

Xbolt GAMMA RAY

1in/100ft Measured Depth

Final Print

Recorded Mode

Company: PDC Energy INC.
Well: Hen 10N
Field Name: Wattenberg
Country Name: United States
State Name: Colorado
County Name: Weld

Latitude	40°19'40.980"N	API Number	05-123-51807
Longitude	104°34'20.424"W	Rig Name	Patterson 272
Spud Date	30-Aug-2023	Rig Type	Land rig
Log Interval	1721.00--14741.50(ft)	Job Number	O.1041735.1.7
Depth Source	Driller's Depth	Print Type	Final Print
Log Measured From	Drill Floor	Northing	1363702.25(ft)
Rig Floor Above GL	28.50(ft)	Easting	3258632.41(ft)
Ground Level Above MSL	4779.00(ft)	Coordinate System	NAD83 Colorado State Plane, Northern Zone, US Feet

Disclaimer

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Operational Run Summary

Notes:			
Run 1 (Bit Size: 8.5in)			
Date/Time Log Started	02-Sep-2023 01:49:57	Date/Time Log Finished	05-Sep-2023 05:16:19
Start Depth	1721(ft)	Stop Depth	14742(ft)
Mud Type	Oil Based Mud	Mud Density	10.2(lbm/gal)
Potassium	0(%)	Barite	Yes
GR Sensor Offset	28.97(ft)	Calibration Coefficient	0
DNI Sensor Offset	32.61(ft)		

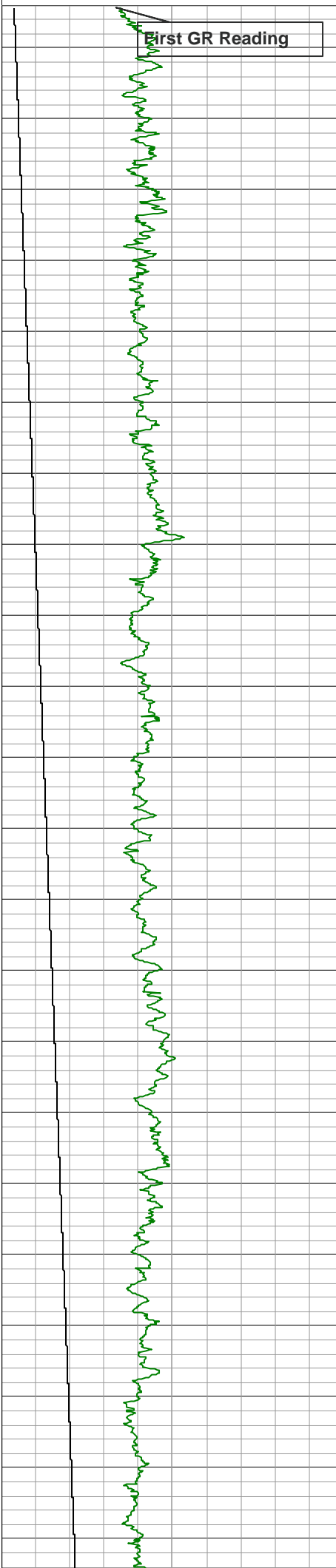
Log			
Description:	Xbolt GAMMA RAY	Format:	XBOLT_PDC
Index Type:	Measured Depth	Creation Date:	06-Sep-2023
		Index Scale:	1in/100ft
		Index Unit:	ft

TVD_RT	Depth	ROP5_RT	TEMP_RT, XBOLT
1 500 ft Borehole 7 500		0 ft/h Borehole 1 000 0	degF Borehole 300

