



Titan Directional Services, Inc.
20302 Park Row, Suite 1200
Katy, Texas 77449

Ptasnik 2-30-9-59
Scale 2":100' - MD
4/24/2015 6:48 AM

Oper. Company: Carrizo Oil & Gas, Inc.
Well: Ptasnik 2-30-9-59
Field: Niobrara CONZ'83
Rig: Xtreme 19
Well ID: 05-123-41239-00
Job Number: TL15014

State: Colorado
County: Weld
Country: USA
Location: Keota
Start Date: 04/20/2015 19:30:00
End Date: 04/24/2015 06:45:00

Latitude: 40 42' 54.69
Longitude: 104 1' 44.00

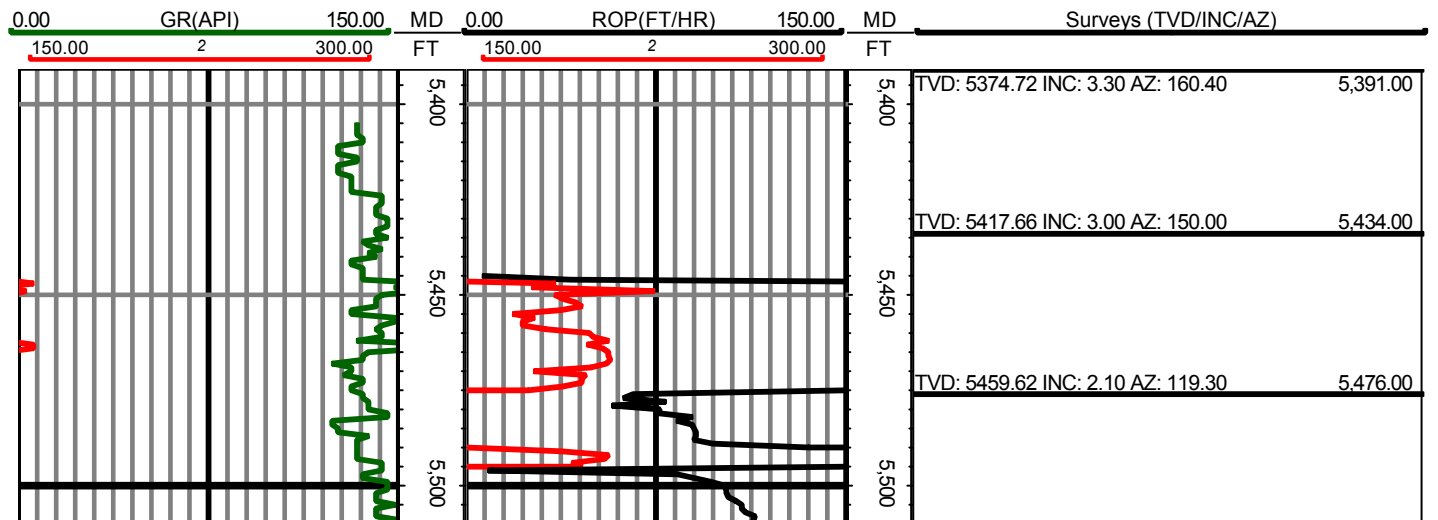
Elev KB: 17'
Elev DF: 4934'
Elev GL: 4917'

