

**XTO Energy, INC**  
**Corral Canyon Federal 4H**  
**Eddy County, NM**  
**Noram 25**  
**API# 30-015-42923-0000**

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

**OCT 27 2015**

**RECEIVED**

**March 30, 2015 – April 17, 2015**

**MO-XX-0902148487**

## **Sperry Drilling Survey Report**

**Submitted by JJ Peters**  
3950 Interwood South Parkway  
Houston, TX 77032  
Ph: 281.986.4400

**HALLIBURTON**

**Drilling and Formation  
Evaluation**

[REDACTED]

[REDACTED]

[REDACTED]

# Survey Report for XTO Energy, INC

**Rig** : Noram 25  
**Well Name** : Corral Canyon Federal 4H  
**Field Name** : 2nd Bone Springs "C" SS  
**Country** : USA  
**Job Number** : MO-XX-0902148487  
**Job Start Date** : 30-Mar-15  
**API Number** : 30-015-42923-0000

## DIRECTIONAL SURVEY DATA

Tie-in

0.00

0.00

0.00

0.00

0.00 N

0.00 E

| Measured Depth<br>(ft) | Inclination<br>(deg) | Direction<br>(deg) | Vertical Depth<br>(ft) | Latitude<br>(ft) | Departure<br>(ft) | Vertical Section<br>(ft) | Dogleg<br>(ft/100) |
|------------------------|----------------------|--------------------|------------------------|------------------|-------------------|--------------------------|--------------------|
| 100.00                 | 0.13                 | 98.74              | 100.00                 | 0.02 S           | 0.11 E            | -0.02                    | 0.13               |
| 200.00                 | 0.21                 | 47.16              | 200.00                 | 0.09 N           | 0.36 E            | 0.09                     | 0.16               |
| 300.00                 | 0.56                 | 107.21             | 300.00                 | 0.07 N           | 0.96 E            | 0.07                     | 0.49               |
| 400.00                 | 0.74                 | 108.92             | 399.99                 | 0.28 S           | 2.04 E            | -0.29                    | 0.18               |
| 500.00                 | 0.64                 | 64.80              | 499.98                 | 0.26 S           | 3.15 E            | -0.27                    | 0.53               |
| 600.00                 | 0.40                 | 50.22              | 599.98                 | 0.21 N           | 3.93 E            | 0.19                     | 0.27               |
| 700.00                 | 0.54                 | 35.99              | 699.98                 | 0.81 N           | 4.47 E            | 0.79                     | 0.18               |
| 800.00                 | 0.30                 | 287.45             | 799.98                 | 1.27 N           | 4.50 E            | 1.25                     | 0.70               |
| 900.00                 | 0.18                 | 292.67             | 899.97                 | 1.41 N           | 4.10 E            | 1.39                     | 0.12               |
| 1000.00                | 0.38                 | 259.35             | 999.97                 | 1.41 N           | 3.63 E            | 1.39                     | 0.25               |
| 1100.00                | 0.59                 | 153.03             | 1,099.97               | 0.89 N           | 3.54 E            | 0.87                     | 0.79               |
| 1200.00                | 0.76                 | 109.57             | 1,199.96               | 0.21 N           | 4.40 E            | 0.19                     | 0.52               |
| 1300.00                | 0.60                 | 49.37              | 1,299.96               | 0.33 N           | 5.42 E            | 0.30                     | 0.70               |
| 1400.00                | 0.19                 | 89.58              | 1,399.96               | 0.67 N           | 5.99 E            | 0.64                     | 0.47               |
| 1500.00                | 0.16                 | 212.08             | 1,499.96               | 0.55 N           | 6.08 E            | 0.52                     | 0.31               |
| 1600.00                | 0.49                 | 143.87             | 1,599.95               | 0.09 N           | 6.26 E            | 0.06                     | 0.46               |
| 1700.00                | 0.66                 | 76.36              | 1,699.95               | 0.12 S           | 7.07 E            | -0.16                    | 0.65               |
| 1800.00                | 1.18                 | 350.17             | 1,799.94               | 1.03 N           | 7.45 E            | 0.99                     | 1.31               |
| 1900.00                | 1.59                 | 300.39             | 1,899.91               | 2.74 N           | 6.08 E            | 2.72                     | 1.22               |
| 2000.00                | 0.92                 | 243.66             | 1,999.89               | 3.09 N           | 4.16 E            | 3.07                     | 1.33               |
| 2100.00                | 0.42                 | 137.10             | 2,099.89               | 2.47 N           | 3.69 E            | 2.45                     | 1.11               |
| 2200.00                | 1.37                 | 303.06             | 2,199.88               | 2.85 N           | 2.94 E            | 2.84                     | 1.78               |
| 2300.00                | 1.18                 | 280.37             | 2,299.86               | 3.69 N           | 0.92 E            | 3.68                     | 0.54               |
| 2400.00                | 1.30                 | 241.15             | 2,399.84               | 3.32 N           | 1.08 W            | 3.33                     | 0.84               |
| 2500.00                | 1.10                 | 178.94             | 2,499.82               | 1.82 N           | 2.06 W            | 1.83                     | 1.25               |
| 2600.00                | 1.12                 | 87.89              | 2,599.80               | 0.89 N           | 1.06 W            | 0.90                     | 1.58               |
| 2700.00                | 0.87                 | 30.43              | 2,699.79               | 1.58 N           | 0.30 E            | 1.58                     | 0.98               |
| 2800.00                | 0.69                 | 294.21             | 2,799.79               | 2.49 N           | 0.13 E            | 2.49                     | 1.17               |
| 2900.00                | 1.04                 | 271.08             | 2,899.77               | 2.75 N           | 1.32 W            | 2.76                     | 0.49               |
| 3000.00                | 1.28                 | 279.45             | 2,999.75               | 2.95 N           | 3.33 W            | 2.97                     | 0.29               |
| 3100.00                | 1.30                 | 275.40             | 3,099.73               | 3.24 N           | 5.56 W            | 3.27                     | 0.09               |
| 3200.00                | 1.19                 | 278.47             | 3,199.71               | 3.50 N           | 7.72 W            | 3.54                     | 0.13               |
| 3300.00                | 1.26                 | 274.15             | 3,299.68               | 3.73 N           | 9.84 W            | 3.78                     | 0.12               |
| 3400.00                | 1.27                 | 270.18             | 3,399.66               | 3.82 N           | 12.05 W           | 3.87                     | 0.09               |
| 3500.00                | 1.18                 | 269.06             | 3,499.64               | 3.80 N           | 14.19 W           | 3.87                     | 0.09               |
| 3600.00                | 0.86                 | 245.79             | 3,599.62               | 3.48 N           | 15.90 W           | 3.55                     | 0.52               |
| 3700.00                | 0.90                 | 281.57             | 3,699.61               | 3.33 N           | 17.35 W           | 3.41                     | 0.54               |
| 3800.00                | 0.98                 | 256.44             | 3,799.60               | 3.28 N           | 18.95 W           | 3.37                     | 0.42               |
| 3900.00                | 0.95                 | 257.59             | 3,899.58               | 2.91 N           | 20.60 W           | 3.00                     | 0.04               |
| 4000.00                | 0.81                 | 240.71             | 3,999.57               | 2.38 N           | 22.02 W           | 2.49                     | 0.29               |
| 4100.00                | 0.32                 | 265.59             | 4,099.56               | 2.01 N           | 22.92 W           | 2.12                     | 0.54               |

**DIRECTIONAL SURVEY DATA**

| Measured Depth<br>(ft) | Inclination<br>(deg) | Direction<br>(deg) | Vertical Depth<br>(ft) | Latitude<br>(ft) | Departure<br>(ft) | Vertical Section<br>(ft) | Dogleg<br>(ft/100) |
|------------------------|----------------------|--------------------|------------------------|------------------|-------------------|--------------------------|--------------------|
| 4200.00                | 0.58                 | 295.72             | 4,199.56               | 2.21 N           | 23.65 W           | 2.32                     | 0.34               |
| 4300.00                | 0.76                 | 278.09             | 4,299.56               | 2.53 N           | 24.76 W           | 2.64                     | 0.27               |
| 4400.00                | 0.81                 | 276.16             | 4,399.55               | 2.70 N           | 26.12 W           | 2.82                     | 0.06               |
| 4500.00                | 0.92                 | 267.93             | 4,499.53               | 2.74 N           | 27.63 W           | 2.87                     | 0.17               |
| 4600.00                | 0.93                 | 265.80             | 4,599.52               | 2.65 N           | 29.24 W           | 2.79                     | 0.04               |
| 4700.00                | 0.92                 | 263.77             | 4,699.51               | 2.51 N           | 30.85 W           | 2.65                     | 0.03               |
| 4800.00                | 0.83                 | 242.53             | 4,799.50               | 2.09 N           | 32.29 W           | 2.24                     | 0.33               |
| 4900.00                | 0.42                 | 220.68             | 4,899.49               | 1.47 N           | 33.17 W           | 1.63                     | 0.47               |
| 5000.00                | 0.14                 | 276.60             | 4,999.49               | 1.21 N           | 33.53 W           | 1.37                     | 0.36               |
| 5100.00                | 0.29                 | 272.05             | 5,099.49               | 1.23 N           | 33.90 W           | 1.39                     | 0.15               |
| 5200.00                | 0.46                 | 227.80             | 5,199.49               | 0.97 N           | 34.45 W           | 1.13                     | 0.32               |
| 5300.00                | 0.58                 | 222.21             | 5,299.48               | 0.33 N           | 35.09 W           | 0.49                     | 0.13               |
| 5400.00                | 0.72                 | 212.92             | 5,399.48               | 0.57 S           | 35.77 W           | -0.41                    | 0.17               |
| 5500.00                | 0.86                 | 189.97             | 5,499.47               | 1.84 S           | 36.24 W           | -1.67                    | 0.34               |
| 5600.00                | 0.77                 | 169.43             | 5,599.46               | 3.24 S           | 36.25 W           | -3.07                    | 0.30               |
| 5700.00                | 0.40                 | 157.59             | 5,699.45               | 4.22 S           | 35.99 W           | -4.05                    | 0.39               |
| 5800.00                | 0.57                 | 228.46             | 5,799.45               | 4.88 S           | 36.23 W           | -4.71                    | 0.58               |
| 5900.00                | 0.75                 | 206.56             | 5,899.44               | 5.79 S           | 36.90 W           | -5.62                    | 0.31               |
| 6000.00                | 0.78                 | 177.46             | 5,999.43               | 7.06 S           | 37.16 W           | -6.88                    | 0.39               |
| 6100.00                | 0.77                 | 196.25             | 6,099.42               | 8.38 S           | 37.32 W           | -8.21                    | 0.25               |
| 6200.00                | 0.71                 | 150.91             | 6,199.42               | 9.57 S           | 37.21 W           | -9.39                    | 0.57               |
| 6300.00                | 0.35                 | 116.68             | 6,299.41               | 10.25 S          | 36.63 W           | -10.07                   | 0.46               |
| 6400.00                | 0.43                 | 227.76             | 6,399.41               | 10.64 S          | 36.64 W           | -10.46                   | 0.64               |
| 6500.00                | 0.64                 | 159.98             | 6,499.41               | 11.41 S          | 36.72 W           | -11.24                   | 0.62               |
| 6600.00                | 0.53                 | 245.66             | 6,599.40               | 12.13 S          | 36.95 W           | -11.95                   | 0.80               |
| 6700.00                | 1.33                 | 334.86             | 6,699.39               | 11.27 S          | 37.87 W           | -11.09                   | 1.42               |
| 6800.00                | 2.12                 | 334.15             | 6,799.35               | 8.55 S           | 39.17 W           | -8.37                    | 0.79               |
| 6900.00                | 2.21                 | 346.64             | 6,899.28               | 5.01 S           | 40.42 W           | -4.82                    | 0.48               |
| 7000.00                | 2.25                 | 0.44               | 6,999.20               | 1.17 S           | 40.85 W           | -0.98                    | 0.54               |
| 7100.00                | 1.84                 | 349.38             | 7,099.14               | 2.37 N           | 41.13 W           | 2.56                     | 0.57               |
| 7200.00                | 1.68                 | 321.83             | 7,199.09               | 5.10 N           | 42.33 W           | 5.30                     | 0.85               |
| 7300.00                | 1.84                 | 293.66             | 7,299.05               | 6.89 N           | 44.71 W           | 7.10                     | 0.87               |
| 7400.00                | 1.55                 | 286.03             | 7,399.00               | 7.91 N           | 47.48 W           | 8.13                     | 0.37               |
| 7500.00                | 1.64                 | 269.10             | 7,498.97               | 8.26 N           | 50.21 W           | 8.50                     | 0.48               |
| 7600.00                | 2.36                 | 269.75             | 7,598.90               | 8.23 N           | 53.70 W           | 8.48                     | 0.72               |
| 7700.00                | 2.25                 | 267.90             | 7,698.82               | 8.15 N           | 57.72 W           | 8.42                     | 0.13               |
| 7800.00                | 1.85                 | 279.95             | 7,798.76               | 8.36 N           | 61.27 W           | 8.65                     | 0.59               |
| 7900.00                | 0.44                 | 244.19             | 7,898.74               | 8.47 N           | 63.21 W           | 8.77                     | 1.51               |
| 7925.00                | 0.19                 | 168.13             | 7,923.74               | 8.39 N           | 63.29 W           | 8.68                     | 1.74               |
| 7977.00                | 0.97                 | 171.32             | 7,975.73               | 7.87 N           | 63.20 W           | 8.17                     | 1.49               |
| 8040.00                | 1.32                 | 16.46              | 8,038.73               | 8.04 N           | 62.92 W           | 8.33                     | 3.54               |
| 8071.00                | 4.13                 | 4.33               | 8,069.69               | 9.49 N           | 62.73 W           | 9.79                     | 9.21               |
| 8103.00                | 7.56                 | 358.53             | 8,101.52               | 12.75 N          | 62.70 W           | 13.04                    | 10.86              |
| 8134.00                | 10.90                | 356.07             | 8,132.12               | 17.71 N          | 62.95 W           | 18.01                    | 10.85              |
| 8166.00                | 13.10                | 356.07             | 8,163.42               | 24.35 N          | 63.41 W           | 24.64                    | 6.87               |