GR_RM, XBOLT

gAPI, Borehole 300

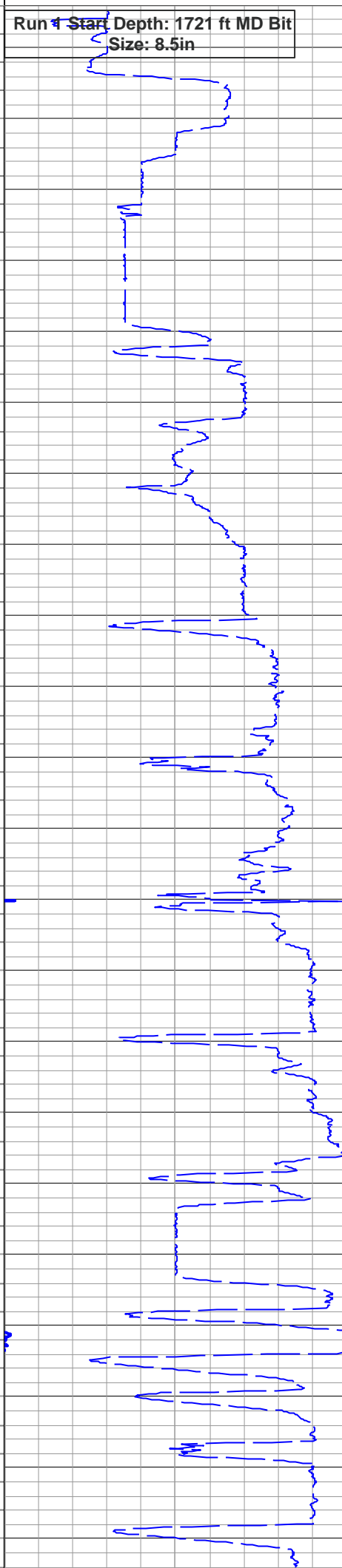
First GR Reading



1 : 100
in : ft

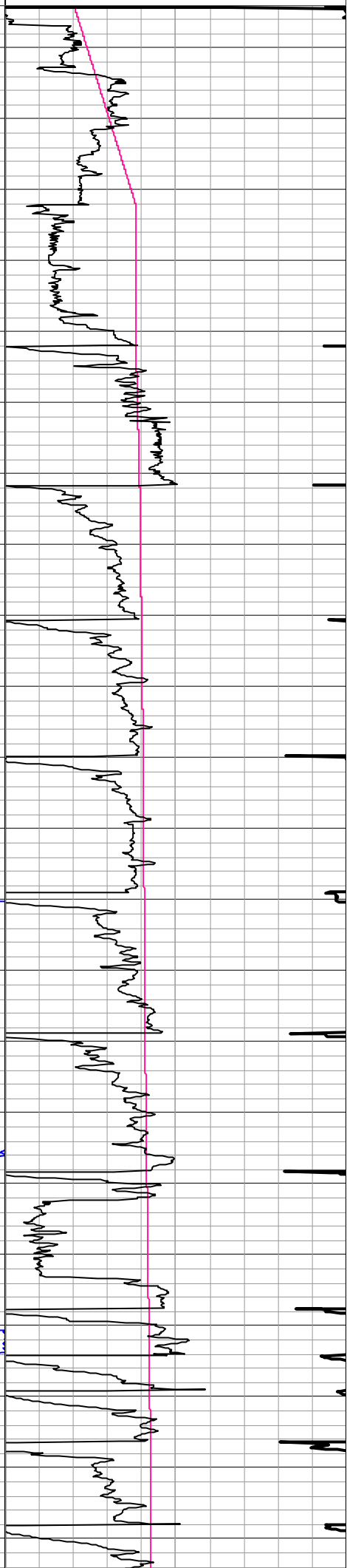


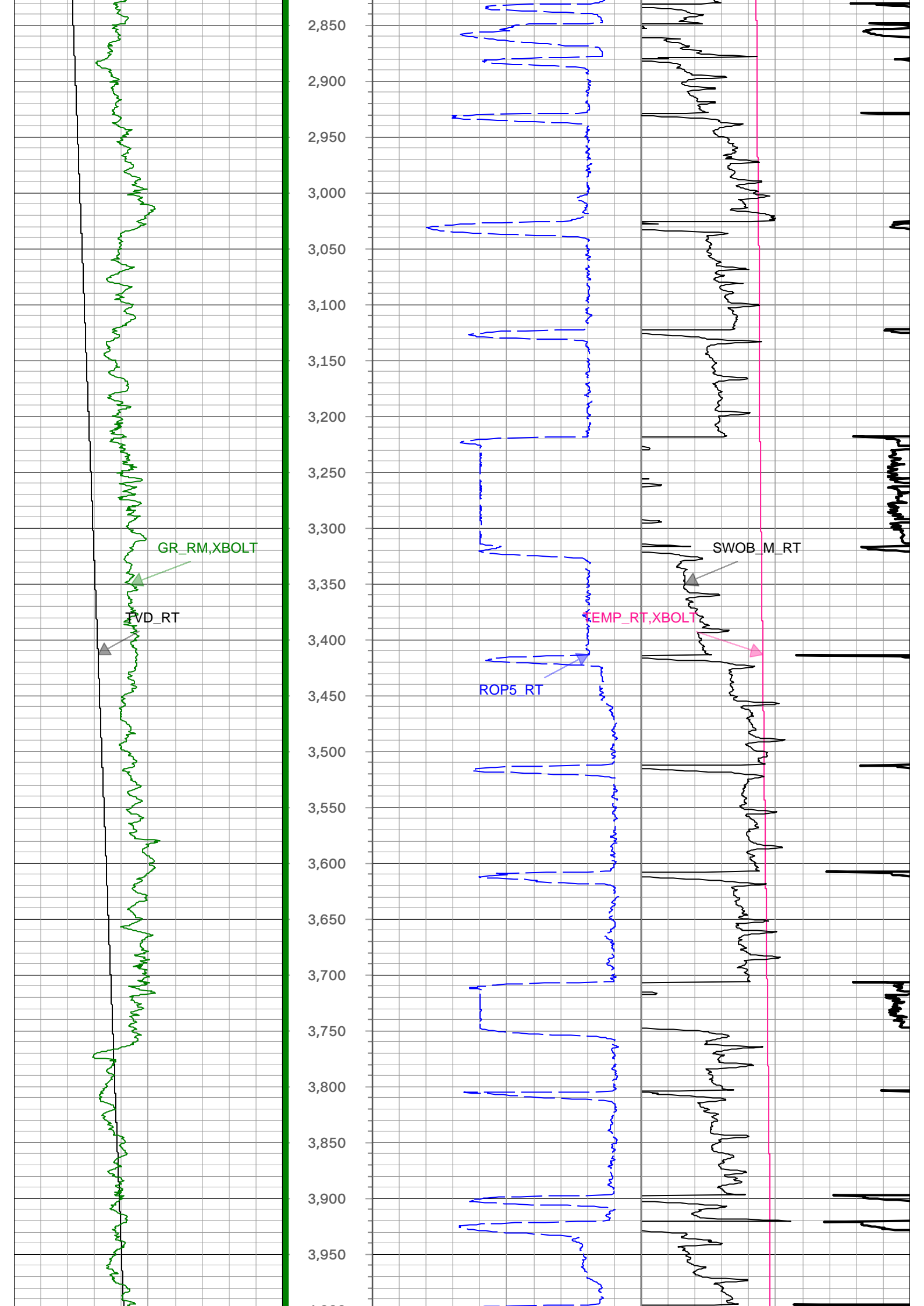
Run 4 Start Depth: 1721 ft MD Bit Size: 8.5in

