



Cathedral Energy Company
1949 North Pyrite Road
Casper, Wyoming 82604

155065

5":100' - TVD

2/2/2015 3:36:01 PM

CATHEDRAL

Oper. Company: Encana Oil & Gas (USA) Inc.

Country: U.S.A.

State / Province: Colorado

County / Parish: Weld

Started: 01/27/2015 09:00 PM

API/UWI: 05-123-40285-00

Field: Wattenberg (B Chalk)

Well: Ruhl 1H-32H-B264

Rig: Ensign Drilling 135

Ended: 02/01/2015 02:30 PM

Gamma Ray
Section Plane: 180.00
Magnetic North: 8.25
Gamma Attenuation Factor: 5000'MD-7445'MD = 4.149
7446'MD-11445'MD = 2.851
Gamma Averaging: 7%

Personnel

Day Hand: J. Corby

Night Hand: J. Starkey

Comp. Emp: Gage Soehner

Maximum Temperature: 207 °f

Location

Latitude: 40.101448

Longitude: -104.570873

Elev. GL: 4997

Elev. DF:

Elev. KB: 5010

Log and Survey Depths Relative to Kelly Bushing (KB) Depth

Hole Data

Size	From	To
12-1/4	137	1152
8-3/4	1152	7446
6-1/8	7446	11445

Casing Data

Size	From	To
9-5/8	0	1142
7	0	7427

Bit Sizes

Size	From	To
12-1/4	137	1152
8-3/4	1152	7446
6-1/8	7446	11445

Mud Data

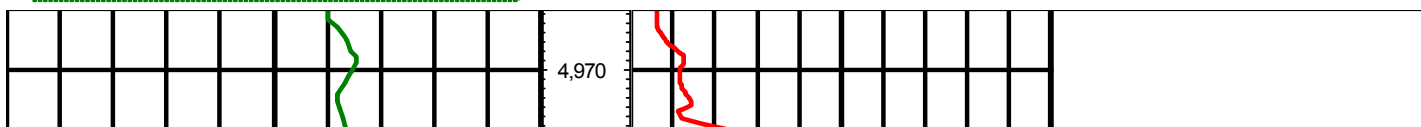
Type	Weight	Density	Viscosity	Rm	Rmf	Rmc	From	To
Water/LSND	9.8	9.8	35				1893	7446
Water/LSND	10.4	10.4	44				7446	11445

