

Company: PDC Energy Inc		Well: Pharaoh 3N		Field Name: Wattenberg		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 3N											
Field Name: Wattenberg											
Country Name: United States											
State Name: Colorado											
County Name: Weld											
Latitude: 40°21'11.895"N				API Number: 05-123-48831							
Longitude: 104°29'23.697"W				Rig Name: Ensign 142							
Spud Date: 22-Oct-2020				Rig Type: Land							
Log Interval: 1658.50--16830.98(ft)				Job Number: 20CCCO0558							
Depth Source: Driller's Depth				Print Type: Final Print							
Log Measured From: Drill Floor				Northing: 1373152.22(ft)							
Drill Floor Elevation: 4621 (ft)				Easting: 3281507.38(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	01-Jan-2021 11:12:01	DateTime Log Finished	03-Jan-2021 17:31:28
Start Depth (ft)	1682	Stop Depth (ft)	16831
Mud Type	Oil Based Mud	Mud Density (lbm/gal)	10.2
Potassium (%)	0	Barite	Yes
GR Sensor Offset (ft)	24.54	Calibration Coefficient	0.52
DNI Sensor Offset (ft)	19.95		

Log										
Description: XEM GAMMA RAY			Format: XEM_GR_WOB_PDC		Index Scale: 1in/100ft		Index Unit: ft		Index Type: Measured Depth	
Creation Date: 04-Jan-2021										
TVD_RT			Depth	ROP5_RT			ZTMP_RT,XEM			
1,500	ft, Borehole	7,500		0	ft/h, Borehole	1,000	0	degF, Borehole	300	