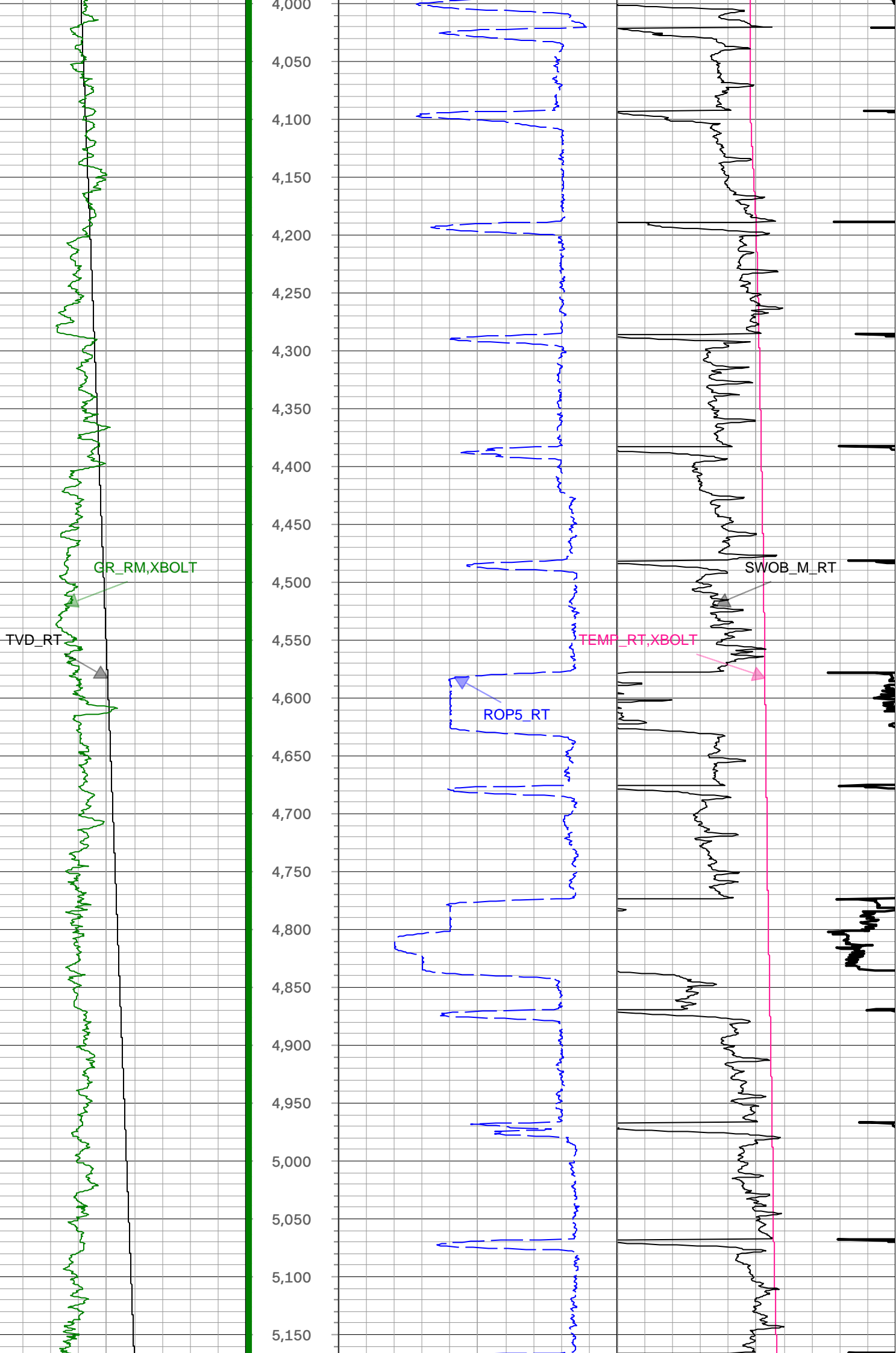


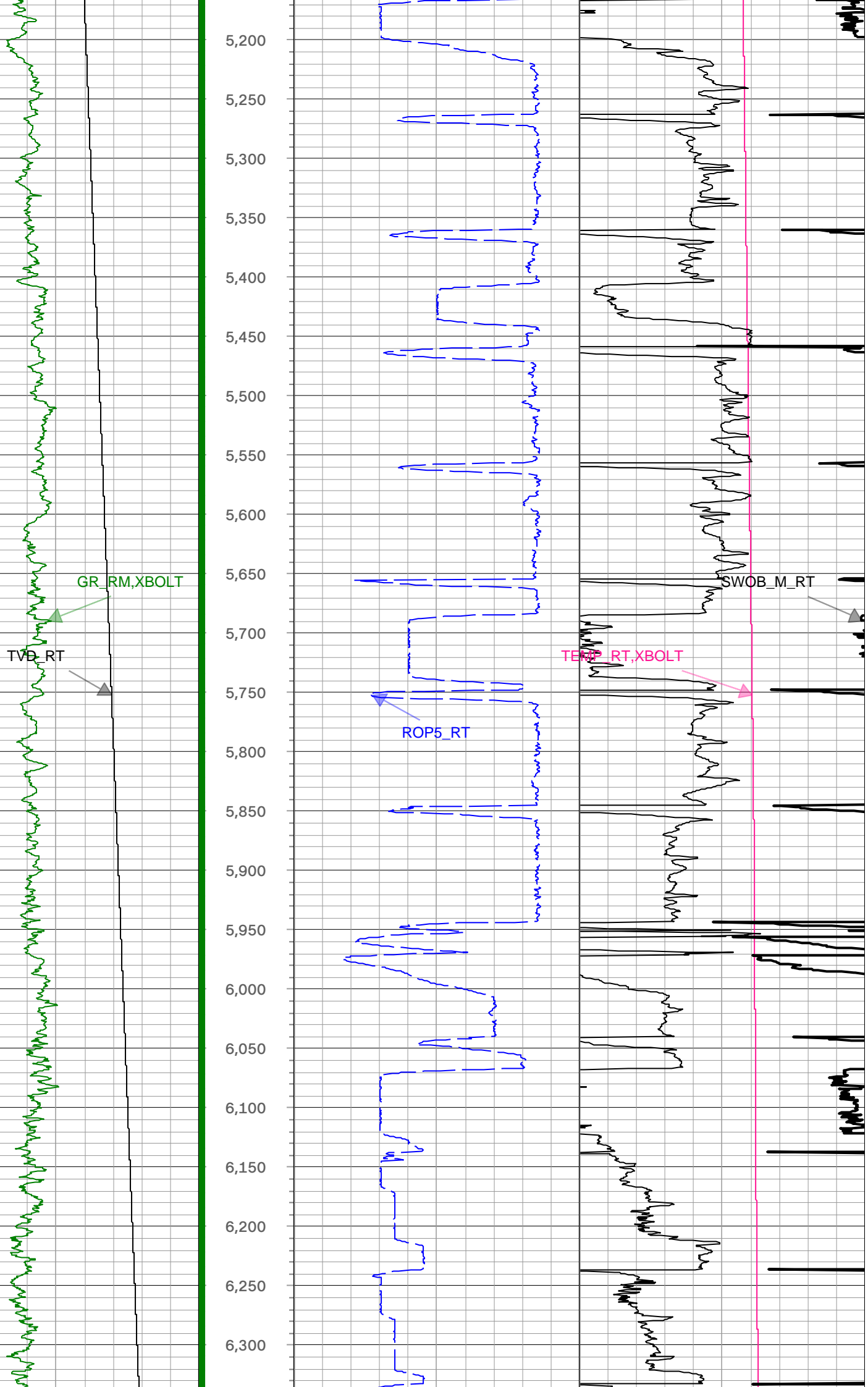
SWOB_M_RT

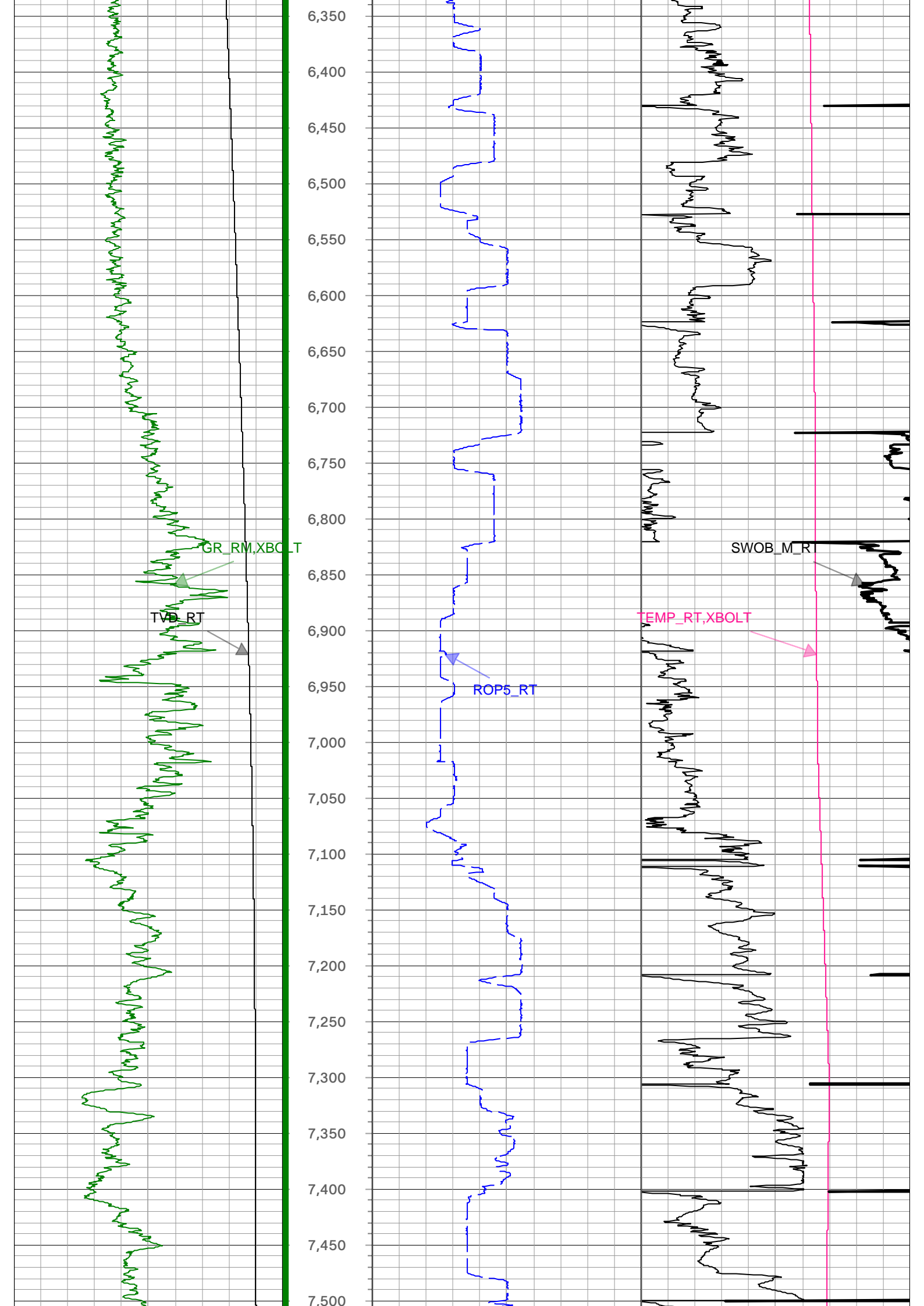
1000 lbm, Borehole 50

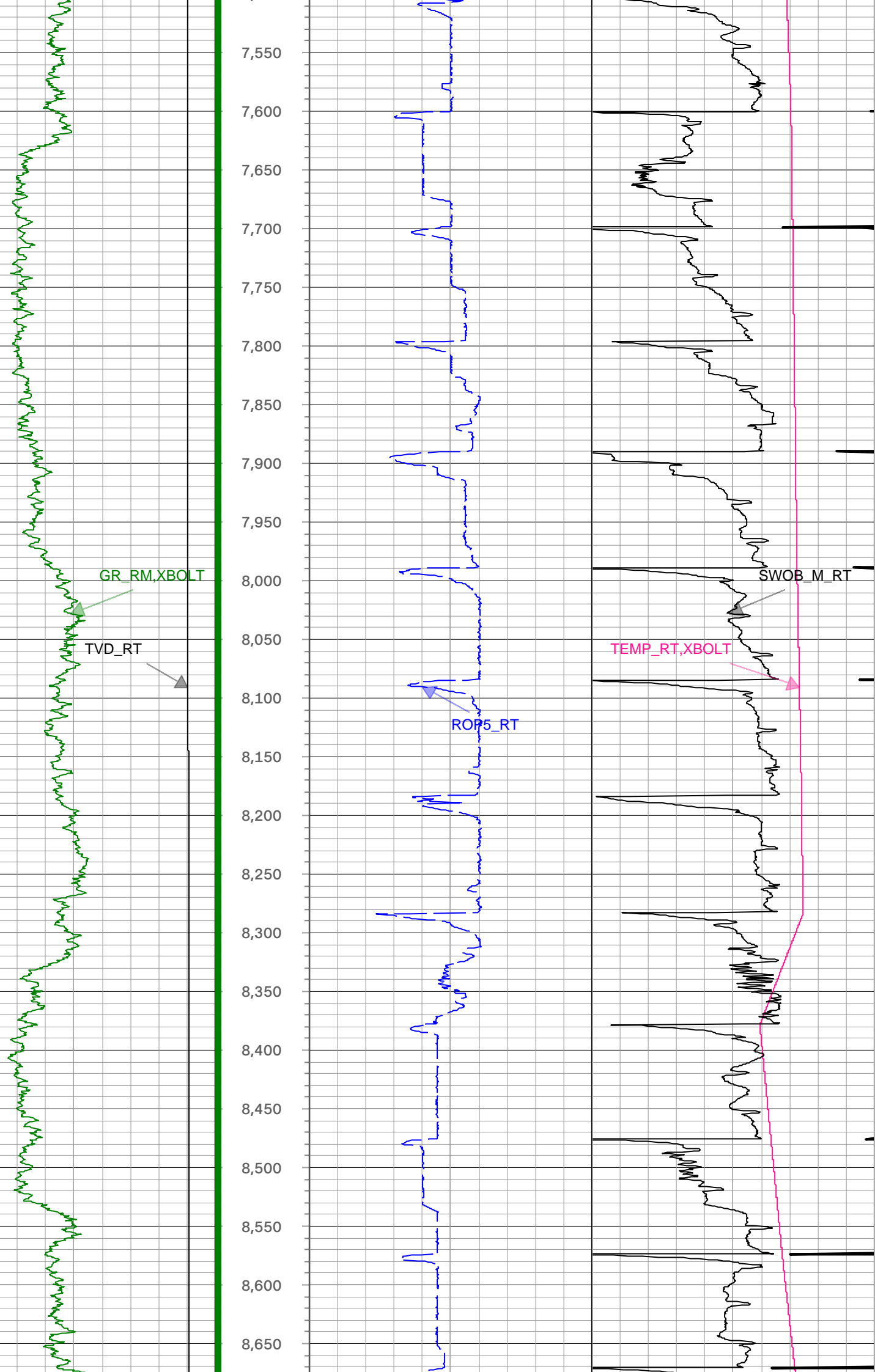


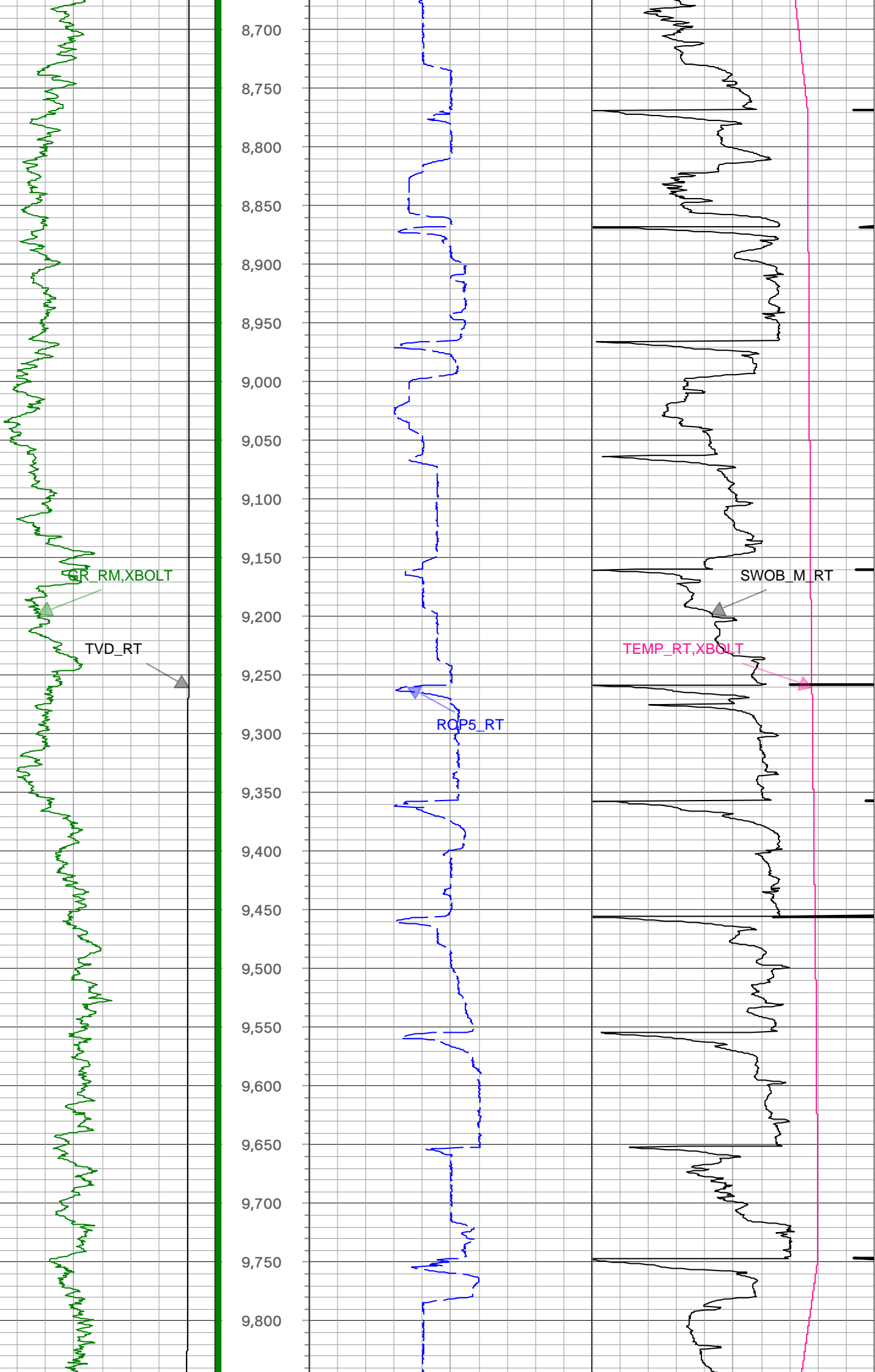


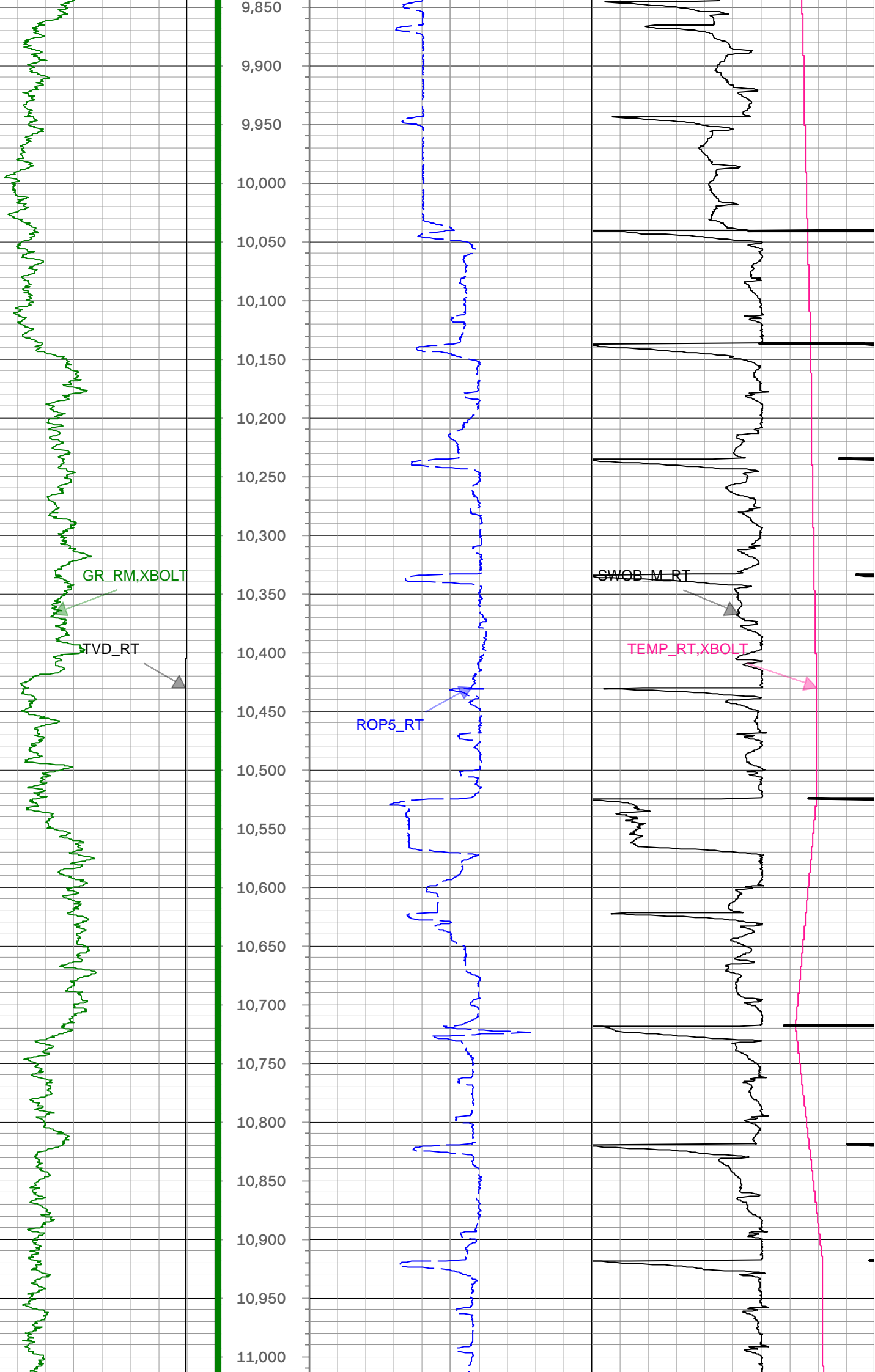


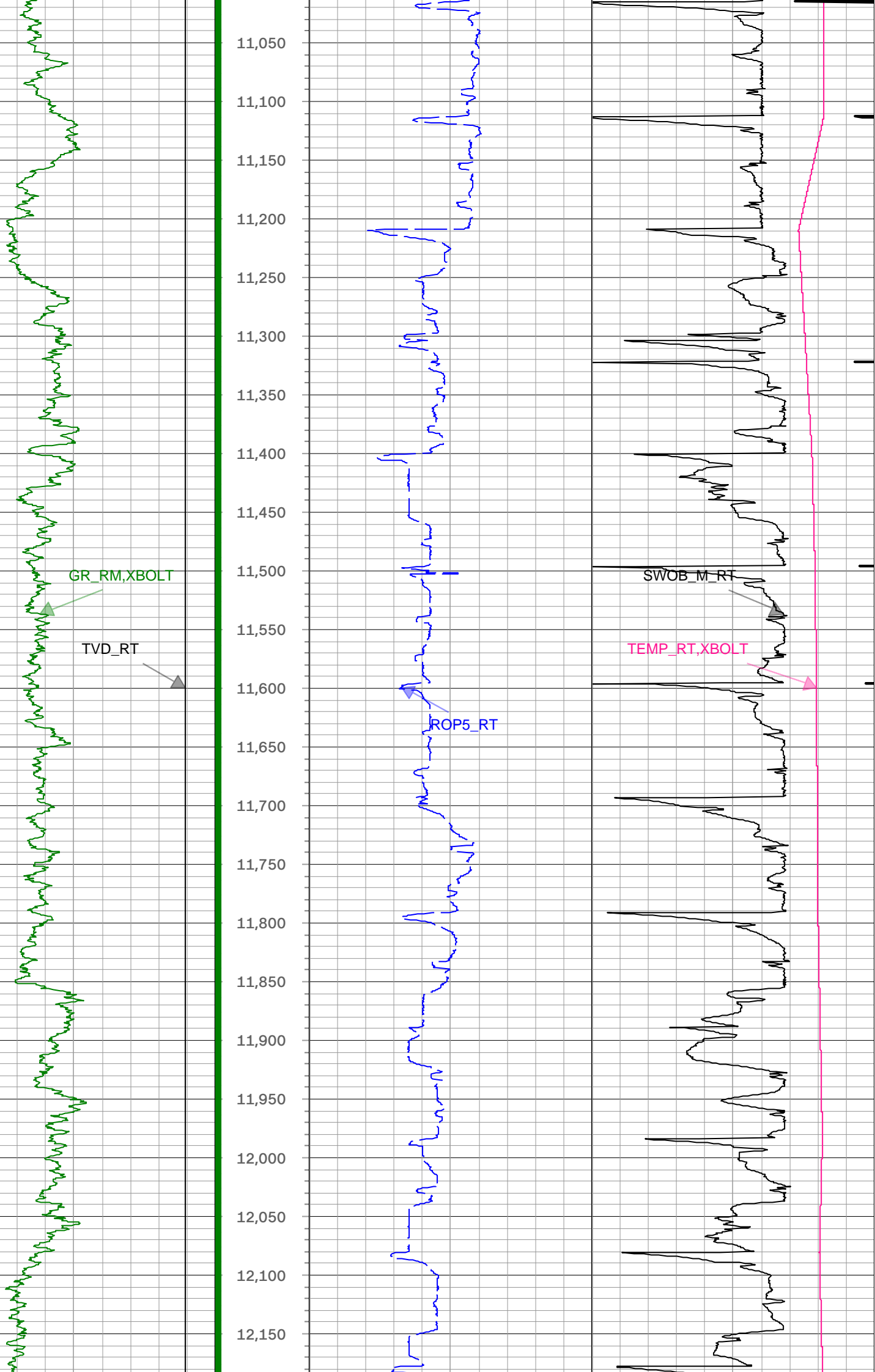


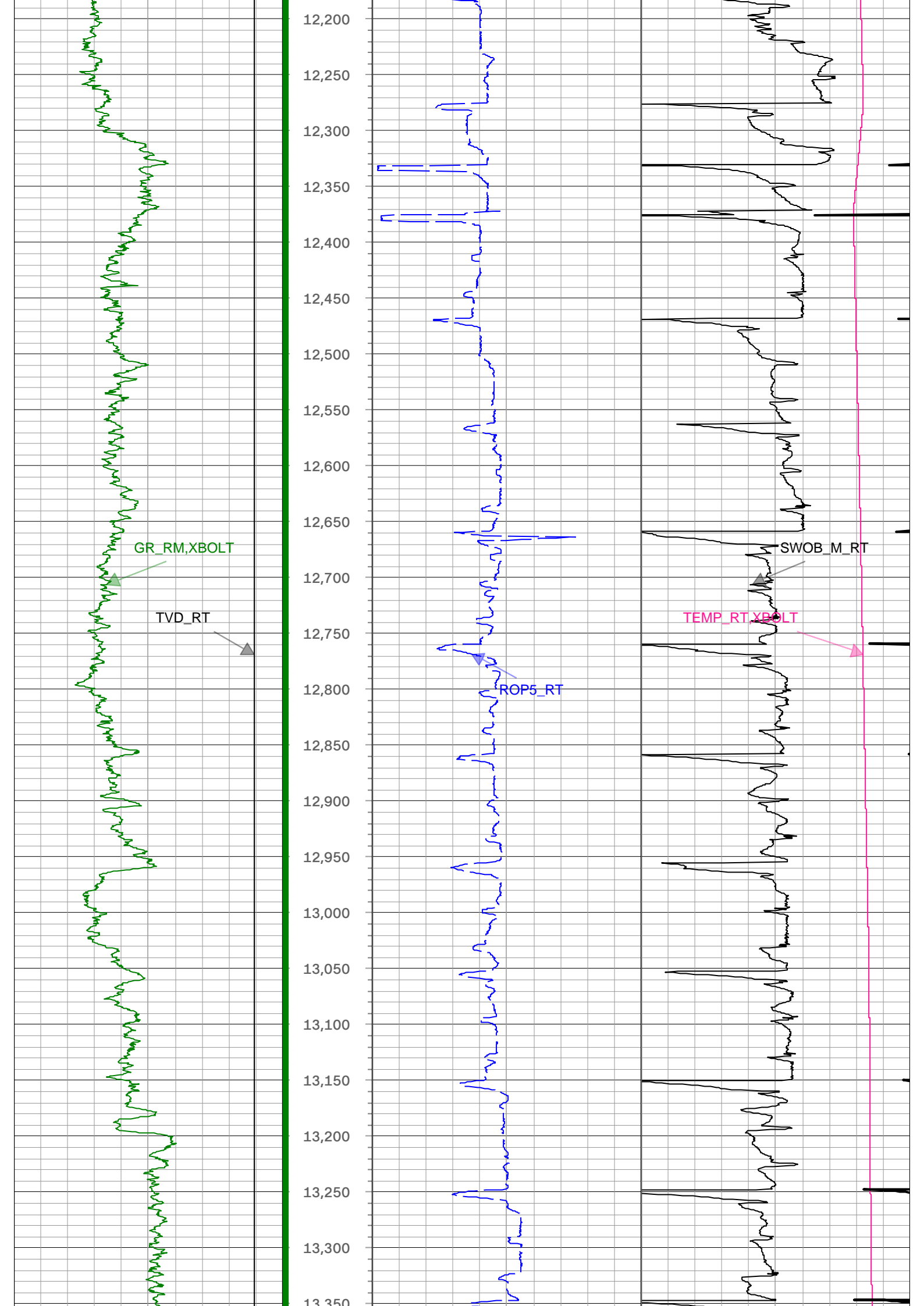


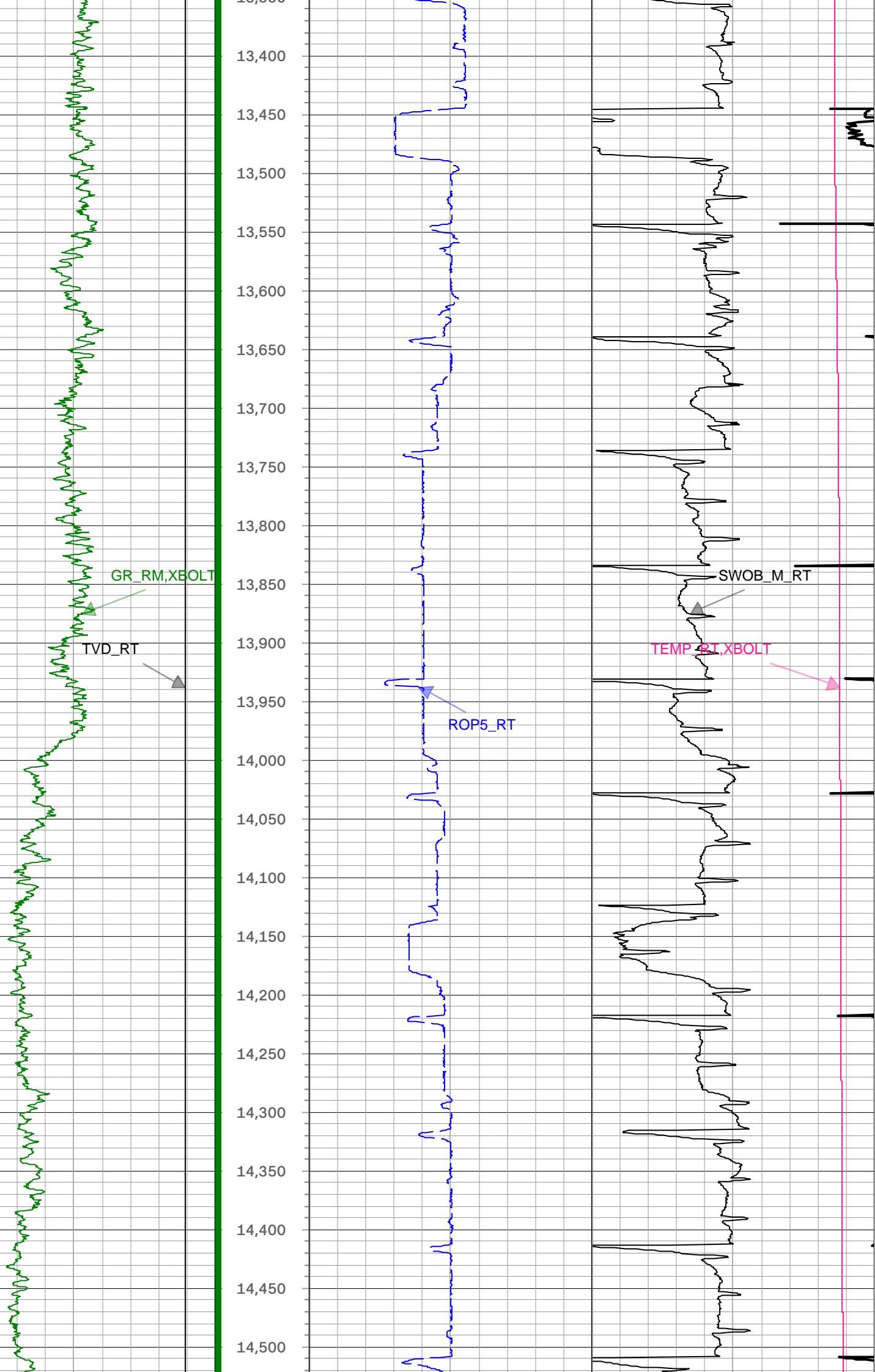


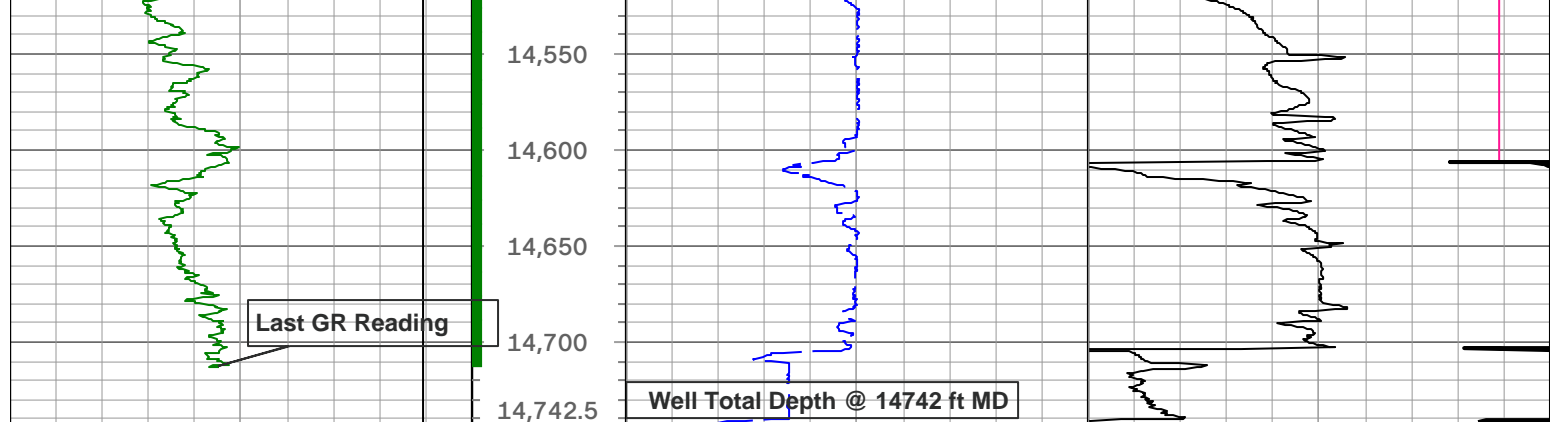












TVD_RT			Depth 1 : 100 in : ft	ROP5_RT			TEMP_RT,XBOLT		
