

Pressure Cased Gamma (PCGK)

1:240

[illegible]

WELL INFORMATION

MWD Run Number	100	200			
Date run completed	19-Nov-14	21-Nov-14			
Rig Bit Number	2	3			
Bit Size (in)	8.750	8.750			
Tool Nominal OD (in)	6.750	6.750			
Log Start Depth (TVD, ft)	1,180.96	6,419.17			
Log End Depth (TVD, ft)	6,419.17	7,052.80			
Drill or Wipe	Drill	Drill			
Drill/Wipe Start Date and Time	17-Nov-14 23:35	20-Nov-14 01:10			
Drill/Wipe End Date and Time	18-Nov-14 20:25	20-Nov-14 17:00			
Min Inc (deg) @ Depth (TVD, ft)	0.22 @ 6,363.23	11.36 @ 6,503.29			
Max Inc (deg) @ Depth (TVD, ft)	8.86 @ 3,049.00	90.45 @ 7,052.80			
Bit TFA(in2) / Bit Type	0.91 /	1.24 /			
Flow Rate (gpm)	585.42	576.06			
Max AV (fpm) / CV (fpm) @ MWD	N/A	N/A			
Fluid Type	Polymer	Polymer			
Density (ppg) / Viscosity (spqt)	9.10 / 48.00	10.40 / 51.00			
Filtrate CL (ppm)	1,100.00	1,300.00			
pH/ API Filtrate (mpptm)	9.20 / 5	8.60 / 6			
PV (cP) / YP (lbf2)	8 / 11.00	15 / 11.00			
% Solids / % Sand	4.7 / 0.35	7.3 / 0.30			
% Oil / Oil:Water Ratio	0.00 / N/A	0.00 / 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			
MWD Tool Face (ft) / Bit	170.47 / 501.4	170.70 / 501.4			

Max Tool Temp (degF) / Source	158.47 / PCM	172.78 / PCM			
Rm @ Max Tool Temp (degF)	N/A @ 158.47	N/A @ 172.78			
Lead MWD Engineer	Henry Schmeidler	Henry Schmeidler			
Customer Representative	Martin Suarez	Martin Suarez			

SENSOR INFORMATION

Downhole Processor Information

Tool Type	PCM	PCM			
Software Version	5.93	5.93			
Sub Serial Number	11404298	11404298			
Insert Serial Number	11680745	11680745			
Date and Time Initialized	17-Nov-14 11:32	19-Nov-14 16:47			
Date and Time Read	19-Nov-14 10:18	21-Nov-14 06:42			
ECMB SW Version	N/A	N/A			

Directional Sensor Information

Tool Type	PCDC	PCDC			
Distance From Bit (ft)	56.29	51.91			
Software Version	6.21	6.21			
Sub Serial Number	11404298	11404298			
Sonde Serial Number	11638623	11638623			
Sensor ID Number	N/A	N/A			
Toolface Offset (deg)	221.22	143.89			

Gamma Ray Sensor Information

Tool Type	PCG	PCG			
Distance From Bit (ft)	51.19	46.81			
Recorded Sample Period (sec)	10	10			
Software Version	8.15	8.15			
Sub Serial Number	11404298	11404298			
Insert/Sonde Serial Number	12037422	12037422			

REMARKS

1. All depths are true vertical bit depths, referenced to the Driller's pipe tally and are measured from the Drill Floor, unless otherwise specified.

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:

PGRC (Corrected Gamma Ray):
Interval Resolution: 0.5 ft
Interval Distance: 0.6 ft
Gap Fill: 3.0 ft

ROPA (Average Rate of Penetration):
Interval Resolution: 0.5 ft
Interval Distance: 1.2 ft
Gap Fill : 3.0 ft

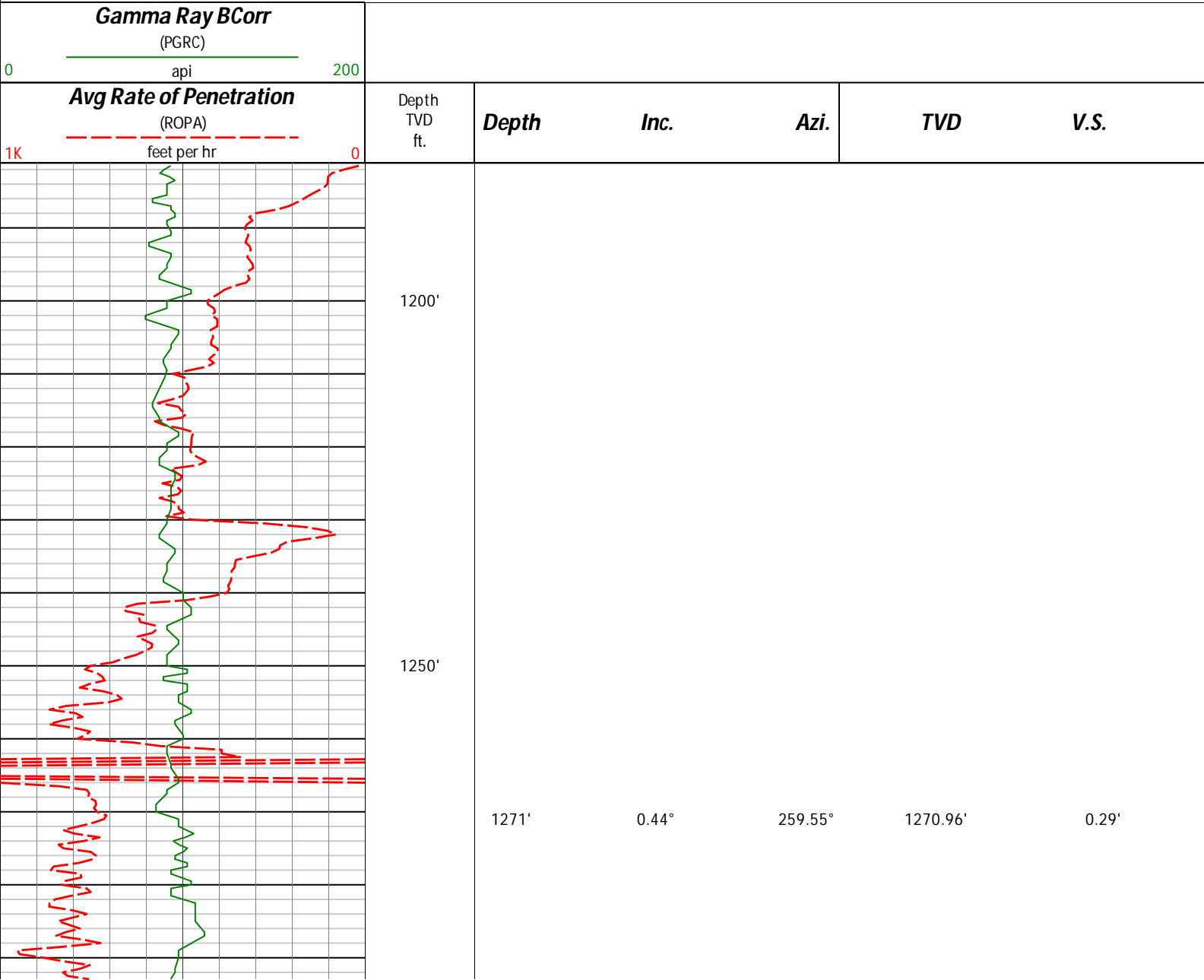
5. INSITE version 8.4.10-MLWD

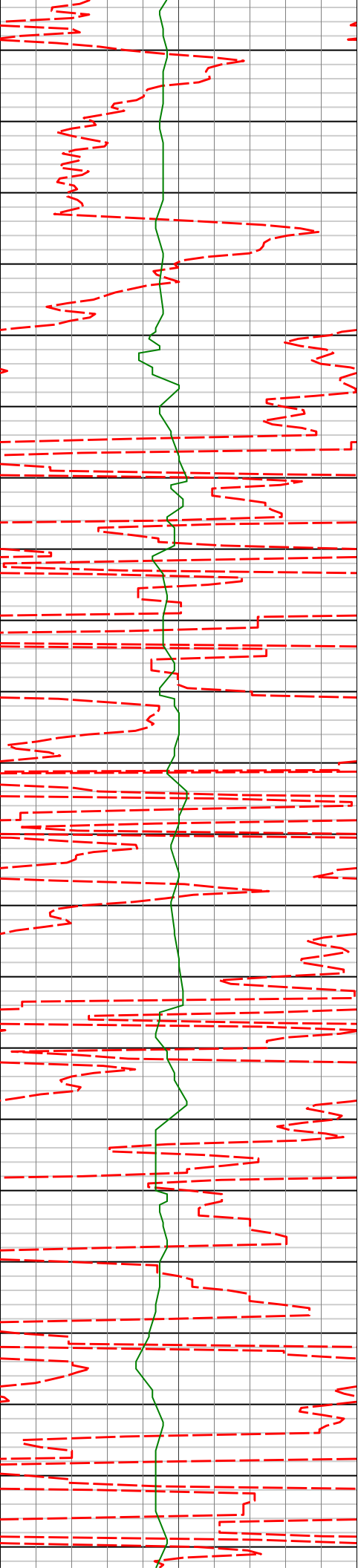
WARRANTY

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Sperry Drilling Services

TVD Detail Log 1:240





1300'

1350'

1400'

1450'

1500'

