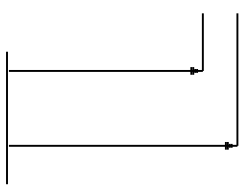



Company: Great Western Operating Company LLC		Well: Schneider HD 11-102HN		Field: Wattenberg		County: Weld		State: Colorado		Country: United States of America	
<div><div>XEM Gamma Ray</div><div>5in/100ft Measured Depth</div><div>Recorded Mode, Composite Log</div><div>Schlumberger</div></div>											
Company: Great Western Operating Company LLC											
Well: Schneider HD 11-102HN											
Field: Wattenberg											
County: Weld											
State: Colorado											
Country: United States of America											
Latitude: 40° 19' 27.239" N		APIN: 05-123-46406									
Longitude: 104° 49' 35.447" W		Rig Name: Precision Drilling 466									
		Rig Type: Land Rig - Top Drive									
FL: NAD83 Colorado State Plane, Northern Zone, US Feet											
FL1: Easting: 3187780.932 ftUS											
FL2: Northing: 1361672.032 ftUS											
<div><div>Log Measured From: - Drill Floor: 4755.00 ft</div><div>Ground Level: 4735.00 ft</div><div></div></div>											
Permanent Datum: - Mean Sea Level											
Acquisition Dates: 24-Oct-2019 -- 28-Oct-2019		Other Services:									
Log Interval: 1624.00(ft) -- 17758.00ft)		Directional Drilling									
Index Types: Measured Depth		Direction and Inclination (Surveys)									
Index Scales: 1:240 5" / 100'		Continuous D&I									
Depth Source: Driller's Depth		Rotary Steerable System									
Depth Sensor: 3rd Party Depth											
Print Type: Final											
Spud Date: 05-Sep-2019											

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.

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9.1 Integration Summary

9.2 Software Version

9.3 Composite Summary

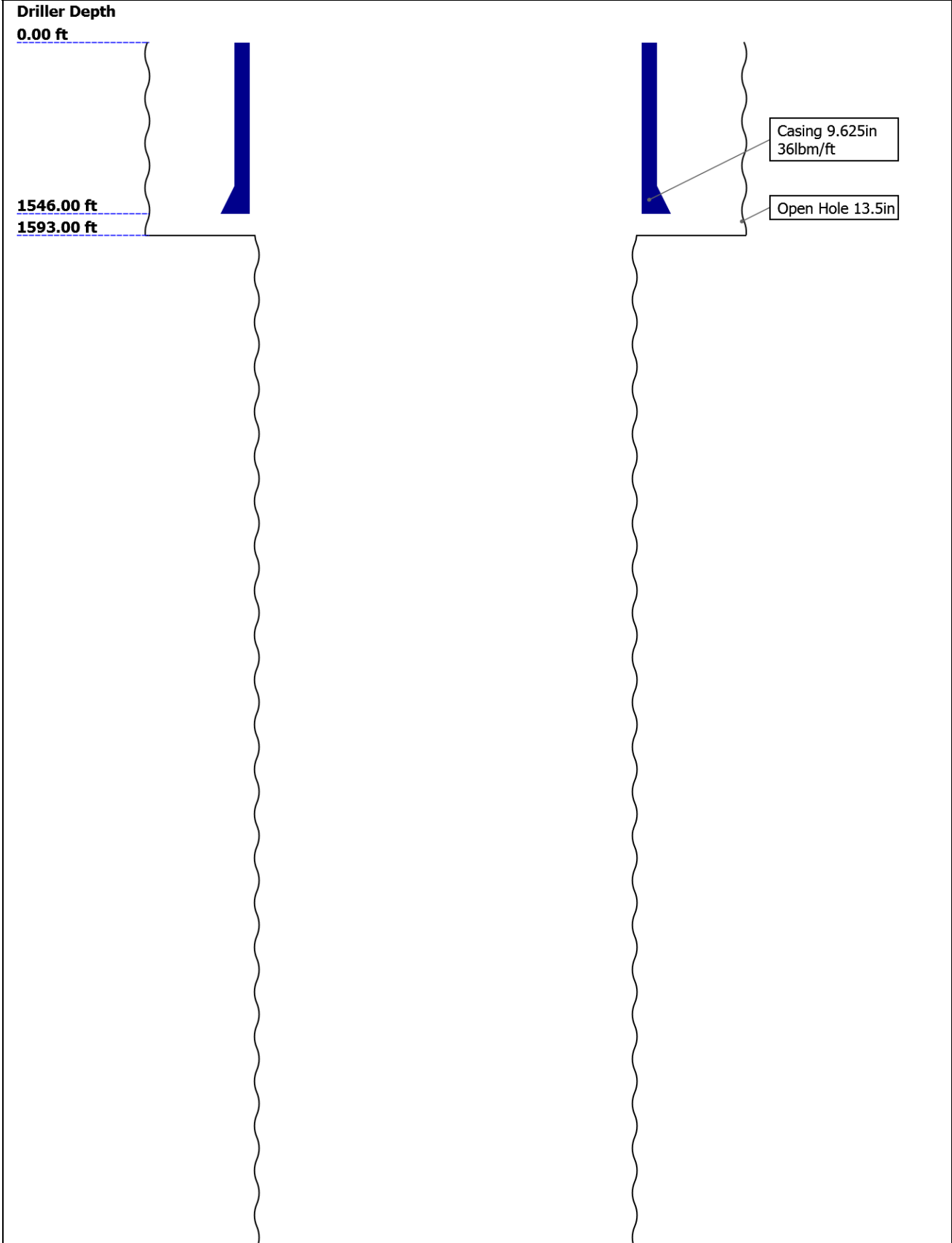
9.4 Log ( Extreme Gamma Ray 1 RT\_6 )

9.5 Parameter Listing

10. Calibration Report

11. Tail

Well Sketch





Borehole Size/Casing Record						
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Bit						
Bit Size ( in )	13.5	8.5				
Top Driller ( ft )	0	1593				
Bottom Driller ( ft )	1593	17758.00				
Casing						
Size ( in )	9.625					
Weight ( lbm/ft )	36					
Inner Diameter ( in )	8.921					
Grade	J55					
Top Driller ( ft )	0					
Bottom Driller ( ft )	1546					

Operational Run Summary						
-------------------------	--	--	--	--	--	--

Parameter ( unit )	Run1					
Date Log Started	24-Oct-2019					
Time Log Started	19:55:29					
Date Log Finished	28-Oct-2019					
Time Log Finished	17:57:33					
Bit Size ( in )	8.500					
Bit Start Depth ( ft )	1593.00					
Bit Stop Depth ( ft )	17758.00					
Top Log Interval ( ft )	1624.00					
Bottom Log Interval ( ft )	17733.00					
Max Hole Deviation ( deg )	91.43					
Azimuth of Max Deviation ( deg )	270.76					
Logging Unit Number	Client Provided					
Logging Unit Location	Zone 2					
Recorded By	D. Goldfarb					
Witnessed By	M.Hackworth					
Service Order Number	19CCO1387					

Borehole Fluids	
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## Remarks and Equipment Summary

[illegible]

XEM650:SD36558H 40.87  
S

GAP650:GSBR0882  
XEM650DC:SD36558H  
S  
DPG:DDRP073  
XHOP:XHOP1010  
XTX:HVTX089o2  
DYN:SOCD1379  
BAT:DOBA2512  
XGM:XGM0813  
DNI:SOCD1379

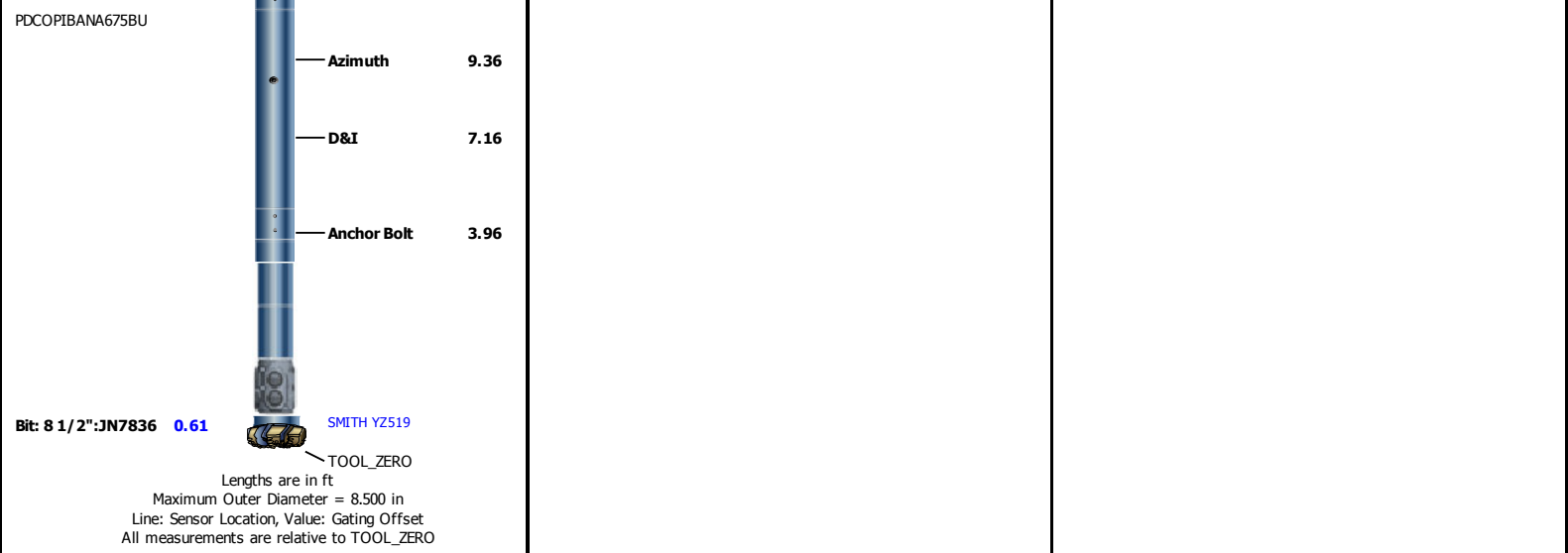
INT PRES 38.75  
ANN PRES 38.6  
TEMP 38.6

GR 24.56

D&I 19.97

PDCOPIBANA\_675 13.48

PD675CC:ENP051  
Impeller Set  
PDCU:ENP051



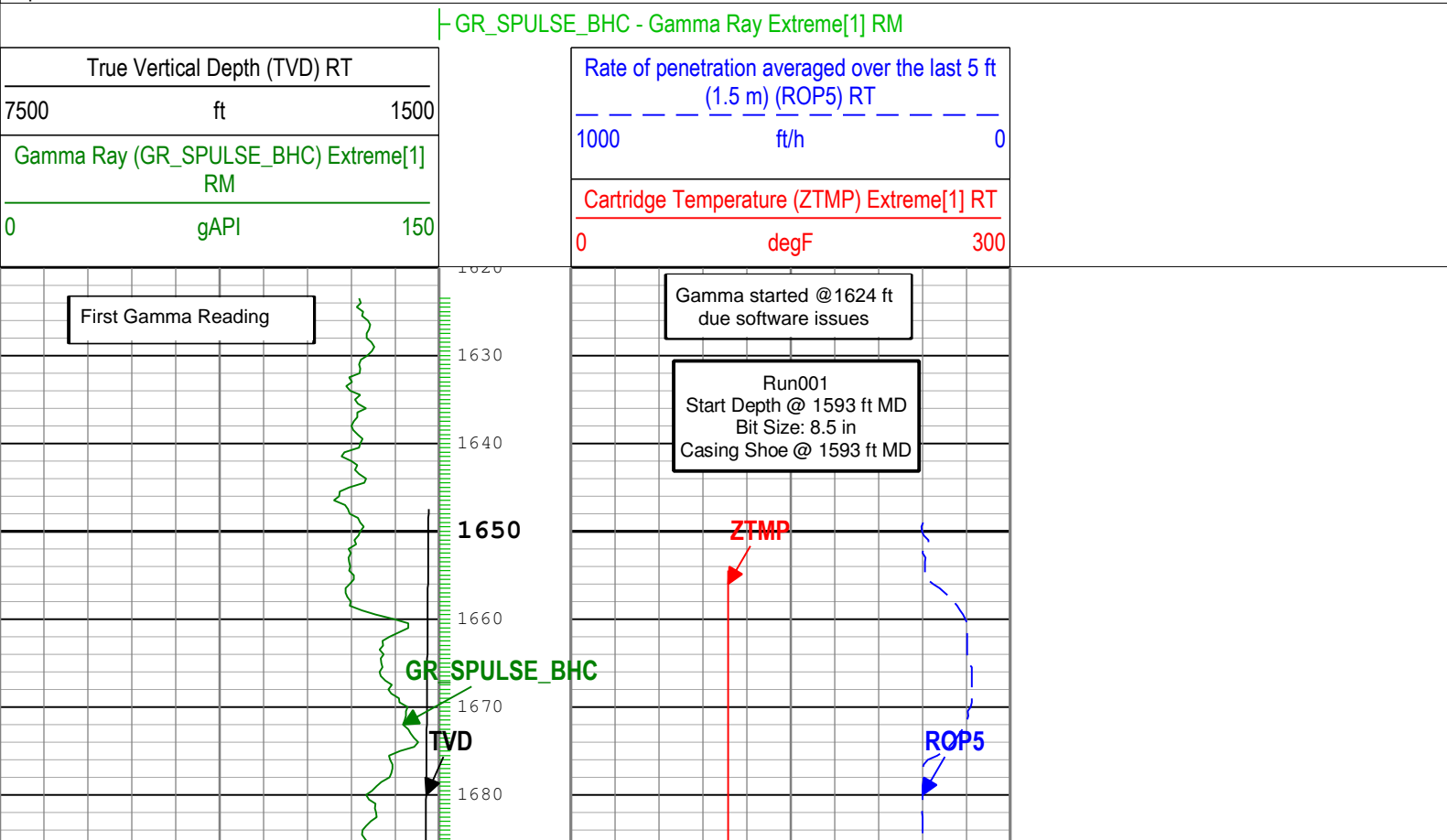
## Well Composite

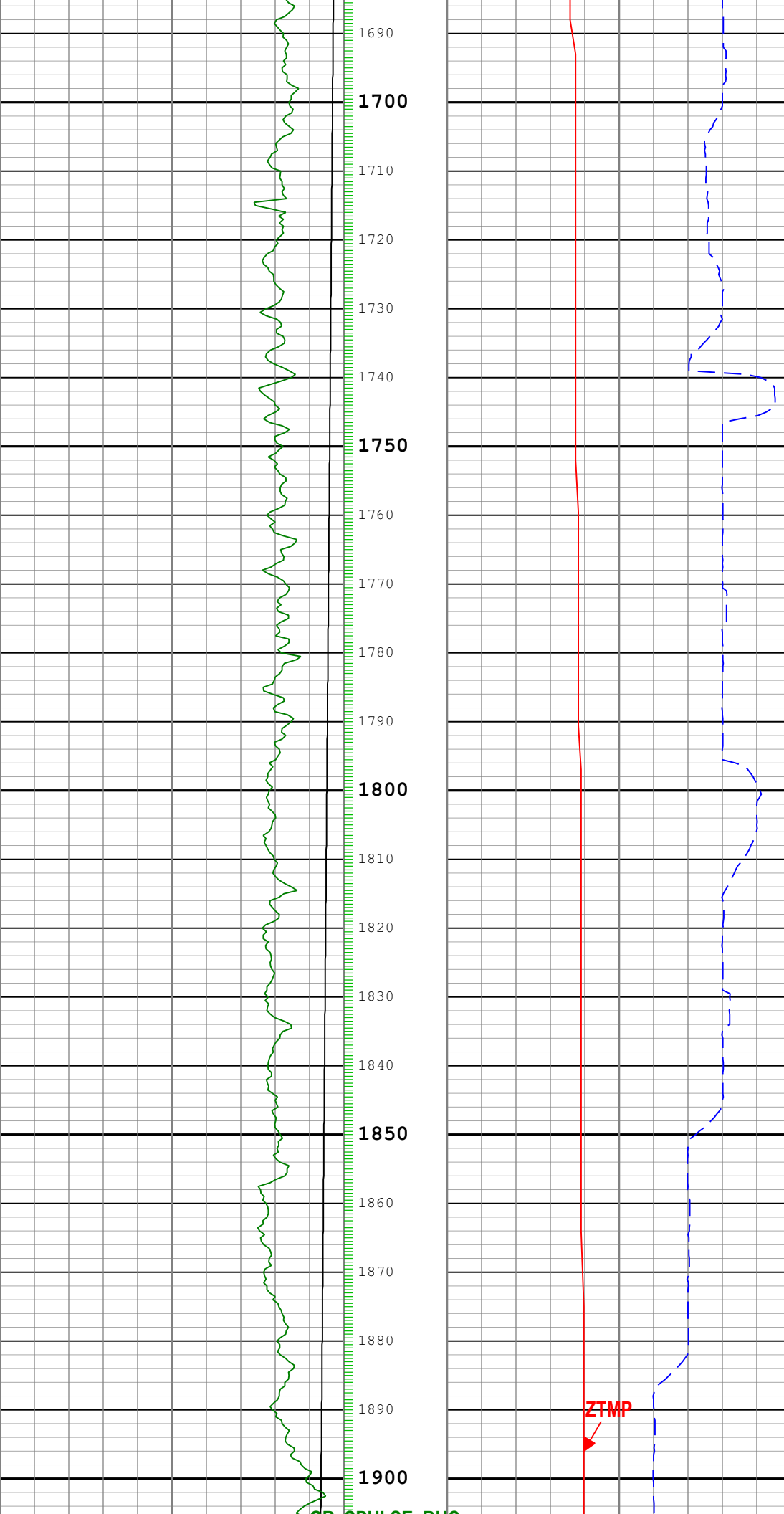
Software Version	
Acquisition System	Version
Maxwell 2018 SP2	8.2.104493.3100

Composite Summary							
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Include Parallel Data
Run1	Drilling	Down	1647.50 ft	17757.92 ft	24-Oct-2019 10:44:42 PM	28-Oct-2019 5:57:33 PM	No

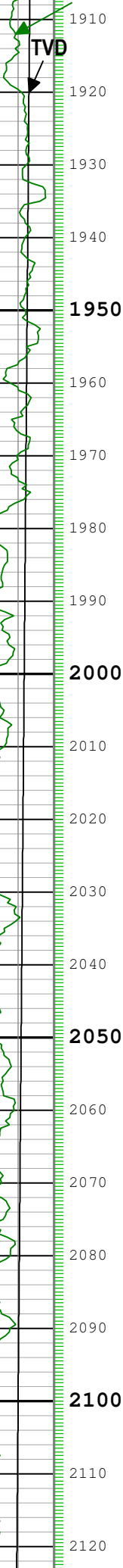
All depths are referenced to toolstring zero							
Log		Company:Great Western Operating Company LLC			Well:Schneider HD 11-102HN		
					Well Composite:S189		

Description: Extreme Gamma Ray 1 RT Format: Log ( Extreme Gamma Ray 1 RT\_6 ) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured  
Depth Creation Date: 28-Oct-2019 19:05:11





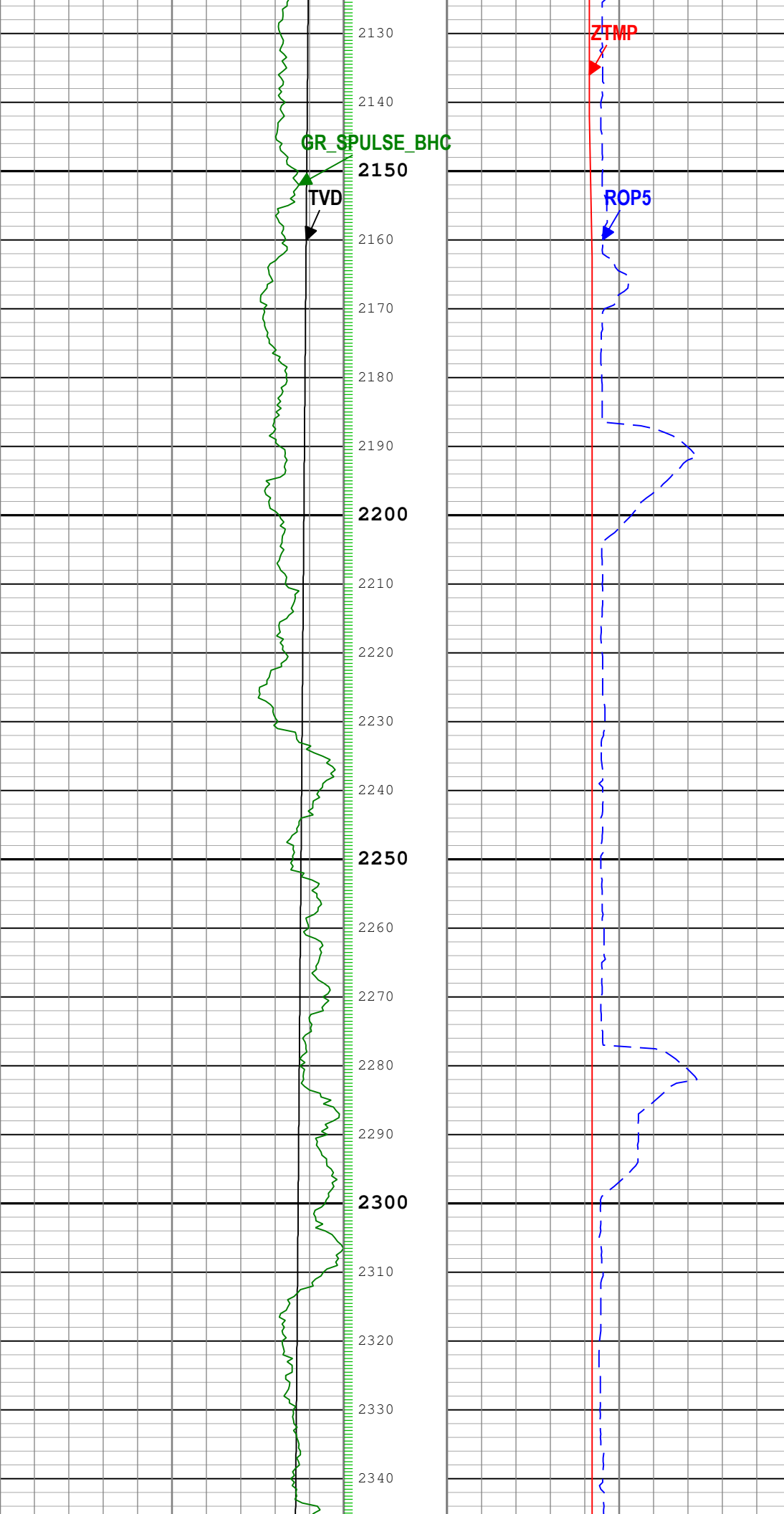
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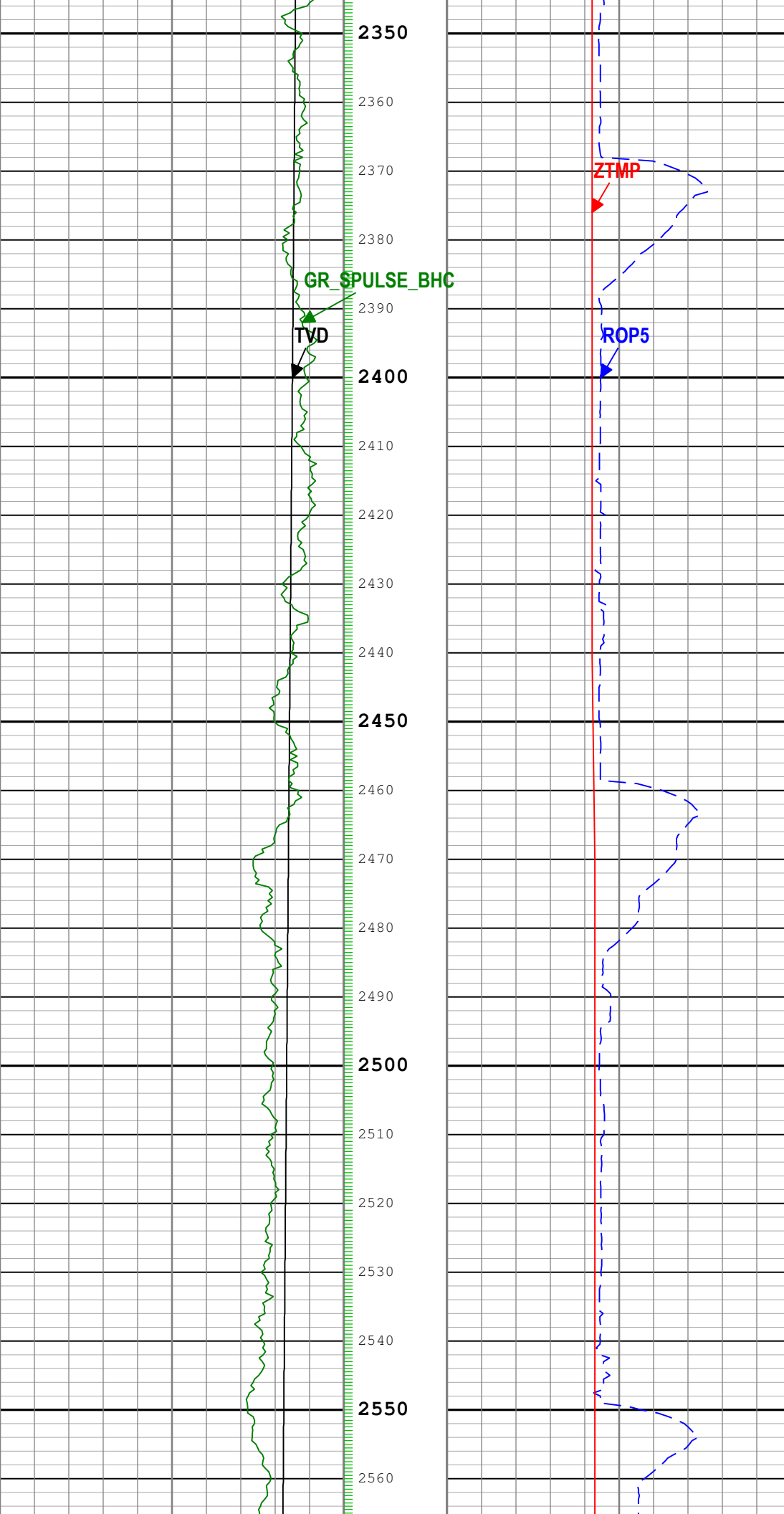


