

# XEM Gamma Ray

## 5in/100ft Measured Depth

### Real Time, Composite Log

# Schlumberger

Country: United States of America

Company: Great Western Operating Company LLC

Well: Schneider HD 11-099HC

Field: Wattenberg

County: Weld

State: CO

Country: United States of America

Latitude: 40° 19' 27.052" N APIN: 05-123-46408

Longitude: 104° 49' 35.76" W RIG Name: Precision 466

RIG Type: Land RIG, Top Drive

FL: NAD 83 Colorado State Plane, Northern Zone, US Feet

FL1: Northing: 1361652.905 ft US

FL2: Easting: 3187756.819

Log Measured From: - Drill Floor: 4755.00 ft  
Ground Level: 4735.00 ft

Permanent Datum: - Mean Sea Level

Acquisition Dates: 09-Sep-2019 – 15-Sep-2019

Log Interval: 1689 ft – 17996 ft

Index Types: Measured Depth

Index Scales: 1:240 5" / 100'

Depth Source: Driller's Depth

Depth Sensor: 3rd Party Depth

Print Type: Final

Spud Date: 03-Sep-2019

Other Services:

Directional Drilling

Direction and Inclination (Surveys)

Continuous D&I

Rotary Steerable System

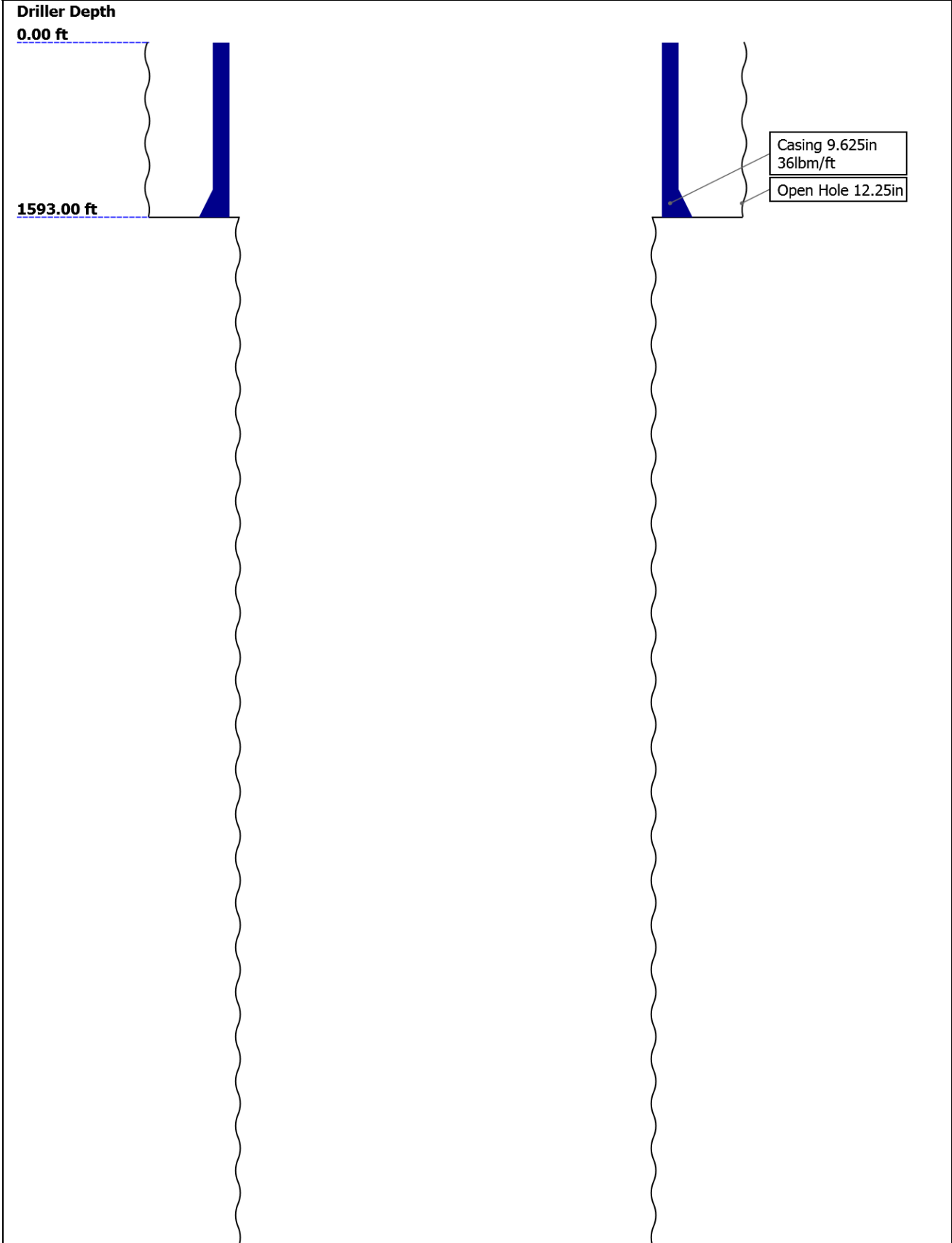
## Disclaimer

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Well Sketch





## Borehole Size/Casing Record

Bit						
Bit Size ( in )	12.25	8.5				
Top Driller ( ft )	0	1593				
Bottom Driller ( ft )	1593	17996				
Casing						
Size ( in )	9.625					
Weight ( lbm/ft )	36					
Inner Diameter ( in )	8.921					
Grade	J55					
Top Driller ( ft )	0					
Bottom Driller ( ft )	1593					

## Operational Run Summary

Parameter ( unit )	Run002	Run003				
Date Log Started	09-Sep-2019	12-Sep-2019				
Time Log Started	19:10:31	02:41:13				
Date Log Finished	12-Sep-2019	15-Sep-2019				
Time Log Finished	02:41:09	00:09:55				
Bit Size ( in )	8.500	8.500				
Bit Start Depth ( ft )	1689.00	8605.00				
Bit Stop Depth ( ft )	8605.00	17996.00				
Top Log Interval ( ft )	1593.00	8582.00				
Bottom Log Interval ( ft )	8582.00	17973.00				
Max Hole Deviation ( deg )	90.91	91.22				
Azimuth of Max Deviation ( deg )	267.94	270.05				
Logging Unit Number	Client Provided	Client Provided				
Logging Unit Location	Zone 2	Zone 2				
Recorded By	D. Goldfarb	D. Goldfarb				
Witnessed By	K. Behla	K. Behla				
Service Order Number	19CCO1381	19CCO1381				

## Borehole Fluids

Parameter( unit )	Run002	Run003				
Fluid Type	Oil	Oil				
Fluid Name	Diesel	Diesel				
Max Recorded Temperatures ( degF )	131	265				
Source of Sample	Active Tank	Active Tank				
Salinity ( ppm )	0	0				
Density ( lbm/gal )	10	10				
Funnel Viscosity ( s )	19	25				
Fluid Loss ( cm3 )						
PH						
Source RMF	Pressed	Pressed				
RMC	Pressed	Pressed				
RM @ Meas Temp ( ohm.m@degF )	N/A	N/A				
RMF @ Meas Temp ( ohm.m@degF )	N/A	N/A				
RMC @ Meas Temp ( ohm.m@degF )	N/A	N/A				
RM @ BHT ( ohm.m@degF )	N/A	N/A				
RMF @ BHT ( ohm.m@degF )	N/A	N/A				
RMC @ BHT ( ohm.m@degF )	N/A	N/A				
Electricity Stability ( V )	500	540				
Oil/Water	76/24 (3.17)	76/24 (3.17)				
Total Solid ( % )	17.2	17.1				
High Gravity Solids ( % )						

## Remarks and Equipment Summary

All Data Presented is from Real Time Data and acquired while drilling.	
Depth is referenced to Driller's Depth.	
Gamma Ray is environmentally corrected for mud weight, bit size and collar thickness.	
Run002: Remarks	Run003: Remarks
Run Objective: Drill to well total depth.	Run Objective: Drill to well total depth.
Reason for POOH: PowerDrive Failure.	Reason for POOH: Well Total Depth.
Drill Interval: 1689ft MD to 8605 ft MD	Drill Interval: 8605ft MD to 17996 ft MD
Logged Interval: 1593 ft MD to 8582 ft MD	Logged Interval: 8582 ft MD to 17973 ft MD
MWD Personnel: D. Goldfarb K. Behla	MWD Personnel: D. Goldfarb K. Behla

Run002: Toolstring				Run003: Toolstring			
Equip name	Length	MP name	Offset	Equip name	Length	MP name	Offset
Filtr Sub: 6 3/4":SD 116122	123.5	Filter Sub		Filtr Sub: 6 3/4":SD 116122	122.63	Filter Sub	
Motor: 6 3/4":7023	116.21	HUNTING		Motor: 6 3/4":7023	114.96	HUNTING	

Flex DC: 6 3/4":SD 77.38  
56558HS

Archer Flex Pony

XEM650  
GAP650  
XEM650DC  
DPG:DDRP034  
XHOP:XHOP1010  
CTX:HVTX0882  
DYN:SOCD1195  
BAT:DOBA2281  
XGM:XGM0772  
DNI:SOCD1195

42.02

INT PRES  
ANN PRES  
TEMP

39.61  
39.46  
39.46

GR

24.21

Flex DC: 6 3/4":SD 76.13  
56558HS

Archer Flex Pony

XEM650  
GAP650  
XEM650DC  
DPG:DDRP034  
XHOP:XHOP1010  
CTX:HVTX0882  
DYN:SOCD1195  
BAT:DOBA2281  
XGM:XGM0772  
DNI:SOCD1195

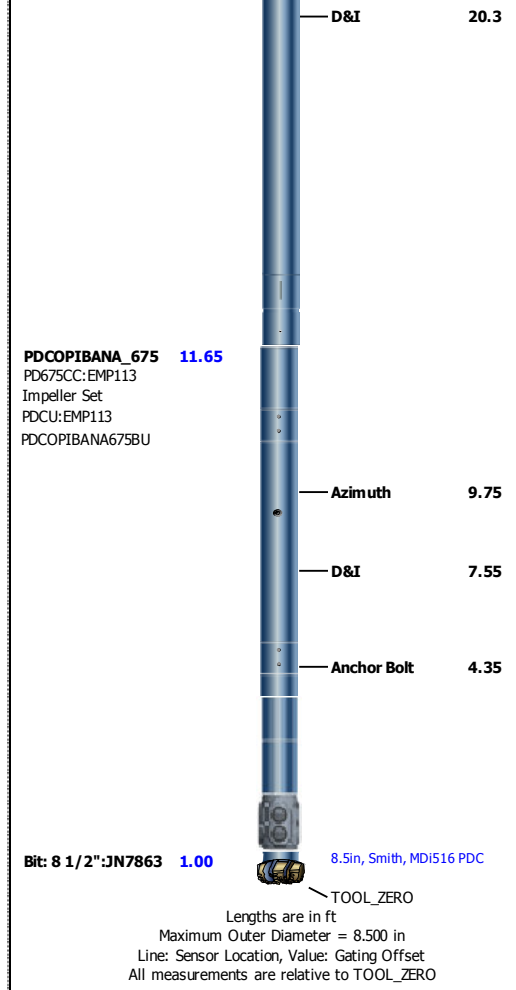
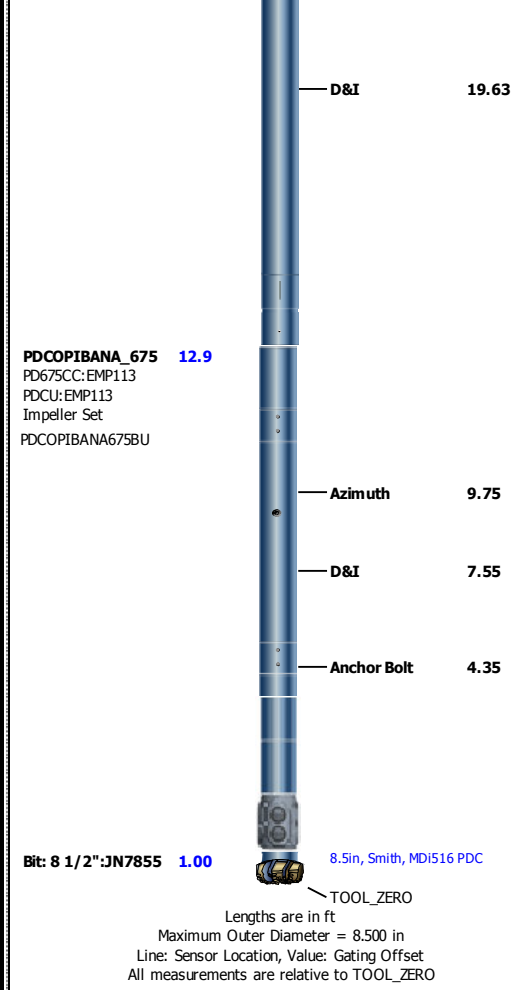
40.77

INT PRES  
ANN PRES  
TEMP

38.36  
38.21  
38.21

GR

24.89



## 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
Run002	Drilling	Down	1689.25 ft	8605.00 ft	09-Sep-2019 7:10:31 PM	12-Sep-2019 2:41:09 AM	No
Run003	Drilling	Down	8604.25 ft	17996.58 ft	12-Sep-2019 2:41:13 AM	15-Sep-2019 12:09:55 AM	No

All depths are referenced to toolstring zero

## Log

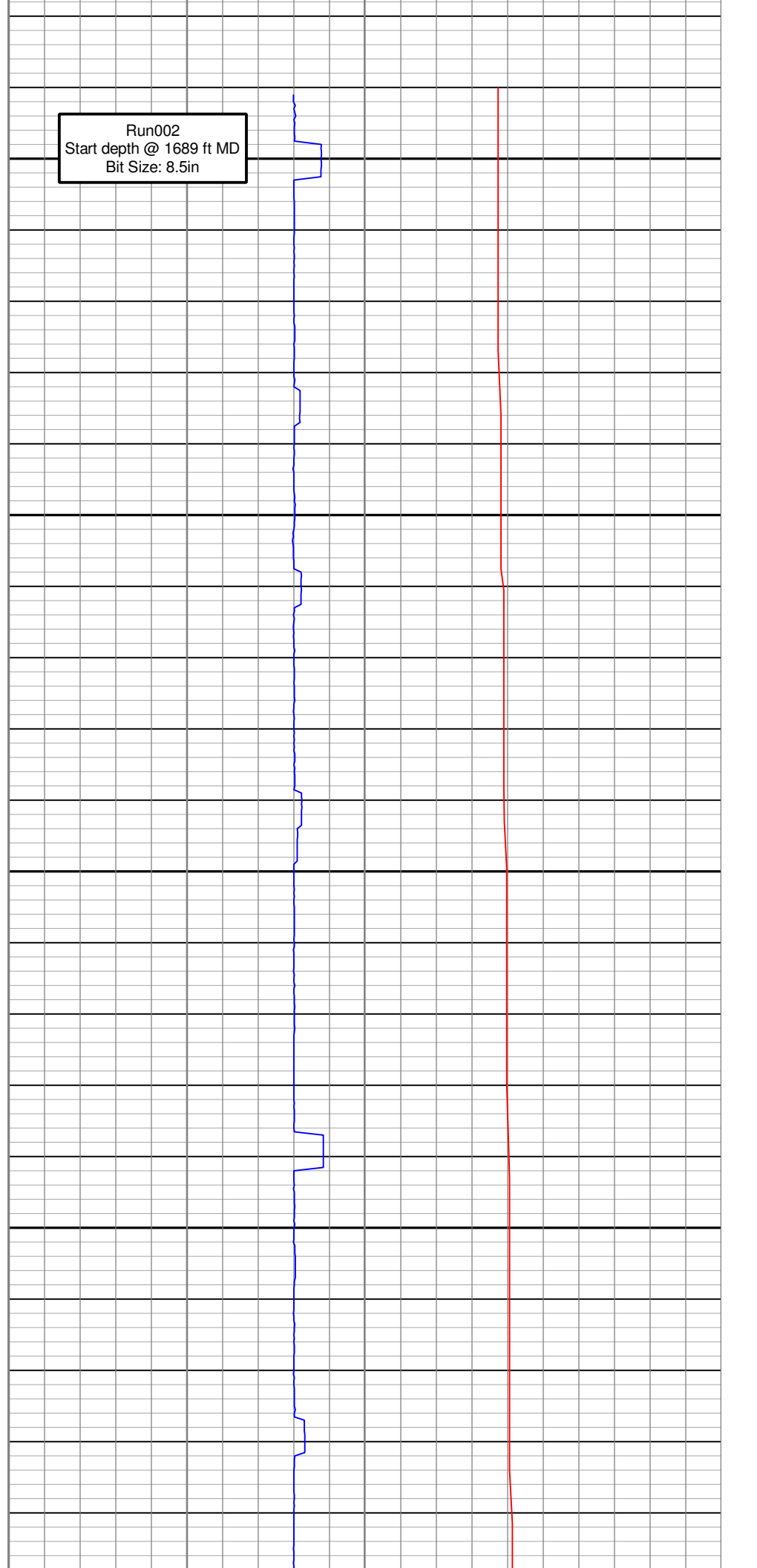
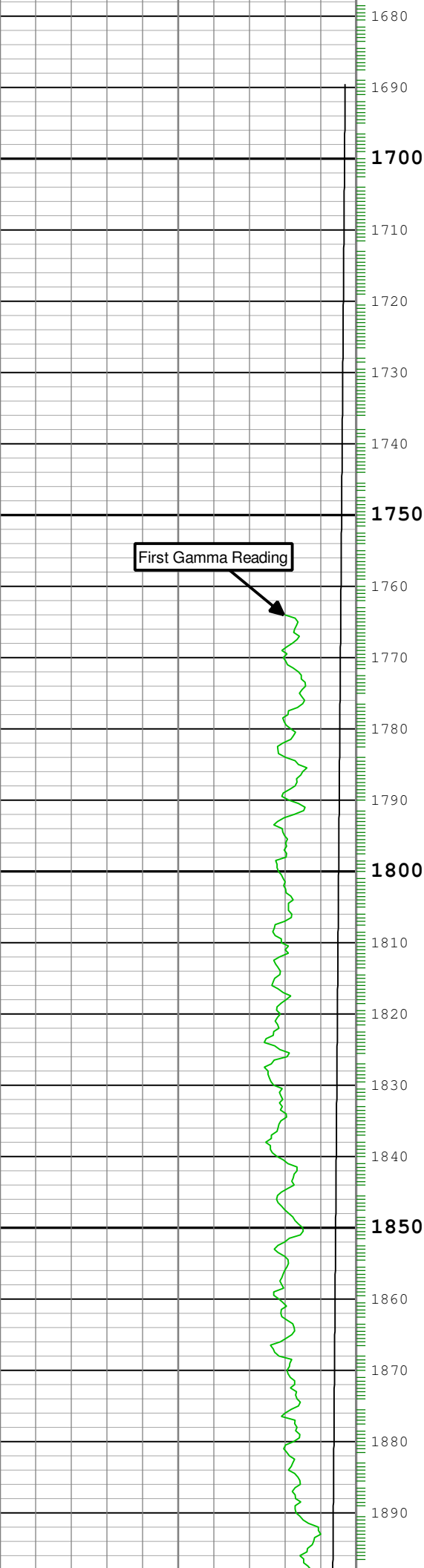
Company:Great Western Operating Company LLC      Well:Schneider HD 11-099HC

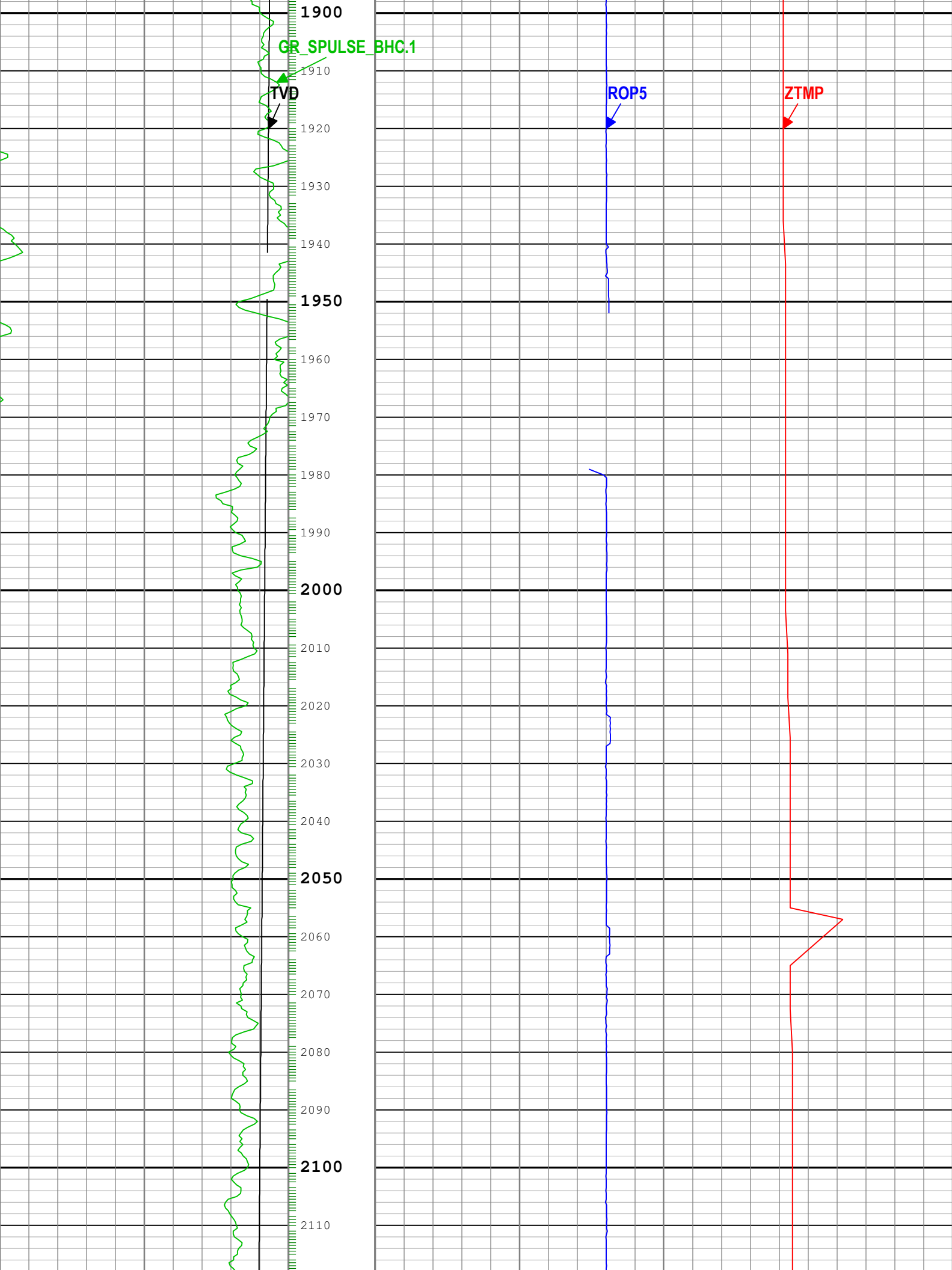
Composite:S204

Description: Extreme Gamma Ray 1 RT   Format: Log ( Extreme Gamma Ray 1 RT )   Index Scale: 5 in per 100 ft   Index Unit: ft   Index Type: Measured  
Depth   Creation Date: 21-Sep-2019 07:00:25

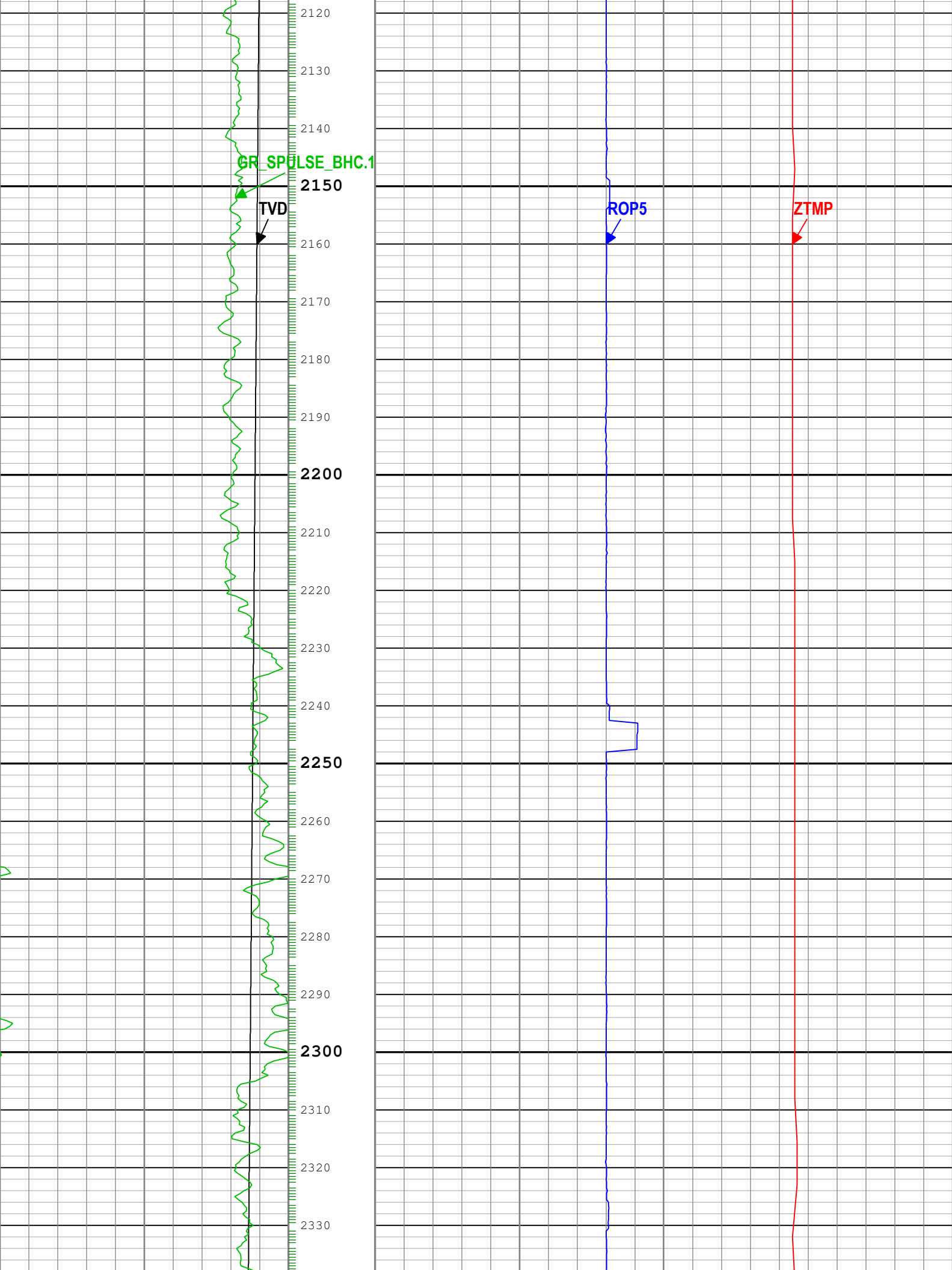
└ GRM1.2 - Gamma Ray Extreme[1] RT

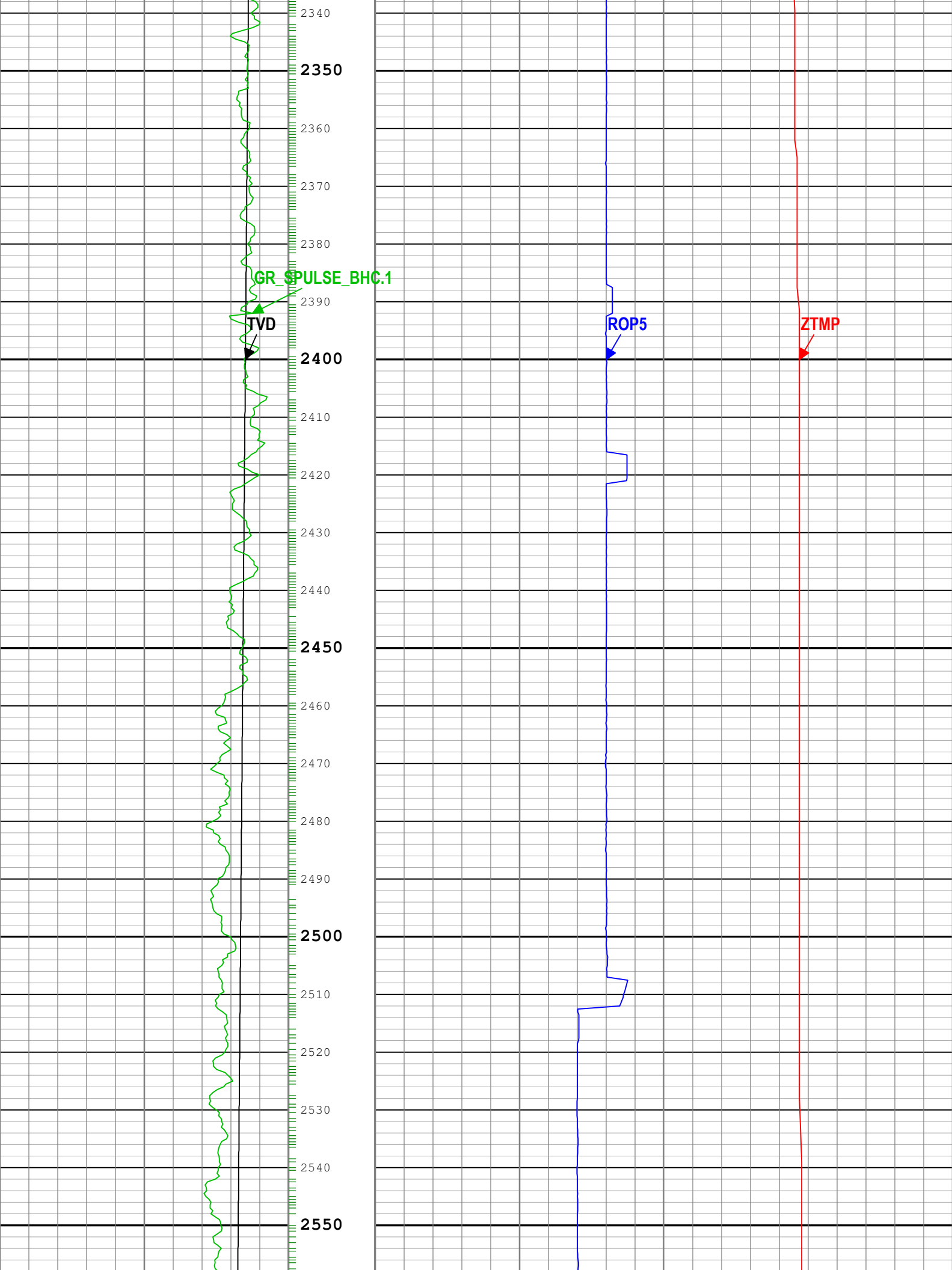
True Vertical Depth (TVD) RT									
7500	ft								1500
Gamma Ray (GR_SPULSE_BHC).1 Extreme[1] RM									
0	gAPI								150
Rate of penetration averaged over the last 5 ft (1.5 m) (ROP5) RT									
1000	ft/h								0
XEM Temperature (ZTMP) Extreme[1] RM									
0	degF								300

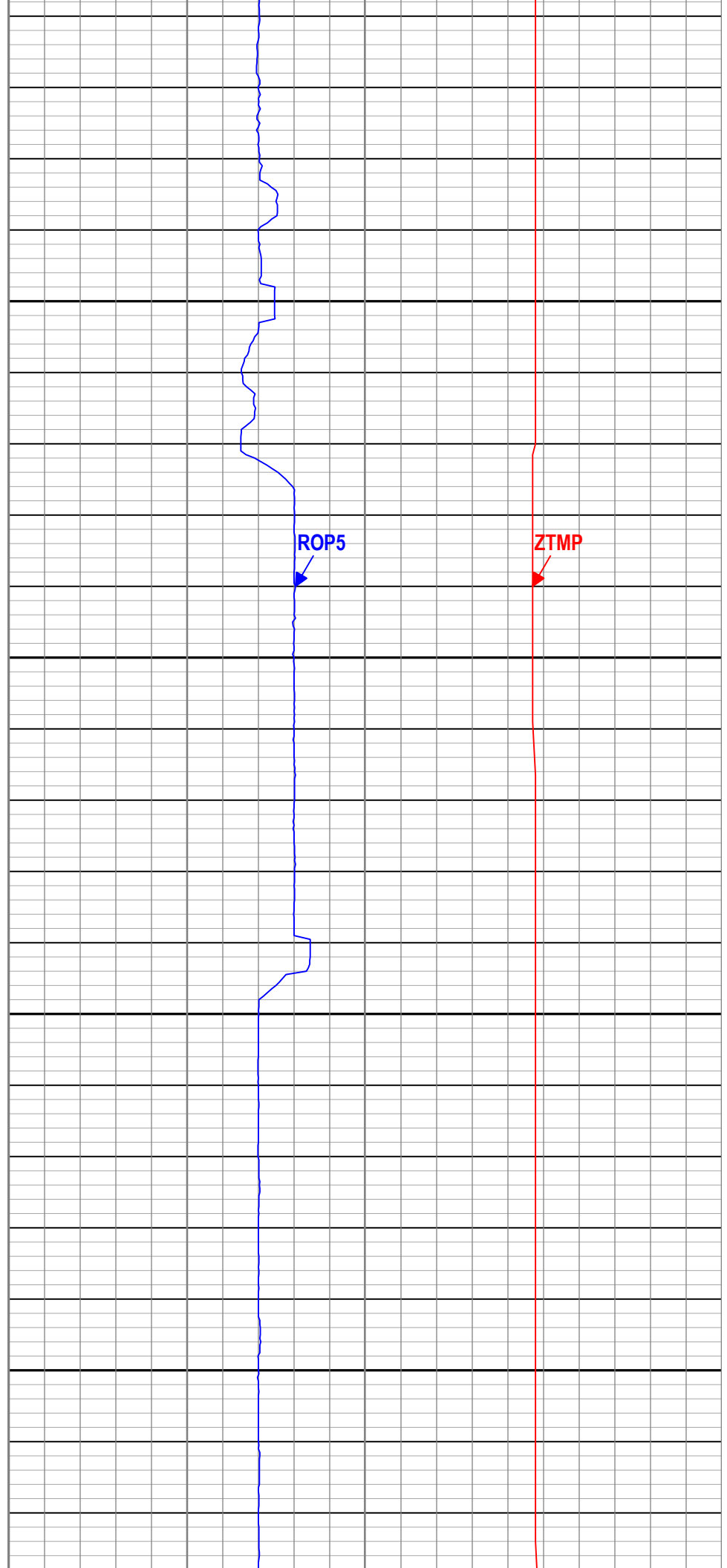
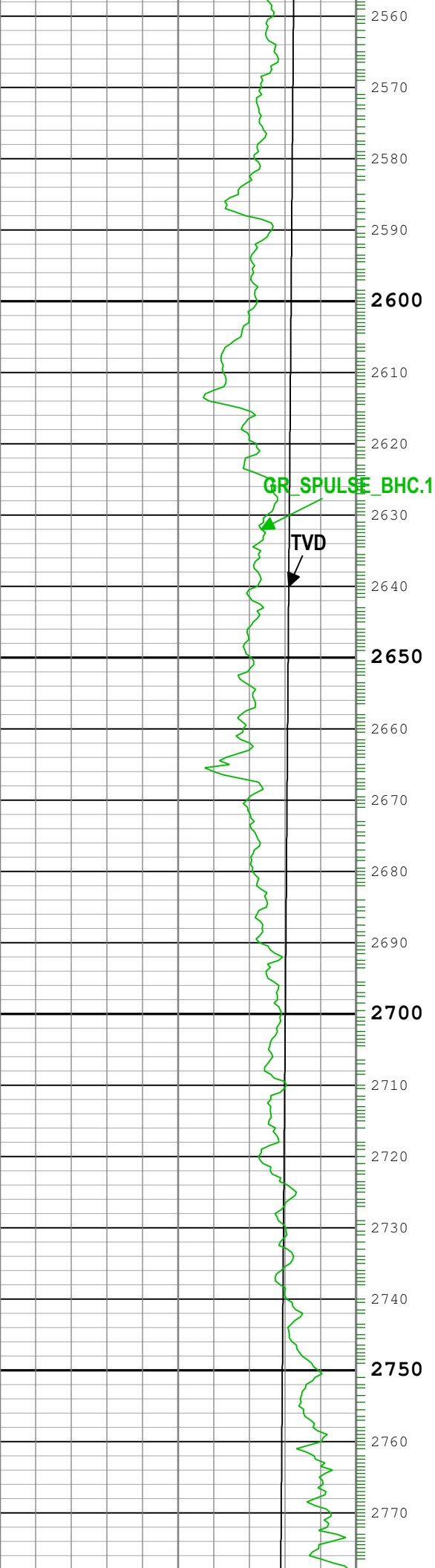