1,500	ft, Borehole	7,500		0	ft/h, Borehole	1,000	0	degF, Borehole	300
GR_RM,XBOLT				SWOB_M_RT					
0	gAPI, Borehole	300				0	1000 lbm, Borehole	50	

Description: Xbolt GAMMA RAY Format: XBOLT_PDC Index Scale: 1in/100ft
 Index Type: Measured Depth Creation Date: 06-Sep-2023 Index Unit: ft

Survey Record

Survey Calculation North Reference: True North

Tie In Point

Measured Depth:	0(ft)	Inclination:	0(deg)	Azimuth:	0(deg)
True Vertical Depth:	0(ft)	North Displacement:	0(ft)	East Displacement:	0(ft)

D&I Inits - Run - 1

Geomagnetic Model:	HDGM 2023	Geomagnetic Date:	29-Aug-2023 18:00:00
Location B:	51618 (nT)	Location G:	999.026 (mgn)
Magnetic Dip:	66.54 (deg)	Magnetic Dec:	7.66 (deg)
Total Correction:	7.66		

MD	Incl	Azim	TVD	V Sec	N/-S	E/-W	DLS	Closure Distance	Closure Azimuth	Tool Type
(ft)	(deg)	(deg)	(ft)	(ft)	(ft)	(ft)	(deg/100ft)	(ft)	(deg)	
0	0	0	0	0.00	0	0	0.00			TIP
159.5	0.88	290.52	159.49	-1.15	0.43	-1.15	0.55	1.22	290.52	MWD
249.5	1.67	270.31	249.47	-3.11	0.68	-3.11	1	3.18	282.33	MWD
340.5	1.93	275.05	340.43	-5.97	0.82	-5.96	0.33	6.01	277.84	MWD
456.5	2.2	256.24	456.35	-10.07	0.46	-10.07	0.63	10.08	272.63	MWD
545.5	2.64	253.96	545.27	-13.69	-0.51	-13.7	0.51	13.71	267.87	MWD
629.5	2.2	258	629.2	-17.12	-1.38	-17.13	0.56	17.19	265.4	MWD
715.5	2.37	269.25	715.13	-20.5	-1.75	-20.52	0.56	20.6	265.14	MWD
801.5	3.17	269.78	801.03	-24.66	-1.78	-24.68	0.93	24.74	265.88	MWD
888.5	3.96	269.43	887.86	-30.07	-1.82	-30.09	0.91	30.15	266.54	MWD
977.5	4.13	270.31	976.64	-36.35	-1.83	-36.37	0.2	36.41	267.12	MWD
1066.5	5.54	267.32	1065.32	-43.84	-2.01	-43.86	1.61	43.91	267.37	MWD