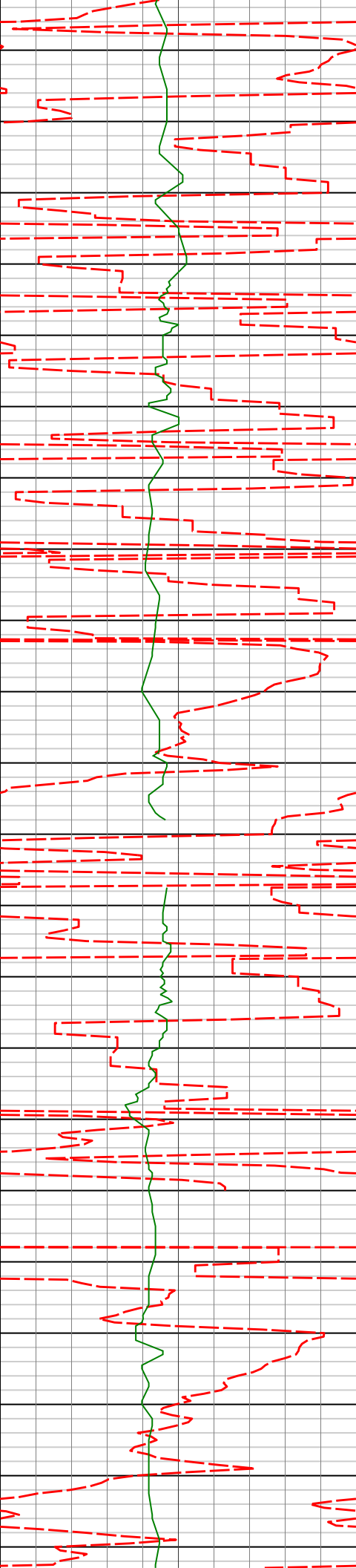
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0.39°

293.91°

1363.96'

0.35'



1550'

1600'

1650'

1700'

1550'

1643'

0.28°

1.33°

21.74°

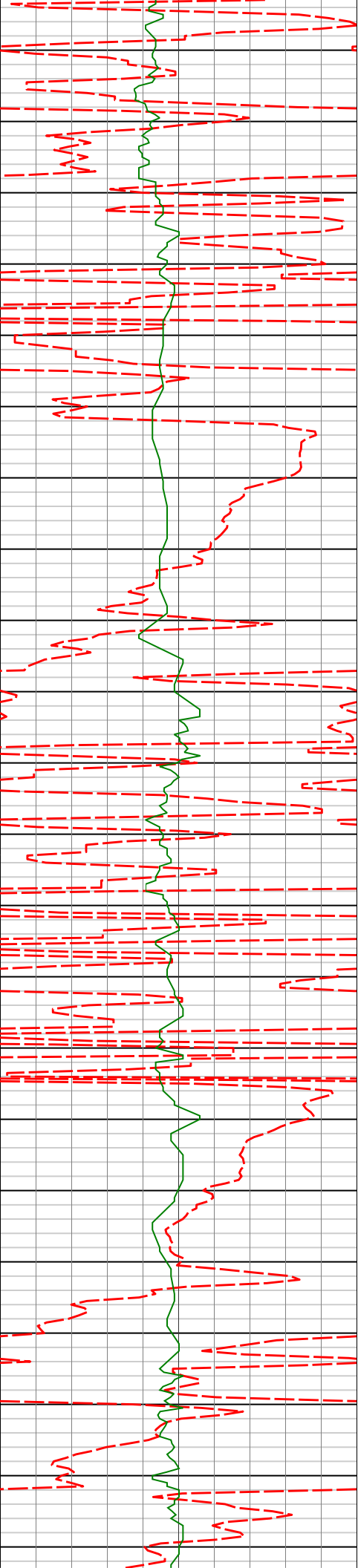
29.12°

1549.96'

1642.95'

1.02'

2.18'



1736'

2.41°

21.24°

1735.90'

4.95'

1750'

1800'

1850'

1900'

1950'

1828'

4.13°

25.14°

1827.74'

9.77'

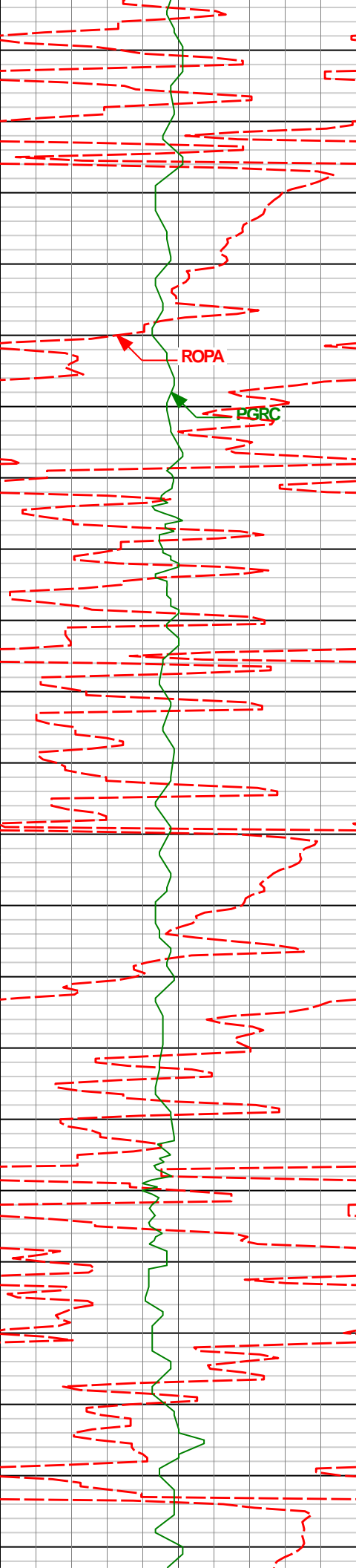
1920'

5.82°

19.16°

1919.39'

17.20'



2000'

2050'

2100'

2150'

2015'

7.07°

25.28°

2013.79'

27.06'

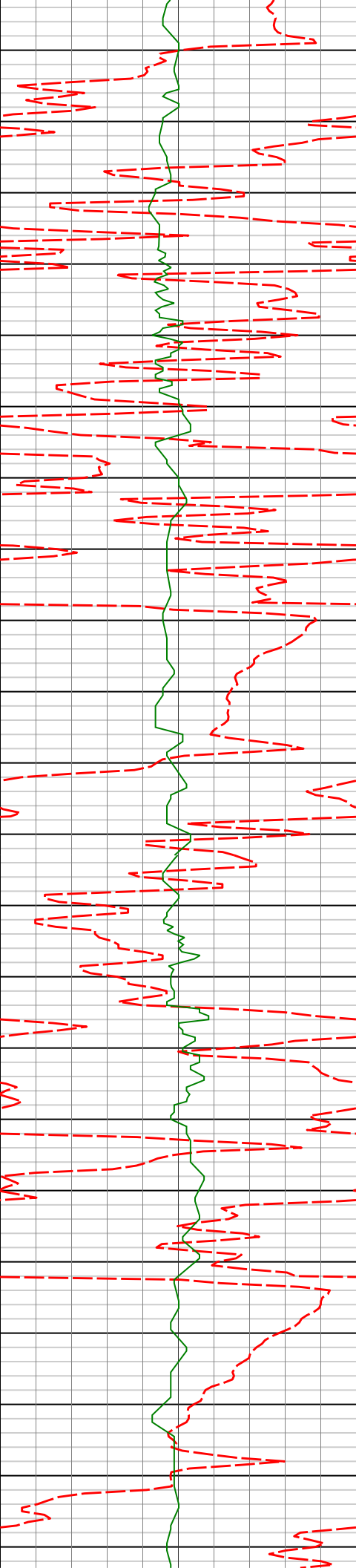
2110'

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29.13°

2108.05'

37.66'



2200'

2250'

2300'

2350'

2205'

2300'

2394'

6.94°

6.68°

6.34°

26.77°

33.18°

31.67°

2202.31'

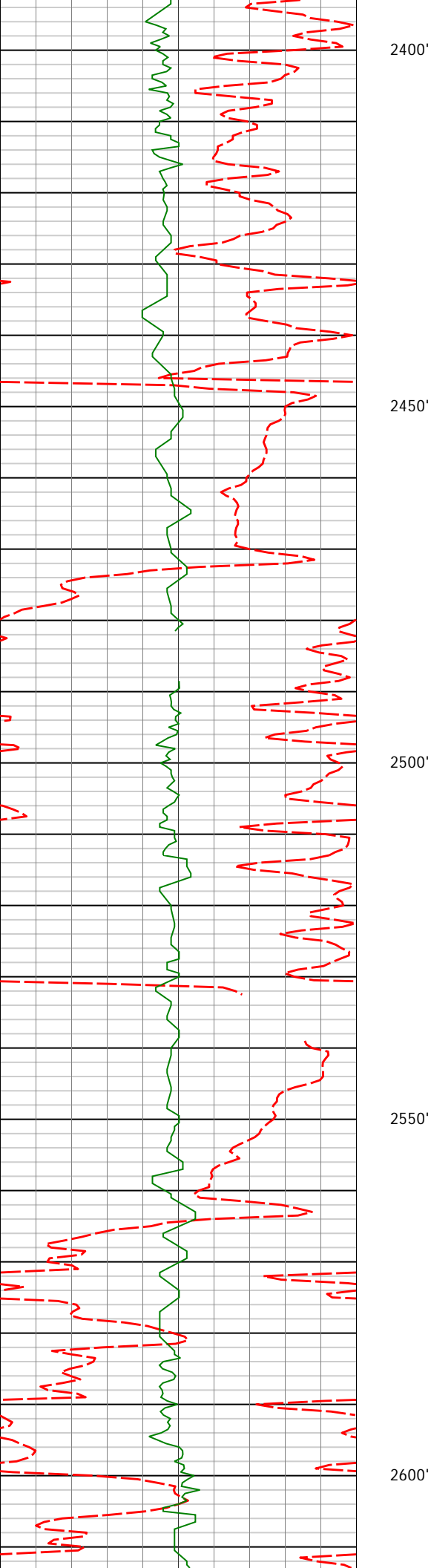
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2390.04'

48.10'

57.89'

66.92'



2489'

7.33°

29.41°

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76.70'