GR\_RM,XEM

in : ft

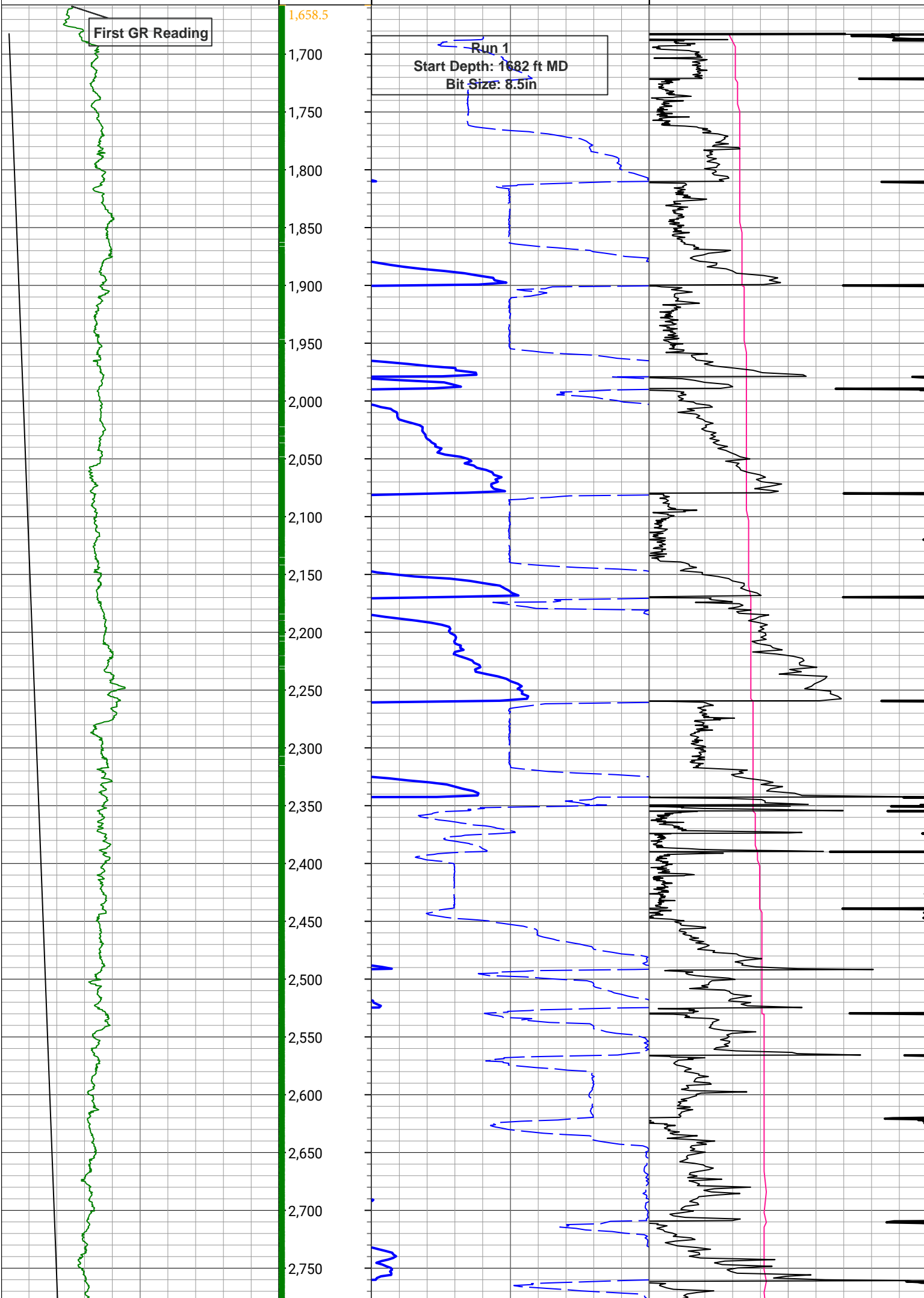
SWOB\_RT

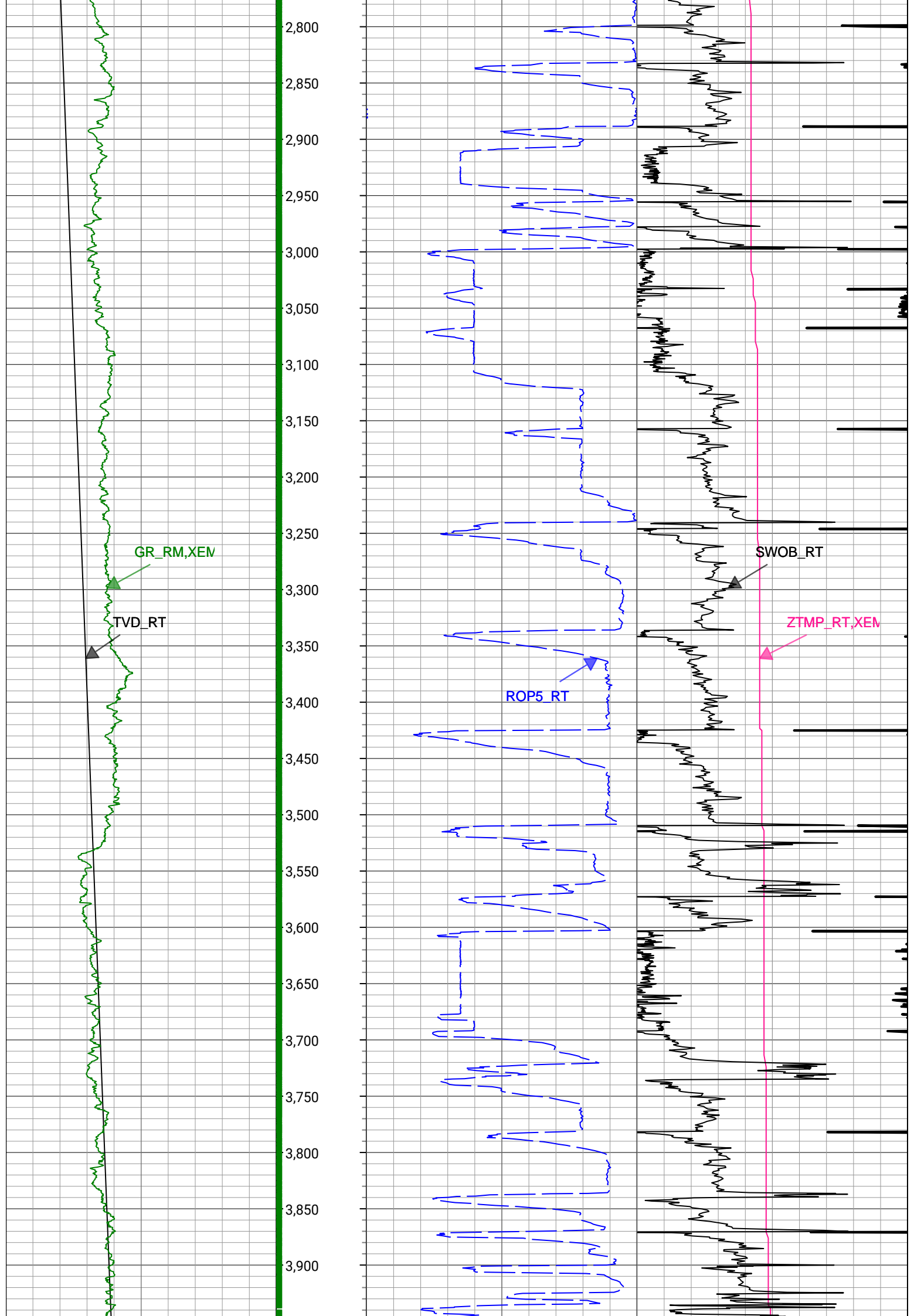
0 gAPI, Borehole 300

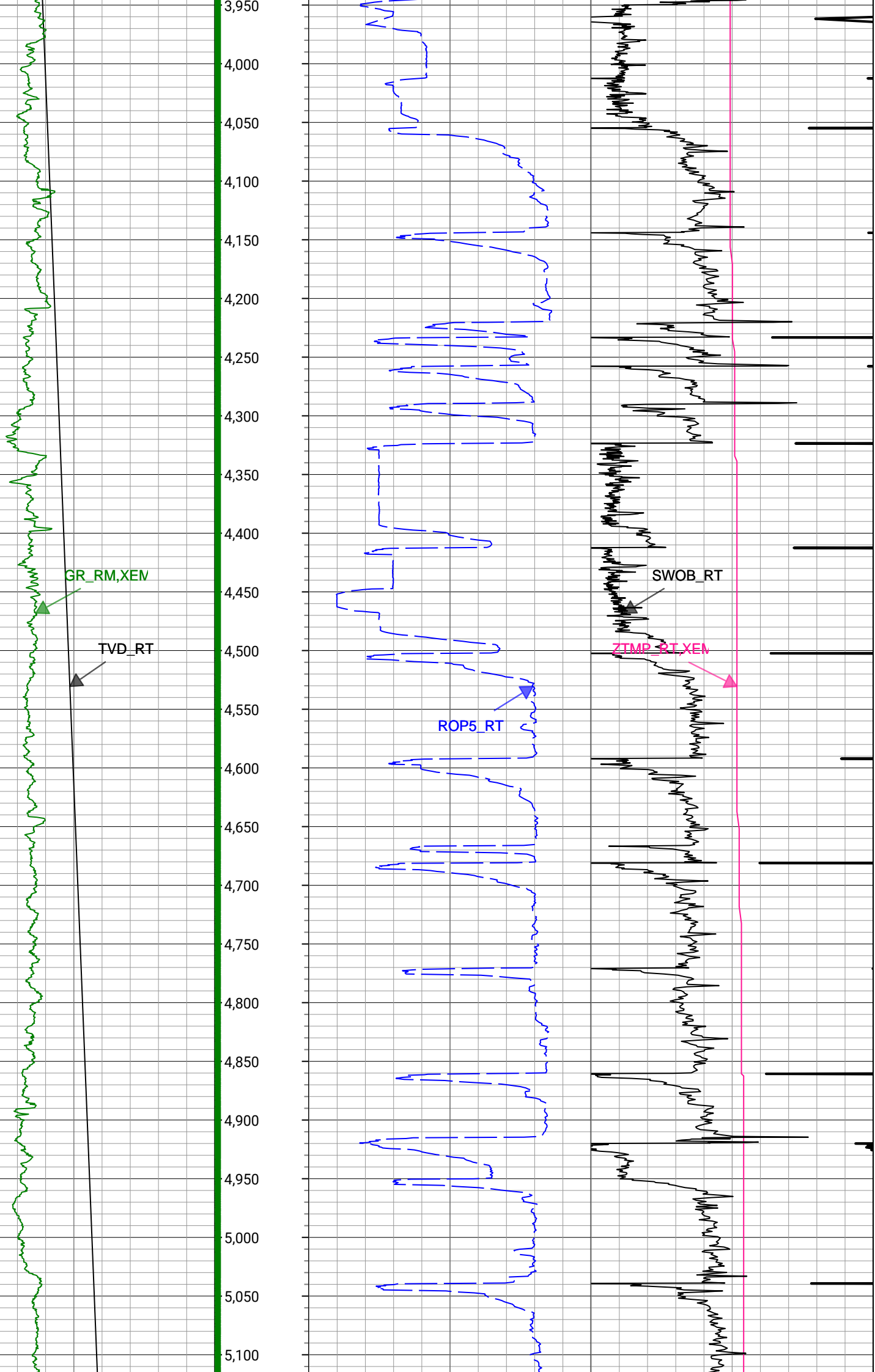
