Country : USA
Field : Wattenburg
Location : Lat: 40° 42' 59.33" North
Long: 103° 52' 22.26" West
Well : Greyson LD28-780
Company : Noble Energy
Rig : H&P 343

Powered by INSITE™

1 : 600 / 1 : 240

HALLIBURTON | Sperry Drilling

PCG Pressure Case Gamma
PCG Pressure Case Directional

Company : Noble Energy
Rig : H&P 343
Well : Greyson LD28-780
Field : Wattenburg
Country : USA
API Number : 05-123-41584

LOCATION
Latitude : 40° 42' 59.33" North
Longitude : 103° 52' 22.26" West
UTM Easting = 3,451,037.148 usft
UTM Northing = 1,507,996.149 usft

Other Services
Directional Drilling

Permanent Datum : Ground Level   Elevation : 4855.00 ft
Log Measured From : Drill Floor   24.00 ft Above Permanent Datum
Drilling Measured From : Drill Floor

TVD LOG

Elev. KB N/A
DF 4879.00 ft
GL 4855.00 ft
WD N/A

Depth Logged : 1,128.99 ft To 5,829.64 ft
Date Logged : 24-Aug-15 To 26-Aug-15
Total Depth MD : 6,355.00 ft TVD : 5,829.64 ft
Spud Date : 24-Aug-15

Unit No. : 11610115
Job No. : CA-XX-0902595941
Plot Type : Final
Plot Date : 26-Aug-15

Run No.	Borehole Record (TVD) Size	From	To	Casing Record (TVD) Size	Weight	From	To
0100	8.750 in	1,128.99 ft	5,829.64 ft	9.625 in	36.60 lbpf	SURFACE	1,118.99 ft

WELL INFORMATION

MWD Run Number	100				
Date run completed	26-Aug-15				
Rig Bit Number	0100				
Bit Size (in)	8.750				
Tool Nominal OD (in)	6.750				
Log Start Depth (MD, ft)	1,129.00				
Log End Depth (MD, ft)	6,355.00				
Drill or Wipe	Drill				
Drill/Wipe Start Date and Time	25-Aug-15 01:50				
Drill/Wipe End Date and Time	25-Aug-15 21:50				
Min Inc (deg) @ Depth (MD, ft)	0.35 @ 1,202.00				
Max Inc (deg) @ Depth (MD, ft)	86.61 @ 6,291.00				
Bit TFA(in2) / Bit Type	0.98 / PDC				
Flow Rate (gpm)	578.21				
Max AV (fpm) / CV (fpm) @ MWD	225.70 / 414				
Fluid Type	Native/Spud Mud				
Density (ppg) / Viscosity (spqt)	10.20 / 27.00				
Filtrate CL (ppm)	1,600.00				
pH / Fluid Loss (mptm)	9.90 / 77				
PV (cP) / YP (lhf2)	2 / 3.00				
% Solids / % Sand	12.2 / 0.30				
% Oil / Oil:Water Ratio	N/A / N/A				
Rm @ Measured Temp (degF)	N/A @ N/A				
Rmf @ Measured Temp (degF)	N/A @ N/A				
Rmc @ Measured Temp (degF)	N/A @ N/A				

Max Tool Temp (degF) / Source	175.21 / PCM				
Rm @ Max Tool Temp (degF)	N/A @ 175.21				
Lead MWD Engineer	Cody Wurdeman				
Customer Representative	Cliff Kester				

SENSOR INFORMATION

Downhole Processor Information

Tool Type	PCM				
Software Version	5.93				
Sub Serial Number	11303511				
Insert Serial Number	11619985				
Date and Time Initialized	24-Aug-15 14:00				
Date and Time Read	26-Aug-15 02:49				
ECMB SW Version	N/A				

Directional Sensor Information

Tool Type	PCDC				
Distance From Bit (ft)	64.00				
Software Version	6.33				
Sub Serial Number	11303511				
Sonde Serial Number	10859920				
Sensor ID Number	N/A				
Toolface Offset (deg)	253.00				

Gamma Ray Sensor Information

Tool Type	PCG				
Distance From Bit (ft)	57.32				
Recorded Sample Period (sec)	10				
Software Version	8.15				
Sub Serial Number	11303511				
Insert/Sonde Serial Number	11680918				

REMARKS

1. All depths are calibrated to driller's pipe tally and are total vertical depth from the drill floor.
2. No depth corrections have been made for pipe stretch or compression.
3. All data presented is recorded (memory data) unless otherwise stated.
4. Environmental parameters used in gamma and resistance processing:
Hole Size: 8.75"
Mud Density: 9.9-11.0
5. The following smoothing parameters have been applied to the data:
Interval: 0.5 ft
Coercion Distance: 1.2 ft (ROPA)
Interval: 0.5 ft
Coercion Distance: 0.6 ft (Gamma Ray)

WARRANTY

TVD Detail 1:600 Scale

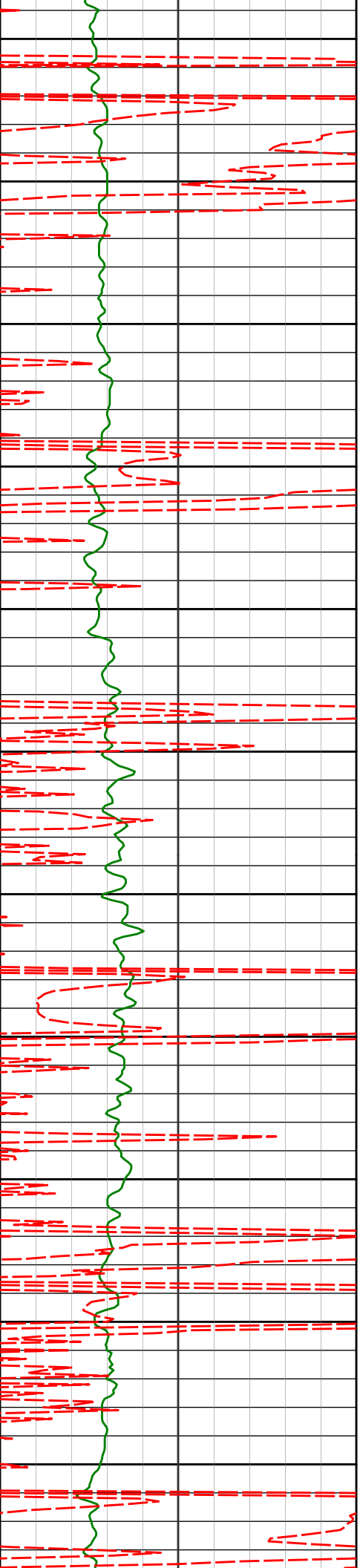
PCG Gamma Ray BCorr
PGRC
0 api 300

Avg Rate of Penetration
ROPA
500 feet per hr 0

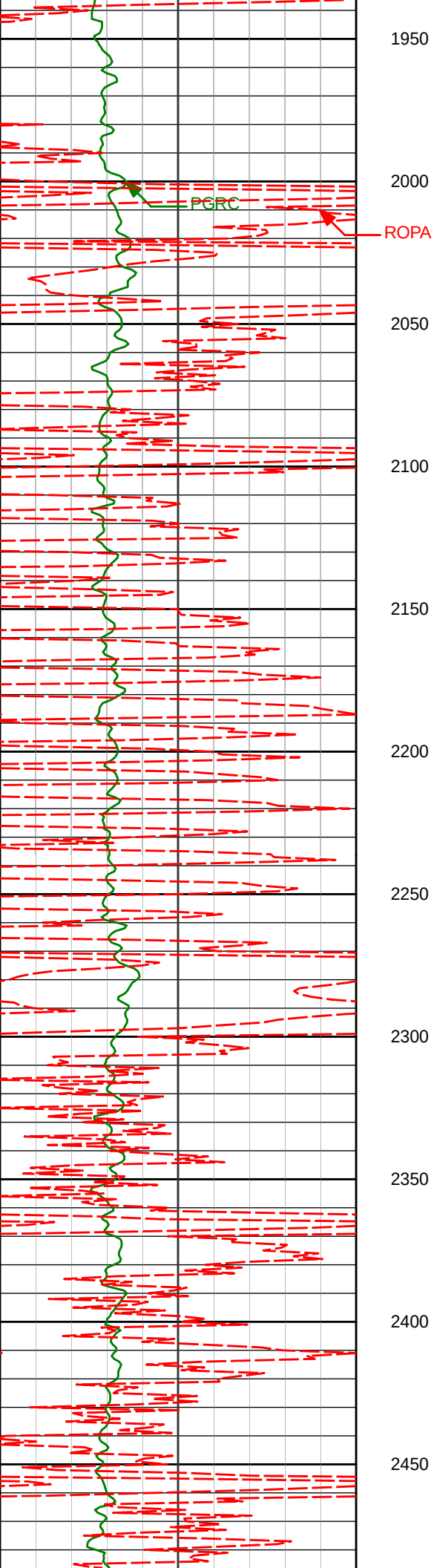
Depth TVD ft

Depth	Inc	Azi	TVD	V.S.	Temp
Casing Shoe @ 1119'					
1109'	0.13°	222.16°	1108.49'	-0.55'	
1118'	0.29°	241.30°	1117.49'	-0.56'	90.19°F
Run 100					
1202'	0.35°	250.82°	1201.99'	-0.65'	92.26°F
					92.26°F
					92.80°F
1386'	0.50°	275.63°	1385.98'	-0.45'	

