

Company: PDC Energy Inc		Well: Pharaoh 4N		Field Name: Wattenebrg		Country Name: United States		State Name: Colorado		County Name: Weld	
<div><div>XEM GAMMA RAY</div><div>1in/100ft Measured Depth</div><div>Final Print</div><div>Recorded Mode</div></div> <div>Schlumberger</div>											
Company: PDC Energy Inc											
Well: Pharaoh 4N											
Field Name: Wattenebrg											
Country Name: United States											
State Name: Colorado											
County Name: Weld											
Latitude: 40°21'11.747"N				API Number: 05-123-48832							
Longitude: 104°29'23.701"W				Rig Name: Ensign 142							
Spud Date: 24-Oct-2020				Rig Type: Land							
Log Interval: 1655.86--16828.99(ft)				Job Number: 20CCCO0560							
Depth Source: Driller's Depth				Print Type: Final Print							
Log Measured From: Drill Floor				Northing: 1373137.28(ft)							
Drill Floor Elevation: 4621 (ft)				Easting: 3281507.27(ft)							
Ground Level Elevation: 4593(ft)				Coordinate System: NAD83 Colorado State Plane, Northern Zone, US Feet							
Permanent Datum: Sea Level											

Disclaimer
<p>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 SCHLUMBERGER 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.</p>

Operational Run Summary			
Notes			
Run 1 (Bit Size: 8.5 in)			
DateTime Log Started	10-Jan-2021 02:38:21	DateTime Log Finished	13-Jan-2021 00:46:22
Start Depth (ft)	1680	Stop Depth (ft)	16829
Mud Type	Oil Based Mud	Mud Density (lbm/gal)	10.2
Potassium (%)	0	Barite	Yes
GR Sensor Offset (ft)	24.57	Calibration Coefficient	0.52
DNI Sensor Offset (ft)	19.98		

Log										
Description: XEM GAMMA RAY			Format: XEM_GR_WOB_PDC		Index Scale: 1in/100ft		Index Unit: ft		Index Type: Measured Depth	
Creation Date: 14-Jan-2021										
TVD_RT			Depth 1 : 100	ROP5_RT			ZTMP_RT,XEM			
1,500	ft, Borehole	7,500		0	ft/h, Borehole	1,000	0	degF, Borehole	300	