Operator 1: Skylar Thompson

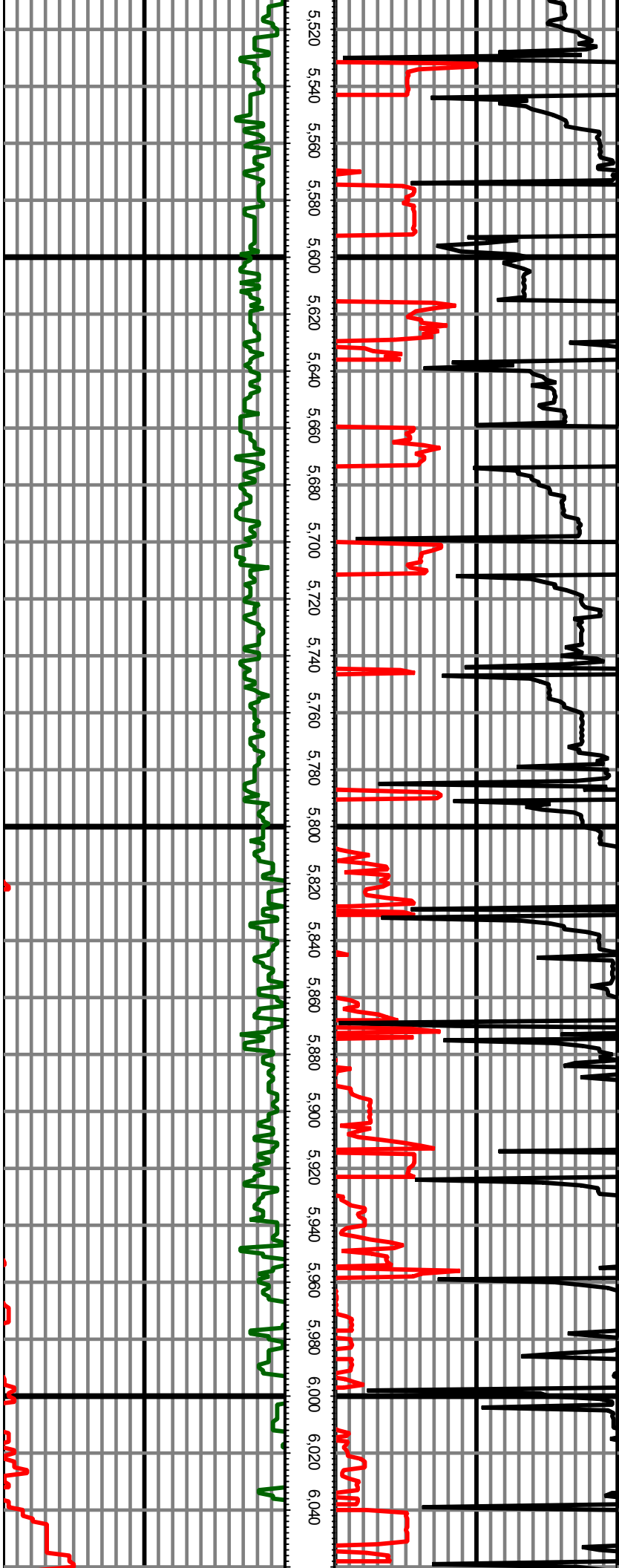
Operator 2: Paul Brown

Tool Run Data	Run #1	Run #2	Run #3	Run #4	Run #5
Tool S/N	N/A	N/A	TG507	TG507	
Bit Size	12 1/4	8 3/4	8 3/4	6 1/8	
Cal Factor	0	0	4.98	2.28	
Survey Offset:	55.00	50.00	51.00	51.00	
Gamma Offset	0.00	0.00	40.00	40.00	
Resistivity Offset	0.00	0.00	0.00	0.00	
Start Depth	0.00	1688.00	5444.00	6355.00	
StartDate	4/18/2015	4/19/2015	4/20/2015	4/22/2015	
StartTime	04:45	14:30	16:00	07:30	
EndDepth	1688.00	5444.00	6355.00	10832.00	
EndDate	4/18/2015	4/20/2015	4/21/2015	4/24/2015	
EndTime	18:00	15:00	12:30	06:45	
Mud Type	WBM	WBM	WBM	WBM	
Temperature	78	131	143	194	
Hole Data			Casing Data		
Size	From	To	Size	From	To
12 1/4	0.00	1688.00	9 5/8	0.00	1645.00
8 3/4	1688.00	6355.00	7	0.00	6335.00
6 1/8	6355.00	10832.00	4.5	0.00	10832.00