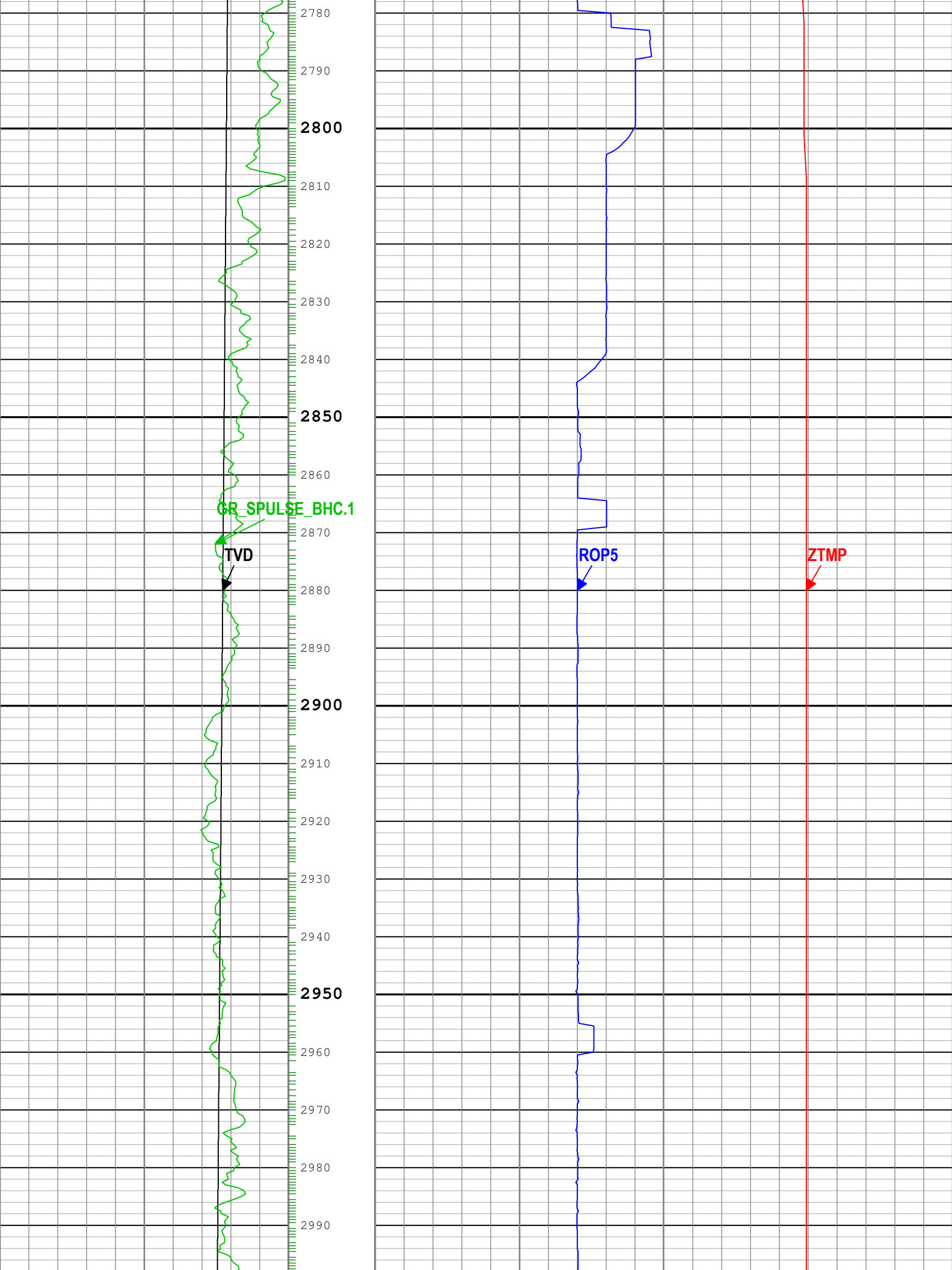


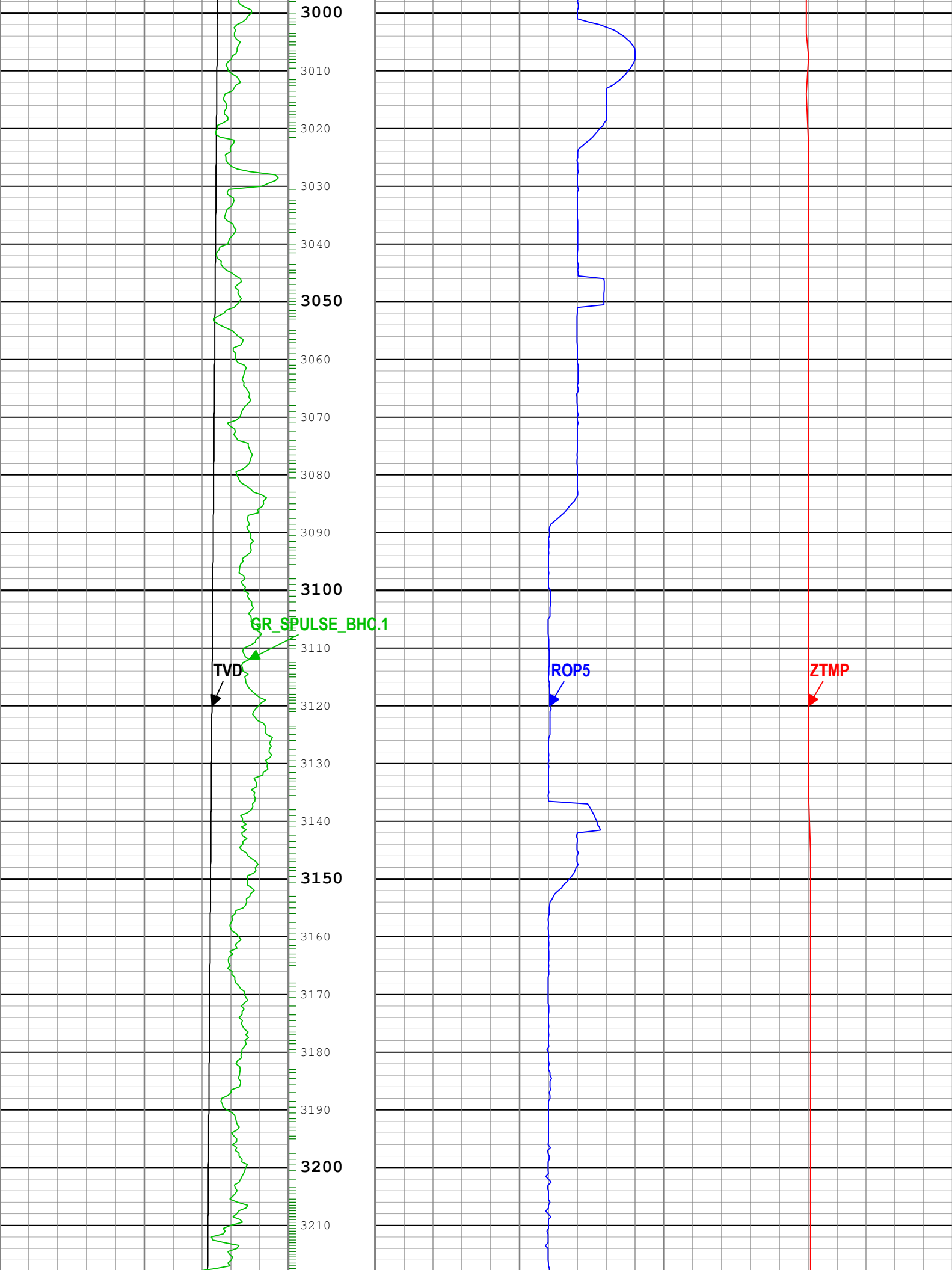


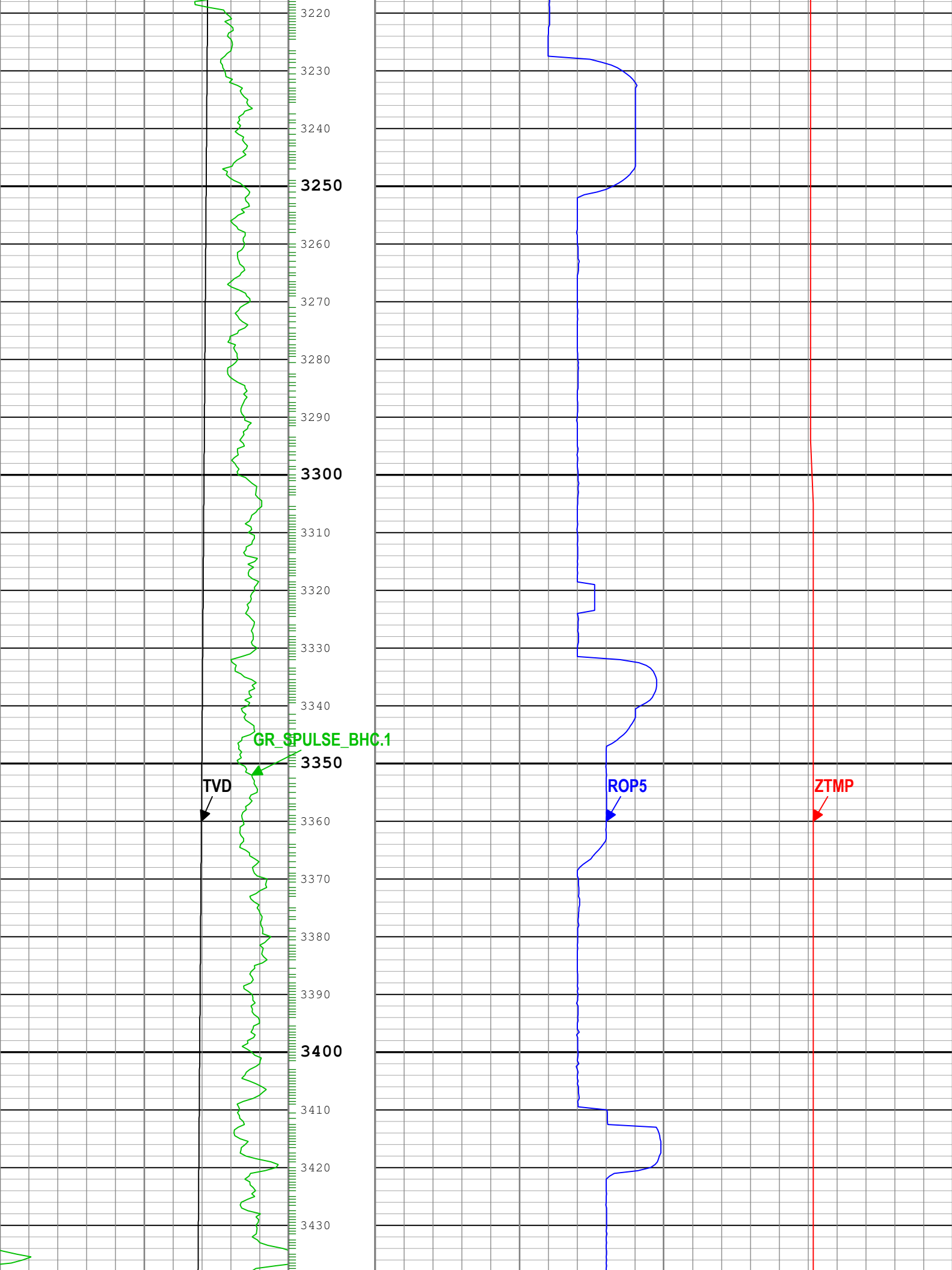


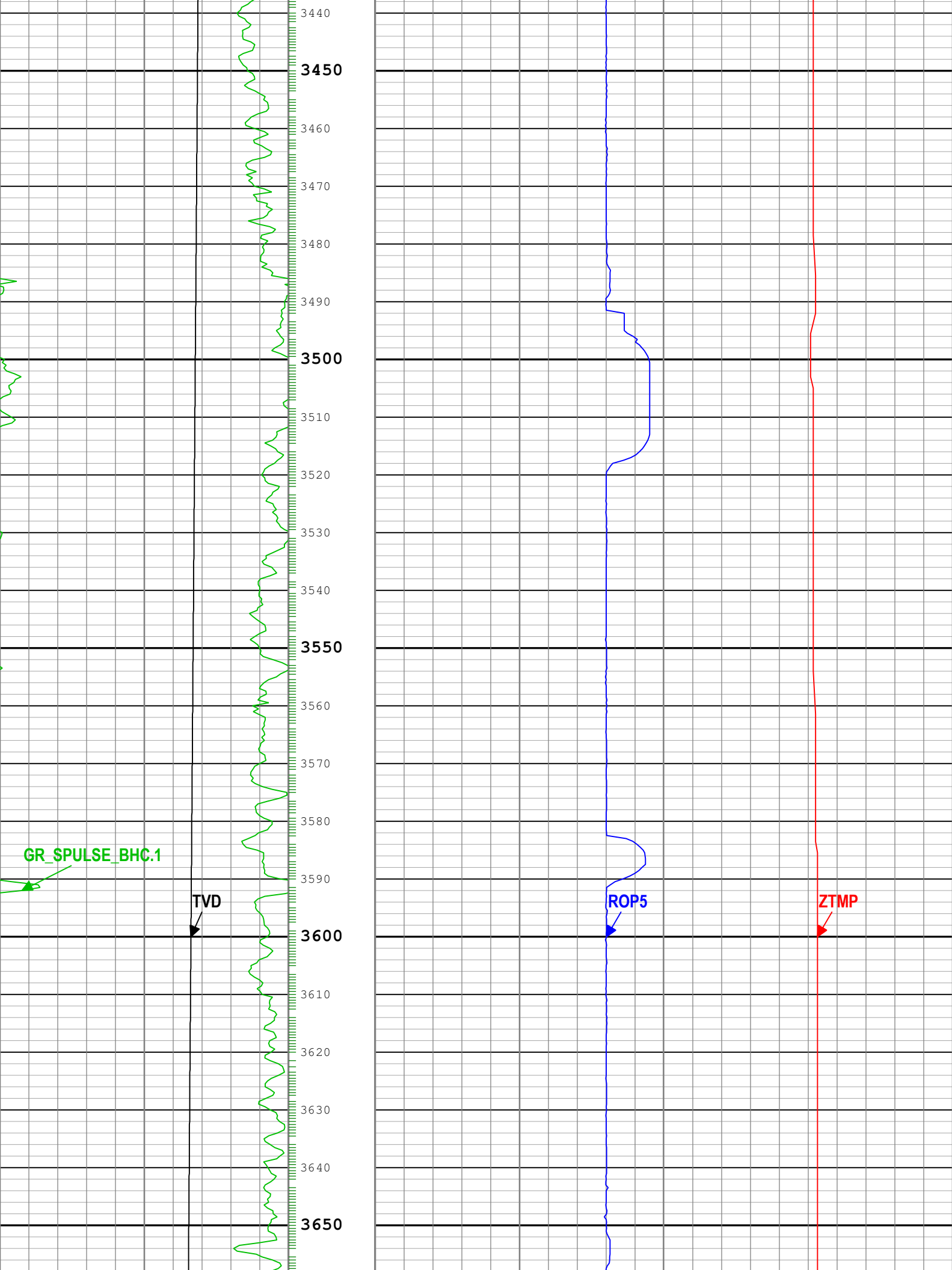


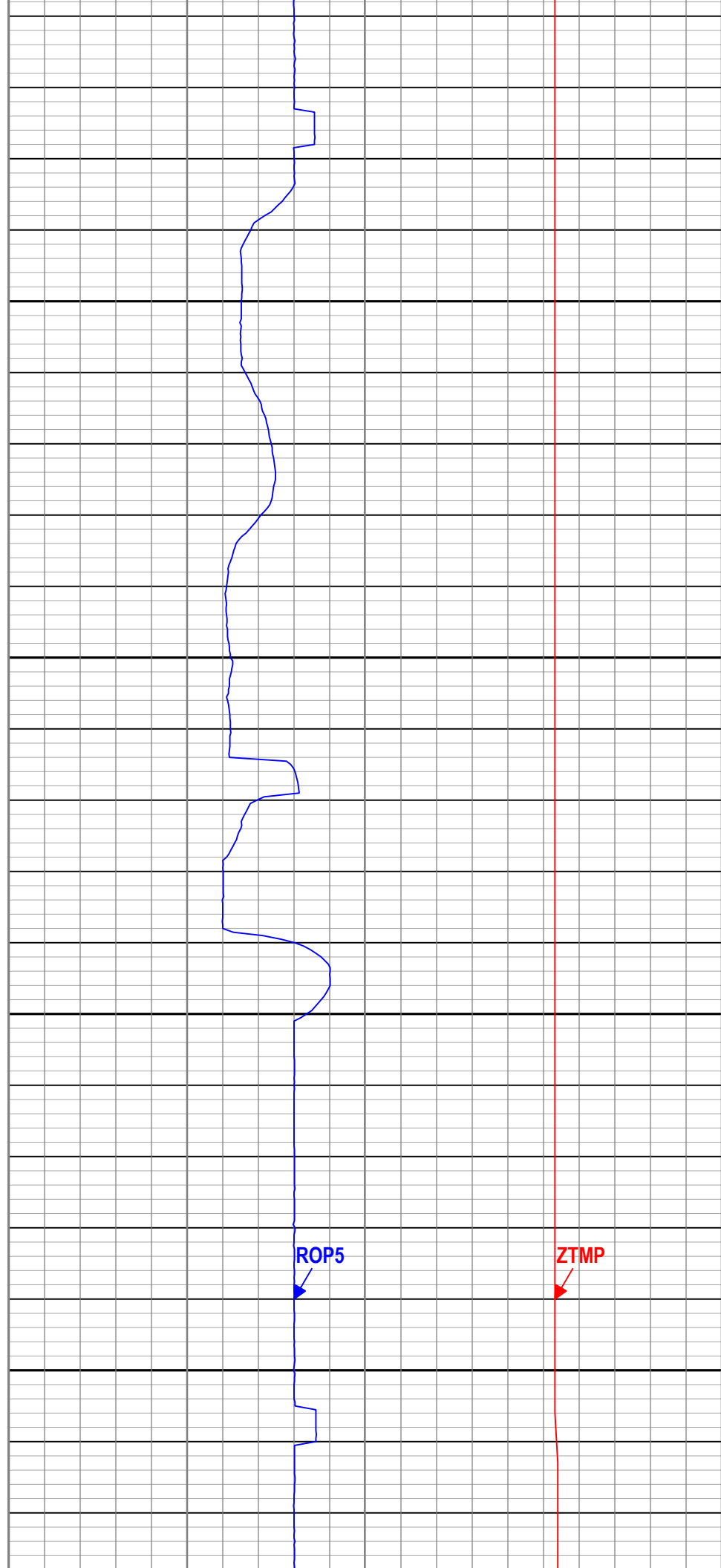
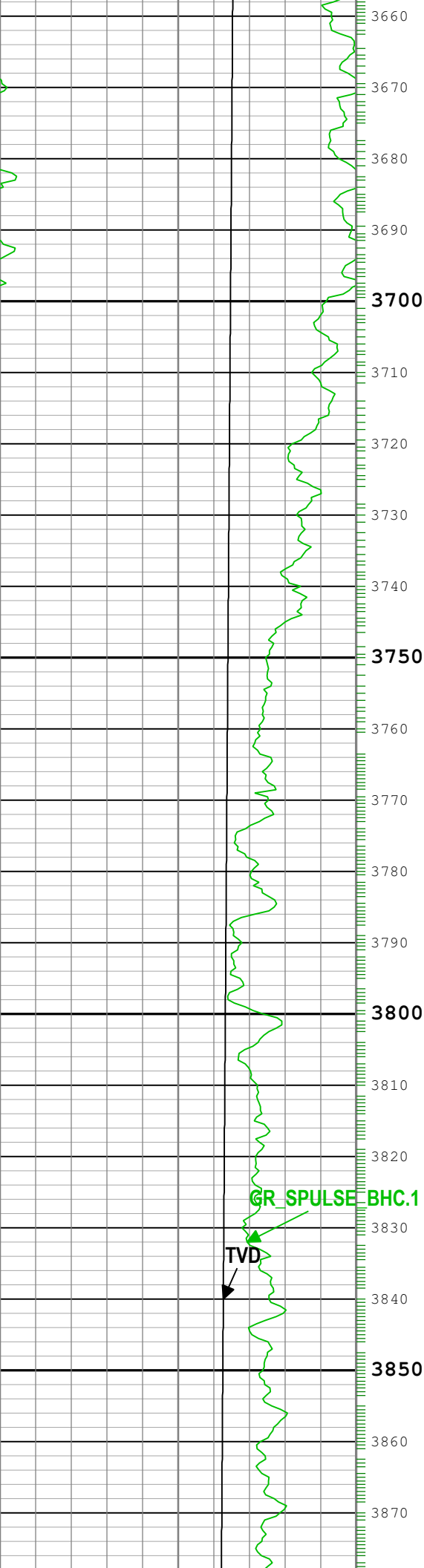




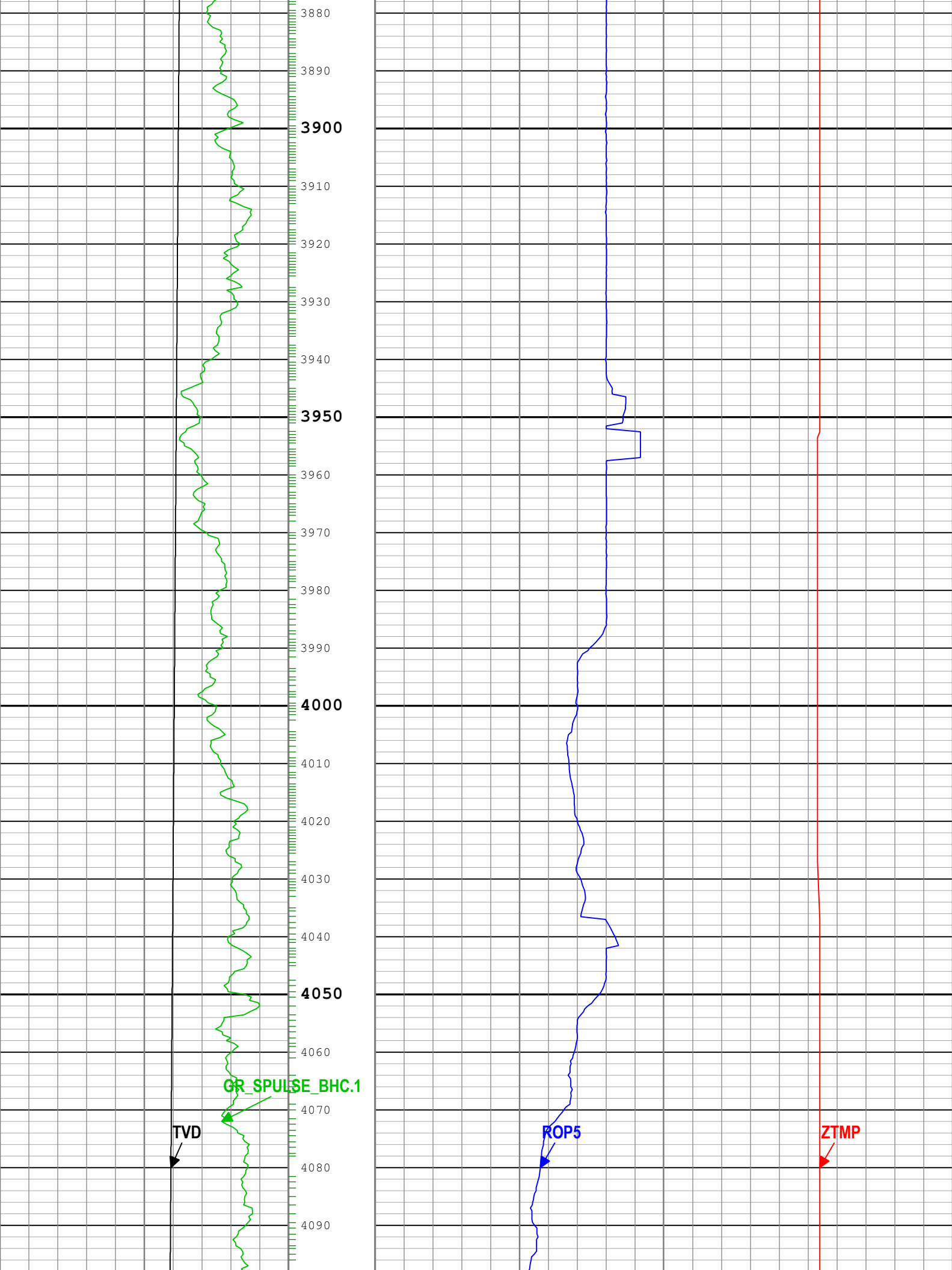


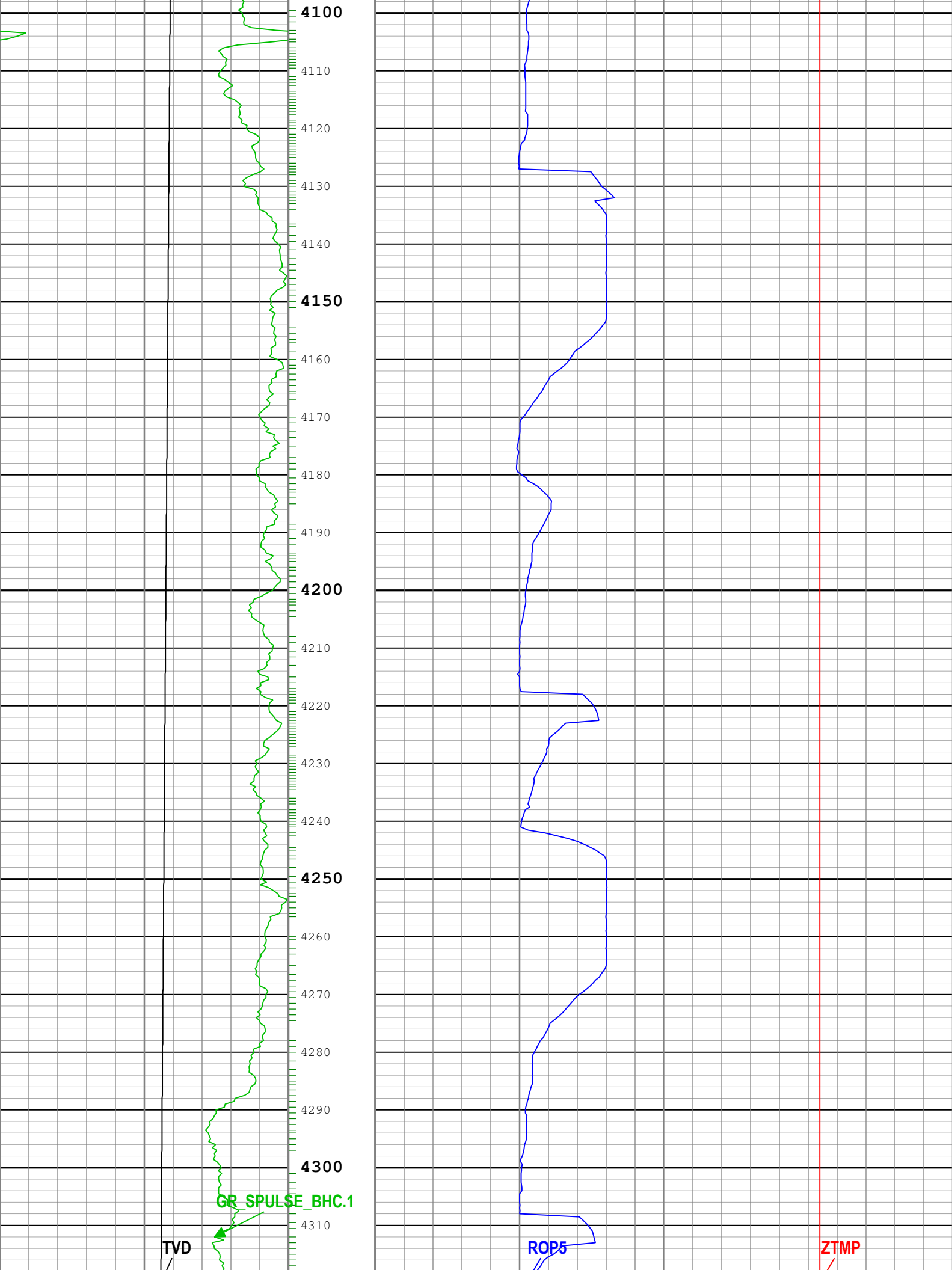


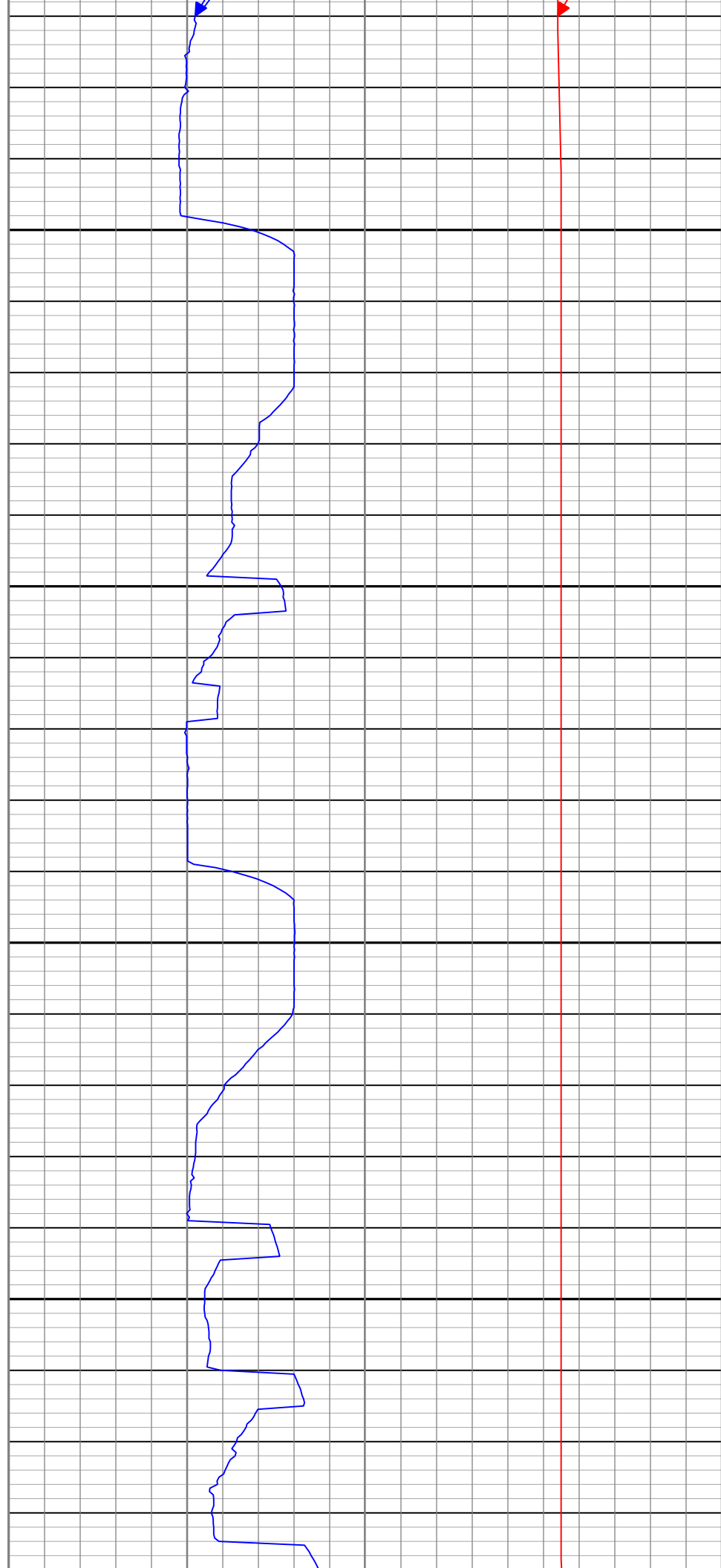
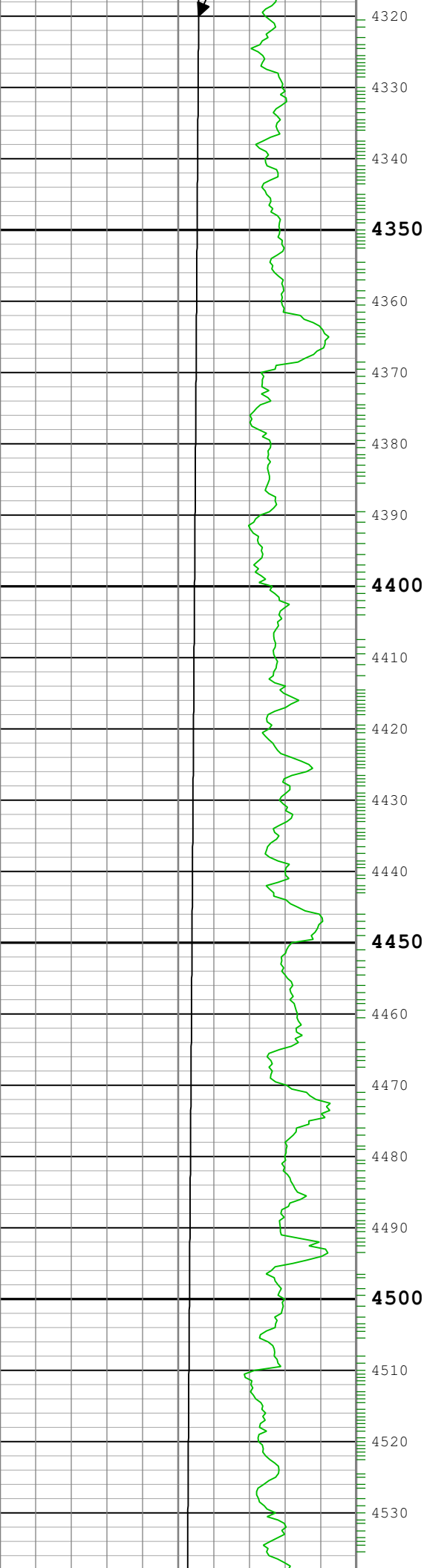


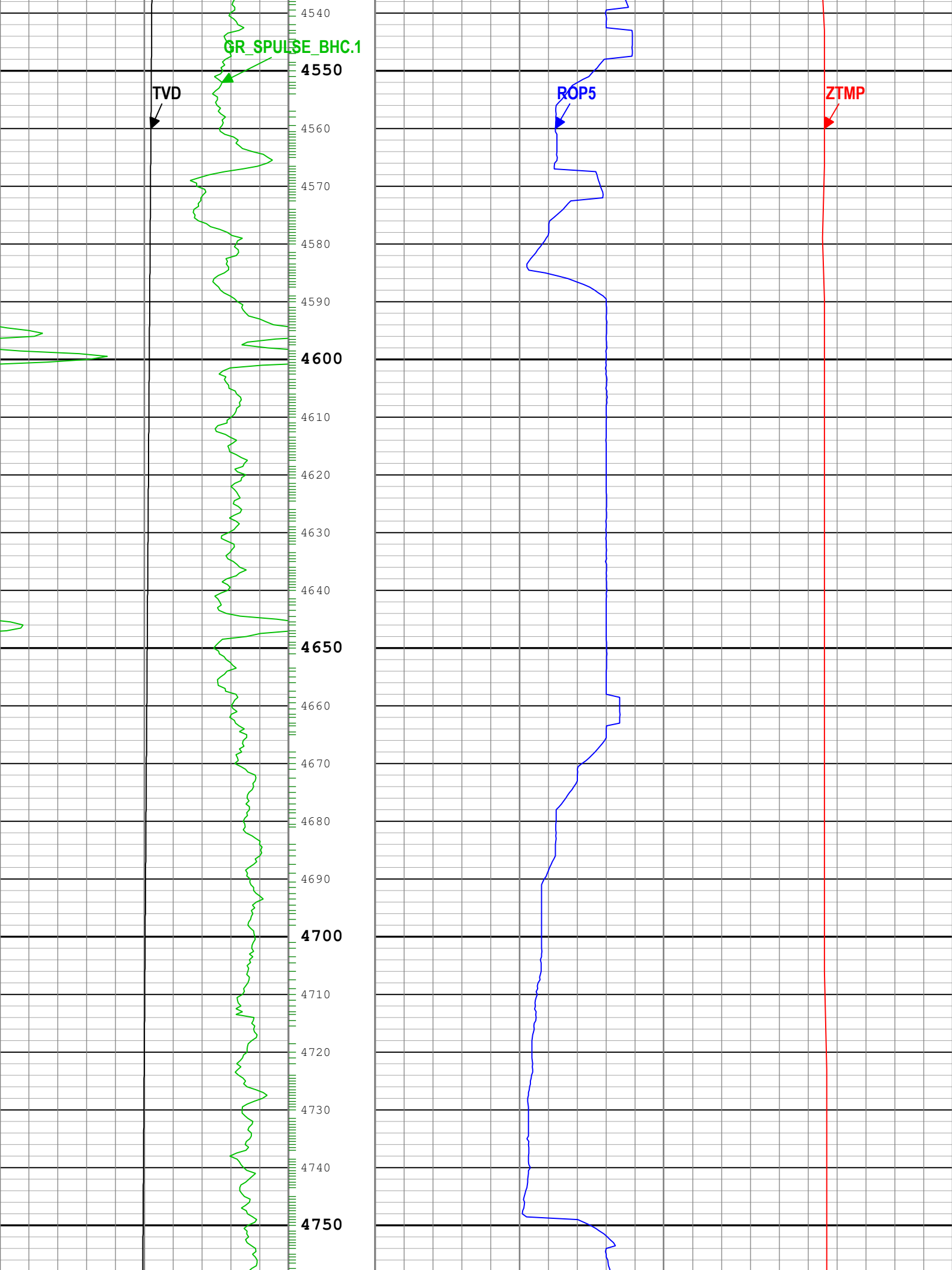


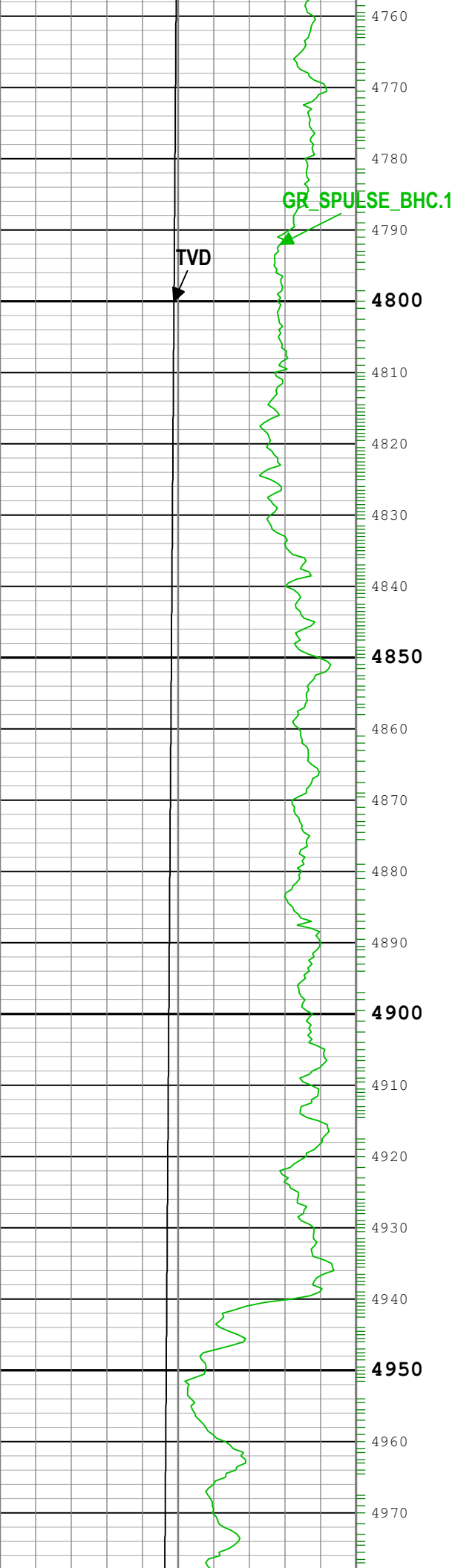


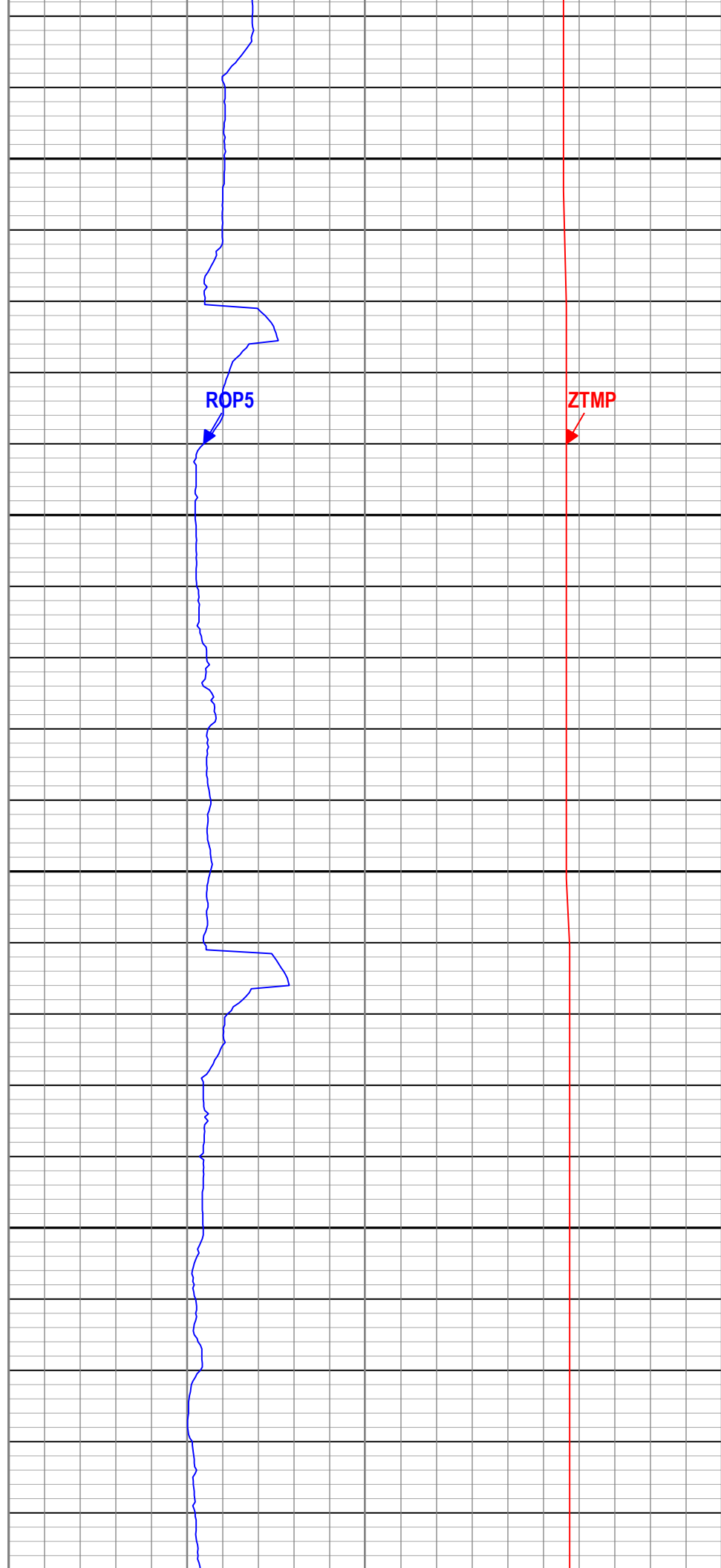
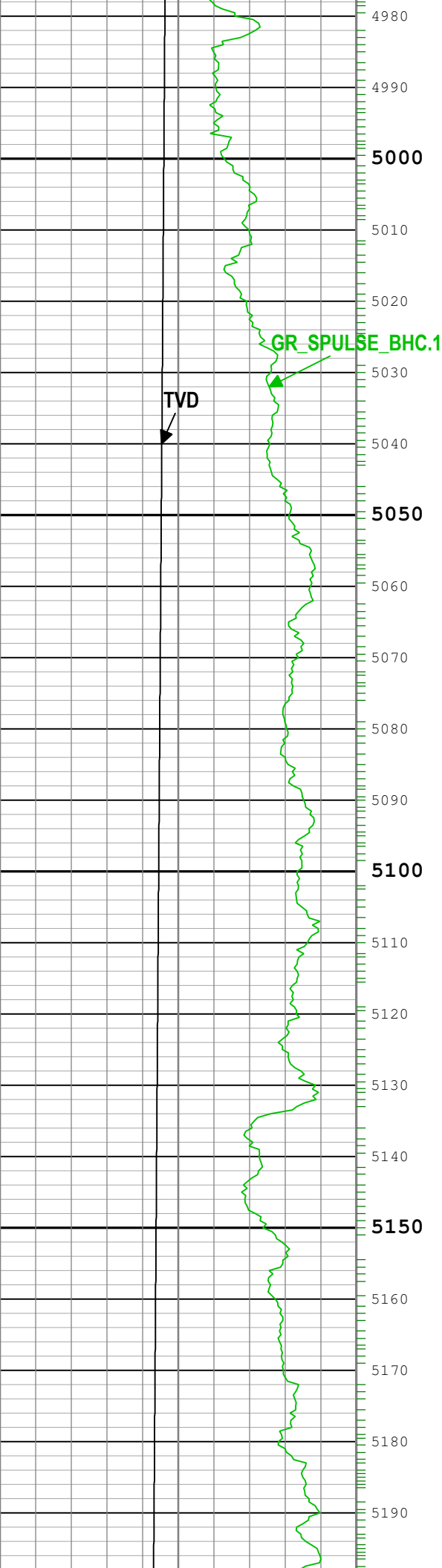


