

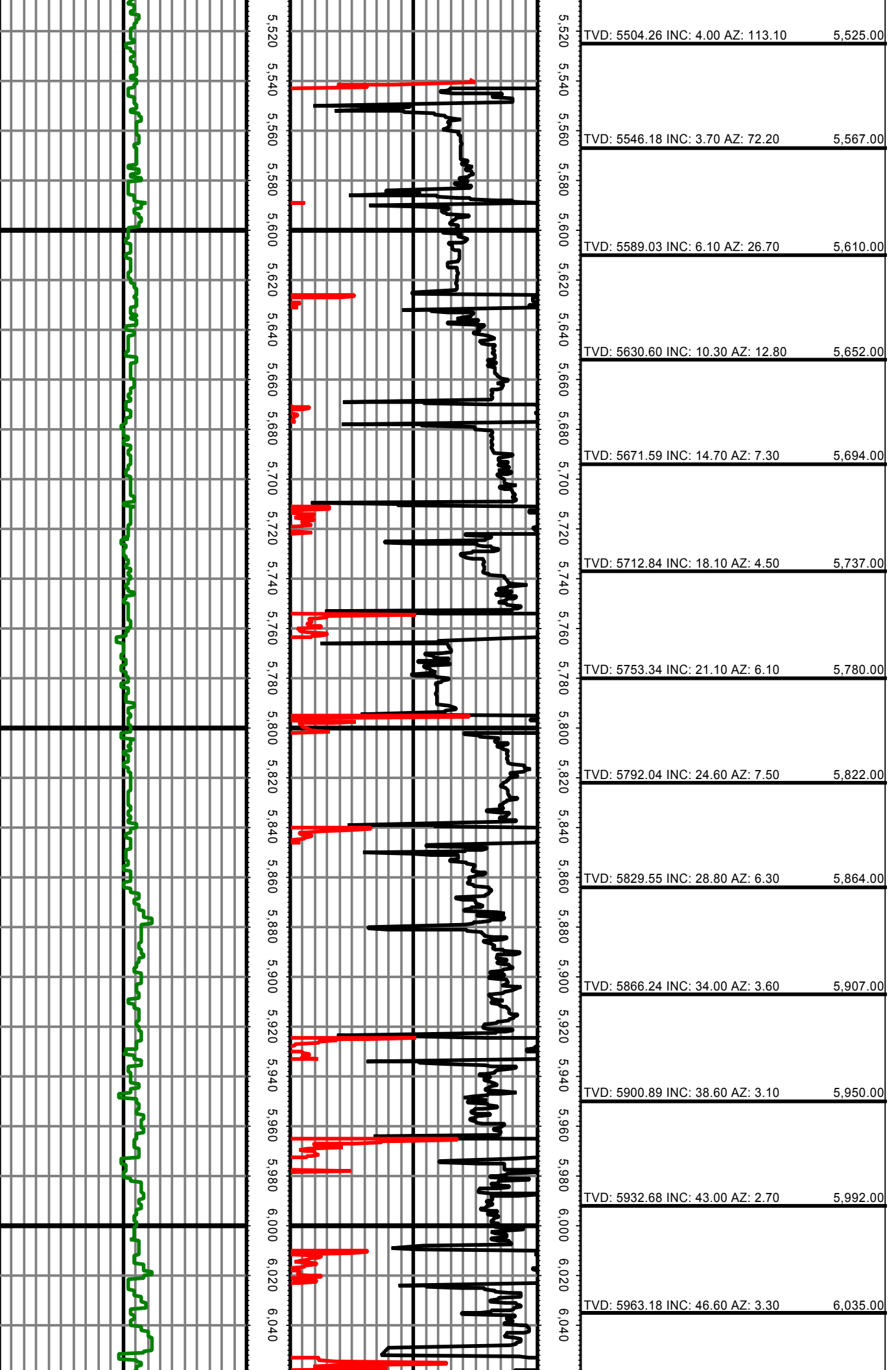
**Precision Directional Services, Inc.**27610 Commerce Oaks Drive
Oak Ridge North, TX 77385
713-435-6250**Hemberger 5-25-8-60****Scale 2":100' - MD****7/26/2014 3:41 AM****Oper. Company:** Carrizo Oil and Gas, Inc.**Well:** Hemberger 5-25-8-60**Field:** Niobrara**Rig:** Xtreme 19**Well ID:** 05-123-39440**Job Number:** DL2306**State:** CO**County:** Weld County**Country:** USA**Location:** Briggsdale**Start Date:** 07/20/2014 10:00:00**End Date:** 07/25/2014 03:30:00**Latitude:** 40.6272194444444**Longitude:** -104.046380555556**Elev KB:** 17'**Elev DF:** 4925'**Elev GL:** 4908'**Operator 1:** Neil LaRubbio**Operator 2:** Paul Browhn

