



| WELL INFORMATION | | | | | |
|----------------------------------|------------------|-------------------|--|--|--|
| MWD Run Number | 100 | 200 | | | |
| Date run completed | 10-Sep-15 | 14-Sep-15 | | | |
| Rig Bit Number | 0200 | 0300 | | | |
| Bit Size (in) | 8.750 | 6.125 | | | |
| Tool Nominal OD (in) | 6.750 | 4.780 | | | |
| Log Start Depth (MD, ft) | 637.00 | 6,833.00 | | | |
| Log End Depth (MD, ft) | 6,833.00 | 16,025.00 | | | |
| Drill or Wipe | Drill | Drill | | | |
| Drill/Wipe Start Date and Time | 09-Sep-15 06:33 | 11-Sep-15 06:39 | | | |
| Drill/Wipe End Date and Time | 10-Sep-15 05:08 | 14-Sep-15 02:30 | | | |
| Min Inc (deg) @ Depth (MD, ft) | 0.00 @ 919.00 | 87.84 @ 14,166.00 | | | |
| Max Inc (deg) @ Depth (MD, ft) | 90.25 @ 6,777.00 | 93.08 @ 15,774.00 | | | |
| Bit TFA(in2) / Bit Type | 0.98 / N/A | 0.98 / N/A | | | |
| Flow Rate (gpm) | 576.89 | 312.64 | | | |
| Max AV (fpm) / CV (fpm) @ MWD | N/A / N/A | N/A / N/A | | | |
| Fluid Type | Fresh Water Gel | Native/Spud Mud | | | |
| Density (ppg) / Viscosity (spqt) | 9.00 / 32.00 | 10.40 / 34.00 | | | |
| Filtrate CL (ppm) | 2,200.00 | 2,100.00 | | | |
| pH / Fluid Loss (mptm) | 10.70 / 12 | 8.60 / 6 | | | |
| PV (cP) / YP (lhf2) | 5 / 4.00 | 8 / 8.00 | | | |
| % Solids / % Sand | 3.00 / 0.35 | 9.80 / 0.10 | | | |
| % Oil / Oil:Water Ratio | N/A / N/A | 1.00 / N/A | | | |
| Rm @ Measured Temp (degF) | N/A @ N/A | N/A @ N/A | | | |
| Rmf @ Measured Temp (degF) | N/A @ N/A | N/A @ N/A | | | |
| Rmc @ Measured Temp (degF) | N/A @ N/A | N/A @ N/A | | | |

| | | | | | |
|-------------------------------|--------------|--------------|--|--|--|
| Max Tool Temp (degF) / Source | 165.58 / PCM | 242.90 / PCM | | | |
| Rm @ Max Tool Temp (degF) | N/A @ 165.58 | N/A @ 242.90 | | | |
| Lead MWD Engineer | Matt Busche | Matt Busche | | | |
| Customer Representative | Jim Turner | JimTurner | | | |

SENSOR INFORMATION

Downhole Processor Information

| | | | | | |
|---------------------------|-----------------|-----------------|--|--|--|
| Tool Type | PCM | PCM | | | |
| Software Version | 5.93 | 5.93 | | | |
| Sub Serial Number | 11341335 | 12334785 | | | |
| Insert Serial Number | 11400992 | 11227493 | | | |
| Date and Time Initialized | 06-Sep-15 20:10 | 10-Sep-15 12:42 | | | |
| Date and Time Read | 10-Sep-15 12:08 | 14-Sep-15 18:43 | | | |
| ECMB SW Version | N/A | N/A | | | |

Directional Sensor Information

| | | | | | |
|------------------------|----------|----------|--|--|--|
| Tool Type | PCDC | PCDC | | | |
| Distance From Bit (ft) | 56.00 | 66.00 | | | |
| Software Version | 6.21 | 6.21 | | | |
| Sub Serial Number | 11341335 | 12334785 | | | |
| Sonde Serial Number | 11297516 | 11637592 | | | |
| Sensor ID Number | N/A | N/A | | | |
| Toolface Offset (deg) | 319.00 | 129.60 | | | |

Gamma Ray Sensor Information

| | | | | | |
|------------------------------|----------|----------|--|--|--|
| Tool Type | PCG | PCG | | | |
| Distance From Bit (ft) | 48.95 | 69.22 | | | |
| Recorded Sample Period (sec) | 10 | 10 | | | |
| Software Version | 8.15 | 8.15 | | | |
| Sub Serial Number | 11341335 | 12334785 | | | |
| Insert/Sonde Serial Number | 12037420 | 12071509 | | | |

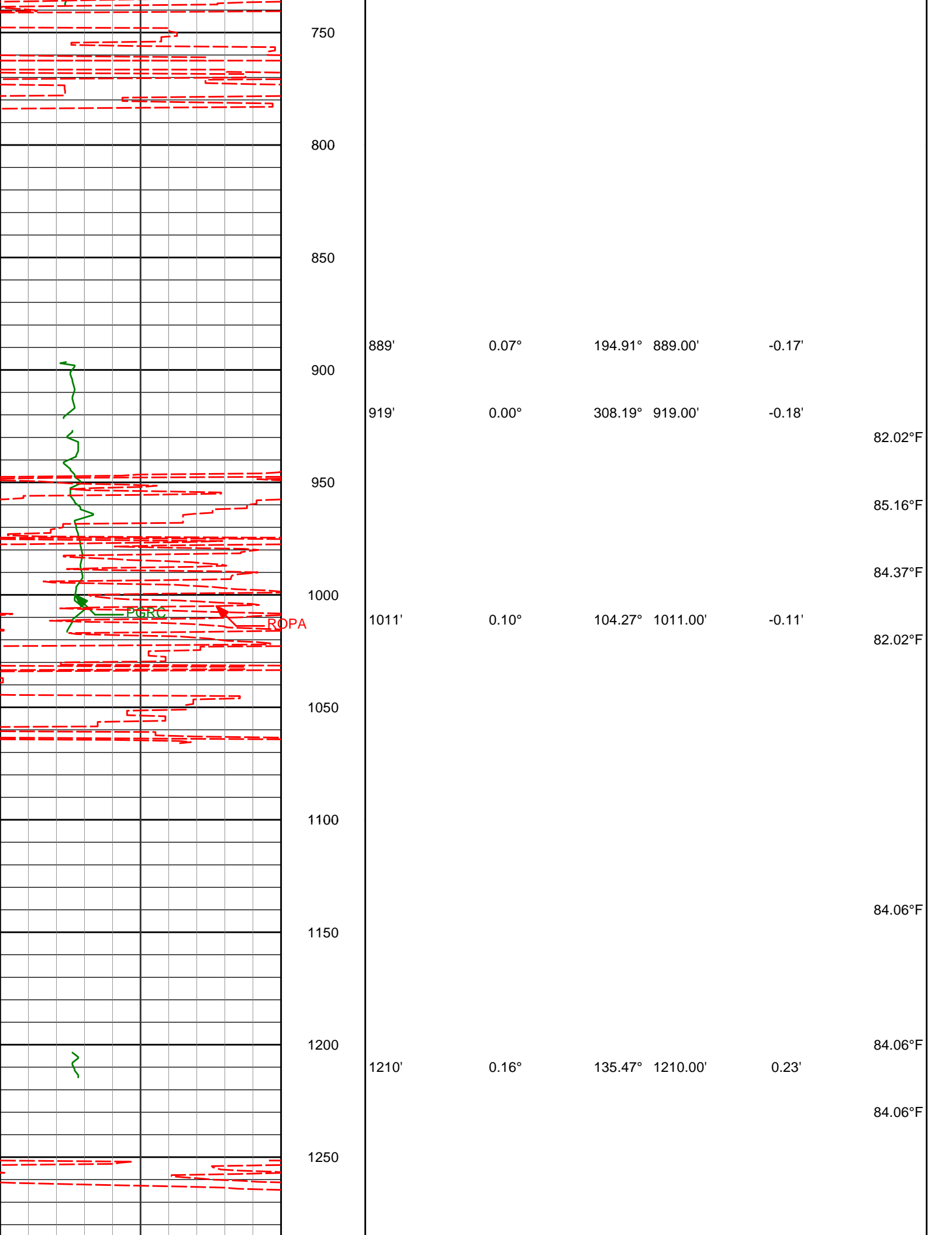
REMARKS

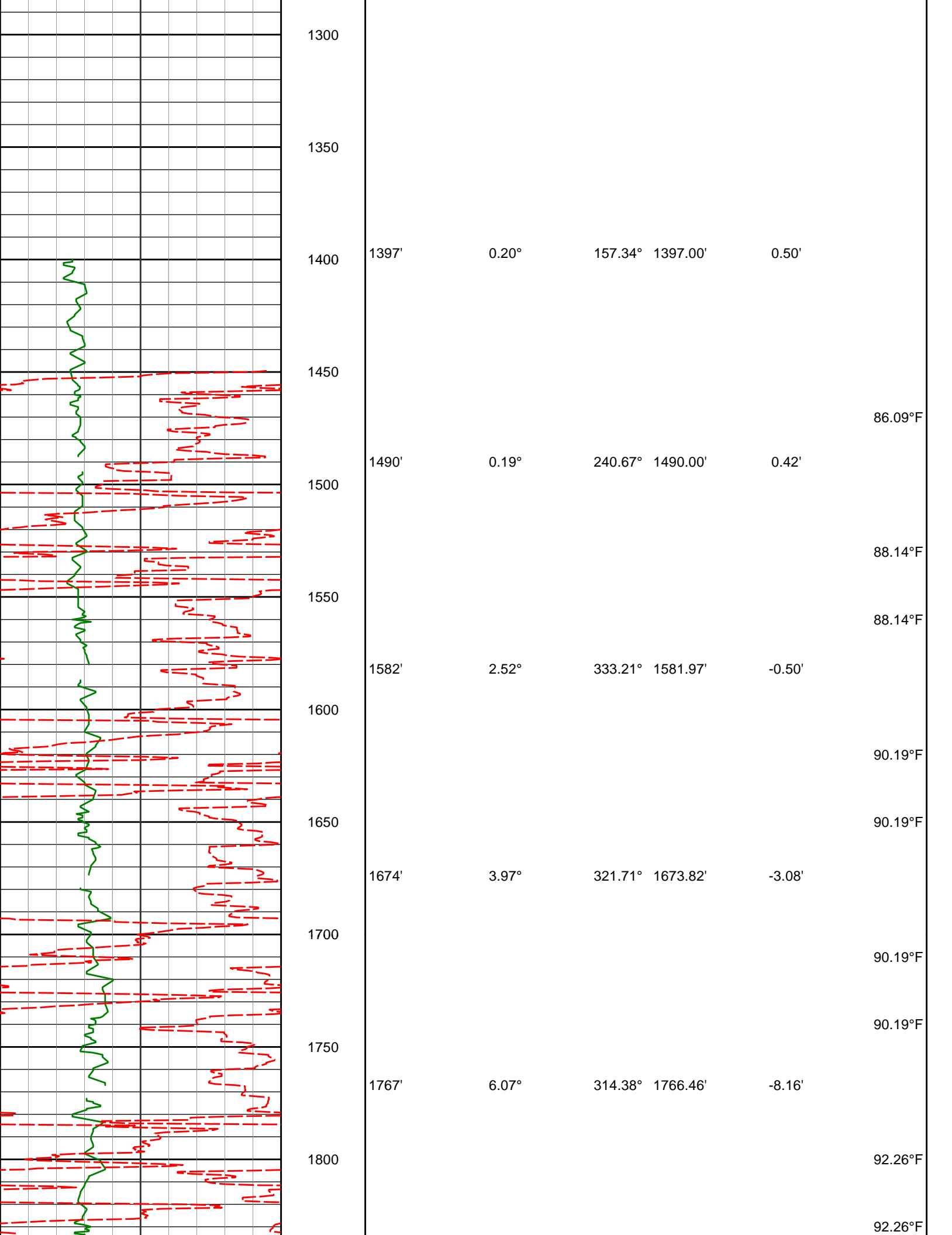
1. All depths are calibrated to driller's pipe tally and are measured depth's from the Drill Floor.
2. No depth corrections have been made for pipe stretch or compression.
3. All data presented is recorded data unless otherwise specified.
4. The following smoothing parameters have been applied to the data:

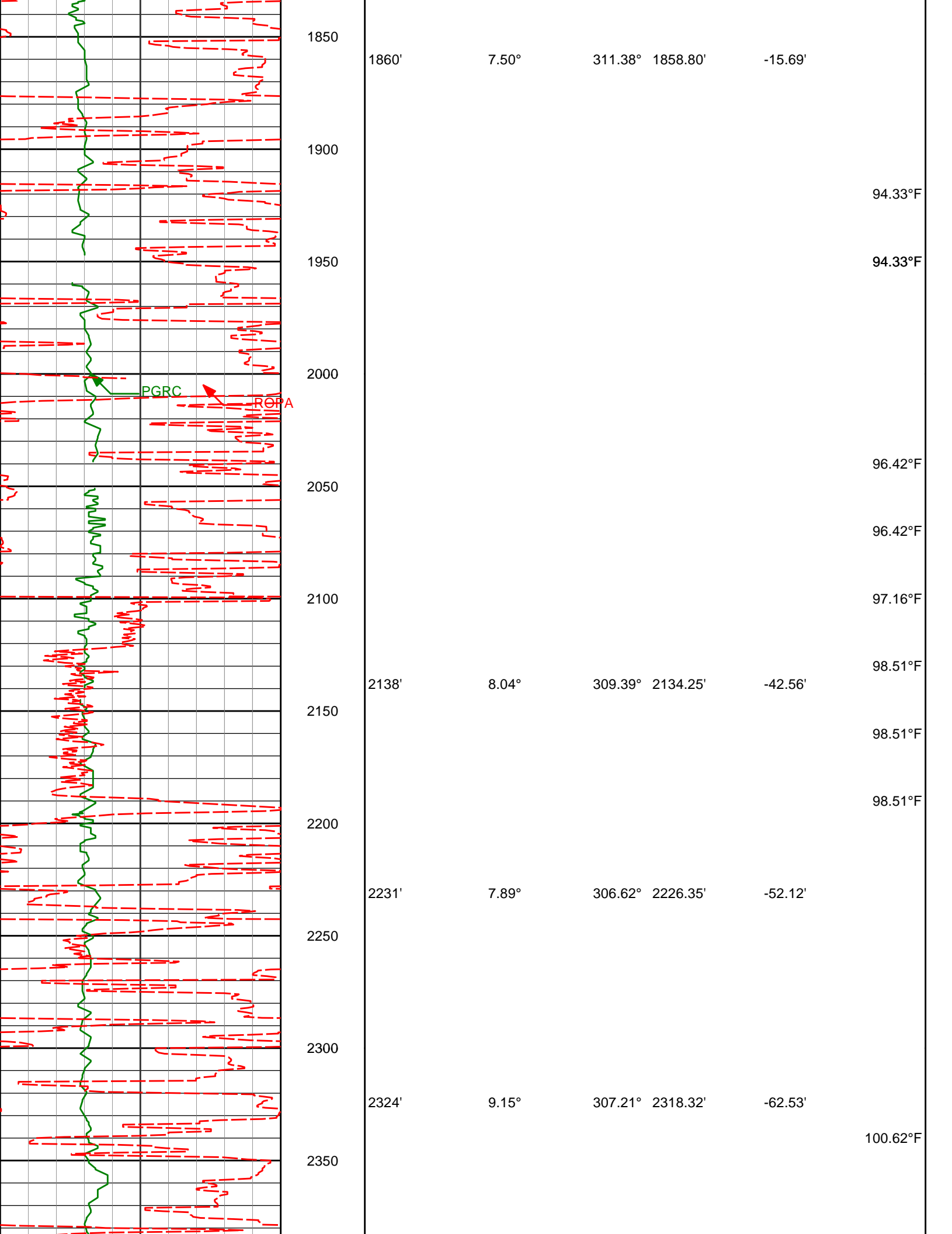
1:600 Log
 PGRC (Gamma CG) and ROPA (Average Rate of Penetration)
 Interval Resolution: 1.0 ft
 Interval Distance: 3.0 ft

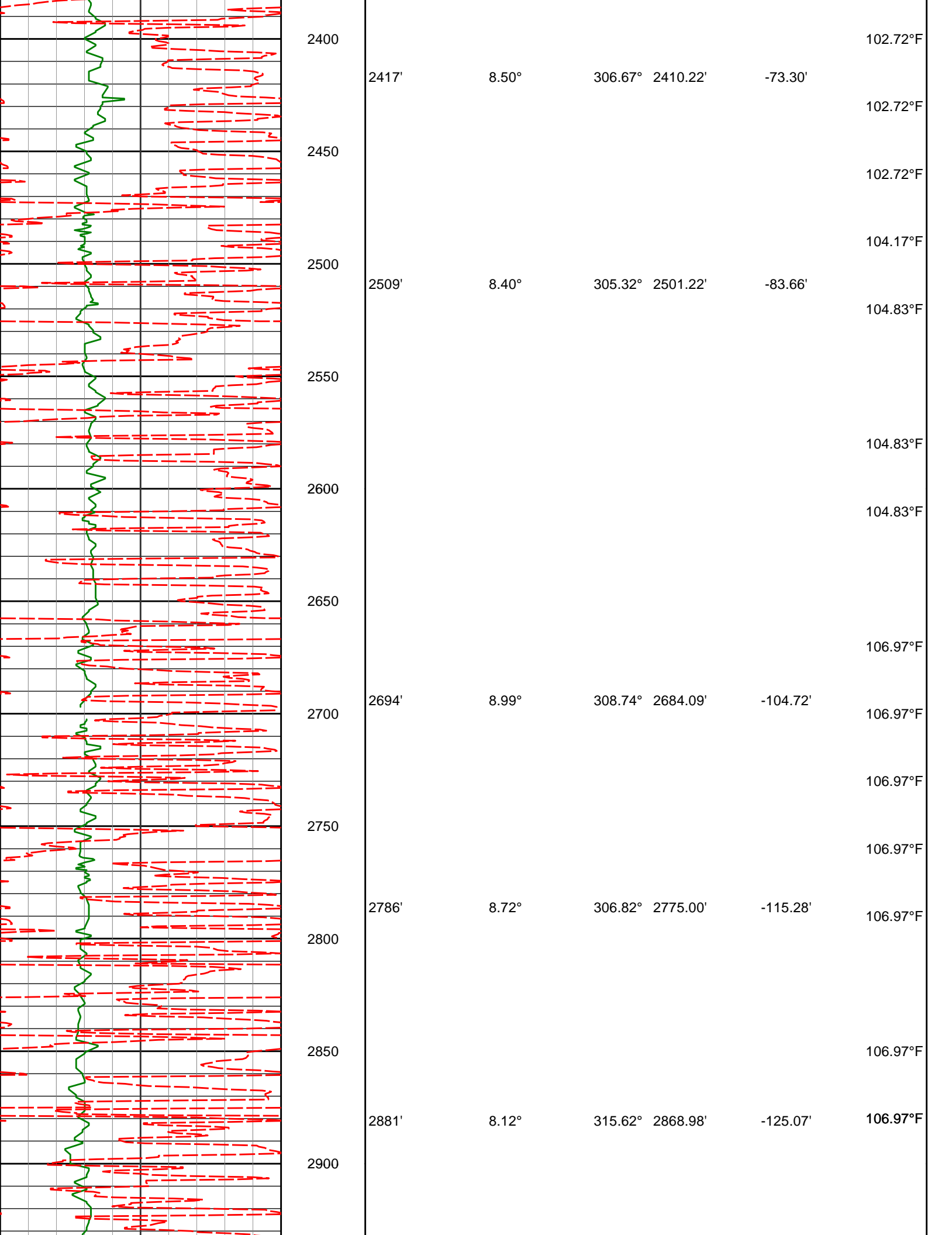
1:240 Log
 PGRC (Gamma CG):
 Interval Resolution: 0.5 ft
 Interval Distance: 0.6 ft

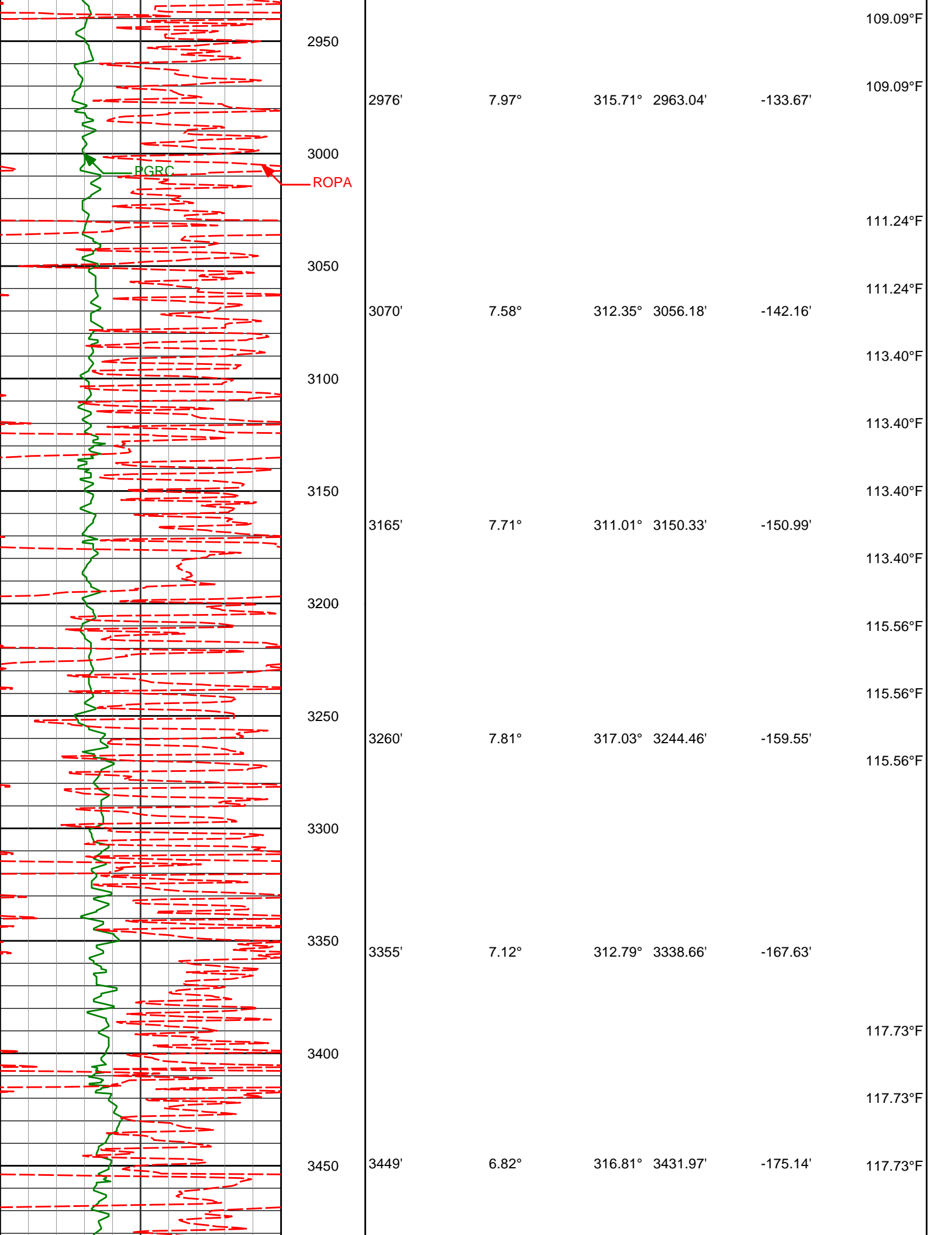
ROPA (Average Rate Of Penetration):
 Interval Resolution: 0.5 ft
 Interval Distance: 1.2 ft