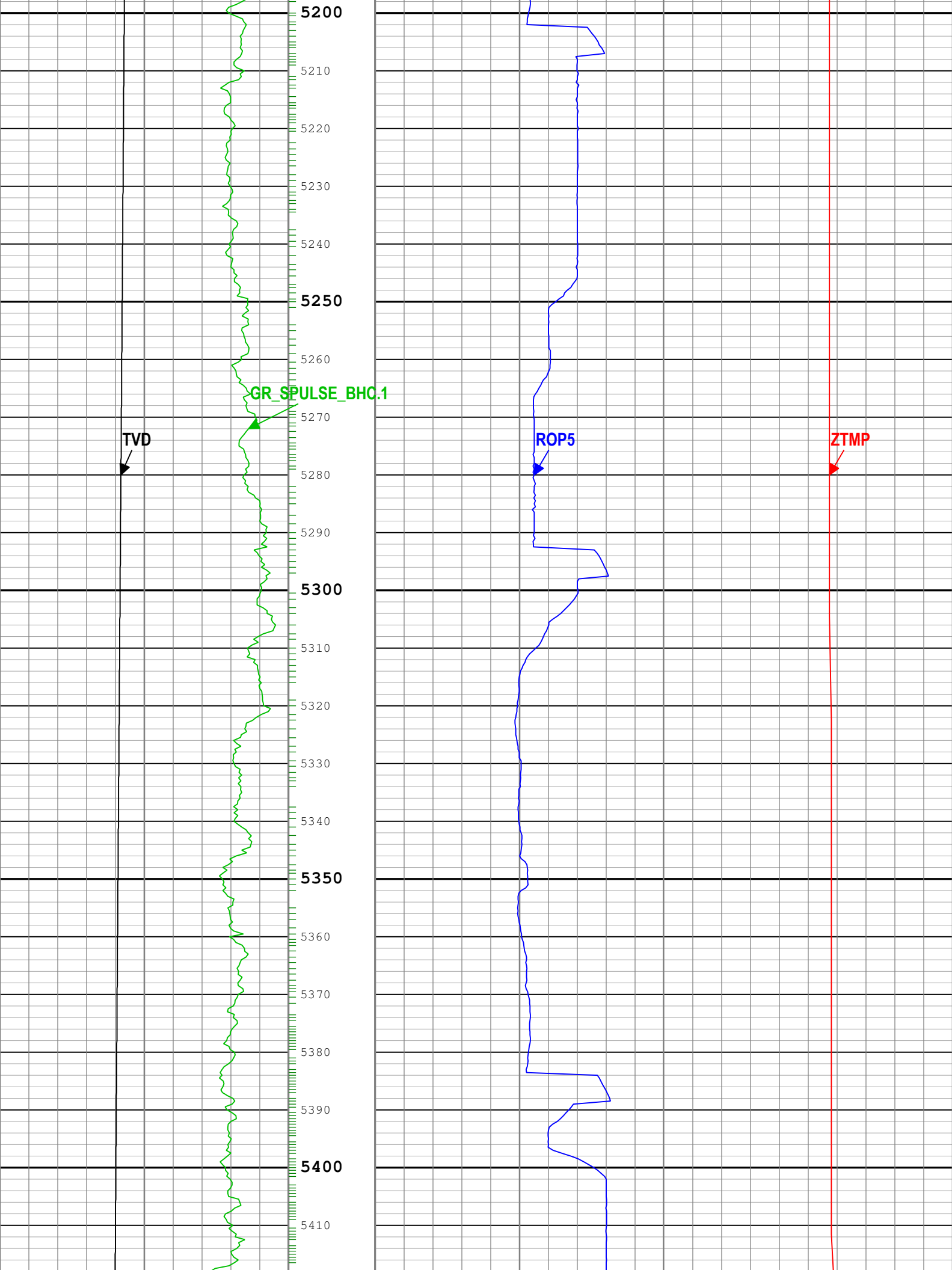


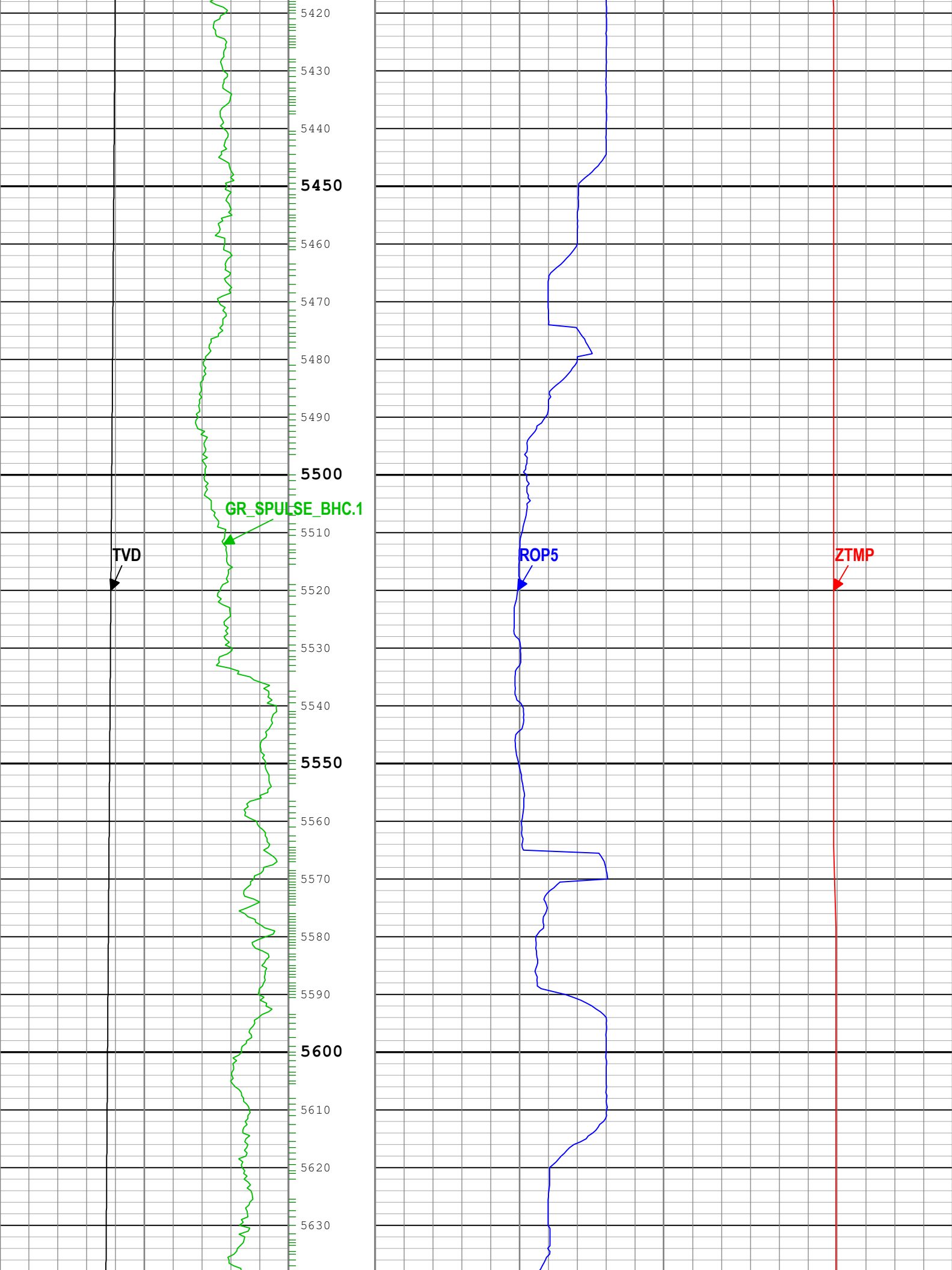




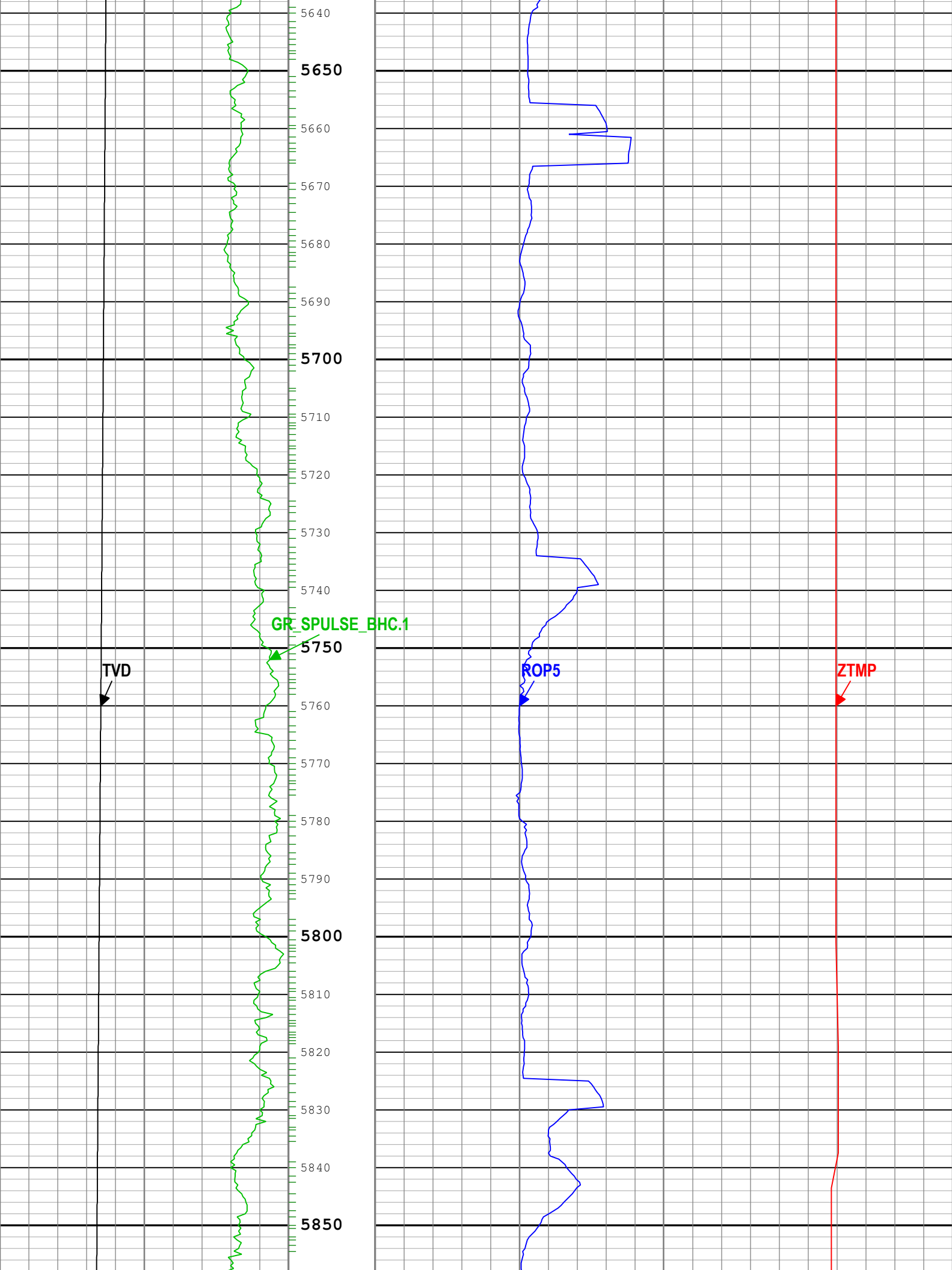


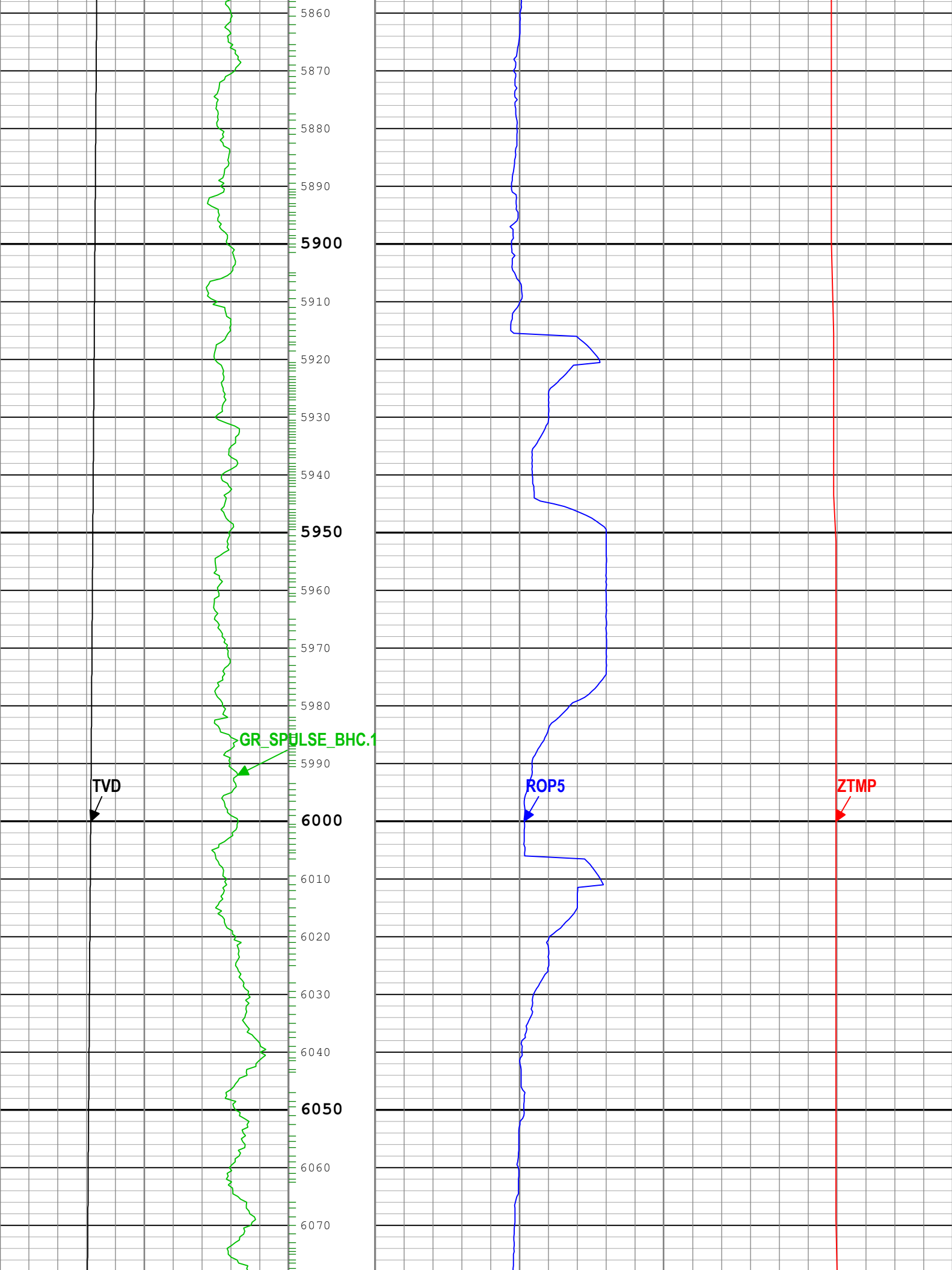


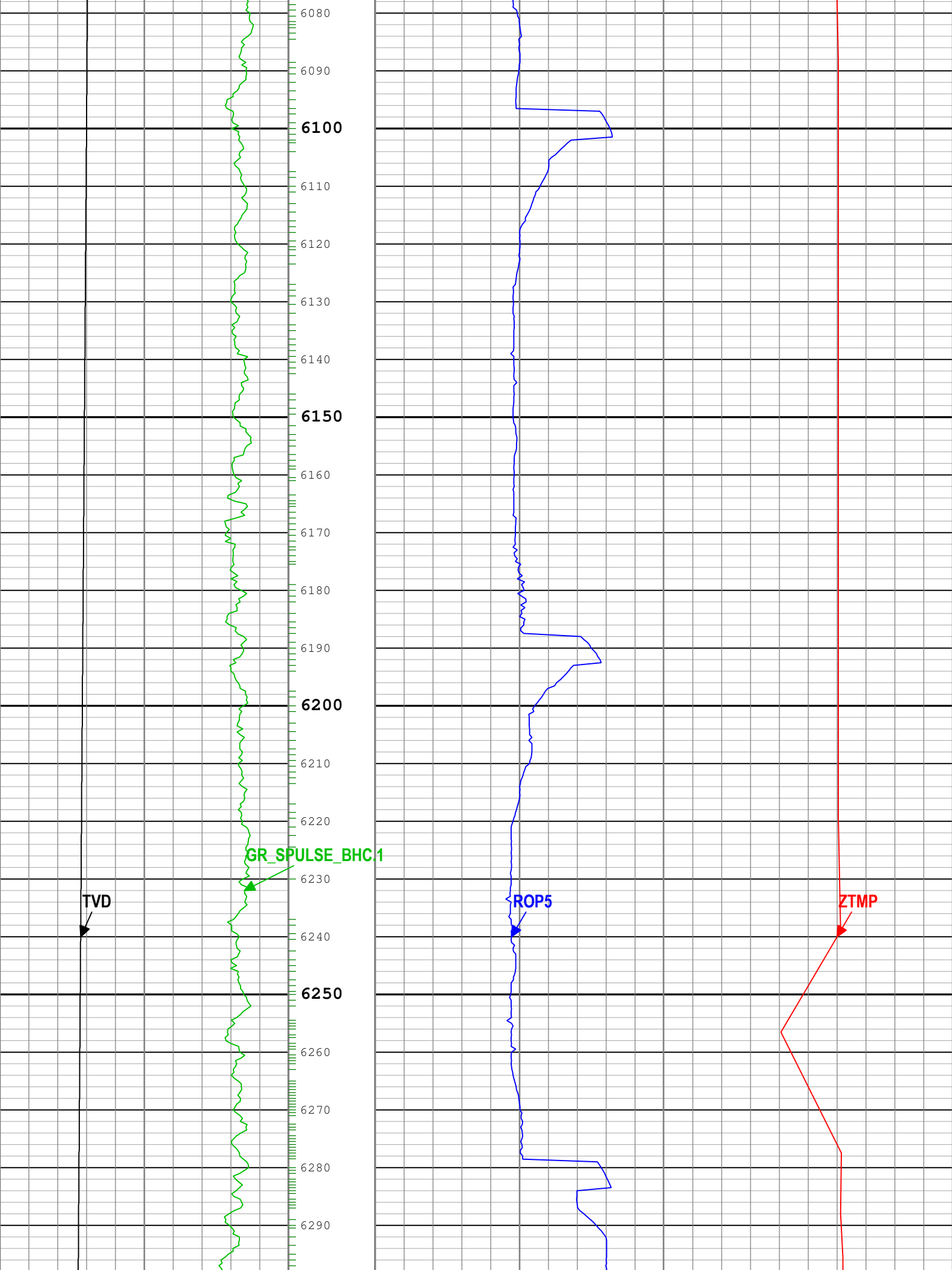


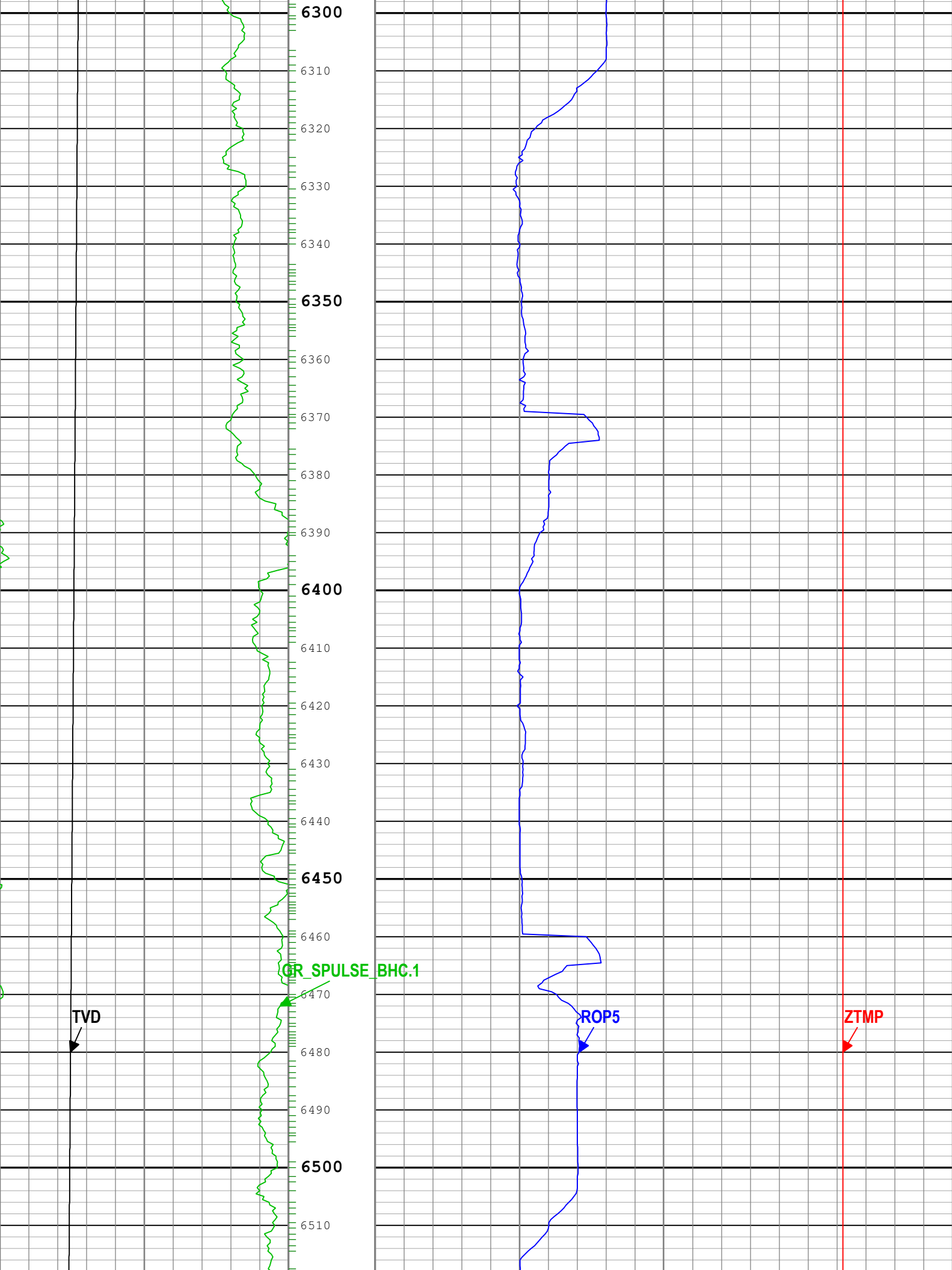


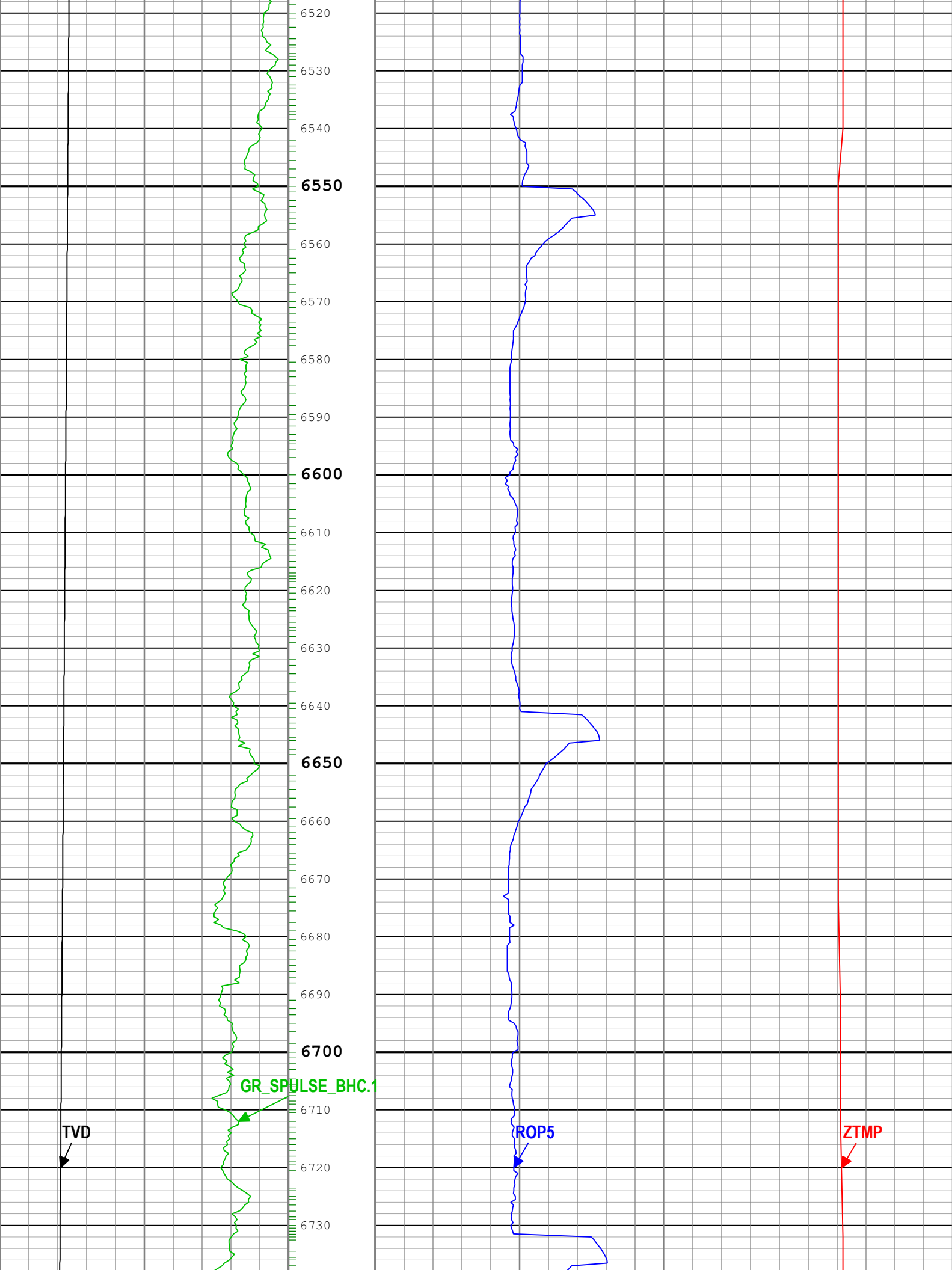


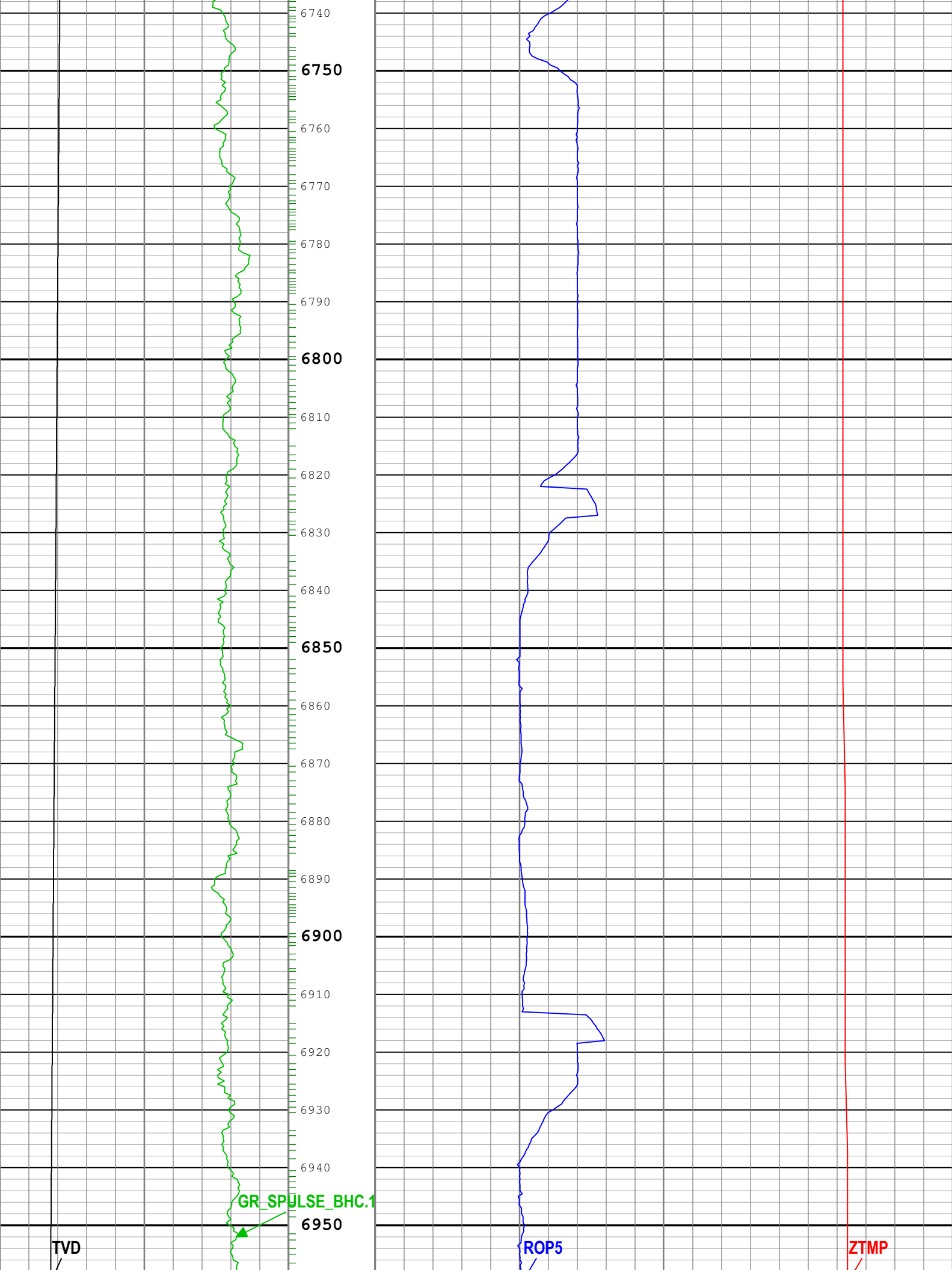


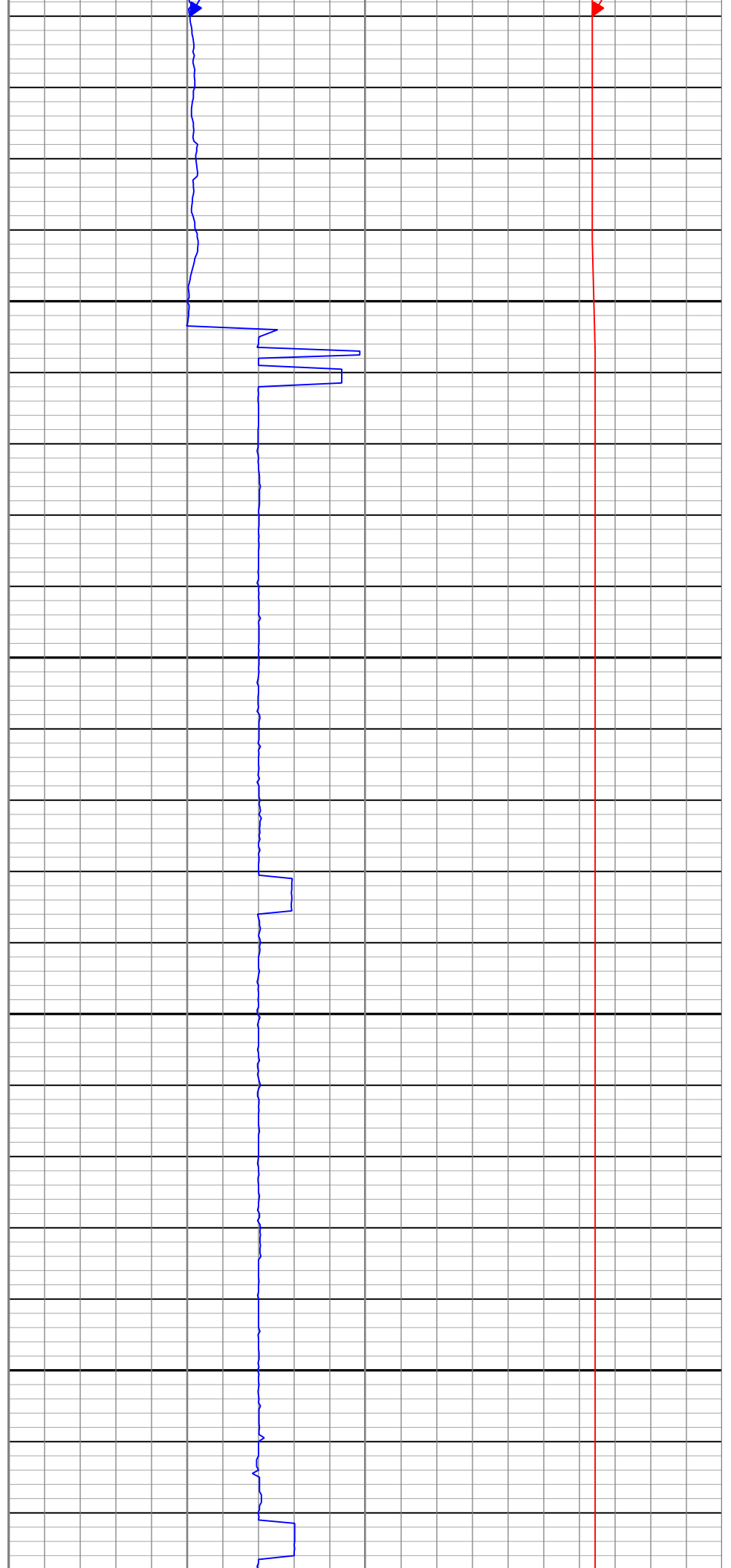
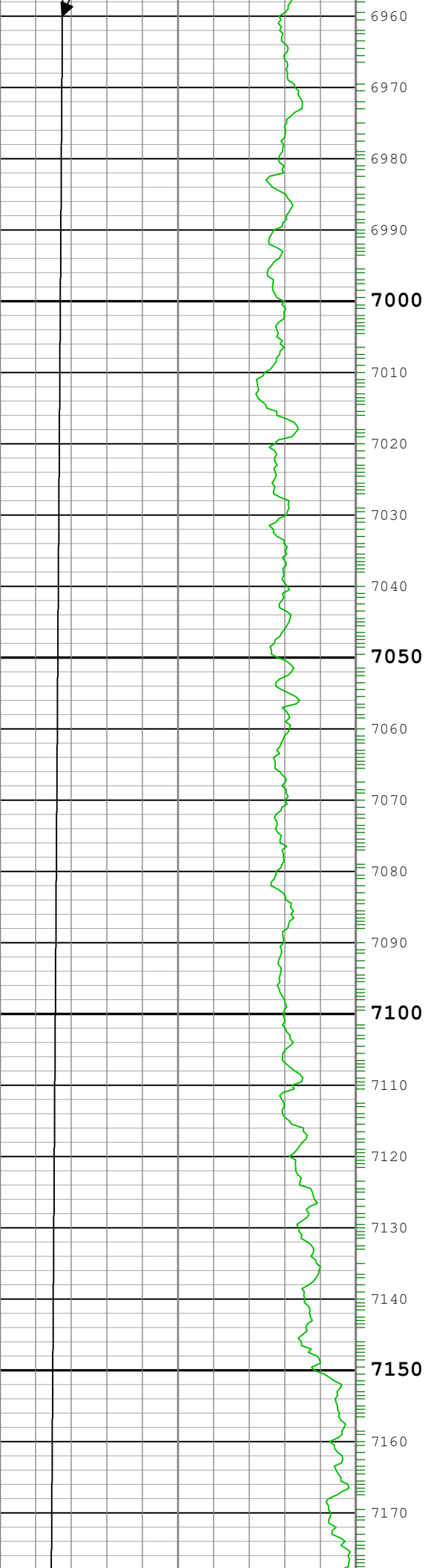


