



DDC

RM-13748

1":100' - MD

9/29/2013 5:00:57 PM

Oper. Company: Noble Energy

Country: USA

State / Province: Colorado

County / Parish: Weld

Started: 09/25/2013 07:00 PM

API/UWI: 05-123-37547-00

Field: Wattenburg

Well: Rohn State LD09-68-1HN

Rig: H&P 326

Ended: 09/29/2013 05:00 PM

FINAL

Personnel

Day Hand: Chris Abbott

Night Hand: Josh Jann

Comp. Emp:

Location

Latitude: 40° 46' 14.124 N

Longitude: 103° 51' 42.120 W

Elev. GL: 4739

Elev. DF: 30

Elev. KB: 4769

Hole Data

Size	From	To
13 1/2	0	1258
8 3/4	1258	6118
6 1/8	6118	9435

Casing Data

Size	From	To
9 5/8	0	1258
7	1258	6118
4	6118	0

Bit Sizes

Size	From	To
13 1/2	0	1258
8 3/4	1258	6118
6 1/8	6118	9435

Mud Data

Type	Weight	Density	Viscosity	Rm	Rmf	Rmc	From	To
LSND	10		38				0	9435

Tool Run Data

Serial Number	Gamma Offset	Resist. Offset	Start Time	Start Depth	End Time	End Depth
1120	36	0	9/25/2013 7:00:21 PM	1258	9/26/2013 9:00:21 AM	4889
1120	44	0	9/26/2013 11:00:48 AM	4889	9/27/2013 8:00:48 AM	6118
1120	52	0	9/28/2013 10:00:06 AM	6118	9/29/2013 5:00:06 PM	9435

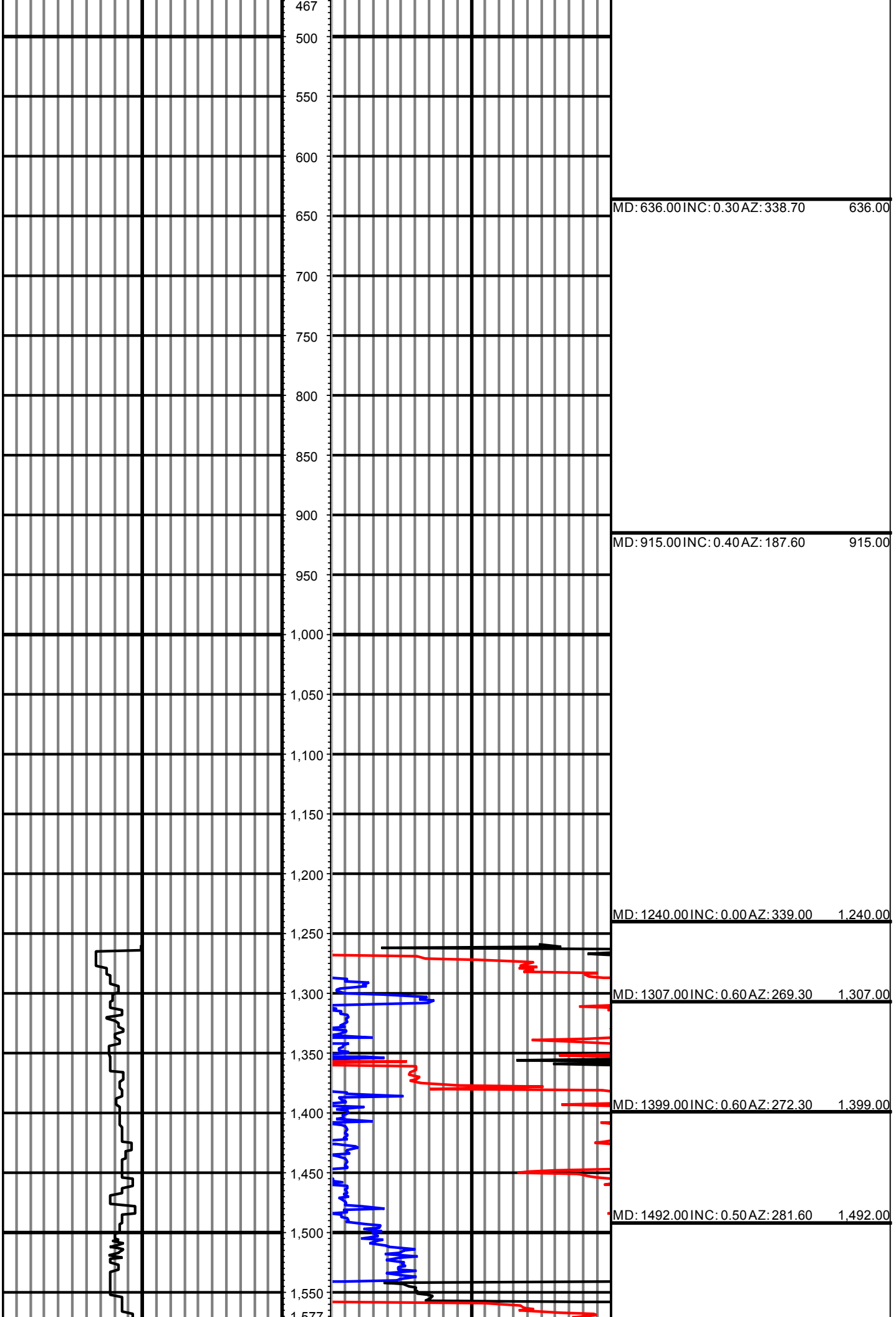
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not except in the case of gross or willful negligence on our part, be liable or responsible for any loss, cost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

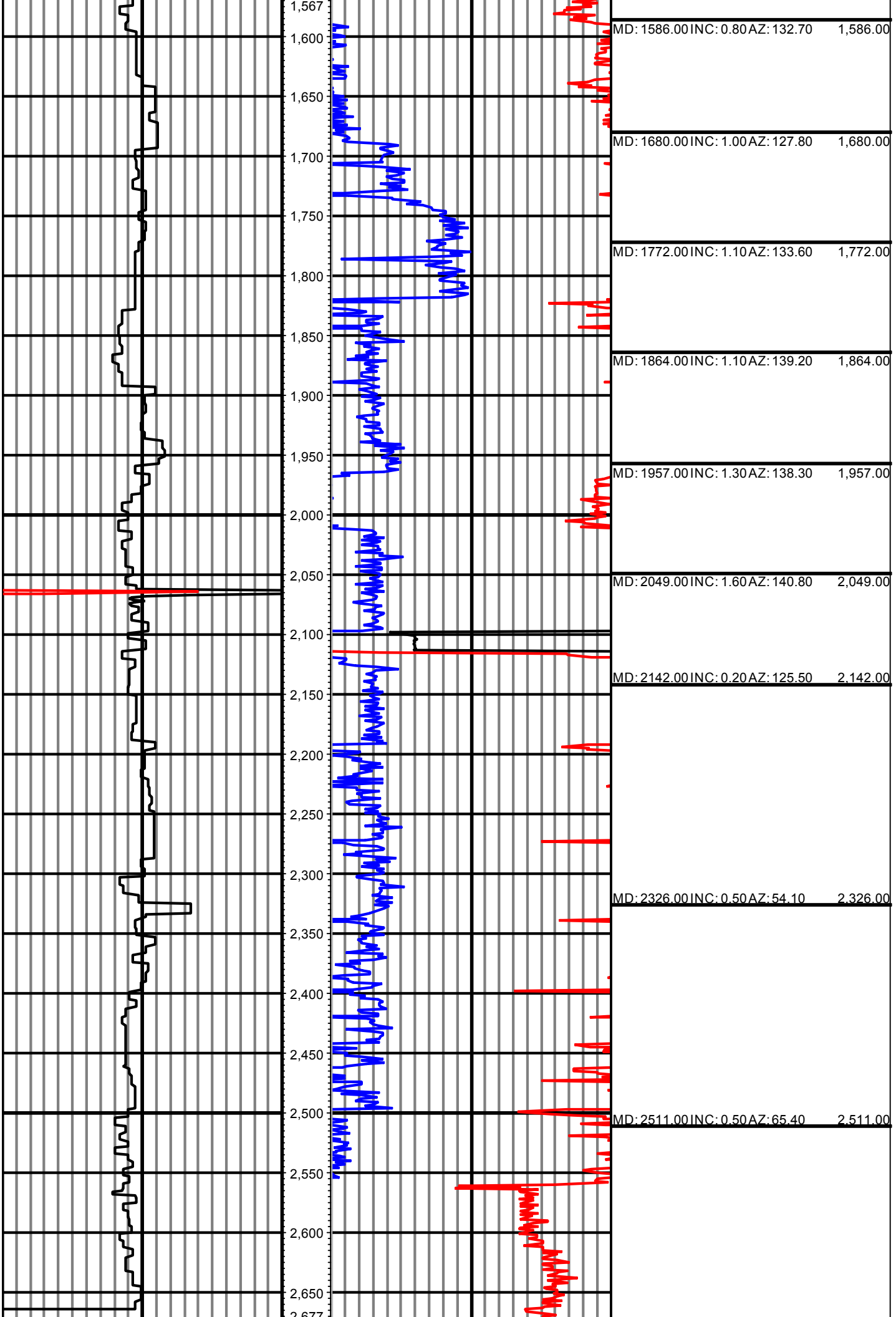
0.00 Counts(mG) 150.00 MD 0.00 ROP(FT/HR) 500.00 Surveys (MD/INC/AZ)

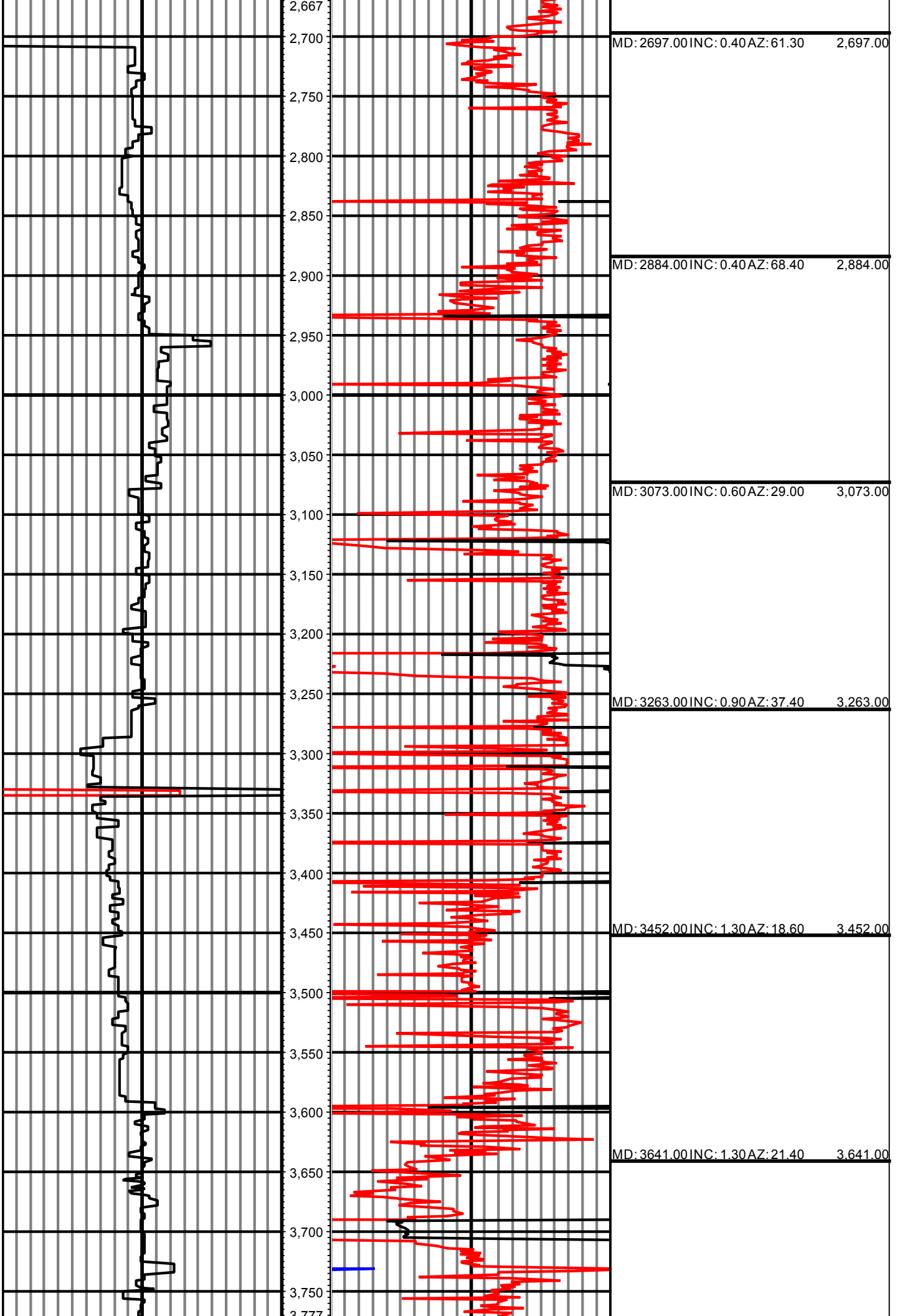
150.00 2 300.00 FT 500.00 2 1,000.00

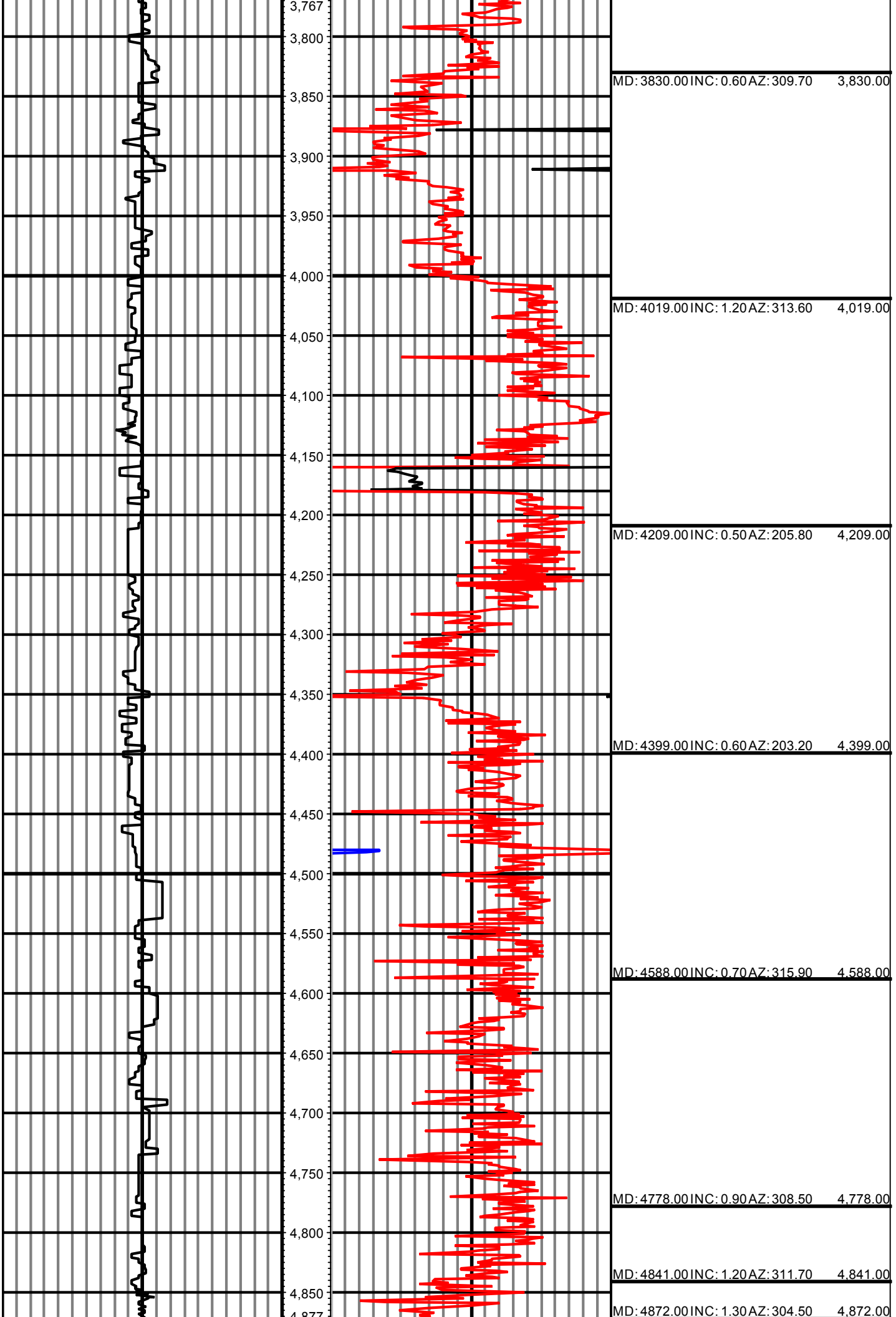
1,000.00 3 1,500.00

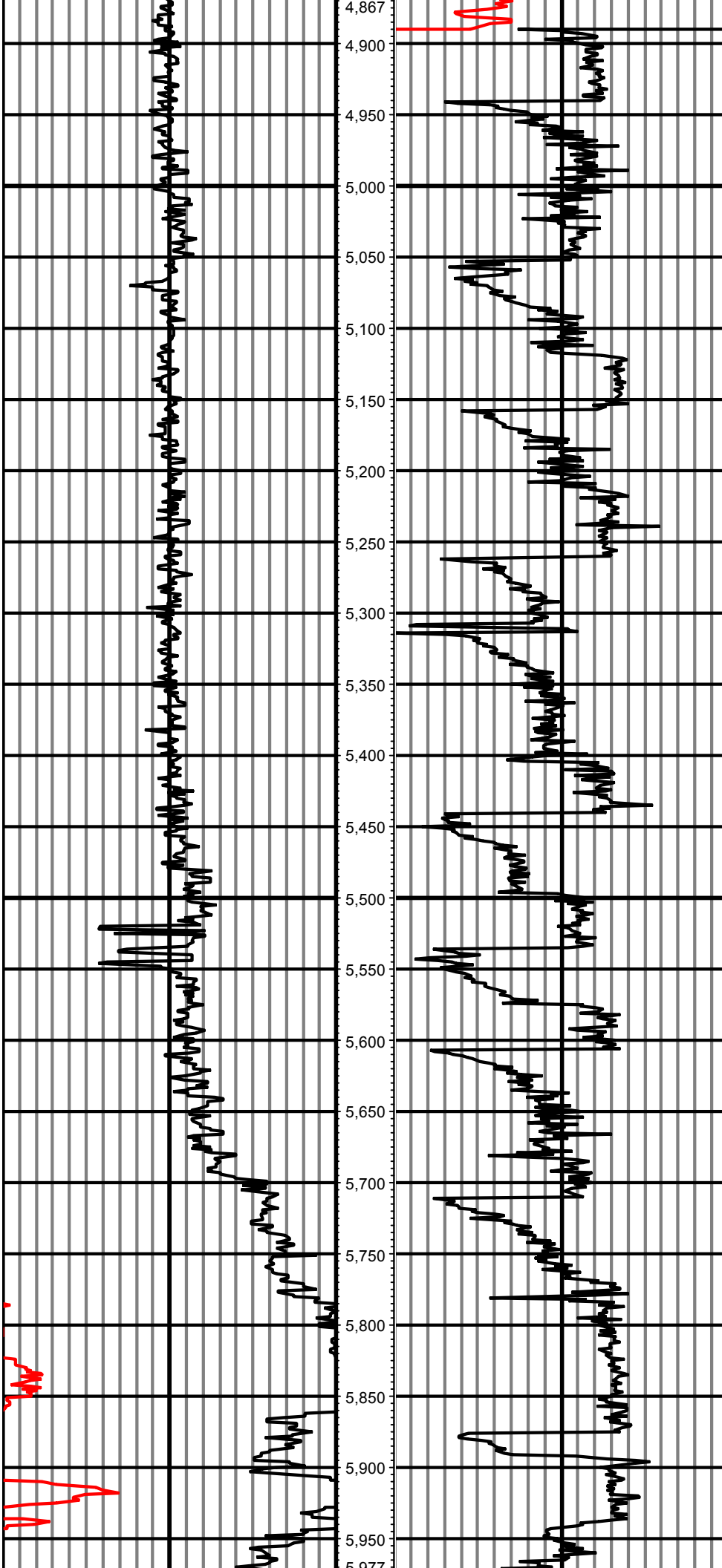
		356			MD: 356.00 INC: 0.60 AZ: 67.80	356.00
		400				
		450				
		477				



