

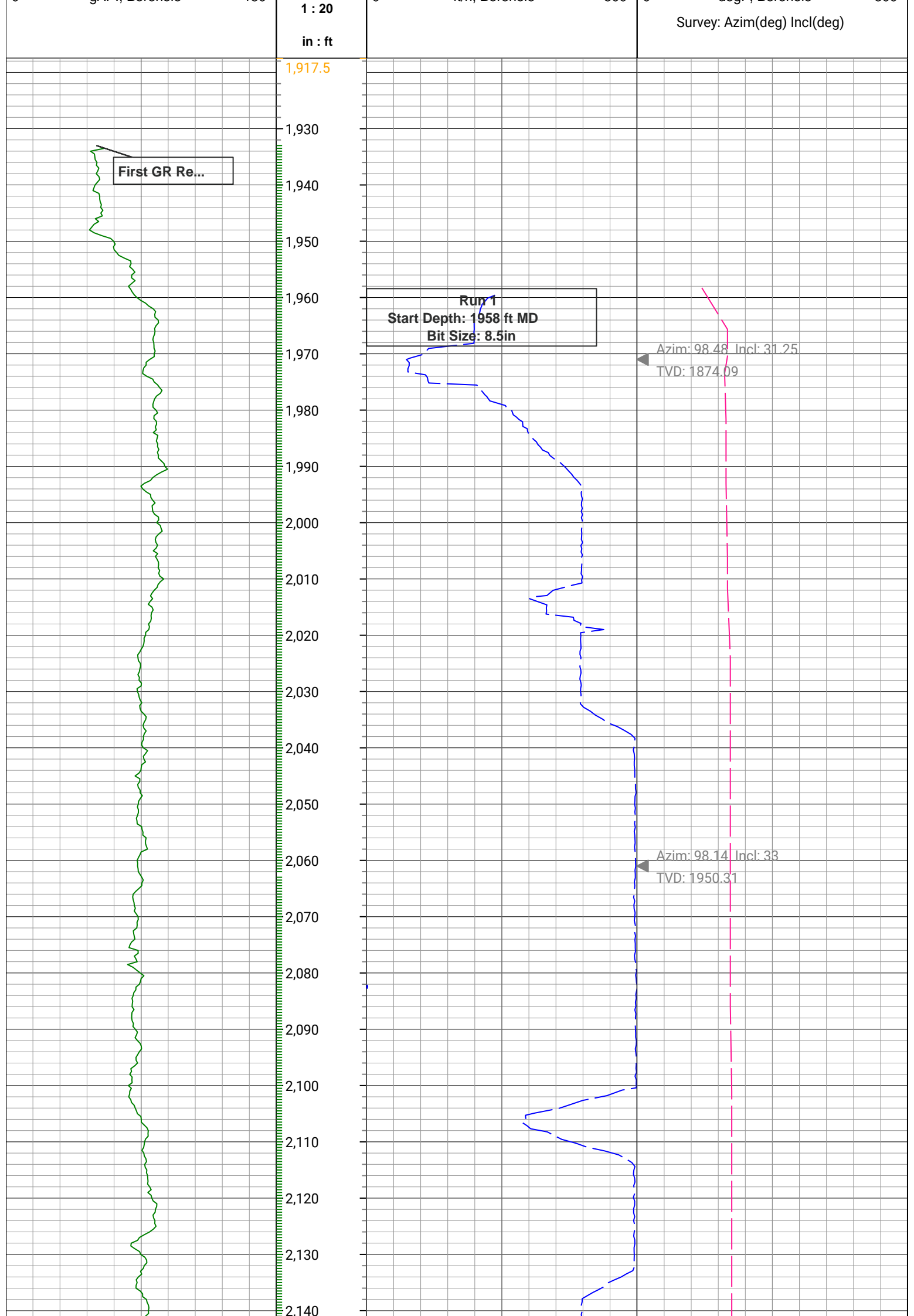
Company: Verdad Resources LLC		Well: Sonic Star 1101-16H		Field Name: DJ Horizontal Niobrara		Country Name: United States		State Name: Colorado		County Name: Weld	
XBOLT GAMMA RAY											
5in/100ft Measured Depth											
Final Print											
Recorded Mode											
Company: Verdad Resources LLC						Verdad Resources LLC					
Well: Sonic Star 1101-16H						Sonic Star 1101-16H					
Field Name: DJ Horizontal Niobrara						DJ Horizontal Niobrara					
Country Name: United States						United States					
State Name: Colorado						Colorado					
County Name: Weld						Weld					
Latitude: 40°40'15.452"N				API Number: 05-123-49003							
Longitude: 104°02'56.767"W				Rig Name: PD 464							
Spud Date: 17-Aug-2021				Rig Type: Land							
Log Interval: 1918.50--19004.80(ft)				Job Number: 21CC00131							
Depth Source: Driller's Depth				Print Type: Final Print							
Log Measured From: Drill Floor				Northing: 1490565.78(ft)							
Drill Floor Elevation: 4903.00(ft)				Easting: 3402457.02(ft)							
Ground Level Elevation: 4882.00(ft)				Coordinate System: NAD83 Colorado State Plane, Northern Zone, US Feet							
Permanent Datum: Sea Level											

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 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.

Operational Run Summary			
Notes			
Run 1 (Bit Size: 8.5 in)			
DateTime Log Started	18-Aug-2021 16:03:25	DateTime Log Finished	22-Aug-2021 17:18:03
Start Depth (ft)	1958	Stop Depth (ft)	19005
Mud Type	Oil Based Mud	Mud Density (lbm/gal)	9.4
Potassium (%)	0	Barite	Yes
GR Sensor Offset (ft)	24.98	Calibration Coefficient	0
DNI Sensor Offset (ft)	39.34		

Log			
Description: XBOLT GAMMA RAY		Format: XBOLT_GR_DNI_VERDAD	Index Scale: 5in/100ft
Creation Date: 23-Aug-2021		Index Unit: ft	Index Type: Measured Depth
GR_RM,XBOLT		TEMP_RT,XBOLT	
0	API Borehole		300
	150		
Depth		ROP5_RT	
0		ft/h Borehole	
		500	
		degF Borehole	
		300	



2,150
2,160
2,170
2,180
2,190
2,200
2,210
2,220
2,230
2,240
2,250
2,260
2,270
2,280
2,290
2,300
2,310
2,320
2,330
2,340
2,350
2,360
2,370

GR_RM,XBOL



Azim: 98.23 Incl: 34.8
TVD: 2024.17

Azim: 98.06 Incl: 37.08
TVD: 2097.08

Azim: 97.86 Incl: 38.82
TVD: 2167.21

ROP5_R1

TEMP_RT,XBOL

GR_RM,XBOL



2,380
2,390
2,400
2,410
2,420
2,430
2,440
2,450
2,460
2,470
2,480
2,490
2,500
2,510
2,520
2,530
2,540
2,550
2,560
2,570
2,580
2,590
2,600

ROP5_R1



Azim: 98.02 Incl: 41.37
TVD: 2235.3

Azim: 97.55 Incl: 43.03
TVD: 2301.97

Azim: 97.3 Incl: 44.96
TVD: 2366.71

TEMP_RT,XBOL



GR_RM,XBOL



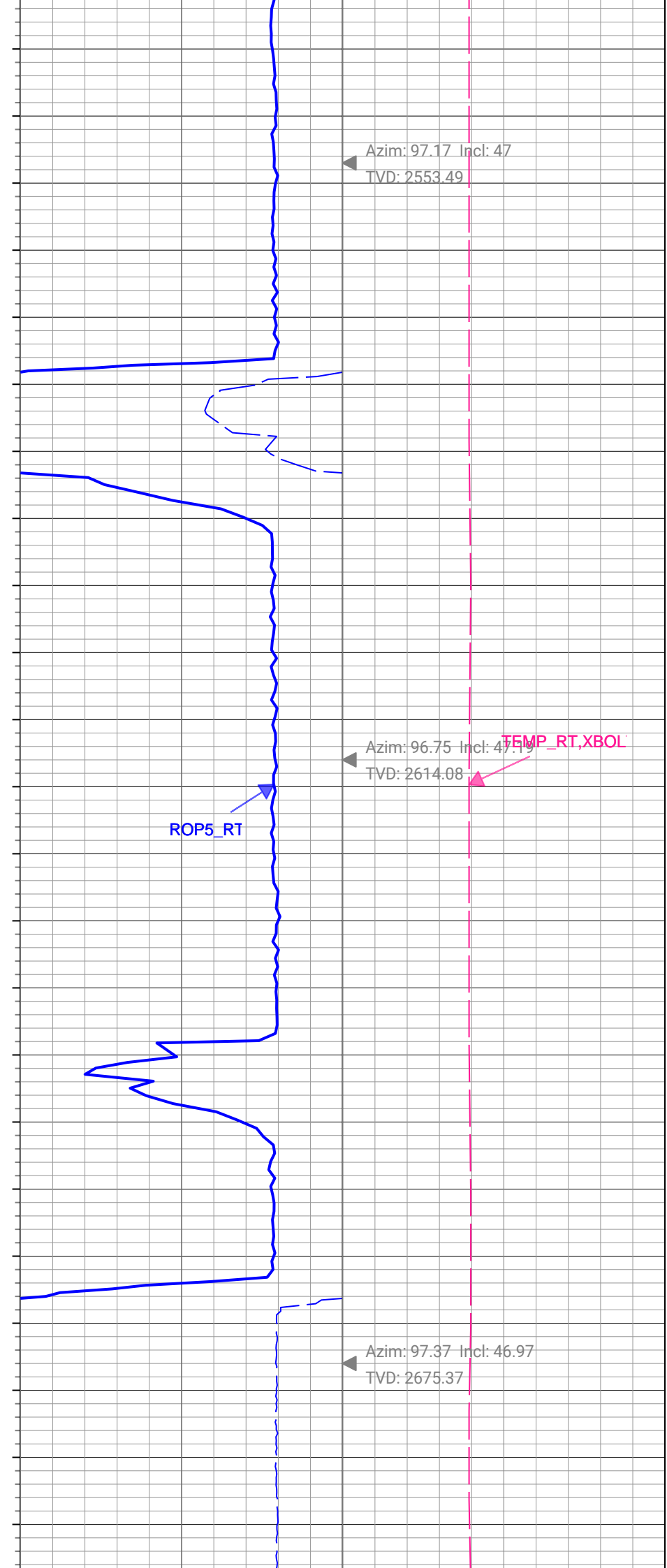
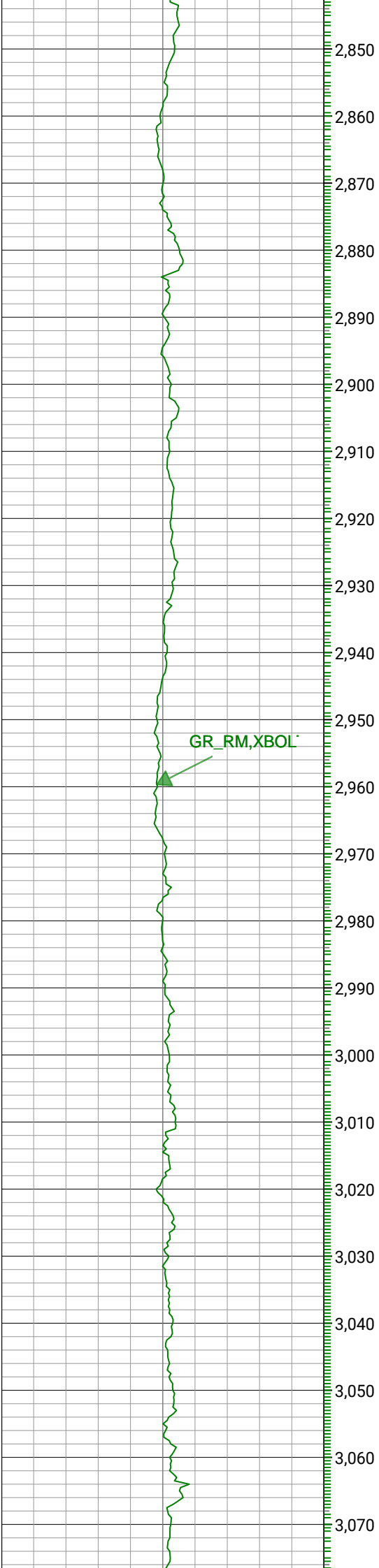
ROP5_R1

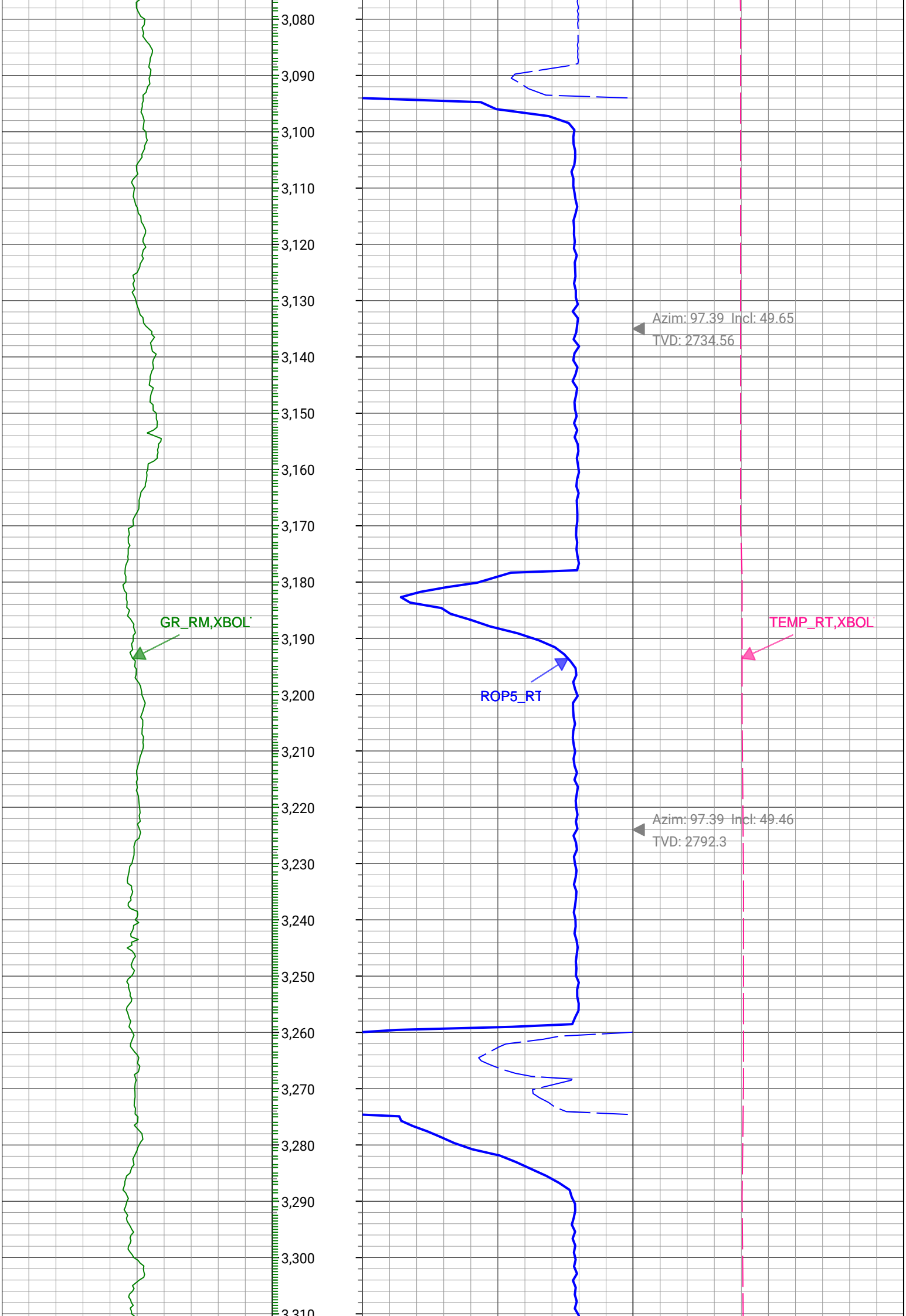
Azim: 97.46 Incl: 44.88
TVD: 2429.73

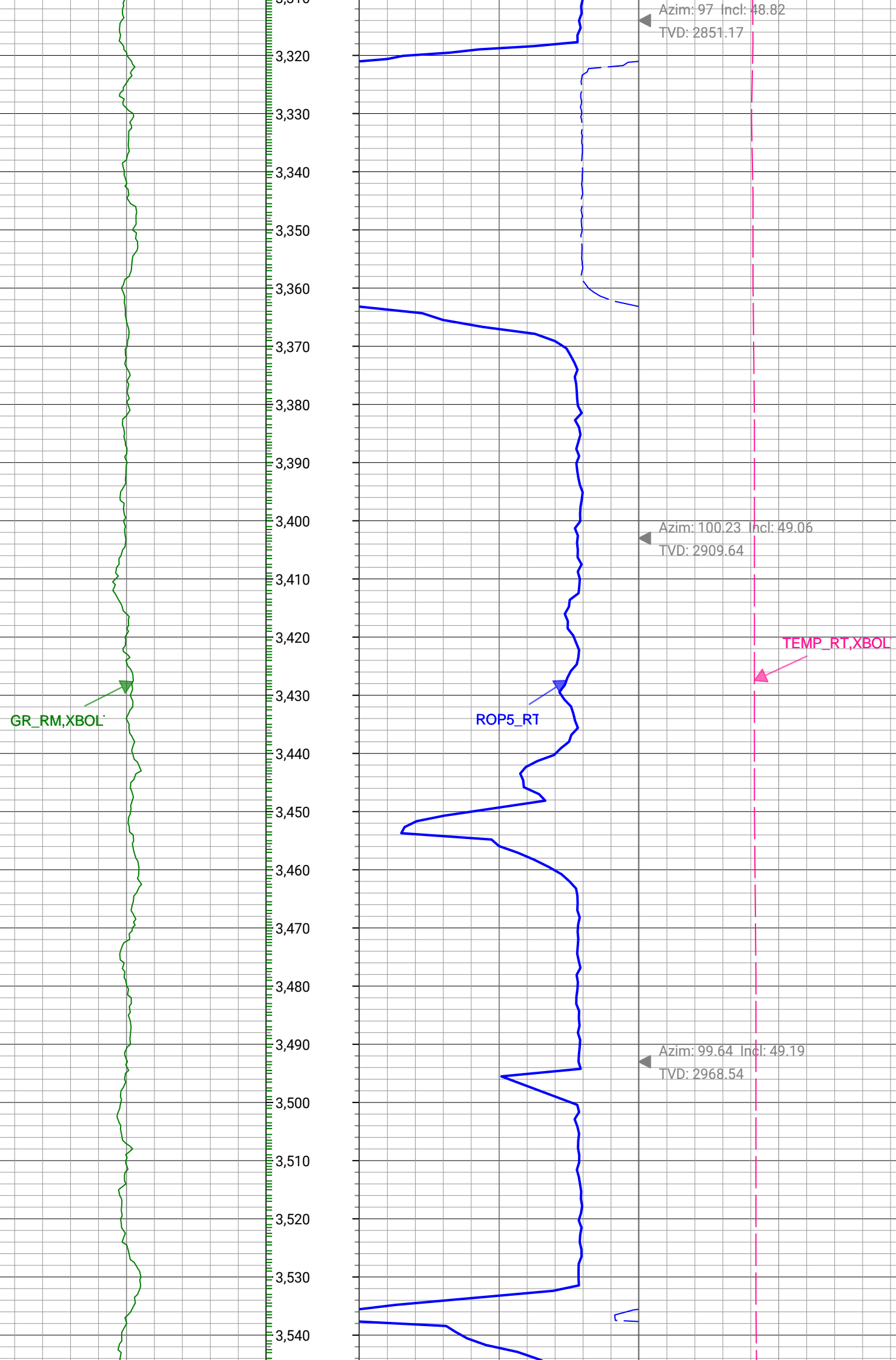
TEMP_RT,XBOL



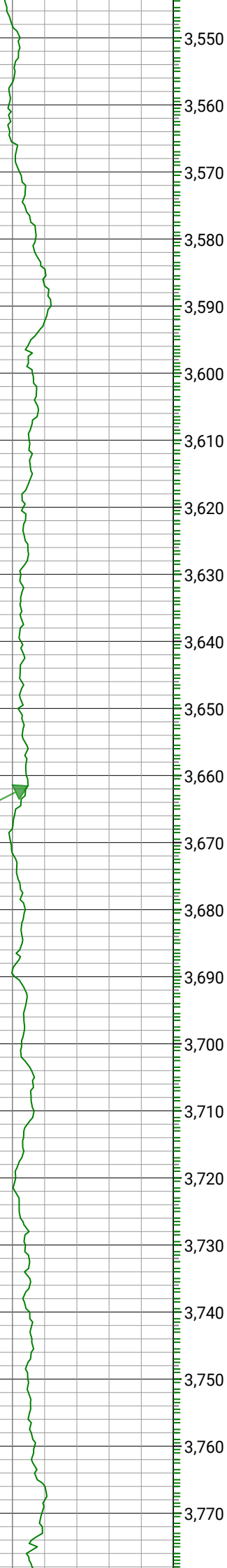
Azim: 97.47 Incl: 47.18
TVD: 2492.21



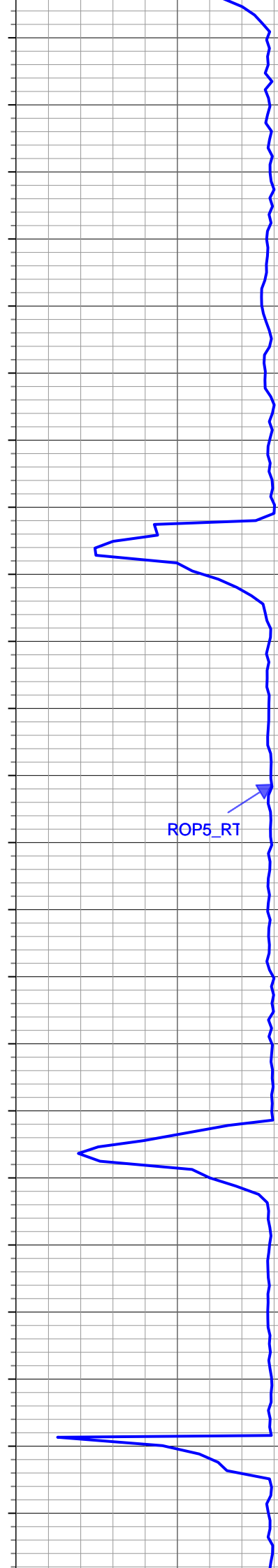




GR_RM,XBOL



ROP5_RT

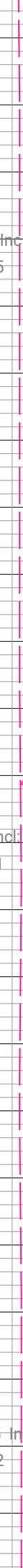


Azim: 99.74 Incl: 48.95
TVD: 3026.85

Azim: 99.6 Incl: 49.28
TVD: 3085.11

Azim: 100.35 Incl: 49.2
TVD: 3143.22

TEMP_RT,XBOL



GR_RM,XBOL



ROP5_RT



TEMP_RT,XBOL



Azim: 99.56 Incl: 49.28
TVD: 3201.32

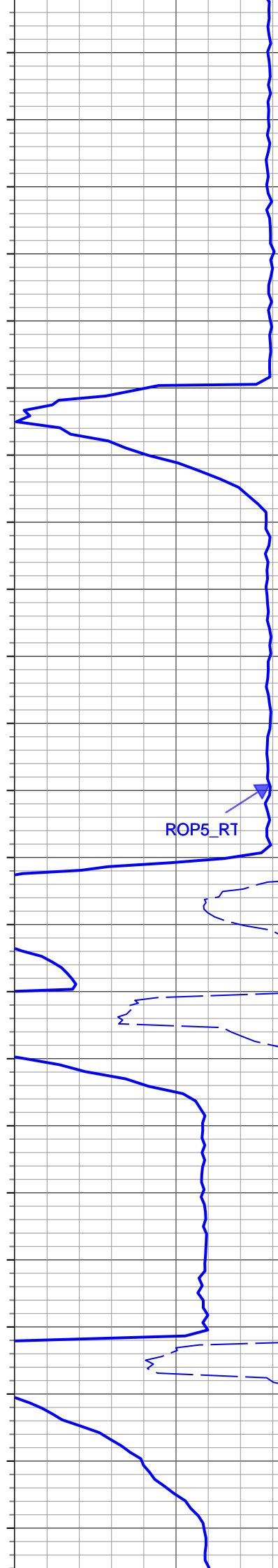
Azim: 100.12 Incl: 48.81
TVD: 3260.31

GR_RM,XBOL



4,020
4,030
4,040
4,050
4,060
4,070
4,080
4,090
4,100
4,110
4,120
4,130
4,140
4,150
4,160
4,170
4,180
4,190
4,200
4,210
4,220
4,230
4,240

