

Xbolt GAMMA RAY

1in/100ft Measured Depth

Final Print

Recorded Mode



Company:	PDC Energy Inc	API Number:	05-123-51304
Well:	Steamboat 14N	Rig Name:	Patterson 272
Field Name:	Wattenberg	Rig Type:	Land rig
Country Name:	United States	Log Interval:	1676.00--15058.00(ft)
State Name:	Colorado	Depth Source:	Driller's Depth
County Name:	Weld	Log Measured From:	Drill Floor
Latitude:	40°15'54.792"N	Rig Floor above Ground Level:	28.50(ft)
Longitude:	104°45'45.216"W	Ground Level above Mean Sea Level:	4805.00 (ft)
Spud Date:	17-Feb-2023	Job Number:	0.1038679.58
Print Type:	Final Print	Northings:	1340316.84(ft)
Eastings:	3205790.63(ft)	Coordinate System:	Plane, Northern Zone, US Feet

Disclaimer

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SLB AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

Operational Run Summary

Notes

Run 1 (Bit Size: 8.5 in)

DateTime Log Started	20-Feb-2023 00:31:32	DateTime Log Finished	20-Feb-2023 10:43:39
Start Depth (ft)	1703	Stop Depth (ft)	2134
Mud Type	Oil Based Mud	Mud Density (lbm/gal)	10.4
Potassium (%)	0	Barite	No
GR Sensor Offset (ft)	23.9	Calibration Coefficient	0
DNI Sensor Offset (ft)	27.54		

Run 2 (Bit Size: 8.5 in)

DateTime Log Started	20-Feb-2023 11:21:21	DateTime Log Finished	23-Feb-2023 00:32:09
Start Depth (ft)	2134	Stop Depth (ft)	15058
Mud Type	Oil Based Mud	Mud Density (lbm/gal)	10.4
Potassium (%)	0	Barite	No
GR Sensor Offset (ft)	23.9	Calibration Coefficient	0