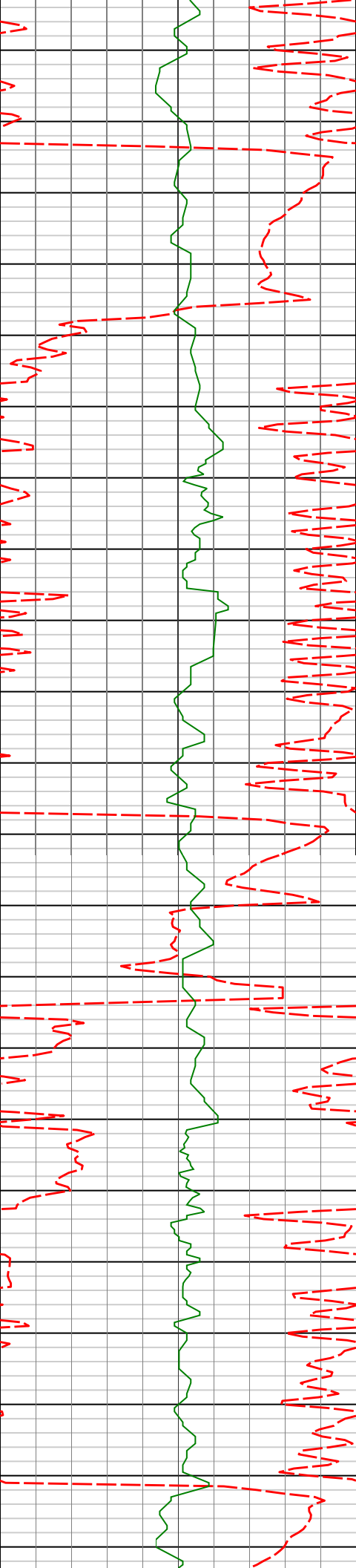
2584'

7.84°

26.75°

2578.53'

87.81'



2650'

2679'

8.05°

30.61°

2672.62'

99.36'

2700'

2750'

2774'

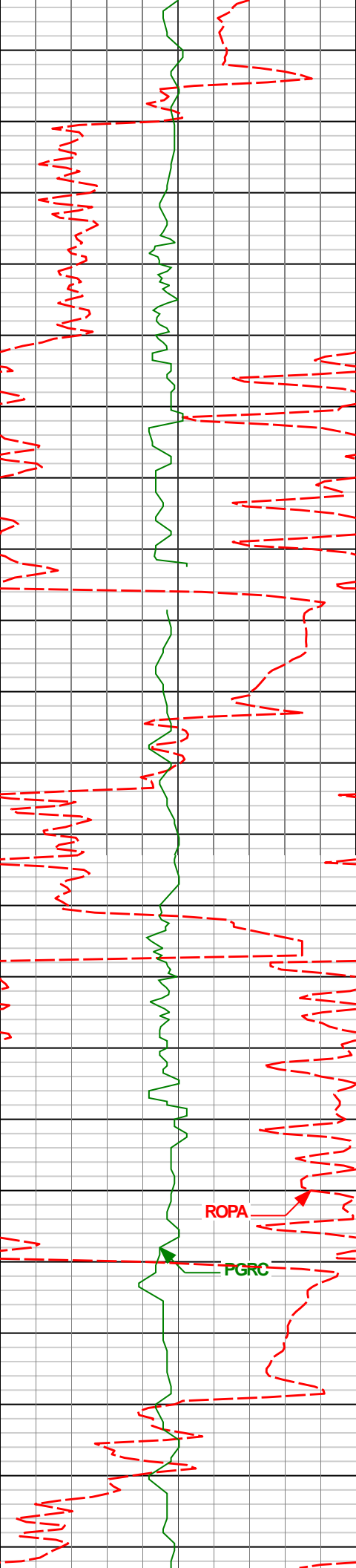
7.32°

31.67°

2766.76'

110.28'

2800'



2850'

2869'

7.47°

30.68°

2860.97'

120.79'

2900'

2950'

2964'

8.35°

35.81°

2955.07'

131.74'

3000'

ROPA

PGRC

3050'

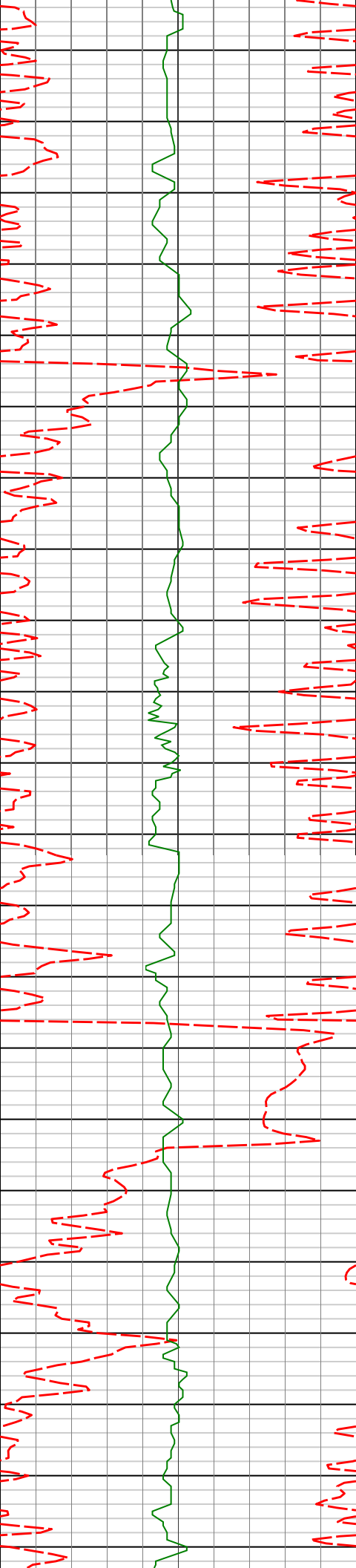
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8.86°

33.85°

3049.00'

143.47'



3100'

3153'

7.61°

34.21°

3142.03'

154.68'

3150'

3200'

3248'

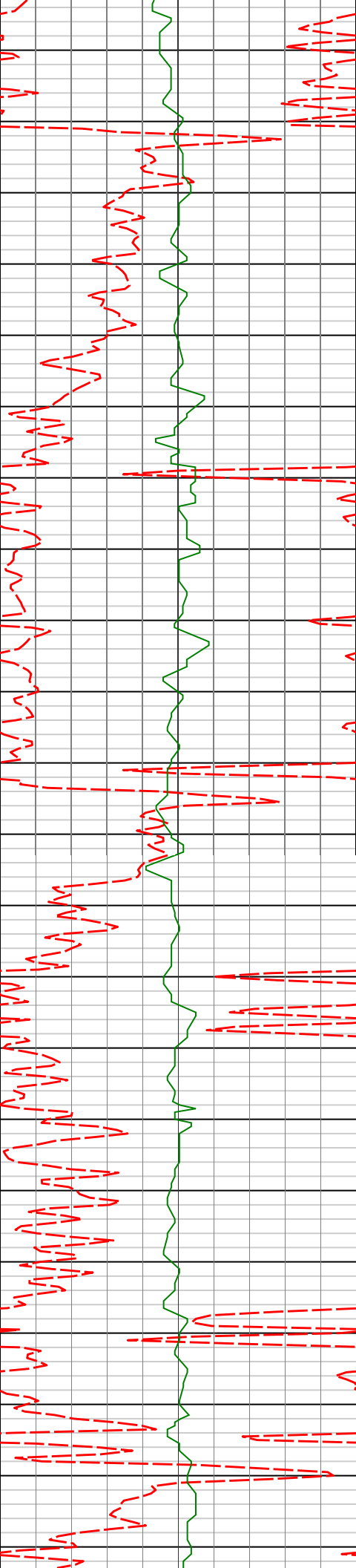
7.79°

33.95°

3236.17'

165.27'

3250'



3300'

3343'

6.11°

33.79°

3330.47'

174.86'

3350'

3400'

3438'

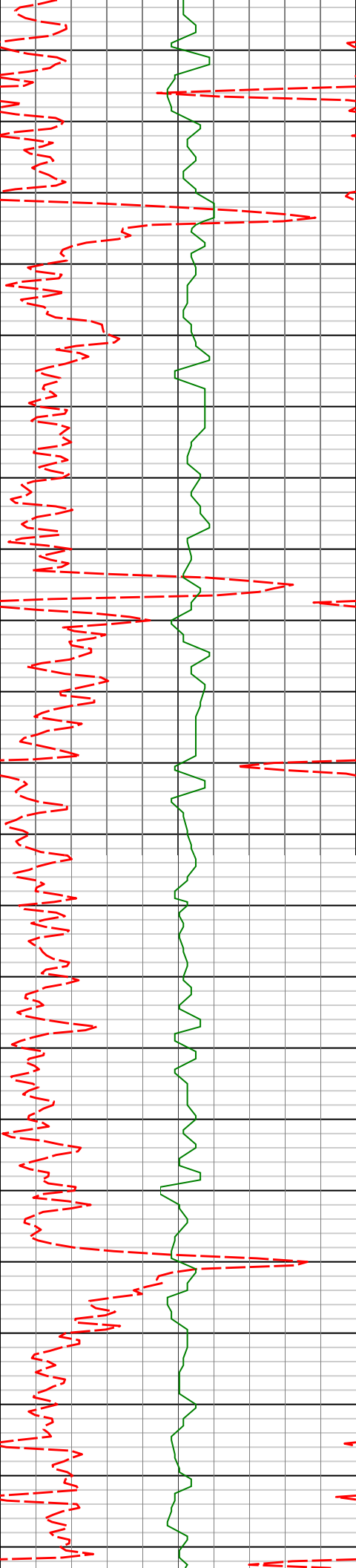
5.10°

33.76°

3425.02'