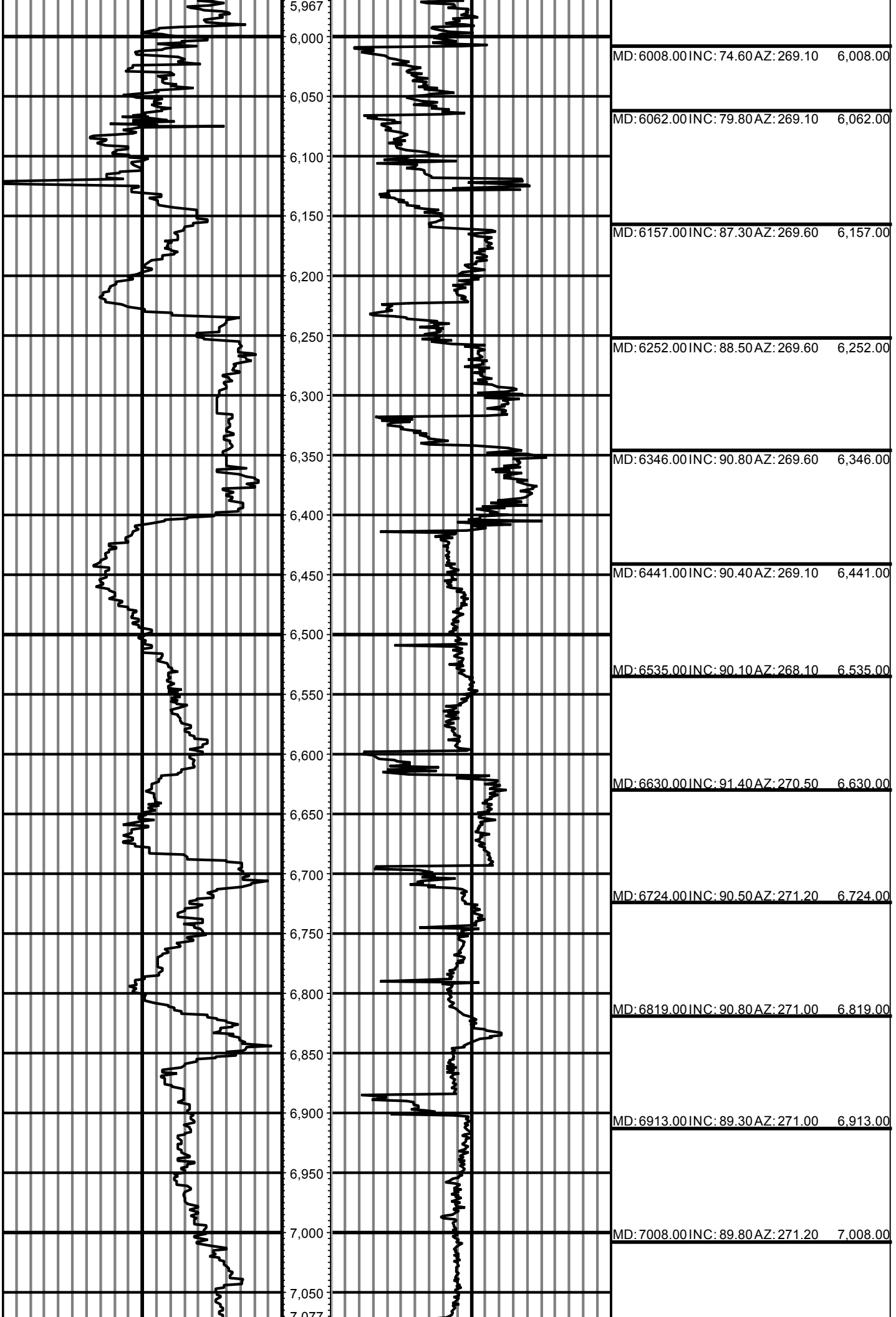


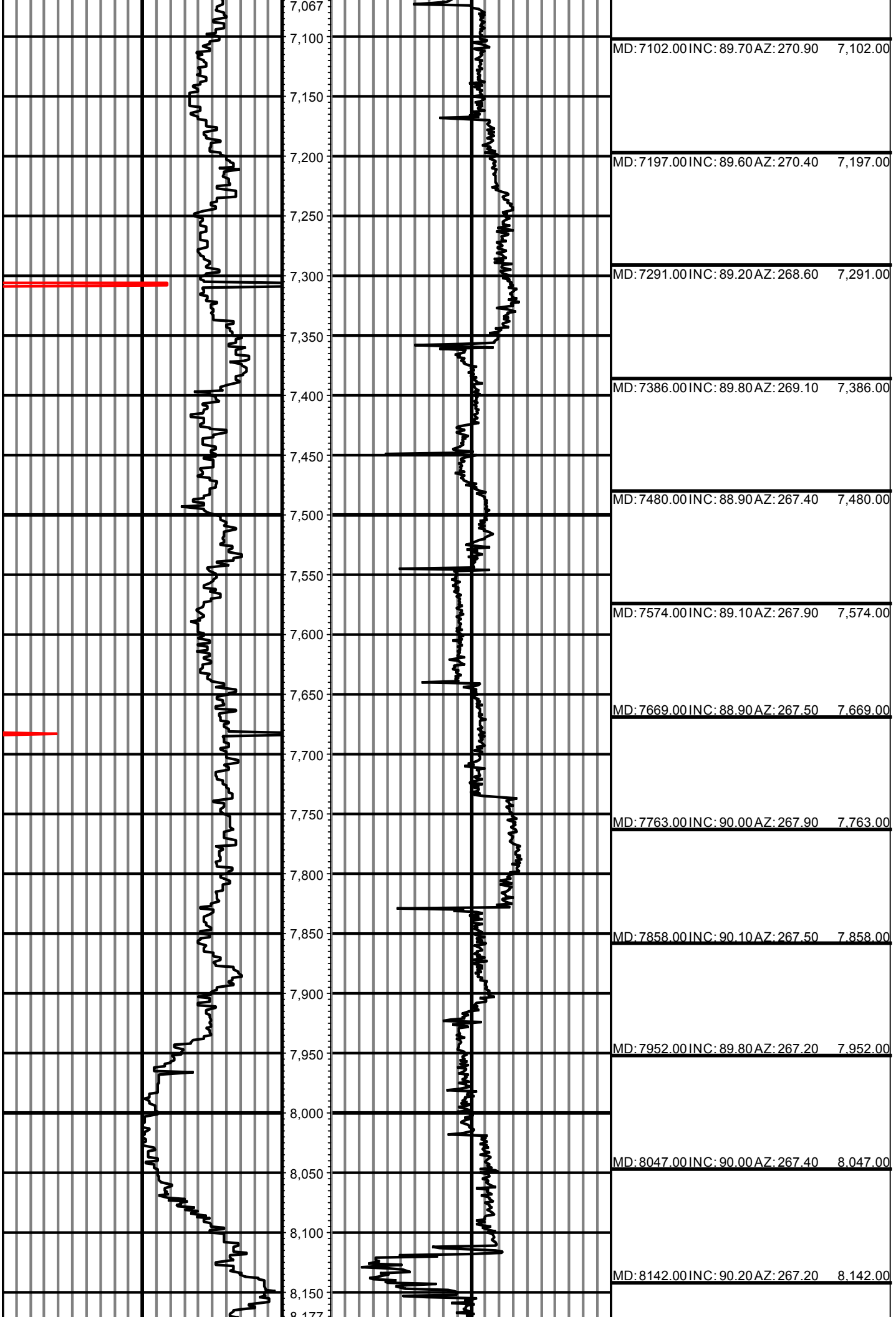


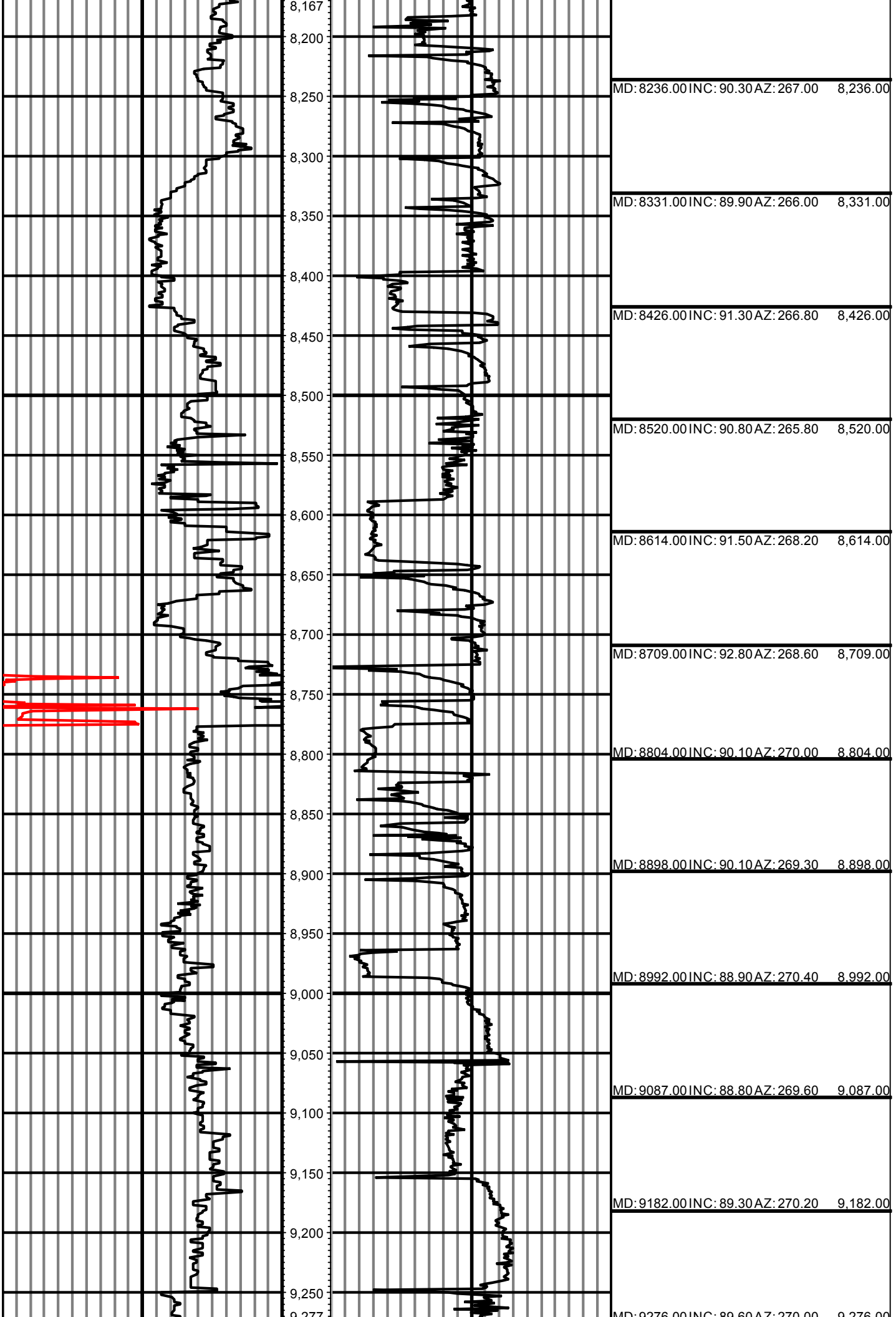


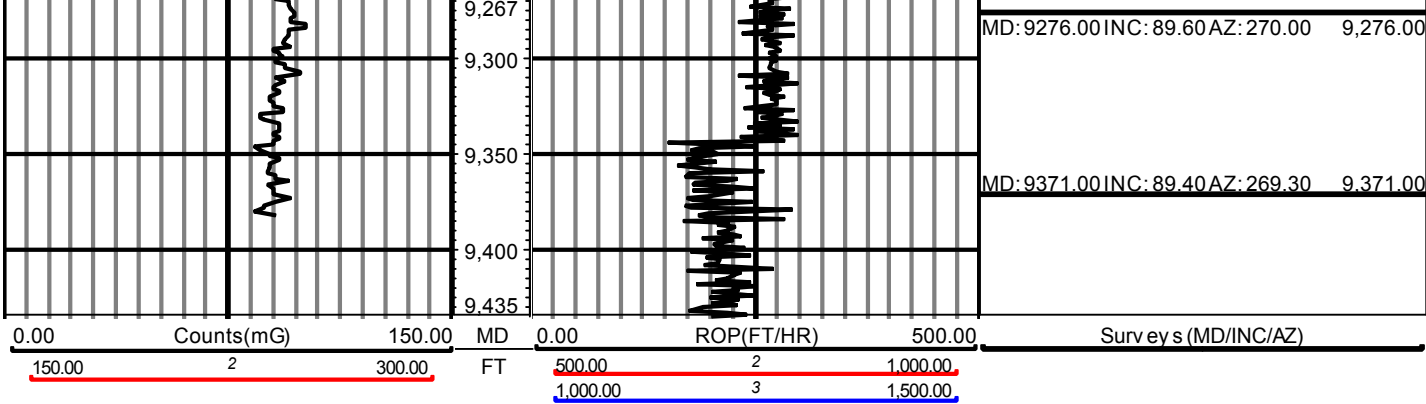


MD: 4872.00INC: 1.30AZ: 304.50	4,872.00
MD: 4967.00INC: 4.50AZ: 291.10	4,967.00
MD: 5061.00INC: 14.00AZ: 278.30	5,061.00
MD: 5156.00INC: 22.30AZ: 271.90	5,156.00
MD: 5251.00INC: 27.50AZ: 267.00	5,251.00
MD: 5346.00INC: 36.90AZ: 260.90	5,346.00
MD: 5440.00INC: 44.00AZ: 256.50	5,440.00
MD: 5535.00INC: 50.00AZ: 257.70	5,535.00
MD: 5629.00INC: 55.80AZ: 263.70	5,629.00
MD: 5724.00INC: 67.40AZ: 264.70	5,724.00
MD: 5819.00INC: 74.70AZ: 265.80	5,819.00
MD: 5913.00INC: 74.70AZ: 269.60	5,913.00











DDC

RM-13748

5":100' - MD

9/29/2013 5:04:00 PM

Oper. Company: Noble Energy

Country: USA

State / Province: Colorado

County / Parish: Weld

Started: 09/25/2013 07:00 PM

API/UWI: 05-123-37547-00

Field: Wattenburg

Well: Rohn State LD09-68-1HN

Rig: H&P 326

Ended: 09/29/2013 05:00 PM

FINAL

Personnel

Day Hand: Chris Abbott

Night Hand: Josh Jann

Comp. Emp:

Location

Latitude: 40° 46' 14.124 N

Longitude: 103° 51' 42.120 W

Elev. GL: 4739

Elev. DF: 30

Elev. KB: 4769

Hole Data

Size	From	To
13 1/2	0	1258
8 3/4	1258	6118
6 1/8	6118	9435

Casing Data

Size	From	To
9 5/8	0	1258
7	1258	6118
4	6118	0

Bit Sizes

Size	From	To
13 1/2	0	1258
8 3/4	1258	6118
6 1/8	6118	9435

Mud Data

Type	Weight	Density	Viscosity	Rm	Rmf	Rmc	From	To
LSND	10		38				0	9435

Tool Run Data

Serial Number	Gamma Offset	Resist. Offset	Start Time	Start Depth	End Time	End Depth
1120	36	0	9/25/2013 7:00:21 PM	1258	9/26/2013 9:00:21 AM	4889
1120	44	0	9/26/2013 11:00:48 AM	4889	9/27/2013 8:00:48 AM	6118
1120	52	0	9/28/2013 10:00:06 AM	6118	9/29/2013 5:00:06 PM	9435

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 Counts(mG) 150.00 MD 0.00 ROP(FT/HR) 500.00 Surveys (MD/INC/AZ)

150.00 2 300.00 FT 500.00 2 1,000.00

1,000.00 3 1,500.00

		356				MD: 356.00 INC: 0.60 AZ: 67.80	356.00
		360					
		370					
		380					

		378		
		390		
		400		
		410		
		420		
		430		
		440		
		450		
		460		
		470		
		480		
		490		
		500		
		510		
		520		
		530		
		540		
		550		
		560		
		570		
		580		
		590		
		600		

		598		
		610		
		620		
		630		
		640		
		650		
		660		
		670		
		680		
		690		
		700		
		710		
		720		
		730		
		740		
		750		
		760		
		770		
		780		
		790		
		800		
		810		
		820		

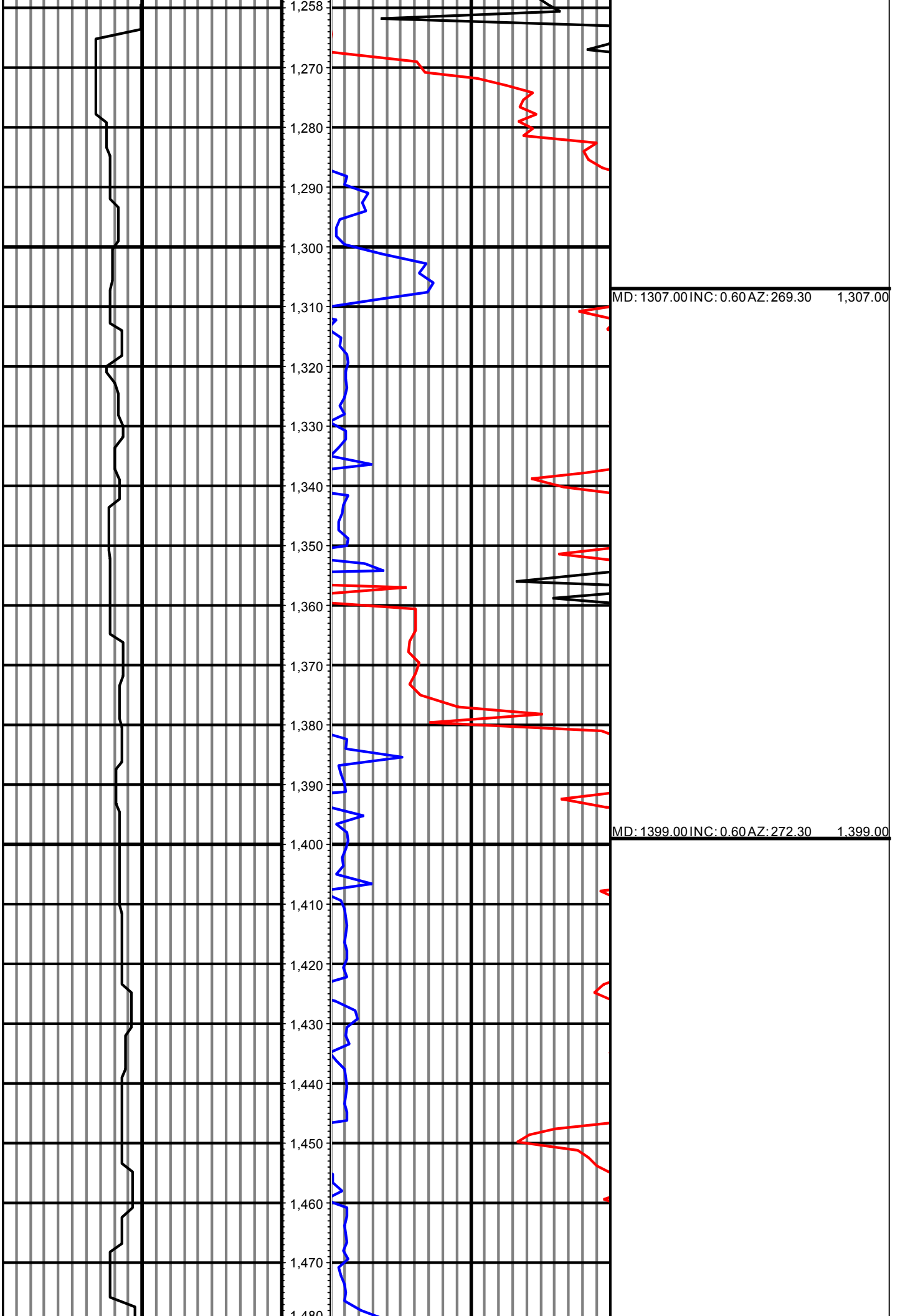
MD: 636.00 INC: 0.30 AZ: 338.70 636.00

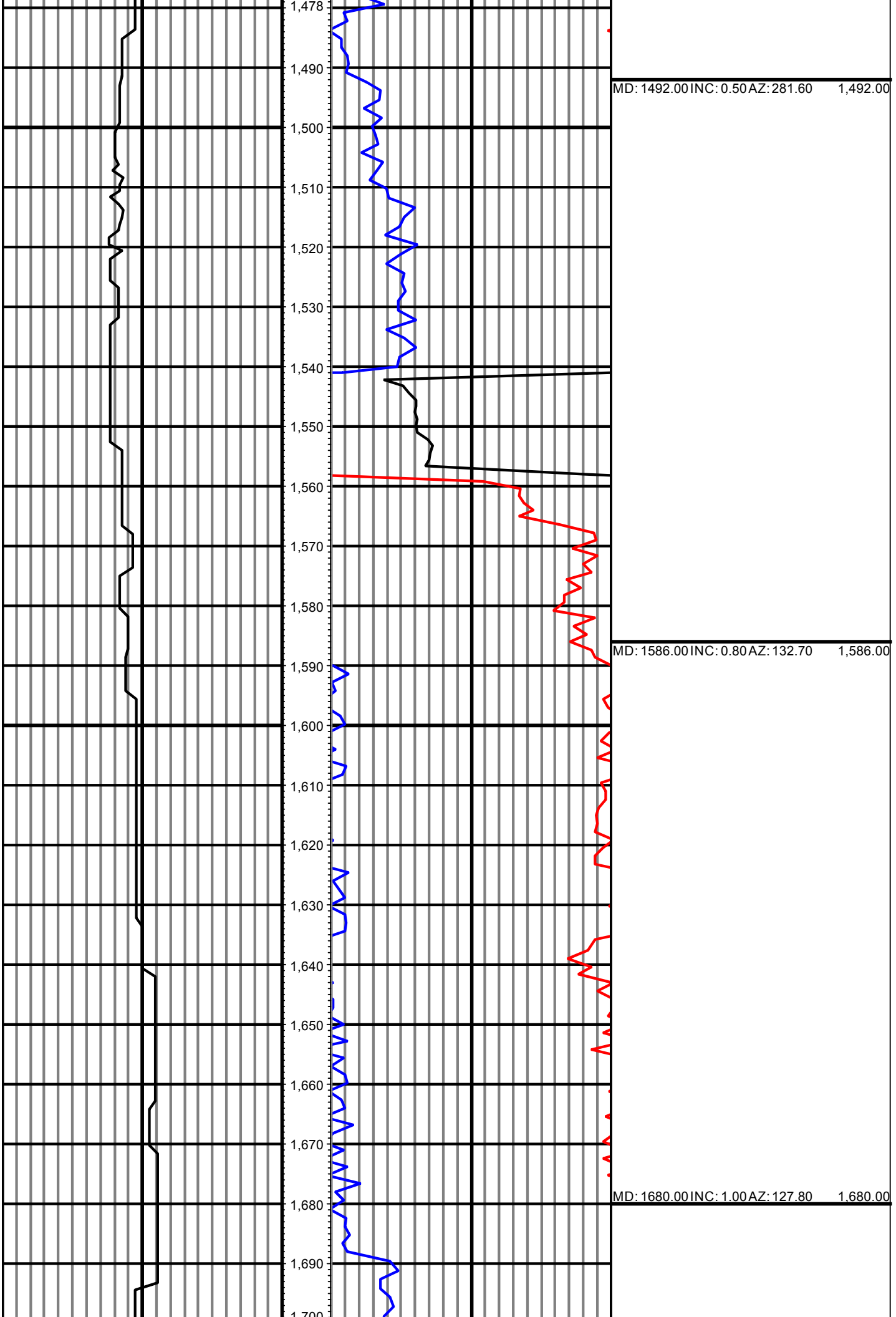
		818		
		830		
		840		
		850		
		860		
		870		
		880		
		890		
		900		
		910		
		920		
		930		
		940		
		950		
		960		
		970		
		980		
		990		
		1,000		
		1,010		
		1,020		
		1,030		
		1,040		