Log

Description: Xbolt GAMMA RAY

Format: XBOLT_PDC

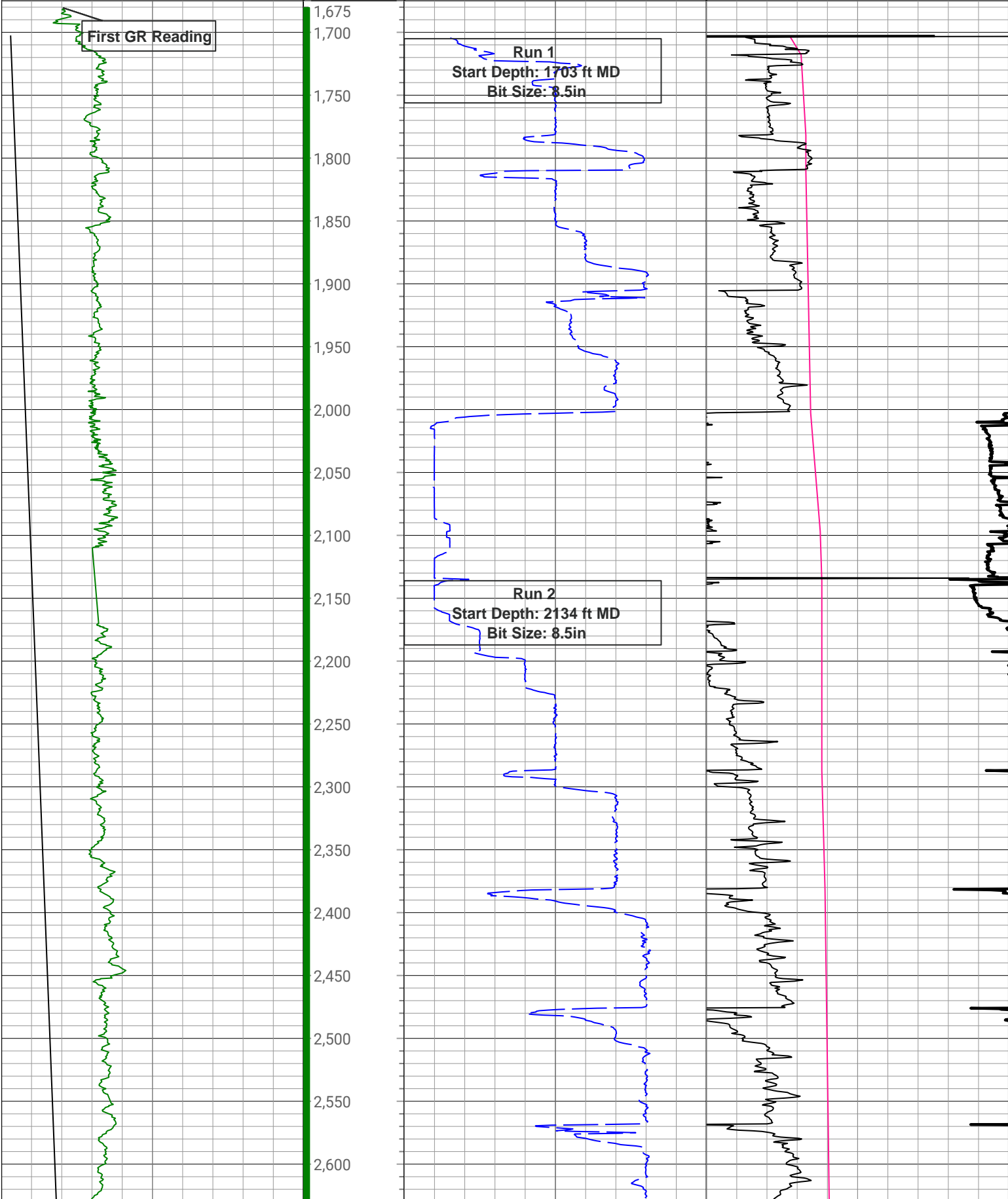
Index Scale: 1in/100ft

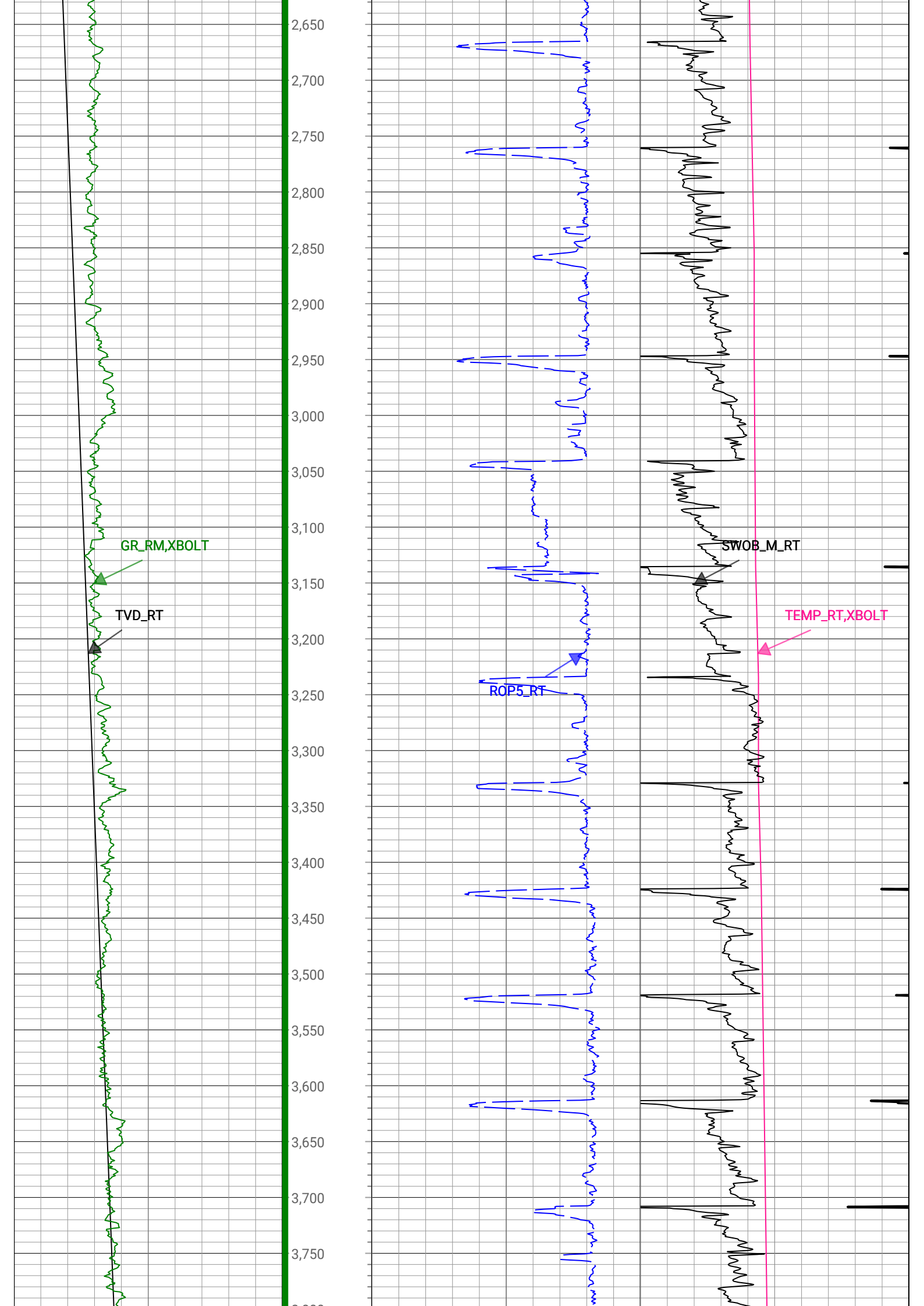
Index Unit: ft

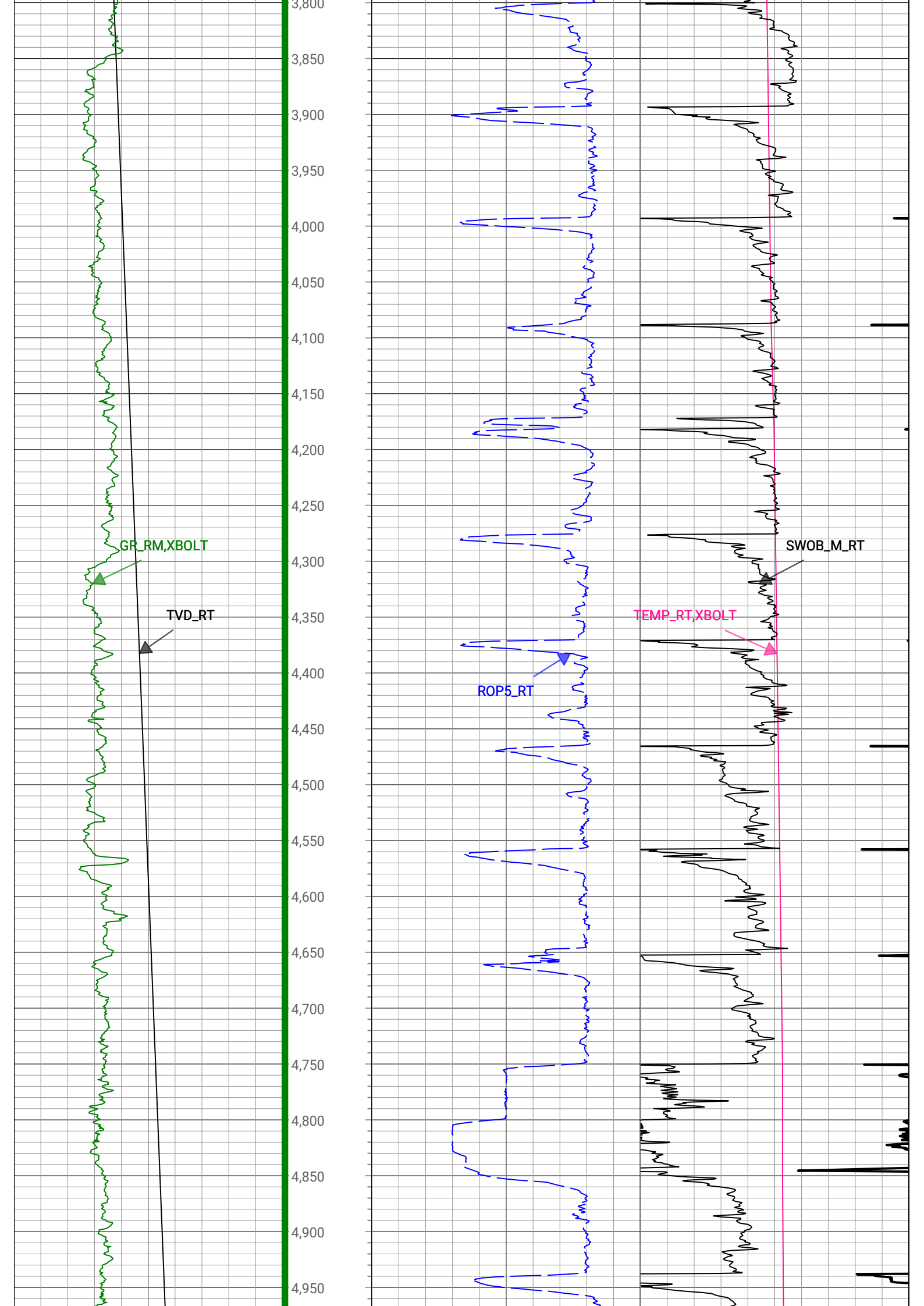
Index Type: Measured Depth

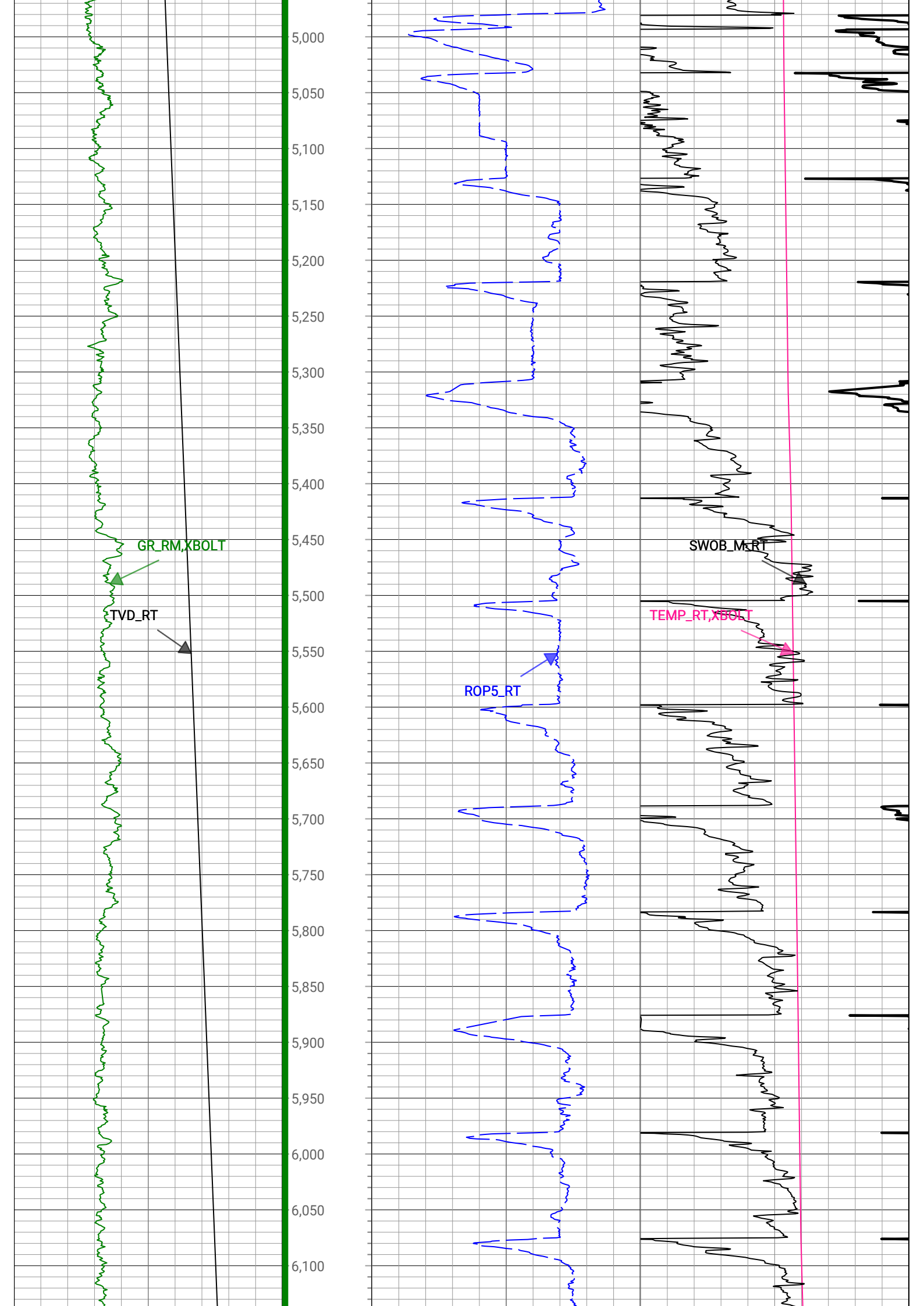
