



**Precision Directional Services, Inc.**

27610 Commerce Oaks Drive  
Oak Ridge North, TX 77385  
713-435-6250

**O'Hare 2-29-11-57**  
**Scale 2":100' - MD**  
**10/10/2014 12:45 AM**

**Oper. Company:** Carrizo Oil & Gas, Inc.

**Well:** O'Hare 2-29-11-57

**Field:** Niobrara CONZ'83

**Rig:** Xtreme 19

**Well ID:** 05-123-40082-00

**Job Number:** DL2405

**State:** Colorado

**County:** Weld

**Country:** USA

**Location:** Kimball

**Start Date:** 09/30/2014 03:00:00

**End Date:** 10/10/2014 00:00:15

**Latitude:** 40.891822222222

**Longitude:** -103.773969444444

**Elev KB:** 17'

**Elev DF:** 4944'

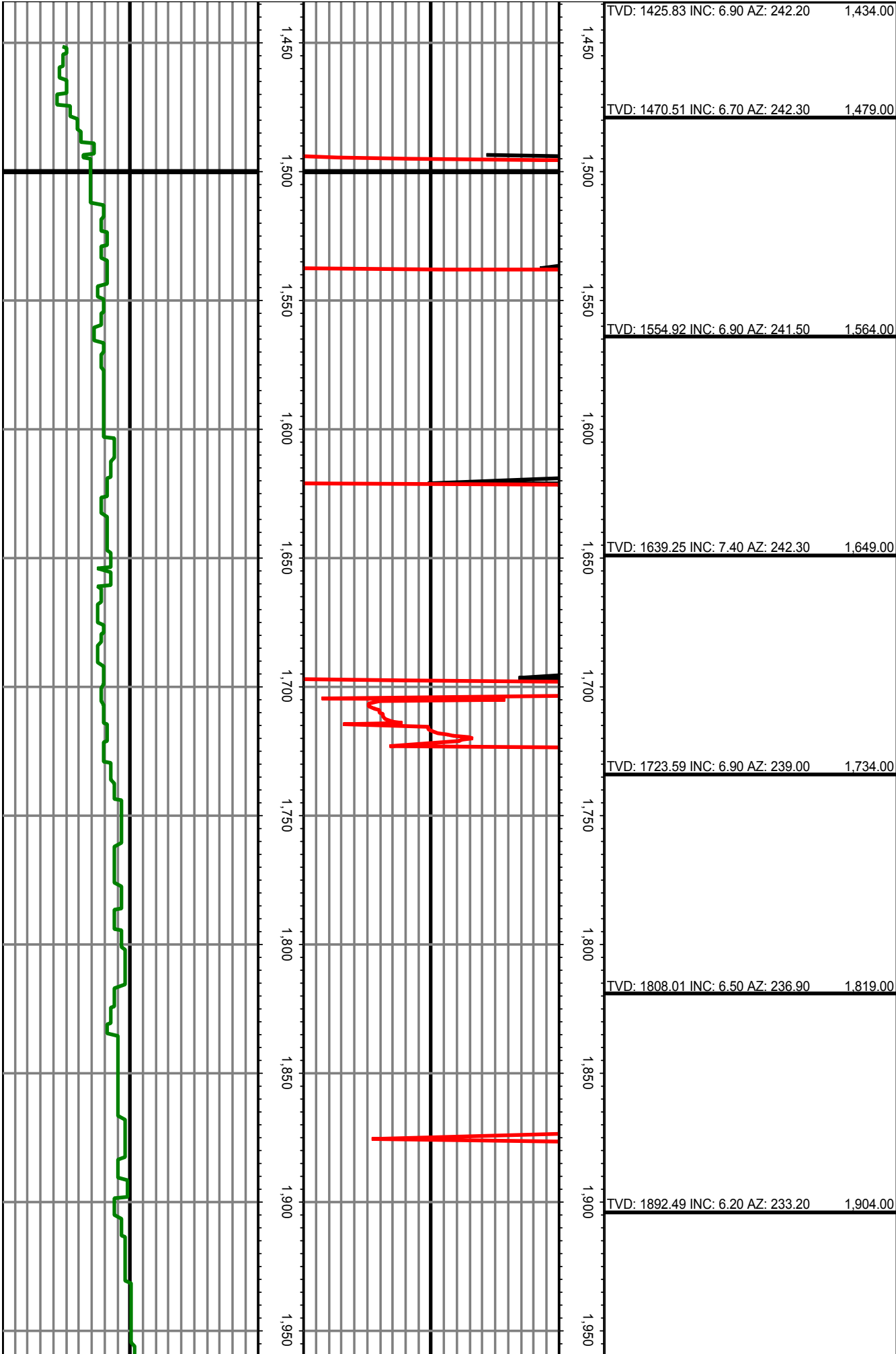
**Elev GL:** 4927'