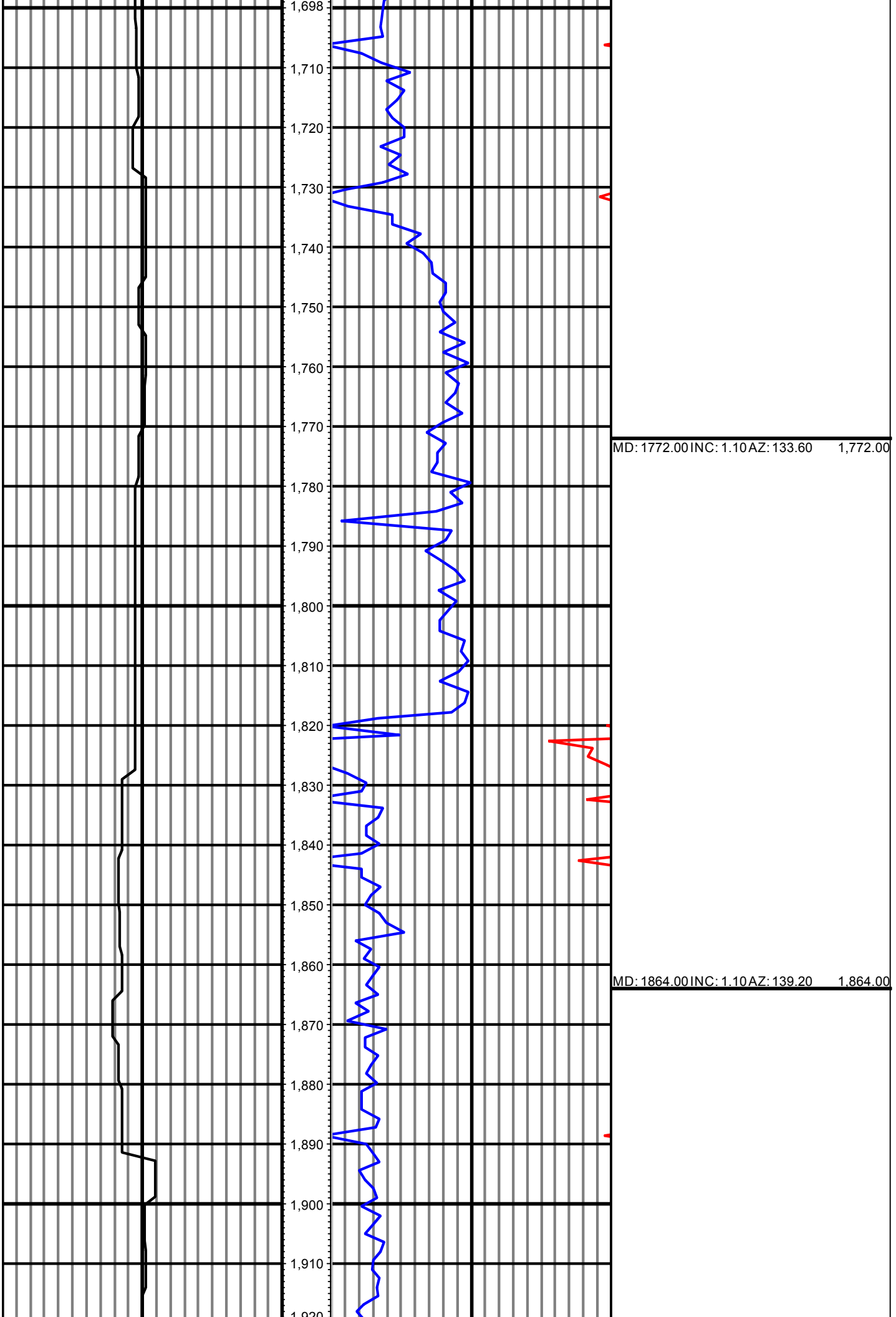
MD: 915.00 INC: 0.40 AZ: 187.60 915.00

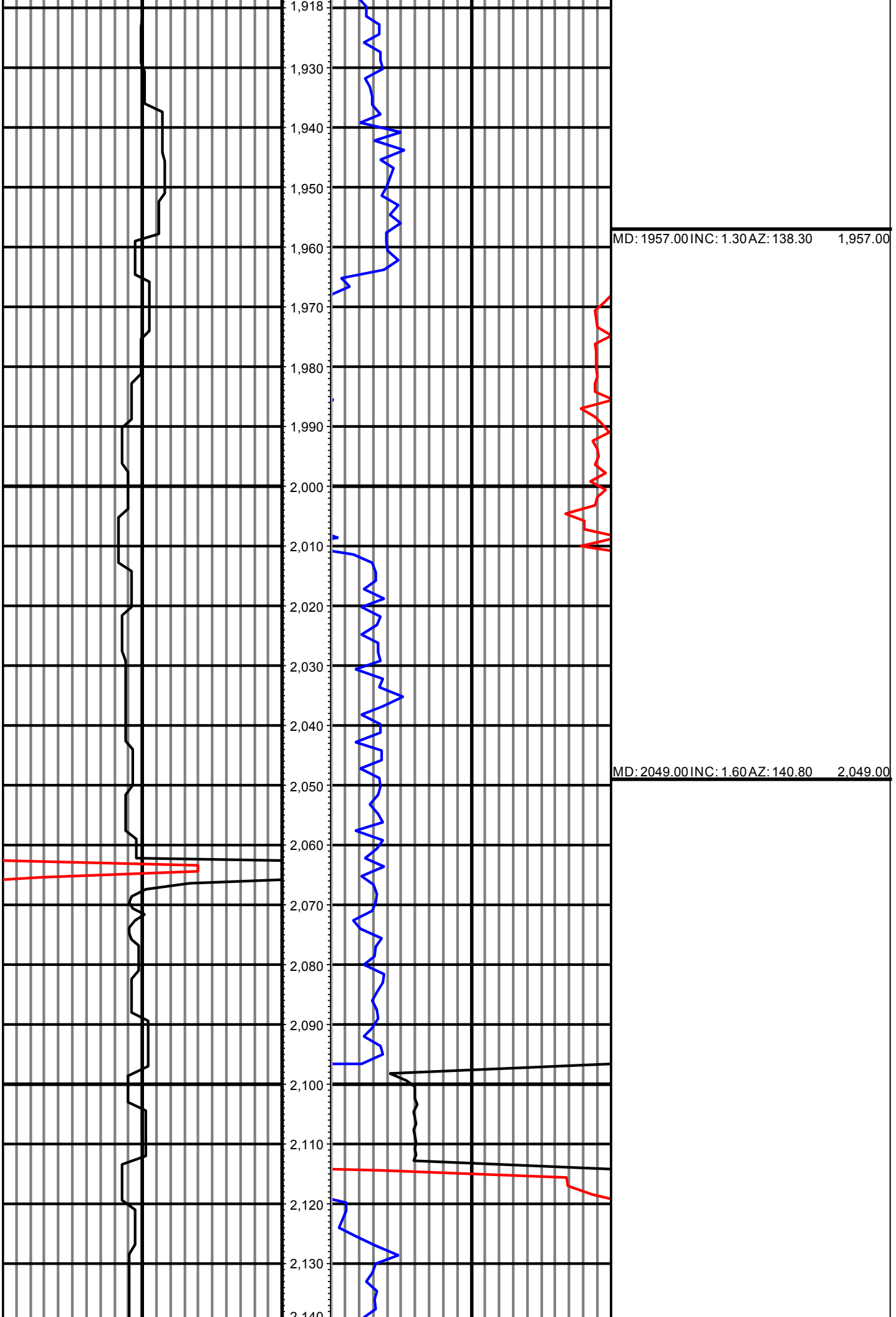
		1,038		
		1,050		
		1,060		
		1,070		
		1,080		
		1,090		
		1,100		
		1,110		
		1,120		
		1,130		
		1,140		
		1,150		
		1,160		
		1,170		
		1,180		
		1,190		
		1,200		
		1,210		
		1,220		
		1,230		
		1,240		
		1,250		
		1,260		

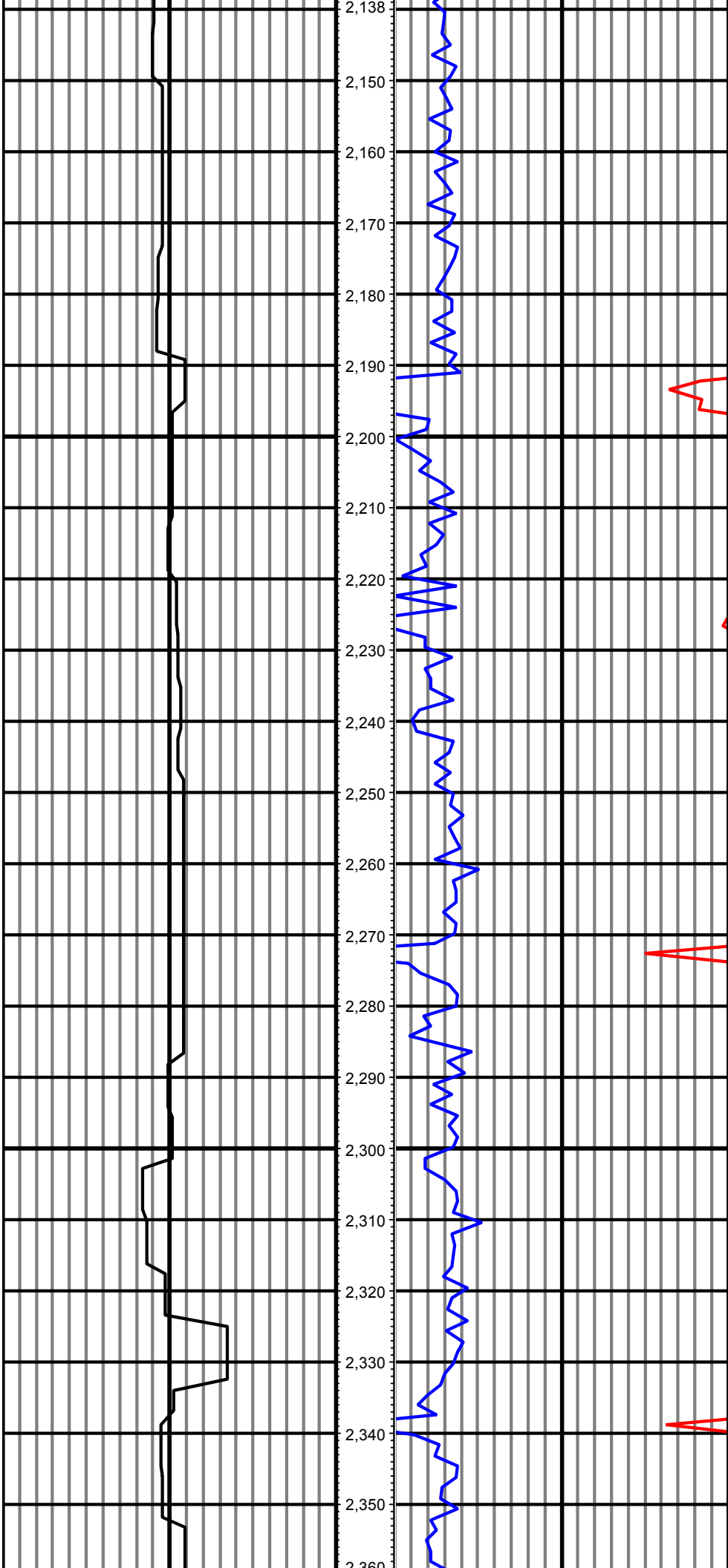
MD: 1240.00 INC: 0.00 AZ: 339.00 1,240.00





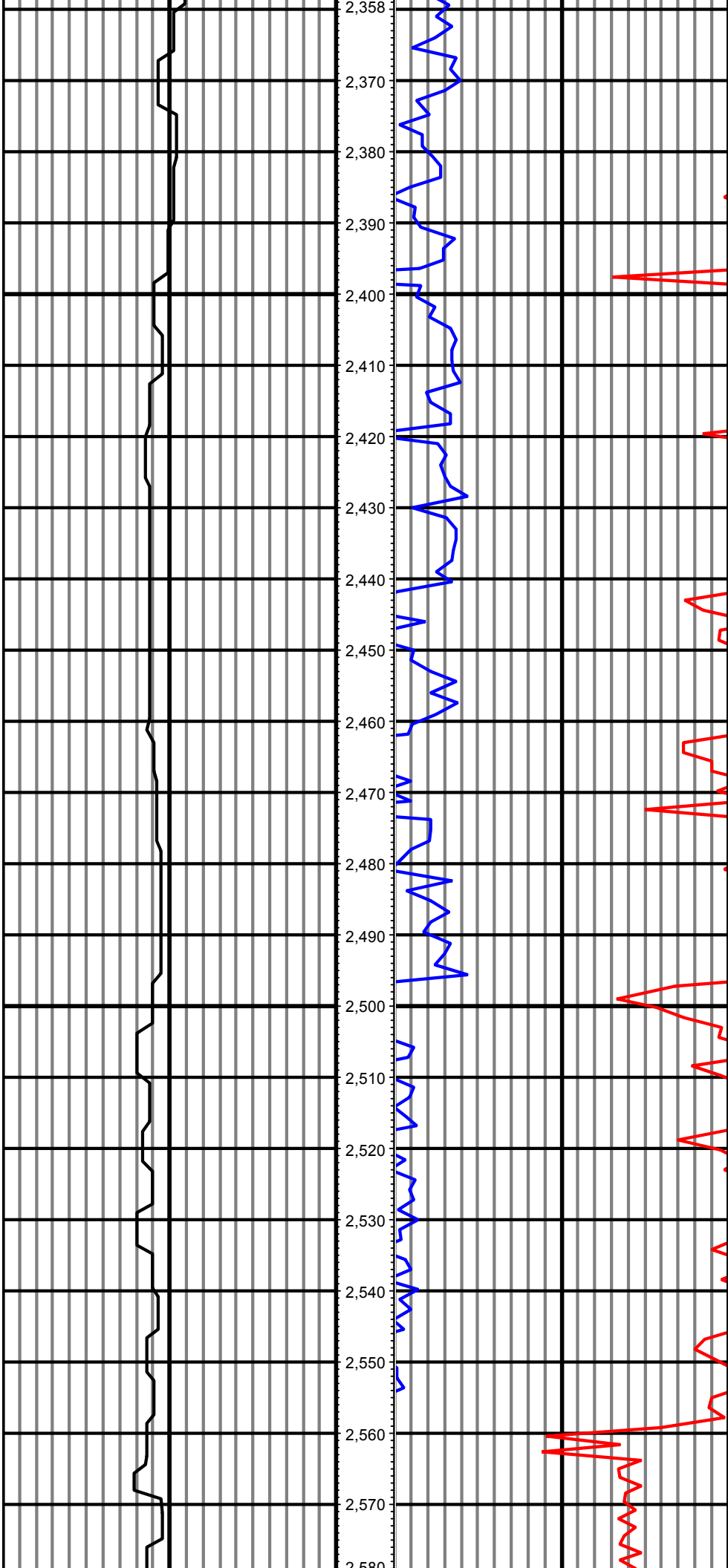




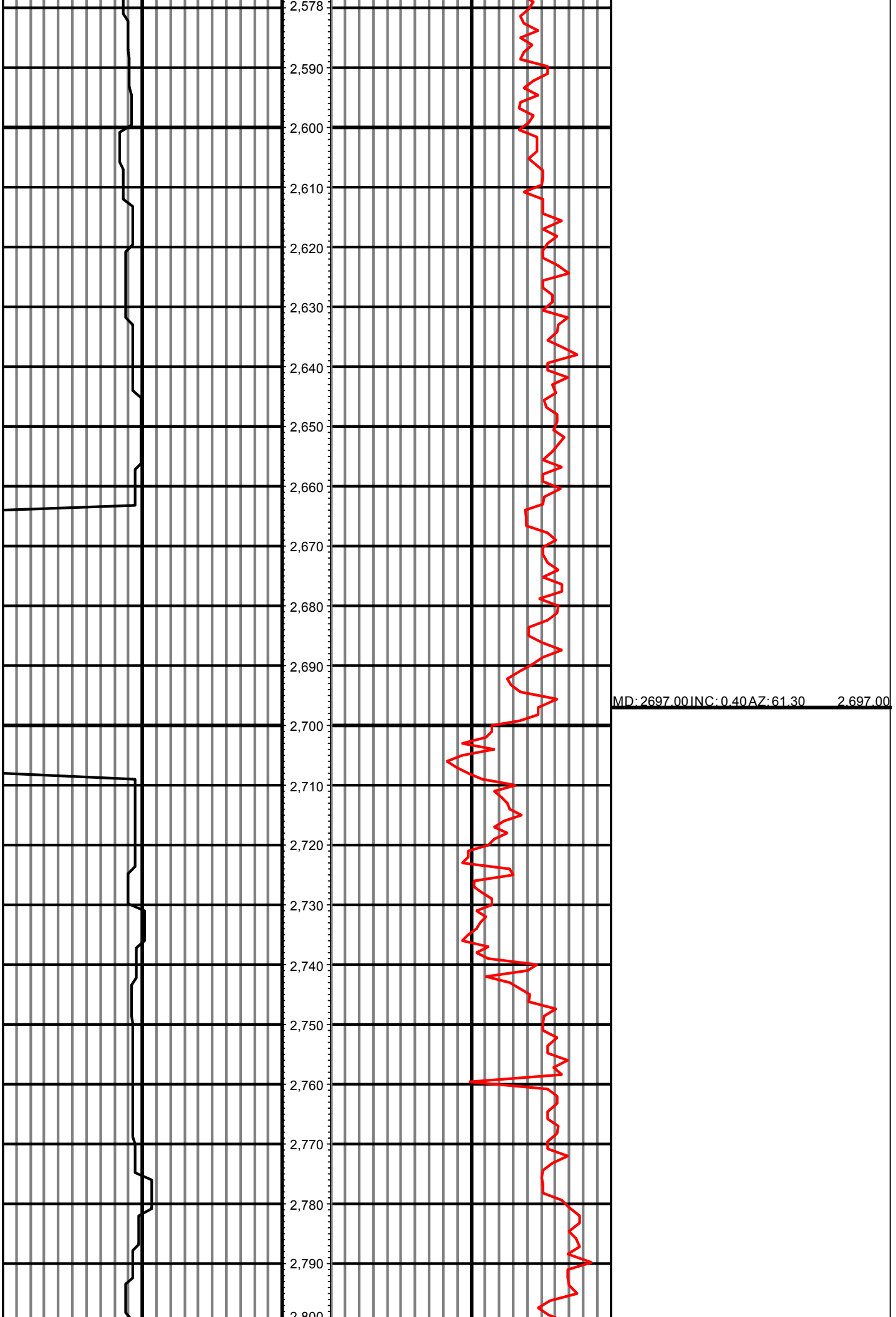


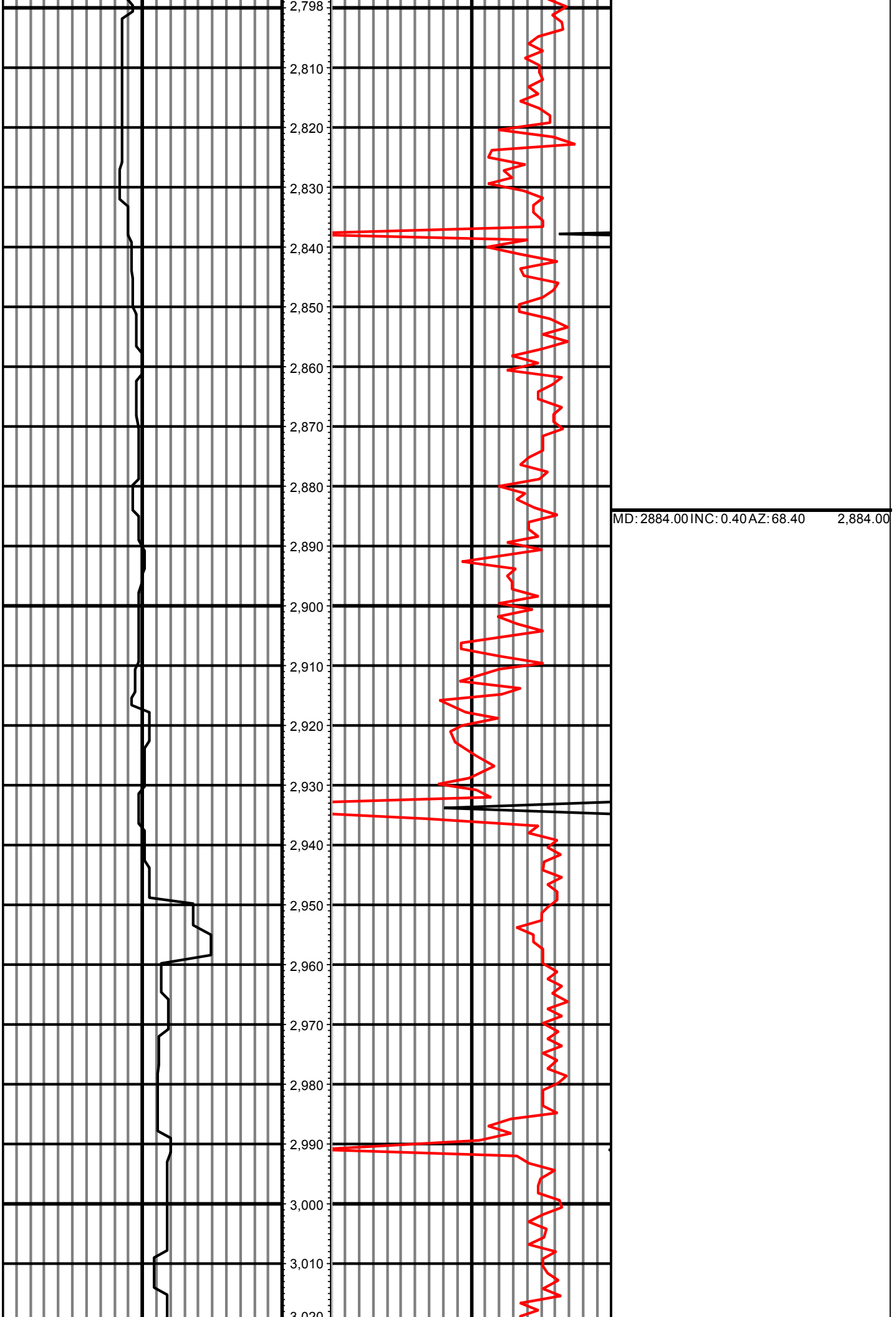
MD: 2142.00 INC: 0.20 AZ: 125.50 2,142.00