## DIRECTIONAL SURVEY DATA

| Measured Depth<br>(ft) | Inclination<br>(deg) | Direction<br>(deg) | Vertical Depth<br>(ft) | Latitude<br>(ft) | Departure<br>(ft) | Vertical Section<br>(ft) | Dogleg<br>(%/100) |
|------------------------|----------------------|--------------------|------------------------|------------------|-------------------|--------------------------|-------------------|
| 8197.00                | 15.73                | 356.95             | 8,193.44               | 32.05 N          | 63.87 W           | 32.35                    | 8.53              |
| 8229.00                | 18.54                | 358.18             | 8,224.01               | 41.47 N          | 64.27 W           | 41.77                    | 8.87              |
| 8260.00                | 21.45                | 359.23             | 8,253.14               | 52.06 N          | 64.50 W           | 52.37                    | 9.43              |
| 8291.00                | 24.35                | 0.46               | 8,281.70               | 64.12 N          | 64.52 W           | 64.43                    | 9.48              |
| 8323.00                | 27.95                | 0.64               | 8,310.42               | 78.22 N          | 64.39 W           | 78.52                    | 11.26             |
| 8354.00                | 30.15                | 0.64               | 8,337.52               | 93.27 N          | 64.22 W           | 93.57                    | 7.09              |
| 8386.00                | 32.61                | 2.04               | 8,364.83               | 109.92 N         | 63.82 W           | 110.22                   | 8.02              |
| 8417.00                | 35.33                | 4.15               | 8,390.54               | 127.22 N         | 62.88 W           | 127.51                   | 9.57              |
| 8449.00                | 38.06                | 5.21               | 8,416.20               | 146.27 N         | 61.31 W           | 146.56                   | 8.74              |
| 8481.00                | 41.40                | 6.09               | 8,440.81               | 166.62 N         | 59.29 W           | 166.90                   | 10.58             |
| 8512.00                | 44.74                | 6.96               | 8,463.45               | 187.65 N         | 56.88 W           | 187.91                   | 10.95             |
| 8544.00                | 48.08                | 7.67               | 8,485.51               | 210.63 N         | 53.93 W           | 210.88                   | 10.56             |
| 8575.00                | 51.24                | 7.32               | 8,505.58               | 234.05 N         | 50.85 W           | 234.29                   | 10.24             |
| 8607.00                | 55.28                | 7.14               | 8,524.72               | 259.49 N         | 47.62 W           | 259.71                   | 12.64             |
| 8638.00                | 58.89                | 6.96               | 8,541.56               | 285.31 N         | 44.43 W           | 285.52                   | 11.63             |
| 8673.00                | 63.19                | 7.32               | 8,558.50               | 315.69 N         | 40.62 W           | 315.88                   | 12.34             |
| 8704.00                | 67.06                | 7.32               | 8,571.54               | 343.58 N         | 37.04 W           | 343.75                   | 12.47             |
| 8736.00                | 71.28                | 7.32               | 8,582.92               | 373.24 N         | 33.23 W           | 373.39                   | 13.18             |
| 8767.00                | 75.59                | 7.49               | 8,591.75               | 402.70 N         | 29.41 W           | 402.83                   | 13.90             |
| 8798.00                | 79.54                | 7.49               | 8,598.43               | 432.70 N         | 25.46 W           | 432.82                   | 12.76             |
| 8830.00                | 83.67                | 7.32               | 8,603.10               | 464.09 N         | 21.38 W           | 464.19                   | 12.92             |
| 8855.00                | 87.54                | 6.96               | 8,605.01               | 488.82 N         | 18.28 W           | 488.90                   | 15.53             |
| 8875.00                | 89.91                | 7.14               | 8,605.46               | 508.66 N         | 15.83 W           | 508.73                   | 11.90             |
| 8924.00                | 92.20                | 6.96               | 8,604.56               | 557.28 N         | 9.81 W            | 557.32                   | 4.68              |
| 8971.00                | 93.51                | 7.14               | 8,602.22               | 603.86 N         | 4.05 W            | 603.88                   | 2.83              |
| 9018.00                | 94.48                | 7.49               | 8,598.94               | 650.37 N         | 1.92 E            | 650.35                   | 2.19              |
| 9065.00                | 93.08                | 6.61               | 8,595.84               | 696.91 N         | 7.68 E            | 696.86                   | 3.53              |
| 9113.00                | 92.28                | 6.26               | 8,593.60               | 744.55 N         | 13.05 E           | 744.48                   | 1.80              |
| 9160.00                | 93.43                | 6.44               | 8,591.26               | 791.21 N         | 18.24 E           | 791.11                   | 2.46              |
| 9207.00                | 90.53                | 5.21               | 8,589.63               | 837.93 N         | 23.01 E           | 837.81                   | 6.70              |
| 9255.00                | 88.59                | 3.45               | 8,590.00               | 885.79 N         | 26.63 E           | 885.65                   | 5.44              |
| 9302.00                | 88.15                | 2.92               | 8,591.34               | 932.70 N         | 29.24 E           | 932.55                   | 1.46              |
| 9349.00                | 88.51                | 1.16               | 8,592.71               | 979.64 N         | 30.91 E           | 979.49                   | 3.81              |
| 9396.00                | 89.03                | 0.28               | 8,593.72               | 1,026.63 N       | 31.51 E           | 1026.47                  | 2.18              |
| 9443.00                | 89.56                | 359.05             | 8,594.30               | 1,073.62 N       | 31.24 E           | 1073.46                  | 2.85              |
| 9490.00                | 90.18                | 358.00             | 8,594.40               | 1,120.61 N       | 30.03 E           | 1120.45                  | 2.60              |
| 9537.00                | 91.14                | 358.18             | 8,593.86               | 1,167.58 N       | 28.46 E           | 1167.43                  | 2.09              |
| 9585.00                | 92.11                | 358.88             | 8,592.50               | 1,215.54 N       | 27.23 E           | 1215.40                  | 2.49              |
| 9679.00                | 91.41                | 358.88             | 8,589.62               | 1,309.48 N       | 25.39 E           | 1309.34                  | 0.75              |
| 9773.00                | 89.99                | 358.18             | 8,588.48               | 1,403.44 N       | 22.98 E           | 1403.31                  | 1.68              |
| 9868.00                | 90.70                | 358.18             | 8,587.90               | 1,498.39 N       | 19.96 E           | 1498.28                  | 0.75              |
| 9962.00                | 90.00                | 357.82             | 8,587.33               | 1,592.33 N       | 16.67 E           | 1592.23                  | 0.84              |
| 10057.00               | 90.88                | 357.65             | 8,586.60               | 1,687.25 N       | 12.92 E           | 1687.17                  | 0.94              |
| 10152.00               | 88.15                | 357.65             | 8,587.40               | 1,782.16 N       | 9.02 E            | 1782.09                  | 2.87              |
| 10246.00               | 85.43                | 358.00             | 8,592.66               | 1,875.93 N       | 5.46 E            | 1875.89                  | 2.92              |

**DIRECTIONAL SURVEY DATA**

| Measured Depth<br>(ft) | Inclination<br>(deg) | Direction<br>(deg) | Vertical Depth<br>(ft) | Latitude<br>(ft) | Departure<br>(ft) | Vertical Section<br>(ft) | Dogleg<br>(%/100) |
|------------------------|----------------------|--------------------|------------------------|------------------|-------------------|--------------------------|-------------------|
| 10340.00               | 84.11                | 359.41             | 8,601.23               | 1,969.51 N       | 3.34 E            | 1969.48                  | 2.05              |
| 10387.00               | 83.93                | 359.76             | 8,606.13               | 2,016.26 N       | 3.00 E            | 2016.22                  | 0.83              |
| 10434.00               | 84.11                | 359.93             | 8,611.02               | 2,063.00 N       | 2.87 E            | 2062.96                  | 0.53              |
| 10465.00               | 84.55                | 359.76             | 8,614.08               | 2,093.85 N       | 2.79 E            | 2093.81                  | 1.53              |
| 10496.00               | 85.52                | 359.41             | 8,616.76               | 2,124.73 N       | 2.56 E            | 2124.70                  | 3.32              |
| 10528.00               | 89.03                | 358.00             | 8,618.29               | 2,156.68 N       | 1.84 E            | 2156.65                  | 11.83             |
| 10559.00               | 92.99                | 356.42             | 8,617.74               | 2,187.63 N       | 0.33 E            | 2187.61                  | 13.74             |
| 10590.00               | 93.60                | 356.07             | 8,615.96               | 2,218.51 N       | 1.70 W            | 2218.50                  | 2.28              |
| 10622.00               | 92.11                | 356.07             | 8,614.36               | 2,250.40 N       | 3.89 W            | 2250.39                  | 4.67              |
| 10653.00               | 92.02                | 356.24             | 8,613.25               | 2,281.31 N       | 5.97 W            | 2281.31                  | 0.63              |
| 10685.00               | 92.99                | 356.42             | 8,611.85               | 2,313.21 N       | 8.01 W            | 2313.22                  | 3.07              |
| 10716.00               | 93.34                | 356.24             | 8,610.14               | 2,344.10 N       | 10.00 W           | 2344.12                  | 1.27              |
| 10747.00               | 94.22                | 356.42             | 8,608.09               | 2,374.97 N       | 11.98 W           | 2375.00                  | 2.89              |
| 10779.00               | 95.10                | 356.77             | 8,605.50               | 2,406.81 N       | 13.87 W           | 2406.85                  | 2.96              |
| 10810.00               | 94.57                | 356.95             | 8,602.88               | 2,437.65 N       | 15.56 W           | 2437.70                  | 1.79              |
| 10842.00               | 94.75                | 357.12             | 8,600.29               | 2,469.50 N       | 17.22 W           | 2469.56                  | 0.78              |
| 10873.00               | 94.39                | 357.65             | 8,597.82               | 2,500.37 N       | 18.63 W           | 2500.43                  | 2.04              |
| 10904.00               | 93.60                | 358.18             | 8,595.66               | 2,531.28 N       | 19.75 W           | 2531.34                  | 3.06              |
| 10936.00               | 94.57                | 358.35             | 8,593.38               | 2,563.18 N       | 20.72 W           | 2563.25                  | 3.07              |
| 10967.00               | 93.08                | 358.88             | 8,591.31               | 2,594.10 N       | 21.47 W           | 2594.17                  | 5.11              |
| 10999.00               | 92.37                | 359.93             | 8,589.79               | 2,626.06 N       | 21.80 W           | 2626.13                  | 3.96              |
| 11030.00               | 91.14                | 0.28               | 8,588.84               | 2,657.05 N       | 21.74 W           | 2657.12                  | 4.13              |
| 11062.00               | 91.32                | 0.64               | 8,588.15               | 2,689.04 N       | 21.48 W           | 2689.11                  | 1.23              |
| 11093.00               | 91.76                | 0.81               | 8,587.32               | 2,720.02 N       | 21.09 W           | 2720.09                  | 1.53              |
| 11125.00               | 91.76                | 0.81               | 8,586.34               | 2,752.01 N       | 20.64 W           | 2752.07                  | 0.00              |
| 11156.00               | 90.88                | 0.46               | 8,585.62               | 2,782.99 N       | 20.29 W           | 2783.06                  | 3.05              |
| 11187.00               | 90.18                | 359.58             | 8,585.34               | 2,813.99 N       | 20.28 W           | 2814.06                  | 3.63              |
| 11219.00               | 90.44                | 359.58             | 8,585.17               | 2,845.99 N       | 20.52 W           | 2846.06                  | 0.82              |
| 11282.00               | 91.49                | 0.28               | 8,584.11               | 2,908.98 N       | 20.59 W           | 2909.05                  | 2.01              |
| 11313.00               | 92.46                | 0.28               | 8,583.04               | 2,939.96 N       | 20.43 W           | 2940.03                  | 3.12              |
| 11376.00               | 91.76                | 359.76             | 8,580.72               | 3,002.92 N       | 20.41 W           | 3002.98                  | 1.39              |
| 11407.00               | 92.11                | 359.93             | 8,579.67               | 3,033.90 N       | 20.49 W           | 3033.96                  | 1.27              |
| 11439.00               | 90.44                | 359.58             | 8,578.96               | 3,065.89 N       | 20.63 W           | 3065.96                  | 5.33              |
| 11470.00               | 89.12                | 358.88             | 8,579.08               | 3,096.89 N       | 21.05 W           | 3096.95                  | 4.82              |
| 11502.00               | 88.86                | 358.18             | 8,579.65               | 3,128.87 N       | 21.87 W           | 3128.94                  | 2.35              |
| 11534.00               | 89.47                | 357.47             | 8,580.11               | 3,160.85 N       | 23.08 W           | 3160.92                  | 2.92              |
| 11565.00               | 90.44                | 357.12             | 8,580.14               | 3,191.81 N       | 24.55 W           | 3191.89                  | 3.32              |
| 11597.00               | 91.41                | 356.59             | 8,579.62               | 3,223.76 N       | 26.30 W           | 3223.85                  | 3.44              |
| 11628.00               | 91.32                | 356.95             | 8,578.88               | 3,254.70 N       | 28.05 W           | 3254.80                  | 1.17              |
| 11659.00               | 91.23                | 357.12             | 8,578.20               | 3,285.65 N       | 29.65 W           | 3285.75                  | 0.63              |
| 11691.00               | 91.93                | 356.95             | 8,577.31               | 3,317.60 N       | 31.31 W           | 3317.71                  | 2.26              |
| 11754.00               | 89.91                | 358.18             | 8,576.30               | 3,380.53 N       | 33.99 W           | 3380.65                  | 3.76              |
| 11815.00               | 90.53                | 357.82             | 8,576.07               | 3,441.49 N       | 36.12 W           | 3441.62                  | 1.16              |
| 11848.00               | 90.97                | 357.82             | 8,575.63               | 3,474.46 N       | 37.37 W           | 3474.60                  | 1.33              |
| 11911.00               | 91.67                | 358.53             | 8,574.19               | 3,537.41 N       | 39.38 W           | 3537.56                  | 1.58              |