ROP5_RT



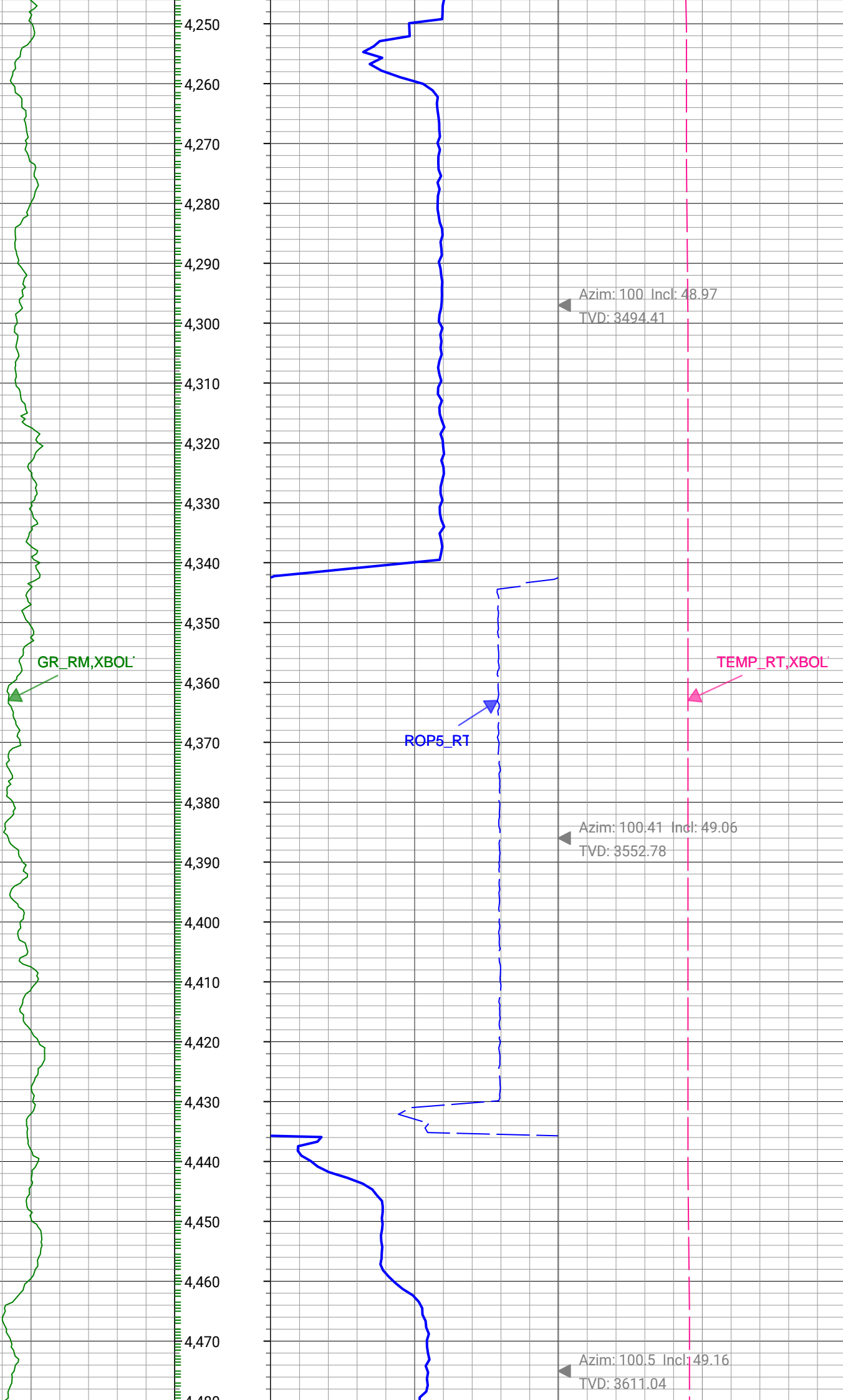
Azim: 100.9 Incl: 49.26
TVD: 3318.66

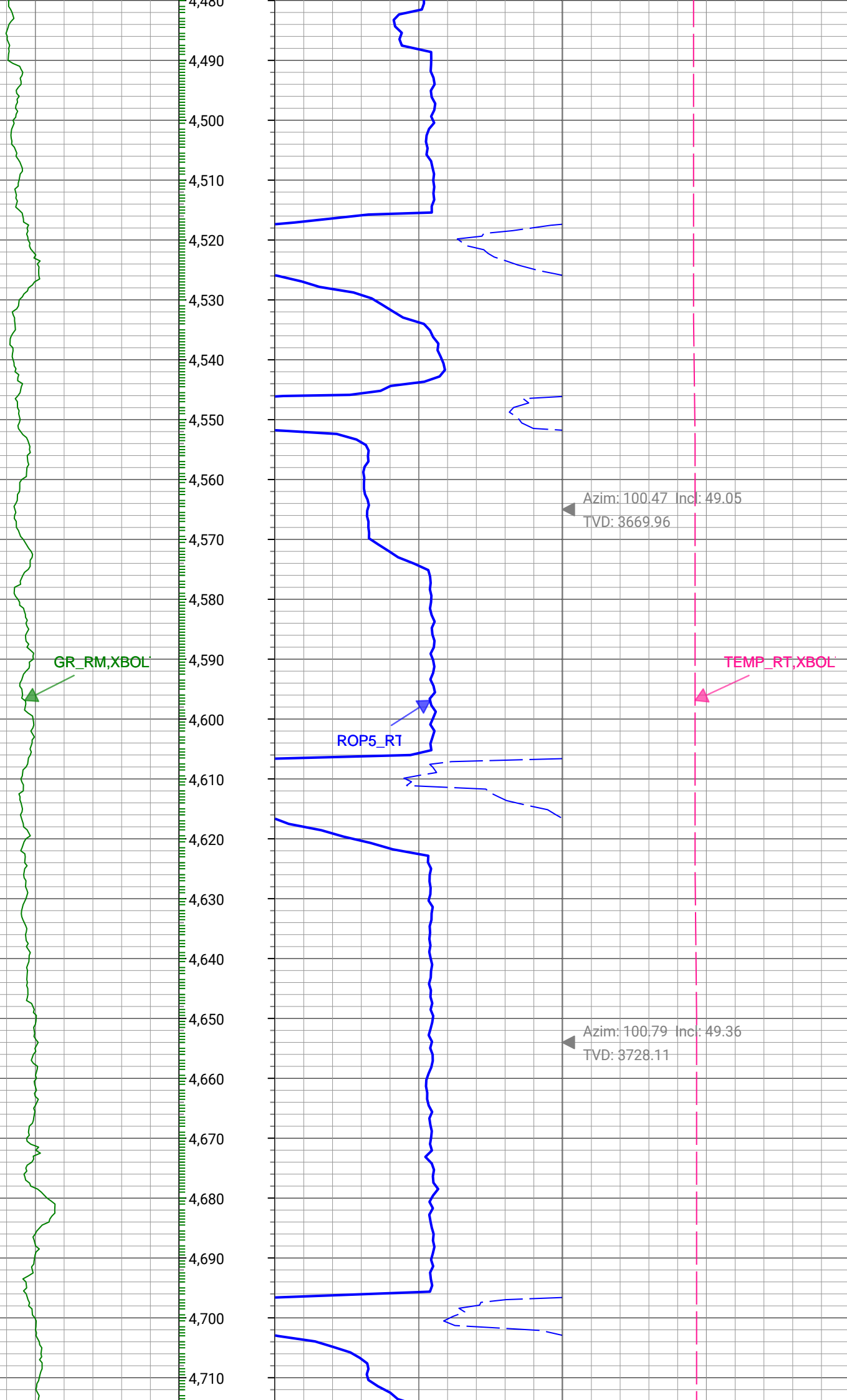
Azim: 101.13 Incl: 49.24
TVD: 3377.41

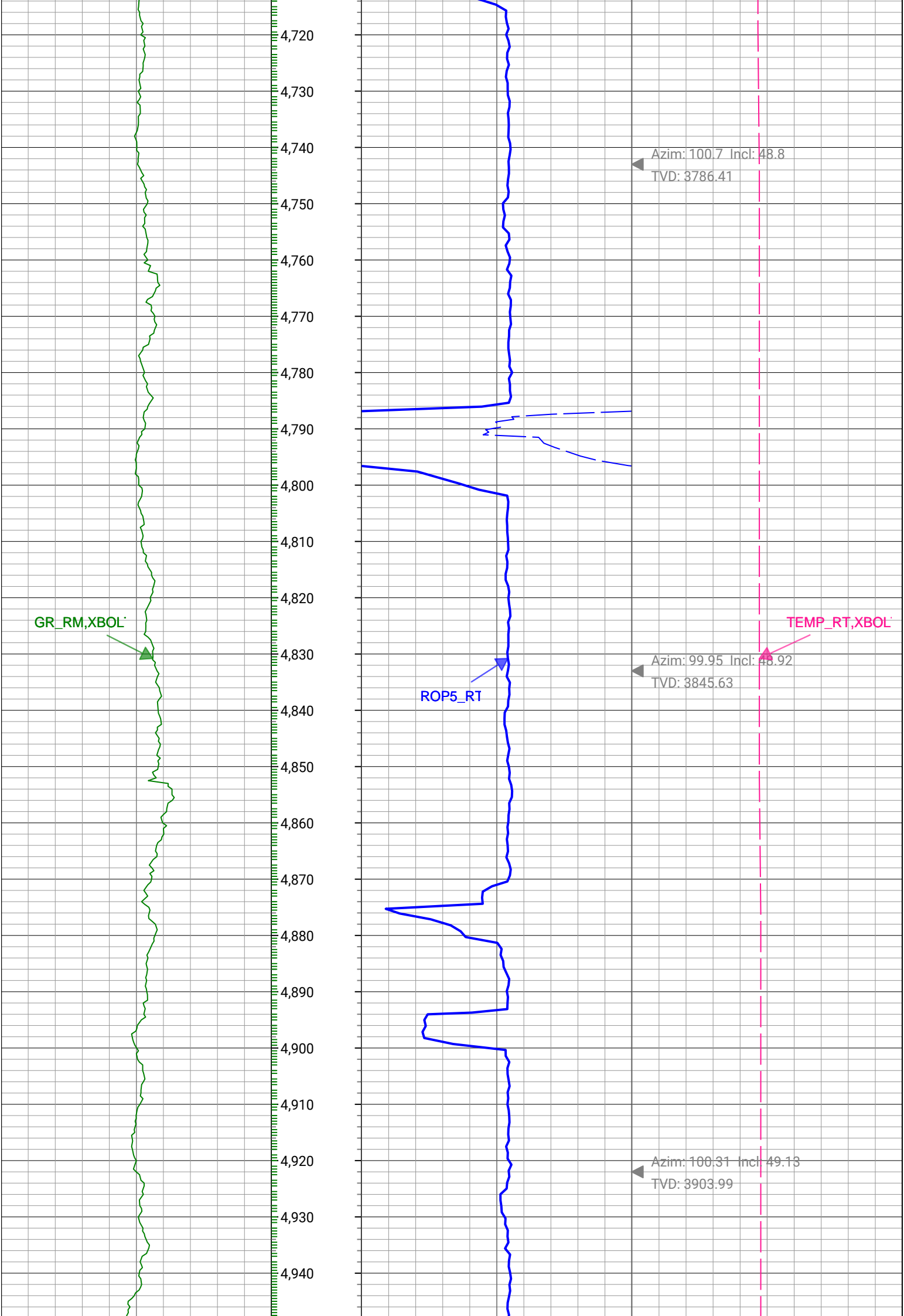
Azim: 100.15 Incl: 49.26
TVD: 3435.5

TEMP_RT,XBOL









GR_RM,XBOL

ROP5_RT

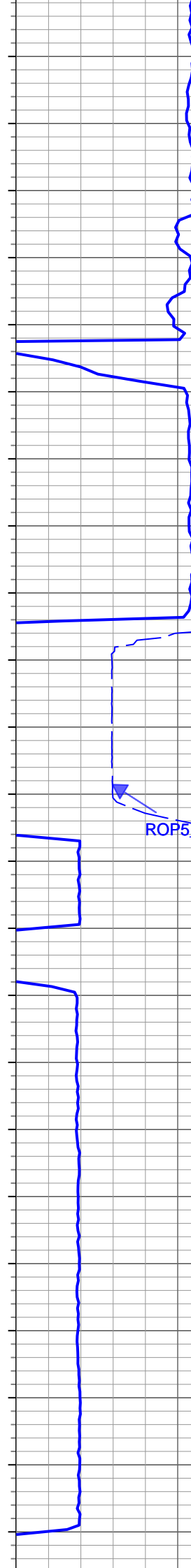
TEMP_RT,XBOL

Azim: 100.17 Incl: 49.33
TVD: 3962.76

Azim: 100.12 Incl: 49.47
TVD: 4020.68

5,190
5,200
5,210
5,220
5,230
5,240
5,250
5,260
5,270
5,280
5,290
5,300
5,310
5,320
5,330
5,340
5,350
5,360
5,370
5,380
5,390
5,400
5,410

GR_RM,XBOL



ROP5_R1



TEMP_RT,XBOL



Azim: 100,07 Incl: 49.28
TVD: 4078.63

Azim: 100,78 Incl: 48.76
TVD: 4137.65

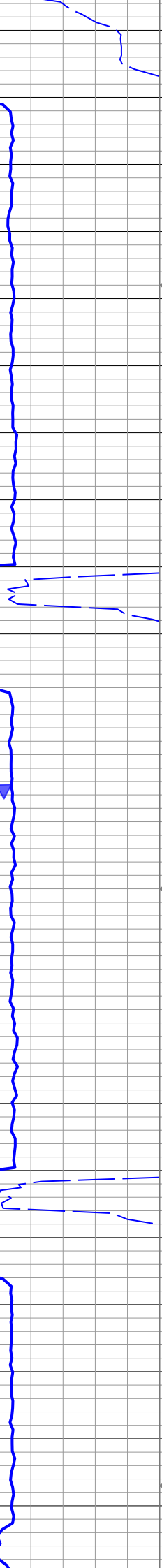
Azim: 101,51 Incl: 49.05
TVD: 4196.15

5,420
5,430
5,440
5,450
5,460
5,470
5,480
5,490
5,500
5,510
5,520
5,530
5,540
5,550
5,560
5,570
5,580
5,590
5,600
5,610
5,620
5,630
5,640