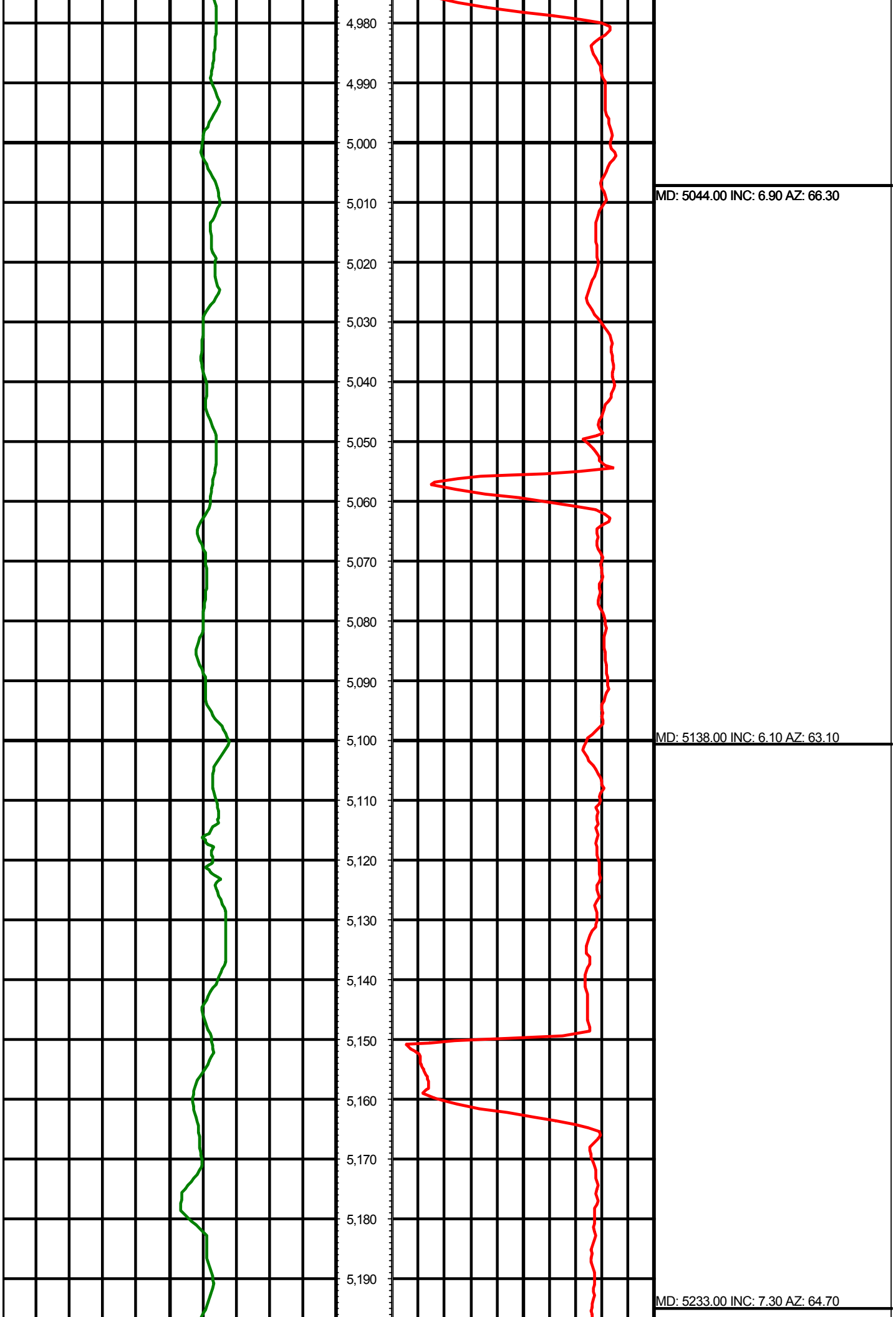
Tool Run Data

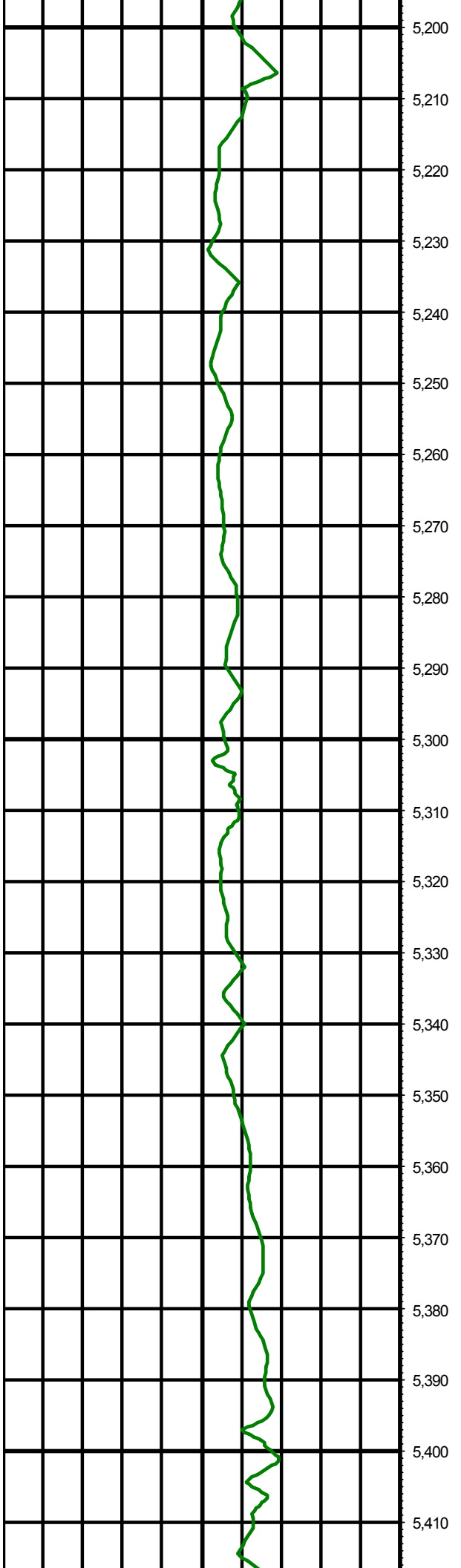
Serial Number	Gamma Offset	Resist. Offset	Start Time	Start Depth	End Time	End Depth
1519	35.79	0	1/27/2015 4:00:12 AM	1893	1/29/2015 10:00:12 AM	7446
1519	43.66	0	1/30/2015 6:30:21 PM	7446	2/1/2015 9:36:21 AM	11445

