

APPENDIX I

OPEN-HOLE GEOPHYSICAL LOGS

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SURFACE CASING

- Gamma Ray Behind Bit (from surface to TD)
- Fluid Caliper

1st INTERMEDIATE CASING

- Borehole Profile Log / Future Casing Diameter = 13.375"

PRODUCTION CASING

- Borehole Profile Log / Future Casing Diameter = 5.5"
- Platform Express / Compensated Neutron Log / Three Detector Litho-Density
- Platform Express / High Resolution Laterolog Array / Spectral Gamma Ray
- Sonic Scanner Field Print
- Spectral Gamma Ray Field Print
- Triple Combo Log / Platform Express / Resistivity
- Geomechanical Properties Advisor / 3D TIV MechPro Processing
- PEX ELAN / Petrophysical Analysis
- Fracture Density Log
- Borehole Image Interpretation

OPEN HOLE

- Borehole Profile Log
- Platform Express / Compensated Neutron Log / Three Detector Litho-Density
- Platform Express / Array Induction Tool
- Spectral Gamma Ray
- Triple Combo Log / Platform Express / Resistivity
- Borehole Profile Log / 4 Arm Caliper / PPC
- Multimode Array Sonic Tool Field Print 1
- Multimode Array Sonic Tool Field Print 2
- PEX ELAN / Petrophysical Analysis
- Shear Anisotropy Analysis with DT Compressional
- Geomechanical Properties Advisor / 3D TIV MechPro Processing
- Fracture Density Log
- Borehole Image Interpretation

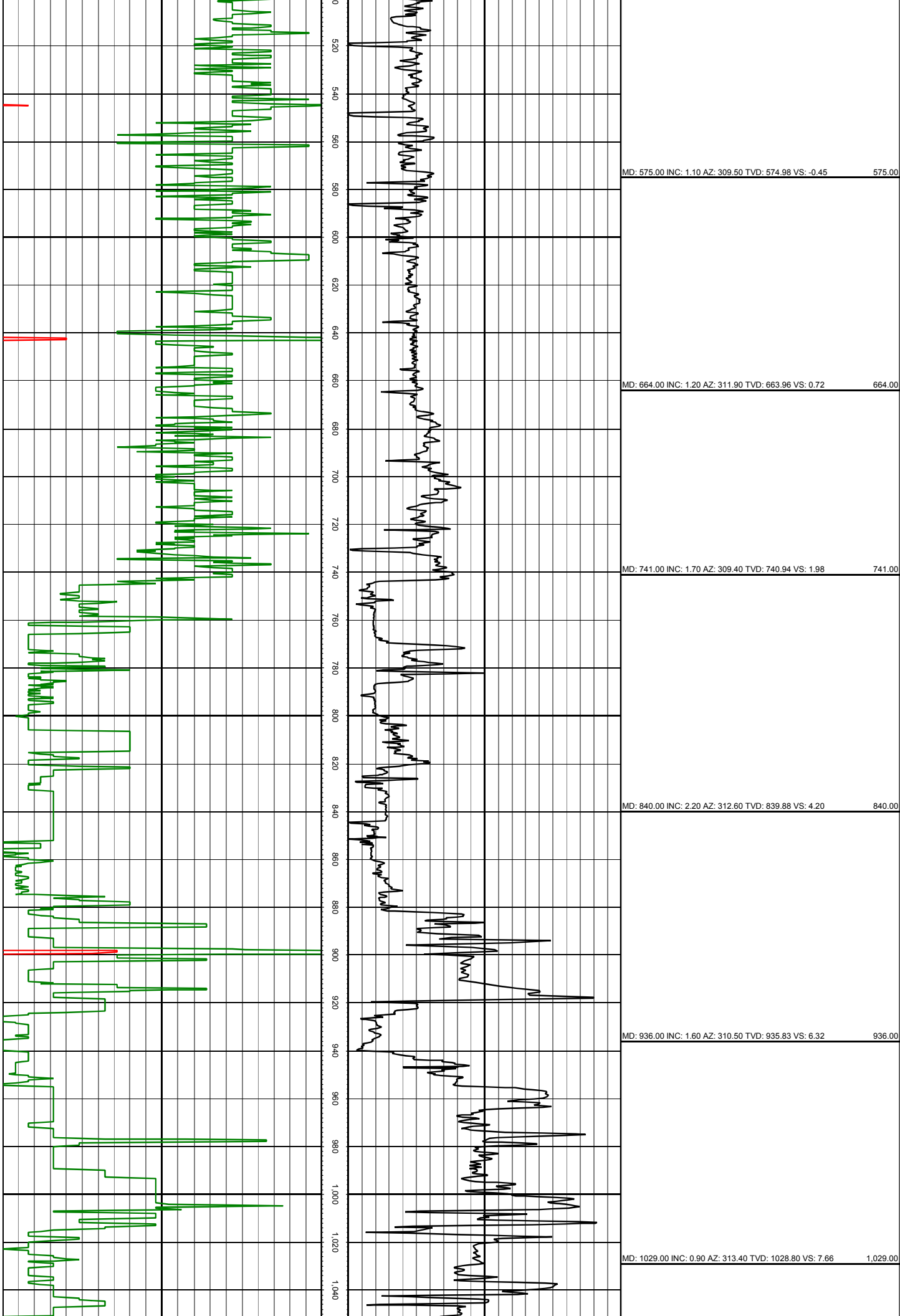
SURFACE CASING

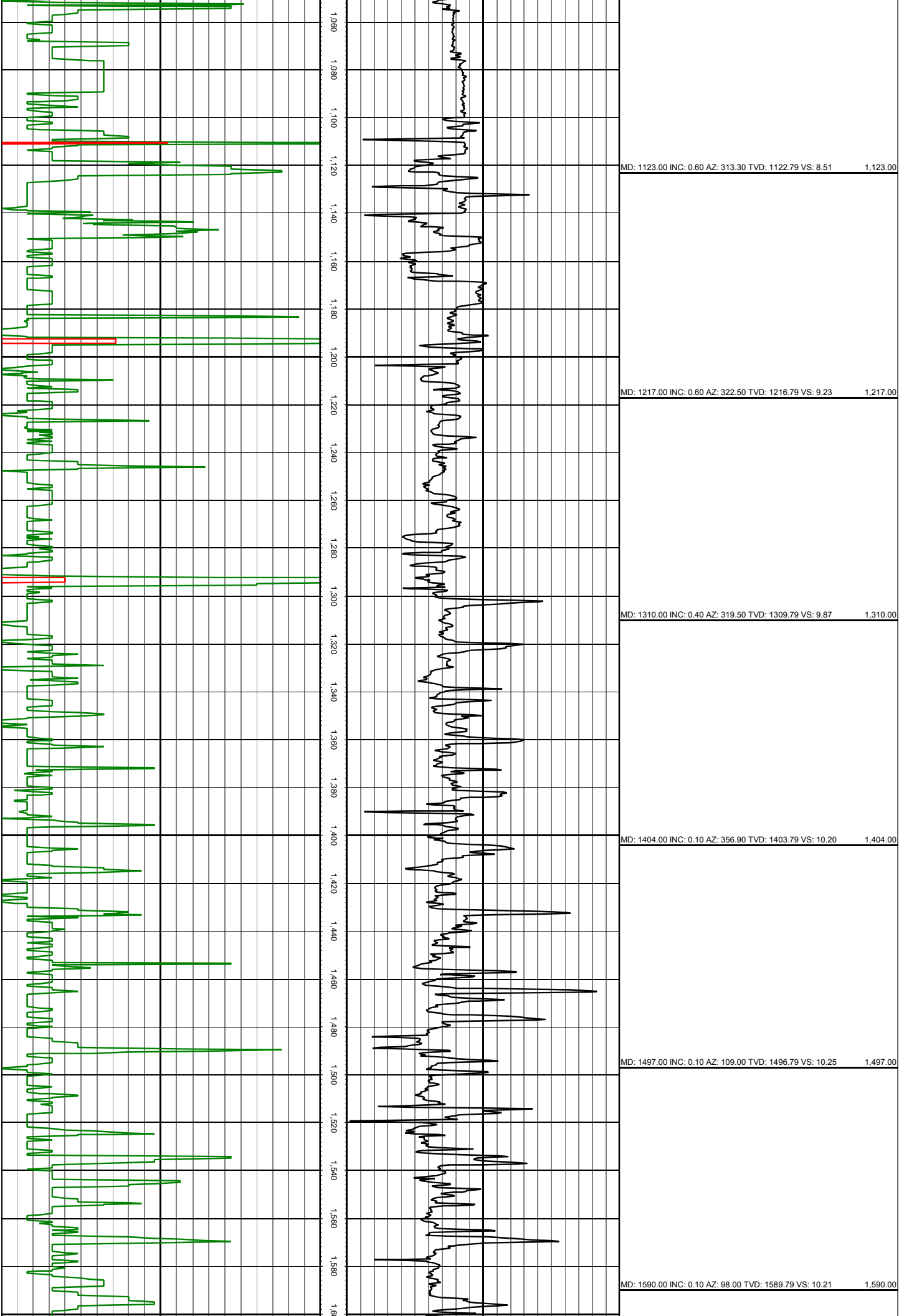
- Gamma Ray Behind Bit (From Surface to TD)
- Fluid Caliper

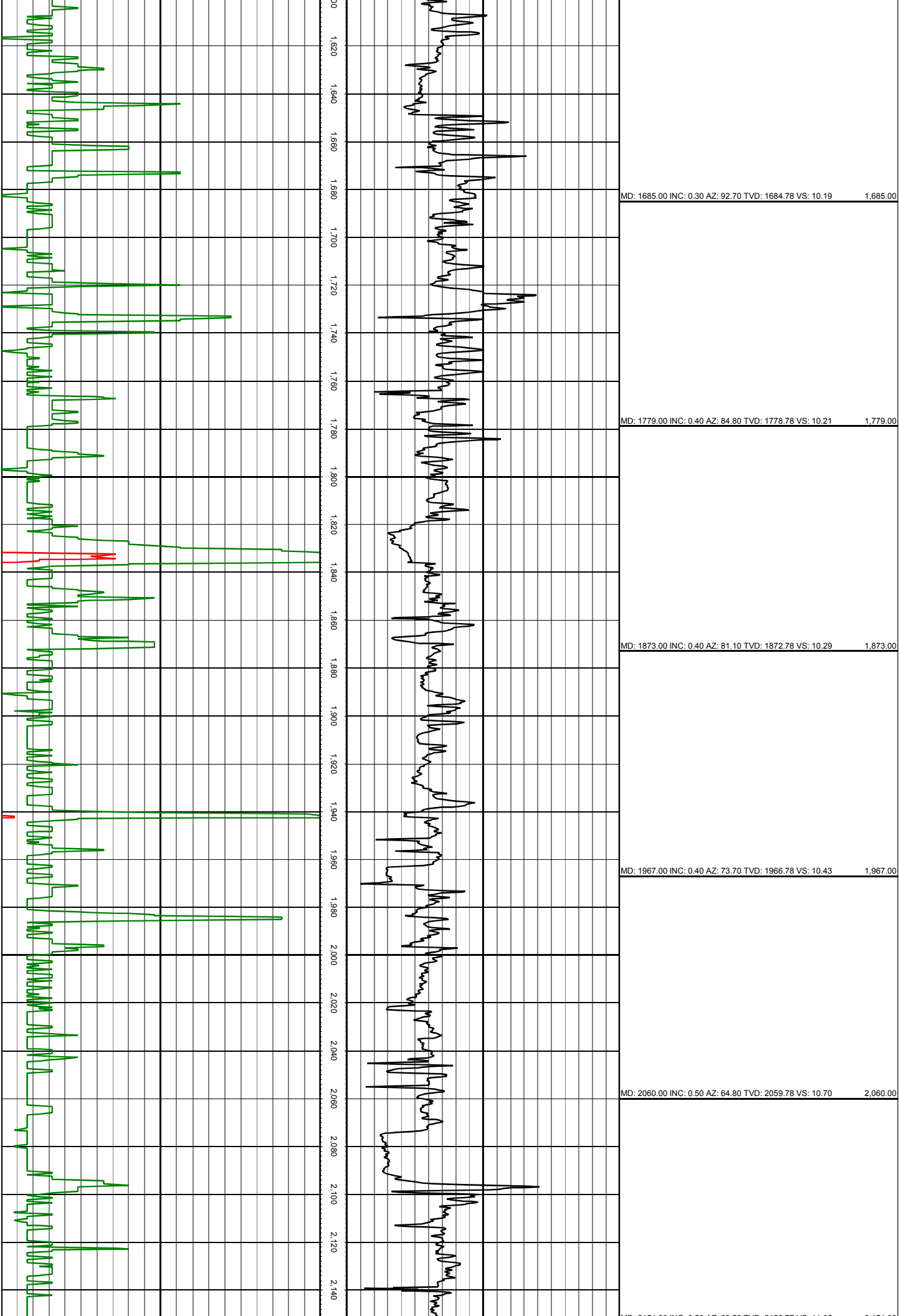
Gamma Ray Behind Bit (From Surface to TD)

**Integrity Directional Services**1514 S. County Road 1309
Midland, TX 79707**ZIA AGI #D2****Scale 2":100' - MD****12/10/2016 9:59 AM****Oper. Company:** COG**Well:** ZIA AGI #D2**Field:** Permian**Rig:** Scandrell Freedom**Well ID:** 30-025-42207**Job Number:** NM-16-124-CG**State:** NM**County:** Lea**Country:** USA**Location:** 48 miles West of Hobbs**Start Date:** 11/02/2016 05:00:00**End Date:** 12/10/2016 10:00:00**Latitude:** 32° 38' 37.79" N**Longitude:** 103° 48' 38.21" W**Elev GL:** 3548**Elev DF:** 26'**Elev KB:** 3574**Operator 1:** Kyle Wayland**Operator 2:** Roland Rodriguez

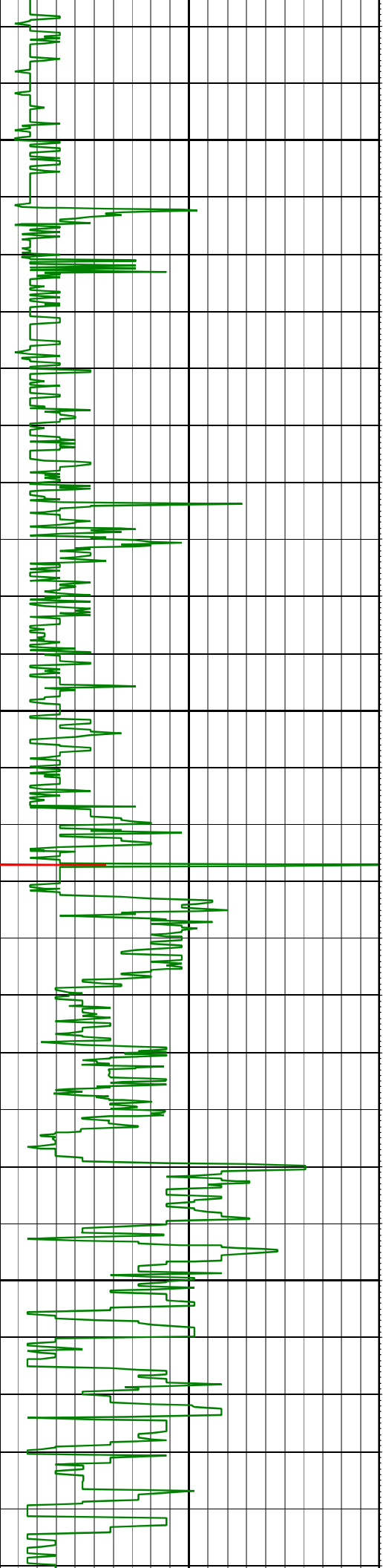
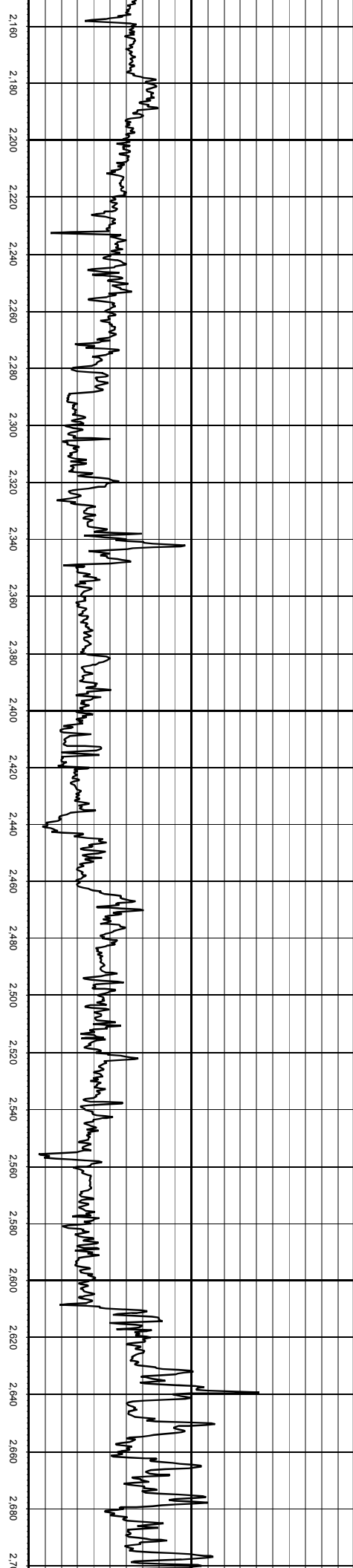
Tool Run Data	Run #1	Run #2	Run #3	Run #4	Run #5
Tool S/N	GA-2440	GA-2440	GA-2446	GA-2440	GA-2446
Bit Size	26	17.5	12.25	8.75	8.75
Cal Factor	18	12	11	6	6
Survey Offset	84.00	79.00	79.00	70.00	54.00
Gamma Offset	70.48	65.76	65.76	5674.00	40.40
Resistivity Offset	0.00	0.00	0.00	0.00	0.00
Start Depth	0.00	826.00	2555.00	4696.00	7512.00
StartDate	11/1/2016	11/6/2016	11/11/2016	11/15/2016	11/18/2016
StartTime	16:34	00:31	00:38	00:45	00:49
EndDepth	826.00	2555.00	4696.00	7512.00	8748.00
EndDate	11/3/2016	11/9/2016	11/13/2016	11/17/2016	11/19/2016
EndTime	00:00	00:00	00:00	00:00	00:00
Mud Type	Brine	Brine	Brine	Brine	Brine
Mud Weight	8.6	10.2	8.4	9.0	9.05
Funnel Viscosity	30	33	28	29	30
Plastic Viscosity	2	4	3	2	2
Yield Point	1	3	2	1	1
Gel Strength	1 / 2	2 / 3	2 / 3	1 / 2	1 / 2
Solids Content	2.1	3.3	0.6	1.2	1.8
Sand Content	TRC	TRC	TRC	TRC	TRC
Mud Alkalinity	0	0.3	0.2	0.3	0.2
Filtrate Alkalinity	0 / 0.2	0.05 / 0.15	0.1 / 0.2	0.15 / 0.3	0.1 / 0.25
Chlorides	900	155000	1600	57000	53000
Temperature	72	100	80	89	92
Tool Run Data	Run #6	Run #7	Run #8	Run #9	Run #10
Tool S/N	GA-2440	GA-2446	GA-2447	GA-2431	
Bit Size	8.75	8.75	8.75	6.0	
Cal Factor	6	6	6	2.5	
Survey Offset	54.00	56.00	25.00	56.00	
Gamma Offset	40.40	42.90	11.00	42.50	
Resistivity Offset	0.00	0.00	0.00	0.00	
Start Depth	8748.00	11231.00	13530.00	13622.00	
StartDate	11/19/2016	11/22/2016	11/28/2016	12/8/2016	
StartTime	00:55	00:59	01:03	07:15	
EndDepth	11231.00	13530.00	13622.00	14750.00	
EndDate	11/22/2016	11/28/2016	11/29/2016	12/8/2016	
EndTime	00:00	00:00	00:00	00:00	
Mud Type	Brine	Brine	Brine	Brine	
Mud Weight	9.3	9.4	9.55	8.4	







MD: 2154.00 INC: 0.50 AZ: 63.50 TVD: 2153.77 VS: 11.05		2,154.00
MD: 2247.00 INC: 0.40 AZ: 72.40 TVD: 2246.77 VS: 11.33		2,247.00
MD: 2341.00 INC: 0.30 AZ: 82.60 TVD: 2340.77 VS: 11.46		2,341.00
MD: 2435.00 INC: 0.10 AZ: 187.40 TVD: 2434.77 VS: 11.41		2,435.00
MD: 2476.00 INC: 0.20 AZ: 225.00 TVD: 2475.77 VS: 11.33		2,476.00
MD: 2631.00 INC: 0.50 AZ: 227.70 TVD: 2630.76 VS: 10.68		2,631.00



MD: 2724.00 INC: 0.50 AZ: 224.80 TVD: 2723.76 VS: 10.12 2,724.00

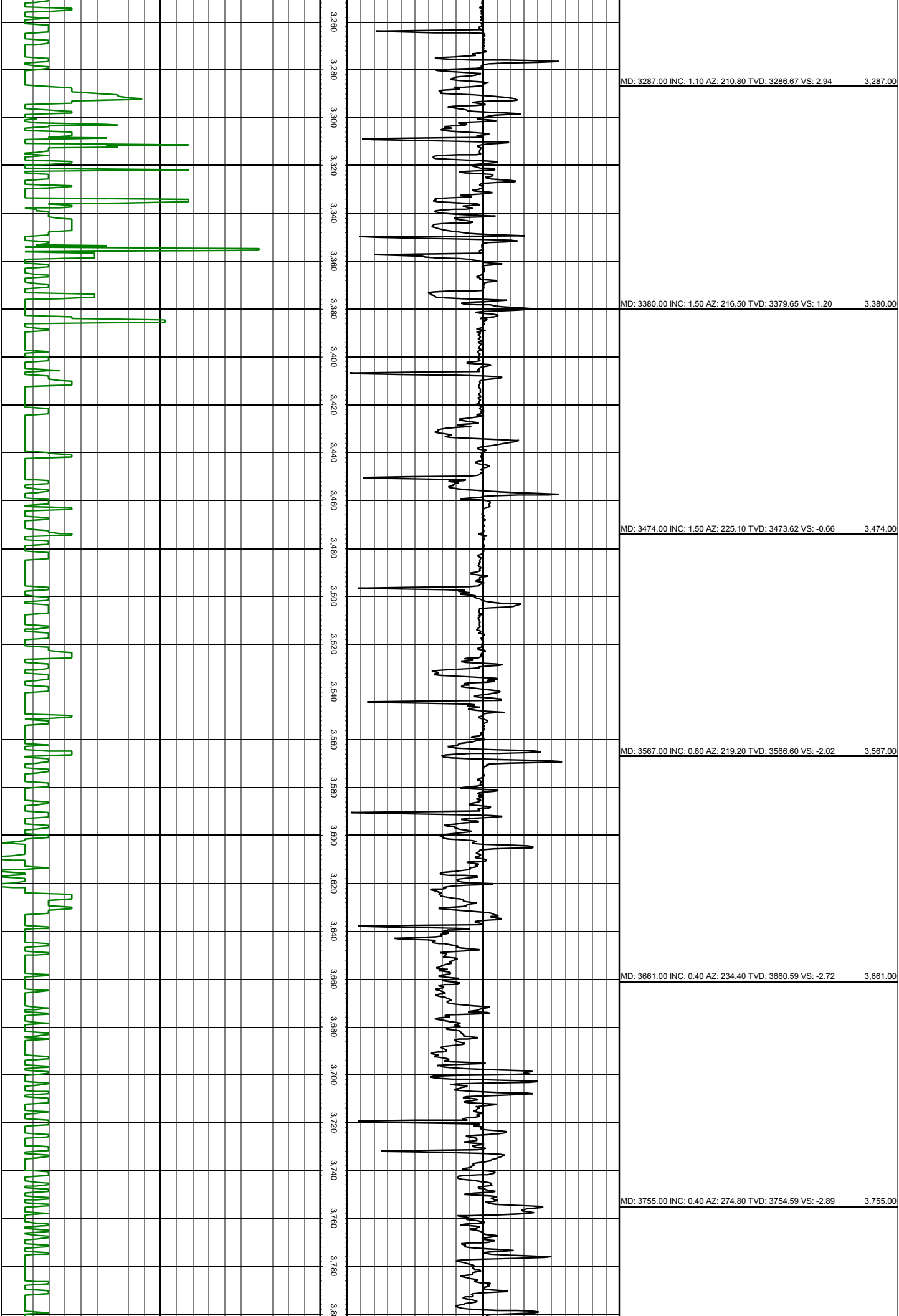
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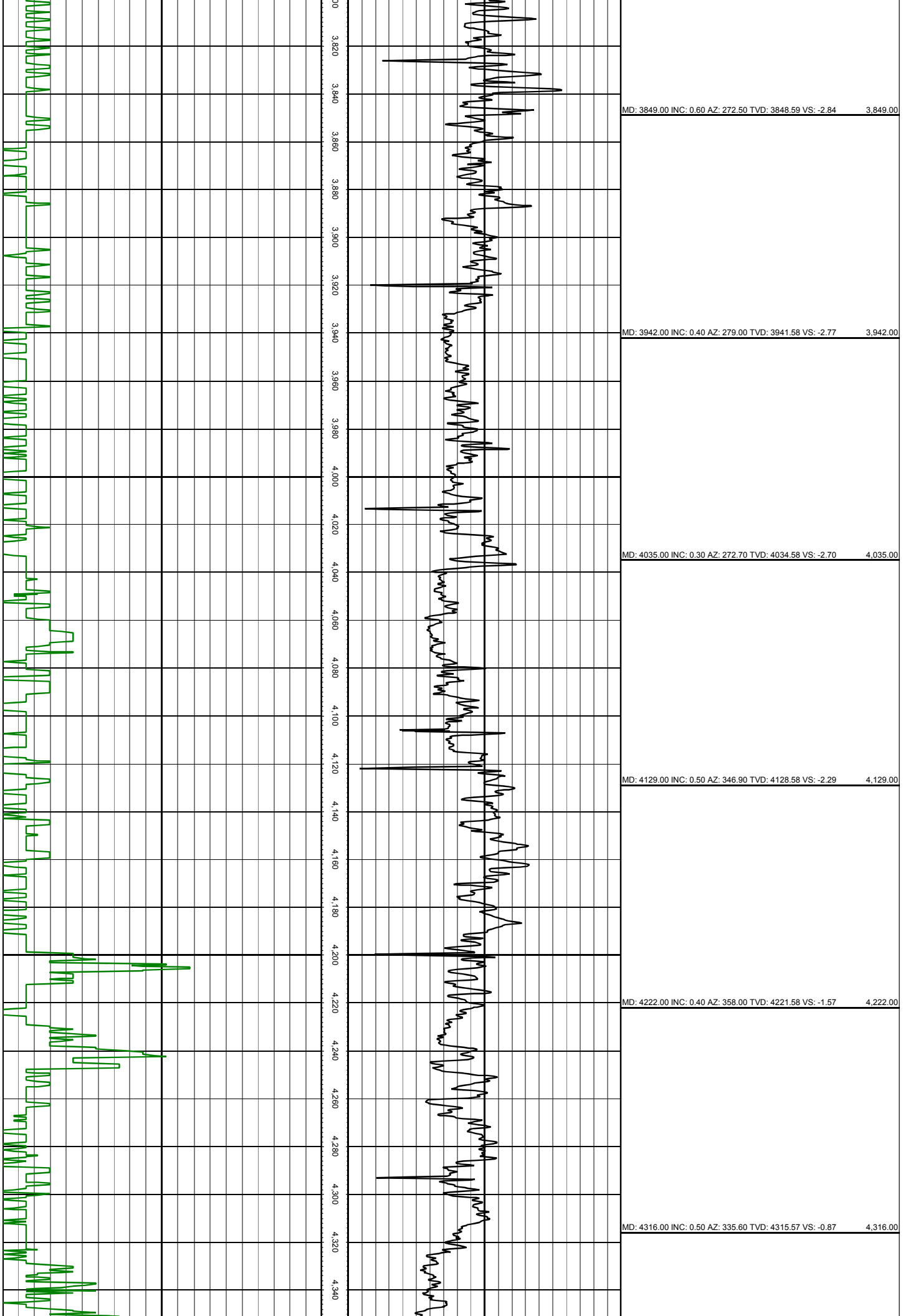
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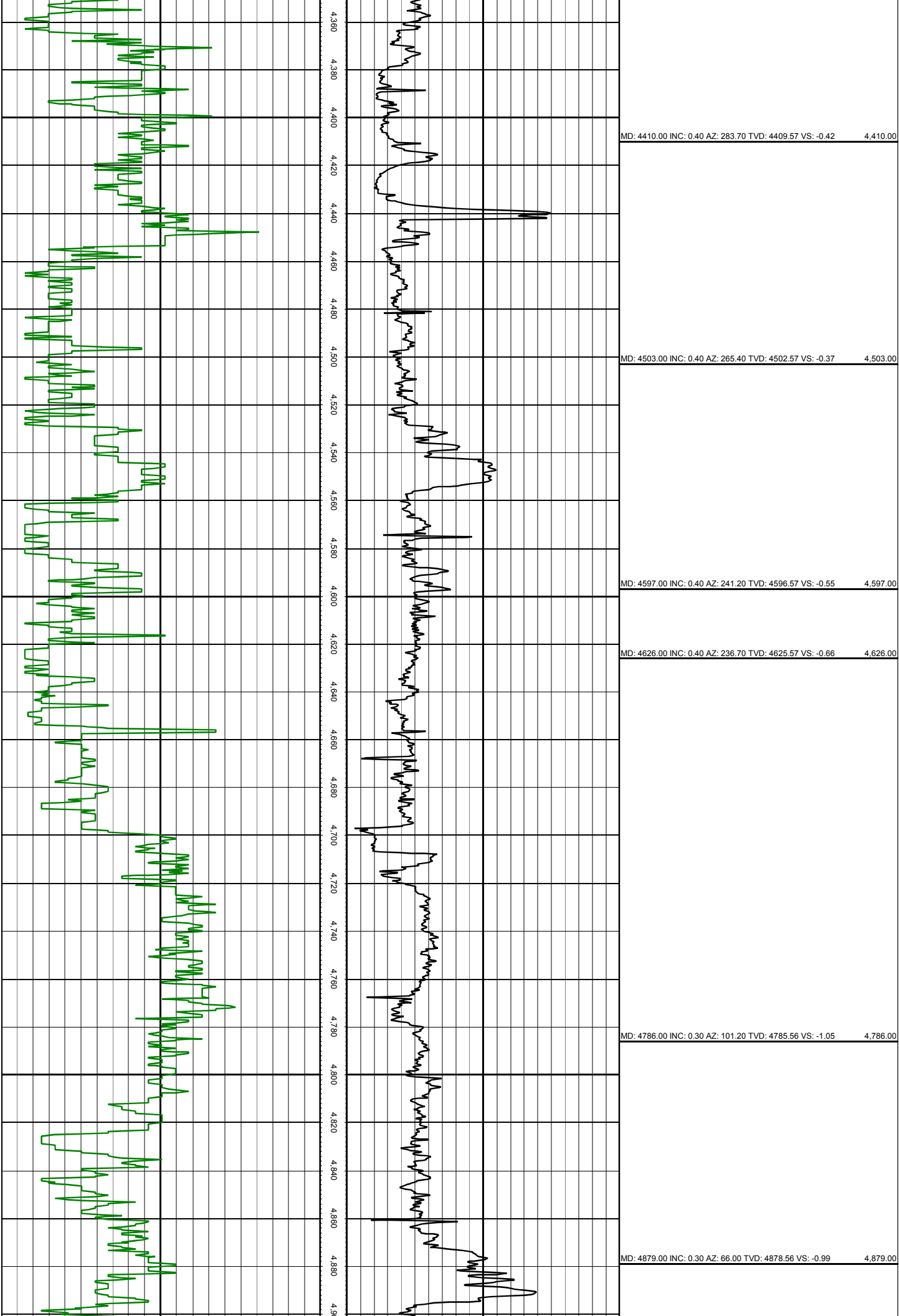
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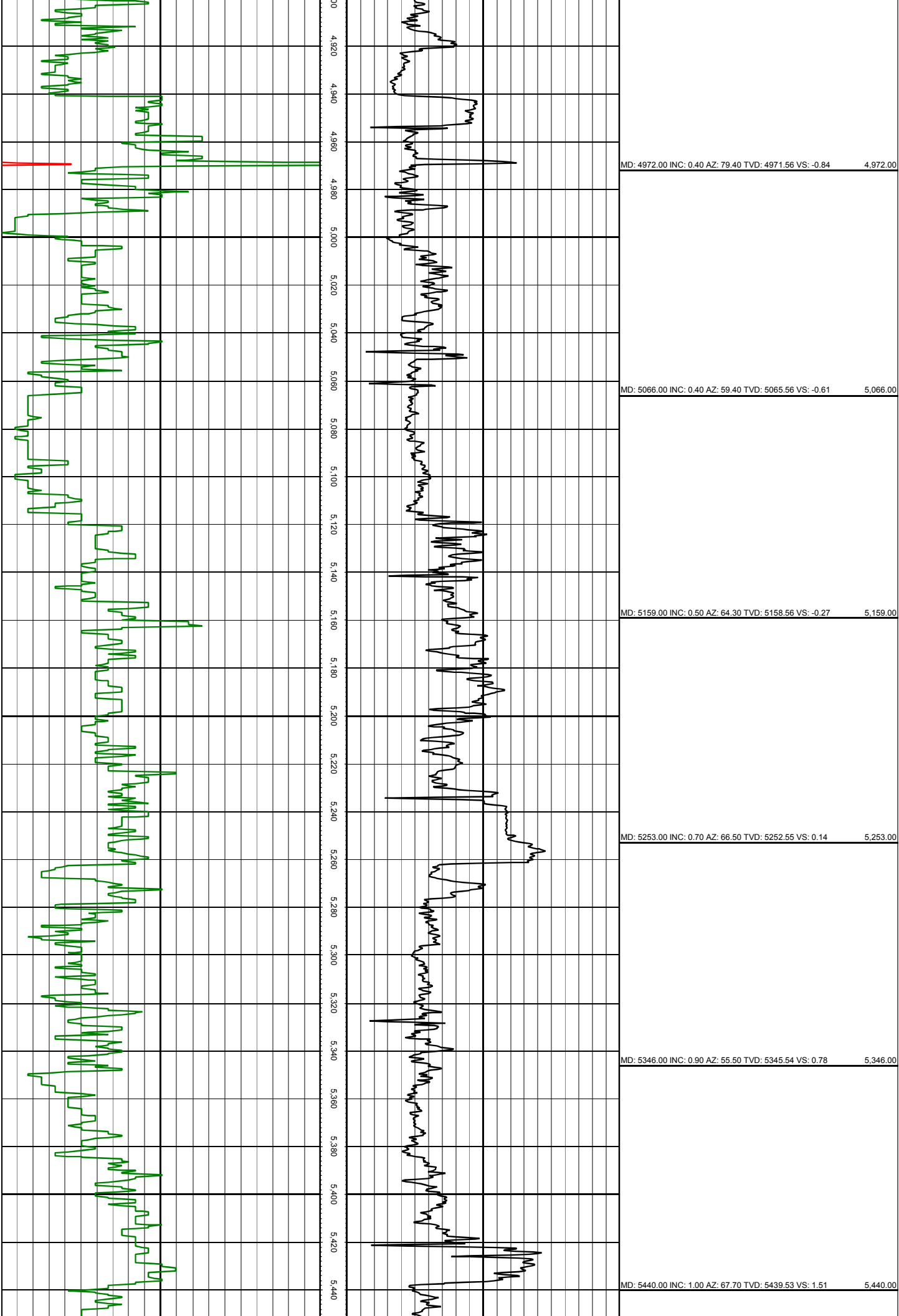
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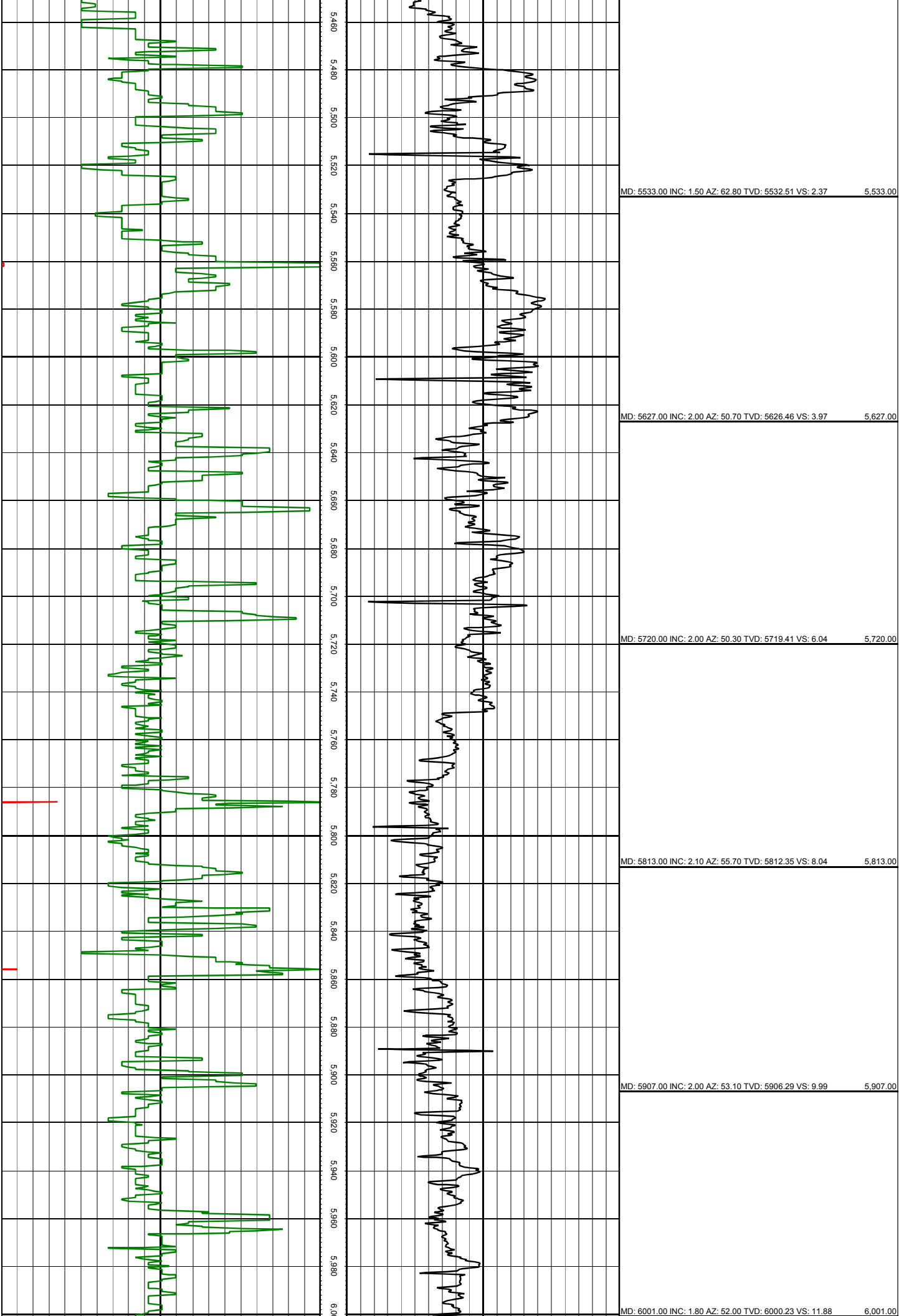
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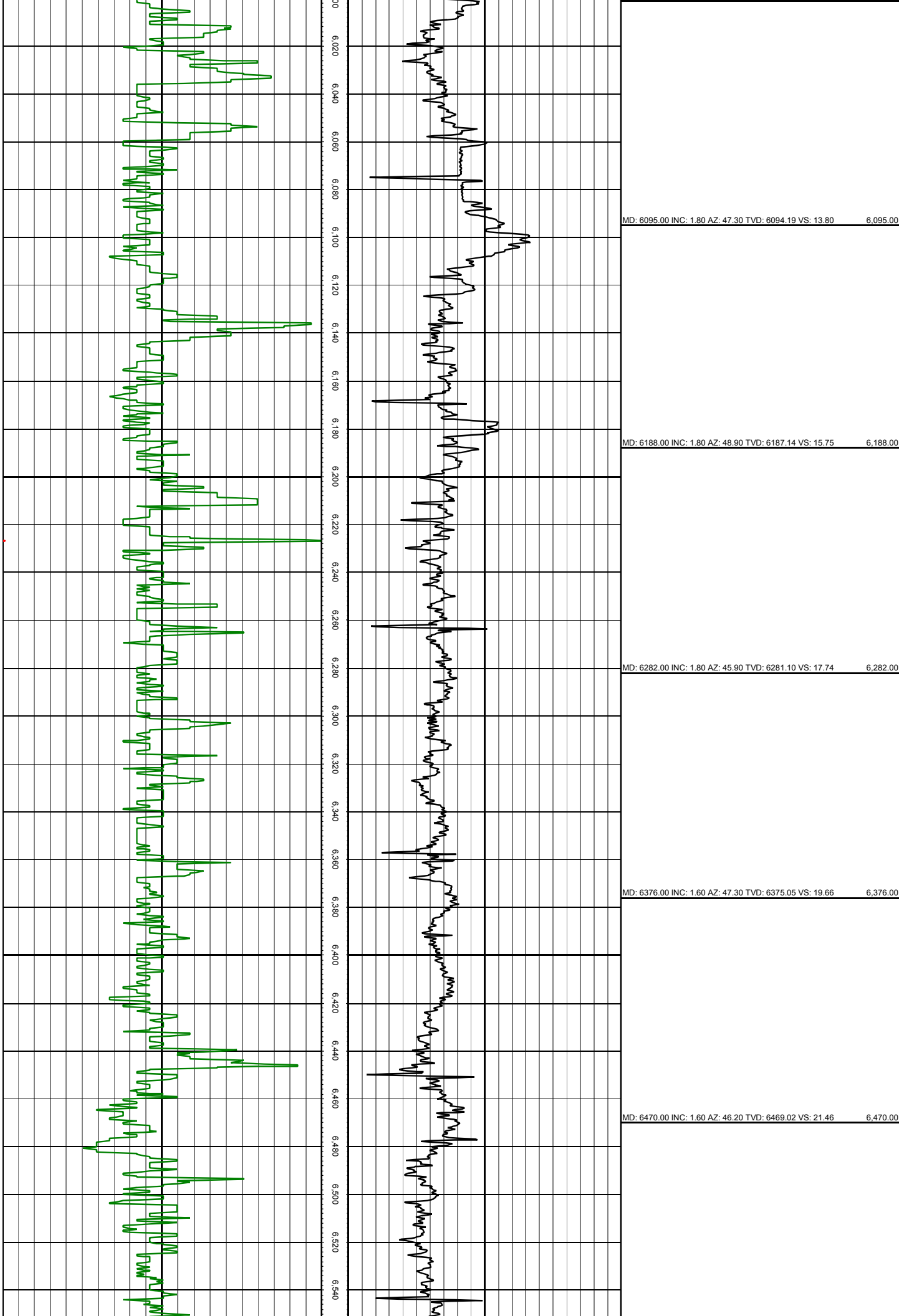


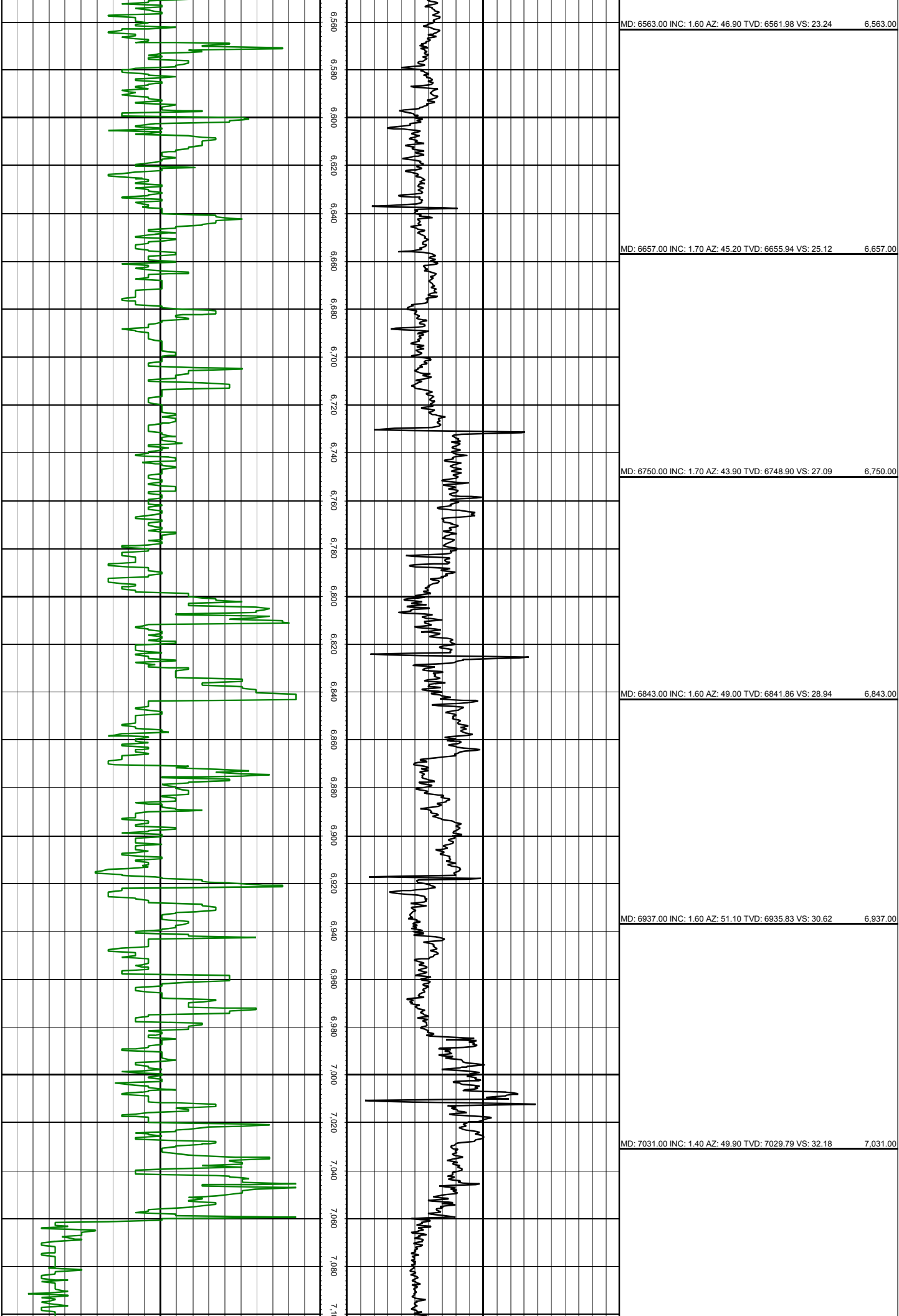


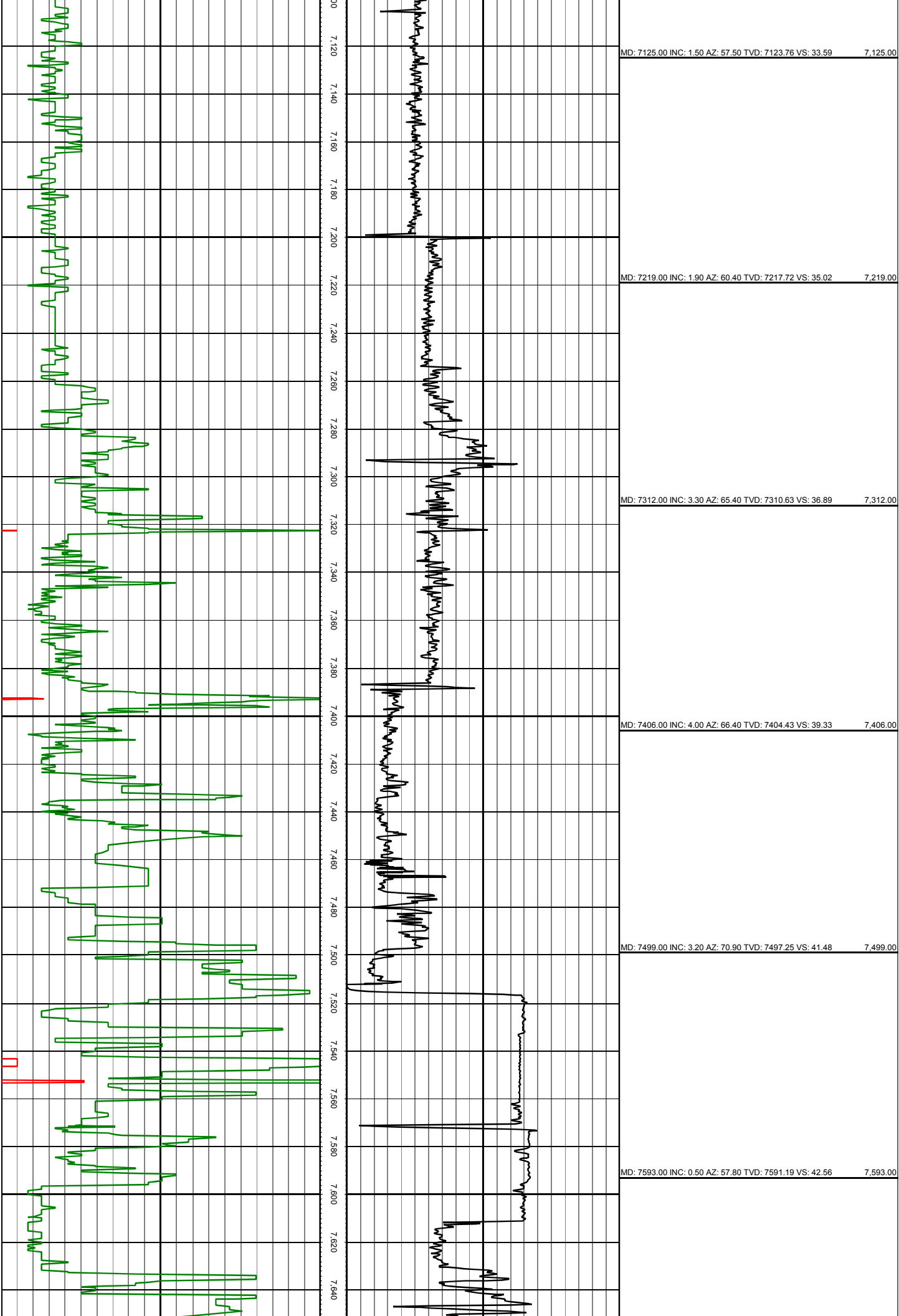


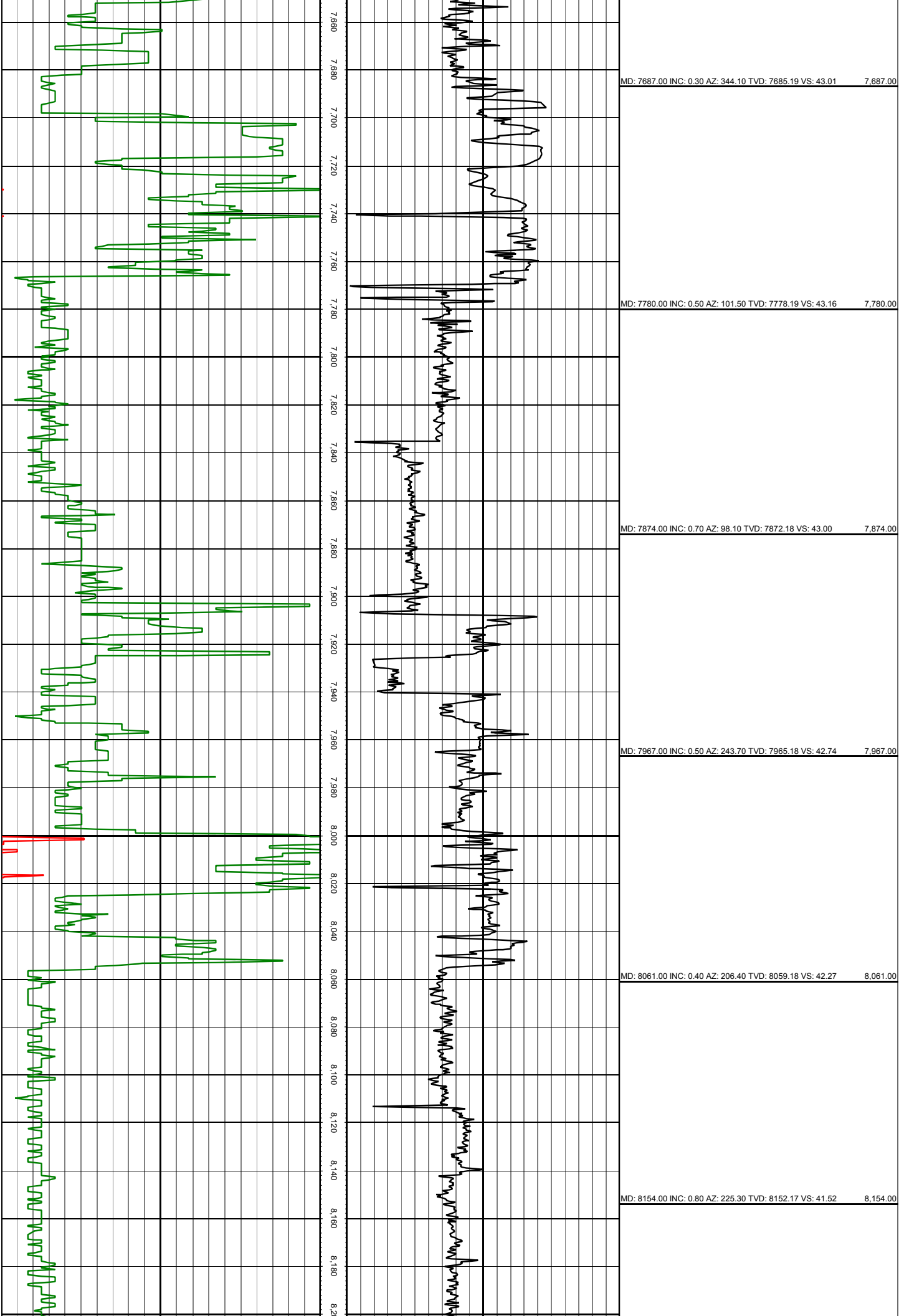


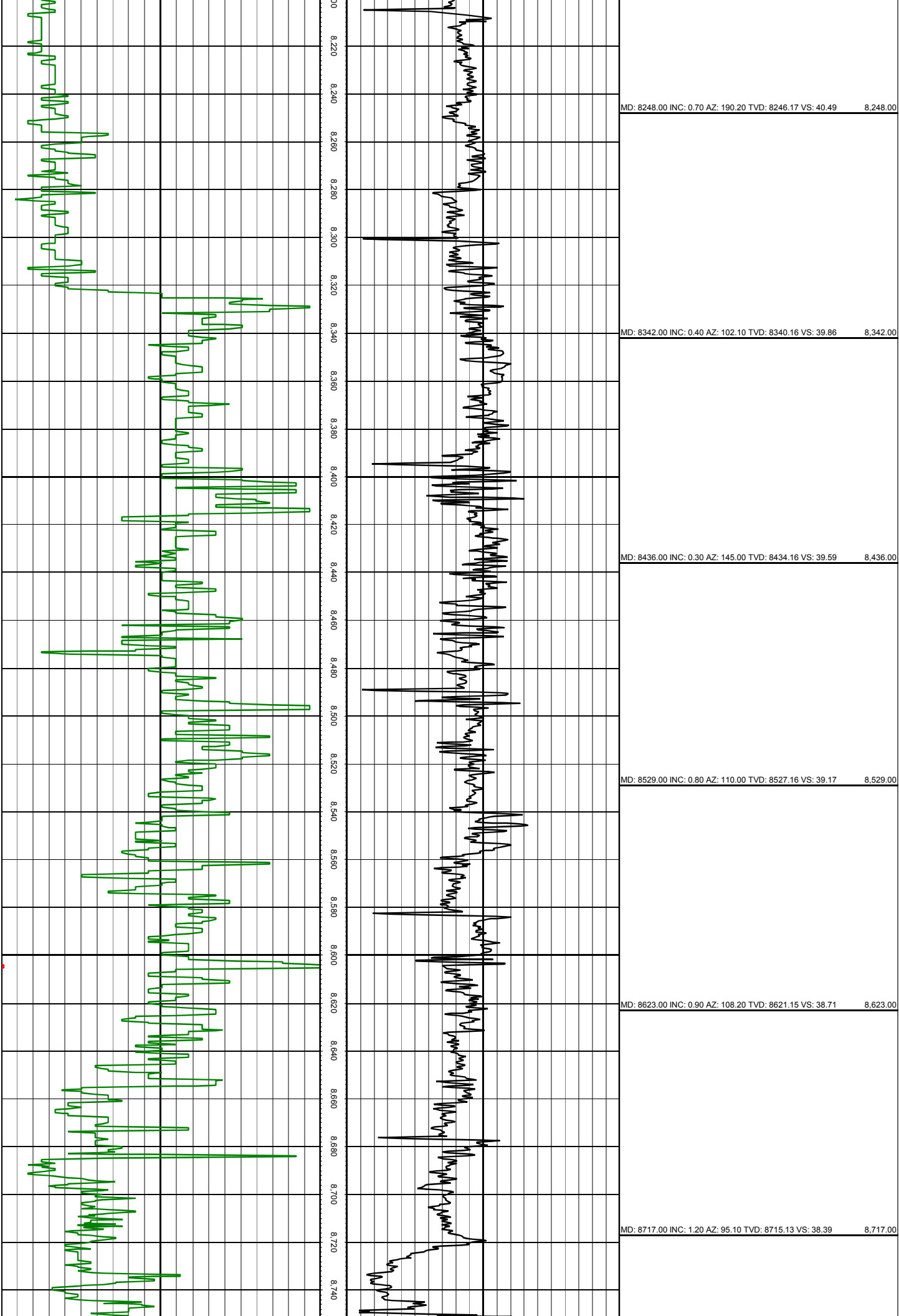


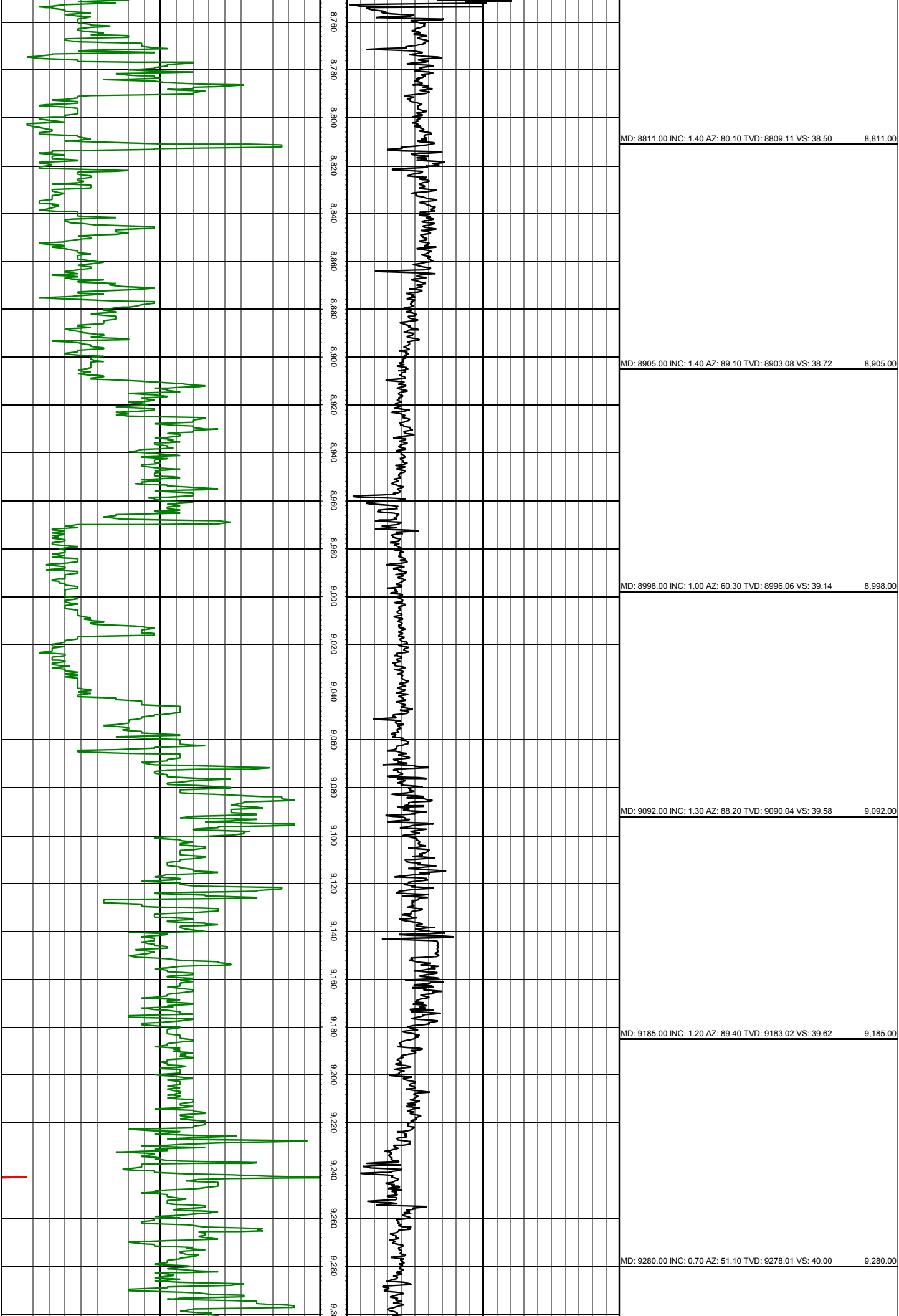


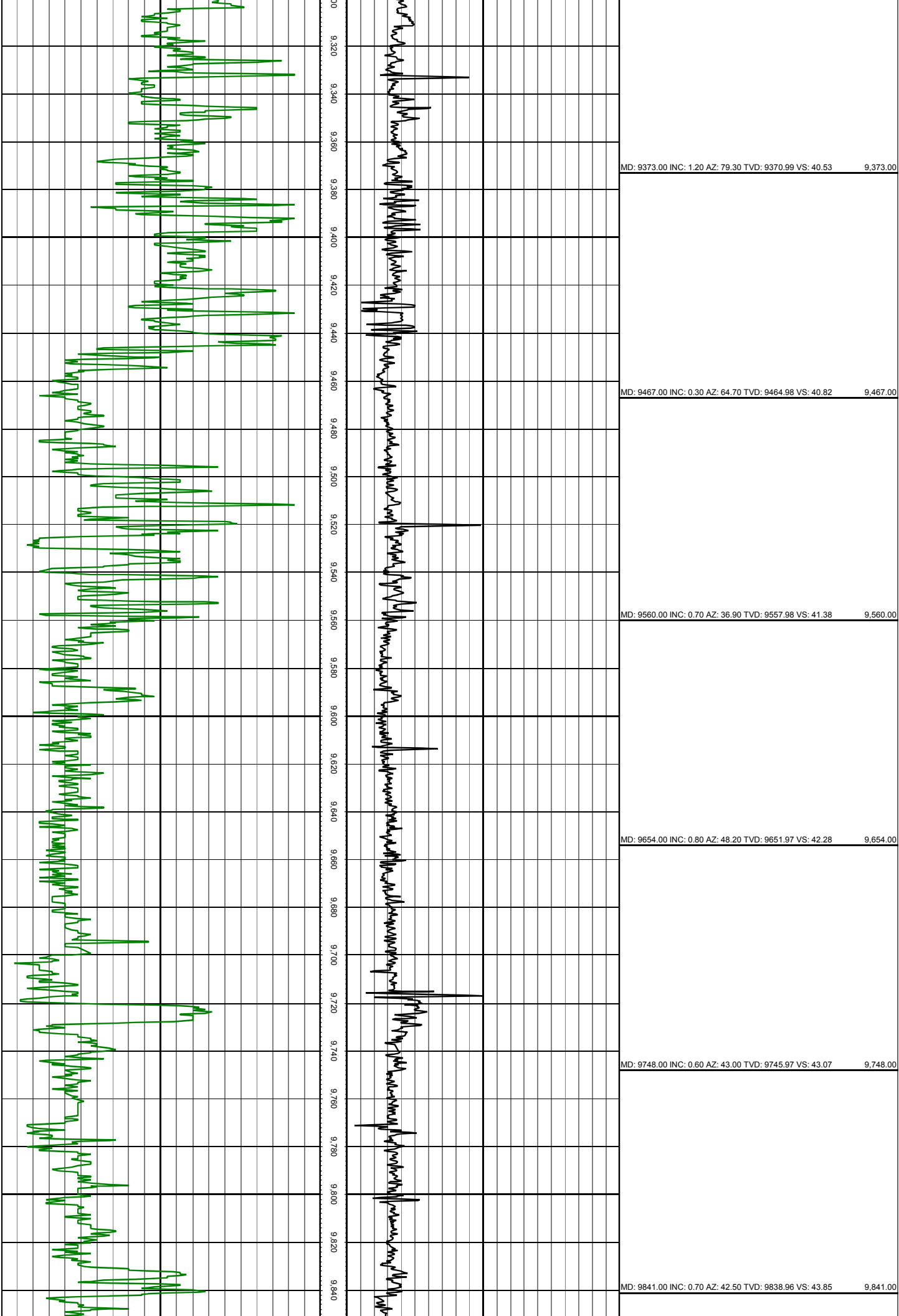


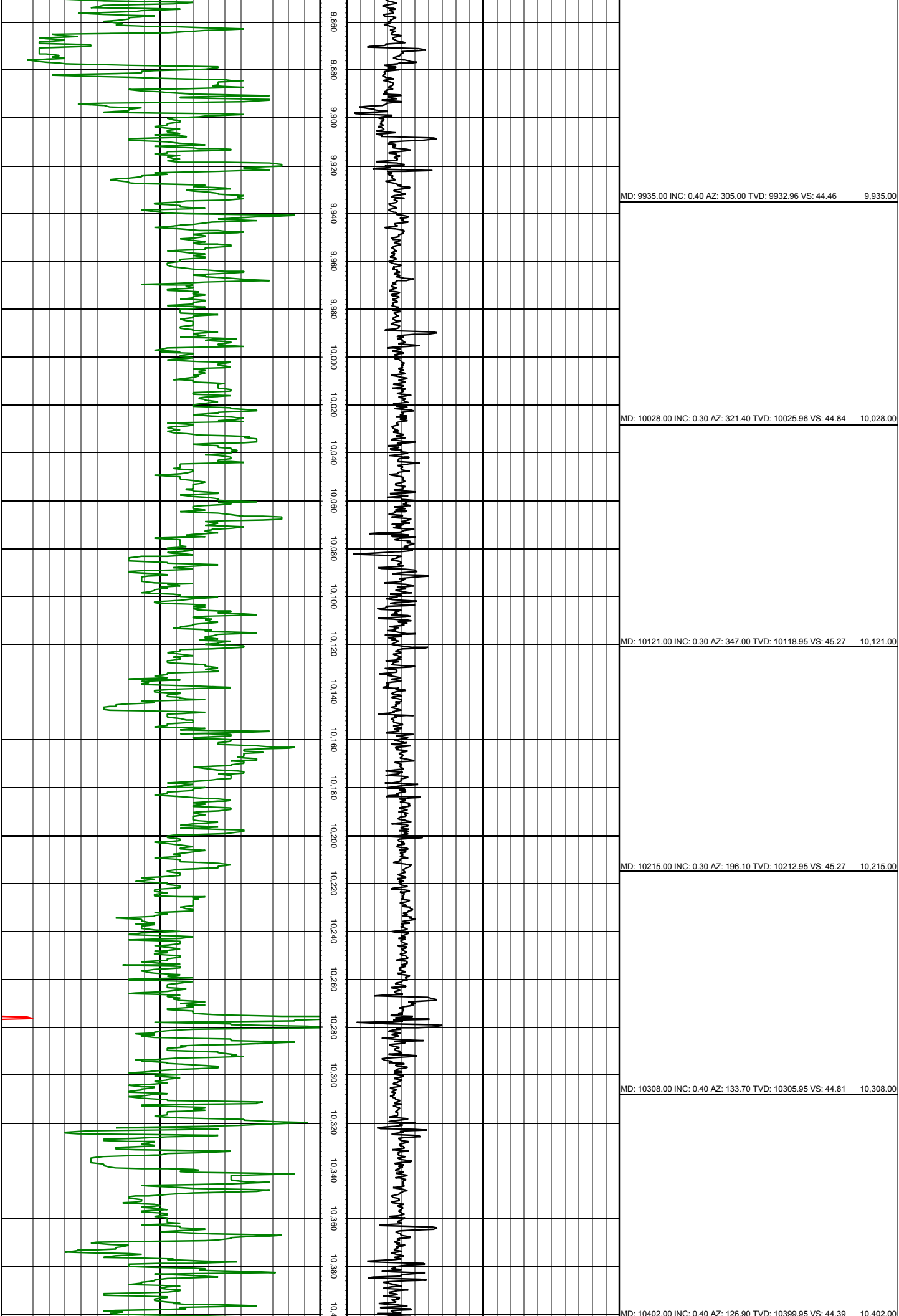


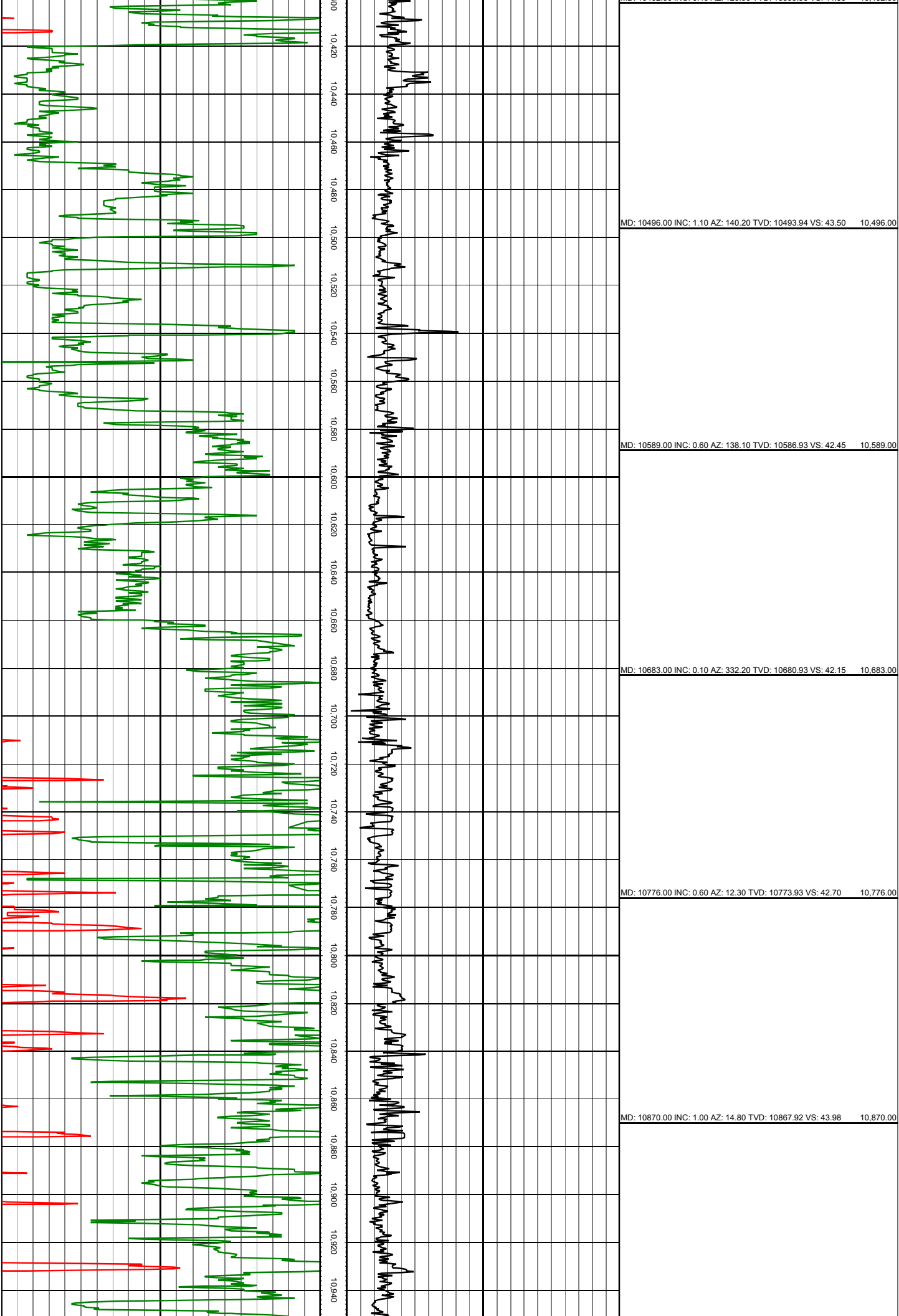


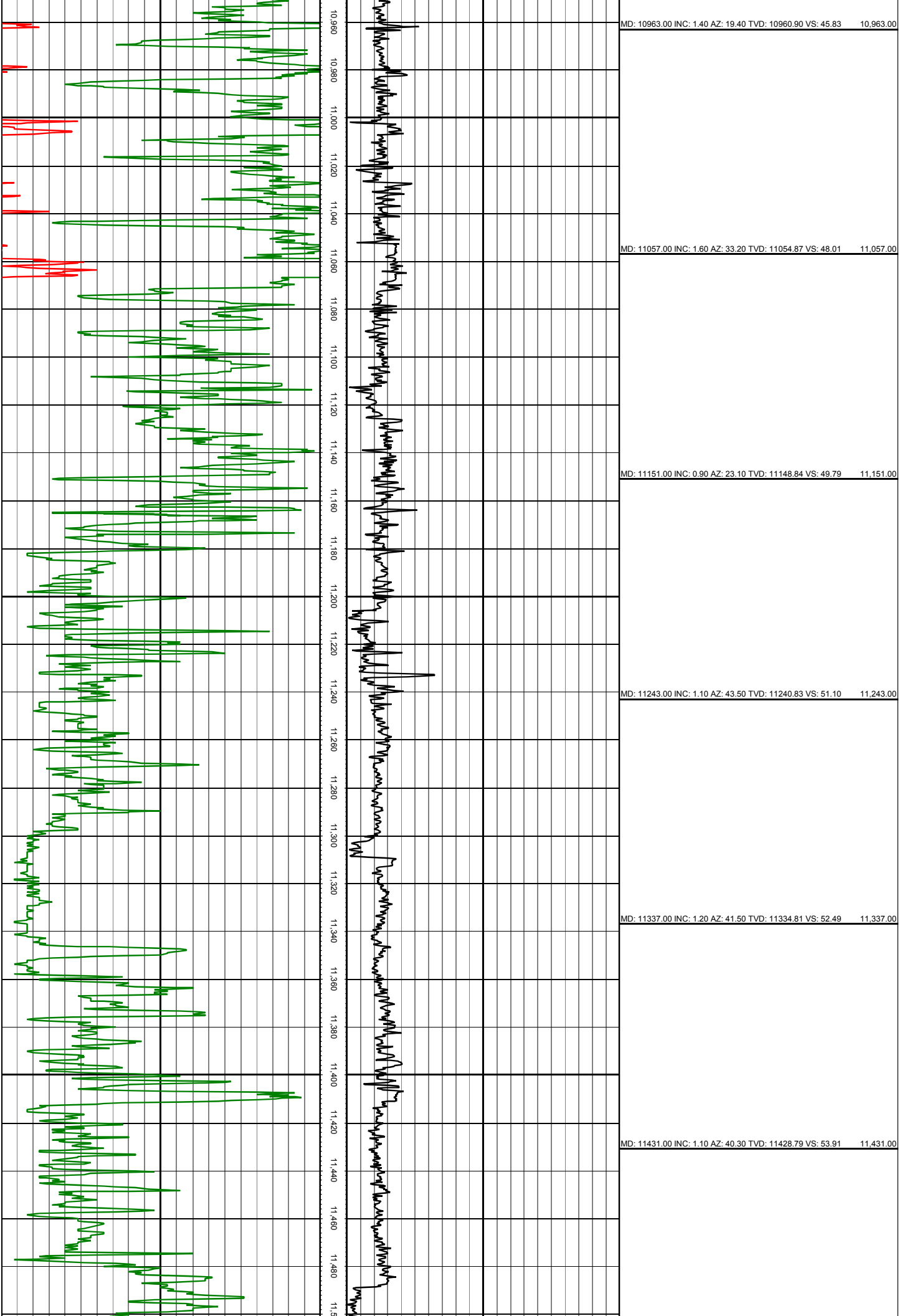


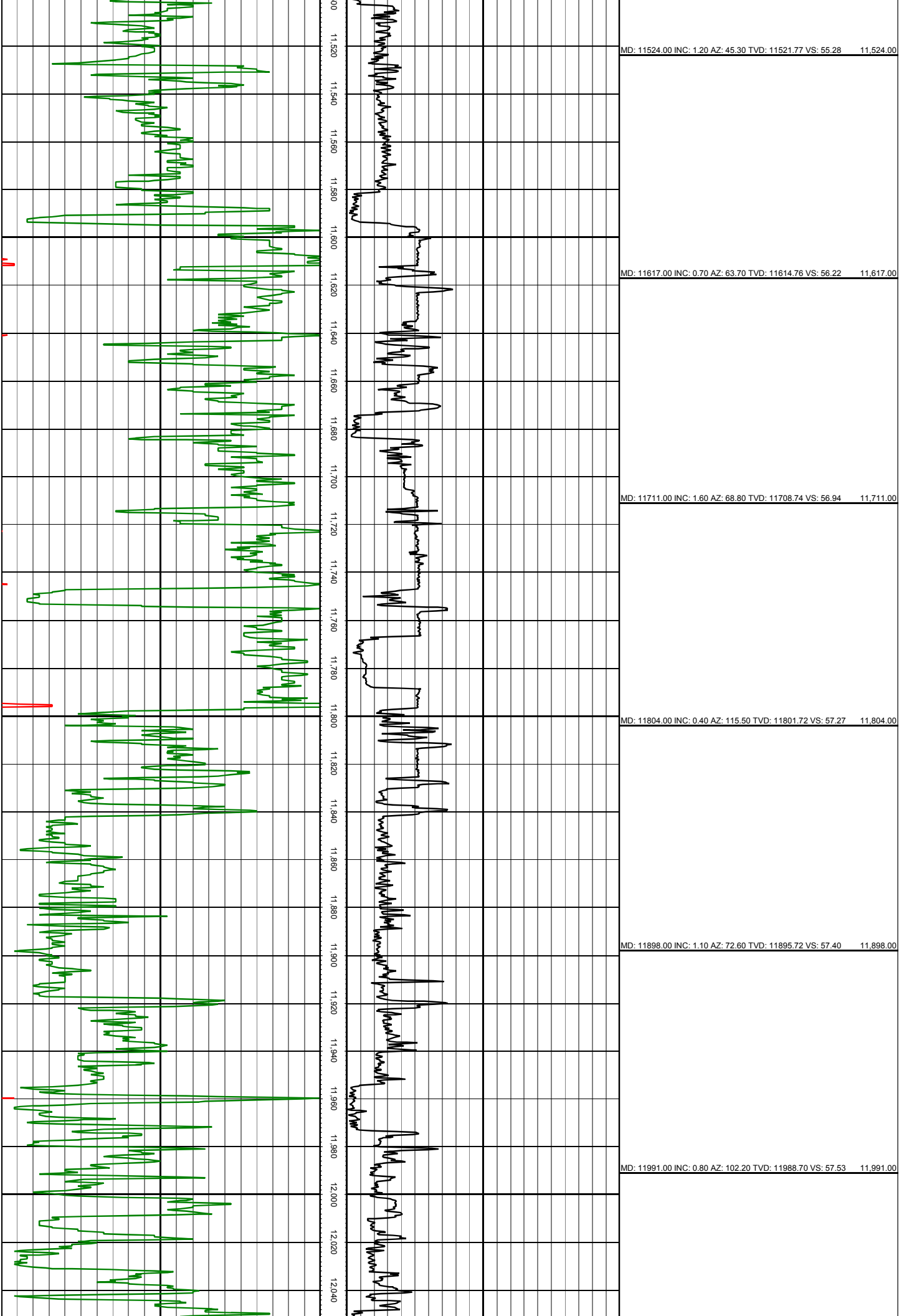


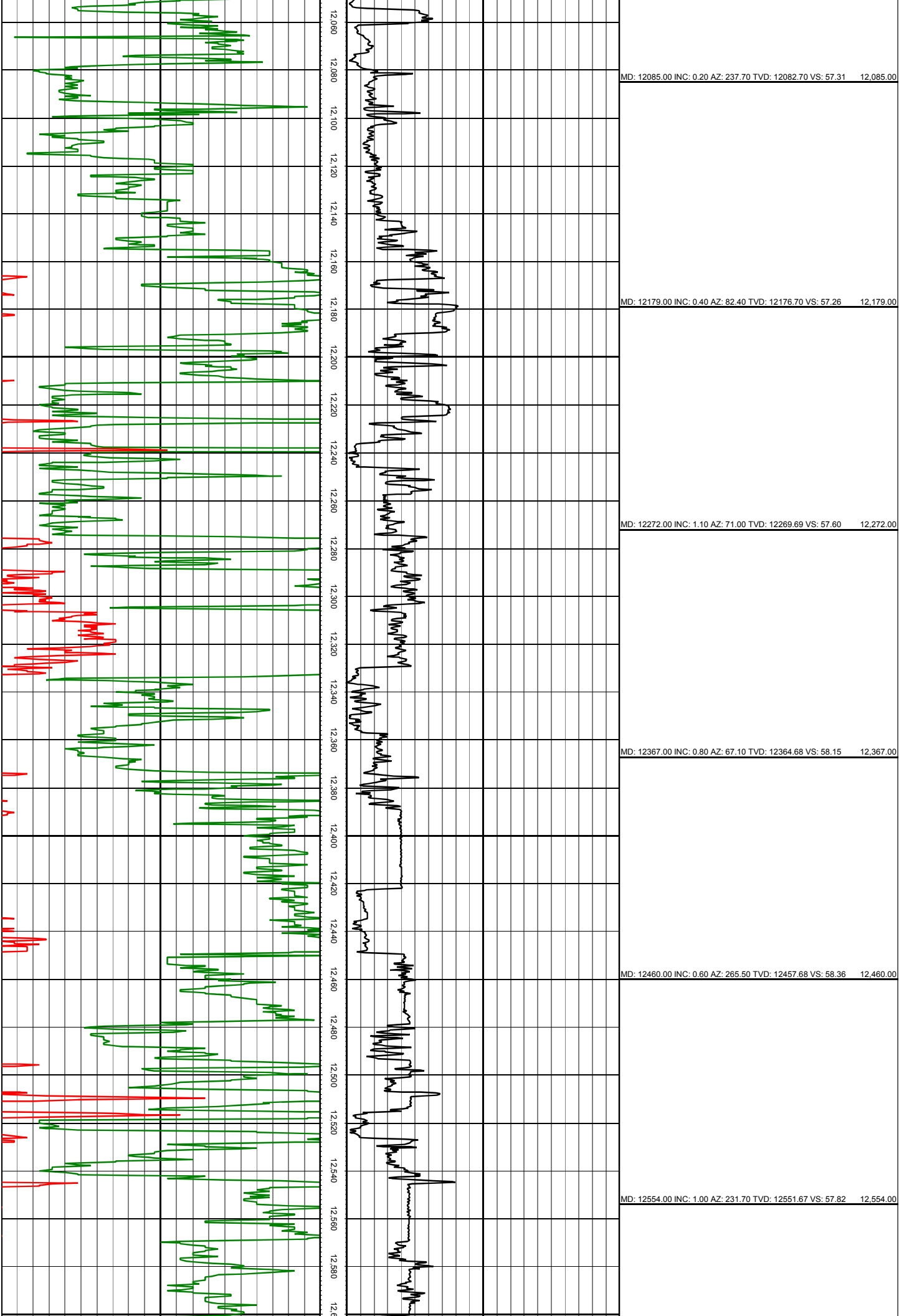


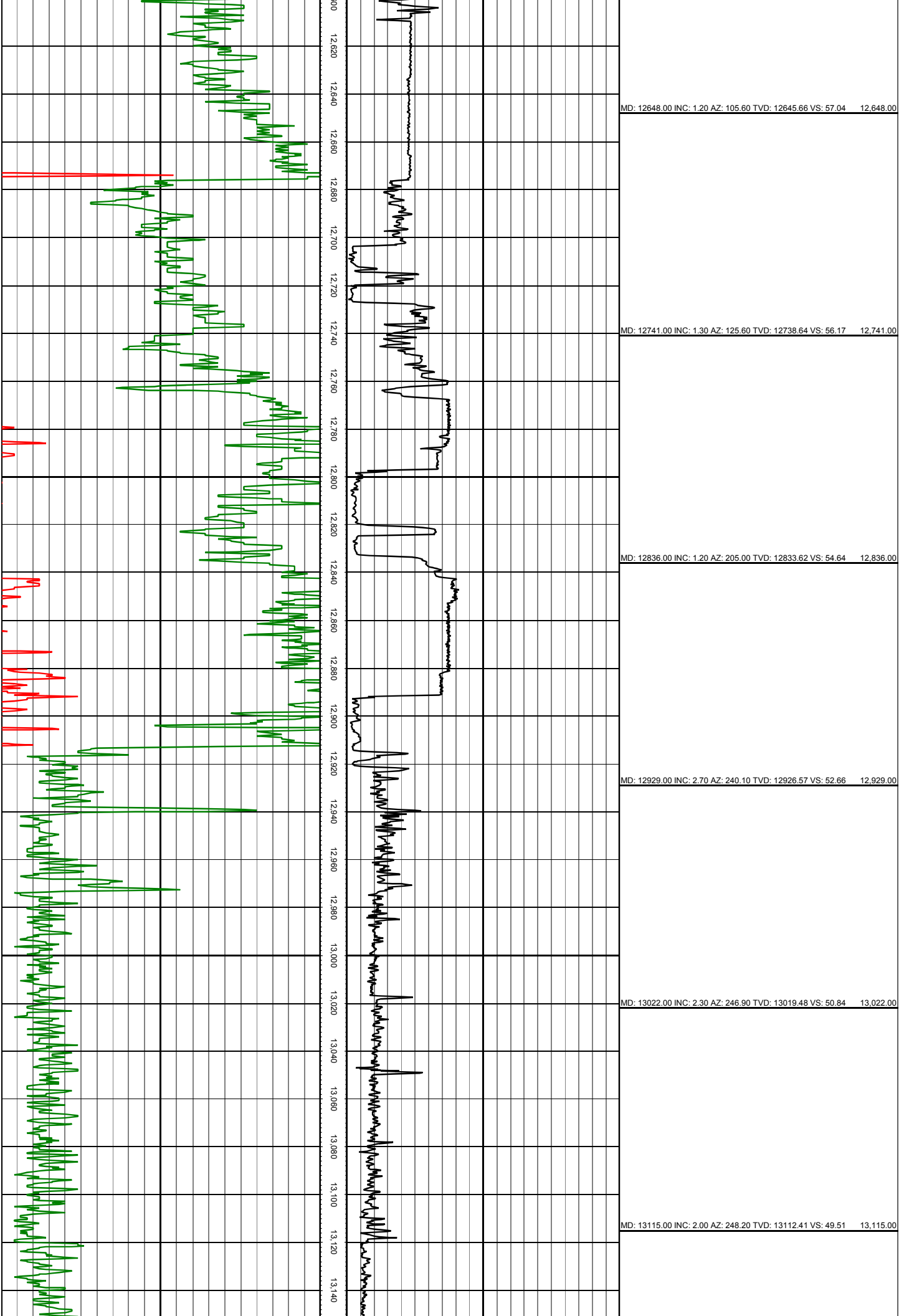


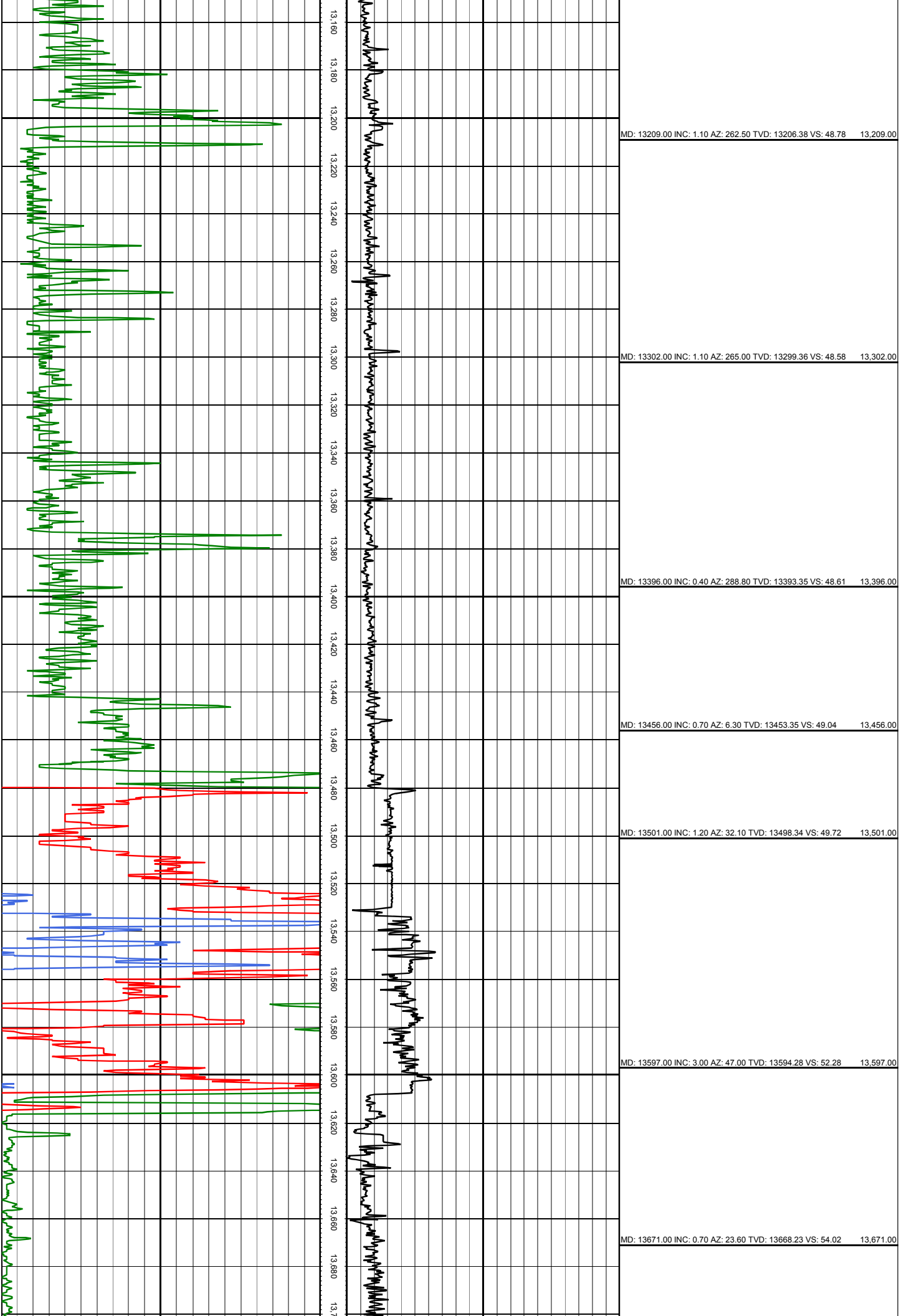


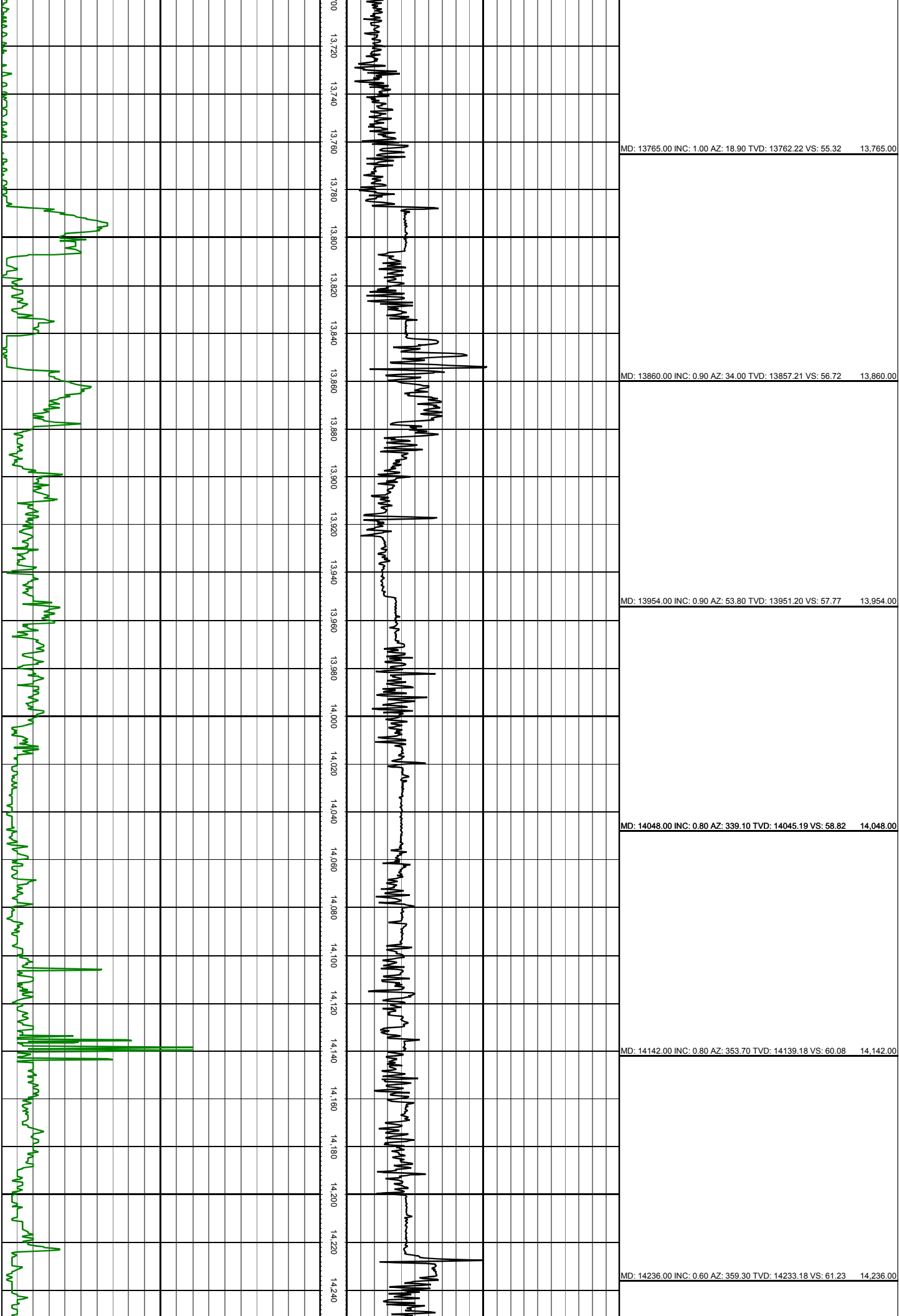


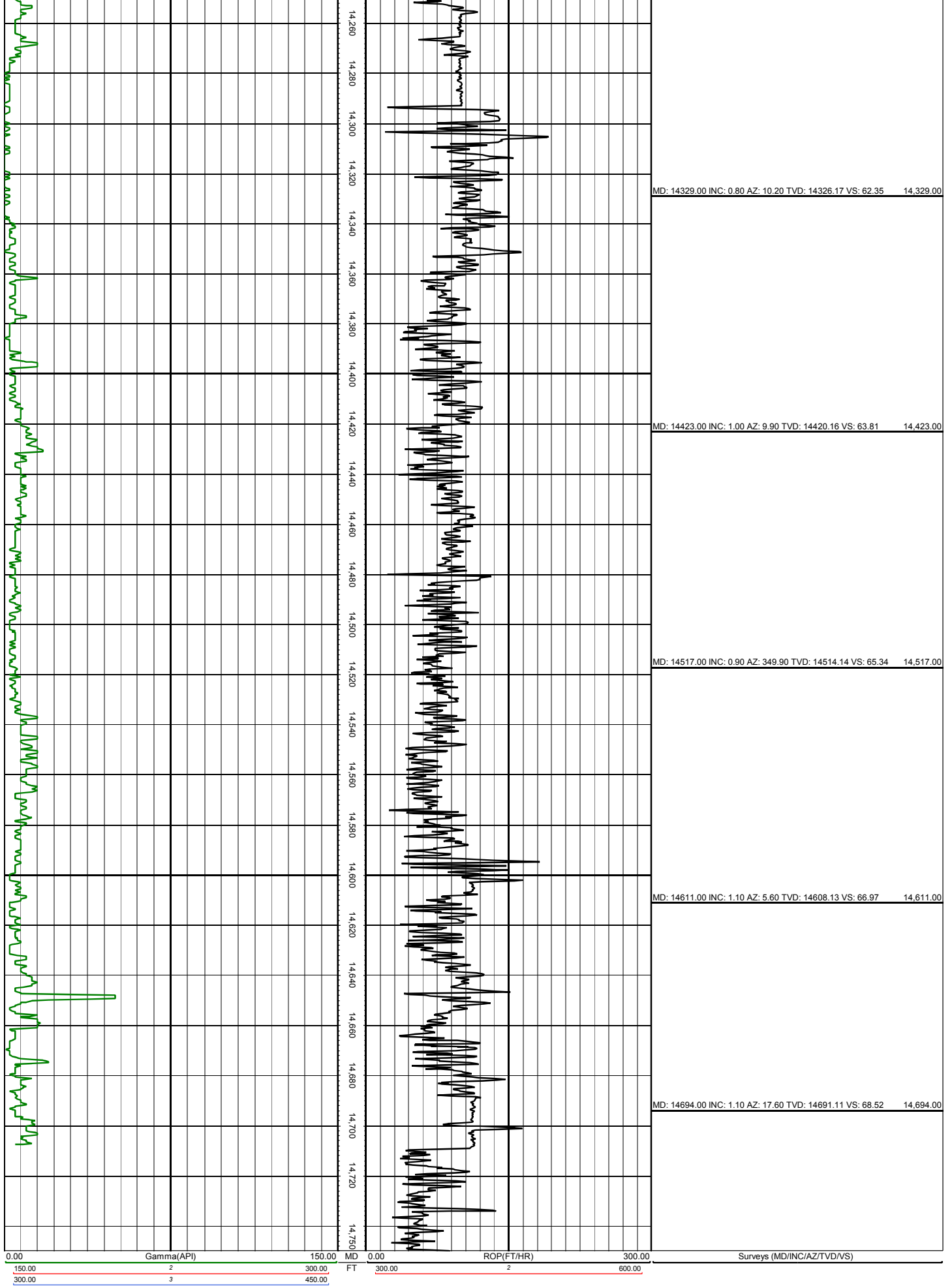












Fluid Caliper

1st INTERMEDIATE CASING

- Borehole Profile Log / Future Casing Diameter = 13.375”

Borehole Profile Log / Future Casing Diameter = 13.375”

Company: DCP Midstream LP

Well: Zia AGI D2

Field: AGI Devonian Exploration

County: Lea State: New Mexico

Borehole Profile Log

Future Casing Diameter = 13.375"

County: Lea

Field: AGI Devonian Exploration

Location: 1893' FSL & 950' FWL

Well: Zia AGI D2

Company: DCP Midstream LP

Location:

1893' FSL & 950' FWL

Section: 19 Township: T19S Abstract: R32E

Elev.: K.B. 3572.00 ft
G.L. 3547.00 ft
D.F. 3571.00 ft

Permanent Datum:

Log Measured From:

Drilling Measured From:

Ground Level

Kelly Bushing

Kelly Bushing

Elev.: 25.00 ft

3547.00 f

above Perm.Datum

API Serial No.

30-025-42207

Section: 19

Township: T19S

Abstract: R32E

Logging Date	08-Nov-2016				
Run Number	Run 1A				
Depth Driller	2555.00 ft				
Schlumberger Depth	2555.00 ft				
Bottom Log Interval	2555.00 ft				
Top Log Interval	823.00 ft				
Casing Driller Size @ Depth	20 in @ 820.00 ft				
Casing Schlumberger	823 ft				
Bit Size	17.5 in				
Type Fluid In Hole	Water				
Density	Viscosity	30 s			
	Fluid Loss	PH	9.5		
MUD	Source of Sample				
RM @ Meas Temp	0.1 ohm.m @ 71 degF				
RMF @ Meas Temp	0.08 ohm.m @ 71 degF				
RMC @ Meas Temp	0.12 ohm.m @ 71 degF				
Source RMF	RMC				
RM @ BHT	RMF @ BHT	0.07 @ 110.21	0.05 @ 110.21		
Max Recorded Temperatures					
Circulation Stopped		Time	20:00:00		
Logger on Bottom		Time	03:00:00		
Unit Number	Location:	9105	Midland, TX		
Recorded By	Danielle Krebs				
Witnessed By	Joe Harris				

Disclaimer

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10.2 Software Version

10.3 Composite Summary

10.4 Log (PPC_HoleDiameter)

10.5 Parameter Listing

Well Sketch

Driller Depth

0.00 ft

820.00 ft

Casing 20in
106.5lbm/ft

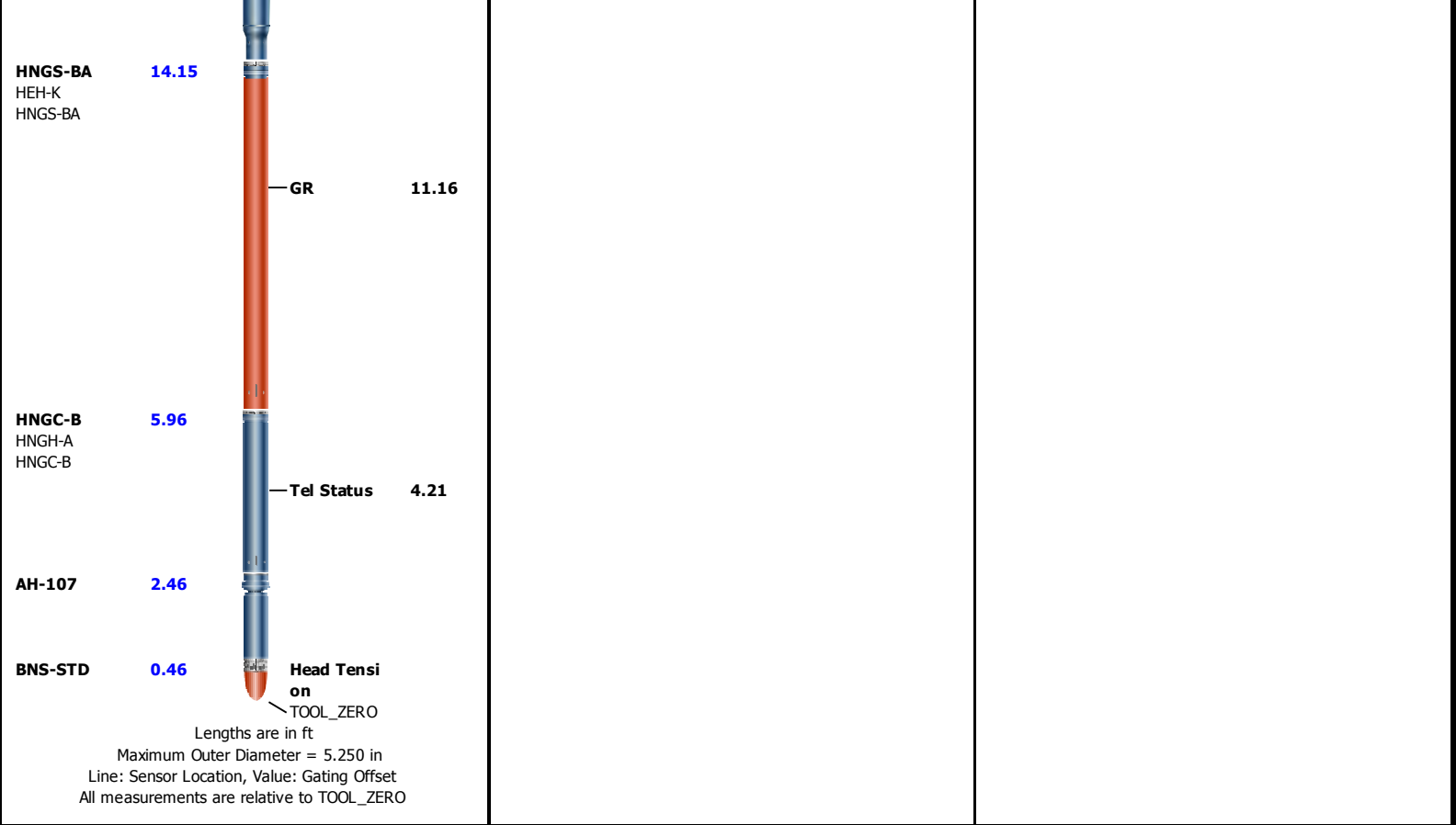


Borehole Size/Casing/Tubing Record

Bit						
Bit Size (in)	17.5					
Top Driller (ft)	0					
Top Logger (ft)	0					
Bottom Driller (ft)	2555					
Bottom Logger (ft)	2555					
Casing						
Size (in)	20					
Weight (lbm/ft)	106.5					
Inner Diameter (in)	19					
Grade	N/A					
Top Driller (ft)	0					
Top Logger (ft)	0					
Bottom Driller (ft)	820					
Bottom Logger (ft)	823					

Remarks and Equipment Summary

Run 1A: Toolstring				Run 1A: Remarks			
Equip name LEH-QT LEH-QT Length 26.58 MP name Offset 	1. Crew: Danielle, Hakan, Wallis						
	2. Logs performed from TD to Casing.						
	3. Caliper Check used from the 20" 103 lb casing string.						
	4. Casing ID: 19.035						
DTC-H ECH-KC DTC-H 23.67 CTEM HV 22.77 0.00 TelStatus 20.67 ToolStatus 20.67							
PPC-B:8225 PPC-B:8225 20.67 PPC-B Calipers 19.52							



Depth Summary			
Run 1A			
Depth Measuring Device			
Type	IDW-JA		
Serial Number	6213		
Calibration Date	24-Oct-2016		
Calibrator Serial Number	Calibrator Jig 16		
Calibration Cable Type	7 46 A XS		
Wheel Correction 1	-5		
Wheel Correction 2	0		
Tension Device			
Type	CMTD-B/A		
Serial Number	8308		
Calibration Date	01-Nov-2016		
Calibrator Serial Number	315426A		
Number of Calibration Points	10		
Calibration Root Mean Square Error	43		
Calibration Peak Error	95		
Logging Cable			
Type	7-46A-XS		
Serial Number	U715045		
Length	17500.00 ft		
Conveyance Type	Wireline		
Rig Type	Land		
Run 1A:Depth Control Parameters		Depth Control Remarks	

Log Sequence	First Log In the Well	1. All SLB depth policies and procedurse followed.
Rig Up Length At Surface		2. IDW used as primary depth control device.
Rig Up Length At Bottom		3. Z Chart used as secondary depth control device.
Rig Up Length Correction		4. First Run in Hole Procedures followed.
Stretch Correction		
Tool Zero Check At Surface		

Run 1A

Main Pass 2" = 100'

Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ICV	Integrated Cement Volume	GCSE_UP_PASS, FCD	1539.68	ft3
IHV	Integrated Hole Volume	GCSE_UP_PASS	3233.99	ft3

Software Version

Acquisition System	Version
Maxwell 2017	7.0.75530.3100

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run 1A	Main[2]:Up	Up	22.85 ft	2559.58 ft	09-Nov-2016 3:53:43 AM	09-Nov-2016 4:20:00 AM	ON	3.11 ft	Yes

All depths are referenced to toolstring zero

Log

Company:DCP Midstream LP Well:Zia AGI D2

Run 1A: Main[2]:Up:S026

Description: HRLT BASIC LOG	Format: Log (Caliper 2 inch General)	Index Scale: 2 in per 100 ft	Index Unit: ft	Index Type: Measured Depth	Creation
Date: 10-Nov-2016 01:59:27					

Channel	Source	Sampling
BS	Borehole	6in - RT
FCD	Borehole	6in - RT
HD1	PPC-B:PPC-B:PPC-B	6in
ICV	Borehole	6in - RT
IHV	Borehole	6in - RT
SGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
TENS	WLWorkflow	1in
TIME_1900	WLWorkflow	0.1in

— IHV - Integrated Hole Volume every 100.00 (ft3)

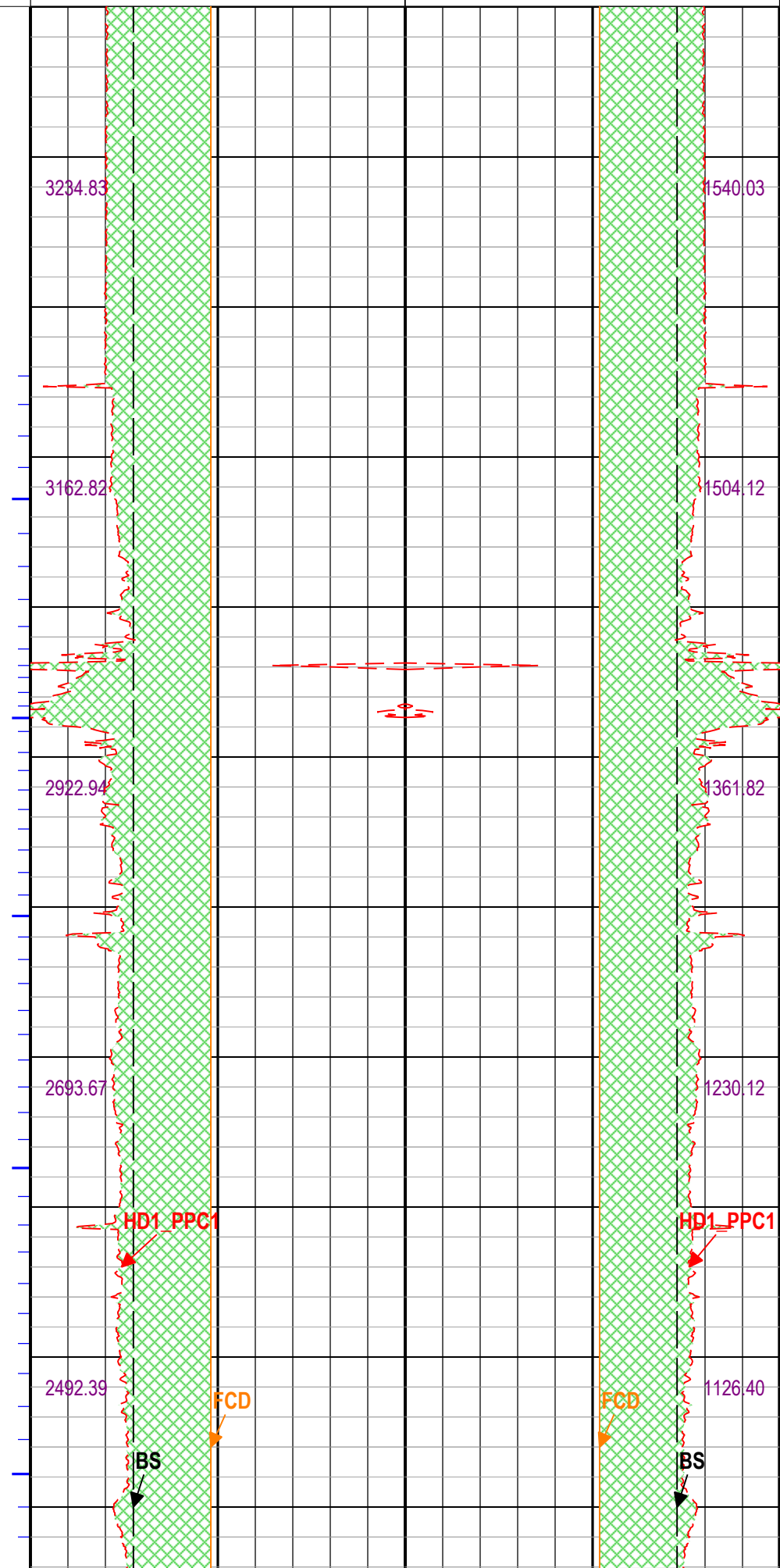
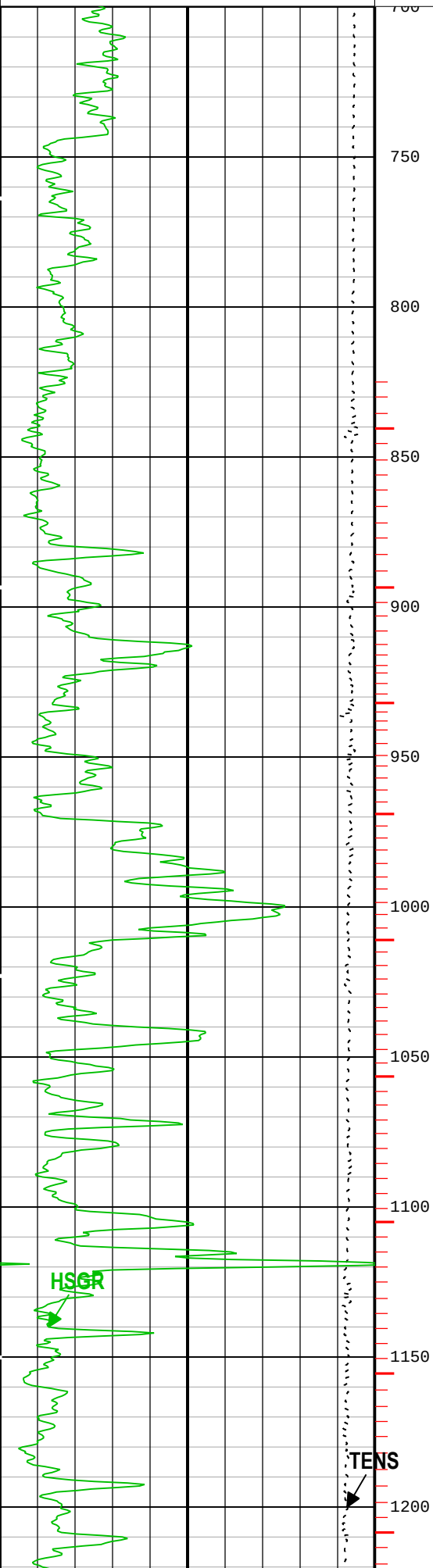
└ IHV - Integrated Hole Volume every 10.00 (ft3)

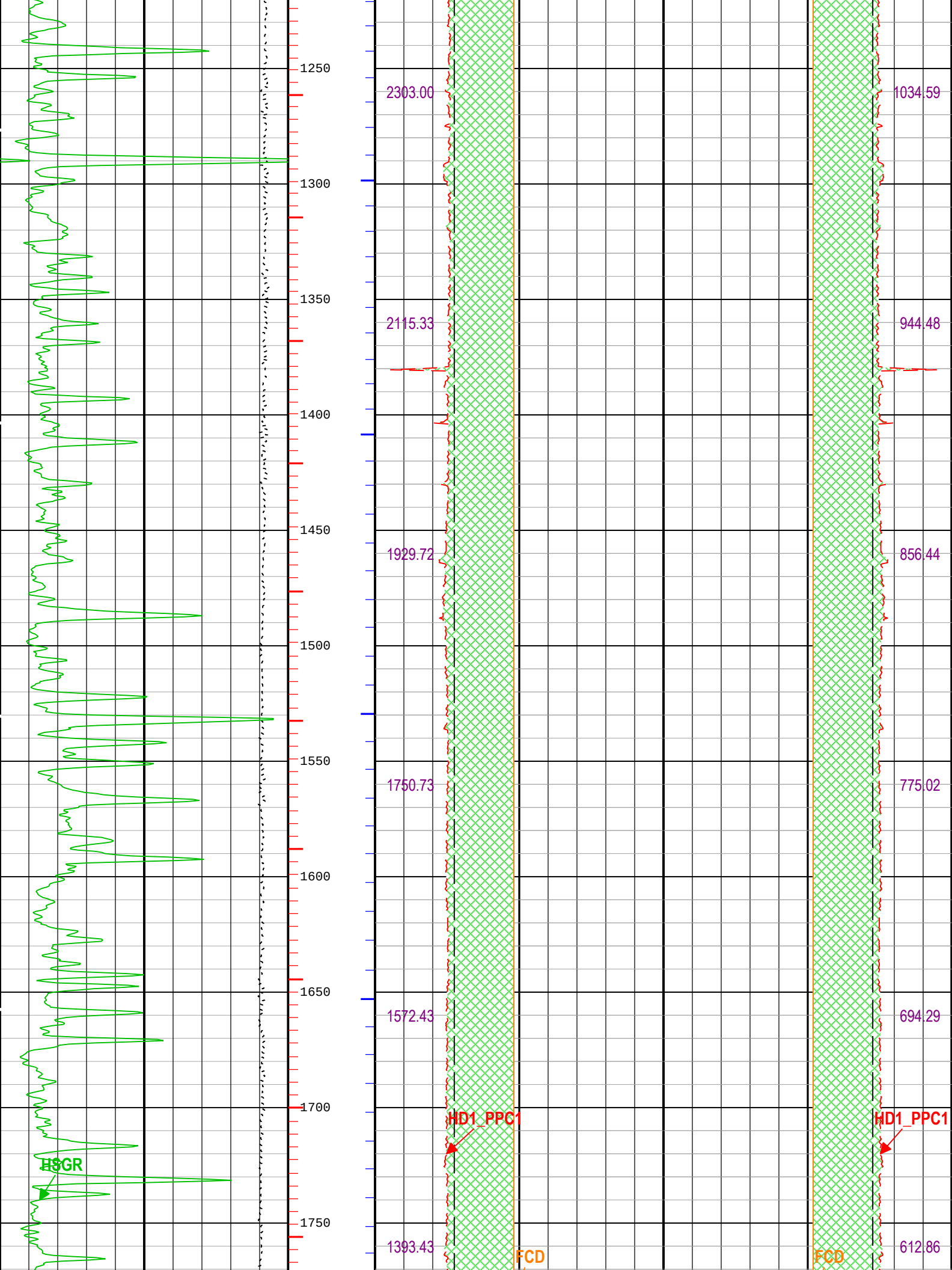
—ICV - Integrated Cement Volume every 100.00 (ft3)

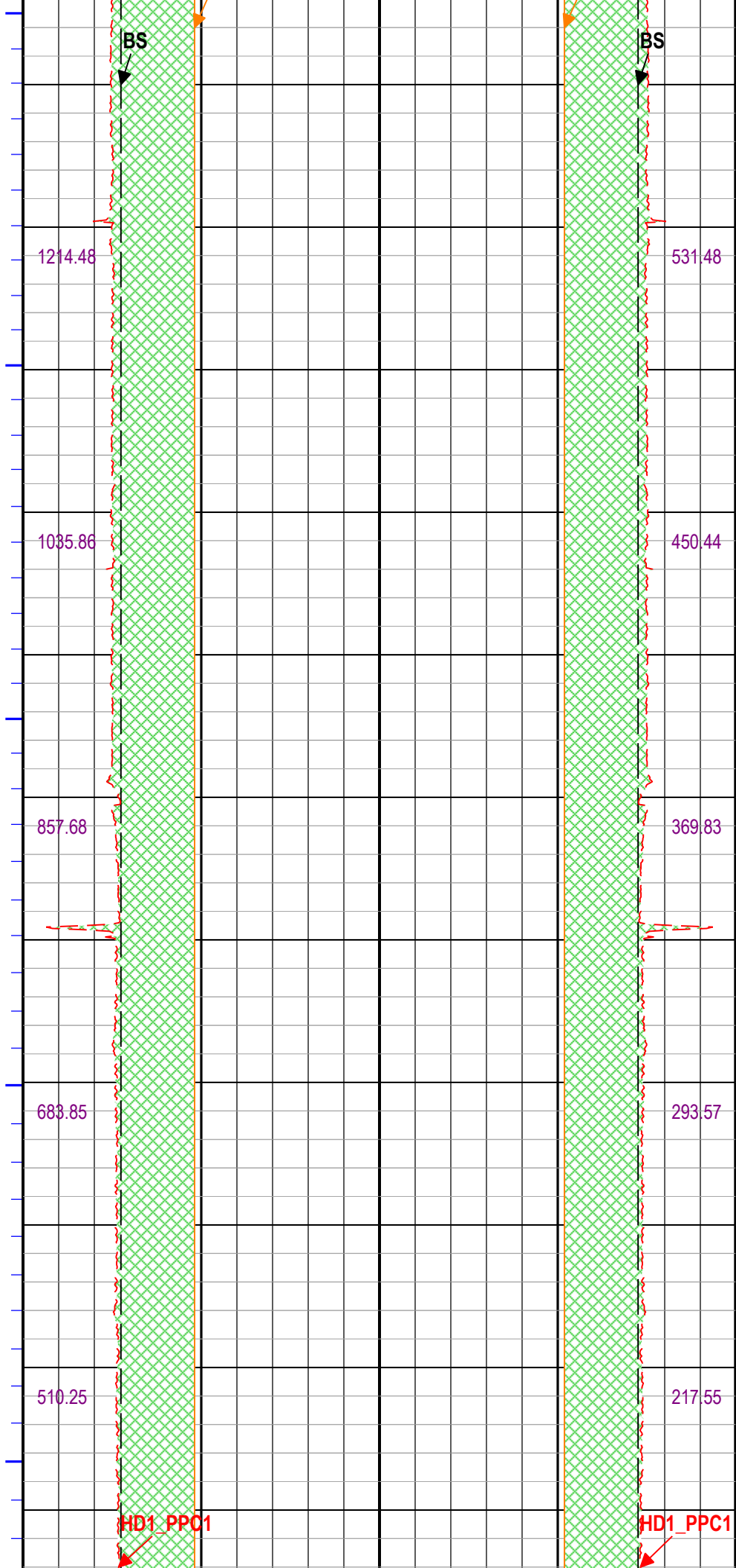
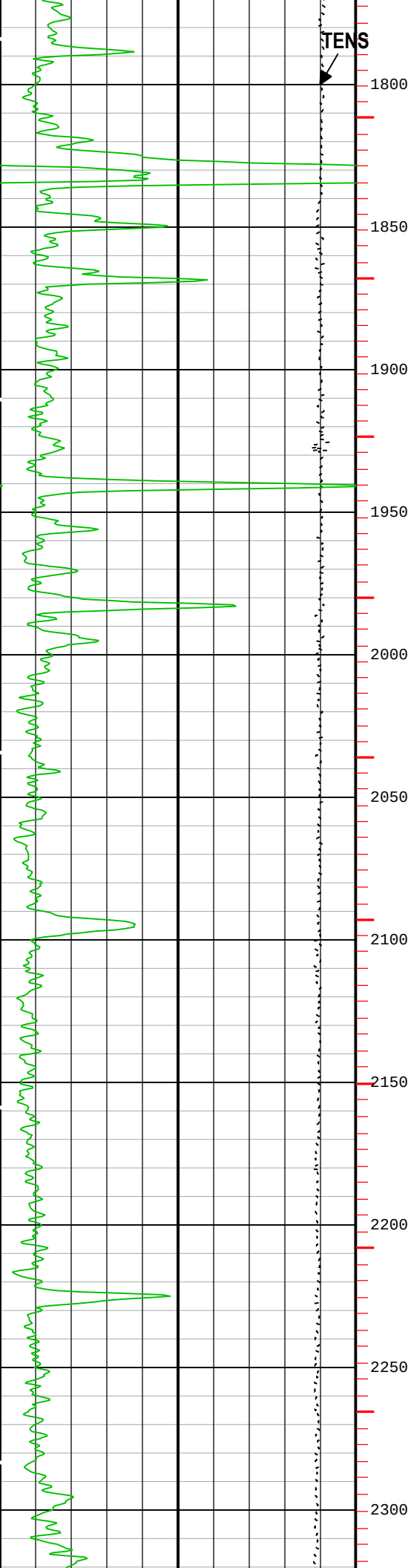
—ICV - Integrated Cement Volume every 10.00 (ft3)

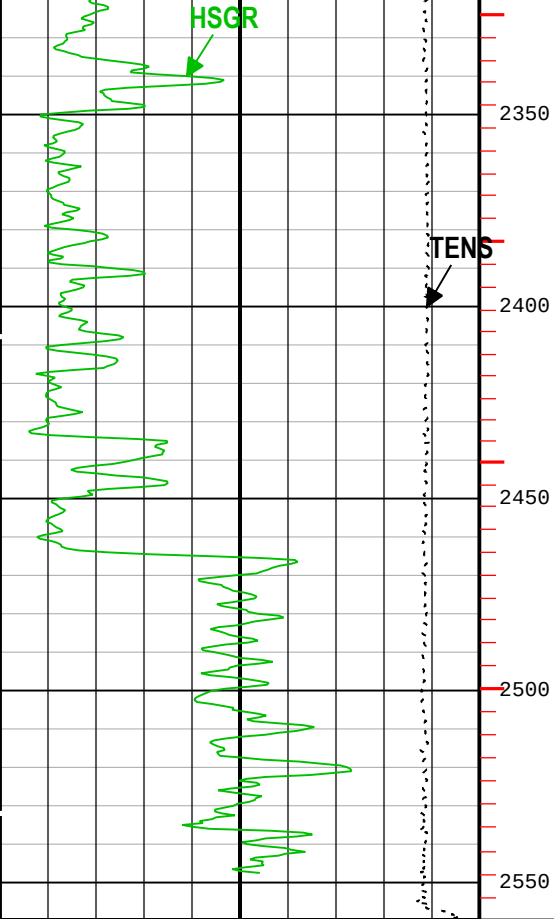
TIME_1900 - Time Marked every 60.00 (s)

Cement			Cement		
Bit Size (BS) RT			Bit Size (BS) RT		
23	in	3	3	in	23
Future Casing Diameter (FCD) RT			Future Casing Diameter (FCD) RT		
23	in	3	3	in	23
Integrated Hole Volume (IHV) RT ft3			Integrated Cement Volume (ICV) RT ft3		

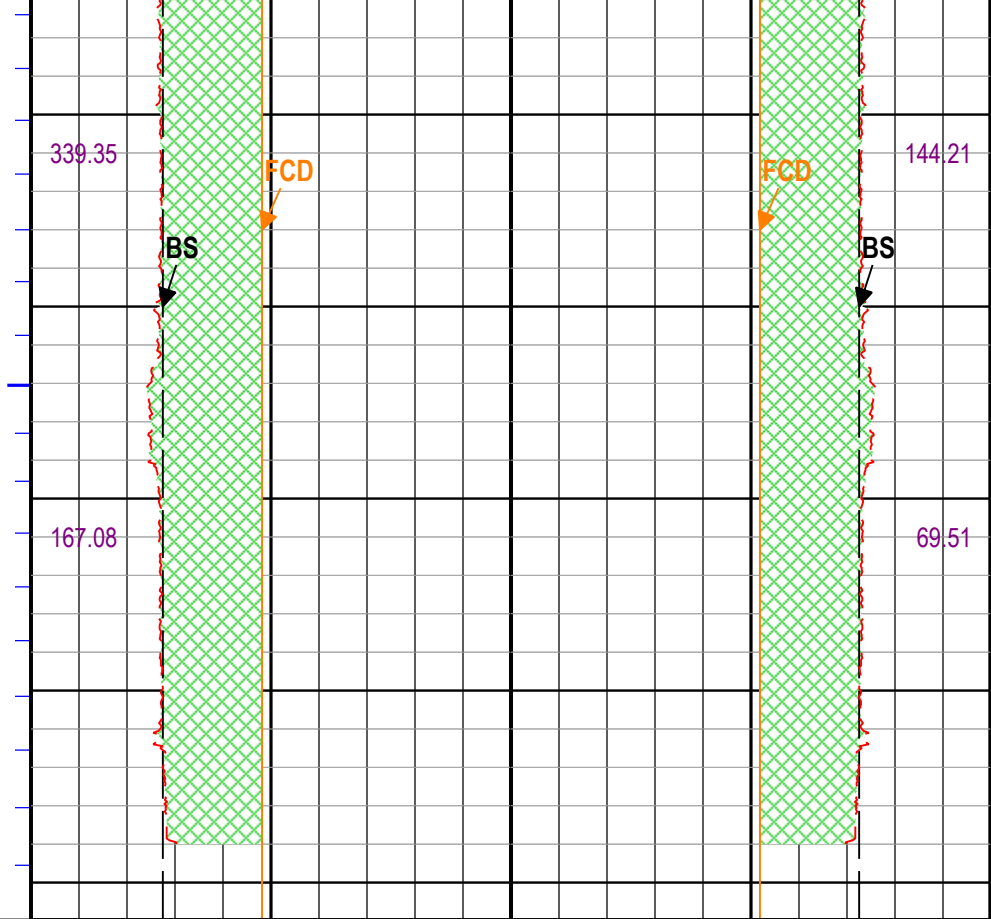








Cable Tension (TENS)	
10000	lbf
0	
Spectroscopy Gamma Ray (HSGR) HNGS-BA	
0	gAPI
150	



Cement		Cement	
Bit Size (BS) RT		Bit Size (BS) RT	
23	in	3	3
Future Casing Diameter (FCD) RT		Future Casing Diameter (FCD) RT	
23	in	3	3
Integrated Hole Volume (IHV) RT		Integrated Cement Volume (ICV) RT	
ft3		ft3	
Hole Diameter 1 (HD1_PPC1) PPC-B		Hole Diameter 1 (HD1_PPC1) PPC-B	
23	in	3	3

TIME_1900 - Time Marked every 60.00 (s)

- ICV - Integrated Cement Volume every 10.00 (ft3)
- ICV - Integrated Cement Volume every 100.00 (ft3)
- IHV - Integrated Hole Volume every 10.00 (ft3)
- IHV - Integrated Hole Volume every 100.00 (ft3)

Description: HRLT BASIC LOG Format: Log (Caliper 2 inch General) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 10-Nov-2016 01:59:27

Run 1A

Integration Summary				
Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ICV	Integrated Cement Volume	GCSE_UP_PASS, FCD	1539.68	ft3
IHV	Integrated Hole Volume	GCSE_UP_PASS	3233.99	ft3

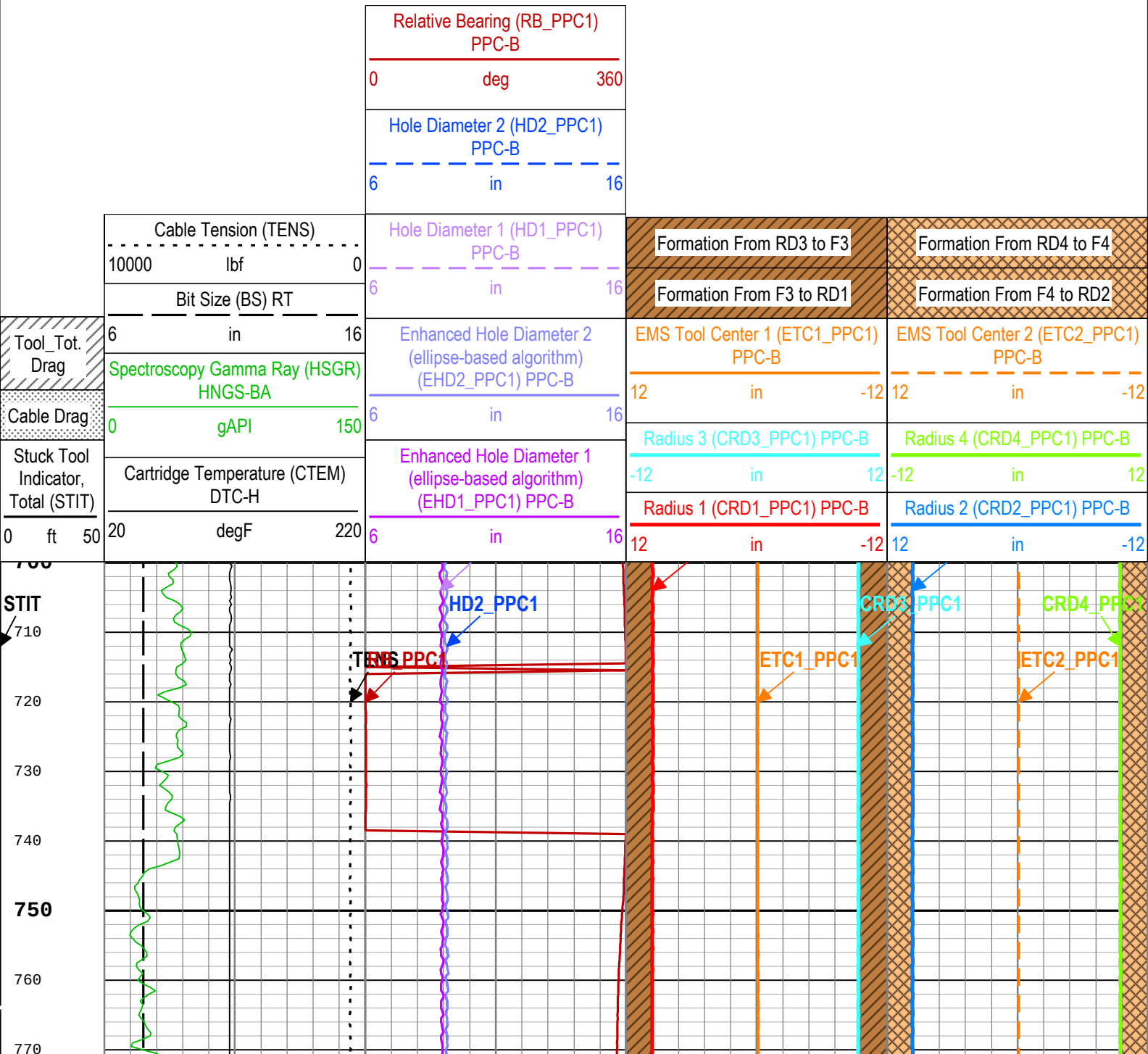
Software Version	
Acquisition System	Version

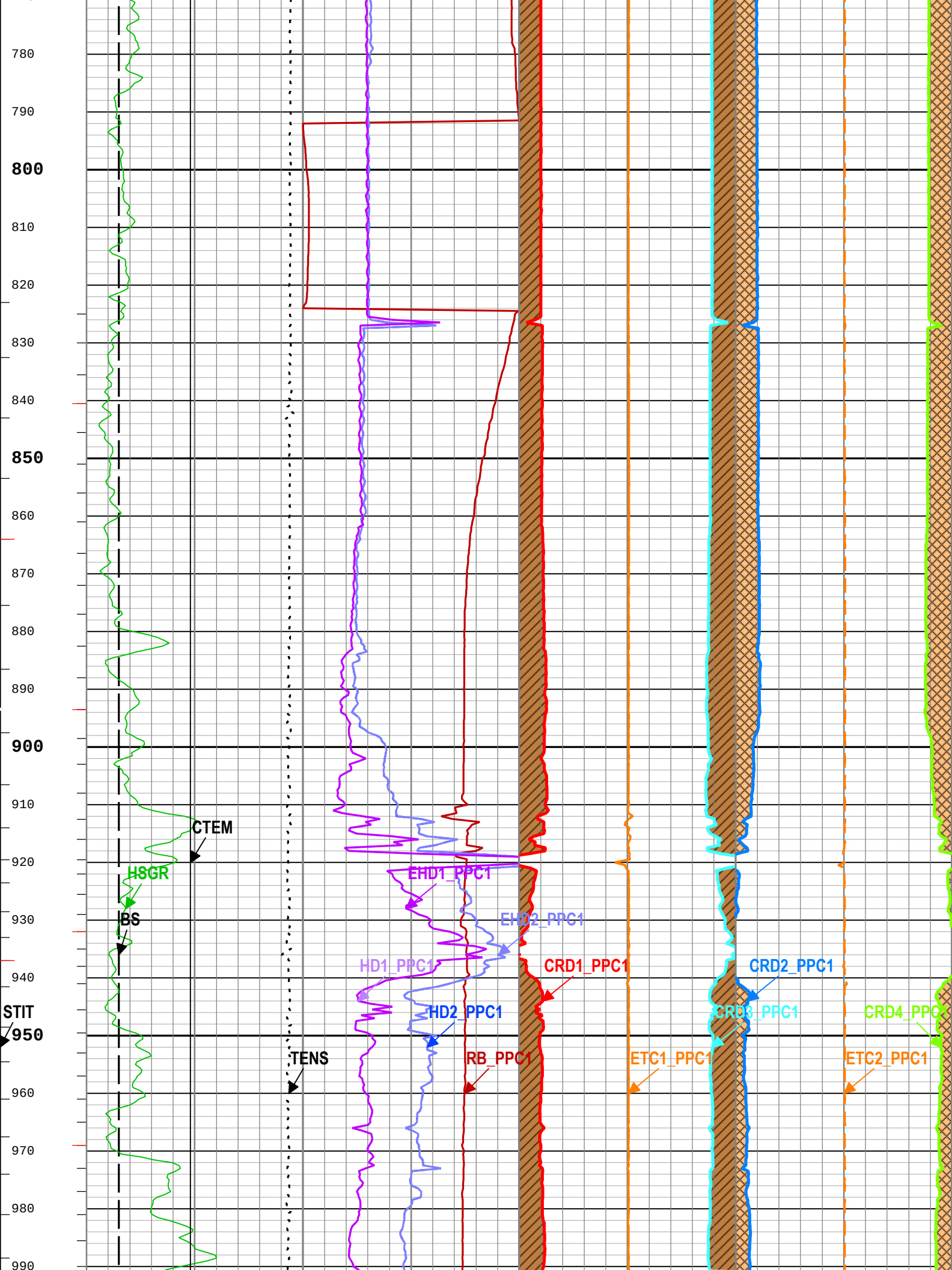
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run 1A	Main[2]:Up	Up	22.85 ft	2559.58 ft	09-Nov-2016 3:53:43 AM	09-Nov-2016 4:20:00 AM	ON	3.11 ft	Yes
All depths are referenced to toolstring zero									

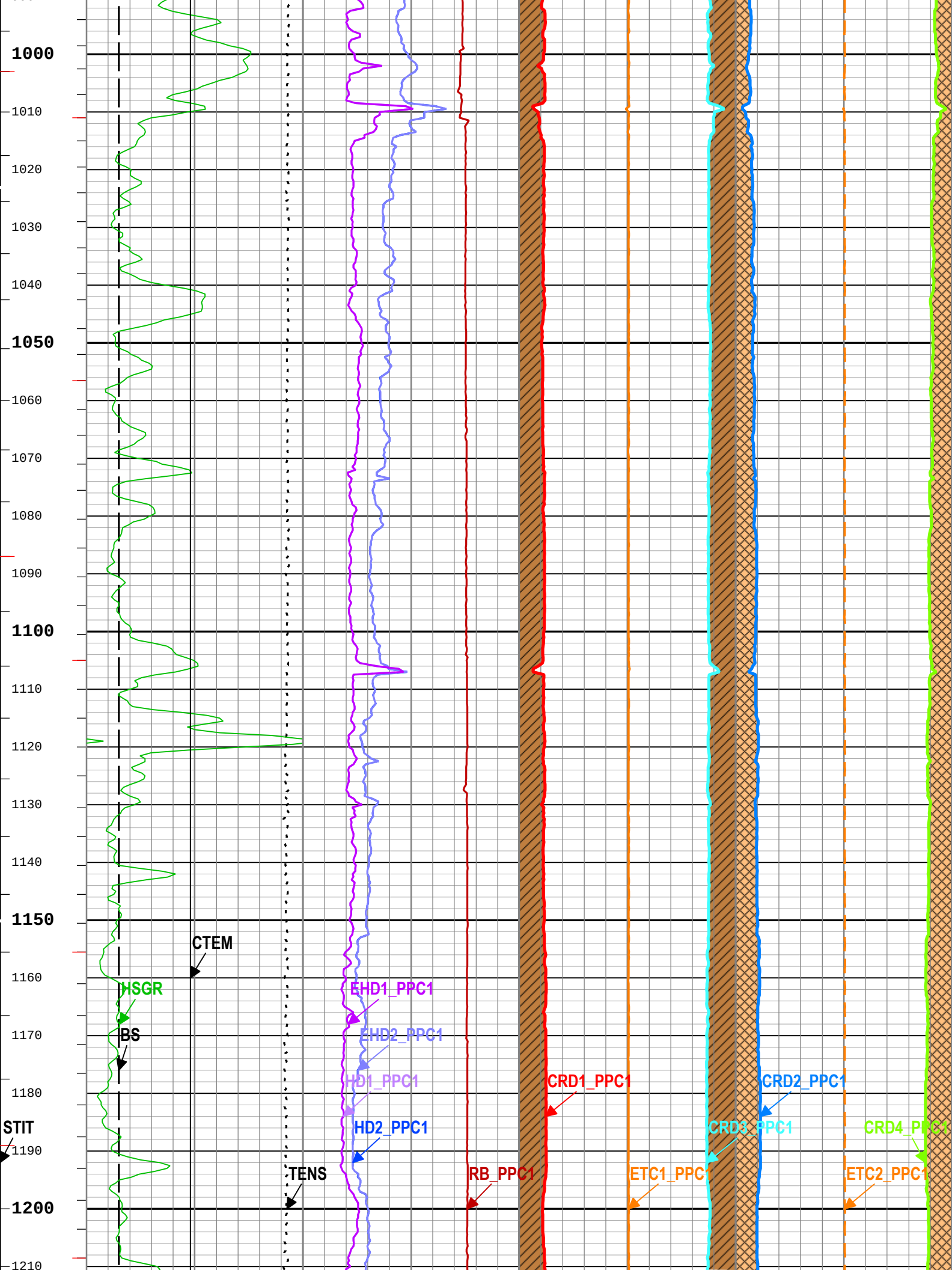
Log	Company:DCP Midstream LP	Well:Zia AGI D2
	Run 1A: Main[2]:Up:S026	

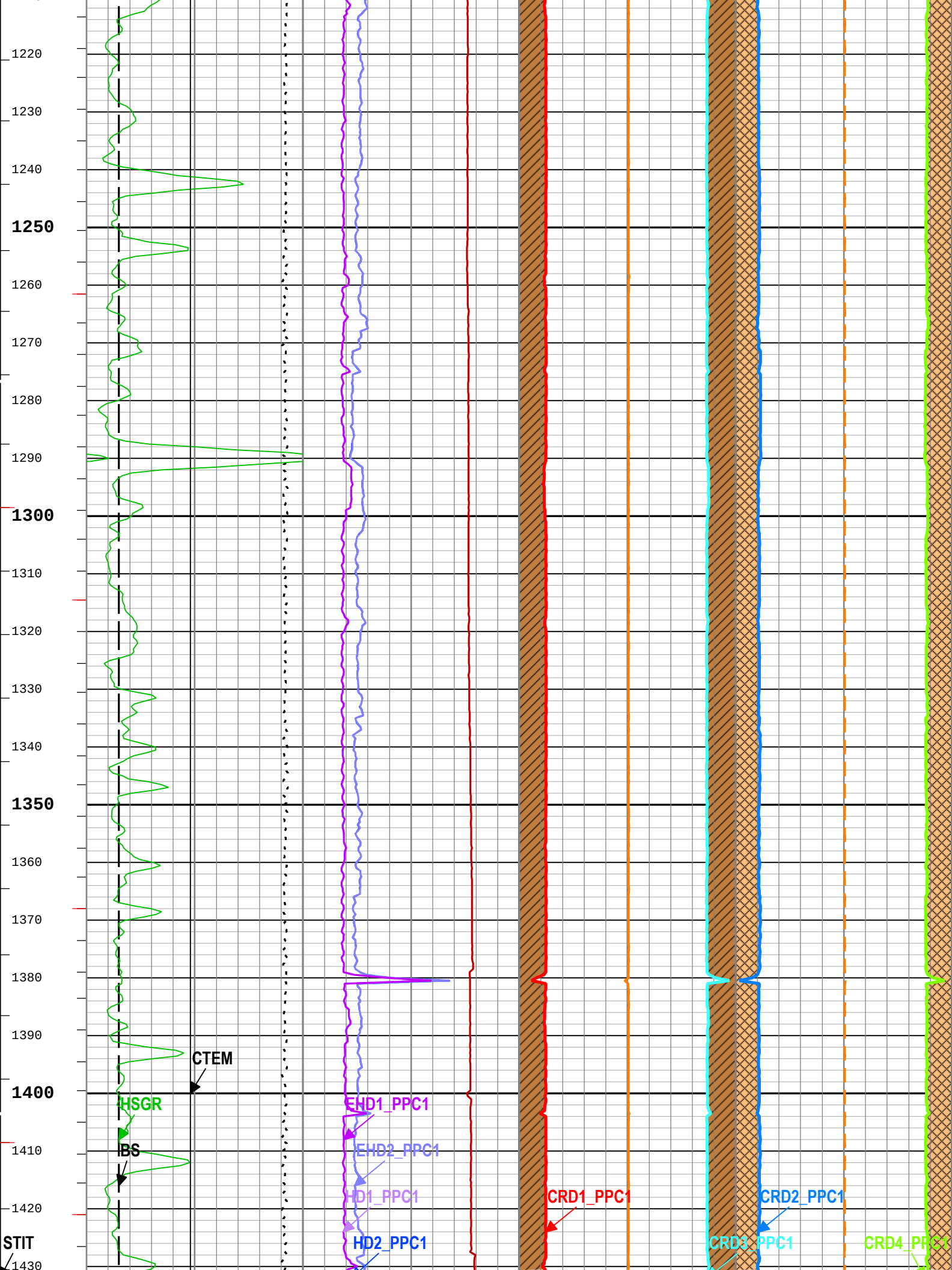
Description: PPC-B:1_Caliper_Formation Format: Log (PPC-B:1_Caliper_Formation) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 10-Nov-2016 01:59:29

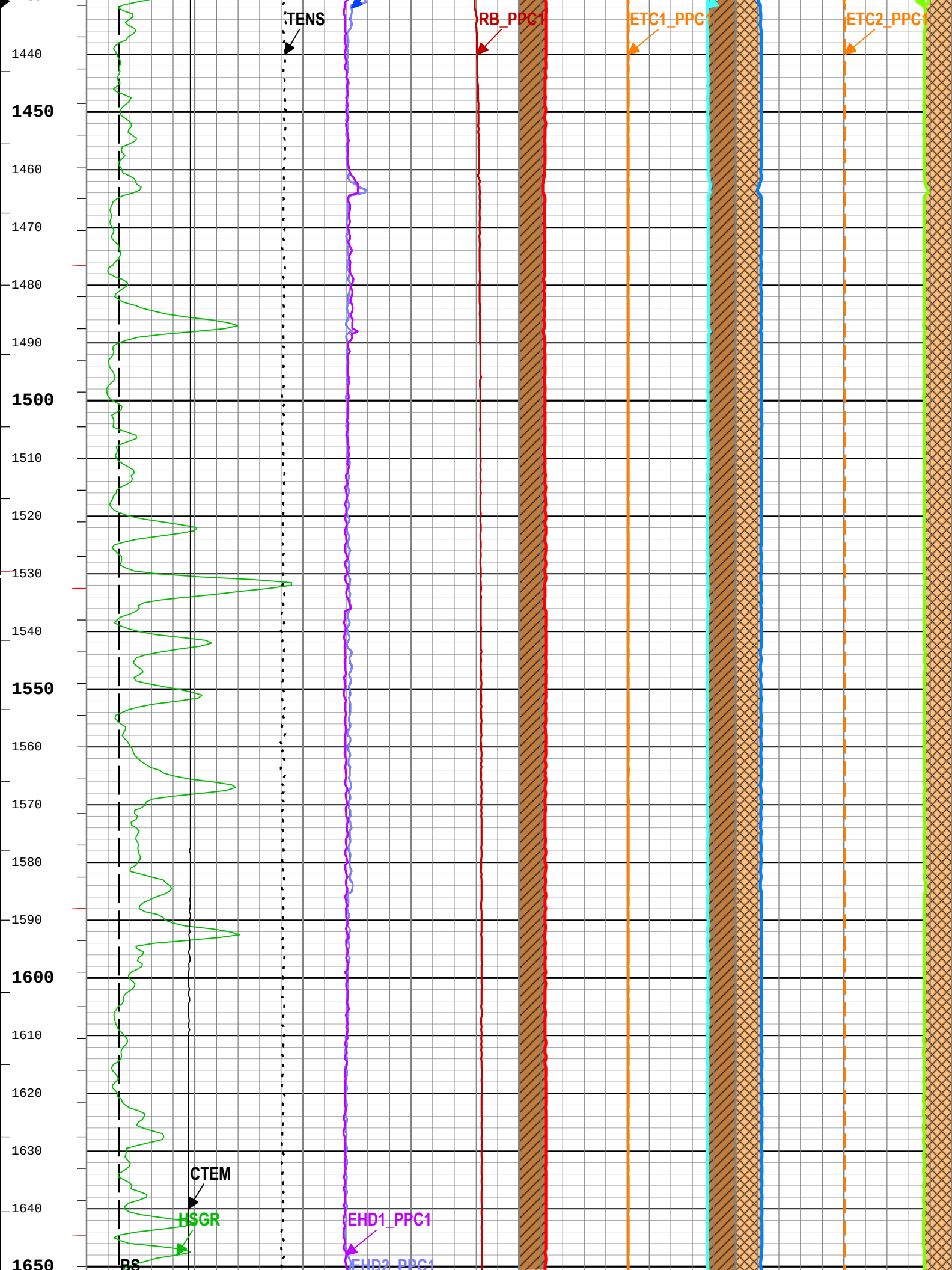
- IHV - Integrated Hole Volume every 10.00 (ft3)
- IHV - Integrated Hole Volume every 100.00 (ft3)
- ICV - Integrated Cement Volume every 10.00 (ft3)
- TIME_1900 - Time Marked every 60.00 (s)
- ICV - Integrated Cement Volume every 100.00 (ft3)

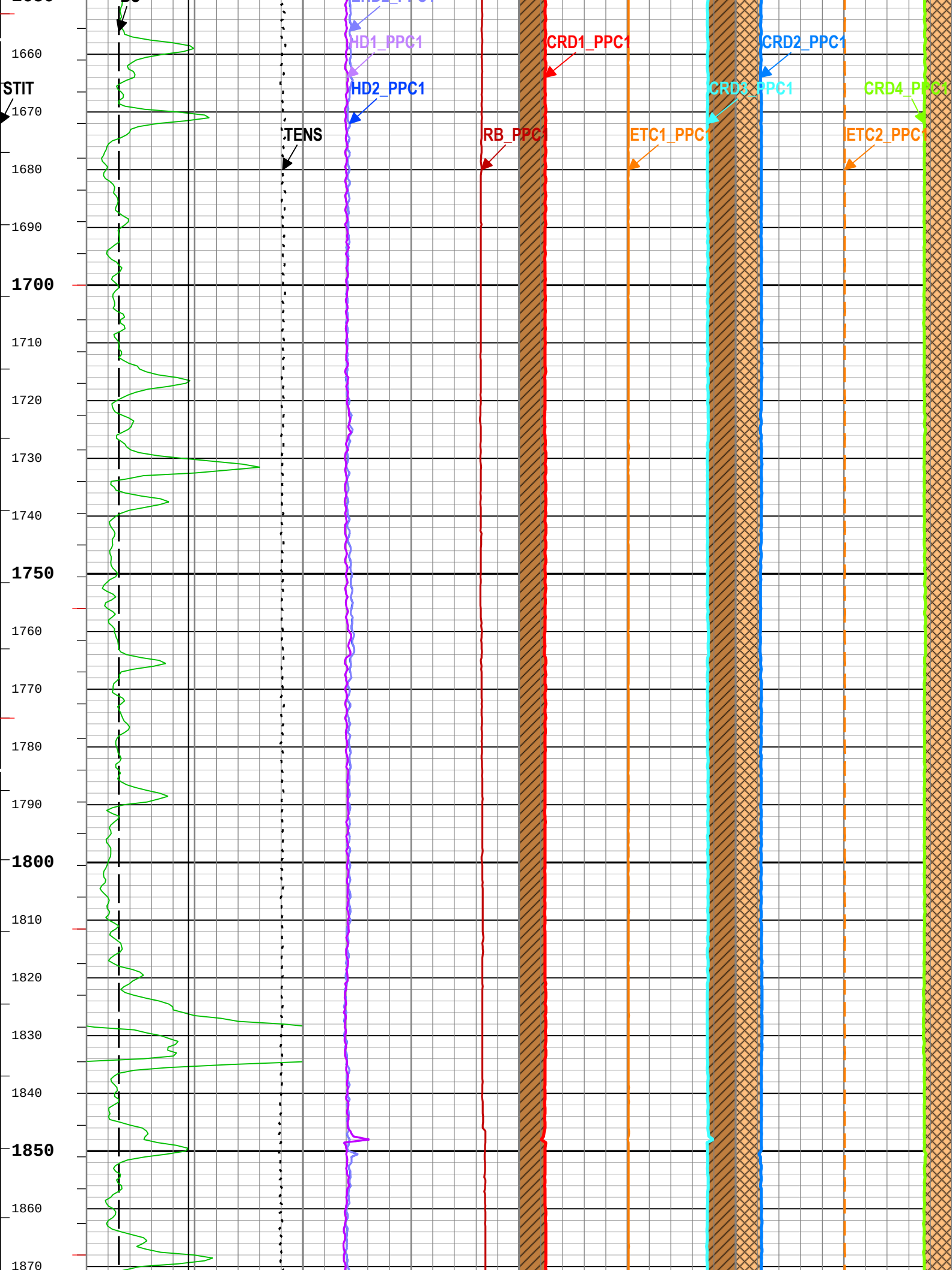


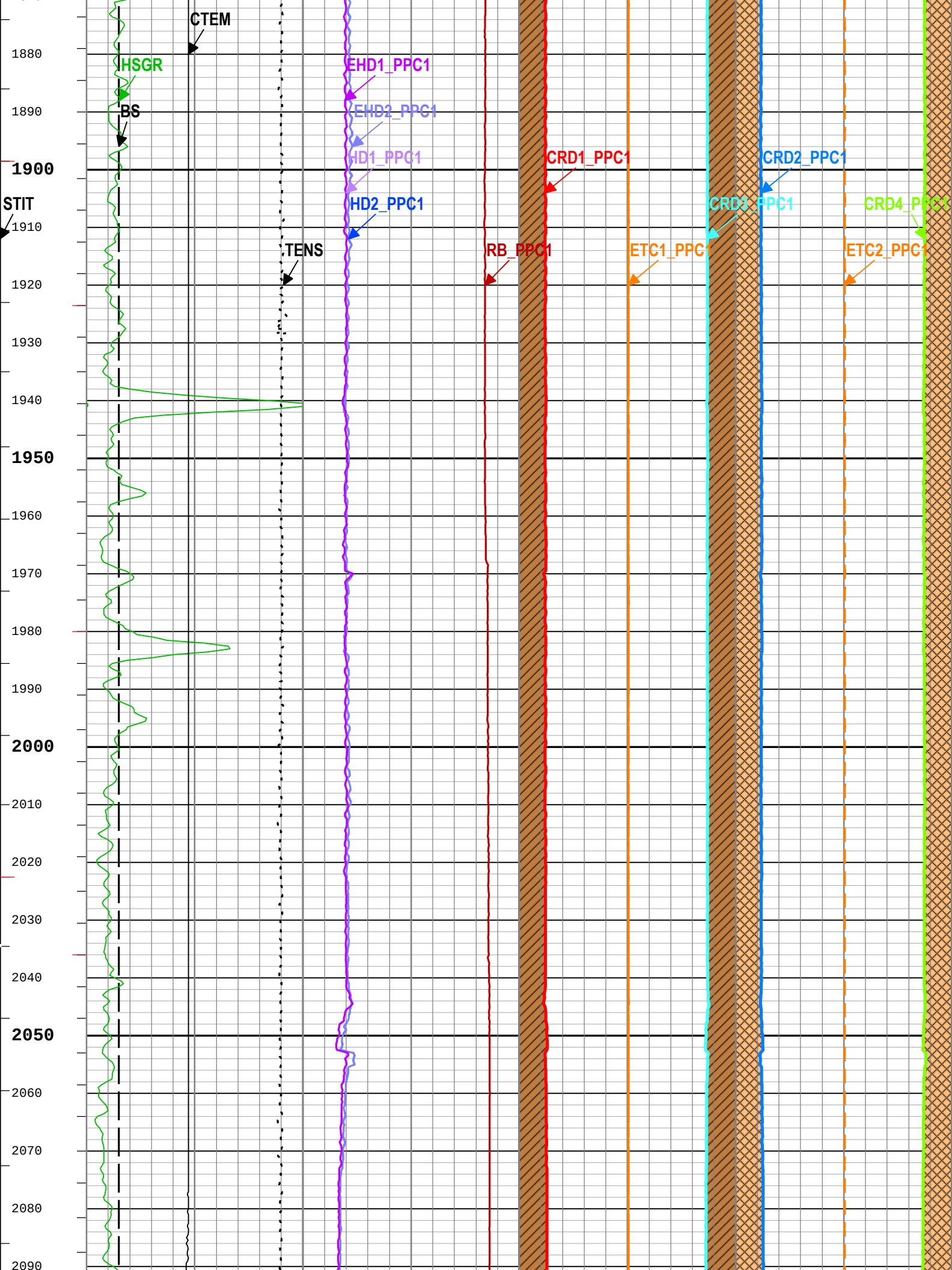


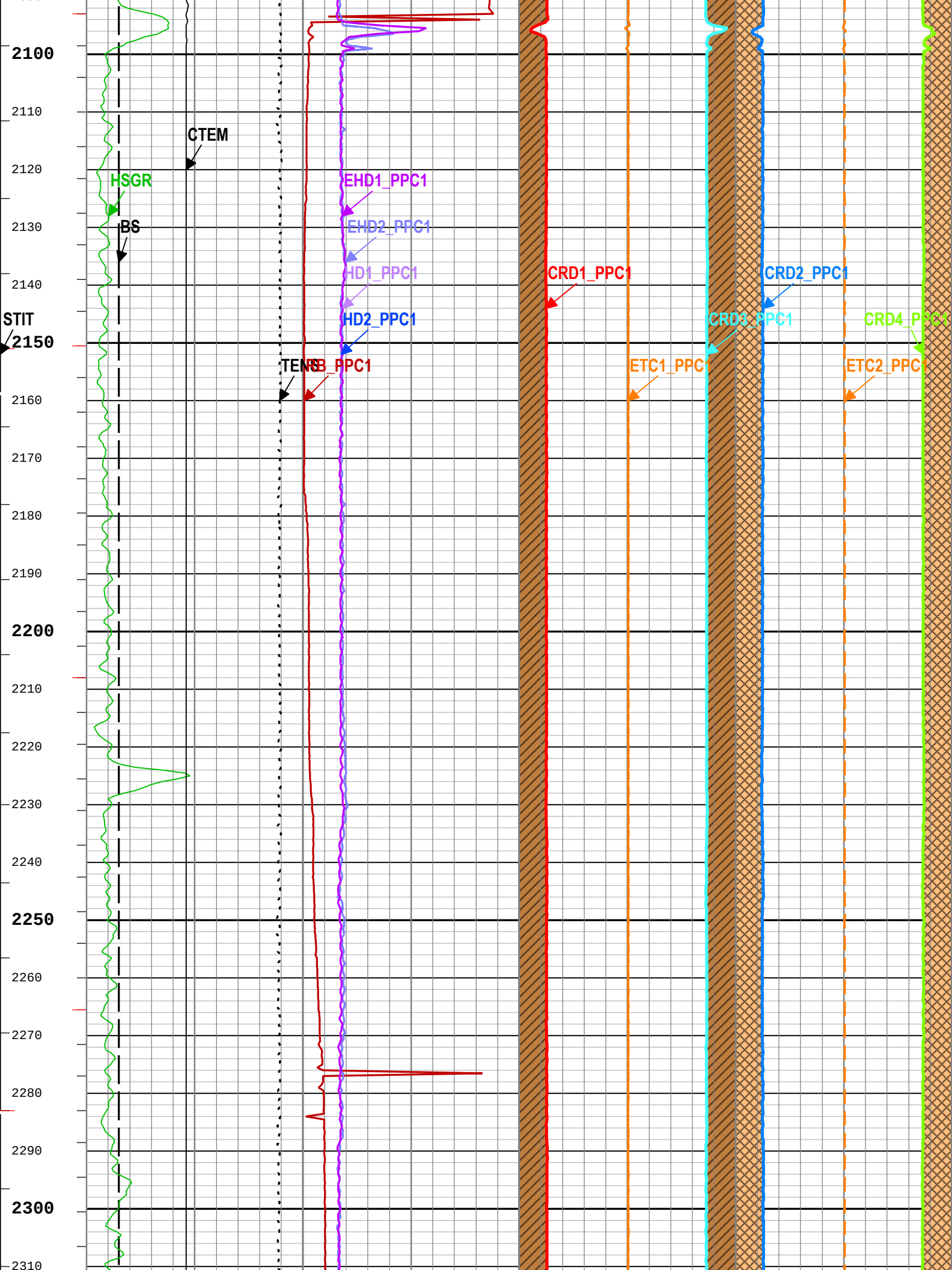


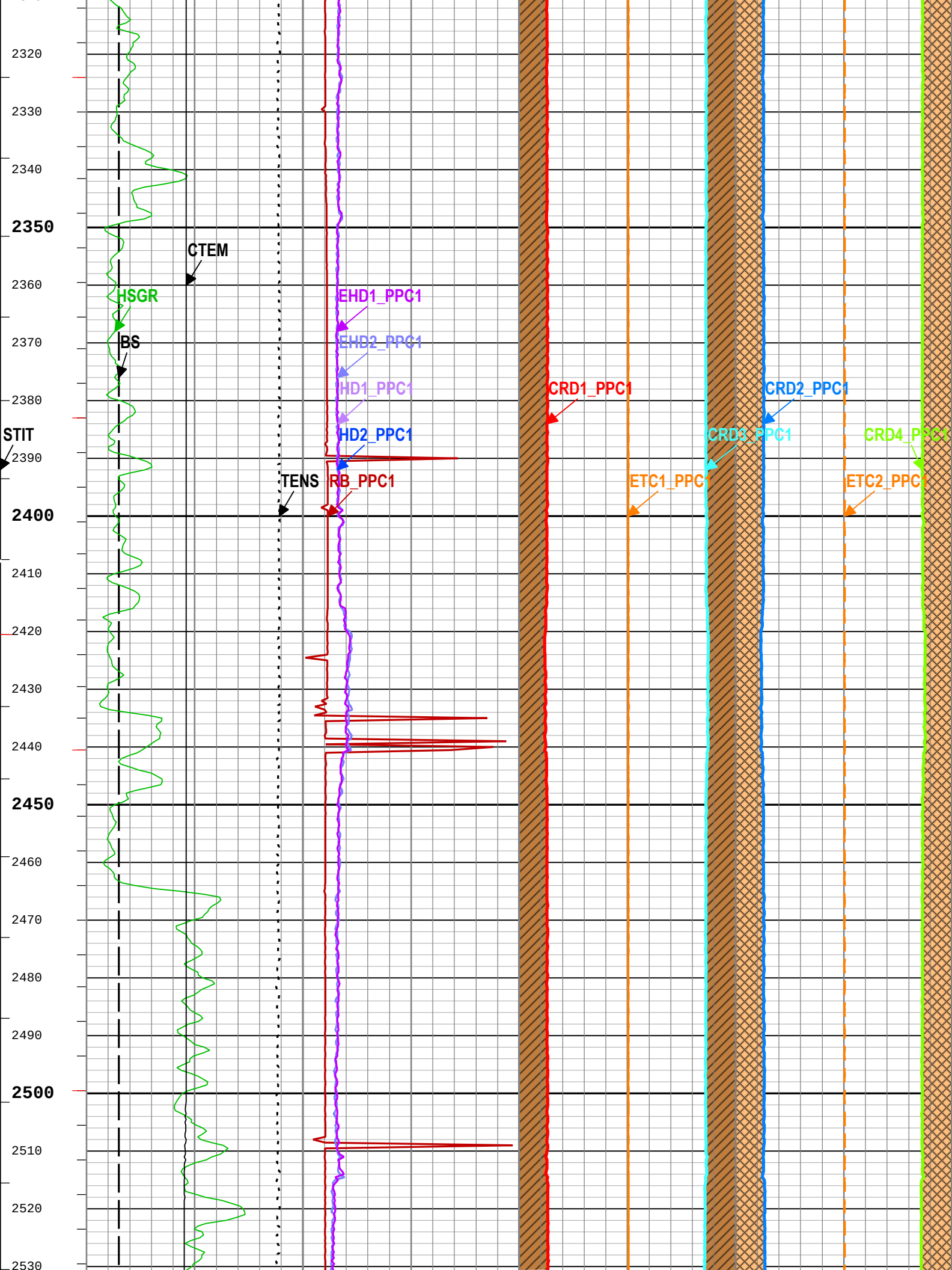


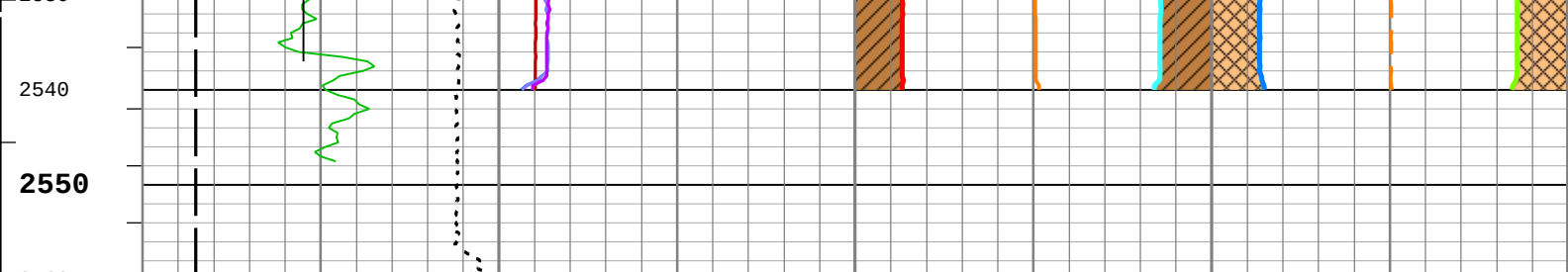












Tool_Tot. Drag	Cable Tension (TENS)		Relative Bearing (RB_PPC1) PPC-B		Formation From RD3 to F3		Formation From RD4 to F4	
	10000	lbf	0		Formation From F3 to RD1		Formation From F4 to RD2	
Cable Drag	Bit Size (BS) RT		Hole Diameter 2 (HD2_PPC1) PPC-B		EMS Tool Center 1 (ETC1_PPC1) PPC-B		EMS Tool Center 2 (ETC2_PPC1) PPC-B	
	6	in	6	16	12 in -12		12 in -12	
Stuck Tool Indicator, Total (STIT)	Spectroscopy Gamma Ray (HSGR) HNGS-BA		Hole Diameter 1 (HD1_PPC1) PPC-B		Radius 3 (CRD3_PPC1) PPC-B		Radius 4 (CRD4_PPC1) PPC-B	
	0	gAPI	6	16	-12 in 12		-12 in 12	
0 ft 50	Cartridge Temperature (CTEM) DTC-H		Enhanced Hole Diameter 2 (ellipse-based algorithm) (EHD2_PPC1) PPC-B		Radius 1 (CRD1_PPC1) PPC-B		Radius 2 (CRD2_PPC1) PPC-B	
	20	degF	6	16	12 in -12		12 in -12	
			Enhanced Hole Diameter 1 (ellipse-based algorithm) (EHD1_PPC1) PPC-B					
			6	16				

— ICV - Integrated Cement Volume every 100.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

— ICV - Integrated Cement Volume every 10.00 (ft3)

— IHV - Integrated Hole Volume every 100.00 (ft3)

— IHV - Integrated Hole Volume every 10.00 (ft3)

Description: PPC-B:1_Caliper_Formation Format: Log (PPC-B:1_Caliper_Formation) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured
Depth Creation Date: 10-Nov-2016 01:59:29

Channel Processing Parameters

Run 1A: Parameters

Parameter	Description	Tool	Value	Unit
ISSBAR	Barite Mud Presence Flag	Borehole	No	
BHK	Drilling Fluid Potassium Concentration	Borehole	0	%
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	17.5	in
CBLO	Casing Bottom (Logger)	WLSESSION	823	ft
CSODDRL	Casing Outer Diameter - Zoned along driller depths	WLSESSION	20	in
DBCC	Barite Constant Correction Flag	HNGS-BA	None	
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	8.4	lbm/gal
FCD	Future Casing (Outer) Diameter	WLSESSION	13.375	in
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS(RT)	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	HD2	
HCRB	Apply Borehole Potassium Correction	HNGS-BA	None	
HEMA	Hematite Presence Flag	Borehole	No	

SGRC	Standard Gamma Ray Correction Flag	HNGS-BA	Yes	
TPOS	Tool Position: Centered or Eccentered	HNGS-BA	Centered	

Tool Control Parameters

Run 1A: Parameters

Parameter	Description	Tool	Value	Unit
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1800	ft/h

Run 1A

Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
IHV	Integrated Hole Volume	GCSE_UP_PASS	3233.99	ft3
ICV	Integrated Cement Volume	GCSE_UP_PASS, FCD	1539.68	ft3

Software Version

Acquisition System	Version
Maxwell 2017	7.0.75530.3100

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run 1A	Main[2]:Up	Up	22.85 ft	2559.58 ft	09-Nov-2016 3:53:43 AM	09-Nov-2016 4:20:00 AM	ON	3.11 ft	Yes

All depths are referenced to toolstring zero

Log	Company:DCP Midstream LP Well:Zia AGI D2 Run 1A: Main[2]:Up:S026
-----	--

Description: PPC_HoleDiameter
Format: Log (PPC_HoleDiameter)
Index Scale: 5 in per 100 ft
Index Unit: ft
Index Type: Measured Depth
Creation Date: 10-Nov-2016 01:59:31

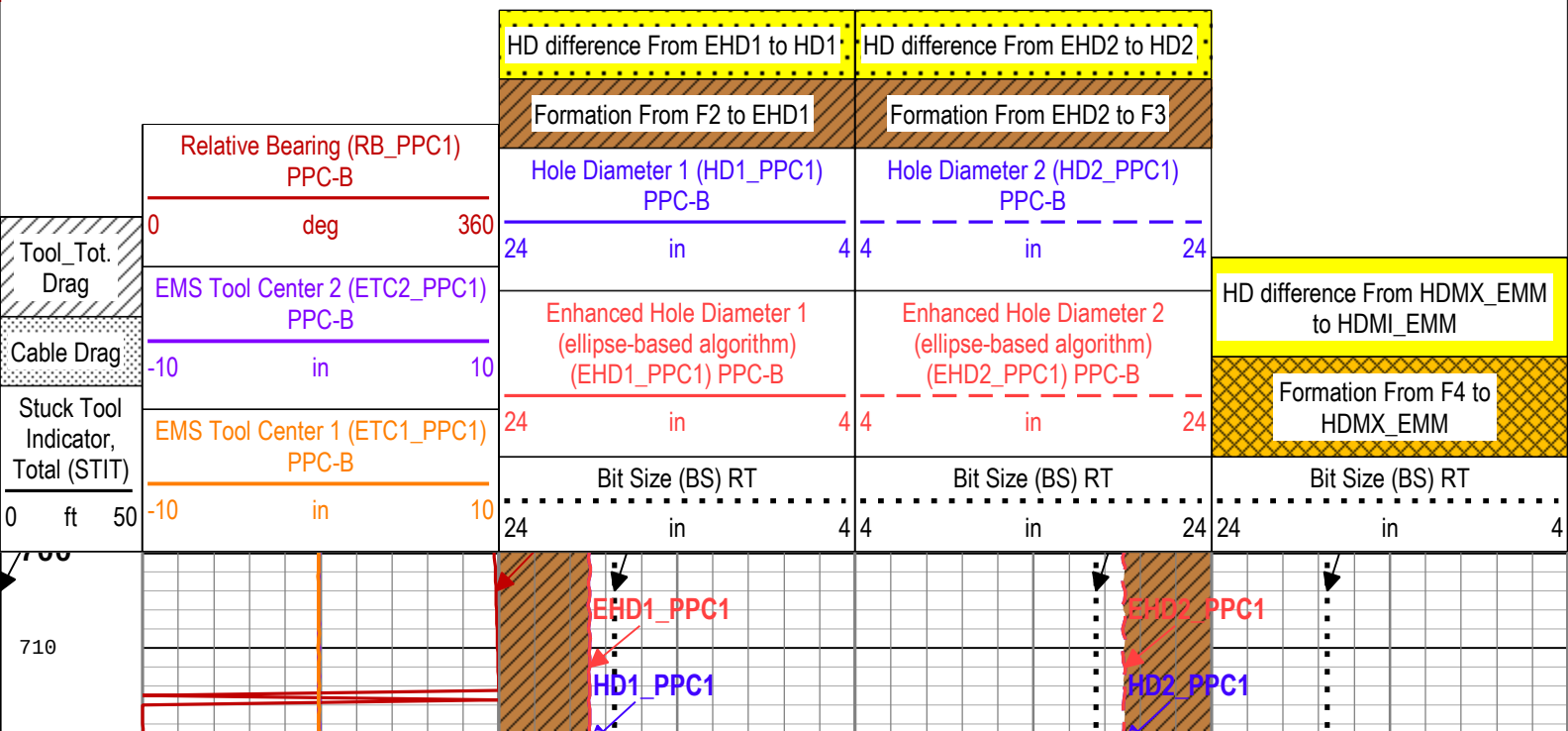
IHV - Integrated Hole Volume every 10.00 (ft3)

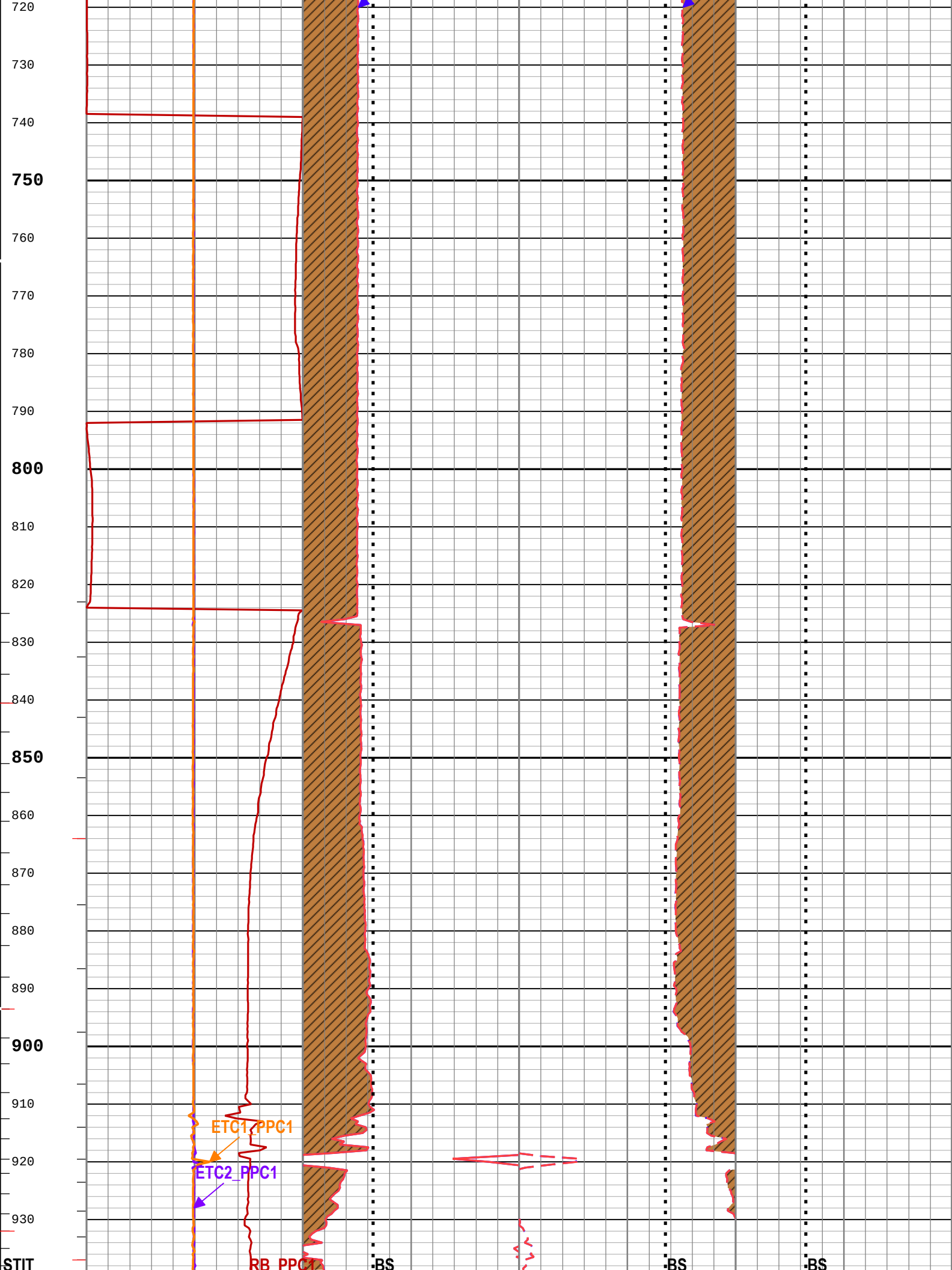
ICV - Integrated Cement Volume every 10.00 (ft3)

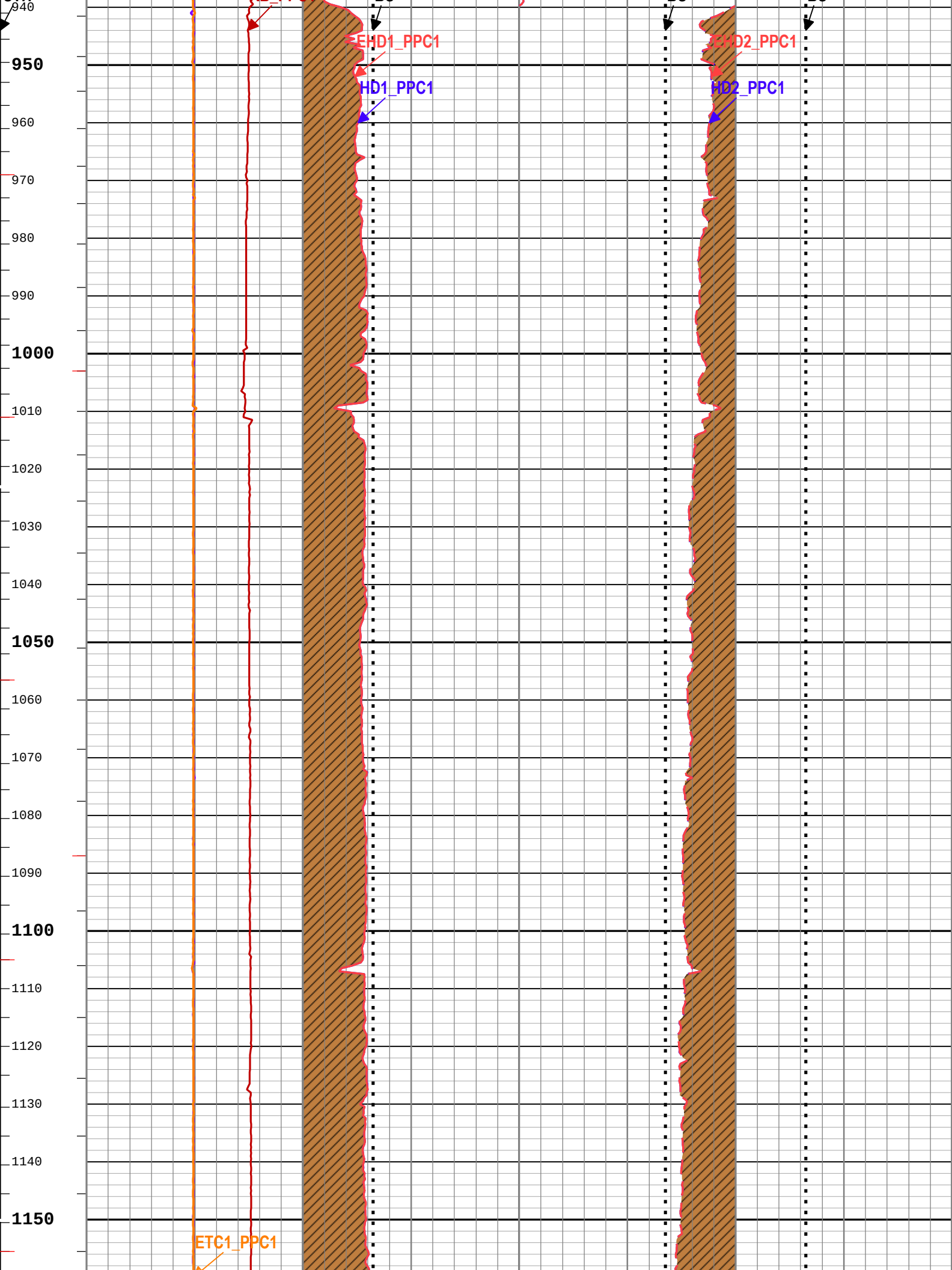
ICV - Integrated Cement Volume every 100.00 (ft3)

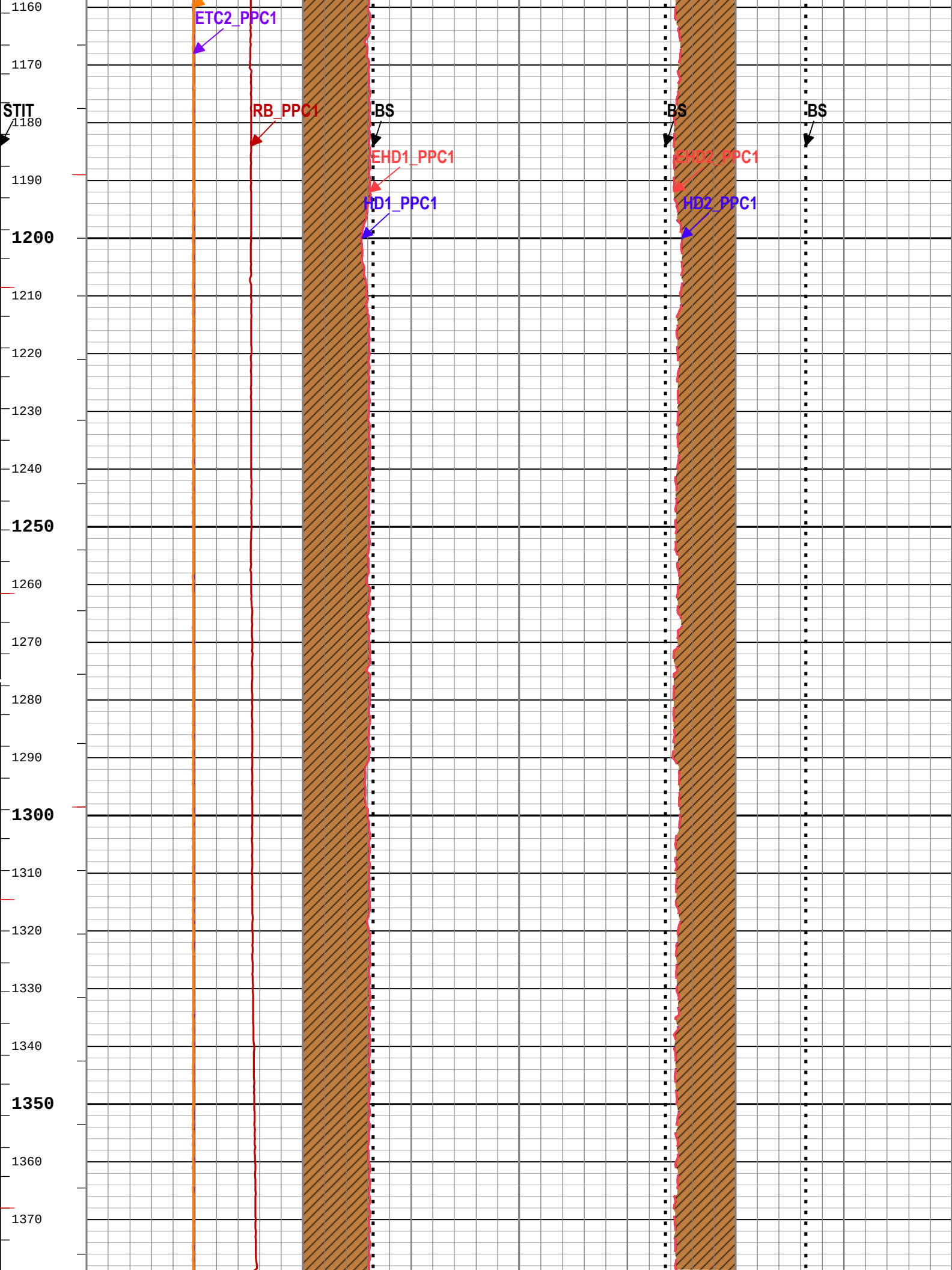
TIME_1900 - Time Marked every 60.00 (s)

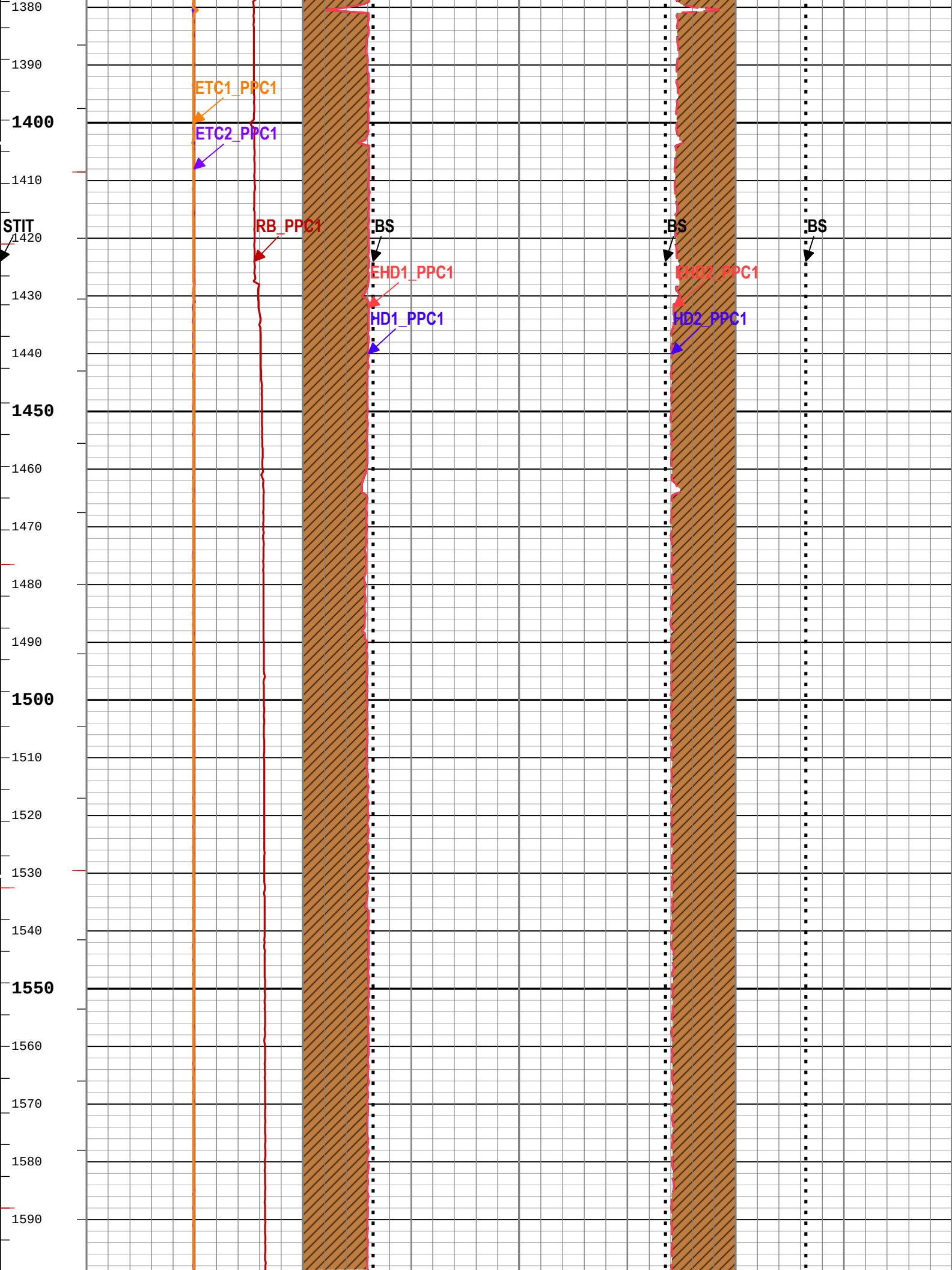
IHV - Integrated Hole Volume every 100.00 (ft3)

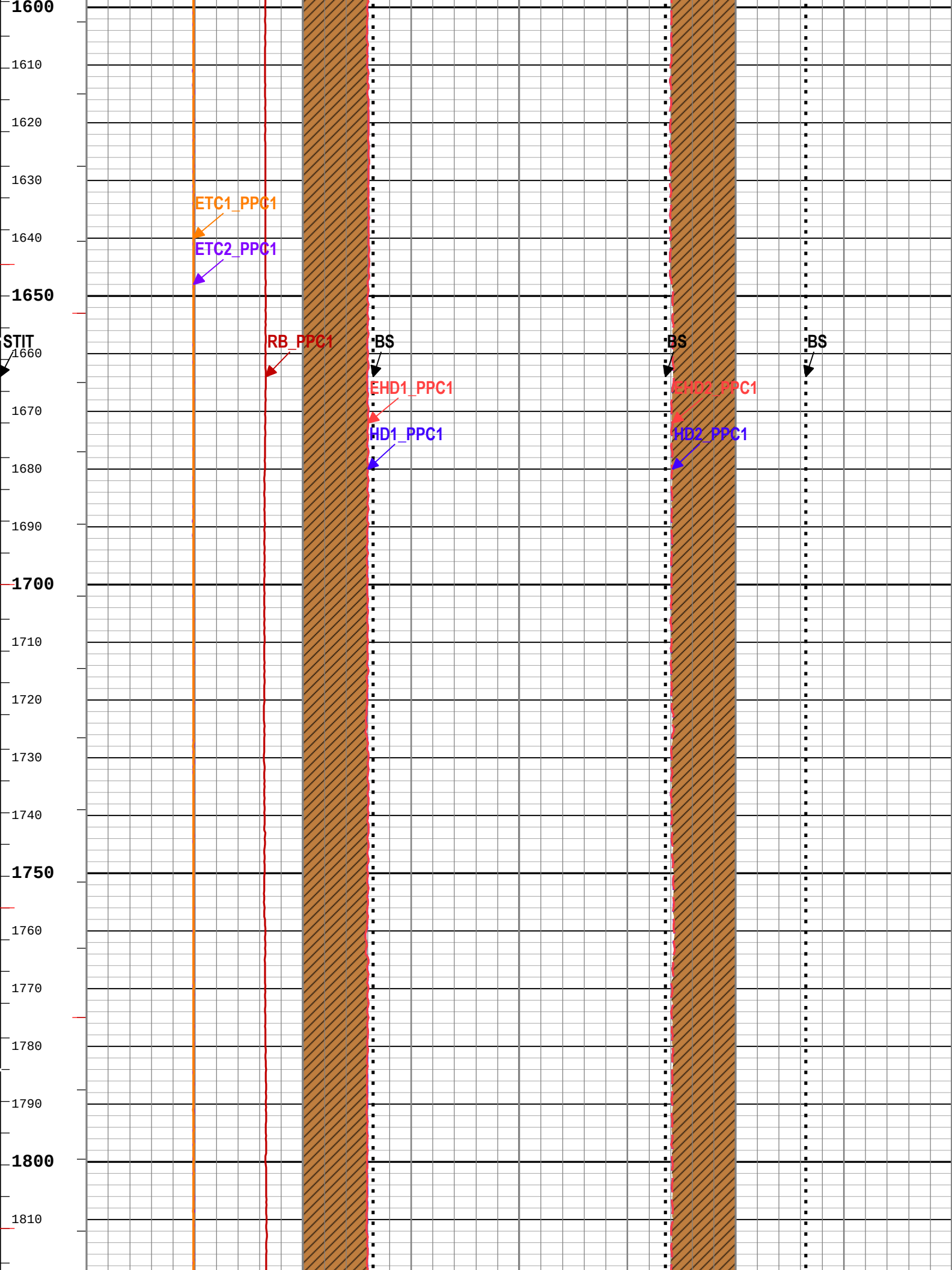


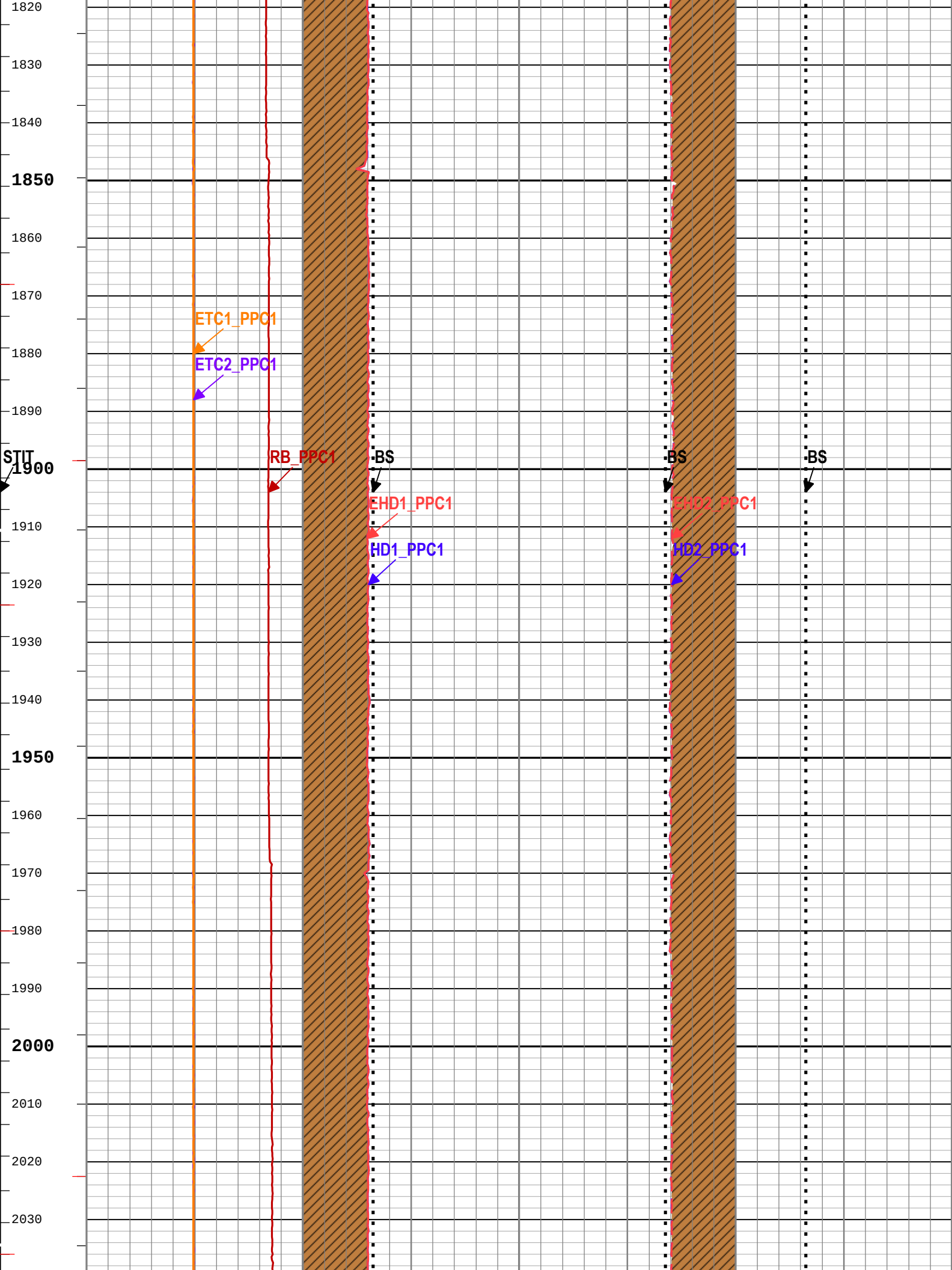


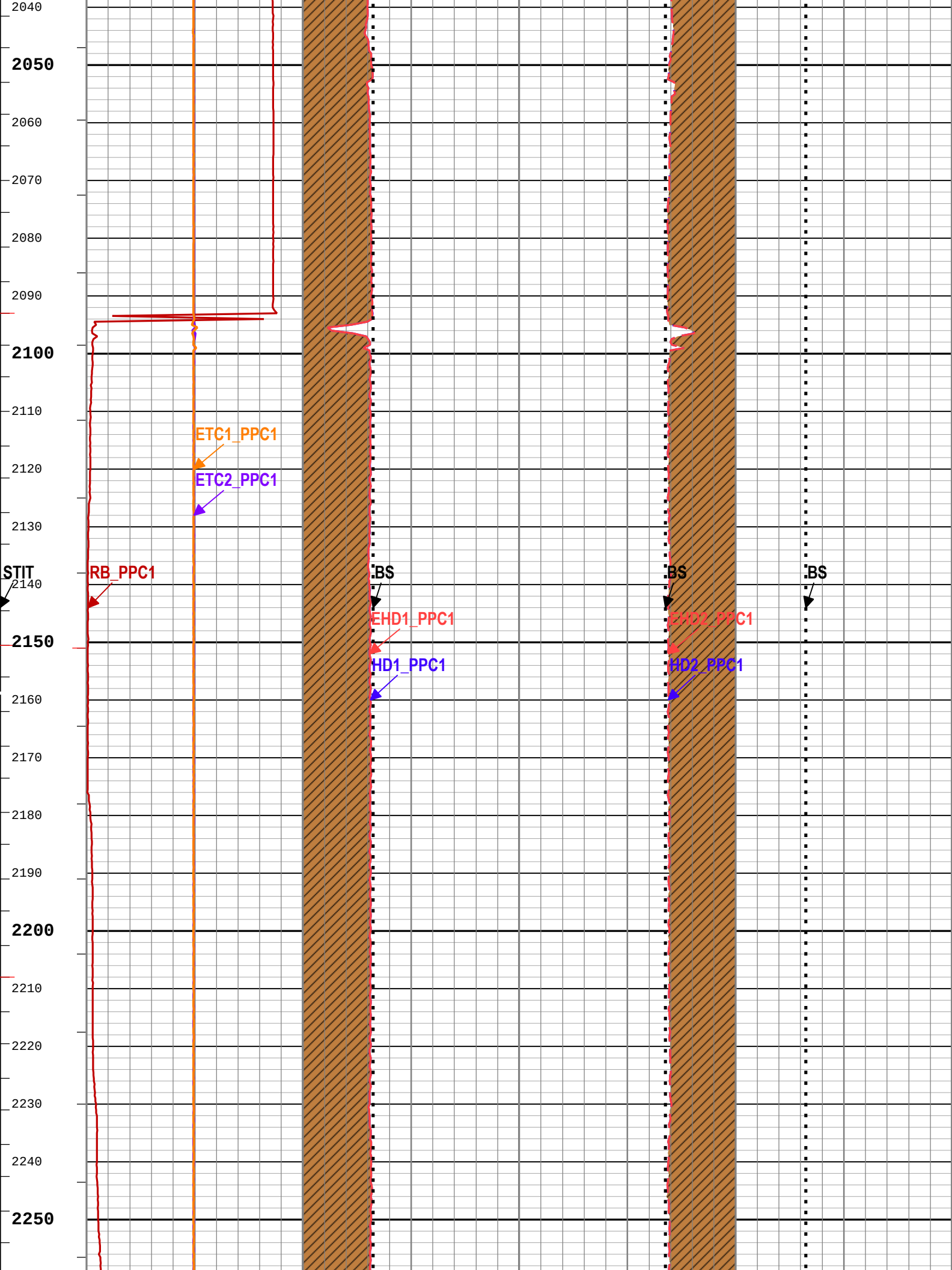


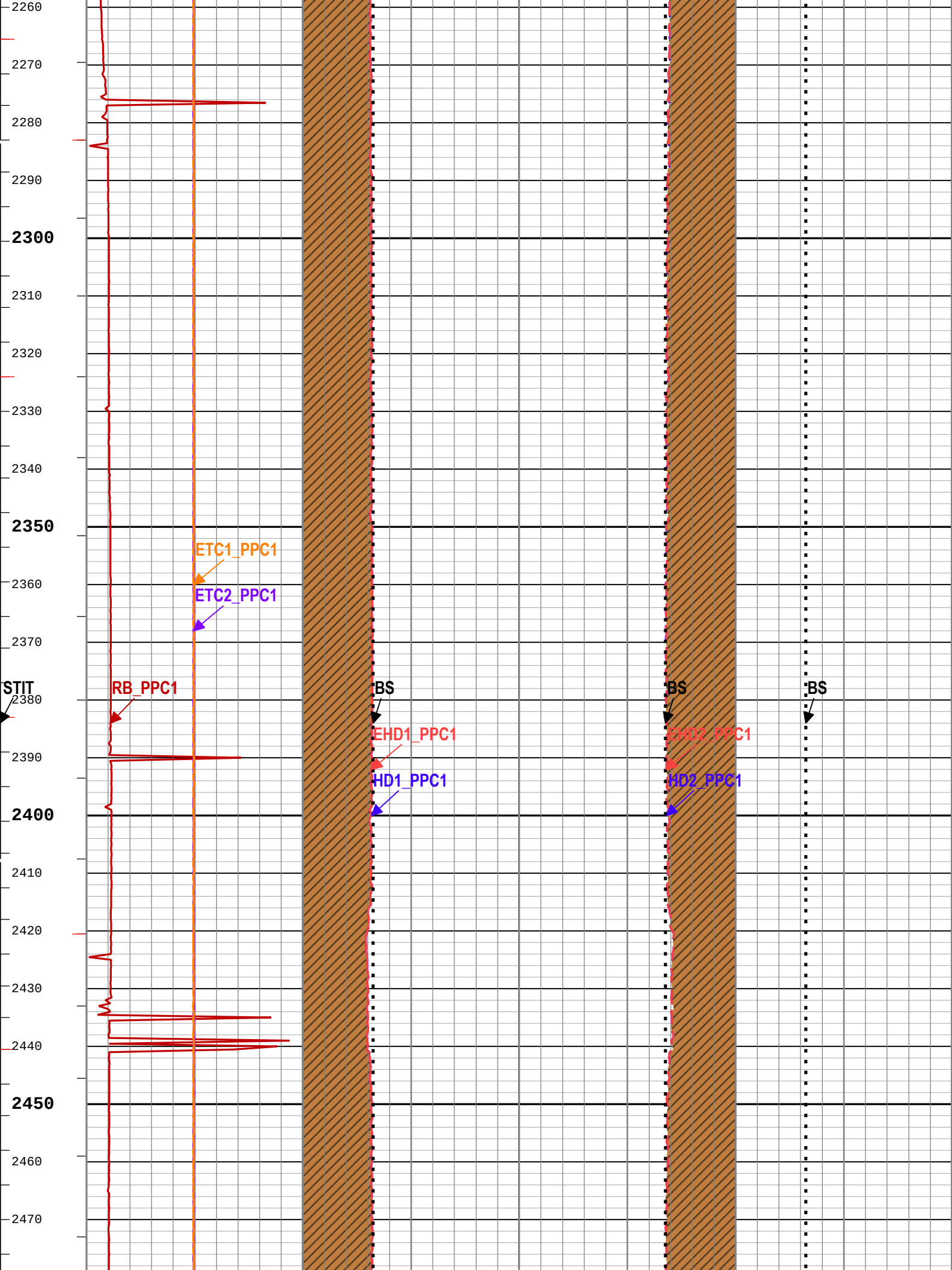


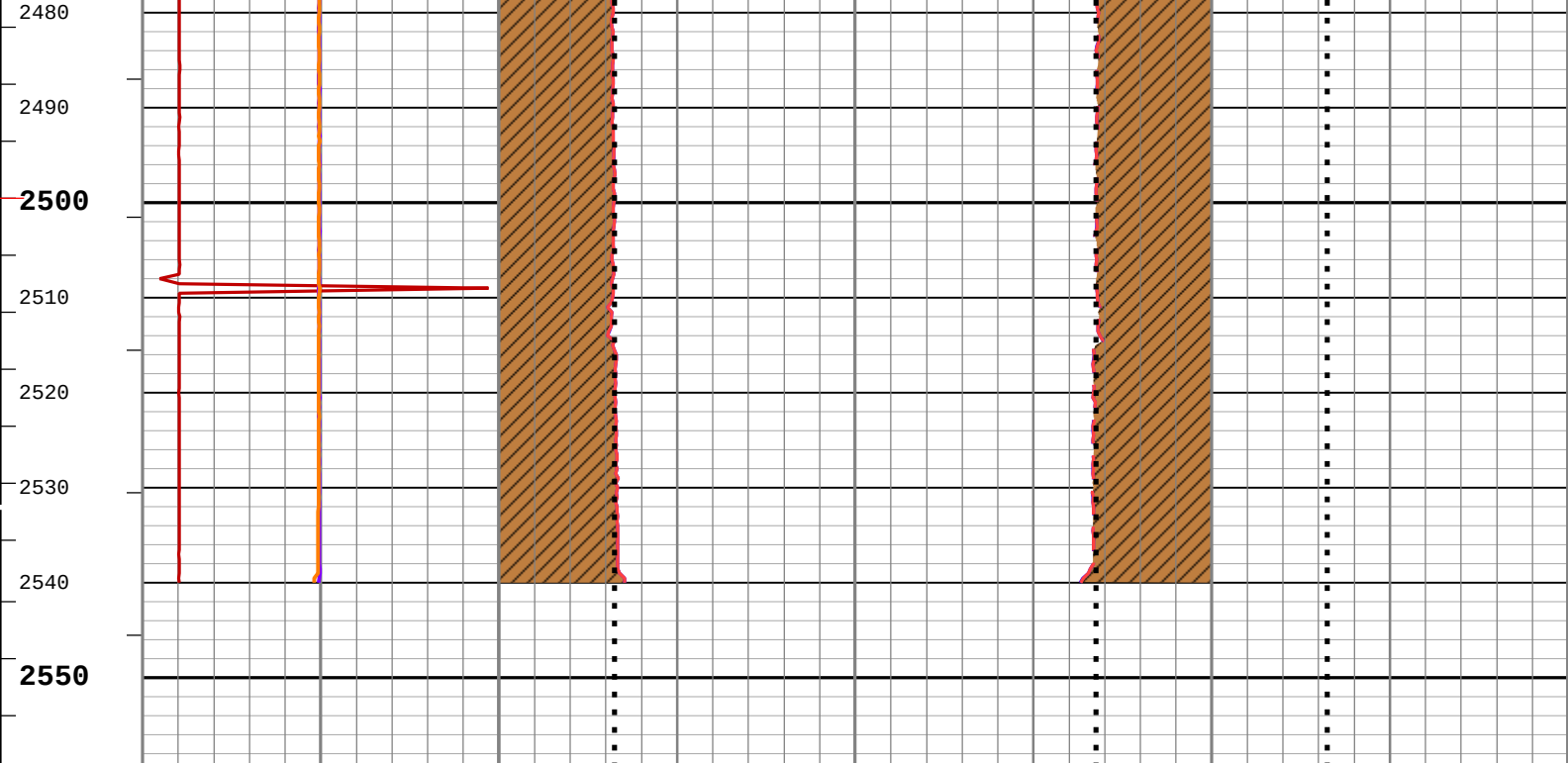












Tool_Tot. Drag	Relative Bearing (RB_PPC1) PPC-B	HD difference From EHD1 to HD1	HD difference From EHD2 to HD2	HD difference From HDMX_EMM to HDMI_EMM
Cable Drag	0 deg 360	Formation From F2 to EHD1	Formation From EHD2 to F3	Formation From F4 to HDMX_EMM
Stuck Tool Indicator, Total (STIT)	EMS Tool Center 2 (ETC2_PPC1) PPC-B	Hole Diameter 1 (HD1_PPC1) PPC-B	Hole Diameter 2 (HD2_PPC1) PPC-B	Bit Size (BS) RT
0 ft 50	-10 in 10	24 in 4 4	24 in 24	24 in 4
	EMS Tool Center 1 (ETC1_PPC1) PPC-B	Enhanced Hole Diameter 1 (ellipse-based algorithm) (EHD1_PPC1) PPC-B	Enhanced Hole Diameter 2 (ellipse-based algorithm) (EHD2_PPC1) PPC-B	
	-10 in 10	24 in 4 4	24 in 24	
		Bit Size (BS) RT	Bit Size (BS) RT	
		24 in 4 4	24 in 24	