GR\_RT,XEM

in : ft

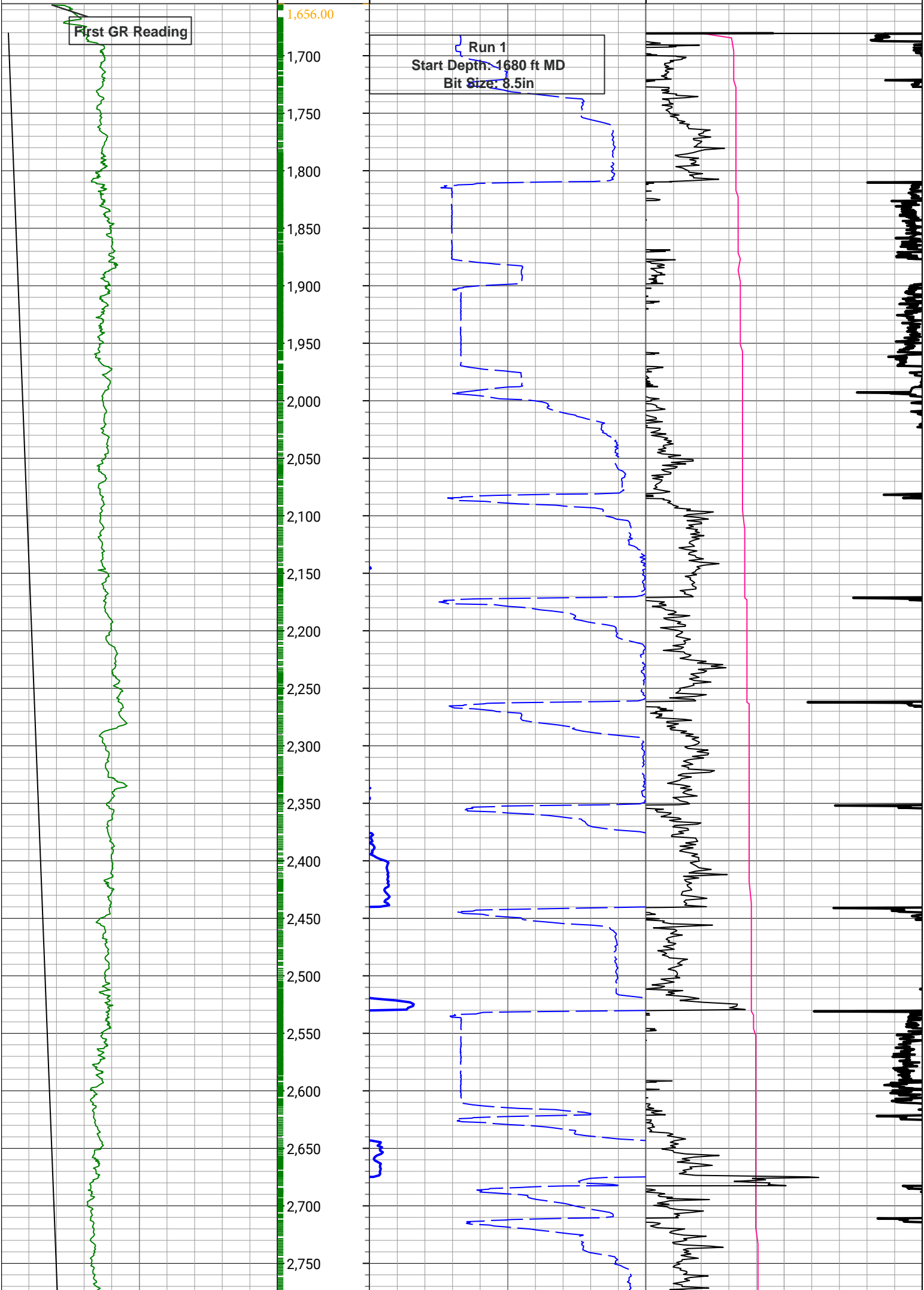
SWOB\_RT

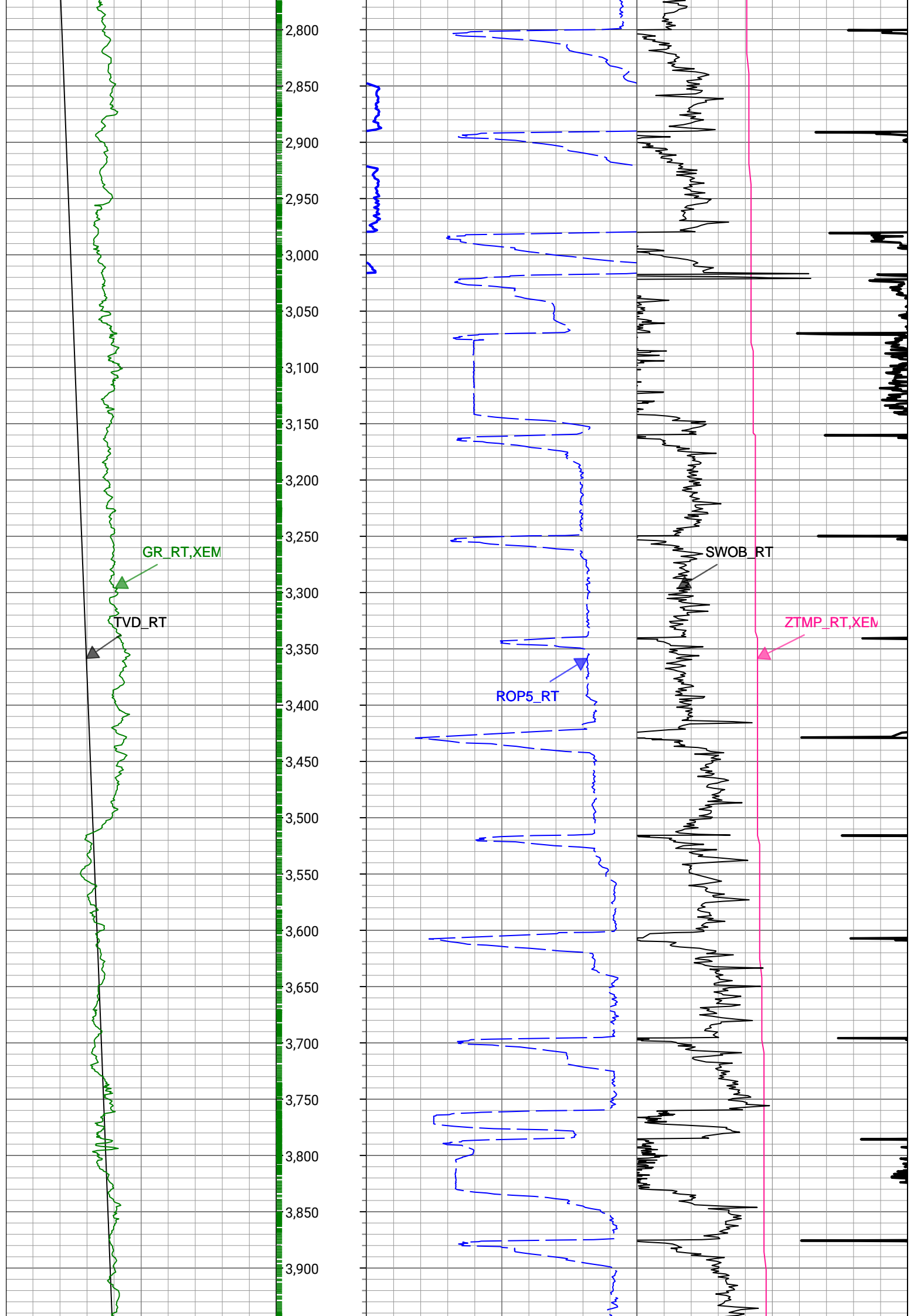
0 gAPI, Borehole 300

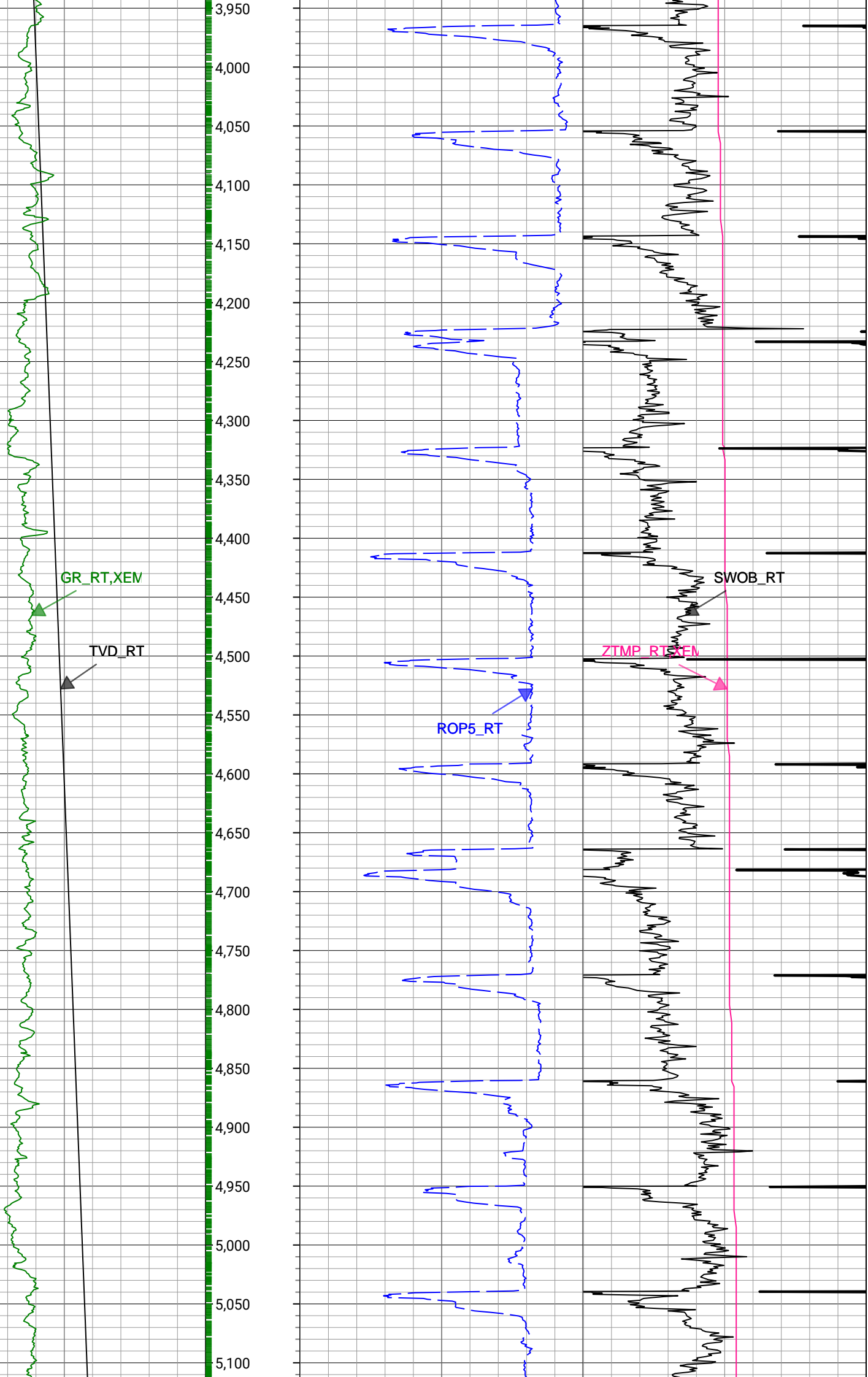