Creation Date: 06-Mar-2023

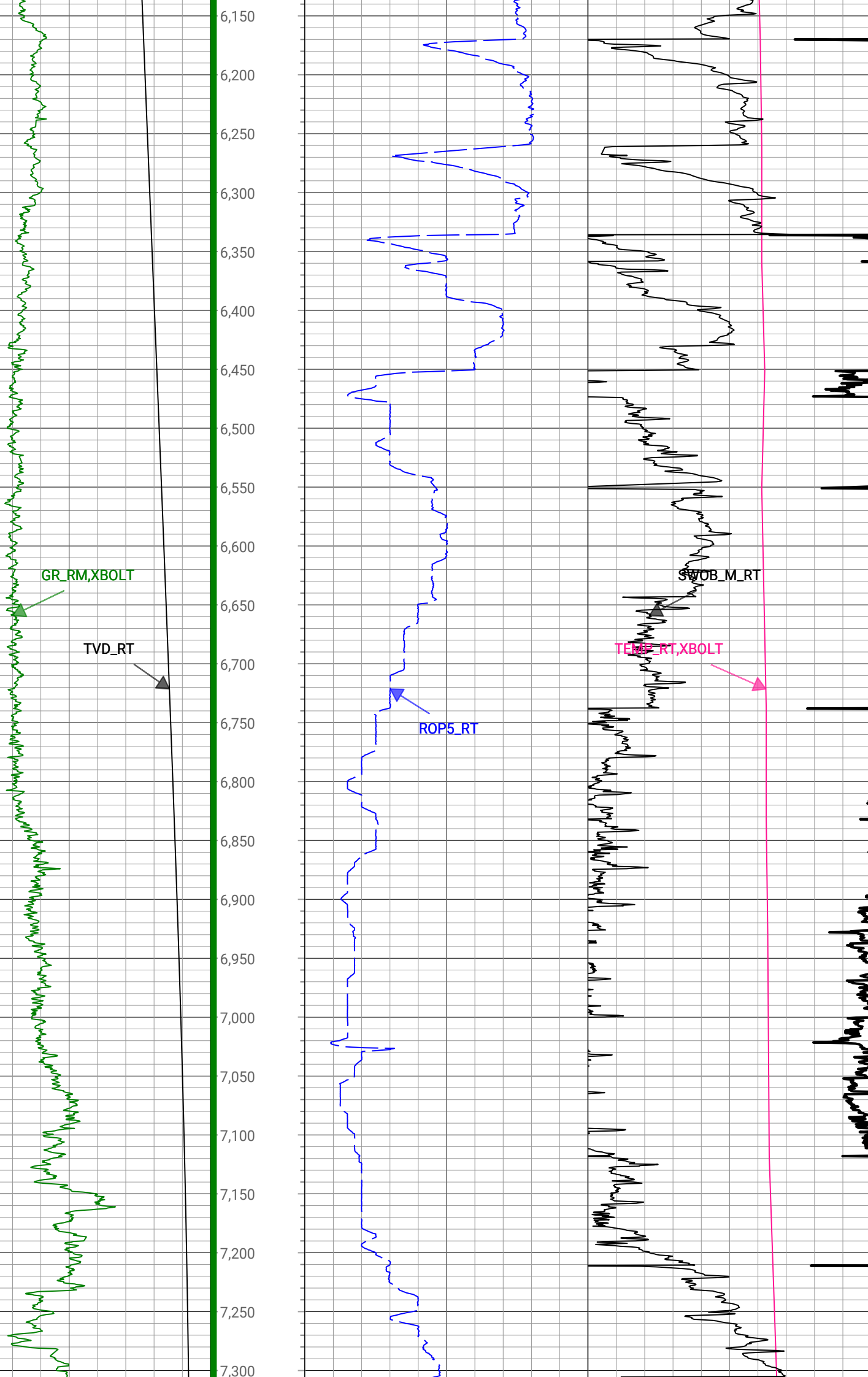
TVD_RT		Depth	ROP5_RT		TEMP_RT,XBOLT	
1,500	ft, Borehole 7,500		0	ft/h, Borehole 1,000	0	degF, Borehole 300
GR_RM,XBOLT		in : ft			SWOB_M_RT	
0	gAPI, Borehole 350		0		0	1000 lbm, Borehole 50