1151.5	7.3	265.56	1149.78	-53.32	-2.62	-53.35	2.08	53.41	267.18	MWD
1237.5	8.62	266.26	1234.95	-65.19	-3.47	-65.23	1.54	65.32	266.96	MWD
1322.5	10.02	267.14	1318.83	-78.92	-4.25	-78.97	1.66	79.08	266.92	MWD
1407.5	11.61	269.25	1402.32	-94.85	-4.73	-94.91	1.93	95.03	267.15	MWD
1495.5	13.01	270.66	1488.29	-113.61	-4.73	-113.67	1.63	113.77	267.61	MWD
1582.5	12.57	271.19	1573.13	-132.87	-4.43	-132.93	0.52	133	268.09	MWD
1661.5	11.96	272.77	1650.33	-149.65	-3.85	-149.7	0.88	149.75	268.53	MWD
1828	10.96	270.35	1813.51	-182.71	-2.92	-182.76	0.67	182.78	269.08	MWD
1925	11.19	271.37	1908.7	-201.35	-2.64	-201.39	0.31	201.4	269.25	MWD
2022	12.46	270.24	2003.64	-221.22	-2.37	-221.26	1.33	221.27	269.39	MWD
2119	12.59	267.19	2098.33	-242.24	-2.84	-242.28	0.69	242.3	269.33	MWD
2216	12.22	268.14	2193.07	-263.05	-3.7	-263.1	0.44	263.13	269.2	Manual
2314	12.78	267.84	2288.75	-284.24	-4.44	-284.3	0.58	284.34	269.1	Manual
2408	12.95	268.53	2380.39	-305.15	-5.1	-305.22	0.24	305.26	269.04	Manual
2506	12.79	268.35	2475.92	-326.96	-5.7	-327.04	0.17	327.09	269	Manual
2603	12.49	267.54	2570.57	-348.16	-6.46	-348.25	0.36	348.31	268.94	Manual
2700	12.66	268.04	2665.25	-369.25	-7.27	-369.36	0.21	369.43	268.87	Manual
2797	11.84	267.75	2760.04	-389.81	-8.03	-389.92	0.85	390	268.82	Manual
2894	12.45	269	2854.87	-410.2	-8.6	-410.32	0.68	410.41	268.8	Manual
2990	11.84	267.65	2948.72	-430.38	-9.18	-430.51	0.7	430.61	268.78	Manual
3087	11.93	267.39	3043.64	-450.33	-10.05	-450.47	0.11	450.58	268.72	Manual
3184	12.6	269.63	3138.42	-470.92	-10.57	-471.06	0.85	471.18	268.71	Manual
3283	12.14	270.52	3235.12	-492.13	-10.55	-492.27	0.5	492.38	268.77	Manual
3378	11.24	269.39	3328.15	-511.37	-10.56	-511.52	0.98	511.63	268.82	Manual
3476	11.25	267.6	3424.27	-530.47	-11.06	-530.62	0.36	530.73	268.81	Manual
3574	11.25	267.25	3520.39	-549.56	-11.92	-549.72	0.07	549.85	268.76	Manual
3671	11.53	268.9	3615.48	-568.69	-12.56	-568.86	0.44	569	268.74	Manual
3767	12.06	266.17	3709.45	-588.28	-13.41	-588.46	0.8	588.61	268.69	Manual
3864	11.35	266.1	3804.43	-607.9	-14.74	-608.09	0.73	608.27	268.61	Manual
3961	11.55	266.51	3899.5	-627.1	-15.98	-627.31	0.22	627.51	268.54	Manual
4057	11.94	267.87	3993.49	-646.61	-16.93	-646.83	0.5	647.05	268.5	Manual
4154	11.89	266.74	4088.4	-666.6	-17.87	-666.83	0.25	667.07	268.46	Manual
4251	11.77	269.05	4183.35	-686.46	-18.6	-686.7	0.5	686.95	268.45	Manual
4350	11.92	269.36	4280.24	-706.77	-18.89	-707.02	0.16	707.27	268.47	Manual
4447	11.72	265.81	4375.18	-726.6	-19.72	-726.86	0.78	727.13	268.45	Manual
4544	12.02	268.38	4470.11	-746.51	-20.72	-746.78	0.63	747.07	268.41	Manual
4641	10.18	263.8	4565.29	-765.12	-21.93	-765.4	2.1	765.72	268.36	Manual
4739	10.79	268.55	4661.66	-782.89	-23.1	-783.18	1.08	783.52	268.31	Manual
4837	12.53	263.71	4757.63	-802.61	-24.5	-802.92	2.04	803.3	268.25	Manual

4935	12.25	263.91	4853.35	-823.49	-26.77	-823.83	0.29	824.26	268.14	Manual
5032	13.42	268	4947.93	-844.95	-28.25	-845.31	1.53	845.78	268.09	Manual
5131	12.66	269.48	5044.37	-867.28	-28.75	-867.64	0.84	868.12	268.1	Manual
5228	11.87	265.11	5139.16	-887.84	-29.7	-888.21	1.26	888.71	268.09	Manual
5326	12.09	265.04	5235.03	-908.08	-31.44	-908.48	0.22	909.02	268.02	Manual
5424	12	266.98	5330.87	-928.46	-32.87	-928.87	0.42	929.45	267.97	Manual
5522	12.96	267.8	5426.55	-949.61	-33.83	-950.03	1	950.63	267.96	Manual
5618	12.58	267.84	5520.18	-970.8	-34.63	-971.23	0.4	971.85	267.96	Manual
5715	12.32	266.81	5614.9	-991.68	-35.61	-992.12	0.35	992.76	267.94	Manual
5812	13.2	266.44	5709.5	-1013.05	-36.87	-1013.51	0.91	1014.18	267.92	Manual
5910	12.26	261.15	5805.09	-1034.47	-39.17	-1034.96	1.53	1035.7	267.83	Manual
6007	12.75	264.98	5899.79	-1055.28	-41.69	-1055.8	0.99	1056.62	267.74	Manual
6104	12.73	265.06	5994.41	-1076.57	-43.55	-1077.11	0.03	1077.99	267.68	Manual
6200	5.67	264.97	6089.11	-1091.84	-44.87	-1092.39	7.35	1093.31	267.65	Manual
6297	4.73	88.11	6185.97	-1092.61	-45.16	-1093.17	10.72	1094.1	267.63	Manual
6394	14.65	87.65	6281.47	-1076.33	-44.53	-1076.87	10.23	1077.79	267.63	Manual
6492	20.63	84.2	6374.82	-1046.77	-42.27	-1047.29	6.19	1048.14	267.69	Manual
6591	26.66	84.69	6465.47	-1007.31	-38.45	-1007.78	6.09	1008.52	267.82	Manual
6688	31.94	93.38	6550.07	-959.98	-37.95	-960.45	6.98	961.2	267.74	Manual
6786	38.34	95.73	6630.17	-903.75	-42.52	-904.27	6.67	905.26	267.31	Manual
6883	45.97	95.39	6702.03	-838.94	-48.8	-839.52	7.87	840.94	266.67	Manual
6980	54.97	94.75	6763.7	-764.43	-55.38	-765.07	9.29	767.07	265.86	Manual
7077	63.3	92.17	6813.43	-681.35	-60.32	-682.04	8.88	684.7	264.95	Manual
7174	74.11	90.74	6848.6	-591.11	-62.57	-591.83	11.23	595.12	263.96	Manual
7271	79.74	92.23	6870.54	-496.68	-65.03	-497.41	5.99	501.65	262.55	Manual
7369	86.09	91.93	6882.62	-399.51	-68.56	-400.28	6.49	406.11	260.28	Manual
7468	87.11	90.48	6888.49	-300.69	-70.64	-301.48	1.79	309.64	256.81	Manual
7565	88.04	88.93	6892.6	-203.8	-70.14	-204.57	1.86	216.26	251.08	Manual
7662	87.54	88.95	6896.34	-106.91	-68.34	-107.66	0.52	127.52	237.59	Manual
7759	87.79	89.86	6900.29	-10.02	-67.34	-10.74	0.97	68.19	189.07	Manual
7856	87.77	89.61	6904.05	86.9	-66.89	86.18	0.26	109.09	127.82	Manual
8052	87.47	90.92	6912.19	282.72	-67.79	282.01	0.69	290.04	103.52	Manual
8150	87.63	90.25	6916.38	380.63	-68.79	379.91	0.7	386.09	100.26	Manual
8246	87.96	89.9	6920.07	476.56	-68.92	475.84	0.5	480.8	98.24	Manual
8345	87.5	90.51	6923.99	575.48	-69.27	574.76	0.77	578.92	96.87	Manual
8442	87.5	90.35	6928.22	672.38	-70	671.67	0.16	675.3	95.95	Manual
8539	89.07	89.75	6931.13	769.33	-70.09	768.62	1.73	771.81	95.21	Manual
8637	88.68	91.65	6933.05	867.31	-71.28	866.59	1.98	869.51	94.7	Manual