IHV - Integrated Hole Volume every 100.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

ICV - Integrated Cement Volume every 100.00 (ft3)

ICV - Integrated Cement Volume every 10.00 (ft3)

IHV - Integrated Hole Volume every 10.00 (ft3)

Description: PPC_HoleDiameter Format: Log (PPC_HoleDiameter) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 10-Nov-2016 01:59:31

Channel Processing Parameters				
Run 1A: Parameters				
Parameter	Description	Tool	Value	Unit
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	17.5	in
CBLO	Casing Bottom (Logger)	WLSESSION	823	ft
CSODDRL	Casing Outer Diameter - Zoned along driller depths	WLSESSION	20	in
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
FCD	Future Casing (Outer) Diameter	WLSESSION	13.375	in
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS(RT)	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	HD2	

Tool Control Parameters

Run 1A: Parameters

Parameter	Description	Tool	Value	Unit
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1800	ft/h

Run 1A

Software Version

Acquisition System	Version
Maxwell 2017	7.0.75530.3100

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run 1A	Main[2]:Up	Up	22.85 ft	2559.58 ft	09-Nov-2016 3:53:43 AM	09-Nov-2016 4:20:00 AM	ON	3.11 ft	Yes

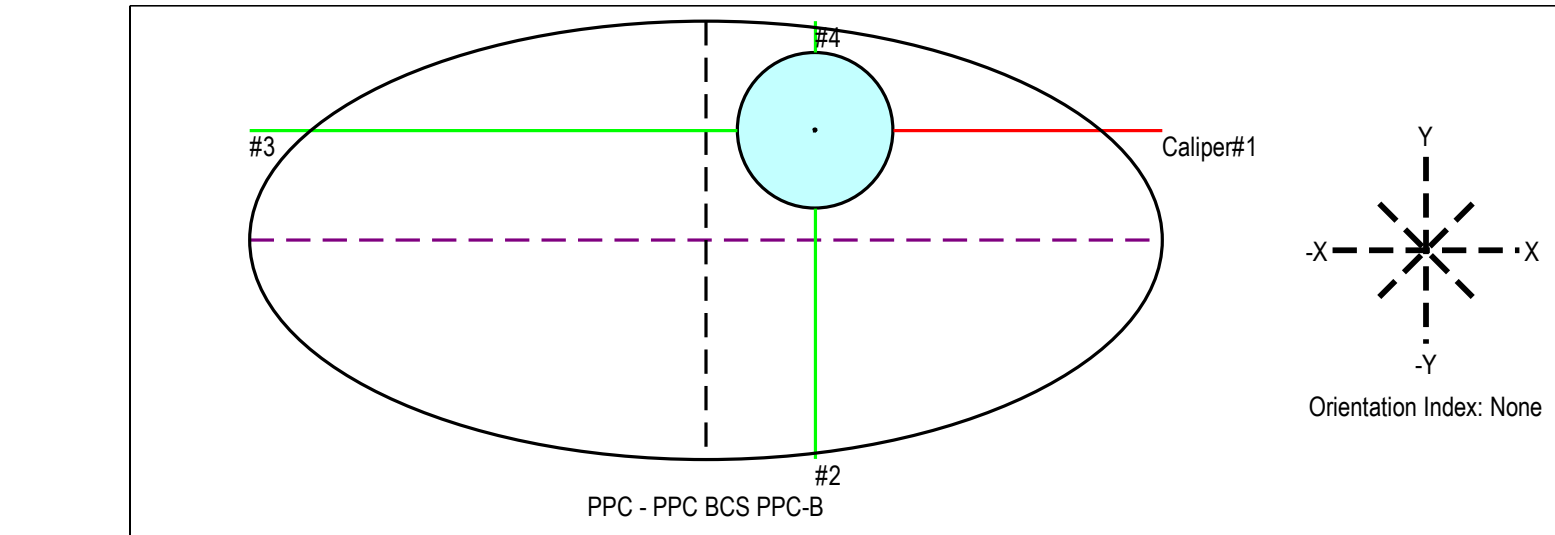
All depths are referenced to toolstring zero

Log

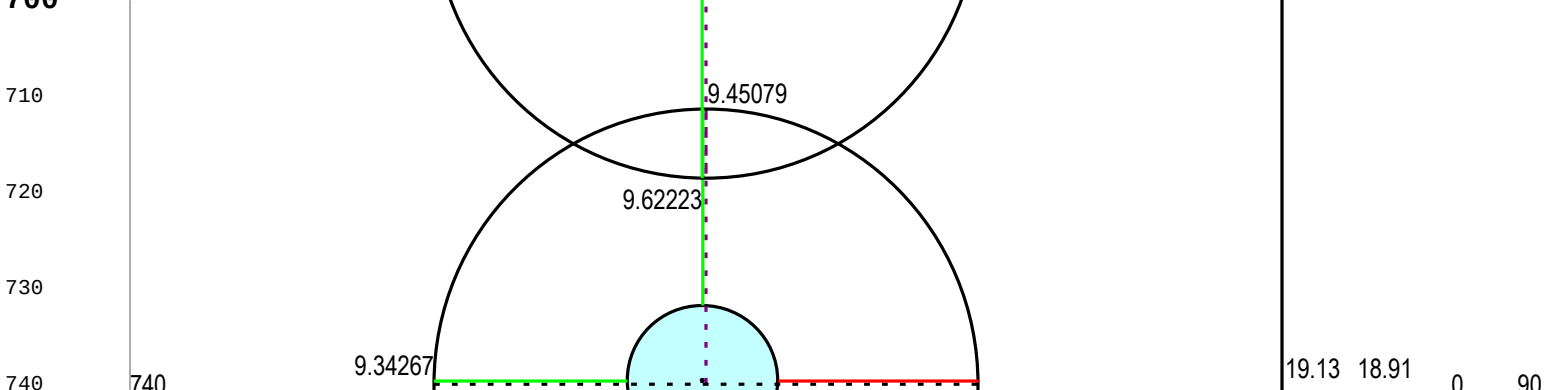
Company:DCP Midstream LP Well:Zia AGI D2

Run 1A: Main[2]:Up:S026

Description: Borehole Cross Section Format for PPC Format: Log (PPC_BORE_GRAPHIC) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 10-Nov-2016 01:59:32
TIME_1900 - Time Marked every 60.00 (s)



PPC Borehole Data	
Long Axis: ELA(in)	
Short Axis: ESA(in)	
Std. Devi: Devi()	
Orient Angle: Orient(deg)	
ELA ESA Devi Orient	



750

760

770

780

790

800

810

820

830

840

850

860

870

880

890

900

910

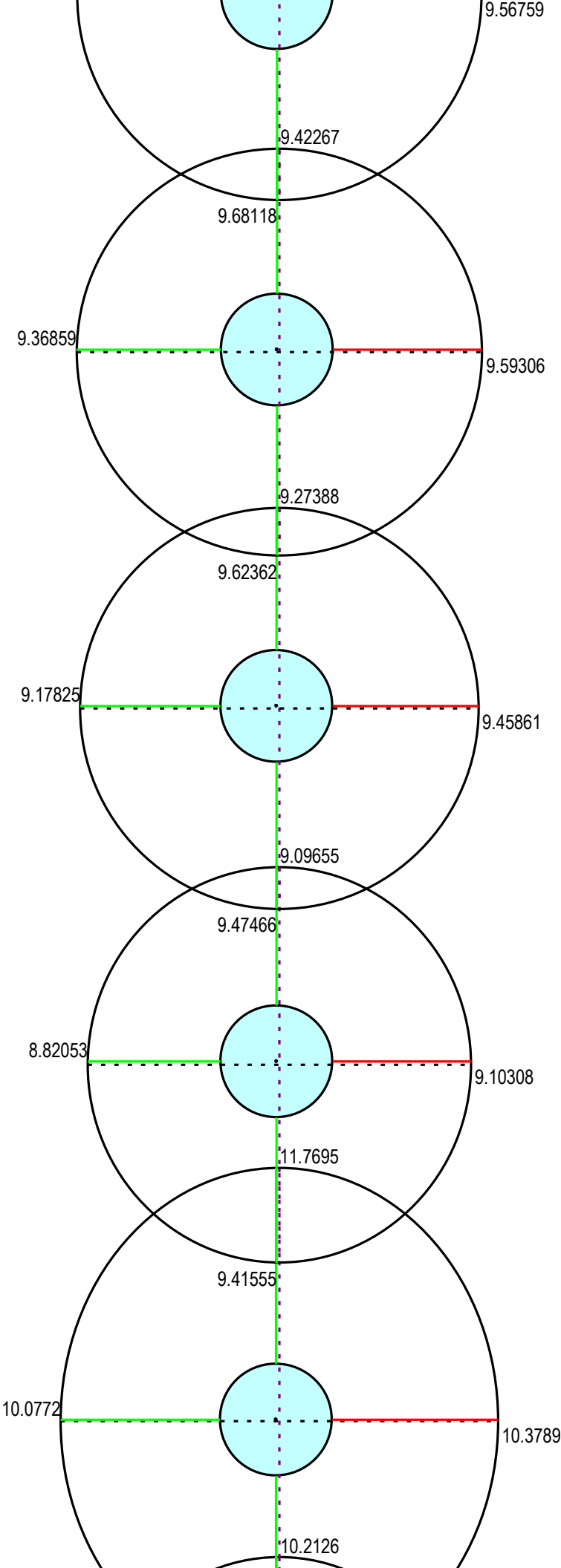
920

930

940

950

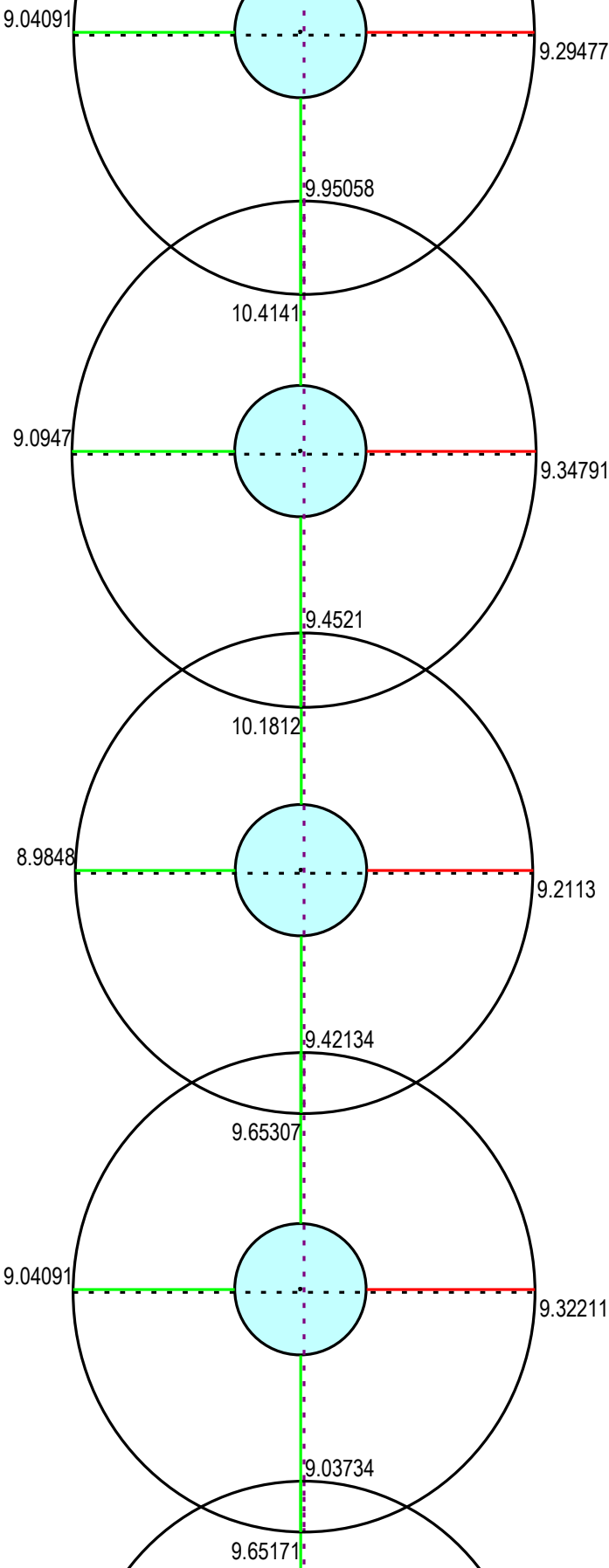
960



2	03	0	90
19.04	18.96	0	90
63	16		
18.74	18.63	0	90
85	69		
18.51	17.92	0	90
21	36		
23.68	20.45	0	90
47	6		

970
980
990
1000
1010
1020
1030
1040
1050
1060
1070
1080
1090
1100
1110
1120
1130
1140
1150
1160
1170
1180

990
1040
1090
1140



20.62 67	18.33 57	0	90
20.13 18	18.44 26	0	90
19.10 52	18.19 61	0	90
19.07 31	18.36 3	0	90

1190

1200

1210

1220

1230

1240

1250

1260

1270

1280

1290

1300

1310

1320

1330

1340

1350

1360

1370

1380

1390

1400

1190

1240

1290

1340

1390

8.76531

8.79293

8.82053

8.8196

8.87472

9.21482

9.26757

8.97809

9.38597

9.09819

9.20829

9.1573

9.2693

9.02075

9.02075

9.0482

9.04696

9.15657

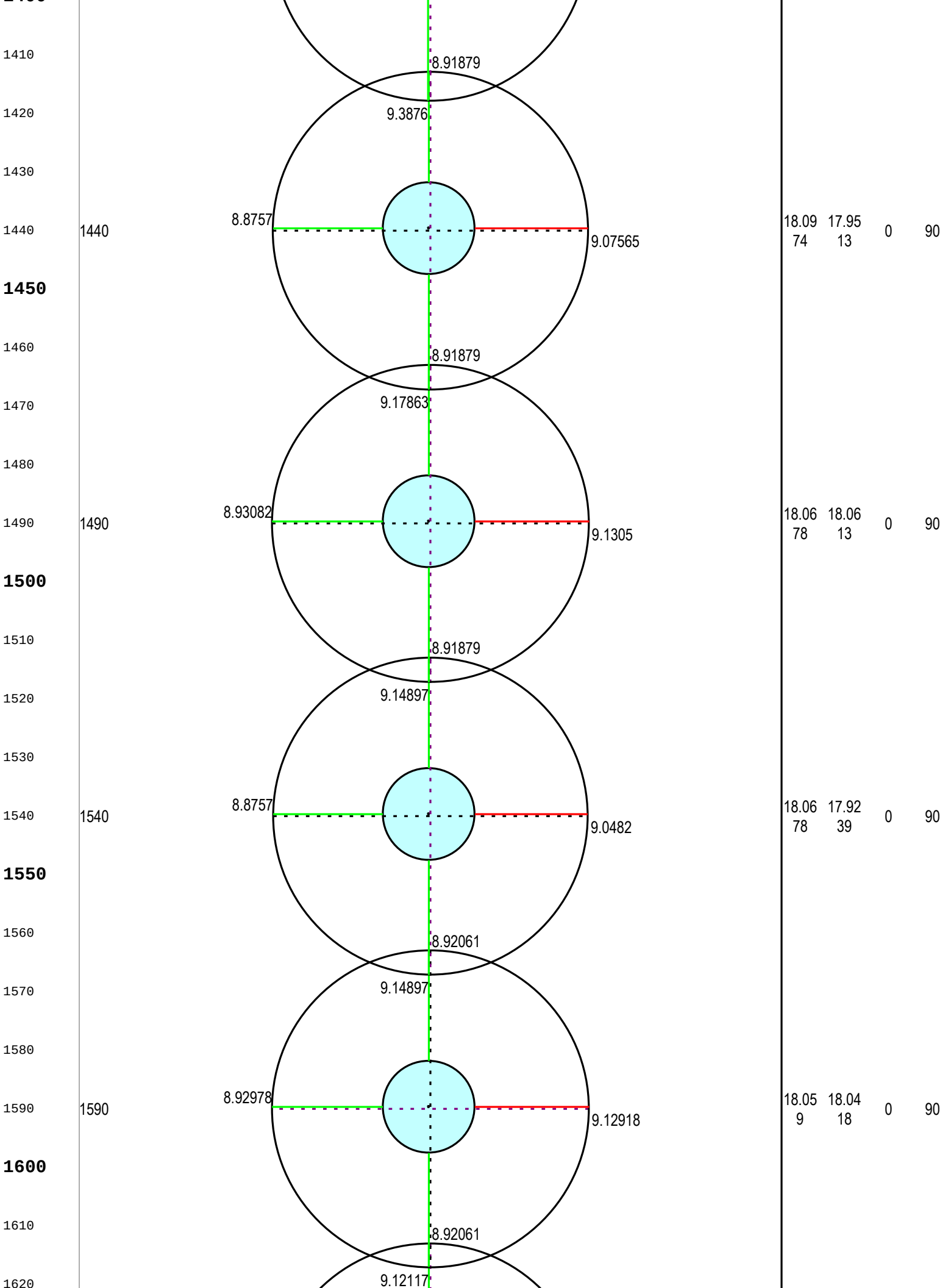
18.30	17.78	0	90
49	61		

18.60	17.81	0	90
08	37		

18.18	17.86	0	90
64	87		

18.36	17.86	0	90
75	66		

18.54	18.03	0	90
49	13		



1630
1640
1650
1660
1670
1680
1690
1700
1710
1720
1730
1740
1750
1760
1770
1780
1790
1800
1810
1820
1830
1840

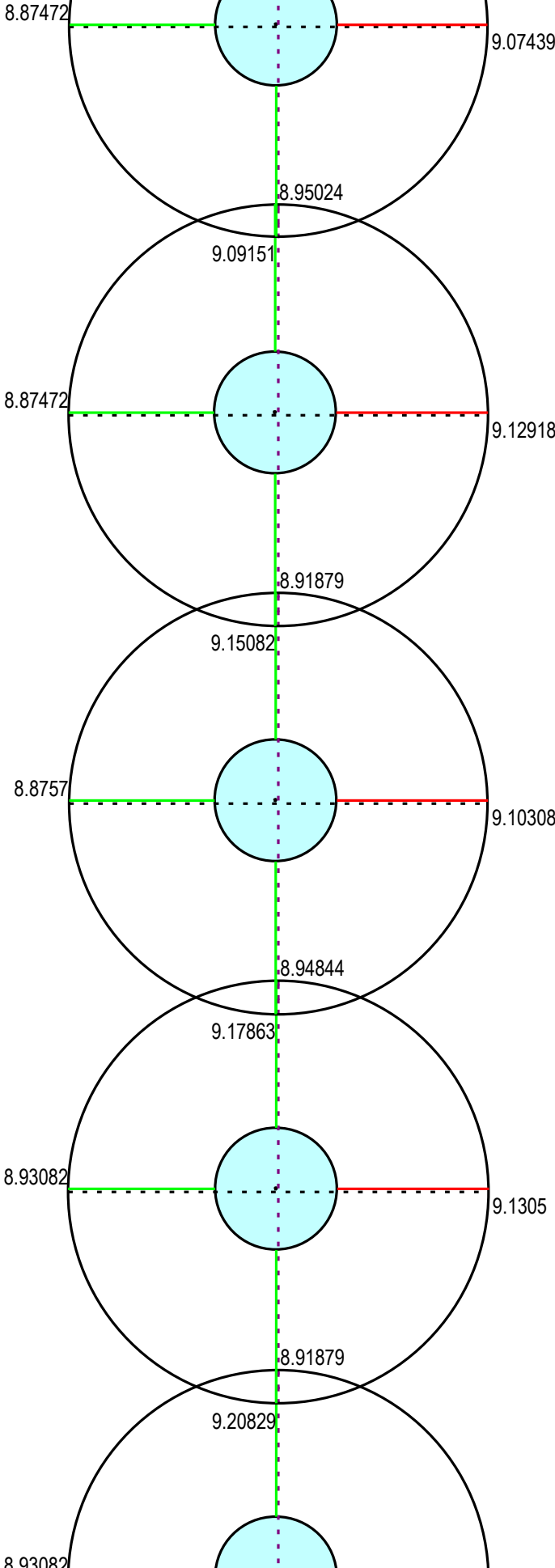
1640

1690

1740

1790

1840



18.01 21	17.94 91	0	90
18.10 11	18.00 39	0	90
18.09 74	17.97 88	0	90
18.15 67	18.06 13	0	90
18.06	18.06	0	90

1850

1860

1870

1880

1890

1900

1910

1920

1930

1940

1950

1960

1970

1980

1990

2000

2010

2020

2030

2040

2050

2060

1890

1940

1990

2040

8.90326

8.82053

8.84717

8.90326

8.94844

8.85945

8.95024

8.94844

9.14897

9.17863

9.0896

9.15082

9.1305

9.1305

9.02075

9.12918

9.15791

18.12

17.94

18.10

18.06

18.03

17.84

17.97

18.06

0

0

0

0

90

90

90

90

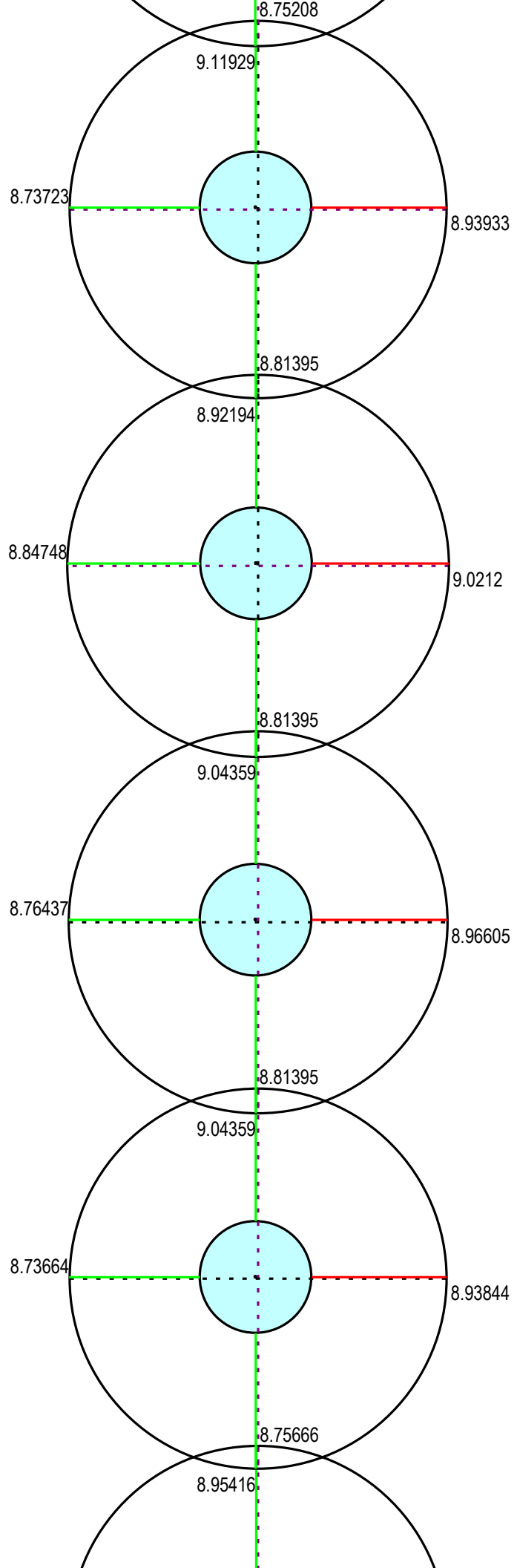
2070
2080
2090
2100
2110
2120
2130
2140
2150
2160
2170
2180
2190
2200
2210
2220
2230
2240
2250
2260
2270
2280

2090

2140

2190

2240



17.67 66	17.67 4	0	90
17.86 87	17.85 75	0	90
17.85 75	17.73 04	0	90
17.76 81	17.67 51	0	90

2290 2290

2300

2310

2320

2330

2340 2340

2350

2360

2370

2380

2390 2390

2400

2410

2420

2430

2440 2440

2450

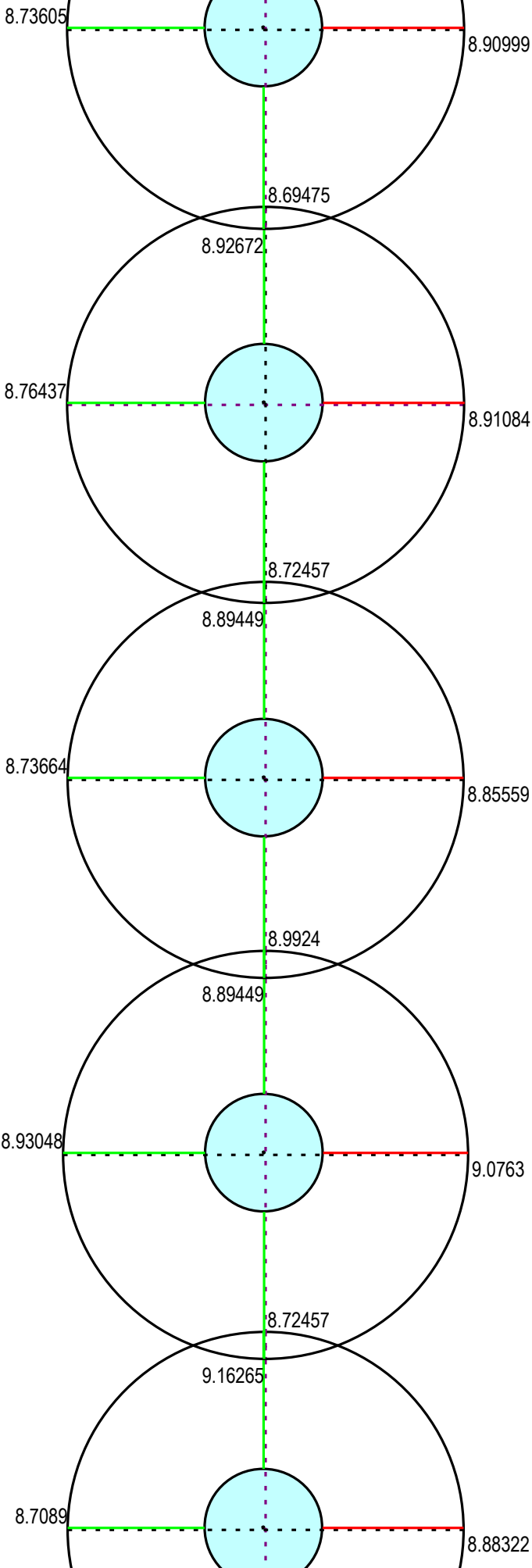
2460

2470

2480

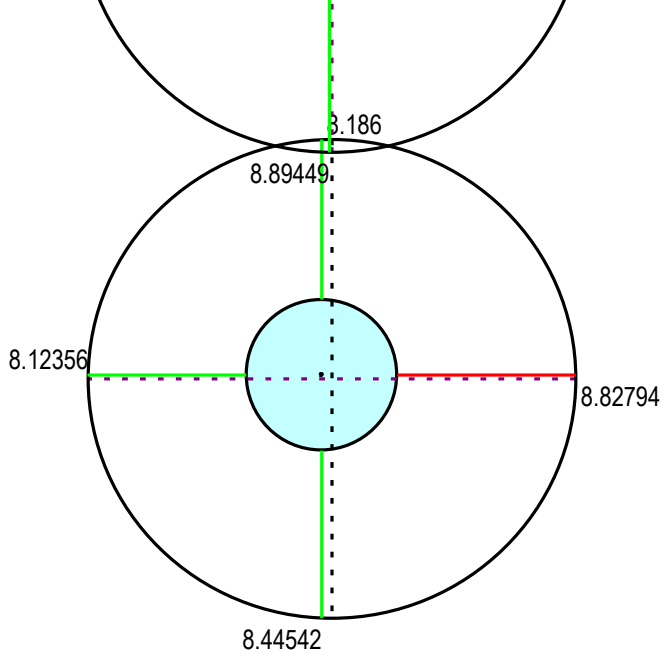
2490 2490

2500

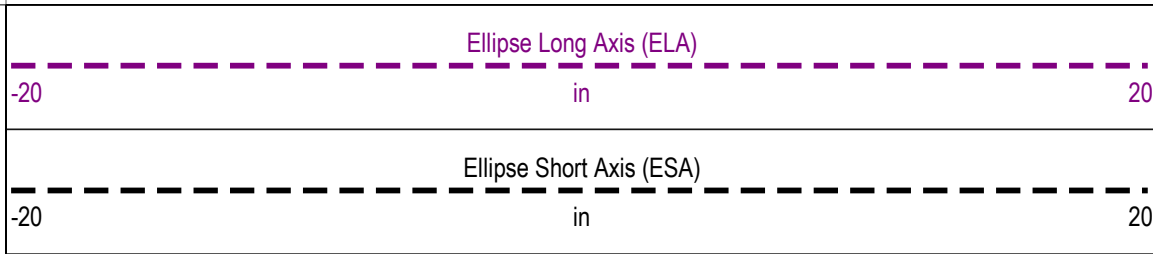


17.68 34	17.64 6	0	90
17.67 52	17.58 92	0	90
17.61 91	17.59 22	0	90
18.15 51	18.00 68	0	90
17.61 91	17.59 21	0	90

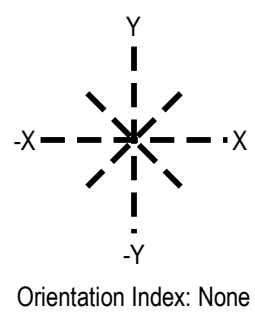
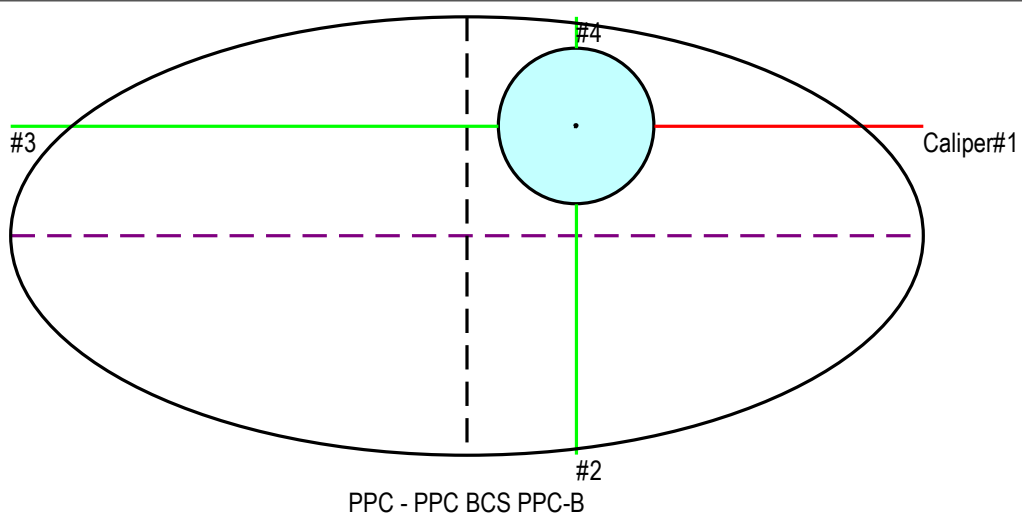
2510
2520
2530
2540
2550
2560
2570
2580
2590
2600



16.95	16.63	0	90
15	14		



PPC Borehole Data			
Long Axis: ELA(in)			
Short Axis: ESA(in)			
Std. Devi: Devi()			
Orient Angle: Orient(deg)			
ELA	ESA	Devi	Orient



TIME_1900 - Time Marked every 60.00 (s)

Description: Borehole Cross Section Format for PPC Format: Log (PPC_BORE_GRAPHIC) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 10-Nov-2016 01:59:32

Channel Processing Parameters	
Tool Control Parameters	
Calibration Report	
PPC-B (Powered Positioning device and Caliper.) Calibration - Run Run 1A	
Primary Equipment :	

Calibration Parameter :

ZERO_REF

PLUS_REF

Equipment Properties :

Caliper Arm Equipment Type for PPC

PPC_CAL_17EXT

PPC Check - Downhole Electronics Test

Before:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Positive Analog Voltage - 0	V	Before	----	----	----	----	
Minus Analog Voltage - 0	V	Before	----	----	----	----	
Digital Voltage - 0	V	Before	----	----	----	----	
Digital Voltage for Analog Digital Converter - 0	V	Before	----	----	----	----	
Status Word of Analog Digital Converter Offset - 0		Before	----	----	----	----	

PPC Check - Cartridge Temperature Test

Before:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Cartridge Temperature - 0	degF	Before	----	----	----	----	

PPC Check - Power Control LVDT Test

Before:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
LVDT5 Caliper Open Position - 0	in	Before	----	----	----	----	
LVDT5 Full Power Position - 0	in	Before	----	----	----	----	

PPC Diagnostics - Arm Close Position Test

Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Caliper-arm 1, radius raw - 0	in	Master	----	----	----	----	
Caliper-arm 2, radius raw - 0	in	Master	----	----	----	----	
Caliper-arm 3, radius raw - 0	in	Master	----	----	----	----	
Caliper-arm 4, radius raw - 0	in	Master	----	----	----	----	
Power Control LVDT - 0	in	Master	----	----	----	----	
LVDT excitation - 0	V	Master	----	----	----	----	

PPC Diagnostics - Downhole Electronics Test

Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Positive Analog Voltage - 0	V	Master	----	----	----	----	
Minus Analog Voltage - 0	V	Master	----	----	----	----	
Digital Voltage - 0	V	Master	----	----	----	----	
Digital Voltage for Analog Digital Converter - 0	V	Master	----	----	----	----	
Status Word of Analog Digital Converter Offset - 0		Master	----	----	----	----	

PPC Diagnostics - RBS Test

Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Relative Bearing - 0	deg	Master	----	----	----	----	
Potentiometer Excitation - 0	V	Master	----	----	----	----	

PPC Diagnostics - Cartridge Temperature Test

Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Cartridge Temperature - 0	degF	Master	----	----	----	----	

PPC Diagnostics - Power Control LVDT Test

Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
LVDT5 Caliper Open Position - 0	in	Master	----	----	----	----	
LVDT5 Full Power Position - 0	in	Master	----	----	----	----	

PPC LVDT5 Master Calibration - PPC CaliCoefficients

Master (Manual Entry):15:29:00 01-Nov-2016

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
CCS	in	Master	-1.51		-1.47449			
COP	in	Master	-1.31		-1.24731			
CPW	in	Master	1.41		1.40515			

PPC Caliper Calibration - PPC CaliCoefficients

Before (Manual Entry):05:22:00 09-Nov-2016

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
RD1_GAIN		Before	1	0.82	1	1.29		
RD2_GAIN		Before	1	0.82	1	1.29		
RD3_GAIN		Before	1	0.82	1	1.29		
RD4_GAIN		Before	1	0.82	1	1.29		
RD1_OFFSET	in	Before	0	-6	-3.1	6.5		
RD2_OFFSET	in	Before	0	-6	0.05	6.5		
RD3_OFFSET	in	Before	0	-6	-3	6.5		
RD4_OFFSET	in	Before	0	-6	-0.2	6.5		

PPC Caliper Calibration - PPC Accumulations

Before (Manual Entry):05:22:00 09-Nov-2016

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Caliper 1 Zero Radius - 0	in	Before	----	----	----	----		
Caliper 2 Zero Radius - 0	in	Before	----	----	----	----		
Caliper 3 Zero Radius - 0	in	Before	----	----	----	----		
Caliper 4 Zero Radius - 0	in	Before	----	----	----	----		
Caliper 1 Plus Radius - 0	in	Before	----	----	----	----		
Caliper 2 Plus Radius - 0	in	Before	----	----	----	----		
Caliper 3 Plus Radius - 0	in	Before	----	----	----	----		
Caliper 4 Plus Radius - 0	in	Before	----	----	----	----		

Company:DCP Midstream LP

Schlumberger

Well:Zia AGI D2

Field:AGI Devonian Exploration

County:Lea

State:New Mexico

Borehole Profile Log

Future Casing Diameter = 13.375"

PRODUCTION CASING

- Borehole Profile Log / Future Casing Diameter = 5.5”
- Platform Express / Compensated Neutron Log / Three Detector Litho-Density
- Platform Express / High Resolution Laterolog Array / Spectral Gamma Ray
- Sonic Scanner Field Print
- Spectral Gamma Ray Field Print
- Triple Combo Log / Platform Express / Resistivity
- Geomechanical Properties Advisor / 3D TIV MechPro Processing
- PEX ELAN / Petrophysical Analysis
- Fracture Density Log
- Borehole Image Interpretation

Borehole Profile Log / Future Casing Diameter = 5.5”

Company: DCP Midstream LP

Well: Zia AGI D2

Field: AGI Devonian Exploration

County: Lea State: New Mexico

Borehole Profile Log

Future Casing Diameter = 5.5"

County: Lea

Field: AGI Devonian Exploration

Location: 1893' FSL & 950' FWL

Well: Zia AGI D2

Company: DCP Midstream LP

Location:	1893' FSL & 950' FWL	Elev.:	K.B.	3574.00 ft
	Section: 19 Township: T19S Abstract: R32S		G.L.	3547.00 ft
			D.F.	3573.00 ft
	Permanent Datum:	Ground Level	Elev.:	3547.00 f
Log Measured From:	Kelly Bushing	27.00 ft	above Perm.Datum	
Drilling Measured From:	Kelly Bushing			
API Serial No.	Section:	Township:	Abstract:	
30-025-42207	19	T19S	R32S	

Logging Date		29-Nov-2016		
Run Number		Run 1A		
Depth Driller		13622.00 ft		
Schlumberger Depth		13637.00 ft		
Bottom Log Interval		13637.00 ft		
Top Log Interval		4702.00 ft		
Casing Driller Size @ Depth		9.625 in @ 4696.00 ft		
Casing Schlumberger		4702 ft		
Bit Size		8.75 in		
Type Fluid In Hole		Salt Brine		
D U D	Density	10 lbm/gal	41 s	
	Fluid Loss	PH	10	
Source of Sample		Active Tank		
RM @ Meas Temp		0.08 ohm.m @ 72 degF		
RMF @ Meas Temp		0.08 ohm.m @ 72 degF		
RMC @ Meas Temp				
Source RMF	RMC			
RM @ BHT	RMF @ BHT	0.03 @ 174.75	0.03 @ 174.75	
Max Recorded Temperatures		174.75 degF		
Circulation Stopped		Time	00:00:00	
Logger on Bottom		Time	04:30:00	
Unit Number	Location:	9105	Midland, TX	
Recorded By		Danielle Krebs		
Witnessed By		Jared Smith		

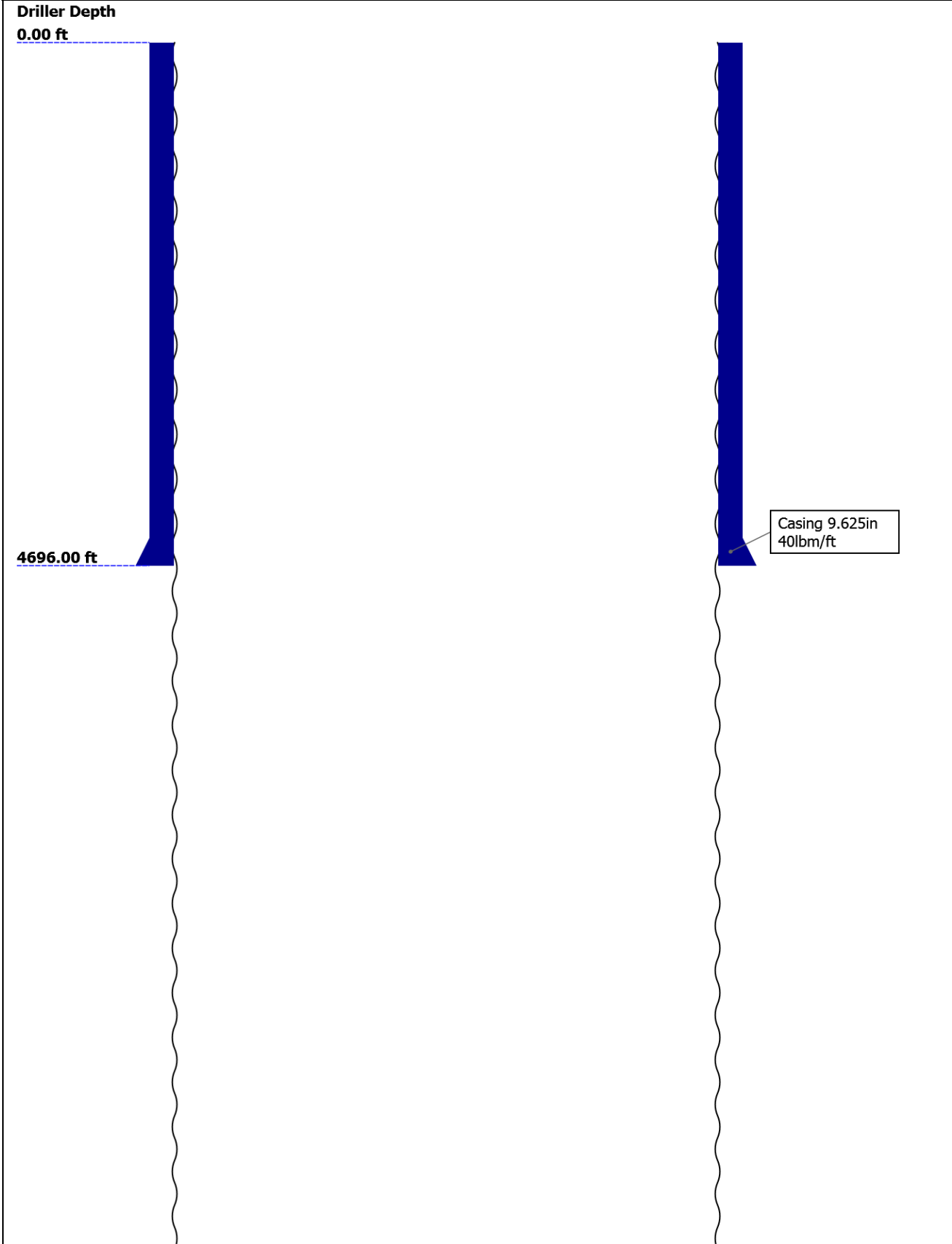
Disclaimer

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- 8.2 Software Version
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- 8.4 Log (Caliper 2 inch General)
9. Tail

Well Sketch





Borehole Size/Casing/Tubing Record

Bit						
Bit Size (in)	8.75					
Top Driller (ft)	0					
Top Logger (ft)	0					
Bottom Driller (ft)	13622					
Bottom Logger (ft)	13637					
Casing						
Size (in)	9.625					
Weight (lbm/ft)	40					
Inner Diameter (in)	8.835					
Grade	N/A					
Top Driller (ft)	0					
Top Logger (ft)	0					
Bottom Driller (ft)	4696					
Bottom Logger (ft)	4702					

Remarks and Equipment Summary

Run 1A: Toolstring				Run 1A: Remarks
Equip name	Length	MP name	Offset	1. Crew: Danielle, Tony, Dago. 2. Logs done from TD to Casing. Repeat was 200 ft off TD. CNL & Gr to Surface. 3. Chlorides = 55,000 ppm. FD = 1.1 g/cc. Rm = 0.08 ohm.meters @ 72 degF. 4. Max temperature from HGNS:CTEM is 174.75 degF. 5. Density data maybe affected by borehole conditions. 6. No pills or LCM in the mud as per company man. 7. Neutron Corrections: HSCO, SOCO. 8. Sonic Scanner logged in Standard Mode. 9. As per client request, main and repeat pass correlated to downlog and not previous logs in well.
LEH-QC	133.69			
AH-369	131.23			
EDTC-H	129.8			
EDTH-H		CTEM	129.05	
EDTC-H				
		HV	0.00	
		ACCZ	0.00	
		Gamma Ra	123.37	
		y		
		Edtch Statu	121.8	
		s		
		TelStatus	121.8	
HNGS-BA:37	121.8			
8				
HEH-K:1000				
HNGS-BA:378				
		GR	118.82	

HNGC-B:638 113.61
HNGH-A:4121
HNGC-B:638

HGNS-H 110.11
HGNH
NSR-F:5317
NPV-N
HACCZ-H:7074
HMCA-H
HGNS-H

HDRS-H 100.7
ECH-MEB
HRCC-H
HRMS-H
Backscatter
GSR-J:5437
Long Spacing
HRGD-H:5748
GPV-Q
Short Spacing

HRLT-B 88.46
HRUH-B
HRUC-B
HRLS-B
HRLH-B
HRLC-B
AH-270

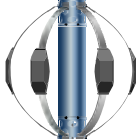




AH-107[1] **62.26**

4

ECH-SF
MAPC-BA
MAMS-BA:85
74
MASS-BA
MAXS-BA



— MAMS 44.82

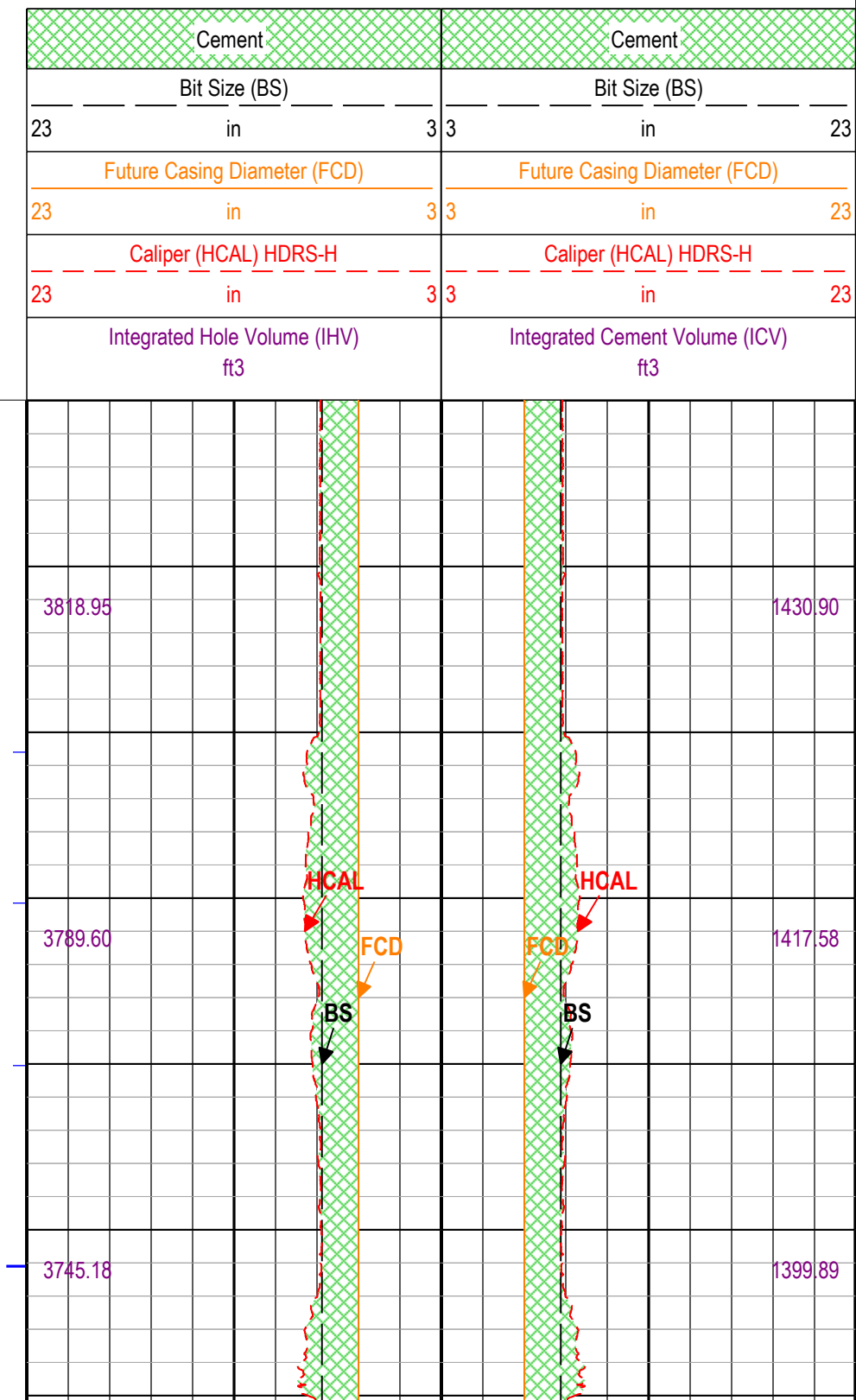
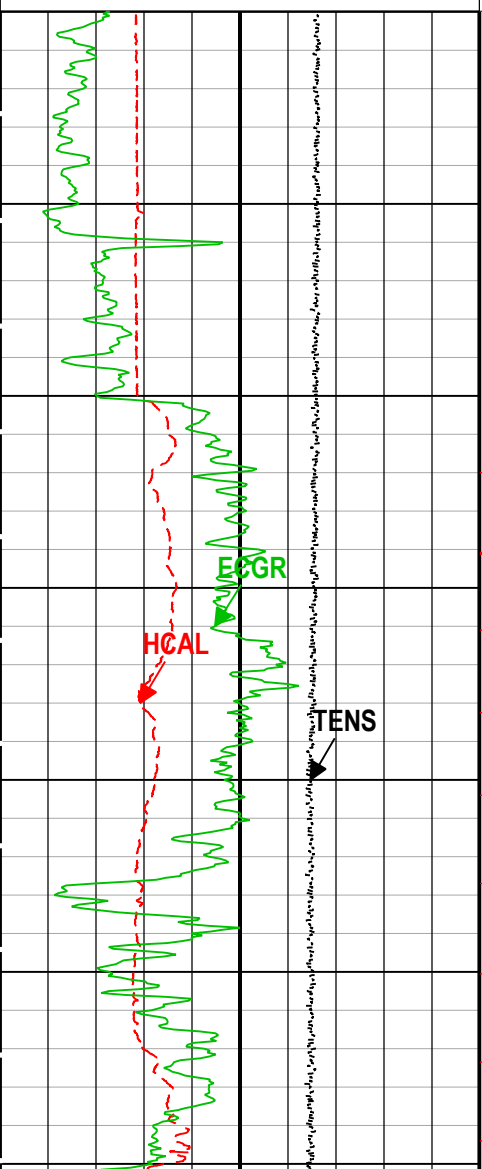


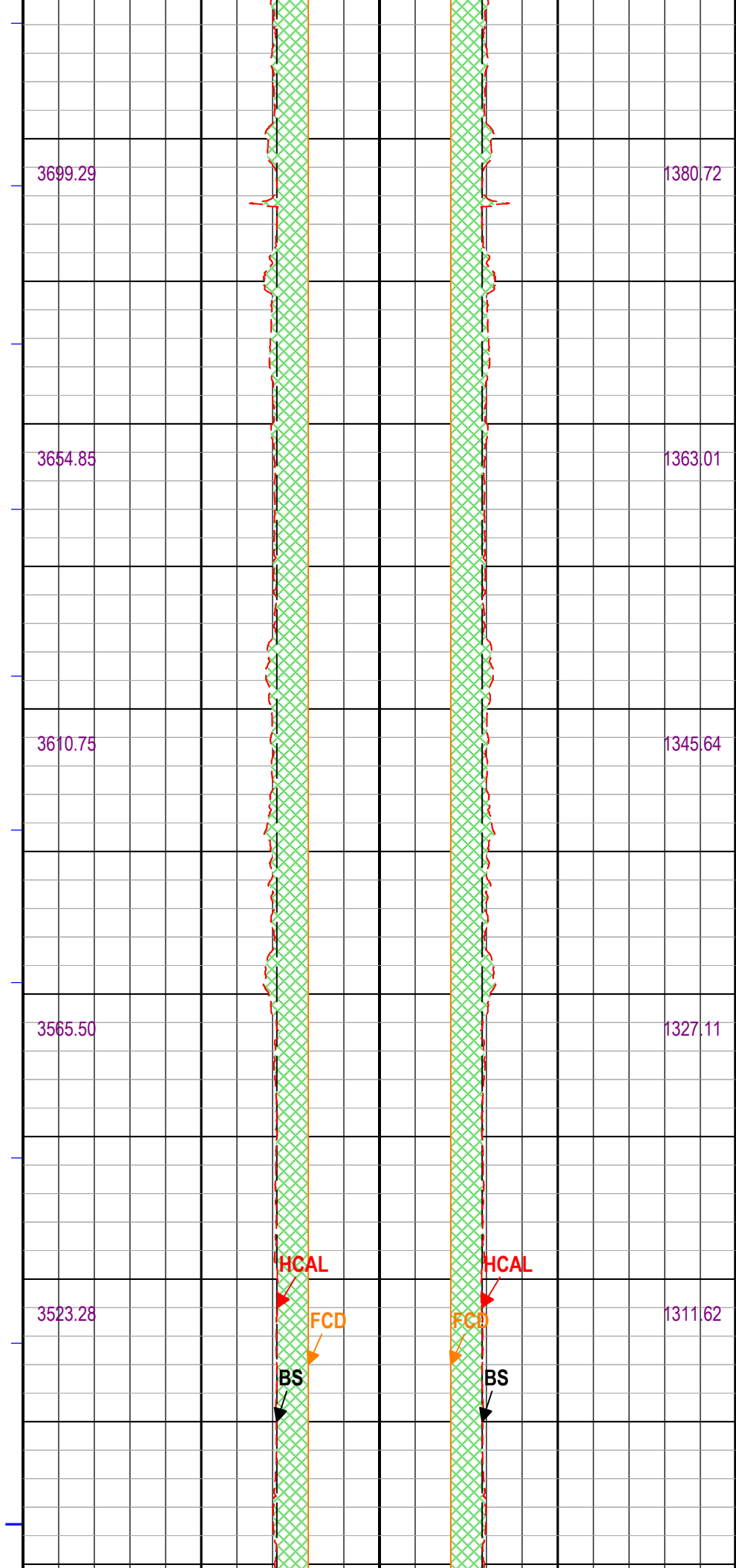
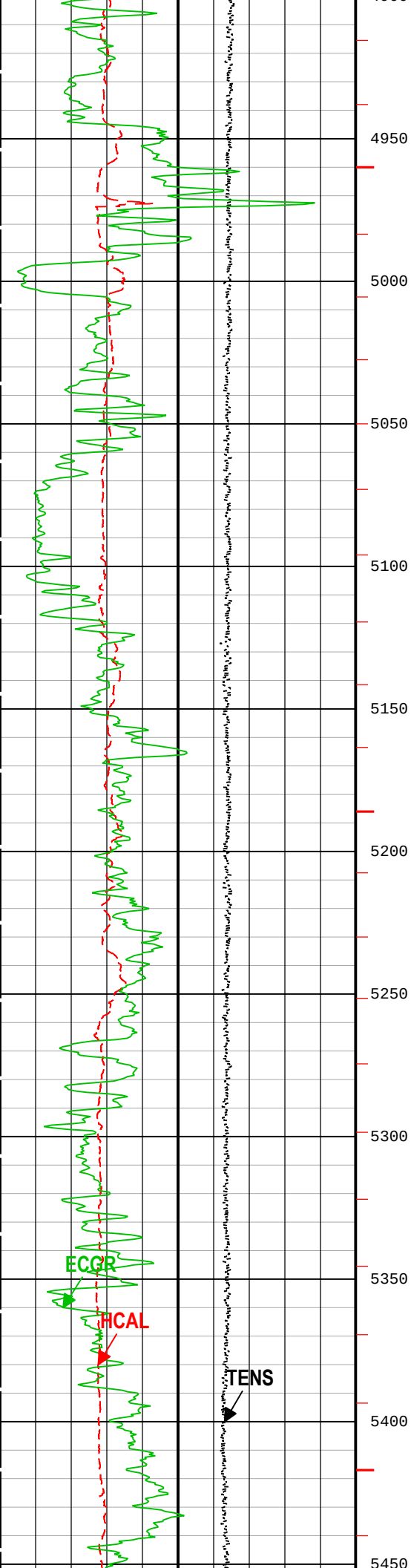
Depth Summary

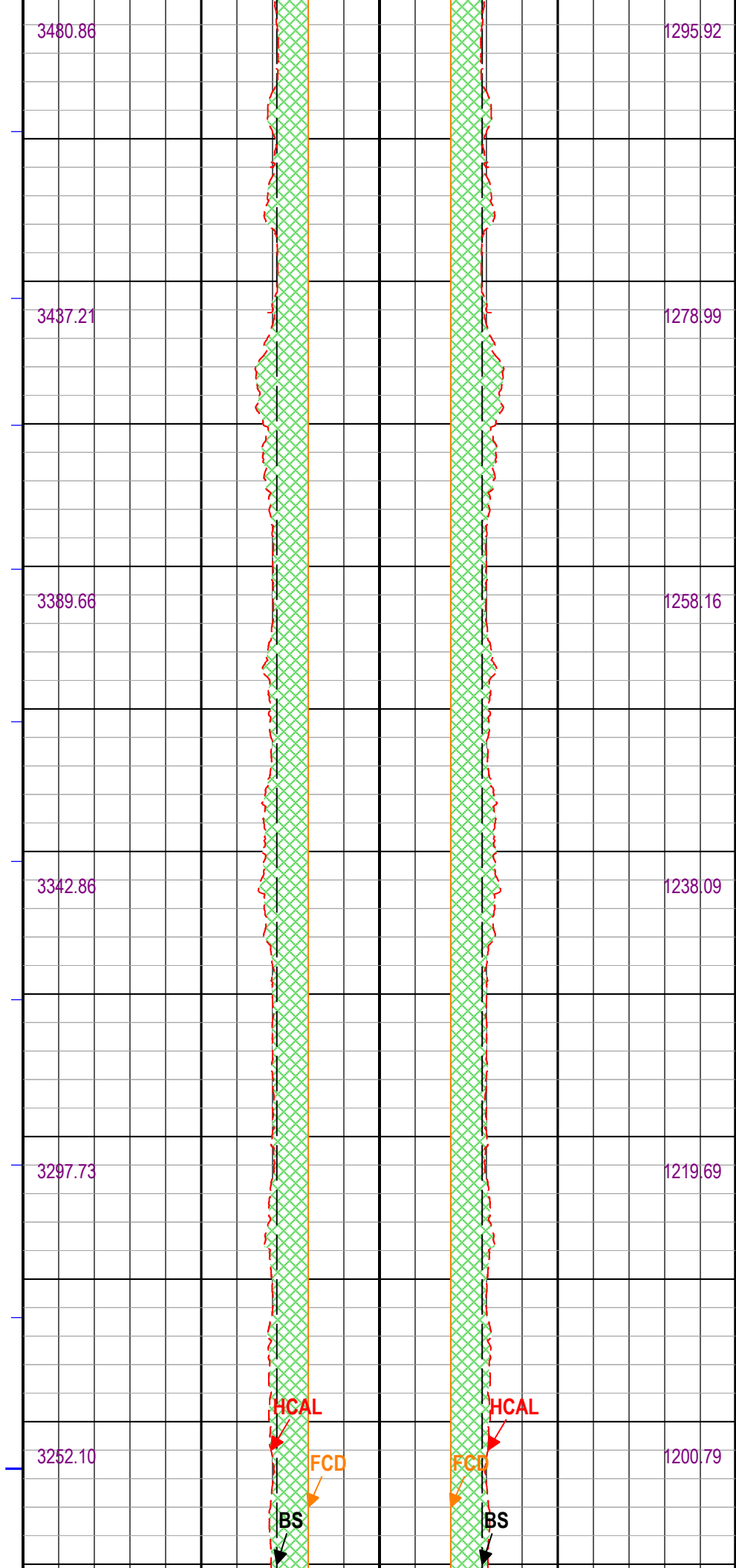
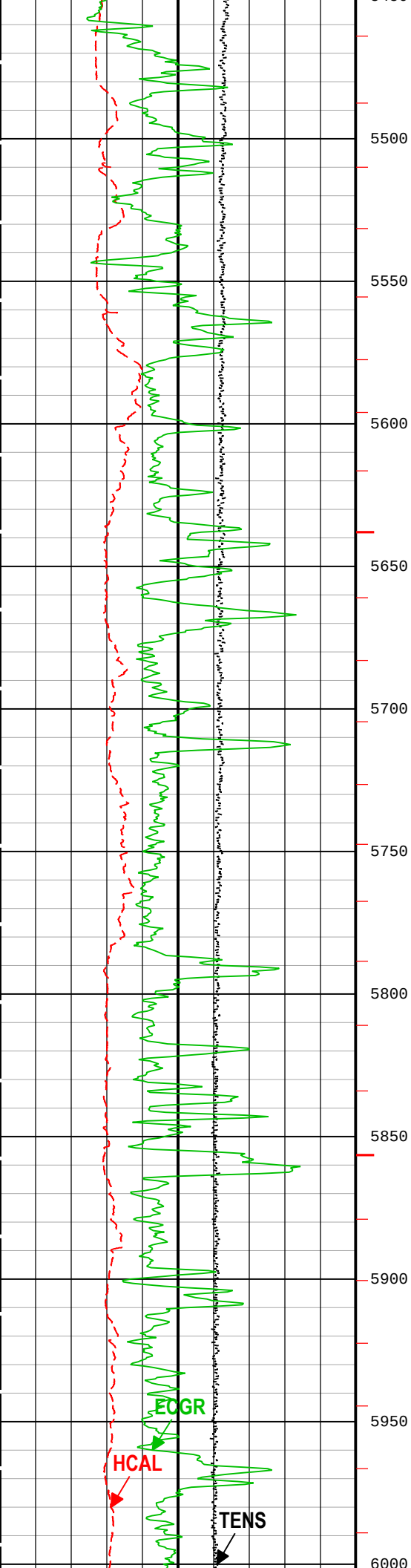
Run 1A			
Depth Measuring Device			
Type	IDW-JA		
Serial Number	2747		
Calibration Date	30-Aug-2016		
Calibrator Serial Number			
Calibration Cable Type	7-46 P-XS		
Wheel Correction 1	2		

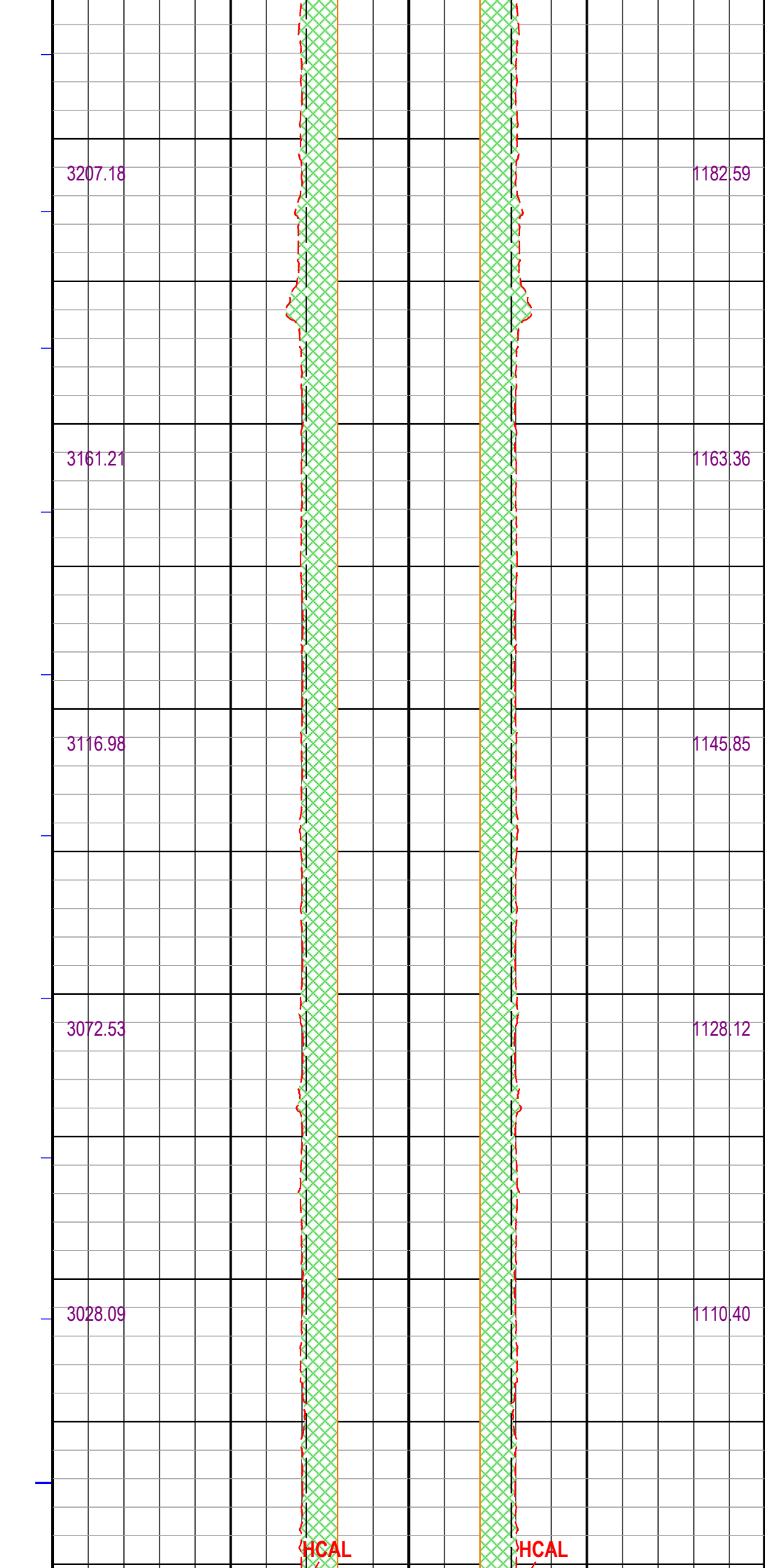
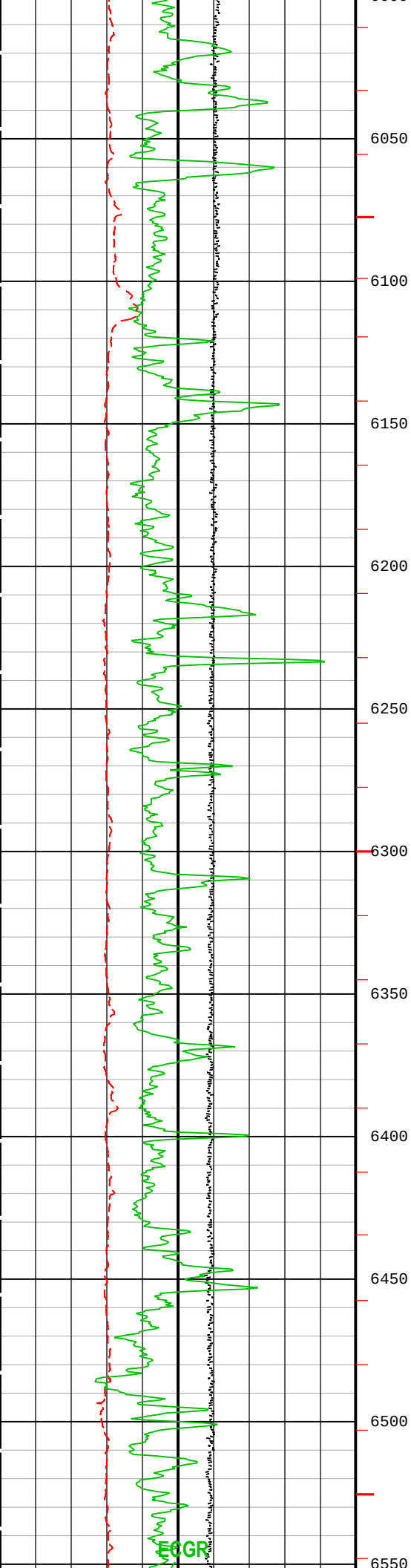
Channel	Source	Sampling
BS	Borehole	6in
CALI	HDRS-H:HRCC-H:HRCC-H	1in

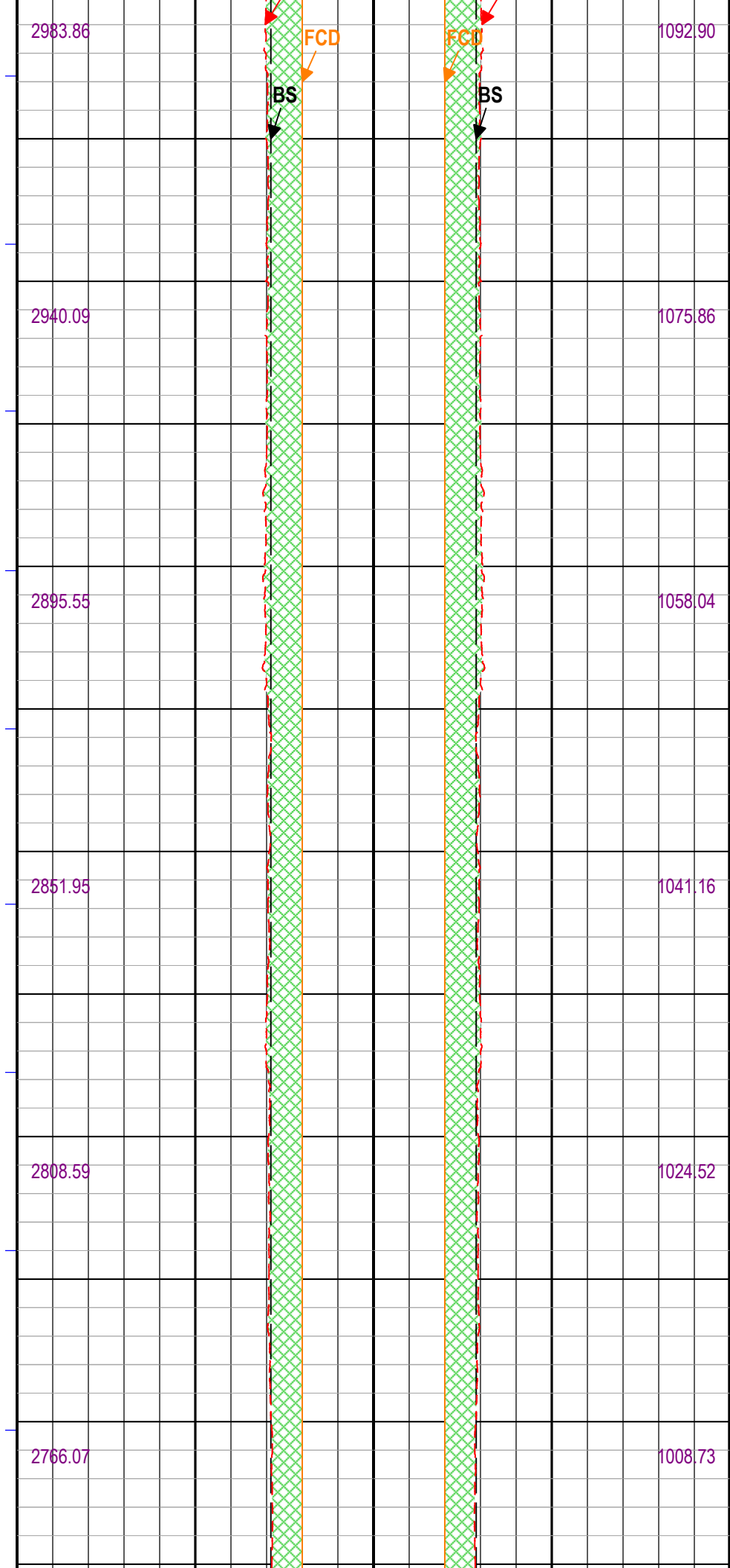
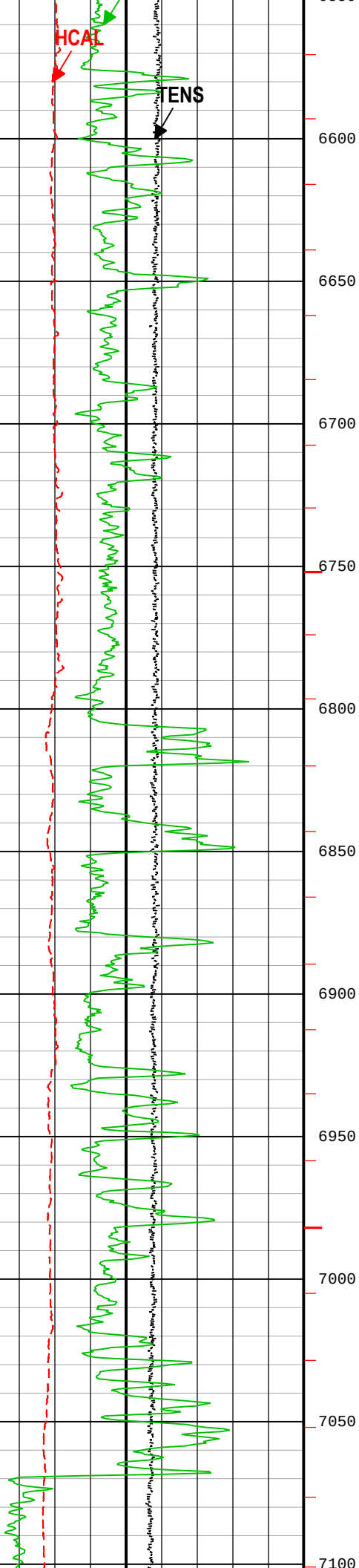
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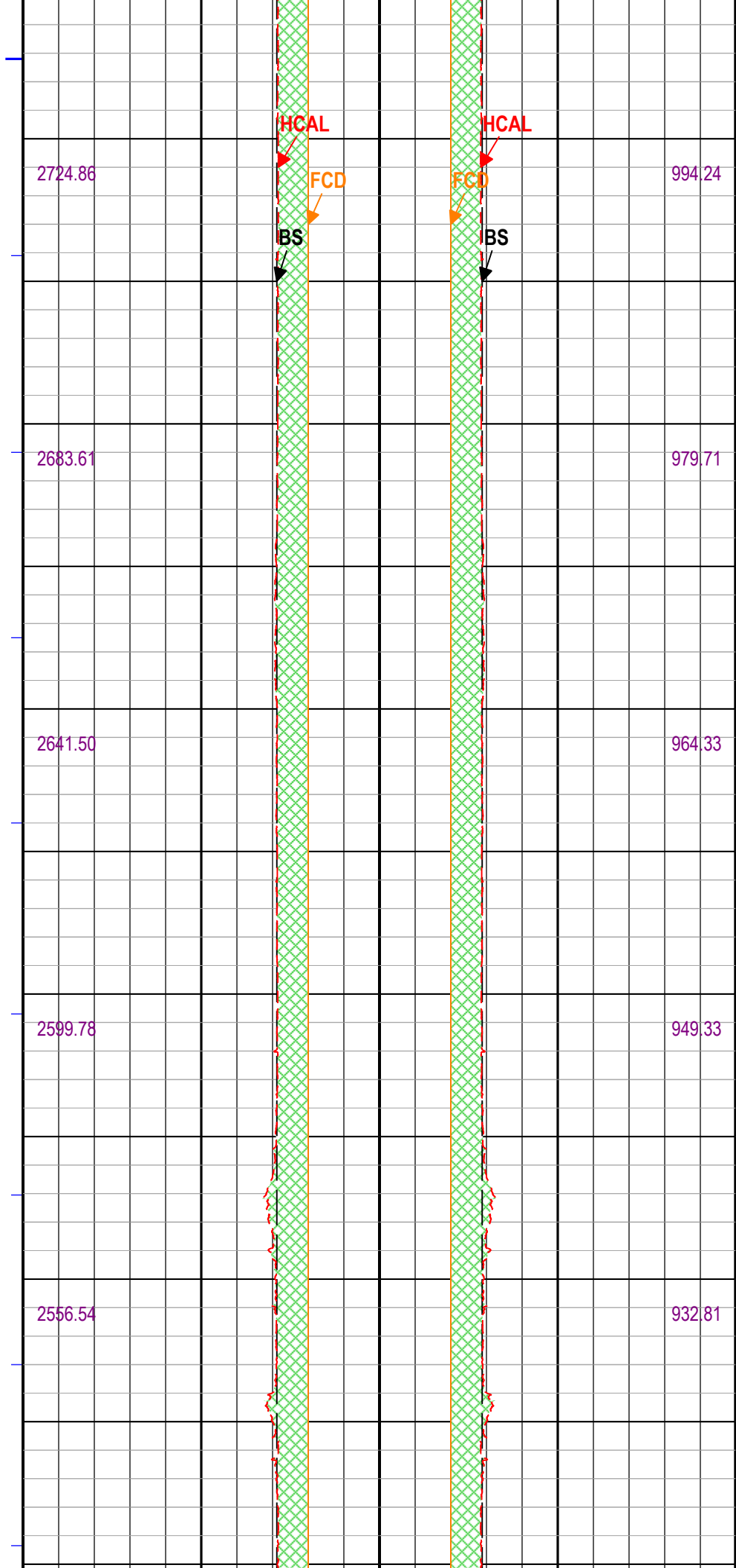
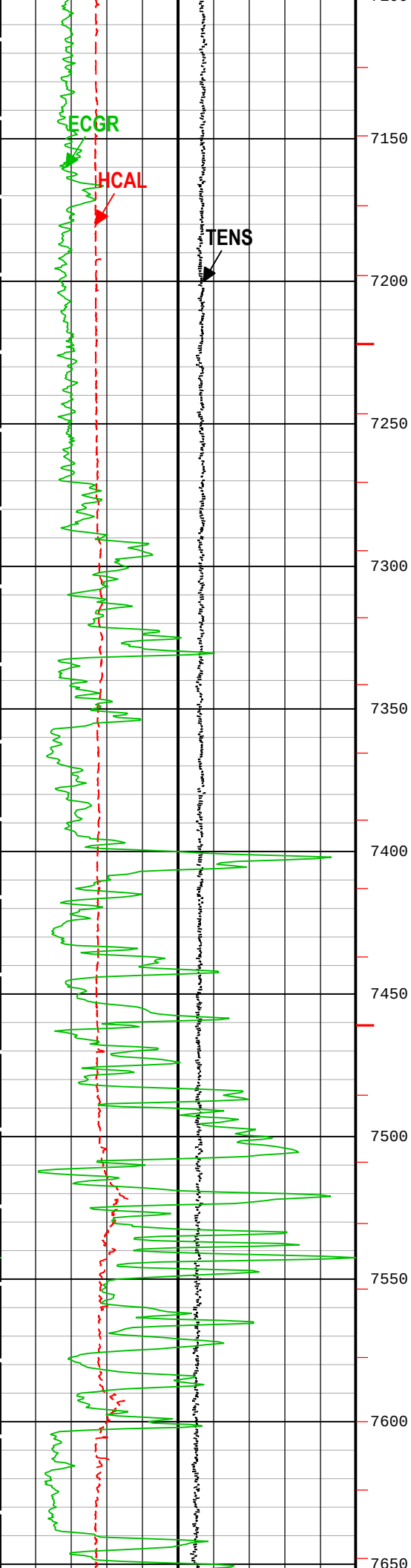


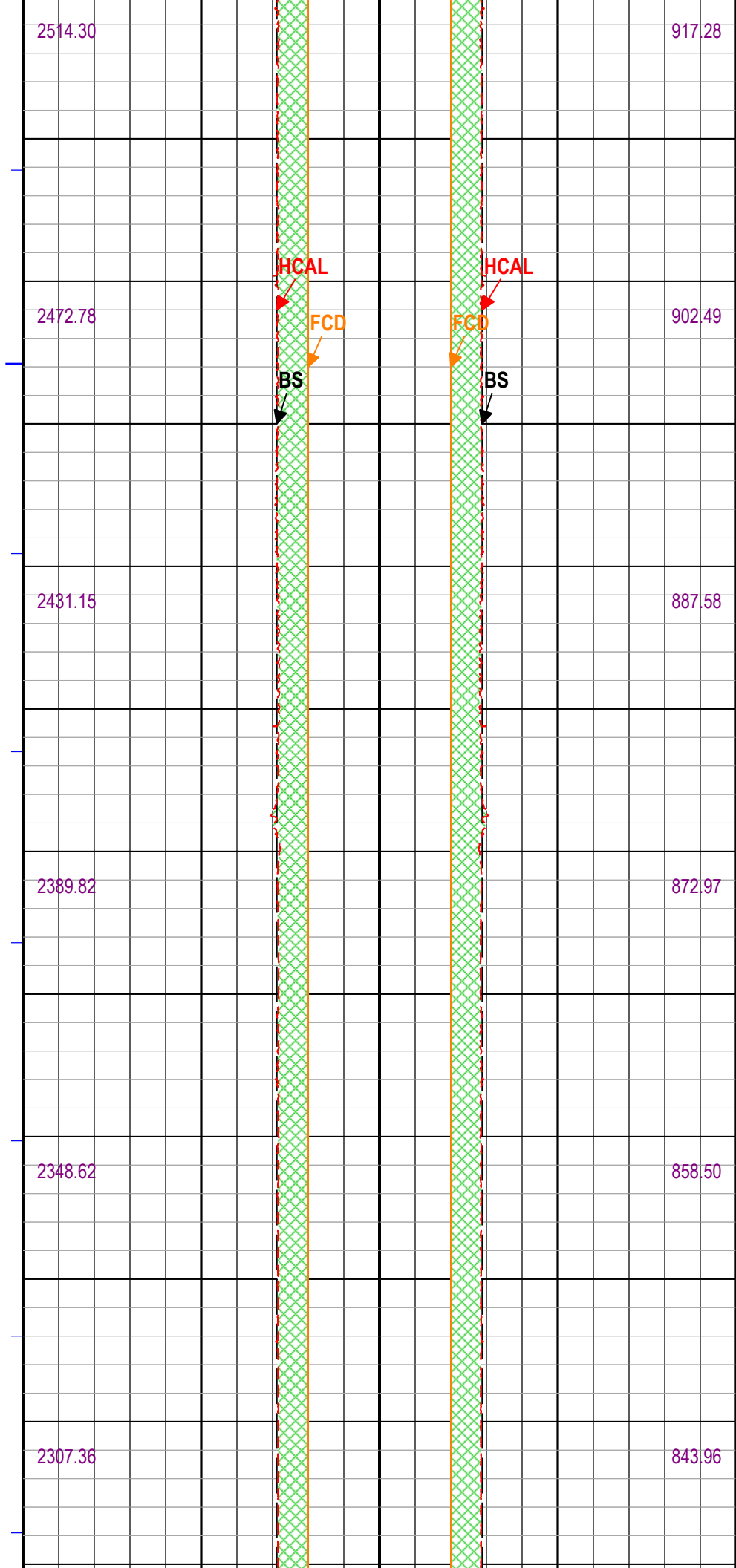
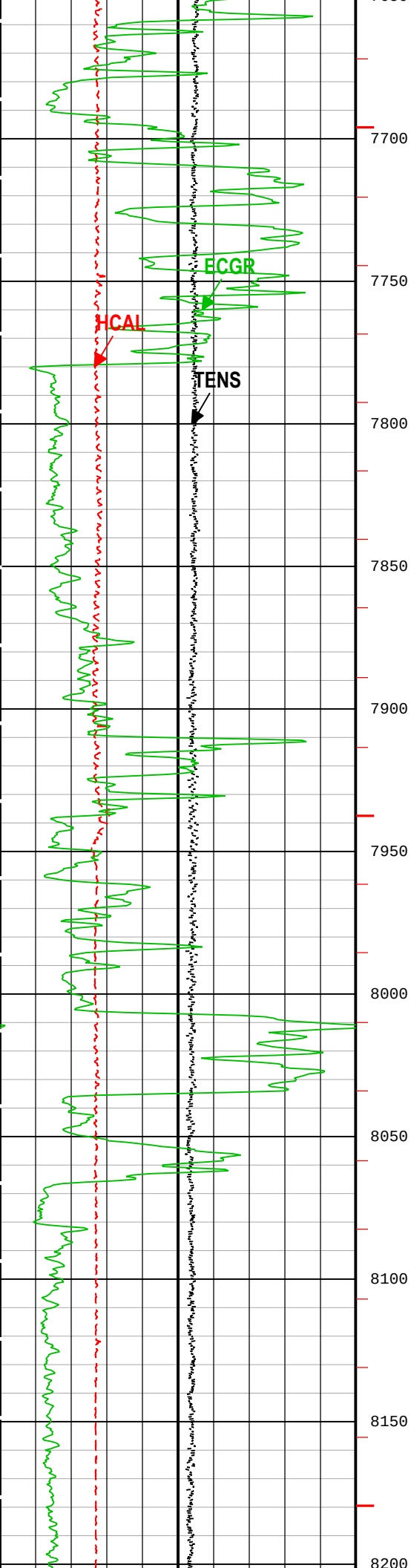


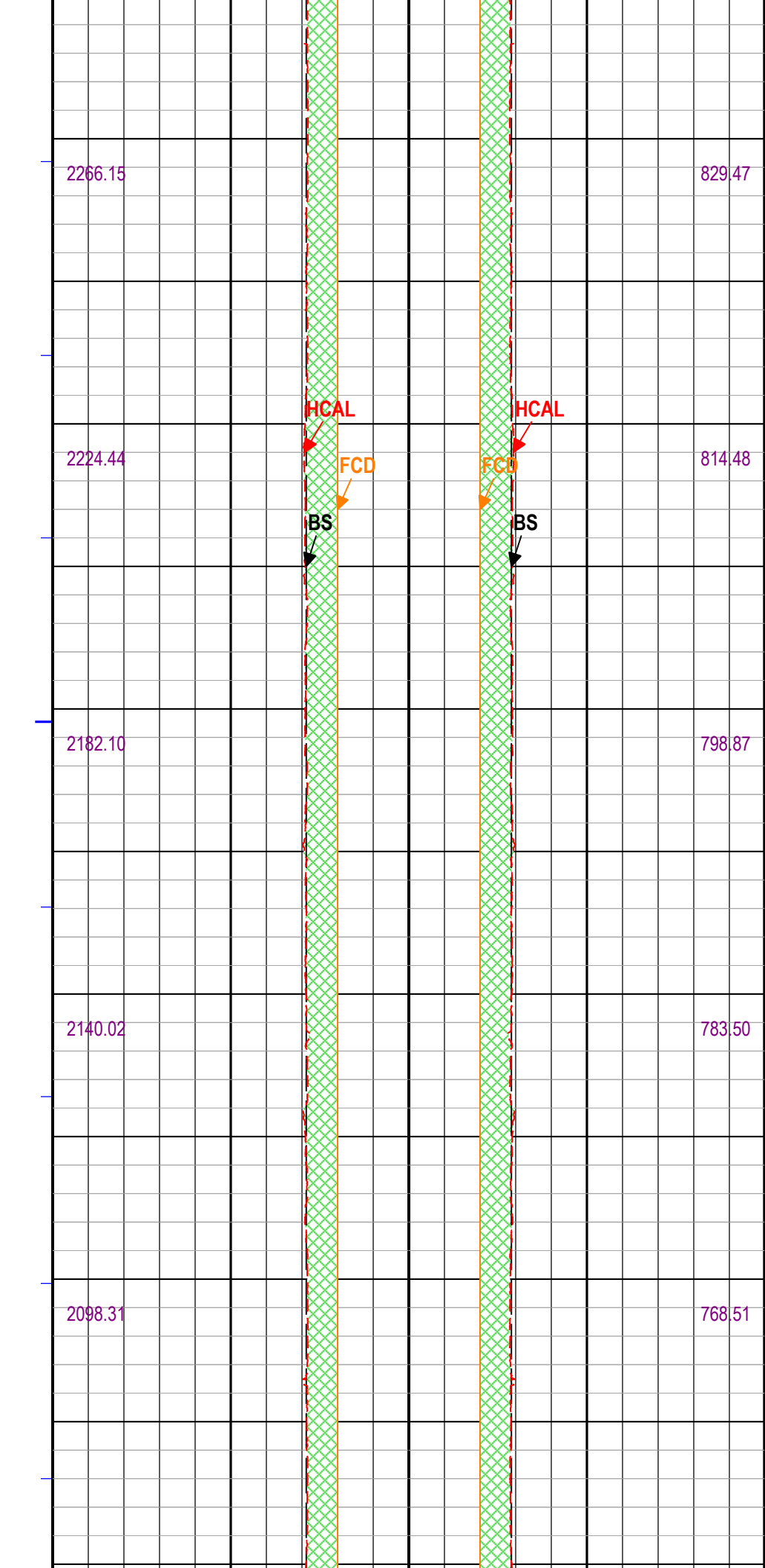
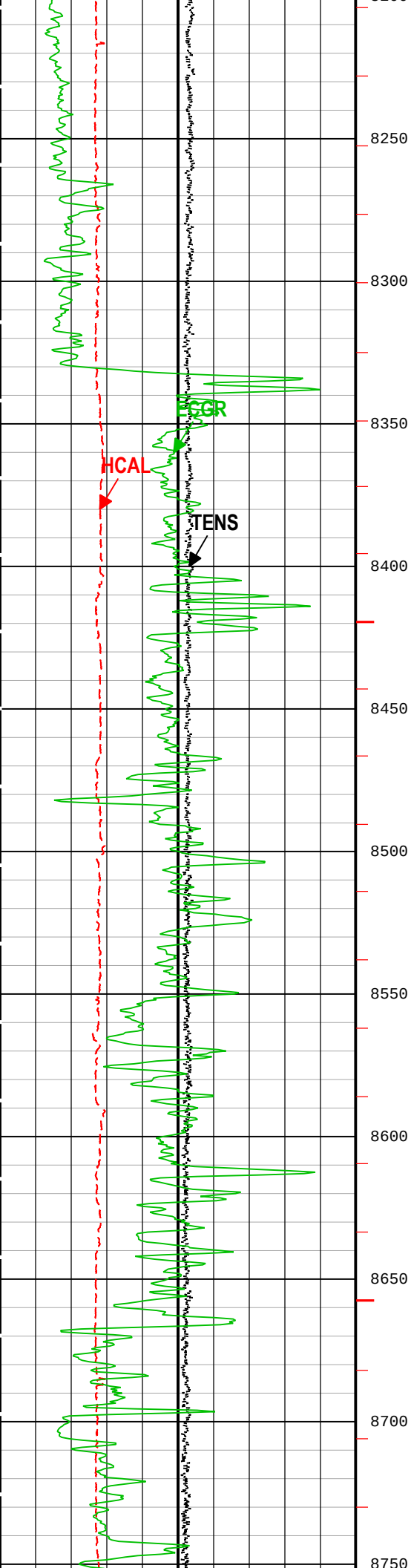


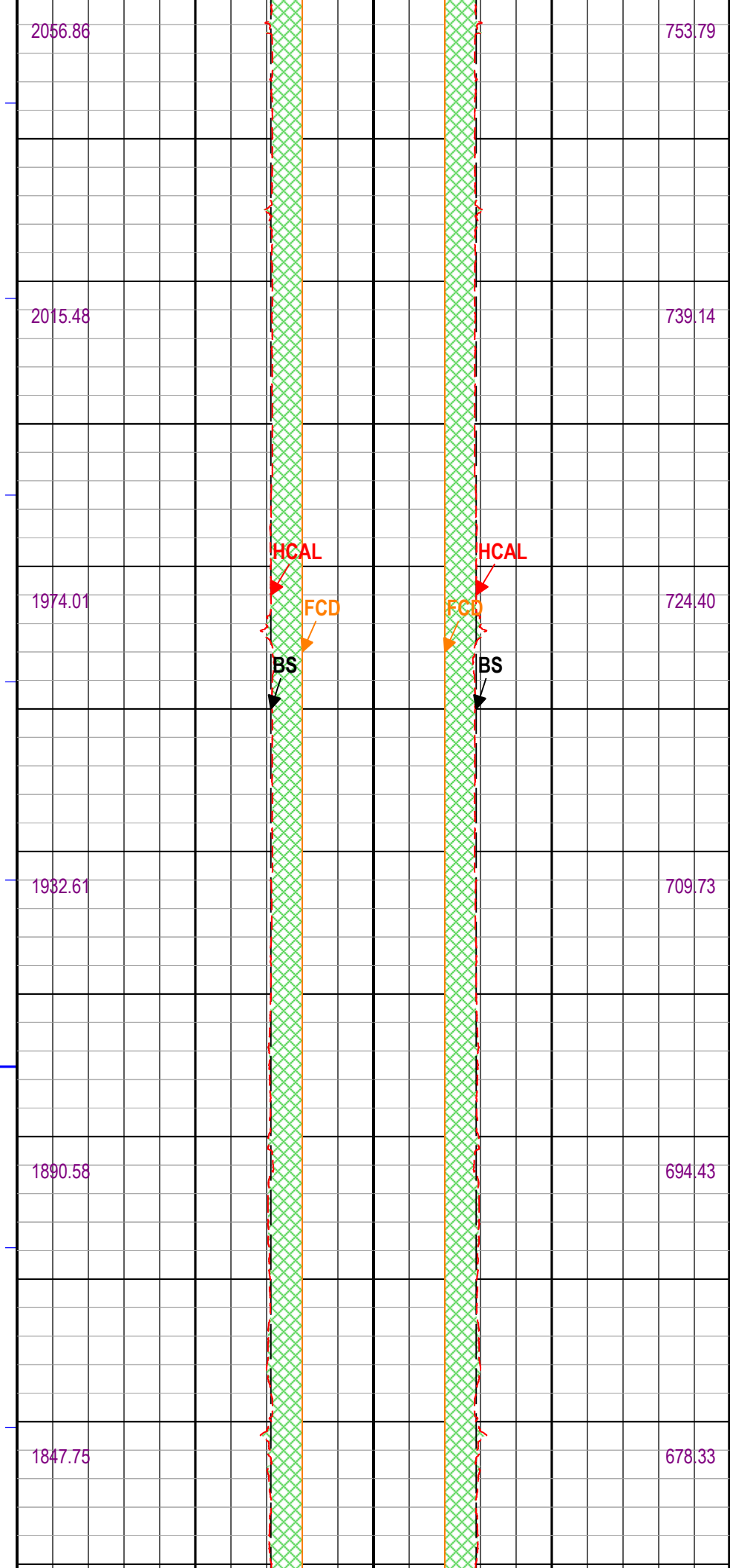
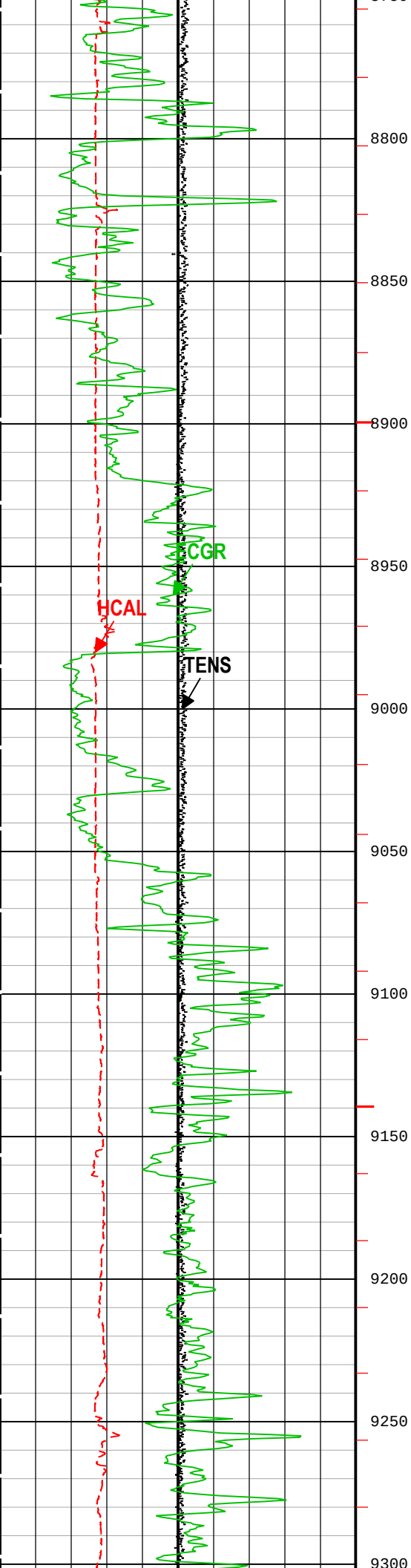


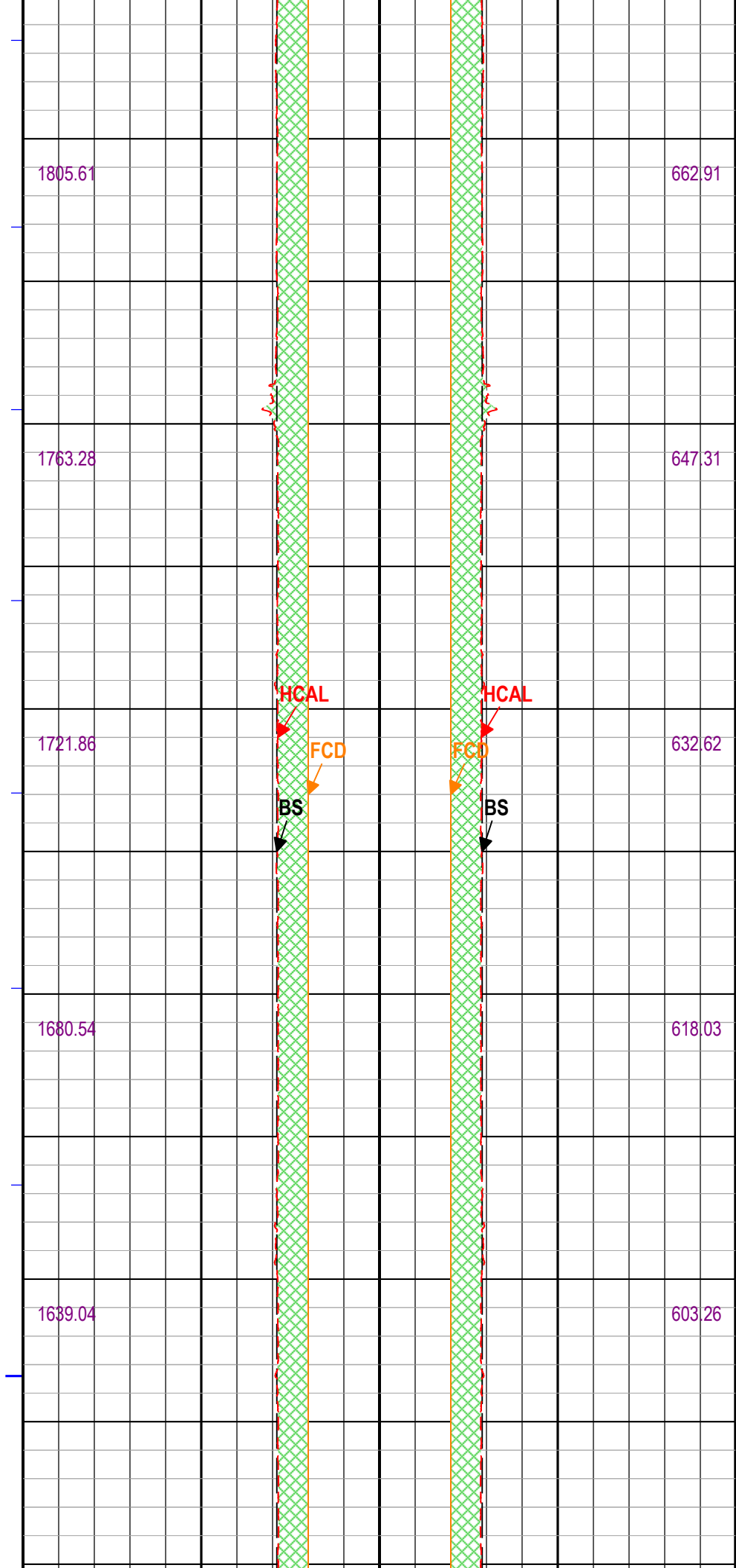
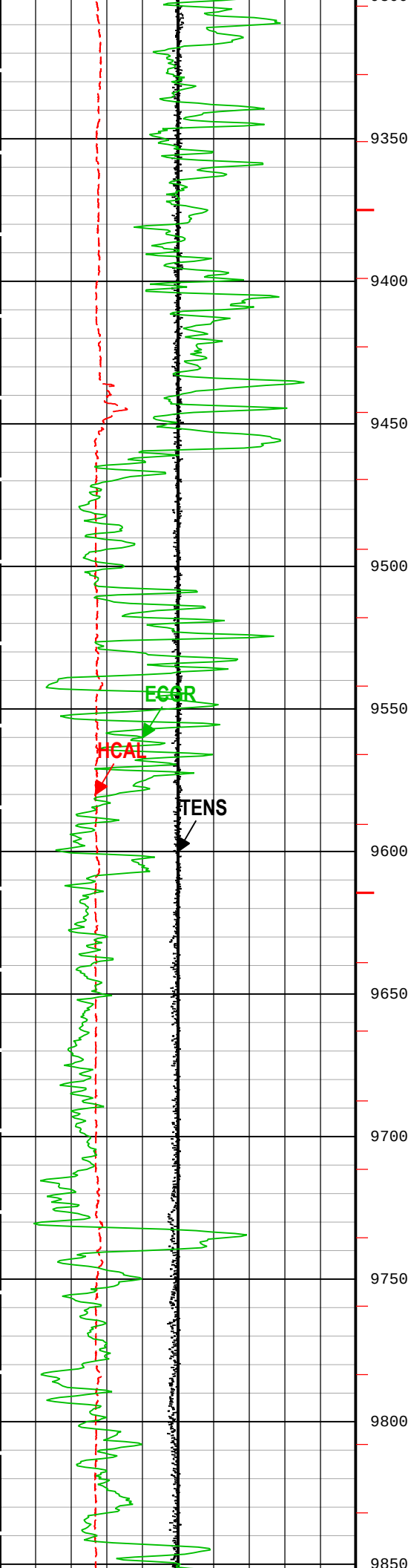


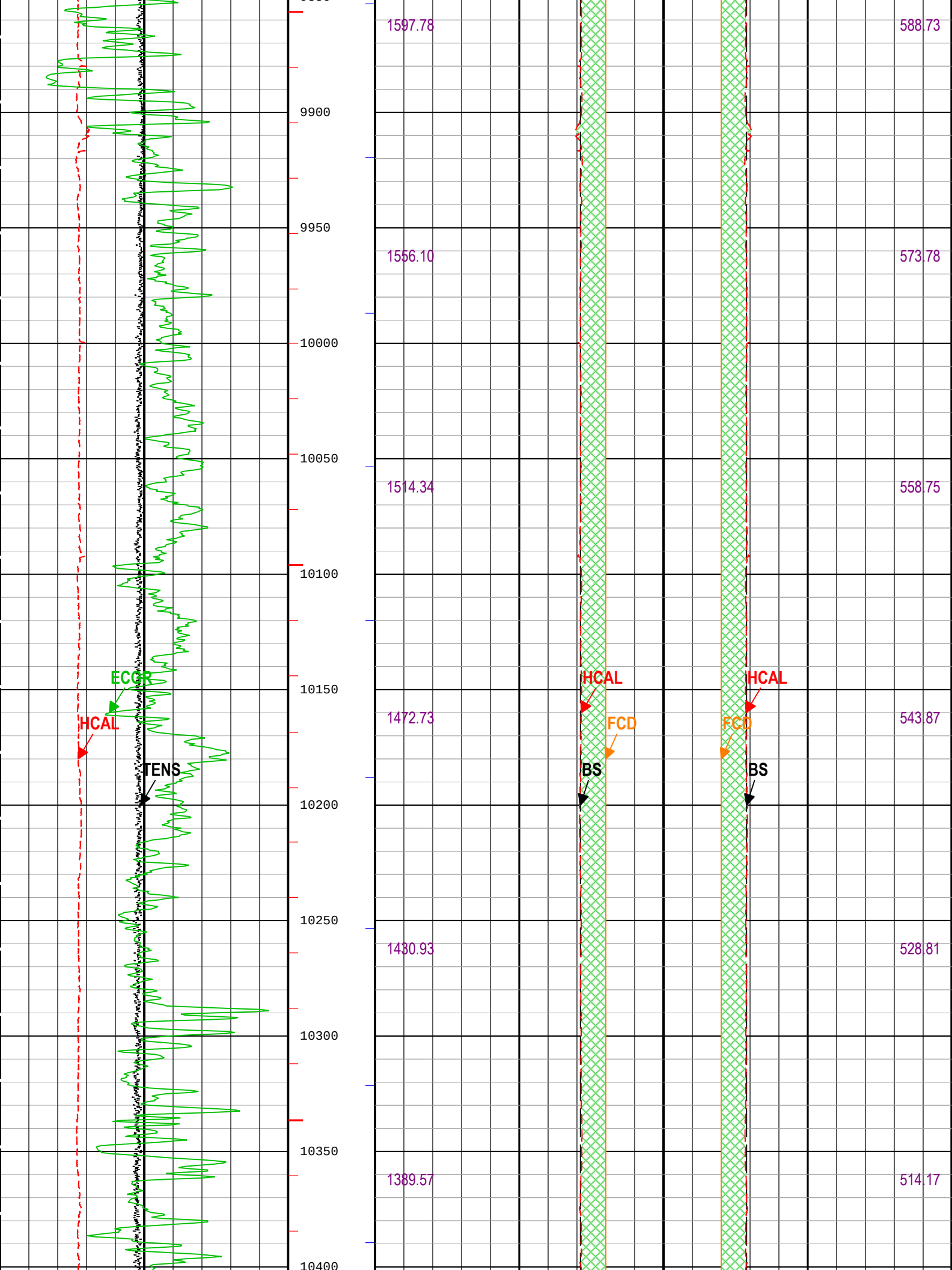


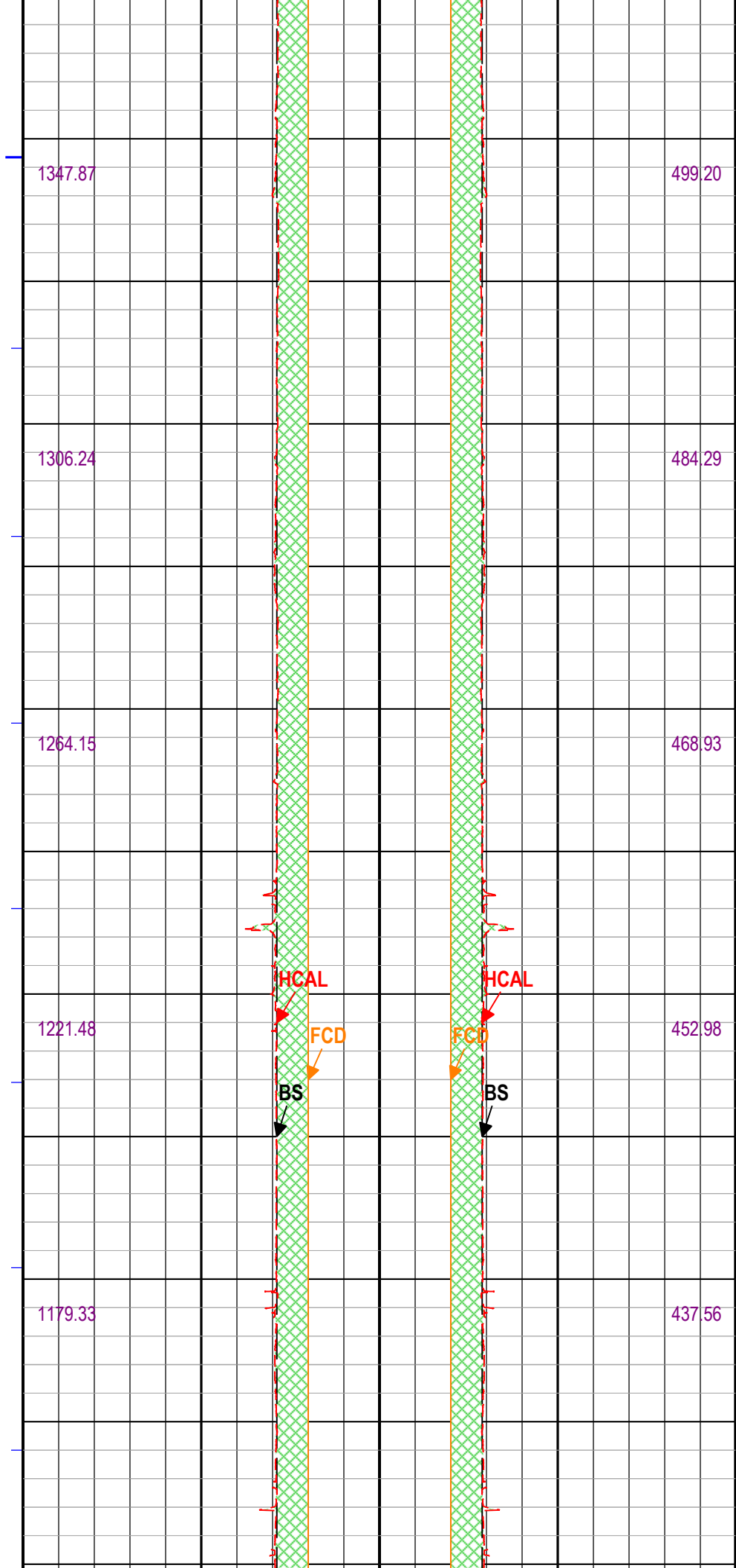
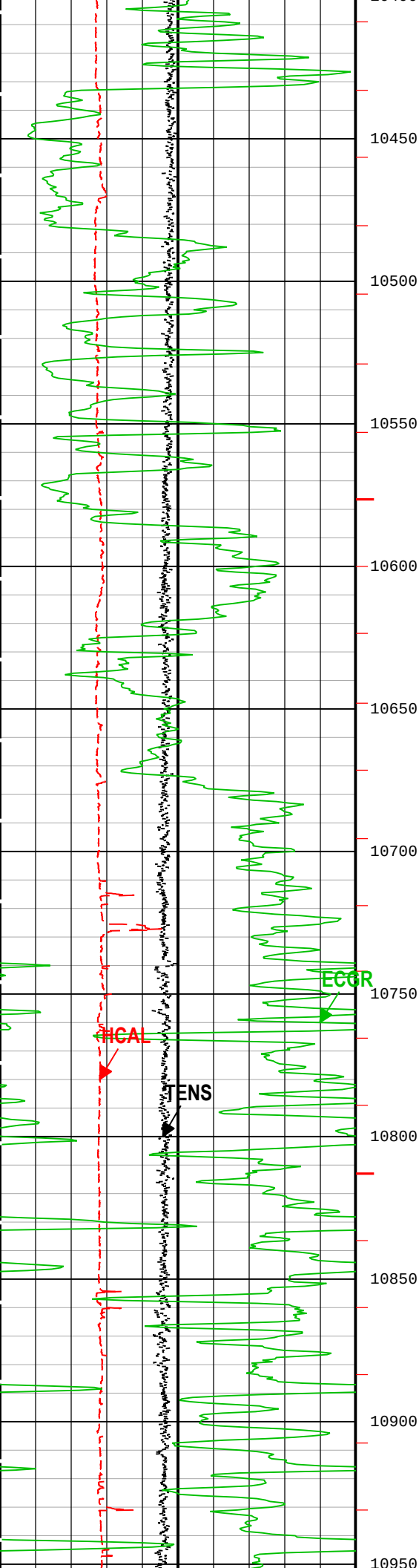


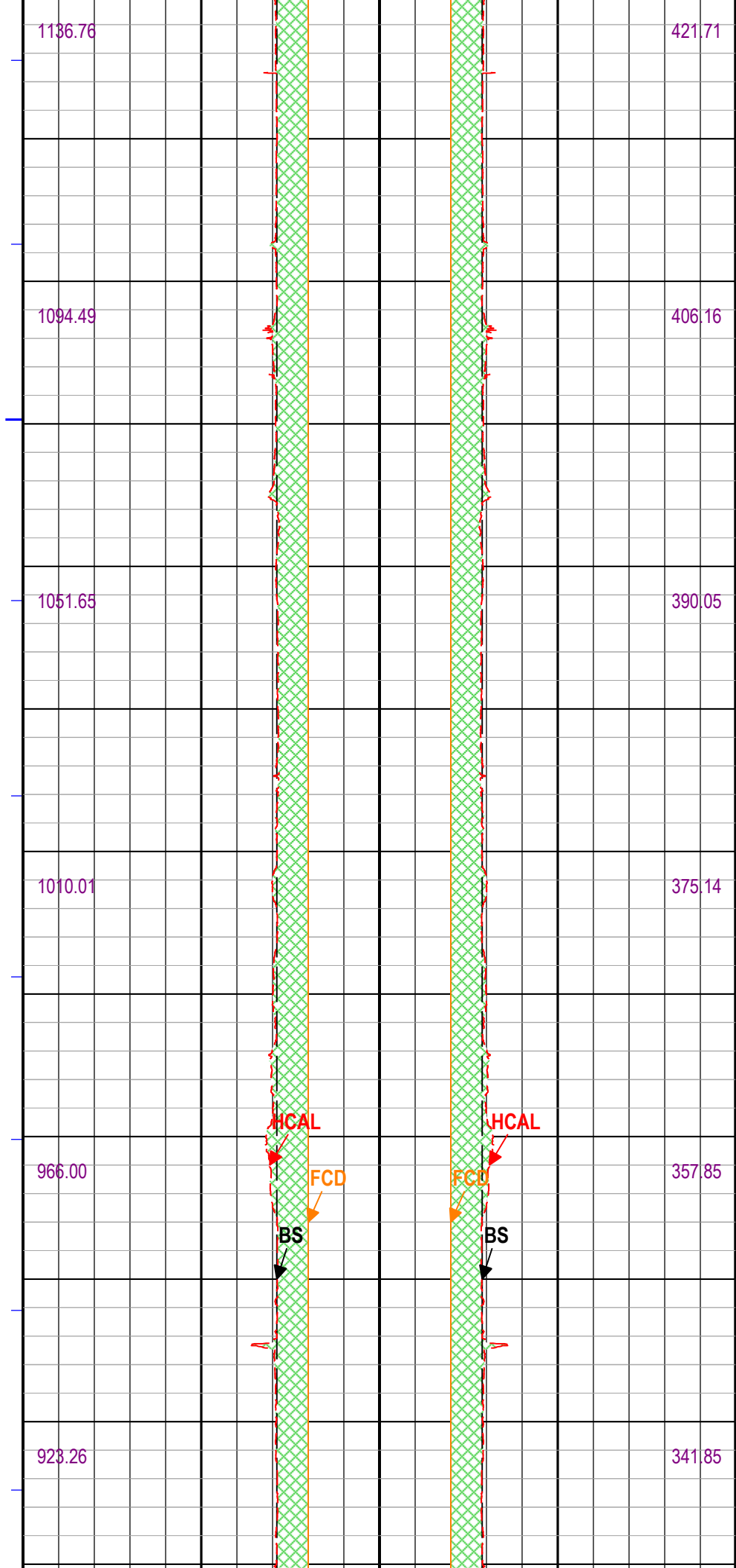
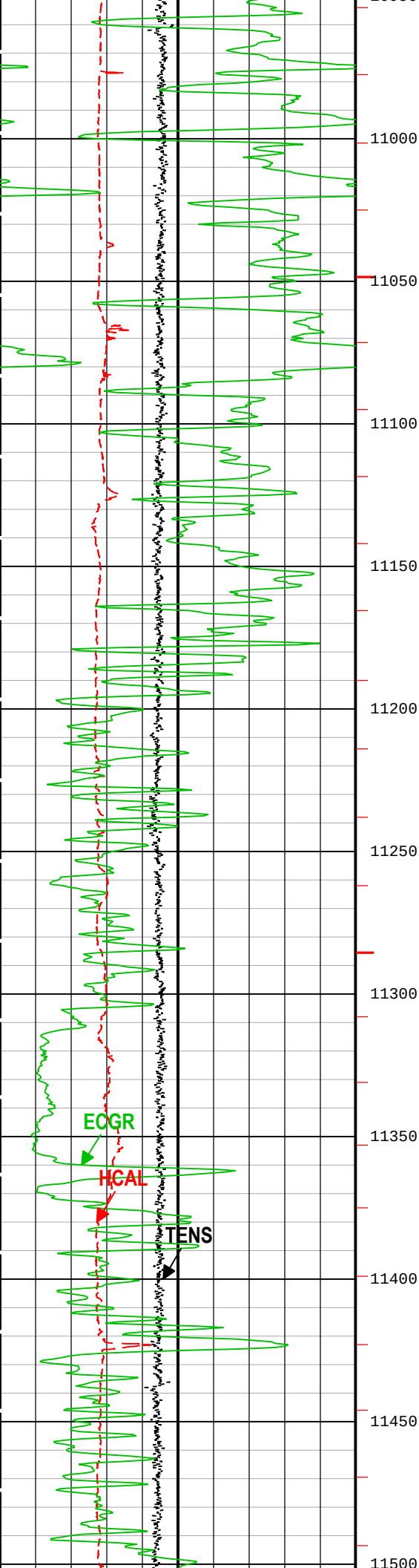


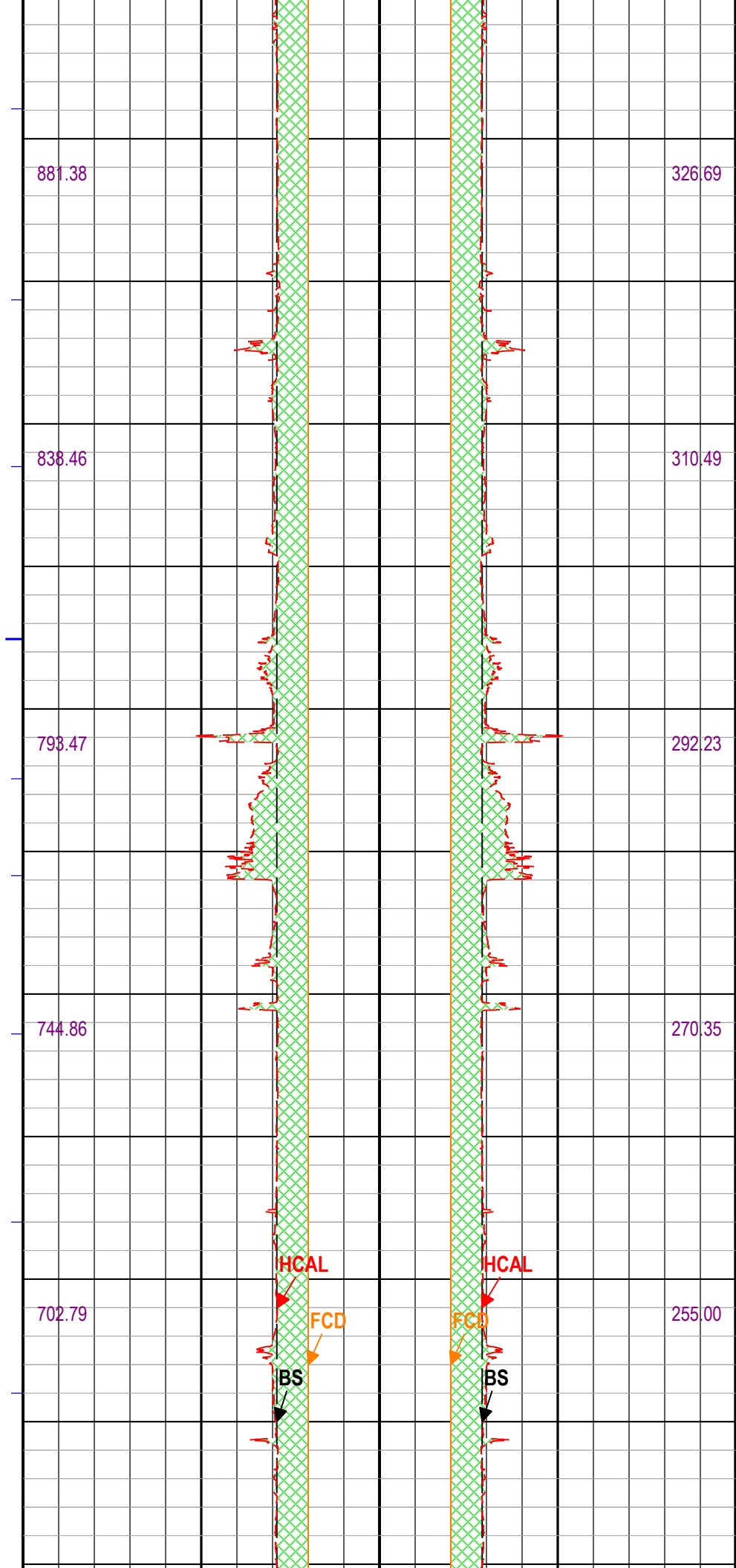
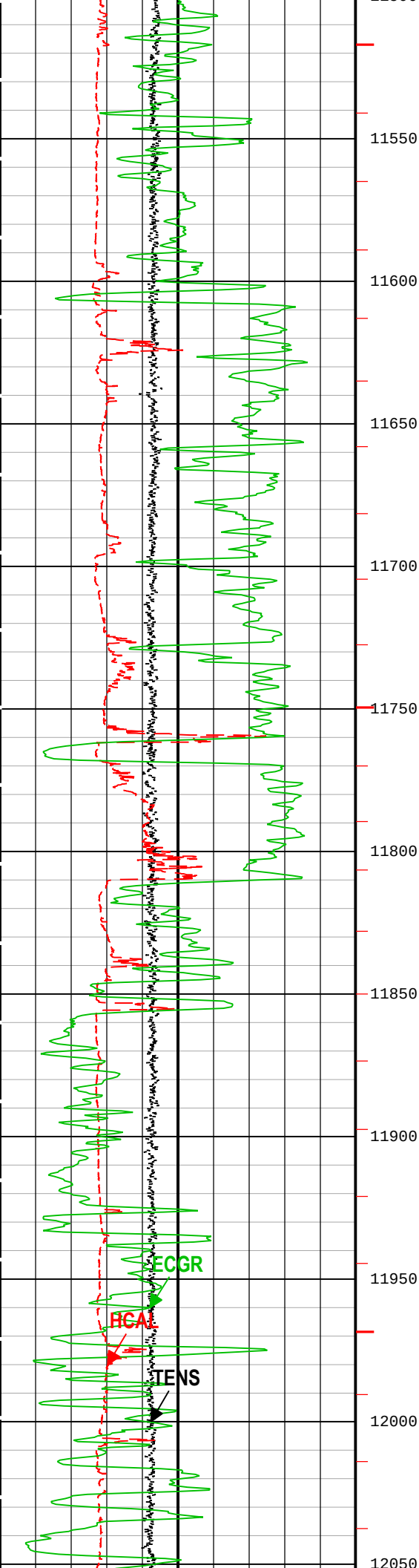


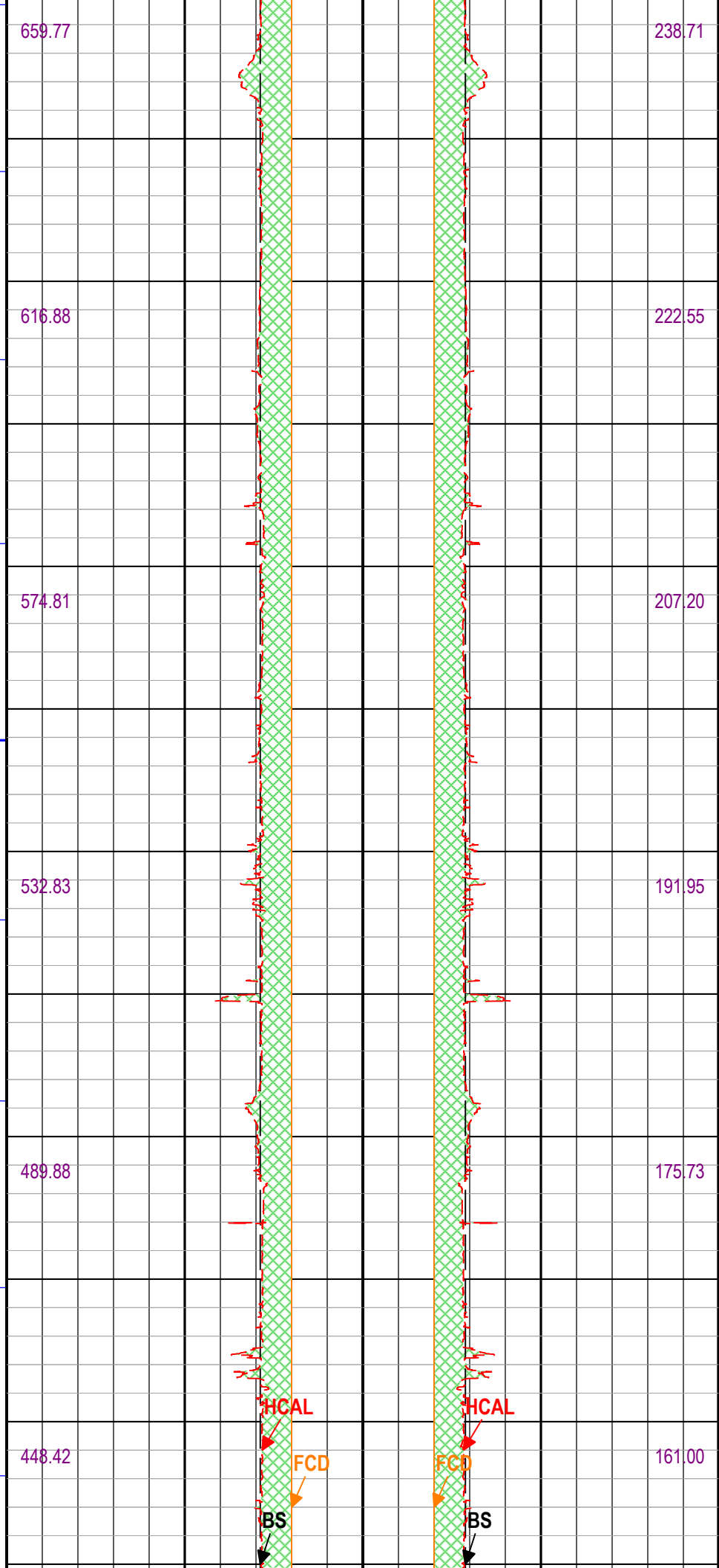
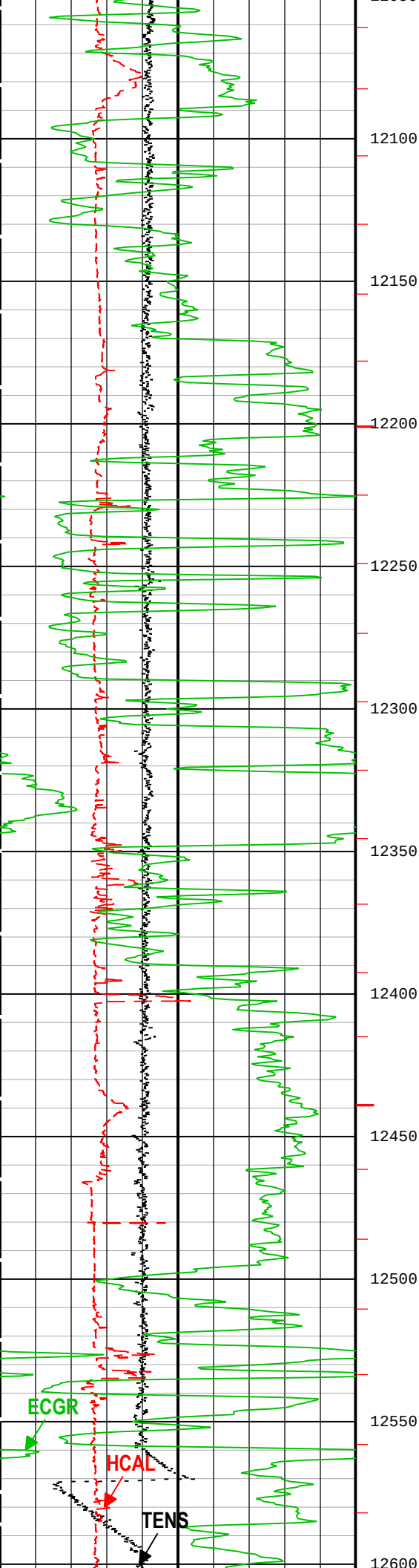


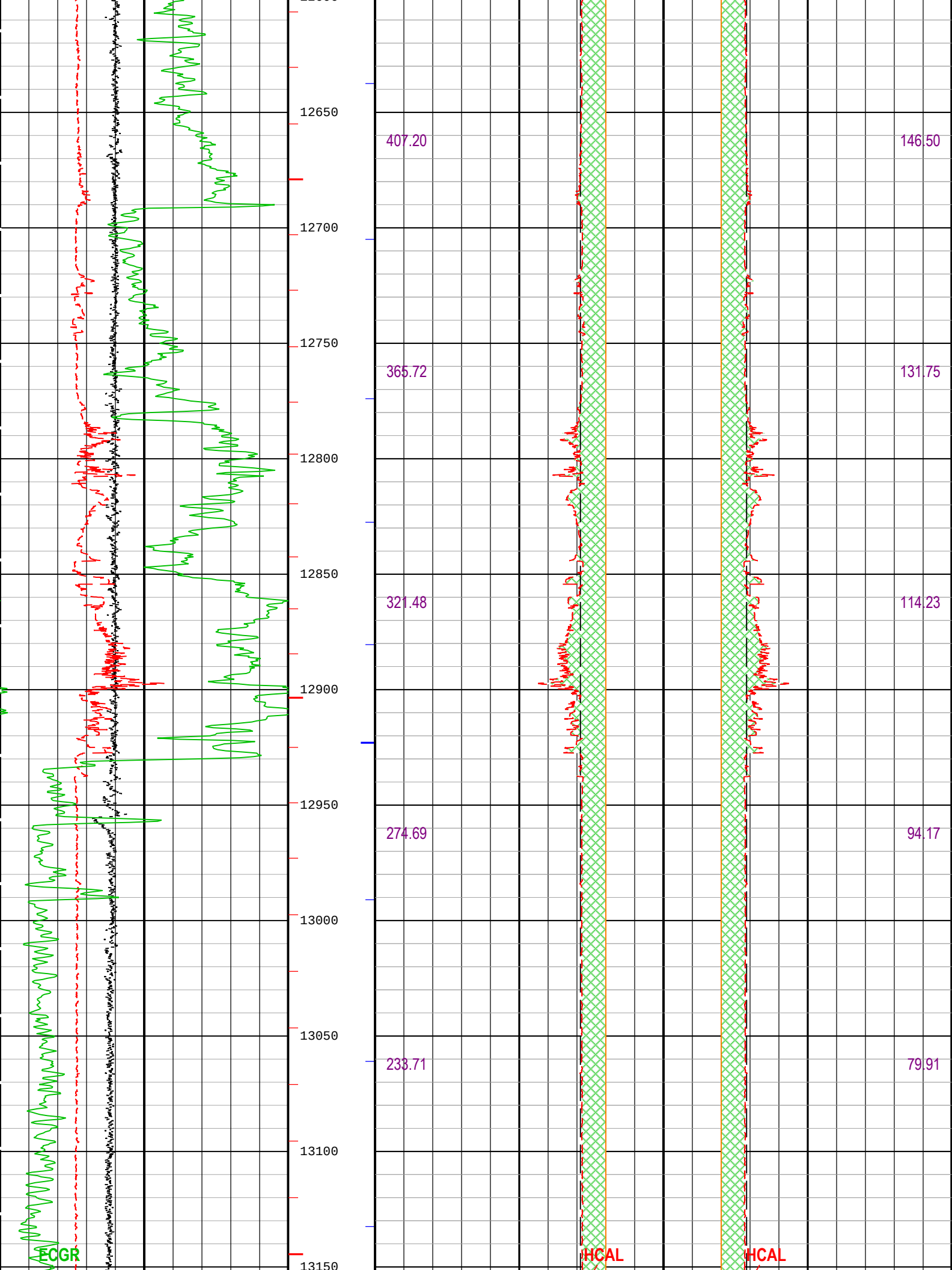


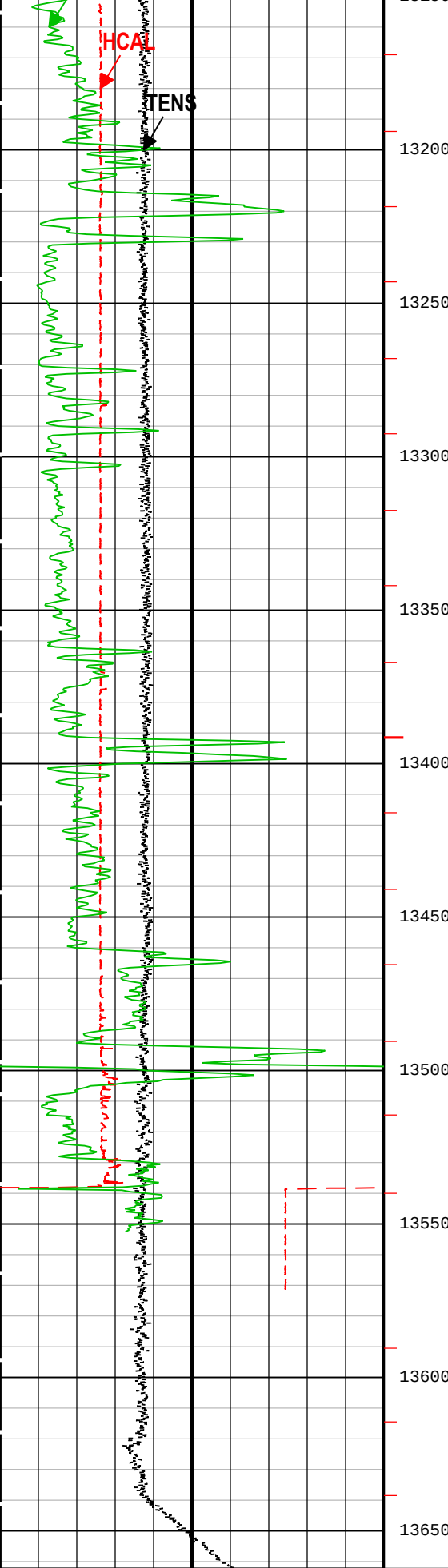




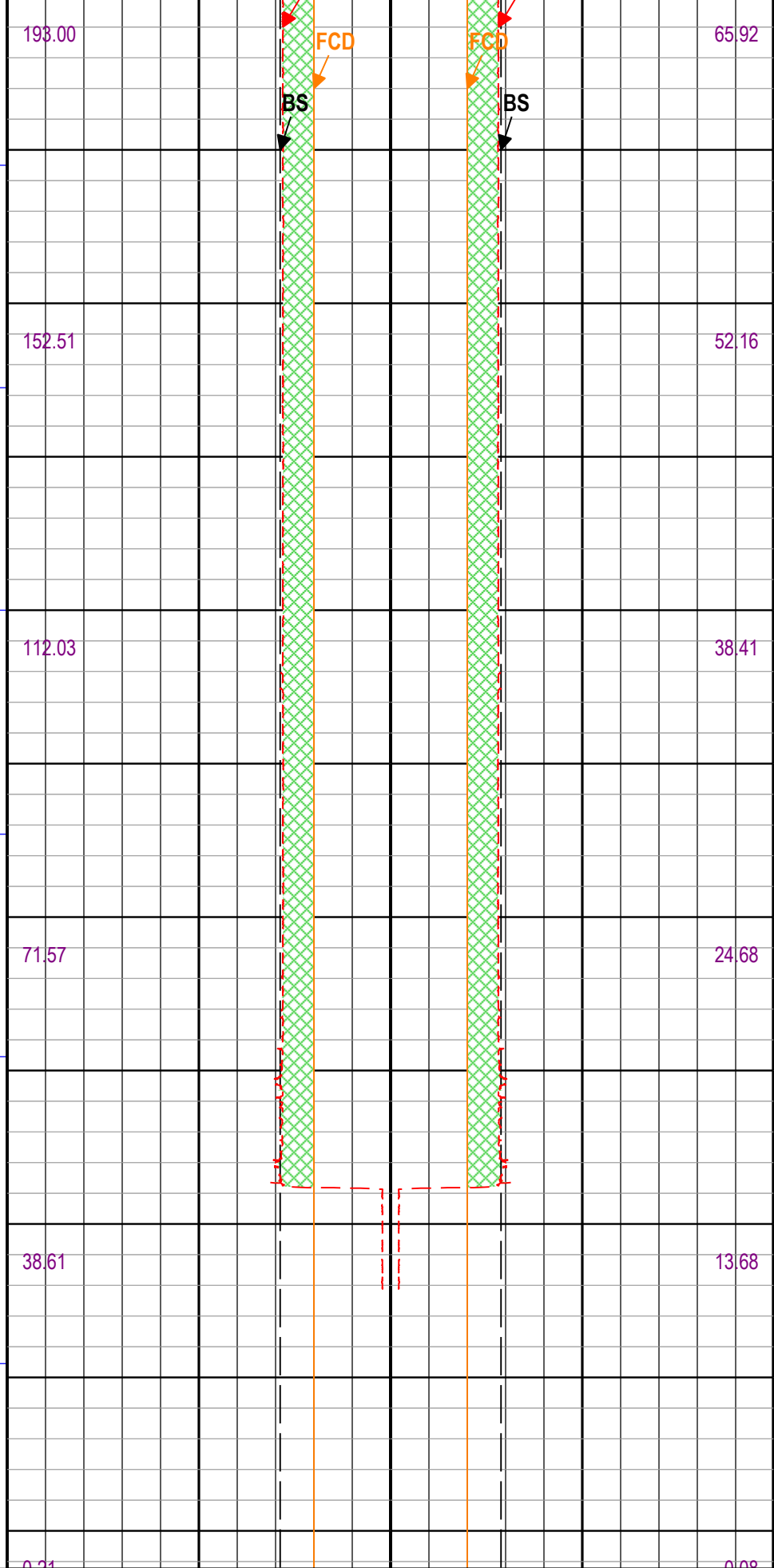








Cable Tension (TENS)
10000 lbf 0
Caliper (HCAL) HDRS-H



Bit Size (BS)
23 in 3 3 in 23
Cement

6	in	16
Gamma Ray (ECGR) HGNS-H		
0	gAPI	150

Future Casing Diameter (FCD)			Future Casing Diameter (FCD)		
23	in	3	3	in	23
Caliper (HCAL) HDRS-H			Caliper (HCAL) HDRS-H		
23	in	3	3	in	23
Integrated Hole Volume (IHV) ft3			Integrated Cement Volume (ICV) ft3		

TIME_1900 - Time Marked every 60.00 (s)

- ICV - Integrated Cement Volume every 10.00 (ft3)
- ICV - Integrated Cement Volume every 100.00 (ft3)
- IHV - Integrated Hole Volume every 10.00 (ft3)
- IHV - Integrated Hole Volume every 100.00 (ft3)

Description: HRLT BASIC LOG Format: Log (Caliper 2 inch General) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:51:05

Company:	DCP Midstream LP	Schlumberger
Well:	Zia AGI D2	
Field:	AGI Devonian Exploration	
County:	Lea	
State:	New Mexico	
Borehole Profile Log		
Future Casing Diameter = 5.5"		

**Platform Express / Compensated Neutron Log / Three
Detector Litho-Density**

Company: DCP Midstream LP

Well: Zia AGI D2

Field: AGI Devonian Exploration

County: Lea State: New Mexico

Platform Express			
Compensated Neutron Log			
Three Detector Litho-Density			
1893' FSL & 950' FWL		Elev.: K.B. 3574.00 ft	
Section: 19 Township: T19S Abstract: R32S		G.L. 3547.00 ft	
		D.F. 3573.00 ft	
Permanent Datum:		Ground Level	
Log Measured From:		Kelly Bushing	
Drilling Measured From:		Kelly Bushing	
API Serial No.		Section:	Township:
30-025-42207		19	T19S
		Abstract: R32S	

Logging Date			29-Nov-2016				
Run Number			Run 1A				
Depth Driller			13622.00 ft				
Schlumberger Depth			13637.00 ft				
Bottom Log Interval			13637.00 ft				
Top Log Interval			4702.00 ft				
Casing Driller Size @ Depth			9.625 in @ 4696.00 ft				
Casing Schlumberger			4702 ft				
Bit Size			8.75 in				
Type Fluid In Hole			Salt Brine				
MUD	Density	Viscosity	10 lbm/gal	41 s			
	Fluid Loss	PH	9 cm3	10			
	Source of Sample			Active Tank			
RM @ Meas Temp			0.08 ohm.m @ 72 degF				
RMF @ Meas Temp			0.08 ohm.m @ 72 degF				
RMC @ Meas Temp							
Source RMF		RMC					
RM @ BHT		RMF @ BHT	0.03 @ 174.75	0.03 @ 174.75			
Max Recorded Temperatures			174.75 degF				
Circulation Stopped		Time	29-Nov-2016		00:00:00		
Logger on Bottom		Time	29-Nov-2016		04:30:00		
Unit Number	Location:	9105	Midland, TX				
Recorded By		Danielle Krebs					
Witnessed By		Jared Smith					

Disclaimer

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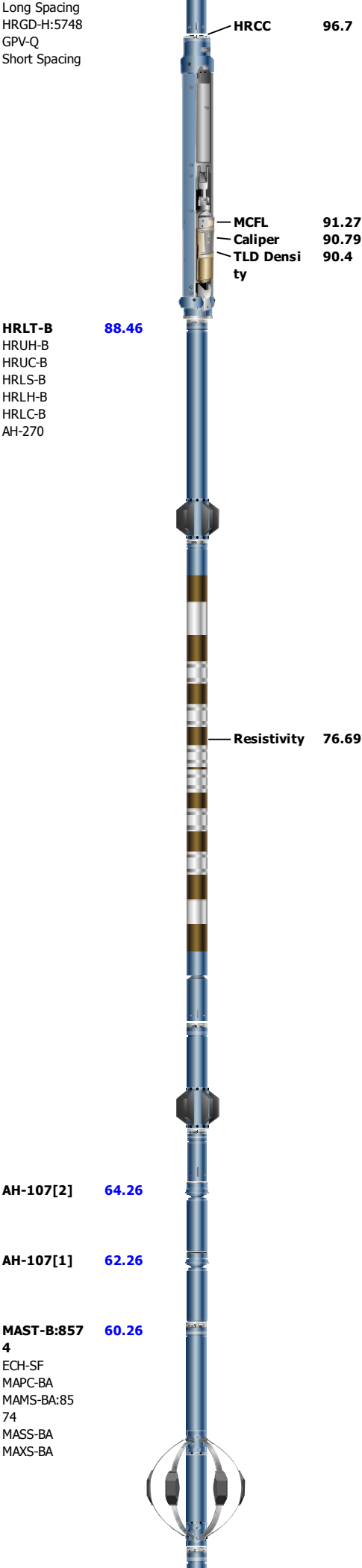
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 - 6.2 Software Version
 - 6.3 Composite Summary
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 - 7.2 Composite Summary
 - 7.3 Log (Porosity_5_Inch)
 - 7.4 Parameter Listing
- 8. Run 1A Repeat Pass 5" = 100'
 - 8.1 Composite Summary

- 8.2 Log (Porosity_5_Inch RA)
- 9. Calibration Report
- 10. Tail
- 11. Run 1A Main Pass 1" = 100'
 - 11.1 Integration Summary
 - 11.2 Composite Summary
 - 11.3 Log (Porosity 1 inch General)

Remarks and Equipment Summary

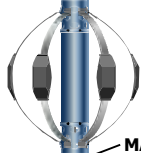
Run 1A: Toolstring				Run 1A: Remarks
Equip name	Length	MP name	Offset	1. Crew: Danielle, Tony, Dago. 2. Logs done from TD to Casing. Repeat was 200 ft off TD. CNL & Gr to Surface. 3. Chlorides = 55,000 ppm. FD = 1.1 g/cc. Rm = 0.08 ohm.meters @ 72 degF. 4. Max temperature from HGNS:CTEM is 174.75 degF. 5. Density data maybe affected by borehole conditions. 6. No pills or LCM in the mud as per company man. 7. Neutron Corrections: HSCO, SOCO. 8. Sonic Scanner logged in Standard Mode. 9. As per client request, main and repeat pass correlated to downlog and not previous logs in well.
LEH-QC	133.69			
AH-369	131.23			
EDTC-H	129.8	CTEM	129.05	
EDTH-H				
EDTC-H				
		HV	0.00	
		ACCZ	0.00	
		Gamma Ra	123.37	
		y		
		Edtch Status	121.8	
		s		
		TelStatus	121.8	
HNGS-BA:378	121.8			
HEH-K:1000				
HNGS-BA:378		GR	118.82	
HNGC-B:638	113.61			
HNGH-A:4121				
HNGC-B:638		Tel Status	111.86	
HGNS-H	110.11	Temperatu	110.08	
HGNH		re		
NSR-F:5317		GR	109.37	
NPV-N				
HACCZ-H:7074				
HMCA-H				
HGNS-H				
		CNL Porosity	103.03	
		HMCA	100.7	
		HGNS	100.7	
		Accelerometer	0.00	
HDRS-H	100.7			
ECH-MEB				
HRCC-H				
HRMS-H				
Backscatter				
GSR-J:5437				





MAMS

44.82



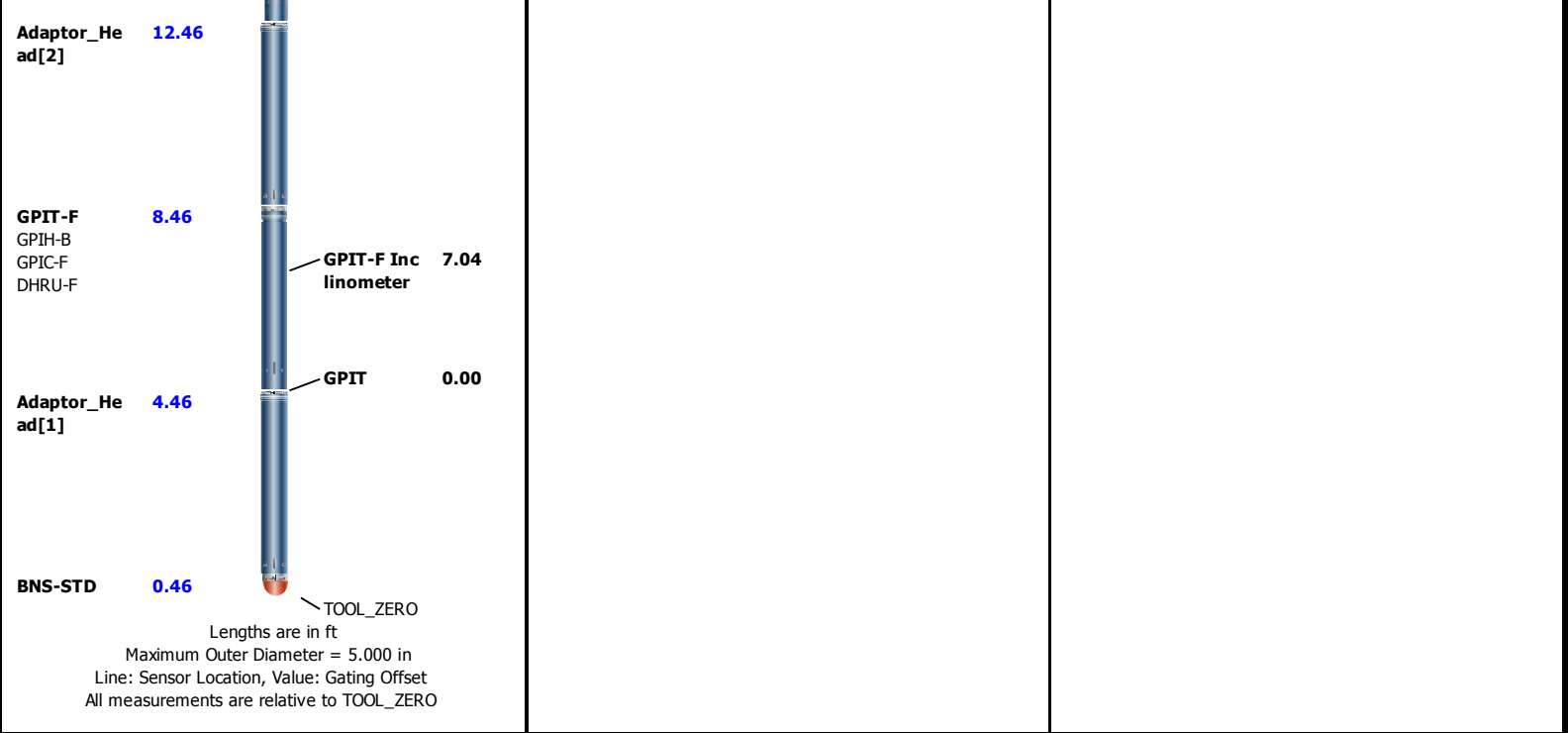
MAXS

18.98

PPC-B:8174 18.98
PPC-B:8174

PPC-B Cal
ipers

17.83



Depth Summary			
		Run 1A	
Depth Measuring Device			
Type	IDW-JA		
Serial Number	2747		
Calibration Date	30-Aug-2016		
Calibrator Serial Number			
Calibration Cable Type	7-46 P-XS		
Wheel Correction 1	-2		
Wheel Correction 2	-1		
Tension Device			
Type	CMTD-B/A		
Serial Number	8100		
Calibration Date	08-Oct-2016		
Calibrator Serial Number	84755A		
Number of Calibration Points	10		
Calibration Root Mean Square Error	17		
Calibration Peak Error	32		
Logging Cable			
Type	7-46P-XS		
Serial Number	U714054		
Length	17700.00 ft		
Conveyance Type	Wireline		
Rig Type	Land		
Run 1A:Depth Control Parameters		Depth Control Remarks	
Log Sequence	First Log In the Well	1. All SLB depth policies and procedures followed.	
Rig Up Length At Surface	215.70 ft	2. IDW used as primary depth control device.	
Rig Up Length At Bottom	215.00 ft	3. Z-Chart used as secondary depth control device.	

Rig Up Length Correction	0.70 ft	4. First run in hole procedures followed.
Stretch Correction	13.00 ft	5. Main and repeat pass correlated to downlog.
Tool Zero Check At Surface	-2.00 ft	

Run 1A

Main Pass 2" = 100'	
---------------------	--

Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ICV	Integrated Cement Volume	GCSE_UP_PASS, FCD	1430.83	ft3
IHV	Integrated Hole Volume	GCSE_UP_PASS	3818.75	ft3

Software Version	
------------------	--

Acquisition System	Version
Maxwell 2016 SP1	6.1.58882.3100
Application Patch	Wireline_NPD-PNX-2016SP1_6.1.70295

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run 1A	Main[3]:Up	Up	213.72 ft	13662.08 ft	29-Nov-2016 4:25:05 PM	29-Nov-2016 10:56:13 PM	ON	13.82 ft	Yes

All depths are referenced to toolstring zero

Log

Company:DCP Midstream LP

Well:Zia AGI D2

Run 1A: Main[3]:Up:S008

Log Company: DCP Midstream LP Well: Zia AGI D2

Run 1A: Main[3]:Up:S008

Description: HKEY_BASIC_ECO	Format: Log (1 cross 2 inch General)	Index Scale: 2 in per 100 ft	Index Unit: ft	Index Type: Measured Depth	Creation
Date: 30-Nov-2016 00:52:35					

Channel	Source	Sampling
CALI	HDRS-H:HRCC-H:HRCC-H	1in
CGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
DPHZ	HDRS-H:HRMS-H:HRGD-H	2in
ICV	Borehole	6in
IHV	Borehole	6in
PEFZ	HDRS-H:HRMS-H:HRGD-H	2in
SGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
TENS	WLWorkflow	1in
TIME_1900	WLWorkflow	0.1in
TNPH	HGNS-H:HGNS-H:HGNS-H	6in

— IHV - Integrated Hole Volume every 100.00 (ft3)

└ IHV - Integrated Hole Volume every 10.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

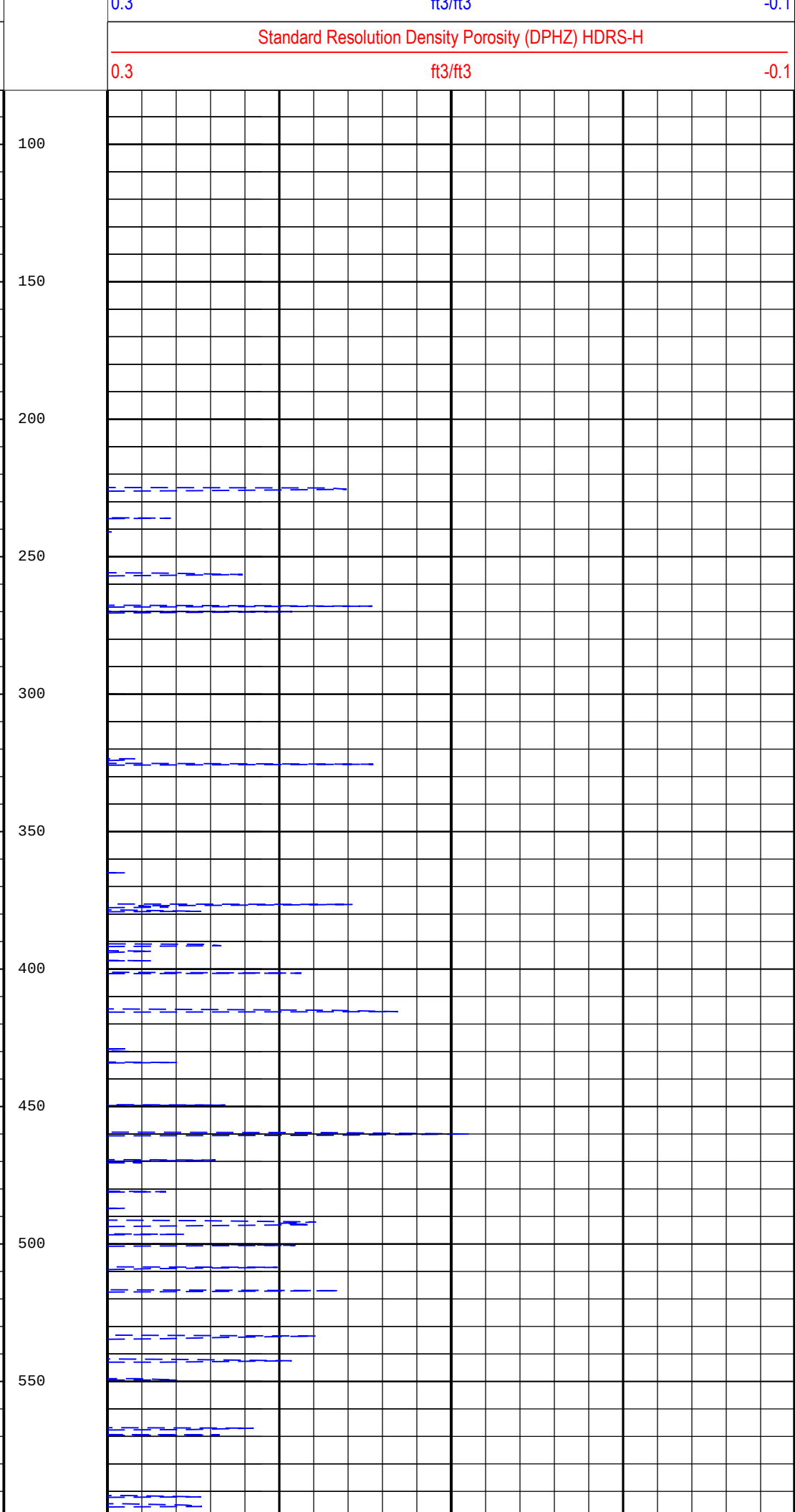
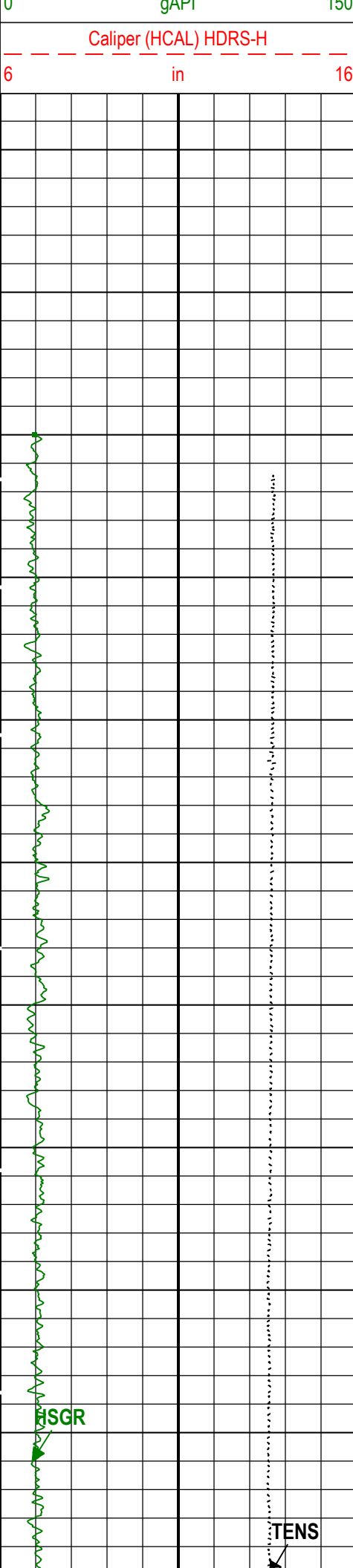
—ICV - Integrated Cement Volume every 10.00 (ft3)

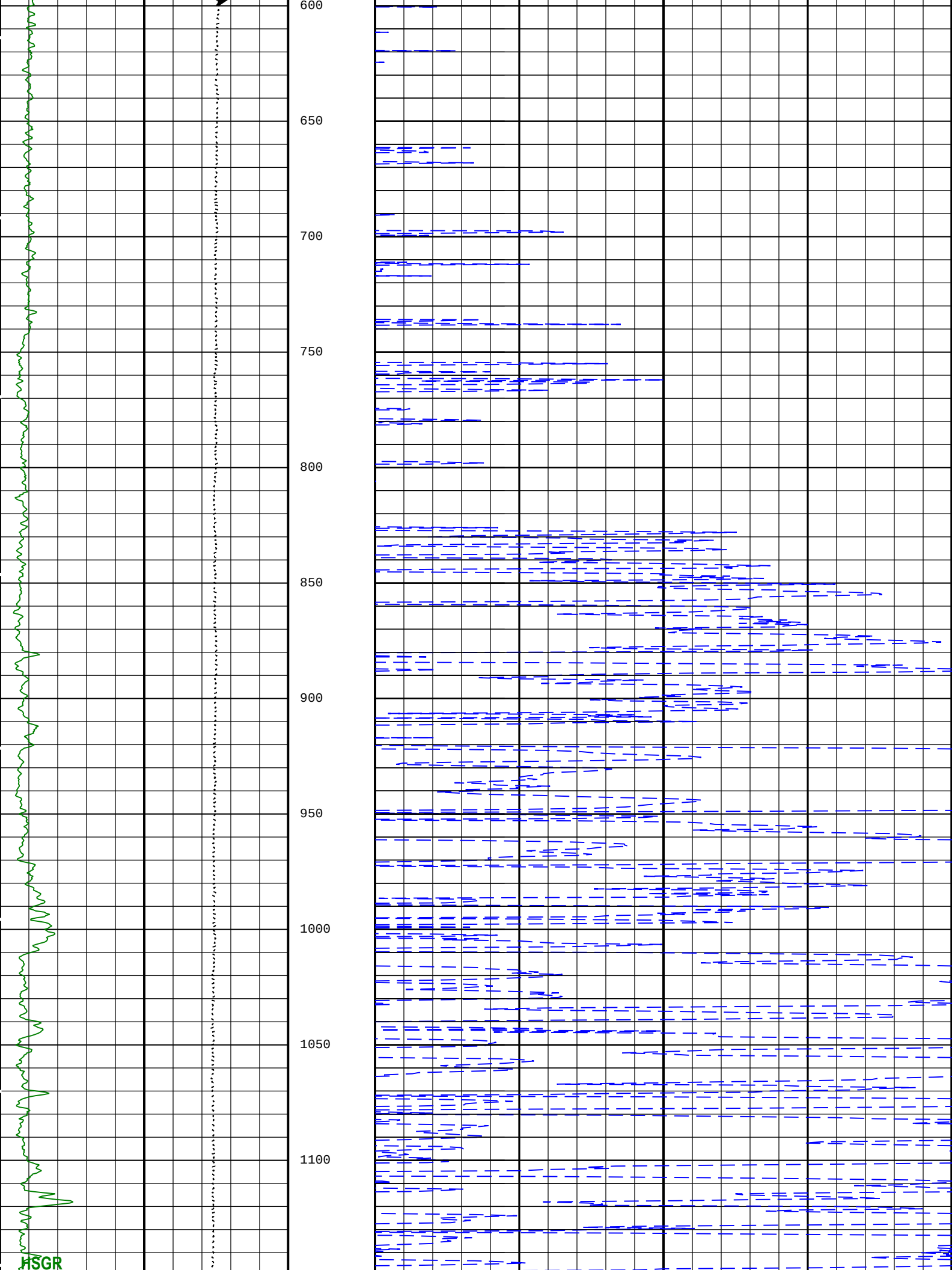
Uranium Indicator

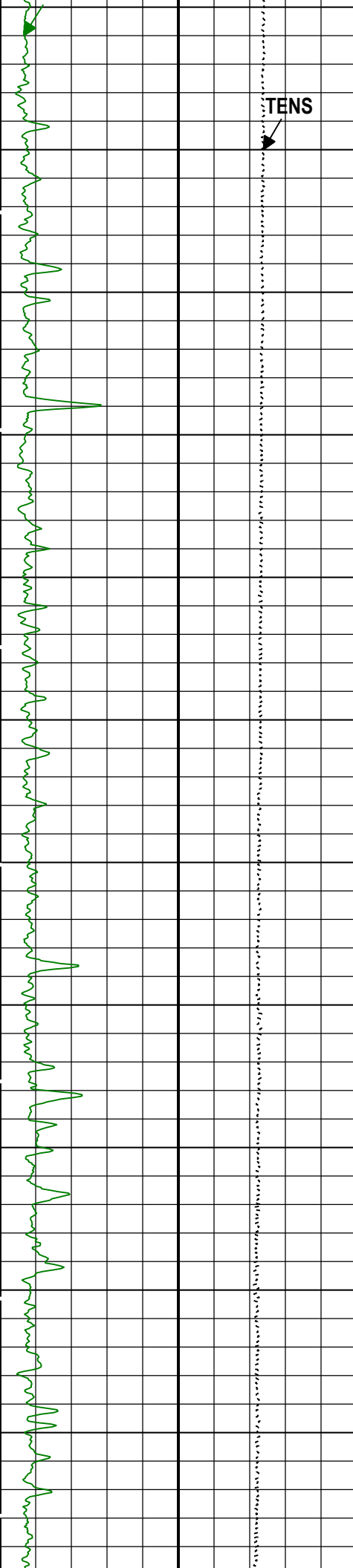
Uranium Indicator	
Cable Tension (TENS)	
10000 lbf 0	
Gamma Ray Contribution from Thorium and Potassium (HCGR) HNGS-BA	Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H
0 gAPI 150	0 10
Spectroscopy Gamma Ray (HSGR) HNGS-BA	Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-H
0 gAPI 150	0.2 #2/#3 0

Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H	
0	10

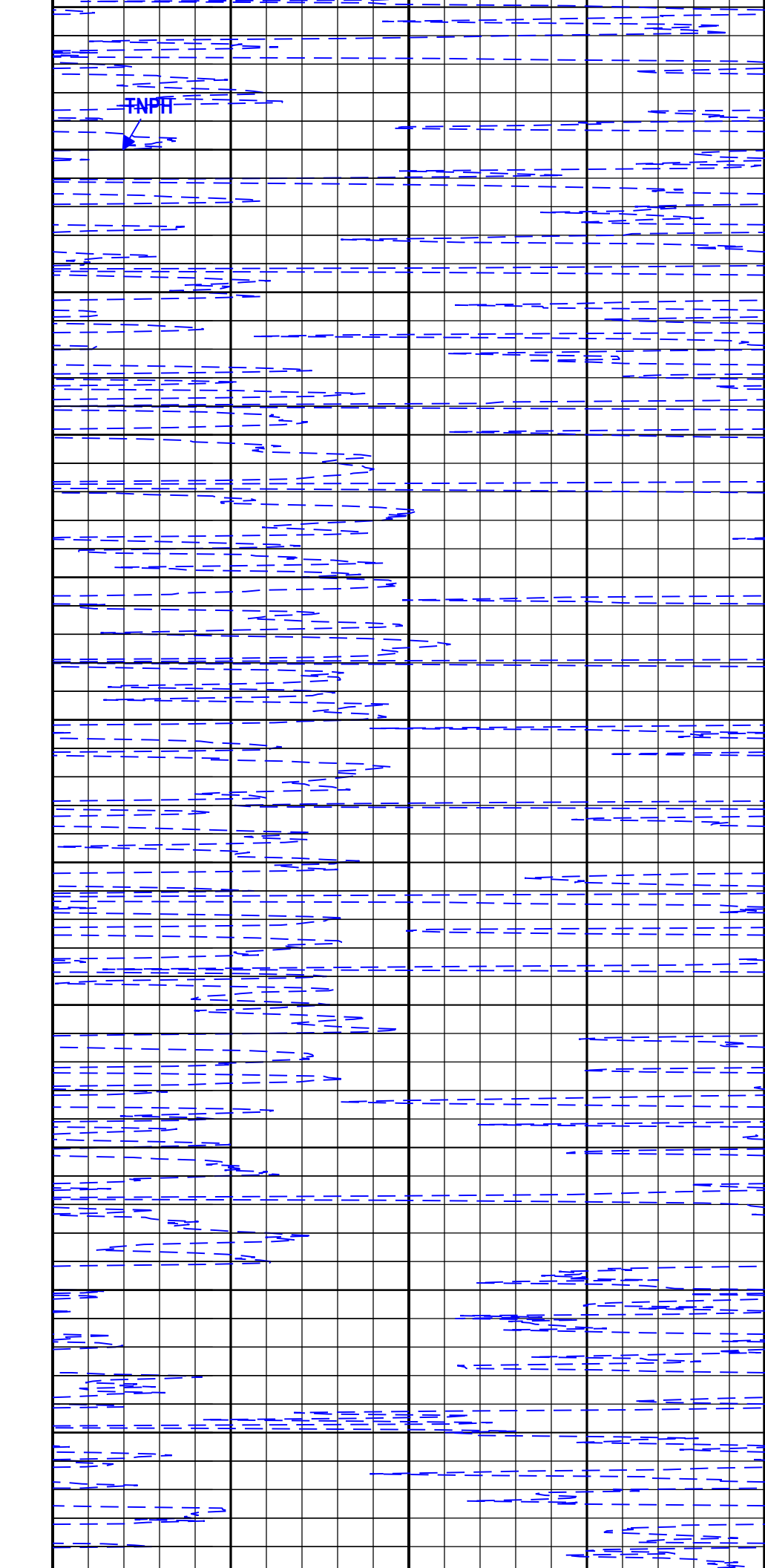
Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-H

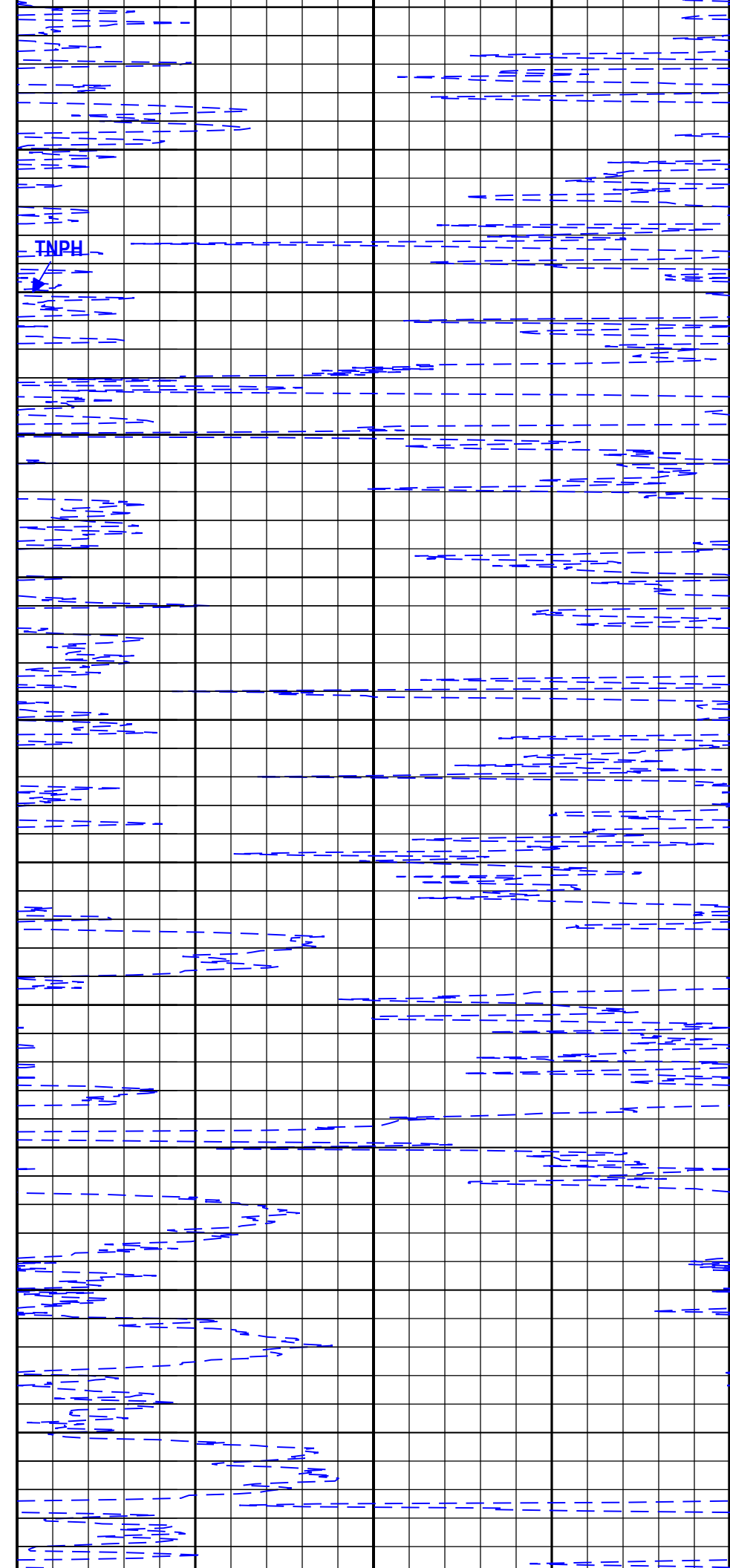
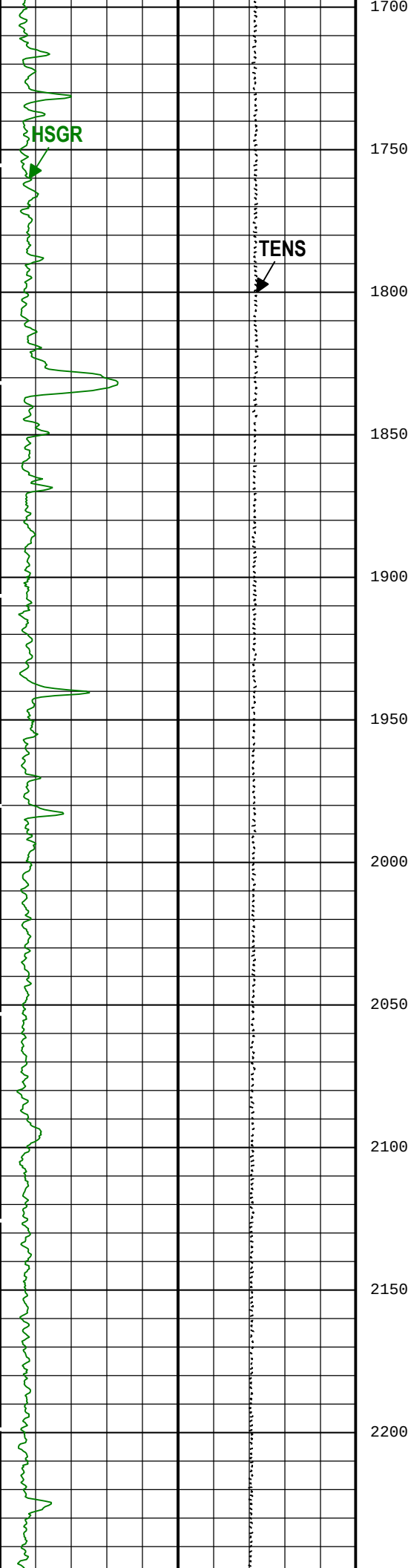


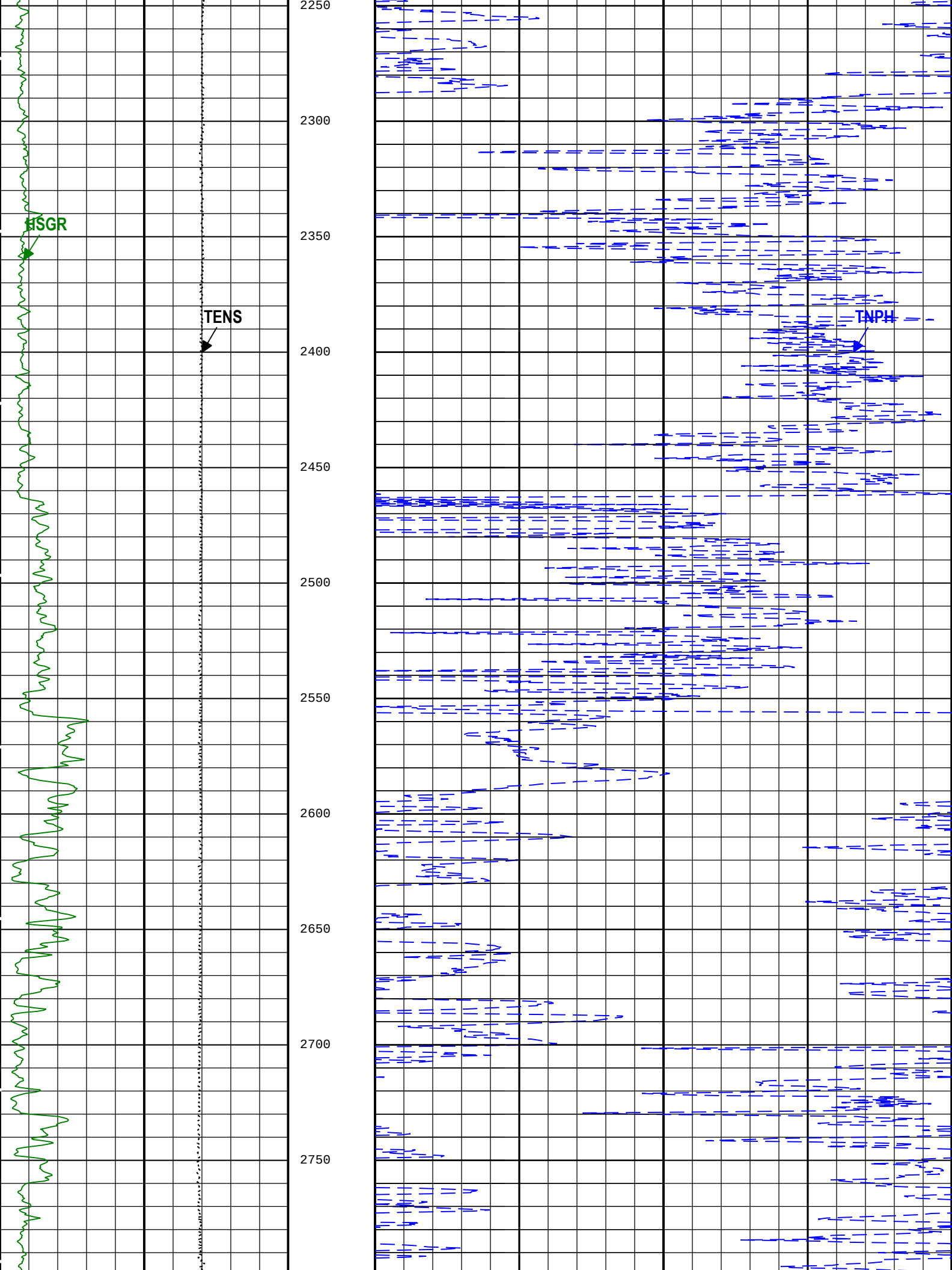


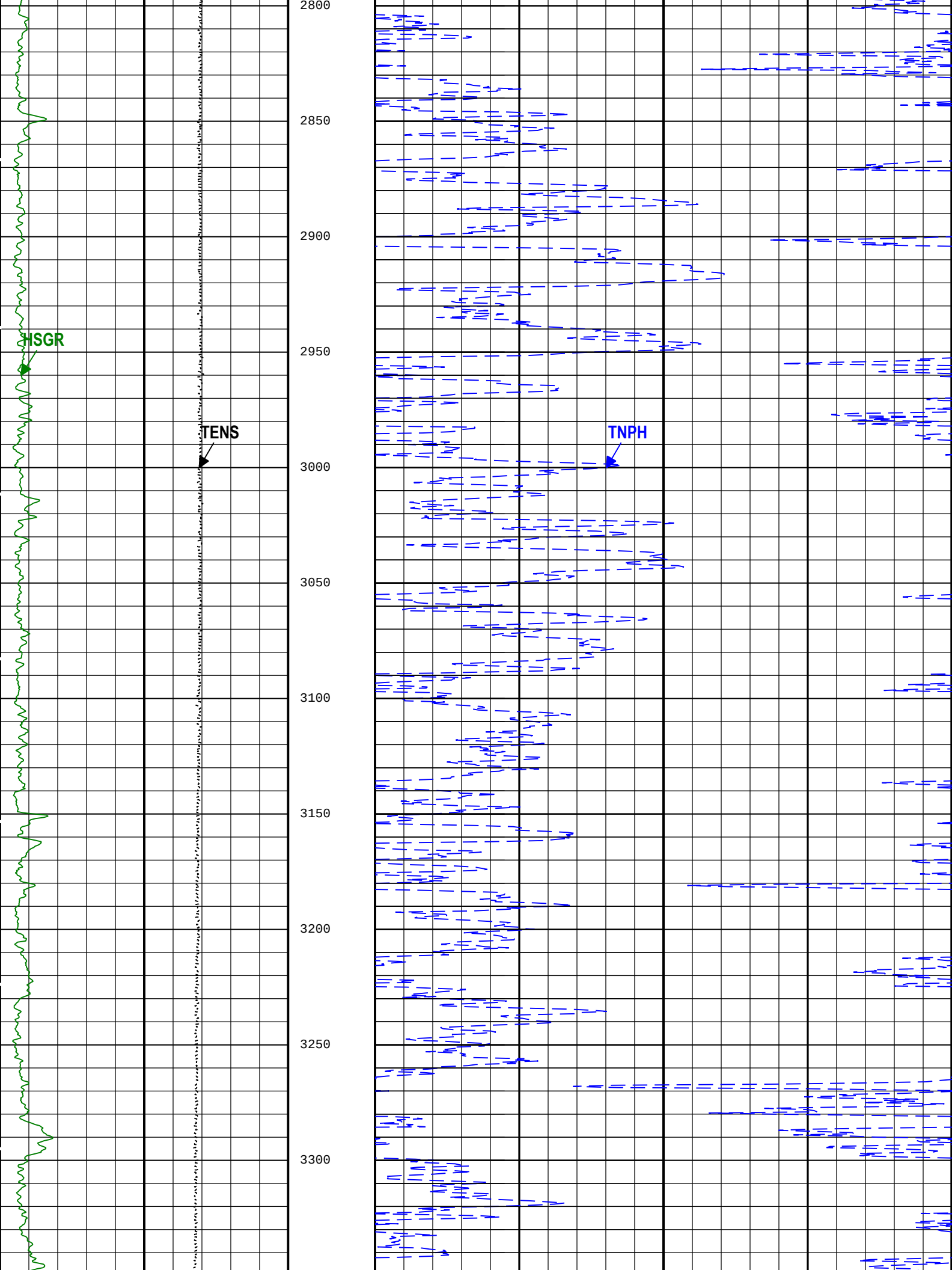


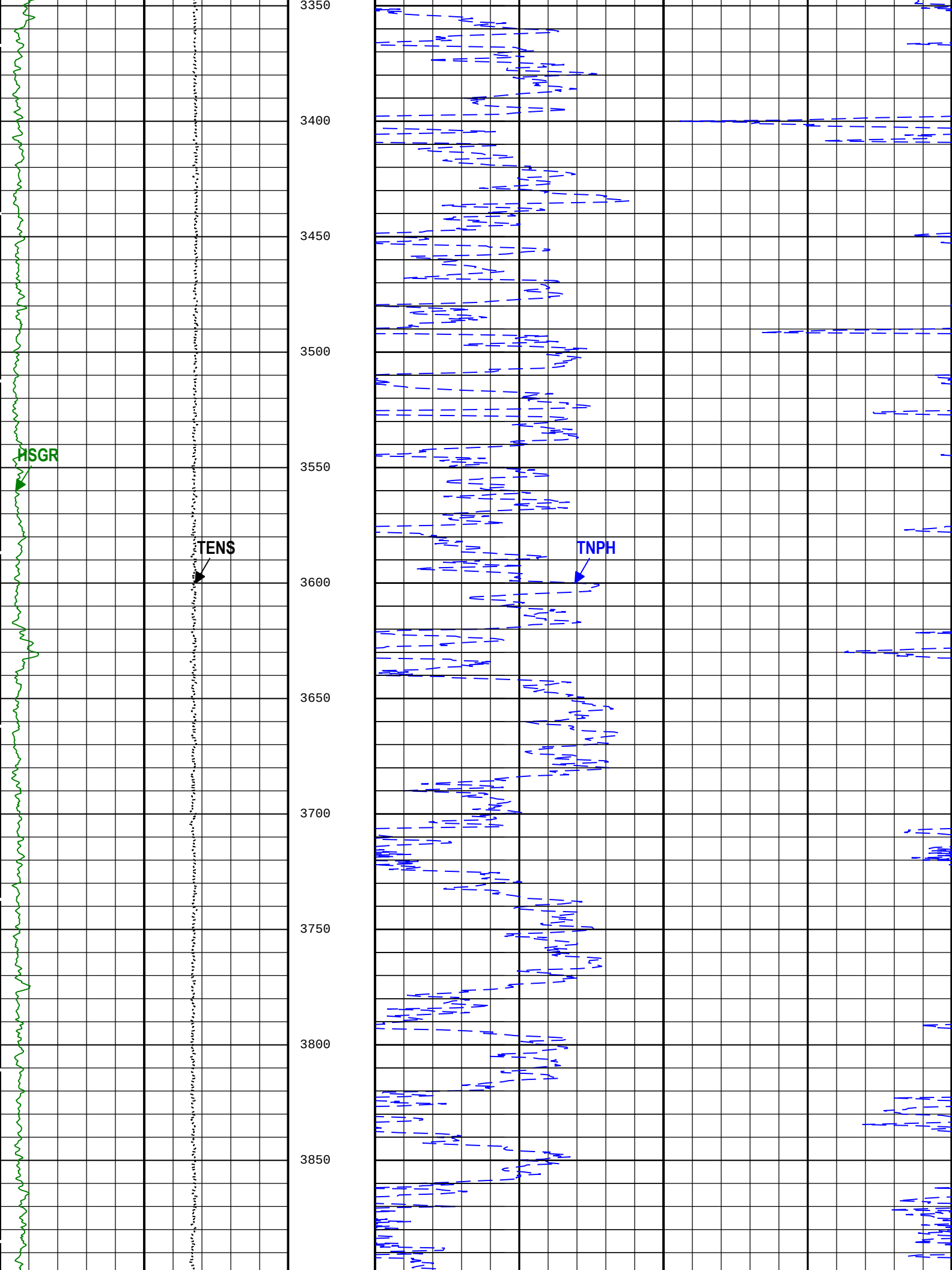
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1200
1250
1300
1350
1400
1450
1500
1550
1600
1650

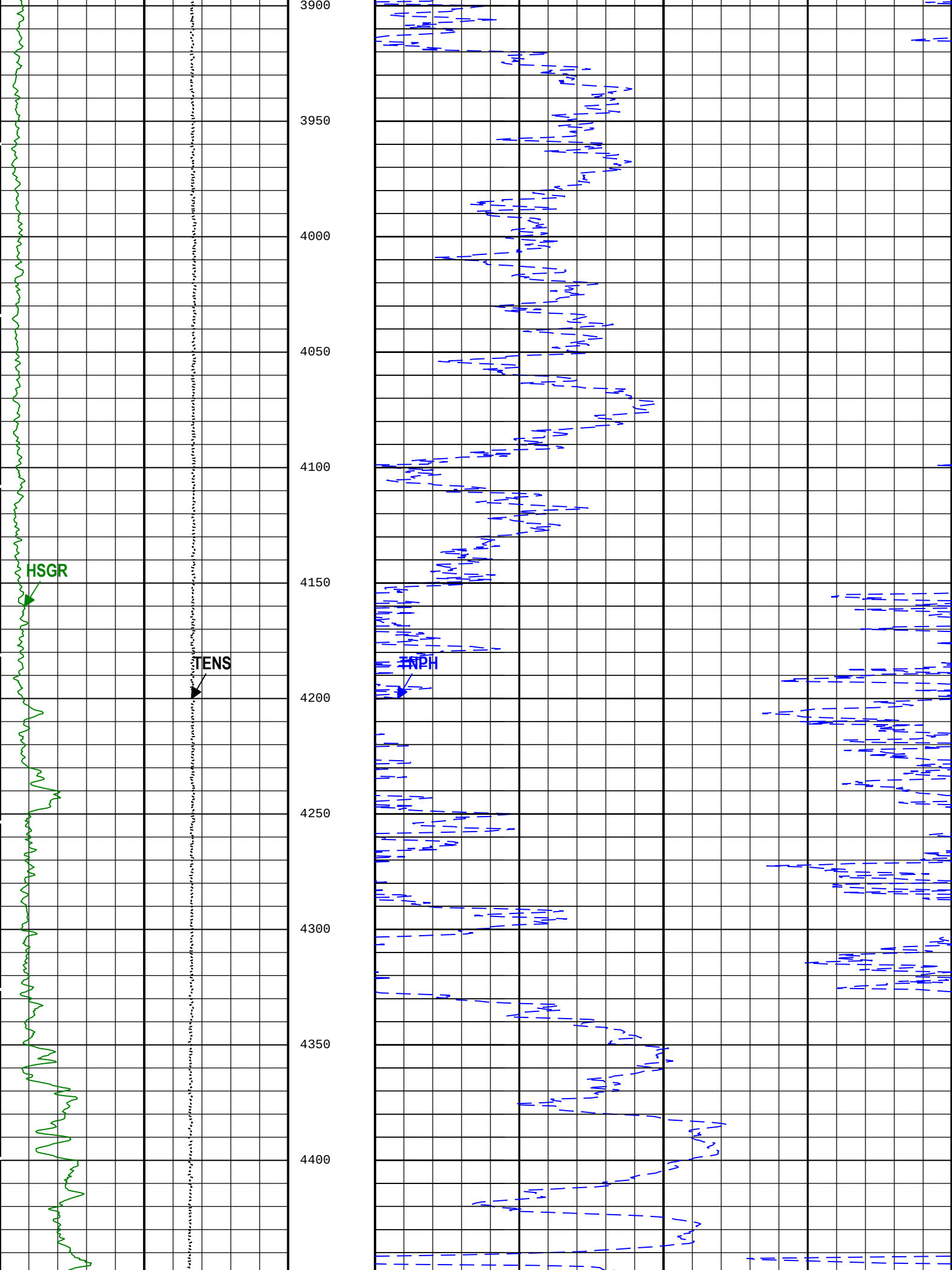


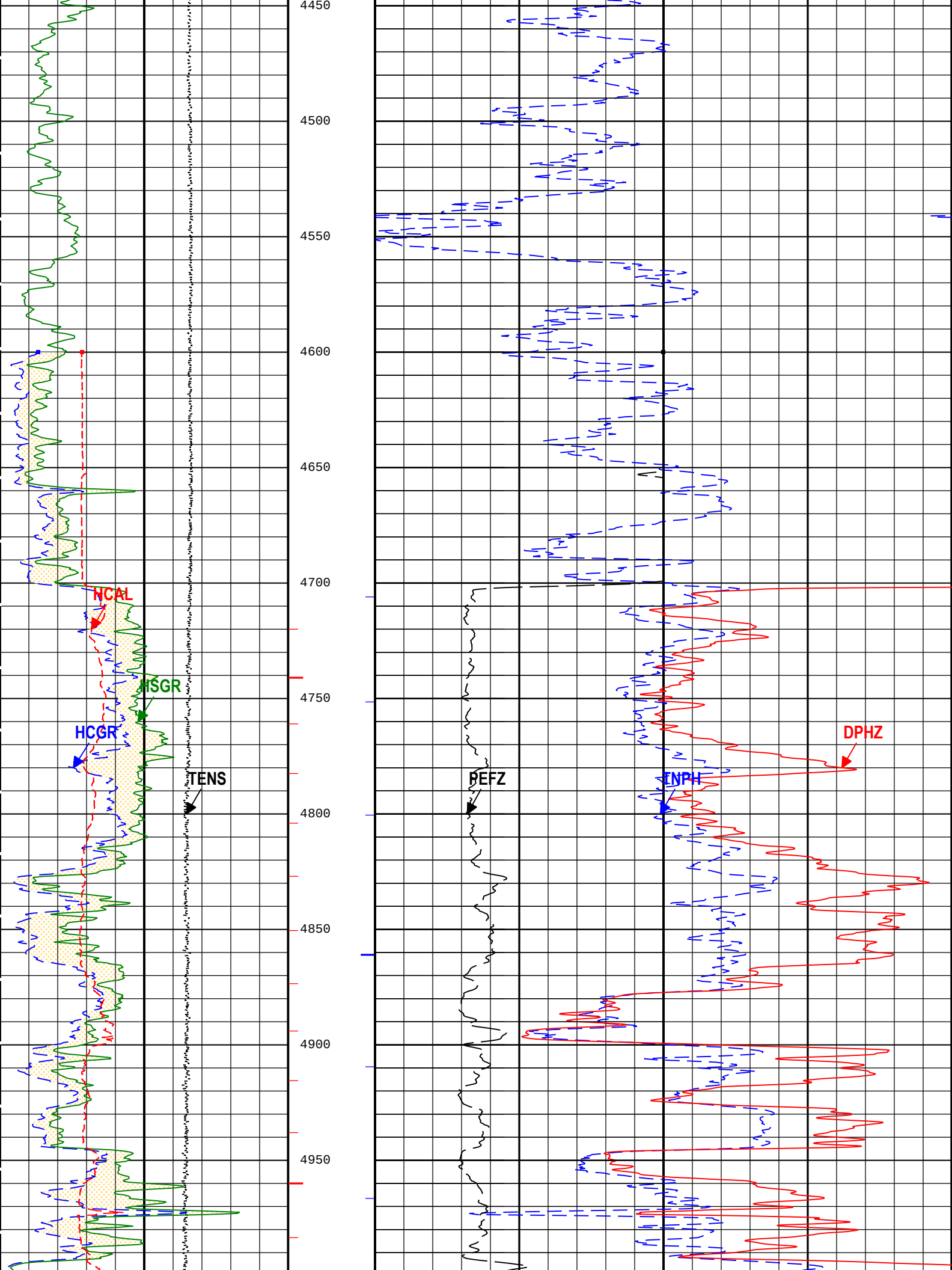


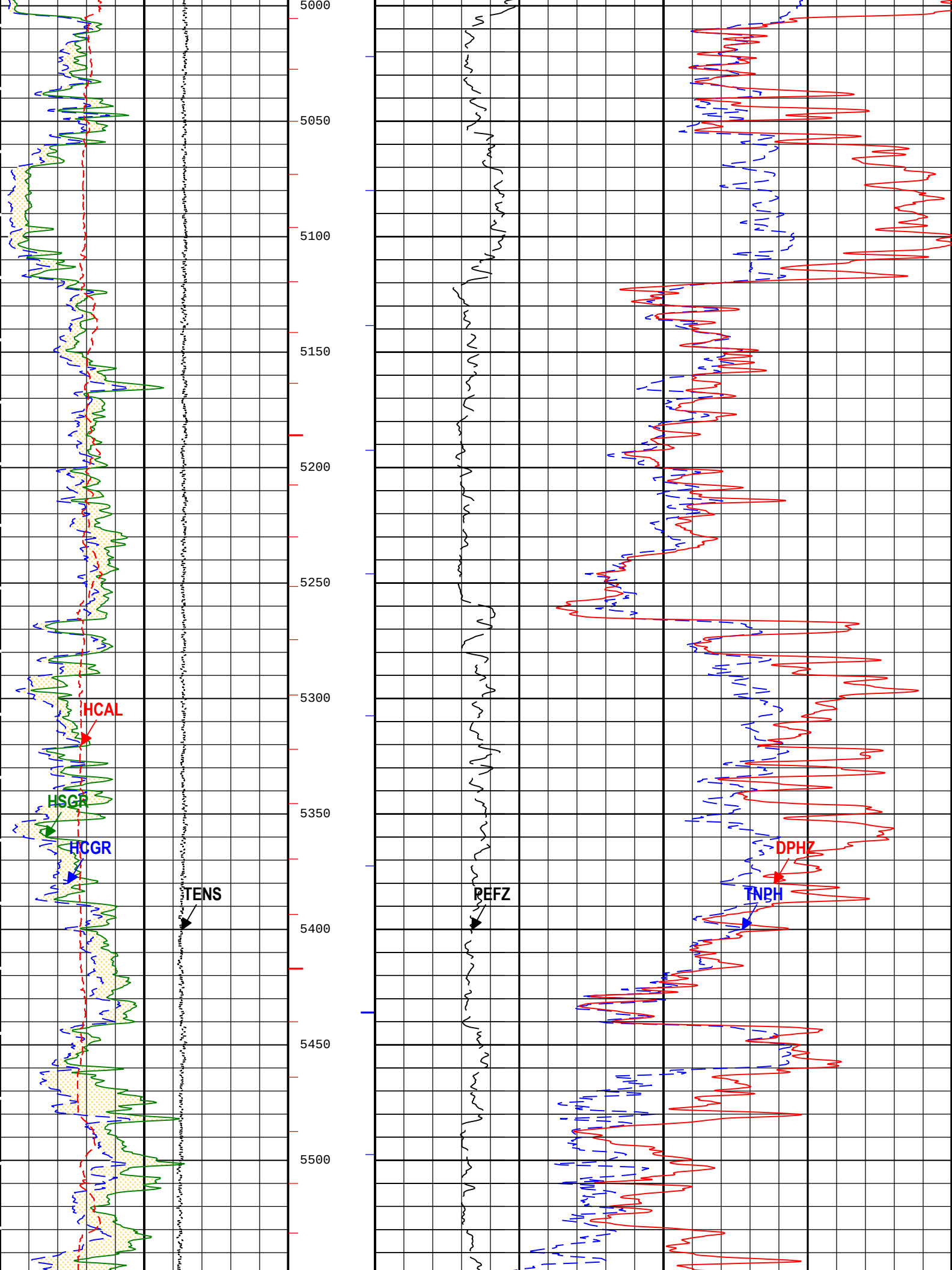


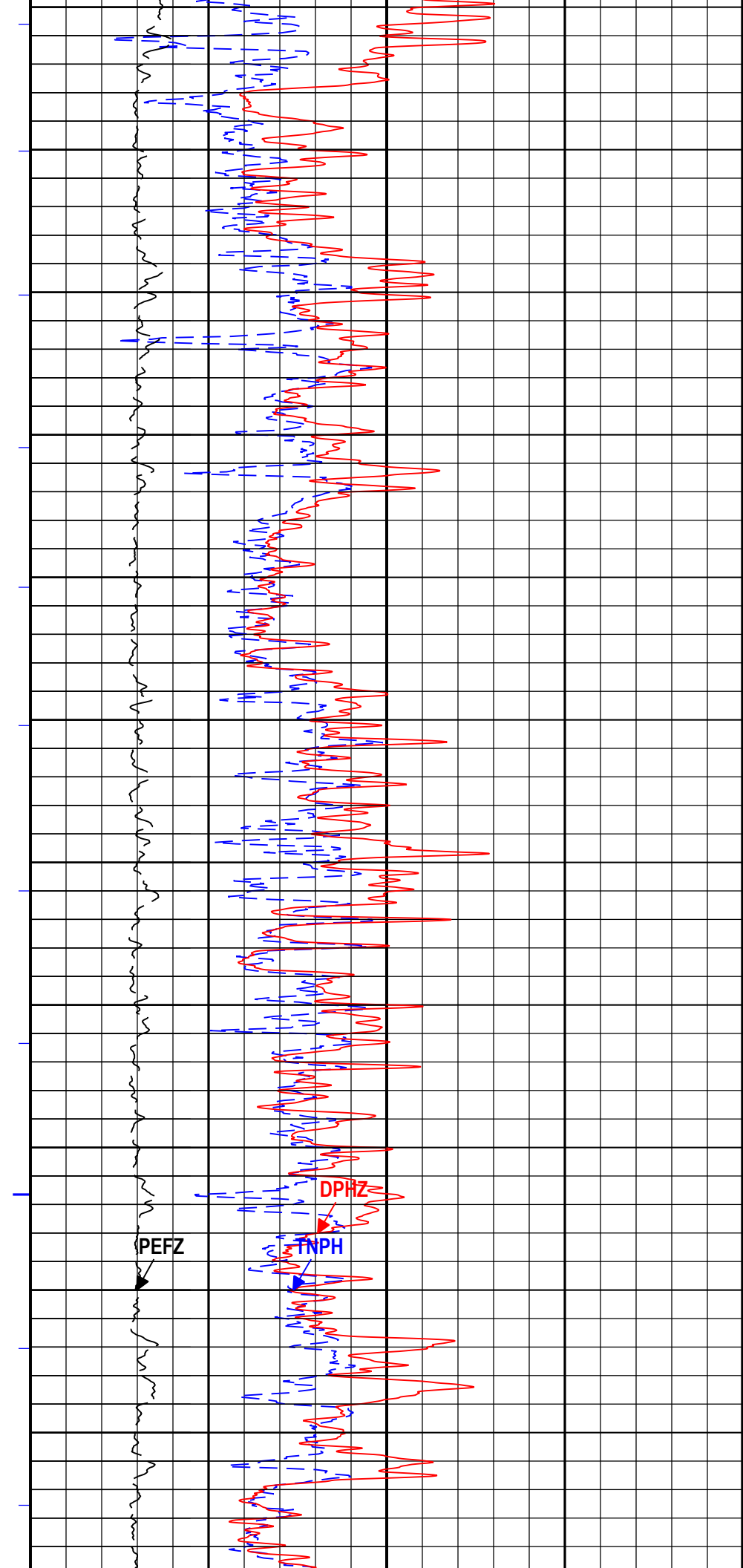
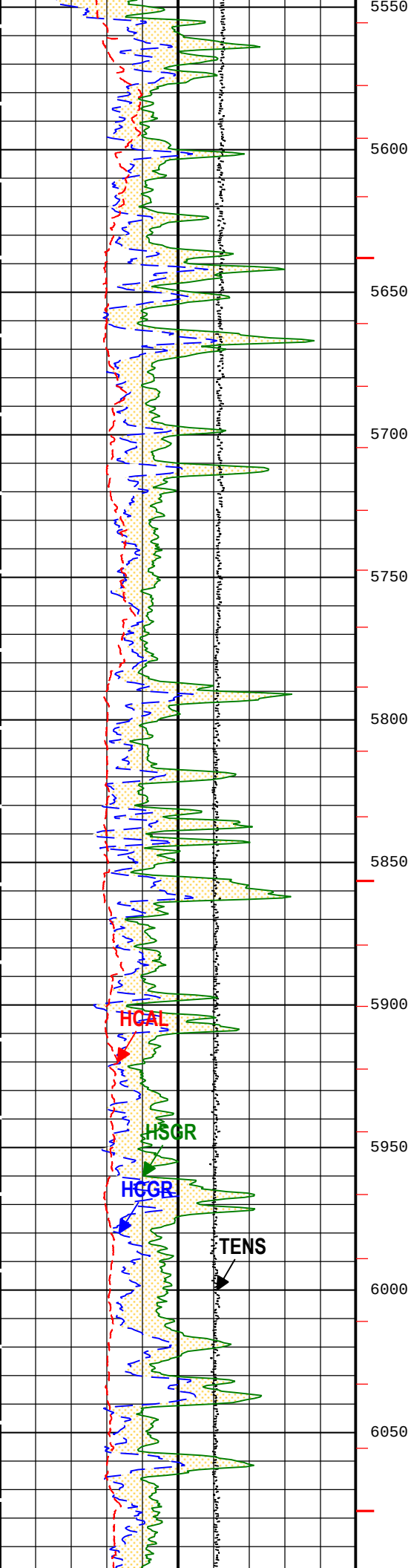