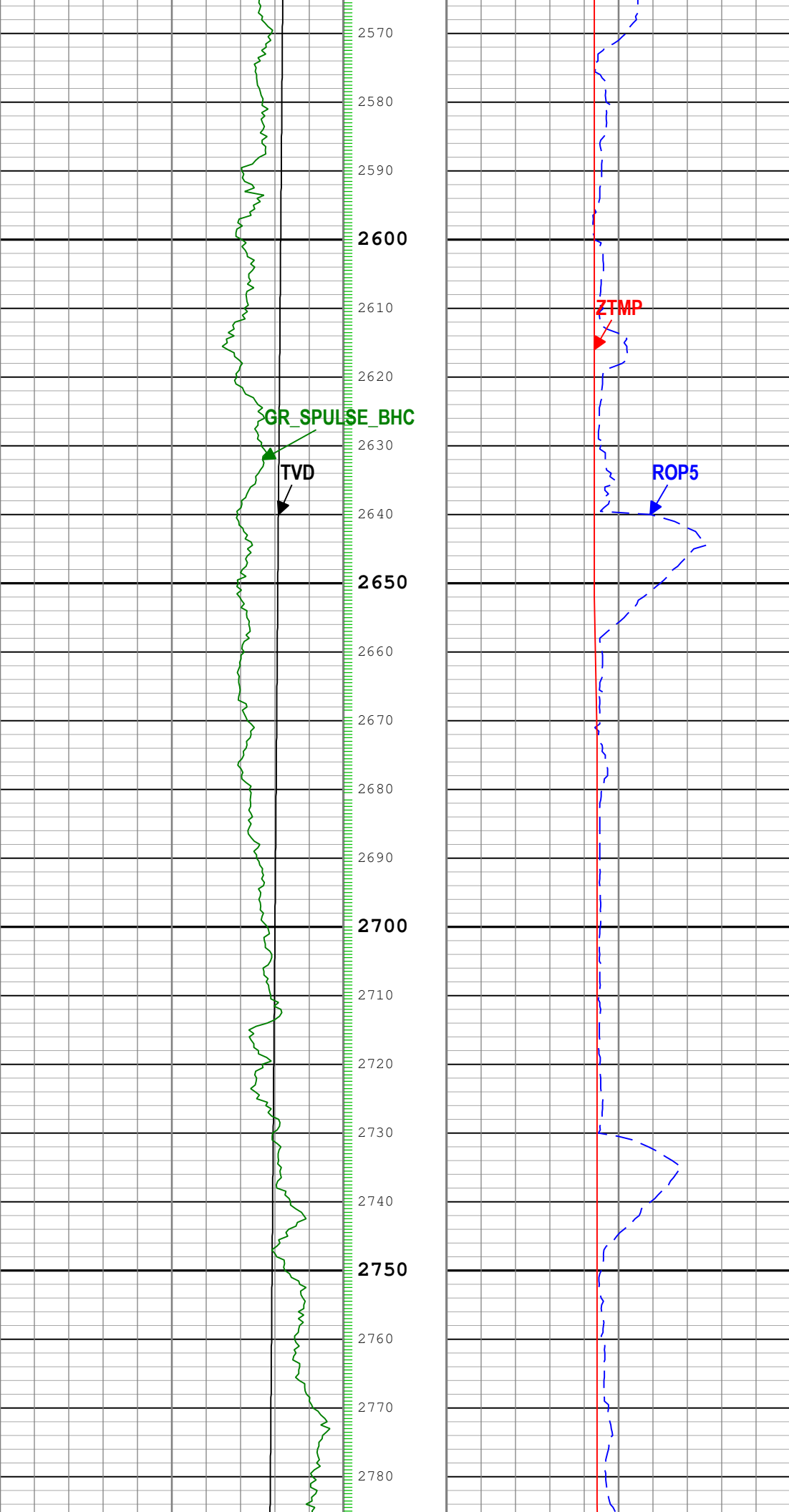
ROP5

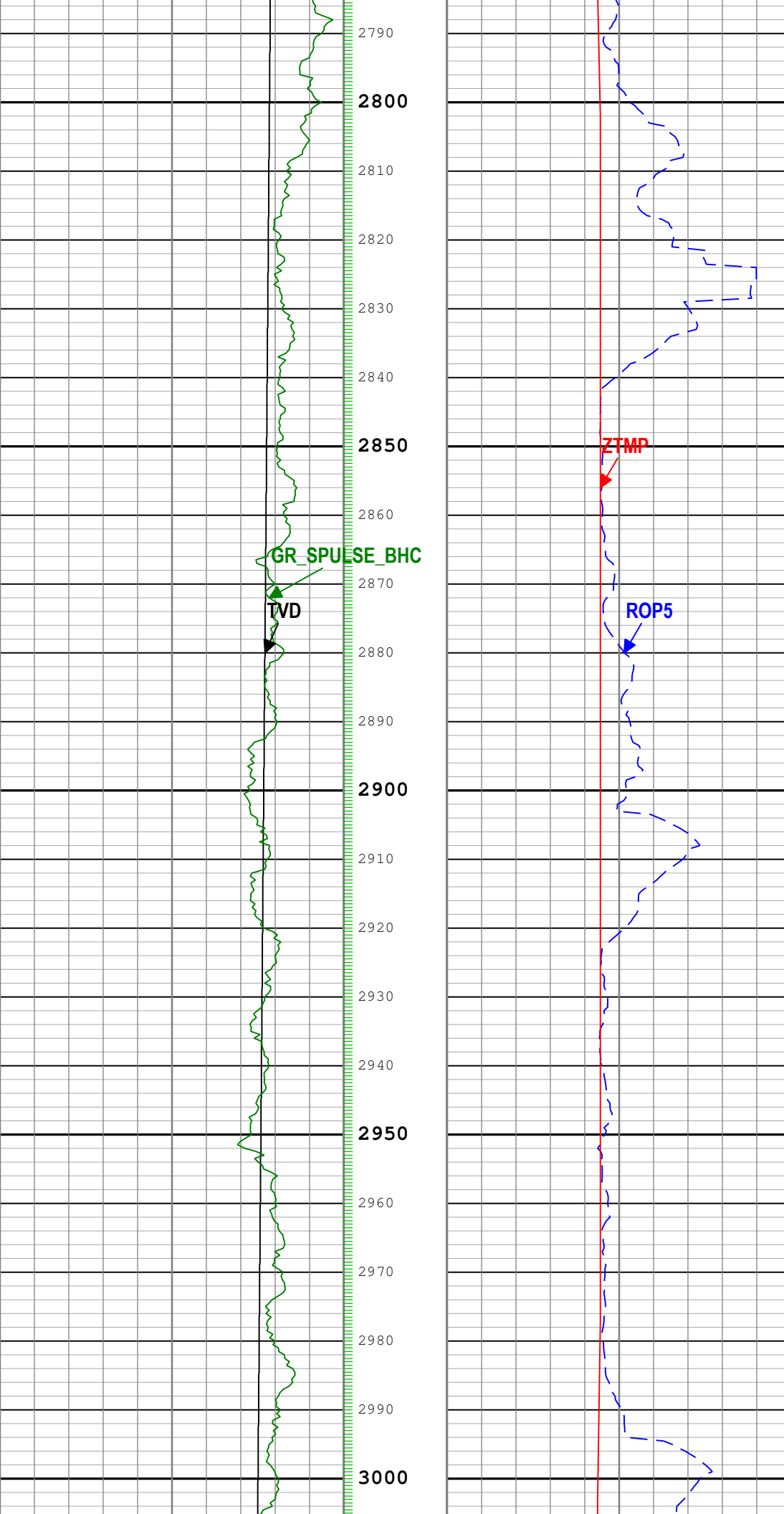


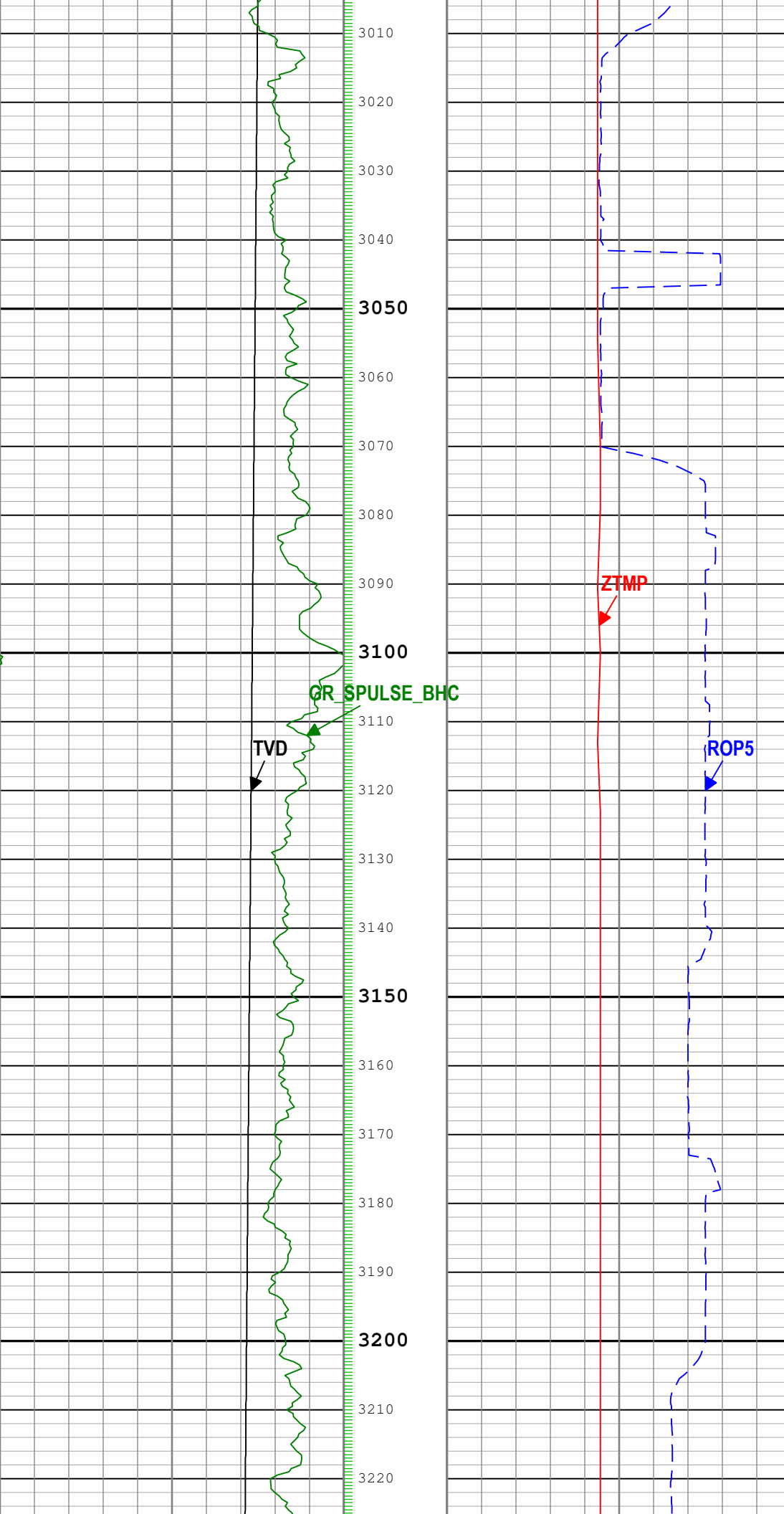


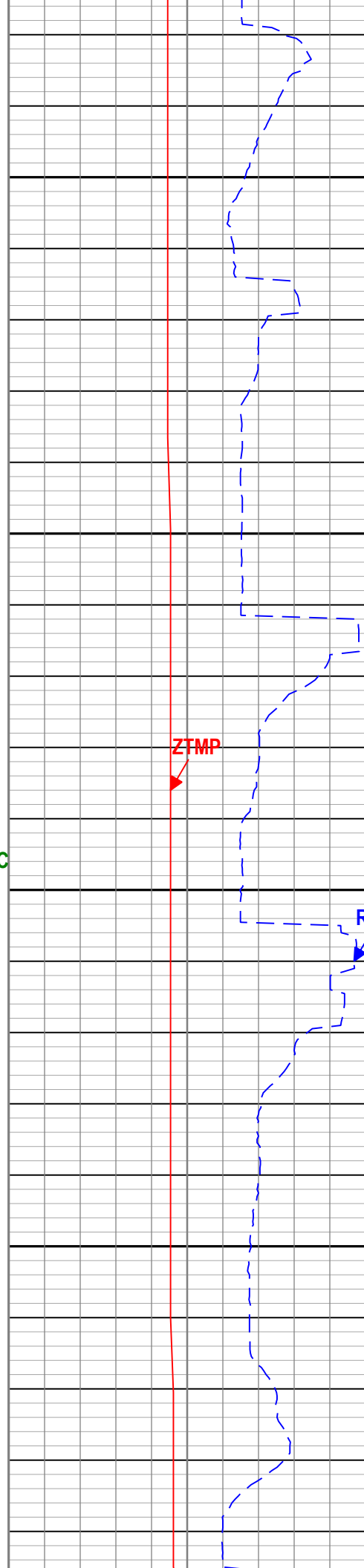
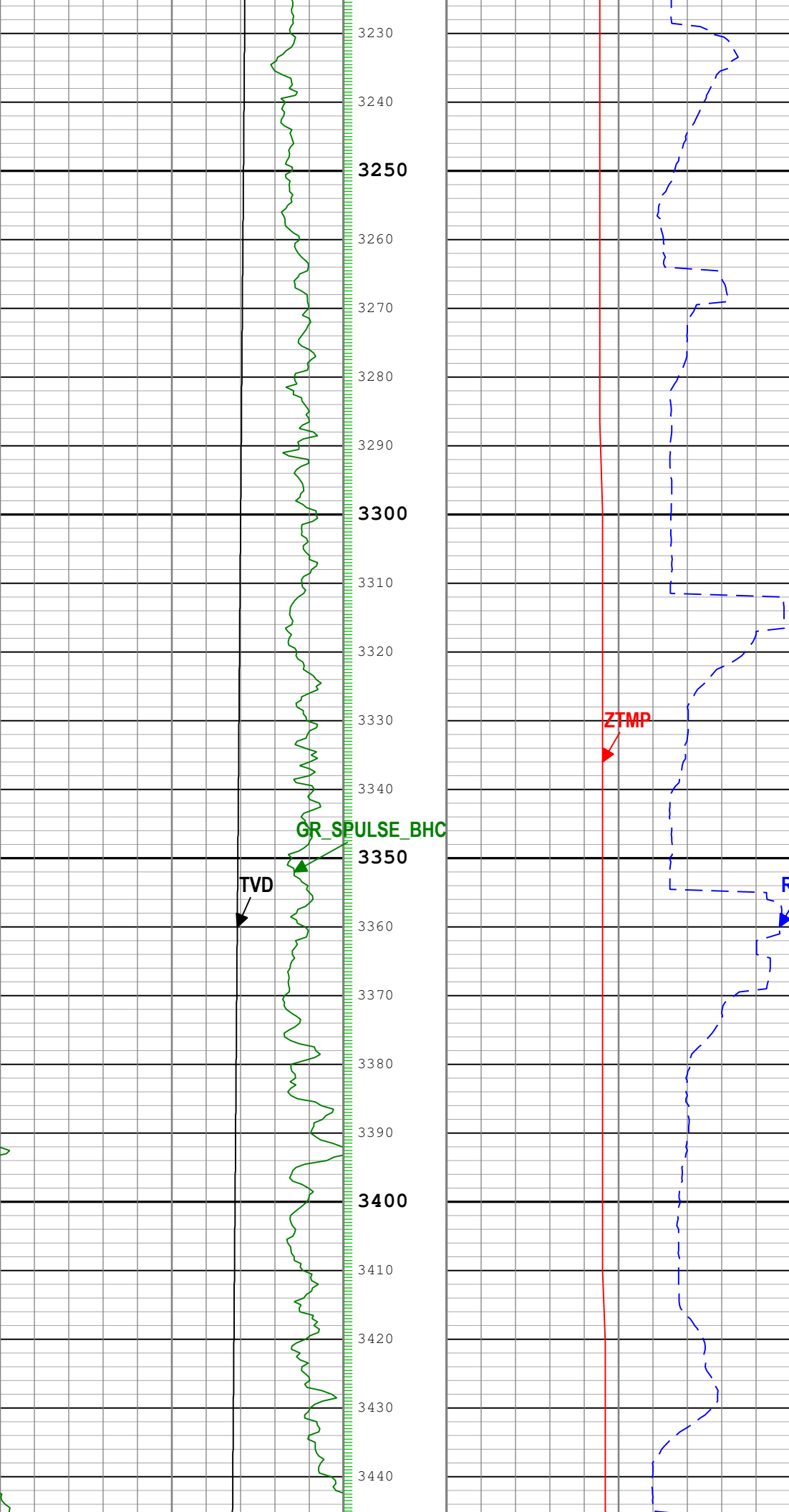


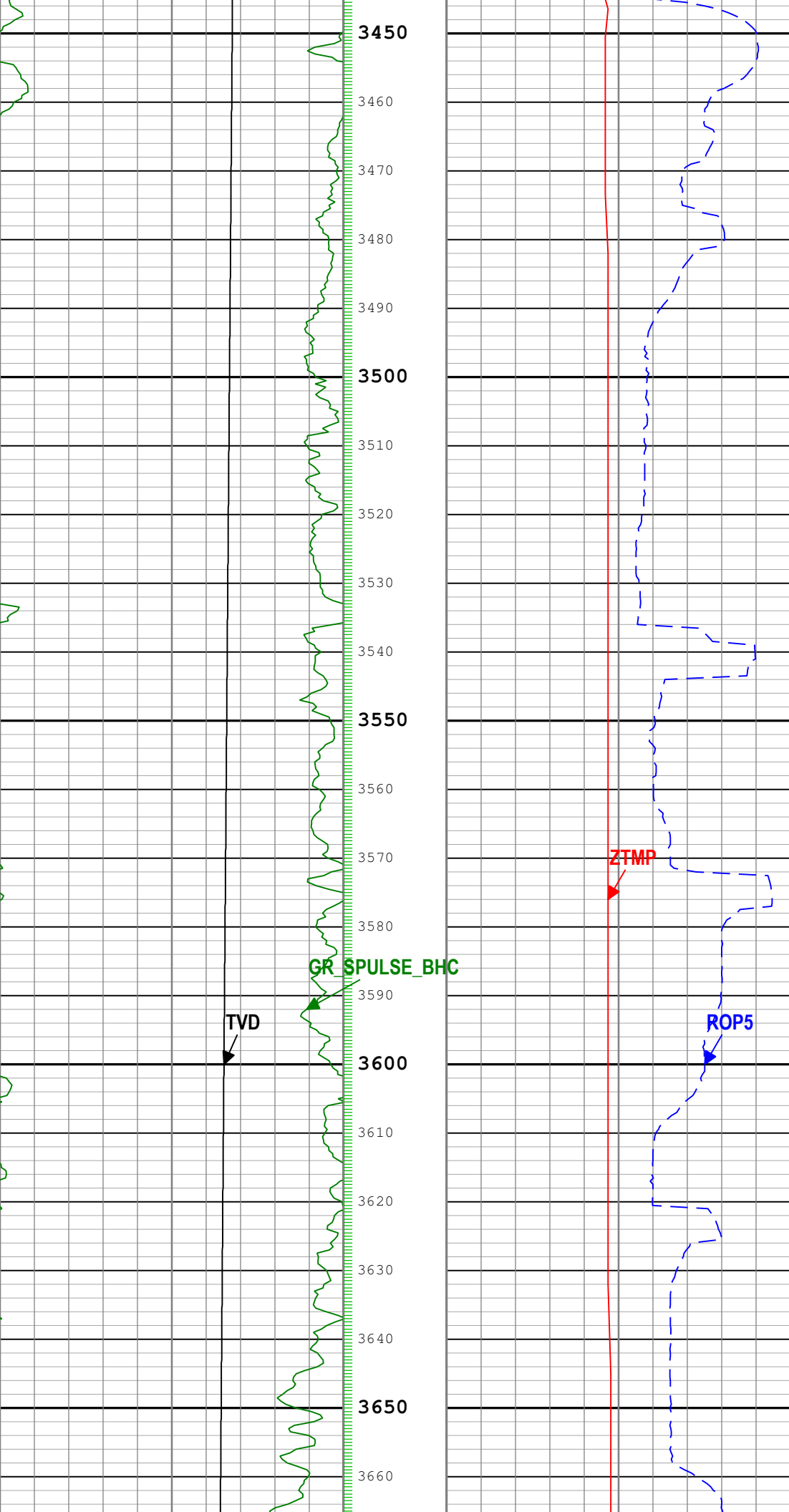


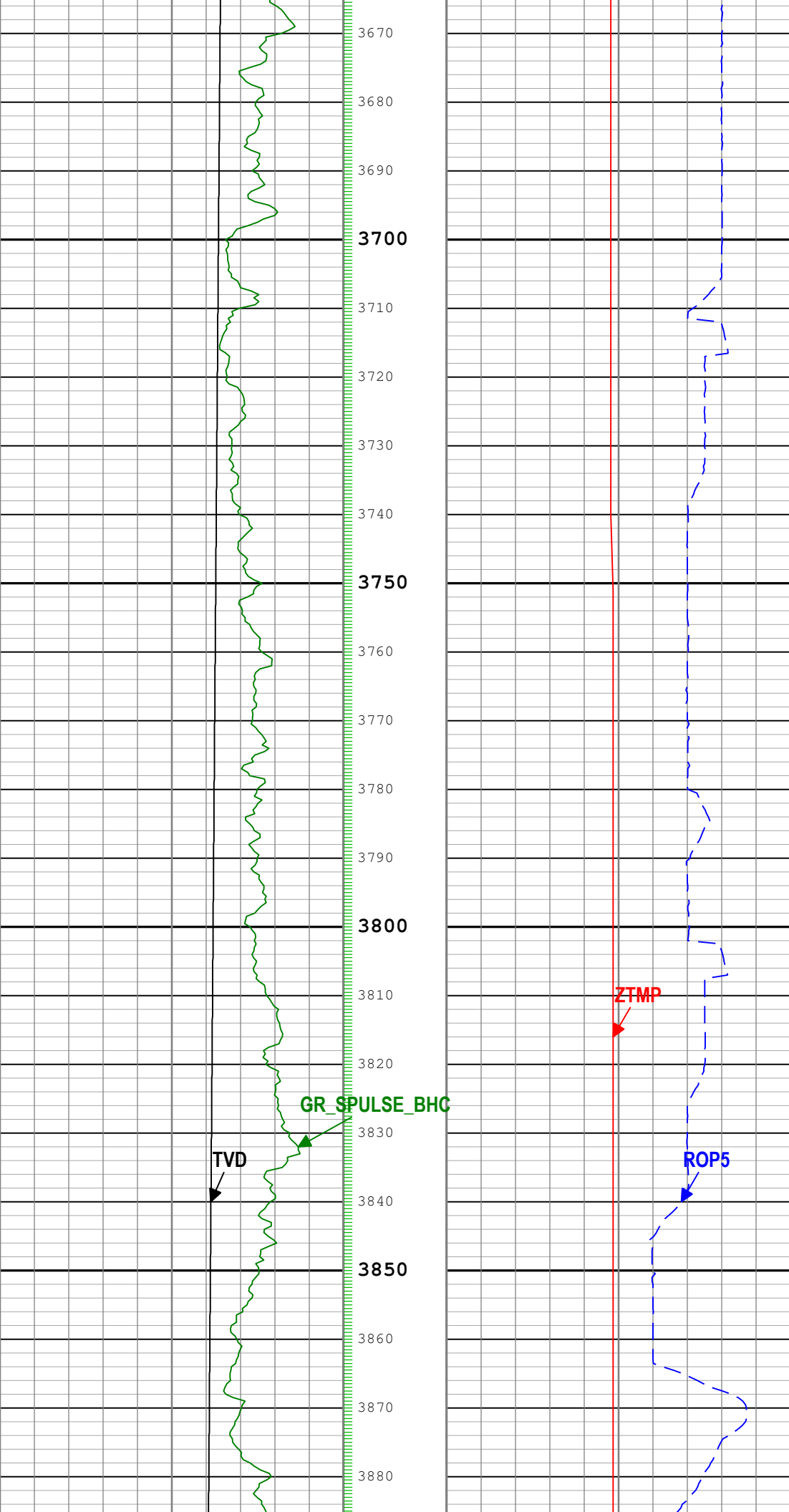




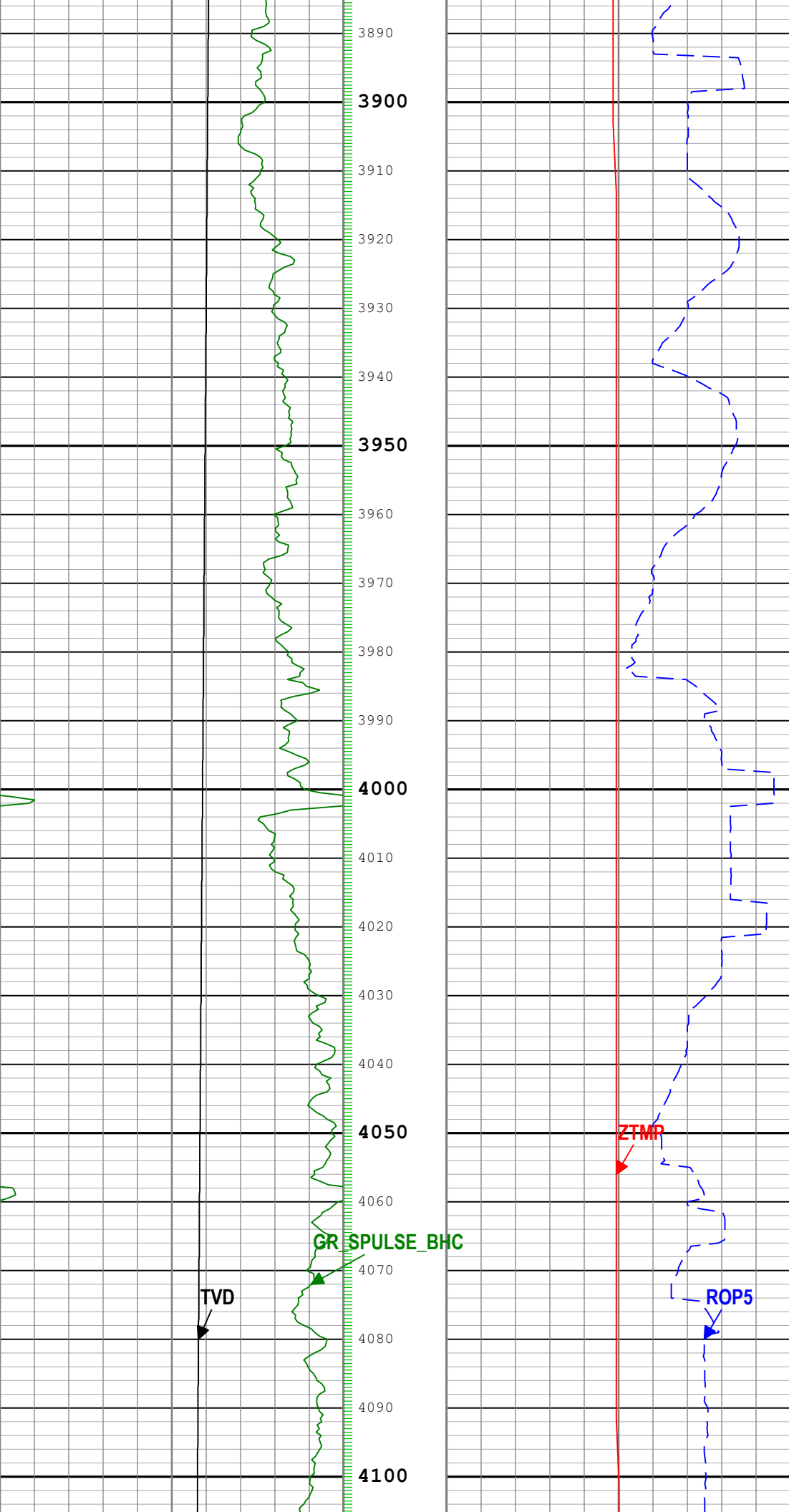


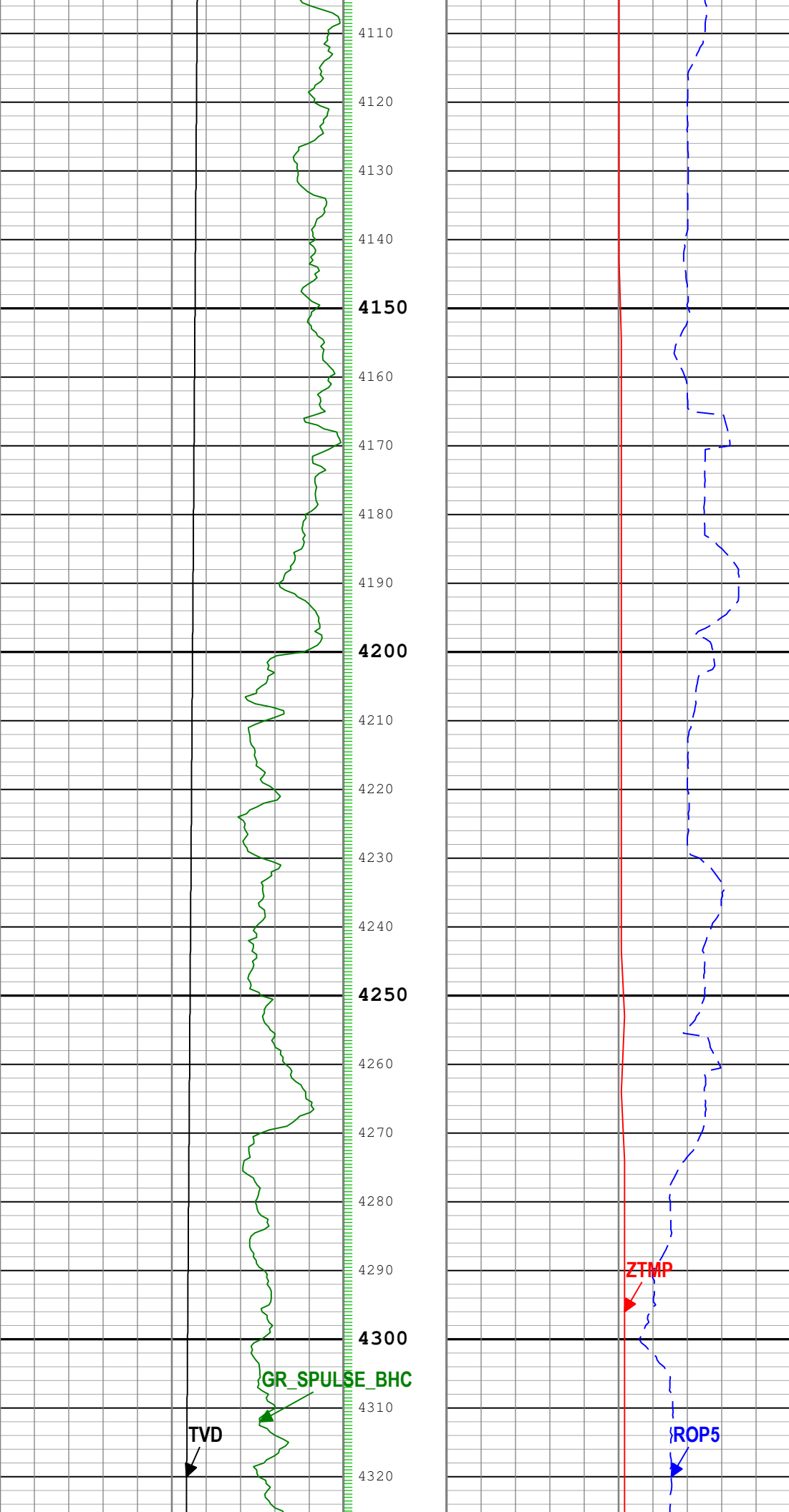


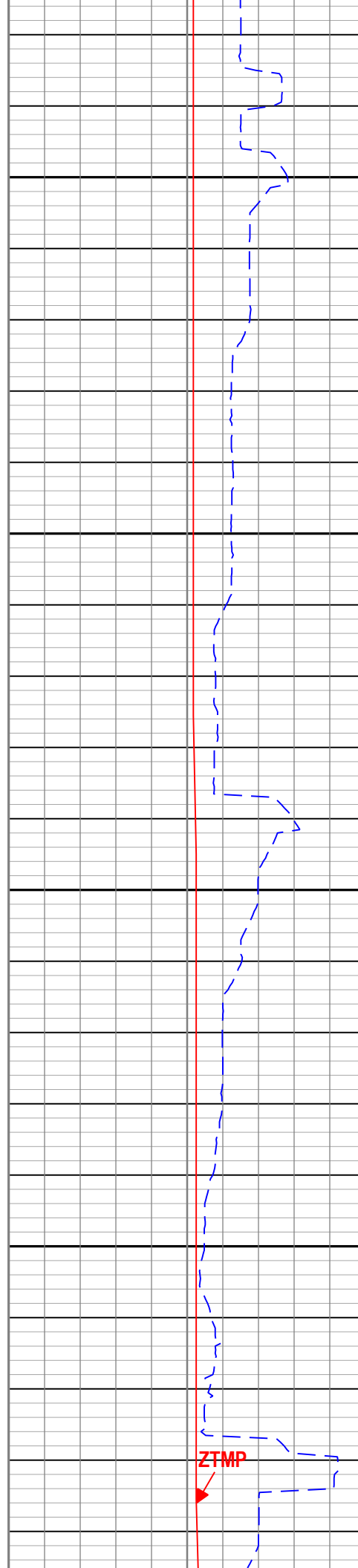
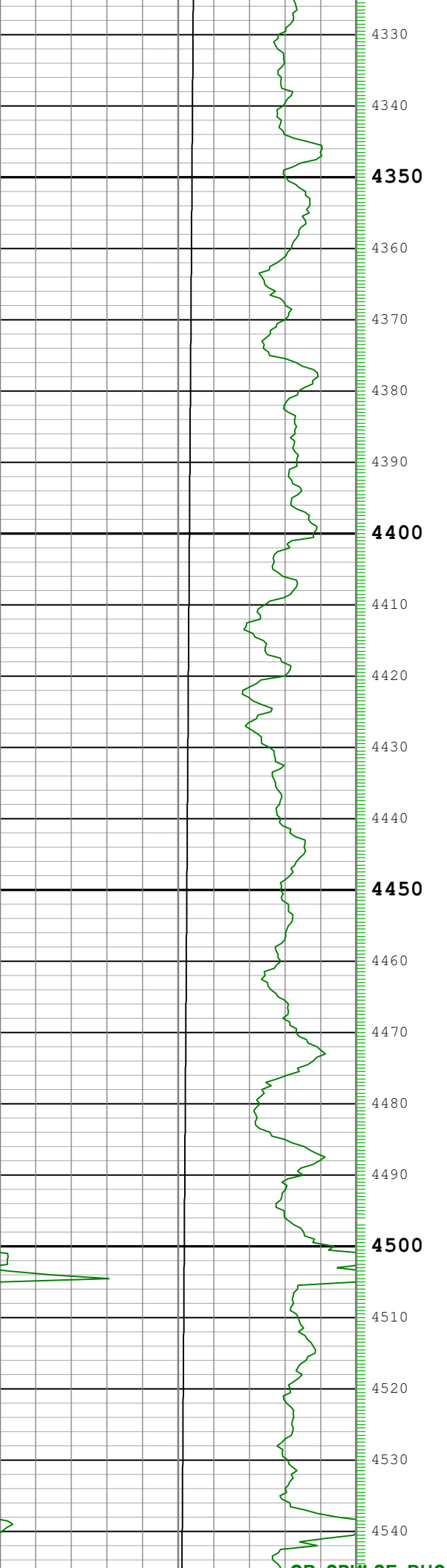


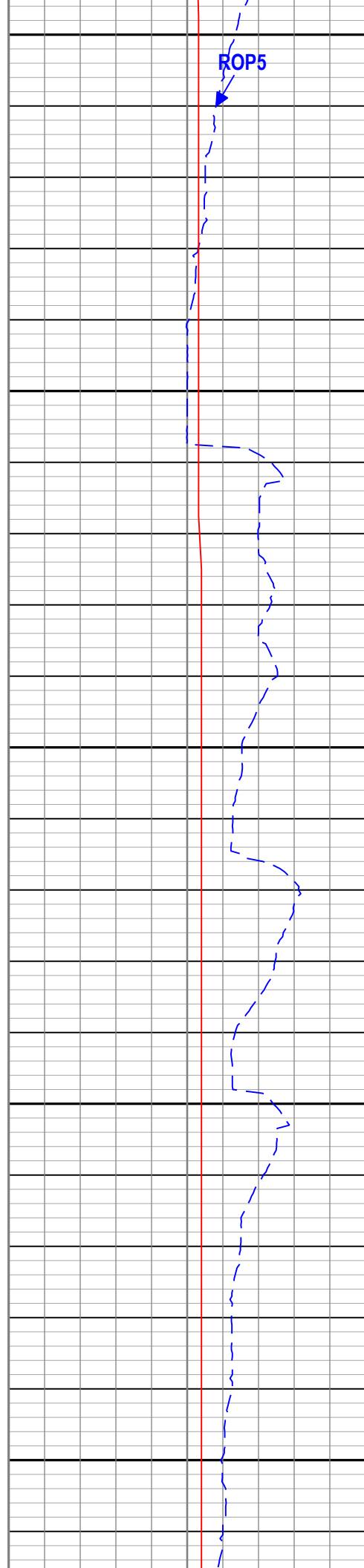
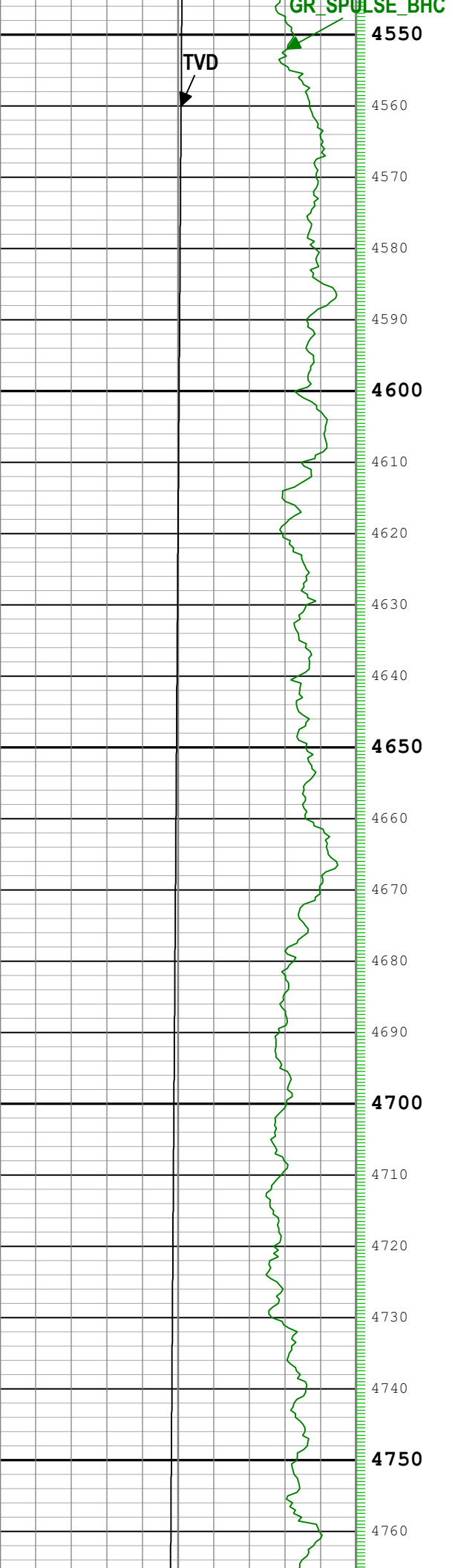