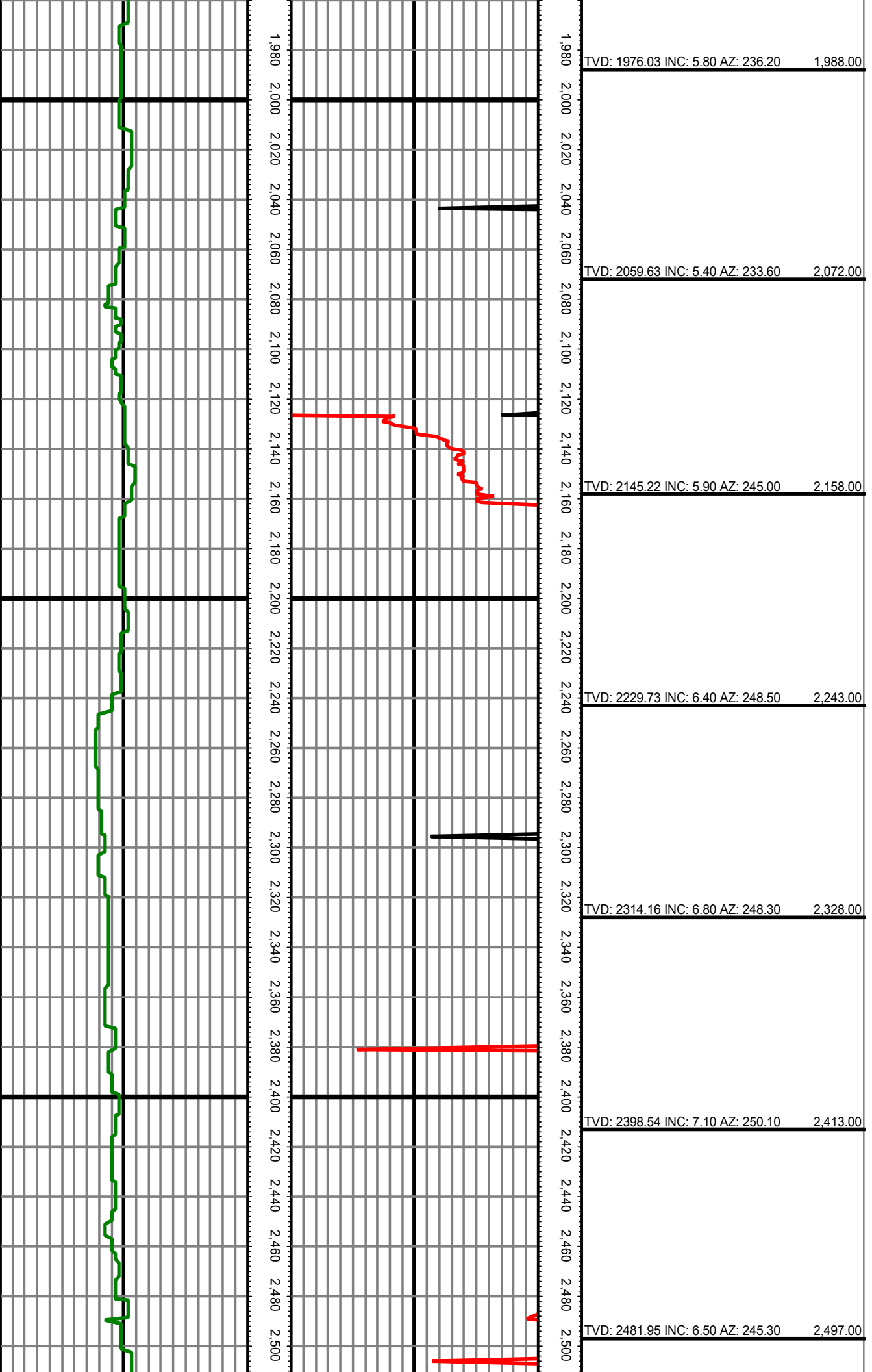
**Operator 1:** Paul Brown

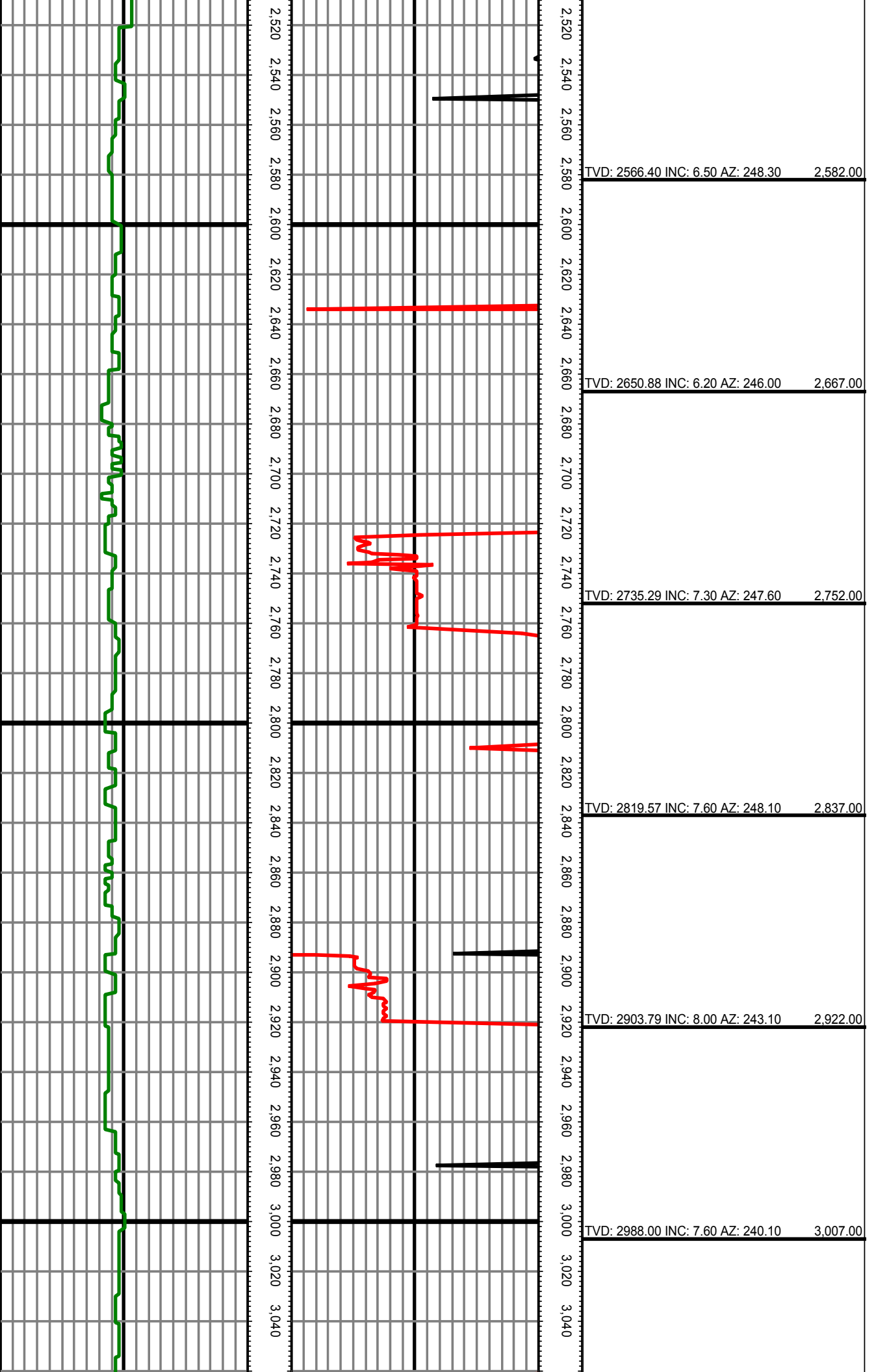
**Operator 2:** Kyle Elliott

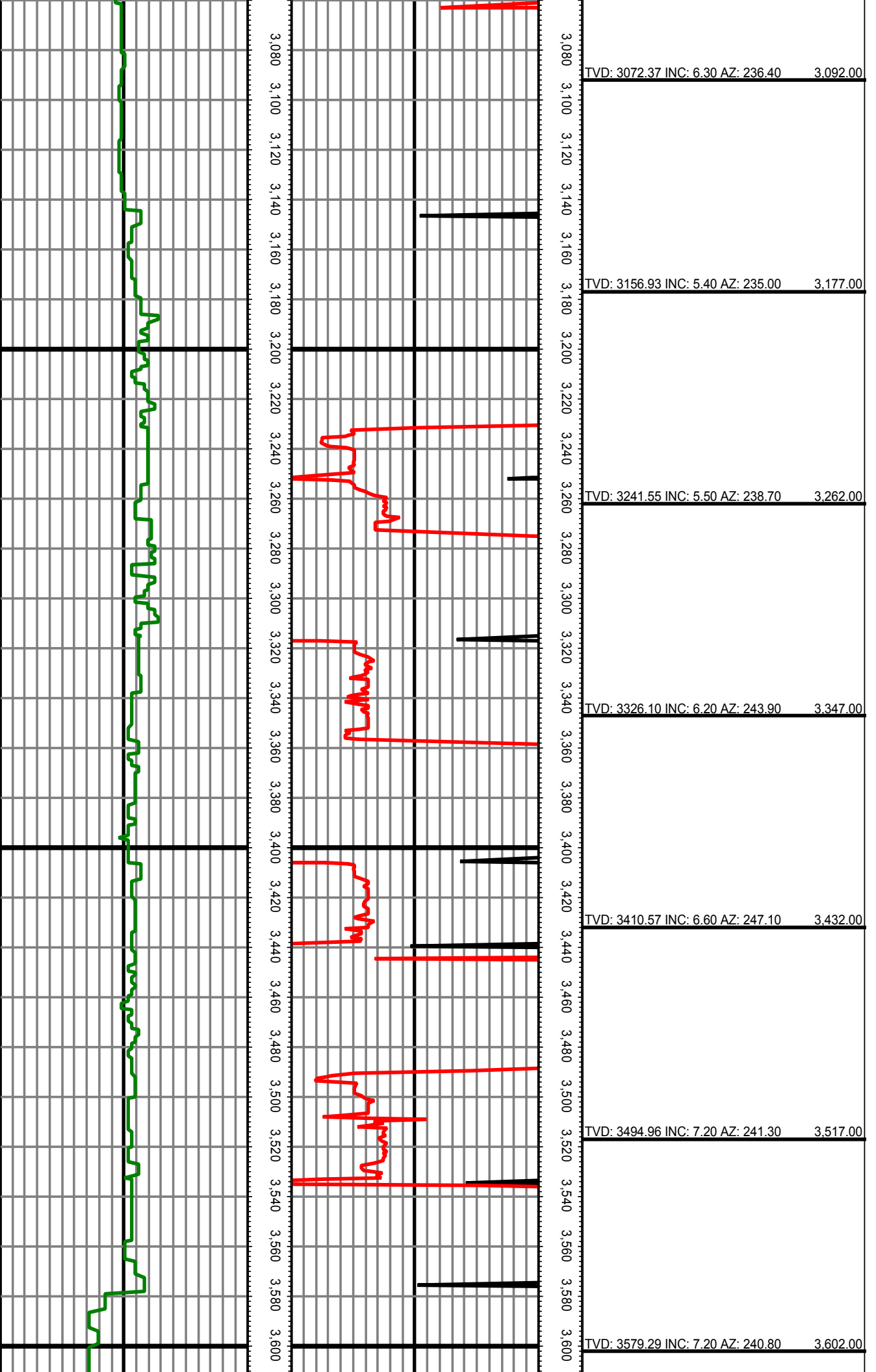
Tool Run Data	Run #1	Run #2	Run #3	Run #4	Run #5
Tool S/N	G2030	G1527	G2030	G1527	G1527
Bit Size	8 3/4	8 3/4	6 1/8	6 1/8	6 1/8
Cal Factor	3.99	3.94	1.62	1.59	1.59
Gamma Offset	42.00	50.00	56.00	56.00	56.00
Resisitivity Offset	0.00	0.00	0.00	0.00	0.00
Start Depth	1493.00	5187.00	6001.00	10888.00	12450.00
StartDate	9/30/2014	10/1/2014	10/3/2014	10/7/2014	10/9/2014
StartTime	1:07 PM	5:23 AM	5:25 AM	5:27 AM	4:04 AM
EndDepth	5188.00	6001.00	10888.00	12450.00	13287.00
EndDate	10/1/2014	10/2/2014	10/7/2014	10/9/2014	10/10/2014
EndTime	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM
Mud Type	WBM	WBM	WBM	WBM	WBM
Mud Weight	8.4 - 9.6	9.6	9.6	9.6	9.6
Funnel Viscosity	58	43	42	41	41 - 43
Plastic Viscosity	10	16	12	15	15
Yield Point	8	13	15	19	19
Gel Strength	12	7	8	10	9 - 10
Solids Content	1.9	6.8	5.5	5.0	5.0 - 5.4
Sand Content	Trace	0.5	0.25	0.5	0.5
Mud Alkalinity	0.6	0.5	0.3	0.4	0.3 - 0.4
Filtrate Alkalinity	0.4 / 0.9	0.4 / 1.0	0.2 / 1.2	0.3 / 1.2	0.3 / 1.2
Chlorides	700	600	800	800	800
Mud RM	N/A	N/A	N/A	N/A	N/A
Mud RMF	N/A	N/A	N/A	N/A	N/A
Mud RMC	N/A	N/A	N/A	N/A	N/A
Mud RM at BHT	N/A	N/A	N/A	N/A	N/A
Temperature	78	94	99	175 - 200	190 - 205
Hole Data			Casing Data		
Size	From	To	Size	From	To
12 1/4	0.00	1493.00	9 5/8	0.00	1473.00
8 3/4	1493.00	6001.00	7	0.00	5981.00
6 1/8	6001.00	13287.00	4.5	5981.00	13287.00