1050
1100
1150
1200
1250
1300
1350

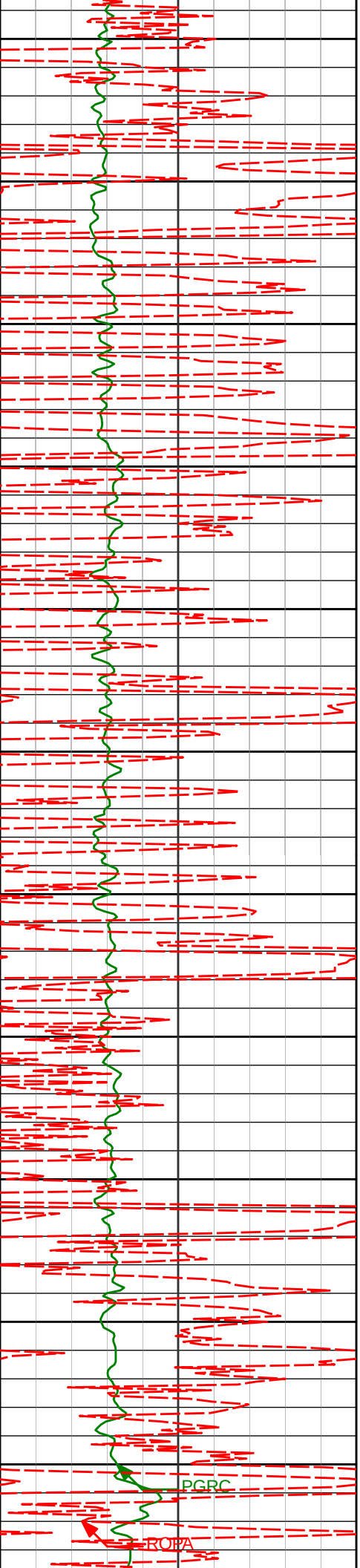


1380'	0.50°	275.63°	1380.98'	-0.45'	93.95°F
					94.33°F
1479'	3.64°	242.46°	1478.91'	-1.07'	94.33°F
					96.42°F
1572'	4.60°	226.87°	1571.68'	-3.68'	96.42°F
					96.42°F
1666'	4.37°	226.63°	1665.39'	-7.38'	98.08°F
					98.51°F
1758'	6.63°	220.18°	1756.96'	-12.33'	100.62°F
					100.62°F
1850'	7.62°	216.31°	1848.25'	-19.49'	100.62°F
					102.56°F
					102.72°F

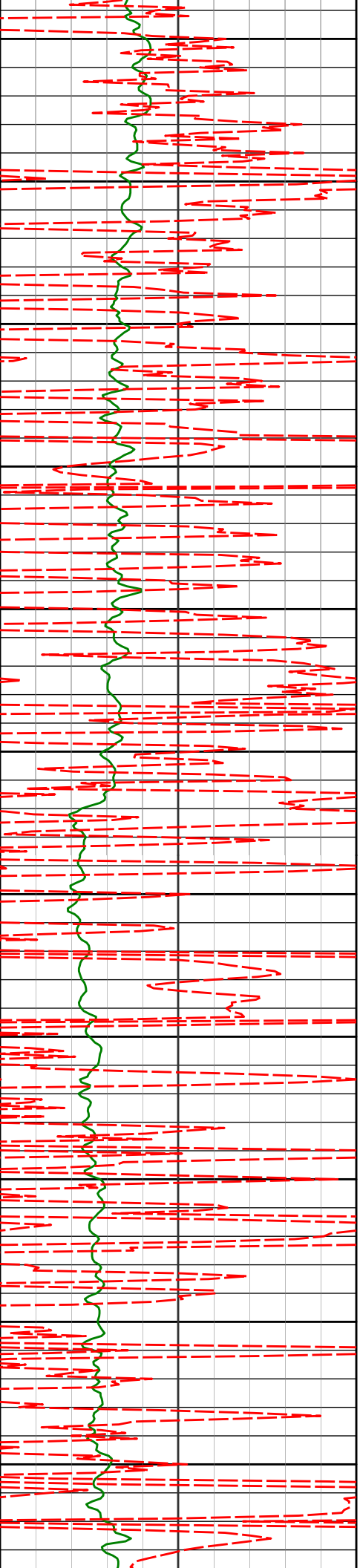


1943'	9.67°	216.84°	1940.19'	-28.55'
2034'	11.15°	215.39°	2029.69'	-39.32'
2126'	11.56°	212.35°	2119.89'	-51.70'
2219'	11.22°	208.33°	2211.06'	-65.04'
2311'	12.16°	218.58°	2301.16'	-77.78'
2404'	11.89°	215.89°	2392.12'	-90.17'
2497'	11.67°	214.76°	2483.16'	-102.79'

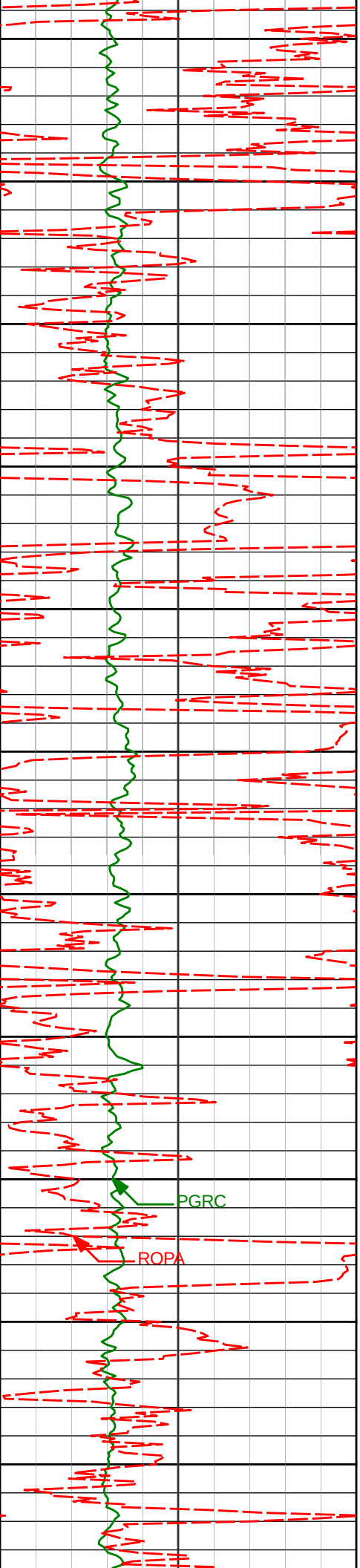
102.92°F
104.83°F
104.83°F
104.83°F
104.83°F
106.64°F
106.97°F
109.09°F
109.09°F
109.09°F
110.36°F



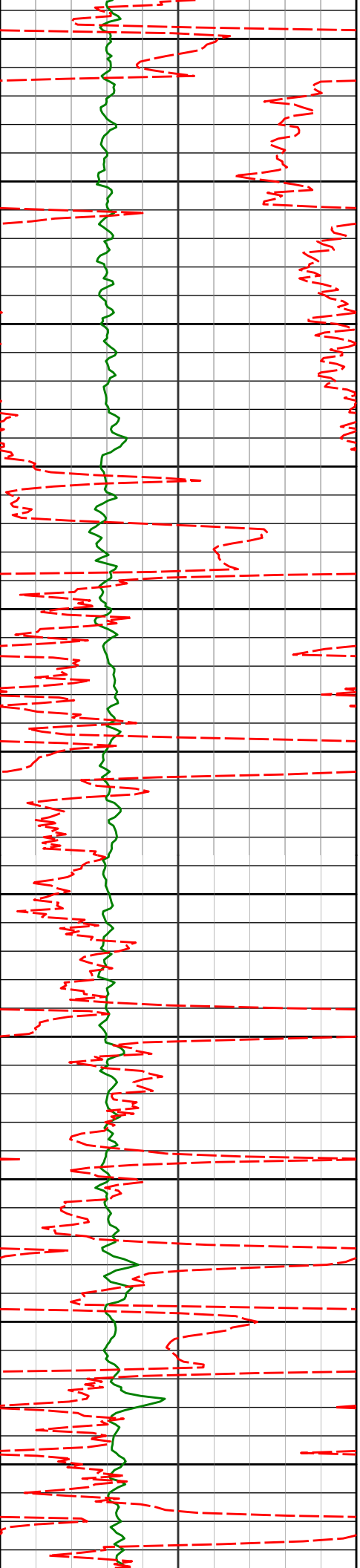
					111.24°F
2590'	13.52°	221.80°	2573.93'	-115.38'	111.24°F
					111.24°F
2682'	13.48°	220.52°	2663.38'	-127.96'	111.24°F
					113.40°F
					113.40°F
					115.56°F
2869'	13.01°	220.29°	2845.40'	-153.50'	115.56°F
					115.56°F
					115.56°F
2964'	12.35°	215.96°	2938.09'	-166.57'	117.73°F
					117.73°F
3058'	11.51°	208.36°	3030.06'	-180.21'	



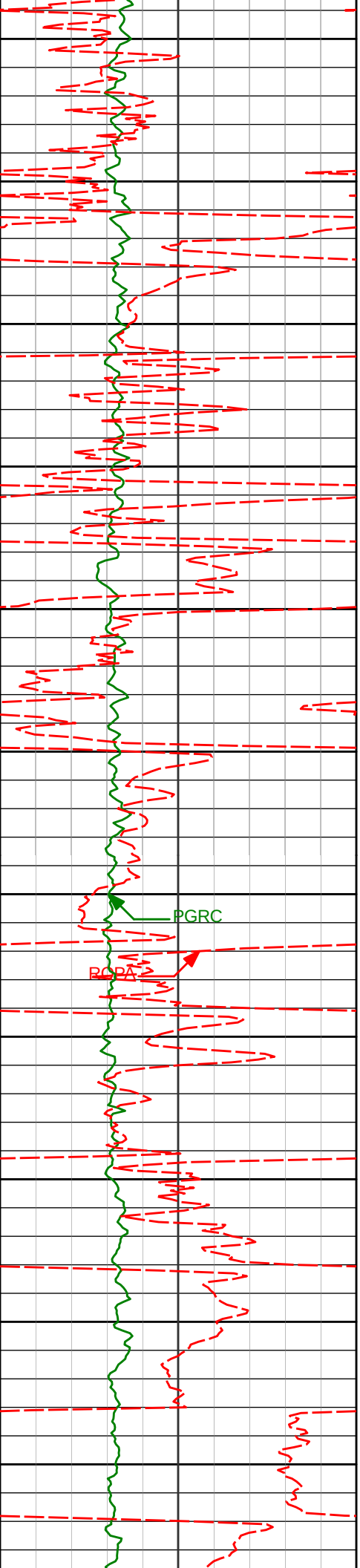
					119.91°F
					119.91°F
3153'	11.06°	204.05°	3123.23'	-194.60'	
					119.91°F
					121.64°F
3248'	12.99°	210.06°	3216.14'	-209.68'	
					122.11°F
					122.11°F
3342'	13.43°	209.75°	3307.65'	-225.41'	
					122.11°F
					124.30°F
3437'	13.47°	217.15°	3400.05'	-240.61'	
					124.30°F
					124.44°F
3532'	14.07°	217.86°	3492.33'	-254.98'	
					126.52°F
					126.52°F
3626'	13.90°	223.18°	3583.54'	-268.48'	



					126.52°F
					127.17°F
3721'	13.39°	222.75°	3675.86'	-281.03'	
					128.73°F
					129.56°F
3815'	13.01°	230.40°	3767.38'	-291.89'	
					130.96°F
					131.29°F
3910'	12.47°	229.76°	3860.04'	-301.37'	
					133.20°F
					133.20°F
4005'	11.65°	227.68°	3952.95'	-310.77'	
					133.20°F
					133.20°F
4099'	10.68°	225.68°	4045.17'	-319.94'	
					133.61°F
					135.23°F



