

**Pressure Cased Directional (PCDC)  
Pressure Cased Gamma (PCGK)**



**1 : 240**

Country : USA			
Field : Wattenberg			
Location : Lat: 40° 9' 8.03" North Long: 104° 32' 8.20" West			
Well : Oscar Y10-75-1HC			
Company : Noble Energy			
Rig : H&P 315			
LOCATION			
Latitude : 40° 9' 8.03" North Longitude : 104° 32' 8.20" West			
UTM Easting = 3,269,568.910 ft UTM Northing = 1,299,766.590 ft			
Company : Noble Energy			
Rig : H&P 315			
Well : Oscar Y10-75-1HC			
Field : Wattenberg			
Country : USA			
API Number : 05-123-38202			
Permanent Datum : Ground Level			
Elevation : 4924.00 ft			
Log Measured From : Drill Floor			
24.00 ft Above Permanent Datum			
Drilling Measured From : Drill Floor			
TVD LOG			
Depth Logged : 1,199.91 ft To 6,842.01 ft			
Date Logged : 12-Oct-14 To 19-Oct-14			
Total Depth MD : 14,440.00 ft TVD: 6,842.01 ft			
Spud Date : 11-Oct-14			
Unit No. : 11610113		Job No. : CA-XX-0901674789	
Plot Type : Final			
Plot Date : 11-Jan-17			
Run No.		Borehole Record (TVD)	
Size		Size	
From		From	
To		To	
Run No.		Size	
Size		Weight	
From		From	
To		To	
Run No.		SURFACE	
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Run No.		SURFACE	
Size		SURFACE	
From		SURFACE	
To		SURFACE	
Run No.		SURFACE	
Size		SURFACE	
From			

Max Tool Temp (degF) / Source	177.64 / PCM	177.64 / PCM			
Rm @ Max Tool Temp (degF)	N/A @ 177.64	N/A @ 177.64			
Lead MWD Engineer	Paul Sheets	Paul Sheets			
Customer Representative	Steve Record	Steve Record			

## SENSOR INFORMATION

### Downhole Processor Information

Tool Type	PCM	PCM			
Software Version	5.93	5.93			
Sub Serial Number	11404298	11404298			
Insert Serial Number	11680742	11680742			
Date and Time Initialized	12-Oct-14 00:50	12-Oct-14 00:50			
Date and Time Read	14-Oct-14 18:32	14-Oct-14 18:39			
ECMB SW Version	N/A	N/A			

### Directional Sensor Information

Tool Type	PCDC	PCDC			
Distance From Bit (ft)	56.50	52.12			
Software Version	6.21	6.21			
Sub Serial Number	11404298	11404298			
Sonde Serial Number	11297515	11297515			
Sensor ID Number	N/A	N/A			
Toolface Offset (deg)	78.40	141.12			

### Gamma Ray Sensor Information

Tool Type	PCG	PCG			
Distance From Bit (ft)	51.40	47.02			
Recorded Sample Period (sec)	10	10			
Software Version	8.15	8.15			
Sub Serial Number	11404298	11404298			
Insert/Sonde Serial Number	11579787	11579787			

## 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

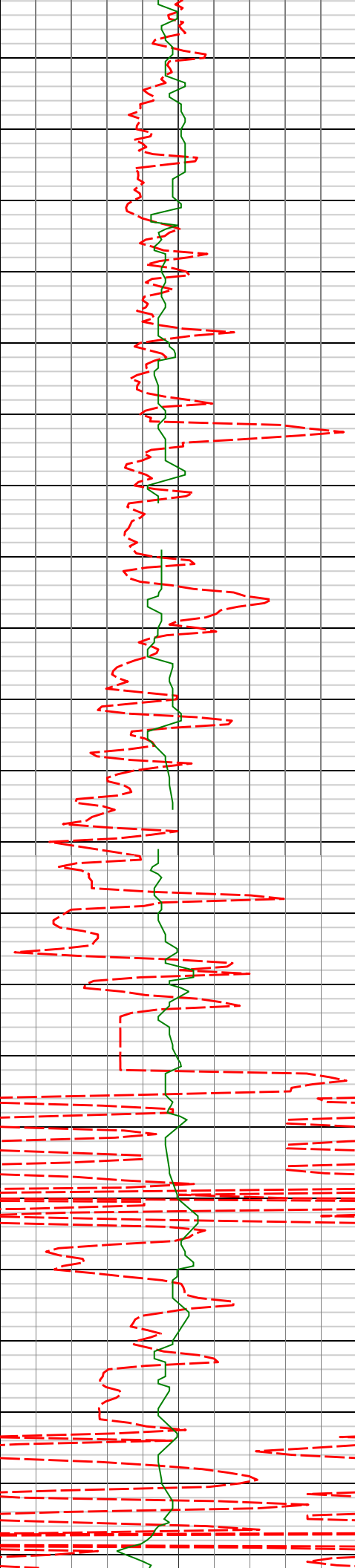
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## Sperry Drilling Services

# TVD Detail Log 1:240

<div>Gamma Ray BCorr (PGRC) api</div>								
0		200	Depth TVD ft.	Depth	Inc.	Azi.	TVD	V.S.
<div>Avg Rate of Penetration (ROPA) feet per hr</div>								
1K		0						
			1150'					
			1200'					
			1250'					



1293'

0.12°

326.39°

1292.91'

-10.30'

1300'

1350'

1386'

0.04°

300.91°

1385.91'

-10.20'

1400'

1450'

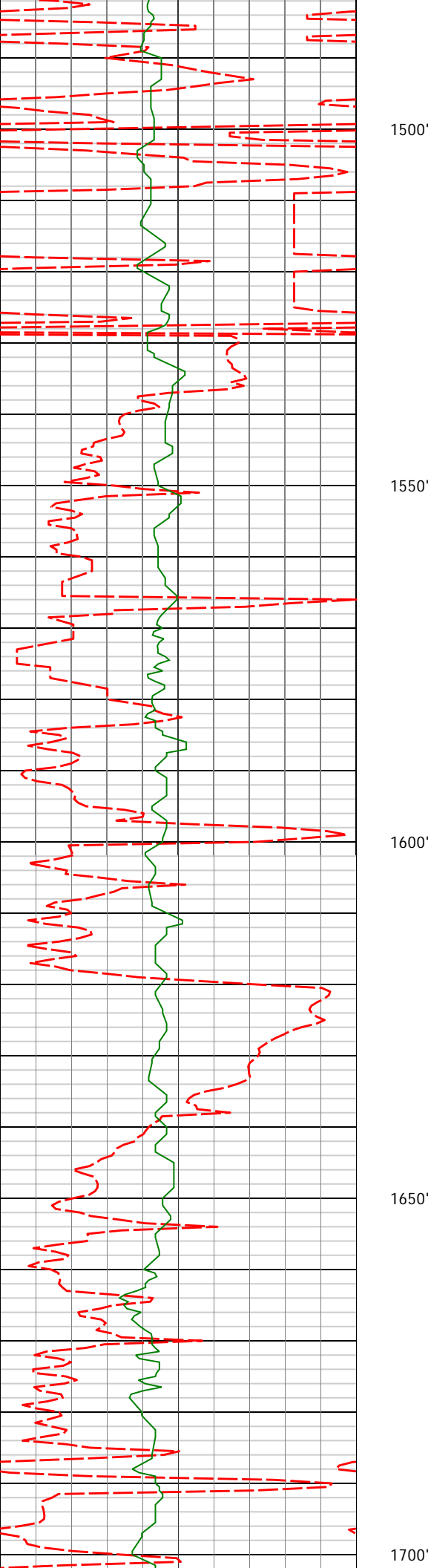
1478'

0.13°

148.21°

1477.91'

-10.27'



1570'

0.25°

46.47°

1569.91'

-10.23'

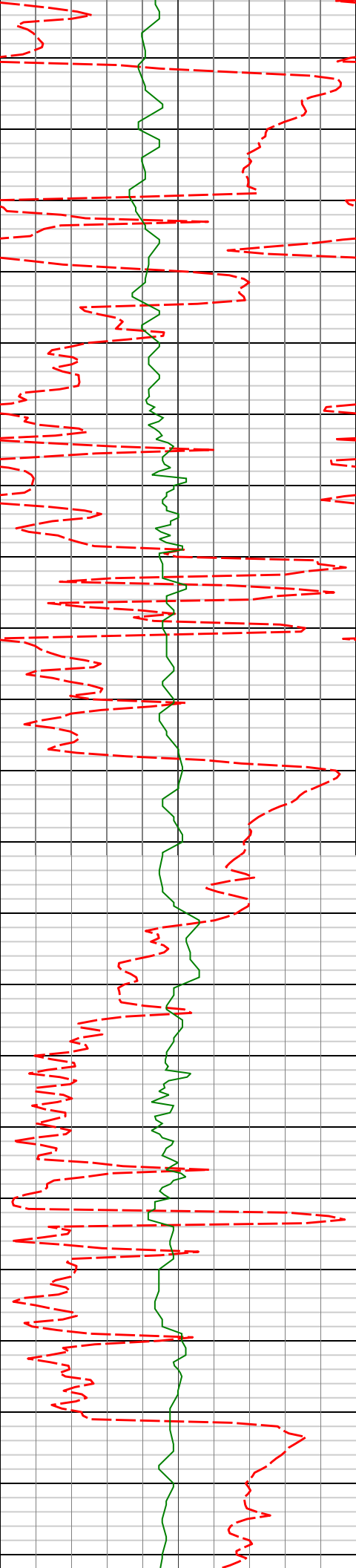
1663'