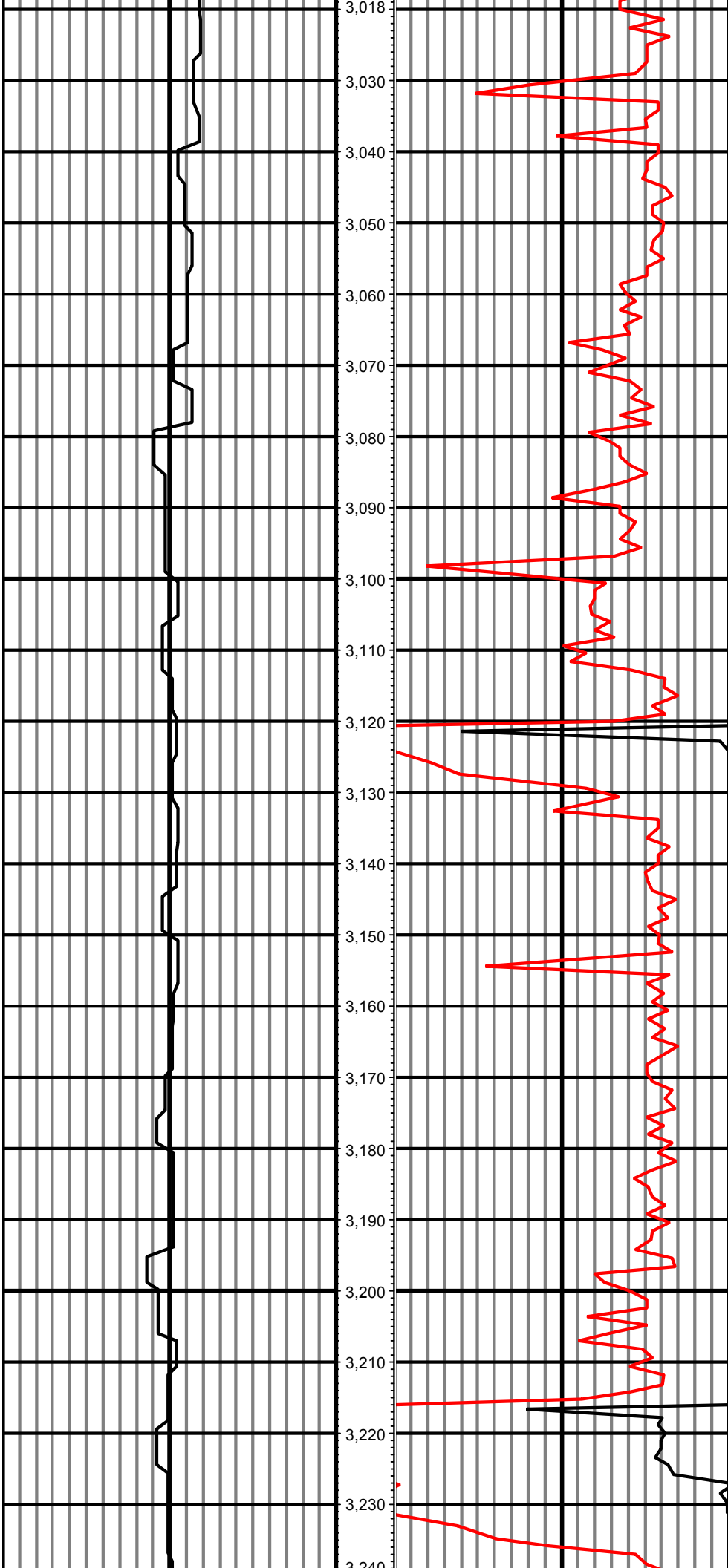
MD: 2326.00 INC: 0.50 AZ: 54.10 2,326.00



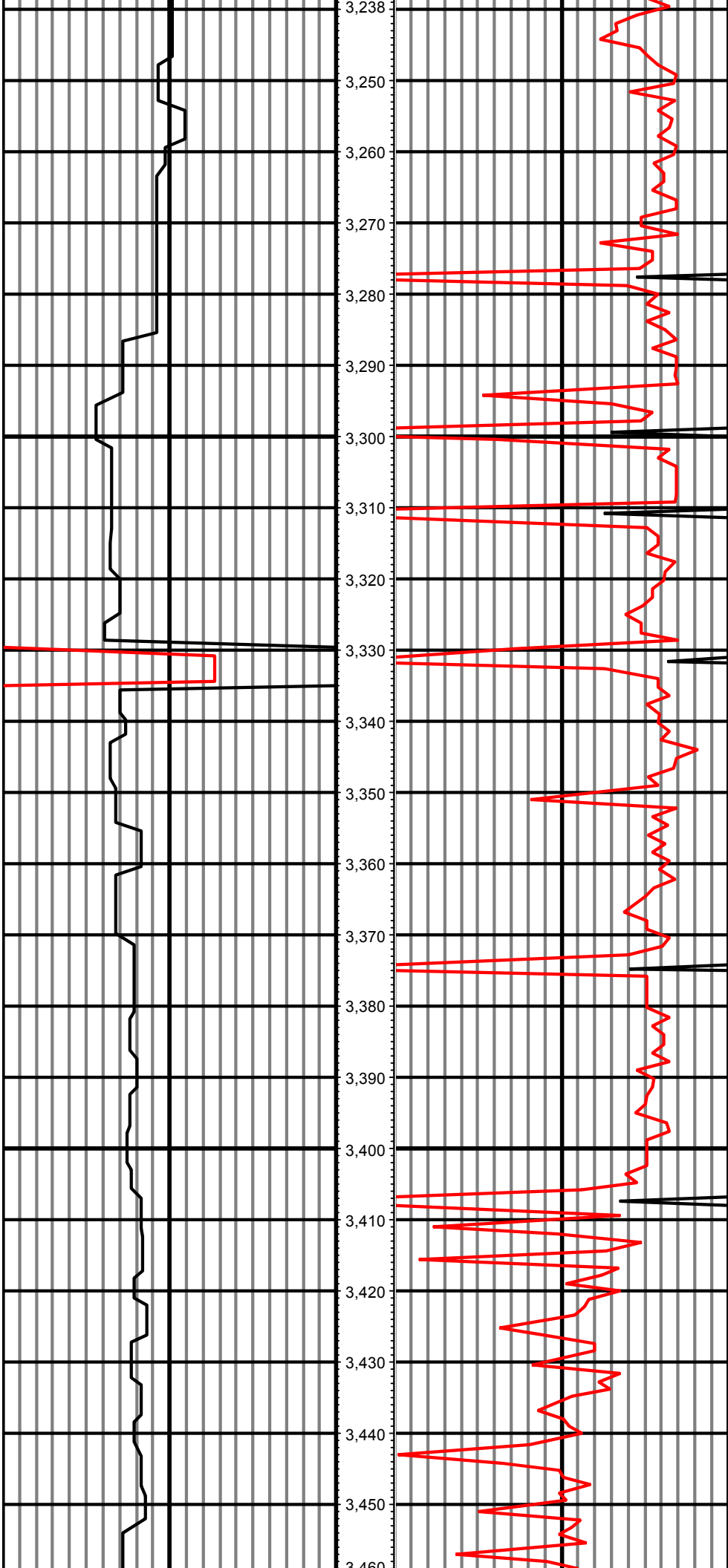
MD: 2511.00 INC: 0.50 AZ: 65.40 2,511.00





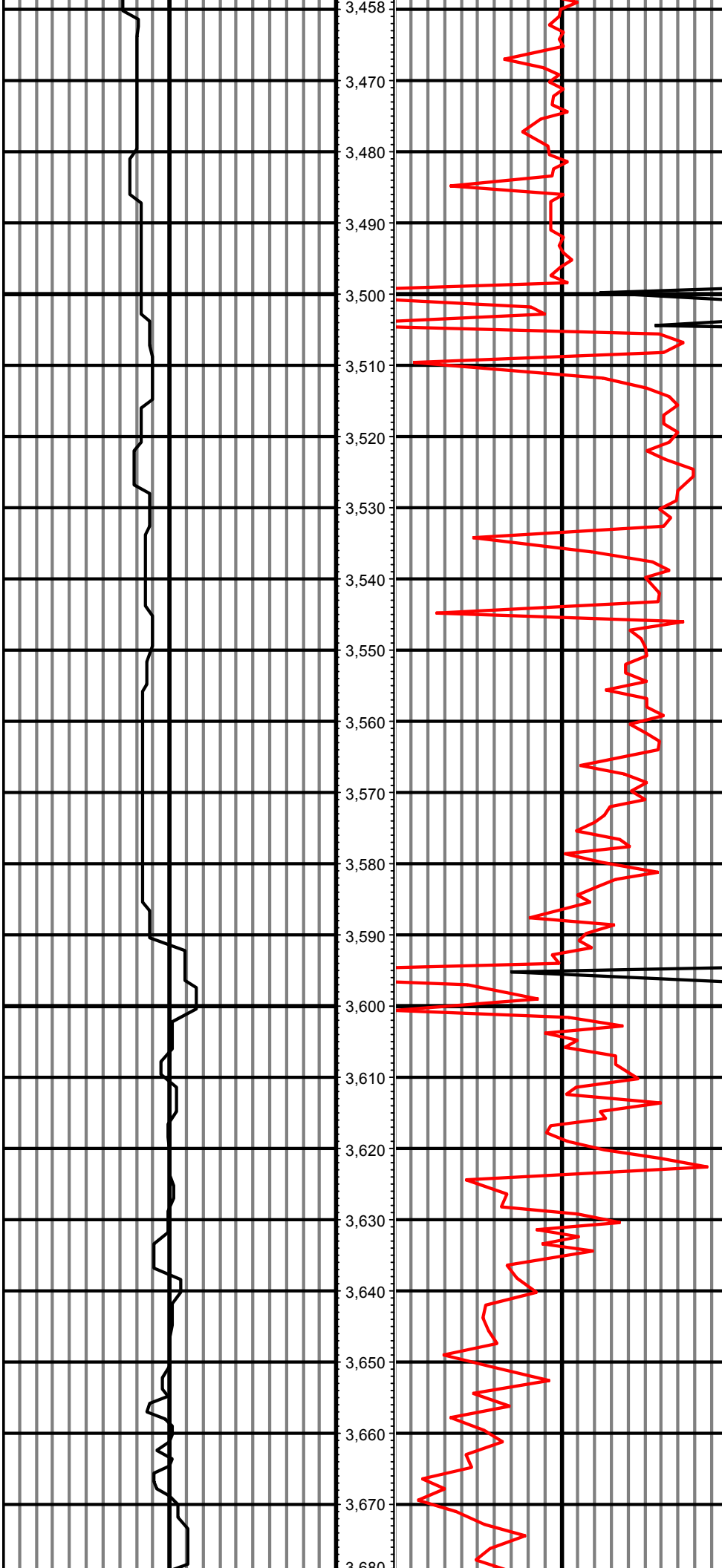


MD: 3073.00 INC: 0.60 AZ: 29.00 3,073.00

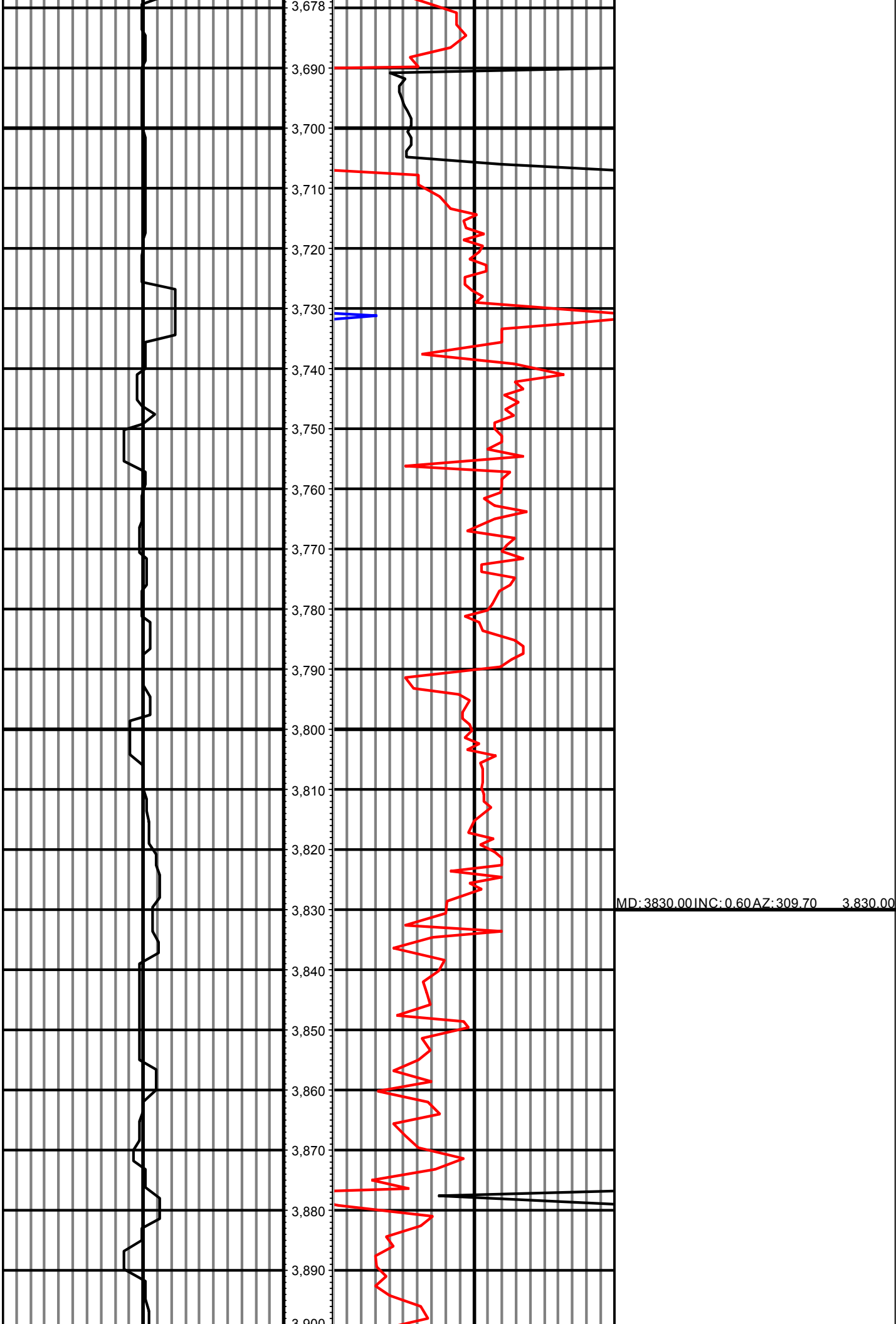


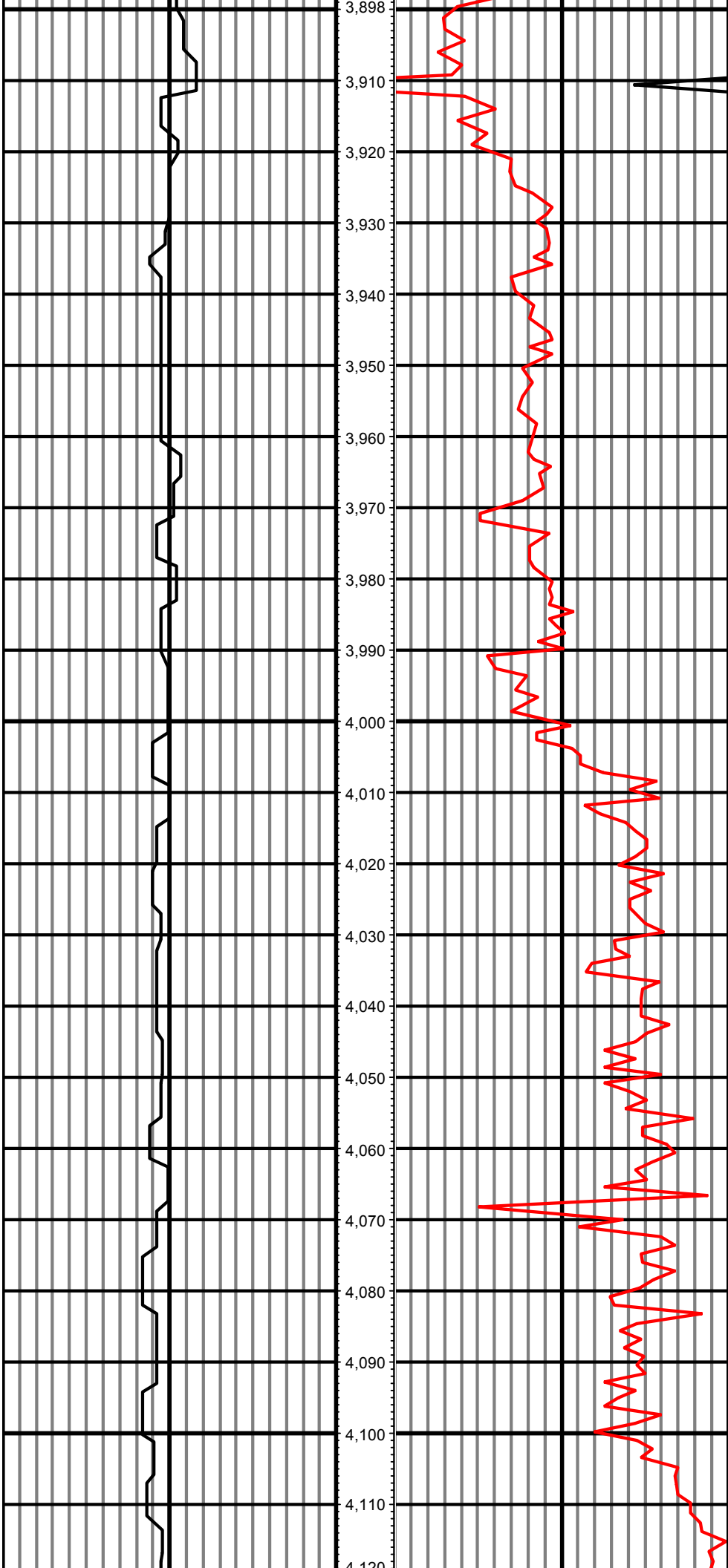
MD: 3263.00 INC: 0.90 AZ: 37.40 3,263.00