**DIRECTIONAL SURVEY DATA**

| Measured Depth<br>(ft) | Inclination<br>(deg) | Direction<br>(deg) | Vertical Depth<br>(ft) | Latitude<br>(ft) | Departure<br>(ft) | Vertical Section<br>(ft) | Dogleg<br>(°/100) |
|------------------------|----------------------|--------------------|------------------------|------------------|-------------------|--------------------------|-------------------|
| 11943.00               | 90.53                | 359.23             | 8,573.57               | 3,569.40 N       | 40.00 W           | 3569.55                  | 4.19              |
| 11974.00               | 90.79                | 359.05             | 8,573.22               | 3,600.39 N       | 40.47 W           | 3600.54                  | 1.02              |
| 12006.00               | 90.79                | 359.23             | 8,572.78               | 3,632.39 N       | 40.94 W           | 3632.54                  | 0.55              |
| 12037.00               | 88.77                | 359.76             | 8,572.89               | 3,663.38 N       | 41.22 W           | 3663.54                  | 6.74              |
| 12069.00               | 88.77                | 0.11               | 8,573.58               | 3,695.38 N       | 41.26 W           | 3695.53                  | 1.10              |
| 12132.00               | 87.80                | 0.46               | 8,575.47               | 3,758.35 N       | 40.94 W           | 3758.50                  | 1.63              |
| 12163.00               | 88.24                | 0.81               | 8,576.54               | 3,789.33 N       | 40.60 W           | 3789.47                  | 1.81              |
| 12194.00               | 89.47                | 0.99               | 8,577.16               | 3,820.31 N       | 40.11 W           | 3820.46                  | 4.01              |
| 12226.00               | 90.97                | 0.99               | 8,577.03               | 3,852.31 N       | 39.56 W           | 3852.45                  | 4.67              |
| 12258.00               | 89.74                | 1.34               | 8,576.84               | 3,884.30 N       | 38.91 W           | 3884.44                  | 4.00              |
| 12289.00               | 89.21                | 1.69               | 8,577.12               | 3,915.29 N       | 38.09 W           | 3915.42                  | 2.04              |
| 12320.00               | 89.56                | 1.69               | 8,577.46               | 3,946.27 N       | 37.18 W           | 3946.40                  | 1.13              |
| 12352.00               | 89.12                | 1.87               | 8,577.83               | 3,978.26 N       | 36.18 W           | 3978.38                  | 1.48              |
| 12383.00               | 87.80                | 1.87               | 8,578.66               | 4,009.23 N       | 35.17 W           | 4009.35                  | 4.25              |
| 12415.00               | 88.15                | 1.87               | 8,579.79               | 4,041.19 N       | 34.13 W           | 4041.31                  | 1.10              |
| 12446.00               | 87.98                | 2.39               | 8,580.83               | 4,072.15 N       | 32.98 W           | 4072.26                  | 1.79              |
| 12478.00               | 88.77                | 2.22               | 8,581.74               | 4,104.11 N       | 31.69 W           | 4104.22                  | 2.53              |
| 12509.00               | 90.00                | 2.39               | 8,582.07               | 4,135.08 N       | 30.44 W           | 4135.18                  | 4.01              |
| 12541.00               | 91.41                | 2.39               | 8,581.68               | 4,167.05 N       | 29.11 W           | 4167.14                  | 4.39              |
| 12604.00               | 89.91                | 2.39               | 8,580.96               | 4,229.99 N       | 26.48 W           | 4230.07                  | 2.37              |
| 12698.00               | 88.77                | 2.39               | 8,582.04               | 4,323.90 N       | 22.55 W           | 4323.96                  | 1.22              |
| 12792.00               | 88.51                | 2.22               | 8,584.28               | 4,417.80 N       | 18.77 W           | 4417.84                  | 0.34              |
| 12887.00               | 89.21                | 2.39               | 8,586.17               | 4,512.70 N       | 14.94 W           | 4512.72                  | 0.76              |
| 12981.00               | 90.09                | 2.04               | 8,586.75               | 4,606.63 N       | 11.31 W           | 4606.63                  | 1.01              |
| 13076.00               | 90.26                | 1.69               | 8,586.46               | 4,701.58 N       | 8.21 W            | 4701.57                  | 0.41              |
| 13170.00               | 89.47                | 1.52               | 8,586.68               | 4,795.54 N       | 5.58 W            | 4795.51                  | 0.86              |
| 13265.00               | 88.77                | 0.99               | 8,588.13               | 4,890.51 N       | 3.51 W            | 4890.47                  | 0.93              |
| 13359.00               | 90.26                | 359.76             | 8,588.93               | 4,984.50 N       | 2.89 W            | 4984.46                  | 2.06              |
| 13453.00               | 92.20                | 359.23             | 8,586.91               | 5,078.47 N       | 3.72 W            | 5078.43                  | 2.13              |
| 13548.00               | 91.93                | 359.05             | 8,583.49               | 5,173.39 N       | 5.15 W            | 5173.36                  | 0.33              |
| 13652.00               | 89.74                | 359.23             | 8,581.97               | 5,277.36 N       | 6.70 W            | 5277.34                  | 2.12              |
| 13747.00               | 88.15                | 359.41             | 8,583.72               | 5,372.34 N       | 7.83 W            | 5372.32                  | 1.68              |
| 13810.00               | 89.30                | 0.28               | 8,585.13               | 5,435.32 N       | 8.00 W            | 5435.30                  | 2.29              |
| 13841.00               | 89.74                | 359.93             | 8,585.39               | 5,466.32 N       | 7.94 W            | 5466.30                  | 1.82              |
| 13935.00               | 89.30                | 359.23             | 8,586.18               | 5,560.31 N       | 8.63 W            | 5560.29                  | 0.88              |
| 14030.00               | 89.82                | 359.05             | 8,586.91               | 5,655.30 N       | 10.05 W           | 5655.28                  | 0.59              |
| 14124.00               | 88.94                | 358.35             | 8,587.92               | 5,749.27 N       | 12.18 W           | 5749.26                  | 1.20              |
| 14219.00               | 89.47                | 358.70             | 8,589.23               | 5,844.23 N       | 14.62 W           | 5844.23                  | 0.67              |
| 14313.00               | 89.74                | 357.65             | 8,589.88               | 5,938.18 N       | 17.61 W           | 5938.19                  | 1.16              |
| 14407.00               | 91.05                | 358.35             | 8,589.24               | 6,032.11 N       | 20.90 W           | 6032.15                  | 1.59              |
| 14502.00               | 89.47                | 359.05             | 8,588.80               | 6,127.09 N       | 23.05 W           | 6127.13                  | 1.82              |
| 14597.00               | 90.35                | 358.70             | 8,588.95               | 6,222.07 N       | 24.90 W           | 6222.11                  | 1.00              |
| 14692.00               | 89.30                | 359.05             | 8,589.24               | 6,317.05 N       | 26.76 W           | 6317.10                  | 1.17              |
| 14786.00               | 88.77                | 358.70             | 8,590.83               | 6,411.01 N       | 28.60 W           | 6411.08                  | 0.67              |
| 14881.00               | 89.30                | 358.70             | 8,592.43               | 6,505.98 N       | 30.75 W           | 6506.05                  | 0.56              |

**DIRECTIONAL SURVEY DATA**

| Measured Depth<br>(ft) | Inclination<br>(deg) | Direction<br>(deg) | Vertical Depth<br>(ft) | Latitude<br>(ft) | Departure<br>(ft) | Vertical Section<br>(ft) | Dogleg<br>(%/100) |
|------------------------|----------------------|--------------------|------------------------|------------------|-------------------|--------------------------|-------------------|
| 14975.00               | 89.74                | 358.53             | 8,593.23               | 6,599.94 N       | 33.03 W           | 6600.03                  | 0.50              |
| 15070.00               | 90.00                | 357.65             | 8,593.45               | 6,694.89 N       | 36.20 W           | 6694.99                  | 0.97              |
| 15165.00               | 90.00                | 357.30             | 8,593.45               | 6,789.80 N       | 40.39 W           | 6789.91                  | 0.37              |
| 15259.00               | 90.70                | 357.82             | 8,592.87               | 6,883.71 N       | 44.39 W           | 6883.84                  | 0.93              |
| 15354.00               | 91.05                | 358.00             | 8,591.41               | 6,978.64 N       | 47.85 W           | 6978.78                  | 0.41              |
| 15448.00               | 89.47                | 359.58             | 8,590.98               | 7,072.61 N       | 49.83 W           | 7072.76                  | 2.38              |
| 15543.00               | 88.68                | 359.05             | 8,592.51               | 7,167.59 N       | 50.96 W           | 7167.75                  | 1.00              |
| 15638.00               | 89.30                | 359.93             | 8,594.19               | 7,262.57 N       | 51.80 W           | 7262.73                  | 1.13              |
| 15732.00               | 89.82                | 359.41             | 8,594.91               | 7,356.56 N       | 52.34 W           | 7356.73                  | 0.79              |
| 15797.00               | 90.00                | 358.53             | 8,595.01               | 7,421.55 N       | 53.52 W           | 7421.72                  | 1.38              |
| 15826.00               | 89.91                | 358.00             | 8,595.04               | 7,450.54 N       | 54.39 W           | 7450.71                  | 1.84              |
| 15874.00               | 90.18                | 358.00             | 8,595.00               | 7,498.51 N       | 56.07 W           | 7498.69                  | 0.55              |
| 15935.00               | 90.18                | 358.00             | 8,594.81               | 7,559.47 N       | 58.20 W           | 7559.66                  | 0.01              |

**SURVEY FOOTER**

SURVEYS CALCULATED USING SHORT COLLAR METHOD  
 TIE-ON SURVEY ASSUMED VERTICAL AT SURFACE  
 SURVEYS FROM 100' MD TO 7925' MD PROVIDED BY MULTISHOT DIRECTIONAL SERVICES  
 SURVEYS FROM 7977' MD TO 15874' MD PROVIDED BY SPERRY DRILLING SERVICES  
 SURVEY AT 15874' MD HAS BEEN PROJECTED TO TD AT 15935' MD  
 SPERRY ENGINEERS: JJ PETERS, FRED GALINDO

**DIRECTIONAL SURVEY DATA NOTES**

- Calculation based on minimum curvature method.
- Survey coordinates relative to well system reference point.
- TVD values given relative to drilling measurement point.
- Vertical section relative to well head.
- Vertical section is computed along a direction of 359.73 degrees (Grid)
- A total correction of 7.32 deg from Magnetic north to Grid north has been applied
- Horizontal displacement is relative to the well head.
- Horizontal displacement (closure) at 15,935.00 feet is 7,559.70 feet along 359.56 degrees (Grid)

**WARRANTY**

HALLIBURTON ENERGY SERVICES, INC. WILL USE ITS BEST EFFORTS TO FURNISH CUSTOMERS WITH ACCURATE INFORMATION AND INTERPRETATIONS THAT ARE PART OF, AND INCIDENT TO, THE SERVICES PROVIDED. HOWEVER, HALLIBURTON ENERGY SERVICES, INC. CANNOT AND DOES NOT WARRANT THE ACCURACY OR CORRECTNESS OF SUCH INFORMATION AND INTERPRETATIONS. UNDER NO CIRCUMSTANCES SHOULD ANY SUCH INFORMATION OR INTERPRETATION BE RELIED UPON AS THE SOLE BASIS FOR ANY DRILLING, COMPLETION, PRODUCTION, OR FINANCIAL DECISION OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING VENTURE, DRILLING RIG OR ITS CREW OR ANY THIRD PARTY. THE CUSTOMER HAS FULL RESPONSIBILITY FOR ALL DRILLING, COMPLETION, AND PRODUCTION OPERATION. HALLIBURTON ENERGY SERVICES, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE SERVICES RENDERED. IN NO EVENT WILL HALLIBURTON ENERGY SERVICES, INC. SERVICES BE LIABLE FOR FAILURE TO OBTAIN ANY PARTICULAR RESULTS OR FOR ANY DAMAGES, INCLUDING, BUT NOT LIMITED TO, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OF ANY INFORMATION OR INTERPRETATION PROVIDED BY HALLIBURTON ENERGY SERVICES, INC.

HALLIBURTON / SPERRY DRILLING  
3950 INTERWOOD S. PARKWAY  
HOUSTON, TEXAS 77032

PHONE: 281.986.4400  
FAX: 281.986.4499



Radial Cement Bond  
Gamma Ray CCL  
Log

Company XTO Energy Inc.  
Well Corral Canyon Federal #4H  
Field Willow Lake; Bone Spring, SE  
County Eddy  
State New Mexico

Company XTO Energy Inc.  
Well Corral Canyon Federal #4H  
Field Willow Lake; Bone Spring, SE  
County Eddy State New Mexico

Location: API #: 30-015-42923

200' FSL & 760' FEL  
Section 5, Township 2S, Range 29E

SEC TWP RGE

Permanent Datum Ground Level Elevation 2948'

Log Measured From KB 25 APD

Drilling Measured From KB

Other Services  
---  
Elevation  
K.B. 2973'  
D.F. 2972'  
G.L. 2948'

Date 4-27-2015

Run Number One

Depth Driller 15935'

Depth Logger 8350'

Bottom Logged Interval 8350'

Top Log Interval 1800'

Open Hole Size 7 7/8"

Type Fluid Water

Density / Viscosity ---

Max. Recorded Temp. ---

Estimated Cement Top 2360'

Time Well Ready On Arrival

Time Logger on Bottom See Log

Equipment Number WL-821

Location Hobbs, New Mexico

Recorded By D. Canham

Witnessed By Mr. Mo Gomez

Run Number

Bit

From

To

Size

Weight

From

To

Borehole Record

Size

Wgt/Ft

Top

Bottom

Surface String 13 3/8" 54.5# 590'

Production String 9 5/8" 36# 2875'

Line# 5 1/2" 17# 15935'

Marker Joint 7724' to 7746'

<<< Fold Here >>>

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 interpretation, and we shall not, except in the case of gross or willful 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 set out in our current Price Schedule.