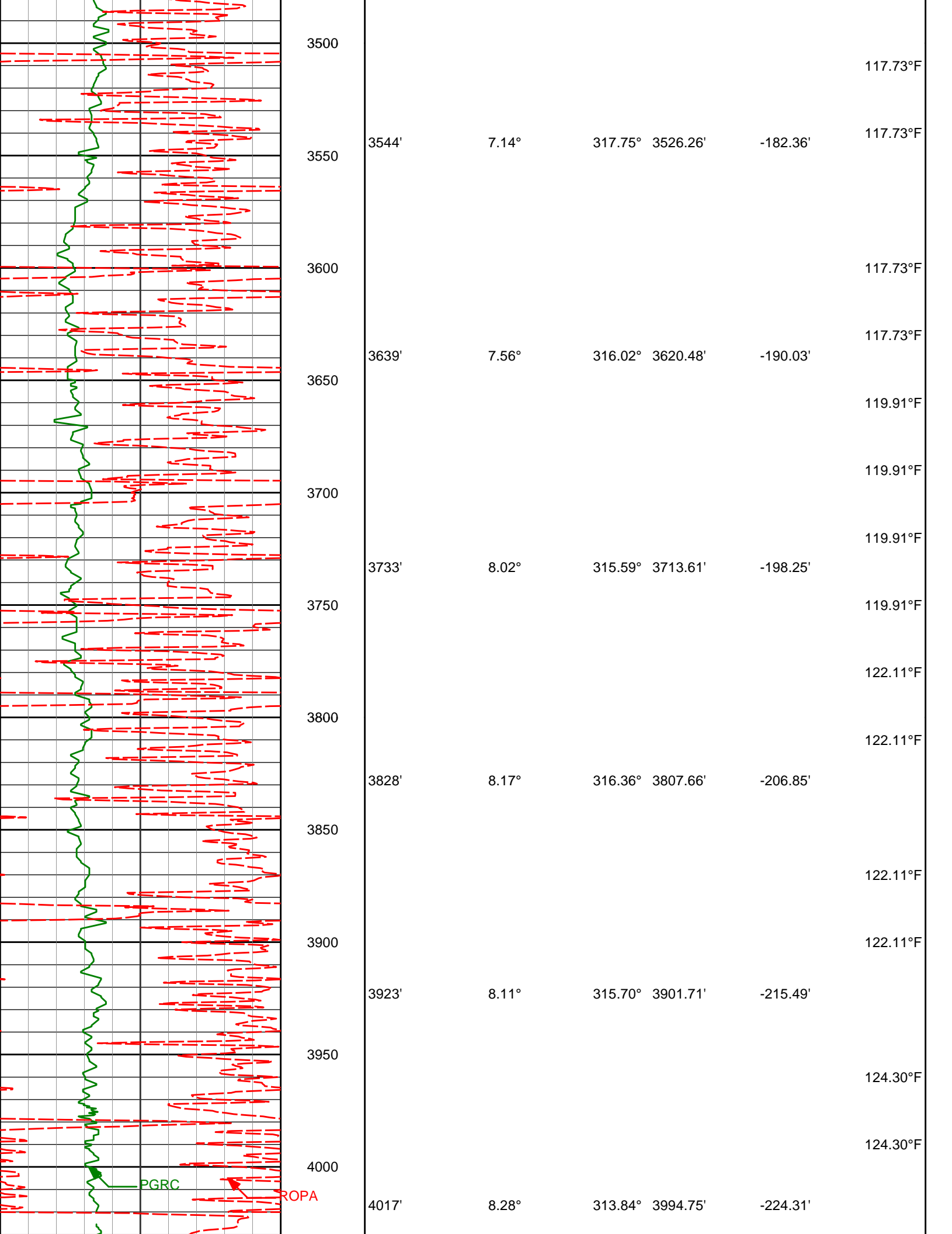


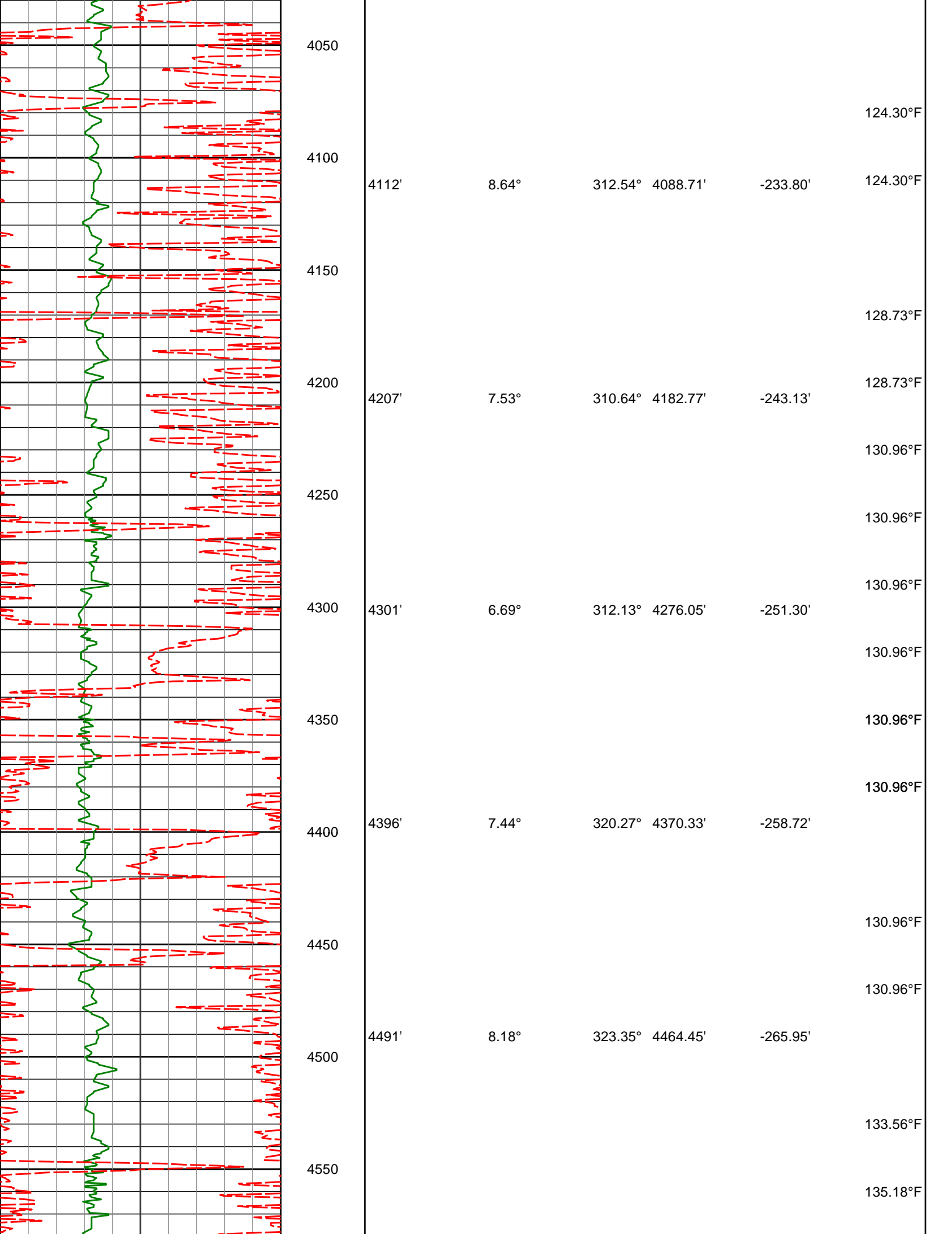


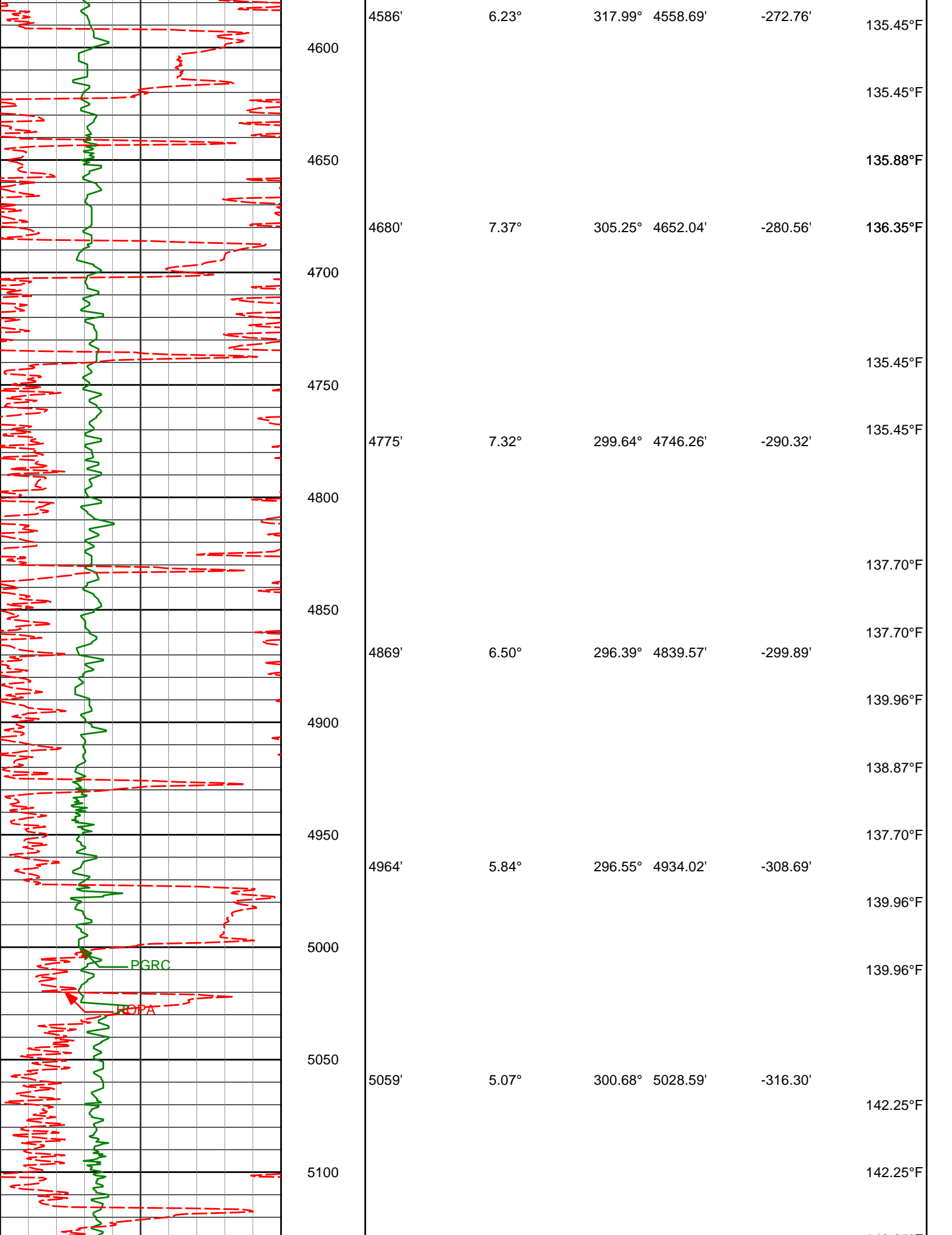


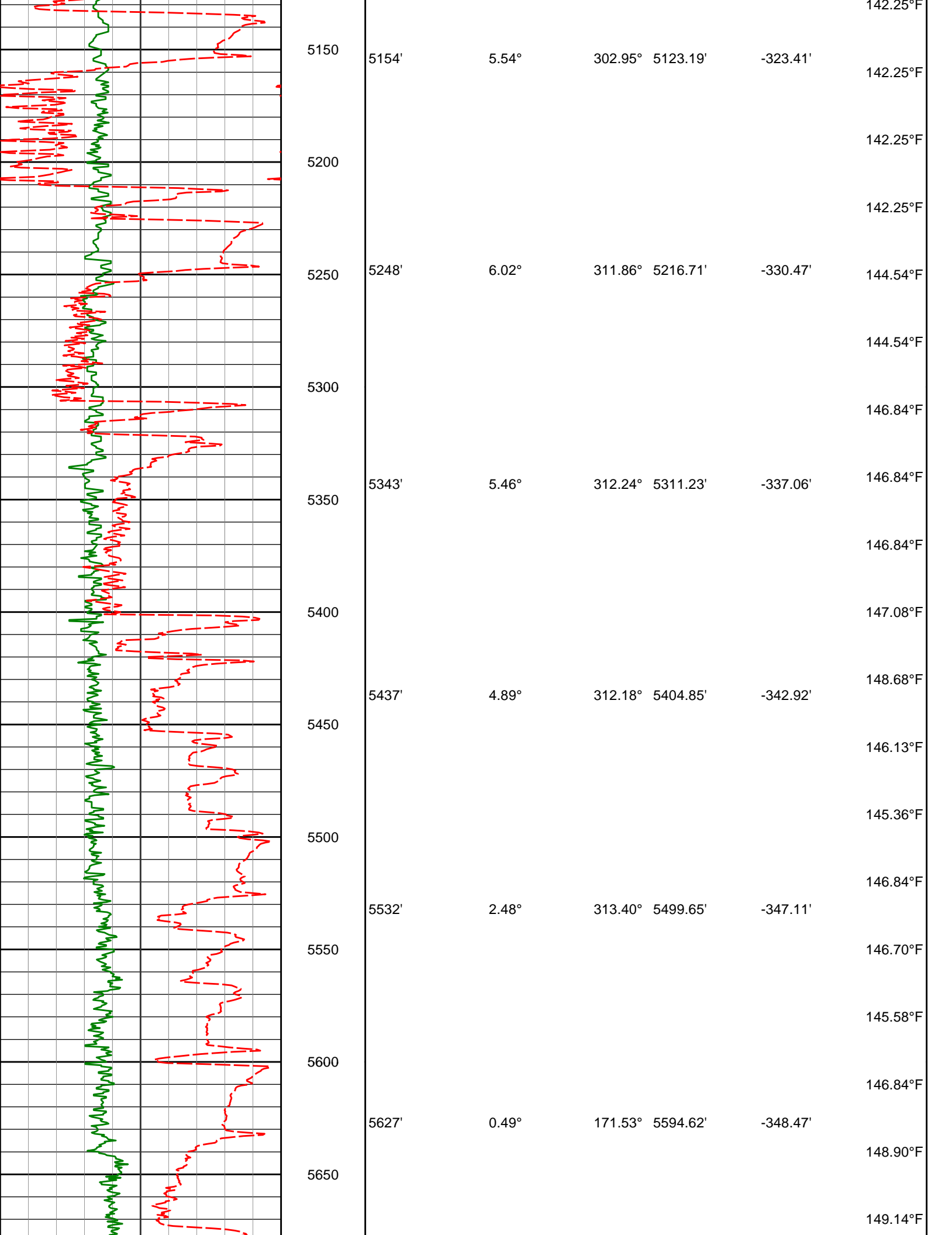


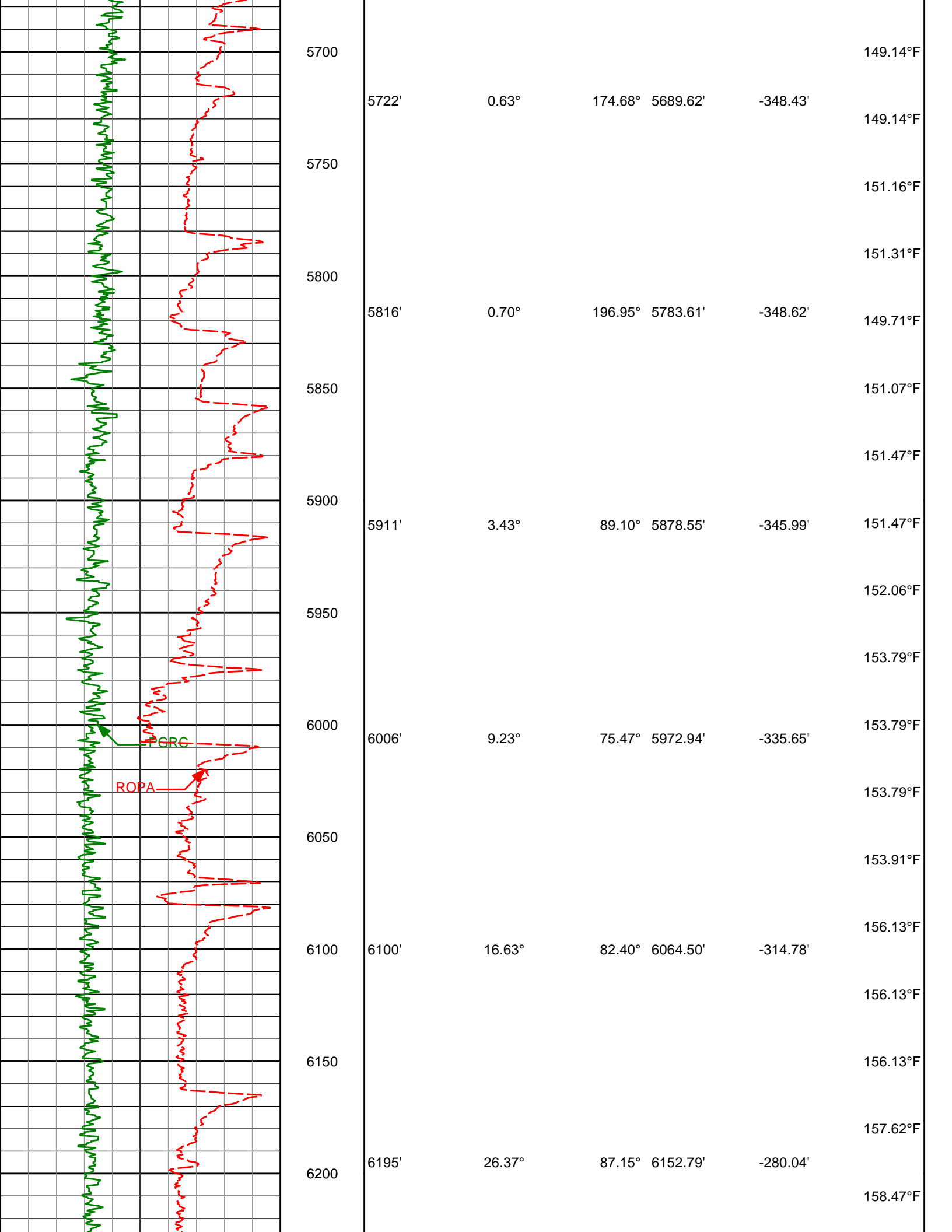


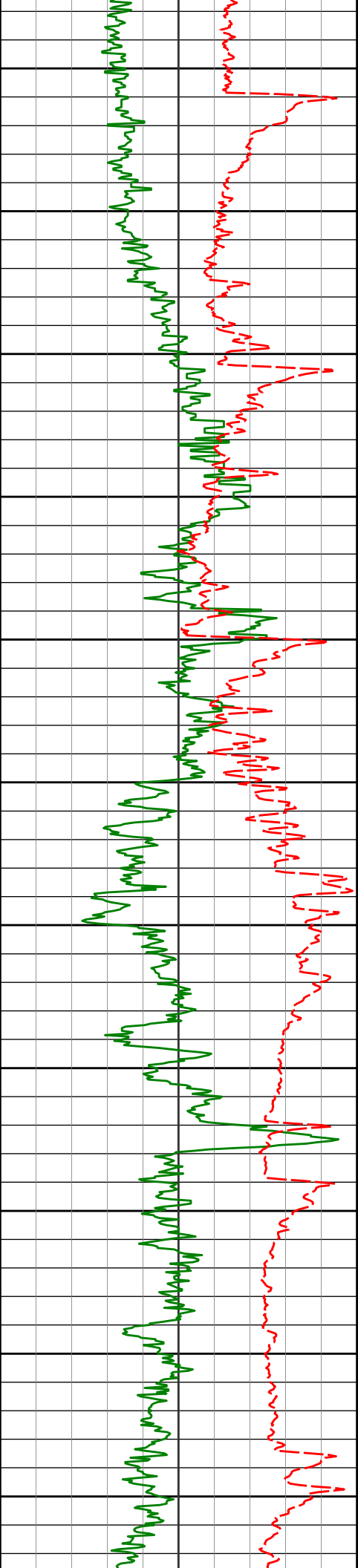




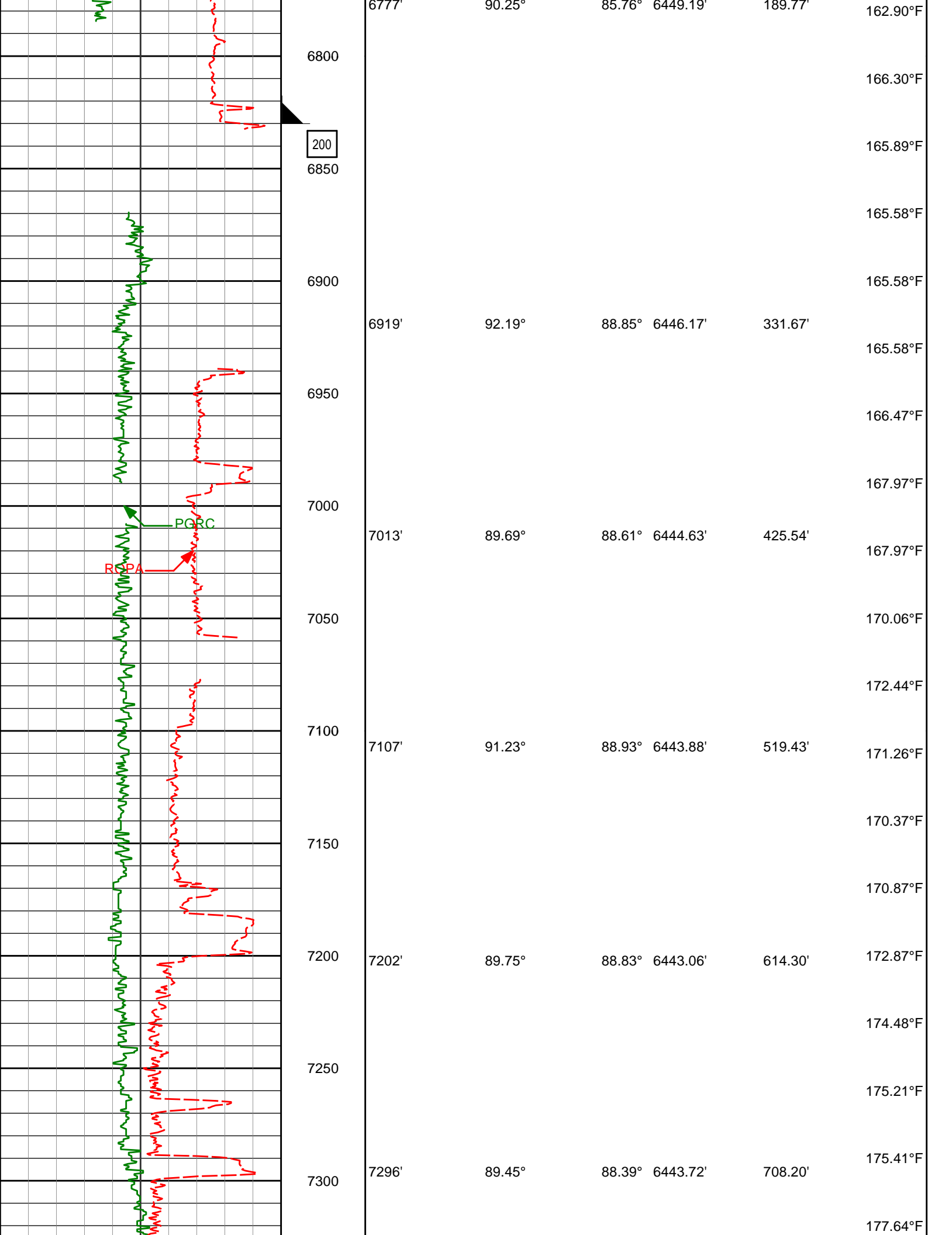


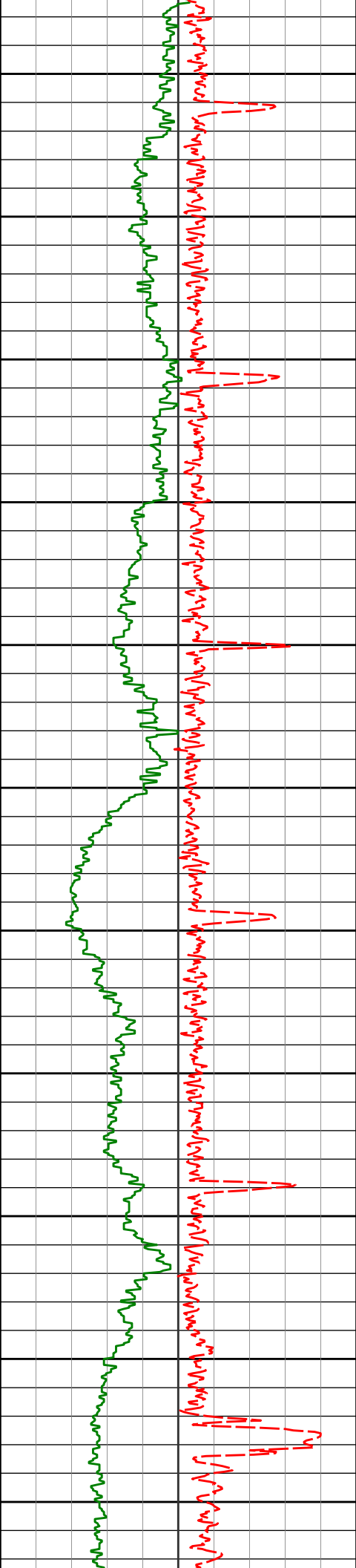




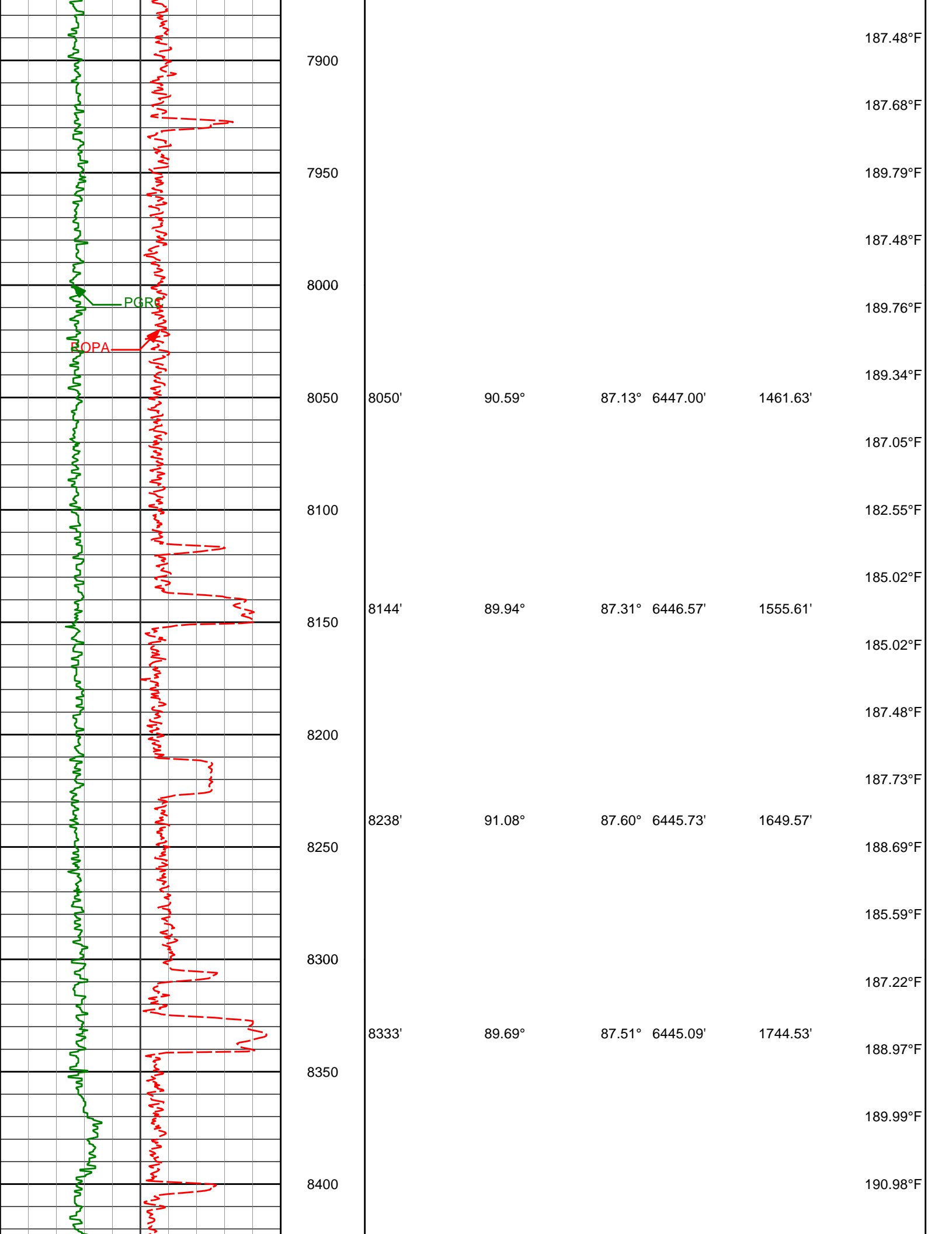


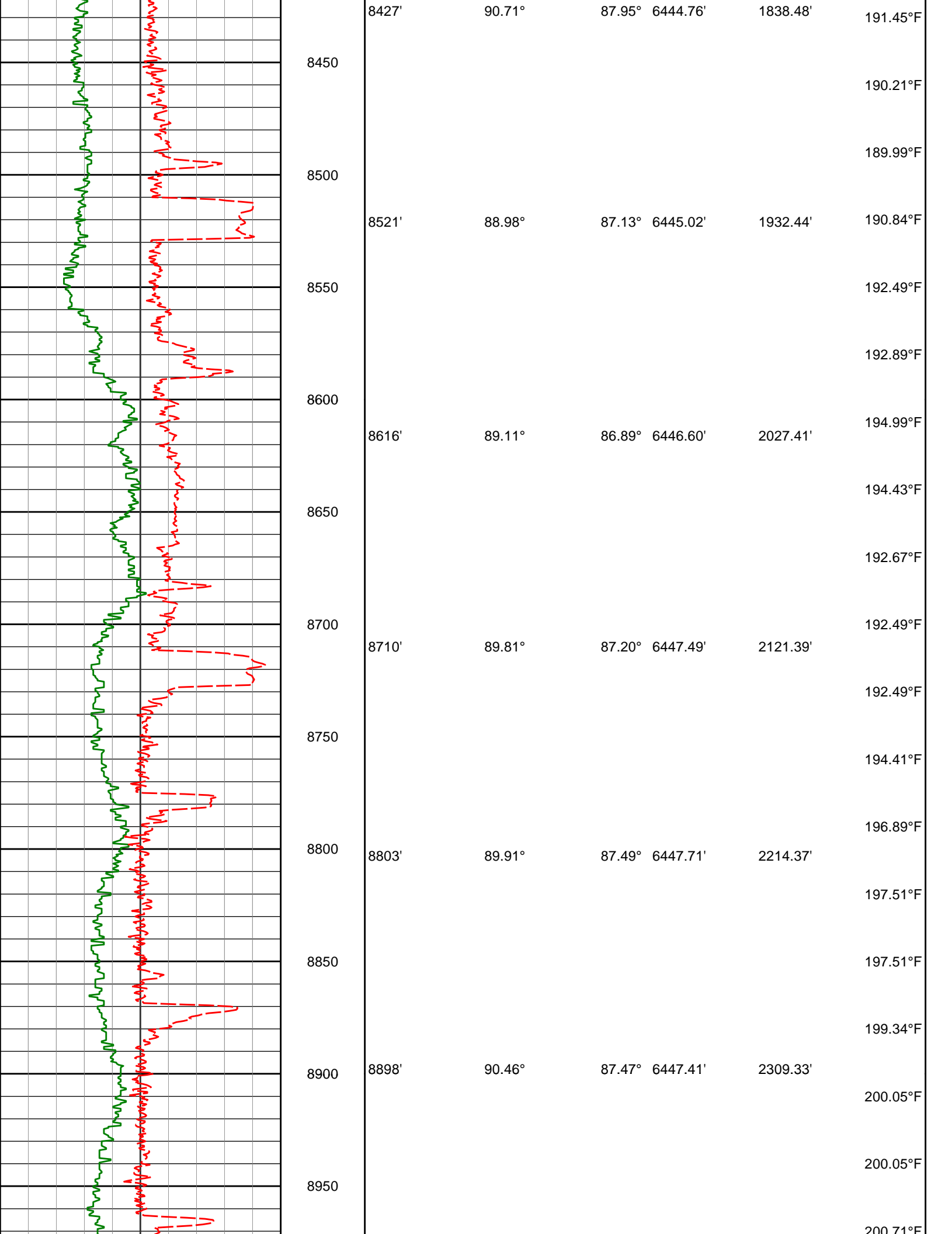
| | | | | | | |
|------|-------|--------|--------|----------|----------|----------|
| 6250 | | | | | | 158.47°F |
| | | | | | | 158.47°F |
| 6300 | 6290' | 37.67° | 89.68° | 6233.21' | -229.82' | 158.47°F |
| | | | | | | 158.47°F |
| 6350 | | | | | | 160.64°F |
| | | | | | | 160.83°F |
| 6400 | 6385' | 48.25° | 91.13° | 6302.64' | -165.38' | 160.83°F |
| | | | | | | 160.83°F |
| 6450 | | | | | | 160.83°F |
| | | | | | | 160.20°F |
| 6500 | 6479' | 58.82° | 89.23° | 6358.44' | -90.09' | 158.54°F |
| | | | | | | 158.47°F |
| 6550 | | | | | | 158.99°F |
| | | | | | | 158.65°F |
| 6600 | 6574' | 65.99° | 89.41° | 6402.42' | -6.10' | 160.19°F |
| | | | | | | 160.83°F |
| 6650 | 6668' | 74.15° | 86.30° | 6434.45' | 82.13' | 162.26°F |
| | | | | | | 162.79°F |
| 6700 | | | | | | 163.06°F |
| | | | | | | |
| 6750 | | | | | | |

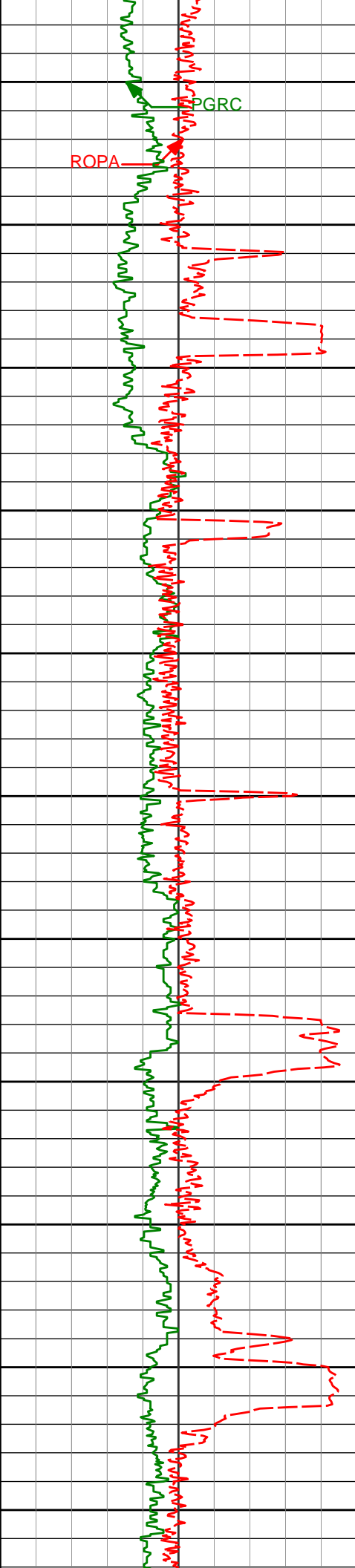




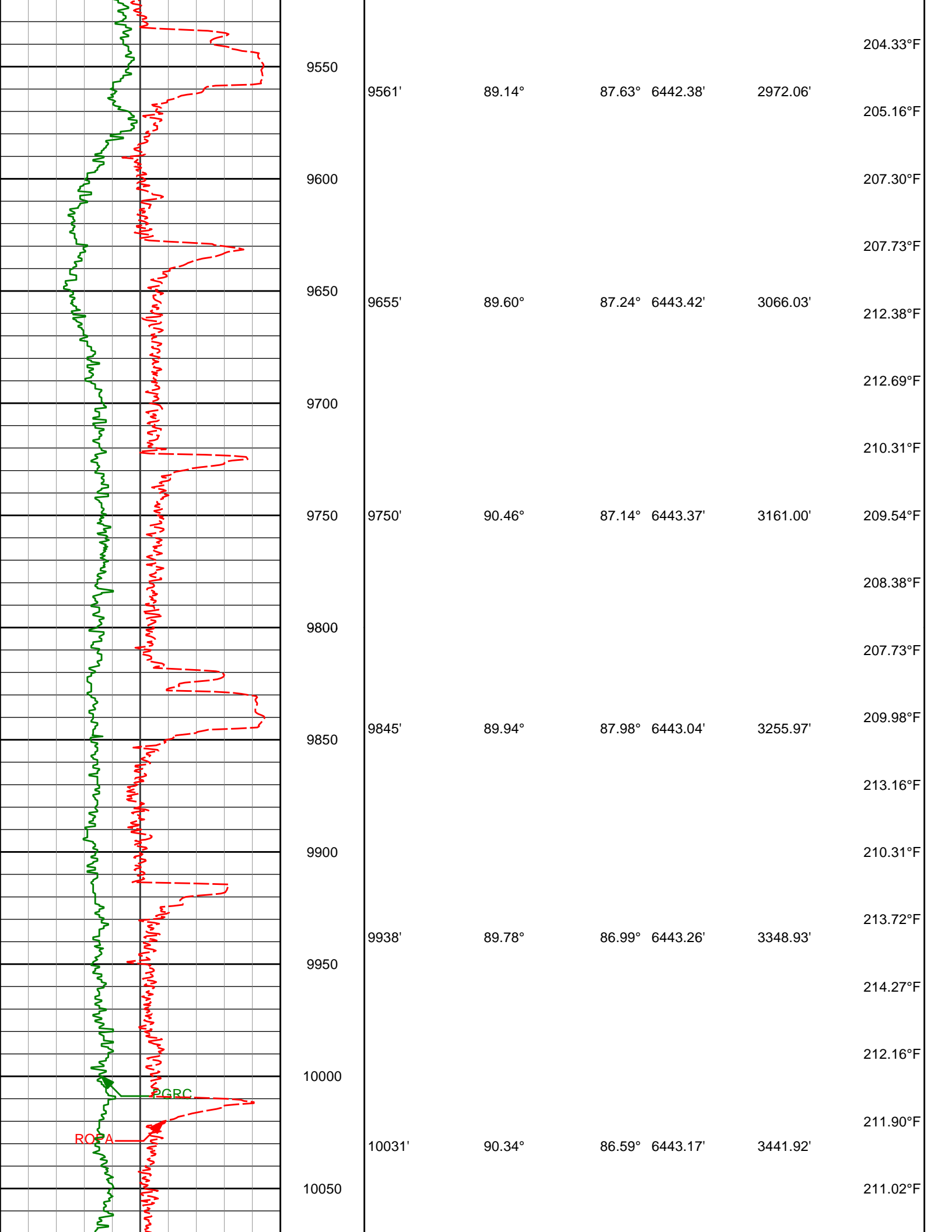
| | | | | | |
|-------|--------|--------|----------|----------|----------|
| 7350 | | | | | 177.86°F |
| | | | | | 179.86°F |
| 7391' | 89.54° | 88.30° | 6444.56' | 803.11' | |
| 7400 | | | | | 180.09°F |
| | | | | | 182.15°F |
| 7450 | | | | | 182.55°F |
| 7485' | 89.51° | 88.38° | 6445.34' | 897.03' | |
| 7500 | | | | | 182.55°F |
| | | | | | 182.55°F |
| 7550 | | | | | 182.55°F |
| 7579' | 89.23° | 88.29° | 6446.37' | 990.94' | |
| 7600 | | | | | 185.02°F |
| | | | | | 185.02°F |
| 7650 | | | | | 185.02°F |
| 7673' | 89.35° | 88.27° | 6447.54' | 1084.86' | |
| 7700 | | | | | 185.56°F |
| | | | | | 187.11°F |
| 7750 | | | | | 184.88°F |
| 7767' | 89.23° | 87.94° | 6448.70' | 1178.78' | |
| 7800 | | | | | 183.09°F |
| | | | | | 185.50°F |
| 7850 | | | | | 187.48°F |
| 7861' | 90.55° | 88.11° | 6448.88' | 1272.72' | |