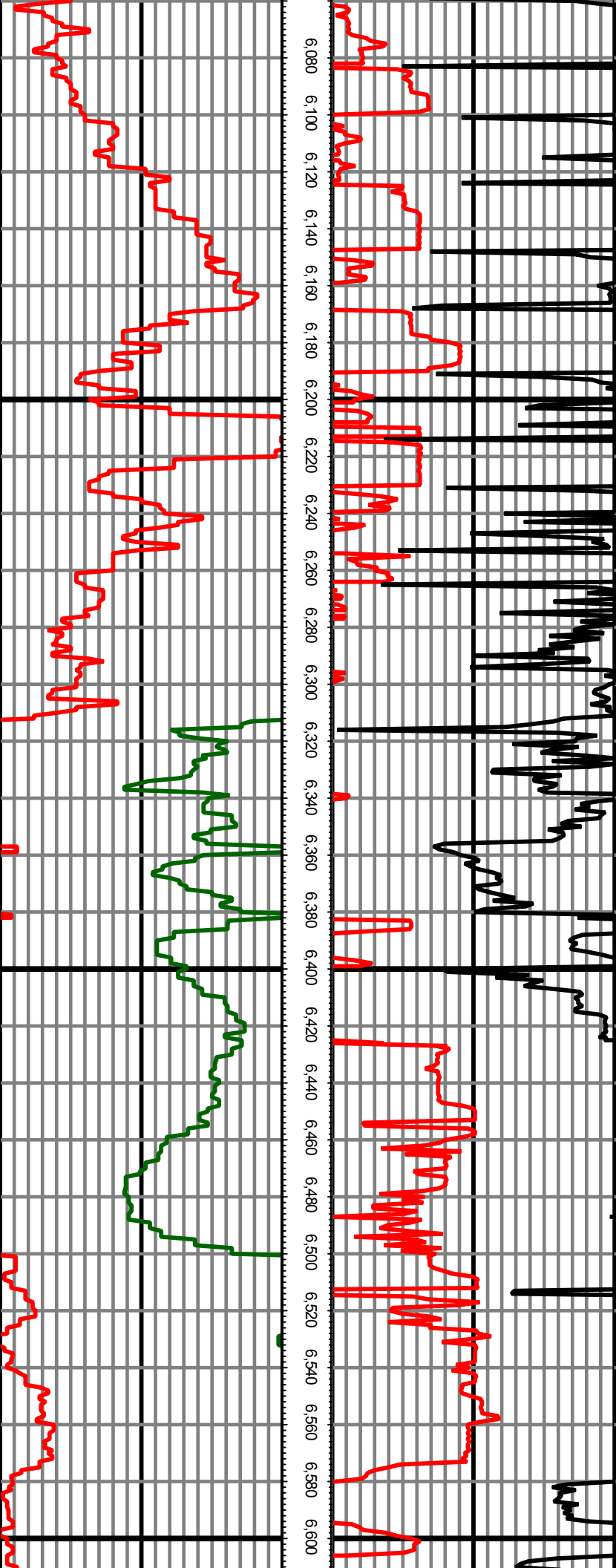
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not except in the case of gross or willful negligence on our part, be liable or responsible for any loss, cost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



5,520	TVD: 5502.55 INC: 5.00 AZ: 41.40	5,519.00
5,540		
5,560	TVD: 5544.20 INC: 9.50 AZ: 25.80	5,561.00
5,580		
5,600	TVD: 5586.46 INC: 11.90 AZ: 18.70	5,604.00
5,620		
5,640	TVD: 5627.40 INC: 13.80 AZ: 14.00	5,646.00
5,660		
5,680	TVD: 5668.92 INC: 16.40 AZ: 7.50	5,689.00
5,700		
5,720	TVD: 5708.83 INC: 19.80 AZ: 5.50	5,731.00
5,740		
5,760	TVD: 5747.78 INC: 24.10 AZ: 6.60	5,773.00
5,780		
5,800	TVD: 5786.34 INC: 28.40 AZ: 8.00	5,816.00
5,820		
5,840	TVD: 5822.34 INC: 33.50 AZ: 8.90	5,858.00
5,860		
5,880		
5,900	TVD: 5857.28 INC: 37.80 AZ: 7.80	5,901.00
5,920		
5,940	TVD: 5889.68 INC: 41.20 AZ: 8.00	5,943.00
5,960		
5,980	TVD: 5919.83 INC: 47.00 AZ: 6.40	5,985.00
6,000		
6,020	TVD: 5947.37 INC: 53.30 AZ: 4.30	6,028.00
6,040		



TVD: 5971.40 INC: 56.90 AZ: 2.50	6,070.00
TVD: 5993.61 INC: 60.90 AZ: 1.80	6,113.00
TVD: 6013.03 INC: 64.00 AZ: 2.40	6,155.00
TVD: 6030.86 INC: 67.00 AZ: 2.70	6,198.00
TVD: 6046.15 INC: 70.30 AZ: 2.20	6,240.00
TVD: 6058.86 INC: 75.30 AZ: 2.00	6,283.00
TVD: 6063.18 INC: 76.90 AZ: 1.70	6,301.00
TVD: 6074.62 INC: 84.00 AZ: 0.10	6,370.00
TVD: 6077.67 INC: 88.40 AZ: 359.00	6,416.00
TVD: 6078.77 INC: 88.80 AZ: 359.00	6,461.00
TVD: 6081.44 INC: 87.80 AZ: 358.30	6,551.00