1.31°

358.18°

1662.90'

-9.04'



1750'

1755'

2.30°

307.02°

1754.86'

-6.79'

1800'

1850'

1847'

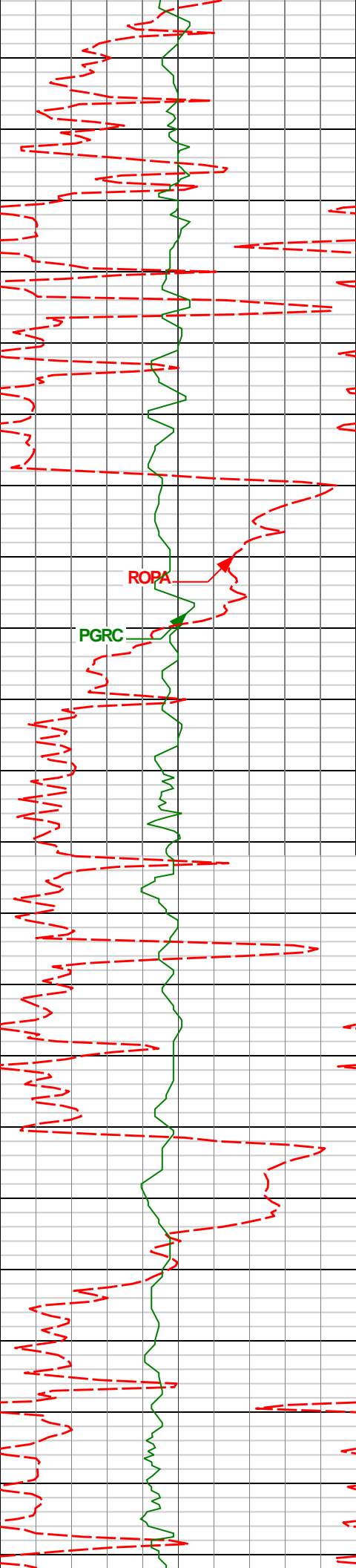
4.34°

307.40°

1846.70'

-3.31'

1900'



1938'

6.35°

306.37°

1937.30'

2.16'

1950'

2000'

2031'

8.12°

304.64°

2029.56'

9.51'

2050'

2100'

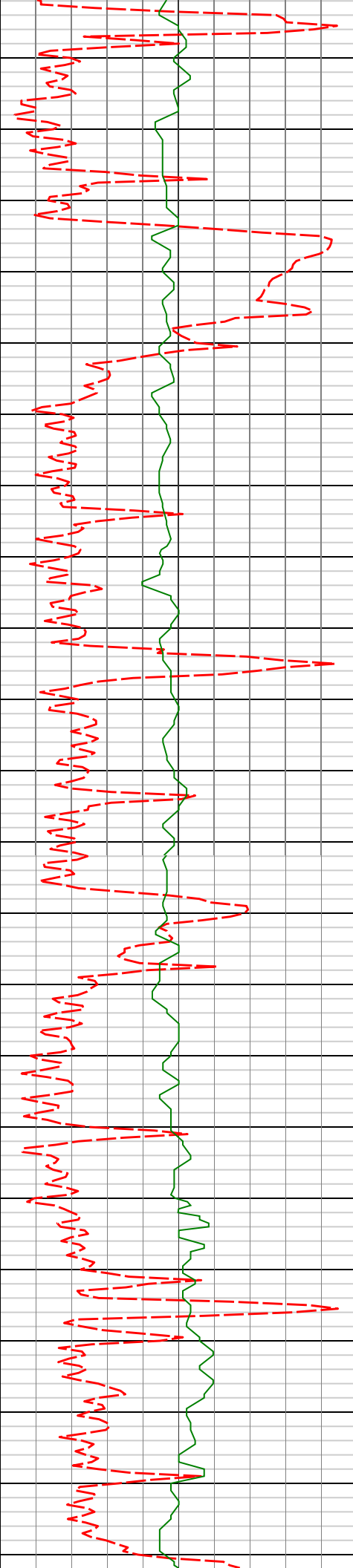
2124'

8.69°

299.81°

2121.56'

17.42'



2150'

2200'

2250'

2300'

2350'

2216'

9.38°

296.81°

2212.42'

25.02'

2309'

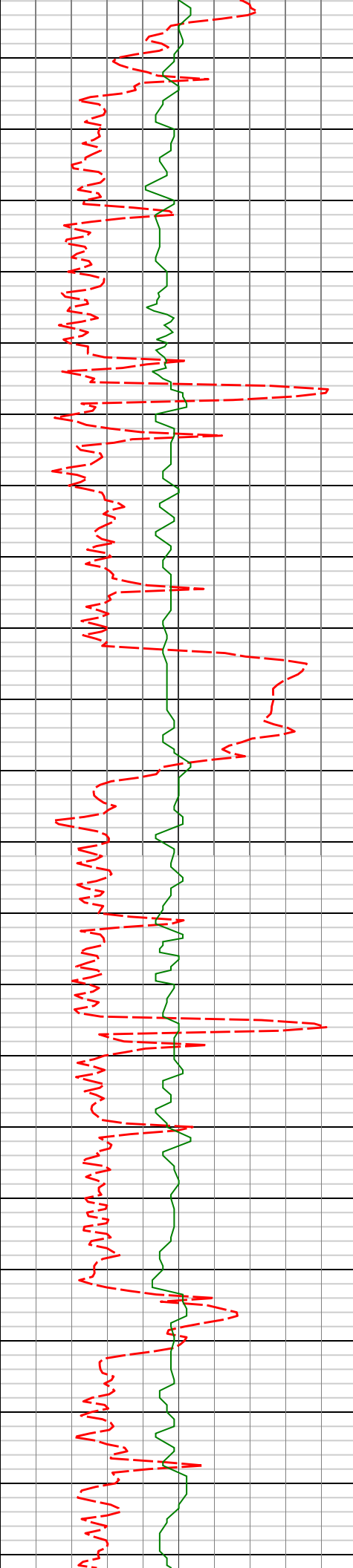
8.72°

293.15°

2304.26'

32.00'





2400' 2402' 7.82° 292.50° 2396.29' 37.93'

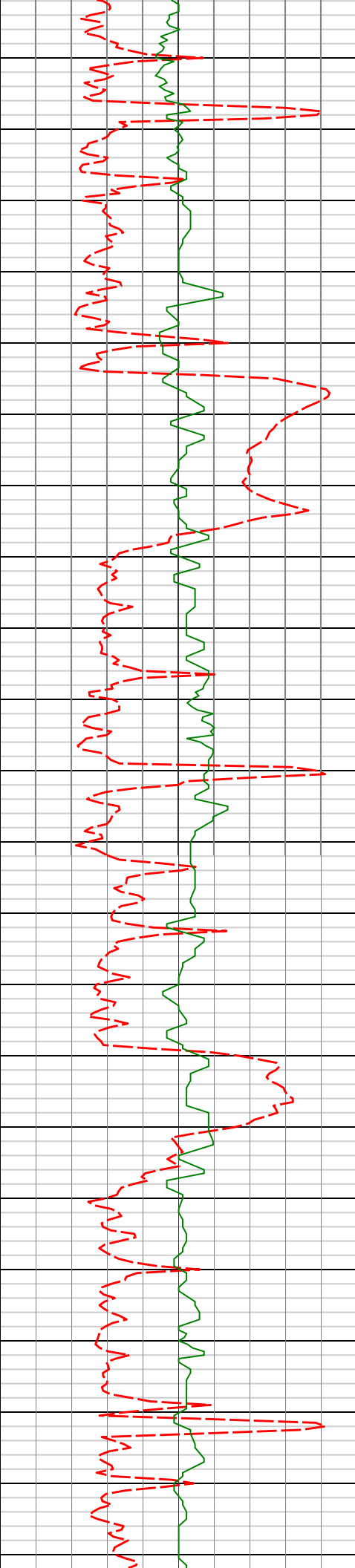
2450'

2495' 8.63° 297.50° 2488.33' 44.29'

2500'

2550'

2589' 7.73° 296.66° 2581.38' 51.09'



2600'

2650'

2700'

2750'

2800'

2681'

8.34°

307.03°

2672.48'

58.53'