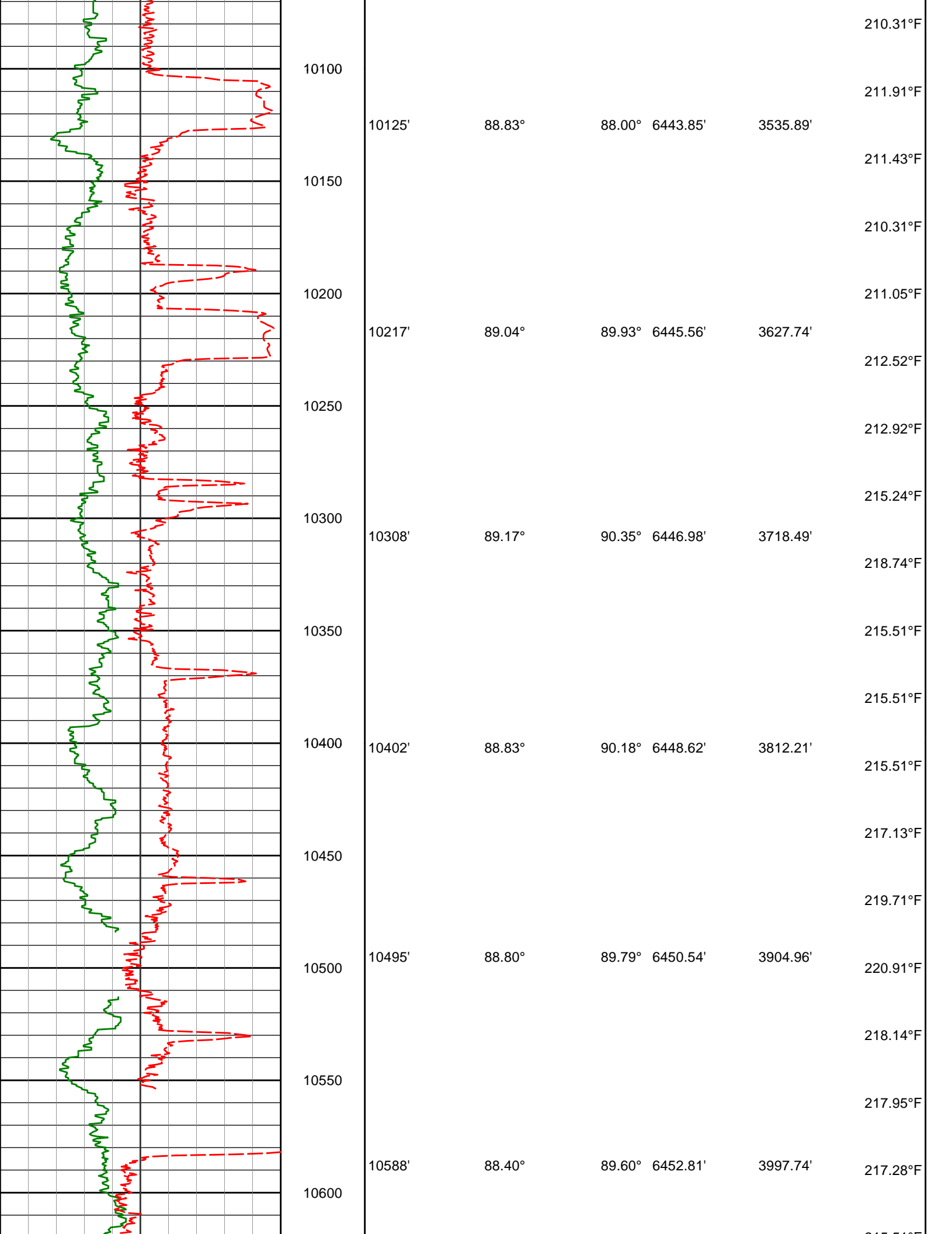


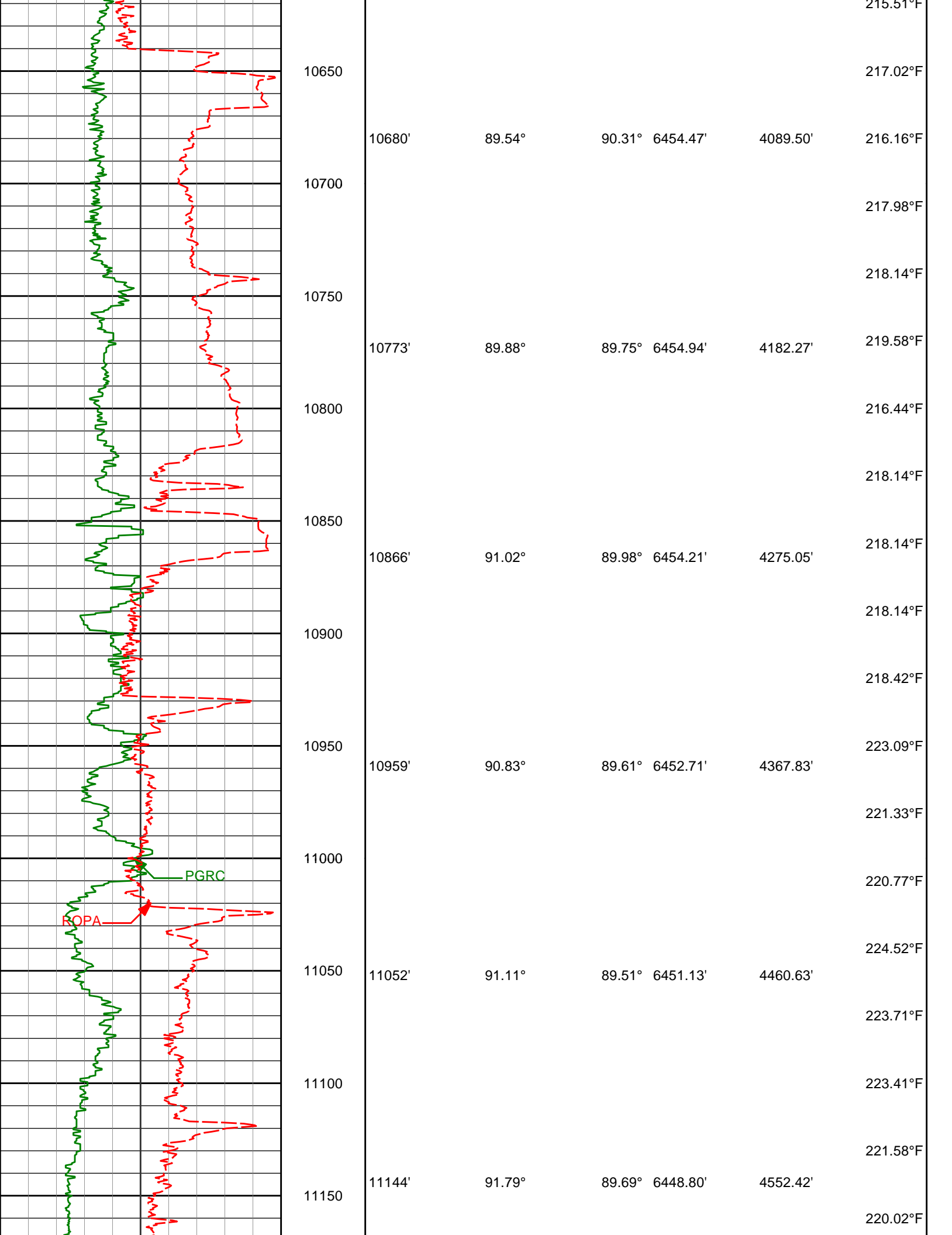


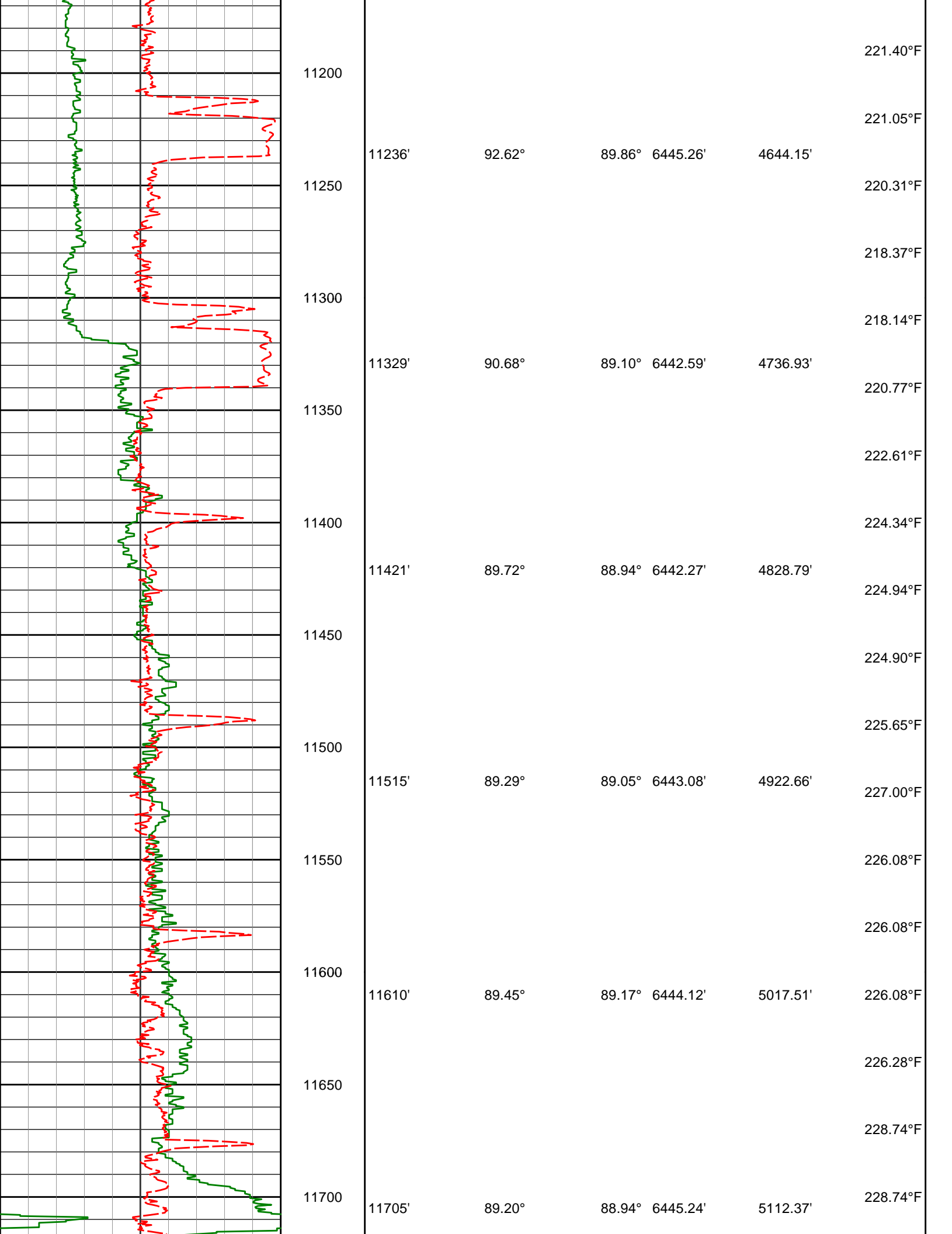


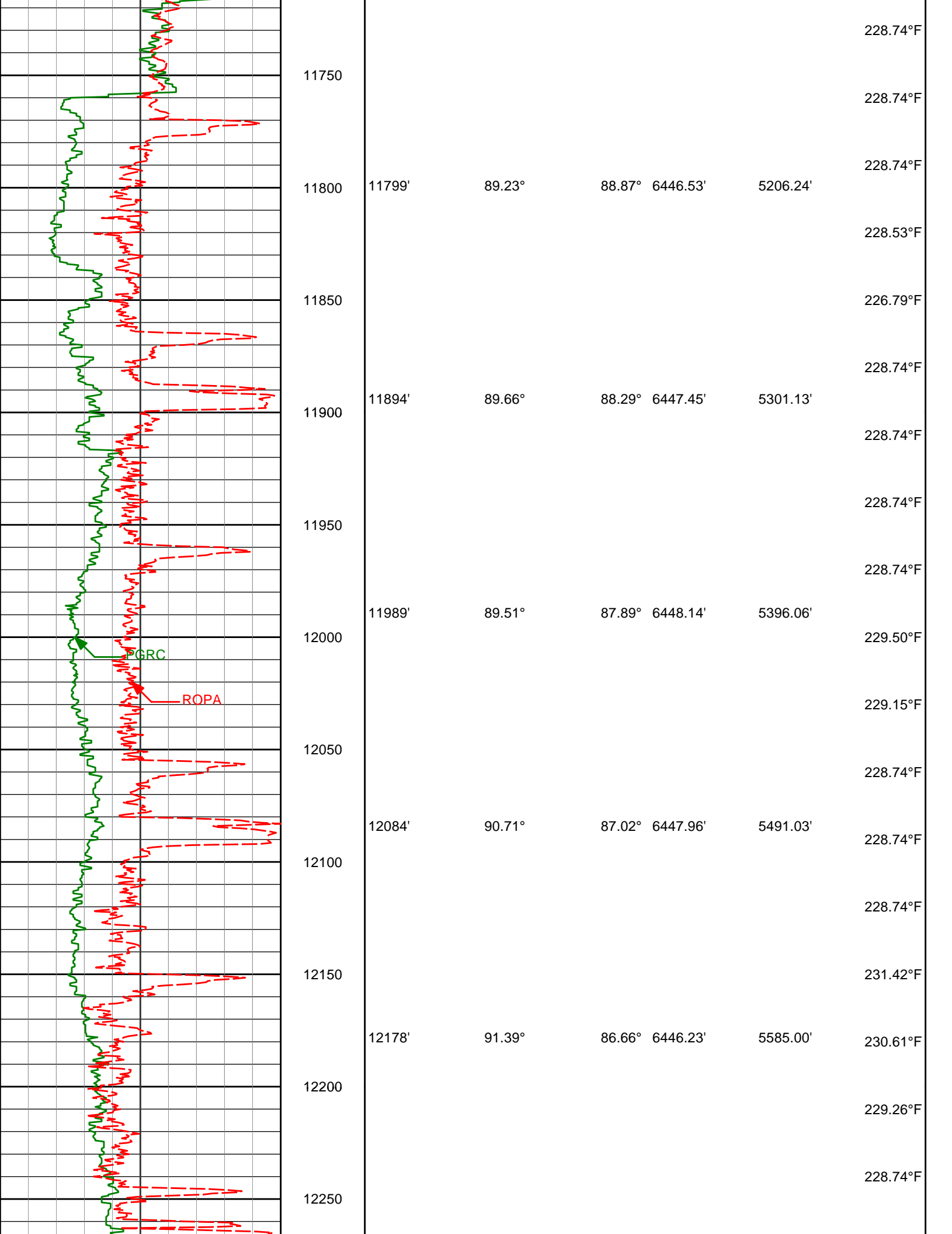
| | | | | | | |
|------|-------|--------|--------|----------|----------|----------|
| 9000 | 8993' | 90.89° | 87.30° | 6446.29' | 2404.30' | 200.52°F |
| | | | | | | 200.05°F |
| 9050 | | | | | | 200.05°F |
| | 9087' | 89.91° | 87.42° | 6445.63' | 2498.27' | 202.60°F |
| 9100 | | | | | | 202.60°F |
| | | | | | | 202.60°F |
| 9150 | | | | | | 202.60°F |
| | 9182' | 90.37° | 87.13° | 6445.40' | 2593.24' | 202.60°F |
| 9200 | | | | | | 202.60°F |
| | | | | | | 203.83°F |
| 9250 | | | | | | 201.65°F |
| | 9277' | 91.11° | 87.04° | 6444.17' | 2688.21' | 211.51°F |
| 9300 | | | | | | 210.33°F |
| | | | | | | 207.96°F |
| 9350 | | | | | | 208.38°F |
| | 9372' | 90.62° | 88.22° | 6442.74' | 2783.16' | 206.15°F |
| 9400 | | | | | | 203.17°F |
| | | | | | | 204.99°F |
| 9450 | | | | | | 205.20°F |
| | 9466' | 90.34° | 87.54° | 6441.95' | 2877.10' | |
| 9500 | | | | | | |

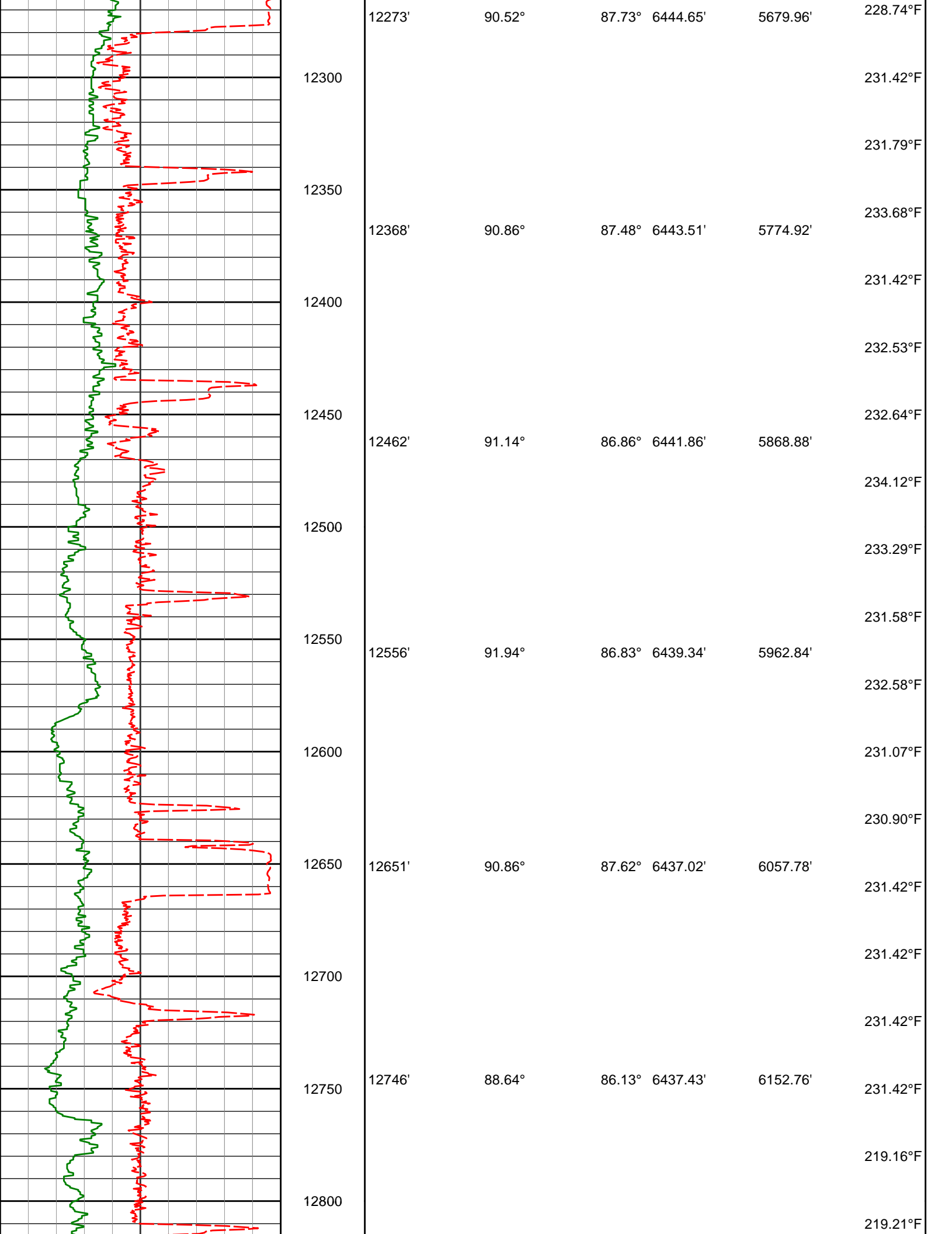


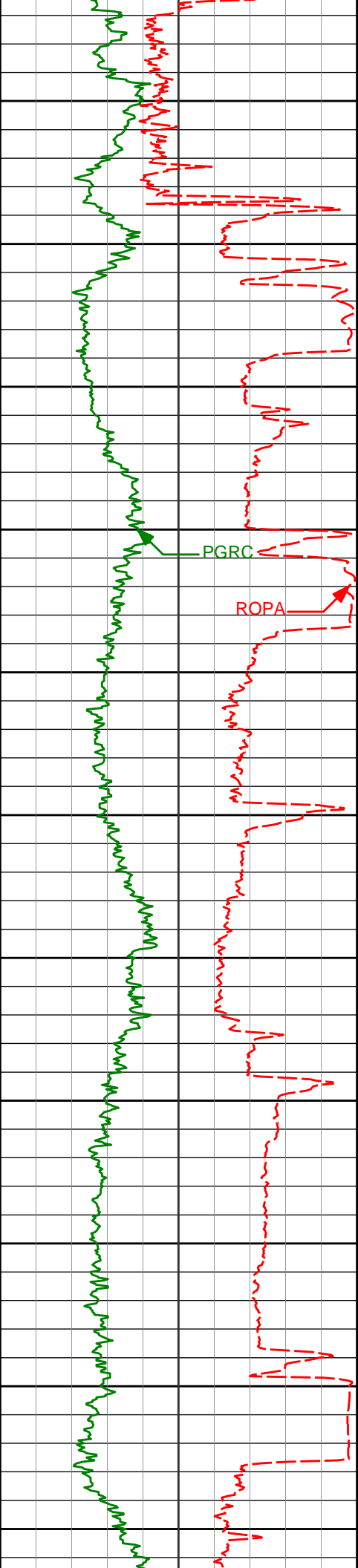




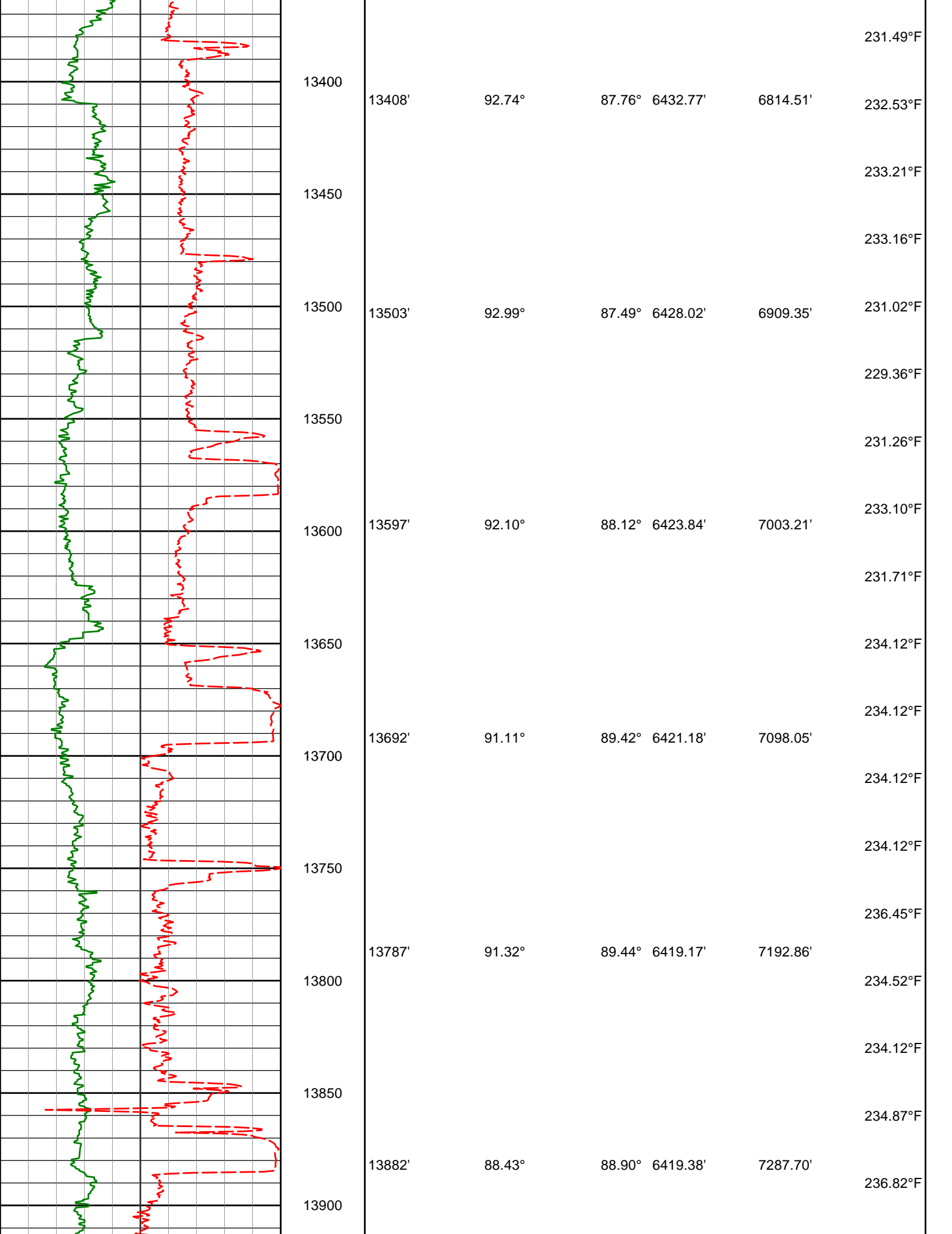


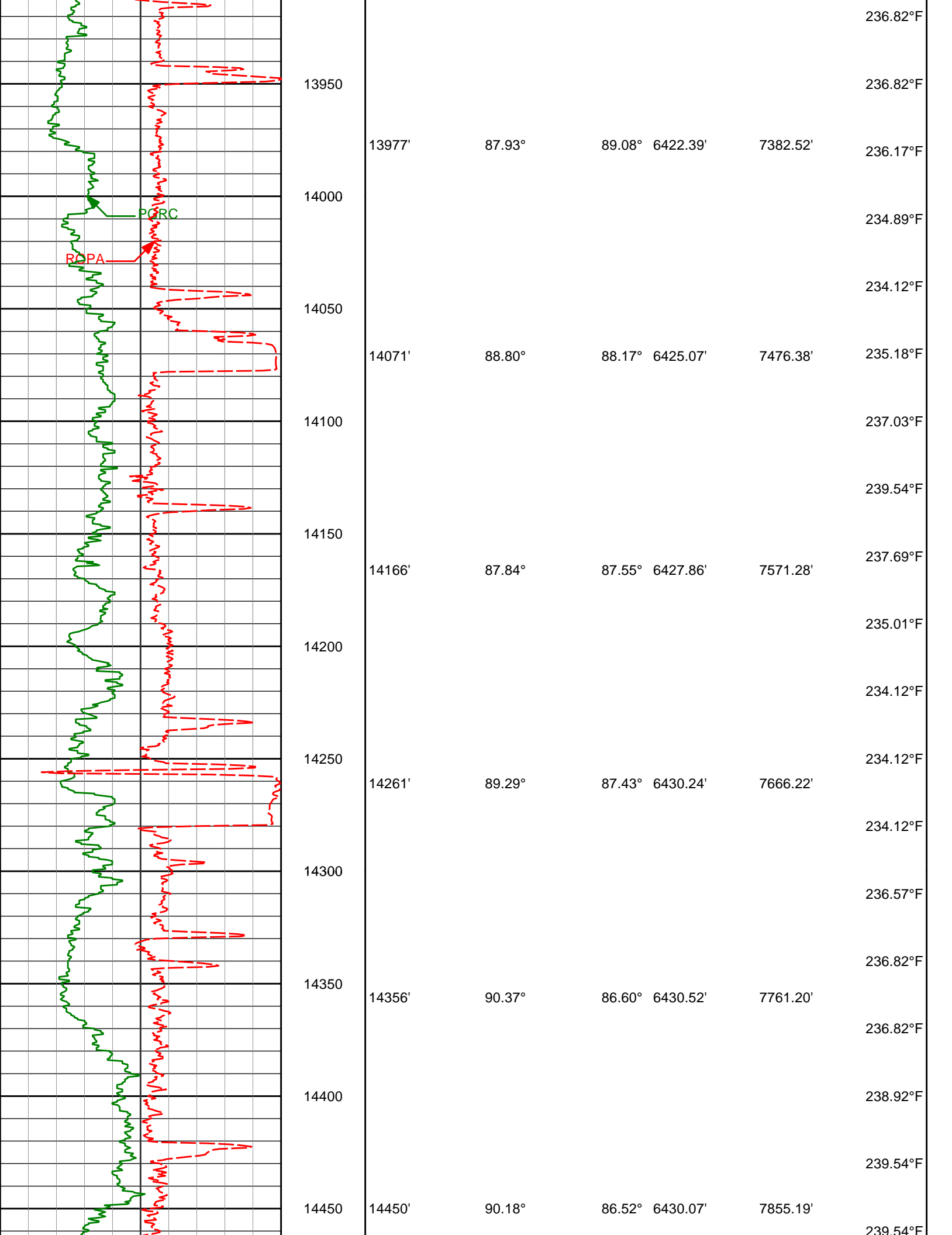


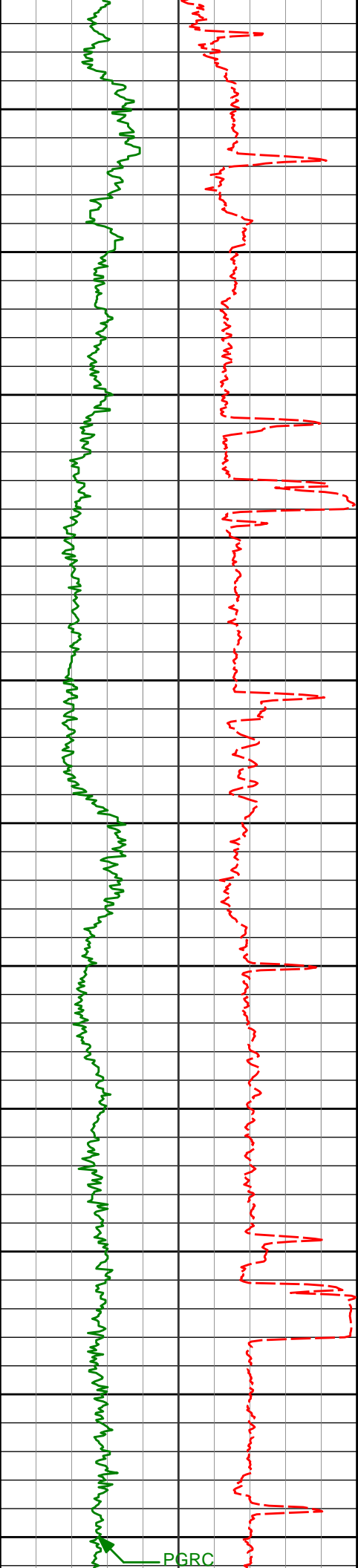




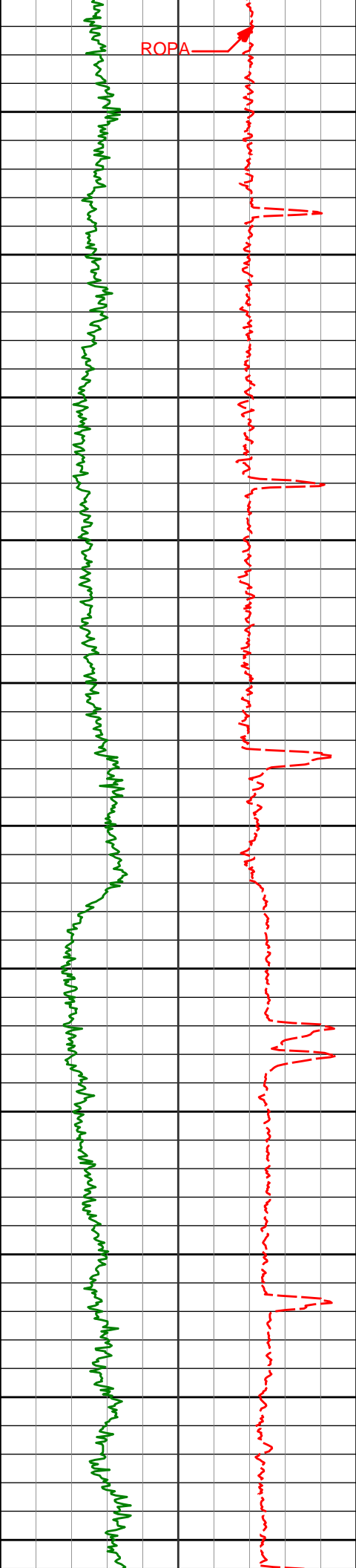
| | | | | | |
|--------|--------|--------|----------|----------|----------|
| 12840' | 88.09° | 85.71° | 6440.11' | 6246.72' | 220.76°F |
| 12850 | | | | | 220.91°F |
| 12900 | | | | | 223.41°F |
| 12935' | 89.11° | 85.88° | 6442.44' | 6341.69' | 223.61°F |
| 12950 | | | | | 223.44°F |
| 13000 | | | | | 224.56°F |
| 13029' | 90.71° | 85.09° | 6442.58' | 6435.69' | 226.08°F |
| 13050 | | | | | 227.08°F |
| 13100 | | | | | 228.74°F |
| 13124' | 91.51° | 85.74° | 6440.74' | 6530.66' | 228.74°F |
| 13150 | | | | | 228.97°F |
| 13200 | | | | | 230.82°F |
| 13219' | 90.89° | 84.85° | 6438.75' | 6625.63' | 229.23°F |
| 13250 | | | | | 228.74°F |
| 13300 | | | | | 228.74°F |
| 13350 | | | | | 228.74°F |