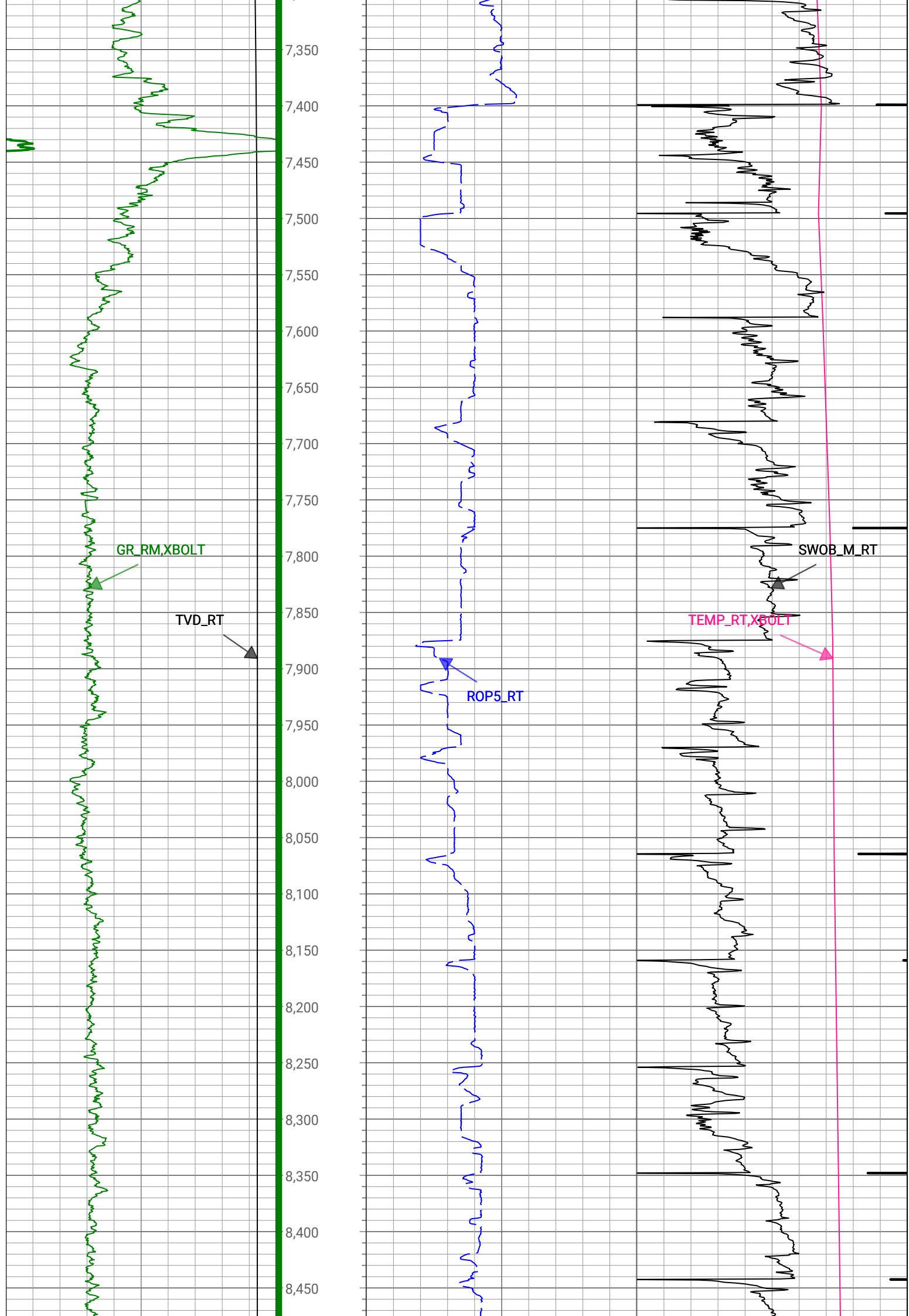


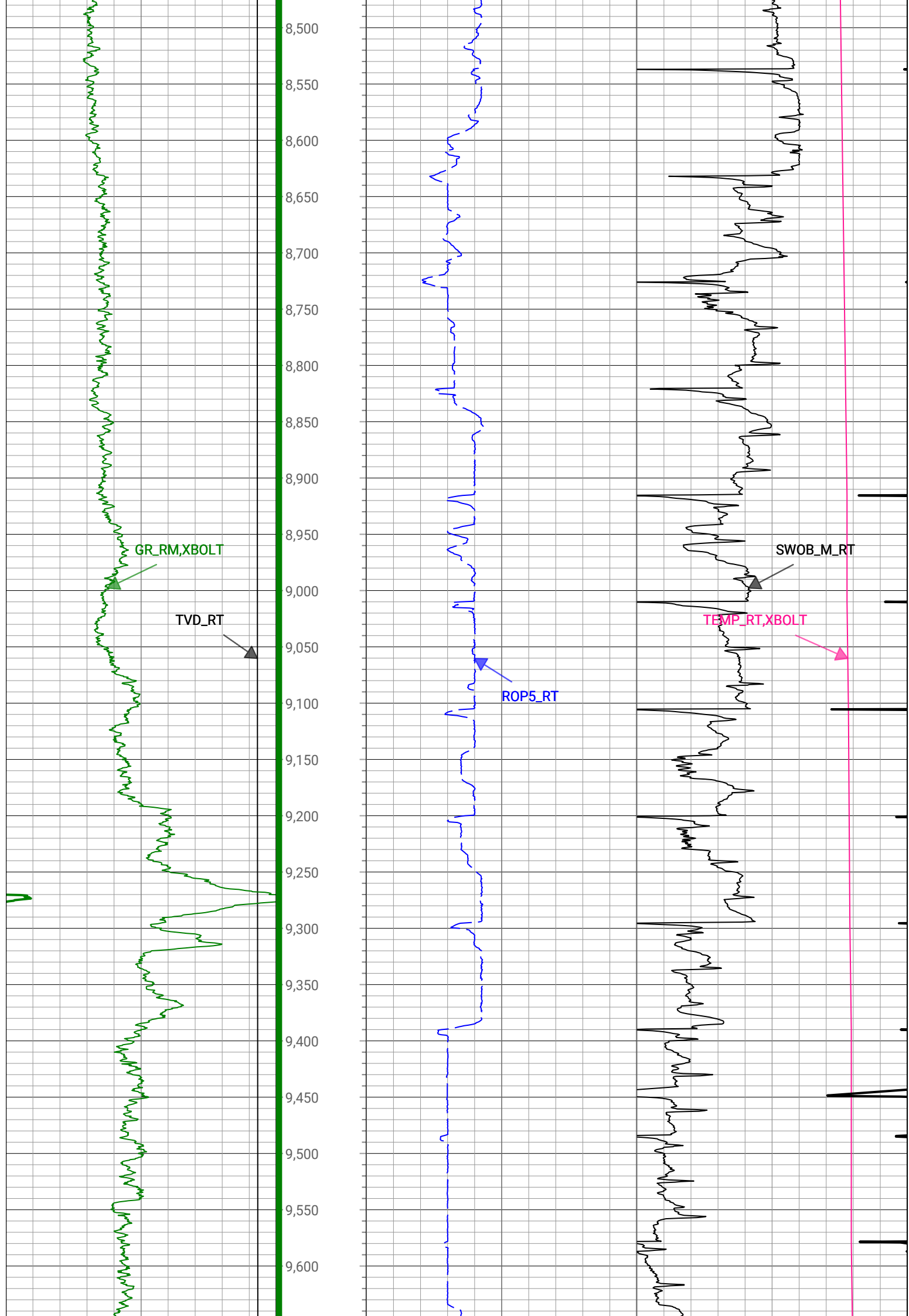


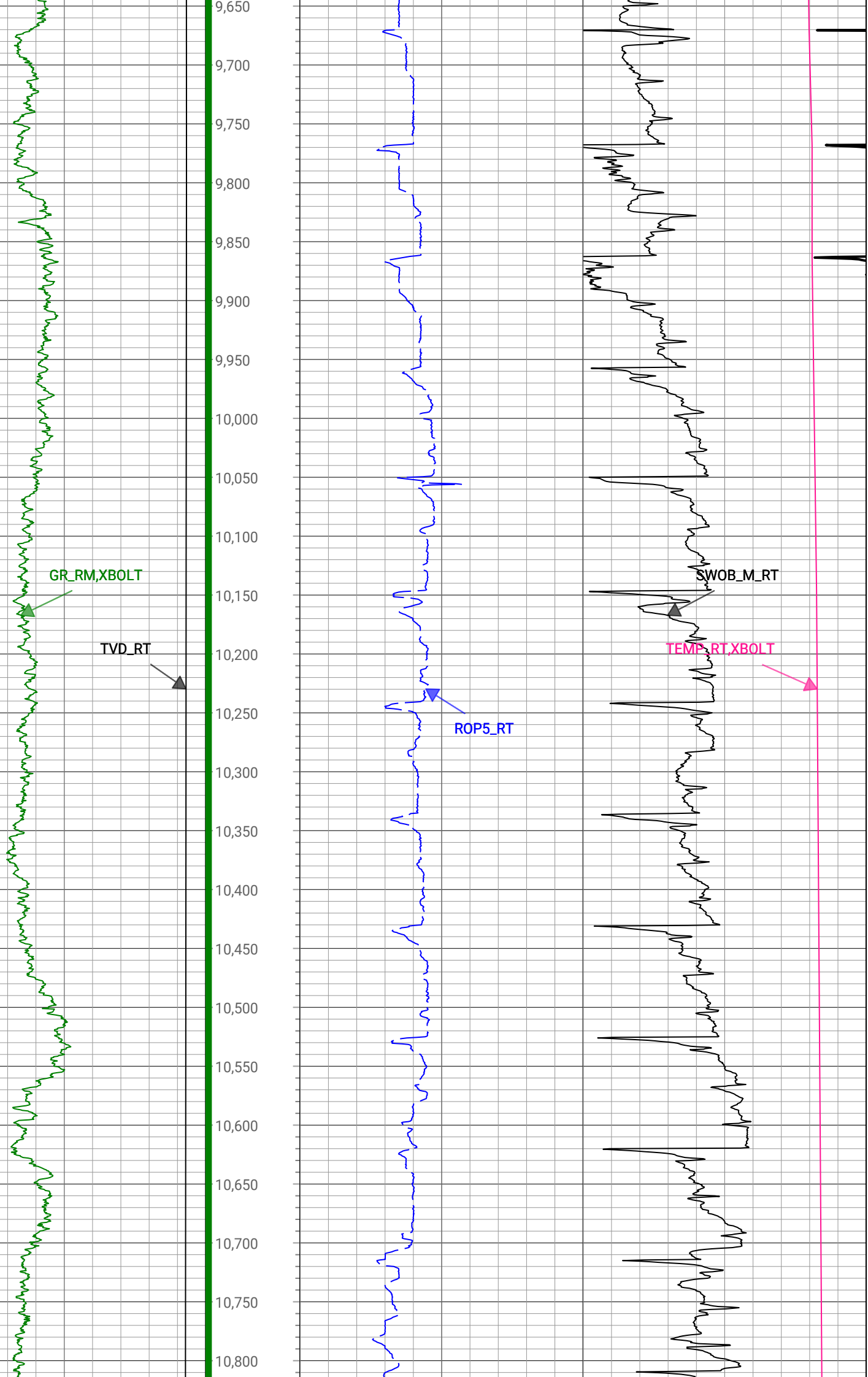


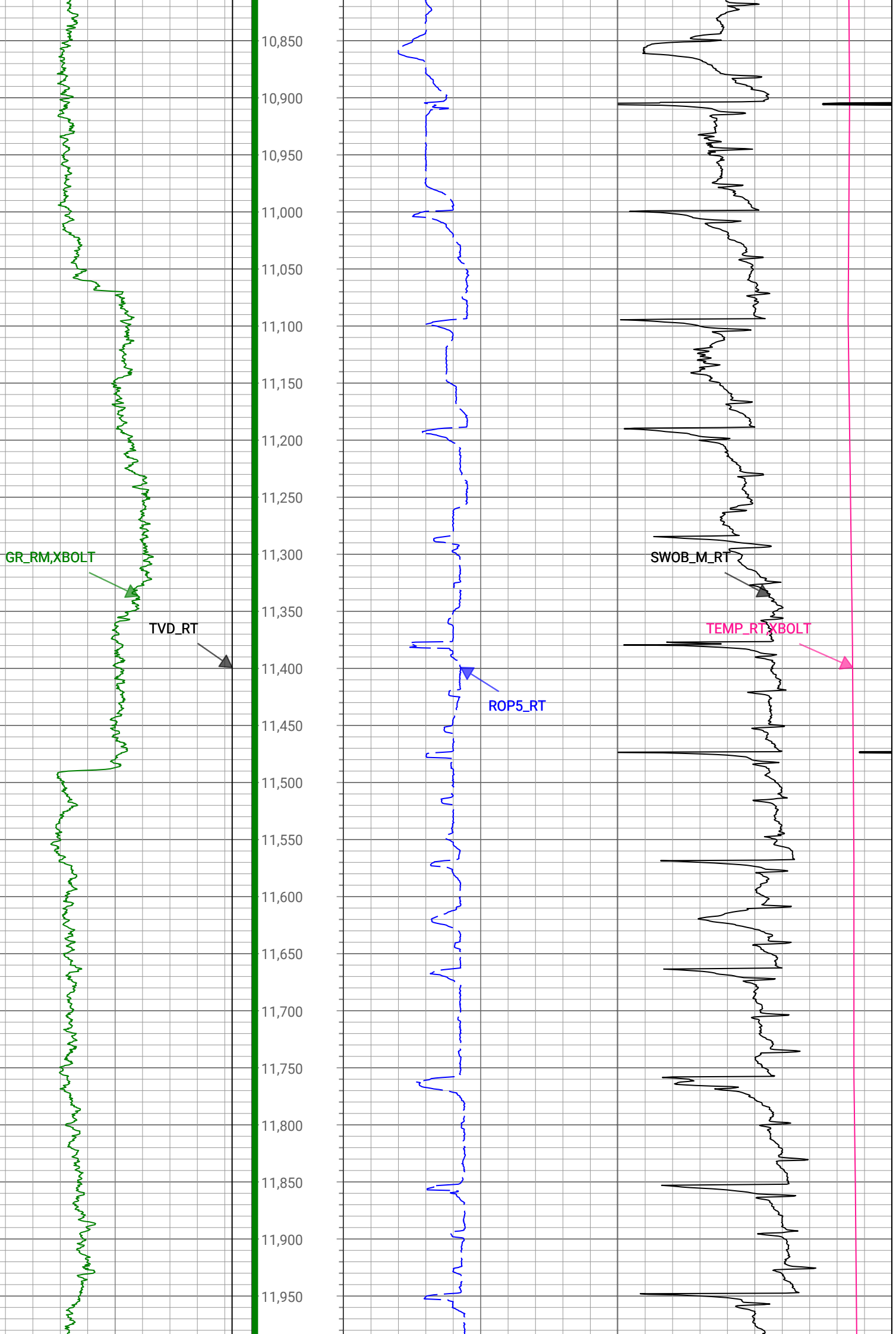


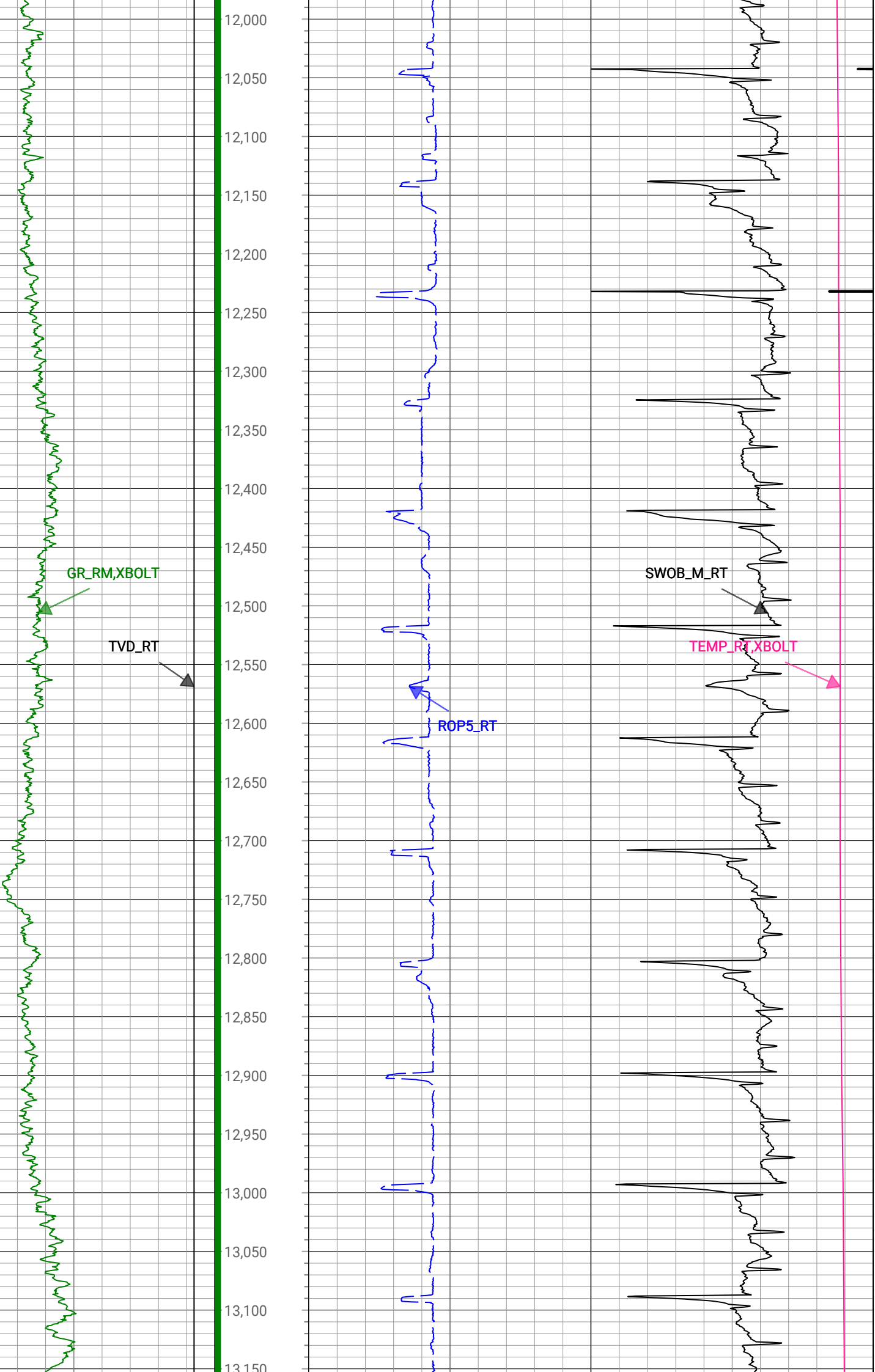


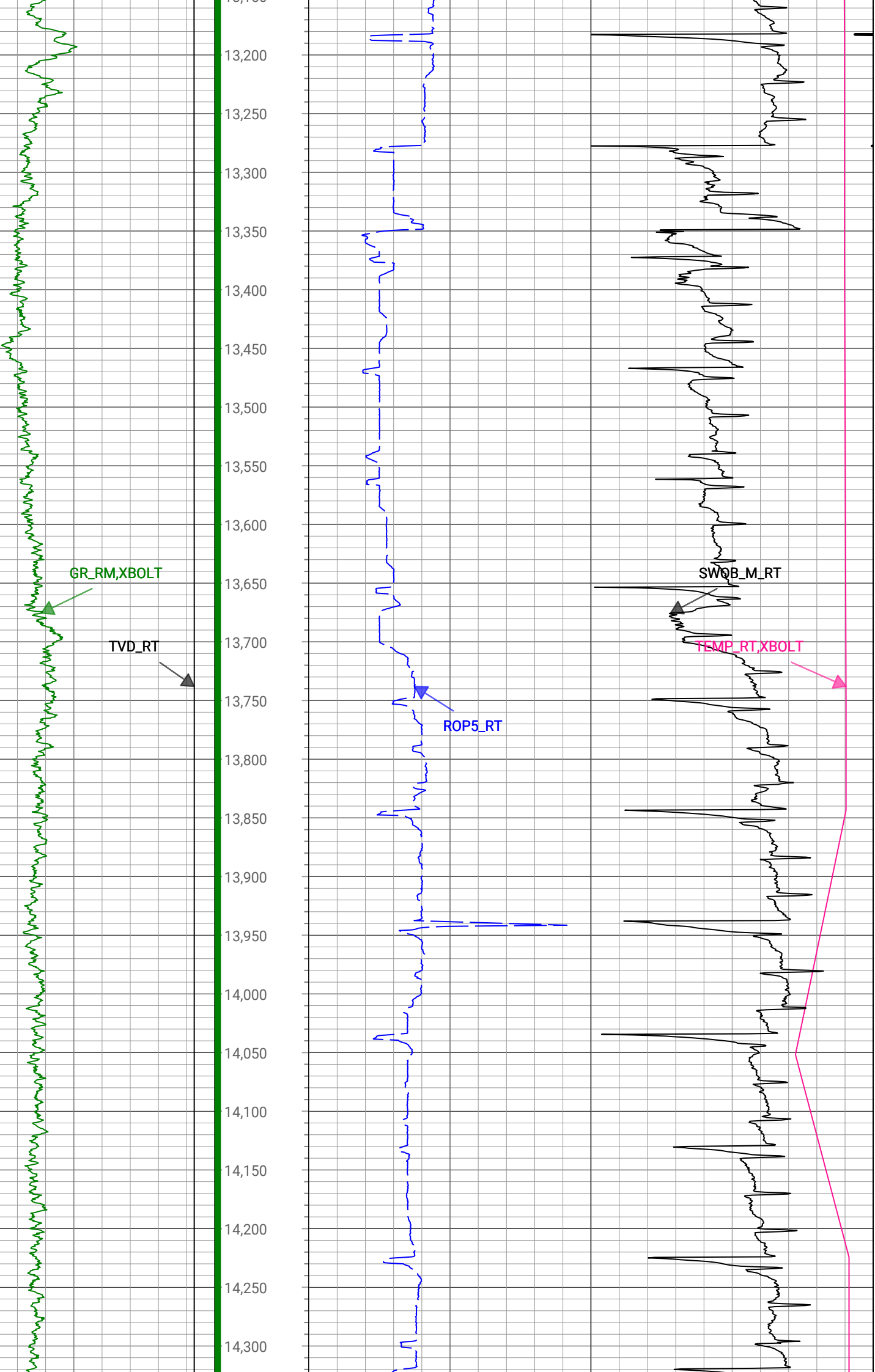