MD: 3452.00 INC: 1.30 AZ: 18.60 3,452.00

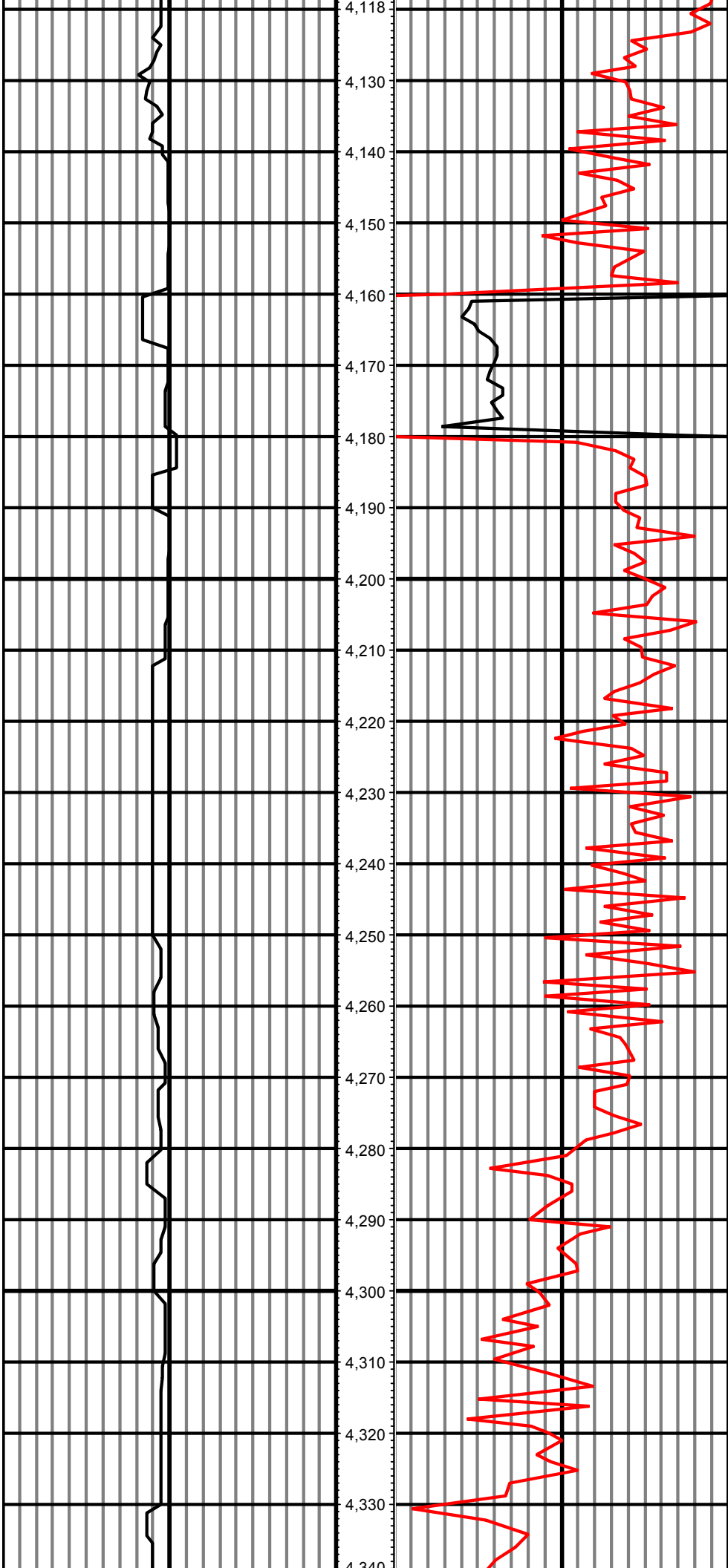


MD: 3641.00 INC: 1.30 AZ: 21.40 3.641.00

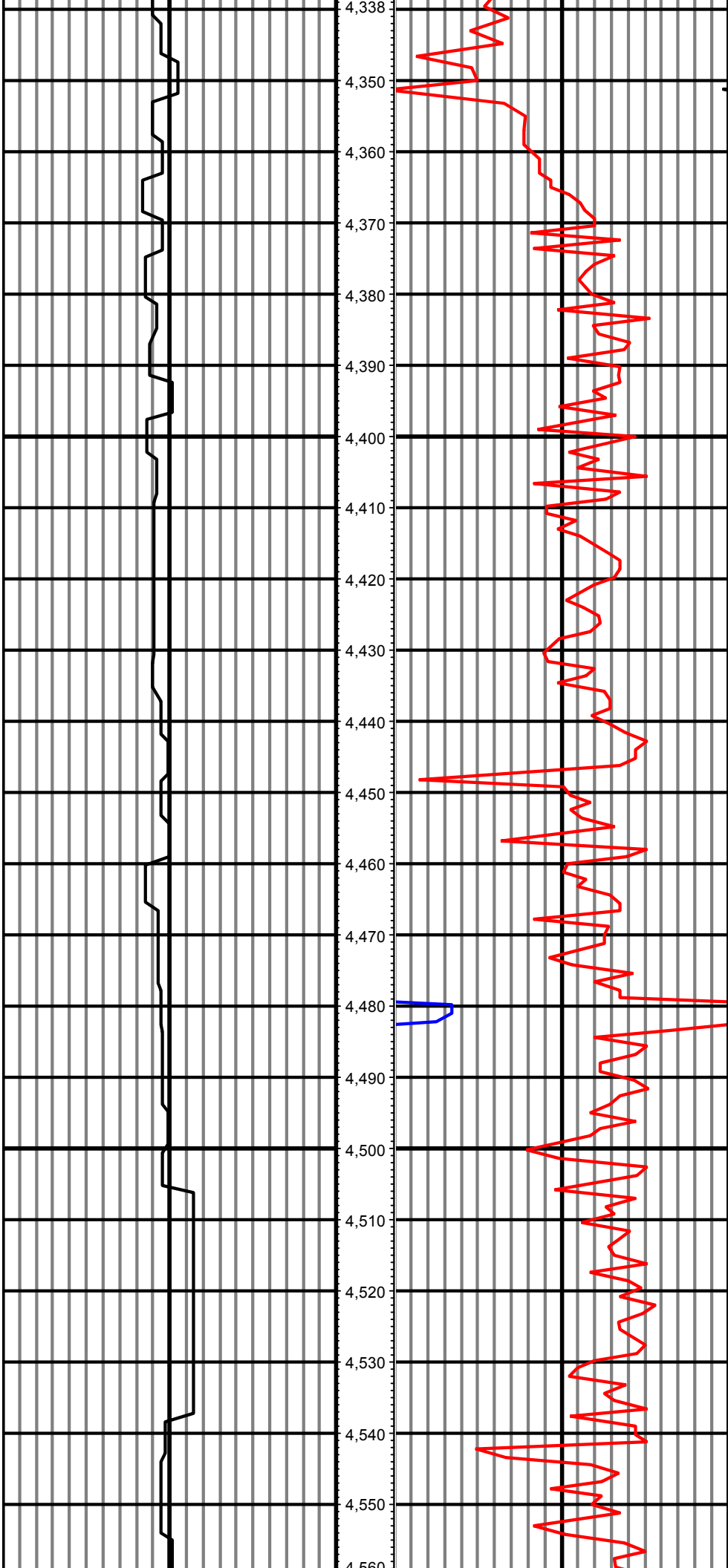




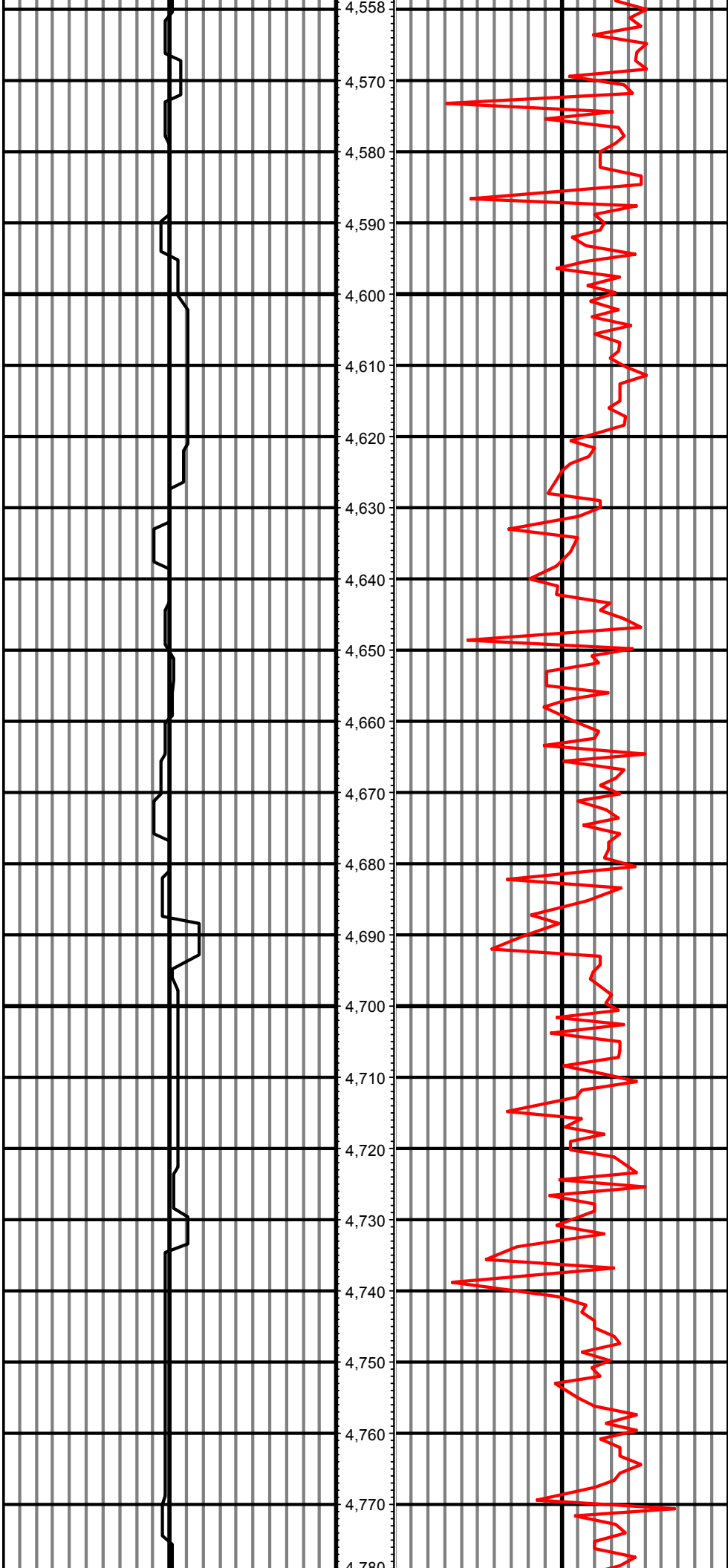
MD: 4019.00 INC: 1.20 AZ: 313.60 4.019.00



MD: 4209.00 INC: 0.50 AZ: 205.80 4,209.00

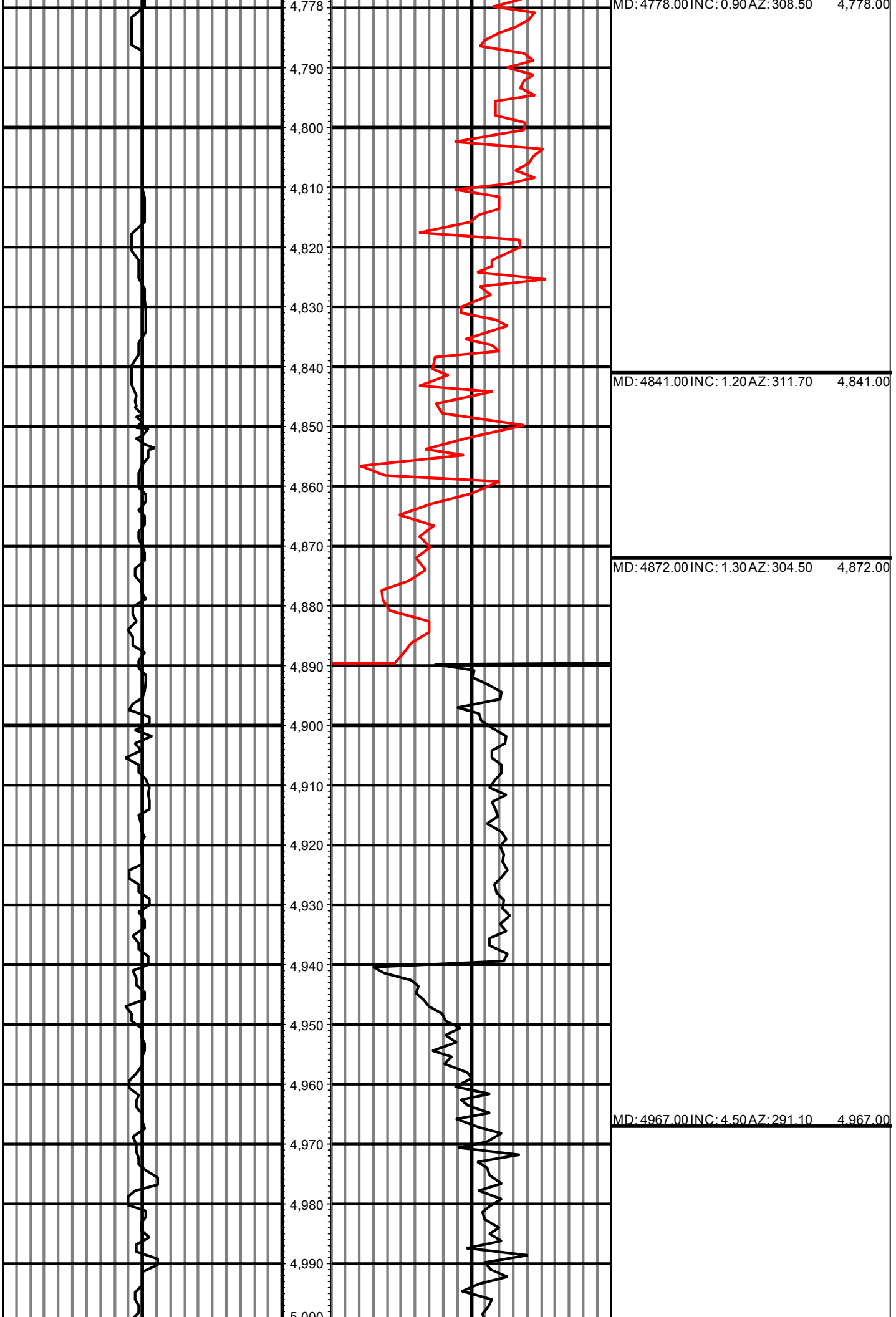


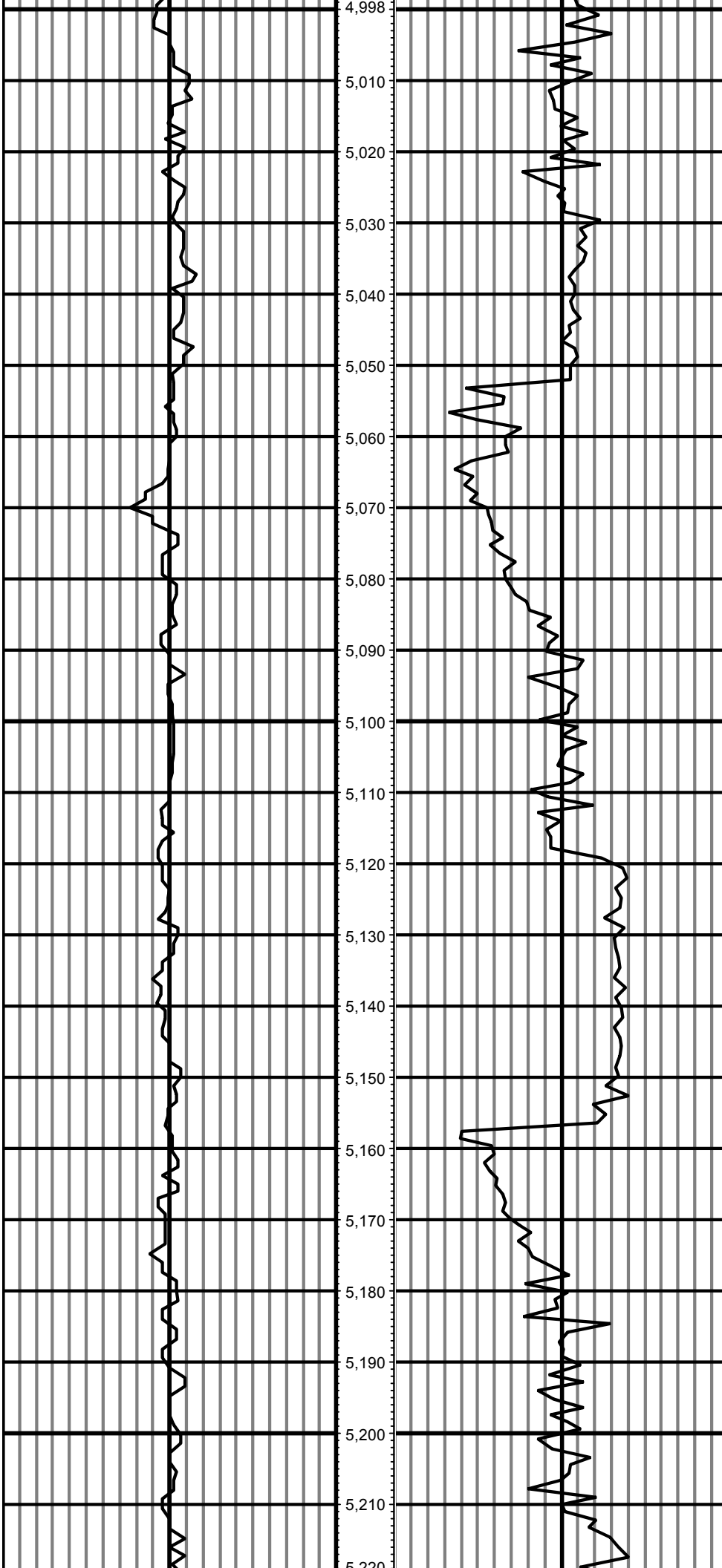
MD: 4399.00 INC: 0.60 AZ: 203.20 4,399.00



MD: 4588.00 INC: 0.70 AZ: 315.90 4,588.00

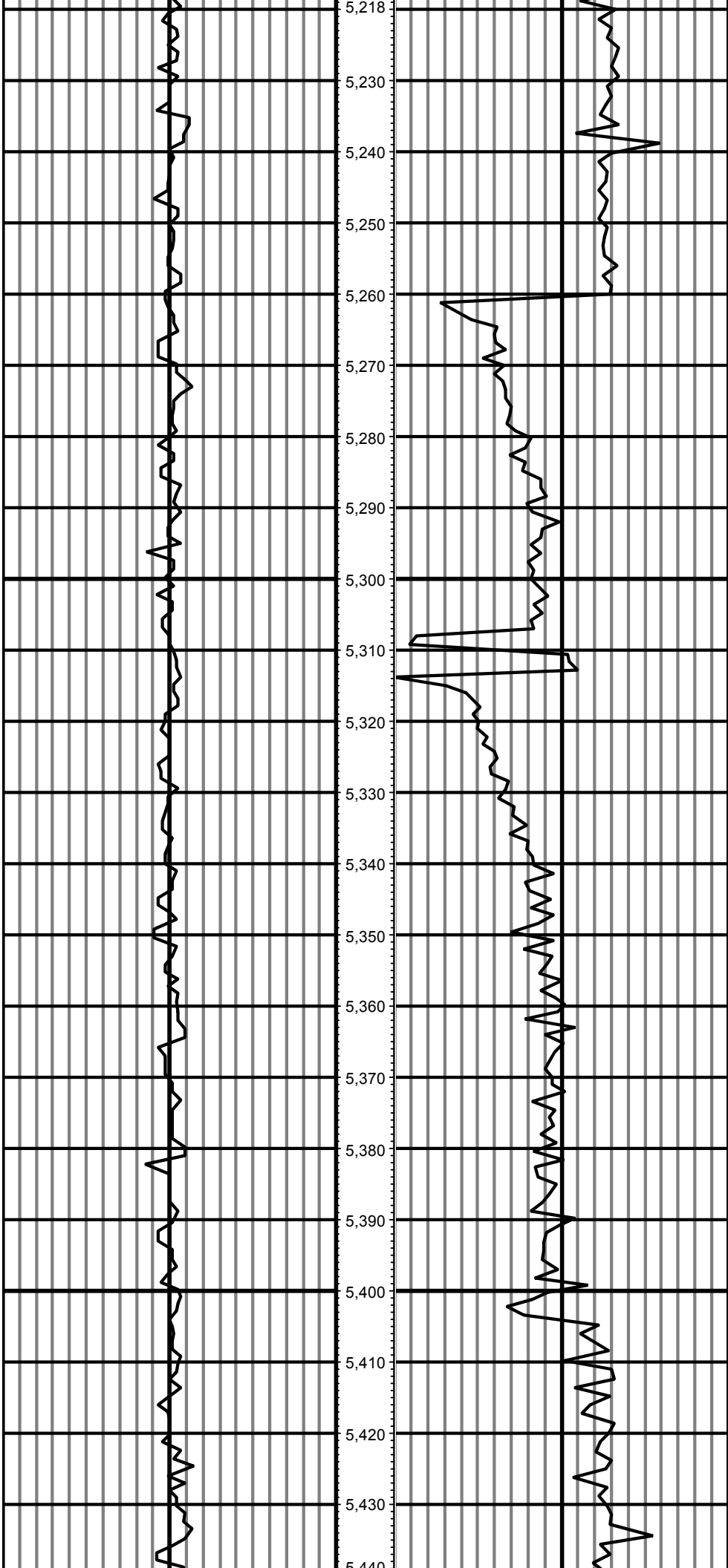
MD: 4778.00 INC: 0.90 AZ: 308.50 4,778.00





MD: 5061.00 INC: 14.00 AZ: 278.30 5,061.00

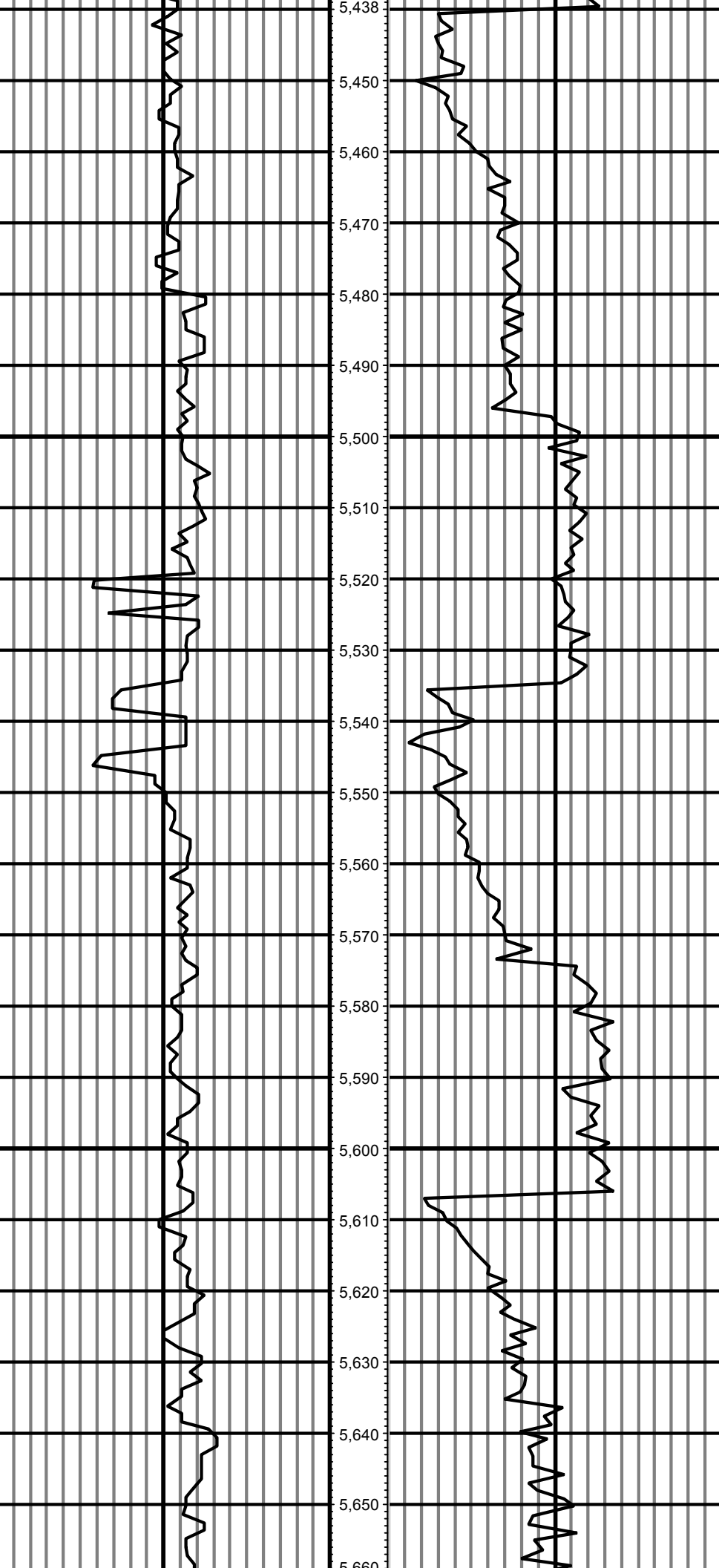
MD: 5156.00 INC: 22.30 AZ: 271.90 5,156.00