GR_RM,XBOL



ROP5_RT



Azim: 101.12 Incl: 49.69
TVD: 4254.11

TEMP_RT,XBOL

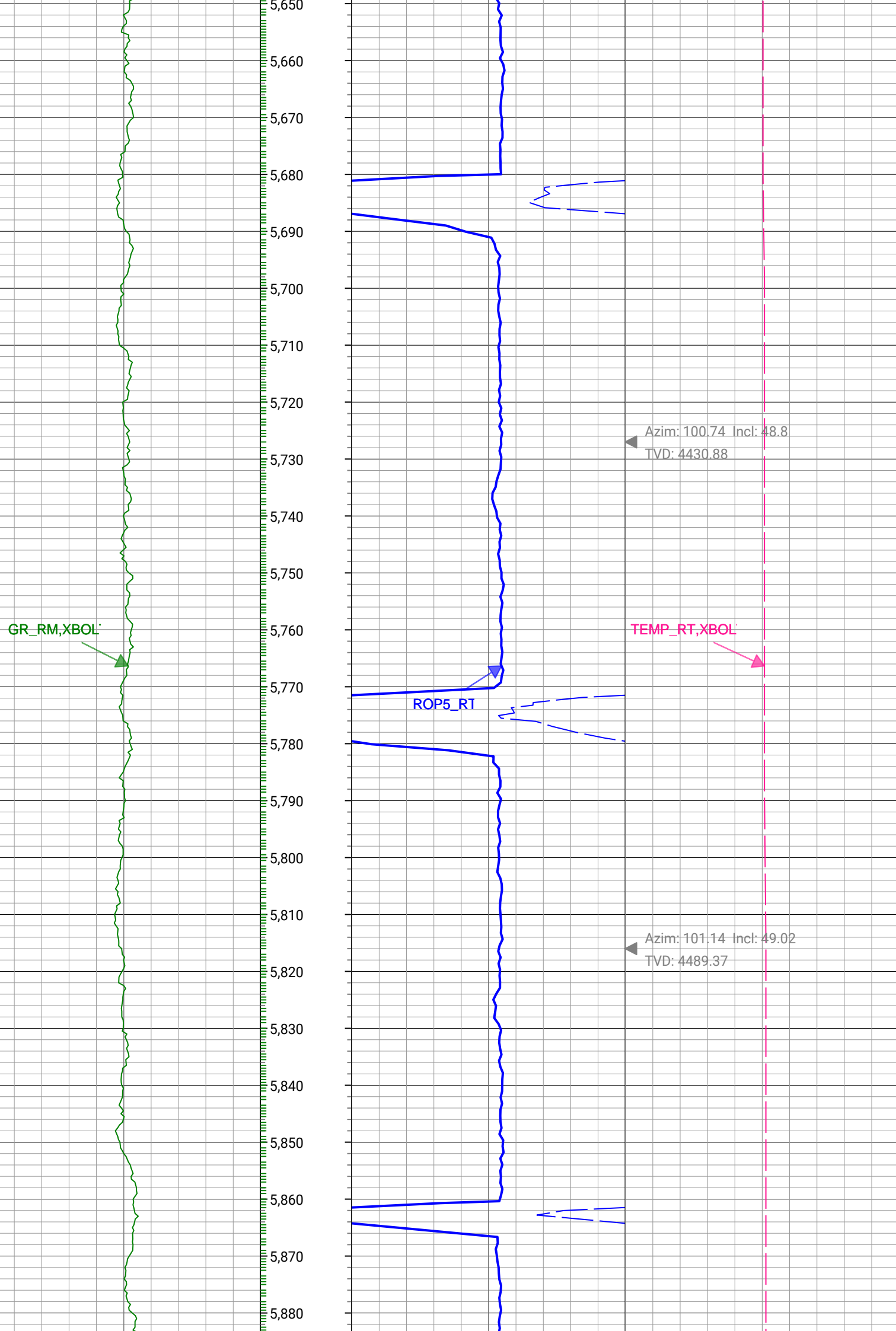
TEMP_RT,XBOL

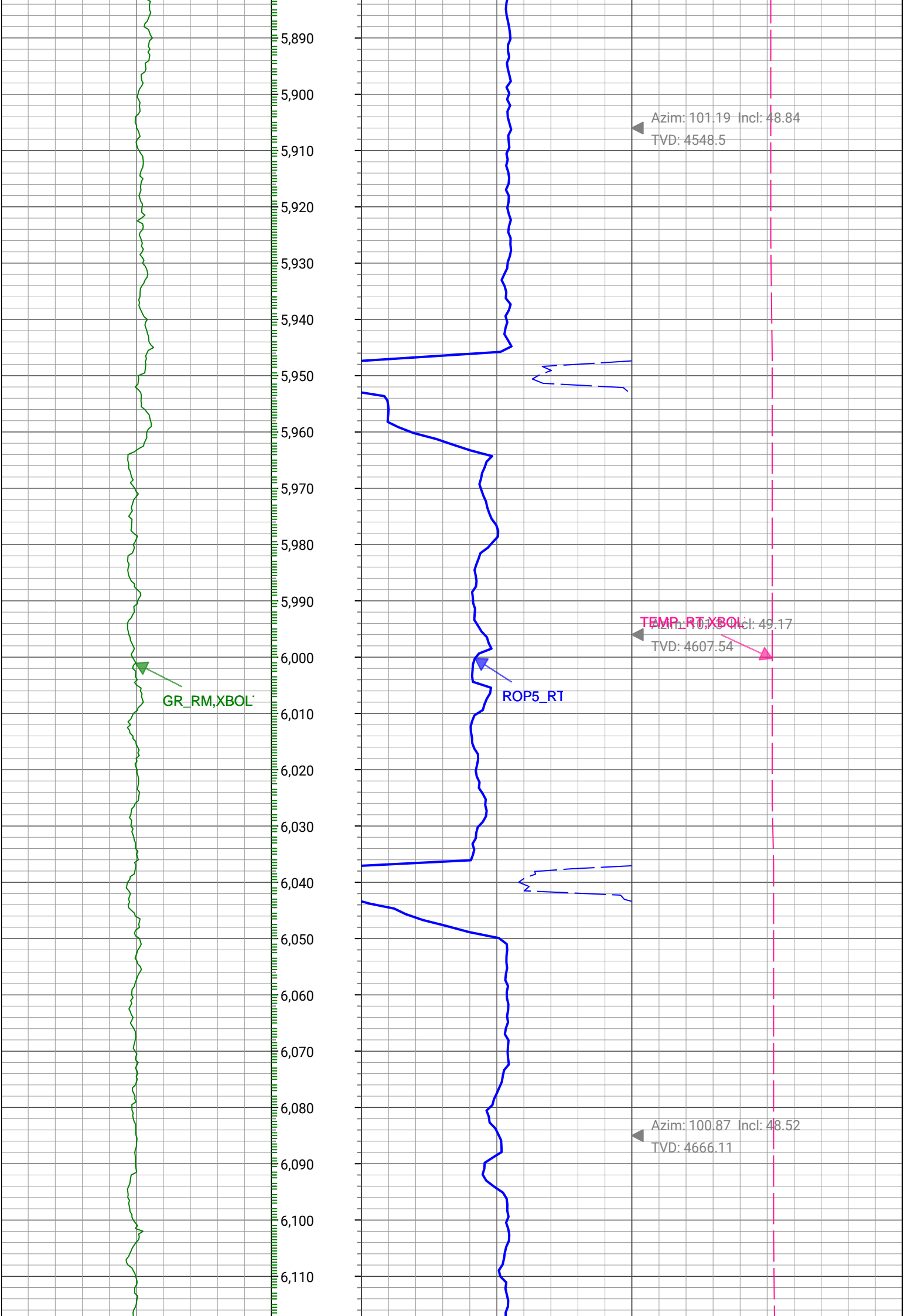


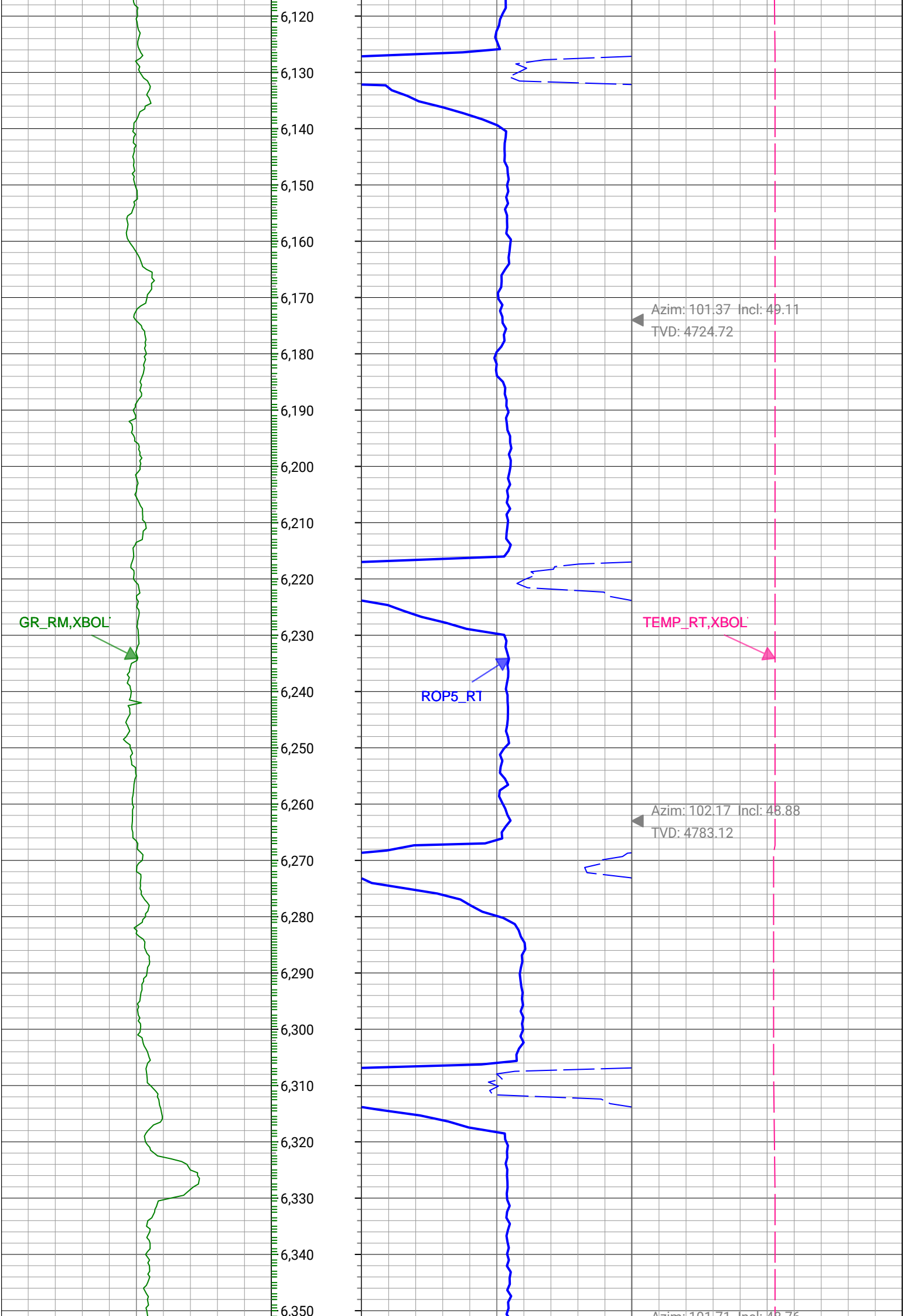
Azim: 101.21 Incl: 48.71
TVD: 4312.91

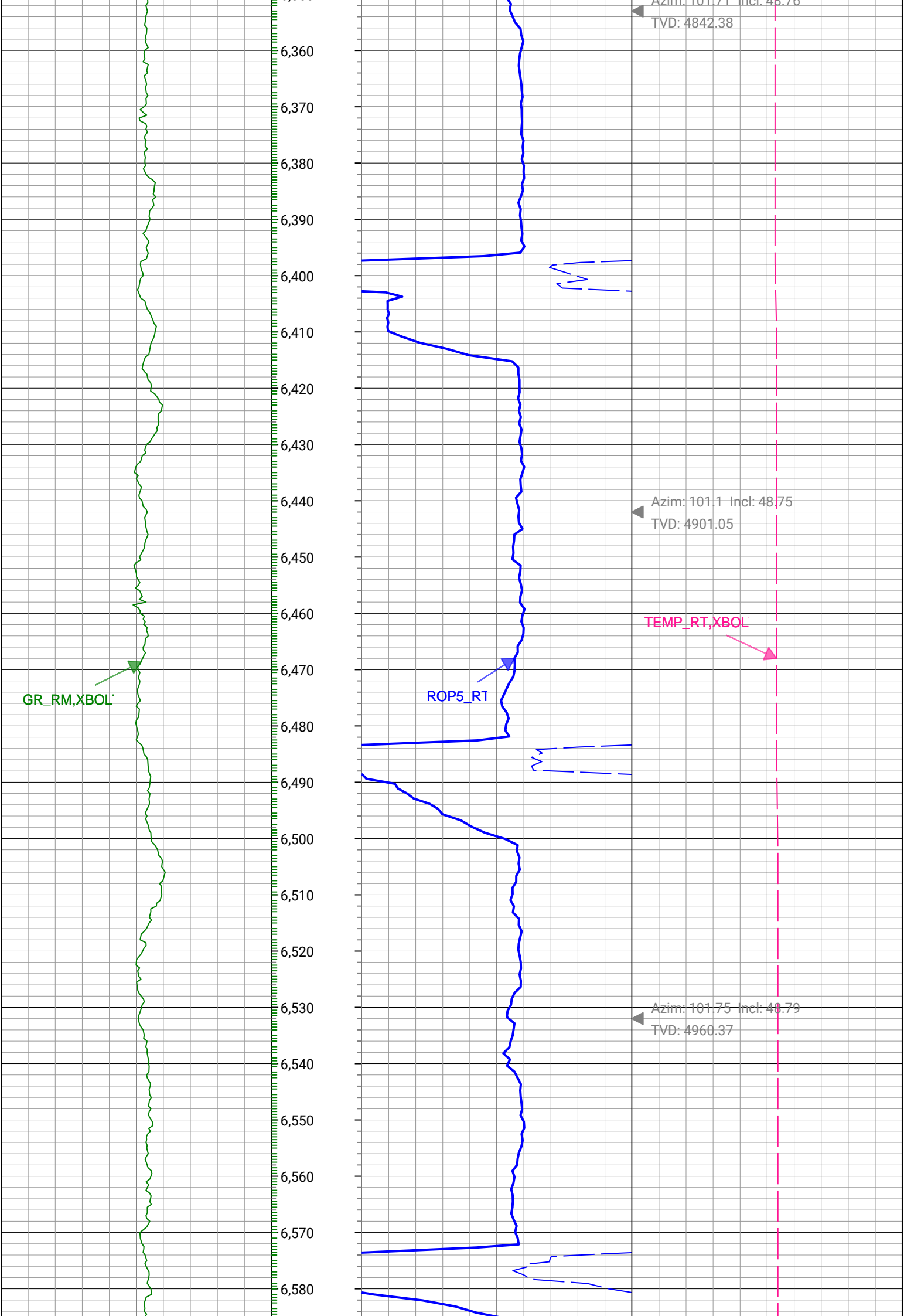
Azim: 101.46 Incl: 48.79
TVD: 4371.59

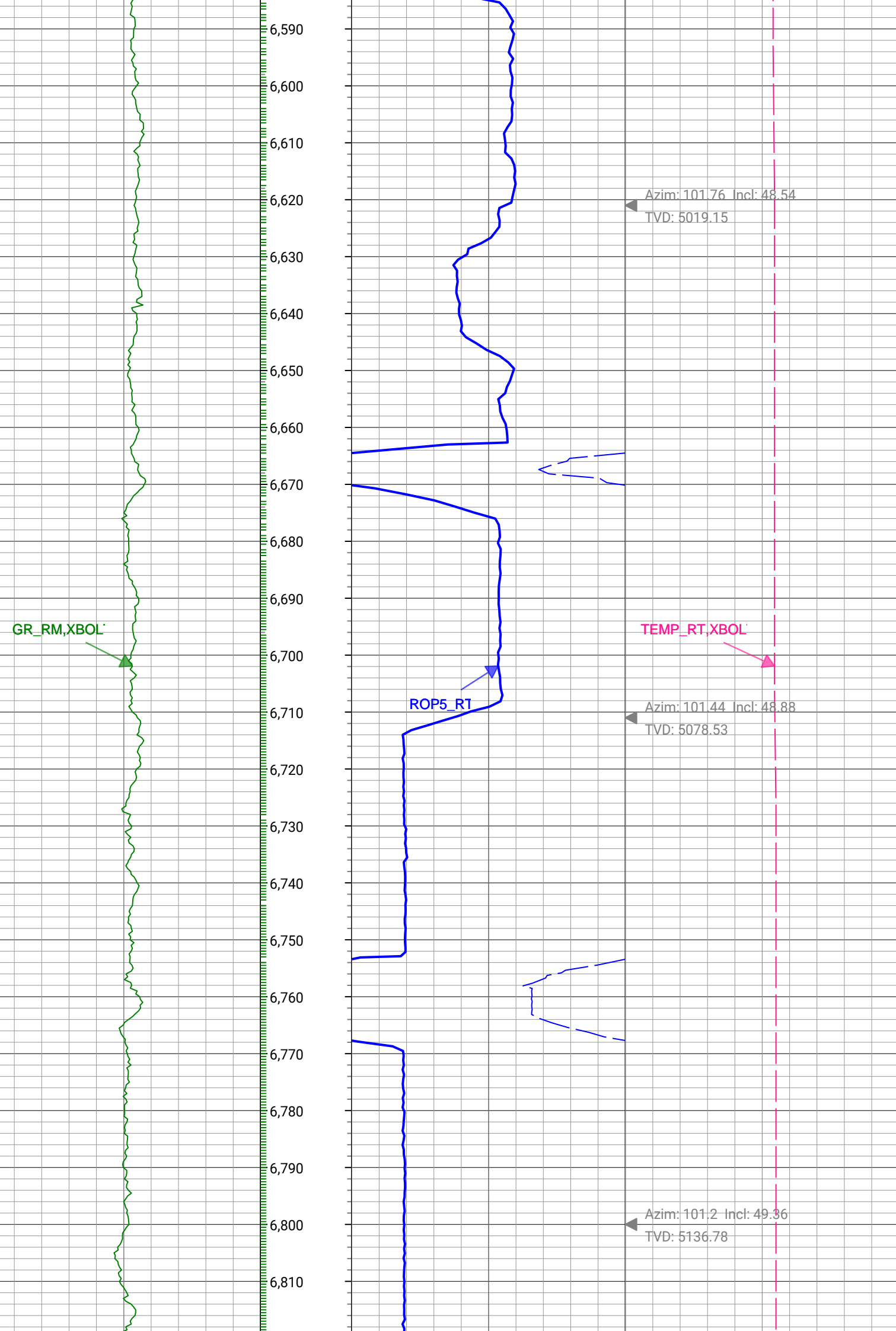


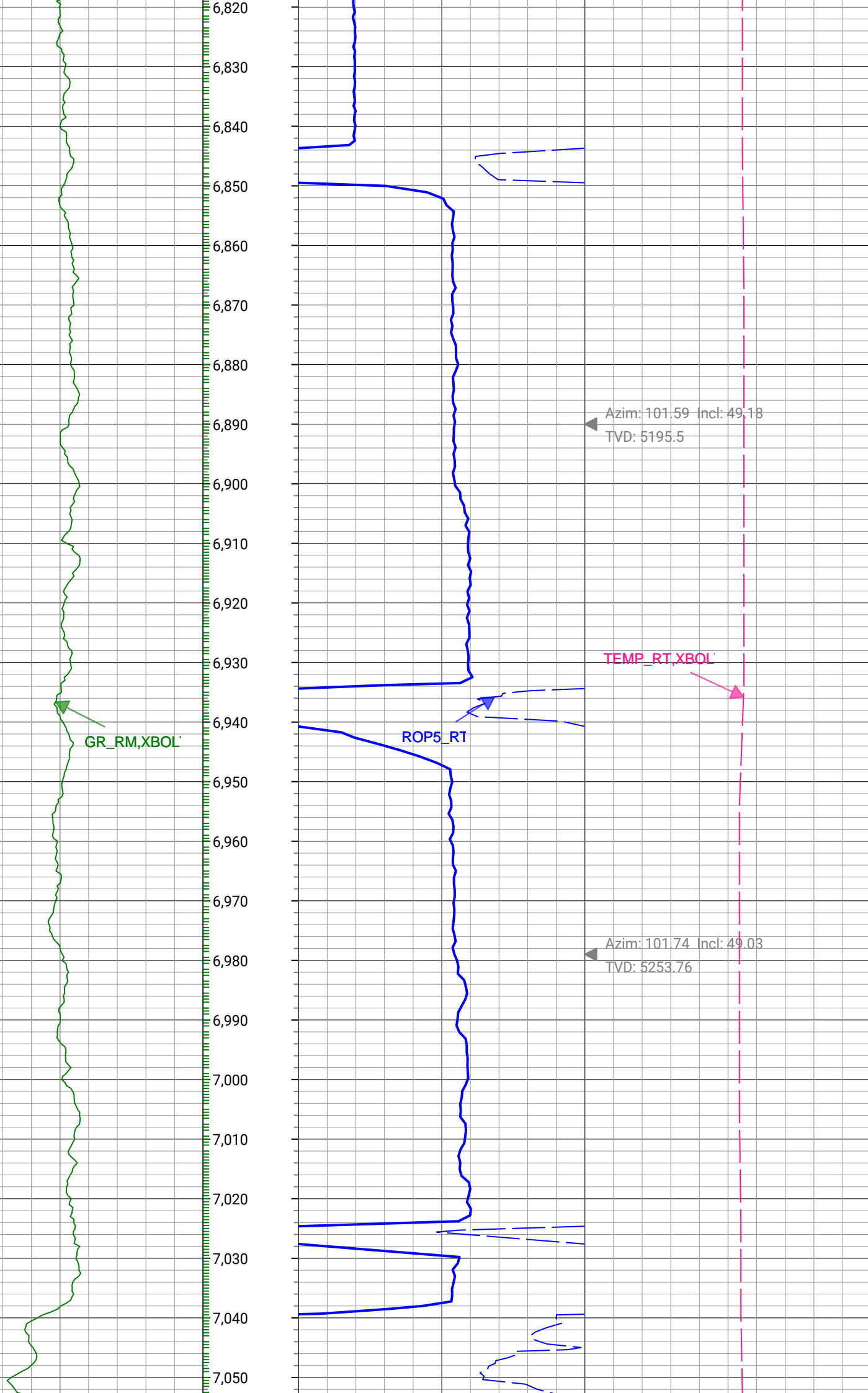












GR_RM,XBOL



ROP5_RT



Azim: 102.05 Incl: 49.1
TVD: 5312.73



Azim: 101.86 Incl: 48.88
TVD: 5371.13

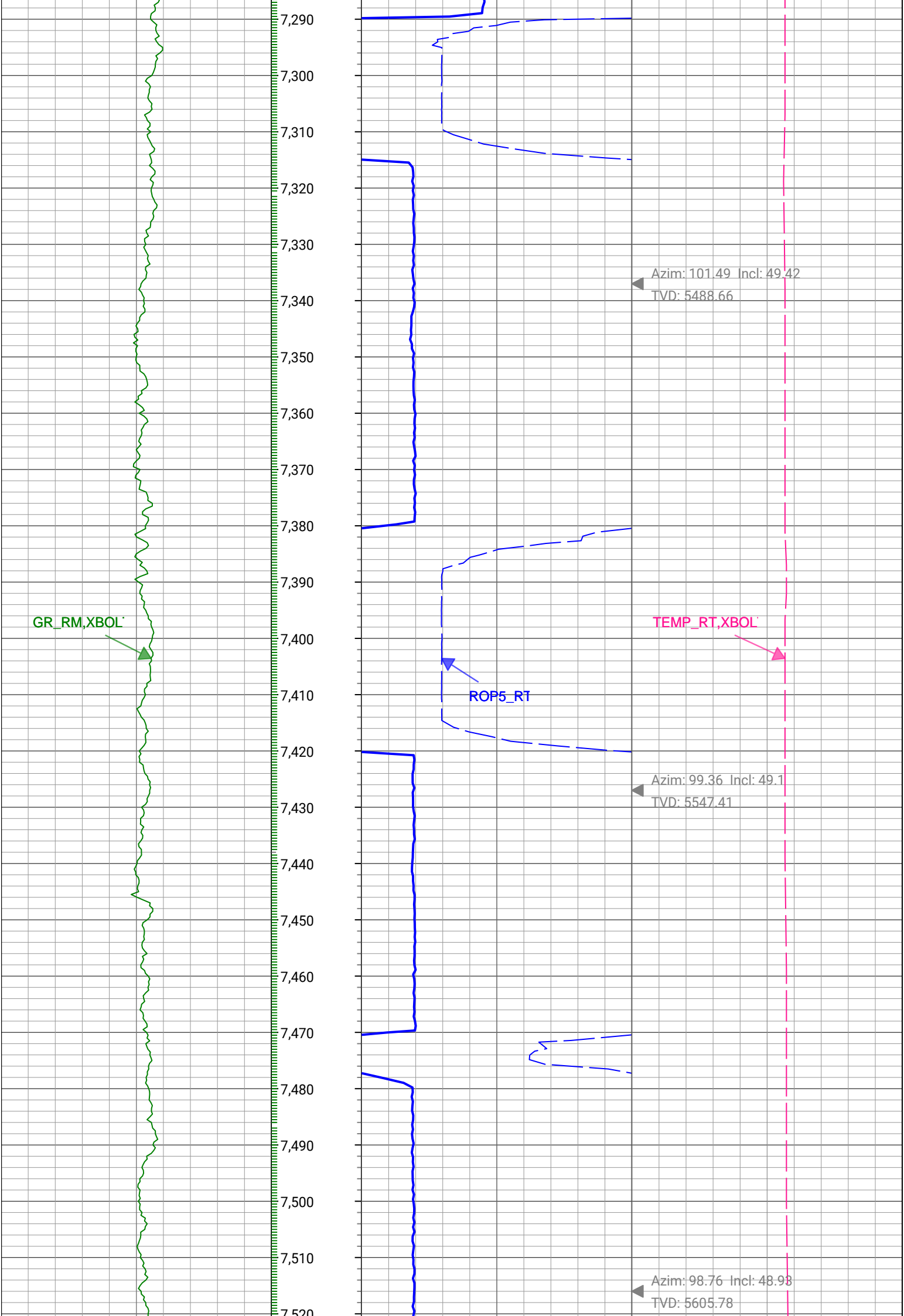


TEMP_RT,XBOL

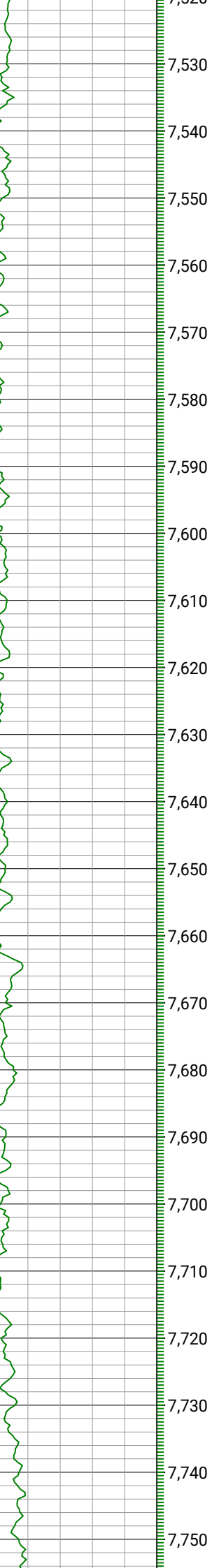


Azim: 101.75 Incl: 48.77
TVD: 5430.38



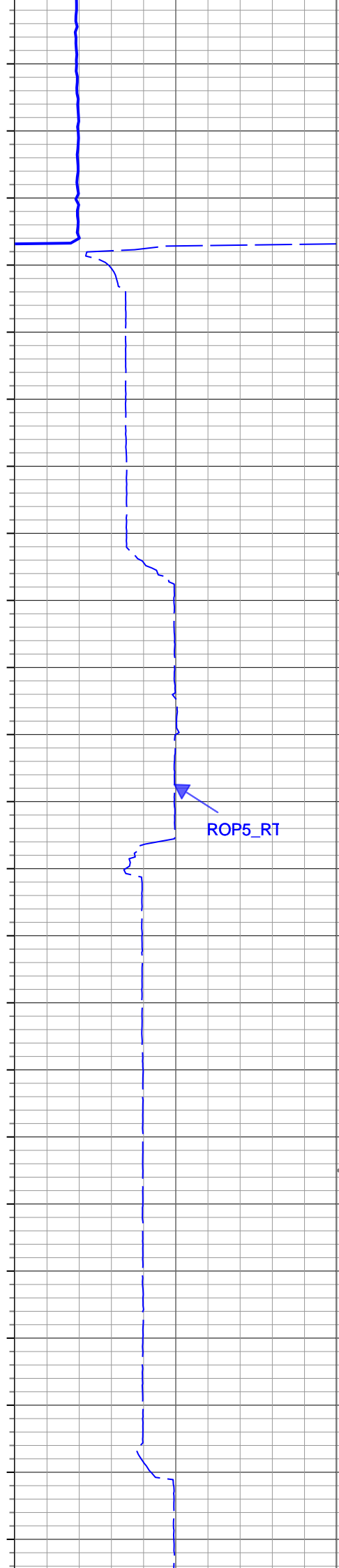


GR_RM,XBOL



7,520
7,530
7,540
7,550
7,560
7,570
7,580
7,590
7,600
7,610
7,620
7,630
7,640
7,650
7,660
7,670
7,680
7,690
7,700
7,710
7,720
7,730
7,740
7,750

ROP5_RT



Azim: 92.61 Incl: 49.15
TVD: 5664.81



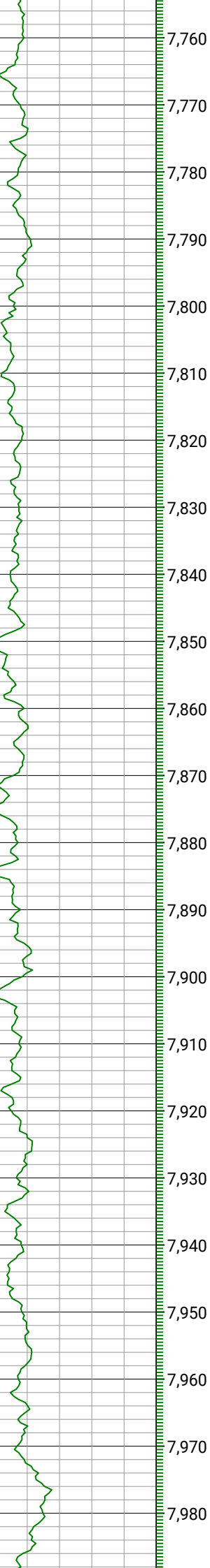
TEMP_RT,XBOL



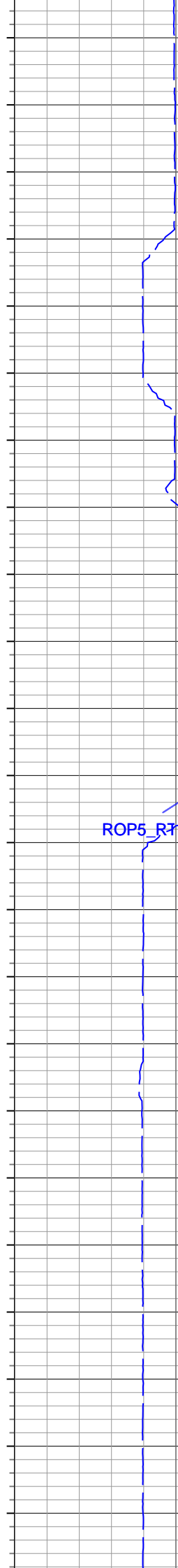
Azim: 83.77 Incl: 48.95
TVD: 5723.21



GR_RM,XBOL'



ROP5_RT



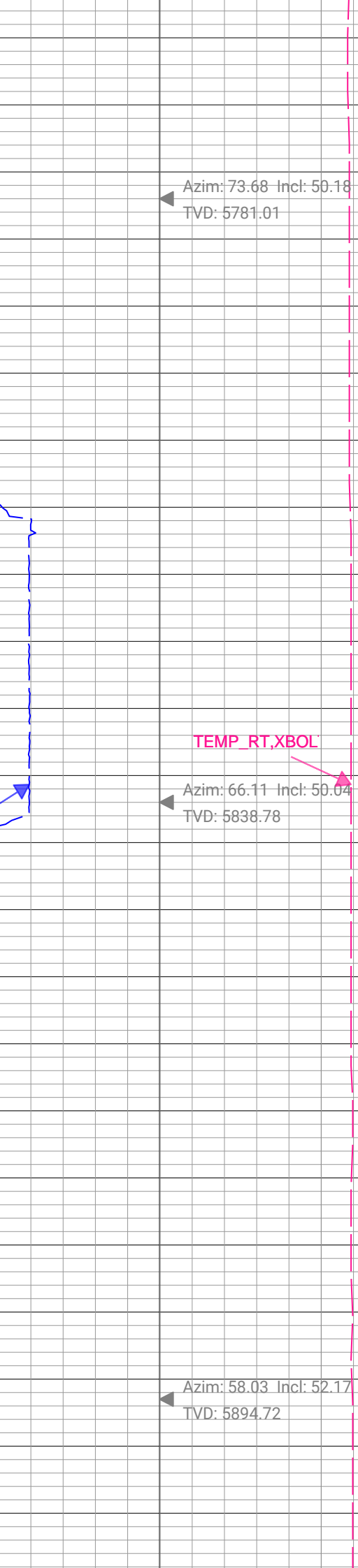
TEMP_RT,XBOL'

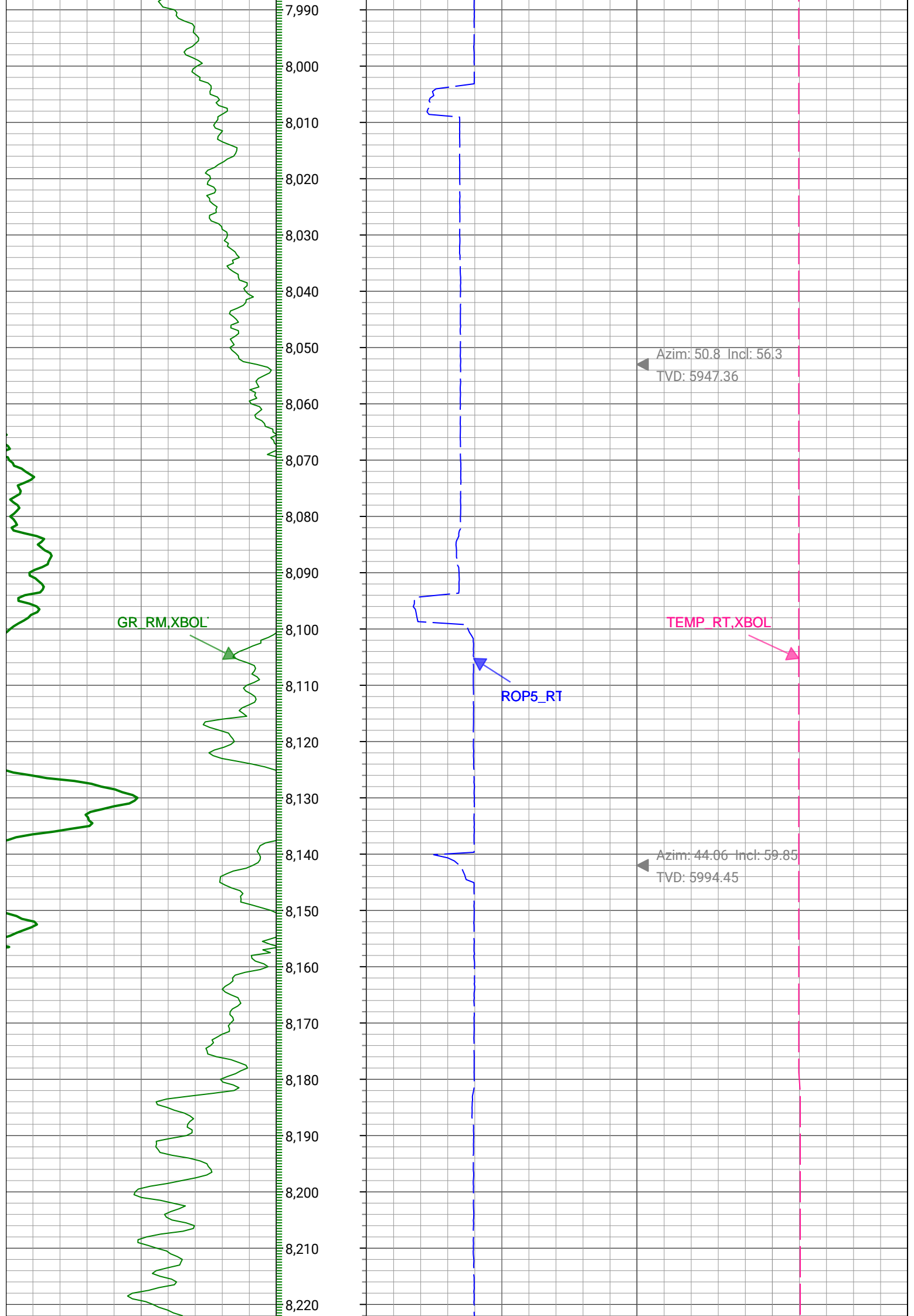


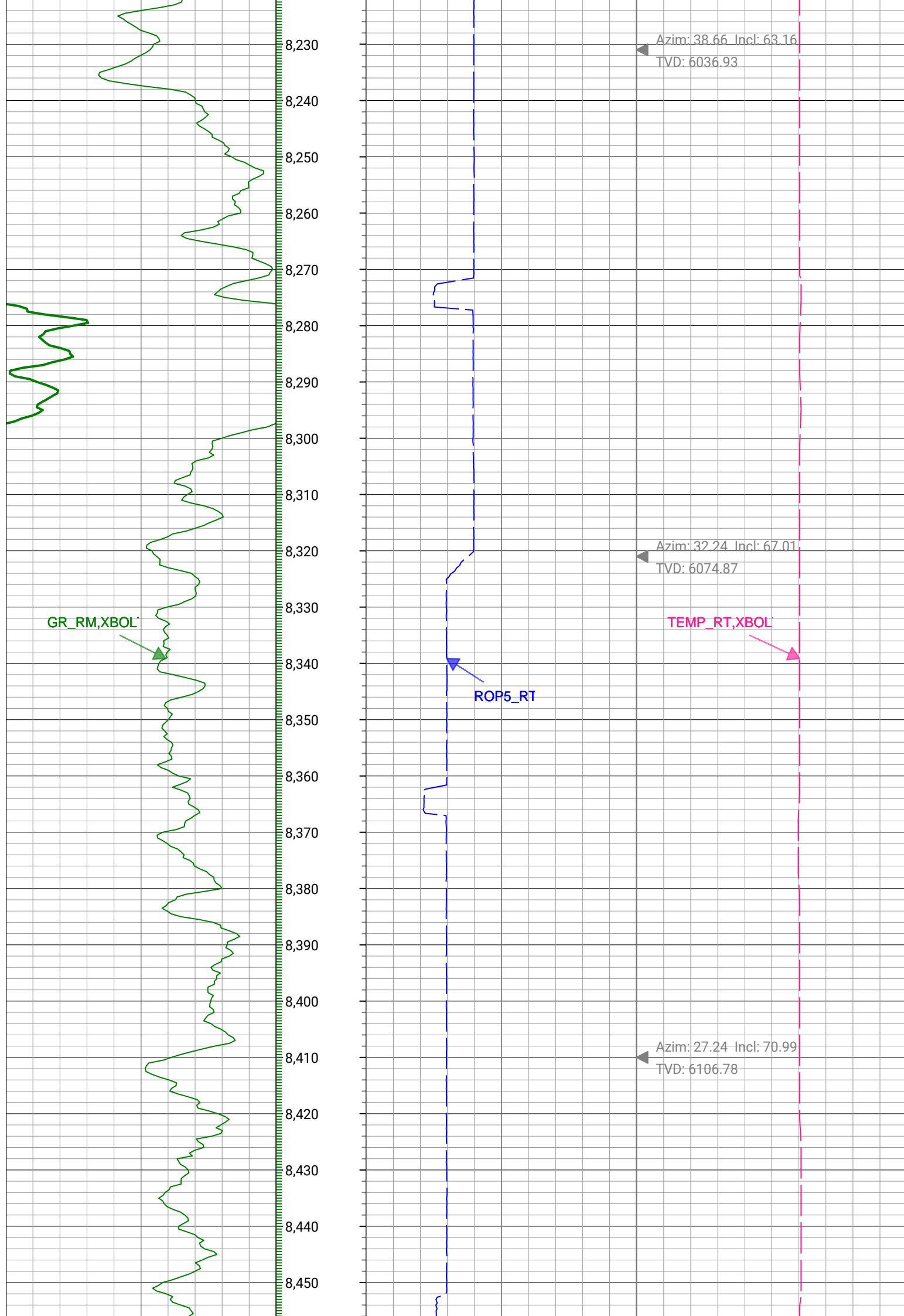
Azim: 73.68 Incl: 50.18
TVD: 5781.01

Azim: 66.11 Incl: 50.04
TVD: 5838.78

Azim: 58.03 Incl: 52.17
TVD: 5894.72







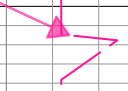
GR_RM,XBOL



ROP5_RT



TEMP_RT,XBOL



Azim: 18.4 Incl: 75.72
TVD: 6132.6

Azim: 8.57 Incl: 81.9
TVD: 6149.91

Azim: 5.34 Incl: 89.22
TVD: 6156.87

GR_RM,XBOL

ROP5_RT

TEMP_RT,XBOL

Azim: 4.32 Incl: 90.98
TVD: 6156.72

Azim: 1.1 Incl: 90.96
TVD: 6155.19

GR_RM,XBOL



ROP5_RT



TEMP_RT,XBOL



Azim: 0 Incl: 90.69
TVD: 6153.91

Azim: 0.39 Incl: 90.65
TVD: 6152.7

Azim: 1.19 Incl: 90.59
TVD: 6151.59

GR_RM,XBOL



ROP5_RT



TEMP_RT,XBOL



Azim: 1.29 Incl: 90.61
TVD: 6150.64

Azim: 0.79 Incl: 90.77
TVD: 6149.56

GR_RM,XBOL



ROP5_RT

TEMP_RT,XBOL



Azim: 1.21 Incl: 91.04
TVD: 6148.16

Azim: 1.33 Incl: 90.19
TVD: 6147.19

Azim: 358.2 Incl: 90.03
TVD: 6147.02

9,630
9,640
9,650
9,660
9,670
9,680
9,690
9,700
9,710
9,720
9,730
9,740
9,750
9,760
9,770
9,780
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9,800
9,810
9,820
9,830
9,840
9,850