Comments

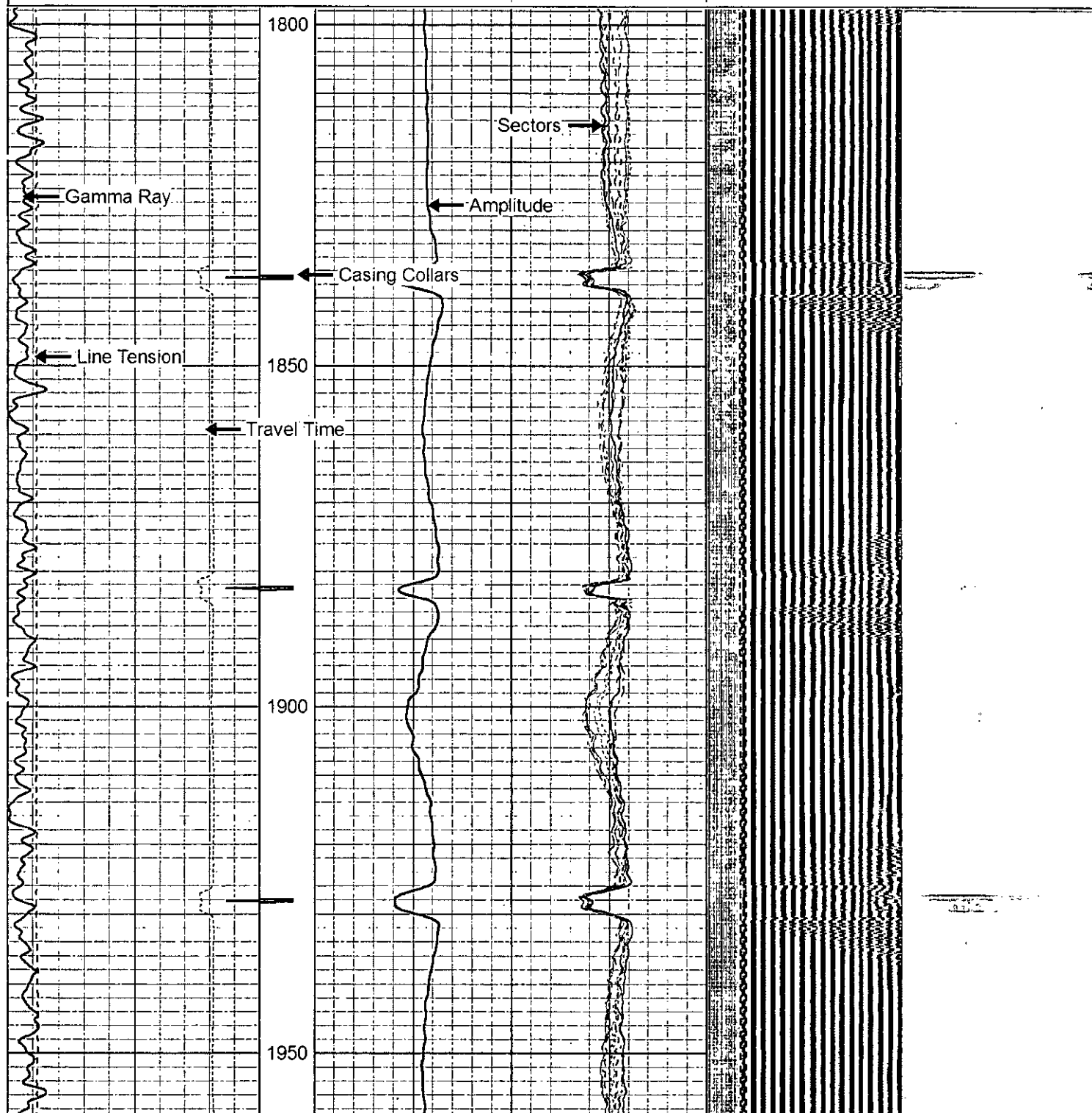
\*\*\*\*\*Thank you for using Capitan Corporation\*\*\*\*\*  
Correlated to Halliburton Spectral Neutron Spectral Gamma Ray Log 3-30-2015

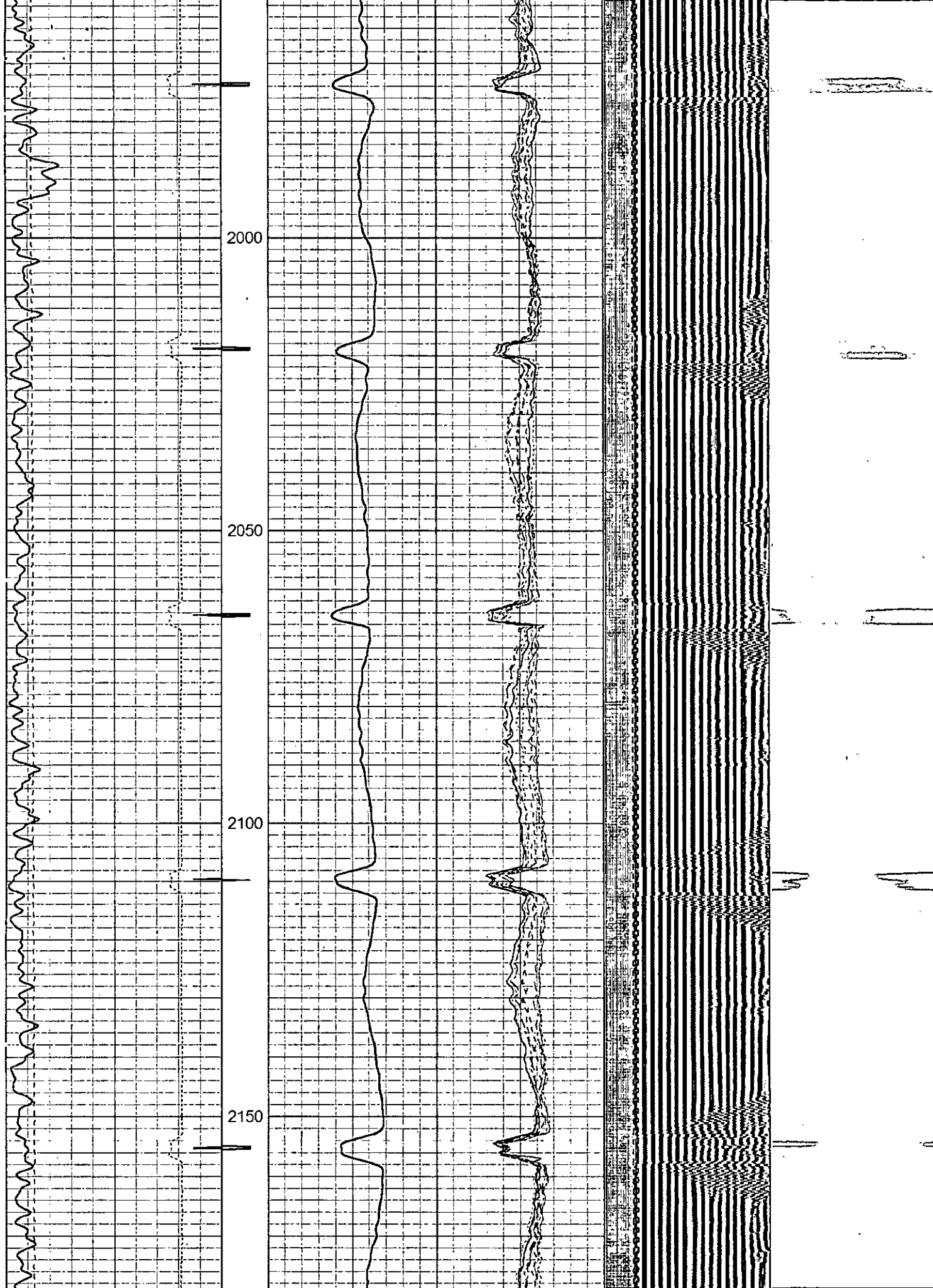


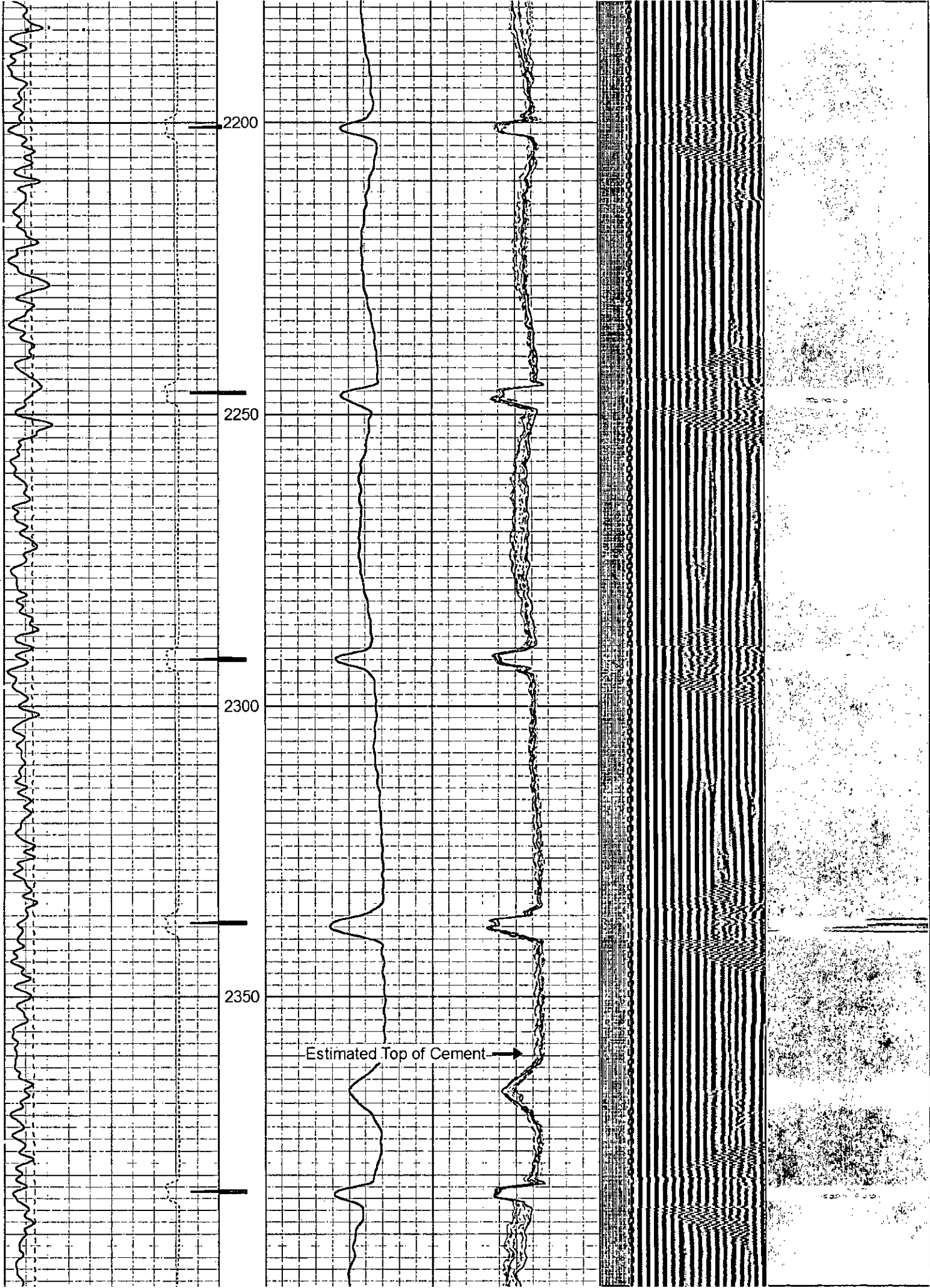
Main Pass 5" = 100'

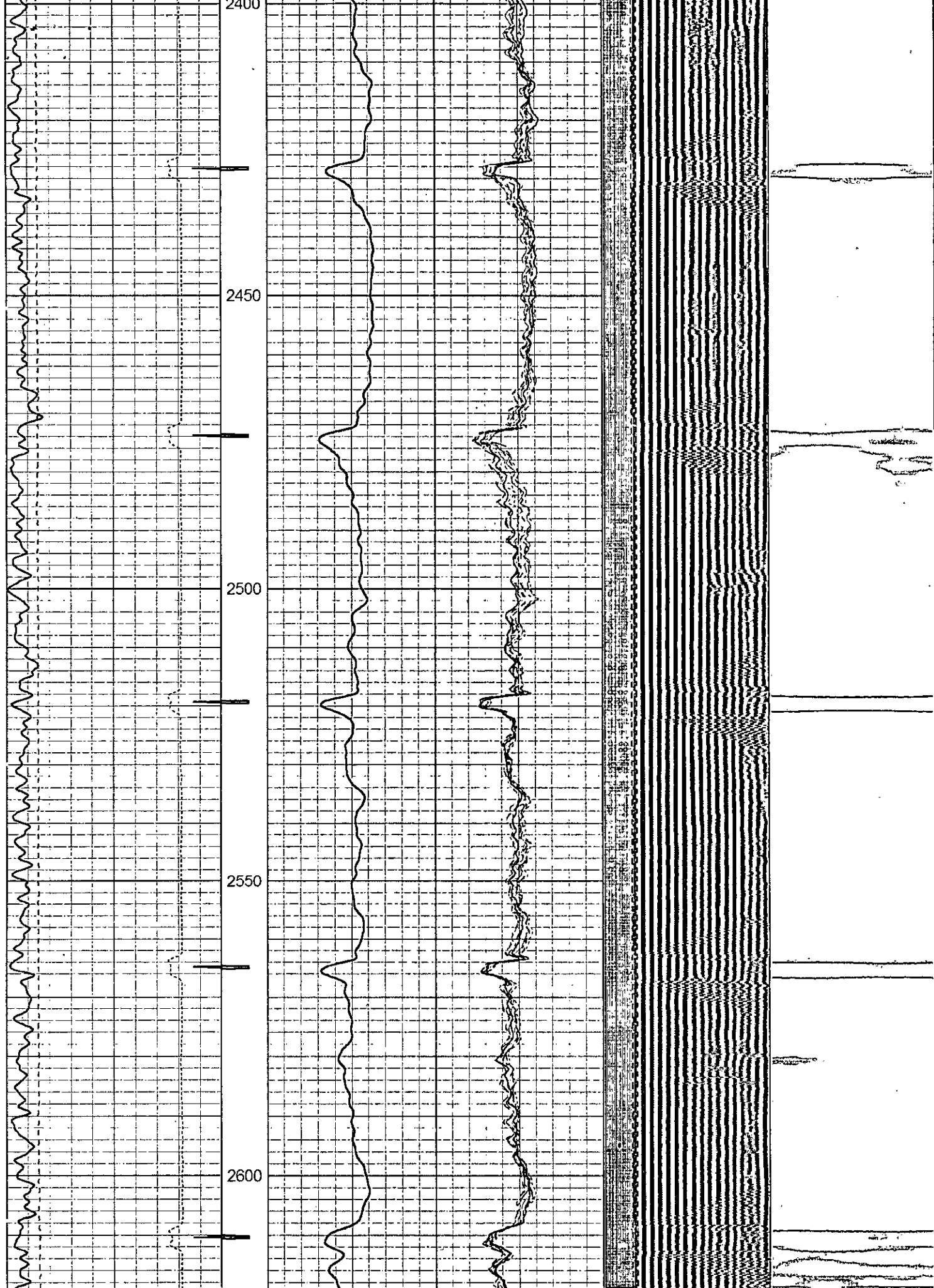
Database File: c:\warrior\data\xtc\_corral\_canyon\_fed\_4h\_rbl\xtc\_corral\_canyon\_fed\_4h\_rbl.db  
 Dataset Pathname: pass5.1  
 Presentation Format: rbl55  
 Dataset Creation: Mon Apr 27 16:31:27 2015 by Calc SCH 120430  
 Charted by: Depth in Feet scaled 1:240