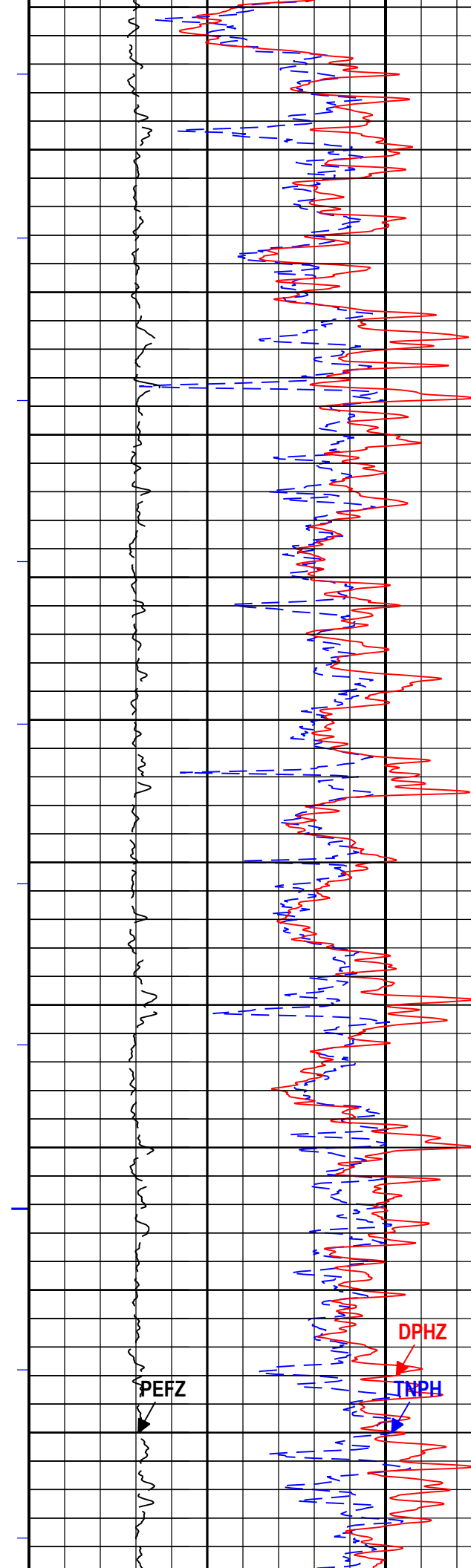
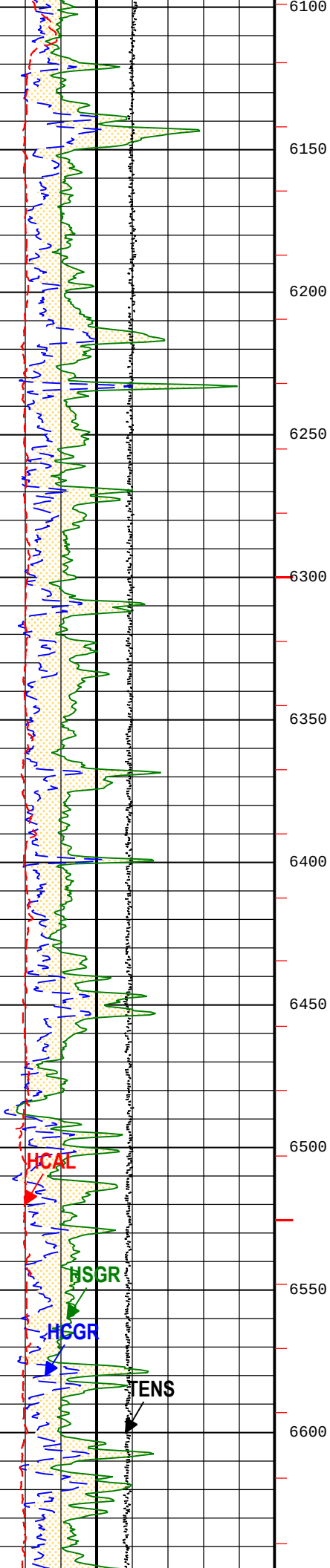


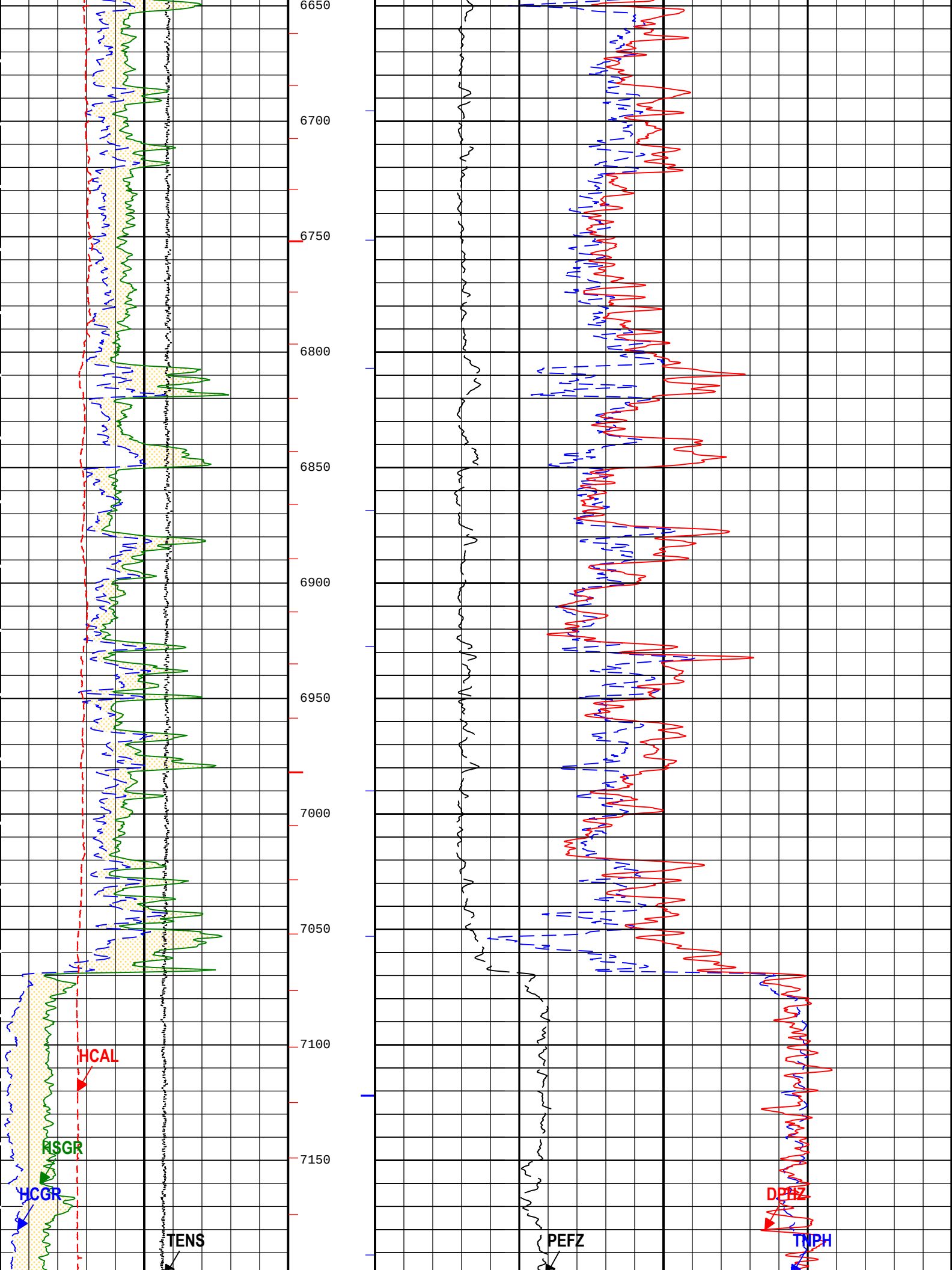


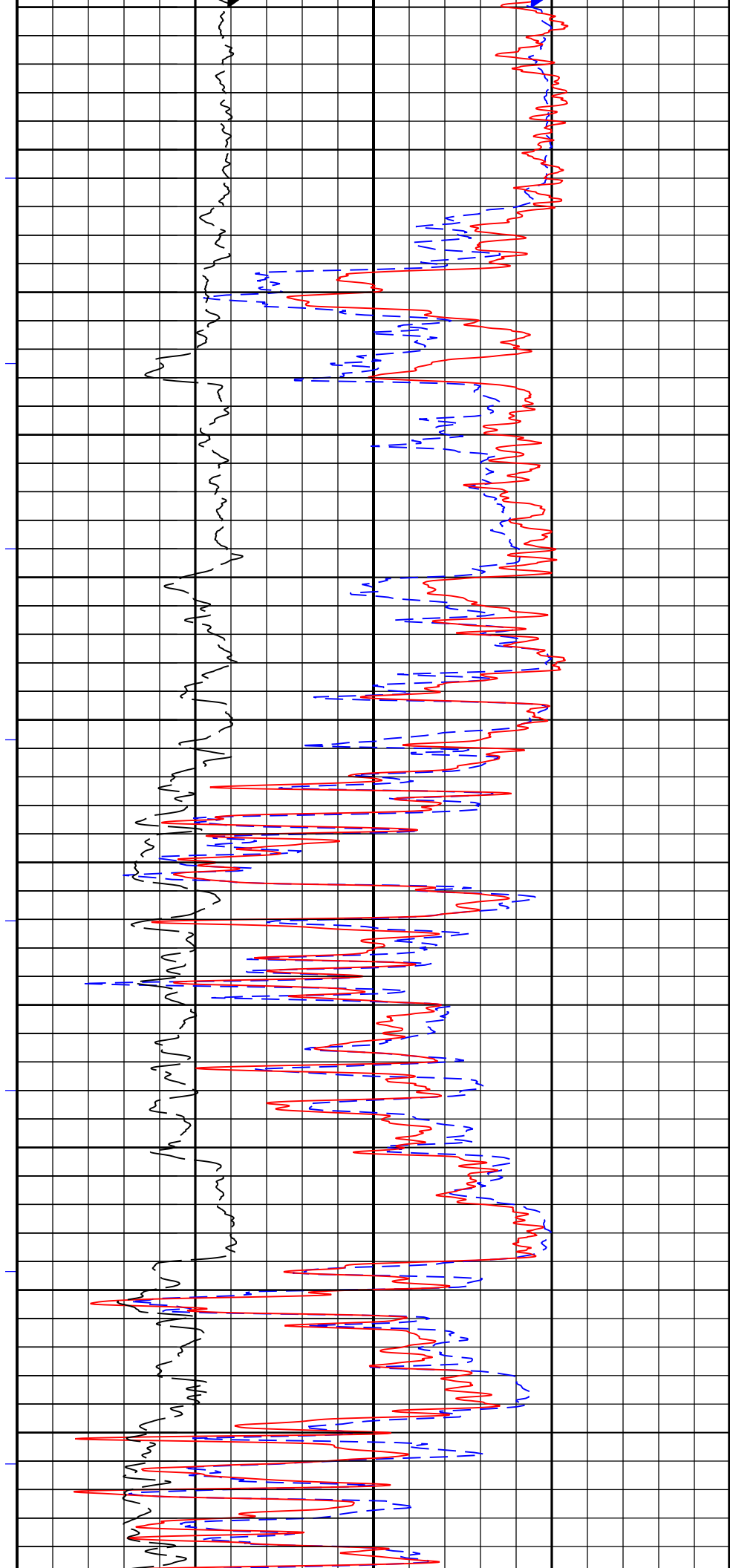
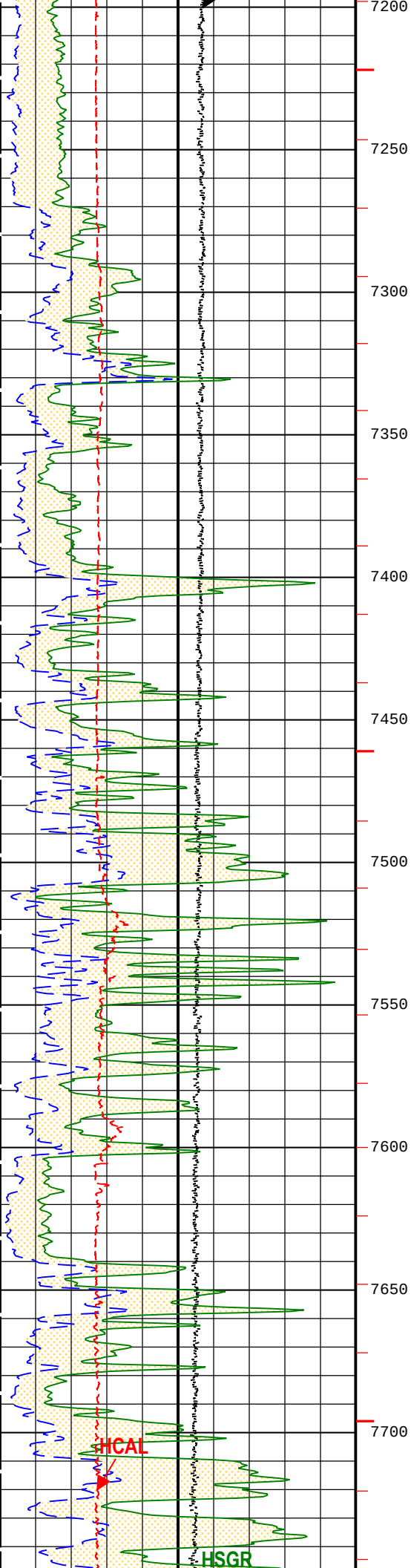


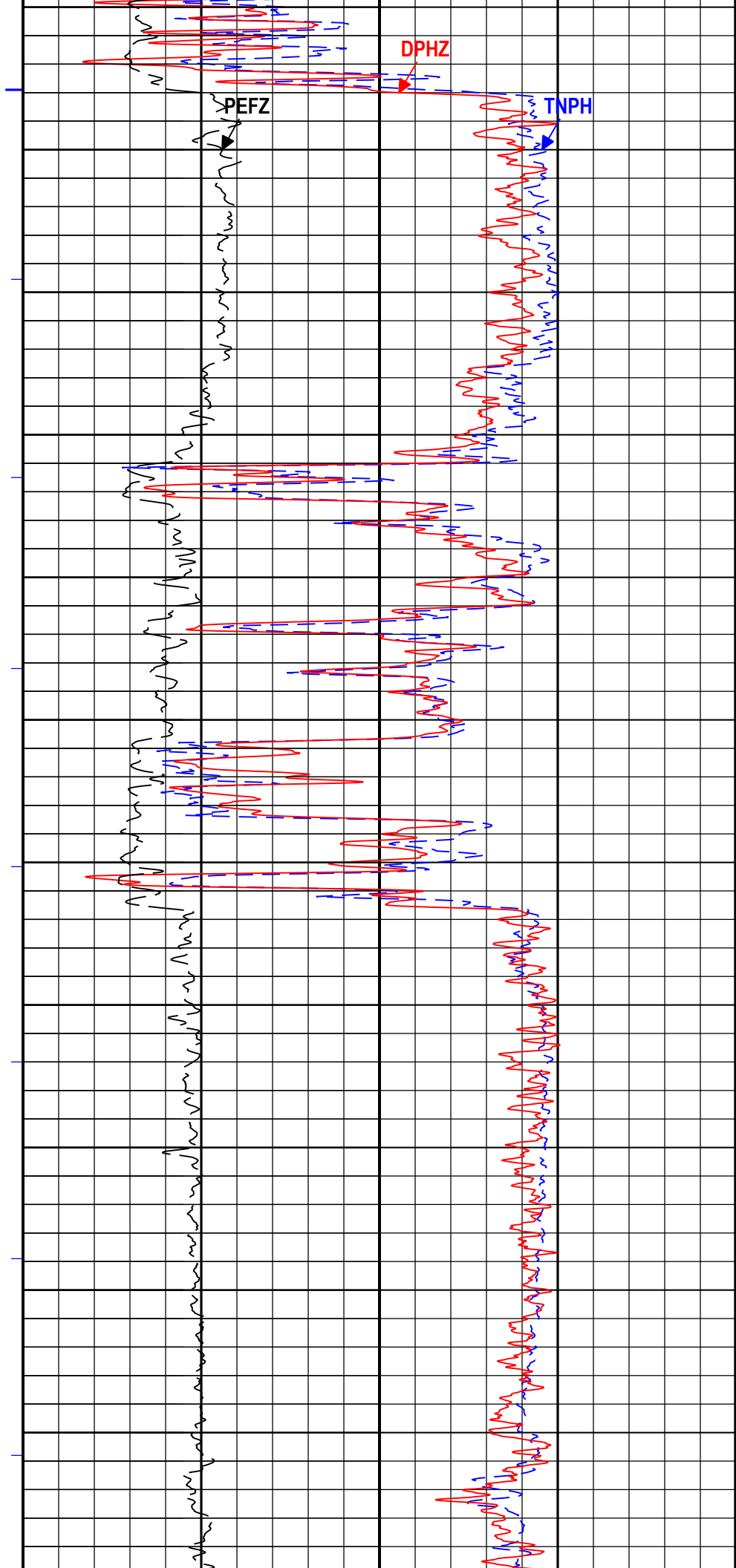
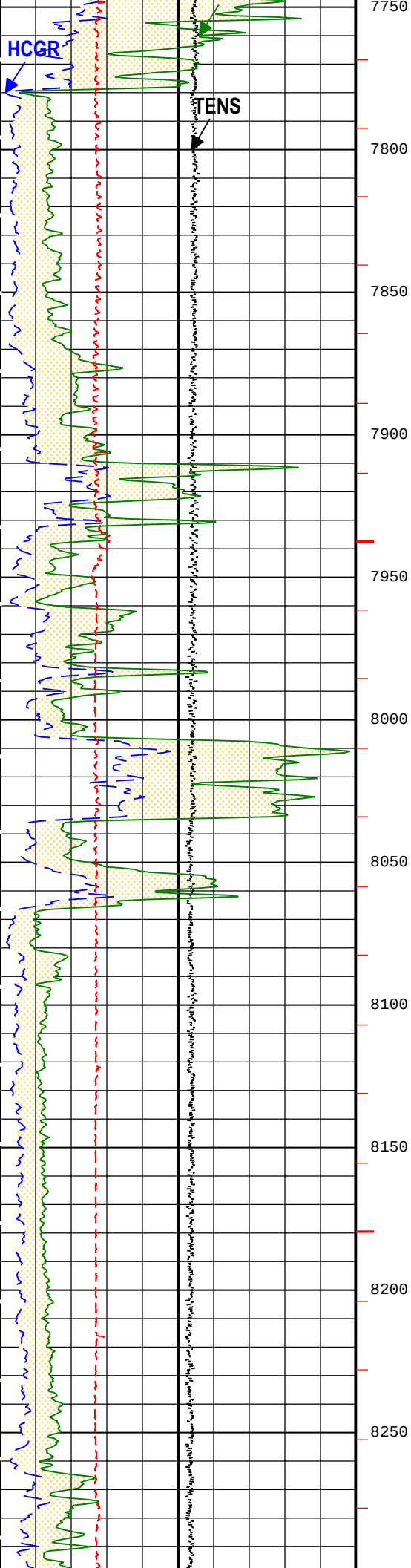


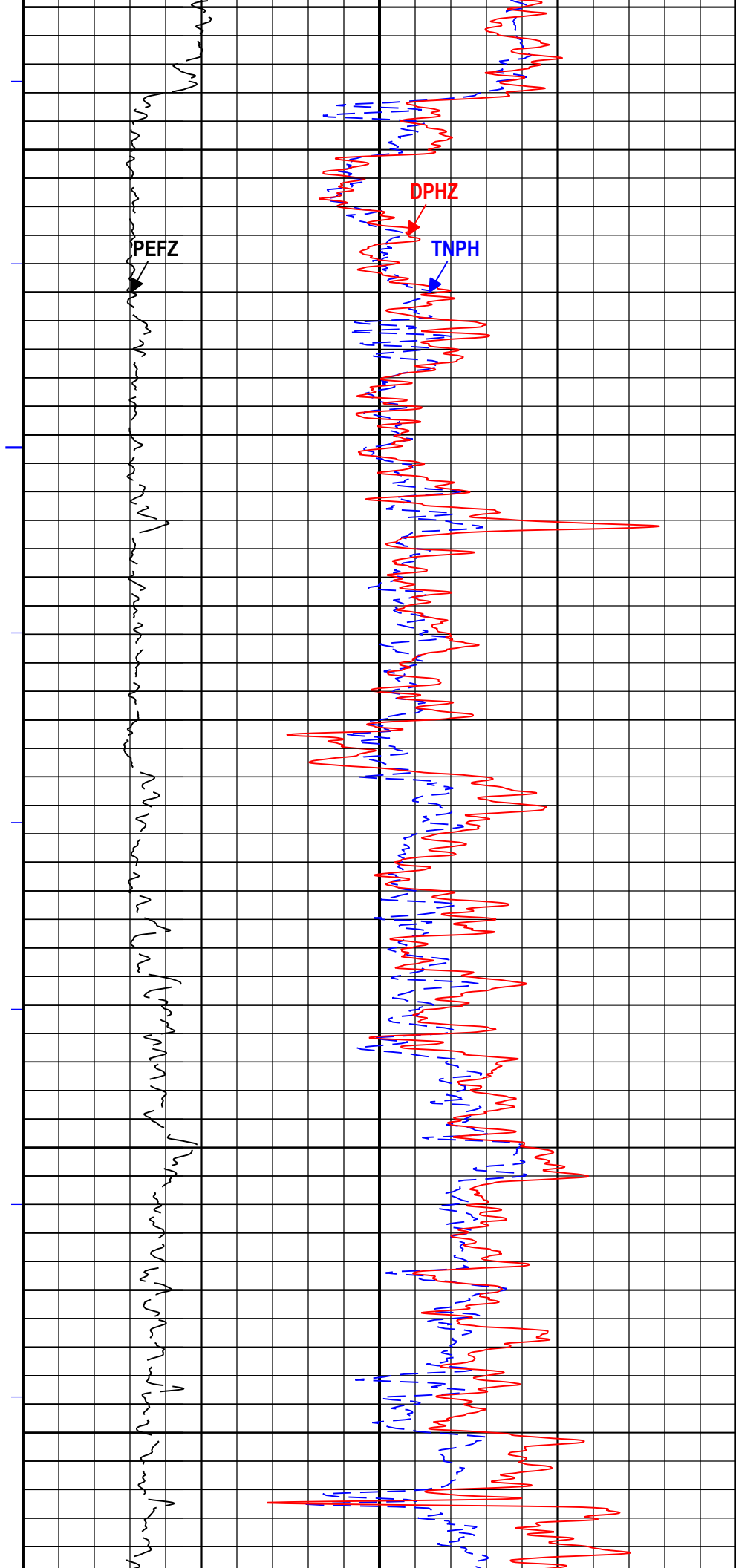
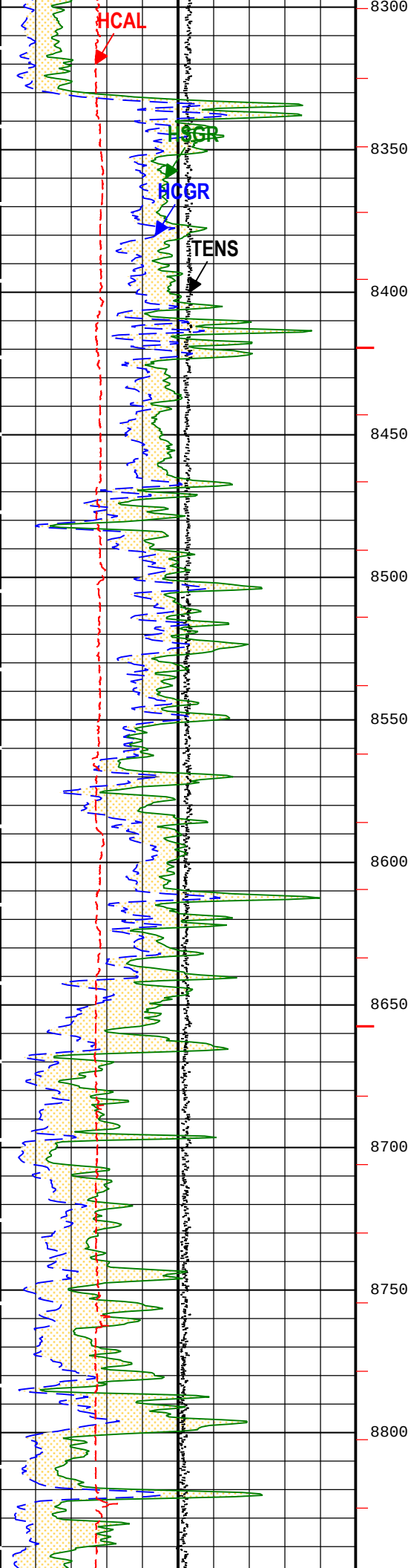


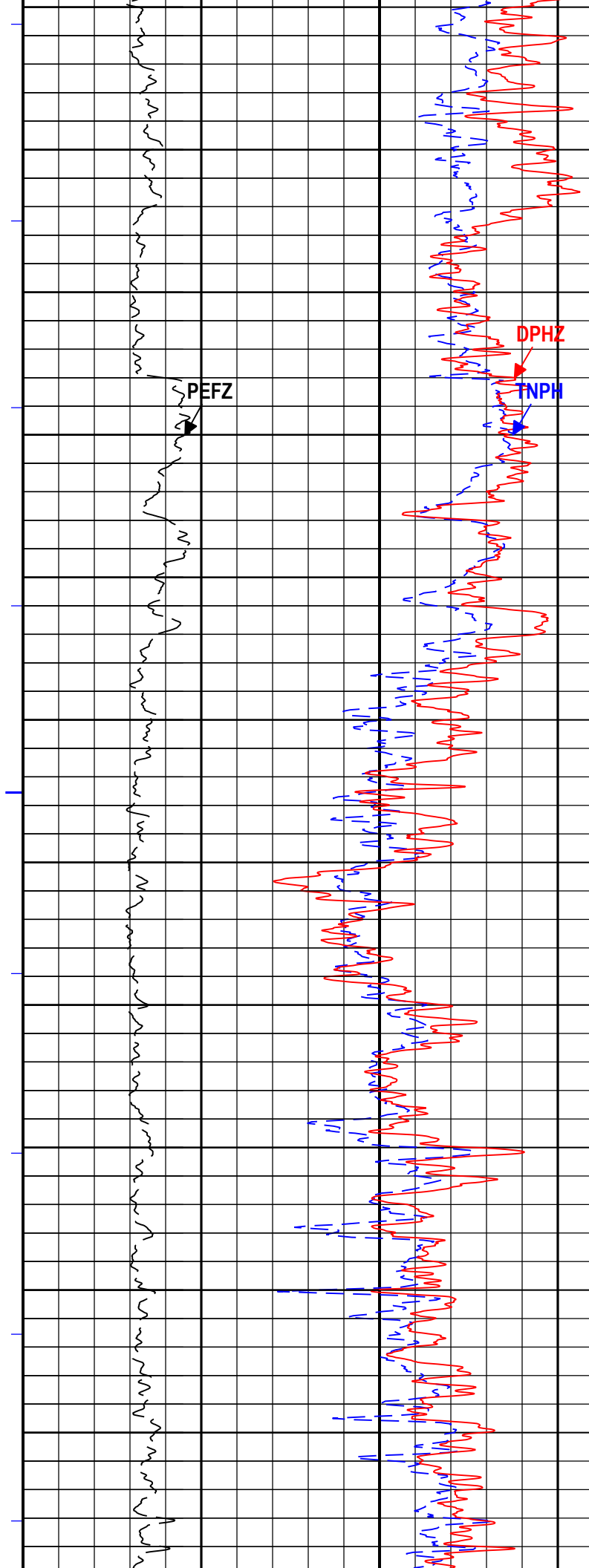
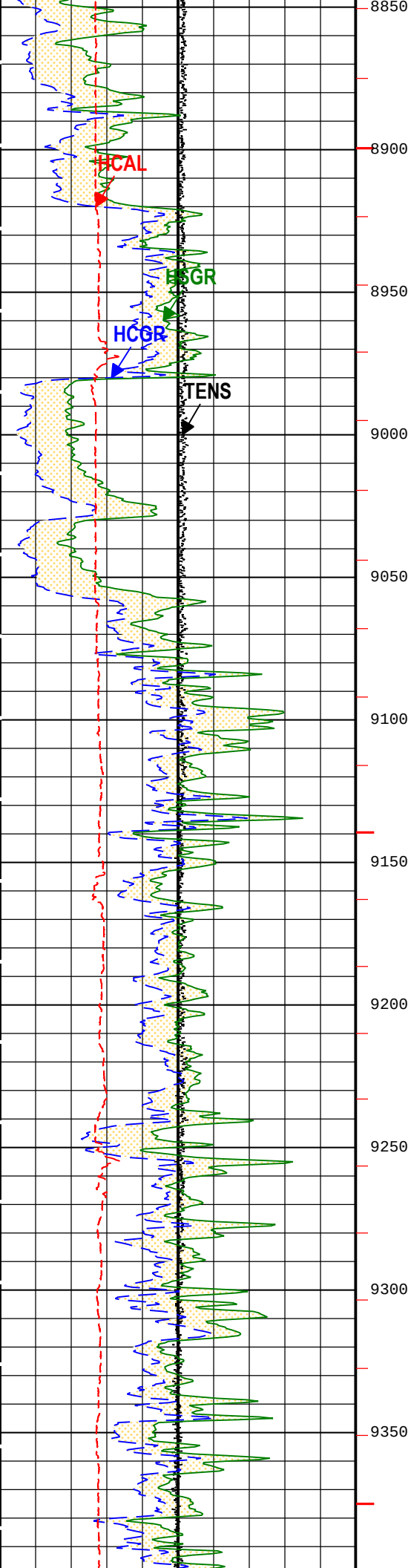


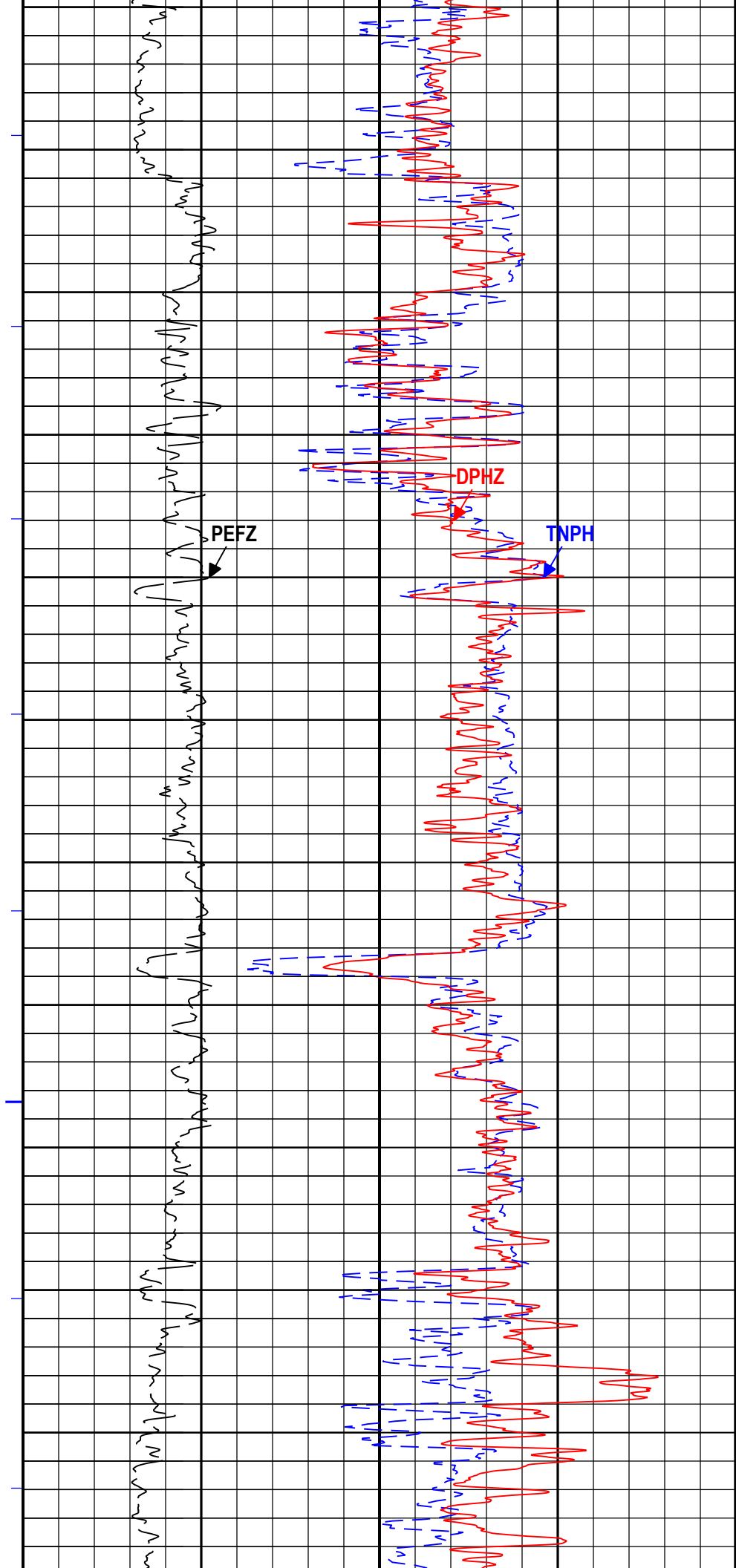
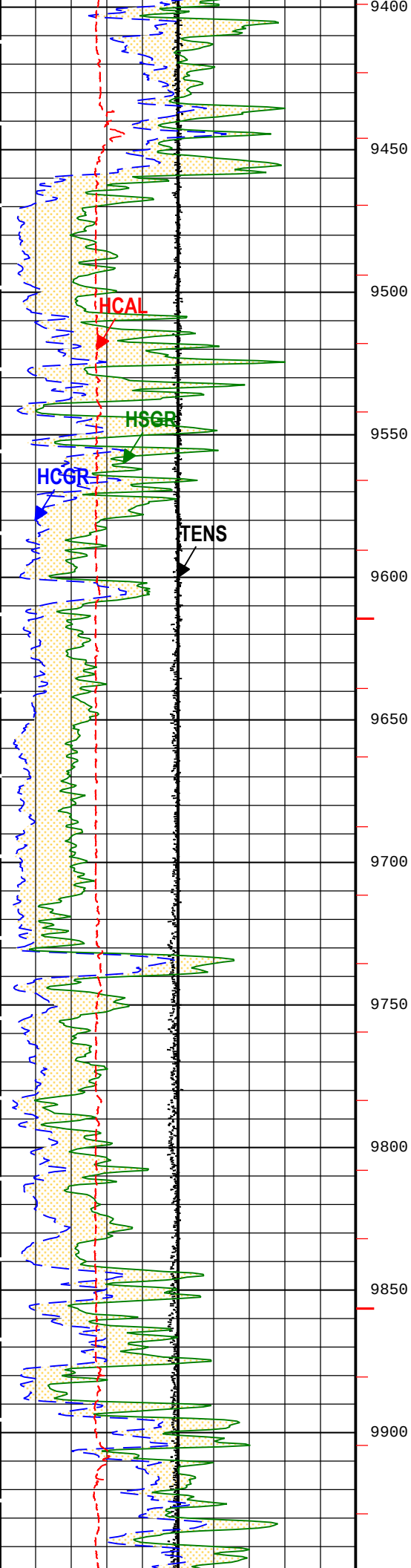


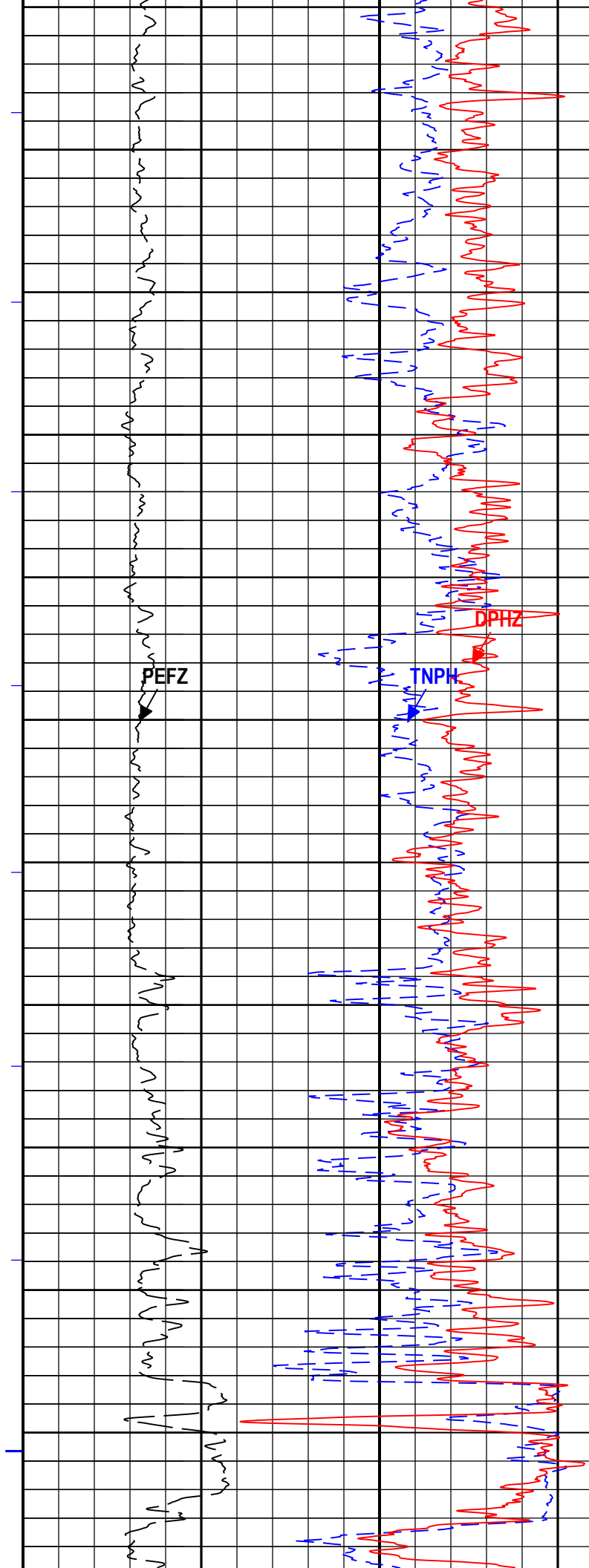
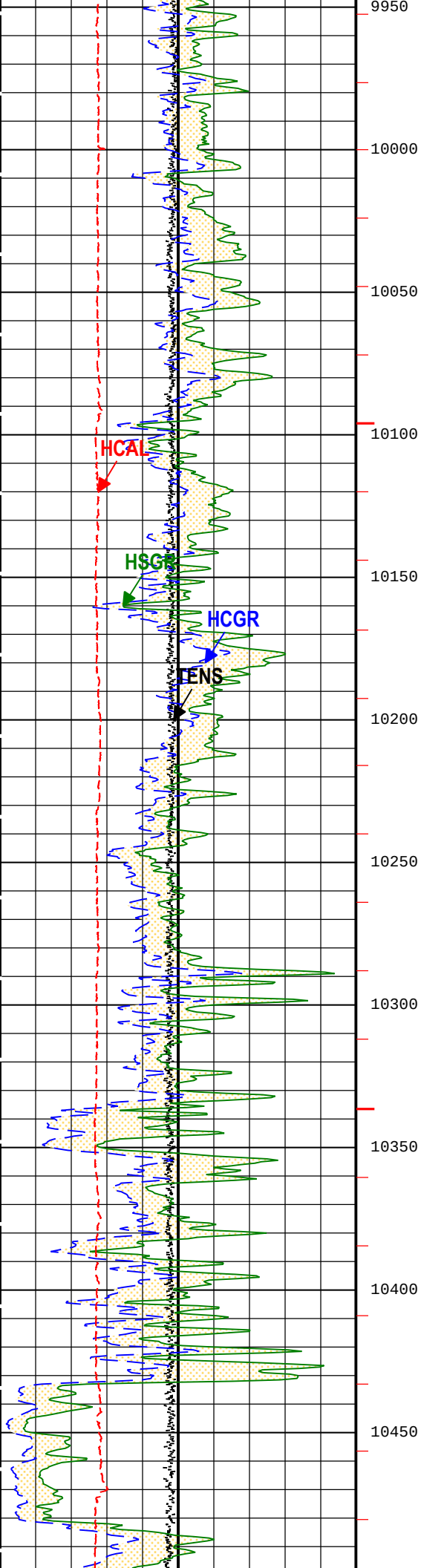


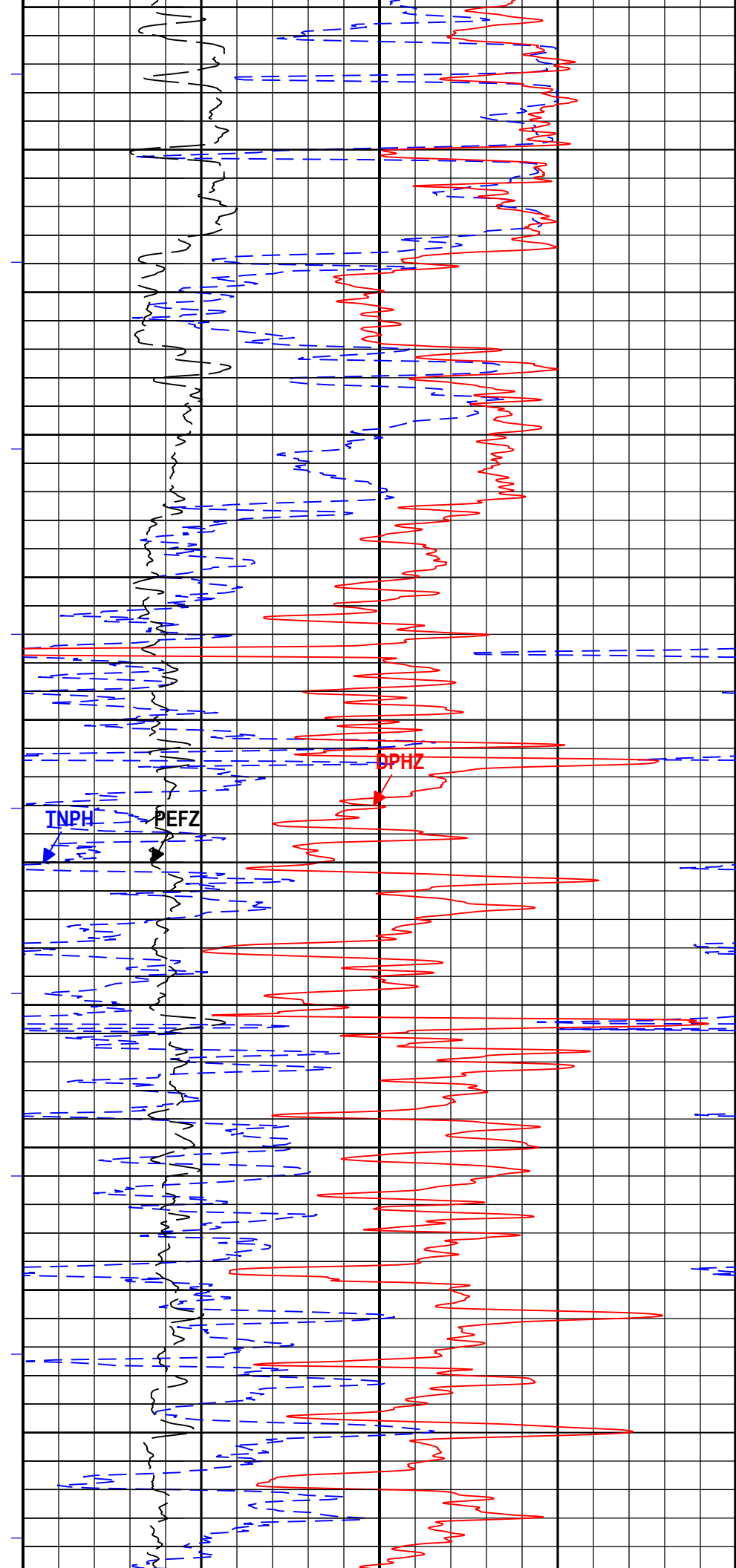
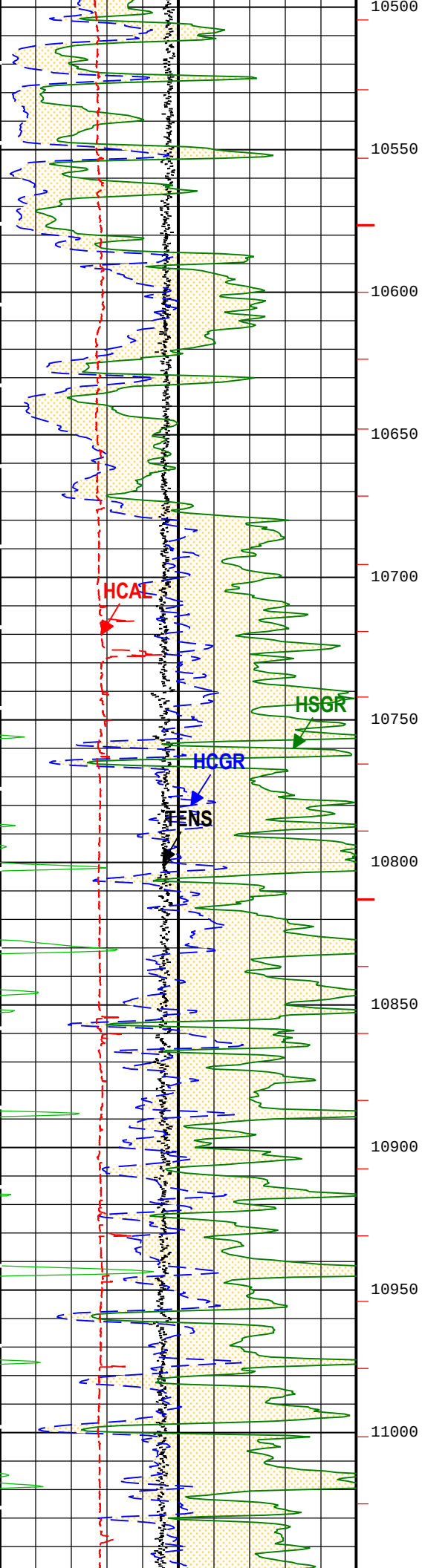


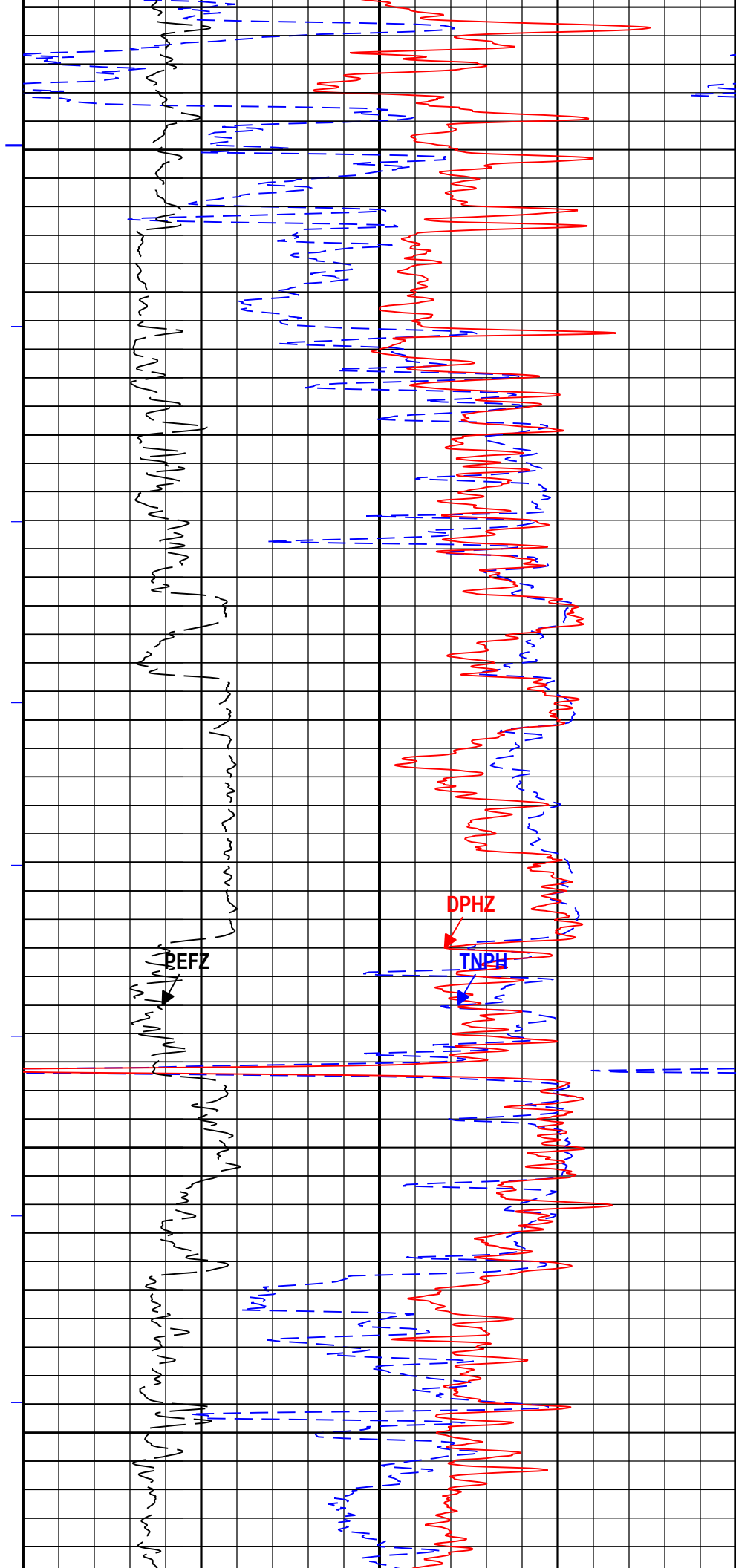
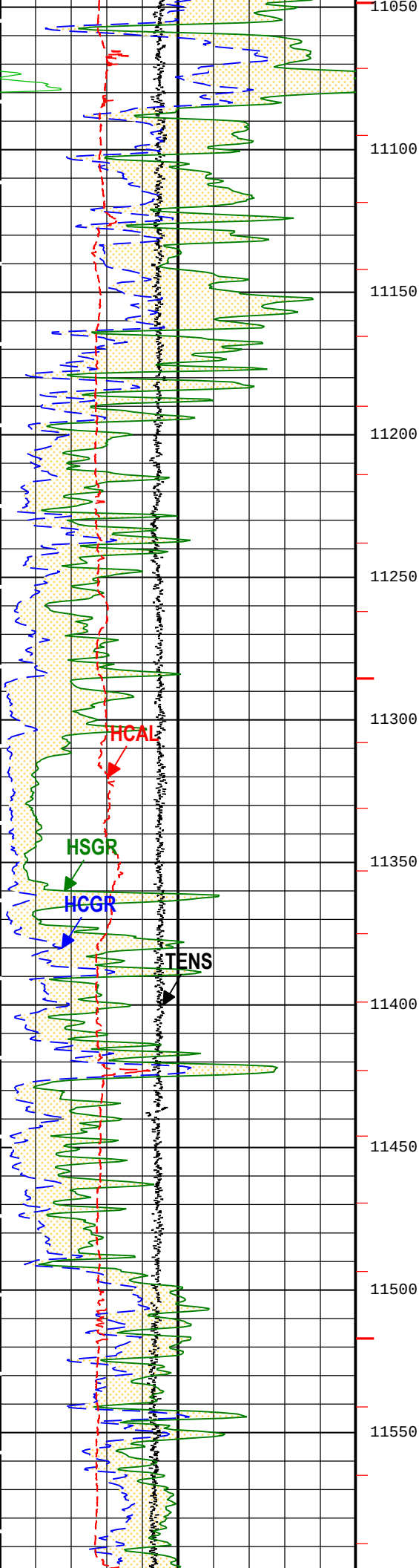


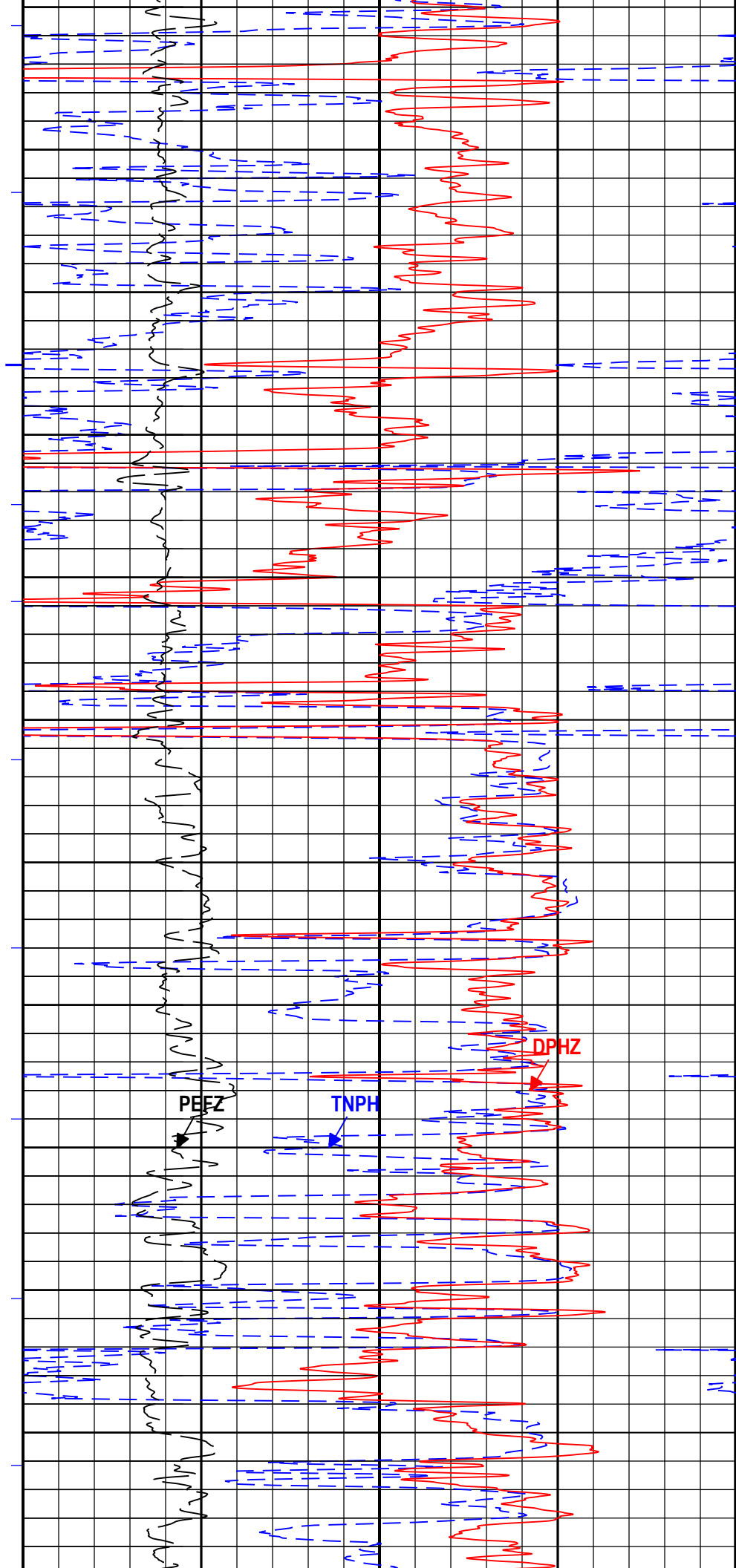
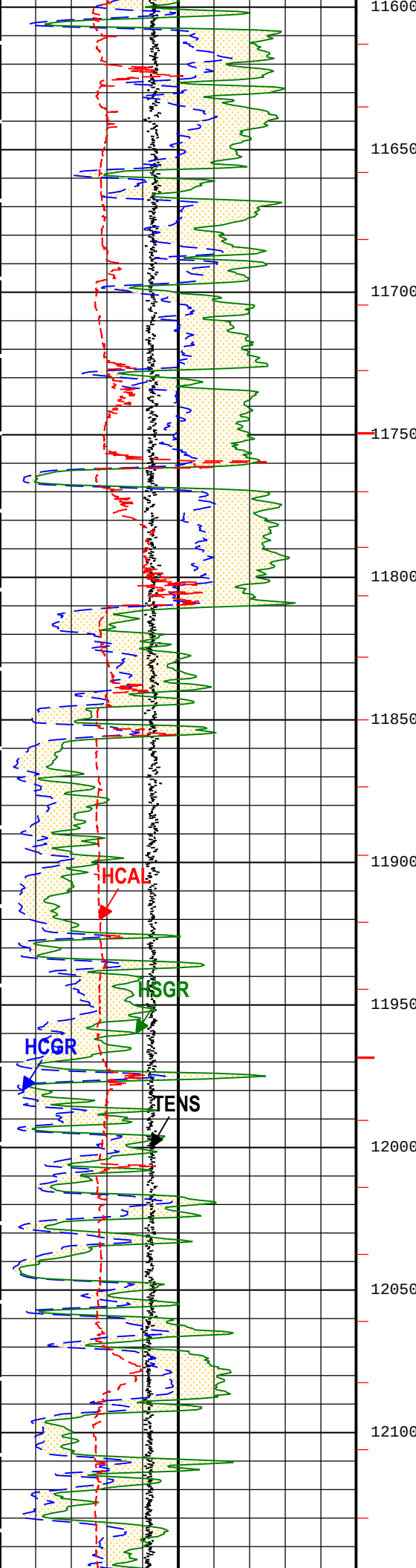


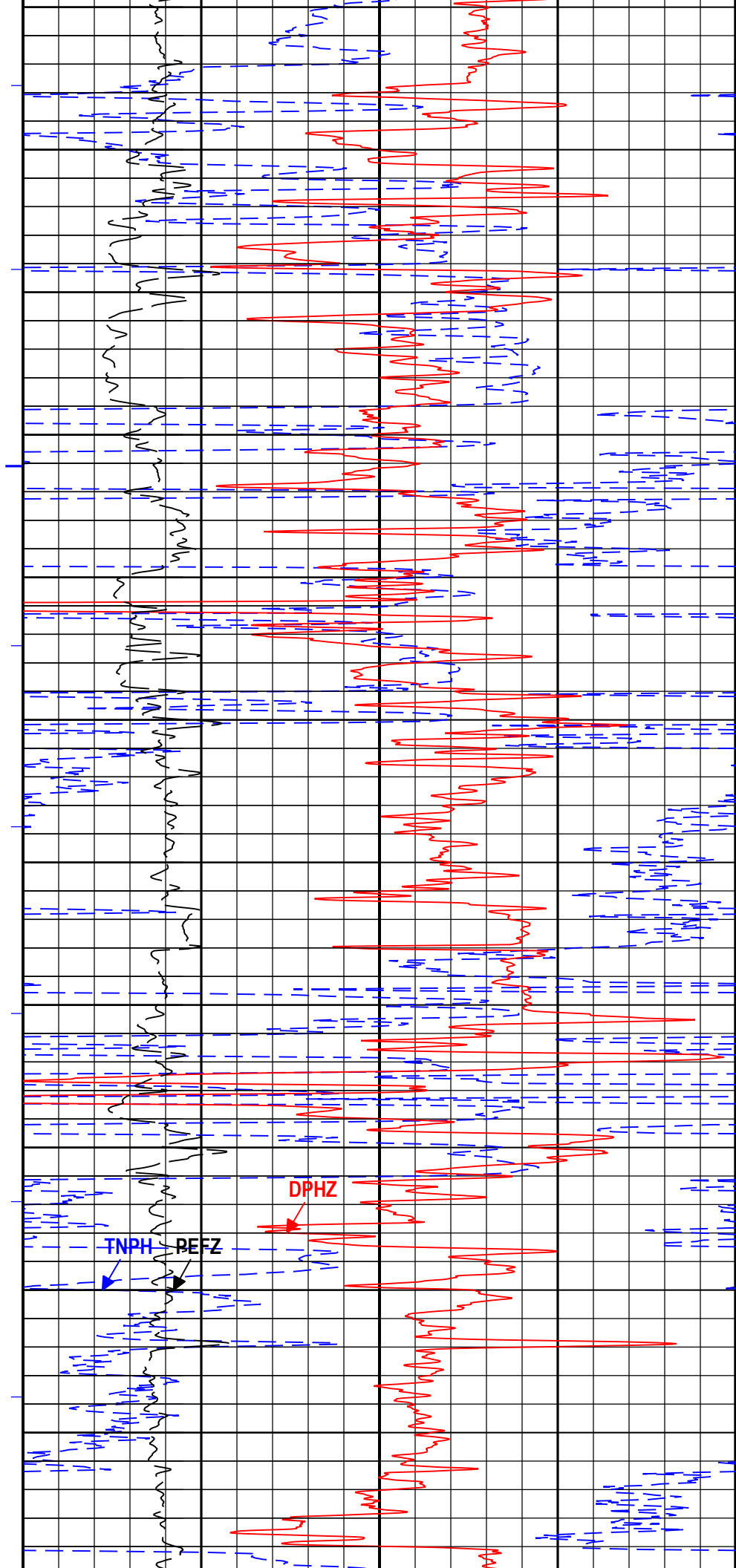
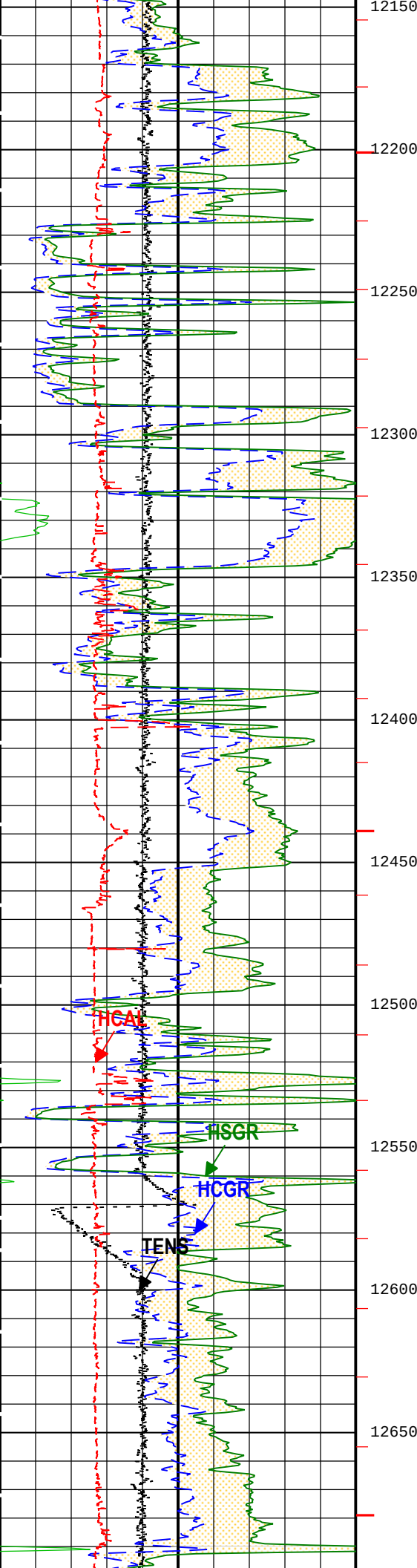


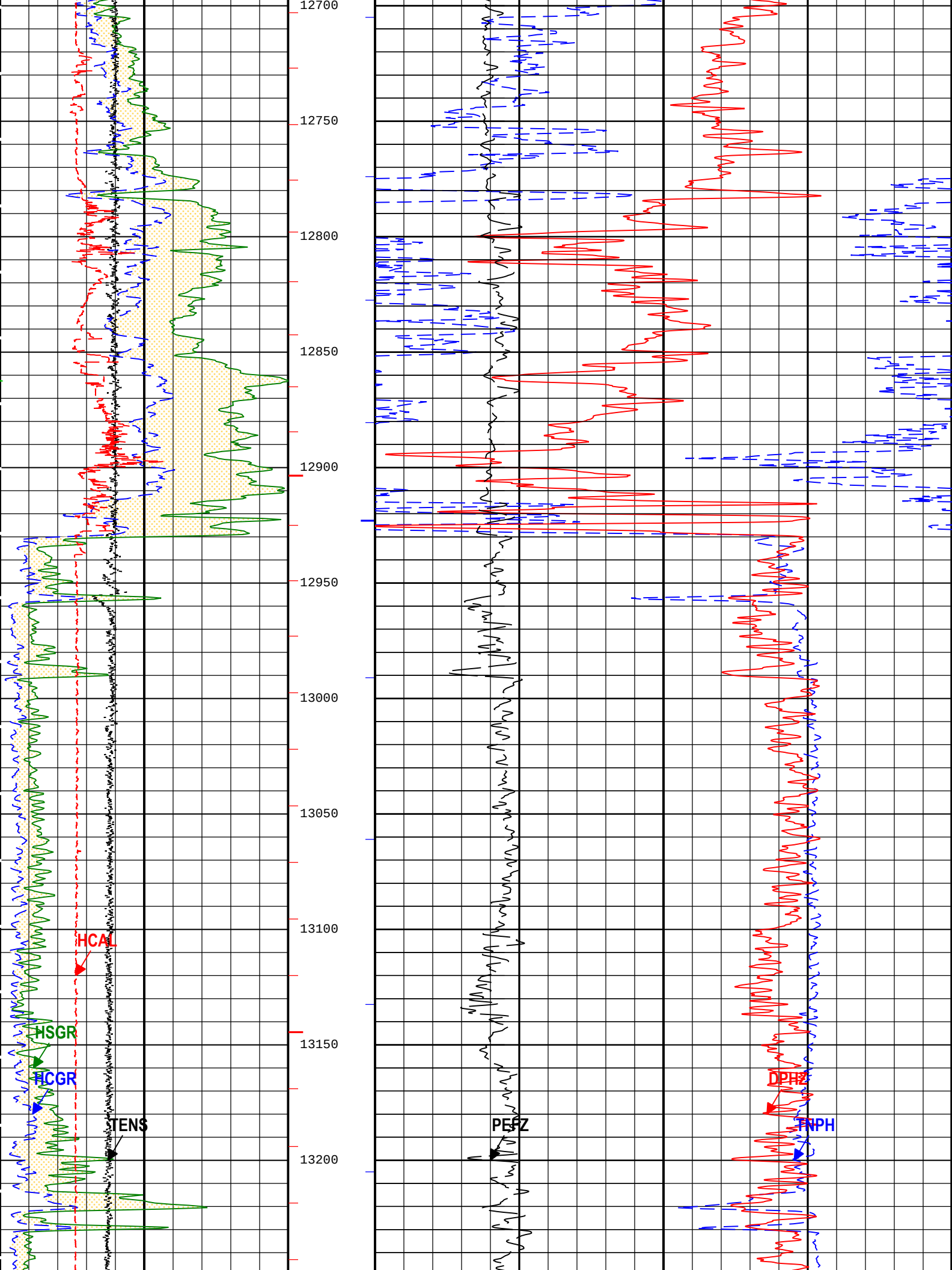


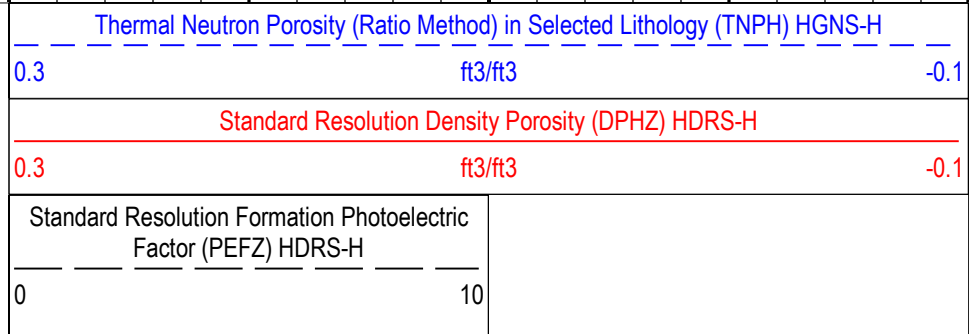
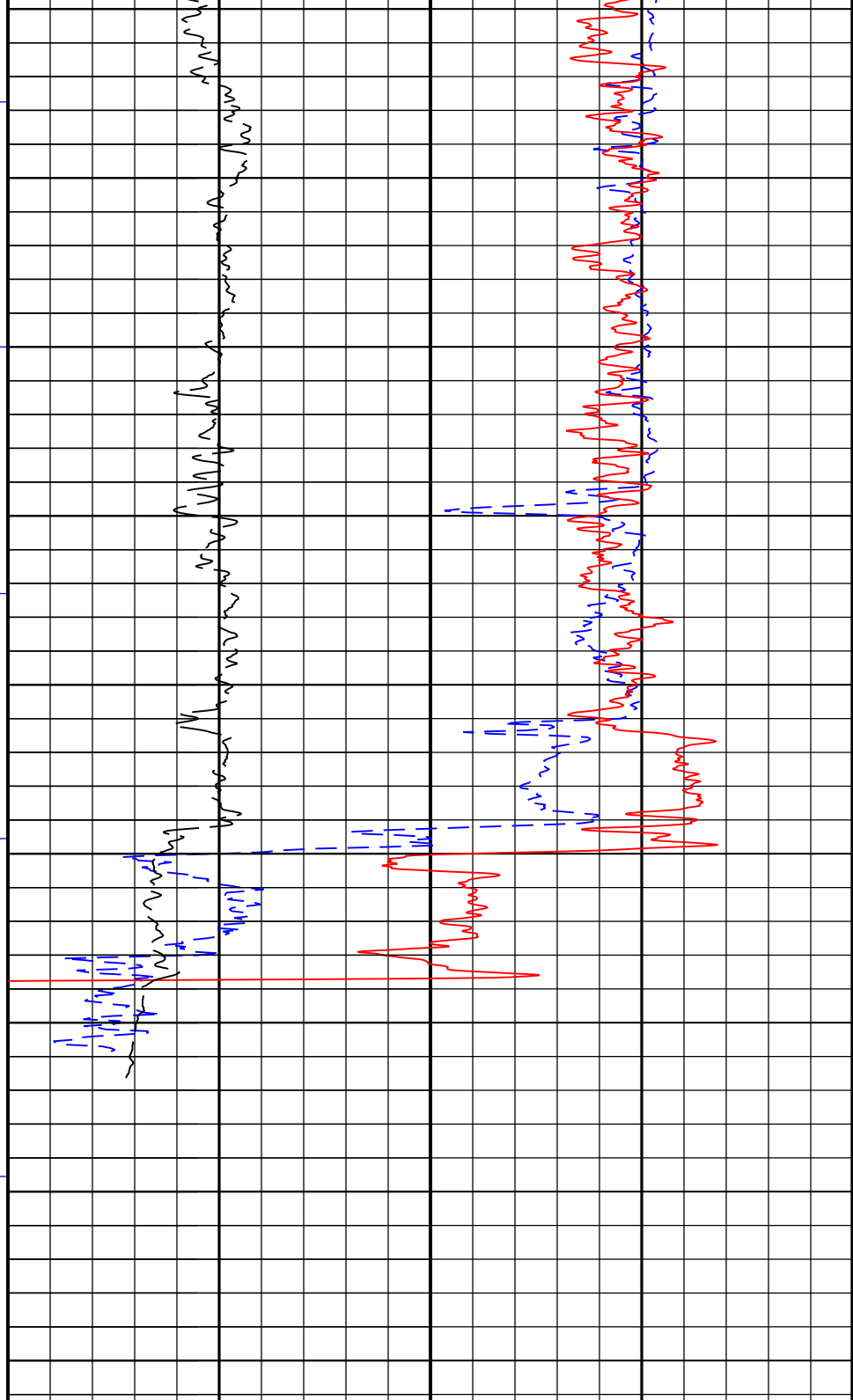
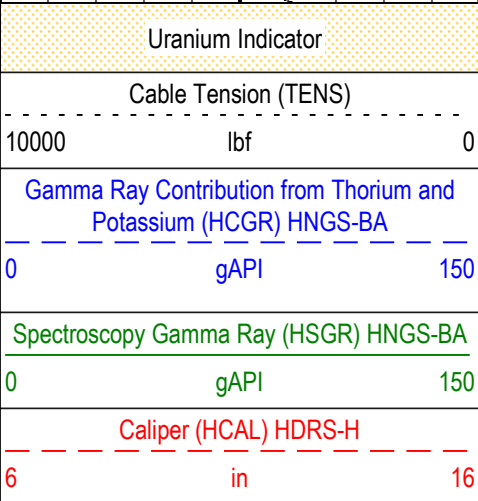
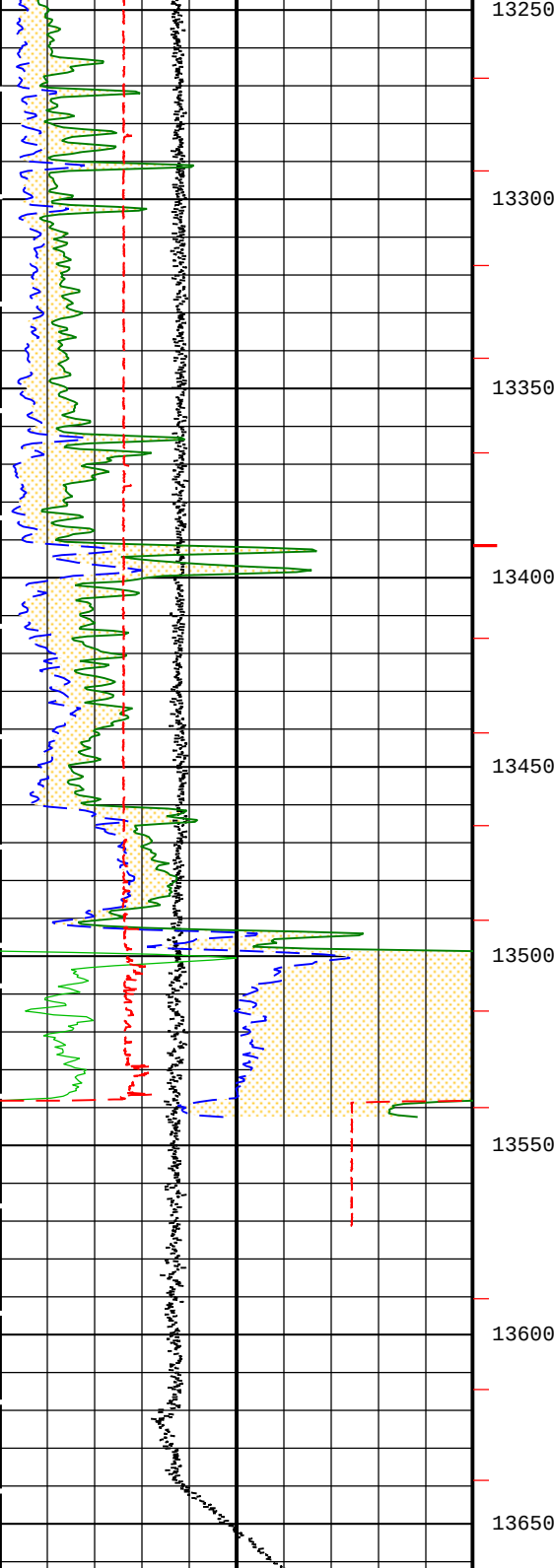




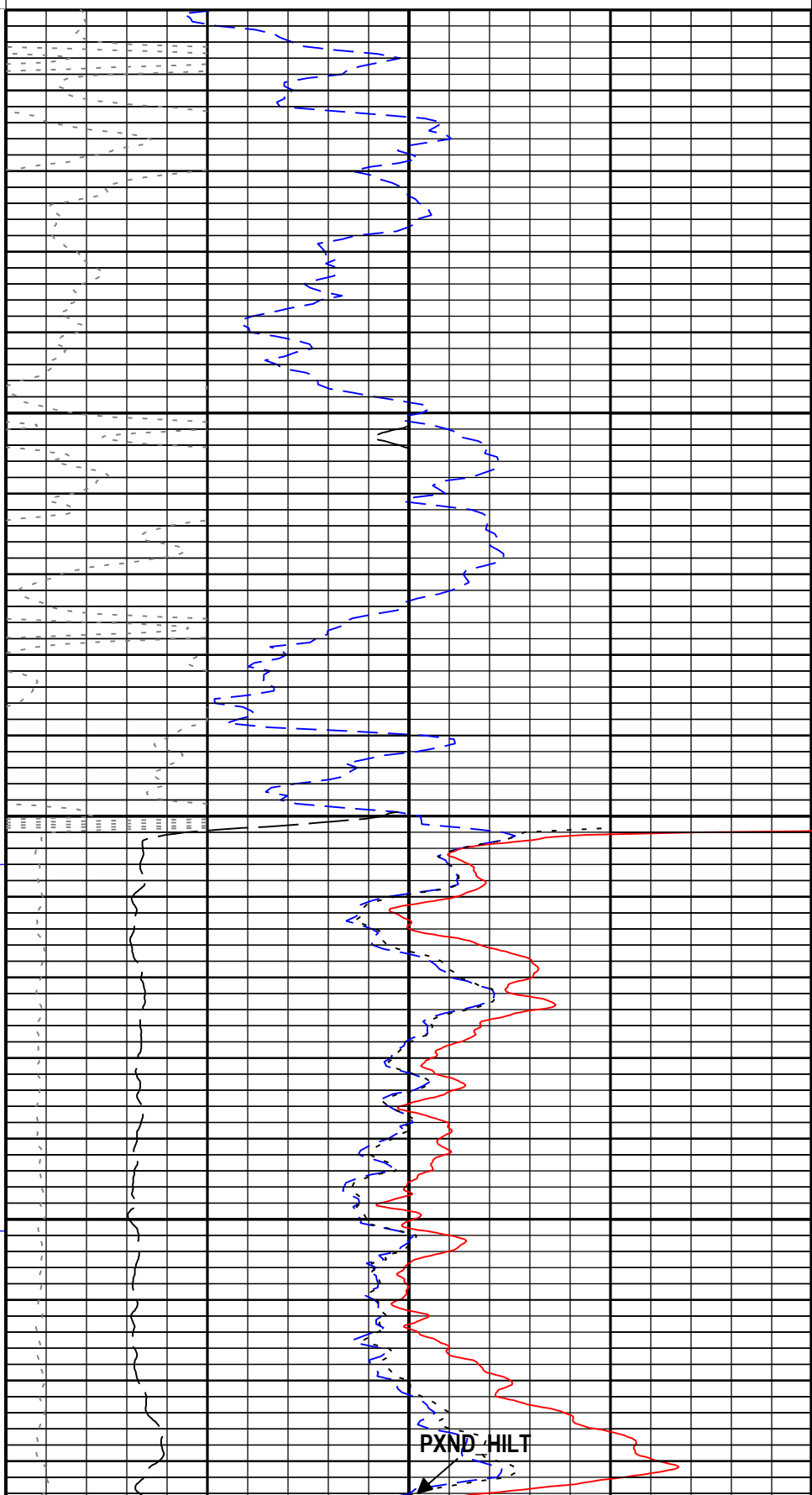
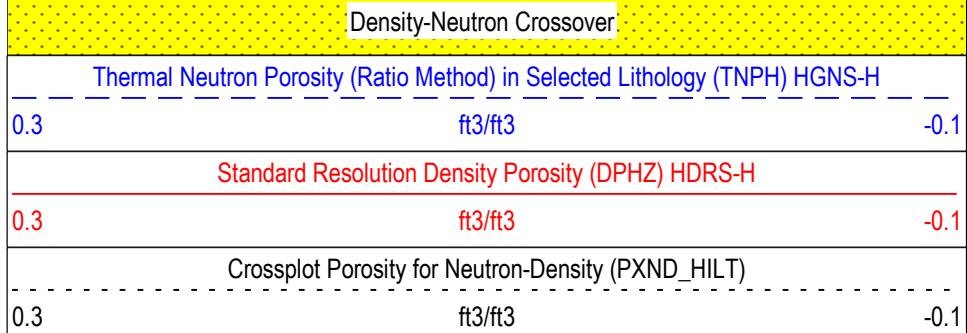
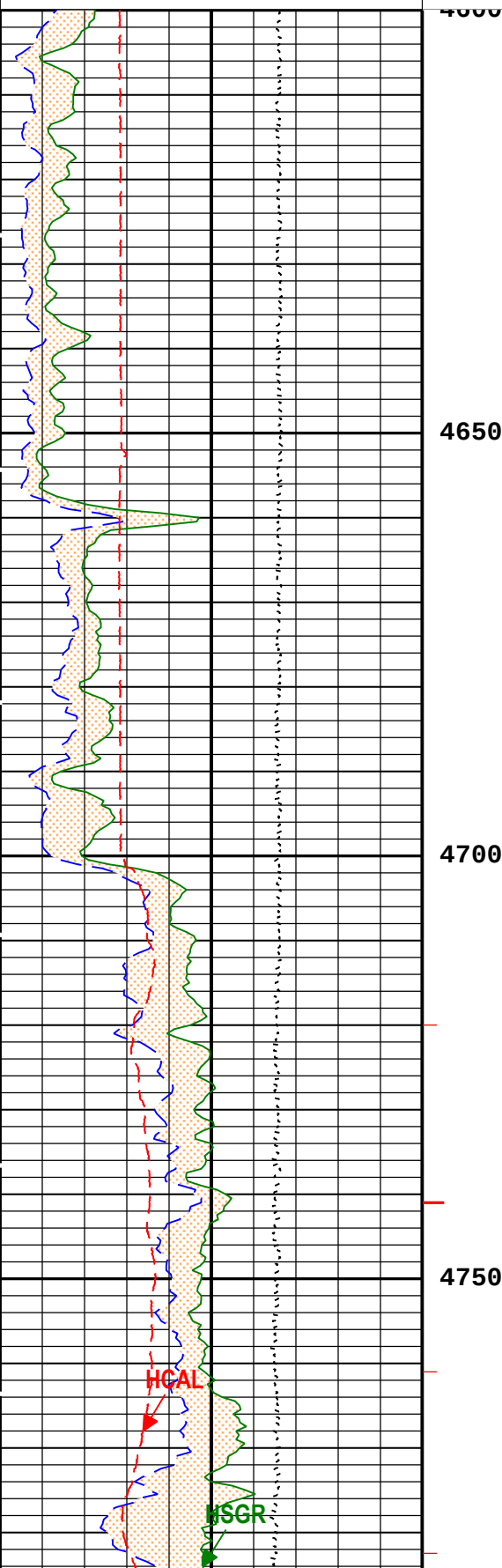
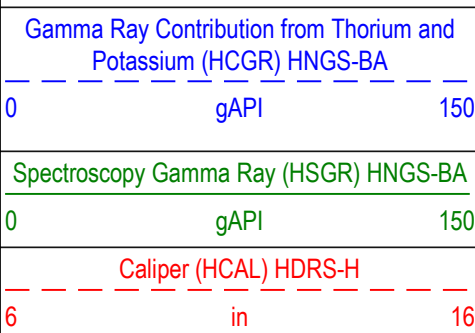


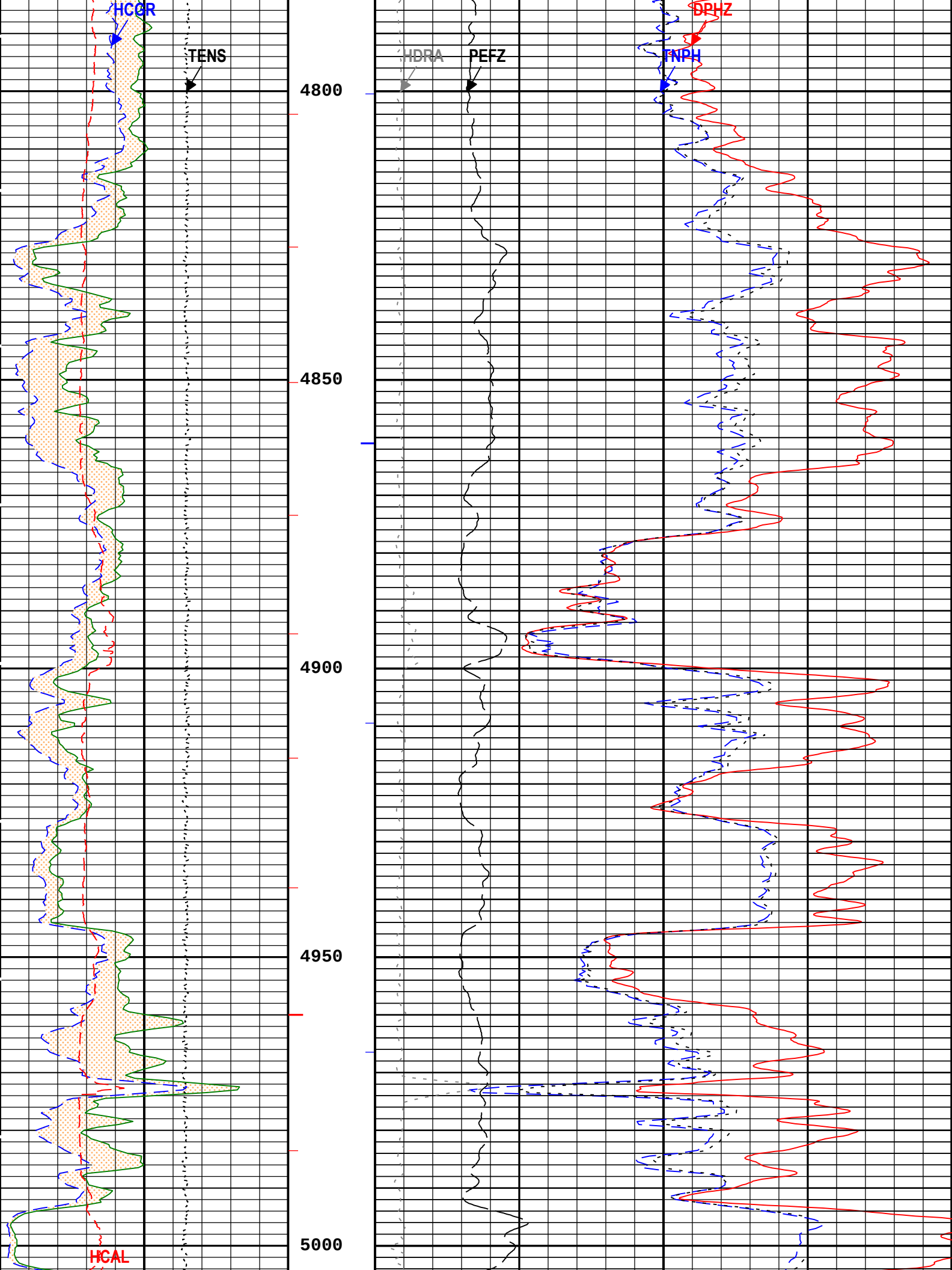


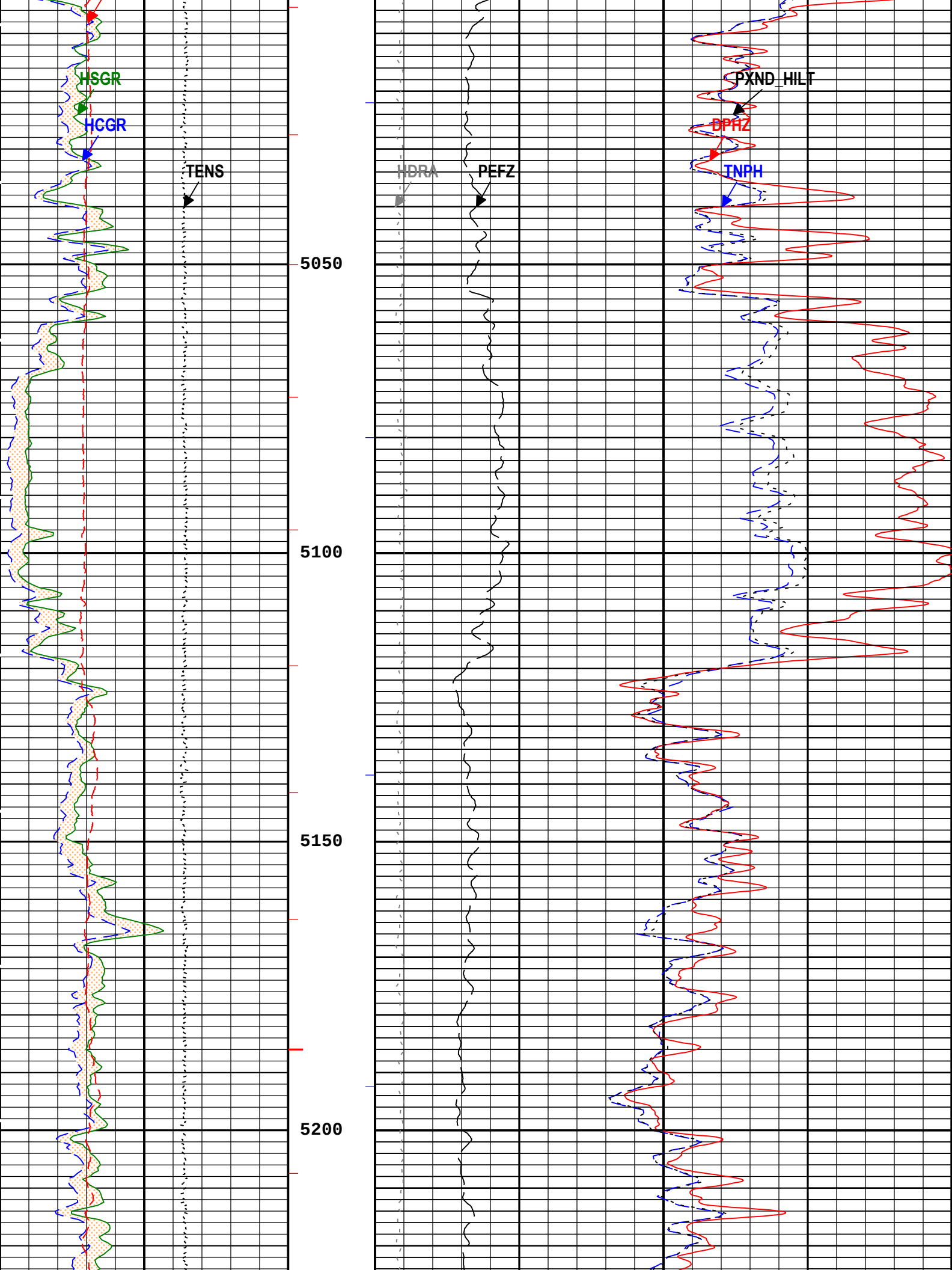


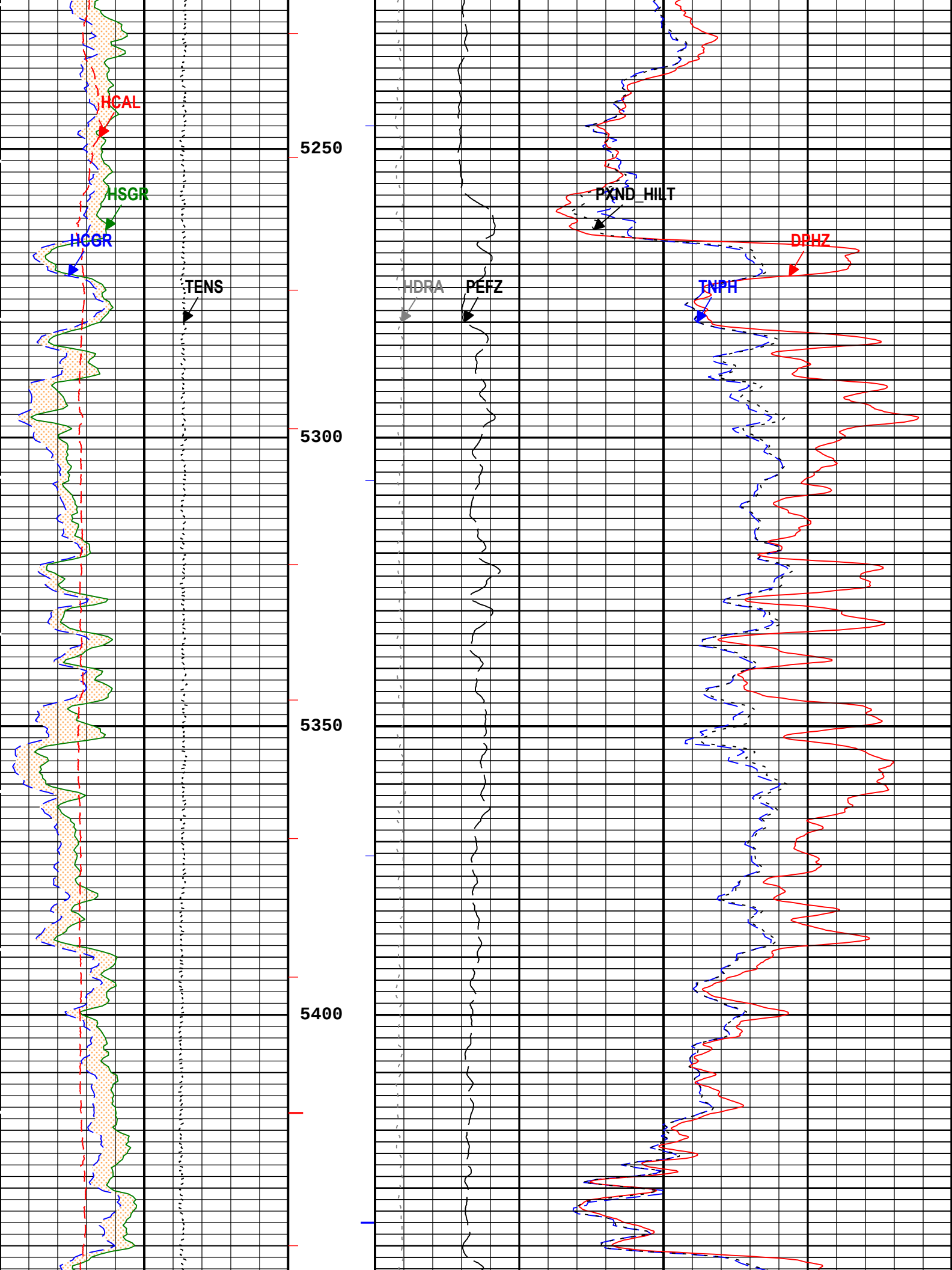


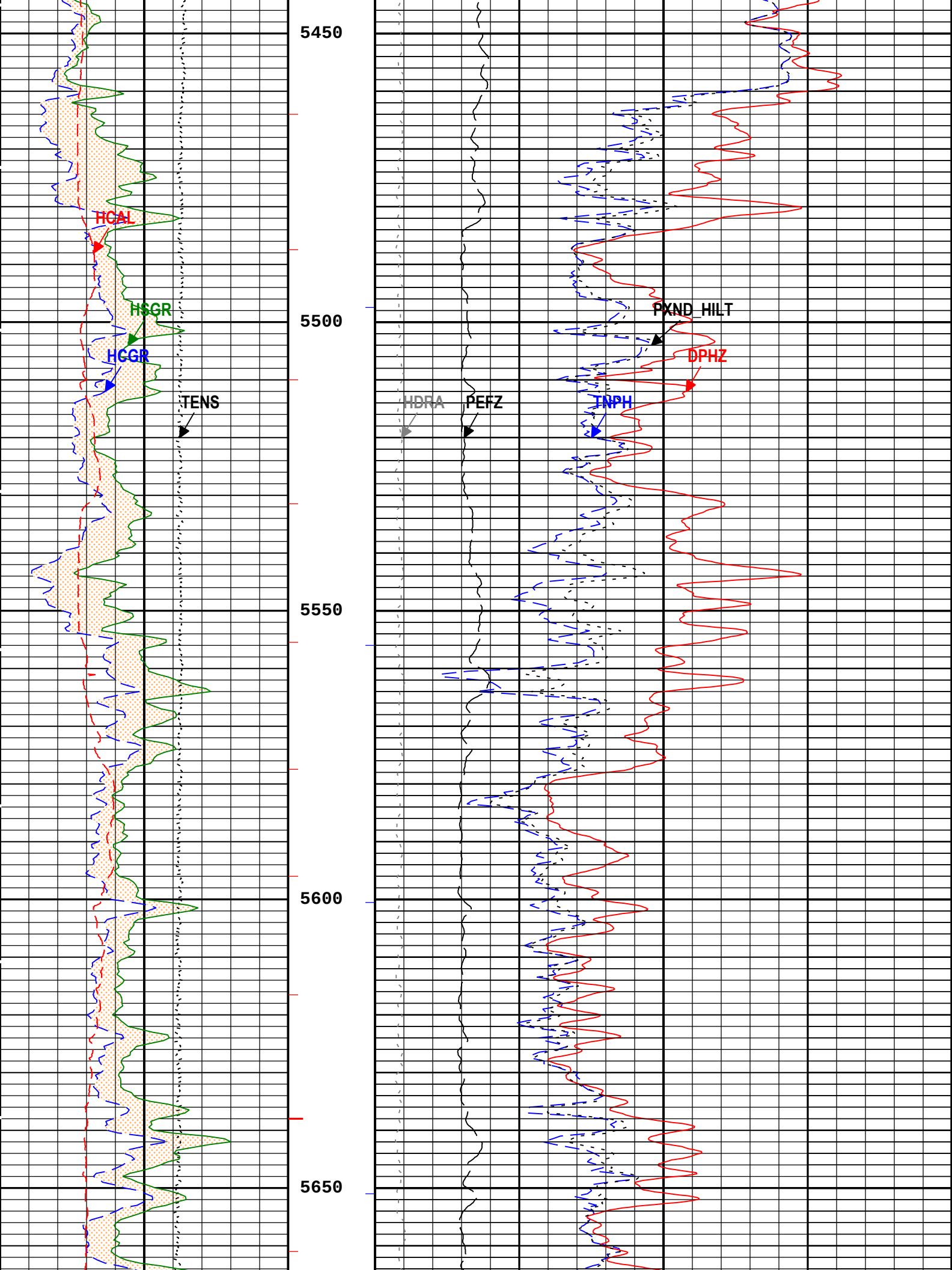
TIME_1900 - Time Marked every 60.00 (s)									
ICV - Integrated Cement Volume every 10.00 (ft3)									
ICV - Integrated Cement Volume every 100.00 (ft3)									
TIME_1900 - Time Marked every 60.00 (s)									
IHV - Integrated Hole Volume every 10.00 (ft3)									
IHV - Integrated Hole Volume every 100.00 (ft3)									
Description: HRLT BASIC LOG Format: Log (Porosity 2 inch General) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:52:35									
Run 1A									
Main Pass 5" = 100'									
Integration Summary									
Output Channel(s)		Output Description		Input Parameter		Output Value		Unit	
ICV		Integrated Cement Volume		GCSE_UP_PASS, FCD		1430.83		ft3	
IHV		Integrated Hole Volume		GCSE_UP_PASS		3818.75		ft3	
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run 1A	Main[3]:Up	Up	213.72 ft	13662.08 ft	29-Nov-2016 4:25:05 PM	29-Nov-2016 10:56:13 PM	ON	13.82 ft	Yes
All depths are referenced to toolstring zero									
Log	Company:DCP Midstream LP Well:Zia AGI D2 Run 1A: Main[3]:Up:S008								
Description: HRLT BASIC LOG Format: Log (Porosity_5_Inch) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:52:41									
Channel	Source			Sampling					
CALI	HDRS-H:HRCC-H:HRCC-H			1in					
CGR	HNGS-BA:HNGS-BA:HNGS-BA			6in					
DPHZ	HDRS-H:HRMS-H:HRGD-H			2in					
HDRA	HDRS-H:HRMS-H:HRGD-H			2in					
ICV	Borehole			6in					
IHV	Borehole			6in					
PEFZ	HDRS-H:HRMS-H:HRGD-H			2in					
PXND	PEQL			6in					
SGR	HNGS-BA:HNGS-BA:HNGS-BA			6in					
TENS	WLWorkflow			1in					
TIME_1900	WLWorkflow			0.1in					
TNPH	HGNS-H:HGNS-H:HGNS-H			6in					
IHV - Integrated Hole Volume every 100.00 (ft3)									
IHV - Integrated Hole Volume every 10.00 (ft3)									
TIME_1900 - Time Marked every 60.00 (s)									
ICV - Integrated Cement Volume every 100.00 (ft3)									
ICV - Integrated Cement Volume every 10.00 (ft3)									
Uranium Indicator				Density Standoff Correction (HDRA) HDRS-H -0.05 g/cm3 0.2					
Cable Tension (TENS)				Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H 0 10					
10000 lbf 0									

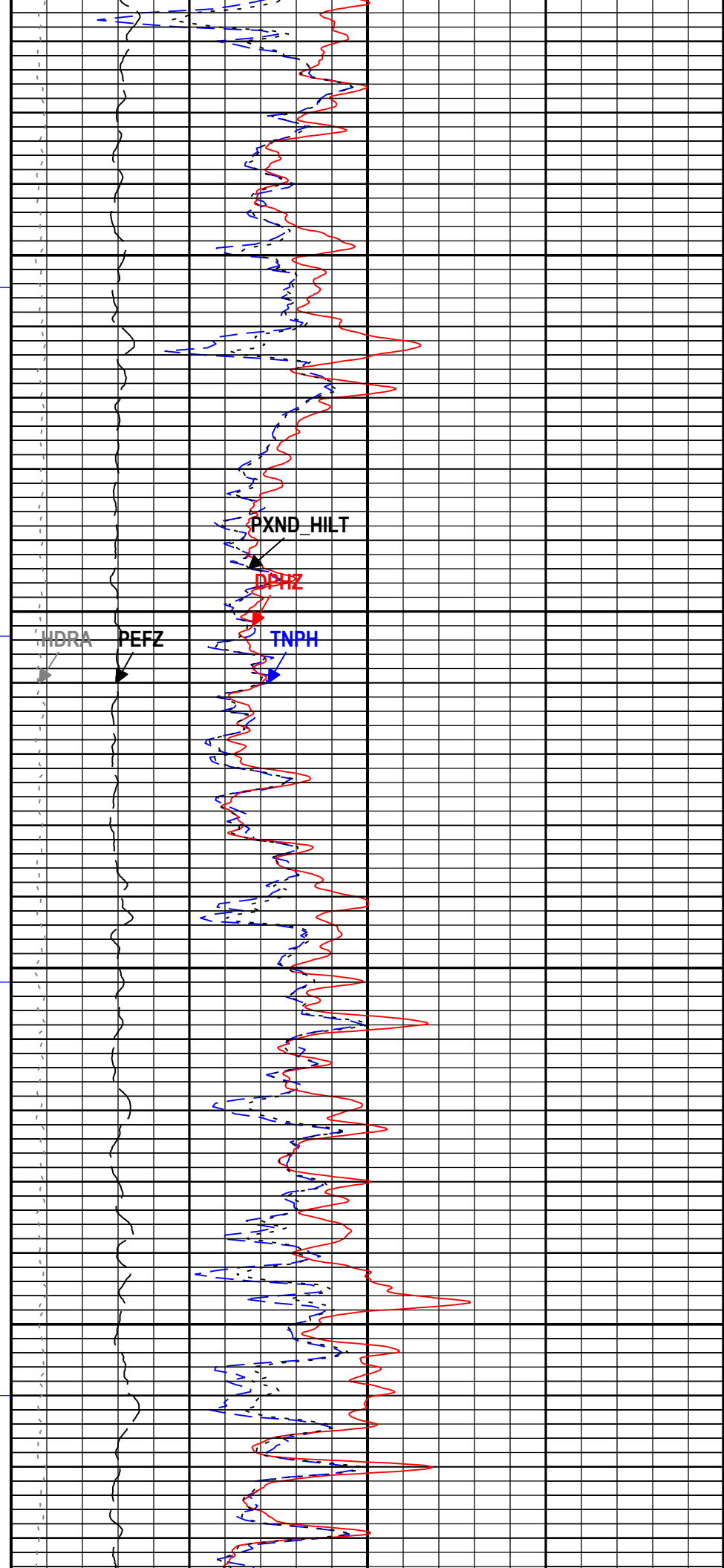
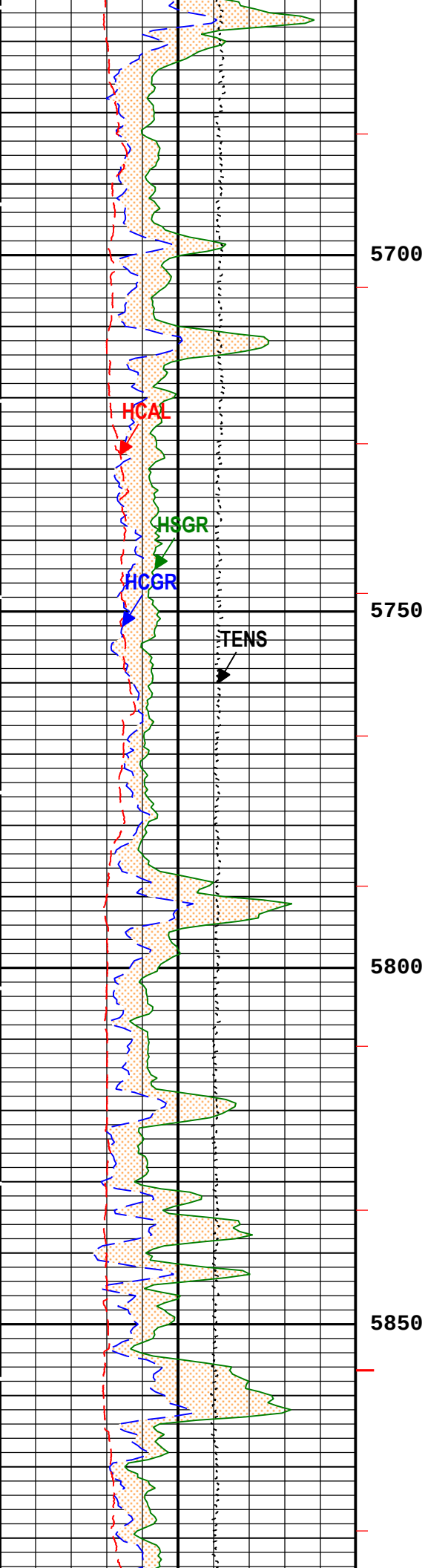


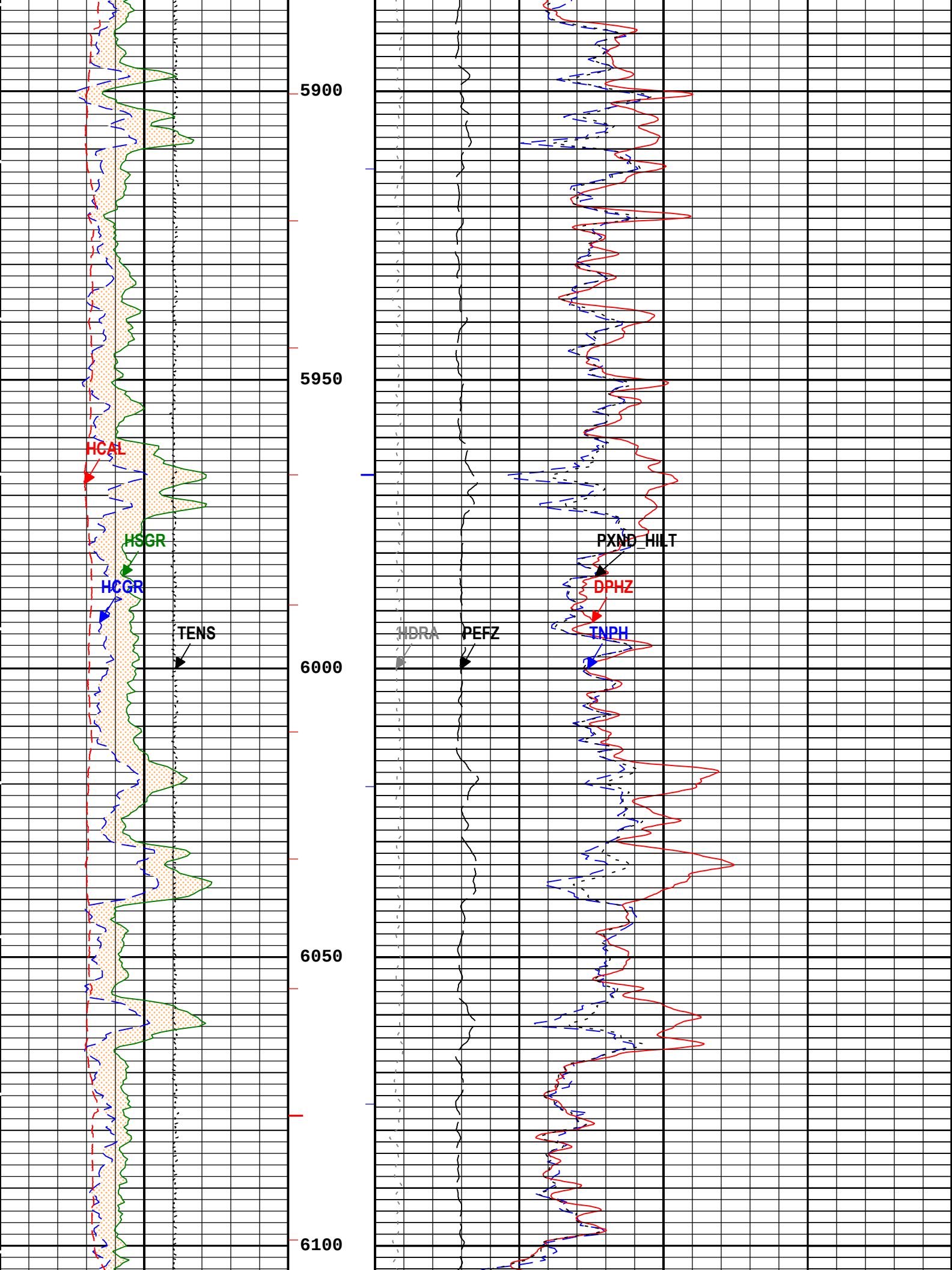


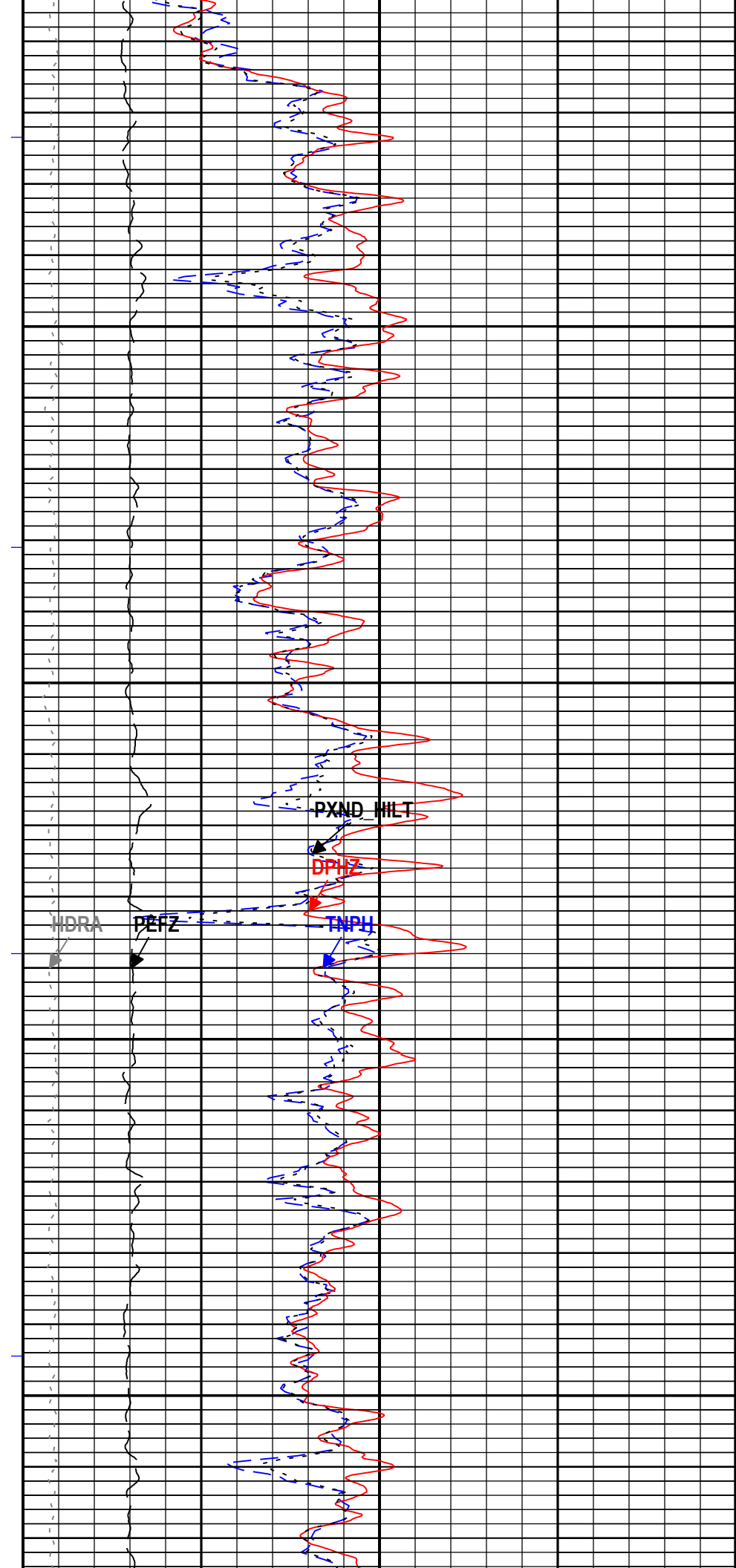
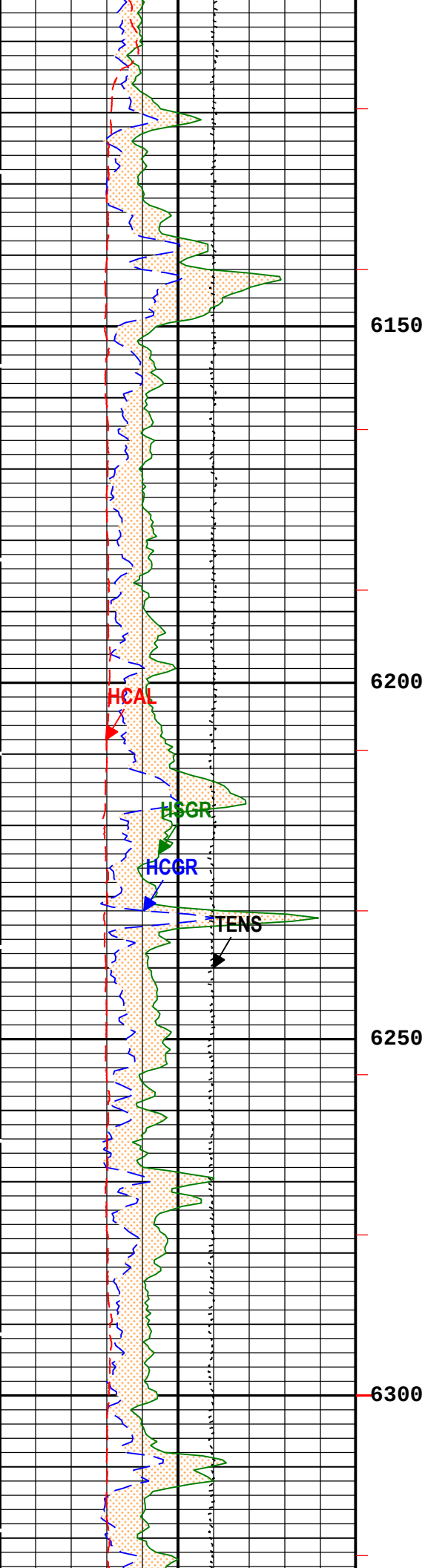


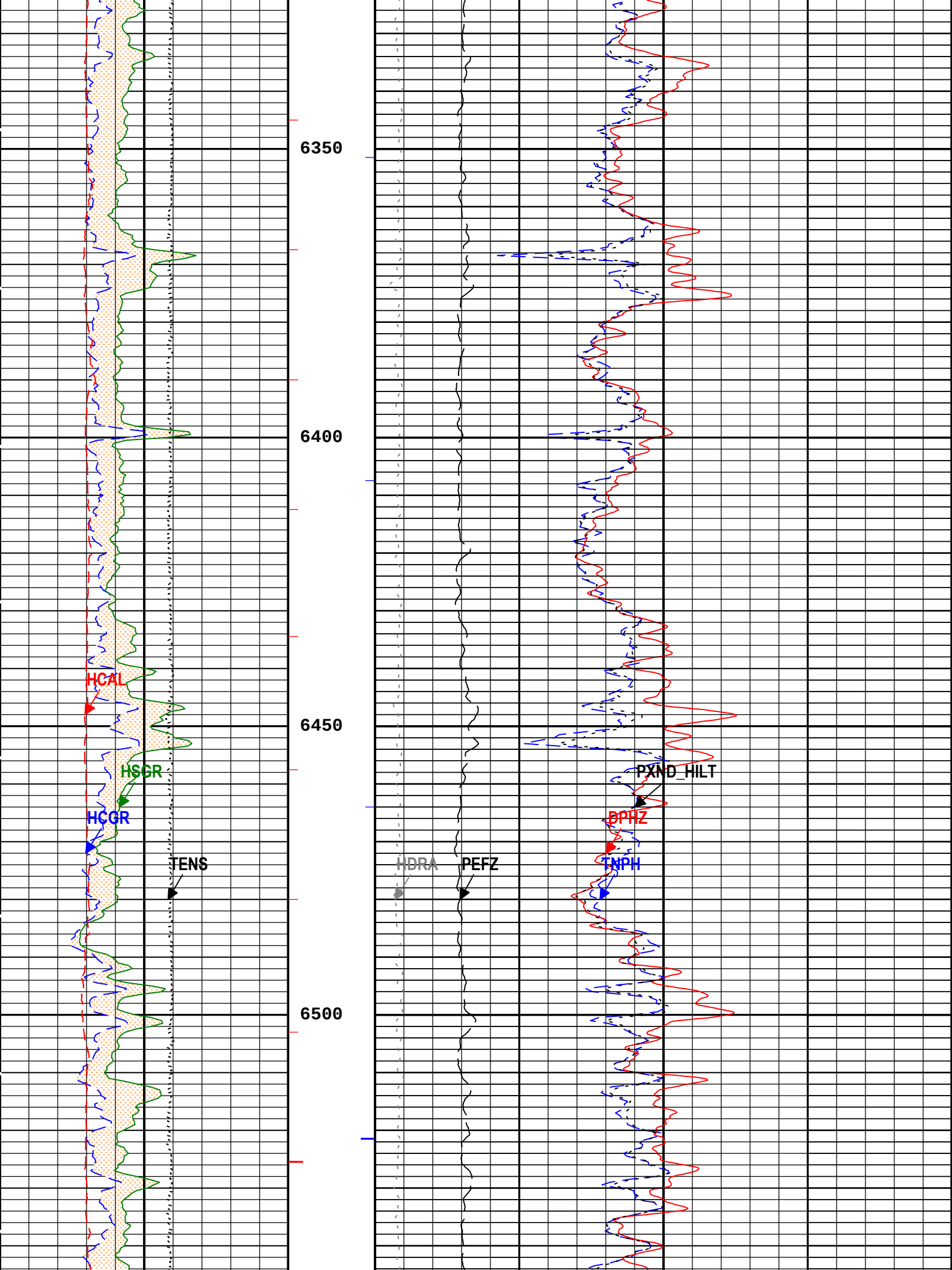


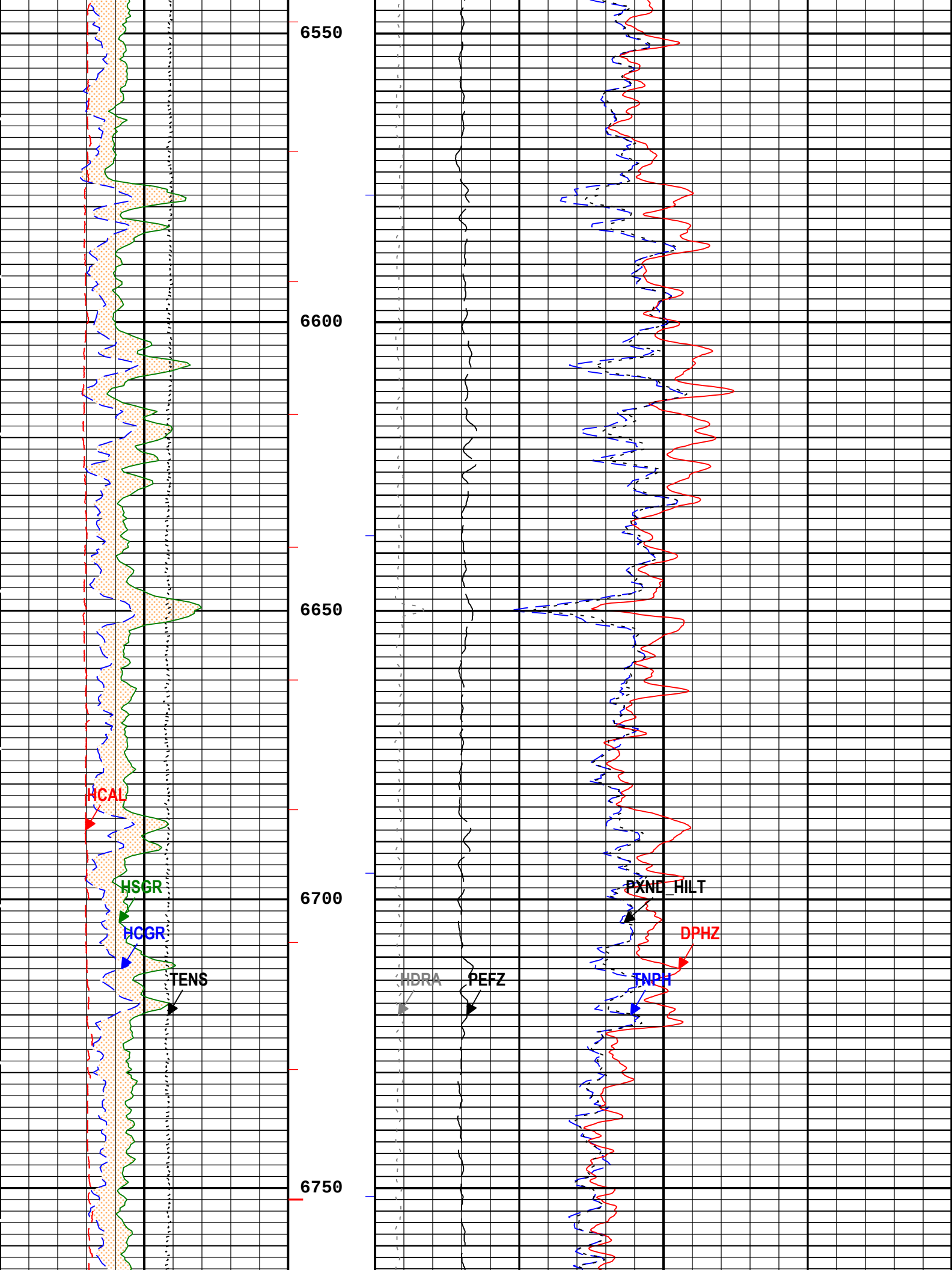


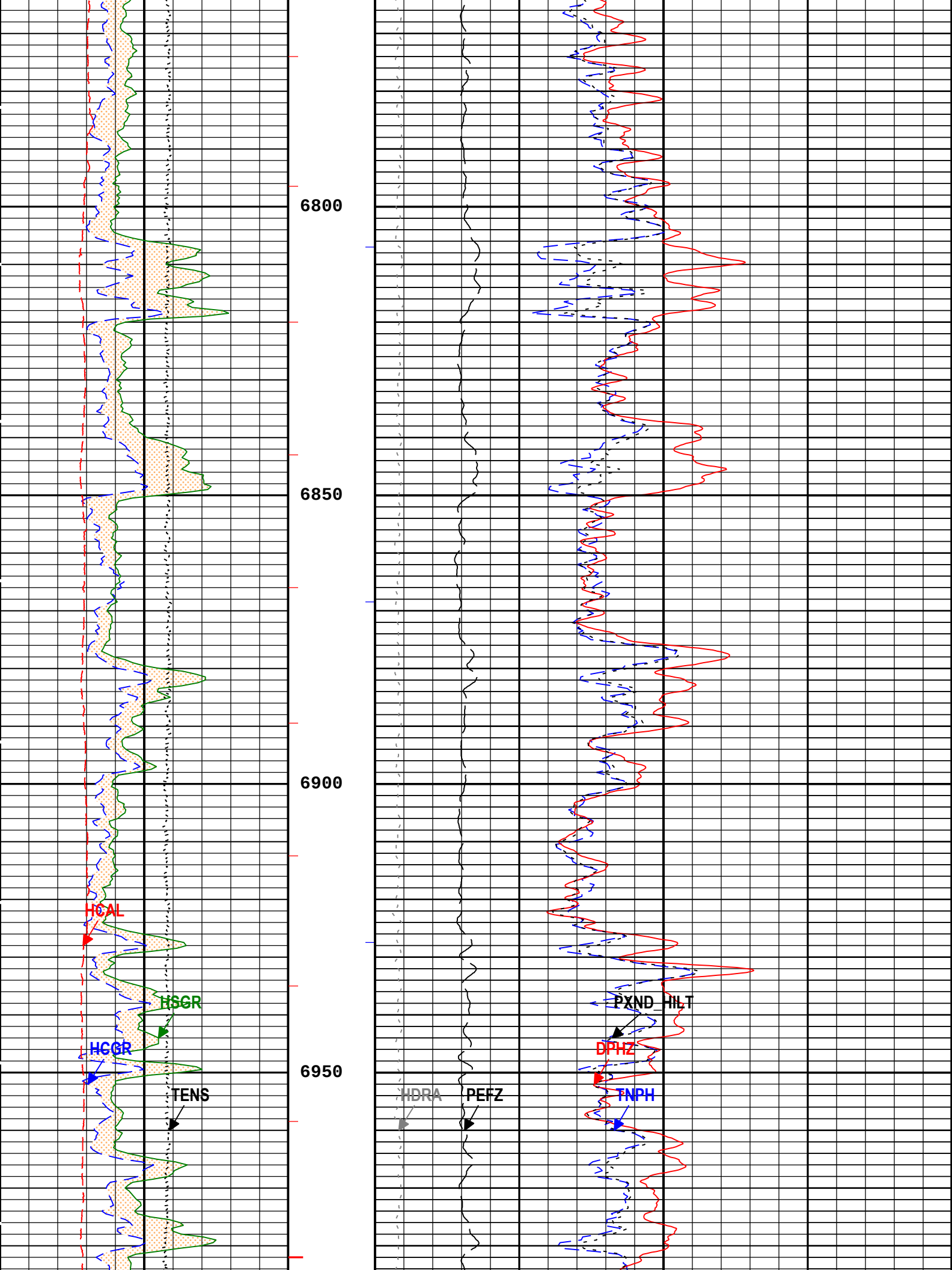


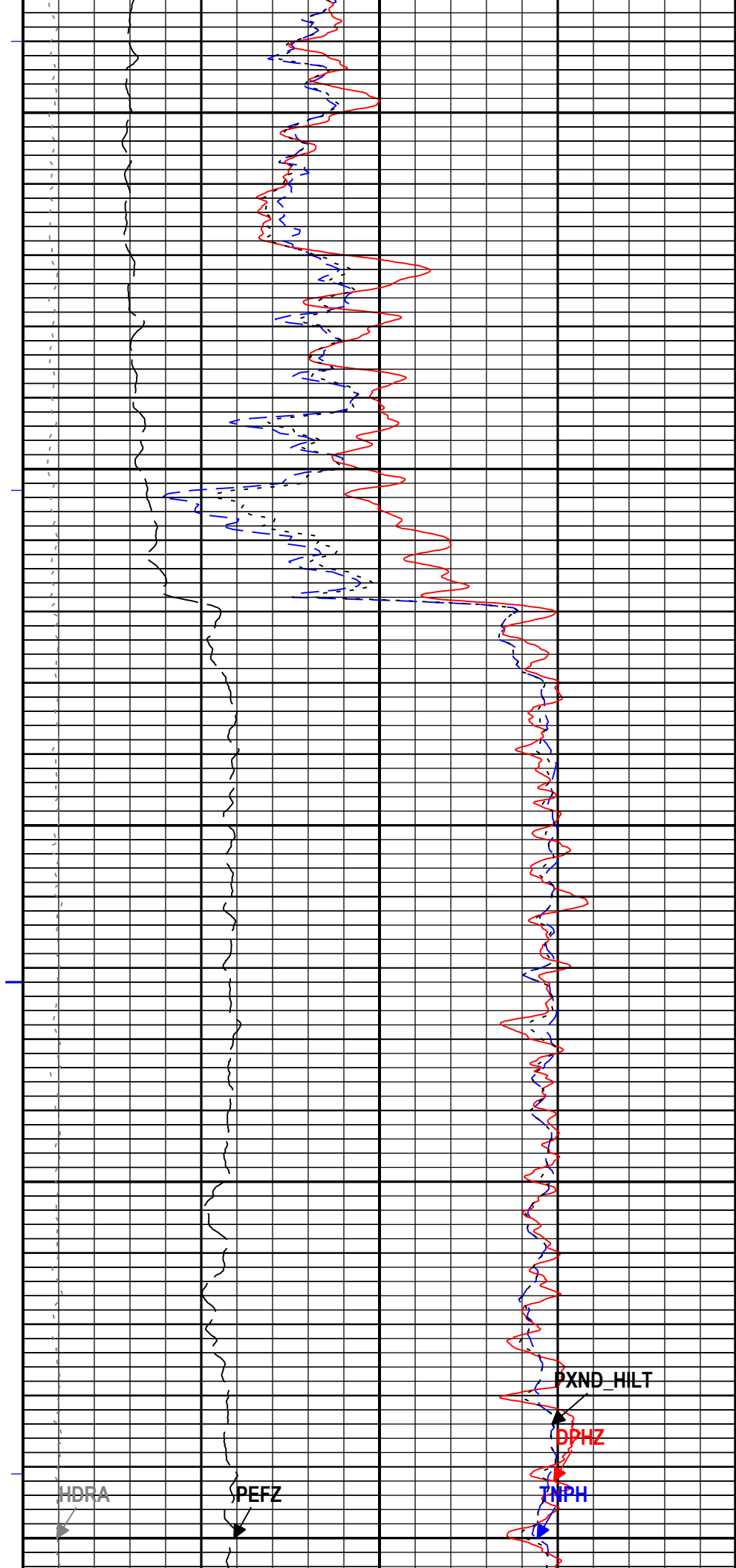
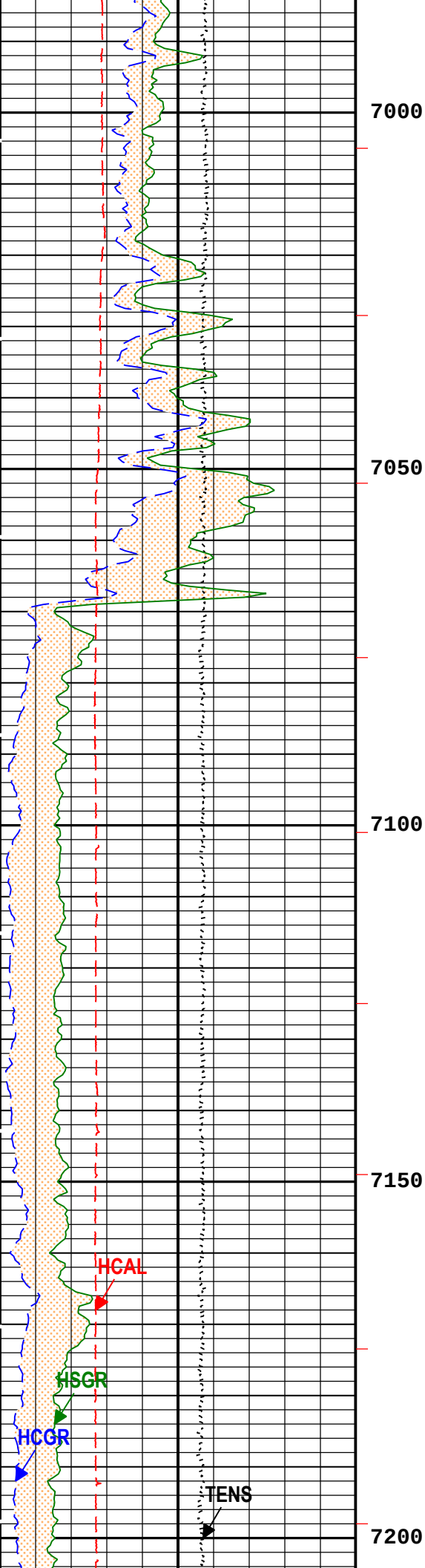


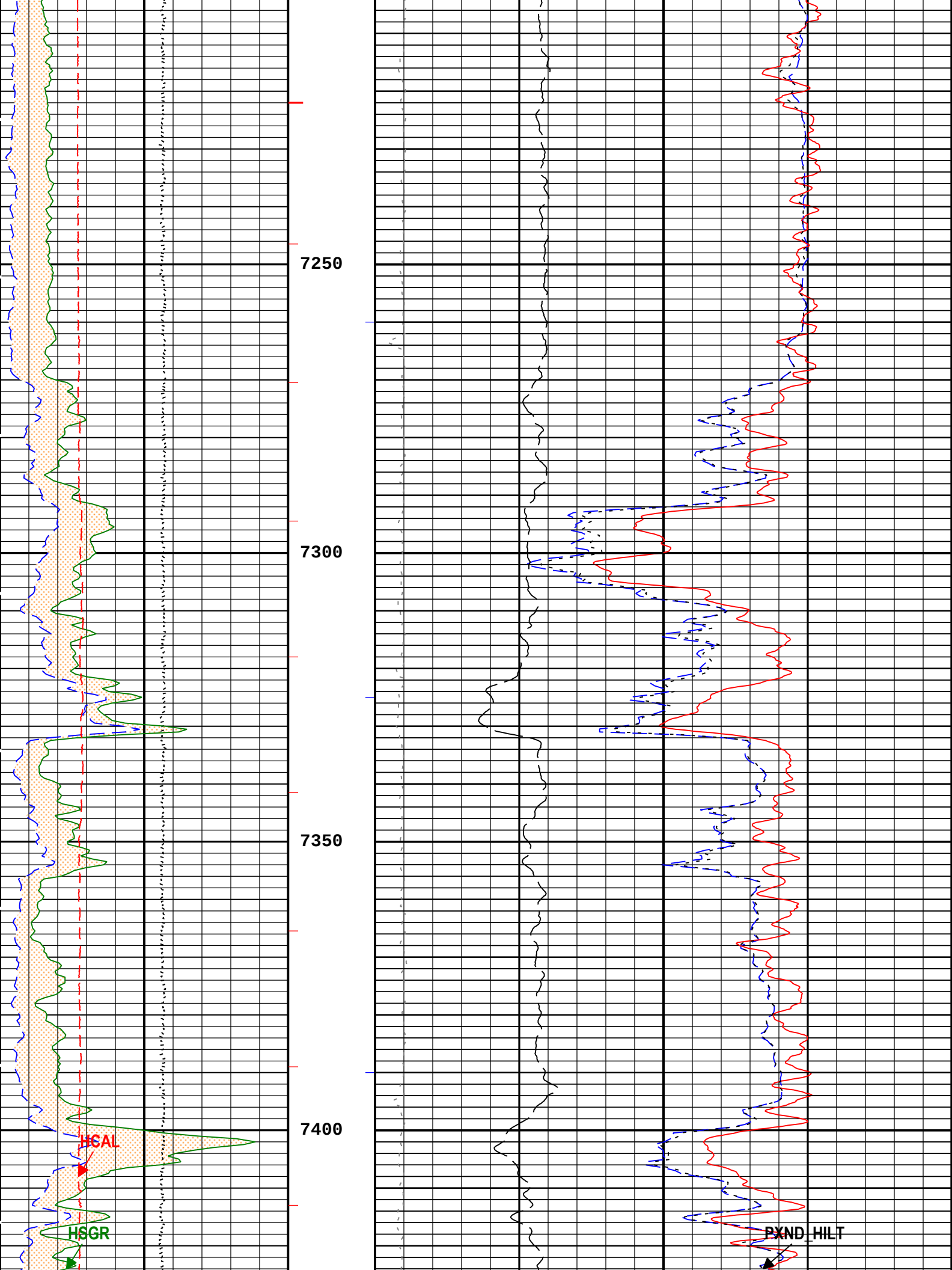


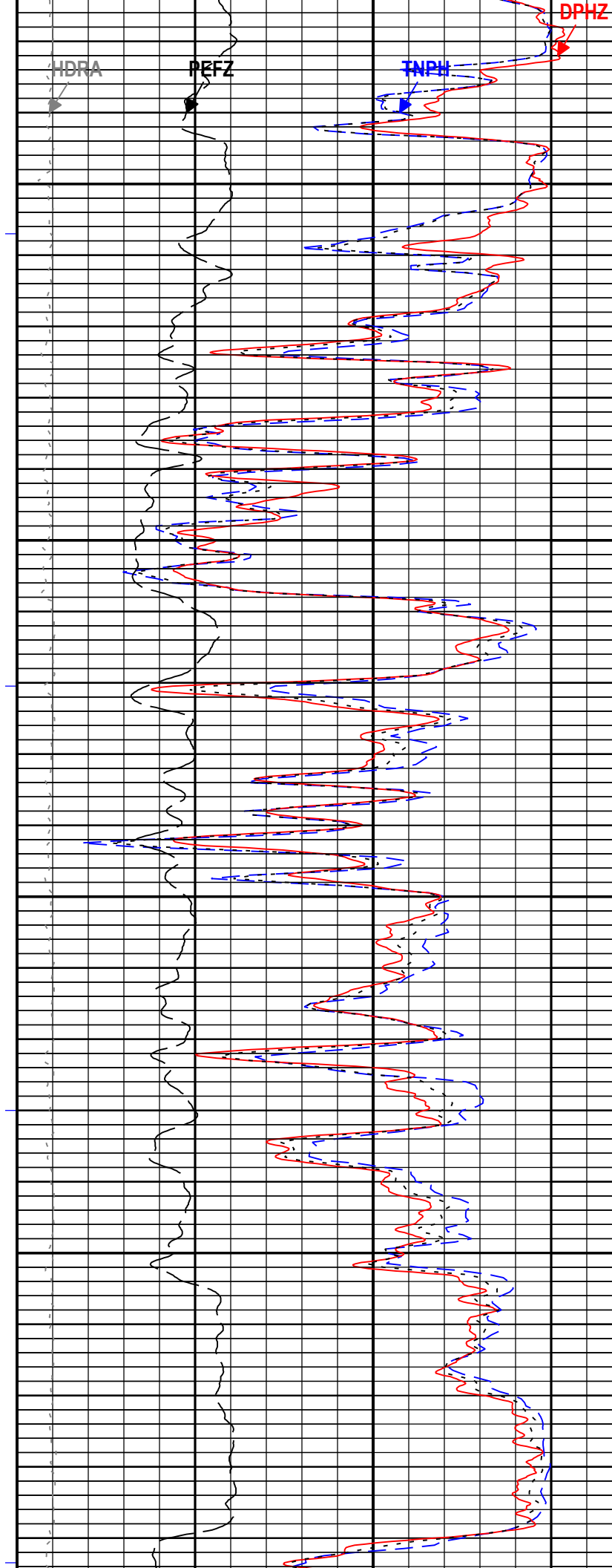
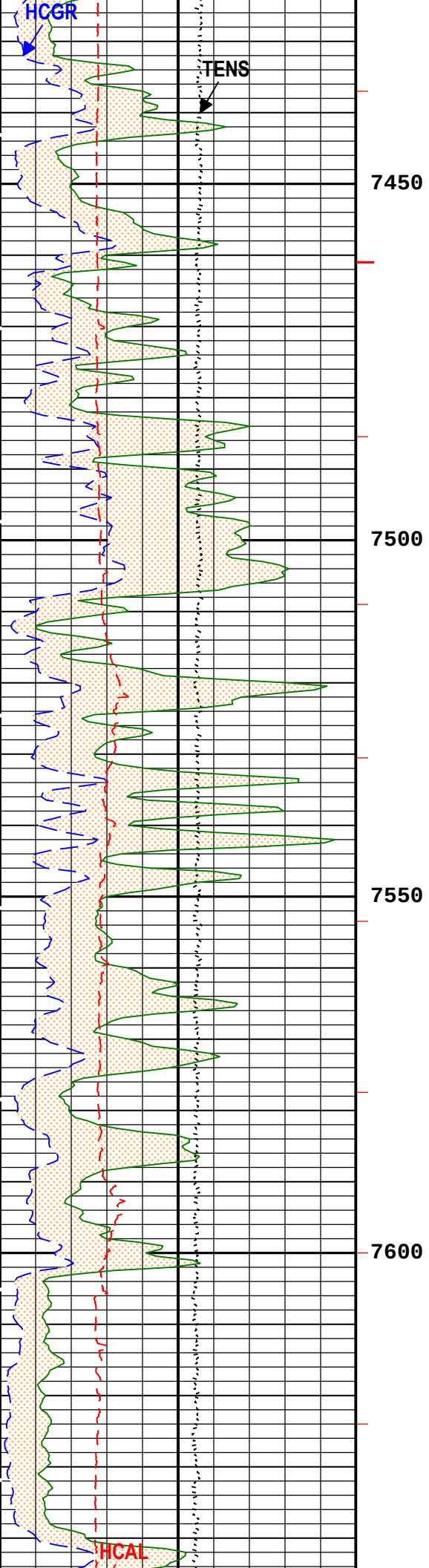


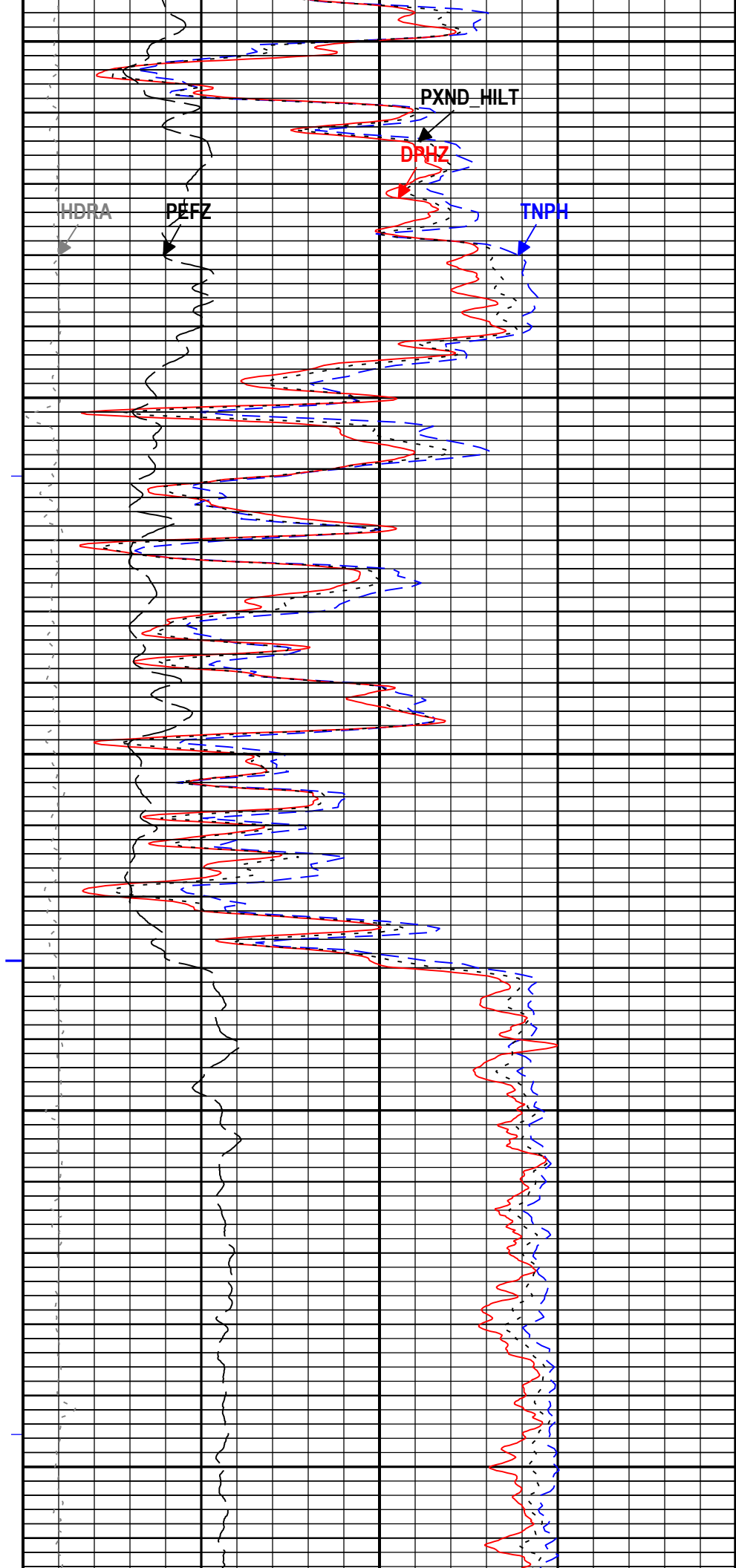
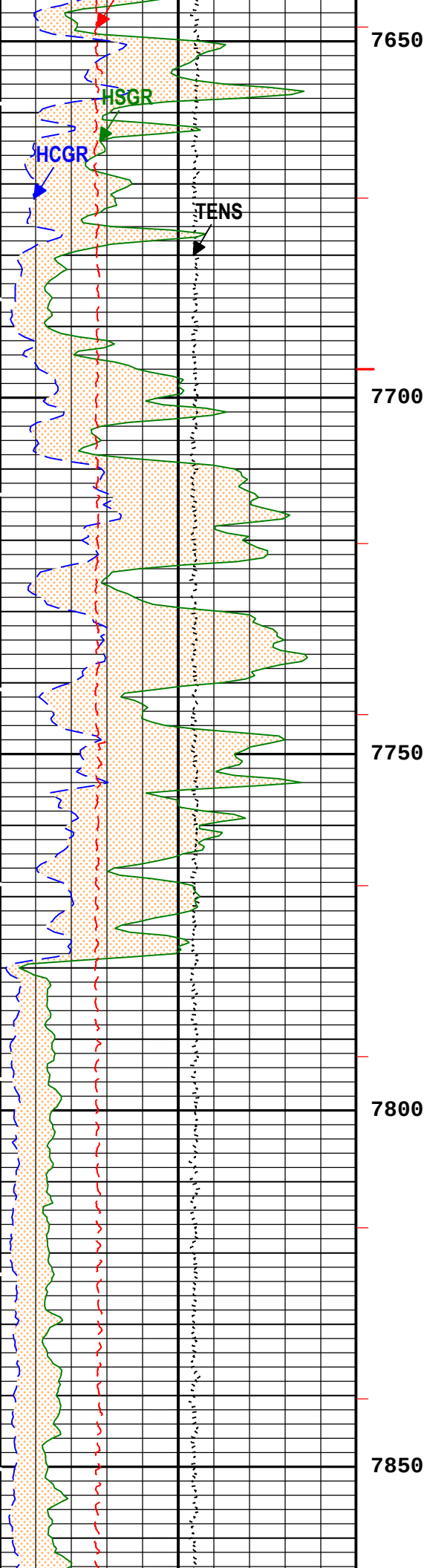


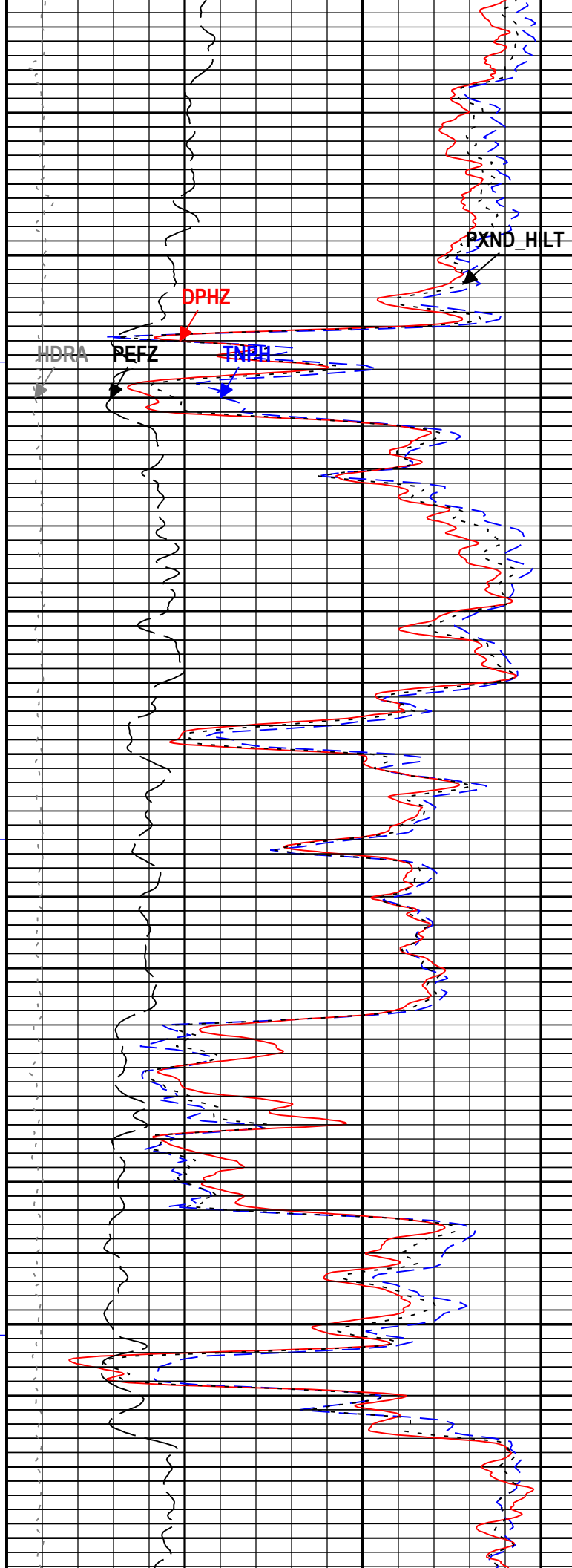
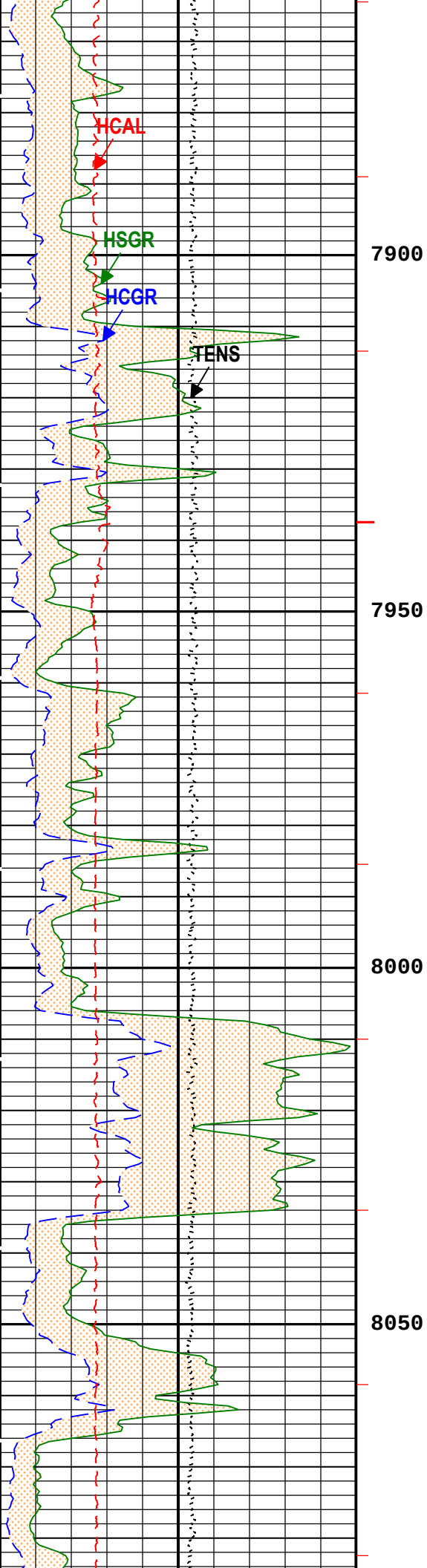


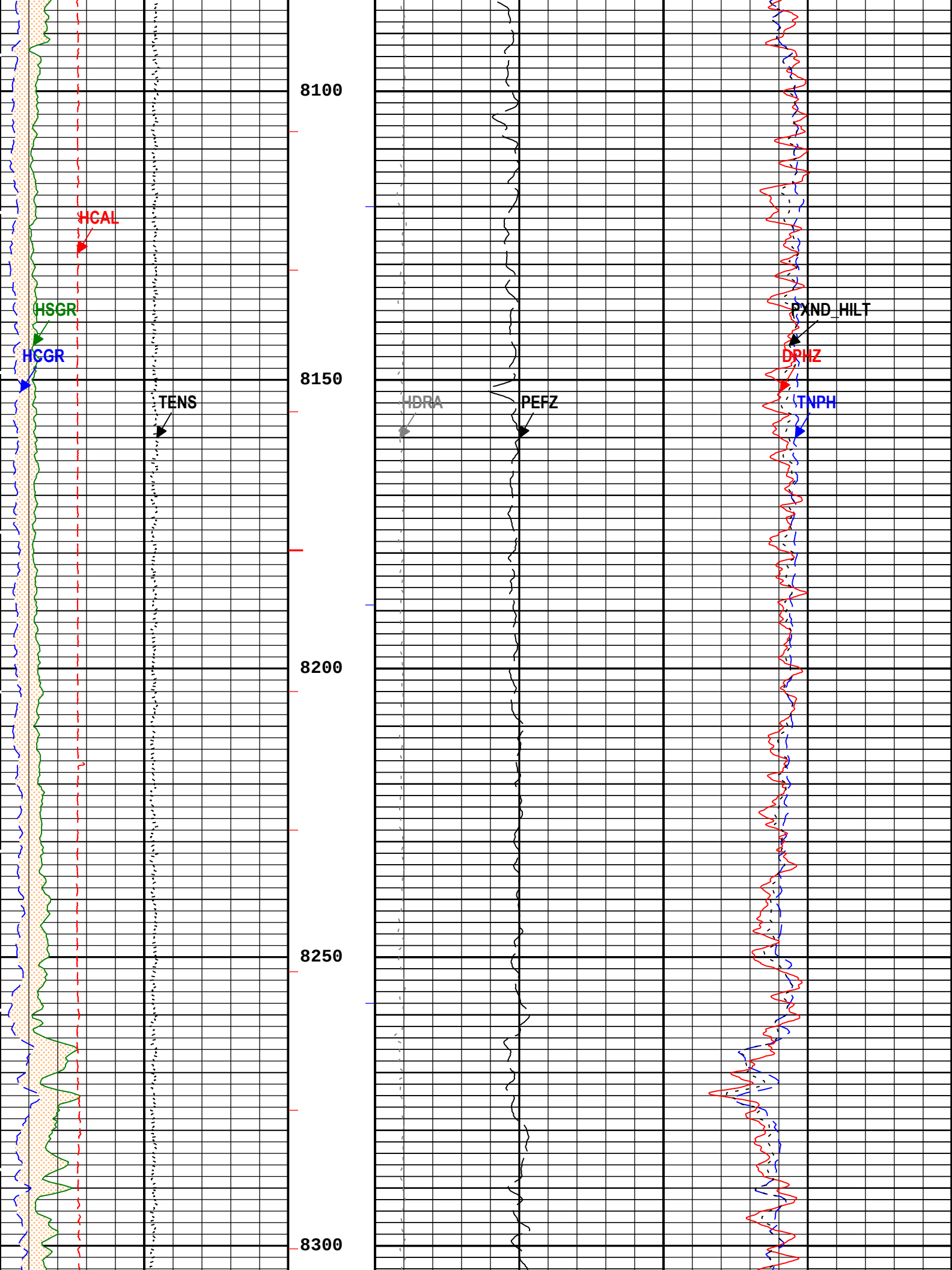


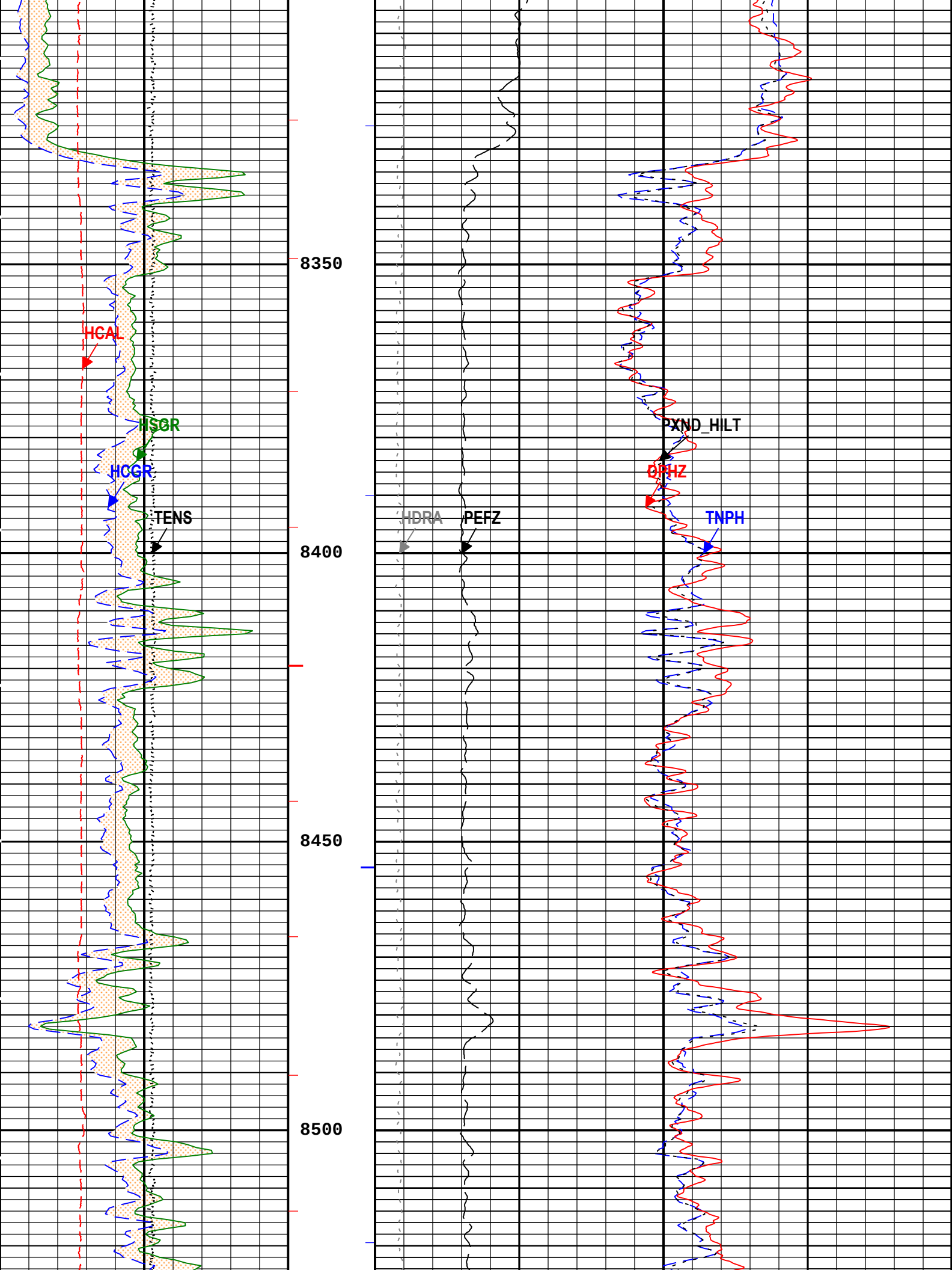


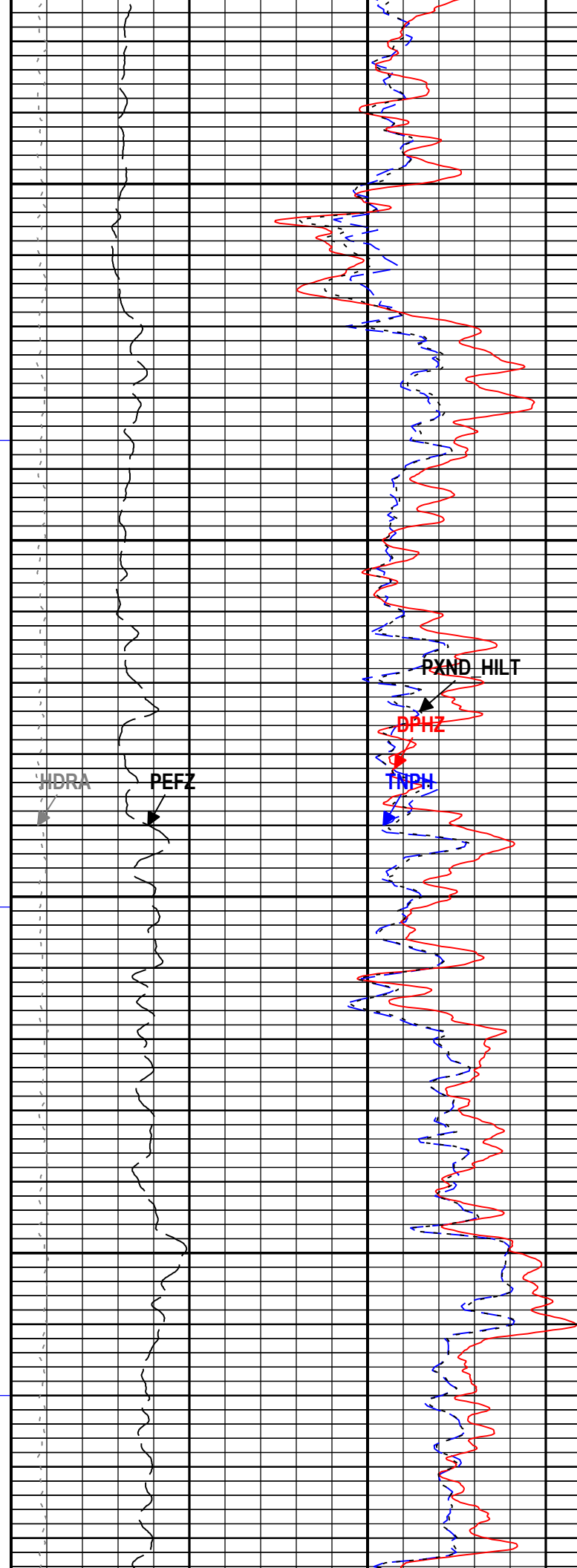
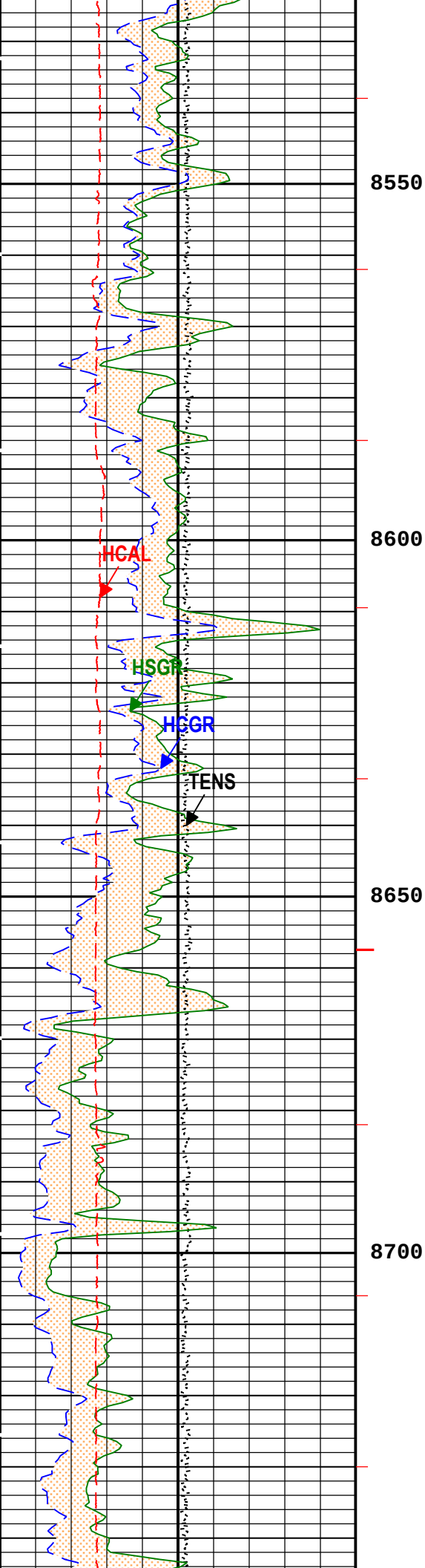


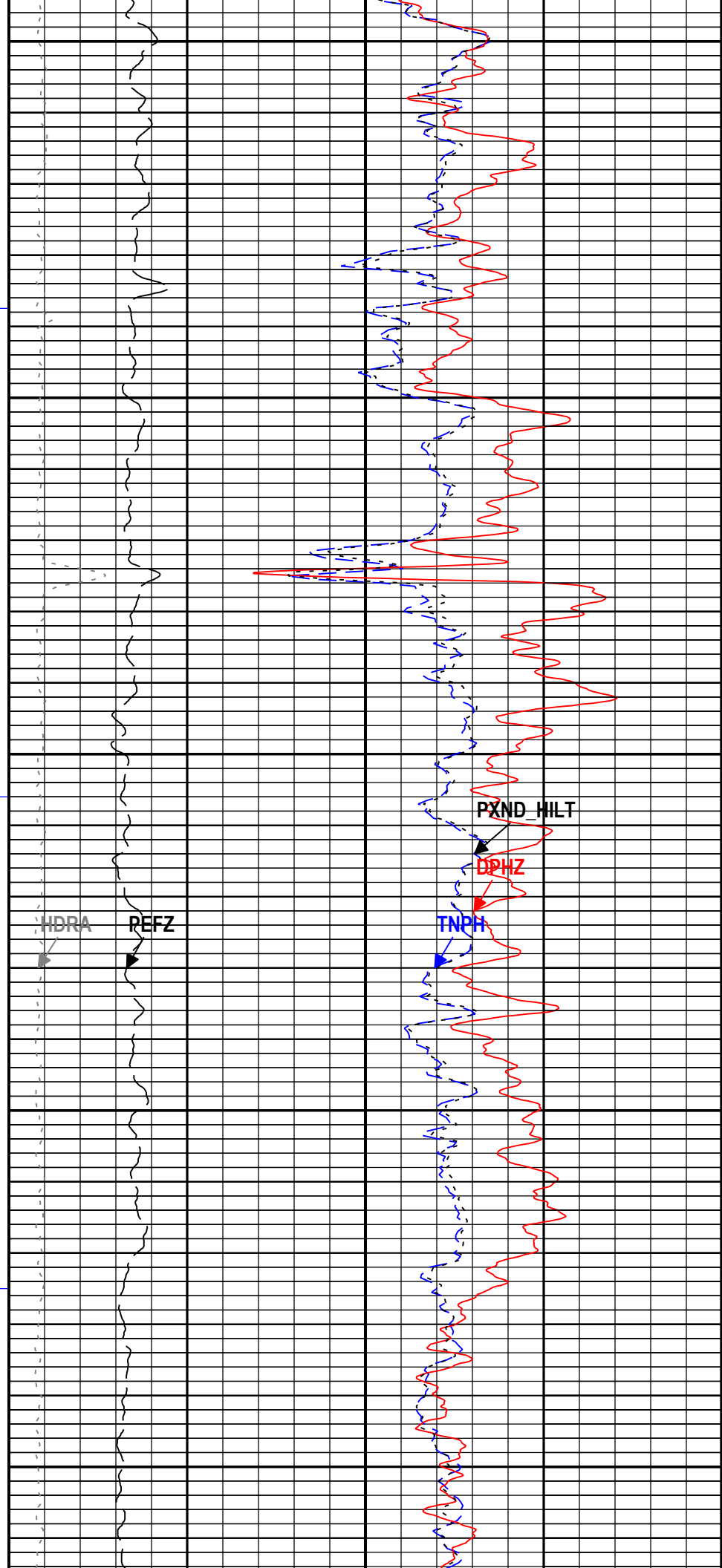
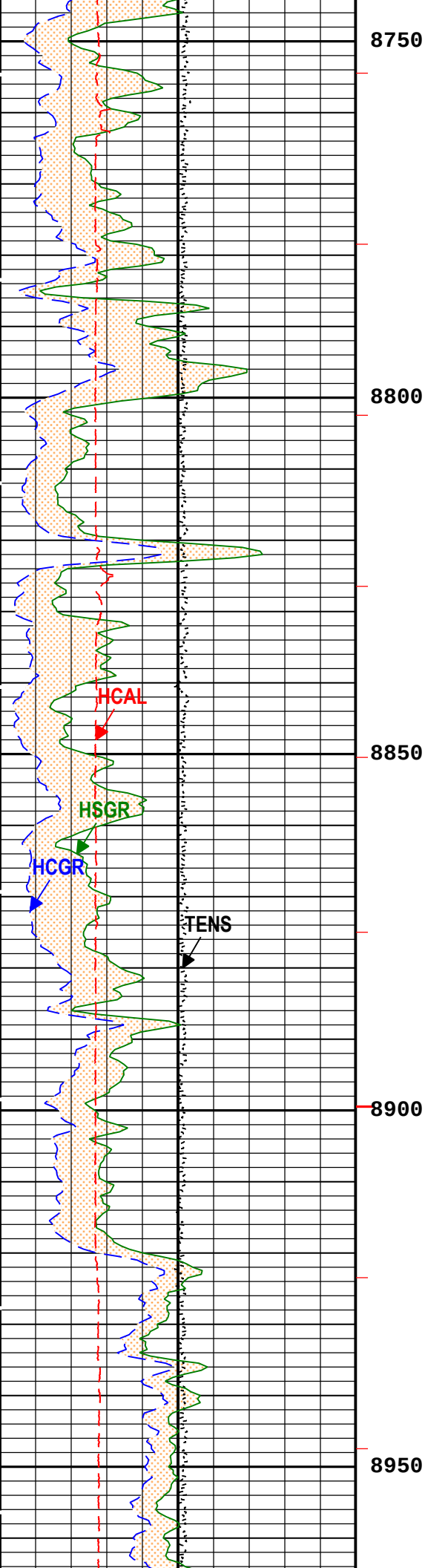


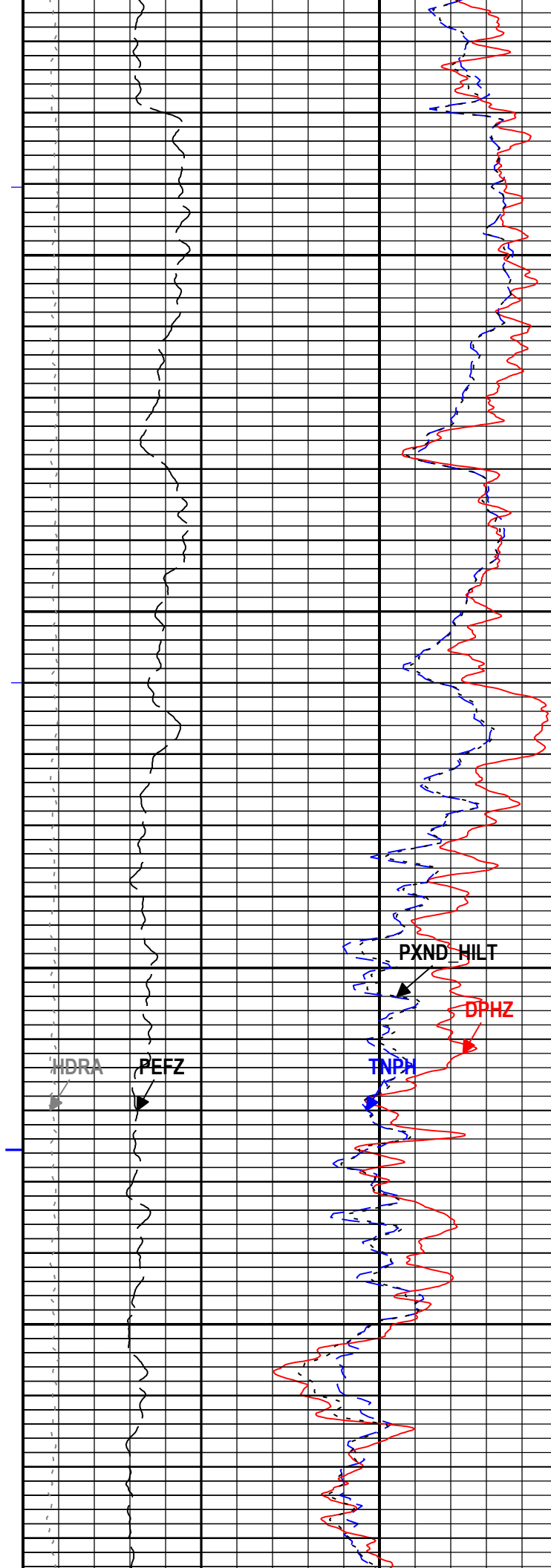
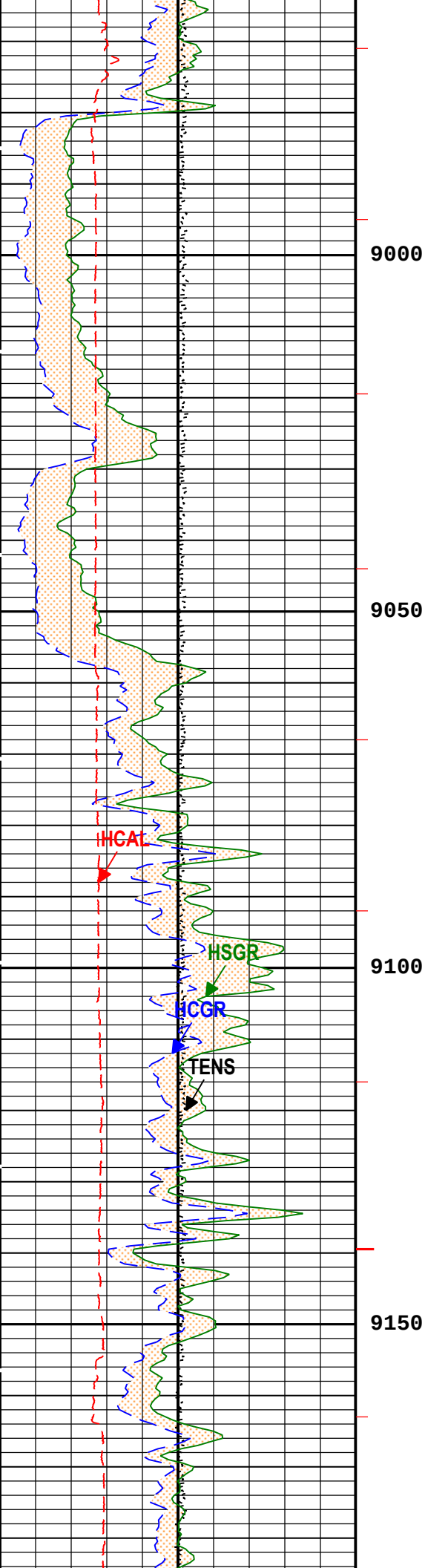


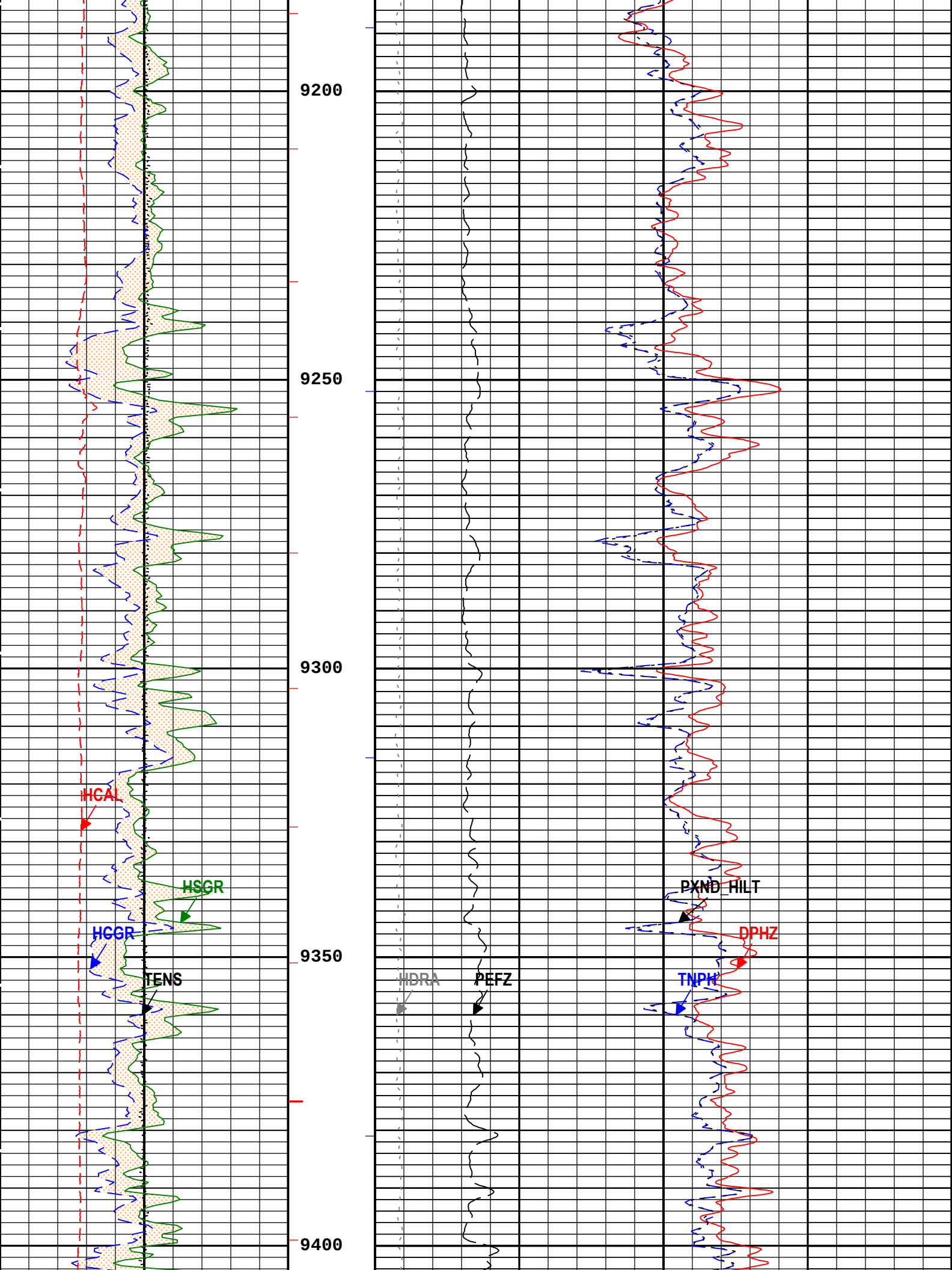


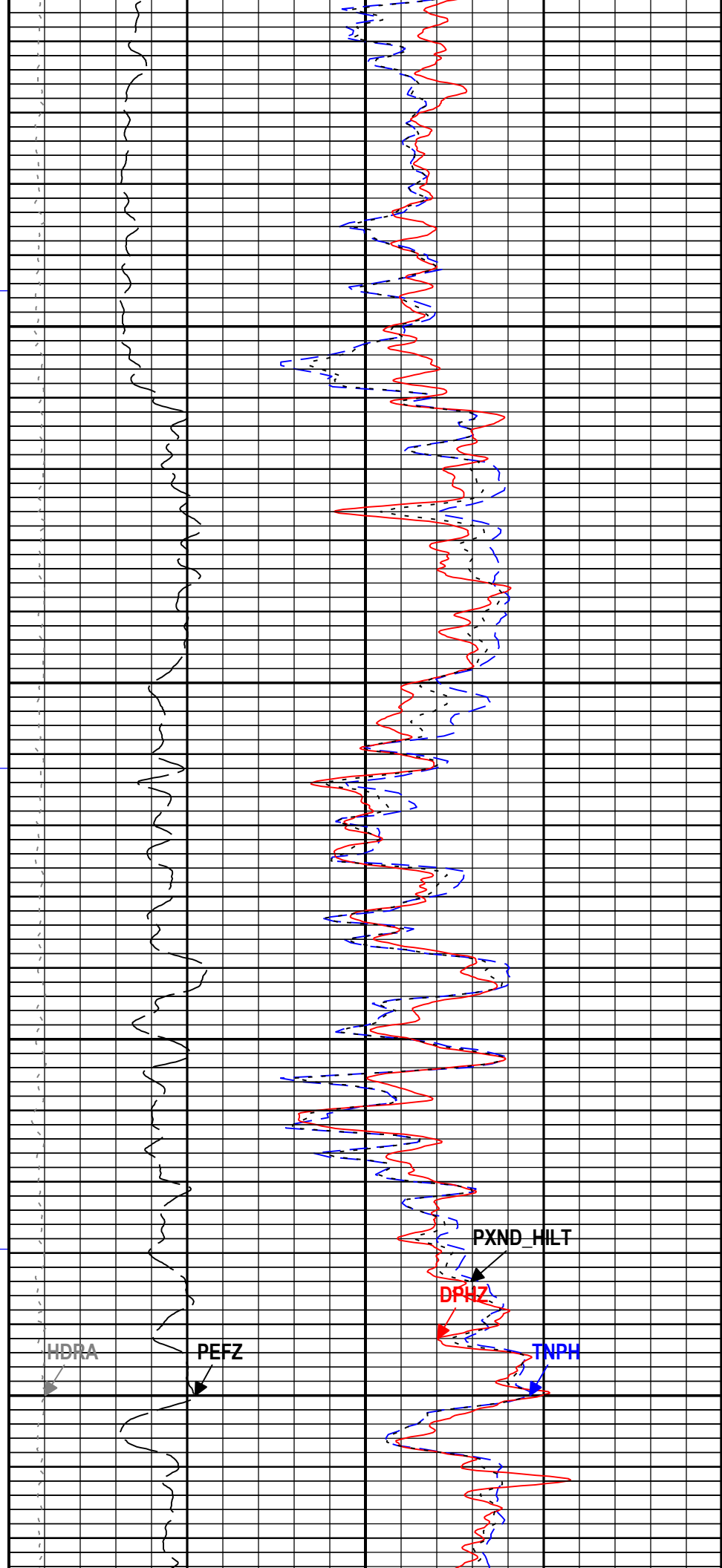
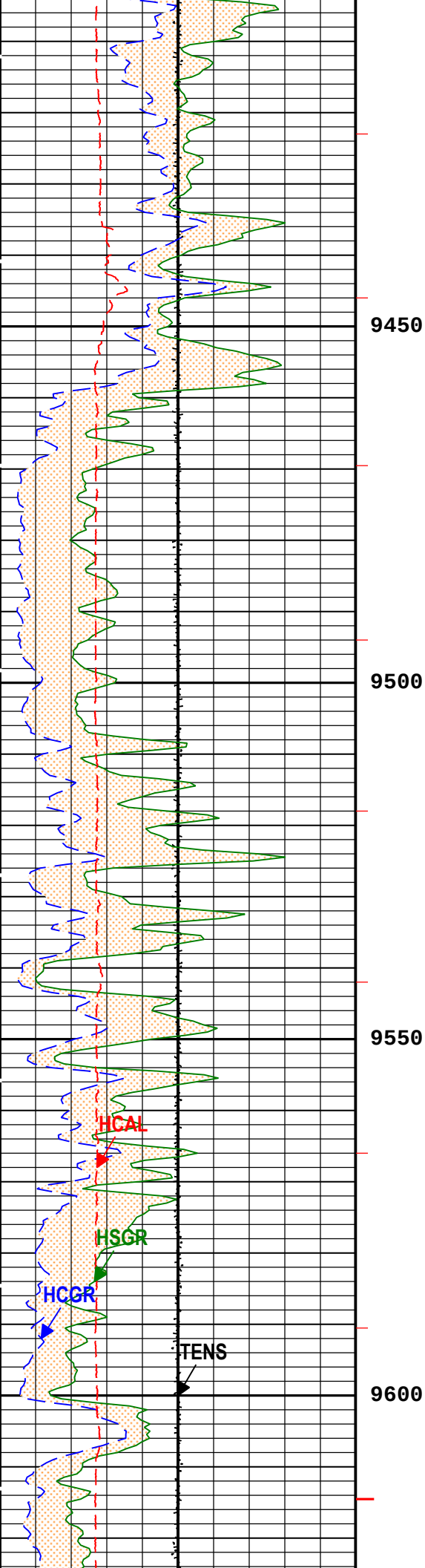


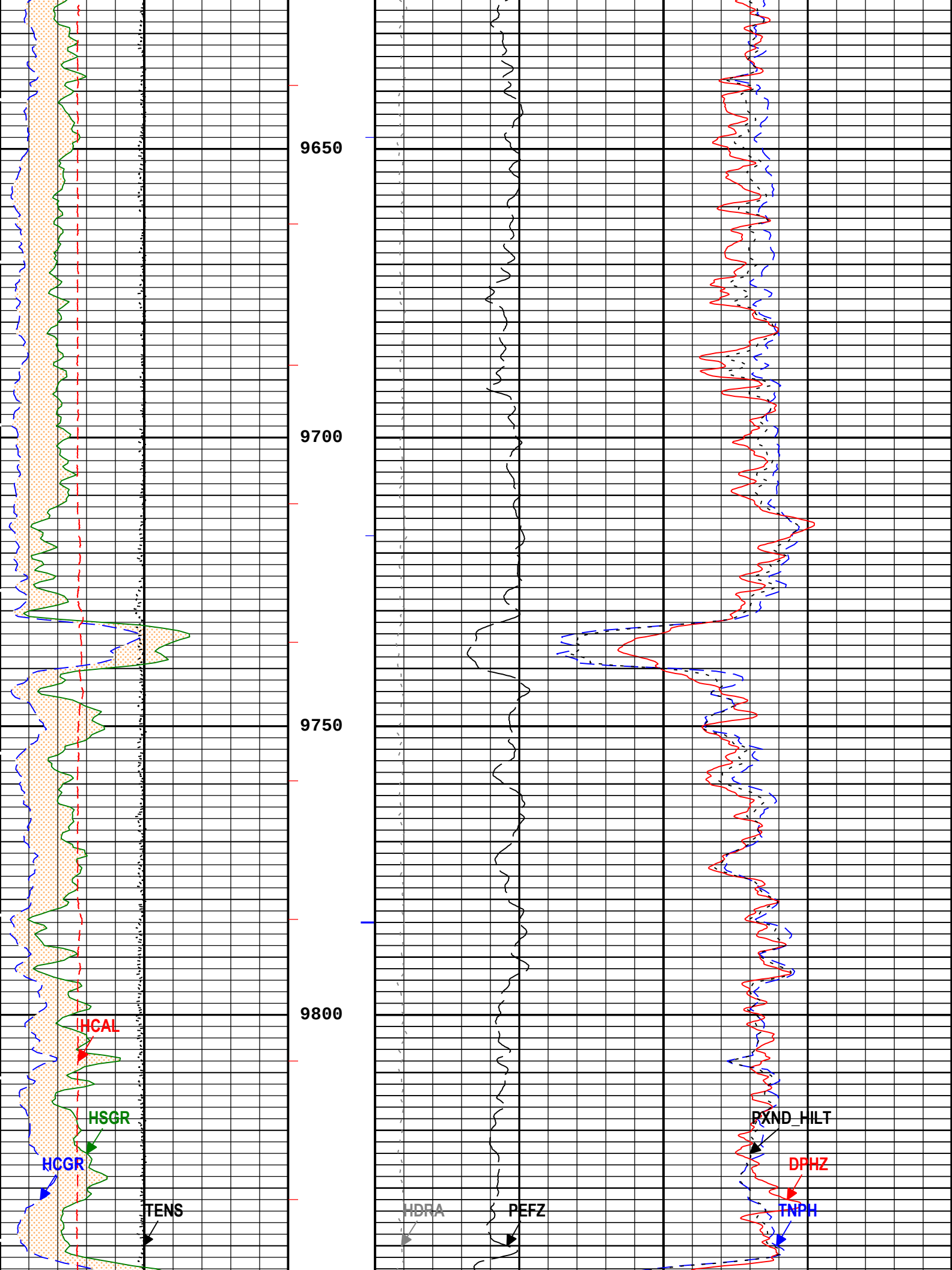


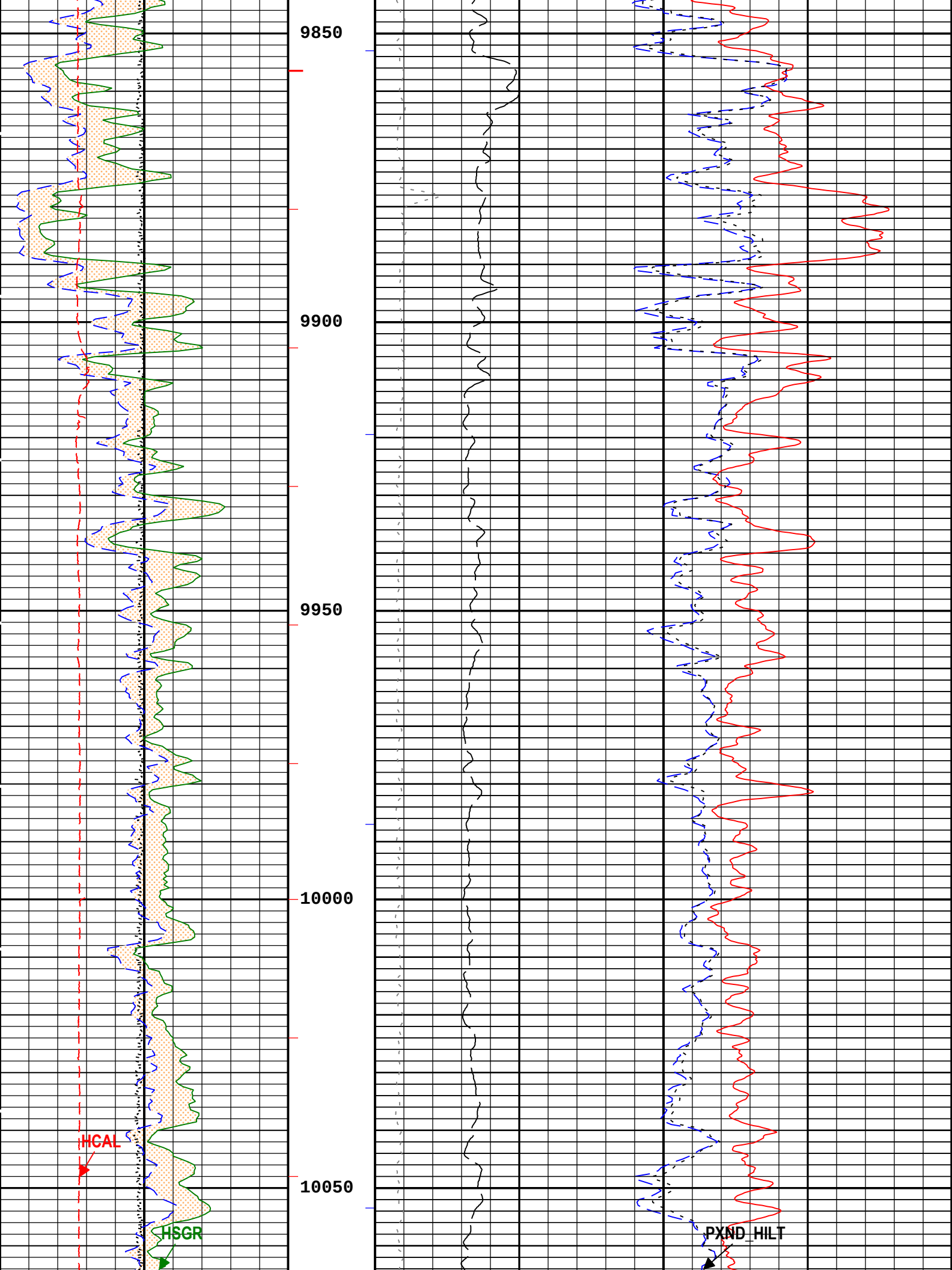


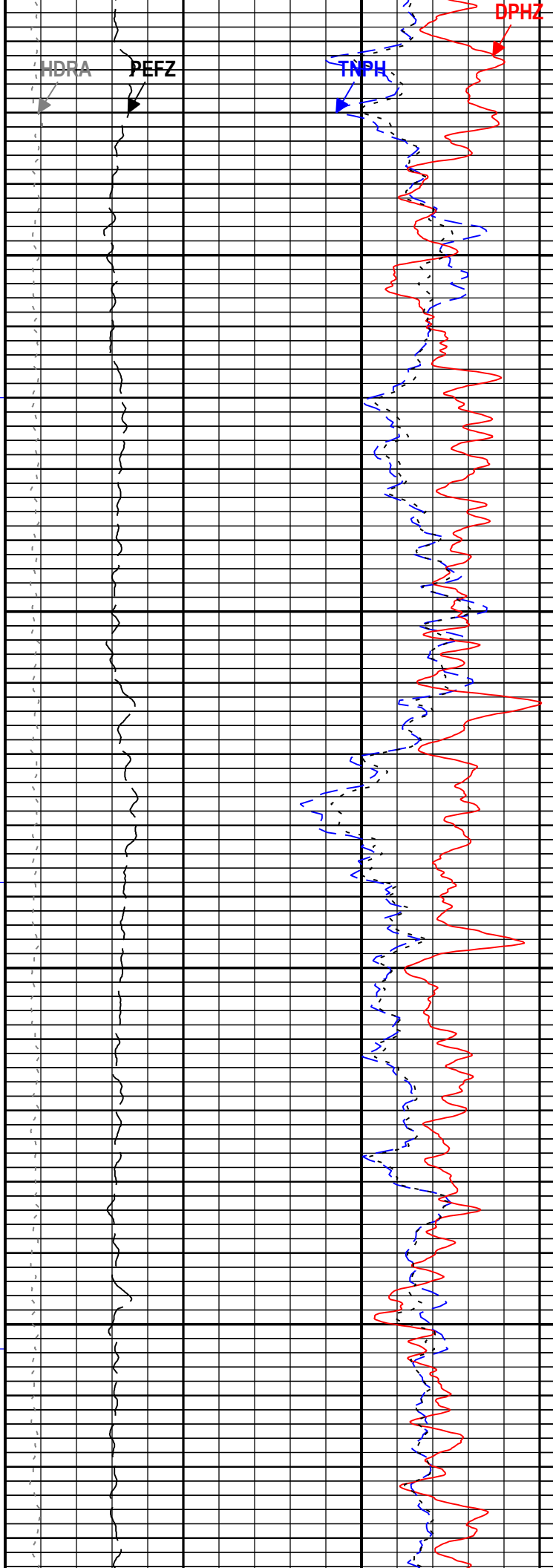
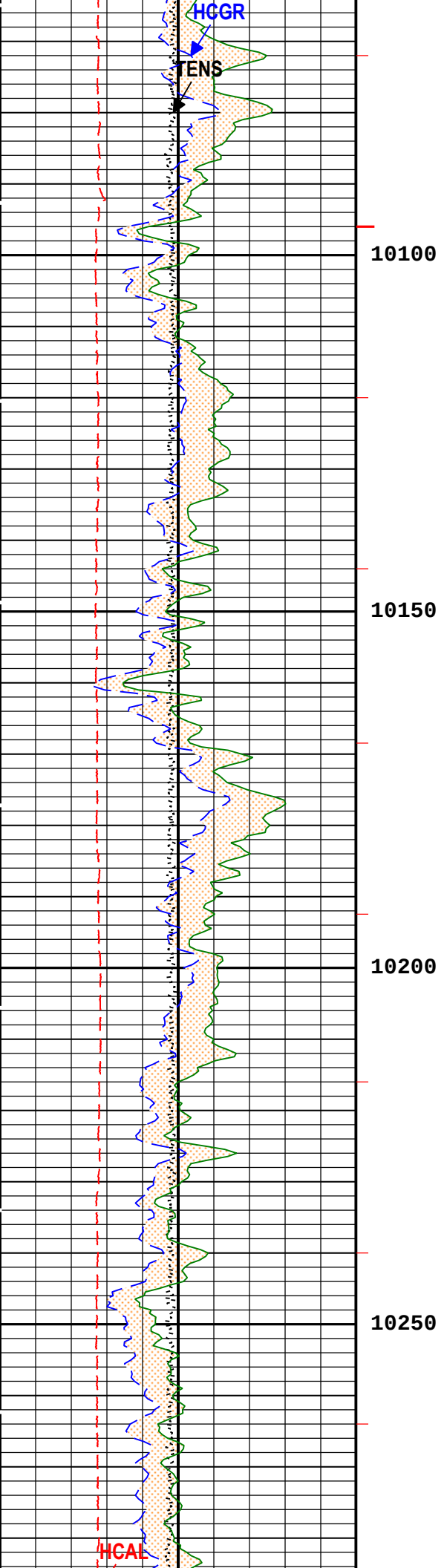