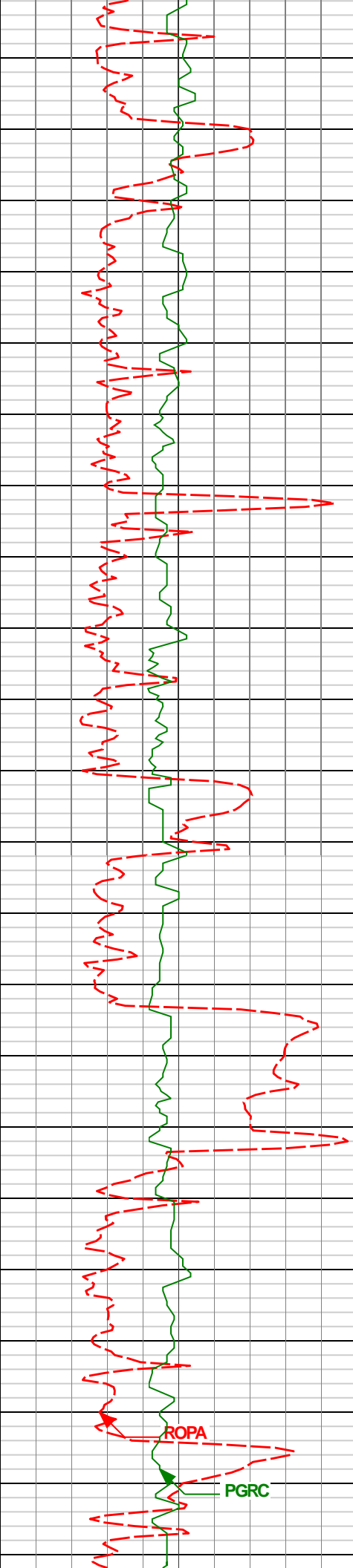
2774'

9.05°

307.87°

2764.41'

67.74'



2850'

2866'

8.23°

306.40°

2855.36'

76.74'

2900'

2950'

2960'

8.97°

305.92°

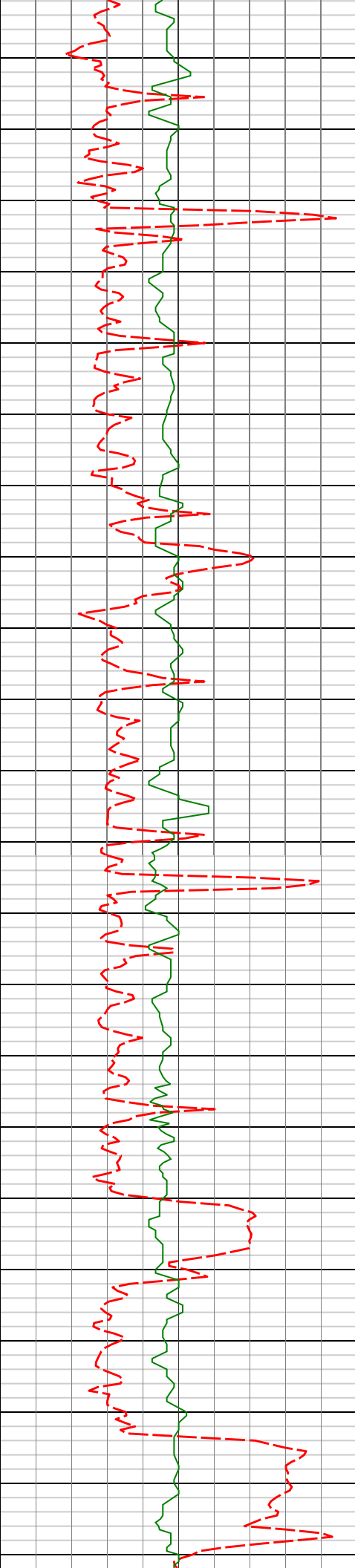
2948.31'

85.70'

3000'

ROPA

PGRC



3050'

3100'

3150'

3200'

3055'

9.02°

303.16°

3042.14'

94.85'

3150'

8.33°

302.08°

3136.05'

103.29'

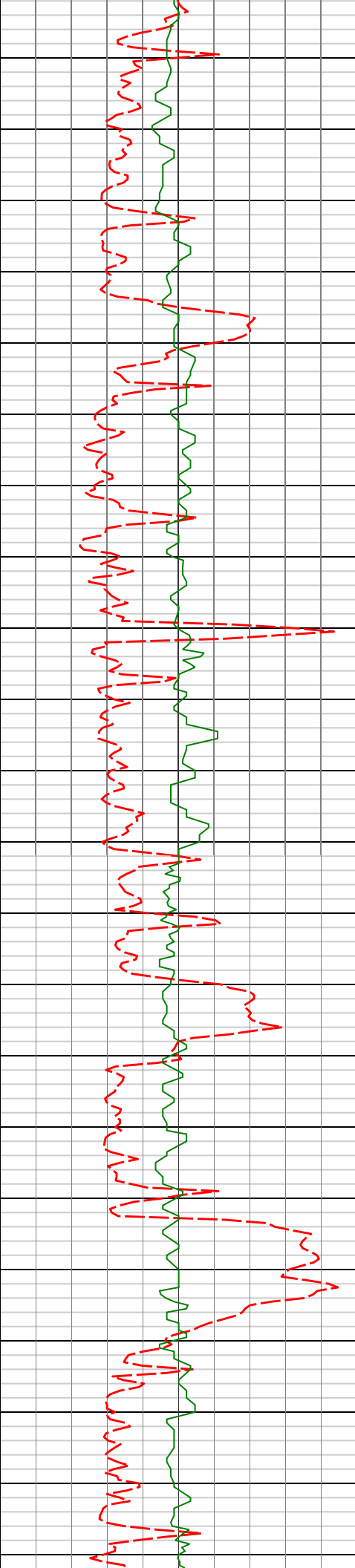
3245'

8.21°

298.25°

3230.06'

110.86'



3250'

3300'

3350'

3400'

3450'

3340'

8.09°

295.44°

3324.11'

117.66'

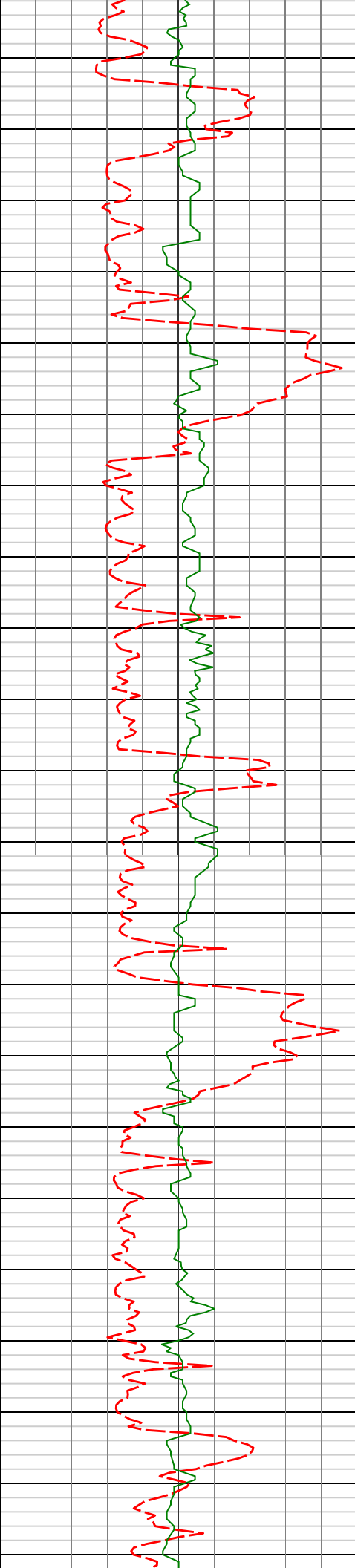
3435'

7.82°

293.63°

3418.19'

123.83'



3500'

3530'

8.01°

290.24°

3512.29'

129.44'

3550'

3600'

3625'

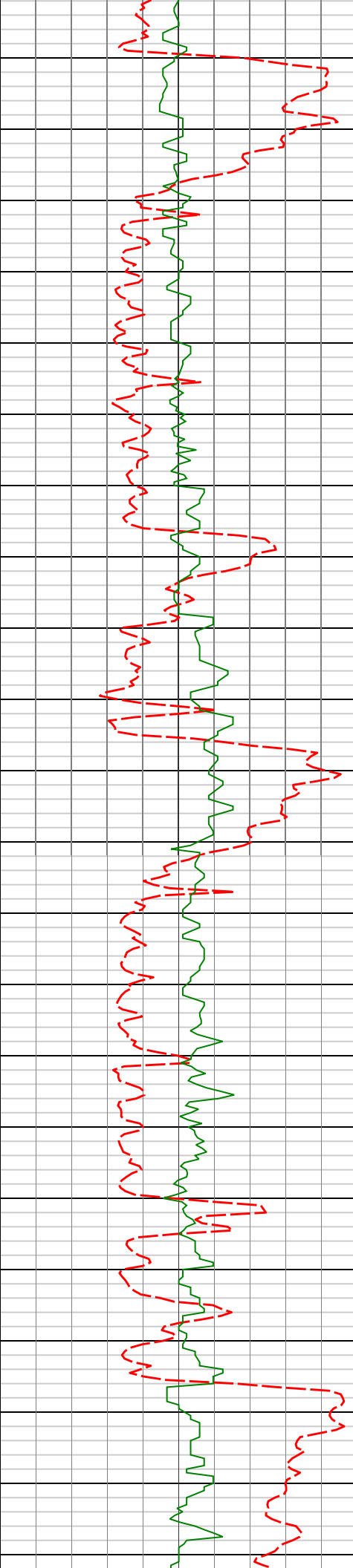
7.37°

293.33°

3606.43'