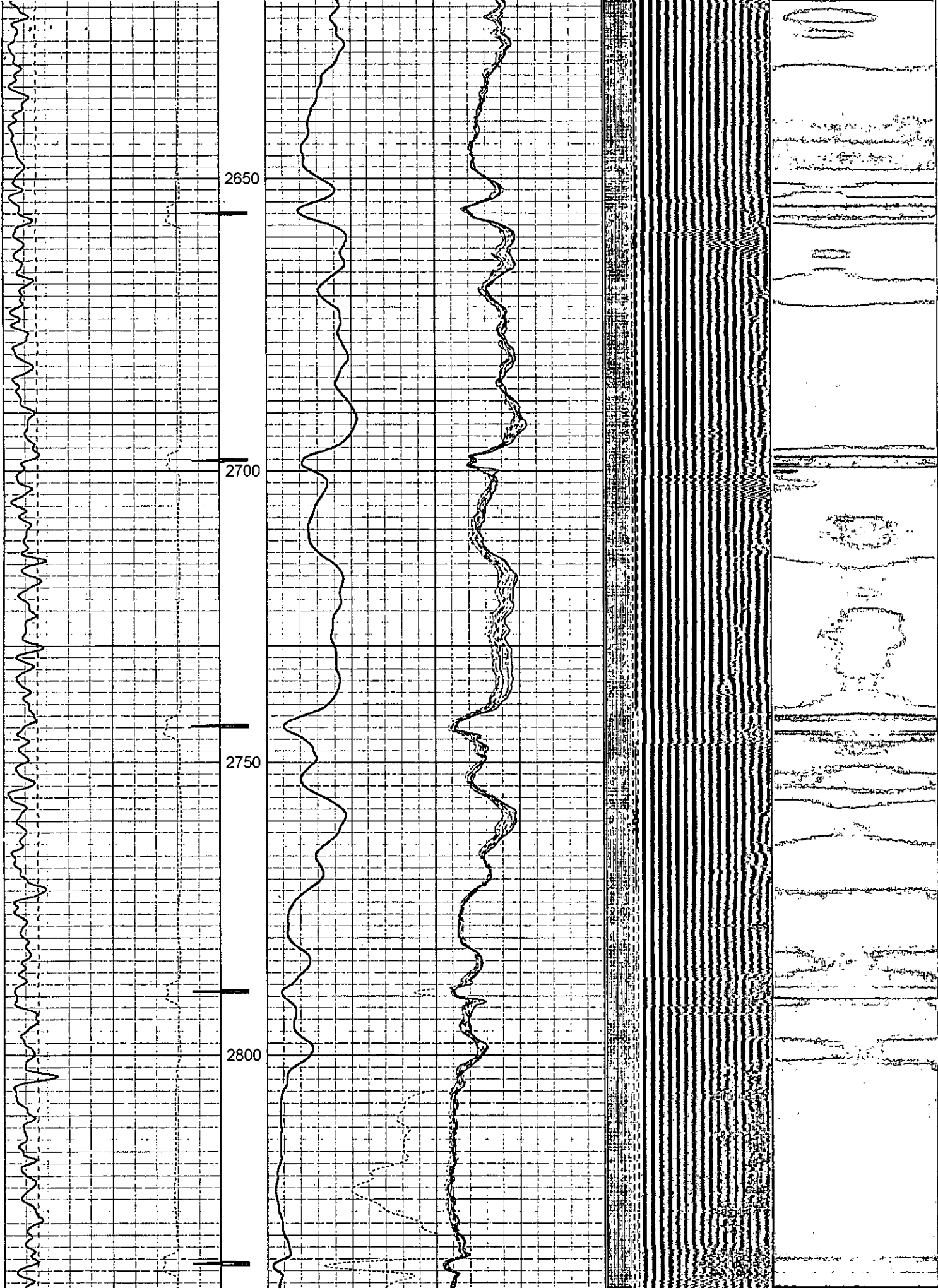
|     |           |      |   |                     |     |    |       |     |                                                                                     |                                                                                     |      |            |
|-----|-----------|------|---|---------------------|-----|----|-------|-----|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|------------|
| 343 | TT (usec) | 243  | 0 | Amplitude (mV)      | 100 | -5 | AMPS2 | 150 | 200                                                                                 | VDL                                                                                 | 1200 | Cement Map |
| 0   | GR (GAPI) | 150  |   | Amplified Amplitude |     | -5 | AMPS3 | 150 |  | 1                                                                                   | 80   |            |
| 0   | LTEN (lb) | 4000 | 0 | (mV)                | 10  | -5 | AMPS4 | 150 | Free Pipe Gate                                                                      |  |      |            |
|     |           |      |   |                     |     | -5 | AMPS5 | 150 |                                                                                     |                                                                                     |      |            |
|     |           |      |   |                     |     | -5 | AMPS6 | 150 |                                                                                     |                                                                                     |      |            |
|     |           |      |   |                     |     | -5 | AMPS7 | 150 |                                                                                     |                                                                                     |      |            |
|     |           |      |   |                     |     | -5 | AMPS8 | 150 |                                                                                     |                                                                                     |      |            |
|     |           |      |   |                     |     | -5 | AMPS1 | 150 |                                                                                     |                                                                                     |      |            |