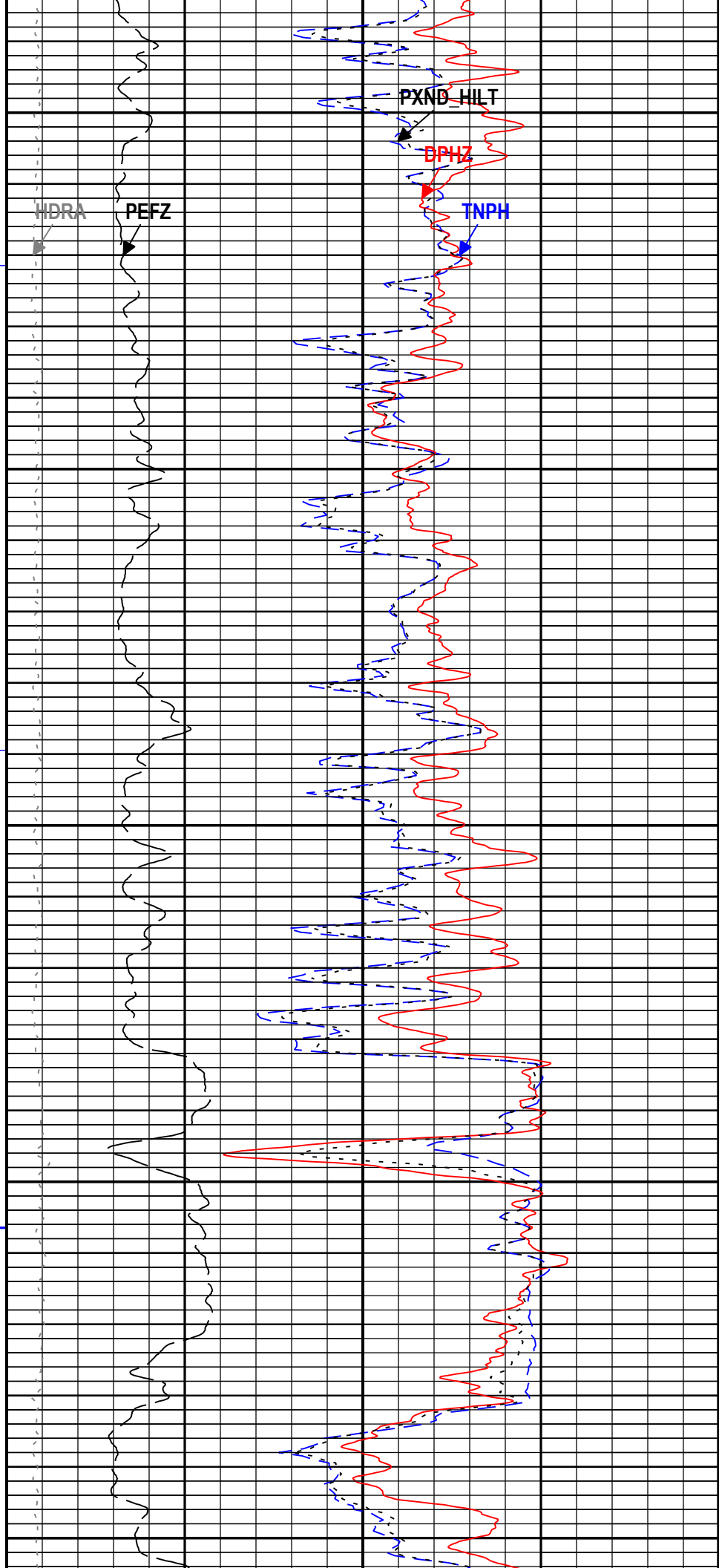
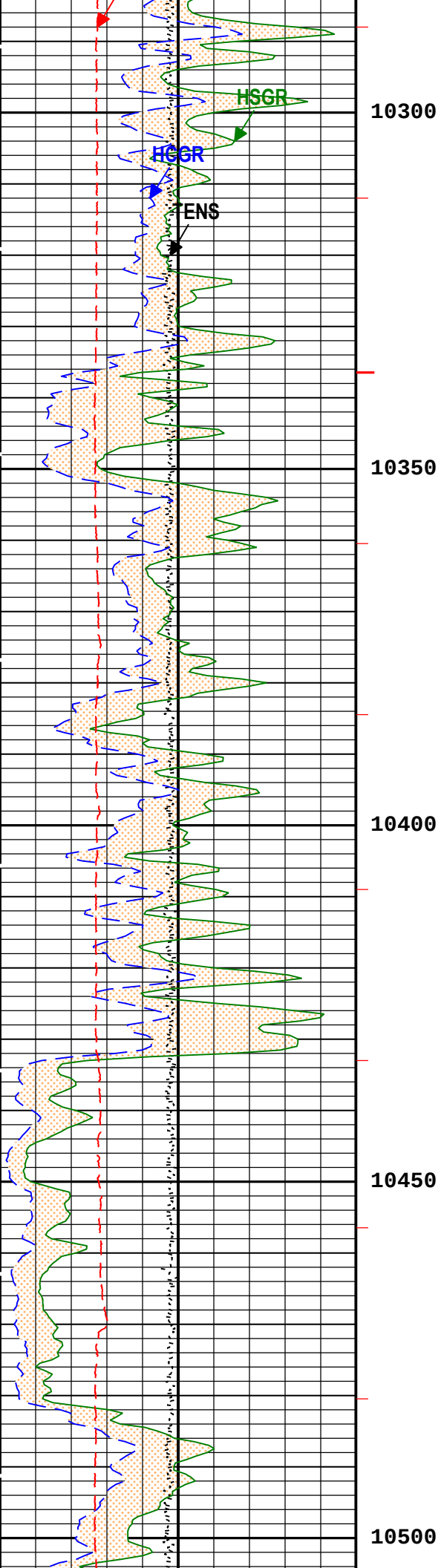


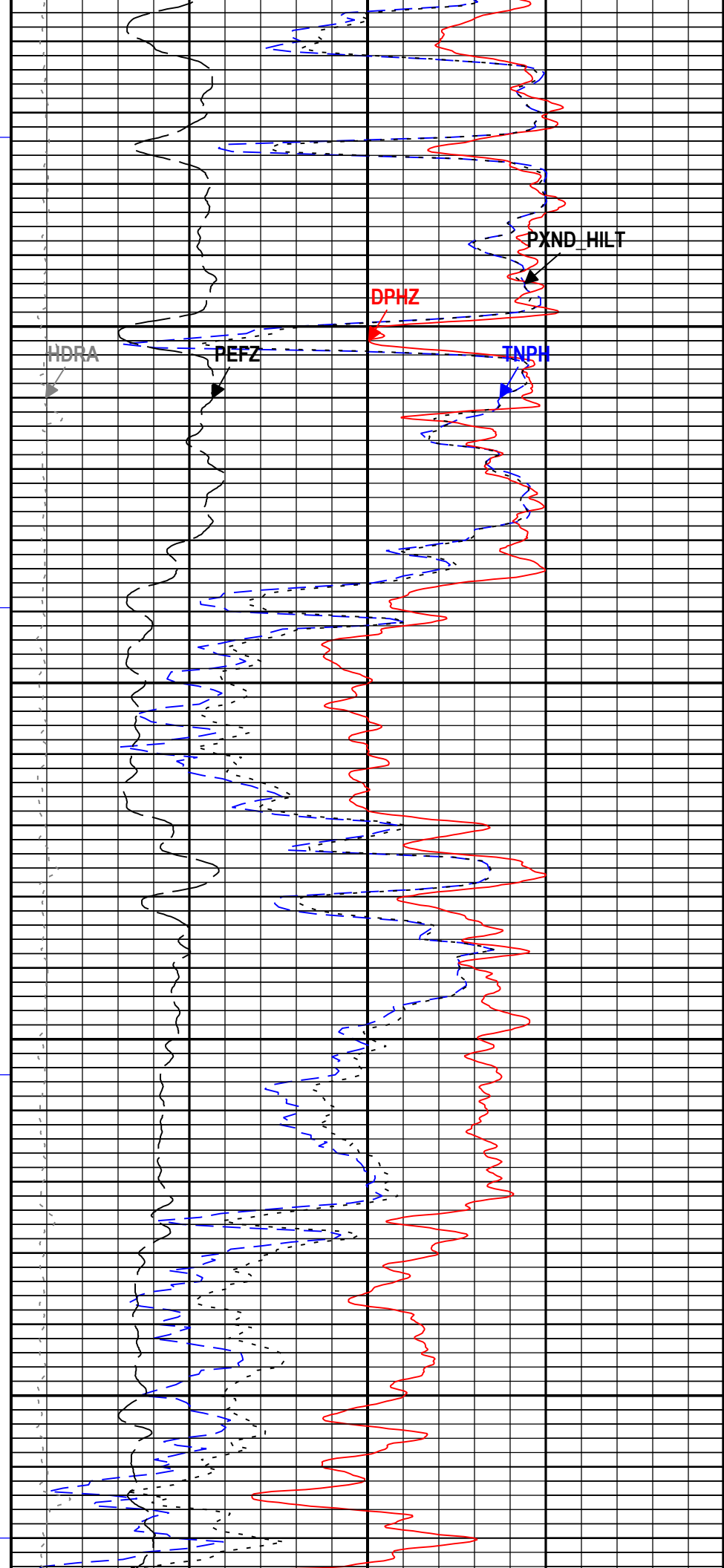
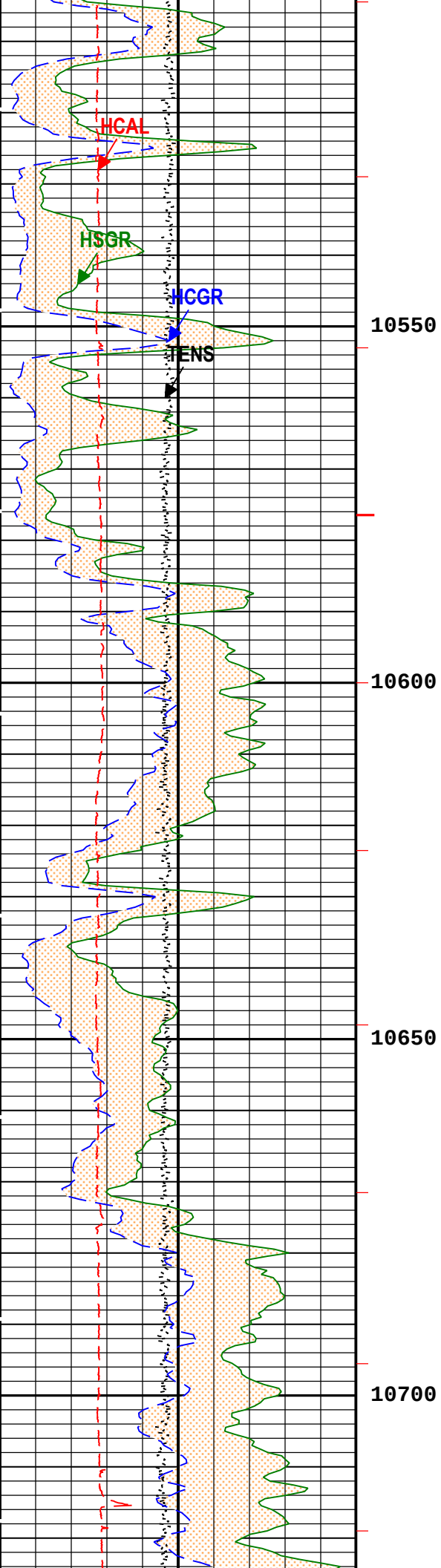


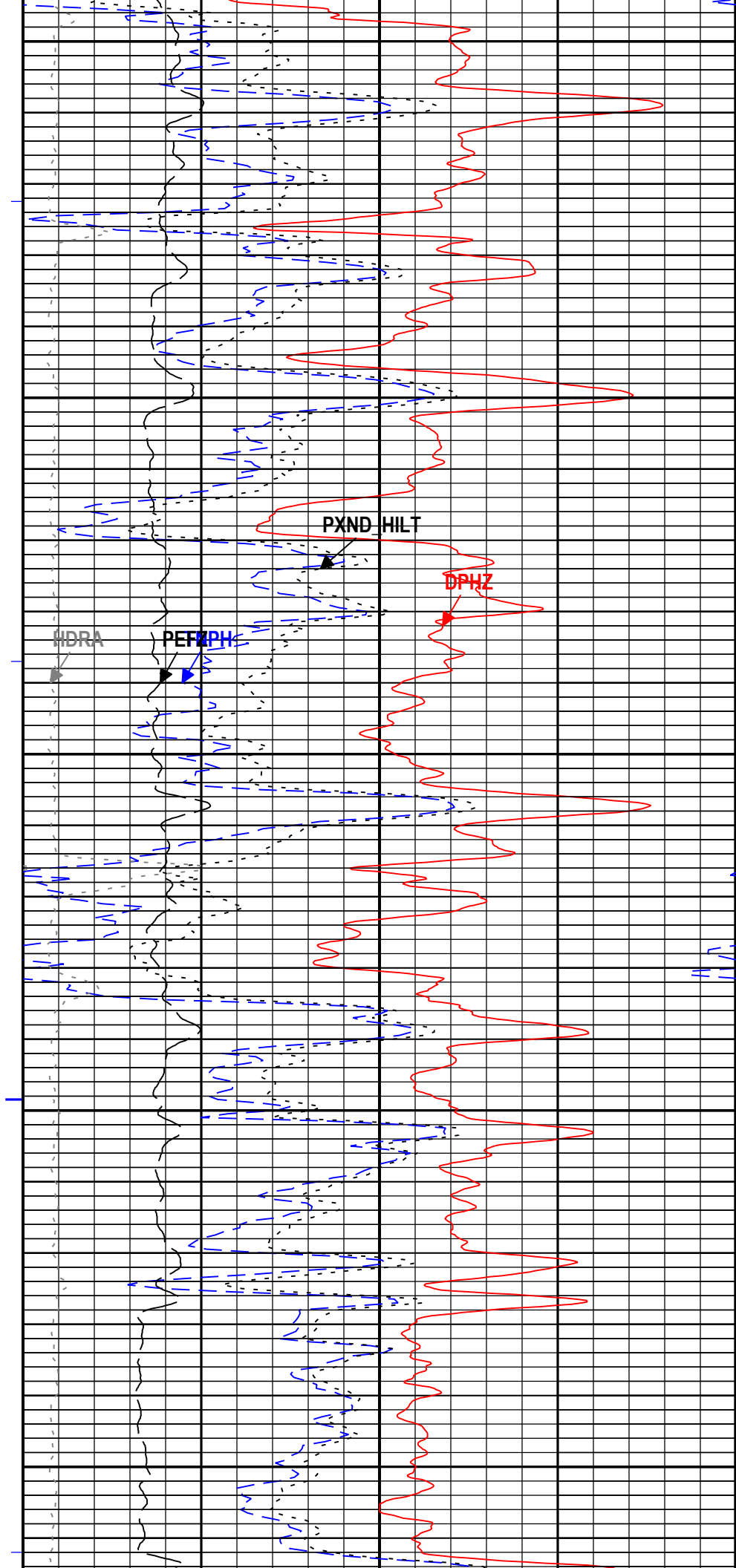
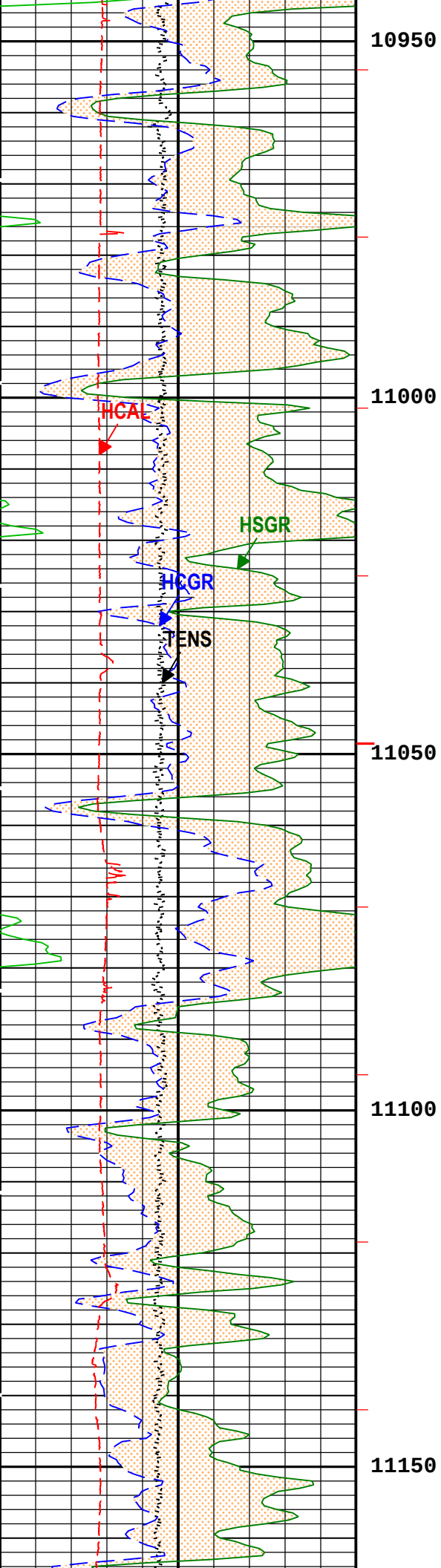


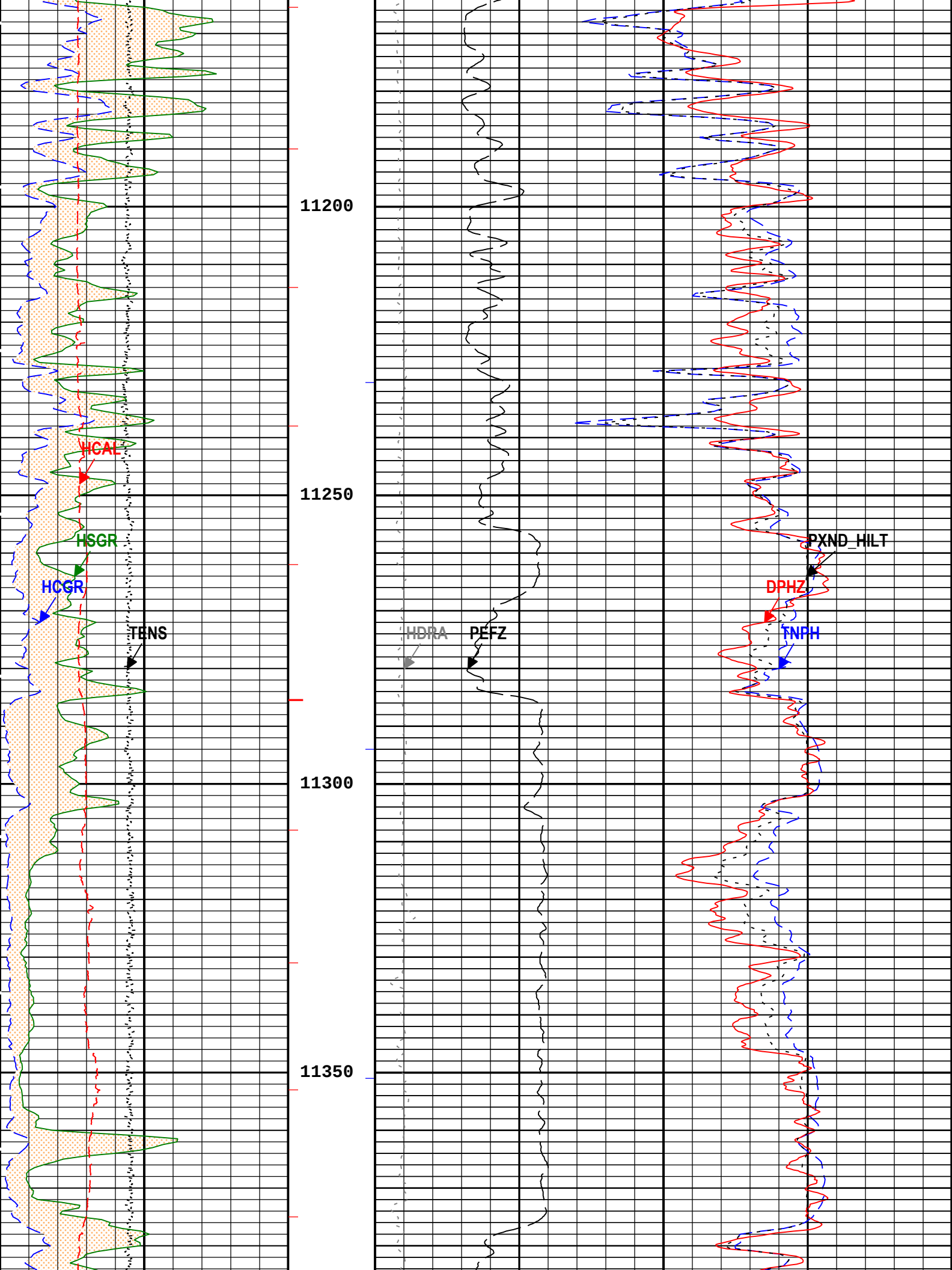


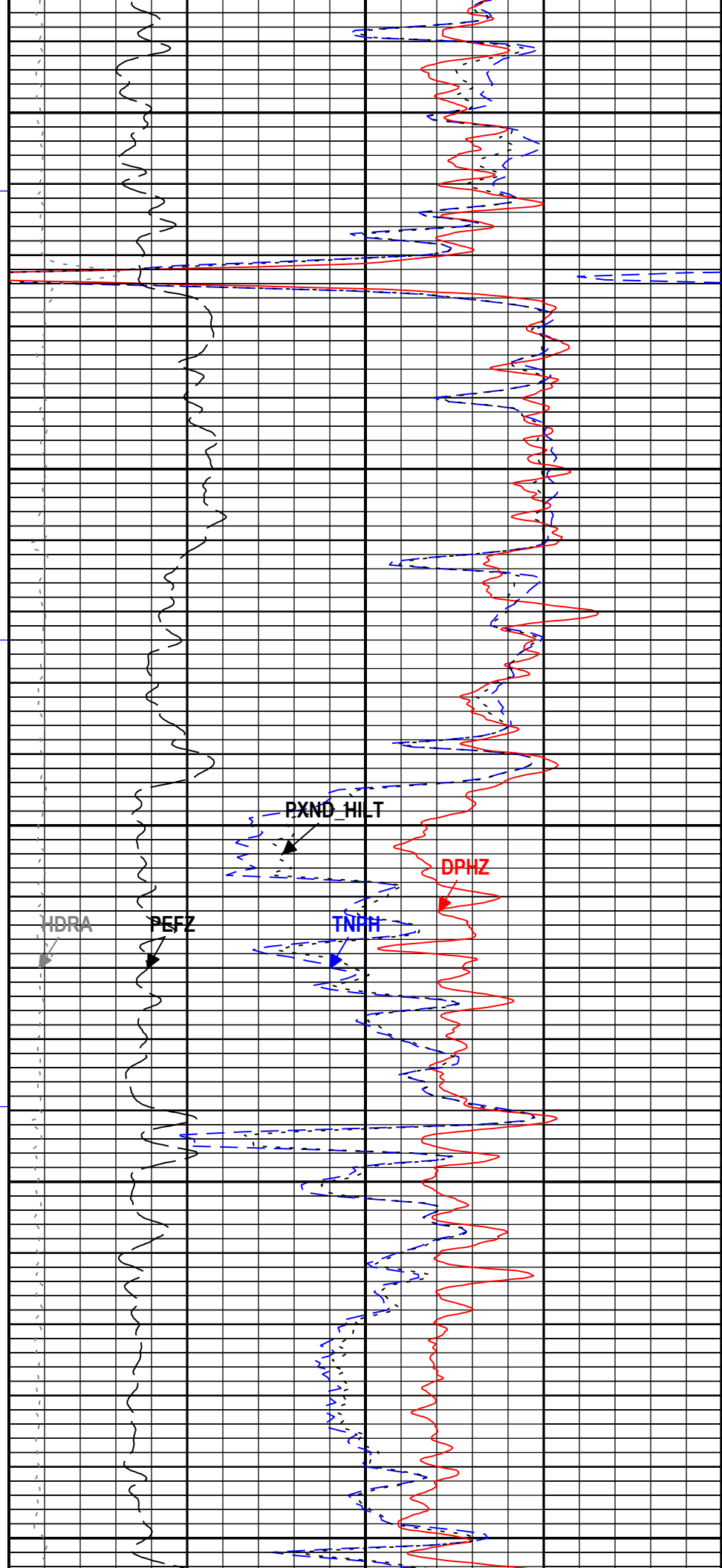
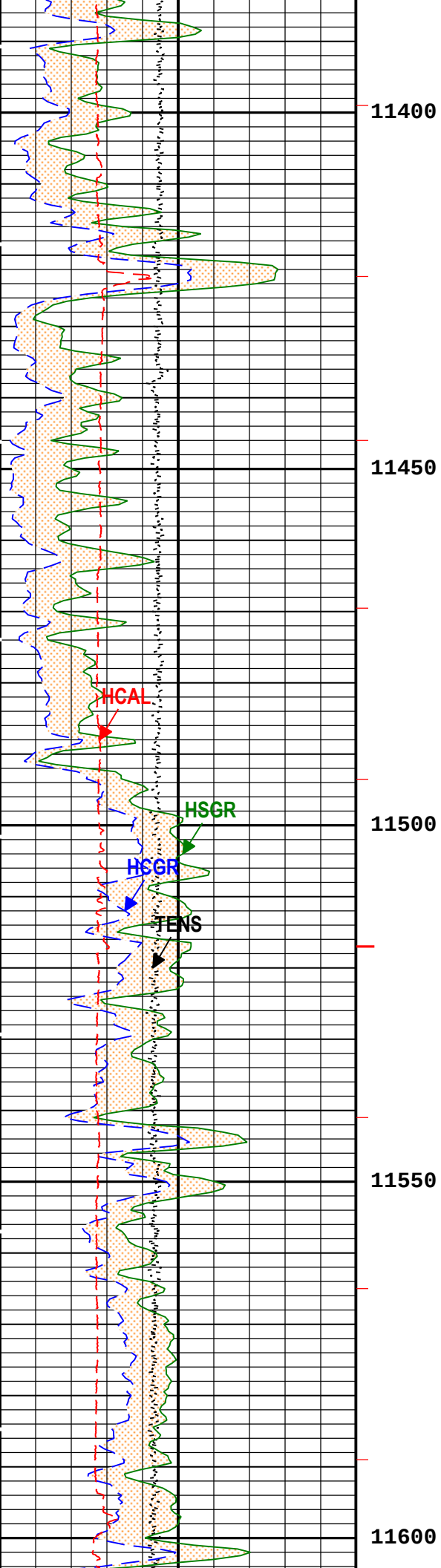


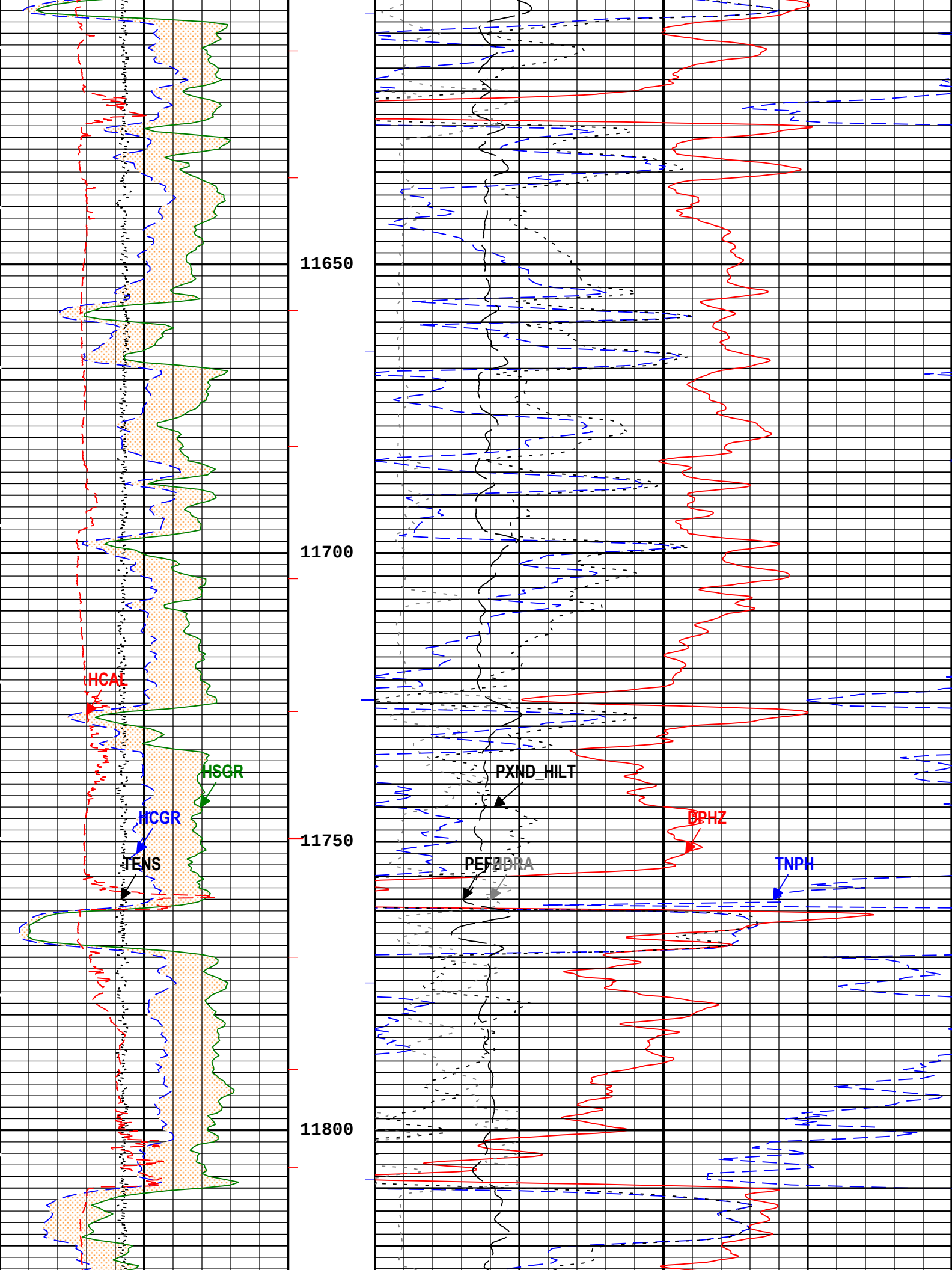


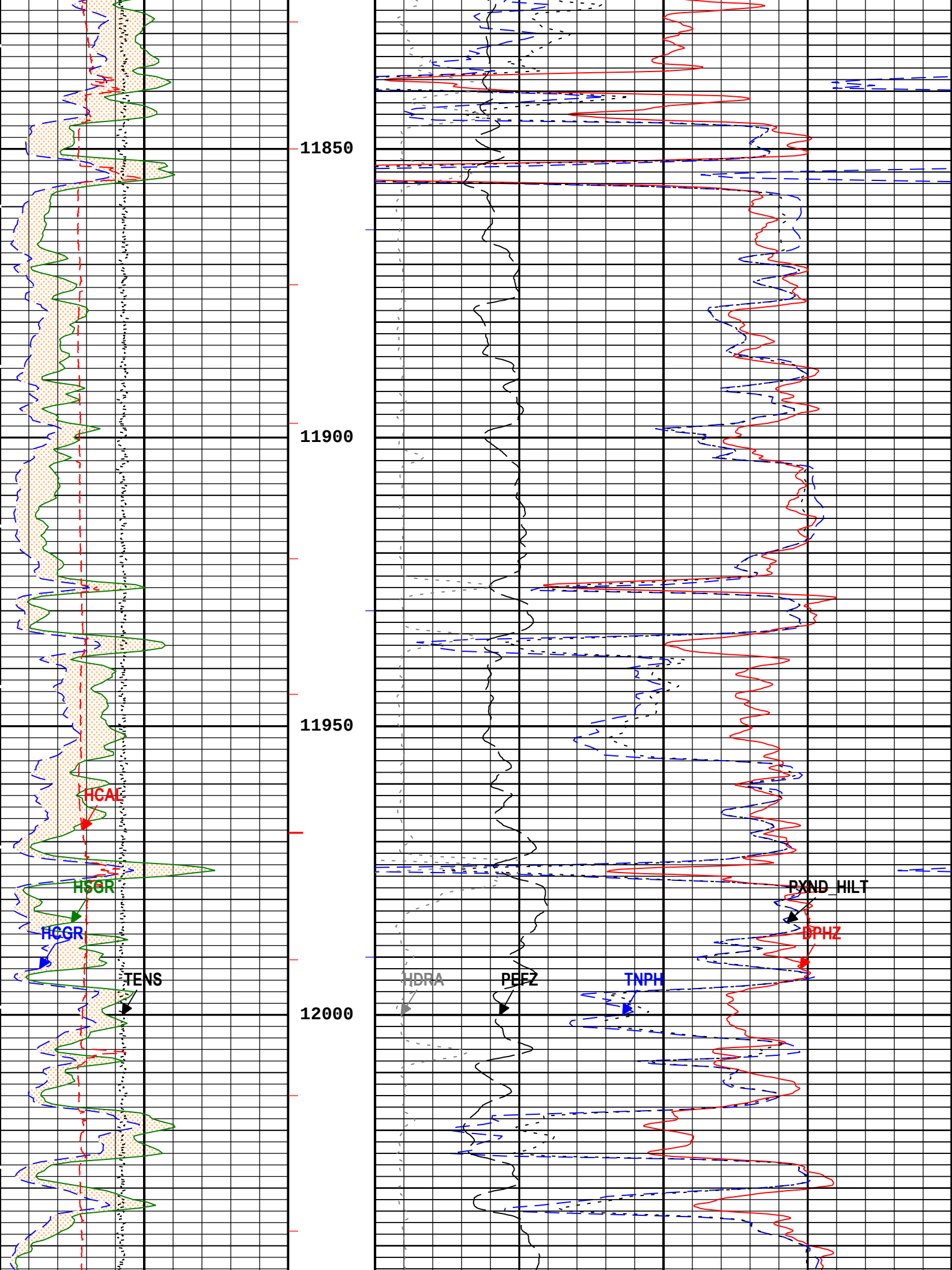


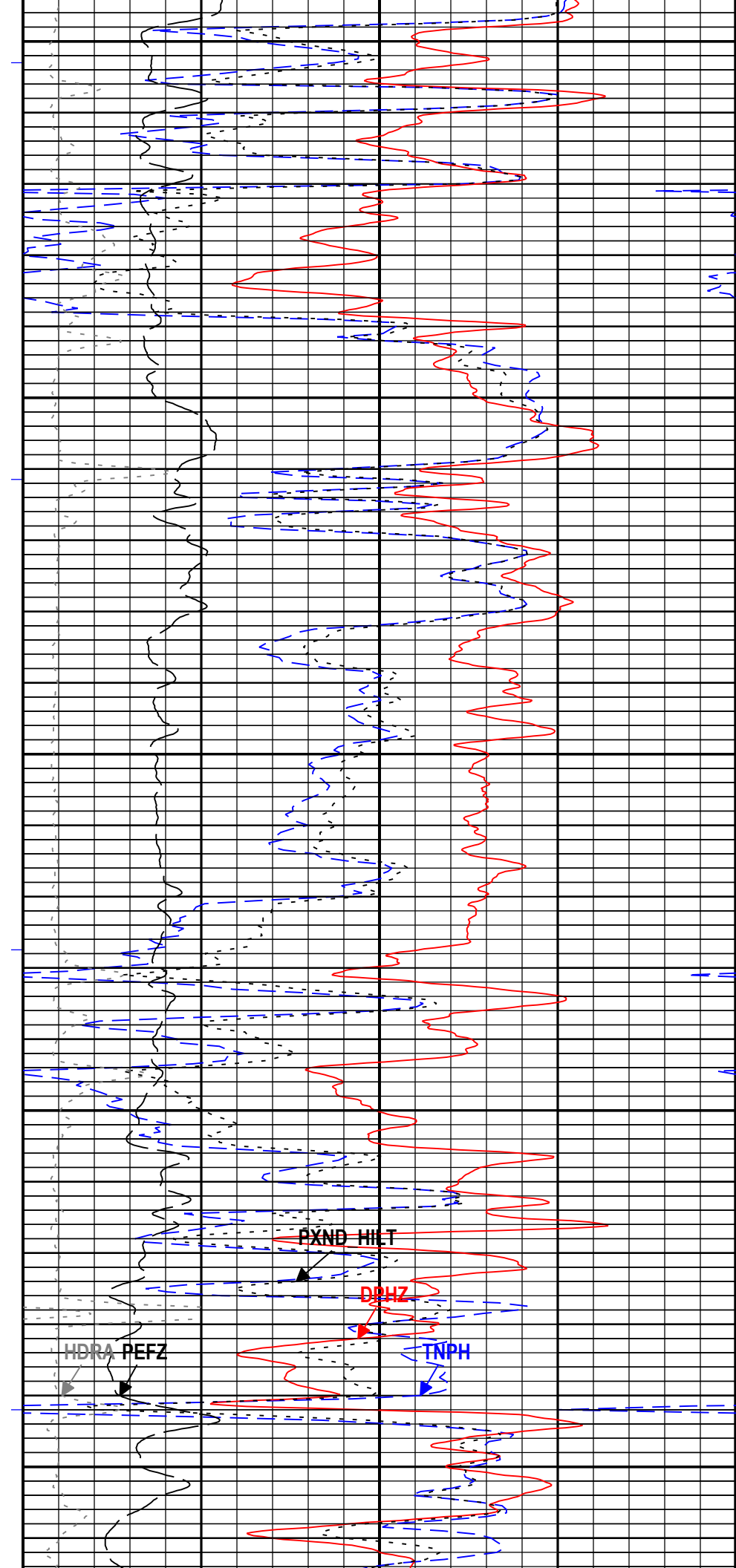
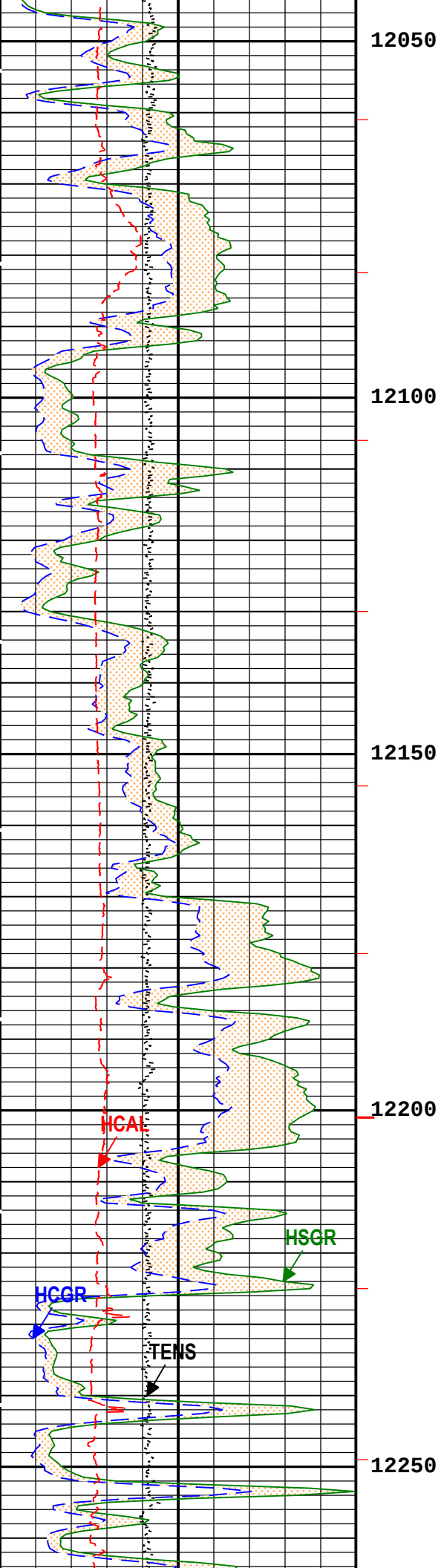


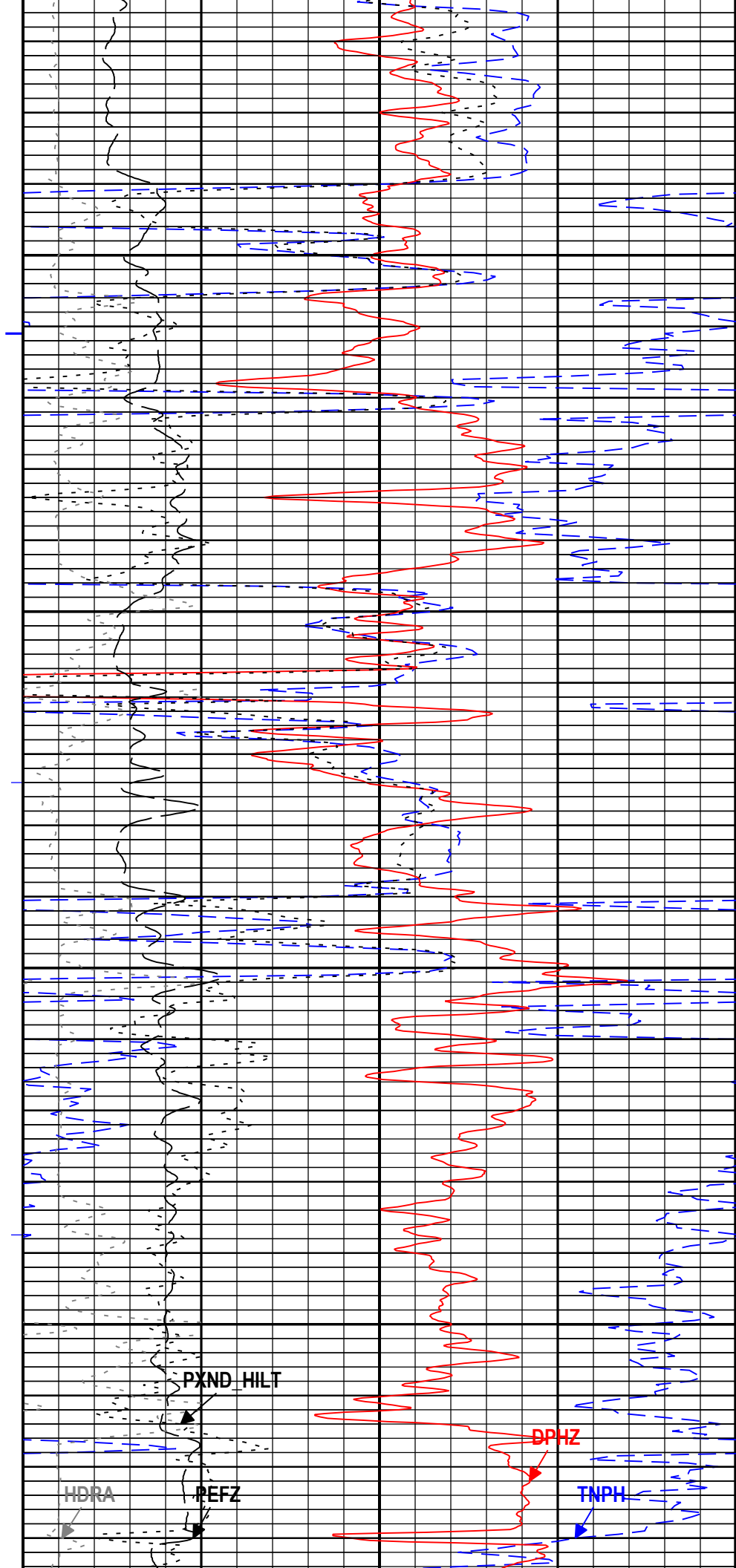
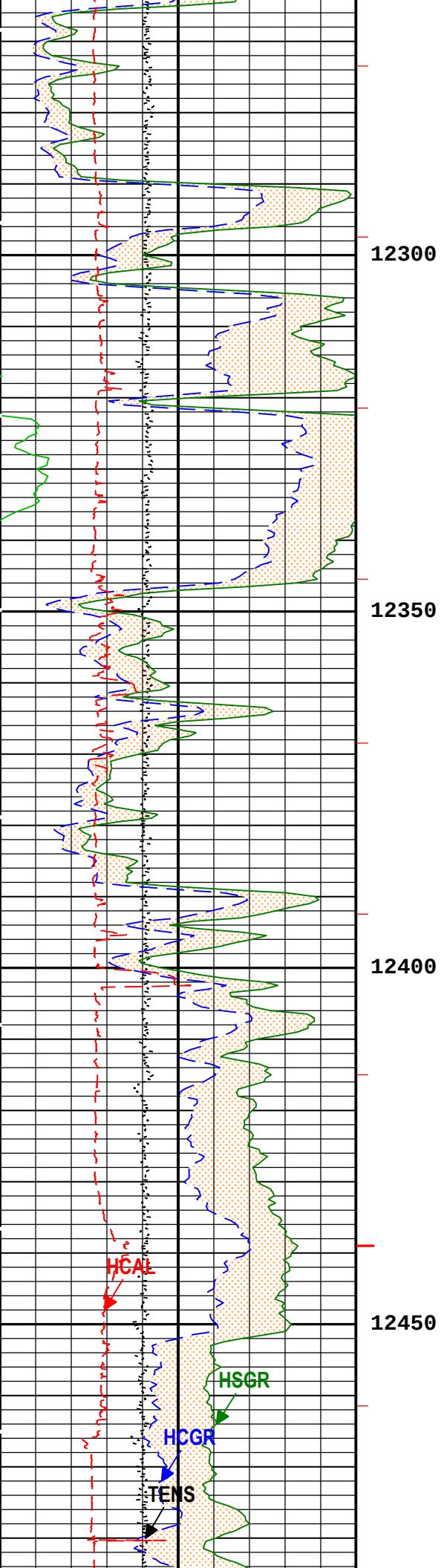


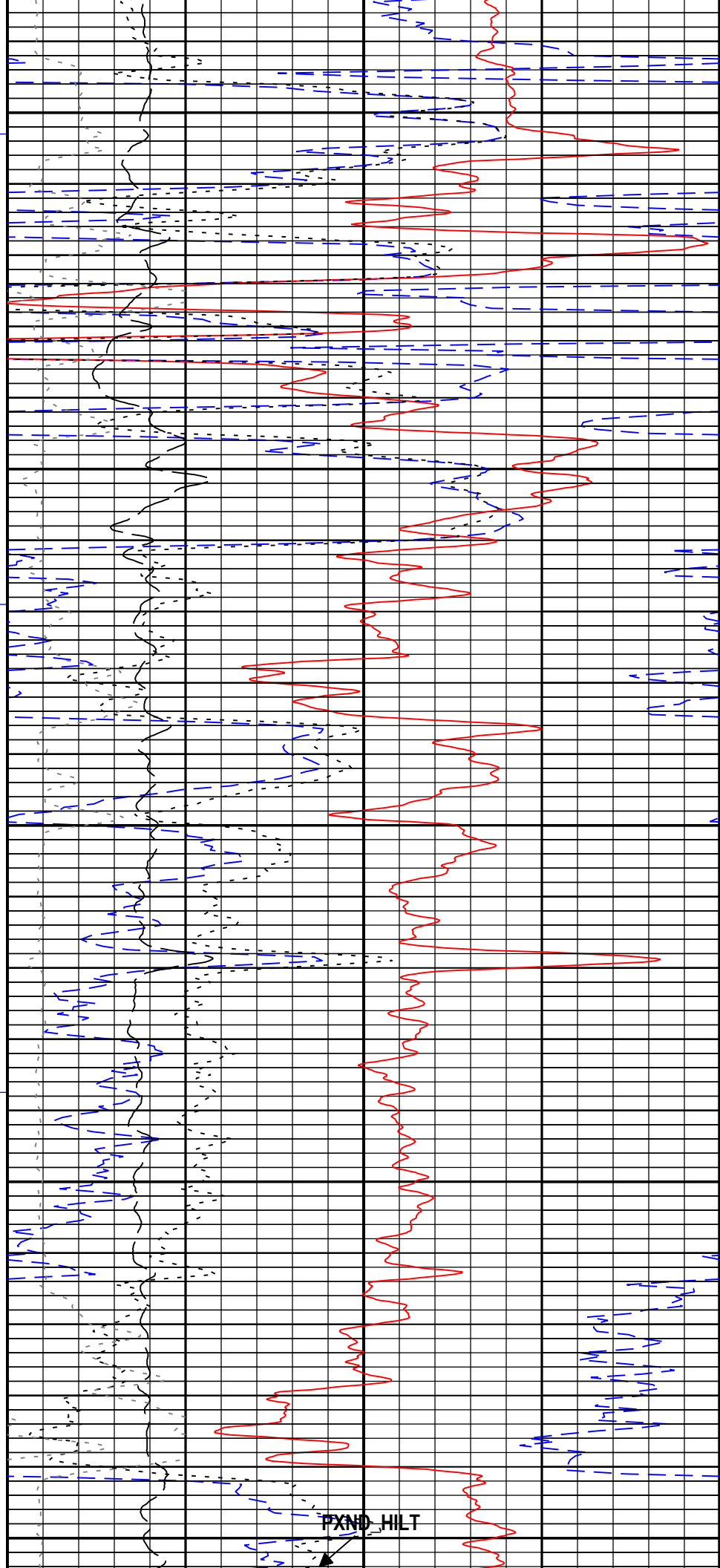
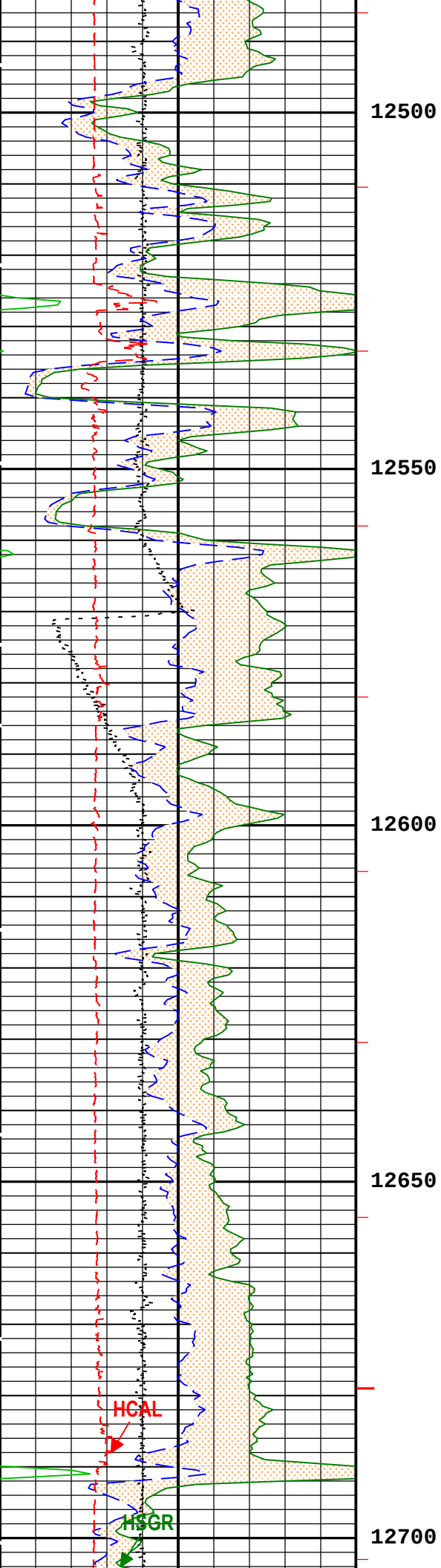


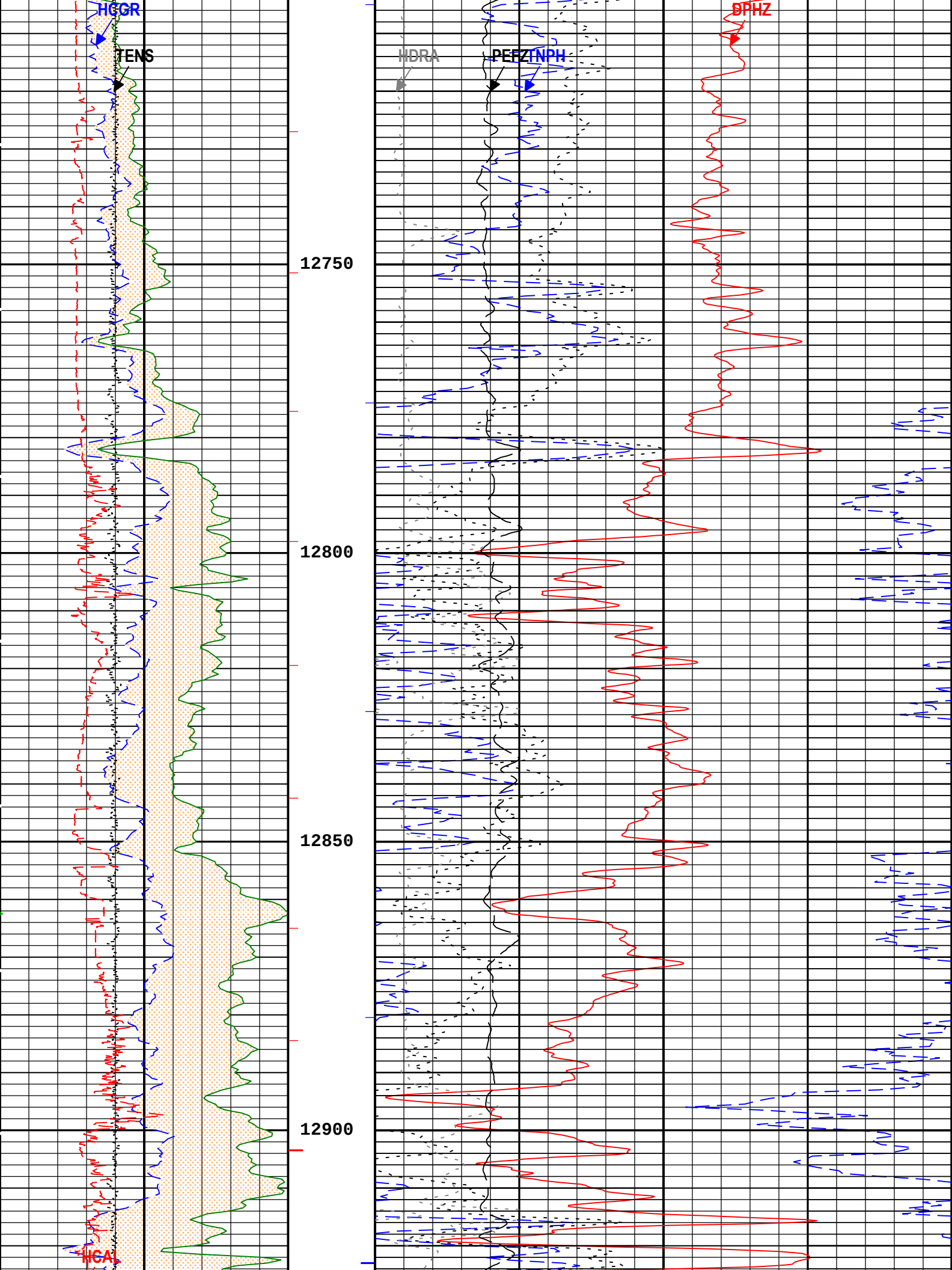


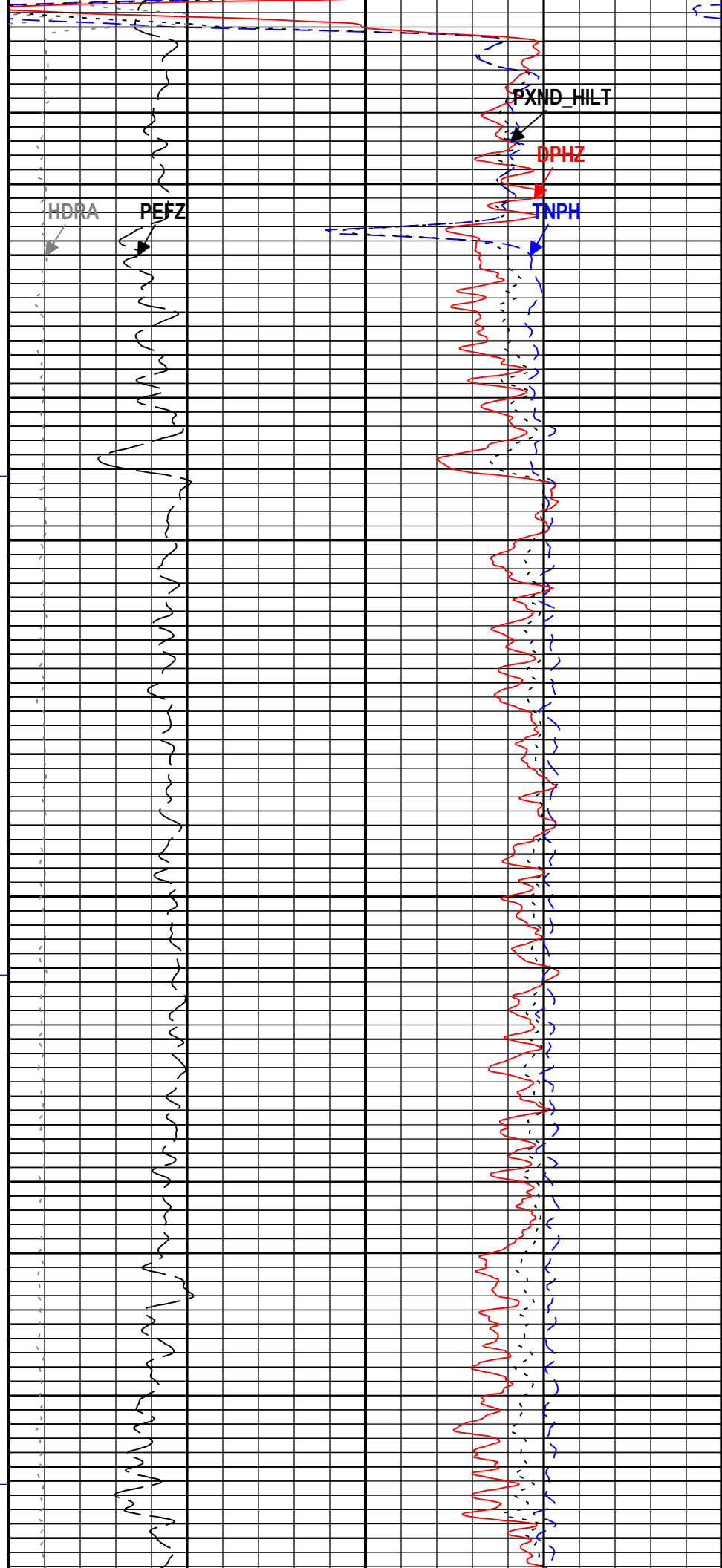
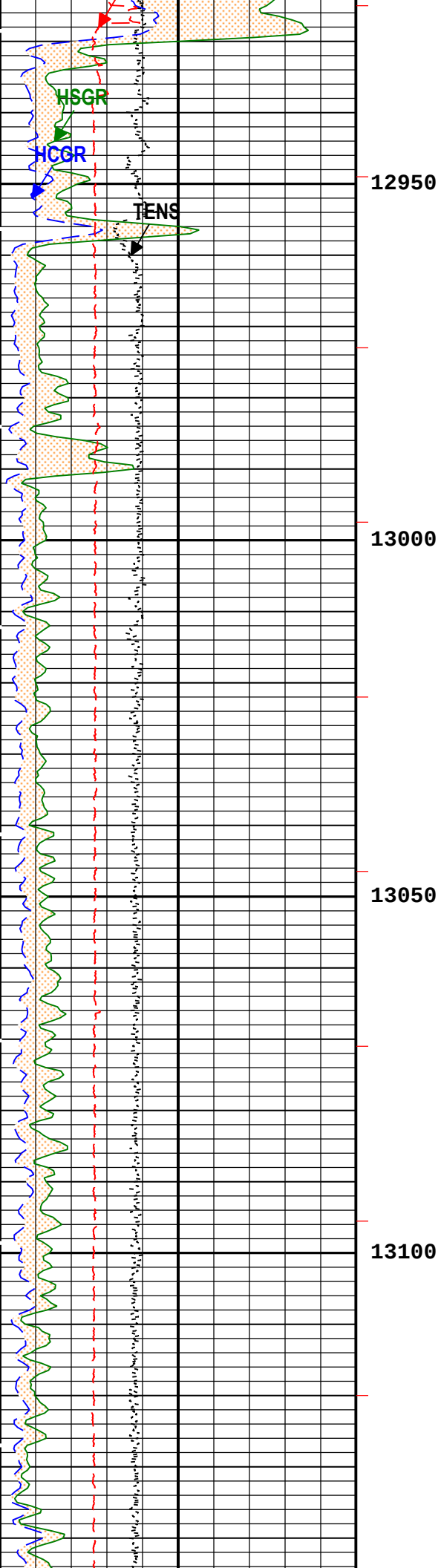


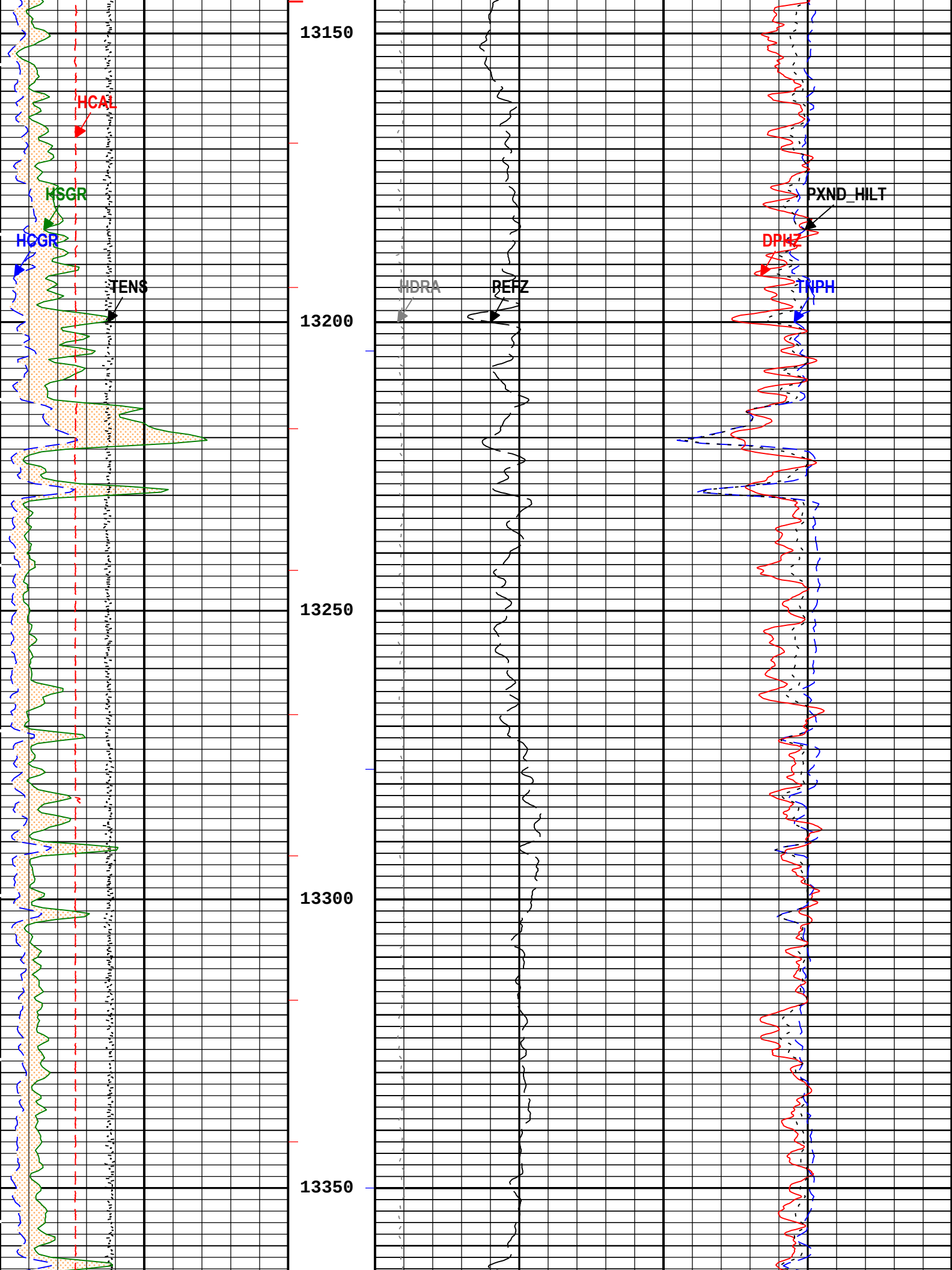


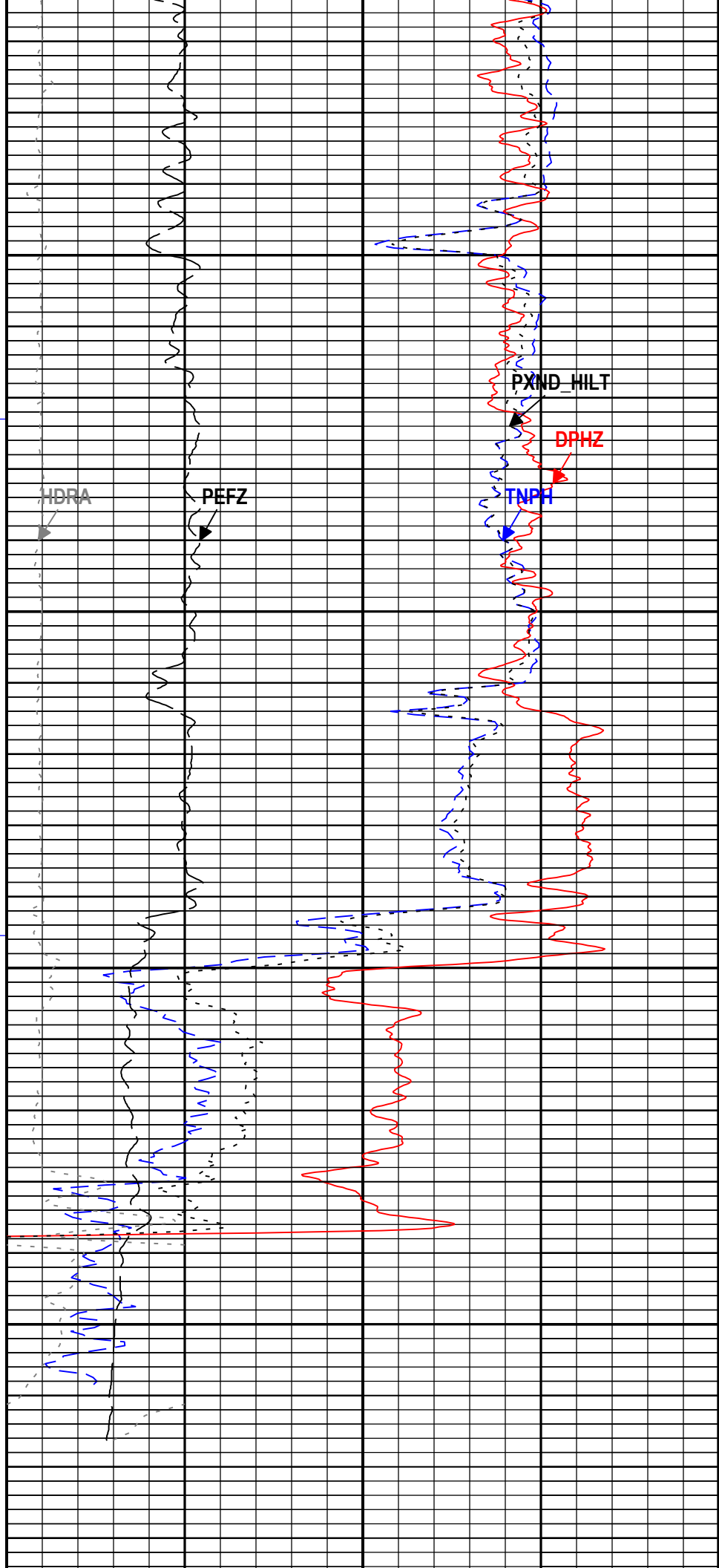
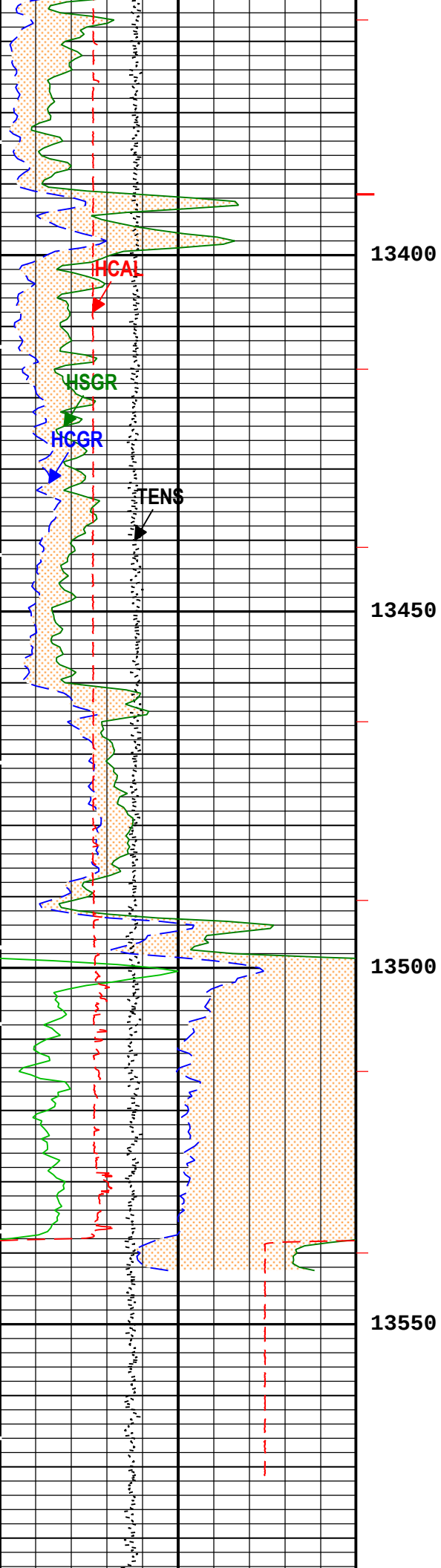


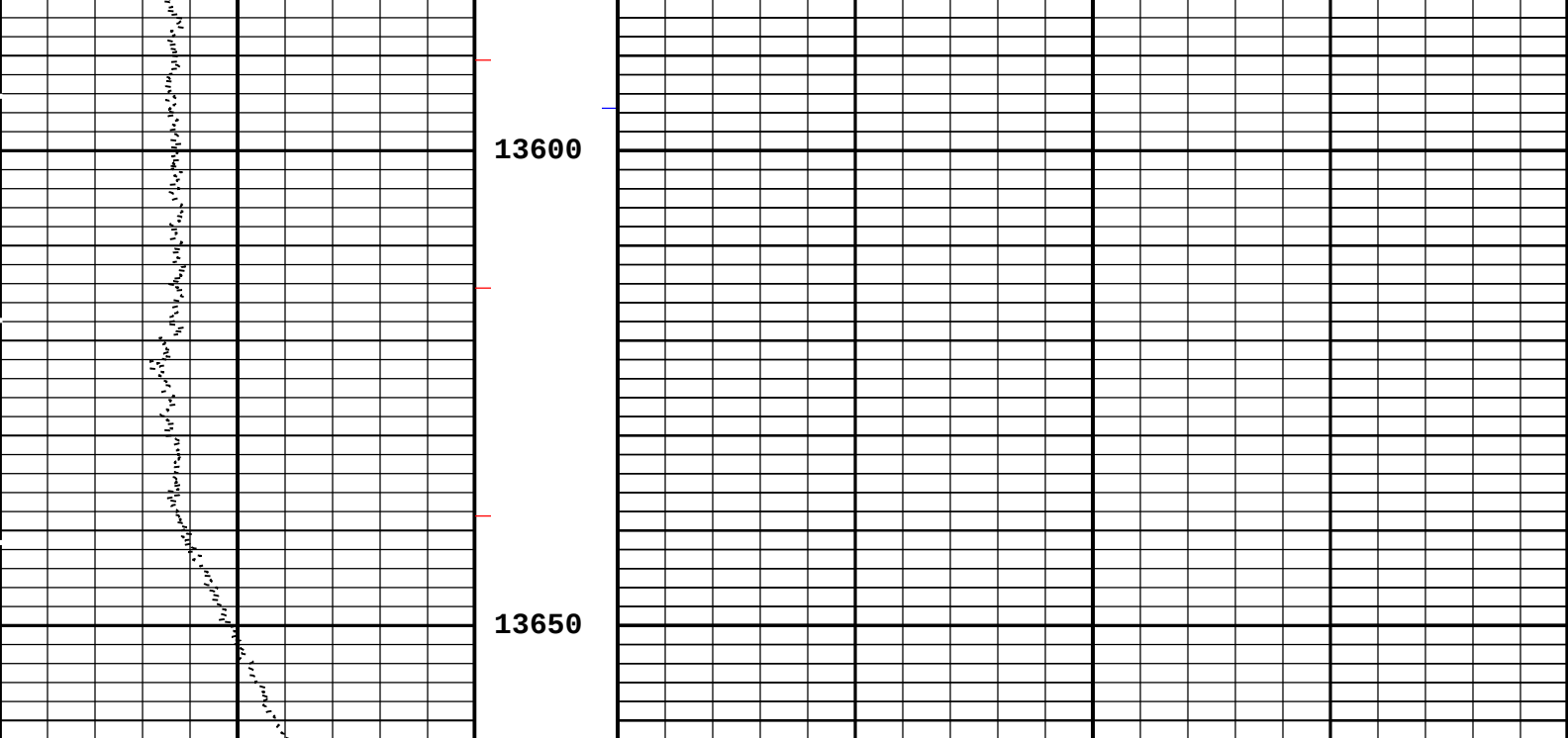












Uranium Indicator		
Cable Tension (TENS)		
10000	lbf	0
Gamma Ray Contribution from Thorium and Potassium (HCGR) HNGS-BA		
0	gAPI	150
Spectroscopy Gamma Ray (HSGR) HNGS-BA		
0	gAPI	150
Caliper (HCAL) HDRS-H		
6	in	16

Density-Neutron Crossover		
Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-H		
0.3	ft3/ft3	-0.1
Standard Resolution Density Porosity (DPHZ) HDRS-H		
0.3	ft3/ft3	-0.1
Crossplot Porosity for Neutron-Density (PXND_HILT)		
0.3	ft3/ft3	-0.1
Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H		
0		10
Density Standoff Correction (HDRA) HDRS-H		
-0.05	g/cm3	0.2

—ICV - Integrated Cement Volume every 10.00 (ft3)
—ICV - Integrated Cement Volume every 100.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

—IHV - Integrated Hole Volume every 10.00 (ft3)
—IHV - Integrated Hole Volume every 100.00 (ft3)

Description: HRLT BASIC LOG Format: Log (Porosity_5_Inch) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:52:41

Channel Processing Parameters				
Run 1A: Parameters				
Parameter	Description	Tool	Value	Unit
ISSBAR	Barite Mud Presence Flag	Borehole	No	
BHK	Drilling Fluid Potassium Concentration	Borehole	0	%
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BHT	Bottom Hole Temperature	Borehole	174.75	degF
BS	Bit Size	WLSESSION	8.75	in
BSM	Drilling Fluid Solids	Drilling Fluid	55000	

BSAL	Borehole Salinity	Borehole	55000	ppm
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	0.059	in
CBLO	Casing Bottom (Logger)	WLSESSION	4702	ft
CSODDRL	Casing Outer Diameter - Zoned along driller depths	WLSESSION	9.625	in
DBCC	Barite Constant Correction Flag	HNGS-BA	None	
DFD	Drilling Fluid Density	Borehole	10	lbm/gal
DFT	Drilling Fluid Type	Borehole	Water	
DFT_WATER	Drilling Fluid Water Type	Borehole	Salt Brine	
DHC	Density Hole Correction	HDRS-H	Bit Size	
FCD	Future Casing (Outer) Diameter	WLSESSION	7	in
FD	Fluid Density	Borehole	1	g/cm3
FSAL	Formation Salinity	Borehole	0	ppm
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
GRSE	Generalized Mud Resistivity Selection, from Measured or Computed Mud Resistivity	Borehole	MRES	
GTSE	Generalized Temperature Selection, from Measured or Computed Temperature	Borehole	CTEM	
HCRB	Apply Borehole Potassium Correction	HNGS-BA	None	
HEMA	Hematite Presence Flag	Borehole	No	
PROCRM	Mud Resistivity Select	HRLT-B	HRLT Compute	
HSCO	Hole Size Correction Option	HGNS-H	Yes	
KFAC_HRLT	HRLT Geometrical Factor Option	HRLT-B	Sonde	
MATR	Rock Matrix for Neutron Porosity Corrections	Borehole	LIMESTONE	
MDEN	Matrix Density for Density Porosity	Borehole	2.71	g/cm3
MFST	Mud Filtrate Sample Temperature	Borehole	72	degF
NPRM	HRDD Nuclear Processing Mode	HDRS-H	High Resolution	
PROCMSO	Mechanical Standoff Size	HRLT-B	1.5	in
PROCSP0	Sonde Position	HRLT-B	Eccentered	
RMFS	Resistivity of Mud Filtrate Sample	Borehole	0.08	ohm.m
SGRC	Standard Gamma Ray Correction Flag	HNGS-BA	Yes	
SOCO	Standoff Correction Option	HGNS-H	Yes	

Tool Control Parameters

Run 1A: Parameters

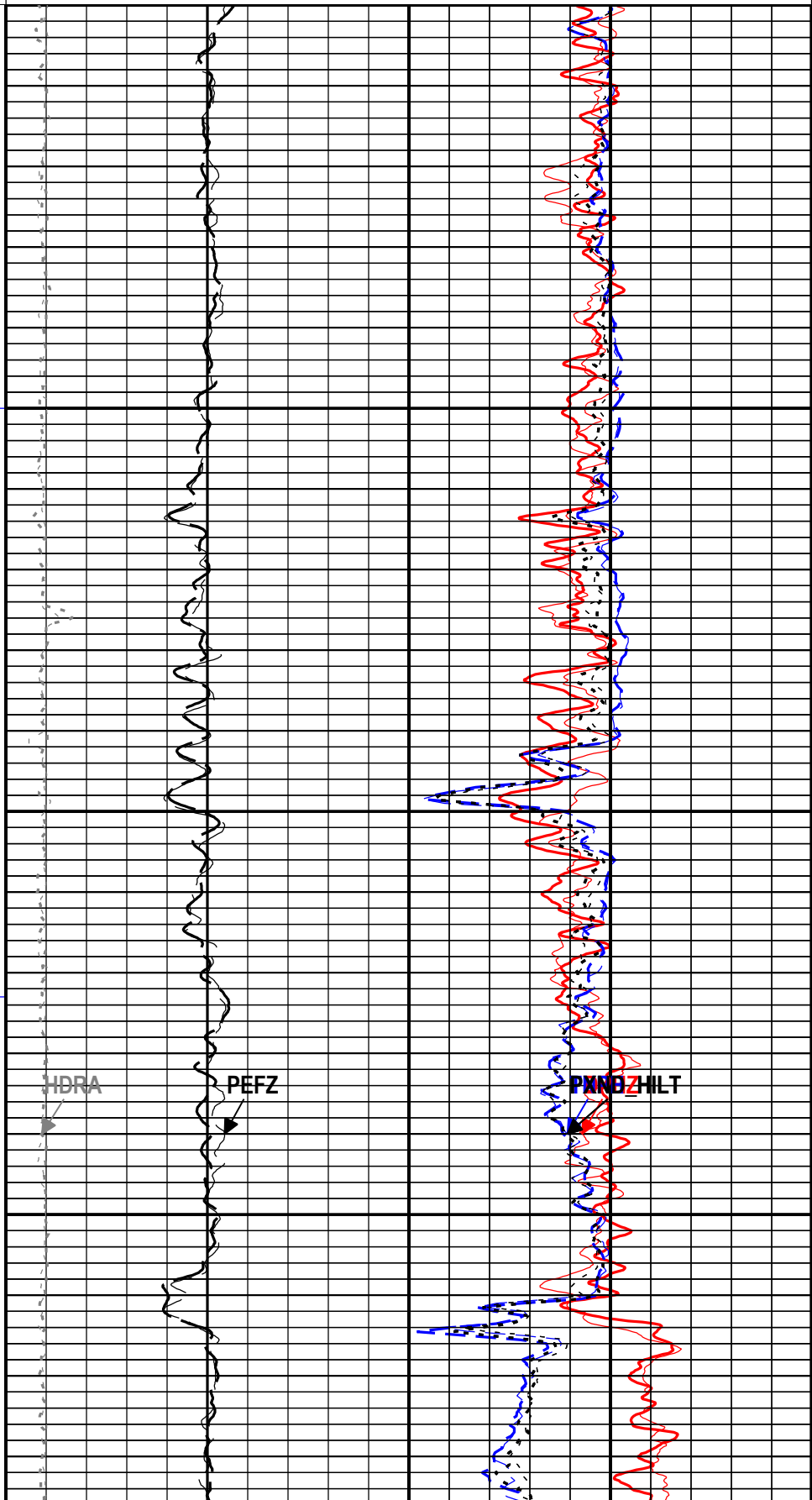
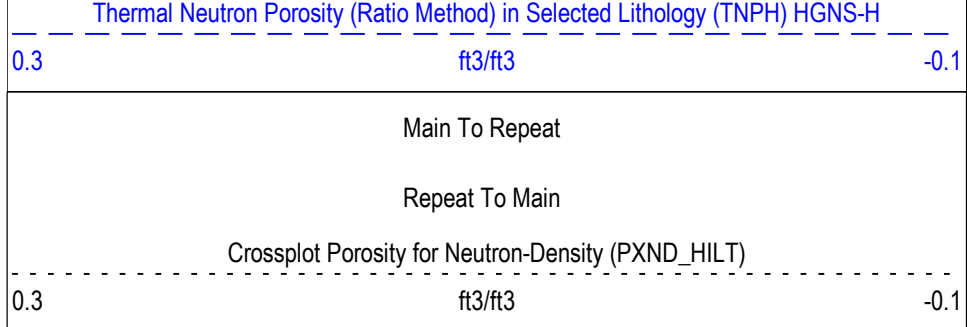
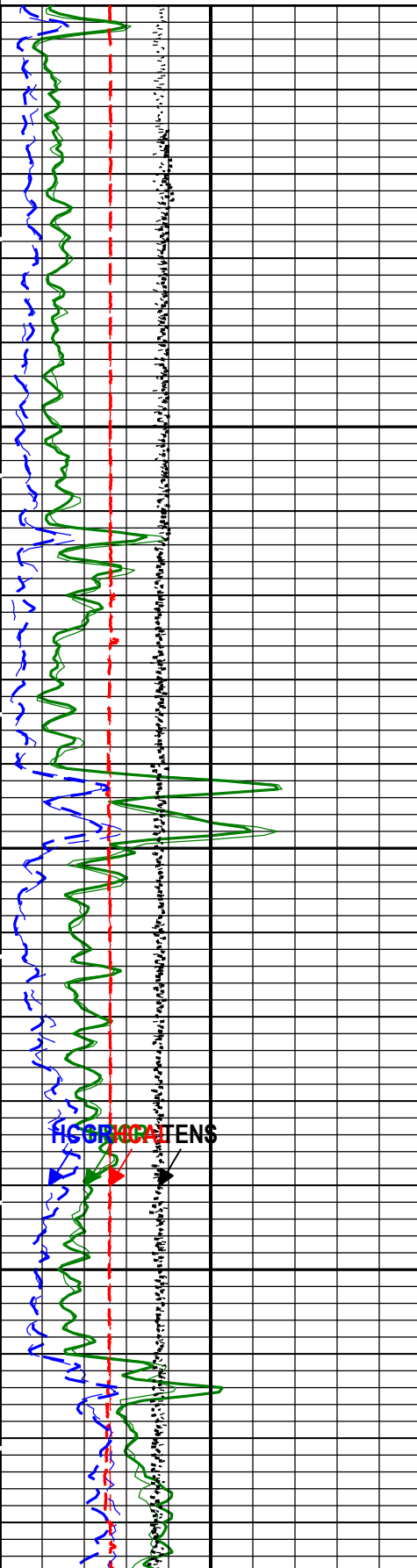
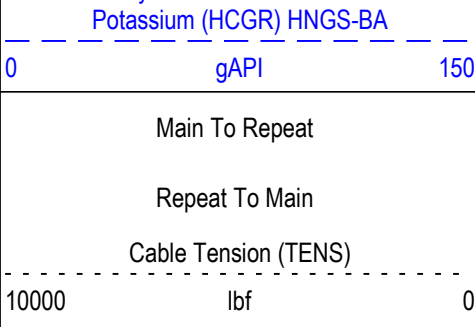
Parameter	Description	Tool	Value	Unit
HMCA_BOARD_TYPE	HMCA Board Type	HGNS-H	1	
HRGD_BOARD_TYPE	HRGD Board Type	HDRS-H	WITH_HET	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	Time Zoned	ft/h

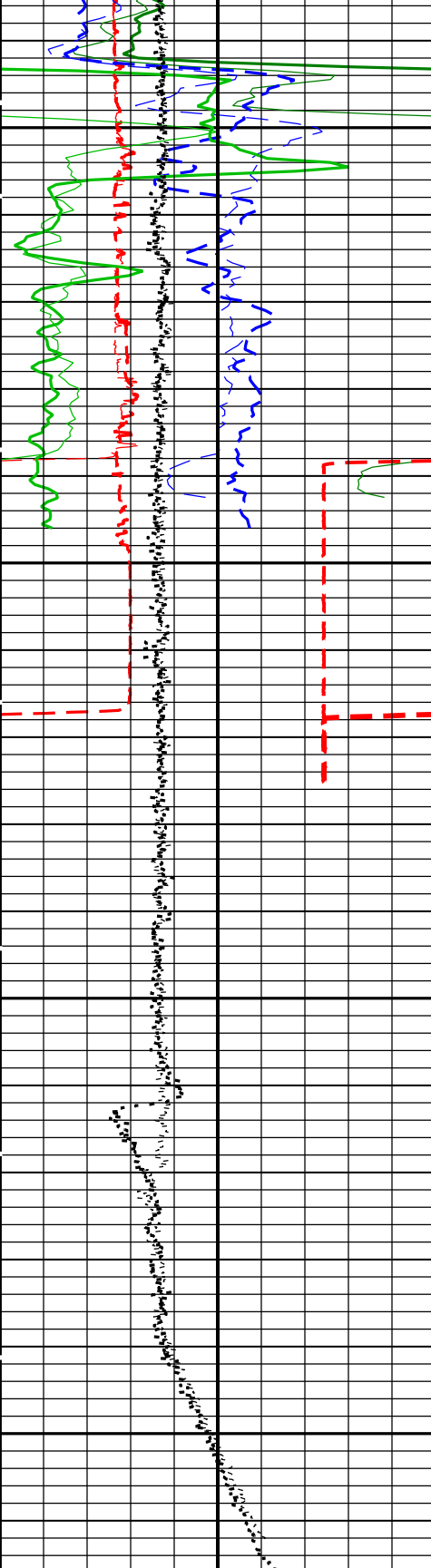
Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
MAX_LOG_SPEED	1695	29-Nov-2016 16:25:05	29-Nov-2016 16:25:10	13662.08	13660.47
MAX_LOG_SPEED	1800	29-Nov-2016 16:25:10	29-Nov-2016 16:31:18	13660.47	13498.77
MAX_LOG_SPEED	1690	29-Nov-2016 16:31:18	29-Nov-2016 16:52:49	13498.77	12933.39
MAX_LOG_SPEED	1800	29-Nov-2016 16:52:49	29-Nov-2016 17:06:06	12933.39	12571.73
MAX_LOG_SPEED	1770	29-Nov-2016 17:06:06	29-Nov-2016 17:09:10	12571.73	12488.53
MAX_LOG_SPEED	1800	29-Nov-2016 17:09:10	29-Nov-2016 17:12:14	12488.53	12400.95
MAX_LOG_SPEED	1753	29-Nov-2016 17:12:14	29-Nov-2016 17:13:15	12400.95	12371.38
MAX_LOG_SPEED	1800	29-Nov-2016 17:13:15	29-Nov-2016 17:16:19	12371.38	12286.82
MAX_LOG_SPEED	1729	29-Nov-2016 17:16:19	29-Nov-2016 17:18:21	12286.82	12231.58

MAX_LOG_SPEED	1800	29-Nov-2016 17:18:21	29-Nov-2016 17:22:26	12231.58	12122.52
MAX_LOG_SPEED	1781	29-Nov-2016 17:22:26	29-Nov-2016 17:23:28	12122.52	12095.38
MAX_LOG_SPEED	1800	29-Nov-2016 17:23:28	29-Nov-2016 17:30:37	12095.38	11897.92
MAX_LOG_SPEED	1692	29-Nov-2016 17:30:37	29-Nov-2016 17:31:39	11897.92	11869.47
MAX_LOG_SPEED	1800	29-Nov-2016 17:31:39	29-Nov-2016 17:40:51	11869.47	11616.36
MAX_LOG_SPEED	1794	29-Nov-2016 17:40:51	29-Nov-2016 17:45:58	11616.36	11474.54
MAX_LOG_SPEED	1651	29-Nov-2016 17:45:58	29-Nov-2016 17:47:00	11474.54	11446.18
MAX_LOG_SPEED	1747	29-Nov-2016 17:47:00	29-Nov-2016 17:49:02	11446.18	11389.42
MAX_LOG_SPEED	1629	29-Nov-2016 17:49:02	29-Nov-2016 17:56:13	11389.42	11190.26
MAX_LOG_SPEED	1747	29-Nov-2016 17:56:13	29-Nov-2016 17:59:17	11190.26	11103.2
MAX_LOG_SPEED	1800	29-Nov-2016 17:59:17	29-Nov-2016 18:14:37	11103.2	10671.4
MAX_LOG_SPEED	1764	29-Nov-2016 18:14:37	29-Nov-2016 18:21:45	10671.4	10469.58
MAX_LOG_SPEED	1663	29-Nov-2016 18:21:45	29-Nov-2016 18:27:54	10469.58	10293.28
MAX_LOG_SPEED	1753	29-Nov-2016 18:27:54	29-Nov-2016 18:43:16	10293.28	9859.61
MAX_LOG_SPEED	1660	29-Nov-2016 18:43:16	29-Nov-2016 19:01:43	9859.61	9334.22
MAX_LOG_SPEED	1756	29-Nov-2016 19:01:43	29-Nov-2016 19:06:50	9334.22	9189.58
MAX_LOG_SPEED	1800	29-Nov-2016 19:06:50	29-Nov-2016 19:09:53	9189.58	9102.28
MAX_LOG_SPEED	1723	29-Nov-2016 19:09:53	29-Nov-2016 19:37:30	9102.28	8327.82
MAX_LOG_SPEED	1626	29-Nov-2016 19:37:30	29-Nov-2016 19:47:43	8327.82	8046.58
MAX_LOG_SPEED	1770	29-Nov-2016 19:47:43	29-Nov-2016 19:50:48	8046.58	7964.6
MAX_LOG_SPEED	1659	29-Nov-2016 19:50:48	29-Nov-2016 19:57:59	7964.6	7768.42
MAX_LOG_SPEED	1768	29-Nov-2016 19:57:59	29-Nov-2016 20:02:05	7768.42	7656.38
MAX_LOG_SPEED	1663	29-Nov-2016 20:02:05	29-Nov-2016 20:07:11	7656.38	7519.44
MAX_LOG_SPEED	1775	29-Nov-2016 20:07:11	29-Nov-2016 20:09:14	7519.44	7463.56
MAX_LOG_SPEED	1654	29-Nov-2016 20:09:14	29-Nov-2016 20:14:22	7463.56	7324
MAX_LOG_SPEED	1757	29-Nov-2016 20:14:22	29-Nov-2016 20:16:25	7324	7267.91
MAX_LOG_SPEED	1607	29-Nov-2016 20:16:25	29-Nov-2016 20:23:35	7267.91	7071.09
MAX_LOG_SPEED	1796	29-Nov-2016 20:23:35	29-Nov-2016 20:28:41	7071.09	6929.06
MAX_LOG_SPEED	1800	29-Nov-2016 20:28:41	29-Nov-2016 21:18:45	6929.06	5563.46
MAX_LOG_SPEED	1789	29-Nov-2016 21:18:45	29-Nov-2016 21:19:46	5563.46	5535.53
MAX_LOG_SPEED	1800	29-Nov-2016 21:19:46	29-Nov-2016 21:21:49	5535.53	5478.22
MAX_LOG_SPEED	1728	29-Nov-2016 21:21:49	29-Nov-2016 21:22:50	5478.22	5449.62
MAX_LOG_SPEED	1800	29-Nov-2016 21:22:50	29-Nov-2016 21:23:51	5449.62	5421.01
MAX_LOG_SPEED	1748	29-Nov-2016 21:23:51	29-Nov-2016 21:28:59	5421.01	5279.95
MAX_LOG_SPEED	1800	29-Nov-2016 21:28:59	29-Nov-2016 21:34:06	5279.95	5142.02
MAX_LOG_SPEED	1741	29-Nov-2016 21:34:06	29-Nov-2016 21:35:07	5142.02	5114.37
MAX_LOG_SPEED	1600	29-Nov-2016 21:35:07	29-Nov-2016 21:37:09	5114.37	5058.65
MAX_LOG_SPEED	1717	29-Nov-2016 21:37:09	29-Nov-2016 21:42:17	5058.65	4918.42
MAX_LOG_SPEED	1800	29-Nov-2016 21:42:17	29-Nov-2016 21:44:20	4918.42	4862.3
MAX_LOG_SPEED	1631	29-Nov-2016 21:44:20	29-Nov-2016 21:46:22	4862.3	4807.08
MAX_LOG_SPEED	1756	29-Nov-2016 21:46:22	29-Nov-2016 21:50:28	4807.08	4696.12
MAX_LOG_SPEED	1637	29-Nov-2016 21:50:28	29-Nov-2016 22:15:05	4696.12	3217.06
MAX_LOG_SPEED	1778	29-Nov-2016 22:15:05	29-Nov-2016 22:16:07	3217.06	3144.43
MAX_LOG_SPEED	1645	29-Nov-2016 22:16:07	29-Nov-2016 22:53:59	3144.43	305.57
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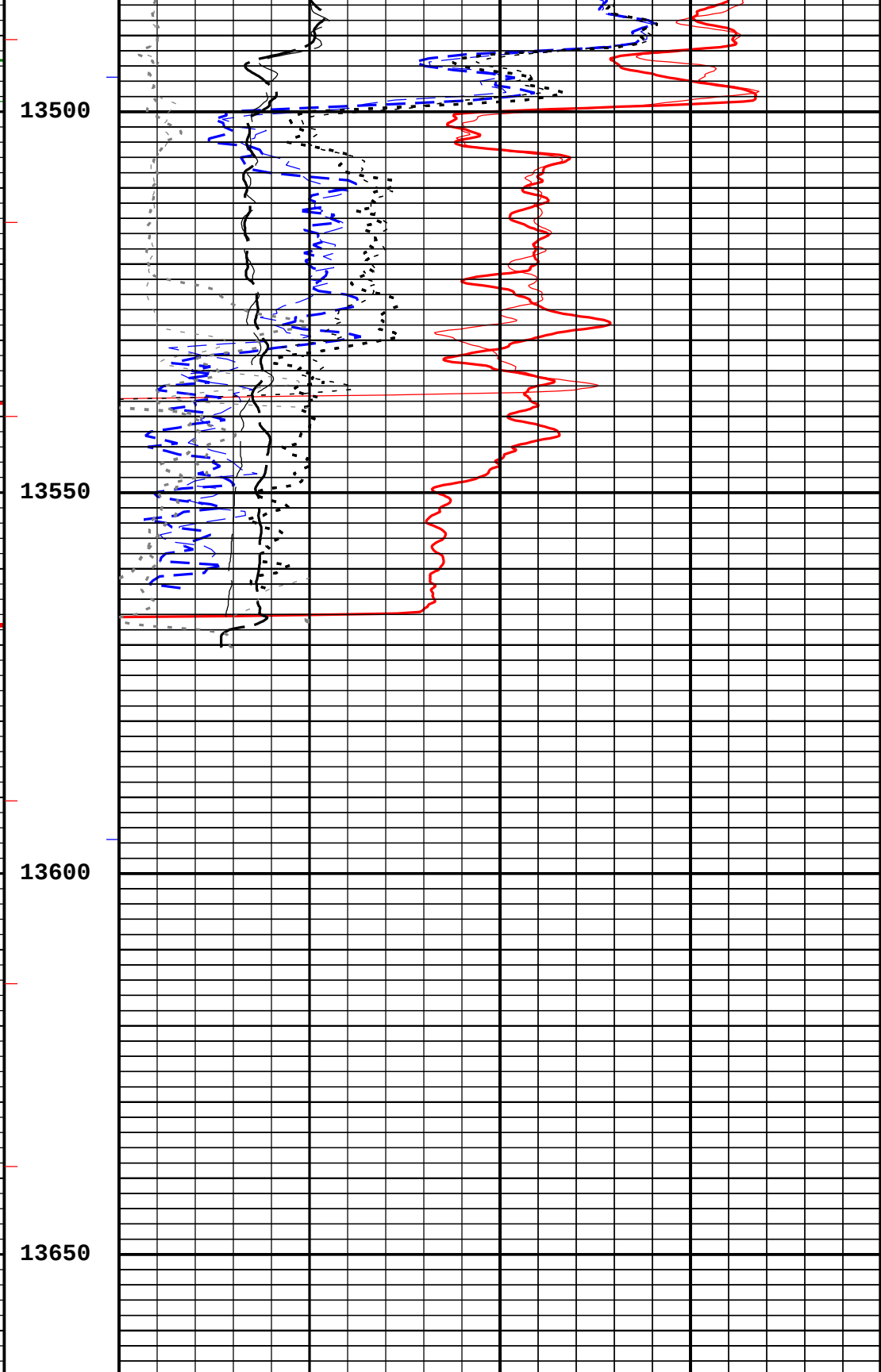
[illegible]





Main To Repeat
Repeat To Main
Spectroscopy Gamma Ray (HSGR) HNGS-BA
0 gAPI 150

Main To Repeat
Repeat To Main



Main To Repeat
Repeat To Main
Crossplot Porosity for Neutron-Density (PXND_HILT)
0.3 ft3/ft3 -0.1

Main To Repeat
Repeat To Main

Caliper (HCAL) HDRS-H		
6	in	16
Main To Repeat		
Repeat To Main		
Gamma Ray Contribution from Thorium and Potassium (HCGR) HGNS-BA		
0	gAPI	150
Main To Repeat		
Repeat To Main		
Cable Tension (TENS)		
10000	lbf	0

Standard Resolution Density Porosity (DPHZ) HDRS-H		
0.3	ft3/ft3	-0.1
Main To Repeat		
Repeat To Main		
Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-H		
0.3	ft3/ft3	-0.1
Main To Repeat		
Repeat To Main		
Crossplot Porosity for Neutron-Density (PXND_HILT)		
0.3	ft3/ft3	-0.1
Main To Repeat		
Repeat To Main		
Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H		
0		10
Main To Repeat		
Repeat To Main		
Density Standoff Correction (HDRA) HDRS-H		
-0.05	g/cm3	0.2

—ICV - Integrated Cement Volume every 10.00 (ft3)

—ICV - Integrated Cement Volume every 100.00 (ft3)

— IHV - Integrated Hole Volume every 10.00 (ft3)

— IHV - Integrated Hole Volume every 100.00 (ft3)

TIME_1900 - Time Marked every 60.00 (s)

Description: HRLT BASIC LOG Format: Log (Porosity_5_Inch RA) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:52:47

Calibration Report

HDRS-H (HILT Density and Rxo Sonde, 150 degC) Calibration - Run Run 1A

Primary Equipment :

HILT High-Resolution Control Cartridge, 150 degC	HRCC-H	
HILT Resistivity Gamma-Ray Density Device, 150 degC	HRGD-H	5748

Auxiliary Equipment :

HRDD Backscatter Detector	Backscatter	
HRDD Long Spacing Detector	Long Spacing	
HRDD Short Spacing Detector	Short Spacing	
Cesium 137 Gamma-Ray Logging Source	GSR-J	5437
HILT High-Resolution Control Cartridge, 150 degC	HRCC-H	
HILT High-Resolution Mechanical Sonde, 150 degC	HRMS-H	

Calibration Parameter :

Small Ring Size (Caliper Calibration Small Ring)	8.00
Large Ring Size (Caliper Calibration Large Ring)	12.00

HDRS Caliper Calibration - Caliper Accumulations

Before (Measured): 13:09:22 28-Nov-2016 Expired by 1 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Small Ring	in	Before	8.00	6.00	8.18	10.00		
Large Ring	in	Before	12.00	9.00	12.36	15.00		

HDRS Density Calibration - Inversion Results

Master (EEPROM): 16:08:16 10-Nov-2016

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Rho Aluminum	g/cm3	Master	2.596	2.586	2.599	2.606		
Rho Magnesium	g/cm3	Master	1.686	1.676	1.688	1.696		
Pe Aluminum		Master	2.570	2.470	2.564	2.670		
Pe Magnesium		Master	2.650	2.550	2.613	2.750		

HDRS Density Calibration - Deviation Summary

Master (EEPROM): 16:08:16 10-Nov-2016

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
BS Average Deviation	%	Master	0	-0.6000	0.3961	0.6000		
BS Max Deviation	%	Master	0	-1.6000	0.8344	1.6000		
SS Average Deviation	%	Master	0	-1.0000	0.3203	1.0000		
SS Max Deviation	%	Master	0	-2.5000	1.5330	2.5000		
LS Average Deviation	%	Master	0	-1.5000	0.5582	1.5000		
LS Max Deviation	%	Master	0	-3.5000	1.0935	3.5000		

HDRS Density Calibration - Background Summary

Master (EEPROM): 16:08:16 10-Nov-2016

Before (Measured): 13:01:07 28-Nov-2016 Expired by 1 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
BS Window Ratio		Master	1.0000		0.7389			
		Before	0.7389	0.7020	0.7397	0.7759		
		Before-Master	-----	-----	0.0008	-----		
BS Window Sum	1/s	Master	1		28405			
		Before	28405	26984	28393	29825		
		Before-Master	-----	-----	-12	-----		
SS Window Ratio		Master	1.0000		0.4824			
		Before	0.4824	0.4582	0.4810	0.5065		
		Before-Master	-----	-----	-0.0014	-----		
SS Window Sum	1/s	Master	1		11783			
		Before	11783	11194	11754	12372		
		Before-Master	-----	-----	-29	-----		
LS Window Ratio		Master	1.0000		0.3004			
		Before	0.3004	0.2853	0.2998	0.3154		
		Before-Master	-----	-----	-0.0006	-----		
LS Window Sum	1/s	Master	1		1228			
		Before	1228	1167	1224	1290		
		Before-Master	-----	-----	-4	-----		

HDRS Density Calibration - Photo-multiplier High Voltages

Master (EEPROM): 16:08:16 10-Nov-2016

Before (Measured): 13:01:07 28-Nov-2016 Expired by 1 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
BS PM High Voltage	V	Master		1000	1495	2400		
		Before		1000	1511	2400		
		Before-Master	-----	-100	16	100		
SS PM High Voltage	V	Master		1000	1528	2400		
		Before		1000	1549	2400		
		Before-Master	-----	-100	21	100		
LS PM High Voltage	V	Master		1000	1302	2400		
		Before		1000	1307	2400		
		Before-Master	-----	-100	5	100		

HDRS Density Calibration - Crystal Quality Resolutions

Master (EEPROM): 16:08:16 10-Nov-2016

Before (Measured): 13:01:07 28-Nov-2016 Expired by 1 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
BS Crystal Resolution	%	Master		5.00	12.11	25.00		

		Before		5.00	12.11	25.00	
		Before-Master	-----	-1.00	0.00	1.00	
SS Crystal Resolution	%	Master		5.00	10.05	20.00	
		Before		5.00	10.15	20.00	
		Before-Master	-----	-1.00	0.10	1.00	
LS Crystal Resolution	%	Master		5.00	8.69	20.00	
		Before		5.00	8.81	20.00	
		Before-Master	-----	-1.00	0.12	1.00	

HDRS MCFL Calibration - MCFL Accumulations

Before (Measured): 16:07:21 29-Nov-2016							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Main Resistivity	ohm.m	Before	3875	3565	3886	4185	
Deep Resistivity	ohm.m	Before	3830	3524	3817	4136	
Shallow Resistivity	ohm.m	Before	3830	3524	3865	4136	

HGNS-H (HILT Gamma-Ray and Neutron Sonde, 150 degC) Calibration - Run Run 1A

Primary Equipment :			
HILT Gamma-Ray and Neutron Sonde, 150 degC		HGNS-H	
Auxiliary Equipment :			
HGNS Accelerometer, 150 degC		HACCZ-H	7074
AmBe Neutron Logging Source		NSR-F	5317
Calibration Parameter :			
Water Temperature			
Housing Size			
JIG-BKG			

HGNS Accelerometer Calibration - Accelerometer Accumulations

Before (Measured): 14:44:05 29-Nov-2016							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
AZ Vertical Measurement	ft/s2	Before	32.2	31.5	32.1	32.8	

HGNS Accelerometer EEPROM - Accelerometer EEPROM Read

Master (EEPROM): 00:00:00 15-Jun-2007							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Accelerometer Manufacturer		Master			QAT_160		
Accelerometer Reference Temperature	degF	Master		30.2	77.0	122.0	
Accelerometer Coefficients - 0		Master	-----	-----	96.560	-----	
Accelerometer Coefficients - 1		Master	-----	-----	2.419	-----	
Accelerometer Coefficients - 2		Master	-----	-----	0.006	-----	
Accelerometer Coefficients - 3		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 4		Master	-----	-----	2.737	-----	
Accelerometer Coefficients - 5		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 6		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 7		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 8		Master	-----	-----	299.200	-----	
Accelerometer Coefficients - 9		Master	-----	-----	1.010	-----	

HGNS Neutron Calibration - HGNS Neutron Accumulations

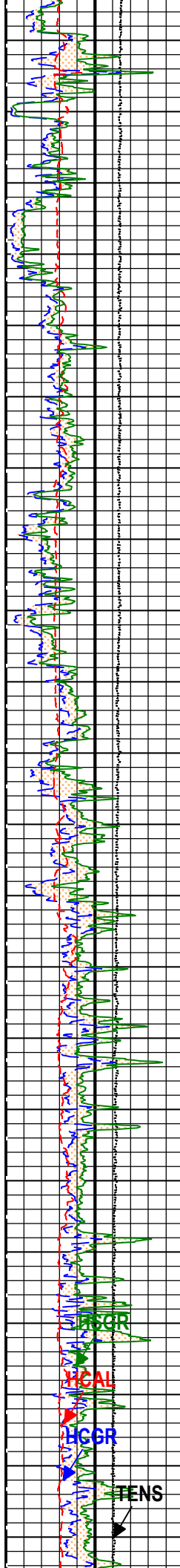
Master (EEPROM): 16:34:08 11-Oct-2016				Before (Measured): 12:58:58 28-Nov-2016 Expired by 1 days			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Near Zero Measurement	1/s	Master	0	5.0	28.8	40.0	
		Before	0	5.0	28.0	40.0	
		Before-Master	-----	-4.3	-0.8	4.3	
Far Zero Measurement	1/s	Master	0	5.0	30.4	40.0	
		Before	0	5.0	28.3	40.0	
		Before-Master	-----	-4.6	-2.1	4.6	
Near Plus Measurement	1/s	Master	6031.0	4700.0	5644.0	6900.0	
		Before	-----	-----	-----	-----	
		Before-Master	-----	-----	-----	-----	
Far Plus Measurement	1/s	Master	2793.0	1900.0	2378.0	2900.0	

		Before Before-Master	----- -----	----- -----	----- -----	----- -----	
Near Corrected Plus Measurement	1/s	Master Before Before-Master	----- ----- -----	4700.0 ----- -----	5559.0 ----- -----	6900.0 ----- -----	
Far Corrected Plus Measurement	1/s	Master Before Before-Master	----- ----- -----	1900.0 ----- -----	2311.0 ----- -----	2900.0 ----- -----	

HGNS Gamma-Ray Calibration - Gamma-Ray Accumulations							
Before:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RGR Zero Measurement - 0	gAPI	Before	-----	-----	-----	-----	
RGR Plus Measurement	gAPI	Before			NOT DONE		
GR Calibration Gain		Before			NOT DONE		

Company:	DCP Midstream LP	Schlumberger
Well:	Zia AGI D2	
Field:	AGI Devonian Exploration	
County:	Lea	
State:	New Mexico	
Platform Express		
Compensated Neutron Log		
Three Detector Litho-Density		
Run 1A		
Main Pass 1" = 100'		

Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run 1A	Main[3]:Up	Up	213.72 ft	13662.08 ft	29-Nov-2016 4:25:05 PM	29-Nov-2016 10:56:13 PM	ON	13.82 ft	Yes
All depths are referenced to toolstring zero									
Log					Company:DCP Midstream LP Well:Zia AGI D2 Run 1A: Main[3]:Up:S008				
Description: HRLT BASIC LOG Format: Log (Porosity 1 inch General) Index Scale: 1 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:52:52									
Channel	Source	Sampling							
CALI	HDRS-H:HRCC-H:HRCC-H	1in							
CGR	HNGS-BA:HNGS-BA:HNGS-BA	6in							
DPHZ	HDRS-H:HRMS-H:HRGD-H	2in							
SGR	HNGS-BA:HNGS-BA:HNGS-BA	6in							
TENS	WLWorkflow	1in							
TIME_1900	WLWorkflow	0.1in							
TNPH	HGNS-H:HGNS-H:HGNS-H	6in							
TIME_1900 - Time Marked every 60.00 (s)									
Uranium Indicator Cable Tension (TENS) 10000 lbf 0 Gamma Ray Contribution from Thorium and Potassium (HCGR) HNGS-BA 0 gAPI 150 Caliper (HCAL) HDRS-H 6 in 16 Spectroscopy Gamma Ray (HSGR) HNGS-BA 0 gAPI 150 Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-H 0.3 ft3/ft3 -0.1 Standard Resolution Density Porosity (DPHZ) HDRS-H 0.45 ft3/ft3 -0.15									



4950

5000

5050

5100

5150

5200

5250

5300

5350

5400

5450

5500

5550

5600

5650

5700

5750

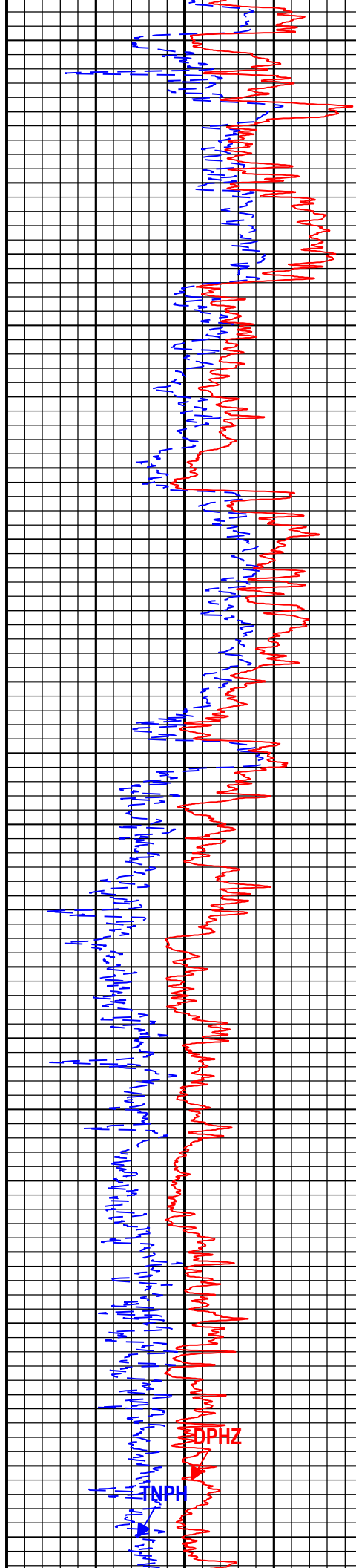
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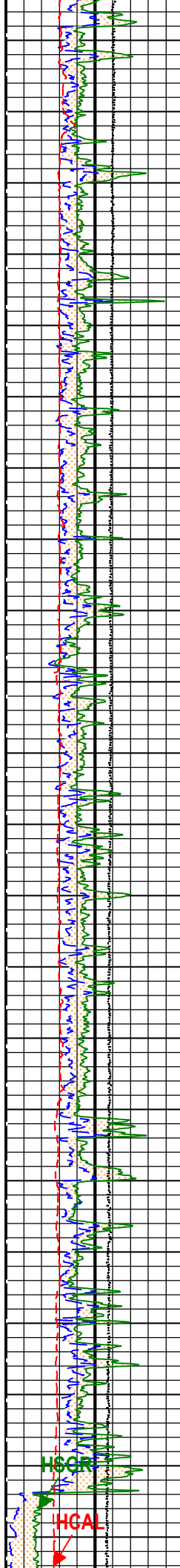
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5900

5950

6000





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6100

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6300

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6400

6450

6500

6550

6600

6650

6700

6750

6800

6850

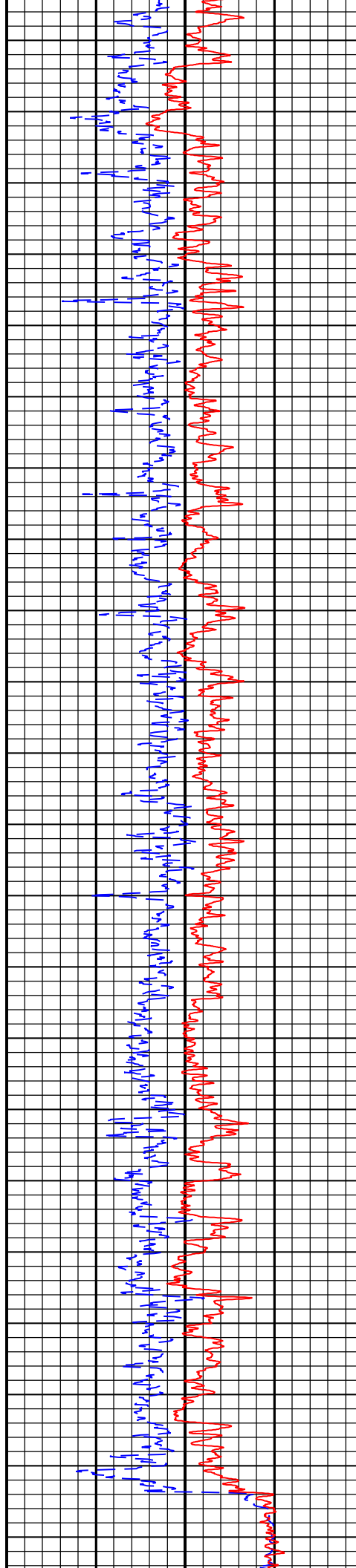
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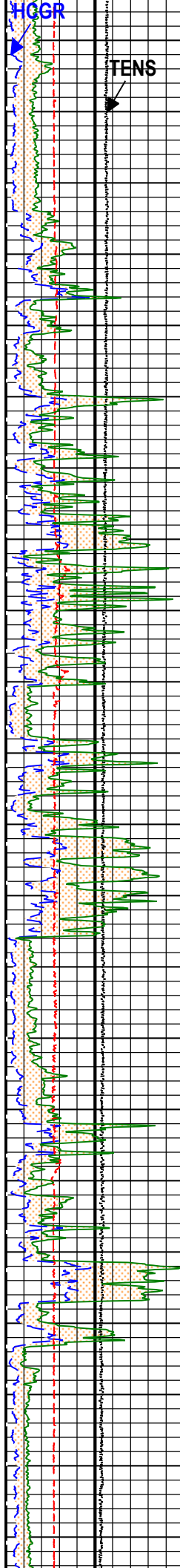
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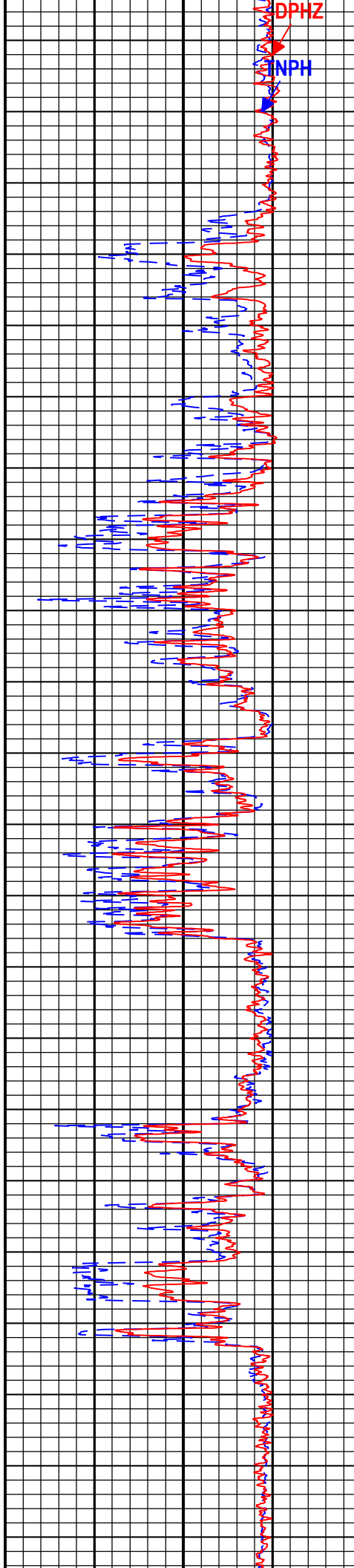
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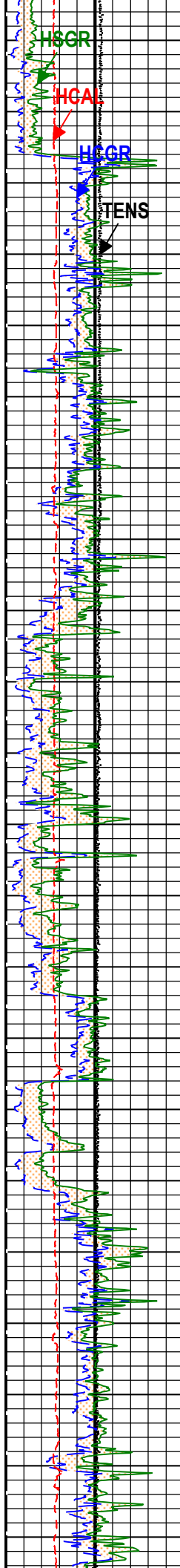
7100





7150
7200
7250
7300
7350
7400
7450
7500
7550
7600
7650
7700
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7800
7850
7900
7950
8000
8050
8100
8150
8200





8250

8300

8350

8400

8450

8500

8550

8600

8650

8700

8750

8800

8850

8900

8950

9000

9050

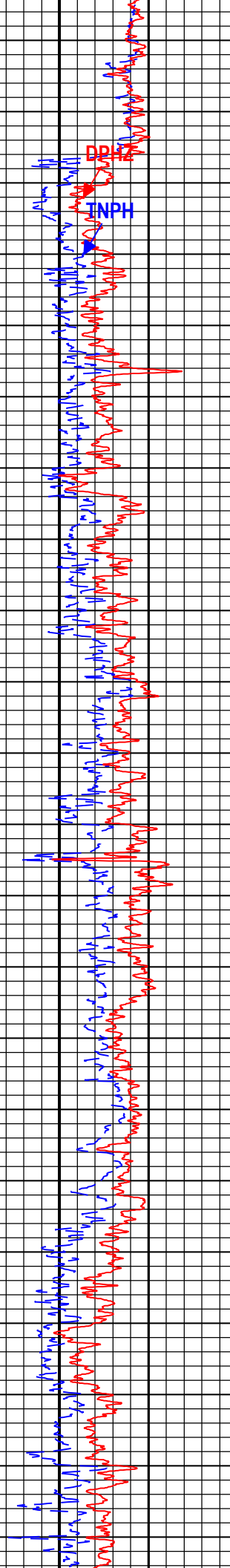
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9150

9200

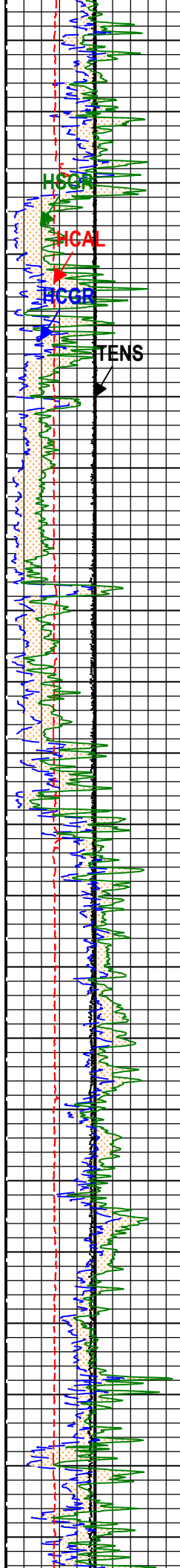
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9300



DPI

INPH



9350

9400

9450

9500

9550

9600

9650

9700

9750

9800

9850

9900

9950

10000

10050

10100

10150

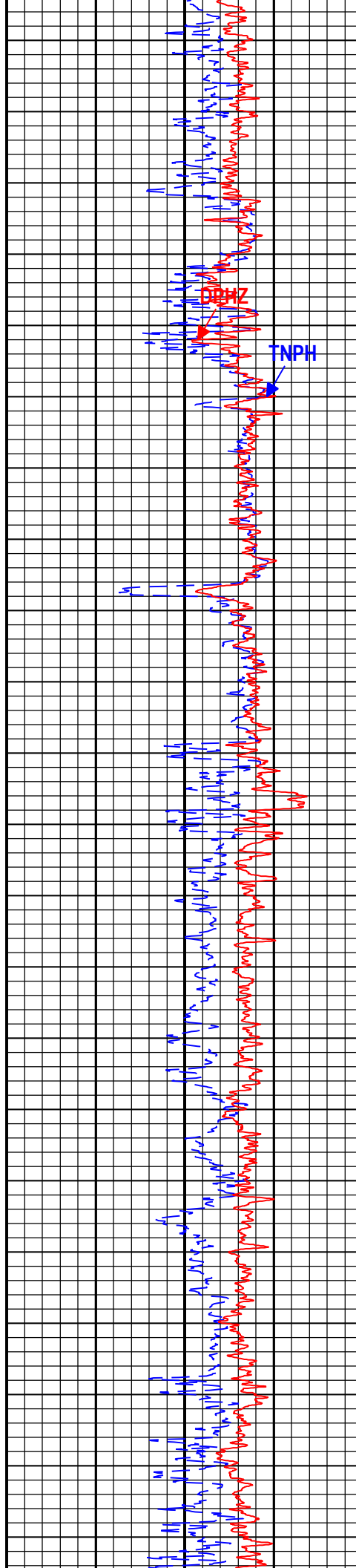
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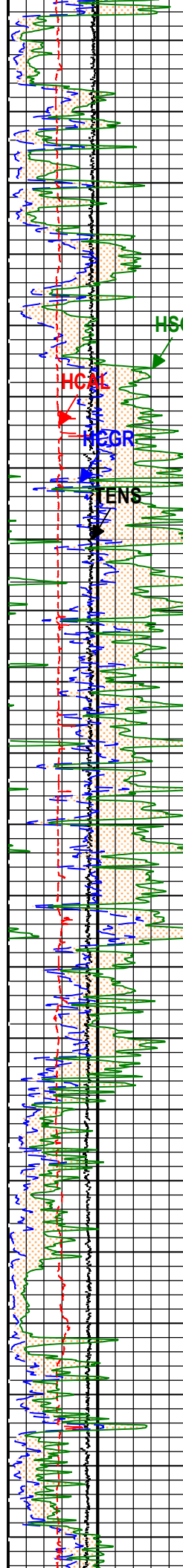
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10300

10350

10400





HSCR

HCR

NPH

TENS

10450

10500

10550

10600

10650

10700

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10800

10850

10900

10950

11000

11050

11100

11150

11200

11250

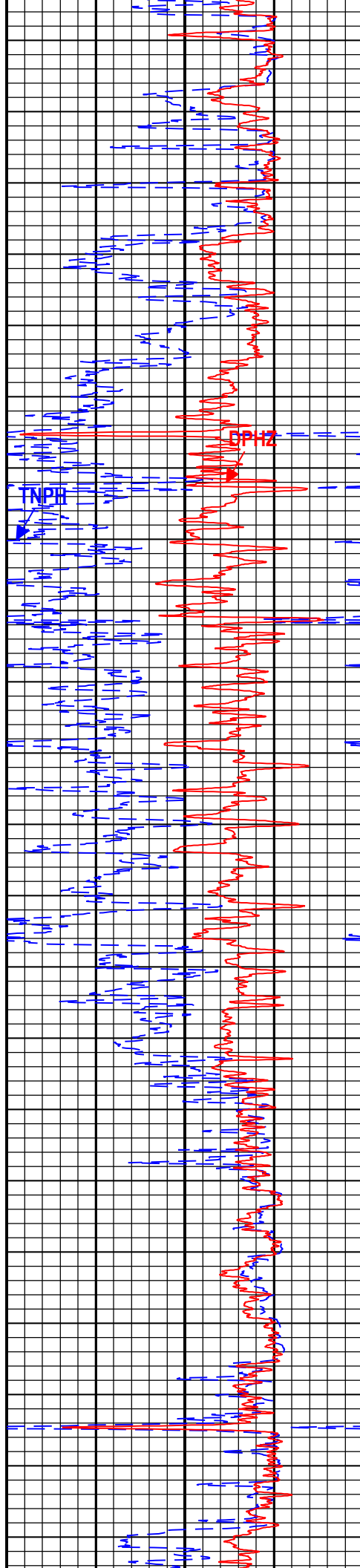
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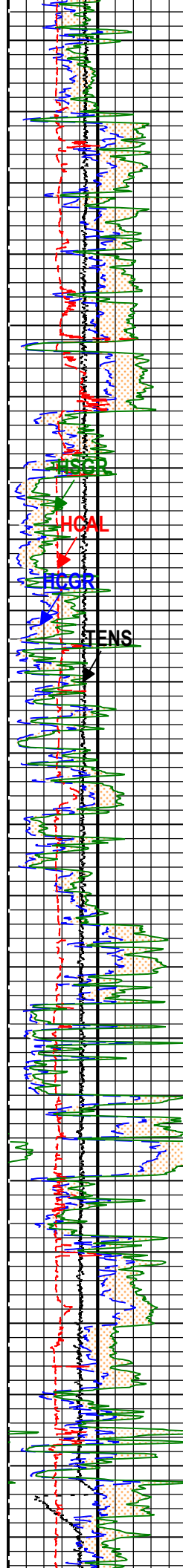
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11450

11500



DPH2



11550

11600

11650

11700

11750

11800

11850

11900

11950

12000

12050

12100

12150

12200

12250

12300

12350

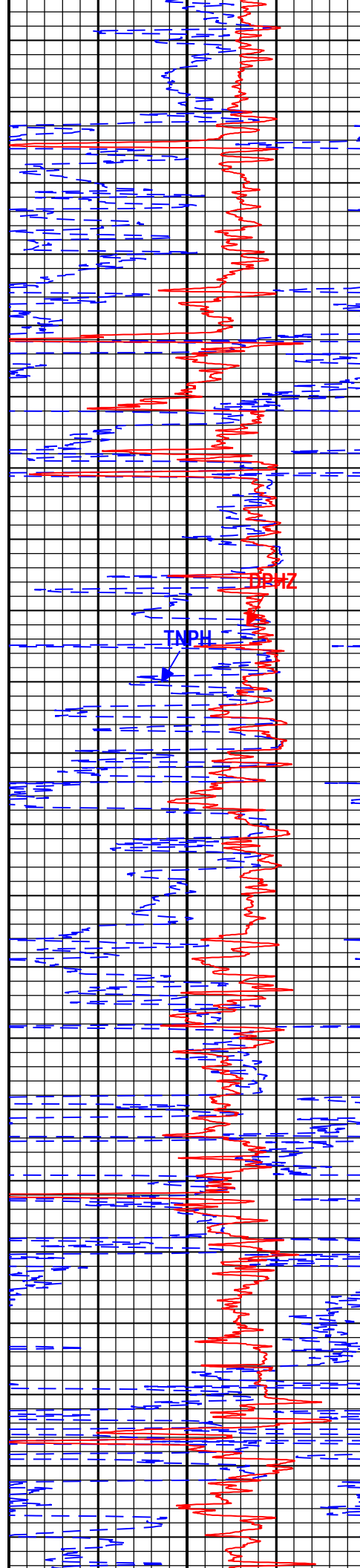
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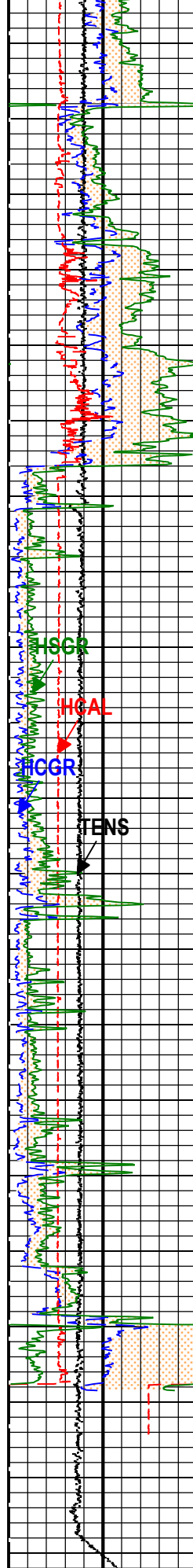
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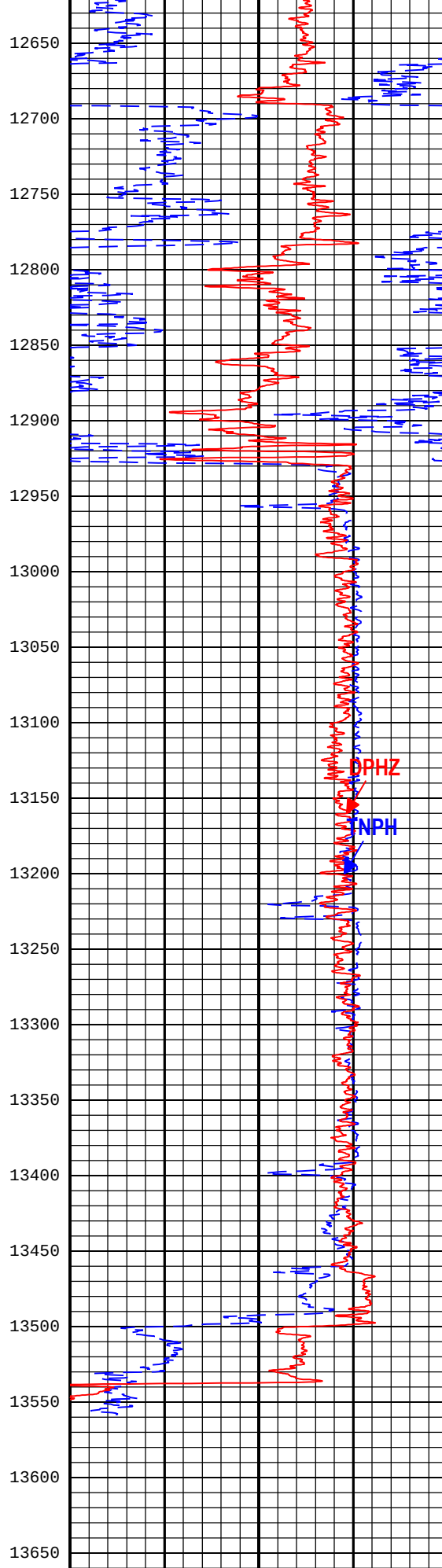
12600





Uranium Indicator

Cable Tension (TENS)



Thermal Neutron Porosity (Ratio Method) in
Selected Lithology (TNPH) HGNS-H

0.3

ft3/ft3

-0.1

10000	lbf	0
Gamma Ray Contribution from Thorium and Potassium (HCGR) HNGS-BA 0gAPI150		
Caliper (HCAL) HDRS-H 6in16		
Spectroscopy Gamma Ray (HSGR) HNGS-BA 0gAPI150		
TIME_1900 - Time Marked every 60.00 (s)		
Standard Resolution Density Porosity (DPHZ) HDRS-H 0.45ft3/ft3-0.15		
Description: HRLT BASIC LOG Format: Log (Porosity 1 inch General) Index Scale: 1 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:52:52		

**Platform Express / High Resolution Laterolog Array / Spectral
Gamma Ray**

Company: DCP Midstream LP

Well: Zia AGI D2

Field: AGI Devonian Exploration

County: Lea State: New Mexico

Platform Express			
High Resolution Laterolog Array			
Spectral Gamma Ray			
County: Lea Field: AGI Devonian Exploration Location: 1893' FSL & 950' FWL Well: Zia AGI D2 Company: DCP Midstream LP	Location:		
	1893' FSL & 950' FWL		Elev.: K.B. 3574.00 ft
	Section: 19 Township: T 19S Abstract: R32S		G.L. 3547.00 ft
			D.F. 3573.00 ft
	Permanent Datum:	Ground Level	Elev.: 3547.00 f
	Log Measured From:	Kelly Bushing	27.00 ft above Perm.Datum
	Drilling Measured From:	Kelly Bushing	
	API Serial No. 30-025-42207	Section: 19	Township: T19S Abstract: R32S

Logging Date	29-Nov-2016	
Run Number	Run 1A	
Depth Driller	13622.00 ft	
Schlumberger Depth	13637.00 ft	
Bottom Log Interval	13637.00 ft	
Top Log Interval	4702.00 ft	
Casing Driller Size @ Depth	9.625 in @ 4696.00 ft	
Casing Schlumberger	4702 ft	
Bit Size	8.75 in	
Type Fluid In Hole	Salt Brine	
Density	10 lbm/gal	41 s
Fluid Loss	PH 9 cm3	10
MUD	Source of Sample	Active Tank
RM @ Meas Temp	0.08 ohm.m	@ 72 degF
RMF @ Meas Temp	0.08 ohm.m	@ 72 degF
RMC @ Meas Temp		
Source RMF	RMC	
RM @ BHT	RMF @ BHT	0.03 @ 174.75 0.03 @ 174.75
Max Recorded Temperatures	174.75 degF	
Circulation Stopped	29-Nov-2016	00:00:00
Logger on Bottom	29-Nov-2016	04:30:00
Unit Number	Location: 9105	Midland, TX
Recorded By	Danielle Krebs	
Witnessed By	Jared Smith	

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.

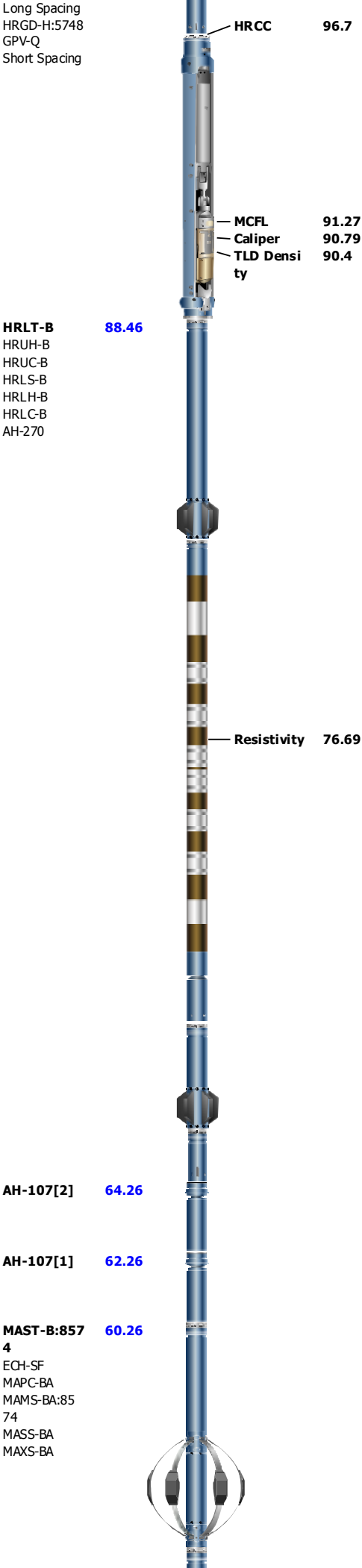
Contents

- 1. Header
- 2. Disclaimer
- 3. Contents
- 4. Remarks and Equipment Summary
- 5. Depth Summary
- 6. Run 1A Main Pass 2"=100'
 - 6.1 Integration Summary
 - 6.2 Software Version
 - 6.3 Composite Summary
 - 6.4 Log (HRLA_2_inch)
- 7. Run 1A Main Pass 5"=100'
 - 7.1 Integration Summary
 - 7.2 Composite Summary
 - 7.3 Log (HRLA_5_Inch)
 - 7.4 Parameter Listing
- 8. Run 1A Repeat Analysis 5"=100'
 - 8.1 Composite Summary

9. Calibration Report
10. Tail
11. Run 1A Main Pass 1"=100'
 - 11.1 Integration Summary
 - 11.2 Composite Summary
 - 11.3 Log (HRLA_1_inch)

Remarks and Equipment Summary

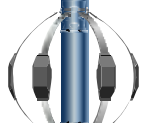
Run 1A: Toolstring				Run 1A: Remarks
Equip name LEH-QC	Length 133.69	MP name	Offset	1. Crew: Danielle, Tony, Dago.
				2. Logs done from TD to Casing. Repeat was 200 ft off TD. CNL & Gr to Surface.
AH-369	131.23			3. Chlorides = 55,000 ppm. FD = 1.1 g/cc. Rm = 0.08 ohm.meters @ 72 degF.
EDTC-H EDTH-H EDTC-H	129.8	CTEM	129.05	4. Max temperature from HGNS:CTEM is 174.75 degF.
				5. Density data maybe affected by borehole conditions.
				6. No pills or LCM in the mud as per company man.
				7. Neutron Corrections: HSCO, SOCO.
				8. Sonic Scanner logged in Standard Mode.
				9. As per client request, main and repeat pass correlated to downlog and not previous logs in well.
HNGS-BA:378 HEH-K:1000 HNGS-BA:378	121.8	HV ACCZ Gamma Ray Edtch Status TelStatus	0.00 0.00 123.37 121.8 121.8	
		GR	118.82	
HNGC-B:638 HNGH-A:4121 HNGC-B:638	113.61	Tel Status	111.86	
HGNS-H HGNH NSR-F:5317 NPV-N HACCZ-H:7074 HMCA-H HGNS-H	110.11	Temperature GR	110.08 109.37	
		CNL Porosity HMCA HGNS Accelerometer	103.03 100.7 100.7 0.00	
HDRS-H ECH-MEB HRCC-H HRMS-H Backscatter GSR-J:5437	100.7			





MAMS

44.82



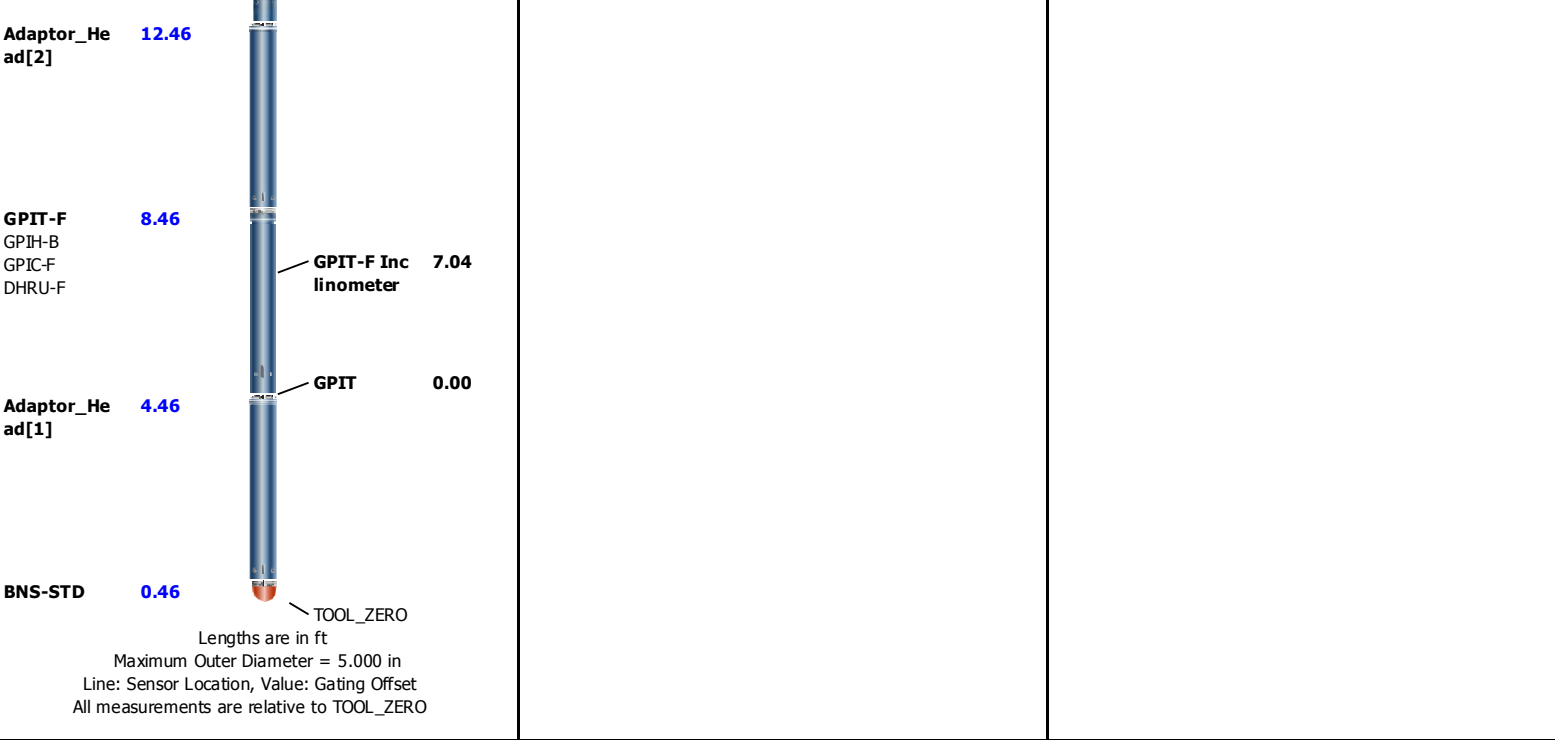
MAXS

18.98

PPC-B Cal
ipers

17.83

PPC-B:8174 18.98
PPC-B:8174



Depth Summary			
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	Run 1A		
--	--------	--	--

Depth Measuring Device			
------------------------	--	--	--

Type	IDW-JA		
Serial Number	2747		
Calibration Date	30-Aug-2016		
Calibrator Serial Number			
Calibration Cable Type	7-46 P-XS		
Wheel Correction 1	-2		
Wheel Correction 2	-1		

Tension Device			
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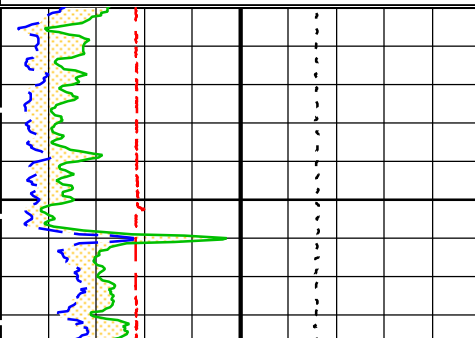
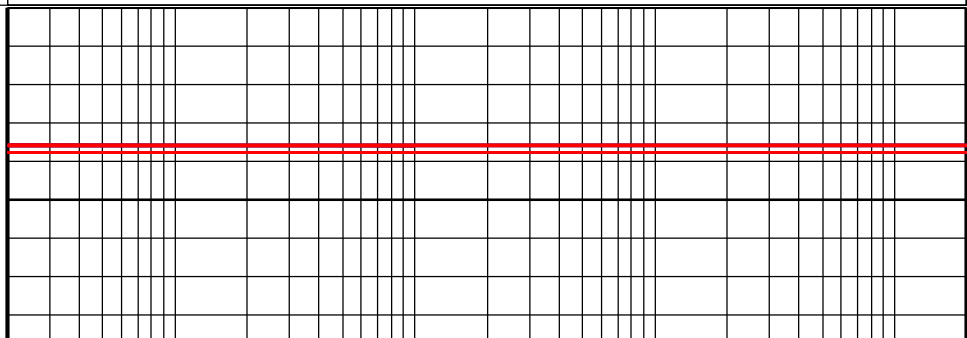
Type	CMTD-B/A		
Serial Number	8100		
Calibration Date	08-Oct-2016		
Calibrator Serial Number	84755A		
Number of Calibration Points	10		
Calibration Root Mean Square Error	17		
Calibration Peak Error	32		

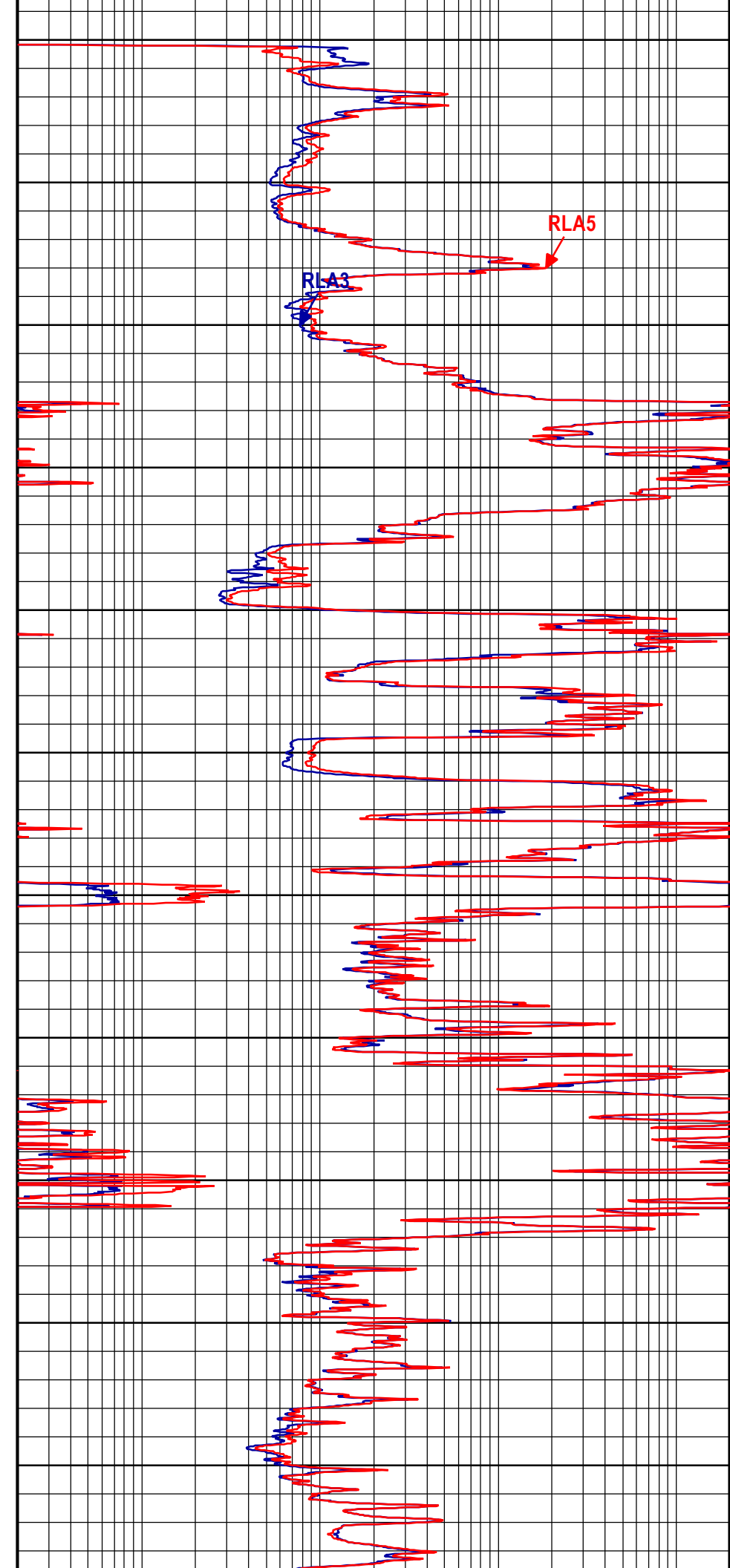
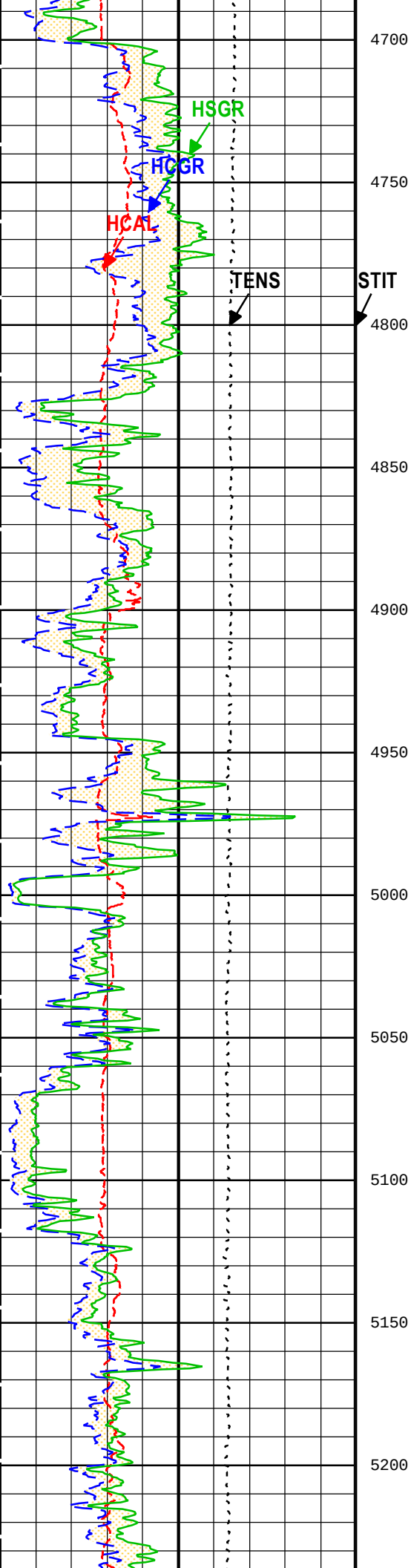
Logging Cable			
---------------	--	--	--

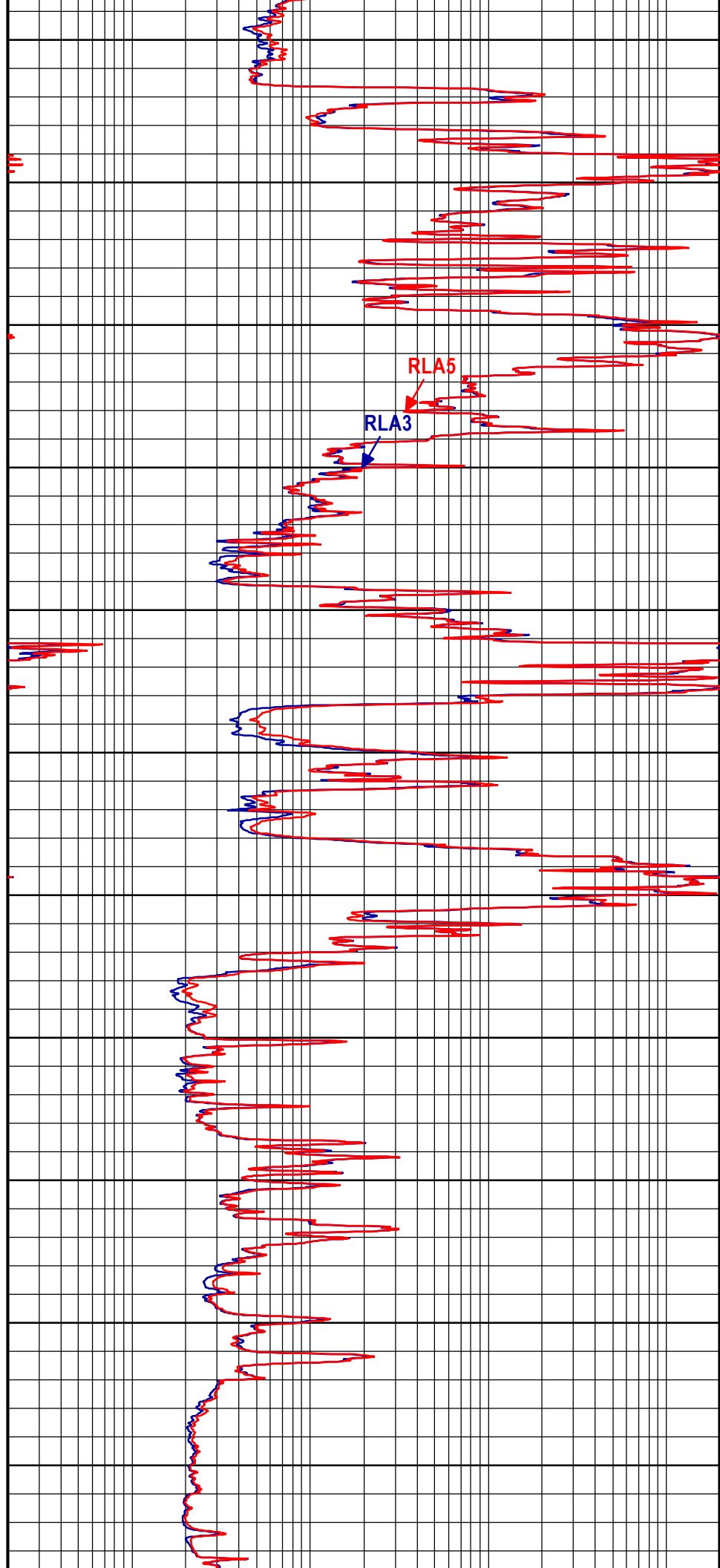
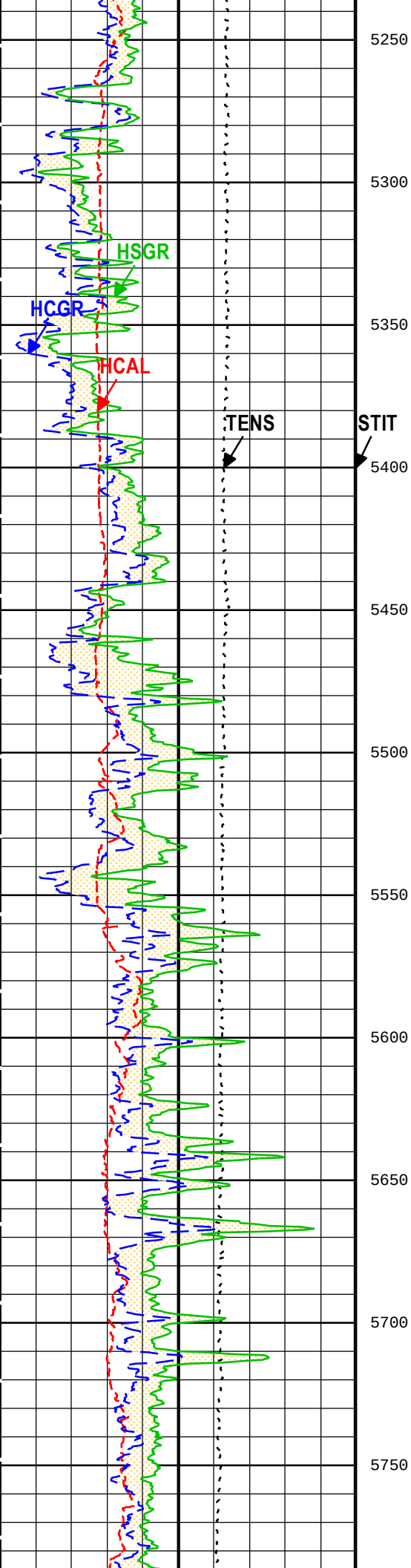
Type	7-46P-XS		
Serial Number	U714054		
Length	17700.00 ft		
Conveyance Type	Wireline		
Rig Type	Land		

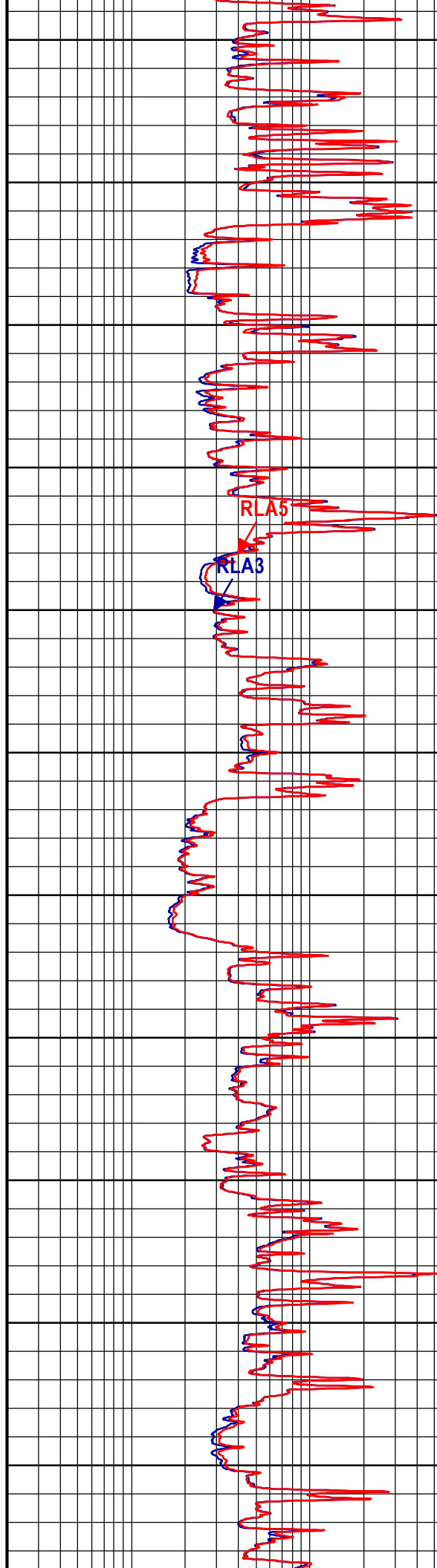
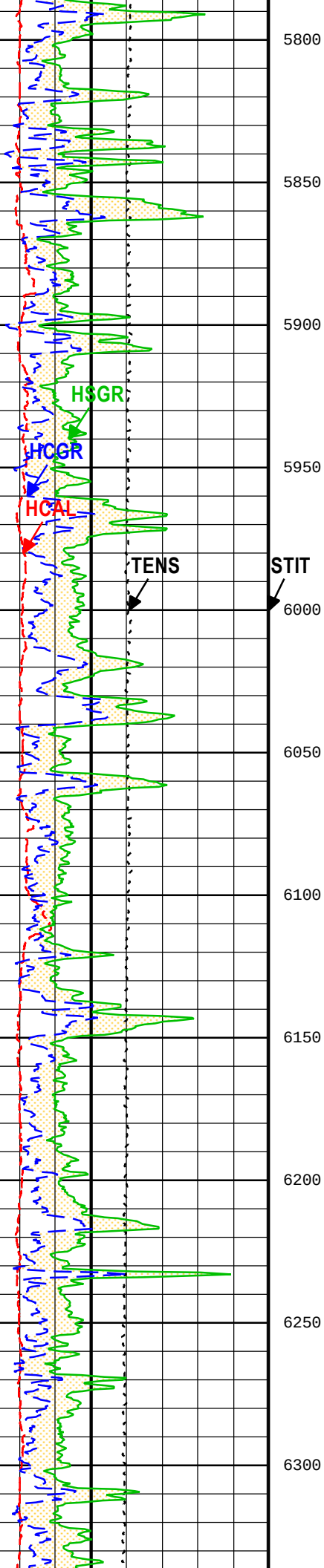
Run 1A:Depth Control Parameters		Depth Control Remarks	
---------------------------------	--	-----------------------	--

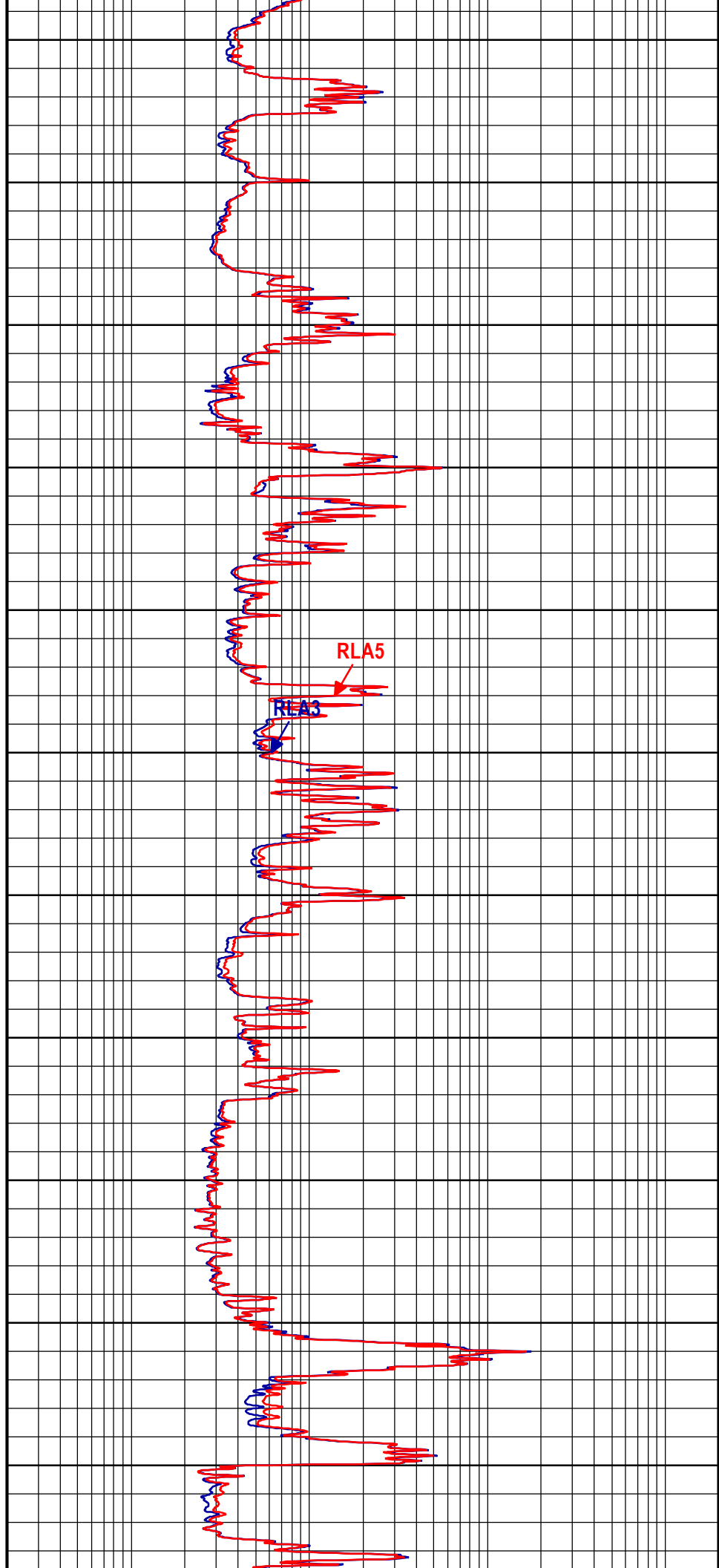
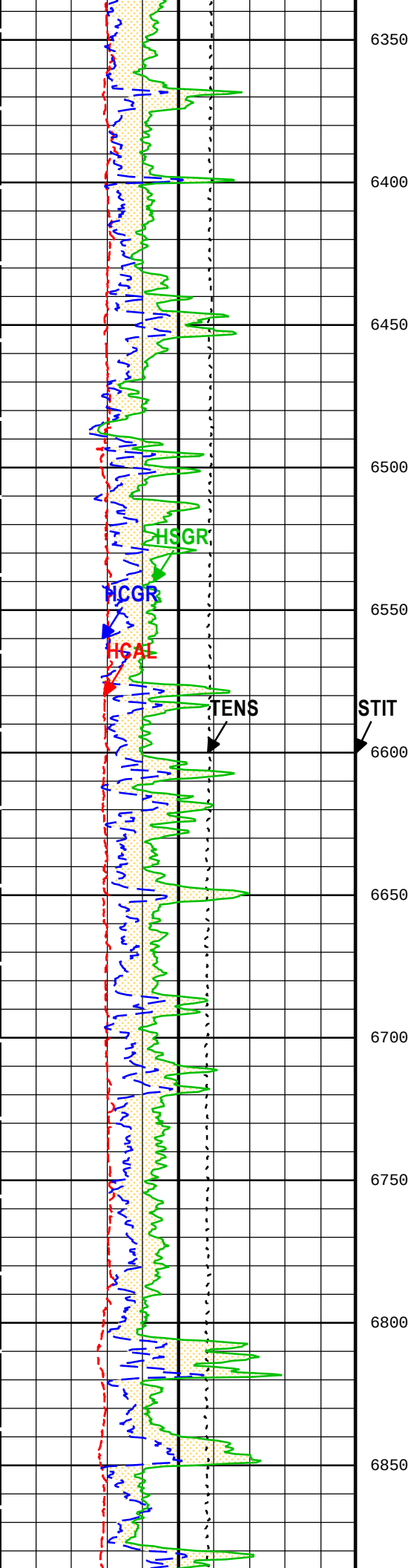
Log Sequence	First Log In the Well	1. All SLB depth policies and procedures followed.	
Rig Up Length At Surface	215.70 ft	2. IDW used as primary depth control device.	
Rig Up Length At Bottom	215.00 ft	3. Z-Chart used as secondary depth control device.	

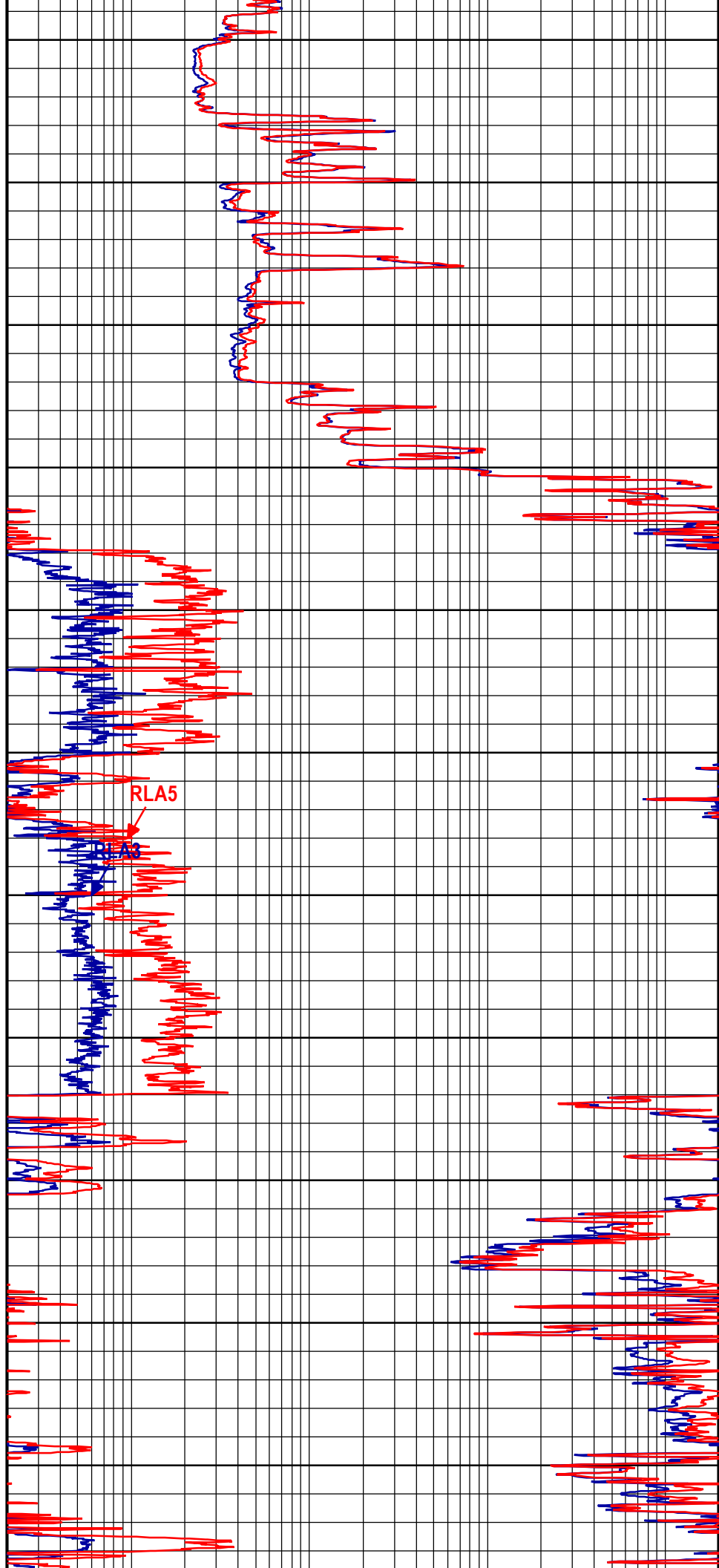
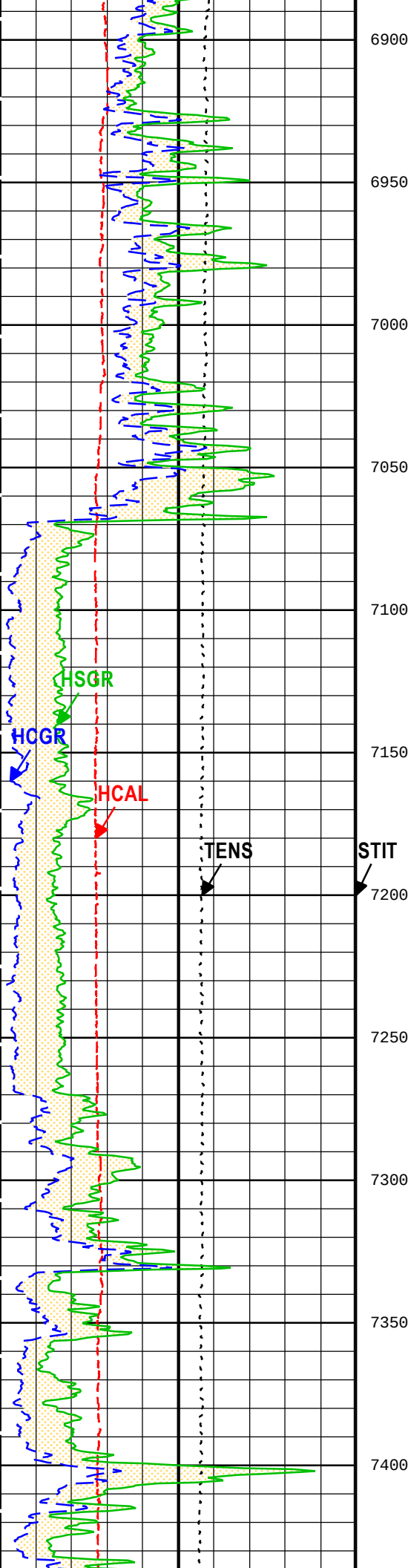
Rig Up Length Correction				0.70 ft	4. First run in hole procedures followed.				
Stretch Correction				13.00 ft	5. Main and repeat pass correlated to downlog.				
Tool Zero Check At Surface				-2.00 ft					
Run 1A									
Main Pass 2"=100'									
Software Version									
Acquisition System						Version			
Maxwell 2016 SP1						6.1.58882.3100			
Application Patch						Wireline_NPD-PNX-2016SP1_6.1.70295			
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run 1A	Main[3]:Up	Up	213.72 ft	13662.08 ft	29-Nov-2016 4:25:05 PM	29-Nov-2016 10:56:13 PM	ON	13.82 ft	Yes
All depths are referenced to toolstring zero									
Log	Company:DCP Midstream LP Well:Zia AGI D2 Run 1A: Main[3]:Up:S008								
Description: HRLT BASIC LOG Format: Log (HRLA_2_inch) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:50:46									
Channel	Source			Sampling					
CALI	HDRS-H:HRCC-H:HRCC-H			1in					
CGR	HNGS-BA:HNGS-BA:HNGS-BA			6in					
RLA3	HRLT-B:HRLS-B:HRLS-B			2in					
RLA5	HRLT-B:HRLS-B:HRLS-B			2in					
SGR	HNGS-BA:HNGS-BA:HNGS-BA			6in					
STIT	DepthCorrection			6in					
TENS	WLWorkflow			6in					
TIME_1900	WLWorkflow			0.1in					
TIME_1900 - Time Marked every 60.00 (s)									
Uranium Indicator									
Cable Tension (TENS)									
10000 lbf 0									
Caliper (HCAL) HDRS-H									
6 in 16									
Gamma Ray Contribution from Thorium and Potassium (HCGR) HNGS-BA									
0 gAPI 150									
Spectroscopy Gamma Ray (HSGR) HNGS-BA									
0 gAPI 150									
				4600					
				4650					

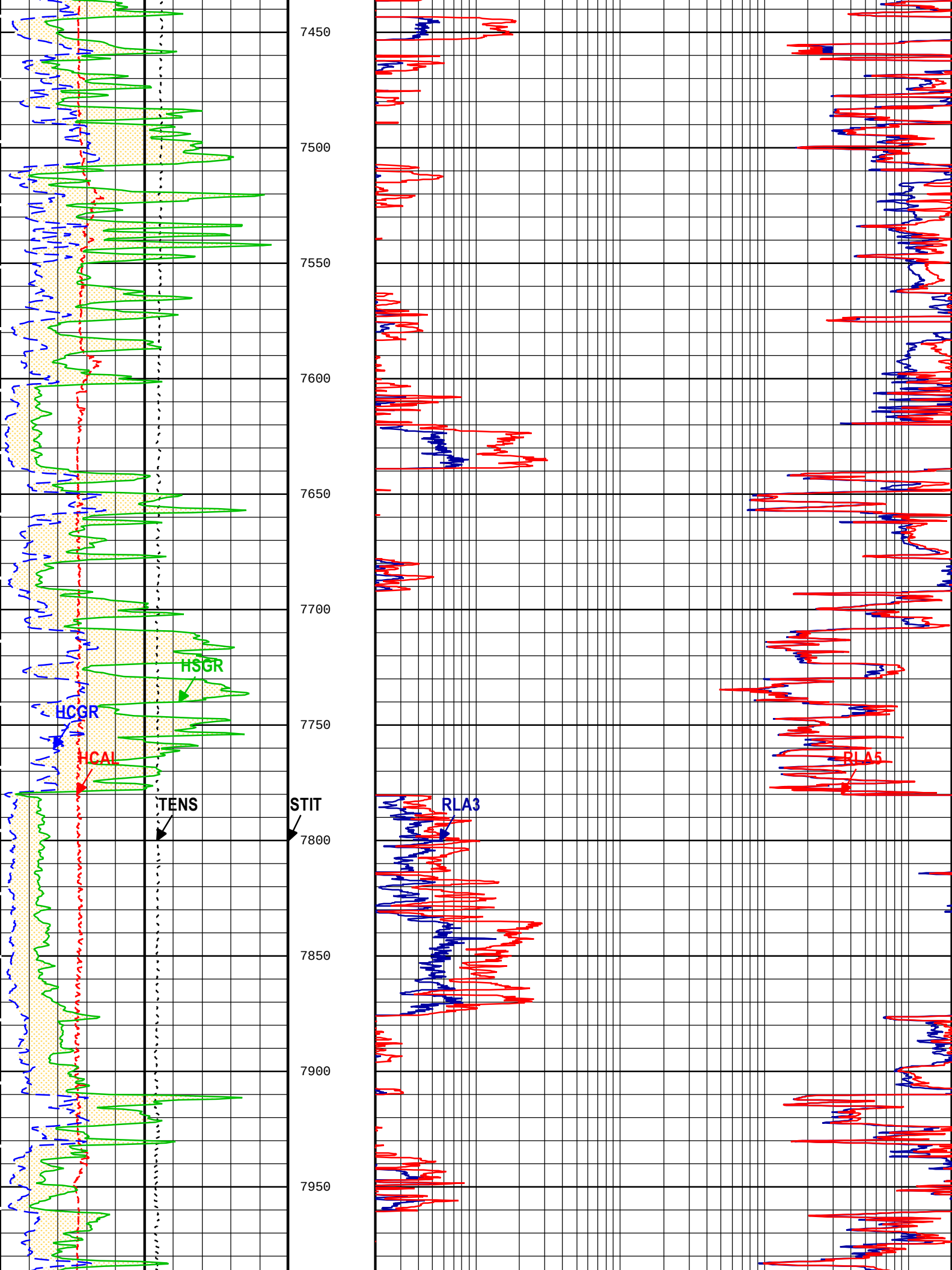


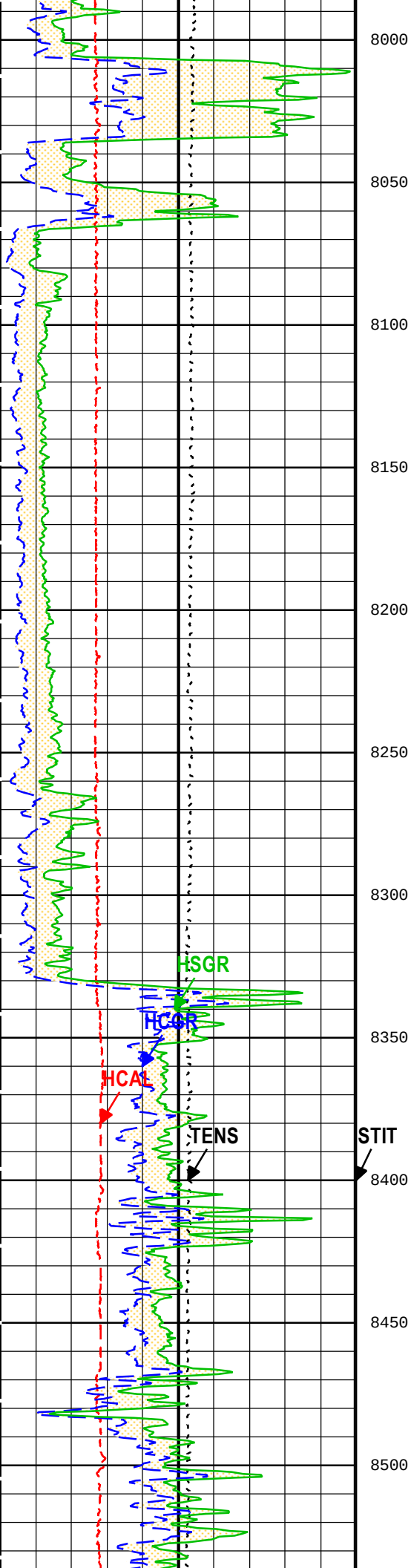












8000

8050

8100

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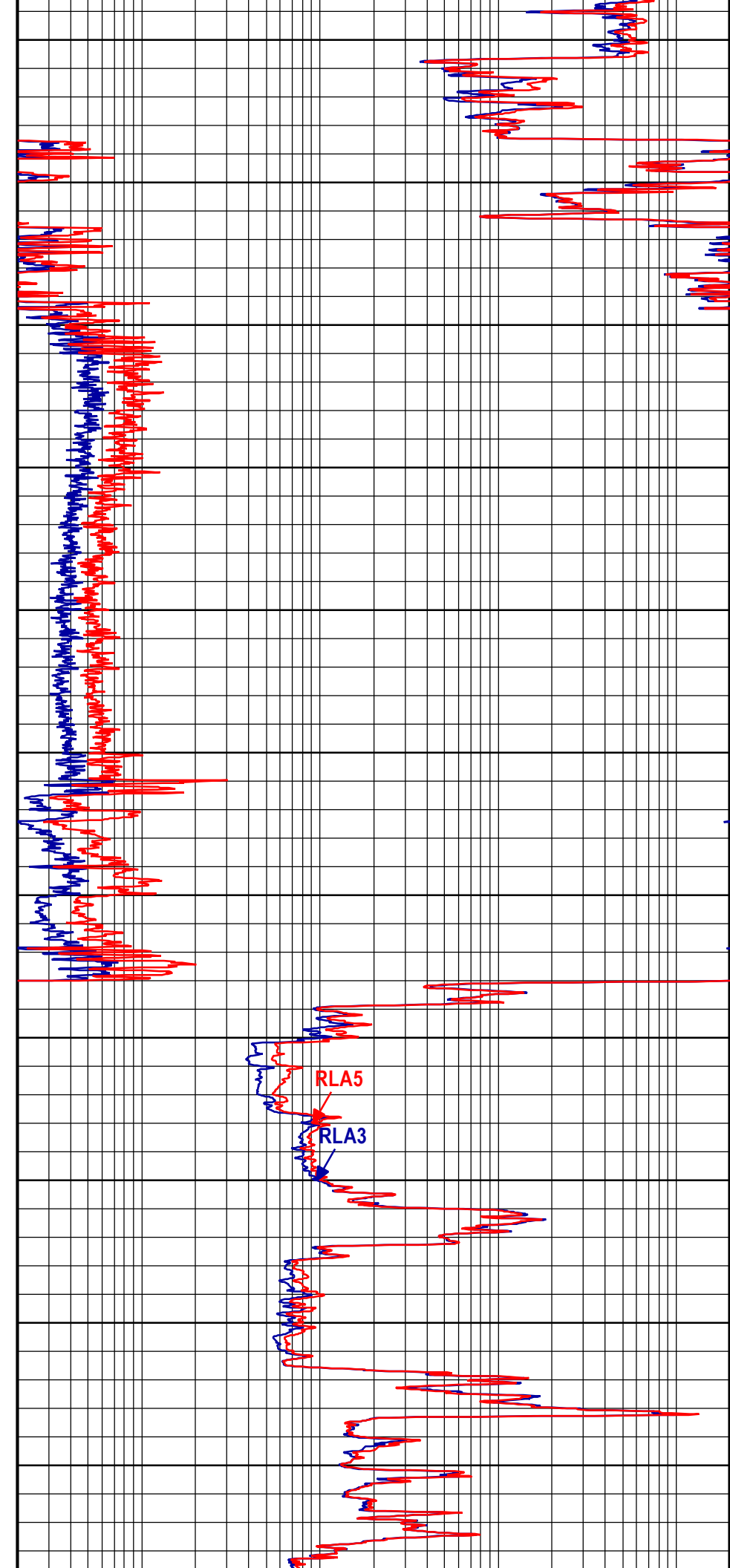
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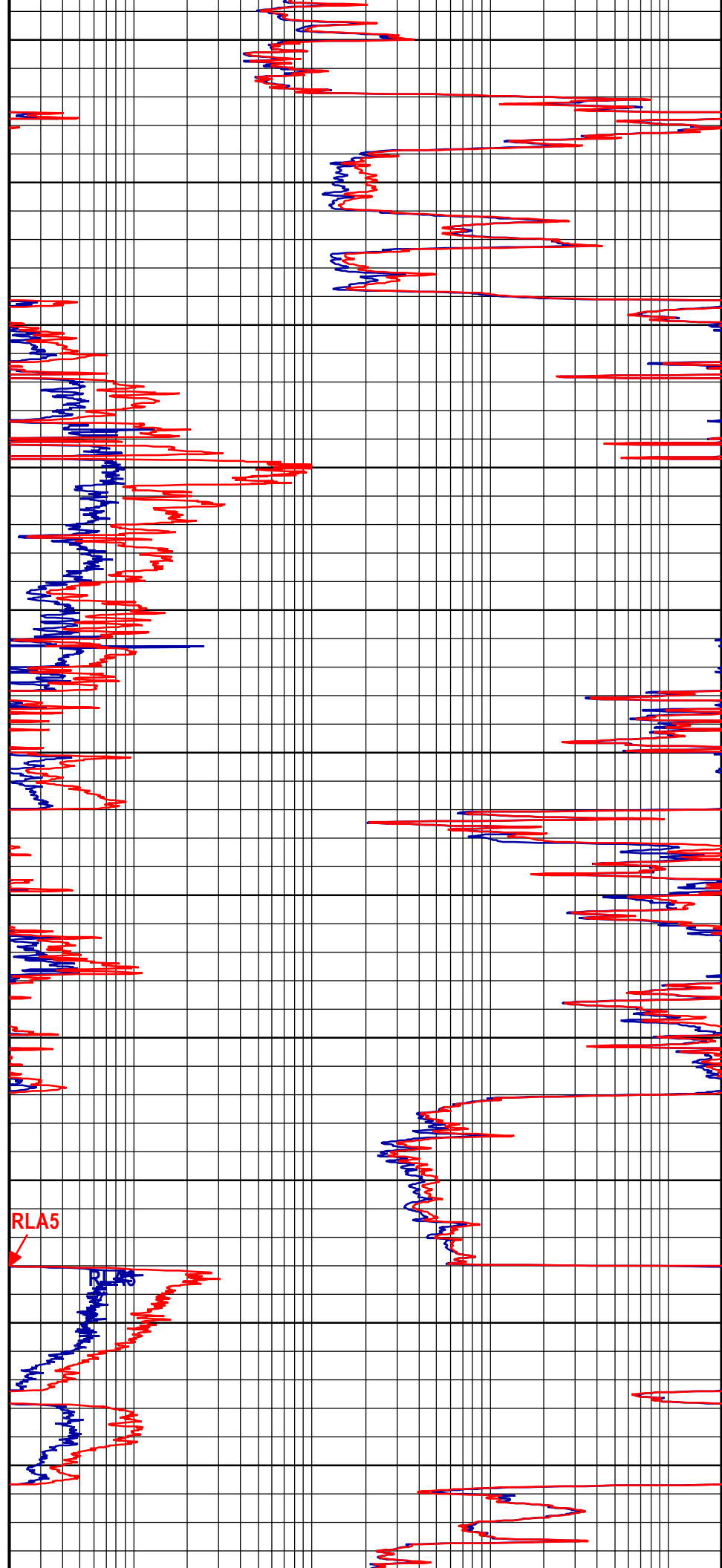
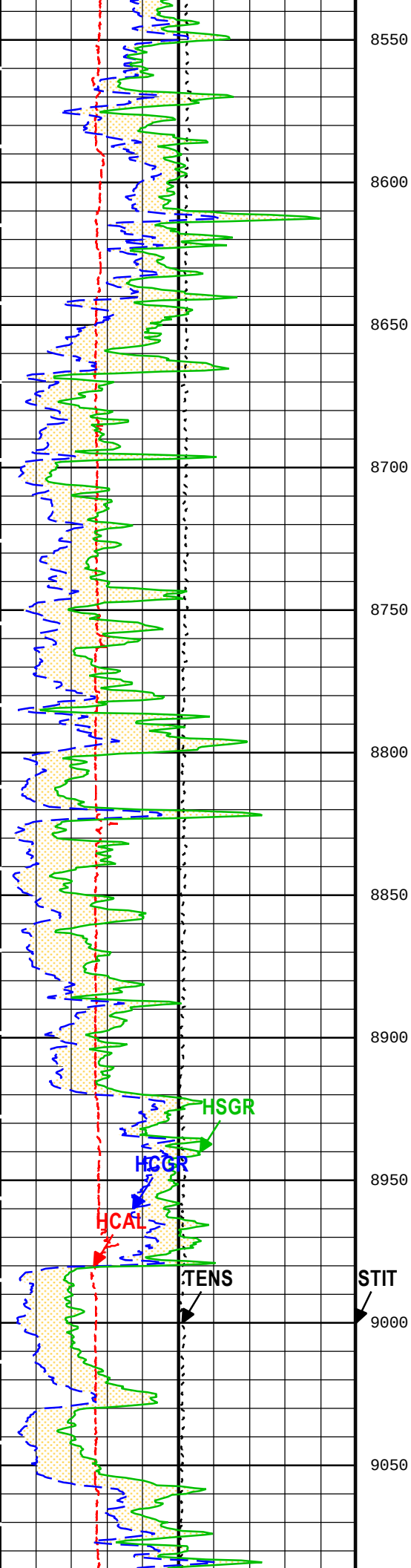
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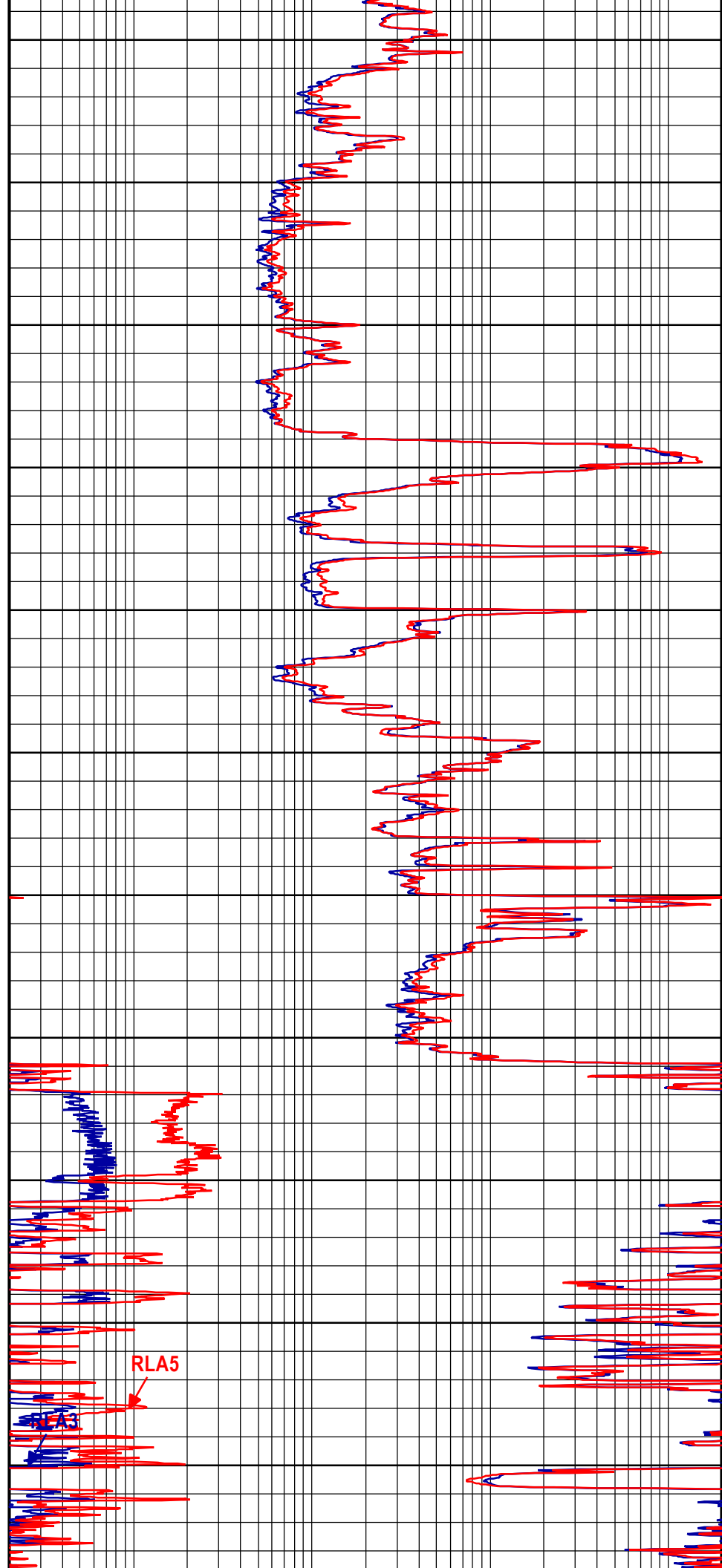
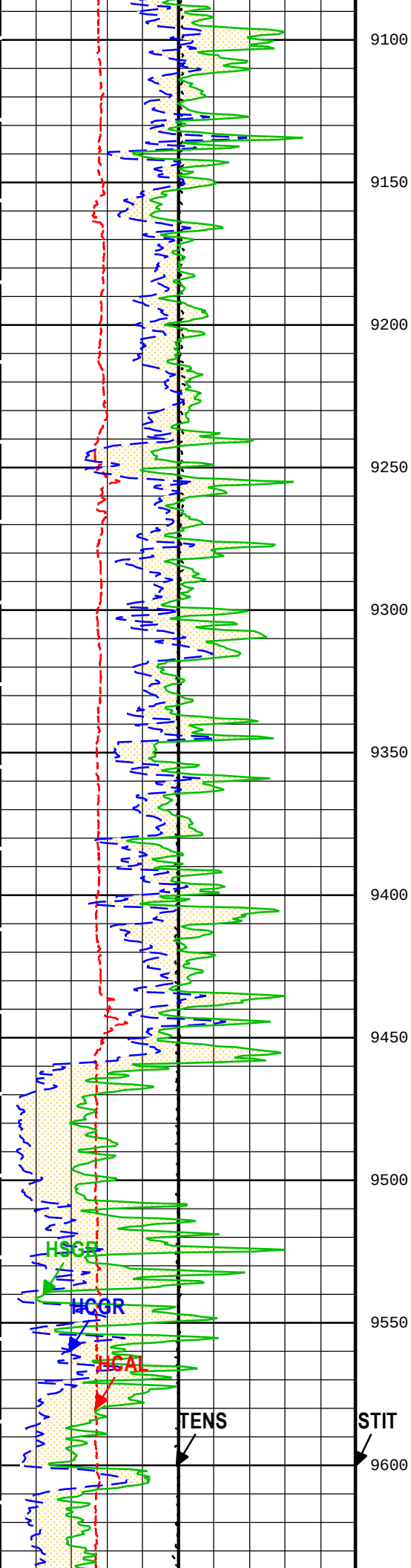
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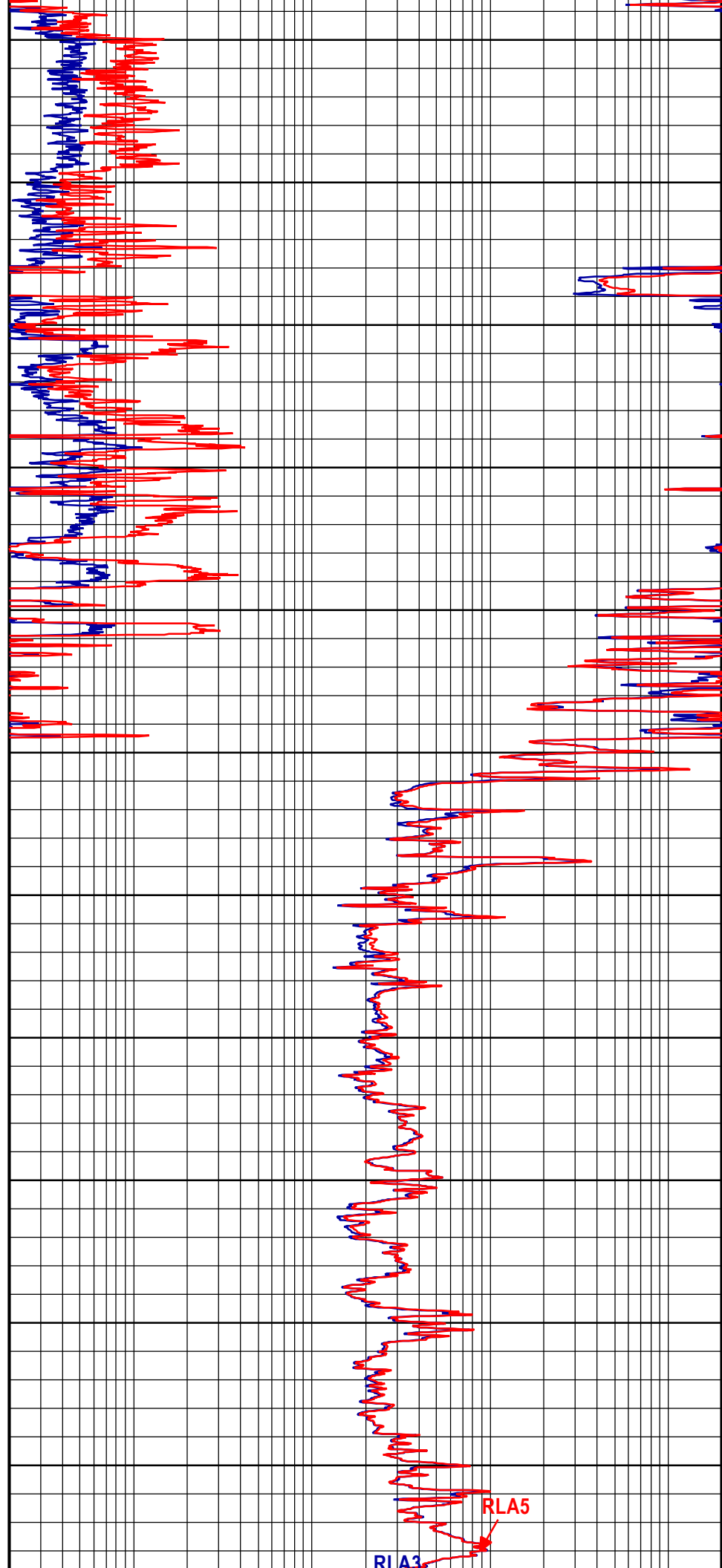
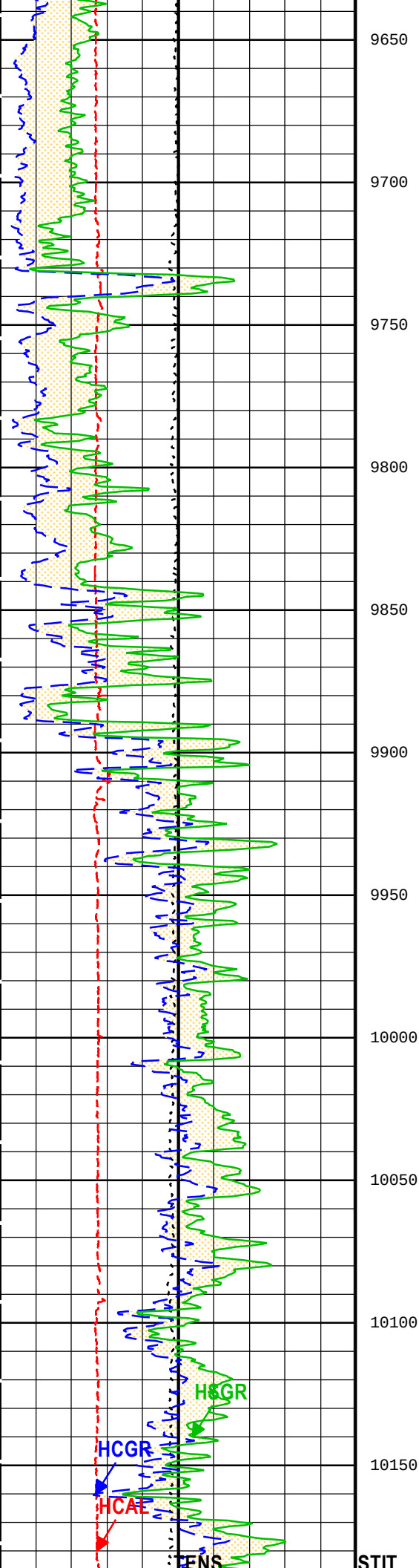