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not except in the case of gross or willful negligence on our part, be liable or responsible for any loss, cost damages or expenses incurred or sustained by anyone resulting from an interpretation made by any of our officers, agents, or employees.

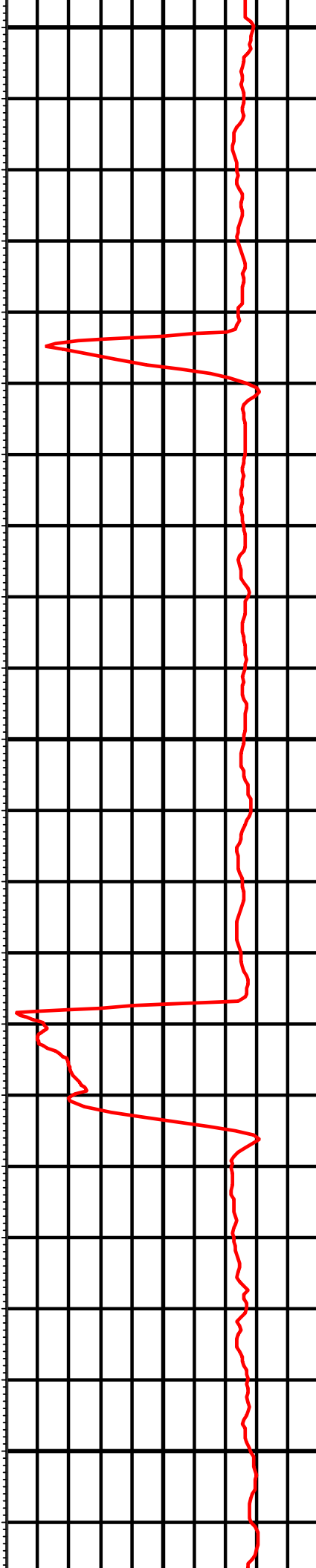
0.00 Gamma Ray (API) 150.00 TVD 0.00 ROP (FT/HR) 600.00 Surveys (MD/INC/AZ)
150.00 2 300.00 FT