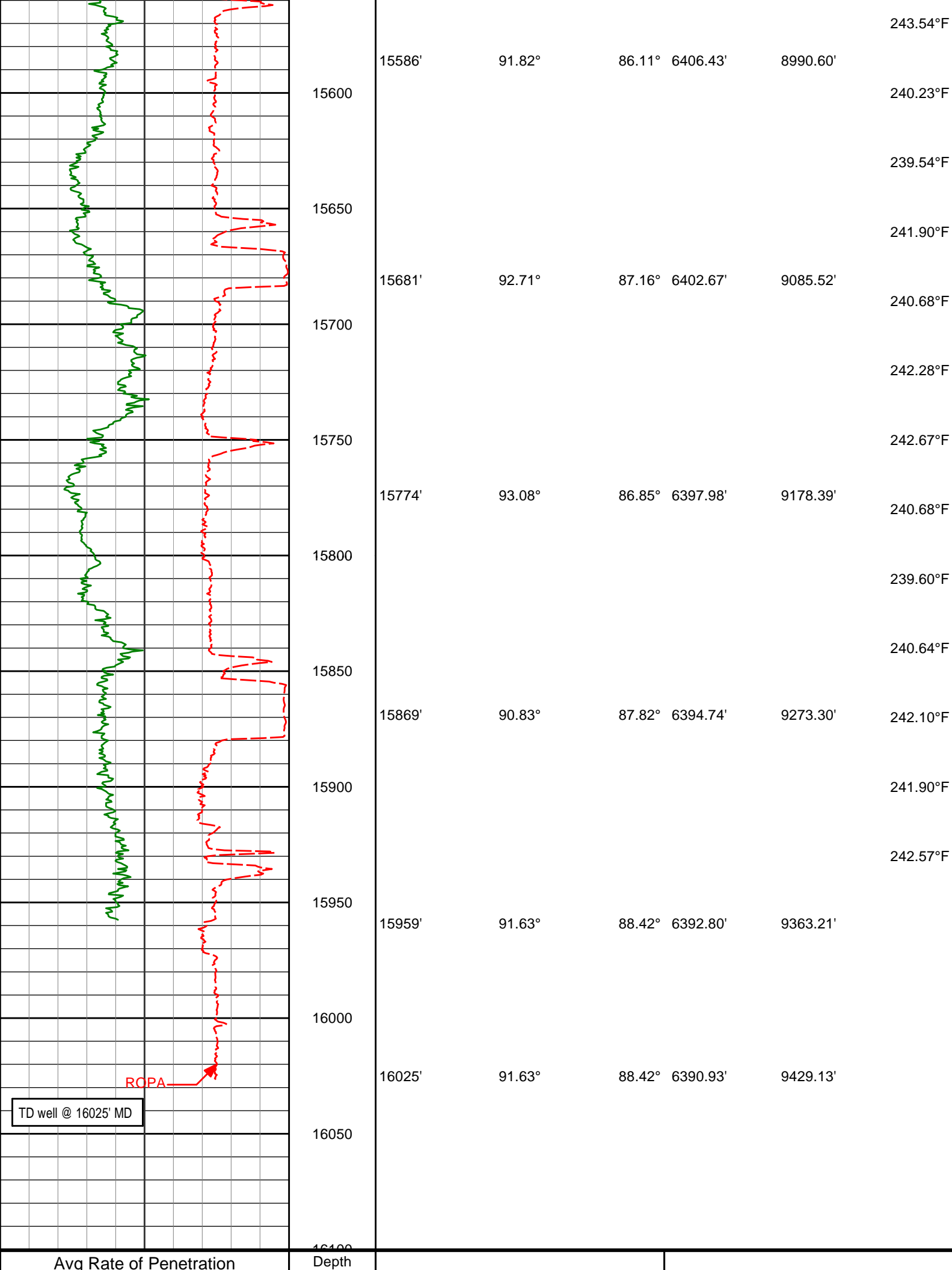




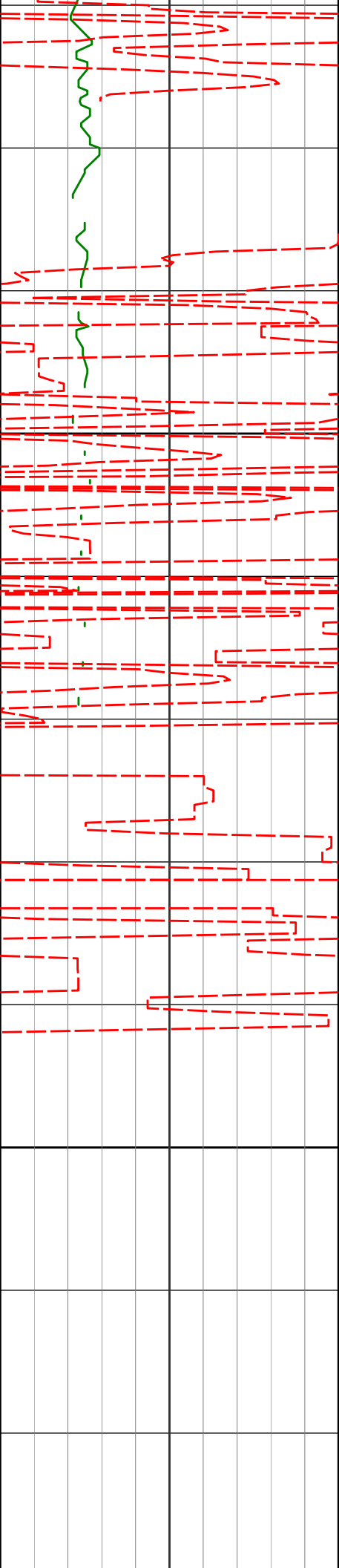
| | | | | | |
|-------|--------|--------|--------|----------|----------|
| | | | | | 239.54°F |
| | | | | | 239.54°F |
| 14500 | | | | | 239.54°F |
| | 14545' | 89.91° | 86.37° | 6430.00' | 7950.19' |
| 14550 | | | | | 239.54°F |
| | | | | | 239.54°F |
| 14600 | | | | | 239.54°F |
| | 14640' | 90.77° | 87.08° | 6429.43' | 8045.18' |
| 14650 | | | | | 239.54°F |
| | | | | | 239.54°F |
| 14700 | | | | | 241.96°F |
| | 14734' | 91.33° | 86.72° | 6427.71' | 8139.15' |
| 14750 | | | | | 242.28°F |
| | | | | | 242.28°F |
| 14800 | | | | | 242.28°F |
| | 14829' | 91.32° | 86.37° | 6425.51' | 8234.12' |
| 14850 | | | | | 240.84°F |
| | | | | | 238.65°F |
| 14900 | | | | | 239.16°F |
| | 14924' | 90.46° | 87.91° | 6424.04' | 8329.09' |
| 14950 | | | | | 239.54°F |
| | | | | | 239.81°F |
| | | | | | 242.28°F |
| 15000 | | | | | 241.50°F |



| | | | | | |
|--------|--------|--------|----------|----------|----------|
| 15018' | 91.63° | 88.38° | 6422.32' | 8423.00' | 238.44°F |
| 15050 | | | | | 239.35°F |
| 15100 | | | | | 240.38°F |
| 15113' | 91.39° | 87.82° | 6419.82' | 8517.90' | 242.28°F |
| 15150 | | | | | 242.28°F |
| 15200 | | | | | 242.28°F |
| 15208' | 91.11° | 87.41° | 6417.75' | 8612.84' | 242.28°F |
| 15250 | | | | | 242.28°F |
| 15300 | | | | | 243.95°F |
| 15303' | 91.76° | 87.38° | 6415.37' | 8707.78' | 243.48°F |
| 15350 | | | | | 242.28°F |
| 15397' | 91.57° | 86.96° | 6412.64' | 8801.72' | 242.28°F |
| 15400 | | | | | 242.28°F |
| 15450 | | | | | 243.19°F |
| 15492' | 92.07° | 86.65° | 6409.62' | 8896.66' | 244.62°F |
| 15500 | | | | | 243.83°F |
| 15550 | | | | | 245.03°F |



| | | | | | | | | |
|------------------------------------|--|--------------------|-------|-----|-----|-----|------|------|
| ROPA feet per hr | | TVD ft | Depth | Inc | Azi | TVD | V.S. | Temp |
| PCG Gamma Ray BCorr PGRC api | | | | | | | | |
| 0 | | 300 | | | | | | |
| MD Detail 1:240 Scale | | | | | | | | |
| PCG Gamma Ray BCorr PGRC api | | | | | | | | |
| 0 | | 300 | | | | | | |
| ROPA feet per hr | | Depth TVD ft | Depth | Inc | Azi | TVD | V.S. | Temp |
| 1K | | 0 | | | | | | |
| | | 500 | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | 600 | | | | | | |
| | | | | | | | | |
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| | | | | | | | | |
| | | 100 | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |



700

800



889'

0.07°

194.91° 889.00'

-0.17'

900

919'

0.00°

308.19° 919.00'

-0.18'

82.02°F

85.16°F

84.37°F

1000

PGRC

ROPA

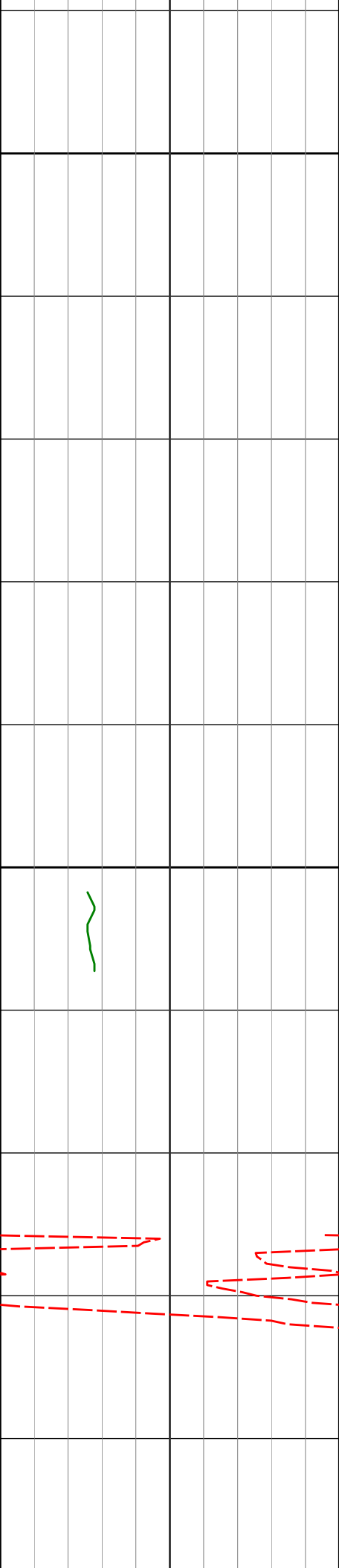
1011'

0.10°

104.27° 1011.00'

-0.11'

82.02°F



1100

1200

1210'

0.16°

135.47°

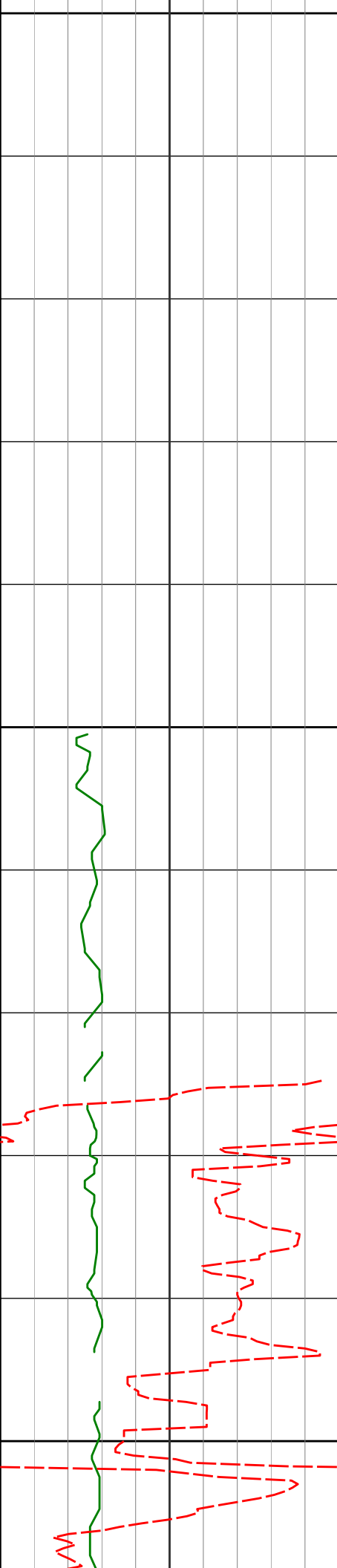
1210.00'

0.23'

84.06°F

84.06°F

84.06°F



1300

1400

1500

1397'

0.20°

157.34°

1397.00'

0.50'

1490'

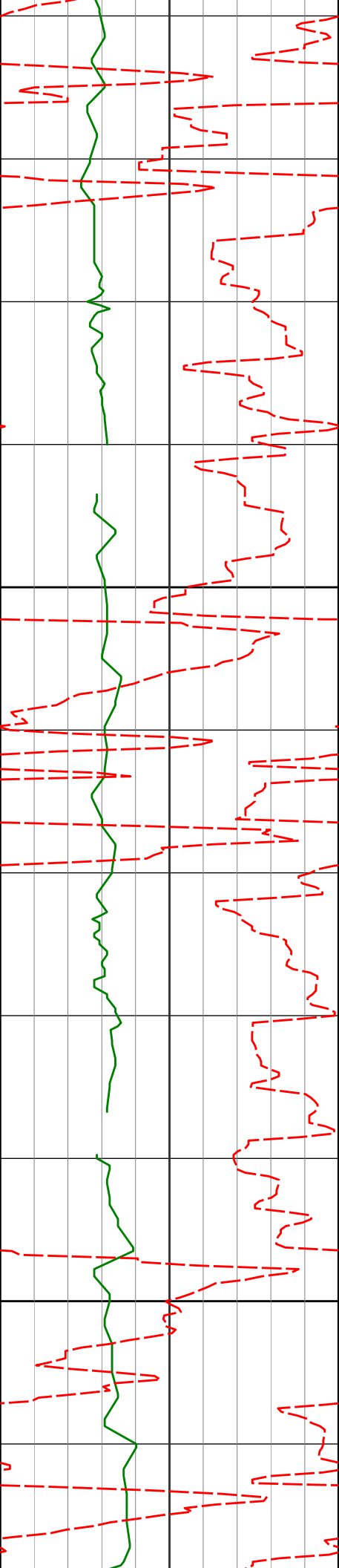
0.19°

240.67°

1490.00'

0.42'

86.09°F



1600

1700

1582'

1674'

2.52°

3.97°

333.21°

321.71°

1581.97'

1673.82'

-0.50'

-3.08'

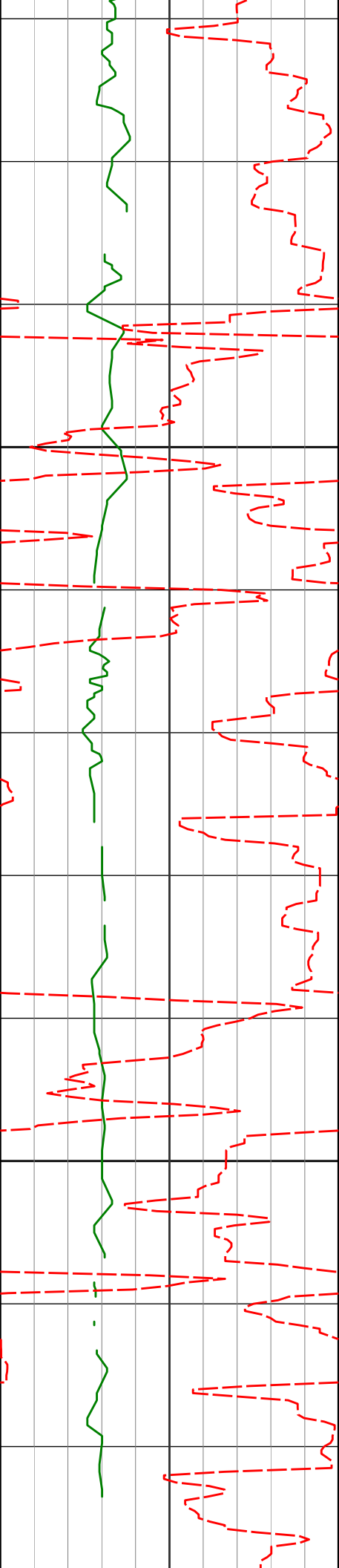
88.14°F

88.14°F

90.19°F

90.19°F

90.19°F



1800

1900

1767'

1860'

6.07°

7.50°

314.38° 1766.46'

311.38° 1858.80'

-8.16'

-15.69'

90.19°F

92.26°F

92.26°F

94.33°F

94.33°F



2000

96.42°F

96.42°F

2100

97.16°F

98.51°F

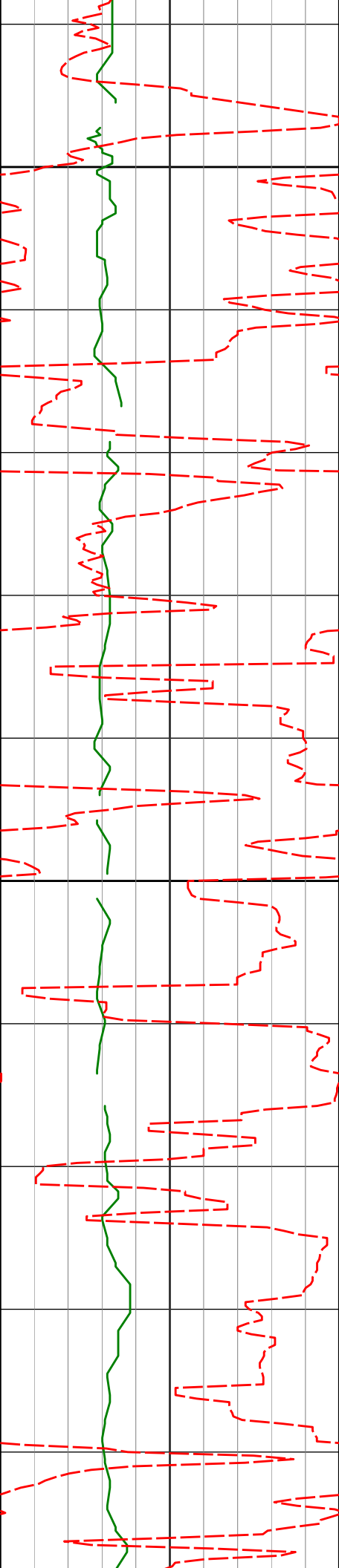
2138'

8.04°

309.39° 2134.25'

-42.56'

98.51°F



2200

2231'

7.89°

306.62° 2226.35'

-52.12'

2300

2324'

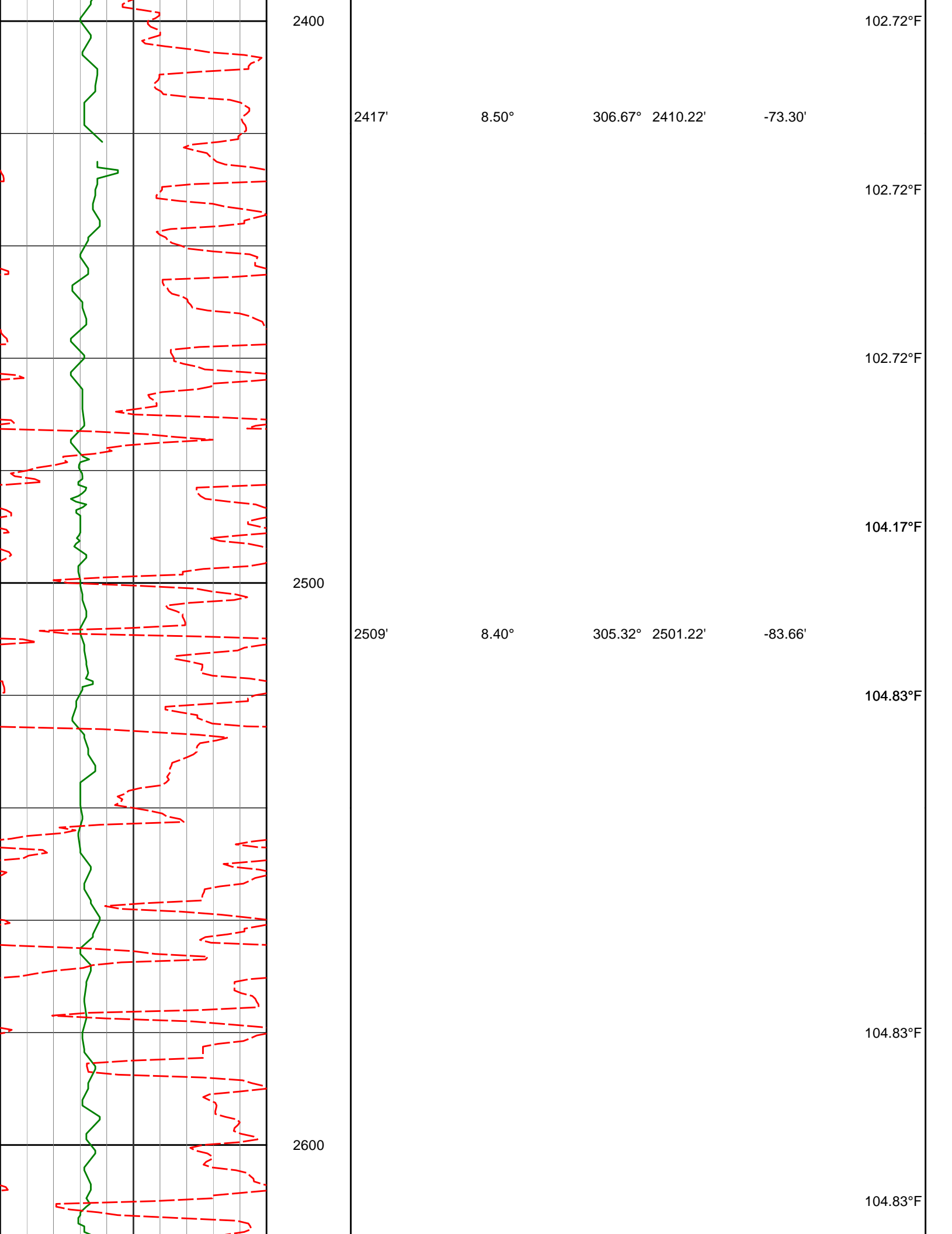
9.15°

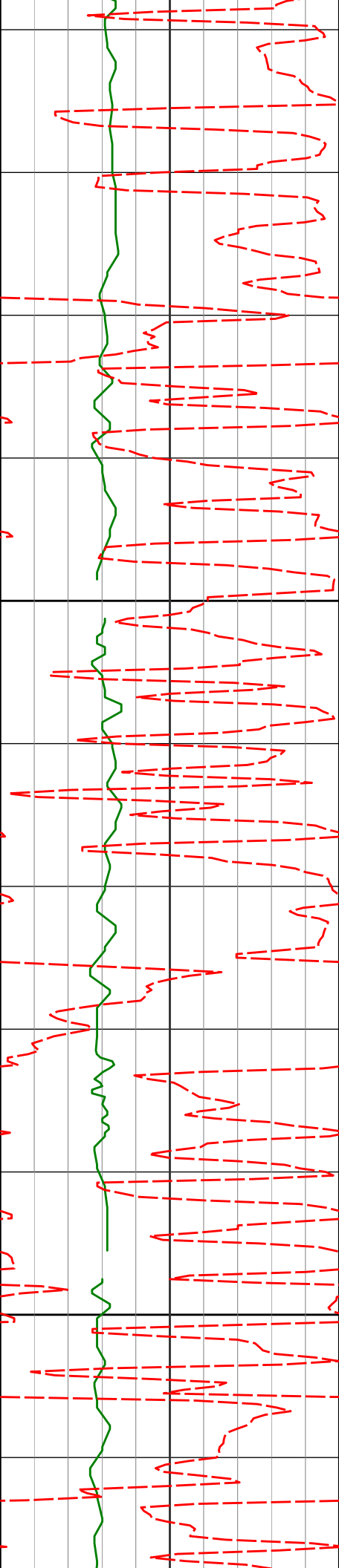
307.21° 2318.32'

-62.53'

98.51°F

100.62°F





2700

2800

2694'

8.99°

308.74°

2684.09'

-104.72'

2786'

8.72°

306.82°

2775.00'

-115.28'

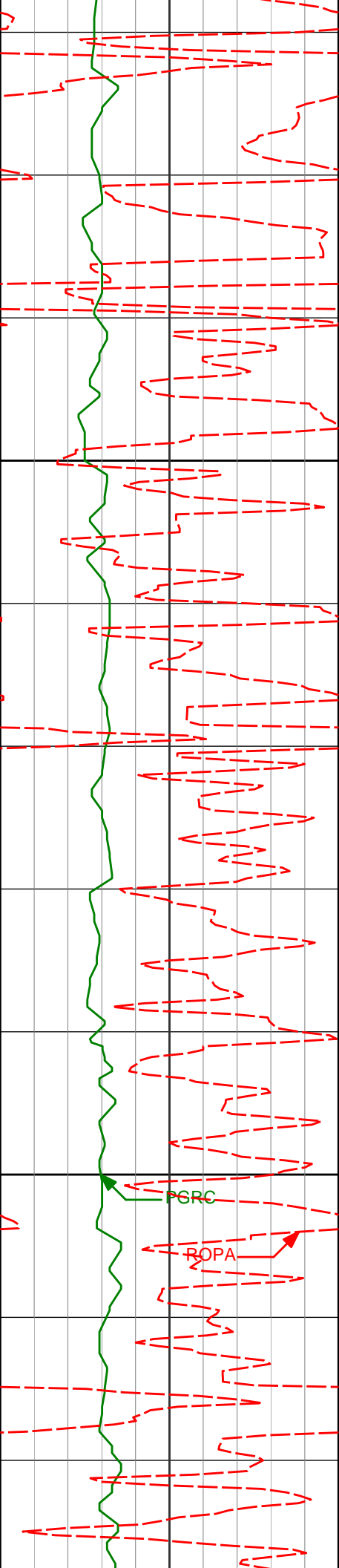
106.97°F

106.97°F

106.97°F

106.97°F

106.97°F



2881'

8.12°

315.62°

2868.98'

-125.07'

106.97°F

2900

2976'

7.97°

315.71°

2963.04'

-133.67'

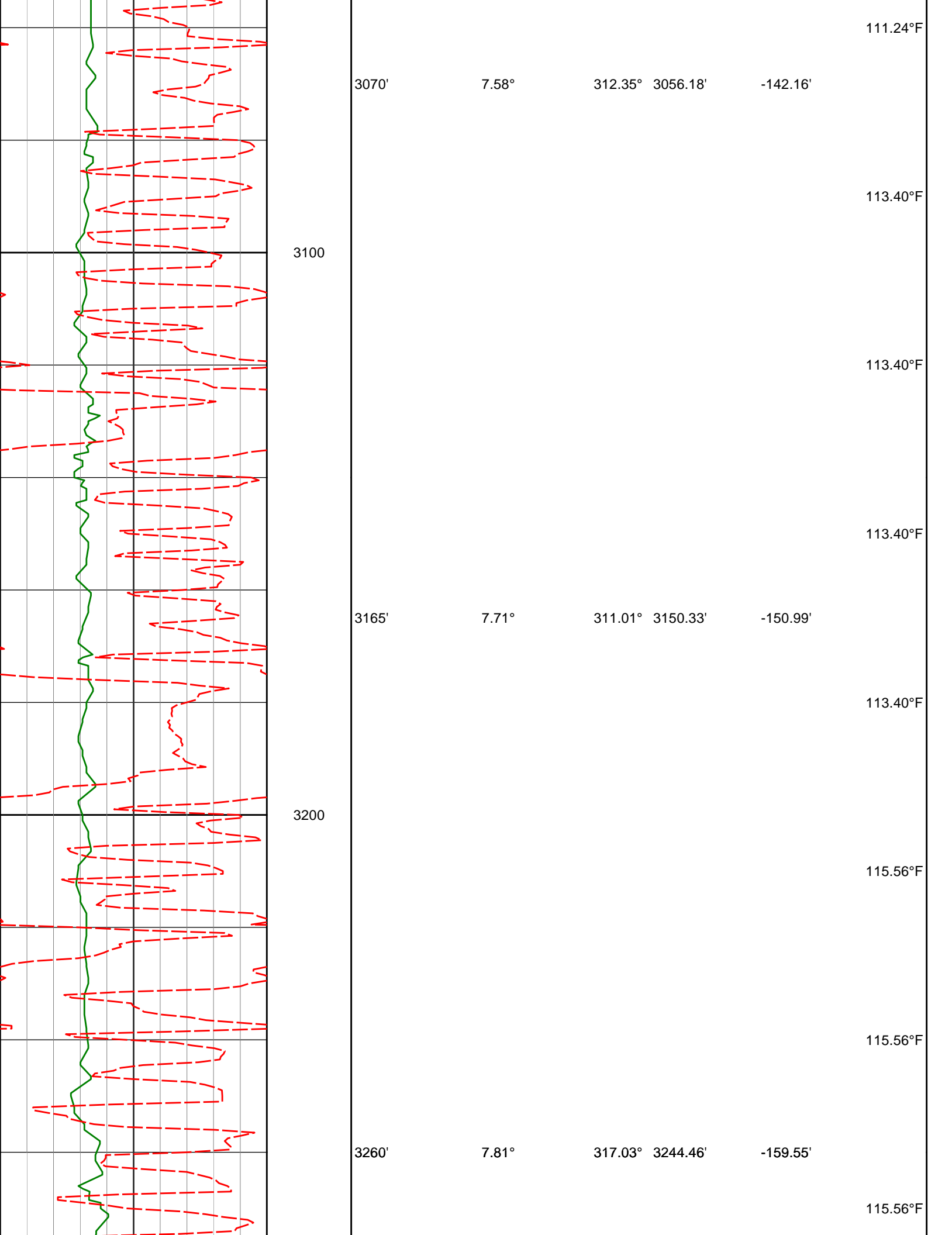
109.09°F

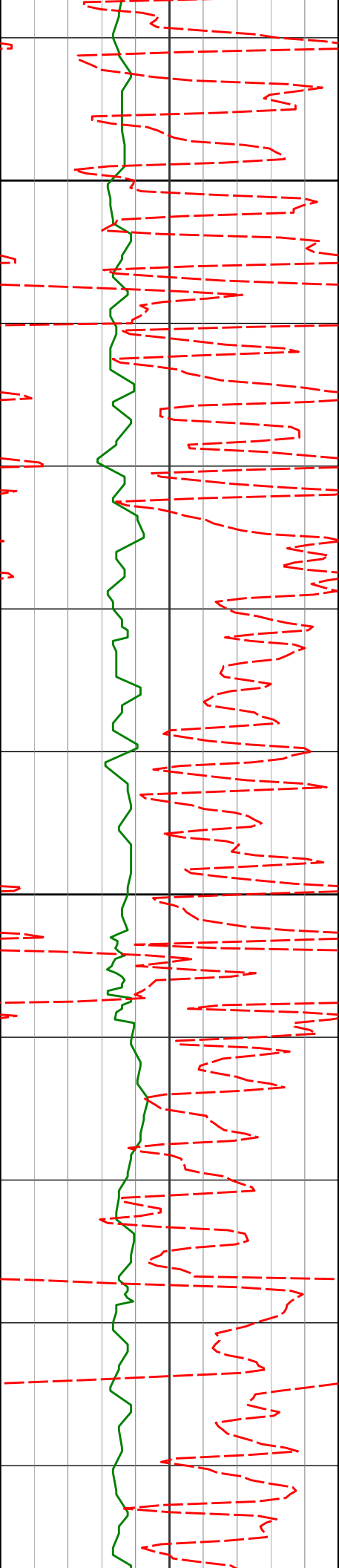
3000

PGRC

ROPA

111.24°F





3300

3355'

7.12°

312.79°

3338.66'

-167.63'

3400

3449'

6.82°

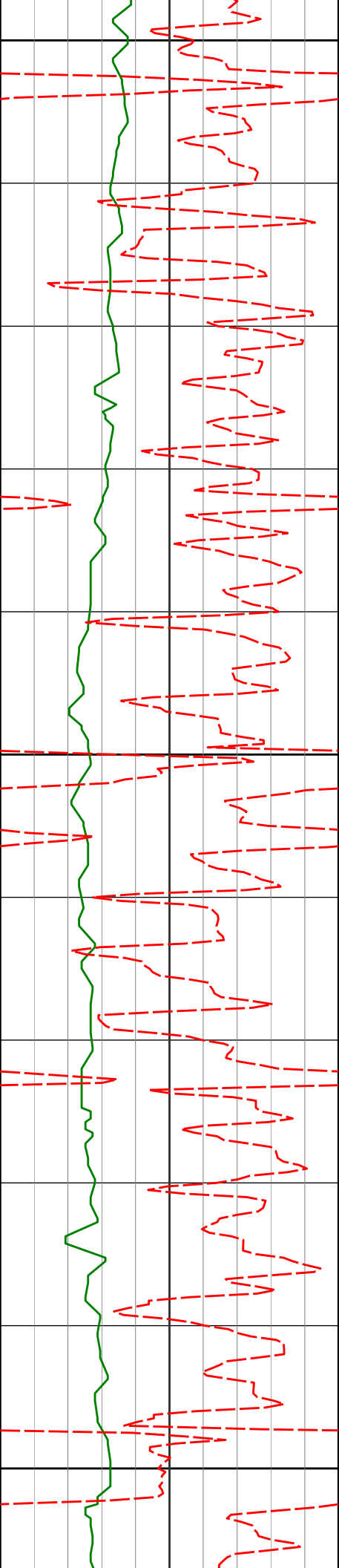
316.81°

3431.97'

-175.14'

117.73°F

117.73°F



3500

117.73°F

117.73°F

3544'

7.14°

317.75°

3526.26'

-182.36'

3600

117.73°F

117.73°F

3639'