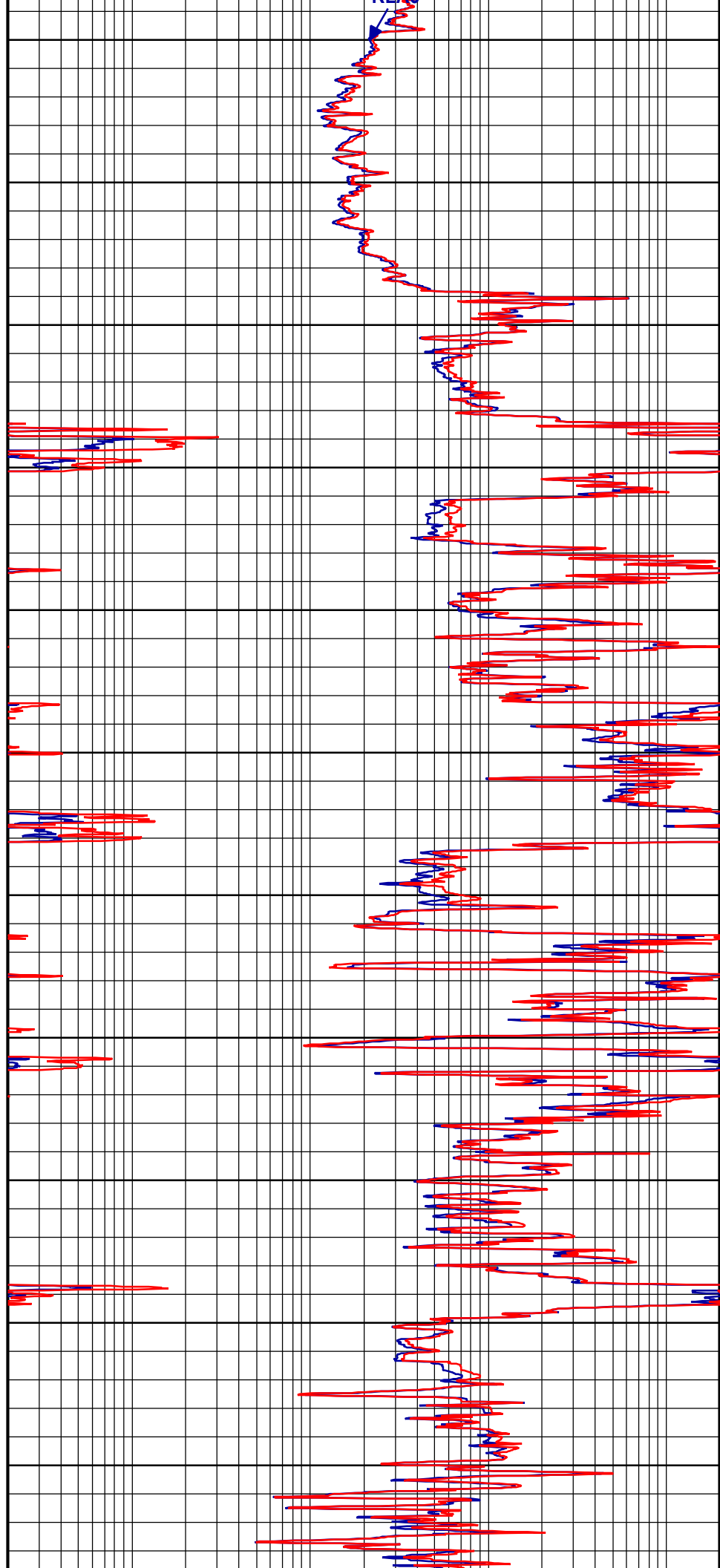
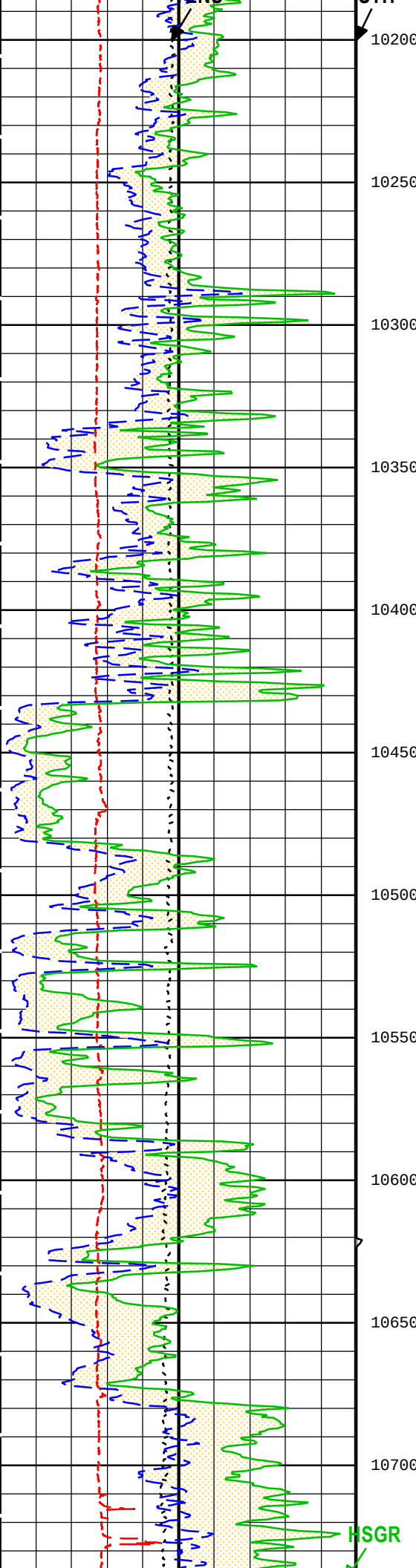
RLA5

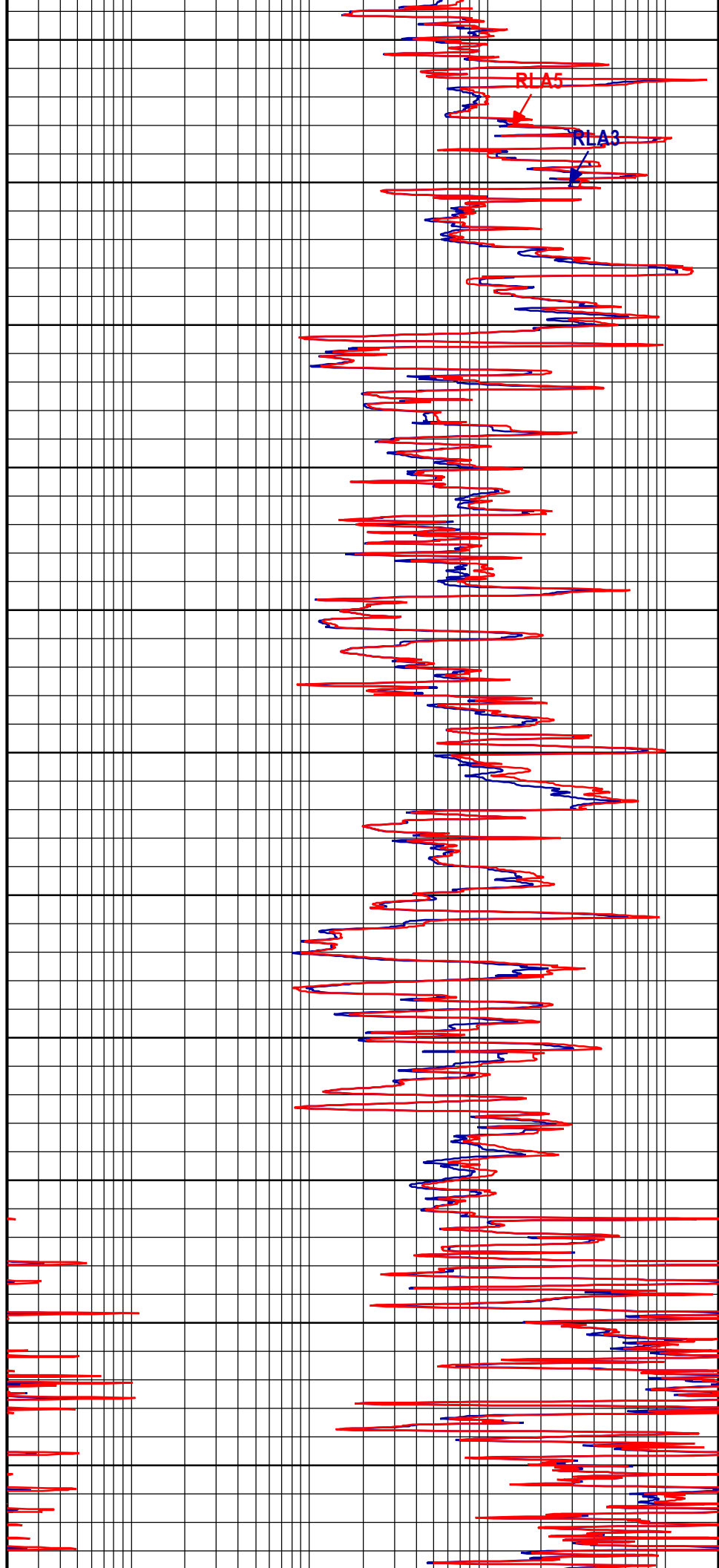
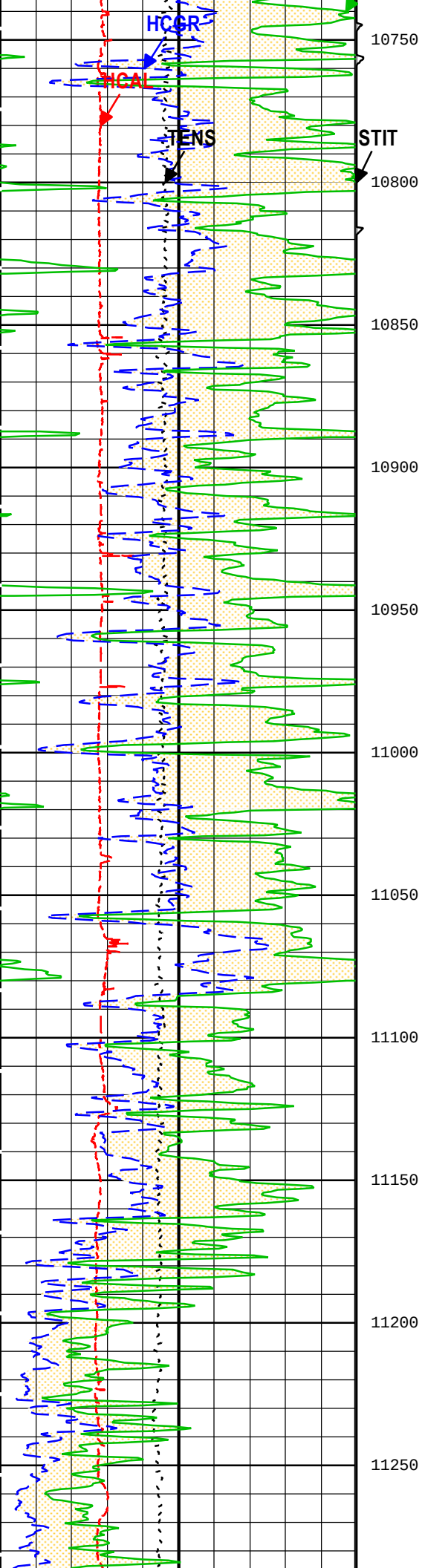
RLA3

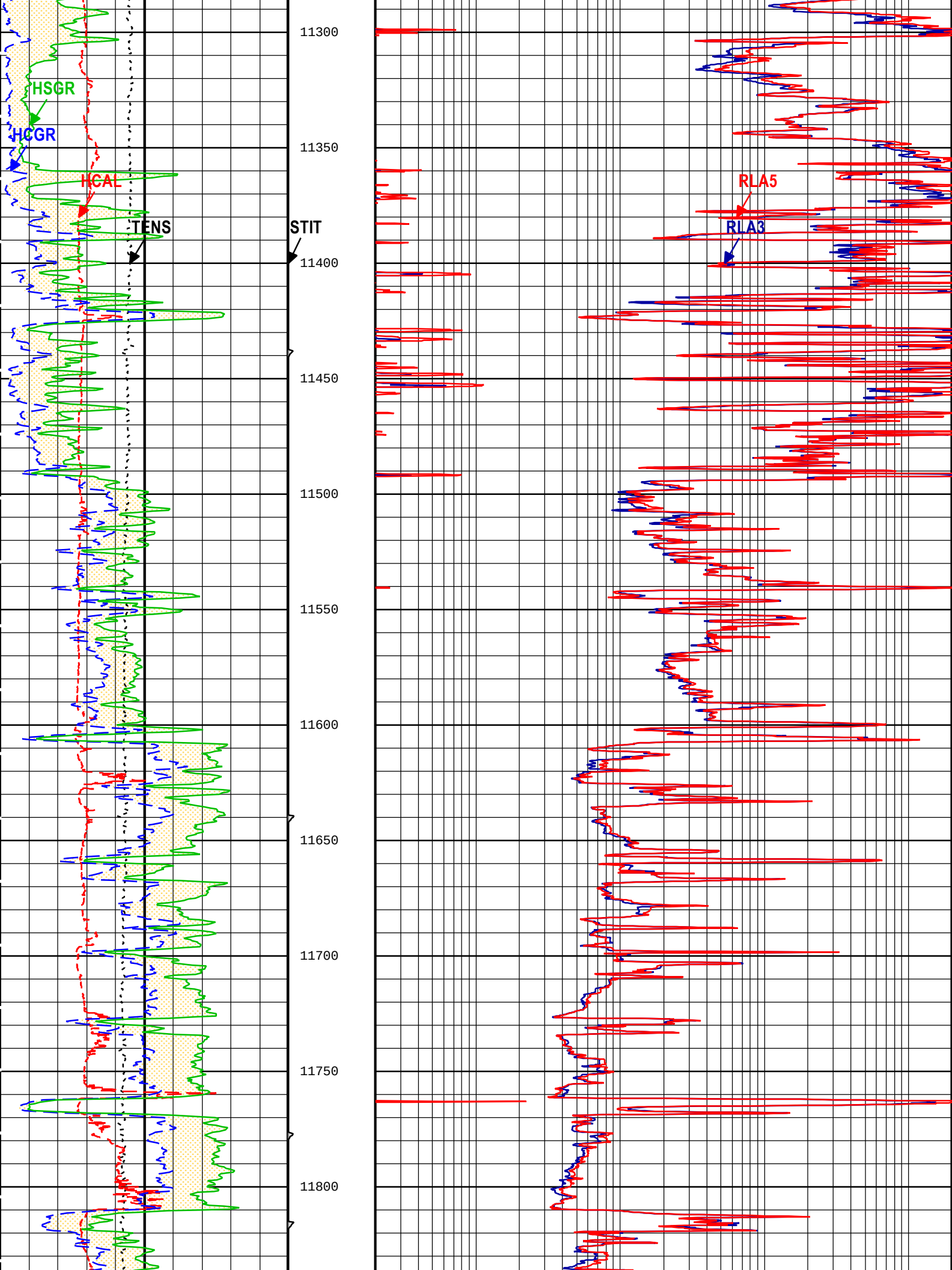


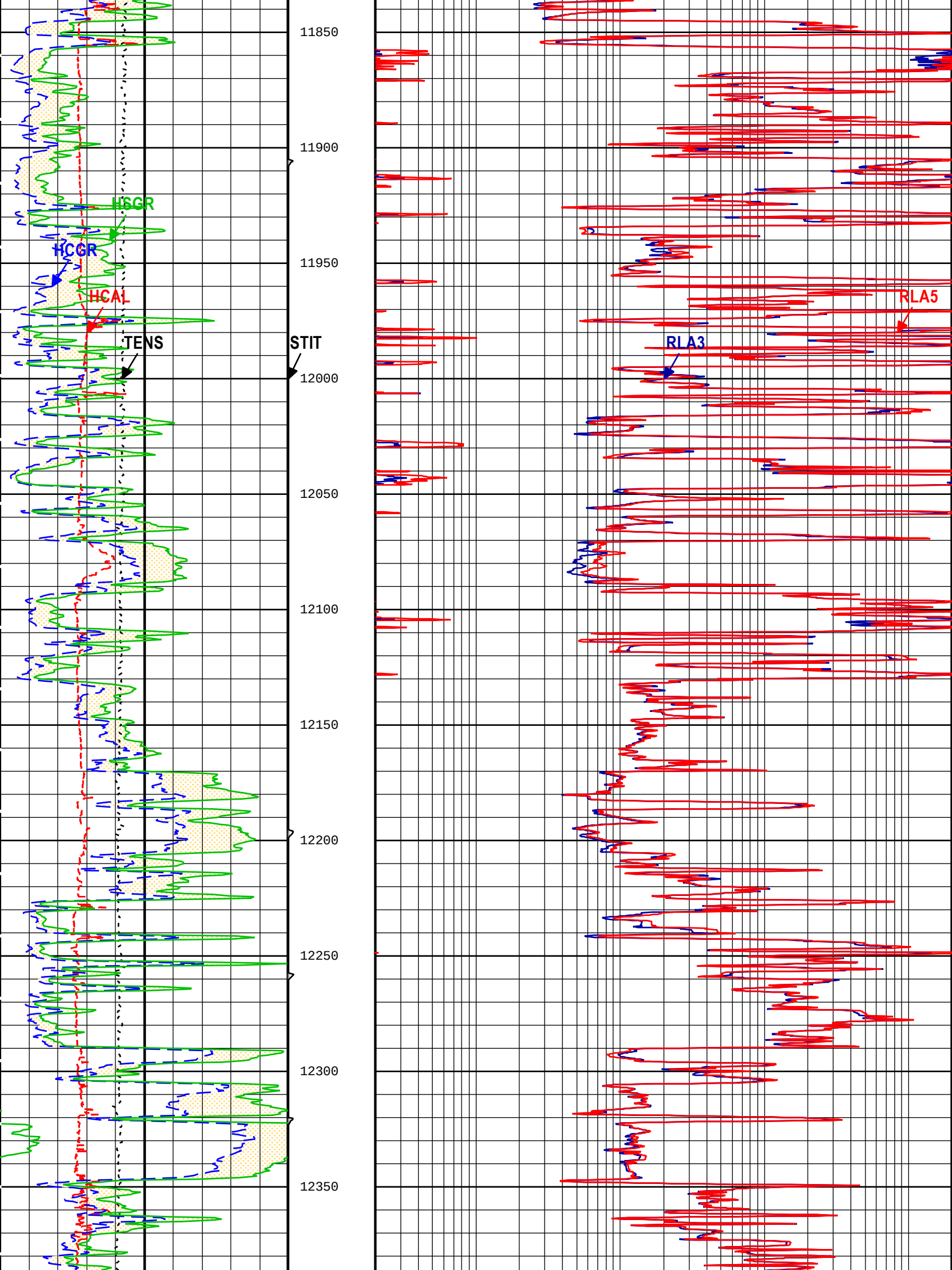


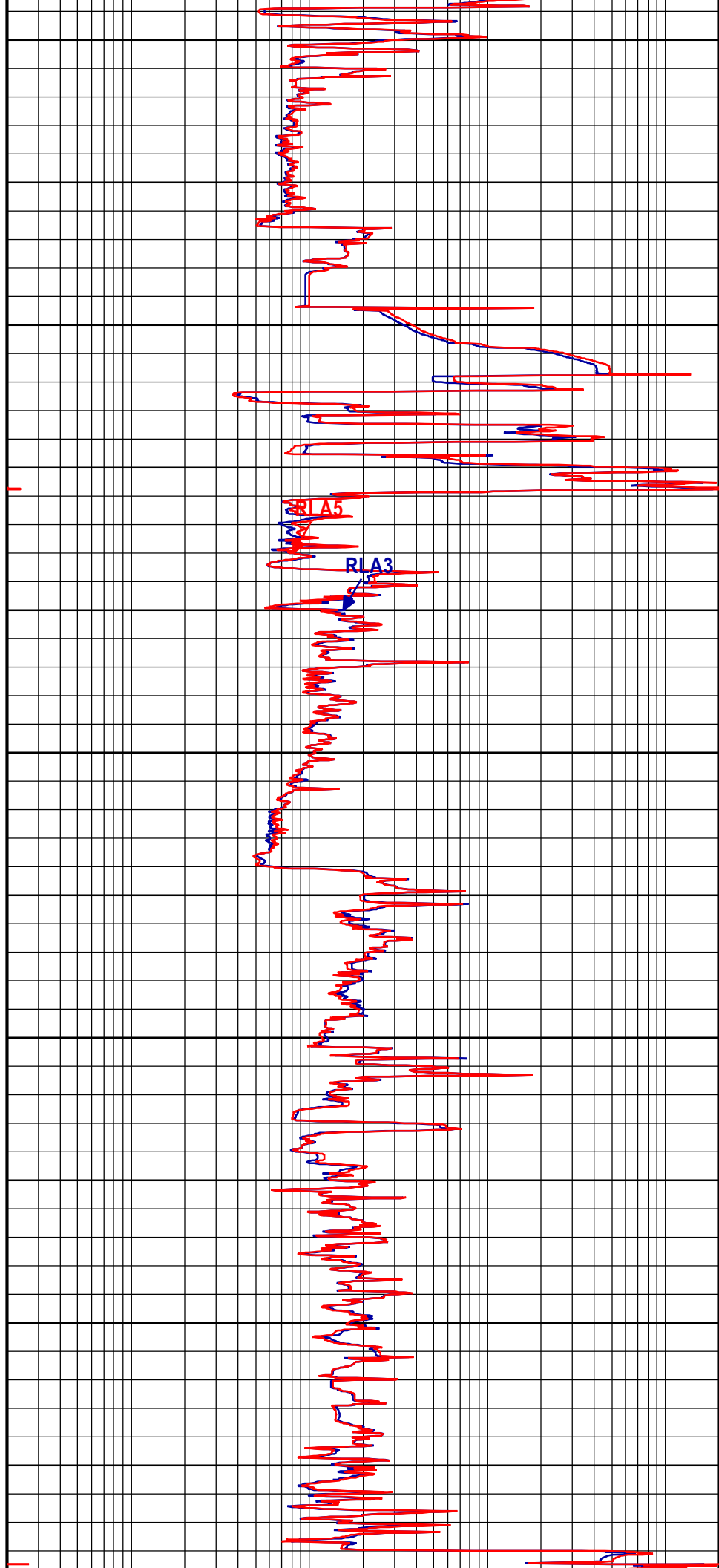
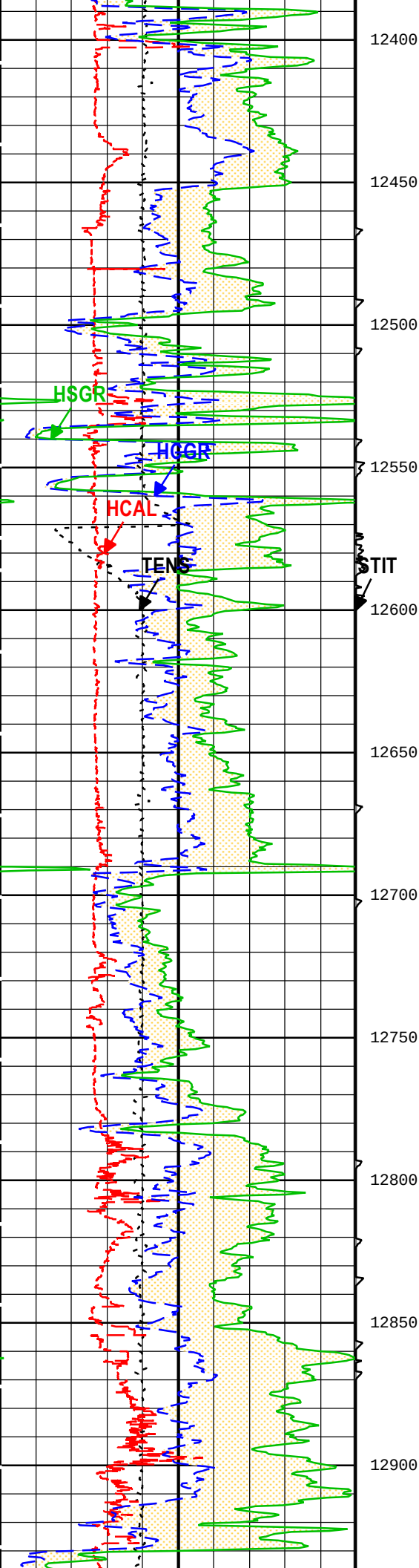


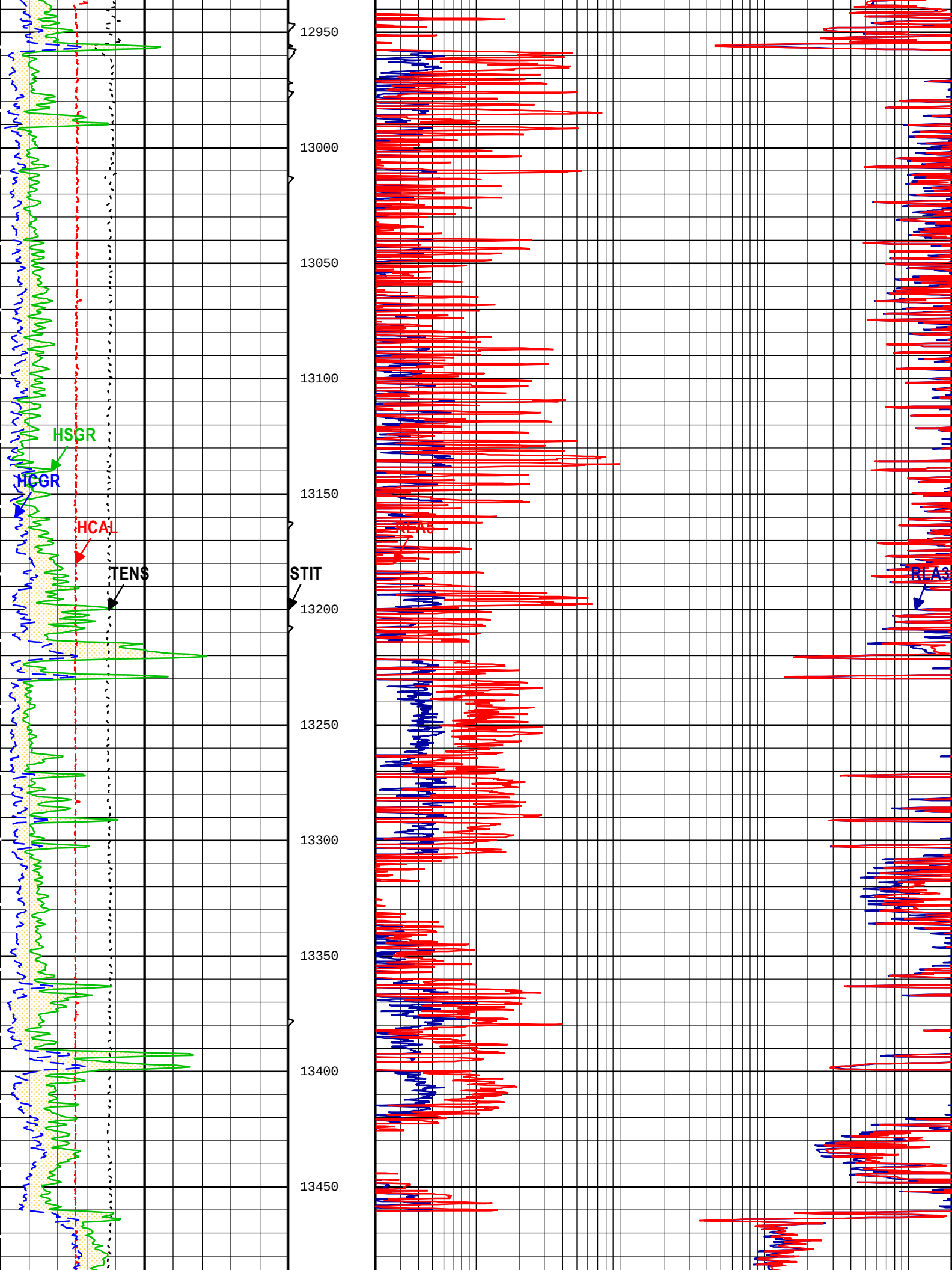


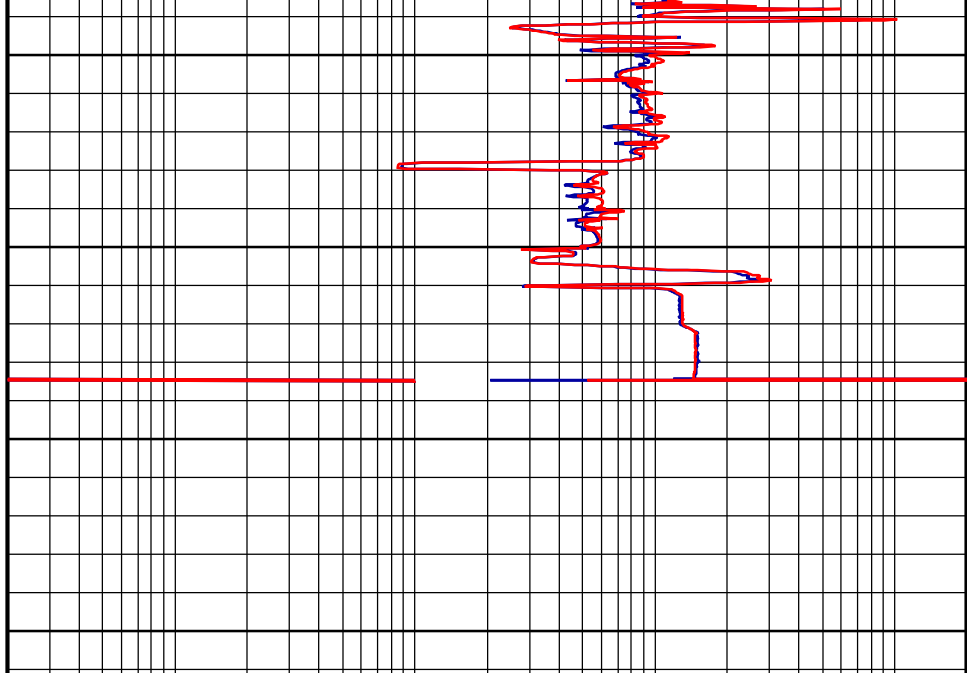
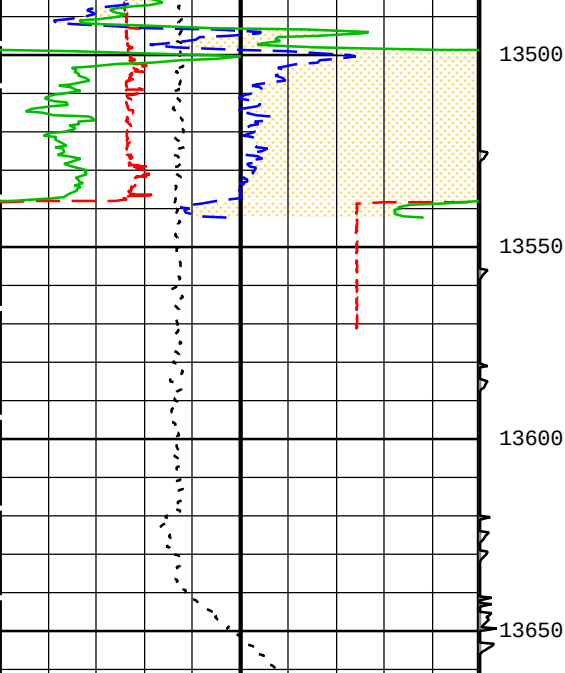












Uranium Indicator		
Cable Tension (TENS)		
10000	lbf	0
Caliper (HCAL) HDRS-H		
6	in	16
Gamma Ray Contribution from Thorium and Potassium (HCGR) HNGS-BA		
0	gAPI	150
Spectroscopy Gamma Ray (HSGR) HNGS-BA		
0	gAPI	150

Apparent Resistivity from Computed Focusing Mode 3 (RLA3) HRLT-B		
0.2	ohm.m	2000
Apparent Resistivity from Computed Focusing Mode 5 (RLA5) HRLT-B		
0.2	ohm.m	2000

TIME_1900 - Time Marked every 60.00 (s)

Description: HRLT BASIC LOG Format: Log (HRLA_2_inch) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:50:46

Run 1A

Main Pass 5"=100'

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run 1A	Main[3]:Up	Up	213.72 ft	13662.08 ft	29-Nov-2016 4:25:05 PM	29-Nov-2016 10:56:13 PM	ON	13.82 ft	Yes

All depths are referenced to toolstring zero

Log	Company:DCP Midstream LP Well:Zia AGI D2	
	Run 1A: Main[3]:Up:S008	

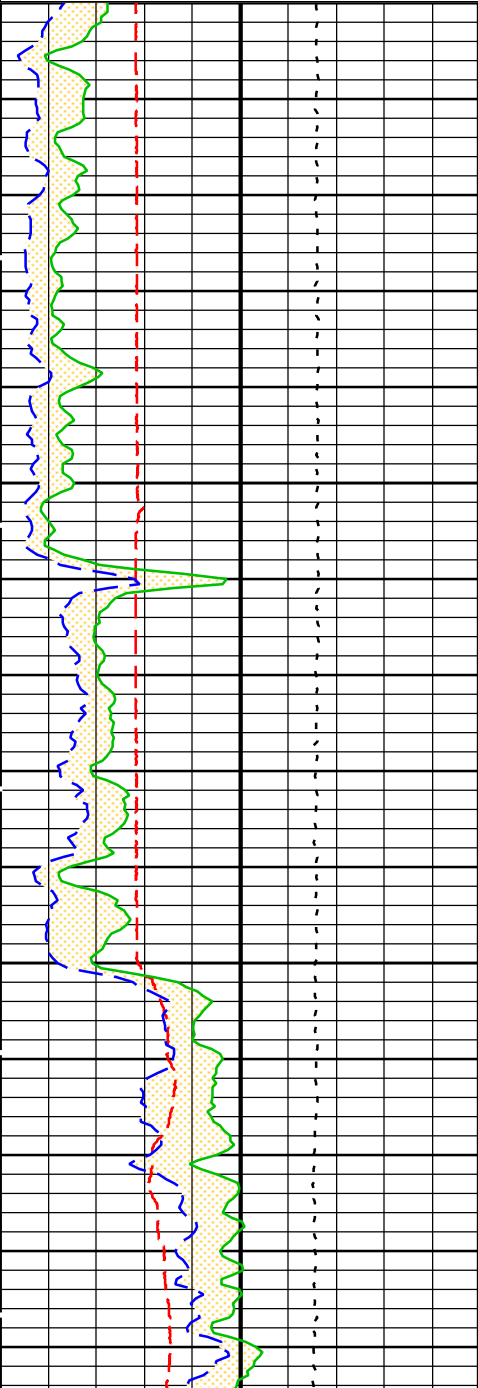
Description: HRLT BASIC LOG Format: Log (HRLA_5_Inch) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:50:50

Channel	Source	Sampling
CALI	HDRS-H:HRCC-H:HRCC-H	1in
CGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
MRES	HRLT-B:HRLS-B:HRLS-B	2in
RLA3	HRLT-B:HRLS-B:HRLS-B	2in
RLA4	HRLT-B:HRLS-B:HRLS-B	2in
RLA5	HRLT-B:HRLS-B:HRLS-B	2in

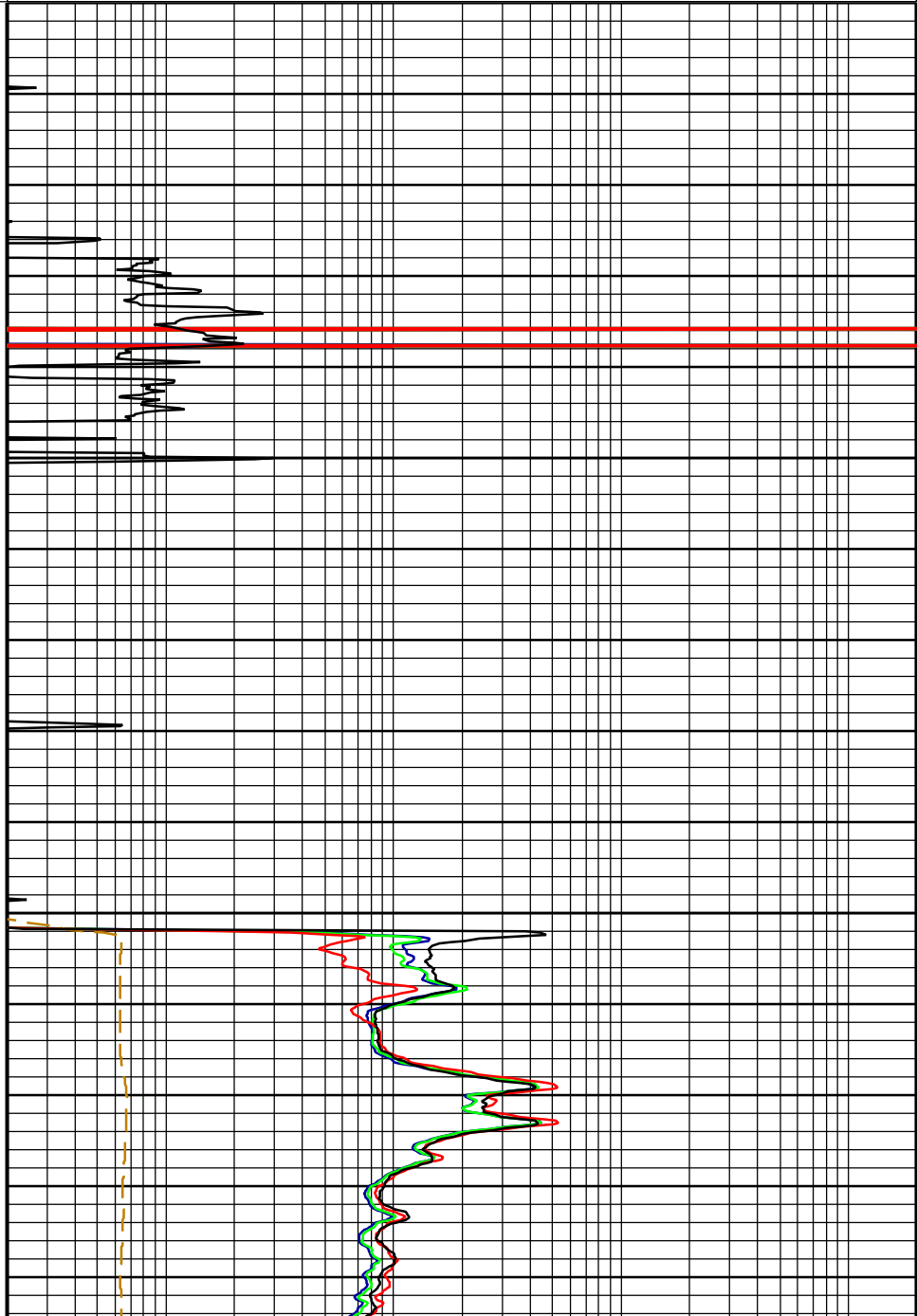
RXOZ	HDRS-H:HRMS-H:HRGD-H	2in
SGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
TENS	WLWorkflow	6in
TIME_1900	WLWorkflow	0.1in

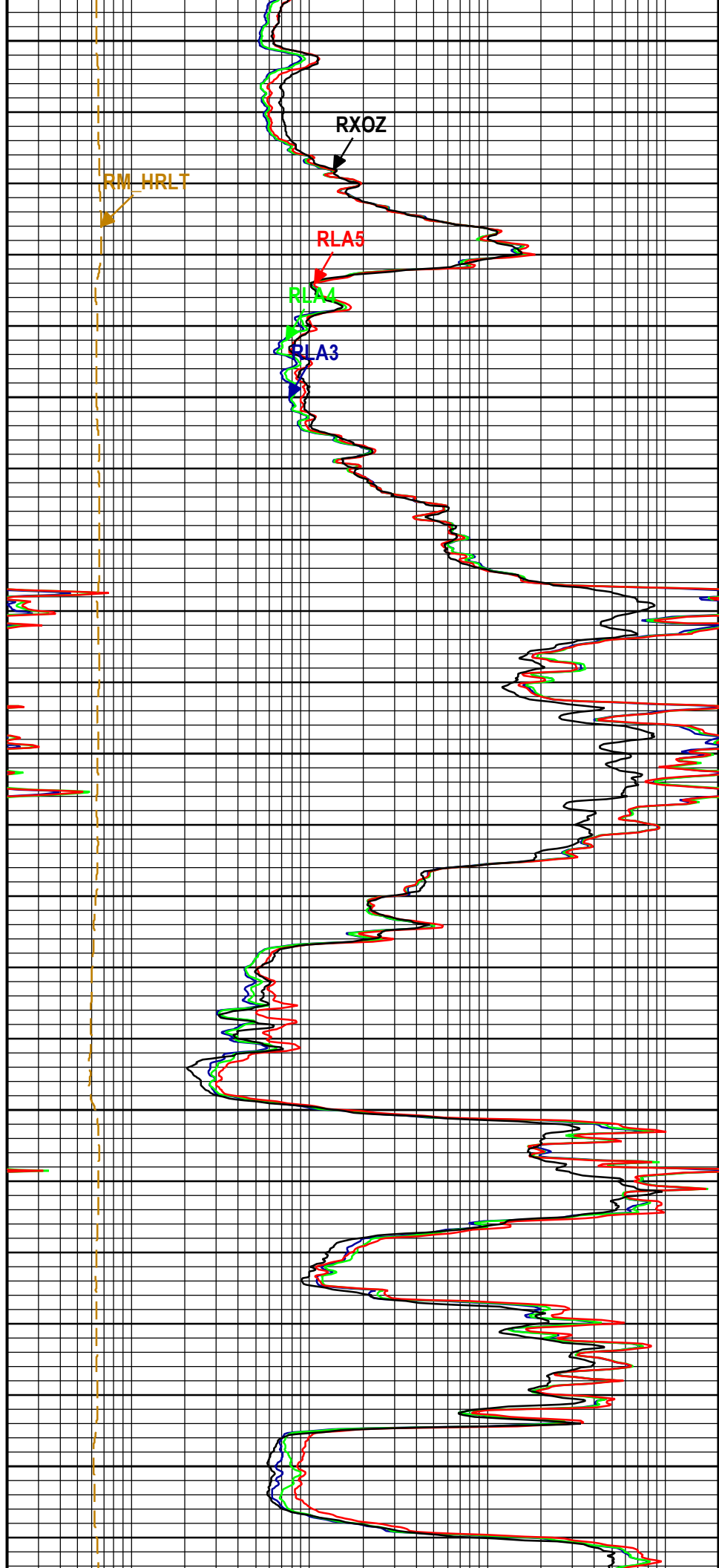
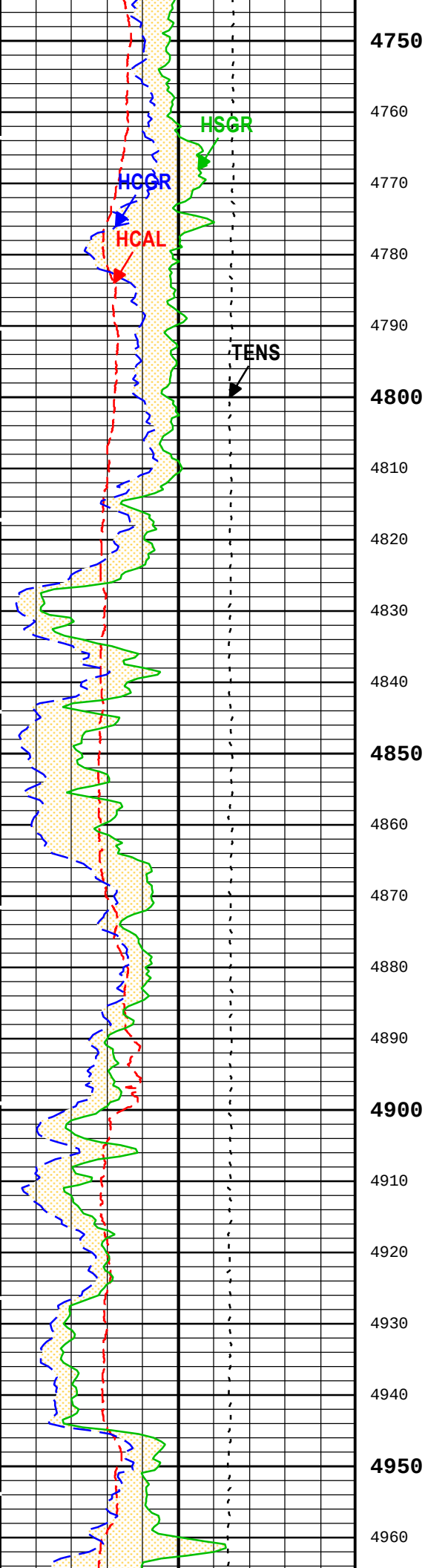
TIME_1900 - Time Marked every 60.00 (s)

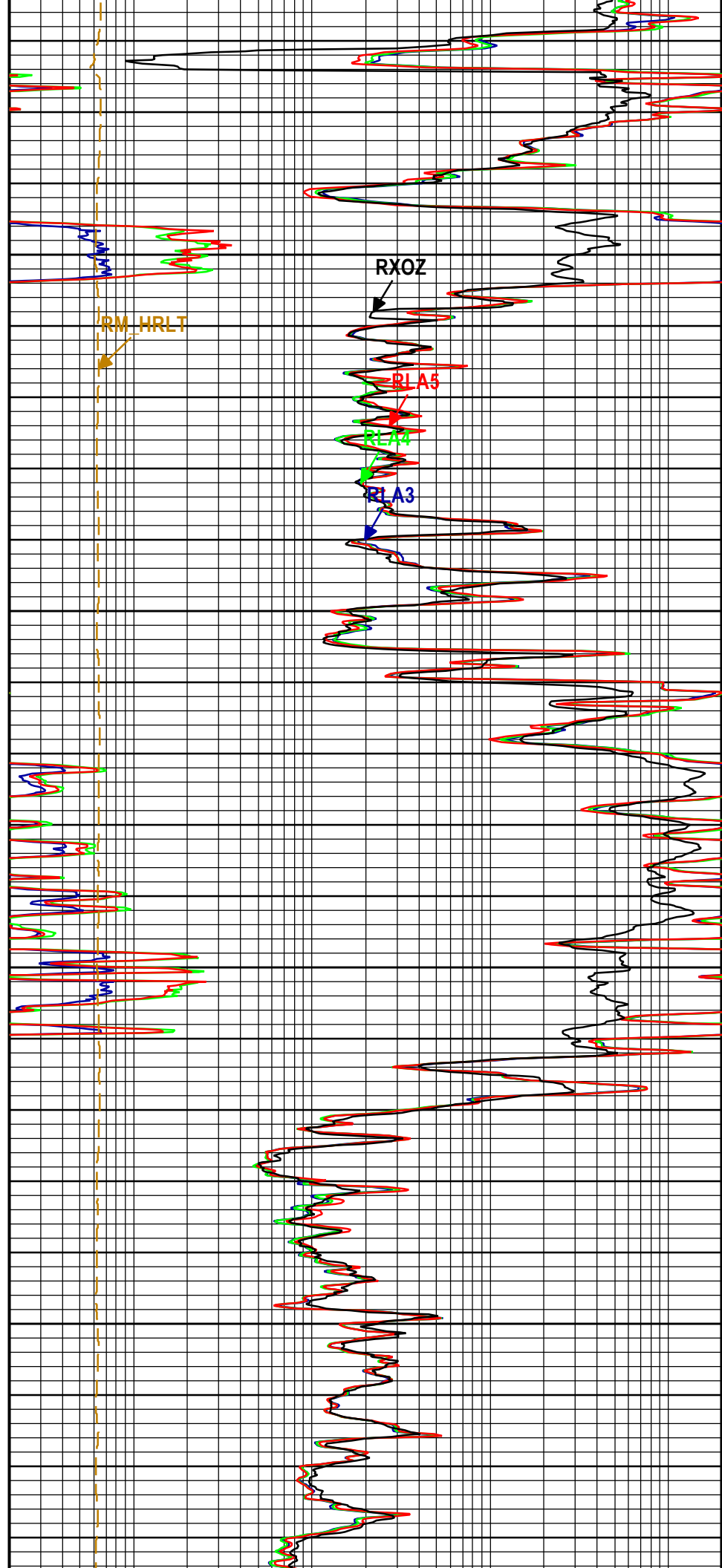
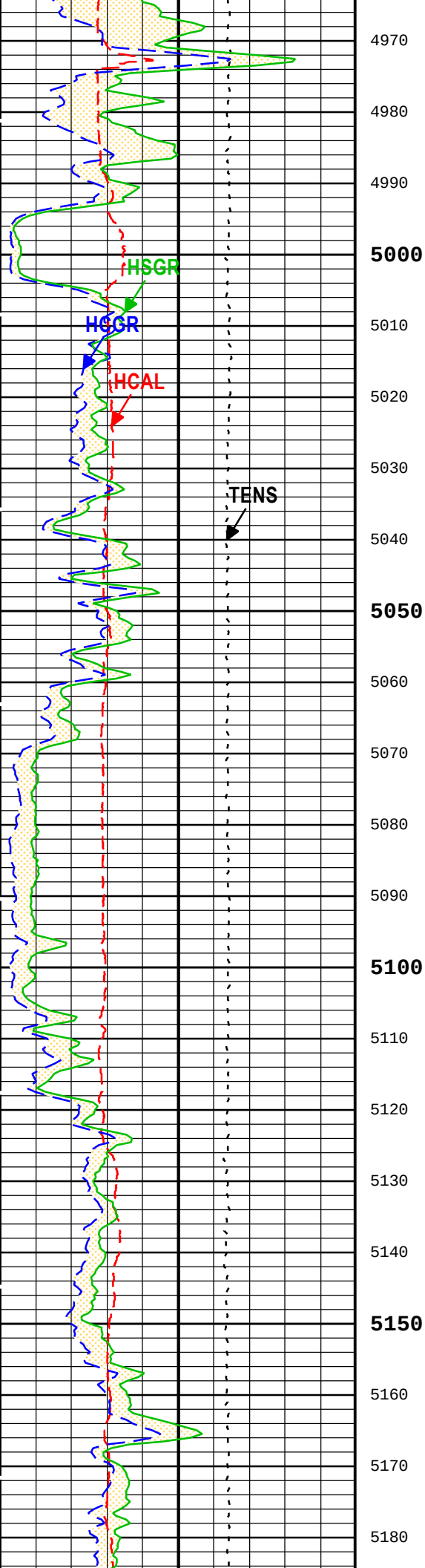
Uranium Indicator		
Cable Tension (TENS)		
10000	lbf	0
Caliper (HCAL) HDRS-H		
6	in	16
Gamma Ray Contribution from Thorium and Potassium (HCGR) HNGS-BA		
0	gAPI	150
Spectroscopy Gamma Ray (HSGR) HNGS-BA		
0	gAPI	150

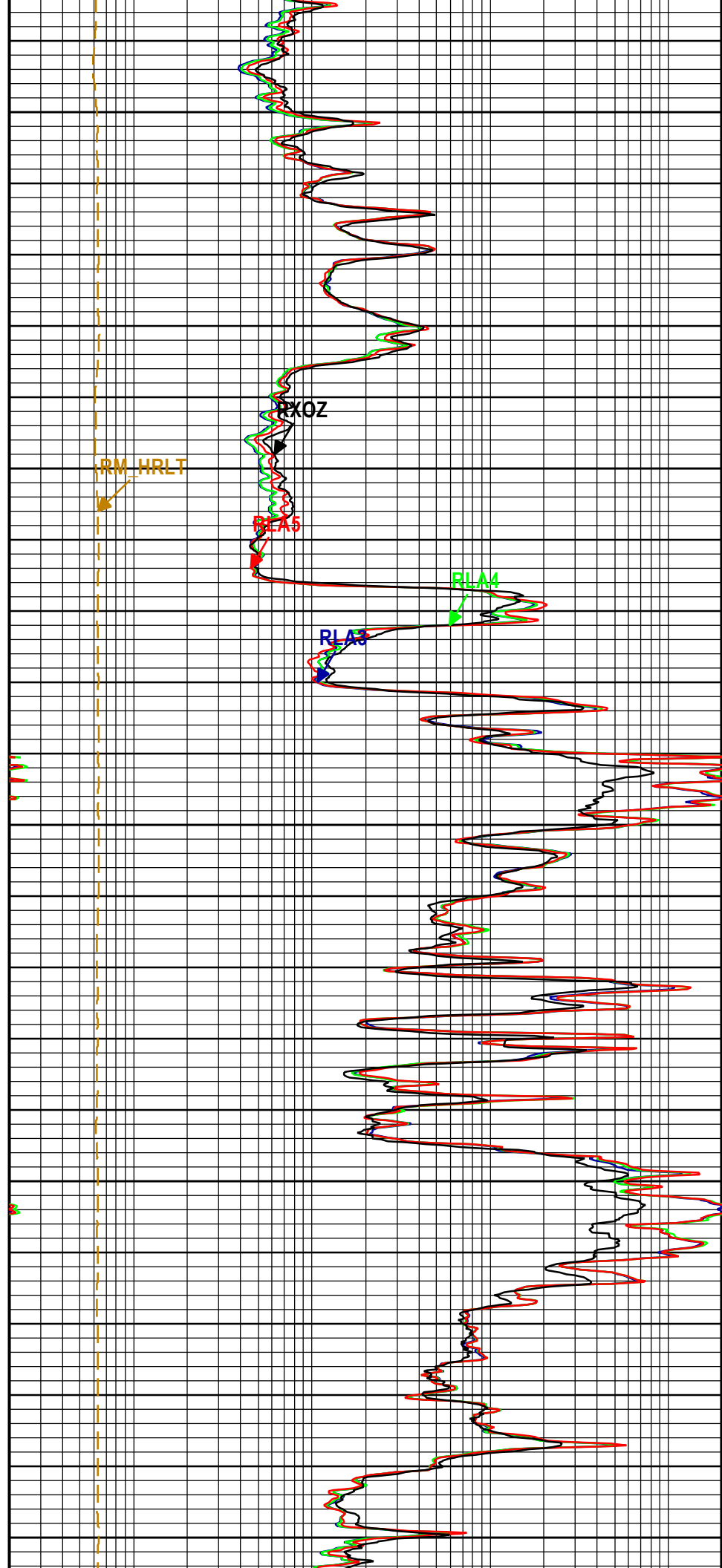
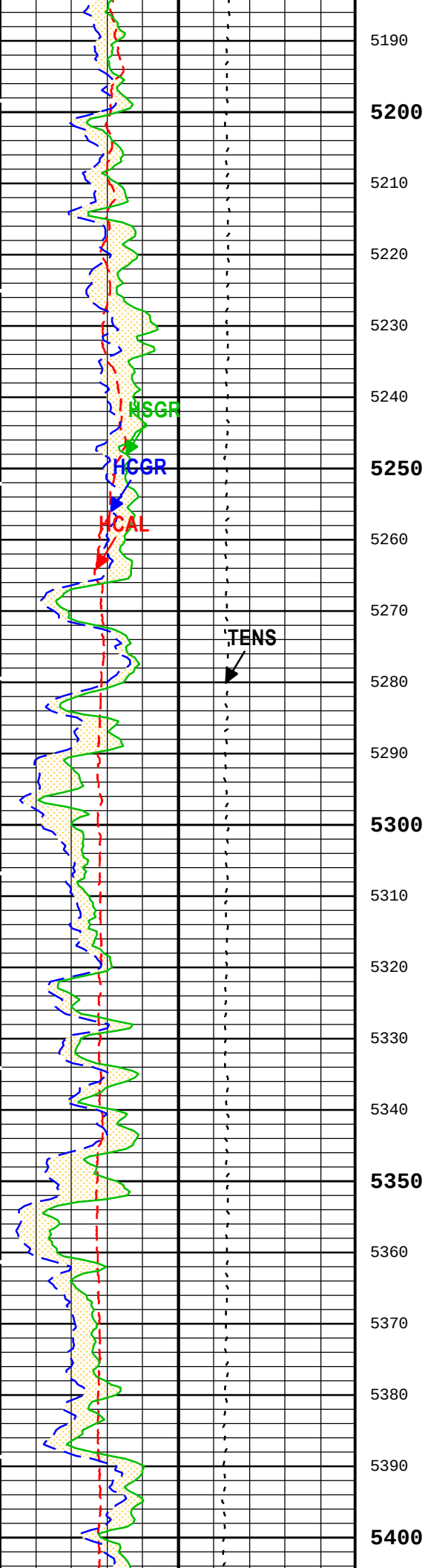


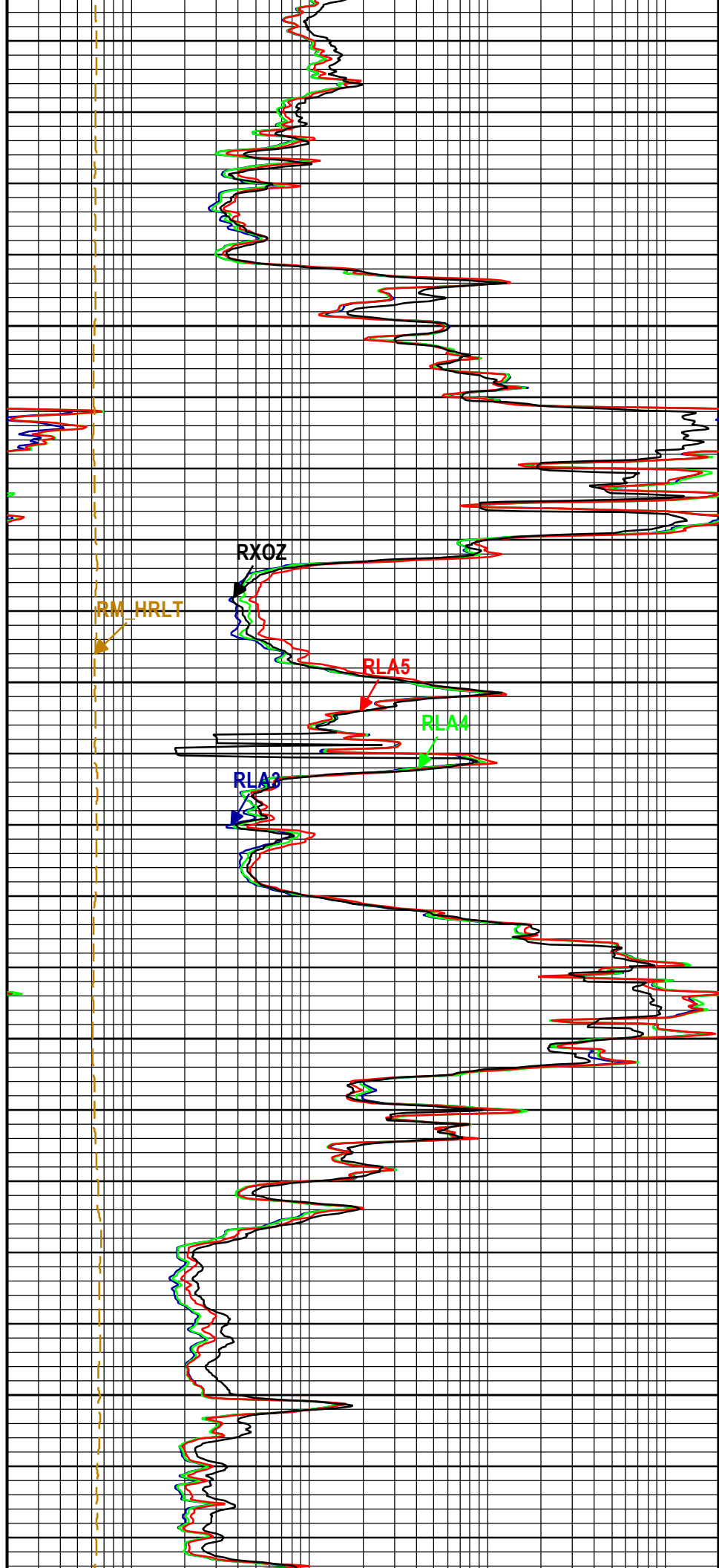
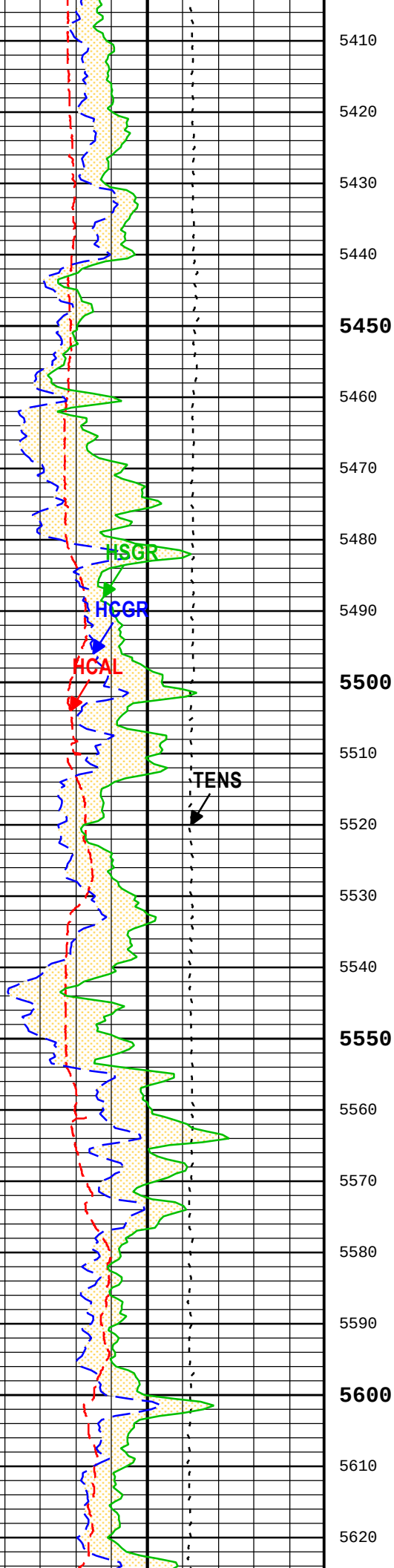
Apparent Resistivity from Computed Focusing Mode 3 (RLA3) HRLT-B		
0.2	ohm.m	2000
Apparent Resistivity from Computed Focusing Mode 4 (RLA4) HRLT-B		
0.2	ohm.m	2000
Apparent Resistivity from Computed Focusing Mode 5 (RLA5) HRLT-B		
0.2	ohm.m	2000
Mud Resistivity (RM_HRLT) HRLT-B		
0.02	ohm.m	200
Invaded Formation Resistivity filtered at 18 inches (RXOZ) HDRS-H		
0.2	ohm.m	2000

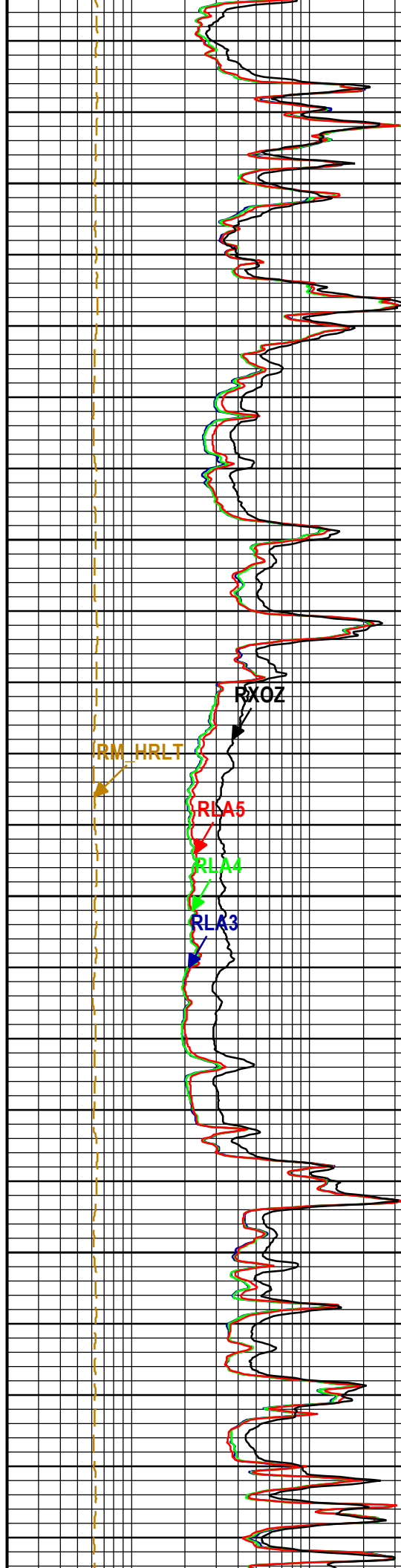
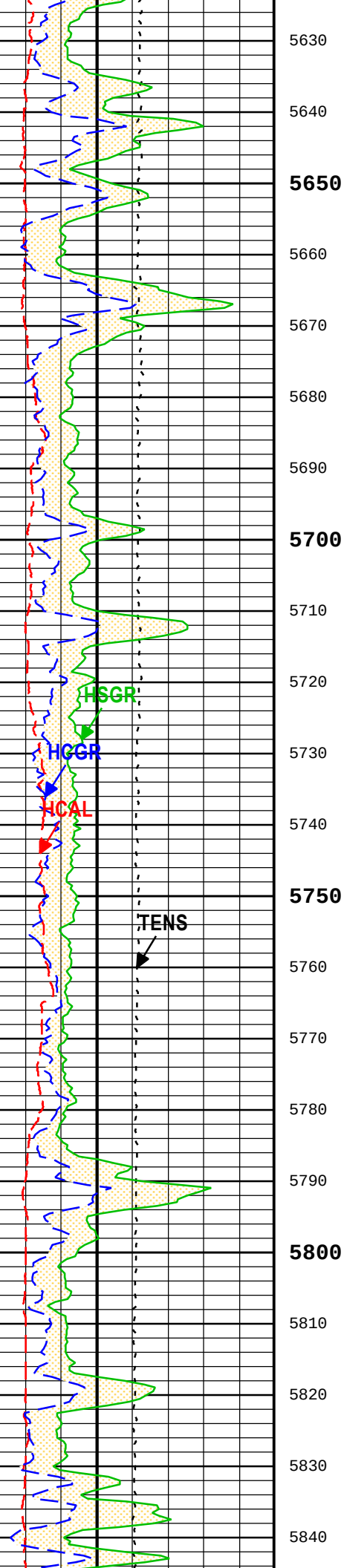


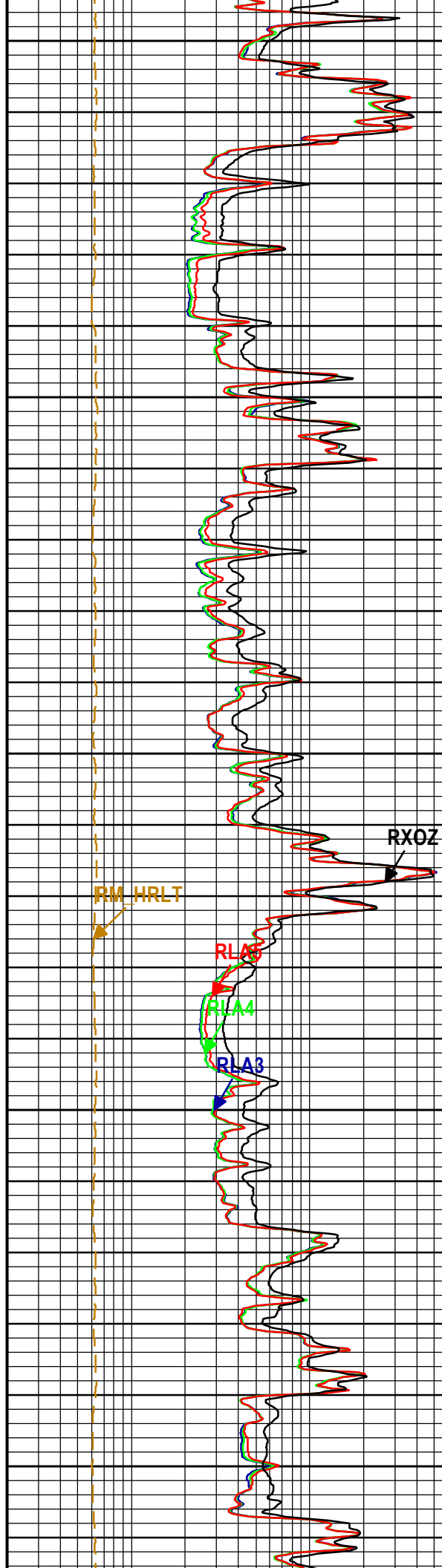
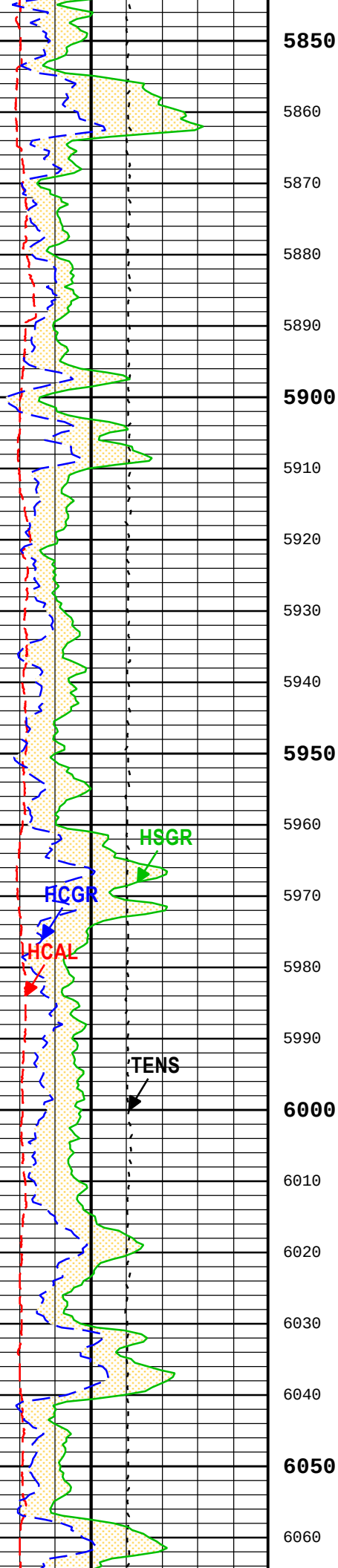


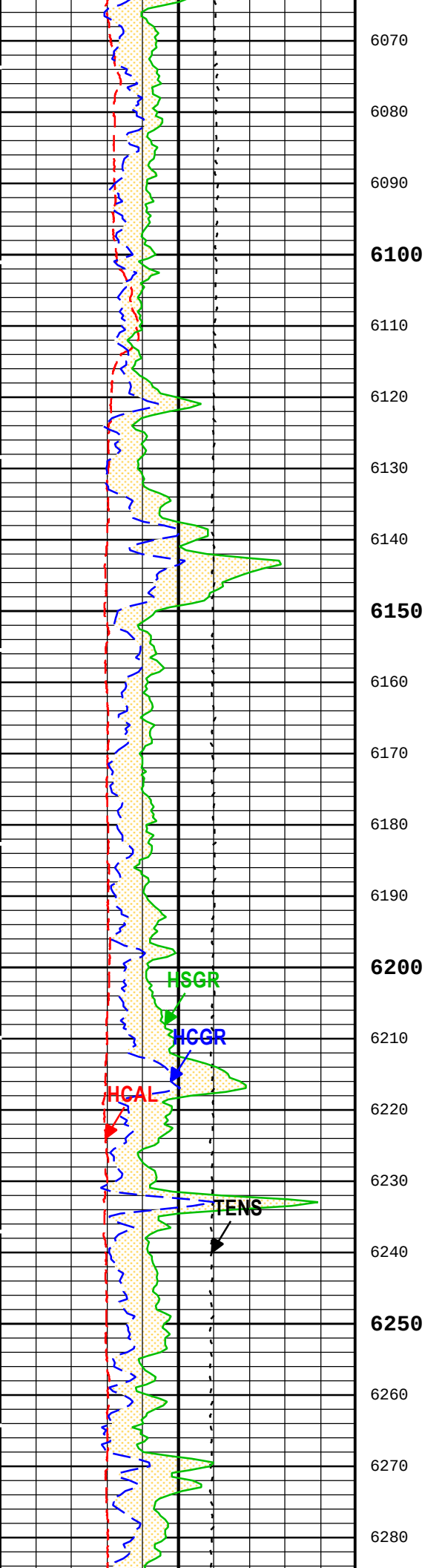




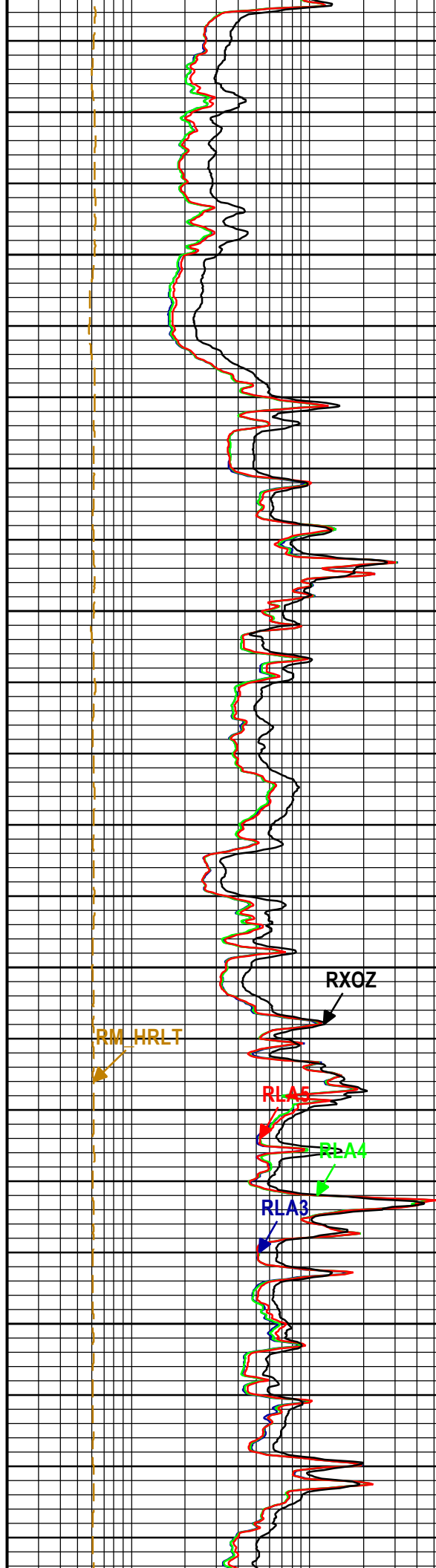


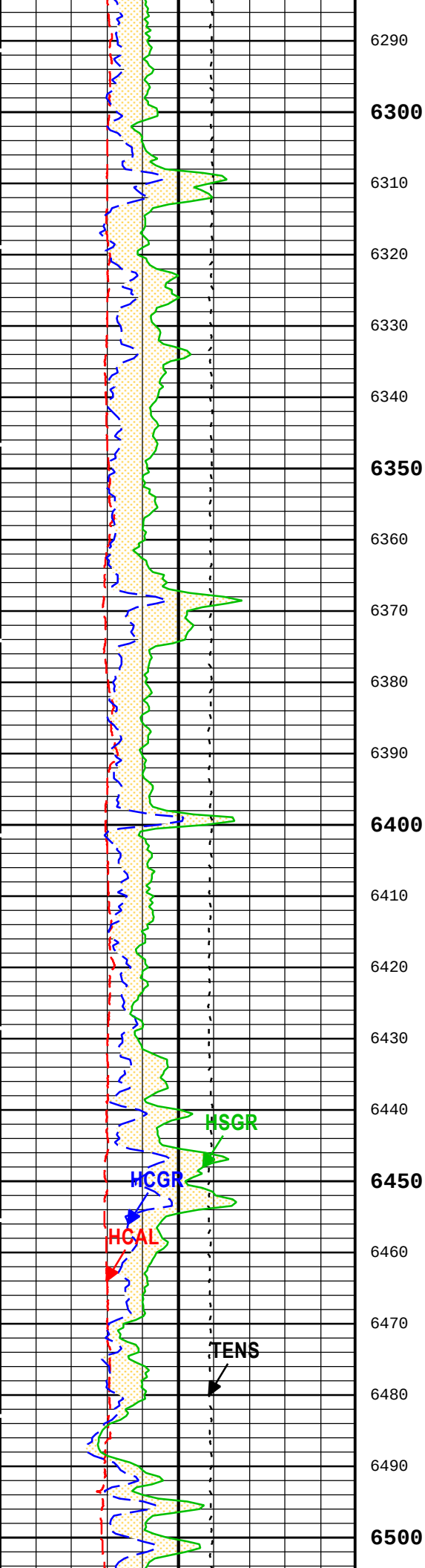




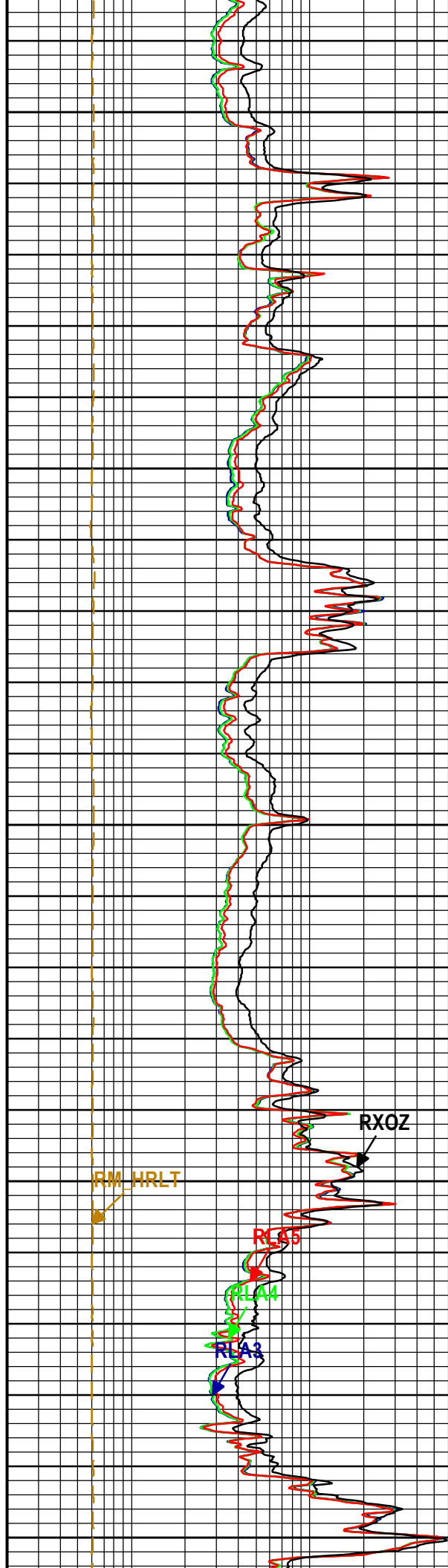


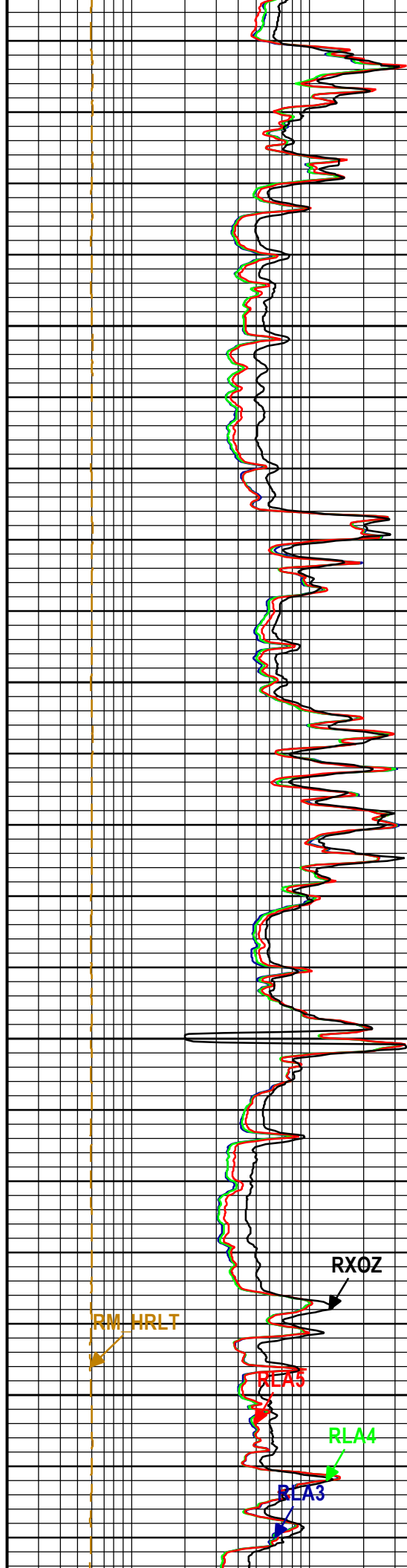
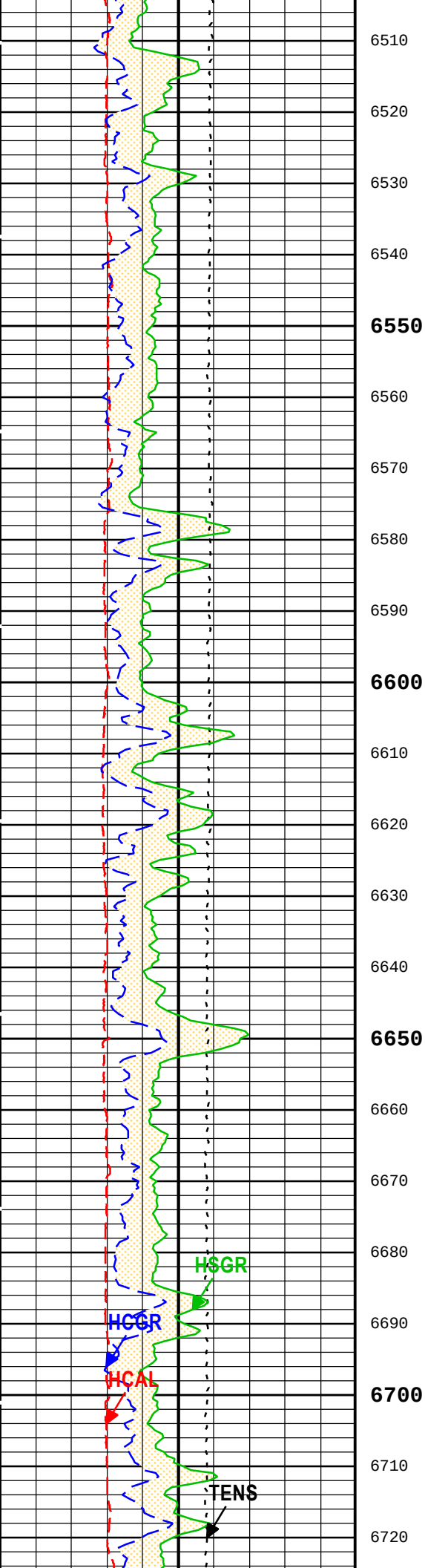
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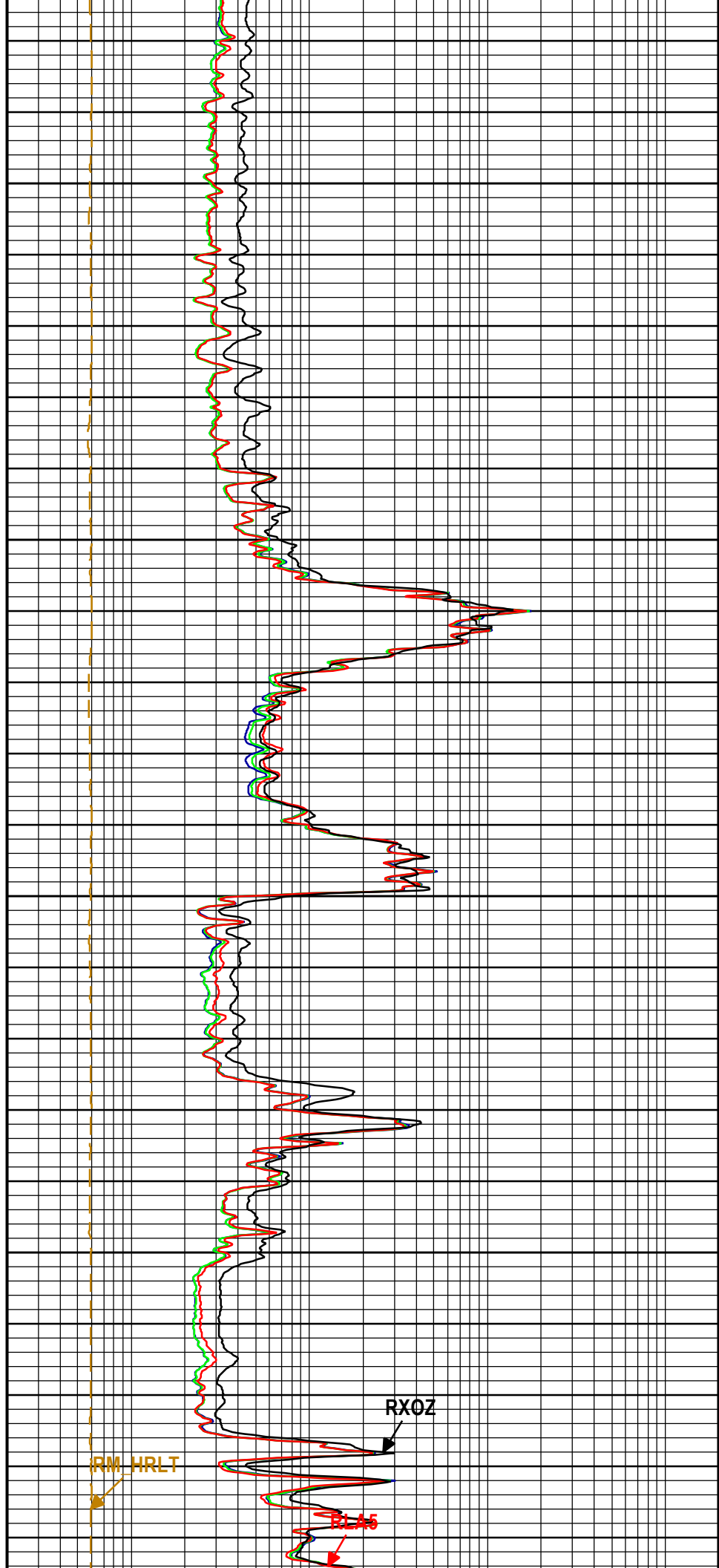
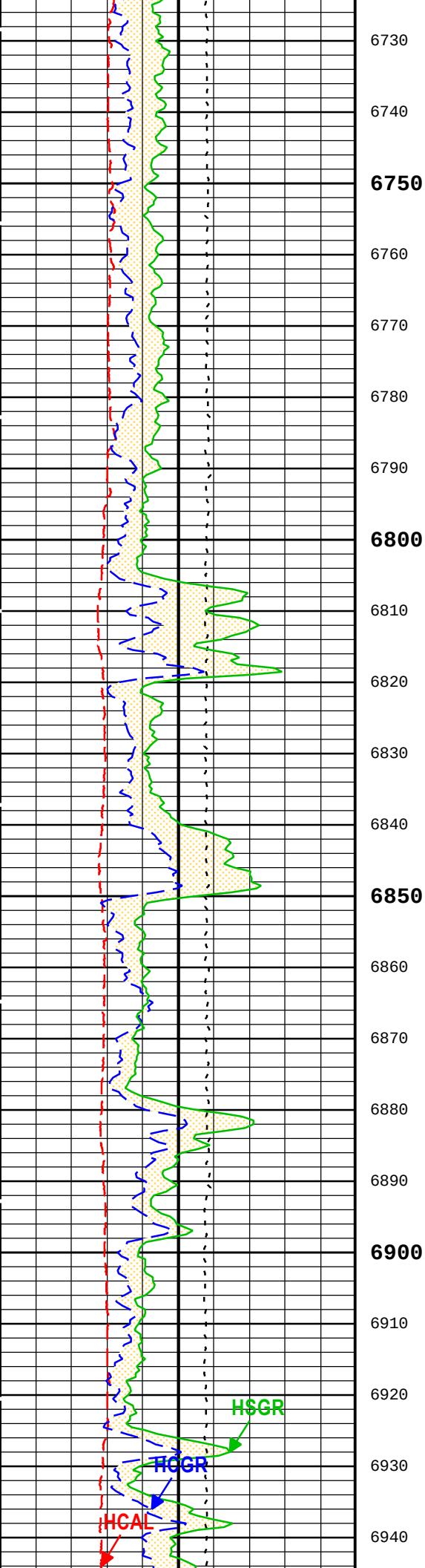


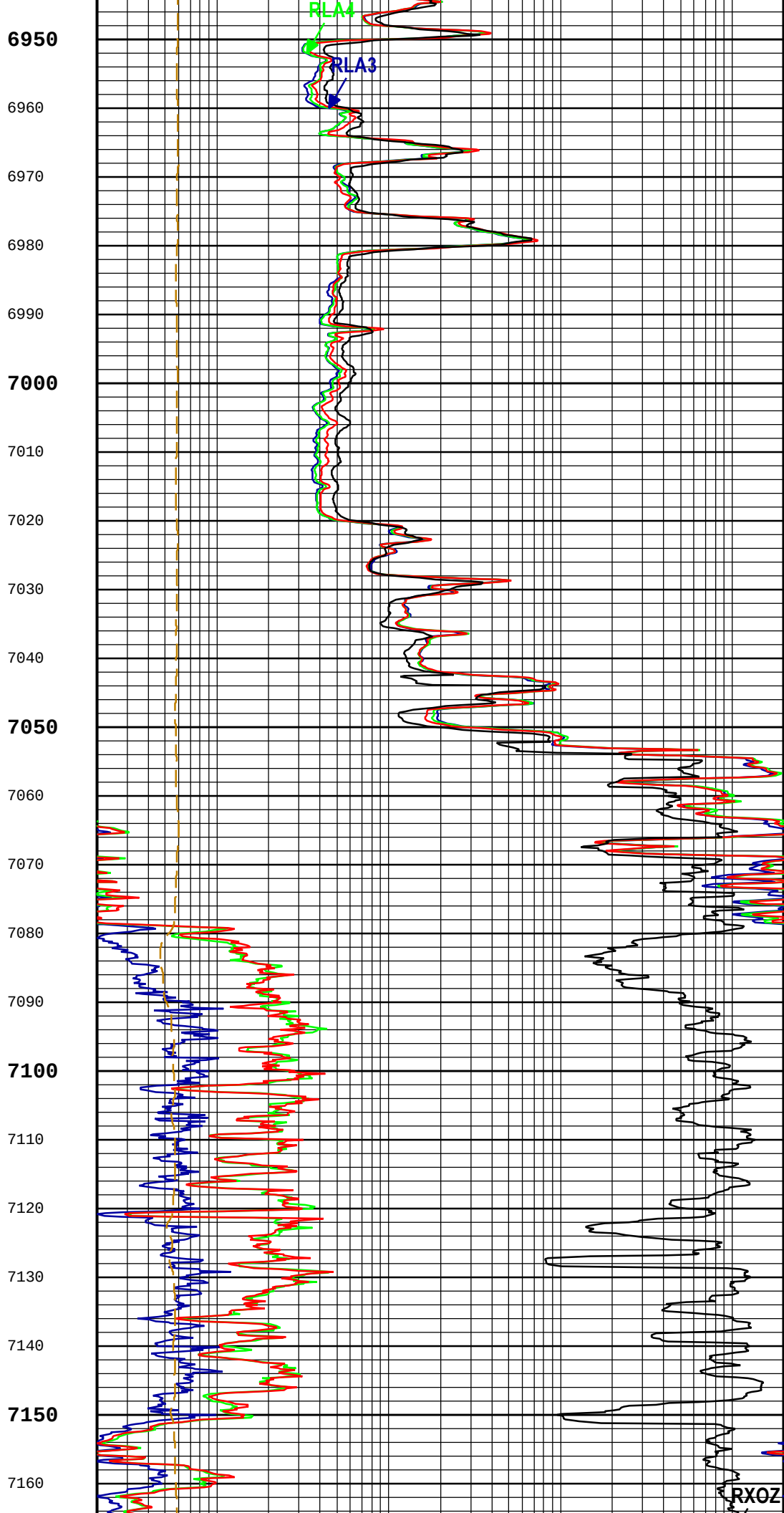
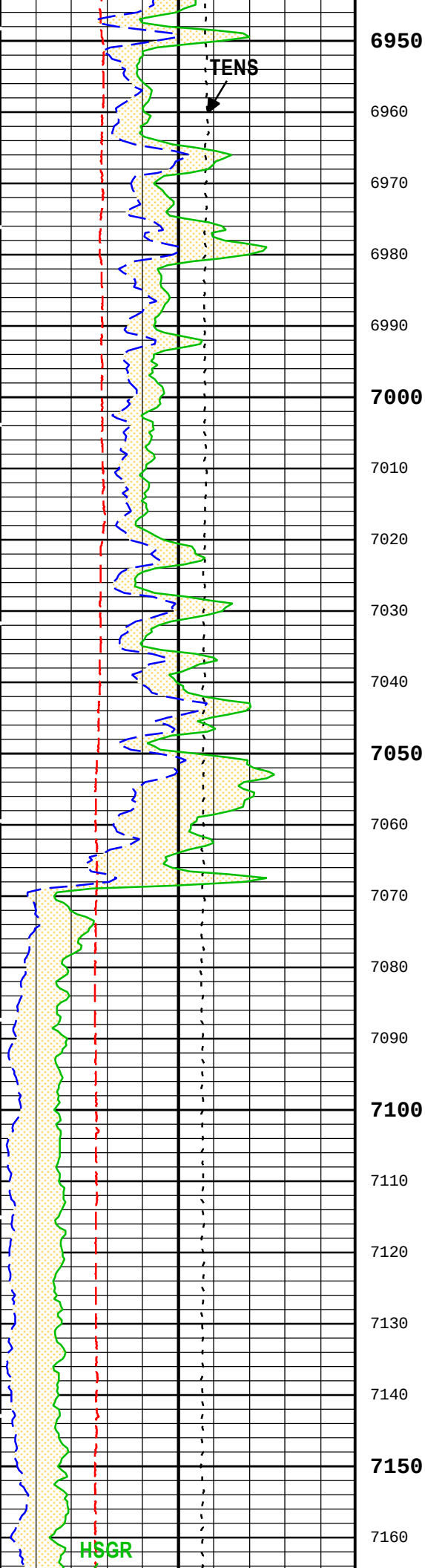


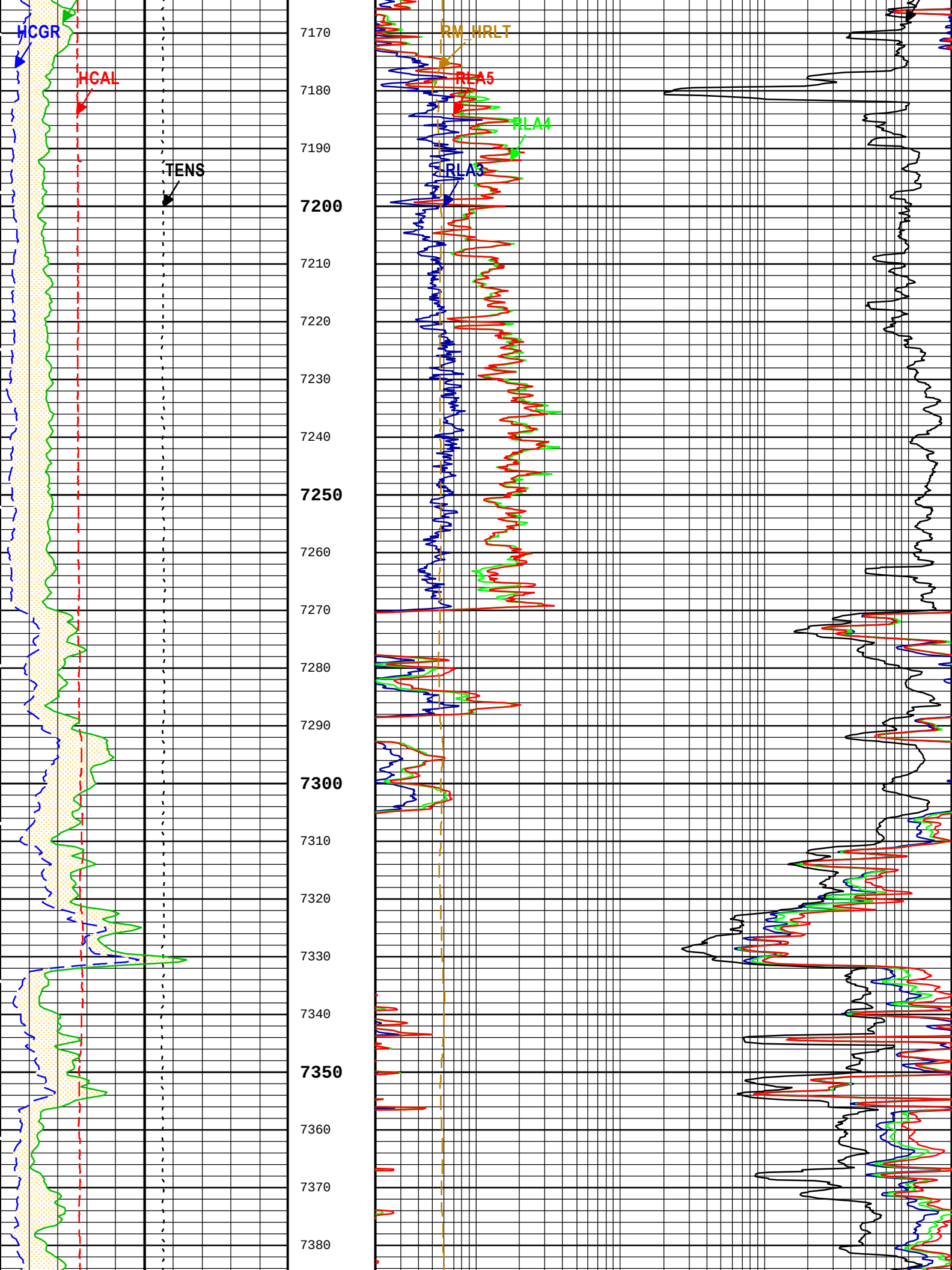
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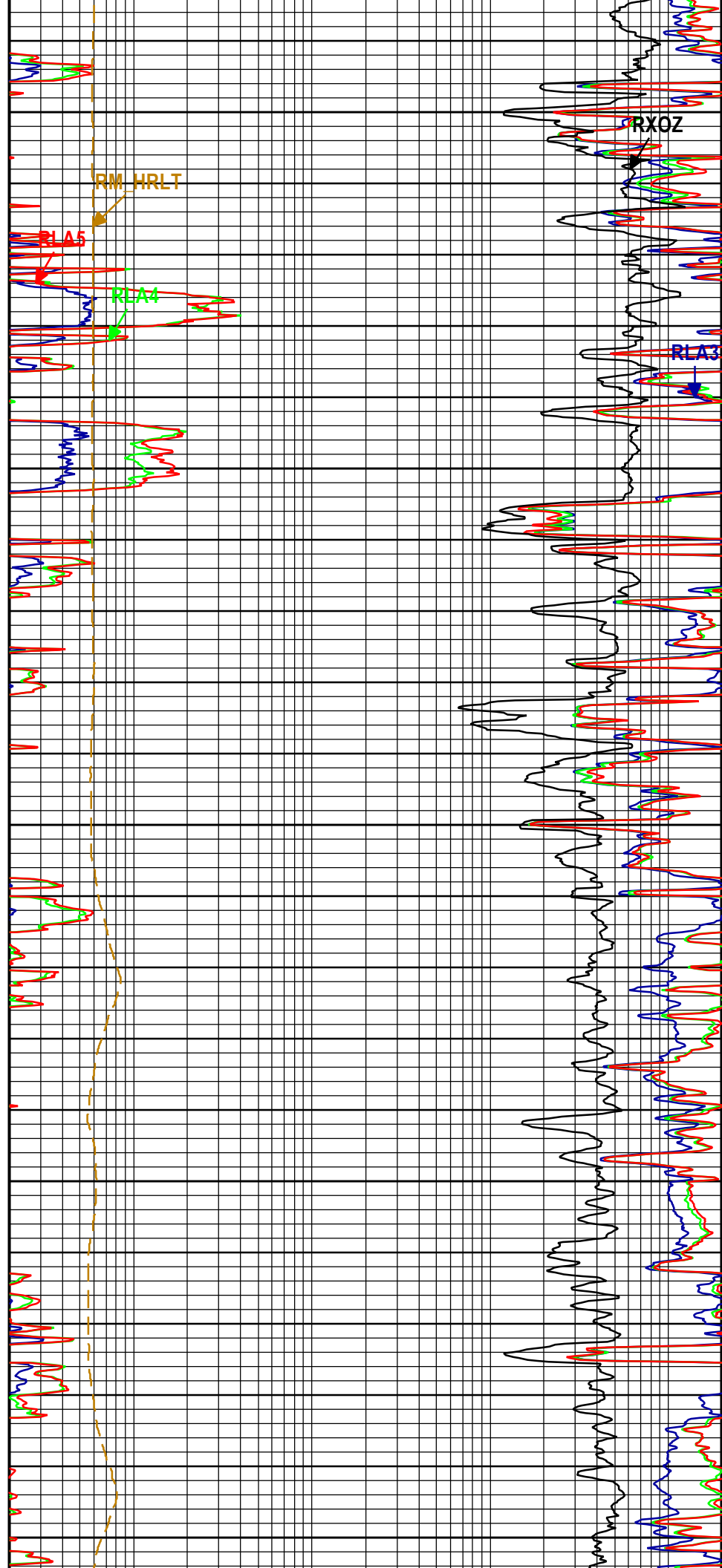
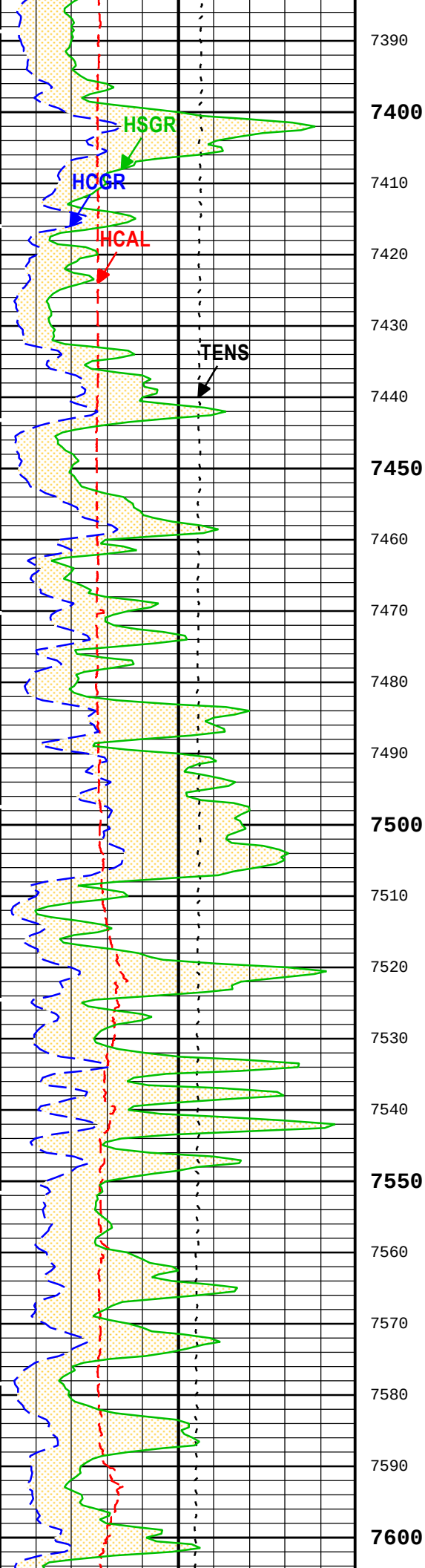


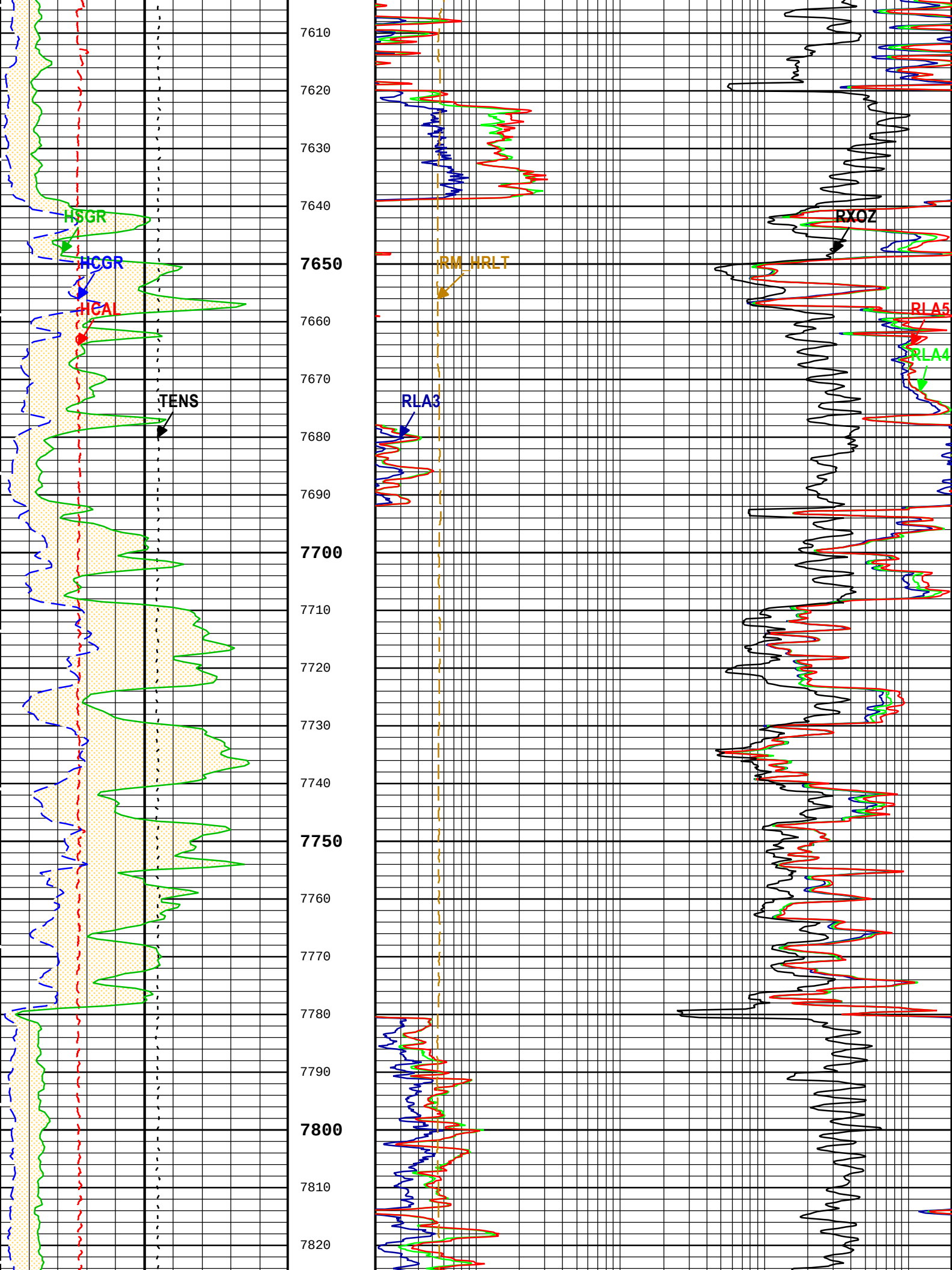


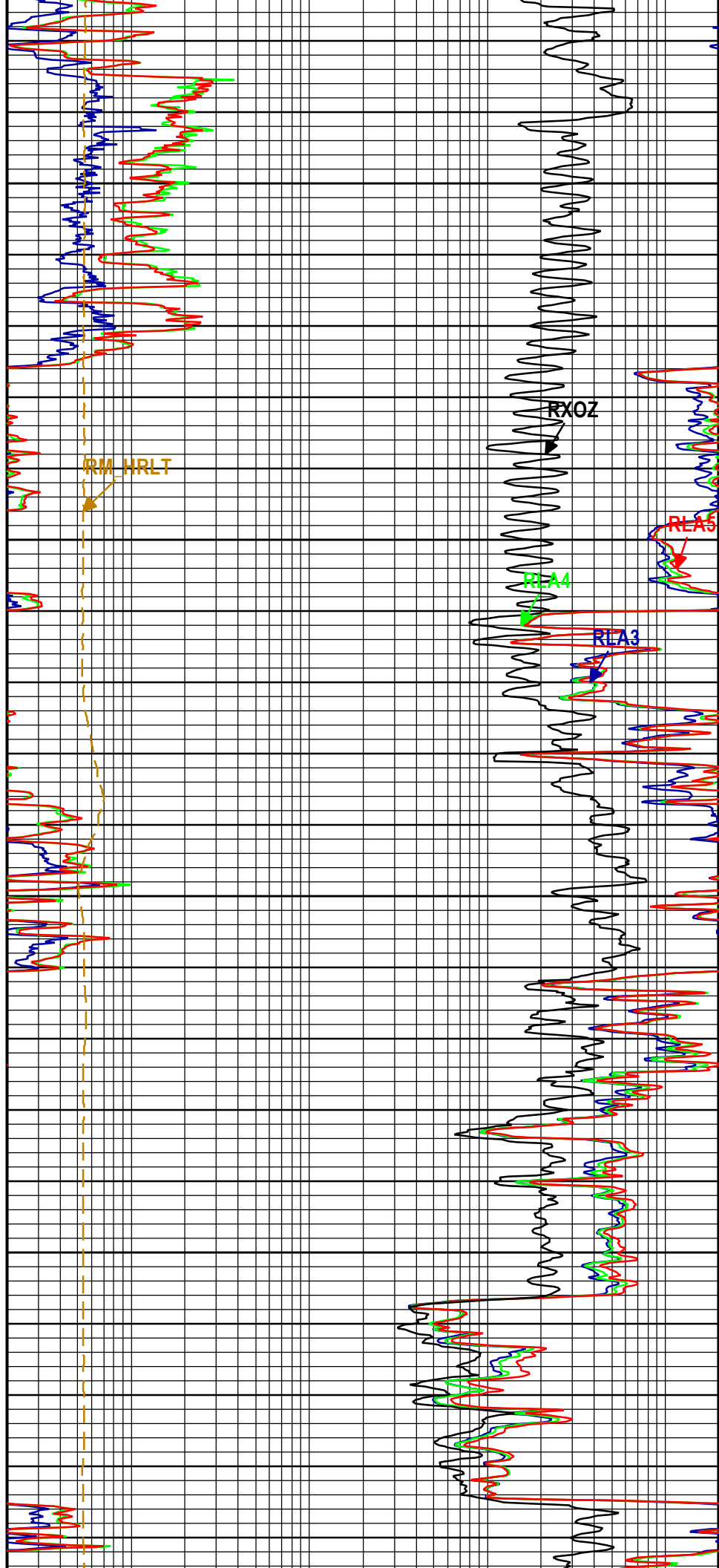
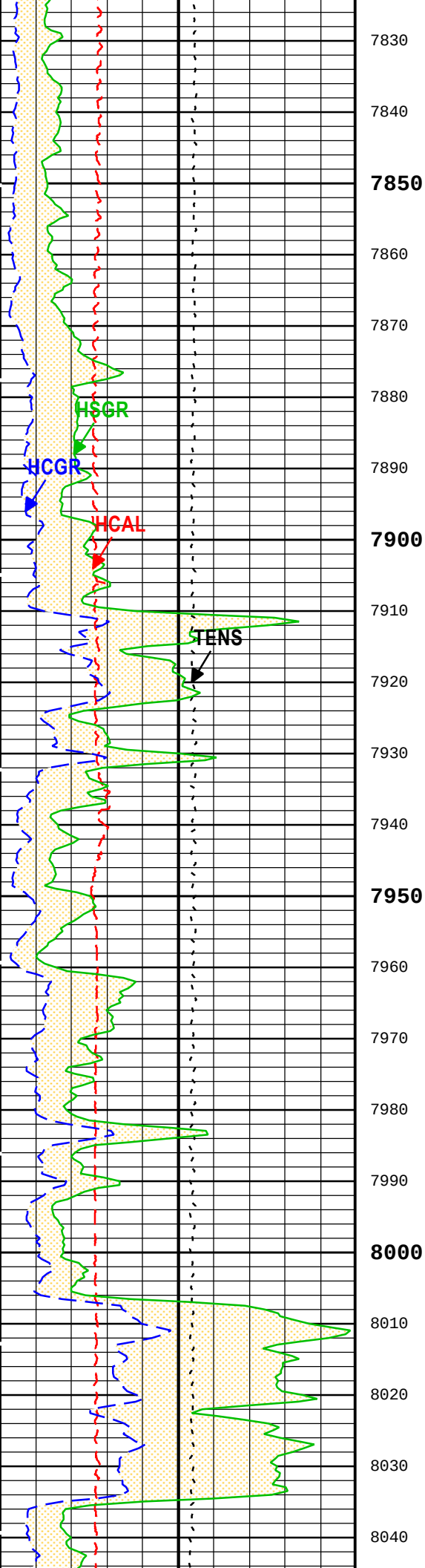


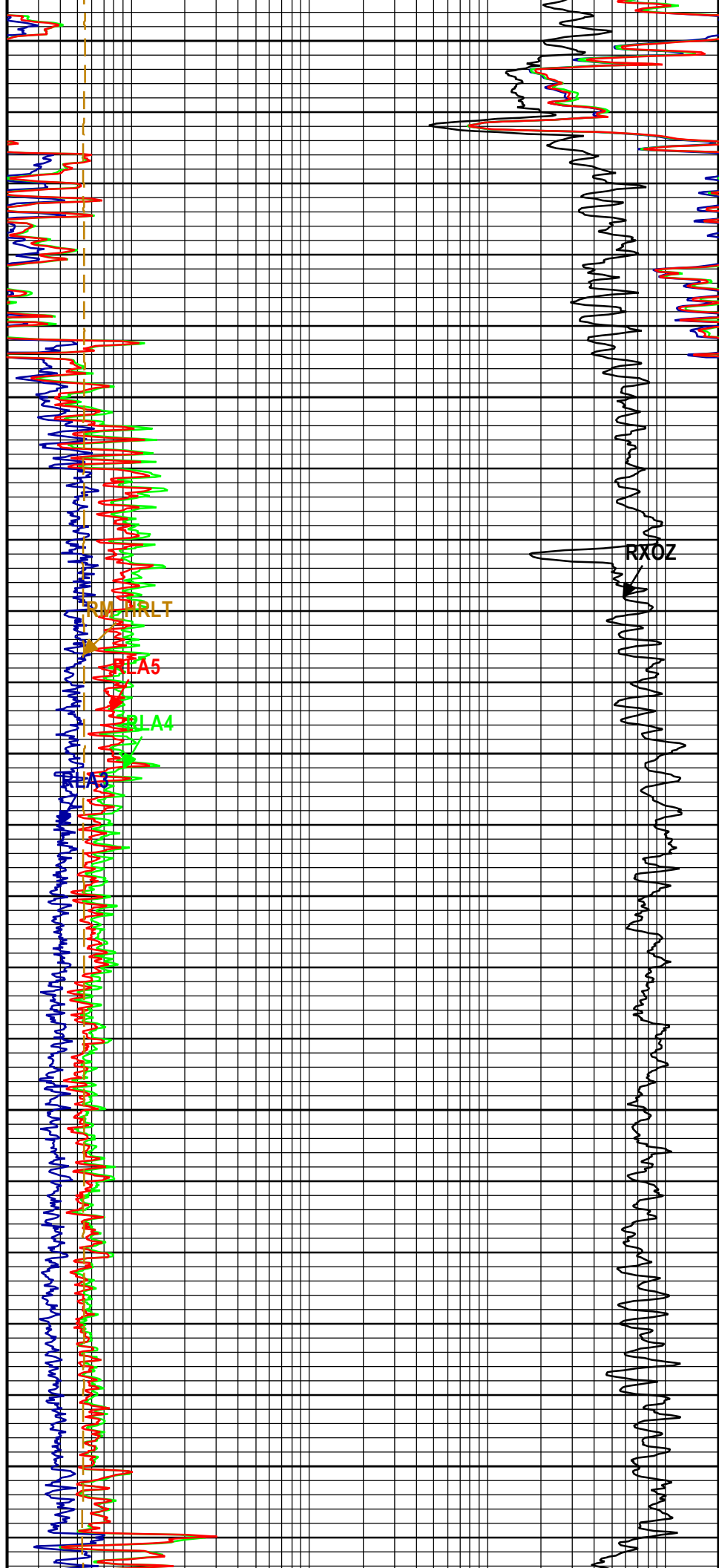
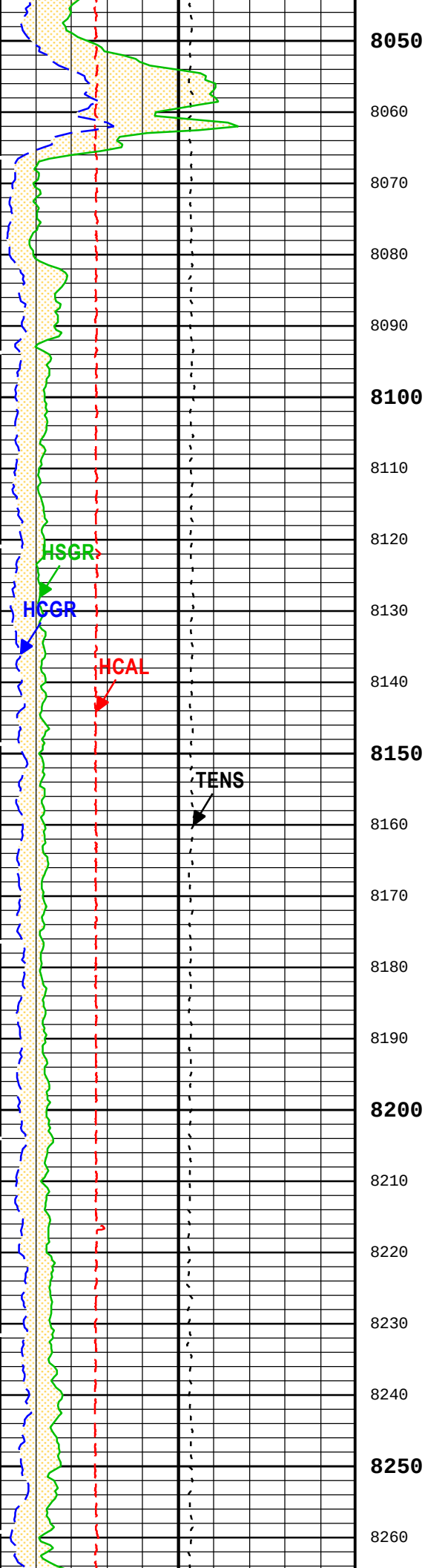


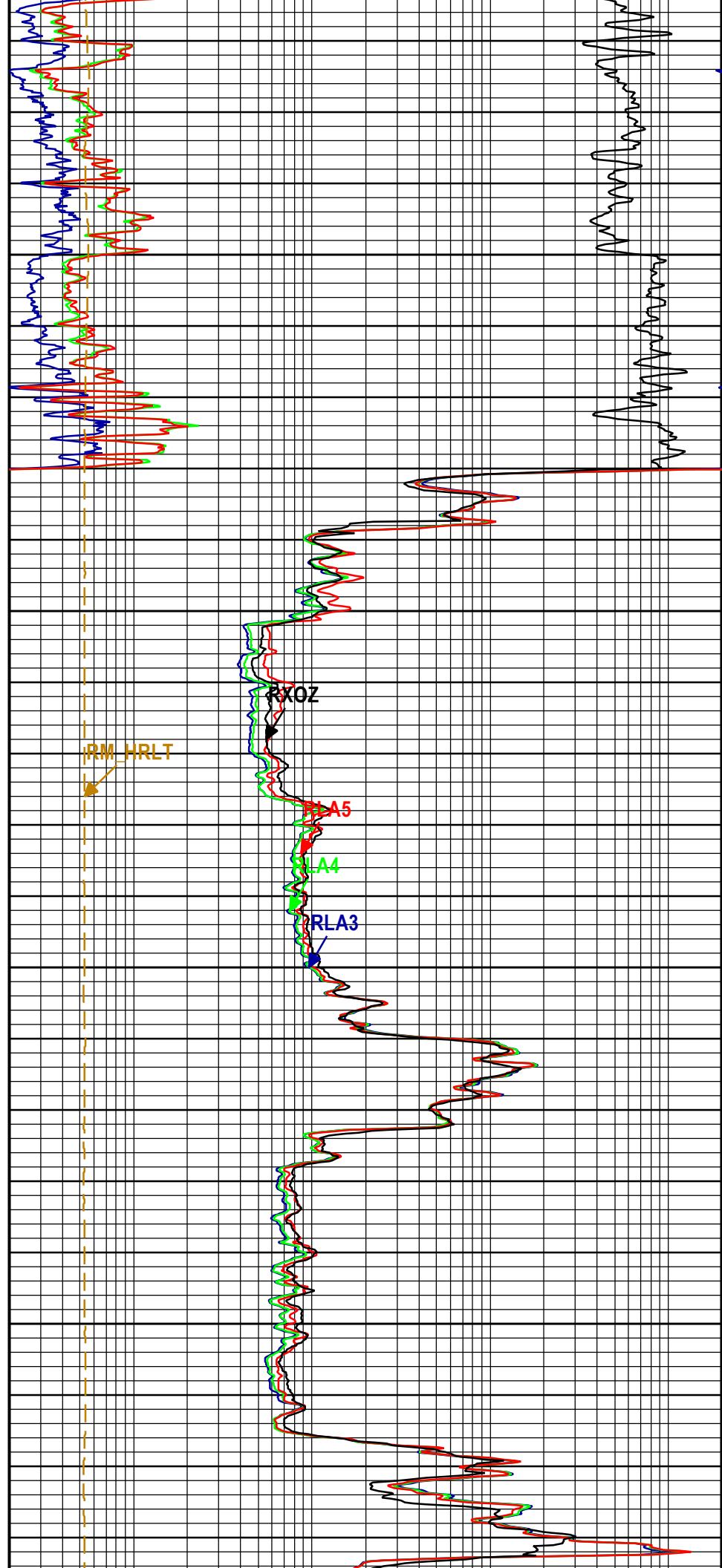
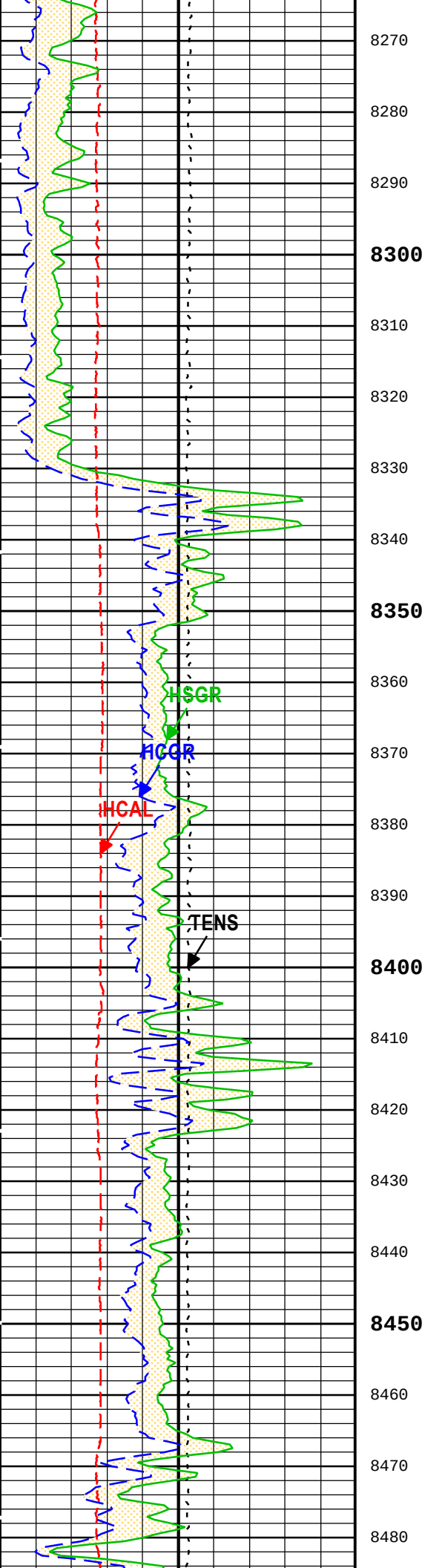


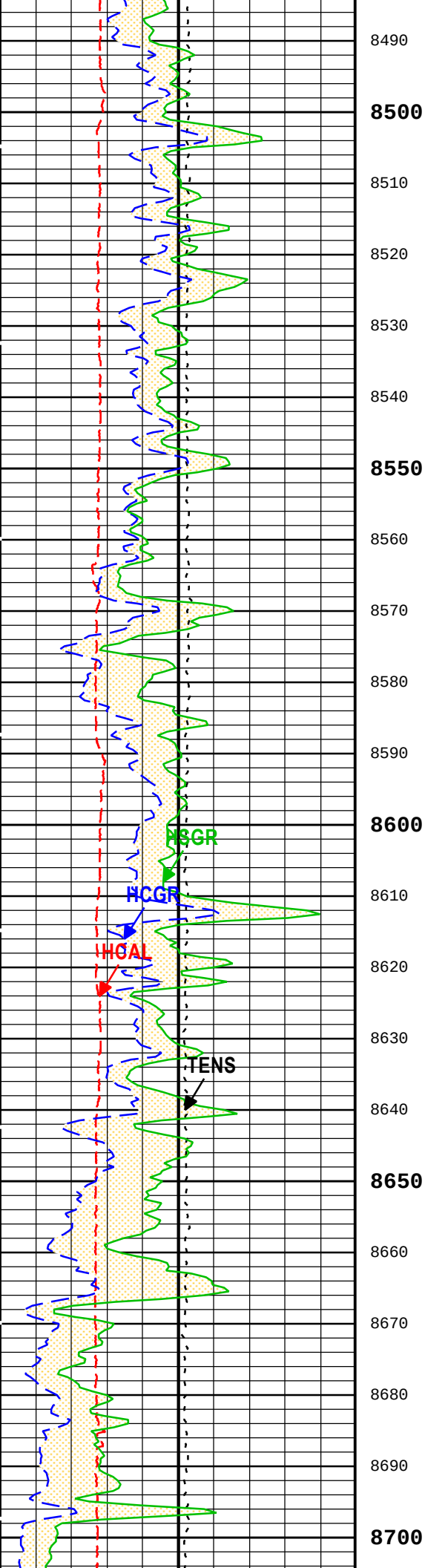












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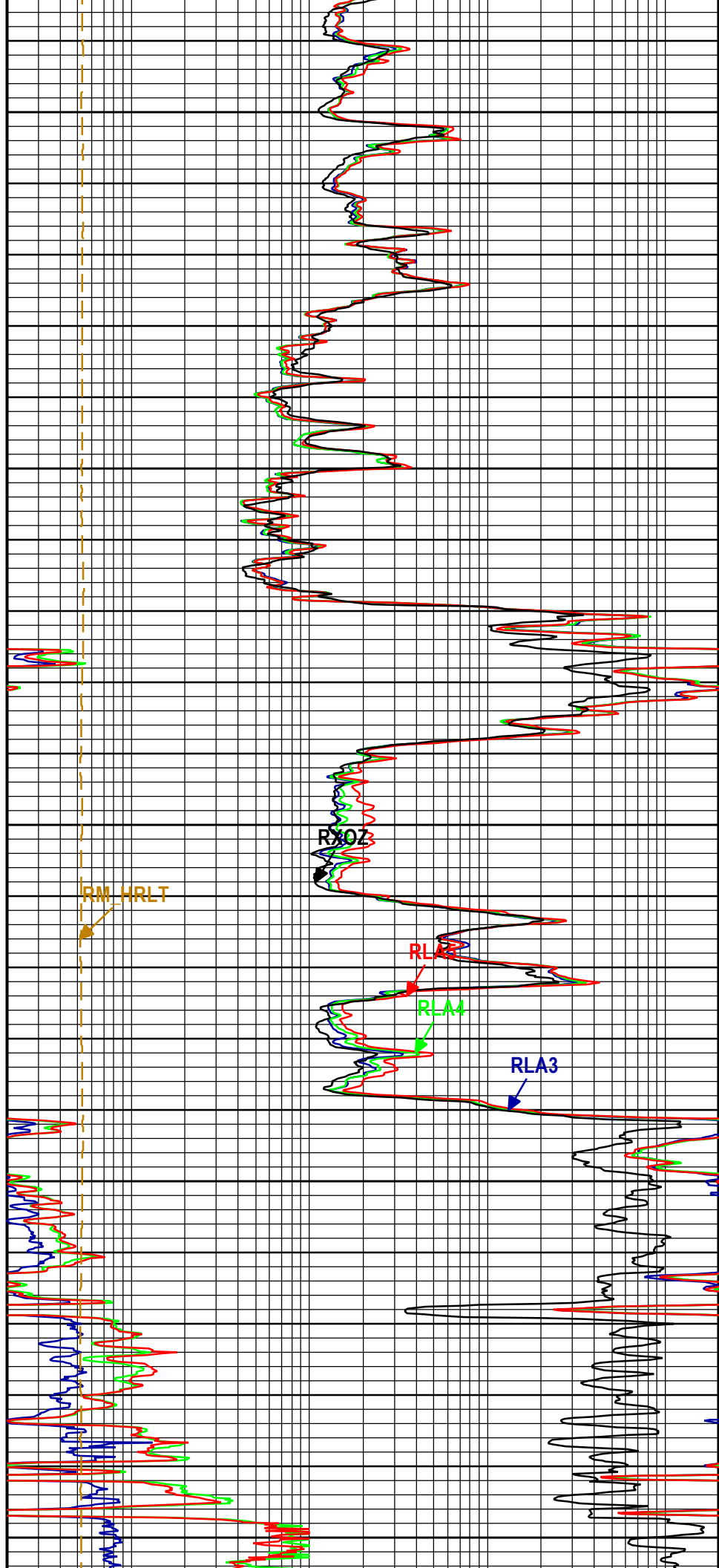
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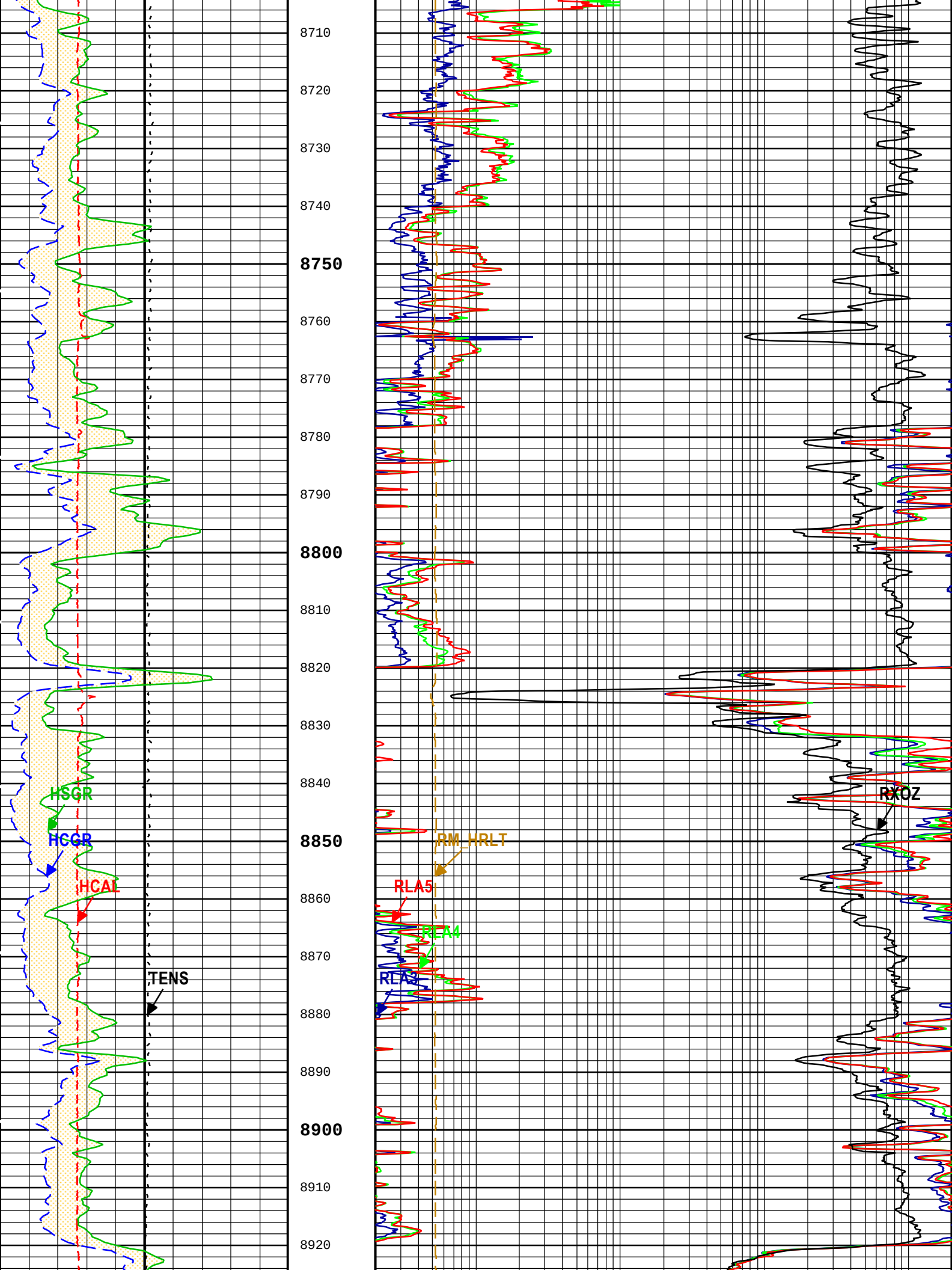
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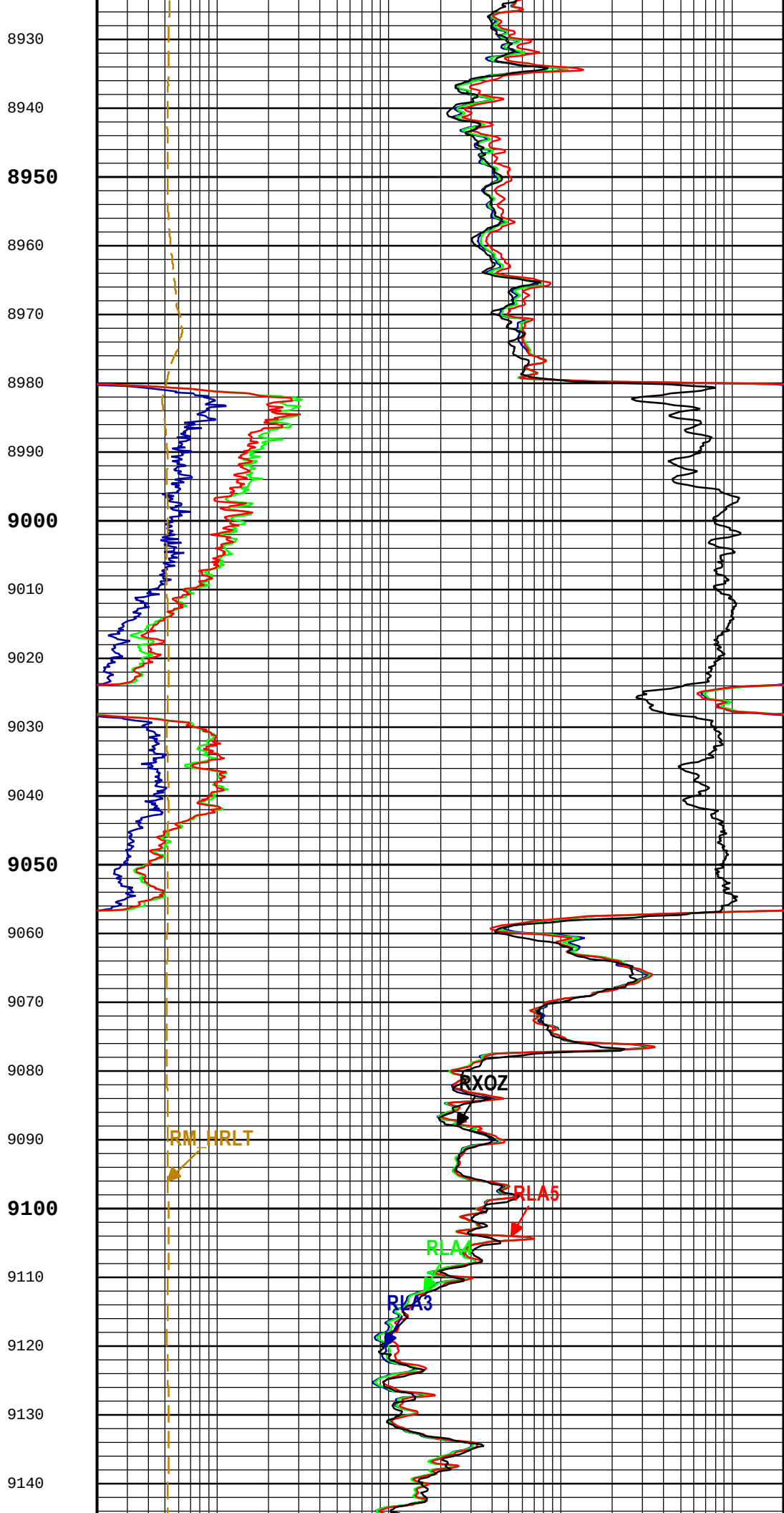
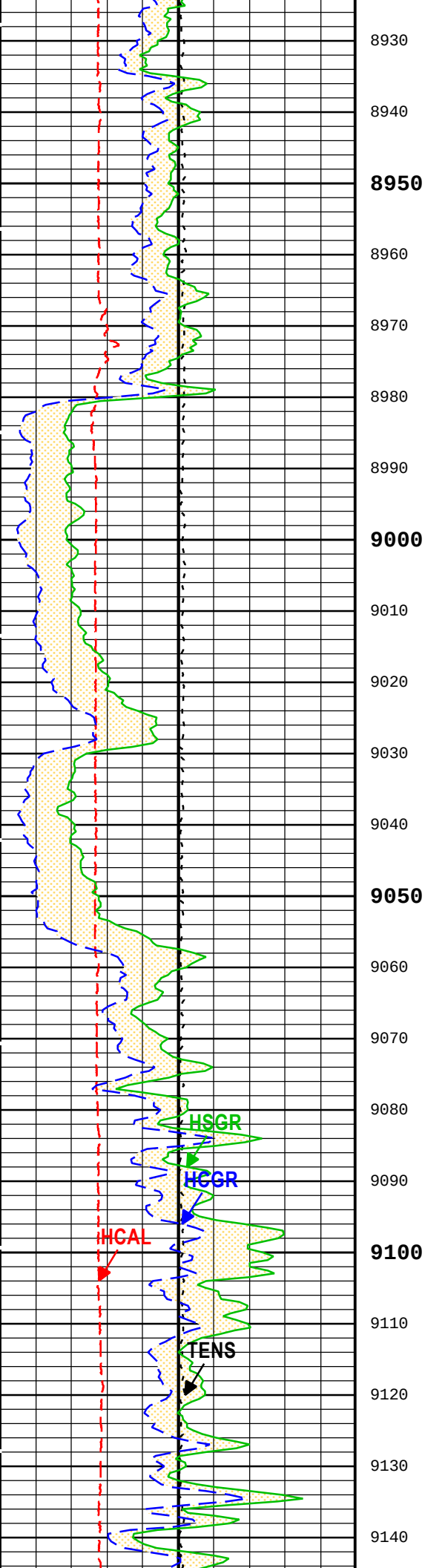
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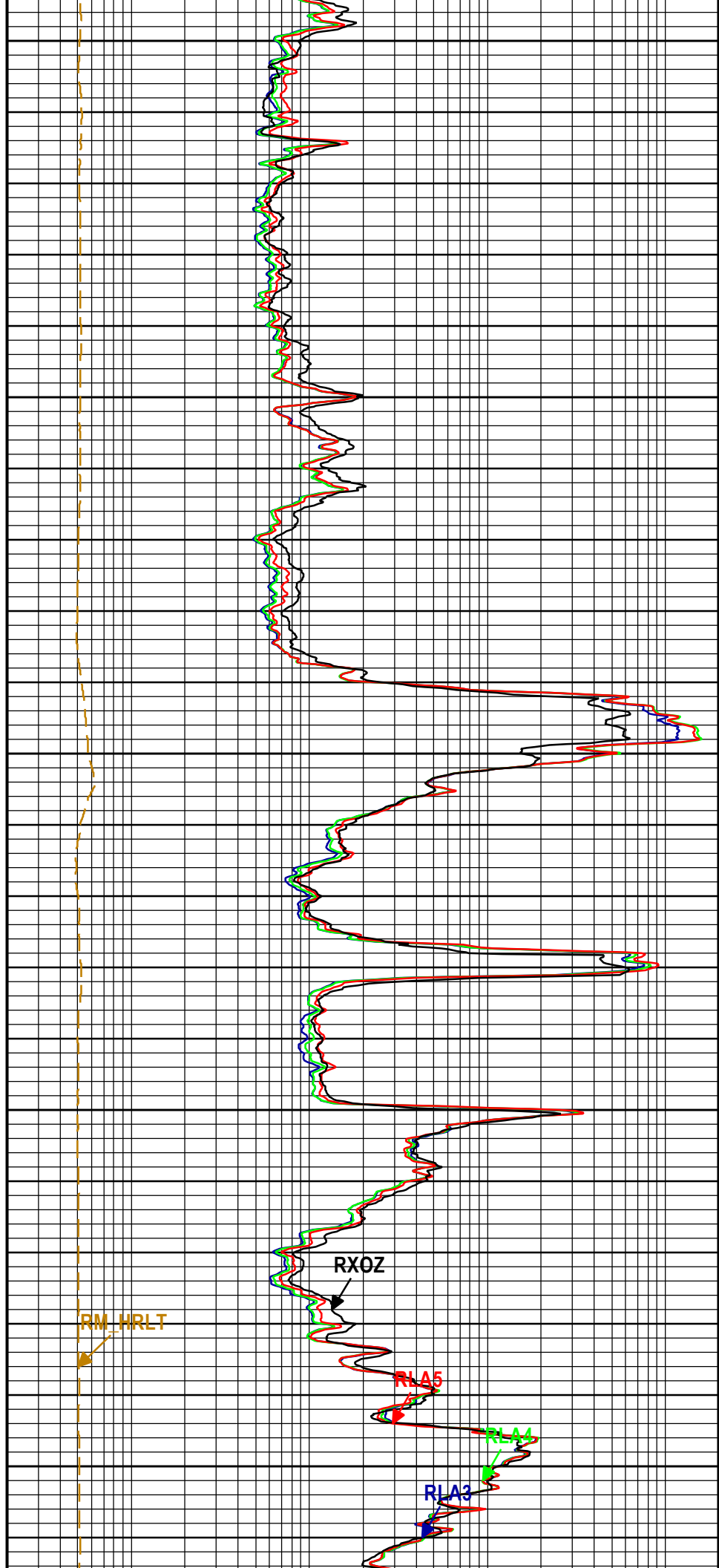
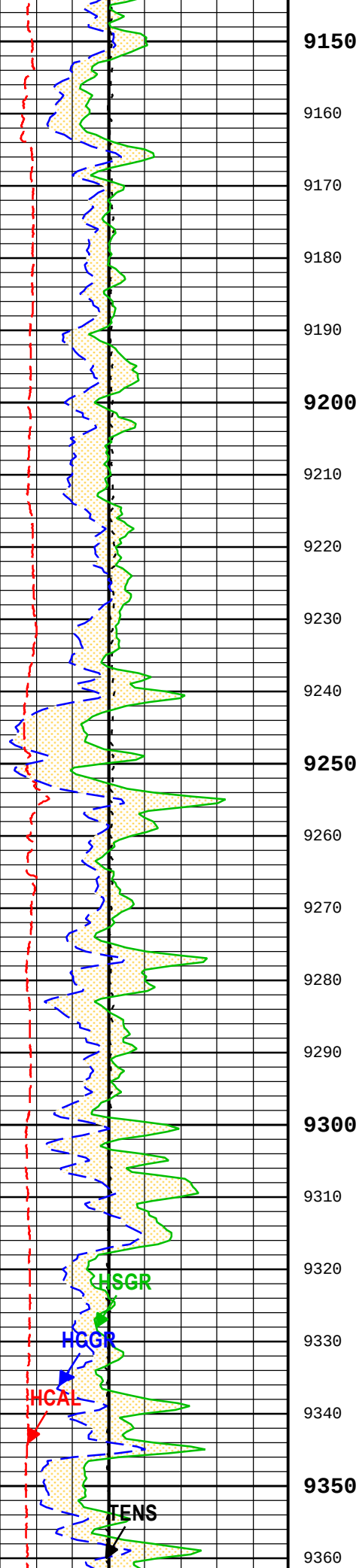
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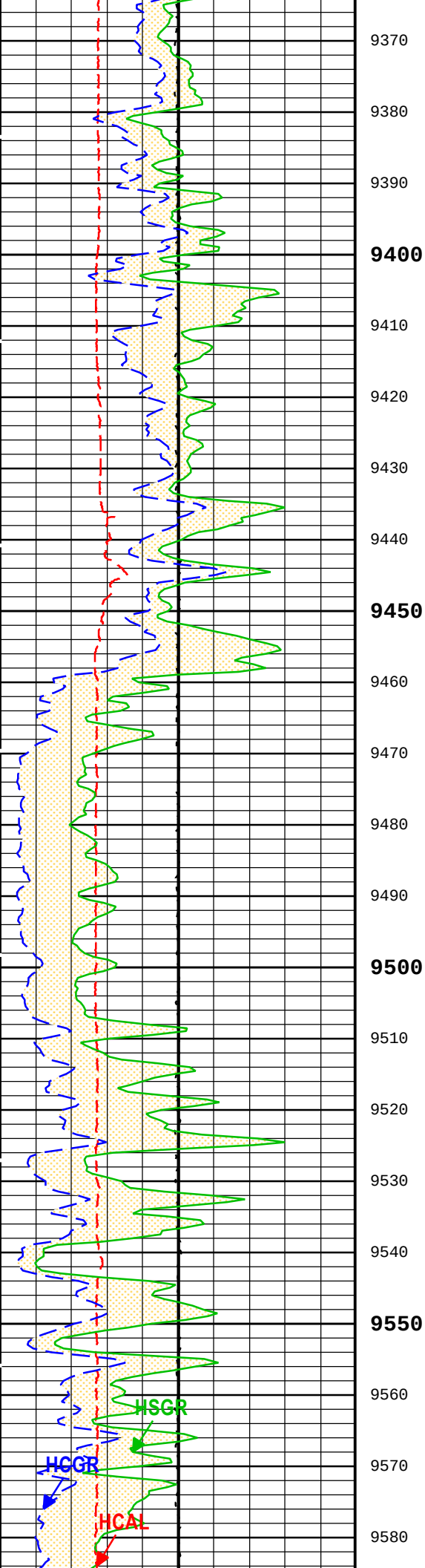
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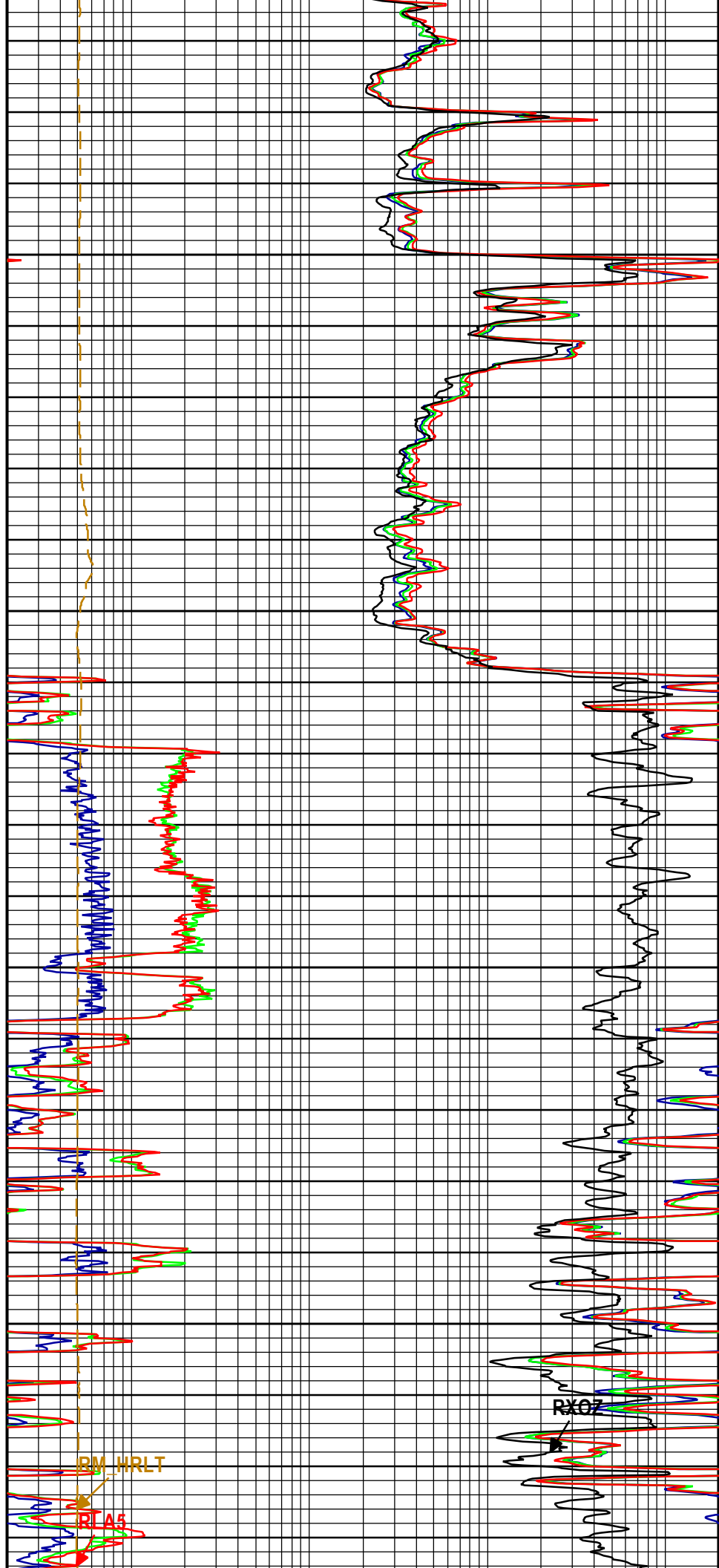


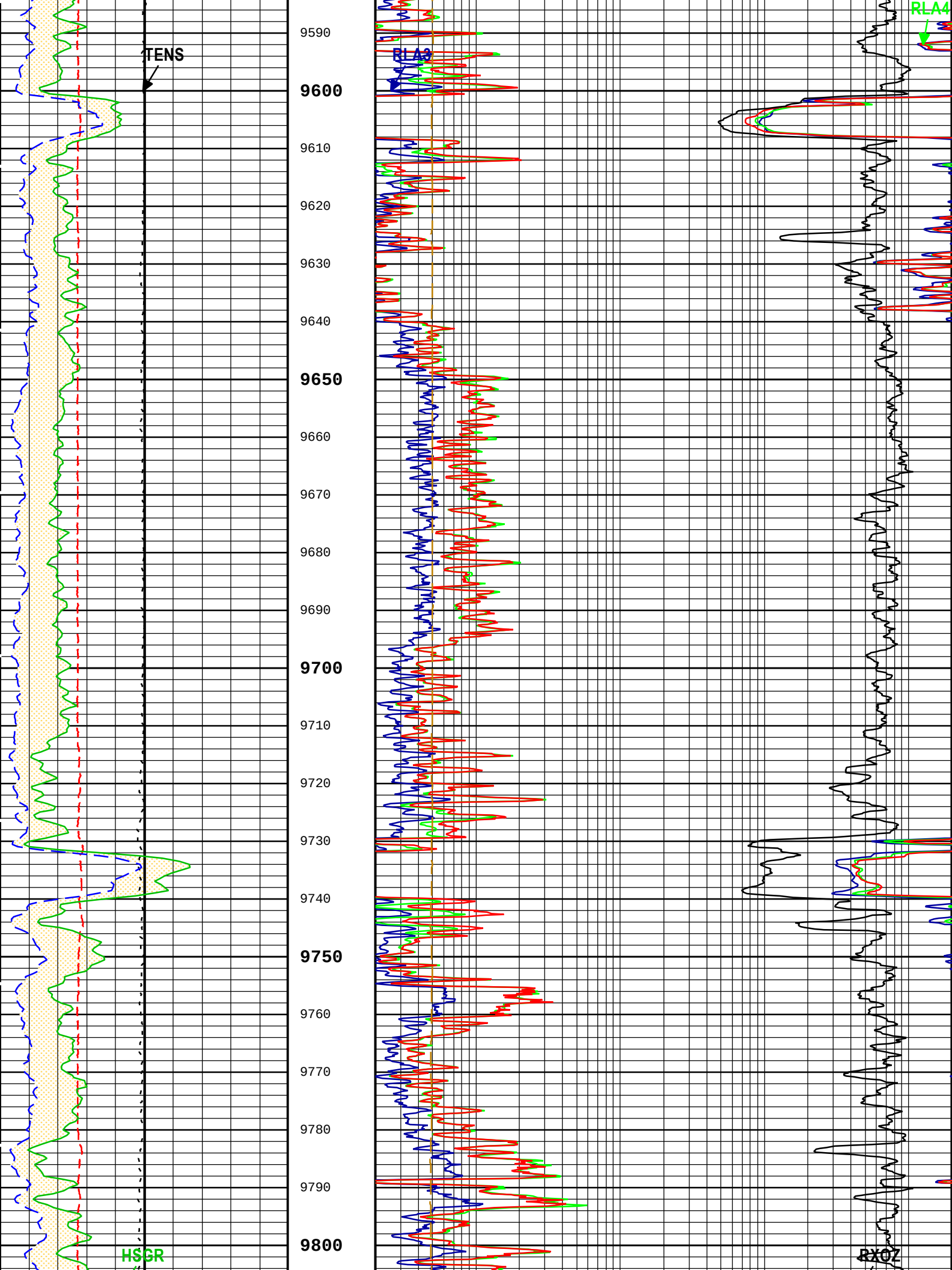


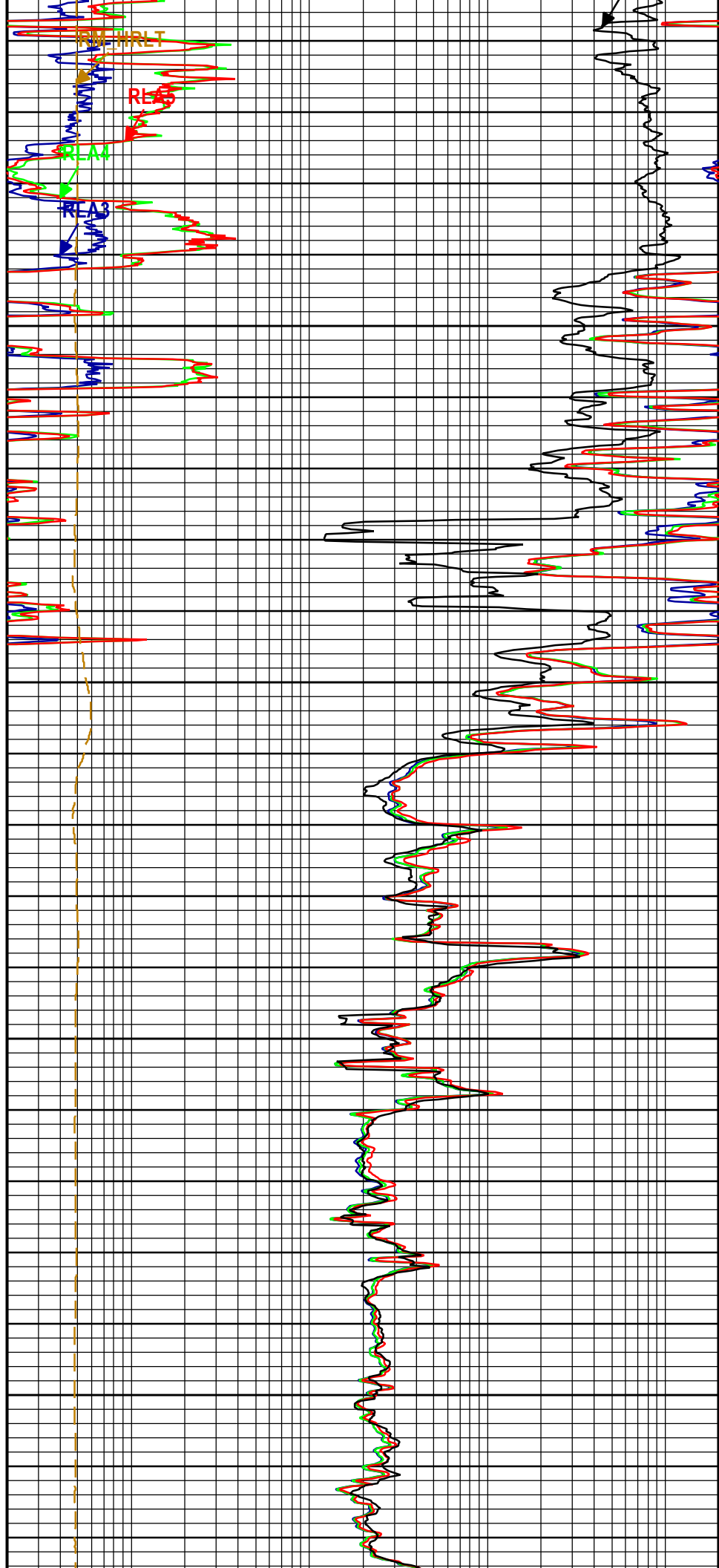
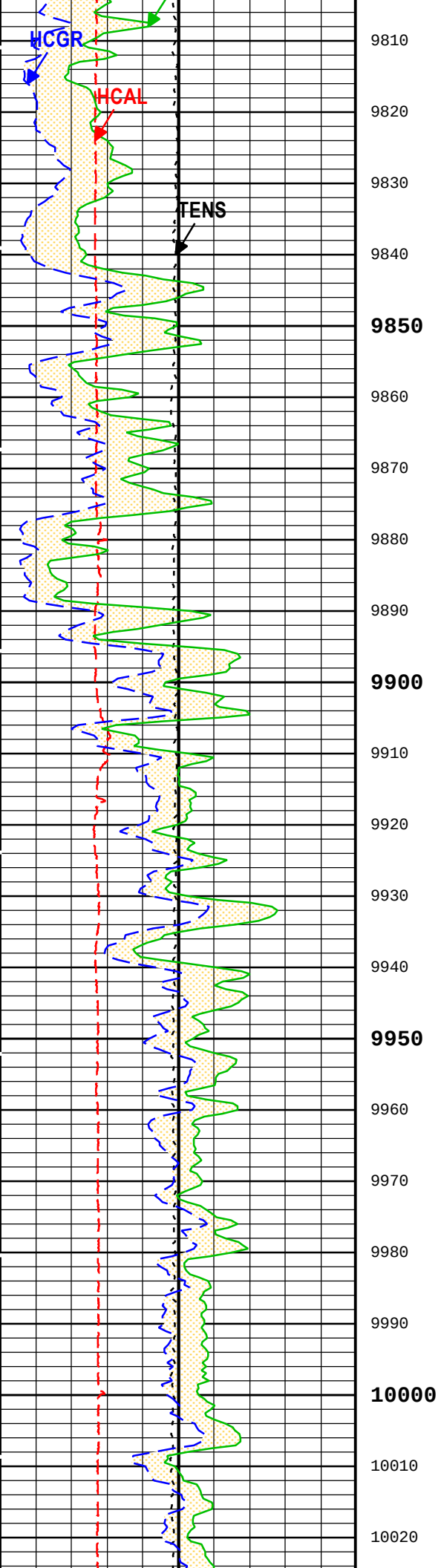


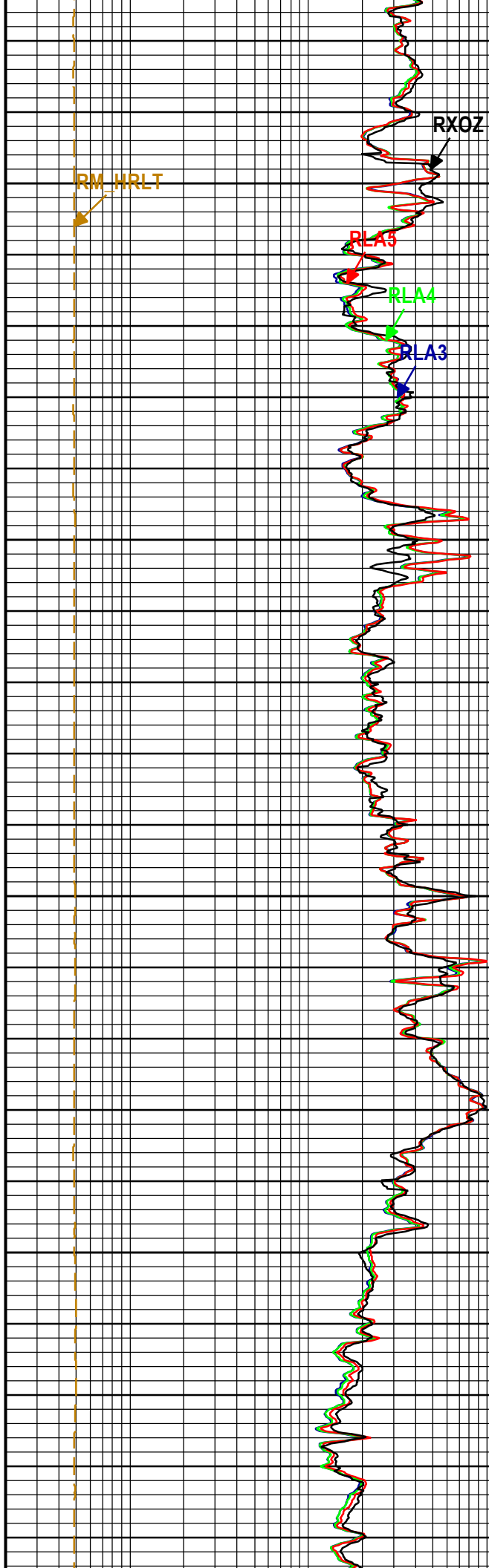
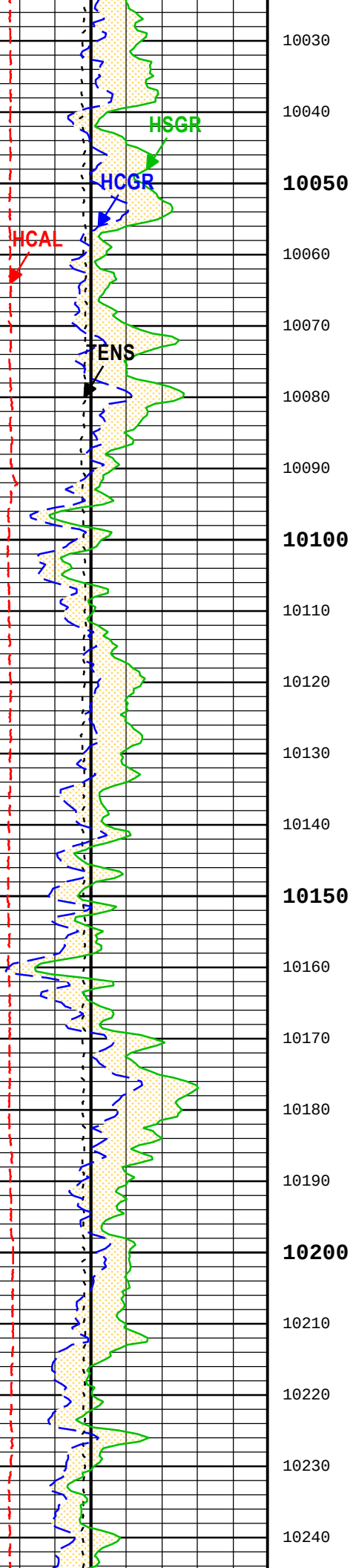


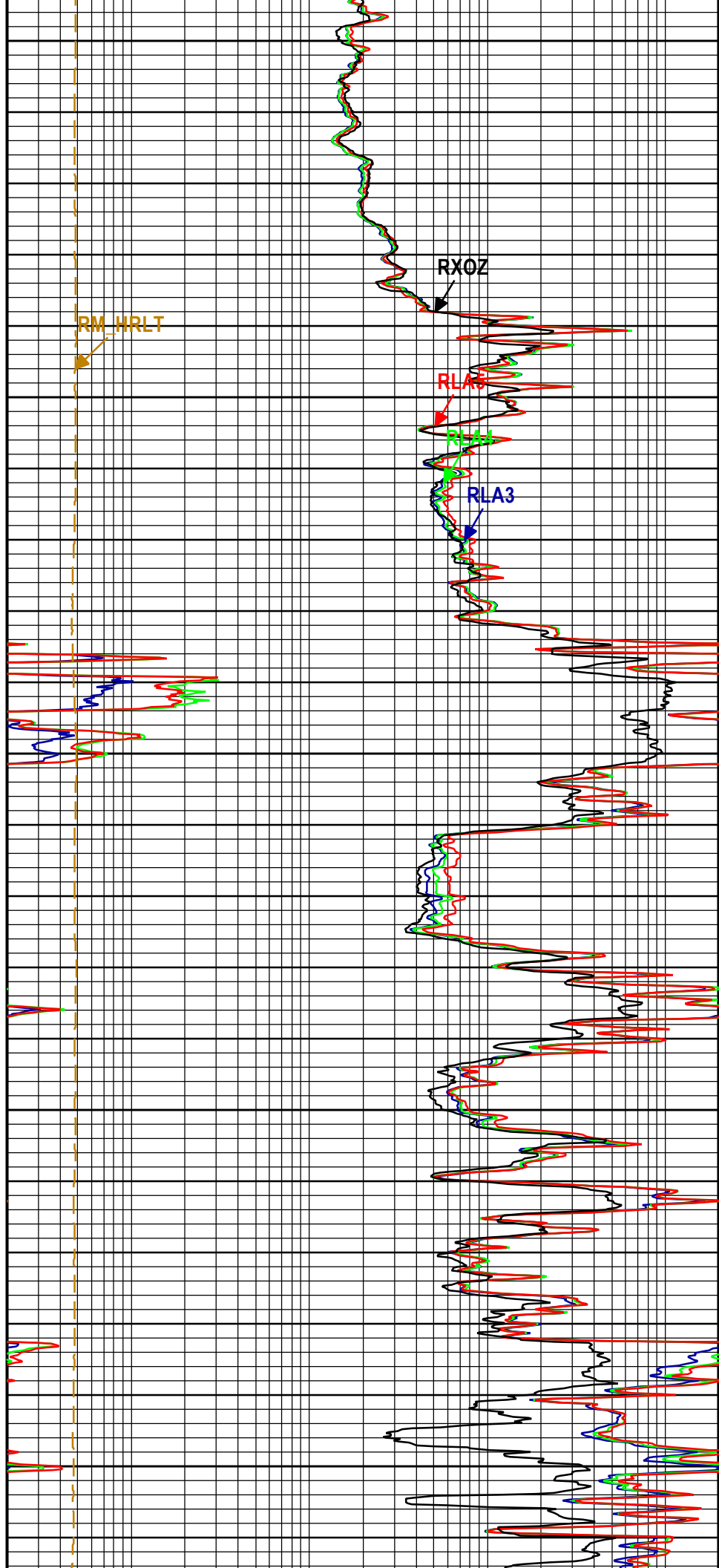
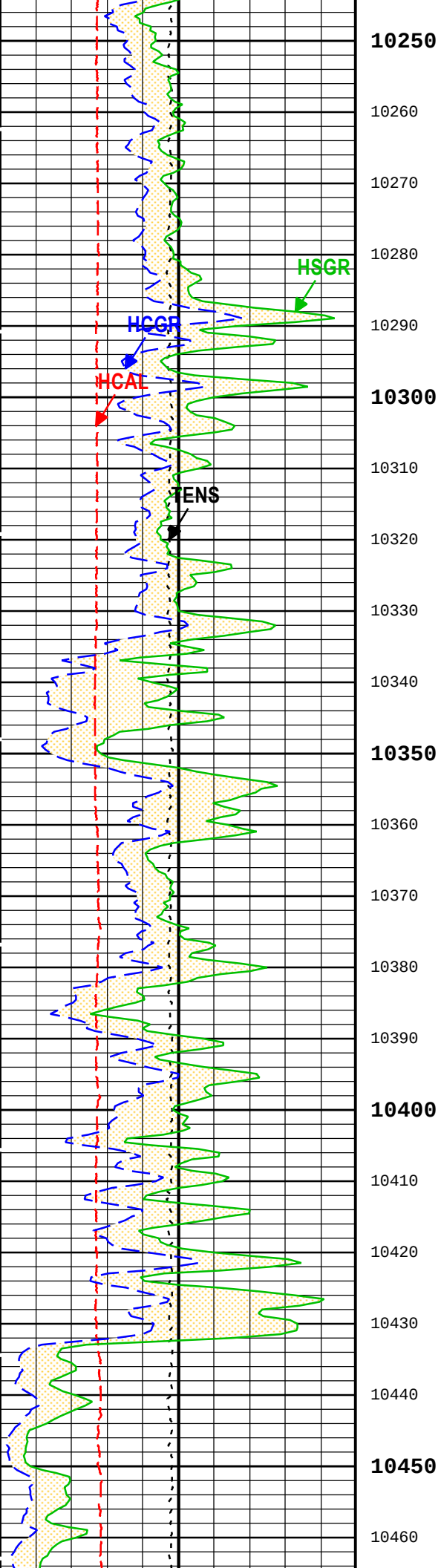
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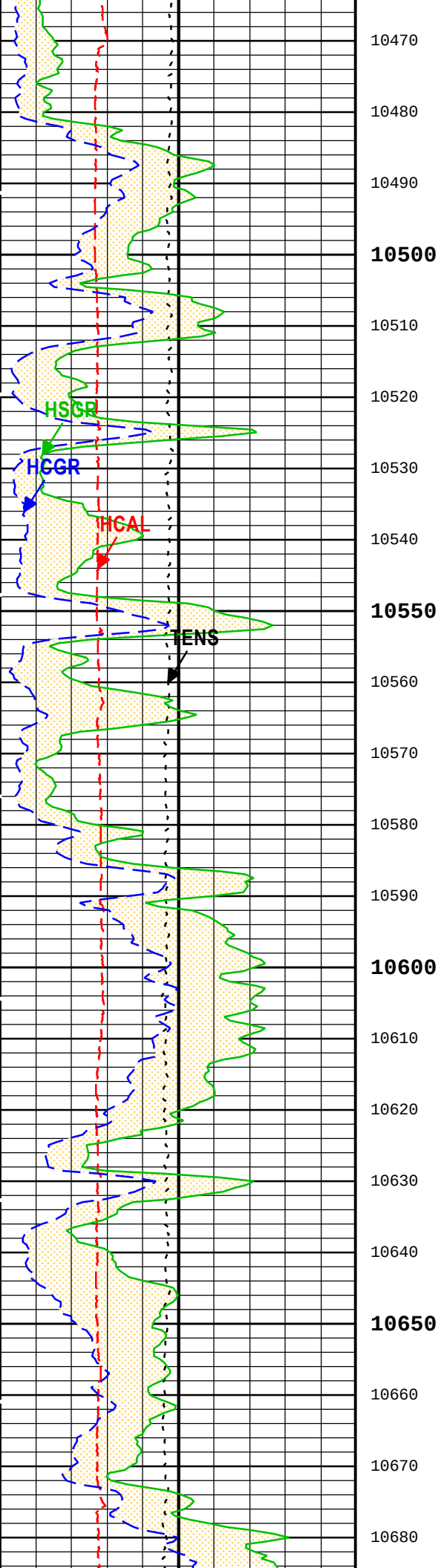




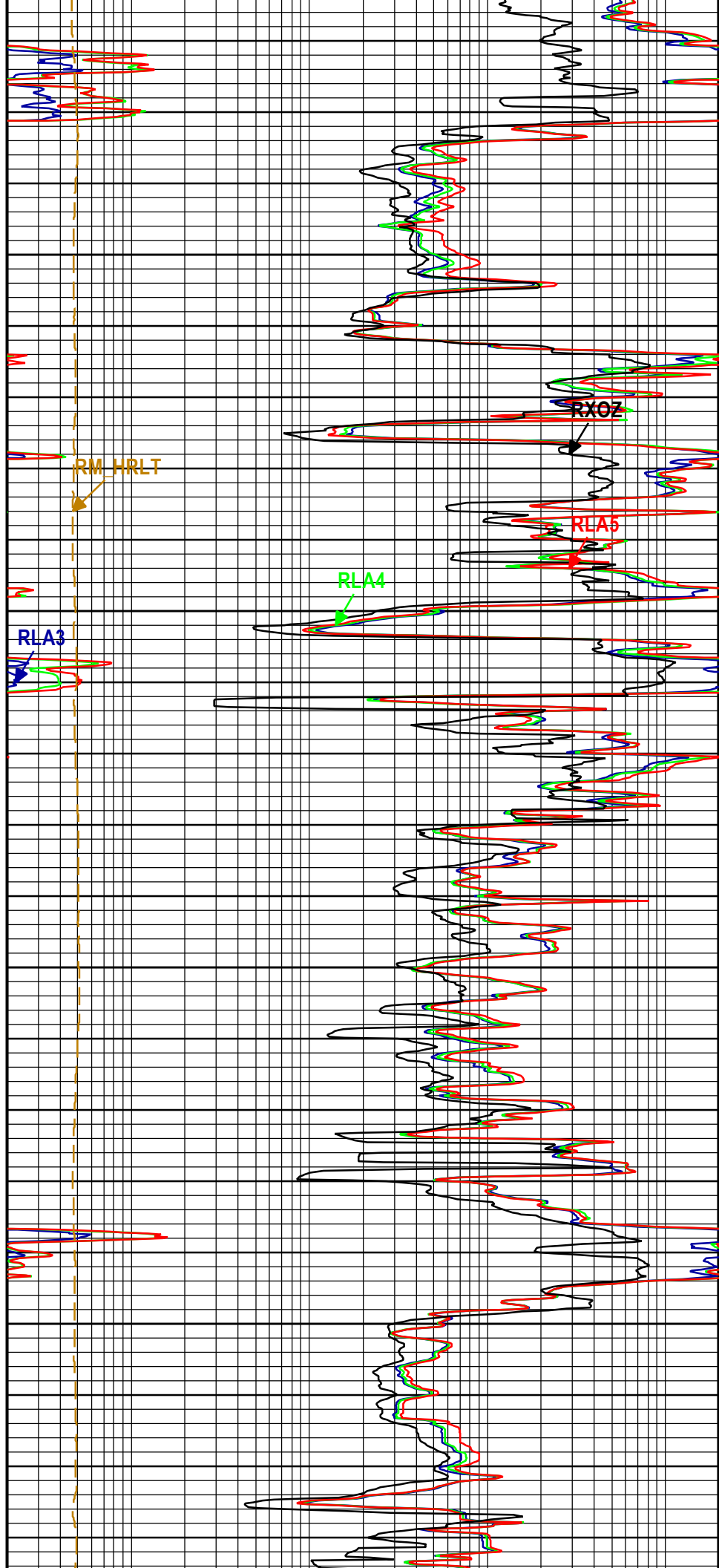


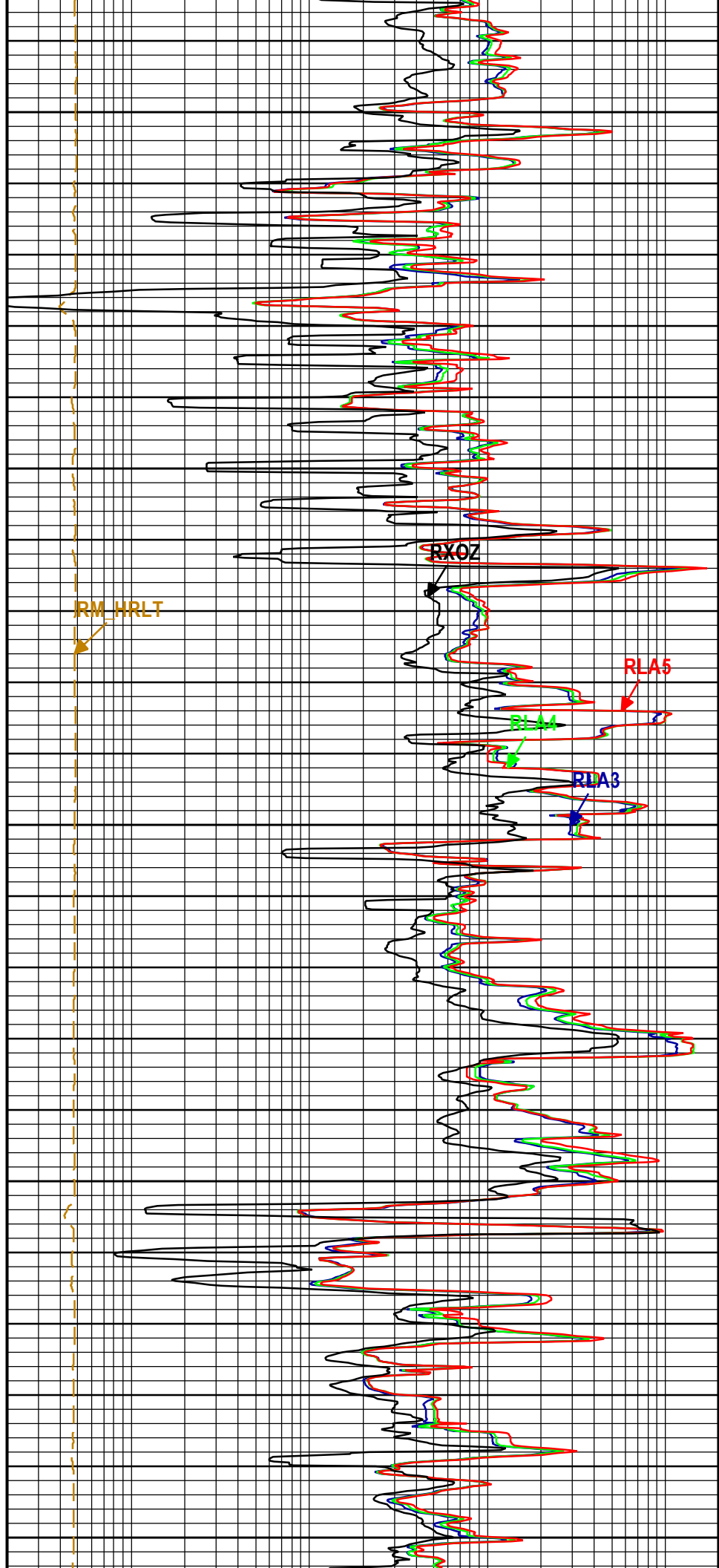
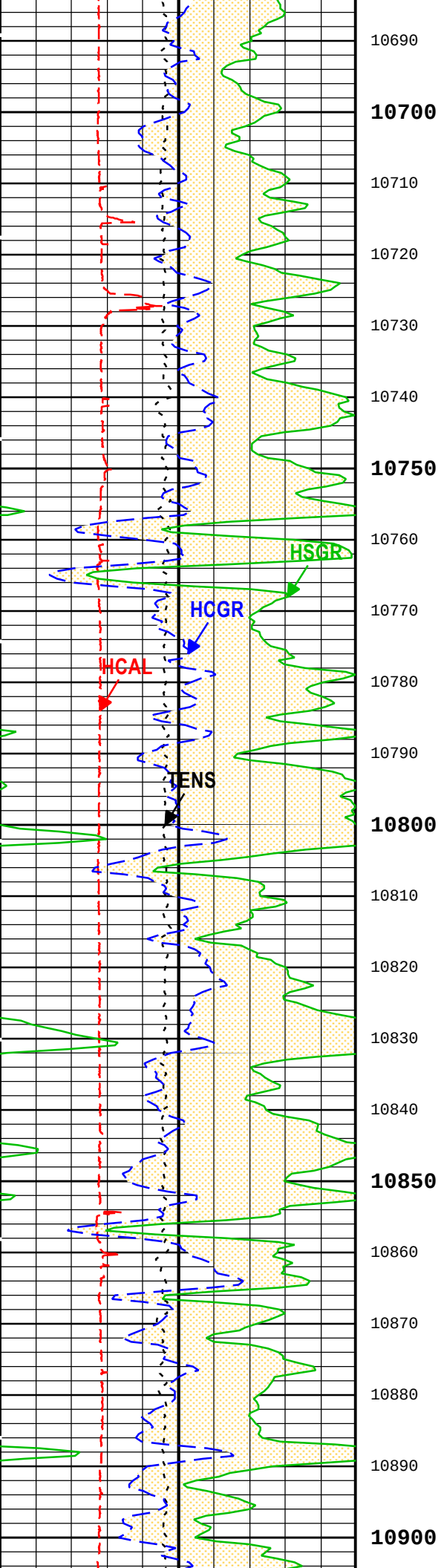


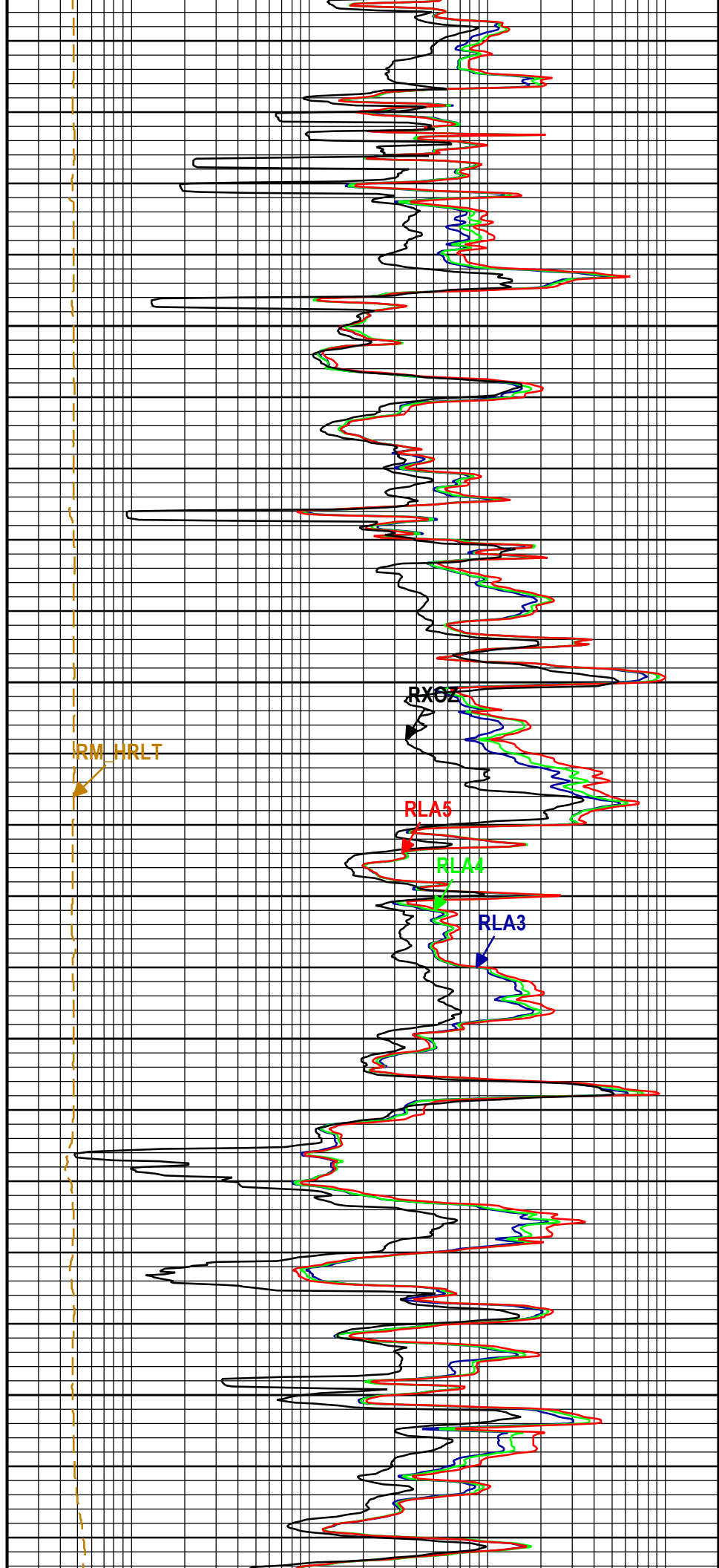
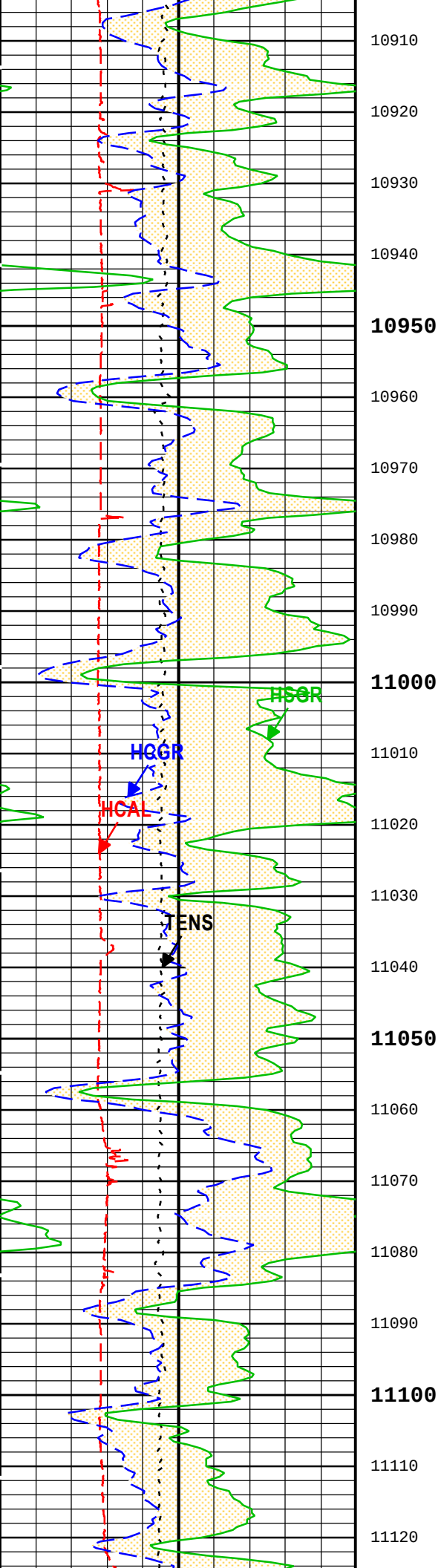


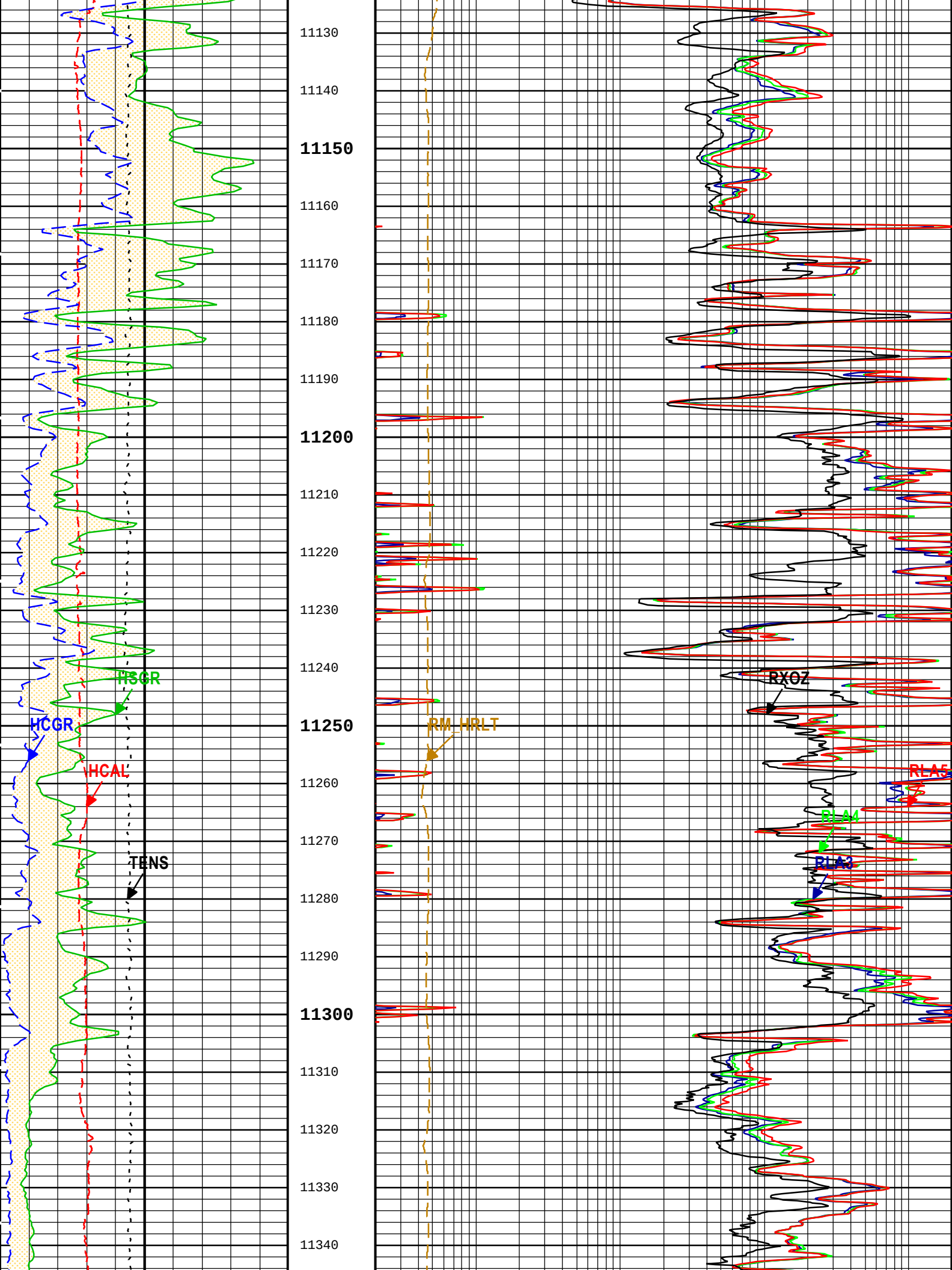


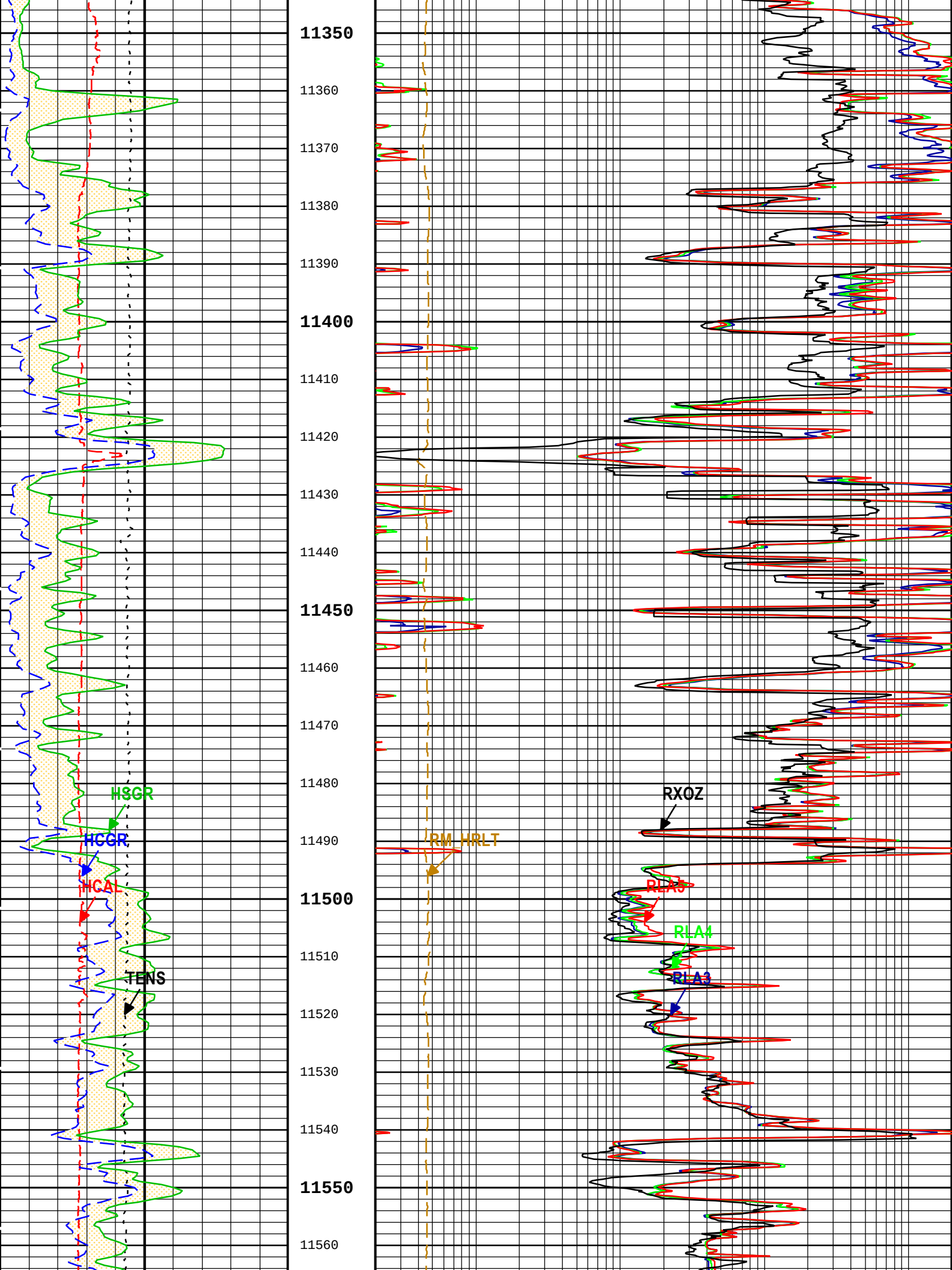
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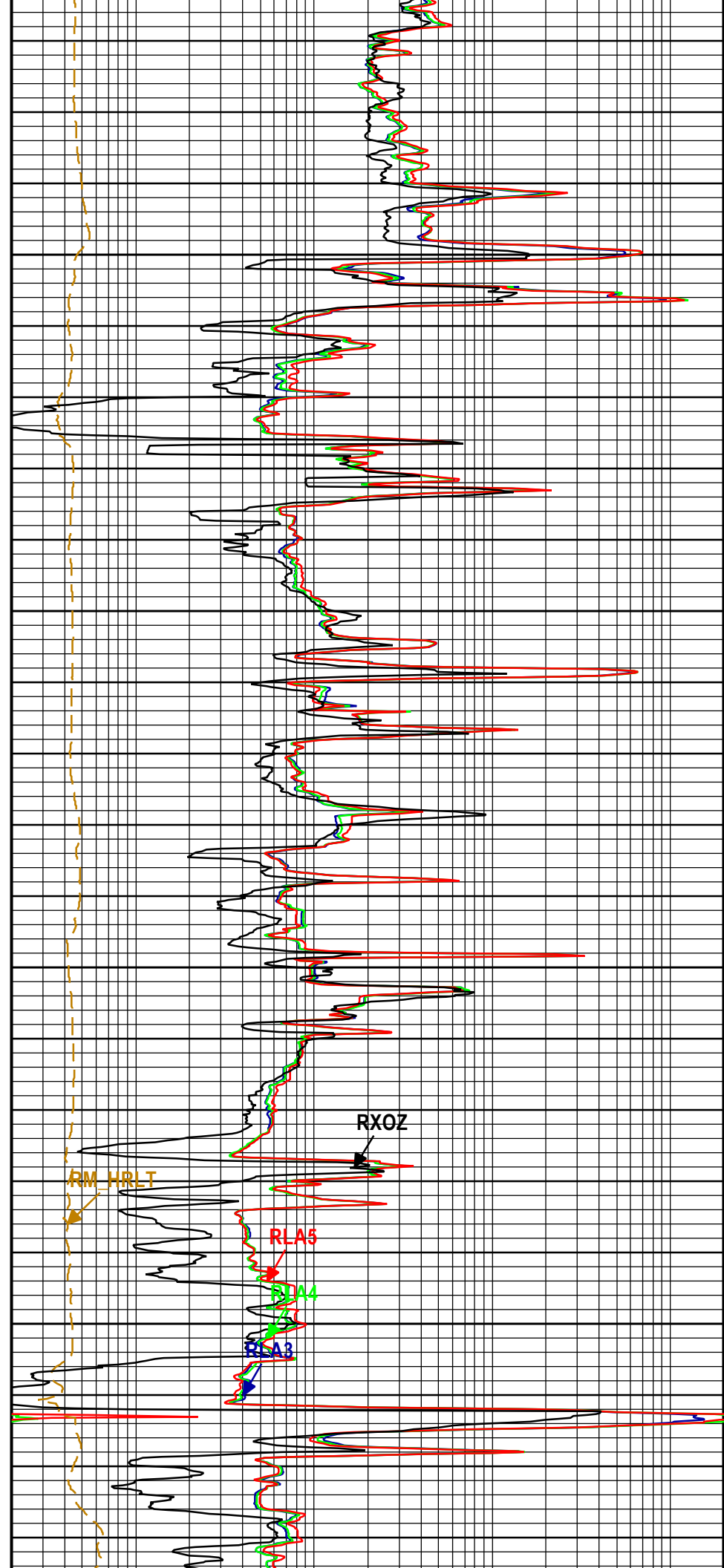
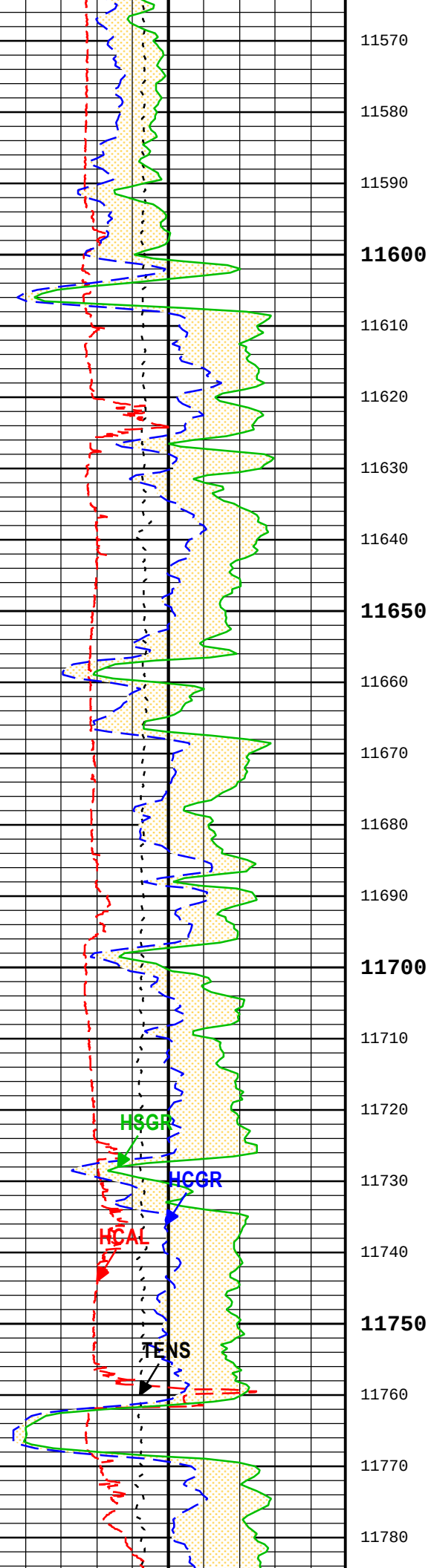