134.85'

3650'



3700'

3719'

8.23°

293.46°

3699.56'

140.61'

3750'

3800'

3814'

7.87°

297.85°

3793.63'

147.07'

3850'

3909'

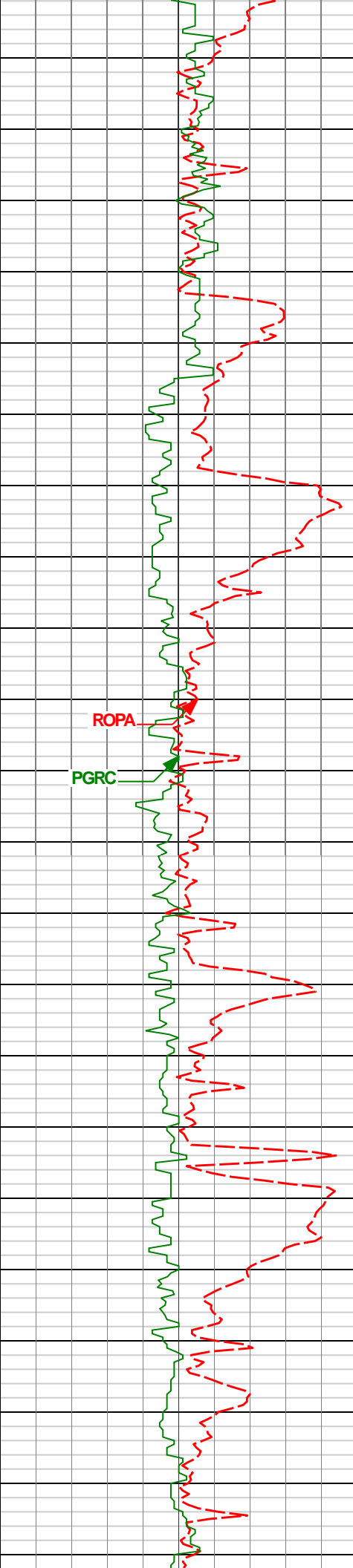
8.03°

301.72°

3887.71'

154.28'

3900'



3950'

4000'

4050'

4100'

4004'

8.12°

303.02°

3981.77'

162.09'

4099'

9.04°

306.73°

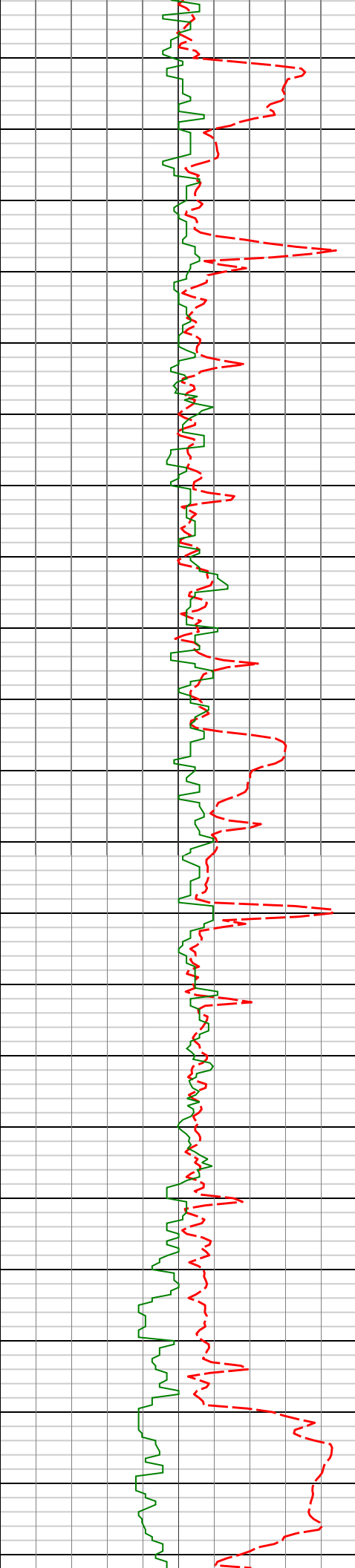
4075.71'

170.90'

ROP

PGR





4150'

4194'

8.93°

304.63°

4169.54'

180.27'

4200'

4250'

4289'

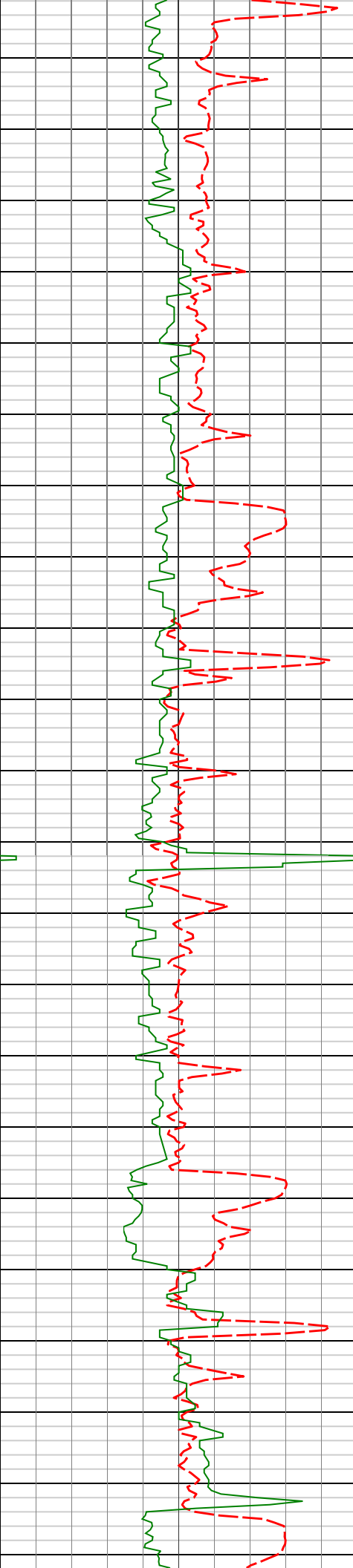
7.71°

300.87°

4263.54'

188.41'

4300'



4350'

4384'

8.94°

300.70°

4357.54'

196.15'

4400'

4450'

4478'

8.80°

297.84°

4450.42'

203.99'

4500'

4550'

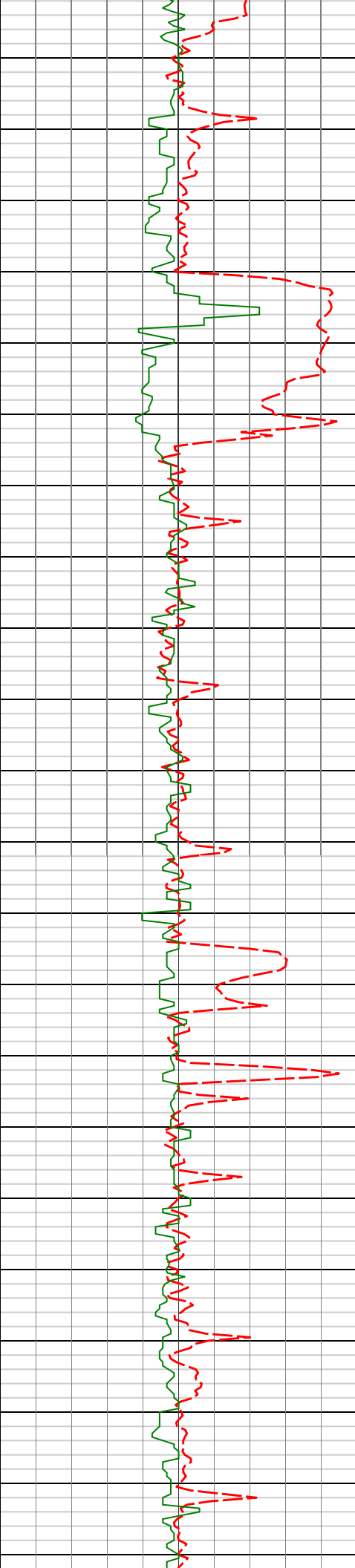
4573'

8.83°

297.51°

4544.29'

211.52'



4600'

4668'

9.22°

304.51°

4638.12'

219.96'

4650'

4700'

4763'