GR_RM,XBOL



ROP5_RT



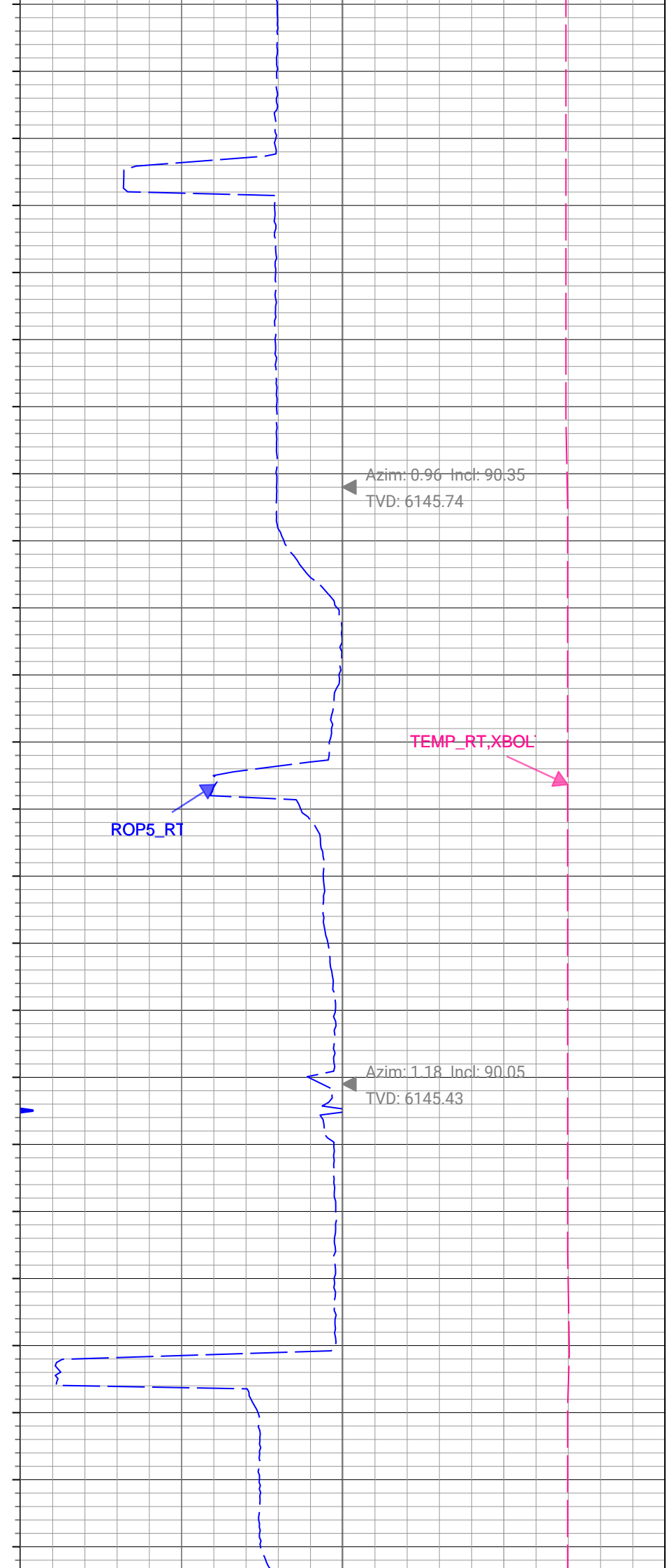
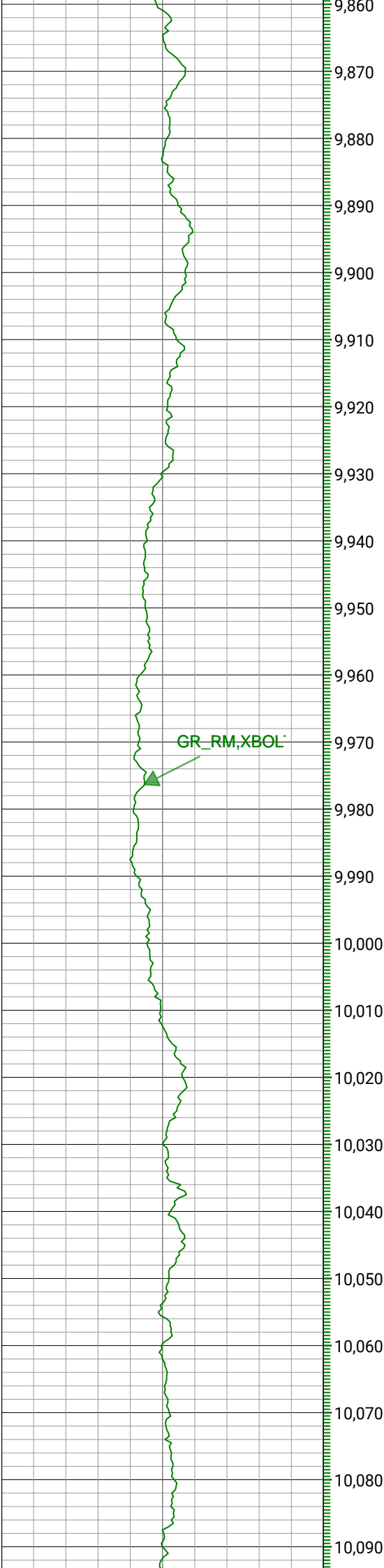
TEMP_RT,XBOL

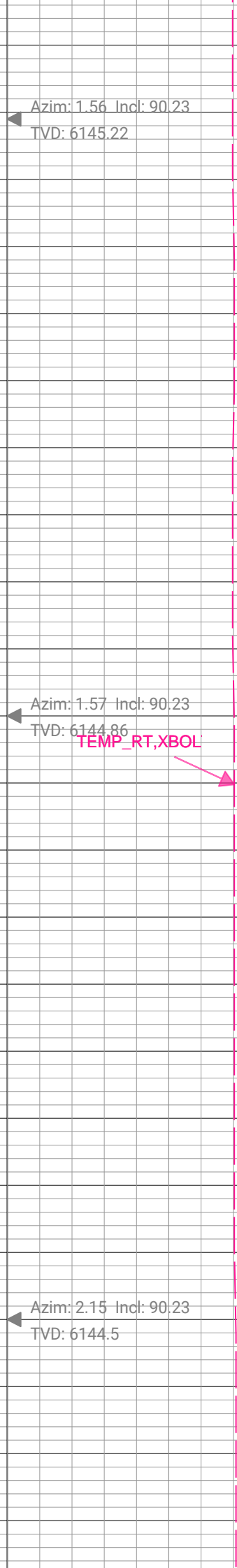
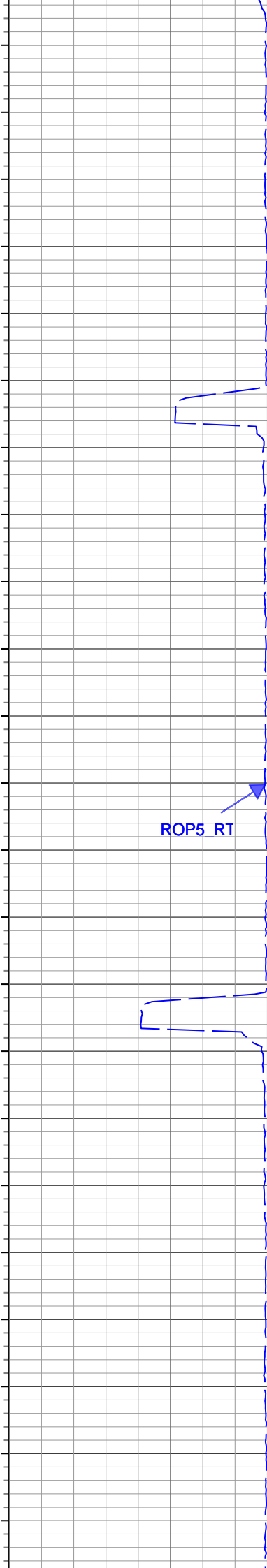
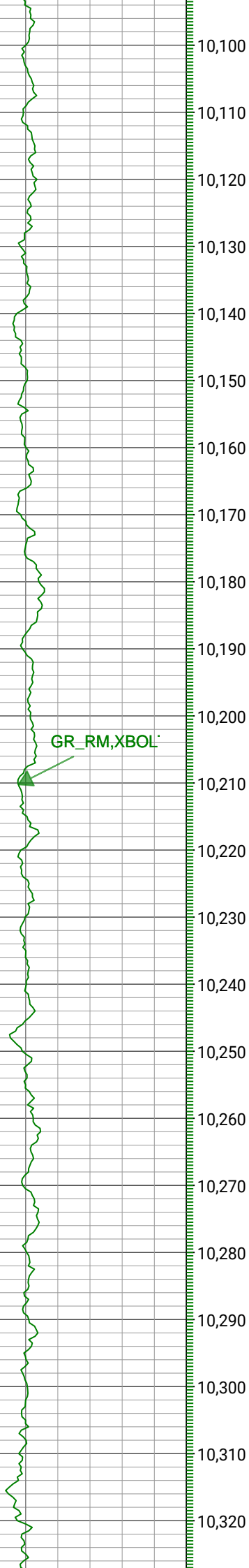


Azim: 359.02 Incl: 90.15
TVD: 6146.89

Azim: 0.1 Incl: 90.26
TVD: 6146.57

Azim: 0.7 Incl: 90.22
TVD: 6146.19

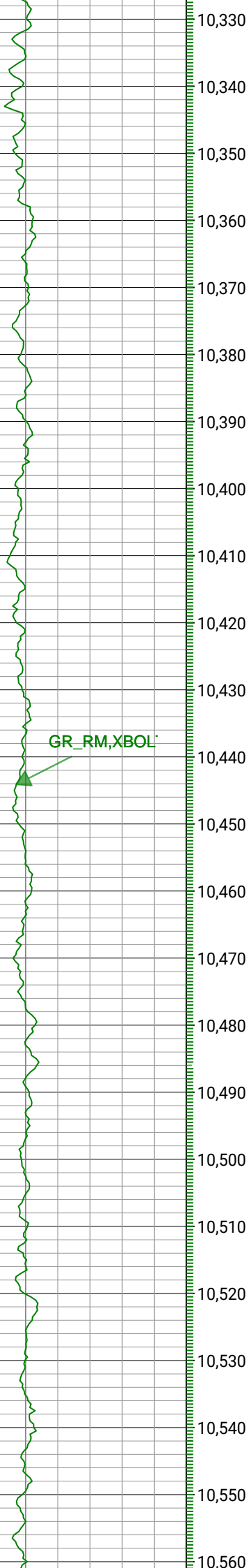




Azim: 1.56 Incl: 90.23
TVD: 6145.22

Azim: 1.57 Incl: 90.23
TVD: 6144.86

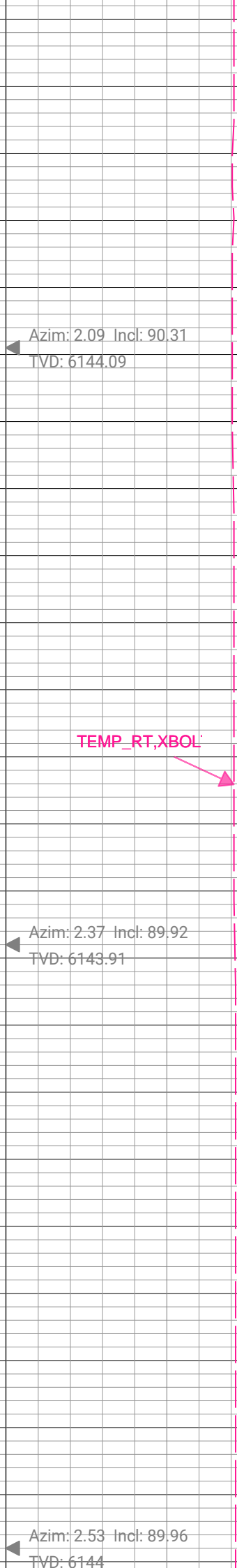
Azim: 2.15 Incl: 90.23
TVD: 6144.5



GR_RM, XBOL



ROP5_RT



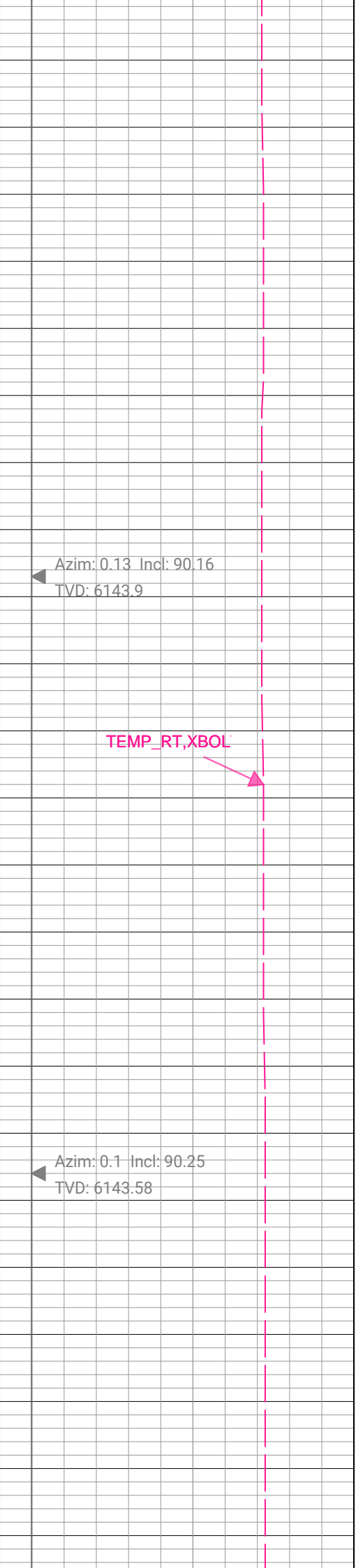
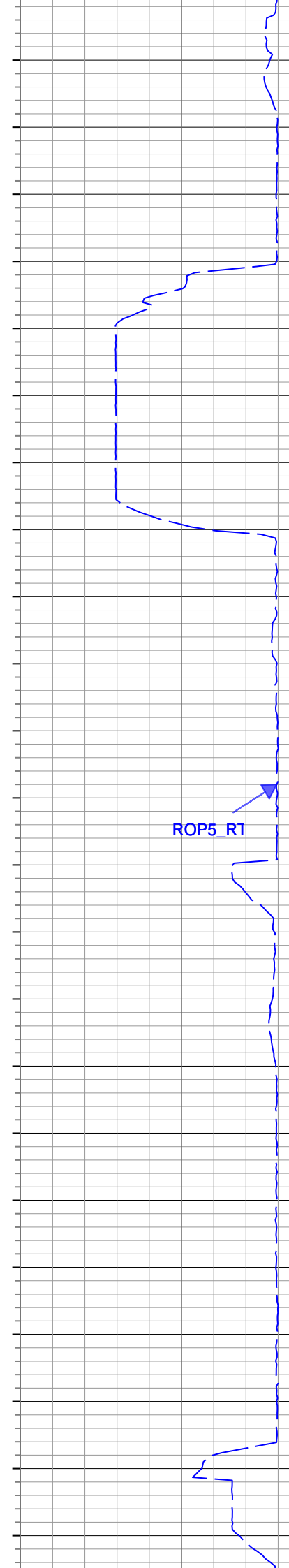
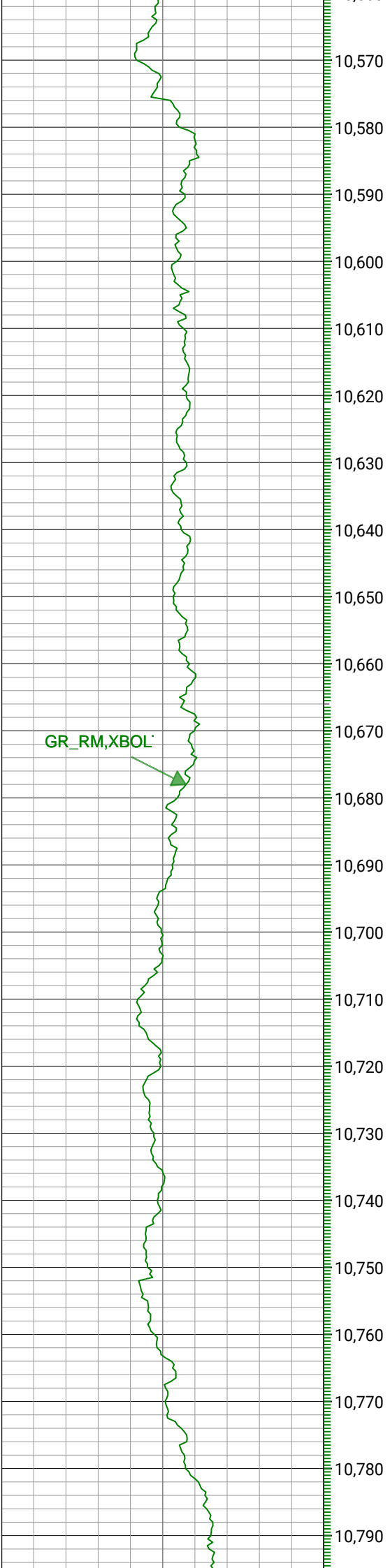
TEMP_RT, XBOL



Azim: 2.09 Incl: 90.31
TVD: 6144.09

Azim: 2.37 Incl: 89.92
TVD: 6143.91

Azim: 2.53 Incl: 89.96
TVD: 6144



GR_RM, XBOL



ROP5_RT



TEMP_RT, XBOL



Azim: 0.13 Incl: 90.16
TVD: 6143.9

Azim: 0.1 Incl: 90.25
TVD: 6143.58

GR_RM,XBOL



TEMP_RT,XBOL



ROP5_RT

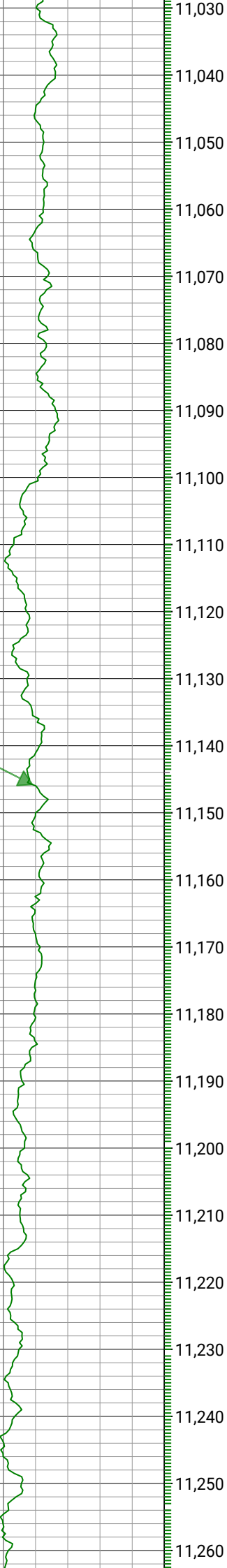


Azim: 0.03 Incl: 89.94
TVD: 6143.43

Azim: 359.94 Incl: 89.81
TVD: 6143.63

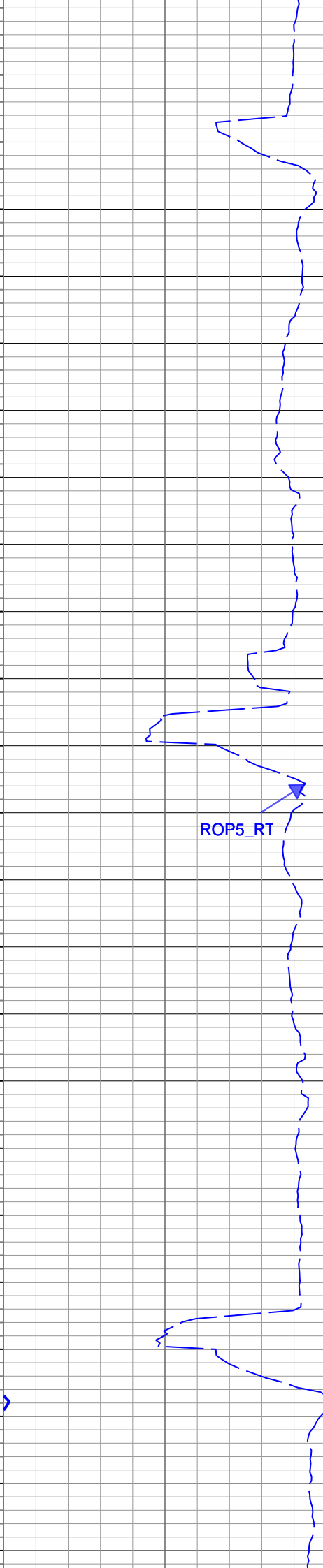
Azim: 0.92 Incl: 90.15
TVD: 6143.67

GR_RM,XBOL



11,030
11,040
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11,100
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11,260