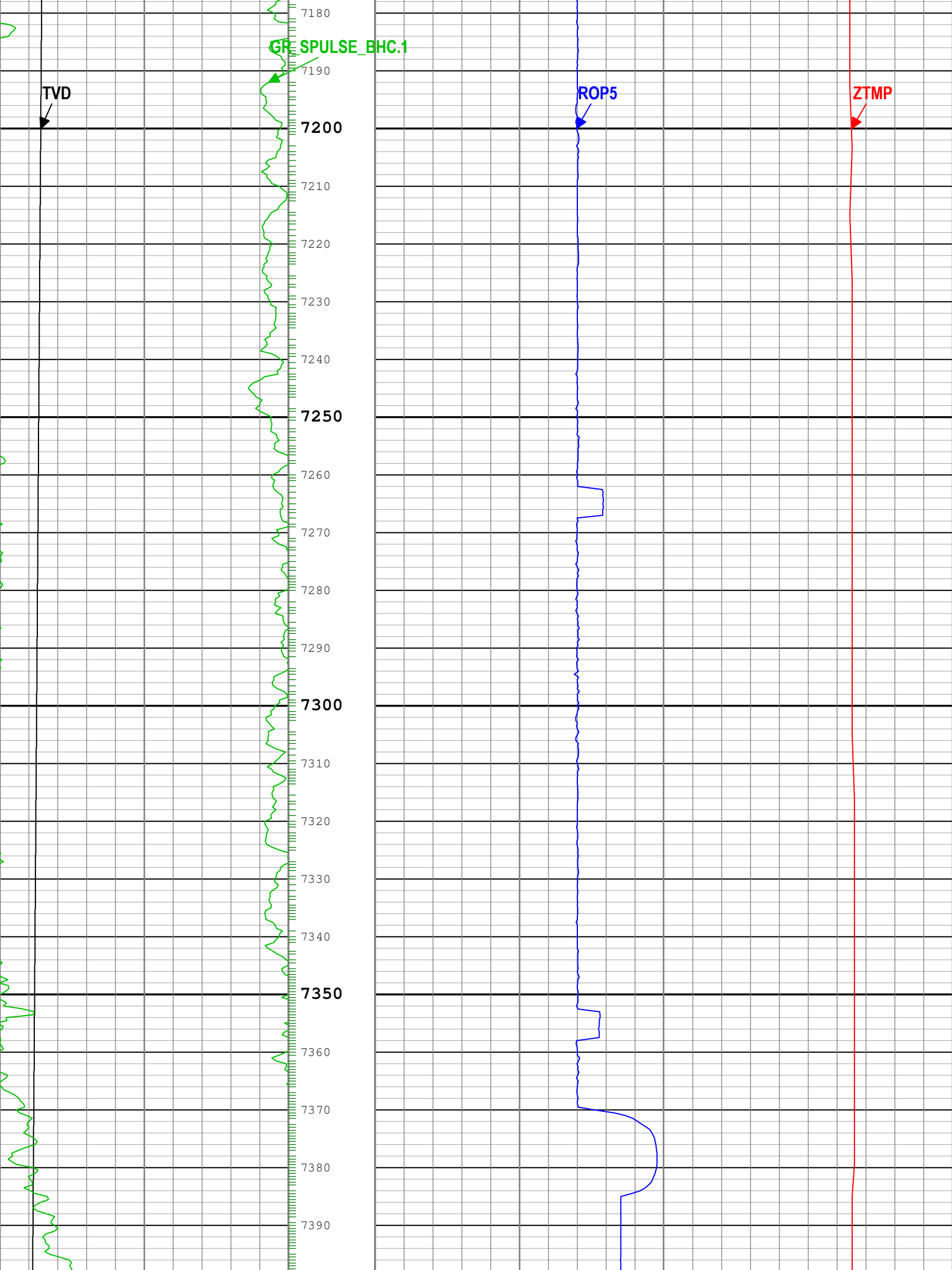




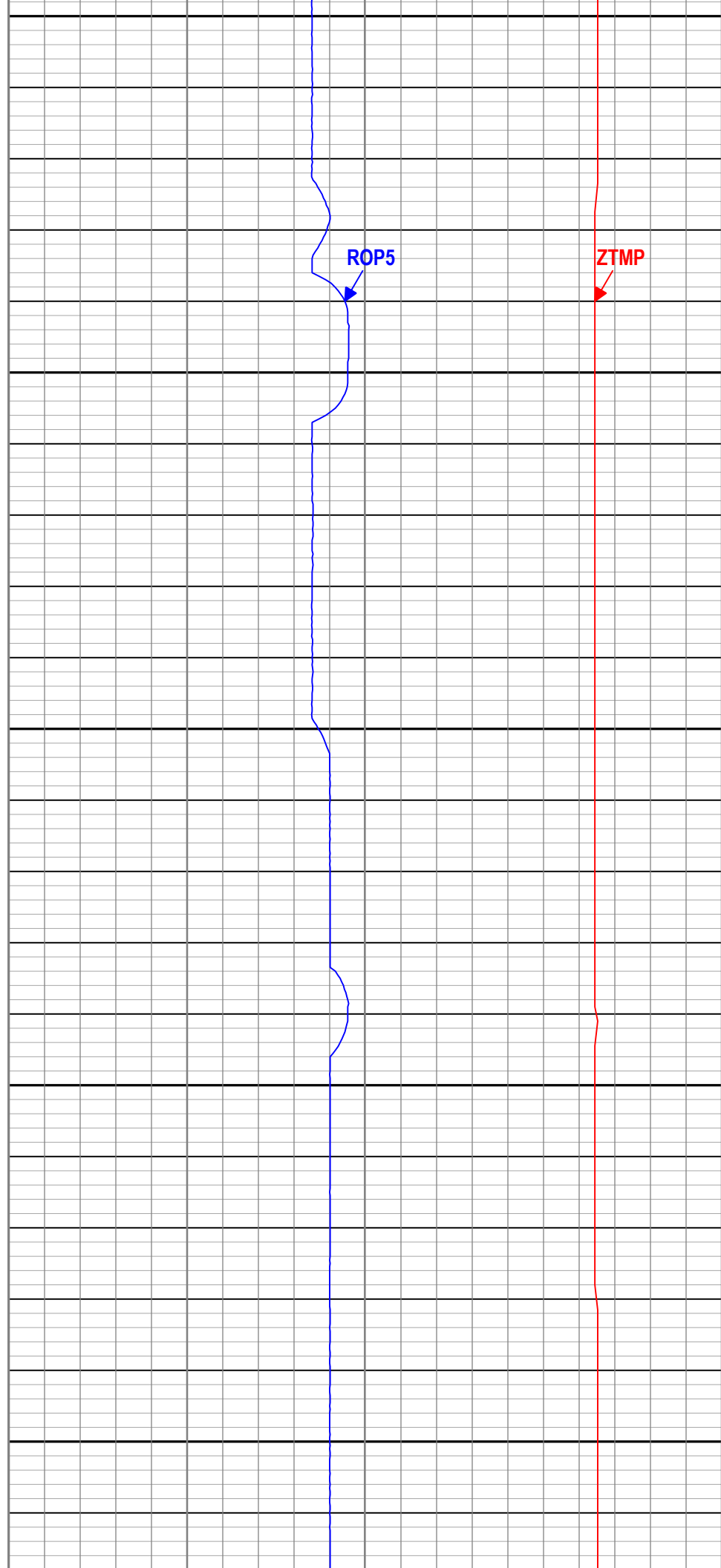
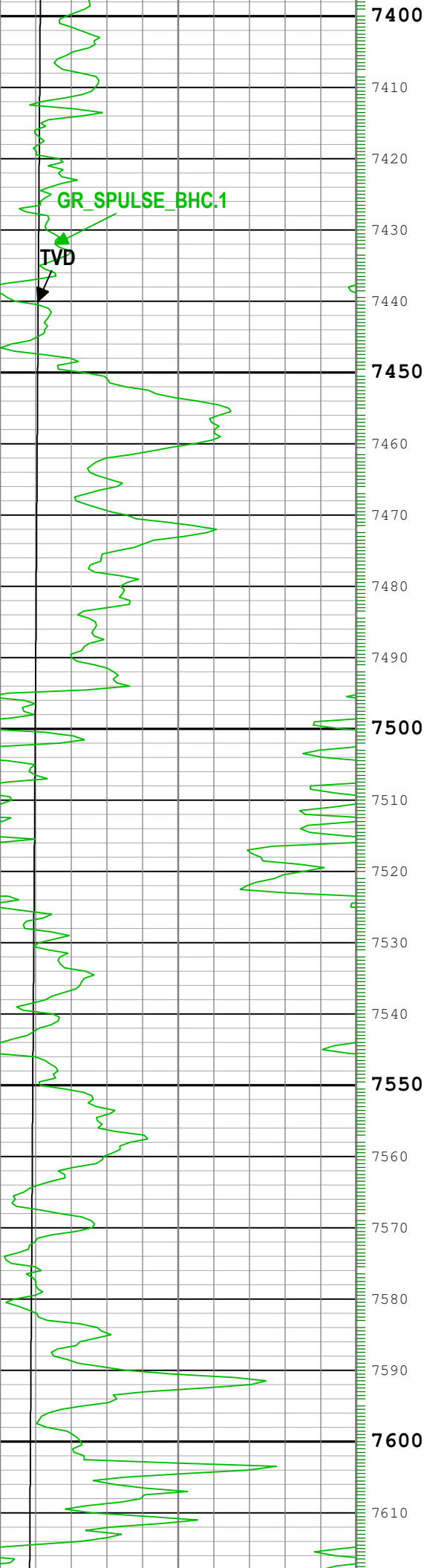


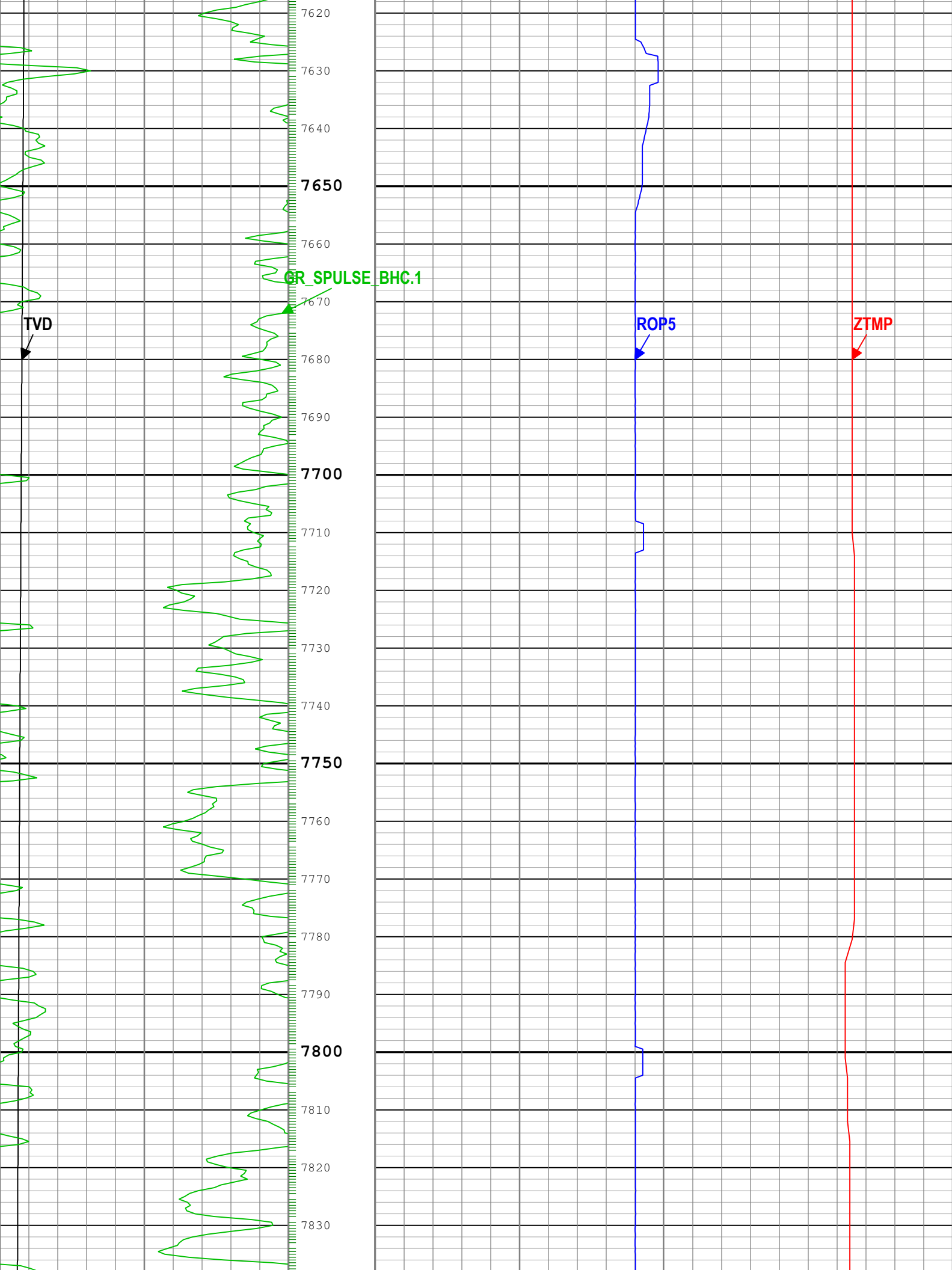


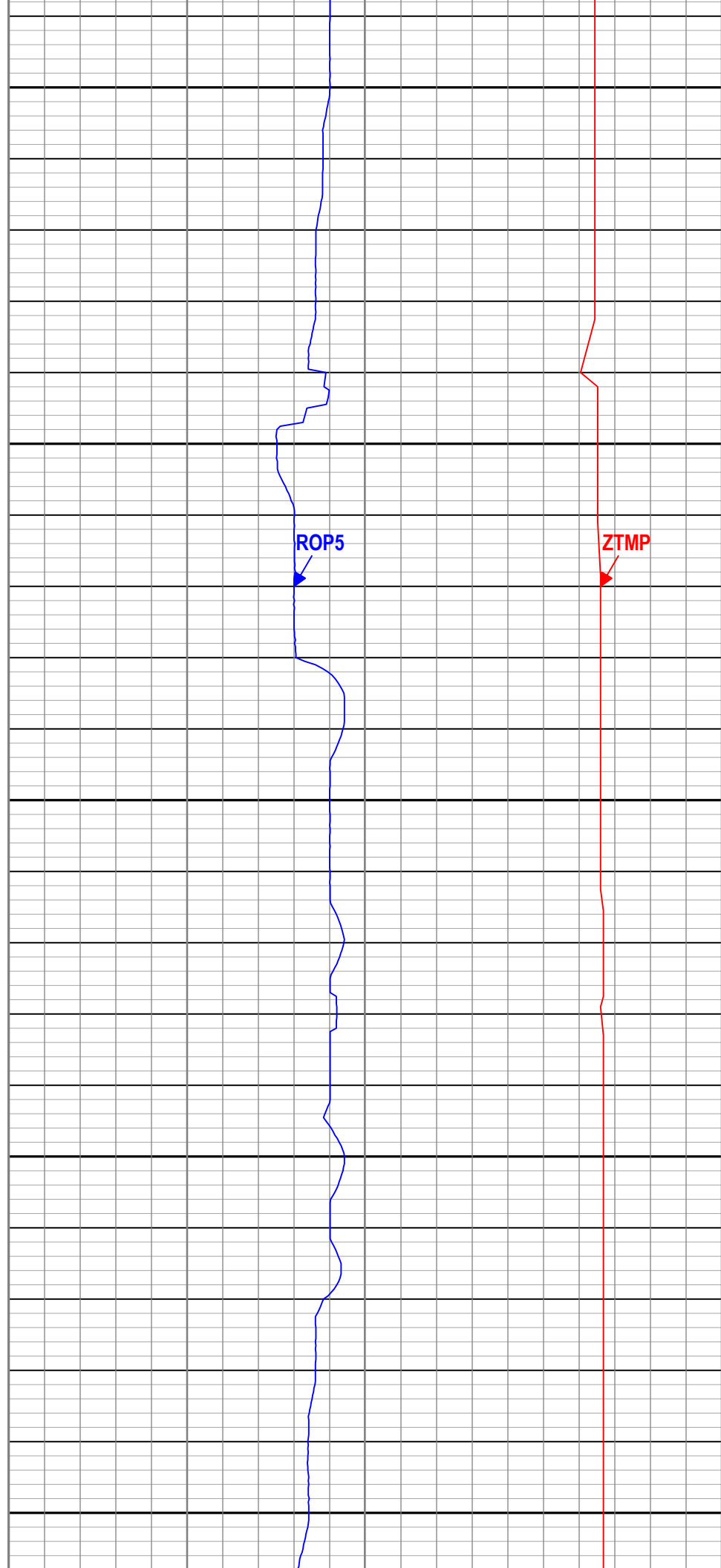
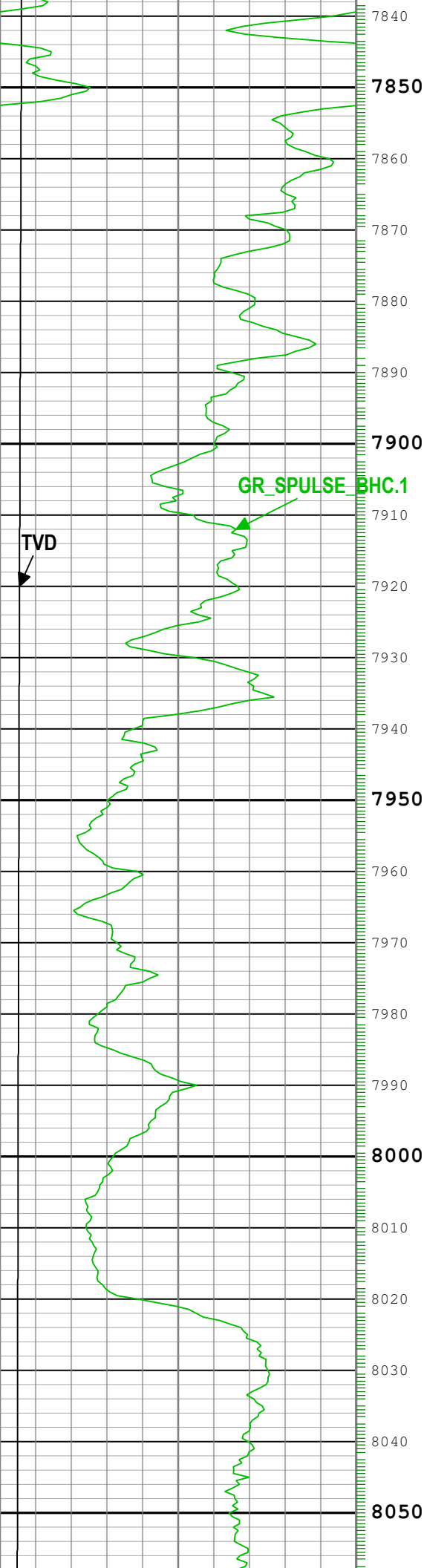


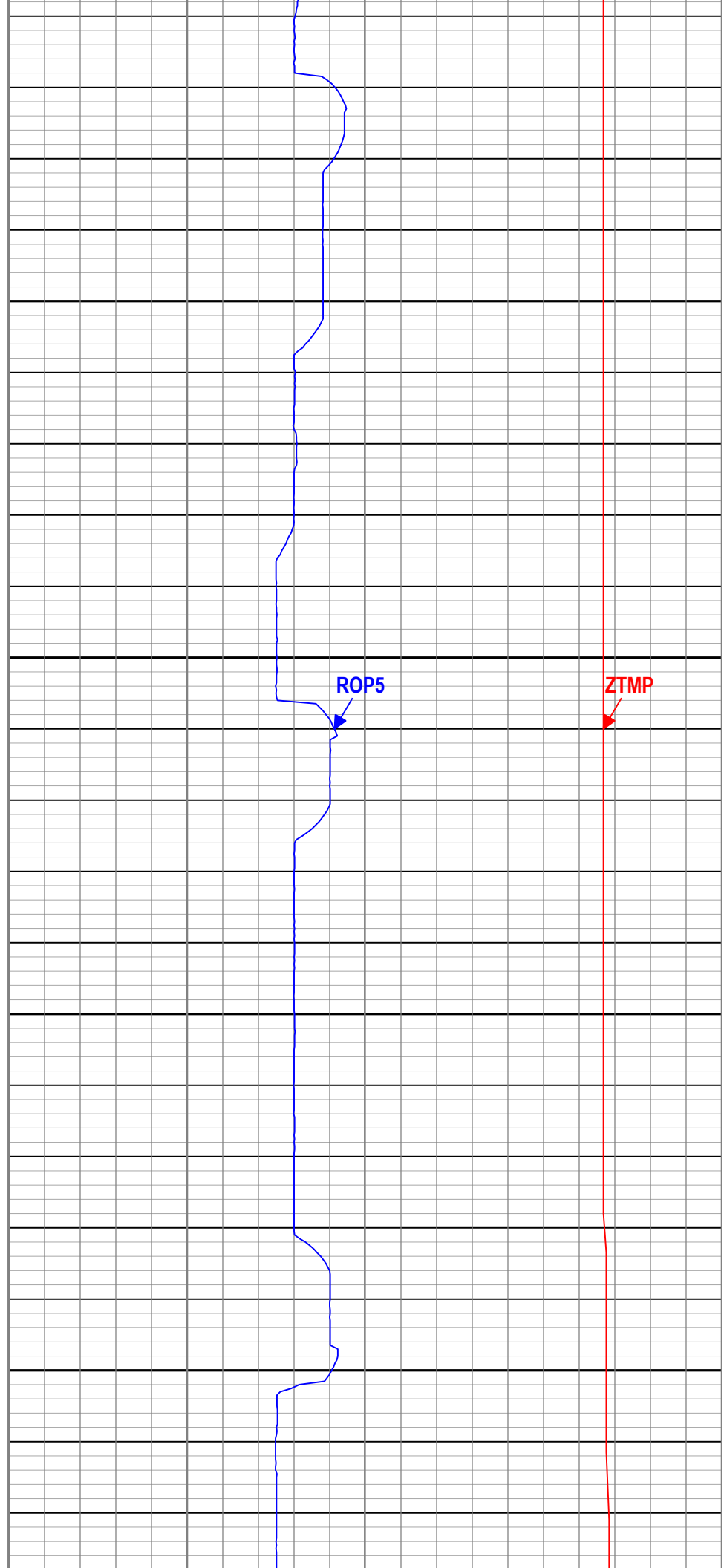
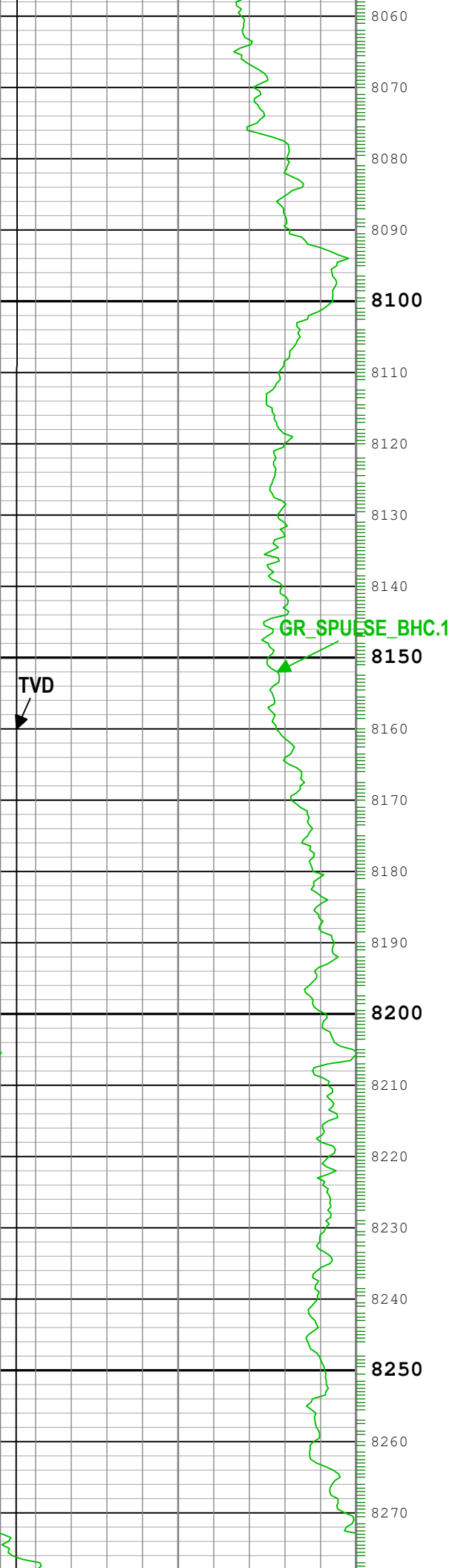