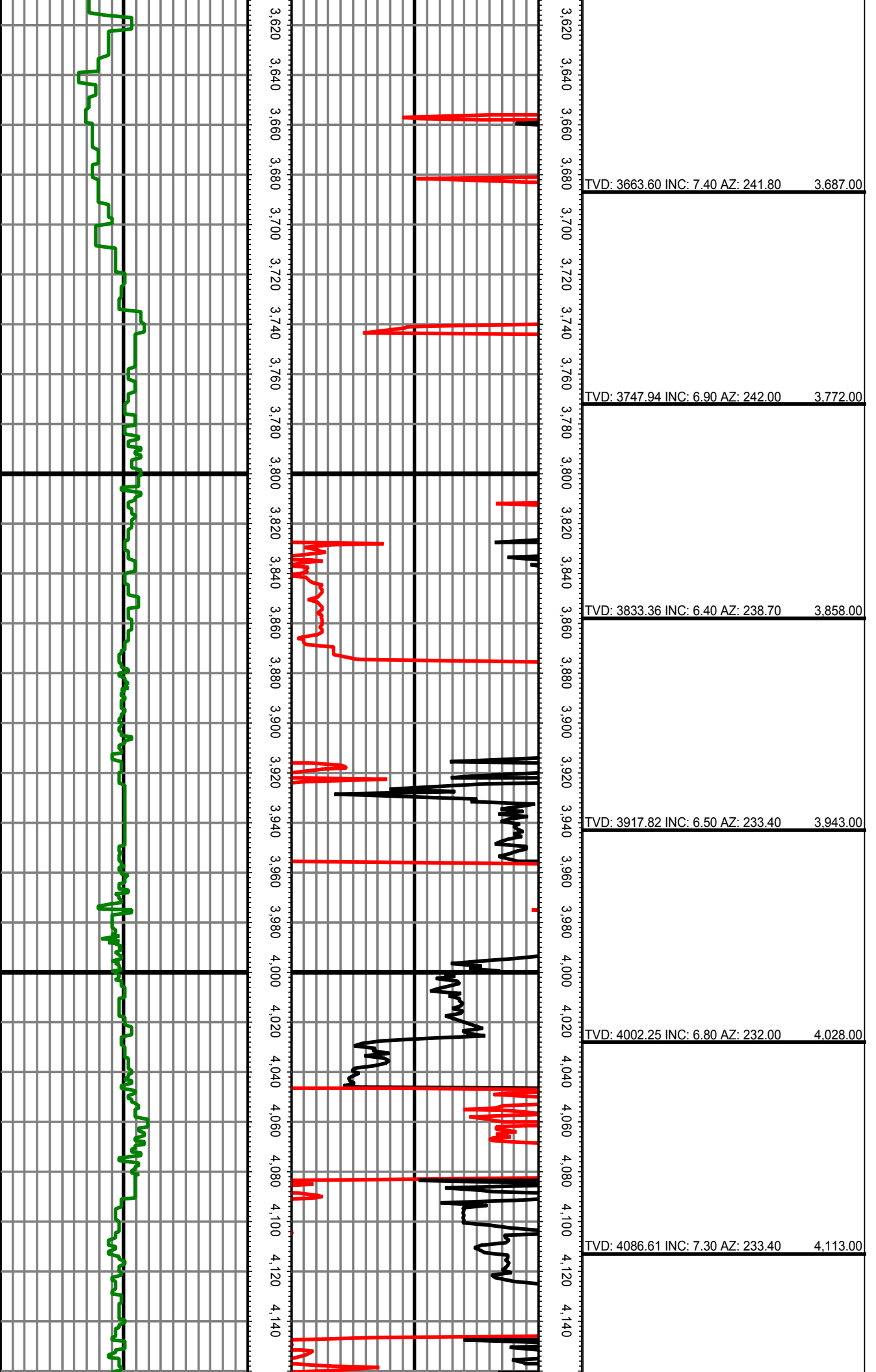
*All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not except in the case of gross or willful negligence on our part, be liable or responsible for any loss, cost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