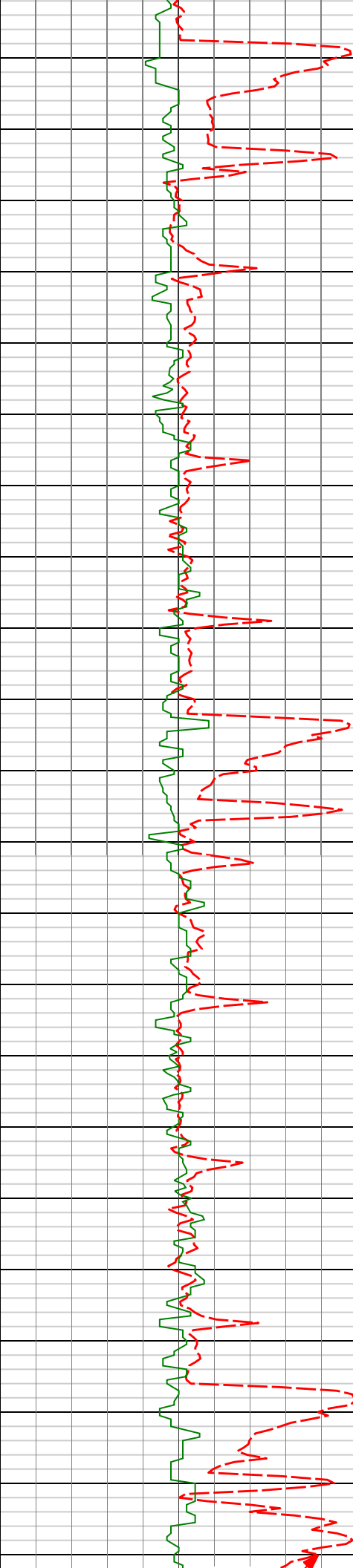
7.60°

302.19°

4732.10'

228.30'

4750'



4800'

4858'

6.83°

299.86°

4826.34'

235.07'

4850'

4900'

4953'

6.50°

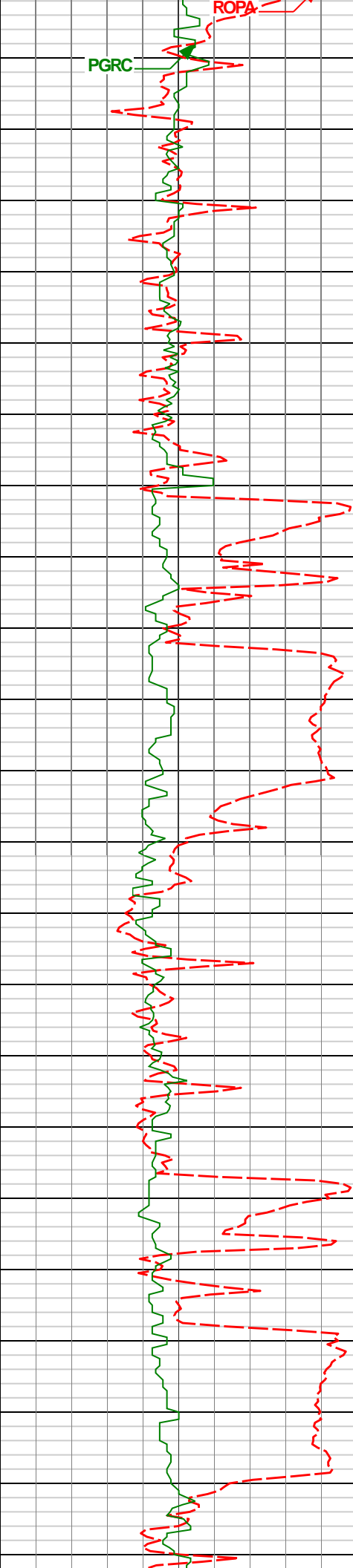
294.87°

4920.70'

240.73'

4950'

5000'



5050'

5100'

5150'

5200'

5048'

5.50°

296.15°

5015.18'

245.53'

5143'

4.13°

292.15°

5109.84'

249.26'

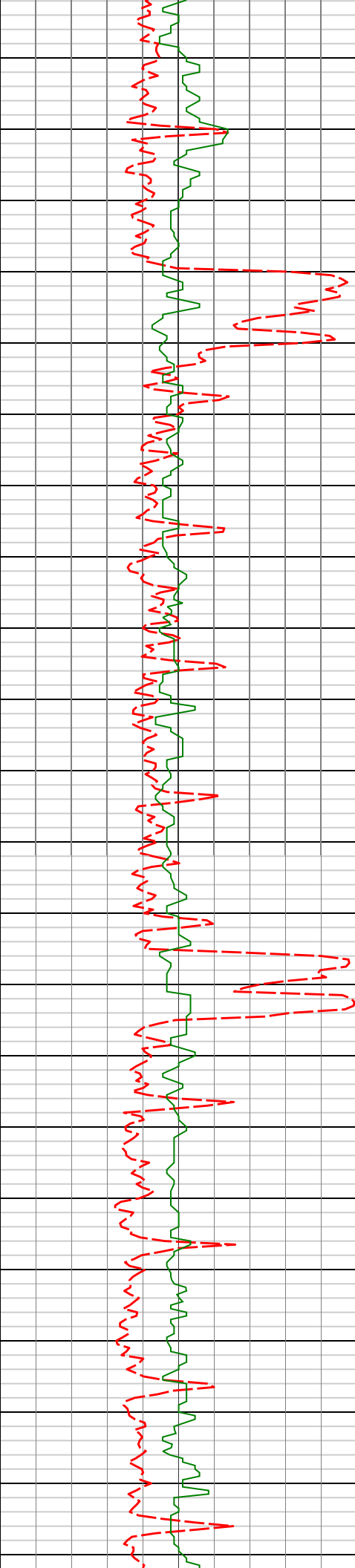
5238'

2.02°

296.75°

5204.70'

251.58'



5250'

5300'

5350'

5400'

5333'

5428'

1.34°

1.33°

291.13°

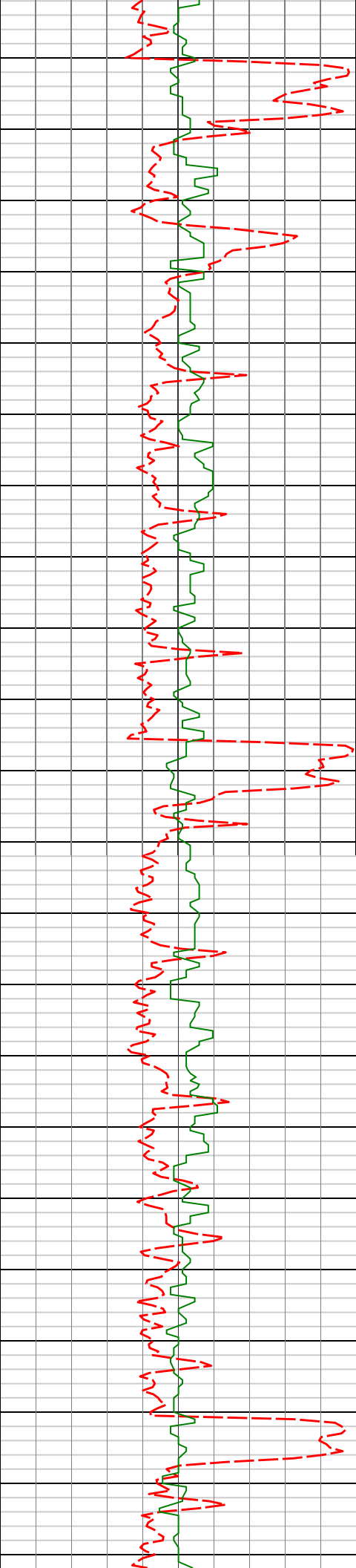
283.78°

5299.66'

5394.63'

252.89'

253.68'



5450'

5523'

0.79°

288.78°

5489.62'

254.25'

5500'

5550'

5617'

0.67°

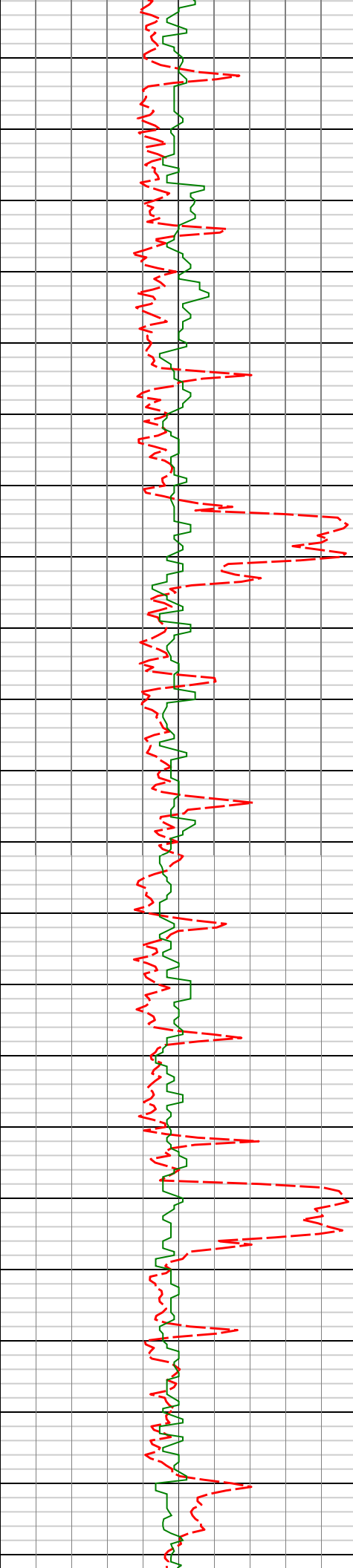
306.21°

5583.61'