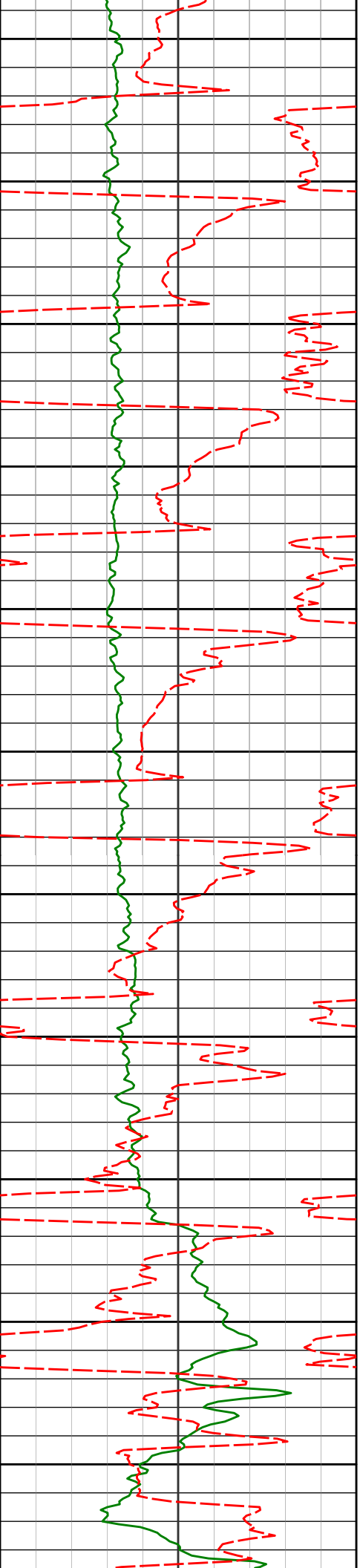
4194'	10.99°	223.94°	4138.47'	-329.46'	133.48°F
					135.45°F
4288'	11.11°	222.24°	4230.73'	-339.51'	135.45°F
					135.45°F
4383'	11.88°	221.02°	4323.82'	-350.47'	135.45°F
					135.45°F
4477'	11.10°	220.09°	4415.94'	-361.59'	135.45°F
					137.24°F
4572'	9.58°	220.11°	4509.39'	-371.83'	138.35°F
					139.87°F
4667'	9.98°	218.21°	4603.01'	-381.74'	139.96°F
					139.96°F
					139.96°F



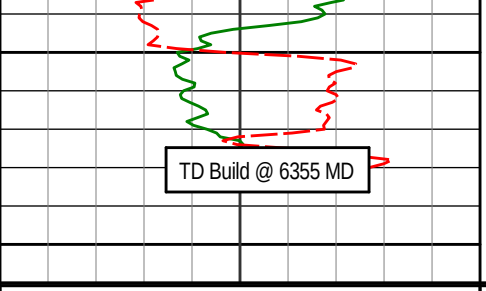
4761'	9.09°	214.15°	4695.71'	-391.89'
4856'	8.73°	223.84°	4789.57'	-400.94'
4951'	10.35°	224.45°	4883.25'	-409.48'
5045'	12.21°	227.57°	4975.44'	-418.91'
5140'	20.38°	238.18°	5066.56'	-429.20'
5234'	21.47°	255.33°	5154.44'	-434.98'

4700
4750
4800
4850
4900
4950
5000
5050
5100
5150
5200

139.96°F
139.96°F
139.96°F
141.63°F
142.25°F
142.95°F
144.65°F
146.59°F
148.42°F
149.53°F
151.29°F
152.11°F



5329'	24.69°	271.02°	5241.91'	-430.68'	153.51°F
5424'	30.68°	280.80°	5326.04'	-416.07'	154.63°F
5518'	35.00°	289.24°	5405.04'	-391.99'	156.05°F
5613'	38.01°	300.23°	5481.48'	-357.38'	157.54°F
5708'	41.07°	314.28°	5554.89'	-310.99'	158.58°F
5802'	46.88°	326.42°	5622.63'	-252.74'	159.07°F
5897'	54.26°	340.06°	5683.09'	-181.71'	160.41°F
5991'	59.84°	350.47°	5734.29'	-103.06'	161.06°F
6086'	65.74°	353.33°	5777.71'	-18.93'	163.11°F
					164.91°F
					166.40°F
					168.92°F



Depth TVD ft	Depth	Inc	Azi	TVD	V.S.	Temp
5800						171.75°F
	6180'	73.13°	352.87°	5810.71'	68.52'	
	6291'	86.61°	353.78°	5830.19'	176.87'	
5850						

Avg Rate of Penetration
ROPA
500 feet per hr 0

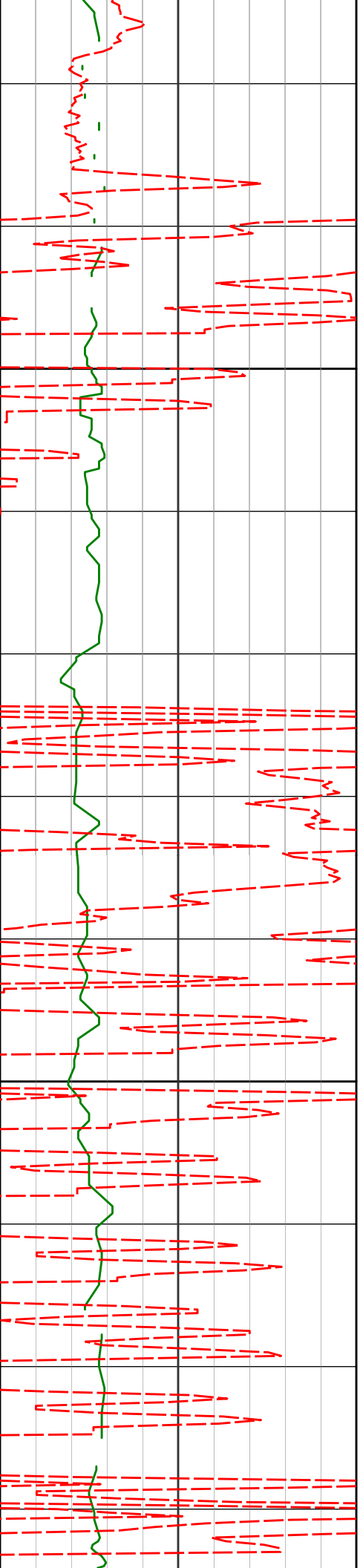
PCG Gamma Ray BCorr
PGRC
0 api 300

TVD Detail 1:240 Scale

PCG Gamma Ray BCorr
PGRC
0 api 300

Avg Rate of Penetration
ROPA
500 feet per hr 0

Depth TVD ft	Depth	Inc	Azi	TVD	V.S.	Temp
1100						
	1109'	0.13°	222.16°	1108.49'	-0.55'	
	1118'	0.29°	241.30°	1117.49'	-0.56'	
	Casing Shoe @ 1119'					90.19°F
	Run 100					



1200

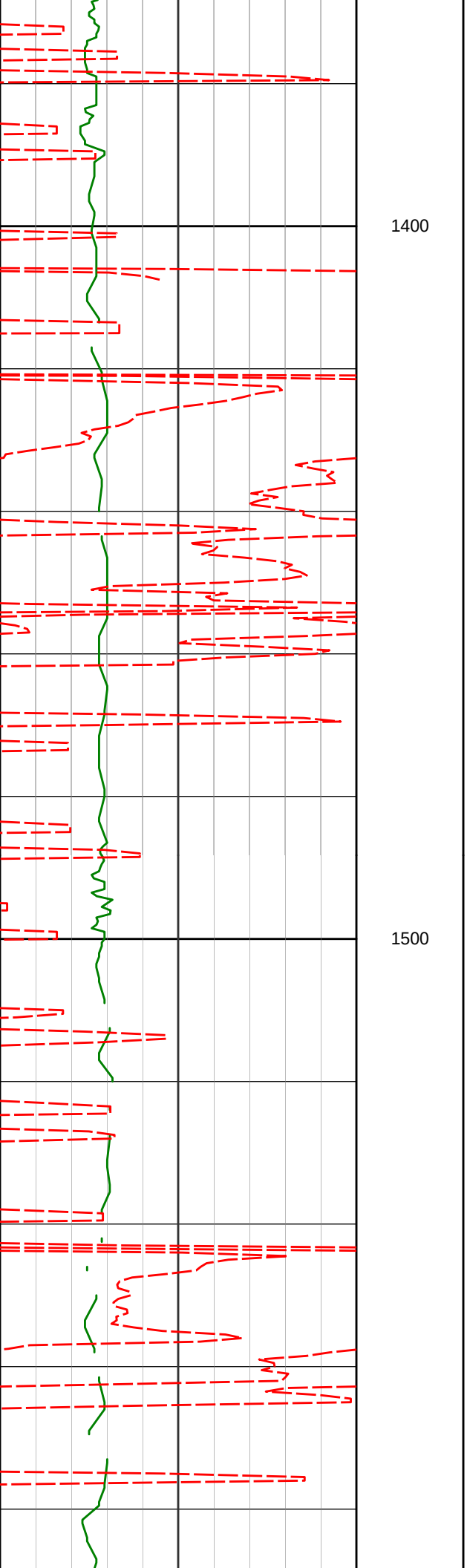
1202' 0.35° 250.82° 1201.99' -0.65'