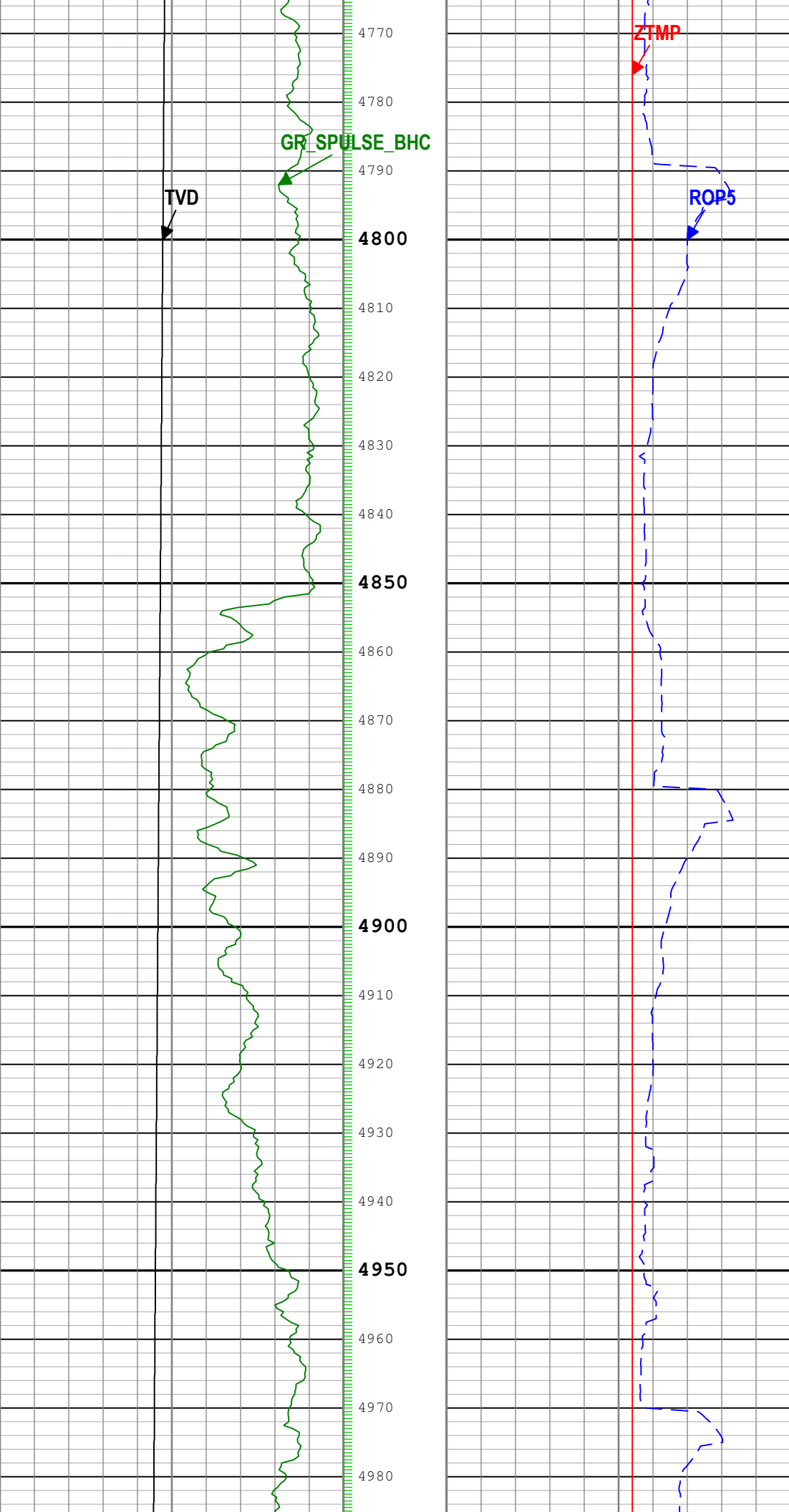


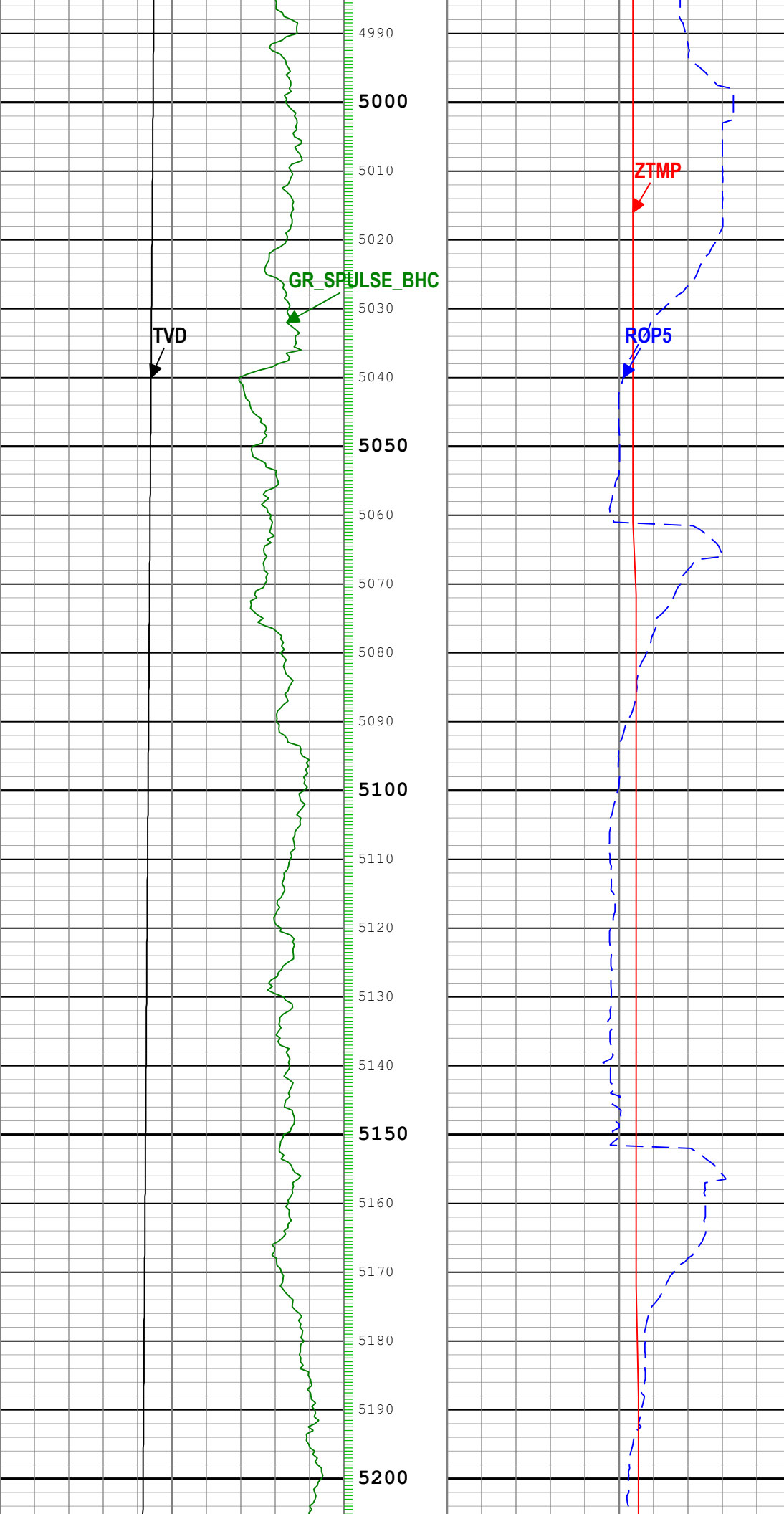


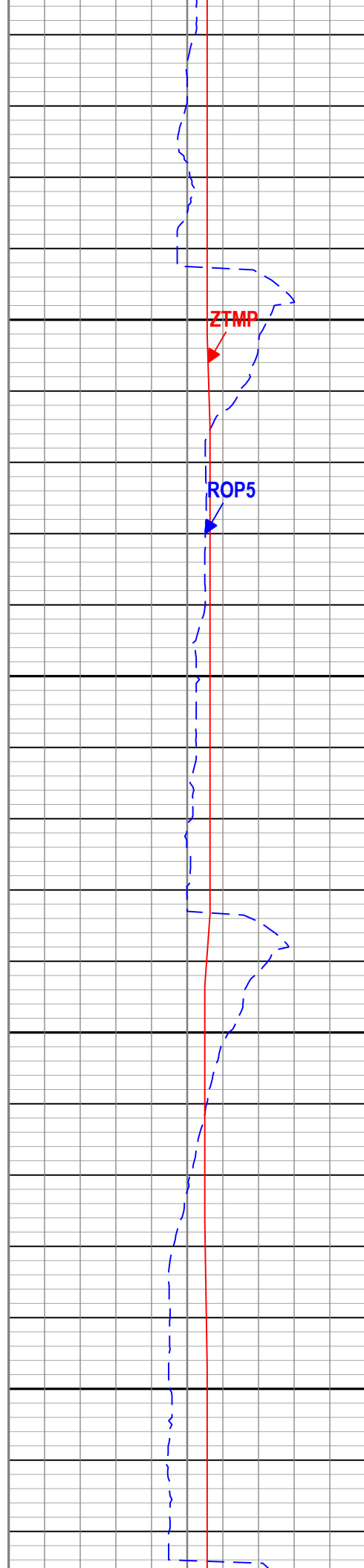
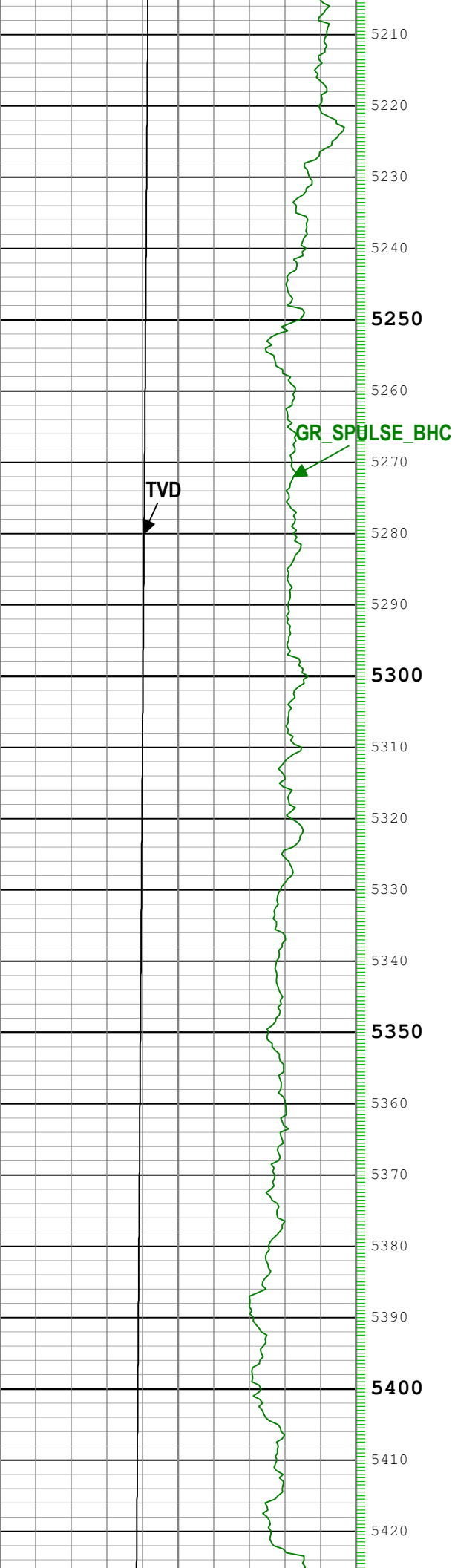


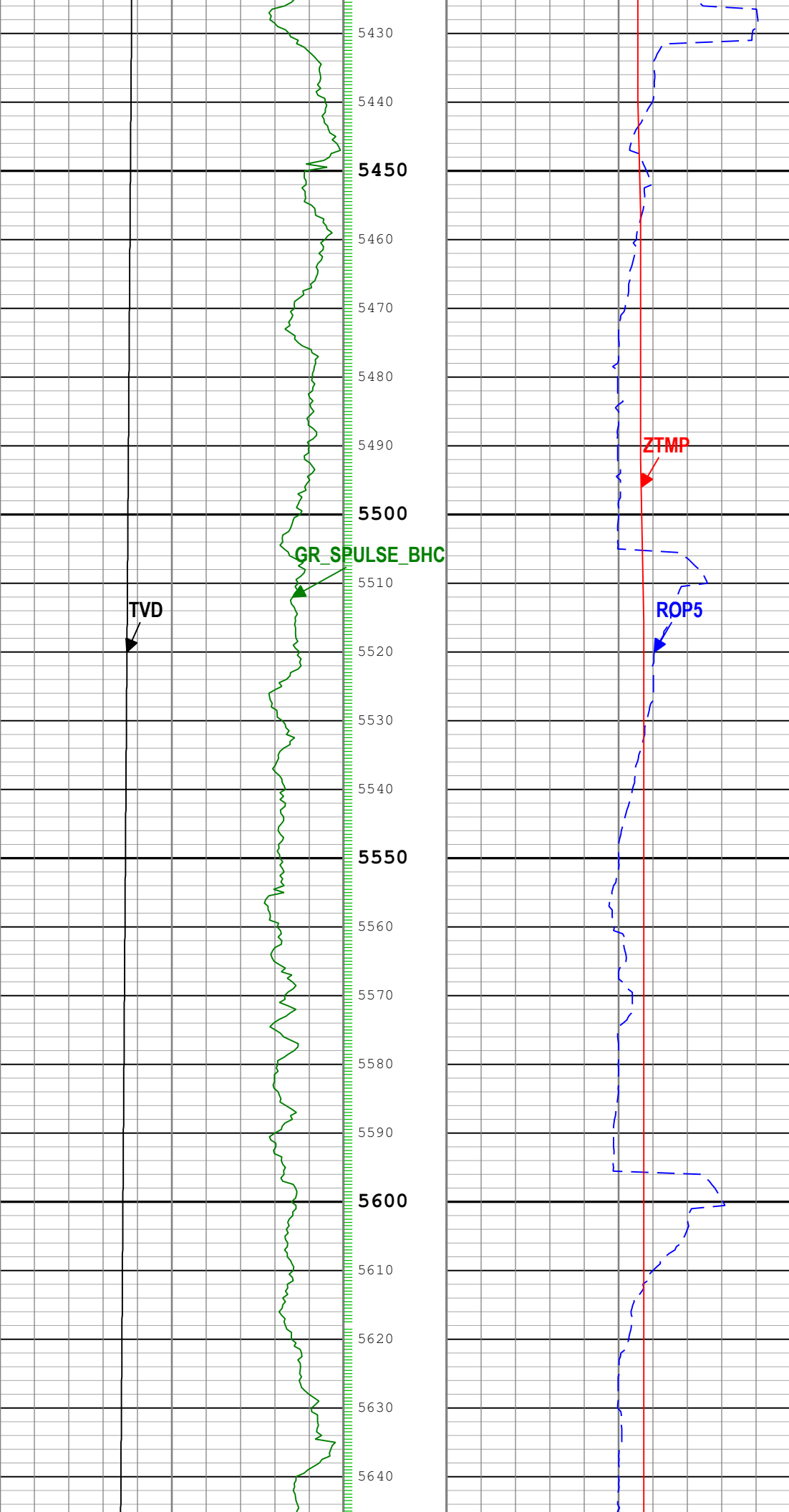




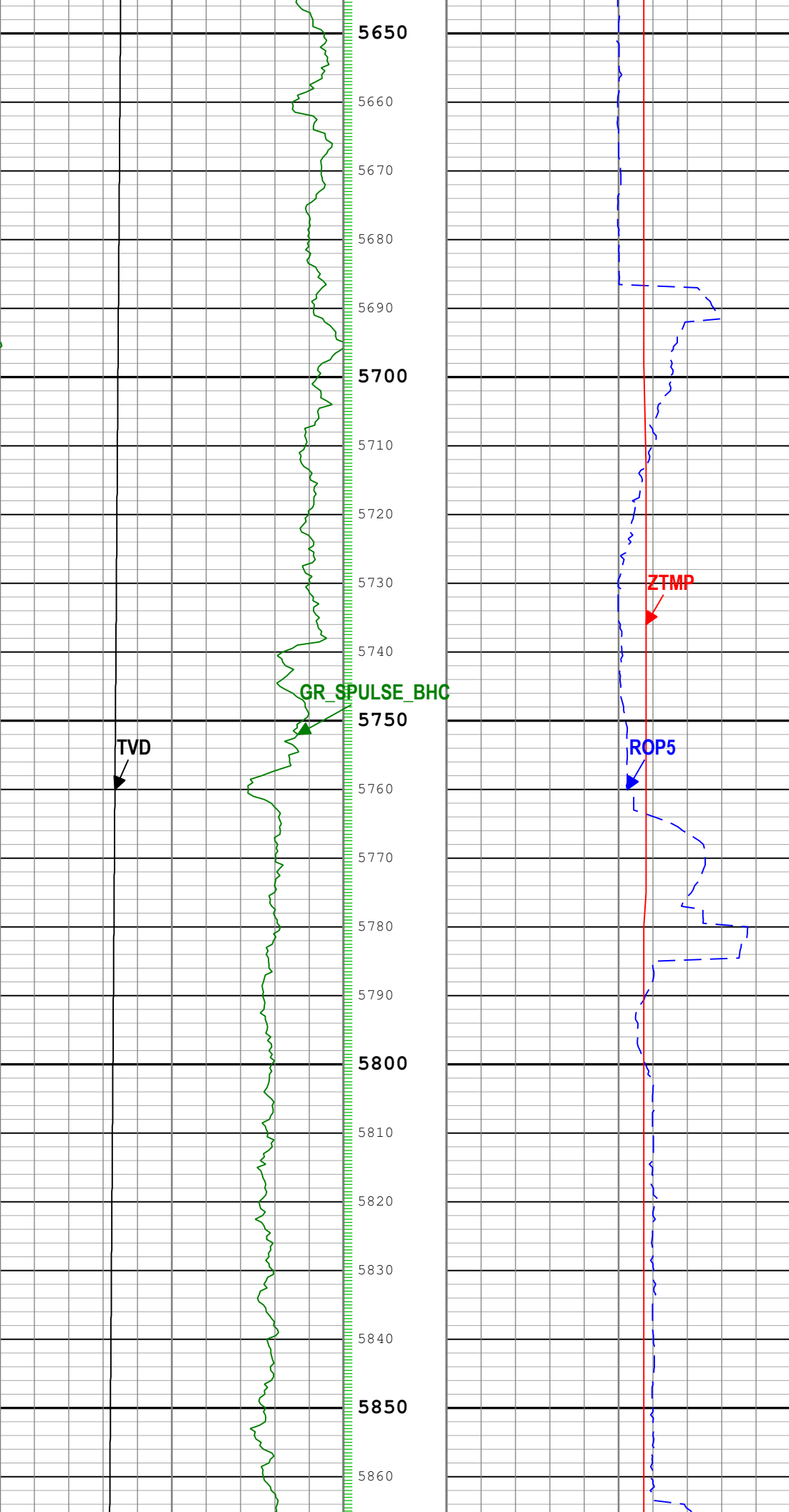


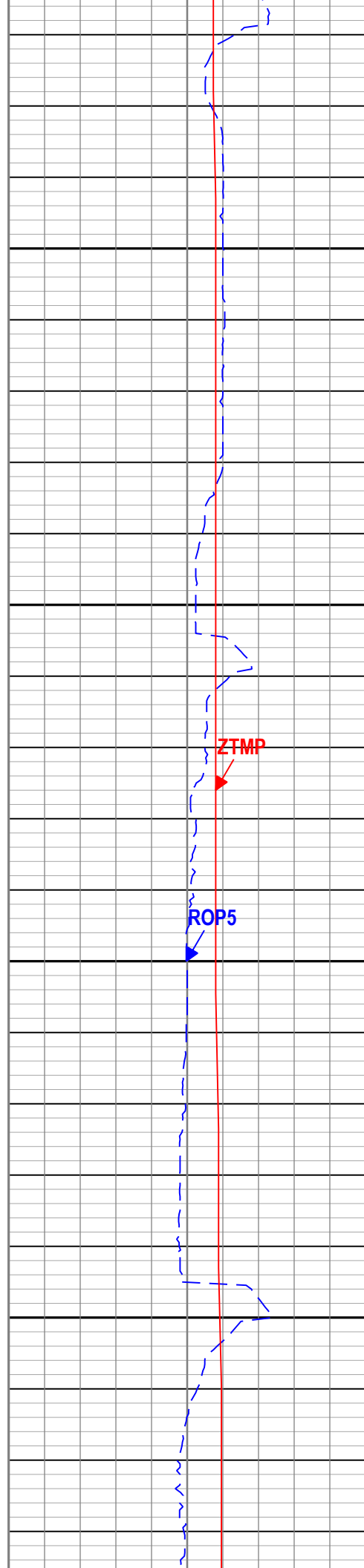
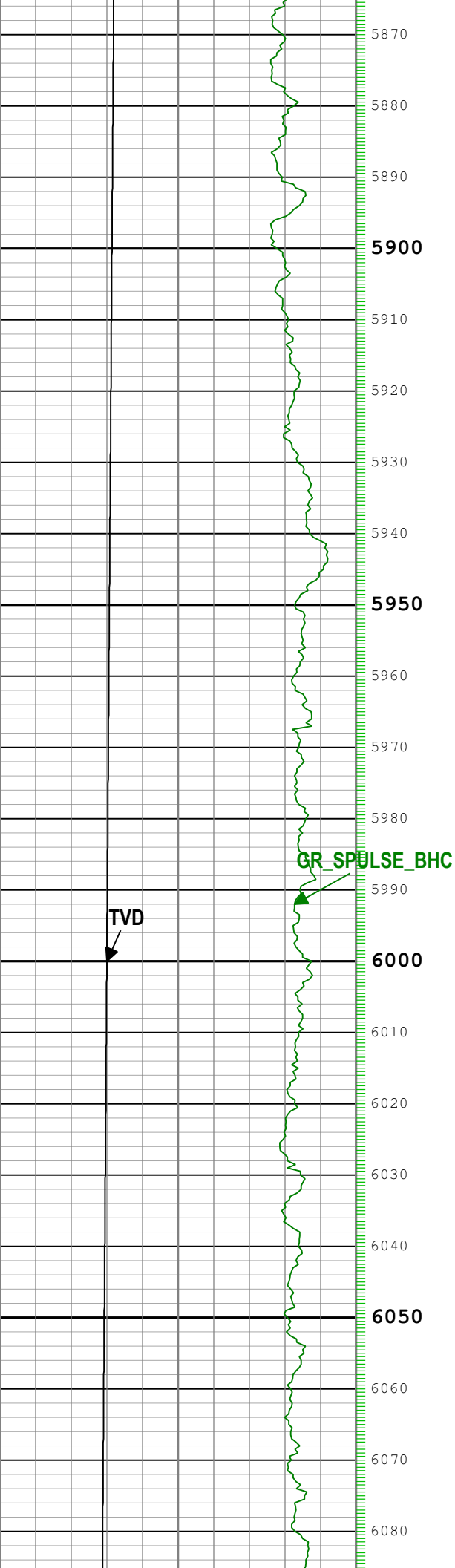


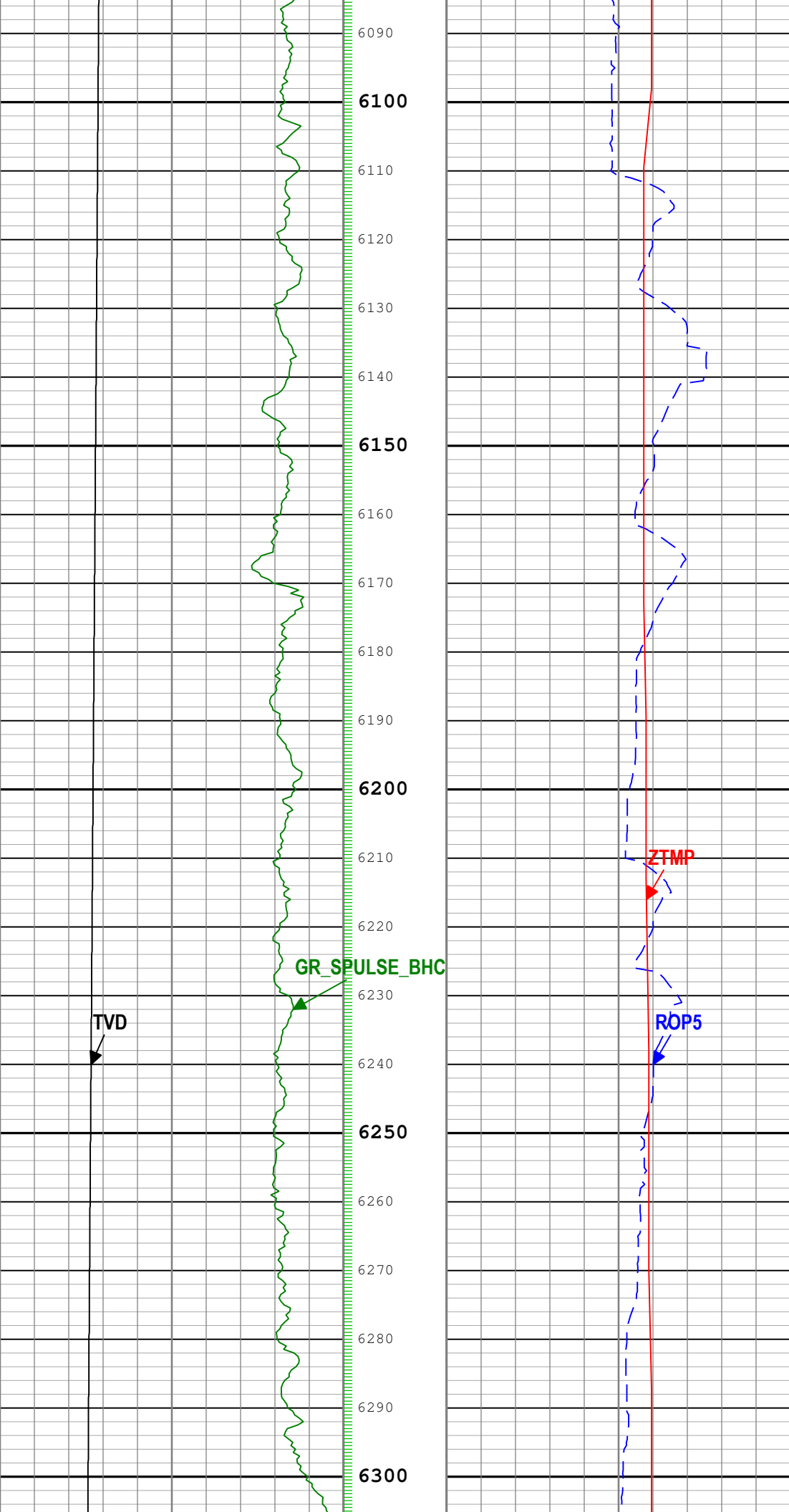


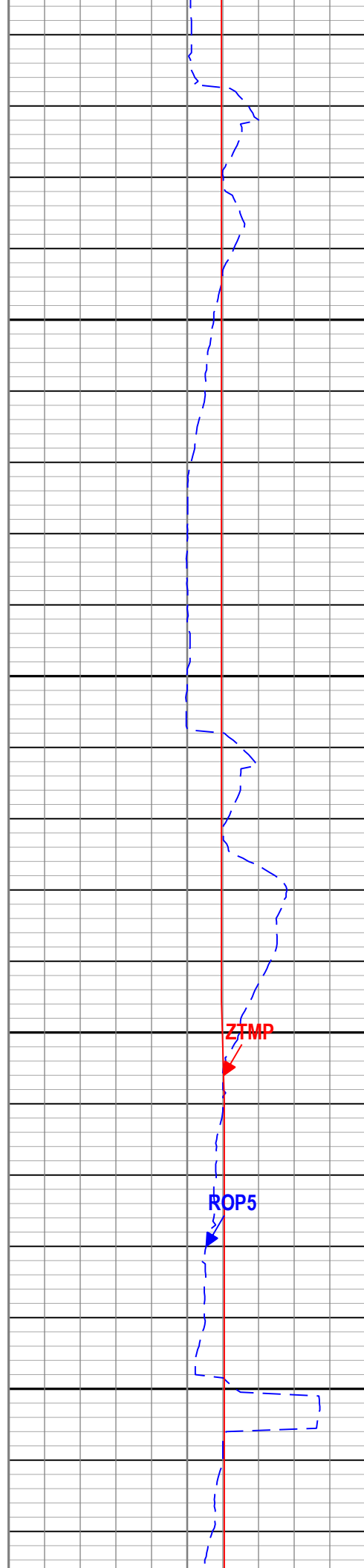
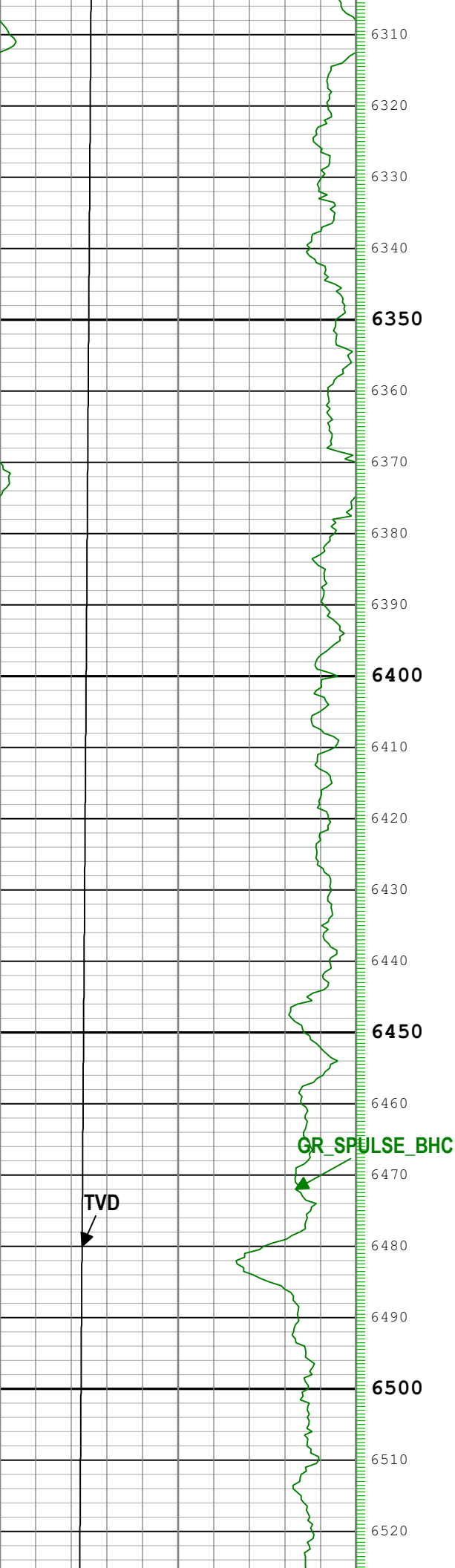


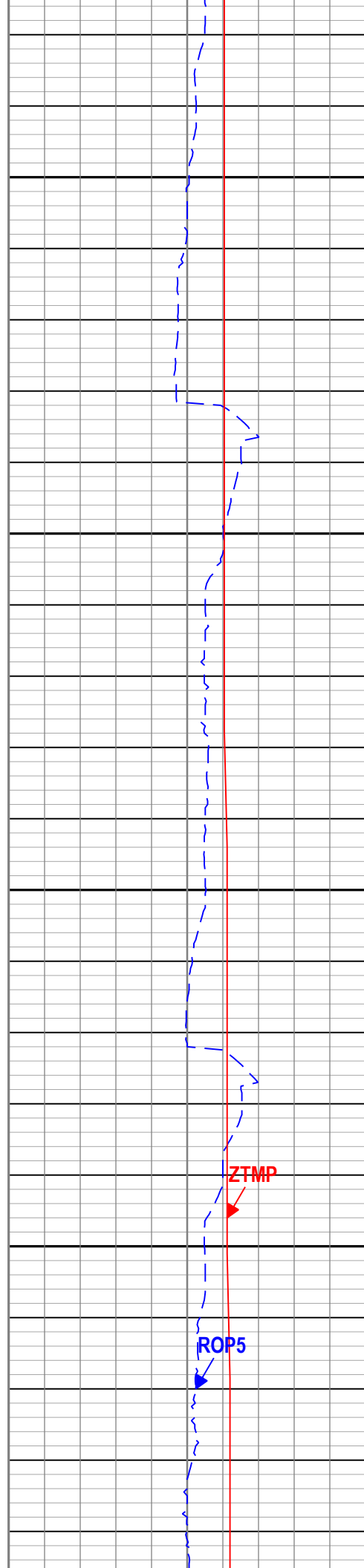
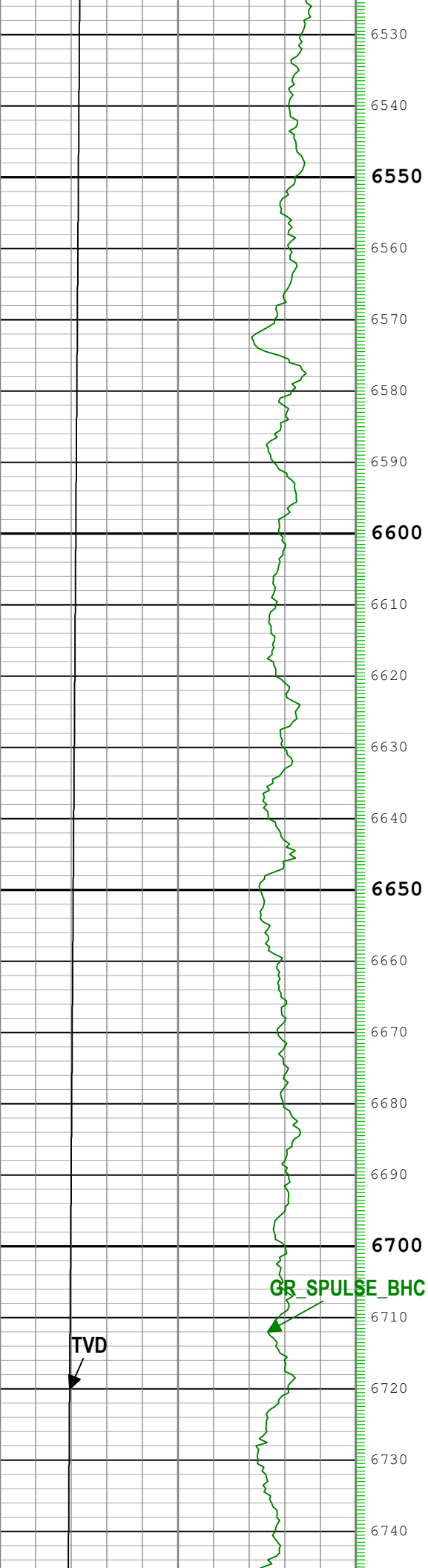


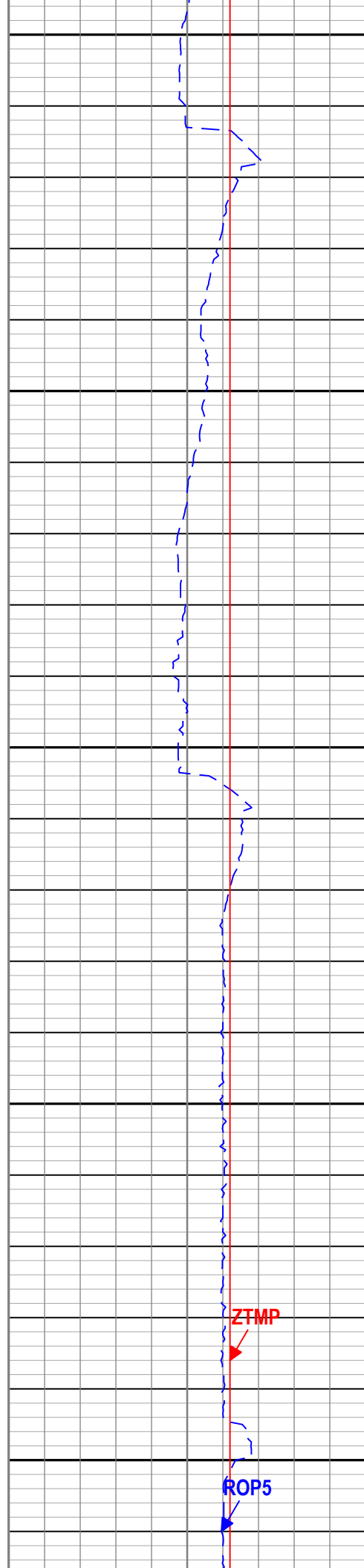
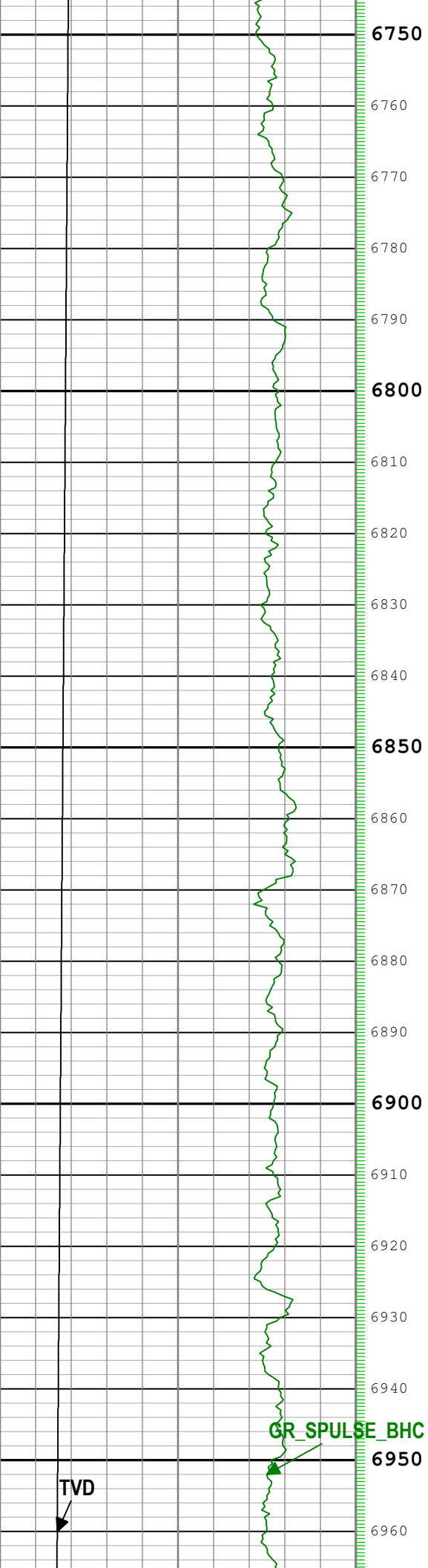