0 1000 lbf, Borehole 50

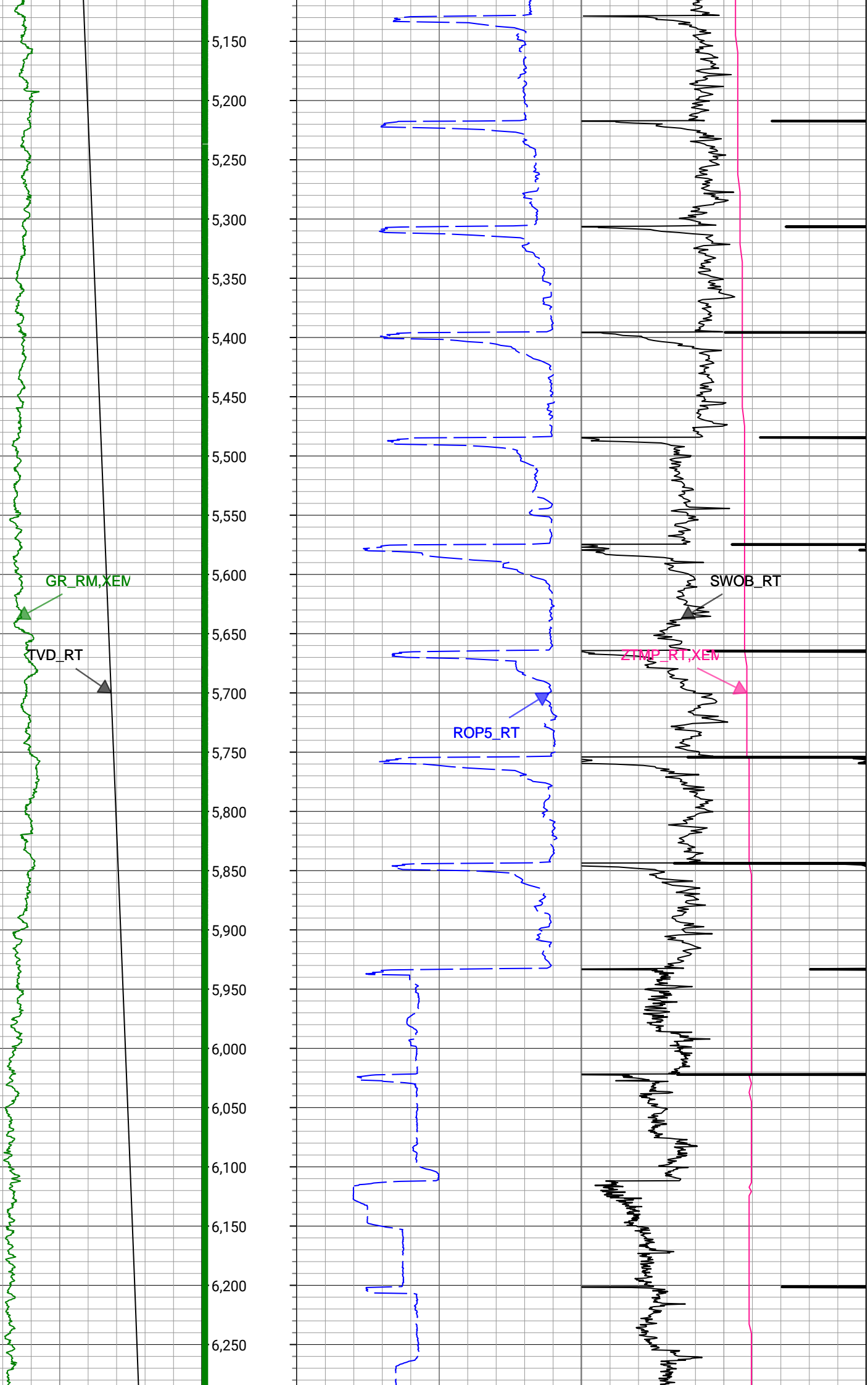
First GR Reading

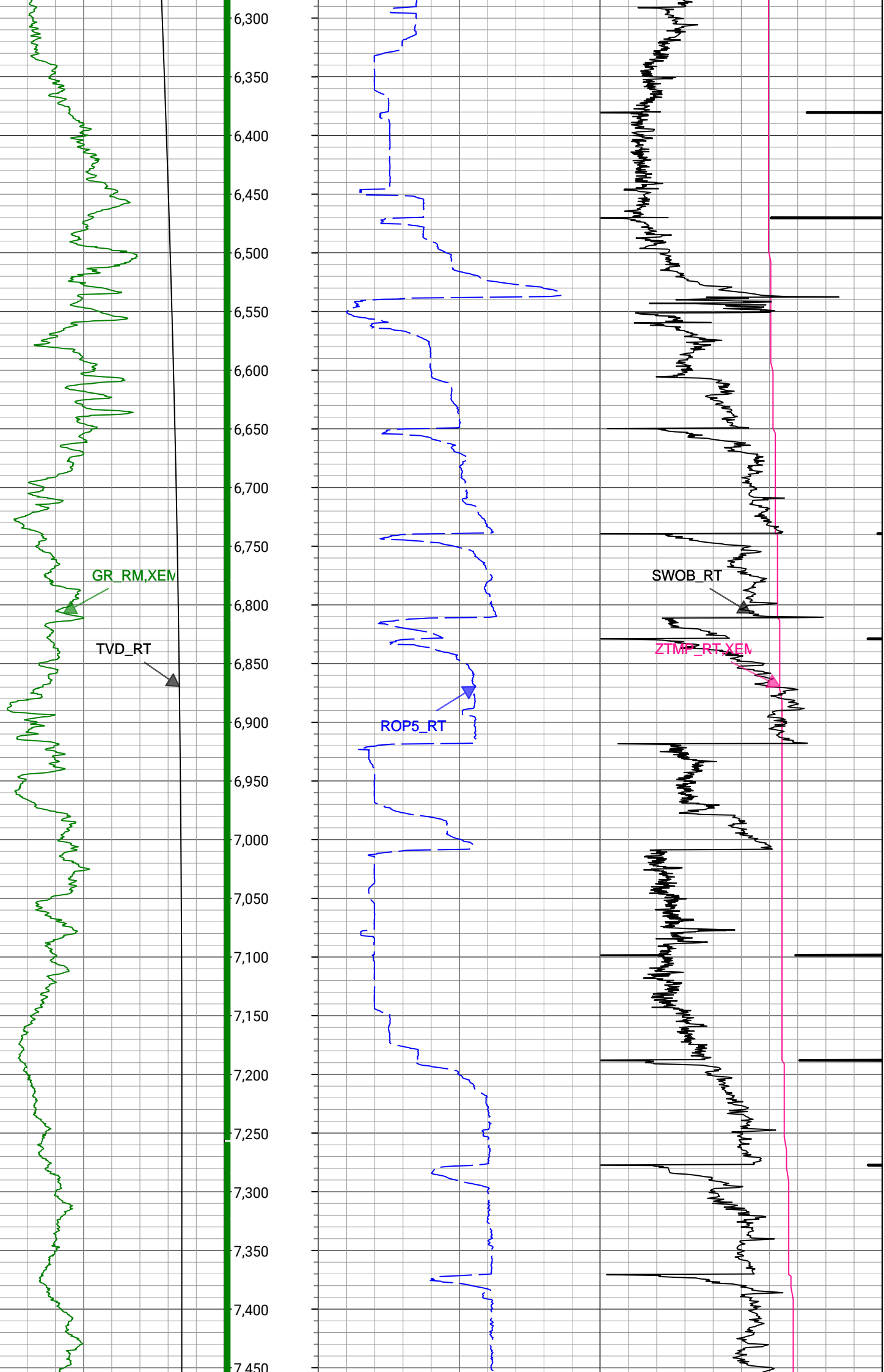
Run 1  
Start Depth: 1682 ft MD  
Bit Size: 8.5in