0 1000 lbf, Borehole 50

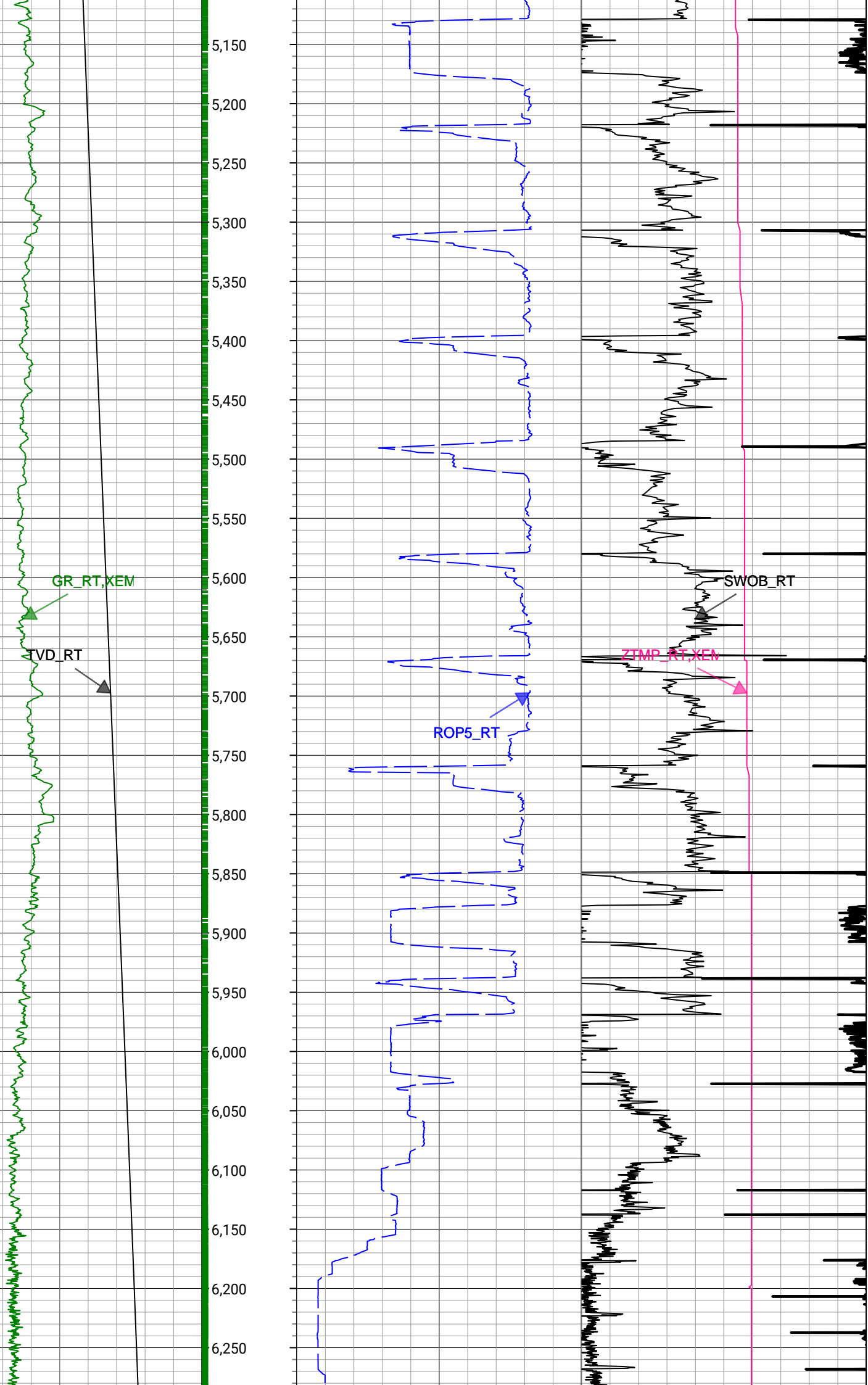
First GR Reading

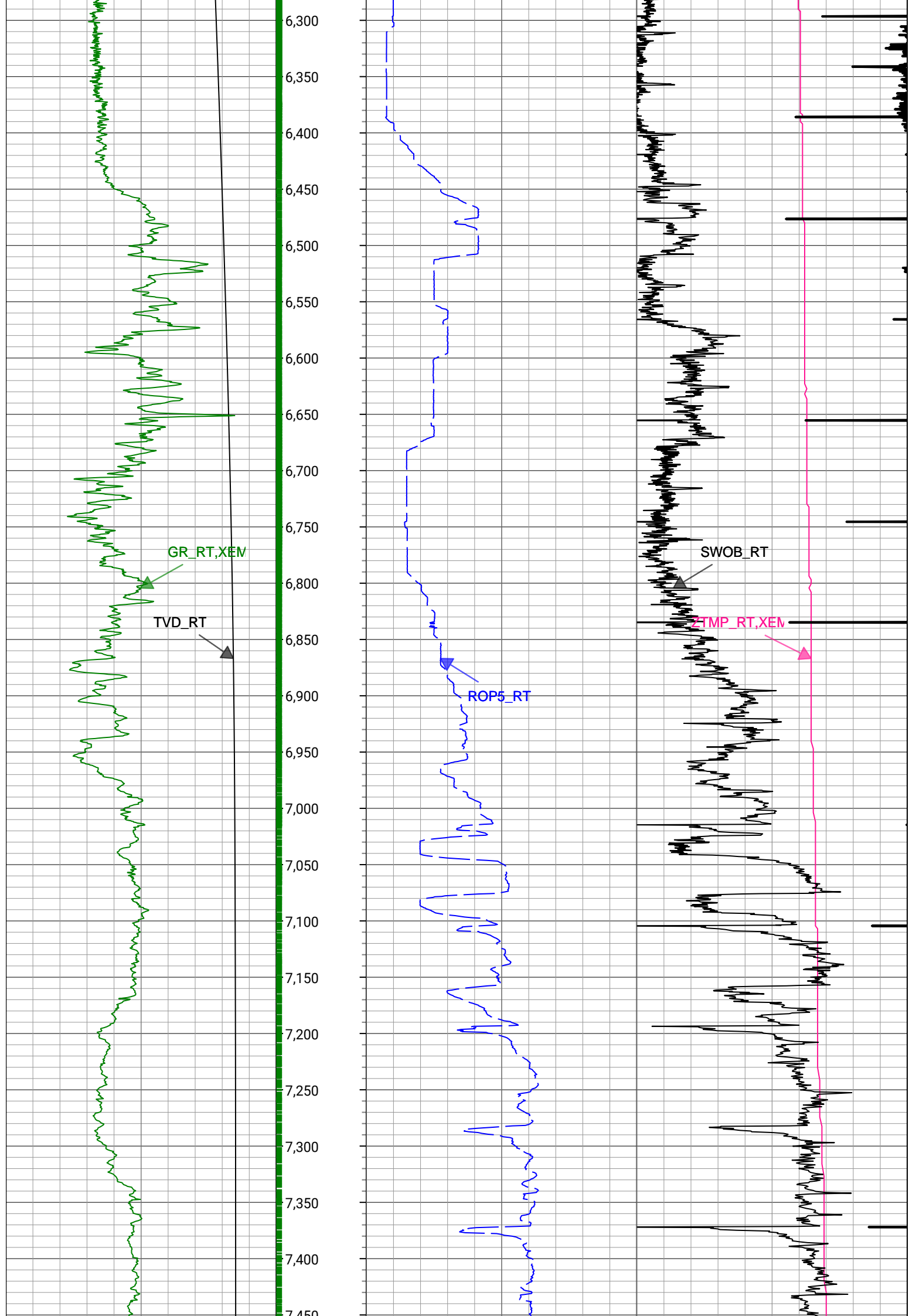
Run 1  
Start Depth: 1680 ft MD  
Bit Size: 8.5in