7.56°

316.02°

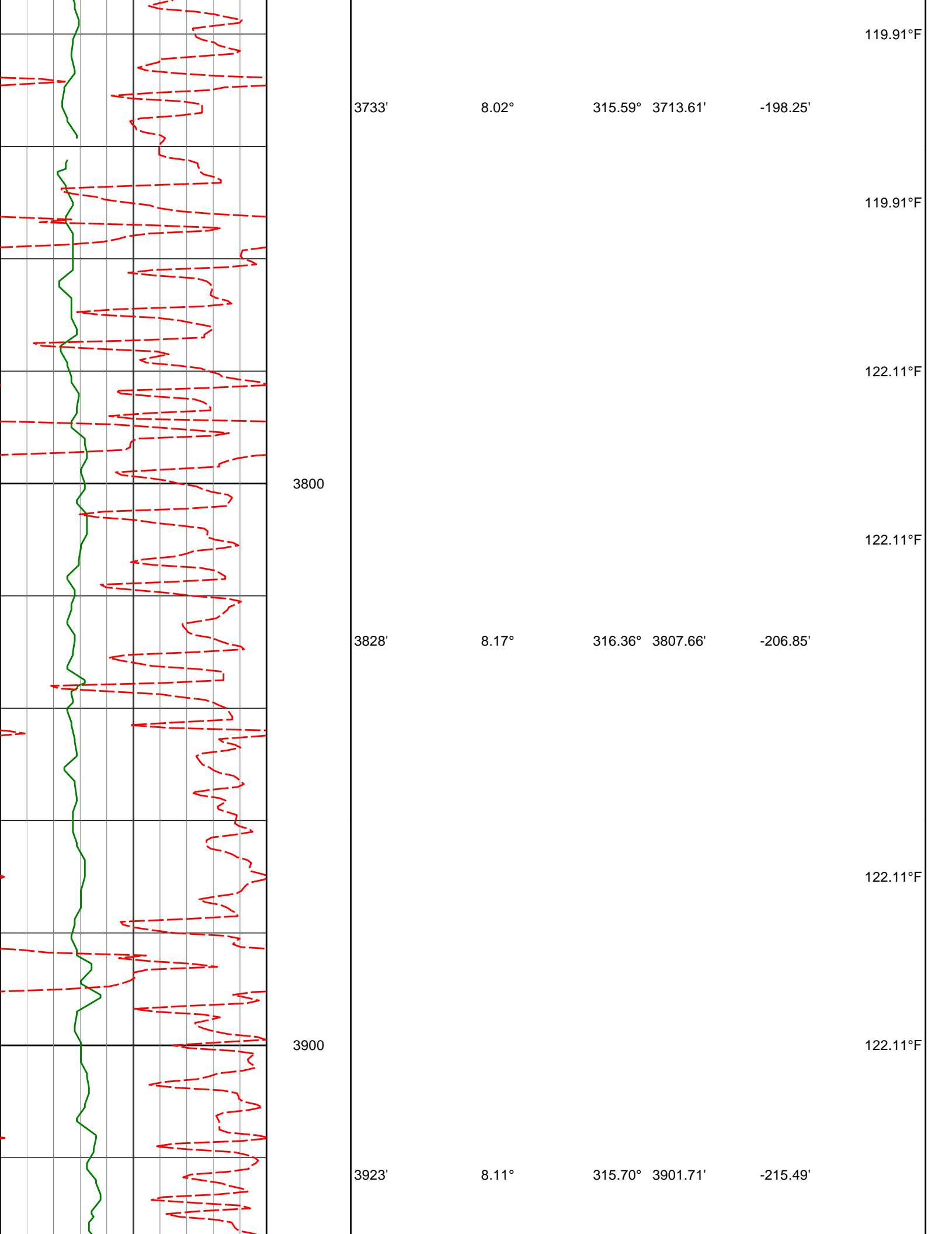
3620.48'

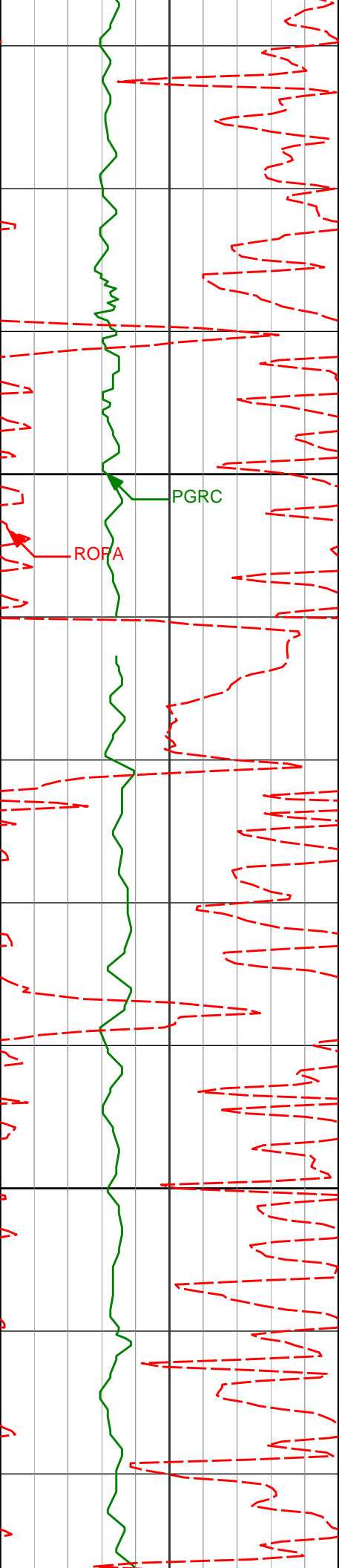
-190.03'

119.91°F

119.91°F

3700





4000

4100

4017'

4112'

8.28°

8.64°

313.84°

312.54°

3994.75'

4088.71'

-224.31'

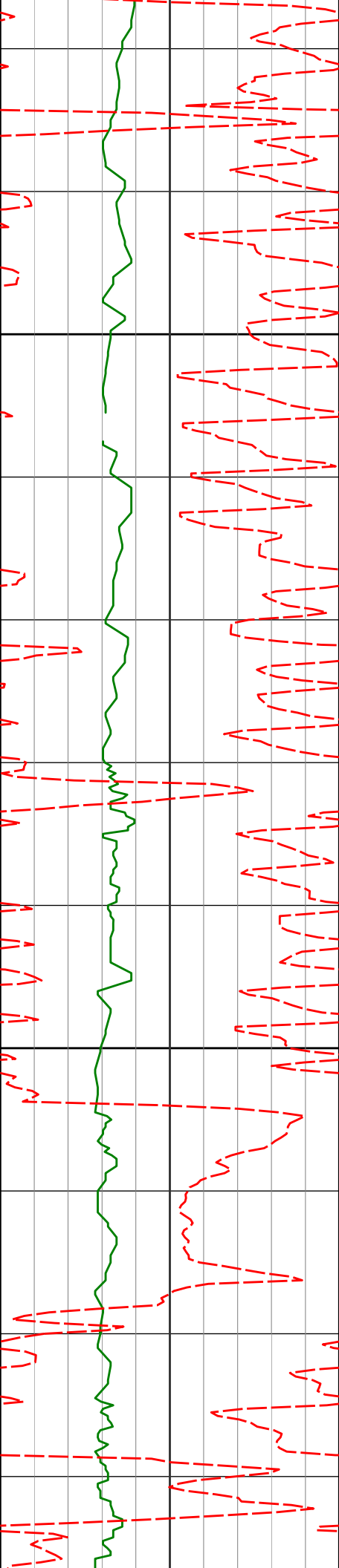
-233.80'

124.30°F

124.30°F

124.30°F

124.30°F



4200

4207'

7.53°

310.64°

4182.77'

-243.13'

4300

4301'

6.69°

312.13°

4276.05'

-251.30'

128.73°F

128.73°F

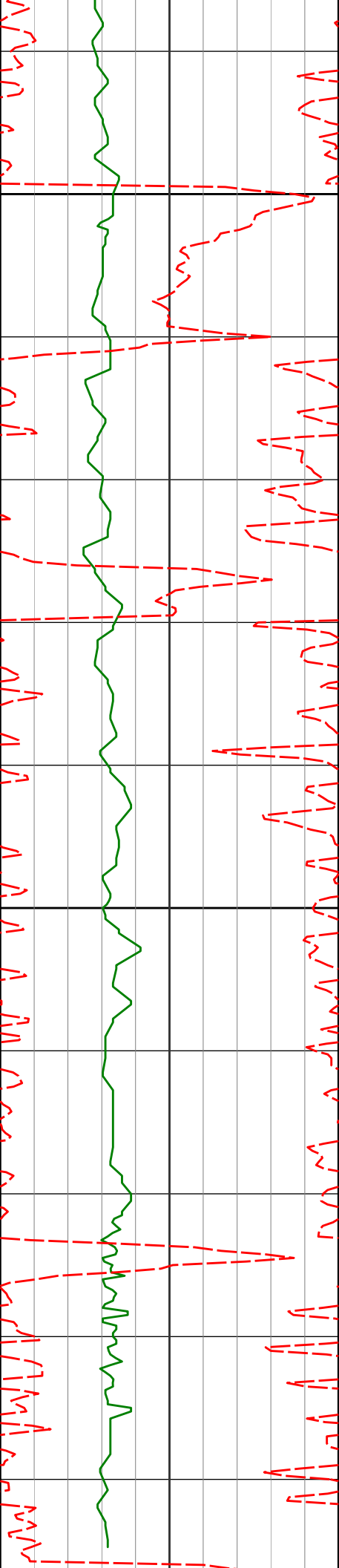
130.96°F

130.96°F

130.96°F

130.96°F

130.96°F



4400

4500

4396'

4491'

4586'

7.44°

8.18°

6.23°

320.27°

323.35°

317.99°

4370.33'

4464.45'

4558.69'

-258.72'

-265.95'

-272.76'

130.96°F

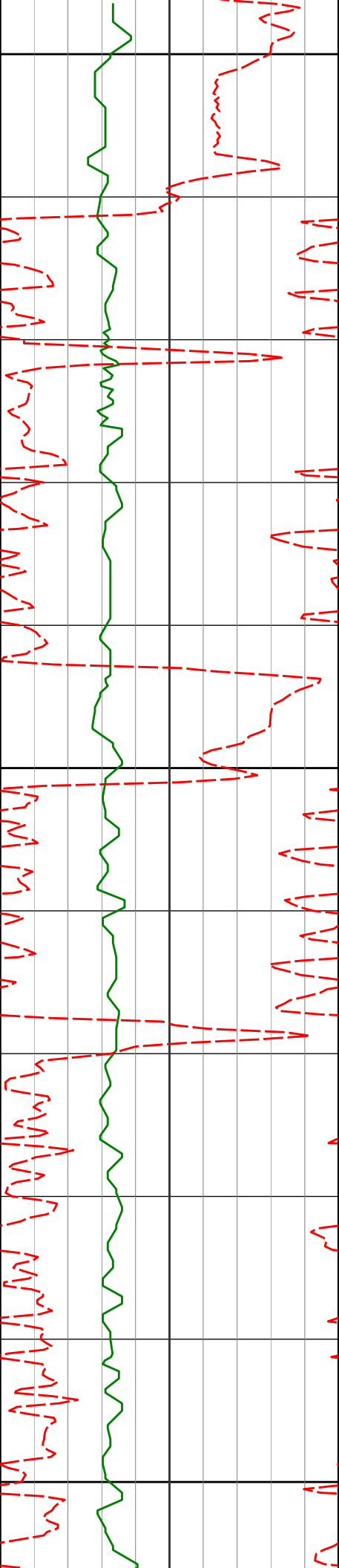
130.96°F

130.96°F

133.56°F

135.18°F

135.45°F



4600

135.45°F

135.88°F

4680'

7.37°

305.25°

4652.04'

-280.56'

136.35°F

4700

135.45°F

4775'

7.32°

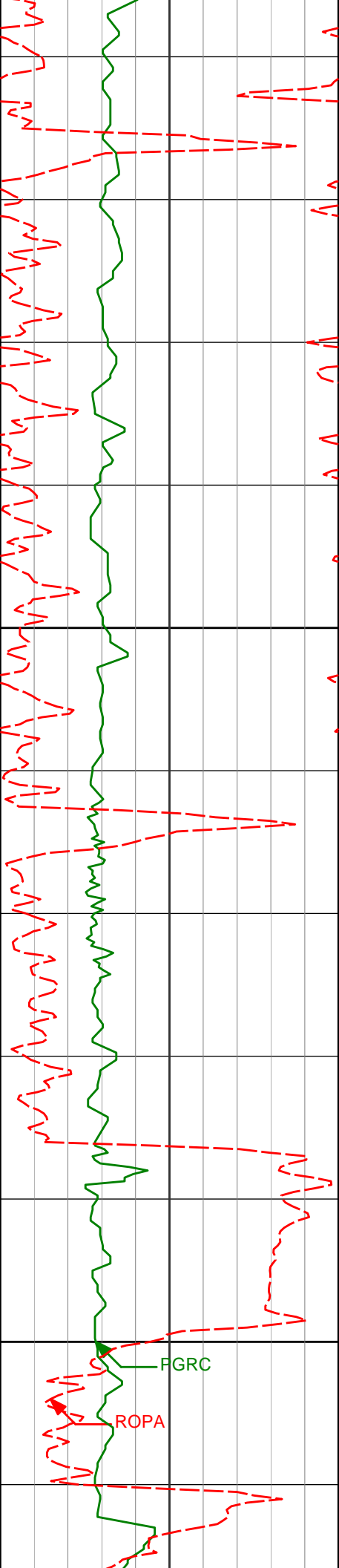
299.64°

4746.26'

-290.32'

135.45°F

4800



4869'

4900

4964'

5000

6.50°

296.39° 4839.57' -299.89'

5.84°

296.55° 4934.02' -308.69'

137.70°F

137.70°F

139.96°F

138.87°F

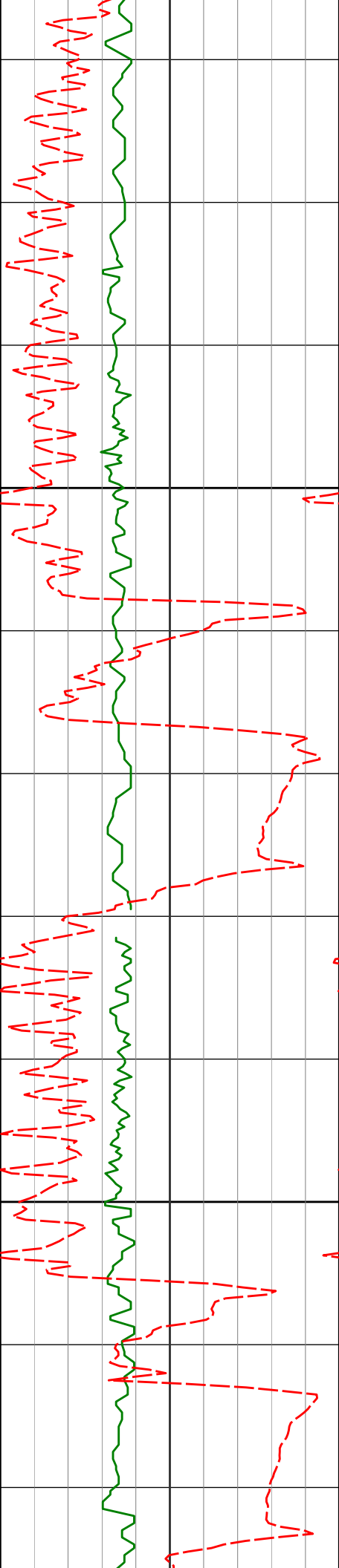
137.70°F

139.96°F

139.96°F

FGRC

ROPA



5059'

5.07°

300.68°

5028.59'

-316.30'

142.25°F

5100

142.25°F

142.25°F

5154'

5.54°

302.95°

5123.19'

-323.41'

142.25°F

142.25°F

5200

142.25°F

5248'

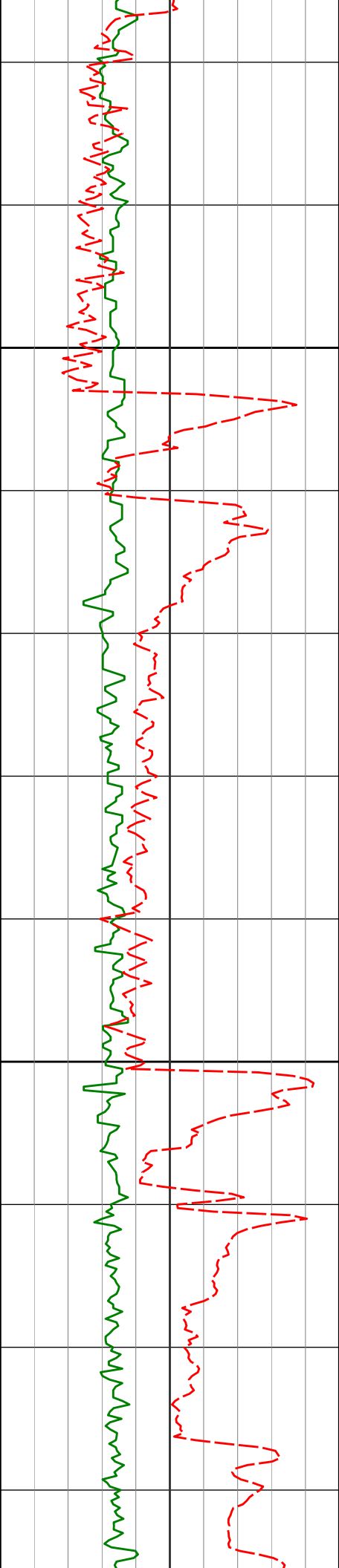
6.02°

311.86°

5216.71'

-330.47'

144.54°F



5300

5400

5343'

5437'

5.46°

4.89°

312.24°

312.18°

5311.23'

5404.85'

-337.06'

-342.92'

144.54°F

146.84°F

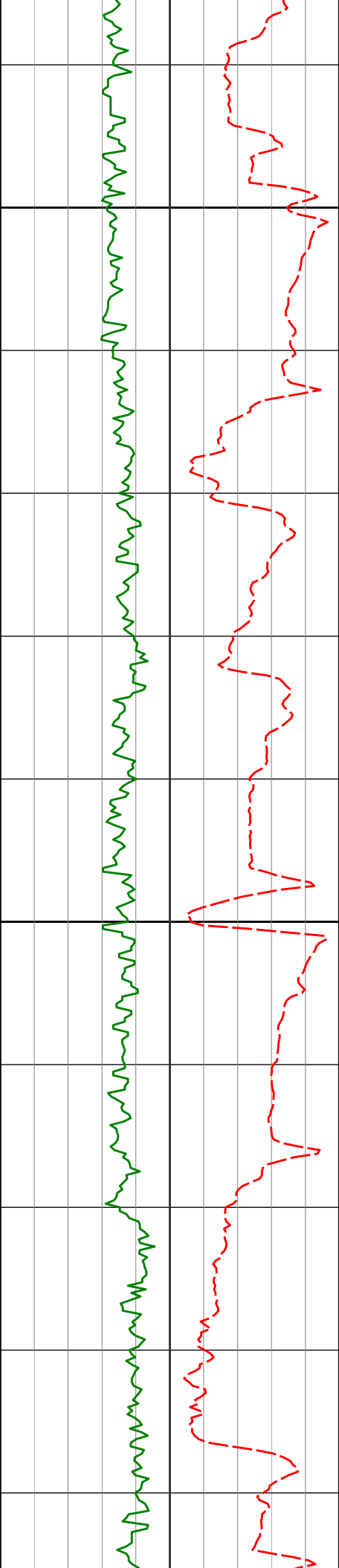
146.84°F

146.84°F

147.08°F

148.68°F

146.13°F



5500

5532'

2.48°

313.40°

5499.65'

-347.11'

5600

5627'

0.49°

171.53°

5594.62'

-348.47'

145.36°F

146.84°F

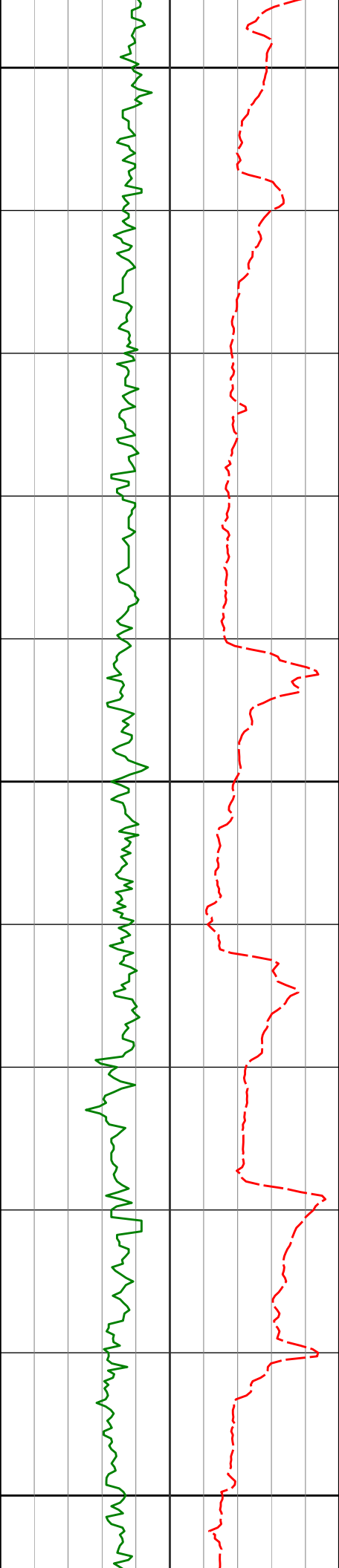
146.70°F

145.58°F

146.84°F

148.90°F

149.14°F



5700

149.14°F

5722'

0.63°

174.68° 5689.62'

-348.43'

149.14°F

151.16°F

151.31°F

5800

5816'

0.70°

196.95° 5783.61'

-348.62'

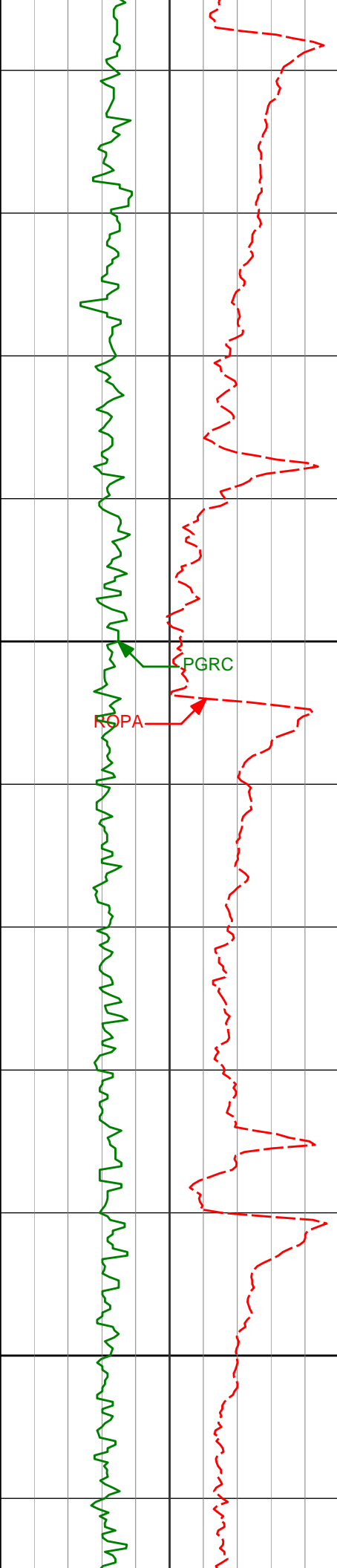
149.71°F

151.07°F

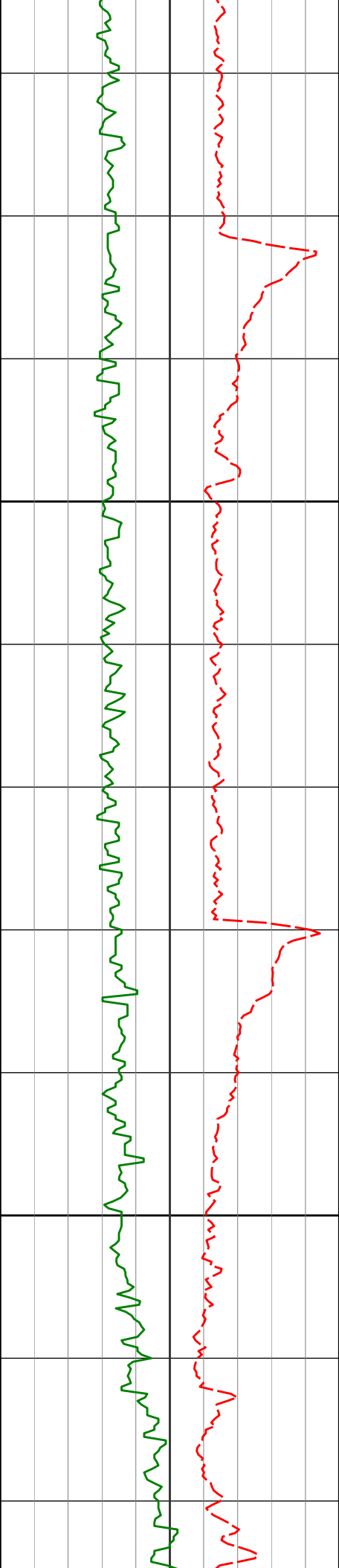
151.47°F

5900

151.47°F



| | | | | | | |
|------|-------|--------|--------|----------|----------|----------|
| | 5911' | 3.43° | 89.10° | 5878.55' | -345.99' | 151.47°F |
| | | | | | | 152.06°F |
| | | | | | | 153.79°F |
| 6000 | | | | | | 153.79°F |
| | 6006' | 9.23° | 75.47° | 5972.94' | -335.65' | |
| | | | | | | 153.79°F |
| | | | | | | 153.91°F |
| | | | | | | 156.13°F |
| 6100 | 6100' | 16.63° | 82.40° | 6064.50' | -314.78' | |
| | | | | | | 156.13°F |



6200

6195'

26.37°

87.15°

6152.79'

-280.04'

156.13°F

157.62°F

158.47°F

158.47°F

158.47°F

6300

6290'

37.67°

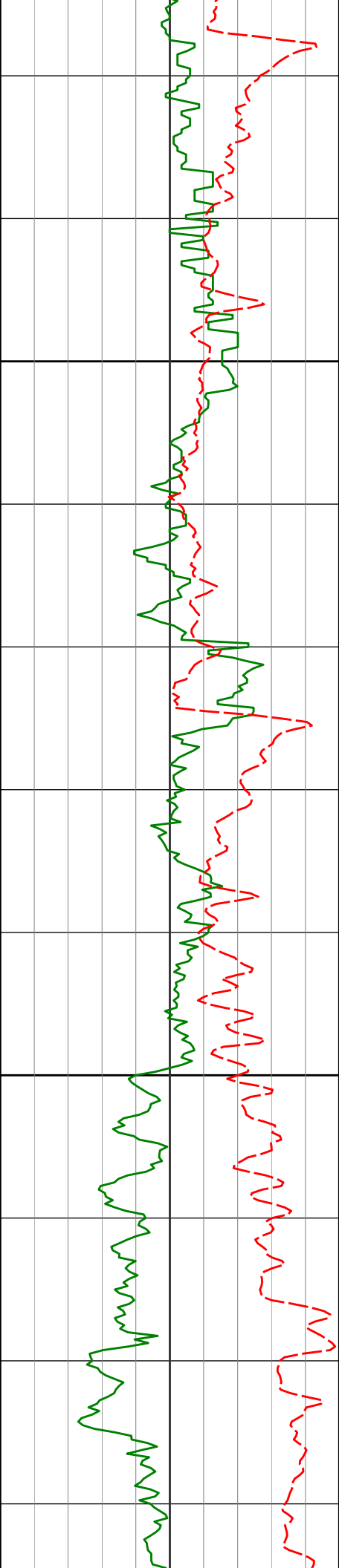
89.68°

6233.21'

-229.82'

158.47°F

158.47°F



6385'

48.25°

91.13°

6302.64'

-165.38'

6400

6479'

58.82°

89.23°

6358.44'

-90.09'

6500

160.64°F

160.83°F

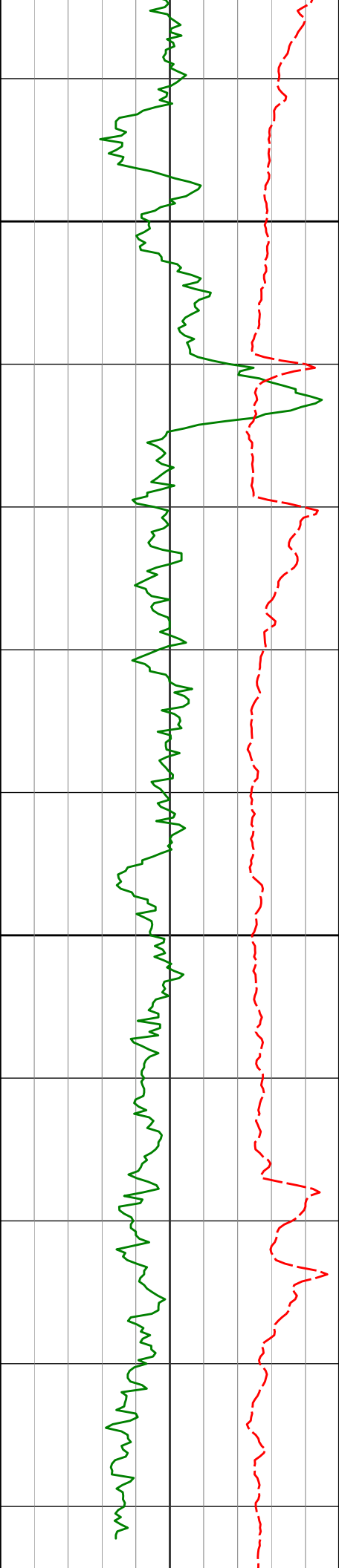
160.83°F

160.83°F

160.20°F

158.54°F

158.47°F



6574'

65.99°

89.41°

6402.42'

-6.10'

158.99°F

6600

158.65°F

160.19°F

160.83°F

6668'

74.15°

86.30°

6434.45'

82.13'

162.26°F

6700

162.79°F

163.06°F

6777'

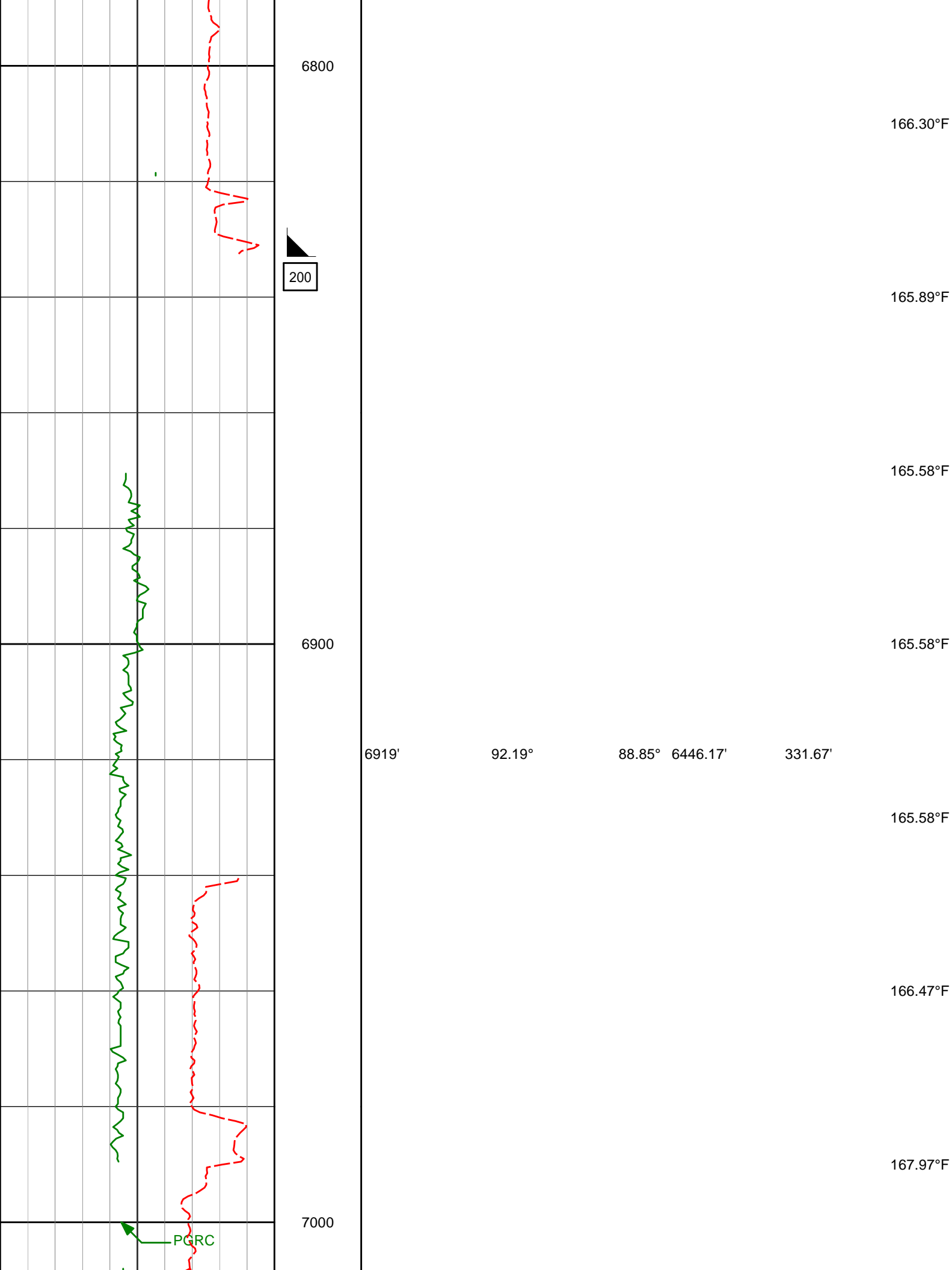
90.25°

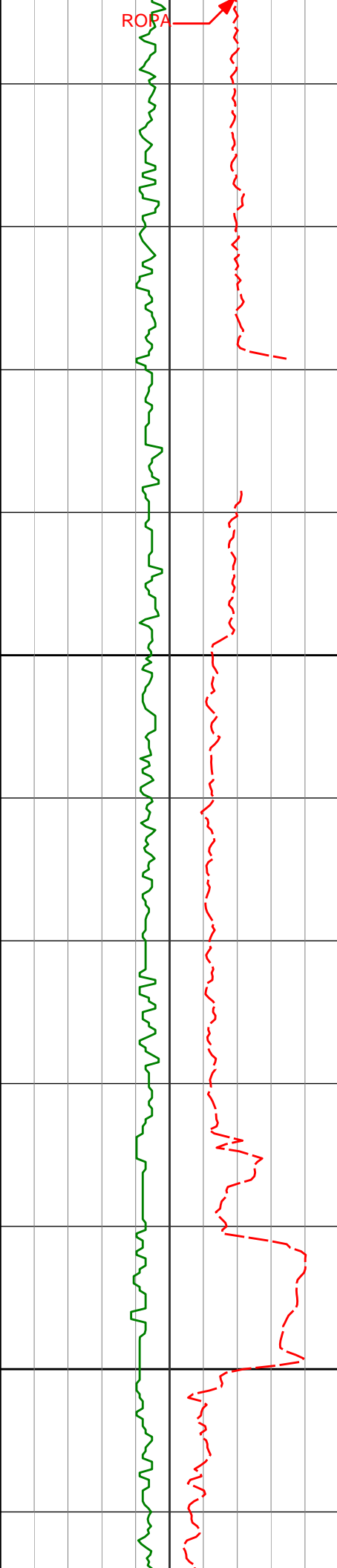
85.76°

6449.19'