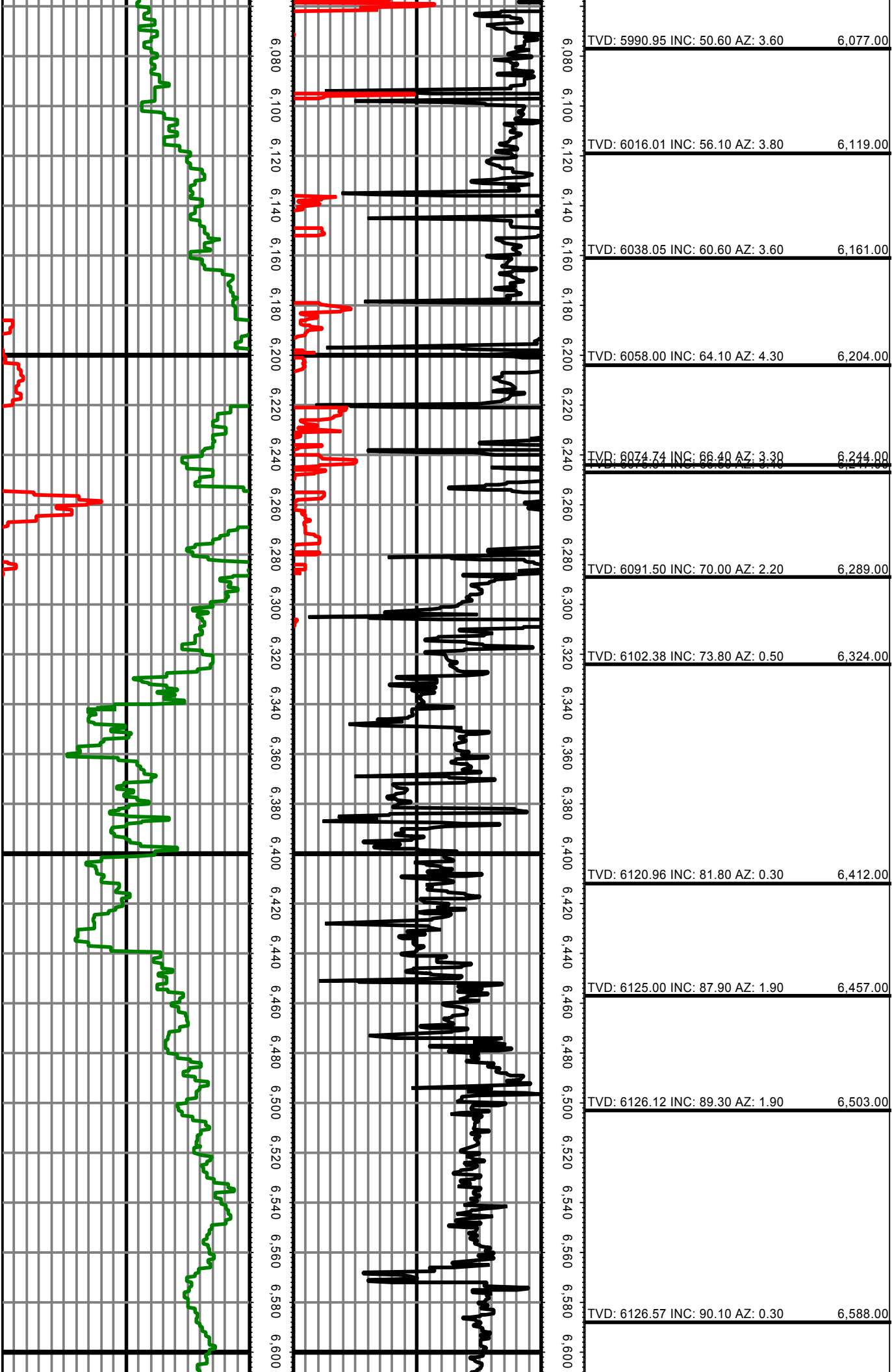
Tool Run Data	Run #1	Run #2	Run #3	Run #4	Run #5
Tool S/N	G2034	G2034			
Bit Size	8 3/4	6 1/8			
Cal Factor	3.08	1.32			
Gamma Offset	42.00	45.00			
Resistivity Offset	0.00	0.00			
Start Depth	5539.00	6382.00			
StartDate	7/20/2014	7/23/2014			
StartTime	5:30 AM	12:30 PM			
EndDepth	6382.00	10490.00			
EndDate	7/21/2014	7/25/2014			
EndTime	5:00 AM	3:30 AM			
Mud Type	WBM	WBM			
Mud Weight	9.6	9.8 - 9.9			
Funnel Viscosity	39 - 40	45 / 55			
Plastic Viscosity	14 - 15	15 - 19			
Yield Point	10	12 - 13			
Gel Strength	3 / 15	5 / 13			
Solids Content	6.0 - 6.1	7.0 - 7.3			
Sand Content	0.5 - 0.6	0.5			
Mud Alkalinity	0.2 - 0.3	0.8			
Filtrate Alkalinity	0.25 - 0.7	0.5 - 1.2			
Chlorides	900	1000			
Mud RM	N/A	N/A			
Mud RMF	N/A	N/A			
Mud RMC	N/A	N/A			
Mud RM at BHT	N/A	N/A			