92.26°F

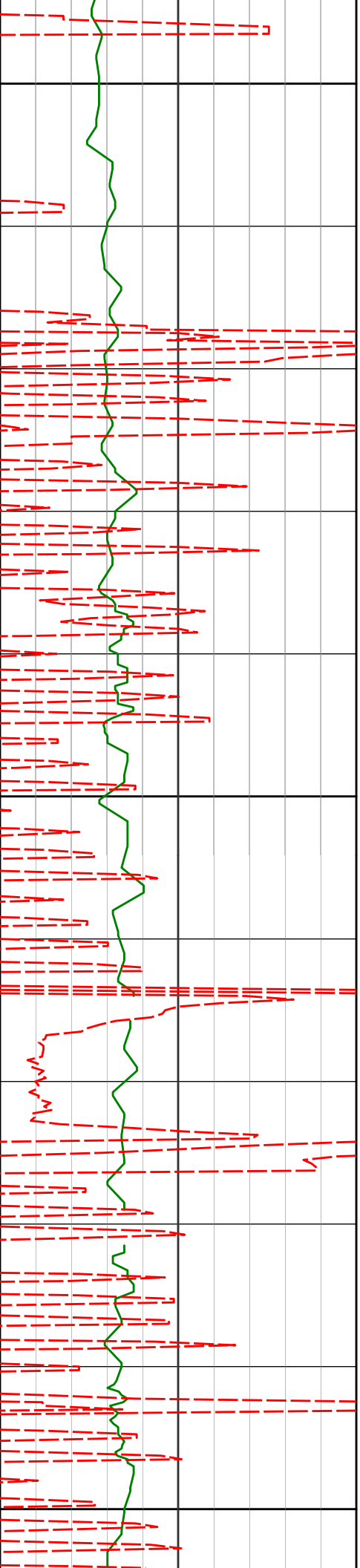
92.26°F

1300

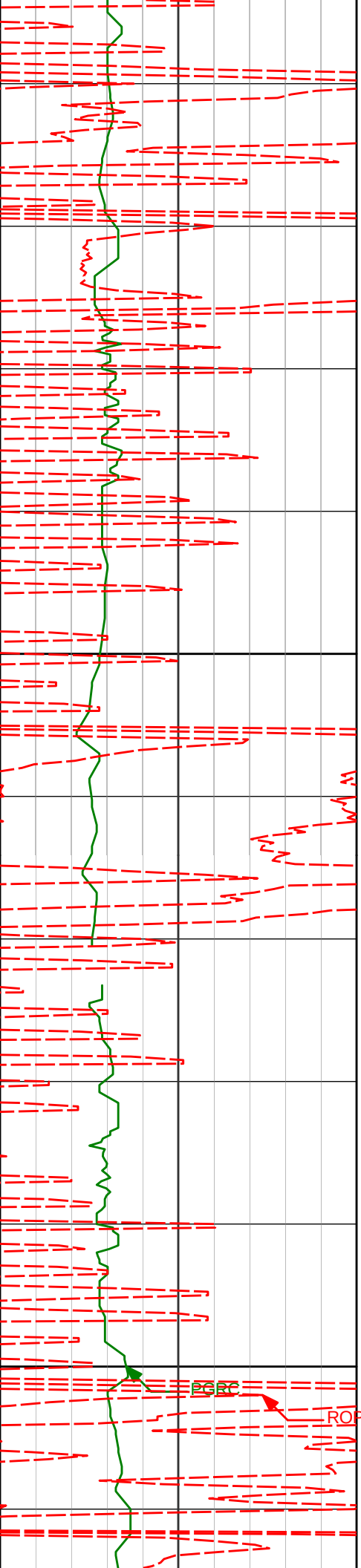
92.80°F



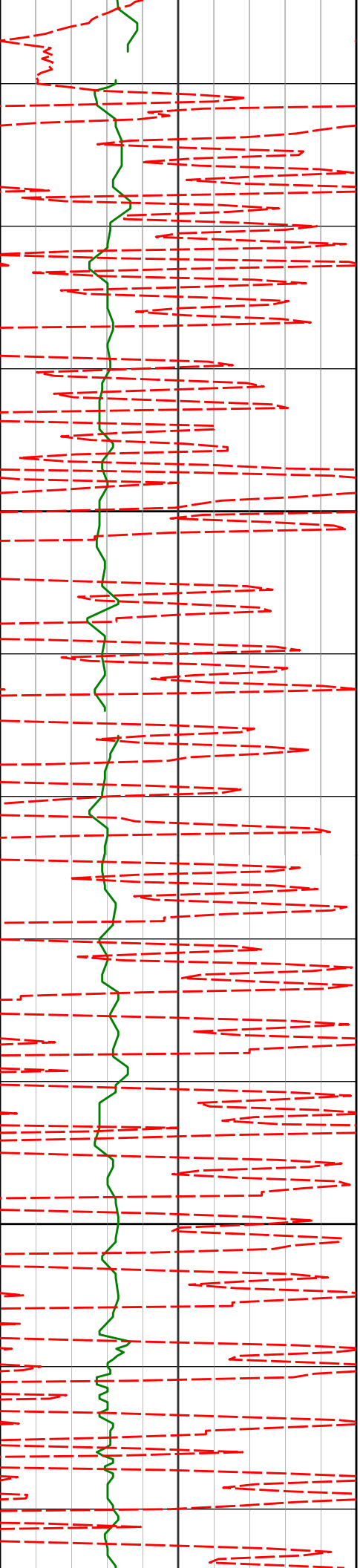
1386'	0.50°	275.63°	1385.98'	-0.45'	93.95°F
1479'	3.64°	242.46°	1478.91'	-1.07'	94.33°F
1572'	4.60°	226.87°	1571.68'	-3.68'	94.33°F
					96.42°F
					96.42°F



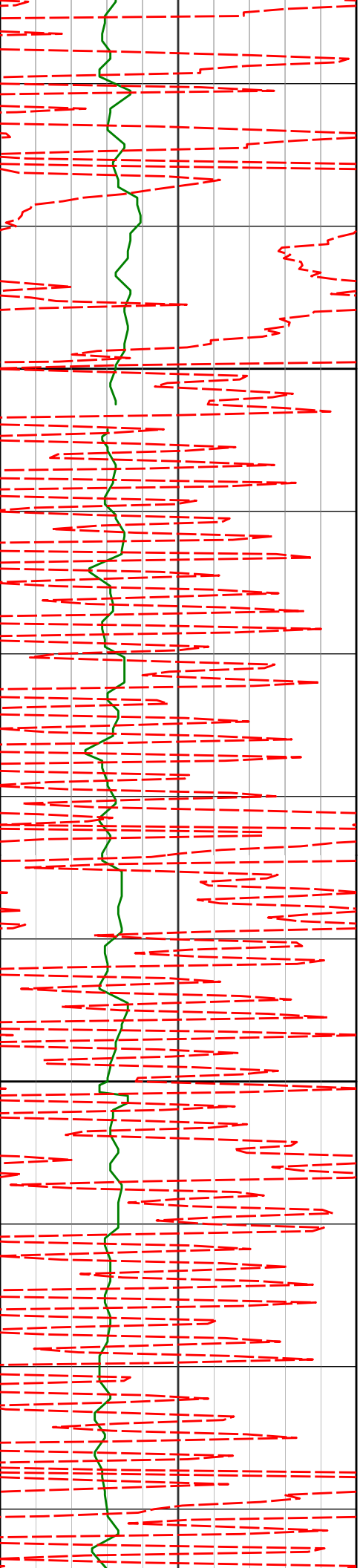
					96.42°F
1666'	4.37°	226.63°	1665.39'	-7.38'	98.08°F
					98.51°F
1758'	6.63°	220.18°	1756.96'	-12.33'	100.62°F
					100.62°F



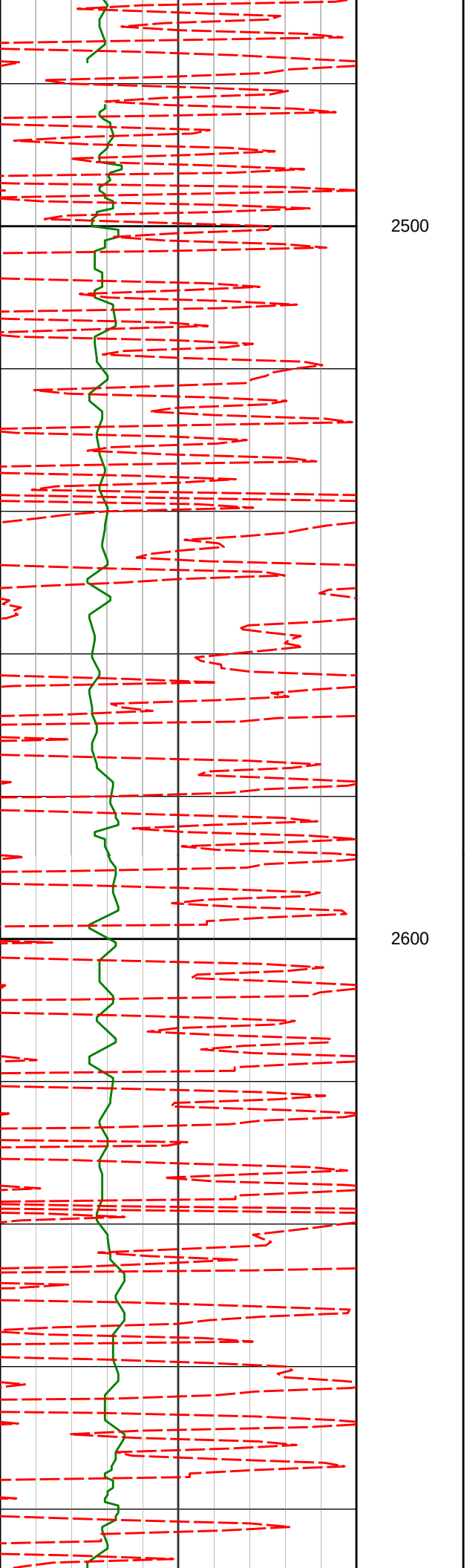
1850'	7.62°	216.31°	1848.25'	-19.49'	100.62°F
					102.56°F
1943'	9.67°	216.84°	1940.19'	-28.55'	102.72°F
					102.92°F
					104.83°F



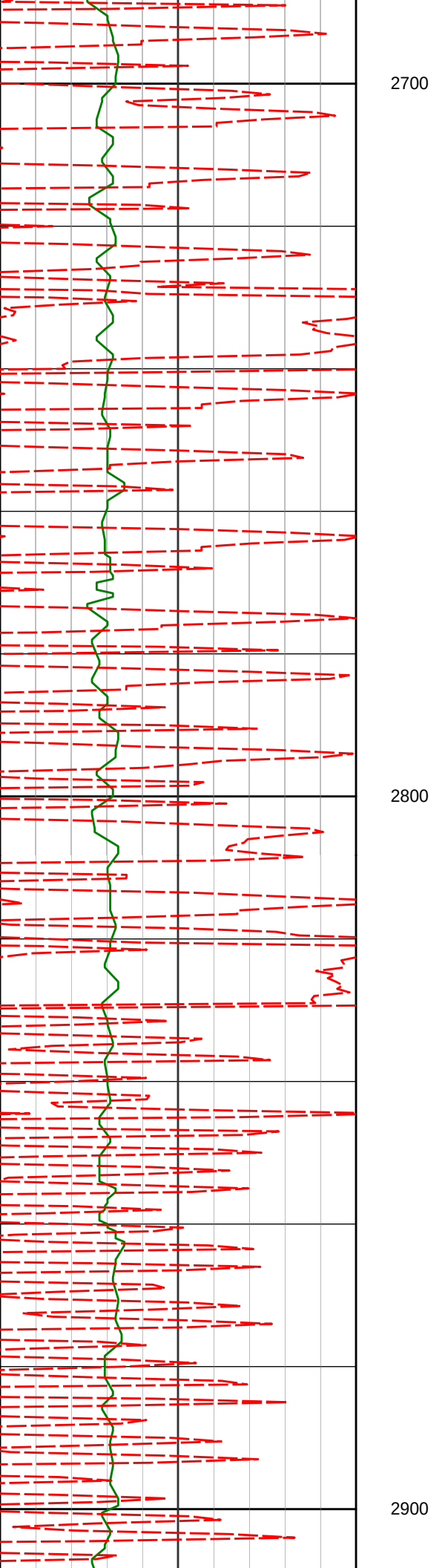
2034'	11.15°	215.39°	2029.69'	-39.32'	
					104.83°F
2126'	11.56°	212.35°	2119.89'	-51.70'	104.83°F
					104.83°F
2219'	11.22°	208.33°	2211.06'	-65.04'	106.64°F