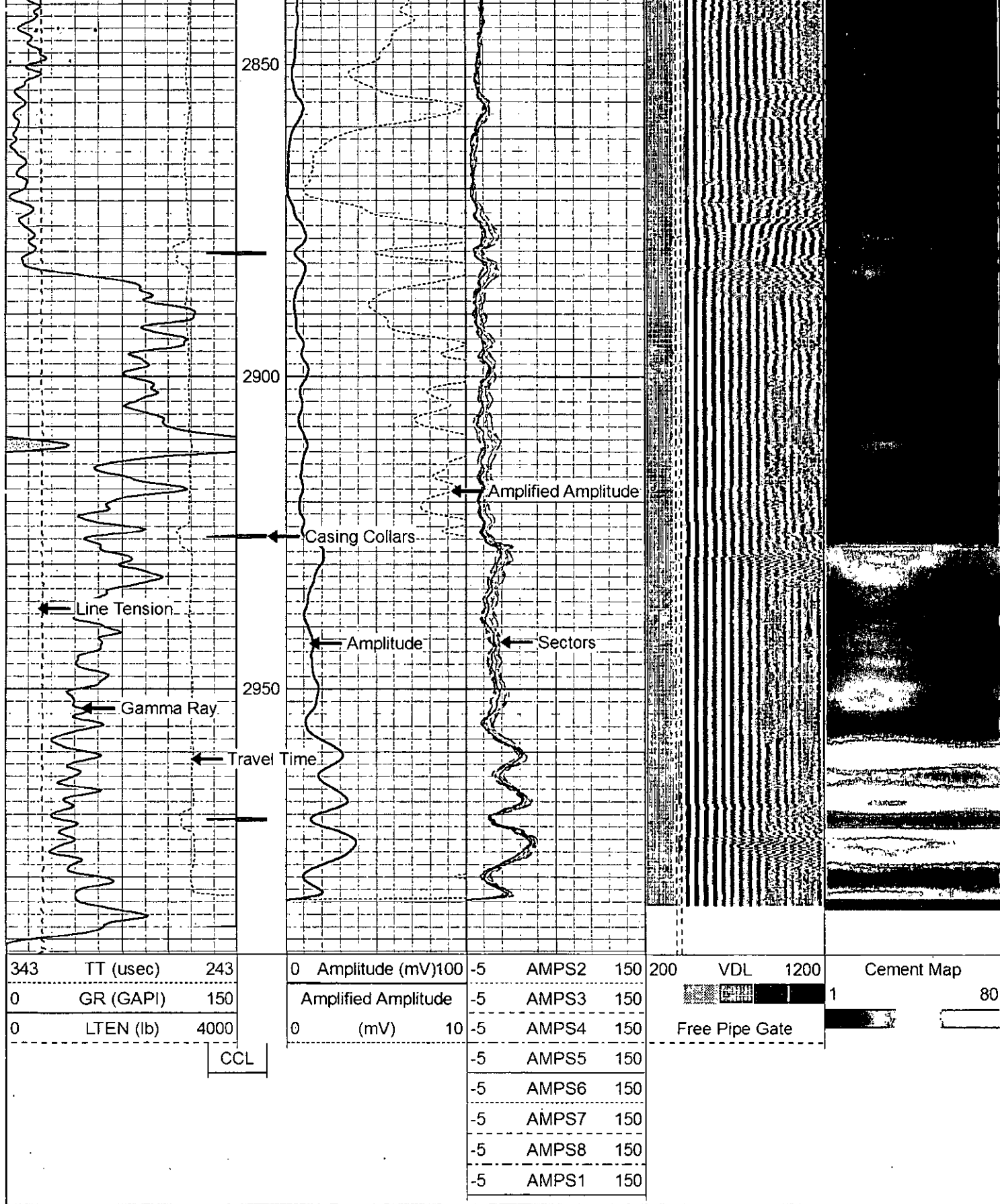






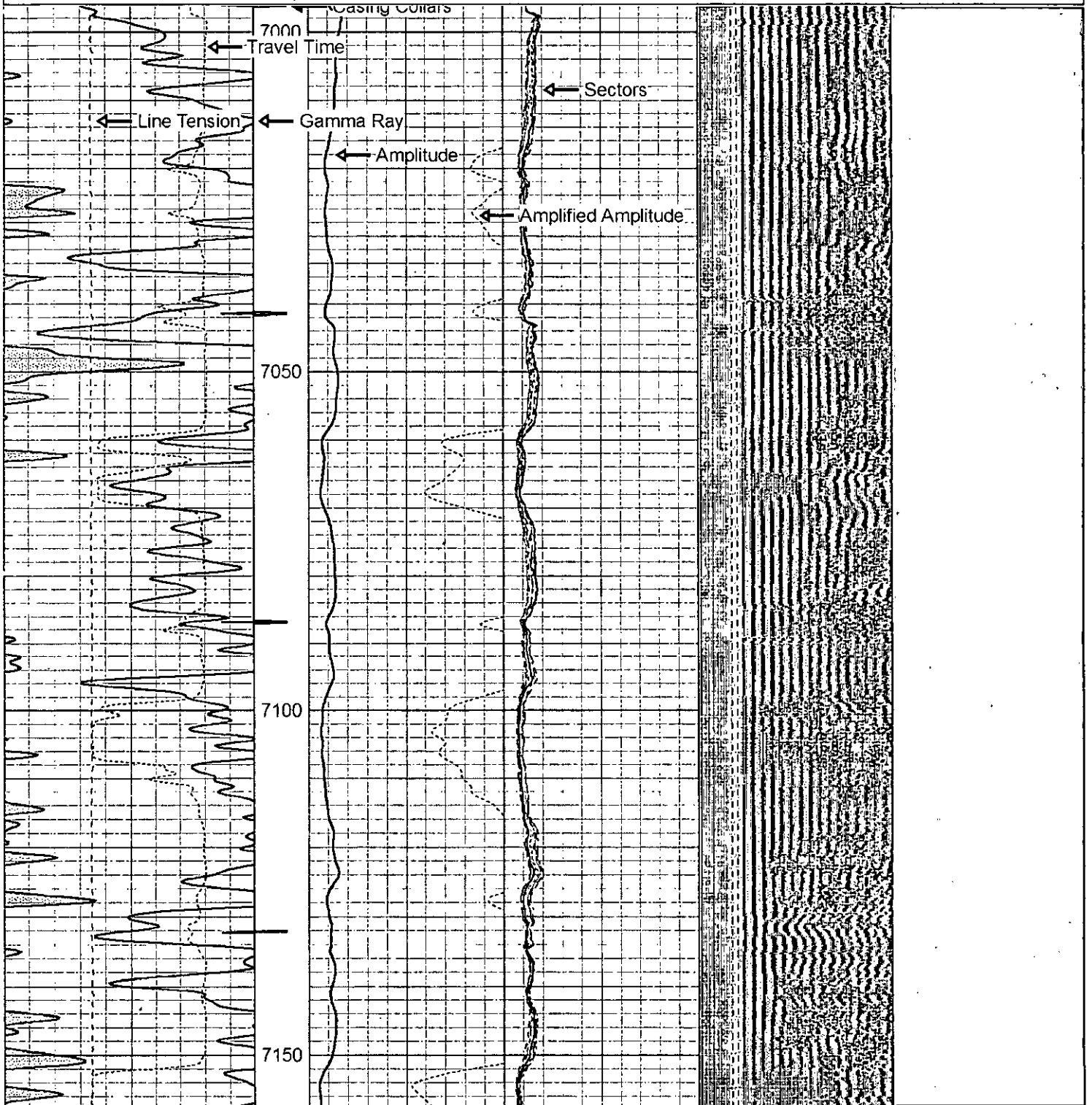


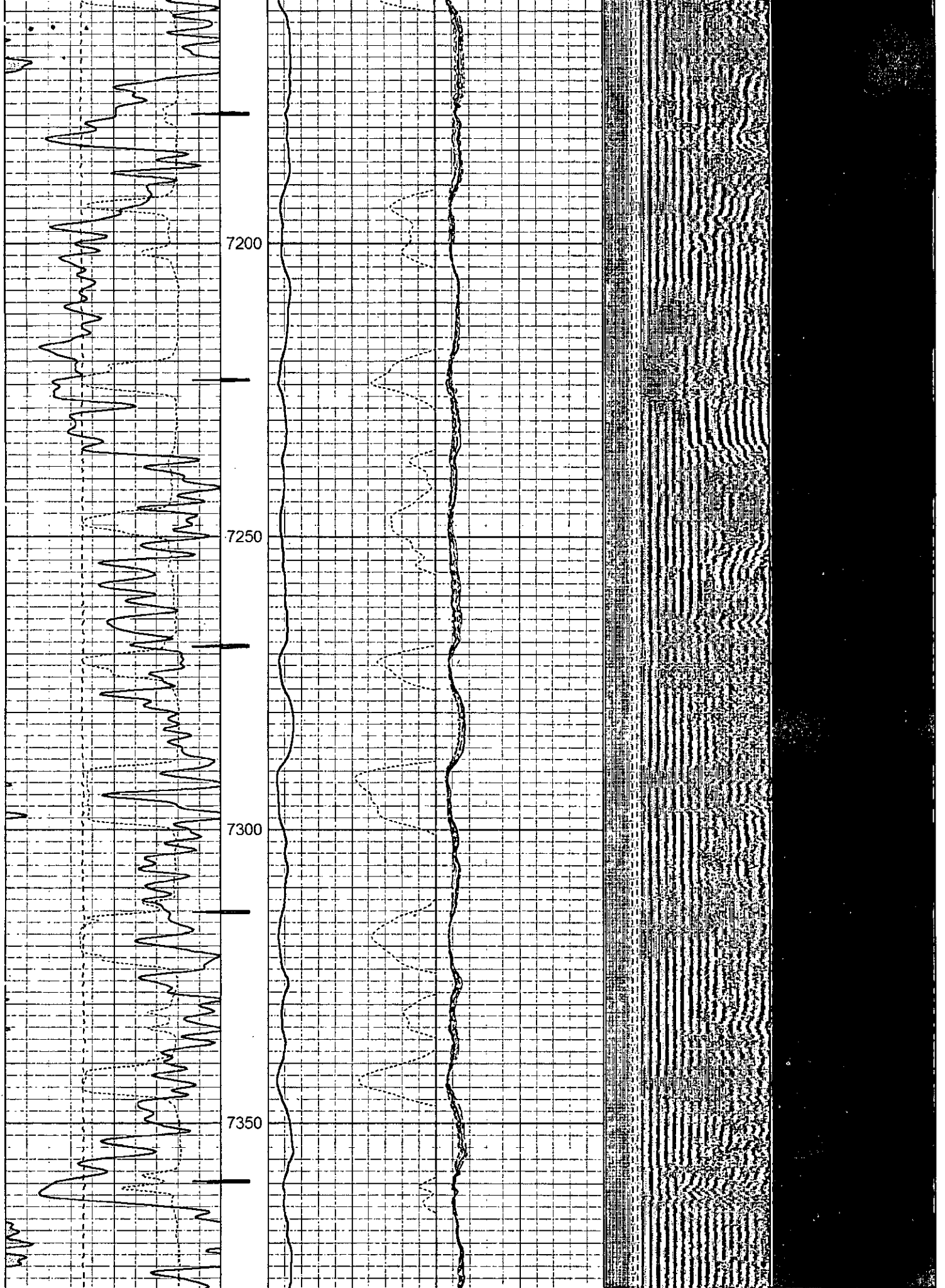


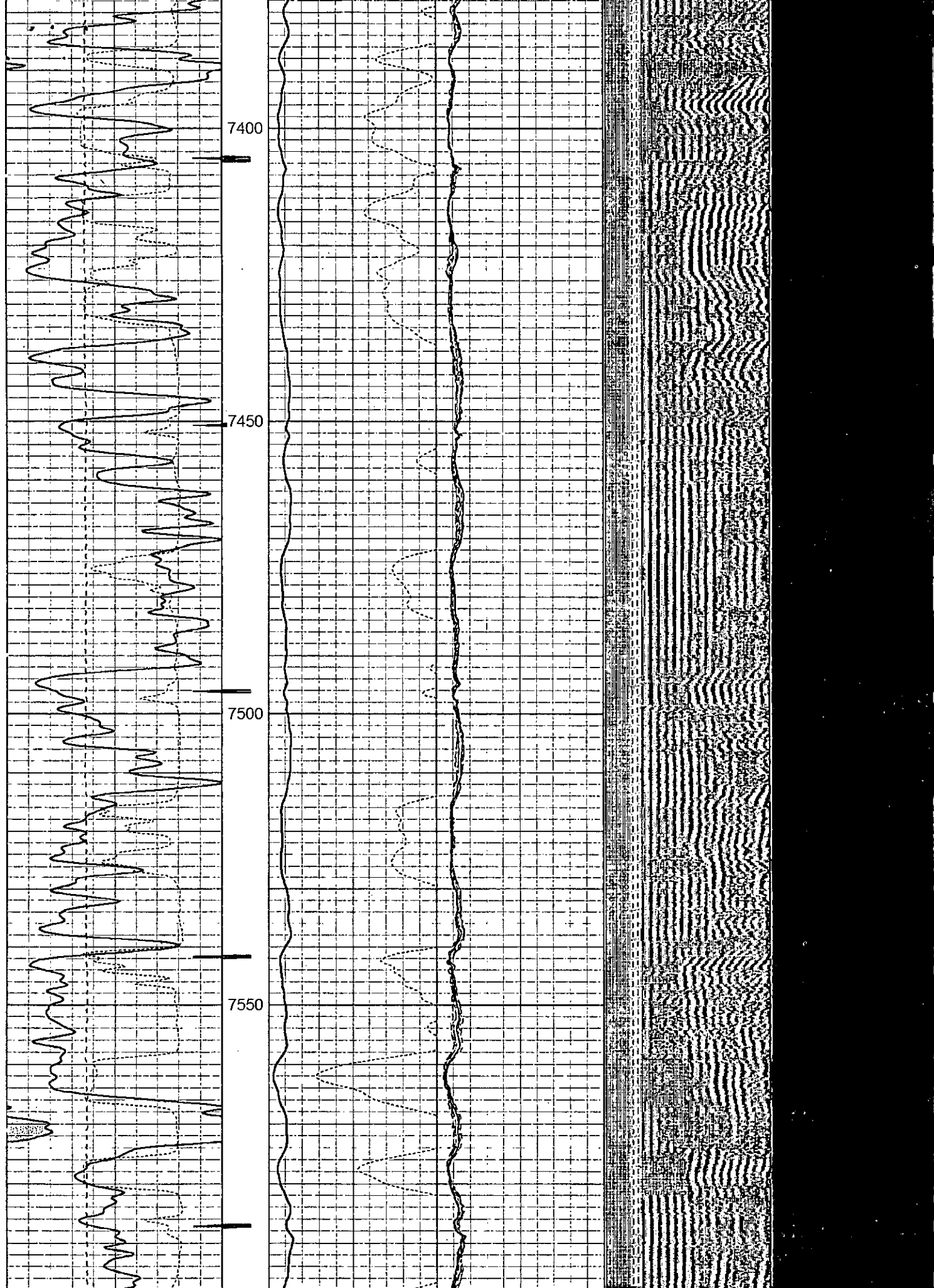


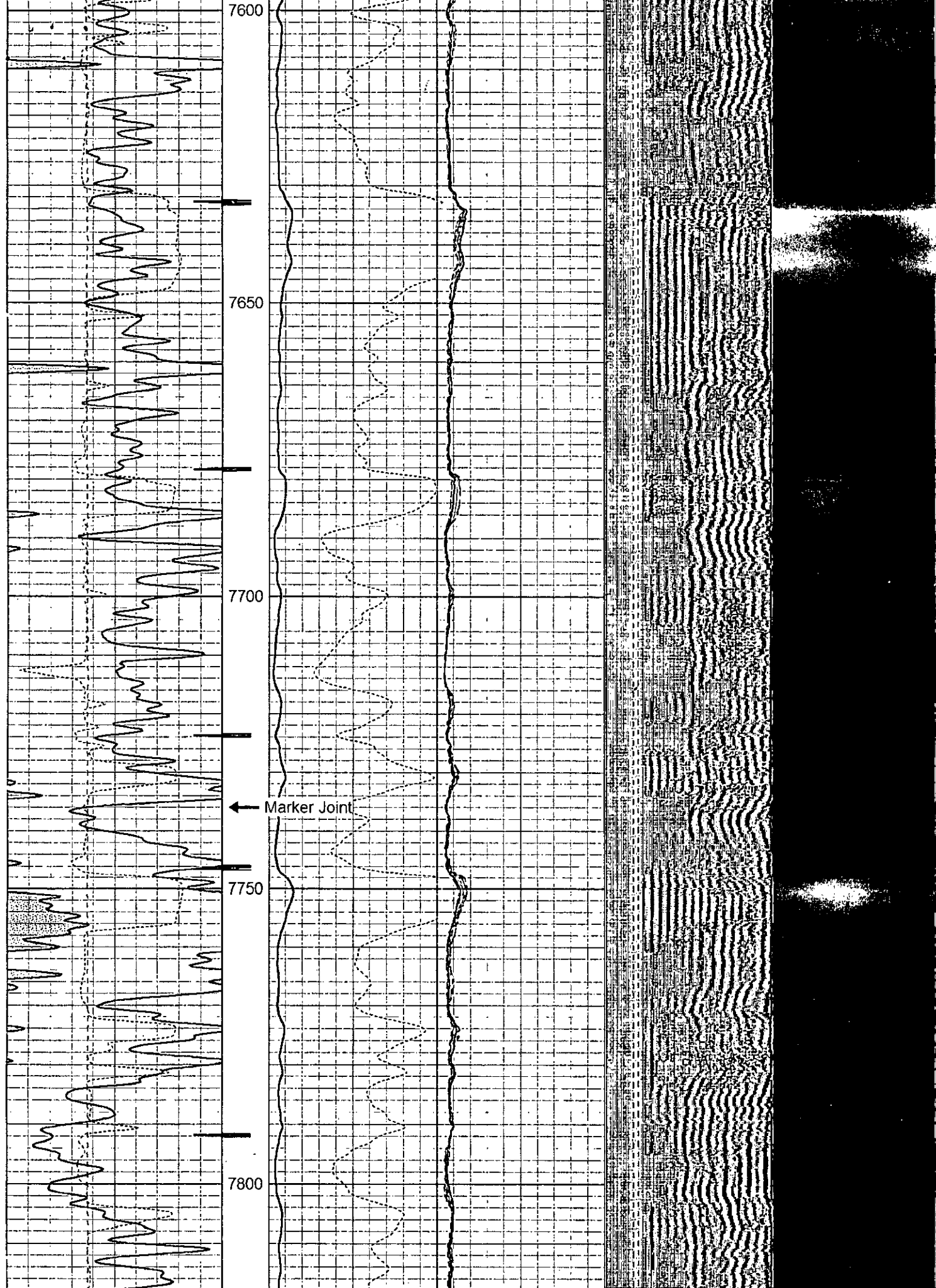
Database File: c:\warrior\data\cto\_corral\_canyon\_fed\_4h\_rb\cto\_corral\_canyon\_fed\_4h\_rb1.db  
Dataset Pathname: pass4  
Presentation Format: rbl55  
Dataset Creation: Mon Apr 27 11:28:01 2015 by Log 7.0 B1  
Charted by: Depth in Feet scaled 1:240