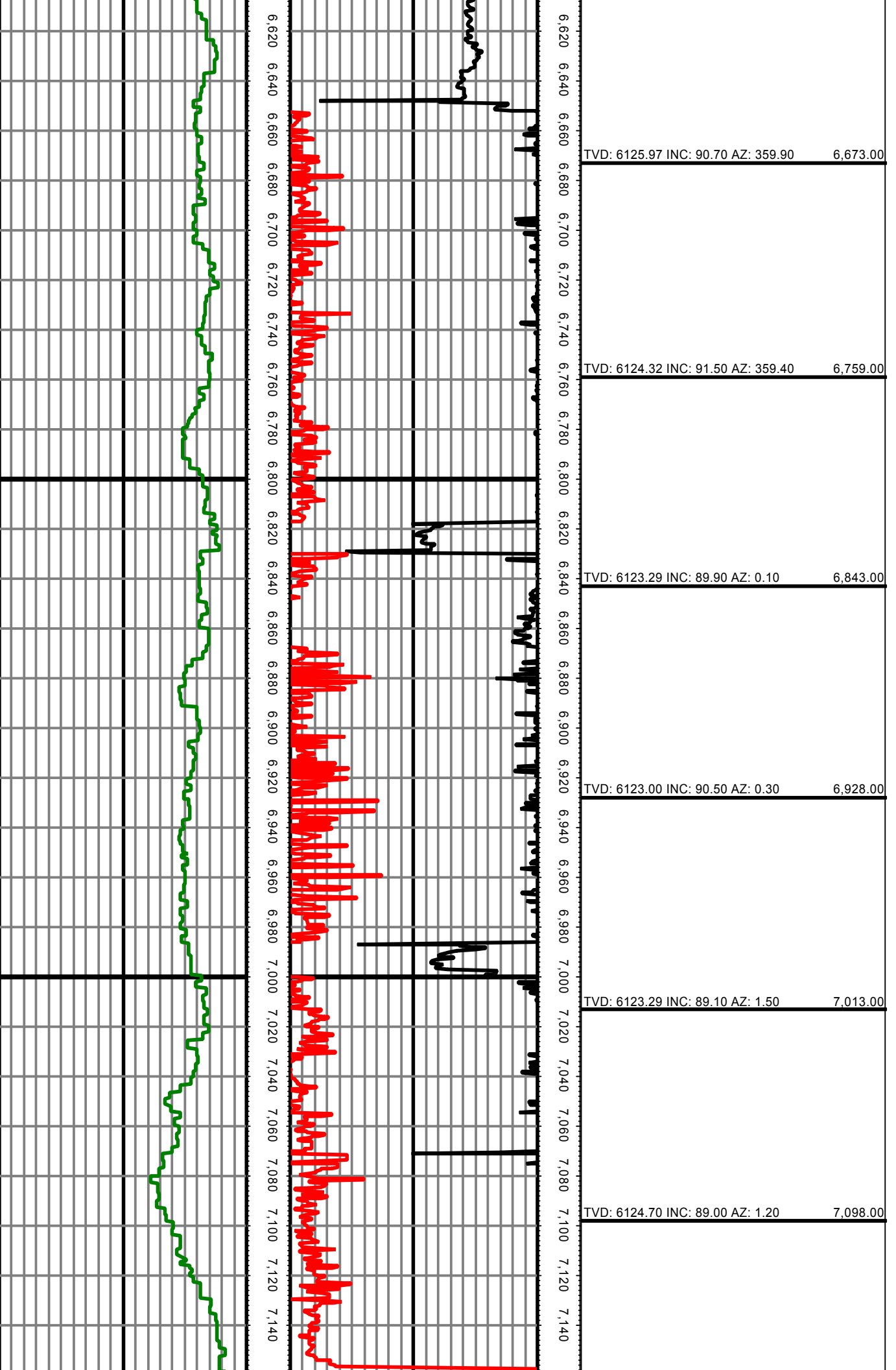
Hole Data			Casing Data		
Size	From	To	Size	From	To
12 1/4	0.00	1507.00	9 5/8	0.00	1477.00
8 3/4	1507.00	6382.00	7	0.00	6411.00
6 1/8	6382.00	10490.00	4.5	6411.00	10490.00