						106.97°F
2300	2311'	12.16°	218.58°	2301.16'	-77.78'	
						109.09°F
						109.09°F
2400	2404'	11.89°	215.89°	2392.12'	-90.17'	
						109.09°F



					110.36°F
2497'	11.67°	214.76°	2483.16'	-102.79'	
					111.24°F
					111.24°F
2590'	13.52°	221.80°	2573.93'	-115.38'	
					111.24°F
					111.24°F
2682'	13.48°	220.52°	2663.38'	-127.96'	



113.40°F

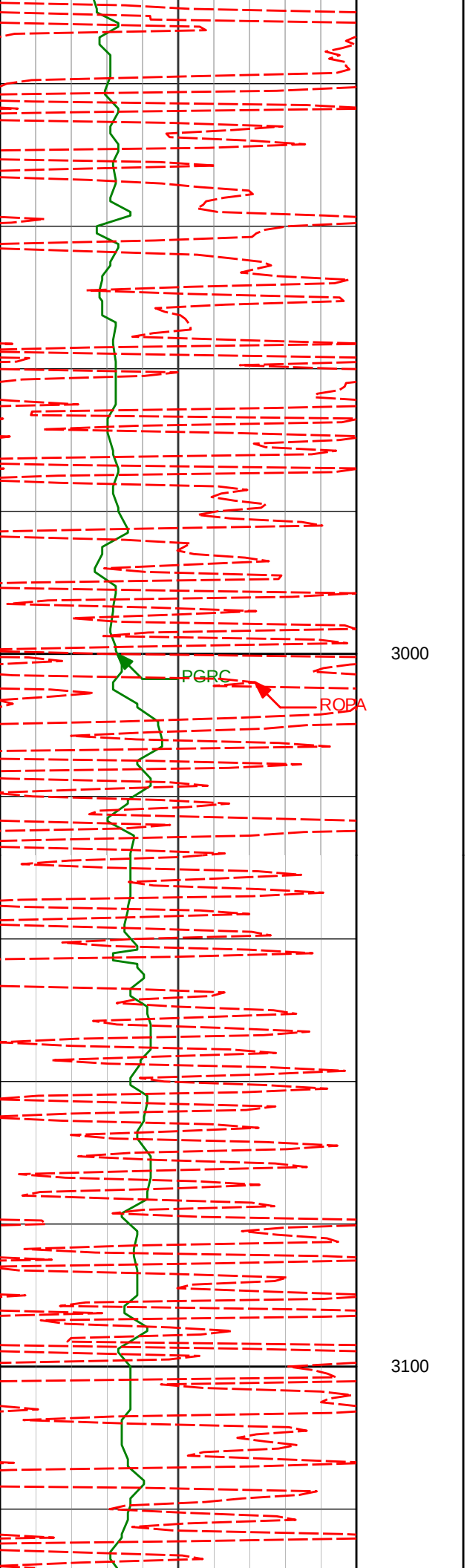
113.40°F

115.56°F

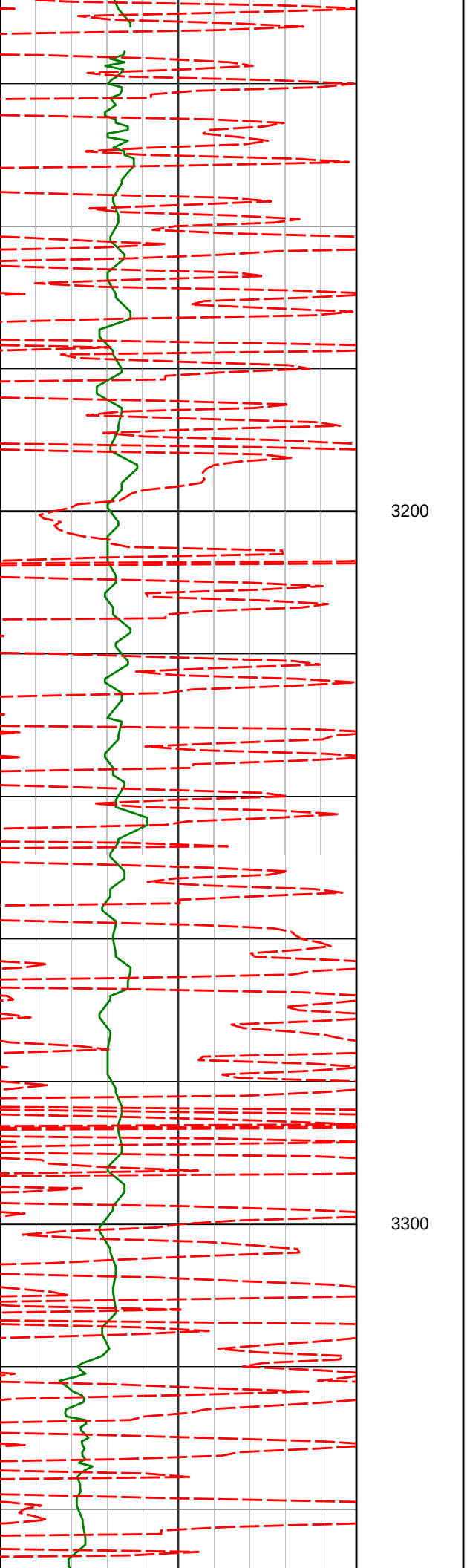
115.56°F

115.56°F

2869'	13.01°	220.29°	2845.40'	-153.50'



					115.56°F
2964'	12.35°	215.96°	2938.09'	-166.57'	
					117.73°F
					117.73°F
3058'	11.51°	208.36°	3030.06'	-180.21'	
					119.91°F
					119.91°F
3153'	11.06°	204.05°	3123.23'	-194.60'	



119.91°F

121.64°F

3200

3248' 12.99° 210.06° 3216.14' -209.68'

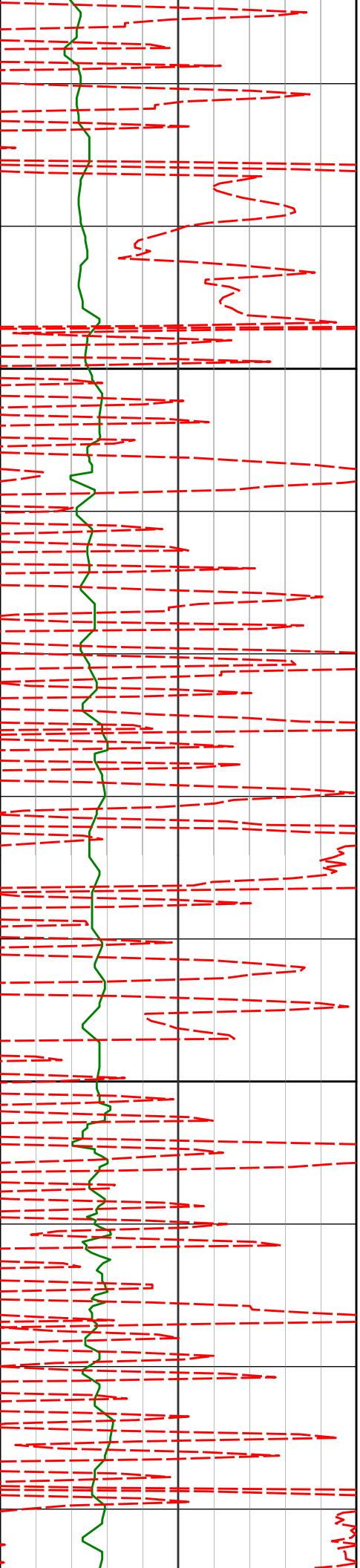
122.11°F

122.11°F

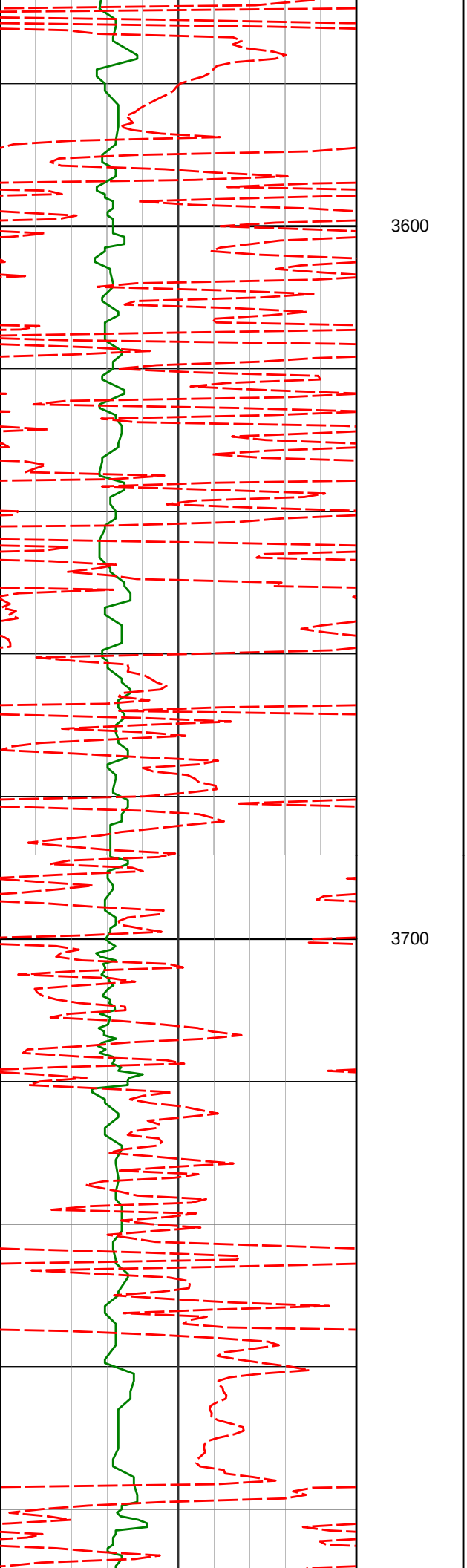
3300

3342' 13.43° 209.75° 3307.65' -225.41'