189.77'

162.90°F





7013'

89.69°

88.61° 6444.63'

425.54'

167.97°F

170.06°F

172.44°F

7100

7107'

91.23°

88.93° 6443.88'

519.43'

171.26°F

170.37°F

170.87°F

7200

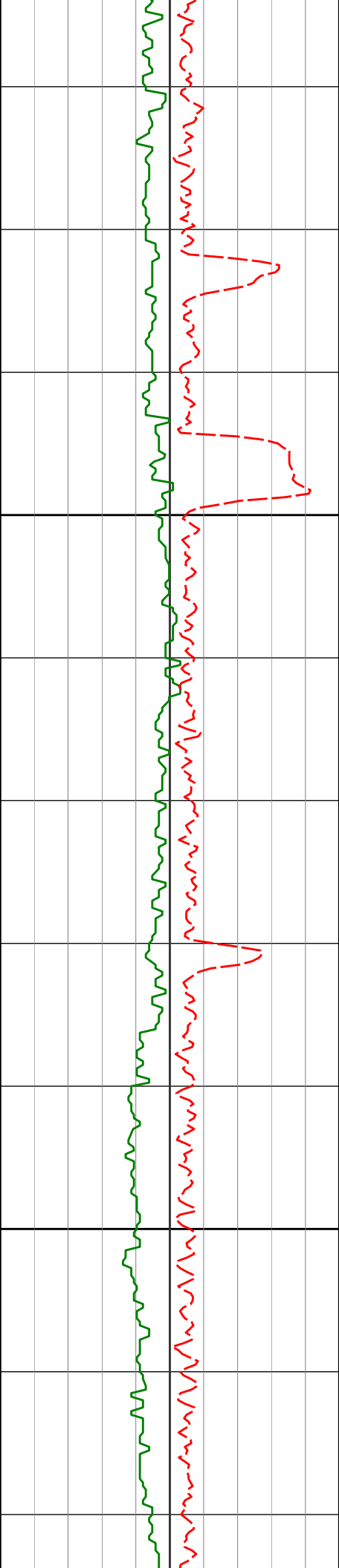
7202'

89.75°

88.83° 6443.06'

614.30'

172.87°F



7300

7296'

89.45°

88.39° 6443.72'

708.20'

7400

7391'

89.54°

88.30° 6444.56'

803.11'

174.48°F

175.21°F

175.41°F

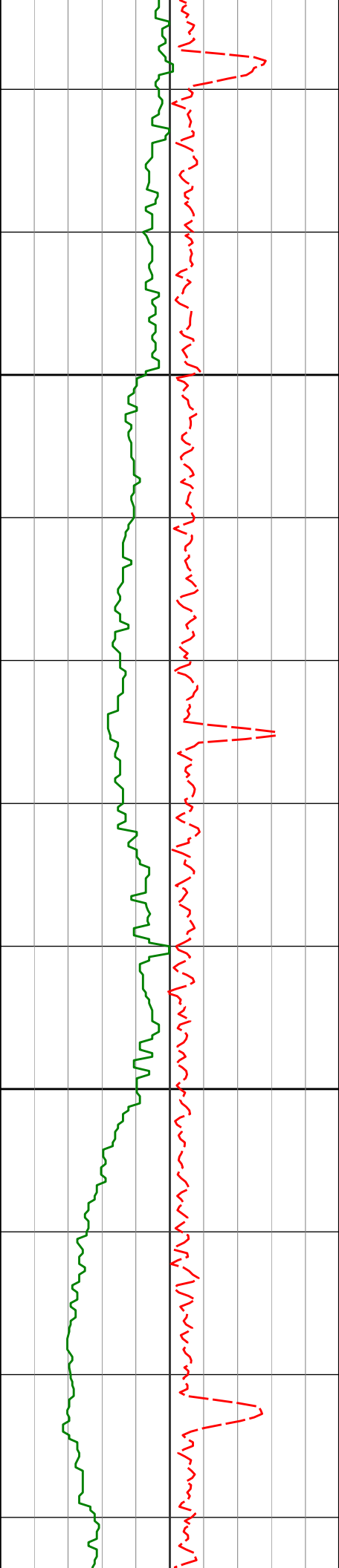
177.64°F

177.86°F

179.86°F

180.09°F

182.15°F



7500

7600

7485'

89.51°

88.38° 6445.34'

897.03'

7579'

89.23°

88.29° 6446.37'

990.94'

182.55°F

182.55°F

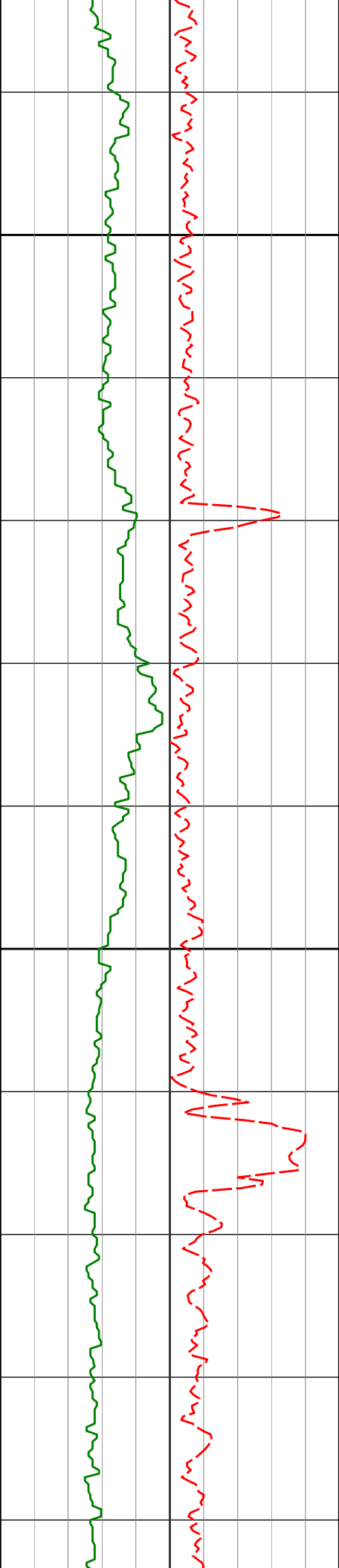
182.55°F

182.55°F

185.02°F

185.02°F

185.02°F



7673'

89.35°

88.27° 6447.54'

1084.86'

7700

185.02°F

185.56°F

187.11°F

7767'

89.23°

87.94° 6448.70'

1178.78'

184.88°F

7800

183.09°F

185.50°F

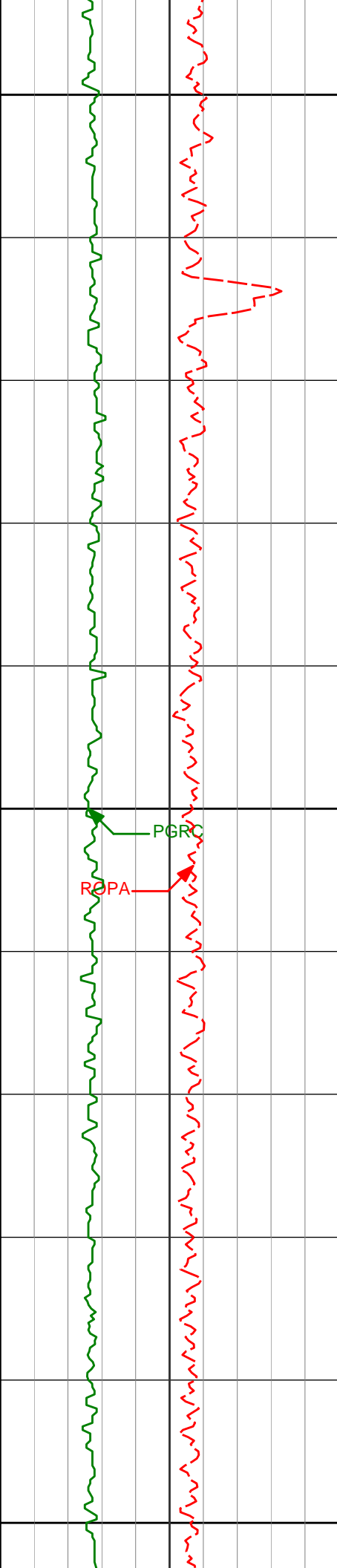
7861'

90.55°

88.11° 6448.88'

1272.72'

187.48°F



7900

8000

8100

187.48°F

187.68°F

189.79°F

187.48°F

189.76°F

189.34°F

187.05°F

182.55°F

PGR

ROPA

8050'

90.59°

87.13° 6447.00'

1461.63'



8200

8300

8144'

89.94°

87.31° 6446.57'

1555.61'

8238'

91.08°

87.60° 6445.73'

1649.57'

185.02°F

185.02°F

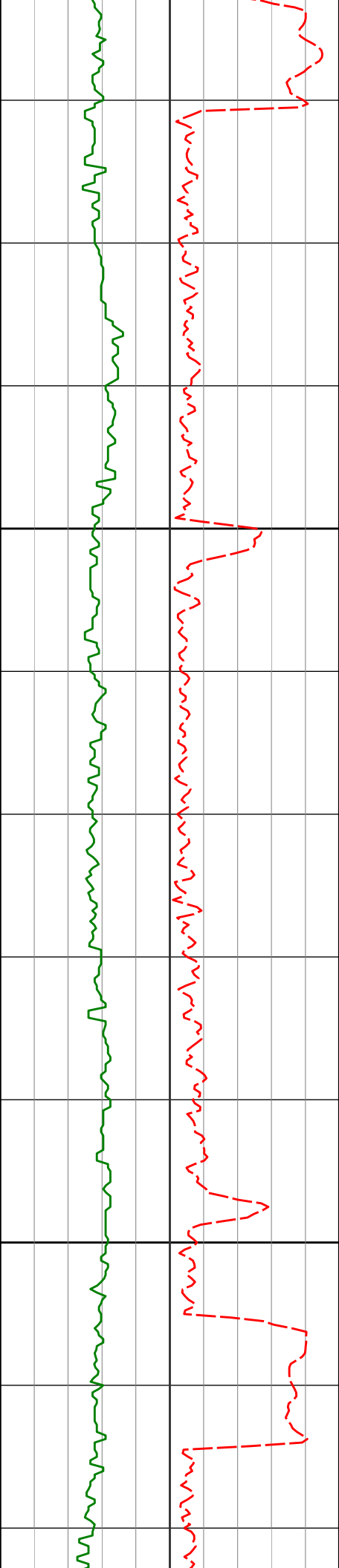
187.48°F

187.73°F

188.69°F

185.59°F

187.22°F



8333'

89.69°

87.51° 6445.09'

1744.53'

188.97°F

189.99°F

8400

190.98°F

8427'

90.71°

87.95° 6444.76'

1838.48'

191.45°F

190.21°F

189.99°F

8500

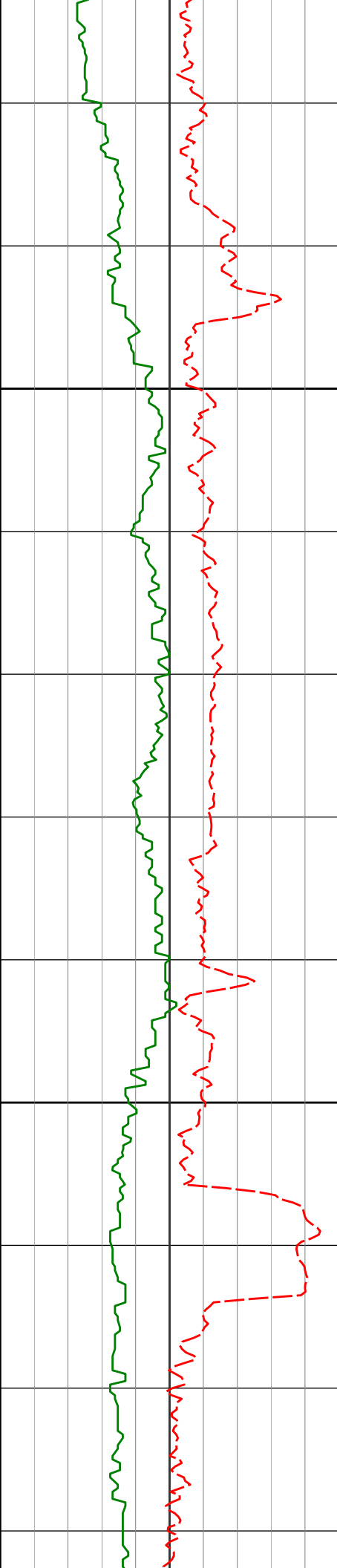
8521'

88.98°

87.13° 6445.02'

1932.44'

190.84°F



8600

8616'

89.11°

86.89°

6446.60'

2027.41'

192.49°F

192.89°F

194.99°F

194.43°F

192.67°F

8700

8710'

89.81°

87.20°

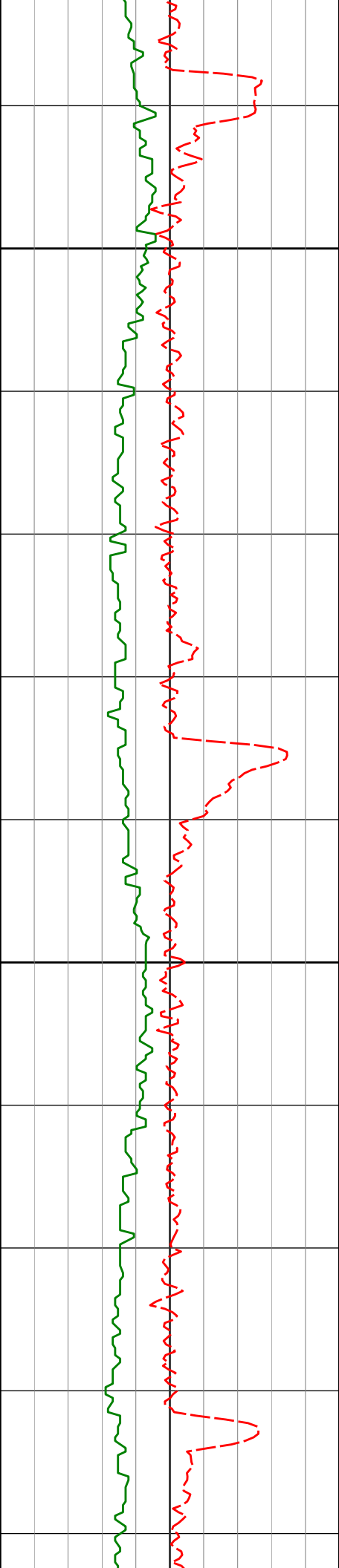
6447.49'

2121.39'

192.49°F

192.49°F

194.41°F



8800

8803'

89.91°

87.49°

6447.71'

2214.37'

196.89°F

197.51°F

197.51°F

199.34°F

8900

8898'

90.46°

87.47°

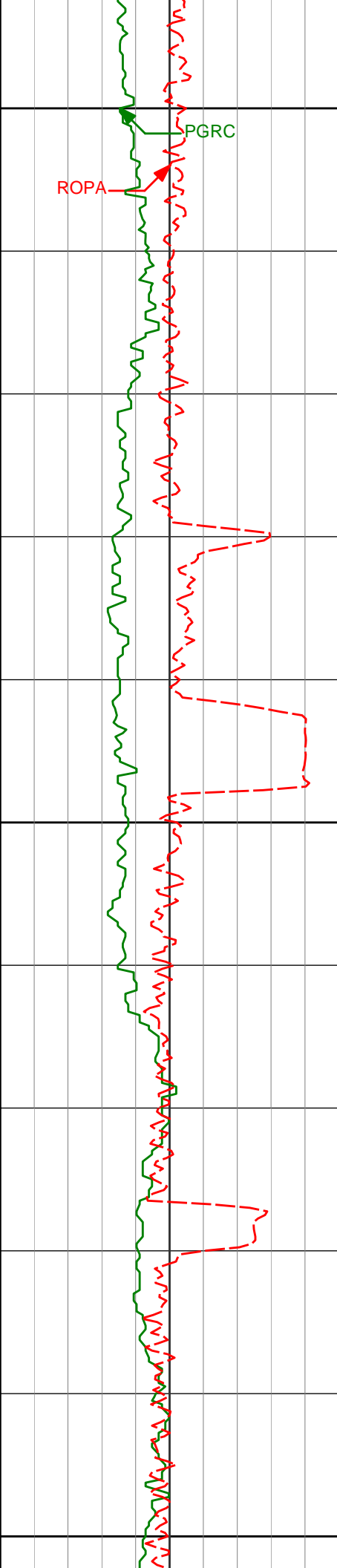
6447.41'

2309.33'

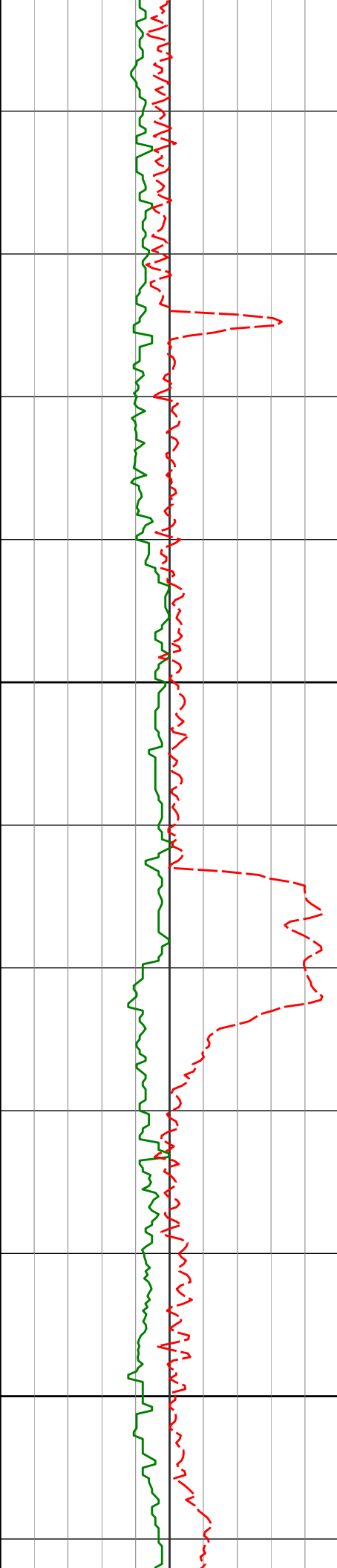
200.05°F

200.05°F

200.71°F



| | | | | | |
|-------|--------|--------|----------|----------|----------|
| 8993' | 90.89° | 87.30° | 6446.29' | 2404.30' | |
| 9000 | | | | | 200.52°F |
| | | | | | 200.05°F |
| | | | | | 200.05°F |
| | | | | | |
| 9087' | 89.91° | 87.42° | 6445.63' | 2498.27' | 202.60°F |
| 9100 | | | | | 202.60°F |
| | | | | | 202.60°F |
| | | | | | |
| 9182' | 90.37° | 87.13° | 6445.40' | 2593.24' | 202.60°F |
| 9200 | | | | | |



9300

9400

9277'

9372'

91.11°

90.62°

87.04°

88.22°

6444.17'

6442.74'

2688.21'

2783.16'

202.60°F

203.83°F

201.65°F

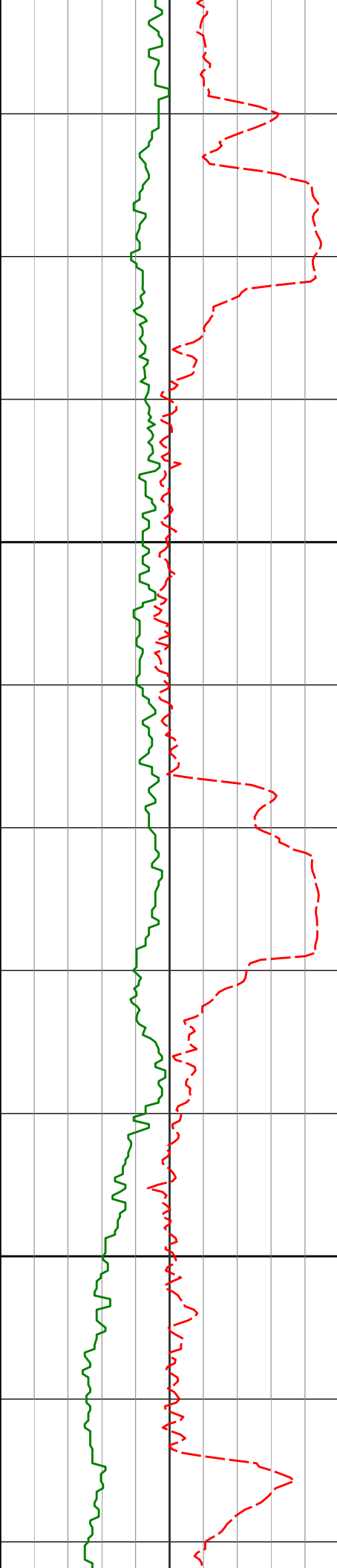
211.51°F

210.33°F

207.96°F

208.38°F

206.15°F



9500

9600

9466'

90.34°

87.54°

6441.95'

2877.10'

9561'

89.14°

87.63°

6442.38'

2972.06'

203.17°F

204.99°F

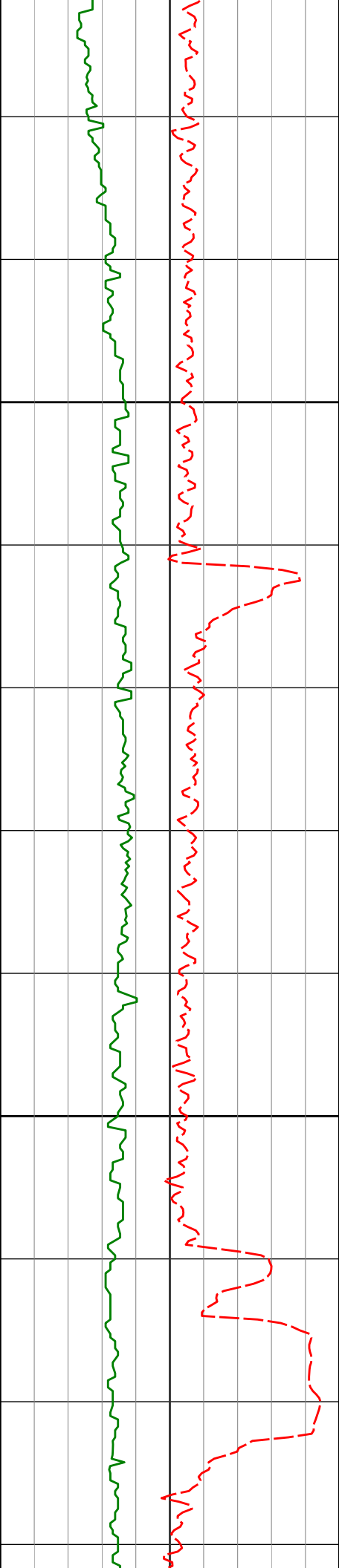
205.20°F

204.33°F

205.16°F

207.30°F

207.73°F



9655'

89.60°

87.24°

6443.42'

3066.03'

212.38°F

212.69°F

9700

210.31°F

9750'

90.46°

87.14°

6443.37'

3161.00'

209.54°F

208.38°F

9800

207.73°F

209.98°F

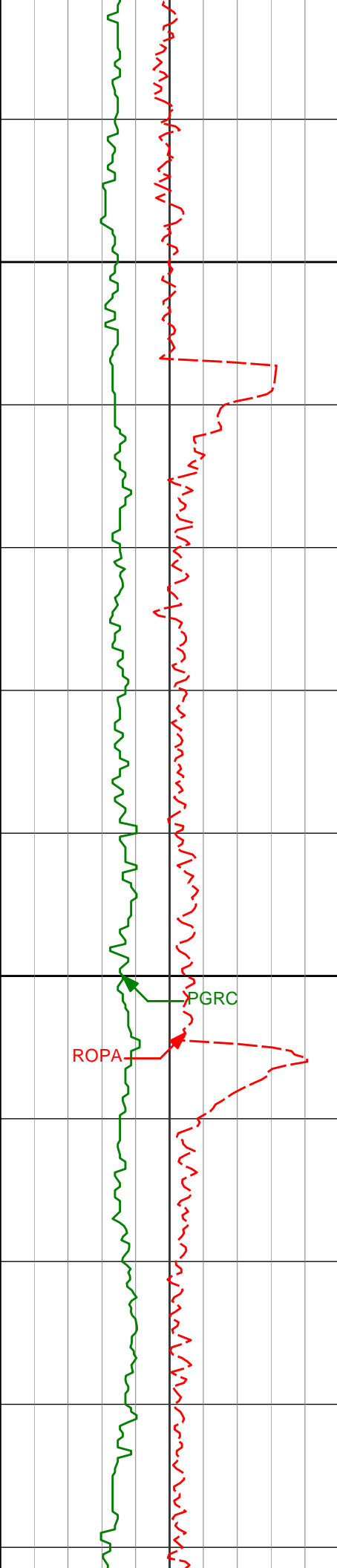
9845'

89.94°

87.98°

6443.04'

3255.97'



9900

9938'

89.78°

86.99°

6443.26'

3348.93'

10000

10031'

90.34°

86.59°

6443.17'

3441.92'

213.16°F

210.31°F

213.72°F

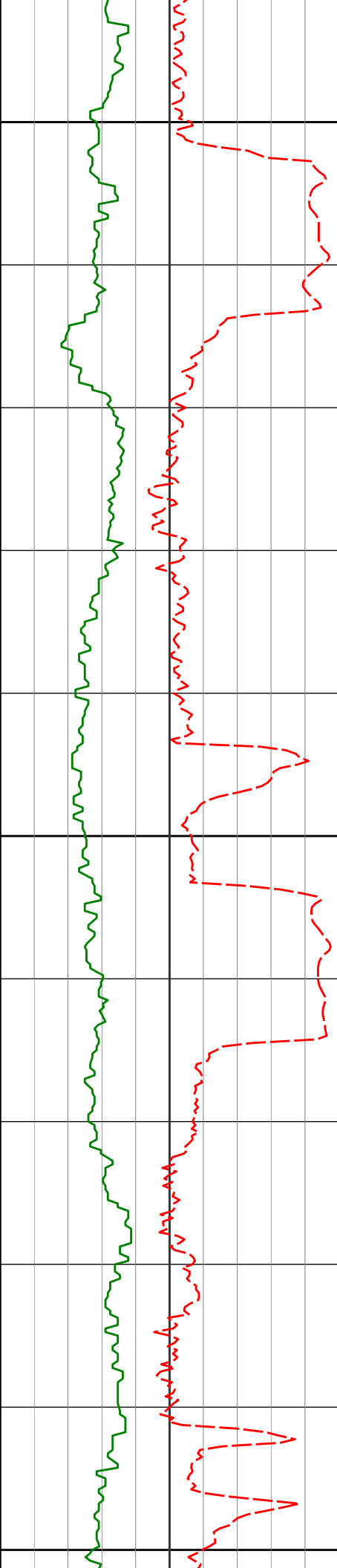
214.27°F

212.16°F

211.90°F

211.02°F

210.31°F



10100

10125'

88.83°

88.00° 6443.85'

3535.89'

10200

10217'

89.04°

89.93° 6445.56'

3627.74'

10300

211.91°F

211.43°F

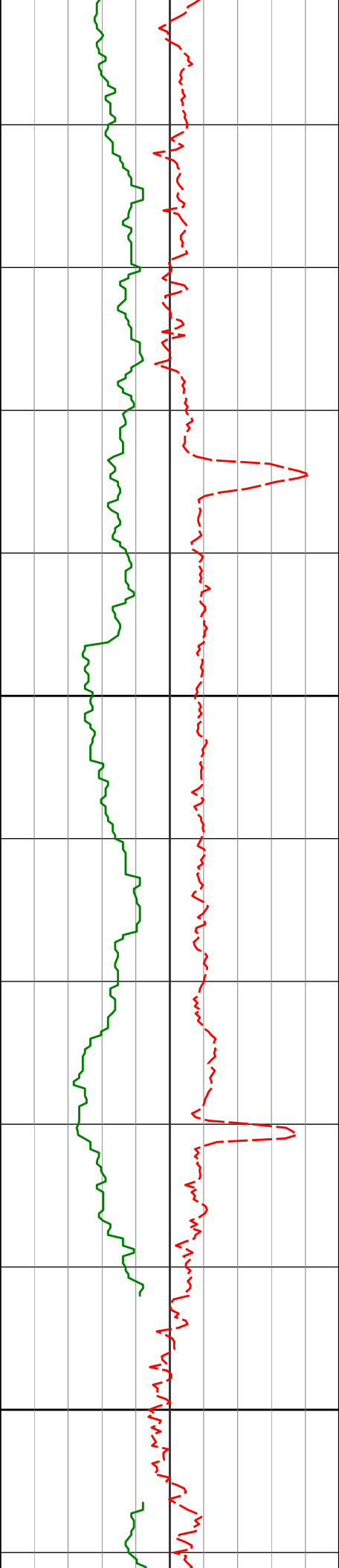
210.31°F

211.05°F

212.52°F

212.92°F

215.24°F



10308'

89.17°

90.35° 6446.98'

3718.49'

218.74°F

215.51°F

215.51°F

10400

10402'

88.83°

90.18° 6448.62'

3812.21'

215.51°F

217.13°F

219.71°F

10500

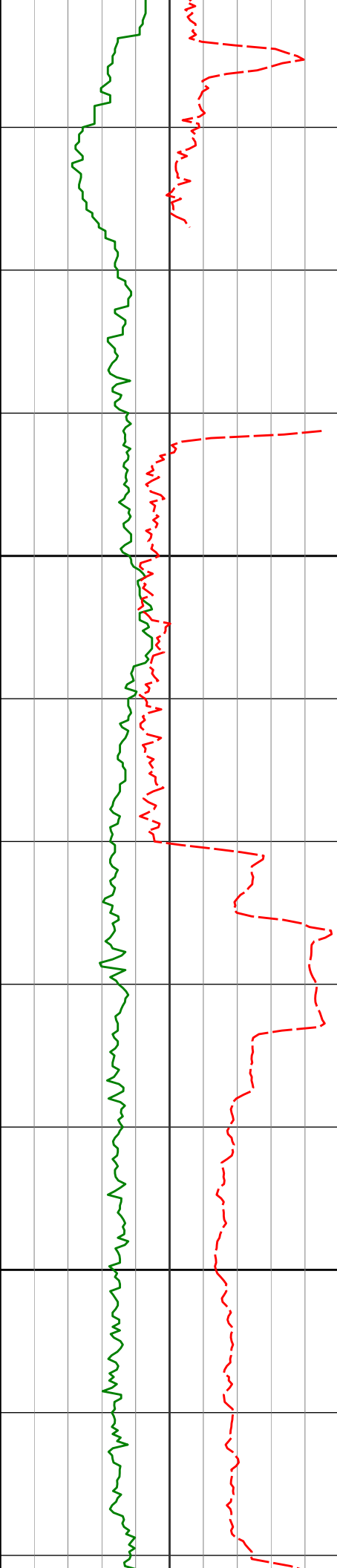
10495'

88.80°

89.79° 6450.54'

3904.96'

220.91°F



10600

10700

10588'

10680'

88.40°

89.54°

89.60° 6452.81'

90.31° 6454.47'

3997.74'

4089.50'

218.14°F

217.95°F

217.28°F

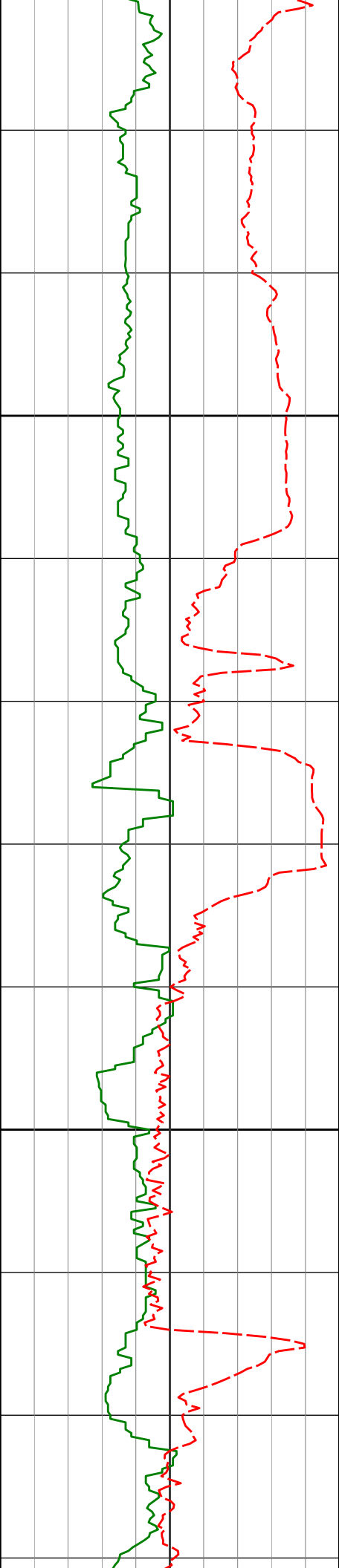
215.51°F

217.02°F

216.16°F

217.98°F

218.14°F



10773'