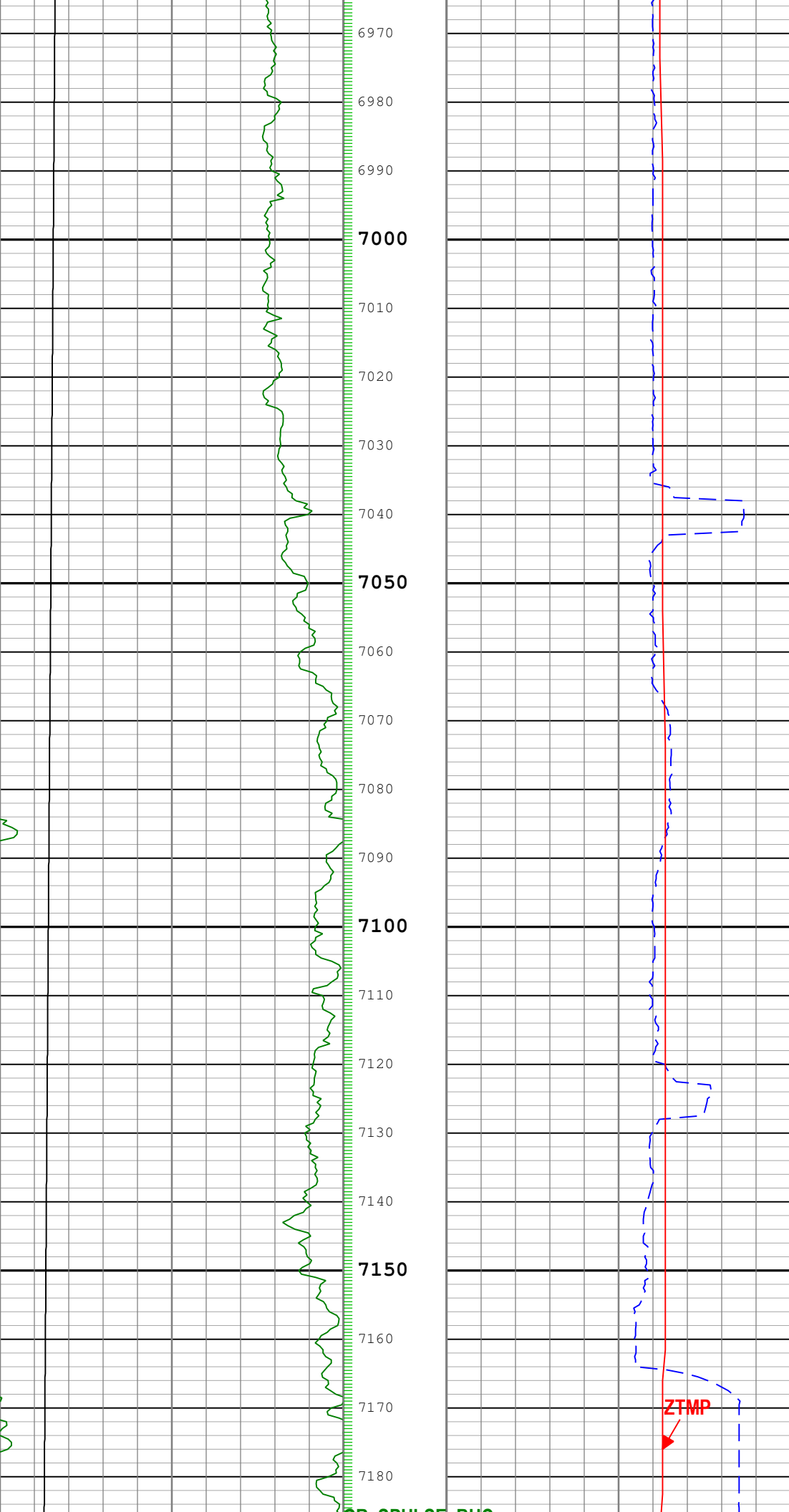


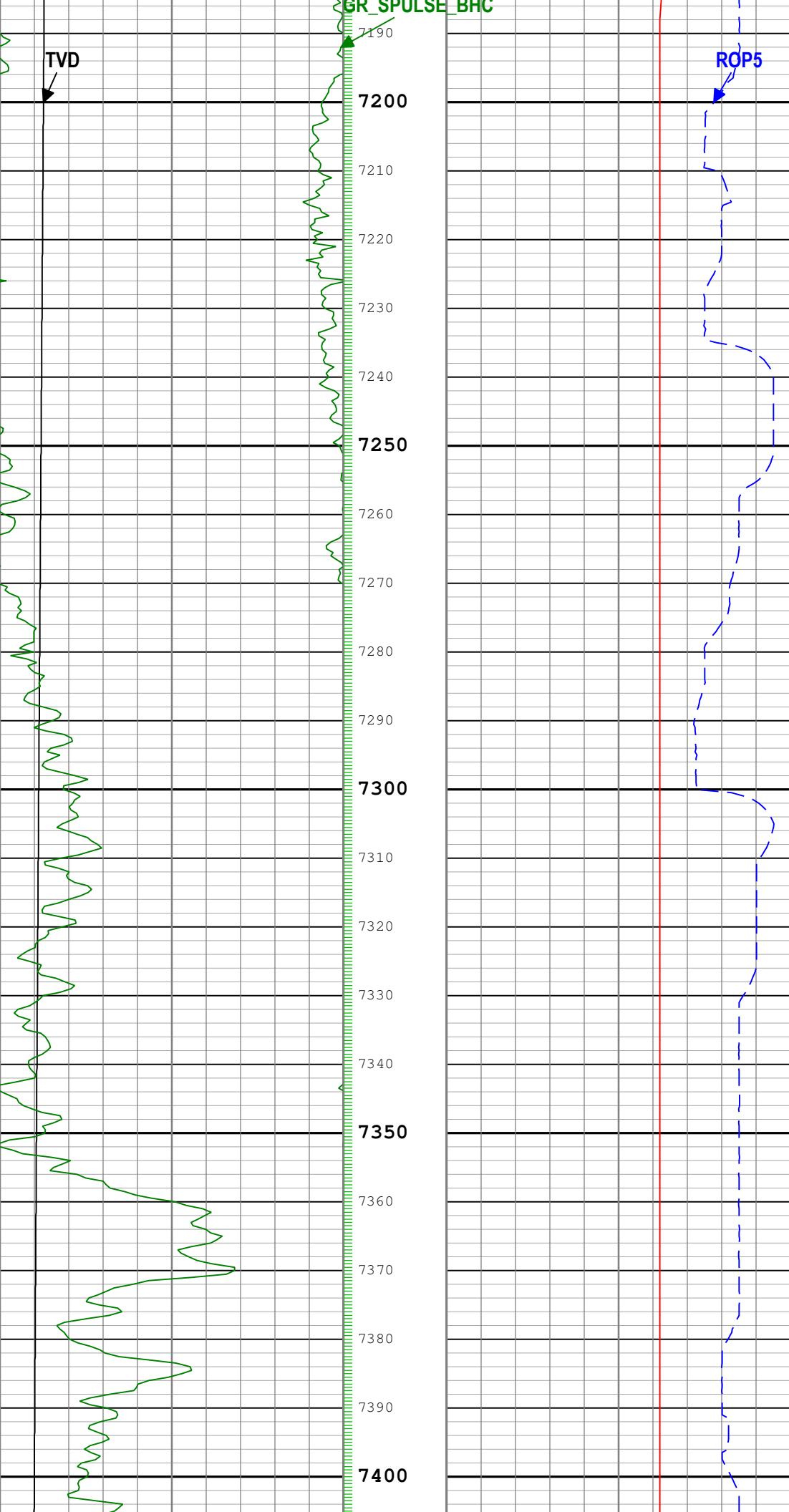




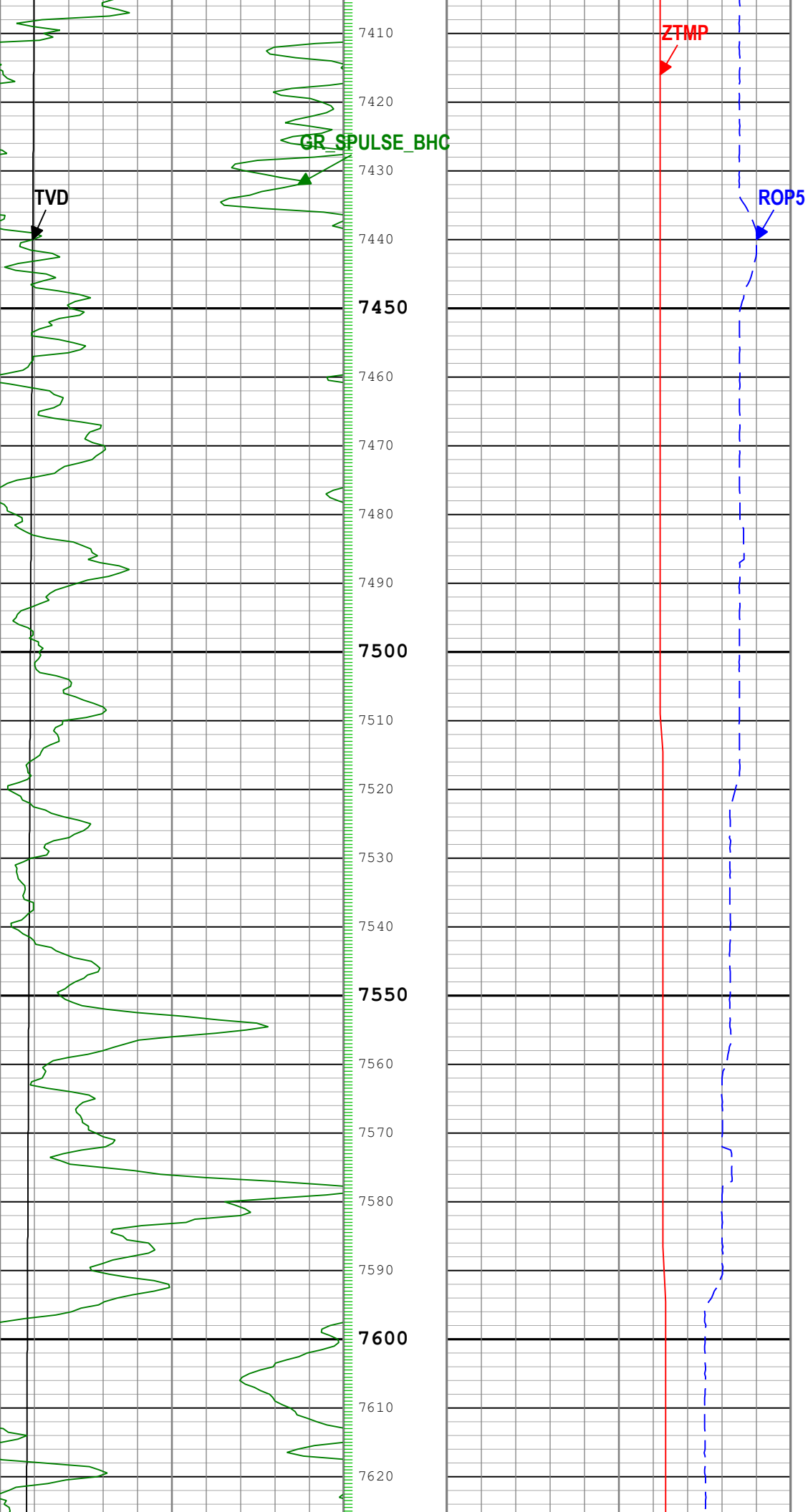


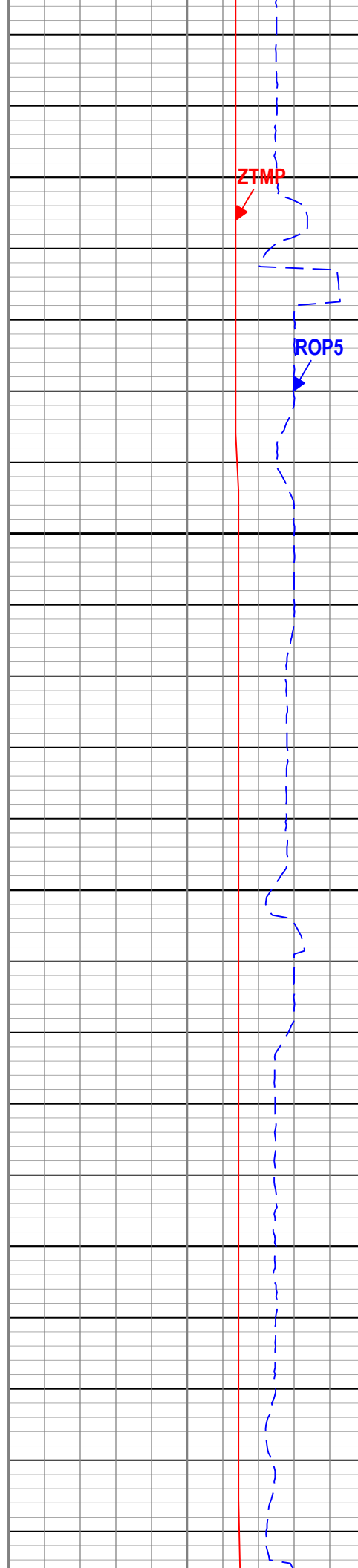
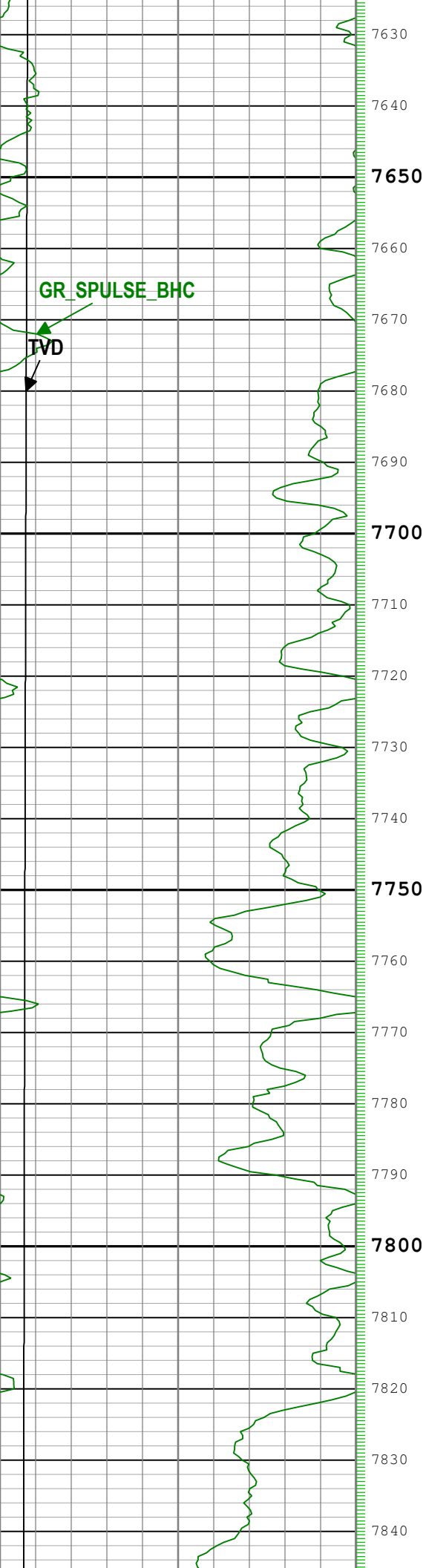


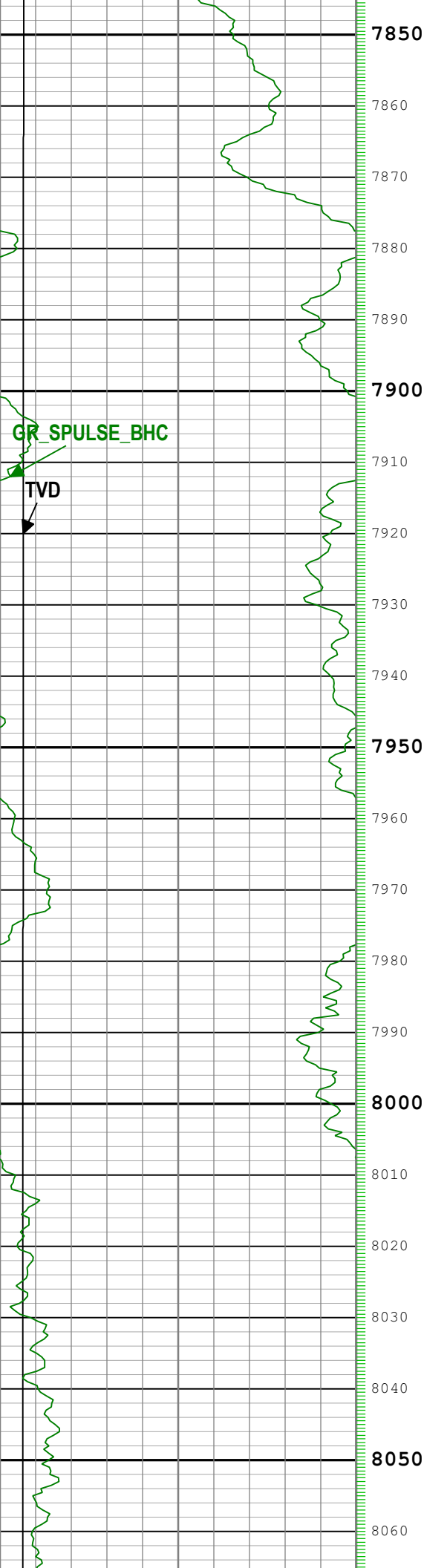


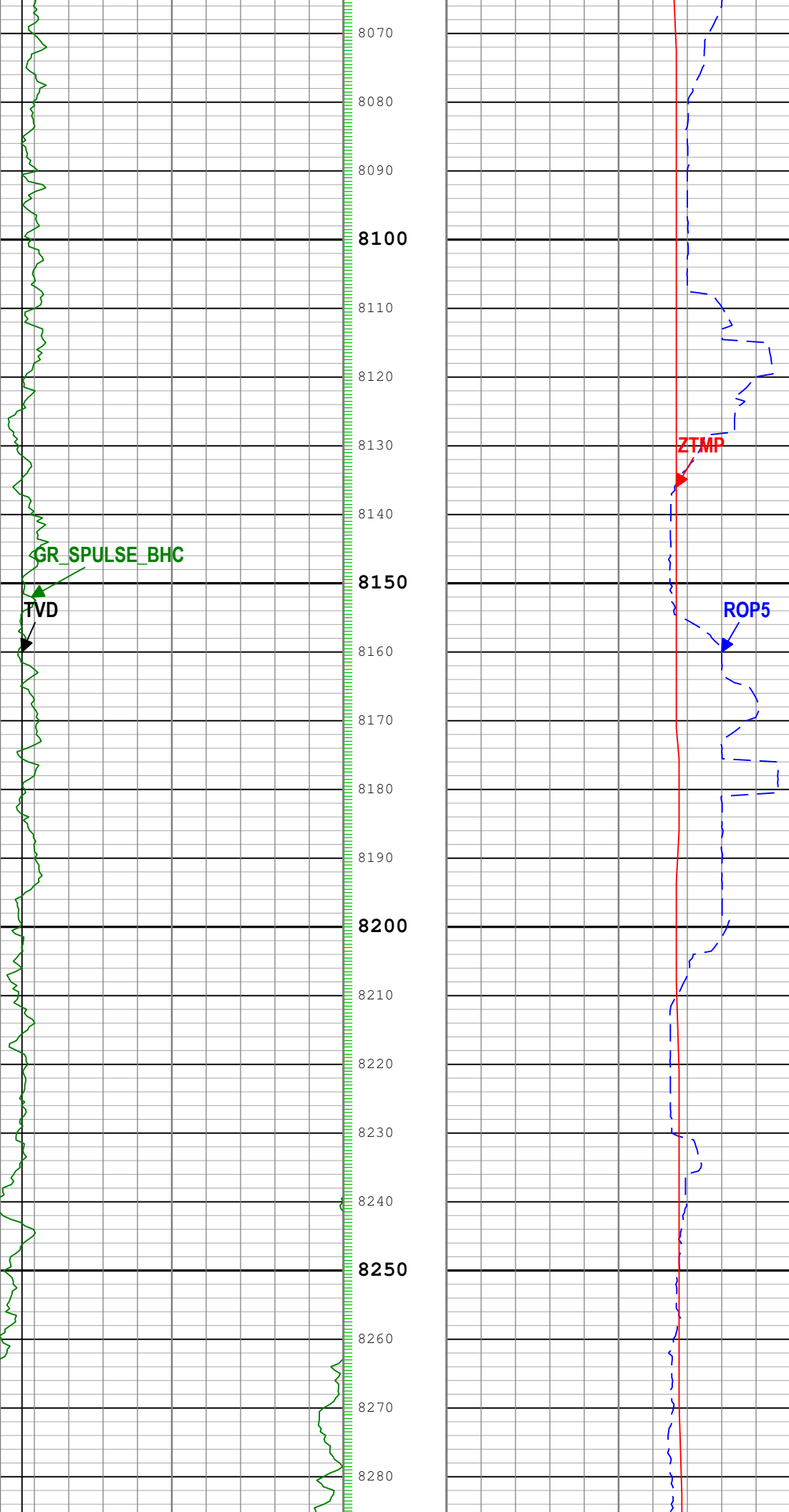


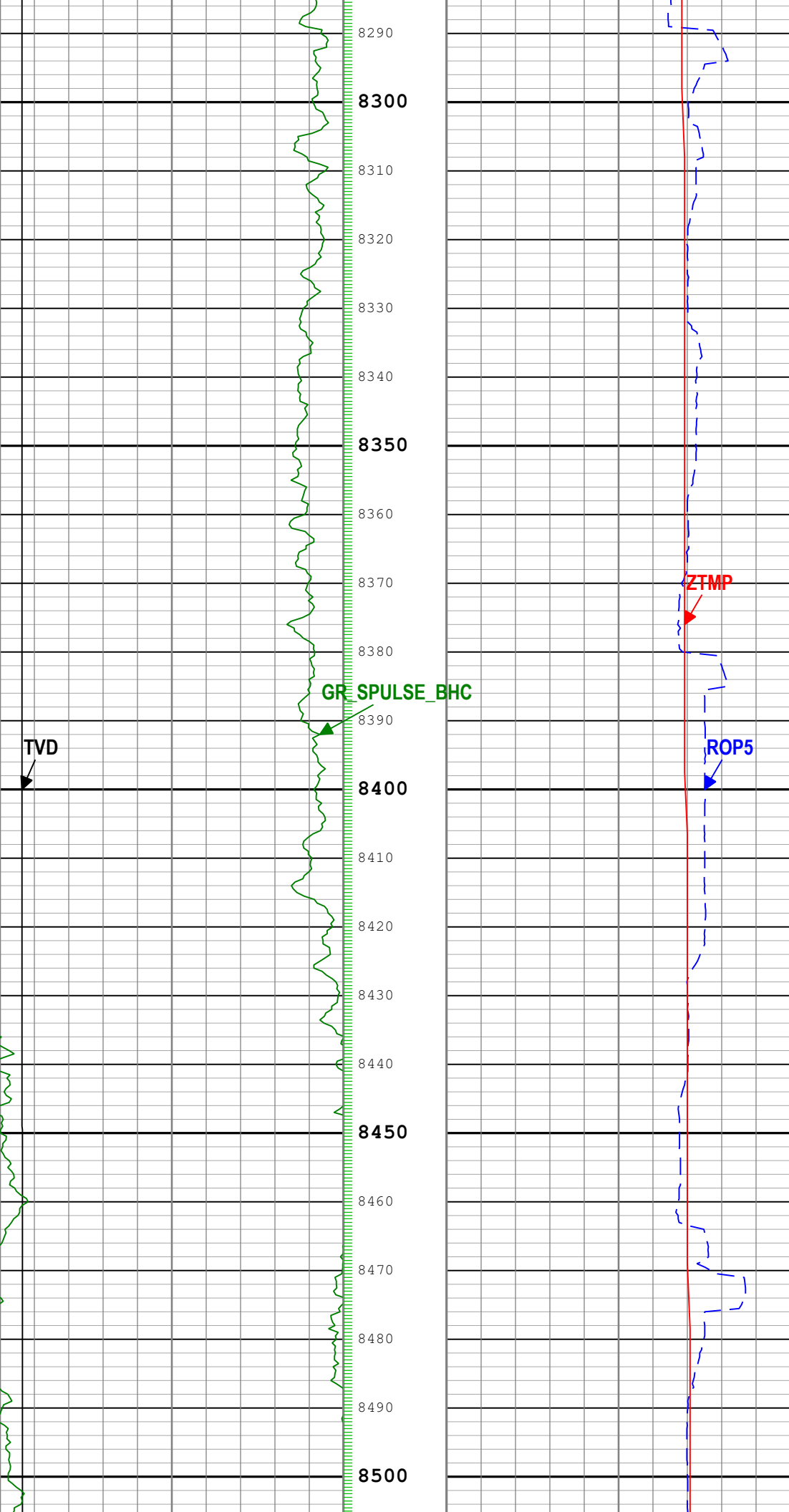


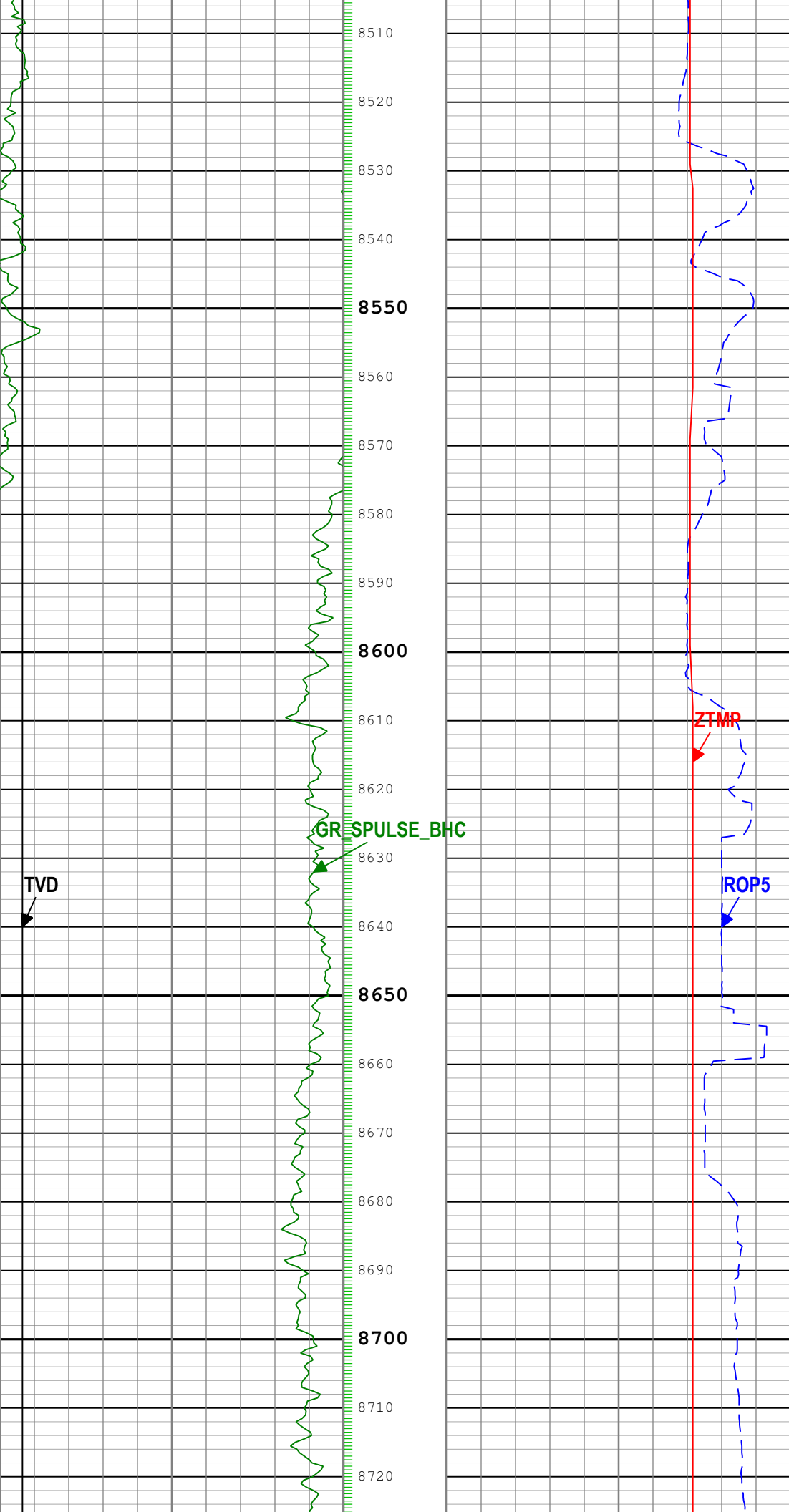


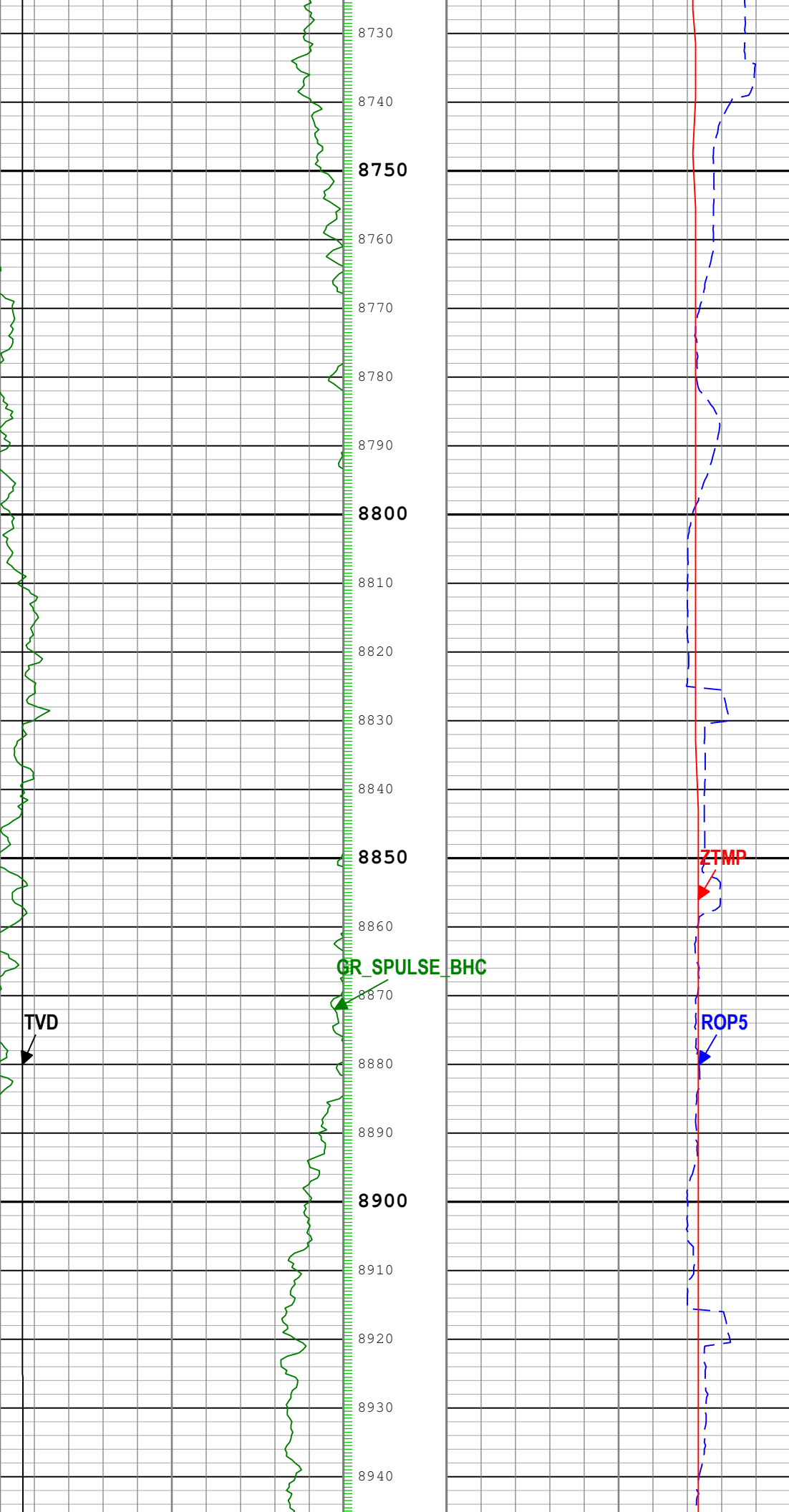


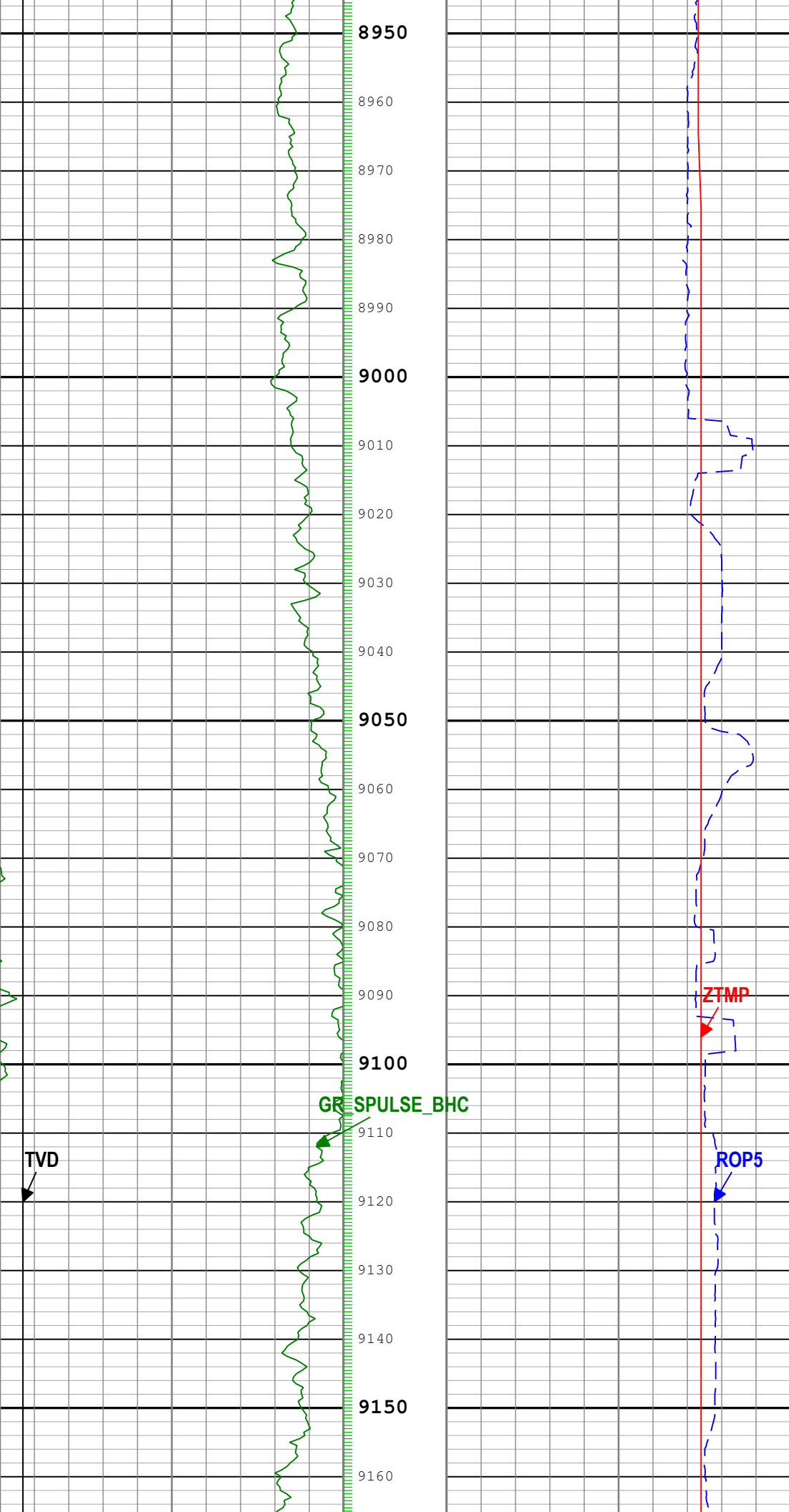




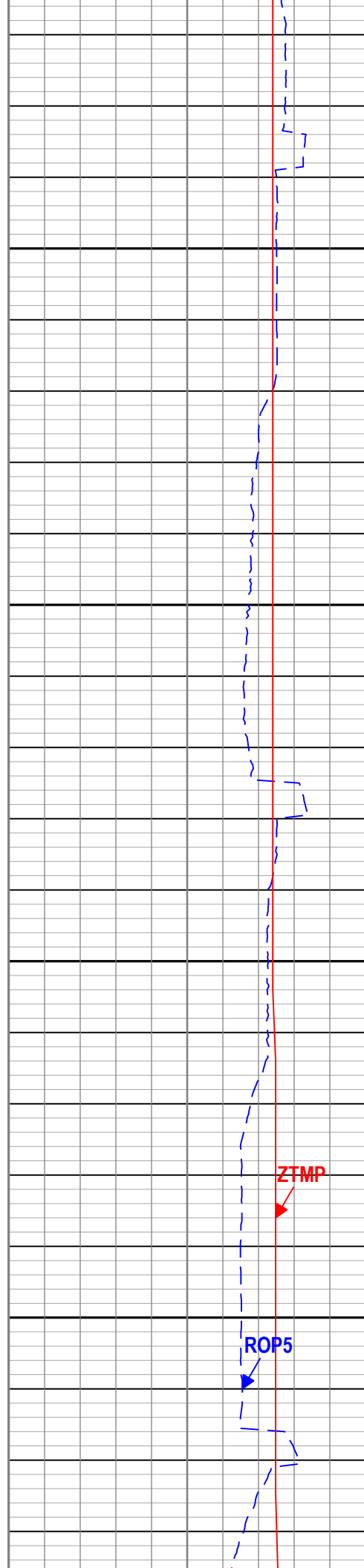
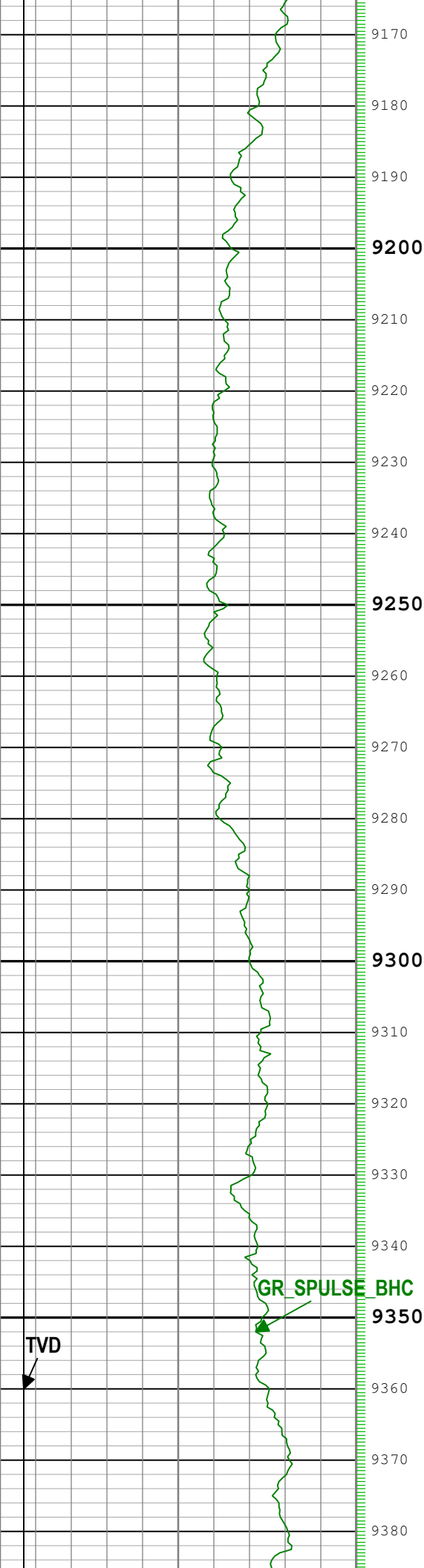