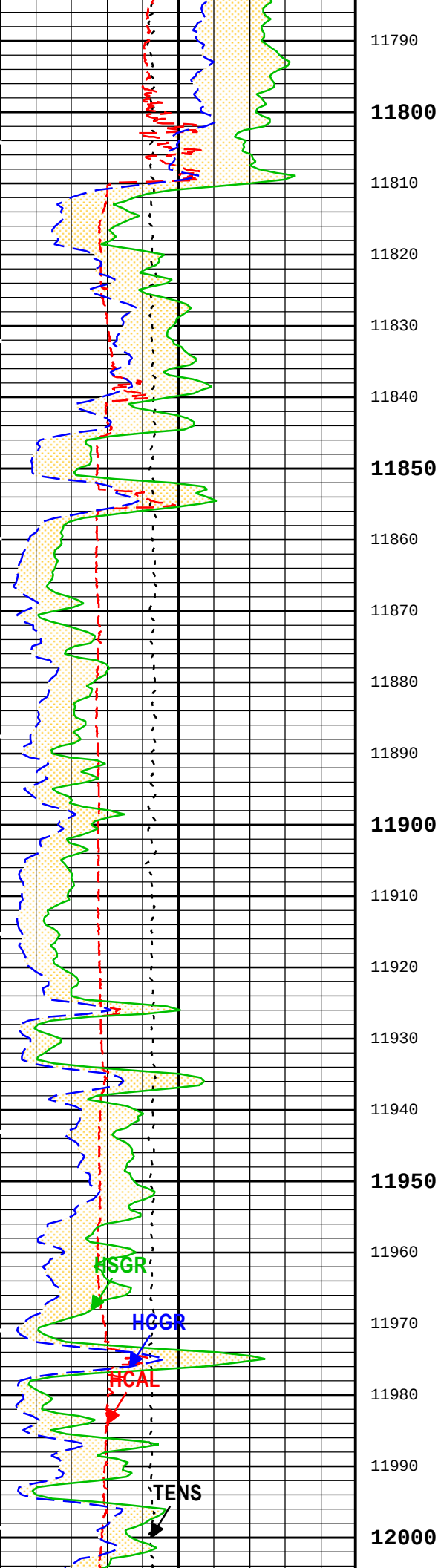












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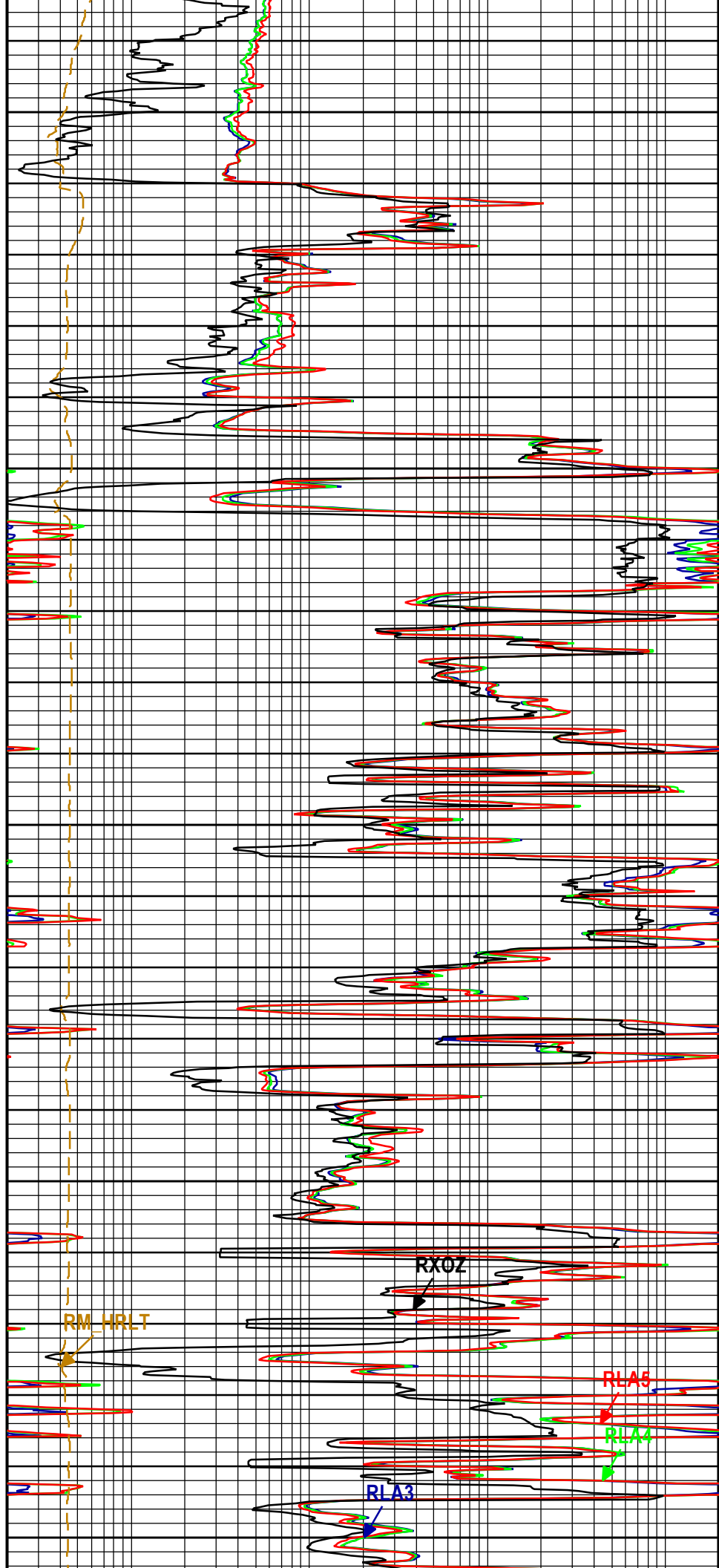
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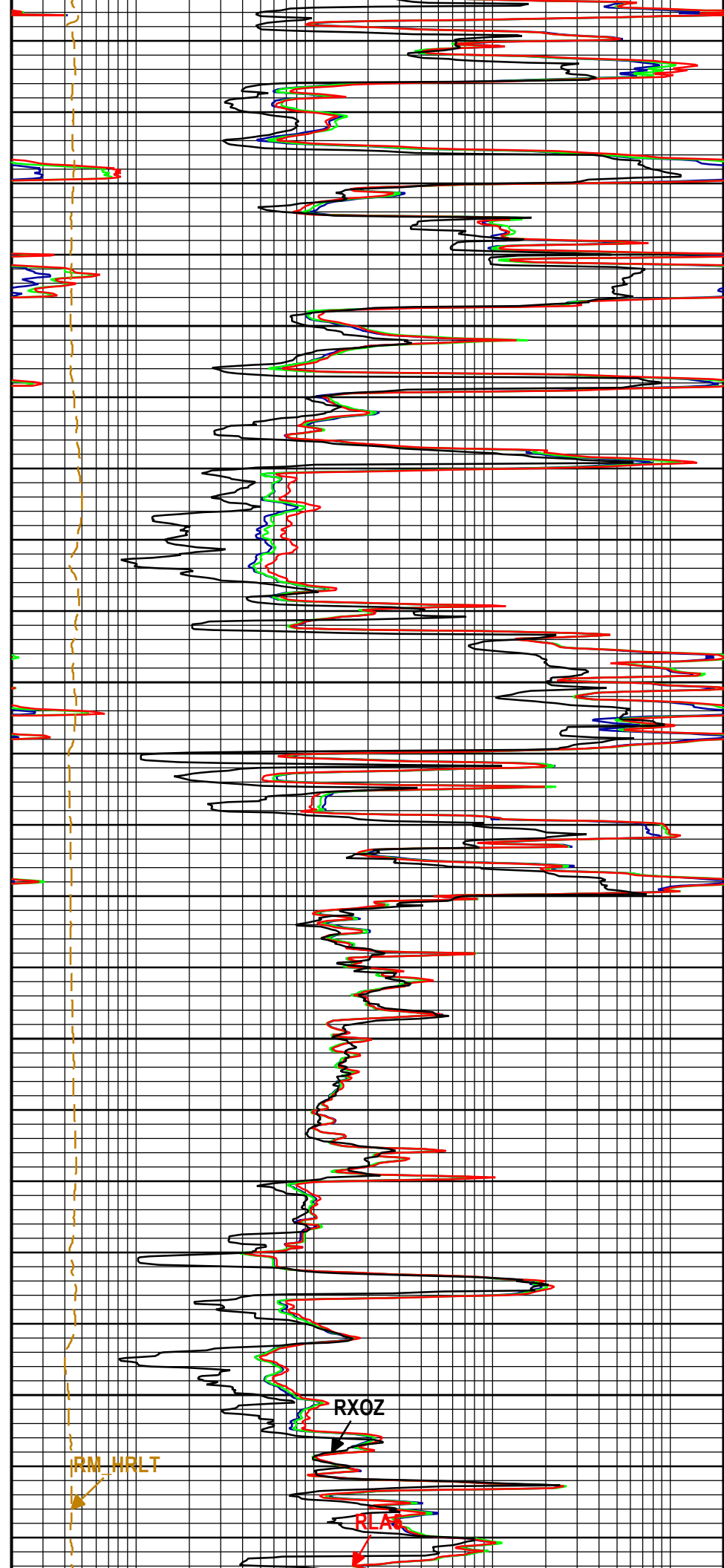
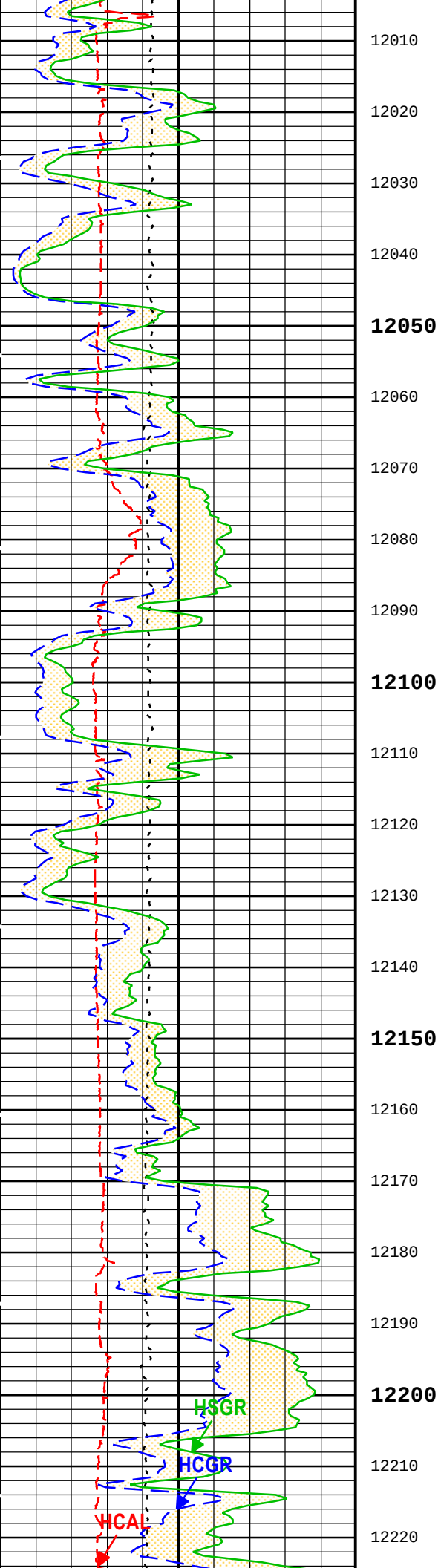
RM HRLT

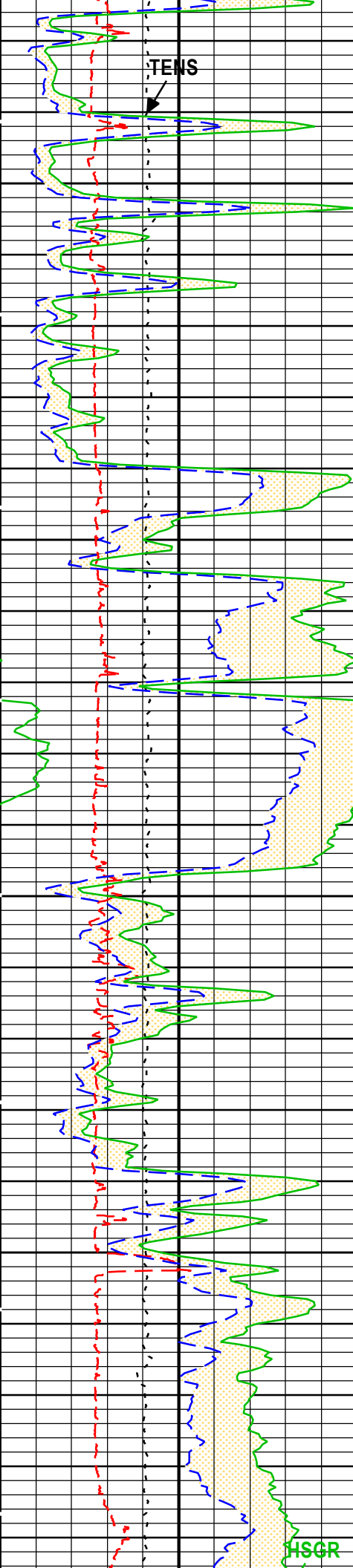
RX0Z

RLA5

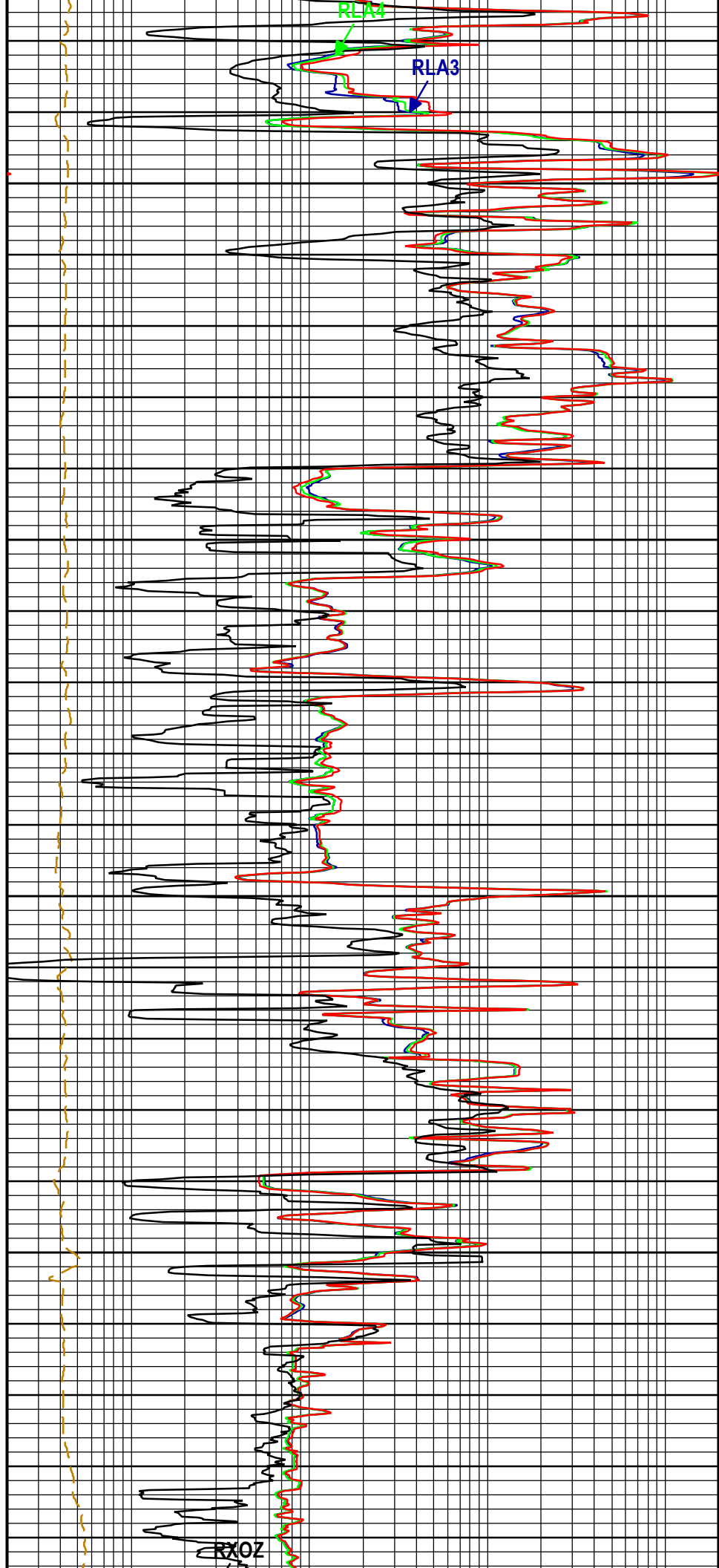
RLA4

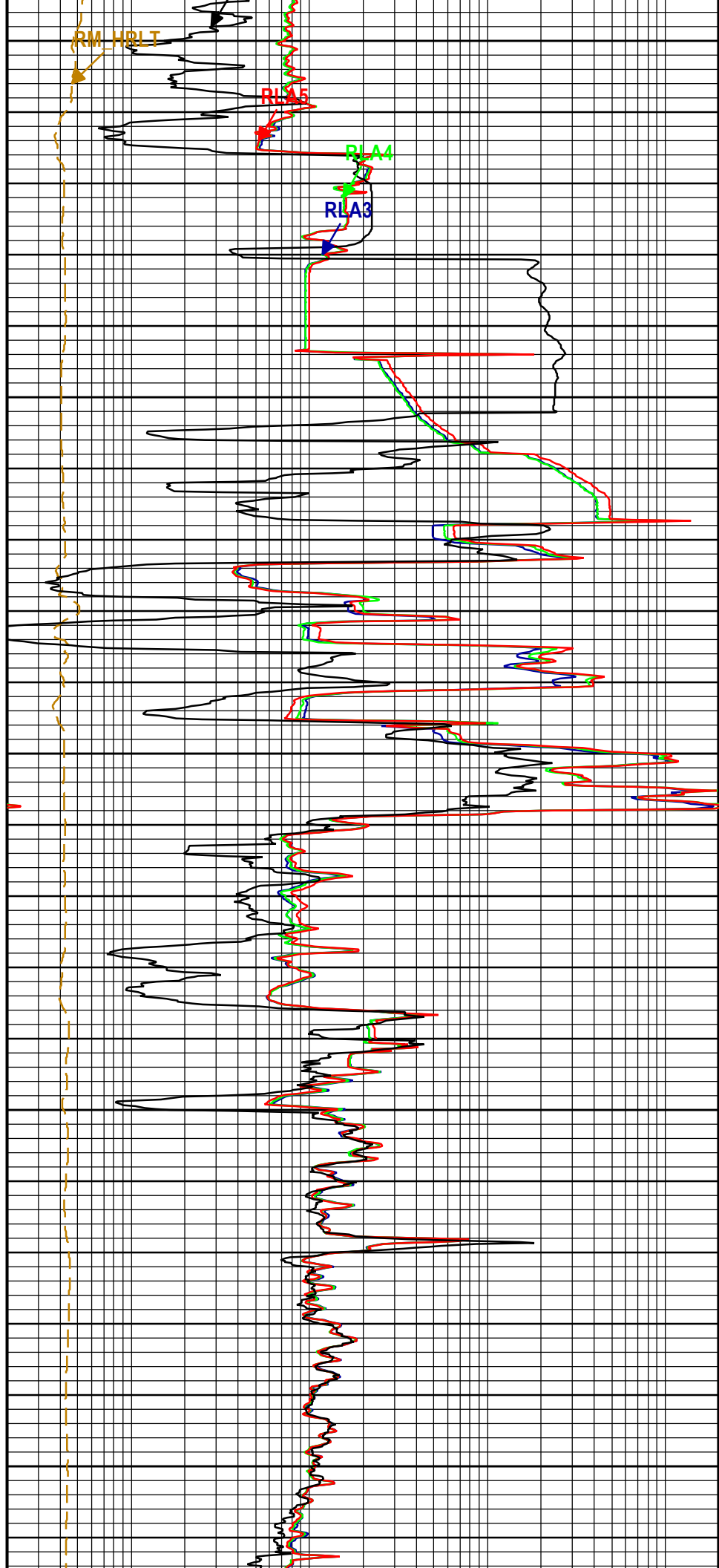
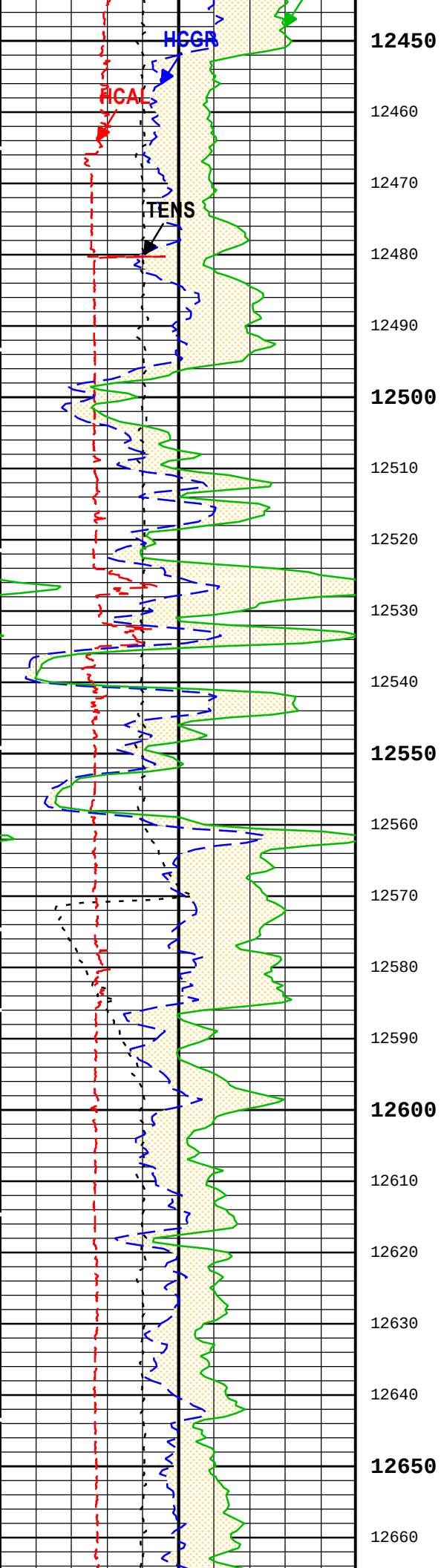
RLA3

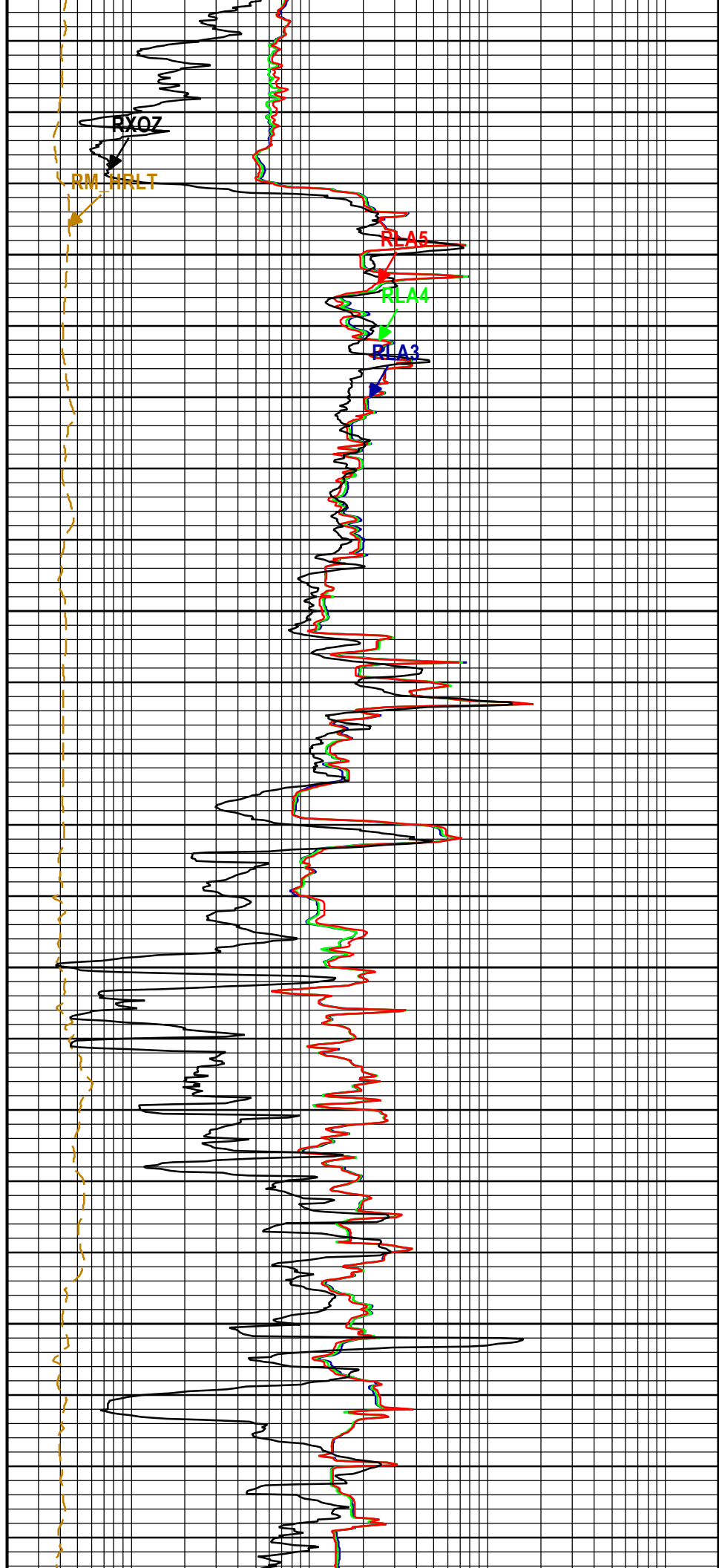
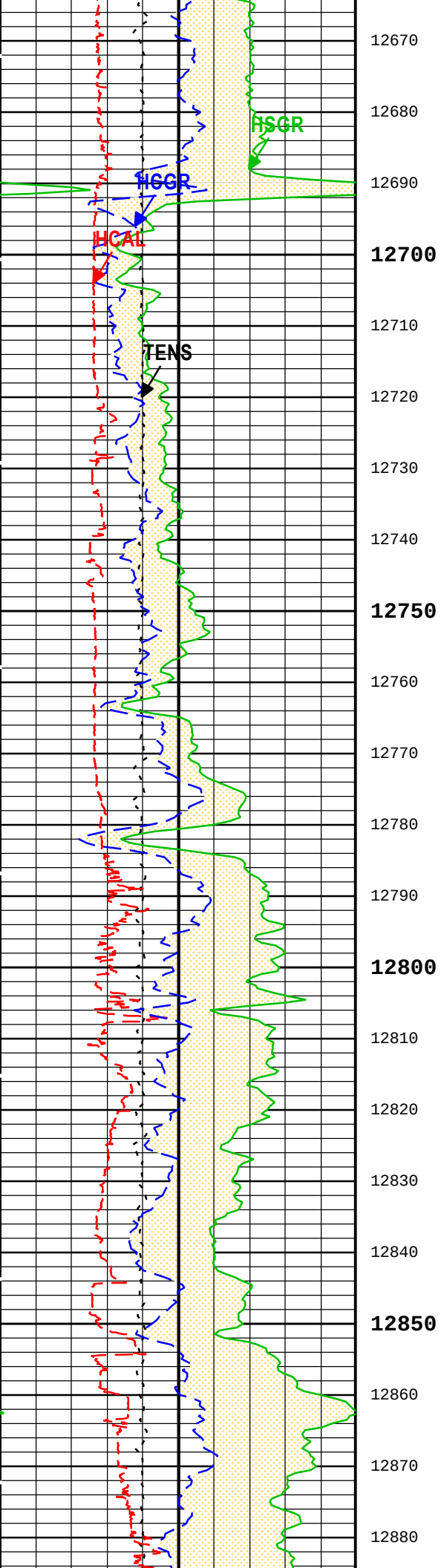


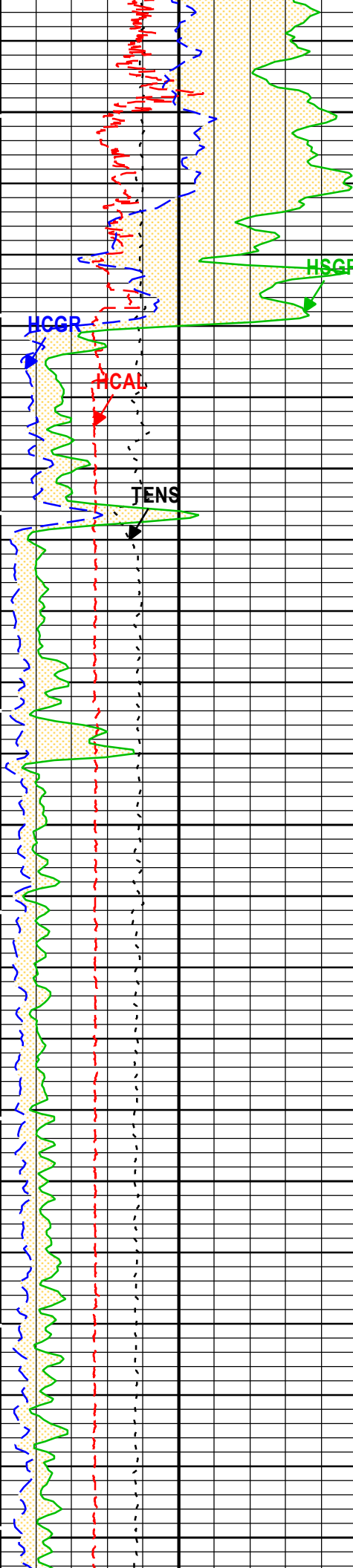


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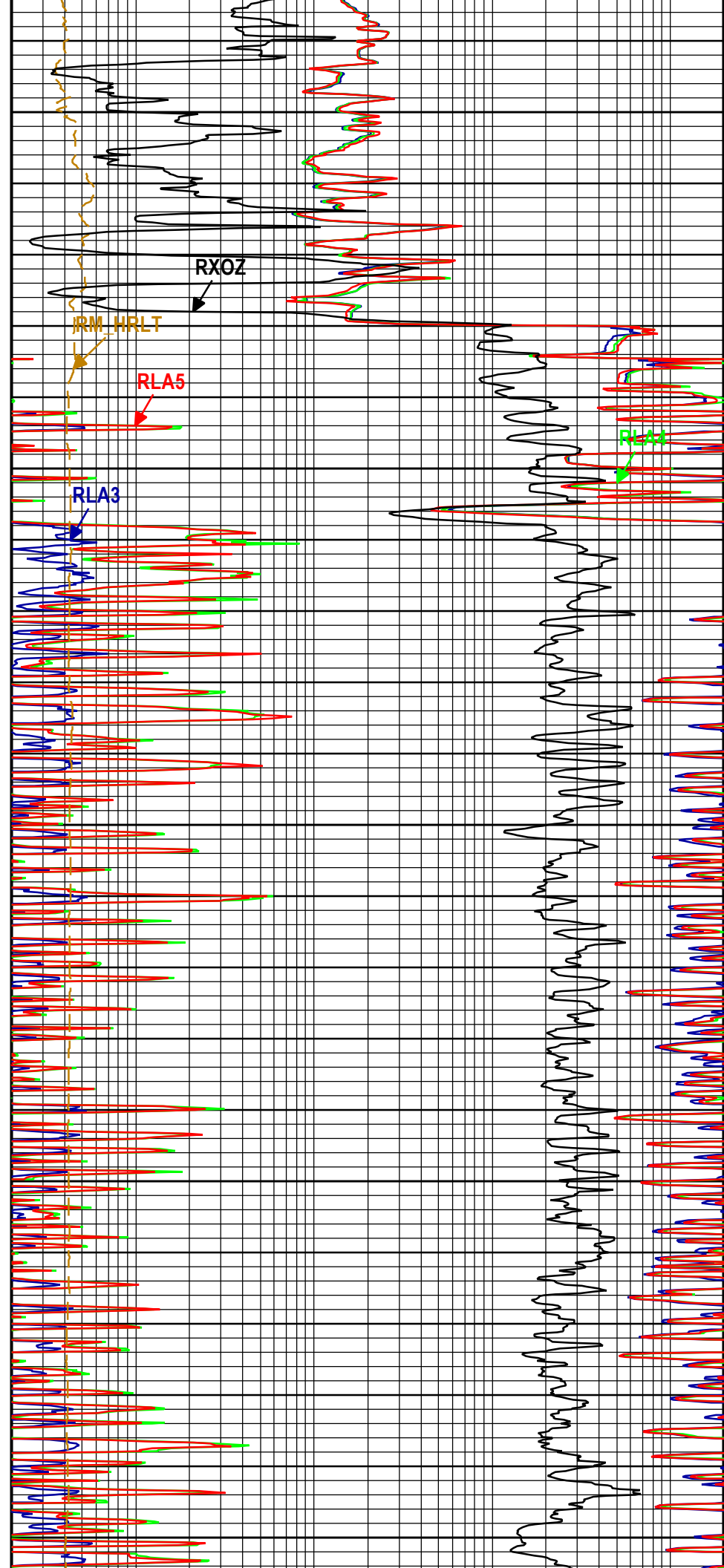


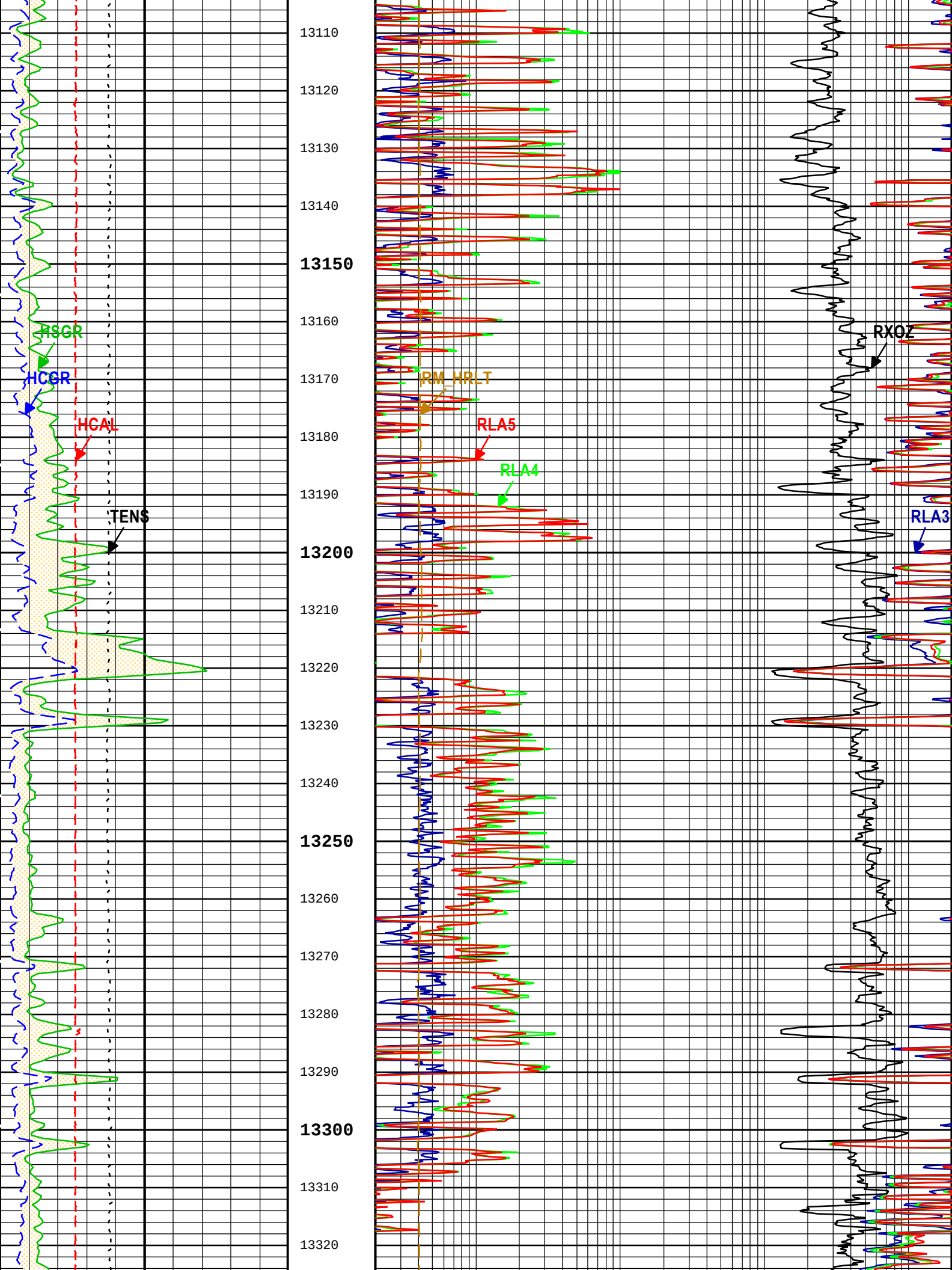


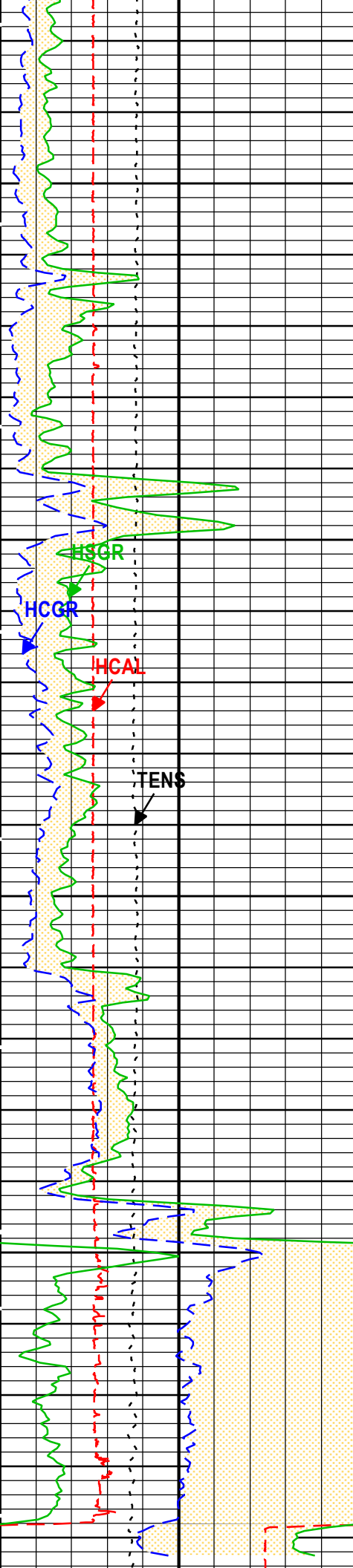




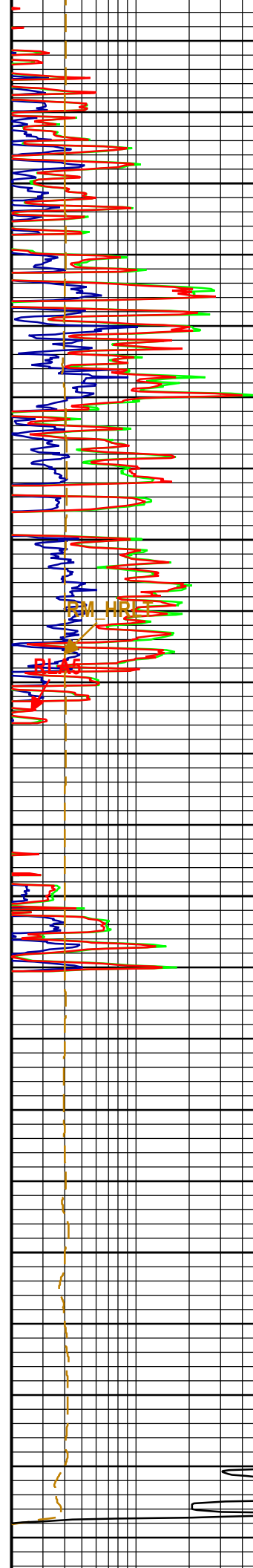
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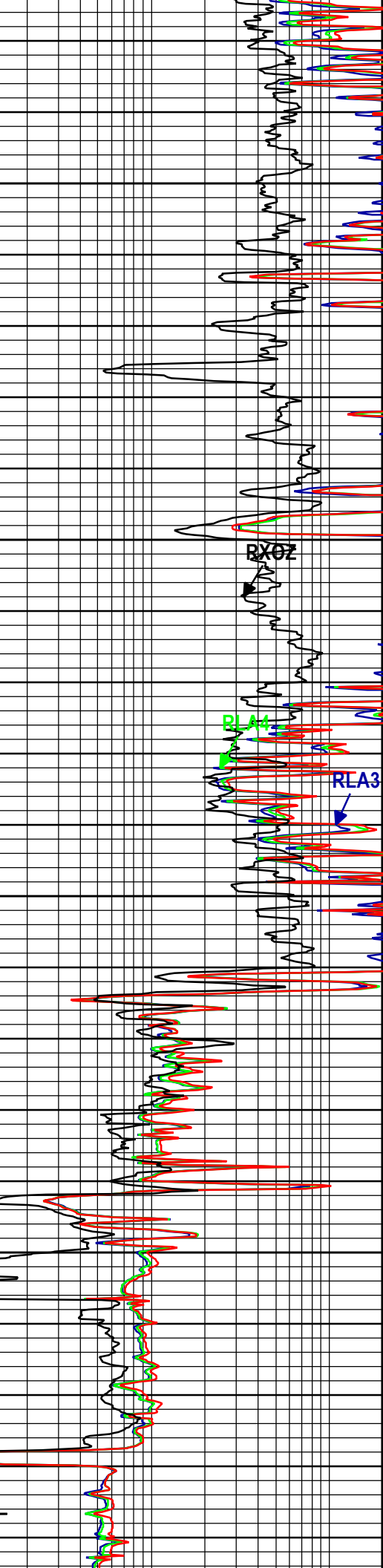


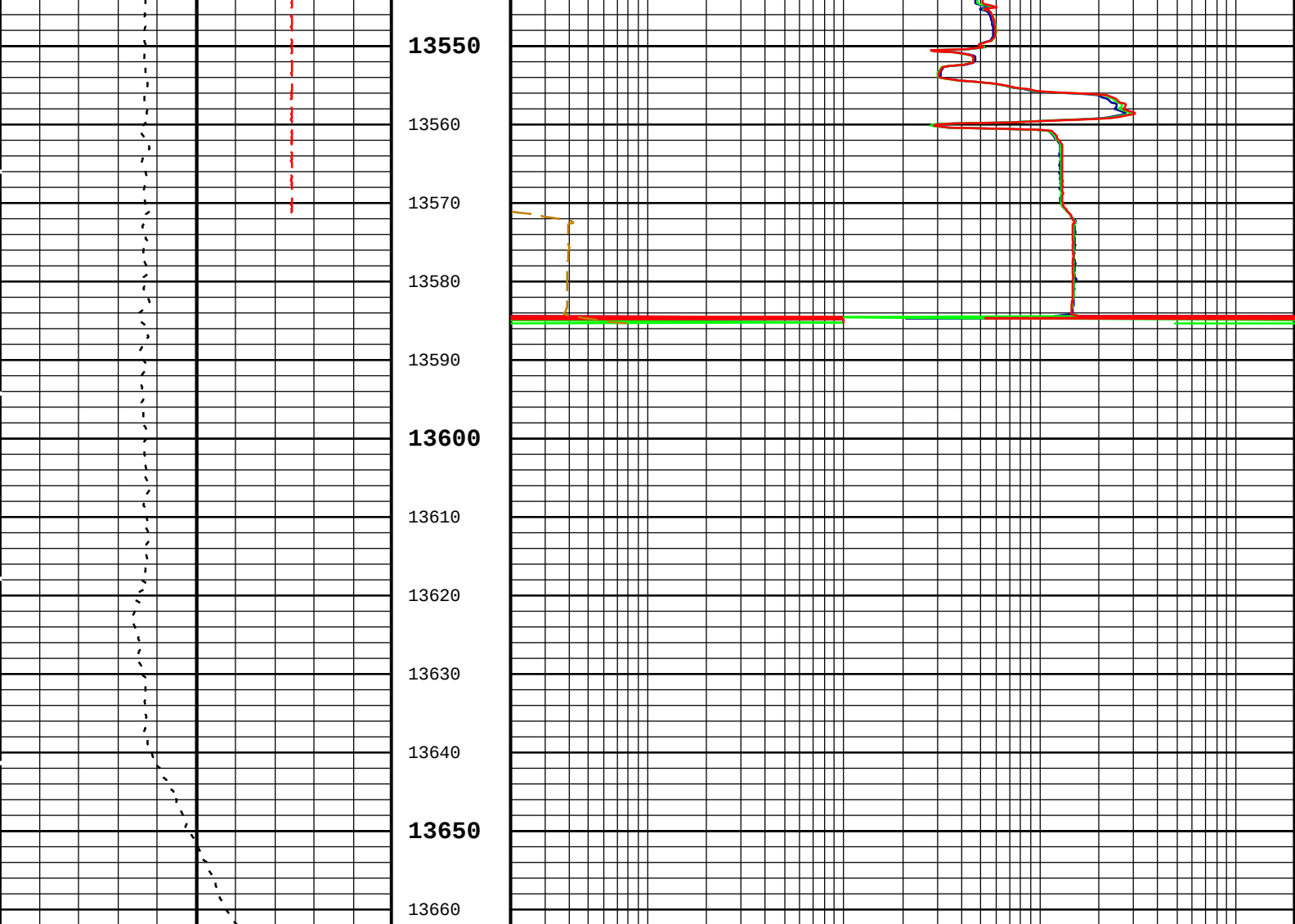


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Uranium Indicator		
Cable Tension (TENS)		
10000	lbf	0
Caliper (HCAL) HDRS-H		
6	in	16
Gamma Ray Contribution from Thorium and Potassium (HCGR) HNGS-BA		
0	gAPI	150
Spectroscopy Gamma Ray (HSGR) HNGS-BA		
0	gAPI	150

TIME_1900 - Time Marked every 60.00 (s)

Description: HRLT BASIC LOG Format: Log (HRLA_5_Inch) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:50:50

Apparent Resistivity from Computed Focusing Mode 3 (RLA3) HRLT-B		
0.2	ohm.m	2000
Apparent Resistivity from Computed Focusing Mode 4 (RLA4) HRLT-B		
0.2	ohm.m	2000
Apparent Resistivity from Computed Focusing Mode 5 (RLA5) HRLT-B		
0.2	ohm.m	2000
Mud Resistivity (RM_HRLT) HRLT-B		
0.02	ohm.m	200
Invaded Formation Resistivity filtered at 18 inches (RXOZ) HDRS-H		
0.2	ohm.m	2000

Channel Processing Parameters				
Run 1A: Parameters				
Parameter	Description	Tool	Value	Unit
ISSBAR	Barite Mud Presence Flag	Borehole	No	
BHK	Drilling Fluid Potassium Concentration	Borehole	0	%
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	8.75	in
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	0.059	in

CBLO	Casing Bottom (Logger)	WLSESSION	4702	ft
DBCC	Barite Constant Correction Flag	HNGS-BA	None	
DFD	Drilling Fluid Density	Borehole	10	lbm/gal
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
GRSE	Generalized Mud Resistivity Selection, from Measured or Computed Mud Resistivity	Borehole	MRES	
HCRB	Apply Borehole Potassium Correction	HNGS-BA	None	
HEMA	Hematite Presence Flag	Borehole	No	
PROCRM	Mud Resistivity Select	HRLT-B	HRLT Compute	
KFAC_HRLT	HRLT Geometrical Factor Option	HRLT-B	Sonde	
PROCMSO	Mechanical Standoff Size	HRLT-B	1.5	in
PROCSPO	Sonde Position	HRLT-B	Eccentered	
SGRC	Standard Gamma Ray Correction Flag	HNGS-BA	Yes	

Tool Control Parameters				
Run 1A: Parameters				
Parameter	Description	Tool	Value	Unit
HRGD_BOARD_TYPE	HRGD Board Type	HDRS-H	WITH_HET	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	Time Zoned	ft/h

Time Zone Parameters					
Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
MAX_LOG_SPEED	1695	29-Nov-2016 16:25:05	29-Nov-2016 16:25:10	13662.08	13660.47
MAX_LOG_SPEED	1800	29-Nov-2016 16:25:10	29-Nov-2016 16:31:18	13660.47	13498.77
MAX_LOG_SPEED	1690	29-Nov-2016 16:31:18	29-Nov-2016 16:52:49	13498.77	12933.39
MAX_LOG_SPEED	1800	29-Nov-2016 16:52:49	29-Nov-2016 17:06:06	12933.39	12571.73
MAX_LOG_SPEED	1770	29-Nov-2016 17:06:06	29-Nov-2016 17:09:10	12571.73	12488.53
MAX_LOG_SPEED	1800	29-Nov-2016 17:09:10	29-Nov-2016 17:12:14	12488.53	12400.95
MAX_LOG_SPEED	1753	29-Nov-2016 17:12:14	29-Nov-2016 17:13:15	12400.95	12371.38
MAX_LOG_SPEED	1800	29-Nov-2016 17:13:15	29-Nov-2016 17:16:19	12371.38	12286.82
MAX_LOG_SPEED	1729	29-Nov-2016 17:16:19	29-Nov-2016 17:18:21	12286.82	12231.58
MAX_LOG_SPEED	1800	29-Nov-2016 17:18:21	29-Nov-2016 17:22:26	12231.58	12122.52
MAX_LOG_SPEED	1781	29-Nov-2016 17:22:26	29-Nov-2016 17:23:28	12122.52	12095.38
MAX_LOG_SPEED	1800	29-Nov-2016 17:23:28	29-Nov-2016 17:30:37	12095.38	11897.92
MAX_LOG_SPEED	1692	29-Nov-2016 17:30:37	29-Nov-2016 17:31:39	11897.92	11869.47
MAX_LOG_SPEED	1800	29-Nov-2016 17:31:39	29-Nov-2016 17:40:51	11869.47	11616.36
MAX_LOG_SPEED	1794	29-Nov-2016 17:40:51	29-Nov-2016 17:45:58	11616.36	11474.54
MAX_LOG_SPEED	1651	29-Nov-2016 17:45:58	29-Nov-2016 17:47:00	11474.54	11446.18
MAX_LOG_SPEED	1747	29-Nov-2016 17:47:00	29-Nov-2016 17:49:02	11446.18	11389.42
MAX_LOG_SPEED	1629	29-Nov-2016 17:49:02	29-Nov-2016 17:56:13	11389.42	11190.26
MAX_LOG_SPEED	1747	29-Nov-2016 17:56:13	29-Nov-2016 17:59:17	11190.26	11103.2
MAX_LOG_SPEED	1800	29-Nov-2016 17:59:17	29-Nov-2016 18:14:37	11103.2	10671.4
MAX_LOG_SPEED	1764	29-Nov-2016 18:14:37	29-Nov-2016 18:21:45	10671.4	10469.58
MAX_LOG_SPEED	1663	29-Nov-2016 18:21:45	29-Nov-2016 18:27:54	10469.58	10293.28
MAX_LOG_SPEED	1753	29-Nov-2016 18:27:54	29-Nov-2016 18:43:16	10293.28	9859.61
MAX_LOG_SPEED	1660	29-Nov-2016 18:43:16	29-Nov-2016 19:01:43	9859.61	9334.22
MAX_LOG_SPEED	1756	29-Nov-2016 19:01:43	29-Nov-2016 19:06:50	9334.22	9189.58

MAX_LOG_SPEED	1800	29-Nov-2016 19:06:50	29-Nov-2016 19:09:53	9189.58	9102.28
MAX_LOG_SPEED	1723	29-Nov-2016 19:09:53	29-Nov-2016 19:37:30	9102.28	8327.82
MAX_LOG_SPEED	1626	29-Nov-2016 19:37:30	29-Nov-2016 19:47:43	8327.82	8046.58
MAX_LOG_SPEED	1770	29-Nov-2016 19:47:43	29-Nov-2016 19:50:48	8046.58	7964.6
MAX_LOG_SPEED	1659	29-Nov-2016 19:50:48	29-Nov-2016 19:57:59	7964.6	7768.42
MAX_LOG_SPEED	1768	29-Nov-2016 19:57:59	29-Nov-2016 20:02:05	7768.42	7656.38
MAX_LOG_SPEED	1663	29-Nov-2016 20:02:05	29-Nov-2016 20:07:11	7656.38	7519.44
MAX_LOG_SPEED	1775	29-Nov-2016 20:07:11	29-Nov-2016 20:09:14	7519.44	7463.56
MAX_LOG_SPEED	1654	29-Nov-2016 20:09:14	29-Nov-2016 20:14:22	7463.56	7324
MAX_LOG_SPEED	1757	29-Nov-2016 20:14:22	29-Nov-2016 20:16:25	7324	7267.91
MAX_LOG_SPEED	1607	29-Nov-2016 20:16:25	29-Nov-2016 20:23:35	7267.91	7071.09
MAX_LOG_SPEED	1796	29-Nov-2016 20:23:35	29-Nov-2016 20:28:41	7071.09	6929.06
MAX_LOG_SPEED	1800	29-Nov-2016 20:28:41	29-Nov-2016 21:18:45	6929.06	5563.46
MAX_LOG_SPEED	1789	29-Nov-2016 21:18:45	29-Nov-2016 21:19:46	5563.46	5535.53
MAX_LOG_SPEED	1800	29-Nov-2016 21:19:46	29-Nov-2016 21:21:49	5535.53	5478.22
MAX_LOG_SPEED	1728	29-Nov-2016 21:21:49	29-Nov-2016 21:22:50	5478.22	5449.62
MAX_LOG_SPEED	1800	29-Nov-2016 21:22:50	29-Nov-2016 21:23:51	5449.62	5421.01
MAX_LOG_SPEED	1748	29-Nov-2016 21:23:51	29-Nov-2016 21:28:59	5421.01	5279.95
MAX_LOG_SPEED	1800	29-Nov-2016 21:28:59	29-Nov-2016 21:34:06	5279.95	5142.02
MAX_LOG_SPEED	1741	29-Nov-2016 21:34:06	29-Nov-2016 21:35:07	5142.02	5114.37
MAX_LOG_SPEED	1600	29-Nov-2016 21:35:07	29-Nov-2016 21:37:09	5114.37	5058.65
MAX_LOG_SPEED	1717	29-Nov-2016 21:37:09	29-Nov-2016 21:42:17	5058.65	4918.42
MAX_LOG_SPEED	1800	29-Nov-2016 21:42:17	29-Nov-2016 21:44:20	4918.42	4862.3
MAX_LOG_SPEED	1631	29-Nov-2016 21:44:20	29-Nov-2016 21:46:22	4862.3	4807.08
MAX_LOG_SPEED	1756	29-Nov-2016 21:46:22	29-Nov-2016 21:50:28	4807.08	4696.12
MAX_LOG_SPEED	1637	29-Nov-2016 21:50:28	29-Nov-2016 22:15:05	4696.12	3217.06
MAX_LOG_SPEED	1778	29-Nov-2016 22:15:05	29-Nov-2016 22:16:07	3217.06	3144.43
MAX_LOG_SPEED	1645	29-Nov-2016 22:16:07	29-Nov-2016 22:53:59	3144.43	305.57
MAX_LOG_SPEED	1728	29-Nov-2016 22:53:59	29-Nov-2016 22:56:13	305.57	213.72

All depth are at tool zero.

Run 1A

Repeat Analysis 5"=100'

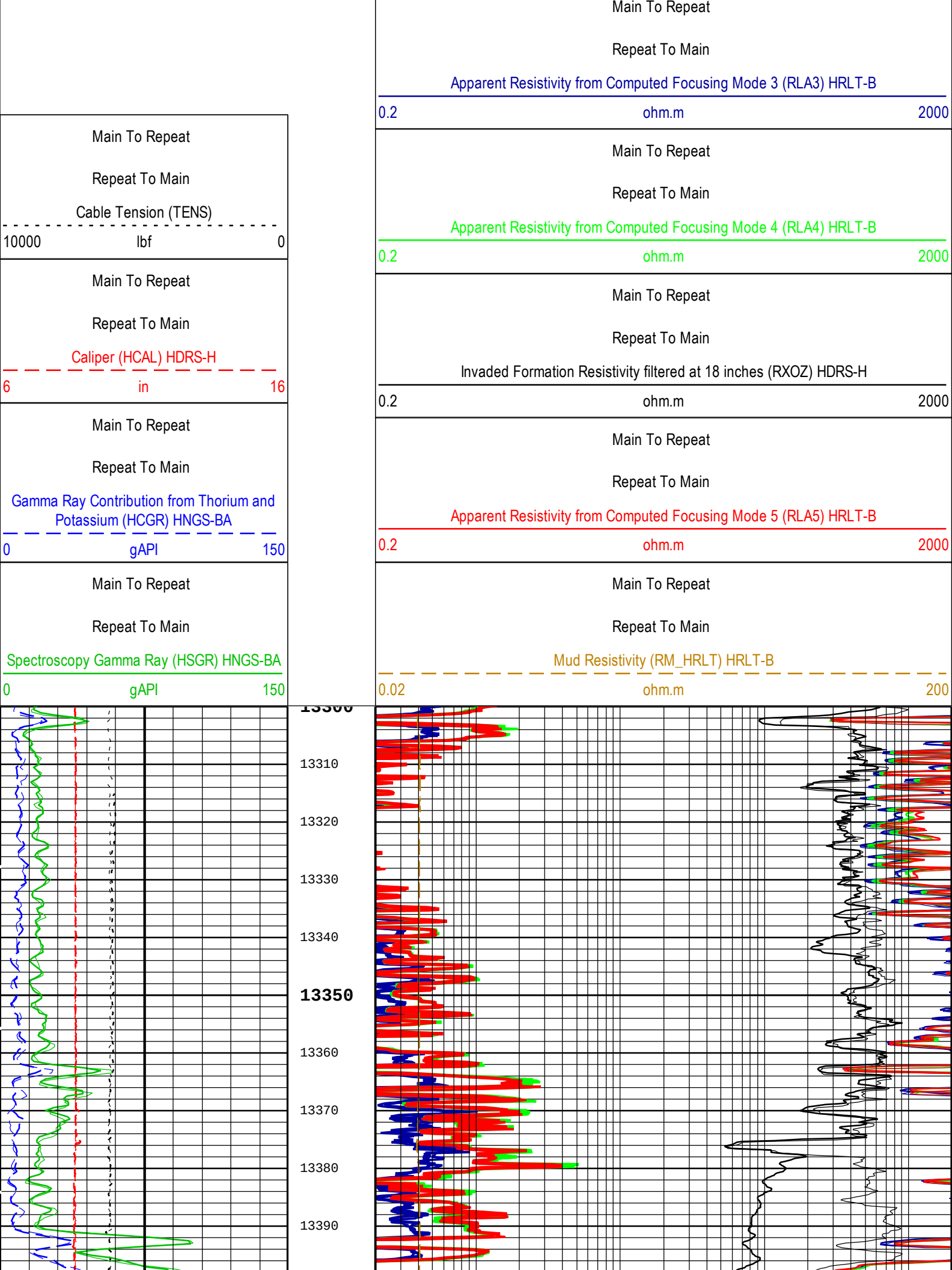
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run 1A	Repeat[2]:Up	Up	13314.45 ft	13665.97 ft	29-Nov-2016 4:09:12 PM	29-Nov-2016 4:21:23 PM	ON	13.10 ft	Yes
Run 1A	Main[3]:Up	Up	213.72 ft	13662.08 ft	29-Nov-2016 4:25:05 PM	29-Nov-2016 10:56:13 PM	ON	13.82 ft	Yes

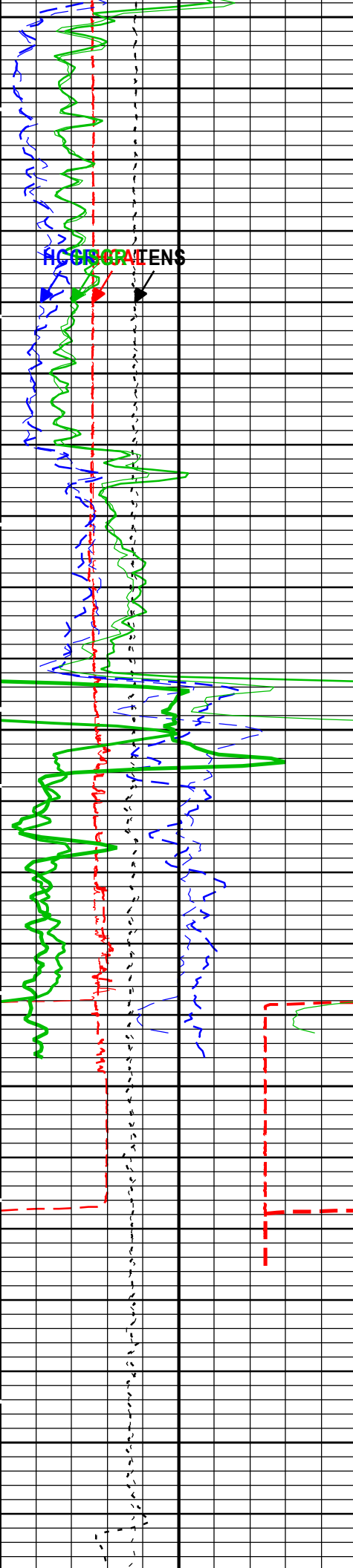
All depths are referenced to toolstring zero

Log	Company:DCP Midstream LP Well:Zia AGI D2 Run 1A: Main[3]:Up:S008
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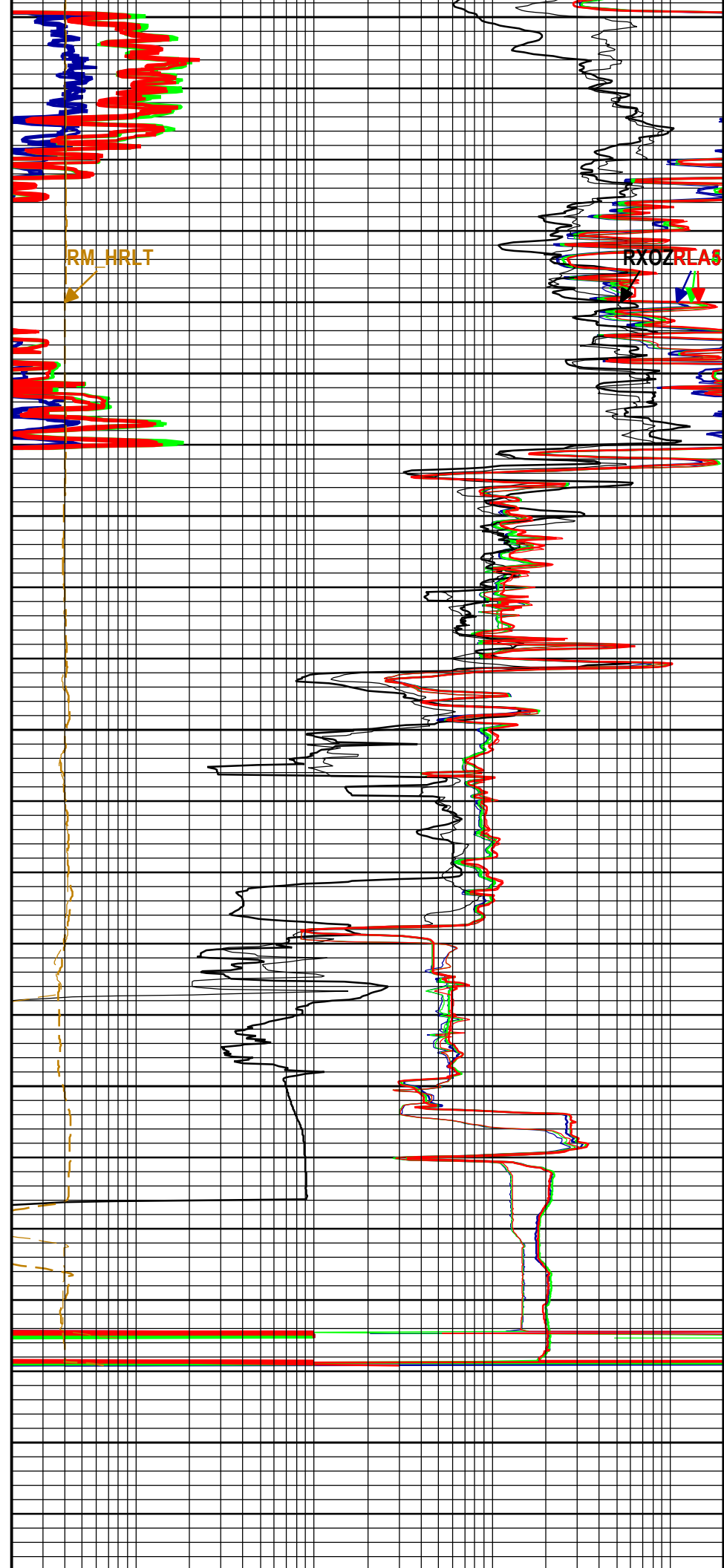
Description: HRLT BASIC LOG Format: Log (HRLA_5_Inch RA) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:50:56

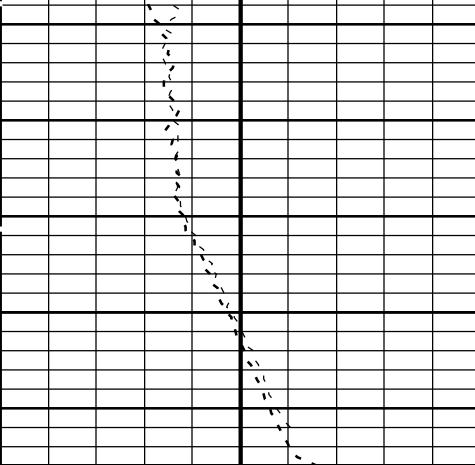
TIME_1900 - Time Marked every 60.00 (s)





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13610





13620
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Main To Repeat
Repeat To Main
Cable Tension (TENS)

10000 lbf 0

Main To Repeat
Repeat To Main
Caliper (HCAL) HDRS-H

6 in 16

Main To Repeat
Repeat To Main
Gamma Ray Contribution from Thorium and Potassium (HCGR) HNGS-BA

0 gAPI 150

Main To Repeat
Repeat To Main
Spectroscopy Gamma Ray (HSGR) HNGS-BA

0 gAPI 150

Main To Repeat
Repeat To Main
Apparent Resistivity from Computed Focusing Mode 3 (RLA3) HRLT-B

0.2 ohm.m 2000

Main To Repeat
Repeat To Main
Apparent Resistivity from Computed Focusing Mode 4 (RLA4) HRLT-B

0.2 ohm.m 2000

Main To Repeat
Repeat To Main
Invaded Formation Resistivity filtered at 18 inches (RXOZ) HDRS-H

0.2 ohm.m 2000

Main To Repeat
Repeat To Main
Apparent Resistivity from Computed Focusing Mode 5 (RLA5) HRLT-B

0.2 ohm.m 2000

Main To Repeat
Repeat To Main
Mud Resistivity (RM_HRLT) HRLT-B

0.02 ohm.m 200

TIME_1900 - Time Marked every 60.00 (s)

Description: HRLT BASIC LOG Format: Log (HRLA_5_Inch RA) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:50:56

Calibration Report	
HRLT-B (High Resolution Laterolog Array) Calibration - Run Run 1A	
Primary Equipment :	
HRLS-B	HRLS-B
HRLT-B Calibration - HRLT M0-M1 Voltage Plus	

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
HRLT-M01	uV	Before	332.7	370.6	330.6	380.6	

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
HRLT VTP - 0	uV	Before	-70000.0	-82352.9	-68596.3	-60869.6	
HRLT VTP - 1	uV	Before	-70000.0	-82352.9	-75869.6	-60869.6	
HRLT VTP - 2	uV	Before	-70000.0	-82352.9	-74099.0	-60869.6	
HRLT VTP - 3	uV	Before	-70000.0	-82352.9	-72341.1	-60869.6	
HRLT VTP - 4	uV	Before	-70000.0	-82352.9	-69598.4	-60869.6	
HRLT VTP - 5	uV	Before	-70000.0	-82352.9	-70833.5	-60869.6	
HRLT VTP - 6	uV	Before	70000.0	60869.6	71918.2	82352.9	

HRLT-B Calibration - HRLT Bridle#9-M0 Voltage

Before (Measured):		16:08:01 29-Nov-2016					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
HRLT VBD - 0	uV	Before	-70000.0	-82352.9	-68630.5	-60869.6	
HRLT VBD - 1	uV	Before	-70000.0	-82352.9	-75950.2	-60869.6	
HRLT VBD - 2	uV	Before	-70000.0	-82352.9	-74166.2	-60869.6	
HRLT VBD - 3	uV	Before	-70000.0	-82352.9	-72403.2	-60869.6	
HRLT VBD - 4	uV	Before	-70000.0	-82352.9	-69639.9	-60869.6	
HRLT VBD - 5	uV	Before	-70000.0	-82352.9	-70858.5	-60869.6	
HRLT VBD - 6	uV	Before	70000.0	60869.6	71997.2	82352.9	

HRLT-B Calibration - HRLT Source Current Plus

Before (Measured):		16:08:01 29-Nov-2016					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
HRLT ISO - 0	uA	Before	284.0	247.0	286.0	334.1	
HRLT ISO - 1	uA	Before	281.1	244.4	281.1	330.7	
HRLT ISO - 2	uA	Before	281.1	244.4	281.1	330.7	
HRLT ISO - 3	uA	Before	281.1	244.4	281.1	330.7	
HRLT ISO - 4	uA	Before	281.1	244.4	281.1	330.7	
HRLT ISO - 5	uA	Before	281.1	244.4	281.1	330.7	
HRLT ISO - 6	uA	Before	281.1	244.4	281.1	330.7	

HRLT-B Calibration - HRLT Vertical Voltage PI

Before (Measured):		16:08:01 29-Nov-2016					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
HRLT MV - 0	uV	Before	-322.7	-379.6	-322.2	-280.6	
HRLT MV - 1	uV	Before	-322.7	-379.6	-343.9	-280.6	
HRLT MV - 2	uV	Before	-322.7	-379.6	-334.0	-280.6	
HRLT MV - 3	uV	Before	-322.7	-379.6	-323.0	-280.6	
HRLT MV - 4	uV	Before	-322.7	-379.6	-309.1	-280.6	
HRLT MV - 5	uV	Before	-322.7	-379.6	-329.4	-280.6	
HRLT MV - 6	uV	Before	322.7	280.6	345.0	379.6	

HRLT-B Calibration - HRLT Calibration Temperature

Before (Measured):		16:08:01 29-Nov-2016					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
CTEM_HRLT	degF	Before			161.1		

Company:	DCP Midstream LP	Schlumberger
Well:	Zia AGI D2	
Field:	AGI Devonian Exploration	
County:	Lea	
State:	New Mexico	

Platform Express

High Resolution Laterolog Array

Spectral Gamma Ray

Run 1A

Main Pass 1"=100'

Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run 1A	Main[3]:Up	Up	213.72 ft	13662.08 ft	29-Nov-2016 4:25:05 PM	29-Nov-2016 10:56:13 PM	ON	13.82 ft	Yes

All depths are referenced to toolstring zero

Log	Company:DCP Midstream LP Well:Zia AGI D2 Run 1A: Main[3]:Up:S008
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Description: HRLT BASIC LOG Format: Log (HRLA_1_inch) Index Scale: 1 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:51:00

Channel	Source	Sampling
CALL	HDRS-H:HRCC-H:HRCC-H	1in

CGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
RLA3	HRLT-B:HRLS-B:HRLS-B	2in
RLA5	HRLT-B:HRLS-B:HRLS-B	2in
SGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
TENS	WLWorkflow	6in
TIME_1900	WLWorkflow	0.1in

TIME_1900 - Time Marked every 60.00 (s)

Spectroscopy Gamma
Ray (HSGR) HNGS-BA

0 gAPI 150

Gamma Ray
Contribution from
Thorium and
Potassium (HCGR)
HNGS-BA

0 gAPI 150

Caliper (HCAL)
HDRS-H

6 in 16

Cable Tension (TENS)

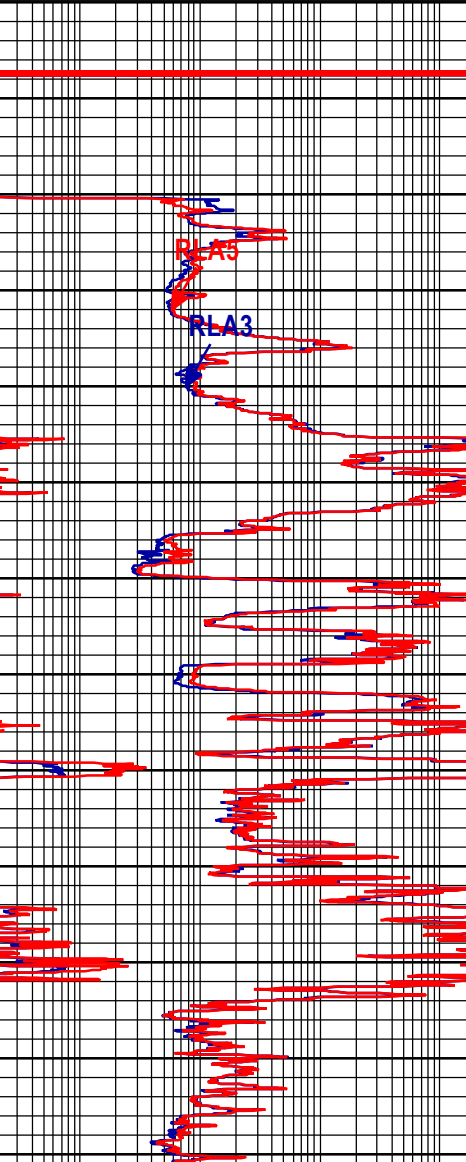
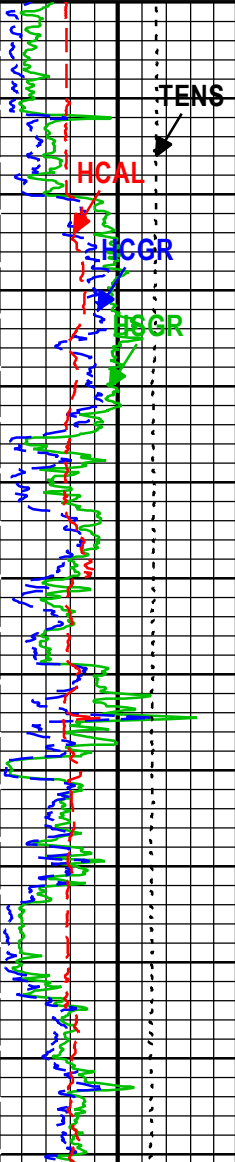
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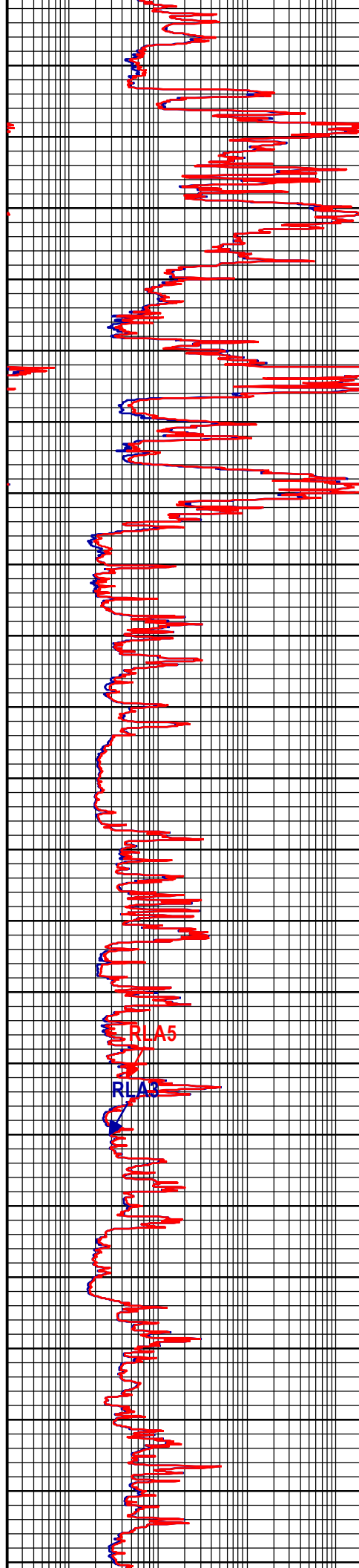
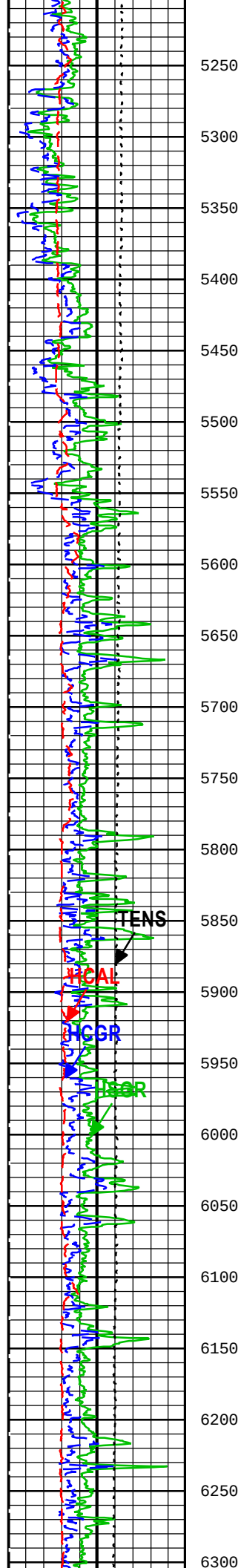
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Mode 3 (RLA3) HRLT-B

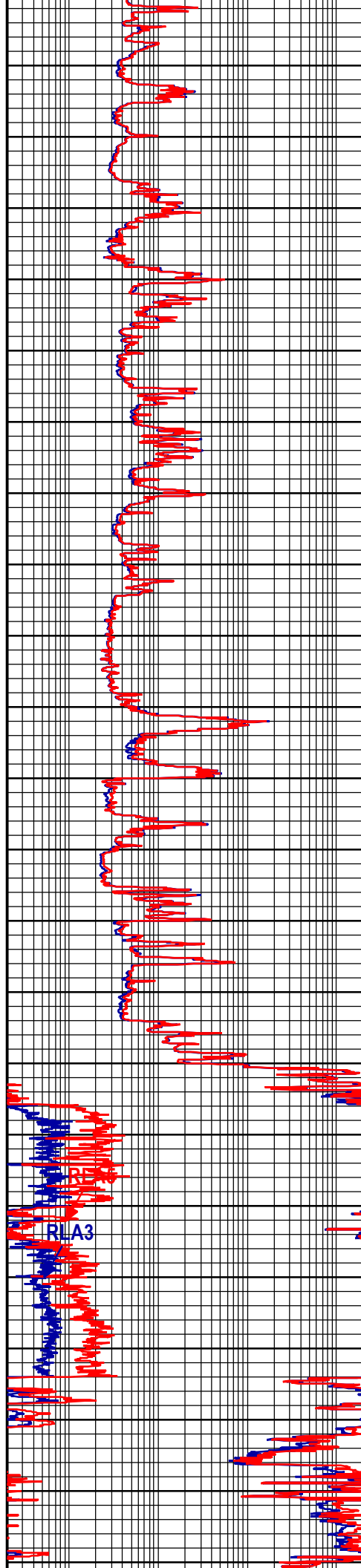
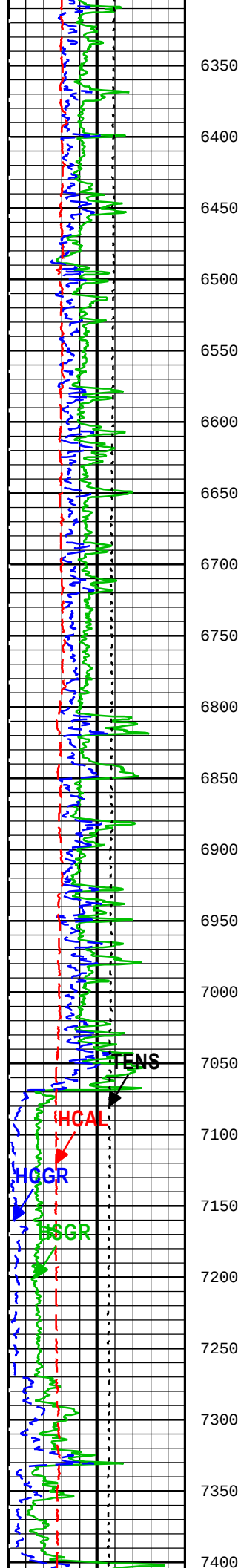
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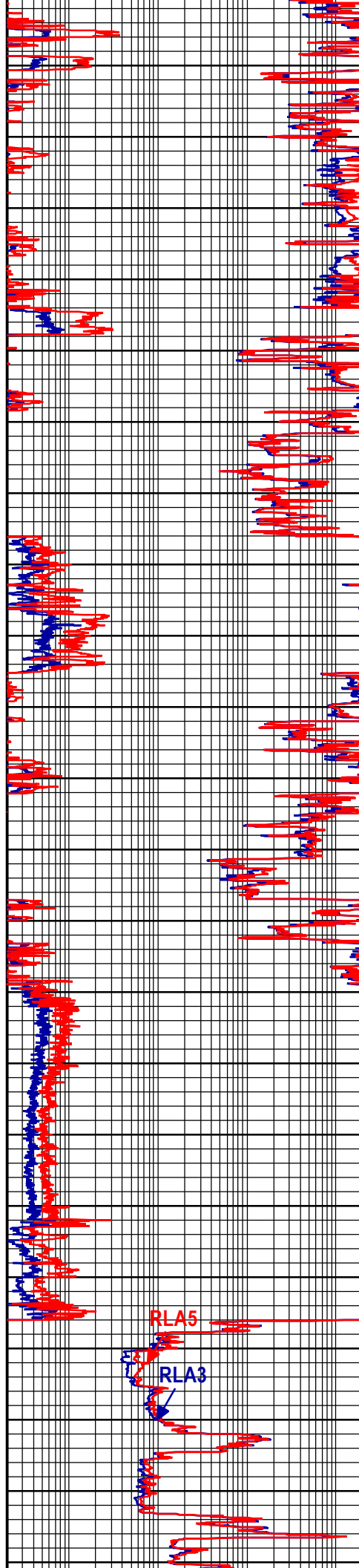
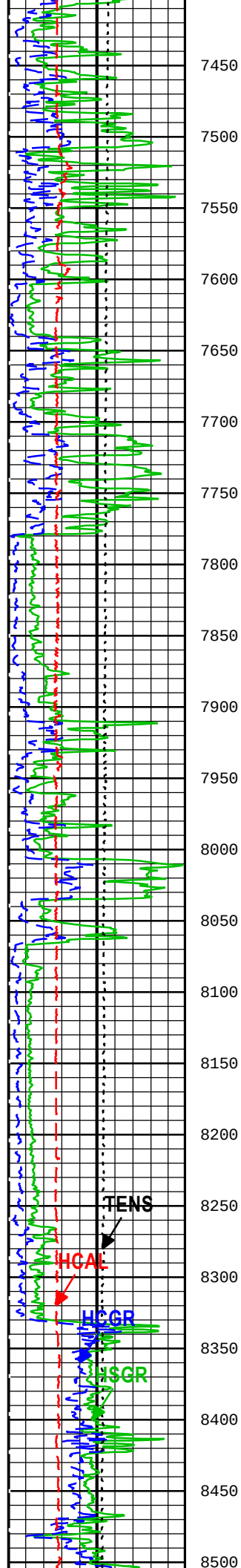
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Mode 5 (RLA5) HRLT-B

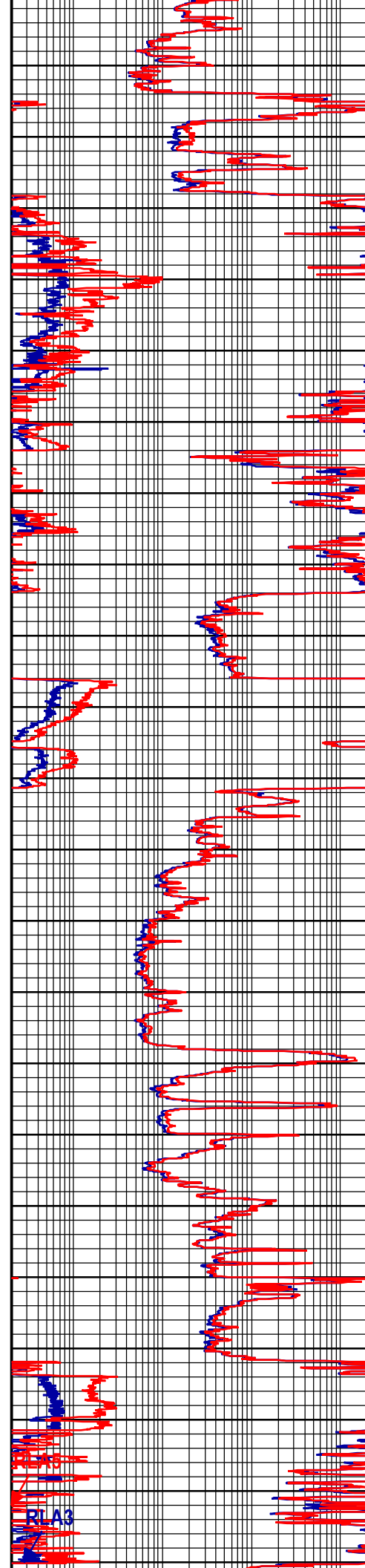
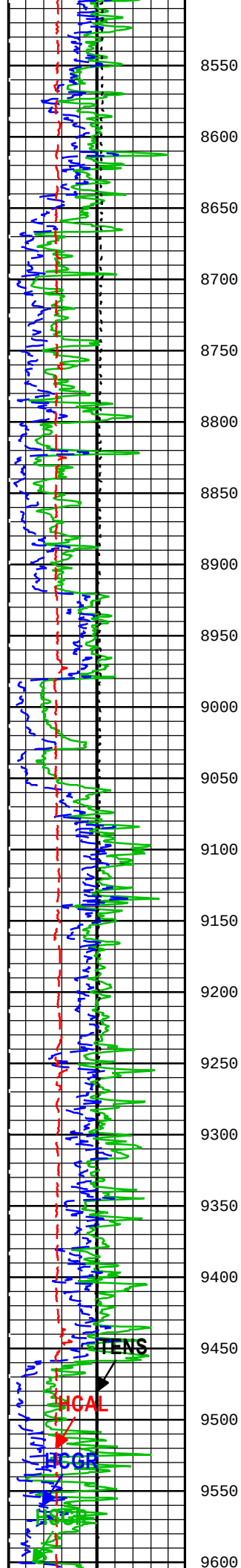
0.2 ohm.m 2000

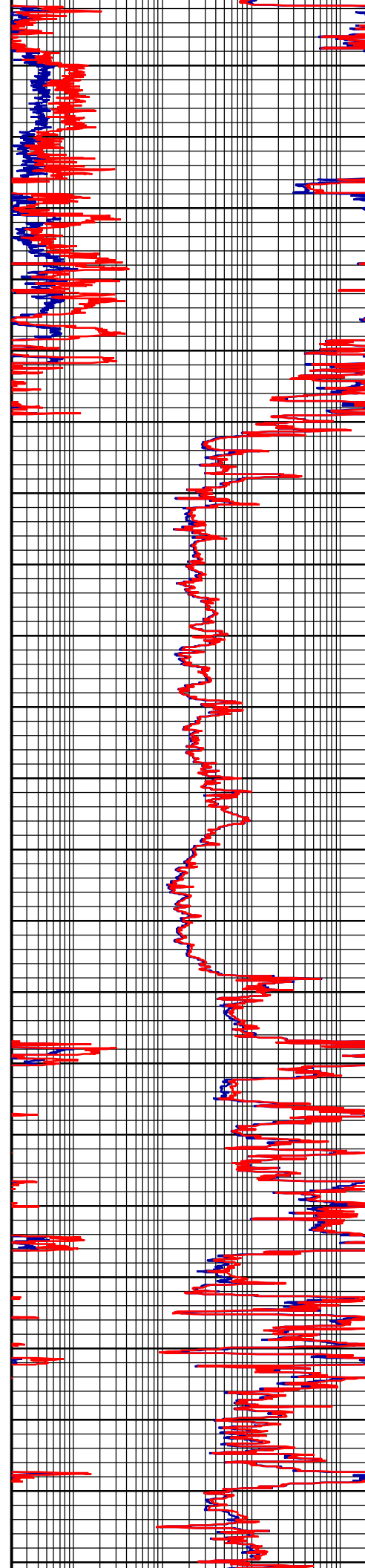
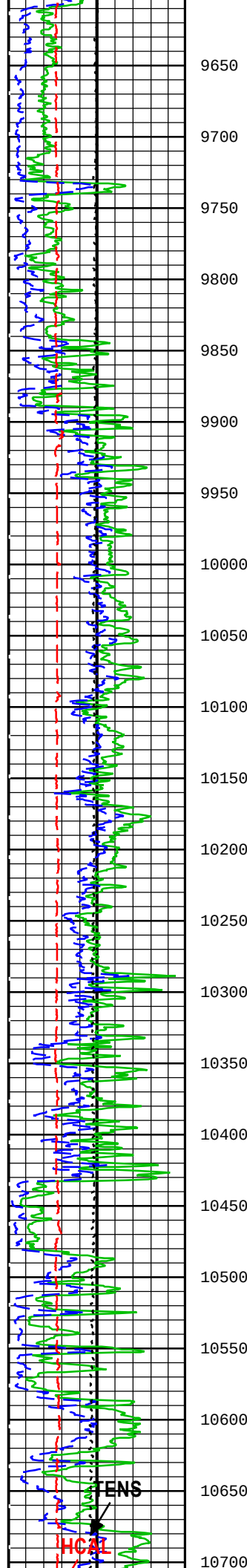


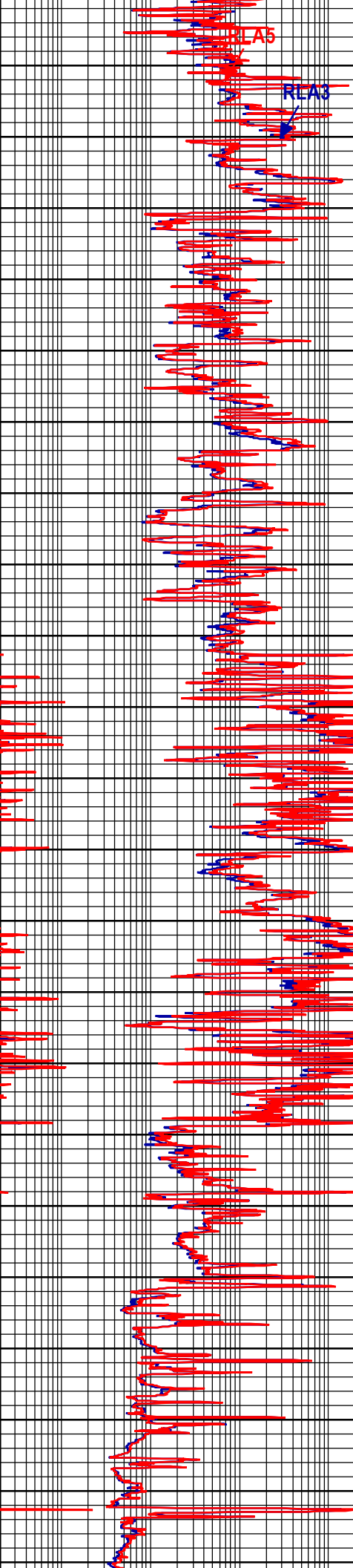
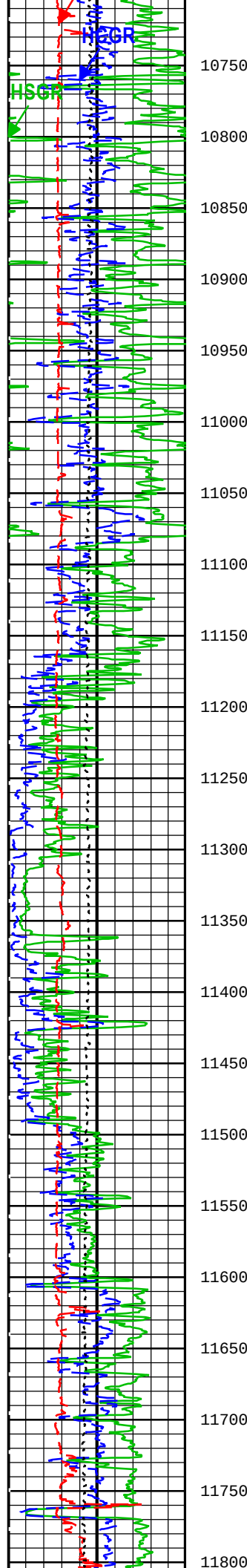


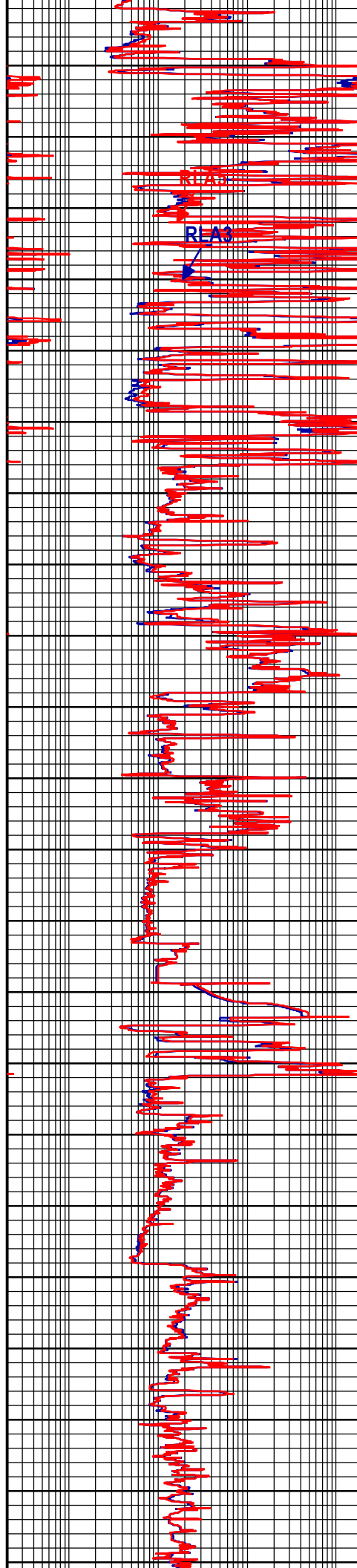
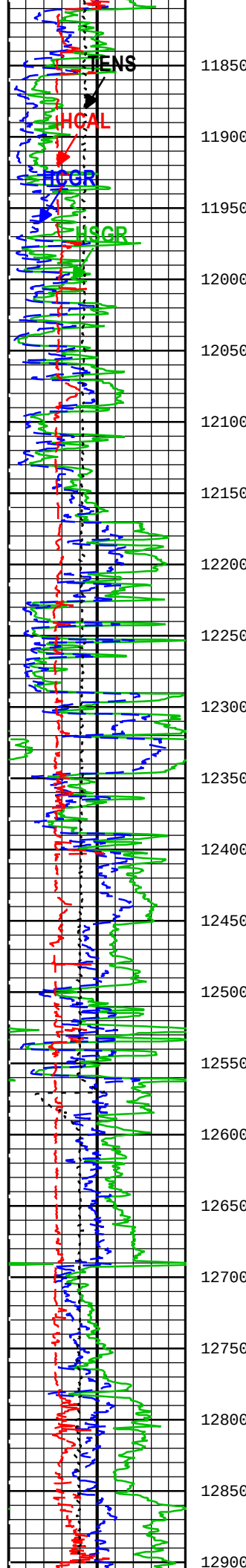


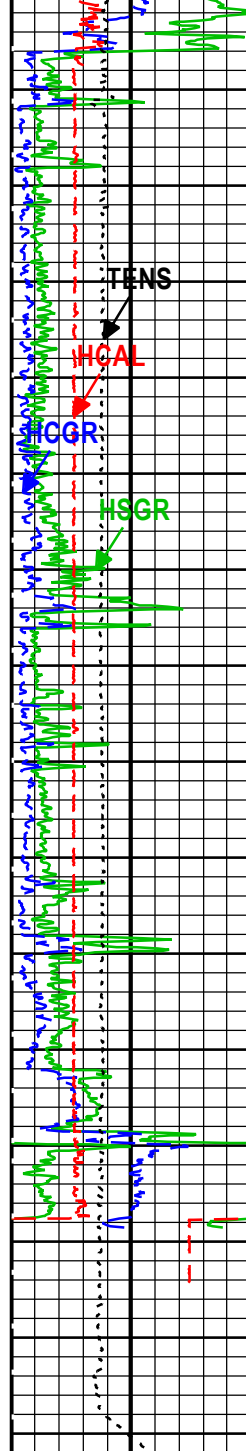




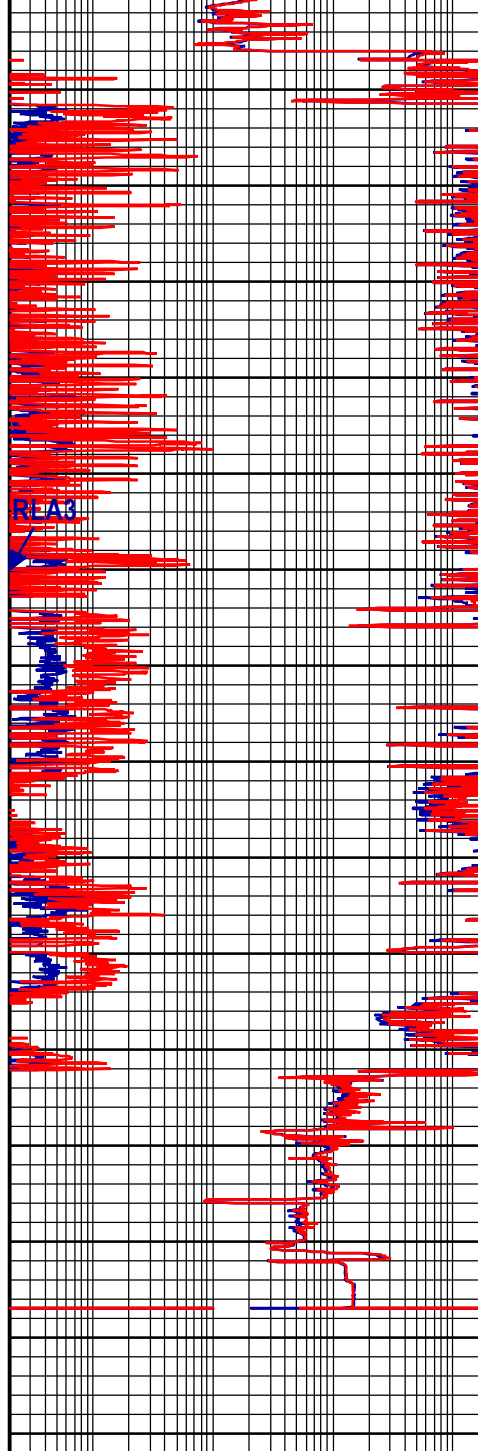








12950
13000
13050
13100
13150
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13250
13300
13350
13400
13450
13500
13550
13600
13650



RLA5

Spectroscopy Gamma Ray (HSGR) HNGS-BA

0 gAPI 150

Gamma Ray Contribution from Thorium and Potassium (HCGR) HNGS-BA

0 gAPI 150

Caliper (HCAL) HDRS-H

6 in 16

Cable Tension (TENS)

10000 lbf 0

Apparent Resistivity from Computed Focusing Mode 3 (RLA3) HRLT-B

0.2 ohm.m 2000

Apparent Resistivity from Computed Focusing Mode 5 (RLA5) HRLT-B

0.2 ohm.m 2000

Sonic Scanner Field Print

Company: DCP Midstream LP

Well: Zia AGI D2

Field: AGI Devonian Exploration

County: Lea State: New Mexico

Sonic Scanner Field Print

County: Lea			
Field: AGI Devonian Exploration			
Location: 1893' FSL & 950' FWL			
Well: Zia AGI D2			
Company: DCP Midstream LP			
Location:	1893' FSL & 950' FWL	Elev.: K.B. 3574.00 ft	
	Section: 19 Township: T19S Abstract: R32S	G.L. 3547.00 ft	
		D.F. 3573.00 ft	
	Permanent Datum:	Ground Level	Elev.: 3547.00 f
Log Measured From:		Kelly Bushing	27.00 ft above Perm.Datum
Drilling Measured From:		Kelly Bushing	
API Serial No.	Section:	Township:	Abstract:
30-025-42207	19	T19S	R32S

Logging Date	29-Nov-2016		
Run Number	Run 1A		
Depth Driller	13622.00 ft		
Schlumberger Depth	13637.00 ft		
Bottom Log Interval	13637.00 ft		
Top Log Interval	4702.00 ft		
Casing Driller Size @ Depth	9.625 in @ 4696.00 ft		
Casing Schlumberger	4702 ft		
Bit Size	8.75 in		
Type Fluid In Hole	Salt Brine		
Density	Viscosity	41 s	
Fluid Loss	PH	10	
Source of Sample	Active Tank		
RM @ Meas Temp	0.08 ohm.m @ 72 degF		
RMF @ Meas Temp	0.08 ohm.m @ 72 degF		
RMC @ Meas Temp			
Source RMF	RMC		
RM @ BHT	RMF @ BHT	0.03 @ 174.75	0.03 @ 174.75
Max Recorded Temperatures			
Circulation Stopped	Time	00:00:00	
Logger on Bottom	Time	04:30:00	
Unit Number	Location:	Midland, TX	
Recorded By	Danielle Krebs		
Witnessed By	Jared Smith		

Disclaimer

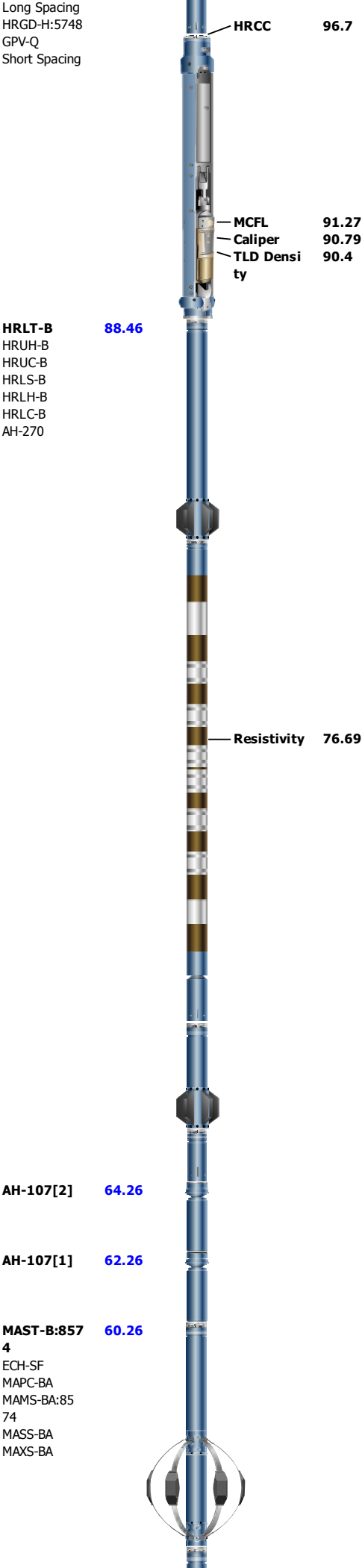
THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (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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- 2. Disclaimer
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- 7. Run 1A
 - 7.1 Integration Summary
 - 7.2 Composite Summary
 - 7.3 Log (MSIP 5 inch General)
 - 7.4 Parameter Listing
- 8. Run 1A
 - 8.1 Composite Summary

Remarks and Equipment Summary

Run 1A: Toolstring				Run 1A: Remarks
Equip name LEH-QC	Length 133.69	MP name	Offset	1. Crew: Danielle, Tony, Dago.
AH-369 EDTC-H EDTH-H EDTC-H	131.23	CTEM	129.05	2. Logs done from TD to Casing. Repeat was 200 ft off TD. CNL & Gr to Surface.
				3. Chlorides = 55,000 ppm. FD = 1.1 g/cc. Rm = 0.08 ohm.meters @ 72 degF.
				4. Max temperature from HGNS:CTEM is 174.75 degF.
				5. Density data maybe affected by borehole conditions.
HNGS-BA:378 HEH-K:1000 HNGS-BA:378	121.8	HV ACCZ Gamma Ra y Edtch Status s TelStatus	0.00 0.00 123.37 121.8 121.8	6. No pills or LCM in the mud as per company man.
				7. Neutron Corrections: HSCO, SOCO.
				8. Sonic Scanner logged in Standard Mode.
				9. As per client request, main and repeat pass correlated to downlog and not previous logs in well.
HNGC-B:638 HNGH-A:4121 HNGC-B:638	113.61	GR	118.82	
HGNS-H HGNH NSR-F:5317 NPV-N HACCZ-H:7074 HMCA-H HGNS-H	110.11	Temperatu re GR	110.08 109.37	
HDRS-H ECH-MEB HRCC-H HRMS-H Backscatter GSR-J:5437	100.7	CNL Porosity HMCA HGNS Accelerometer	103.03 100.7 100.7 0.00	





MAMS

44.82

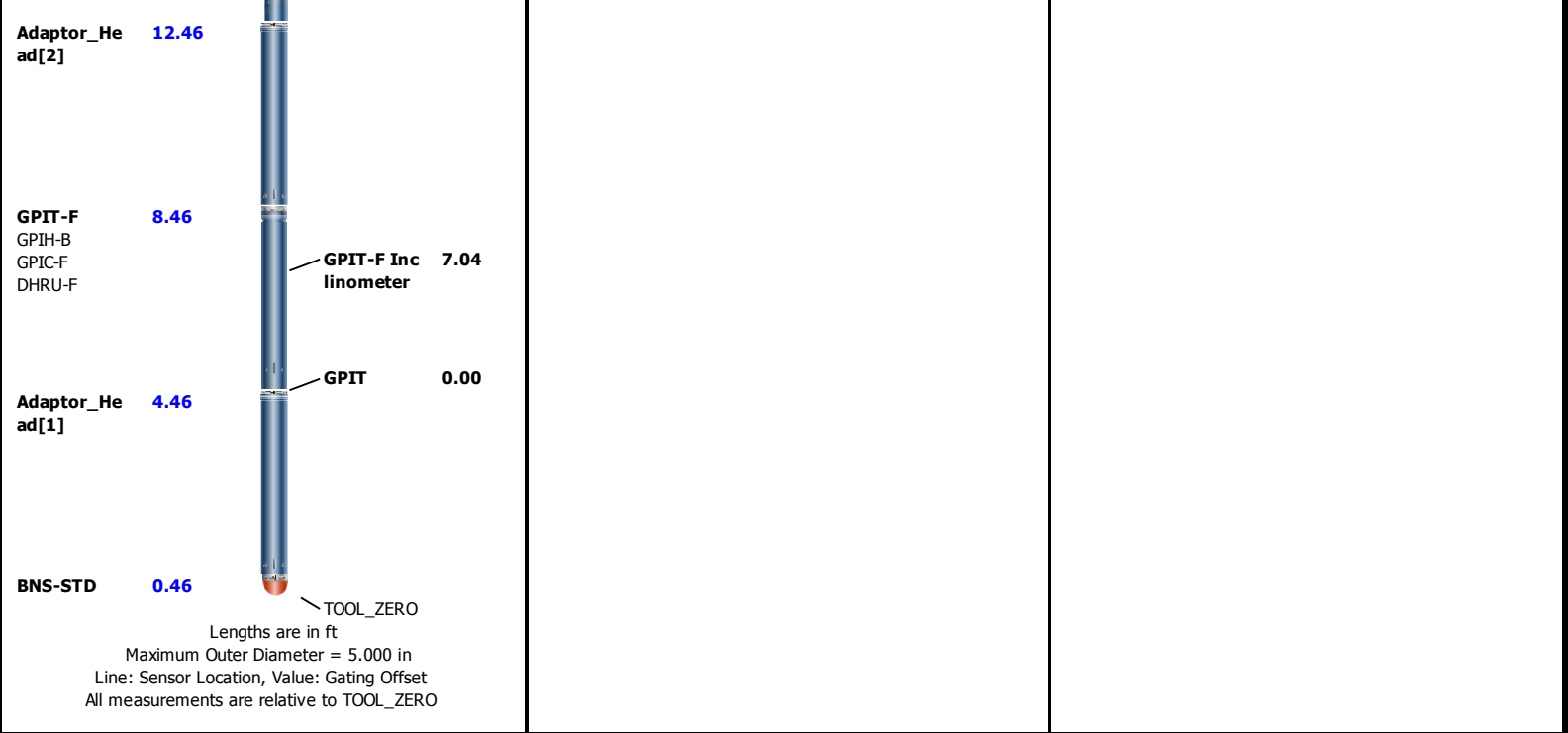
MAXS

18.98

PPC-B Calipers

17.83

PPC-B:8174 18.98
PPC-B:8174



Depth Summary			
		Run 1A	
Depth Measuring Device			
Type	IDW-JA		
Serial Number	2747		
Calibration Date	30-Aug-2016		
Calibrator Serial Number			
Calibration Cable Type	7-46 P-XS		
Wheel Correction 1	-2		
Wheel Correction 2	-1		
Tension Device			
Type	CMTD-B/A		
Serial Number	8100		
Calibration Date	08-Oct-2016		
Calibrator Serial Number	84755A		
Number of Calibration Points	10		
Calibration Root Mean Square Error	17		
Calibration Peak Error	32		
Logging Cable			
Type	7-46P-XS		
Serial Number	U714054		
Length	17700.00 ft		
Conveyance Type	Wireline		
Rig Type	Land		
Run 1A:Depth Control Parameters		Depth Control Remarks	
Log Sequence	First Log In the Well	1. All SLB depth policies and procedures followed.	
Rig Up Length At Surface	215.70 ft	2. IDW used as primary depth control device.	
Rig Up Length At Bottom	215.00 ft	3. Z-Chart used as secondary depth control device.	

Rig Up Length Correction	0.70 ft	4. First run in hole procedures followed.
Stretch Correction	13.00 ft	5. Main and repeat pass correlated to downlog.
Tool Zero Check At Surface	-2.00 ft	

Run 1A

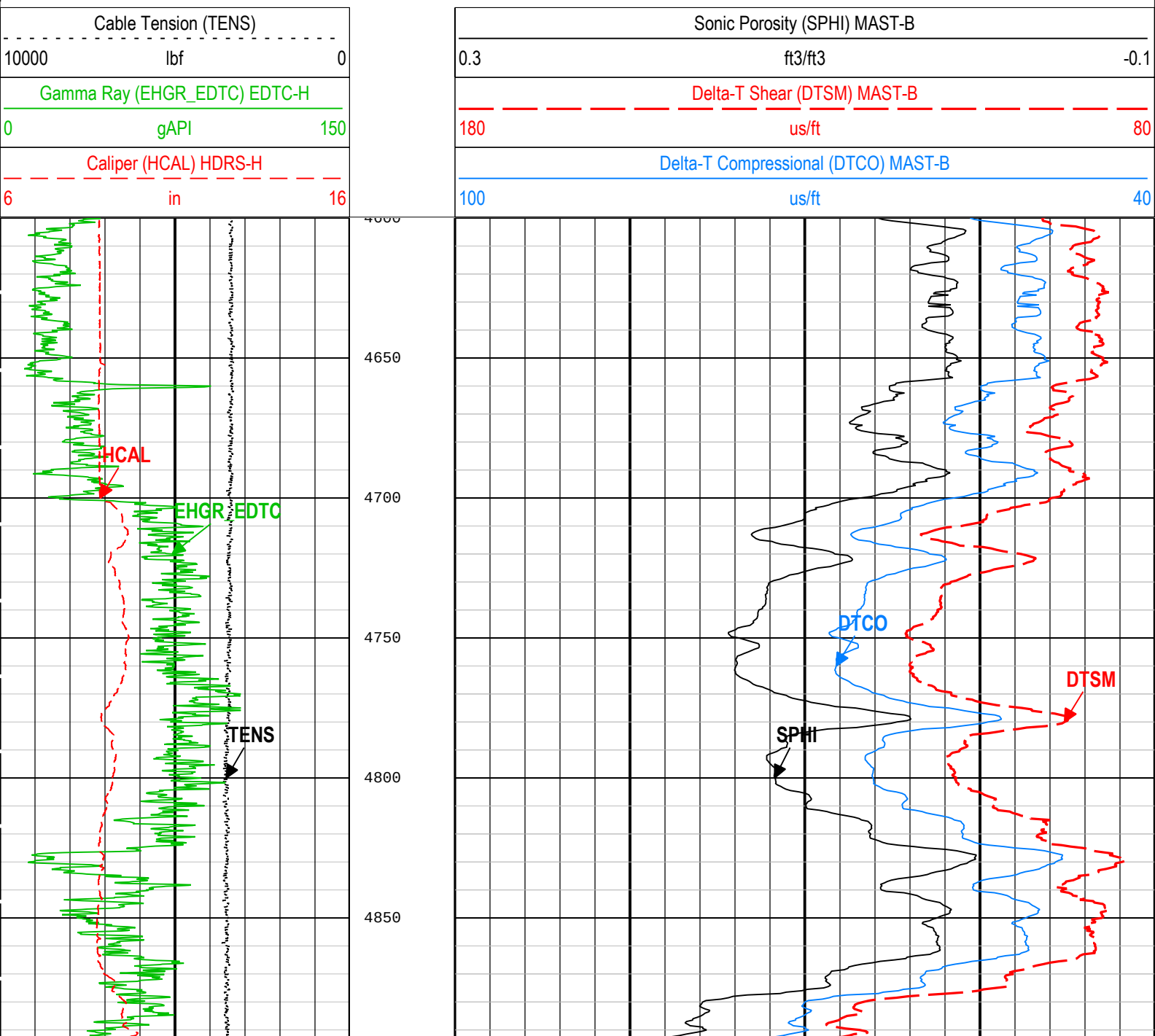
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run 1A	Main[3]:Up	Up	213.72 ft	13662.08 ft	29-Nov-2016 4:25:05 PM	29-Nov-2016 10:56:13 PM	ON	13.82 ft	Yes

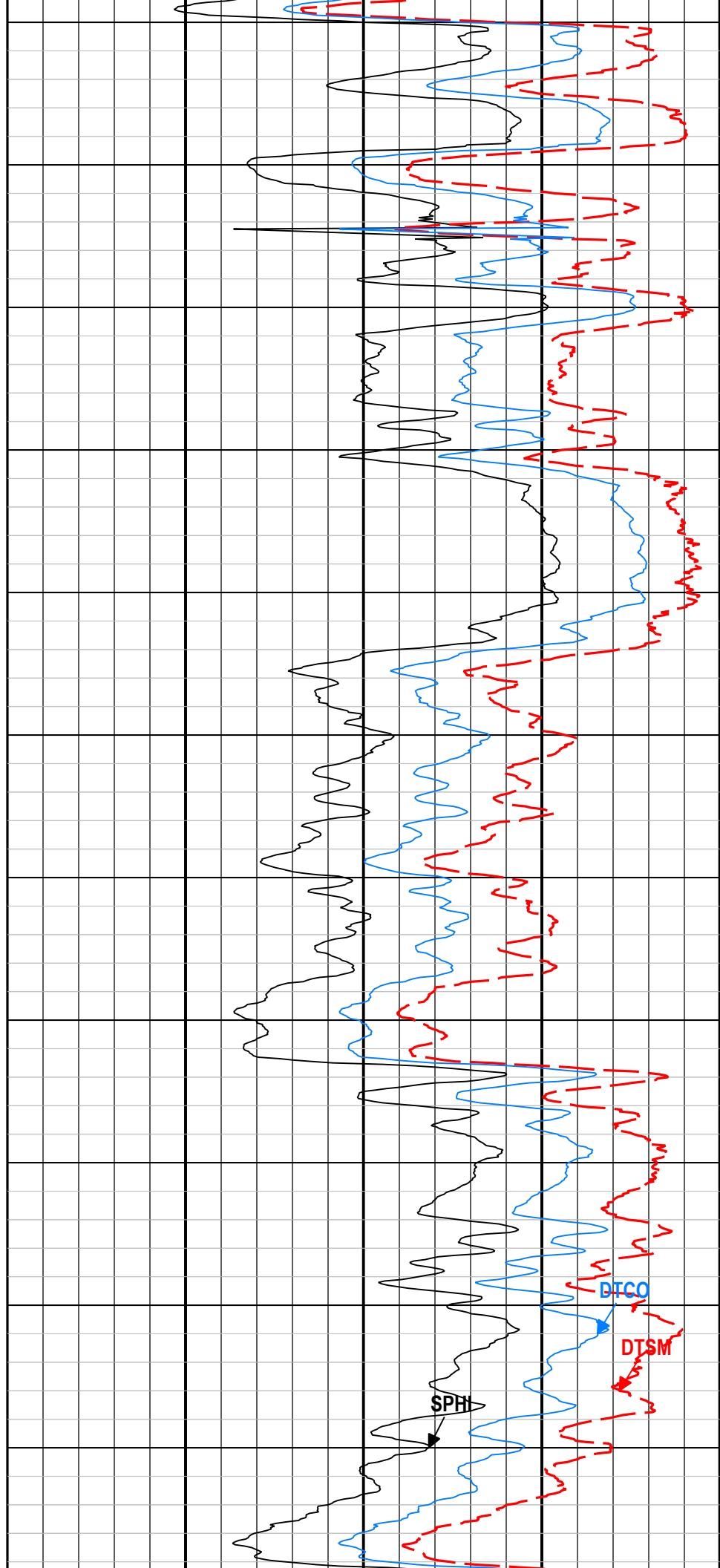
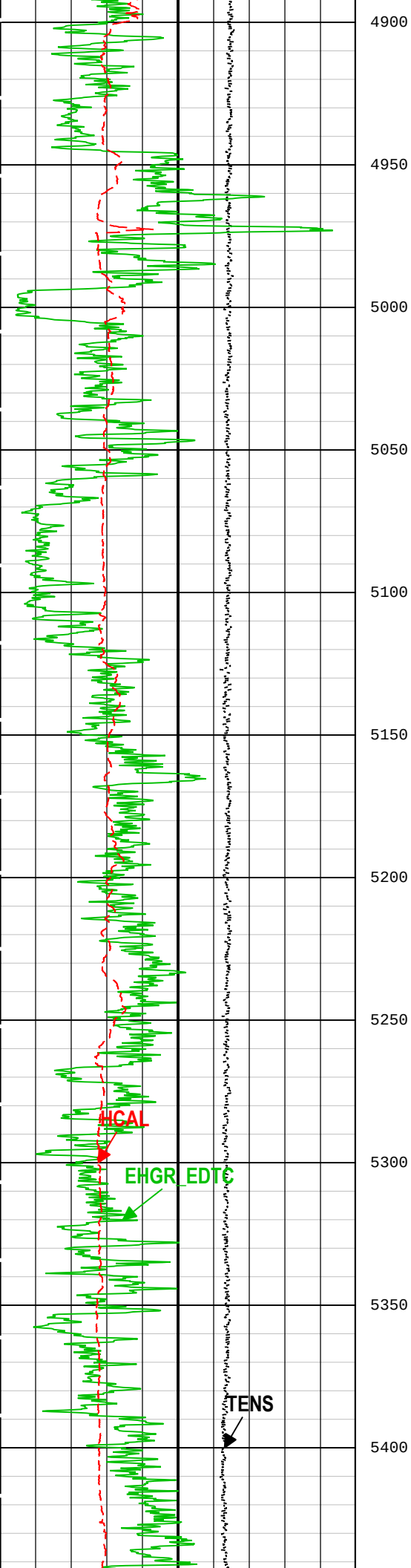
All depths are referenced to toolstring zero

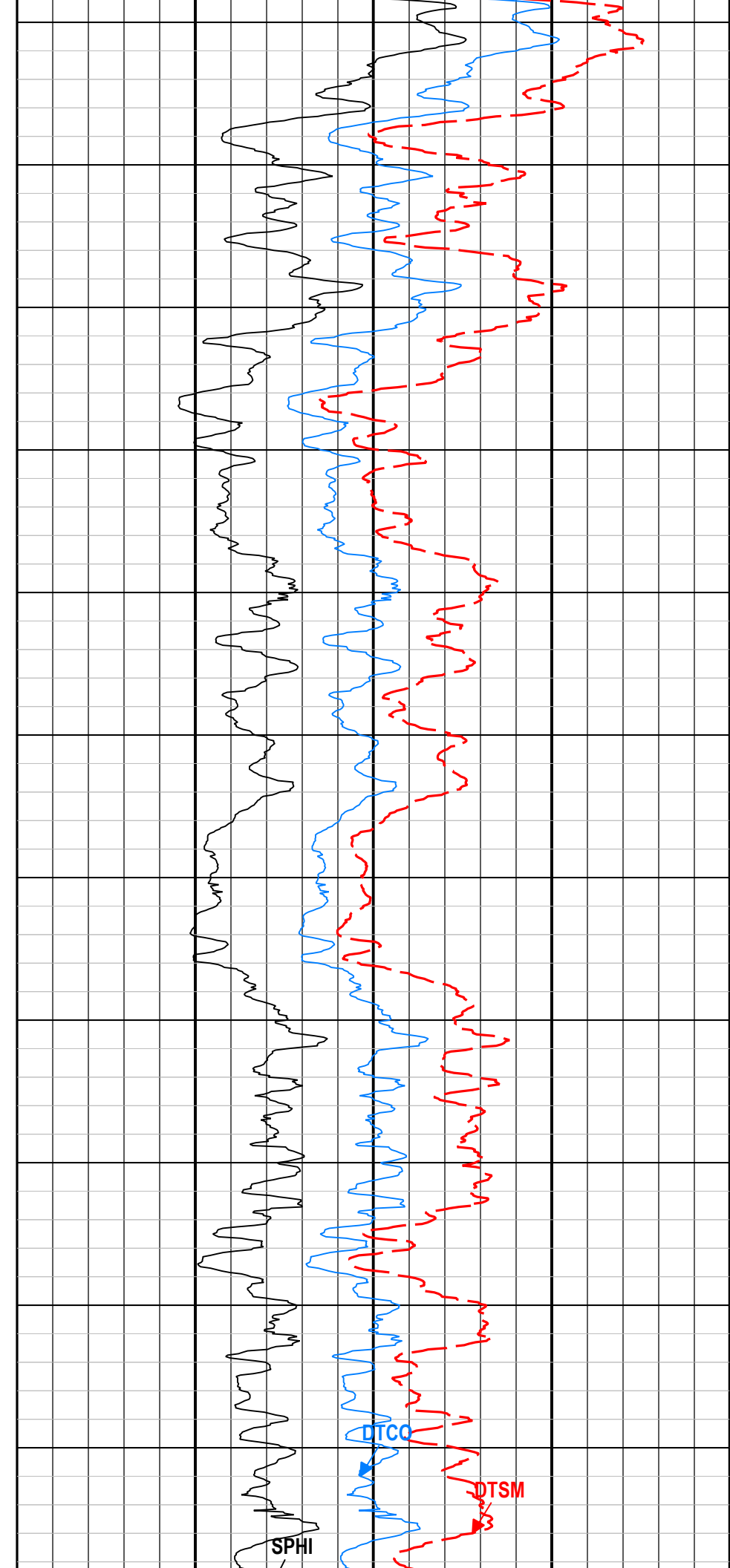
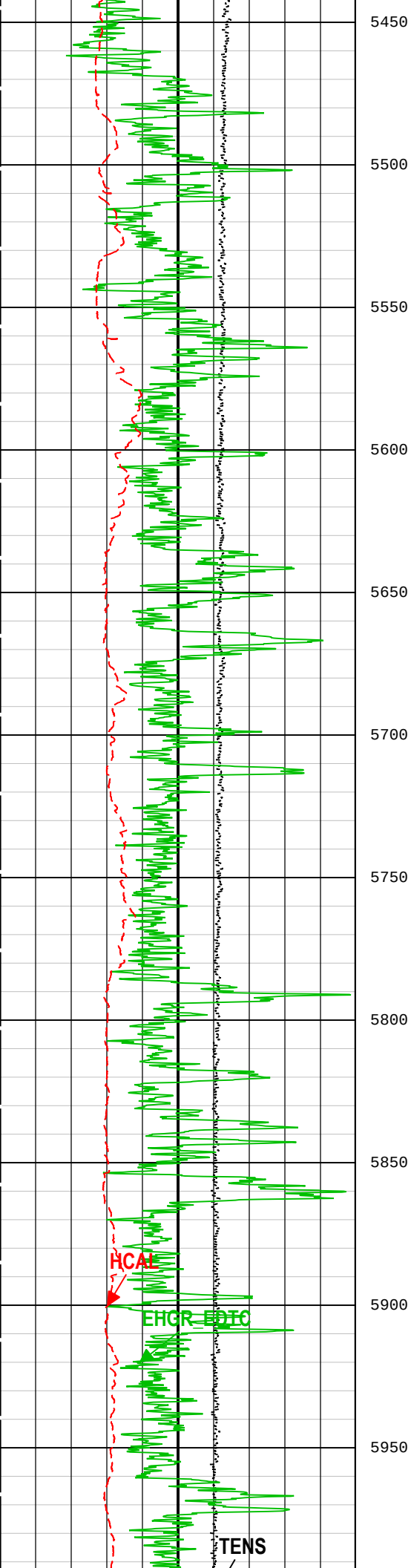
Log	Company:DCP Midstream LP Well:Zia AGI D2 Run 1A: Main[3]:Up:S008
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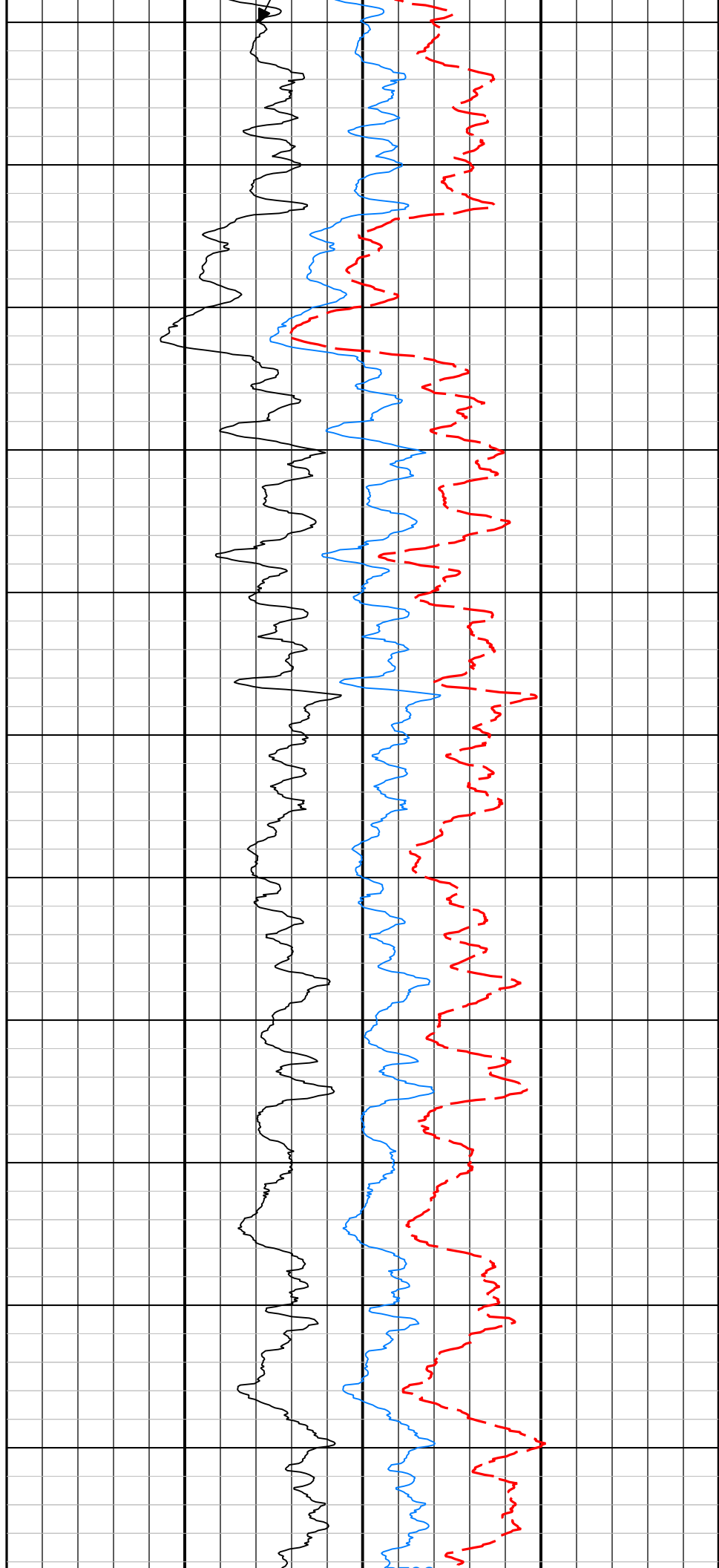
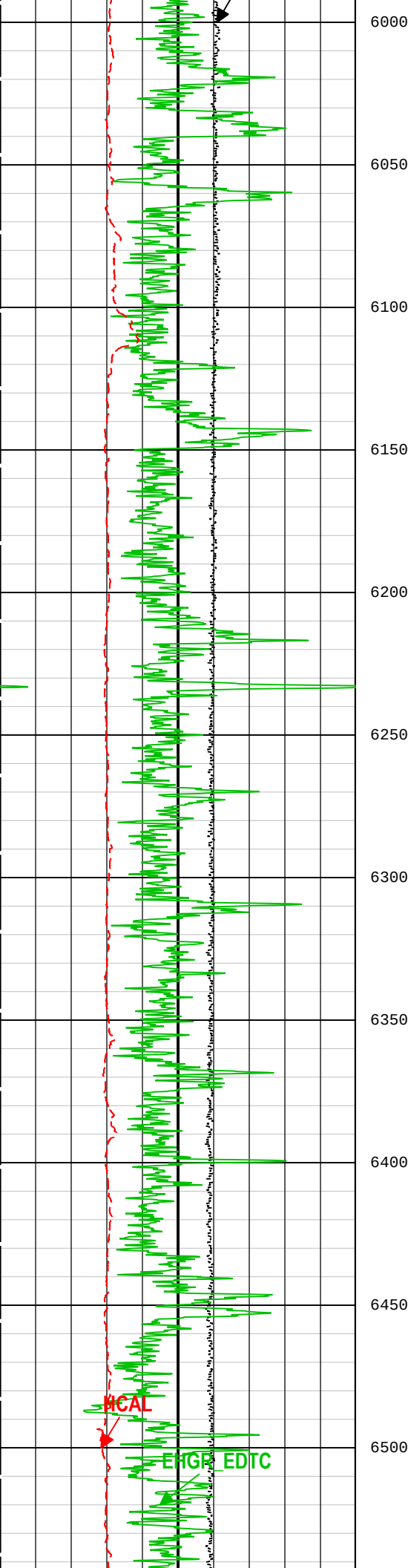
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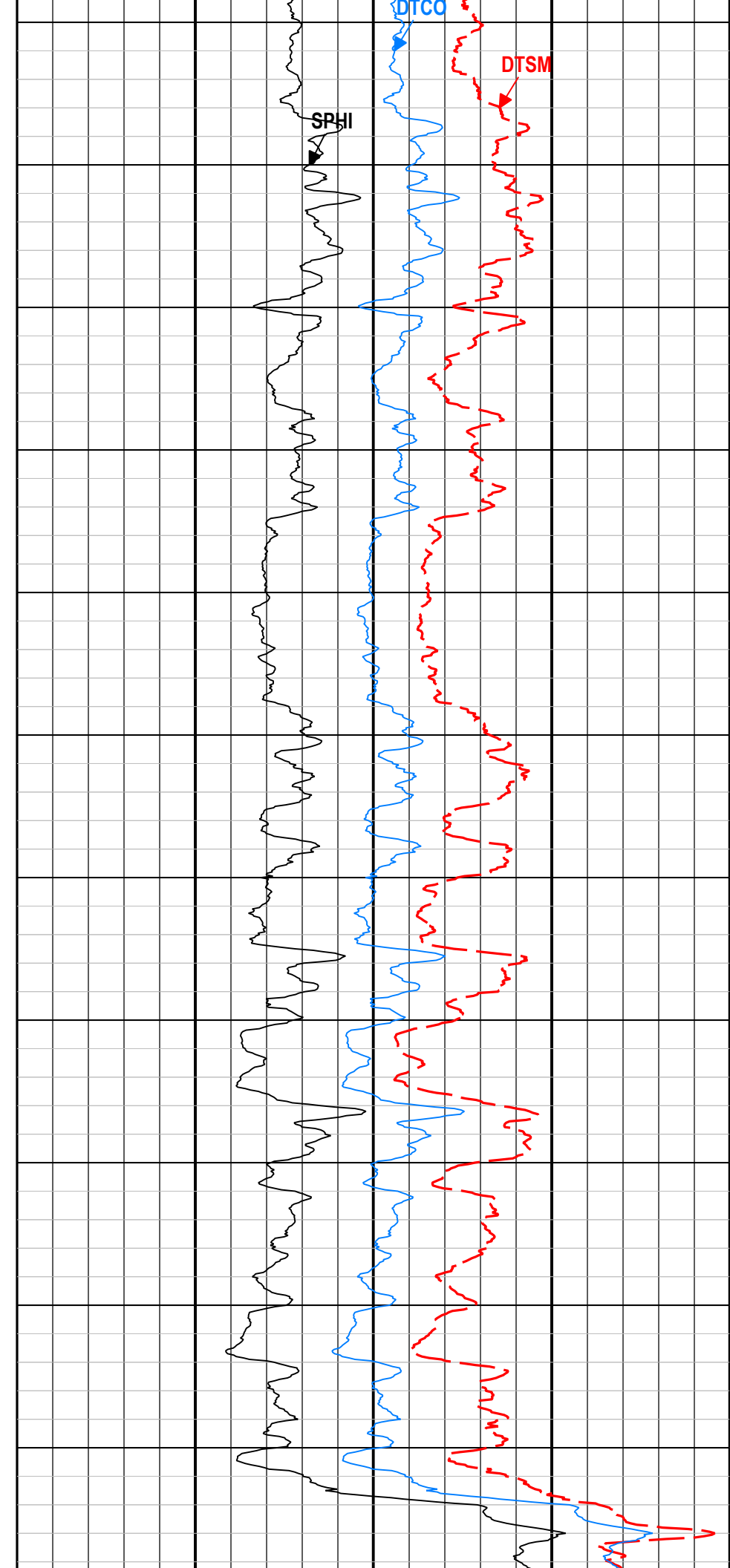
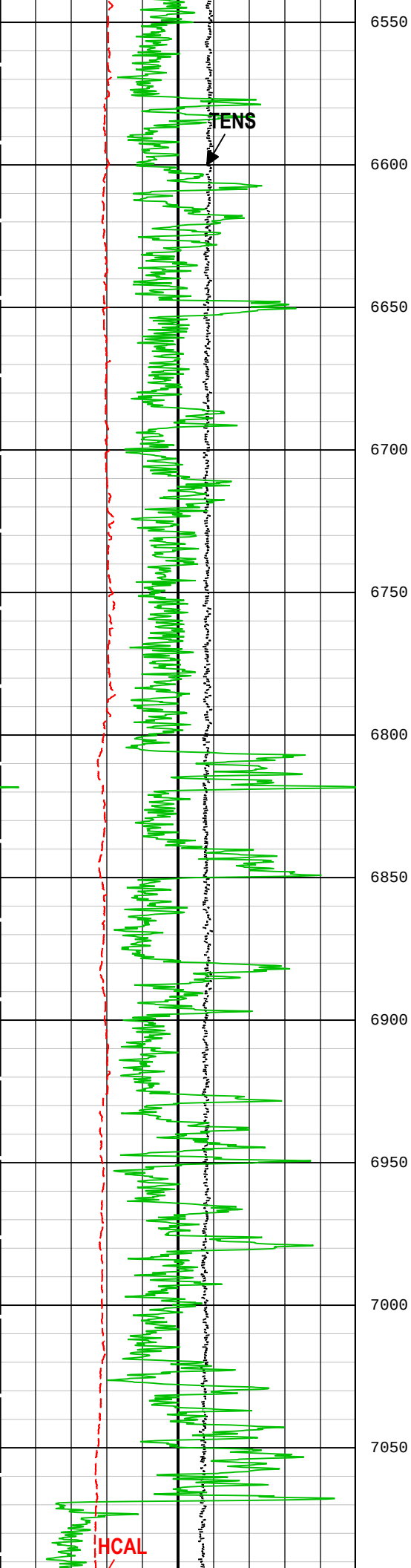
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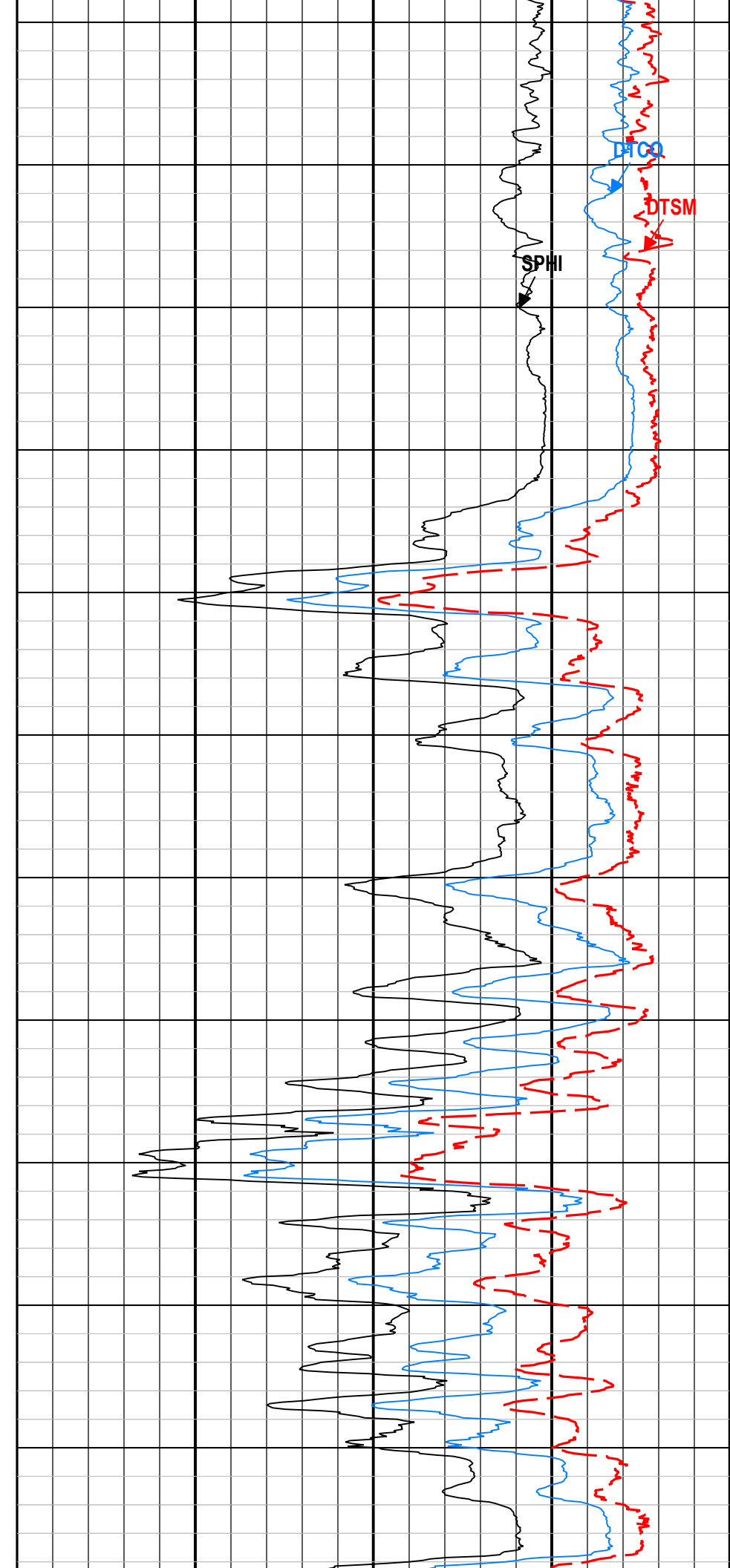
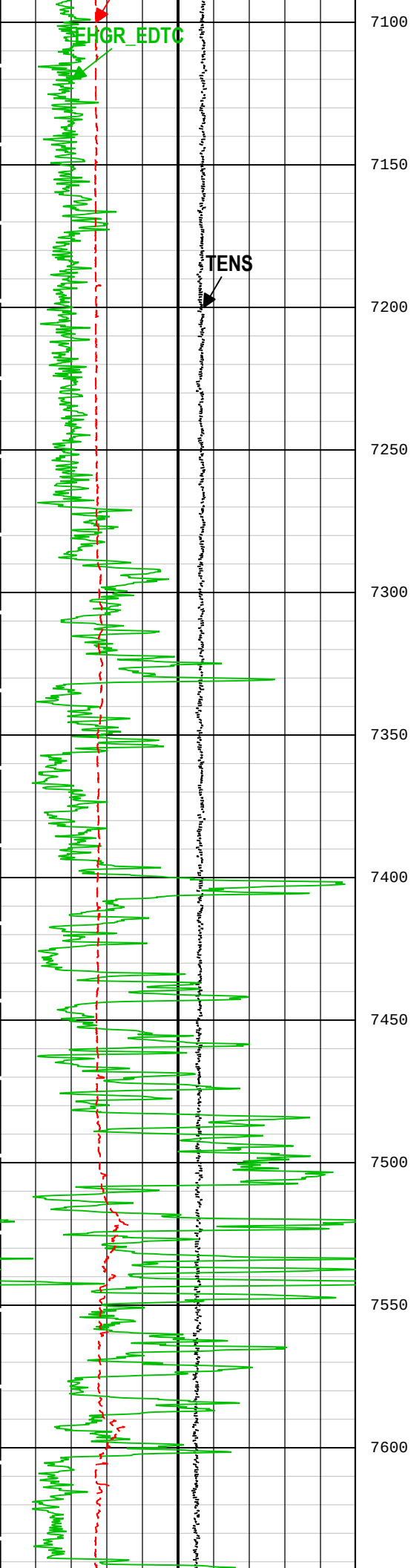


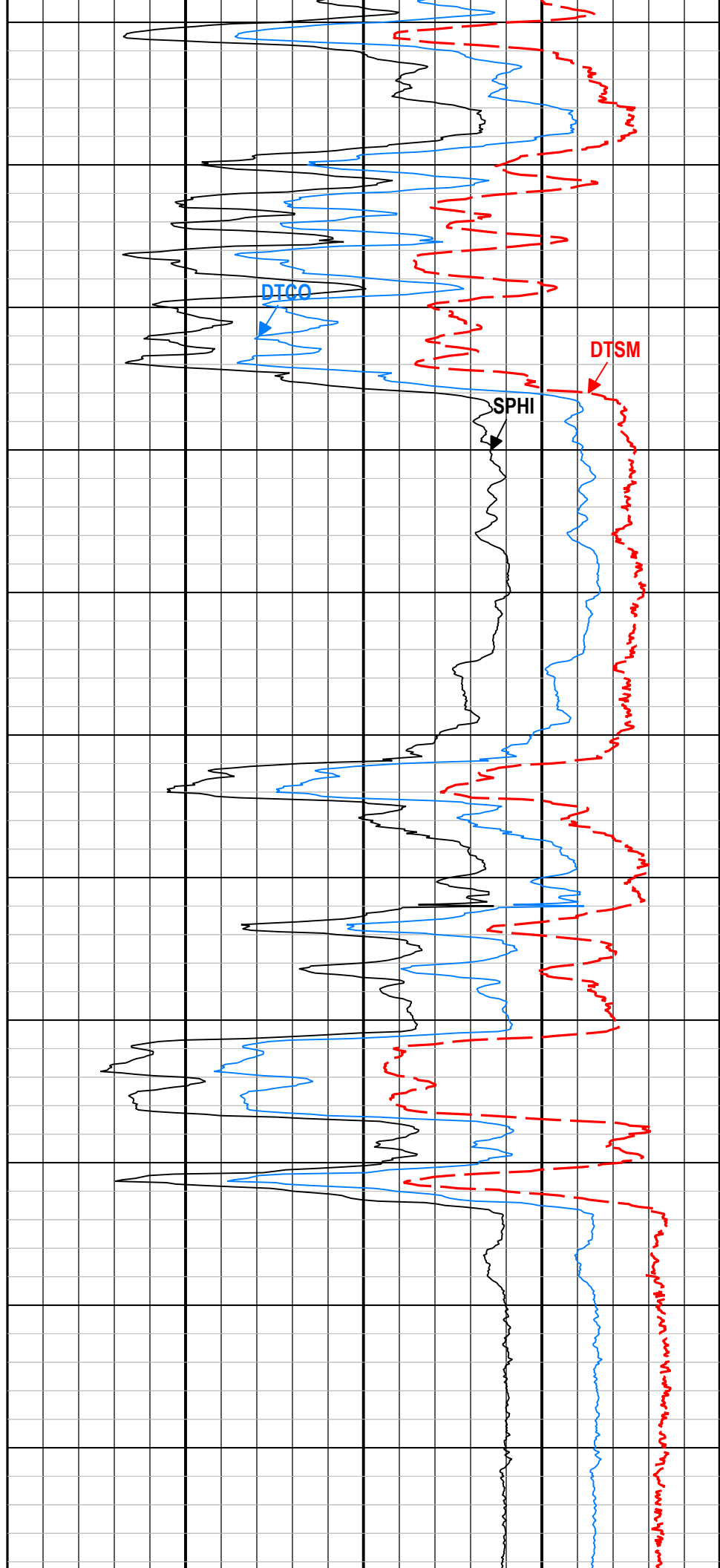
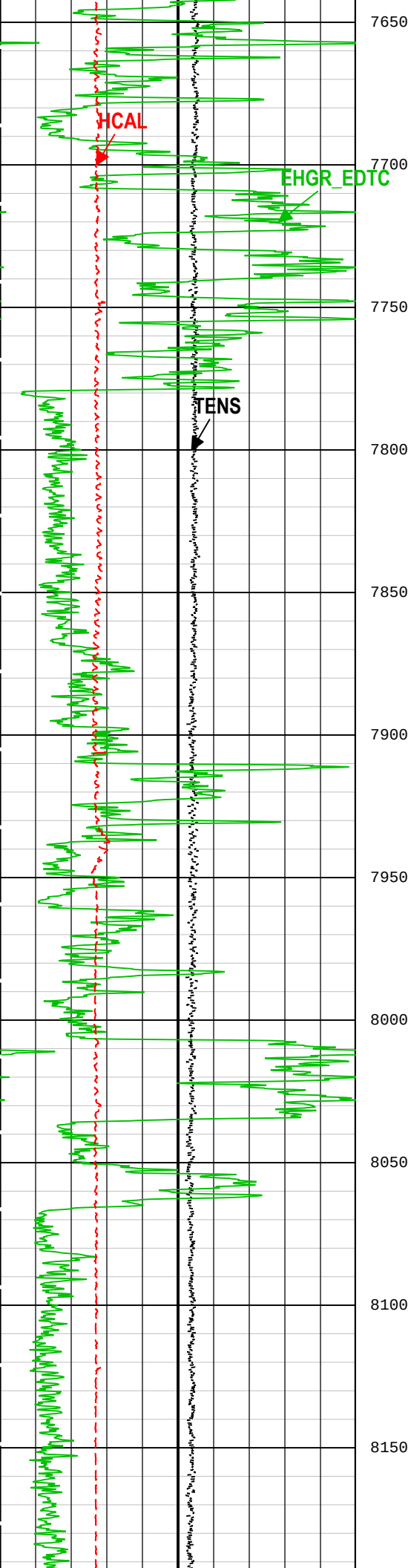


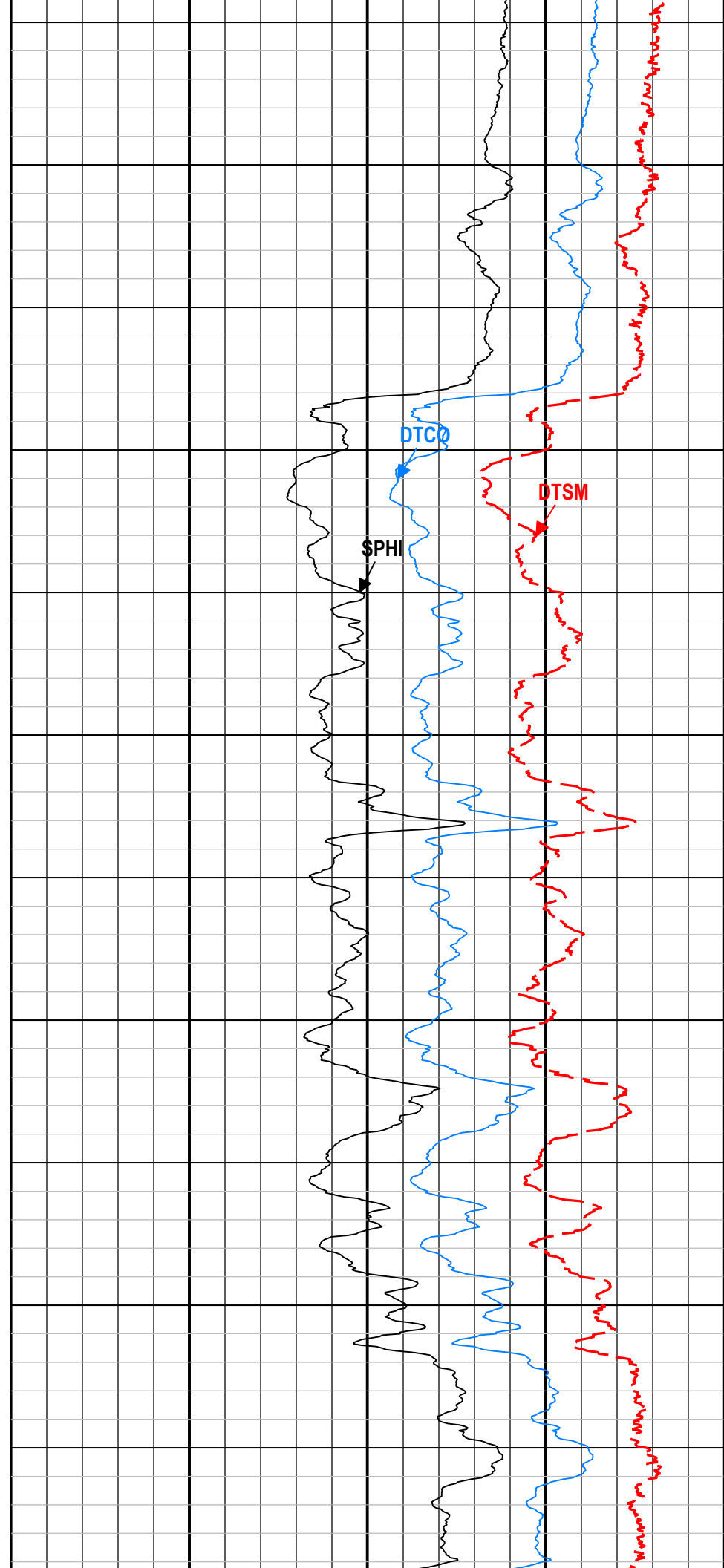
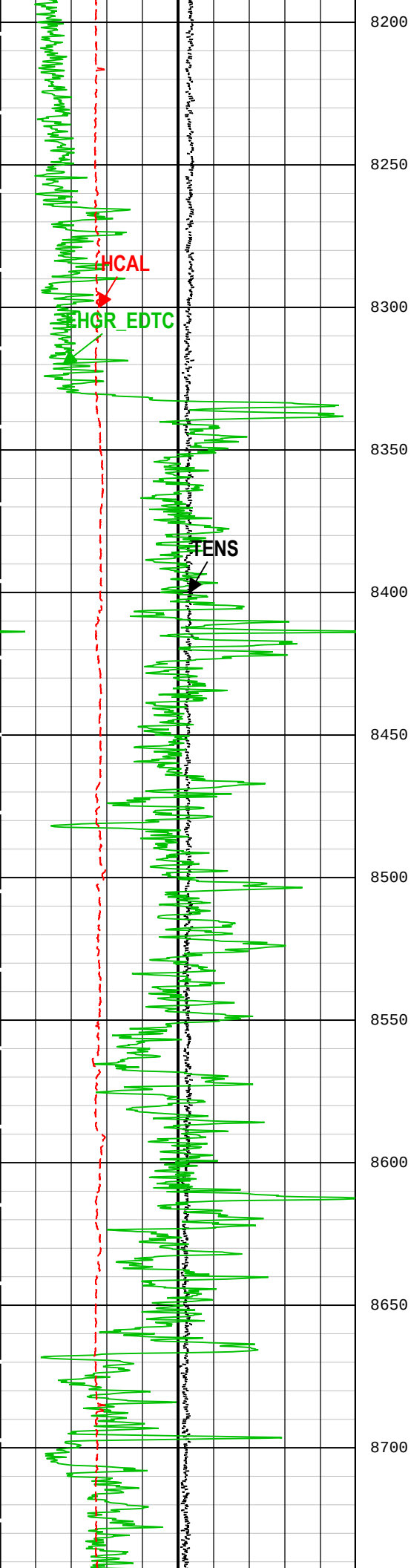


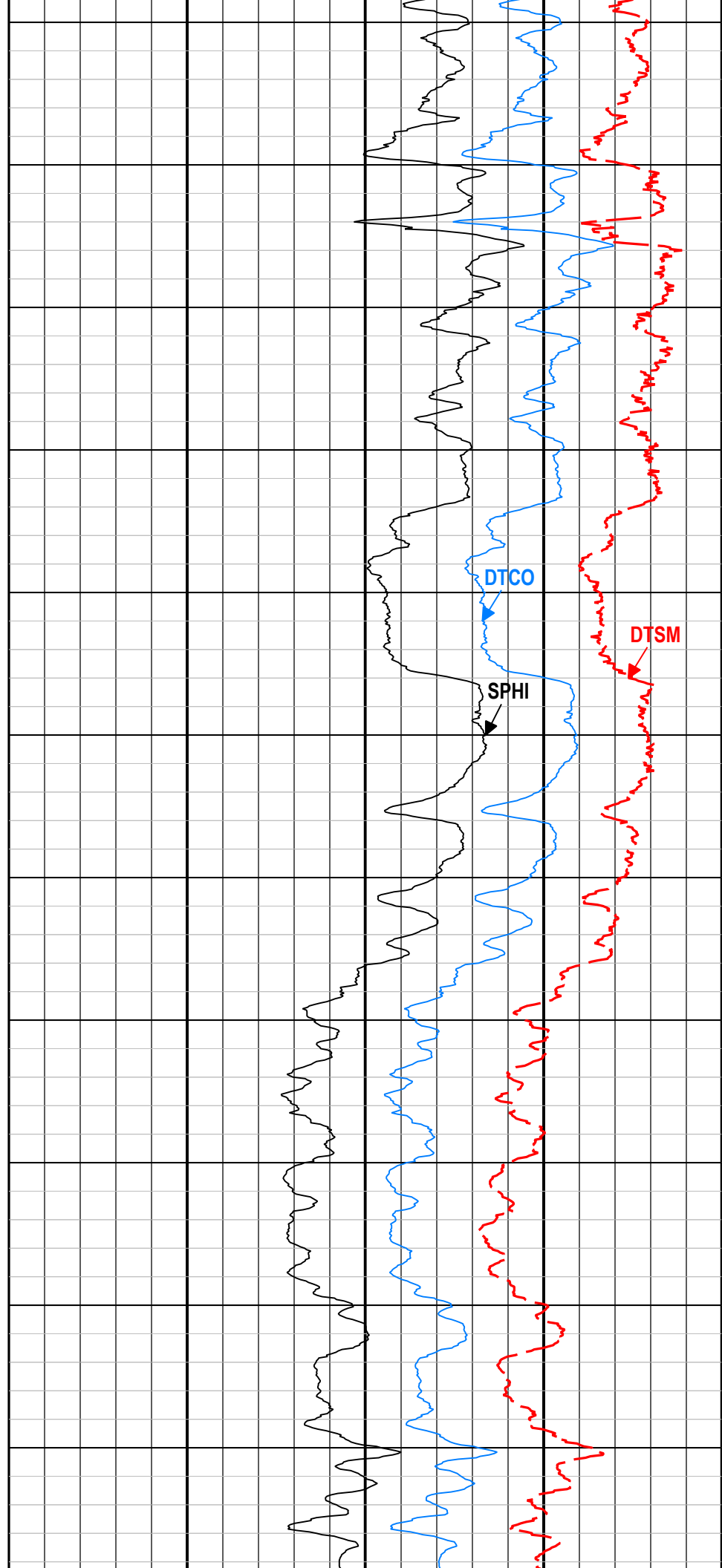
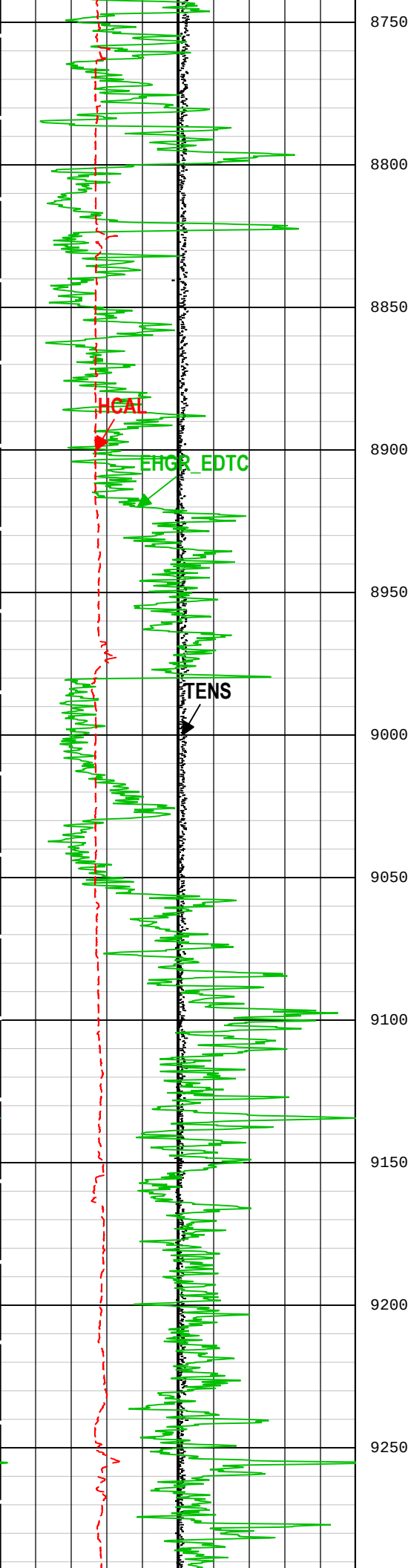


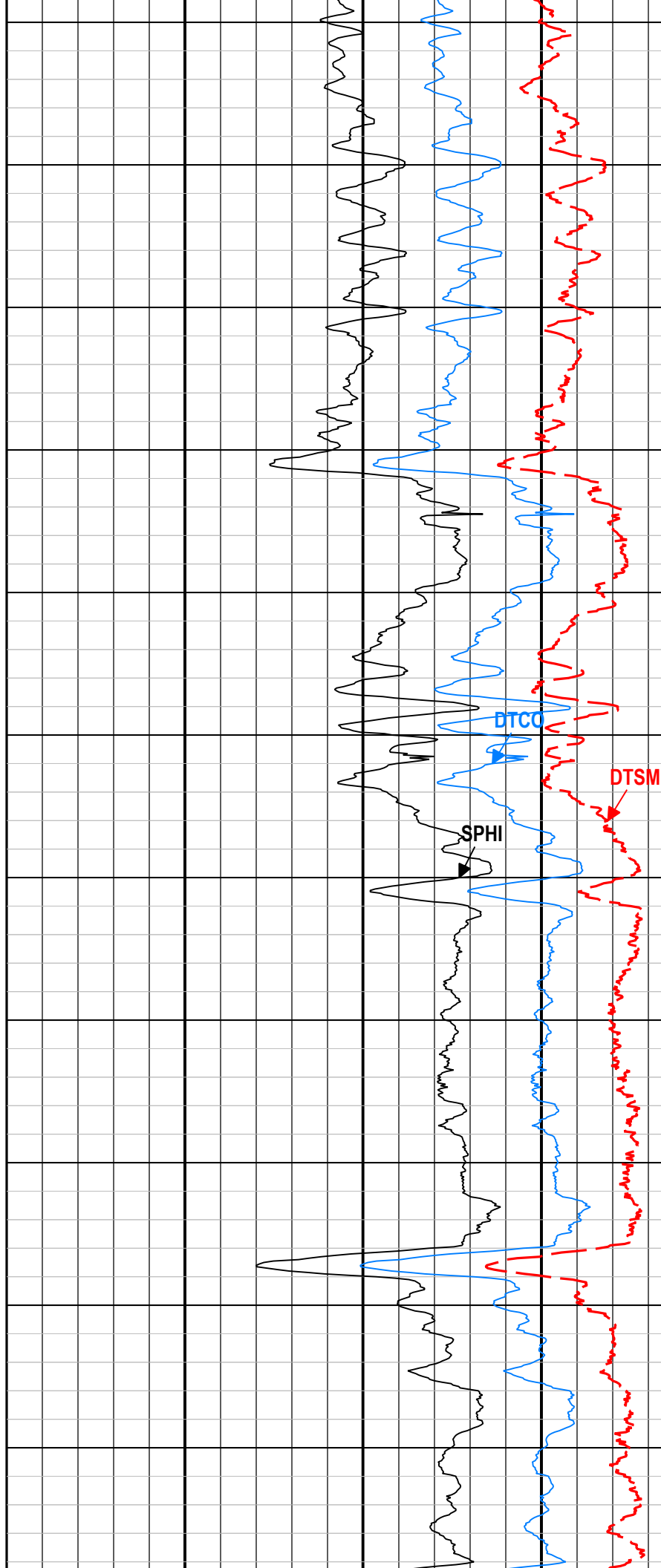
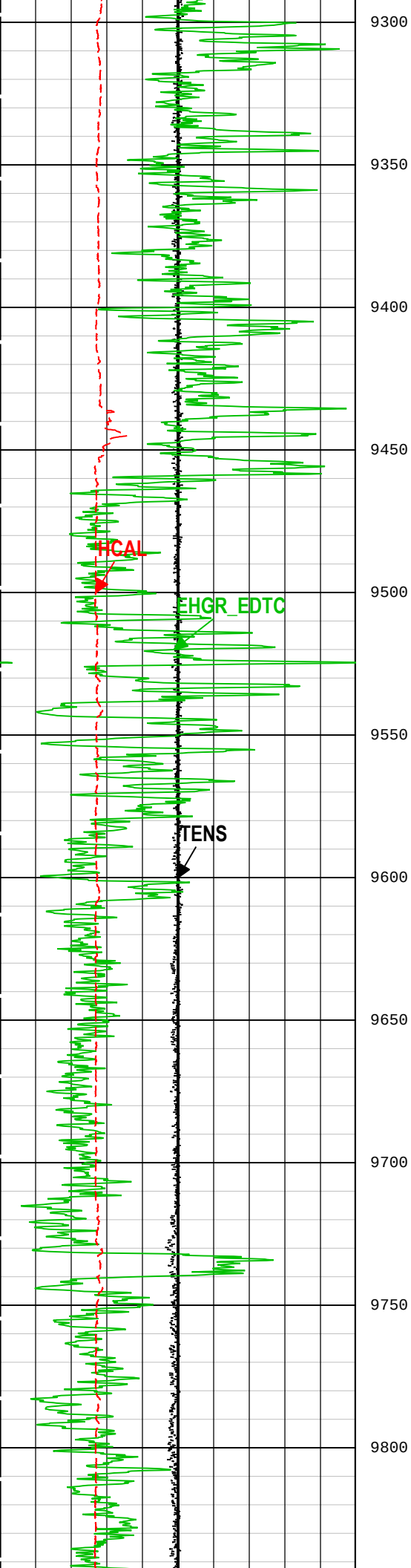


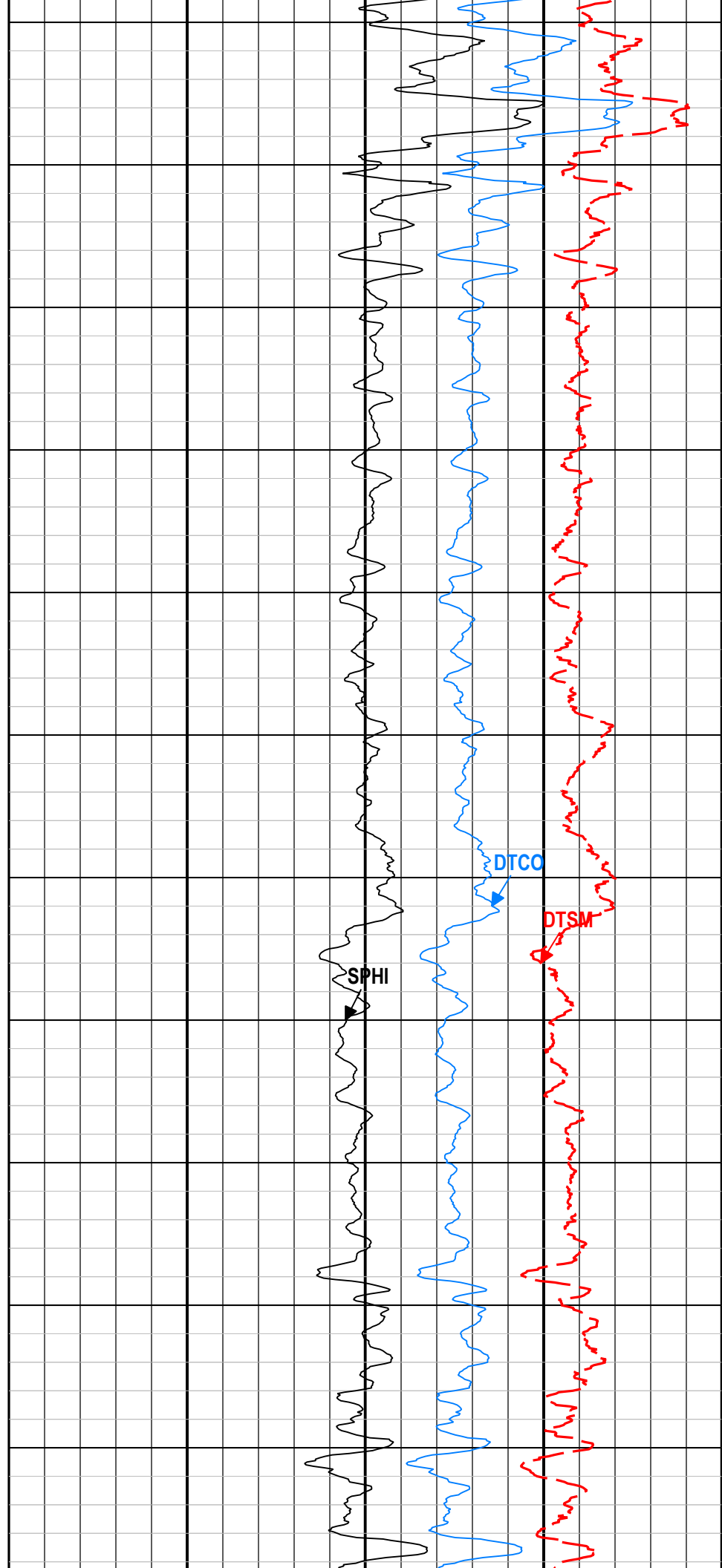
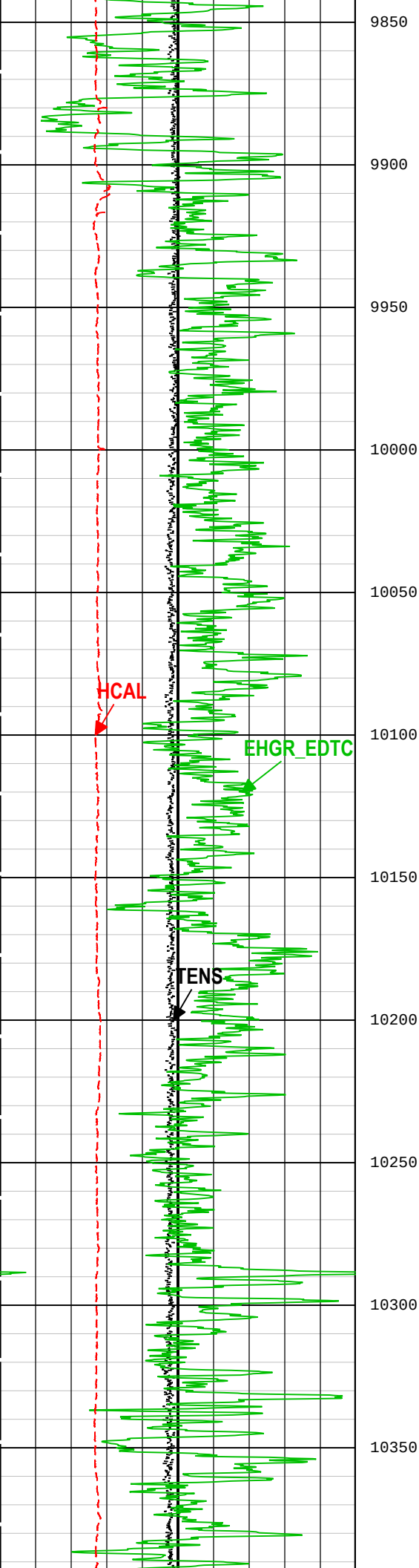


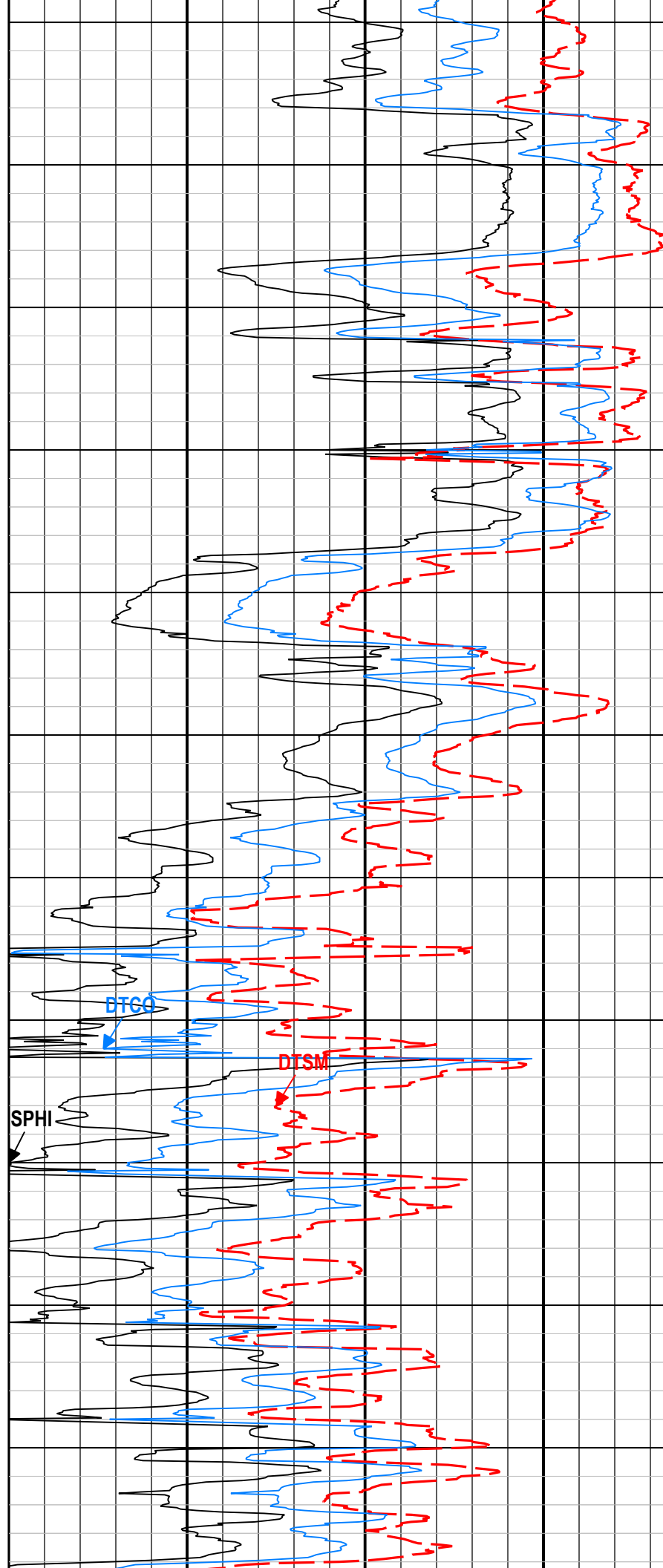
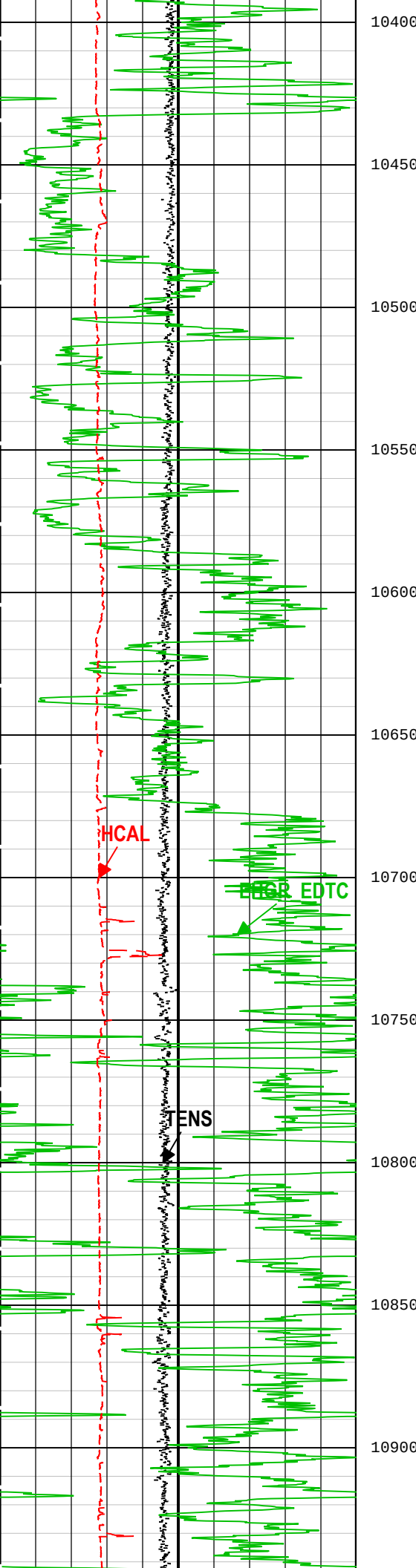


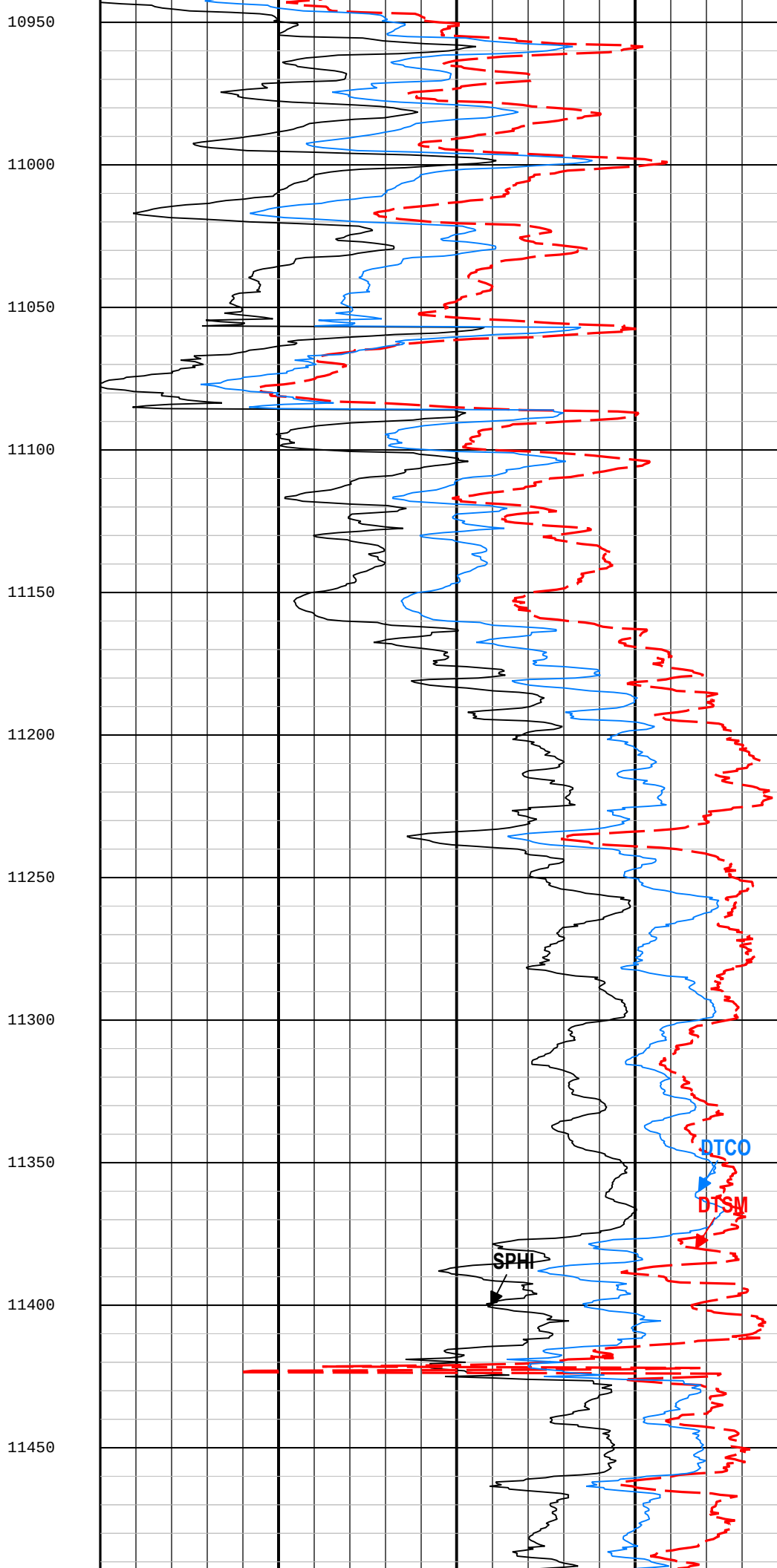
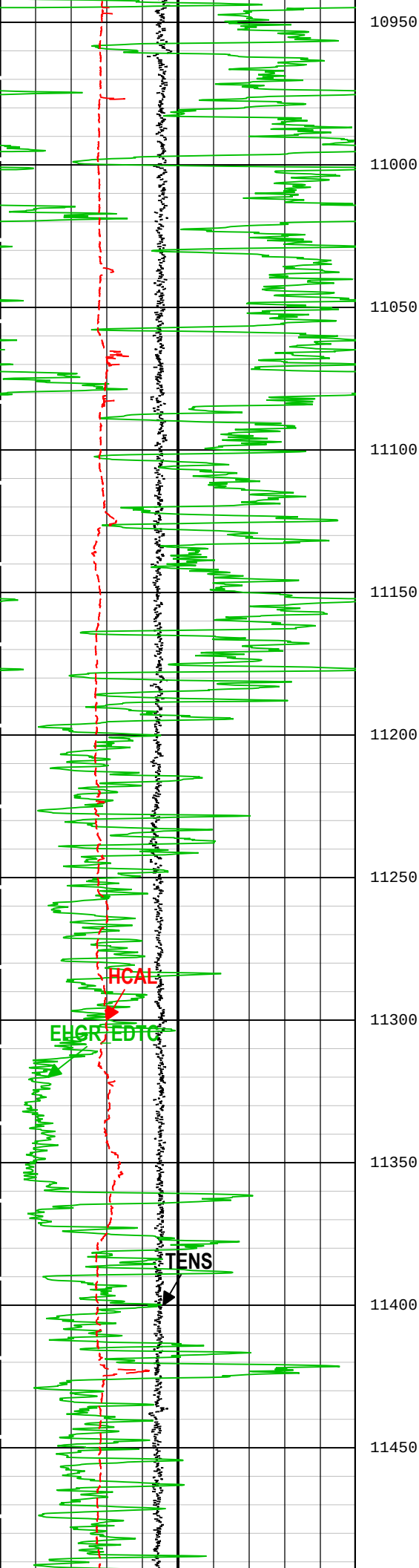


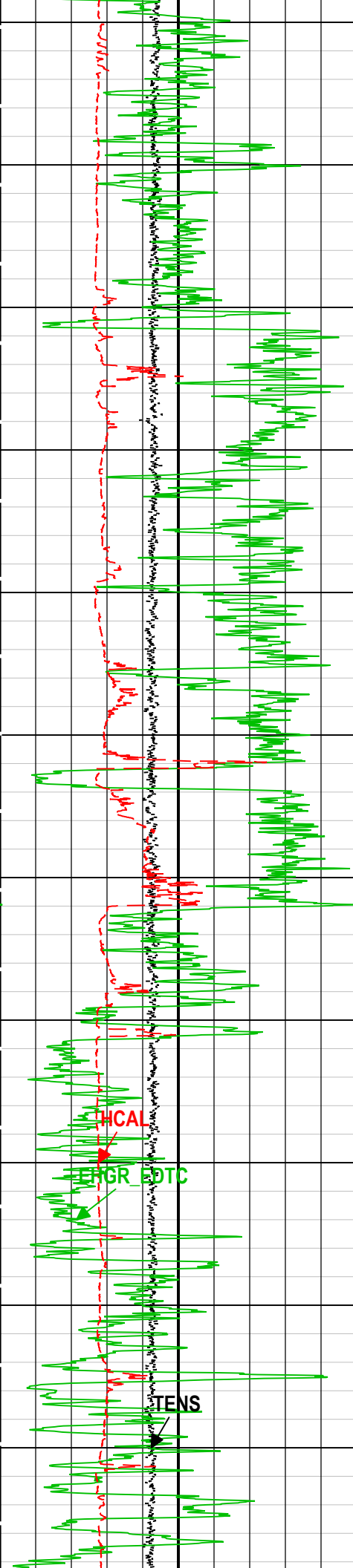




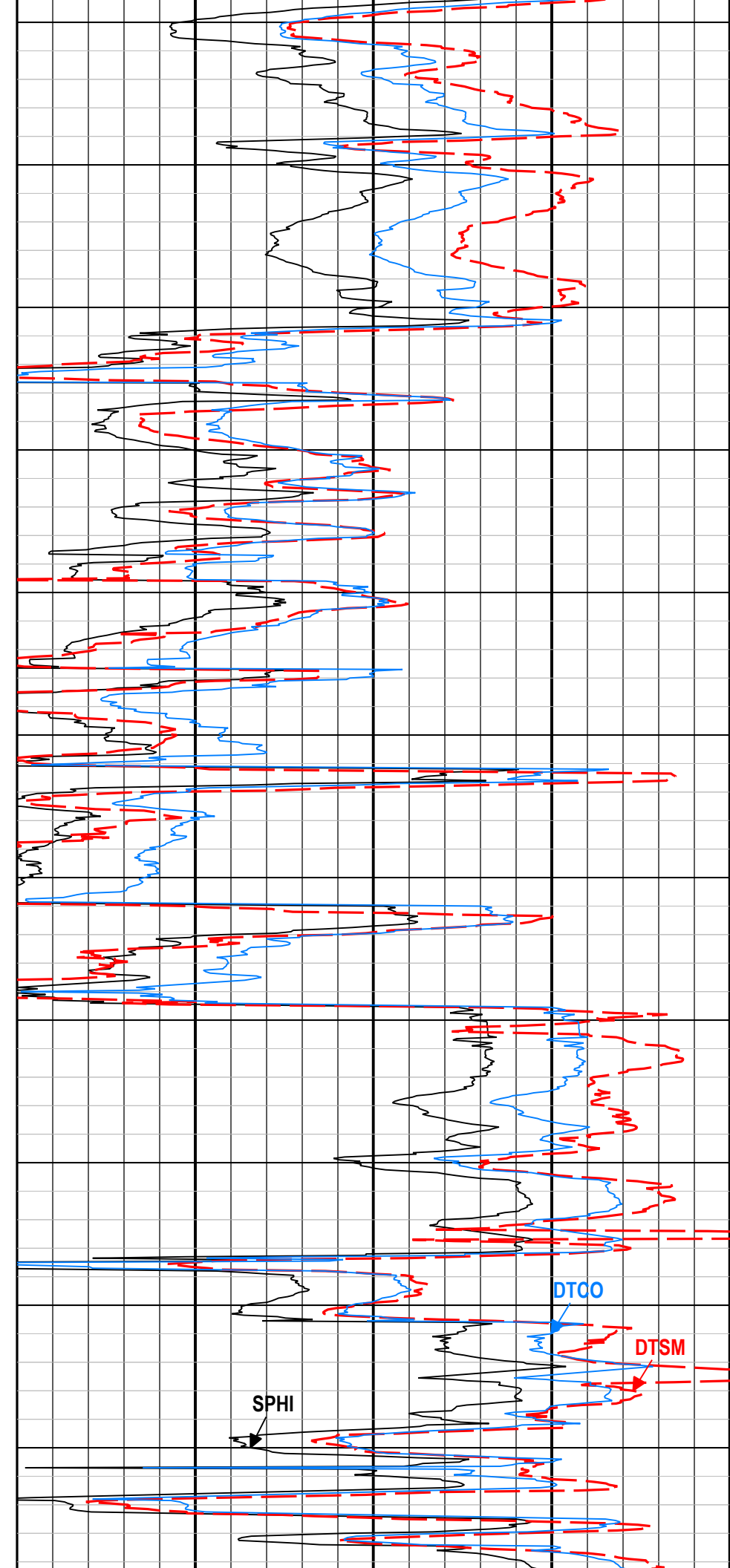


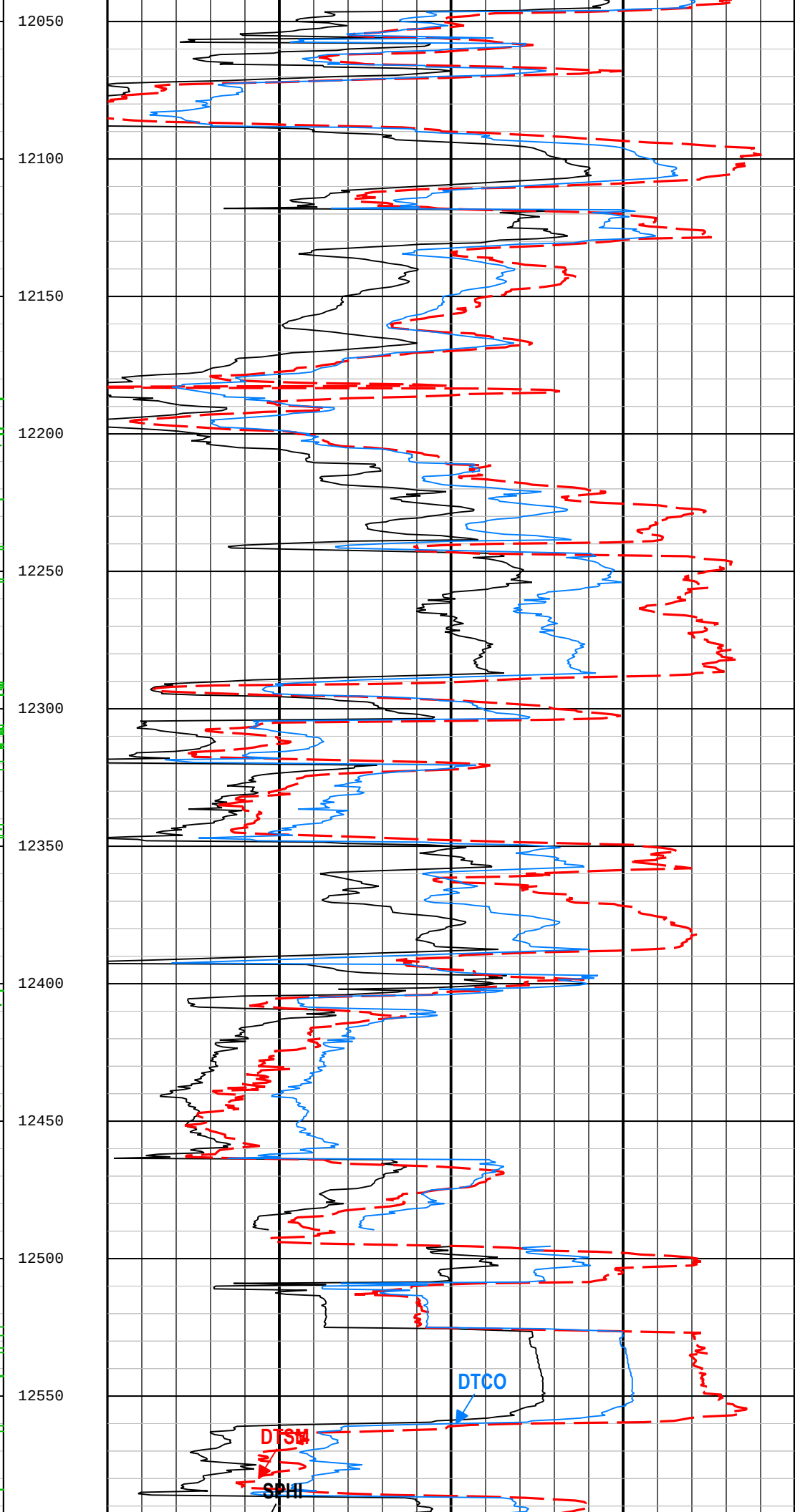
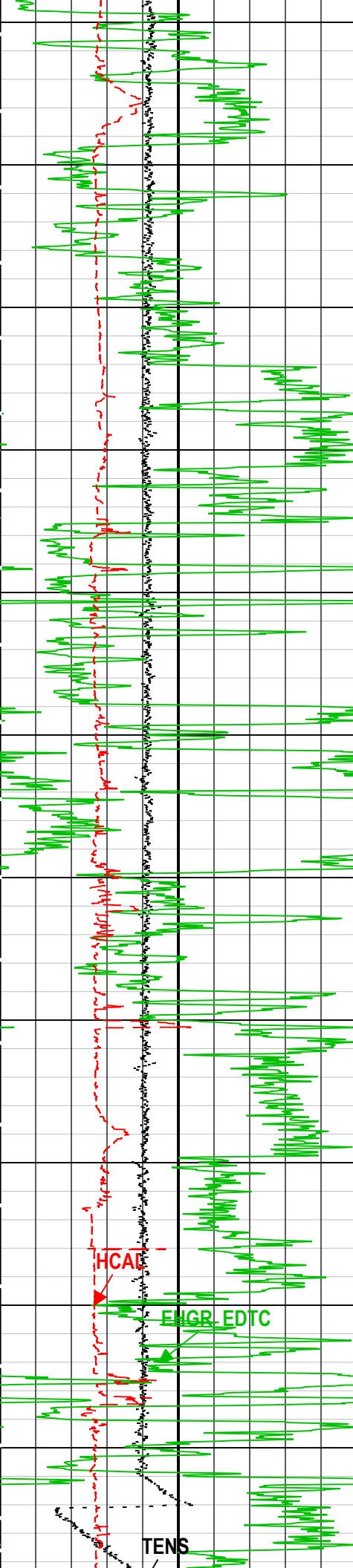


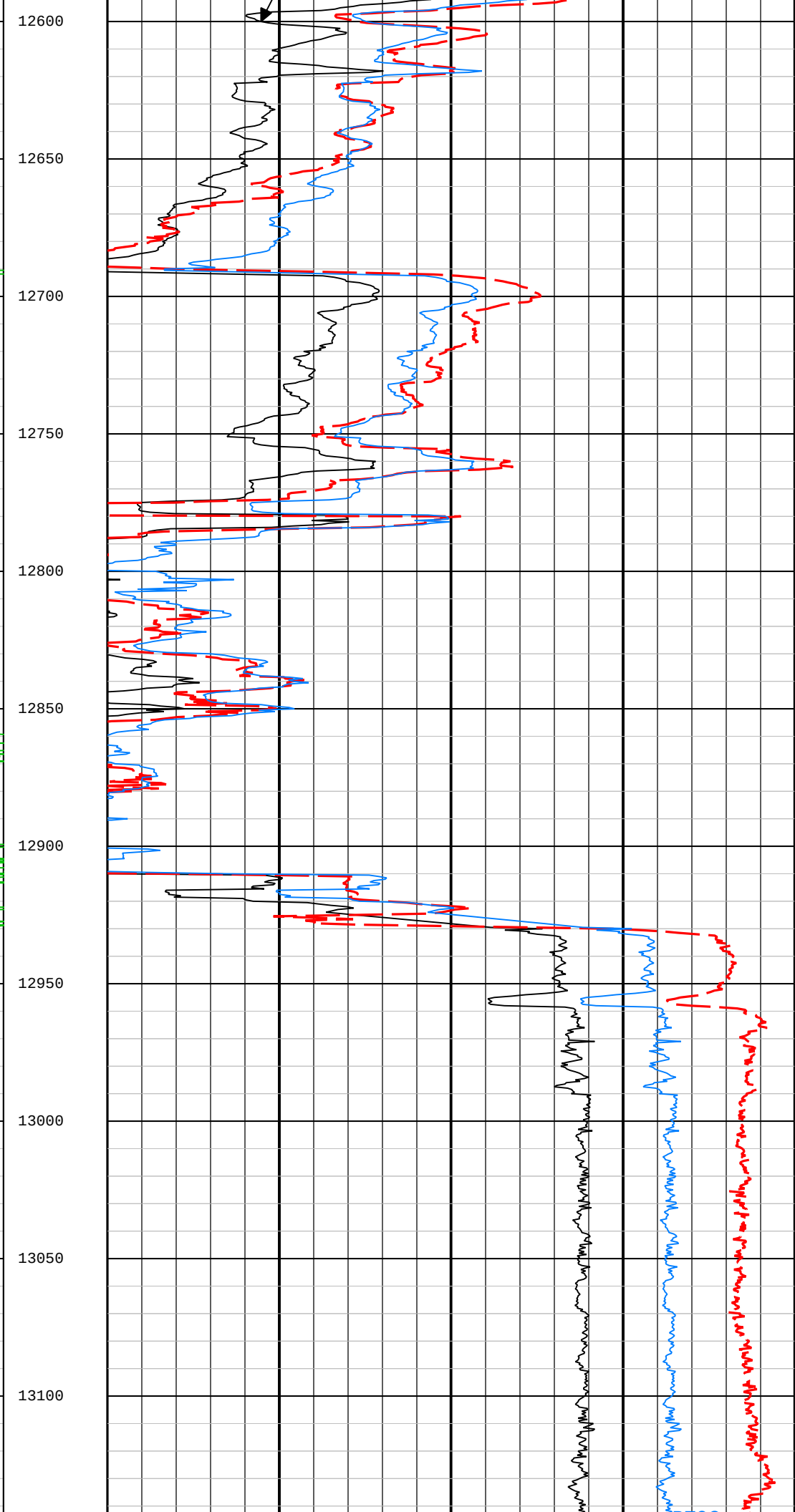
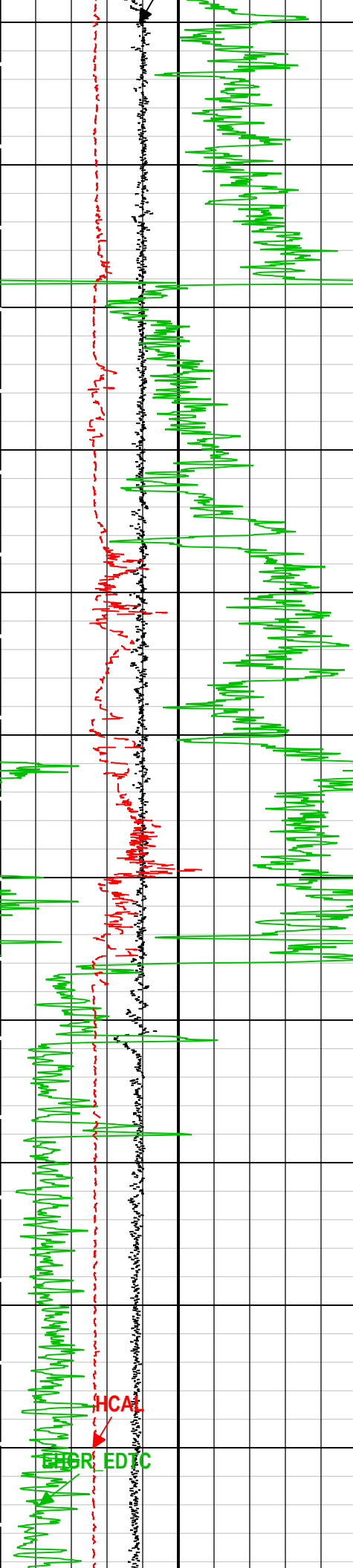


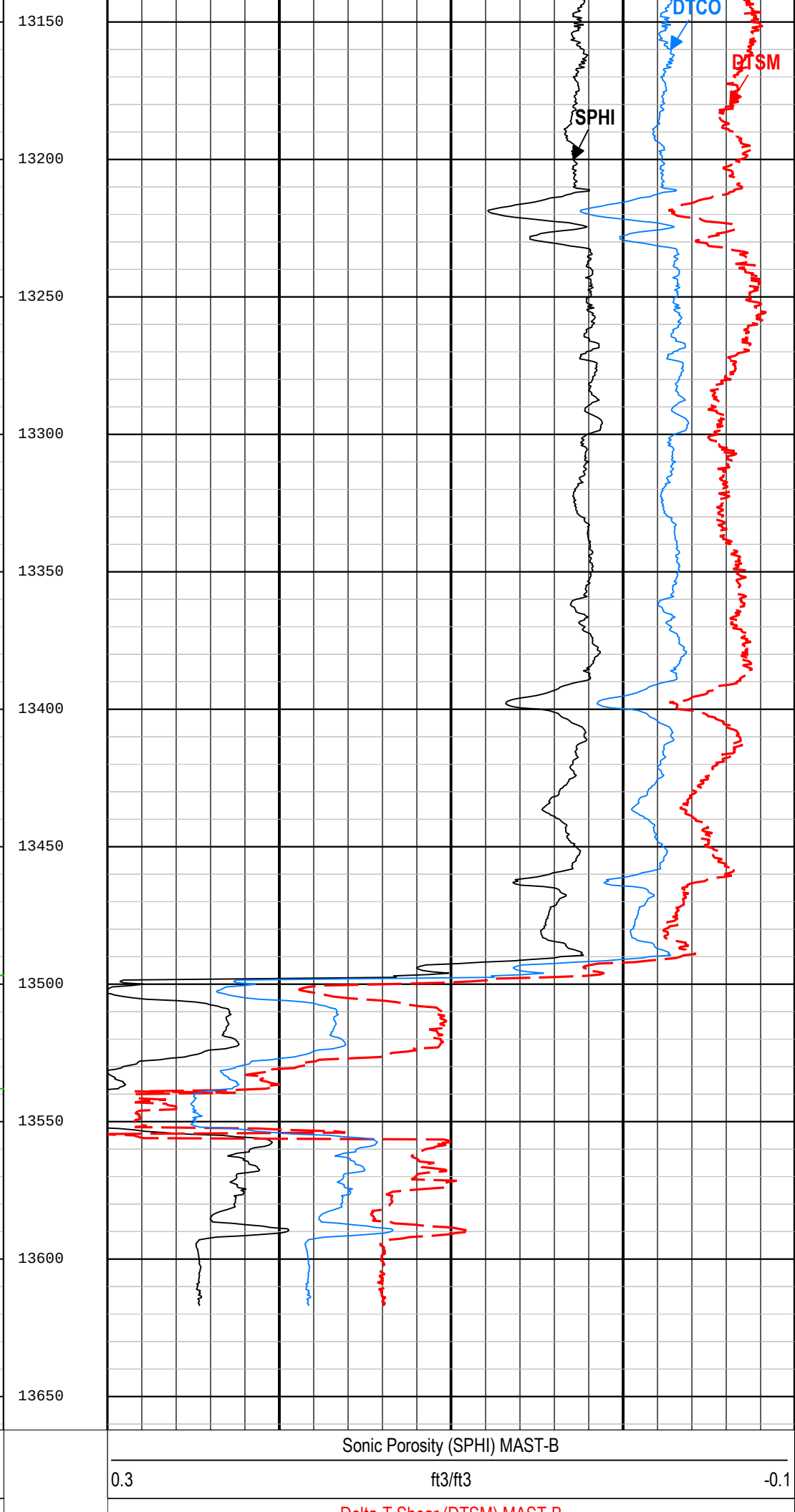
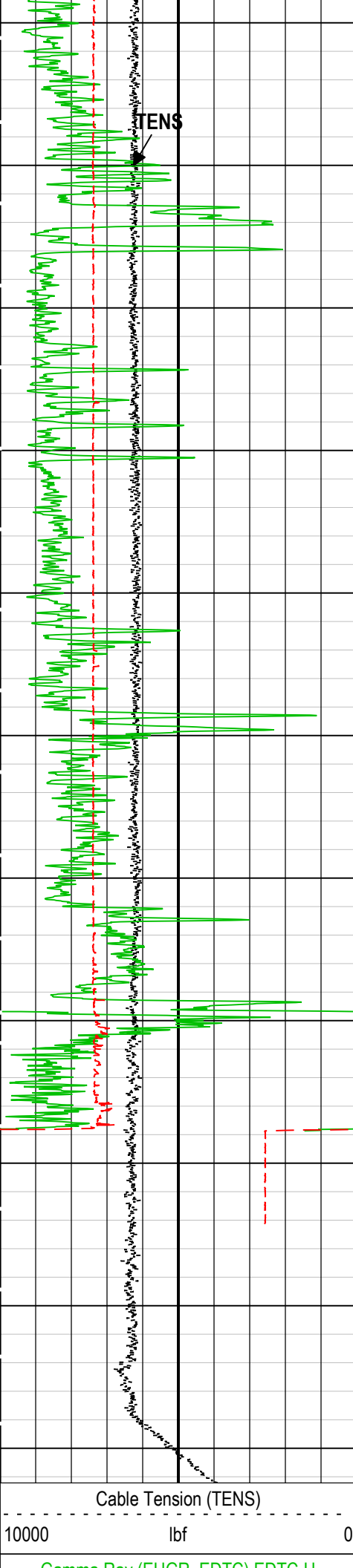


11500
11550
11600
11650
11700
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11800
11850
11900
11950
12000









Gamma Ray (EHGR_EDTC) EDTC-H		
0	gAPI	150
Caliper (HCAL) HDRS-H		
6	in	16

Delta-T Shear (DTSM) MAST-B		
180	us/ft	80
Delta-T Compressional (DTCO) MAST-B		
100	us/ft	40

TIME_1900 - Time Marked every 60.00 (s)

Description: Format: Log (MSIP 2 inch General) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:49:48

Channel Processing Parameters

Run 1A: Parameters

Parameter	Description	Tool	Value	Unit
ISSBAR	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	8.75	in
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	0.059	in
CBLO	Casing Bottom (Logger)	WLSESSION	4702	ft
CDEN	Cement Density	EDTC-H	2	g/cm3
CDS	Correction for Delta-T Shale, Empirical	Borehole	100	us/ft
DFD	Drilling Fluid Density	Borehole	10	lbm/gal
DFT	Drilling Fluid Type	Borehole	Water	
DTF	Delta-T Fluid	Borehole	189	us/ft
DTM	Delta-T Matrix	Borehole	47.6	us/ft
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
SFTY	Slowness Formation Type (Fast, Intermediate, Slow, etc.)	Borehole	Fast	
SPFS	Sonic Porosity Formula	Borehole	Wyllie	
VPVSA	Estimated P-Wave Velocity to S-Wave Velocity Ratio for Slowness-Time Coherence	MAST-B	1.8	

Tool Control Parameters

Run 1A: Parameters

Parameter	Description	Tool	Value	Unit
CBOOTSTA_MAPC	MAMS Controller Boot Status	MAST-B	1	
CONTROLLER_FIRM_REV_MAPC	MAPC Firmware Revision of Controller Electronics	MAST-B	1840	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	Time Zoned	ft/h
MAX_TOOL_SPEED	Maximum service speed allowed for, or attained by, a logging tool.	MAST-B	Time Zoned	ft/h
MSMT_LIST	Measurement List	MAST-B	[MUM, MLM, MFM, MFL, 90C, 00C]	
PROD_MASTUI	MAST Product Class Selection	MAST-B	STD	
SENSOR10_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #10	MAST-B	1057	
SENSOR11_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #11	MAST-B	1057	
SENSOR12_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #12	MAST-B	1057	
SENSOR13_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #13	MAST-B	1057	
SENSOR1_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #1	MAST-B	1057	
SENSOR2_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #2	MAST-B	1057	
SENSOR3_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #3	MAST-B	1057	
SENSOR4_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #4	MAST-B	1057	
SENSOR5_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #5	MAST-B	65535	
SENSOR6_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #6	MAST-B	1057	
SENSOR7_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #7	MAST-B	1057	
SENSOR8_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #8	MAST-B	1057	

SENSOR9_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #9	MAST-B	1057	
RBOOTSTA_MAPC	MAMS Receiver Boot Status	MAST-B	1	
SERVICE_LIST	Service Selection List	MAST-B	[STSTC, NMSTC, XDSTC, YDSTC, FMSTC, ANISO, CRV, BHC, PBHC, NMATD, FMATD]	

Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
MAX_LOG_SPEED	1695	29-Nov-2016 16:25:05	29-Nov-2016 16:25:10	13662.08	13660.47
MAX_LOG_SPEED	1800	29-Nov-2016 16:25:10	29-Nov-2016 16:31:18	13660.47	13498.77
MAX_LOG_SPEED	1690	29-Nov-2016 16:31:18	29-Nov-2016 16:52:49	13498.77	12933.39
MAX_LOG_SPEED	1800	29-Nov-2016 16:52:49	29-Nov-2016 17:06:06	12933.39	12571.73
MAX_LOG_SPEED	1770	29-Nov-2016 17:06:06	29-Nov-2016 17:09:10	12571.73	12488.53
MAX_LOG_SPEED	1800	29-Nov-2016 17:09:10	29-Nov-2016 17:12:14	12488.53	12400.95
MAX_LOG_SPEED	1753	29-Nov-2016 17:12:14	29-Nov-2016 17:13:15	12400.95	12371.38
MAX_LOG_SPEED	1800	29-Nov-2016 17:13:15	29-Nov-2016 17:16:19	12371.38	12286.82
MAX_LOG_SPEED	1729	29-Nov-2016 17:16:19	29-Nov-2016 17:18:21	12286.82	12231.58
MAX_LOG_SPEED	1800	29-Nov-2016 17:18:21	29-Nov-2016 17:22:26	12231.58	12122.52
MAX_LOG_SPEED	1781	29-Nov-2016 17:22:26	29-Nov-2016 17:23:28	12122.52	12095.38
MAX_LOG_SPEED	1800	29-Nov-2016 17:23:28	29-Nov-2016 17:30:37	12095.38	11897.92
MAX_LOG_SPEED	1692	29-Nov-2016 17:30:37	29-Nov-2016 17:31:39	11897.92	11869.47
MAX_LOG_SPEED	1800	29-Nov-2016 17:31:39	29-Nov-2016 17:40:51	11869.47	11616.36
MAX_LOG_SPEED	1794	29-Nov-2016 17:40:51	29-Nov-2016 17:45:58	11616.36	11474.54
MAX_LOG_SPEED	1651	29-Nov-2016 17:45:58	29-Nov-2016 17:47:00	11474.54	11446.18
MAX_LOG_SPEED	1747	29-Nov-2016 17:47:00	29-Nov-2016 17:49:02	11446.18	11389.42
MAX_LOG_SPEED	1629	29-Nov-2016 17:49:02	29-Nov-2016 17:56:13	11389.42	11190.26
MAX_LOG_SPEED	1747	29-Nov-2016 17:56:13	29-Nov-2016 17:59:17	11190.26	11103.2
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MAX_LOG_SPEED	1753	29-Nov-2016 18:27:54	29-Nov-2016 18:43:16	10293.28	9859.61
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MAX_LOG_SPEED	1626	29-Nov-2016 19:37:30	29-Nov-2016 19:47:43	8327.82	8046.58
MAX_LOG_SPEED	1770	29-Nov-2016 19:47:43	29-Nov-2016 19:50:48	8046.58	7964.6
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MAX_LOG_SPEED	1607	29-Nov-2016 20:16:25	29-Nov-2016 20:23:35	7267.91	7071.09
MAX_LOG_SPEED	1796	29-Nov-2016 20:23:35	29-Nov-2016 20:28:41	7071.09	6929.06
MAX_LOG_SPEED	1800	29-Nov-2016 20:28:41	29-Nov-2016 21:18:45	6929.06	5563.46

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MAX_LOG_SPEED	1800	29-Nov-2016 21:19:46	29-Nov-2016 21:21:49	5535.53	5478.22
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MAX_LOG_SPEED	1748	29-Nov-2016 21:23:51	29-Nov-2016 21:28:59	5421.01	5279.95
MAX_LOG_SPEED	1800	29-Nov-2016 21:28:59	29-Nov-2016 21:34:06	5279.95	5142.02
MAX_LOG_SPEED	1741	29-Nov-2016 21:34:06	29-Nov-2016 21:35:07	5142.02	5114.37
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MAX_LOG_SPEED	1800	29-Nov-2016 21:42:17	29-Nov-2016 21:44:20	4918.42	4862.3
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MAX_LOG_SPEED	1637	29-Nov-2016 21:50:28	29-Nov-2016 22:15:05	4696.12	3217.06
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MAX_TOOL_SPEED	1872	29-Nov-2016 17:04:03	29-Nov-2016 17:06:06	12612.96	12571.73
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MAX_TOOL_SPEED	1910	29-Nov-2016 17:09:10	29-Nov-2016 17:12:14	12488.53	12400.95
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MAX_TOOL_SPEED	1770	29-Nov-2016 19:47:43	29-Nov-2016 19:50:48	8046.58	7964.6
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MAX_TOOL_SPEED	1768	29-Nov-2016 19:57:59	29-Nov-2016 20:02:05	7768.42	7656.38
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MAX_TOOL_SPEED	1890	29-Nov-2016 21:19:46	29-Nov-2016 21:21:49	5535.53	5478.22
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MAX_TOOL_SPEED	1637	29-Nov-2016 21:50:28	29-Nov-2016 22:15:05	4696.12	3217.06
MAX_TOOL_SPEED	1778	29-Nov-2016 22:15:05	29-Nov-2016 22:16:07	3217.06	3144.43
MAX_TOOL_SPEED	1645	29-Nov-2016 22:16:07	29-Nov-2016 22:53:59	3144.43	305.57
MAX_TOOL_SPEED	1728	29-Nov-2016 22:53:59	29-Nov-2016 22:56:13	305.57	213.72

All depth are at tool zero.