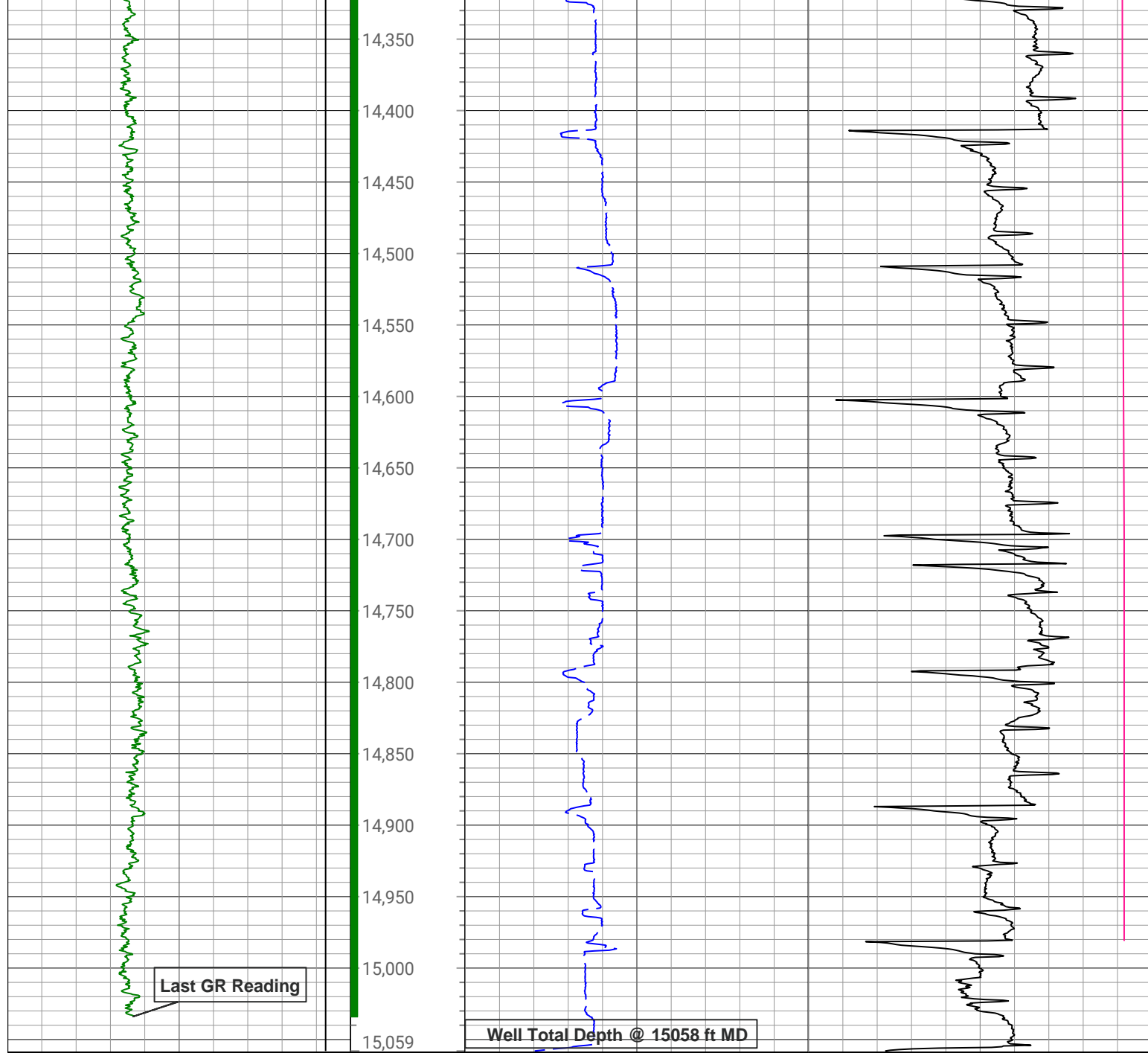












1,500	TVD_RT	7,500	Depth (ft)	0	ROP5_RT	1,000	0	TEMP_RT, XBOLT	300
ft, Borehole				ft/h, Borehole			degF, Borehole		
0	GR_RM, XBOLT	350					0	SWOB_M_RT	50
gAPI, Borehole						1000 lbm, Borehole			

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

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:	17-Feb-2023 17:00:00
Location B:	51584 (nT)	Location G:	999.098 (mgn)
Magnetic Dip:	66.48 (deg)	Magnetic Dec:	7.707 (deg)
Total Correction:	7.707		