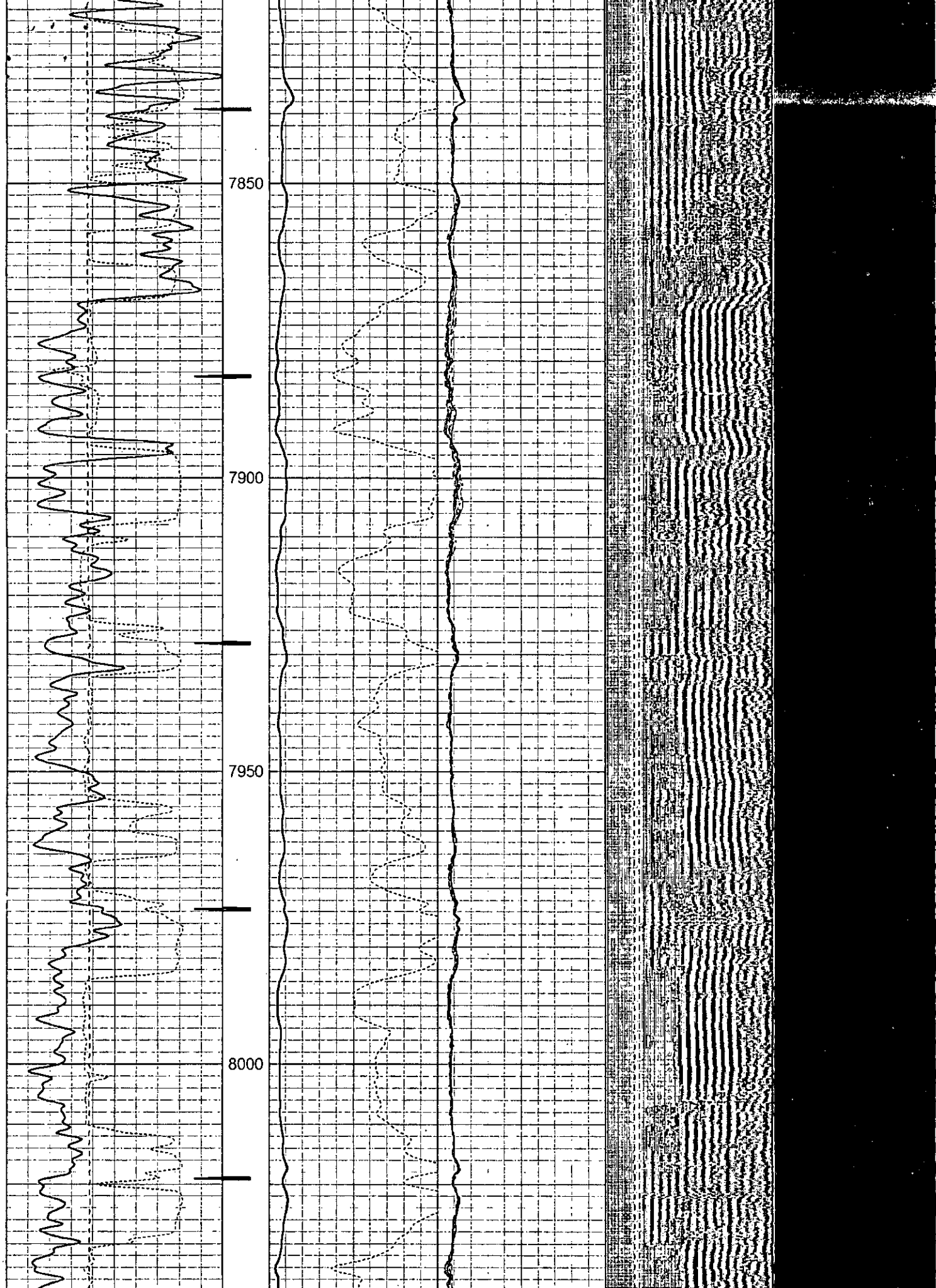
|     |           |      |   |                     |    |       |     |                                                                                     |     |      |            |    |
|-----|-----------|------|---|---------------------|----|-------|-----|-------------------------------------------------------------------------------------|-----|------|------------|----|
| 343 | TT (usec) | 243  | 0 | Amplitude (mV)100   | -5 | AMPS2 | 150 | 200                                                                                 | VDL | 1200 | Cement Map |    |
| 0   | GR (GAPI) | 150  |   | Amplified Amplitude | -5 | AMPS3 | 150 |  |     |      | 1          | 80 |
| 0   | LTEN (lb) | 4000 | 0 | (mV) 10             | -5 | AMPS4 | 150 | Free Pipe Gate                                                                      |     |      |            |    |
|     |           | CCL  |   |                     | -5 | AMPS5 | 150 |                                                                                     |     |      |            |    |
|     |           |      |   |                     | -5 | AMPS6 | 150 |                                                                                     |     |      |            |    |
|     |           |      |   |                     | -5 | AMPS7 | 150 |                                                                                     |     |      |            |    |
|     |           |      |   |                     | -5 | AMPS8 | 150 |                                                                                     |     |      |            |    |
|     |           |      |   |                     | -5 | AMPS1 | 150 |                                                                                     |     |      |            |    |