182.60'

3450'



3500'

3550'

3600'

3650'

3700'

3628'

1.89°

33.89°

3614.64'

192.27'

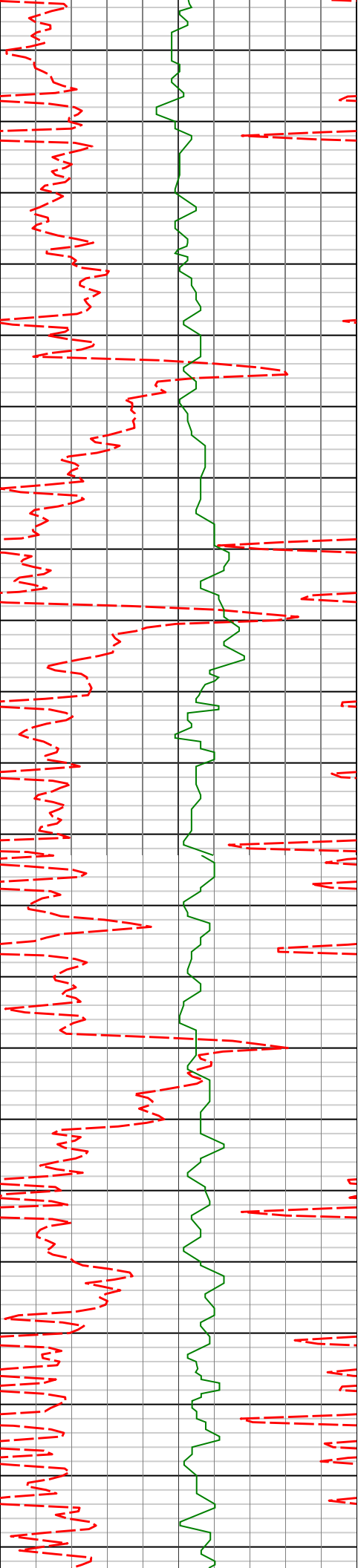
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1.27°

36.36°

3709.60'

194.43'



3750'

3800'

3850'

3900'

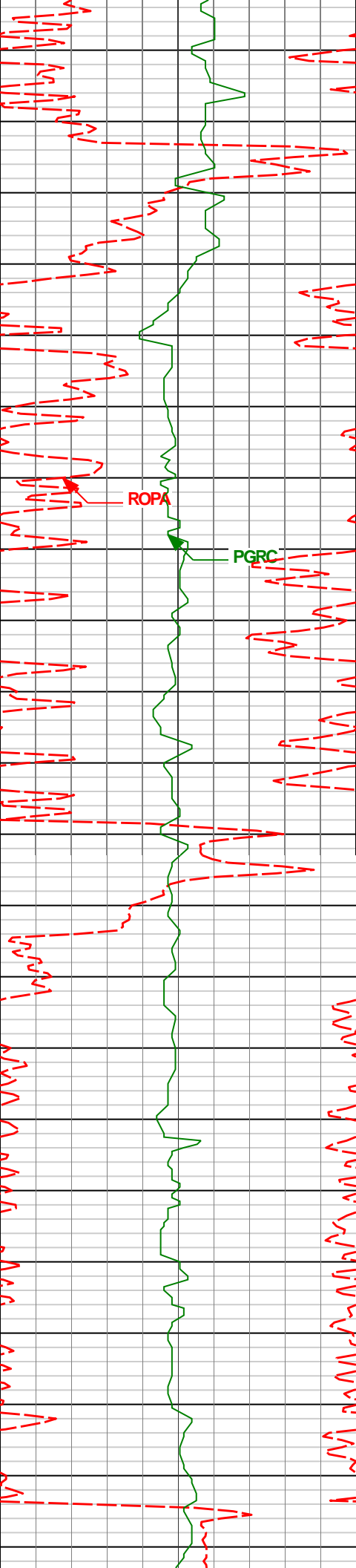
3818'

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359.92°

3804.59'

195.75'



3950'

4008'

0.78°

220.73°

3994.58'

195.71'

4000'

ROPA

PGRC

4050'

4103'

1.18°

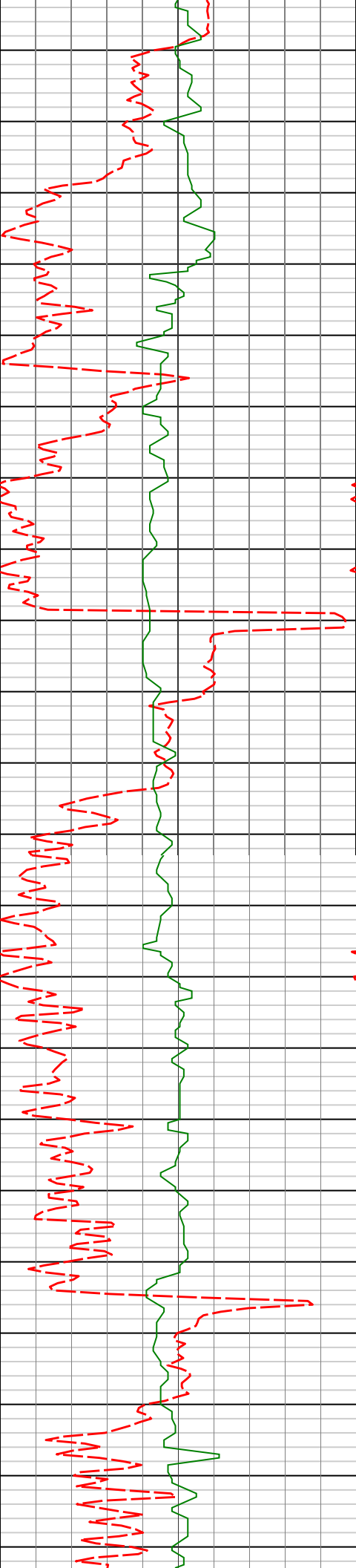
222.35°

4089.57'

194.49'

4100'

4150'



4198'

1.13°

241.00°

4184.55'

193.31'

4200'

4250'

4292'

1.46°

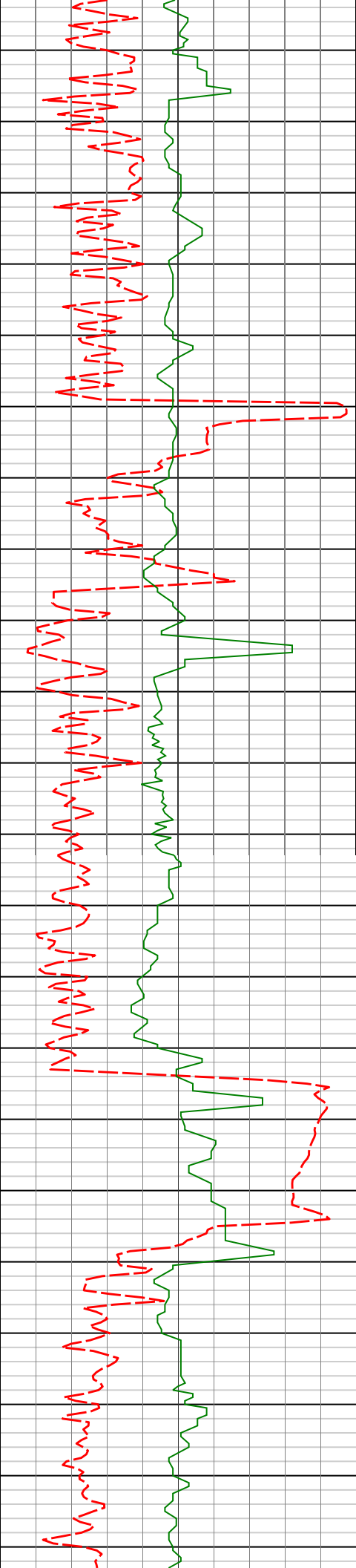
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4278.53'

192.66'

4300'

4350'



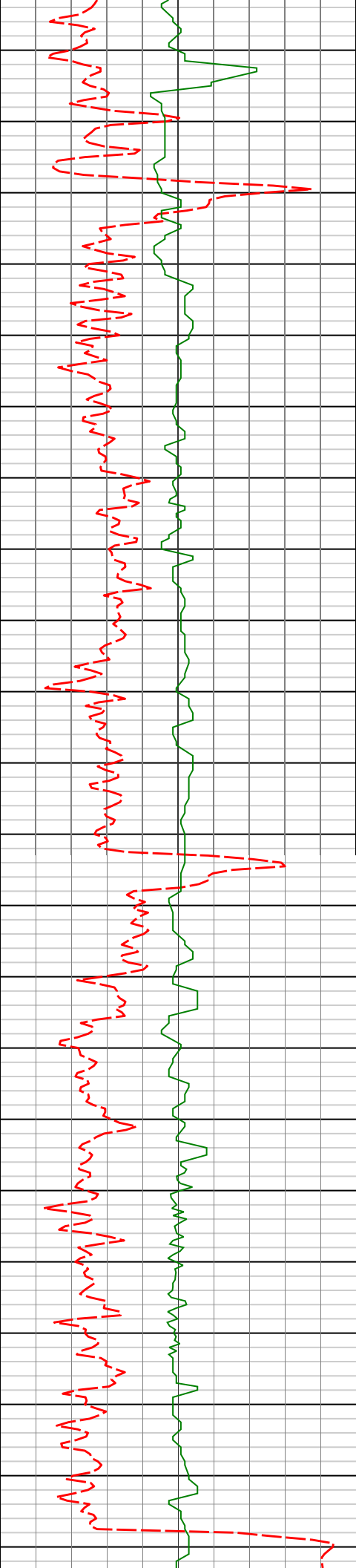
4400'

4450'

4500'

4550'

4387'	1.57°	262.56°	4373.49'	192.29'
4482'	1.80°	267.56°	4468.45'	192.04'
4577'	1.36°	292.83°	4563.42'	192.40'