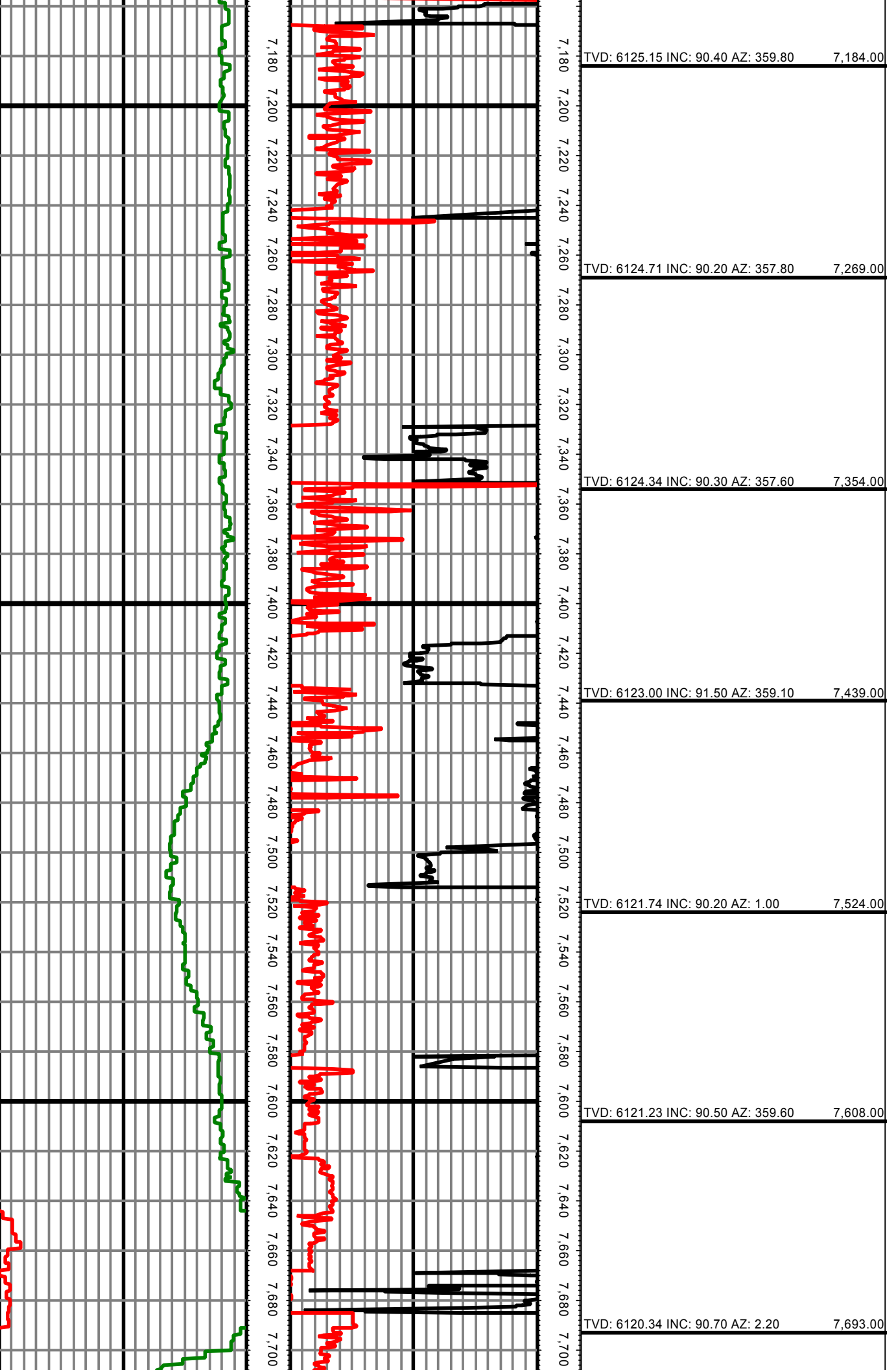
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not except in the case of gross or willful negligence on our part, be liable or responsible for any loss, cost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