89.88°

89.75° 6454.94'

4182.27'

219.58°F

10800

216.44°F

218.14°F

218.14°F

10866'

91.02°

89.98° 6454.21'

4275.05'

218.14°F

10900

218.42°F

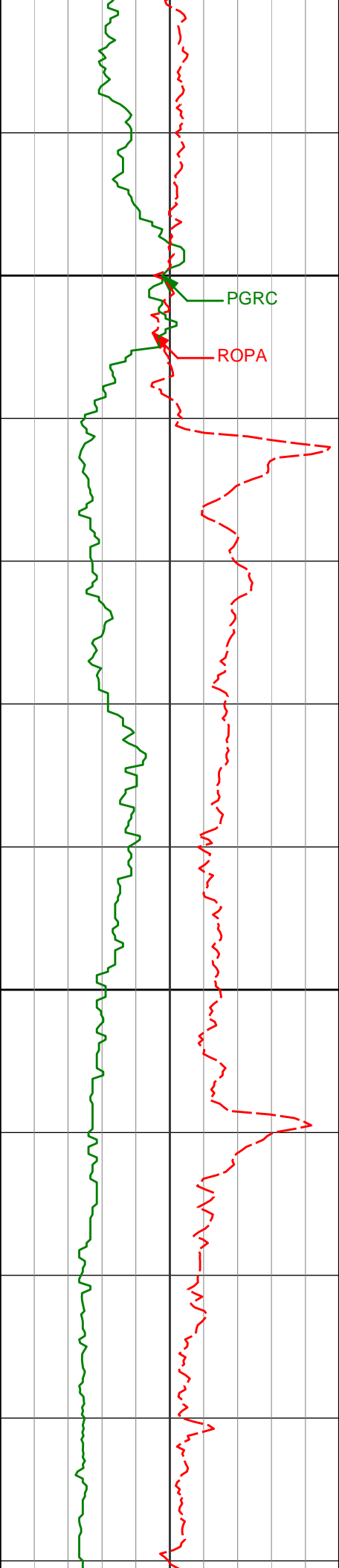
223.09°F

10959'

90.83°

89.61° 6452.71'

4367.83'



11000

PGRC

ROPA

11100

11052'

91.11°

89.51° 6451.13'

4460.63'

11144'

91.79°

89.69° 6448.80'

4552.42'

221.33°F

220.77°F

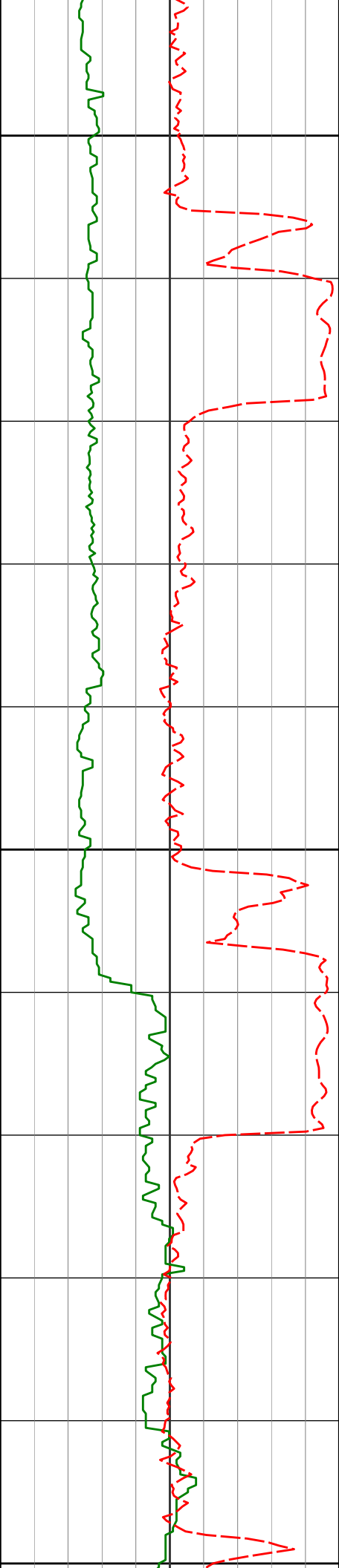
224.52°F

223.71°F

223.41°F

221.58°F

220.02°F



11200

11236'

92.62°

89.86°

6445.26'

4644.15'

11300

11329'

90.68°

89.10°

6442.59'

4736.93'

11400

221.40°F

221.05°F

220.31°F

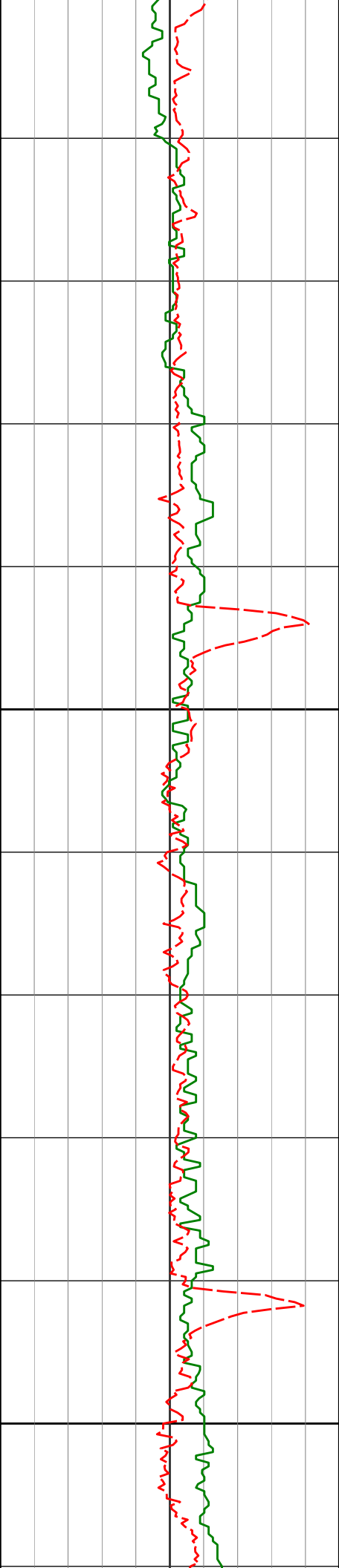
218.37°F

218.14°F

220.77°F

222.61°F

224.34°F



11400
11500
11600

11421'

89.72°

88.94° 6442.27'

4828.79'

224.94°F

224.90°F

225.65°F

11515'

89.29°

89.05° 6443.08'

4922.66'

227.00°F

226.08°F

226.08°F

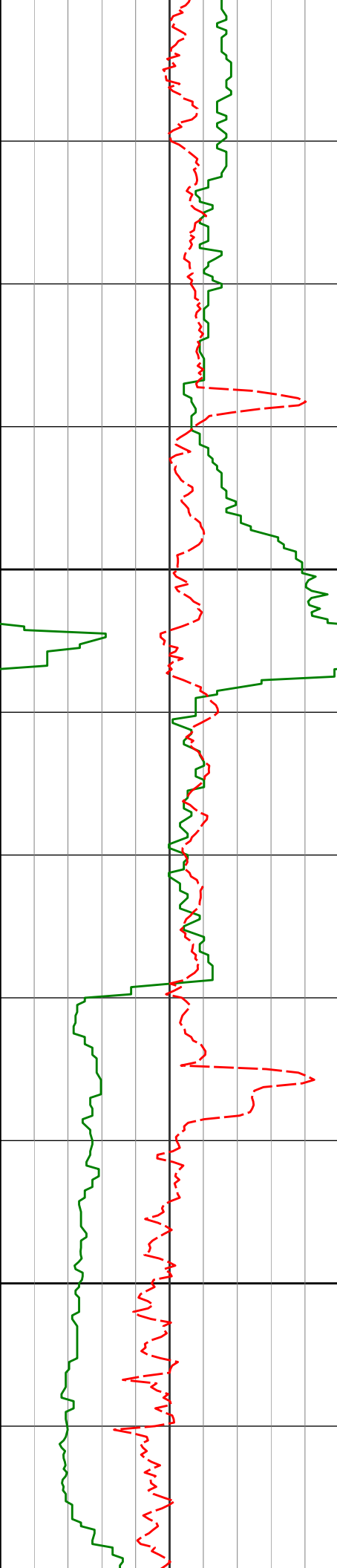
11610'

89.45°

89.17° 6444.12'

5017.51'

226.08°F



11700

11705'

89.20°

88.94° 6445.24'

5112.37'

11800

11799'

89.23°

88.87° 6446.53'

5206.24'

226.28°F

228.74°F

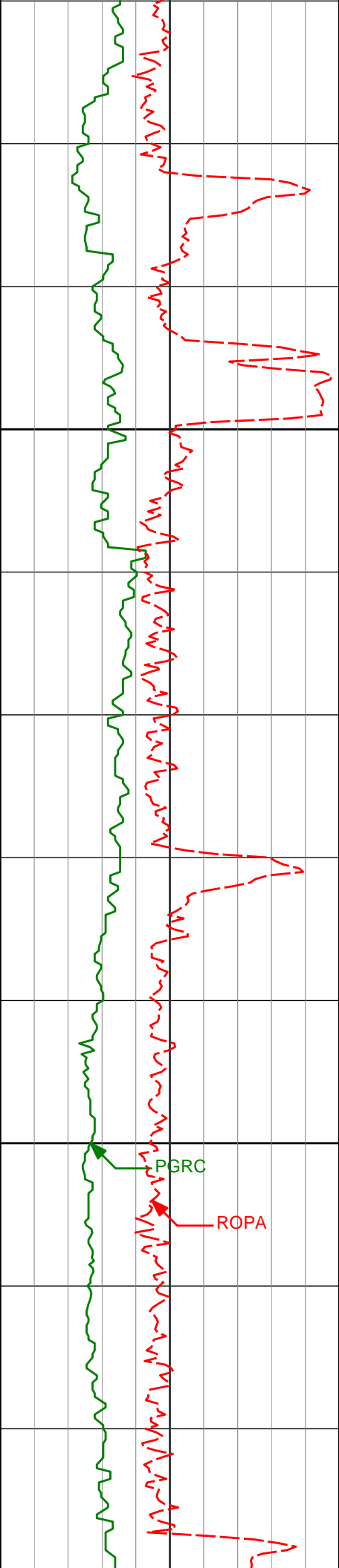
228.74°F

228.74°F

228.74°F

228.74°F

228.53°F



11900

12000

PGRC

ROPA

11894'

89.66°

88.29° 6447.45'

5301.13'

11989'

89.51°

87.89° 6448.14'

5396.06'

226.79°F

228.74°F

228.74°F

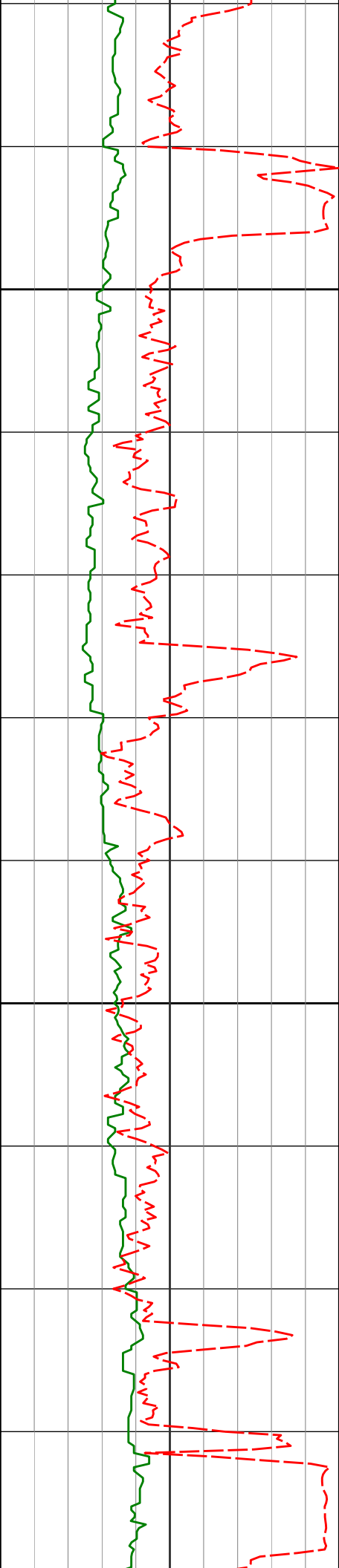
228.74°F

228.74°F

229.50°F

229.15°F

229.74°F



12100

12200

12084'

90.71°

87.02° 6447.96'

5491.03'

12178'

91.39°

86.66° 6446.23'

5585.00'

12273'

90.52°

87.73° 6444.65'

5679.96'

228.74°F

228.74°F

228.74°F

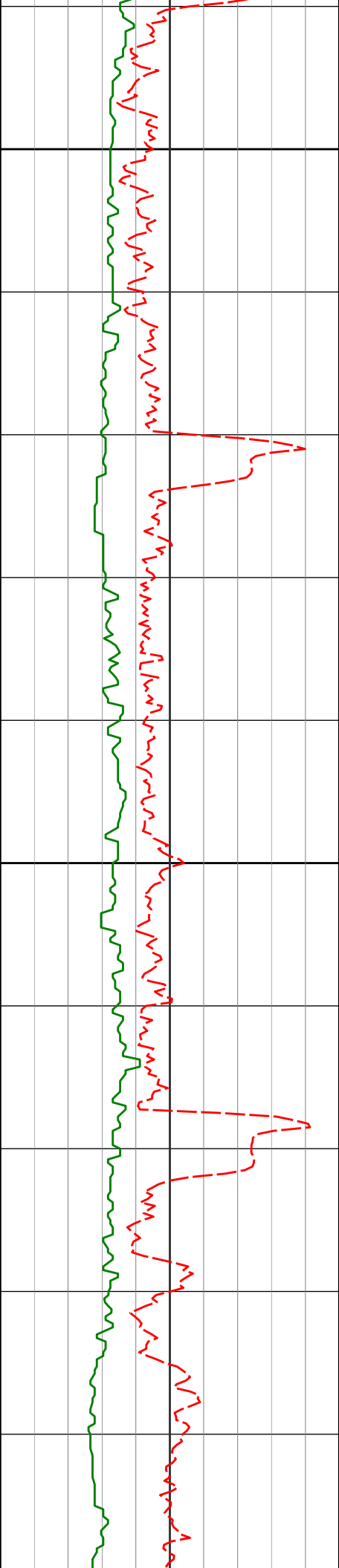
231.42°F

230.61°F

229.26°F

228.74°F

228.74°F



12300

231.42°F

231.79°F

233.68°F

12368'

90.86°

87.48° 6443.51'

5774.92'

231.42°F

12400

232.53°F

232.64°F

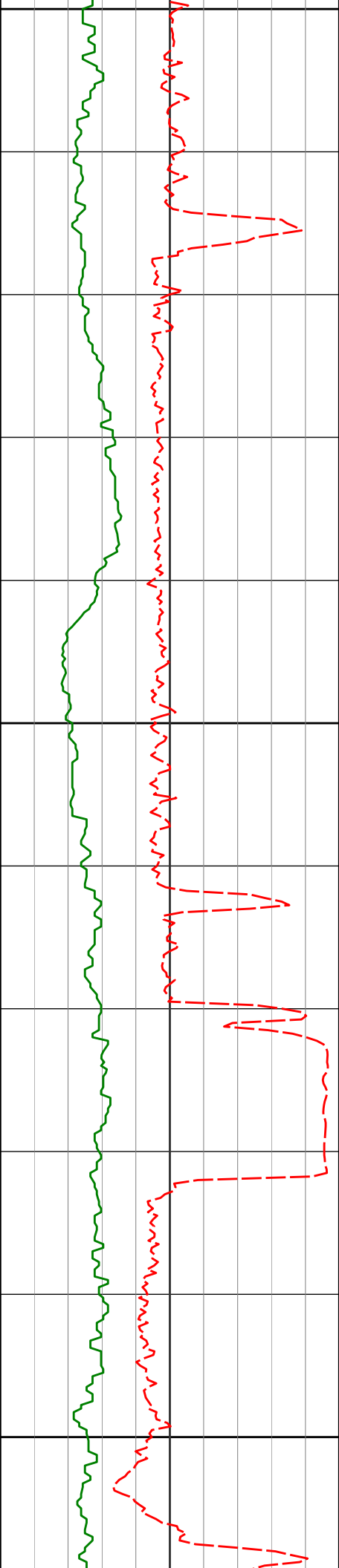
12462'

91.14°

86.86° 6441.86'

5868.88'

234.12°F



12500

233.29°F

231.58°F

12556'

91.94°

86.83° 6439.34'

5962.84'

232.58°F

12600

231.07°F

230.90°F

12651'

90.86°

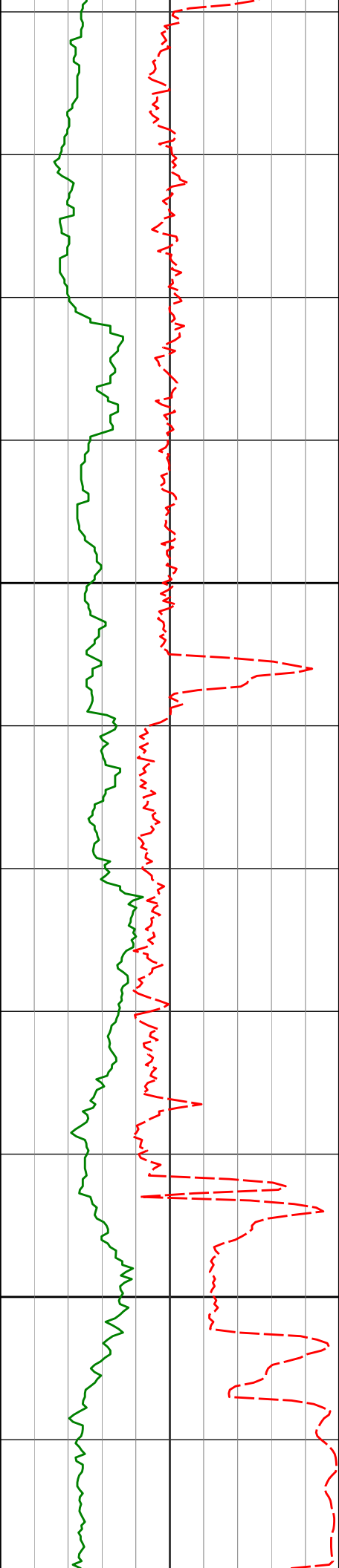
87.62° 6437.02'

6057.78'

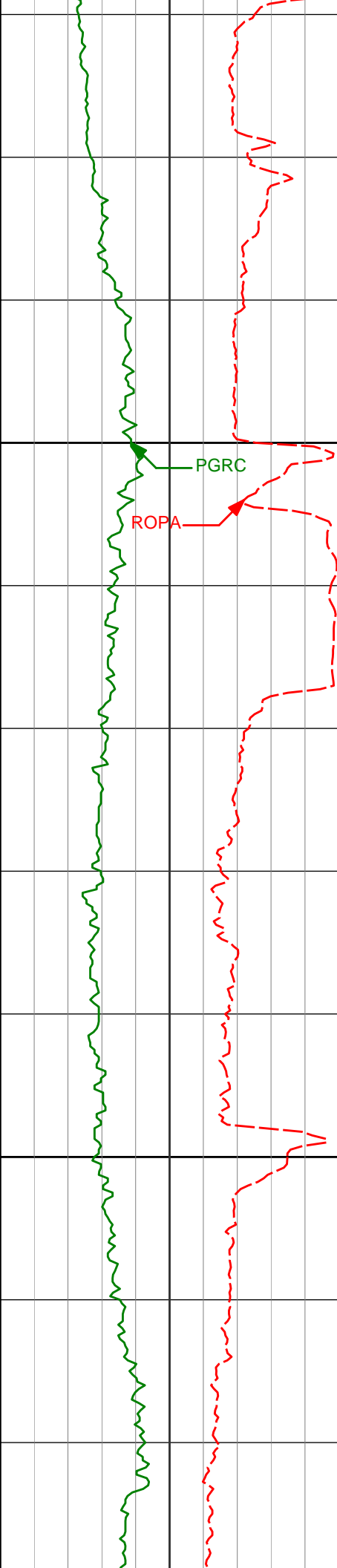
231.42°F

231.42°F

12700



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| | | | | | 231.42°F |
| 12746' | 88.64° | 86.13° | 6437.43' | 6152.76' | 231.42°F |
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| | | | | | 219.16°F |
| | | | | | |
| 12800 | | | | | |
| | | | | | 219.21°F |
| | | | | | |
| 12840' | 88.09° | 85.71° | 6440.11' | 6246.72' | 220.76°F |
| | | | | | |
| | | | | | 220.91°F |
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| | | | | | |
| 12900 | | | | | 223.41°F |
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| | | | | | |
| 12935' | 89.11° | 85.88° | 6442.44' | 6341.69' | 223.61°F |



13000

13029'

90.71°

85.09° 6442.58'

6435.69'

13100

13124'

91.51°

85.74° 6440.74'

6530.66'

223.44°F

224.56°F

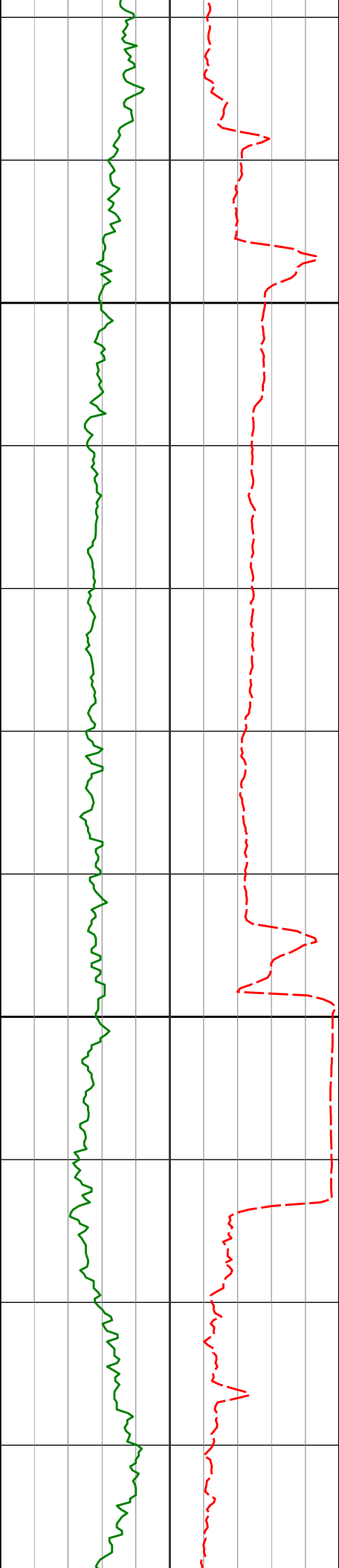
226.08°F

227.08°F

228.74°F

228.74°F

228.74°F



13200

13300

13219'

90.89°

84.85°

6438.75'

6625.63'

228.97°F

230.82°F

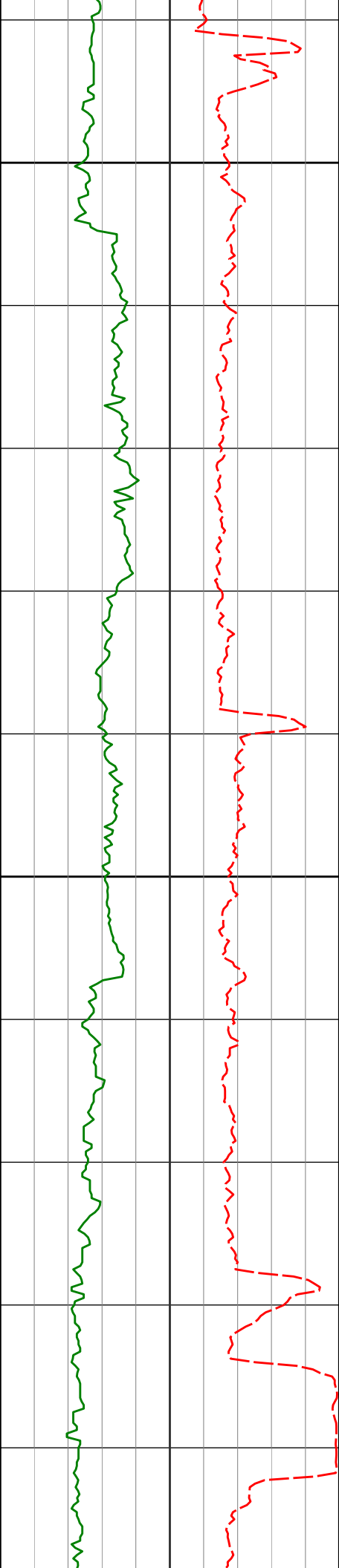
229.23°F

228.74°F

228.74°F

228.74°F

228.74°F



13400

13408'

92.74°

87.76° 6432.77'

6814.51'

232.53°F

233.21°F

233.16°F

13500

13503'

92.99°

87.49° 6428.02'

6909.35'

231.02°F

229.36°F

231.26°F

233.10°F

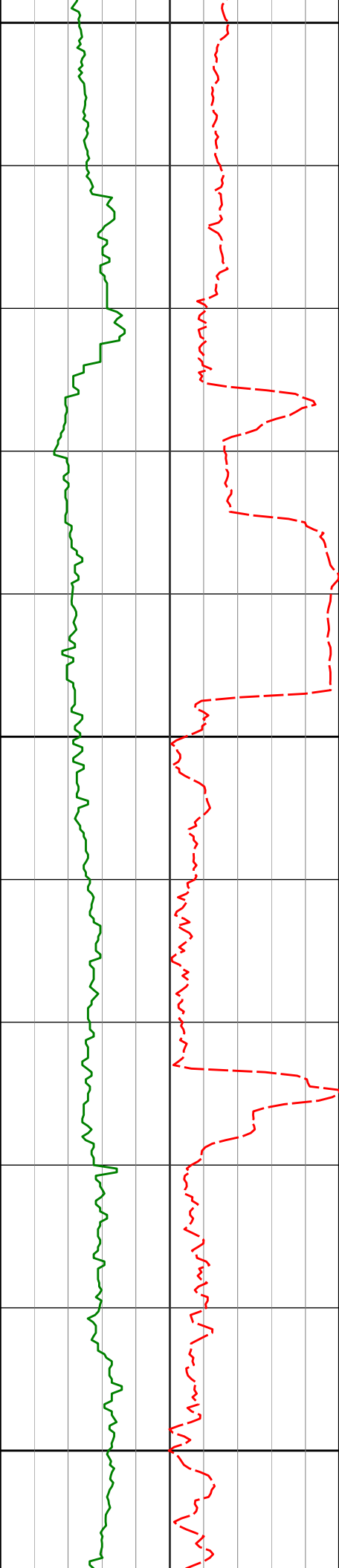
13507'

92.10°

88.12° 6422.84'

7002.21'

231.49°F

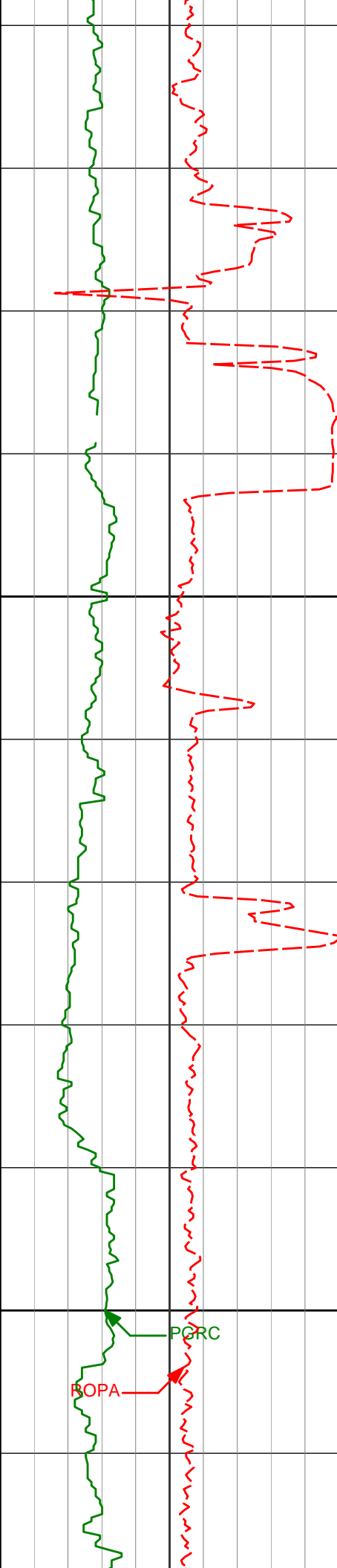


13600

13700

13800

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|--------|--------|--------|----------|----------|----------|
| 13597' | 92.10° | 88.12° | 6423.84' | 7003.21' | |
| | | | | | 231.71°F |
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| | | | | | 234.12°F |
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| | | | | | 234.12°F |
| 13692' | 91.11° | 89.42° | 6421.18' | 7098.05' | |
| | | | | | 234.12°F |
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| | | | | | 234.12°F |
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| | | | | | 236.45°F |
| | | | | | |
| 13787' | 91.32° | 89.44° | 6419.17' | 7192.86' | |
| | | | | | 234.52°F |



13900

14000

13882'

88.43°

88.90°

6419.38'

7287.70'

13977'

87.93°

89.08°

6422.39'

7382.52'

234.12°F

234.87°F

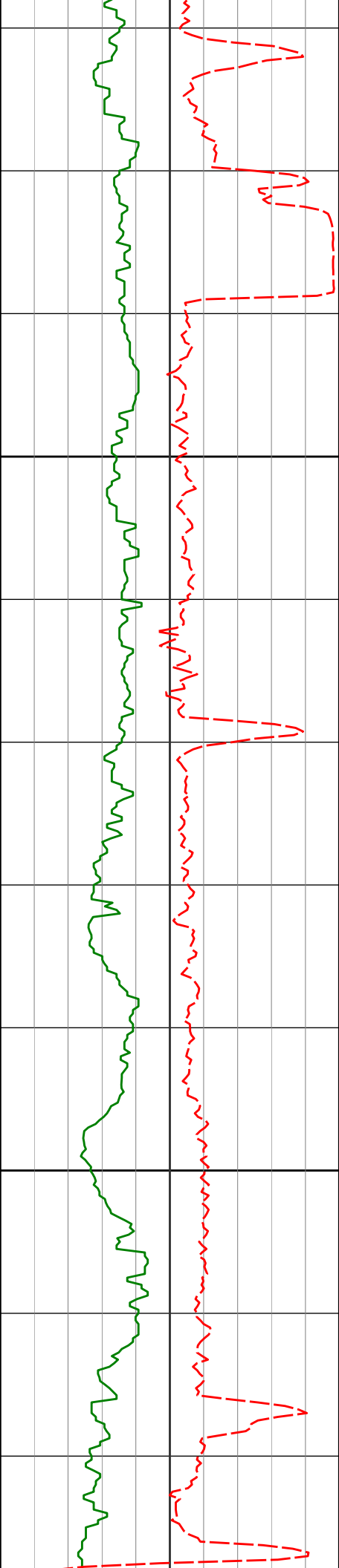
236.82°F

236.82°F

236.82°F

236.17°F

234.89°F



14100

14200

14071'

88.80°

88.17°

6425.07'

7476.38'

14166'

87.84°

87.55°

6427.86'

7571.28'

234.12°F

235.18°F

237.03°F

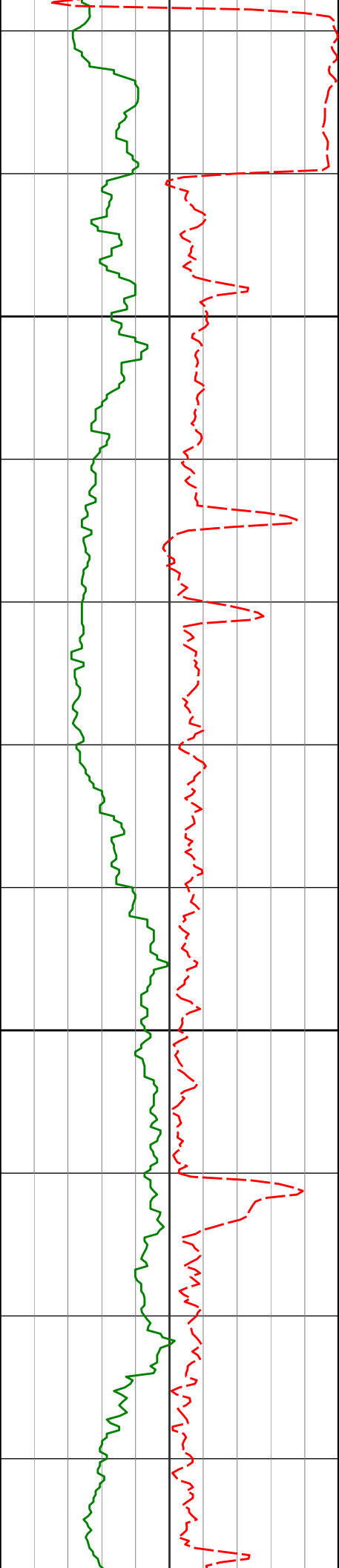
239.54°F

237.69°F

235.01°F

234.12°F

234.12°F



14261'