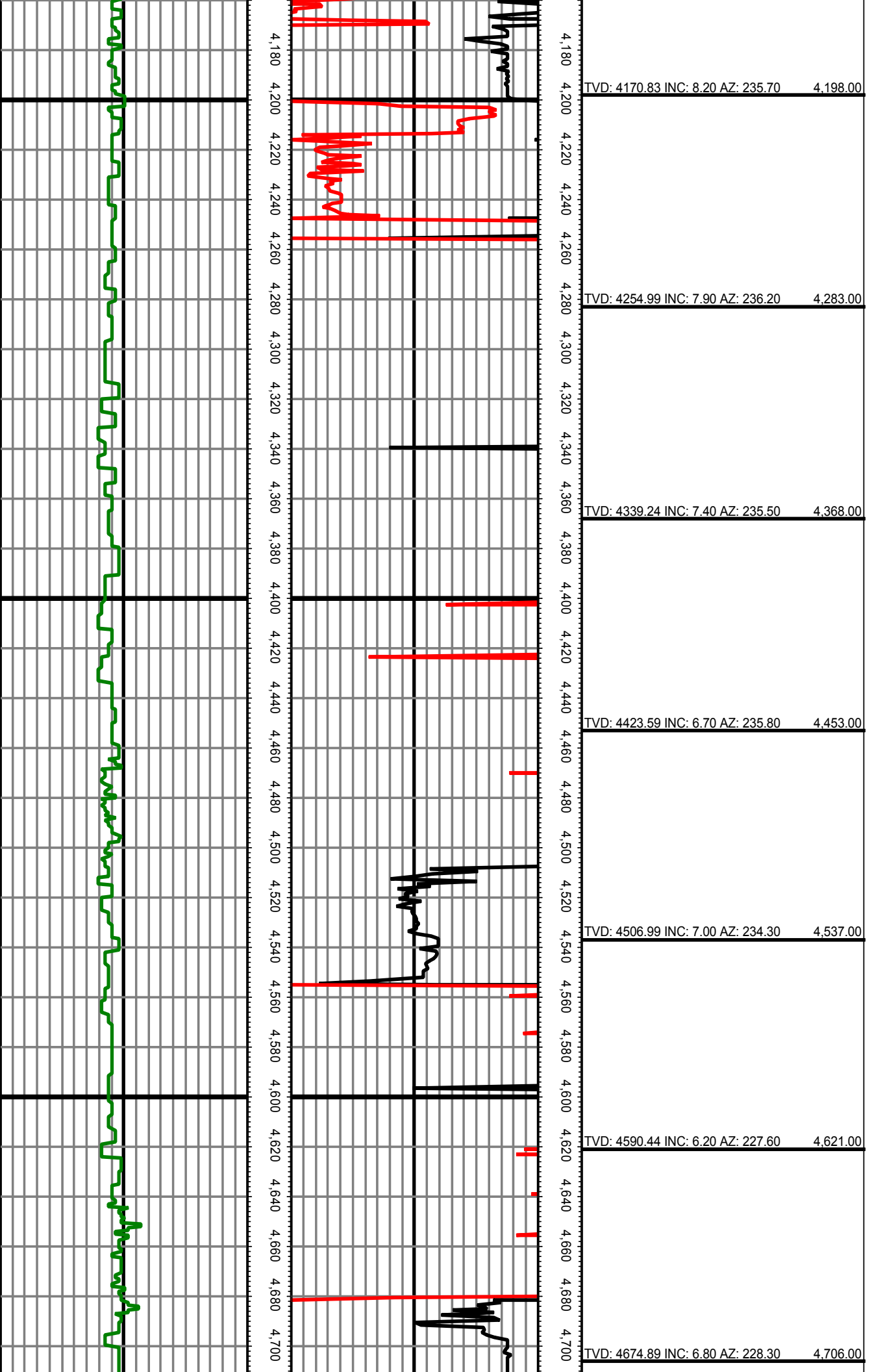


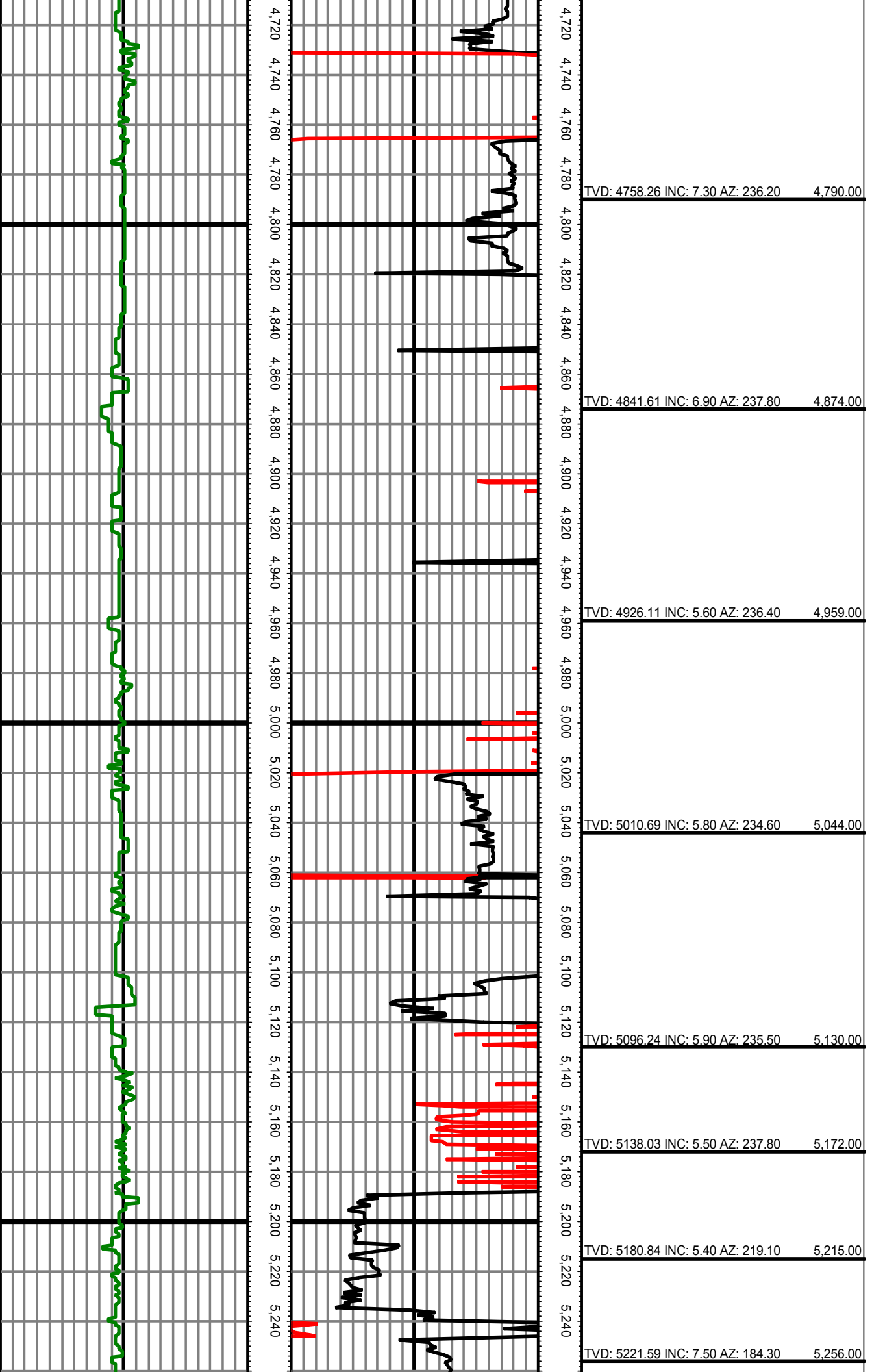




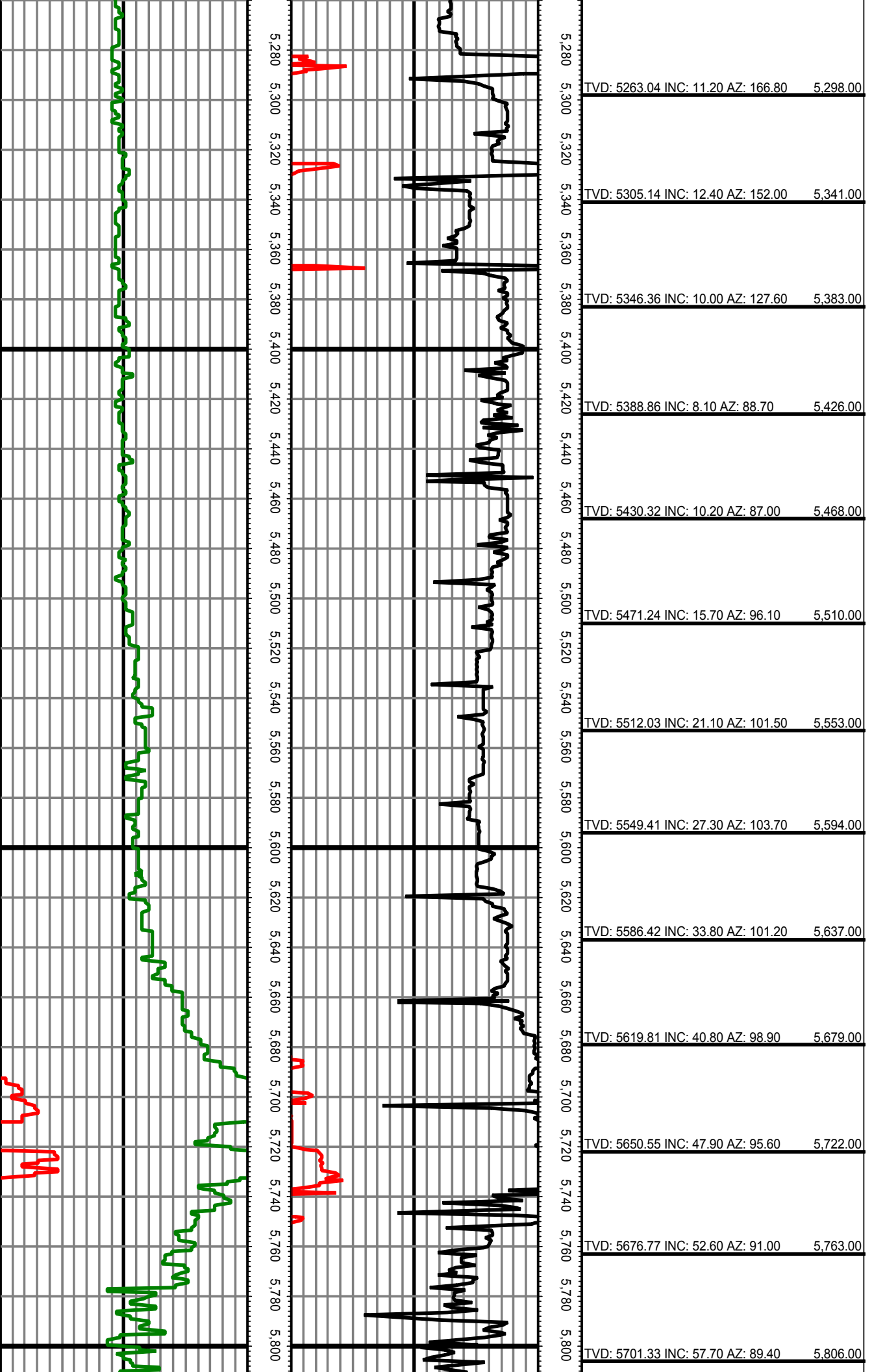


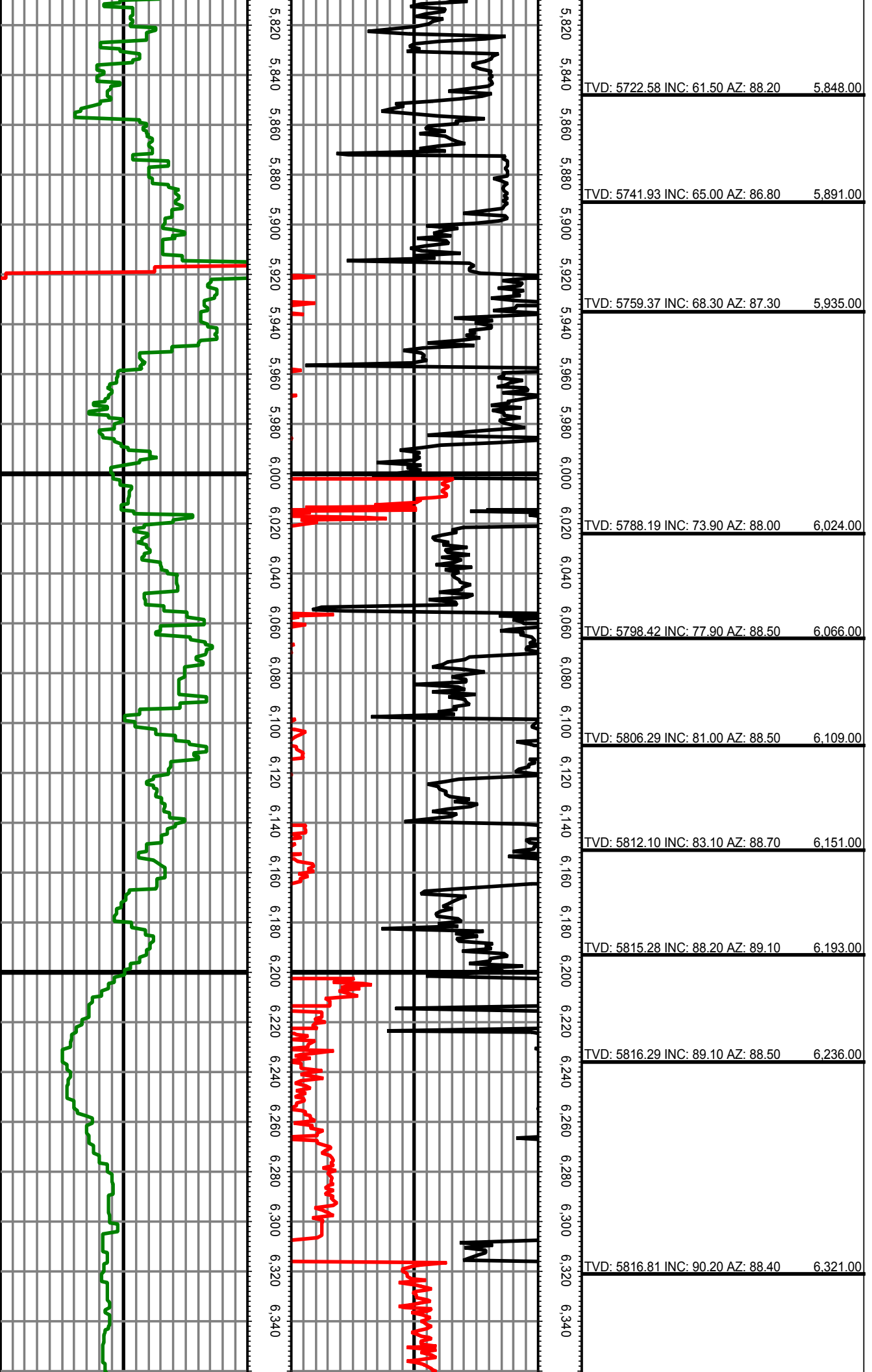


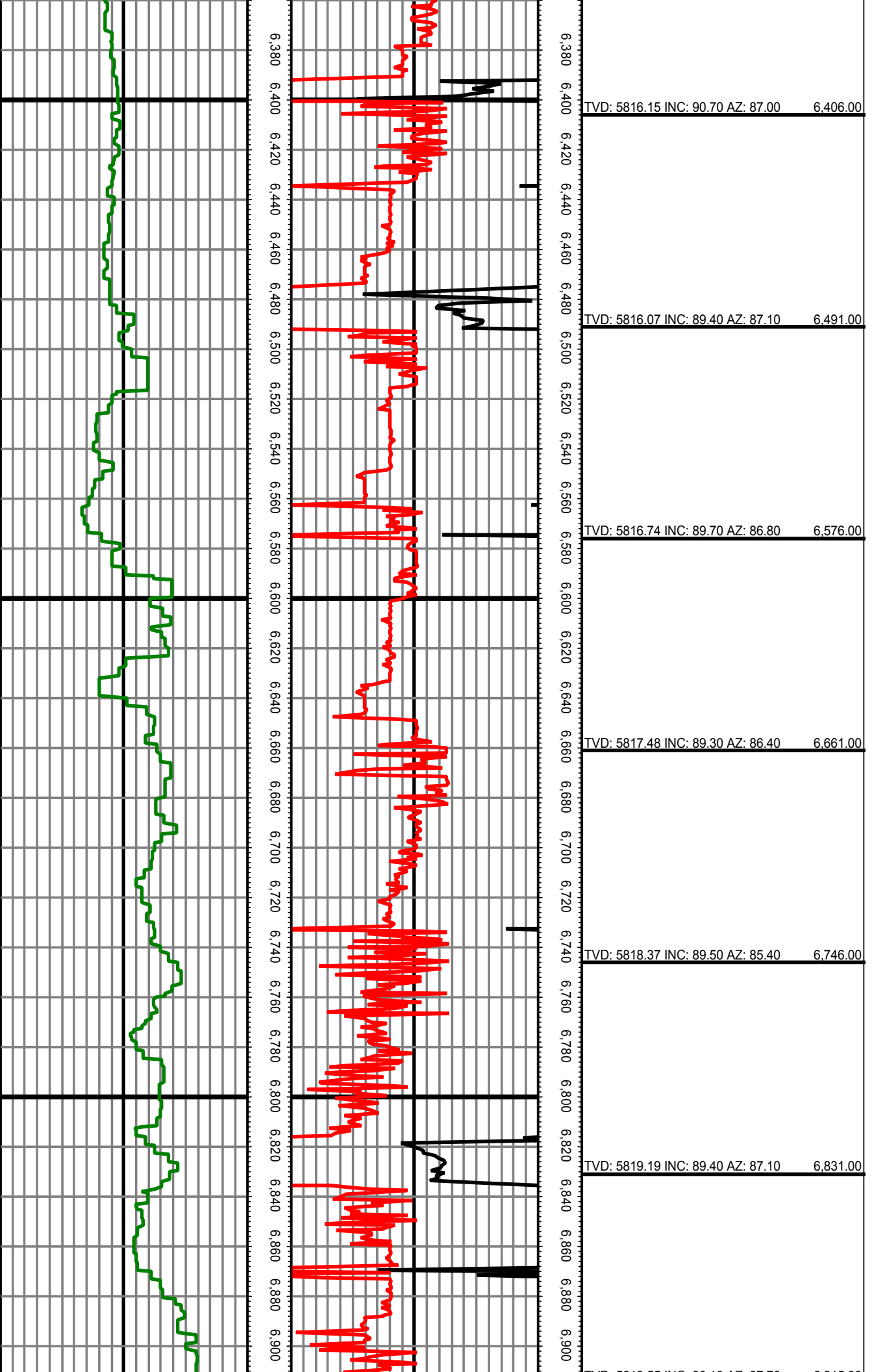


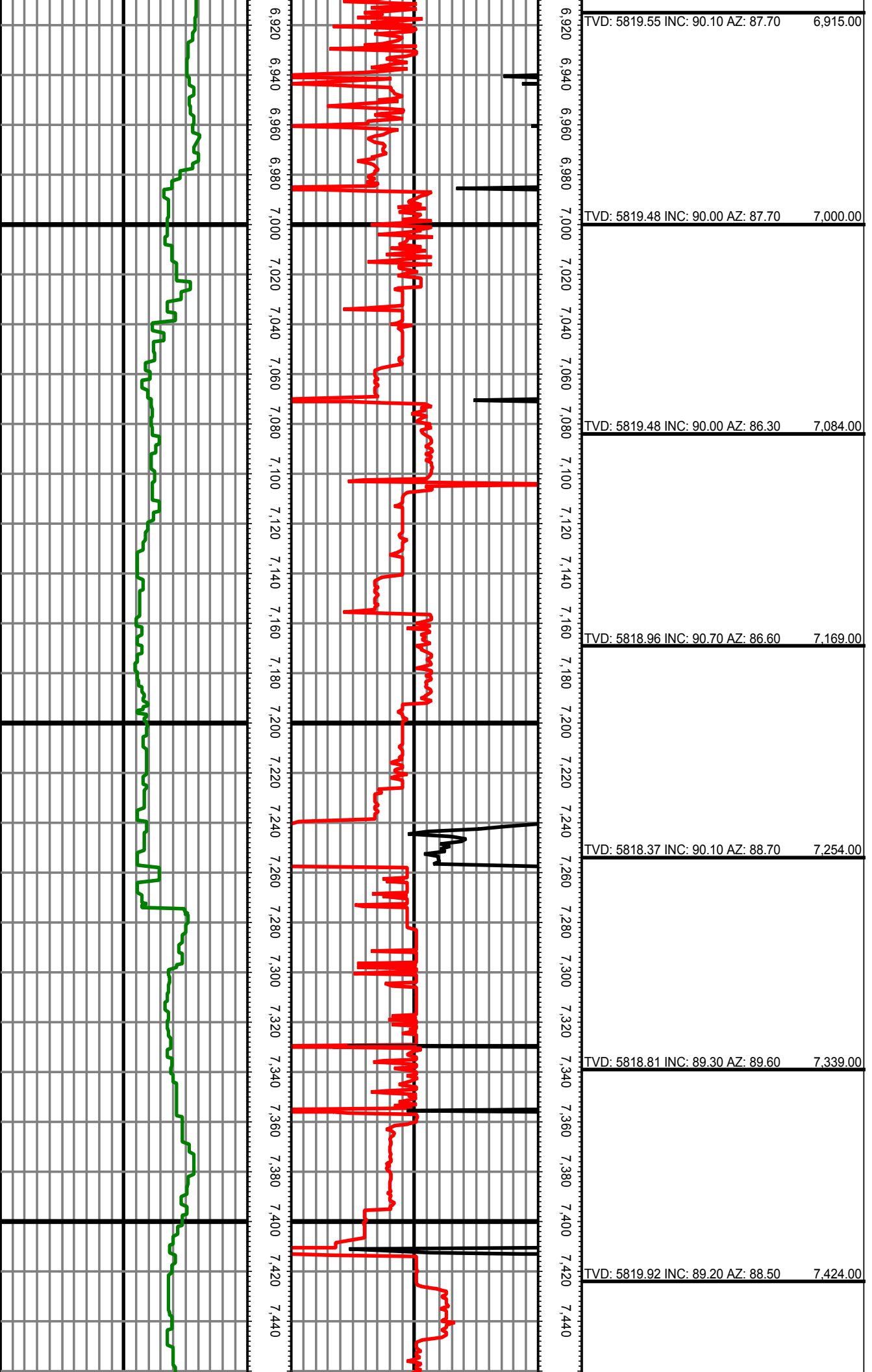


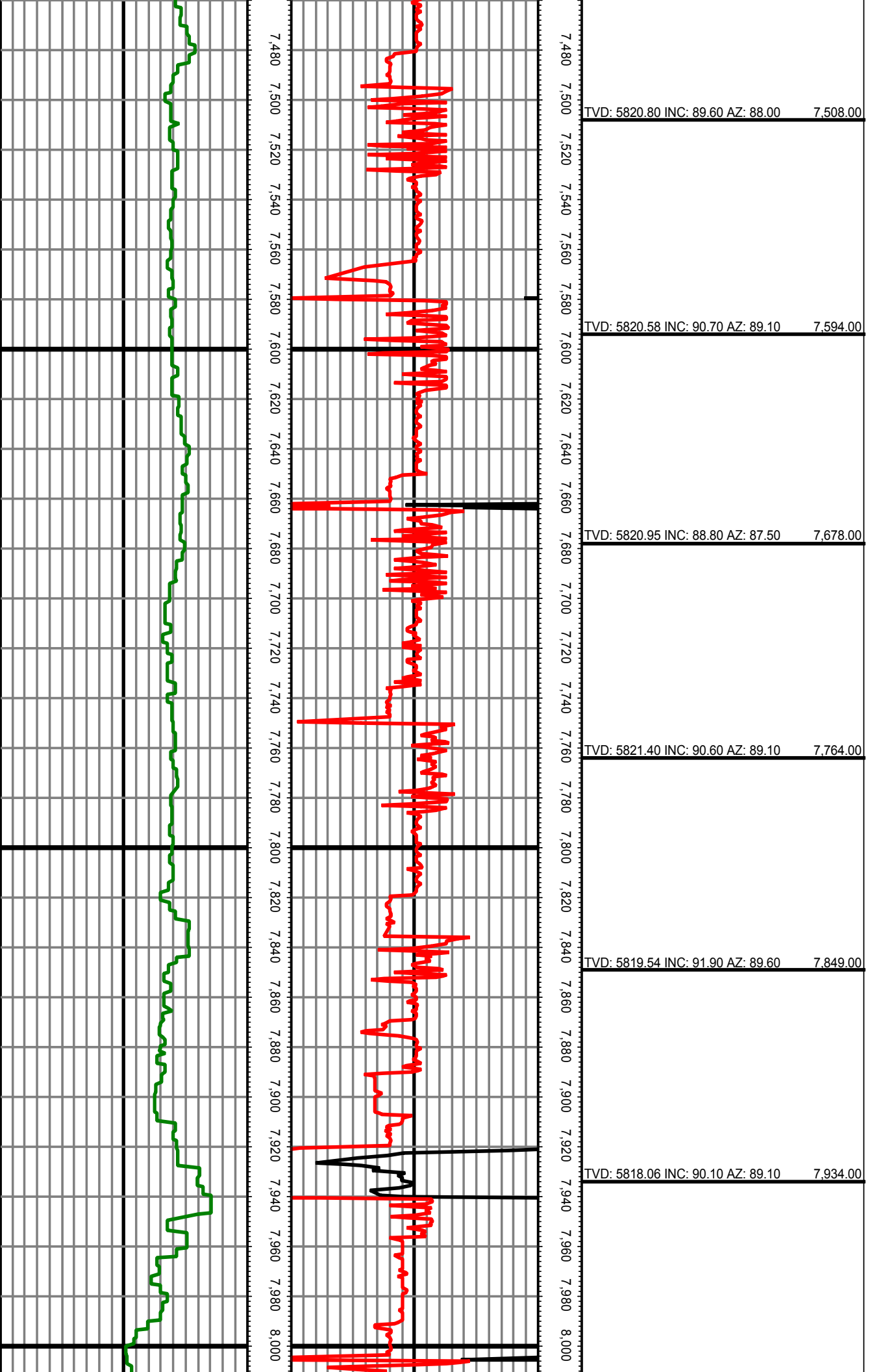