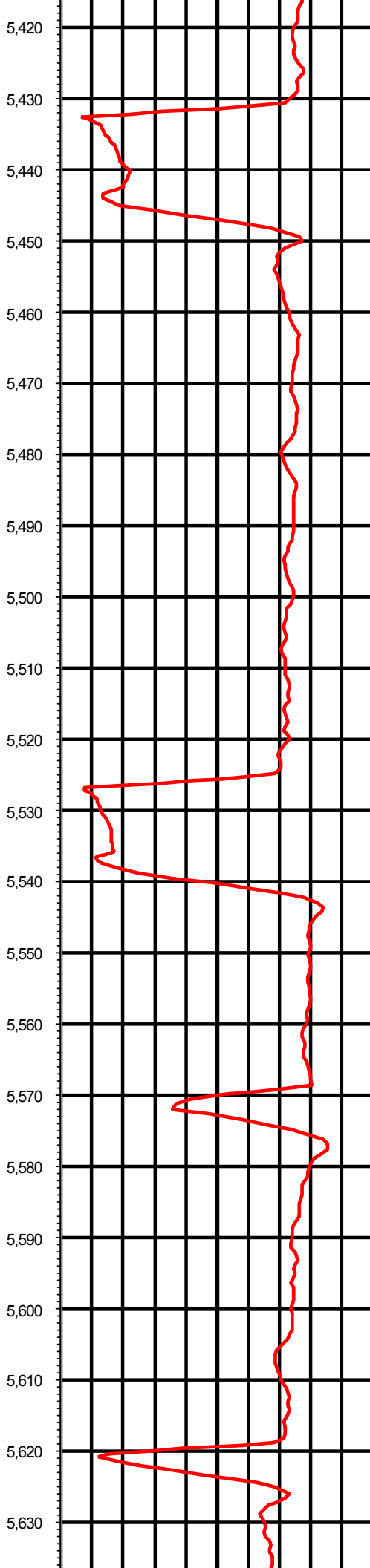
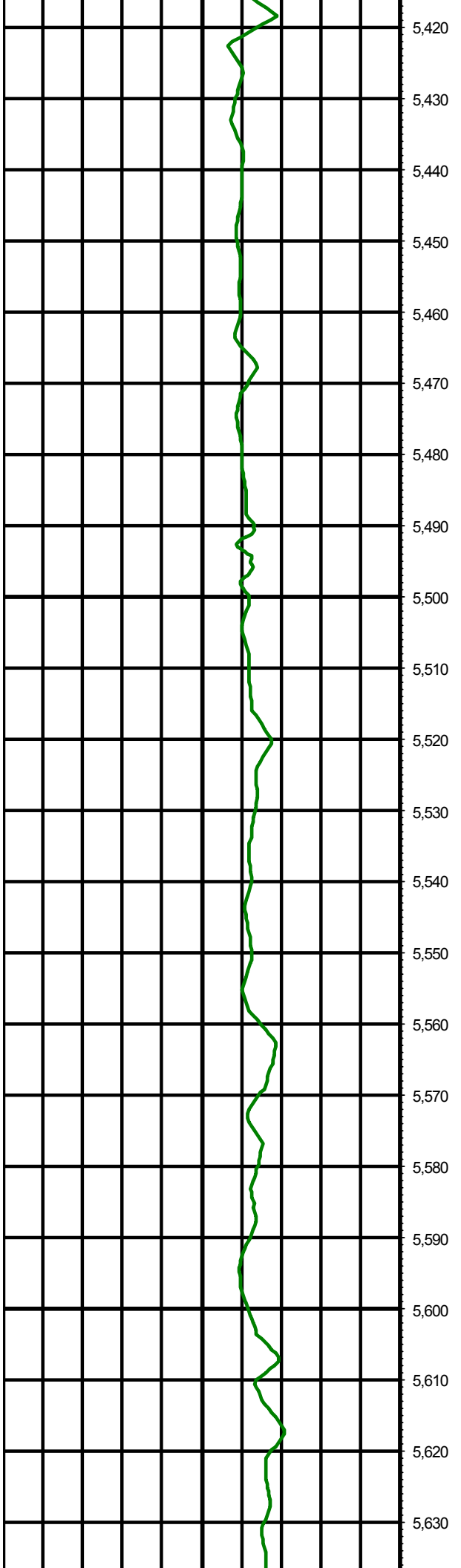


5,200
5,210
5,220
5,230
5,240
5,250
5,260
5,270
5,280
5,290
5,300
5,310
5,320
5,330
5,340
5,350
5,360
5,370
5,380
5,390
5,400
5,410