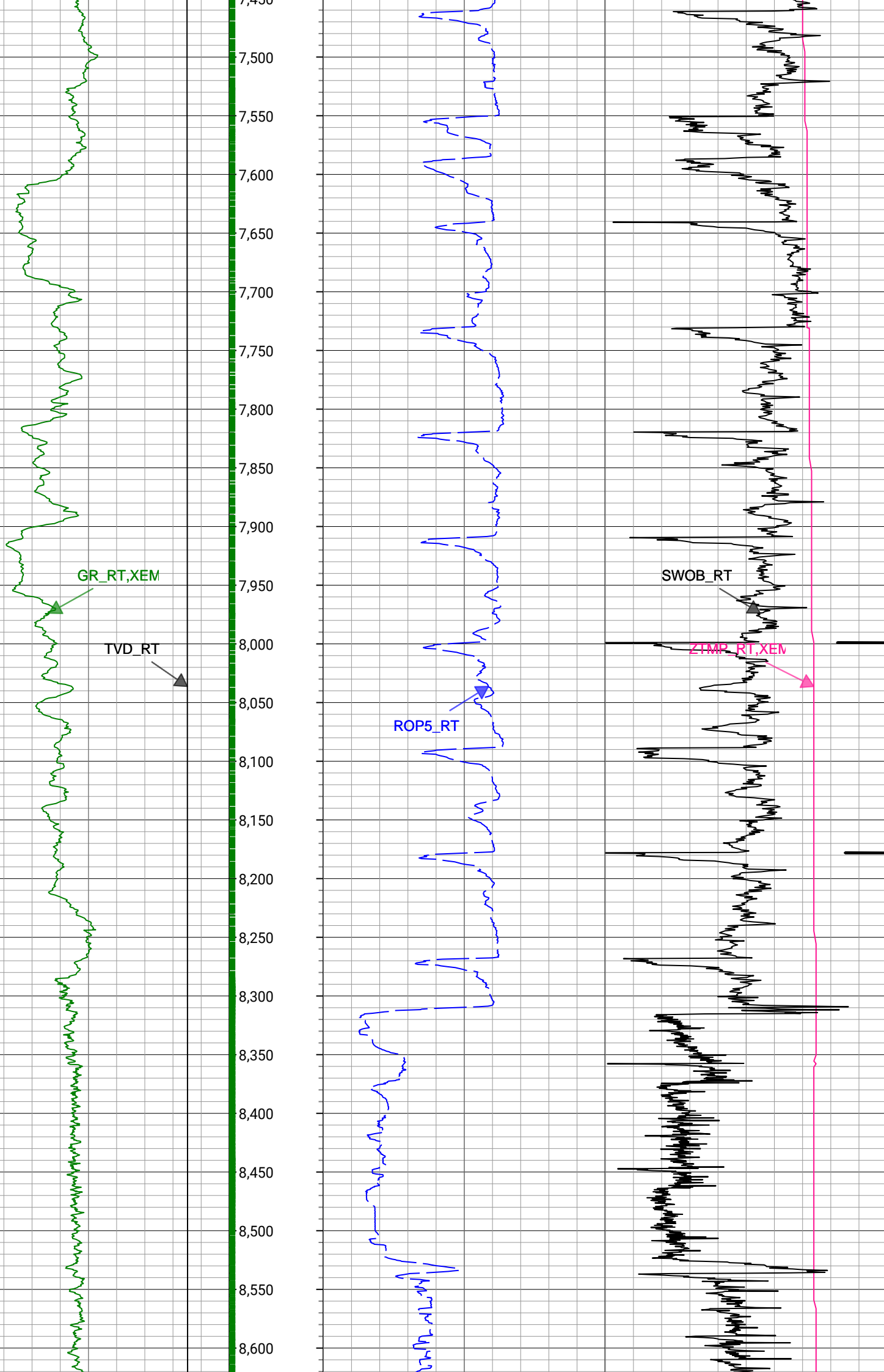


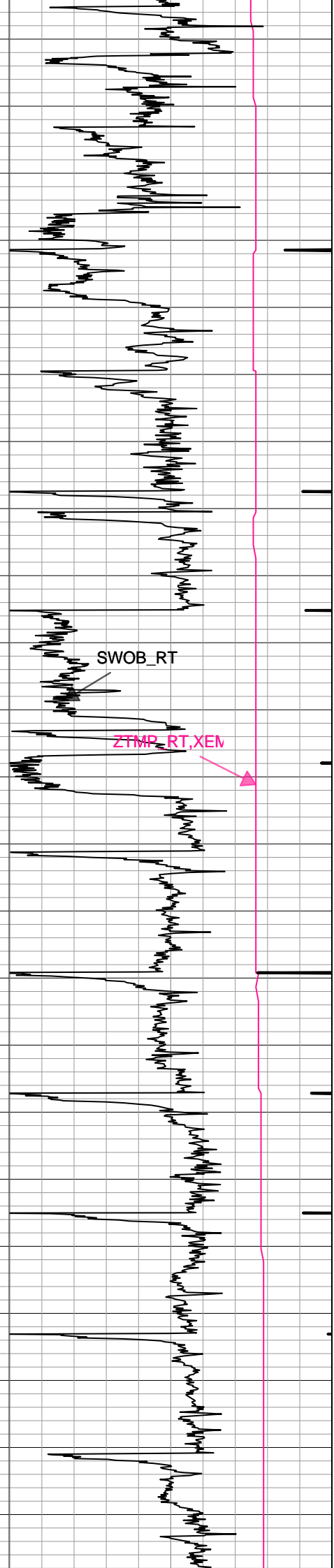
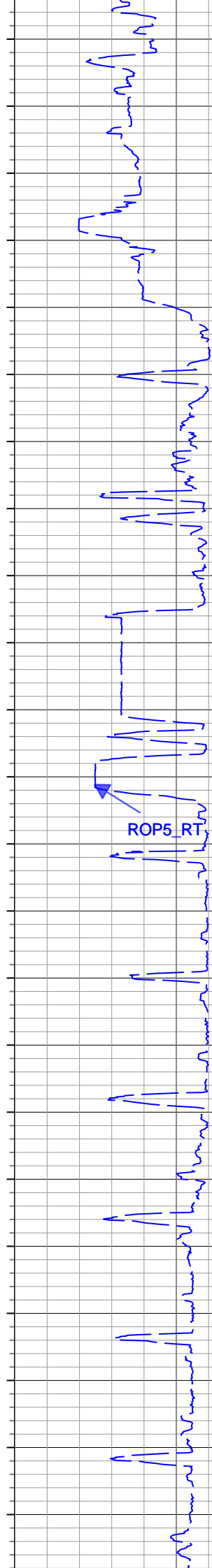
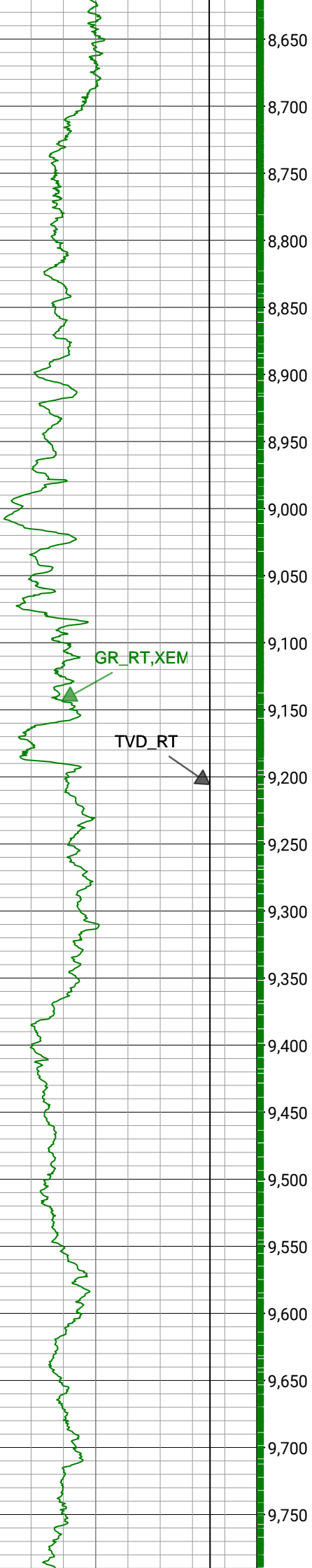