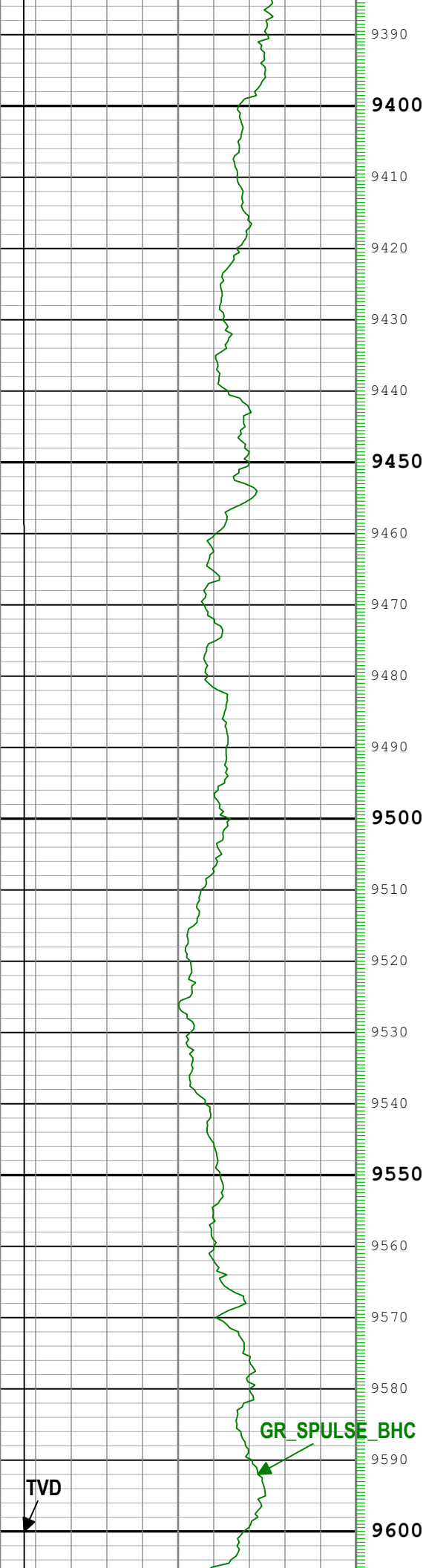


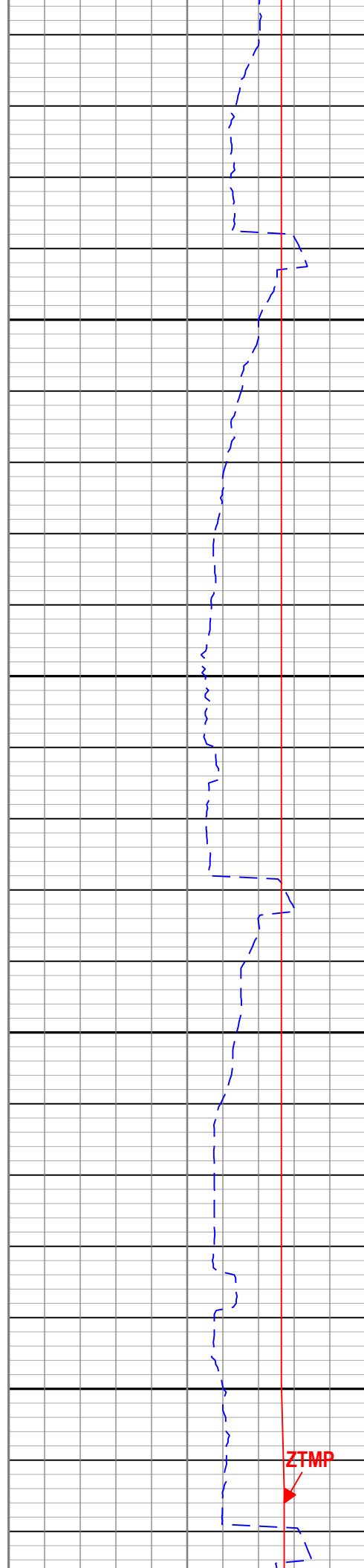
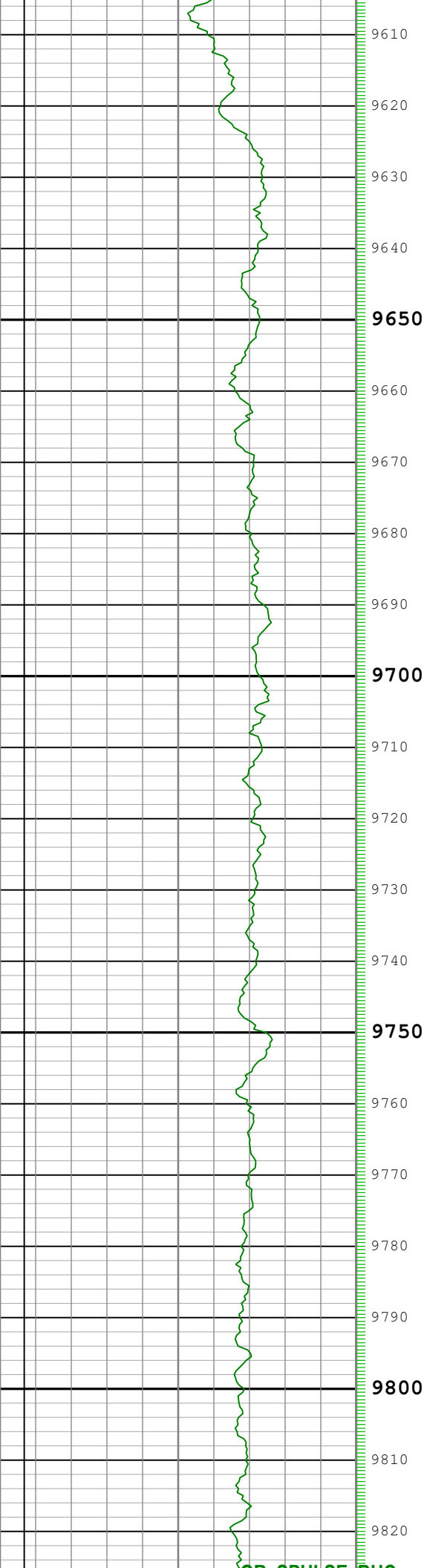


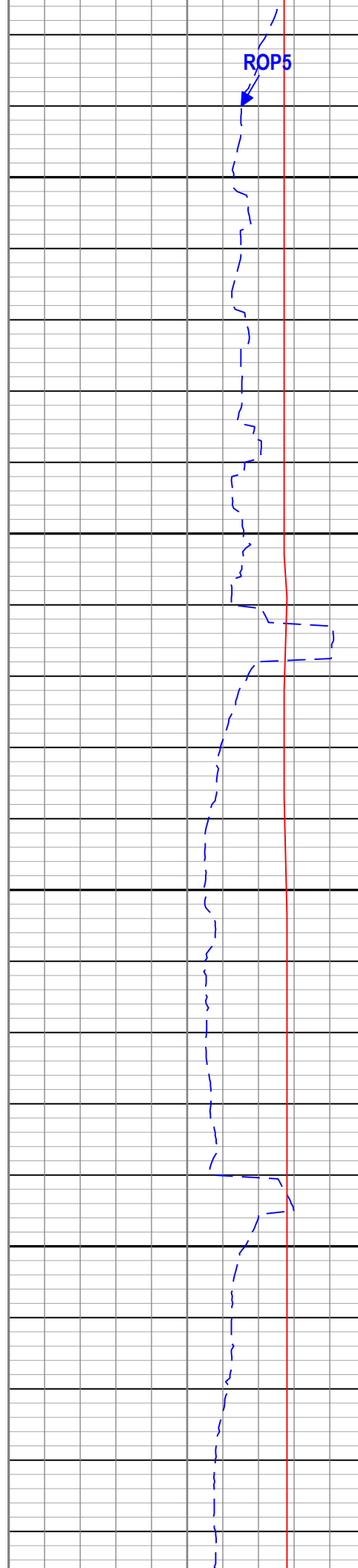
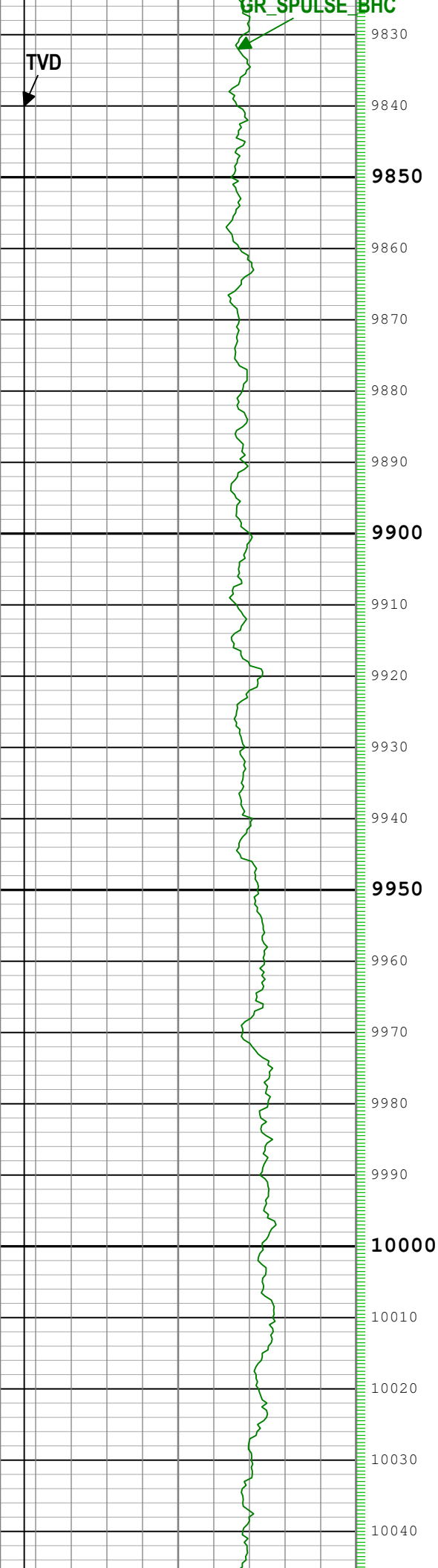


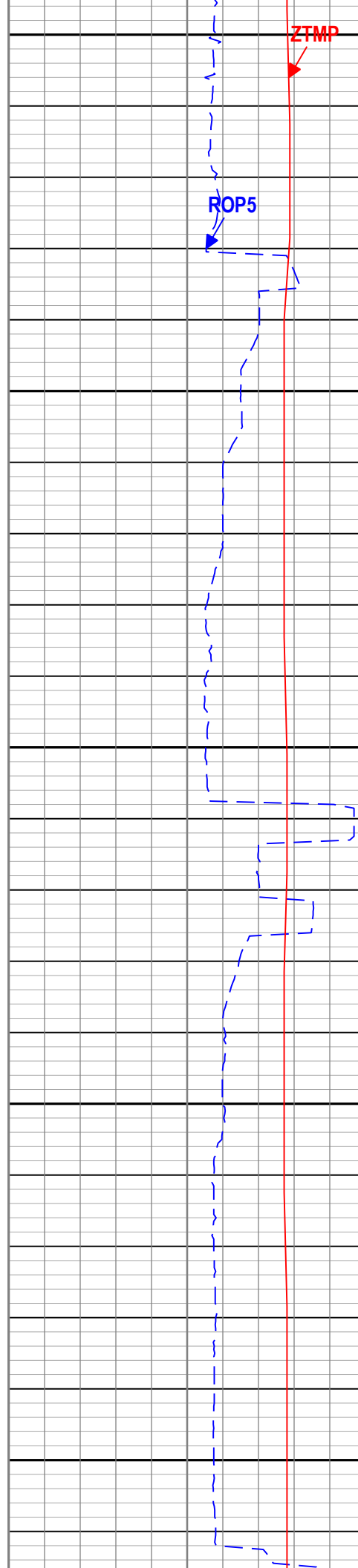
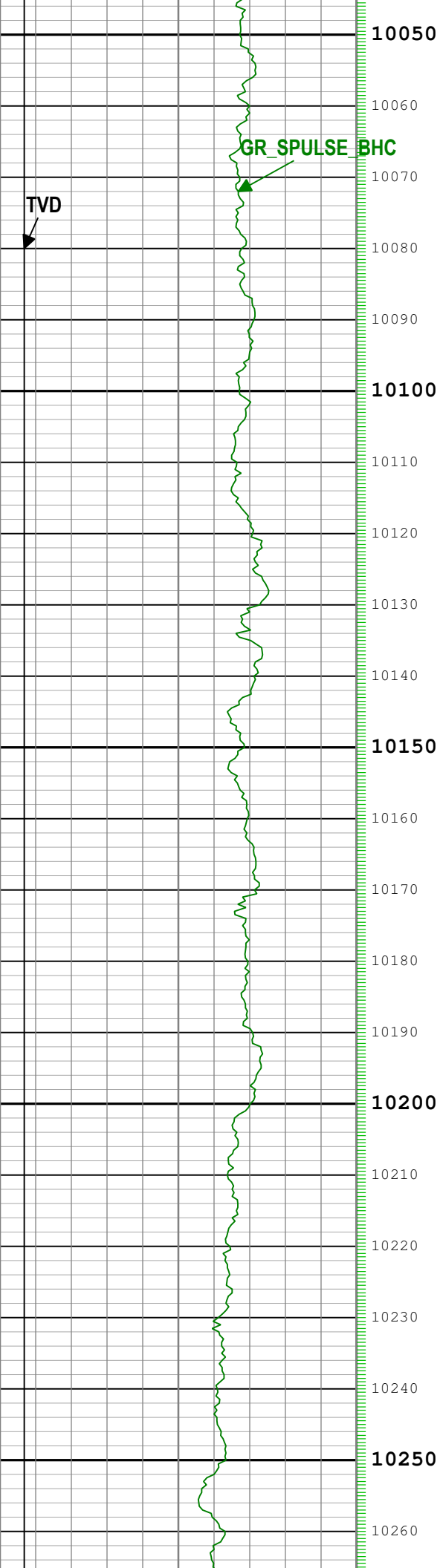