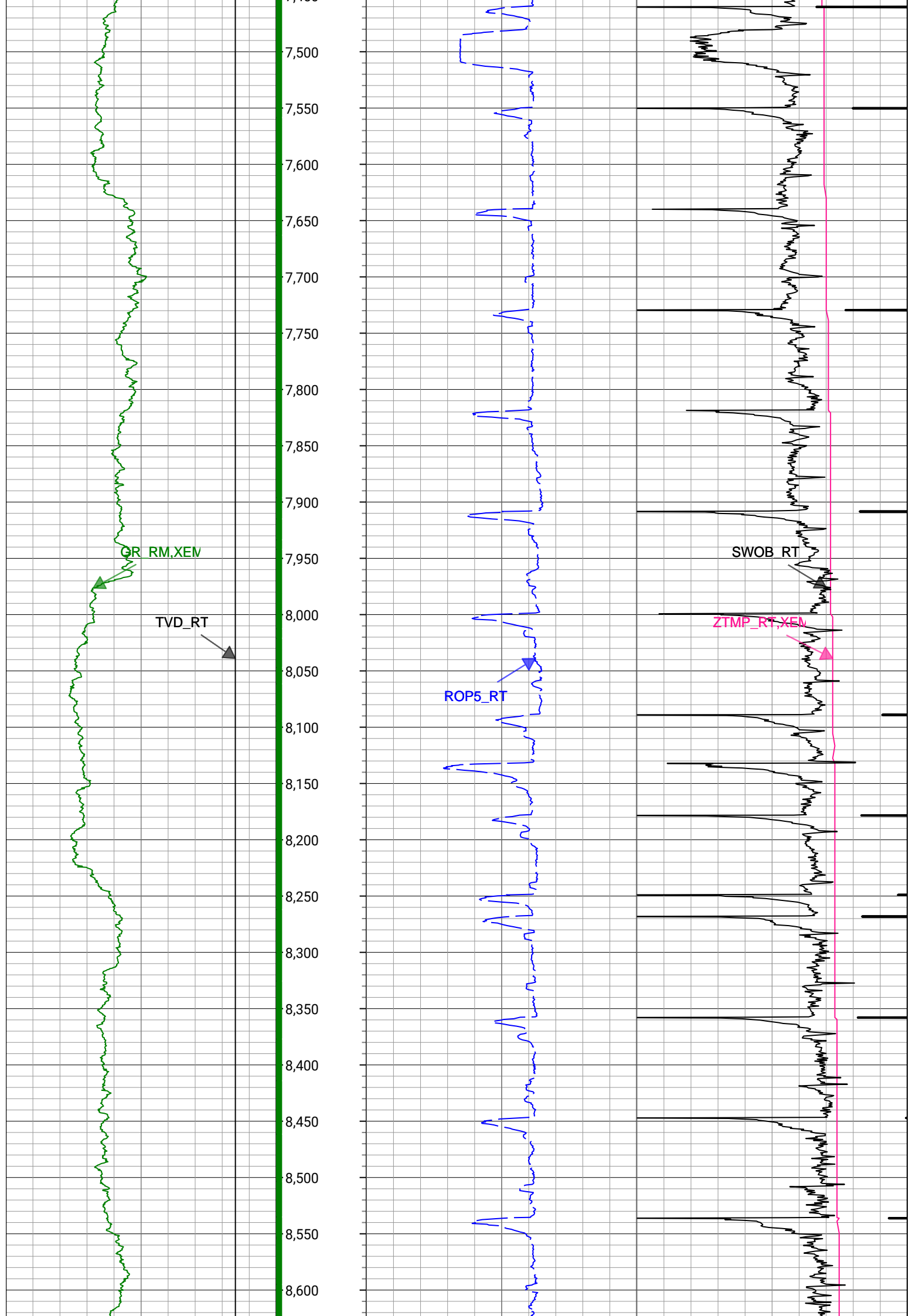


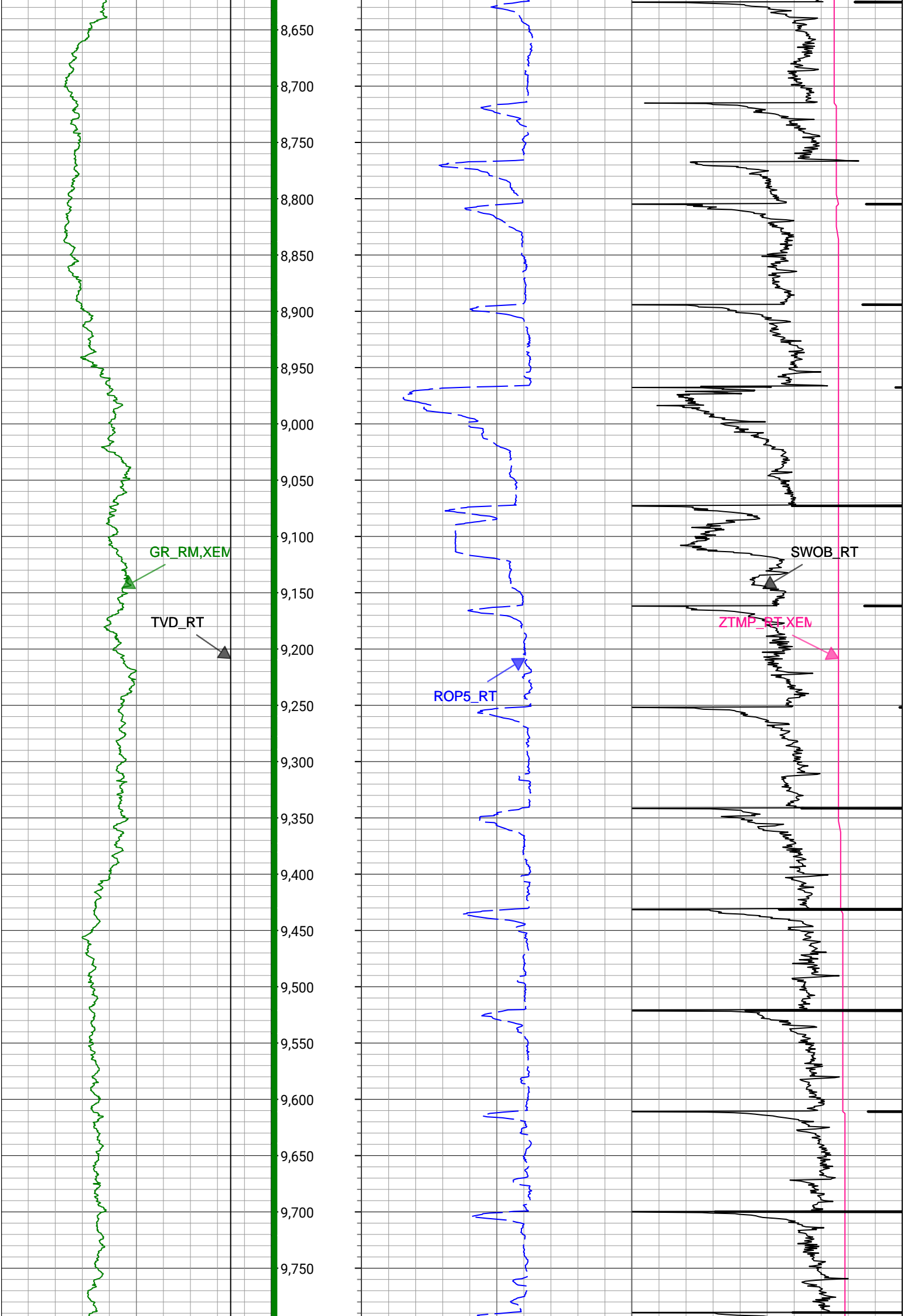




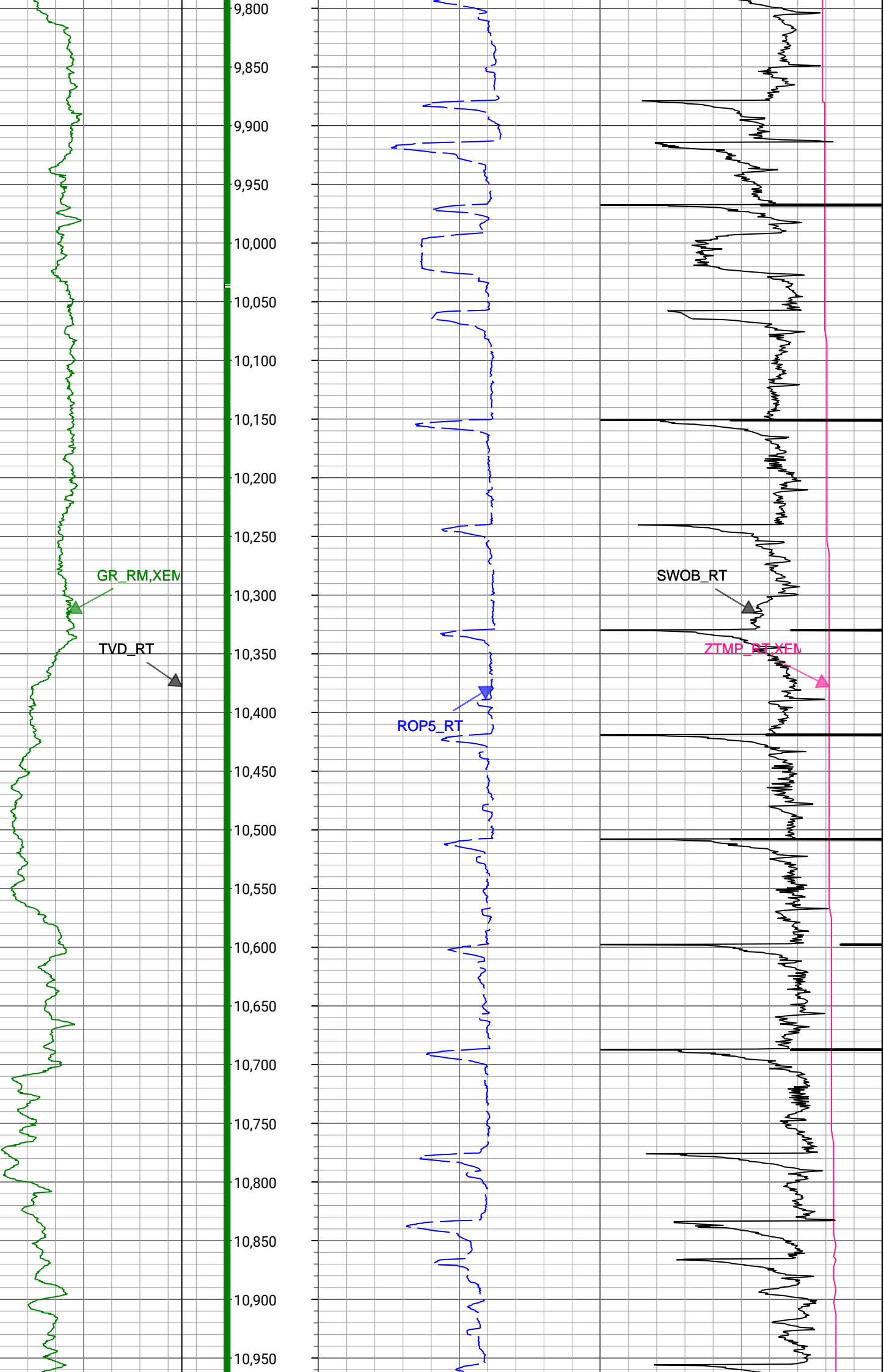


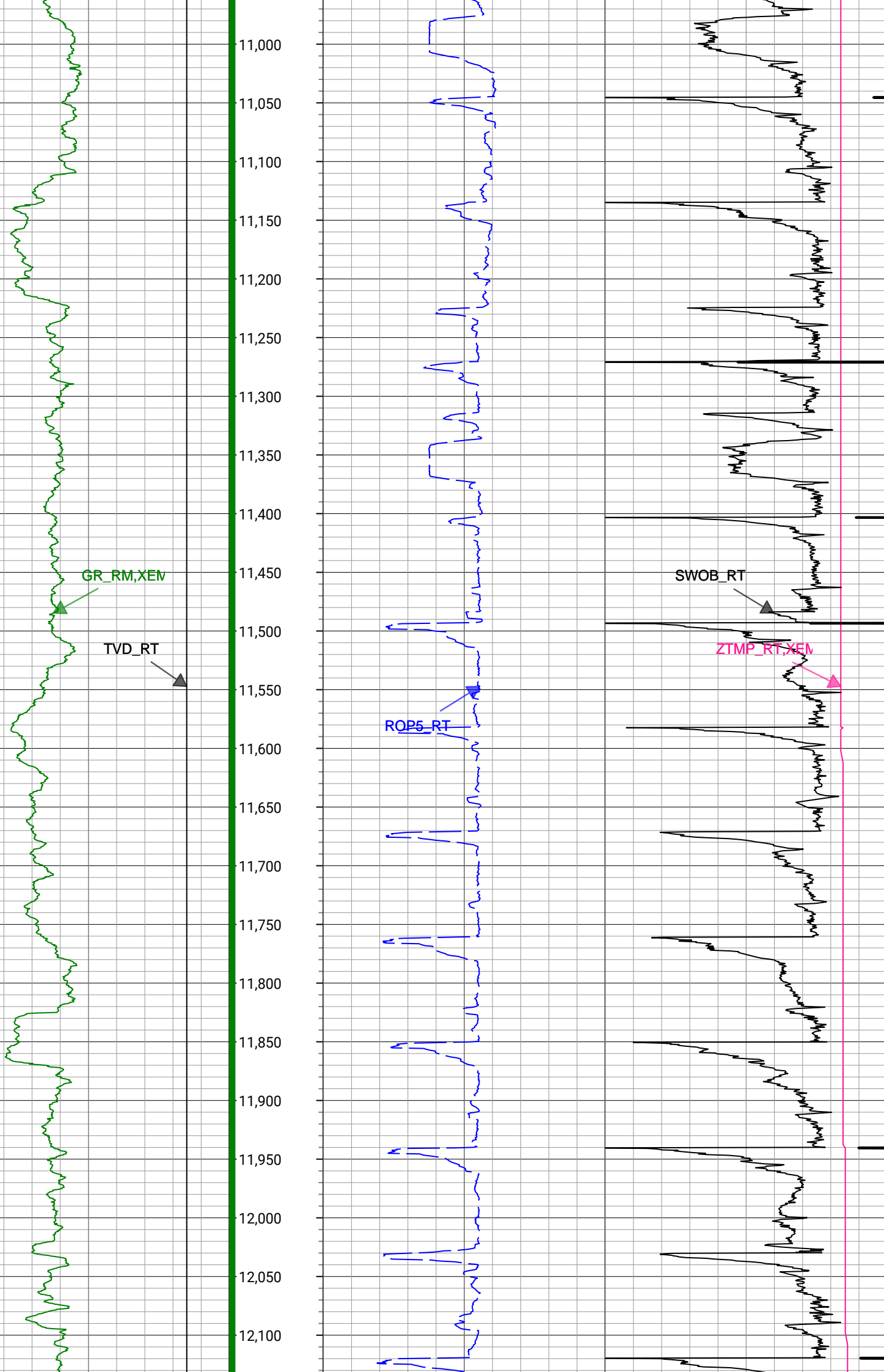


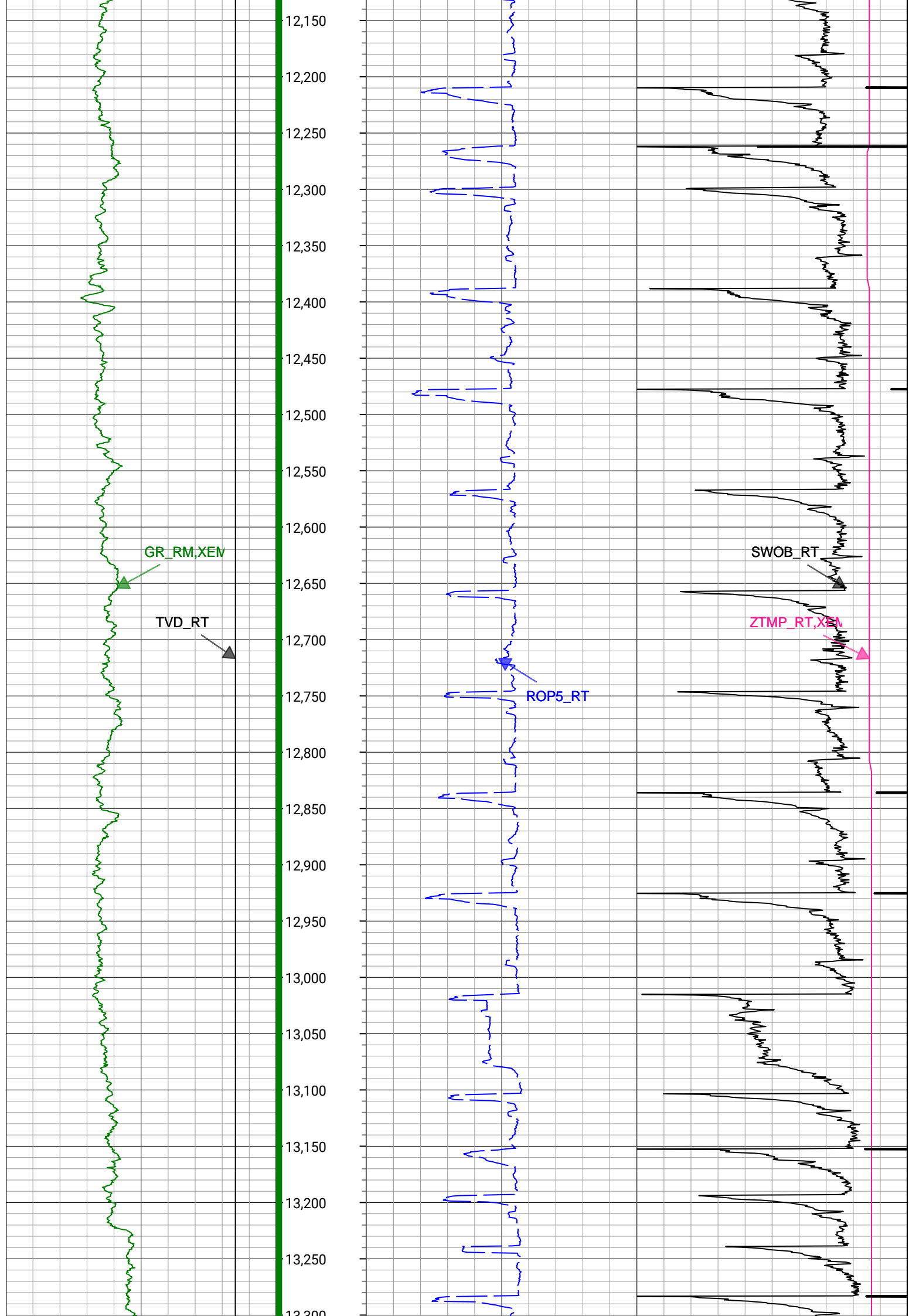


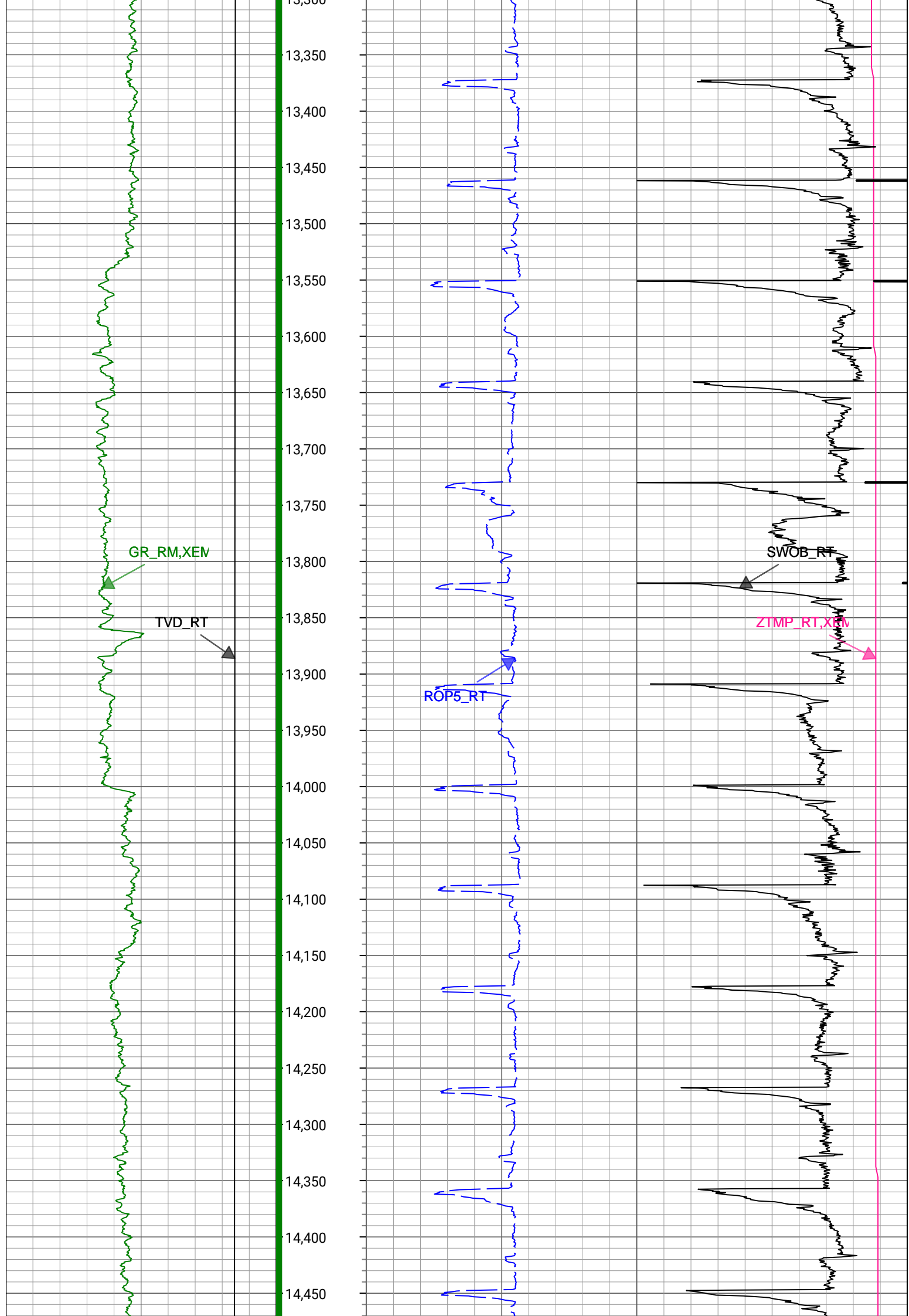


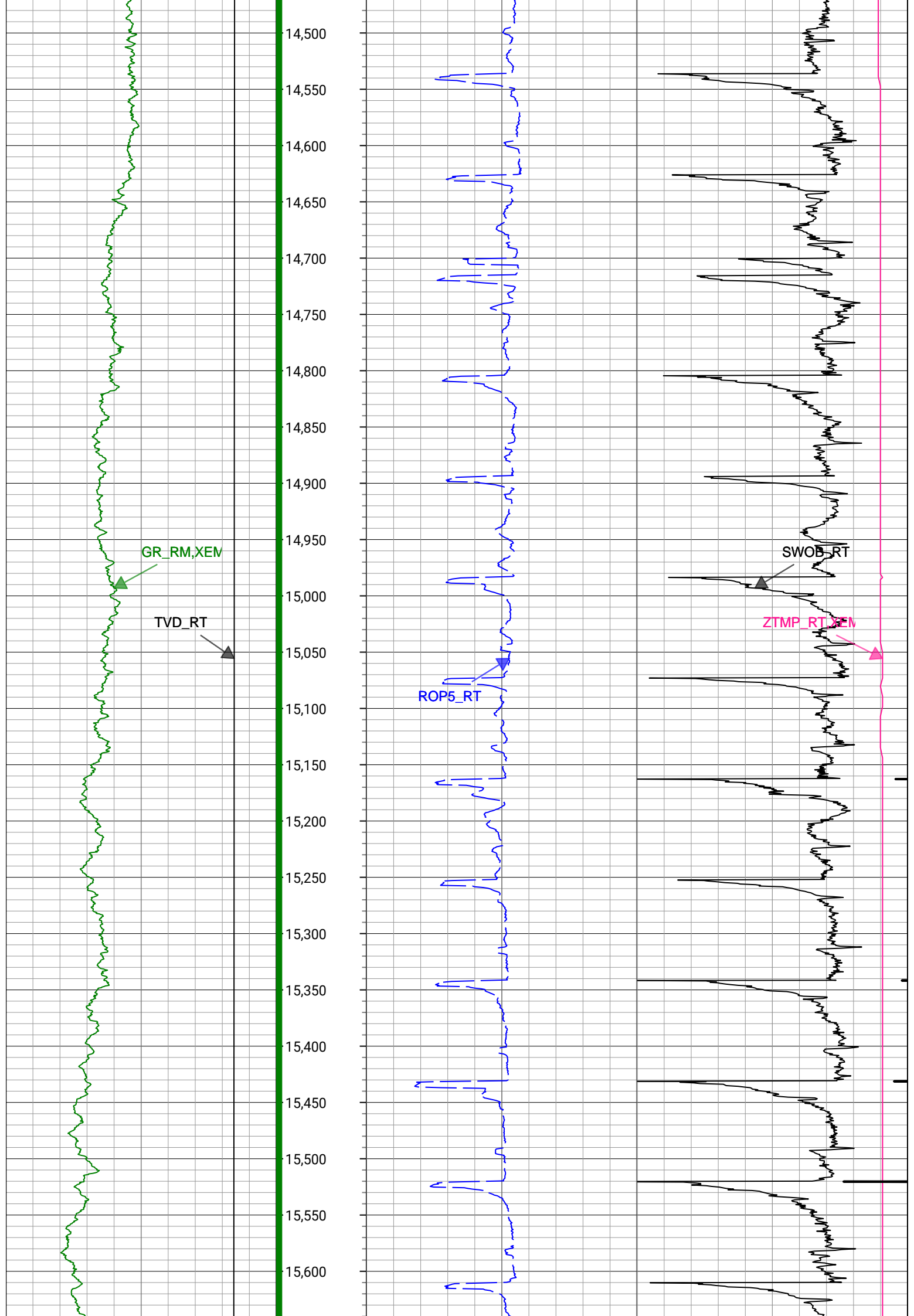


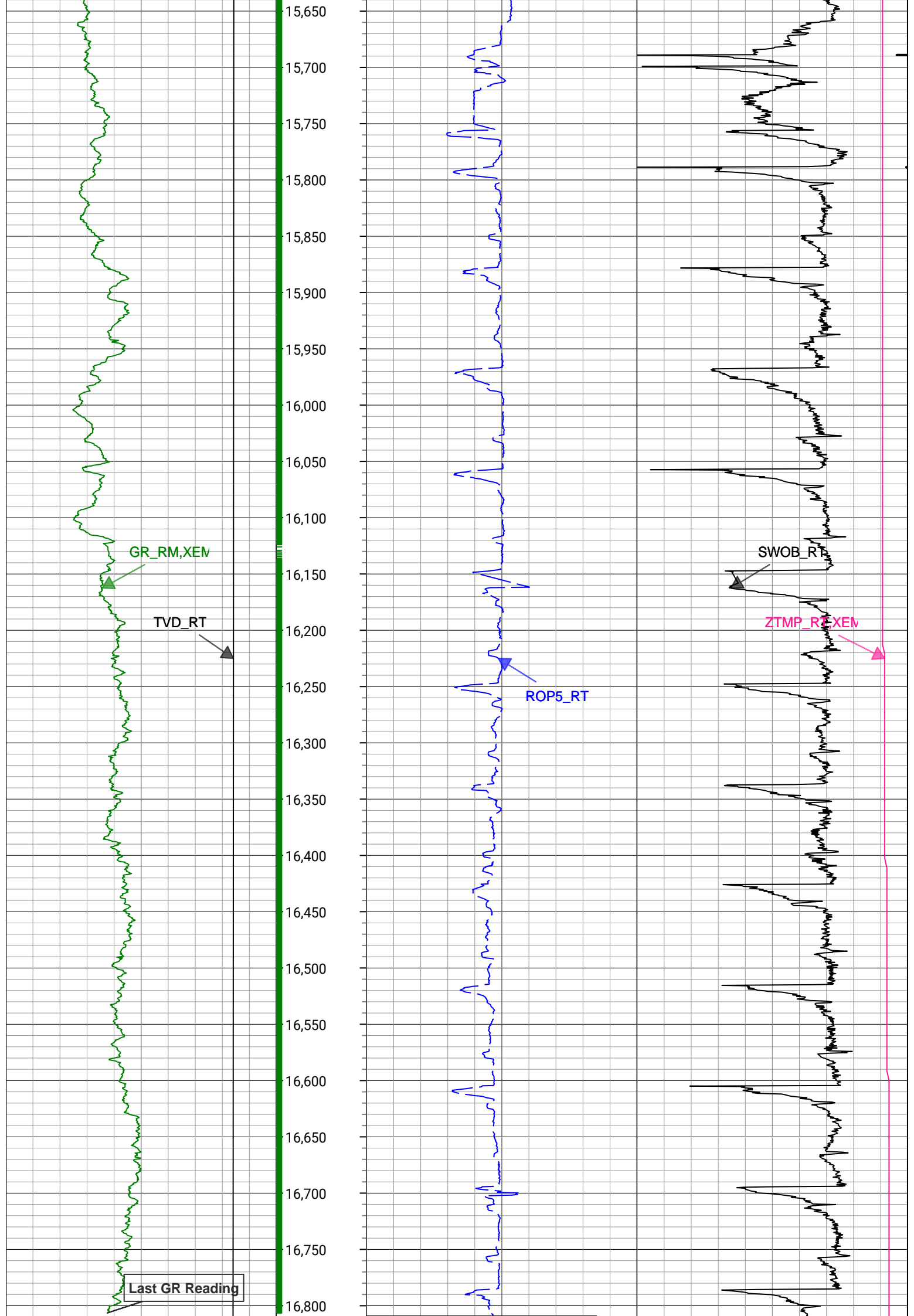














2598	17.62	146.98	2547.16	-192.61	-347.42	219.28	0.92	410.83	147.74	Manual
2687	18.63	146.09	2631.75	-206.11	-370.51	234.55	1.18	438.51	147.66	Manual
2777	17.98	145.24	2717.19	-220.25	-393.85	250.49	0.78	466.76	147.54	Manual
2867	17.9	147.12	2802.82	-233.91	-416.88	265.92	0.65	494.47	147.47	Manual
2956	17.8	146.58	2887.53	-247.07	-439.72	280.84	0.22	521.75	147.44	Manual
3046	18.42	151.86	2973.08	-259.52	-463.74	295.12	1.95	549.68	147.53	Manual
3137	18.39	152.19	3059.42	-271.05	-489.12	308.6	0.12	578.33	147.75	Manual
3227	17.81	149.54	3144.97	-282.79	-513.54	322.2	1.12	606.25	147.9	Manual
3316	18.01	150.74	3229.66	-294.59	-537.28	335.82	0.47	633.59	147.99	Manual