8735	90.71	89.58	6933.57	965.3	-72.33	964.57	2.96	967.28	94.29	Manual
8832	90.6	89.61	6932.46	1062.27	-71.65	1061.56	0.12	1063.98	93.86	Manual
8929	92.07	90.26	6930.2	1159.24	-71.54	1158.53	1.66	1160.74	93.53	Manual
9028	92.52	89.53	6926.24	1258.15	-71.36	1257.45	0.87	1259.47	93.25	Manual
9126	92.28	89.9	6922.13	1356.05	-70.87	1355.36	0.45	1357.22	92.99	Manual
9225	92.45	89.65	6918.05	1454.96	-70.48	1454.28	0.31	1455.99	92.77	Manual
9323	92.6	89.58	6913.73	1552.85	-69.82	1552.18	0.17	1553.75	92.58	Manual
9421	92.74	89.47	6909.17	1650.72	-69.01	1650.07	0.18	1651.51	92.39	Manual
9520	92.63	89.64	6904.53	1749.6	-68.24	1748.96	0.2	1750.29	92.23	Manual
9615	92.62	89.62	6900.18	1844.48	-67.63	1843.86	0.02	1845.1	92.1	Manual
9714	93.01	90.12	6895.32	1943.35	-67.41	1942.74	0.64	1943.91	91.99	Manual
9811	92.37	90.38	6890.76	2040.24	-67.83	2039.63	0.71	2040.76	91.9	Manual
9907	92.25	90.4	6886.89	2136.16	-68.48	2135.55	0.13	2136.65	91.84	Manual
10004	92.51	89.81	6882.87	2233.08	-68.66	2232.46	0.66	2233.52	91.76	Manual
10102	92.32	90.37	6878.74	2330.99	-68.81	2330.38	0.6	2331.39	91.69	Manual
10199	92.86	90.13	6874.35	2427.88	-69.24	2427.28	0.61	2428.26	91.63	Manual
10296	92.85	89.99	6869.52	2524.76	-69.34	2524.16	0.14	2525.11	91.57	Manual
10394	92.81	90.21	6864.68	2622.63	-69.51	2622.04	0.23	2622.96	91.52	Manual
10491	92.69	90.45	6860.03	2719.52	-70.07	2718.92	0.28	2719.83	91.48	Manual
10588	90.44	89.54	6857.38	2816.47	-70.06	2815.88	2.5	2816.75	91.43	Manual
10686	91.18	88.57	6856	2914.42	-68.44	2913.85	1.24	2914.66	91.35	Manual
10784	90.7	90.07	6854.39	3012.38	-67.28	3011.83	1.61	3012.58	91.28	Manual
10882	90.19	91.28	6853.63	3110.38	-68.43	3109.82	1.34	3110.57	91.26	Manual
10978	90.82	90.05	6852.78	3206.37	-69.55	3205.81	1.44	3206.56	91.24	Manual
11076	90.5	90.57	6851.65	3304.36	-70.08	3303.8	0.62	3304.54	91.22	Manual
11172	90.38	90.35	6850.91	3400.36	-70.85	3399.79	0.26	3400.53	91.19	Manual
11268	91.02	90.24	6849.74	3496.35	-71.34	3495.78	0.68	3496.51	91.17	Manual
11365	90.85	90.26	6848.16	3593.34	-71.77	3592.77	0.18	3593.49	91.14	Manual
11463	90	90.56	6847.43	3691.33	-72.47	3690.76	0.92	3691.47	91.12	Manual
11561	90.31	90.38	6847.17	3789.33	-73.27	3788.76	0.37	3789.47	91.11	Manual
11756	90.28	90.36	6846.16	3984.33	-74.53	3983.75	0.02	3984.45	91.07	Manual
11852	90.02	91.64	6845.91	4080.32	-76.21	4079.74	1.36	4080.45	91.07	Manual
11949	90.43	90.2	6845.53	4177.32	-77.76	4176.72	1.54	4177.44	91.07	Manual
12046	89.75	90.36	6845.38	4274.31	-78.24	4273.72	0.72	4274.43	91.05	Manual
12144	90.58	89.25	6845.1	4372.3	-77.9	4371.71	1.41	4372.41	91.02	Manual
12240	89.14	90.49	6845.33	4468.29	-77.69	4467.71	1.98	4468.39	91	Manual
12335	89.87	89.56	6846.15	4563.28	-77.73	4562.7	1.24	4563.37	90.98	Manual
12432	89.74	89.85	6846.48	4660.27	-77.23	4659.7	0.33	4660.34	90.95	Manual
12529	89.88	89.56	6846.8	4757.25	-76.73	4756.7	0.33	4757.32	90.92	Manual

12627	89.64	89.87	6847.21	4855.24	-76.24	4854.7	0.4	4855.3	90.9	Manual
12725	89.28	89.63	6848.14	4953.22	-75.81	4952.69	0.44	4953.27	90.88	Manual
12822	89.98	89.83	6848.76	5050.21	-75.36	5049.69	0.75	5050.25	90.85	Manual
12919	89.84	89.97	6848.92	5147.2	-75.19	5146.69	0.2	5147.24	90.84	Manual
13017	89.67	89.95	6849.33	5245.19	-75.12	5244.69	0.17	5245.23	90.82	Manual
13115	89.67	89.68	6849.9	5343.18	-74.8	5342.69	0.28	5343.21	90.8	Manual
13214	89.49	90.45	6850.62	5442.17	-74.91	5441.68	0.8	5442.2	90.79	Manual
13312	89	90.28	6851.92	5540.16	-75.54	5539.67	0.53	5540.19	90.78	Manual
13410	88.96	90.55	6853.66	5638.15	-76.25	5637.65	0.28	5638.17	90.77	Manual
13506	90.27	89.5	6854.31	5734.14	-76.29	5733.65	1.75	5734.15	90.76	Manual
13602	89.88	89.71	6854.18	5830.12	-75.63	5829.64	0.46	5830.14	90.74	Manual
13701	90.09	89.64	6854.21	5929.11	-75.07	5928.64	0.22	5929.12	90.73	Manual
13895	90.42	89.72	6853.34	6123.08	-73.98	6122.64	0.18	6123.08	90.69	Manual
13990	90.54	89.42	6852.55	6218.06	-73.27	6217.63	0.34	6218.06	90.68	Manual
14087	90.08	89.66	6852.02	6315.04	-72.49	6314.63	0.53	6315.04	90.66	Manual
14183	90.1	90.2	6851.87	6411.03	-72.37	6410.63	0.56	6411.03	90.65	Manual
14282	90.26	90.22	6851.56	6510.03	-72.74	6509.63	0.16	6510.03	90.64	Manual
14377	90.08	90.58	6851.28	6605.03	-73.4	6604.62	0.42	6605.03	90.64	Manual
14475	90.31	89.99	6850.94	6703.03	-73.89	6702.62	0.65	6703.03	90.63	Manual
14572	89.94	90.24	6850.73	6800.02	-74.08	6799.62	0.46	6800.02	90.62	Manual
14668	89.82	90.78	6850.93	6896.02	-74.94	6895.61	0.58	6896.02	90.62	Manual
14707	90.03	90.09	6850.99	6935.02	-75.23	6934.61	1.85	6935.02	90.62	Manual
14742	90.03	90.09	6850.97	6970.02	-75.29	6969.61	0	6970.02	90.62	Manual

Xbolt GAMMA RAY
1in/100ft Measured Depth
Final Print
Recorded Mode

Company: PDC Energy INC.
Well: Hen 10N
Field Name: Wattenberg
Country Name: United States
State Name: Colorado
County Name: Weld