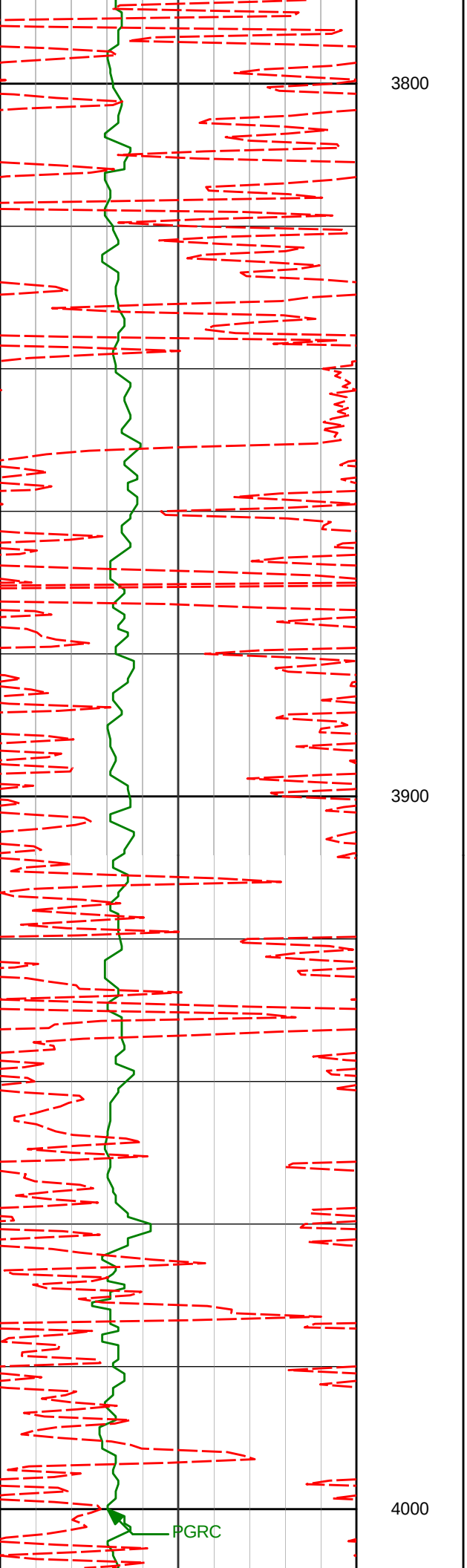
122.11°F



						124.30°F
3400	3437'	13.47°	217.15°	3400.05'	-240.61'	
						124.30°F
						124.44°F
	3532'	14.07°	217.86°	3492.33'	-254.98'	
3500						
						126.52°F
						126.52°F

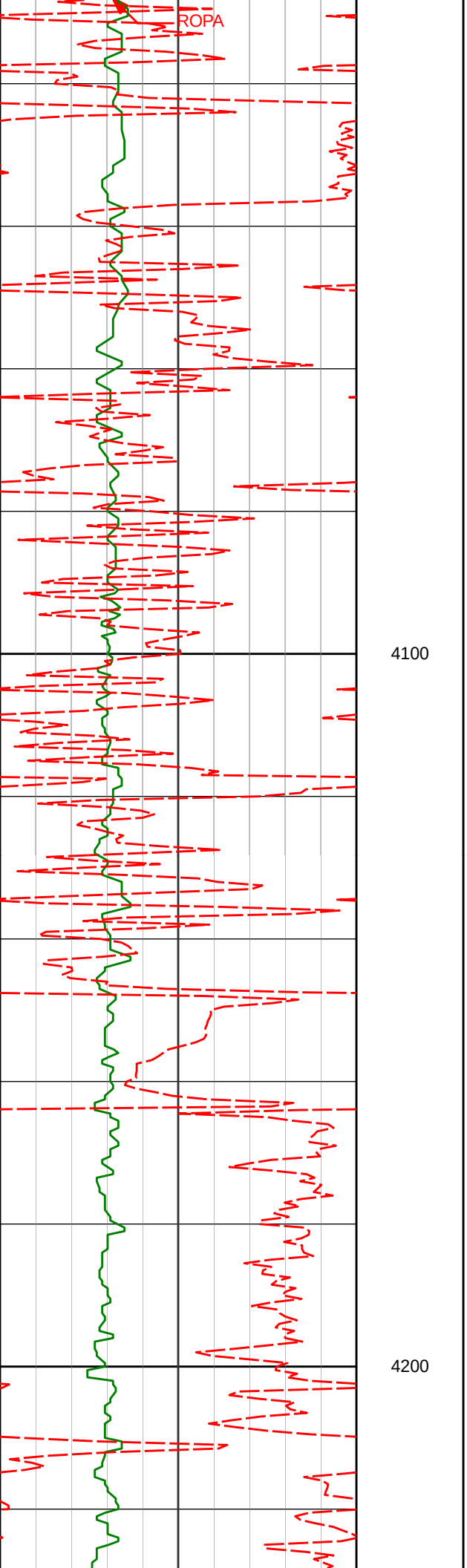


3626'	13.90°	223.18°	3583.54'	-268.48'	
3600					126.52°F
					127.17°F
3721'	13.39°	222.75°	3675.86'	-281.03'	
					128.73°F
3700					
					129.56°F
3815'	13.01°	230.40°	3767.38'	-291.89'	
					130.96°F

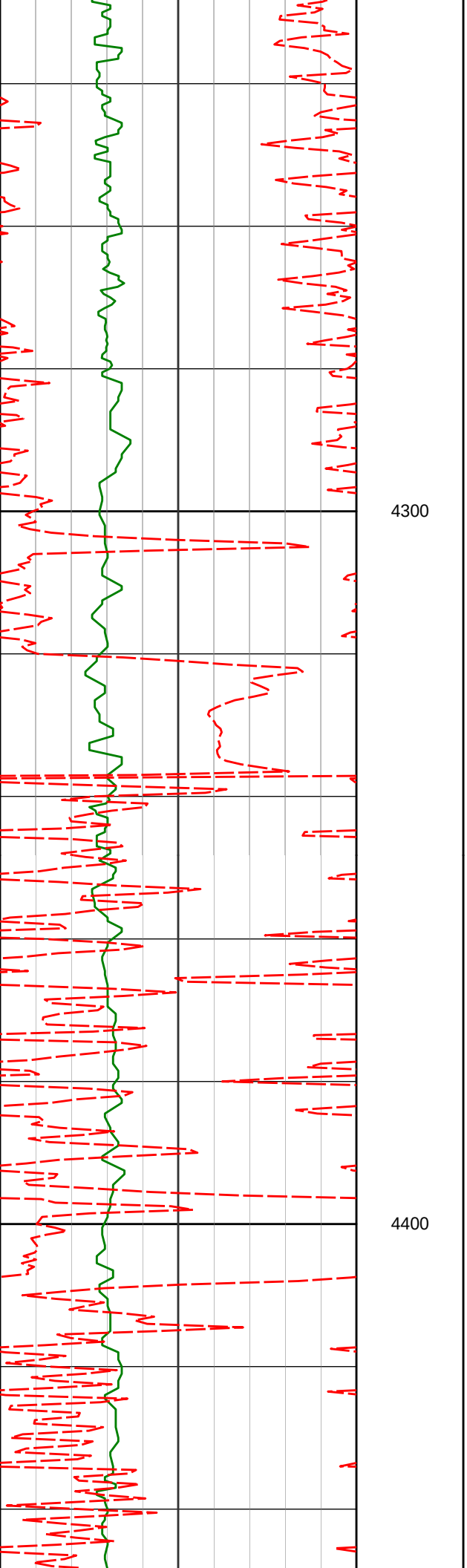


3910'	12.47°	229.76°	3860.04'	-301.37'
4005'	11.65°	227.68°	3952.95'	-310.77'

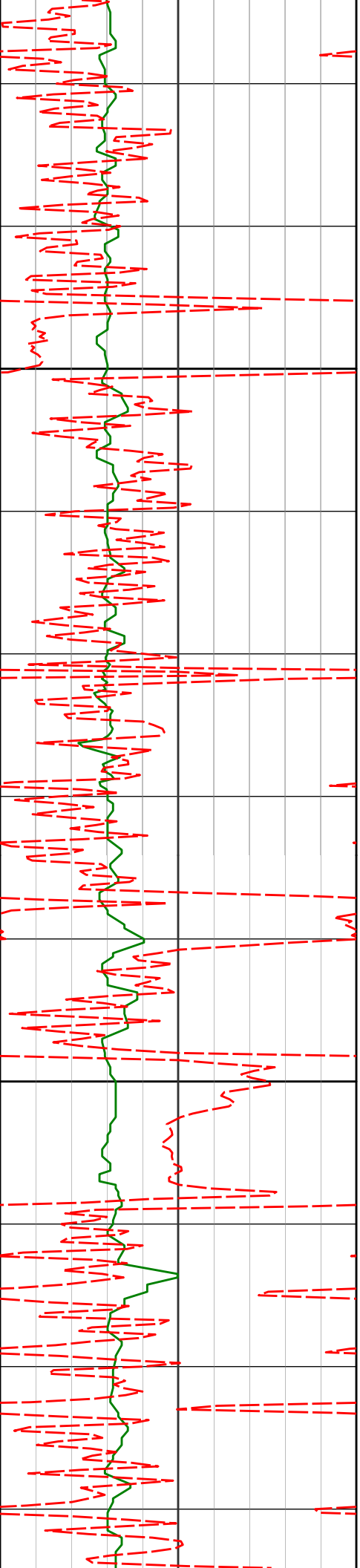
131.29°F
133.20°F
133.20°F
133.20°F
133.20°F



4099'	10.68°	225.68°	4045.17'	-319.94'	133.61°F
					135.23°F
4194'	10.99°	223.94°	4138.47'	-329.46'	133.48°F
					135.45°F



4288'	11.11°	222.24°	4230.73'	-339.51'	135.45°F
					135.45°F
4383'	11.88°	221.02°	4323.82'	-350.47'	135.45°F
					135.45°F
4477'	11.10°	220.09°	4415.94'	-361.59'	135.45°F



137.24°F

4500

138.35°F

4572'	9.58°	220.11°	4509.39'	-371.83'