3406	18.29	151.2	3315.18	-306.32	-561.79	349.43	0.35	661.59	148.12	Manual
3495	18.29	150.6	3399.69	-318.04	-586.19	363.01	0.21	689.49	148.23	Manual
3584	18.34	151.11	3484.18	-329.79	-610.62	376.63	0.19	717.43	148.33	Manual
3674	18.25	154.15	3569.63	-340.86	-635.7	389.62	1.06	745.6	148.5	Manual
3763	15.16	150.02	3654.87	-351.02	-658.33	401.51	3.72	771.11	148.62	Manual
3853	12.39	146.2	3742.27	-360.88	-676.55	412.76	3.24	792.52	148.61	Manual
3943	7.38	143.32	3830.91	-368.73	-689.22	421.59	5.59	807.94	148.55	Manual
4032	4.41	132.89	3919.43	-374.12	-696.13	427.52	3.53	816.93	148.44	Manual
4122	4.54	137.88	4009.16	-378.65	-701.13	432.44	0.46	823.76	148.33	Manual
4211	7.3	129.42	4097.67	-384.9	-707.33	439.17	3.24	832.58	148.16	Manual
4301	7.5	111.71	4186.94	-394.32	-713.14	449.05	2.53	842.74	147.8	Manual
4391	5.81	114.29	4276.33	-403.59	-717.18	458.66	1.91	851.31	147.4	Manual
4480	1.41	117.25	4365.13	-408.49	-719.54	463.74	4.95	856.03	147.2	Manual