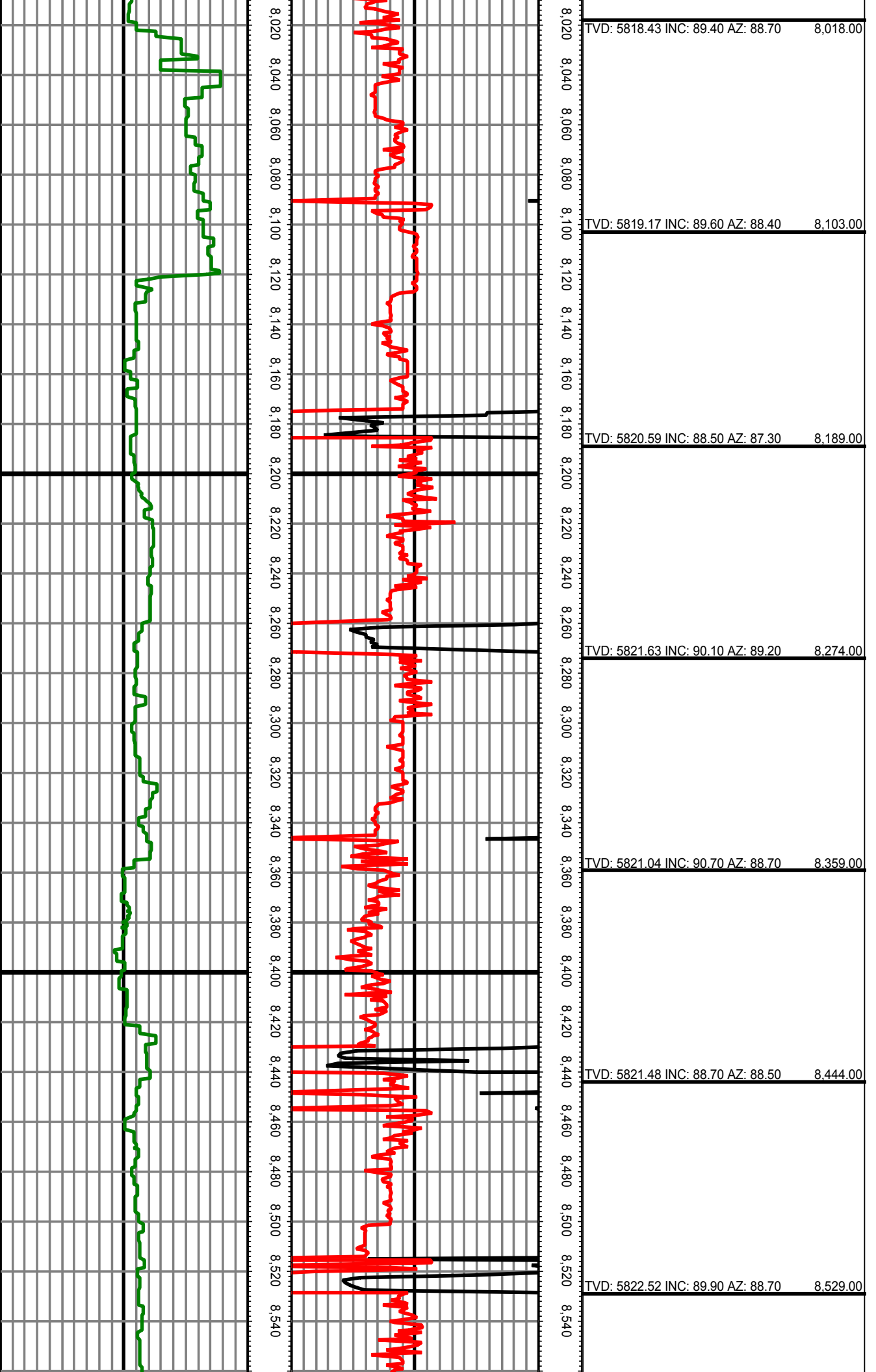


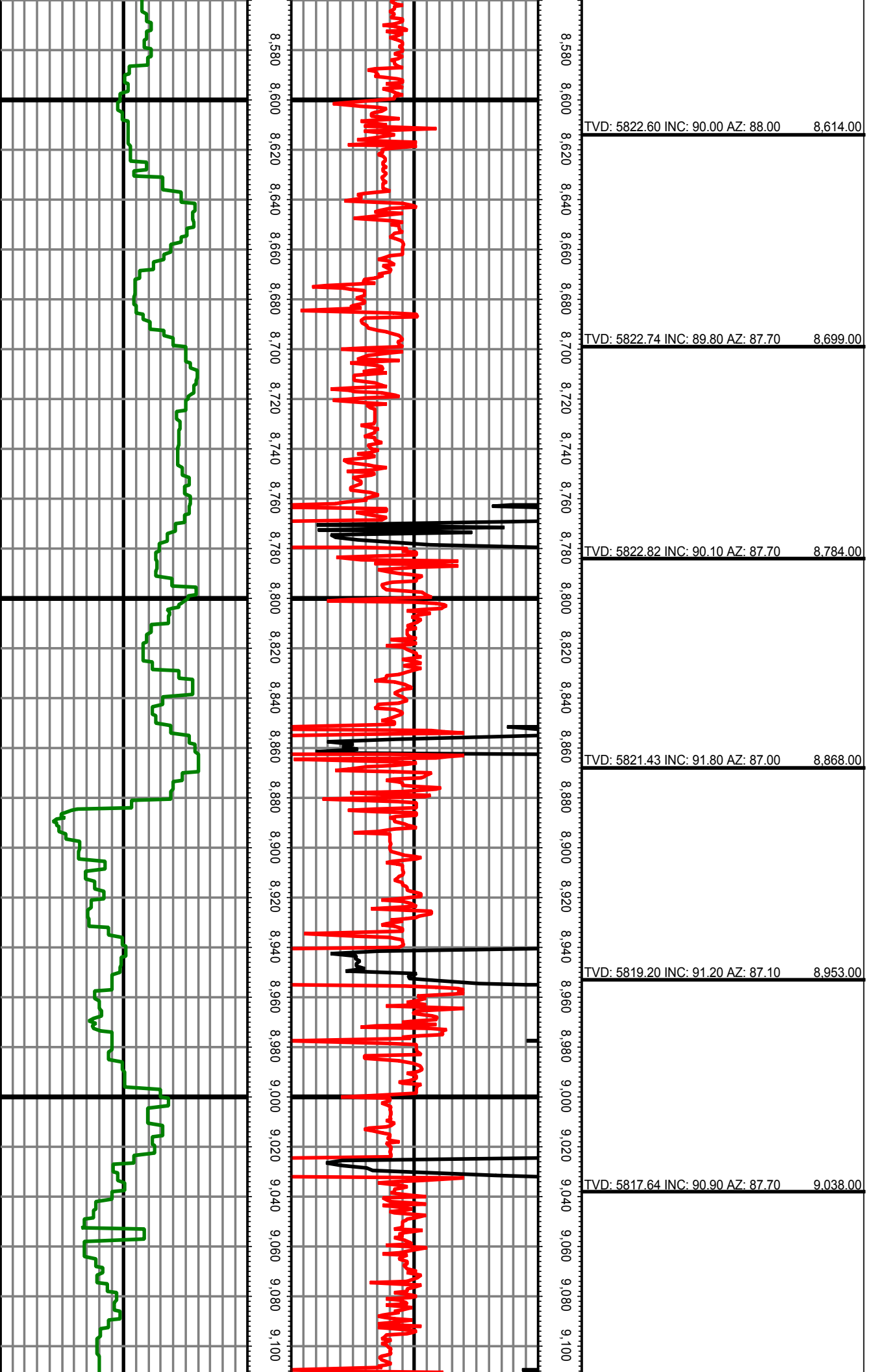


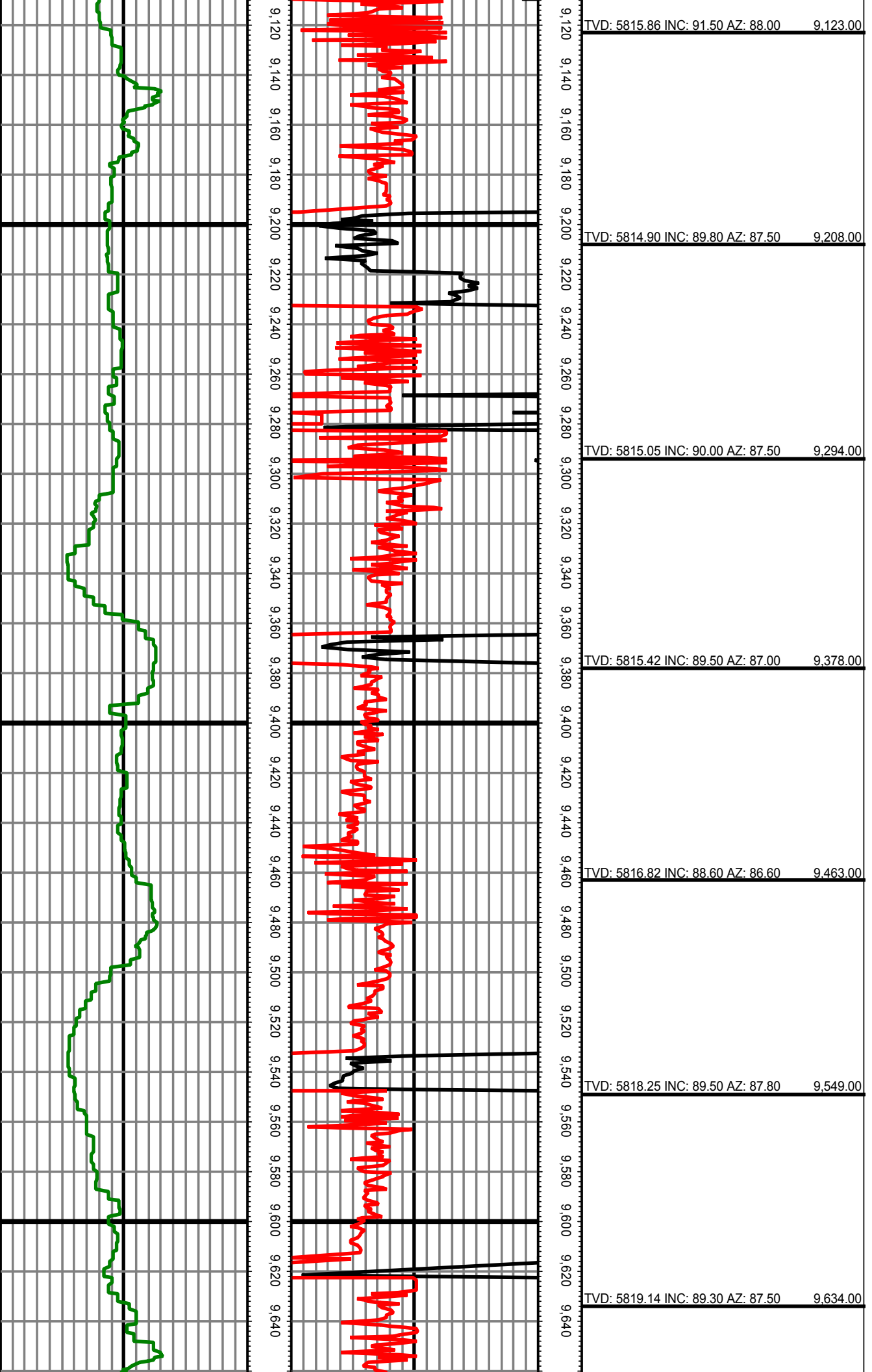




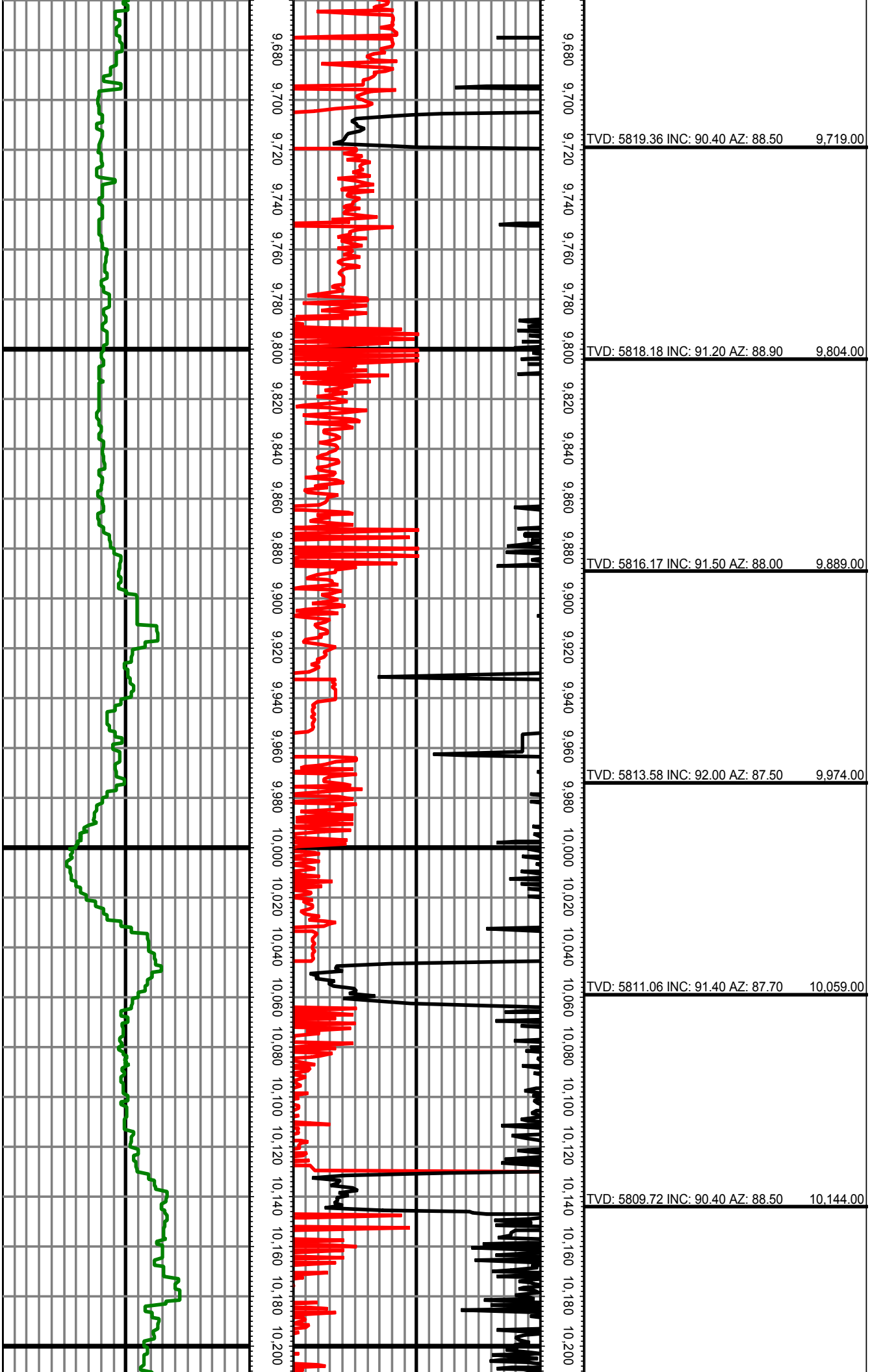


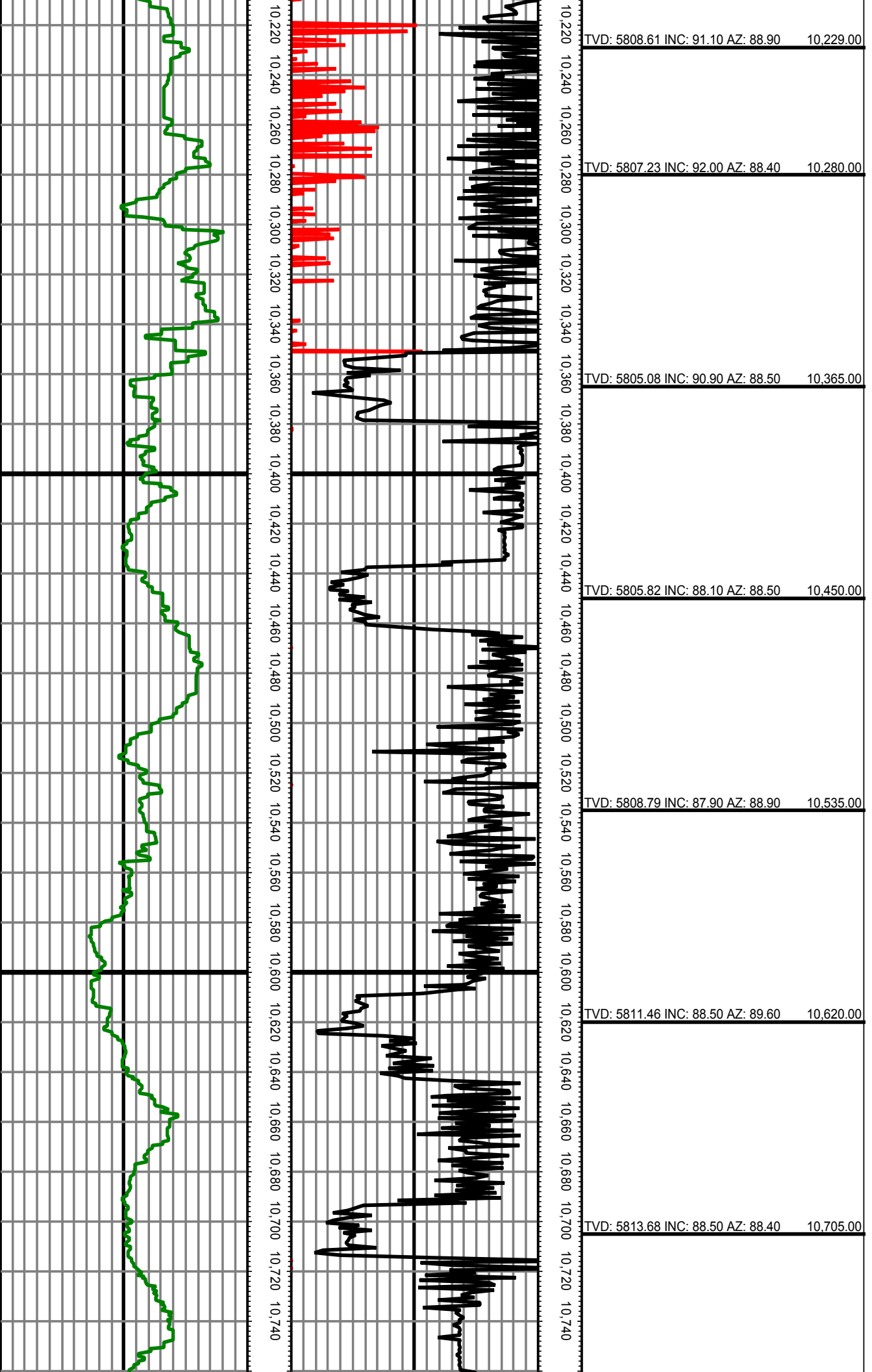


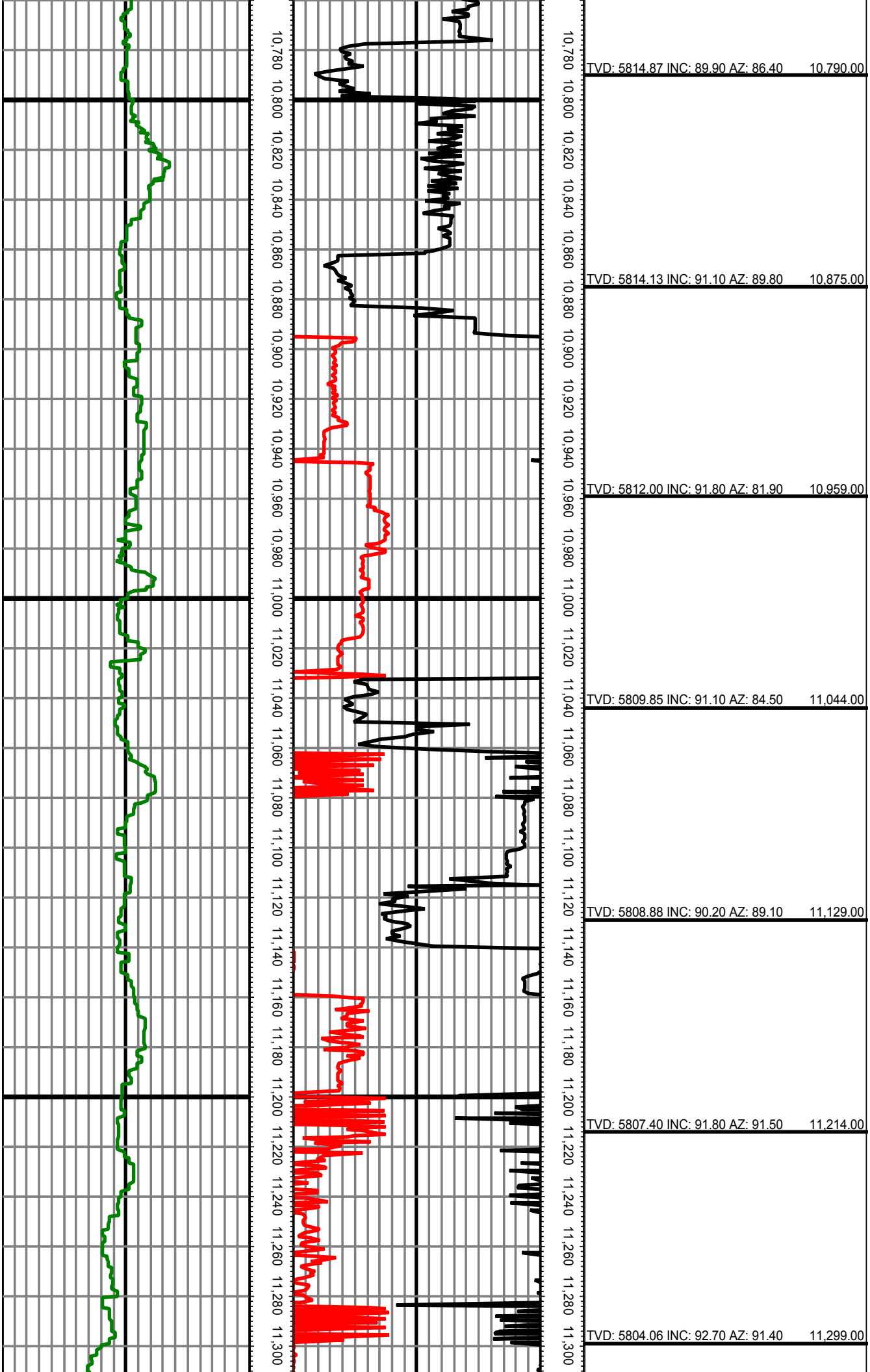












TVD: 5814.87 INC: 89.90 AZ: 86.40 10,790.00