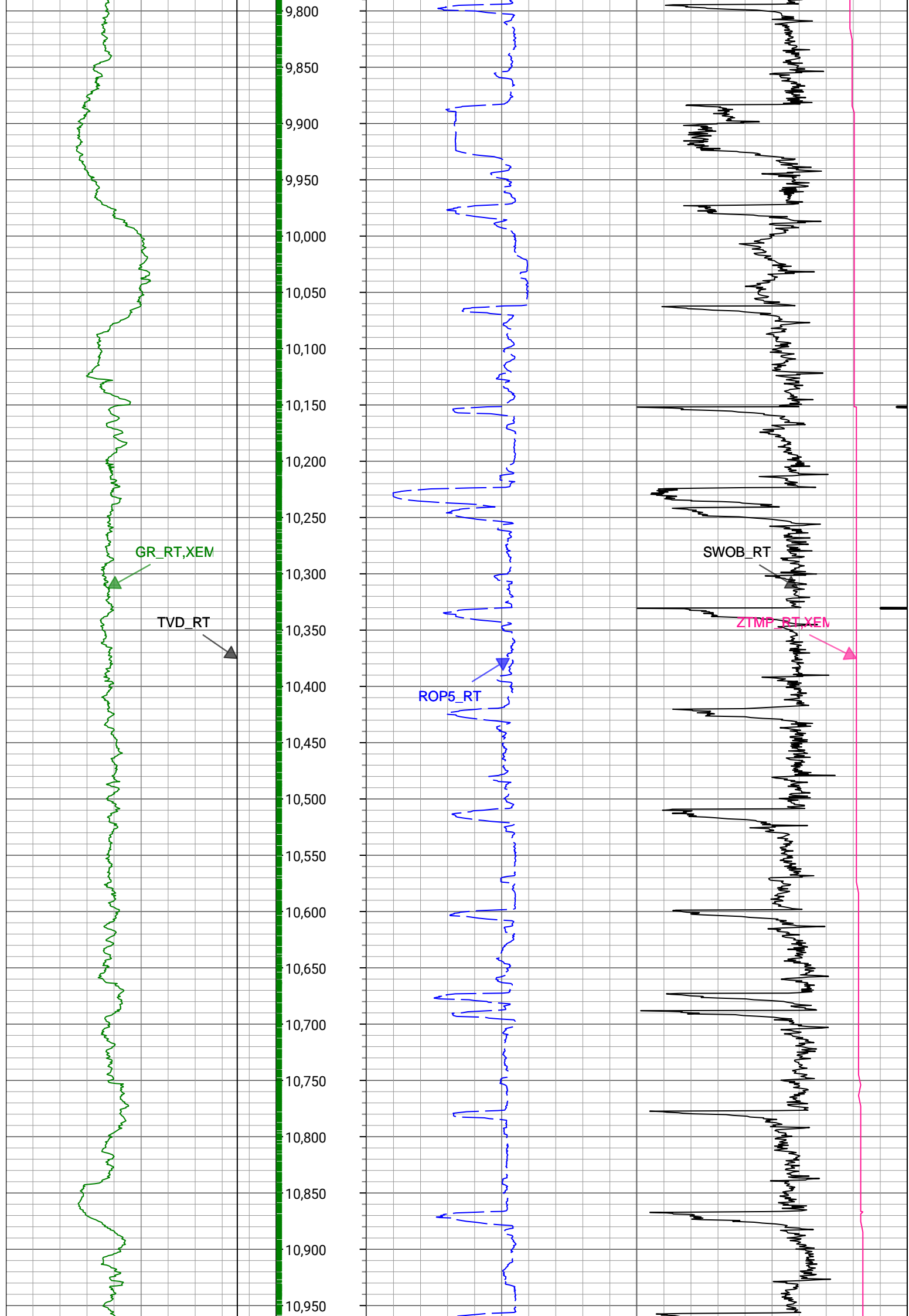


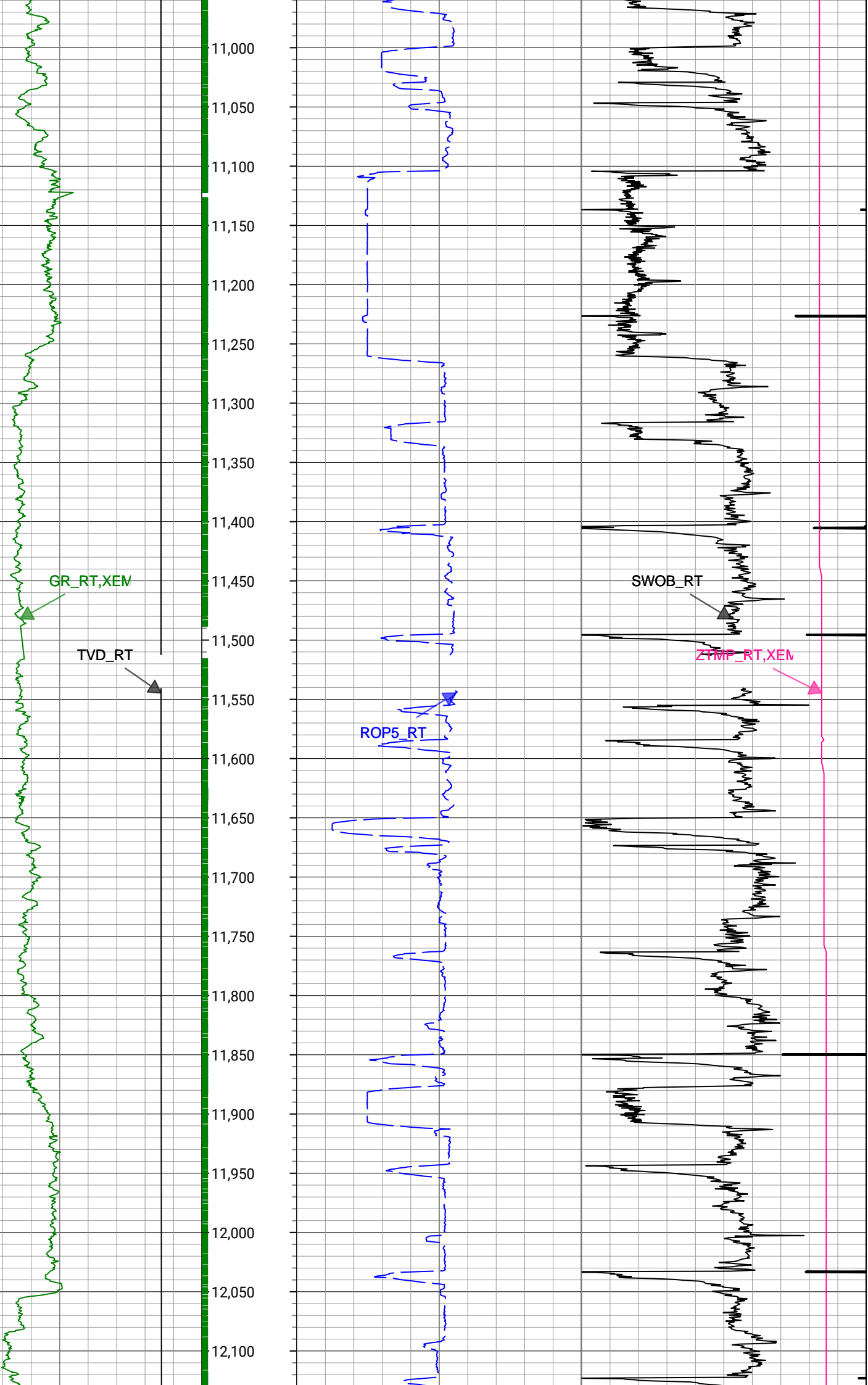


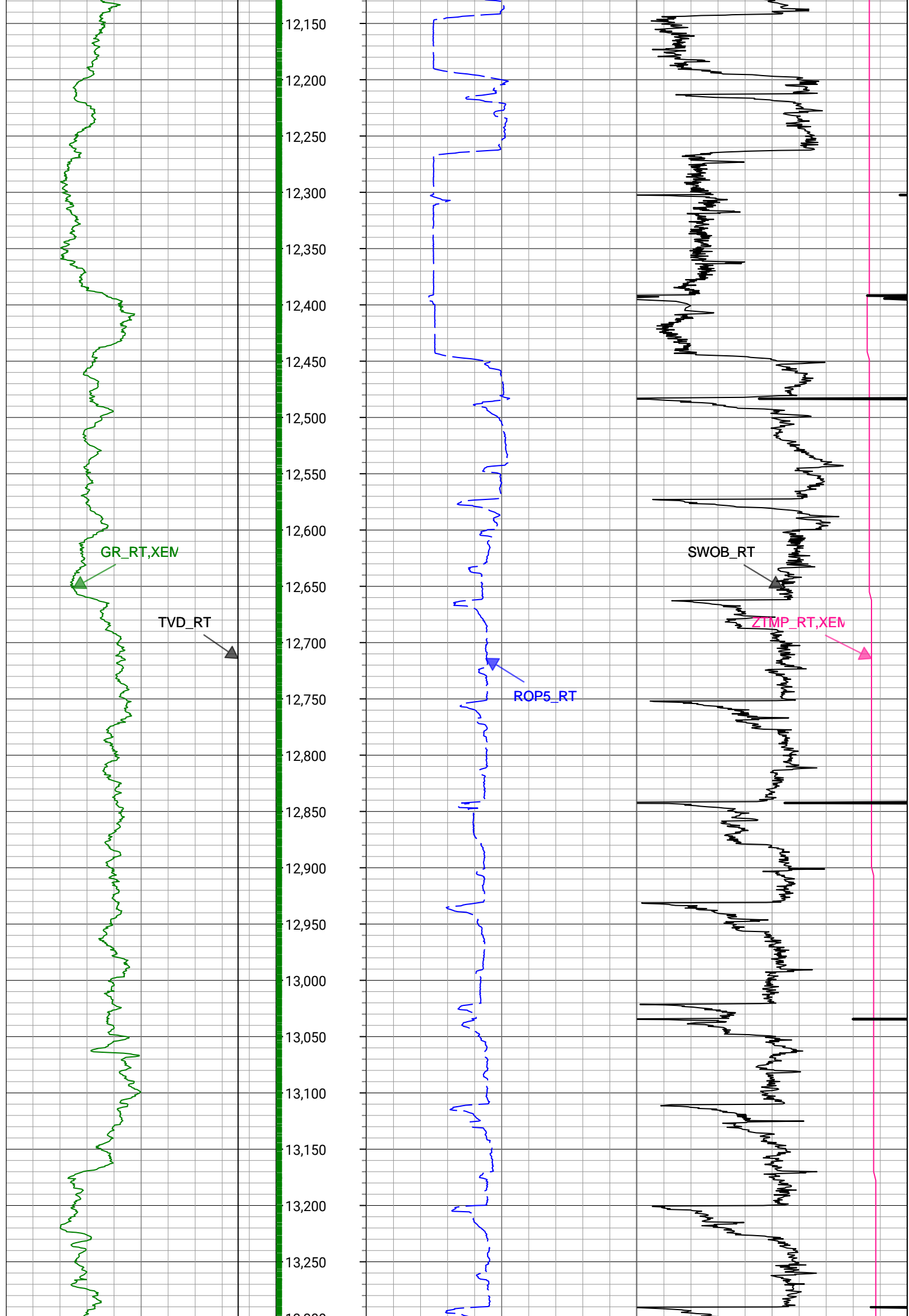


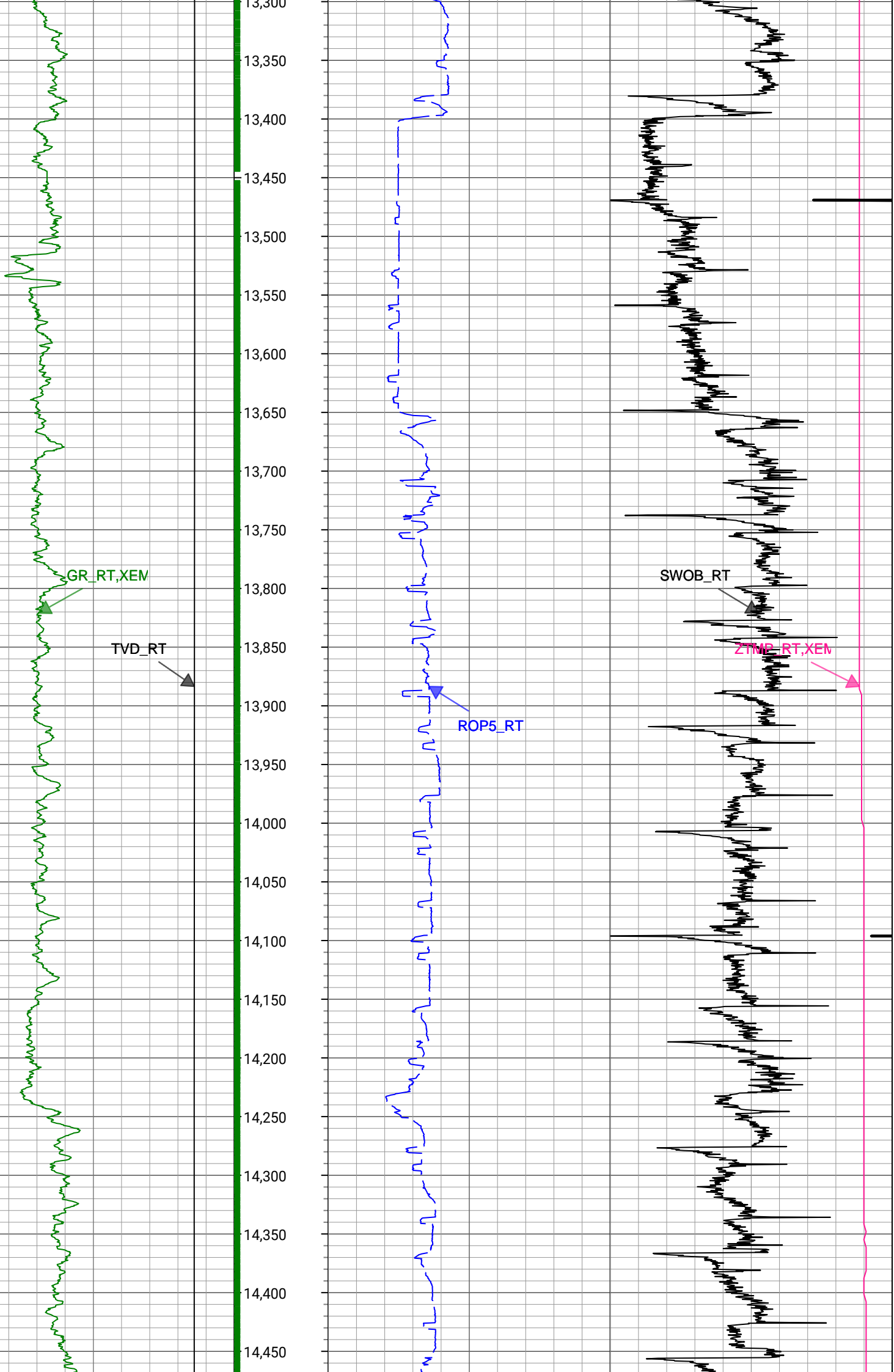


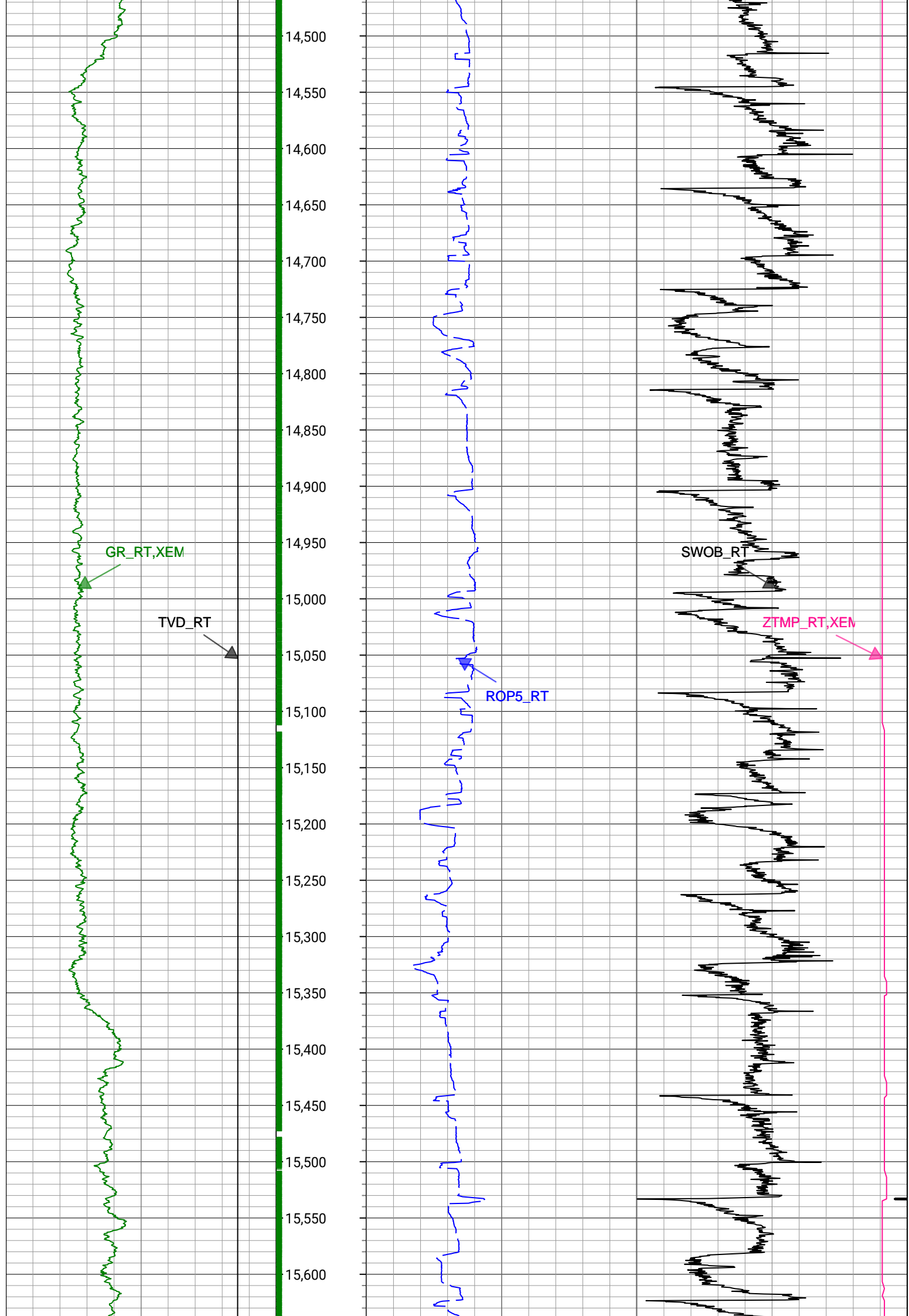


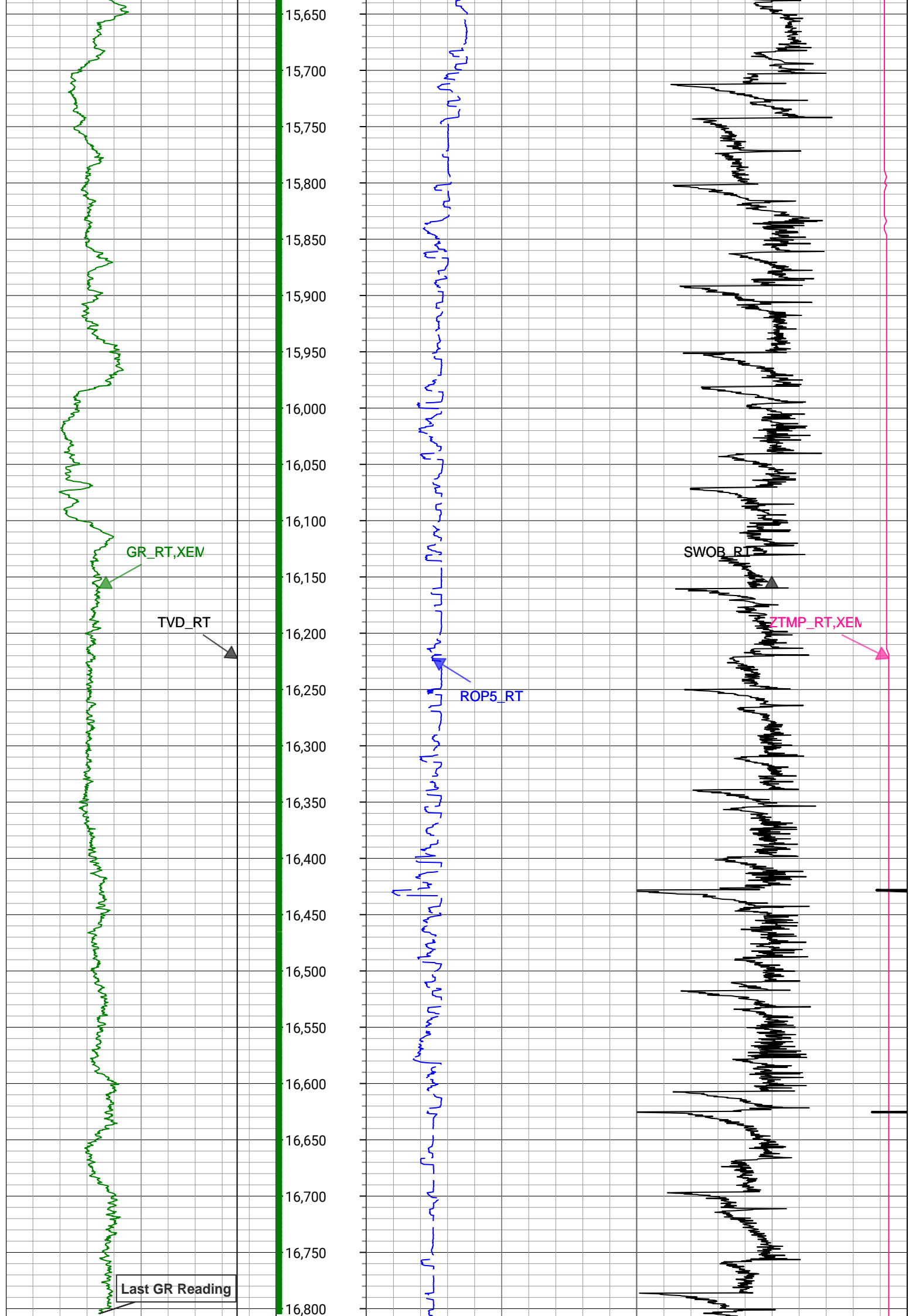














2598	14.4	155.2	2546.56	-139.39	-394.94	181.17	2.5	434.51	155.36	Manual
2687	14.01	153.86	2632.84	-146.7	-414.65	190.55	0.57	456.34	155.32	Manual
2777	14	152.82	2720.17	-154.4	-434.12	200.33	0.28	478.11	155.23	Manual
2867	14.1	153.54	2807.47	-162.2	-453.62	210.18	0.22	499.95	155.14	Manual
2956	13.45	157.92	2893.92	-168.88	-472.91	218.91	1.38	521.12	155.16	Manual
3046	13.91	152.86	2981.37	-175.7	-492.24	227.78	1.42	542.39	155.17	Manual
3136	12.97	155.46	3068.9	-182.84	-511.06	236.91	1.24	563.3	155.13	Manual
3227	13.16	159.42	3157.55	-188.72	-530.04	244.79	1.01	583.84	155.21	Manual
3316	13.86	156.91	3244.09	-194.43	-549.34	252.53	1.03	604.6	155.31	Manual
3406	11.27	154.19	3331.92	-200.6	-567.17	260.59	2.95	624.17	155.32	Manual
3494	13.31	157.02	3417.9	-206.49	-584.24	268.29	2.42	642.9	155.34	Manual
3584	13.93	153.95	3505.37	-213.26	-603.51	277.09	1.06	664.08	155.34	Manual
3674	13.24	153.68	3592.85	-220.57	-622.48	286.42	0.77	685.22	155.29	Manual
3763	14.04	158.03	3679.35	-227.11	-641.63	294.98	1.46	706.19	155.31	Manual