Run 1A

Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run 1A	Main[3]:Up	Up	213.72 ft	13662.08 ft	29-Nov-2016 4:25:05 PM	29-Nov-2016 10:56:13 PM	ON	13.82 ft	Yes

All depths are referenced to toolstring zero

Log

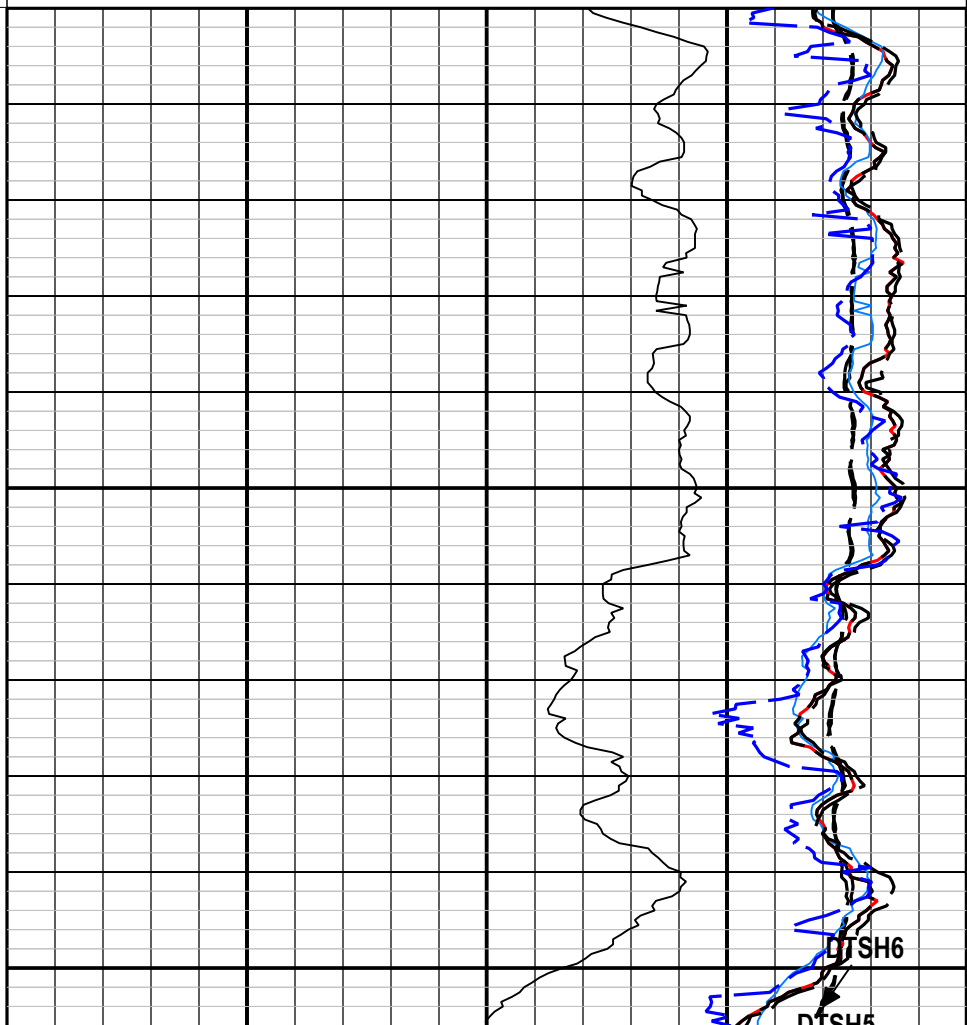
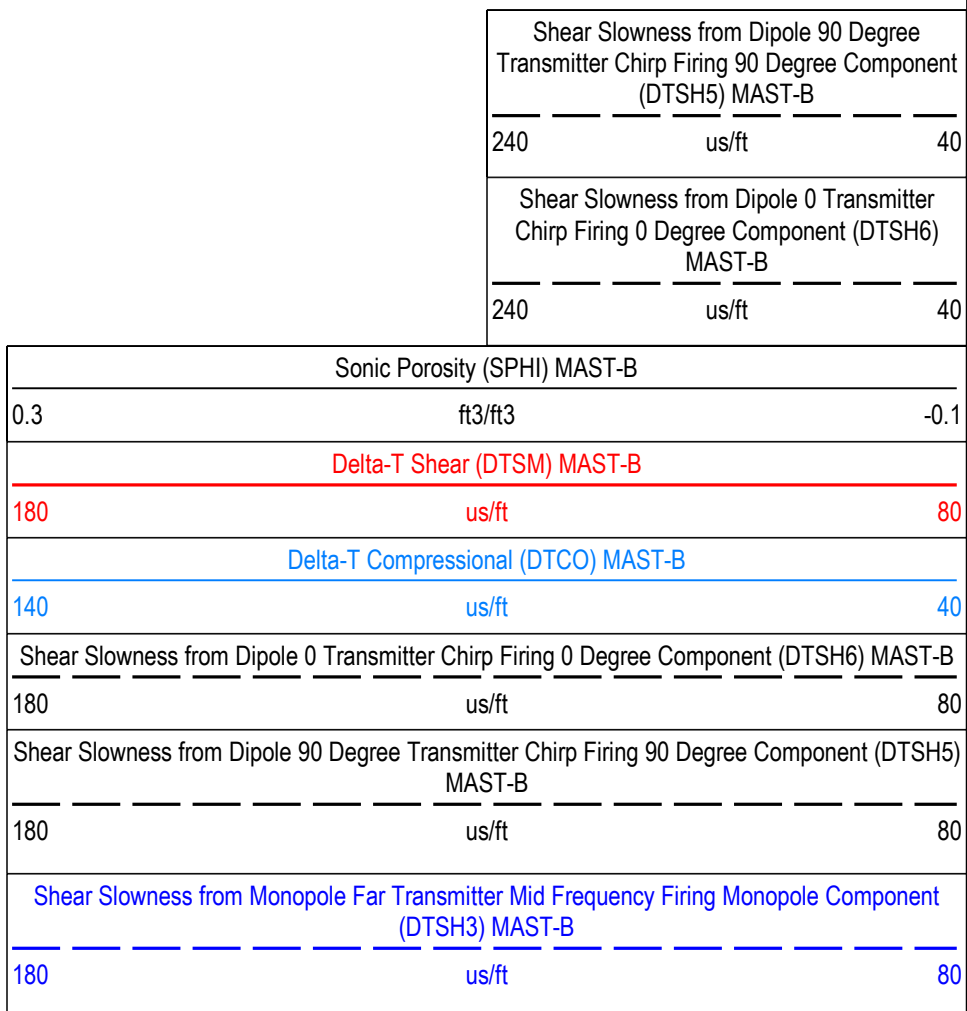
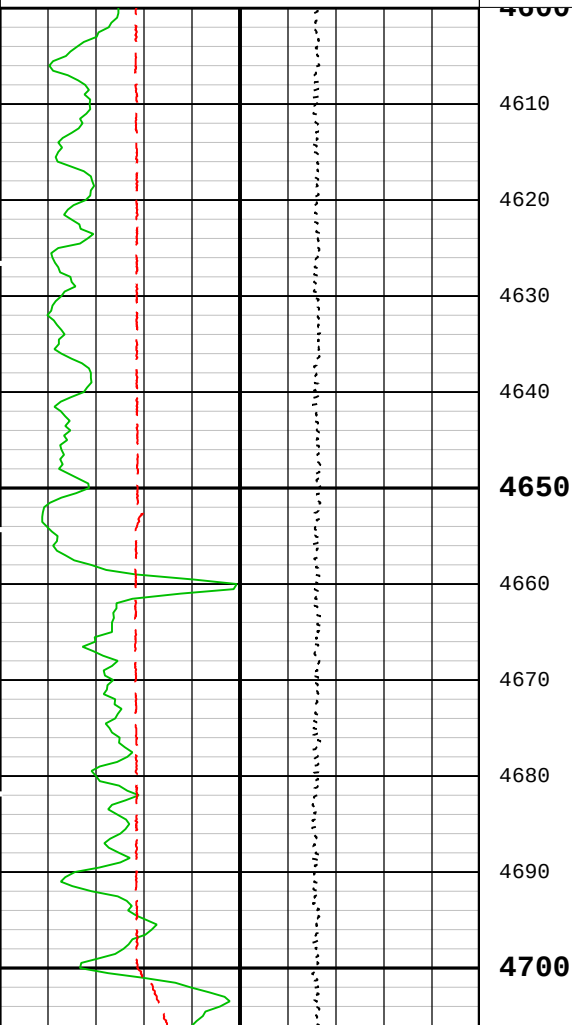
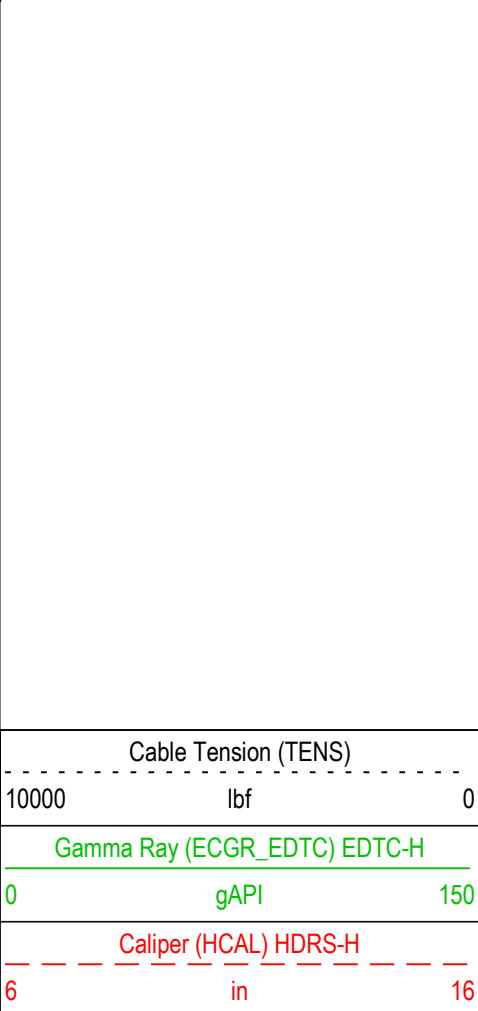
Company:DCP Midstream LP

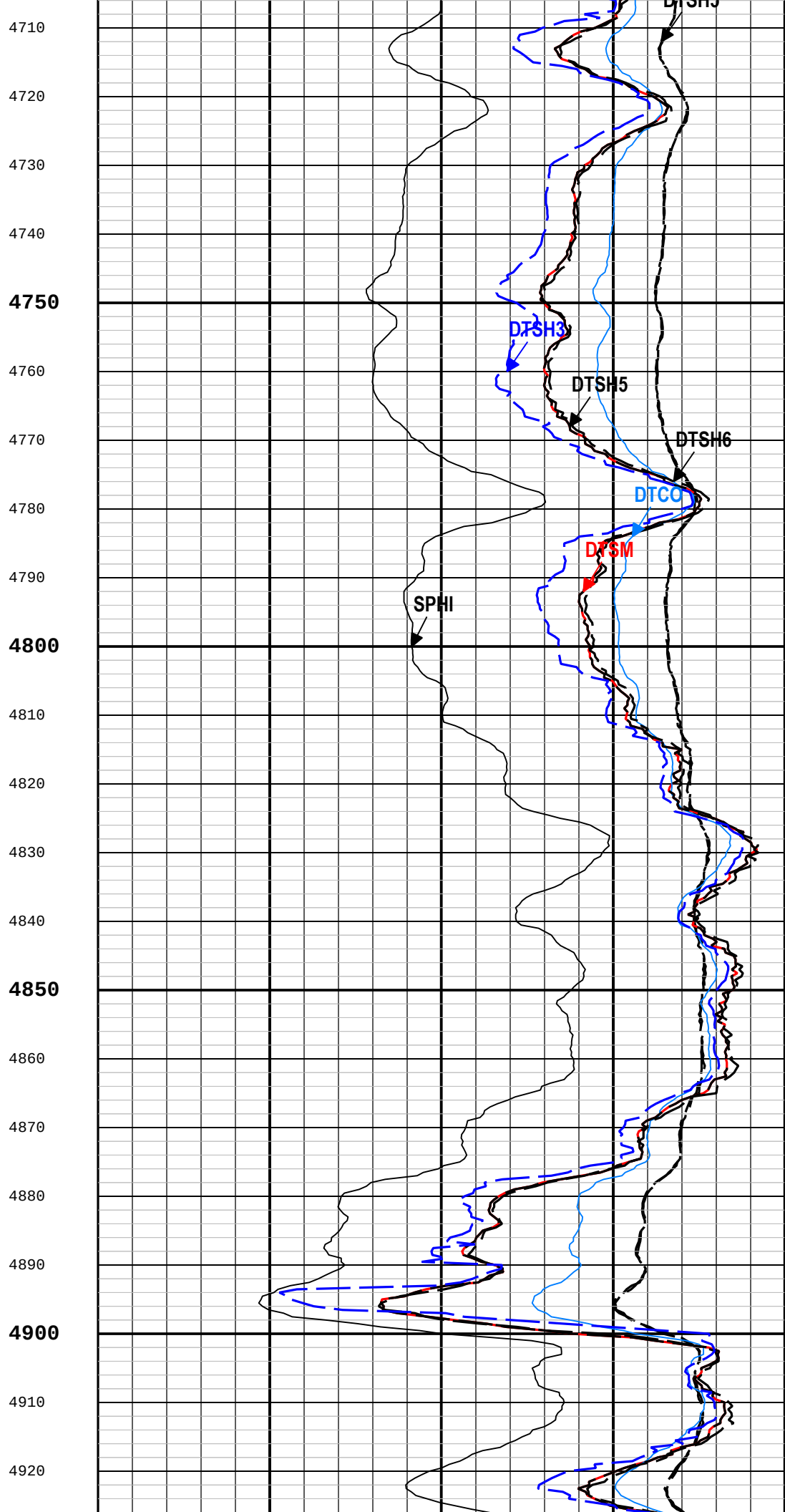
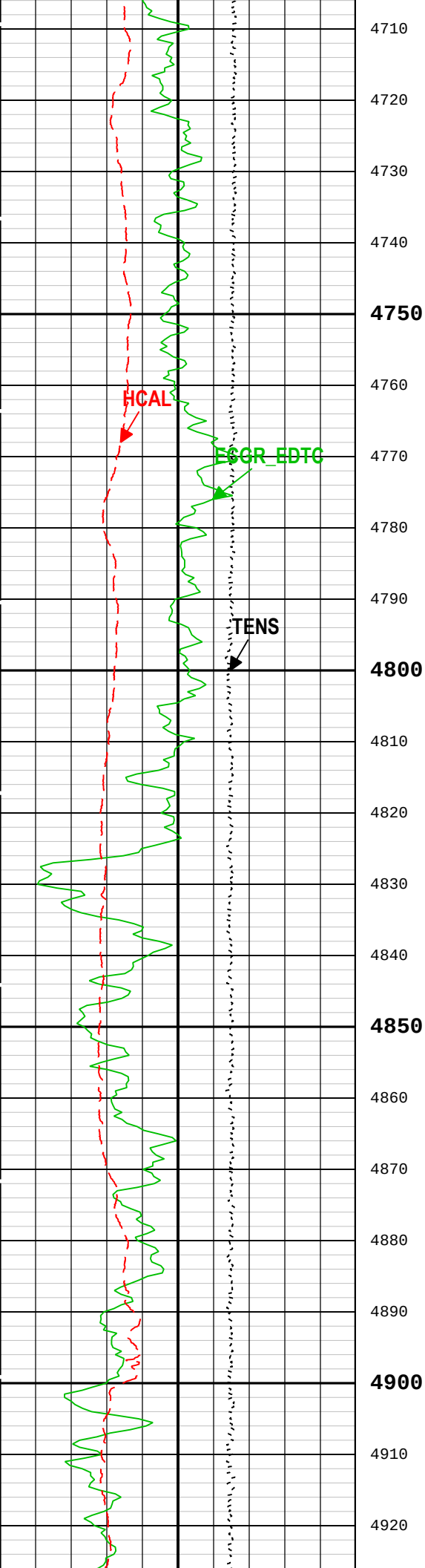
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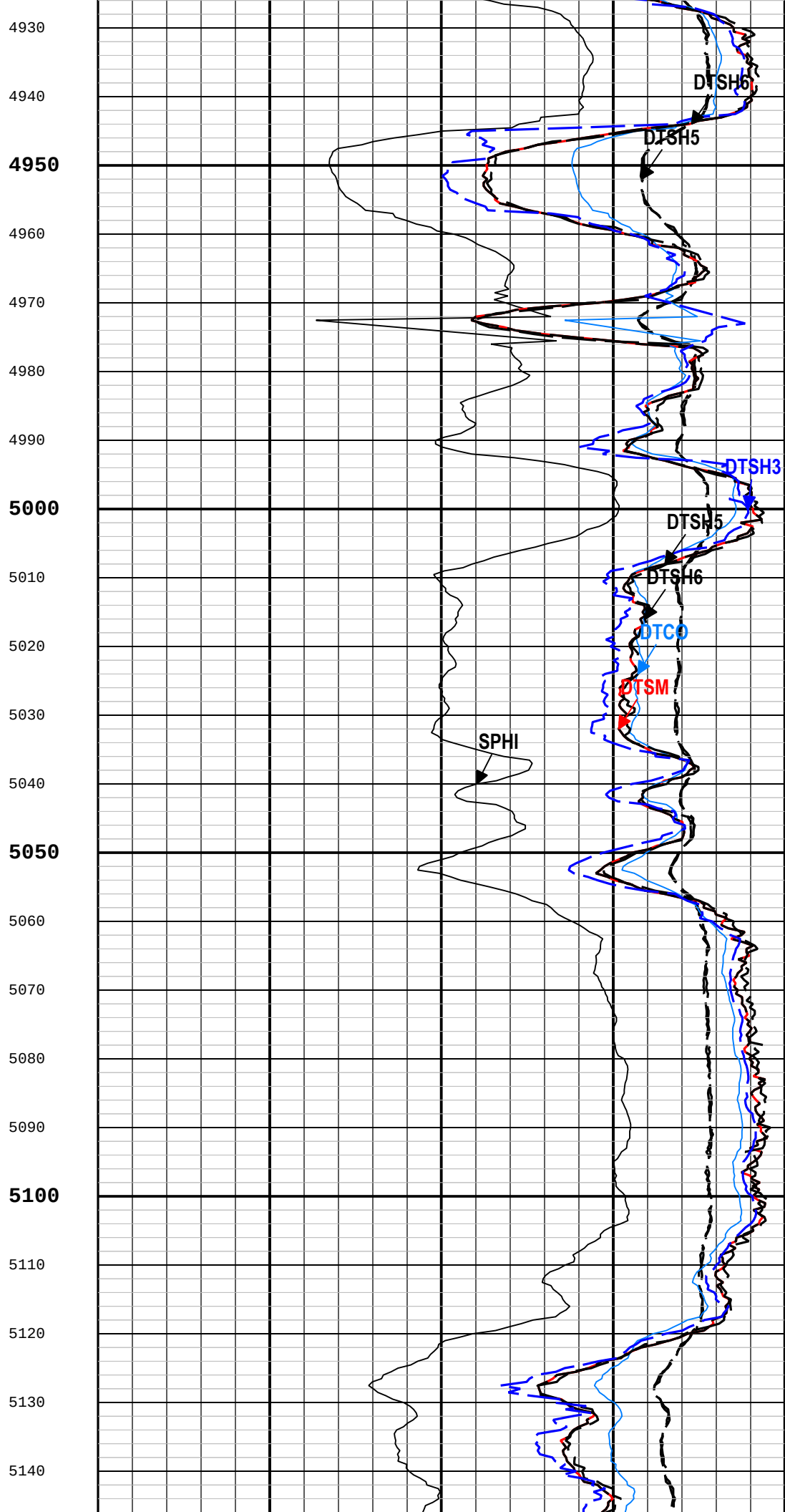
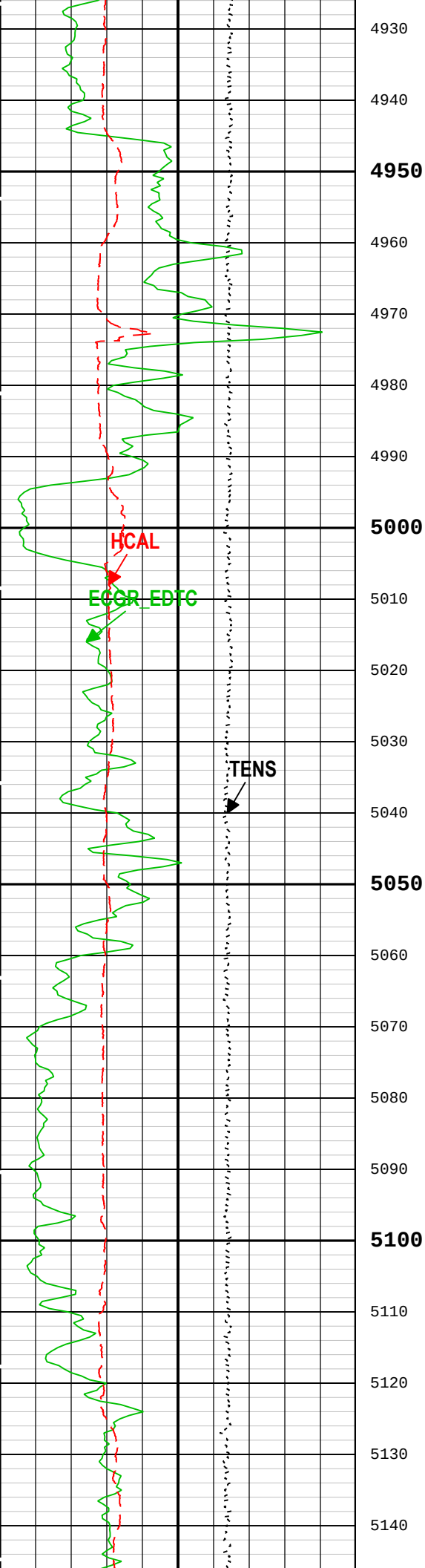
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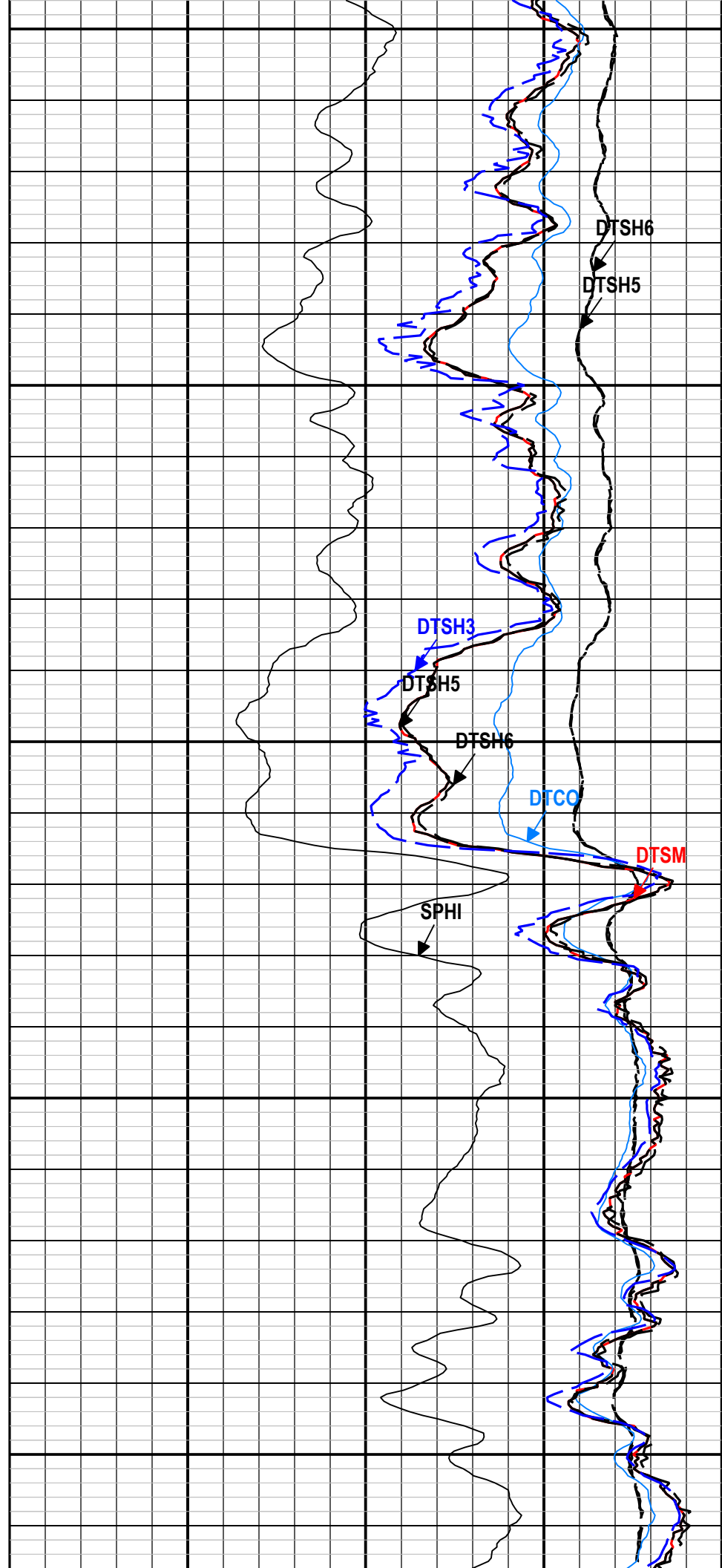
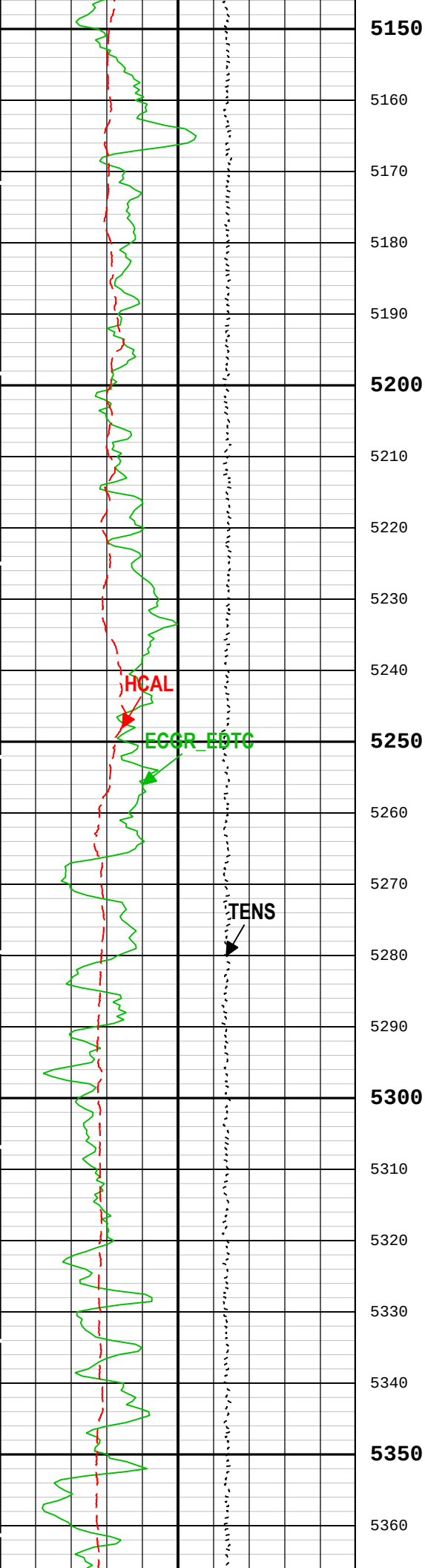
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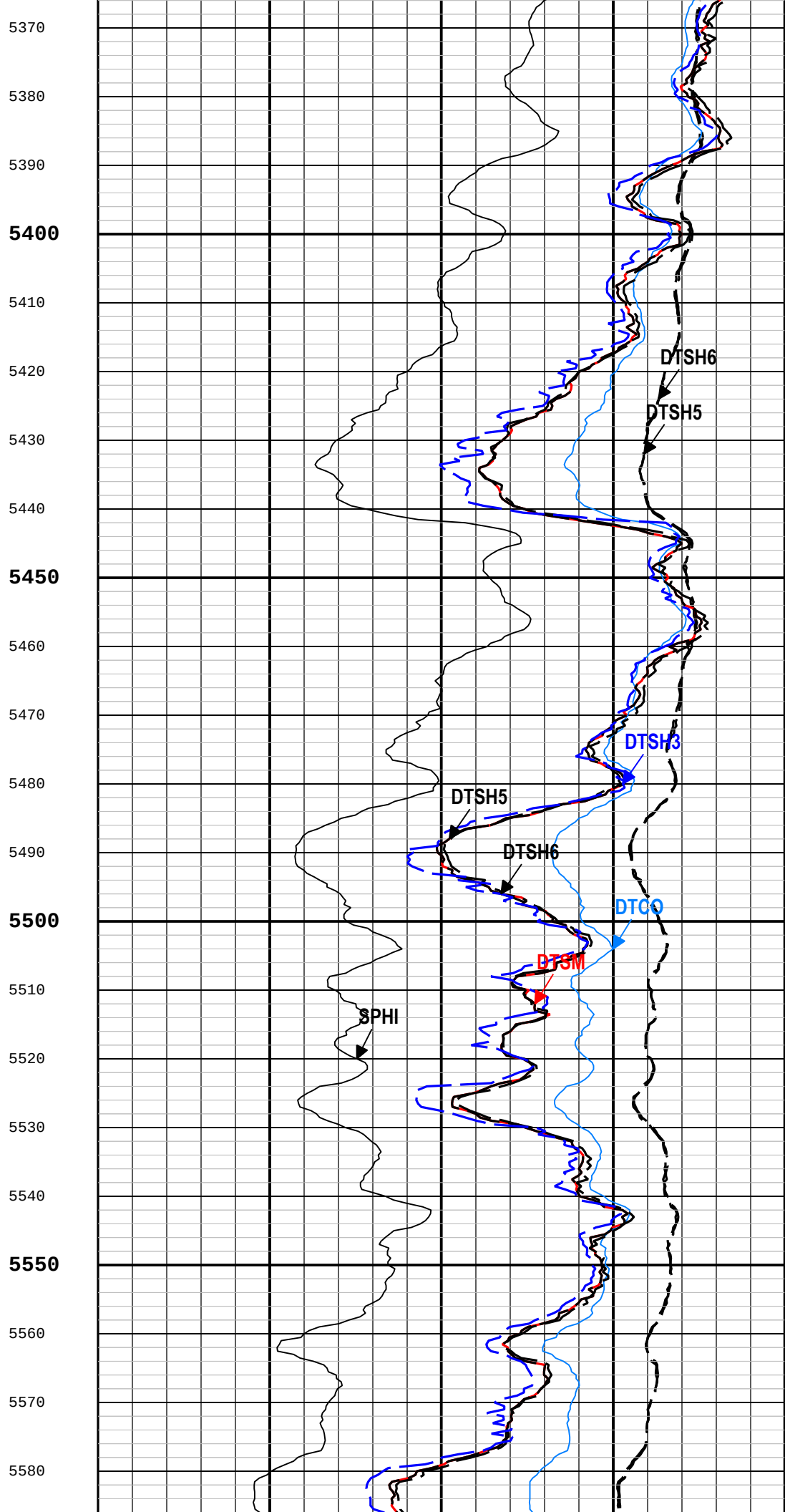
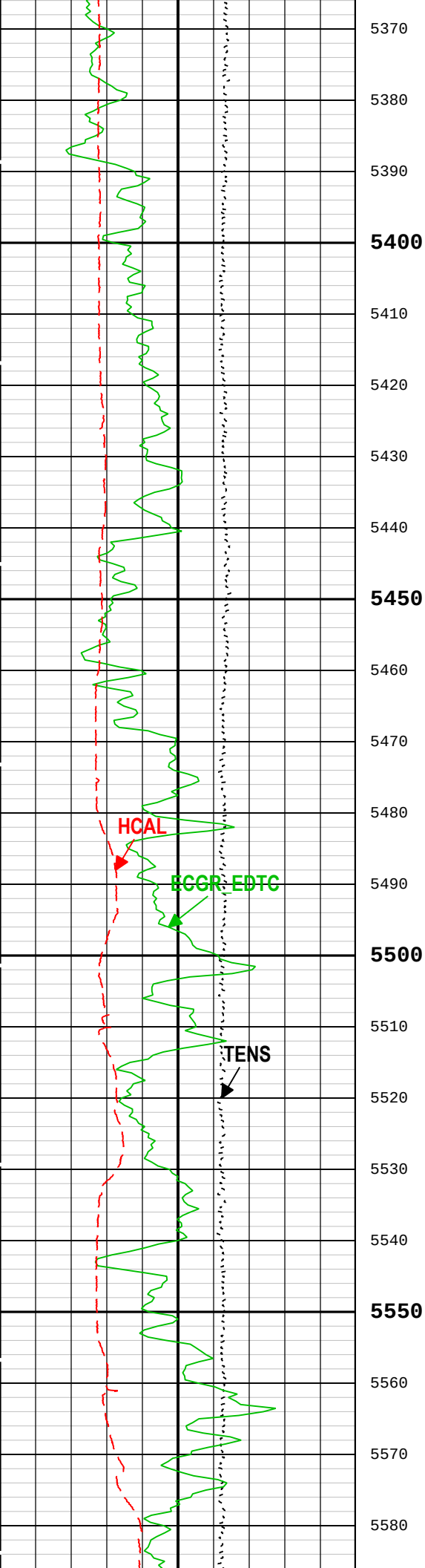
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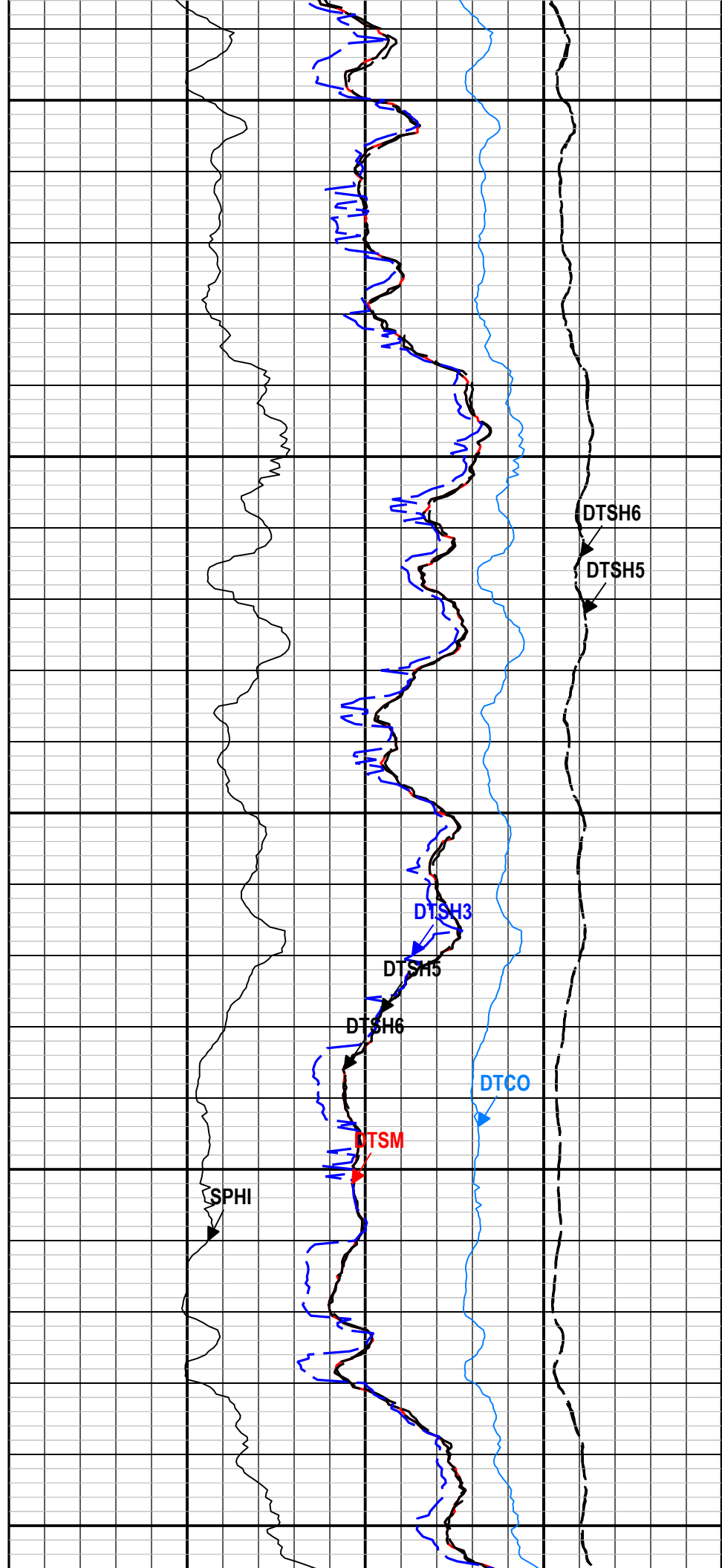
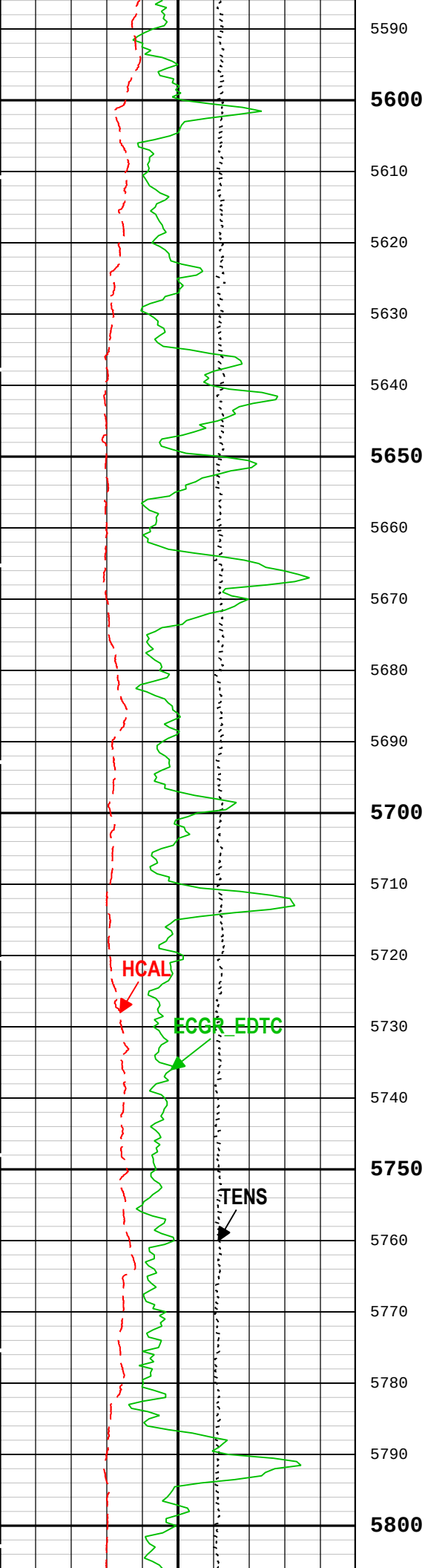


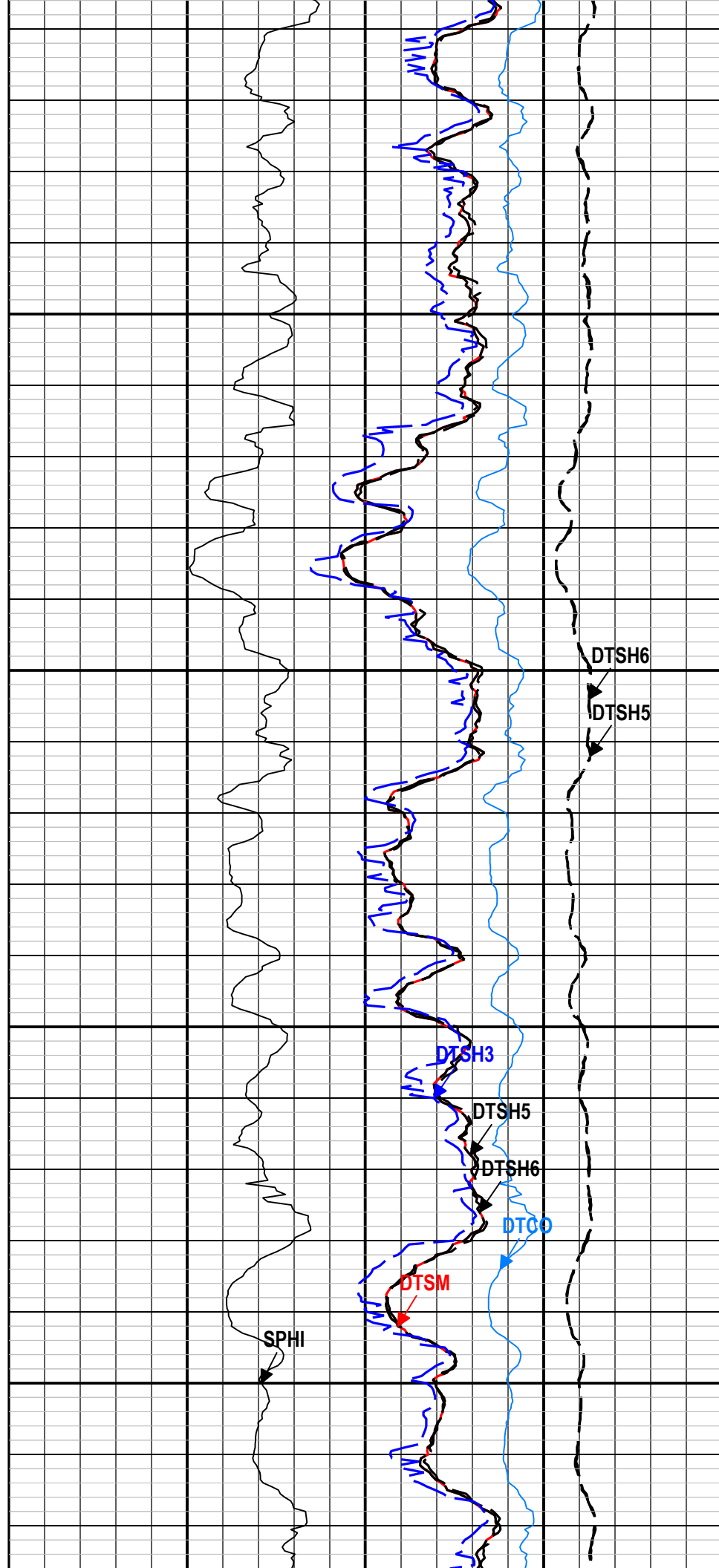
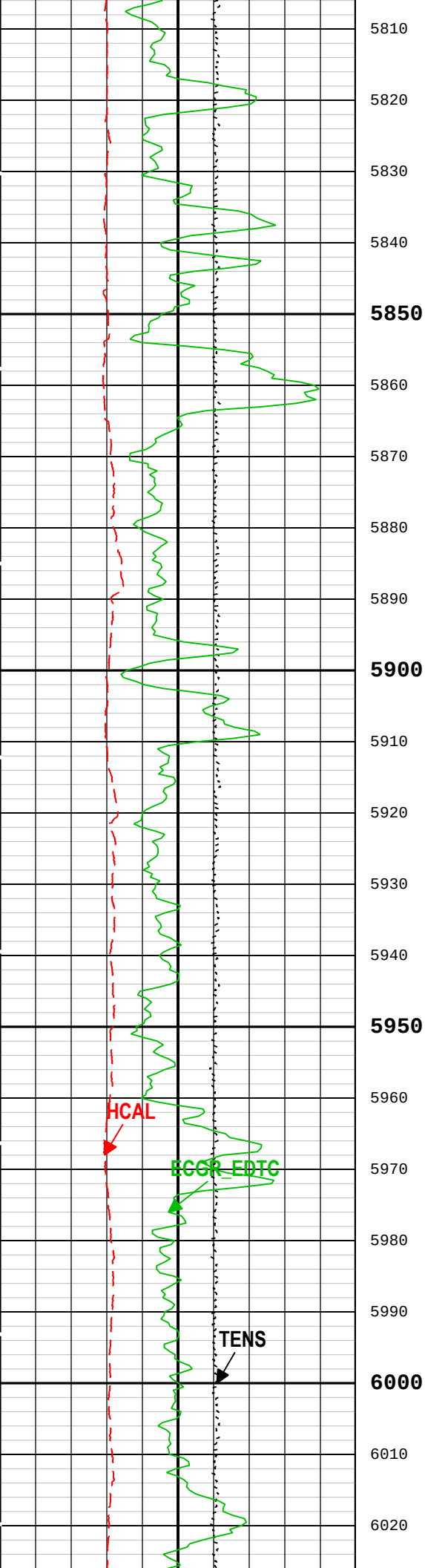


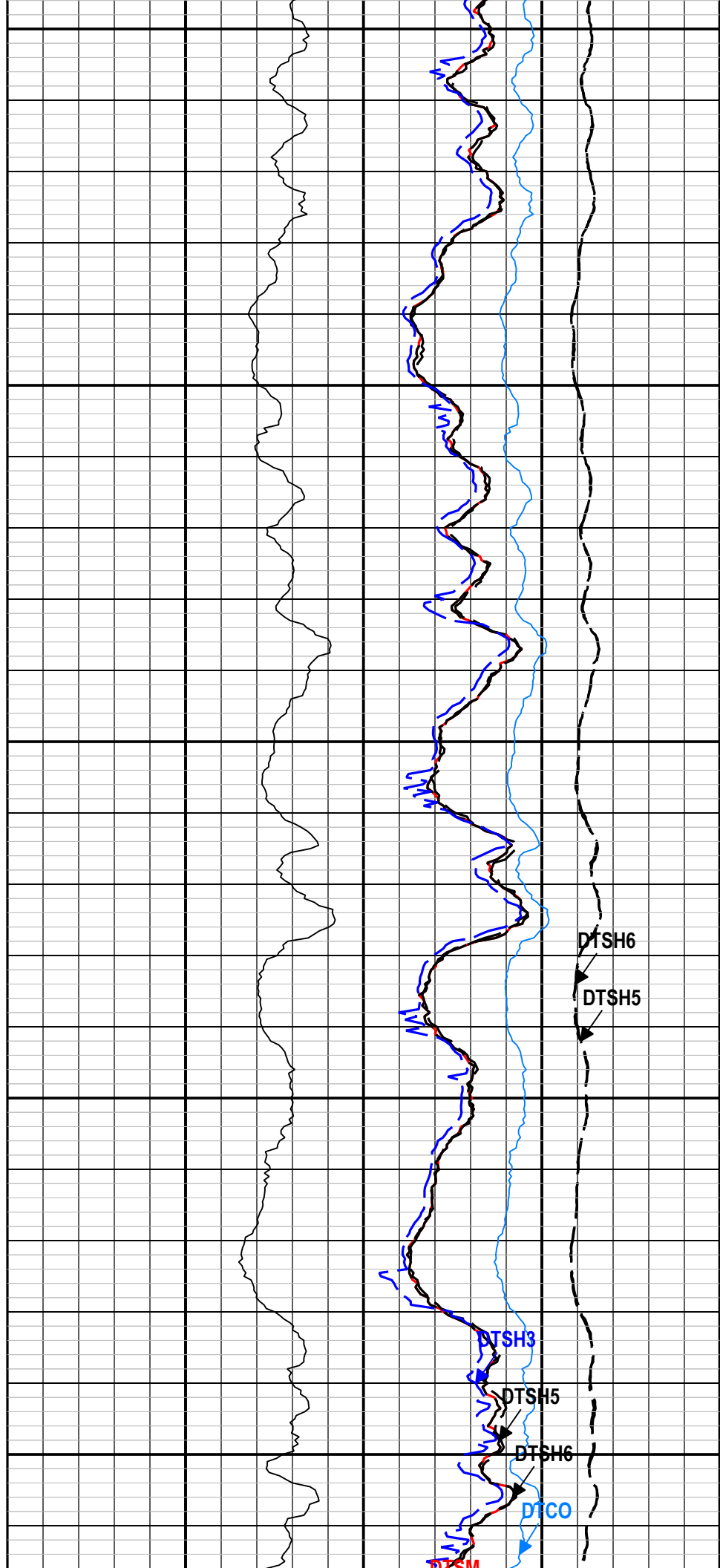
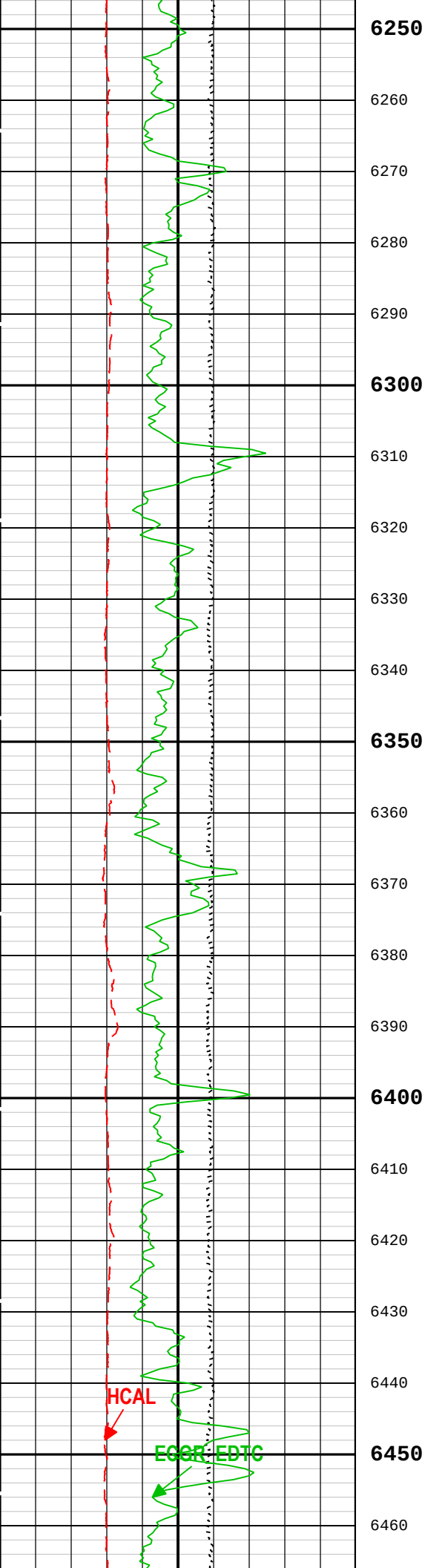


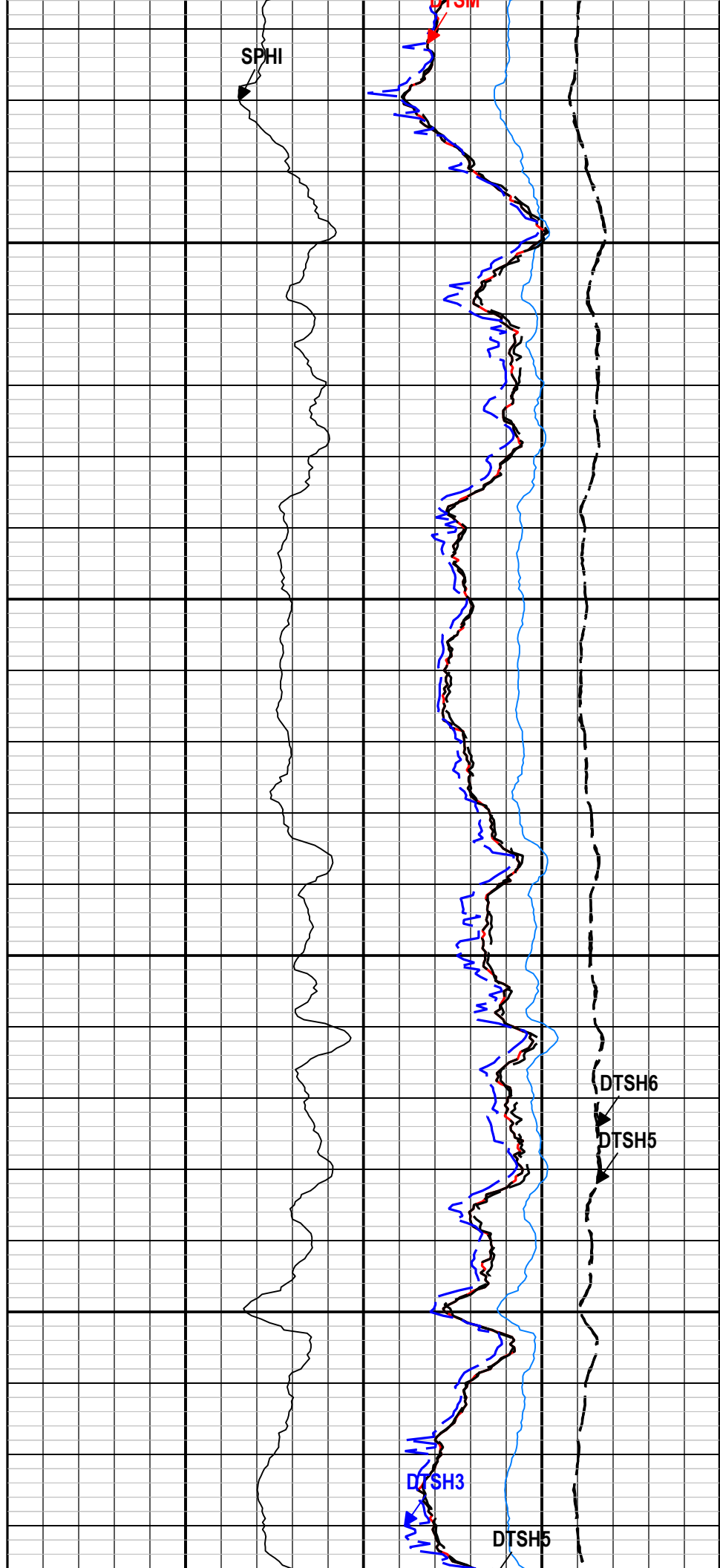
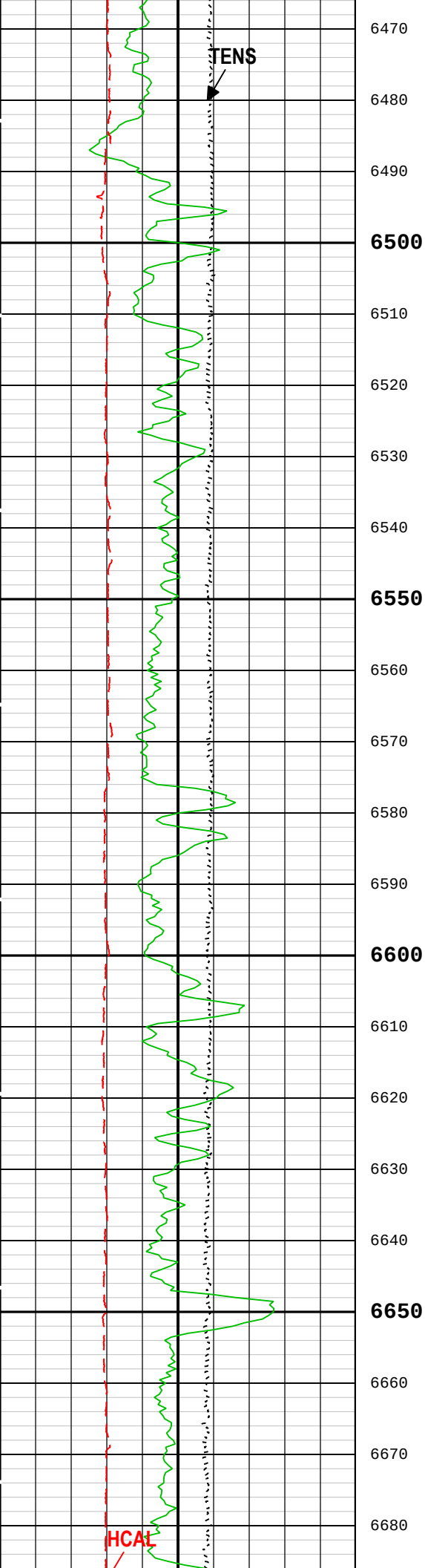


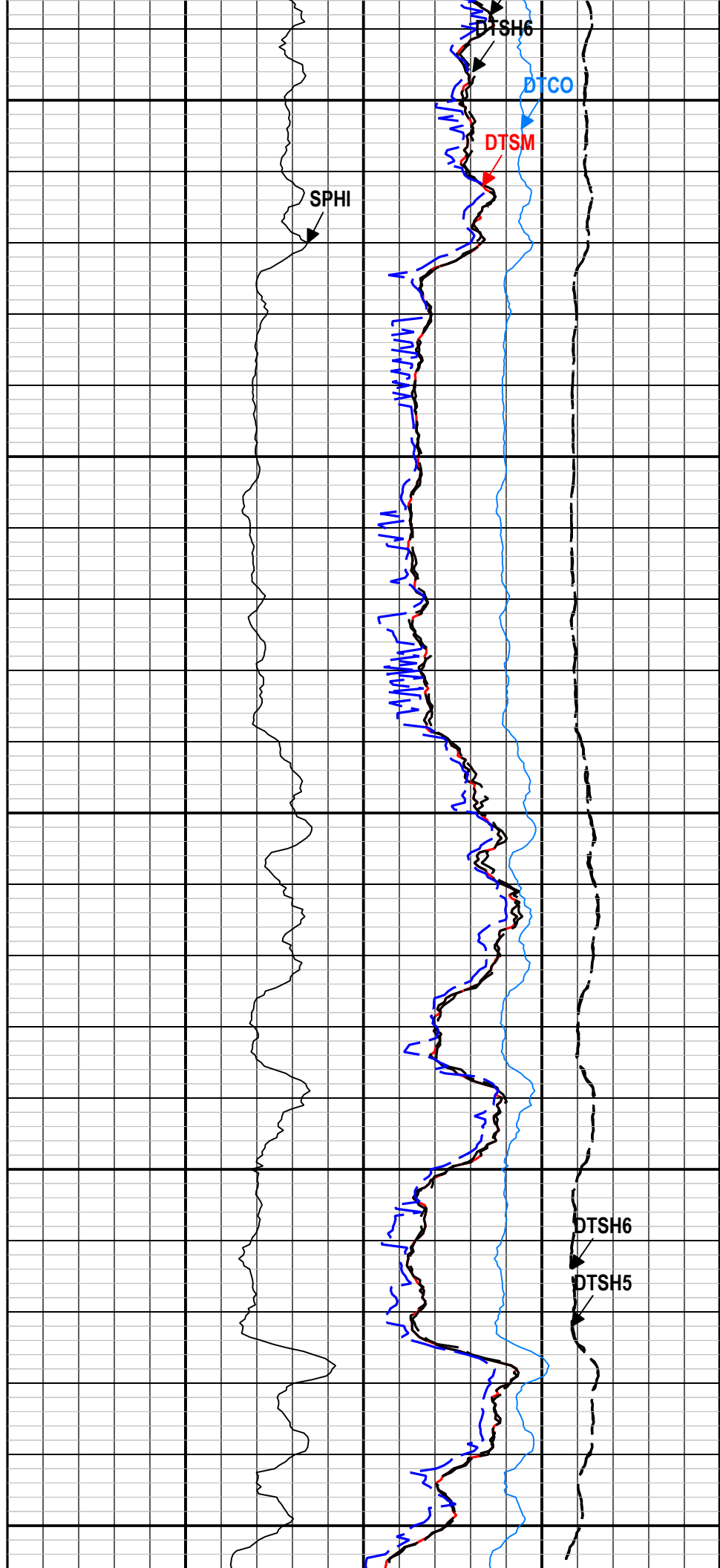
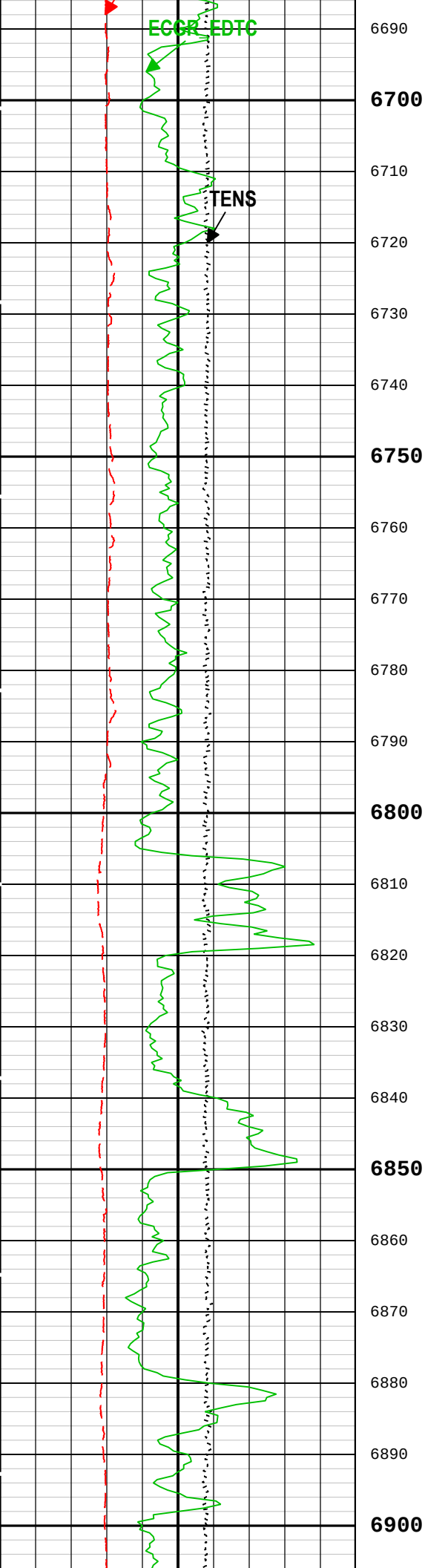


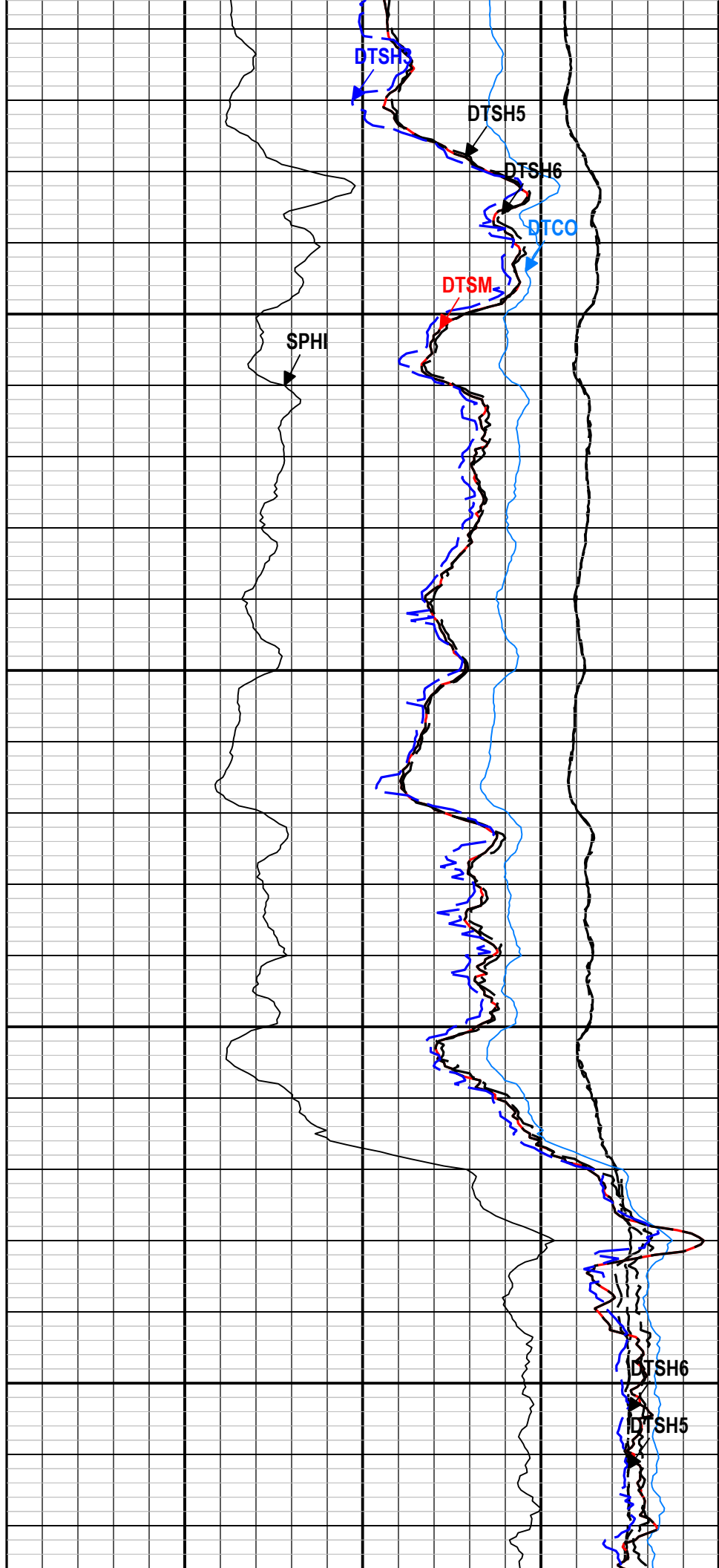
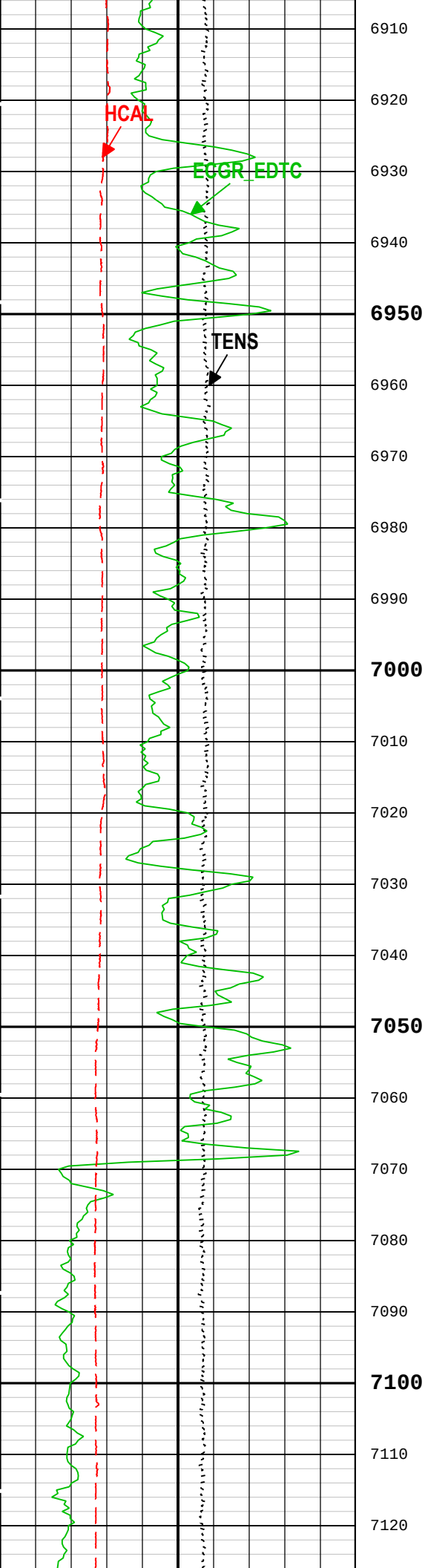


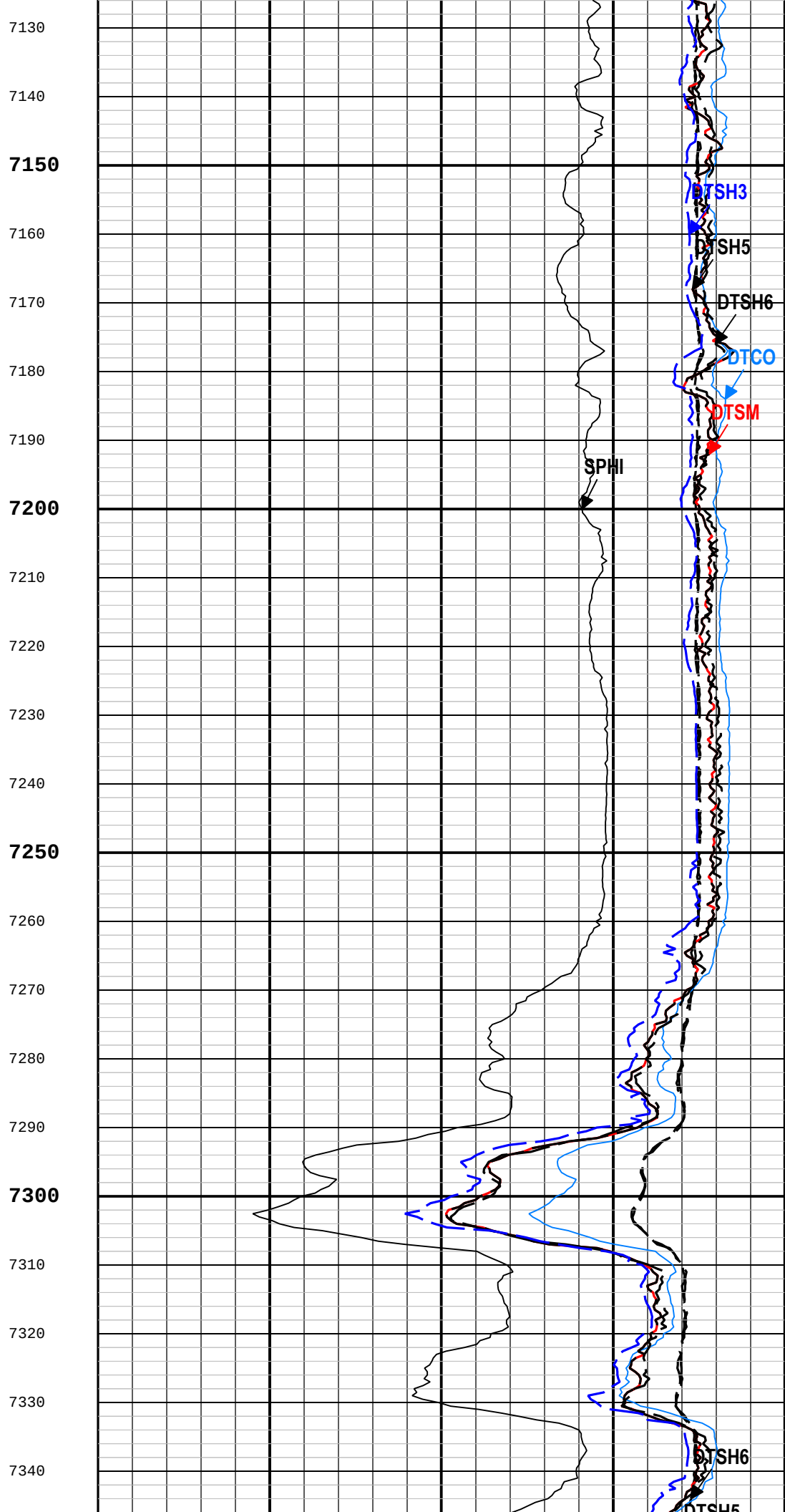
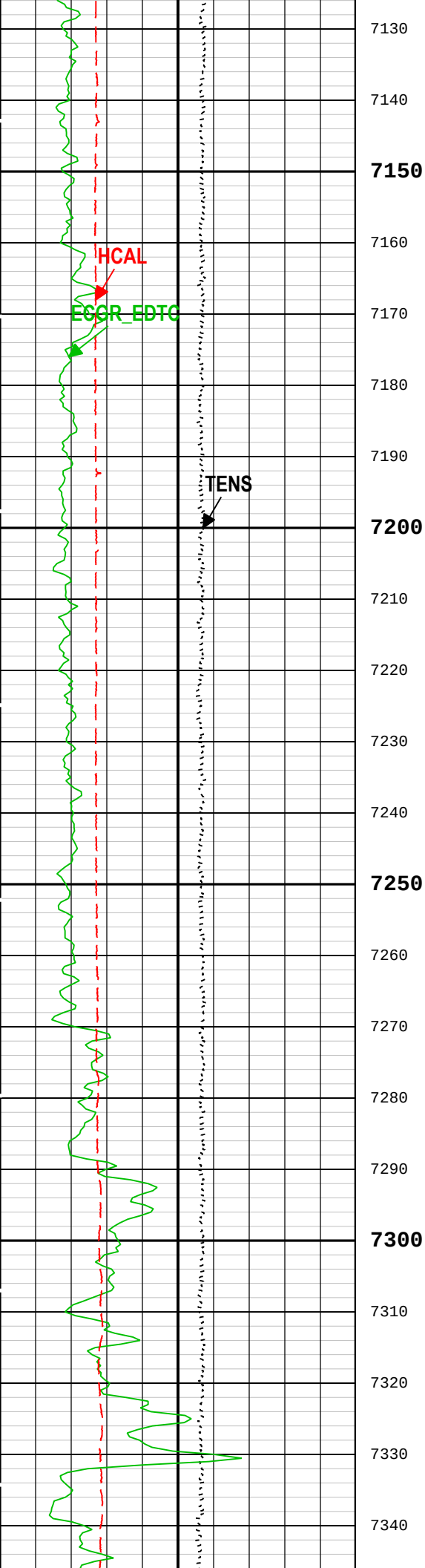


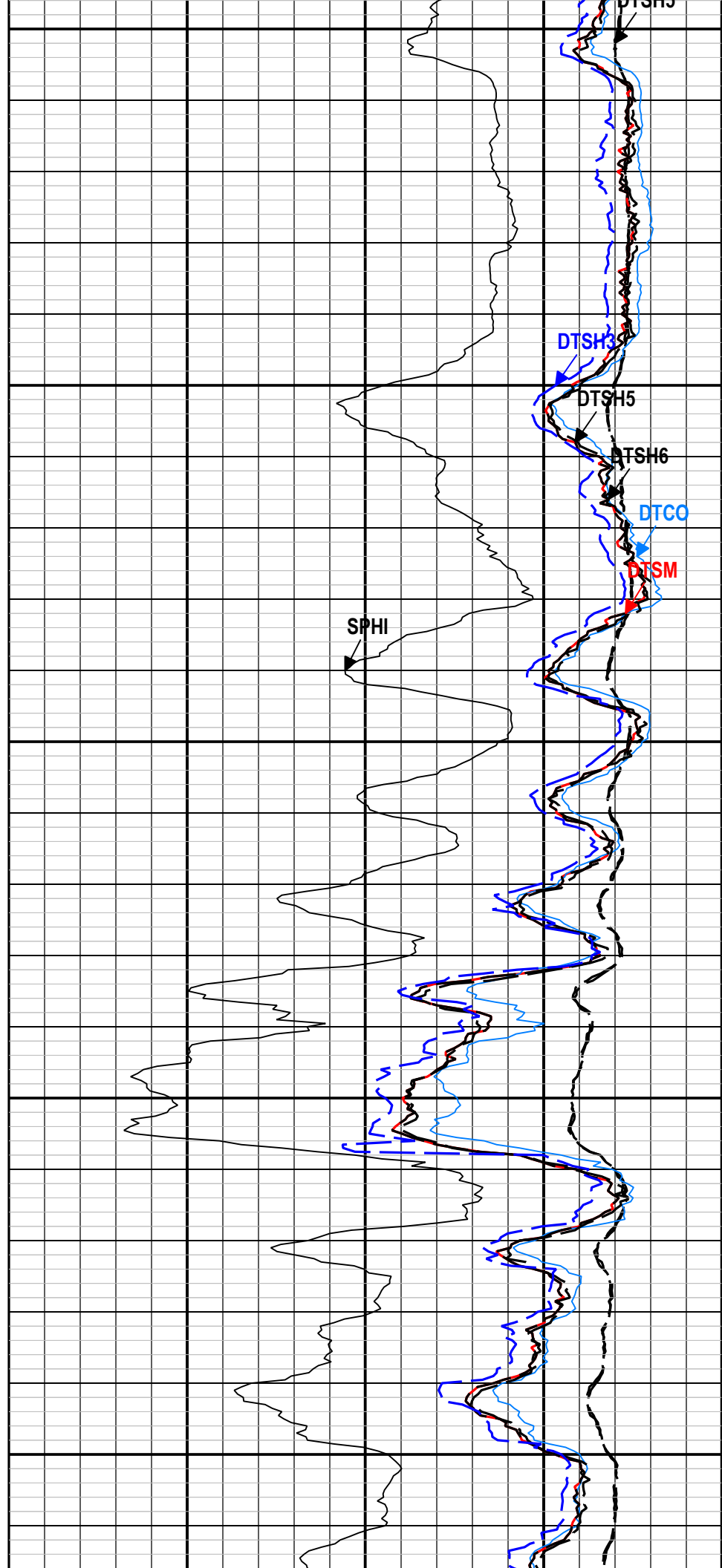
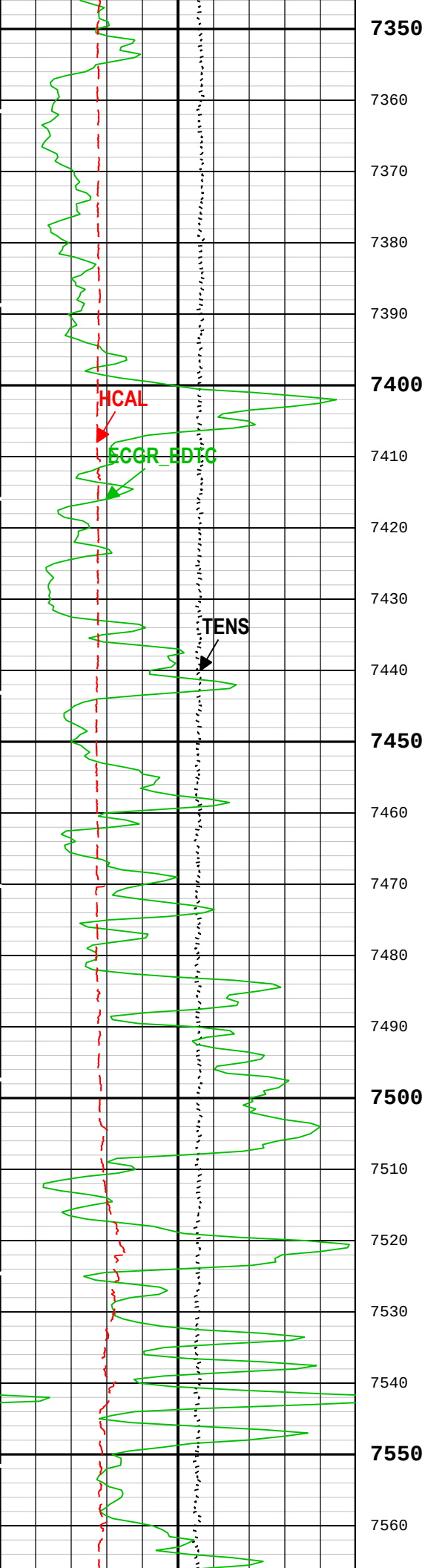


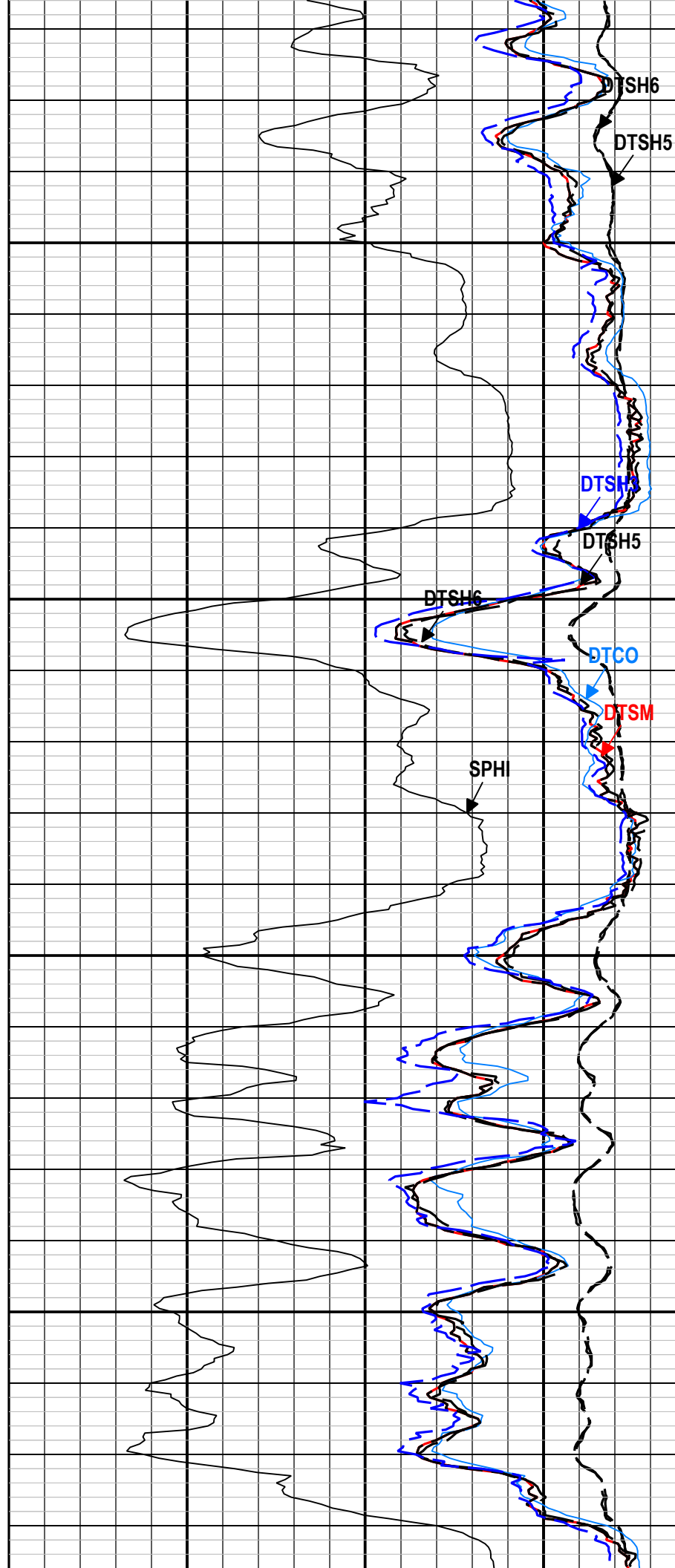
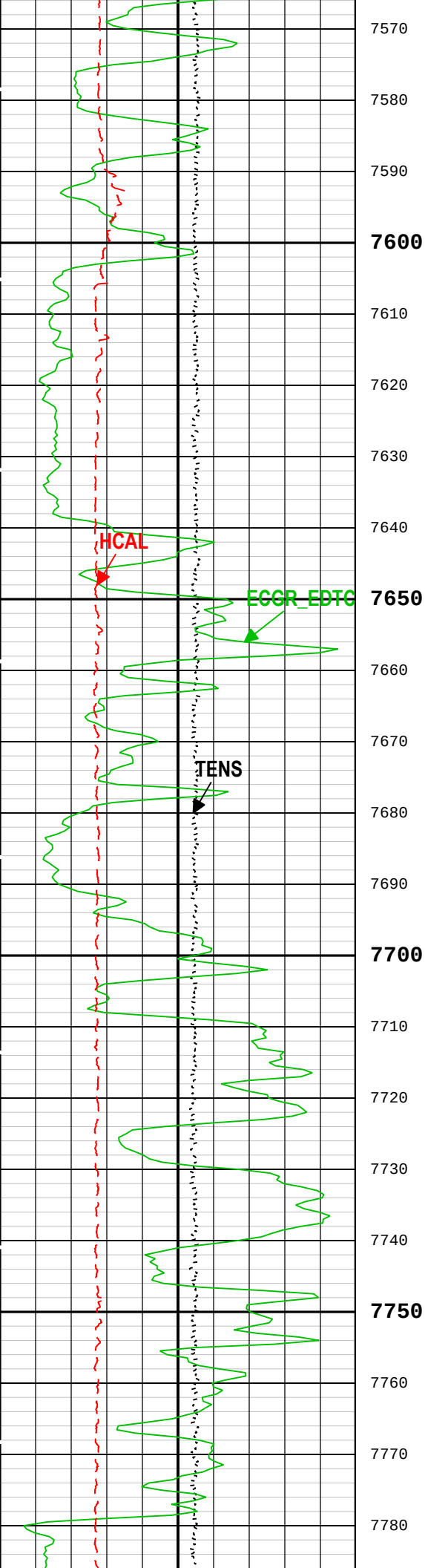


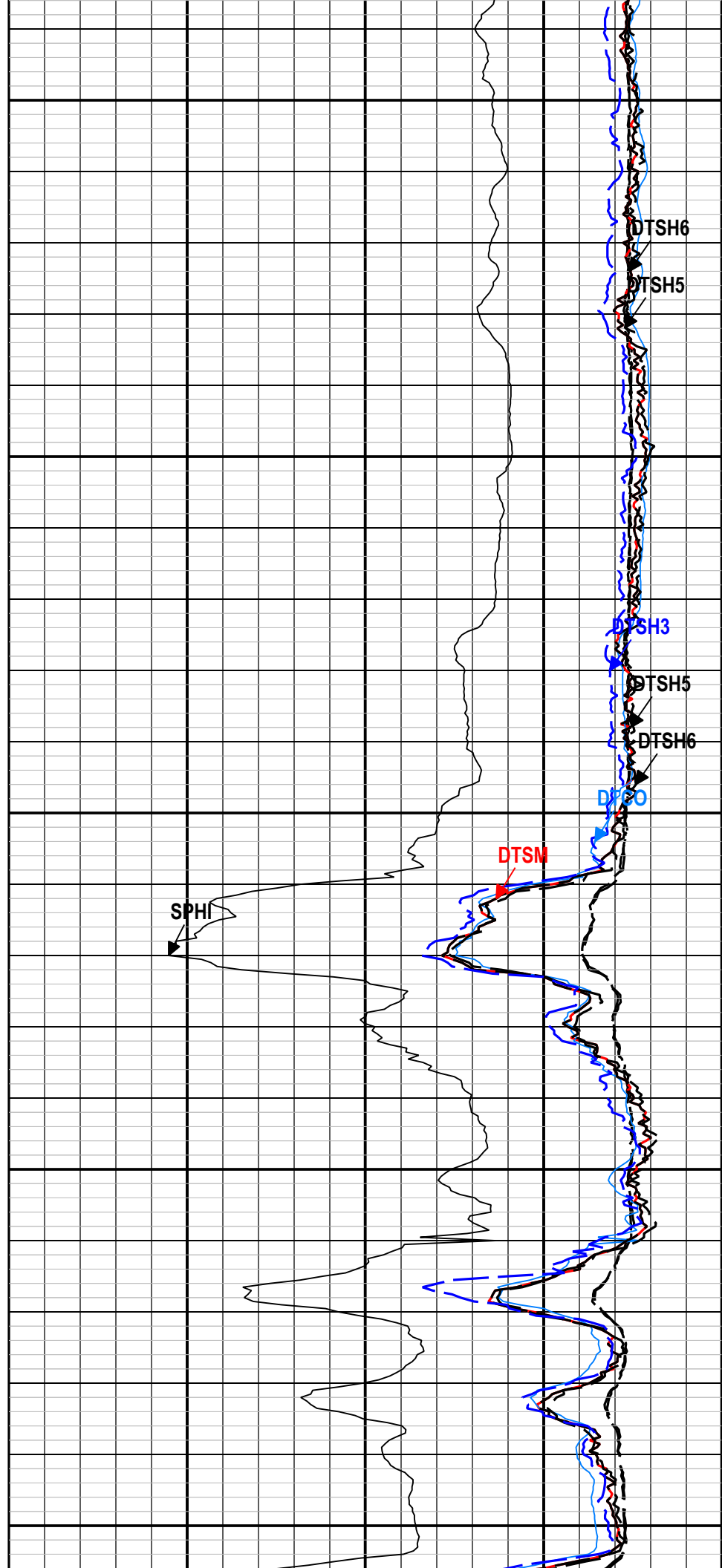
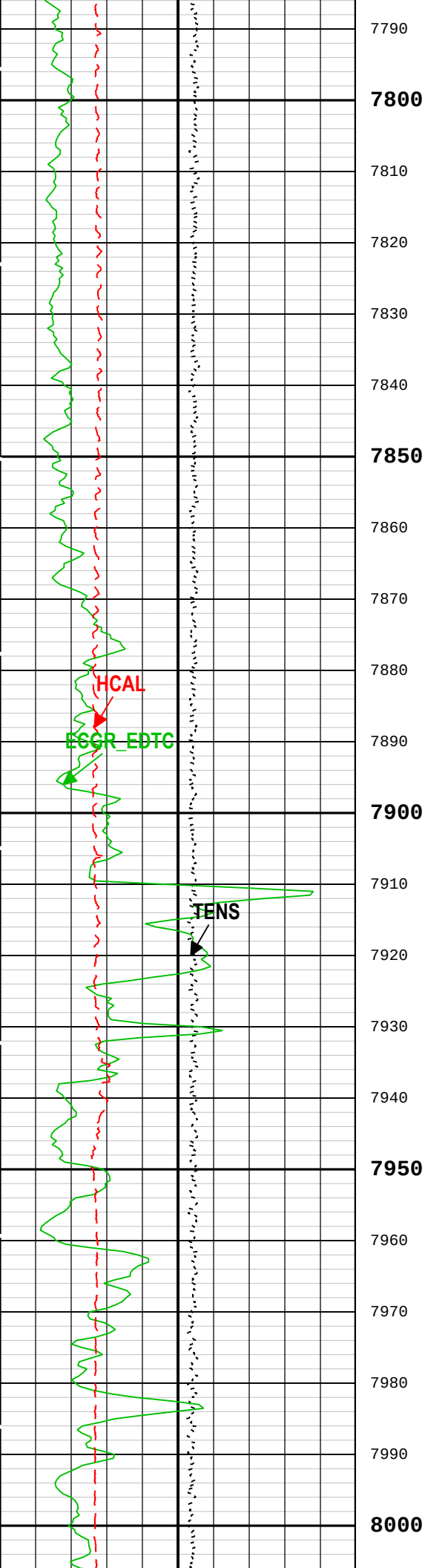


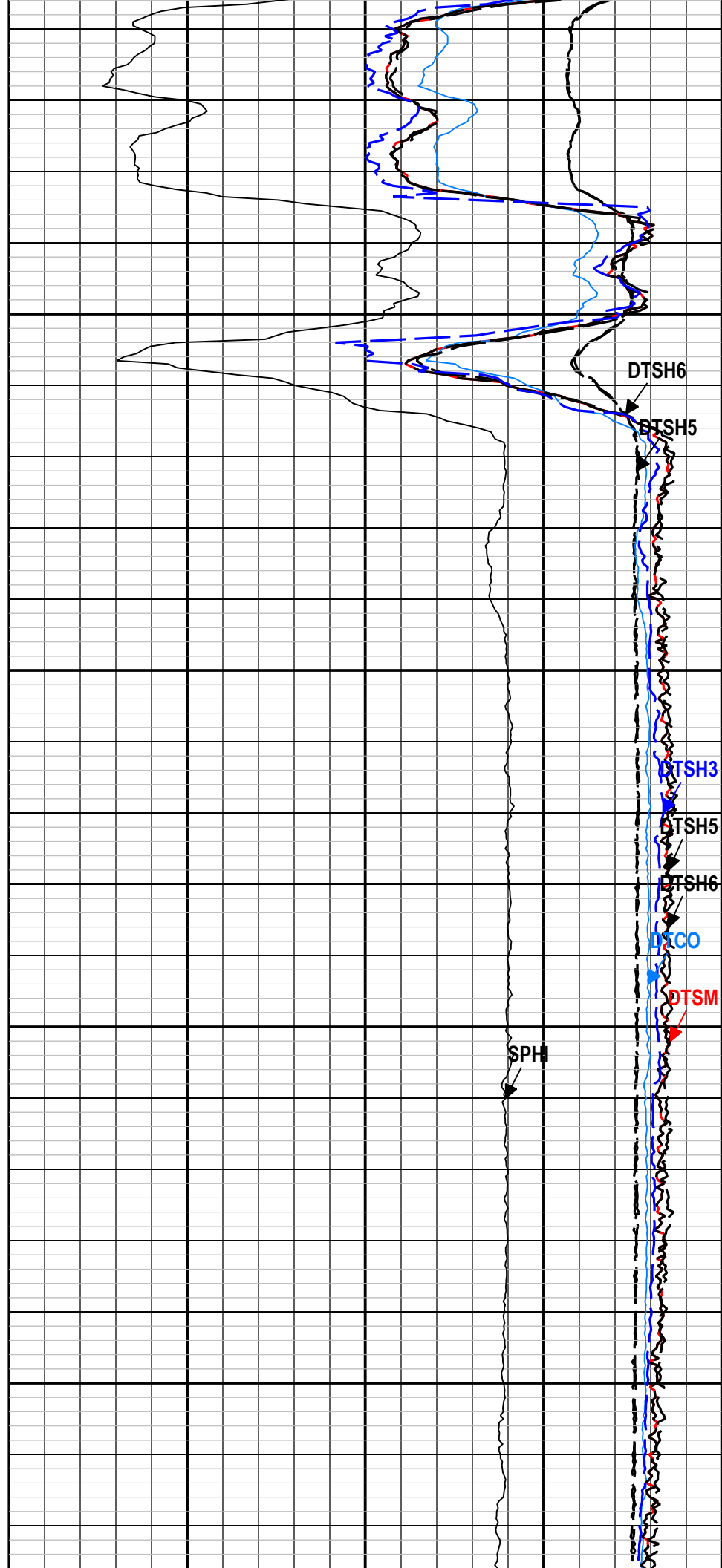
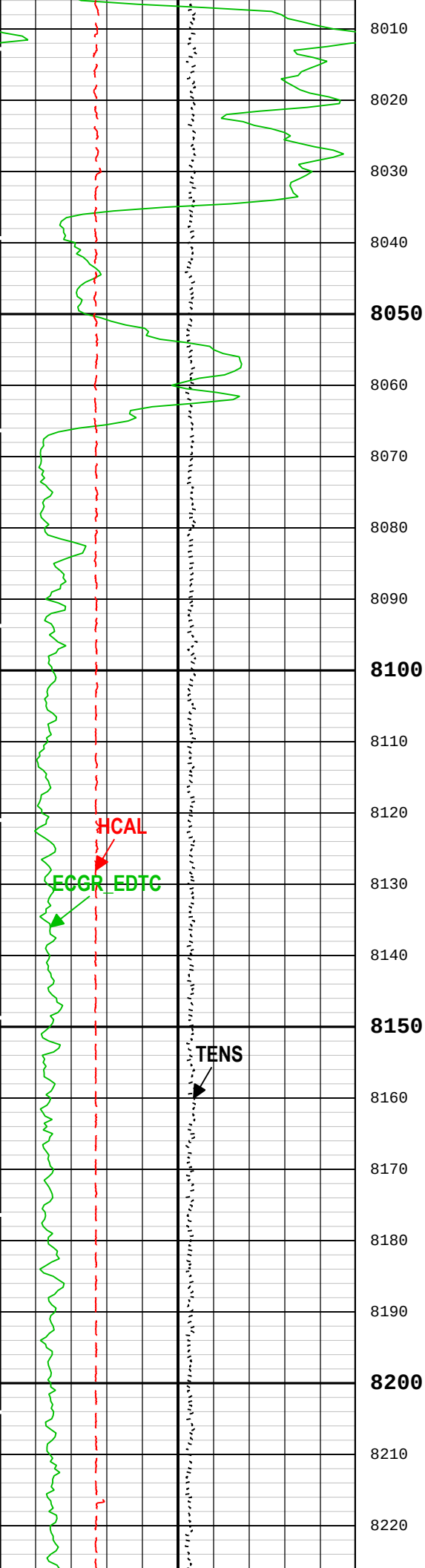


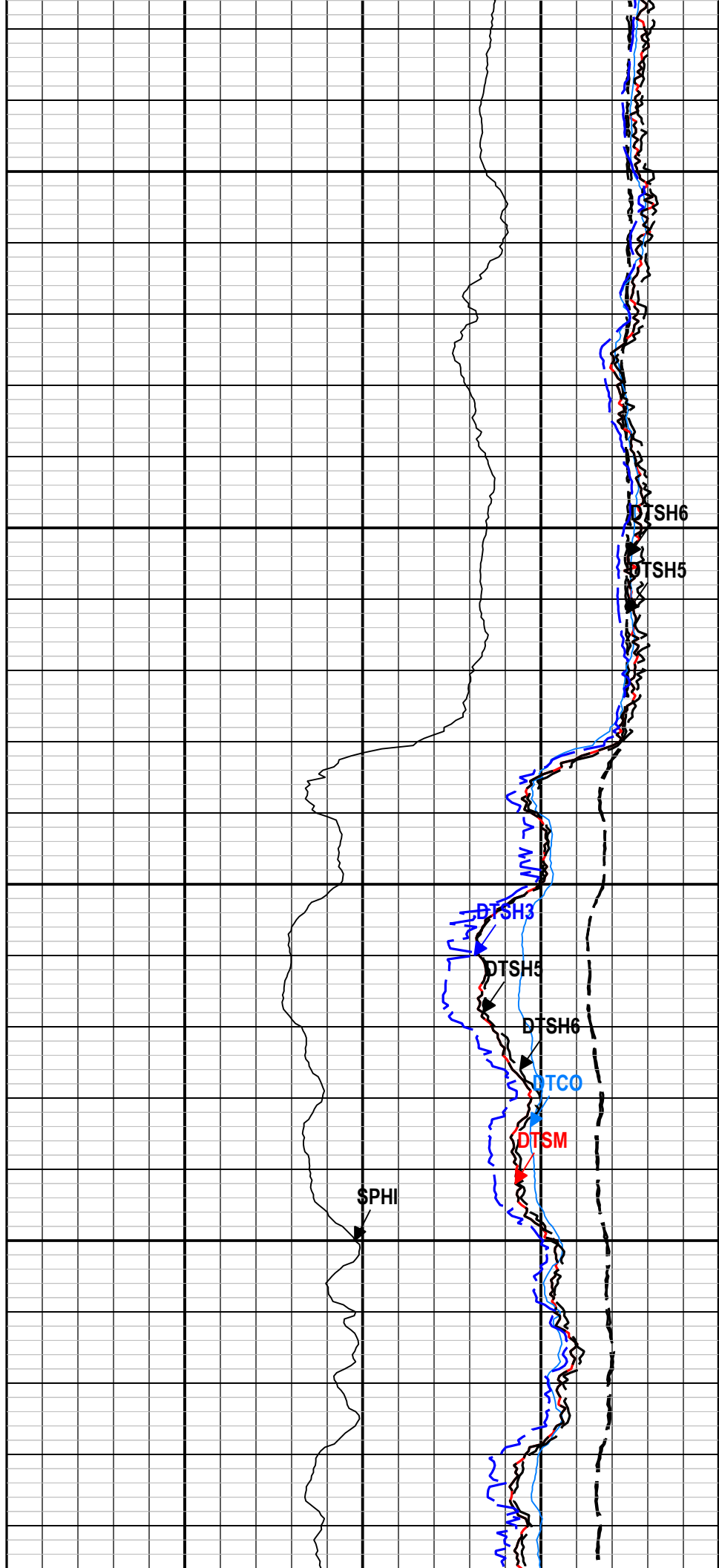
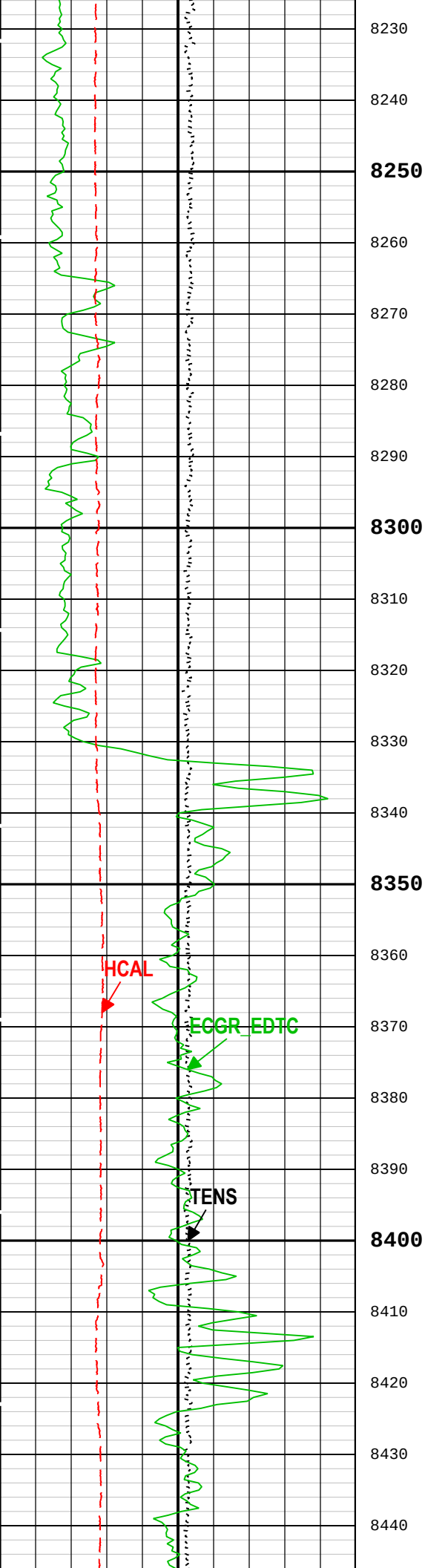


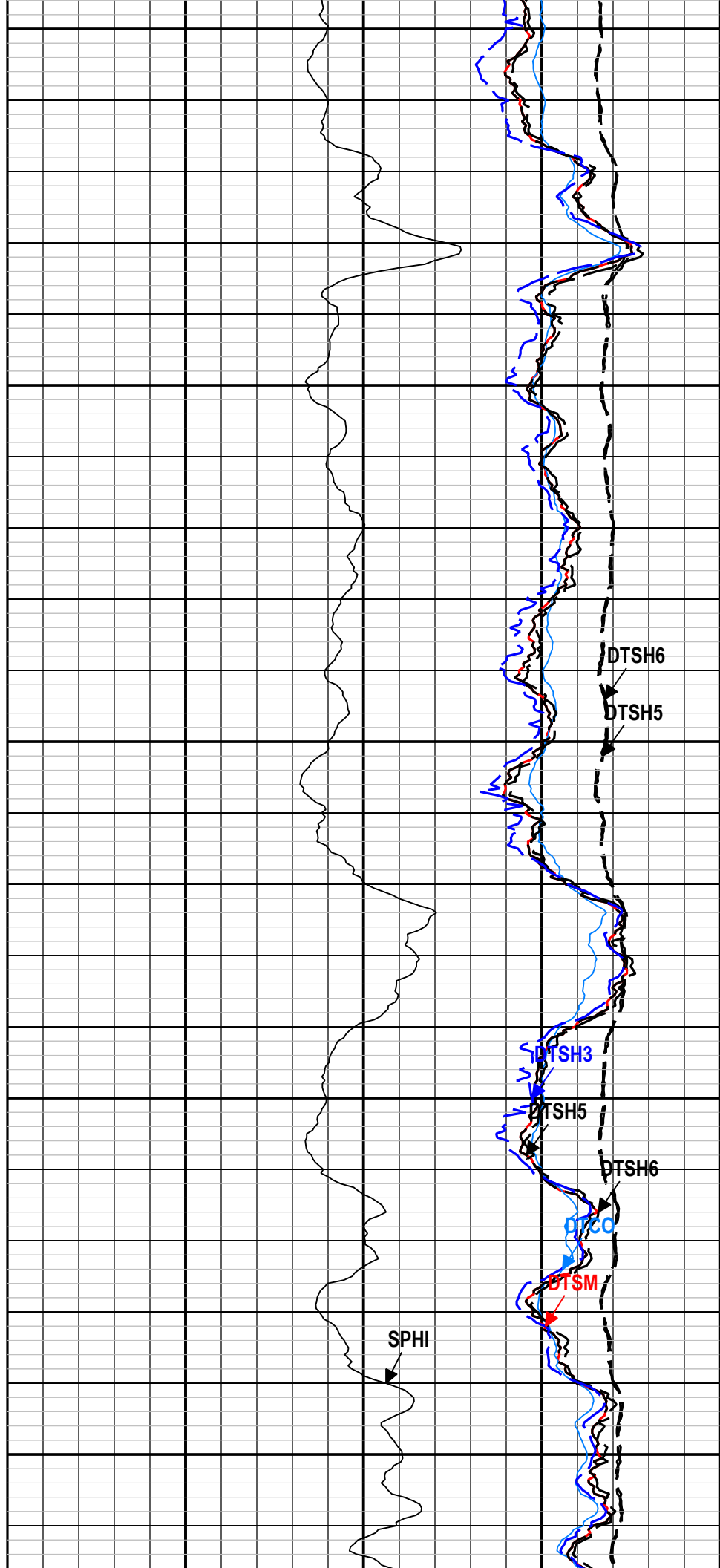
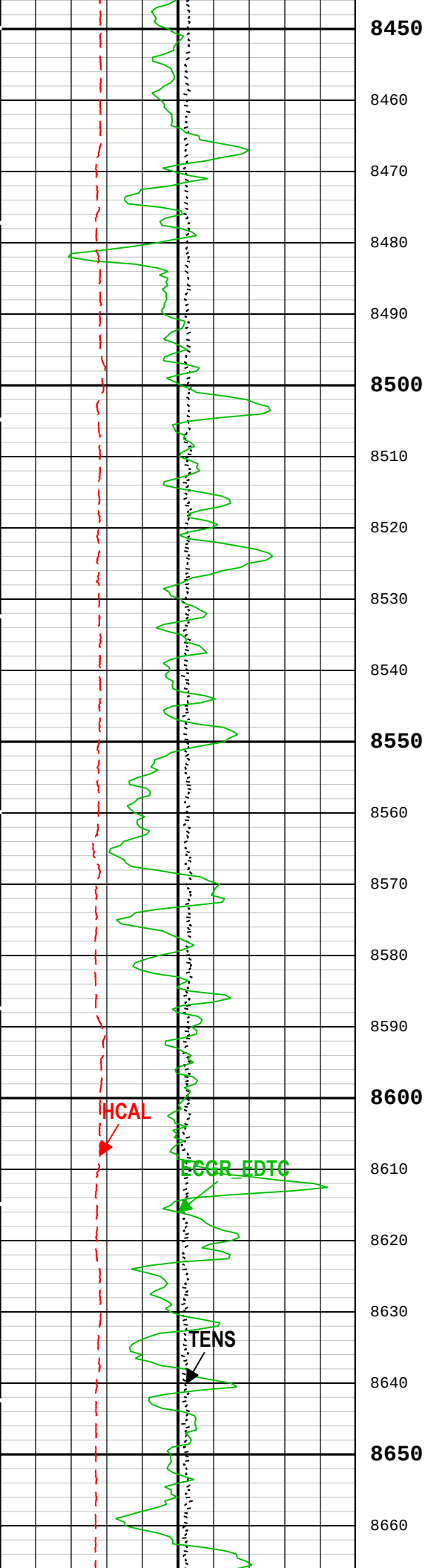


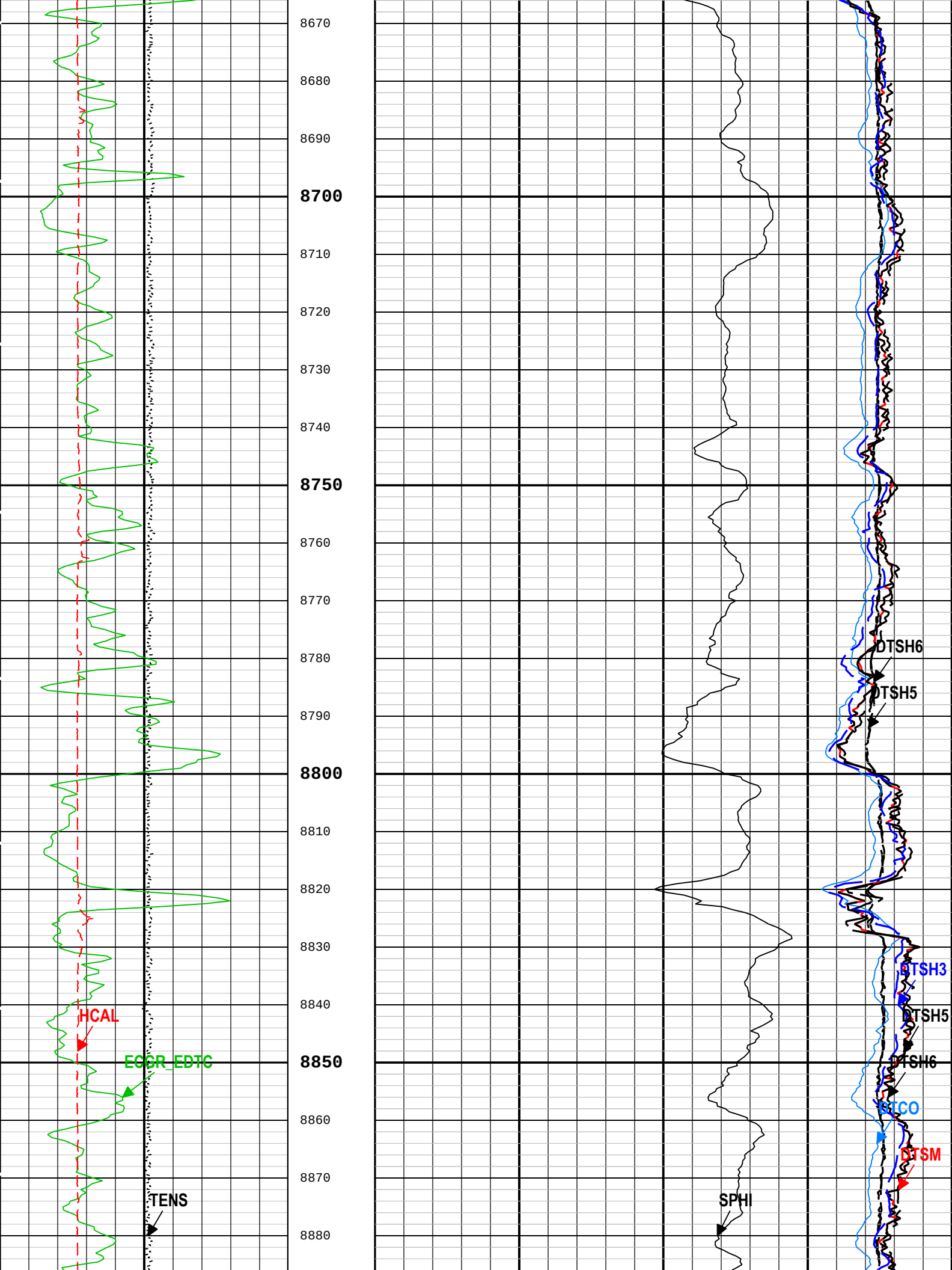


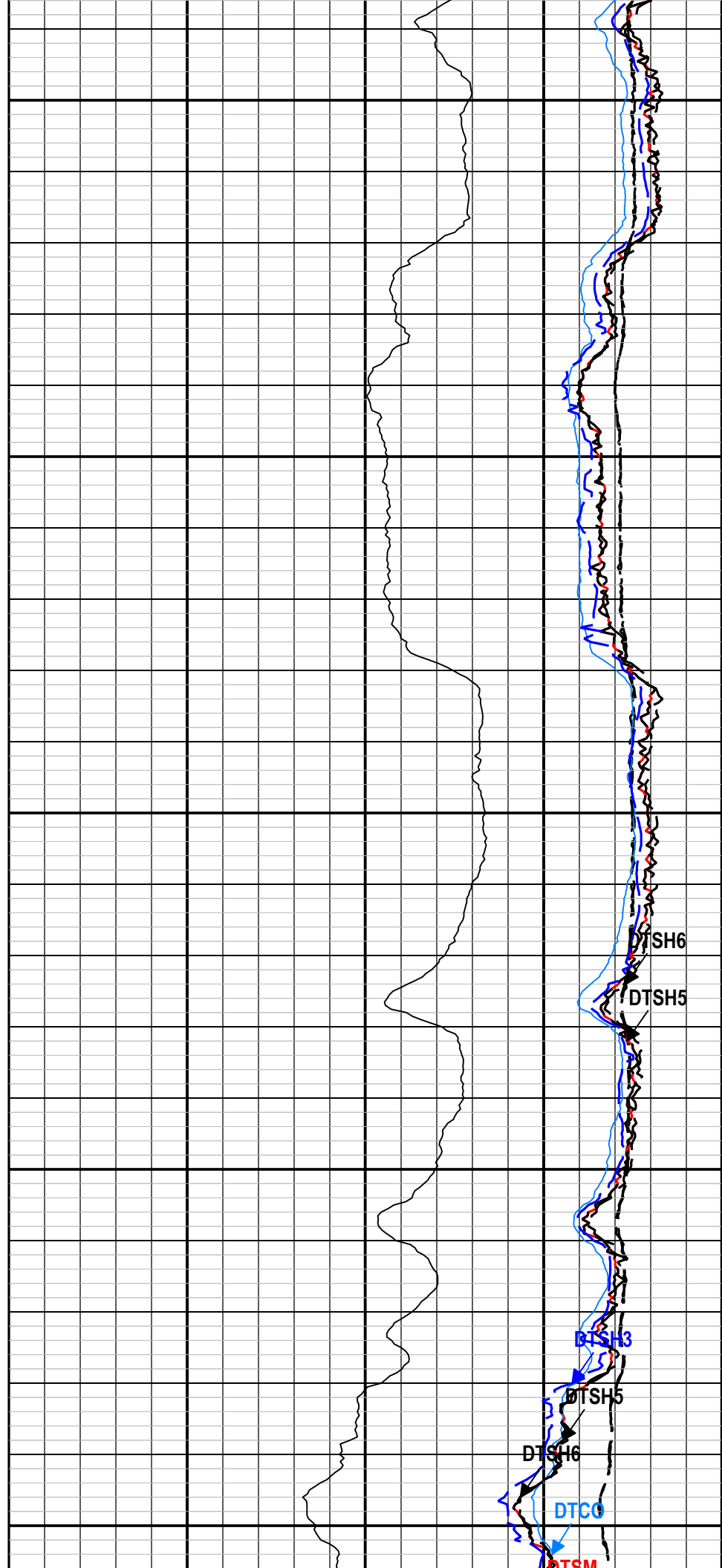
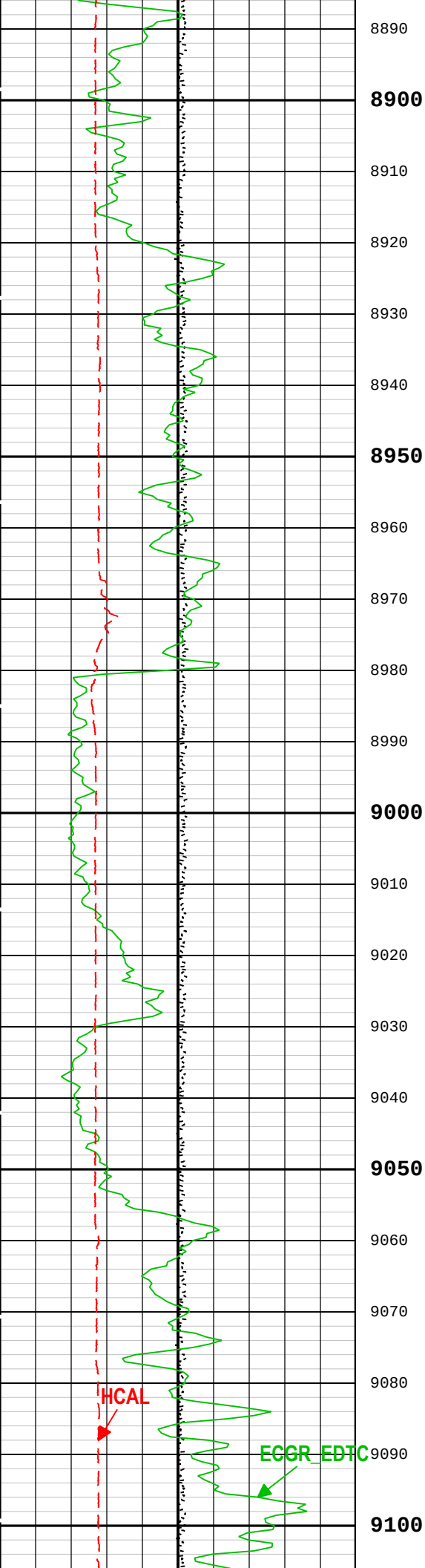


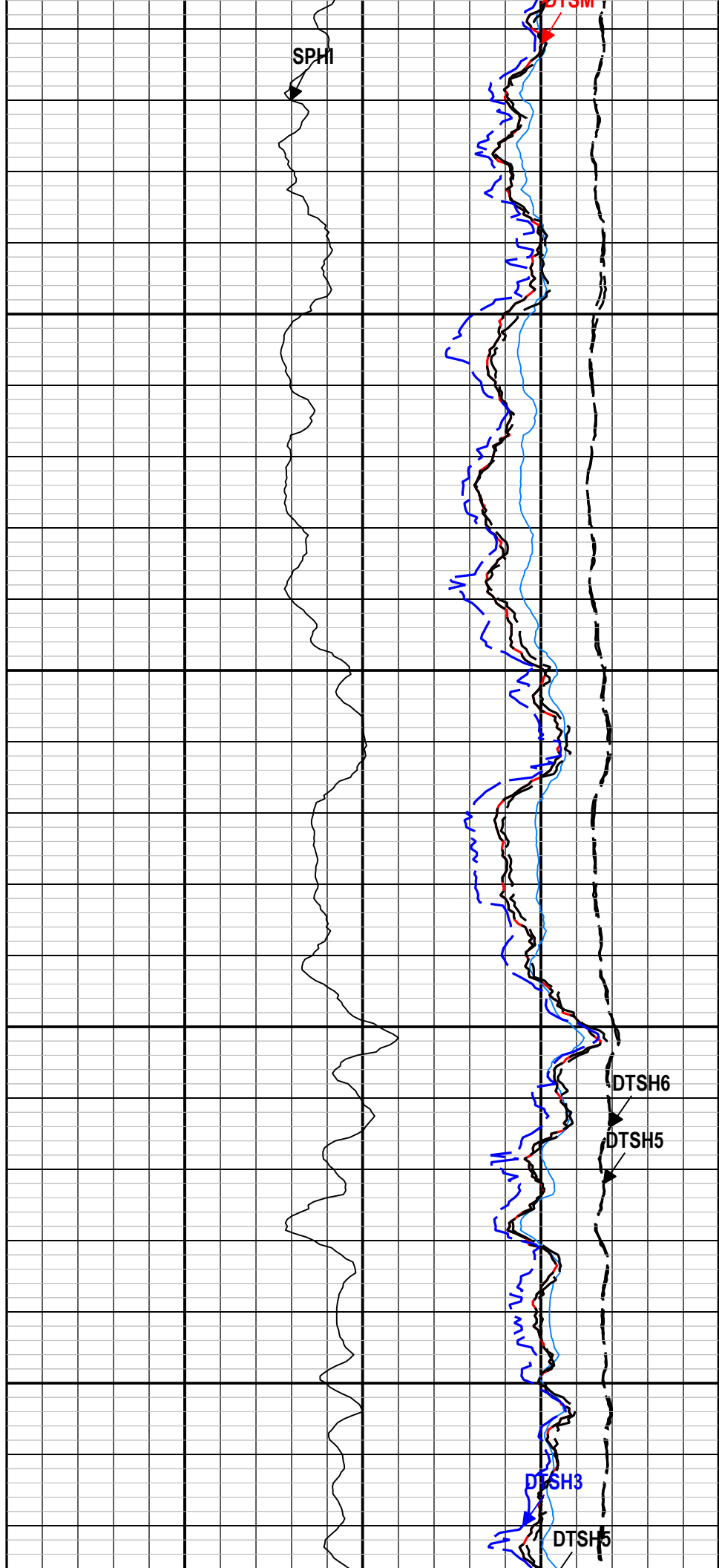
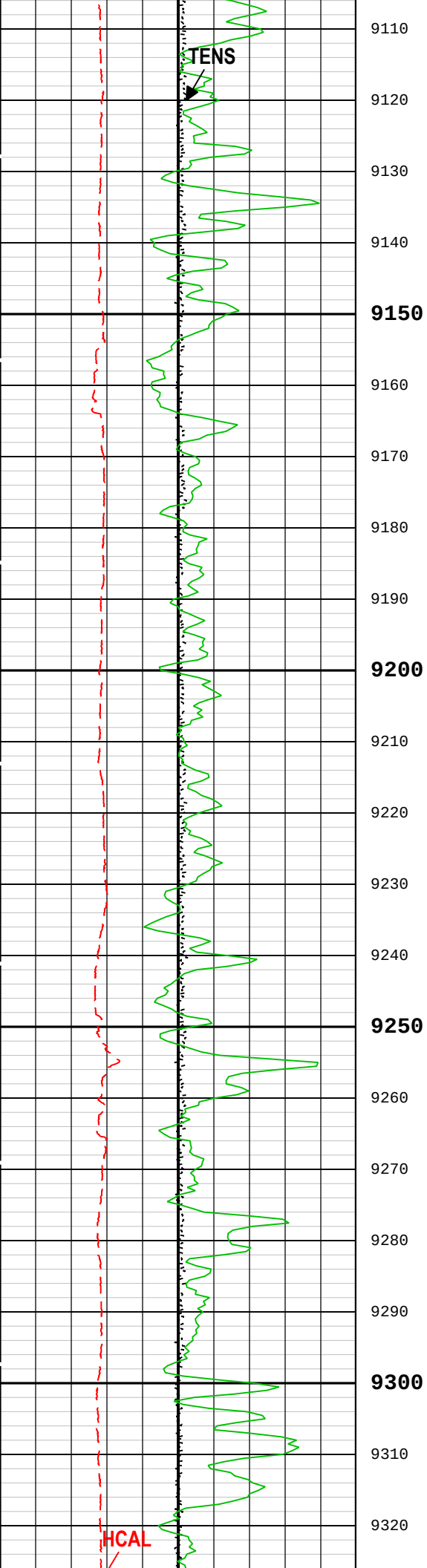


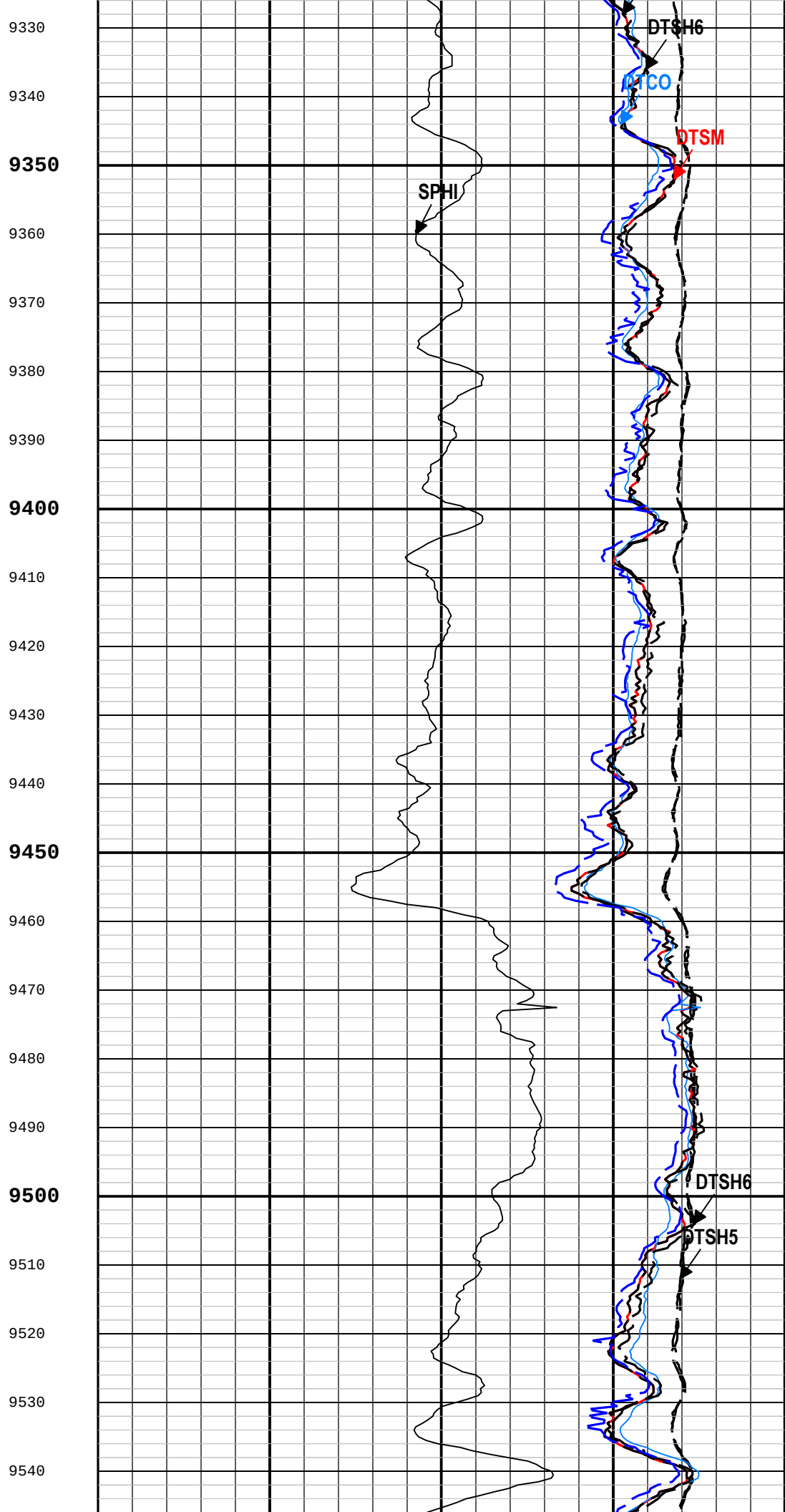
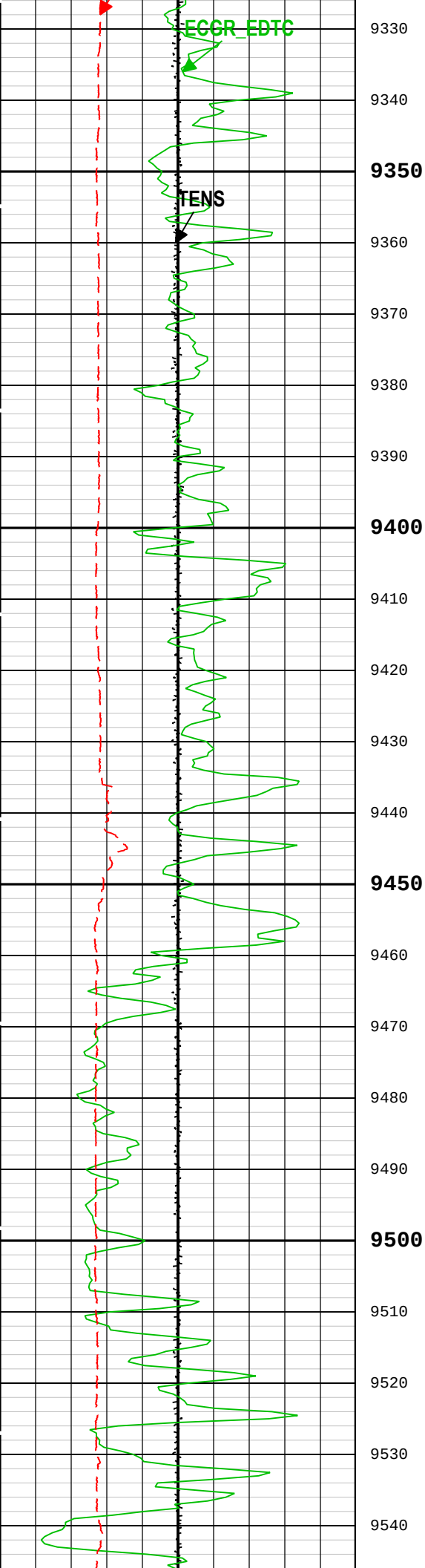


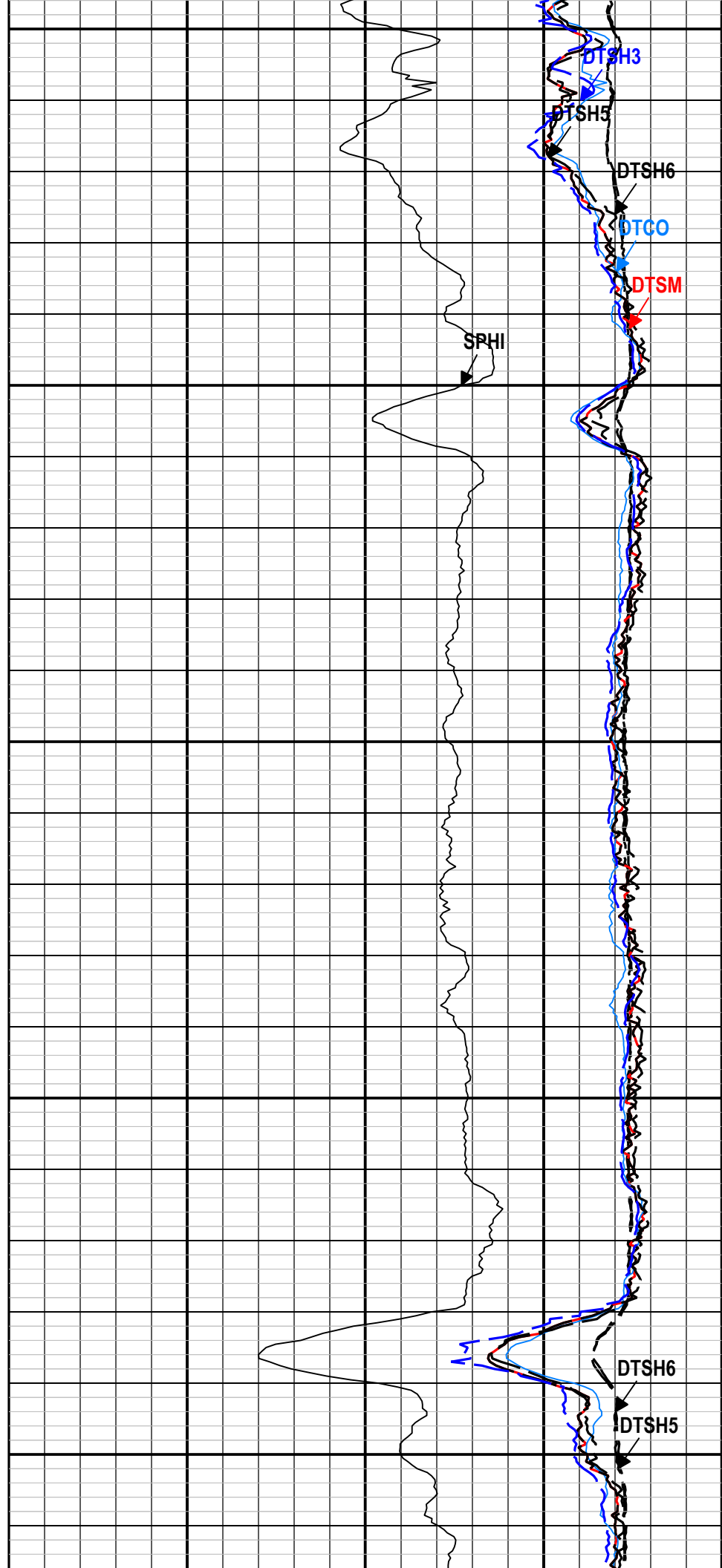
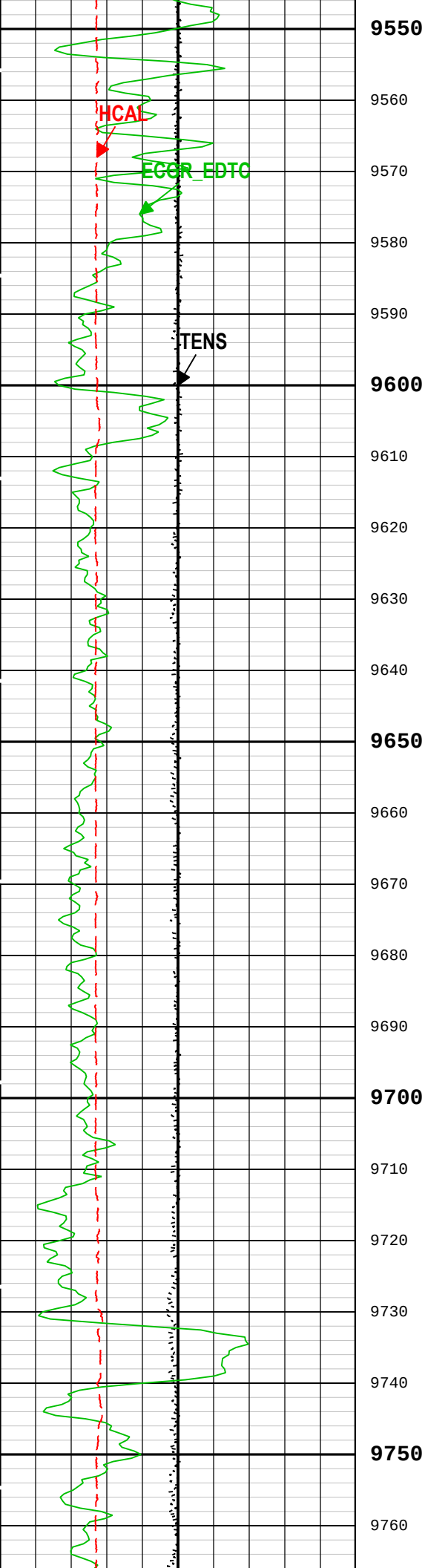


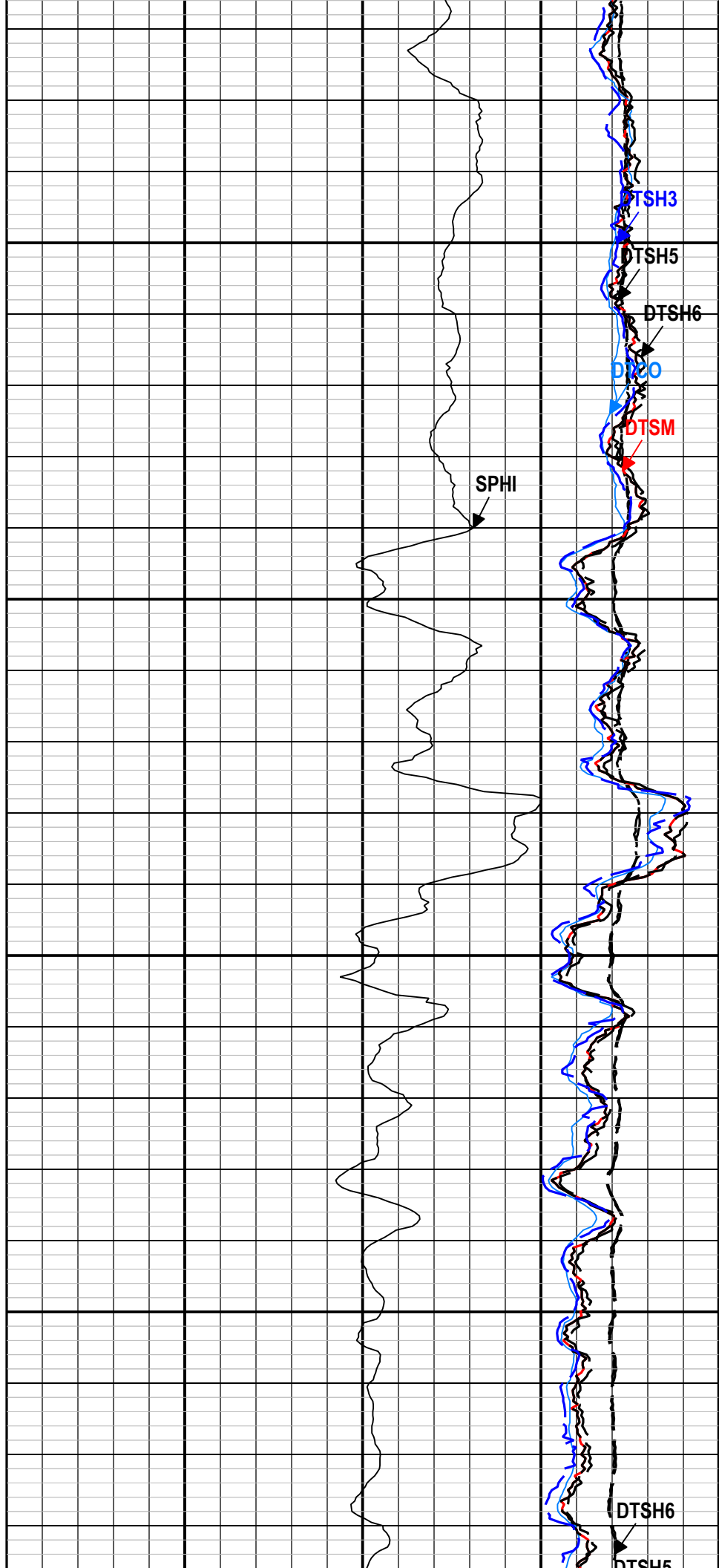
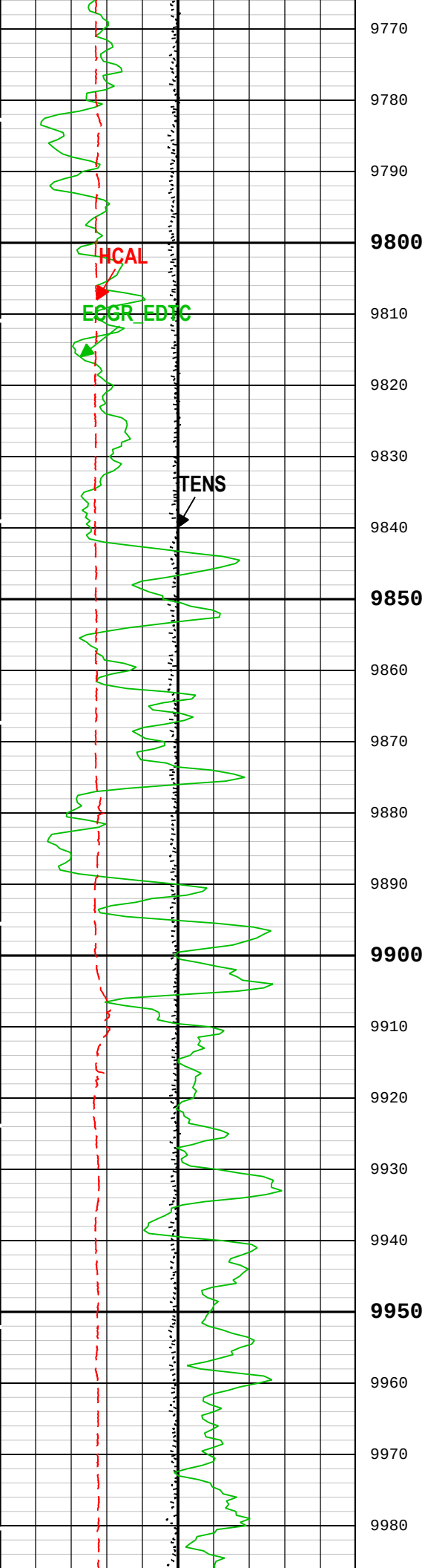


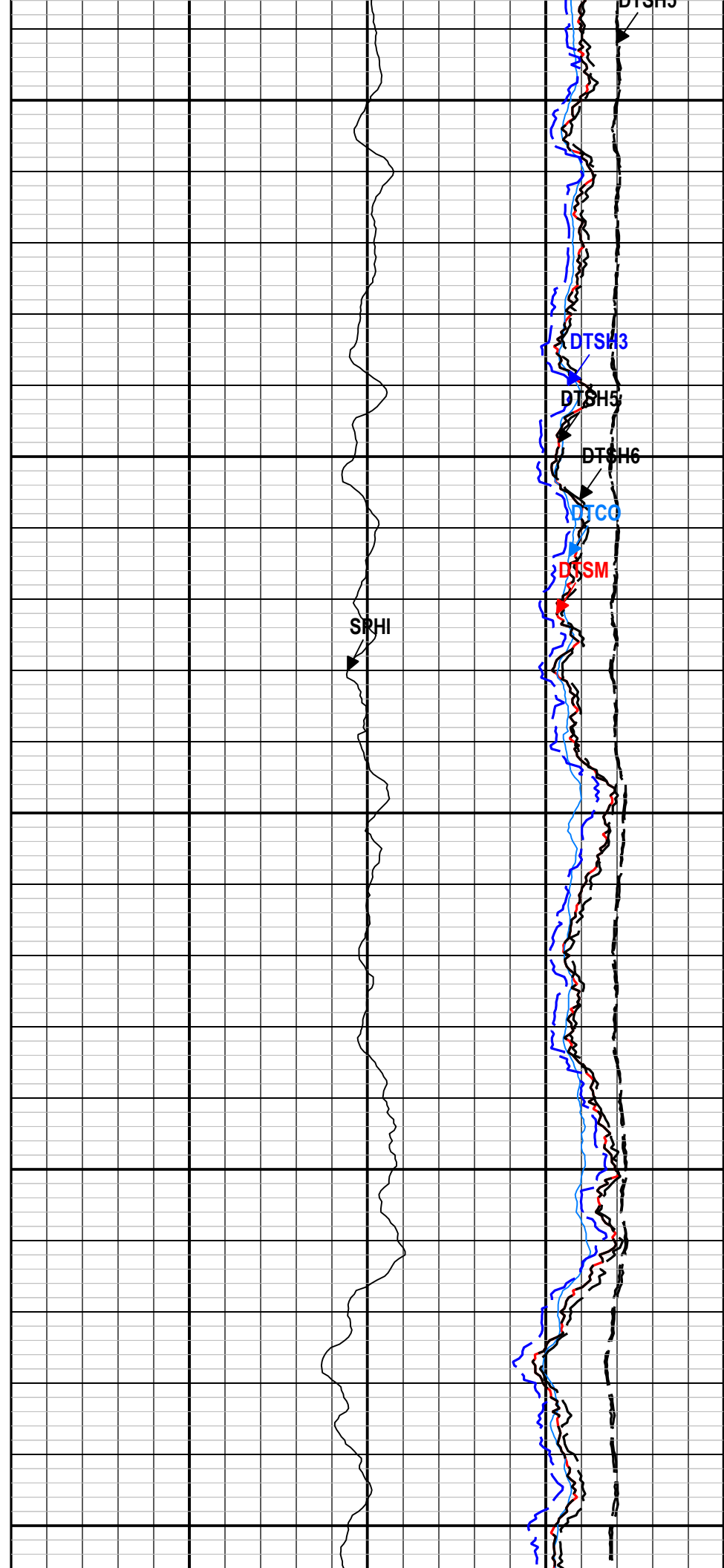
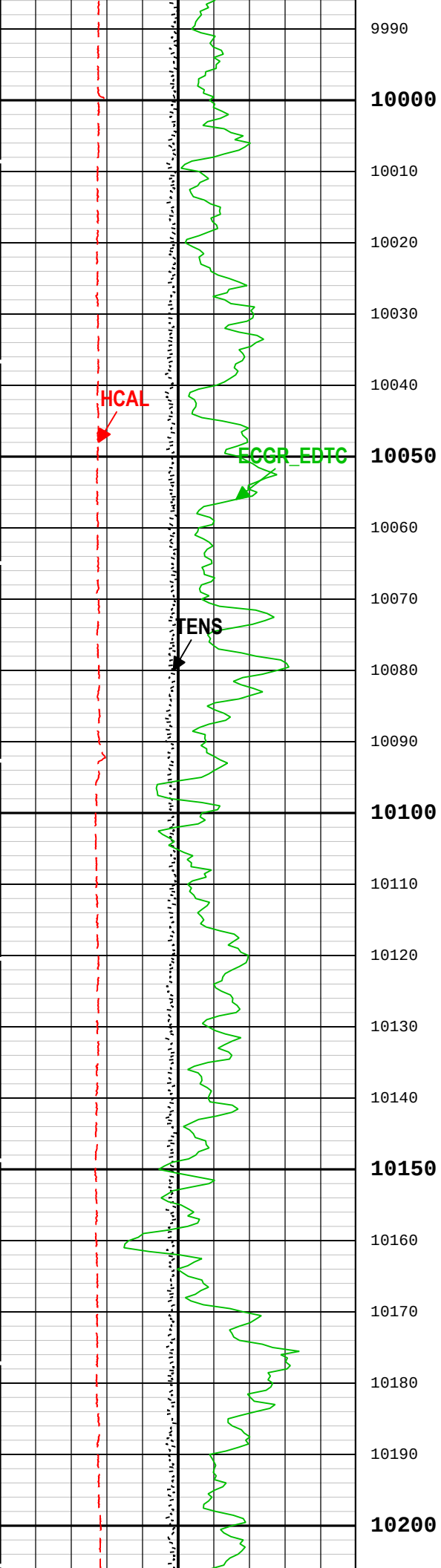


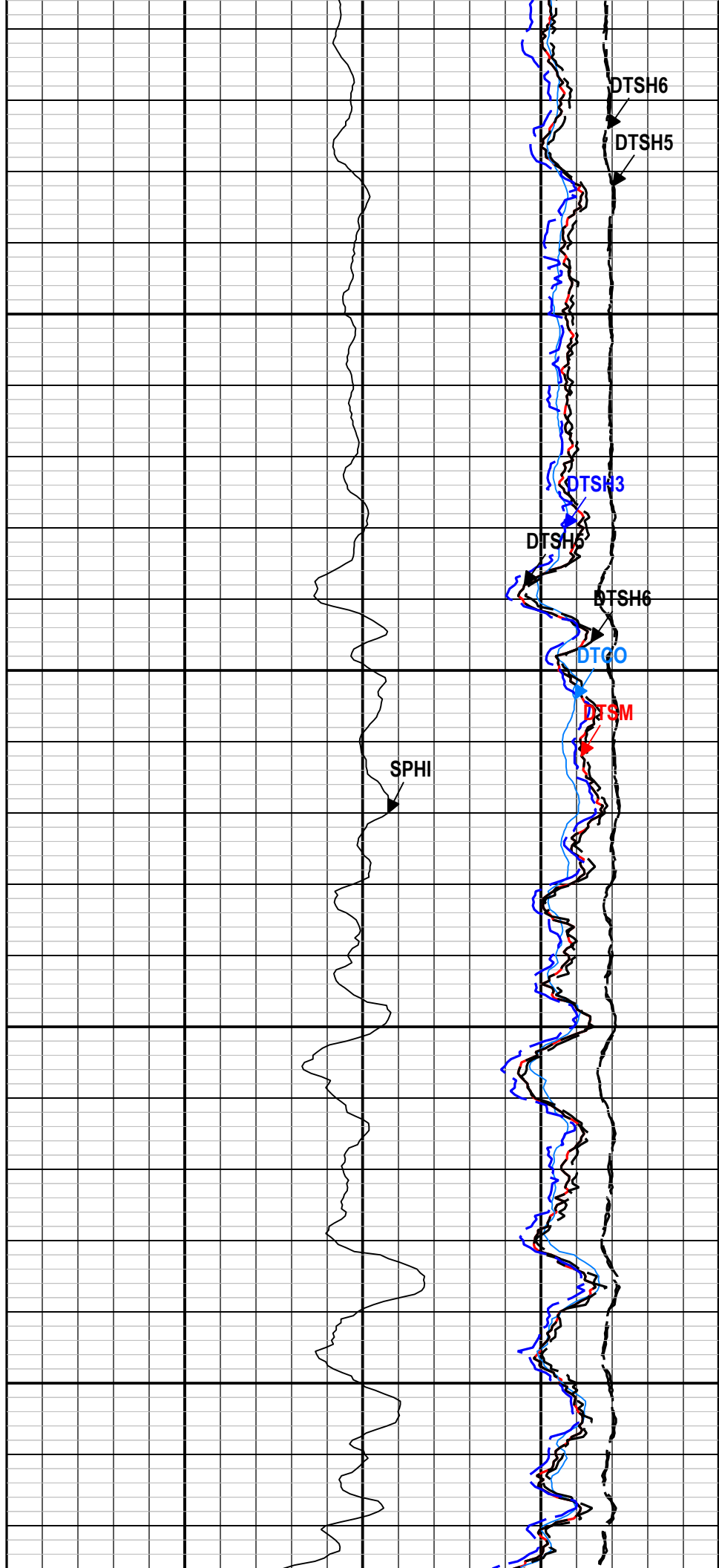
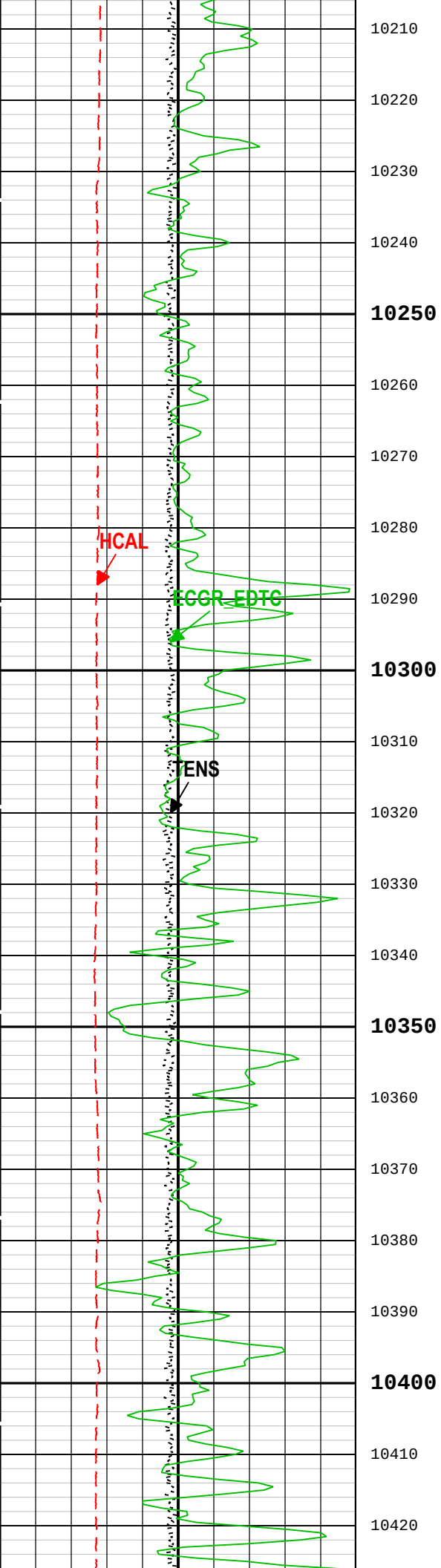


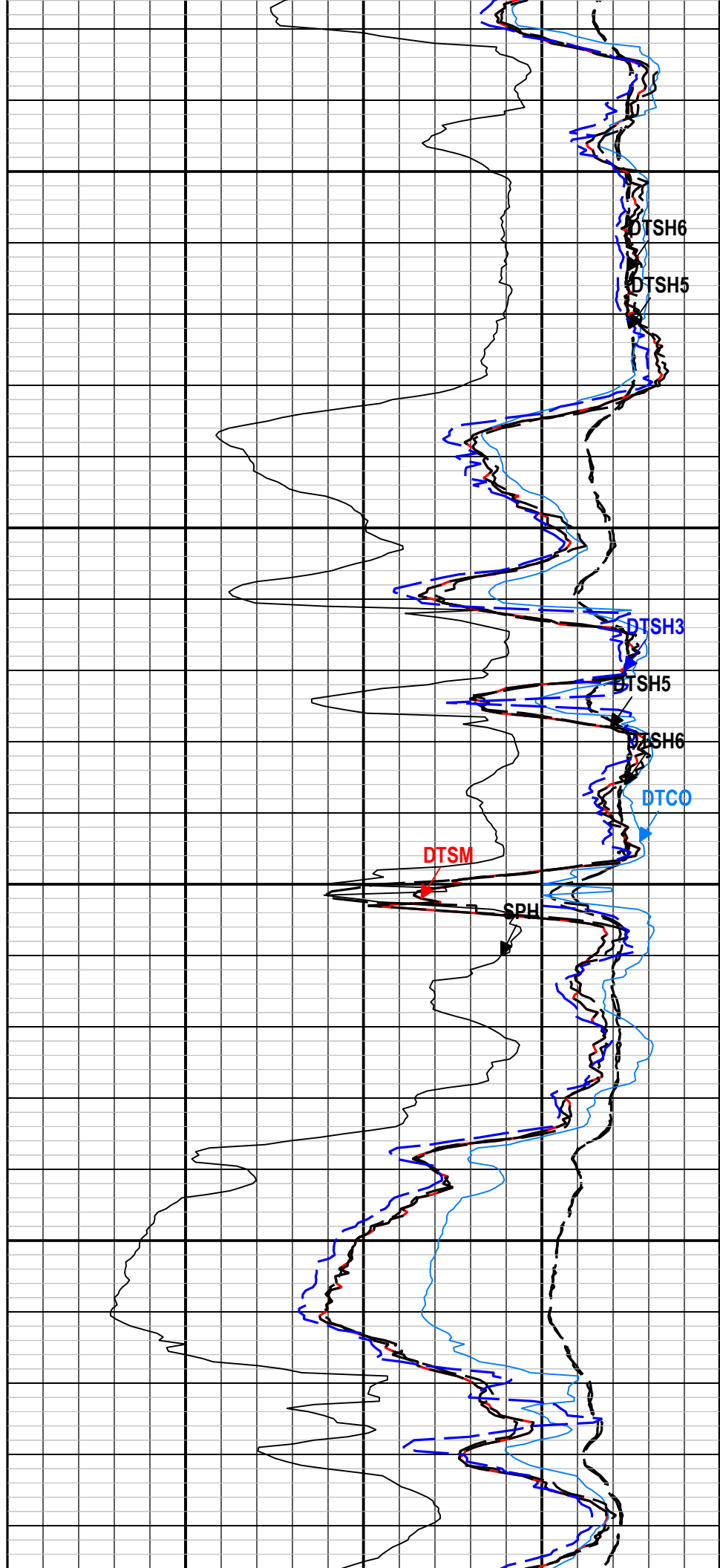
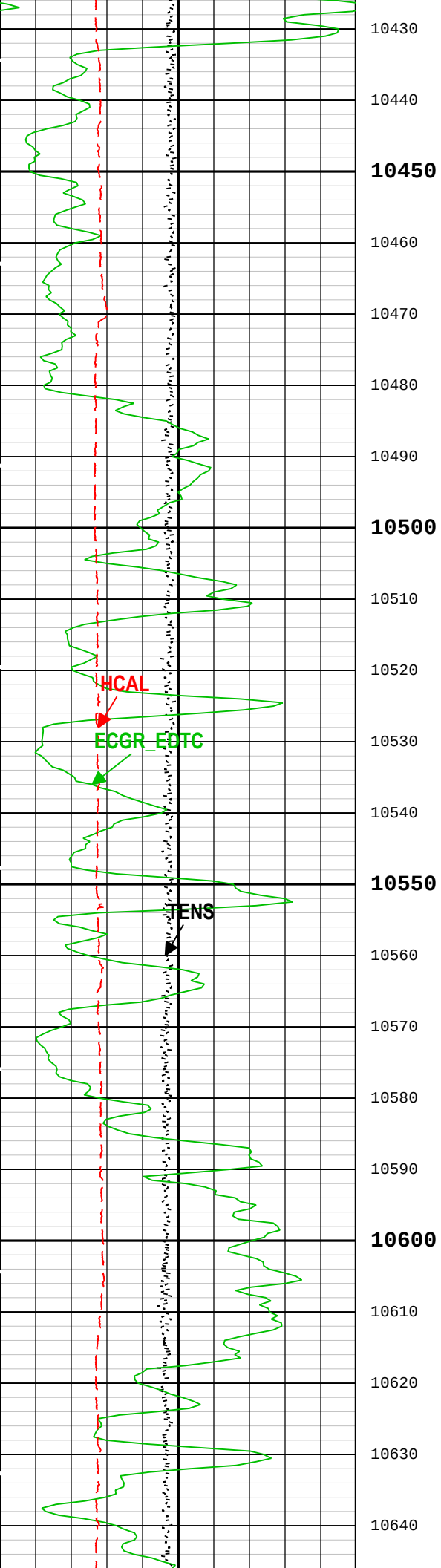


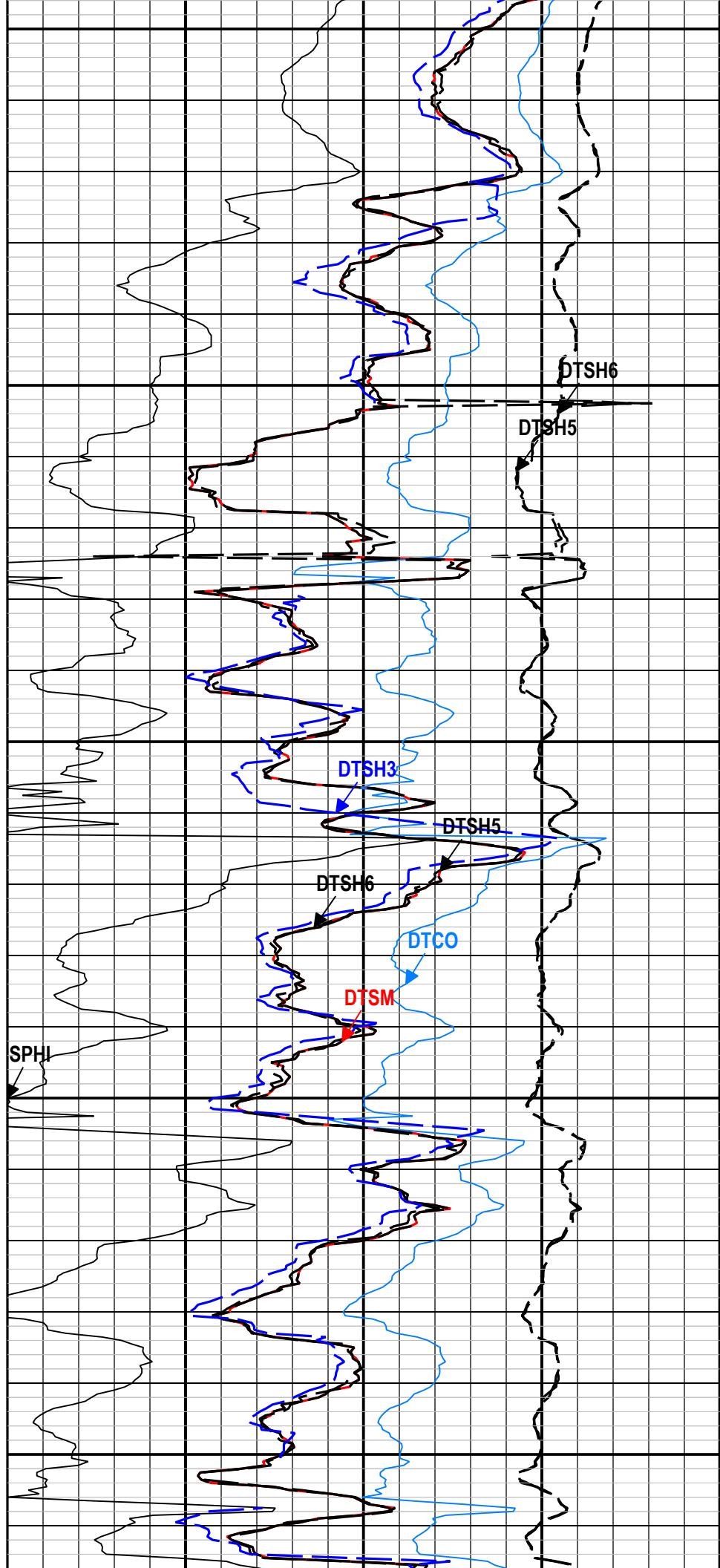
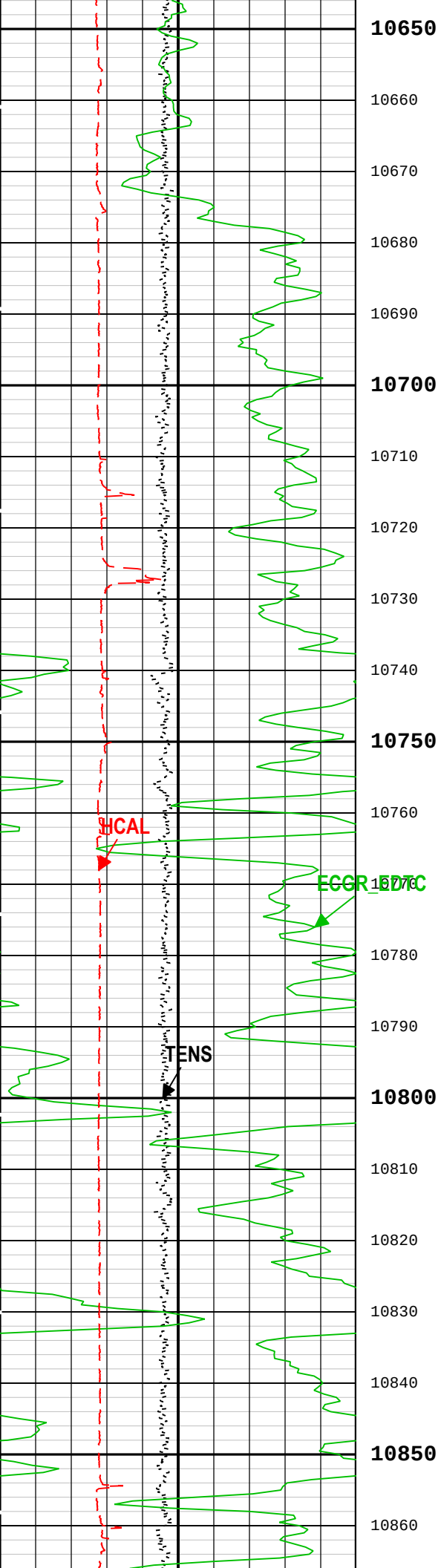


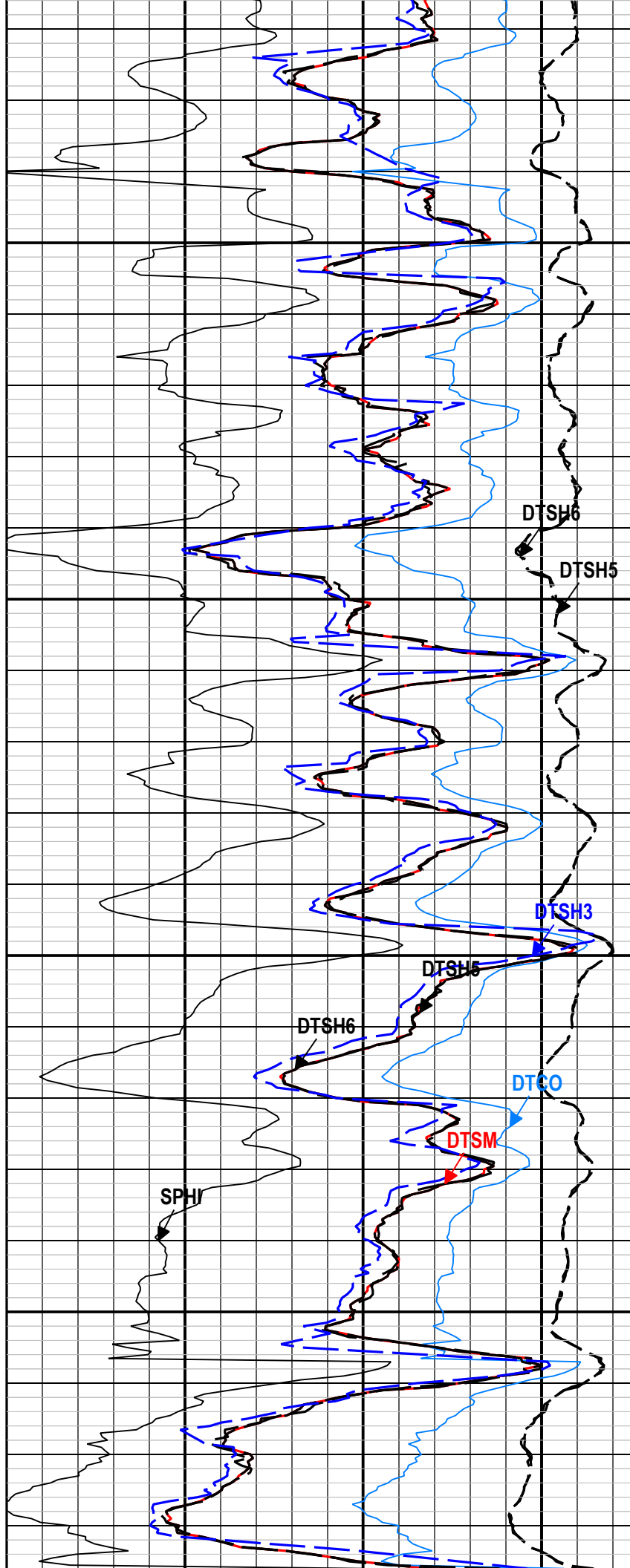
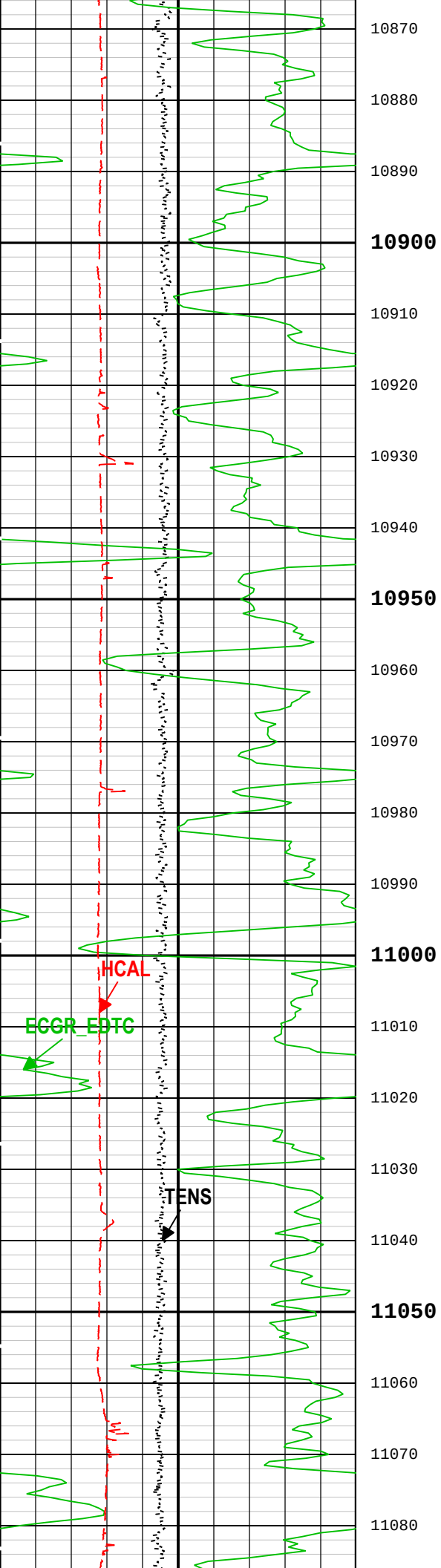


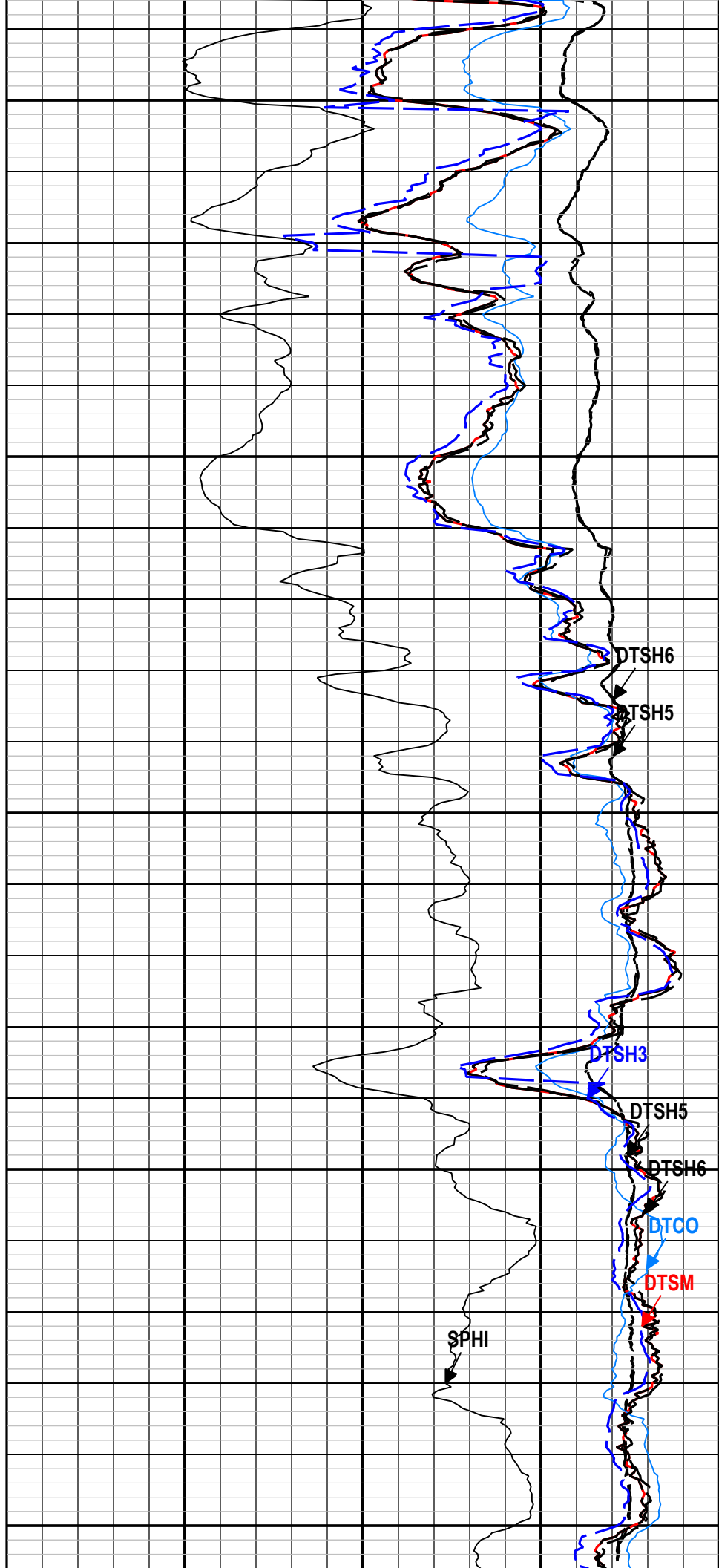
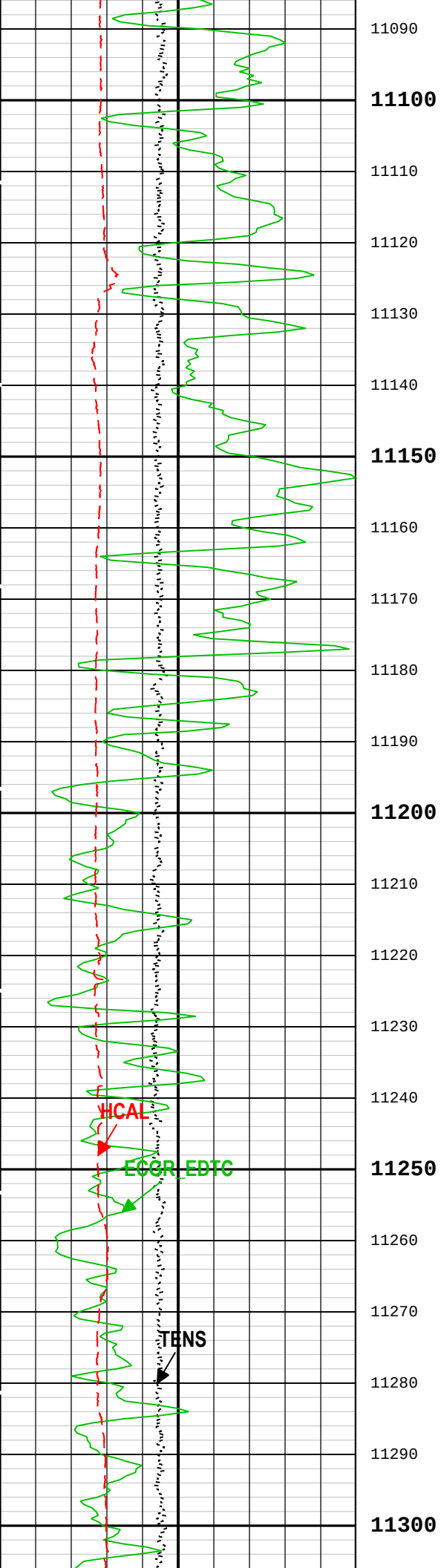


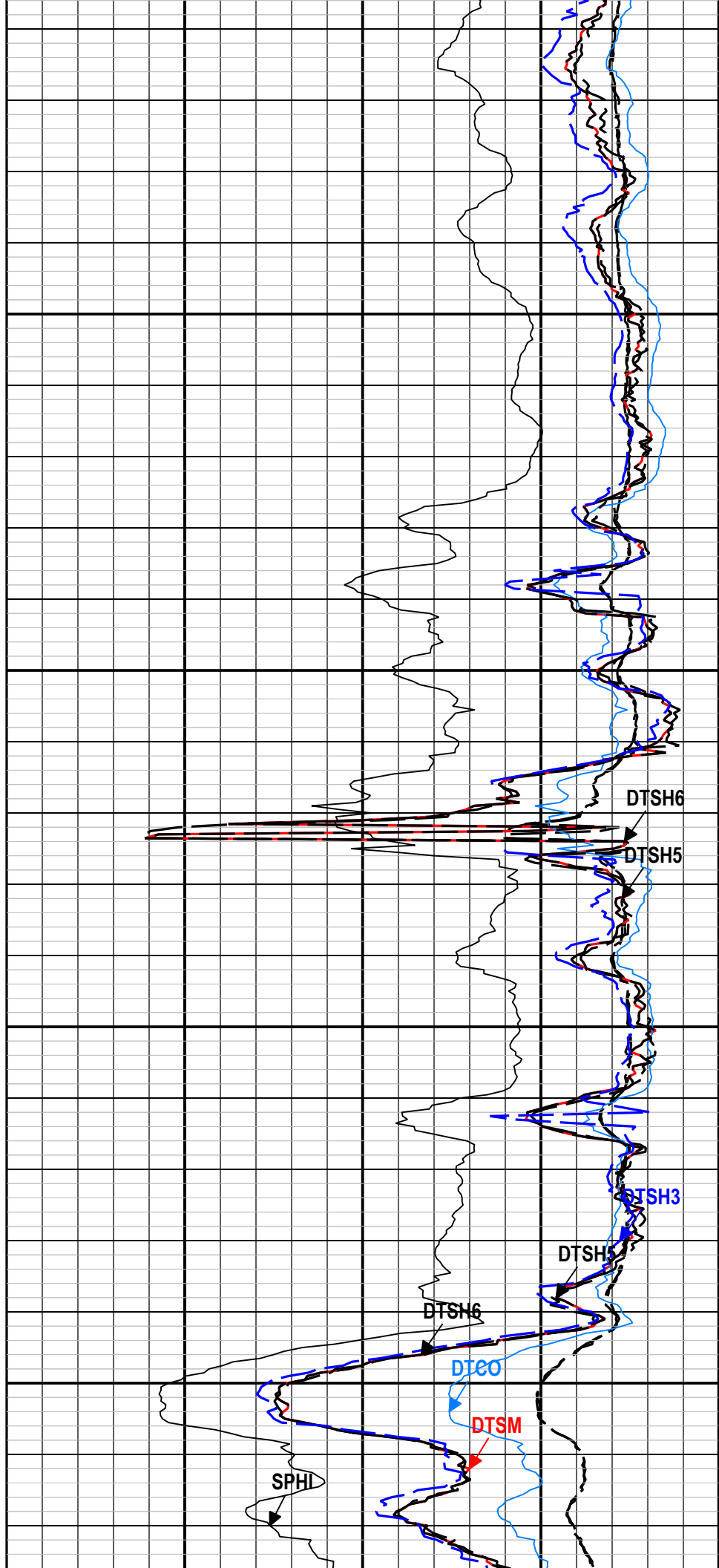
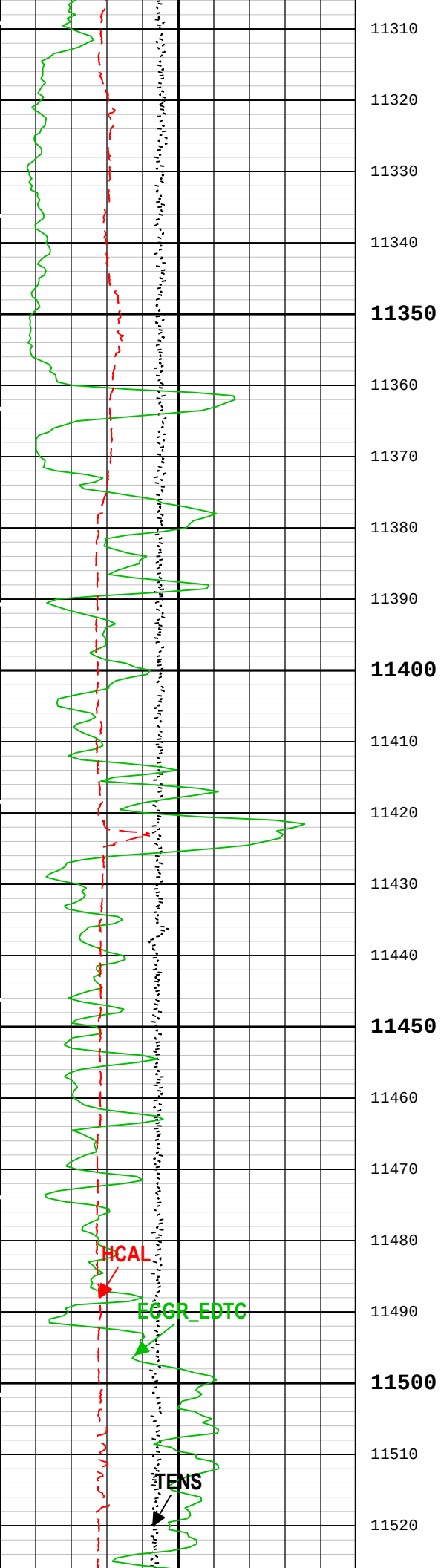


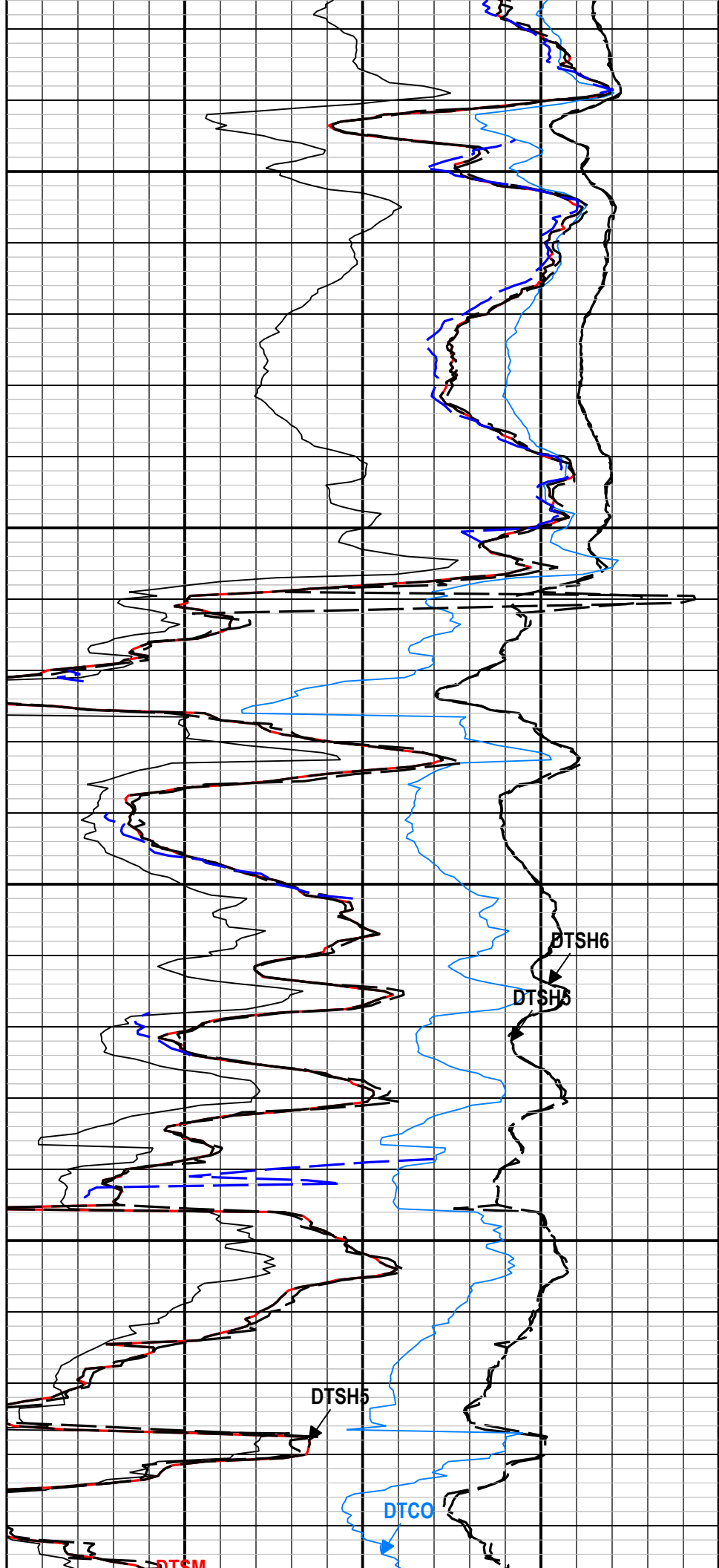
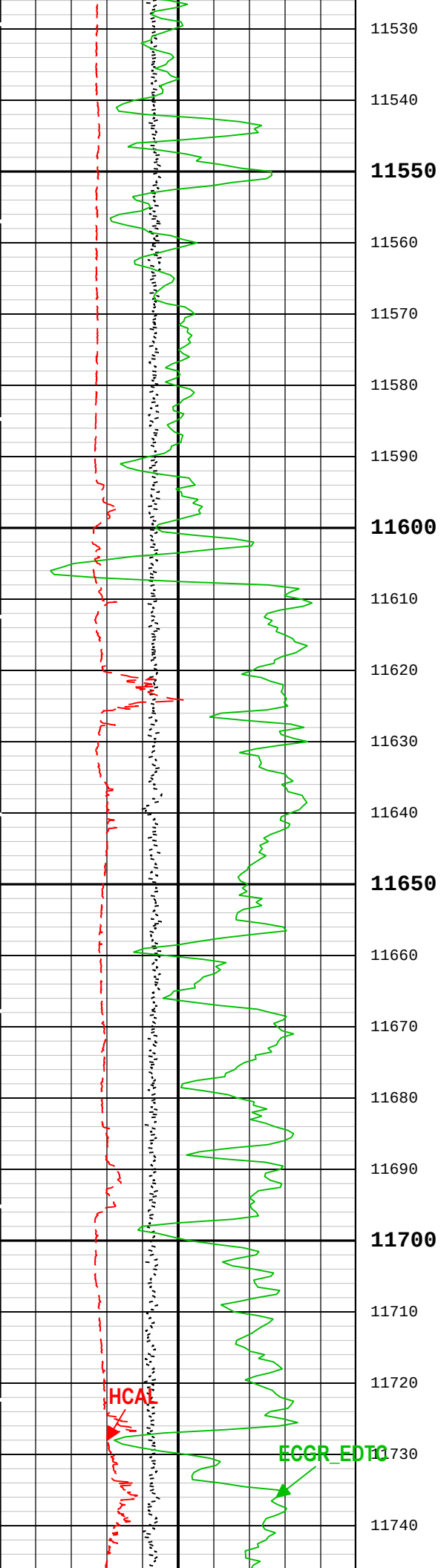


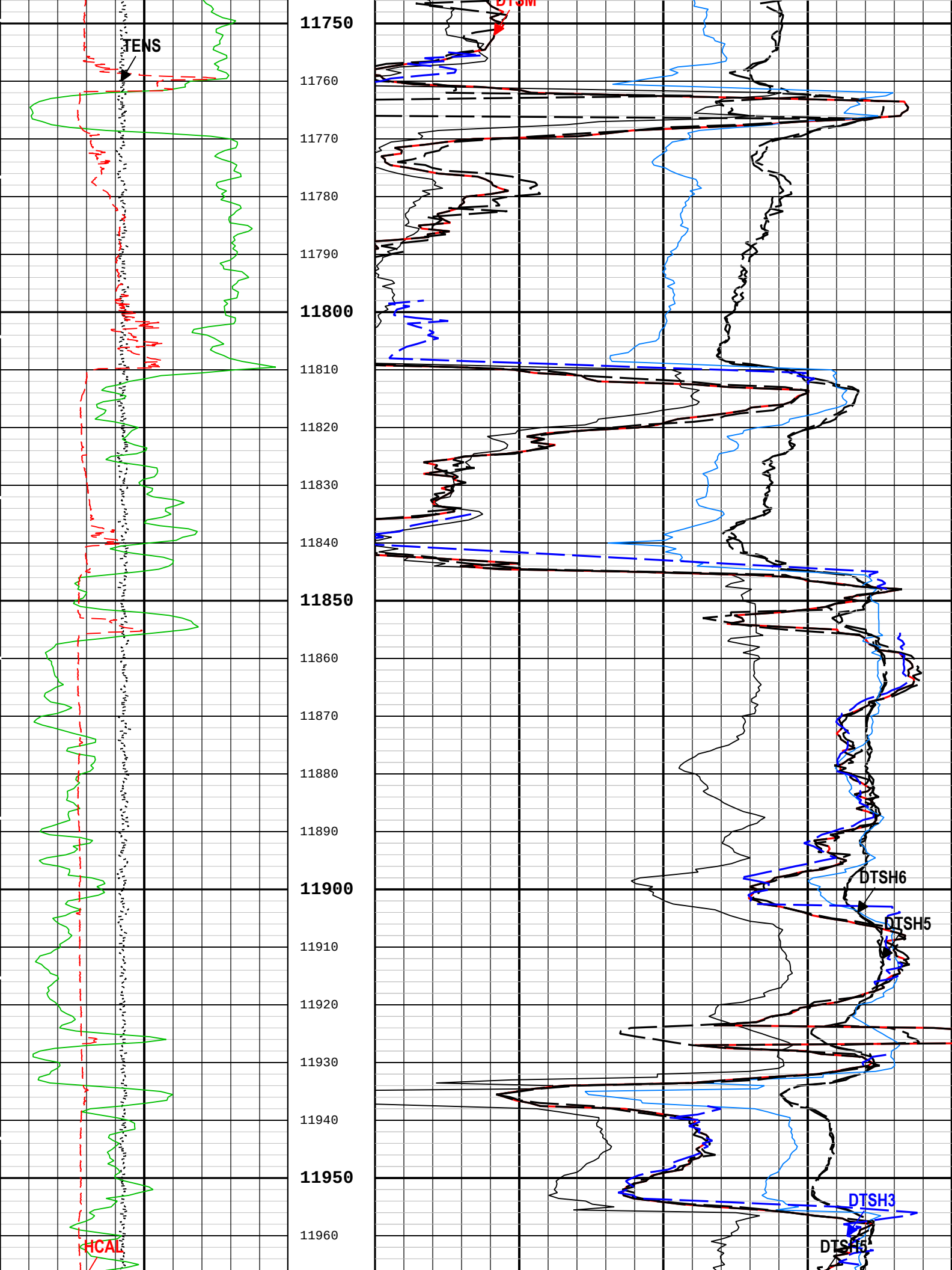


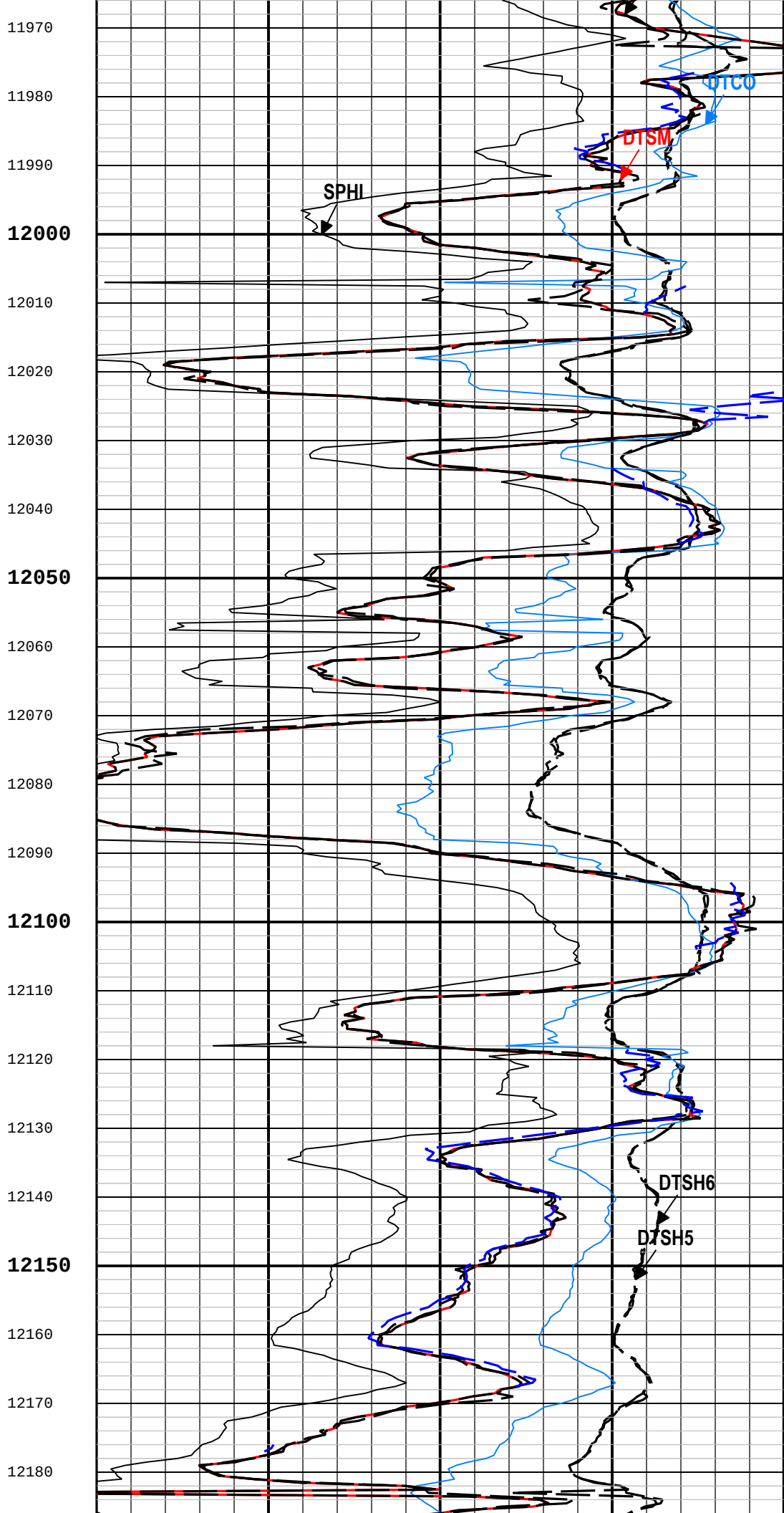
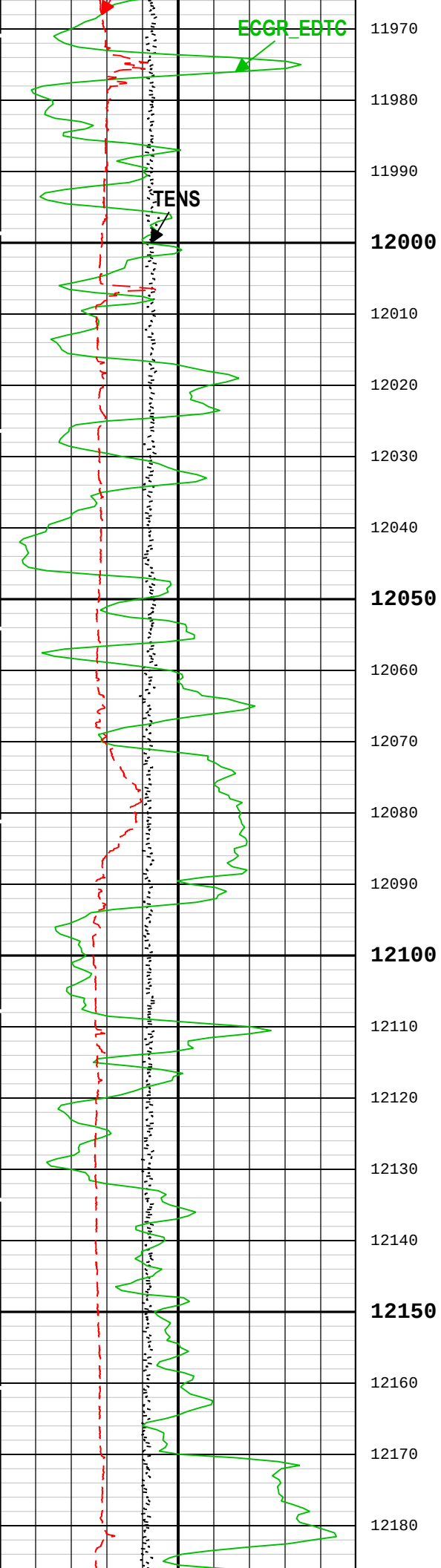