254.85'

5600'

5650'



5700'

5750'

5800'

5850'

5712'

0.23°

343.49°

5678.61'

255.39'

5807'

0.38°

22.62°

5773.61'

255.86'

5902'

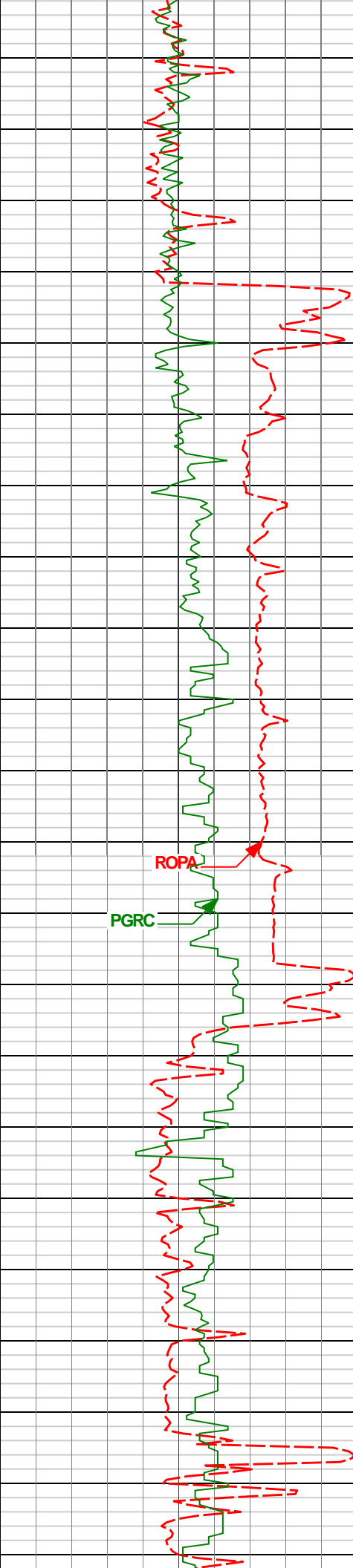
0.57°

45.36°

5868.60'

256.45'





5900'

5950'

6000'

6050'

6100'

5997'

0.71°

35.72°

5963.60'

257.22'

ROPA

PGRC

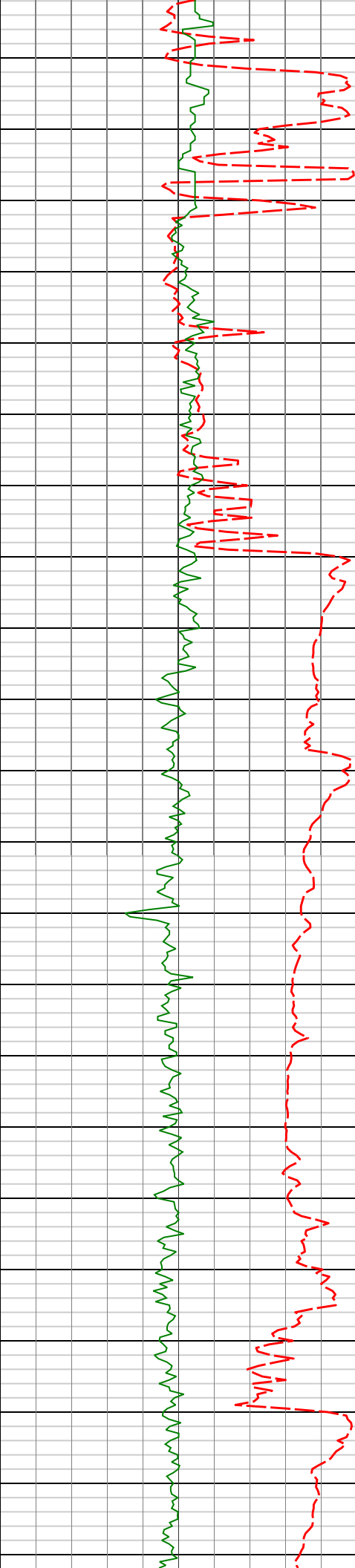
6092'

1.04°

12.20°

6058.59'

258.50'



6150'

6200'

6250'

6300'

6157'

1.23°

9.46°

6123.57'

259.75'

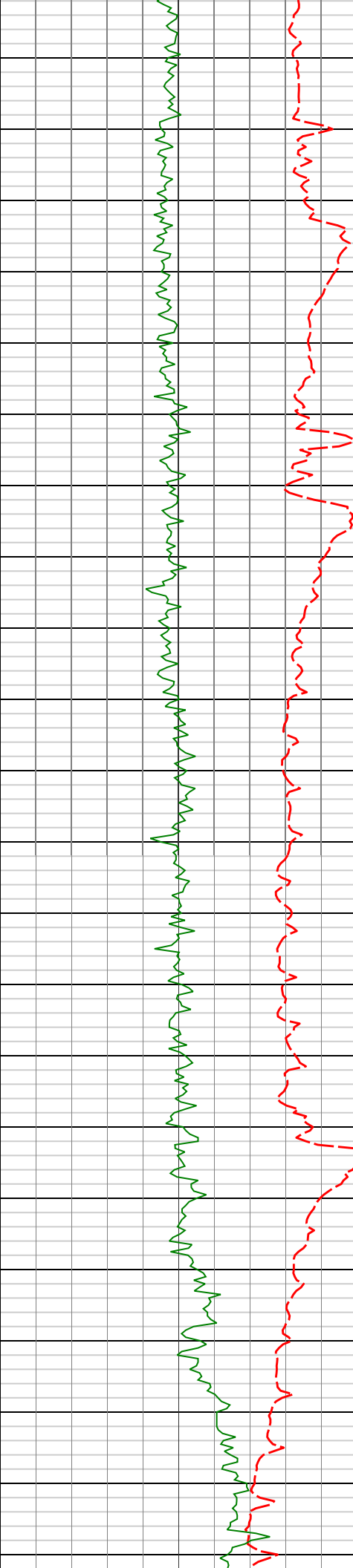
6281'

8.35°

353.91°

6247.06'

270.06'



6350'

6400'

6450'

6500'

6376'

12.47°

0.59°

6340.48'

287.19'

6471'

17.60°

7.07°

6432.21'

311.56'

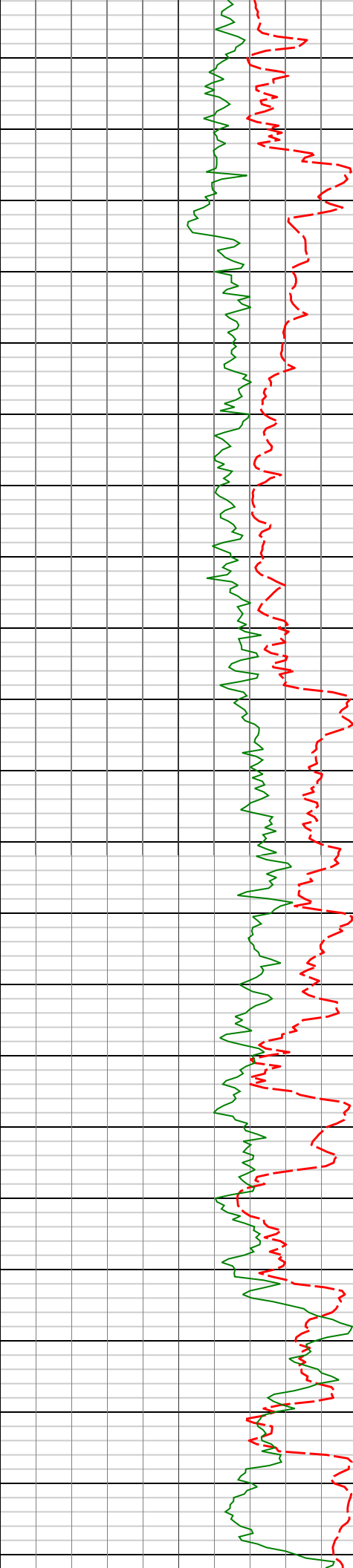
6566'

25.08°

9.24°

6520.63'

345.37'



6550'