TVD: 6082.63 INC: 90.70 AZ: 359.40 6.642.00

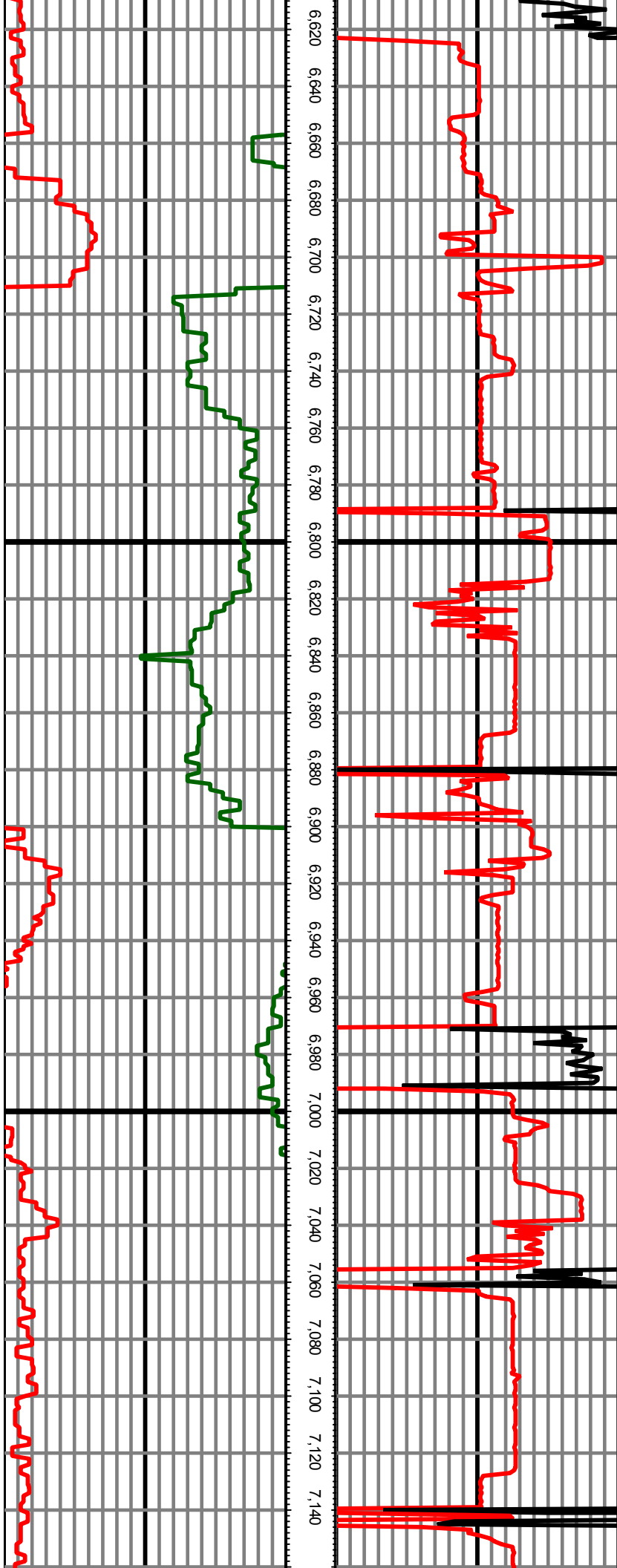
TVD: 6081.44 INC: 90.80 AZ: 359.90 6.733.00

TVD: 6081.12 INC: 89.60 AZ: 358.70 6.824.00

TVD: 6082.42 INC: 88.80 AZ: 357.80 6.917.00

TVD: 6083.16 INC: 90.20 AZ: 359.70 7.001.00

TVD: 6082.86 INC: 90.20 AZ: 0.80 7.086.00



TVD: 6082.13 INC: 90.80 AZ: 1.70 7,170.00

7,180 7,200 7,220 7,240 7,260 7,280 7,300 7,320 7,340 7,360 7,380 7,400 7,420 7,440 7,460 7,480 7,500 7,520 7,540 7,560 7,580 7,600 7,620 7,640 7,660 7,680 7,700