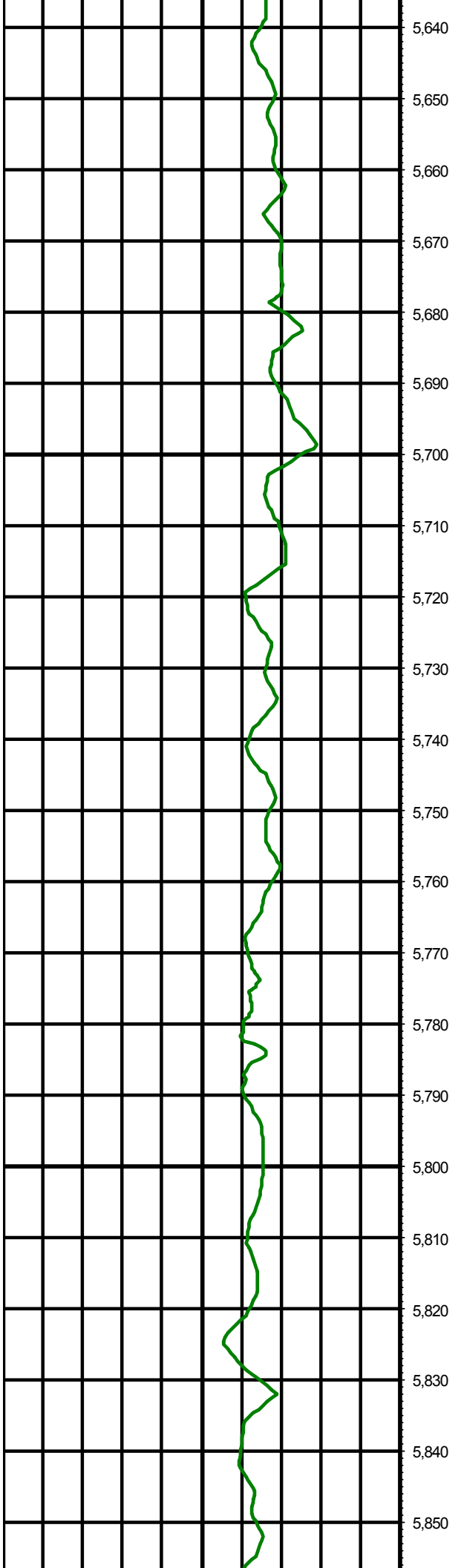
MD: 5328.00 INC: 6.90 AZ: 61.20

MD: 5422.00 INC: 6.20 AZ: 64.20

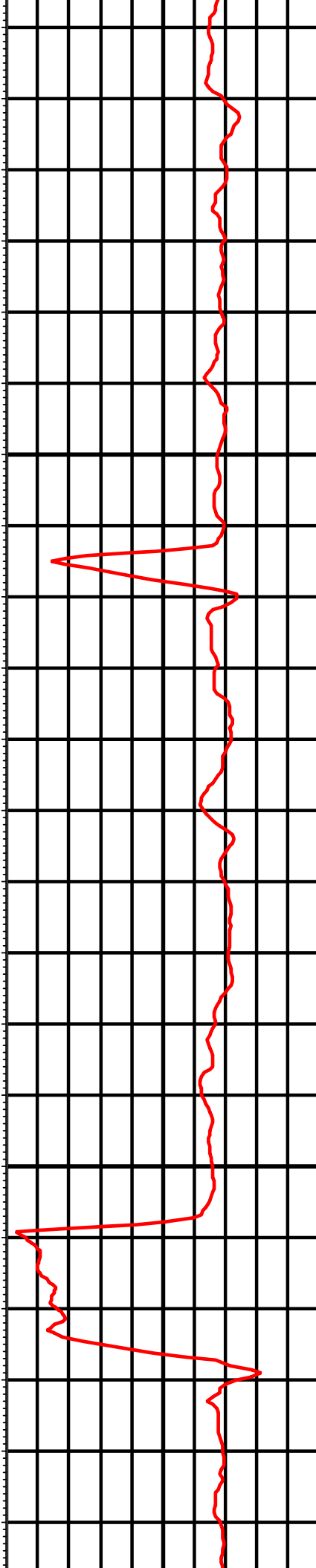


MD: 5517.00 INC: 6.40 AZ: 78.10

MD: 5611.00 INC: 6.90 AZ: 72.40



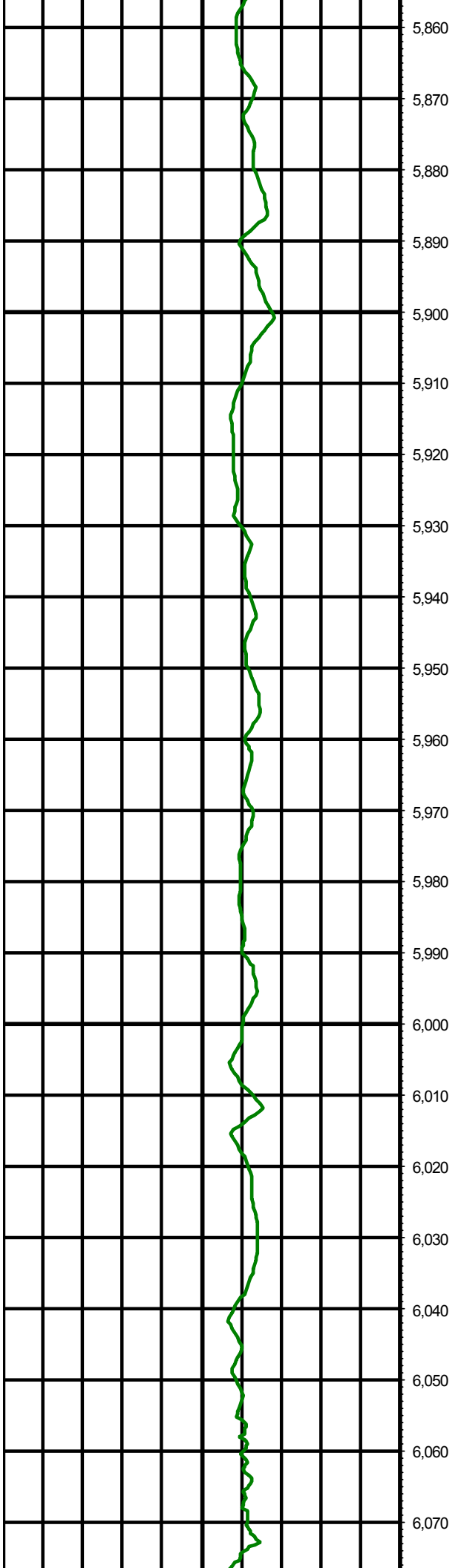
5,640
5,650
5,660
5,670
5,680
5,690
5,700
5,710
5,720
5,730
5,740
5,750
5,760
5,770
5,780
5,790
5,800
5,810