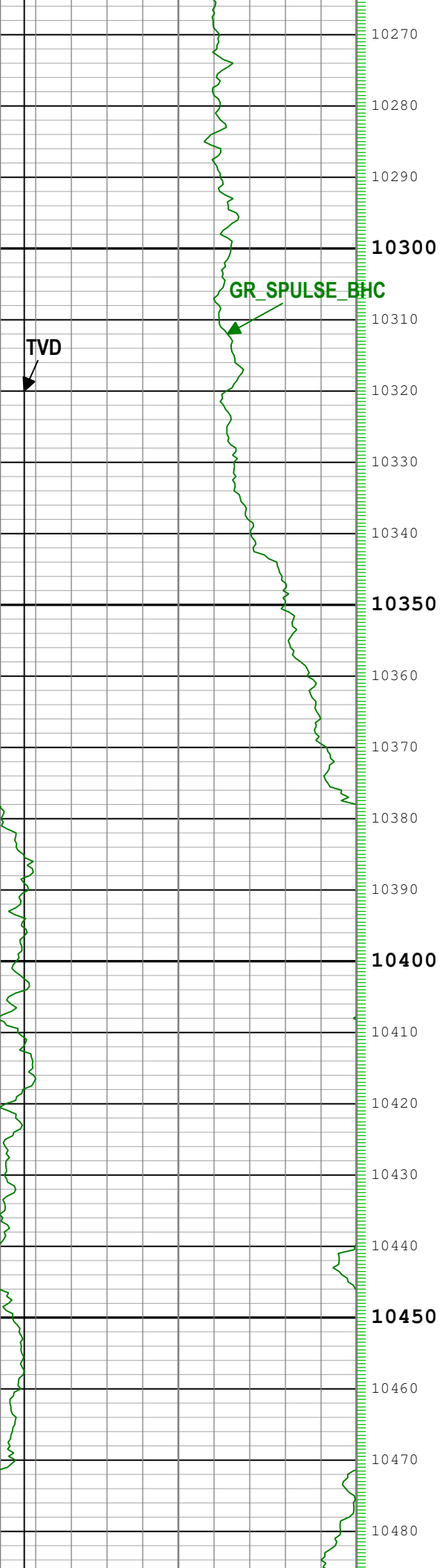


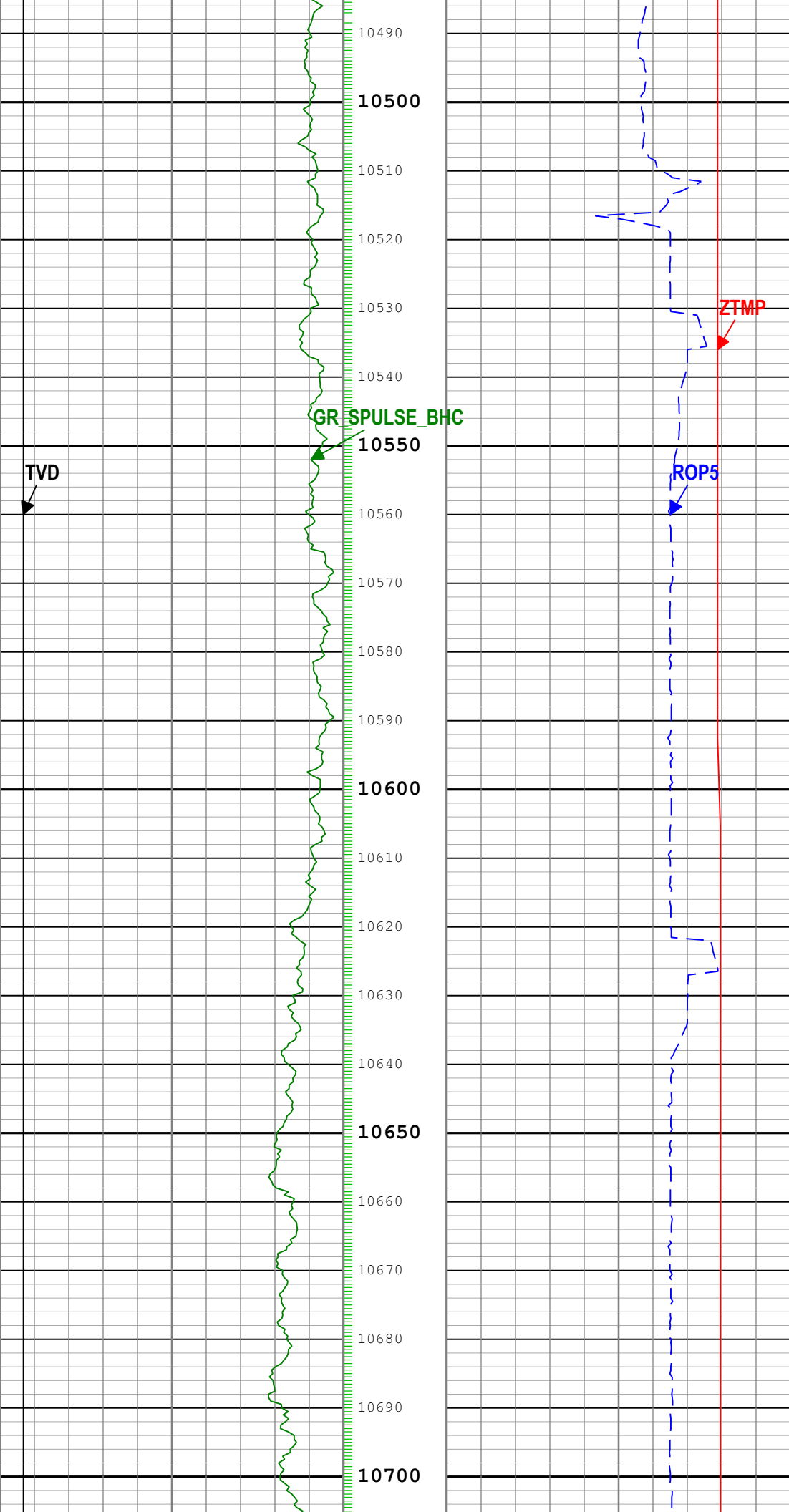


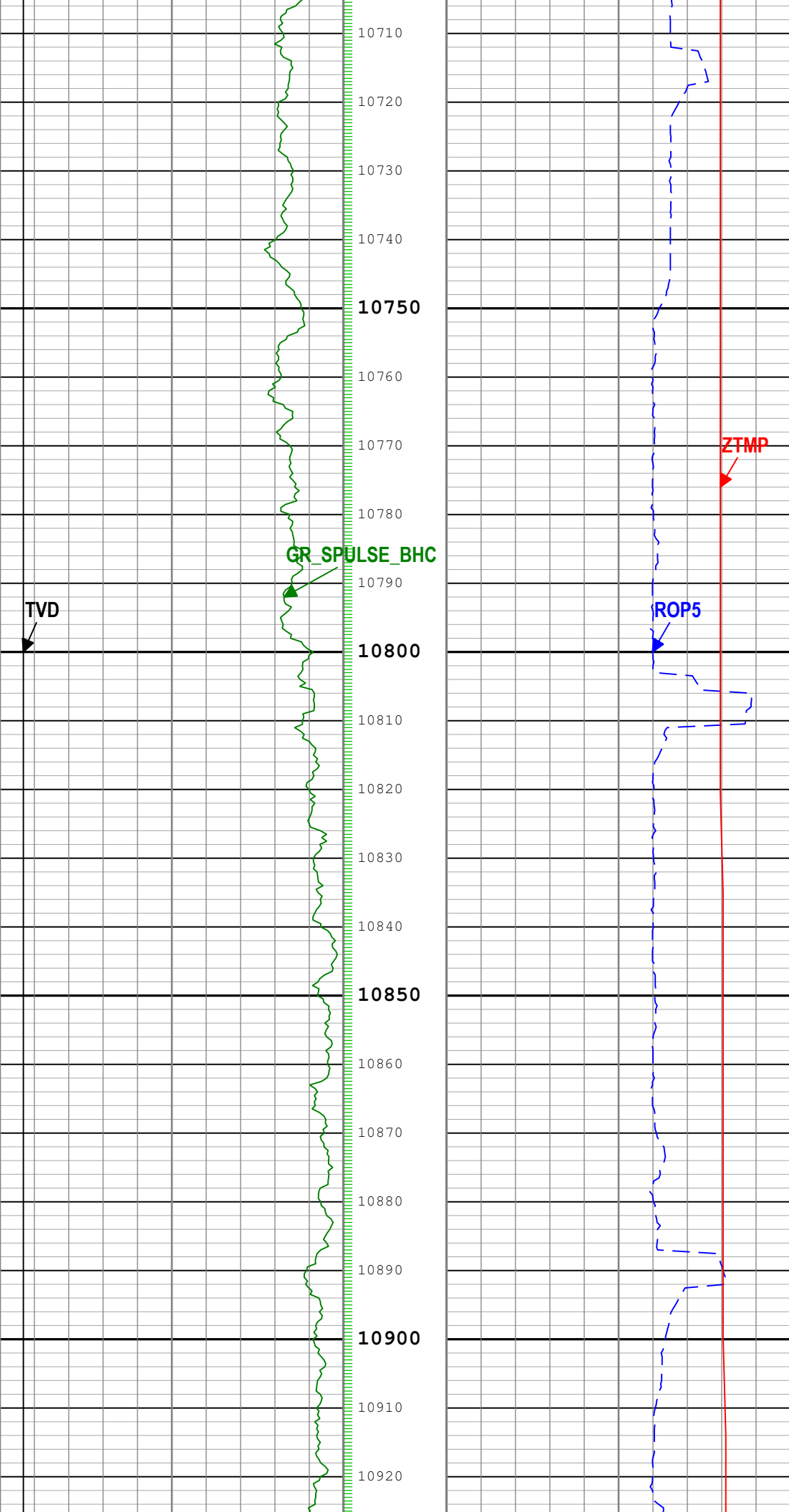




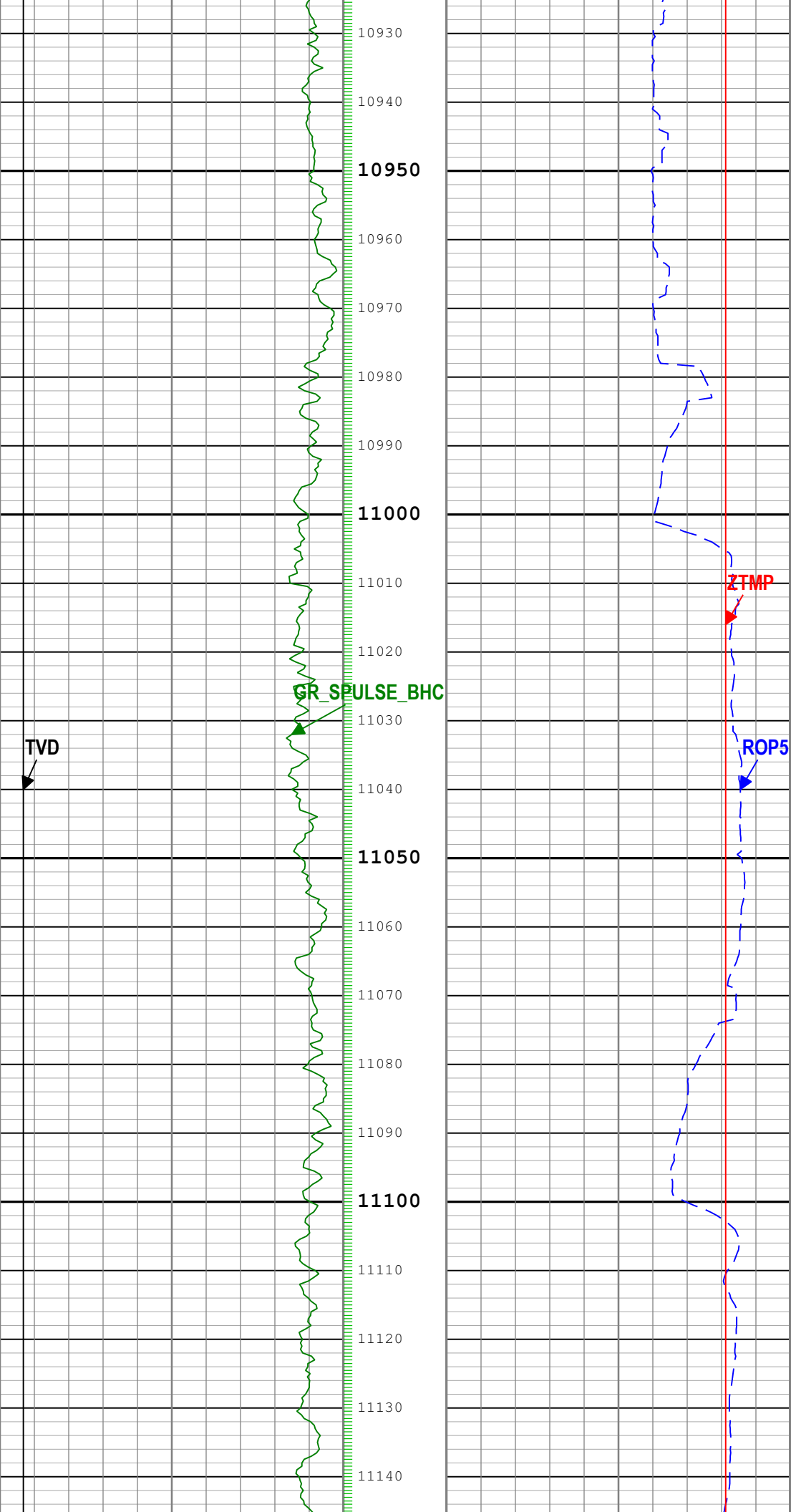


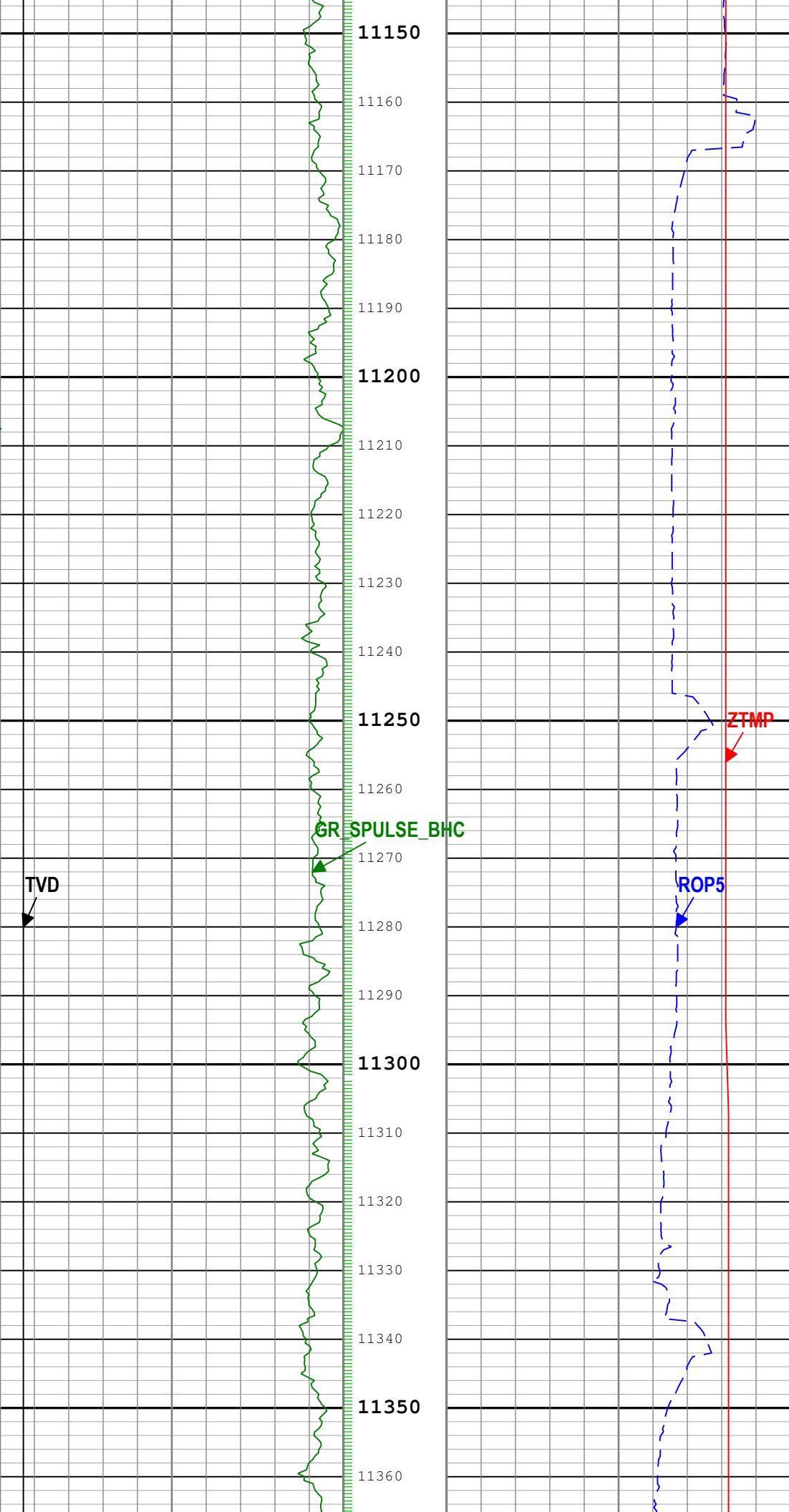


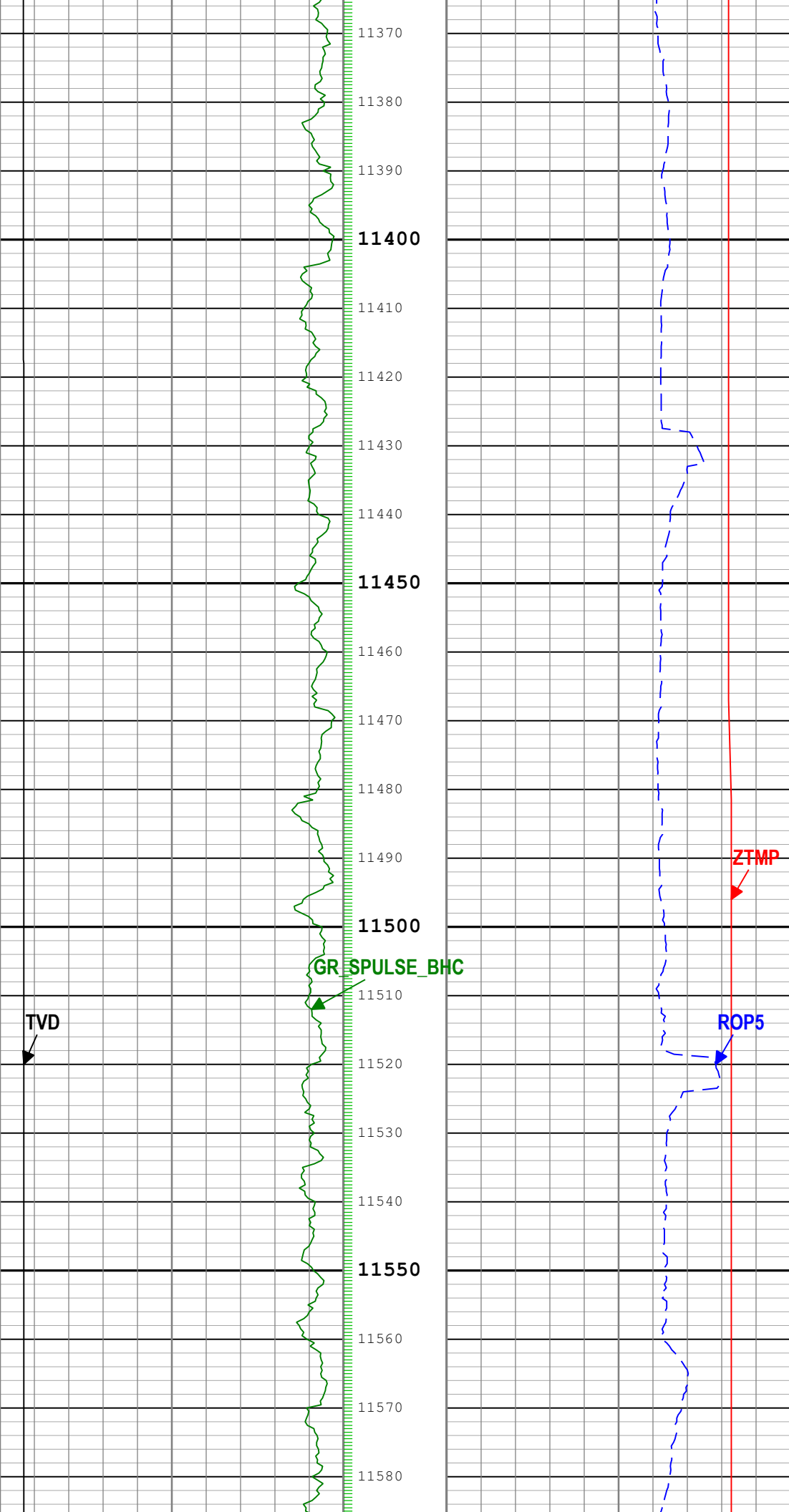


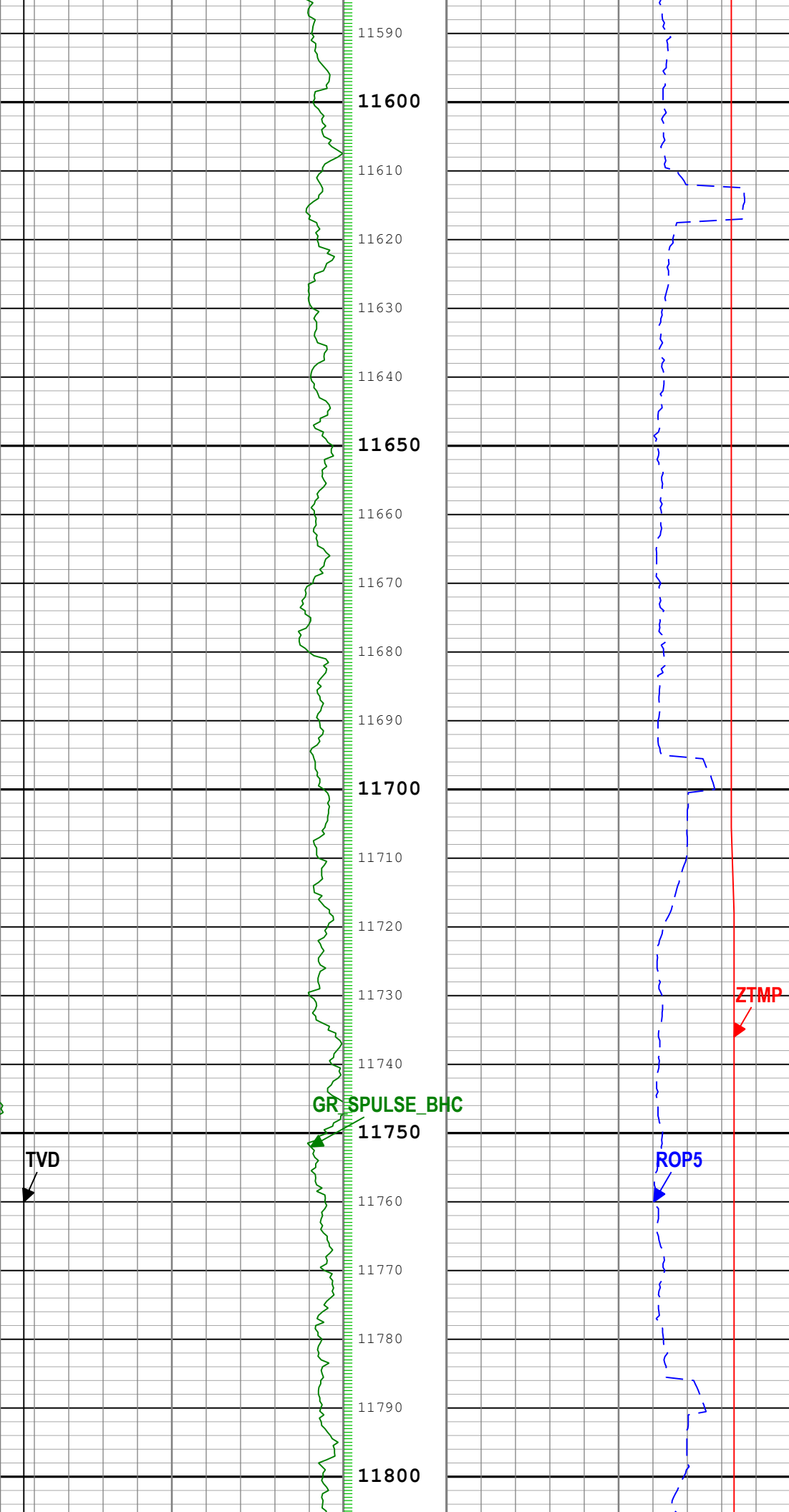


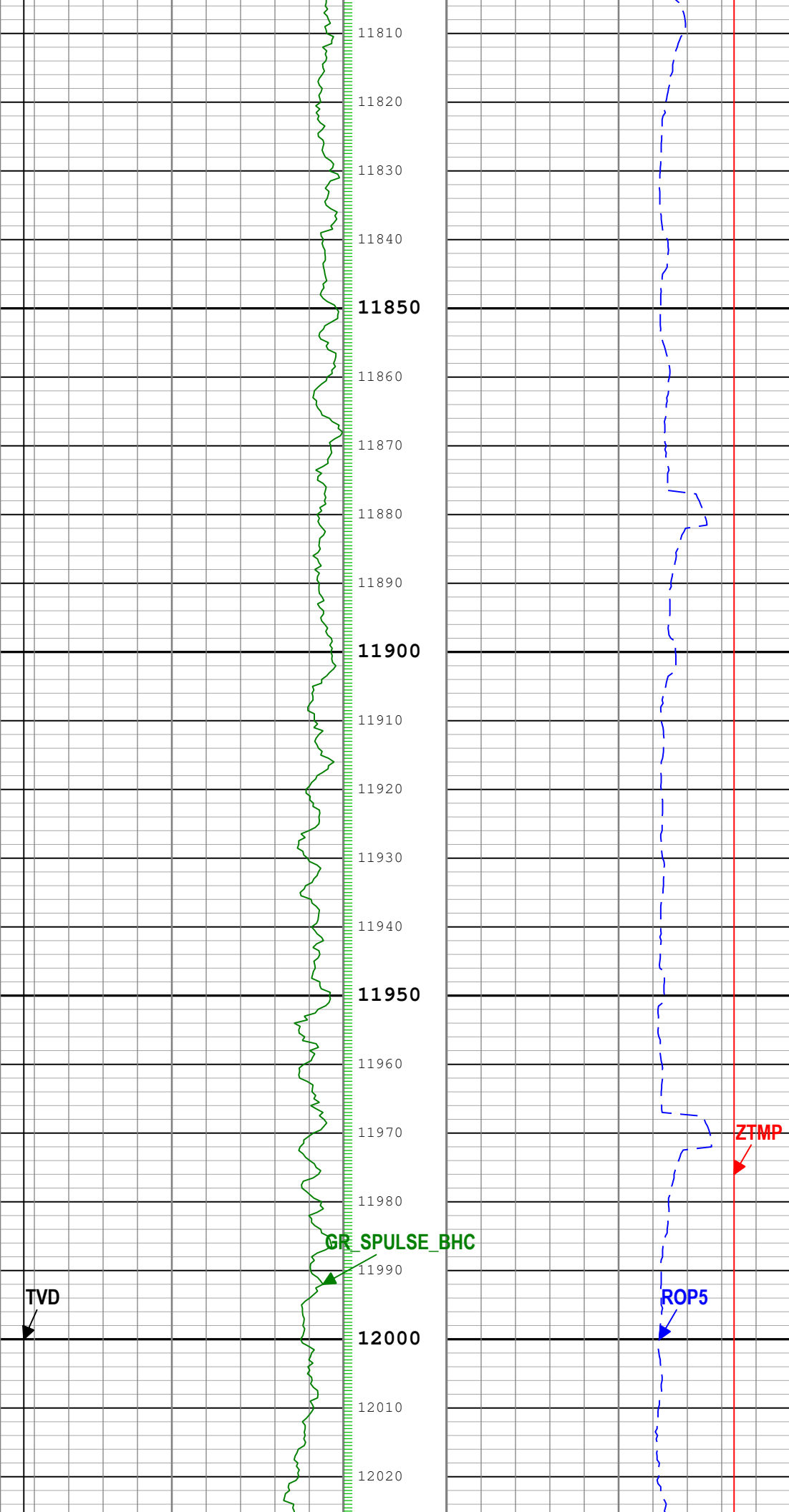


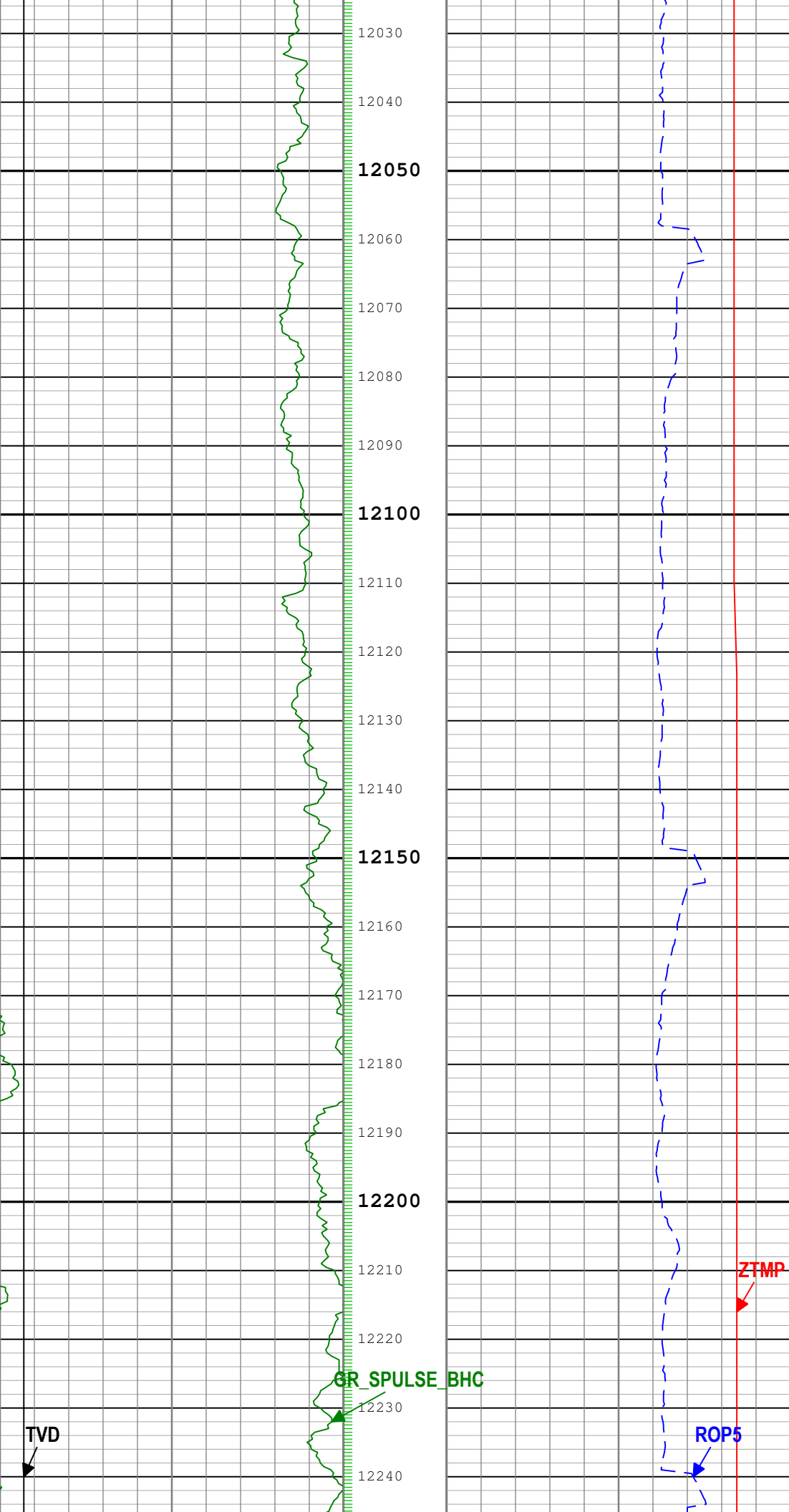


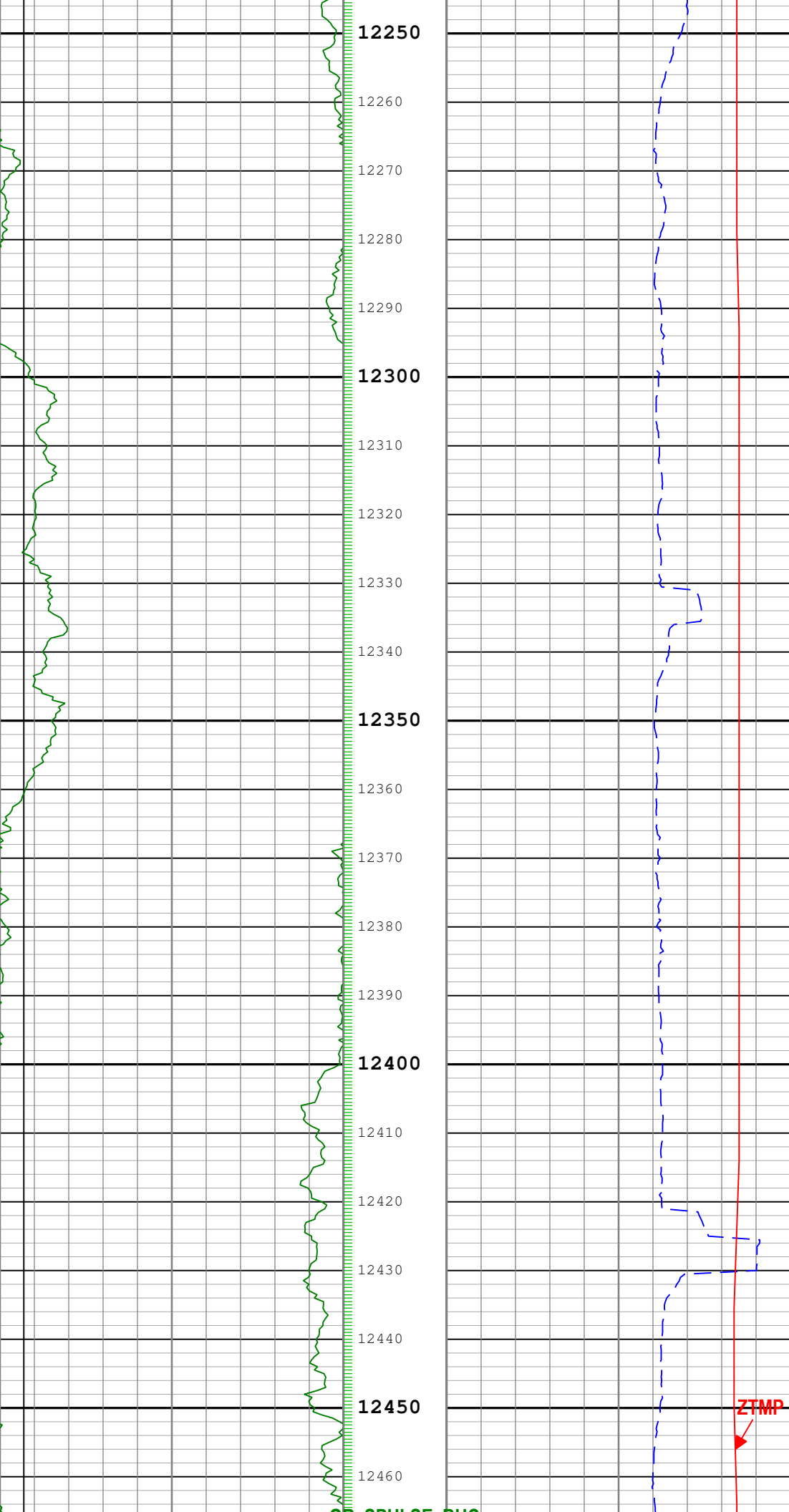


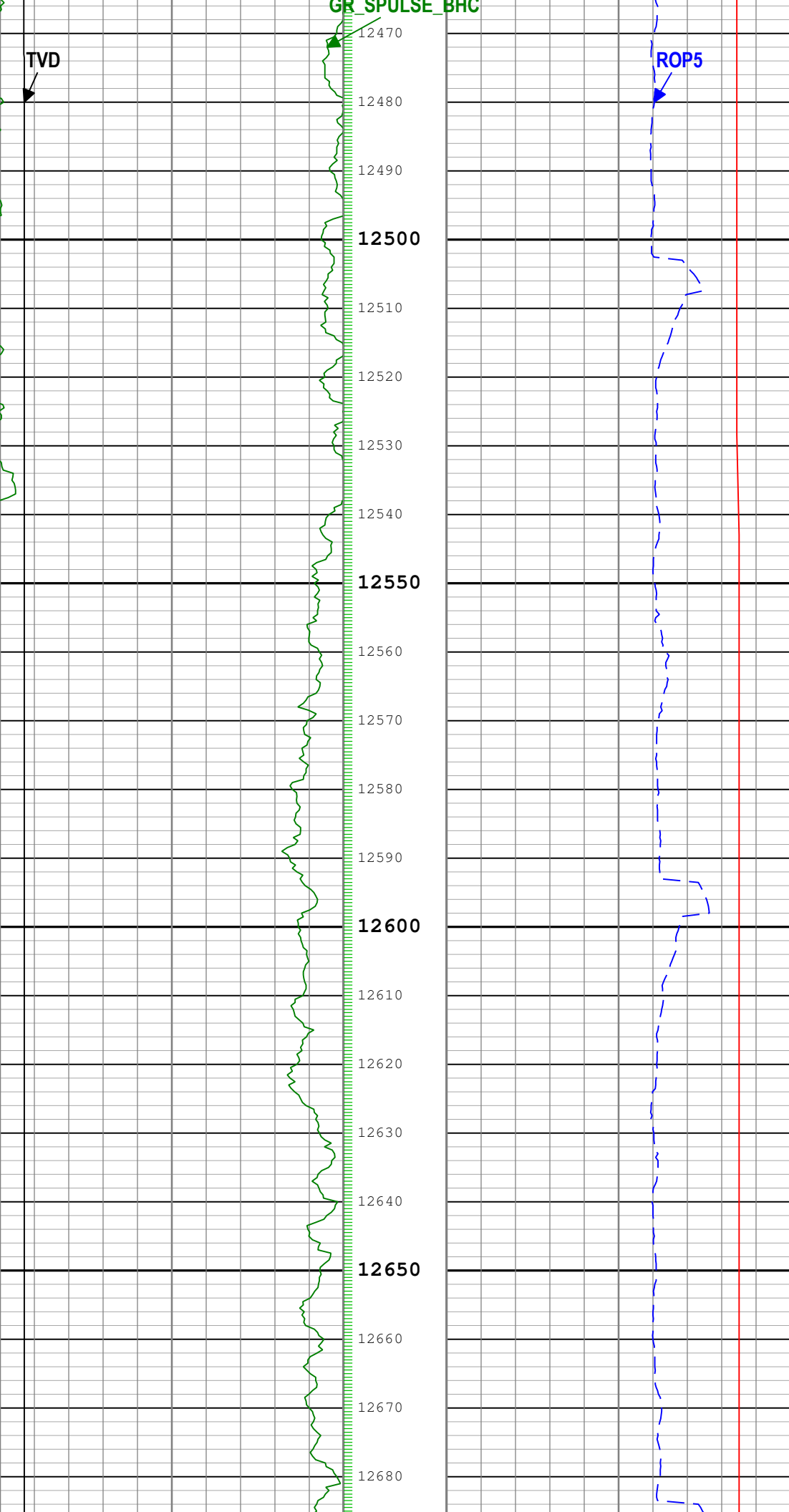




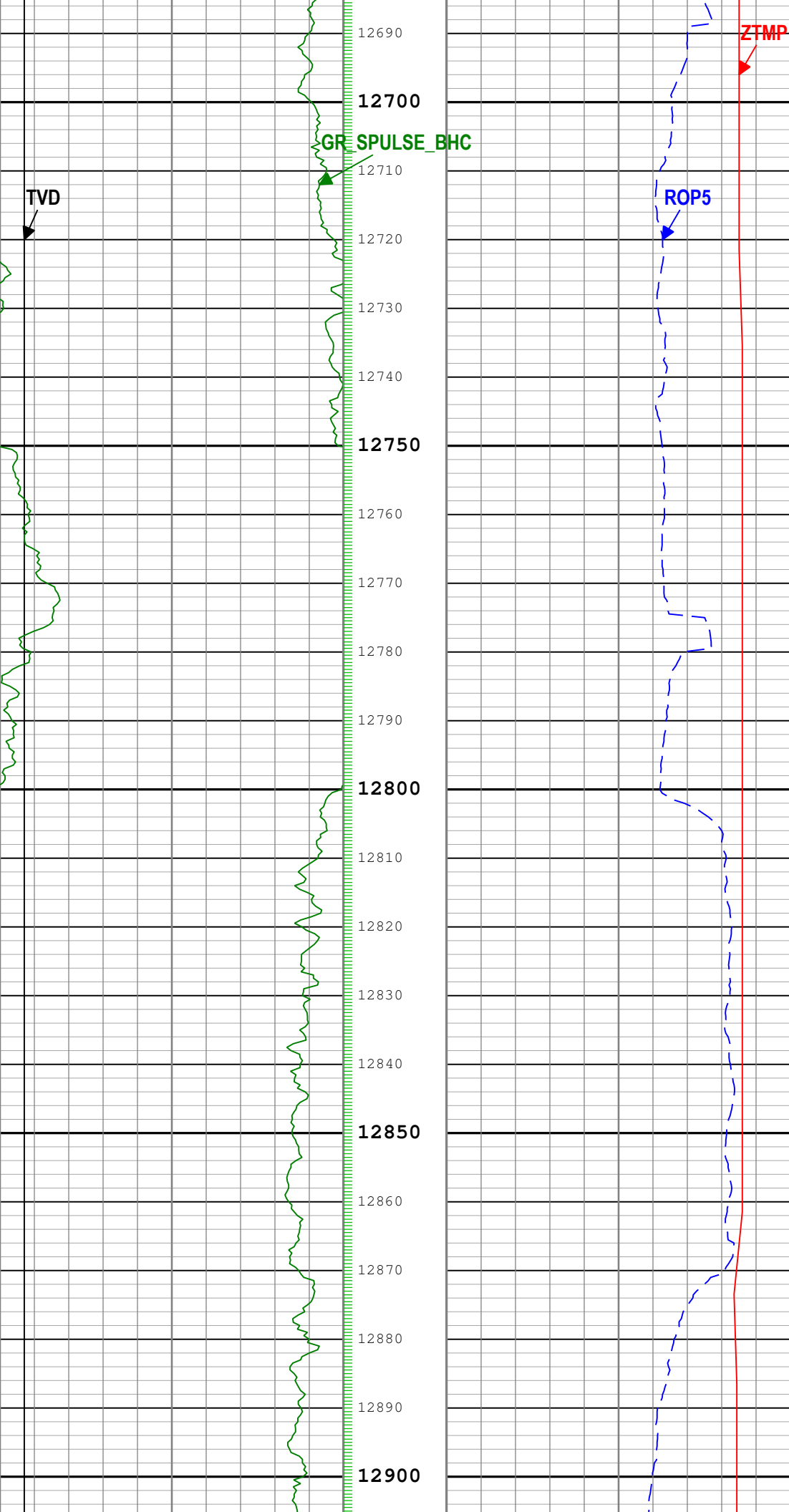