3853	13.07	158.13	3766.84	-232.92	-661.2	302.85	1.08	727.26	155.39	Manual
3943	13.37	158.21	3854.45	-238.56	-680.31	310.5	0.33	747.82	155.47	Manual
4032	14.03	160.6	3940.92	-243.88	-700.04	317.91	0.98	768.84	155.58	Manual
4121	13.66	162.53	4027.34	-248.5	-720.24	324.65	0.66	790.02	155.74	Manual
4211	13.22	155.53	4114.88	-253.9	-739.74	332.1	1.87	810.87	155.82	Manual
4301	14.17	158.48	4202.32	-260.13	-759.36	340.4	1.31	832.16	155.85	Manual
4391	13.4	157.54	4289.72	-266.06	-779.24	348.43	0.89	853.59	155.91	Manual
4480	13.39	156.18	4376.3	-272.16	-798.2	356.53	0.35	874.21	155.93	Manual
4570	12.86	160.98	4463.96	-277.63	-817.2	364	1.35	894.61	155.99	Manual
4659	11.9	158.88	4550.88	-282.28	-835.13	370.54	1.19	913.64	156.07	Manual
4749	12.79	156.86	4638.8	-287.65	-852.94	377.8	1.1	932.87	156.11	Manual
4839	13.11	159.14	4726.51	-293.23	-871.64	385.35	0.67	953.02	156.15	Manual
4928	13.45	159.52	4813.13	-298.43	-890.77	392.56	0.39	973.44	156.22	Manual
5018	13.62	158.4	4900.64	-303.92	-910.43	400.12	0.35	994.48	156.27	Manual
5107	13.24	162.77	4987.2	-308.75	-929.91	407	1.22	1015.08	156.36	Manual
5197	12.36	167.12	5074.97	-311.94	-949.14	412.2	1.45	1034.79	156.53	Manual
5287	8.18	165.71	5163.51	-314.03	-964.74	415.93	4.65	1050.59	156.68	Manual
5377	5.74	159.22	5252.84	-316.12	-975.16	419.11	2.84	1061.41	156.74	Manual