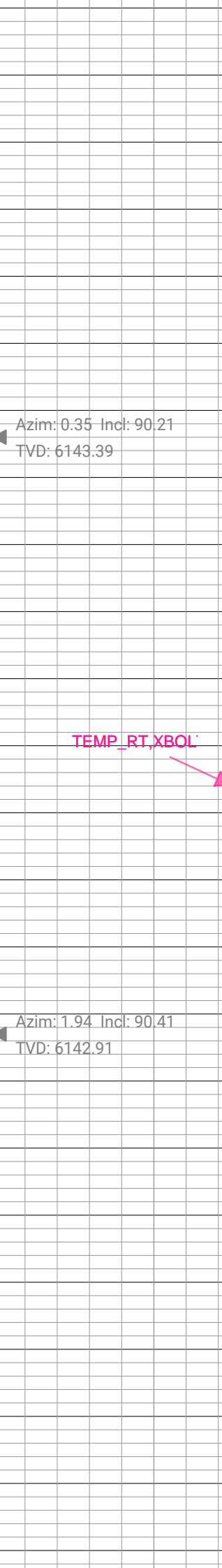
ROP5_RT

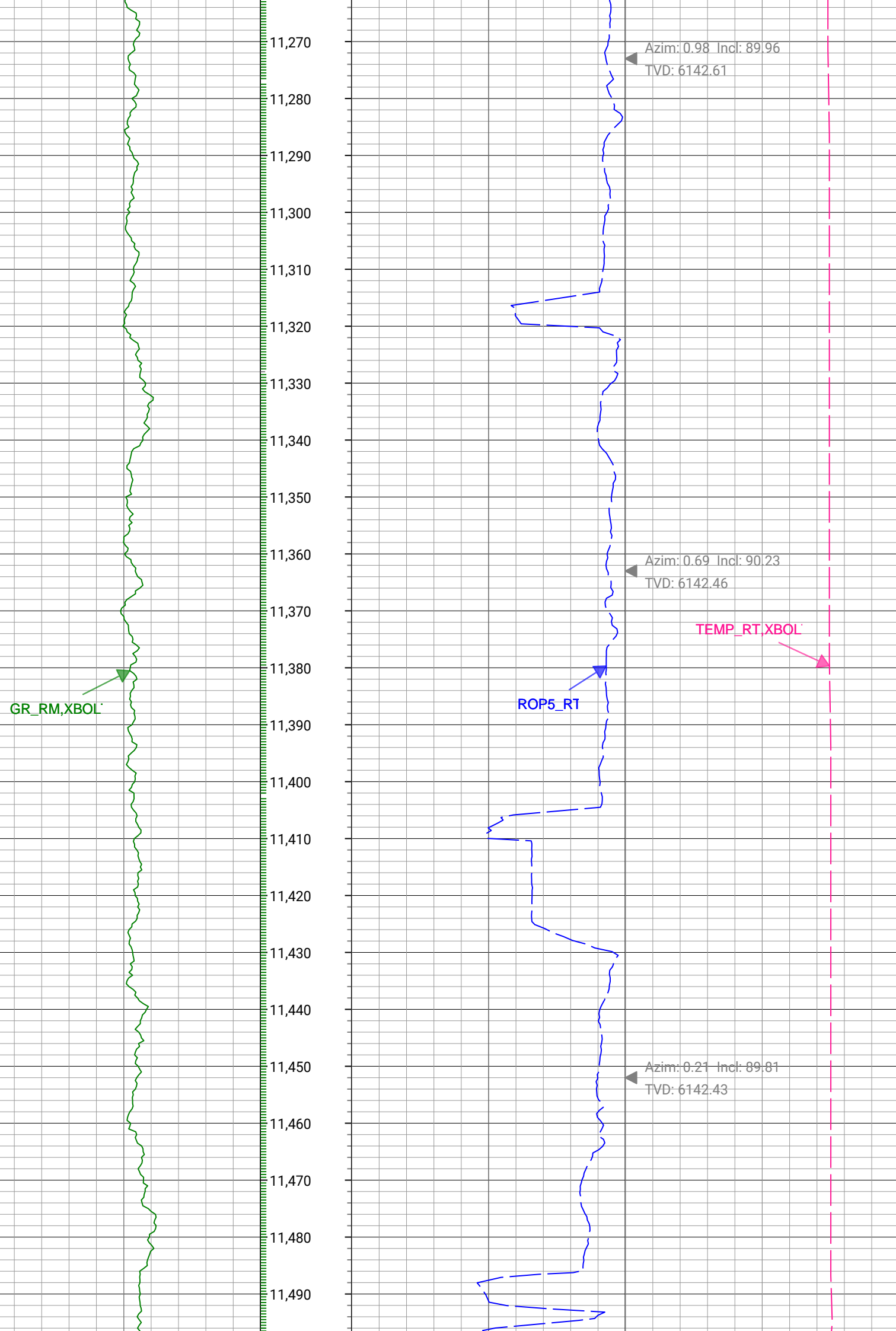


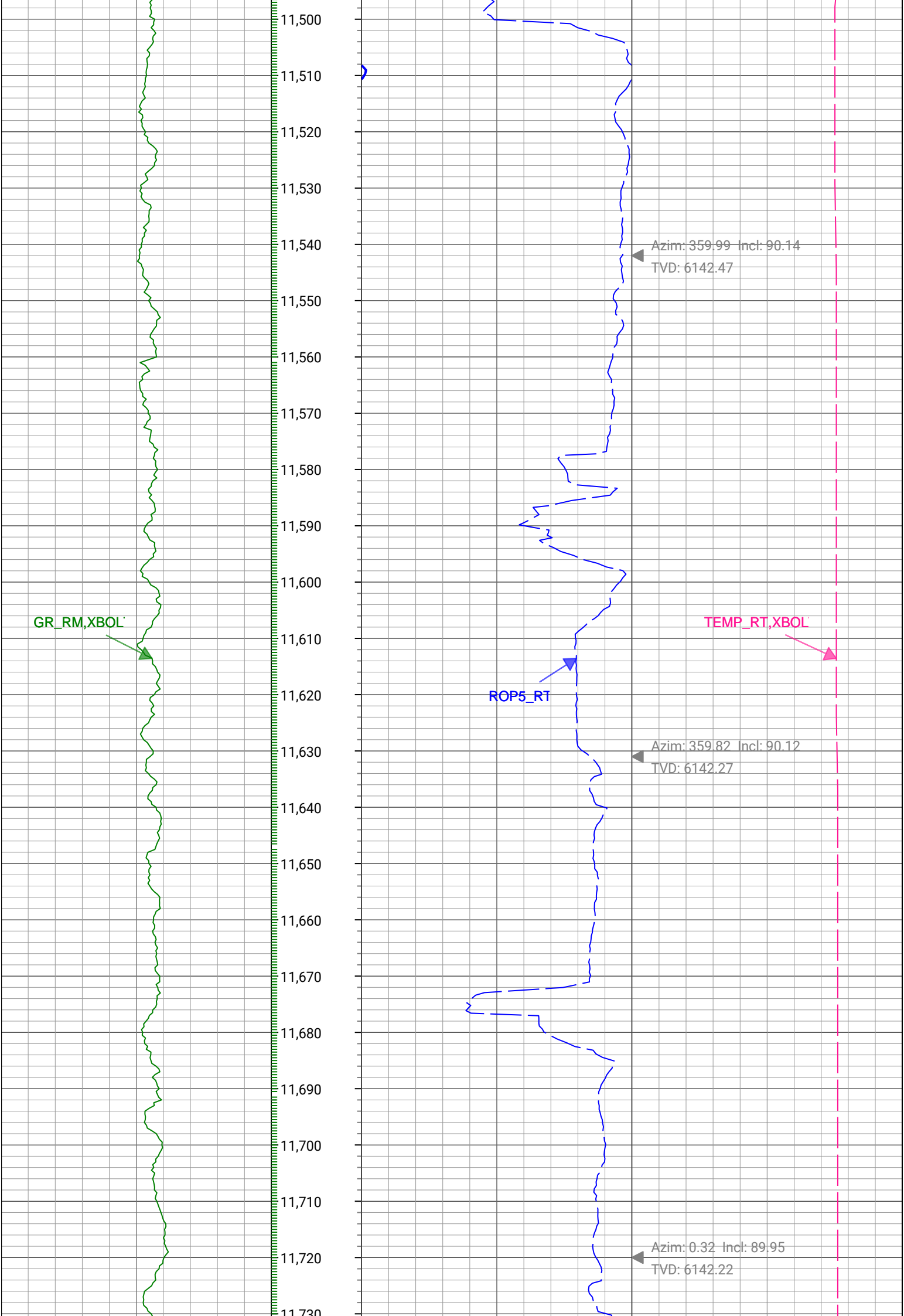
Azim: 0.35 Incl: 90.21
TVD: 6143.39

Azim: 1.94 Incl: 90.41
TVD: 6142.91

TEMP_RT,XBOL







GR_RM,XBOL

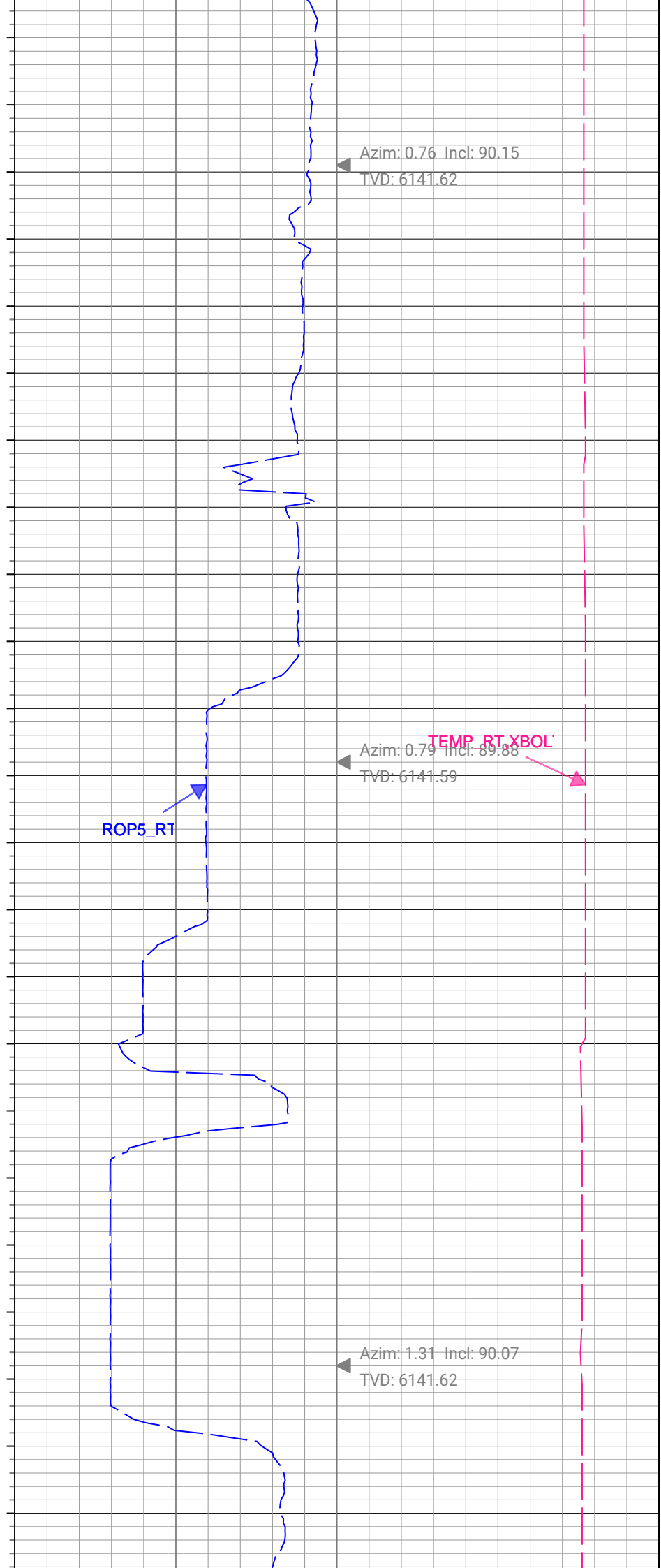
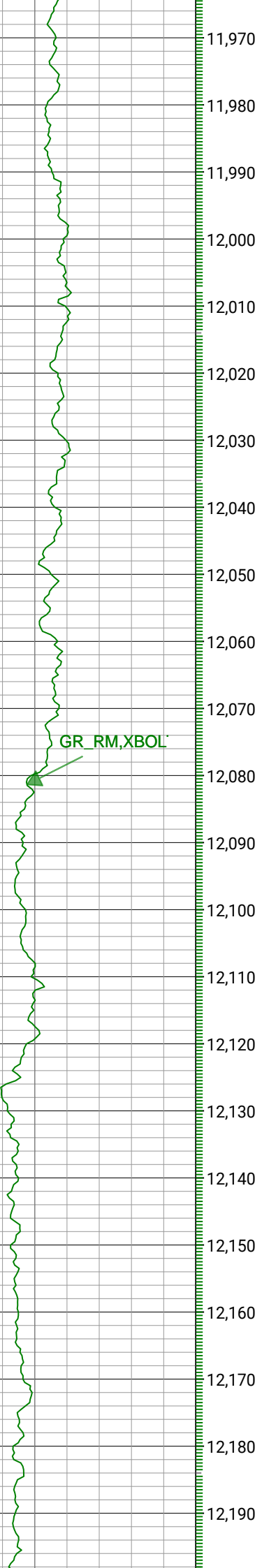


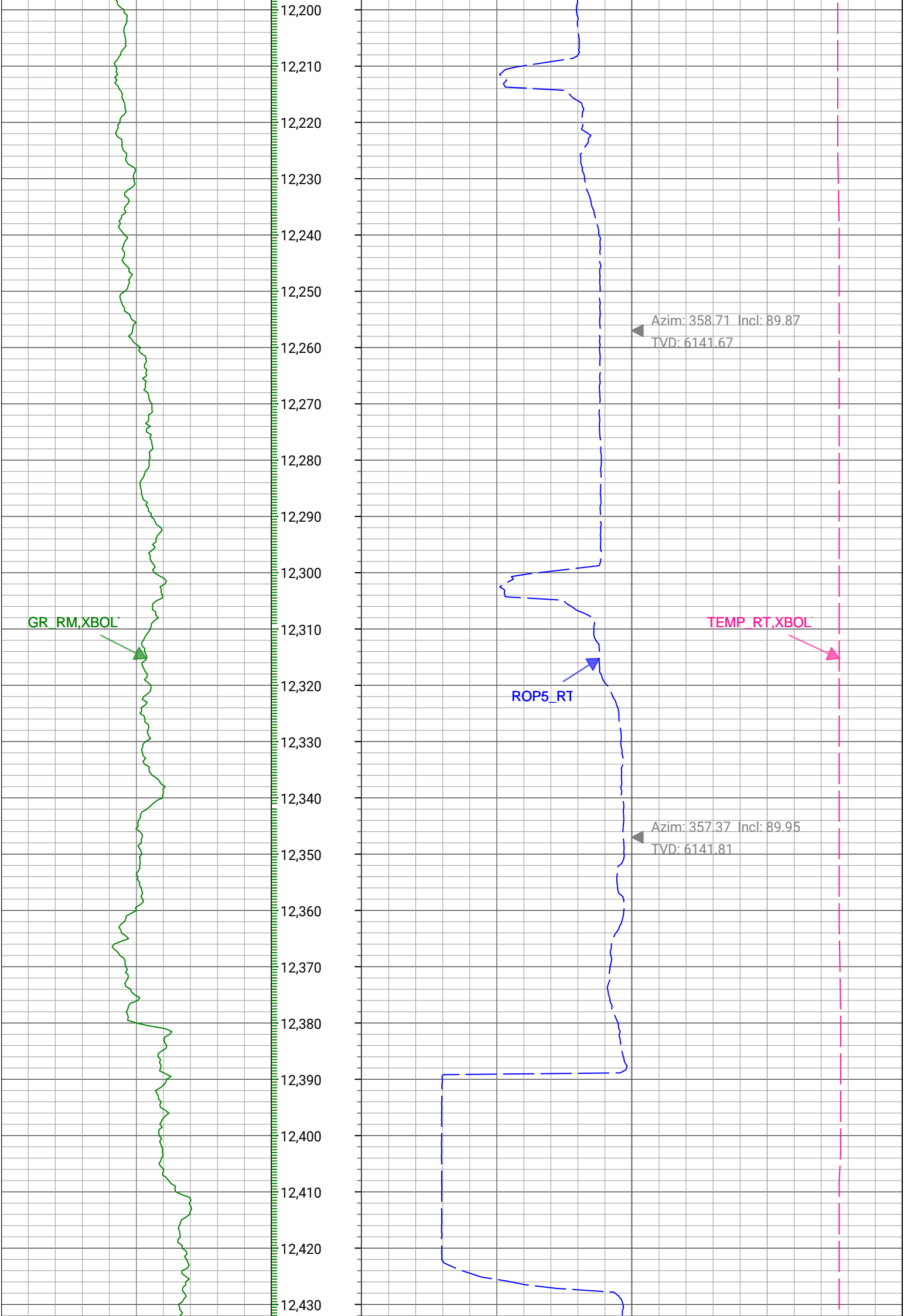
ROP5_RT

TEMP_RT,XBOL

Azim: 0.7 Incl: 90.22
TVD: 6142.08

Azim: 0.59 Incl: 90.11
TVD: 6141.82





GR_RM,XBOL



ROP5_RT



TEMP_RT,XBOL



Azim: 359.11 Incl: 89.74
TVD: 6142.06

Azim: 0.24 Incl: 89.78
TVD: 6142.43

Azim: 0.61 Incl: 89.26
TVD: 6143.18

12,440
12,450
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12,540
12,550
12,560
12,570
12,580
12,590
12,600
12,610
12,620
12,630
12,640
12,650
12,660