4570	0.37	81.76	4455.12	-409.72	-720.01	465.01	1.25	857.11	147.14	Manual
4660	0.23	258.01	4545.12	-409.83	-720	465.12	0.67	857.17	147.14	Manual
4749	0.42	237.64	4634.11	-409.36	-720.21	464.67	0.25	857.1	147.17	Manual
4839	0.45	280.97	4724.11	-408.73	-720.32	464.05	0.36	856.86	147.21	Manual
4928	0.24	39.28	4813.11	-408.52	-720.11	463.82	0.68	856.56	147.21	Manual
5018	0.17	207.19	4903.11	-408.58	-720.08	463.88	0.45	856.57	147.21	Manual
5108	0.08	257.11	4993.11	-408.45	-720.22	463.76	0.15	856.61	147.22	Manual
5197	0.07	196.69	5082.11	-408.37	-720.28	463.68	0.09	856.63	147.23	Manual
5287	0.09	39.7	5172.11	-408.4	-720.28	463.71	0.17	856.64	147.23	Manual
5377	0.28	200.21	5262.11	-408.36	-720.43	463.68	0.41	856.75	147.23	Manual
5467	0.36	183.25	5352.11	-408.23	-720.92	463.59	0.14	857.11	147.26	Manual
5557	0.29	196.29	5442.11	-408.11	-721.42	463.51	0.11	857.49	147.28	Manual
5646	0.2	131.95	5531.11	-408.14	-721.74	463.56	0.31	857.79	147.29	Manual
5735	0.34	154.18	5620.11	-408.35	-722.08	463.79	0.19	858.2	147.29	Manual