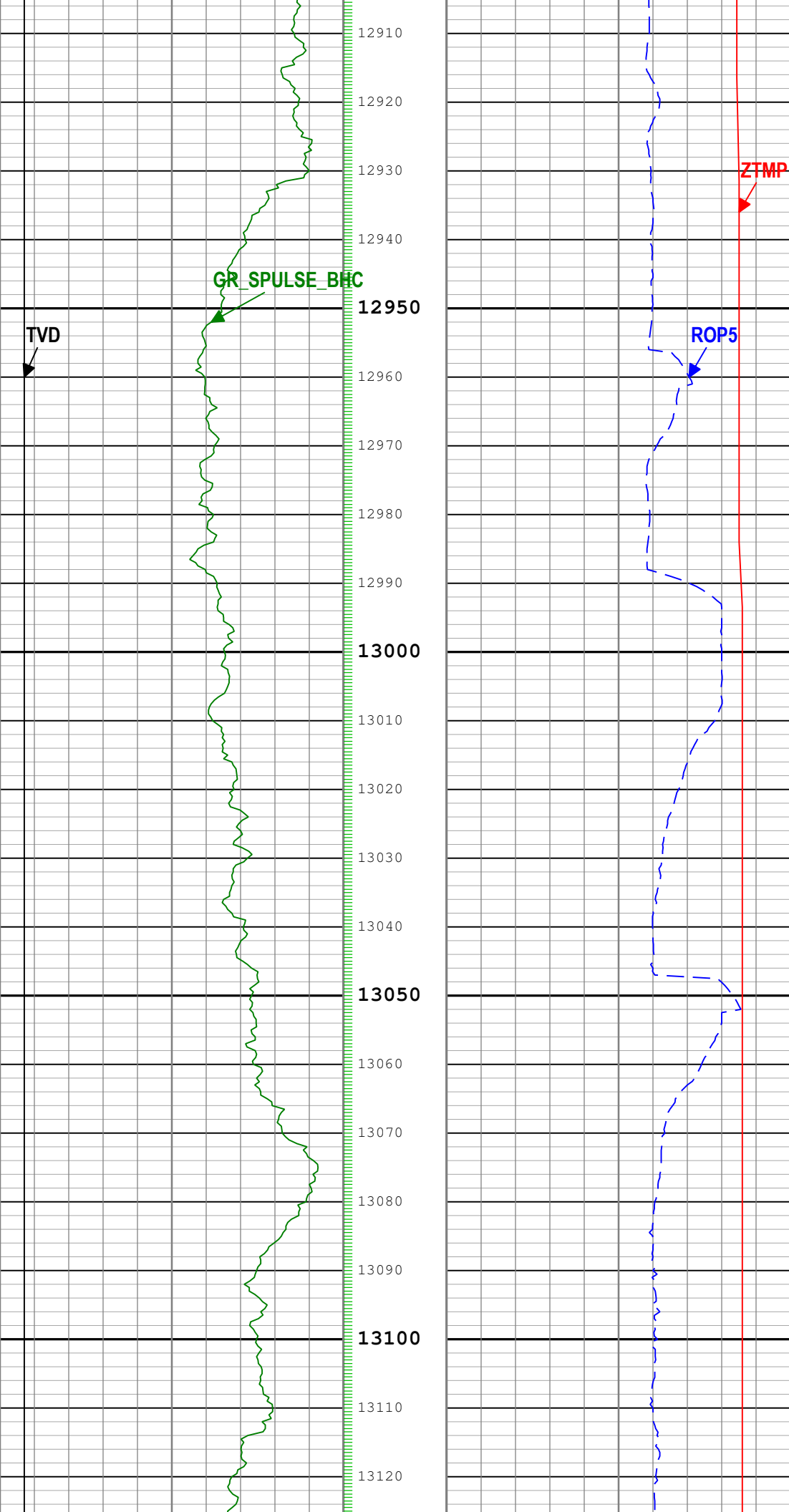


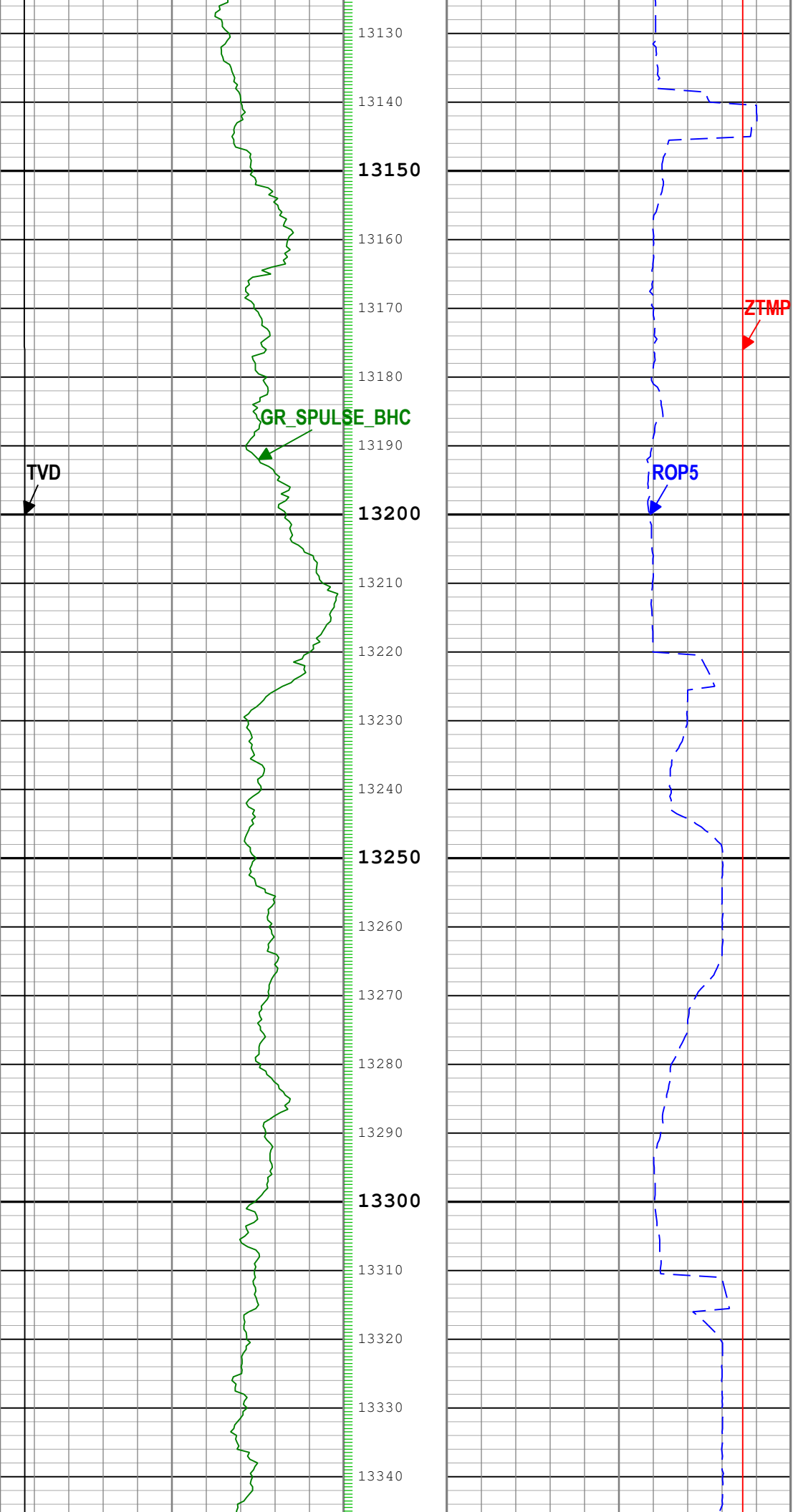


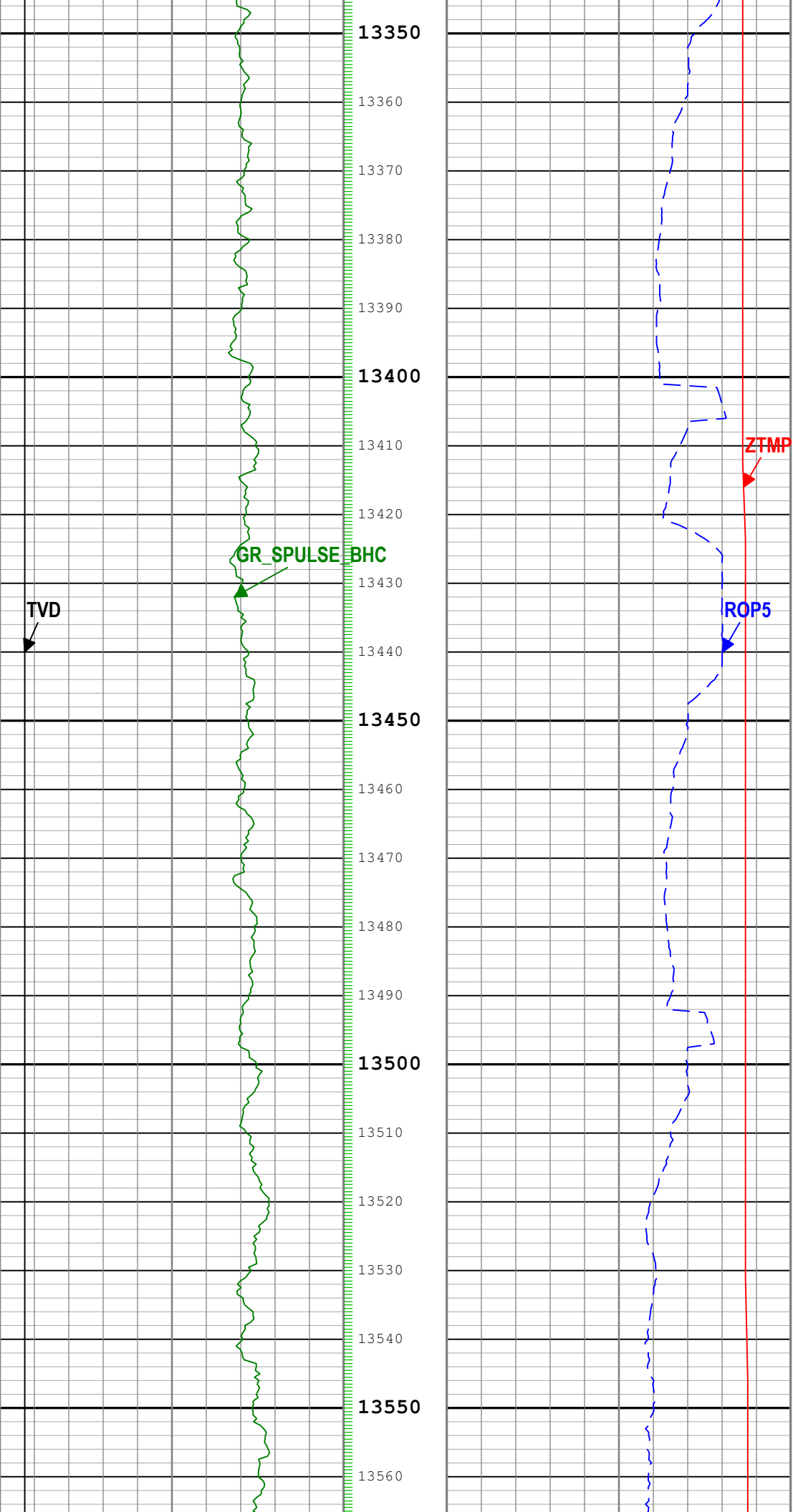


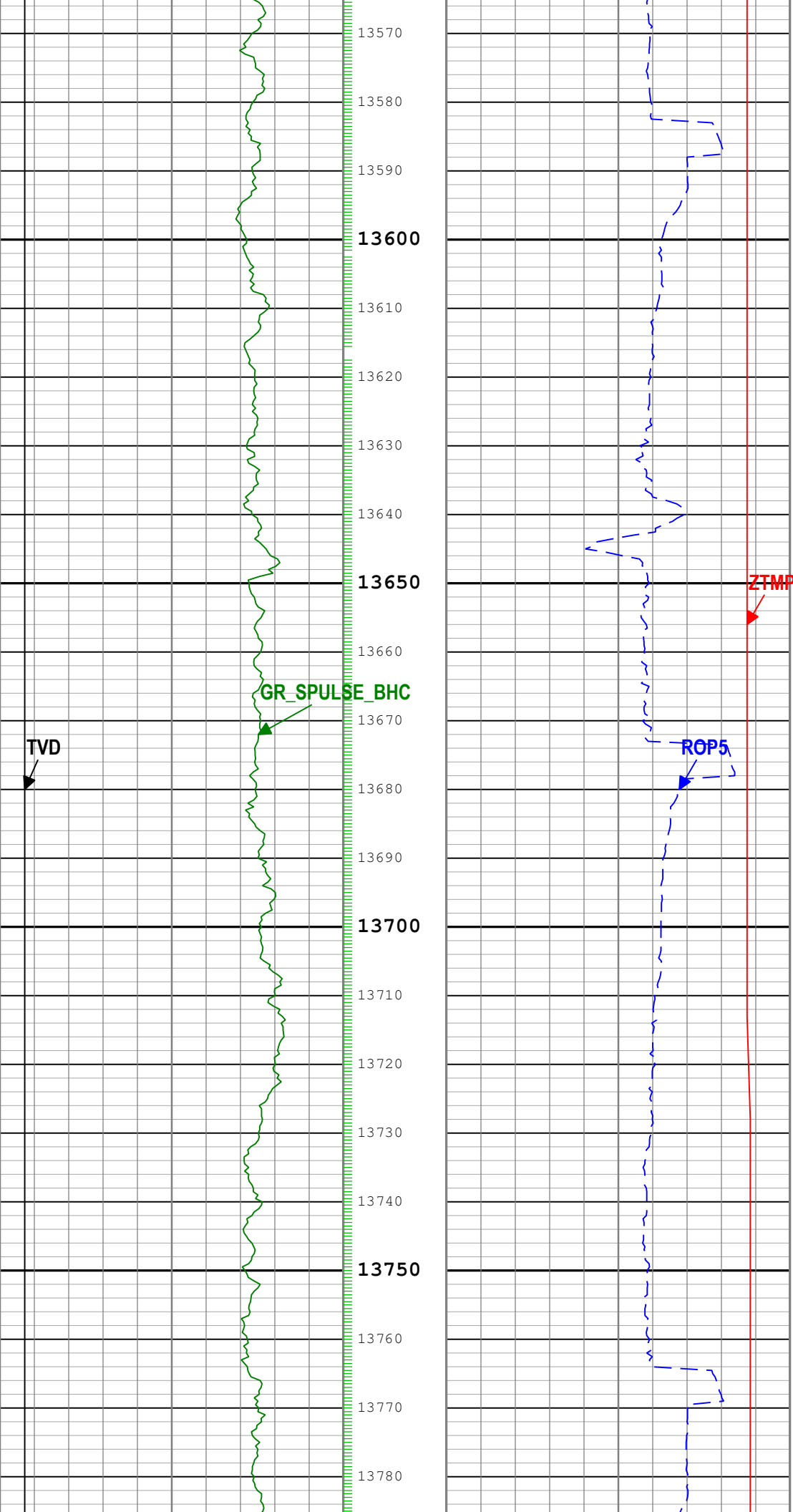


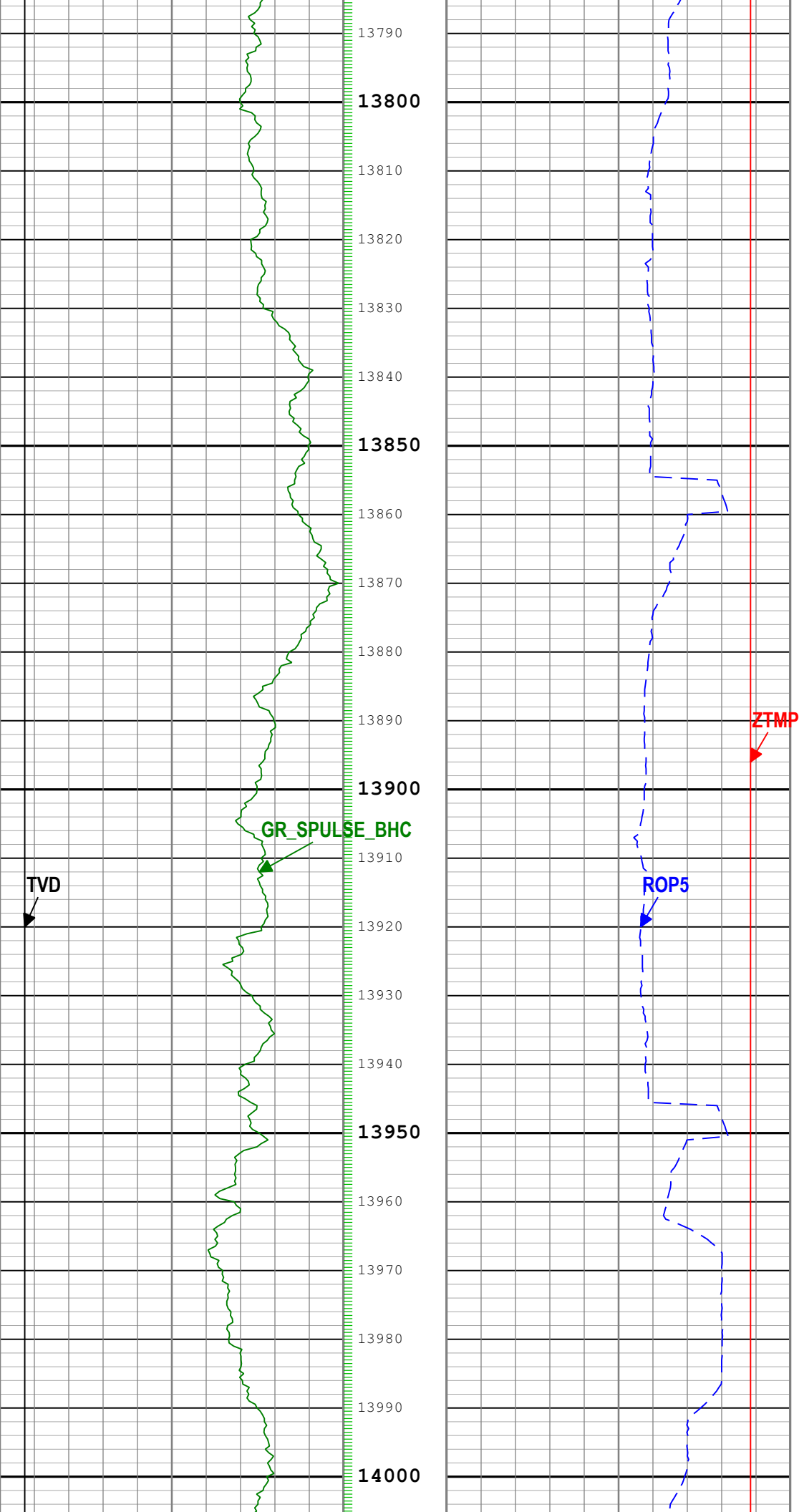


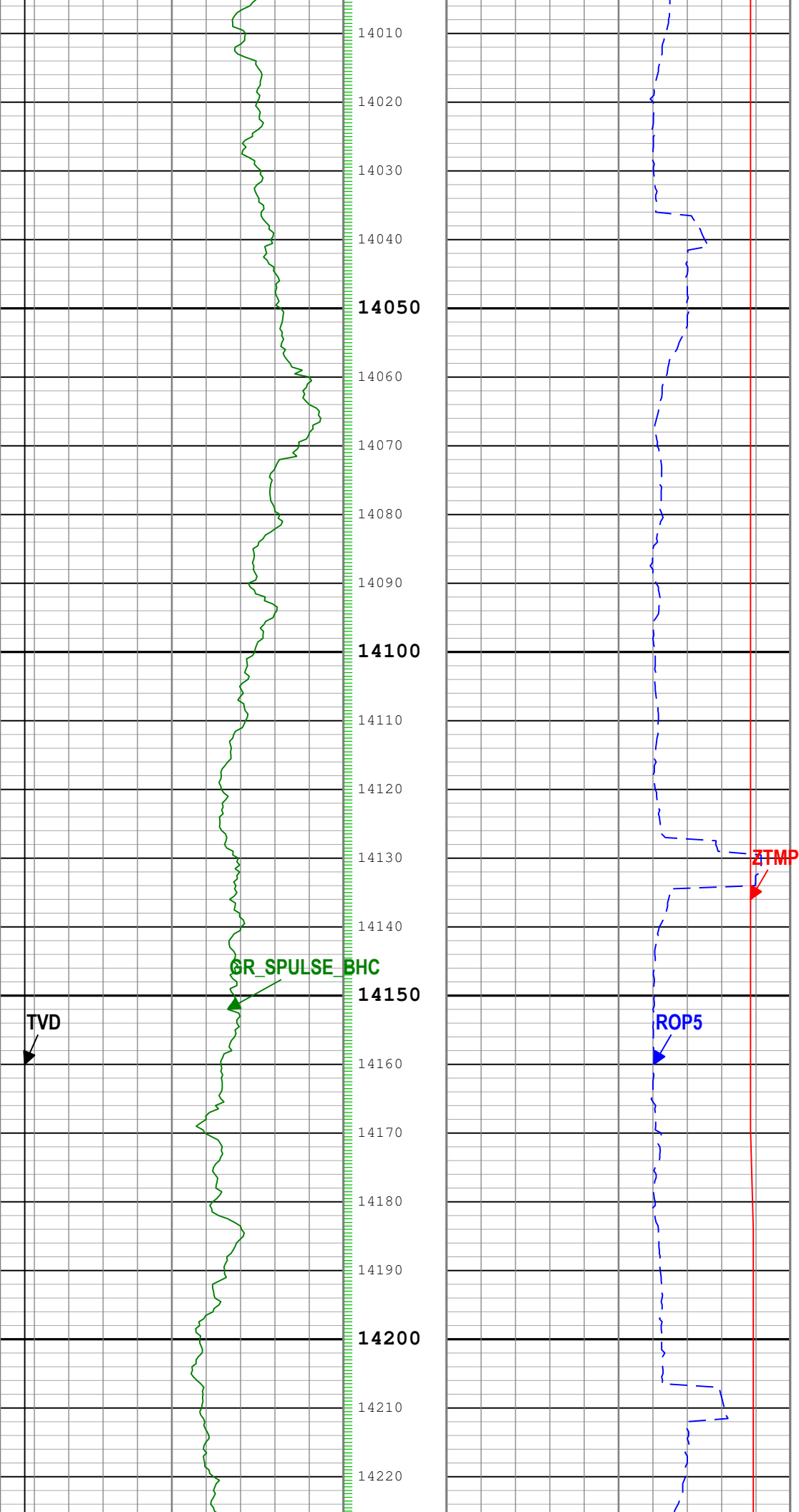


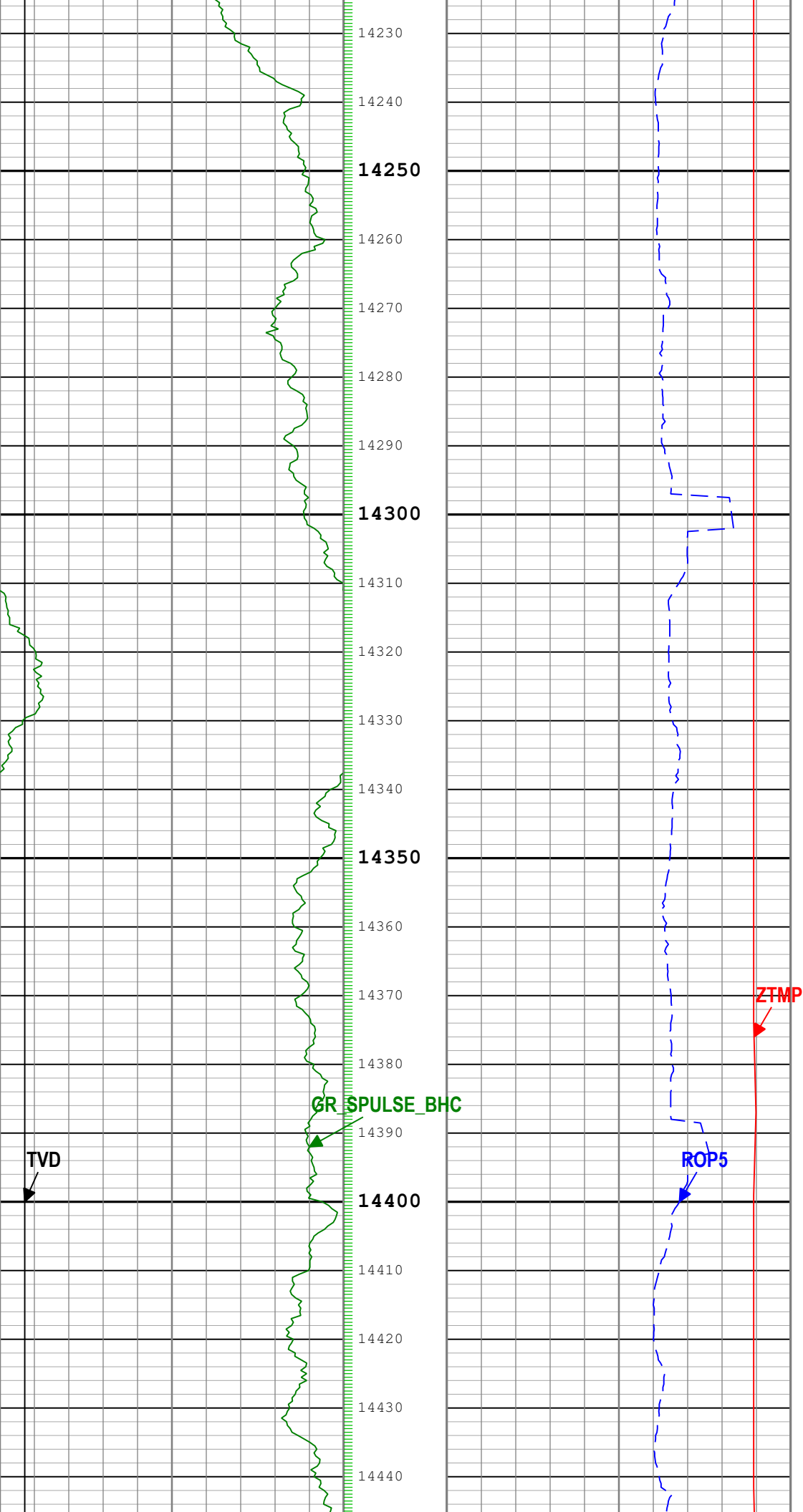




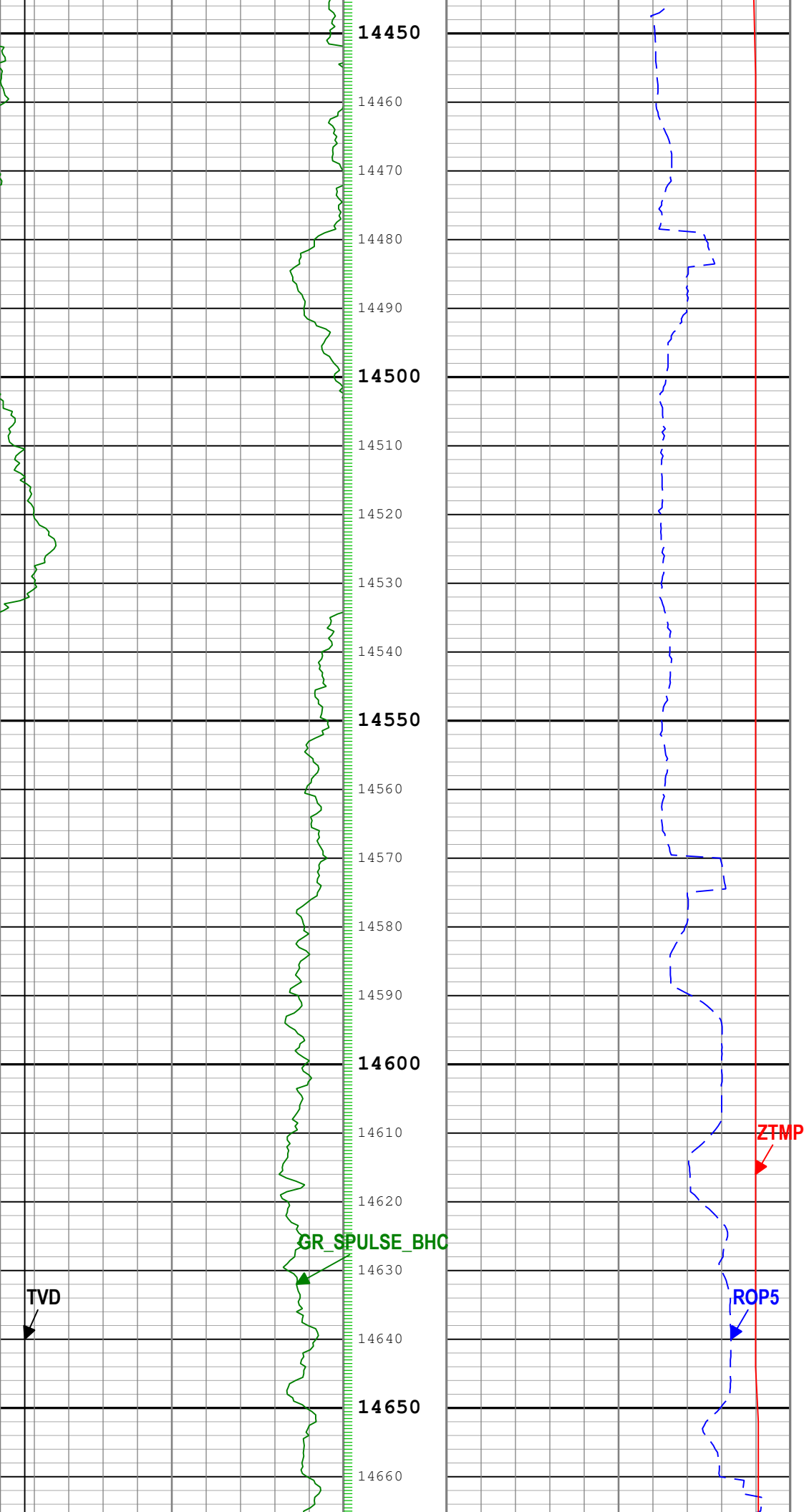


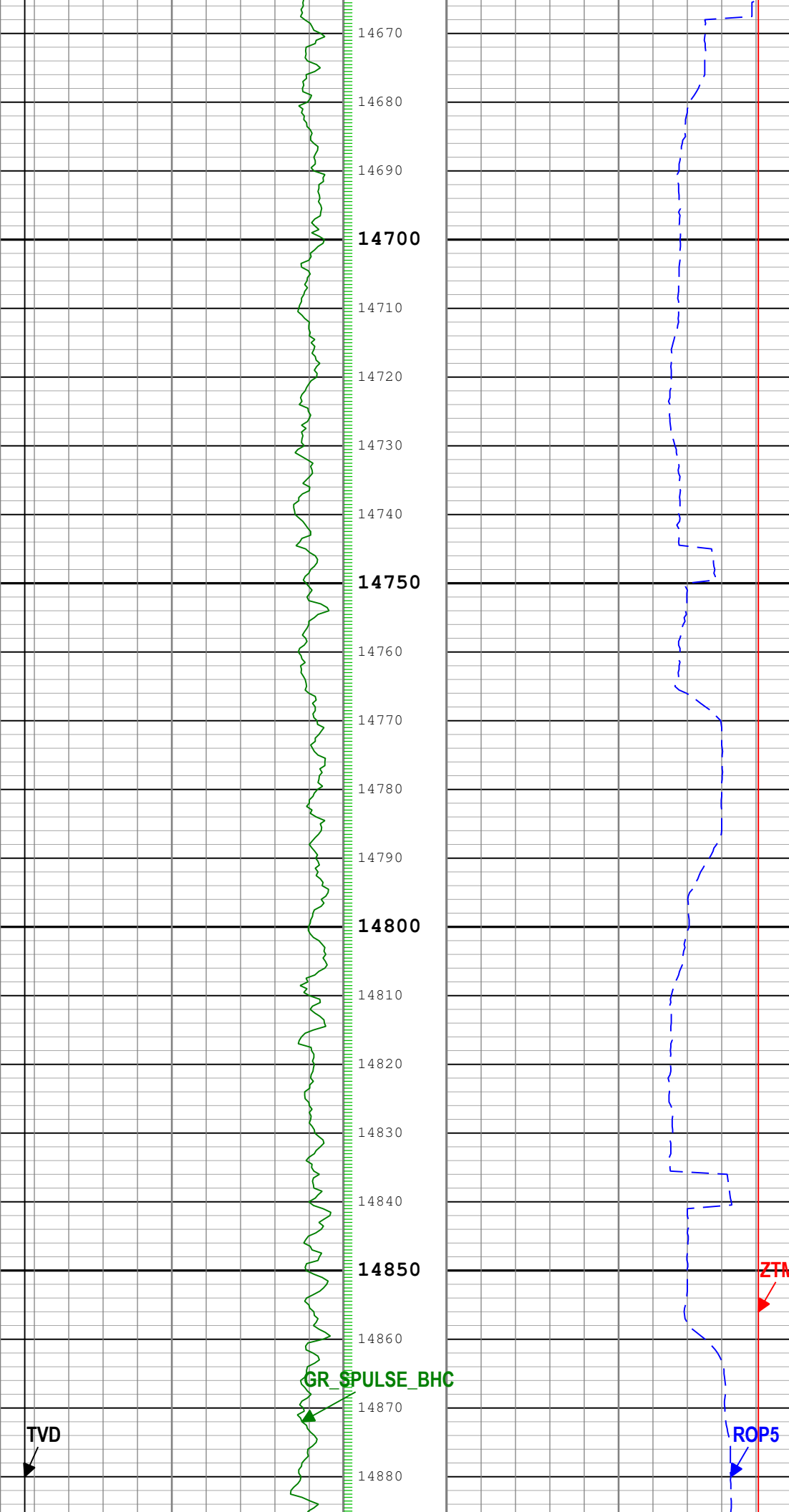










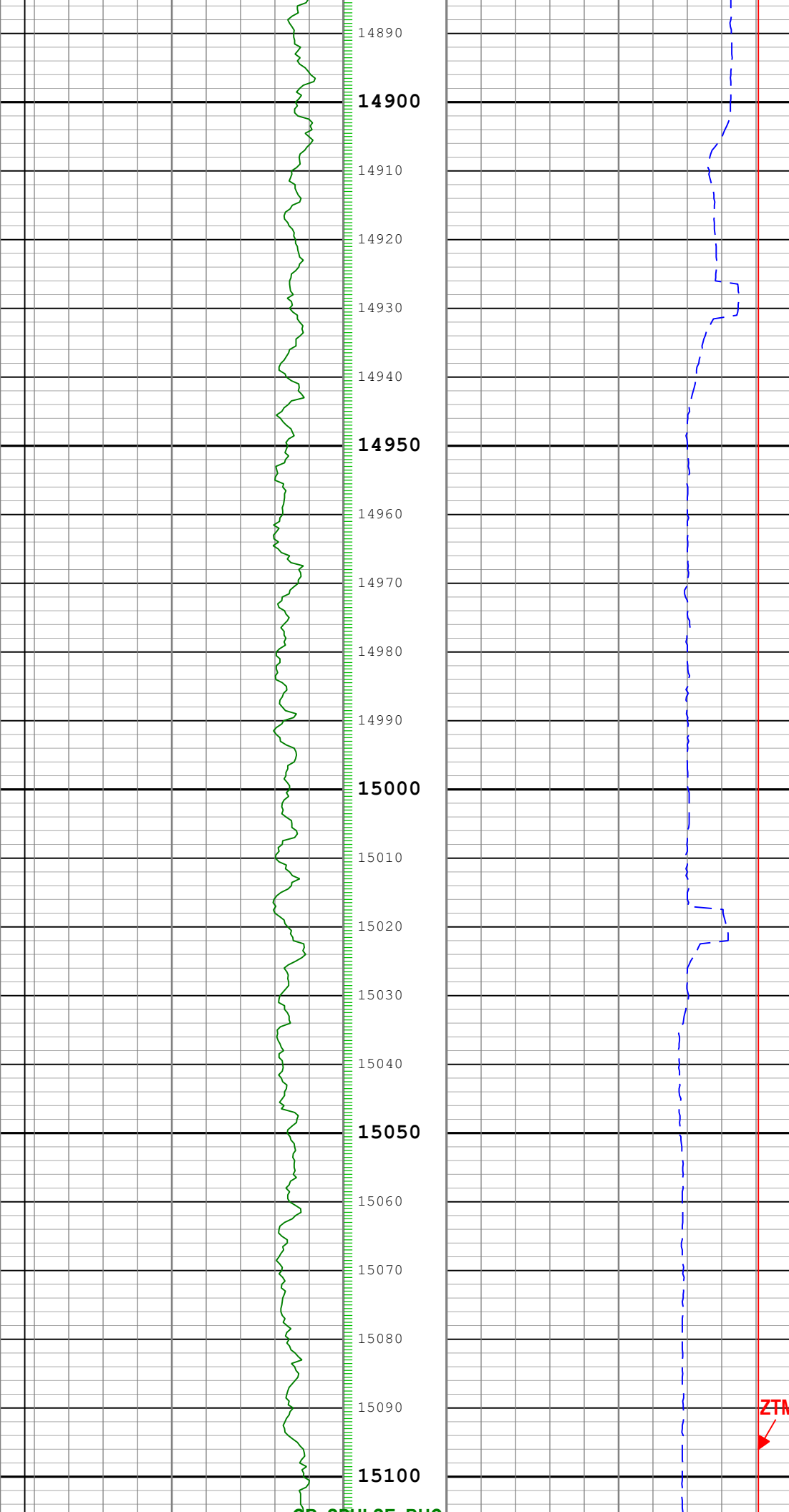


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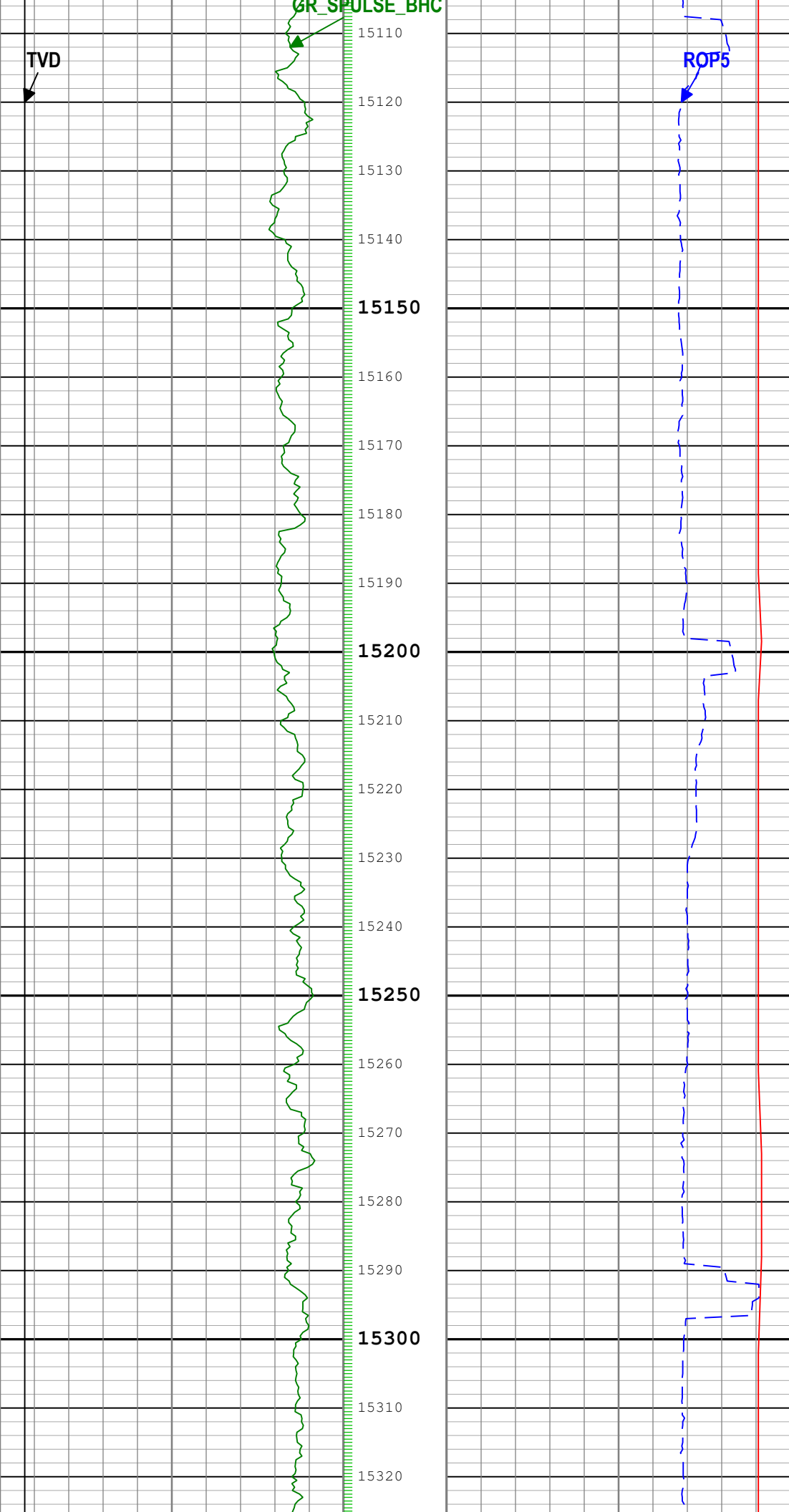
ROP5