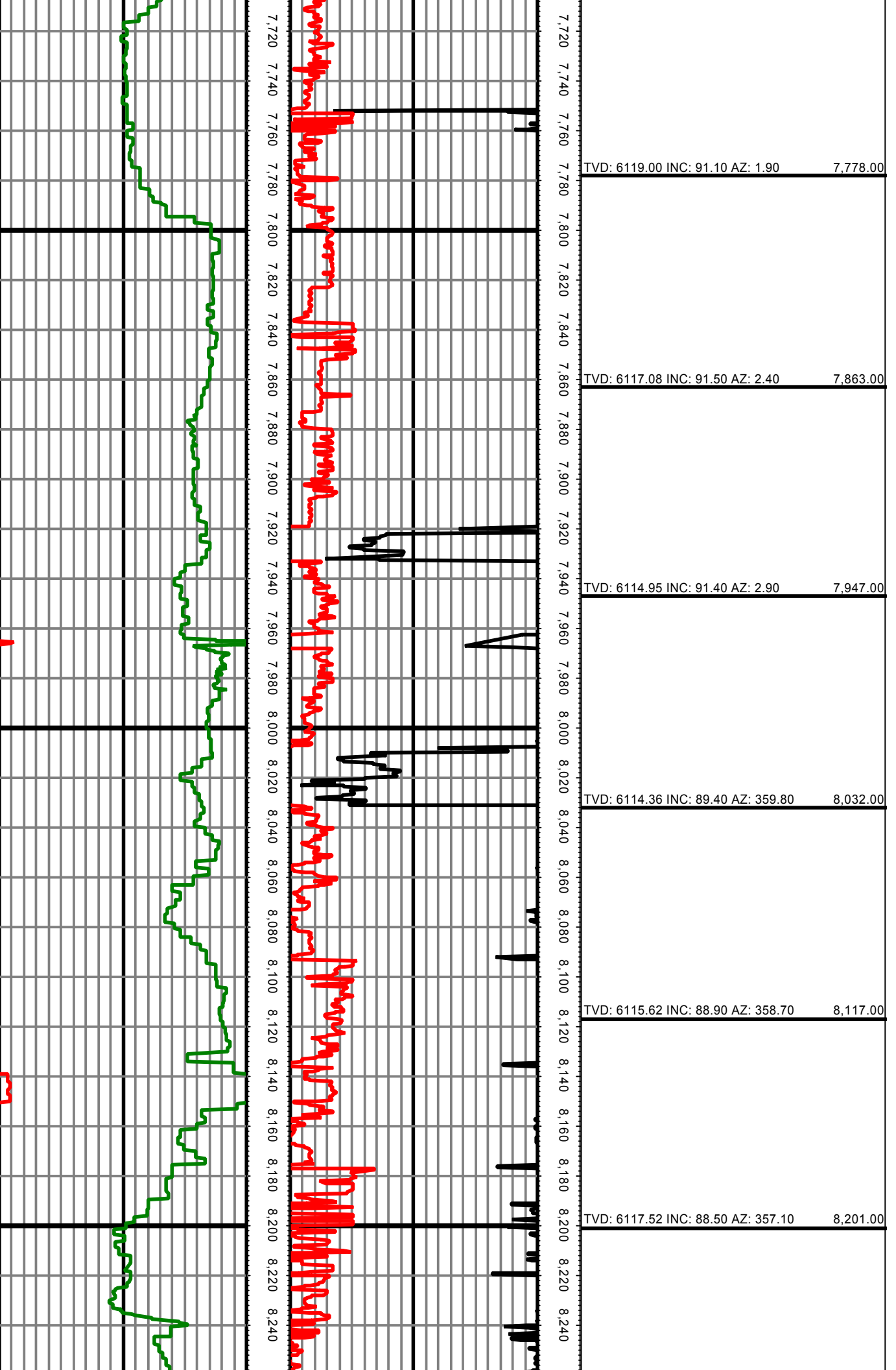
0.00 GR(API) 150.00 MD 0.00 ROP(FT/HR) 150.00 MD Surveys (TVD/INC/AZ)
150.00 2 300.00 FT 150.00 2 300.00 FT