GR_RM,XBOL



ROP5_RT



TEMP_RT,XBOL



Azim: 1.89 Incl: 89.79
TVD: 6143.93

Azim: 2.2 Incl: 89.66
TVD: 6144.36

Azim: 2.02 Incl: 90.01
TVD: 6144.62

GR_RM,XBOL



ROP5_RT

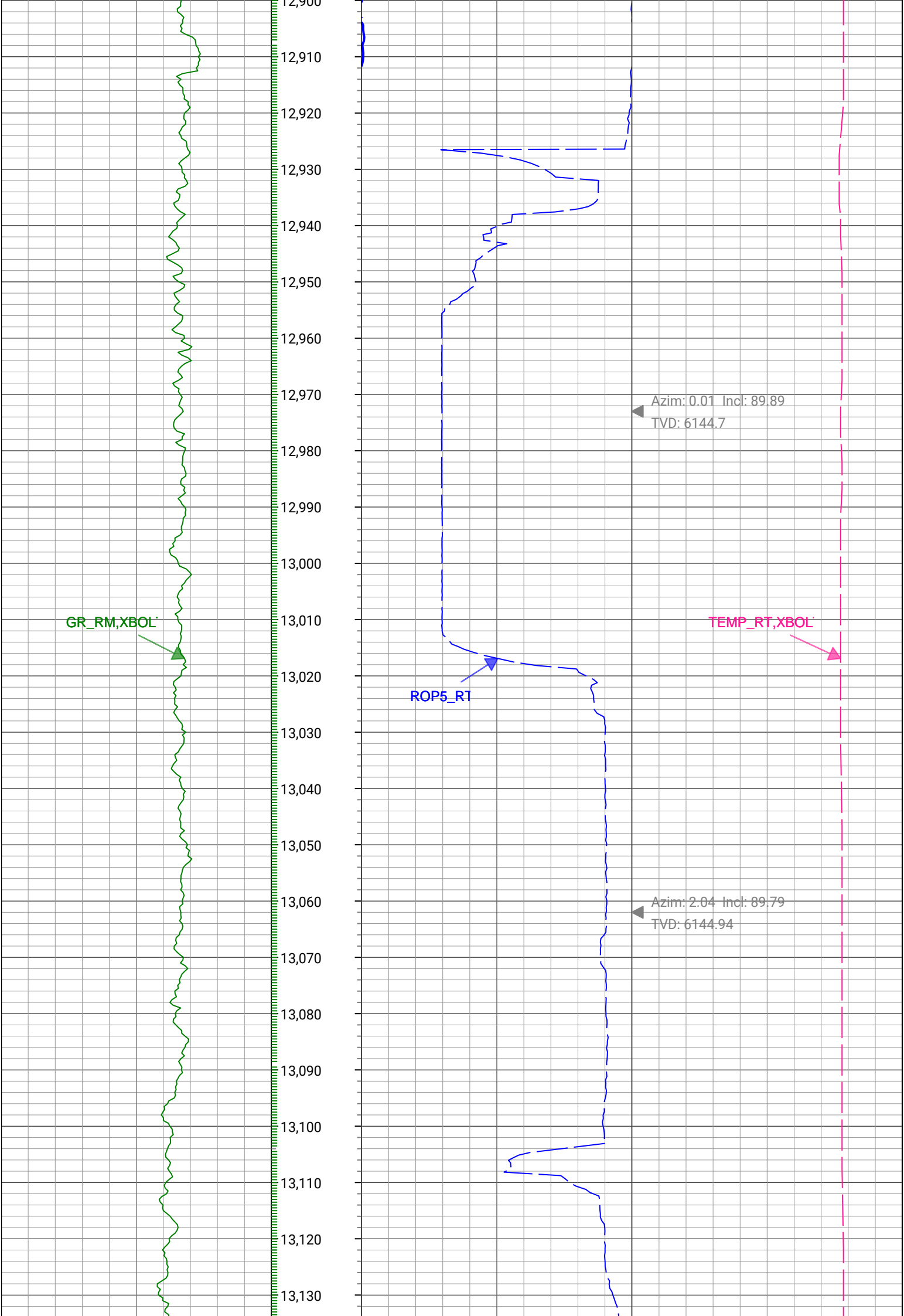


TEMP_RT,XBOL

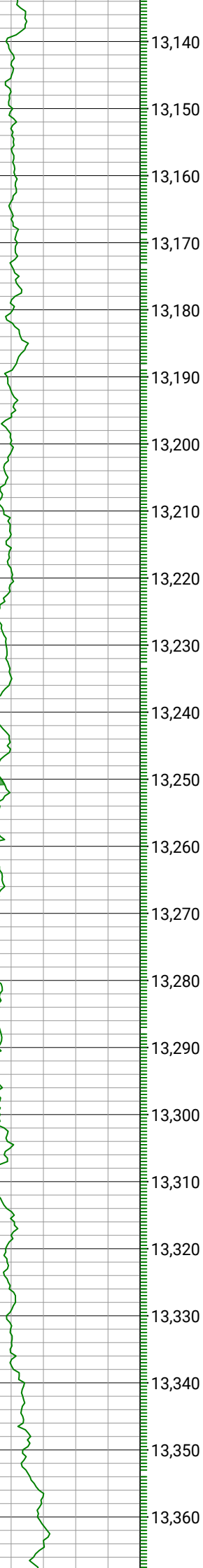


Azim: 0.01 Incl: 89.89
TVD: 6144.7

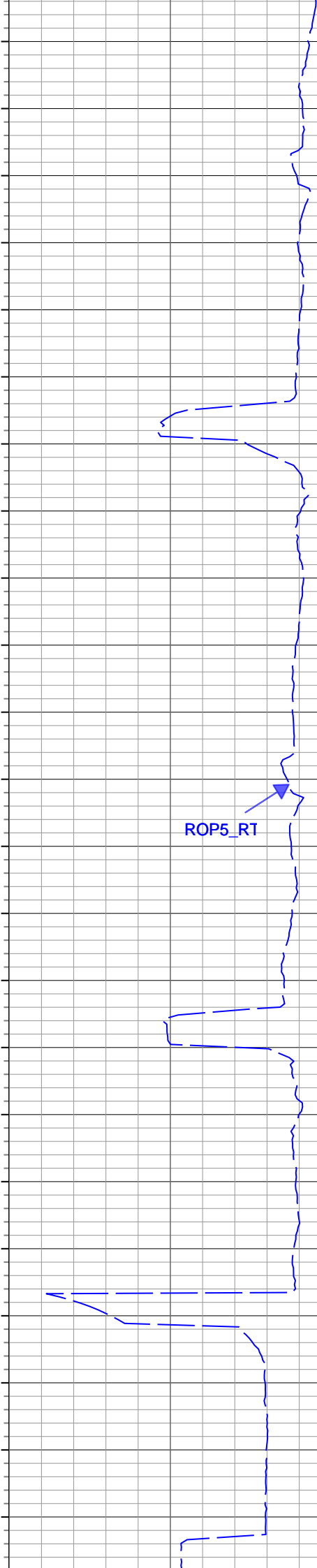
Azim: 2.04 Incl: 89.79
TVD: 6144.94



GR_RM,XBOL



ROP5_RT



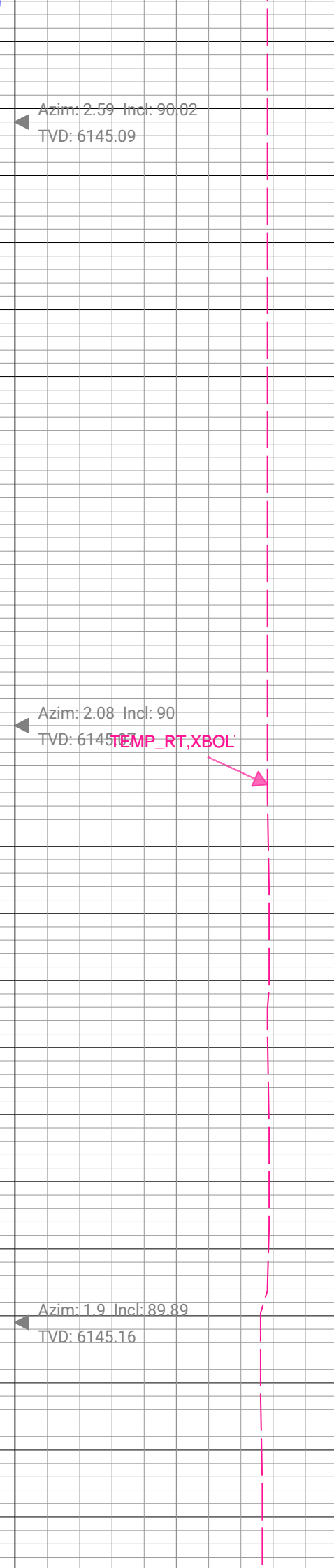
Azim: 2.59 Incl: 90.02
TVD: 6145.09



Azim: 2.08 Incl: 90
TVD: 6145



TEMP_RT,XBOL



GR_RM,XBOL



TEMP_RT,XBOL



ROP5_RT



Azim: 0.11 Incl: 89.75
TVD: 6145.44

Azim: 1.02 Incl: 89.63
TVD: 6145.92

Azim: 1.77 Incl: 89.82
TVD: 6146.34

GR_RM,XBOL



ROP5_RT



TEMP_RT,XBOL



Azim: 1.65 Incl: 89.56
TVD: 6146.83

Azim: 1.62 Incl: 89.66
TVD: 6147.43

GR_RM,XBOL

ROP5_RT

TEMP_RT,XBOL

Azim: 1.86 Incl: 89.27
TVD: 6148.27

Azim: 2.37 Incl: 89.25
TVD: 6149.41

Azim: 2.72 Incl: 89.46
TVD: 6150.42

GR_RM,XBOL



ROP5_RT

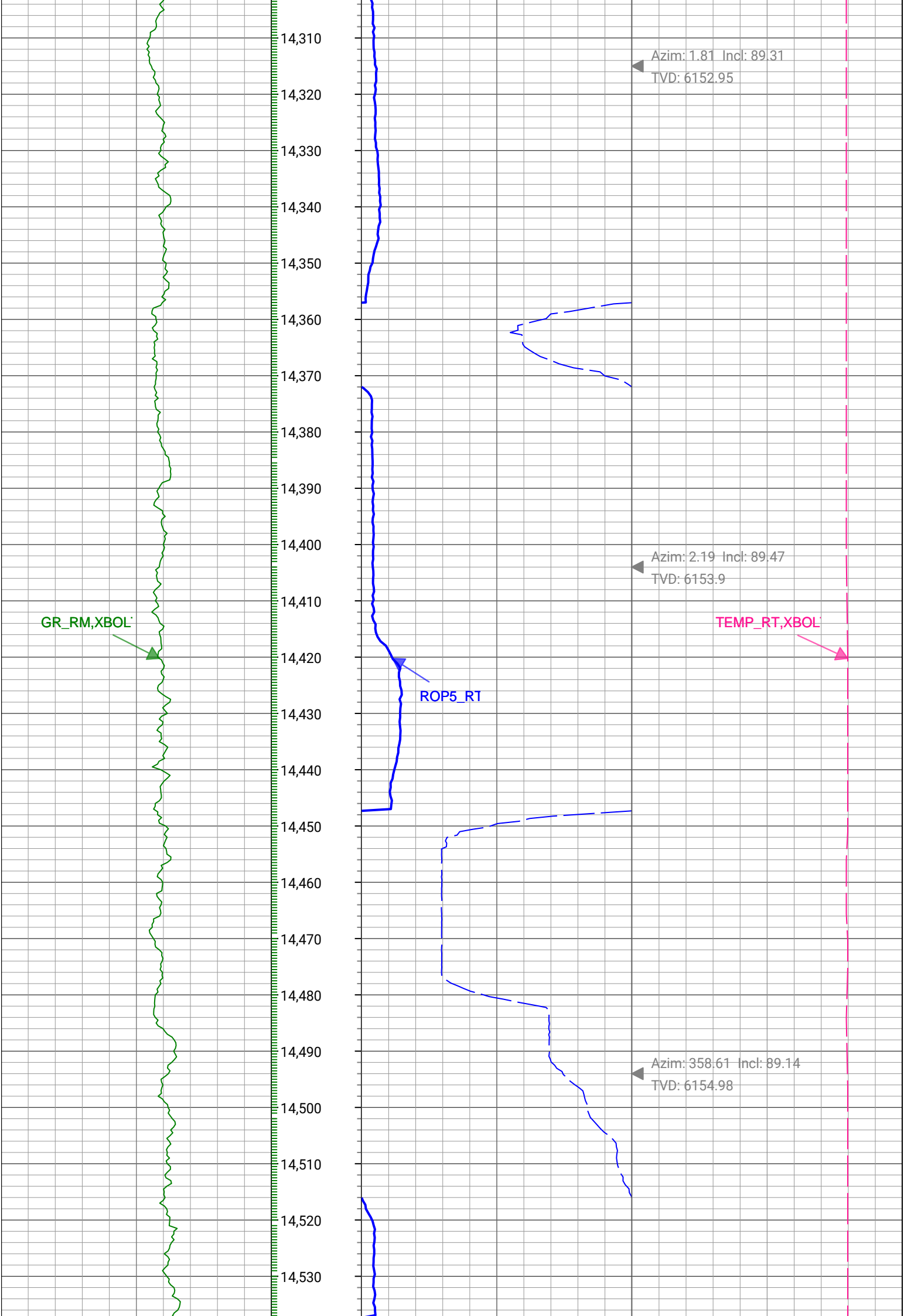


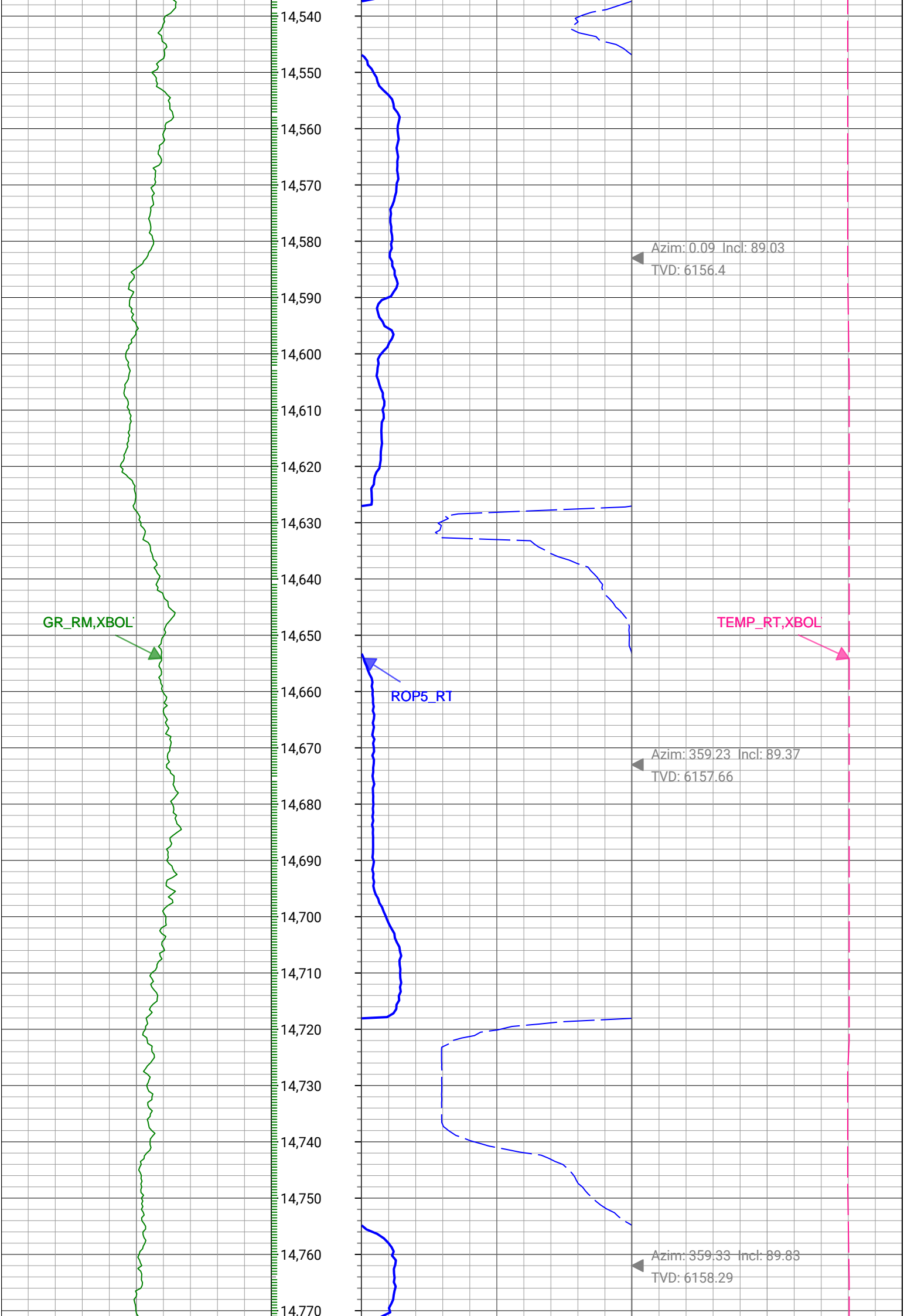
TEMP_RT,XBOL



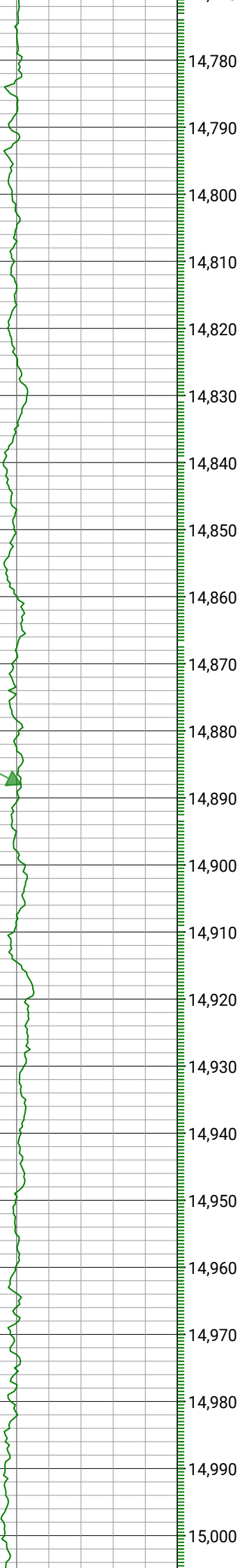
Azim: 2.91 Incl: 89.72
TVD: 6151.06

Azim: 2.39 Incl: 89.28
TVD: 6151.84

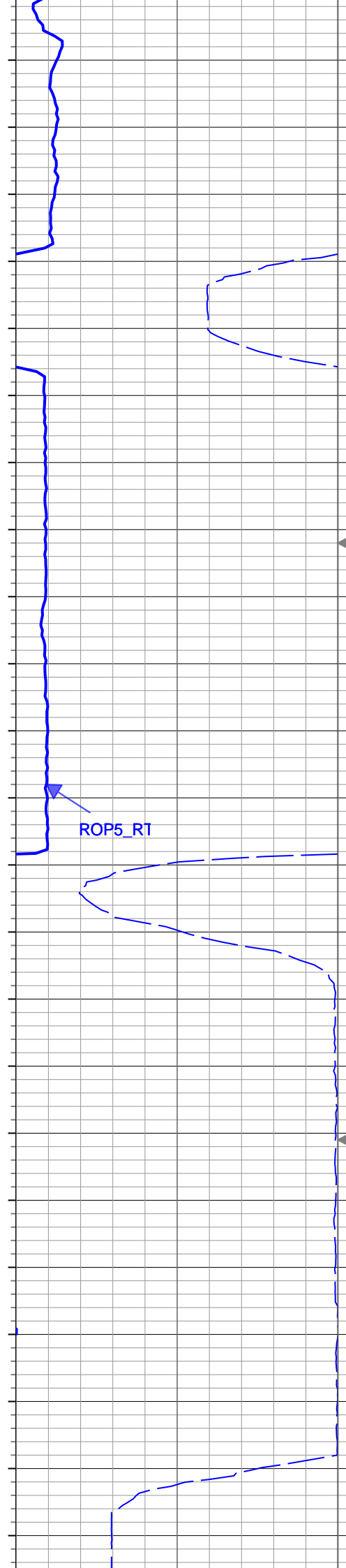




GR_RM,XBOL



ROP5_RT



TEMP_RT,XBOL

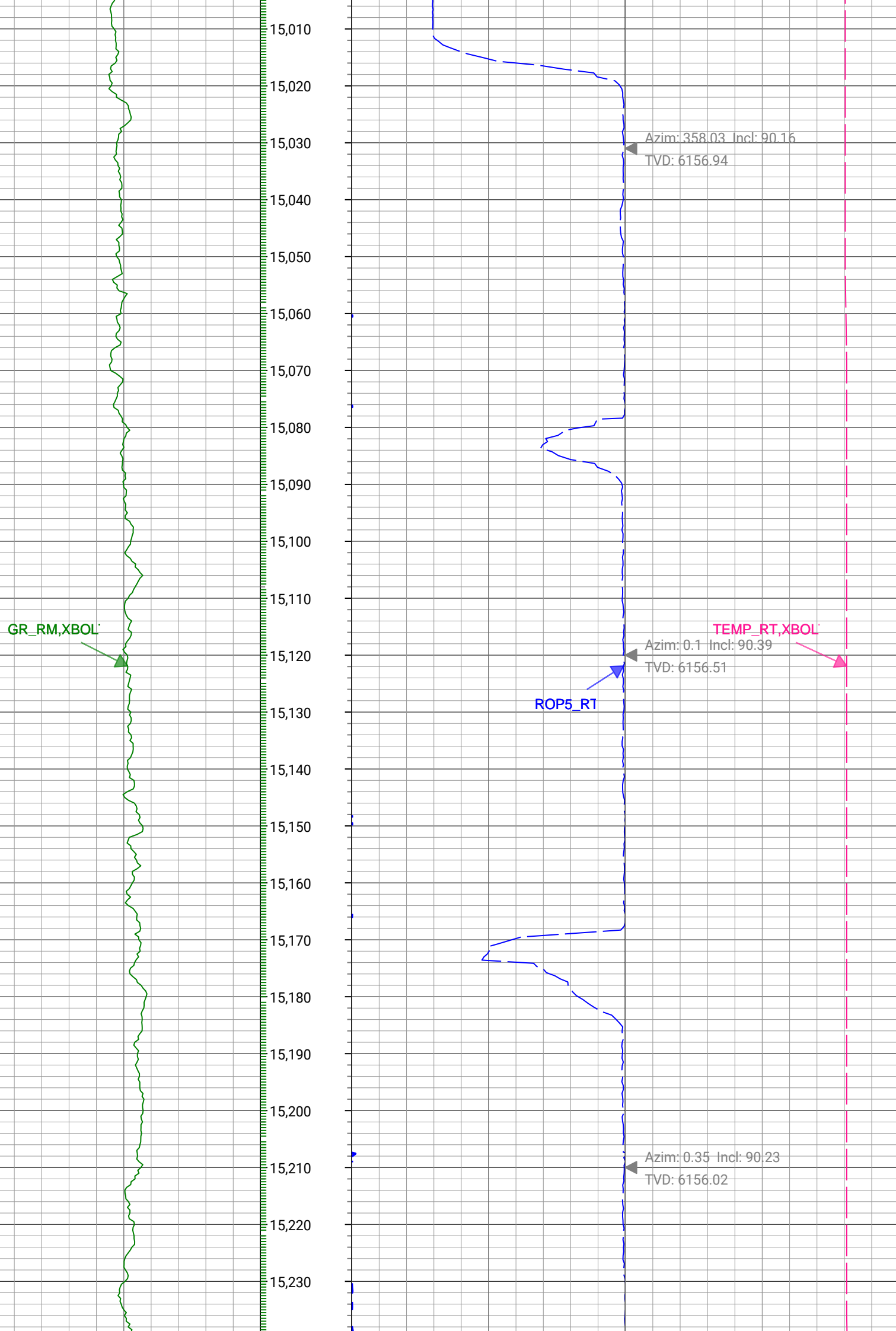


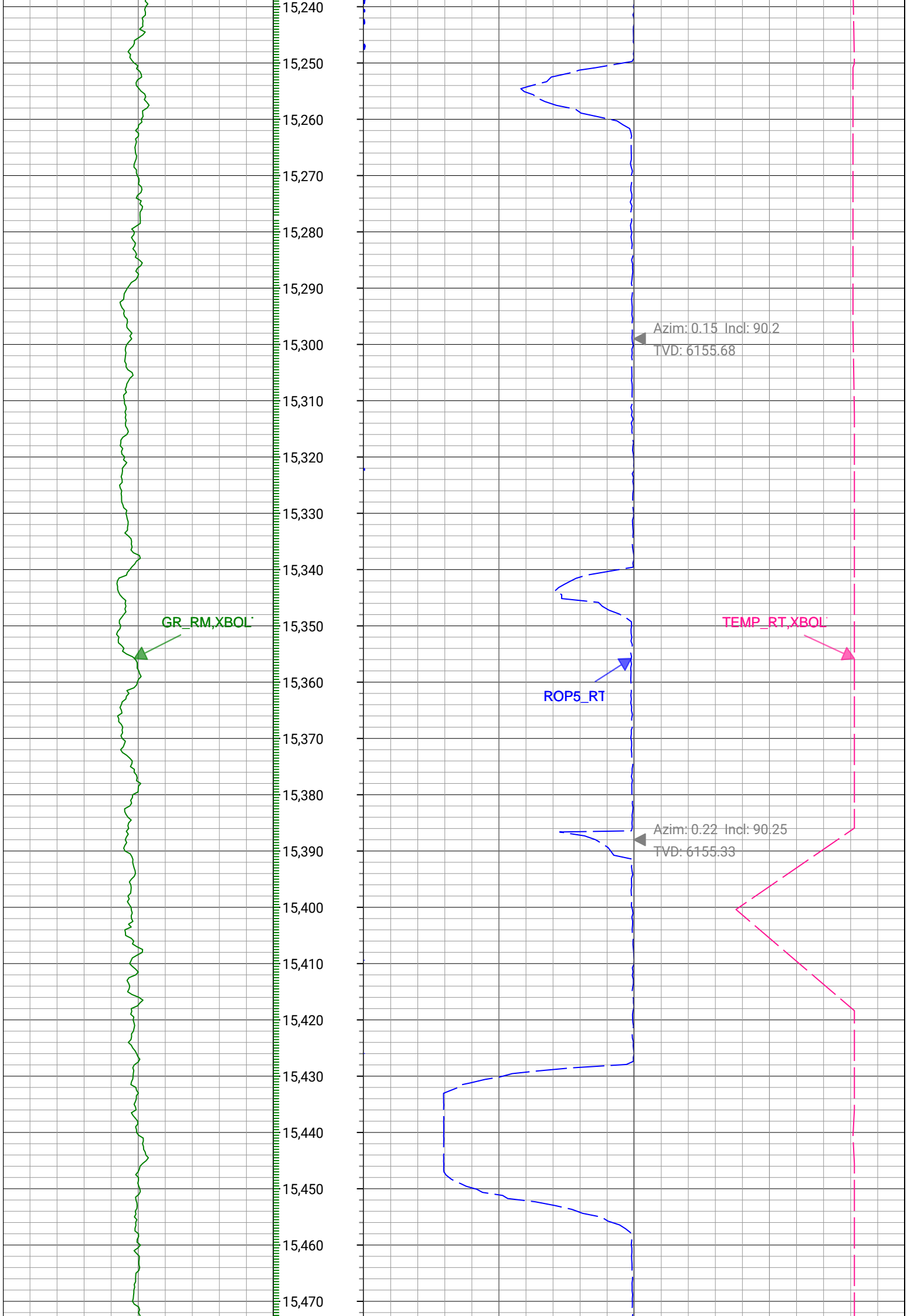
Azim: 358.34 Incl: 90.56
TVD: 6157.98

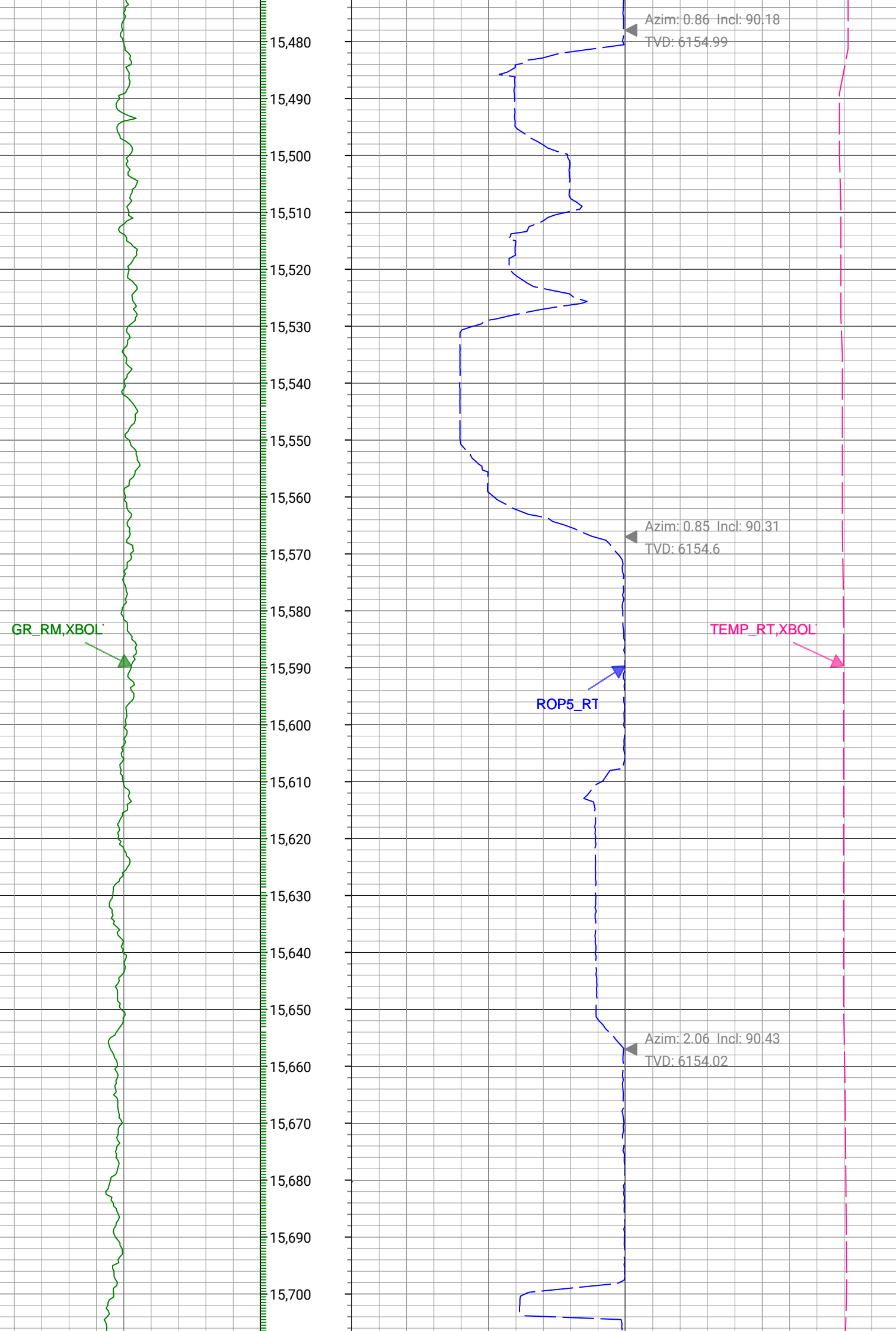


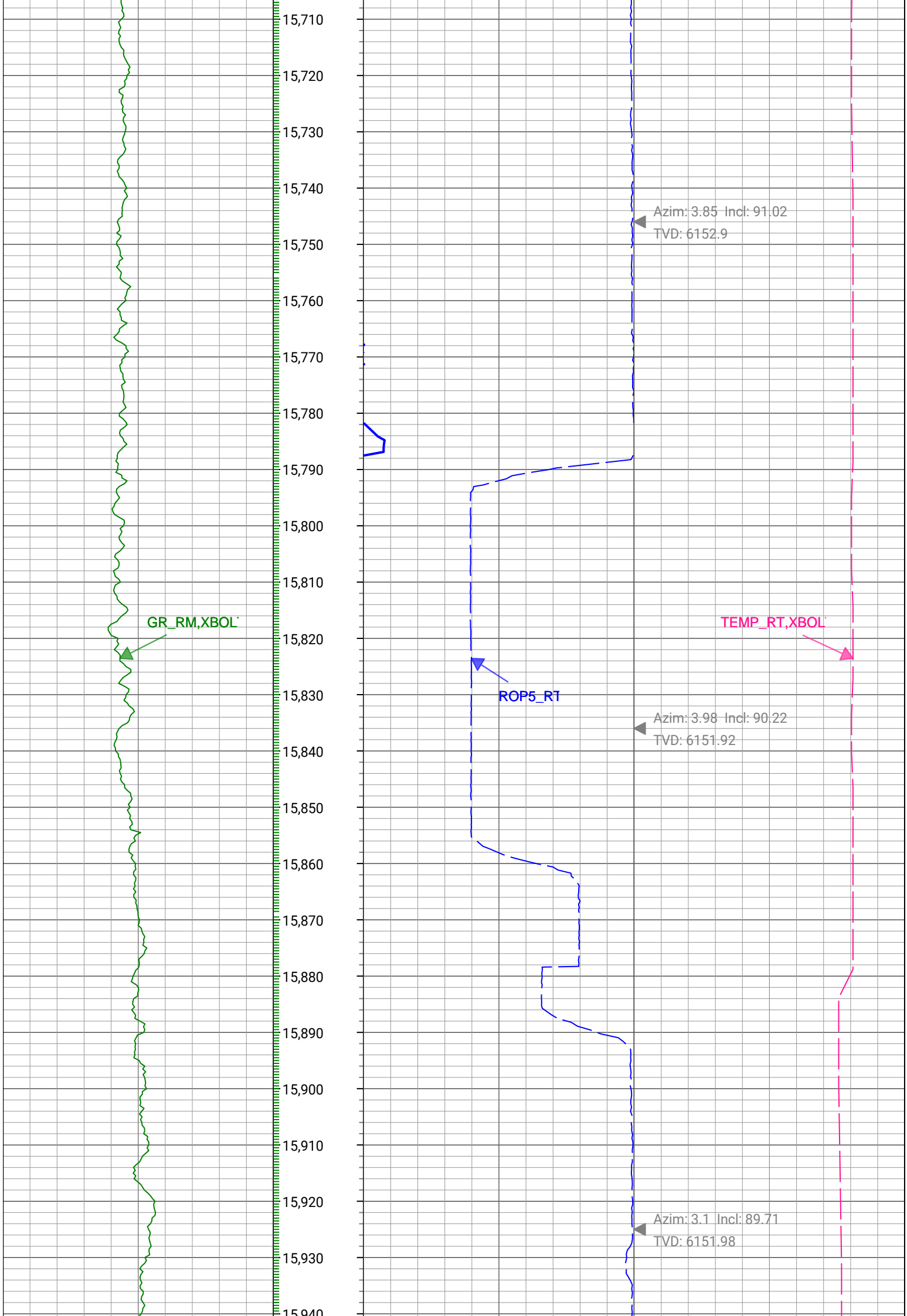
Azim: 356.99 Incl: 90.31
TVD: 6157.31

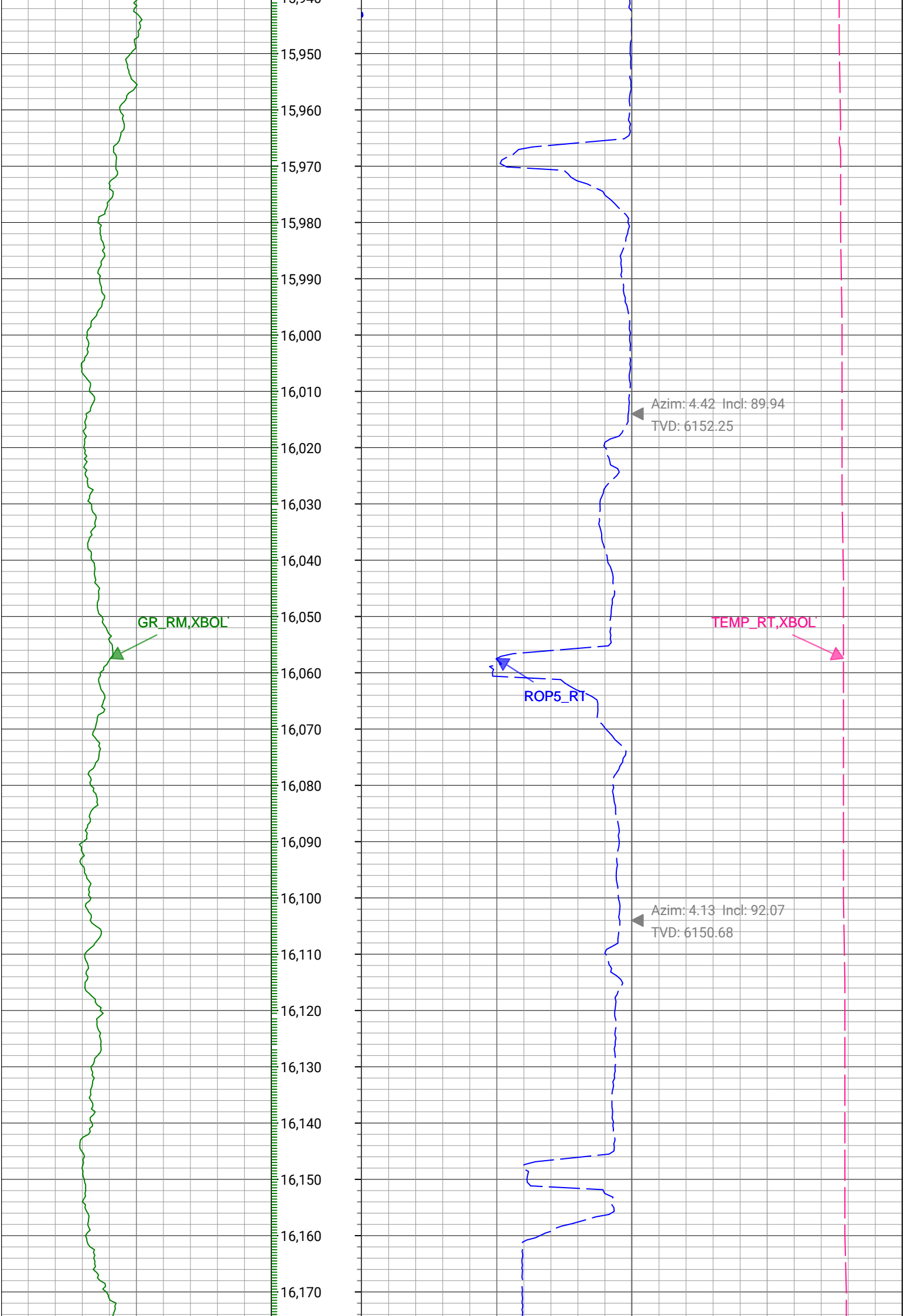












GR_RM,XBOL



ROP5_RT



Azim: 3.56 Incl: 90
TVD: 6149.06

Azim: 2.86 Incl: 88.84
TVD: 6149.28

TEMP_RT,XBOL



Azim: 3.66 Incl: 89.48
TVD: 6151.28

GR_RM,XBOL



ROP5_RT



TEMP_RT,XBOL



Azim: 1.78 Incl: 89.72
TVD: 6151.91

Azim: 0.95 Incl: 89.44
TVD: 6152.57

Azim: 0.93 Incl: 89.64

GR_RM,XBOL



ROP5_RT



TEMP_RT,XBOL



Azim: 0.77 Incl: 89.59
TVD: 6153.89

Azim: 0.88 Incl: 89.63
TVD: 6154.49

TVD: 6153.29

16,650

16,660

16,670

16,680

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16,720

16,730

16,740

16,750

16,760

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16,790

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16,810

16,820

16,830

16,840

16,850

16,860

16,870

GR_RM,XBOL