MD: 5251.00 INC: 27.50 AZ: 267.00 5,251.00

MD: 5346.00 INC: 36.90 AZ: 260.90 5,346.00

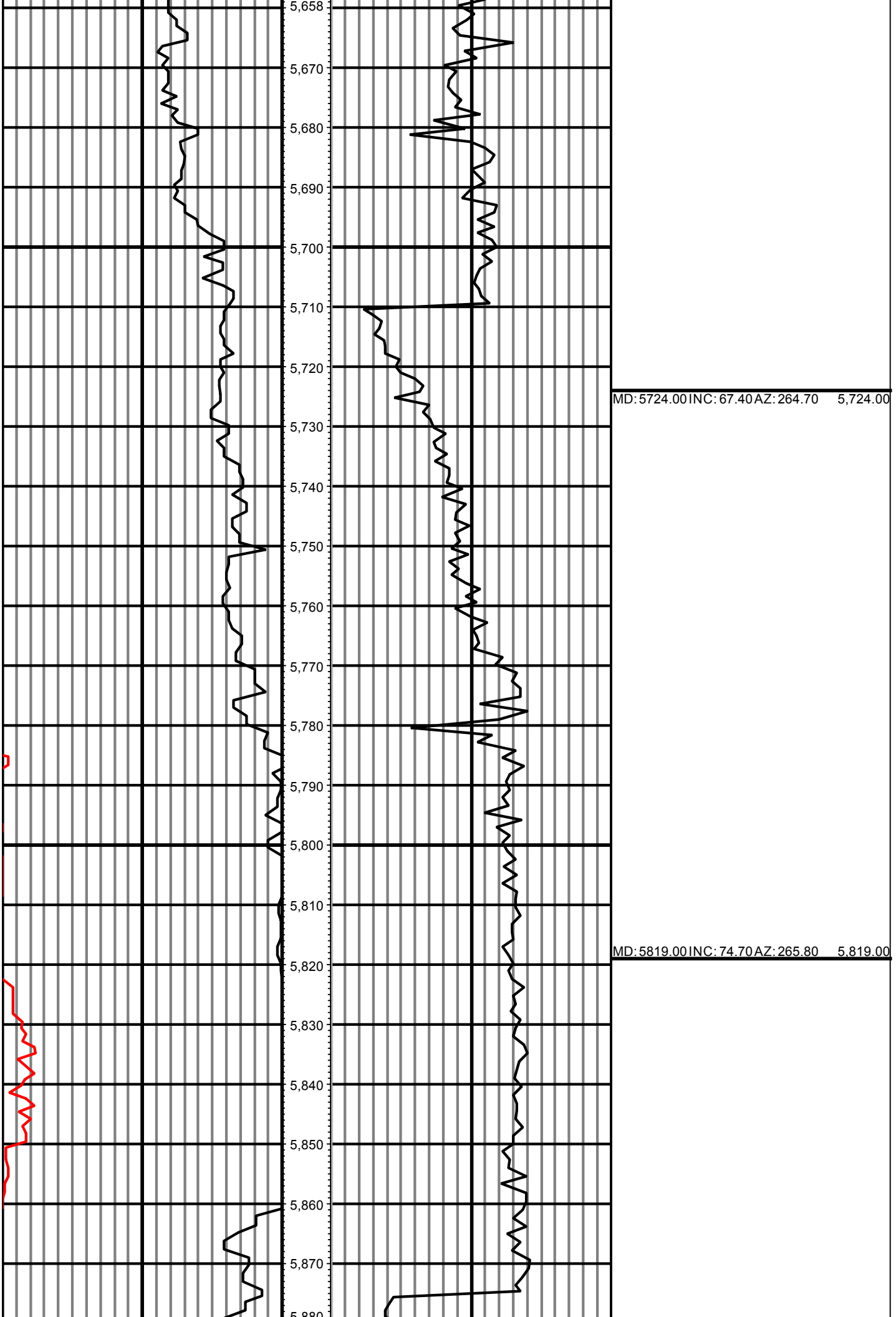
MD: 5440.00 INC: 44.00 AZ: 256.50 5,440.00

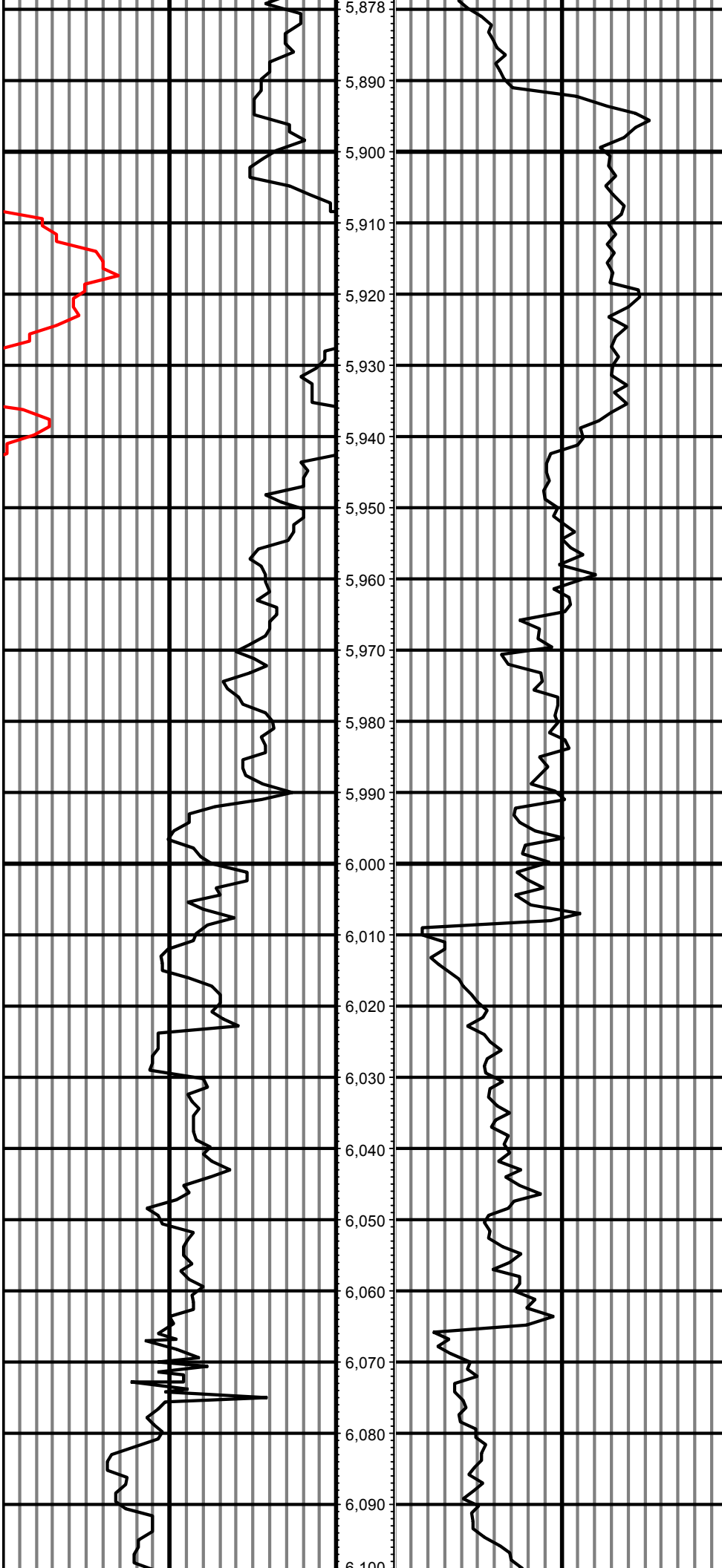


MD: 5440.00 INC: 44.00 AZ: 256.50 5,440.00

MD: 5535.00 INC: 50.00 AZ: 257.70 5,535.00

MD: 5629.00 INC: 55.80 AZ: 263.70 5,629.00

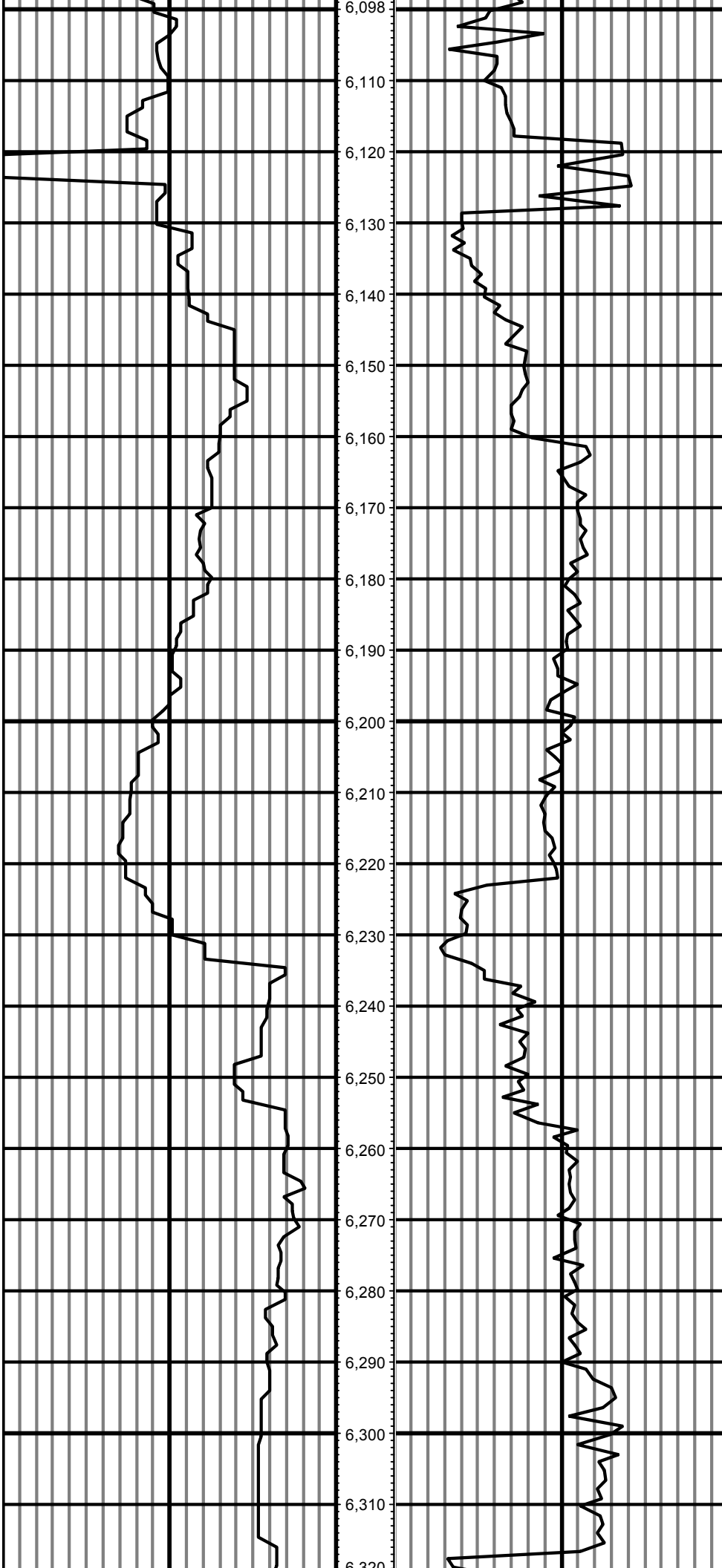




MD: 5913.00 INC: 74.70 AZ: 269.60 5,913.00

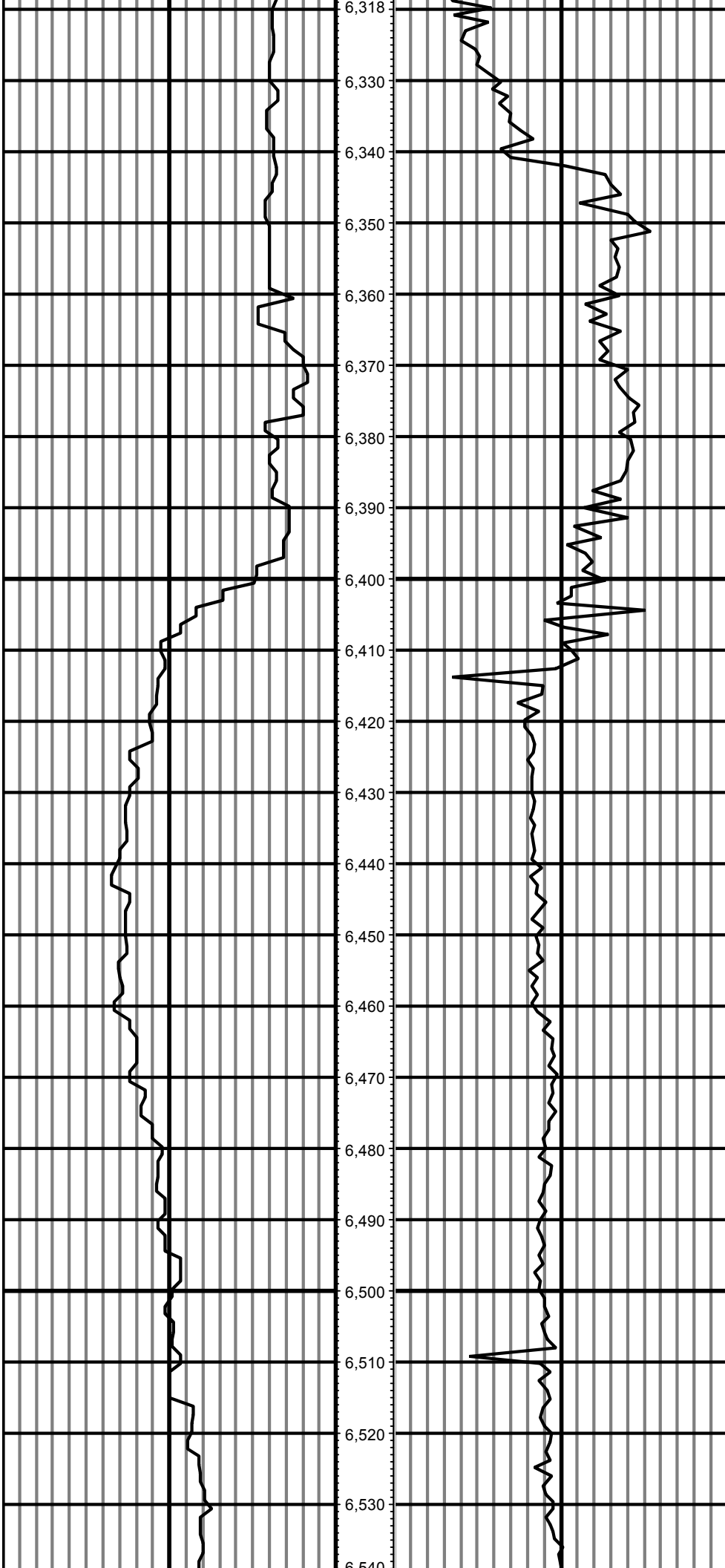
MD: 6008.00 INC: 74.60 AZ: 269.10 6,008.00

MD: 6062.00 INC: 79.80 AZ: 269.10 6,062.00



MD: 6157.00 INC: 87.30 AZ: 269.60 6,157.00

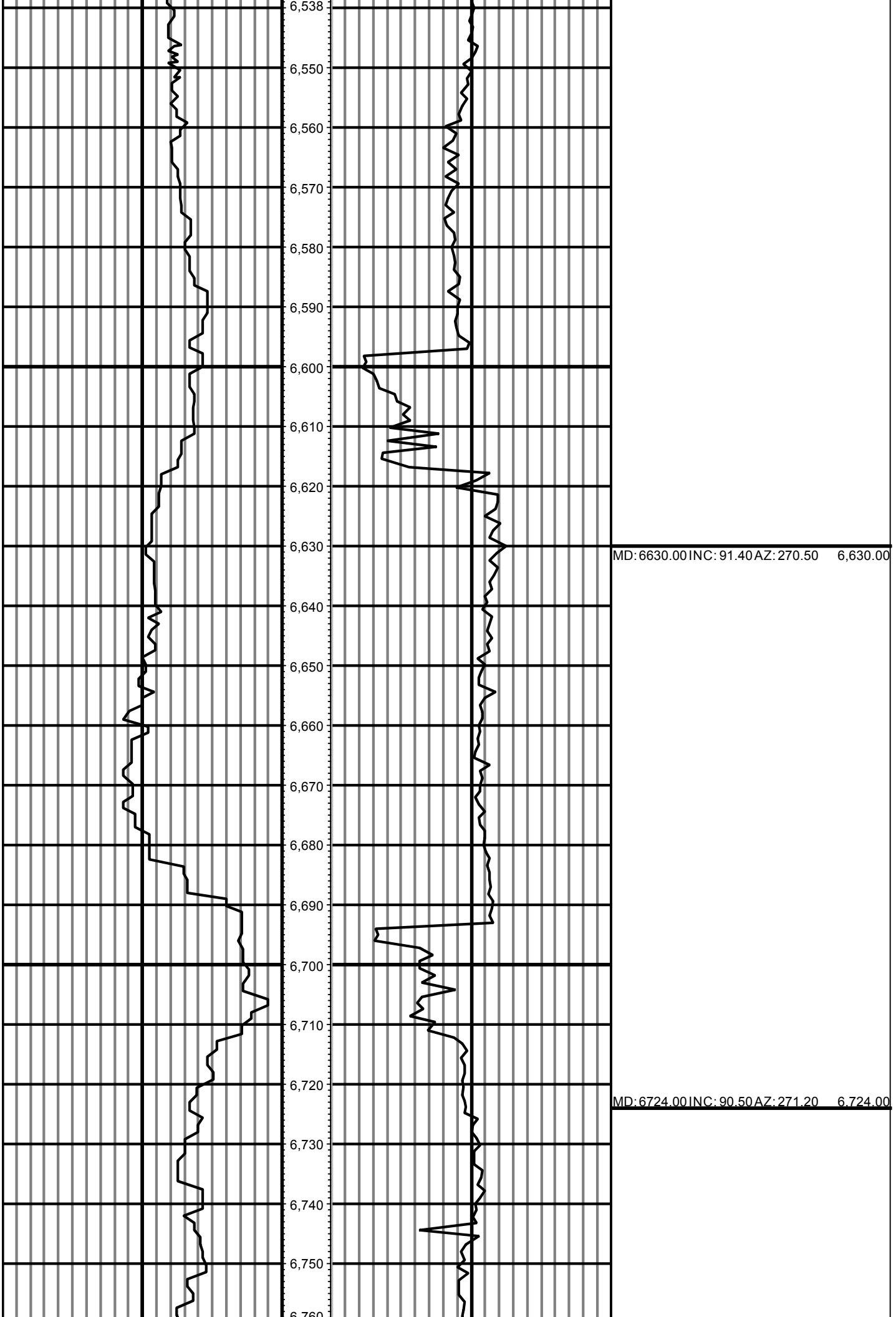
MD: 6252.00 INC: 88.50 AZ: 269.60 6,252.00

