX-BSAT-ACRT-CHIDLE |                  |       | Date: 12-Aug-12 21:25:41 |       |

|             |                |                                              |        |
|-------------|----------------|----------------------------------------------|--------|
| COMPANY     | OXY USA INC    |                                              |        |
| WELL        | TURRENTINE A 4 |                                              |        |
| FIELD       | AZAMON DITCH   |                                              |        |
| COUNTY      | FINNEY         | STATE                                        | KANSAS |
| HALLIBURTON |                | ARRAY COMPENSATED<br>TRUE RESISTIVITY<br>LOG |        |









|   |           |     |          |      |                           |    |  |
|---|-----------|-----|----------|------|---------------------------|----|--|
| 0 | Gamma API | 150 | 1 : 1200 | 0    | 20in Resistivity 2ft Res  | 50 |  |
|   | api       |     | FT       |      | ohm-metre                 |    |  |
|   | SP        |     |          | 0    | 90in Resistivity 2ft Res  | 50 |  |
|   | -]20[+    |     |          |      | ohm-metre                 |    |  |
|   |           |     |          | 1000 | 90in Conductivity 2ft Res | 0  |  |
|   |           |     |          |      | mmho per metre            |    |  |

**HALLIBURTON**

Plot Time: 13-Aug-12 01:12:47  
Plot Range: 1790 ft to 4896.75 ft  
Data: TURRENTINE\_A4\Well Based\IR1\_CASING\  
Plot File: \\LOCAL-ITURRENTINE\_A4\0001 SP-GTET-HFDT-DSNT-SDLT-FLEX-BSAT-ACRT-CHL...ACRT\_1.lib

**1 INCH MAIN LOG**