5825	0.36	182.39	5710.1	-408.41	-722.61	463.9	0.19	858.7	147.3	Manual
5915	0.41	129.17	5800.1	-408.61	-723.09	464.13	0.39	859.23	147.3	Manual
6005	1.81	274.22	5890.09	-407.44	-723.19	462.97	2.4	858.69	147.37	Manual
6095	10.5	277.35	5979.49	-397.98	-722.04	453.4	9.66	852.59	147.87	Manual
6185	15.74	277.61	6067.11	-377.99	-719.37	433.15	5.82	839.71	148.95	Manual
6274	20.87	272.46	6151.58	-350.42	-717.09	405.33	6.04	823.71	150.52	Manual
6364	27.61	270.26	6233.6	-313.67	-716.3	368.41	7.55	805.49	152.78	Manual
6454	37.53	271.1	6309.35	-265.47	-715.68	320.03	11.03	783.98	155.91	Manual
6544	45.19	269.92	6376.85	-206.25	-715.2	260.6	8.55	761.2	159.98	Manual
6634	53.14	270.33	6435.65	-138.41	-715.04	192.57	8.84	740.51	164.93	Manual
6723	61.42	270.26	6483.72	-63.84	-714.65	117.75	9.3	724.29	170.64	Manual
6813	69.72	270.43	6520.91	17.76	-714.16	35.89	9.22	715.06	177.12	Manual
6902	72.93	271.15	6549.4	101.73	-712.99	-48.41	3.69	714.63	183.88	Manual
6992	79.21	271.63	6571.06	188.61	-710.87	-135.69	7	723.7	190.81	Manual