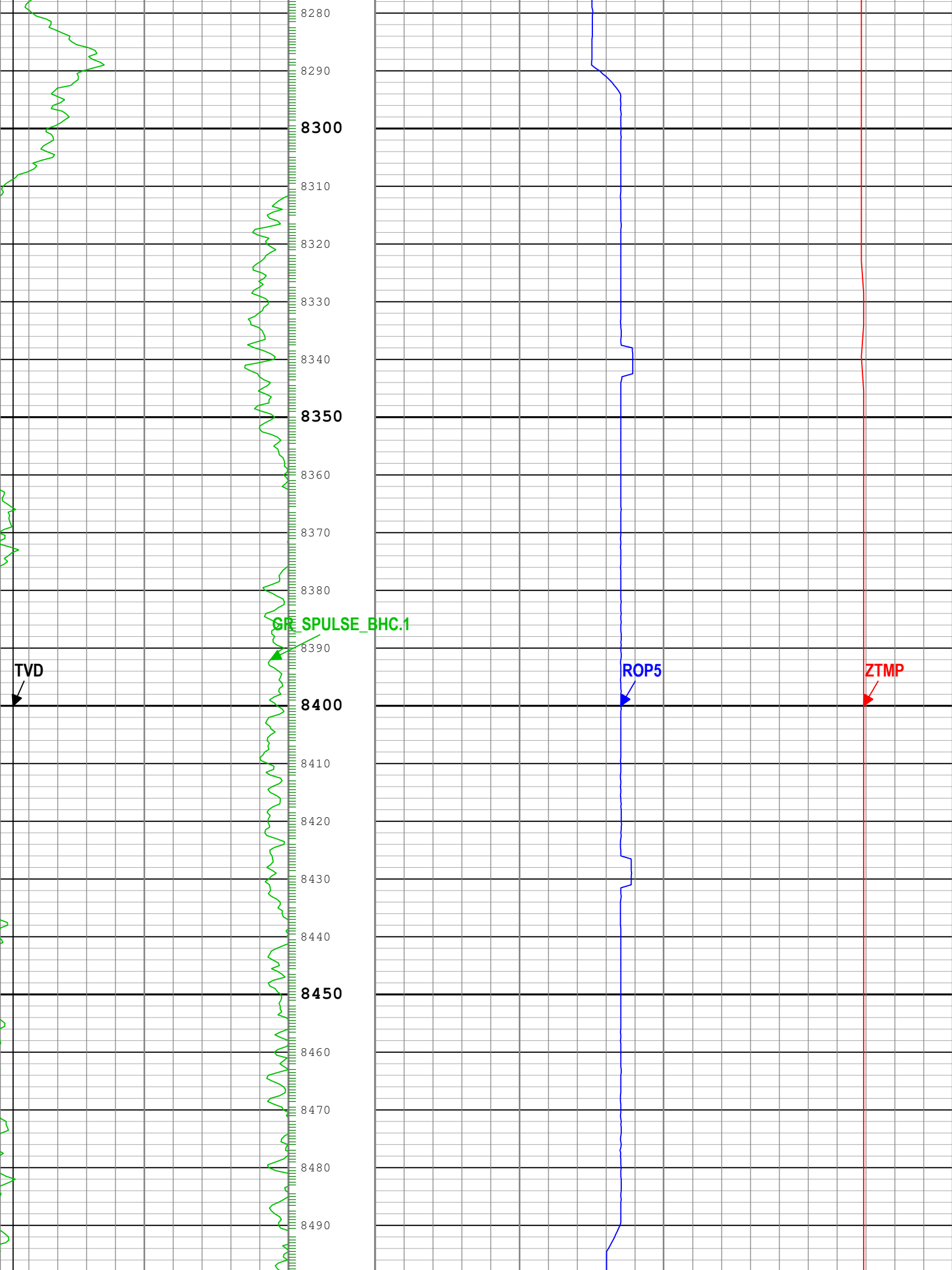


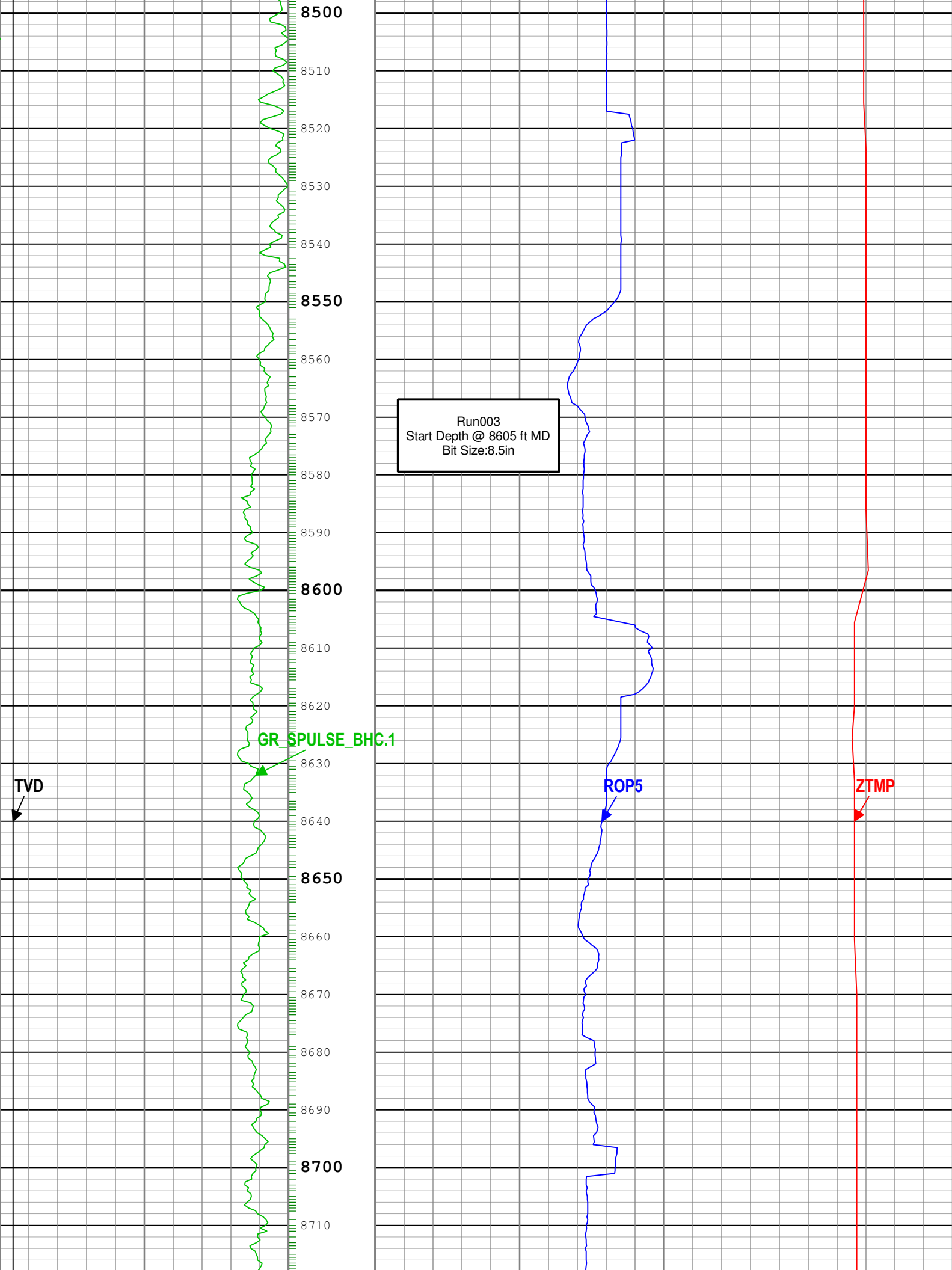


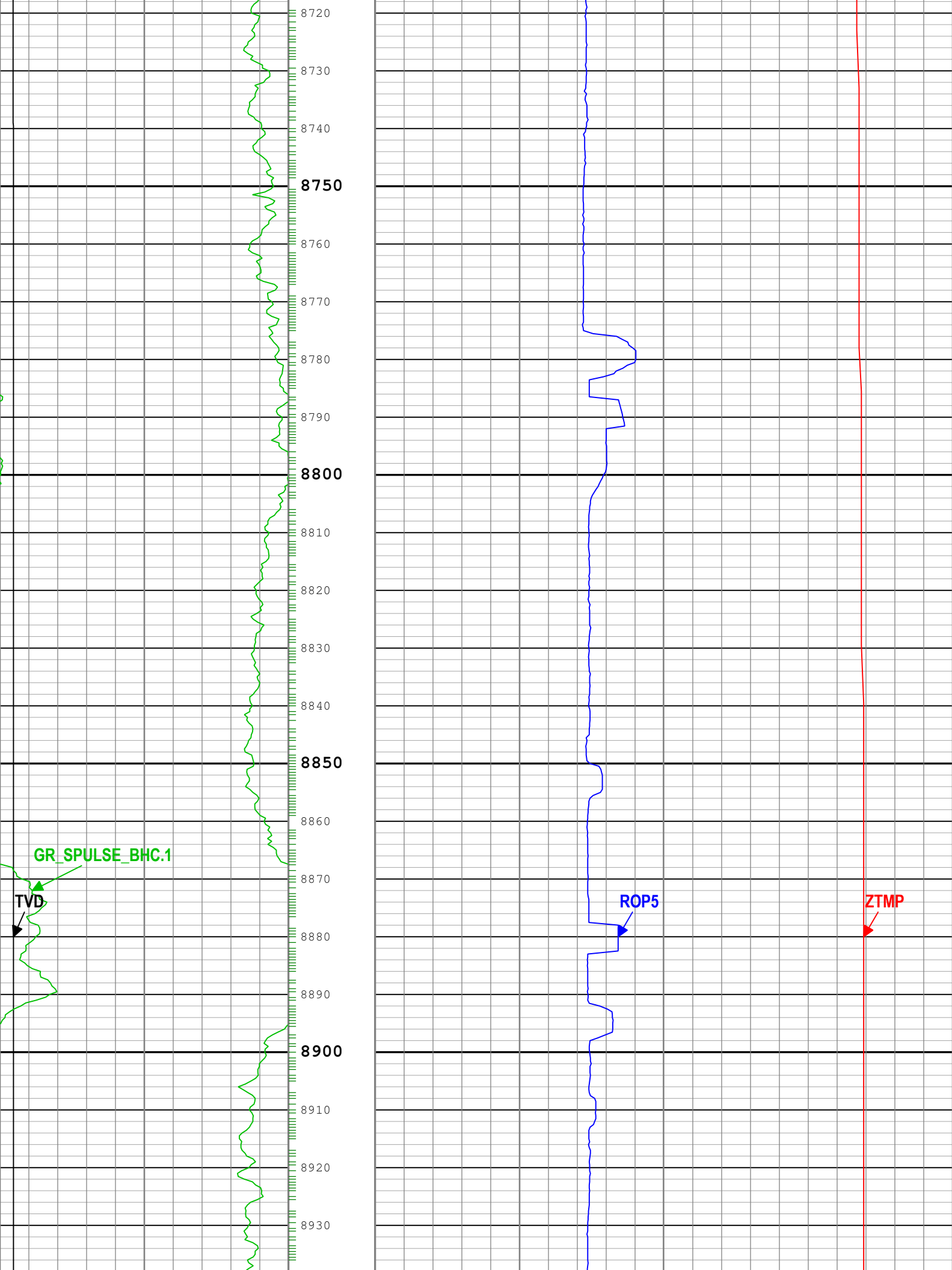


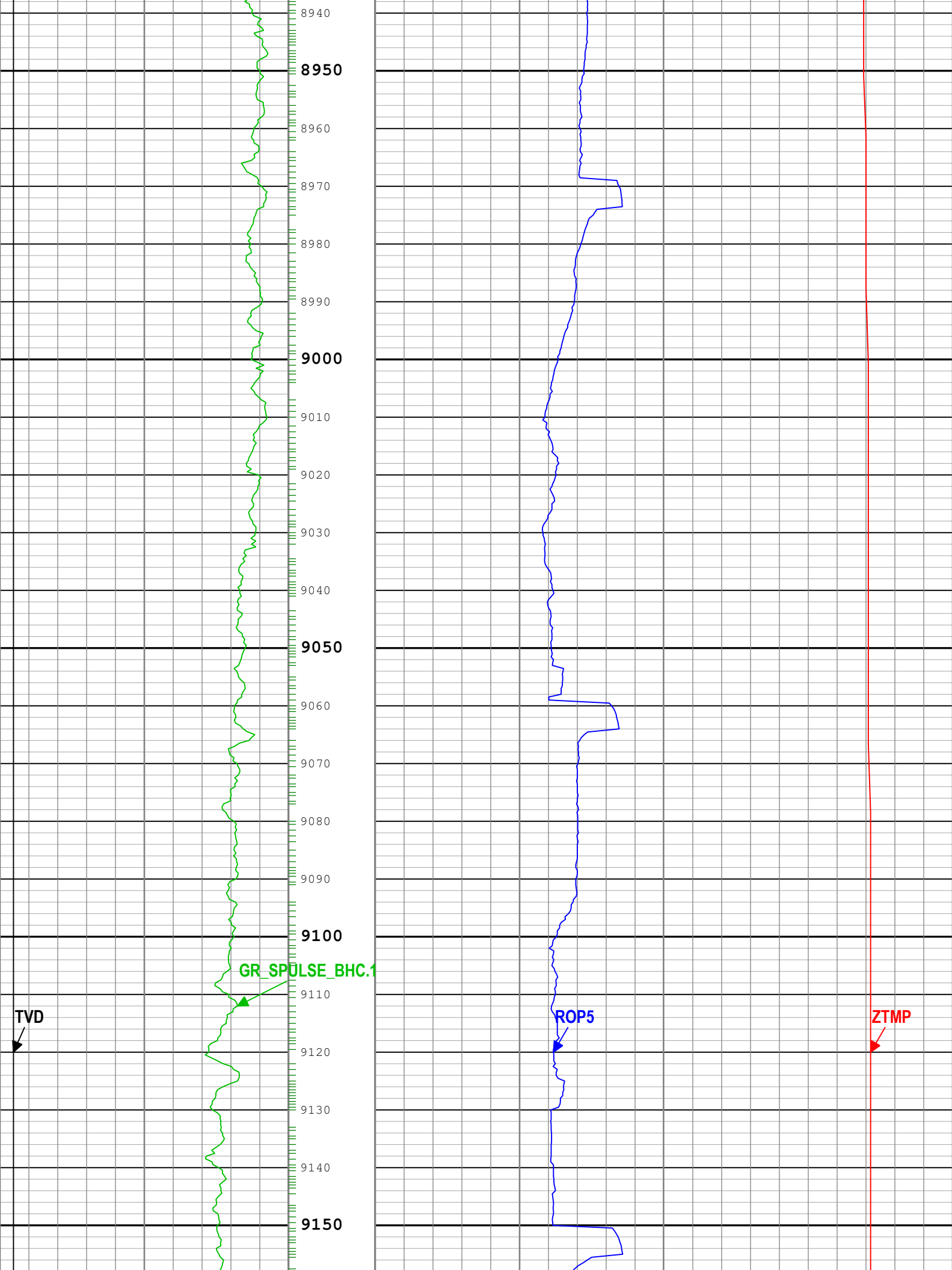




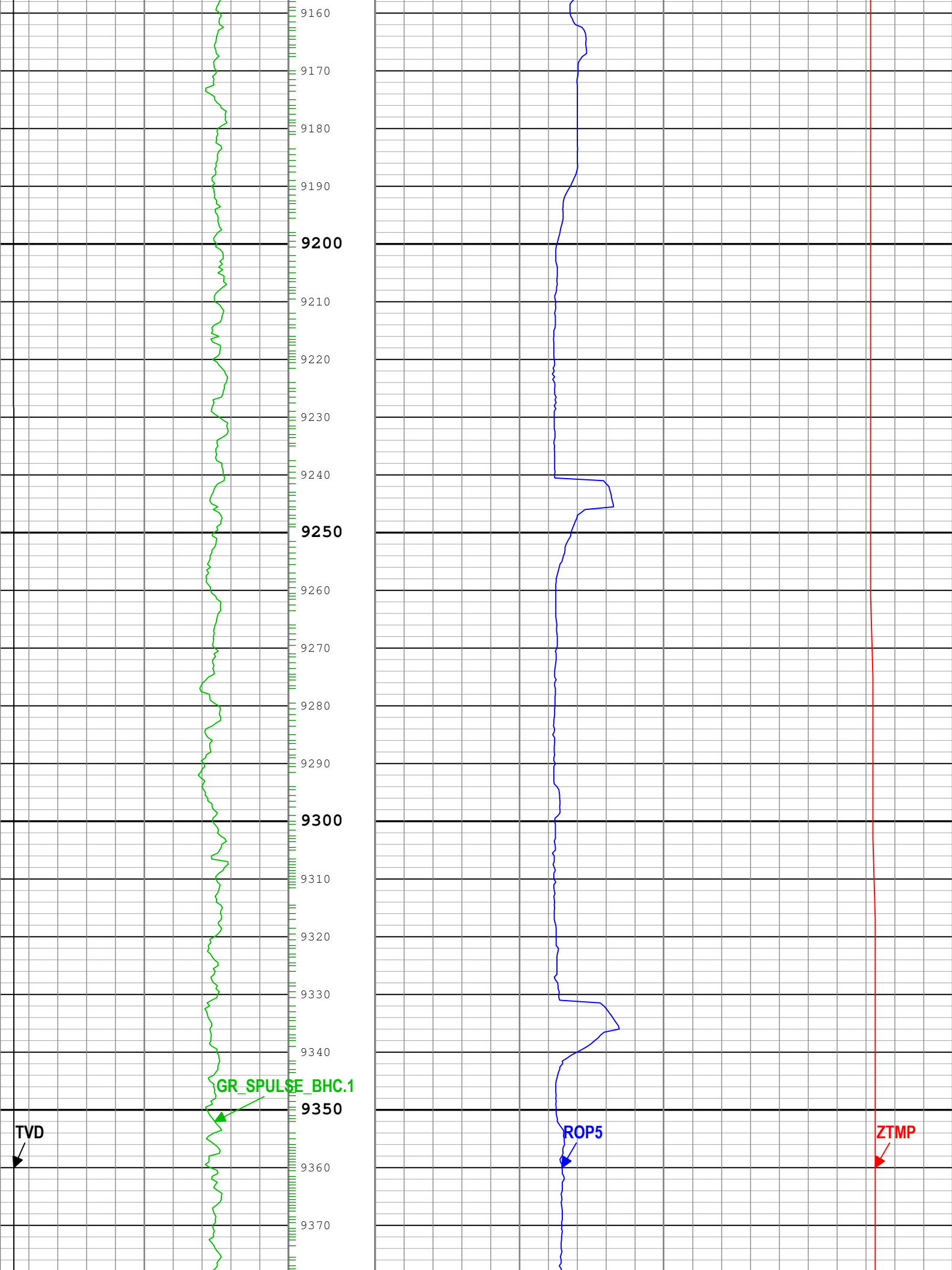


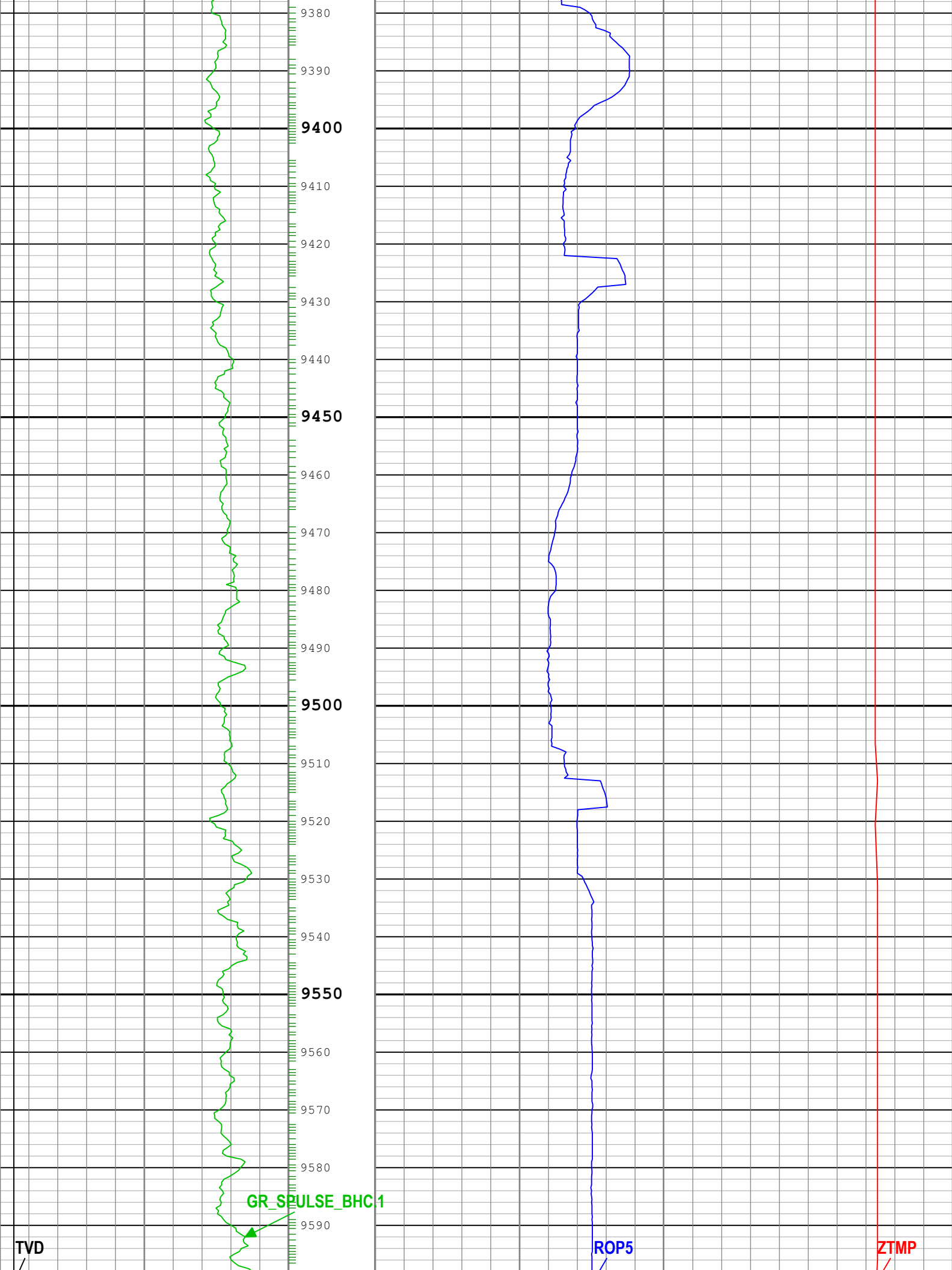


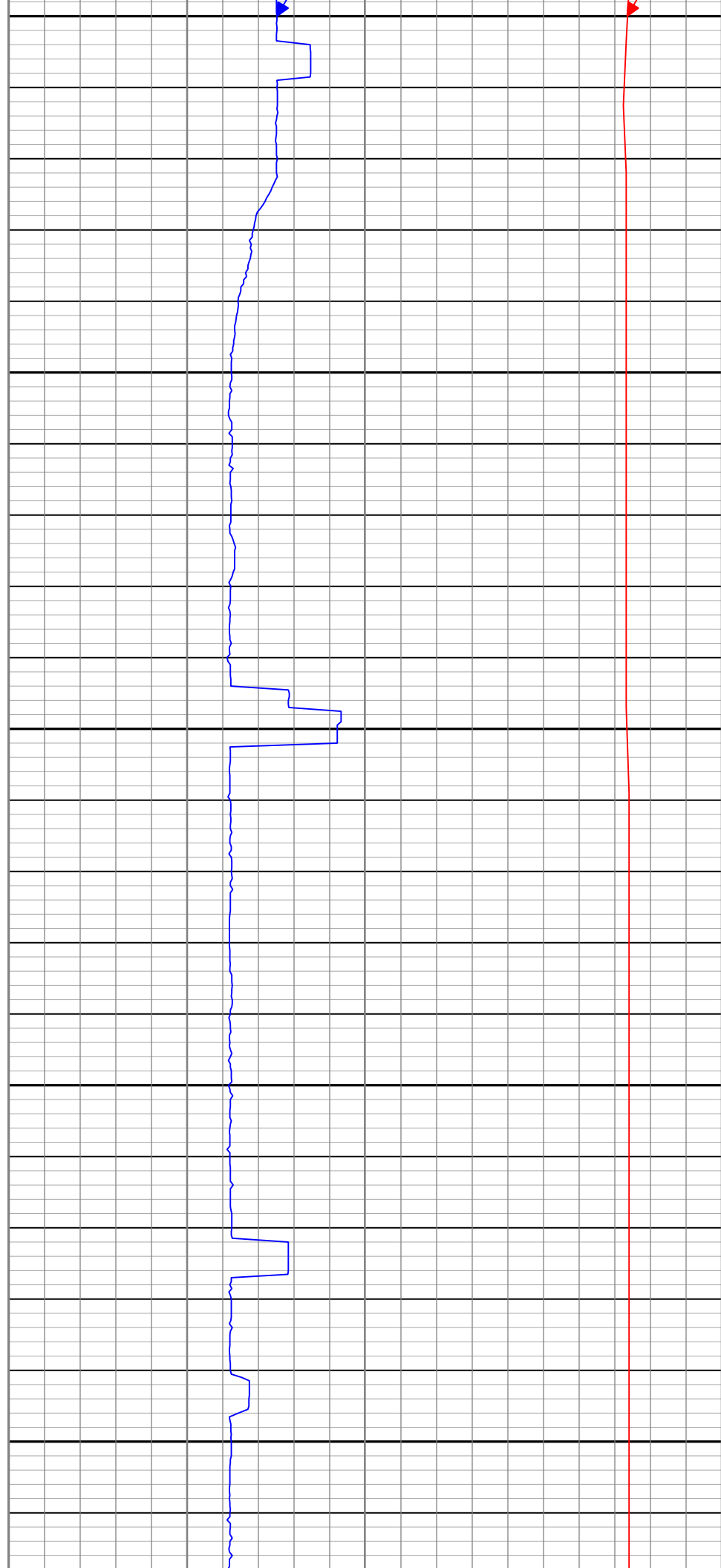
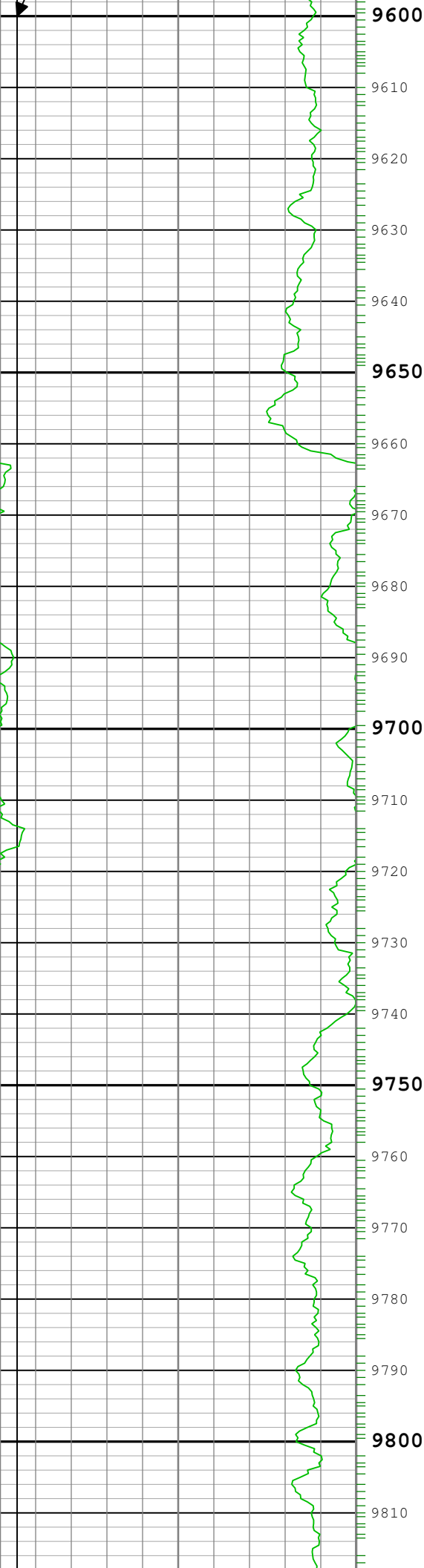