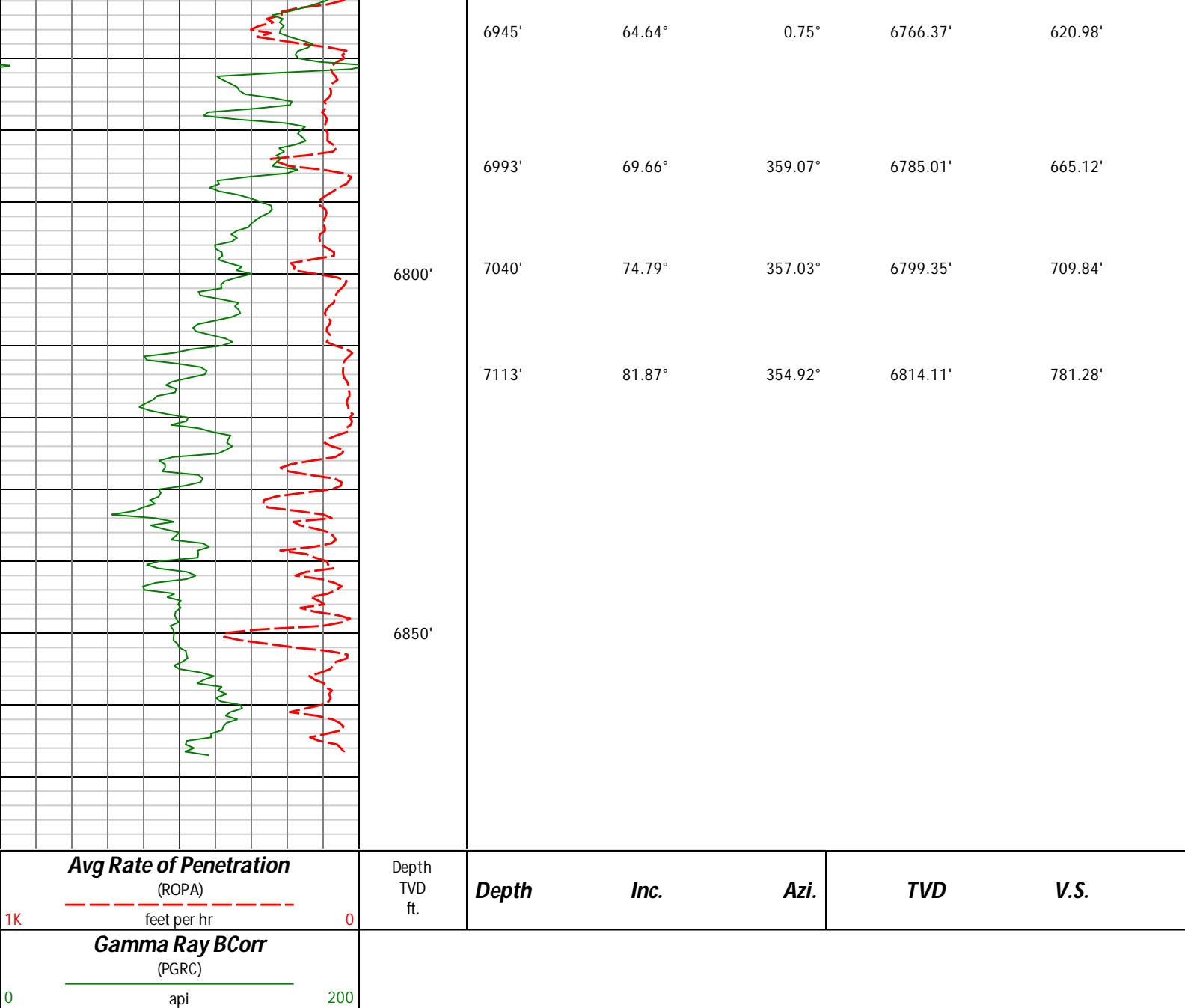
6600'

6650'

6700'

6750'

6661'	37.60°	7.15°	6601.61'	393.69'
6709'	46.62°	5.21°	6637.18'	425.39'
6755'	53.15°	3.92°	6666.81'	460.20'
6803'	56.28°	2.05°	6694.53'	499.13'
6850'	57.82°	2.75°	6720.10'	538.36'
6898'	60.47°	0.80°	6744.71'	579.39'



## HALLIBURTON

### DIRECTIONAL SURVEY REPORT

Noble Energy  
Oscar Y10-75-1HC  
Wattenberg  
Weld Colorado  
USA  
CA-XX-0901674789

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
732.00	1.20	129.74	731.97	4.66 S	3.68 E	-4.87	0.36
997.00	0.80	140.14	996.92	7.85 S	7.00 E	-8.26	0.17
1150.00	0.60	143.94	1149.91	9.32 S	8.15 E	-9.80	0.13
1293.00	0.12	326.39	1292.91	9.80 S	8.51 E	-10.30	0.50
1386.00	0.04	300.91	1385.91	9.70 S	8.43 E	-10.20	0.09
1478.00	0.13	148.21	1477.91	9.78 S	8.46 E	-10.27	0.18
1570.00	0.25	46.47	1569.91	9.73 S	8.66 E	-10.23	0.33
1663.00	1.31	358.18	1662.90	8.53 S	8.77 E	-9.04	1.25

1755.00	2.30	307.02	1754.86	6.36 S	7.26 E	-6.79	1.95
1847.00	4.34	307.40	1846.70	3.14 S	3.02 E	-3.31	2.22
1938.00	6.35	306.37	1937.30	1.94 N	3.76 W	2.16	2.21
2031.00	8.12	304.64	2029.56	8.72 N	13.31 W	9.51	1.92
2124.00	8.69	299.81	2121.56	15.95 N	24.81 W	17.42	0.98
2216.00	9.38	296.81	2212.42	22.79 N	37.53 W	25.02	0.91
2309.00	8.72	293.15	2304.26	28.98 N	50.78 W	32.00	0.94
2402.00	7.82	292.50	2396.29	34.17 N	63.10 W	37.93	0.97
2495.00	8.63	297.50	2488.33	39.81 N	75.14 W	44.29	1.16
2589.00	7.73	296.66	2581.38	45.91 N	87.05 W	51.09	0.97
2681.00	8.34	307.03	2672.48	52.70 N	97.90 W	58.53	1.71
2774.00	9.05	307.87	2764.41	61.25 N	109.06 W	67.74	0.78
2866.00	8.23	306.40	2855.36	69.60 N	120.07 W	76.74	0.92
2960.00	8.97	305.92	2948.31	77.89 N	131.42 W	85.70	0.79
3055.00	9.02	303.16	3042.14	86.31 N	143.65 W	94.85	0.46
3150.00	8.33	302.08	3136.05	94.04 N	155.72 W	103.29	0.75
3245.00	8.21	298.25	3230.06	100.90 N	167.53 W	110.86	0.59
3340.00	8.09	295.44	3324.11	106.99 N	179.54 W	117.66	0.44
3435.00	7.82	293.63	3418.19	112.45 N	191.49 W	123.83	0.39
3530.00	8.01	290.24	3512.29	117.33 N	203.63 W	129.44	0.53
3625.00	7.37	293.33	3606.43	122.03 N	215.43 W	134.85	0.80
3719.00	8.23	293.46	3699.56	127.10 N	227.14 W	140.61	0.92
3814.00	7.87	297.85	3793.63	132.84 N	239.13 W	147.07	0.75
3909.00	8.03	301.72	3887.71	139.37 N	250.52 W	154.28	0.59
4004.00	8.12	303.02	3981.77	146.52 N	261.79 W	162.09	0.21
4099.00	9.04	306.73	4075.71	154.64 N	273.40 W	170.90	1.13
4194.00	8.93	304.63	4169.54	163.29 N	285.45 W	180.27	0.36
4289.00	7.71	300.87	4263.54	170.75 N	296.99 W	188.41	1.41
4384.00	8.94	300.70	4357.54	177.79 N	308.80 W	196.15	1.29
4478.00	8.80	297.84	4450.42	184.87 N	321.44 W	203.99	0.49
4573.00	8.83	297.51	4544.29	191.64 N	334.33 W	211.52	0.06
4668.00	9.22	304.51	4638.12	199.32 N	347.07 W	219.96	1.23
4763.00	7.60	302.19	4732.10	206.97 N	358.66 W	228.30	1.74
4858.00	6.83	299.86	4826.34	213.13 N	368.88 W	235.07	0.87
4953.00	6.50	294.87	4920.70	218.21 N	378.66 W	240.73	0.70
5048.00	5.50	296.15	5015.18	222.48 N	387.62 W	245.53	1.06
5143.00	4.13	292.15	5109.84	225.77 N	394.88 W	249.26	1.48
5238.00	2.02	296.75	5204.70	227.82 N	399.54 W	251.58	2.23
5333.00	1.34	291.13	5299.66	228.97 N	402.07 W	252.89	0.74
5428.00	1.33	283.78	5394.63	229.63 N	404.18 W	253.68	0.18
5523.00	0.79	288.78	5489.62	230.11 N	405.87 W	254.25	0.58
5617.00	0.67	306.21	5583.61	230.64 N	406.93 W	254.85	0.27
5712.00	0.23	343.49	5678.61	231.15 N	407.43 W	255.39	0.53
5807.00	0.38	22.62	5773.61	231.62 N	407.36 W	255.86	0.26
5902.00	0.57	45.36	5868.60	232.25 N	406.90 W	256.45	0.28
5997.00	0.71	35.72	5963.60	233.06 N	406.22 W	257.22	0.19
6092.00	1.04	12.20	6058.59	234.38 N	405.70 W	258.50	0.51
6157.00	1.23	9.46	6123.57	235.64 N	405.46 W	259.75	0.30
6281.00	8.35	353.91	6247.06	245.92 N	406.20 W	270.06	5.78
6376.00	12.47	0.59	6340.48	263.04 N	406.82 W	287.19	4.51
6471.00	17.60	7.07	6432.21	287.57 N	404.95 W	311.56	5.67
6566.00	25.08	9.24	6520.63	321.75 N	399.94 W	345.37	7.92
6661.00	37.60	7.15	6601.61	370.57 N	393.07 W	393.69	13.23
6709.00	46.62	5.21	6637.18	402.54 N	389.66 W	425.39	18.98
6755.00	53.15	3.92	6666.81	437.59 N	386.88 W	460.20	14.36
6803.00	56.28	2.05	6694.53	476.71 N	384.85 W	499.13	7.25
6850.00	57.82	2.75	6720.10	516.12 N	383.20 W	538.36	3.51
6898.00	60.47	0.80	6744.71	557.30 N	381.93 W	579.39	6.53
6945.00	64.64	0.75	6766.37	598.99 N	381.37 W	620.98	8.87
6993.00	69.66	359.07	6785.01	643.21 N	381.45 W	665.12	10.94
7040.00	74.79	357.03	6799.35	687.92 N	382.98 W	709.84	11.67
7113.00	81.87	354.92	6814.11	759.19 N	388.01 W	781.28	10.10
7219.00	85.77	356.86	6825.52	864.27 N	395.56 W	886.63	4.10
7314.00	87.04	356.70	6831.48	958.94 N	400.88 W	981.44	1.35
7408.00	88.80	357.52	6834.89	1052.75 N	405.62 W	1075.37	2.07
7503.00	90.86	358.59	6835.17	1147.69 N	408.84 W	1170.33	2.44
7598.00	91.54	358.41	6833.18	1242.63 N	411.33 W	1265.25	0.74
7693.00	89.01	358.02	6832.72	1337.58 N	414.29 W	1360.20	2.69
7786.00	89.07	357.25	6834.28	1430.49 N	418.13 W	1453.17	0.83
7880.00	89.23	357.39	6835.68	1524.37 N	422.52 W	1547.15	0.23
7974.00	90.77	358.94	6835.68	1618.32 N	425.53 W	1641.11	2.32