4600'

4650'

4700'

4750'

4800'

4672'

1.20°

280.63°

4658.39'

193.01'

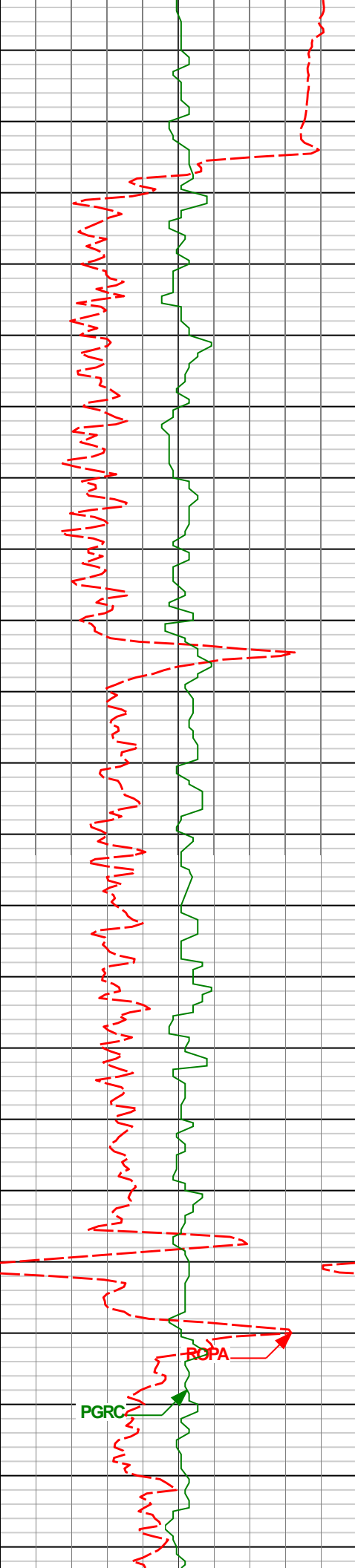
4767'

1.54°

262.53°

4753.37'

193.01'



4850'

4900'

4950'

5000'

4862'

0.98°

22.09°

4848.35'

193.59'

4956'

0.64°

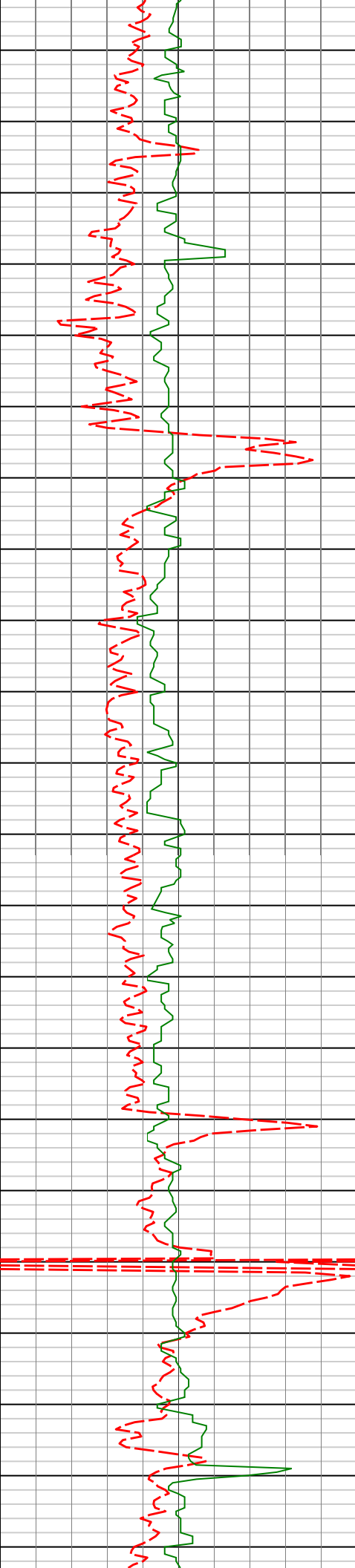
52.76°

4942.35'

194.66'

PGRC

ROPA



5051'

1.29°

99.03°

5037.33'

194.82'

5050'

5100'

5146'

1.23°

87.23°

5132.31'

194.72'

5150'

5200'

5241'

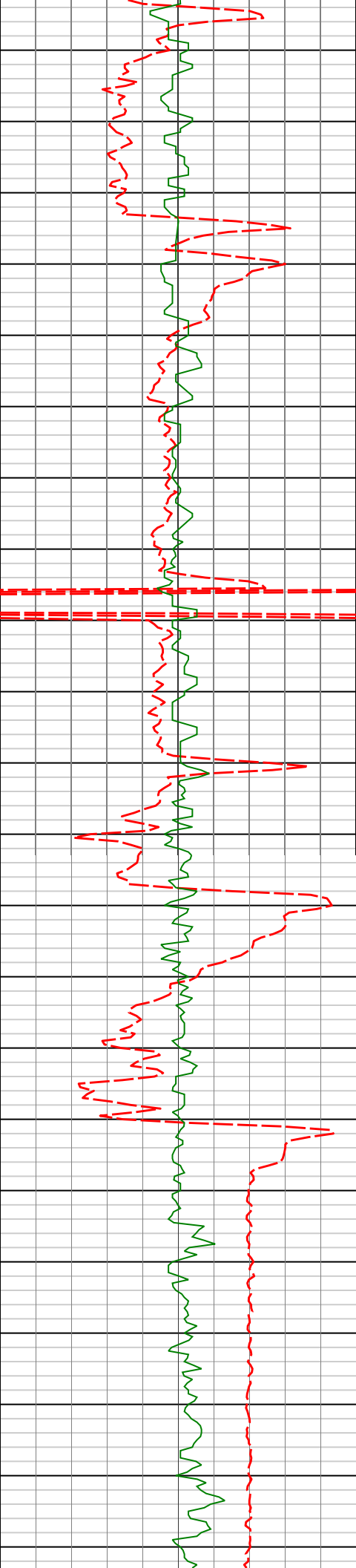
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90.74°

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194.77'

5250'



5300'

5350'

5400'

5450'

5336'

0.49°

84.12°

5322.29'

194.81'

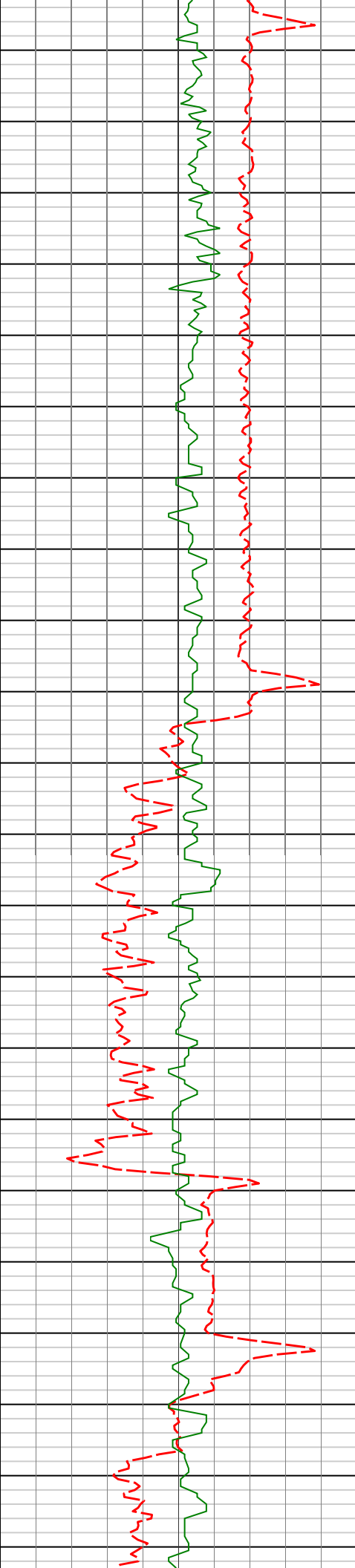
5430'

0.51°

94.56°

5416.29'

194.82'



5500'

5550'

5600'

5650'

5525'

0.48°

69.12°

5511.28'

194.94'

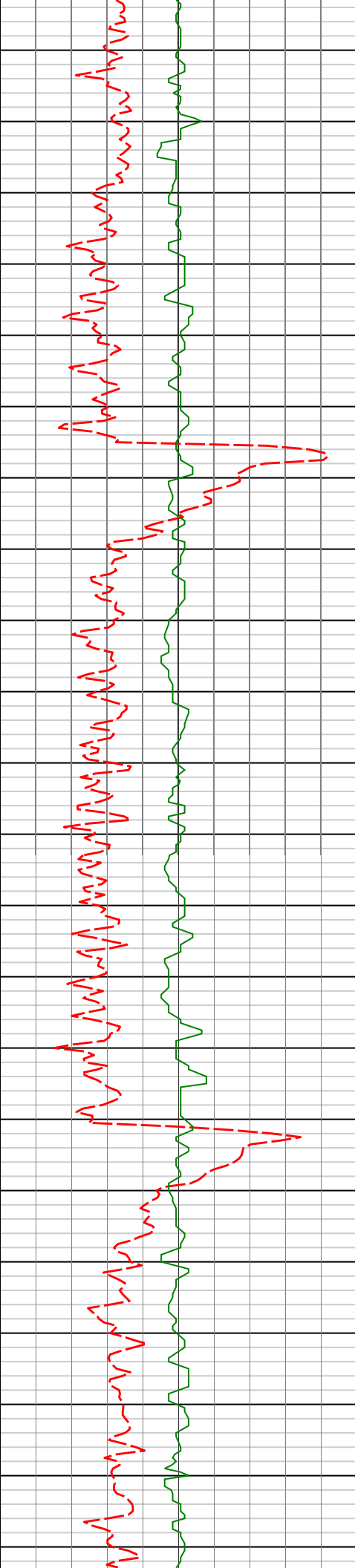
5620'