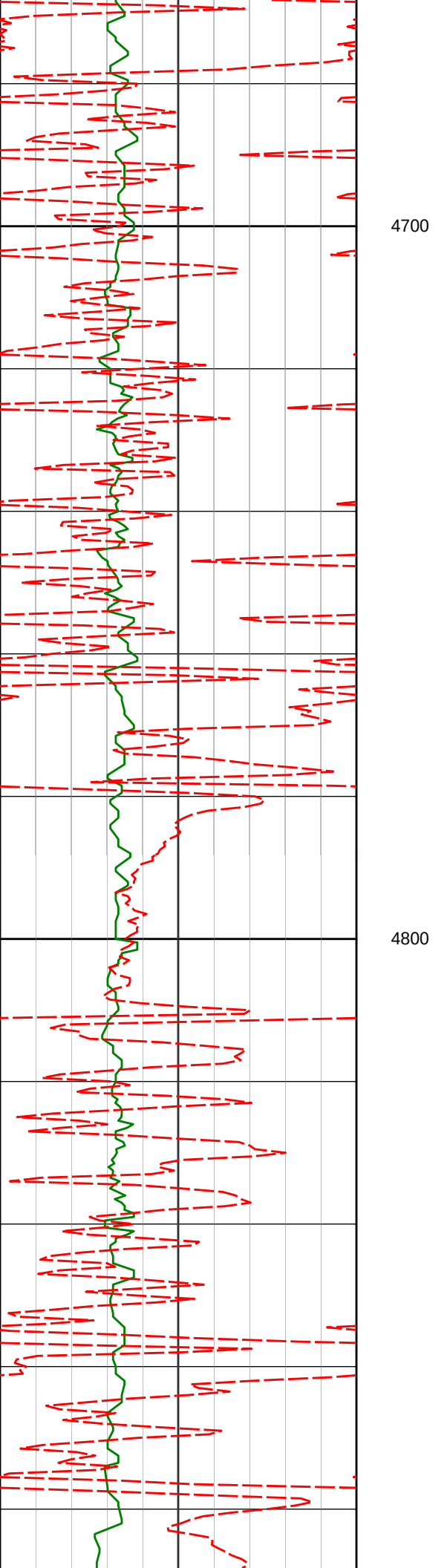
139.87°F

139.96°F

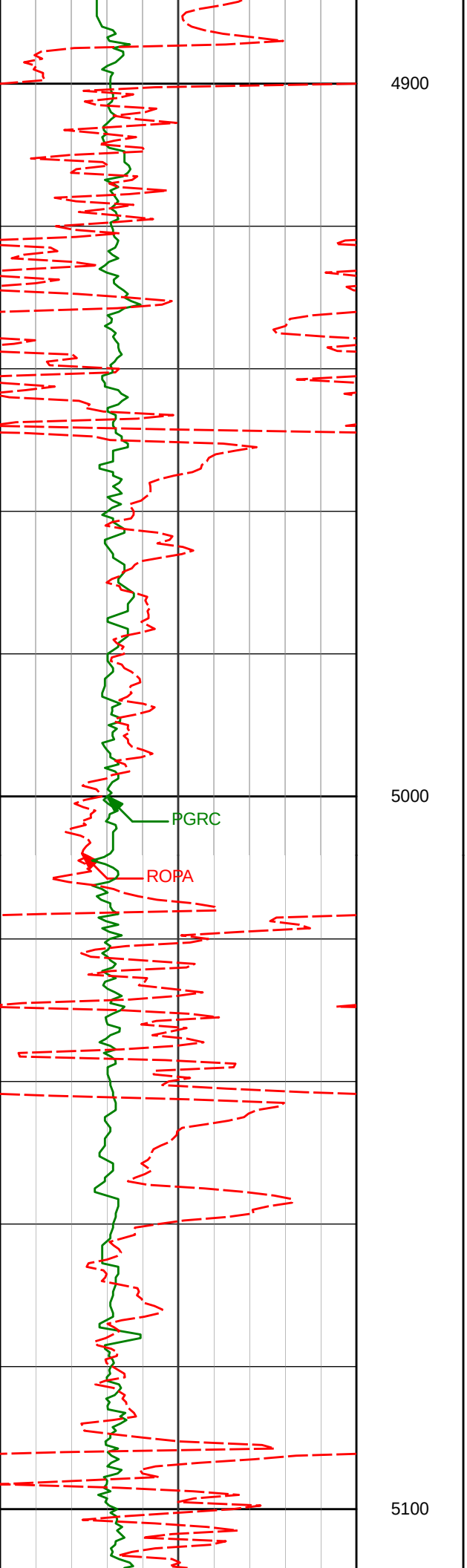
4600

4667'	9.98°	218.21°	4603.01'	-381.74'

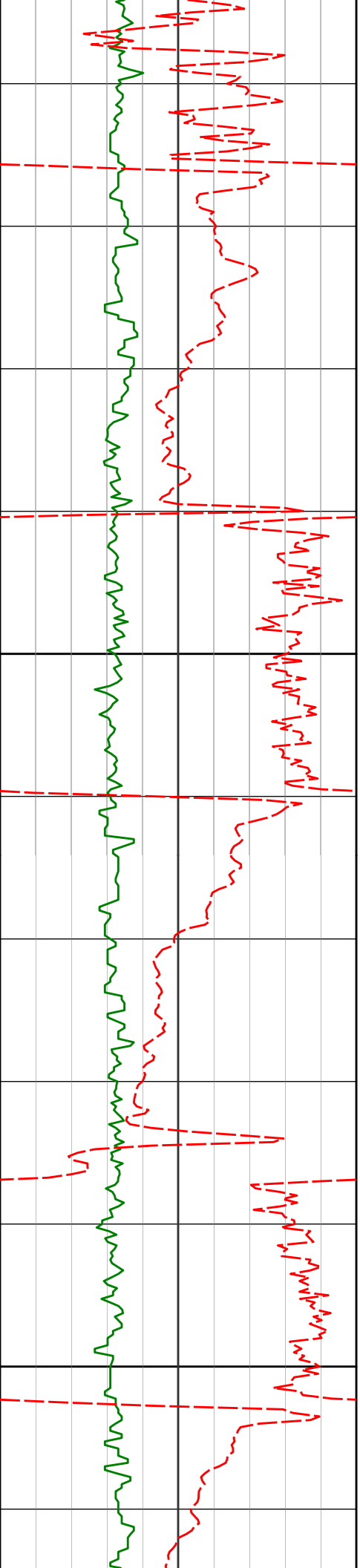
139.96°F



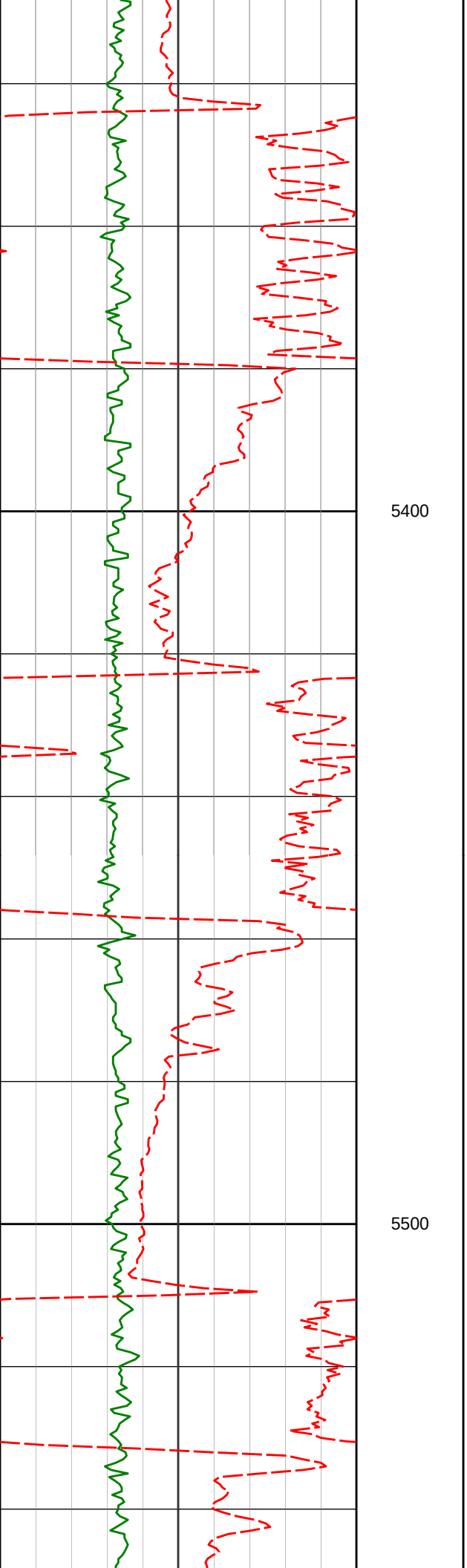
					139.96°F
4761'	9.09°	214.15°	4695.71'	-391.89'	
					139.96°F
					139.96°F
4856'	8.73°	223.84°	4789.57'	-400.94'	
					139.96°F
					141.63°F
4951'	10.35°	224.45°	4883.25'	-409.48'	



					142.25°F
					142.95°F
5045'	12.21°	227.57°	4975.44'	-418.91'	
					144.65°F
					146.59°F
5140'	20.38°	238.18°	5066.56'	-429.20'	
					148.42°F



					149.53°F
5234'	21.47°	255.33°	5154.44'	-434.98'	
					151.29°F
					152.11°F
5329'	24.69°	271.02°	5241.91'	-430.68'	
					153.51°F
					154.63°F
5424'	30.68°	280.80°	5326.04'	-416.07'	



156.05°F

5400

157.54°F

5518' 35.00° 289.24° 5405.04' -391.99'