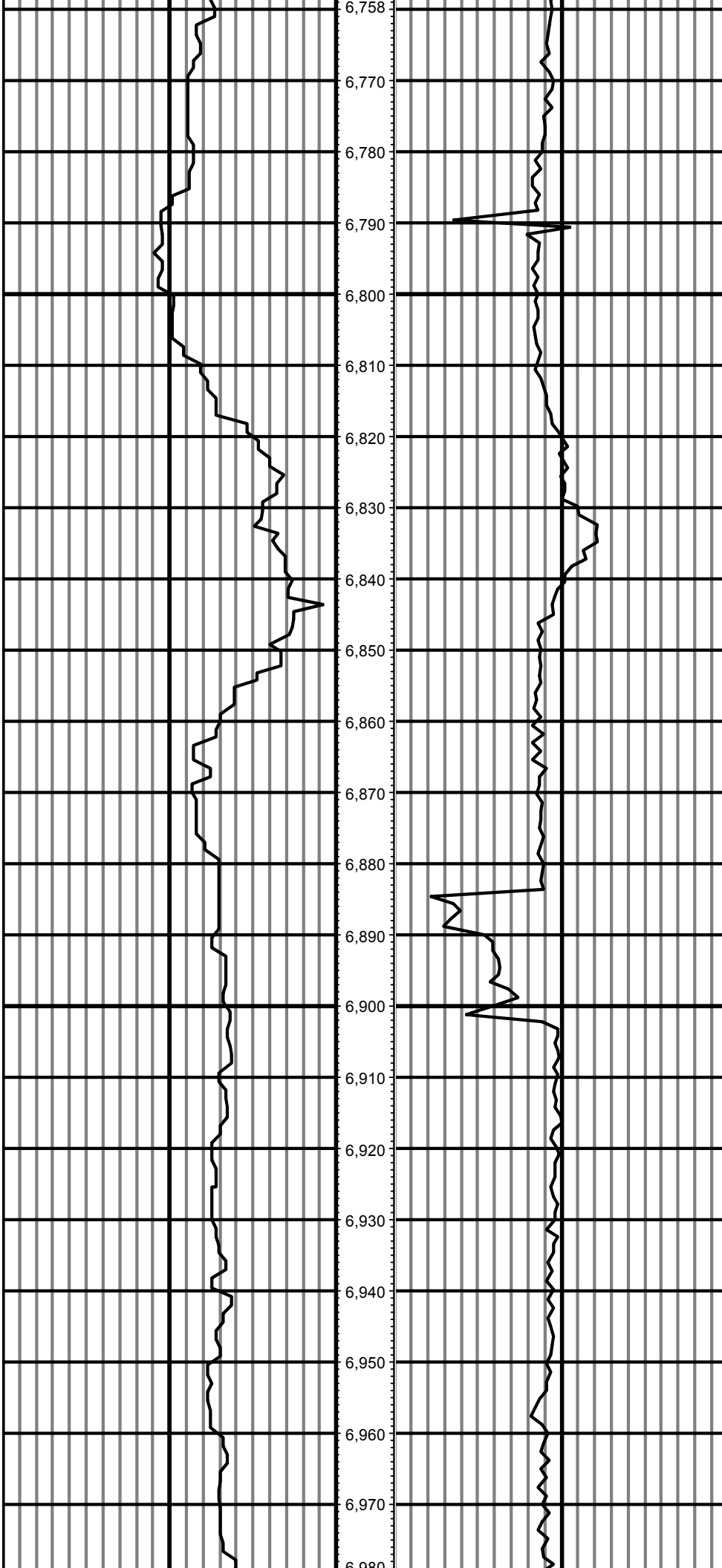


MD: 6346.00 INC: 90.80 AZ: 269.60 6,346.00

MD: 6441.00 INC: 90.40 AZ: 269.10 6,441.00

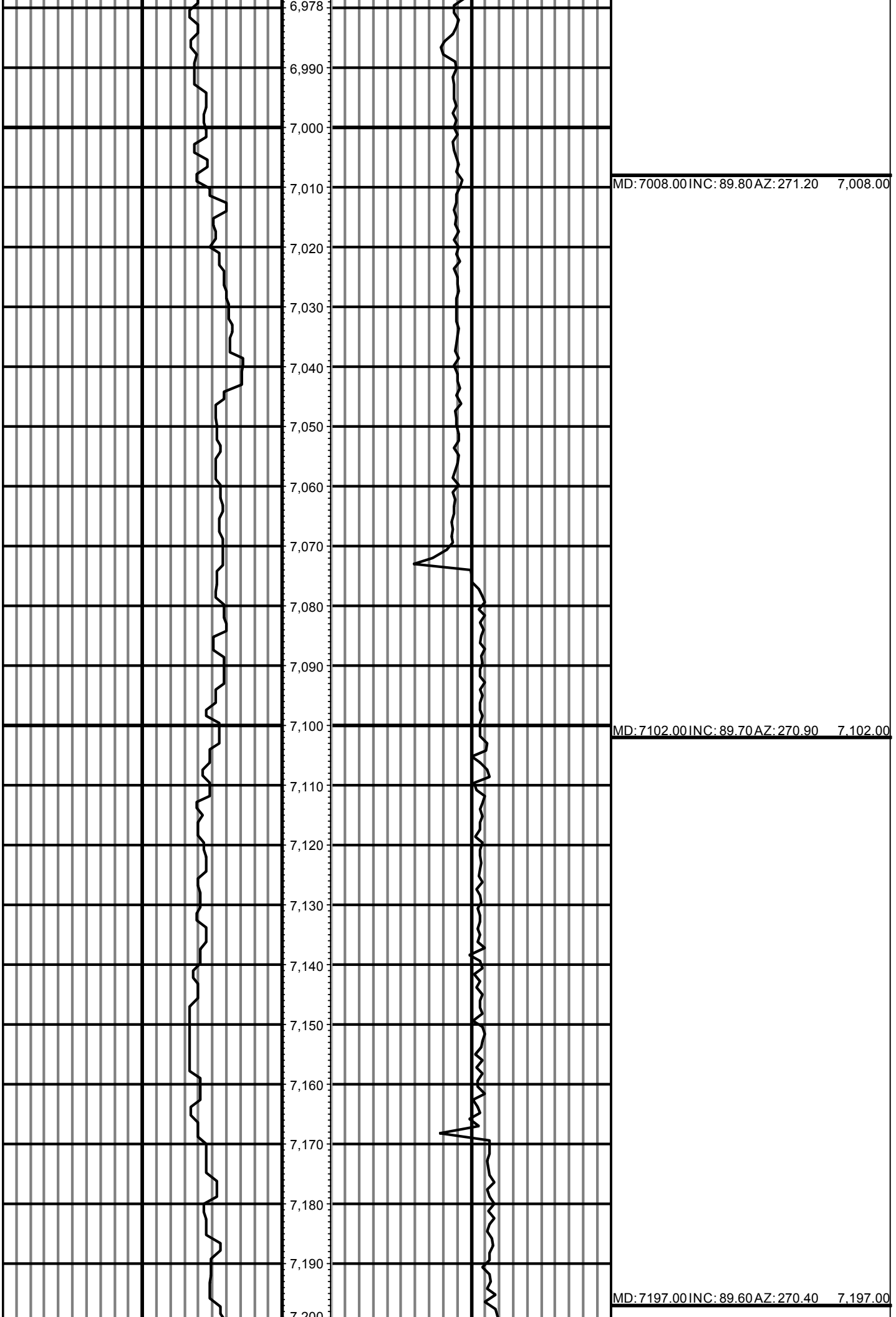
MD: 6535.00 INC: 90.10 AZ: 268.10 6,535.00

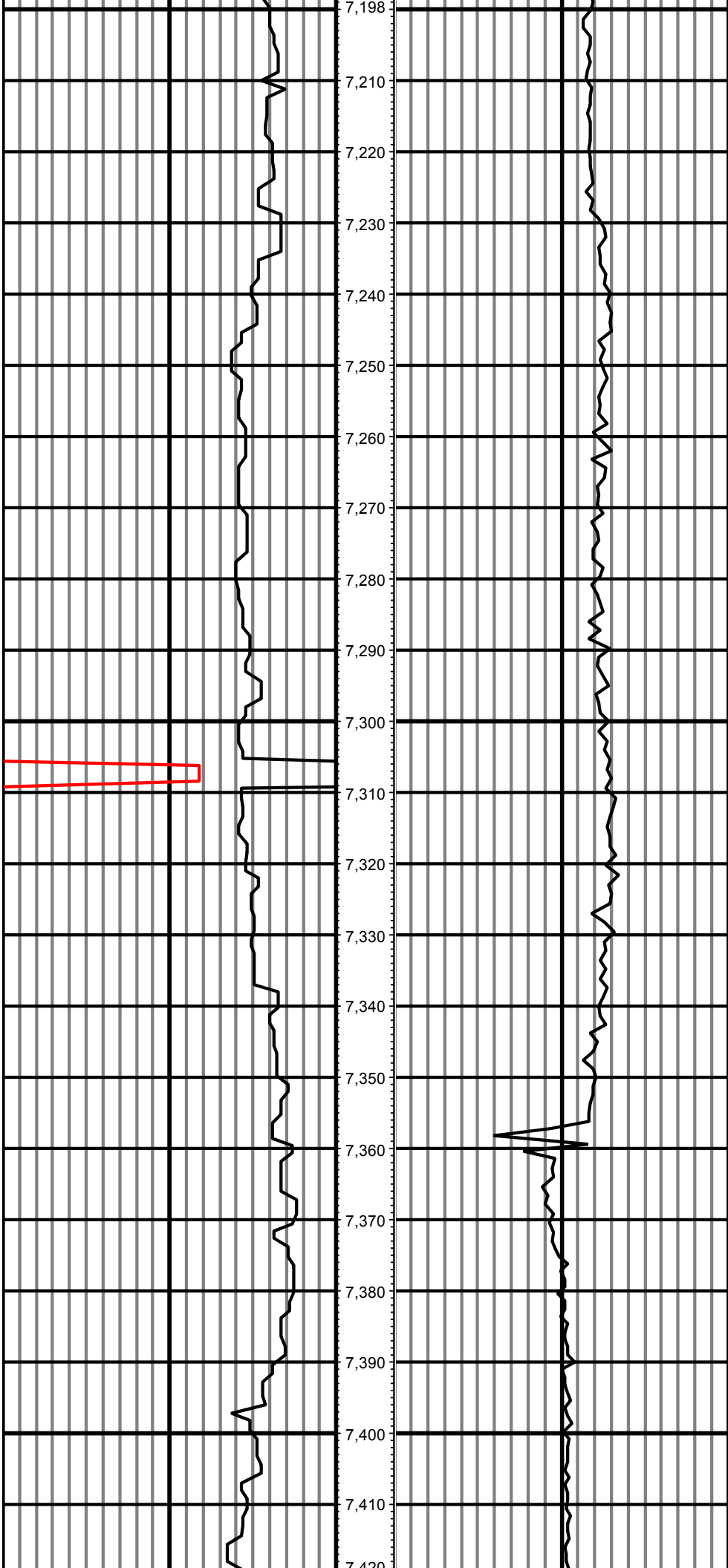




MD: 6819.00 INC: 90.80 AZ: 271.00 6,819.00

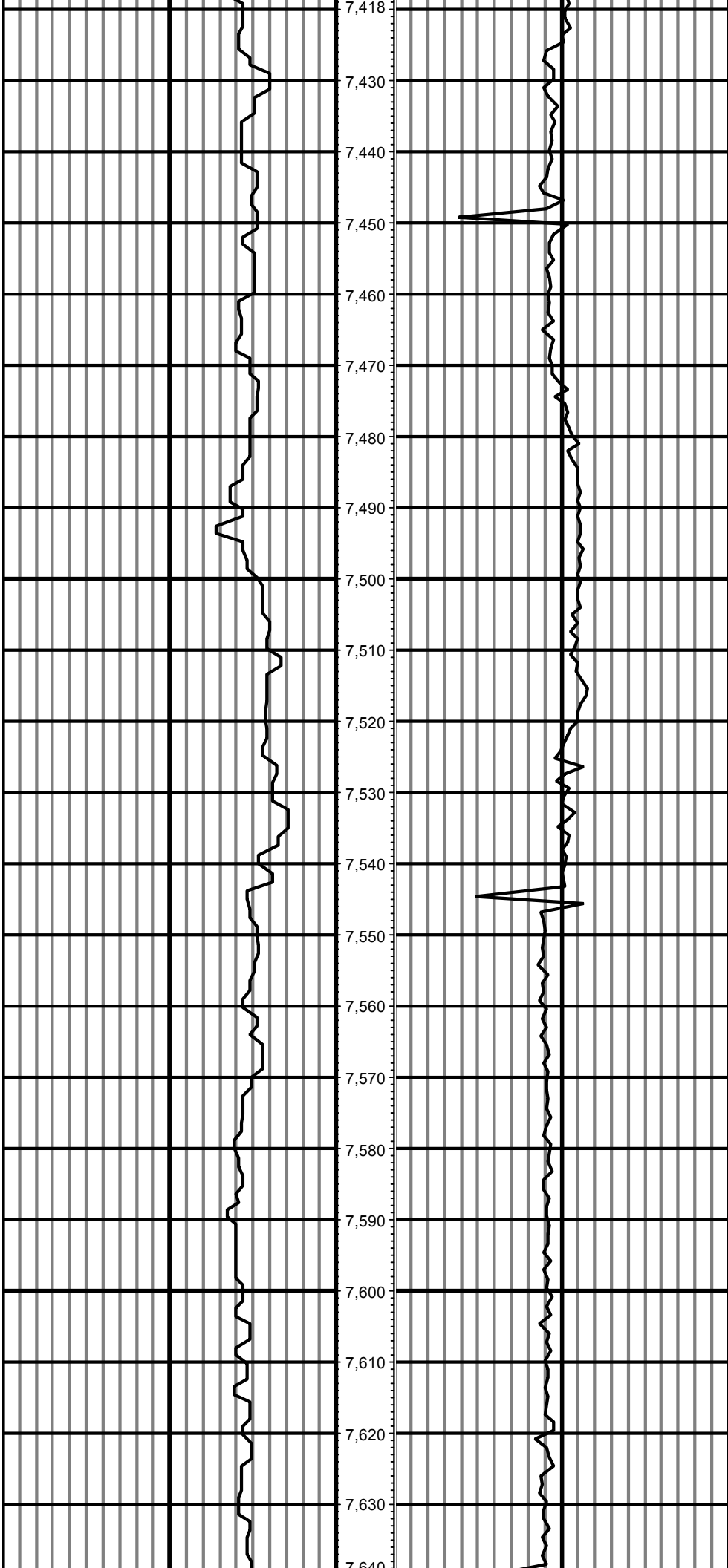
MD: 6913.00 INC: 89.30 AZ: 271.00 6,913.00





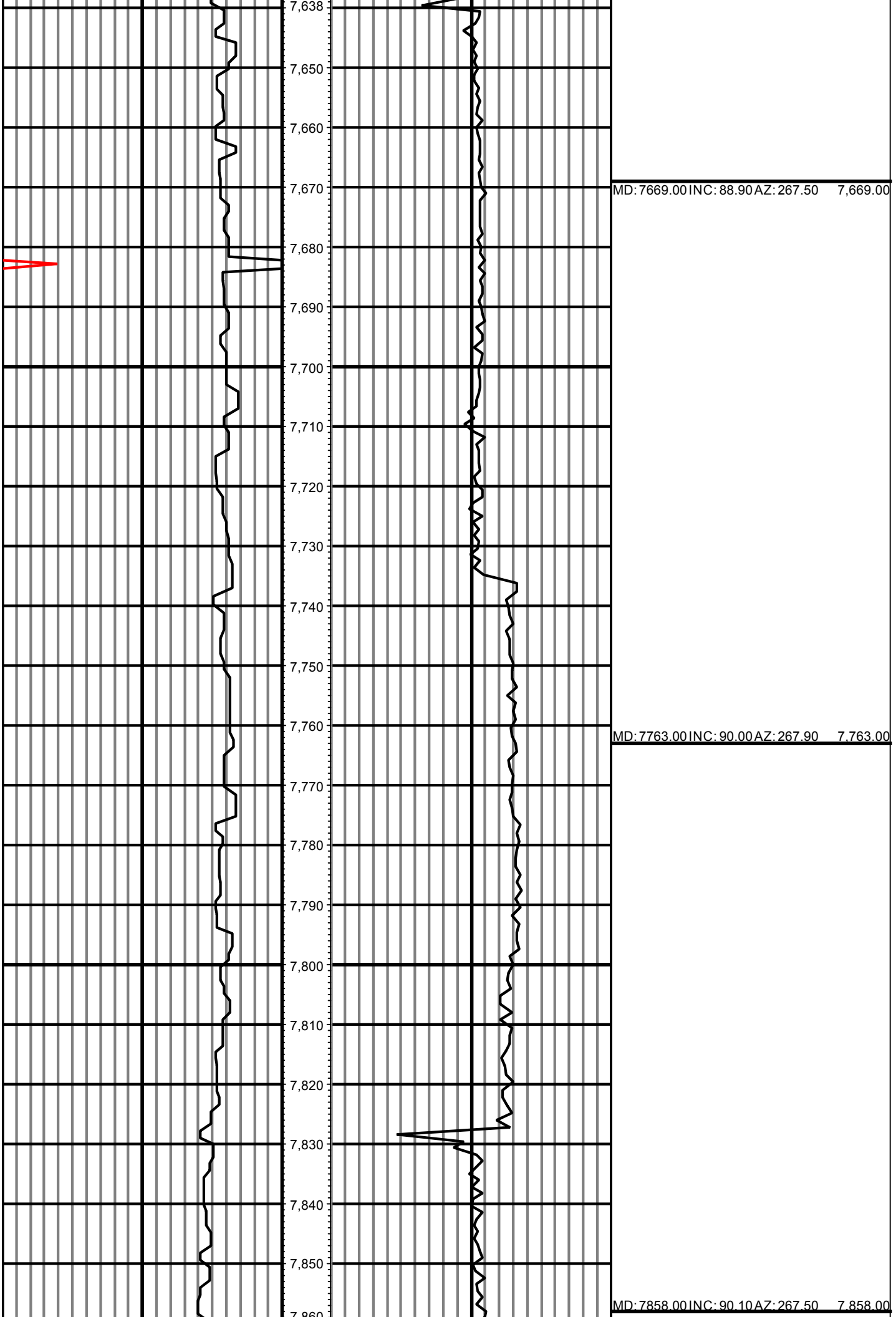
MD: 7291.00 INC: 89.20 AZ: 268.60 7,291.00

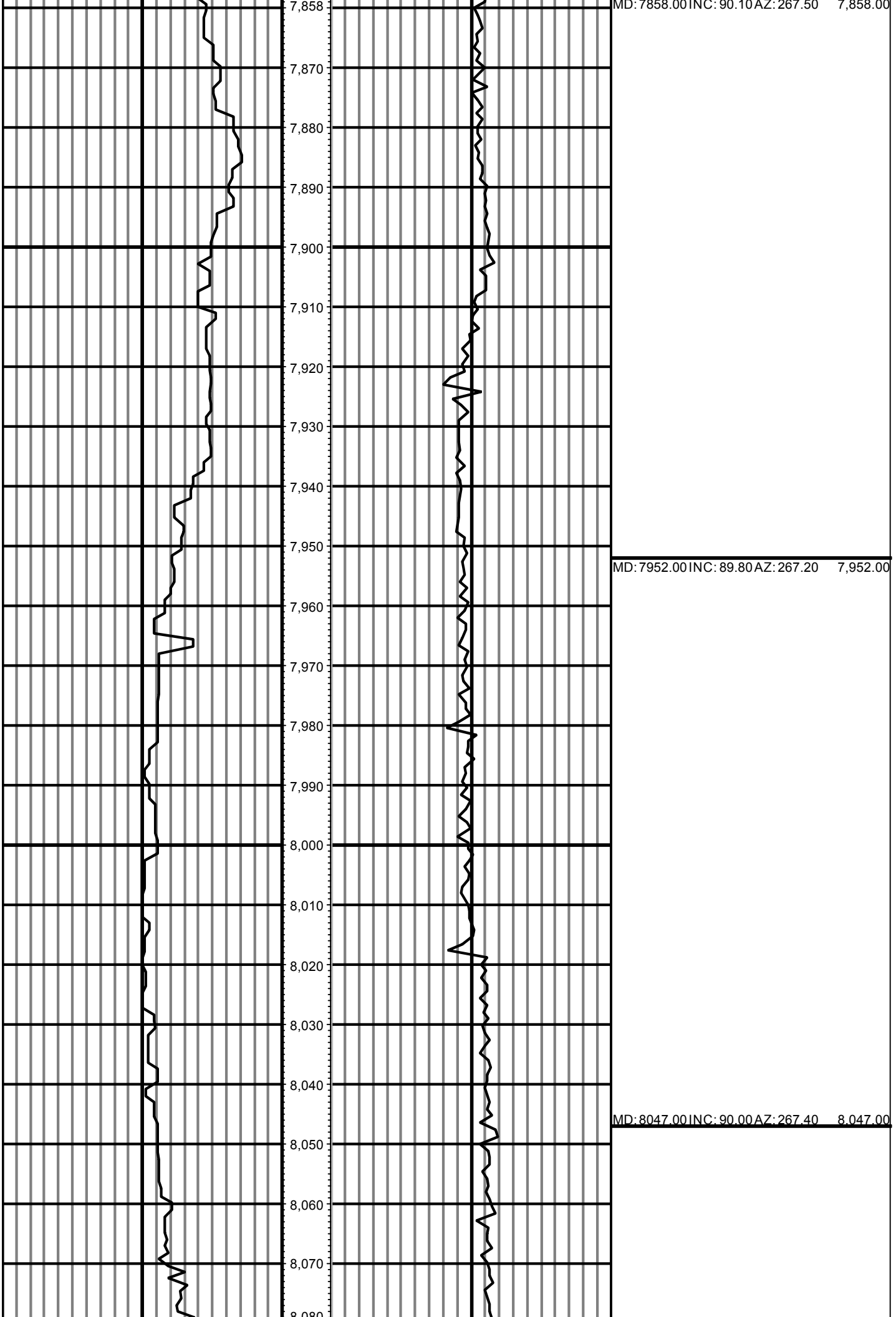
MD: 7386.00 INC: 89.80 AZ: 269.10 7,386.00