89.29°

87.43°

6430.24'

7666.22'

14300

234.12°F

236.57°F

236.82°F

14356'

90.37°

86.60°

6430.52'

7761.20'

236.82°F

14400

238.92°F

239.54°F

14450'

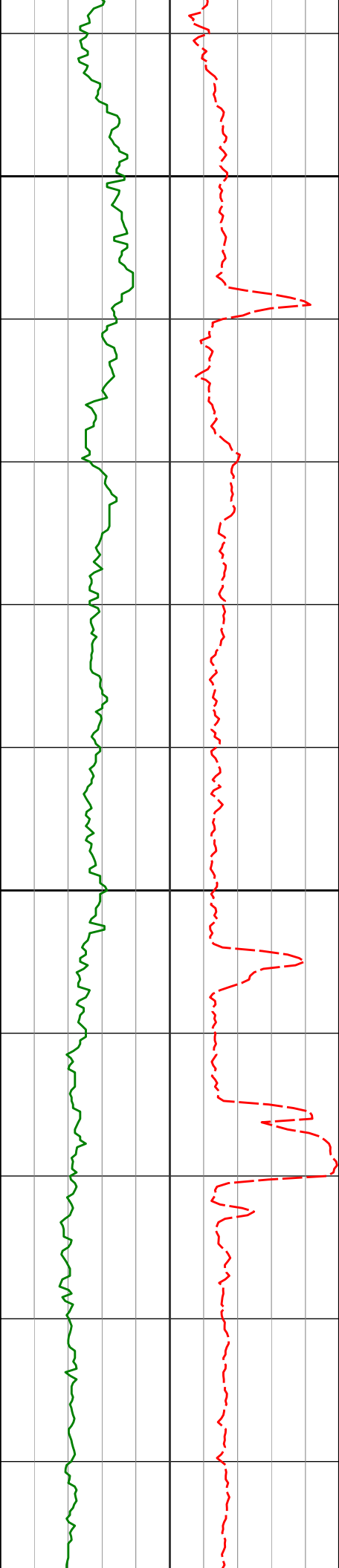
90.18°

86.52°

6430.07'

7855.19'

239.54°F



14500

14600

14545'

14640'

89.91°

90.77°

86.37° 6430.00'

87.08° 6429.43'

7950.19'

8045.18'

239.54°F

239.54°F

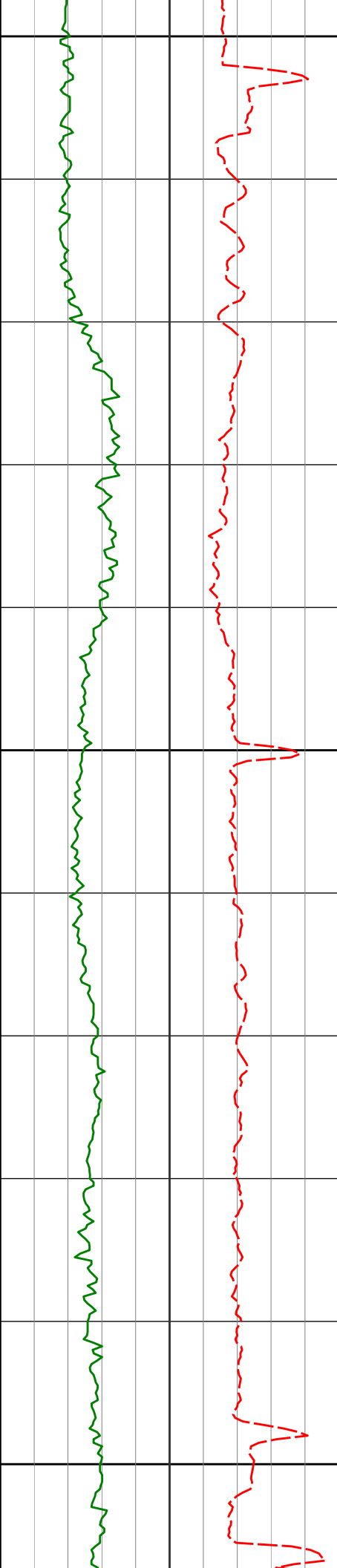
239.54°F

239.54°F

239.54°F

239.54°F

239.54°F



14700

241.96°F

14734'

91.33°

86.72°

6427.71'

8139.15'

242.28°F

242.28°F

242.28°F

14800

240.84°F

14829'

91.32°

86.37°

6425.51'

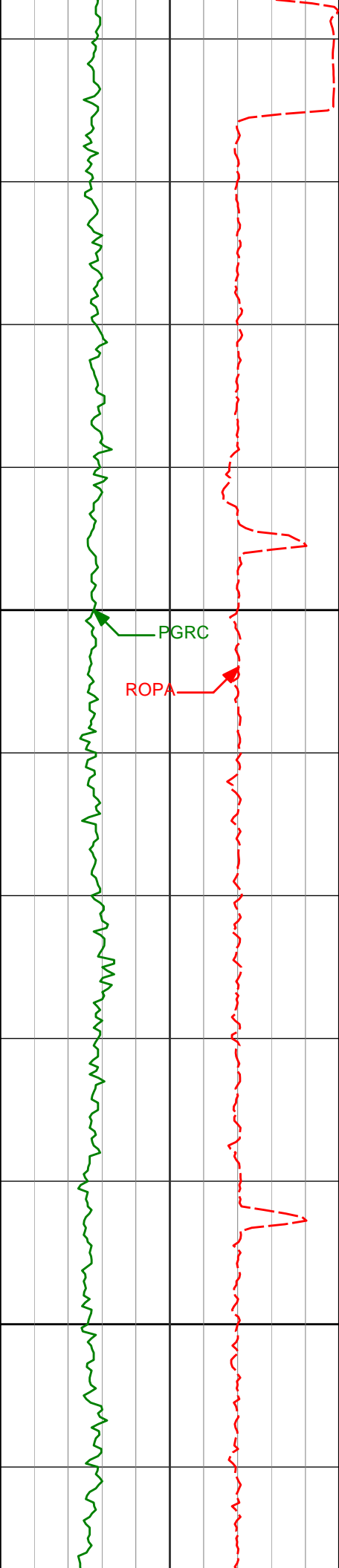
8234.12'

238.65°F

239.16°F

14900

239.54°F



14924'

90.46°

87.91° 6424.04'

8329.09'

239.81°F

242.28°F

15000

241.50°F

15018'

91.63°

88.38° 6422.32'

8423.00'

238.44°F

239.35°F

240.38°F

15100

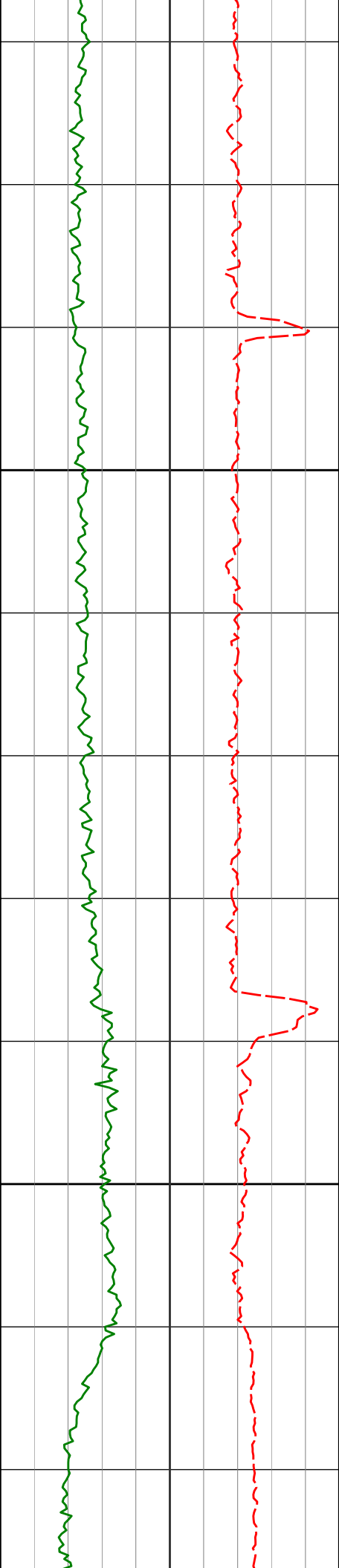
15113'

91.39°

87.82° 6419.82'

8517.90'

242.28°F



15200

15208'

91.11°

87.41° 6417.75'

8612.84'

242.28°F

242.28°F

242.28°F

242.28°F

243.95°F

15300

15303'

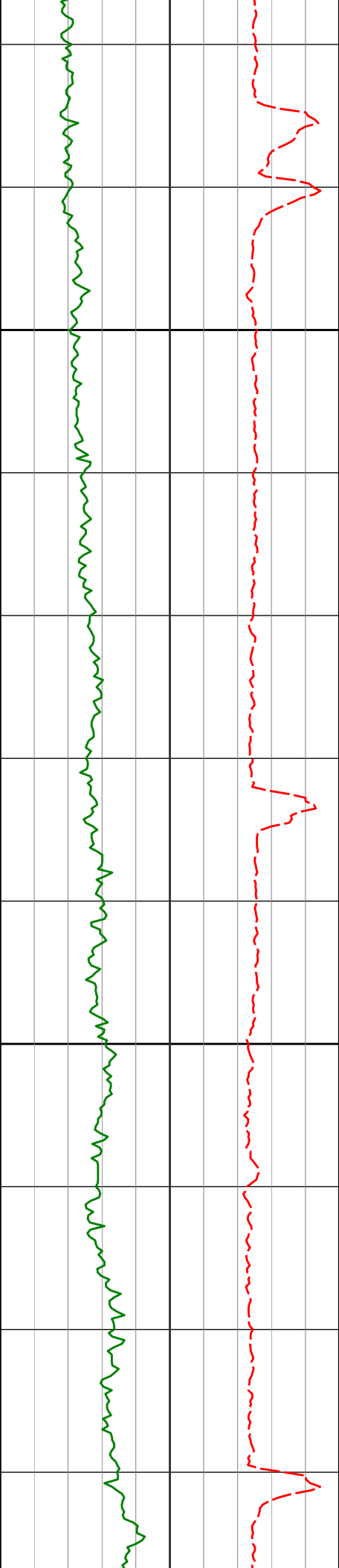
91.76°

87.38° 6415.37'

8707.78'

243.48°F

242.28°F



15400

15500

15397'

91.57°

86.96°

6412.64'

8801.72'

15492'

92.07°

86.65°

6409.62'

8896.66'

242.28°F

242.28°F

242.28°F

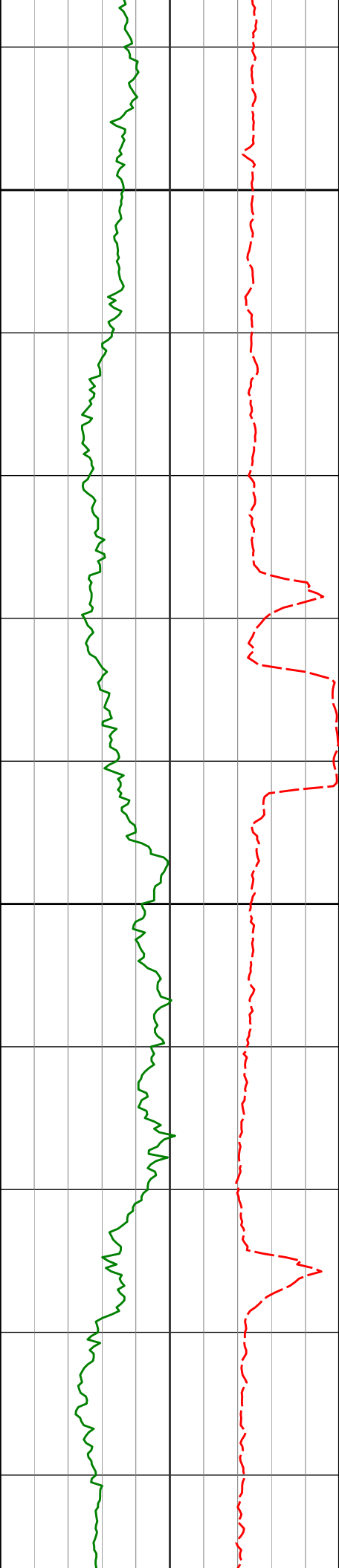
243.19°F

244.62°F

243.83°F

245.03°F

243.54°F



15586'

91.82°

86.11° 6406.43'

8990.60'

15600

240.23°F

239.54°F

241.90°F

15681'

92.71°

87.16° 6402.67'

9085.52'

15700

240.68°F

242.28°F

242.67°F

15774'

93.08°

86.85° 6397.98'

9178.39'

240.68°F



15800

239.60°F

240.64°F

15869'

90.83°

87.82° 6394.74'

9273.30'

242.10°F

15900

241.90°F

242.57°F

15959'

91.63°

88.42° 6392.80'

9363.21'

16000

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| | | | | | | | | | | 16025' | 91.63° | 88.42° | 6390.93' | 9429.13' | | | | | |
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| | | | | | | | | | | 16025' | 91.63° | 88.42° | 6390.93' | 9429.13' | | | | | |
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| | | | | | | | | | | 16025' | 91.63° | 88.42° | 6390.93' | 9429.13' | | | | | |
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| | | | | | | | | | | 16025' | 91.63° | 88.42° | 6390.93' | 9429.13' | | | | | |
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| | | | | | | | | | | 16025' | 91.63° | 88.42° | 6390.93' | 9429.13' | | | | | |
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| | | | | | | | | | | 16025' | 91.63° | 88.42° | 6390.93' | 9429.13' | | | | | |
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|---------|-------|--------|---------|----------|-----------|---------|-------|
| 2417.00 | 8.50 | 306.67 | 2410.22 | 67.11 N | 78.21 W | -73.30 | 0.70 |
| 2509.00 | 8.40 | 305.32 | 2501.22 | 75.06 N | 89.15 W | -83.66 | 0.24 |
| 2694.00 | 8.99 | 308.74 | 2684.09 | 91.92 N | 111.46 W | -104.72 | 0.42 |
| 2786.00 | 8.72 | 306.82 | 2775.00 | 100.60 N | 122.65 W | -115.28 | 0.43 |
| 2881.00 | 8.12 | 315.62 | 2868.98 | 109.72 N | 133.11 W | -125.07 | 1.49 |
| 2976.00 | 7.97 | 315.71 | 2963.04 | 119.23 N | 142.41 W | -133.67 | 0.16 |
| 3070.00 | 7.58 | 312.35 | 3056.18 | 128.07 N | 151.54 W | -142.16 | 0.63 |
| 3165.00 | 7.71 | 311.01 | 3150.33 | 136.47 N | 160.98 W | -150.99 | 0.23 |
| 3260.00 | 7.81 | 317.03 | 3244.46 | 145.38 N | 170.19 W | -159.55 | 0.86 |
| 3355.00 | 7.12 | 312.79 | 3338.66 | 154.09 N | 178.90 W | -167.63 | 0.93 |
| 3449.00 | 6.82 | 316.81 | 3431.97 | 162.12 N | 187.00 W | -175.14 | 0.61 |
| 3544.00 | 7.14 | 317.75 | 3526.26 | 170.61 N | 194.83 W | -182.36 | 0.36 |
| 3639.00 | 7.56 | 316.02 | 3620.48 | 179.48 N | 203.15 W | -190.03 | 0.50 |
| 3733.00 | 8.02 | 315.59 | 3713.61 | 188.62 N | 212.03 W | -198.25 | 0.49 |
| 3828.00 | 8.17 | 316.36 | 3807.66 | 198.24 N | 221.33 W | -206.85 | 0.19 |
| 3923.00 | 8.11 | 315.70 | 3901.71 | 207.92 N | 230.67 W | -215.49 | 0.11 |
| 4017.00 | 8.28 | 313.84 | 3994.75 | 217.35 N | 240.18 W | -224.31 | 0.33 |
| 4112.00 | 8.64 | 312.54 | 4088.71 | 226.91 N | 250.37 W | -233.80 | 0.43 |
| 4207.00 | 7.53 | 310.64 | 4182.77 | 235.79 N | 260.34 W | -243.13 | 1.20 |
| 4301.00 | 6.69 | 312.13 | 4276.05 | 243.47 N | 269.08 W | -251.30 | 0.92 |
| 4396.00 | 7.44 | 320.27 | 4370.33 | 251.91 N | 277.11 W | -258.72 | 1.32 |
| 4491.00 | 8.18 | 323.35 | 4464.45 | 262.06 N | 285.07 W | -265.95 | 0.89 |
| 4586.00 | 6.23 | 317.99 | 4558.69 | 271.31 N | 292.55 W | -272.76 | 2.17 |
| 4680.00 | 7.37 | 305.25 | 4652.04 | 278.58 N | 300.89 W | -280.56 | 2.00 |
| 4775.00 | 7.32 | 299.64 | 4746.26 | 285.09 N | 311.12 W | -290.32 | 0.76 |
| 4869.00 | 6.50 | 296.39 | 4839.57 | 290.41 N | 321.10 W | -299.89 | 0.96 |
| 4964.00 | 5.84 | 296.55 | 4934.02 | 294.97 N | 330.24 W | -308.69 | 0.70 |
| 5059.00 | 5.07 | 300.68 | 5028.59 | 299.27 N | 338.17 W | -316.30 | 0.91 |
| 5154.00 | 5.54 | 302.95 | 5123.19 | 303.90 N | 345.62 W | -323.41 | 0.55 |
| 5248.00 | 6.02 | 311.86 | 5216.71 | 309.66 N | 353.10 W | -330.47 | 1.08 |
| 5343.00 | 5.46 | 312.24 | 5311.23 | 316.02 N | 360.16 W | -337.06 | 0.59 |
| 5437.00 | 4.89 | 312.18 | 5404.85 | 321.71 N | 366.44 W | -342.92 | 0.61 |
| 5532.00 | 2.48 | 313.40 | 5499.65 | 325.85 N | 370.93 W | -347.11 | 2.53 |
| 5627.00 | 0.49 | 171.53 | 5594.62 | 326.86 N | 372.37 W | -348.47 | 3.04 |
| 5722.00 | 0.63 | 174.68 | 5689.62 | 325.93 N | 372.26 W | -348.43 | 0.15 |
| 5816.00 | 0.70 | 196.95 | 5783.61 | 324.86 N | 372.38 W | -348.62 | 0.28 |
| 5911.00 | 3.43 | 89.10 | 5878.55 | 324.35 N | 369.70 W | -345.99 | 3.90 |
| 6006.00 | 9.23 | 75.47 | 5972.94 | 326.31 N | 359.47 W | -335.65 | 6.26 |
| 6100.00 | 16.63 | 82.40 | 6064.50 | 329.98 N | 338.81 W | -314.78 | 8.03 |
| 6195.00 | 26.37 | 87.15 | 6152.79 | 332.83 N | 304.18 W | -280.04 | 10.40 |
| 6290.00 | 37.67 | 89.68 | 6233.21 | 334.05 N | 253.92 W | -229.82 | 11.97 |
| 6385.00 | 48.25 | 91.13 | 6302.64 | 333.51 N | 189.28 W | -165.38 | 11.18 |
| 6479.00 | 58.82 | 89.23 | 6358.44 | 333.36 N | 113.80 W | -90.09 | 11.36 |
| 6574.00 | 65.99 | 89.41 | 6402.42 | 334.34 N | 29.67 W | -6.10 | 7.55 |
| 6668.00 | 74.15 | 86.30 | 6434.45 | 337.70 N | 58.54 E | 82.13 | 9.22 |
| 6777.00 | 90.25 | 85.76 | 6449.19 | 345.16 N | 165.92 E | 189.77 | 14.78 |
| 6919.00 | 92.19 | 88.85 | 6446.17 | 351.83 N | 307.71 E | 331.67 | 2.57 |
| 7013.00 | 89.69 | 88.61 | 6444.63 | 353.92 N | 401.66 E | 425.54 | 2.67 |
| 7107.00 | 91.23 | 88.93 | 6443.88 | 355.93 N | 495.64 E | 519.43 | 1.67 |
| 7202.00 | 89.75 | 88.83 | 6443.06 | 357.79 N | 590.61 E | 614.30 | 1.56 |
| 7296.00 | 89.45 | 88.39 | 6443.72 | 360.07 N | 684.58 E | 708.20 | 0.57 |
| 7391.00 | 89.54 | 88.30 | 6444.56 | 362.82 N | 779.54 E | 803.11 | 0.13 |
| 7485.00 | 89.51 | 88.38 | 6445.34 | 365.54 N | 873.50 E | 897.03 | 0.09 |
| 7579.00 | 89.23 | 88.29 | 6446.37 | 368.27 N | 967.45 E | 990.94 | 0.31 |
| 7673.00 | 89.35 | 88.27 | 6447.54 | 371.09 N | 1061.40 E | 1084.86 | 0.13 |
| 7767.00 | 89.23 | 87.94 | 6448.70 | 374.20 N | 1155.34 E | 1178.78 | 0.37 |
| 7861.00 | 90.55 | 88.11 | 6448.88 | 377.44 N | 1249.28 E | 1272.72 | 1.42 |
| 8050.00 | 90.59 | 87.13 | 6447.00 | 385.29 N | 1438.11 E | 1461.63 | 0.52 |
| 8144.00 | 89.94 | 87.31 | 6446.57 | 389.85 N | 1532.00 E | 1555.61 | 0.72 |
| 8238.00 | 91.08 | 87.60 | 6445.73 | 394.02 N | 1625.90 E | 1649.57 | 1.25 |
| 8333.00 | 89.69 | 87.51 | 6445.09 | 398.07 N | 1720.81 E | 1744.53 | 1.47 |
| 8427.00 | 90.71 | 87.95 | 6444.76 | 401.79 N | 1814.73 E | 1838.48 | 1.18 |
| 8521.00 | 88.98 | 87.13 | 6445.02 | 405.83 N | 1908.64 E | 1932.44 | 2.04 |
| 8616.00 | 89.11 | 86.89 | 6446.60 | 410.78 N | 2003.50 E | 2027.41 | 0.29 |
| 8710.00 | 89.81 | 87.20 | 6447.49 | 415.63 N | 2097.37 E | 2121.39 | 0.81 |
| 8803.00 | 89.91 | 87.49 | 6447.71 | 419.94 N | 2190.27 E | 2214.37 | 0.33 |
| 8898.00 | 90.46 | 87.47 | 6447.41 | 424.11 N | 2285.18 E | 2309.33 | 0.58 |
| 8993.00 | 90.89 | 87.30 | 6446.29 | 428.45 N | 2380.07 E | 2404.30 | 0.49 |
| 9087.00 | 89.91 | 87.42 | 6445.63 | 432.78 N | 2473.97 E | 2498.27 | 1.05 |
| 9182.00 | 90.37 | 87.13 | 6445.40 | 437.29 N | 2568.86 E | 2593.24 | 0.57 |
| 9277.00 | 91.11 | 87.04 | 6444.17 | 442.13 N | 2663.73 E | 2688.21 | 0.78 |

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|----------|-------|-------|---------|----------|-----------|---------|------|
| 9372.00 | 90.62 | 88.22 | 6442.74 | 446.05 N | 2758.63 E | 2783.16 | 1.34 |
| 9466.00 | 90.34 | 87.54 | 6441.95 | 449.53 N | 2852.57 E | 2877.10 | 0.78 |
| 9561.00 | 89.14 | 87.63 | 6442.38 | 453.53 N | 2947.48 E | 2972.06 | 1.27 |
| 9655.00 | 89.60 | 87.24 | 6443.42 | 457.74 N | 3041.38 E | 3066.03 | 0.64 |
| 9750.00 | 90.46 | 87.14 | 6443.37 | 462.40 N | 3136.26 E | 3161.00 | 0.91 |
| 9845.00 | 89.94 | 87.98 | 6443.04 | 466.44 N | 3231.17 E | 3255.97 | 1.04 |
| 9938.00 | 89.78 | 86.99 | 6443.26 | 470.52 N | 3324.08 E | 3348.93 | 1.08 |
| 10031.00 | 90.34 | 86.59 | 6443.17 | 475.73 N | 3416.94 E | 3441.92 | 0.74 |
| 10125.00 | 88.83 | 88.00 | 6443.85 | 480.17 N | 3510.82 E | 3535.89 | 2.20 |
| 10217.00 | 89.04 | 89.93 | 6445.56 | 481.83 N | 3602.79 E | 3627.74 | 2.11 |
| 10308.00 | 89.17 | 90.35 | 6446.98 | 481.61 N | 3693.78 E | 3718.49 | 0.48 |
| 10402.00 | 88.83 | 90.18 | 6448.62 | 481.17 N | 3787.76 E | 3812.21 | 0.40 |
| 10495.00 | 88.80 | 89.79 | 6450.54 | 481.19 N | 3880.74 E | 3904.96 | 0.42 |
| 10588.00 | 88.40 | 89.60 | 6452.81 | 481.69 N | 3973.71 E | 3997.74 | 0.48 |
| 10680.00 | 89.54 | 90.31 | 6454.47 | 481.76 N | 4065.70 E | 4089.50 | 1.46 |
| 10773.00 | 89.88 | 89.75 | 6454.94 | 481.71 N | 4158.69 E | 4182.27 | 0.70 |
| 10866.00 | 91.02 | 89.98 | 6454.21 | 481.93 N | 4251.69 E | 4275.05 | 1.25 |
| 10959.00 | 90.83 | 89.61 | 6452.71 | 482.27 N | 4344.68 E | 4367.83 | 0.45 |
| 11052.00 | 91.11 | 89.51 | 6451.13 | 482.98 N | 4437.66 E | 4460.63 | 0.32 |
| 11144.00 | 91.79 | 89.69 | 6448.80 | 483.62 N | 4529.63 E | 4552.42 | 0.76 |
| 11236.00 | 92.62 | 89.86 | 6445.26 | 483.98 N | 4621.56 E | 4644.15 | 0.92 |
| 11329.00 | 90.68 | 89.10 | 6442.59 | 484.83 N | 4714.51 E | 4736.93 | 2.24 |
| 11421.00 | 89.72 | 88.94 | 6442.27 | 486.40 N | 4806.50 E | 4828.79 | 1.06 |
| 11515.00 | 89.29 | 89.05 | 6443.08 | 488.05 N | 4900.48 E | 4922.66 | 0.47 |
| 11610.00 | 89.45 | 89.17 | 6444.12 | 489.52 N | 4995.46 E | 5017.51 | 0.21 |
| 11705.00 | 89.20 | 88.94 | 6445.24 | 491.09 N | 5090.44 E | 5112.37 | 0.36 |
| 11799.00 | 89.23 | 88.87 | 6446.53 | 492.89 N | 5184.41 E | 5206.24 | 0.08 |
| 11894.00 | 89.66 | 88.29 | 6447.45 | 495.24 N | 5279.38 E | 5301.13 | 0.76 |
| 11989.00 | 89.51 | 87.89 | 6448.14 | 498.41 N | 5374.33 E | 5396.06 | 0.45 |
| 12084.00 | 90.71 | 87.02 | 6447.96 | 502.63 N | 5469.23 E | 5491.03 | 1.56 |
| 12178.00 | 91.39 | 86.66 | 6446.23 | 507.81 N | 5563.07 E | 5585.00 | 0.82 |
| 12273.00 | 90.52 | 87.73 | 6444.65 | 512.45 N | 5657.94 E | 5679.96 | 1.45 |
| 12368.00 | 90.86 | 87.48 | 6443.51 | 516.42 N | 5752.85 E | 5774.92 | 0.44 |
| 12462.00 | 91.14 | 86.86 | 6441.86 | 521.06 N | 5846.72 E | 5868.88 | 0.72 |
| 12556.00 | 91.94 | 86.83 | 6439.34 | 526.24 N | 5940.54 E | 5962.84 | 0.85 |
| 12651.00 | 90.86 | 87.62 | 6437.02 | 530.83 N | 6035.40 E | 6057.78 | 1.41 |
| 12746.00 | 88.64 | 86.13 | 6437.43 | 536.01 N | 6130.25 E | 6152.76 | 2.81 |
| 12840.00 | 88.09 | 85.71 | 6440.11 | 542.70 N | 6223.97 E | 6246.72 | 0.74 |
| 12935.00 | 89.11 | 85.88 | 6442.44 | 549.66 N | 6318.69 E | 6341.69 | 1.09 |
| 13029.00 | 90.71 | 85.09 | 6442.58 | 557.06 N | 6412.39 E | 6435.69 | 1.90 |
| 13124.00 | 91.51 | 85.74 | 6440.74 | 564.65 N | 6507.07 E | 6530.66 | 1.08 |
| 13219.00 | 90.89 | 84.85 | 6438.75 | 572.44 N | 6601.73 E | 6625.63 | 1.14 |
| 13408.00 | 92.74 | 87.76 | 6432.77 | 584.62 N | 6790.21 E | 6814.51 | 1.82 |
| 13503.00 | 92.99 | 87.49 | 6428.02 | 588.55 N | 6885.01 E | 6909.35 | 0.39 |
| 13597.00 | 92.10 | 88.12 | 6423.84 | 592.15 N | 6978.85 E | 7003.21 | 1.16 |
| 13692.00 | 91.11 | 89.42 | 6421.18 | 594.19 N | 7073.79 E | 7098.05 | 1.72 |
| 13787.00 | 91.32 | 89.44 | 6419.17 | 595.13 N | 7168.76 E | 7192.86 | 0.22 |
| 13882.00 | 88.43 | 88.90 | 6419.38 | 596.51 N | 7263.74 E | 7287.70 | 3.09 |
| 13977.00 | 87.93 | 89.08 | 6422.39 | 598.18 N | 7358.68 E | 7382.52 | 0.56 |
| 14071.00 | 88.80 | 88.17 | 6425.07 | 600.43 N | 7452.61 E | 7476.38 | 1.34 |
| 14166.00 | 87.84 | 87.55 | 6427.86 | 603.98 N | 7547.50 E | 7571.28 | 1.20 |
| 14261.00 | 89.29 | 87.43 | 6430.24 | 608.14 N | 7642.38 E | 7666.22 | 1.53 |
| 14356.00 | 90.37 | 86.60 | 6430.52 | 613.09 N | 7737.24 E | 7761.20 | 1.43 |
| 14450.00 | 90.18 | 86.52 | 6430.07 | 618.73 N | 7831.07 E | 7855.19 | 0.22 |
| 14545.00 | 89.91 | 86.37 | 6430.00 | 624.62 N | 7925.89 E | 7950.19 | 0.33 |
| 14640.00 | 90.77 | 87.08 | 6429.43 | 630.04 N | 8020.73 E | 8045.18 | 1.17 |
| 14734.00 | 91.33 | 86.72 | 6427.71 | 635.13 N | 8114.58 E | 8139.15 | 0.71 |
| 14829.00 | 91.32 | 86.37 | 6425.51 | 640.85 N | 8209.38 E | 8234.12 | 0.37 |
| 14924.00 | 90.46 | 87.91 | 6424.04 | 645.59 N | 8304.25 E | 8329.09 | 1.86 |
| 15018.00 | 91.63 | 88.38 | 6422.32 | 648.63 N | 8398.18 E | 8423.00 | 1.34 |
| 15113.00 | 91.39 | 87.82 | 6419.82 | 651.78 N | 8493.09 E | 8517.90 | 0.64 |
| 15208.00 | 91.11 | 87.41 | 6417.75 | 655.73 N | 8587.99 E | 8612.84 | 0.52 |
| 15303.00 | 91.76 | 87.38 | 6415.37 | 660.05 N | 8682.86 E | 8707.78 | 0.68 |
| 15397.00 | 91.57 | 86.96 | 6412.64 | 664.69 N | 8776.71 E | 8801.72 | 0.49 |
| 15492.00 | 92.07 | 86.65 | 6409.62 | 669.98 N | 8871.51 E | 8896.66 | 0.62 |
| 15586.00 | 91.82 | 86.11 | 6406.43 | 675.91 N | 8965.27 E | 8990.60 | 0.63 |
| 15681.00 | 92.71 | 87.16 | 6402.67 | 681.48 N | 9060.03 E | 9085.52 | 1.45 |
| 15774.00 | 93.08 | 86.85 | 6397.98 | 686.34 N | 9152.78 E | 9178.39 | 0.52 |
| 15869.00 | 90.83 | 87.82 | 6394.74 | 690.75 N | 9247.62 E | 9273.30 | 2.58 |
| 15959.00 | 91.63 | 88.42 | 6392.80 | 693.70 N | 9337.55 E | 9363.21 | 1.11 |
| 16055.00 | 94.63 | 88.42 | 6390.93 | 695.53 N | 9429.50 E | 9459.13 | 0.90 |

16025.00 91.63 88.42 6390.93 695.52 N 9403.50 E 9429.13 0.00

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 85.97 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 16025.00 FEET
IS 9429.18 FEET ALONG 85.77 DEGREES (GRID)**

Date Printed:02 November 2015