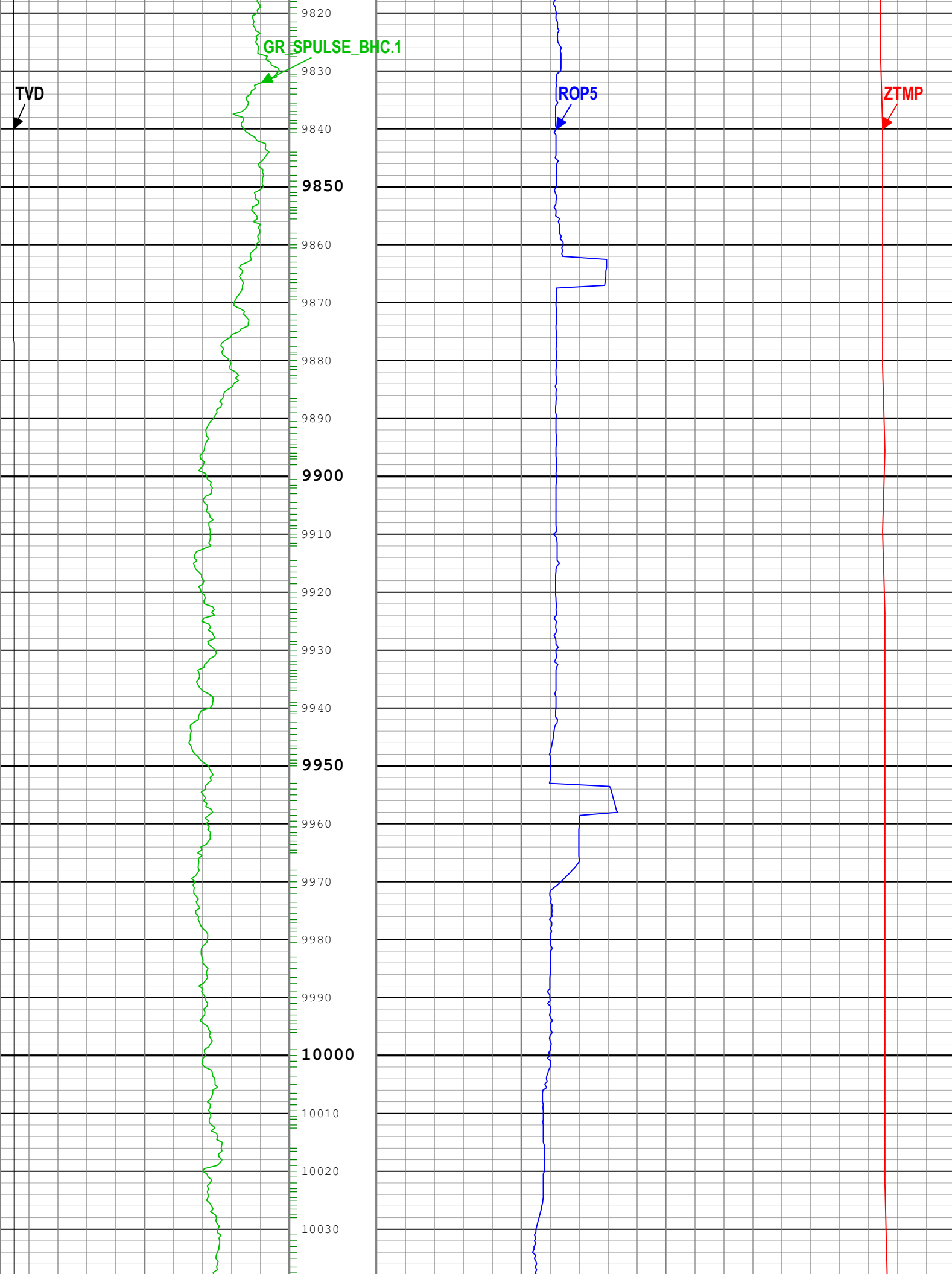


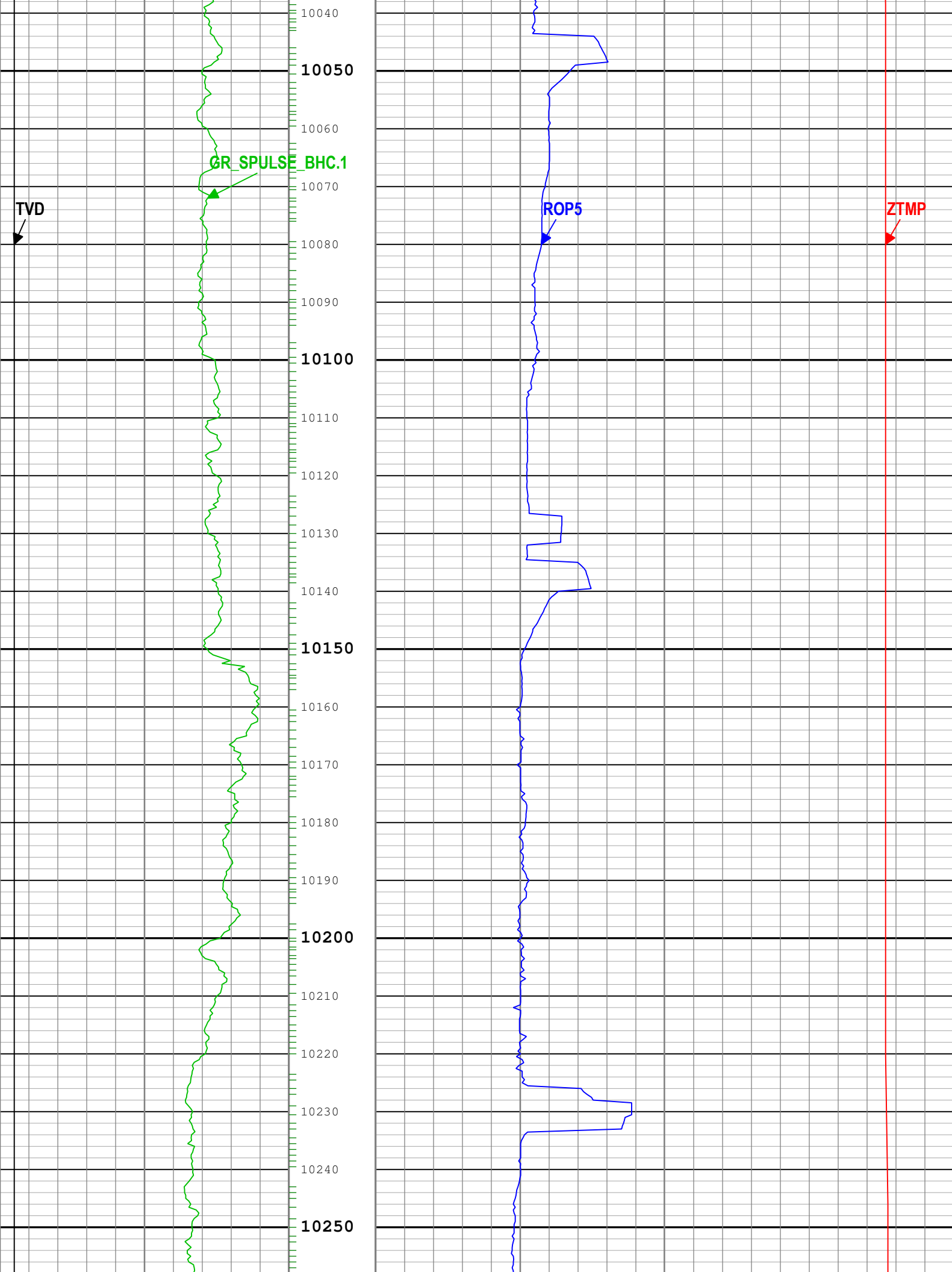


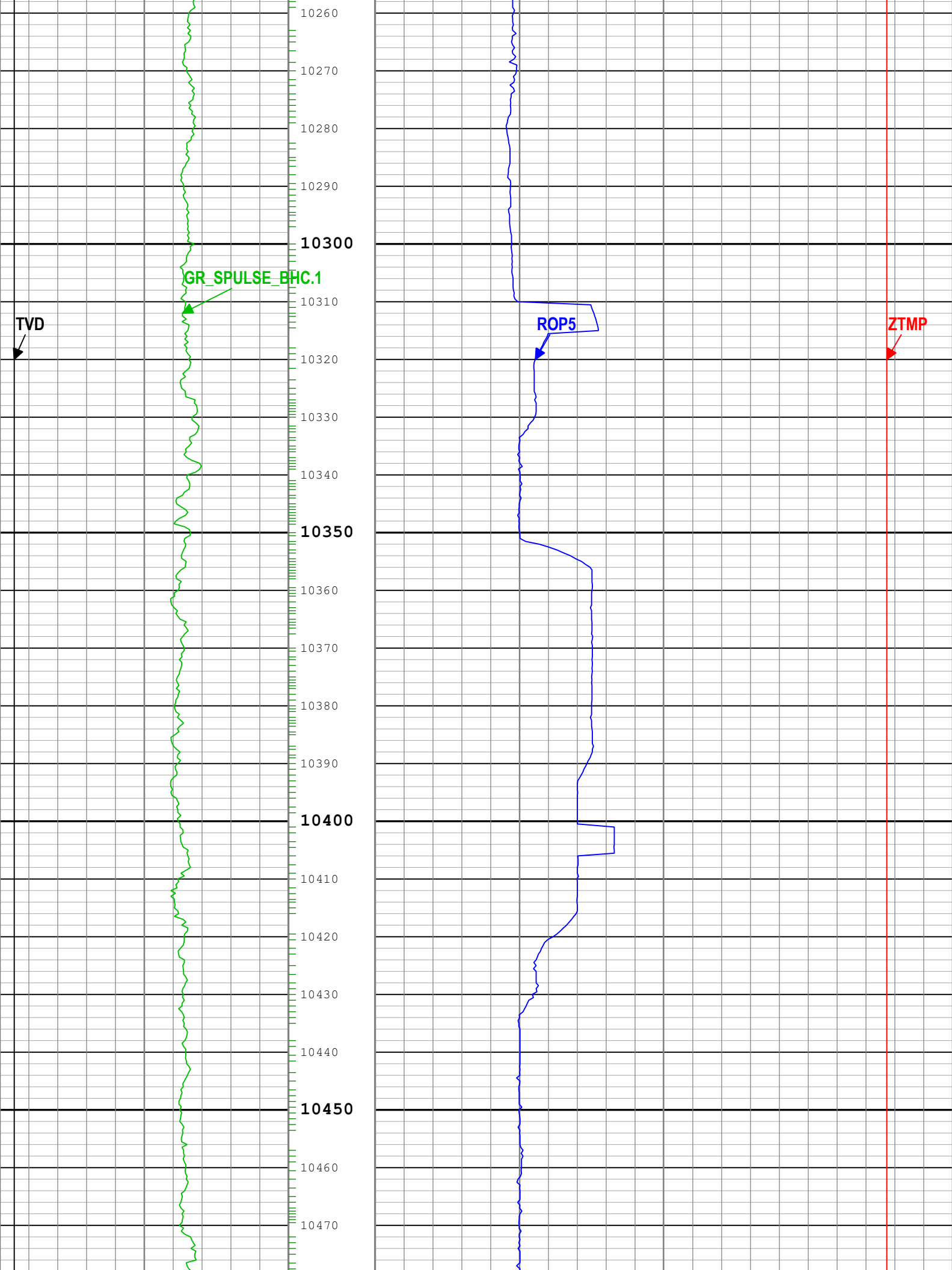


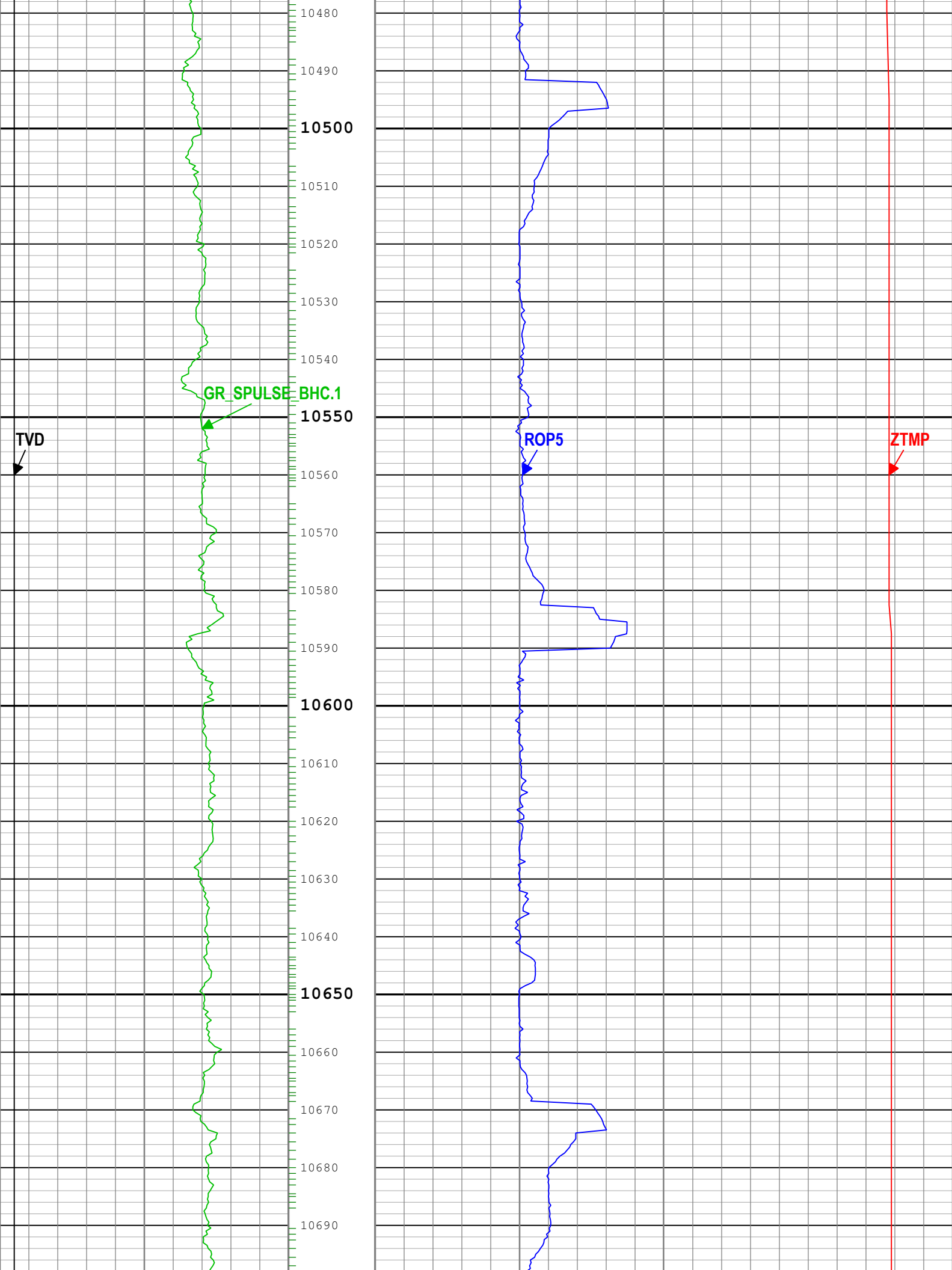


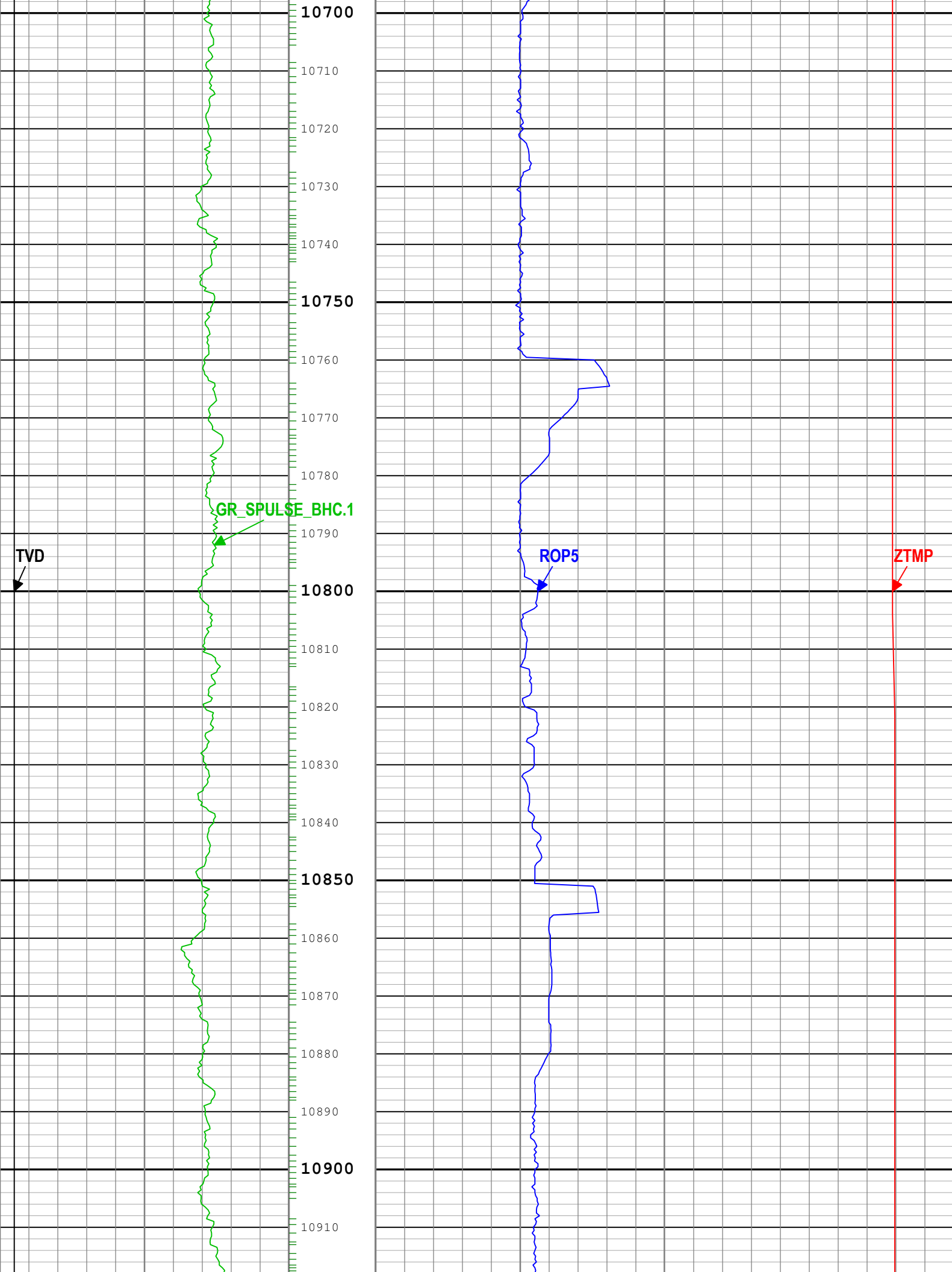




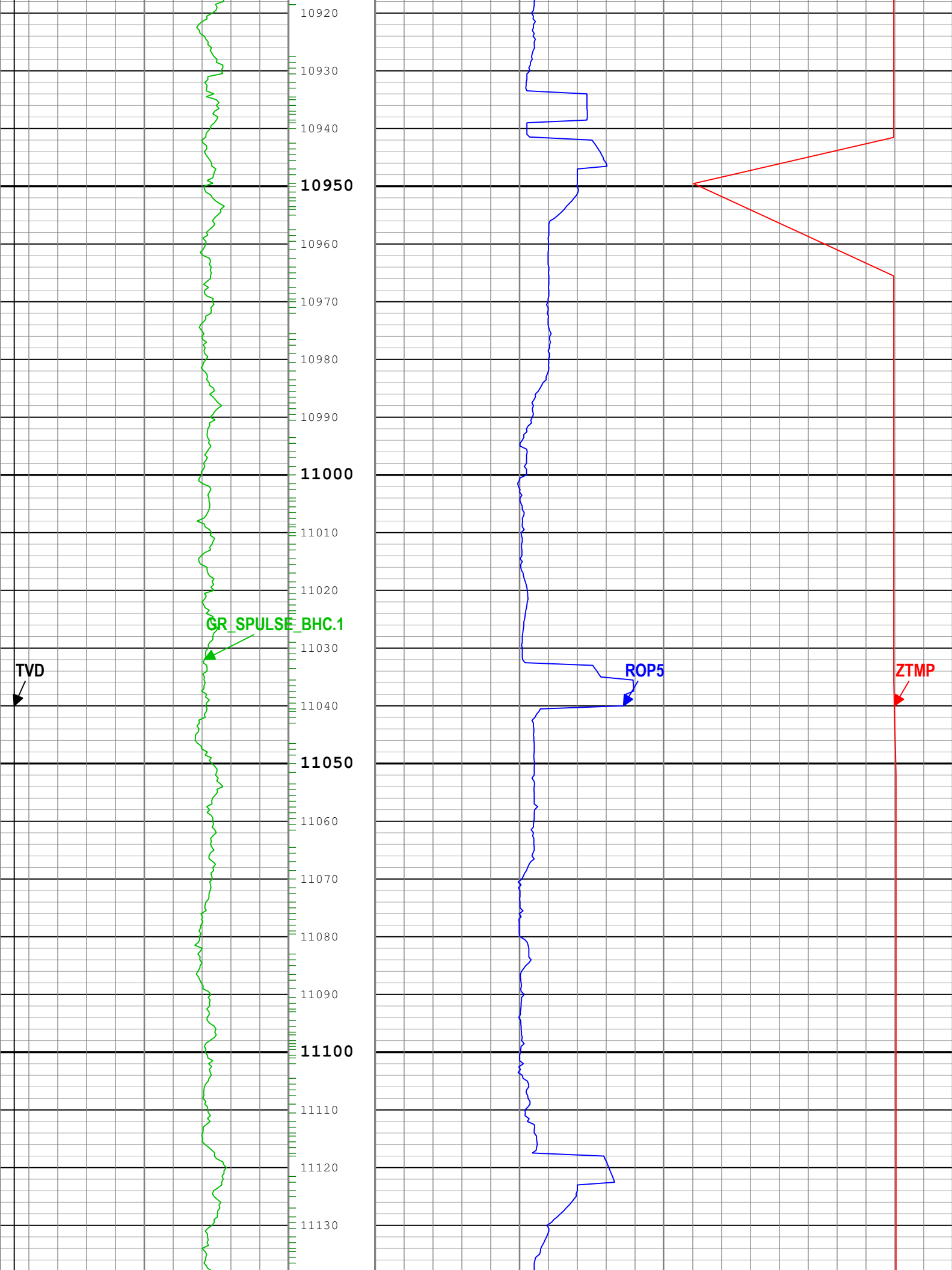


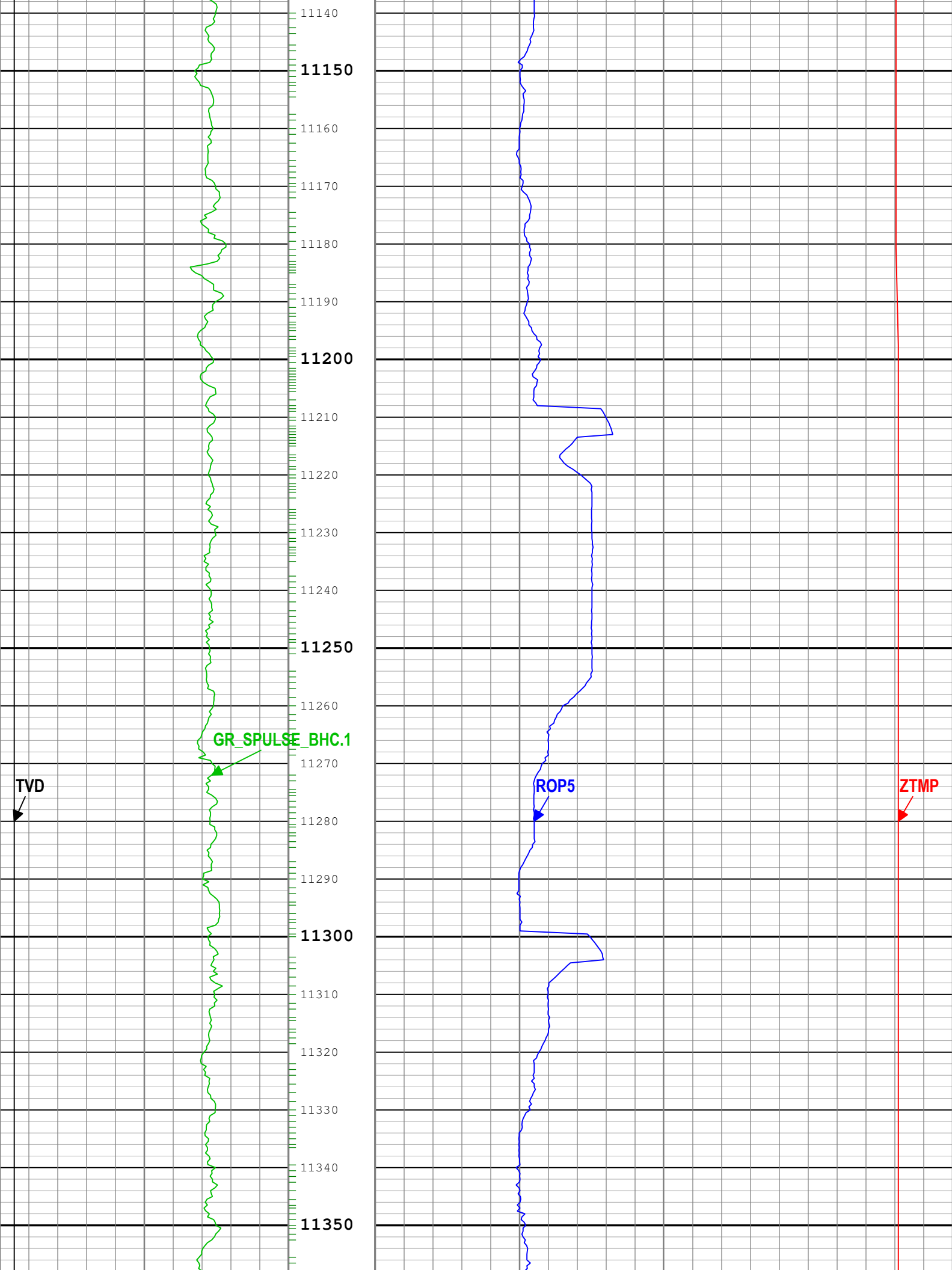


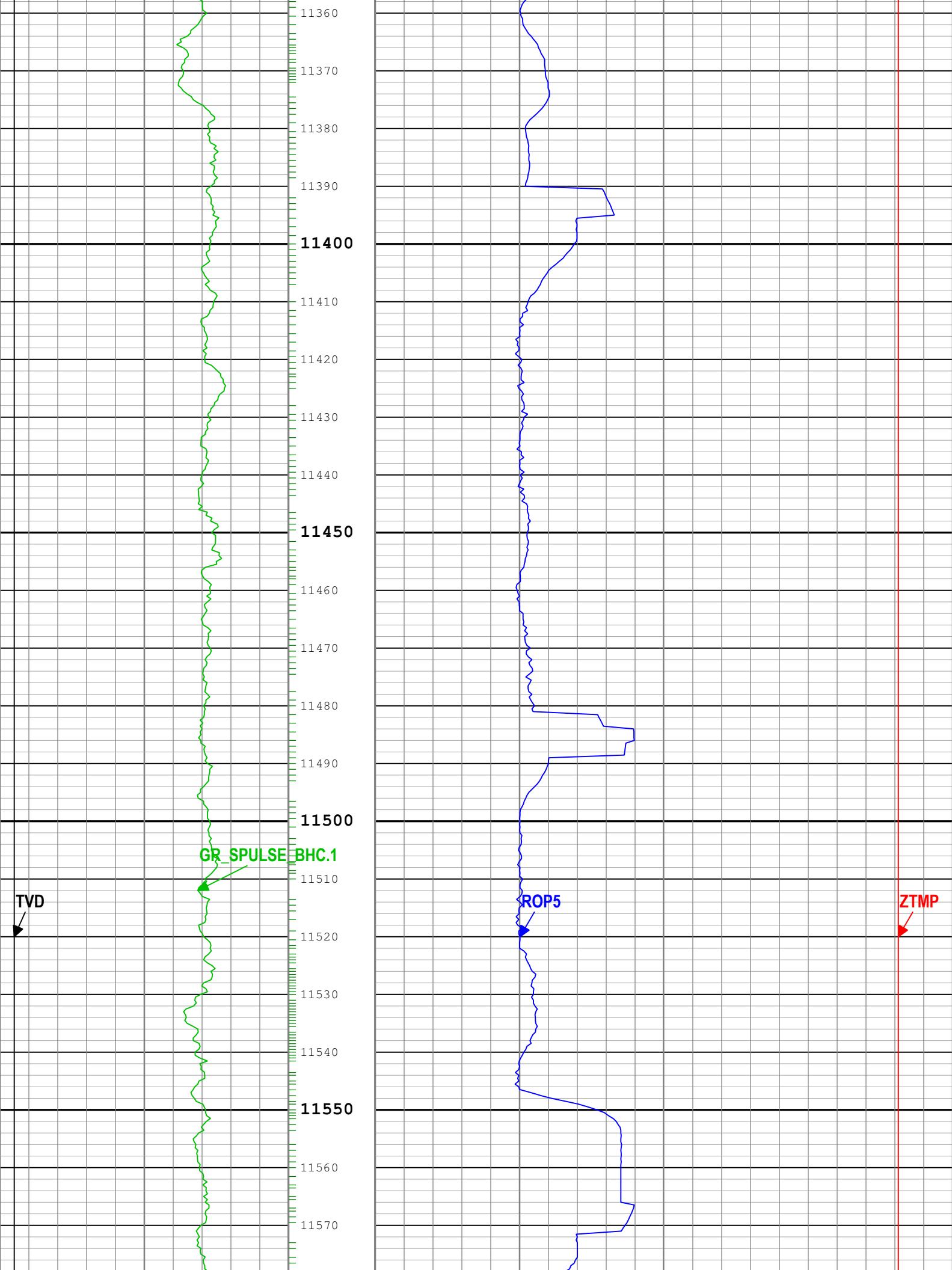


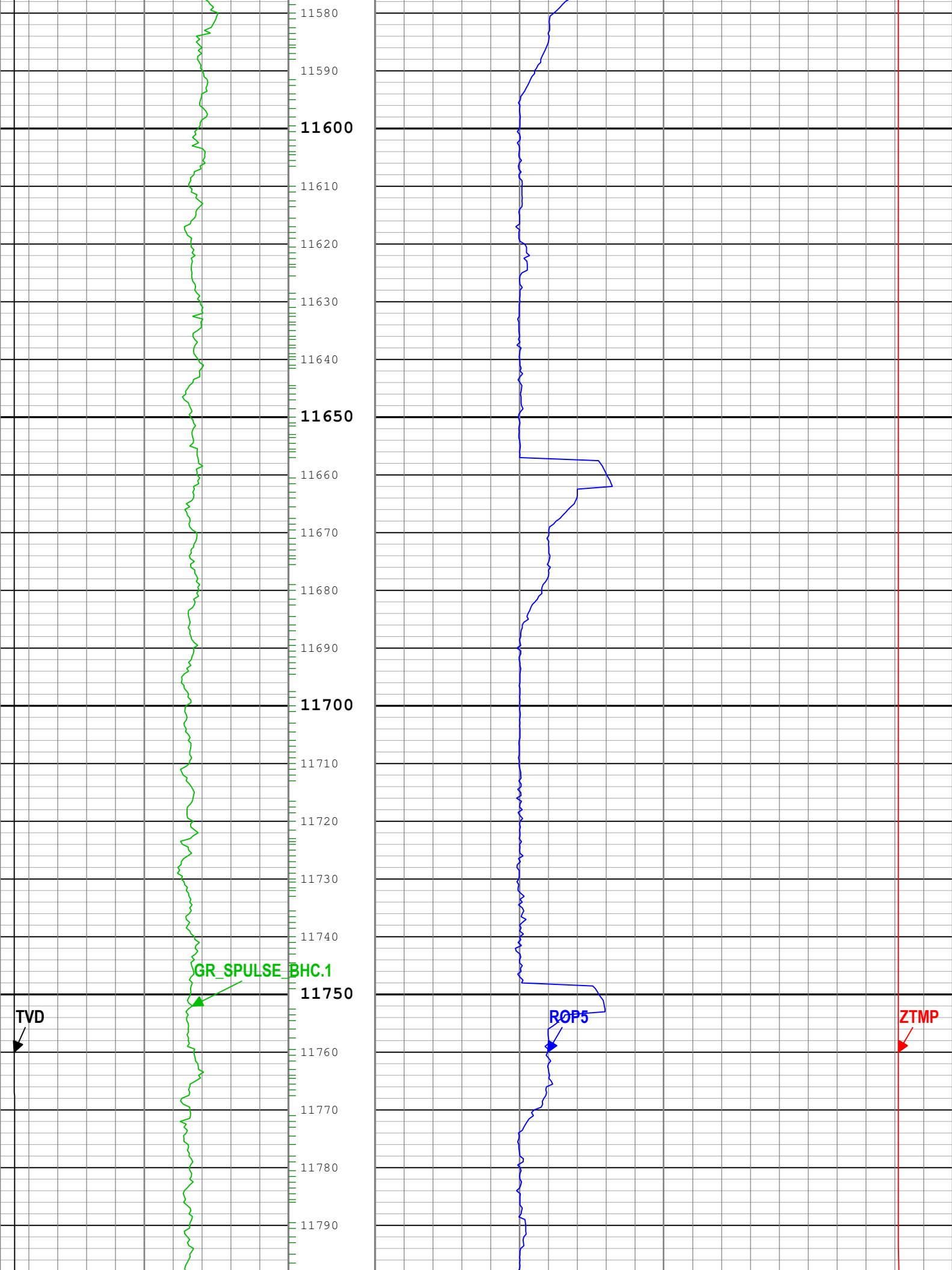


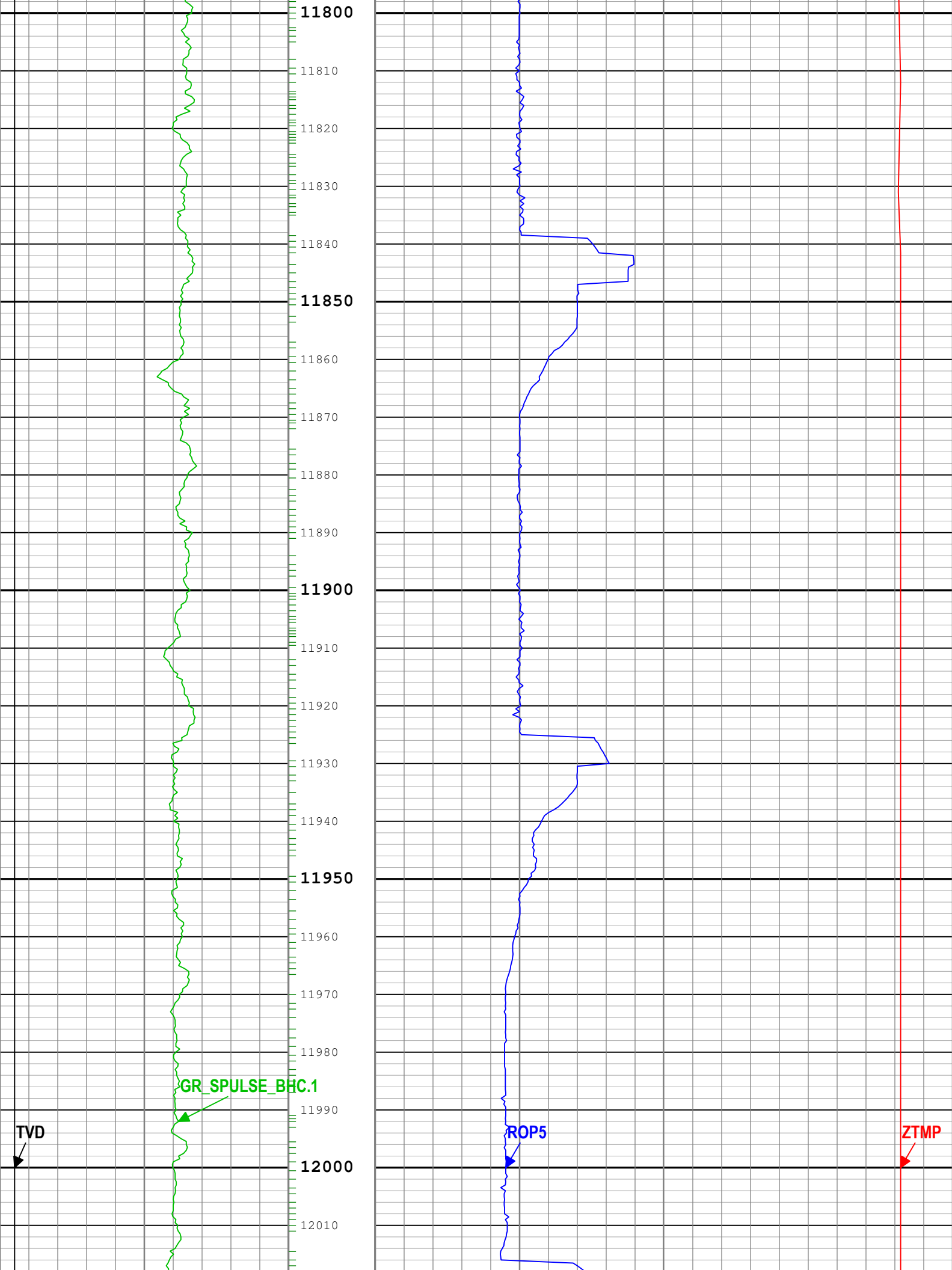


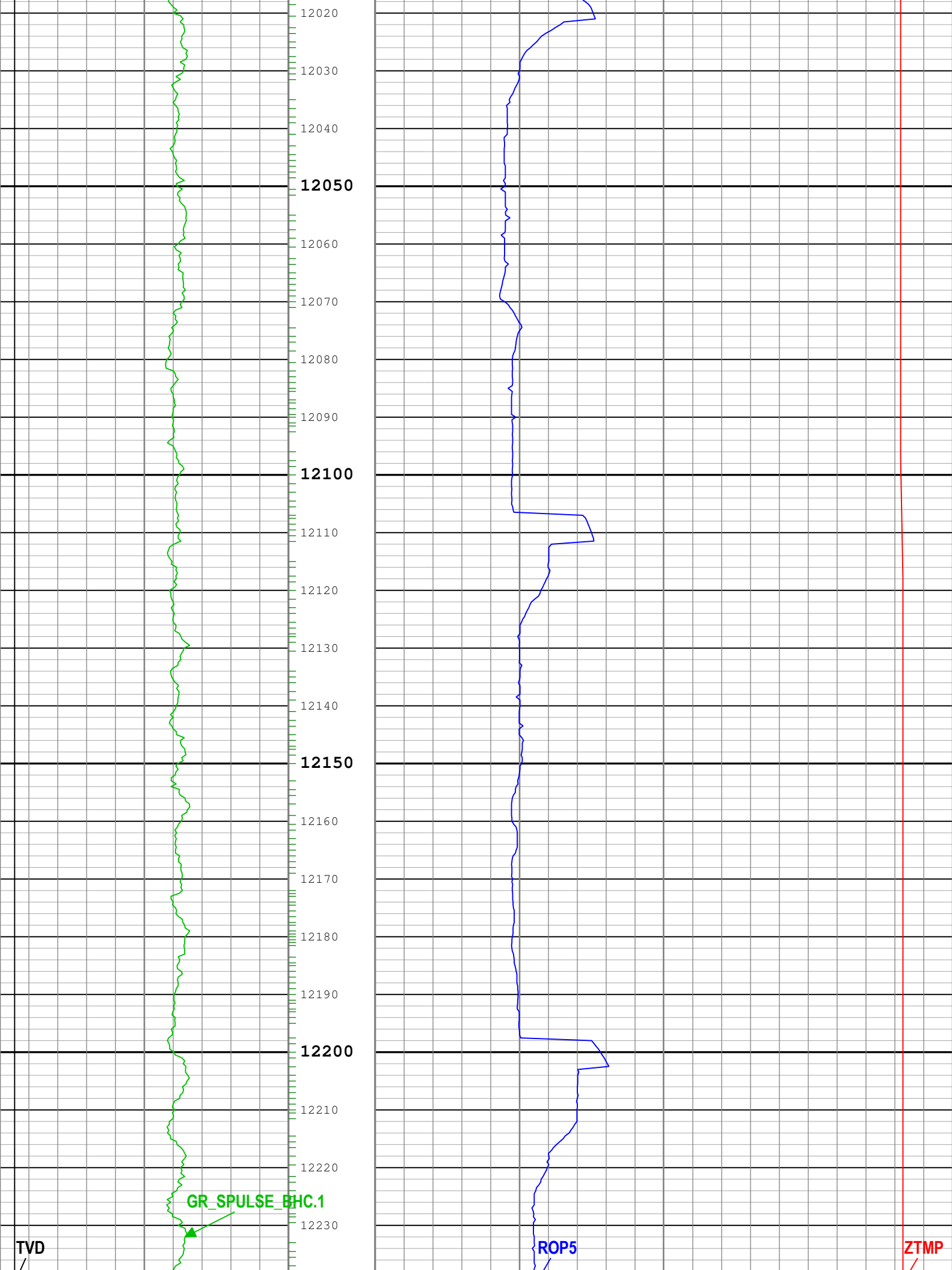


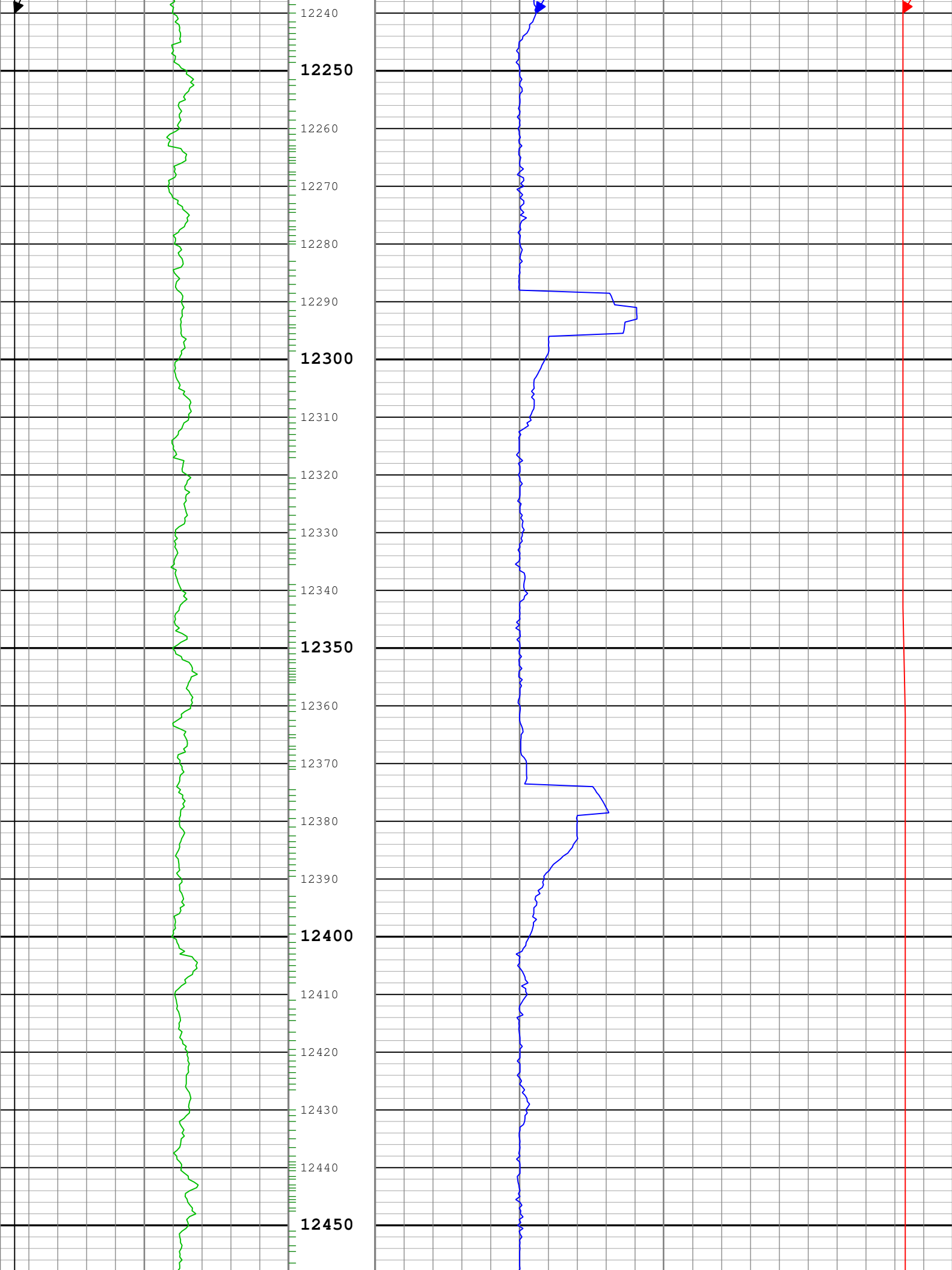