8066.00	90.89	359.25	6834.34	1710.30 N	426.99 W	1733.01	0.36
8158.00	91.48	359.46	6832.44	1802.27 N	428.02 W	1824.87	0.68
8251.00	87.17	359.05	6833.54	1895.23 N	429.23 W	1917.74	4.66
8344.00	87.69	358.66	6837.71	1988.12 N	431.09 W	2010.57	0.70
8436.00	87.90	359.69	6841.25	2080.04 N	432.41 W	2102.40	1.14
8527.00	88.83	0.58	6843.84	2171.00 N	432.20 W	2193.18	1.41
8619.00	90.83	1.31	6844.12	2262.99 N	430.68 W	2284.90	2.31
8712.00	91.45	0.77	6842.27	2355.95 N	428.99 W	2377.60	0.88
8804.00	92.87	0.68	6838.80	2447.88 N	427.83 W	2469.28	1.55
8897.00	91.08	359.88	6835.59	2540.82 N	427.37 W	2562.02	2.11
8990.00	88.98	0.26	6835.54	2633.81 N	427.26 W	2654.84	2.29
9083.00	88.86	359.18	6837.30	2726.79 N	427.71 W	2747.68	1.17
9176.00	88.43	358.39	6839.50	2819.74 N	429.69 W	2840.58	0.97
9269.00	89.26	359.16	6841.37	2912.70 N	431.67 W	2933.49	1.22
9362.00	89.29	356.86	6842.55	3005.63 N	434.90 W	3026.44	2.47
9454.00	89.82	355.53	6843.26	3097.42 N	441.01 W	3118.44	1.56
9546.00	89.63	357.76	6843.70	3189.26 N	446.39 W	3210.43	2.43
9641.00	90.06	358.97	6843.96	3284.22 N	449.10 W	3305.38	1.35
9736.00	90.89	358.48	6843.17	3379.19 N	451.22 W	3400.31	1.01
9831.00	90.40	359.96	6842.10	3474.17 N	452.51 W	3495.19	1.64
9926.00	89.88	359.80	6841.87	3569.17 N	452.71 W	3590.03	0.57
10020.00	90.68	1.44	6841.41	3663.16 N	451.69 W	3683.78	1.94
10115.00	91.51	1.62	6839.60	3758.11 N	449.15 W	3778.40	0.89
10210.00	90.31	2.80	6838.09	3853.02 N	445.49 W	3872.92	1.77
10305.00	87.81	2.40	6839.65	3947.90 N	441.18 W	3967.37	2.67
10400.00	87.63	1.86	6843.43	4042.76 N	437.65 W	4061.84	0.60
10494.00	89.01	1.58	6846.18	4136.68 N	434.83 W	4155.41	1.50
10589.00	86.39	0.64	6849.99	4231.57 N	433.00 W	4250.02	2.93
10684.00	87.53	359.86	6855.03	4326.44 N	432.58 W	4344.69	1.45
10779.00	89.88	0.61	6857.18	4421.41 N	432.19 W	4439.46	2.60
10874.00	88.98	358.30	6858.13	4516.39 N	433.10 W	4534.32	2.61
10969.00	89.35	358.33	6859.51	4611.34 N	435.89 W	4629.27	0.39
11064.00	93.52	357.68	6857.13	4706.23 N	439.19 W	4724.18	4.44
11159.00	92.81	357.85	6851.89	4801.01 N	442.89 W	4819.02	0.77
11254.00	92.25	357.28	6847.69	4895.83 N	446.93 W	4913.91	0.84
11349.00	91.51	358.77	6844.58	4990.72 N	450.20 W	5008.82	1.75
11443.00	89.69	358.91	6843.59	5084.69 N	452.10 W	5102.73	1.94
11538.00	89.26	358.58	6844.46	5179.67 N	454.18 W	5197.66	0.57
11633.00	89.35	359.16	6845.61	5274.64 N	456.05 W	5292.57	0.62
11728.00	89.51	359.78	6846.56	5369.63 N	456.93 W	5387.44	0.67
11823.00	89.20	359.80	6847.63	5464.62 N	457.28 W	5482.28	0.33
11918.00	90.65	359.76	6847.75	5559.62 N	457.65 W	5577.13	1.53
12013.00	88.25	359.46	6848.67	5654.61 N	458.29 W	5671.98	2.55
12108.00	89.23	359.69	6850.75	5749.58 N	459.00 W	5766.82	1.06
12203.00	86.58	357.72	6854.23	5844.48 N	461.14 W	5861.67	3.47
12297.00	87.35	358.23	6859.20	5938.29 N	464.46 W	5955.51	0.98
12392.00	87.59	359.19	6863.40	6033.17 N	466.59 W	6050.35	1.04
12487.00	88.15	359.83	6866.93	6128.10 N	467.41 W	6145.15	0.89
12582.00	90.22	0.53	6868.28	6223.08 N	467.11 W	6239.95	2.30
12677.00	90.09	0.66	6868.02	6318.08 N	466.12 W	6334.71	0.19
12772.00	92.34	0.64	6866.01	6413.04 N	465.04 W	6429.43	2.37
12867.00	90.43	358.15	6863.71	6508.00 N	466.05 W	6524.28	3.30
12961.00	91.23	358.49	6862.35	6601.95 N	468.80 W	6618.22	0.92
13056.00	91.57	358.69	6860.03	6696.89 N	471.14 W	6713.13	0.42
13151.00	91.45	358.13	6857.53	6791.82 N	473.78 W	6808.05	0.60
13245.00	90.34	357.29	6856.06	6885.73 N	477.53 W	6902.01	1.48
13340.00	89.78	357.40	6855.96	6980.63 N	481.93 W	6997.00	0.60
13435.00	90.77	2.56	6855.50	7075.60 N	481.97 W	7091.79	5.53
13530.00	88.70	2.26	6855.94	7170.51 N	477.97 W	7186.29	2.20
13625.00	90.37	2.75	6856.71	7265.41 N	473.82 W	7280.77	1.83
13719.00	90.43	2.95	6856.06	7359.29 N	469.15 W	7374.19	0.22
13815.00	89.14	359.49	6856.42	7455.25 N	467.10 W	7469.85	3.85
13910.00	89.85	358.78	6857.25	7550.23 N	468.54 W	7564.75	1.06
14005.00	90.15	358.42	6857.25	7645.21 N	470.86 W	7659.69	0.49
14099.00	91.48	357.46	6855.92	7739.13 N	474.24 W	7753.65	1.74
14194.00	92.15	357.35	6852.91	7833.99 N	478.53 W	7848.59	0.71
14289.00	92.99	357.23	6848.65	7928.78 N	483.02 W	7943.48	0.89
14382.00	92.31	356.17	6844.35	8021.53 N	488.37 W	8036.38	1.35
14440.00	92.31	356.17	6842.01	8079.35 N	492.24 W	8094.33	0.00

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 356.53 DEGREES (GRID)  
A TOTAL CORRECTION OF 7.72 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED

HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.  
HORIZONTAL DISPLACEMENT(CLOSURE) AT 14440.00 FEET  
IS 8094.33 FEET ALONG 356.51 DEGREES (GRID)

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