TVD: 6080.66 INC: 91.20 AZ: 0.40 7,254.00

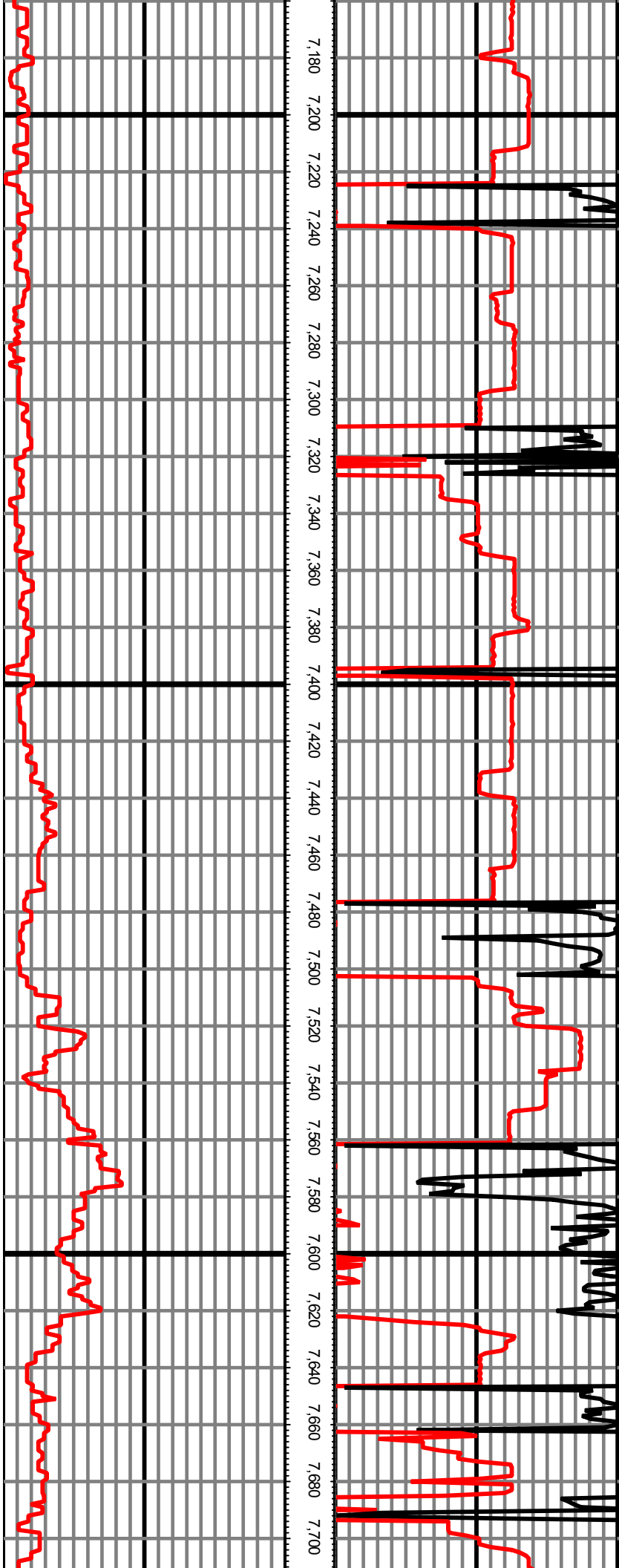
TVD: 6079.27 INC: 90.70 AZ: 359.70 7,338.00

TVD: 6077.71 INC: 91.40 AZ: 0.40 7,423.00

TVD: 6077.86 INC: 88.40 AZ: 355.50 7,507.00

TVD: 6080.06 INC: 88.60 AZ: 357.80 7,591.00

TVD: 6081.45 INC: 89.50 AZ: 359.40 7,675.00



TVD: 6082.86 INC: 88.60 AZ: 358.70 7,760.00

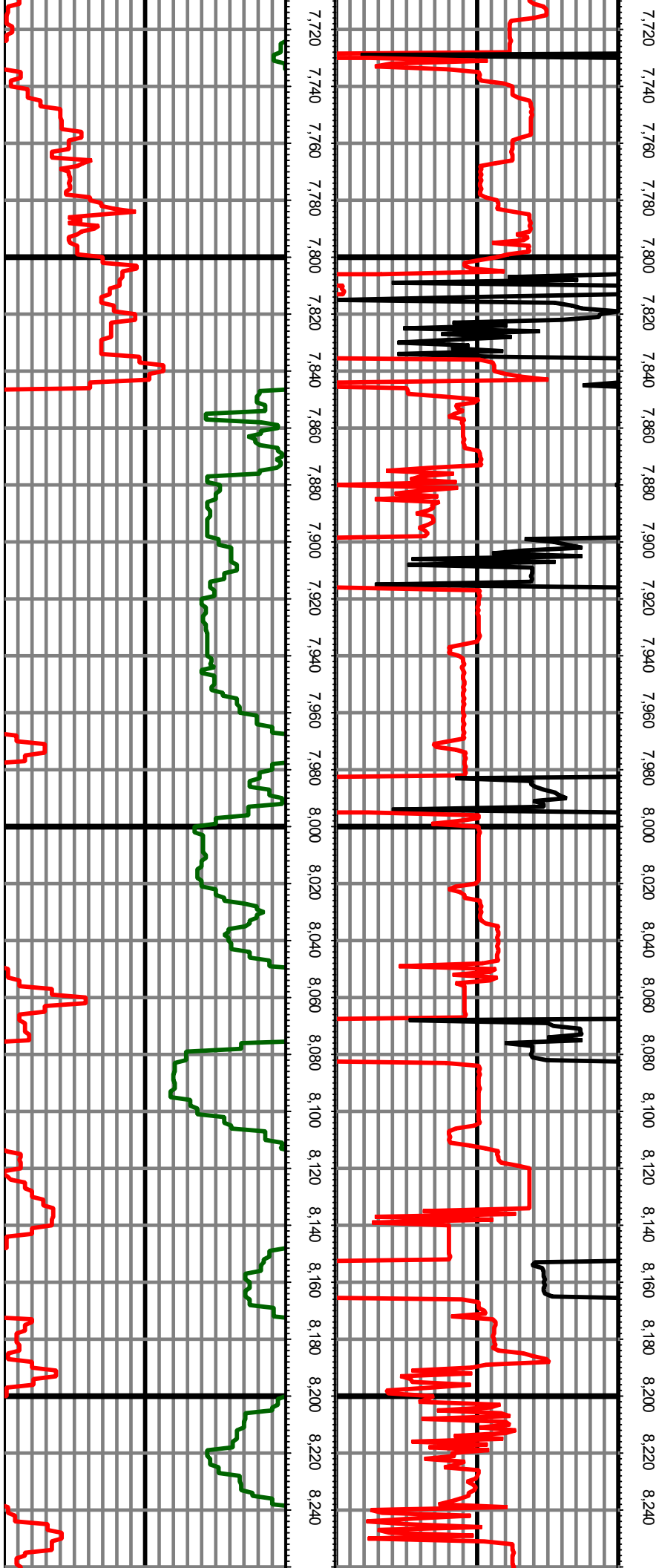
TVD: 6083.60 INC: 90.40 AZ: 359.20 7,845.00