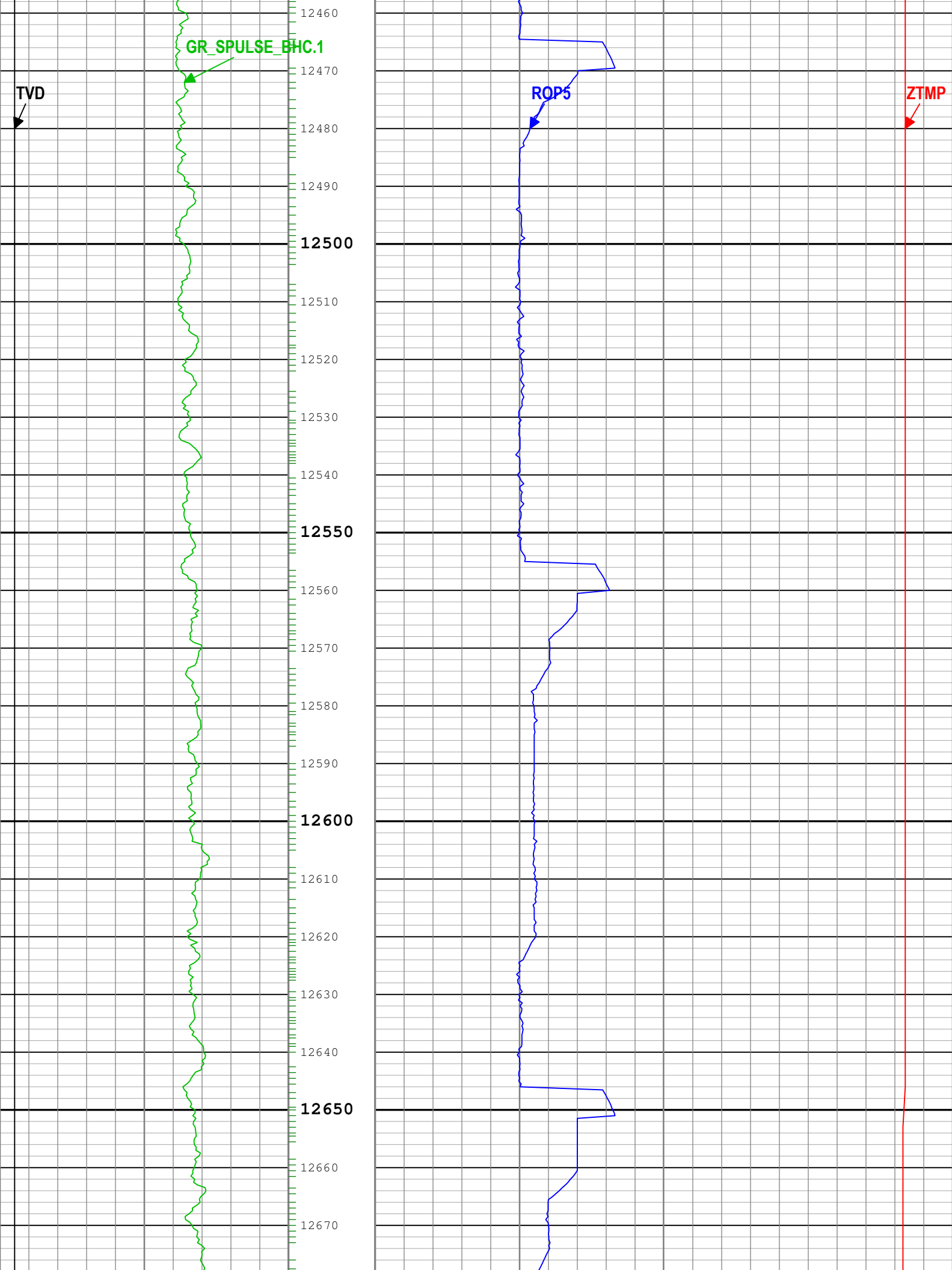




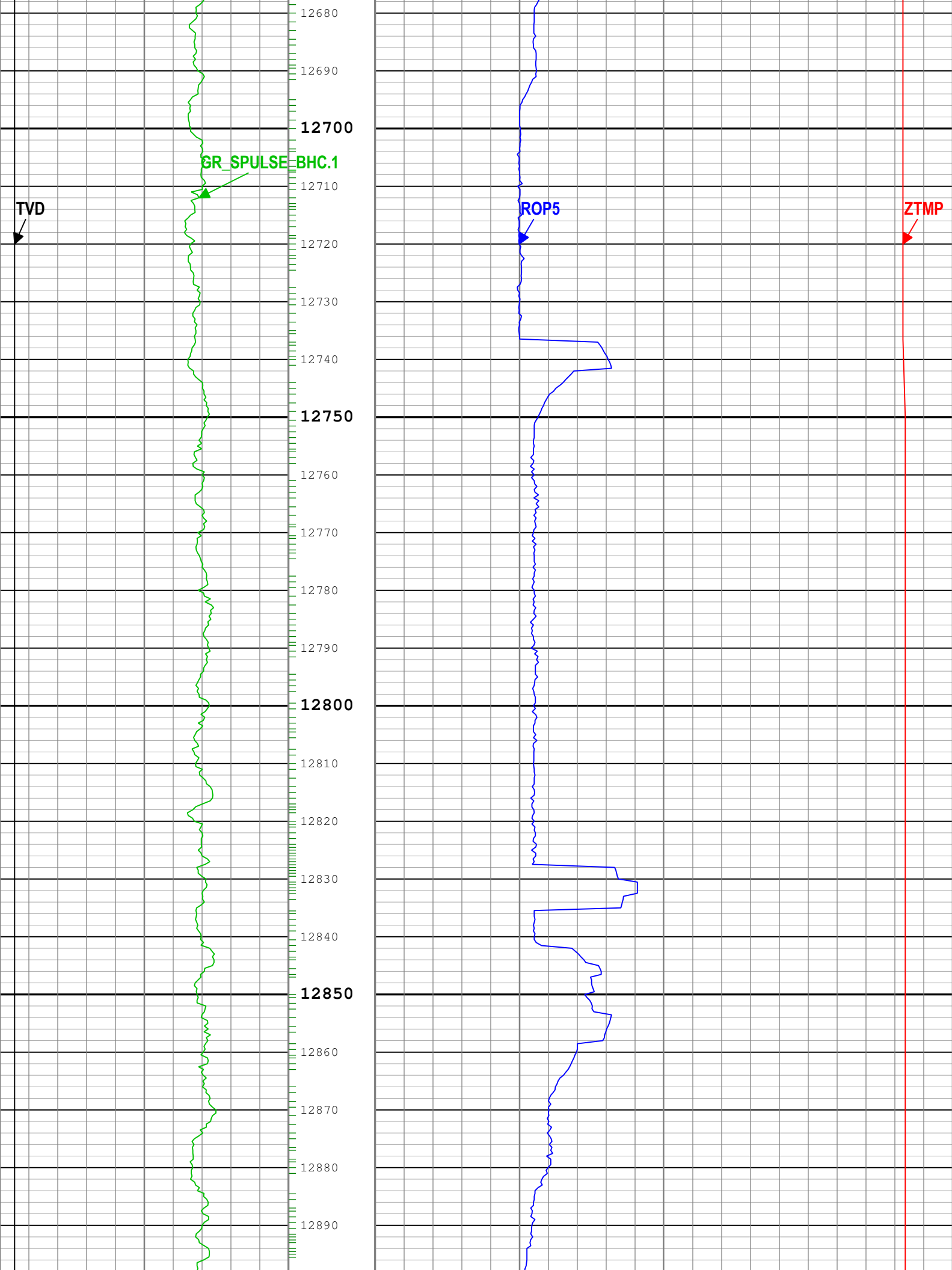


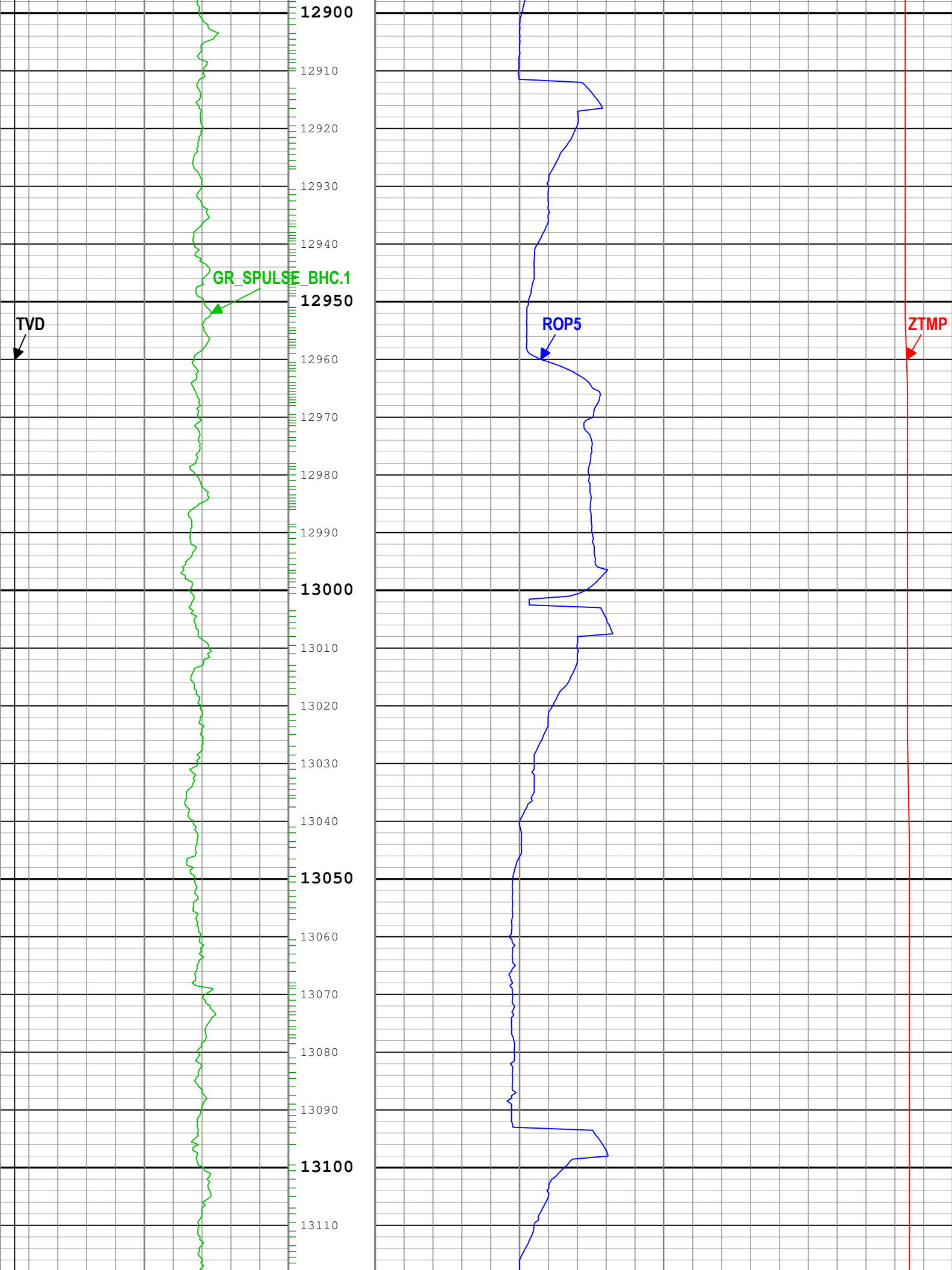


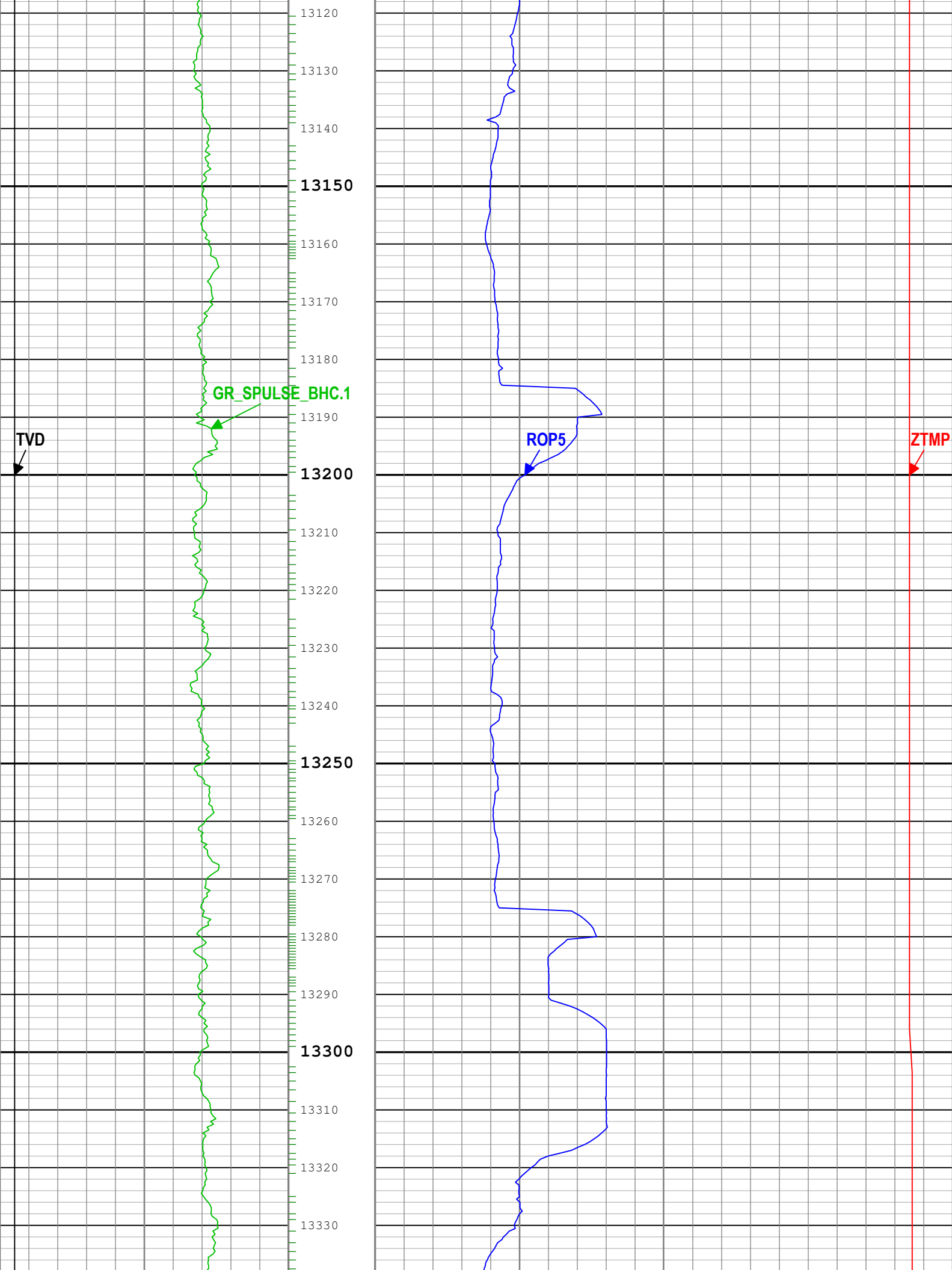


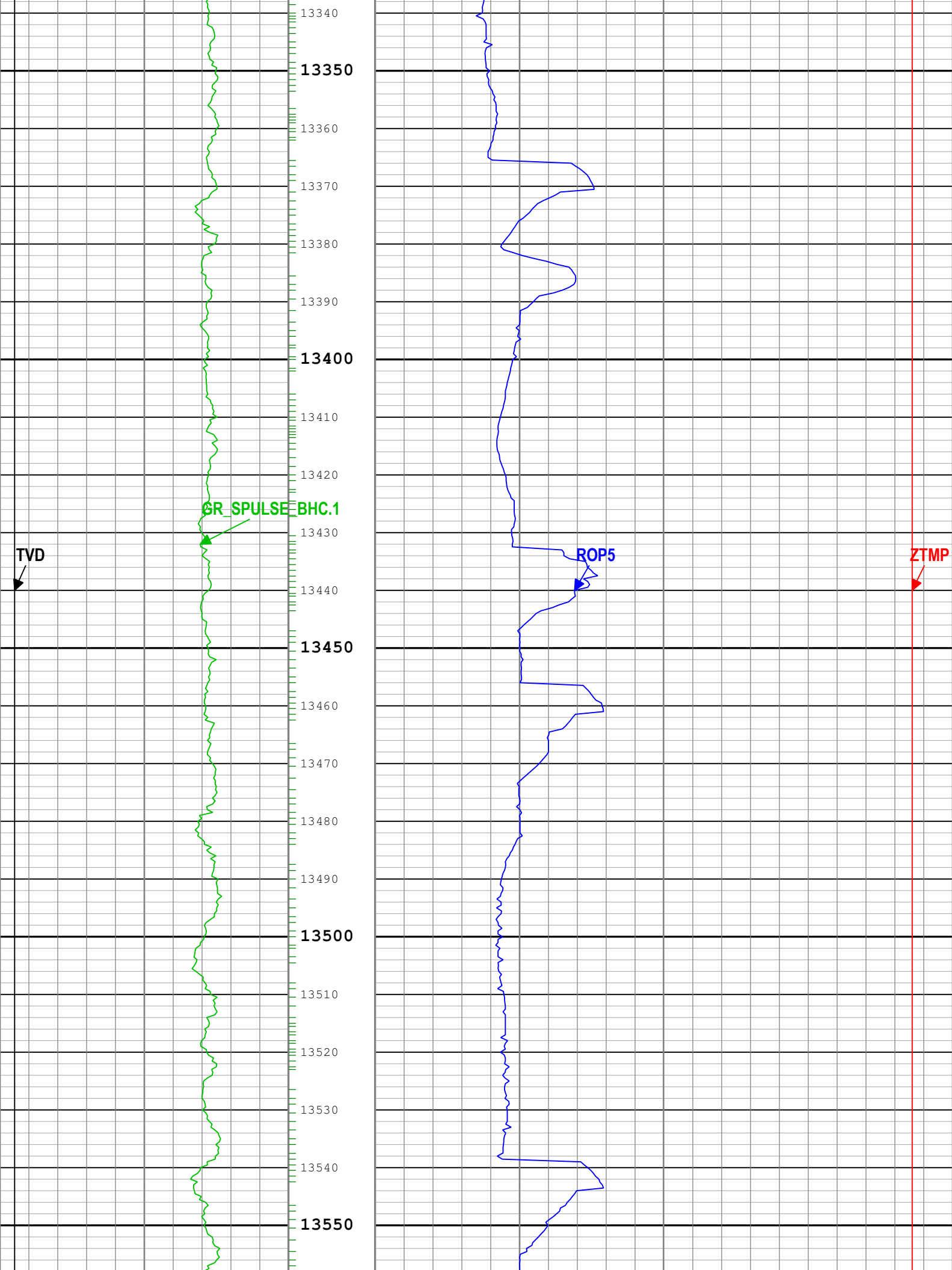


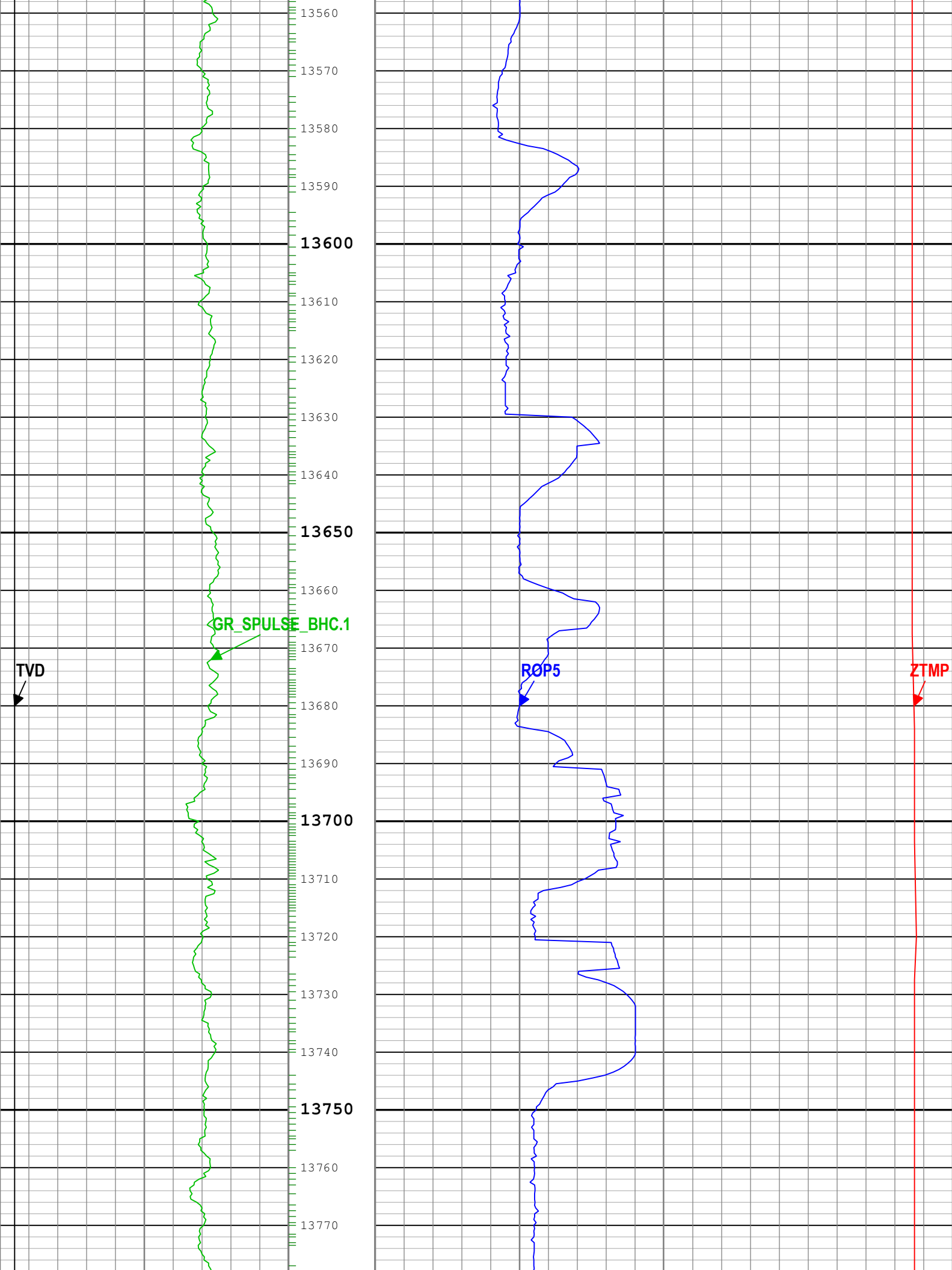


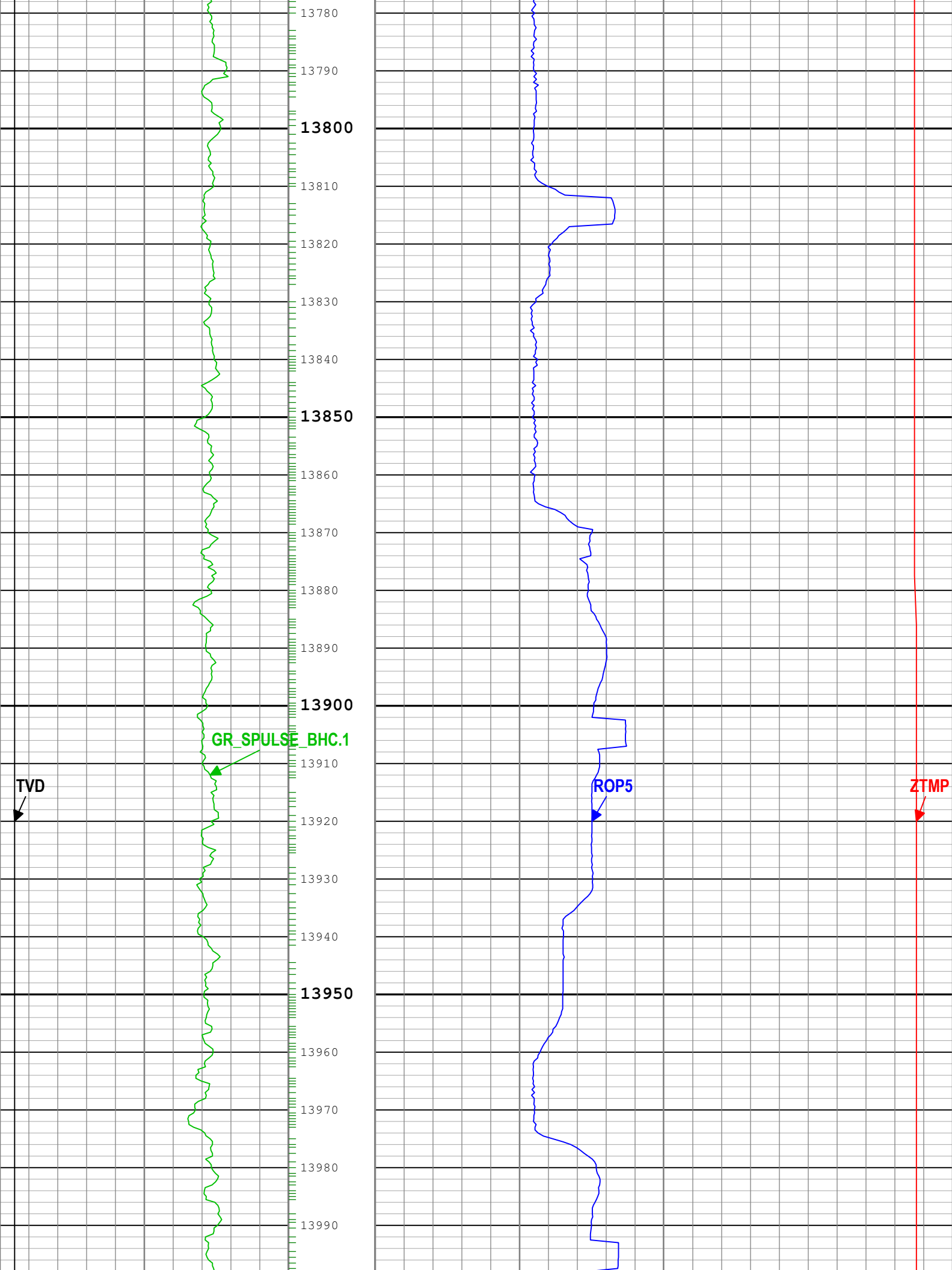


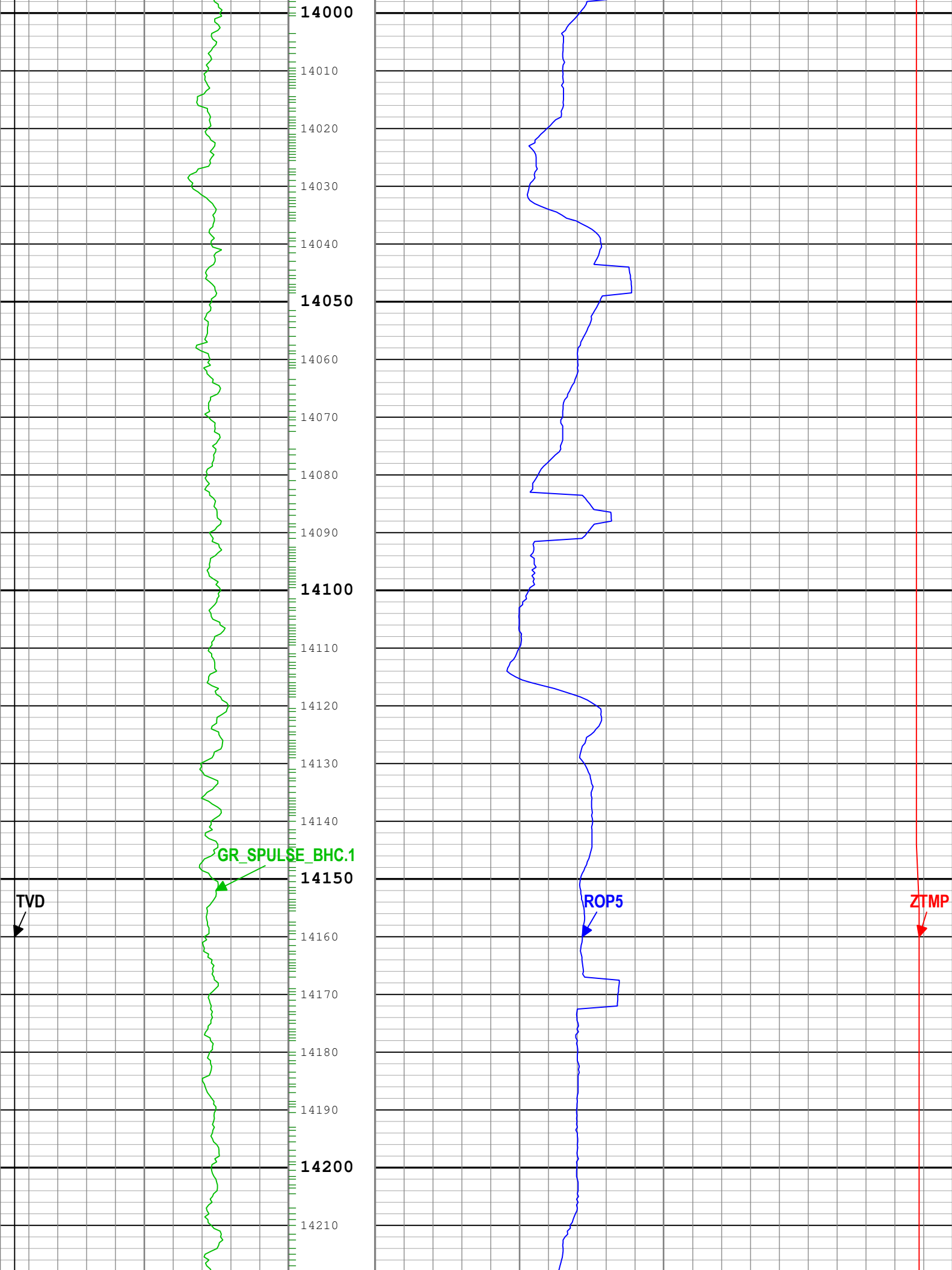


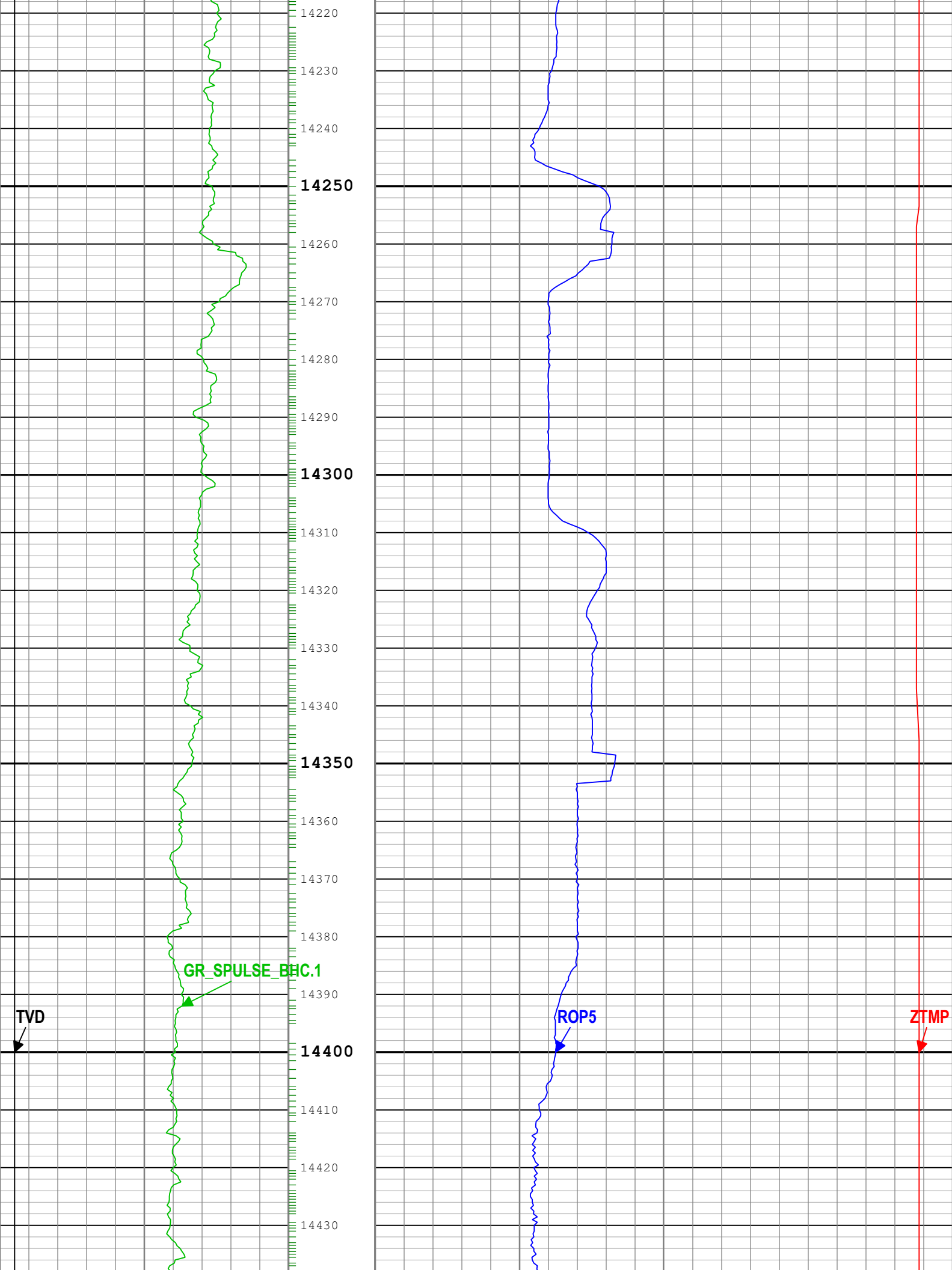




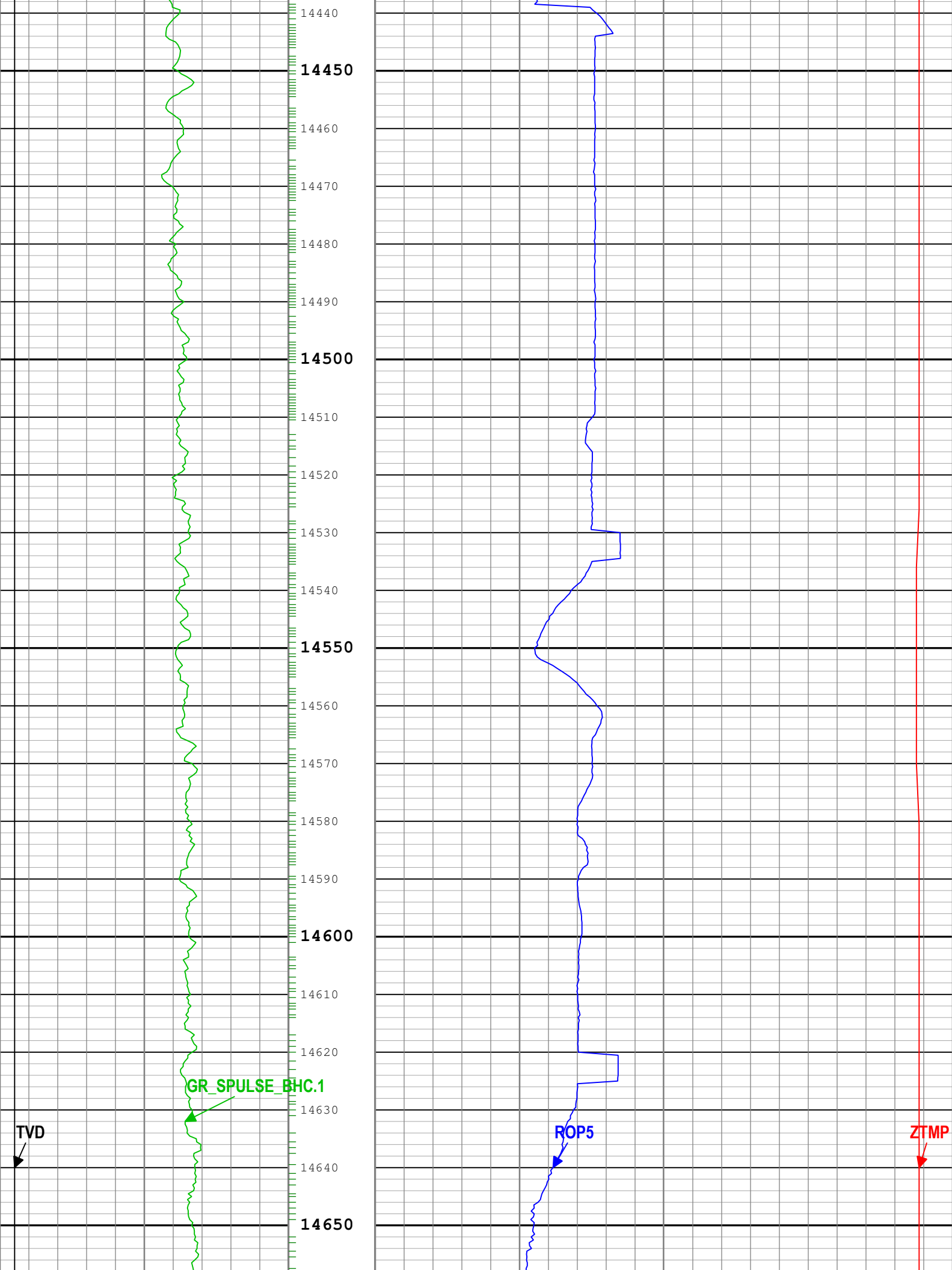


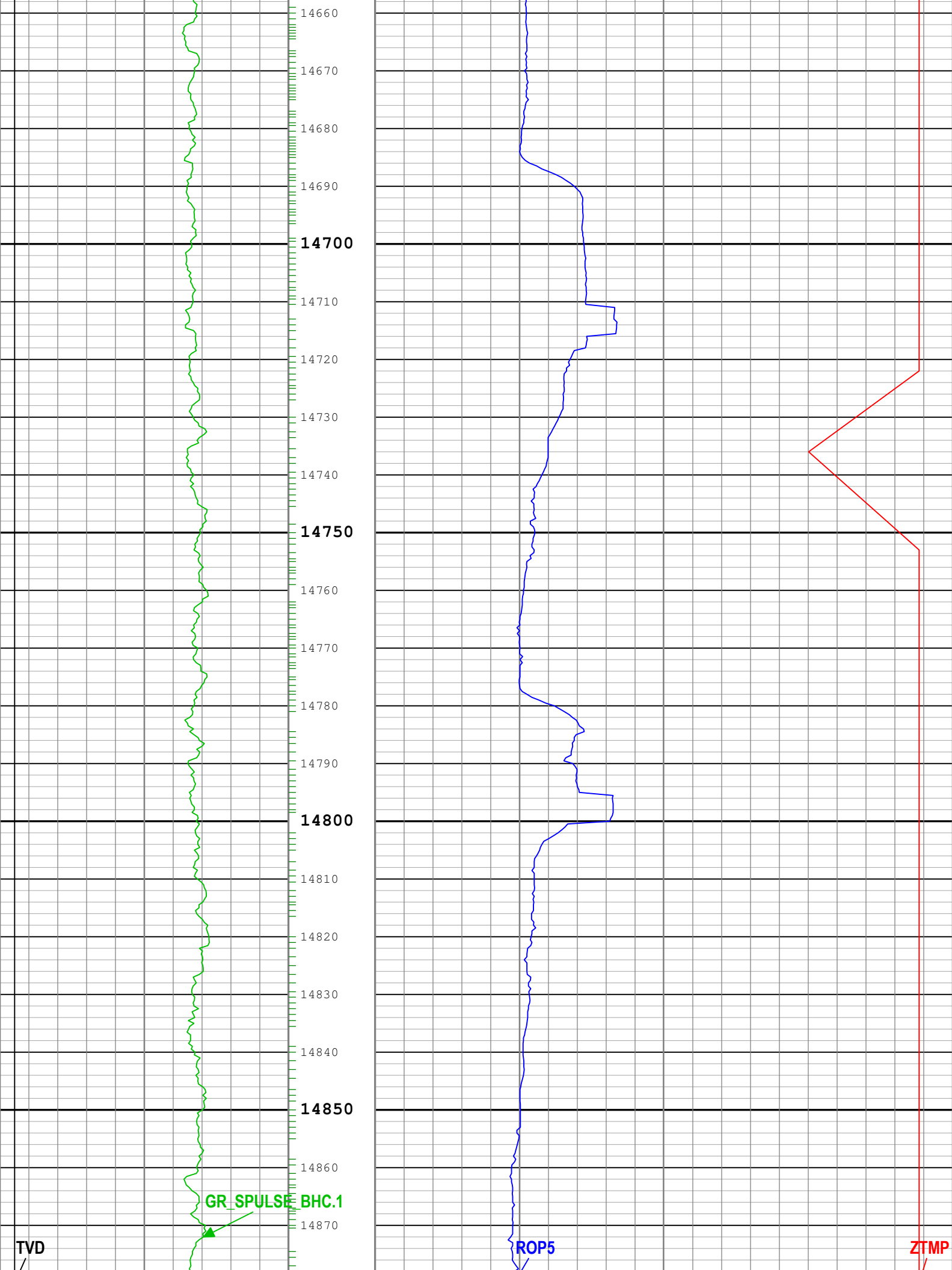


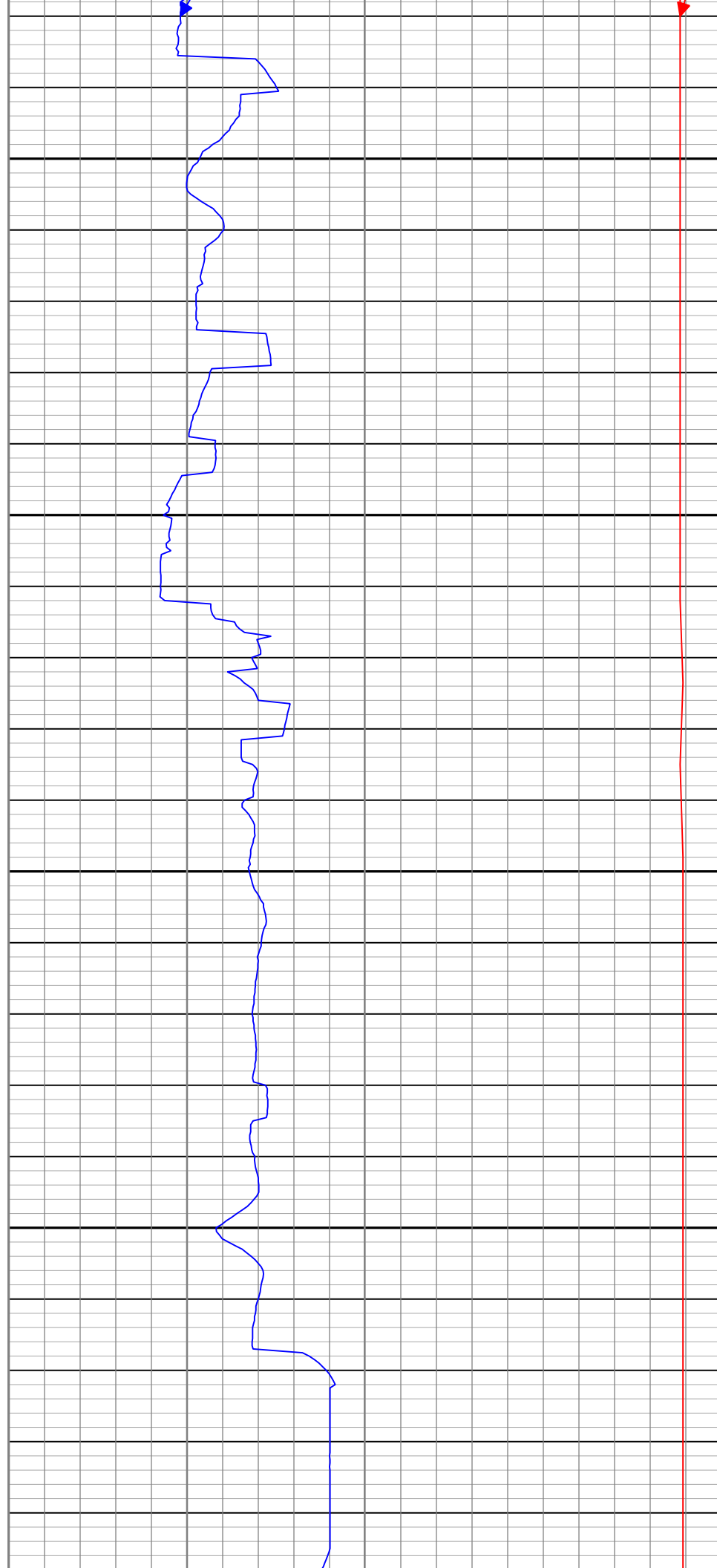
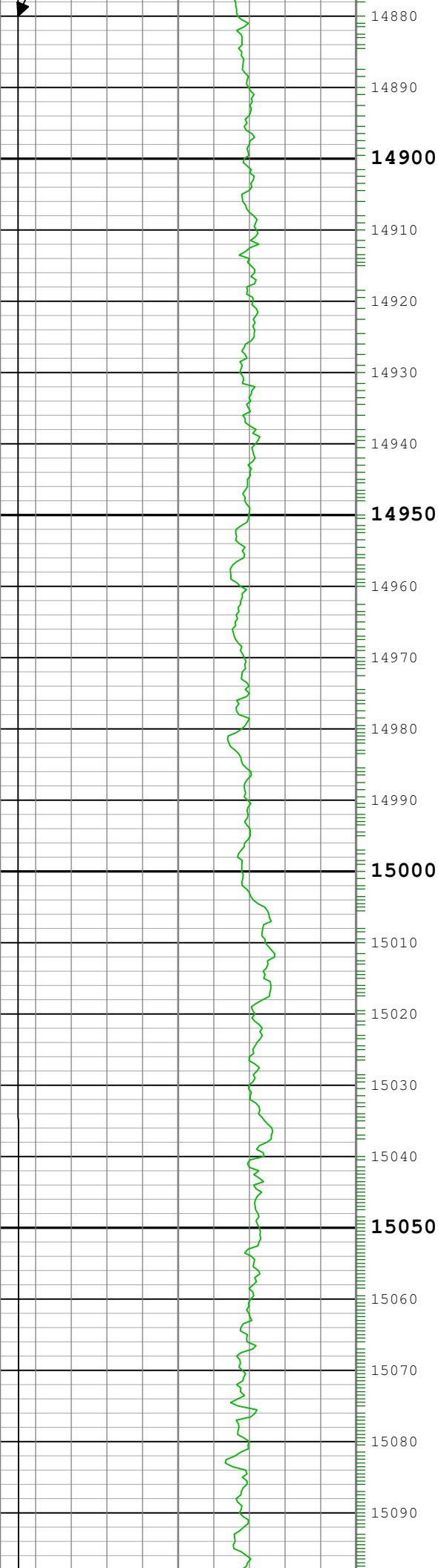