0.43°

88.59°

5606.28'

195.09'



5700'

5715'

0.68°

90.97°

5701.27'

195.10'

5750'

5800'

5810'

0.72°

78.04°

5796.27'

195.22'

5850'

5900'

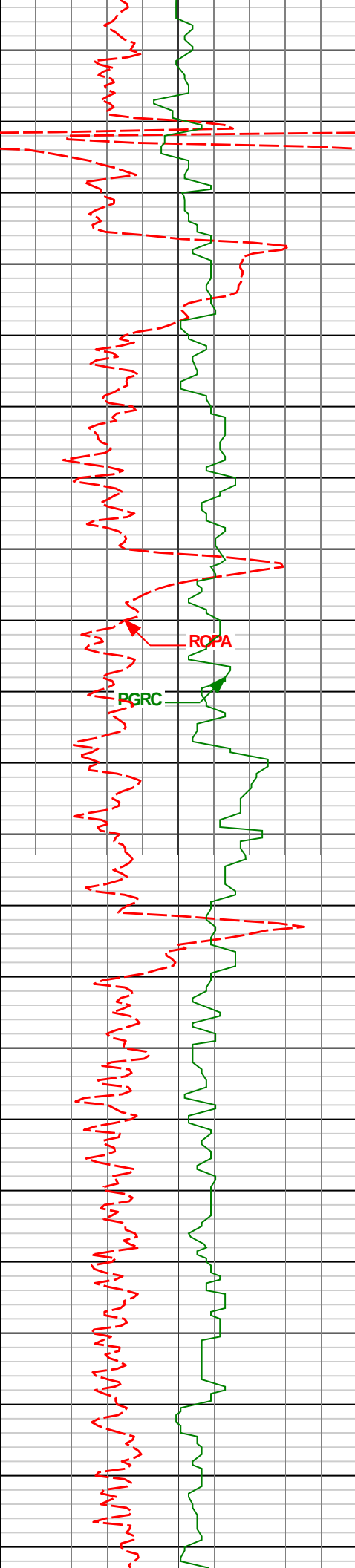
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15.04°

5891.26'

196.07'



5950'

5999'

0.84°

19.53°

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197.43'

6000'

6050'

6094'

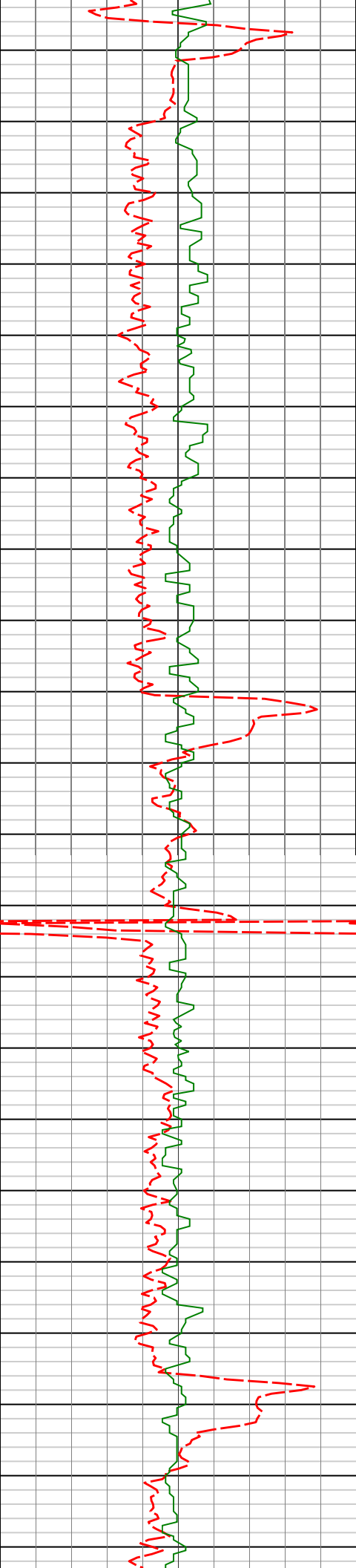
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198.71'

6100'



6150'

6189'

0.62°

348.13°

6175.23'

199.82'

6200'

6250'

6284'

0.36°

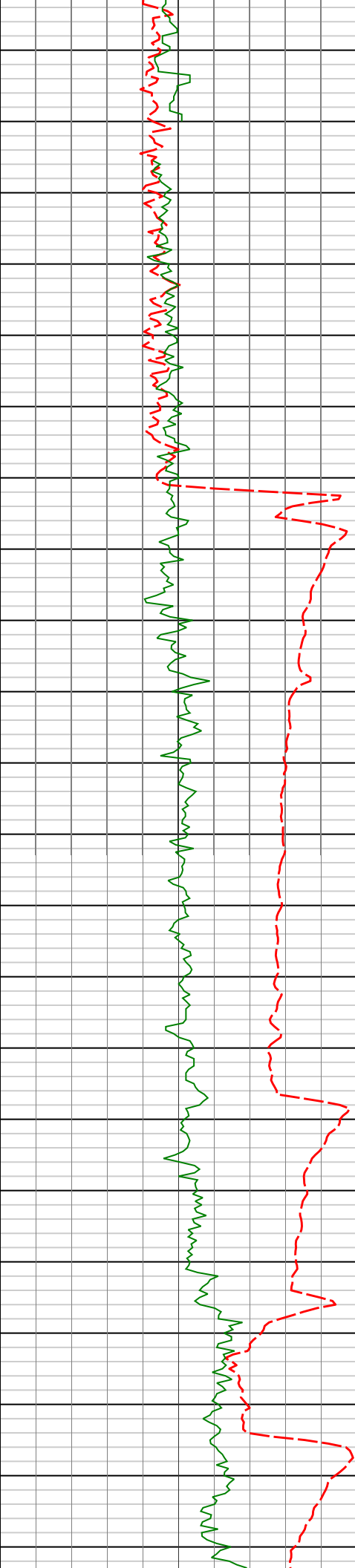
41.19°

6270.23'

200.55'

6300'

6350'



6377'

0.22°

19.15°

6363.23'

200.94'

6400'

6450'

6500'

6518'

11.36°

356.15°

6503.29'

215.09'

6550'

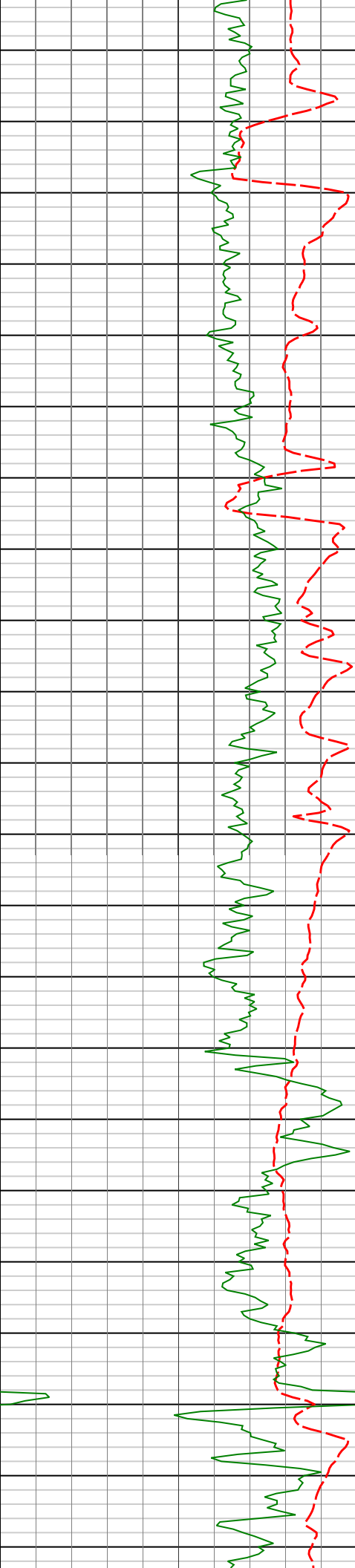
6565'

14.77°

354.43°

6549.07'

225.67'



6600'

6650'

6700'

6750'

6613'

17.57°

352.43°

6595.16'

238.93'

6660'

20.19°

353.64°

6639.63'

254.02'

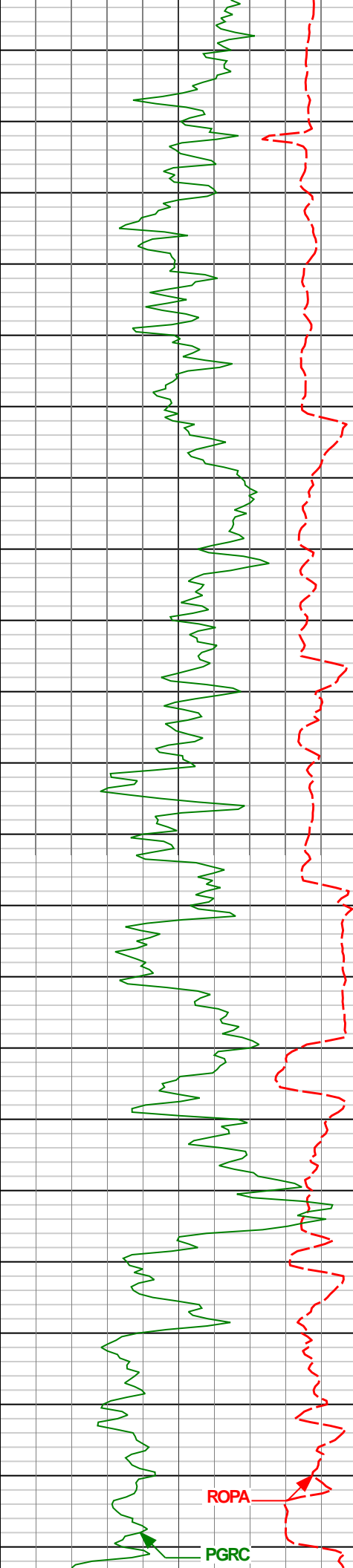
6755'