TVD: 6081.23 INC: 92.80 AZ: 359.40 7,930.00

TVD: 6078.70 INC: 90.60 AZ: 358.20 8,015.00

TVD: 6076.85 INC: 91.90 AZ: 359.40 8,100.00

TVD: 6074.92 INC: 90.70 AZ: 358.70 8,185.00



TVD: 6073.88 INC: 90.70 AZ: 358.30 8,270.00

8,280 8,300 8,320 8,340 8,360 8,380 8,400 8,420 8,440 8,460 8,480 8,500 8,520 8,540 8,560 8,580 8,600 8,620 8,640 8,660 8,680 8,700 8,720 8,740 8,760 8,780 8,800

TVD: 6071.88 INC: 92.00 AZ: 358.70 8,355.00

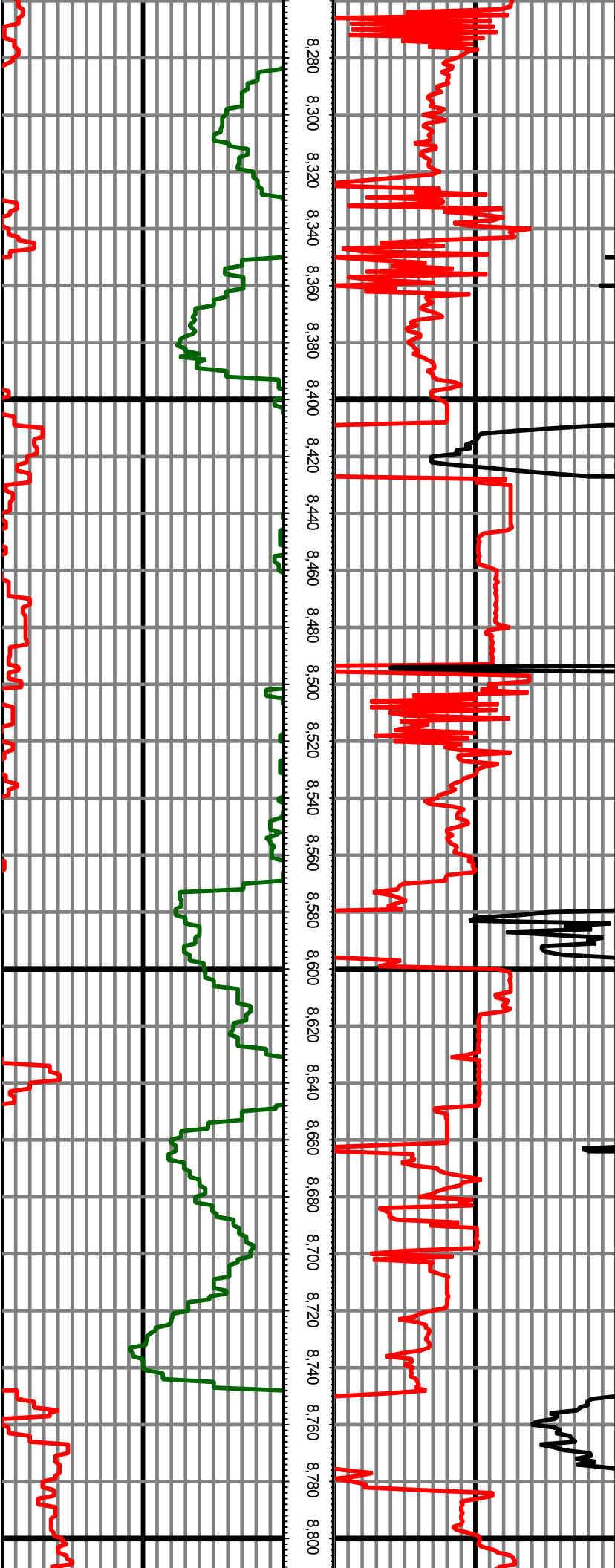
TVD: 6071.21 INC: 88.90 AZ: 358.90 8,440.00