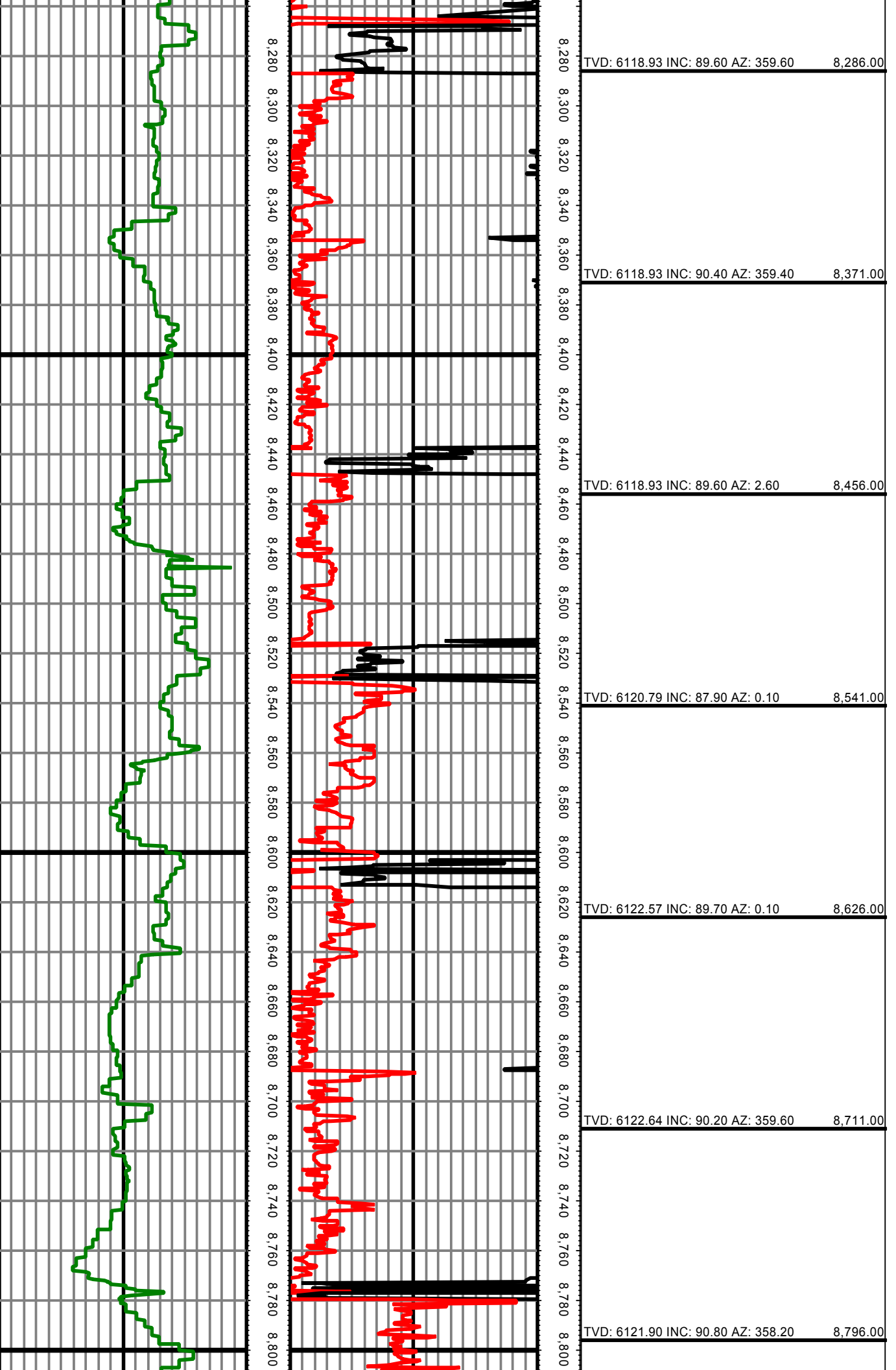


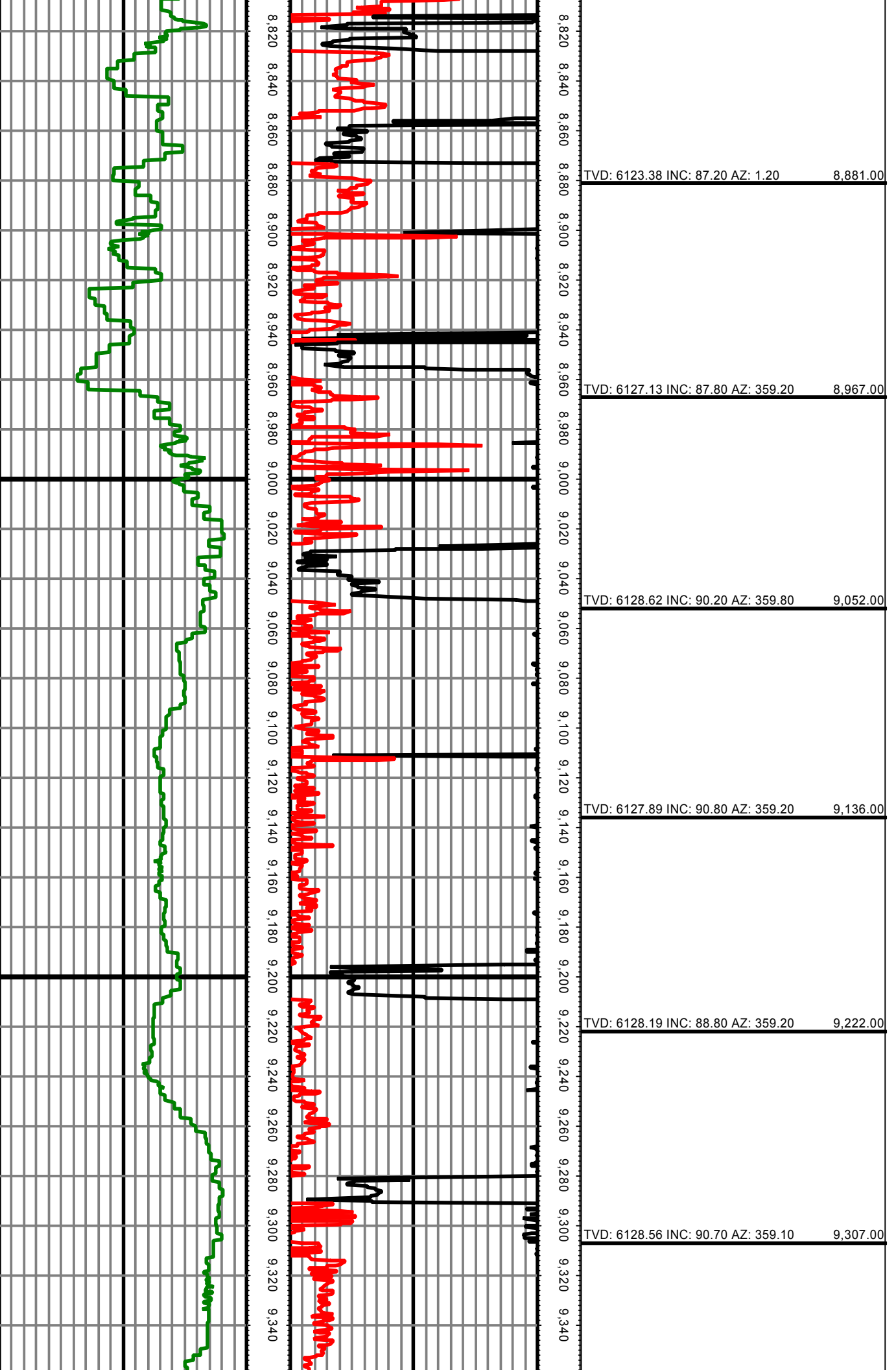


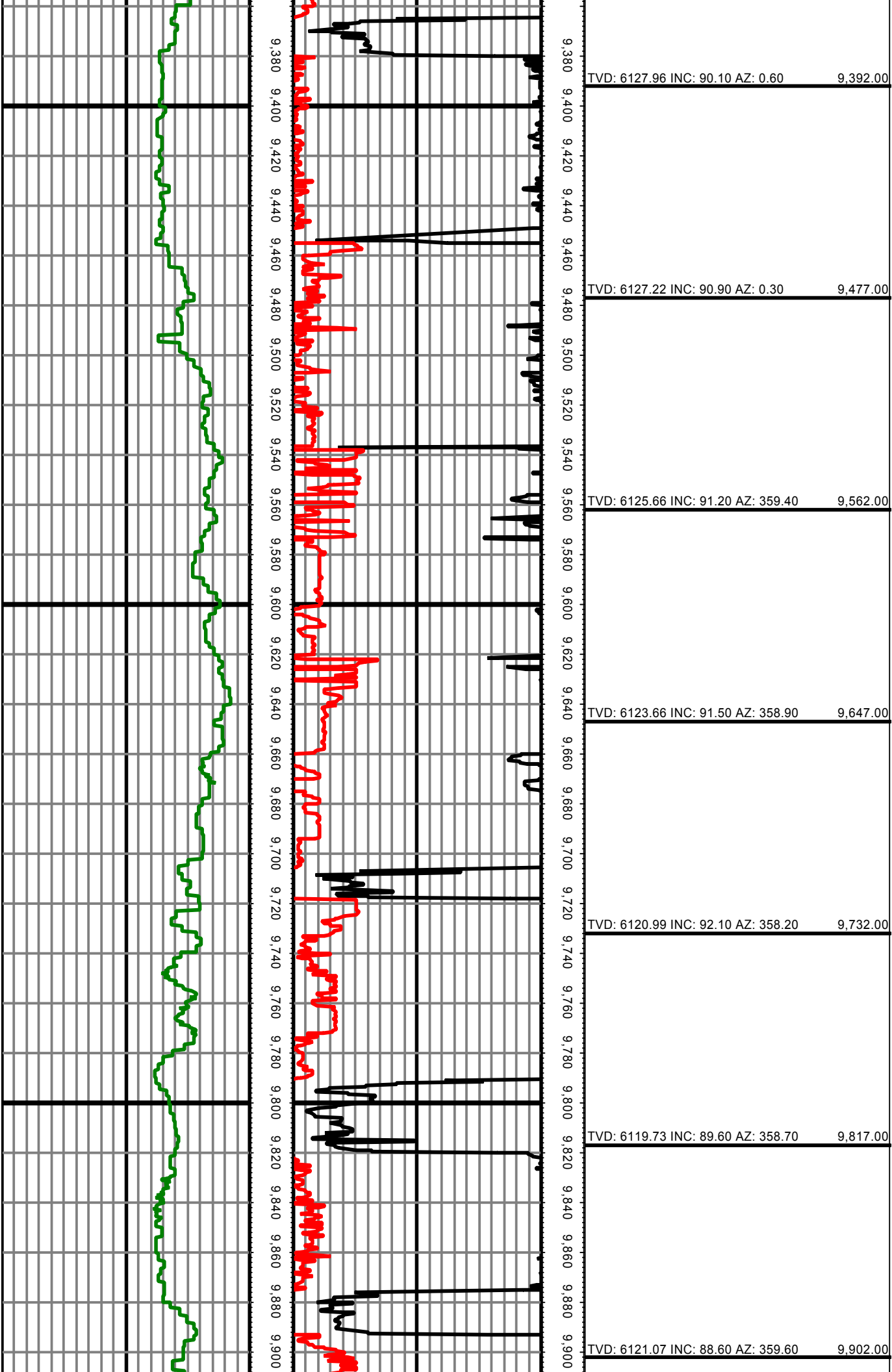












TVD: 6127.96 INC: 90.10 AZ: 0.60 9,392.00

TVD: 6127.22 INC: 90.90 AZ: 0.30 9,477.00

TVD: 6125.66 INC: 91.20 AZ: 359.40 9,562.00

TVD: 6123.66 INC: 91.50 AZ: 358.90 9,647.00

TVD: 6120.99 INC: 92.10 AZ: 358.20 9,732.00

TVD: 6119.73 INC: 89.60 AZ: 358.70 9,817.00

TVD: 6121.07 INC: 88.60 AZ: 359.60 9,902.00