5,820
5,830
5,840
5,850



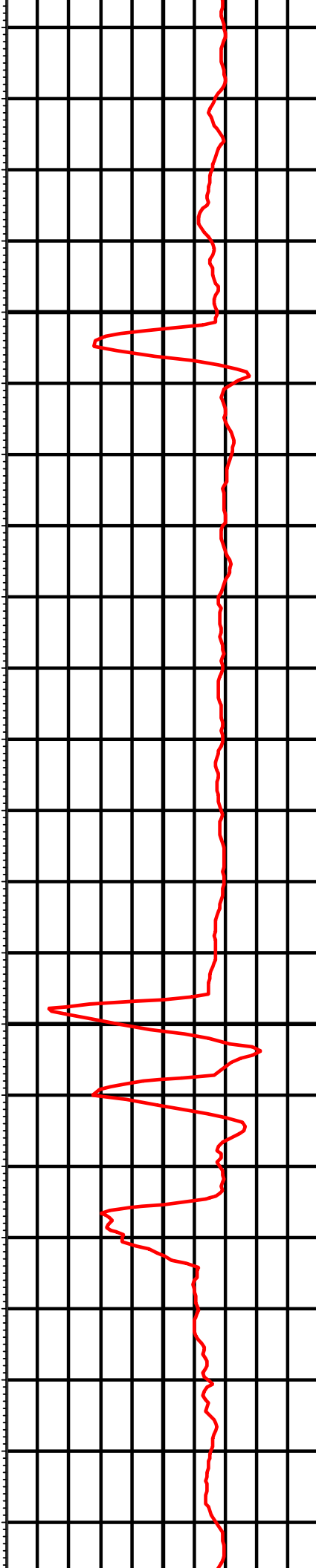
MD: 5706.00 INC: 5.70 AZ: 64.60

MD: 5801.00 INC: 4.50 AZ: 58.90

MD: 5895.00 INC: 4.50 AZ: 68.50



5,860
5,870
5,880
5,890
5,900
5,910
5,920
5,930
5,940
5,950
5,960
5,970
5,980
5,990
6,000
6,010
6,020
6,030
6,040
6,050
6,060
6,070



MD: 5990.00 INC: 3.90 AZ: 59.20

MD: 6085.00 INC: 3.60 AZ: 52.10