TVD: 6072.02 INC: 90.00 AZ: 2.20 8,524.00

TVD: 6073.80 INC: 87.60 AZ: 0.60 8,609.00

TVD: 6078.17 INC: 86.50 AZ: 359.70 8,694.00

TVD: 6081.88 INC: 88.50 AZ: 358.50 8,779.00



TVD: 6081.88 INC: 91.50 AZ: 2.20 8,864.00

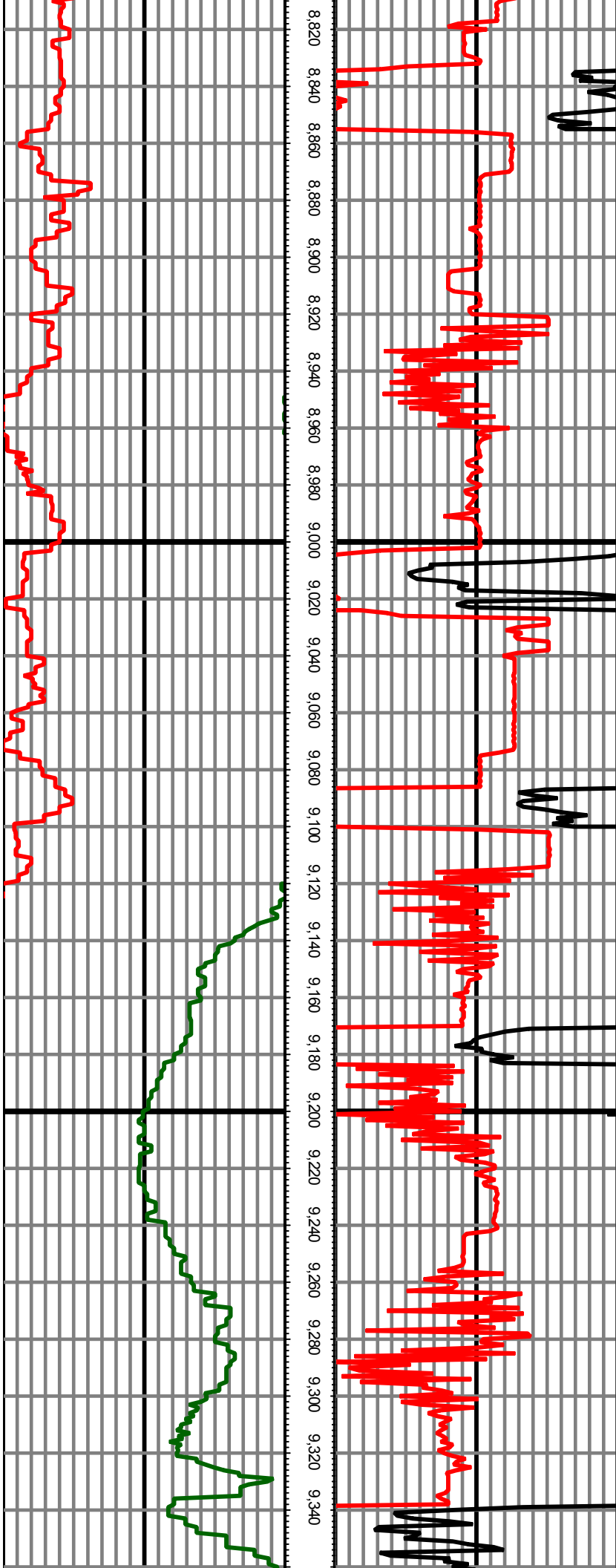
TVD: 6080.12 INC: 90.90 AZ: 1.70 8,948.00