TVD: 5814.13 INC: 91.10 AZ: 89.80 10,875.00

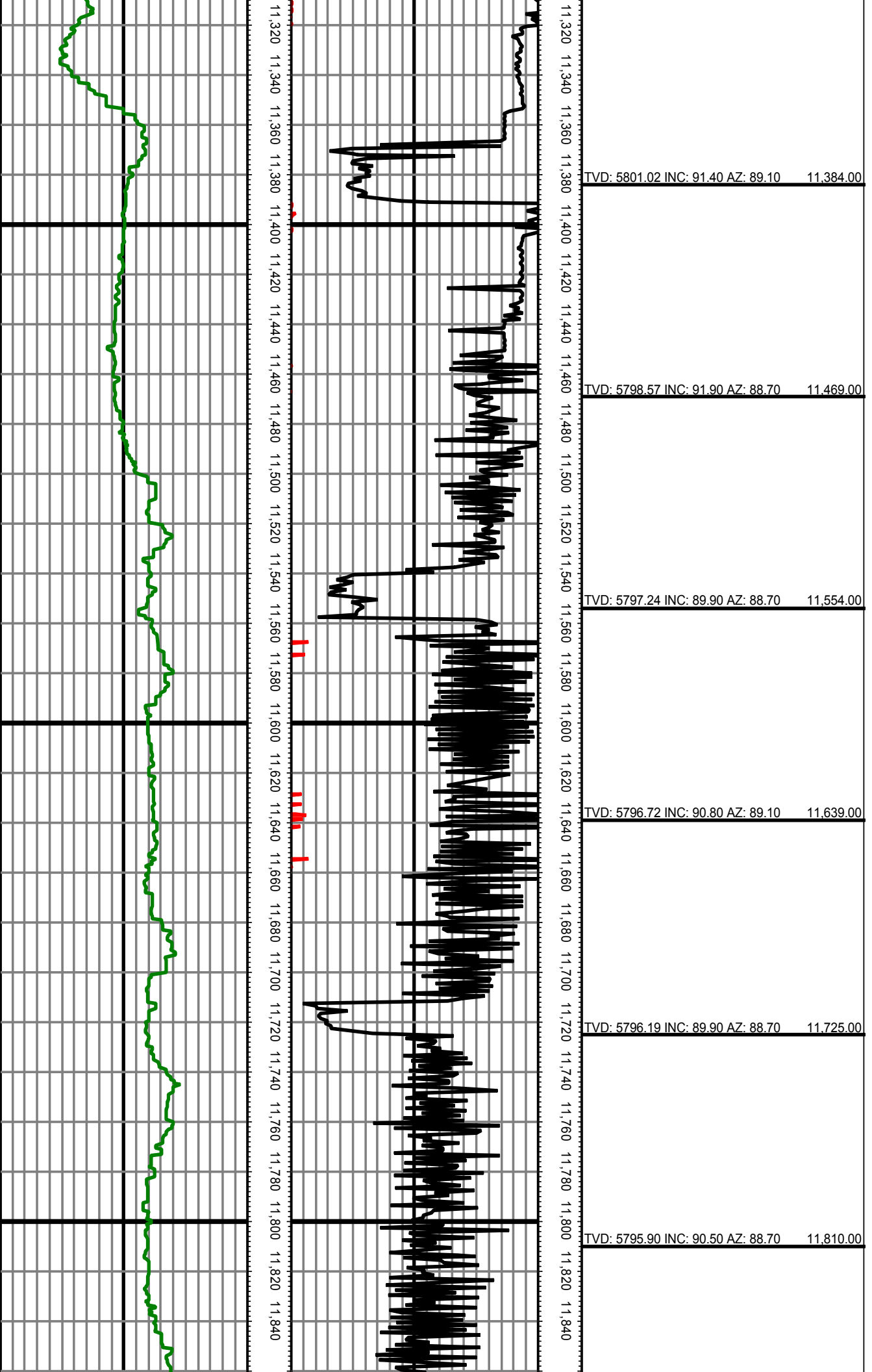
TVD: 5812.00 INC: 91.80 AZ: 81.90 10,959.00

TVD: 5809.85 INC: 91.10 AZ: 84.50 11,044.00

TVD: 5808.88 INC: 90.20 AZ: 89.10 11,129.00

TVD: 5807.40 INC: 91.80 AZ: 91.50 11,214.00

TVD: 5804.06 INC: 92.70 AZ: 91.40 11,299.00



TVD: 5795.82 INC: 89.60 AZ: 87.30 11,895.00

TVD: 5795.60 INC: 90.70 AZ: 87.30 11,980.00

TVD: 5795.38 INC: 89.60 AZ: 88.00 12,065.00

TVD: 5796.04 INC: 89.50 AZ: 87.80 12,150.00

TVD: 5795.60 INC: 91.10 AZ: 88.20 12,235.00

TVD: 5795.67 INC: 88.80 AZ: 87.50 12,320.00

TVD: 5797.68 INC: 88.50 AZ: 87.50 12,405.00

11,880 11,900 11,920 11,940 11,960 11,980 12,000 12,020 12,040 12,060 12,080 12,100 12,120 12,140 12,160 12,180 12,200 12,220 12,240 12,260 12,280 12,300 12,320 12,340 12,360 12,380 12,400

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