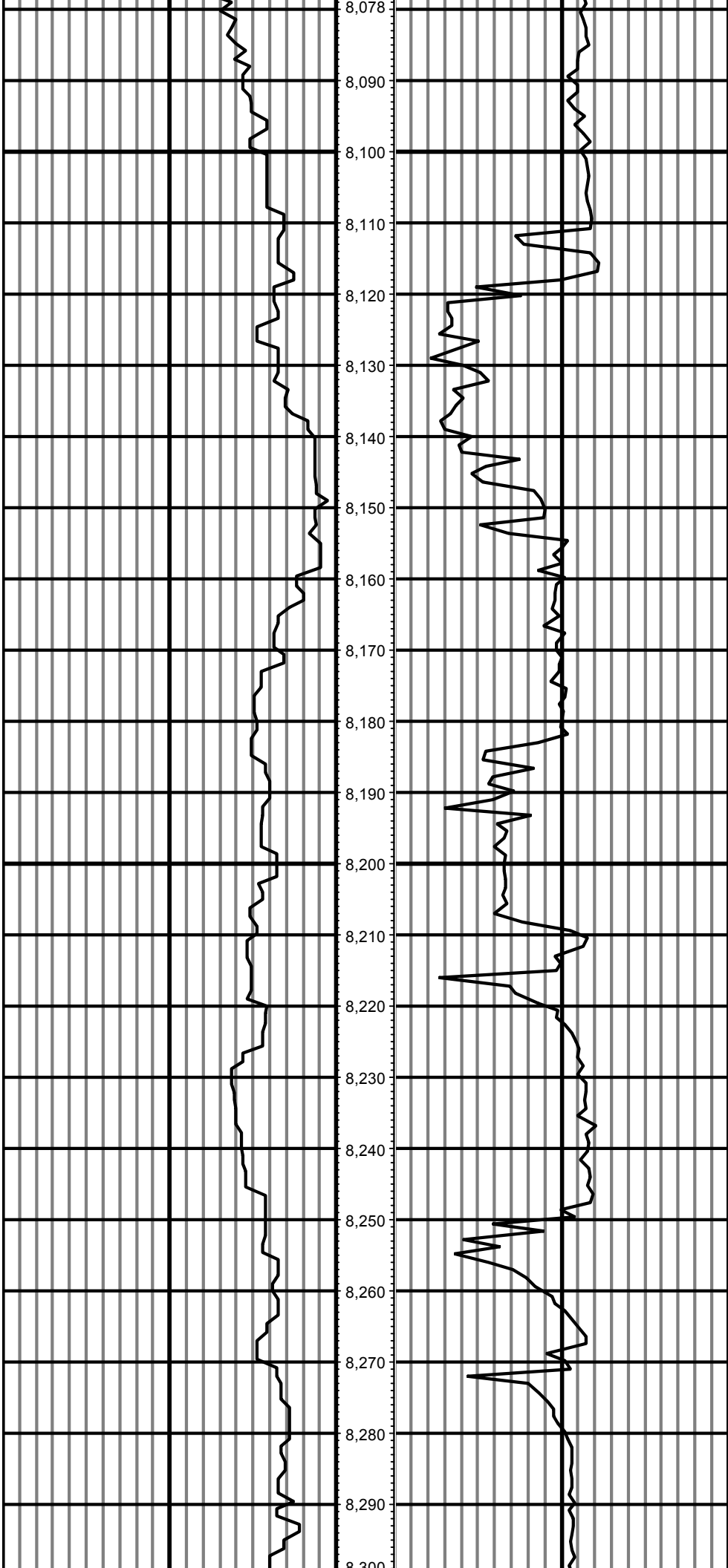


MD: 7480.00 INC: 88.90 AZ: 267.40 7,480.00

MD: 7574.00 INC: 89.10 AZ: 267.90 7,574.00

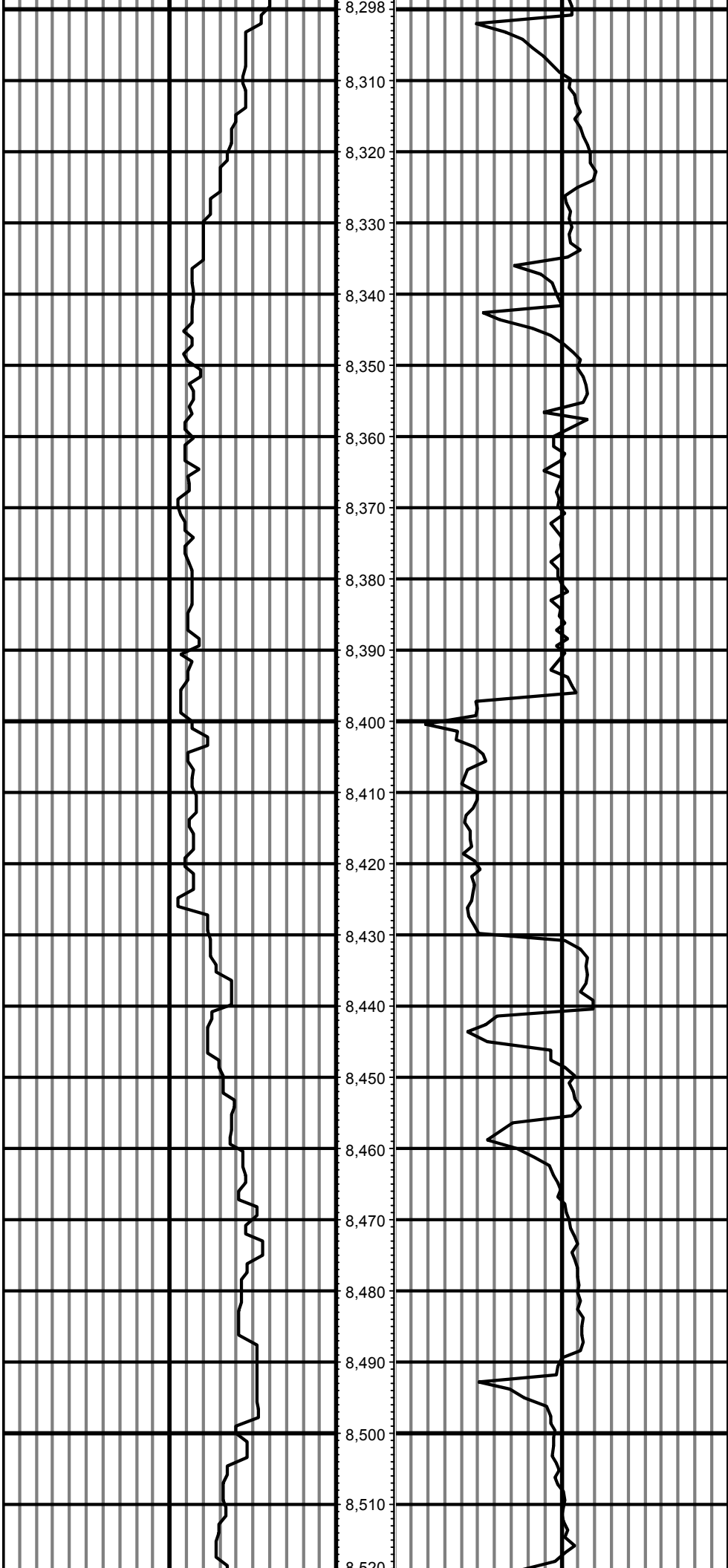






MD: 8142.00 INC: 90.20 AZ: 267.20 8,142.00

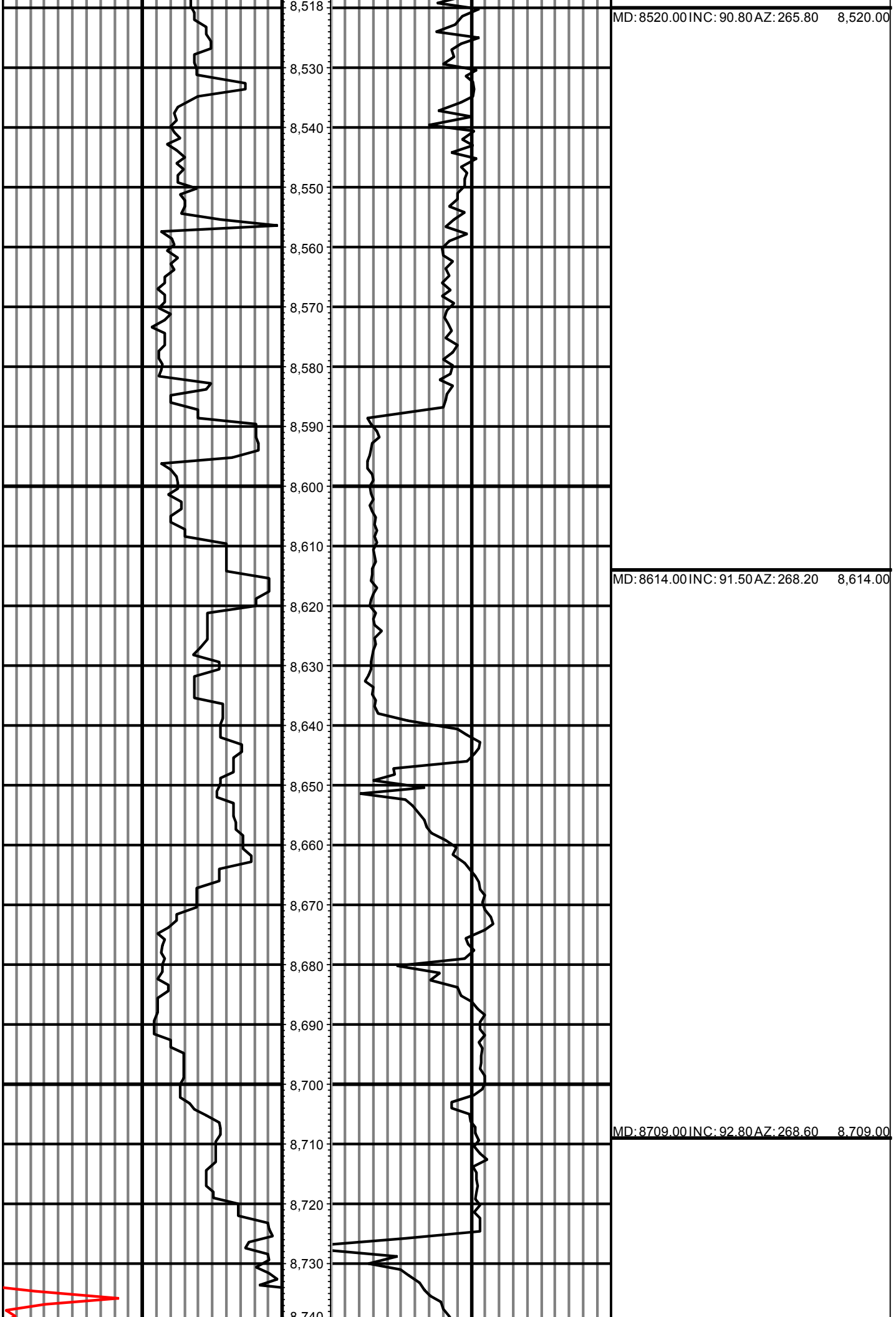
MD: 8236.00 INC: 90.30 AZ: 267.00 8,236.00



MD: 8331.00 INC: 89.90 AZ: 266.00 8,331.00

MD: 8426.00 INC: 91.30 AZ: 266.80 8,426.00

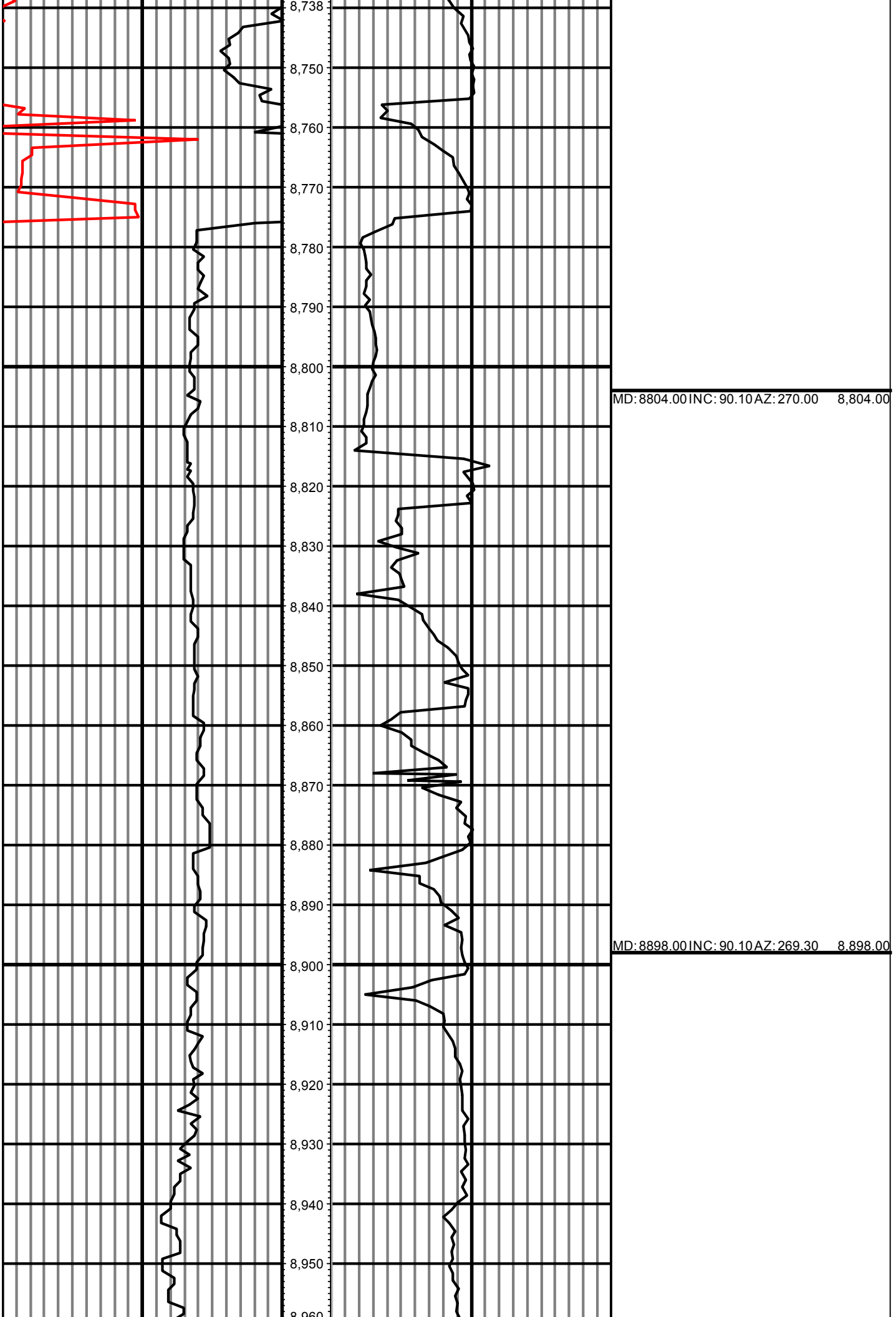
MD: 8520.00 INC: 90.80 AZ: 265.80 8,520.00

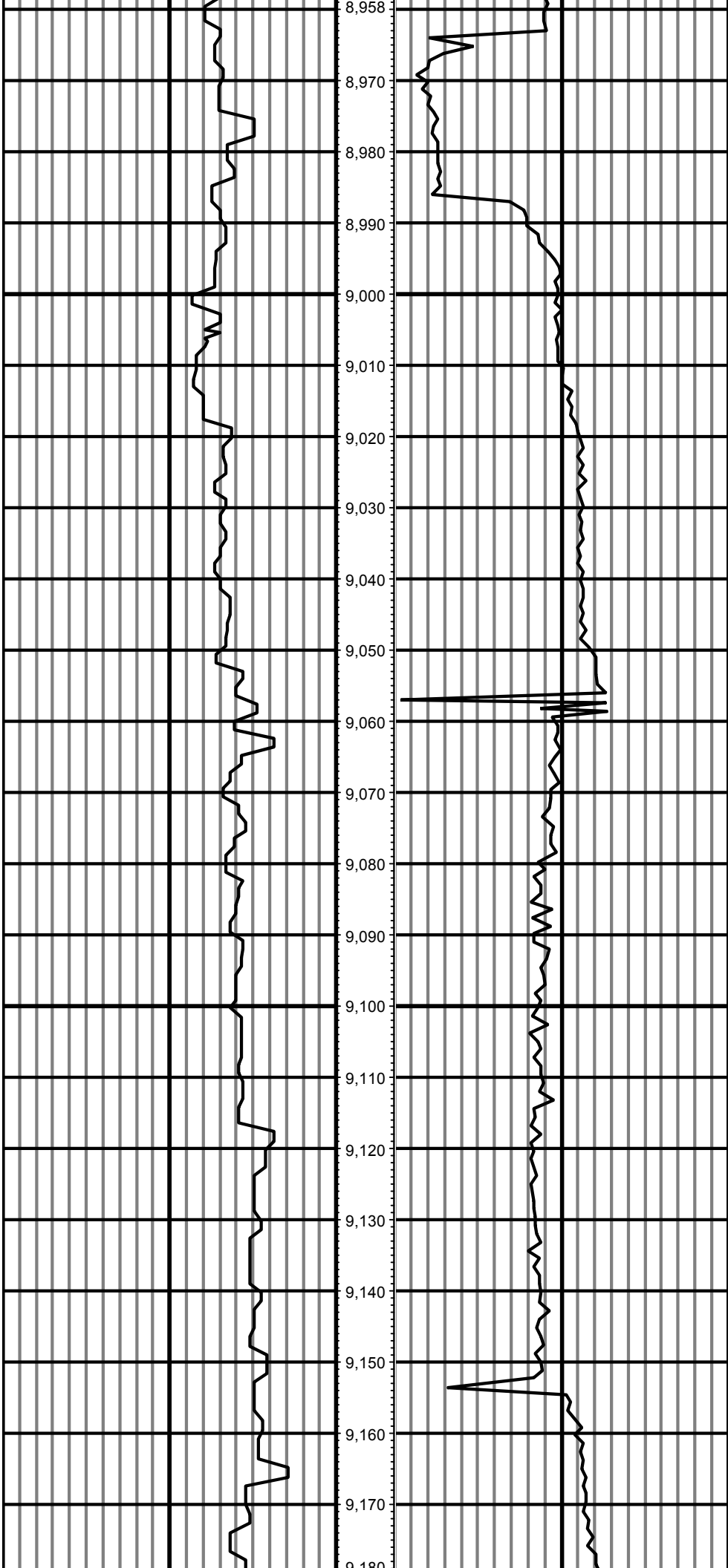


MD: 8520.00 INC: 90.80 AZ: 265.80 8,520.00

MD: 8614.00 INC: 91.50 AZ: 268.20 8,614.00

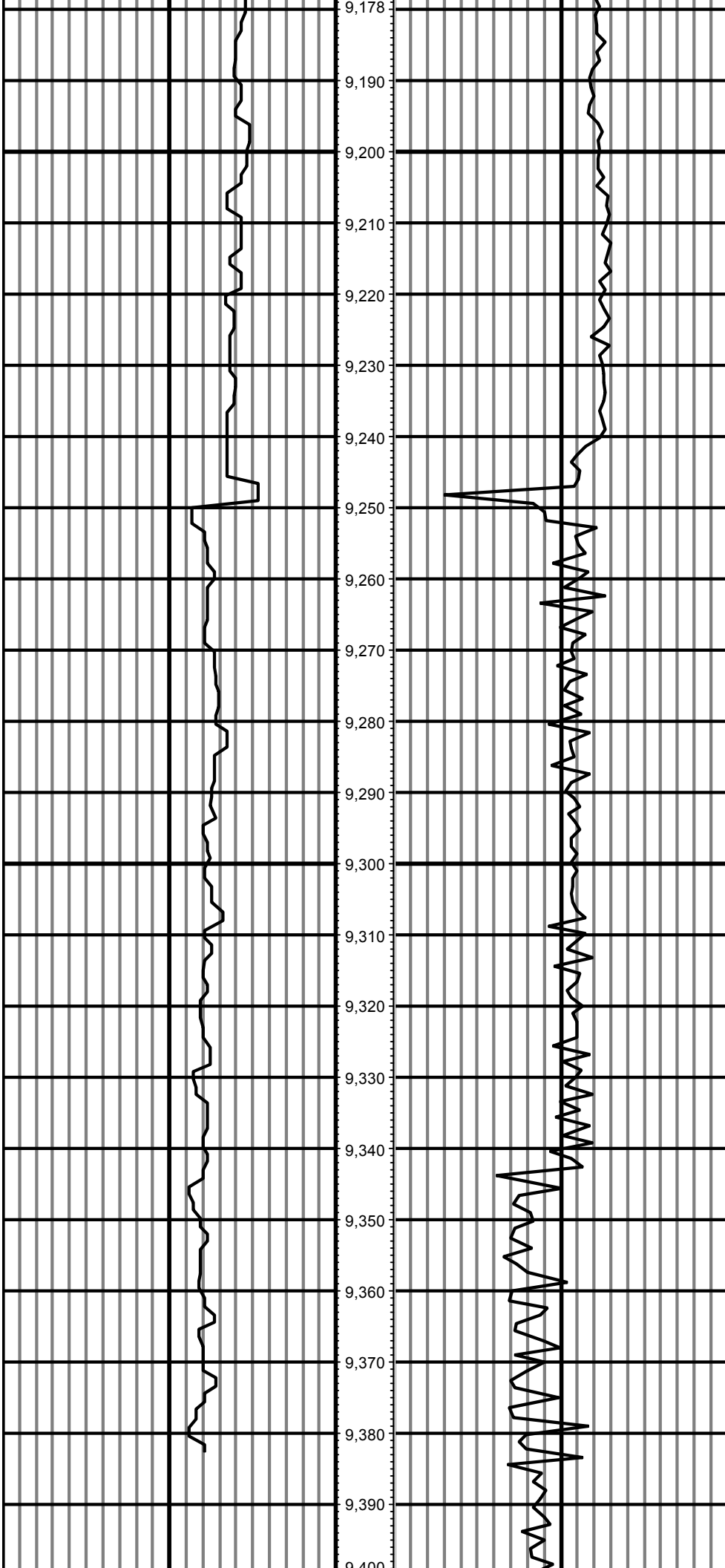
MD: 8709.00 INC: 92.80 AZ: 268.60 8,709.00





MD: 8992.00 INC: 88.90 AZ: 270.40 8,992.00

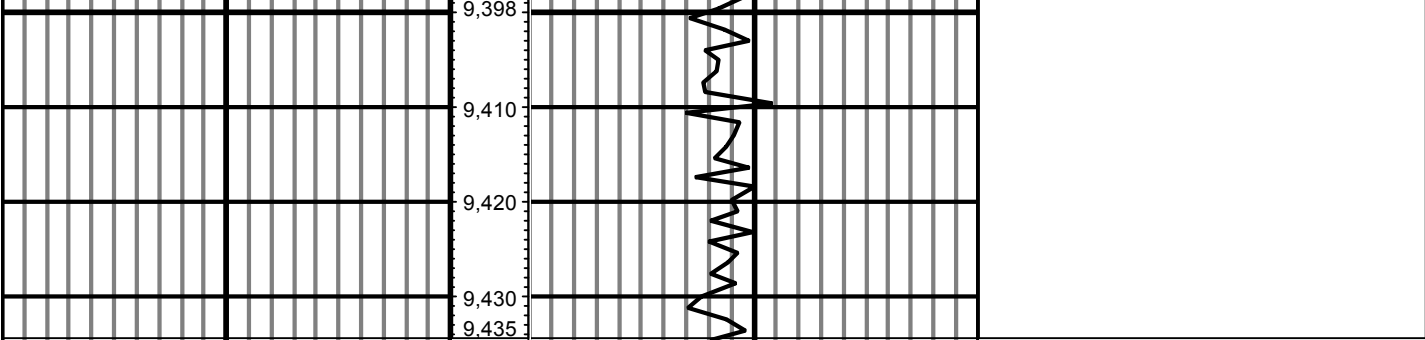
MD: 9087.00 INC: 88.80 AZ: 269.60 9,087.00



MD: 9182.00 INC: 89.30 AZ: 270.20 9,182.00

MD: 9276.00 INC: 89.60 AZ: 270.00 9,276.00

MD: 9371.00 INC: 89.40 AZ: 269.30 9,371.00



0.00	Counts(mG)	150.00	MD	0.00	ROP(FT/HR)	500.00	Surveys (MD/INC/AZ)
150.00	2	300.00	FT	500.00	2	1,000.00	
				1,000.00	3	1,500.00	