7082	82.76	268.89	6585.16	277.19	-710.47	-224.56	4.96	745.12	197.54	Manual
7171	88.66	268.95	6591.82	365.77	-712.14	-313.25	6.63	778	203.74	Manual
7261	90.56	269.18	6592.43	455.6	-713.61	-403.23	2.13	819.66	209.47	Manual
7350	90.48	269.05	6591.62	544.44	-714.99	-492.22	0.17	868.04	214.54	Manual
7440	90.49	269.3	6590.86	634.27	-716.28	-582.21	0.28	923.05	219.1	Manual
7530	90.14	268.56	6590.37	724.13	-717.96	-672.19	0.91	983.52	223.11	Manual
7619	89.95	268.93	6590.3	813	-719.91	-761.17	0.47	1047.69	226.6	Manual
7709	89.78	268.85	6590.51	902.86	-721.66	-851.15	0.21	1115.91	229.71	Manual
7799	89.96	269.27	6590.71	992.71	-723.13	-941.14	0.51	1186.87	232.46	Manual
7888	89.81	268.61	6590.89	1081.56	-724.78	-1030.12	0.76	1259.55	234.87	Manual
7977	90.01	269.48	6591.03	1170.41	-726.26	-1119.11	1	1334.11	237.02	Manual
8067	90.05	269.95	6590.98	1260.19	-726.71	-1209.11	0.52	1410.69	238.99	Manual
8157	89.8	269.57	6591.1	1349.96	-727.09	-1299.11	0.51	1488.74	240.76	Manual
8246	89.86	269.55	6591.37	1438.76	-727.77	-1388.1	0.07	1567.32	242.33	Manual
8336	89.79	269.31	6591.64	1528.57	-728.67	-1478.1	0.28	1647.95	243.76	Manual
8426	89.73	269.66	6592.02	1618.37	-729.48	-1568.09	0.39	1729.47	245.05	Manual
8516	90.01	269.88	6592.22	1708.15	-729.84	-1658.09	0.4	1811.61	246.24	Manual
8606	89.87	269.75	6592.32	1797.91	-730.13	-1748.09	0.21	1894.44	247.33	Manual
8696	89.85	269.73	6592.54	1887.69	-730.54	-1838.09	0.03	1977.94	248.33	Manual
8785	89.73	269.67	6592.86	1976.47	-731	-1927.09	0.15	2061.08	249.23	Manual
8875	89.82	270.1	6593.22	2066.23	-731.18	-2017.09	0.49	2145.52	250.07	Manual
8964	89.93	269.87	6593.41	2154.98	-731.21	-2106.09	0.29	2229.41	250.85	Manual
9054	89.93	269.7	6593.52	2244.75	-731.54	-2196.09	0.19	2314.72	251.58	Manual
9144	90.08	269	6593.51	2334.57	-732.56	-2286.08	0.8	2400.59	252.23	Manual
9234	90.07	269.36	6593.39	2424.41	-733.85	-2376.07	0.4	2486.82	252.84	Manual
9323	90.03	268.9	6593.32	2513.25	-735.2	-2465.06	0.52	2572.36	253.39	Manual
9413	90.01	269.3	6593.28	2603.09	-736.62	-2555.05	0.44	2659.11	253.92	Manual
9503	90.04	269.56	6593.25	2692.9	-737.51	-2645.04	0.29	2745.94	254.42	Manual
9592	90.08	269.38	6593.15	2781.7	-738.34	-2734.04	0.21	2831.98	254.89	Manual
9682	90.15	269.32	6592.97	2871.52	-739.36	-2824.03	0.1	2919.22	255.33	Manual
9772	89.67	268.28	6593.11	2961.39	-741.24	-2914.01	1.27	3006.81	255.73	Manual
9861	89.94	269.07	6593.42	3050.27	-743.3	-3002.99	0.94	3093.61	256.1	Manual
9951	90.23	269.89	6593.28	3140.07	-744.12	-3092.98	0.97	3181.23	256.47	Manual
10041	89.79	269.05	6593.27	3229.87	-744.95	-3182.98	1.05	3268.99	256.83	Manual
10130	90.12	270.22	6593.34	3318.66	-745.52	-3271.97	1.37	3355.83	257.16	Manual
10219	90.14	270.49	6593.13	3407.37	-744.96	-3360.97	0.3	3442.54	257.5	Manual
10309	90.16	270.95	6592.9	3497.02	-743.83	-3450.97	0.51	3530.22	257.84	Manual
10399	90.13	270.4	6592.67	3586.68	-742.77	-3540.96	0.61	3618.02	258.15	Manual
10489	90.35	271.25	6592.29	3676.32	-741.48	-3630.95	0.98	3705.88	258.46	Manual
10578	90.05	270.39	6591.98	3764.96	-740.2	-3719.94	1.02	3792.87	258.75	Manual
10668	90.15	270.37	6591.83	3854.66	-739.61	-3809.93	0.11	3881.06	259.01	Manual
10757	90.03	270.19	6591.69	3943.38	-739.17	-3898.93	0.24	3968.38	259.27	Manual
10847	89.84	270.56	6591.79	4033.08	-738.58	-3988.93	0.46	4056.73	259.51	Manual
10937	89.48	269.48	6592.32	4122.82	-738.55	-4078.93	1.26	4145.25	259.74	Manual
11027	89.97	270.42	6592.75	4212.57	-738.63	-4168.93	1.18	4233.85	259.95	Manual
11117	90.12	270.68	6592.68	4302.25	-737.77	-4258.92	0.33	4322.35	260.17	Manual
11206	89.94	270.04	6592.64	4390.96	-737.21	-4347.92	0.75	4409.97	260.38	Manual
11296	90.07	270.11	6592.63	4480.69	-737.09	-4437.92	0.16	4498.71	260.57	Manual
11386	90.27	271.07	6592.36	4570.36	-736.16	-4527.91	1.09	4587.37	260.77	Manual
11476	90.1	269.71	6592.07	4660.06	-735.55	-4617.91	1.52	4676.12	260.95	Manual



15960	90.91	269.36	6550.41	9131.01	-736.7	-9101.4	0.46	9131.16	265.37	Manual
16049	90.34	268.4	6549.44	9219.87	-738.44	-9190.37	1.25	9219.99	265.41	Manual
16138	90.71	268.7	6548.62	9308.76	-740.69	-9279.34	0.54	9308.85	265.44	Manual
16227	90.8	269.48	6547.45	9397.59	-742.1	-9368.32	0.88	9397.67	265.47	Manual
16317	90.95	269.84	6546.08	9487.37	-742.64	-9458.31	0.43	9487.42	265.51	Manual
16407	90.62	268.85	6544.84	9577.17	-743.67	-9548.29	1.16	9577.21	265.55	Manual
16496	91.07	269.89	6543.53	9665.98	-744.64	-9637.28	1.27	9666	265.58	Manual
16585	90.79	268.62	6542.09	9754.8	-745.8	-9726.25	1.46	9754.81	265.62	Manual
16675	90.84	269.05	6540.8	9844.65	-747.63	-9816.23	0.48	9844.66	265.64	Manual
16765	91.06	270.07	6539.31	9934.43	-748.32	-9906.21	1.16	9934.43	265.68	Manual
16809	90.7	268.54	6538.64	9978.34	-748.86	-9950.2	3.57	9978.34	265.7	Manual
16831	90.7	268.54	6538.37	10000.31	-749.42	-9972.19	0	10000.31	265.7	Manual

Company:

Well:

Field Name:

Country Name:

State Name:

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PDC Energy Inc


Pharaoh 3N

Wattenberg

United States

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Weld



XEM GAMMA RAY

1in/100ft Measured Depth

Final Print

Recorded Mode