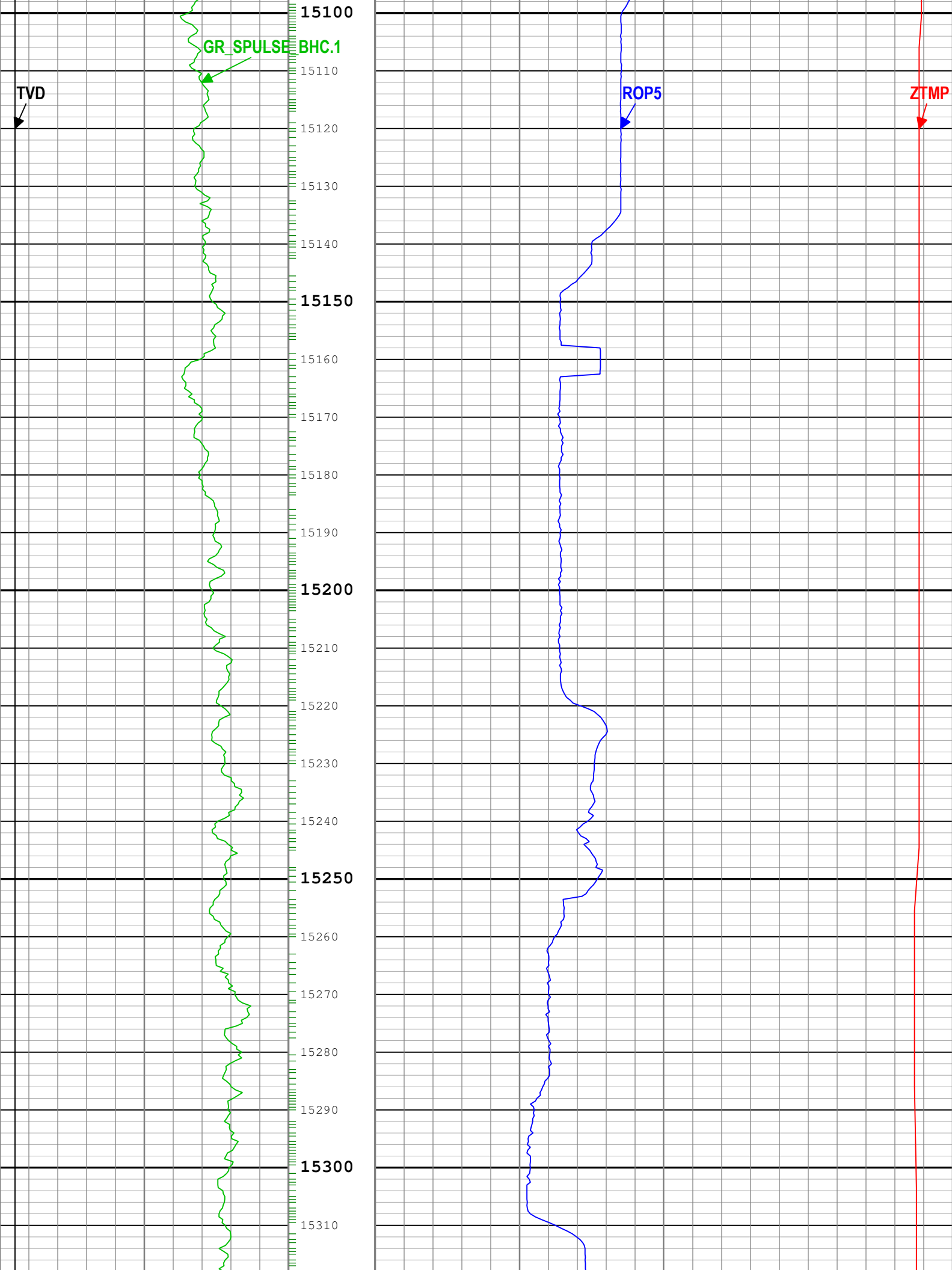


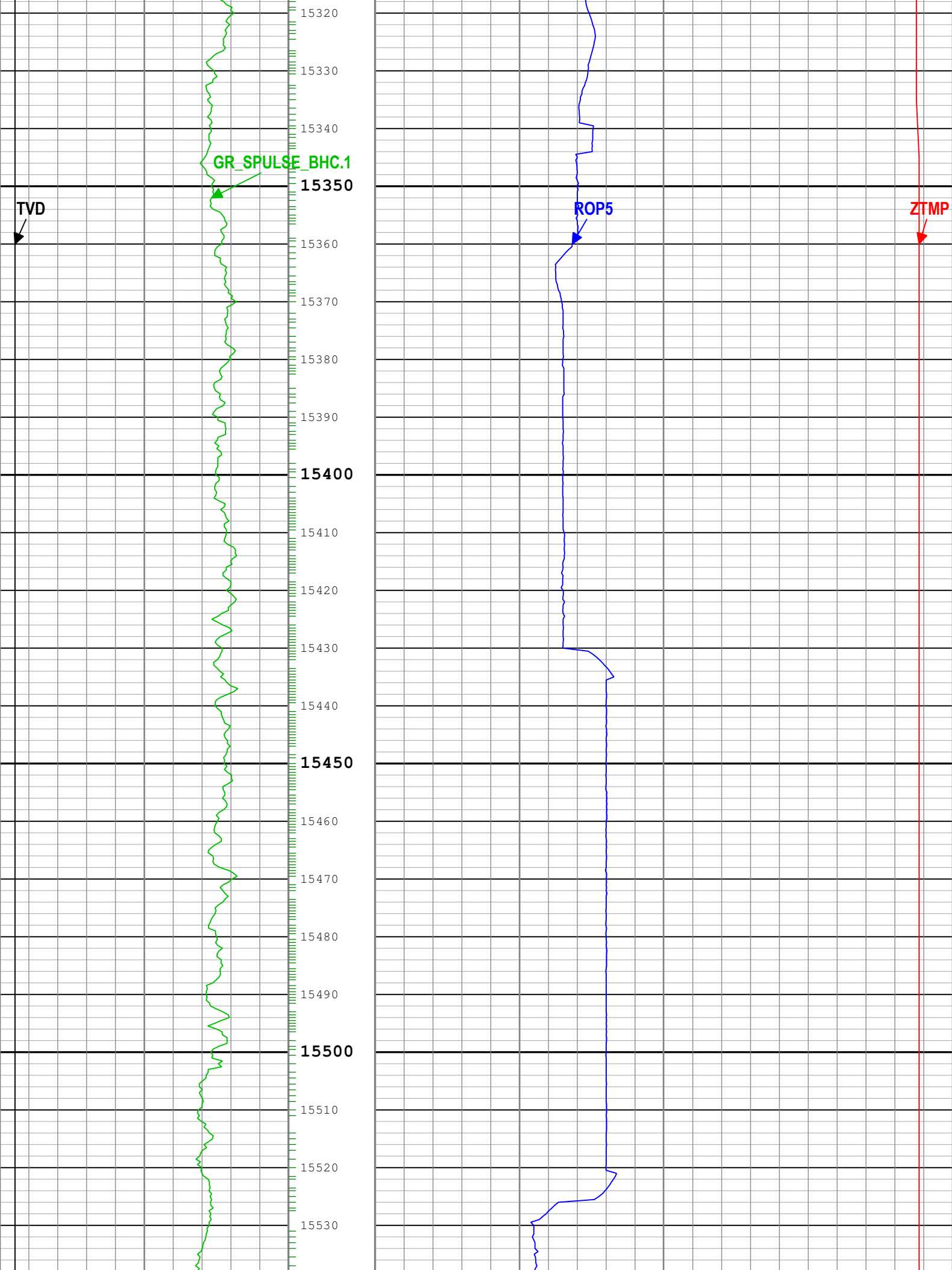


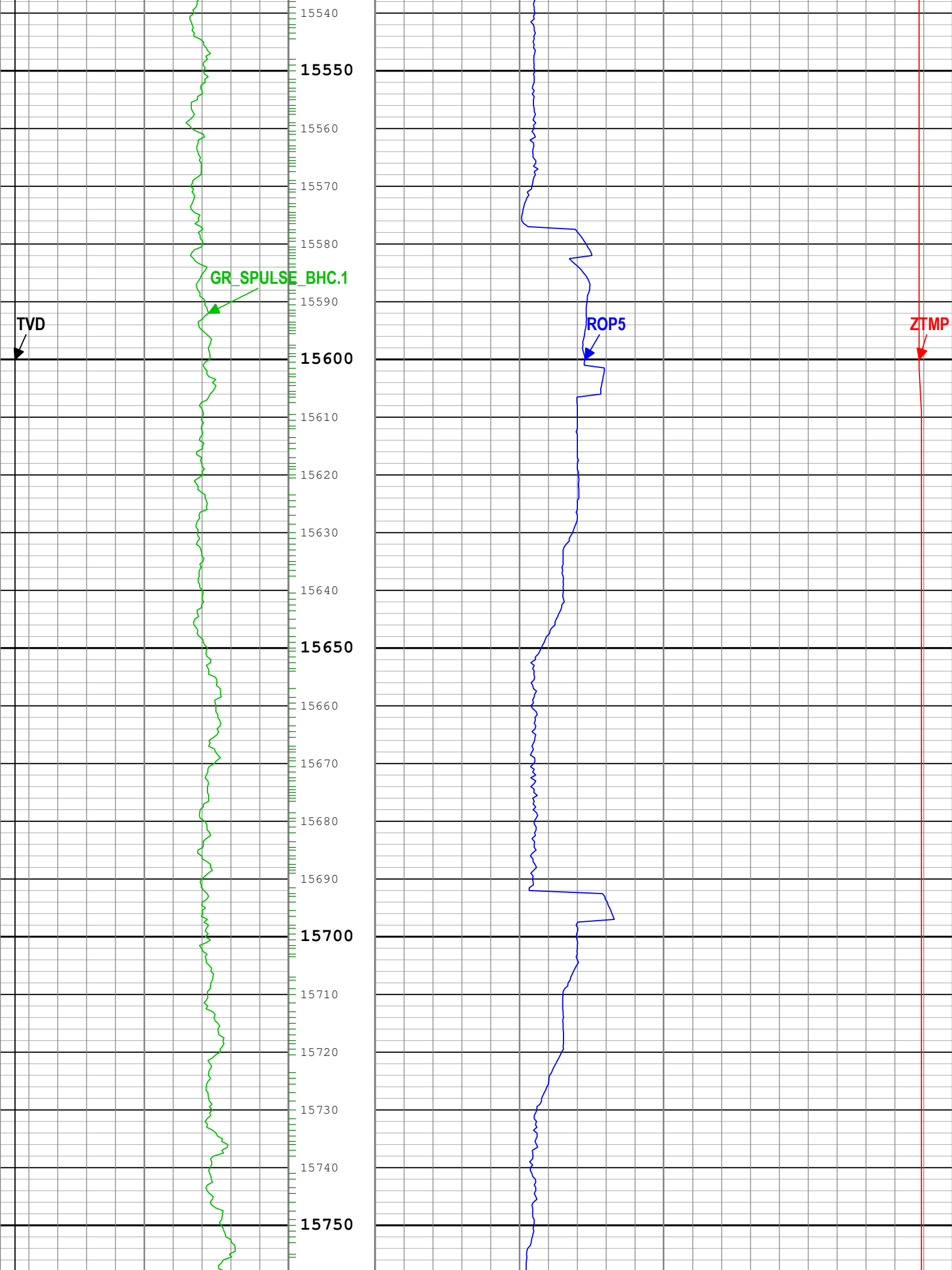


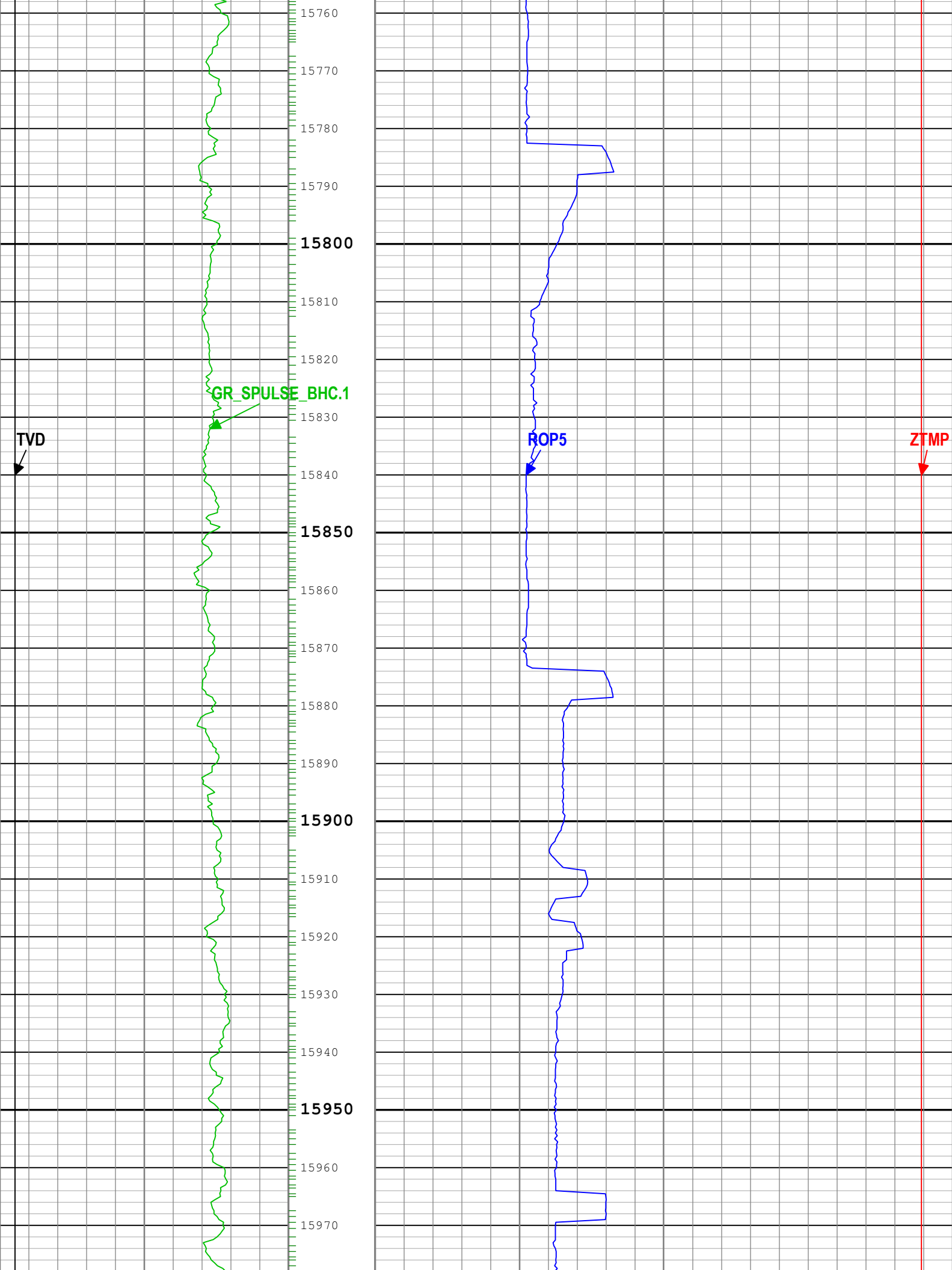


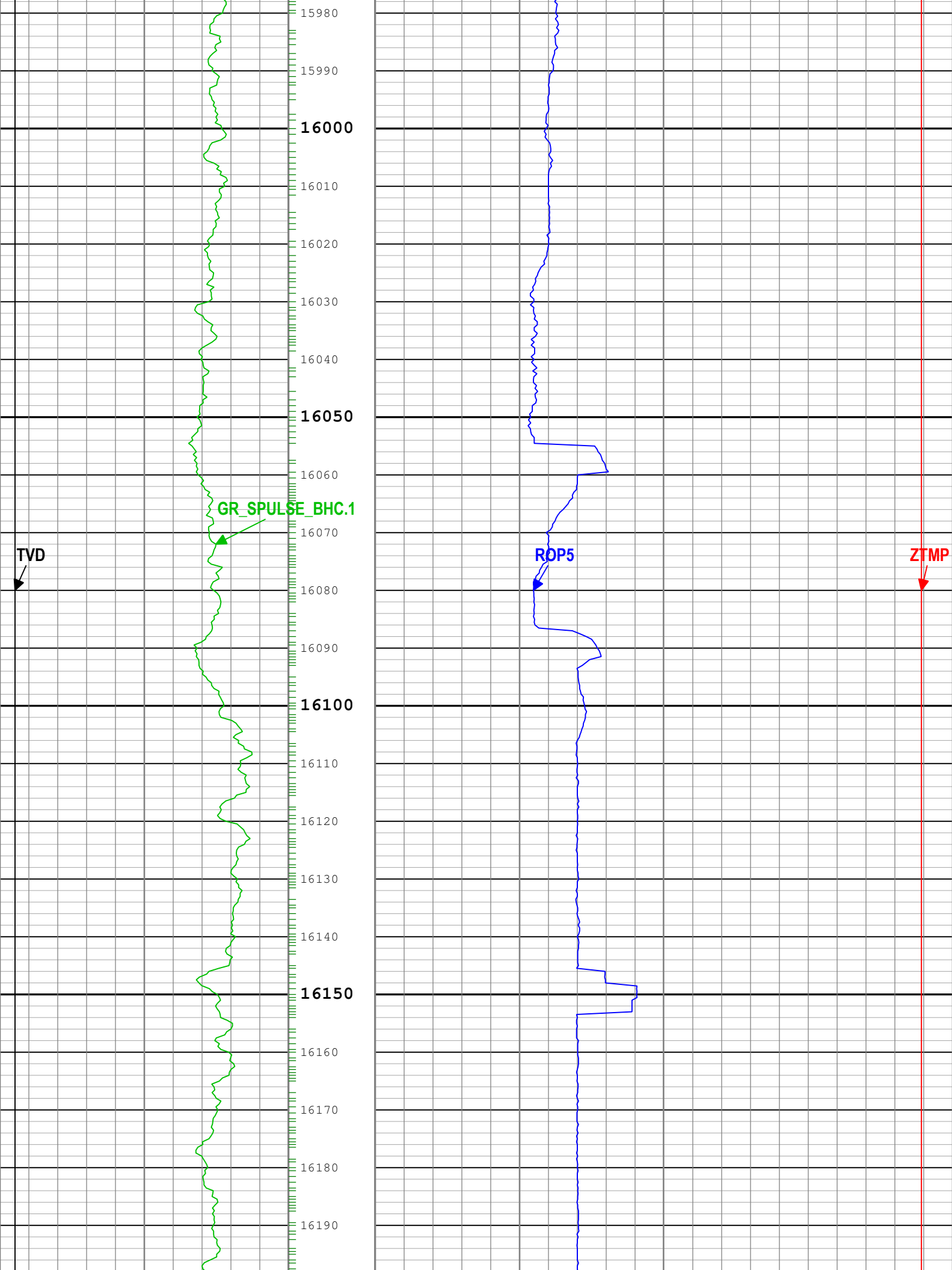




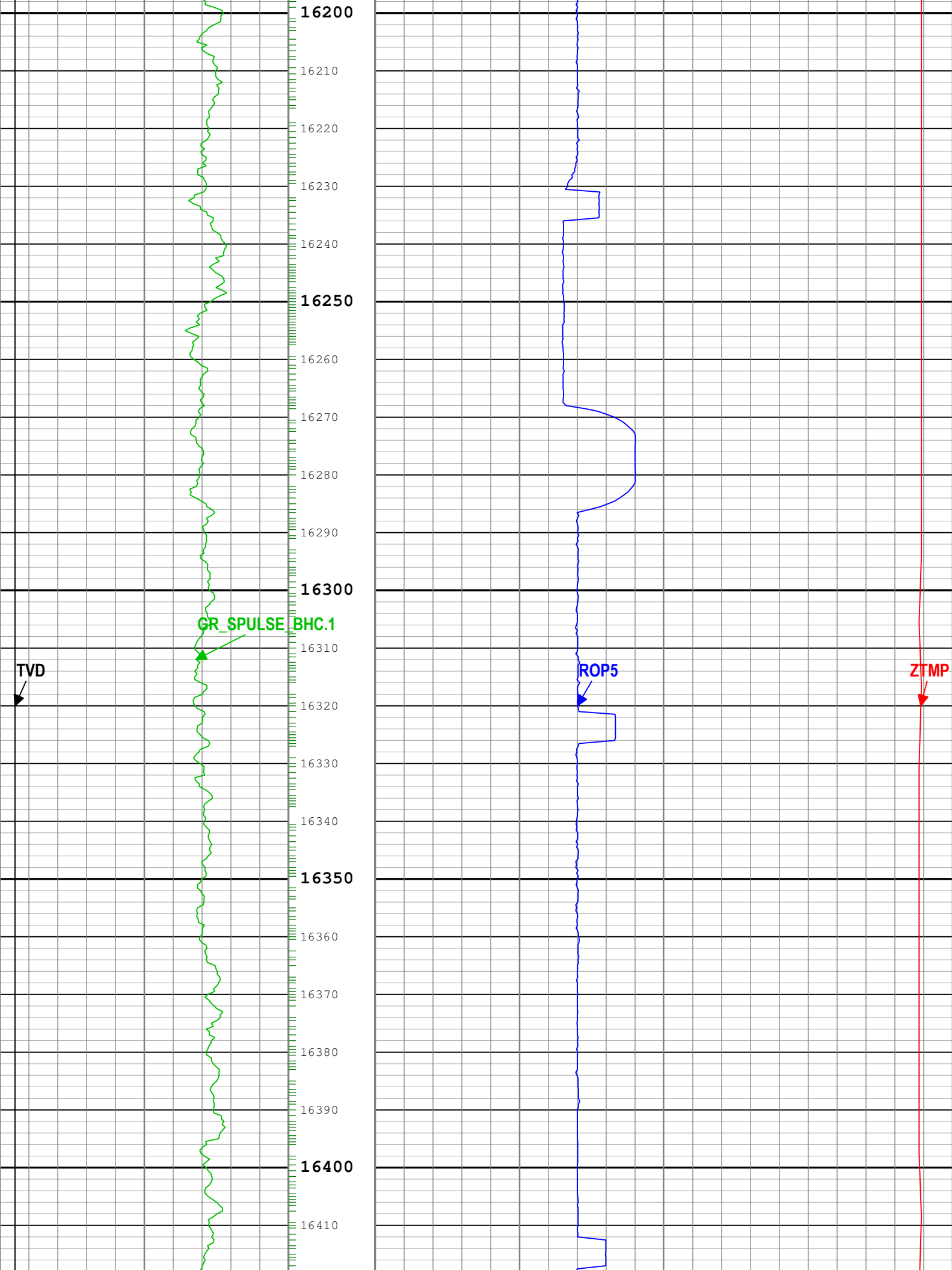


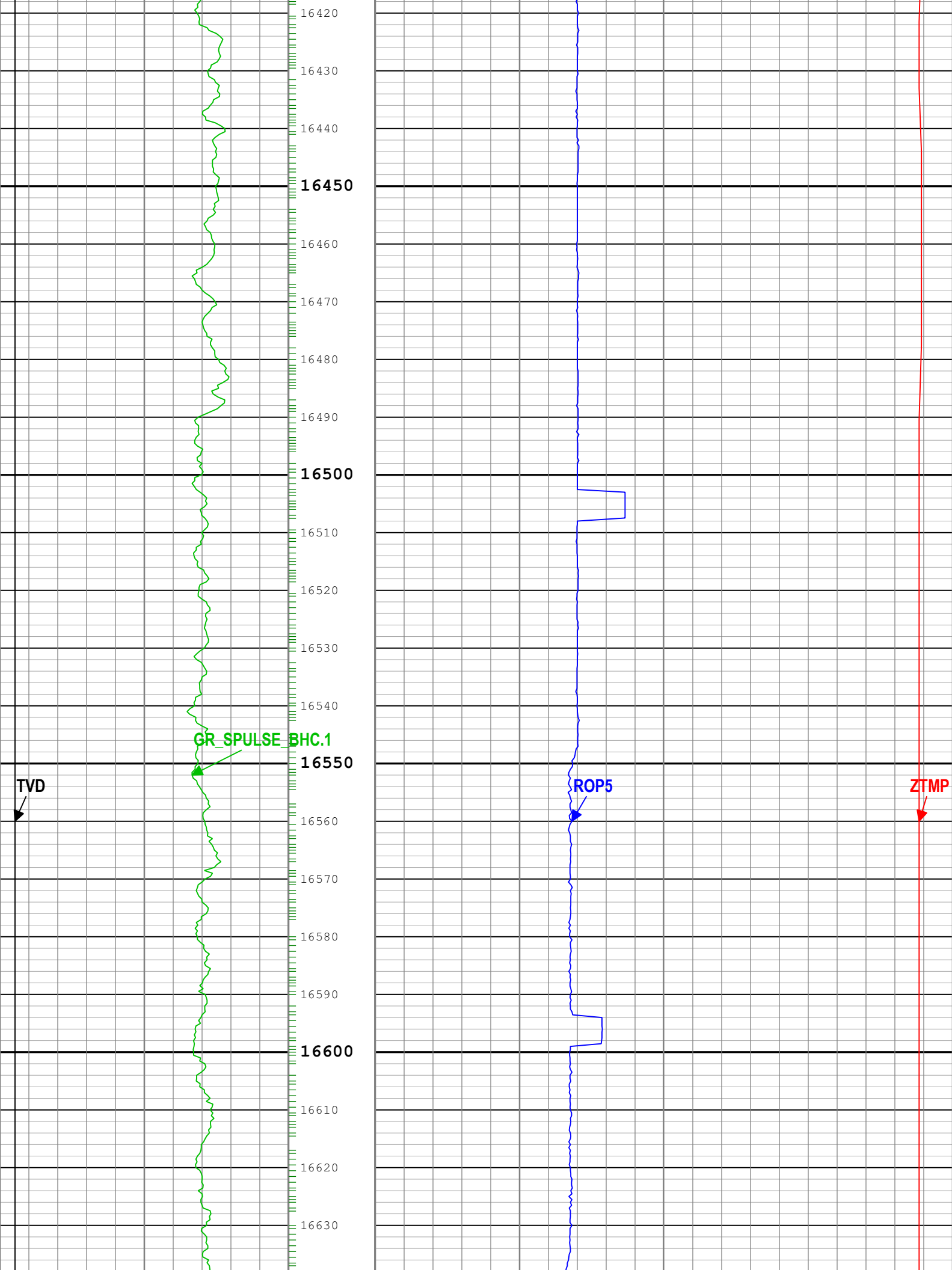


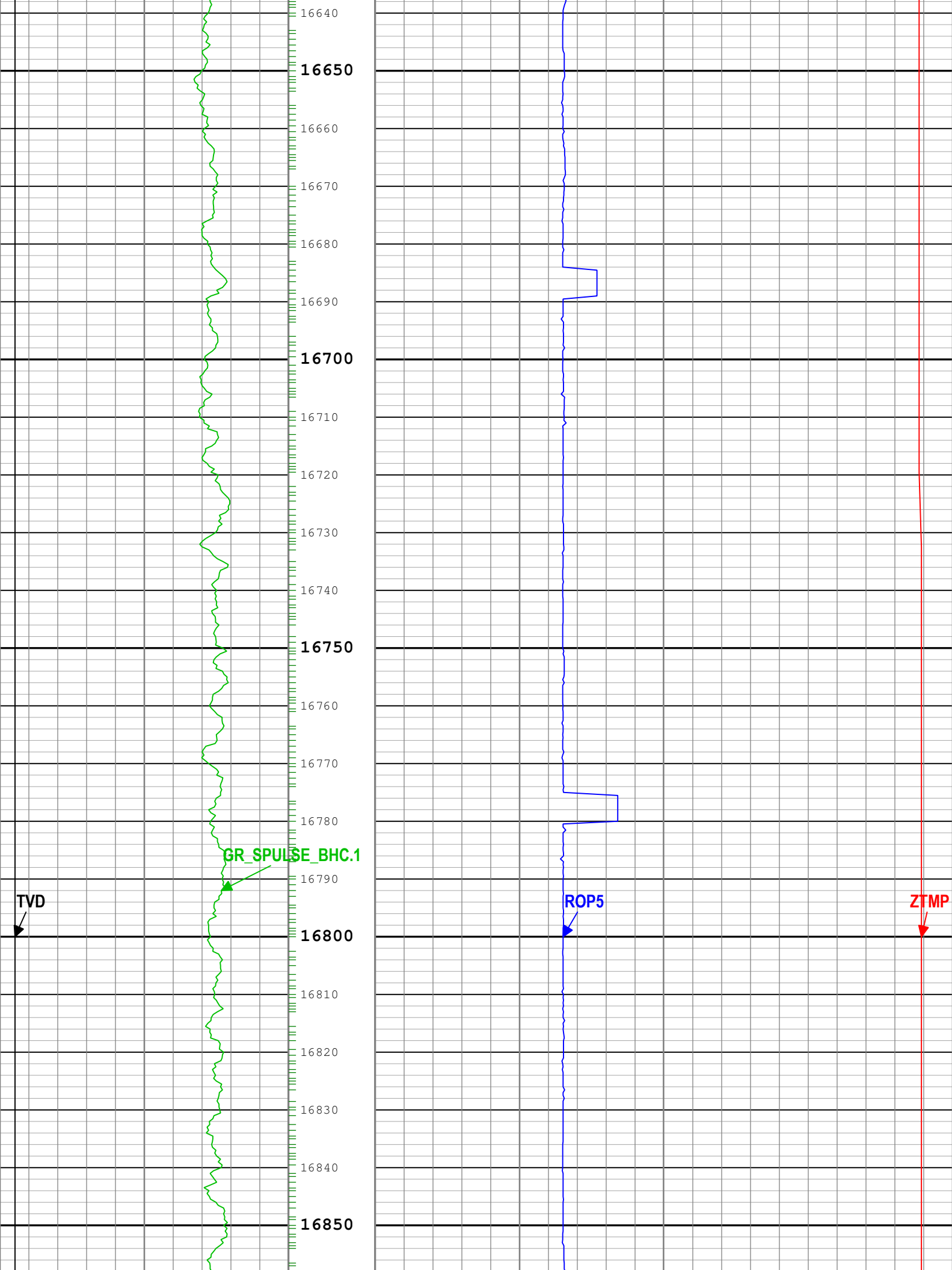


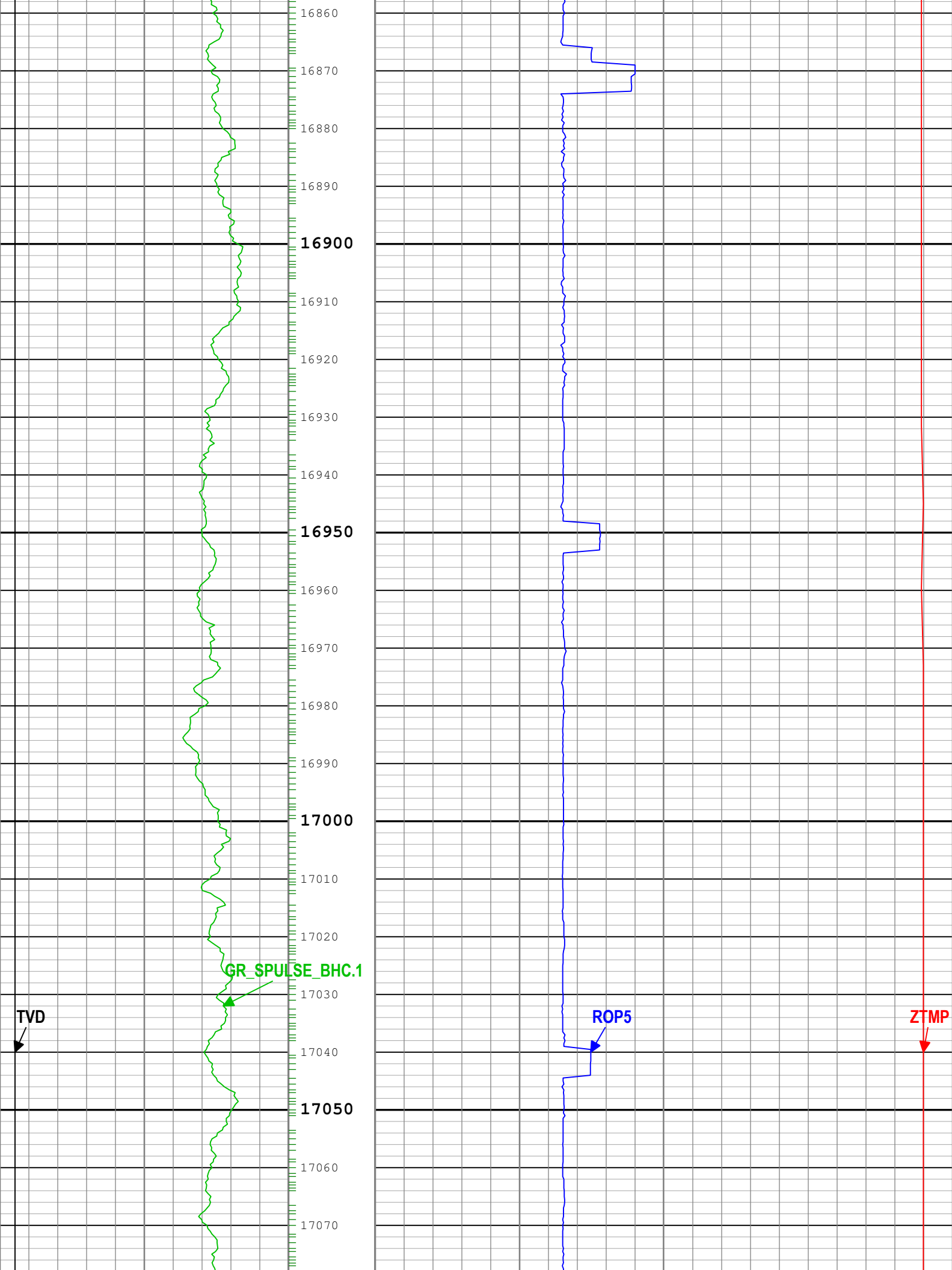


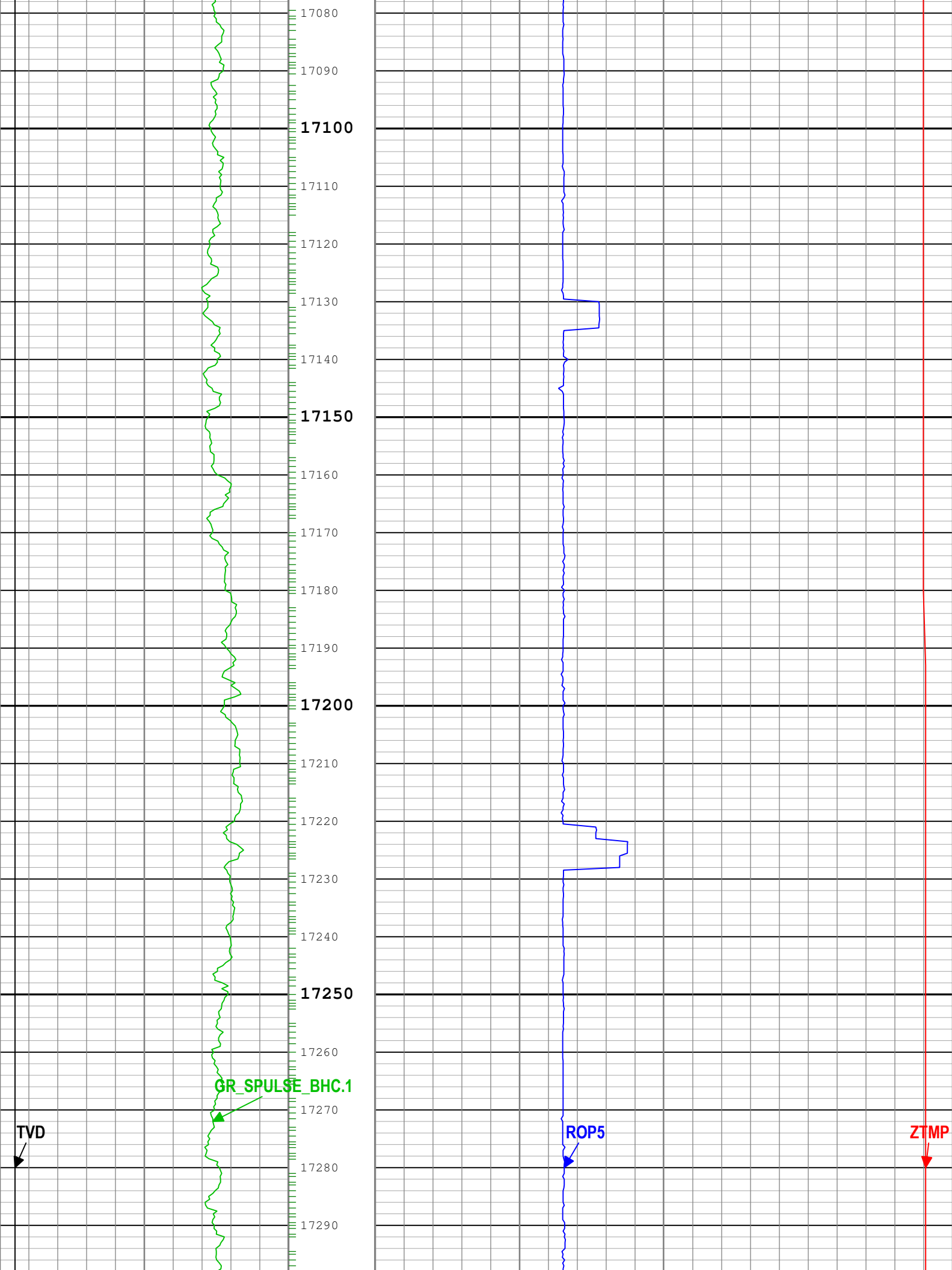


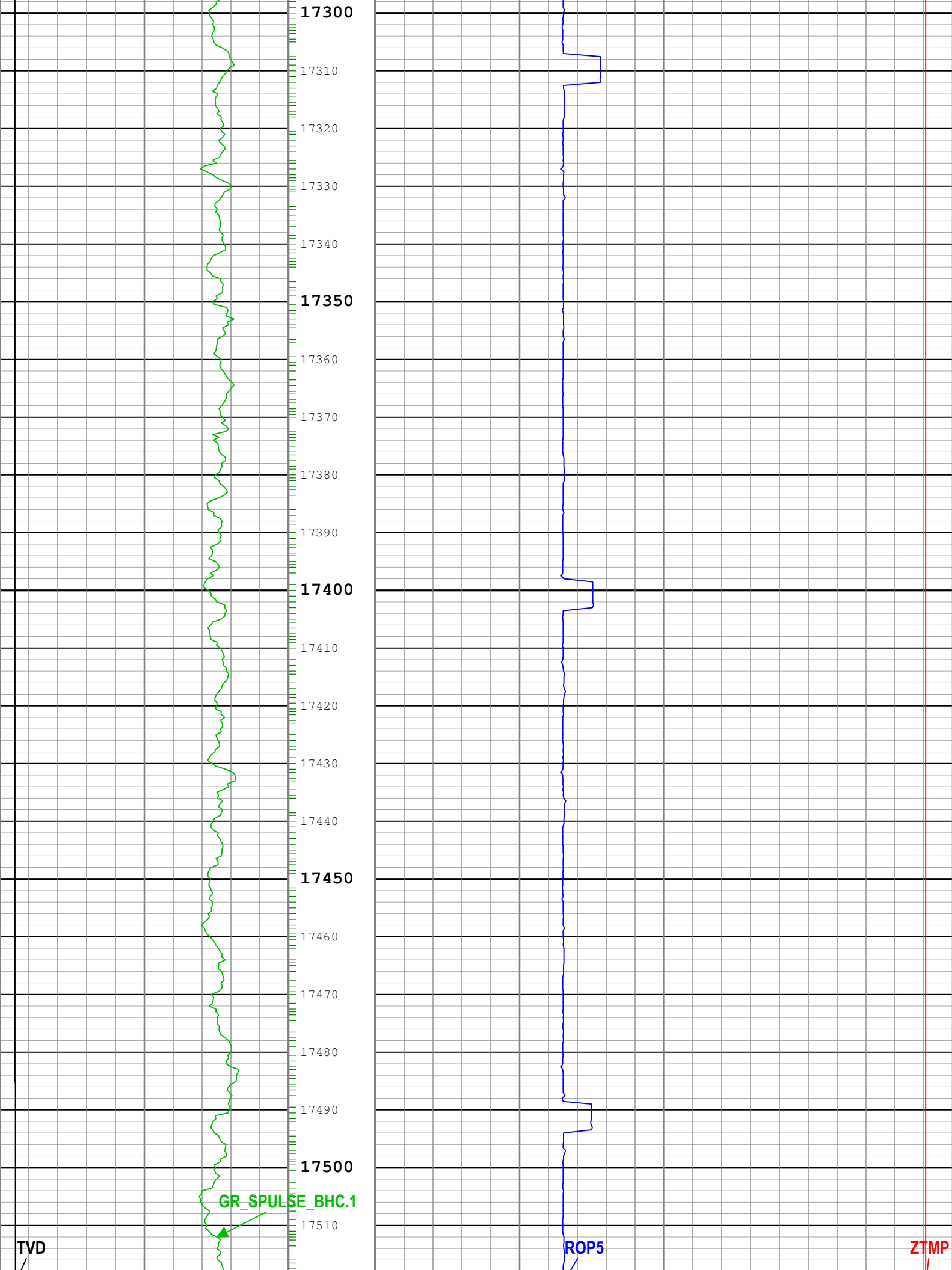


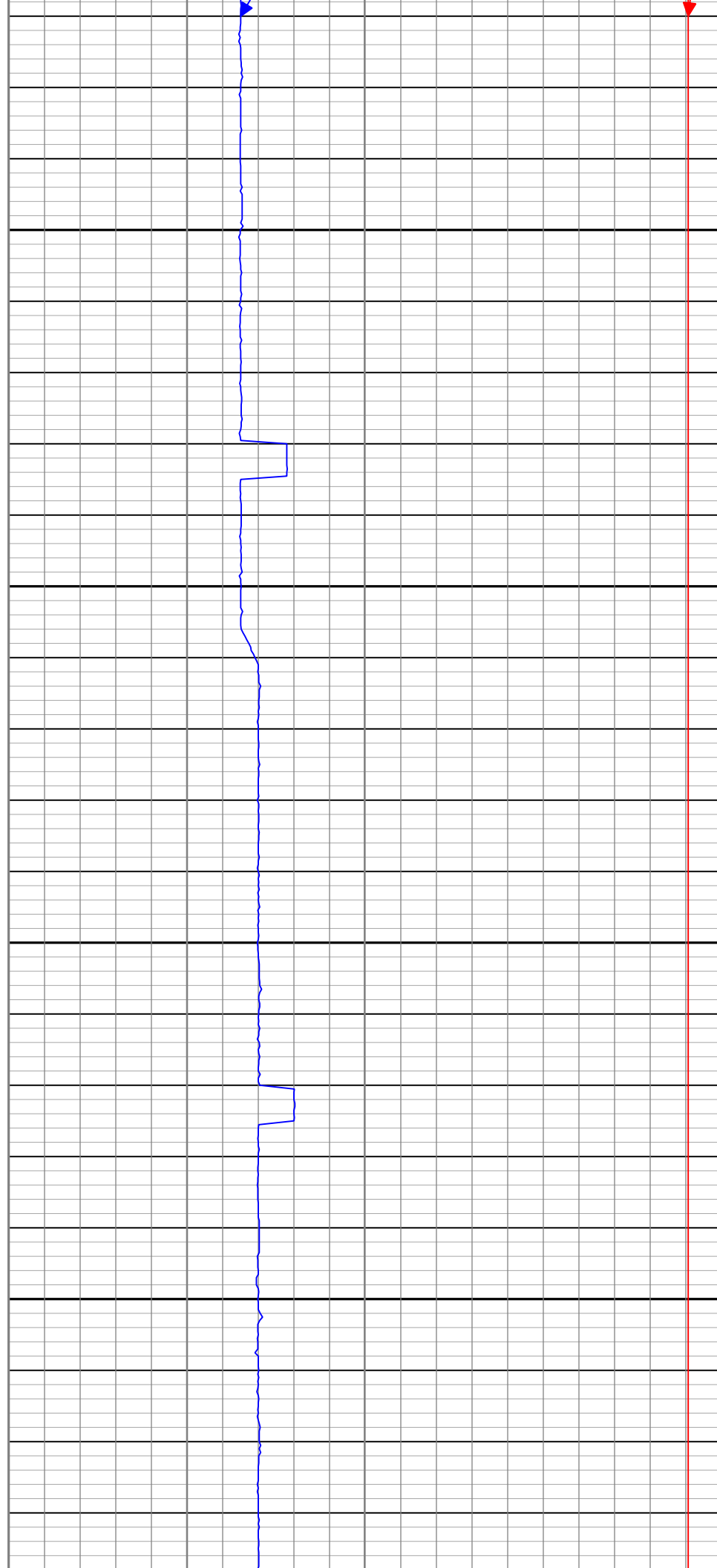
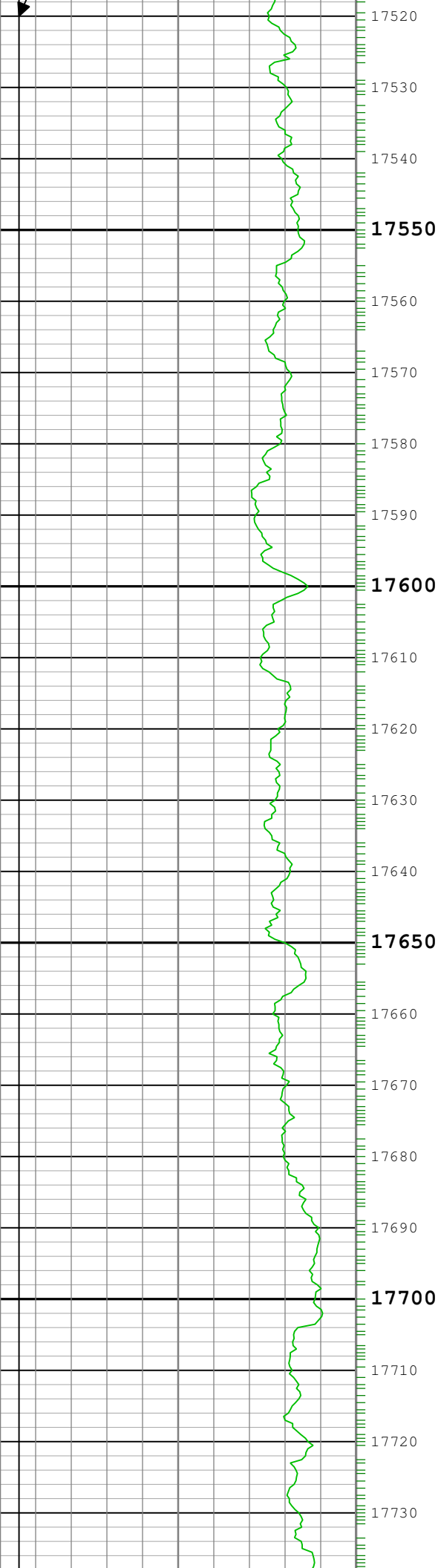


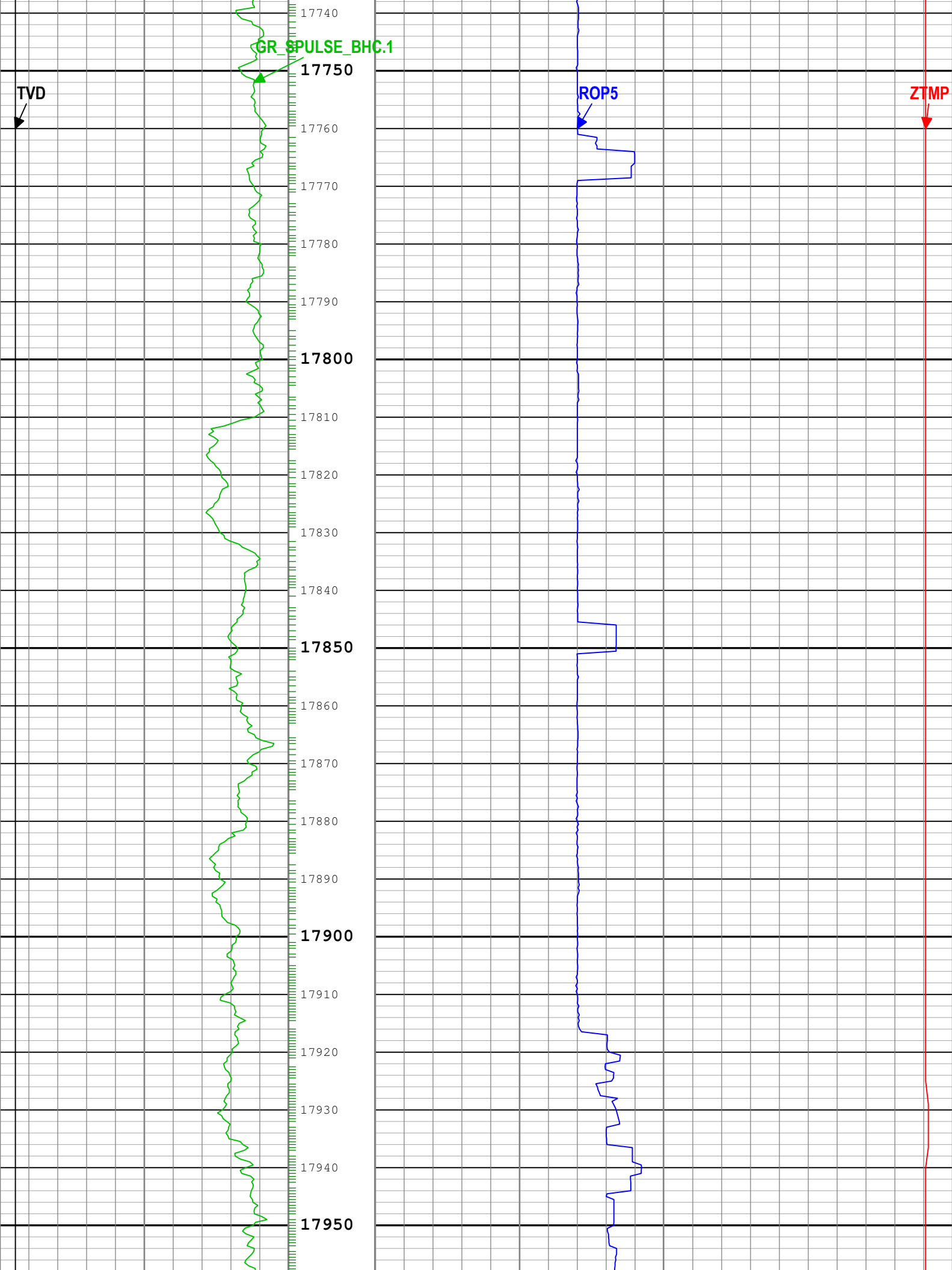




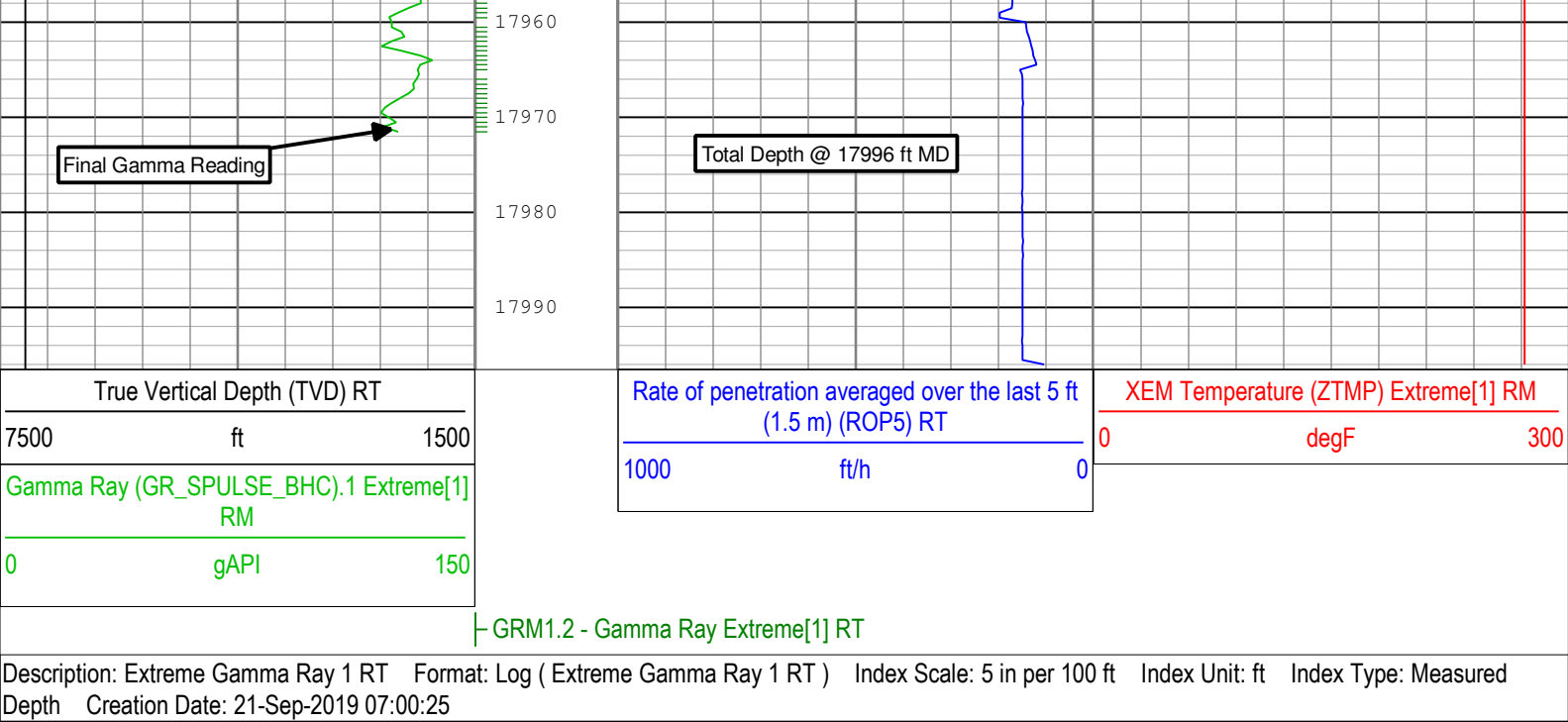












Channel Processing Parameters				
Run002: Parameters				
Parameter	Description	Tool	Value	Unit
BS	Bit Size	DNMSESSION	8.5	in
DEPTH_SEL	Depth Selection Parameter	DNMSESSION	Driller's Depth	
DFD	Drilling Fluid Density	Borehole	10	lbm/gal
Run003: Parameters				
Parameter	Description	Tool	Value	Unit
BS	Bit Size	DNMSESSION	8.5	in
DEPTH_SEL	Depth Selection Parameter	DNMSESSION	Driller's Depth	
DFD	Drilling Fluid Density	Borehole	10	lbm/gal
Tool Control Parameters				
Run002: Parameters				
Parameter	Description	Tool	Value	Unit
Run003: Parameters				
Parameter	Description	Tool	Value	Unit
Calibration Report				

**Company:** Great Western Operating Company LLC

**Well:** Schneider HD 11-099HC

**Field:** Wattenberg

**County:** Weld

**State:** CO

**Country:** United States of America



XEM Gamma Ray  
5in/100ft Measured Depth  
Real Time, Composite Log