D&I Inits - Run - 2										
Geomagnetic Model:			HDGM 2023				Geomagnetic Date:			16-Feb-2023 17:00:00
Location B:			51584 (nT)				Location G:			999.098 (mgn)
Magnetic Dip:			66.48 (deg)				Magnetic Dec:			7.707 (deg)
Total Correction:			7.707							
MD(ft)	Incl(deg)	Azim(deg)	TVD(ft)	V Sec(ft)	N/-S(ft)	E/-W(ft)	DLS (deg/100ft)	Closure Distance (ft)	Closure Azimuth (deg)	Tool Type
0	0	0	0	0.00	0	0	0.00			TIP
161.5	1.32	158.68	161.49	0.82	-1.73	0.68	0.82	1.86	158.68	MWD
253.5	0.35	30.89	253.48	1.41	-2.48	1.21	1.69	2.76	154.06	MWD
344.5	0.79	24.91	344.47	1.75	-1.67	1.61	0.49	2.32	136.02	MWD
461.5	1.06	10.5	461.46	2.13	0.12	2.15	0.3	2.15	86.7	MWD
548.5	1.06	228.99	548.45	1.65	0.39	1.69	2.3	1.73	77.08	MWD
633.5	2.81	229.34	633.4	-0.36	-1.49	-0.48	2.06	1.56	198.07	MWD
720.5	4.66	225.15	720.21	-4.14	-5.37	-4.61	2.15	7.08	220.64	MWD
810.5	7.12	224.25	809.73	-10.04	-11.94	-11.09	2.74	16.3	222.89	MWD
898.5	8.97	221.26	896.86	-17.57	-21.01	-19.42	2.15	28.61	222.76	MWD
988.5	10.64	222.14	985.54	-26.76	-32.44	-29.63	1.86	43.94	222.4	MWD
1076.5	10.82	222.14	1072	-36.68	-44.59	-40.62	0.2	60.32	222.33	MWD
1165.5	11.43	221.43	1159.33	-46.99	-57.4	-52.06	0.7	77.49	222.21	MWD
1254.5	11.34	220.38	1246.58	-57.32	-70.68	-63.56	0.25	95.05	221.97	MWD
1342.5	11.61	220.38	1332.82	-67.49	-84.01	-74.91	0.31	112.56	221.72	MWD
1431.5	12.4	223.19	1419.87	-78.61	-97.8	-87.25	1.1	131.06	221.74	MWD
1519.5	12.57	221.96	1505.79	-90.24	-111.81	-100.12	0.36	150.08	221.84	MWD
1606.5	12.13	222.31	1590.78	-101.51	-125.61	-112.6	0.51	168.69	221.87	MWD
1643.5	11.87	220.38	1626.97	-106.08	-131.38	-117.68	1.29	176.38	221.85	MWD
1785	11.53	220.14	1765.53	-122.69	-153.28	-136.23	0.24	205.07	221.63	Manual
1880	10.94	219.36	1858.71	-133.28	-167.51	-148.06	0.64	223.57	221.47	Manual
1975	10.21	218.4	1952.1	-143.03	-181.08	-159.01	0.79	240.98	221.29	Manual
2070	9.81	220.39	2045.65	-152.38	-193.84	-169.49	0.56	257.49	221.16	Manual
2164	12.06	221.99	2137.94	-162.96	-207.24	-181.25	2.42	275.31	221.17	Manual
2259	13.21	224.88	2230.64	-175.92	-222.31	-195.54	1.38	296.07	221.34	Manual
2354	12.83	220.78	2323.2	-189.09	-237.99	-210.09	1.05	317.45	221.44	Manual
2448	13.25	222.15	2414.77	-201.73	-253.88	-224.14	0.55	338.66	221.44	Manual
2543	12.8	220.57	2507.33	-214.46	-269.94	-238.29	0.6	360.07	221.44	Manual
2638	13.19	220.56	2599.9	-226.92	-286.17	-252.18	0.41	381.43	221.39	Manual
2733	12.92	220.86	2692.44	-239.49	-302.44	-266.18	0.29	402.89	221.35	Manual
2828	13.14	221.91	2784.99	-252.23	-318.51	-280.34	0.34	424.31	221.35	Manual
2922	12.96	224.66	2876.57	-265.41	-333.96	-294.89	0.69	445.51	221.44	Manual
3017	12.98	222.02	2969.14	-278.66	-349.46	-309.51	0.62	466.82	221.53	Manual
3112	12.99	222.12	3061.72	-291.57	-365.3	-323.82	0.03	488.17	221.55	Manual
3206	12.03	221.25	3153.48	-303.77	-380.51	-337.36	1.04	508.53	221.56	Manual
3301	12.39	224.05	3246.33	-316.08	-395.27	-350.98	0.73	528.61	221.6	Manual
3396	11.91	222.44	3339.21	-328.49	-409.83	-364.68	0.62	548.59	221.66	Manual
3491	12.26	224.38	3432.1	-340.88	-424.28	-378.35	0.56	568.47	221.72	Manual
3586	11.95	224.7	3524.99	-353.6	-438.48	-392.32	0.33	588.37	221.82	Manual
3680	12.05	223.33	3616.93	-365.93	-452.53	-405.9	0.32	607.9	221.89	Manual
3775	12.32	225	3709.79	-378.63	-466.91	-419.87	0.47	627.93	221.96	Manual
3870	12.39	224.3	3802.59	-391.63	-481.37	-434.15	0.17	648.24	222.05	Manual

3964	11.18	218.03	3894.62	-403.02	-495.77	-446.81	1.87	667.41	222.03	Manual
4059	12.1	221.04	3987.66	-413.93	-510.54	-459.03	1.16	686.55	221.96	Manual
4154	12.26	225.58	4080.52	-426.38	-525.11	-472.77	1.02	706.57	222	Manual
4248	12.19	225.15	4172.39	-439.31	-539.09	-486.93	0.12	726.44	222.09	Manual
4343	10.94	223.06	4265.46	-451.36	-552.75	-500.2	1.39	745.47	222.14	Manual
4438	11.02	223.92	4358.72	-462.65	-565.88	-512.65	0.19	763.56	222.17	Manual
4532	12.25	225.81	4450.79	-474.85	-579.3	-526.03	1.37	782.5	222.24	Manual
4627	11.74	224.7	4543.72	-487.64	-593.19	-540.06	0.59	802.21	222.32	Manual
4722	11.8	221.88	4636.72	-499.67	-607.3	-553.34	0.61	821.58	222.34	Manual
4816	11.5	218.51	4728.78	-510.65	-621.79	-565.59	0.79	840.54	222.29	Manual
4910	9.65	212.31	4821.19	-519.47	-635.78	-575.64	2.31	857.66	222.16	Manual
5005	8.8	210.27	4914.96	-526.25	-648.78	-583.56	0.96	872.62	221.97	Manual
5100	7.87	206.68	5008.95	-531.78	-660.87	-590.14	1.12	886.01	221.76	Manual
5194	4.06	193.23	5102.43	-534.66	-669.87	-593.79	4.29	895.16	221.55	Manual
5290	1.25	183.54	5198.32	-535.13	-674.22	-594.64	2.95	898.98	221.41	Manual
5385	0.07	268.78	5293.31	-535.16	-675.25	-594.76	1.31	899.84	221.37	Manual
5479	0.12	135.13	5387.31	-535.14	-675.33	-594.75	0.19	899.88	221.37	Manual
5574	0.02	282.16	5482.31	-535.08	-675.39	-594.69	0.14	899.9	221.36	Manual
5669	0.09	218.77	5577.31	-535.14	-675.45	-594.76	0.09	899.98	221.37	Manual
5764	0.13	157.73	5672.31	-535.13	-675.61	-594.76	0.12	900.1	221.36	Manual
5858	0.1	332.45	5766.31	-535.13	-675.63	-594.76	0.24	900.12	221.36	Manual
5953	0.12	111.93	5861.31	-535.08	-675.6	-594.7	0.22	900.06	221.36	Manual
6048	0.04	210.51	5956.31	-535	-675.66	-594.63	0.14	900.06	221.35	Manual
6142	0.01	45.79	6050.31	-535	-675.68	-594.64	0.05	900.08	221.35	Manual
6237	0.03	339.21	6145.31	-535.01	-675.65	-594.64	0.03	900.06	221.35	Manual
6332	0.06	286.03	6240.31	-535.07	-675.62	-594.7	0.05	900.07	221.36	Manual
6426	0.11	281.04	6334.31	-535.21	-675.59	-594.84	0.05	900.14	221.36	Manual
6521	5.85	107.5	6429.15	-530.57	-677.03	-590.3	6.27	898.23	221.09	Manual
6616	12.42	99.75	6522.9	-515.65	-680.22	-575.6	7.02	891.07	220.24	Manual
6711	17.08	96.75	6614.74	-491.51	-683.59	-551.66	4.97	878.42	218.9	Manual
6806	23.94	94.09	6703.67	-458.26	-686.61	-518.54	7.29	860.42	217.06	Manual
6901	32	91.39	6787.51	-413.78	-688.59	-474.08	8.59	836.01	214.55	Manual
6995	41.51	93.28	6862.74	-357.66	-690.99	-417.95	10.19	807.56	211.17	Manual
7090	50.75	92.84	6928.5	-289.28	-694.62	-349.64	9.73	777.65	206.72	Manual
7184	60.37	88.95	6981.61	-212.07	-695.68	-272.24	10.79	747.05	201.37	Manual
7279	69.06	89.94	7022.15	-126.64	-694.87	-186.42	9.2	719.44	195.02	Manual
7374	77.5	91.36	7049.46	-35.98	-695.93	-95.53	9	702.45	187.82	Manual
7468	81.56	92.44	7066.54	56.31	-699	-3.17	4.46	699	180.26	Manual
7563	86.34	91.3	7076.55	150.62	-702.07	91.22	5.17	707.98	172.6	Manual
7657	89.24	91.04	7080.17	244.34	-703.99	185.12	3.1	727.93	165.27	Manual
7752	90.22	92.64	7080.62	339.2	-707.04	280.07	1.97	760.49	158.39	Manual
7847	89.78	87.82	7080.62	433.86	-707.42	375.04	5.09	800.69	152.07	Manual
7942	90.25	89.93	7080.6	528.33	-705.56	470.02	2.28	847.78	146.33	Manual
8036	90.61	90.12	7079.89	621.99	-705.6	564.01	0.43	903.32	141.36	Manual
8225	90.57	89.93	7077.94	810.31	-705.68	753	0.1	1031.99	133.14	Manual
8320	89.5	90.22	7077.89	904.97	-705.81	848	1.17	1103.3	129.77	Manual
8415	89.77	90.16	7078.49	999.65	-706.12	943	0.29	1178.07	126.83	Manual
8509	89.81	89.9	7078.84	1093.31	-706.17	1037	0.28	1254.61	124.25	Manual
8604	90.07	88.5	7078.94	1187.84	-704.84	1131.99	1.5	1333.49	121.91	Manual
8698	90.62	89.76	7078.37	1281.37	-703.42	1225.97	1.46	1413.44	119.85	Manual