5467	3.94	158.96	5342.51	-318.08	-982.25	421.82	2	1068.99	156.76	Manual
5556	3.33	155.67	5431.33	-319.69	-987.46	423.98	0.72	1074.63	156.76	Manual
5646	2.69	140.86	5521.21	-321.67	-991.48	426.39	1.11	1079.28	156.73	Manual
5735	2.93	121.85	5610.11	-324.62	-994.3	429.64	1.08	1083.16	156.63	Manual
5825	2.71	101.27	5700	-328.47	-995.93	433.68	1.14	1086.26	156.47	Manual
5915	2.74	93.06	5789.9	-332.62	-996.46	437.91	0.43	1088.44	156.28	Manual
6005	0.53	313.56	5879.87	-334.48	-996.29	439.76	3.51	1089.03	156.18	Manual
6095	8.37	303.93	5969.53	-329.17	-992.34	434.02	8.72	1083.1	156.38	Manual
6185	14.82	300.46	6057.64	-314.86	-982.84	418.64	7.21	1068.29	156.93	Manual
6274	20.87	279.64	6142.41	-290.38	-974.4	393.15	9.78	1050.72	158.03	Manual
6364	28.45	268.43	6224.18	-253.49	-972.3	355.84	9.86	1035.37	159.9	Manual
6454	36.67	265.23	6299.98	-205.16	-975.12	307.55	9.33	1022.47	162.5	Manual
6544	42.78	263.67	6369.17	-147.67	-980.73	250.33	6.88	1012.18	165.68	Manual
6634	49.26	265.64	6431.64	-82.95	-986.7	185.89	7.37	1004.06	169.33	Manual
6723	57.19	270.68	6484.9	-11.95	-988.83	114.73	9.99	995.46	173.38	Manual
6813	66	270.17	6527.67	66.65	-988.25	35.64	9.8	988.9	177.93	Manual
6902	74.16	269.6	6557.97	149.82	-988.43	-47.96	9.19	989.6	182.78	Manual
6992	81.77	267.81	6576.72	237.49	-990.44	-135.89	8.68	999.72	187.81	Manual