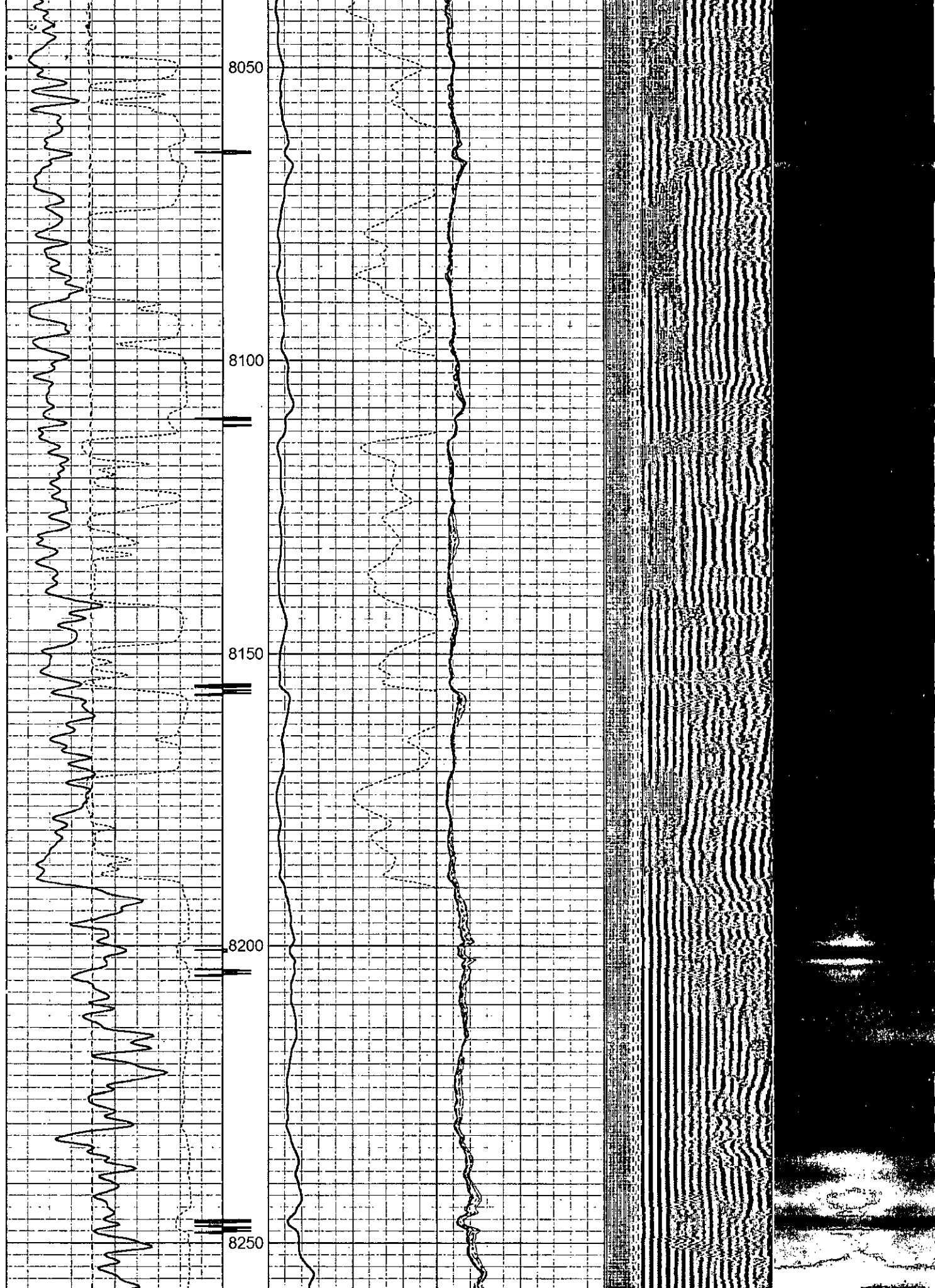


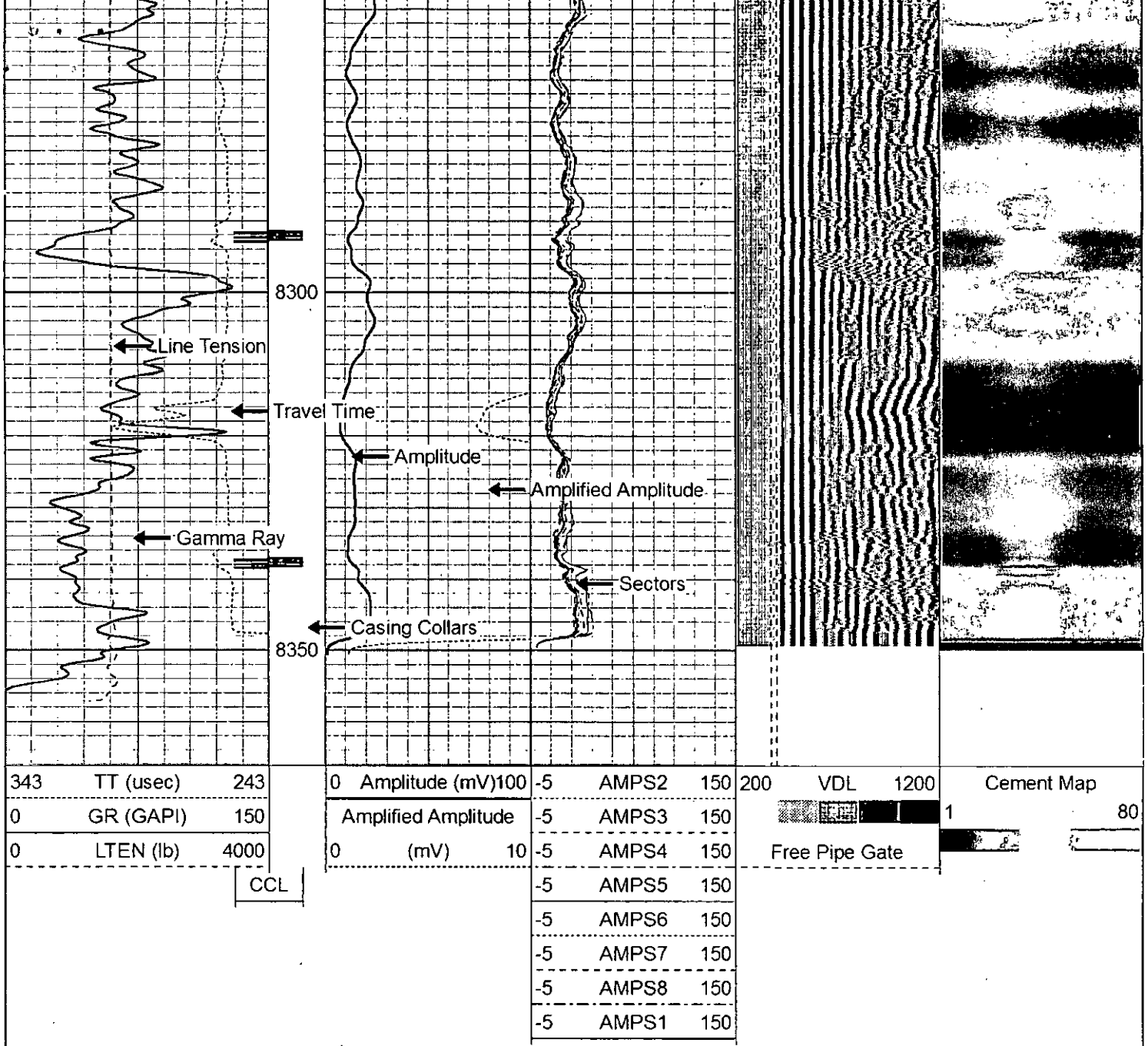






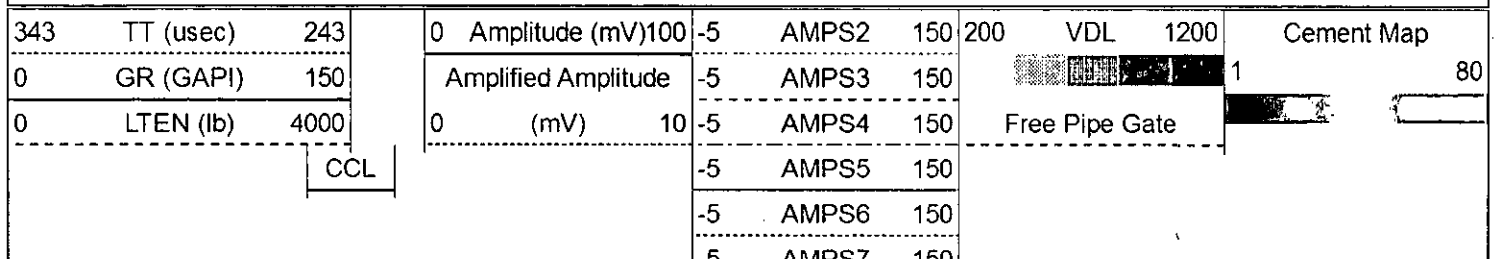




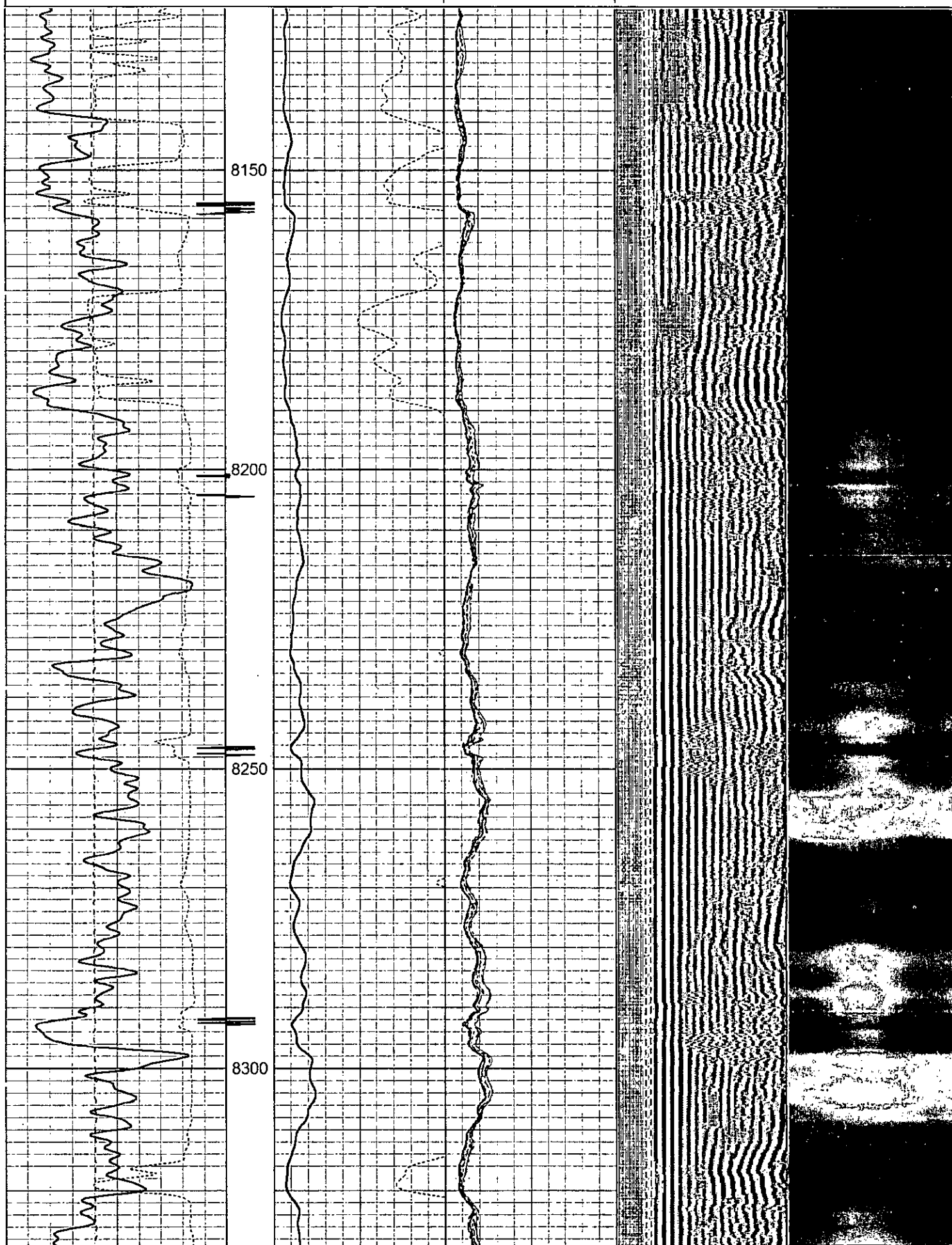


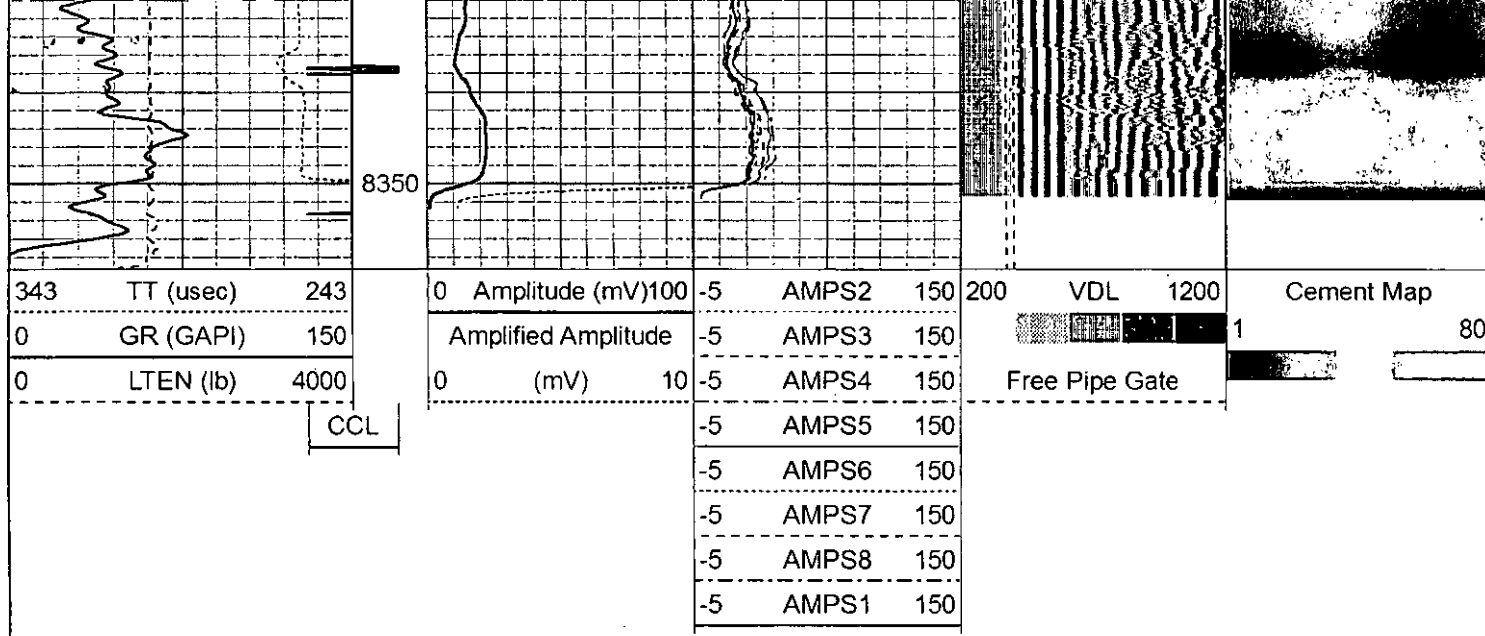
Repeat Pass 5"=100'

Database File: c:\warrior\data\xtc\_corral\_canyon\_fed\_4h\_rbl\xtc\_corral\_canyon\_fed\_4h\_rbl.db  
 Dataset Pathname: pass3  
 Presentation Format: rbl55  
 Dataset Creation: Mon Apr 27 11:22:11 2015 by Log 7.0 B1  
 Charted by: Depth in Feet scaled 1:240



|    |       |     |
|----|-------|-----|
| -5 | AMPS1 | 150 |
|----|-------|-----|





## Log Variables

Database: C:\Warrior\Data\xtc\_corral\_canyon\_fed\_4h\_rbl\xtc\_corral\_canyon\_fed\_4h\_rbl.db  
Dataset: field/well/run1/pass5

### Top - Bottom

| XXXX  | PPT<br>usec  | CASEWGHT<br>lb/ft | MAXAMPL<br>mV | MINAMPL<br>mV | MINATTN<br>db/ft | SRFTEMP<br>degF | CASEOD<br>in |
|-------|--------------|-------------------|---------------|---------------|------------------|-----------------|--------------|
| 0     | 0            | 17                | 71.91         | 2             | 0.8              | 0               | 5.5          |
| PERFS | TDEPTH<br>ft | BOTTEMP<br>degF   | BOREID<br>in  |               |                  |                 |              |
| 0     | 8390         | 100               | 7.875         |               |                  |                 |              |

### Calibration Report

Database File: C:\Warrior\Data\xtc\_corral\_canyon\_fed\_4h\_rbl\xtc\_corral\_canyon\_fed\_4h\_rbl.db  
Dataset Pathname: pass5  
Dataset Creation: Mon Apr 27 12:06:59 2015 by Log 7.0 B1

### Gamma Ray Calibration Report

Type / Serial: Probe275dig / FW1302-11.

#### SHOP CALIBRATION

Sun Jun 13 13:33:21 1993

|            | Counts/Sec. | Gain   | Offset | Jig | Units    |
|------------|-------------|--------|--------|-----|----------|
| Background | 0.0         |        |        |     | cps      |
| Calibrator | 1.0         |        |        |     | cps      |
|            |             | 1.0000 |        |     | GAPI/cps |

#### PRIMARY VERIFICATION

|            |     |  |     | Units |
|------------|-----|--|-----|-------|
| Background | 0.0 |  |     | cps   |
| Calibrator | 0.0 |  |     | cps   |
| Difference |     |  | 0.0 | GAPI  |

#### BEFORE SURVEY VERIFICATION

|            |     |  |     | Units |
|------------|-----|--|-----|-------|
| Background | 0.0 |  |     | cps   |
| Calibrator | 0.0 |  |     | cps   |
| Difference |     |  | 0.0 | GAPI  |

#### AFTER SURVEY VERIFICATION

Background 0.0  
 Calibrator 0.0  
 Difference 0.0

cps  
 cps  
 GAPI

### Segmented Cement Bond Log Calibration Report

Serial Number: FW1403-67  
 Tool Model: RBT-TEMP  
 Calibration Casing Diameter: 5.500 in  
 Calibration Depth: 28.183 ft

Master Calibration, performed Mon Apr 27 09:39:07 2015:

|     | Raw (v) |       | Calibrated (mv) |         | Results |        |
|-----|---------|-------|-----------------|---------|---------|--------|
|     | Zero    | Cal   | Zero            | Cal     | Gain    | Offset |
| 3'  | -0.002  | 0.873 | 1.000           | 71.921  | 81.065  | 1.156  |
| CAL | -0.002  | 0.936 |                 |         |         |        |
| 5'  | -0.002  | 0.882 | 1.000           | 71.921  | 80.260  | 1.159  |
| SUM |         |       |                 |         |         |        |
| S1  | -0.002  | 0.868 | 0.000           | 100.000 | 114.993 | 0.201  |
| S2  | -0.002  | 0.878 | 0.000           | 100.000 | 113.625 | 0.226  |
| S3  | -0.002  | 0.878 | 0.000           | 100.000 | 113.620 | 0.232  |
| S4  | -0.002  | 0.878 | 0.000           | 100.000 | 113.730 | 0.197  |
| S5  | -0.002  | 0.887 | 0.000           | 100.000 | 112.520 | 0.199  |
| S6  | -0.002  | 0.878 | 0.000           | 100.000 | 113.674 | 0.208  |
| S7  | -0.002  | 0.883 | 0.000           | 100.000 | 113.021 | 0.218  |
| S8  | -0.002  | 0.886 | 0.000           | 100.000 | 112.597 | 0.212  |

Internal Reference Calibration, performed Mon Apr 27 09:38:41 2015:

|     | Raw (v) |       | Calibrated (v) |       | Results |        |
|-----|---------|-------|----------------|-------|---------|--------|
|     | Zero    | Cal   | Zero           | Cal   | Gain    | Offset |
| CAL | 0.000   | 0.000 | -0.002         | 0.936 | 1.000   | 0.000  |

Air Zero Calibration, performed Mon Apr 27 09:37:40 2015:

|     | Raw (v) |  | Calibrated (v) |  | Results |  |
|-----|---------|--|----------------|--|---------|--|
|     | Zero    |  | Zero           |  | Offset  |  |
| 3'  | 0.000   |  | 0.000          |  | 0.000   |  |
| 5'  | 0.000   |  | 0.000          |  | 0.000   |  |
| SUM |         |  |                |  |         |  |
| S1  | 0.000   |  | 0.000          |  | 0.000   |  |
| S2  | 0.000   |  | 0.000          |  | 0.000   |  |
| S3  | 0.000   |  | 0.000          |  | 0.000   |  |
| S4  | 0.000   |  | 0.000          |  | 0.000   |  |
| S5  | 0.000   |  | 0.000          |  | 0.000   |  |
| S6  | 0.000   |  | 0.000          |  | 0.000   |  |
| S7  | 0.000   |  | 0.000          |  | 0.000   |  |
| S8  | 0.000   |  | 0.000          |  | 0.000   |  |

### Temperature Calibration Report

Serial Number: FW1403-67  
 Tool Model: RBT-TEMP  
 Performed: Fri May 09 10:19:34 2014

Reference Reading

Low Reference: 0.00 degF  
 High Reference: 1.00 degF  
 Gain: 1.00  
 Offset: 0.00  
 Delta Spacing 5

| Sensor  | Offset (ft) | Schematic | Description                                                    | Len (ft) | OD (in) | Wt (lb) |
|---------|-------------|-----------|----------------------------------------------------------------|----------|---------|---------|
| TEMP    | 11.12       |           | 1.4375CHD<br>Titan Cable Head 1 7/16                           | 1.00     | 1.44    | 10.00   |
| WVFS3FT | 8.97        |           | RBT-RBT-TEMP (FW1403-67)<br>Probe 2.75" Radii Bond w/Temp Tool | 9.17     | 2.75    | 90.00   |
| WVFCAL  | 8.97        |           |                                                                |          |         |         |
| WVFS1   | 8.97        |           |                                                                |          |         |         |
| WVFS2   | 8.97        |           |                                                                |          |         |         |
| WVFS3   | 8.97        |           |                                                                |          |         |         |
| WVFS4   | 8.97        |           |                                                                |          |         |         |
| WVFS5   | 8.97        |           |                                                                |          |         |         |
| WVFS6   | 8.97        |           |                                                                |          |         |         |
| WVFS7   | 8.97        |           |                                                                |          |         |         |
| WVFS8   | 8.97        |           |                                                                |          |         |         |
| WVFS5FT | 7.97        |           |                                                                |          |         |         |
| CCL     | 3.88        |           |                                                                |          |         |         |
| DCCL    | 3.88        |           |                                                                |          |         |         |
| GR      | 2.54        |           | GR-Probe275dig (FW1302-11)<br>Probe Digital Gamma CCL          | 4.78     | 2.75    | 57.00   |

|               |                                                        |
|---------------|--------------------------------------------------------|
| Dataset:      | xto_corral_canyon_fed_4h_rbl.db: field/well/run1/pass5 |
| Total Length: | 14.95 ft                                               |
| Total Weight: | 157.00 lb                                              |
| O.D.          | 2.75 in                                                |

|         |                              |       |            |
|---------|------------------------------|-------|------------|
| Company | XTO Energy Inc.              |       |            |
| Well    | Corral Canyon Federal #4H    |       |            |
| Field   | Willow Lake; Bone Spring, SE |       |            |
| County  | Eddy                         | State | New Mexico |



|                                            |
|--------------------------------------------|
| Radial Cement Bond<br>Gamma Ray CCL<br>Log |
|--------------------------------------------|

# HALLIBURTON

---

3950 Interwood South Parkway • Houston, TX 77032

PHONE 281.986.4400 • FAX 281.986.4499

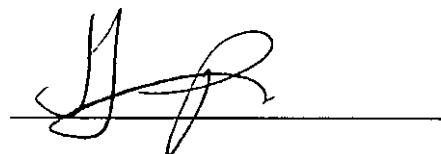
**NM OIL CONSERVATION**  
ARTESIA DISTRICT

OCT 27 2015

State of New Mexico, Eddy County

RECEIVED

I, JJ Peters, certify that I am employed by Halliburton Energy Services, Inc. (AKA Sperry Drilling) and that on the dates of March 30, 2015 through April 17, 2015 I did conduct or supervise the taking of MWD Directional surveys for the well Corral Canyon Federal 4H from 7977' MD to 15874' MD. This data is true, correct, complete and within the limitations of the tools as set forth by Halliburton Energy Services, Inc. (AKA Sperry Drilling). I am authorized and qualified to make this report and this survey was conducted at the request of XTO Energy, INC for the Corral Canyon Federal 4H well, API No. 30-015 42923-0000 in Eddy County, New Mexico. I have reviewed this report and find that it conforms to the principles and procedures as set forth by Halliburton Energy Services, Inc. (AKA Sperry Drilling).



JJ Peters  
MWD Field Engineer