25.02°

6.83°

6727.36'

290.30'



6800'

6849'

34.79°

4.63°

6808.75'

336.91'

6850'

6897'

39.45°

1.59°

6847.02'

365.84'

6944'

44.89°

0.19°

6881.84'

397.37'

6900'

6992'

49.96°

356.72°

6914.31'

432.68'

6950'

7039'

54.14°

355.75°

6943.21'

469.63'

7087'

60.14°

355.44°

6969.24'

509.79'

7134'

65.68°

355.08°

6990.64'

551.45'

7000'

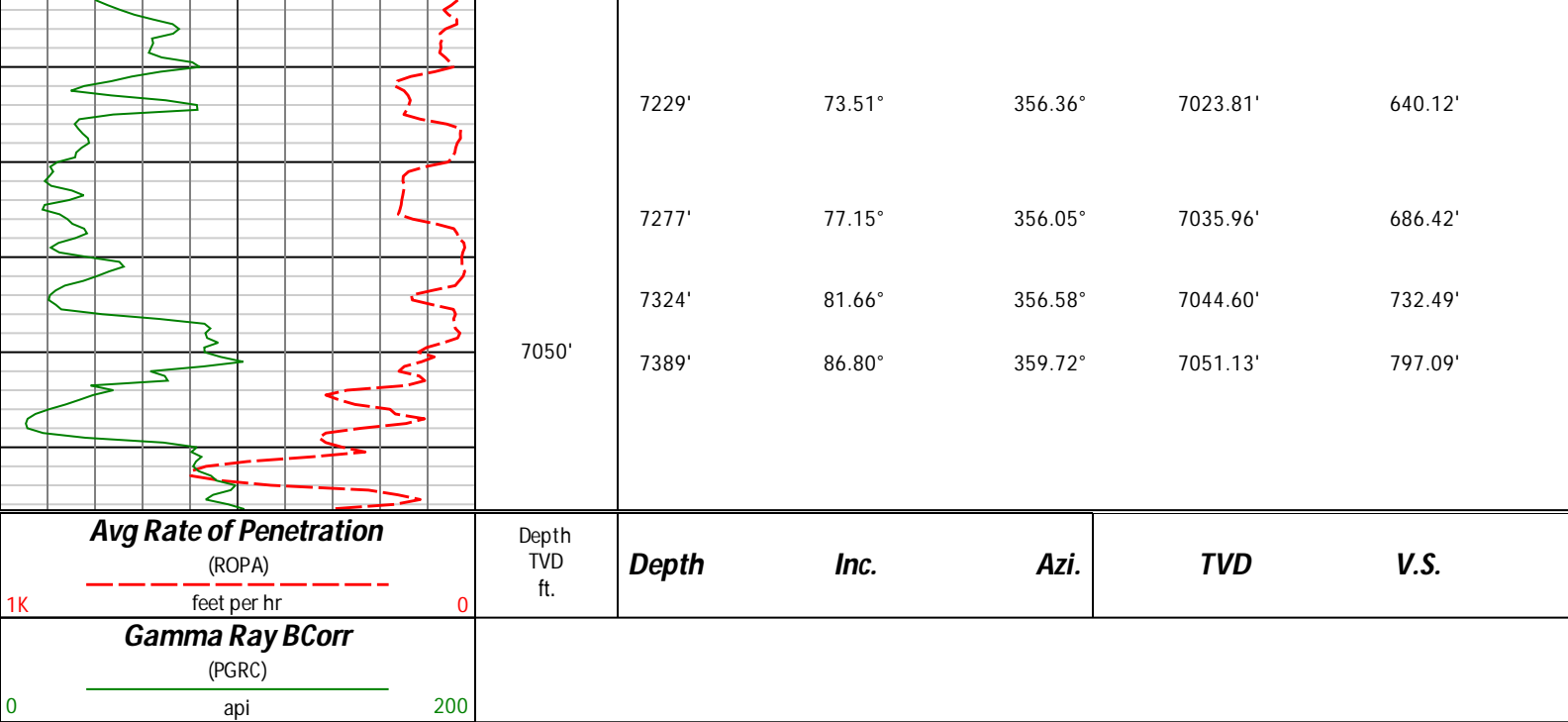
7182'

69.54°

356.11°

7008.92'

595.67'



HALLIBURTON

DIRECTIONAL SURVEY REPORT

Noble Energy
Oscar Y10-74-1HC
Wattenberg
Weld Colorado
USA
CA-XX-0901675723

Measured Depth (feet)	Inclination (degrees)	Direction (degrees)	Vertical Depth (feet)	Latitude (feet)	Departure (feet)	Vertical Section (feet)	Dogleg (deg/100ft)
0.00	0.00	0.00	0.00	0.00 N	0.00 E	0.00	TIE-IN
534.00	0.50	243.51	533.99	1.87 S	1.64 W	-1.88	0.12
750.00	0.60	266.31	749.98	2.36 S	3.61 W	-2.39	0.11
995.00	0.60	332.71	994.97	1.30 S	5.48 W	-1.34	0.27
1149.00	0.50	326.61	1148.96	0.03 S	6.22 W	-0.07	0.08
1271.00	0.44	259.55	1270.96	0.33 N	6.97 W	0.29	0.43
1364.00	0.39	293.91	1363.96	0.40 N	7.61 W	0.35	0.27
1550.00	0.28	21.74	1549.96	1.08 N	8.02 W	1.02	0.25
1643.00	1.33	29.12	1642.95	2.23 N	7.41 W	2.18	1.13
1736.00	2.41	21.24	1735.90	5.00 N	6.18 W	4.95	1.19
1828.00	4.13	25.14	1827.74	9.80 N	4.07 W	9.77	1.88
1920.00	5.82	19.16	1919.39	17.20 N	1.13 W	17.20	1.92
2015.00	7.07	25.28	2013.79	27.04 N	2.94 E	27.06	1.50
2110.00	7.31	29.13	2108.05	37.61 N	8.38 E	37.66	0.57
2205.00	6.94	26.77	2202.31	48.01 N	13.91 E	48.10	0.50
2300.00	6.68	33.18	2296.64	57.76 N	19.52 E	57.89	0.85
2394.00	6.34	31.67	2390.04	66.75 N	25.24 E	66.92	0.40
2489.00	7.33	29.41	2484.36	76.50 N	30.97 E	76.70	1.08
2584.00	7.84	26.75	2578.53	87.56 N	36.86 E	87.81	0.65
2679.00	8.05	30.61	2672.62	99.07 N	43.16 E	99.36	0.60
2774.00	7.32	31.67	2766.76	109.95 N	49.73 E	110.28	0.78
2869.00	7.47	30.68	2860.97	120.41 N	56.06 E	120.79	0.21
2964.00	8.35	35.81	2955.07	131.31 N	63.24 E	131.74	1.19
3059.00	8.86	33.85	3049.00	142.98 N	71.35 E	143.47	0.62
3153.00	7.61	34.21	3142.03	154.14 N	78.89 E	154.68	1.33
3248.00	7.79	33.95	3236.17	164.69 N	86.02 E	165.27	0.19
3343.00	6.11	33.79	3330.47	174.23 N	92.43 E	174.86	1.77
3438.00	5.10	33.76	3425.02	181.94 N	97.58 E	182.60	1.06
3628.00	1.89	33.89	3614.64	191.57 N	104.03 E	192.27	1.69
3723.00	1.27	36.36	3709.60	193.72 N	105.52 E	194.43	0.66