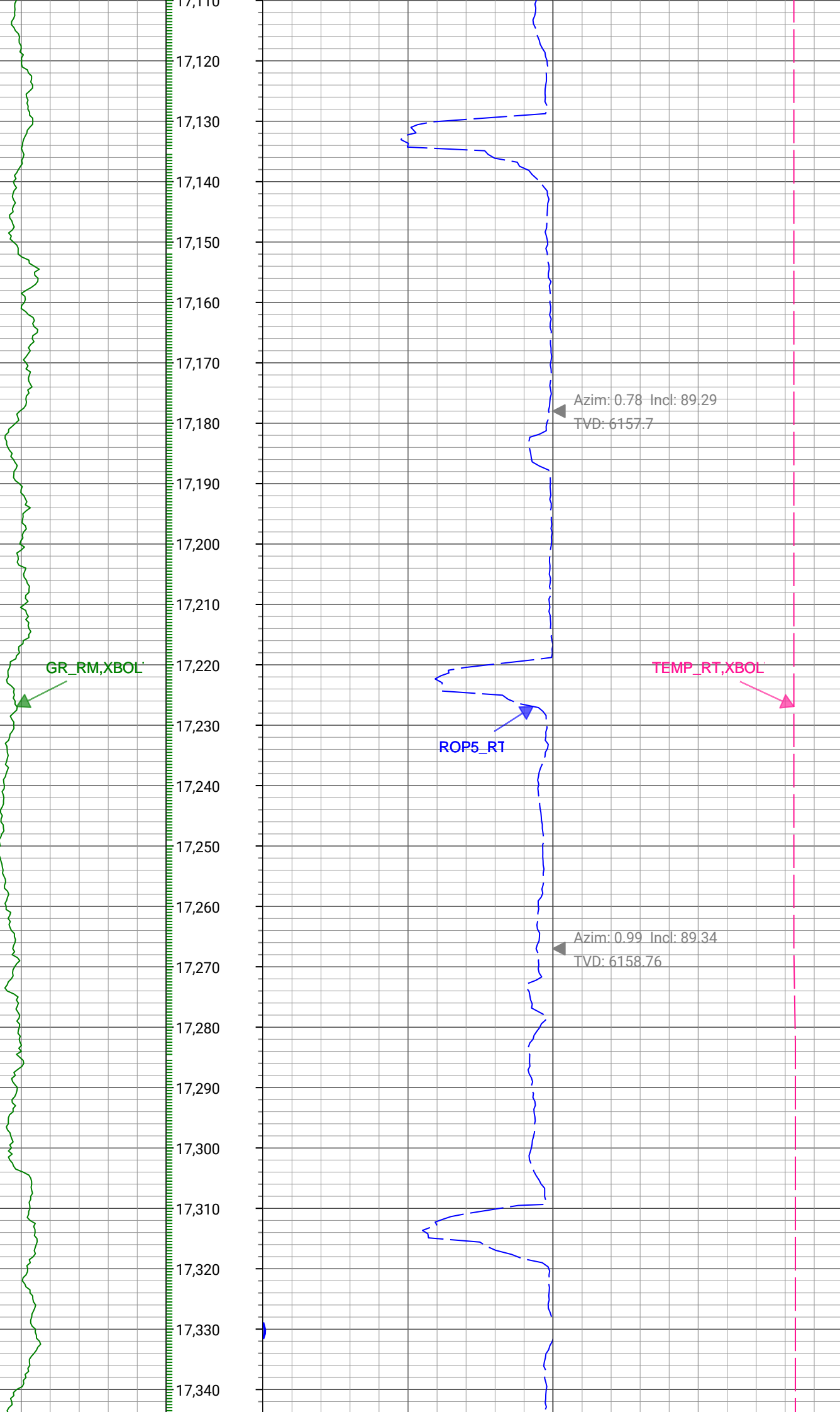
TEMP_RT,XBOL

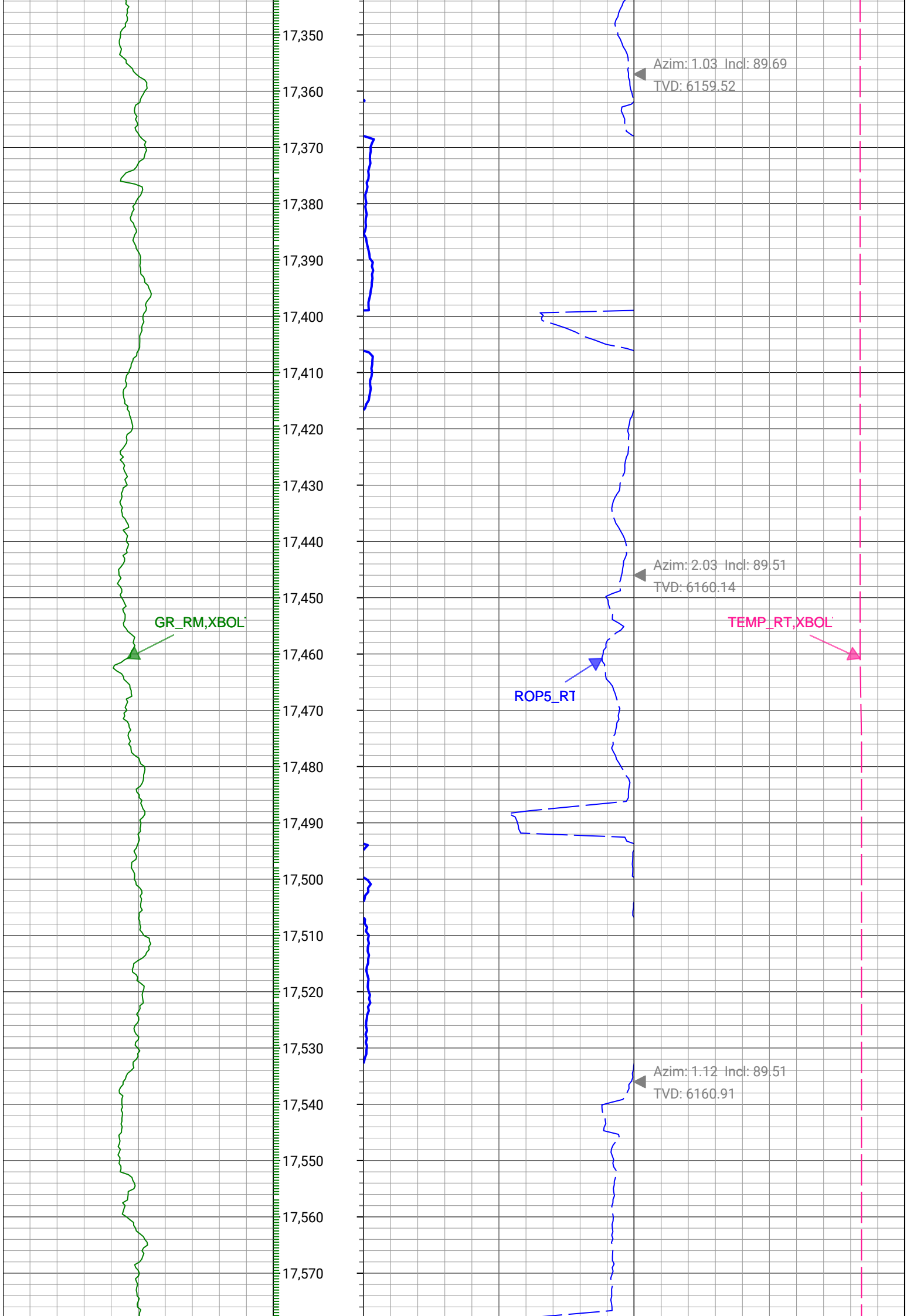
ROP5_RT

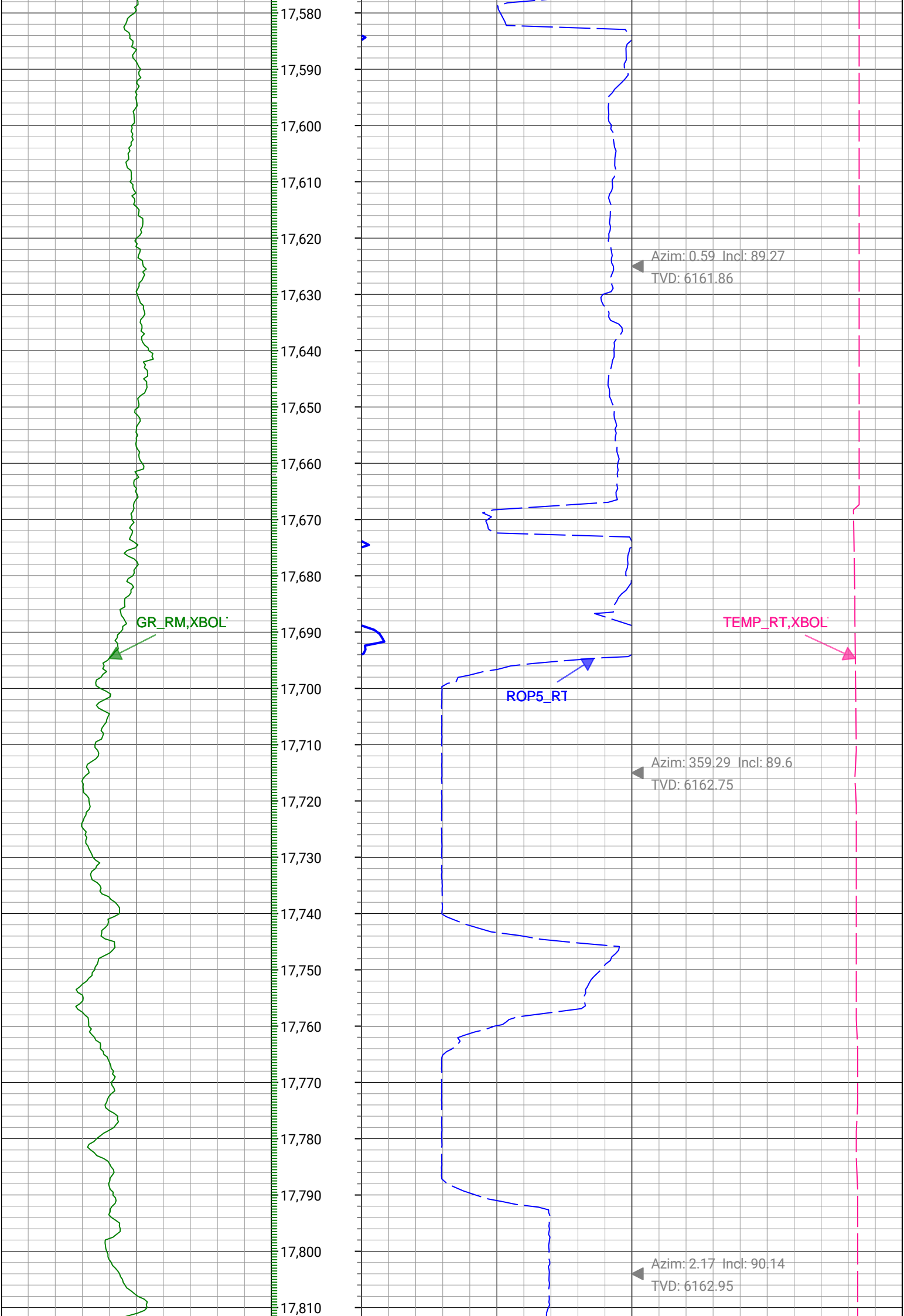
Azim: 1.35 Incl: 89.65
TVD: 6155.04

Azim: 0.99 Incl: 89.26
TVD: 6155.9

Azim: 0.84 Incl: 89.57
TVD: 6156.81







GR_RM,XBOL



ROP5_RT

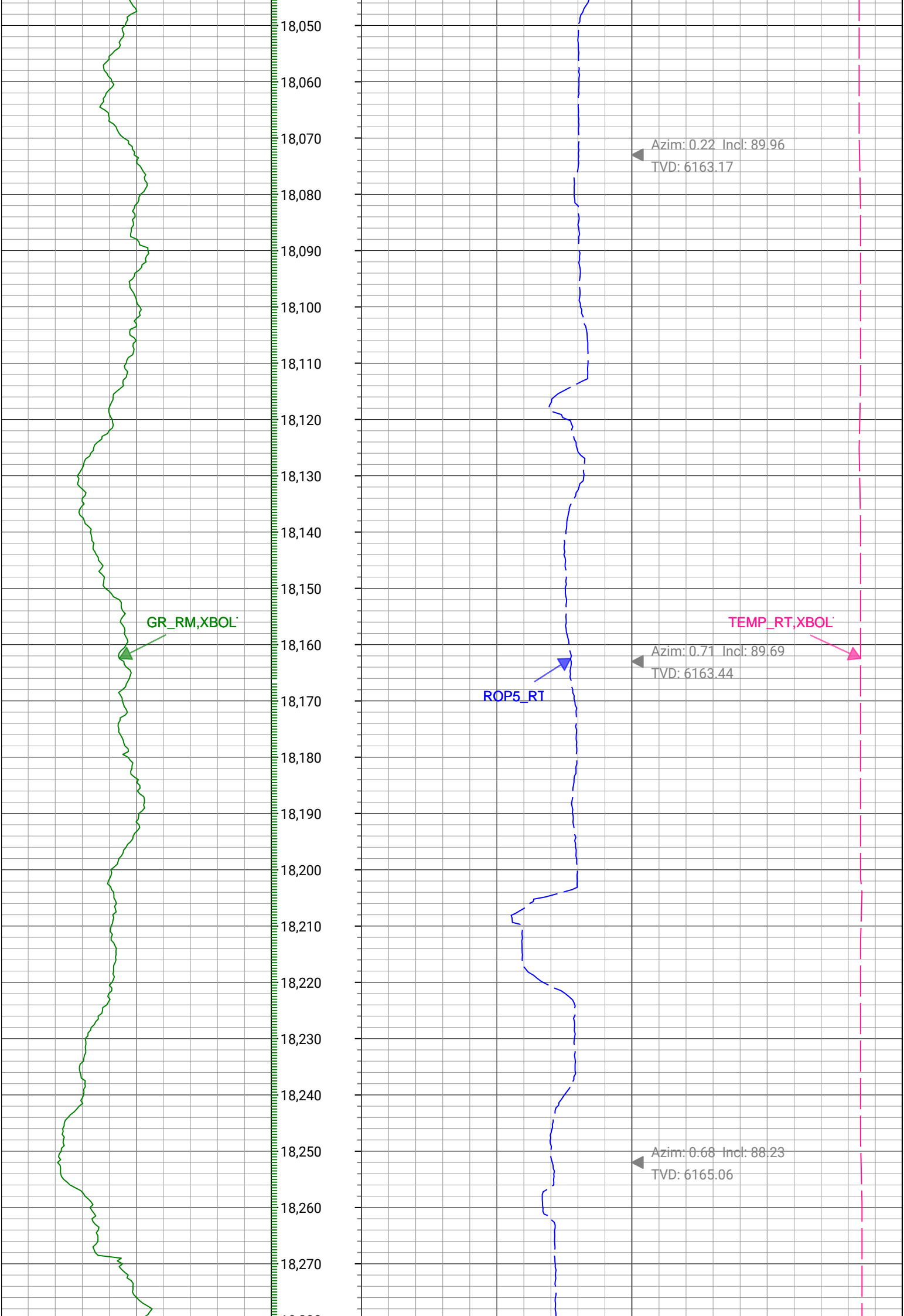


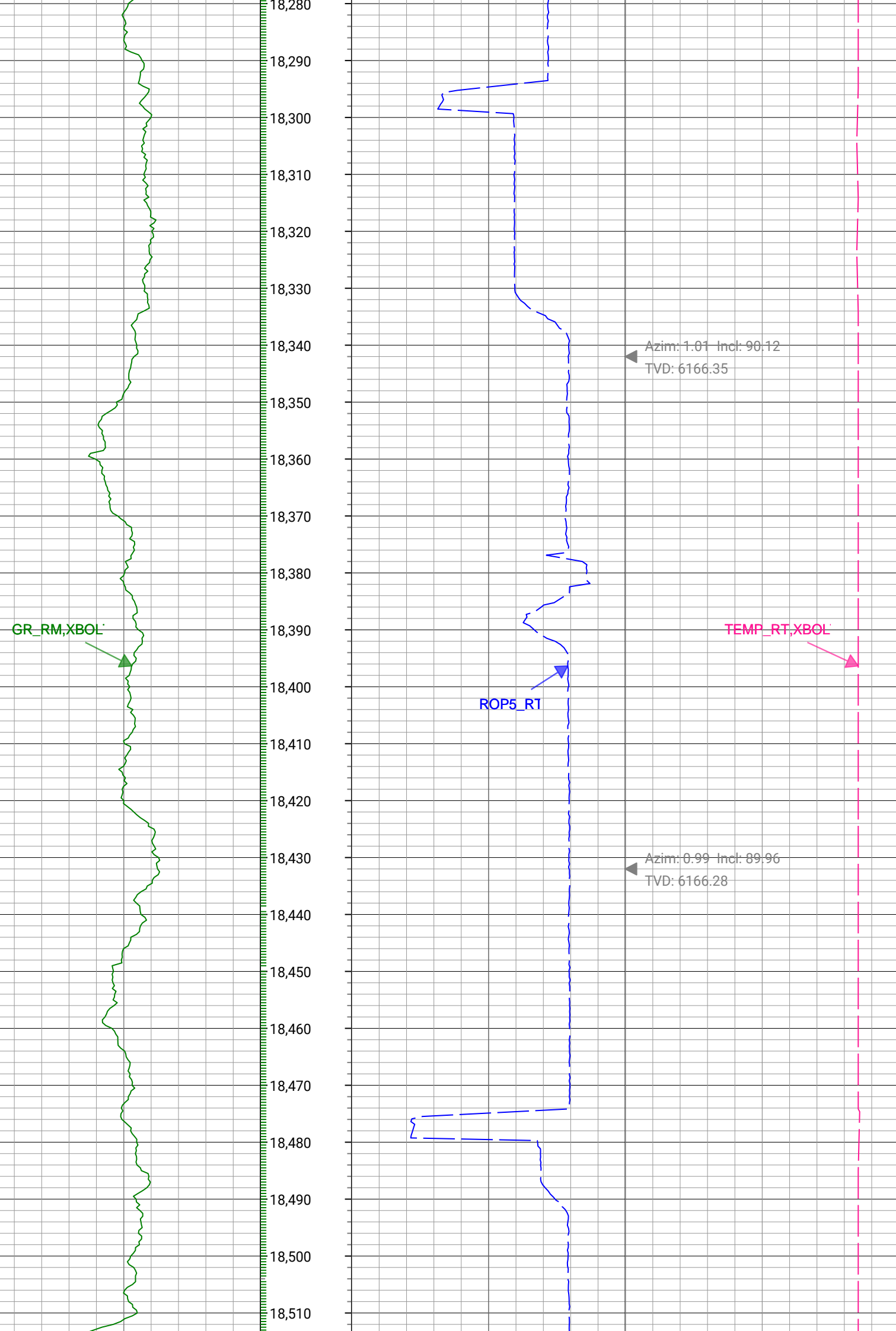
TEMP_RT,XBOL

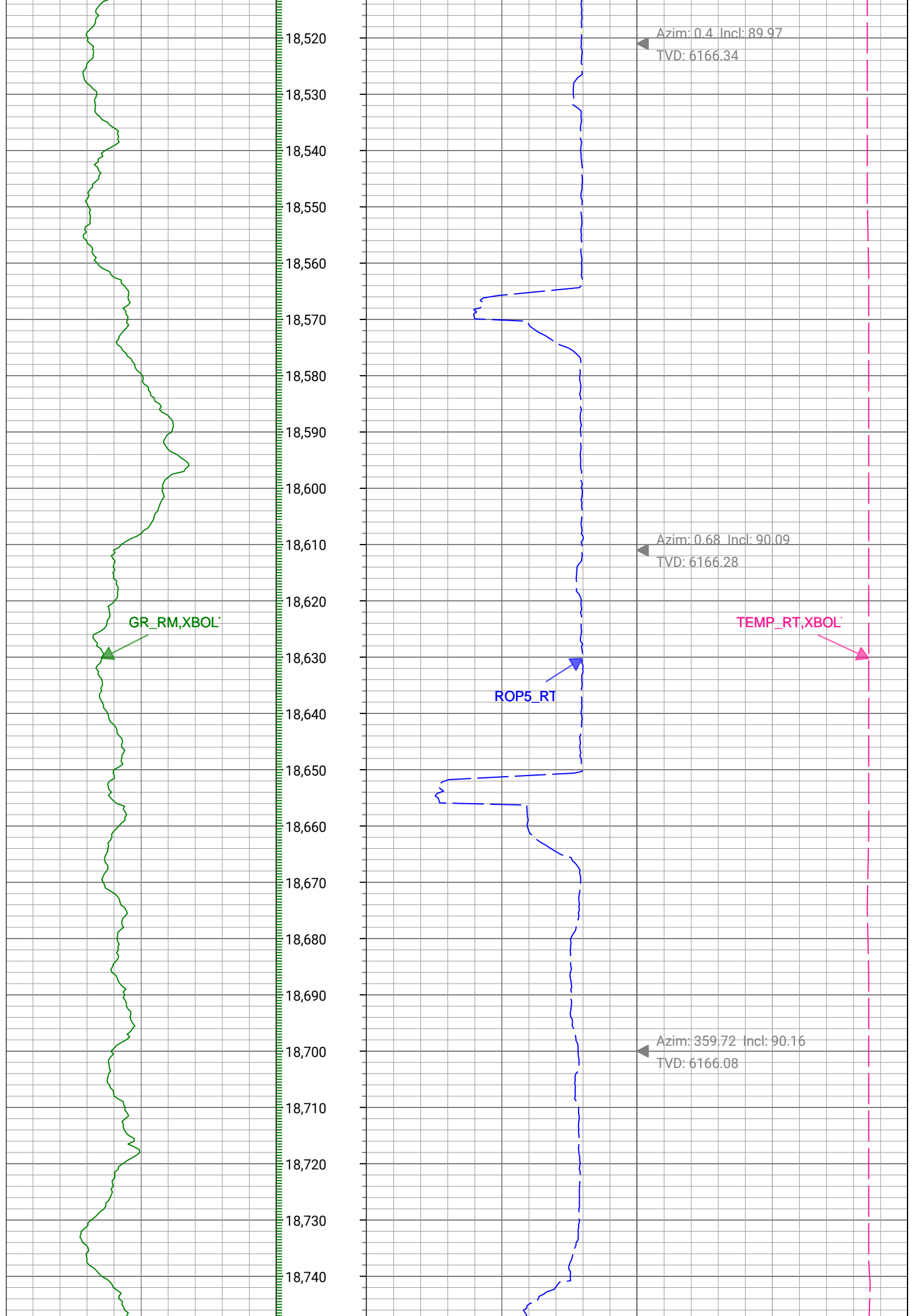


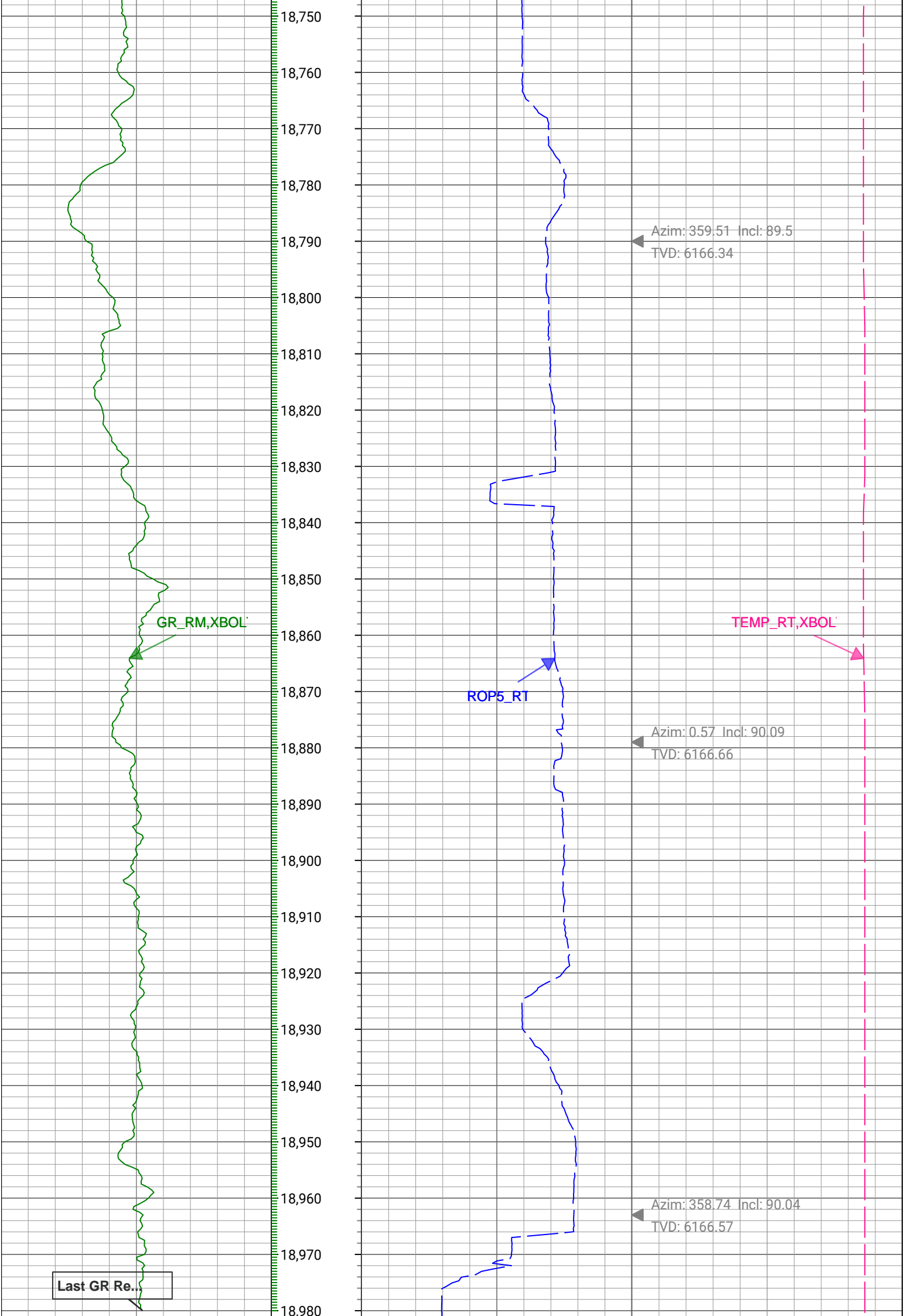
Azim: 0.74 Incl: 90
TVD: 6162.84

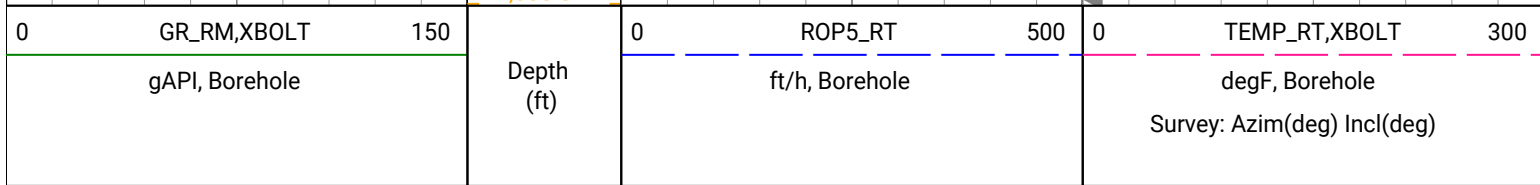
Azim: 0.3 Incl: 89.81
TVD: 6162.99











Survey Record

North Reference: True North

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

Geomagnetic Model:	HDGM 2021	Geomagnetic Date:	14-Aug-2021 17:00:00
Location B:	52151.213(nT)	Location G:	999.077(mgn)
Magnetic Dip:	66.857(deg)	Magnetic Dec:	7.595(deg)
Total Correction:	7.595		

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
17	0	0	17	0	0	0	0	0	0	MWD
192	0.83	206.93	191.99	-1.14	-1.13	-0.57	0.47	1.27	206.93	MWD
220	0.75	176.78	219.99	-1.51	-1.49	-0.66	1.49	1.63	203.7	MWD
248	1.25	143.22	247.99	-1.93	-1.92	-0.46	2.68	1.98	193.53	MWD
279	2.17	126.13	278.97	-2.53	-2.54	0.21	3.36	2.55	175.18	MWD
307	3.46	117.62	306.94	-3.21	-3.24	1.39	4.83	3.53	156.78	MWD
338	4.79	114.63	337.86	-4.15	-4.22	3.4	4.34	5.41	141.14	MWD
368	5.59	112.15	367.73	-5.17	-5.29	5.89	2.77	7.91	131.93	MWD
398	6.32	109.65	397.57	-6.22	-6.39	8.8	2.58	10.88	126.02	MWD
428	7.11	107.61	427.37	-7.27	-7.51	12.12	2.75	14.26	121.79	MWD
458	8.08	104.16	457.1	-8.28	-8.59	15.94	3.57	18.1	118.32	MWD
488	8.79	101.1	486.78	-9.15	-9.55	20.23	2.8	22.37	115.26	MWD
518	9.37	98.08	516.4	-9.84	-10.33	24.9	2.5	26.95	112.54	MWD
548	10.05	96.59	545.97	-10.39	-10.97	29.91	2.42	31.86	110.15	MWD
578	10.77	96.17	575.48	-10.88	-11.58	35.3	2.41	37.15	108.16	MWD
608	11.45	96.27	604.92	-11.4	-12.2	41.05	2.27	42.82	106.56	MWD
638	11.95	96.31	634.29	-11.95	-12.87	47.1	1.67	48.82	105.28	MWD
668	12.26	96.57	663.63	-12.53	-13.58	53.35	1.05	55.05	104.28	MWD
698	12.6	95.82	692.92	-13.1	-14.27	59.77	1.25	61.45	103.43	MWD
728	12.81	94.84	722.19	-13.58	-14.88	66.34	1	67.99	102.65	MWD
758	13.07	94.1	751.43	-13.98	-15.41	73.03	1.03	74.64	101.91	MWD
788	13.28	93.84	780.64	-14.32	-15.88	79.85	0.73	81.42	101.25	MWD
818	13.64	93.86	809.81	-14.65	-16.35	86.82	1.2	88.35	100.66	MWD