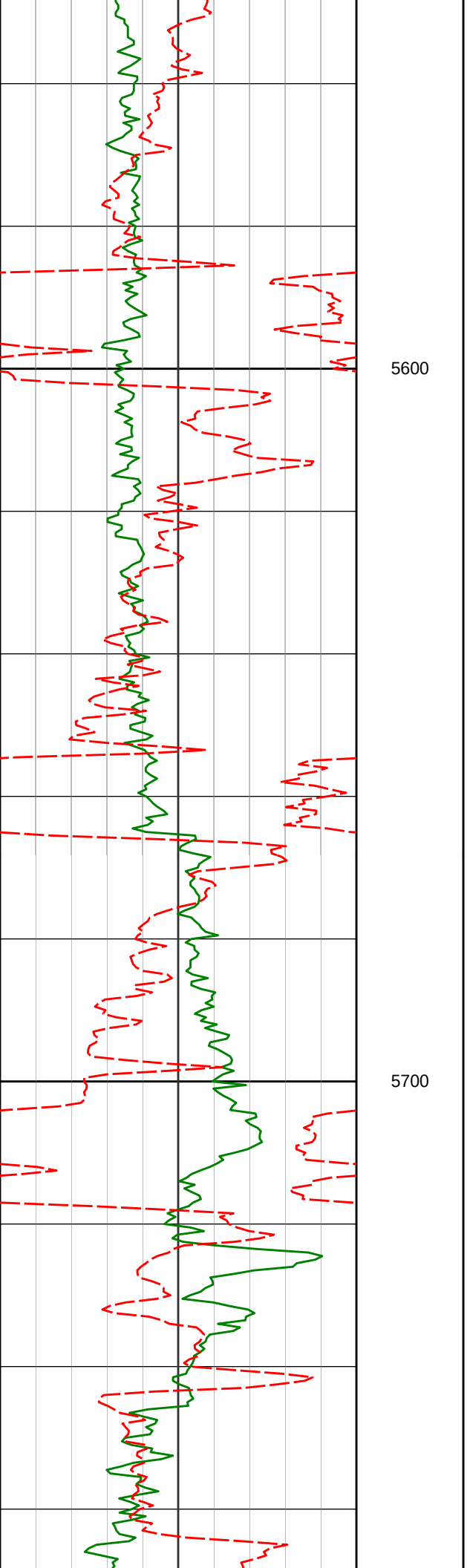
158.58°F

5613' 38.01° 300.23° 5481.48' -357.38'

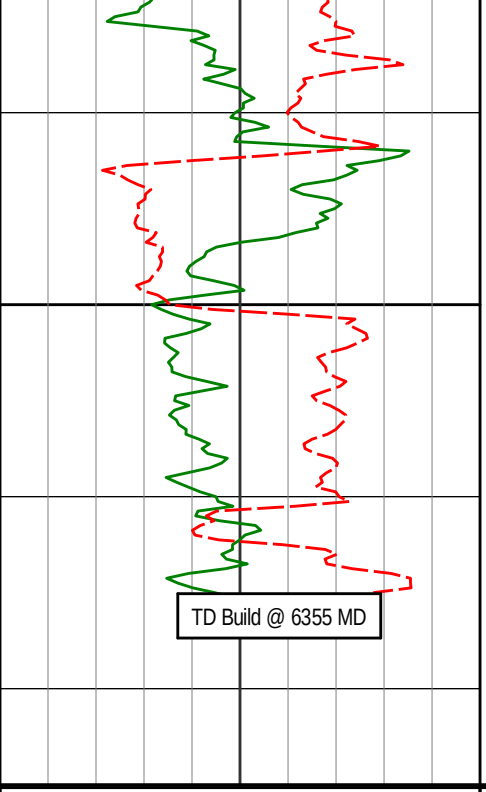
159.07°F

5500

160.41°F



5708'	41.07°	314.28°	5554.89'	-310.99'	
					161.06°F
5802'	46.88°	326.42°	5622.63'	-252.74'	
					163.11°F
					164.91°F
5897'	54.26°	340.06°	5683.09'	-181.71'	
					166.40°F
5991'	59.84°	350.47°	5734.29'	-103.06'	
					168.92°F



6086'	65.74°	353.33°	5777.71'	-18.93'		
5800						171.75°F
6180'	73.13°	352.87°	5810.71'	68.52'		
6291'	86.61°	353.78°	5830.19'	176.87'		

Avg Rate of Penetration
ROPA
500 feet per hr 0

PCG Gamma Ray BCorr
PGRC
0 api 300

Depth
TVD
ft

Depth	Inc	Azi	TVD	V.S.	Temp

HALLIBURTON

DIRECTIONAL SURVEY REPORT

Noble Energy
Greyson LD28-780
Wattenburg
Weld Colorado
USA
CA-XX-0902595941

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
91.00	0.17	125.79	91.00	0.08 S	0.11 E	-0.10	0.18
183.50	0.44	178.66	183.50	0.51 S	0.23 E	-0.55	0.39
276.00	0.48	129.17	276.00	1.11 S	0.53 E	-1.20	0.42
368.50	0.14	240.80	368.49	1.40 S	0.74 E	-1.53	0.59
461.00	0.34	298.11	460.99	1.33 S	0.40 E	-1.38	0.32
553.50	0.12	280.89	553.49	1.18 S	0.06 E	-1.16	0.25
646.00	0.20	319.20	645.99	1.04 S	0.14 W	-0.98	0.14
738.50	0.13	296.31	738.49	0.87 S	0.33 W	-0.78	0.10
831.00	0.15	354.87	830.99	0.71 S	0.43 W	-0.60	0.15
923.50	0.31	61.84	923.49	0.47 S	0.22 W	-0.41	0.31
1016.00	0.12	126.65	1015.99	0.41 S	0.08 E	-0.42	0.31
1108.50	0.13	222.16	1108.49	0.55 S	0.08 E	-0.55	0.20
1117.50	0.29	241.30	1117.49	0.57 S	0.05 E	-0.56	1.92
1202.00	0.35	250.82	1201.99	0.76 S	0.38 W	-0.65	0.09
1386.00	0.50	275.63	1385.98	0.86 S	1.71 W	-0.45	0.13
1479.00	3.64	242.46	1478.91	2.19 S	4.74 W	-1.07	3.48
1572.00	4.60	226.87	1571.68	6.10 S	10.07 W	-3.68	1.57
1666.00	4.37	226.63	1665.39	11.13 S	15.42 W	-7.38	0.24
1758.00	6.63	220.18	1756.96	17.59 S	21.40 W	-12.33	2.54

1850.00	7.62	216.31	1848.25	26.57 S	28.44 W	-19.49	1.20
1943.00	9.67	216.84	1940.19	37.79 S	36.77 W	-28.55	2.20
2034.00	11.15	215.39	2029.69	51.07 S	46.45 W	-39.32	1.65
2126.00	11.56	212.35	2119.89	66.11 S	56.53 W	-51.70	0.79
2219.00	11.22	208.33	2211.06	81.94 S	65.81 W	-65.04	0.93
2311.00	12.16	218.58	2301.16	97.40 S	76.10 W	-77.78	2.47
2404.00	11.89	215.89	2392.12	112.81 S	87.82 W	-90.17	0.67
2497.00	11.67	214.76	2483.16	128.30 S	98.80 W	-102.79	0.34
2590.00	13.52	221.80	2573.93	144.14 S	111.41 W	-115.38	2.59
2682.00	13.48	220.52	2663.38	160.31 S	125.55 W	-127.96	0.33
2869.00	13.01	220.29	2845.40	192.94 S	153.33 W	-153.50	0.25
2964.00	12.35	215.96	2938.09	209.32 S	166.21 W	-166.57	1.22
3058.00	11.51	208.36	3030.06	225.72 S	176.57 W	-180.21	1.89
3153.00	11.06	204.05	3123.23	242.39 S	184.79 W	-194.60	1.01
3248.00	12.99	210.06	3216.14	259.95 S	193.86 W	-209.68	2.41
3342.00	13.43	209.75	3307.65	278.57 S	204.56 W	-225.41	0.48
3437.00	13.47	217.15	3400.05	296.97 S	216.72 W	-240.61	1.81
3532.00	14.07	217.86	3492.33	314.90 S	230.49 W	-254.98	0.66
3626.00	13.90	223.18	3583.54	332.16 S	245.23 W	-268.48	1.38
3721.00	13.39	222.75	3675.86	348.56 S	260.51 W	-281.03	0.55
3815.00	13.01	230.40	3767.38	363.30 S	276.05 W	-291.89	1.90
3910.00	12.47	229.76	3860.04	376.74 S	292.12 W	-301.37	0.59
4005.00	11.65	227.68	3952.95	389.83 S	307.04 W	-310.77	0.97
4099.00	10.68	225.68	4045.17	402.30 S	320.29 W	-319.94	1.12
4194.00	10.99	223.94	4138.47	414.97 S	332.87 W	-329.46	0.48
4288.00	11.11	222.24	4230.73	428.13 S	345.18 W	-339.51	0.37
4383.00	11.88	221.02	4323.82	442.28 S	357.75 W	-350.47	0.85
4477.00	11.10	220.09	4415.94	456.51 S	369.93 W	-361.59	0.85
4572.00	9.58	220.11	4509.39	469.55 S	380.91 W	-371.83	1.60
4667.00	9.98	218.21	4603.01	482.07 S	391.10 W	-381.74	0.54
4761.00	9.09	214.15	4695.71	494.62 S	400.30 W	-391.89	1.19
4856.00	8.73	223.84	4789.57	506.03 S	409.51 W	-400.94	1.62
4951.00	10.35	224.45	4883.25	517.33 S	420.49 W	-409.48	1.71
5045.00	12.21	227.57	4975.44	530.06 S	433.74 W	-418.91	2.08
5140.00	20.38	238.18	5066.56	545.59 S	455.25 W	-429.20	9.13
5234.00	21.47	255.33	5154.44	558.59 S	485.83 W	-434.98	6.59
5329.00	24.69	271.02	5241.91	562.64 S	522.53 W	-430.68	7.28
5424.00	30.68	280.80	5326.04	557.74 S	566.24 W	-416.07	7.89
5518.00	35.00	289.24	5405.04	544.36 S	615.29 W	-391.99	6.69
5613.00	38.01	300.23	5481.48	520.62 S	666.35 W	-357.38	7.57
5708.00	41.07	314.28	5554.89	484.02 S	714.07 W	-310.99	9.93
5802.00	46.88	326.42	5622.63	433.75 S	755.26 W	-252.74	10.87
5897.00	54.26	340.06	5683.09	368.35 S	787.72 W	-181.71	13.51
5991.00	59.84	350.47	5734.29	292.20 S	807.52 W	-103.06	11.01
6086.00	65.74	353.33	5777.71	208.60 S	819.37 W	-18.93	6.77
6180.00	73.13	352.87	5810.71	121.28 S	829.94 W	68.52	7.87
6291.00	86.61	353.78	5830.19	13.01 S	842.59 W	176.87	12.17

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 347.00 DEGREES (GRID)
A TOTAL CORRECTION OF 6.97 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED

HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.
HORIZONTAL DISPLACEMENT(CLOSURE) AT 6291.00 FEET
IS 842.69 FEET ALONG 269.12 DEGREES (GRID)

Surveys from surface to 1117.5MD are flexi-shot surveys
Final survey is a straight line projection to TD.

Date Printed:26 August 2015