3818.00	0.57	359.92	3804.59	195.04 N	106.15 E	195.75	0.93
4008.00	0.78	220.73	3994.58	195.00 N	105.30 E	195.71	0.67
4103.00	1.18	222.35	4089.57	193.79 N	104.22 E	194.49	0.42
4198.00	1.13	241.00	4184.55	192.61 N	102.74 E	193.31	0.40
4292.00	1.46	261.31	4278.53	191.98 N	100.75 E	192.66	0.60
4387.00	1.57	262.56	4373.49	191.63 N	98.26 E	192.29	0.12
4482.00	1.80	267.56	4468.45	191.40 N	95.48 E	192.04	0.29
4577.00	1.36	292.83	4563.42	191.77 N	92.95 E	192.40	0.86
4672.00	1.20	280.63	4658.39	192.39 N	90.93 E	193.01	0.33
4767.00	1.54	262.53	4753.37	192.41 N	88.69 E	193.01	0.58
4862.00	0.98	22.09	4848.35	193.00 N	87.73 E	193.59	2.31
4956.00	0.64	52.76	4942.35	194.06 N	88.45 E	194.66	0.57
5051.00	1.29	99.03	5037.33	194.21 N	89.93 E	194.82	1.02
5146.00	1.23	87.23	5132.31	194.09 N	92.00 E	194.72	0.28
5241.00	0.78	90.74	5227.29	194.13 N	93.67 E	194.77	0.48
5336.00	0.49	84.12	5322.29	194.17 N	94.72 E	194.81	0.31
5430.00	0.51	94.56	5416.29	194.18 N	95.54 E	194.82	0.10
5525.00	0.48	69.12	5511.28	194.28 N	96.33 E	194.94	0.23
5620.00	0.43	88.59	5606.28	194.43 N	97.06 E	195.09	0.17
5715.00	0.68	90.97	5701.27	194.43 N	97.98 E	195.10	0.26
5810.00	0.72	78.04	5796.27	194.55 N	99.13 E	195.22	0.17
5905.00	0.90	15.04	5891.26	195.39 N	99.90 E	196.07	0.91
5999.00	0.84	19.53	5985.25	196.75 N	100.32 E	197.43	0.10
6094.00	0.75	8.32	6080.24	198.03 N	100.65 E	198.71	0.19
6189.00	0.62	348.13	6175.23	199.14 N	100.63 E	199.82	0.29
6284.00	0.36	41.19	6270.23	199.87 N	100.72 E	200.55	0.52
6377.00	0.22	19.15	6363.23	200.26 N	100.97 E	200.94	0.19
6518.00	11.36	356.15	6503.29	214.42 N	100.13 E	215.09	7.91
6565.00	14.77	354.43	6549.07	225.00 N	99.23 E	225.67	7.30
6613.00	17.57	352.43	6595.16	238.27 N	97.69 E	238.93	5.95
6660.00	20.19	353.64	6639.63	253.37 N	95.85 E	254.02	5.64
6755.00	25.02	6.83	6727.36	289.65 N	96.43 E	290.30	7.34
6849.00	34.79	4.63	6808.75	336.24 N	100.97 E	336.91	10.46
6897.00	39.45	1.59	6847.02	365.15 N	102.50 E	365.84	10.43
6944.00	44.89	0.19	6881.84	396.68 N	102.97 E	397.37	11.75
6992.00	49.96	356.72	6914.31	431.99 N	101.97 E	432.68	11.83
7039.00	54.14	355.75	6943.21	468.97 N	99.53 E	469.63	9.04
7087.00	60.14	355.44	6969.24	509.15 N	96.43 E	509.79	12.51
7134.00	65.68	355.08	6990.64	550.83 N	92.97 E	551.45	11.81
7182.00	69.54	356.11	7008.92	595.07 N	89.57 E	595.67	8.28
7229.00	73.51	356.36	7023.81	639.55 N	86.64 E	640.12	8.46
7277.00	77.15	356.05	7035.96	685.87 N	83.57 E	686.42	7.61
7324.00	81.66	356.58	7044.60	731.96 N	80.60 E	732.49	9.66
7389.00	86.80	359.72	7051.13	796.57 N	78.52 E	797.09	9.25
7480.00	91.63	359.14	7052.38	887.53 N	77.62 E	888.04	5.35
7543.00	90.65	357.02	7051.13	950.48 N	75.51 E	950.97	3.71
7638.00	89.97	356.50	7050.61	1045.32 N	70.14 E	1045.78	0.90
7733.00	91.51	357.26	7049.39	1140.17 N	64.97 E	1140.59	1.81
7826.00	91.63	357.49	7046.84	1233.04 N	60.71 E	1233.42	0.28
7920.00	89.26	357.69	7046.11	1326.95 N	56.76 E	1327.30	2.53
8013.00	90.49	358.06	7046.31	1419.88 N	53.31 E	1420.21	1.38
8106.00	89.32	357.32	7046.47	1512.80 N	49.56 E	1513.10	1.49
8198.00	87.45	358.36	7049.06	1604.69 N	46.09 E	1604.97	2.33
8291.00	87.38	356.75	7053.25	1697.51 N	42.13 E	1697.76	1.73
8384.00	87.29	356.31	7057.58	1790.24 N	36.51 E	1790.45	0.48
8476.00	87.26	354.58	7061.95	1881.84 N	29.21 E	1882.00	1.88
8567.00	88.03	355.36	7065.69	1972.41 N	21.24 E	1972.51	1.20
8659.00	88.74	355.57	7068.28	2064.09 N	13.97 E	2064.14	0.80
8751.00	89.63	357.80	7069.59	2155.92 N	8.65 E	2155.93	2.61
8844.00	90.31	358.69	7069.64	2248.87 N	5.80 E	2248.86	1.20
8936.00	90.83	359.08	7068.73	2340.85 N	4.01 E	2340.82	0.71
9030.00	90.83	359.71	7067.36	2434.84 N	3.02 E	2434.80	0.67
9123.00	90.06	0.19	7066.64	2527.83 N	2.93 E	2527.79	0.98
9216.00	89.88	359.81	7066.69	2620.83 N	2.93 E	2620.79	0.45
9309.00	90.09	359.48	7066.72	2713.83 N	2.36 E	2713.78	0.42
9401.00	90.03	359.32	7066.62	2805.83 N	1.39 E	2805.77	0.19
9494.00	88.95	359.22	7067.45	2898.81 N	0.21 E	2898.75	1.17
9586.00	90.86	359.25	7067.60	2990.80 N	1.02 W	2990.72	2.08
9681.00	90.99	359.20	7066.07	3085.78 N	2.30 W	3085.69	0.15
9776.00	91.20	357.94	7064.25	3180.73 N	4.67 W	3180.62	1.34
9871.00	90.22	359.10	7063.07	3275.69 N	7.13 W	3275.56	1.60

9965.00	89.20	357.46	7063.55	3369.64 N	9.95 W	3369.49	2.05
10060.00	87.08	356.45	7066.63	3464.45 N	14.99 W	3464.27	2.47
10155.00	88.00	358.24	7070.71	3559.26 N	19.39 W	3559.04	2.12
10250.00	90.77	357.42	7071.73	3654.17 N	22.98 W	3653.93	3.04
10345.00	92.13	0.09	7069.33	3749.11 N	25.05 W	3748.85	3.15
10439.00	88.31	358.07	7068.96	3843.07 N	26.56 W	3842.80	4.60
10534.00	90.25	357.67	7070.16	3937.99 N	30.09 W	3937.70	2.09
10629.00	91.54	0.10	7068.67	4032.96 N	31.94 W	4032.65	2.90
10724.00	90.09	0.56	7067.32	4127.94 N	31.39 W	4127.63	1.60
10819.00	91.17	1.48	7066.28	4222.92 N	29.70 W	4222.62	1.49
10914.00	92.19	1.37	7063.49	4317.85 N	27.34 W	4317.56	1.08
11009.00	91.88	2.36	7060.12	4412.74 N	24.25 W	4412.47	1.09
11104.00	90.31	3.12	7058.30	4507.61 N	19.71 W	4507.37	1.84
11199.00	89.29	3.43	7058.64	4602.45 N	14.28 W	4602.25	1.12
11293.00	90.68	3.68	7058.66	4696.27 N	8.45 W	4696.10	1.50
11388.00	89.17	2.40	7058.79	4791.13 N	3.41 W	4790.99	2.08
11483.00	89.88	3.91	7059.57	4885.98 N	1.81 E	4885.88	1.76
11578.00	88.86	359.36	7060.62	4980.91 N	4.52 E	4980.82	4.91
11673.00	88.55	353.77	7062.77	5075.67 N	1.16 W	5075.55	5.89
11768.00	88.92	351.94	7064.86	5169.91 N	12.98 W	5169.70	1.96
11863.00	93.79	357.84	7062.62	5264.43 N	21.43 W	5264.17	8.05
11958.00	91.02	0.24	7058.63	5359.32 N	23.02 W	5359.04	3.86
12052.00	89.57	2.14	7058.15	5453.29 N	21.07 W	5453.02	2.54
12147.00	89.75	2.23	7058.71	5548.22 N	17.45 W	5547.97	0.21
12242.00	90.06	0.51	7058.87	5643.19 N	15.18 W	5642.96	1.84
12337.00	88.49	357.73	7060.07	5738.16 N	16.64 W	5737.91	3.36
12432.00	90.37	357.03	7061.01	5833.05 N	20.98 W	5832.77	2.11
12527.00	87.13	359.18	7063.09	5927.96 N	24.12 W	5927.66	4.09
12622.00	90.74	1.69	7064.85	6022.92 N	23.40 W	6022.62	4.63
12717.00	91.94	3.01	7062.63	6117.81 N	19.50 W	6117.53	1.88
12812.00	91.11	3.25	7060.10	6212.63 N	14.32 W	6212.39	0.91
12907.00	89.63	2.76	7059.49	6307.49 N	9.34 W	6307.28	1.64
13001.00	89.75	4.54	7060.00	6401.30 N	3.35 W	6401.13	1.90
13096.00	89.60	5.15	7060.54	6495.96 N	4.67 E	6495.84	0.66
13191.00	89.38	6.96	7061.38	6590.42 N	14.69 E	6590.37	1.92
13285.00	87.78	7.01	7063.71	6683.69 N	26.12 E	6683.71	1.70
13380.00	86.39	4.05	7068.54	6778.11 N	35.26 E	6778.20	3.44
13475.00	87.72	2.70	7073.42	6872.82 N	40.84 E	6872.94	1.99
13570.00	87.81	1.06	7077.13	6967.69 N	43.96 E	6967.83	1.73
13665.00	89.82	0.47	7079.09	7062.66 N	45.23 E	7062.80	2.21
13759.00	91.05	0.71	7078.38	7156.65 N	46.19 E	7156.80	1.33
13854.00	90.89	0.68	7076.77	7251.63 N	47.35 E	7251.78	0.17
13949.00	89.42	0.27	7076.52	7346.62 N	48.13 E	7346.78	1.61
14044.00	90.43	1.65	7076.64	7441.60 N	49.73 E	7441.77	1.80
14139.00	90.92	0.92	7075.52	7536.57 N	51.86 E	7536.75	0.93
14234.00	92.22	0.64	7072.92	7631.53 N	53.15 E	7631.71	1.40
14329.00	91.69	0.81	7069.68	7726.46 N	54.35 E	7726.65	0.59
14349.00	92.10	0.97	7069.02	7746.45 N	54.66 E	7746.64	2.20
14413.00	92.10	0.97	7066.67	7810.40 N	55.74 E	7810.60	0.00
14684.00	92.10	0.97	7056.74	8081.18 N	60.33 E	8081.40	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 0.39 DEGREES (GRID) A TOTAL CORRECTION OF 7.71 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD. HORIZONTAL DISPLACEMENT(CLOSURE) AT 14684.00 FEET IS 8081.40 FEET ALONG 0.43 DEGREES (GRID)							