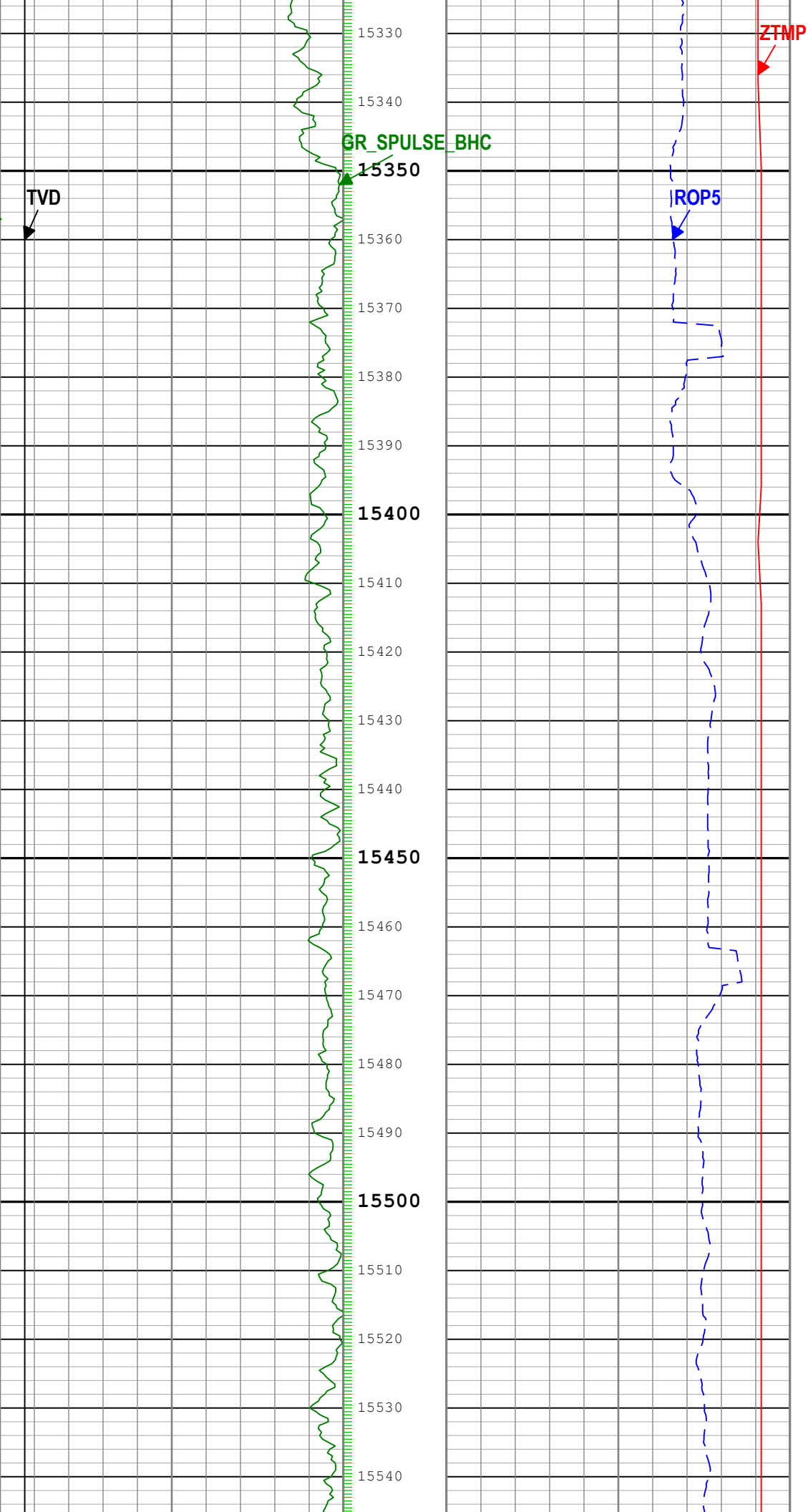
GR SPULSE\_BHC

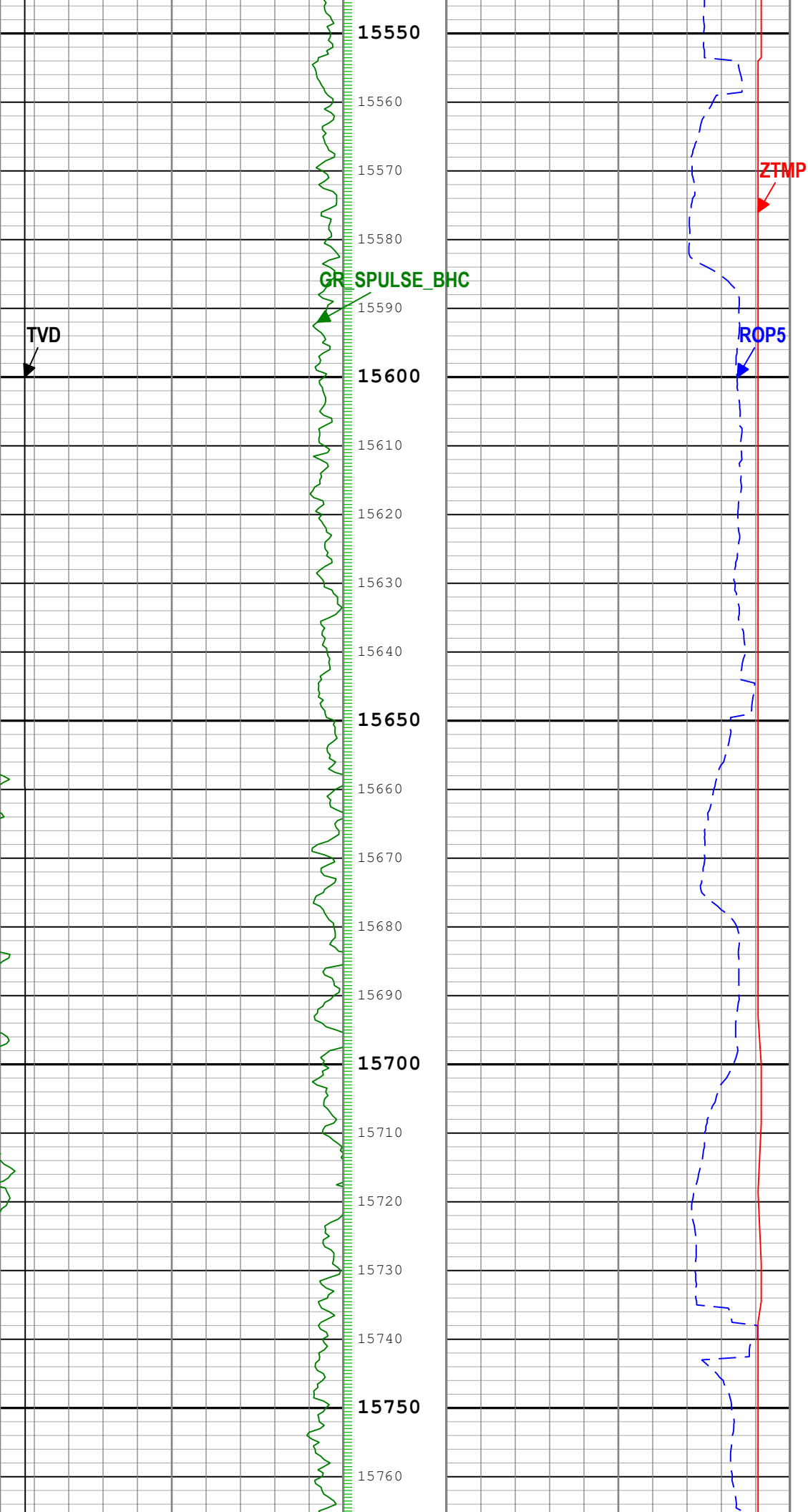
TVD

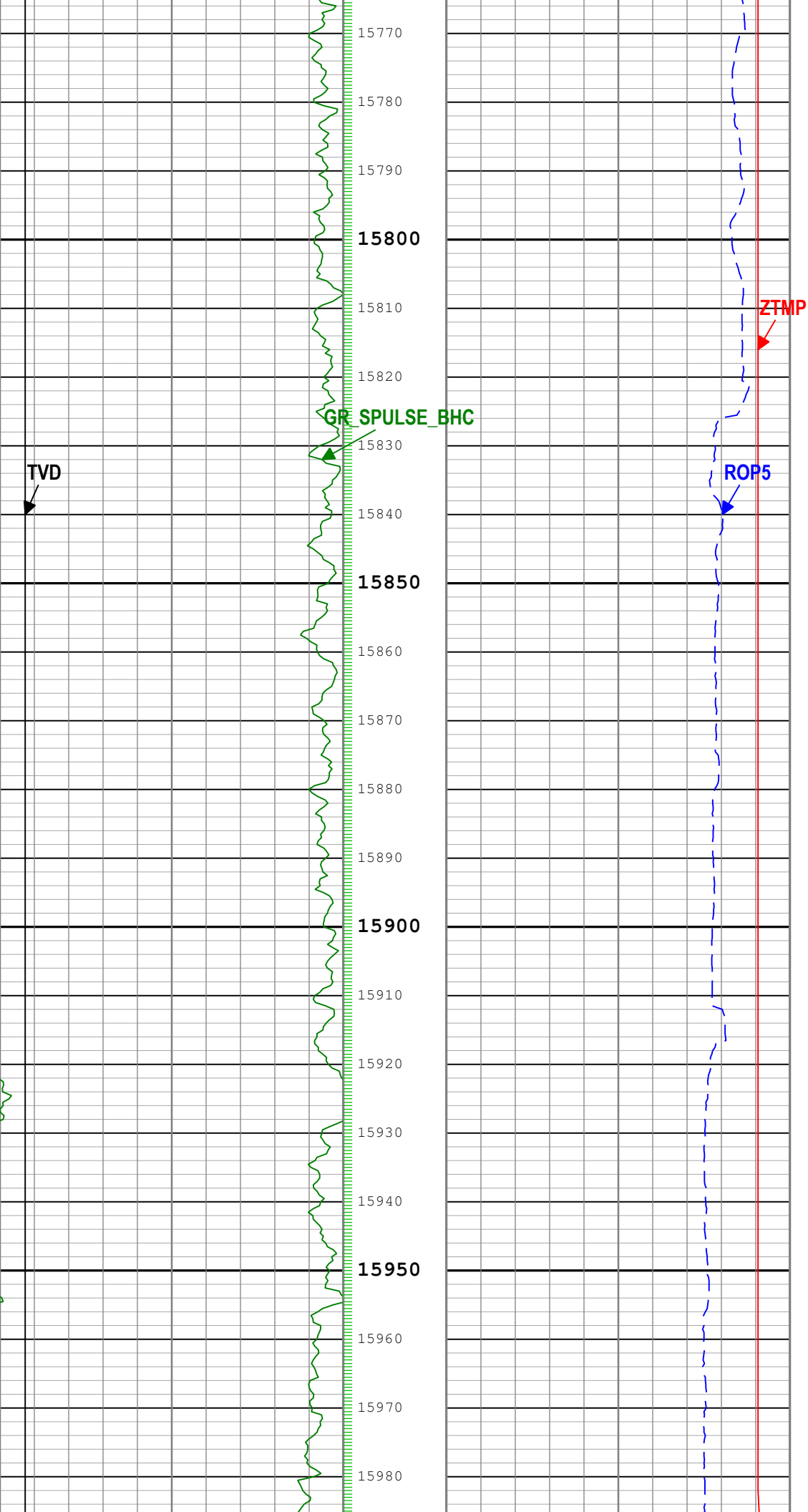


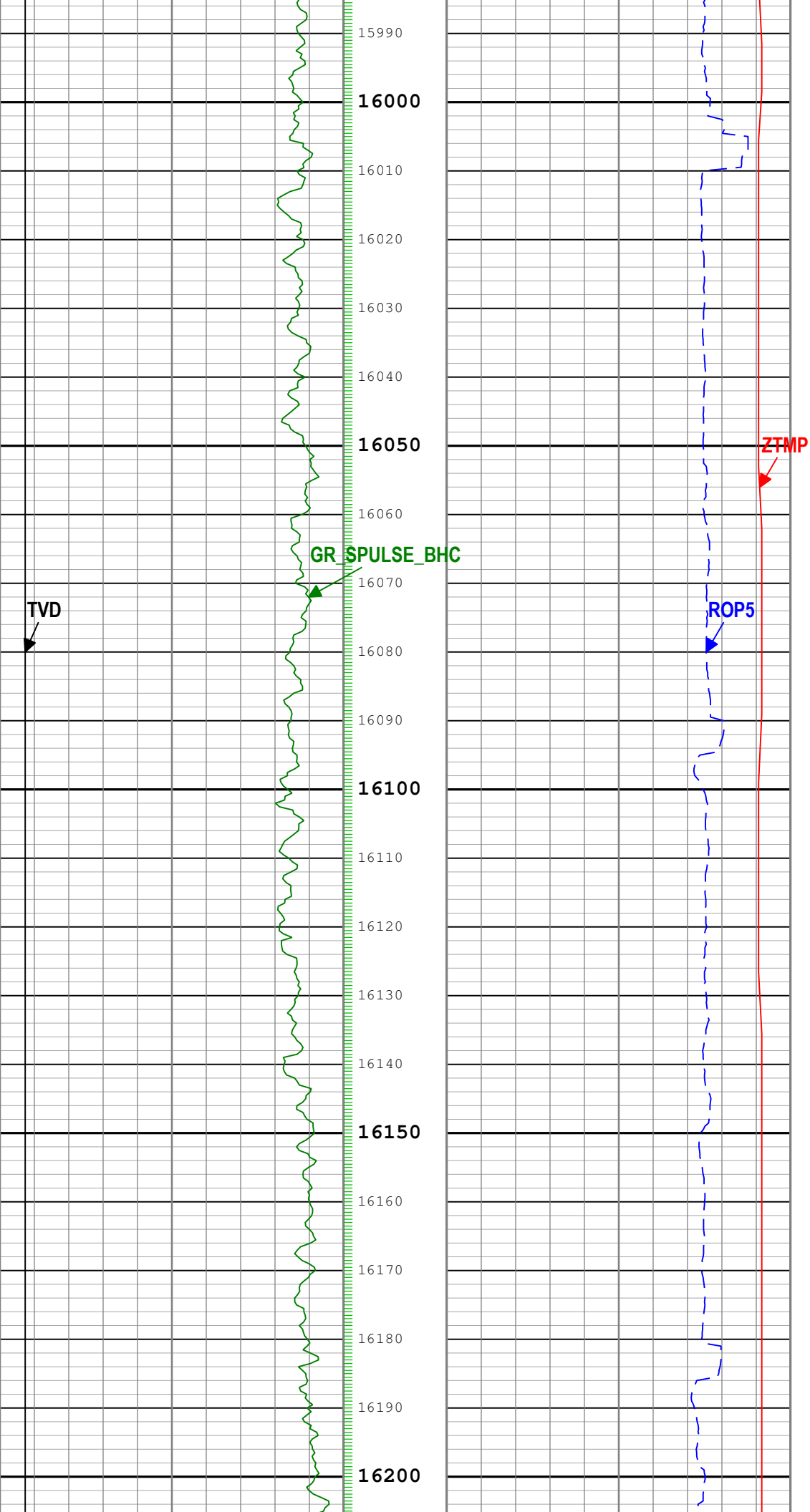
ZTMP



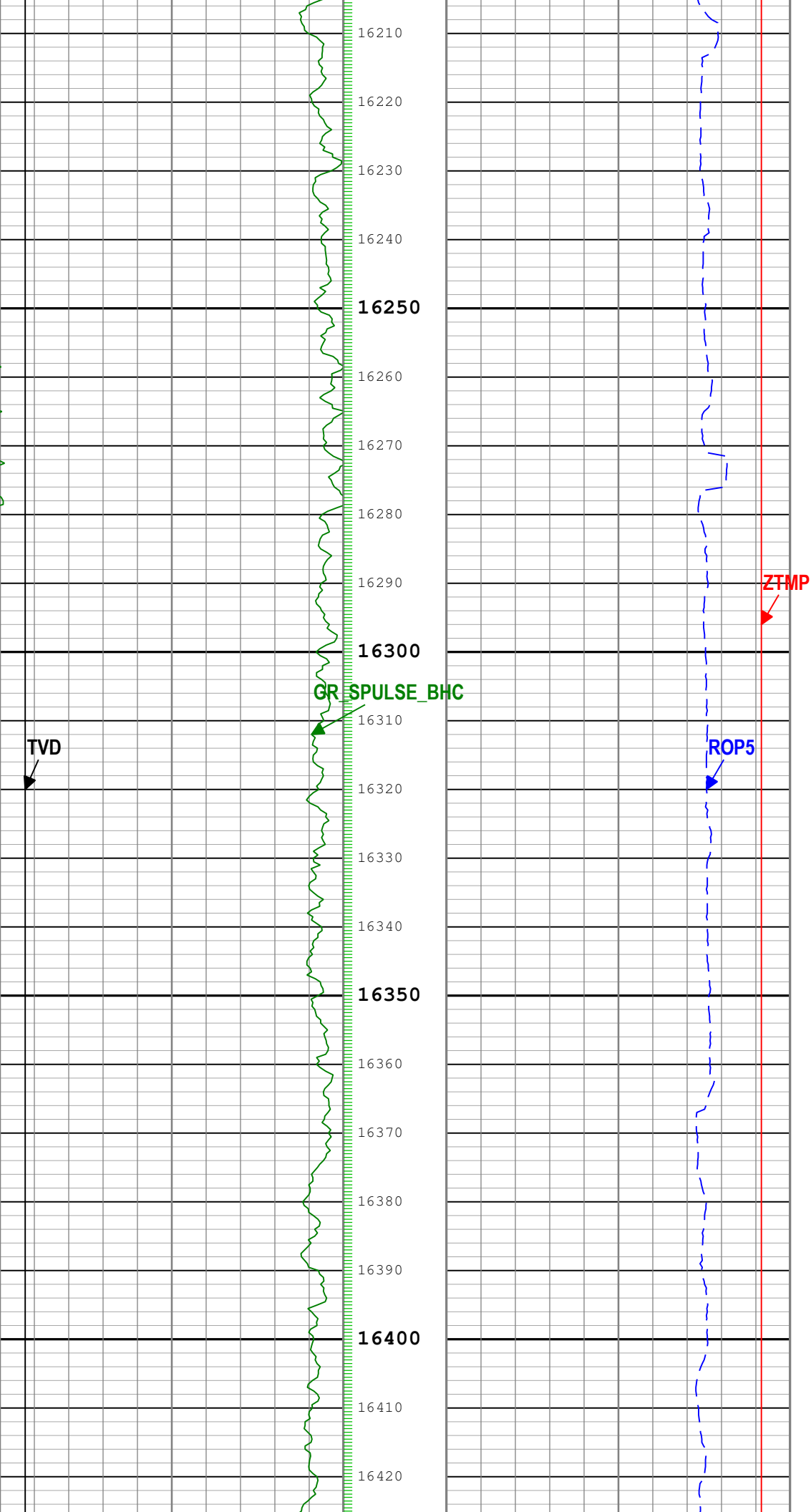


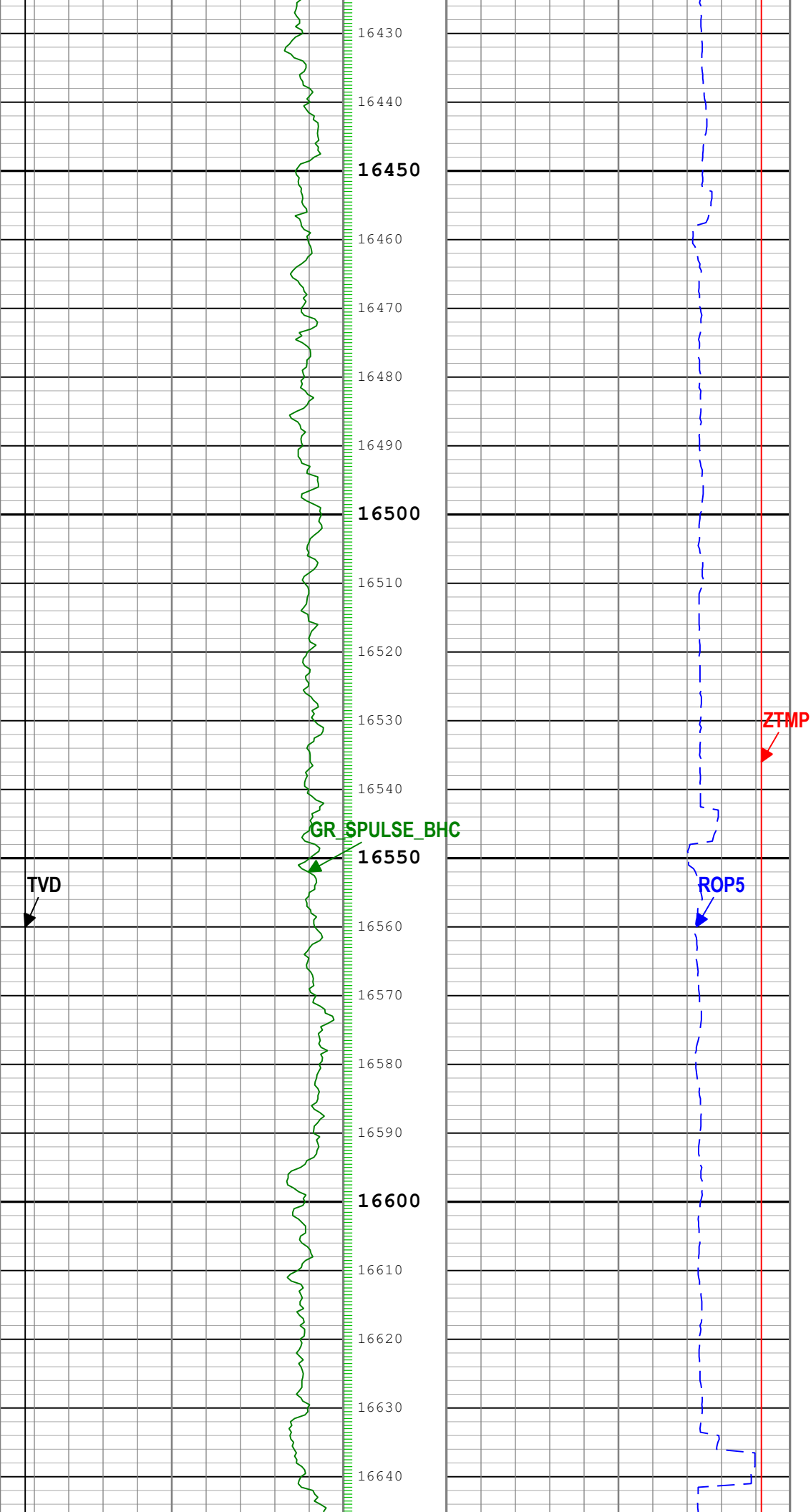


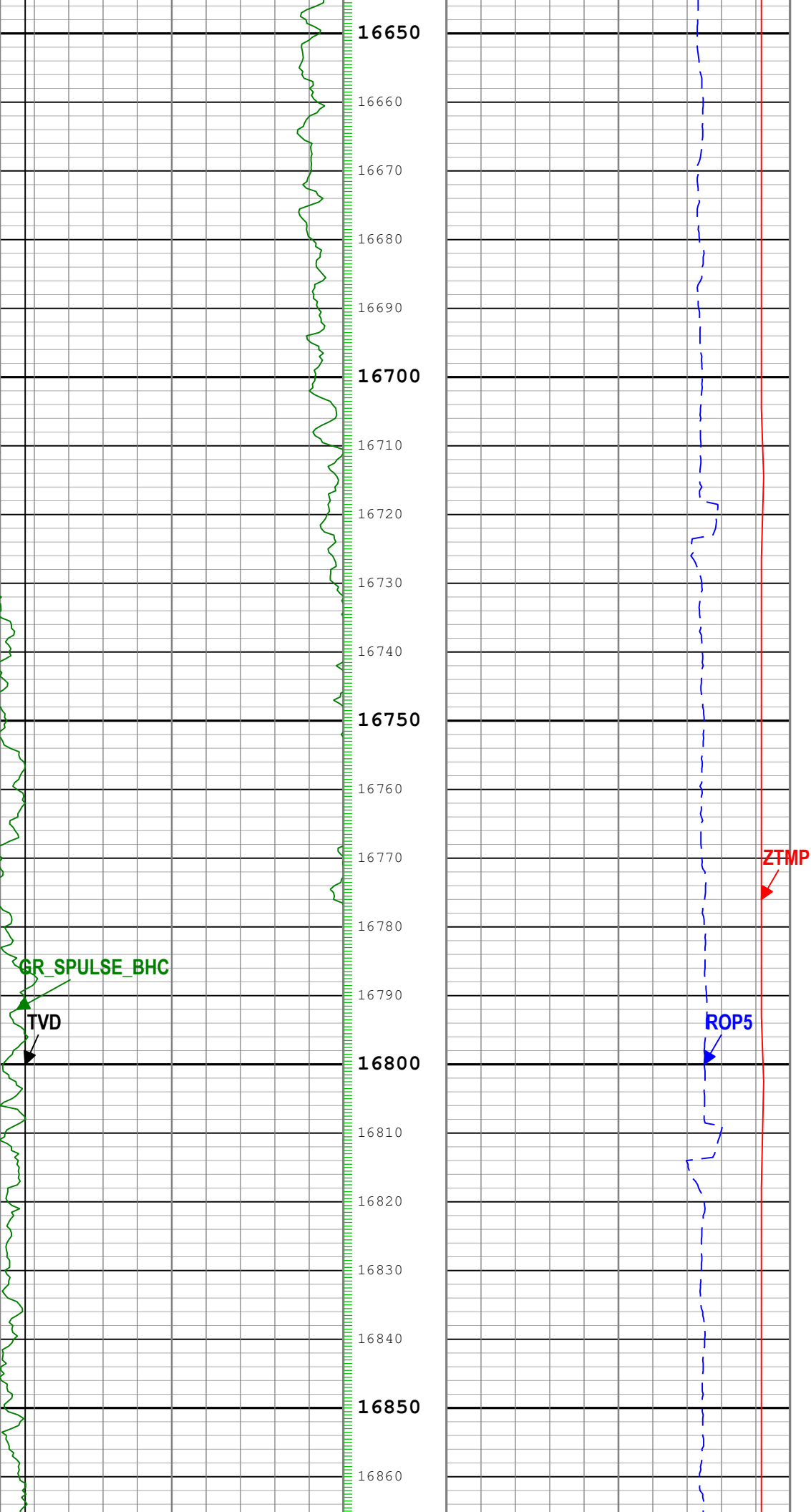


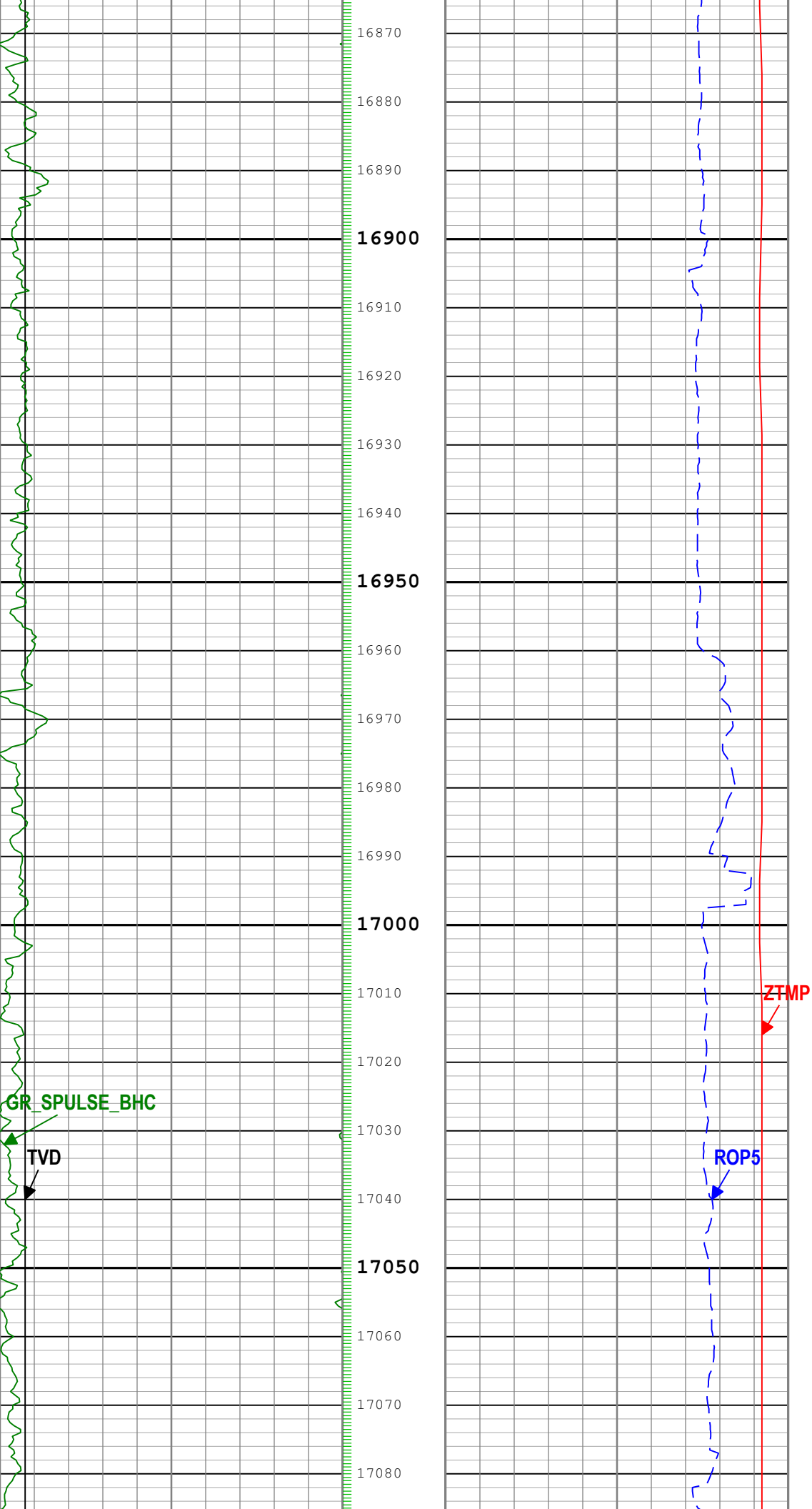


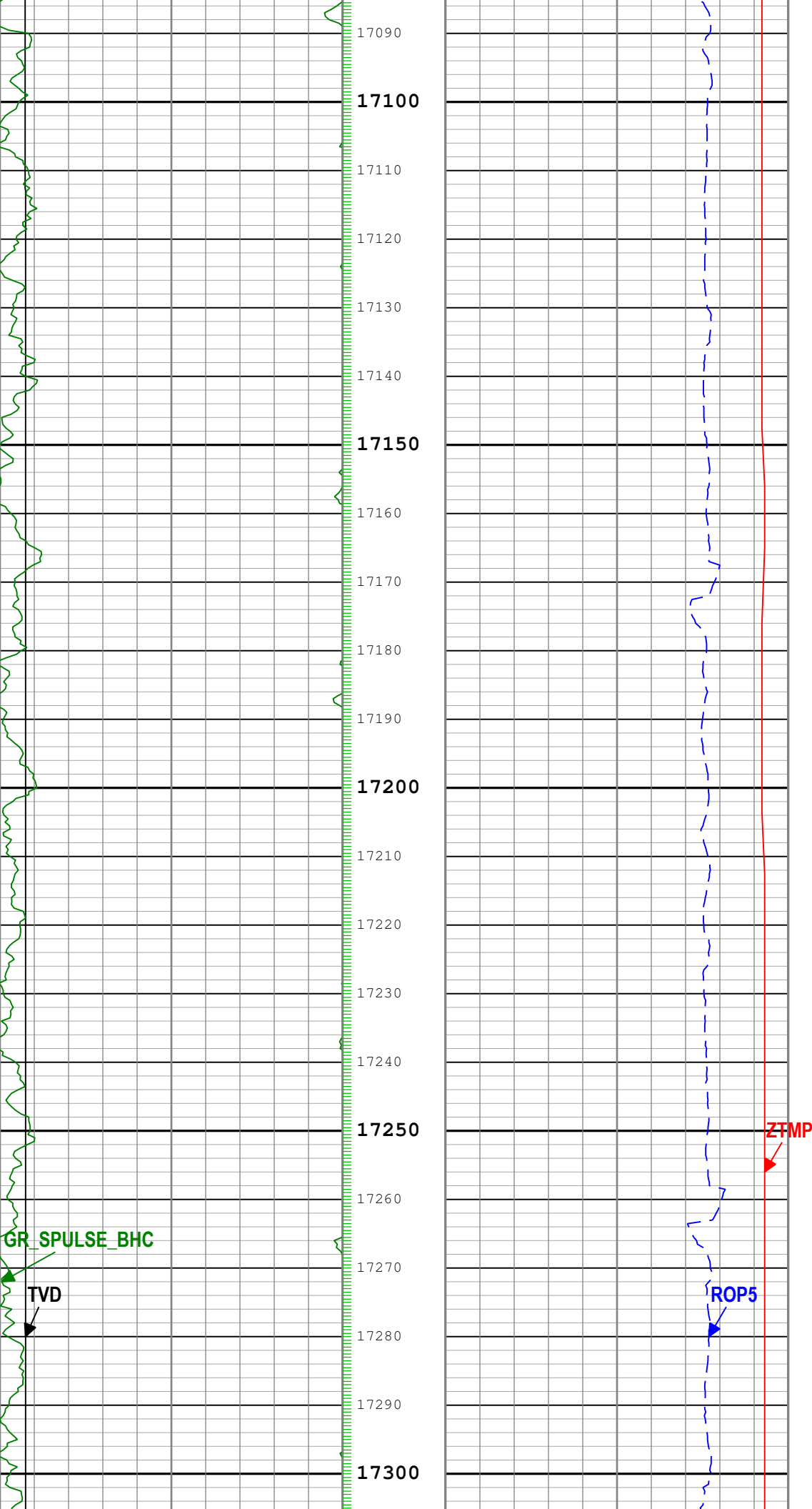


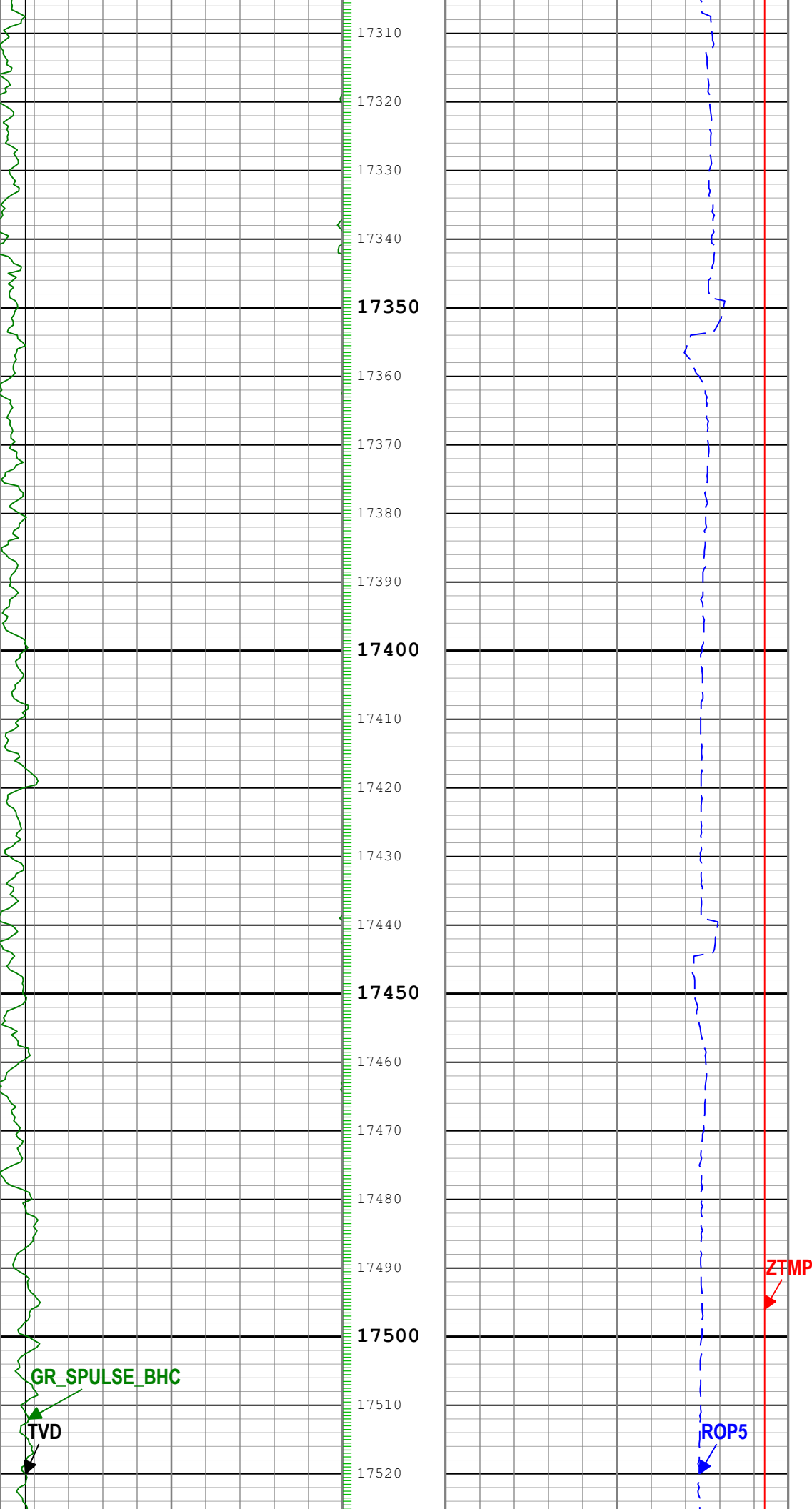


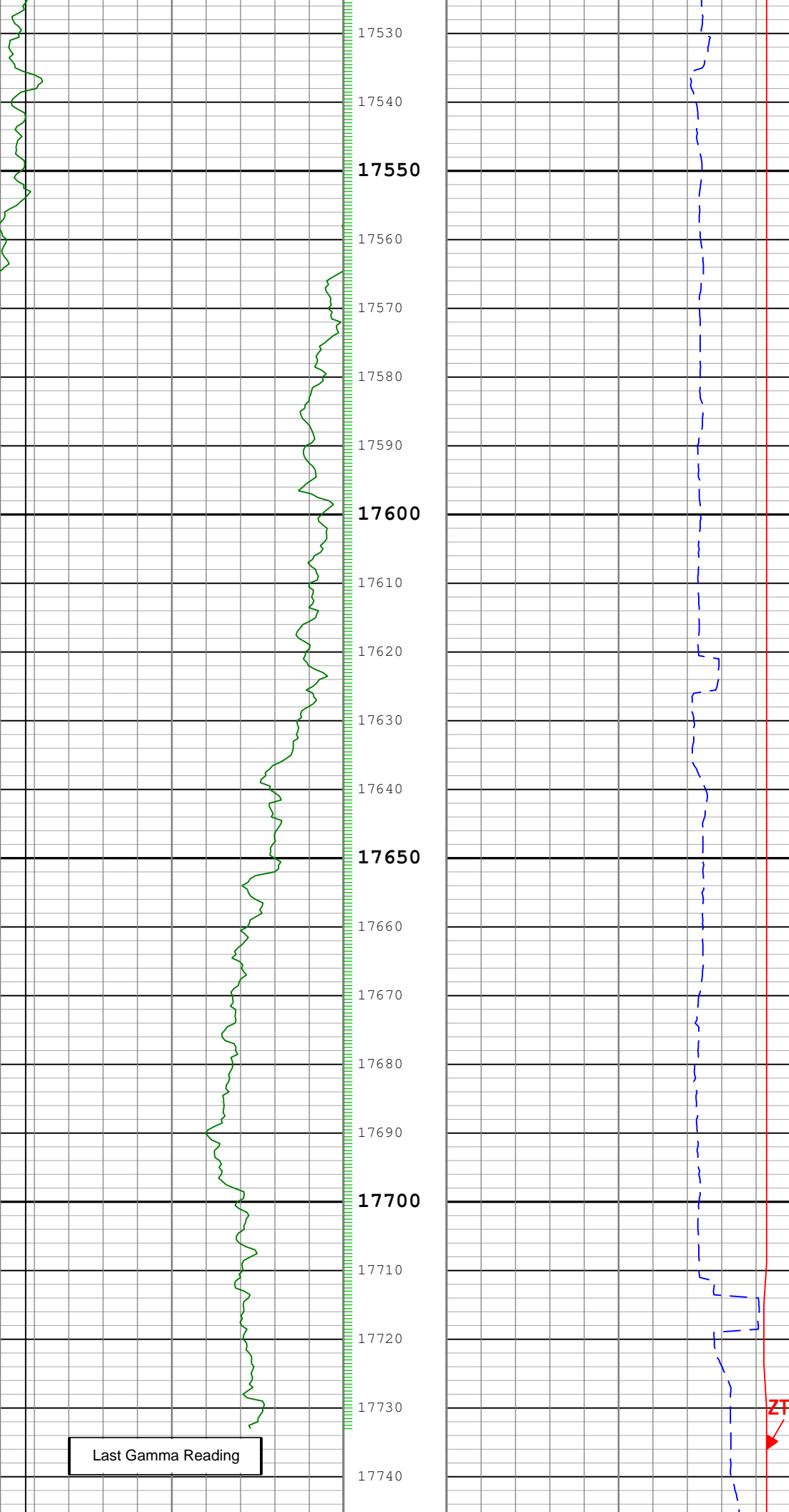












ZTMP

Last Gamma Reading

			17750	Well Final Depth @17758 ft		
True Vertical Depth (TVD) RT				Rate of penetration averaged over the last 5 ft (1.5 m) (ROP5) RT		
7500	ft	1500		1000	ft/h	0
Gamma Ray (GR_SPULSE_BHC) Extreme[1] RM				Cartridge Temperature (ZTMP) Extreme[1] RT		
0	gAPI	150		0	degF	300
└─ GR_SPULSE_BHC - Gamma Ray Extreme[1] RM						
Description: Extreme Gamma Ray 1 RT    Format: Log ( Extreme Gamma Ray 1 RT_6 )    Index Scale: 5 in per 100 ft    Index Unit: ft    Index Type: Measured Depth    Creation Date: 28-Oct-2019 19:05:11						

## Channel Processing Parameters

## Run1: Parameters

Parameter	Description	Tool	Value	Unit
BS	Bit Size	DNMSESSION	8.5	in
DEPTH_SEL	Depth Selection Parameter	DNMSESSION	Driller's Depth	
DFD	Drilling Fluid Density	Borehole	10.5	lbm/gal

## Tool Control Parameters

## Run1: Parameters

Parameter	Description	Tool	Value	Unit
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# Calibration Report



**Company:** Great Western Operating Company LLC

**Well:** Schneider HD 11-102HN

**Field:** Wattenberg

**County:** Weld

**State:** Colorado

**Country:** United States of America



**Schlumberger** XEM Gamma Ray  
5in/100ft Measured Depth  
Recorded Mode, Composite Log