8793	89.34	90.18	7078.4	1376.02	-703.37	1320.97	1.42	1496.56	118.03	Manual
8888	89.65	90.16	7079.24	1470.69	-703.65	1415.97	0.33	1581.16	116.42	Manual
8983	88.97	90.15	7080.38	1565.36	-703.91	1510.96	0.72	1666.88	114.98	Manual
9077	89.69	90.08	7081.48	1659.03	-704.09	1604.95	0.77	1752.6	113.69	Manual
9172	89.5	90.32	7082.15	1753.71	-704.43	1699.95	0.32	1840.12	112.51	Manual
9267	88.6	89.93	7083.73	1848.37	-704.63	1794.93	1.03	1928.29	111.43	Manual
9362	89.03	89.92	7085.69	1942.99	-704.51	1889.91	0.45	2016.95	110.44	Manual
9551	89.25	89.68	7088.53	2131.23	-703.85	2078.89	0.17	2194.81	108.7	Manual
9645	89.36	89.85	7089.67	2224.85	-703.46	2172.88	0.22	2283.92	107.94	Manual
9740	89.19	89.91	7090.87	2319.48	-703.26	2267.87	0.19	2374.41	107.23	Manual
9834	91.3	89.41	7090.47	2413.08	-702.71	2361.87	2.31	2464.18	106.57	Manual
9929	91.37	88.91	7088.26	2507.58	-701.31	2456.83	0.53	2554.97	105.93	Manual
10024	91.41	89.19	7085.95	2602.06	-699.74	2551.79	0.3	2645.99	105.33	Manual
10119	91.21	89.12	7083.78	2696.57	-698.34	2646.75	0.22	2737.33	104.78	Manual
10213	90.9	89.37	7082.05	2790.1	-697.1	2740.73	0.42	2827.99	104.27	Manual
10308	90.86	89.25	7080.59	2884.64	-695.96	2835.71	0.13	2919.86	103.79	Manual
10403	91.27	89.18	7078.83	2979.16	-694.66	2930.68	0.44	3011.89	103.33	Manual
10498	91.06	89.2	7076.89	3073.67	-693.31	3025.66	0.22	3104.07	102.91	Manual
10687	91.55	88.57	7072.59	3261.58	-689.64	3214.57	0.42	3287.71	102.11	Manual
10877	91.07	88.82	7068.25	3450.43	-685.31	3404.47	0.28	3472.76	101.38	Manual
11066	91.2	89.17	7064.5	3638.39	-682	3593.4	0.2	3657.55	100.75	Manual
11161	90.34	89.72	7063.23	3732.96	-681.08	3688.39	1.07	3750.74	100.46	Manual
11256	90.26	90.1	7062.73	3827.6	-680.93	3783.39	0.41	3844.18	100.2	Manual
11351	90.01	89.75	7062.5	3922.24	-680.8	3878.39	0.45	3937.69	99.96	Manual
11446	90.24	89.7	7062.3	4016.86	-680.35	3973.39	0.25	4031.21	99.72	Manual
11541	90.43	89.64	7061.74	4111.46	-679.8	4068.38	0.21	4124.79	99.49	Manual
11635	90.15	90.11	7061.27	4205.1	-679.59	4162.38	0.58	4217.49	99.27	Manual
11730	90.59	89.85	7060.65	4299.76	-679.56	4257.38	0.54	4311.27	99.07	Manual
11825	89.97	89.89	7060.19	4394.39	-679.35	4352.38	0.65	4405.08	98.87	Manual
11920	90.34	89.36	7059.93	4488.99	-678.72	4447.37	0.68	4498.87	98.68	Manual
12109	90.29	89.83	7058.89	4677.18	-677.39	4636.37	0.25	4685.59	98.31	Manual
12204	90.27	89.17	7058.43	4771.76	-676.56	4731.36	0.7	4779.49	98.14	Manual
12394	90.14	90.1	7057.75	4960.96	-675.35	4921.35	0.49	4967.48	97.81	Manual
12489	90.6	89.44	7057.13	5055.58	-674.97	5016.35	0.85	5061.56	97.66	Manual
12584	90.25	90.02	7056.43	5150.2	-674.52	5111.35	0.71	5155.66	97.52	Manual
12679	89.91	89.69	7056.3	5244.83	-674.28	5206.34	0.5	5249.83	97.38	Manual
12774	89.4	89.71	7056.87	5339.44	-673.78	5301.34	0.54	5343.99	97.24	Manual
12868	90.03	89.8	7057.34	5433.06	-673.38	5395.34	0.68	5437.2	97.11	Manual
12963	90.22	89.55	7057.13	5527.67	-672.84	5490.34	0.33	5531.41	96.99	Manual
13058	90.07	90.09	7056.89	5622.3	-672.54	5585.34	0.59	5625.68	96.87	Manual
13153	89.71	89.98	7057.07	5716.96	-672.6	5680.34	0.4	5720.02	96.75	Manual
13249	89.87	89.65	7057.42	5812.59	-672.29	5776.33	0.38	5815.33	96.64	Manual
13343	90.1	89.29	7057.45	5906.17	-671.42	5870.33	0.45	5908.6	96.52	Manual
13438	89.36	89.1	7057.9	6000.7	-670.09	5965.32	0.8	6002.84	96.41	Manual
13627	88.92	89.14	7060.73	6188.72	-667.18	6154.27	0.23	6190.33	96.19	Manual
13722	90.13	88.96	7061.52	6283.23	-665.61	6249.26	1.29	6284.6	96.08	Manual
13817	89.9	89.37	7061.5	6377.75	-664.22	6344.25	0.49	6378.92	95.98	Manual
13912	90.43	88.82	7061.22	6472.27	-662.72	6439.23	0.8	6473.25	95.88	Manual
14101	90.08	89.13	7060.38	6660.26	-659.34	6628.2	0.25	6660.91	95.68	Manual
14196	89.97	89.11	7060.34	6754.78	-657.88	6723.19	0.12	6755.3	95.59	Manual

14290	89.93	89.29	7060.42	6848.32	-656.57	6817.18	0.2	6848.72	95.5	Manual
14385	89.9	89.47	7060.56	6942.88	-655.54	6912.17	0.19	6943.19	95.42	Manual
14479	90.18	89.14	7060.5	7036.44	-654.4	7006.17	0.46	7036.66	95.34	Manual
14574	89.99	89.21	7060.36	7130.97	-653.04	7101.16	0.21	7131.12	95.25	Manual
14669	89.78	89.42	7060.55	7225.52	-651.9	7196.15	0.31	7225.62	95.18	Manual
14764	90.06	89.04	7060.68	7320.06	-650.62	7291.14	0.5	7320.11	95.1	Manual
14859	90.25	89.18	7060.42	7414.58	-649.15	7386.13	0.25	7414.6	95.02	Manual
14954	89.8	89.28	7060.38	7509.12	-647.87	7481.12	0.49	7509.12	94.95	Manual
15029	89.77	89.3	7060.66	7583.76	-646.94	7556.11	0.05	7583.76	94.89	Manual
15058	89.77	89.3	7060.78	7612.62	-646.59	7585.11	0	7612.62	94.87	Manual

Company: PDC Energy Inc

Well: Steamboat 14N

Field Name: Wattenberg

Country Name: United States

State Name: Colorado

County Name: Weld



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