TVD: 6079.39 INC: 90.10 AZ: 358.70 9,032.00

TVD: 6078.87 INC: 90.60 AZ: 356.20 9,117.00

TVD: 6077.48 INC: 91.30 AZ: 356.00 9,201.00

TVD: 6075.42 INC: 91.50 AZ: 355.90 9,285.00



TVD: 6073.20 INC: 91.50 AZ: 357.30 9,370.00

TVD: 6071.57 INC: 90.70 AZ: 358.30 9,455.00

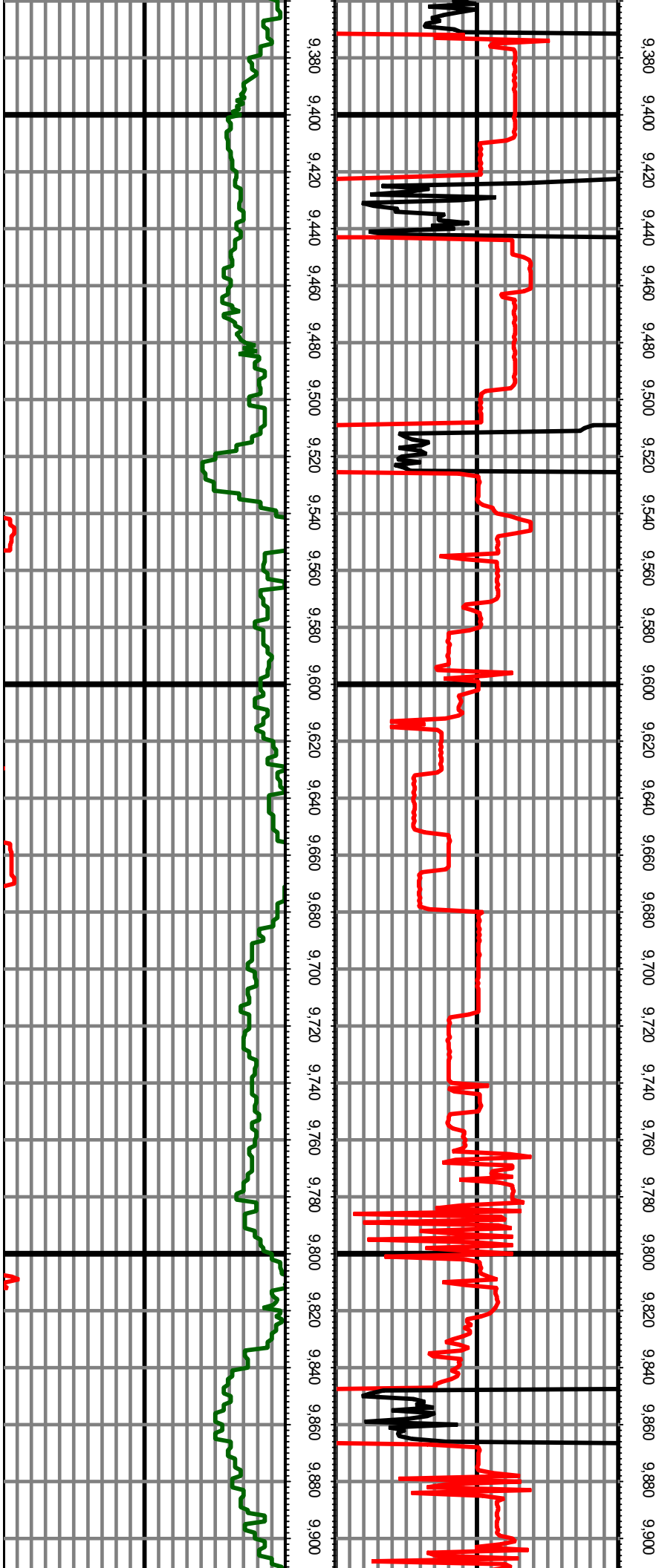
TVD: 6071.35 INC: 89.60 AZ: 359.60 9,540.00

TVD: 6071.79 INC: 89.80 AZ: 359.20 9,624.00

TVD: 6072.30 INC: 89.50 AZ: 358.20 9,709.00

TVD: 6073.71 INC: 88.60 AZ: 357.50 9,794.00

TVD: 6074.38 INC: 90.50 AZ: 359.40 9,879.00



TVD: 6073.87 INC: 90.20 AZ: 358.50 9,963.00

TVD: 6073.65 INC: 90.10 AZ: 358.30 10,048.00

TVD: 6073.65 INC: 89.90 AZ: 357.10 10,134.00

TVD: 6074.08 INC: 89.50 AZ: 356.00 10,218.00

TVD: 6074.23 INC: 90.30 AZ: 359.70 10,303.00

TVD: 6074.60 INC: 89.20 AZ: 358.70 10,388.00