7082	86.02	265.11	6586.29	326.87	-995.97	-225.18	5.59	1021.11	192.74	Manual
7171	86.33	268.56	6592.23	415.56	-1000.87	-313.83	3.88	1048.92	197.41	Manual
7260	88.69	267.73	6596.1	504.24	-1003.75	-402.7	2.81	1081.52	201.86	Manual
7350	89.39	268.3	6597.6	594.02	-1006.87	-492.63	1	1120.92	206.07	Manual
7440	89.41	267.89	6598.55	683.79	-1009.86	-582.57	0.46	1165.85	209.98	Manual
7530	89.03	267.43	6599.77	773.6	-1013.54	-672.49	0.66	1216.35	213.56	Manual
7619	89.53	268.38	6600.89	862.4	-1016.79	-761.42	1.21	1270.28	216.83	Manual
7709	89.04	269.09	6602.01	952.09	-1018.78	-851.39	0.96	1327.69	219.89	Manual
7798	89.62	269.88	6603.05	1040.69	-1019.58	-940.38	1.1	1387.03	222.69	Manual
7888	89.01	269.52	6604.13	1130.24	-1020.05	-1030.37	0.79	1449.88	225.29	Manual
7977	89.44	270.12	6605.33	1218.79	-1020.33	-1119.36	0.83	1514.61	227.65	Manual
8066	89.5	270.92	6606.16	1307.22	-1019.52	-1208.36	0.9	1580.99	229.84	Manual
8156	89.4	270.26	6607.02	1396.63	-1018.59	-1298.35	0.74	1650.22	231.88	Manual
8246	89.48	270.71	6607.9	1486.07	-1017.83	-1388.34	0.51	1721.47	233.75	Manual
8336	89.46	270.09	6608.73	1575.51	-1017.2	-1478.33	0.69	1794.48	235.47	Manual
8426	89.4	269.59	6609.63	1665.05	-1017.45	-1568.33	0.56	1869.45	237.03	Manual
8516	89.79	270.9	6610.26	1754.52	-1017.07	-1658.32	1.52	1945.37	238.48	Manual
8606	89.52	270.59	6610.81	1843.91	-1015.9	-1748.31	0.46	2022.04	239.84	Manual
8695	89.39	269.66	6611.65	1932.41	-1015.7	-1837.31	1.06	2099.37	241.07	Manual
8785	89.35	269.9	6612.64	2021.96	-1016.05	-1927.3	0.27	2178.73	242.2	Manual
8874	88.56	270.74	6614.27	2110.41	-1015.55	-2016.28	1.3	2257.6	243.27	Manual
8964	87.98	270.87	6616.98	2199.75	-1014.29	-2106.23	0.66	2337.73	244.29	Manual
9054	88.46	269.9	6619.78	2289.16	-1013.68	-2196.19	1.2	2418.84	245.22	Manual
9144	88.58	271.11	6622.1	2378.56	-1012.89	-2286.15	1.35	2500.49	246.1	Manual
9233	89.73	270.38	6623.42	2466.95	-1011.73	-2375.13	1.53	2581.64	246.93	Manual
9323	89.28	270	6624.19	2556.43	-1011.44	-2465.13	0.65	2664.56	247.69	Manual
9412	89.72	271.07	6624.97	2644.86	-1010.6	-2554.12	1.3	2746.79	248.41	Manual
9503	89.91	270.96	6625.26	2735.19	-1008.99	-2645.1	0.24	2831.01	249.12	Manual
9592	90.04	270.99	6625.3	2823.55	-1007.48	-2734.09	0.15	2913.81	249.77	Manual
9682	89.52	270.74	6625.65	2912.91	-1006.12	-2824.08	0.64	2997.95	250.39	Manual
9772	89.42	269.62	6626.48	3002.4	-1005.84	-2914.07	1.25	3082.78	250.96	Manual
9861	89.84	270.92	6627.05	3090.87	-1005.42	-3003.07	1.53	3166.91	251.49	Manual
9951	89.66	269.77	6627.45	3180.33	-1004.88	-3093.07	1.29	3252.2	252	Manual
10041	89.83	268.88	6627.85	3269.95	-1005.94	-3183.06	1.01	3338.23	252.46	Manual
10130	89.4	269.75	6628.45	3358.58	-1007	-3272.05	1.09	3423.5	252.89	Manual
10219	89.69	270.4	6629.15	3447.08	-1006.88	-3361.04	0.8	3508.62	253.32	Manual
10309	89.33	268.01	6629.92	3536.71	-1008.13	-3451.03	2.69	3595.26	253.72	Manual
10398	89.81	268.75	6630.59	3625.46	-1010.65	-3539.99	0.99	3681.43	254.07	Manual
10489	89.46	269.02	6631.17	3716.13	-1012.42	-3630.97	0.49	3769.47	254.42	Manual
10578	89.26	268.77	6632.16	3804.81	-1014.13	-3719.95	0.36	3855.71	254.75	Manual
10667	89.78	268.63	6632.91	3893.52	-1016.15	-3808.92	0.61	3942.14	255.06	Manual
10757	89.27	268.93	6633.66	3983.21	-1018.07	-3898.9	0.66	4029.62	255.37	Manual
10847	89.63	269.03	6634.52	4072.88	-1019.67	-3988.88	0.42	4117.14	255.66	Manual
10936	89.68	269.3	6635.06	4161.52	-1020.97	-4077.87	0.31	4203.73	255.94	Manual
11026	89.66	269.34	6635.57	4251.14	-1022.04	-4167.86	0.05	4291.34	256.22	Manual
11116	89.75	269.28	6636.04	4340.77	-1023.12	-4257.85	0.12	4379.05	256.49	Manual
11206	89.9	269.44	6636.31	4430.38	-1024.13	-4347.84	0.24	4466.83	256.75	Manual
11296	89.66	268.61	6636.66	4520.05	-1025.66	-4437.83	0.96	4554.81	256.99	Manual
11386	90.14	269.02	6636.82	4609.74	-1027.52	-4527.81	0.7	4642.94	257.21	Manual
11476	90.12	269.17	6636.6	4699.39	-1028.94	-4617.8	0.17	4731.04	257.44	Manual



15959	90.56	270.12	6639.12	9156.75	-1022.86	-9099.77	1.25	9157.07	263.59	Manual
16049	90.69	269.34	6638.13	9246.3	-1023.28	-9189.76	0.88	9246.55	263.65	Manual
16138	90.67	269.33	6637.08	9334.92	-1024.31	-9278.75	0.03	9335.11	263.7	Manual
16227	90.38	269.86	6636.26	9423.5	-1024.94	-9367.74	0.68	9423.64	263.76	Manual
16317	90.31	270.14	6635.72	9513.02	-1024.94	-9457.74	0.32	9513.11	263.81	Manual
16407	91.02	270.24	6634.68	9602.5	-1024.64	-9547.73	0.8	9602.56	263.87	Manual
16496	90.83	270.71	6633.24	9690.93	-1023.91	-9636.72	0.57	9690.96	263.94	Manual
16585	90.7	269.8	6632.05	9779.4	-1023.51	-9725.71	1.03	9779.41	263.99	Manual
16675	90.91	270.56	6630.79	9868.88	-1023.23	-9815.7	0.88	9868.88	264.05	Manual
16765	90.41	268.87	6629.75	9958.44	-1023.67	-9905.69	1.96	9958.44	264.1	Manual
16807	90.17	268.51	6629.54	10000.3	-1024.63	-9947.67	1.03	10000.3	264.12	Manual
16829	90.17	268.51	6629.47	10022.23	-1025.21	-9969.67	0	10022.24	264.13	Manual

Company:

Well:

Field Name:

Country Name:

State Name:

County Name:

PDC Energy Inc

Pharaoh 4N

Wattenebrg

United States

Colorado

Weld

Schlumberger

XEM GAMMA RAY

1in/100ft Measured Depth

Final Print

Recorded Mode