848	13.87	93.73	838.95	-14.98	-16.82	93.94	0.77	95.43	100.15	MWD
878	14.2	94	868.06	-15.33	-17.31	101.2	1.12	102.67	99.71	MWD
908	14.8	94.19	897.1	-15.72	-17.85	108.69	2.01	110.15	99.33	MWD
938	15.07	95.68	926.09	-16.24	-18.51	116.39	1.56	117.86	99.04	MWD
968	15.45	96.89	955.03	-16.95	-19.38	124.24	1.65	125.74	98.87	MWD
998	15.84	97.26	983.92	-17.79	-20.38	132.27	1.34	133.83	98.76	MWD
1028	16.37	98.11	1012.74	-18.74	-21.49	140.52	1.93	142.15	98.7	MWD
1058	16.6	98.79	1041.51	-19.83	-22.74	148.94	1	150.66	98.68	MWD
1088	16.98	99.59	1070.23	-21.04	-24.13	157.49	1.48	159.33	98.71	MWD
1118	17.45	100.43	1098.89	-22.42	-25.67	166.23	1.77	168.2	98.78	MWD
1148	17.96	100.22	1127.46	-23.88	-27.31	175.21	1.71	177.32	98.86	MWD
1178	18.68	99.67	1155.94	-25.32	-28.93	184.5	2.47	186.75	98.91	MWD
1208	19.14	98.97	1184.32	-26.71	-30.51	194.09	1.71	196.47	98.93	MWD
1238	19.49	98.22	1212.64	-28	-31.99	203.9	1.43	206.4	98.92	MWD
1268	19.71	97.97	1240.9	-29.22	-33.41	213.87	0.78	216.46	98.88	MWD
1298	19.68	97.71	1269.14	-30.4	-34.79	223.88	0.31	226.57	98.83	MWD
1328	19.84	98.2	1297.38	-31.61	-36.19	233.93	0.77	236.71	98.79	MWD
1358	20.41	97.74	1325.54	-32.84	-37.62	244.15	1.97	247.03	98.76	MWD
1388	20.94	97.14	1353.61	-34.01	-38.99	254.65	1.9	257.62	98.71	MWD
1418	21.75	97.1	1381.55	-35.15	-40.34	265.49	2.7	268.53	98.64	MWD
1448	22.44	96.86	1409.35	-36.3	-41.71	276.69	2.32	279.81	98.57	MWD
1478	23.12	96.77	1437.01	-37.45	-43.09	288.22	2.27	291.43	98.5	MWD
1508	23.54	97.27	1464.56	-38.67	-44.55	300.01	1.55	303.3	98.45	MWD
1538	23.9	97.28	1492.02	-39.97	-46.07	311.98	1.2	315.37	98.4	MWD
1568	24.18	97.15	1519.42	-41.26	-47.61	324.11	0.95	327.59	98.36	MWD
1598	24.67	97.83	1546.74	-42.64	-49.23	336.41	1.88	339.99	98.32	MWD
1628	25.19	98.18	1573.94	-44.16	-50.99	348.93	1.8	352.63	98.31	MWD
1658	25.88	98.69	1601.01	-45.8	-52.89	361.72	2.41	365.57	98.32	MWD
1688	26.57	98.84	1627.92	-47.57	-54.91	374.82	2.31	378.82	98.33	MWD
1718	27.37	98.62	1654.66	-49.37	-56.97	388.27	2.69	392.43	98.35	MWD
1748	28.18	98.04	1681.2	-51.12	-58.99	402.1	2.85	406.41	98.35	MWD
1778	29.05	97.79	1707.54	-52.82	-60.97	416.33	2.93	420.77	98.33	MWD
1808	29.7	97.71	1733.68	-54.52	-62.96	430.92	2.17	435.49	98.31	MWD
1838	30.03	97.78	1759.7	-56.25	-64.97	445.72	1.11	450.43	98.29	MWD
1868	30.23	97.89	1785.64	-58.01	-67.02	460.64	0.69	465.49	98.28	MWD
1891	30.63	97.67	1805.47	-59.36	-68.6	472.18	1.81	477.13	98.27	MWD
1971	31.25	98.48	1874.09	-64.34	-74.38	512.9	0.94	518.27	98.25	MWD
2061	33	98.14	1950.31	-70.33	-81.29	560.26	1.95	566.13	98.26	MWD
2150	34.8	98.23	2024.17	-76.43	-88.36	609.39	2.03	615.77	98.25	MWD
2240	37.08	98.06	2097.03	-82.89	-95.84	661.68	2.53	668.59	98.24	MWD
2329	38.82	97.86	2167.21	-89.41	-103.42	715.88	1.96	723.32	98.22	MWD
2418	41.37	98.02	2235.3	-96.21	-111.34	772.65	2.87	780.63	98.2	MWD
2508	43.03	97.55	2301.97	-103.22	-119.52	832.54	1.88	841.07	98.17	MWD
2598	44.96	97.3	2366.71	-110.08	-127.59	894.52	2.15	903.58	98.12	MWD
2687	44.88	97.46	2429.73	-116.94	-135.67	956.85	0.16	966.42	98.07	MWD
2777	47.18	97.47	2492.21	-124.1	-144.08	1021.07	2.55	1031.18	98.03	MWD
2867	47	97.17	2553.49	-131.21	-152.48	1086.45	0.32	1097.09	97.99	MWD
2956	47.19	96.75	2614.08	-137.84	-160.37	1151.16	0.4	1162.28	97.93	MWD
3046	46.97	97.37	2675.37	-144.66	-168.47	1216.57	0.56	1228.18	97.88	MWD
3135	49.65	97.39	2734.56	-151.91	-177.01	1282.47	3.02	1294.63	97.86	MWD

3224	49.46	97.39	2792.3	-159.31	-185.72	1349.64	0.22	1362.35	97.84	MWD
3314	48.82	97	2851.17	-166.51	-194.25	1417.17	0.78	1430.42	97.8	MWD
3403	49.06	100.23	2909.64	-175.27	-204.3	1483.5	2.74	1497.5	97.84	MWD
3493	49.19	99.64	2968.54	-185.69	-216.04	1550.53	0.52	1565.51	97.93	MWD
3582	48.95	99.74	3026.85	-195.71	-227.36	1616.81	0.28	1632.72	98	MWD
3671	49.28	99.6	3085.11	-205.71	-238.66	1683.14	0.39	1699.97	98.07	MWD
3760	49.2	100.35	3143.22	-216.09	-250.34	1749.53	0.65	1767.35	98.14	MWD
3849	49.28	99.56	3201.32	-226.45	-261.99	1815.93	0.68	1834.73	98.21	MWD
3939	48.81	100.12	3260.31	-236.75	-273.61	1882.9	0.7	1902.68	98.27	MWD
4028	49.26	100.9	3318.66	-247.71	-285.86	1948.98	0.83	1969.83	98.34	MWD
4118	49.24	101.13	3377.41	-259.43	-298.89	2015.91	0.2	2037.94	98.43	MWD
4207	49.26	100.15	3435.5	-270.58	-311.33	2082.17	0.83	2105.32	98.5	MWD
4297	48.97	100	3494.41	-281.17	-323.24	2149.16	0.35	2173.34	98.55	MWD
4386	49.06	100.41	3552.78	-291.78	-335.14	2215.29	0.36	2240.5	98.6	MWD
4475	49.16	100.5	3611.04	-302.7	-347.36	2281.45	0.13	2307.75	98.66	MWD
4565	49.05	100.47	3669.96	-313.77	-359.74	2348.35	0.13	2375.74	98.71	MWD
4654	49.36	100.79	3728.11	-324.9	-372.17	2414.56	0.44	2443.08	98.76	MWD
4743	48.8	100.7	3786.41	-336.15	-384.71	2480.63	0.63	2510.29	98.82	MWD
4833	48.92	99.95	3845.63	-346.98	-396.85	2547.31	0.64	2578.04	98.85	MWD
4922	49.13	100.31	3903.99	-357.5	-408.66	2613.46	0.39	2645.21	98.89	MWD
5012	49.33	100.17	3962.76	-368.3	-420.78	2680.53	0.25	2713.35	98.92	MWD
5101	49.47	100.12	4020.68	-378.9	-432.68	2747.05	0.17	2780.92	98.95	MWD
5190	49.28	100.07	4078.63	-389.44	-444.52	2813.55	0.22	2848.45	98.98	MWD
5280	48.76	100.78	4137.65	-400.42	-456.81	2880.38	0.83	2916.38	99.01	MWD
5369	49.05	101.51	4196.15	-412.09	-469.77	2946.19	0.7	2983.4	99.06	MWD
5458	49.69	101.12	4254.11	-424.05	-483.02	3012.41	0.79	3050.89	99.11	MWD
5548	48.71	101.21	4312.91	-435.93	-496.22	3079.26	1.08	3118.98	99.15	MWD
5637	48.79	101.46	4371.59	-447.8	-509.37	3144.87	0.23	3185.85	99.2	MWD
5727	48.8	100.74	4430.88	-459.54	-522.41	3211.31	0.6	3253.53	99.24	MWD
5816	49.02	101.14	4489.37	-470.98	-535.14	3277.17	0.41	3320.58	99.27	MWD
5906	48.84	101.19	4548.5	-482.81	-548.27	3343.74	0.21	3388.39	99.31	MWD
5996	49.17	101.3	4607.54	-494.75	-561.51	3410.37	0.38	3456.28	99.35	MWD
6085	48.52	100.87	4666.11	-506.34	-574.4	3476.12	0.82	3523.26	99.38	MWD
6174	49.11	101.37	4724.72	-517.98	-587.32	3541.84	0.79	3590.21	99.42	MWD
6263	48.88	102.17	4783.12	-530.39	-601.02	3607.59	0.72	3657.31	99.46	MWD
6353	48.76	101.71	4842.38	-543.11	-615.04	3673.86	0.4	3724.99	99.5	MWD
6442	48.75	101.1	4901.05	-555.06	-628.27	3739.46	0.52	3791.87	99.54	MWD
6532	48.79	101.75	4960.37	-567.16	-641.68	3805.8	0.55	3859.52	99.57	MWD
6621	48.54	101.76	5019.15	-579.5	-655.29	3871.23	0.28	3926.3	99.61	MWD
6711	48.88	101.44	5078.53	-591.8	-668.89	3937.48	0.47	3993.89	99.64	MWD
6800	49.36	101.2	5136.78	-603.71	-682.1	4003.46	0.58	4061.15	99.67	MWD
6890	49.18	101.59	5195.5	-615.88	-695.57	4070.32	0.38	4129.33	99.7	MWD
6979	49.03	101.74	5253.76	-628.18	-709.17	4136.21	0.21	4196.57	99.73	MWD
7069	49.1	102.05	5312.73	-640.9	-723.18	4202.75	0.28	4264.51	99.76	MWD
7158	48.88	101.86	5371.13	-653.52	-737.1	4268.45	0.31	4331.62	99.8	MWD
7248	48.77	101.75	5430.38	-666.08	-750.95	4334.76	0.15	4399.32	99.83	MWD
7337	49.42	101.49	5488.66	-678.33	-764.5	4400.64	0.76	4466.55	99.86	MWD
7427	49.1	99.36	5547.41	-689.36	-776.83	4467.7	1.83	4534.73	99.86	MWD
7516	48.93	98.76	5605.78	-698.64	-787.41	4534.04	0.54	4601.91	99.85	MWD
7606	49.15	92.61	5664.81	-704.04	-794.14	4601.61	5.16	4669.63	99.79	MWD

7695	48.95	83.77	5723.21	-700.62	-792.03	4668.67	7.5	4735.38	99.63	MWD
7784	50.18	73.68	5781.01	-686.06	-778.76	4734.94	8.74	4798.56	99.34	MWD
7874	50.04	66.11	5838.78	-661.1	-755.06	4799.71	6.45	4858.73	98.94	MWD
7963	52.17	58.03	5894.72	-627.46	-722.6	4860.78	7.46	4914.19	98.46	MWD
8053	56.3	50.8	5947.36	-583.77	-680.07	4920.02	7.97	4966.8	97.87	MWD
8142	59.85	44.06	5994.45	-531.59	-628.96	4975.53	7.56	5015.13	97.2	MWD
8231	63.16	38.66	6036.93	-471.88	-570.25	5027.14	6.5	5059.38	96.47	MWD
8321	67.01	32.24	6074.87	-404.5	-503.78	5074.38	7.75	5099.32	95.67	MWD
8410	70.99	27.24	6106.78	-331.58	-431.65	5115.52	6.89	5133.7	94.82	MWD
8500	75.72	18.4	6132.6	-251.55	-352.26	5148.84	10.78	5160.88	93.91	MWD
8589	81.9	8.57	6149.91	-166.4	-267.49	5169.08	12.86	5176	92.96	MWD
8679	89.22	5.34	6156.87	-77.21	-178.49	5179.93	8.89	5183	91.97	MWD
8768	90.98	4.32	6156.72	11.6	-89.81	5187.42	2.29	5188.2	90.99	MWD
8858	90.96	1.1	6155.19	101.54	0.06	5191.67	3.58	5191.67	90	MWD
8947	90.69	0	6153.91	190.53	89.05	5192.52	1.27	5193.28	89.02	MWD
9037	90.85	0.39	6152.7	280.51	179.04	5192.83	0.47	5195.92	88.03	MWD
9126	90.59	1.19	6151.59	369.5	268.02	5194.06	0.94	5200.97	87.05	MWD
9216	90.61	1.29	6150.64	459.49	358	5196.01	0.11	5208.32	86.06	MWD
9305	90.77	0.79	6149.56	548.49	446.98	5197.62	0.59	5216.8	85.08	MWD
9394	91.04	1.21	6148.16	637.47	535.95	5199.17	0.56	5226.72	84.11	MWD
9484	90.19	1.33	6147.19	727.47	625.92	5201.16	0.95	5238.69	83.14	MWD
9573	90.03	358.2	6147.02	816.43	714.91	5200.79	3.52	5249.7	82.17	MWD
9663	90.15	359.02	6146.89	906.34	804.88	5198.61	0.93	5260.55	81.2	MWD
9752	90.26	0.1	6146.57	995.31	893.88	5197.92	1.21	5274.22	80.24	MWD
9842	90.22	0.7	6146.19	1085.3	983.88	5198.55	0.68	5290.84	79.28	MWD
9932	90.35	0.96	6145.74	1175.3	1073.87	5199.86	0.32	5309.59	78.33	MWD
10021	90.05	1.18	6145.43	1264.3	1162.85	5201.53	0.42	5329.93	77.4	MWD
10111	90.23	1.56	6145.22	1354.3	1252.82	5203.68	0.47	5352.37	76.46	MWD
10200	90.23	1.57	6144.86	1443.29	1341.79	5206.11	0.01	5376.24	75.55	MWD
10290	90.23	2.15	6144.5	1533.28	1431.74	5209.03	0.65	5402.21	74.63	MWD
10379	90.31	2.09	6144.09	1622.27	1520.68	5212.33	0.11	5429.63	73.74	MWD
10468	89.92	2.37	6143.91	1711.25	1609.61	5215.8	0.53	5458.51	72.85	MWD
10558	89.96	2.53	6144	1801.23	1699.53	5219.64	0.19	5489.36	71.96	MWD
10647	90.16	0.13	6143.9	1890.22	1788.5	5221.71	2.71	5519.51	71.09	MWD
10736	90.25	0.1	6143.58	1979.21	1877.5	5221.89	0.11	5549.15	70.22	MWD
10825	89.94	0.03	6143.43	2068.19	1966.5	5221.98	0.36	5579.98	69.36	MWD
10915	89.81	359.94	6143.63	2158.17	2056.5	5221.96	0.18	5612.31	68.5	MWD
11004	90.15	0.92	6143.67	2247.17	2145.49	5222.63	1.16	5646.15	67.67	MWD
11094	90.21	0.35	6143.39	2337.16	2235.49	5223.63	0.63	5681.88	66.83	MWD
11183	90.41	1.94	6142.91	2426.16	2324.46	5225.41	1.8	5719.1	66.02	MWD
11273	89.96	0.98	6142.61	2516.15	2414.43	5227.71	1.17	5758.34	65.21	MWD
11363	90.23	0.69	6142.46	2606.15	2504.42	5229.02	0.45	5797.83	64.41	MWD
11452	89.81	0.21	6142.43	2695.15	2593.42	5229.72	0.71	5837.45	63.62	MWD
11542	90.14	359.99	6142.47	2785.13	2683.42	5229.88	0.44	5878.13	62.84	MWD
11631	90.12	359.82	6142.27	2874.11	2772.42	5229.73	0.19	5919.16	62.07	MWD
11720	89.95	0.32	6142.22	2963.1	2861.42	5229.84	0.58	5961.45	61.32	MWD
11810	90.22	0.7	6142.08	3053.09	2951.41	5230.64	0.52	6005.86	60.57	MWD
11900	90.11	0.59	6141.82	3143.09	3041.41	5231.65	0.18	6051.47	59.83	MWD
11989	90.15	0.76	6141.62	3232.08	3130.4	5232.7	0.2	6097.59	59.11	MWD

12078	89.88	0.79	6141.59	3321.08	3219.39	5233.9	0.3	6144.77	58.4	MWD
12168	90.07	1.31	6141.62	3411.08	3309.38	5235.55	0.62	6193.79	57.7	MWD
12257	89.87	358.71	6141.67	3500.06	3398.37	5235.57	2.94	6241.8	57.01	MWD
12347	89.95	357.37	6141.81	3589.93	3488.32	5232.48	1.49	6288.66	56.31	MWD
12436	89.74	359.11	6142.06	3678.81	3577.27	5229.75	1.97	6336.18	55.63	MWD
12526	89.78	0.24	6142.43	3768.78	3667.27	5229.24	1.26	6387	54.96	MWD
12615	89.26	0.61	6143.18	3857.77	3756.26	5229.91	0.73	6439.05	54.31	MWD
12705	89.79	1.89	6143.93	3947.76	3846.23	5231.87	1.54	6493.54	53.68	MWD
12794	89.66	2.2	6144.36	4036.75	3935.18	5235.05	0.38	6549.15	53.07	MWD
12883	90.01	2.02	6144.62	4125.74	4024.11	5238.33	0.44	6605.57	52.47	MWD
12973	89.89	0.01	6144.7	4215.73	4114.1	5239.92	2.24	6662.02	51.86	MWD
13062	89.79	2.04	6144.94	4304.73	4203.08	5241.51	2.29	6718.58	51.27	MWD
13152	90.02	2.59	6145.09	4394.71	4293	5245.15	0.66	6778.02	50.7	MWD
13242	90	2.08	6145.07	4484.69	4382.93	5248.82	0.57	6838.14	50.14	MWD
13331	89.89	1.9	6145.16	4573.68	4471.87	5251.91	0.25	6897.84	49.59	MWD
13421	89.75	0.11	6145.44	4663.67	4561.86	5253.49	1.99	6957.7	49.03	MWD
13510	89.63	1.02	6145.92	4752.66	4650.85	5254.36	1.04	7017.03	48.49	MWD
13599	89.82	1.77	6146.34	4841.66	4739.82	5256.53	0.87	7077.92	47.96	MWD
13689	89.56	1.65	6146.83	4931.66	4829.78	5259.21	0.32	7140.45	47.44	MWD
13778	89.66	1.62	6147.43	5020.65	4918.74	5261.75	0.12	7202.78	46.93	MWD
13868	89.27	1.86	6148.27	5110.64	5008.7	5264.48	0.51	7266.48	46.43	MWD
13957	89.25	2.37	6149.41	5199.62	5097.63	5267.76	0.57	7330.43	45.94	MWD
14046	89.46	2.72	6150.42	5288.59	5186.53	5271.71	0.46	7395.34	45.47	MWD
14136	89.72	2.91	6151.06	5378.54	5276.42	5276.13	0.36	7461.78	45	MWD
14225	89.28	2.39	6151.84	5467.51	5365.32	5280.24	0.77	7527.79	44.54	MWD
14315	89.31	1.81	6152.95	5557.49	5455.26	5283.54	0.64	7594.45	44.08	MWD
14404	89.47	2.19	6153.9	5646.47	5544.2	5286.65	0.46	7660.73	43.64	MWD
14494	89.14	358.61	6154.98	5736.44	5634.17	5287.27	4	7726.52	43.18	MWD
14583	89.03	0.09	6156.4	5825.39	5723.15	5286.26	1.67	7790.96	42.73	MWD
14673	89.37	359.23	6157.66	5915.35	5813.14	5285.73	1.03	7856.94	42.28	MWD
14762	89.83	359.33	6158.29	6004.3	5902.13	5284.61	0.53	7922.26	41.84	MWD
14852	90.56	358.34	6157.98	6094.23	5992.11	5282.77	1.37	7988.31	41.4	MWD
14941	90.31	356.99	6157.31	6183.06	6081.03	5279.15	1.54	8052.85	40.96	MWD
15031	90.16	358.03	6156.94	6272.88	6170.95	5275.24	1.17	8118.42	40.53	MWD
15120	90.39	0.1	6156.51	6361.82	6259.93	5273.78	2.34	8185.32	40.11	MWD
15210	90.23	0.35	6156.02	6451.8	6349.93	5274.14	0.33	8254.58	39.71	MWD
15299	90.2	0.15	6155.68	6540.79	6438.93	5274.53	0.23	8323.49	39.32	MWD
15388	90.25	0.22	6155.33	6629.78	6527.92	5274.82	0.1	8392.71	38.94	MWD
15478	90.18	0.86	6154.99	6719.77	6617.92	5275.67	0.71	8463.42	38.56	MWD
15567	90.31	0.85	6154.6	6808.77	6706.91	5277	0.14	8534.01	38.2	MWD
15657	90.43	2.06	6154.02	6898.77	6796.88	5279.29	1.35	8606.3	37.84	MWD
15746	91.02	3.85	6152.9	6987.71	6885.75	5283.88	2.11	8679.45	37.5	MWD
15836	90.22	3.98	6151.92	7077.6	6975.53	5290.01	0.9	8754.56	37.18	MWD
15925	89.71	3.1	6151.98	7166.52	7064.36	5295.51	1.14	8828.79	36.86	MWD
16014	89.94	4.42	6152.25	7255.42	7153.17	5301.34	1.51	8903.48	36.54	MWD
16104	92.07	4.13	6150.68	7345.27	7242.9	5308.05	2.4	8979.7	36.24	MWD
16193	90	3.56	6149.06	7434.15	7331.68	5314.02	2.41	9054.96	35.93	MWD
16283	88.84	2.86	6149.97	7524.08	7421.53	5319.06	1.51	9130.8	35.63	MWD
16372	89.48	3.66	6151.28	7613.01	7510.37	5324.12	1.16	9206.08	35.33	MWD
16462	89.72	1.78	6151.91	7702.96	7600.27	5328.39	2.1	9282.01	35.03	MWD

16552	89.44	0.95	6152.57	7792.96	7690.24	5330.54	0.98	9357.05	34.73	MWD
16641	89.64	0.93	6153.29	7881.96	7779.22	5332	0.23	9431.15	34.43	MWD
16731	89.59	0.77	6153.89	7971.95	7869.21	5333.33	0.19	9506.26	34.13	MWD
16820	89.63	0.88	6154.49	8060.95	7958.2	5334.61	0.13	9580.76	33.84	MWD
16909	89.65	1.35	6155.04	8149.95	8047.18	5336.34	0.53	9655.76	33.55	MWD
16999	89.26	0.99	6155.9	8239.94	8137.16	5338.18	0.59	9731.88	33.27	MWD
17088	89.57	0.84	6156.81	8328.94	8226.14	5339.61	0.4	9807.18	32.99	MWD
17178	89.29	0.78	6157.7	8418.93	8316.13	5340.88	0.32	9883.47	32.71	MWD
17267	89.34	0.99	6158.76	8507.93	8405.11	5342.26	0.24	9959.19	32.44	MWD
17357	89.69	1.03	6159.52	8597.92	8495.09	5343.84	0.4	10036.1	32.17	MWD
17446	89.51	2.03	6160.14	8686.92	8584.06	5346.22	1.15	10112.77	31.91	MWD
17536	89.51	1.12	6160.91	8776.91	8674.02	5348.69	1.01	10190.54	31.66	MWD
17625	89.27	0.59	6161.86	8865.9	8763	5350.03	0.65	10267.08	31.41	MWD
17715	89.6	359.29	6162.75	8955.88	8853	5349.94	1.49	10343.95	31.14	MWD
17804	90.14	2.17	6162.95	9044.87	8941.98	5351.07	3.29	10420.79	30.9	MWD
17894	90	0.74	6162.84	9134.86	9031.95	5353.35	1.6	10499.26	30.66	MWD
17983	89.81	0.3	6162.99	9223.86	9120.94	5354.16	0.53	10576.32	30.41	MWD
18073	89.96	0.22	6163.17	9313.85	9210.94	5354.57	0.2	10654.24	30.17	MWD
18163	89.69	0.71	6163.44	9403.84	9300.94	5355.3	0.62	10732.51	29.93	MWD
18252	88.23	0.68	6165.06	9492.82	9389.92	5356.38	1.63	10810.24	29.7	MWD
18342	90.12	1.01	6166.35	9582.81	9479.89	5357.7	2.13	10889.14	29.47	MWD
18432	89.96	0.99	6166.28	9672.81	9569.88	5359.27	0.19	10968.33	29.25	MWD
18521	89.97	0.4	6166.34	9761.8	9658.87	5360.34	0.66	11046.59	29.03	MWD
18611	90.09	0.68	6166.28	9851.8	9748.87	5361.19	0.34	11125.77	28.81	MWD
18700	90.16	359.72	6166.08	9940.79	9837.87	5361.5	1.08	11203.99	28.59	MWD
18790	89.5	359.51	6166.34	10030.75	9927.86	5360.9	0.77	11282.81	28.37	MWD
18879	90.09	0.57	6166.66	10119.74	10016.86	5360.97	1.36	11361.23	28.16	MWD
18963	90.04	358.74	6166.57	10203.7	10100.86	5360.47	2.18	11435.12	27.95	MWD
19005	90.04	358.74	6166.55	10245.67	10142.85	5359.54	0.01	11471.79	27.85	Manual

Company:

Verdad Resources LLC

Well:

Sonic Star 1101-16H

Field Name:

DJ Horizontal Niobrara

Country Name:

United States

State Name:

Colorado

County Name:

Weld

XBOLT GAMMA RAY

5in/100ft Measured Depth

Final Print

Recorded Mode