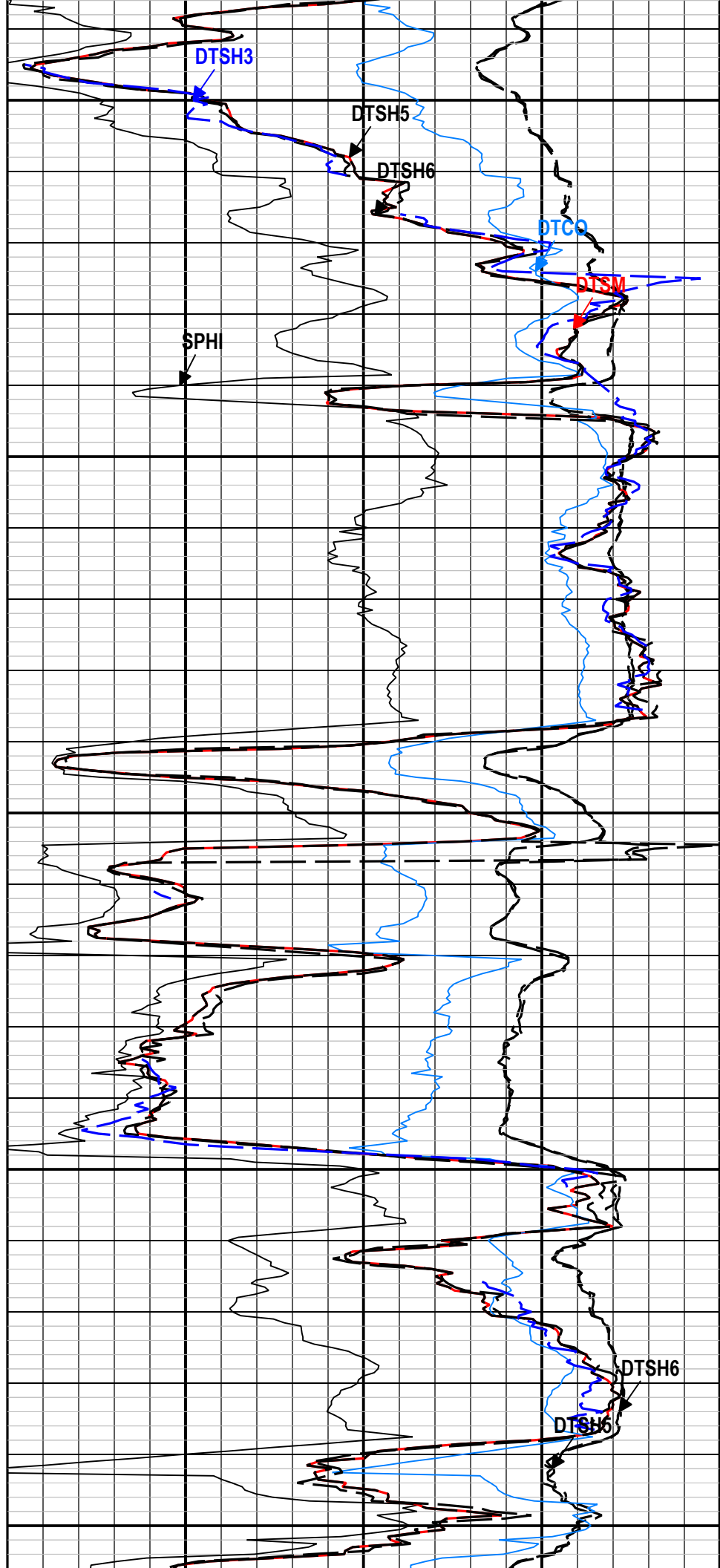
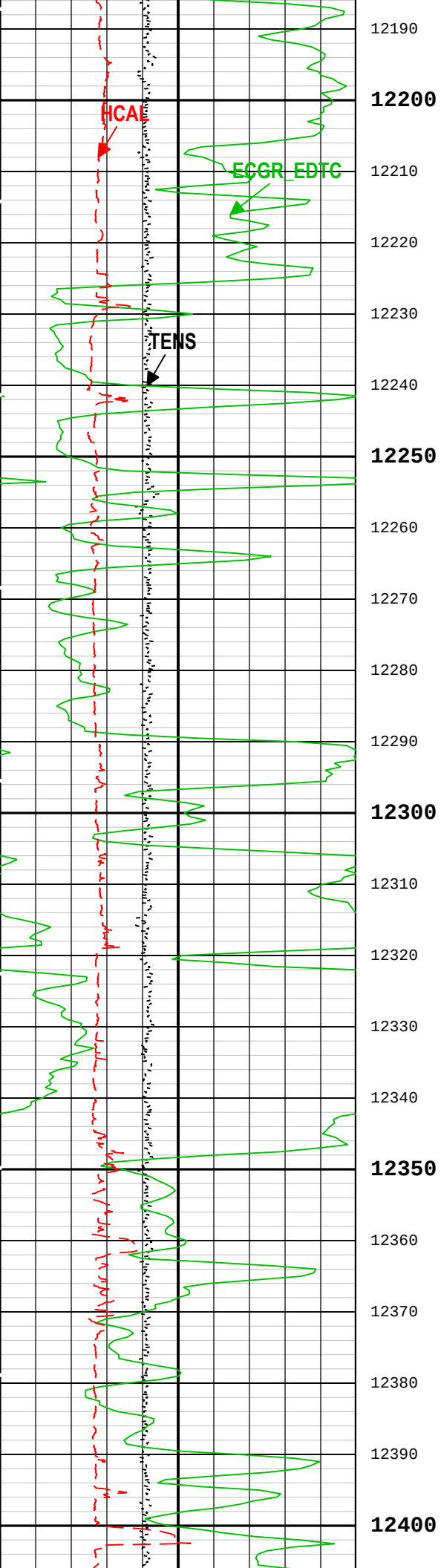


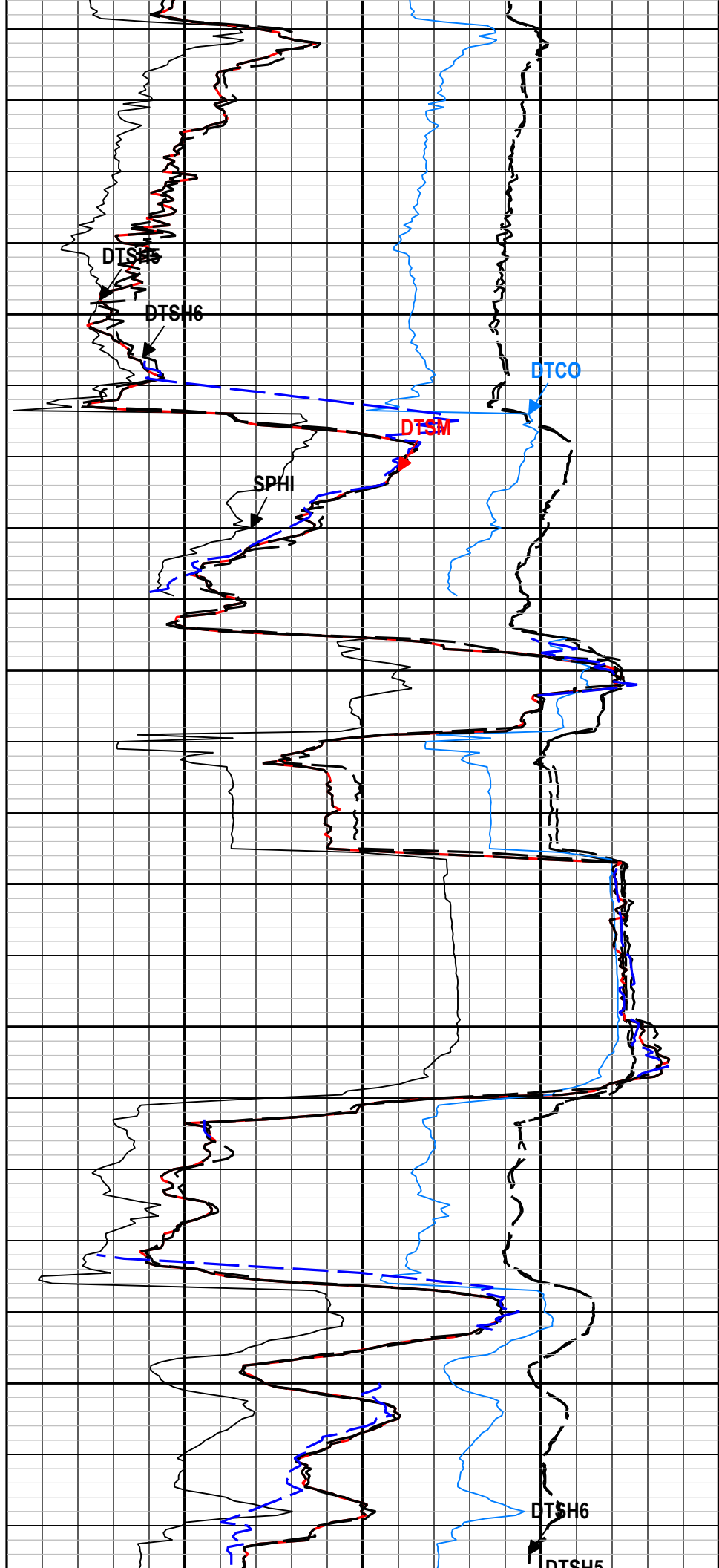
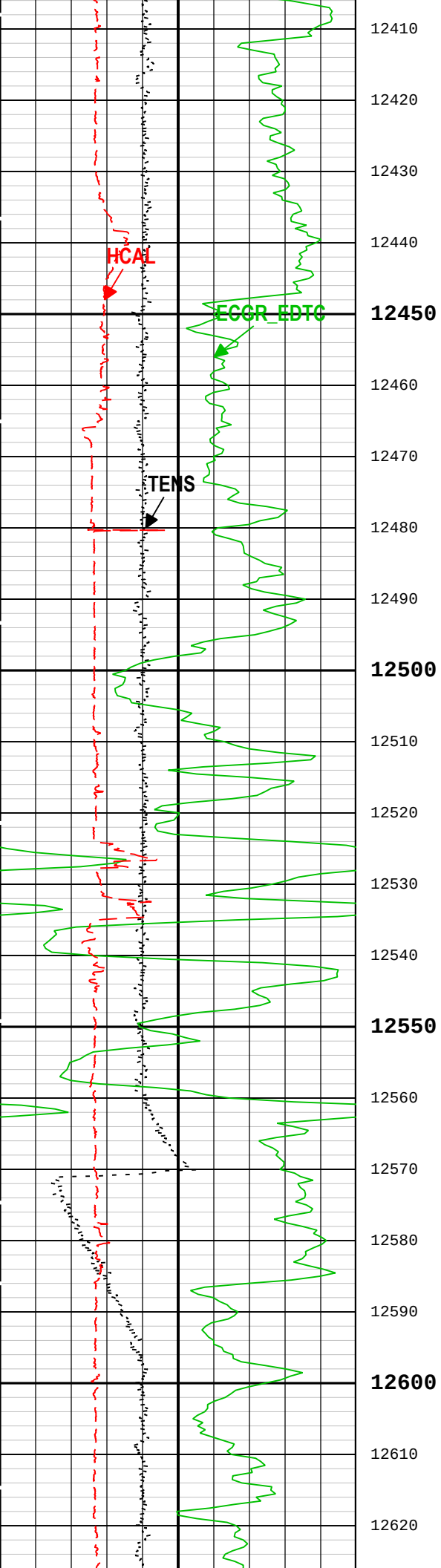


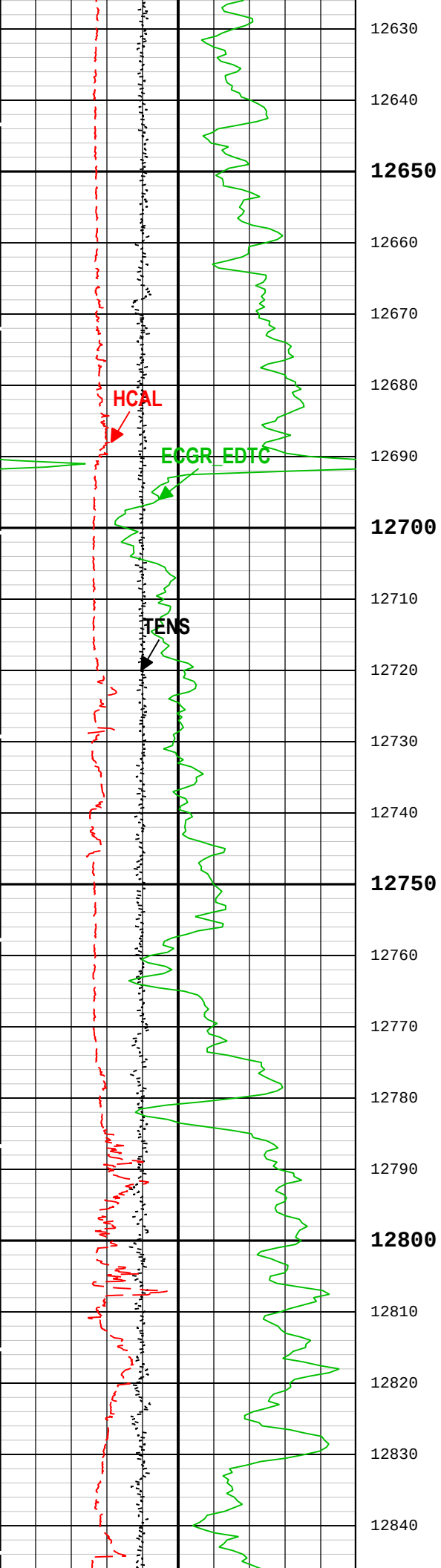




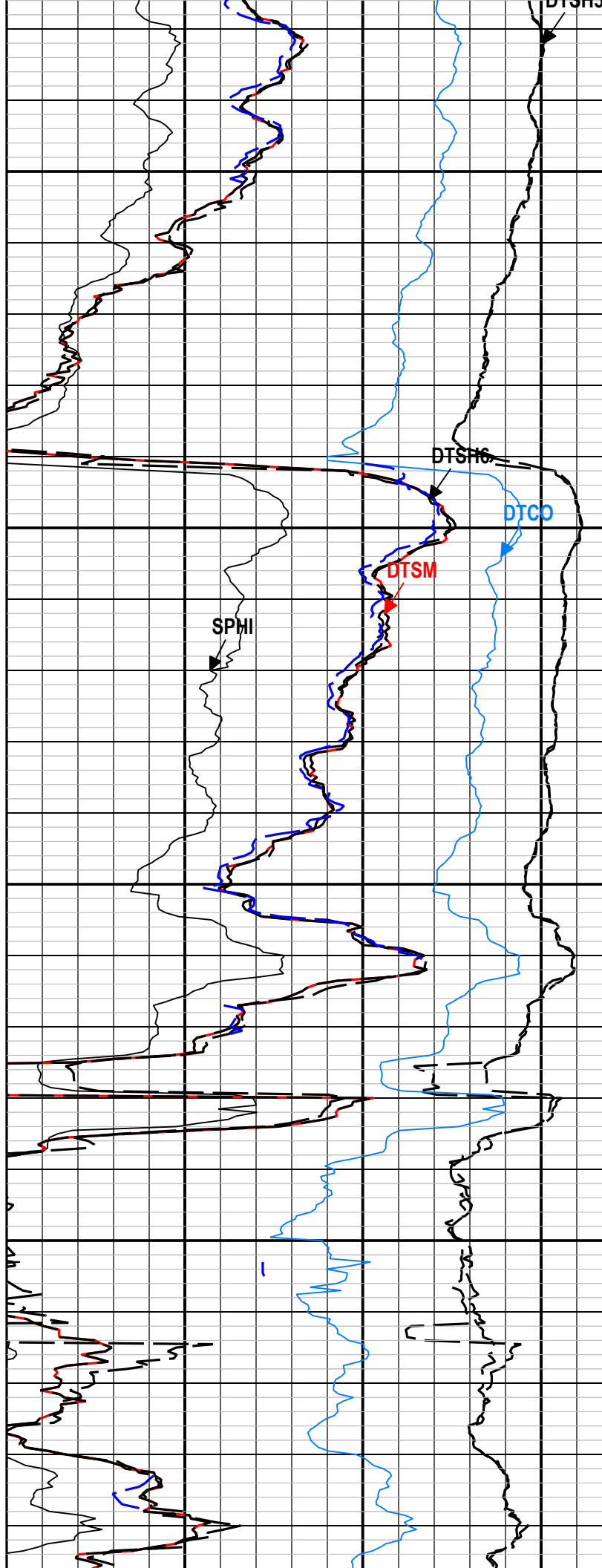


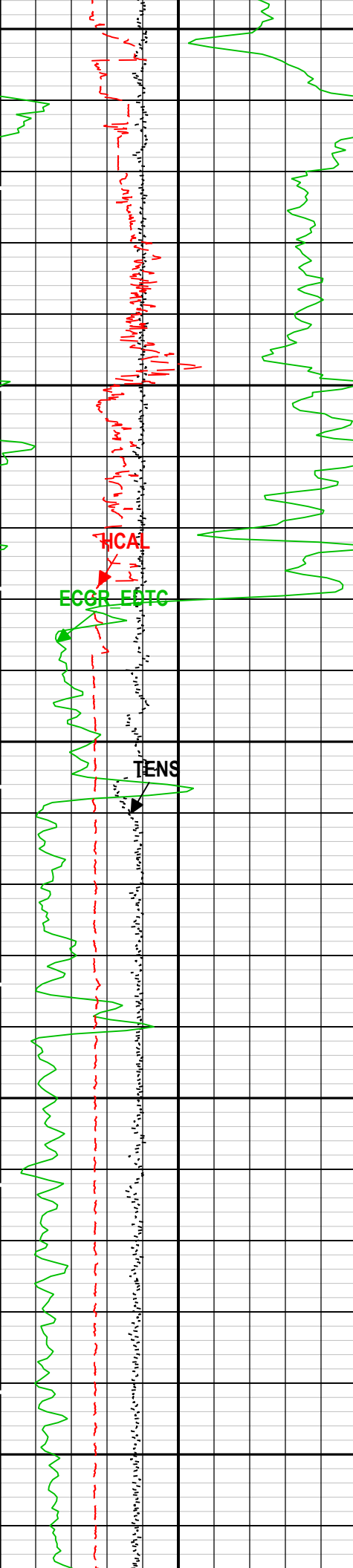




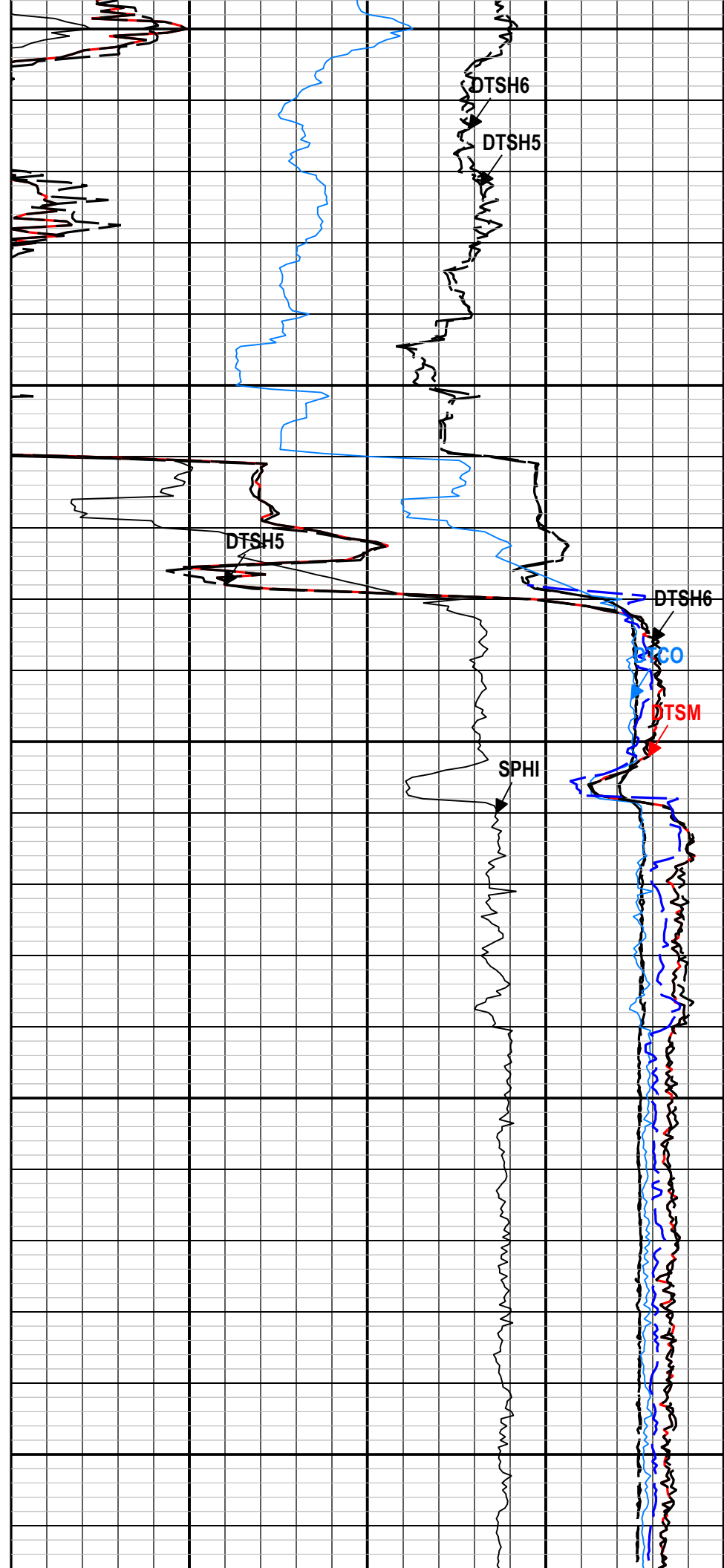


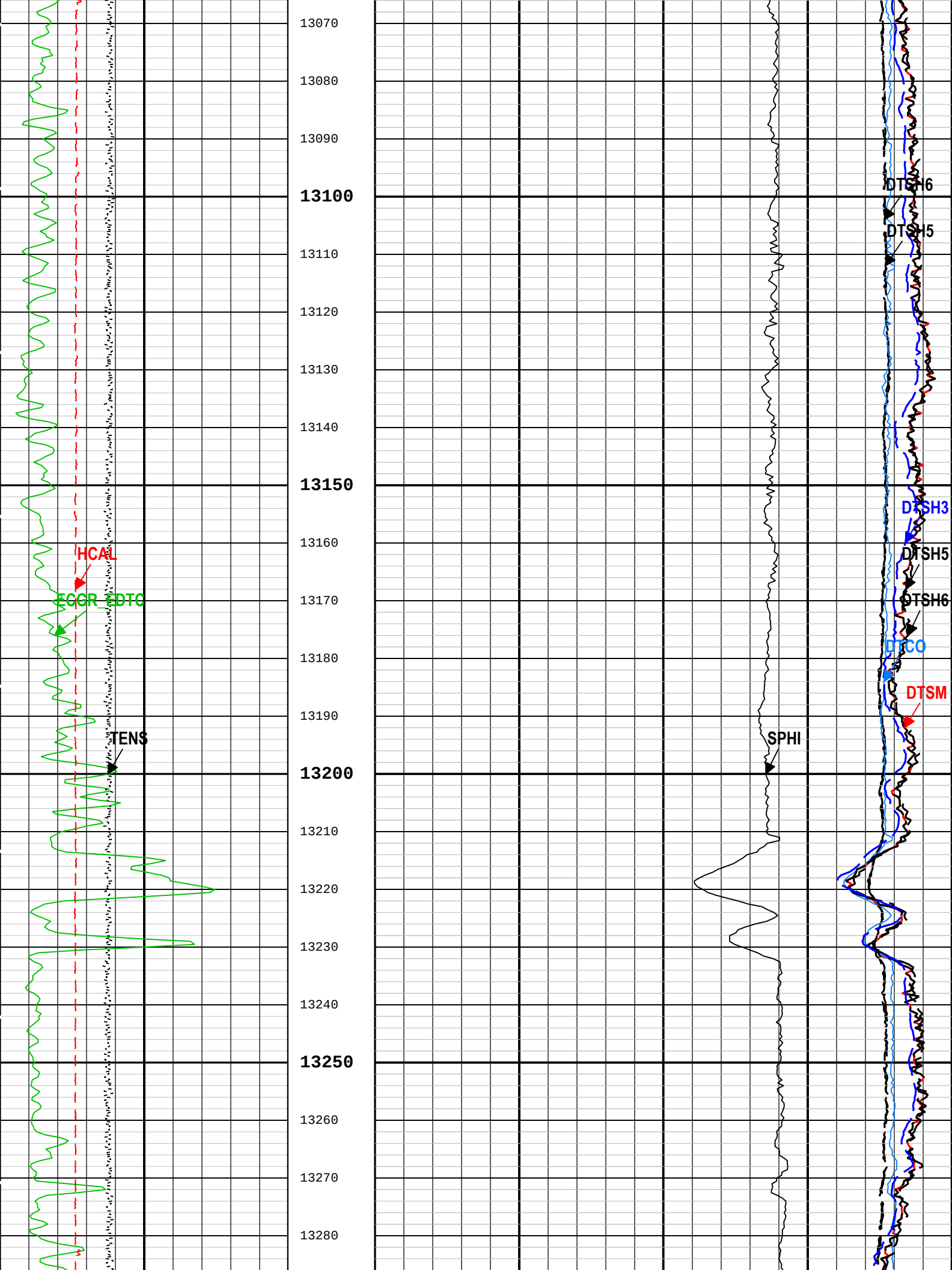
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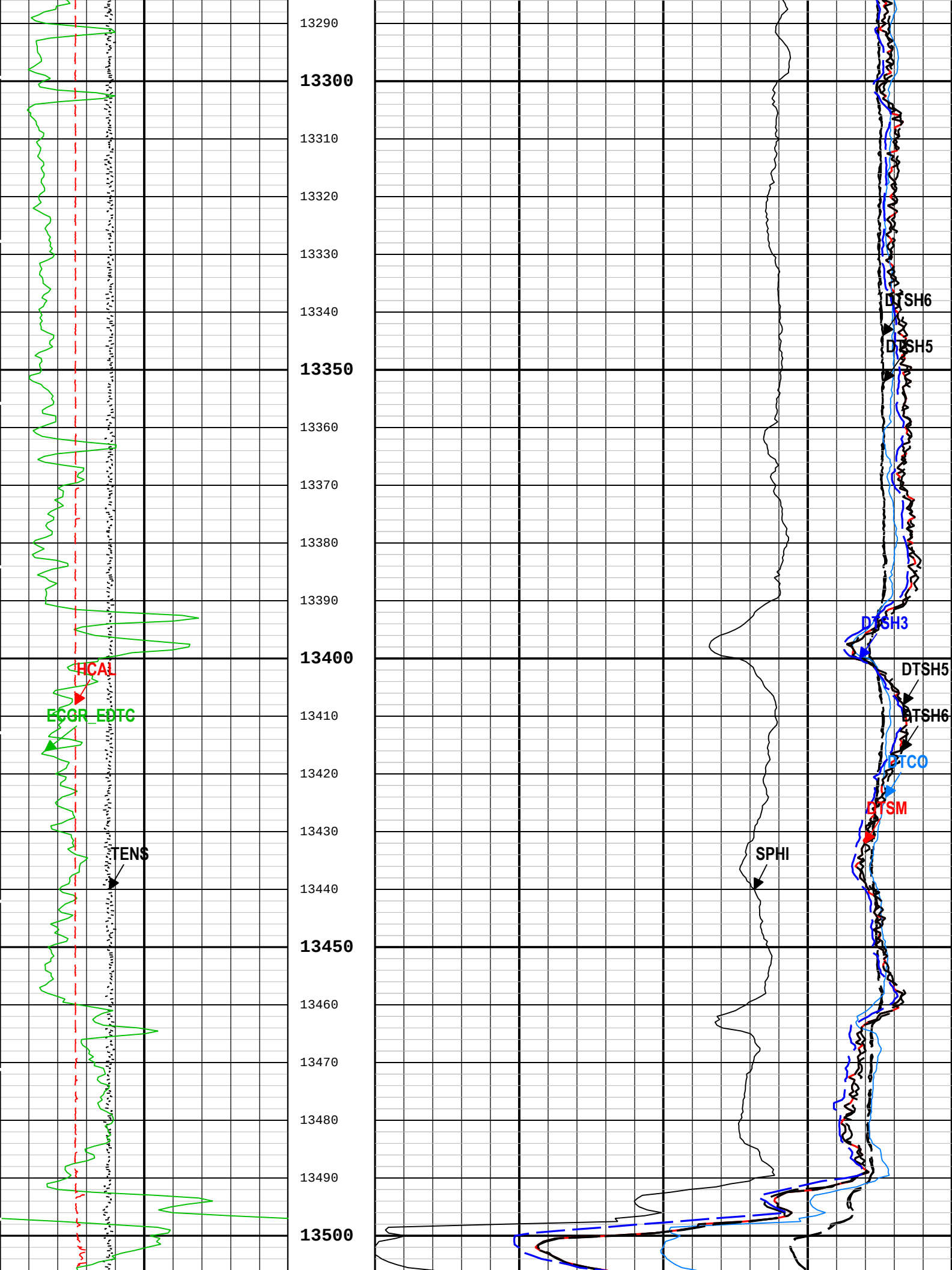


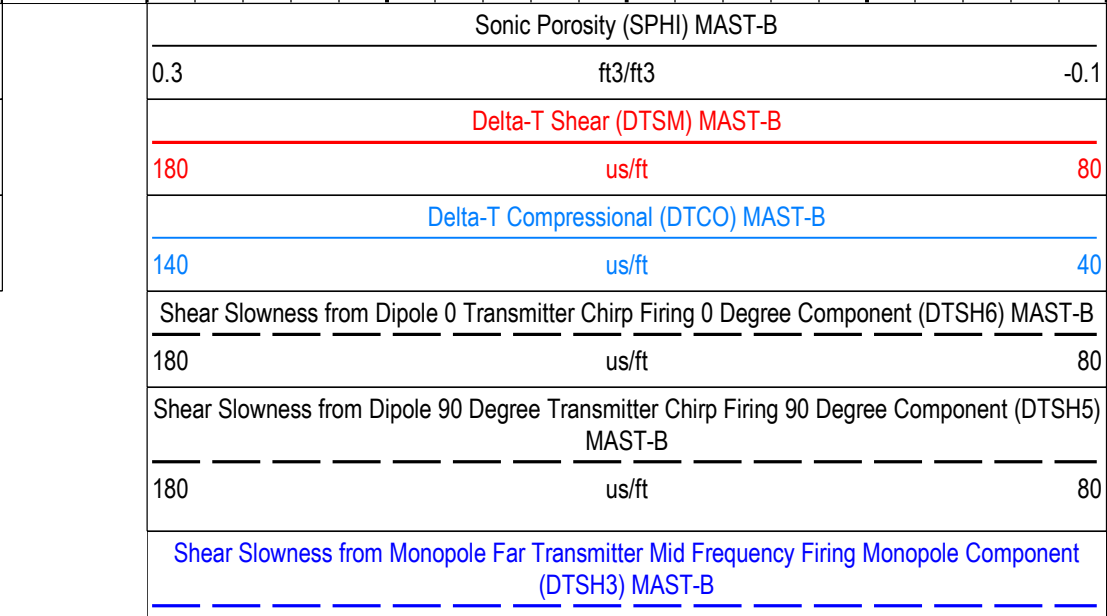
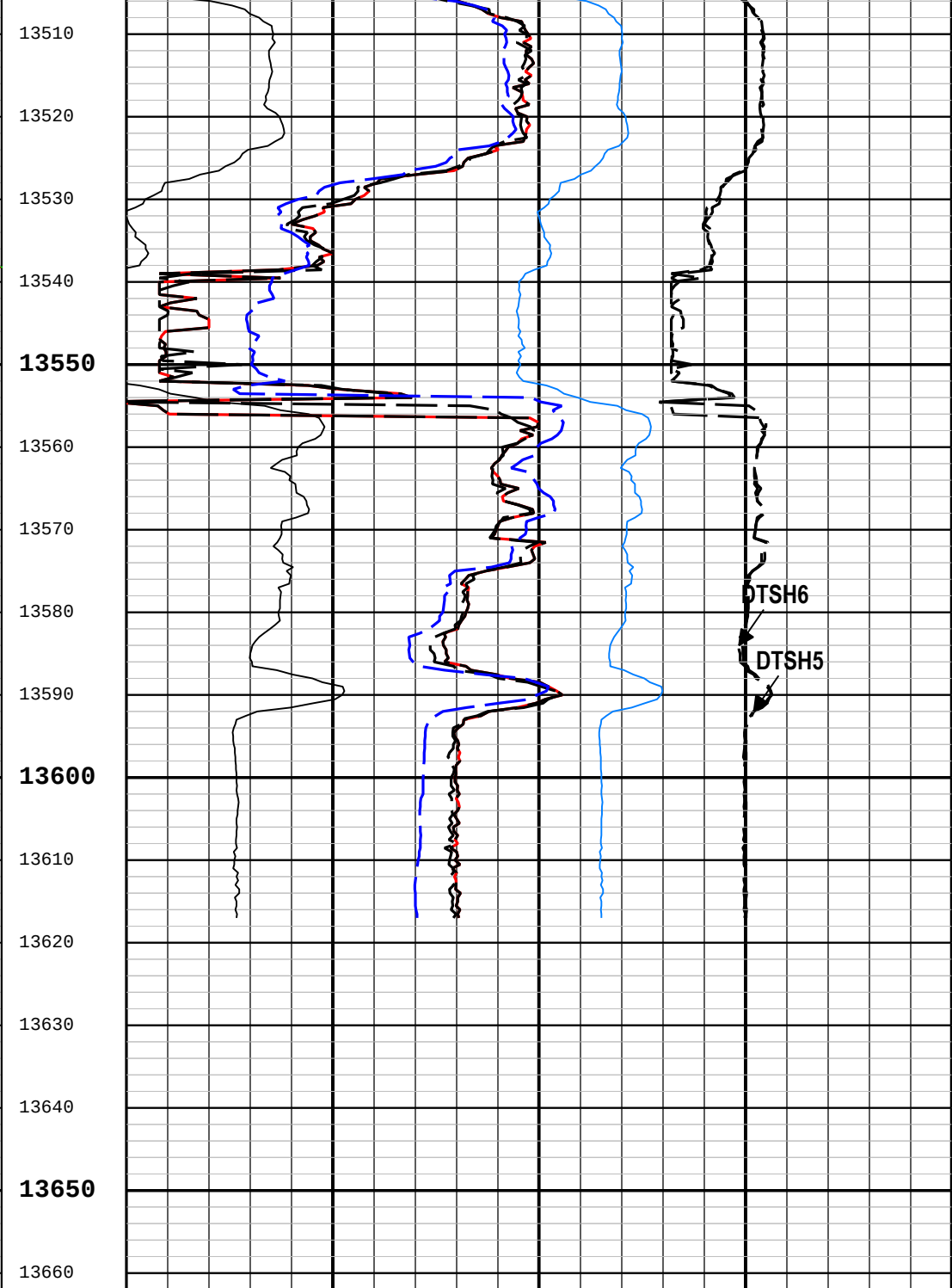
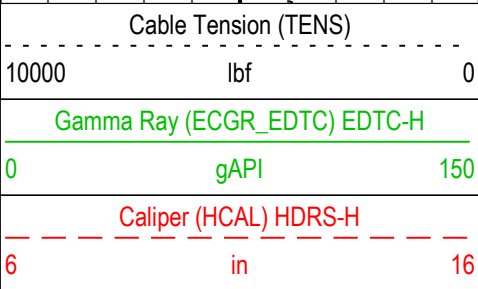
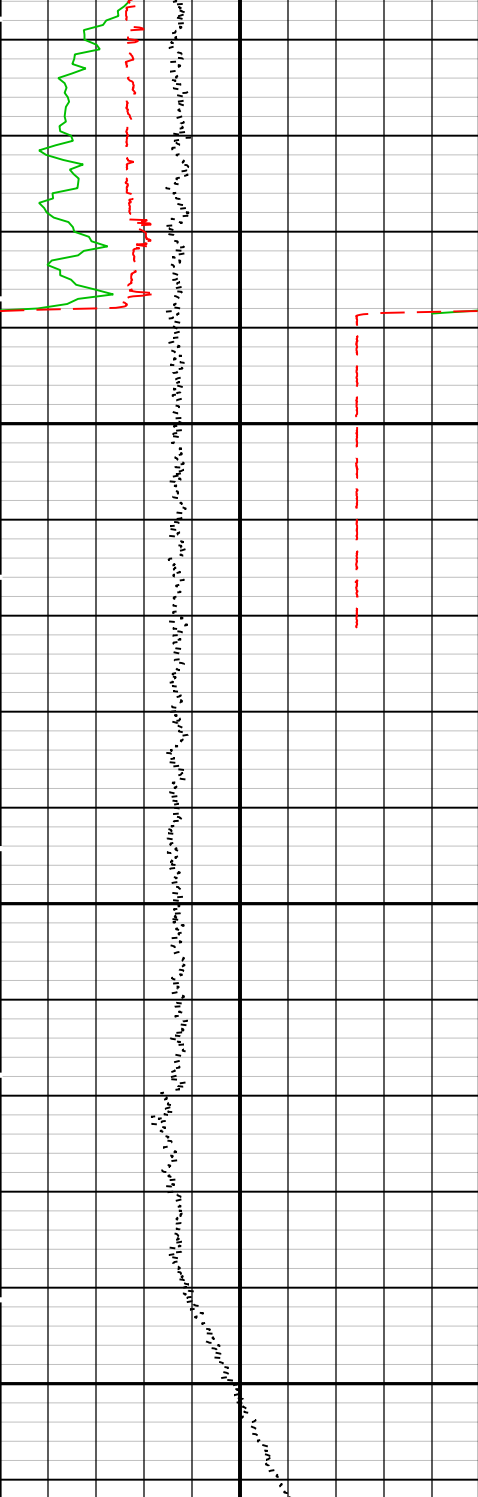


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	180	us/ft	80
		Shear Slowness from Dipole 90 Degree Transmitter Chirp Firing 90 Degree Component (DTSH5) MAST-B 240 us/ft 40 Shear Slowness from Dipole 0 Transmitter Chirp Firing 0 Degree Component (DTSH6) MAST-B 240 us/ft 40	
TIME_1900 - Time Marked every 60.00 (s)			
Description: Format: Log (MSIP 5 inch General) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:49:56			

Channel Processing Parameters

Run 1A: Parameters				
Parameter	Description	Tool	Value	Unit
ISSBAR	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	8.75	in
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	0.059	in
CBLO	Casing Bottom (Logger)	WLSESSION	4702	ft
CDEN	Cement Density	EDTC-H	2	g/cm3
CDS	Correction for Delta-T Shale, Empirical	Borehole	100	us/ft
DFD	Drilling Fluid Density	Borehole	10	lbm/gal
DFT	Drilling Fluid Type	Borehole	Water	
DTF	Delta-T Fluid	Borehole	189	us/ft
DTM	Delta-T Matrix	Borehole	47.6	us/ft
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
SFTY	Slowness Formation Type (Fast, Intermediate, Slow, etc.)	Borehole	Fast	
SPFS	Sonic Porosity Formula	Borehole	Wyllie	
VPVSA	Estimated P-Wave Velocity to S-Wave Velocity Ratio for Slowness-Time Coherence	MAST-B	1.8	

Tool Control Parameters

Run 1A: Parameters				
Parameter	Description	Tool	Value	Unit
CBOOTSTA_MAPC	MAMS Controller Boot Status	MAST-B	1	
CONTROLLER_FIRM_REV_MAPC	MAPC Firmware Revision of Controller Electronics	MAST-B	1840	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	Time Zoned	ft/h
MAX_TOOL_SPEED	Maximum service speed allowed for, or attained by, a logging tool.	MAST-B	Time Zoned	ft/h
MSMT_LIST	Measurement List	MAST-B	[MUM, MLM, MFM, MFL, 90C, 00C]	
PROD_MASTUI	MAST Product Class Selection	MAST-B	STD	
SENSOR10_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #10	MAST-B	1057	
SENSOR11_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #11	MAST-B	1057	
SENSOR12_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #12	MAST-B	1057	
SENSOR13_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #13	MAST-B	1057	
SENSOR1_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #1	MAST-B	1057	
SENSOR2_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #2	MAST-B	1057	
SENSOR3_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #3	MAST-B	1057	

SENSOR4_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #4	MAST-B	1057	
SENSOR5_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #5	MAST-B	65535	
SENSOR6_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #6	MAST-B	1057	
SENSOR7_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #7	MAST-B	1057	
SENSOR8_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #8	MAST-B	1057	
SENSOR9_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #9	MAST-B	1057	
RBOOTSTA_MAPC	MAMS Receiver Boot Status	MAST-B	1	
SERVICE_LIST	Service Selection List	MAST-B	[STSTC, NMSTC, XDSTC, YDSTC, FMSTC, ANISO, CRV, BHC, PBHC, NMATD, FMATD]	

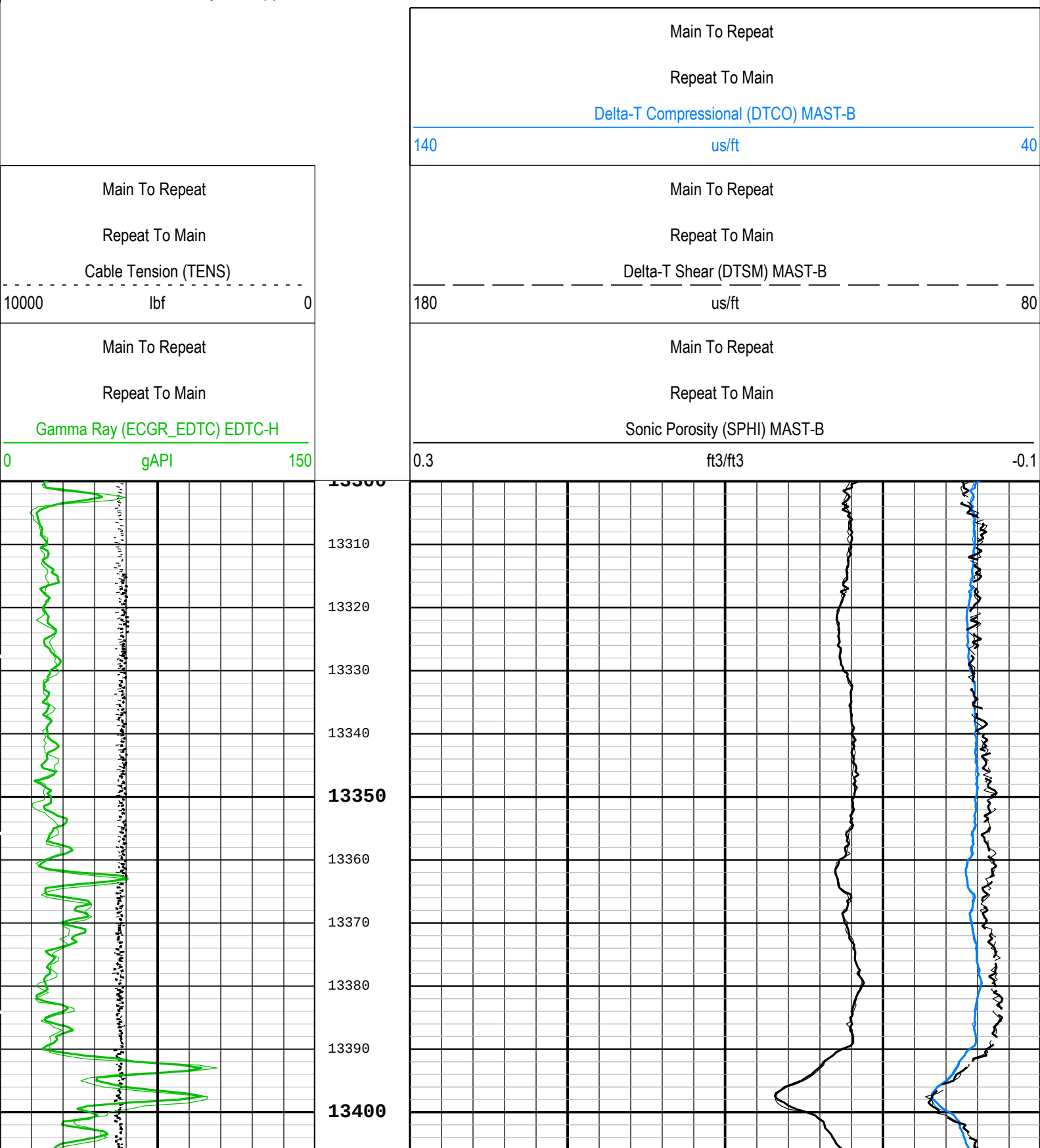
Time Zone Parameters					
Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
MAX_LOG_SPEED	1695	29-Nov-2016 16:25:05	29-Nov-2016 16:25:10	13662.08	13660.47
MAX_LOG_SPEED	1800	29-Nov-2016 16:25:10	29-Nov-2016 16:31:18	13660.47	13498.77
MAX_LOG_SPEED	1690	29-Nov-2016 16:31:18	29-Nov-2016 16:52:49	13498.77	12933.39
MAX_LOG_SPEED	1800	29-Nov-2016 16:52:49	29-Nov-2016 17:06:06	12933.39	12571.73
MAX_LOG_SPEED	1770	29-Nov-2016 17:06:06	29-Nov-2016 17:09:10	12571.73	12488.53
MAX_LOG_SPEED	1800	29-Nov-2016 17:09:10	29-Nov-2016 17:12:14	12488.53	12400.95
MAX_LOG_SPEED	1753	29-Nov-2016 17:12:14	29-Nov-2016 17:13:15	12400.95	12371.38
MAX_LOG_SPEED	1800	29-Nov-2016 17:13:15	29-Nov-2016 17:16:19	12371.38	12286.82
MAX_LOG_SPEED	1729	29-Nov-2016 17:16:19	29-Nov-2016 17:18:21	12286.82	12231.58
MAX_LOG_SPEED	1800	29-Nov-2016 17:18:21	29-Nov-2016 17:22:26	12231.58	12122.52
MAX_LOG_SPEED	1781	29-Nov-2016 17:22:26	29-Nov-2016 17:23:28	12122.52	12095.38
MAX_LOG_SPEED	1800	29-Nov-2016 17:23:28	29-Nov-2016 17:30:37	12095.38	11897.92
MAX_LOG_SPEED	1692	29-Nov-2016 17:30:37	29-Nov-2016 17:31:39	11897.92	11869.47
MAX_LOG_SPEED	1800	29-Nov-2016 17:31:39	29-Nov-2016 17:40:51	11869.47	11616.36
MAX_LOG_SPEED	1794	29-Nov-2016 17:40:51	29-Nov-2016 17:45:58	11616.36	11474.54
MAX_LOG_SPEED	1651	29-Nov-2016 17:45:58	29-Nov-2016 17:47:00	11474.54	11446.18
MAX_LOG_SPEED	1747	29-Nov-2016 17:47:00	29-Nov-2016 17:49:02	11446.18	11389.42
MAX_LOG_SPEED	1629	29-Nov-2016 17:49:02	29-Nov-2016 17:56:13	11389.42	11190.26
MAX_LOG_SPEED	1747	29-Nov-2016 17:56:13	29-Nov-2016 17:59:17	11190.26	11103.2
MAX_LOG_SPEED	1800	29-Nov-2016 17:59:17	29-Nov-2016 18:14:37	11103.2	10671.4
MAX_LOG_SPEED	1764	29-Nov-2016 18:14:37	29-Nov-2016 18:21:45	10671.4	10469.58
MAX_LOG_SPEED	1663	29-Nov-2016 18:21:45	29-Nov-2016 18:27:54	10469.58	10293.28
MAX_LOG_SPEED	1753	29-Nov-2016 18:27:54	29-Nov-2016 18:43:16	10293.28	9859.61
MAX_LOG_SPEED	1660	29-Nov-2016 18:43:16	29-Nov-2016 19:01:43	9859.61	9334.22
MAX_LOG_SPEED	1756	29-Nov-2016 19:01:43	29-Nov-2016 19:06:50	9334.22	9189.58
MAX_LOG_SPEED	1800	29-Nov-2016 19:06:50	29-Nov-2016 19:09:53	9189.58	9102.28
MAX_LOG_SPEED	1723	29-Nov-2016 19:09:53	29-Nov-2016 19:37:30	9102.28	8327.82
MAX_LOG_SPEED	1626	29-Nov-2016 19:37:30	29-Nov-2016 19:47:43	8327.82	8046.58
MAX_LOG_SPEED	1770	29-Nov-2016 19:47:43	29-Nov-2016 19:50:48	8046.58	7964.6
MAX_LOG_SPEED	1659	29-Nov-2016 19:50:48	29-Nov-2016 19:57:59	7964.6	7768.42
MAX_LOG_SPEED	1768	29-Nov-2016 19:57:59	29-Nov-2016 20:02:05	7768.42	7656.38
MAX_LOG_SPEED	1663	29-Nov-2016 20:02:05	29-Nov-2016 20:07:11	7656.38	7519.44
MAX_LOG_SPEED	1775	29-Nov-2016 20:07:11	29-Nov-2016 20:09:14	7519.44	7463.56
MAX_LOG_SPEED	1654	29-Nov-2016 20:09:14	29-Nov-2016 20:14:22	7463.56	7324.1

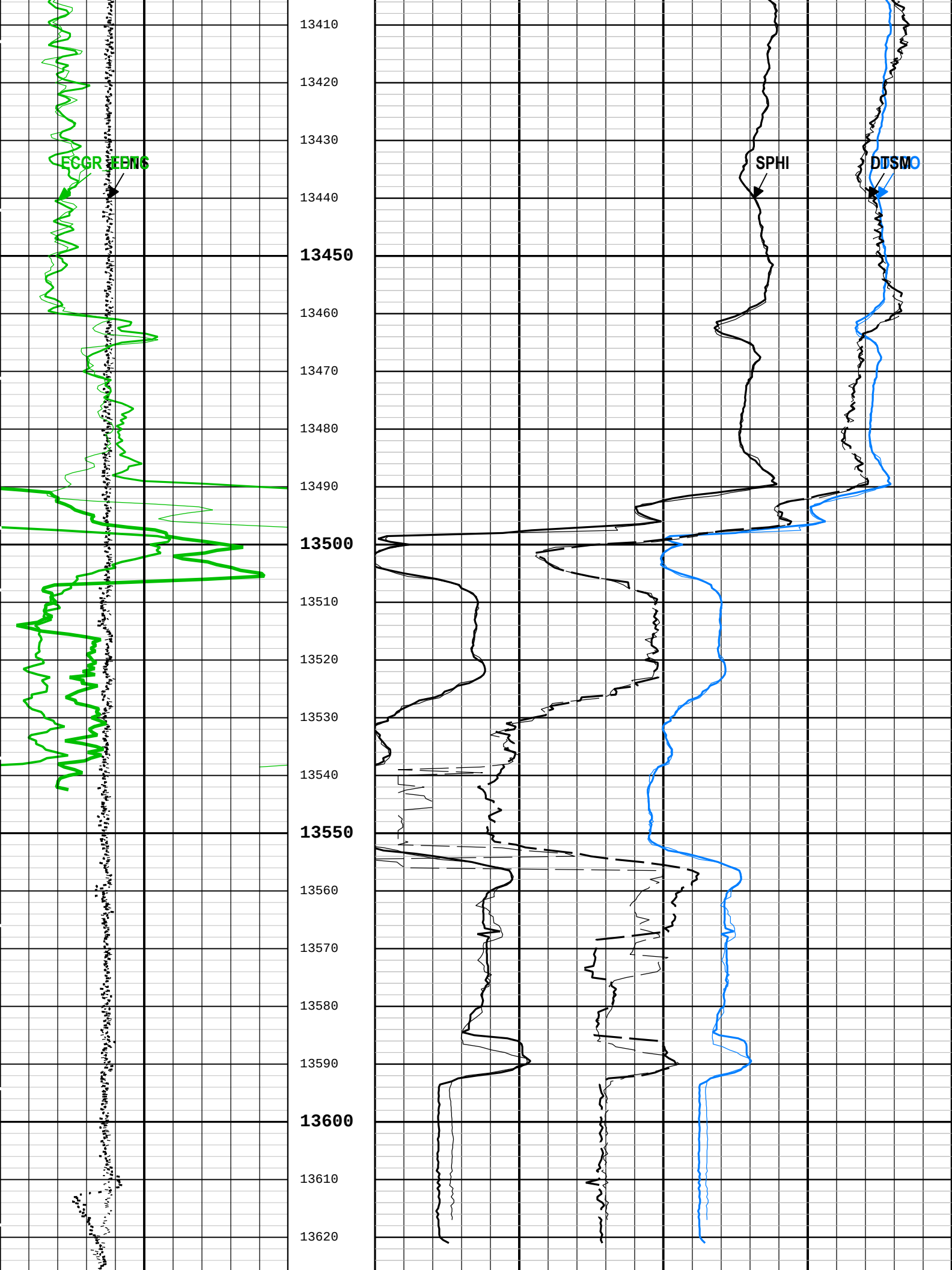
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MAX_LOG_SPEED	1757	29-Nov-2016 20:14:22	29-Nov-2016 20:16:25	7324	7267.91
MAX_LOG_SPEED	1607	29-Nov-2016 20:16:25	29-Nov-2016 20:23:35	7267.91	7071.09
MAX_LOG_SPEED	1796	29-Nov-2016 20:23:35	29-Nov-2016 20:28:41	7071.09	6929.06
MAX_LOG_SPEED	1800	29-Nov-2016 20:28:41	29-Nov-2016 21:18:45	6929.06	5563.46
MAX_LOG_SPEED	1789	29-Nov-2016 21:18:45	29-Nov-2016 21:19:46	5563.46	5535.53
MAX_LOG_SPEED	1800	29-Nov-2016 21:19:46	29-Nov-2016 21:21:49	5535.53	5478.22
MAX_LOG_SPEED	1728	29-Nov-2016 21:21:49	29-Nov-2016 21:22:50	5478.22	5449.62
MAX_LOG_SPEED	1800	29-Nov-2016 21:22:50	29-Nov-2016 21:23:51	5449.62	5421.01
MAX_LOG_SPEED	1748	29-Nov-2016 21:23:51	29-Nov-2016 21:28:59	5421.01	5279.95
MAX_LOG_SPEED	1800	29-Nov-2016 21:28:59	29-Nov-2016 21:34:06	5279.95	5142.02
MAX_LOG_SPEED	1741	29-Nov-2016 21:34:06	29-Nov-2016 21:35:07	5142.02	5114.37
MAX_LOG_SPEED	1600	29-Nov-2016 21:35:07	29-Nov-2016 21:37:09	5114.37	5058.65
MAX_LOG_SPEED	1717	29-Nov-2016 21:37:09	29-Nov-2016 21:42:17	5058.65	4918.42
MAX_LOG_SPEED	1800	29-Nov-2016 21:42:17	29-Nov-2016 21:44:20	4918.42	4862.3
MAX_LOG_SPEED	1631	29-Nov-2016 21:44:20	29-Nov-2016 21:46:22	4862.3	4807.08
MAX_LOG_SPEED	1756	29-Nov-2016 21:46:22	29-Nov-2016 21:50:28	4807.08	4696.12
MAX_LOG_SPEED	1637	29-Nov-2016 21:50:28	29-Nov-2016 22:15:05	4696.12	3217.06
MAX_LOG_SPEED	1778	29-Nov-2016 22:15:05	29-Nov-2016 22:16:07	3217.06	3144.43
MAX_LOG_SPEED	1645	29-Nov-2016 22:16:07	29-Nov-2016 22:53:59	3144.43	305.57
MAX_LOG_SPEED	1728	29-Nov-2016 22:53:59	29-Nov-2016 22:56:13	305.57	213.72
MAX_TOOL_SPEED	1695	29-Nov-2016 16:25:05	29-Nov-2016 16:25:10	13662.08	13660.47
MAX_TOOL_SPEED	1879	29-Nov-2016 16:25:10	29-Nov-2016 16:31:18	13660.47	13498.77
MAX_TOOL_SPEED	1690	29-Nov-2016 16:31:18	29-Nov-2016 16:52:49	13498.77	12933.39
MAX_TOOL_SPEED	1982	29-Nov-2016 16:52:49	29-Nov-2016 16:59:58	12933.39	12730.12
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MAX_TOOL_SPEED	1872	29-Nov-2016 17:04:03	29-Nov-2016 17:06:06	12612.96	12571.73
MAX_TOOL_SPEED	1770	29-Nov-2016 17:06:06	29-Nov-2016 17:09:10	12571.73	12488.53
MAX_TOOL_SPEED	1910	29-Nov-2016 17:09:10	29-Nov-2016 17:12:14	12488.53	12400.95
MAX_TOOL_SPEED	1753	29-Nov-2016 17:12:14	29-Nov-2016 17:13:15	12400.95	12371.38
MAX_TOOL_SPEED	1854	29-Nov-2016 17:13:15	29-Nov-2016 17:16:19	12371.38	12286.82
MAX_TOOL_SPEED	1729	29-Nov-2016 17:16:19	29-Nov-2016 17:18:21	12286.82	12231.58
MAX_TOOL_SPEED	1930	29-Nov-2016 17:18:21	29-Nov-2016 17:22:26	12231.58	12122.52
MAX_TOOL_SPEED	1781	29-Nov-2016 17:22:26	29-Nov-2016 17:23:28	12122.52	12095.38
MAX_TOOL_SPEED	1934	29-Nov-2016 17:23:28	29-Nov-2016 17:24:29	12095.38	12068.16
MAX_TOOL_SPEED	1825	29-Nov-2016 17:24:29	29-Nov-2016 17:30:37	12068.16	11897.92
MAX_TOOL_SPEED	1692	29-Nov-2016 17:30:37	29-Nov-2016 17:31:39	11897.92	11869.47
MAX_TOOL_SPEED	1876	29-Nov-2016 17:31:39	29-Nov-2016 17:33:41	11869.47	11812.66
MAX_TOOL_SPEED	1990	29-Nov-2016 17:33:41	29-Nov-2016 17:40:51	11812.66	11616.36
MAX_TOOL_SPEED	1794	29-Nov-2016 17:40:51	29-Nov-2016 17:45:58	11616.36	11474.54
MAX_TOOL_SPEED	1651	29-Nov-2016 17:45:58	29-Nov-2016 17:47:00	11474.54	11446.18
MAX_TOOL_SPEED	1747	29-Nov-2016 17:47:00	29-Nov-2016 17:49:02	11446.18	11389.42
MAX_TOOL_SPEED	1629	29-Nov-2016 17:49:02	29-Nov-2016 17:56:13	11389.42	11190.26
MAX_TOOL_SPEED	1747	29-Nov-2016 17:56:13	29-Nov-2016 17:57:17	11190.26	11190.2

MAX_TOOL_SPEED	1747		29-Nov-2016 17:56:13	29-Nov-2016 17:59:17	11190.26	11103.2
MAX_TOOL_SPEED	1915		29-Nov-2016 17:59:17	29-Nov-2016 18:14:37	11103.2	10671.4
MAX_TOOL_SPEED	1764		29-Nov-2016 18:14:37	29-Nov-2016 18:21:45	10671.4	10469.58
MAX_TOOL_SPEED	1663		29-Nov-2016 18:21:45	29-Nov-2016 18:27:54	10469.58	10293.28
MAX_TOOL_SPEED	1753		29-Nov-2016 18:27:54	29-Nov-2016 18:43:16	10293.28	9859.61
MAX_TOOL_SPEED	1660		29-Nov-2016 18:43:16	29-Nov-2016 19:01:43	9859.61	9334.22
MAX_TOOL_SPEED	1756		29-Nov-2016 19:01:43	29-Nov-2016 19:06:50	9334.22	9189.58
MAX_TOOL_SPEED	1852		29-Nov-2016 19:06:50	29-Nov-2016 19:09:53	9189.58	9102.28
MAX_TOOL_SPEED	1723		29-Nov-2016 19:09:53	29-Nov-2016 19:37:30	9102.28	8327.82
MAX_TOOL_SPEED	1626		29-Nov-2016 19:37:30	29-Nov-2016 19:47:43	8327.82	8046.58
MAX_TOOL_SPEED	1770		29-Nov-2016 19:47:43	29-Nov-2016 19:50:48	8046.58	7964.6
MAX_TOOL_SPEED	1659		29-Nov-2016 19:50:48	29-Nov-2016 19:57:59	7964.6	7768.42
MAX_TOOL_SPEED	1768		29-Nov-2016 19:57:59	29-Nov-2016 20:02:05	7768.42	7656.38
MAX_TOOL_SPEED	1663		29-Nov-2016 20:02:05	29-Nov-2016 20:07:11	7656.38	7519.44
MAX_TOOL_SPEED	1775		29-Nov-2016 20:07:11	29-Nov-2016 20:09:14	7519.44	7463.56
MAX_TOOL_SPEED	1654		29-Nov-2016 20:09:14	29-Nov-2016 20:14:22	7463.56	7324
MAX_TOOL_SPEED	1757		29-Nov-2016 20:14:22	29-Nov-2016 20:16:25	7324	7267.91
MAX_TOOL_SPEED	1607		29-Nov-2016 20:16:25	29-Nov-2016 20:23:35	7267.91	7071.09
MAX_TOOL_SPEED	1796		29-Nov-2016 20:23:35	29-Nov-2016 20:28:41	7071.09	6929.06
MAX_TOOL_SPEED	1934		29-Nov-2016 20:28:41	29-Nov-2016 20:38:54	6929.06	6649.08
MAX_TOOL_SPEED	1822		29-Nov-2016 20:38:54	29-Nov-2016 20:57:17	6649.08	6147.52
MAX_TOOL_SPEED	1929		29-Nov-2016 20:57:17	29-Nov-2016 21:18:45	6147.52	5563.46
MAX_TOOL_SPEED	1789		29-Nov-2016 21:18:45	29-Nov-2016 21:19:46	5563.46	5535.53
MAX_TOOL_SPEED	1890		29-Nov-2016 21:19:46	29-Nov-2016 21:21:49	5535.53	5478.22
MAX_TOOL_SPEED	1728		29-Nov-2016 21:21:49	29-Nov-2016 21:22:50	5478.22	5449.62
MAX_TOOL_SPEED	1872		29-Nov-2016 21:22:50	29-Nov-2016 21:23:51	5449.62	5421.01
MAX_TOOL_SPEED	1748		29-Nov-2016 21:23:51	29-Nov-2016 21:28:59	5421.01	5279.95
MAX_TOOL_SPEED	1867		29-Nov-2016 21:28:59	29-Nov-2016 21:34:06	5279.95	5142.02
MAX_TOOL_SPEED	1741		29-Nov-2016 21:34:06	29-Nov-2016 21:35:07	5142.02	5114.37
MAX_TOOL_SPEED	1600		29-Nov-2016 21:35:07	29-Nov-2016 21:37:09	5114.37	5058.65
MAX_TOOL_SPEED	1717		29-Nov-2016 21:37:09	29-Nov-2016 21:42:17	5058.65	4918.42
MAX_TOOL_SPEED	1804		29-Nov-2016 21:42:17	29-Nov-2016 21:44:20	4918.42	4862.3
MAX_TOOL_SPEED	1631		29-Nov-2016 21:44:20	29-Nov-2016 21:46:22	4862.3	4807.08
MAX_TOOL_SPEED	1756		29-Nov-2016 21:46:22	29-Nov-2016 21:50:28	4807.08	4696.12
MAX_TOOL_SPEED	1637		29-Nov-2016 21:50:28	29-Nov-2016 22:15:05	4696.12	3217.06
MAX_TOOL_SPEED	1778		29-Nov-2016 22:15:05	29-Nov-2016 22:16:07	3217.06	3144.43
MAX_TOOL_SPEED	1645		29-Nov-2016 22:16:07	29-Nov-2016 22:53:59	3144.43	305.57
MAX_TOOL_SPEED	1728		29-Nov-2016 22:53:59	29-Nov-2016 22:56:13	305.57	213.72

All depth are at tool zero.									
Run 1A									

Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data





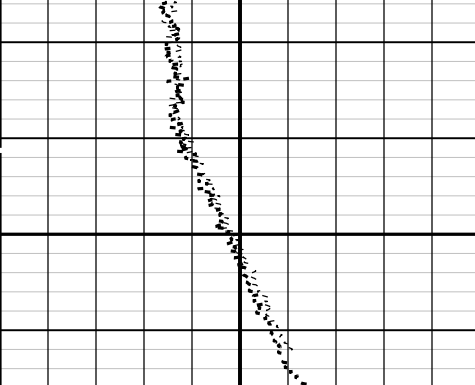


Diagram illustrating the sequence of operations for the cable tension test:

- Top Section:** Shows a sequence of "Main To Repeat" and "Repeat To Main" steps. A dashed line indicates "Cable Tension (TENS)" at 10000 lbf.
- Bottom Section:** Shows a sequence of "Main To Repeat" and "Repeat To Main" steps. A green line indicates "Gamma Ray (ECGR_EDTC) EDTC-H" at 0 gAPI.

Delta-T Compressional (DTCO) MAST-B

140 us/ft 40

Main To Repeat

Repeat To Main

Delta-T Shear (DTSM) MAST-B

180 us/ft 80

Main To Repeat

Repeat To Main

Sonic Porosity (SPHI) MAST-B

0.3 ft3/ft3 -0.1

TIME_1900 - Time Marked every 60.00 (s)

Description: Format: Log (MSIP 5 inch General RA) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:50:04

Channel Processing Parameters

Run 1A: Parameters

Parameter	Description	Tool	Value	Unit
ISSBAR	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	8.75	in
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	0.059	in
CBLO	Casing Bottom (Logger)	WLSESSION	4702	ft
CDEN	Cement Density	EDTC-H	2	g/cm3
CDTS	Correction for Delta-T Shale, Empirical	Borehole	100	us/ft
DFD	Drilling Fluid Density	Borehole	10	lbm/gal
DFT	Drilling Fluid Type	Borehole	Water	
DTF	Delta-T Fluid	Borehole	189	us/ft
DTM	Delta-T Matrix	Borehole	47.6	us/ft
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
SFTY	Slowness Formation Type (Fast, Intermediate, Slow, etc.)	Borehole	Fast	
SPFS	Sonic Porosity Formula	Borehole	Wyllie	
VPVSA	Estimated P-Wave Velocity to S-Wave Velocity Ratio for Slowness-Time Coherence	MAST-B	1.8	

Tool Control Parameters

Run 1A: Parameters

Parameter	Description	Tool	Value	Unit
CBOOTSTA_MAPC	MAMS Controller Boot Status	MAST-B	1	
CONTROLLER_FIRM_REV_MAPC	MAPC Firmware Revision of Controller Electronics	MAST-B	1840	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	Time Zoned	ft/h
MAX_TOOL_SPEED	Maximum service speed allowed for, or attained by, a logging tool.	MAST-B	Time Zoned	ft/h
MSMT_LIST	Measurement List	MAST-B	[MUM, MLM, MFM, MFL, 90C, 00C]	
PROD_MASTUI	MAST Product Class Selection	MAST-B	STD	
SENSOR10_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #10	MAST-B	1057	
SENSOR11_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #11	MAST-B	1057	
SENSOR12_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #12	MAST-B	1057	
SENSOR13_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #13	MAST-B	1057	
SENSOR1_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #1	MAST-B	1057	
SENSOR2_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #2	MAST-B	1057	
SENSOR3_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #3	MAST-B	1057	
SENSOR4_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #4	MAST-B	1057	
SENSOR5_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #5	MAST-B	65535	
SENSOR6_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #6	MAST-B	1057	
SENSOR7_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #7	MAST-B	1057	
SENSOR8_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #8	MAST-B	1057	
SENSOR9_FIRM_REV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #9	MAST-B	1057	
RBOOTSTA_MAPC	MAMS Receiver Boot Status	MAST-B	1	
SERVICE_LIST	Service Selection List	MAST-B	[STSTC, NMSTC, XDSTC, YDSTC, FMSTC, ANISO, CRV, BHC, PBHC, NMATD, FMATD]	

Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
MAX_LOG_SPEED	1695	29-Nov-2016 16:25:05	29-Nov-2016 16:25:10	13662.08	13660.47
MAX_LOG_SPEED	1800	29-Nov-2016 16:25:10	29-Nov-2016 16:31:18	13660.47	13498.77
MAX_LOG_SPEED	1690	29-Nov-2016 16:31:18	29-Nov-2016 16:52:49	13498.77	12933.39
MAX_LOG_SPEED	1800	29-Nov-2016 16:52:49	29-Nov-2016 17:06:06	12933.39	12571.73
MAX_LOG_SPEED	1770	29-Nov-2016 17:06:06	29-Nov-2016 17:09:10	12571.73	12488.53
MAX_LOG_SPEED	1800	29-Nov-2016 17:09:10	29-Nov-2016 17:12:14	12488.53	12400.95
MAX_LOG_SPEED	1753	29-Nov-2016 17:12:14	29-Nov-2016 17:13:15	12400.95	12371.38
MAX_LOG_SPEED	1800	29-Nov-2016 17:13:15	29-Nov-2016 17:16:19	12371.38	12286.82
MAX_LOG_SPEED	1729	29-Nov-2016 17:16:19	29-Nov-2016 17:18:21	12286.82	12231.58
MAX_LOG_SPEED	1800	29-Nov-2016 17:18:21	29-Nov-2016 17:22:26	12231.58	12122.52
MAX_LOG_SPEED	1781	29-Nov-2016 17:22:26	29-Nov-2016 17:23:28	12122.52	12095.38
MAX_LOG_SPEED	1800	29-Nov-2016 17:23:28	29-Nov-2016 17:30:37	12095.38	11897.92
MAX_LOG_SPEED	1692	29-Nov-2016 17:30:37	29-Nov-2016 17:31:39	11897.92	11869.47
MAX_LOG_SPEED	1800	29-Nov-2016 17:31:39	29-Nov-2016 17:40:51	11869.47	11616.36
MAX_LOG_SPEED	1794	29-Nov-2016 17:40:51	29-Nov-2016 17:45:58	11616.36	11474.54
MAX_LOG_SPEED	1651	29-Nov-2016 17:45:58	29-Nov-2016 17:47:00	11474.54	11446.18
MAX_LOG_SPEED	1747	29-Nov-2016 17:47:00	29-Nov-2016 17:49:02	11446.18	11389.42
MAX_LOG_SPEED	1629	29-Nov-2016 17:49:02	29-Nov-2016 17:56:13	11389.42	11190.26
MAX_LOG_SPEED	1747	29-Nov-2016 17:56:13	29-Nov-2016 17:59:17	11190.26	11103.2

MAX_LOG_SPEED	1800	29-Nov-2016 17:59:17	29-Nov-2016 18:14:37	11103.2	10671.4
MAX_LOG_SPEED	1764	29-Nov-2016 18:14:37	29-Nov-2016 18:21:45	10671.4	10469.58
MAX_LOG_SPEED	1663	29-Nov-2016 18:21:45	29-Nov-2016 18:27:54	10469.58	10293.28
MAX_LOG_SPEED	1753	29-Nov-2016 18:27:54	29-Nov-2016 18:43:16	10293.28	9859.61
MAX_LOG_SPEED	1660	29-Nov-2016 18:43:16	29-Nov-2016 19:01:43	9859.61	9334.22
MAX_LOG_SPEED	1756	29-Nov-2016 19:01:43	29-Nov-2016 19:06:50	9334.22	9189.58
MAX_LOG_SPEED	1800	29-Nov-2016 19:06:50	29-Nov-2016 19:09:53	9189.58	9102.28
MAX_LOG_SPEED	1723	29-Nov-2016 19:09:53	29-Nov-2016 19:37:30	9102.28	8327.82
MAX_LOG_SPEED	1626	29-Nov-2016 19:37:30	29-Nov-2016 19:47:43	8327.82	8046.58
MAX_LOG_SPEED	1770	29-Nov-2016 19:47:43	29-Nov-2016 19:50:48	8046.58	7964.6
MAX_LOG_SPEED	1659	29-Nov-2016 19:50:48	29-Nov-2016 19:57:59	7964.6	7768.42
MAX_LOG_SPEED	1768	29-Nov-2016 19:57:59	29-Nov-2016 20:02:05	7768.42	7656.38
MAX_LOG_SPEED	1663	29-Nov-2016 20:02:05	29-Nov-2016 20:07:11	7656.38	7519.44
MAX_LOG_SPEED	1775	29-Nov-2016 20:07:11	29-Nov-2016 20:09:14	7519.44	7463.56
MAX_LOG_SPEED	1654	29-Nov-2016 20:09:14	29-Nov-2016 20:14:22	7463.56	7324
MAX_LOG_SPEED	1757	29-Nov-2016 20:14:22	29-Nov-2016 20:16:25	7324	7267.91
MAX_LOG_SPEED	1607	29-Nov-2016 20:16:25	29-Nov-2016 20:23:35	7267.91	7071.09
MAX_LOG_SPEED	1796	29-Nov-2016 20:23:35	29-Nov-2016 20:28:41	7071.09	6929.06
MAX_LOG_SPEED	1800	29-Nov-2016 20:28:41	29-Nov-2016 21:18:45	6929.06	5563.46
MAX_LOG_SPEED	1789	29-Nov-2016 21:18:45	29-Nov-2016 21:19:46	5563.46	5535.53
MAX_LOG_SPEED	1800	29-Nov-2016 21:19:46	29-Nov-2016 21:21:49	5535.53	5478.22
MAX_LOG_SPEED	1728	29-Nov-2016 21:21:49	29-Nov-2016 21:22:50	5478.22	5449.62
MAX_LOG_SPEED	1800	29-Nov-2016 21:22:50	29-Nov-2016 21:23:51	5449.62	5421.01
MAX_LOG_SPEED	1748	29-Nov-2016 21:23:51	29-Nov-2016 21:28:59	5421.01	5279.95
MAX_LOG_SPEED	1800	29-Nov-2016 21:28:59	29-Nov-2016 21:34:06	5279.95	5142.02
MAX_LOG_SPEED	1741	29-Nov-2016 21:34:06	29-Nov-2016 21:35:07	5142.02	5114.37
MAX_LOG_SPEED	1600	29-Nov-2016 21:35:07	29-Nov-2016 21:37:09	5114.37	5058.65
MAX_LOG_SPEED	1717	29-Nov-2016 21:37:09	29-Nov-2016 21:42:17	5058.65	4918.42
MAX_LOG_SPEED	1800	29-Nov-2016 21:42:17	29-Nov-2016 21:44:20	4918.42	4862.3
MAX_LOG_SPEED	1631	29-Nov-2016 21:44:20	29-Nov-2016 21:46:22	4862.3	4807.08
MAX_LOG_SPEED	1756	29-Nov-2016 21:46:22	29-Nov-2016 21:50:28	4807.08	4696.12
MAX_LOG_SPEED	1637	29-Nov-2016 21:50:28	29-Nov-2016 22:15:05	4696.12	3217.06
MAX_LOG_SPEED	1778	29-Nov-2016 22:15:05	29-Nov-2016 22:16:07	3217.06	3144.43
MAX_LOG_SPEED	1645	29-Nov-2016 22:16:07	29-Nov-2016 22:53:59	3144.43	305.57
MAX_LOG_SPEED	1728	29-Nov-2016 22:53:59	29-Nov-2016 22:56:13	305.57	213.72
MAX_TOOL_SPEED	1695	29-Nov-2016 16:25:05	29-Nov-2016 16:25:10	13662.08	13660.47
MAX_TOOL_SPEED	1879	29-Nov-2016 16:25:10	29-Nov-2016 16:31:18	13660.47	13498.77
MAX_TOOL_SPEED	1690	29-Nov-2016 16:31:18	29-Nov-2016 16:52:49	13498.77	12933.39
MAX_TOOL_SPEED	1982	29-Nov-2016 16:52:49	29-Nov-2016 16:59:58	12933.39	12730.12
MAX_TOOL_SPEED	1861	29-Nov-2016 16:59:58	29-Nov-2016 17:00:59	12730.12	12700.75
MAX_TOOL_SPEED	1985	29-Nov-2016 17:00:59	29-Nov-2016 17:04:03	12700.75	12612.96
MAX_TOOL_SPEED	1872	29-Nov-2016 17:04:03	29-Nov-2016 17:06:06	12612.96	12571.73
MAX_TOOL_SPEED	1770	29-Nov-2016 17:06:06	29-Nov-2016 17:09:10	12571.73	12488.53
MAX_TOOL_SPEED	1910	29-Nov-2016 17:09:10	29-Nov-2016 17:12:14	12488.53	12400.95

MAX_TOOL_SPEED	1753	29-Nov-2016 17:12:14	29-Nov-2016 17:12:15	12400.95	12371.38
MAX_TOOL_SPEED	1854	29-Nov-2016 17:13:15	29-Nov-2016 17:16:19	12371.38	12286.82
MAX_TOOL_SPEED	1729	29-Nov-2016 17:16:19	29-Nov-2016 17:18:21	12286.82	12231.58
MAX_TOOL_SPEED	1930	29-Nov-2016 17:18:21	29-Nov-2016 17:22:26	12231.58	12122.52
MAX_TOOL_SPEED	1781	29-Nov-2016 17:22:26	29-Nov-2016 17:23:28	12122.52	12095.38
MAX_TOOL_SPEED	1934	29-Nov-2016 17:23:28	29-Nov-2016 17:24:29	12095.38	12068.16
MAX_TOOL_SPEED	1825	29-Nov-2016 17:24:29	29-Nov-2016 17:30:37	12068.16	11897.92
MAX_TOOL_SPEED	1692	29-Nov-2016 17:30:37	29-Nov-2016 17:31:39	11897.92	11869.47
MAX_TOOL_SPEED	1876	29-Nov-2016 17:31:39	29-Nov-2016 17:33:41	11869.47	11812.66
MAX_TOOL_SPEED	1990	29-Nov-2016 17:33:41	29-Nov-2016 17:40:51	11812.66	11616.36
MAX_TOOL_SPEED	1794	29-Nov-2016 17:40:51	29-Nov-2016 17:45:58	11616.36	11474.54
MAX_TOOL_SPEED	1651	29-Nov-2016 17:45:58	29-Nov-2016 17:47:00	11474.54	11446.18
MAX_TOOL_SPEED	1747	29-Nov-2016 17:47:00	29-Nov-2016 17:49:02	11446.18	11389.42
MAX_TOOL_SPEED	1629	29-Nov-2016 17:49:02	29-Nov-2016 17:56:13	11389.42	11190.26
MAX_TOOL_SPEED	1747	29-Nov-2016 17:56:13	29-Nov-2016 17:59:17	11190.26	11103.2
MAX_TOOL_SPEED	1915	29-Nov-2016 17:59:17	29-Nov-2016 18:14:37	11103.2	10671.4
MAX_TOOL_SPEED	1764	29-Nov-2016 18:14:37	29-Nov-2016 18:21:45	10671.4	10469.58
MAX_TOOL_SPEED	1663	29-Nov-2016 18:21:45	29-Nov-2016 18:27:54	10469.58	10293.28
MAX_TOOL_SPEED	1753	29-Nov-2016 18:27:54	29-Nov-2016 18:43:16	10293.28	9859.61
MAX_TOOL_SPEED	1660	29-Nov-2016 18:43:16	29-Nov-2016 19:01:43	9859.61	9334.22
MAX_TOOL_SPEED	1756	29-Nov-2016 19:01:43	29-Nov-2016 19:06:50	9334.22	9189.58
MAX_TOOL_SPEED	1852	29-Nov-2016 19:06:50	29-Nov-2016 19:09:53	9189.58	9102.28
MAX_TOOL_SPEED	1723	29-Nov-2016 19:09:53	29-Nov-2016 19:37:30	9102.28	8327.82
MAX_TOOL_SPEED	1626	29-Nov-2016 19:37:30	29-Nov-2016 19:47:43	8327.82	8046.58
MAX_TOOL_SPEED	1770	29-Nov-2016 19:47:43	29-Nov-2016 19:50:48	8046.58	7964.6
MAX_TOOL_SPEED	1659	29-Nov-2016 19:50:48	29-Nov-2016 19:57:59	7964.6	7768.42
MAX_TOOL_SPEED	1768	29-Nov-2016 19:57:59	29-Nov-2016 20:02:05	7768.42	7656.38
MAX_TOOL_SPEED	1663	29-Nov-2016 20:02:05	29-Nov-2016 20:07:11	7656.38	7519.44
MAX_TOOL_SPEED	1775	29-Nov-2016 20:07:11	29-Nov-2016 20:09:14	7519.44	7463.56
MAX_TOOL_SPEED	1654	29-Nov-2016 20:09:14	29-Nov-2016 20:14:22	7463.56	7324
MAX_TOOL_SPEED	1757	29-Nov-2016 20:14:22	29-Nov-2016 20:16:25	7324	7267.91
MAX_TOOL_SPEED	1607	29-Nov-2016 20:16:25	29-Nov-2016 20:23:35	7267.91	7071.09
MAX_TOOL_SPEED	1796	29-Nov-2016 20:23:35	29-Nov-2016 20:28:41	7071.09	6929.06
MAX_TOOL_SPEED	1934	29-Nov-2016 20:28:41	29-Nov-2016 20:38:54	6929.06	6649.08
MAX_TOOL_SPEED	1822	29-Nov-2016 20:38:54	29-Nov-2016 20:57:17	6649.08	6147.52
MAX_TOOL_SPEED	1929	29-Nov-2016 20:57:17	29-Nov-2016 21:18:45	6147.52	5563.46
MAX_TOOL_SPEED	1789	29-Nov-2016 21:18:45	29-Nov-2016 21:19:46	5563.46	5535.53
MAX_TOOL_SPEED	1890	29-Nov-2016 21:19:46	29-Nov-2016 21:21:49	5535.53	5478.22
MAX_TOOL_SPEED	1728	29-Nov-2016 21:21:49	29-Nov-2016 21:22:50	5478.22	5449.62
MAX_TOOL_SPEED	1872	29-Nov-2016 21:22:50	29-Nov-2016 21:23:51	5449.62	5421.01
MAX_TOOL_SPEED	1748	29-Nov-2016 21:23:51	29-Nov-2016 21:28:59	5421.01	5279.95
MAX_TOOL_SPEED	1867	29-Nov-2016 21:28:59	29-Nov-2016 21:34:06	5279.95	5142.02
MAX_TOOL_SPEED	1741	29-Nov-2016 21:34:06	29-Nov-2016 21:35:07	5142.02	5114.37
MAX_TOOL_SPEED	1600	29-Nov-2016 21:35:07	29-Nov-2016 21:37:09	5114.37	5058.65

MAX_TOOL_SPEED	1717	29-Nov-2016 21:37:09	29-Nov-2016 21:42:17	5058.65	4918.42
MAX_TOOL_SPEED	1804	29-Nov-2016 21:42:17	29-Nov-2016 21:44:20	4918.42	4862.3
MAX_TOOL_SPEED	1631	29-Nov-2016 21:44:20	29-Nov-2016 21:46:22	4862.3	4807.08
MAX_TOOL_SPEED	1756	29-Nov-2016 21:46:22	29-Nov-2016 21:50:28	4807.08	4696.12
MAX_TOOL_SPEED	1637	29-Nov-2016 21:50:28	29-Nov-2016 22:15:05	4696.12	3217.06
MAX_TOOL_SPEED	1778	29-Nov-2016 22:15:05	29-Nov-2016 22:16:07	3217.06	3144.43
MAX_TOOL_SPEED	1645	29-Nov-2016 22:16:07	29-Nov-2016 22:53:59	3144.43	305.57
MAX_TOOL_SPEED	1728	29-Nov-2016 22:53:59	29-Nov-2016 22:56:13	305.57	213.72
All depth are at tool zero.					

Company:	DCP Midstream LP	Schlumberger
Well:	Zia AGI D2	
Field:	AGI Devonian Exploration	
County:	Lea	
State:	New Mexico	
Sonic Scanner Field Print		

Spectral Gamma Ray Field Print

Company: DCP Midstream LP

Well: Zia AGI D2

Field: AGI Devonian Exploration

County: Lea State: New Mexico

Spectral Gamma Ray

FIELD PRINT

Lea
AGI Devonian Exploration
1893' FSL & 950' FWL
Zia AGI D2
DCP Midstream LP

1893' FSL & 950' FWL	Elev.:	K.B.	3574.00 ft
Section: 19 Township: T 19S Abstract: R32S		G.L.	3547.00 ft
		D.F.	3573.00 ft
Permanent Datum:	Ground Level	Elev.:	3547.00 f
Log Measured From:	Kelly Bushing	27.00 ft	above Perm.Datum
Drilling Measured From:	Kelly Bushing		
API Serial No.	Section:	Township:	Abstract:
30-025-42207	19	T 19S	R32S

Logging Date 29-Nov-2016

Run Number Run 1A

Depth Driller 13622.00 ft

Schlumberger Depth 13637.00 ft

Bottom Log Interval 13637.00 ft

Top Log Interval 4702.00 ft

Casing Driller Size @ Depth 9.625 in @ 4696.00 ft

Casing Schlumberger 4702 ft

Bit Size 8.75 in

Type Fluid In Hole Salt Brine

Density Viscosity 10 lbm/gal 41 s

Fluid Loss PH 9 cm3 10

MUD Source of Sample Active Tank

RM @ Meas Temp 0.08 ohm.m @ 72 degF

RMF @ Meas Temp 0.08 ohm.m @ 72 degF

RMC @ Meas Temp

Source RMF RMC

RM @ BHT RMF @ BHT 0.03 @ 174.75 0.03 @ 174.75

Max Recorded Temperatures 174.75 degF

Circulation Stopped Time 29-Nov-2016 00:00:00

Logger on Bottom Time 29-Nov-2016 04:30:00

Unit Number Location: 9105

Recorded By Danielle Krebs

Witnessed By Jared Smith

Disclaimer

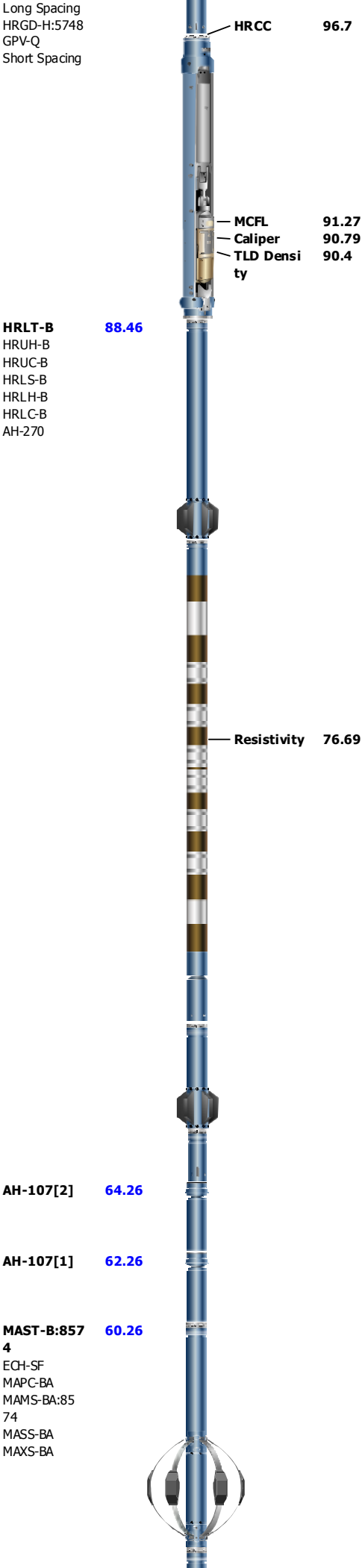
THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (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.

Contents

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 - Log (Spectral 5 inch)
 - Parameter Listing
- Run 1A Repeat Pass 5" = 100'
 - Composite Summary
 - Log (Spectral 5 inch RA)
- Calibration Report
- Tail

Remarks and Equipment Summary

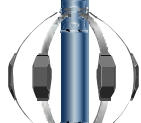
Run 1A: Toolstring				Run 1A: Remarks
Equip name	Length	MP name	Offset	1. Crew: Danielle, Tony, Dago. 2. Logs done from TD to Casing. Repeat was 200 ft off TD. CNL & Gr to Surface. 3. Chlorides = 55,000 ppm. FD = 1.1 g/cc. Rm = 0.08 ohm.meters @ 72 degF. 4. Max temperature from HGNS:CTEM is 174.75 degF. 5. Density data maybe affected by borehole conditions. 6. No pills or LCM in the mud as per company man. 7. Neutron Corrections: HSCO, SOCO. 8. Sonic Scanner logged in Standard Mode. 9. As per client request, main and repeat pass correlated to downlog and not previous logs in well.
LEH-QC	133.69			
AH-369	131.23			
EDTC-H	129.8	CTEM	129.05	
EDTH-H				
EDTC-H				
		HV	0.00	
		ACCZ	0.00	
		Gamma Ray	123.37	
		Edtch Status	121.8	
		TelStatus	121.8	
HNGS-BA:378	121.8			
HEH-K:1000				
HNGS-BA:378		GR	118.82	
HNGC-B:638	113.61			
HNGH-A:4121		Tel Status	111.86	
HNGC-B:638				
HGNS-H	110.11	Temperature	110.08	
HGNH		GR	109.37	
NSR-F:5317				
NPV-N				
HACCZ-H:7074				
HMCA-H				
HGNS-H				
		CNL Porosity	103.03	
		HMCA	100.7	
		HGNS	100.7	
		Accelerometer	0.00	
HDRS-H	100.7			
ECH-MEB				
HRCC-H				
HRMS-H				
Backscatter				
GSR-J:5437				





MAMS

44.82



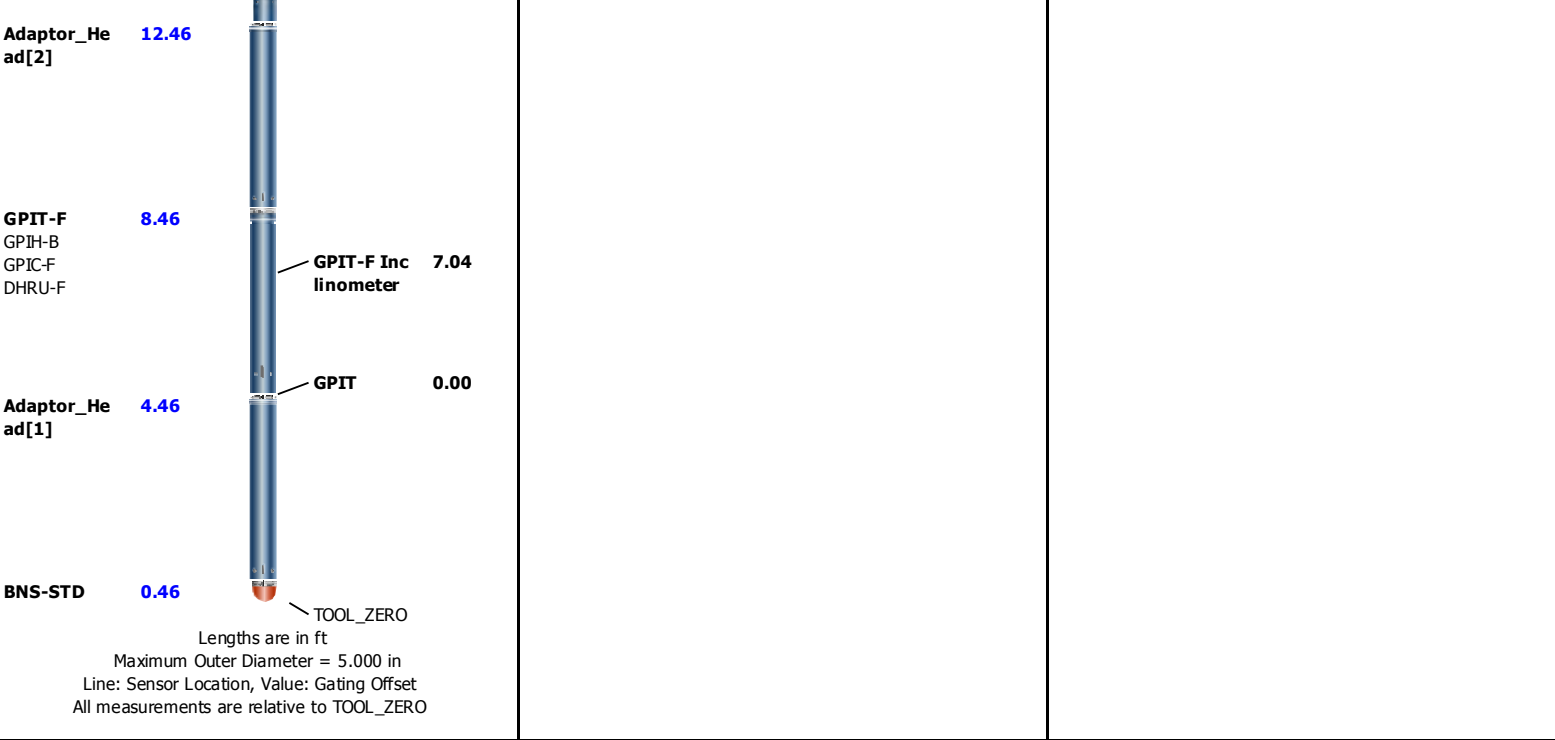
MAXS

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PPC-B Cal
ipers

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PPC-B:8174 18.98
PPC-B:8174



Depth Summary			
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	Run 1A		
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Depth Measuring Device			
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Type	IDW-JA		
Serial Number	2747		
Calibration Date	30-Aug-2016		
Calibrator Serial Number			
Calibration Cable Type	7-46 P-XS		
Wheel Correction 1	-2		
Wheel Correction 2	-1		

Tension Device			
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Type	CMTD-B/A		
Serial Number	8100		
Calibration Date	08-Oct-2016		
Calibrator Serial Number	84755A		
Number of Calibration Points	10		
Calibration Root Mean Square Error	17		
Calibration Peak Error	32		

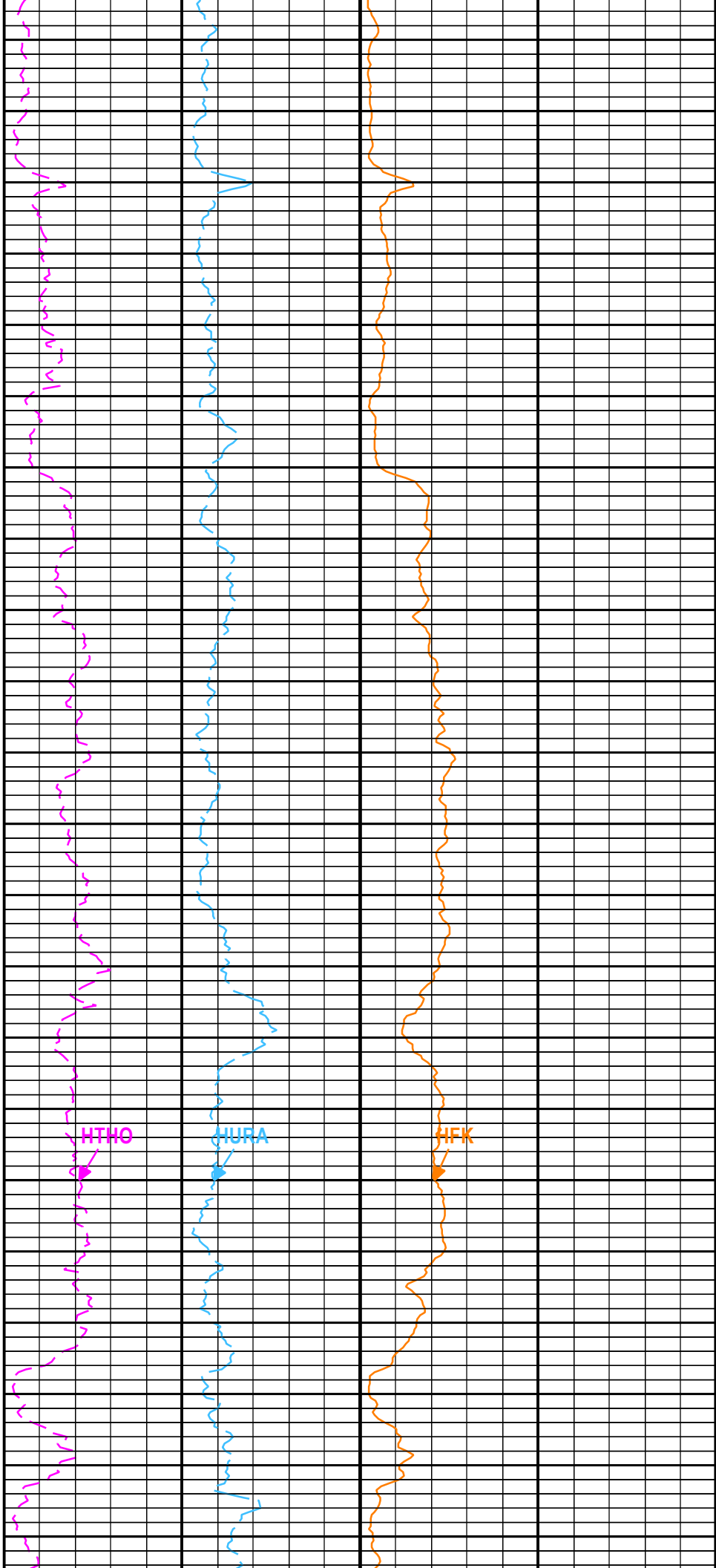
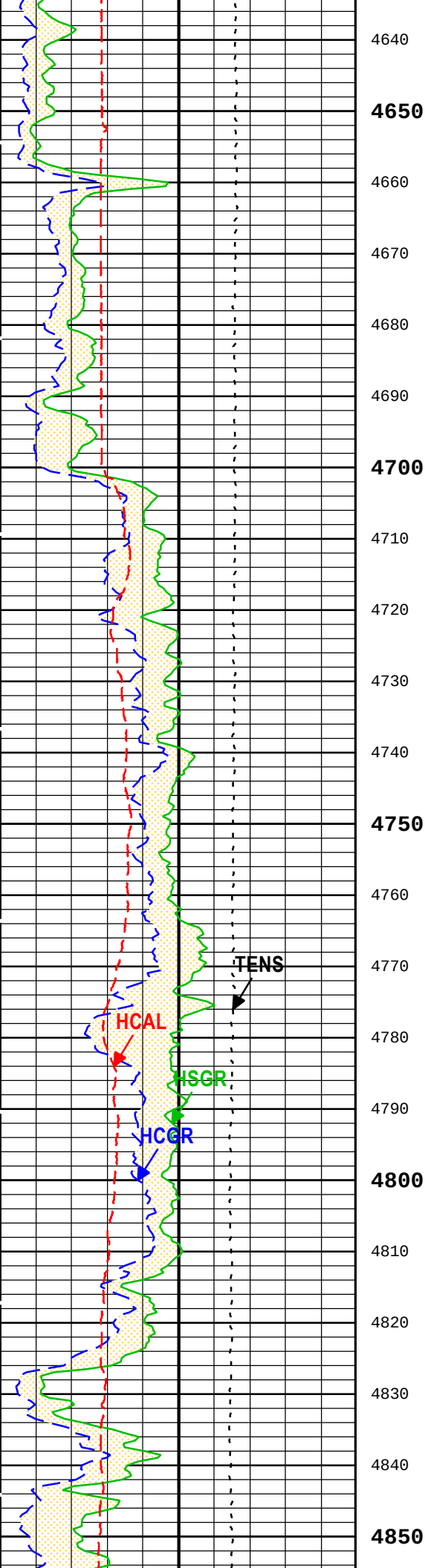
Logging Cable			
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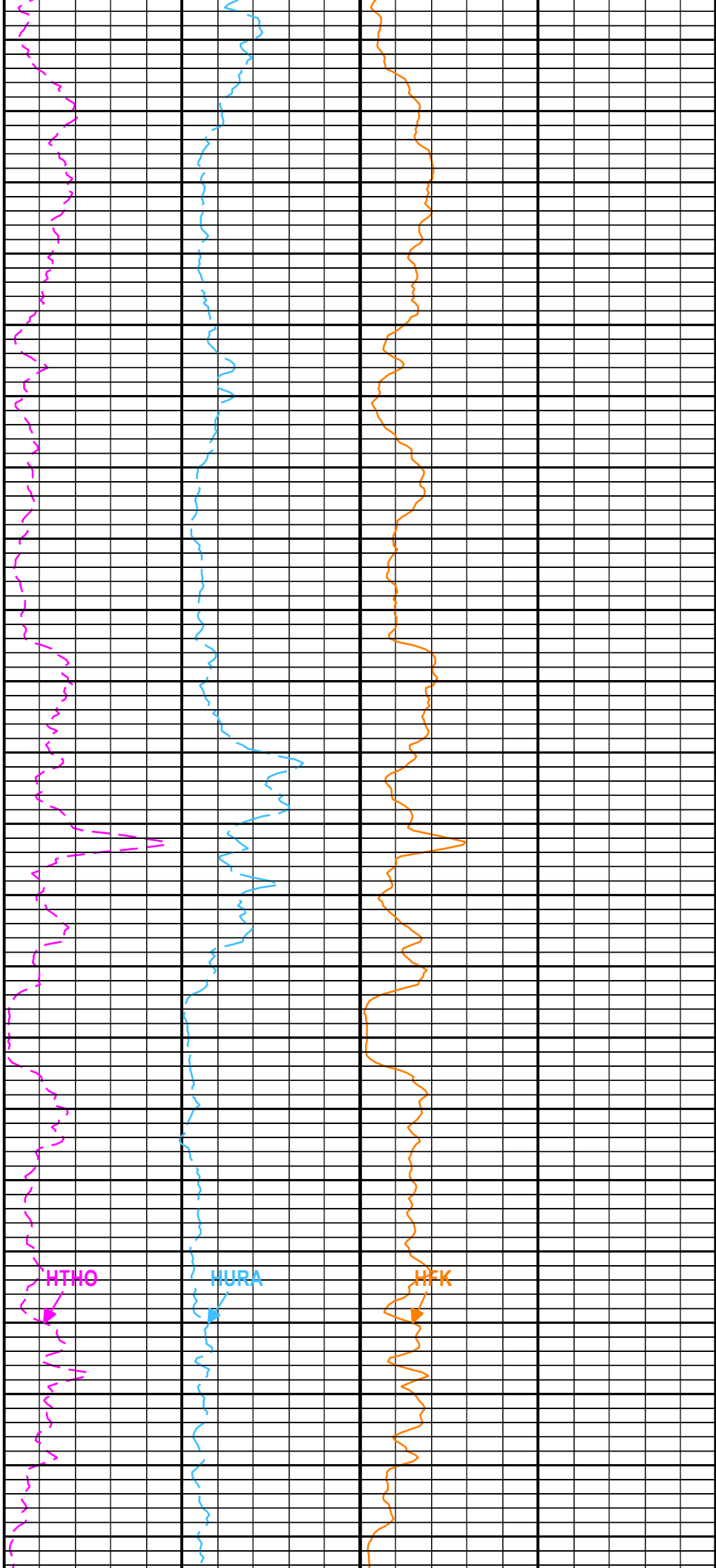
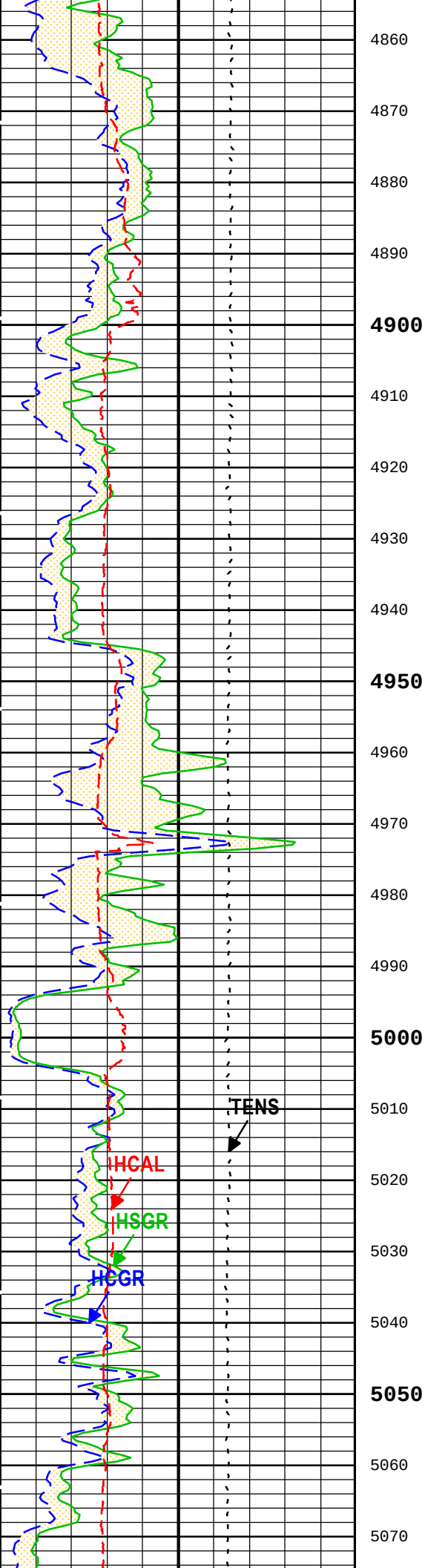
Type	7-46P-XS		
Serial Number	U714054		
Length	17700.00 ft		
Conveyance Type	Wireline		
Rig Type	Land		

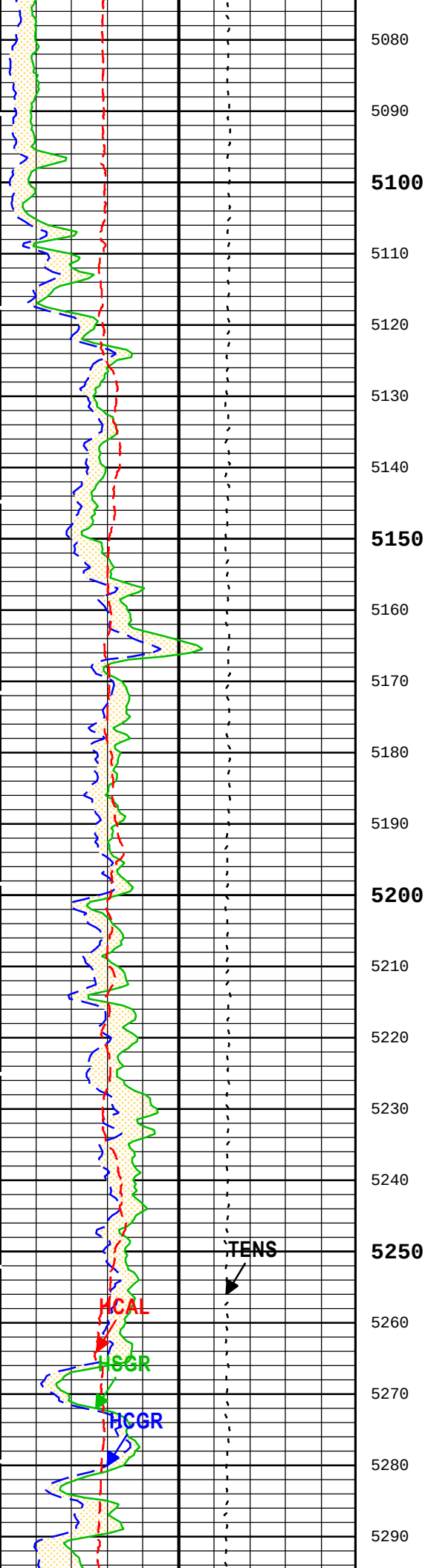
Run 1A:Depth Control Parameters		Depth Control Remarks	
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Log Sequence	First Log In the Well	1. All SLB depth policies and procedures followed.	
Rig Up Length At Surface	215.70 ft	2. IDW used as primary depth control device.	
Rig Up Length At Bottom	215.00 ft	3. Z-Chart used as secondary depth control device.	

Rig Up Length Correction				0.70 ft	4. First run in hole procedures followed.				
Stretch Correction				13.00 ft	5. Main and repeat pass correlated to downlog.				
Tool Zero Check At Surface				-2.00 ft					
Run 1A									
Main Pass 5" = 100'									
Software Version									
Acquisition System						Version			
Maxwell 2016 SP1						6.1.58882.3100			
Application Patch						Wireline_NPD-PNX-2016SP1_6.1.70295			
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run 1A	Main[3]:Up	Up	213.72 ft	13662.08 ft	29-Nov-2016 4:25:05 PM	29-Nov-2016 10:56:13 PM	ON	13.82 ft	Yes
All depths are referenced to toolstring zero									
Log						Company:DCP Midstream LP		Well:Zia AGI D2	
Run 1A: Main[3]:Up:S008									
Description: Format: Log (Spectral 5 inch) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:50:22									
Channel	Source			Sampling					
CALI	HDRS-H:HRCC-H:HRCC-H			1in					
CGR	HNGS-BA:HNGS-BA:HNGS-BA			6in					
POTA	HNGS-BA:HNGS-BA:HNGS-BA			6in					
SGR	HNGS-BA:HNGS-BA:HNGS-BA			6in					
TENS	WLWorkflow			6in					
THOR	HNGS-BA:HNGS-BA:HNGS-BA			6in					
TIME_1900	WLWorkflow			0.1in					
URAN	HNGS-BA:HNGS-BA:HNGS-BA			6in					
TIME_1900 - Time Marked every 60.00 (s)									
Uranium Indicator									
Gamma Ray Contribution from Thorium and Potassium (HCGR) HNGS-BA									
0gAPI150									
Spectroscopy Gamma Ray (HSGR) HNGS-BA									
0gAPI150									
Caliper (HCAL) HDRS-H									
6in16									
Cable Tension (TENS)									
10000lbf0									
				4600	Thorium Concentration (HTHO) HNGS-BA				
				4610	0ppm30				
				4620	Potassium Concentration (HFK) HNGS-BA				
				4630	0%10				
					Uranium Concentration (HURA) HNGS-BA				
					-10ppm30				







5100

5150

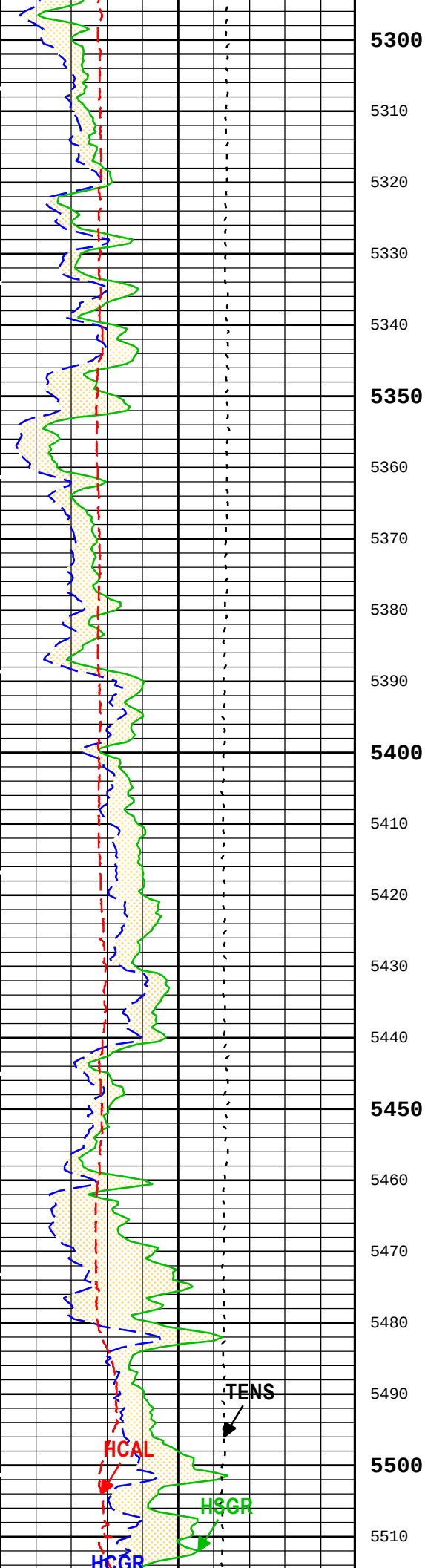
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5280 HURA

5290 HFK



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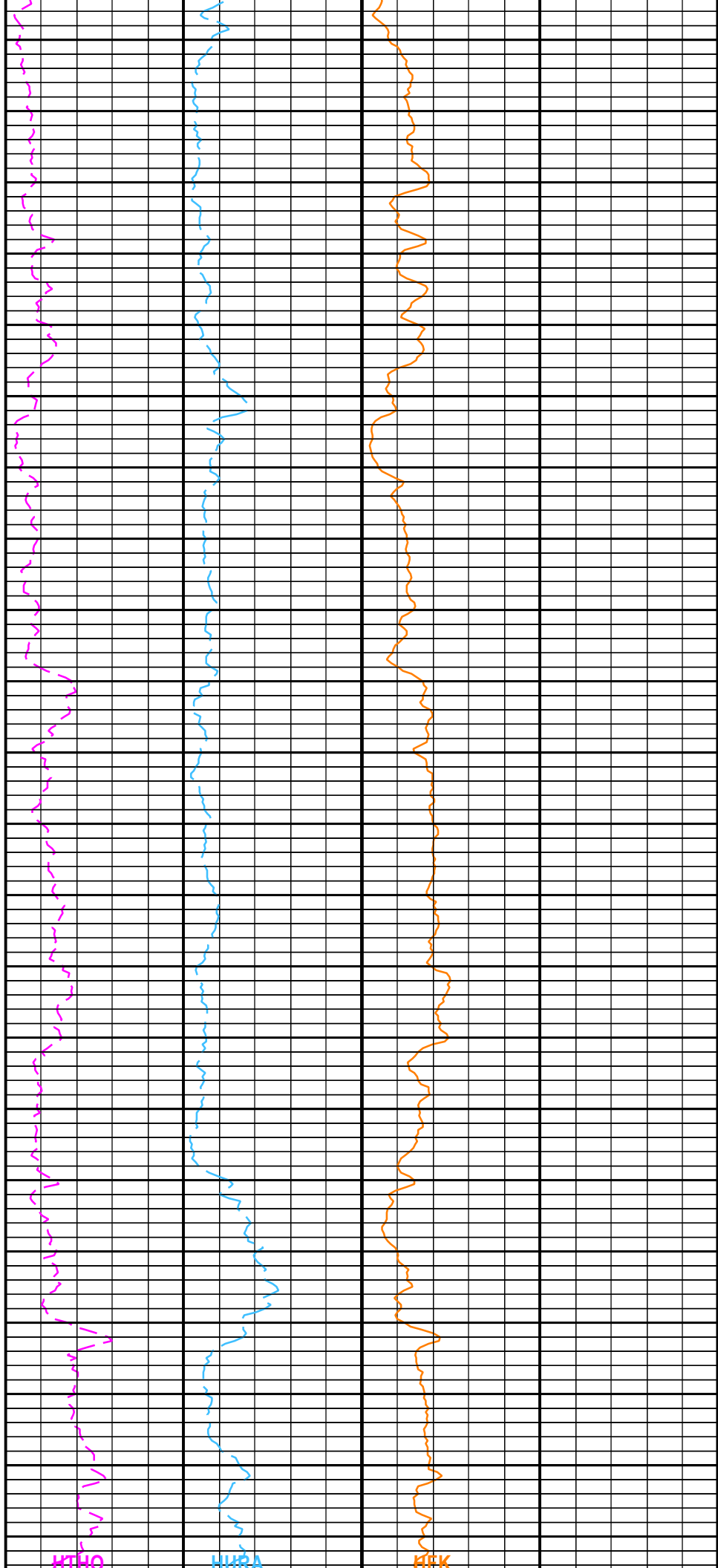
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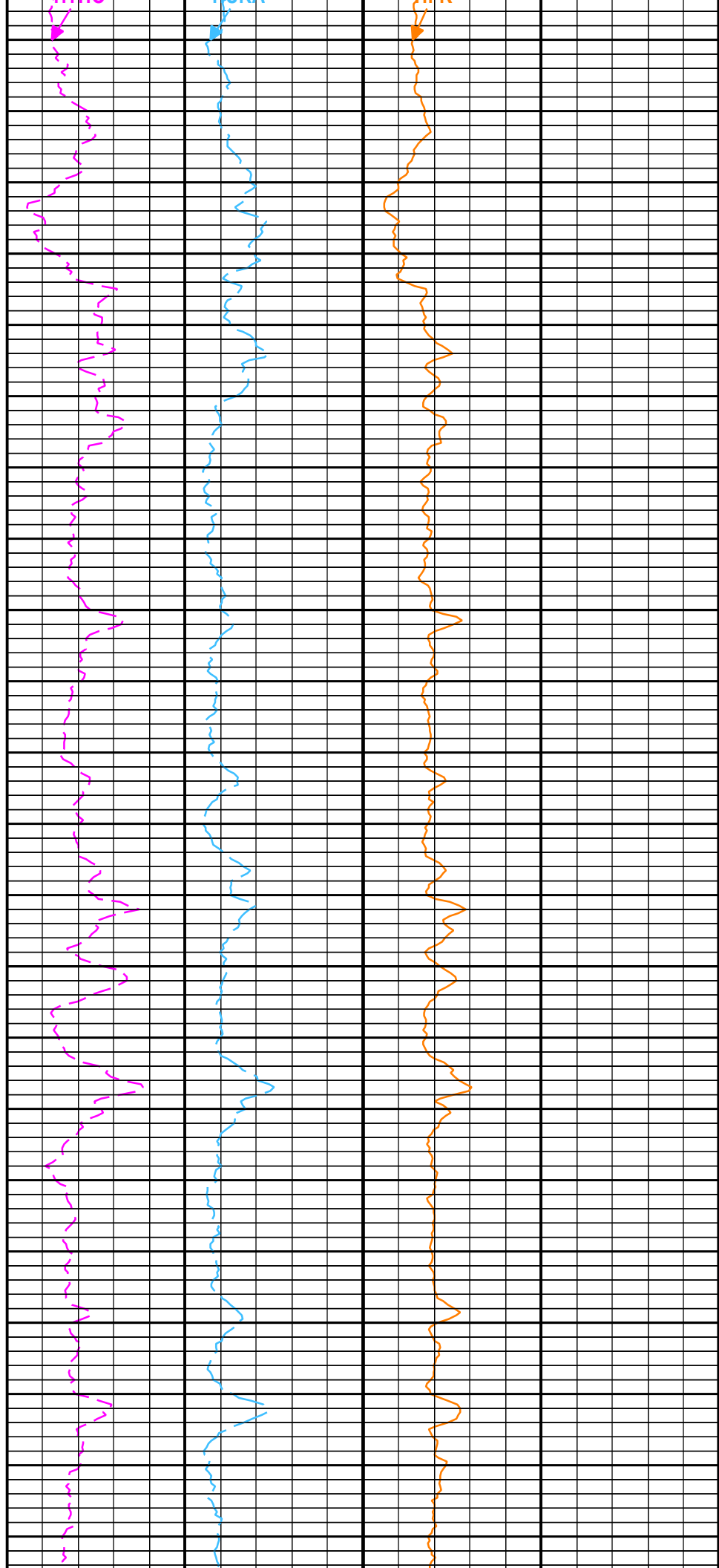
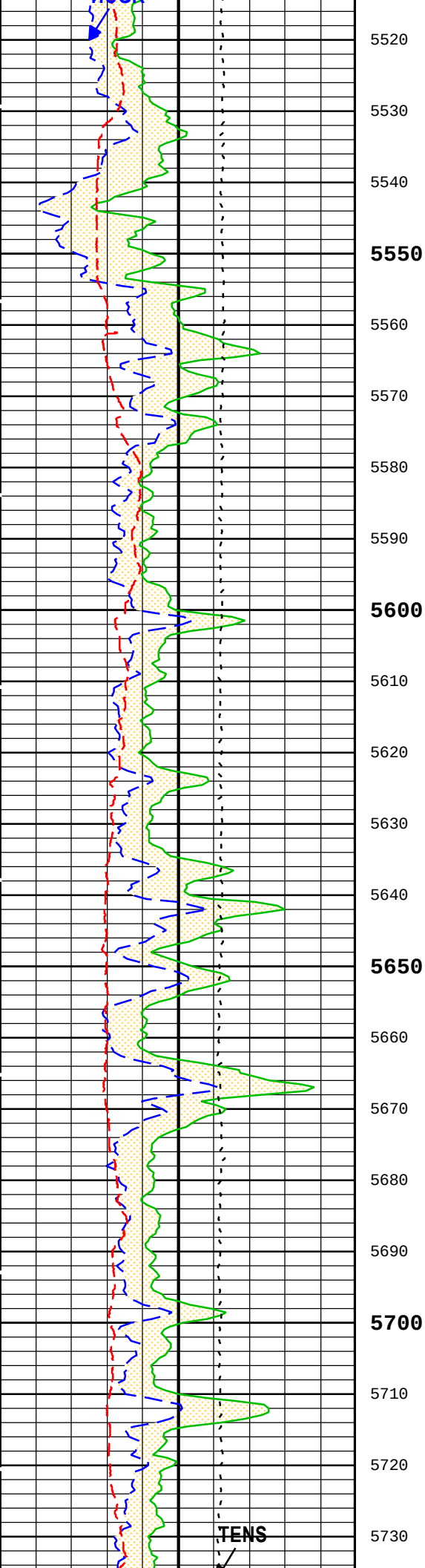
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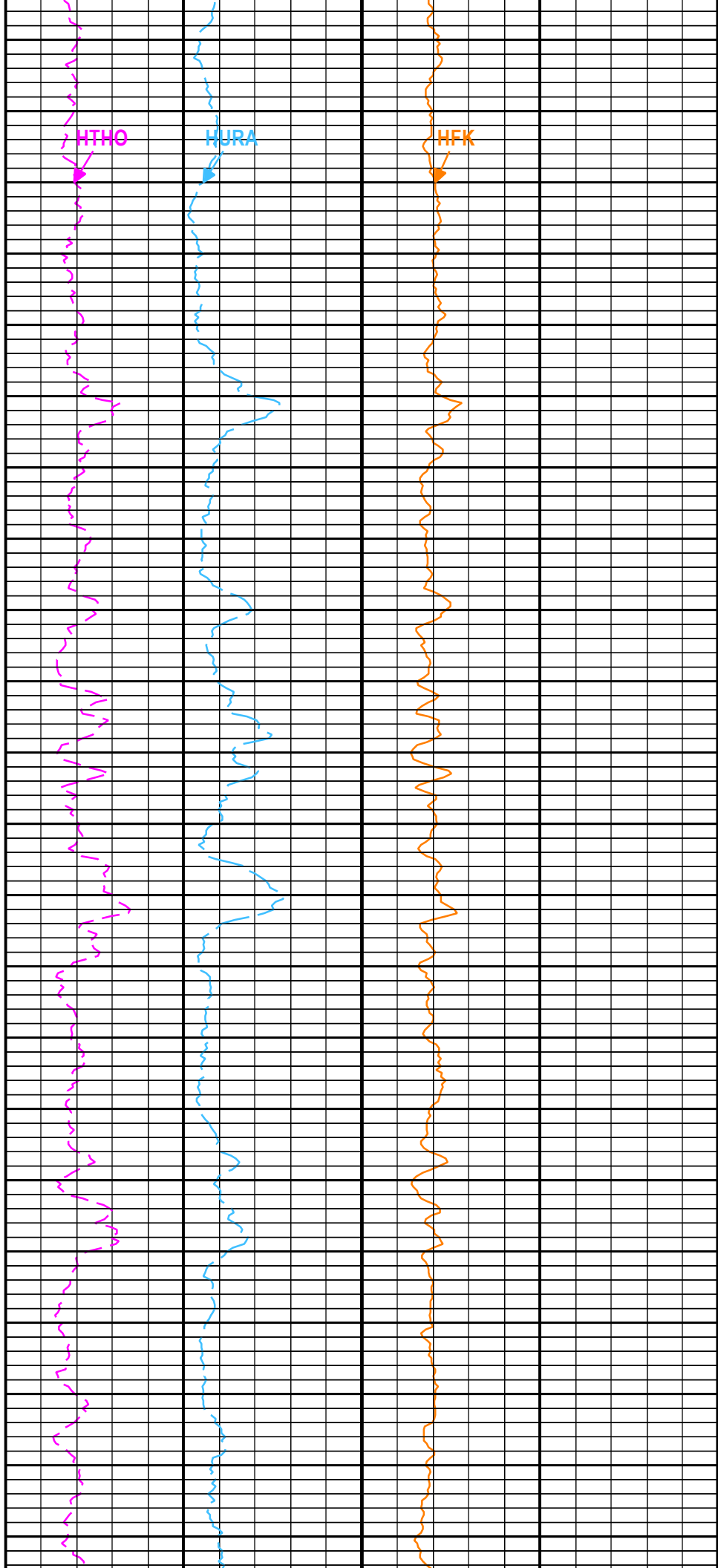
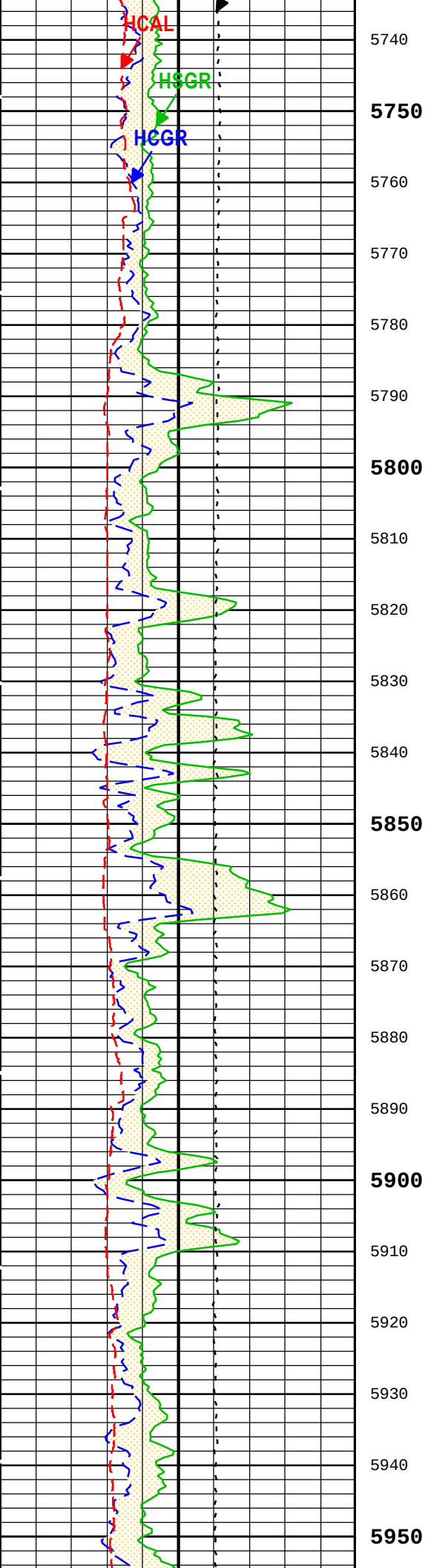


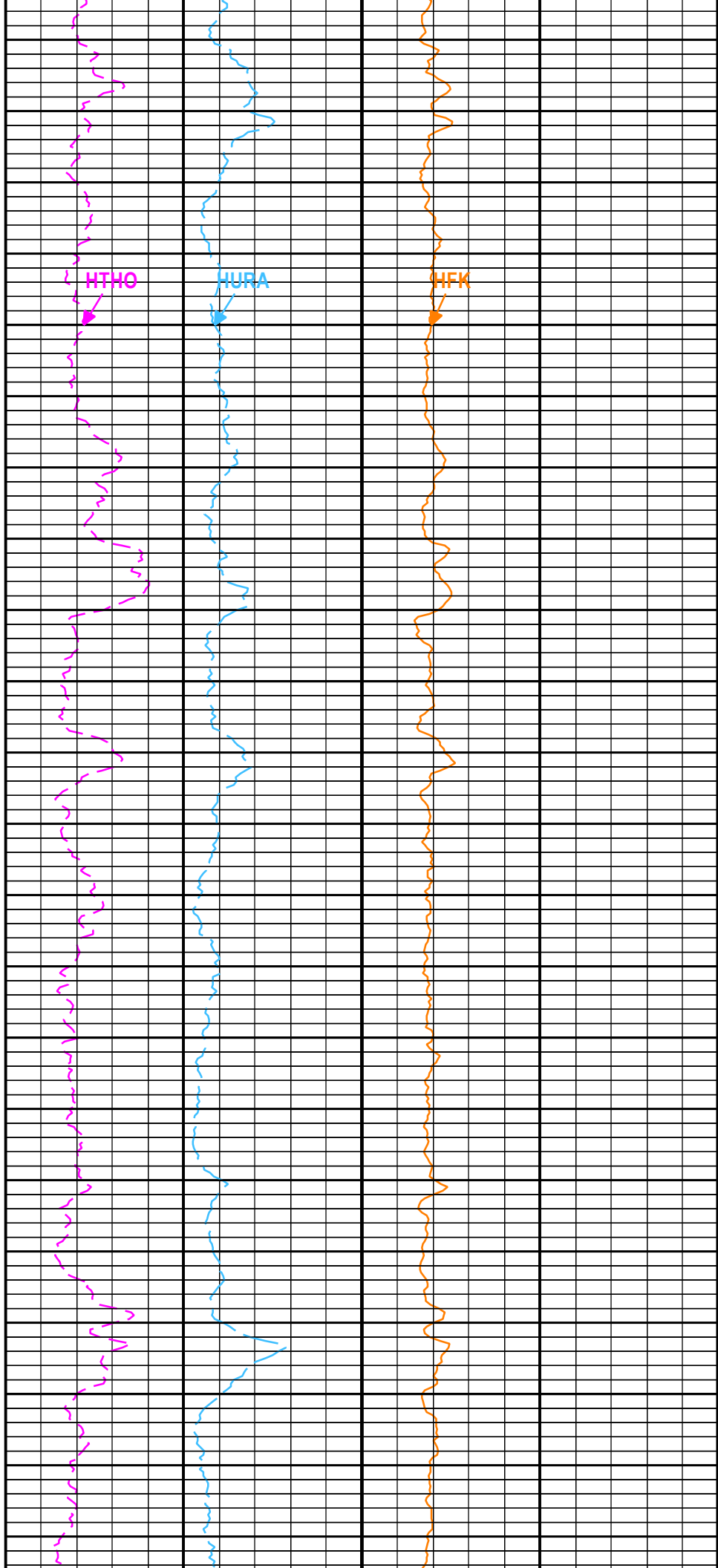
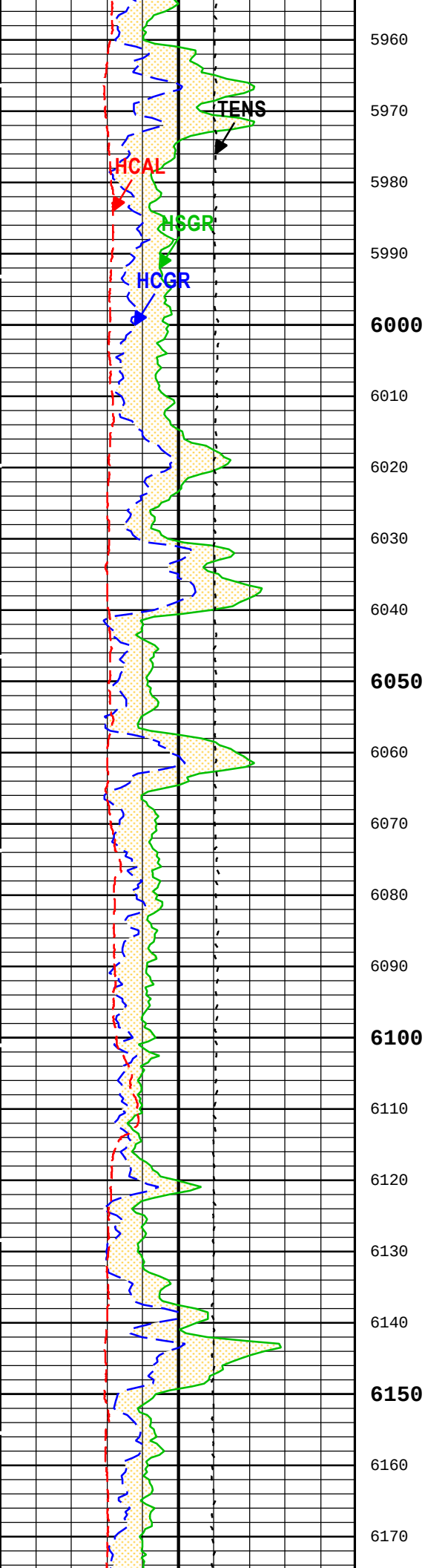
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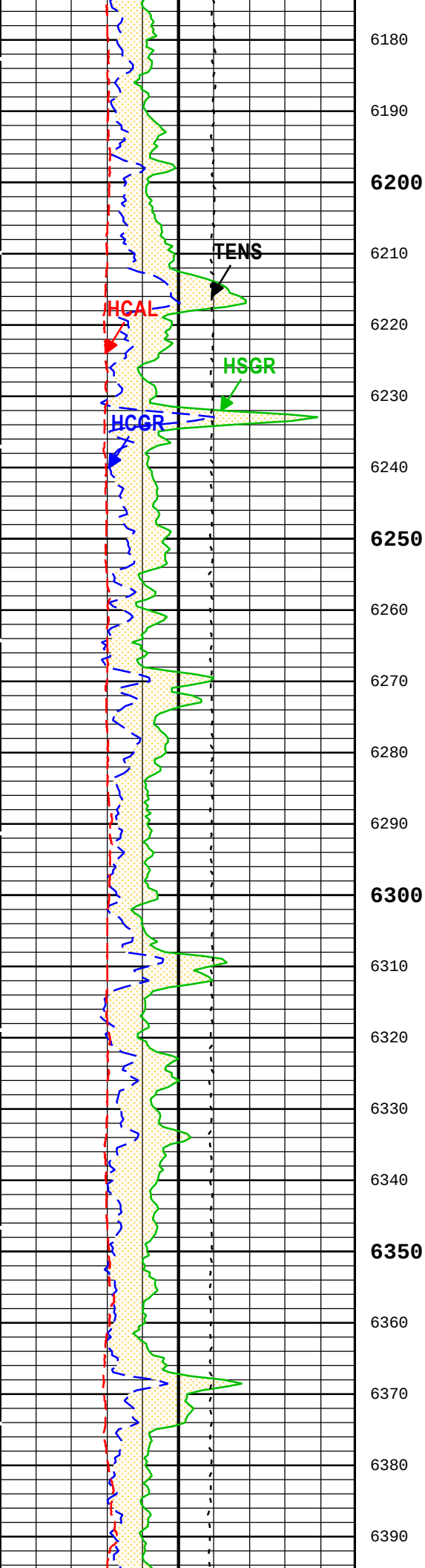
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HEK

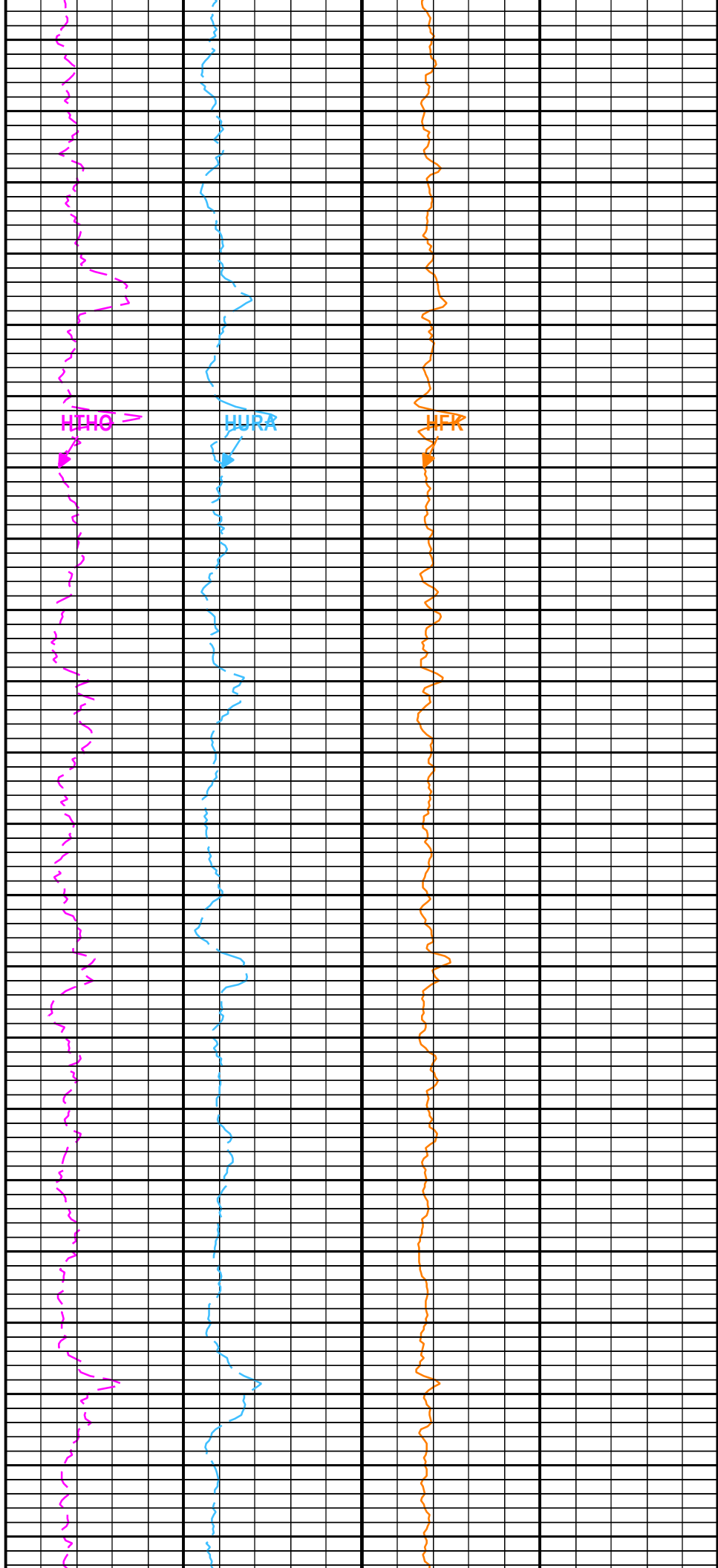


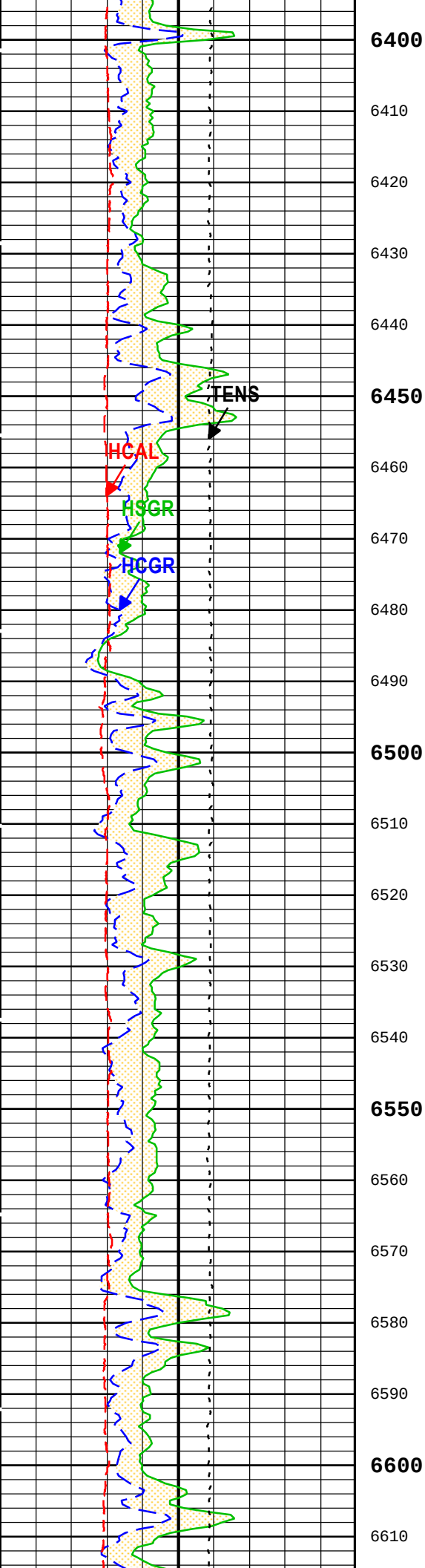






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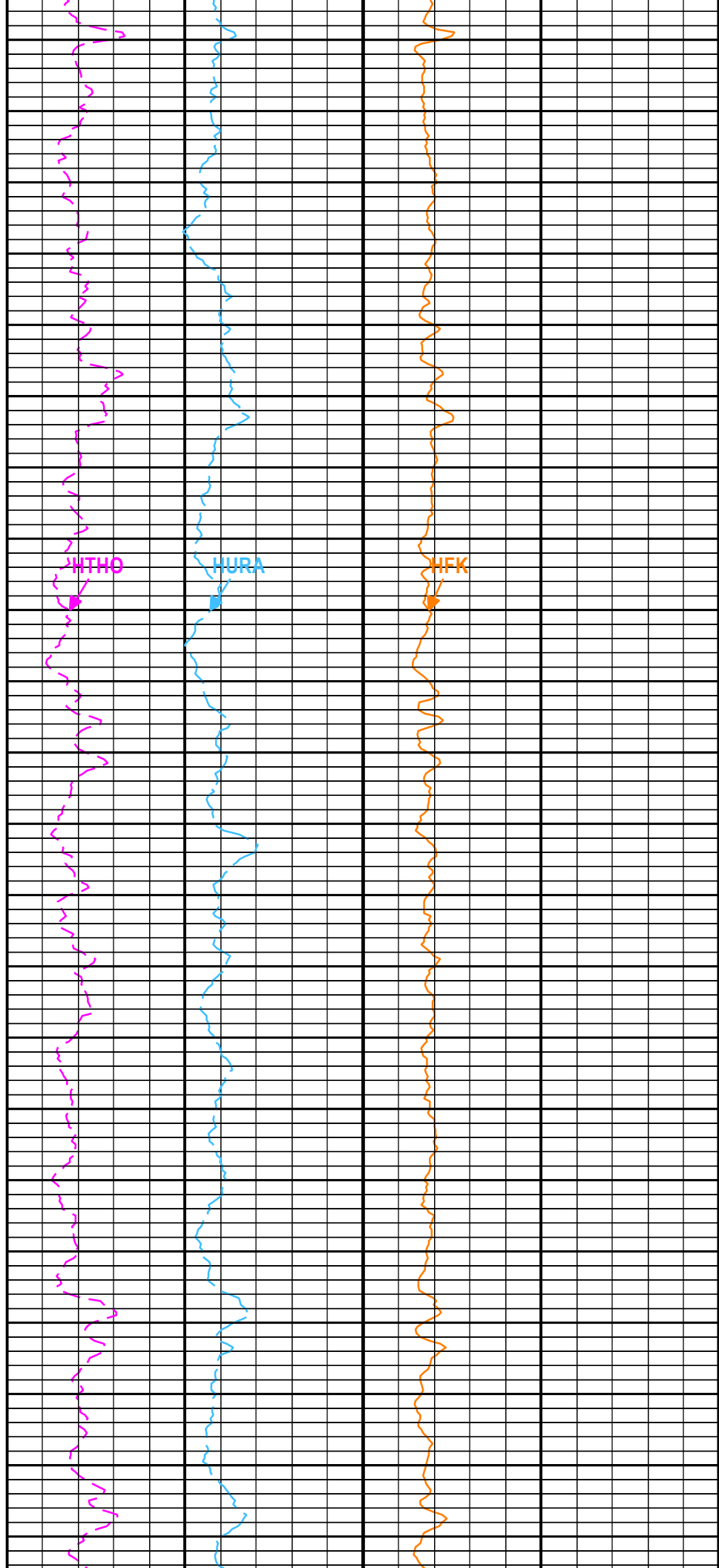
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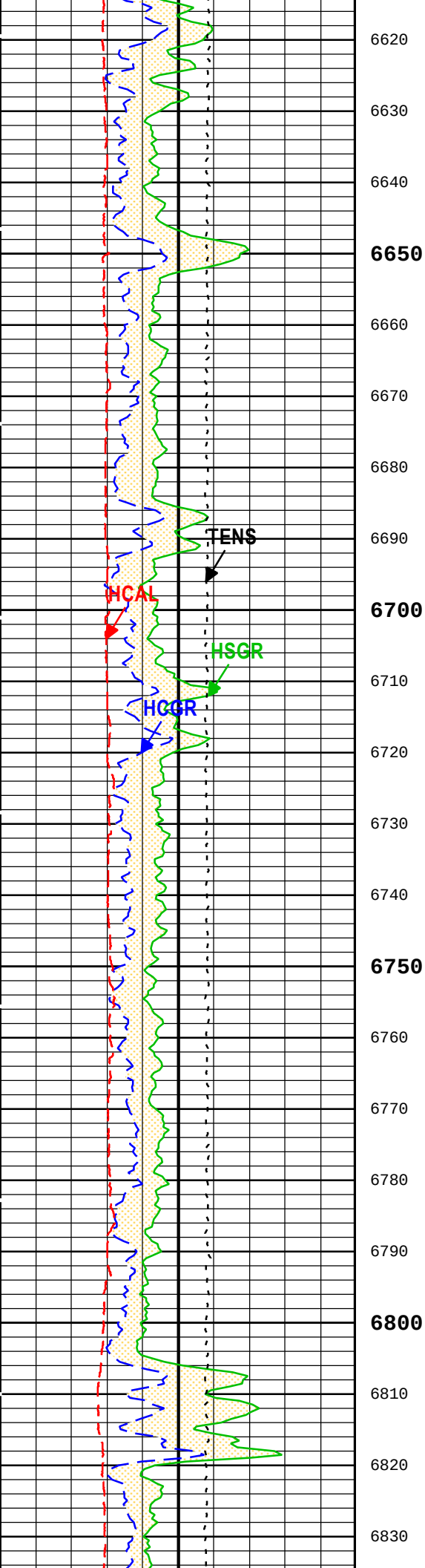
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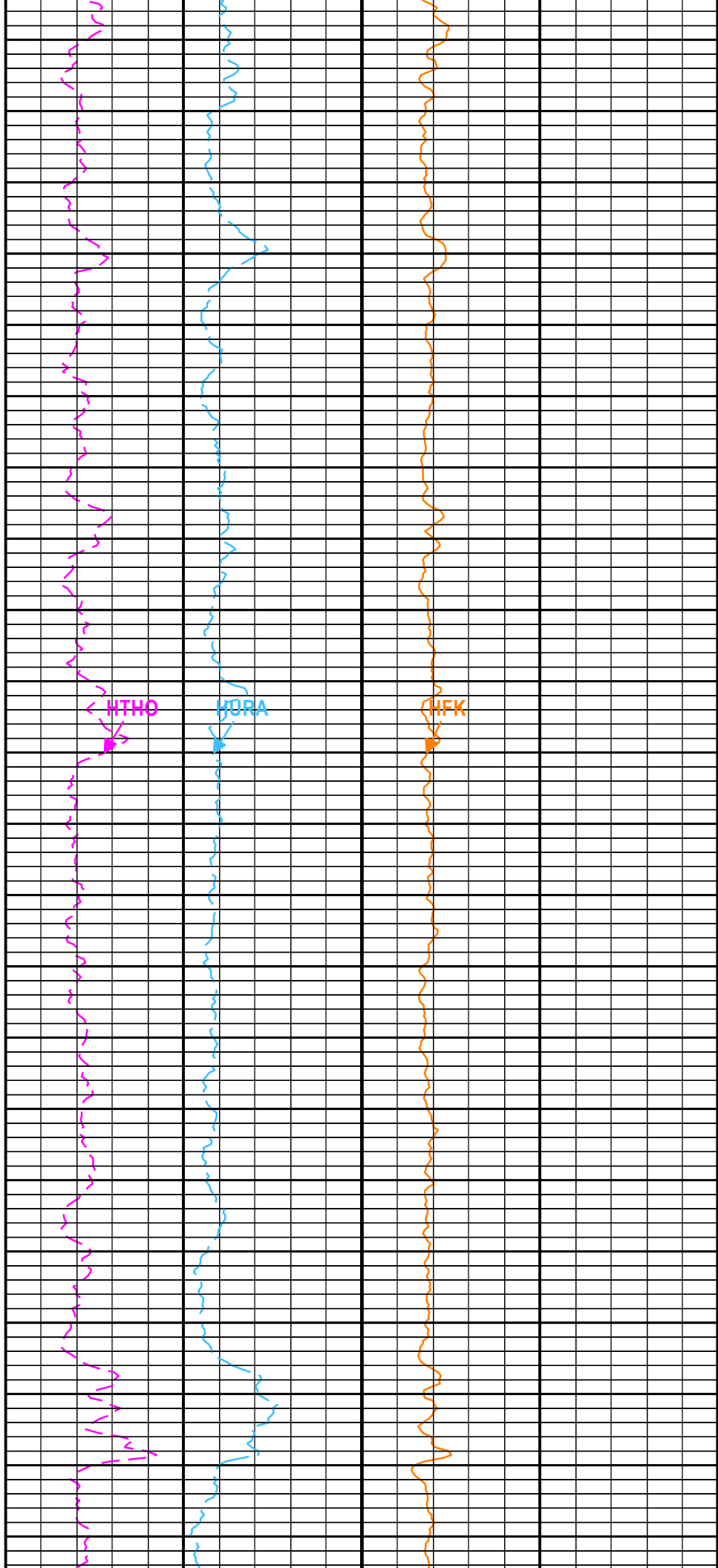
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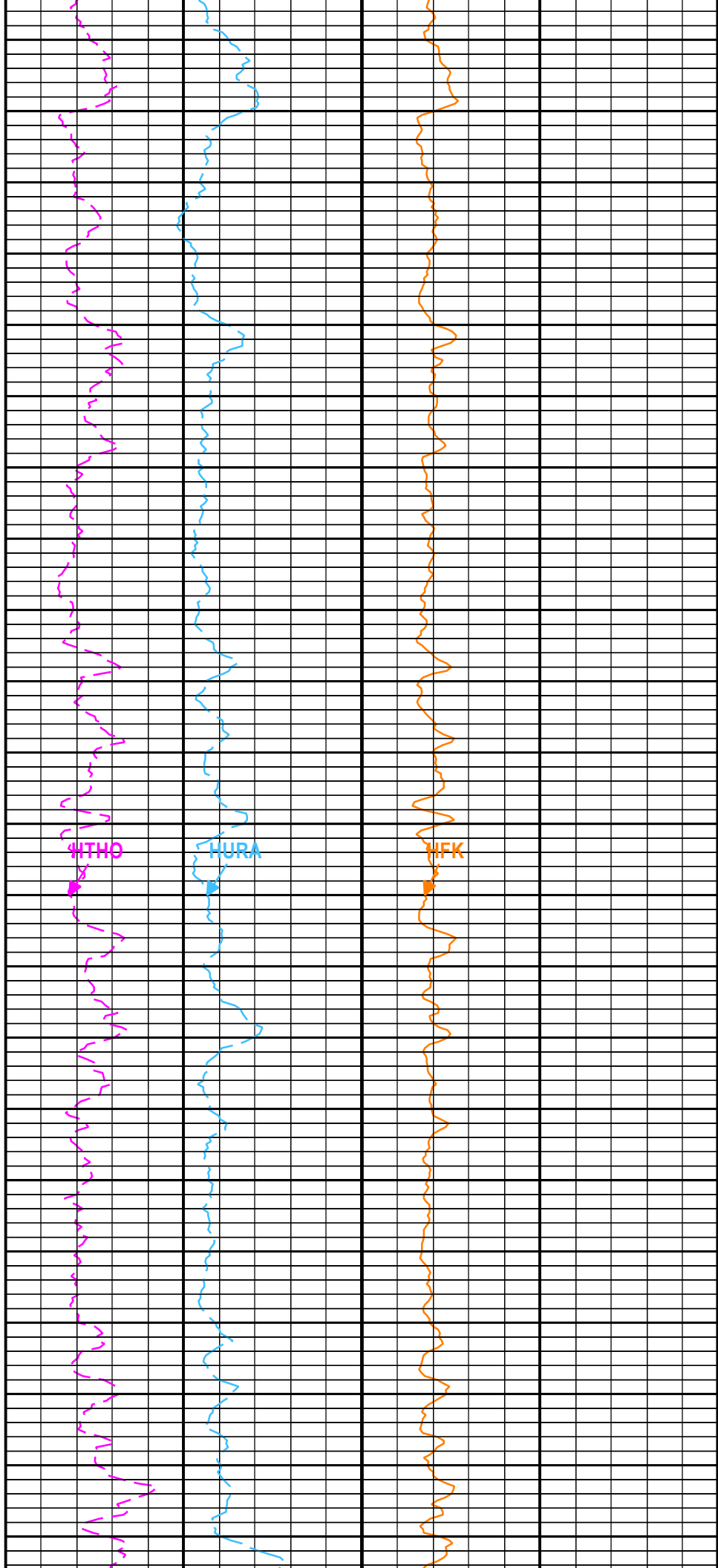
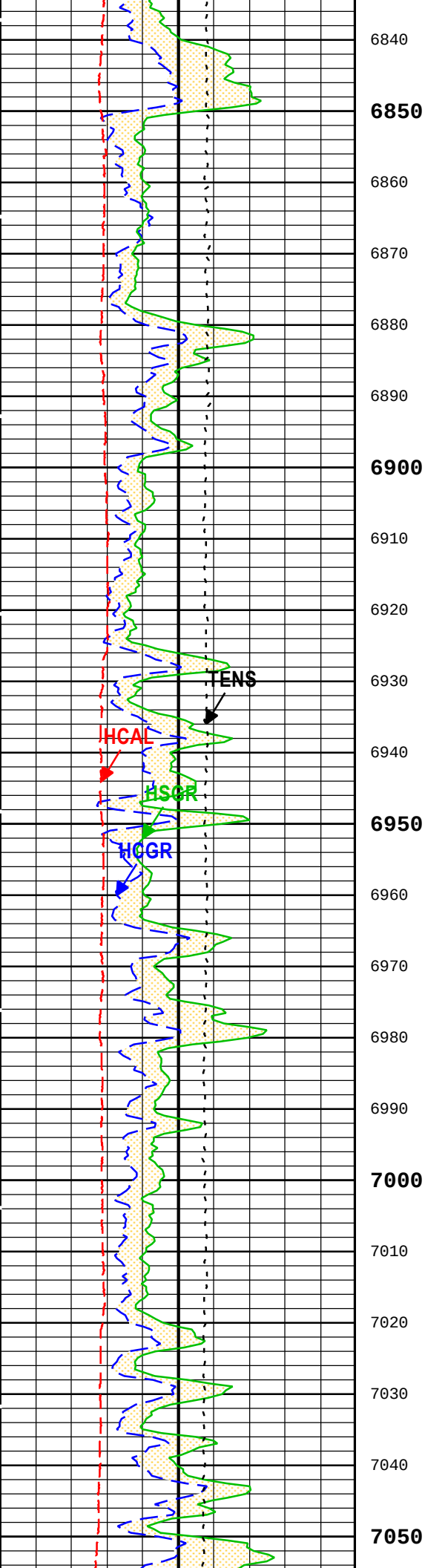
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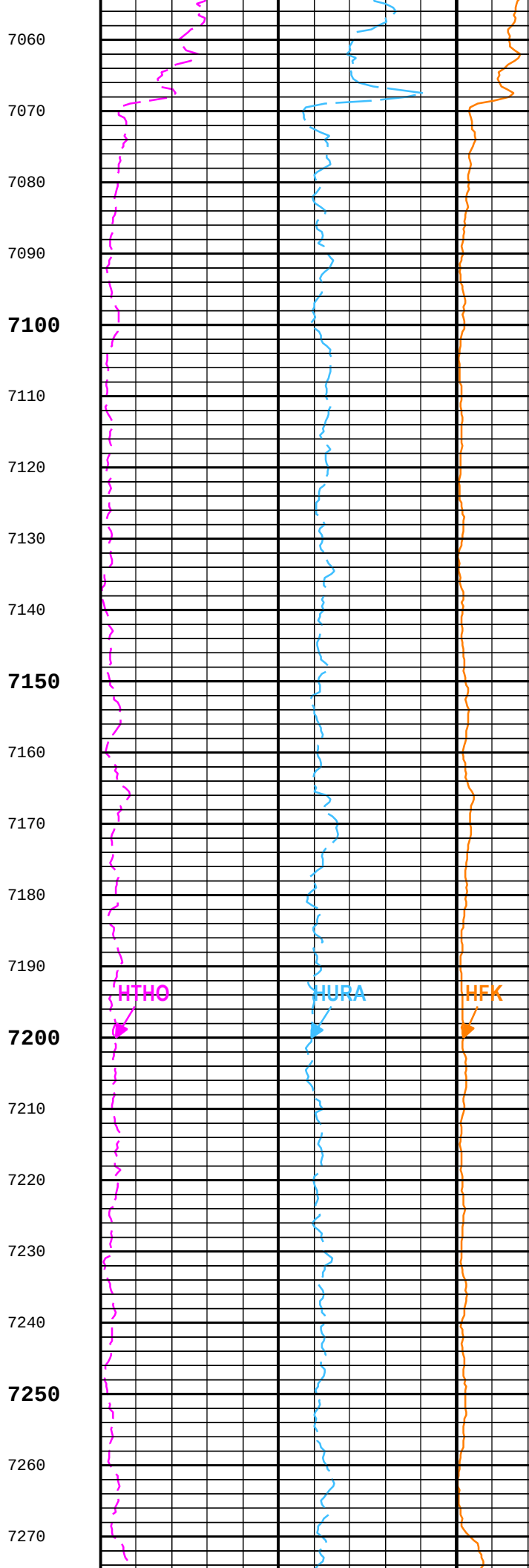
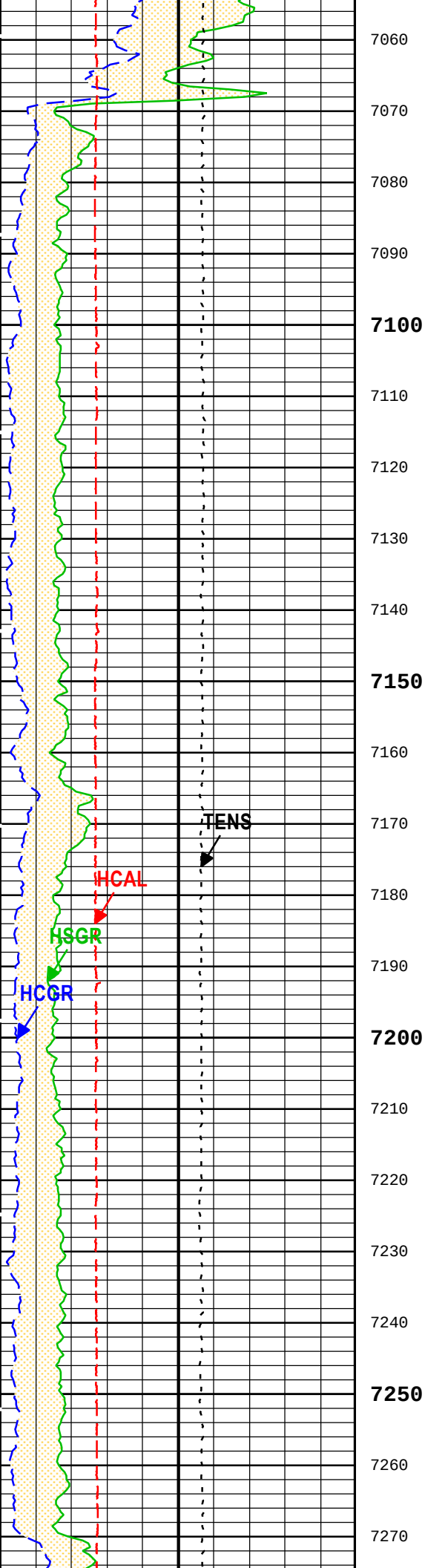
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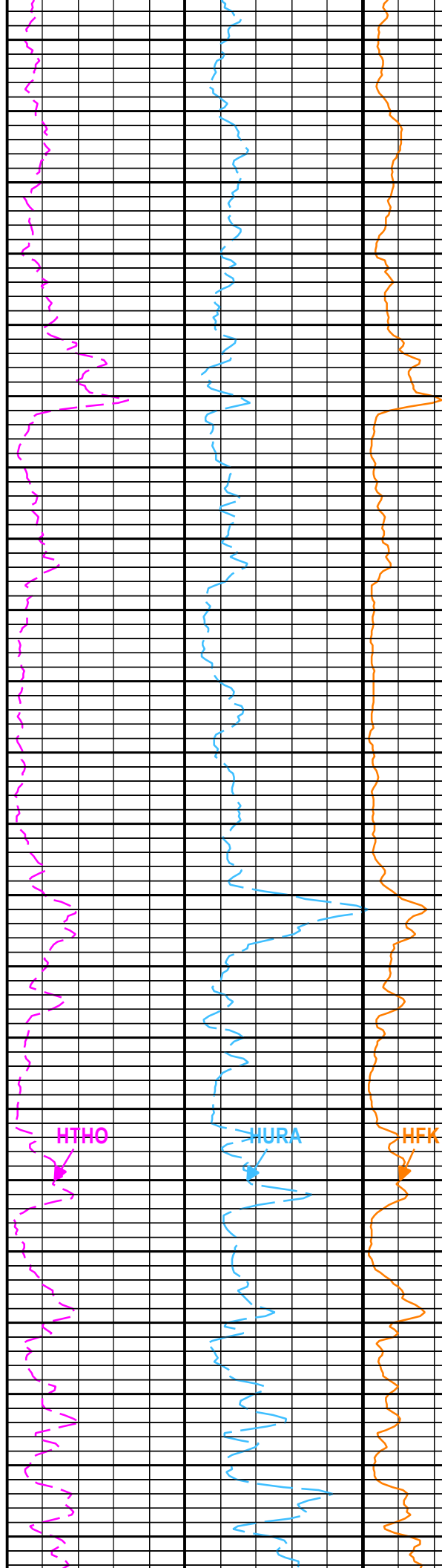
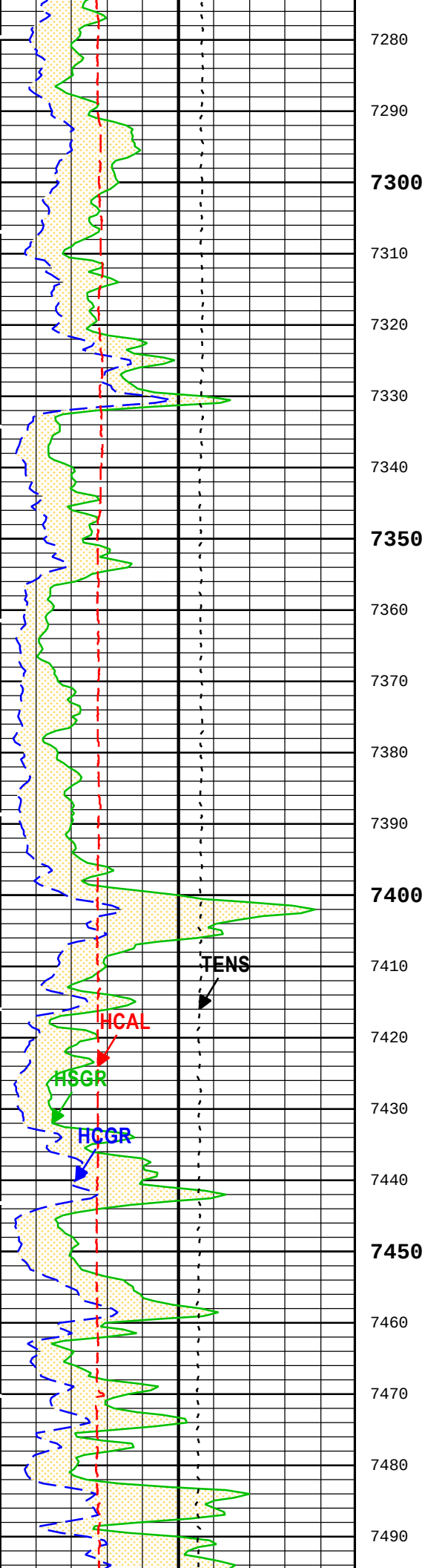


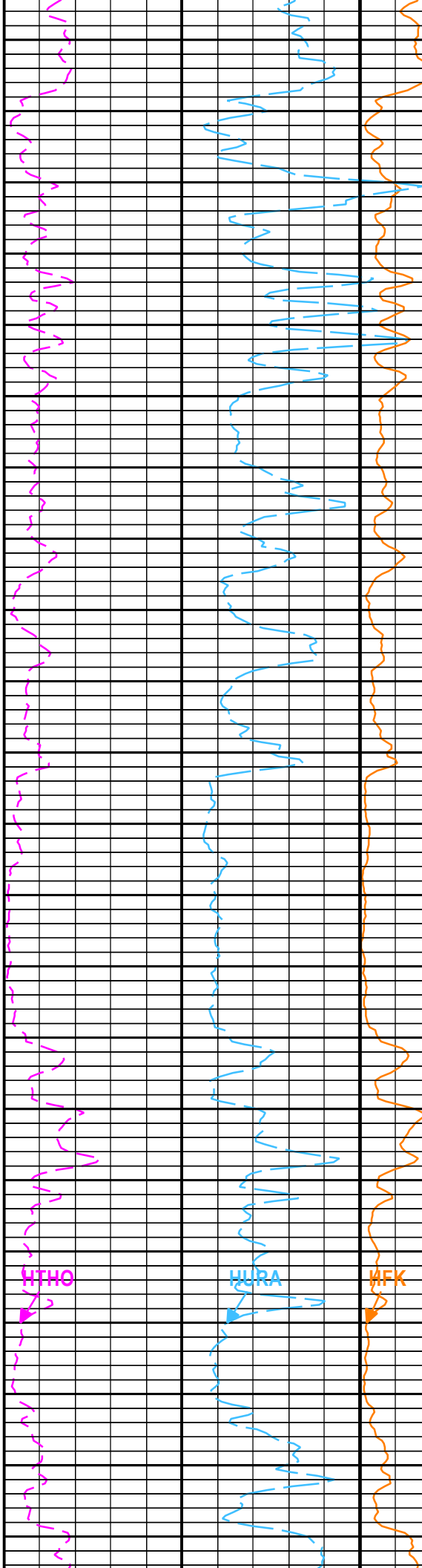
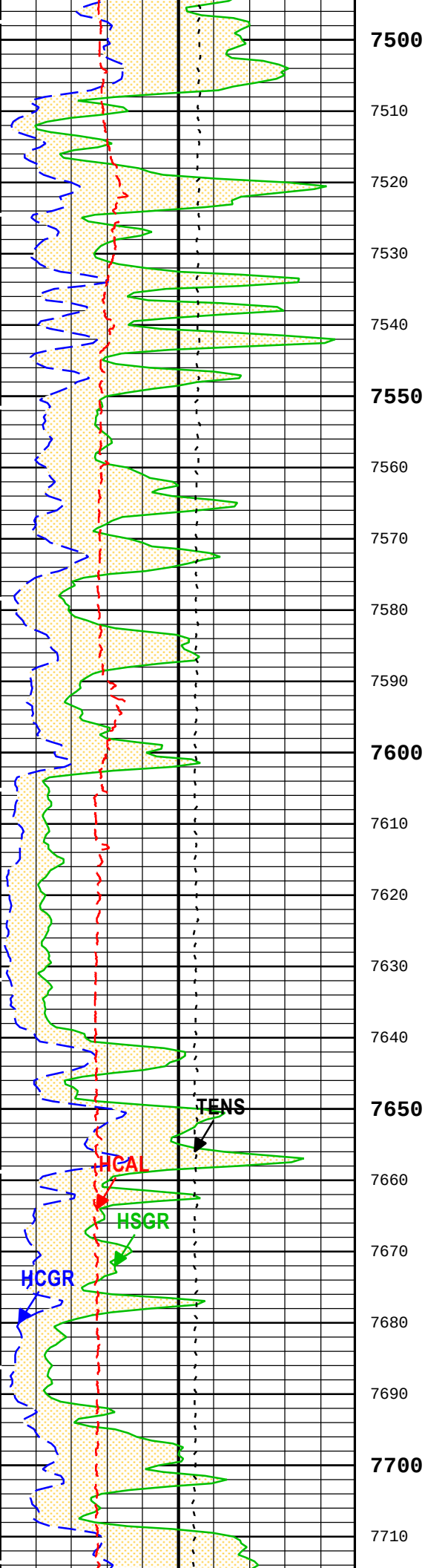
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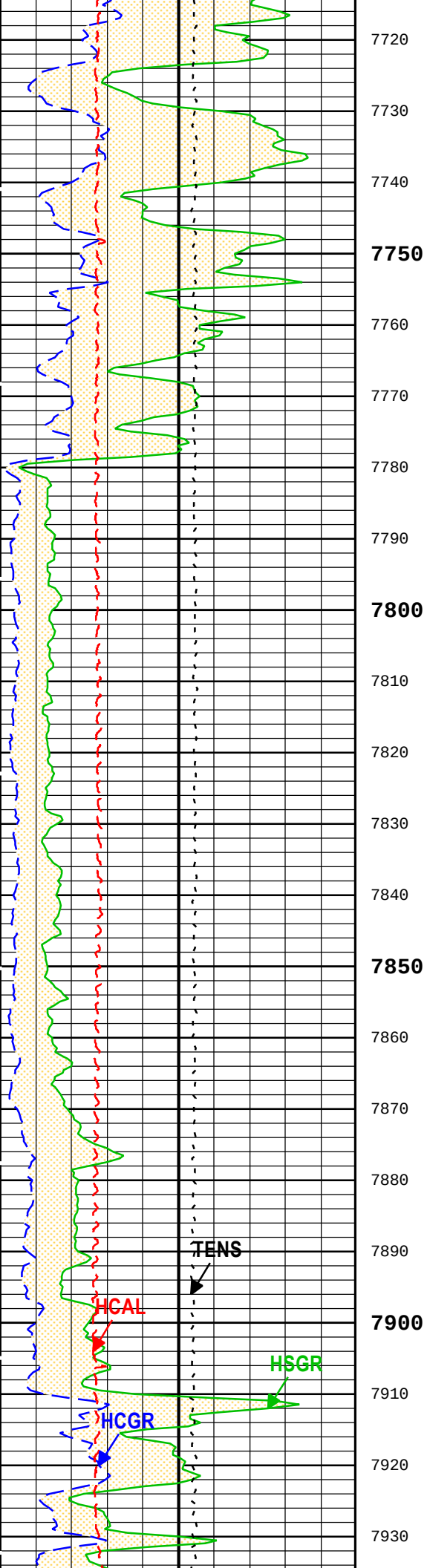




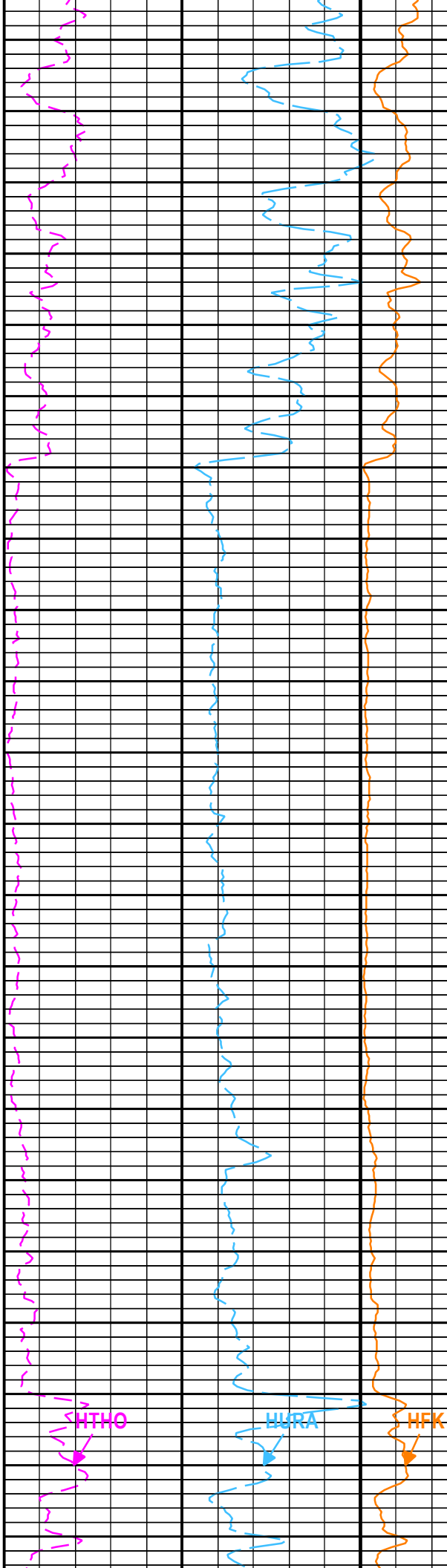








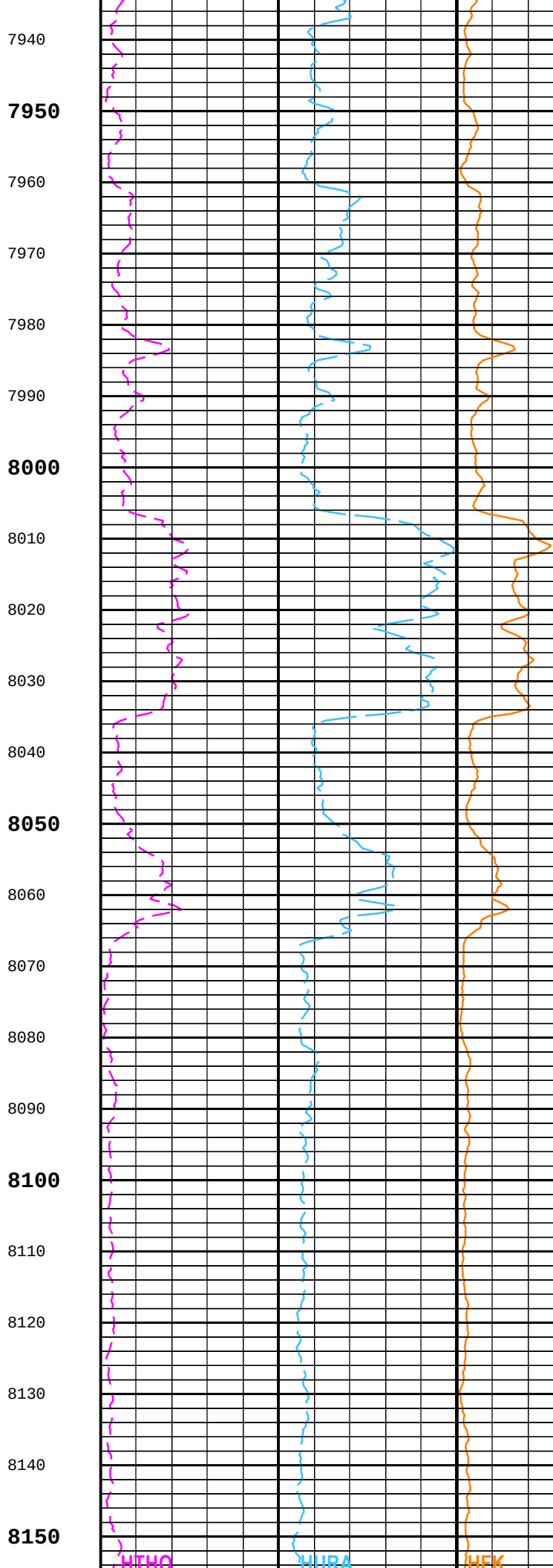
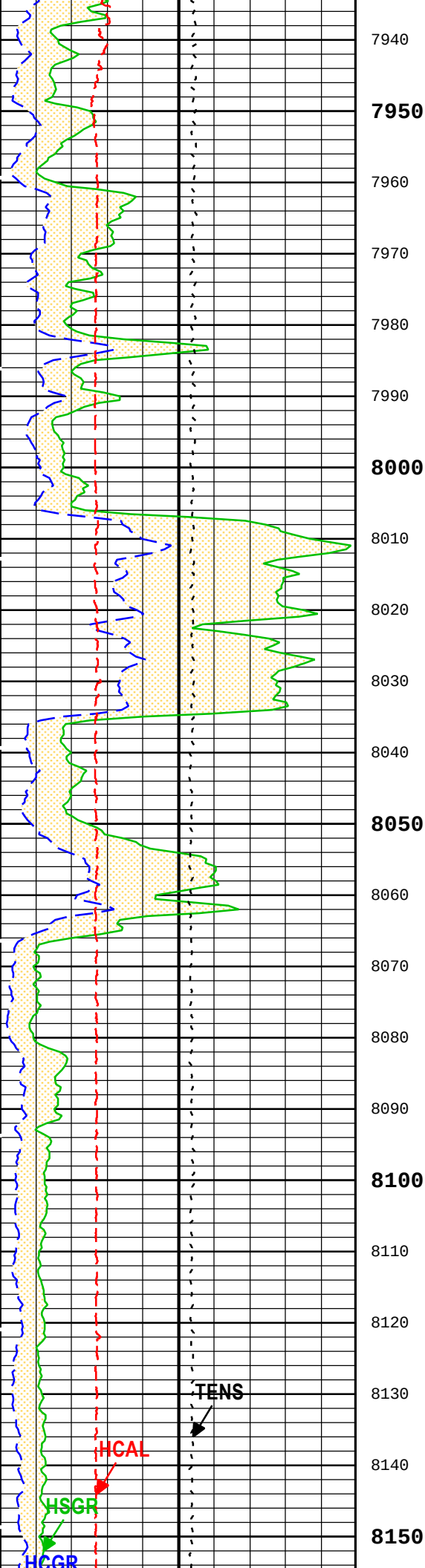
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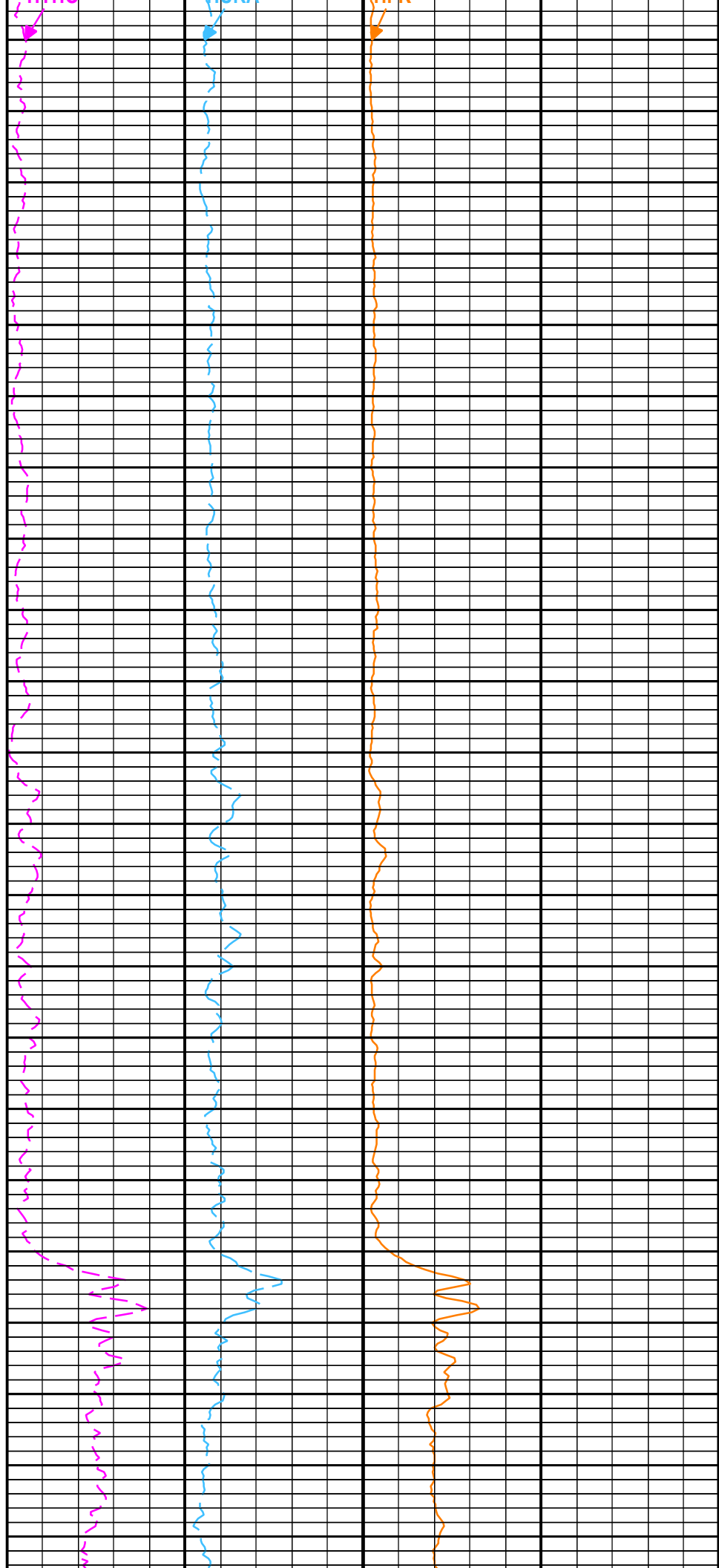
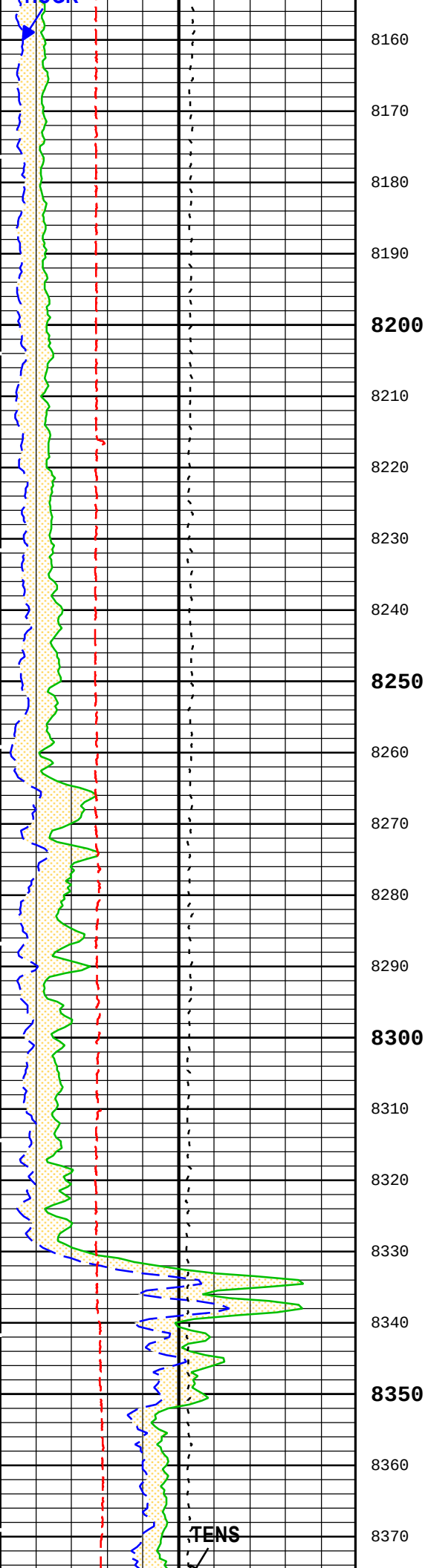


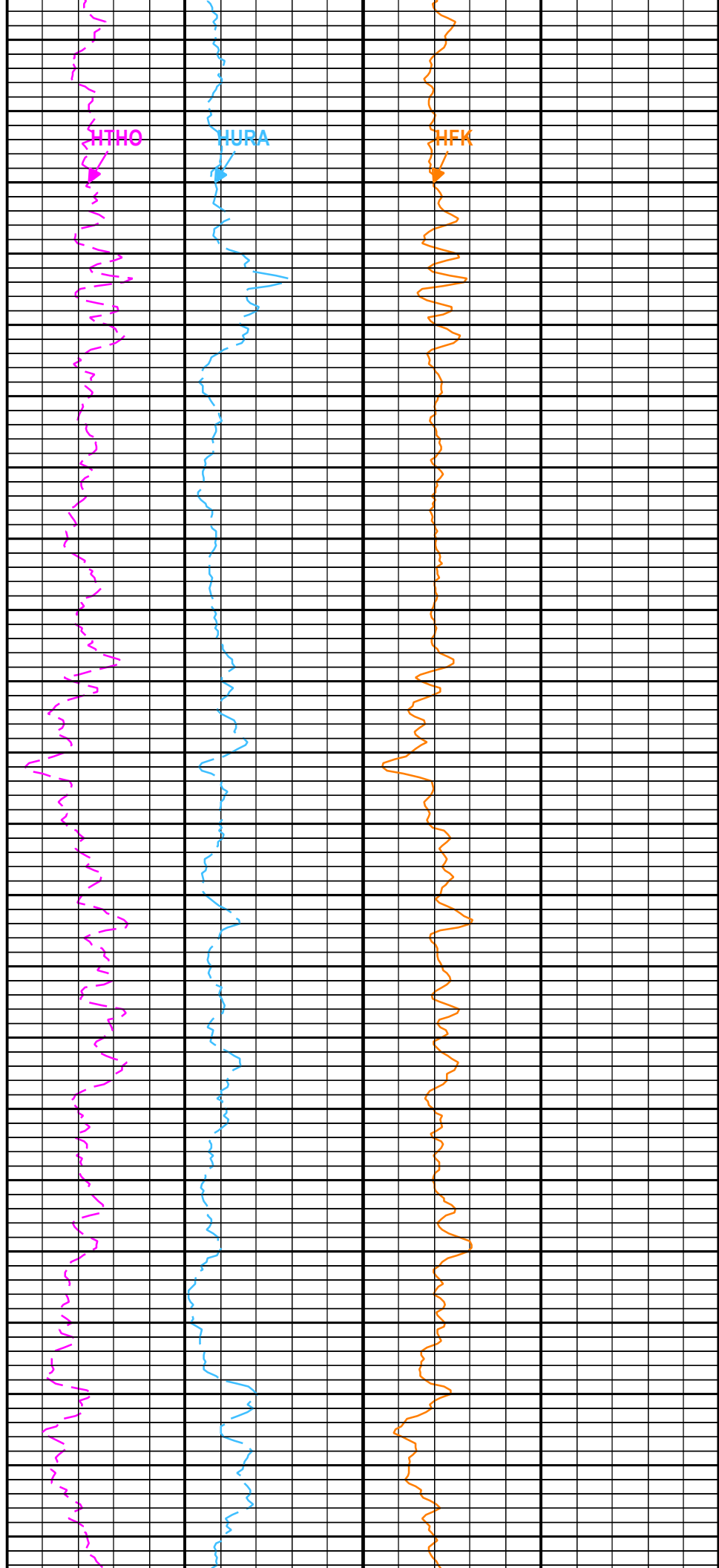
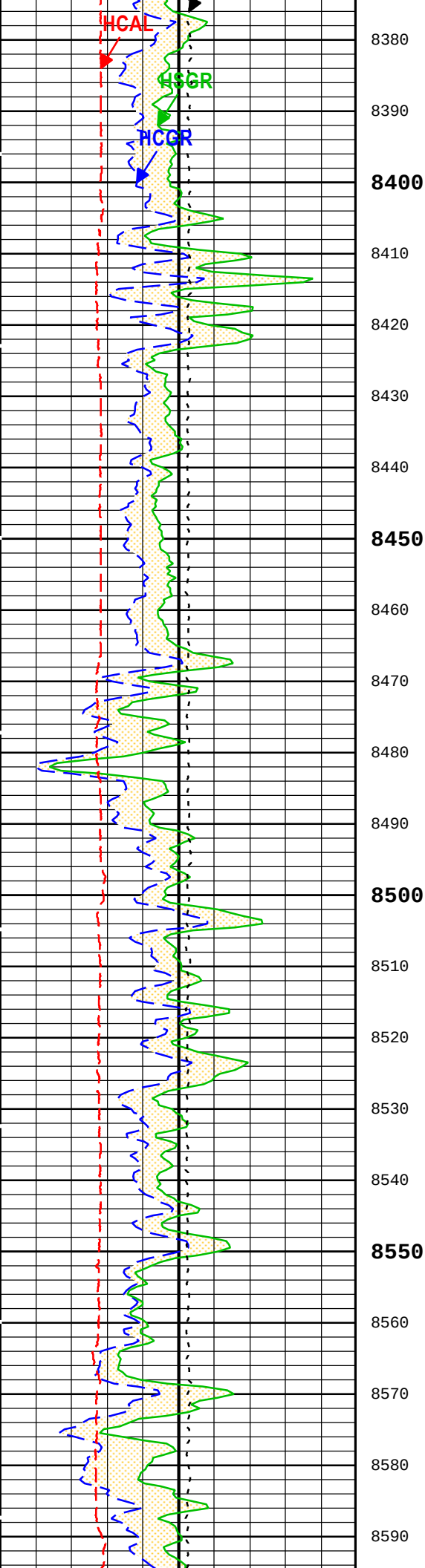
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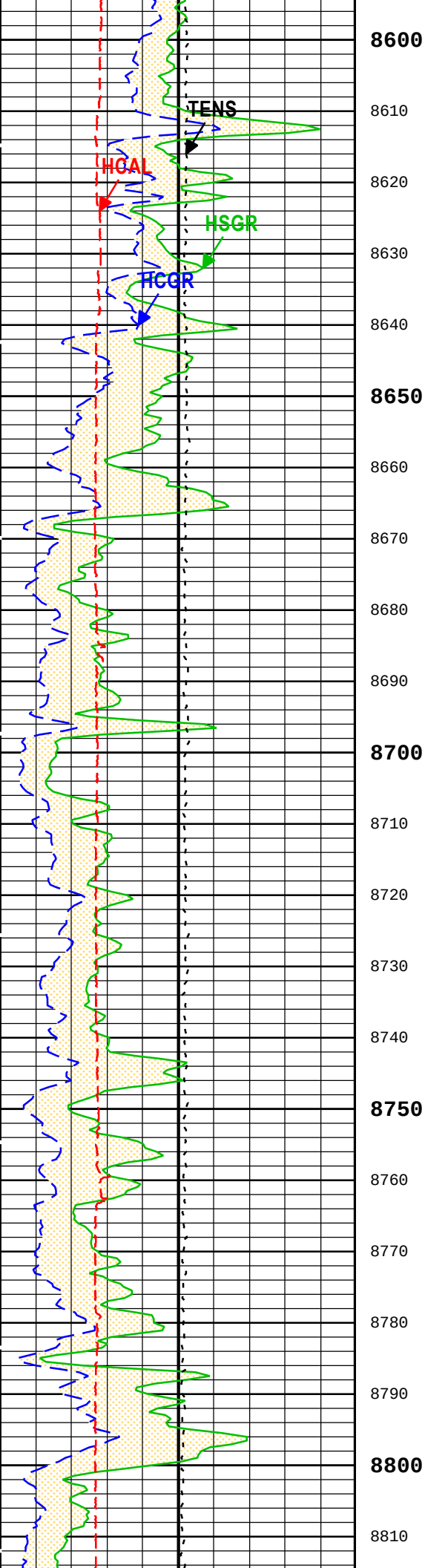
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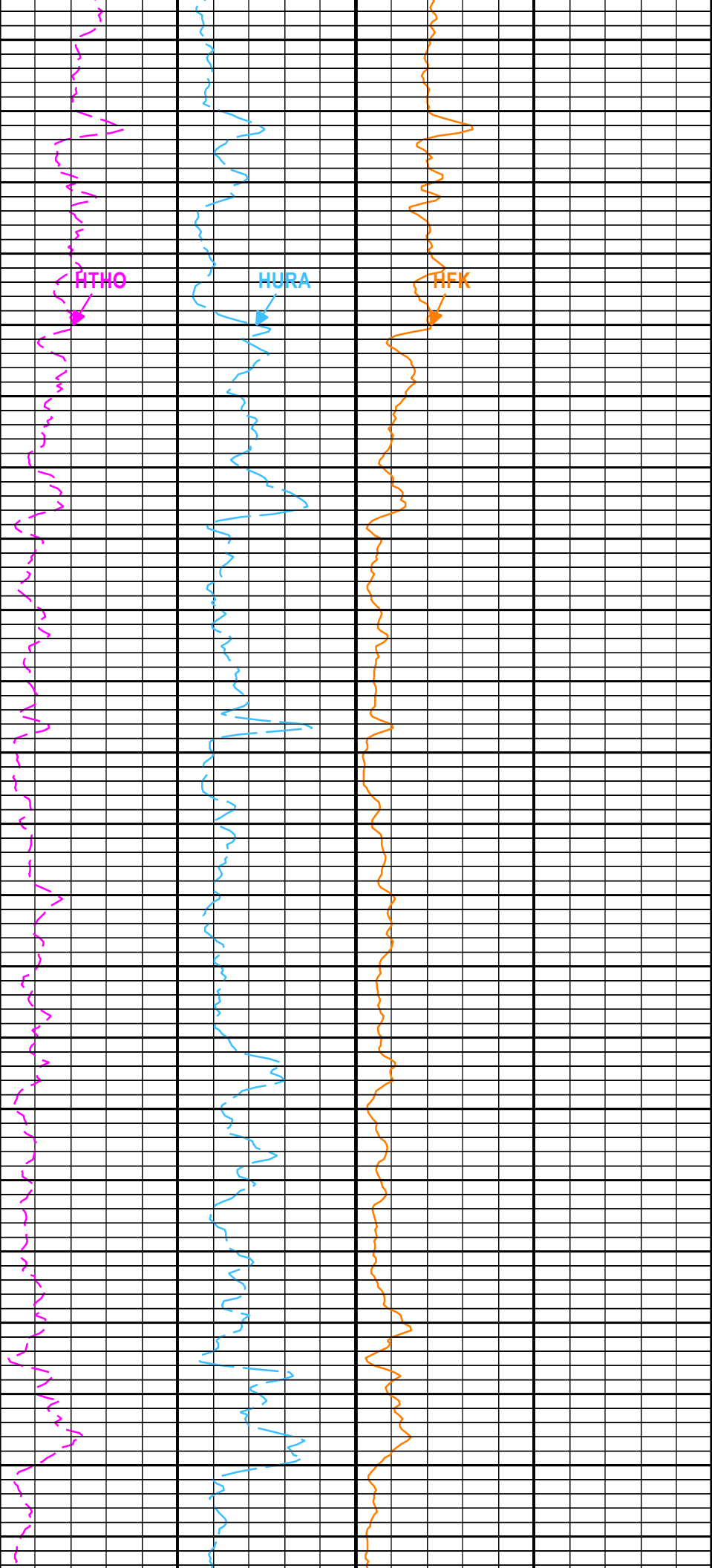
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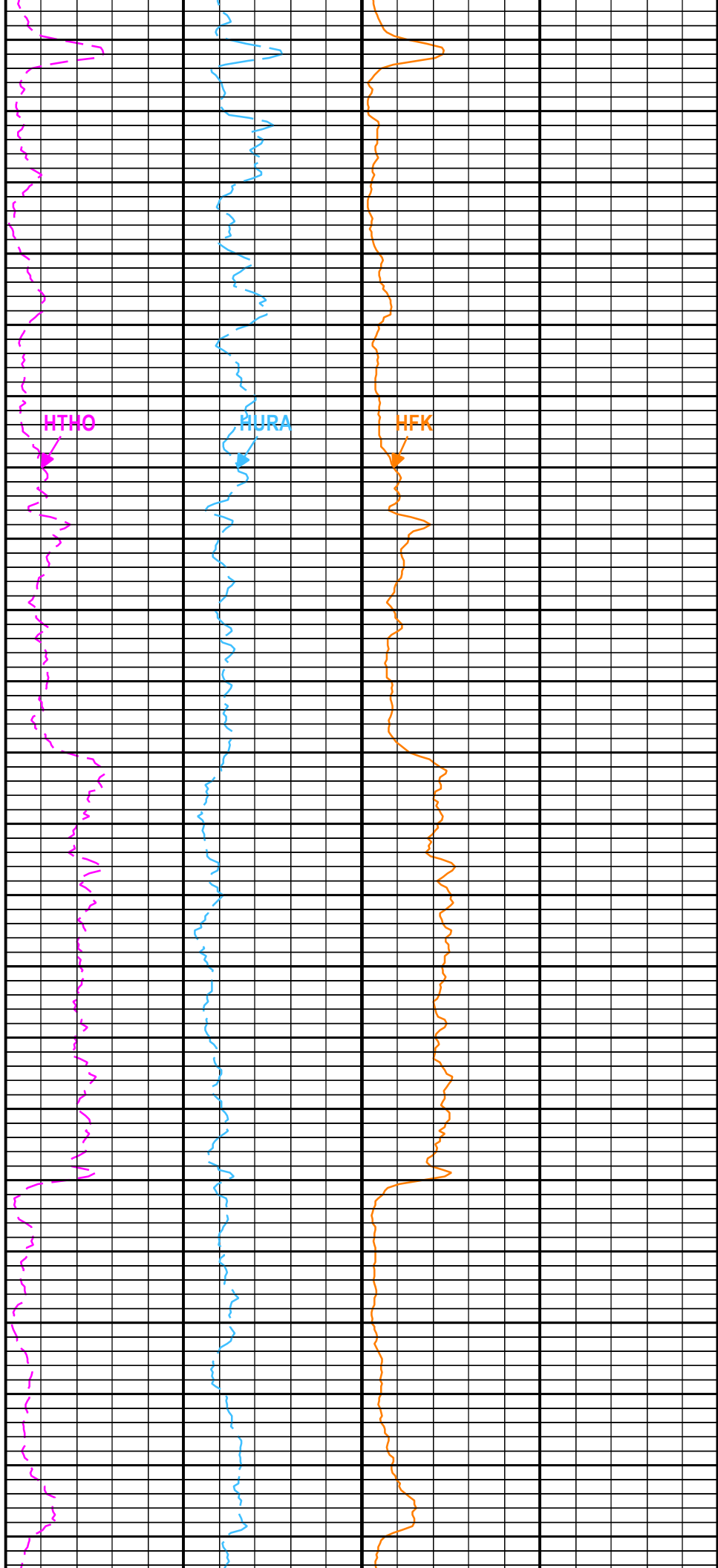
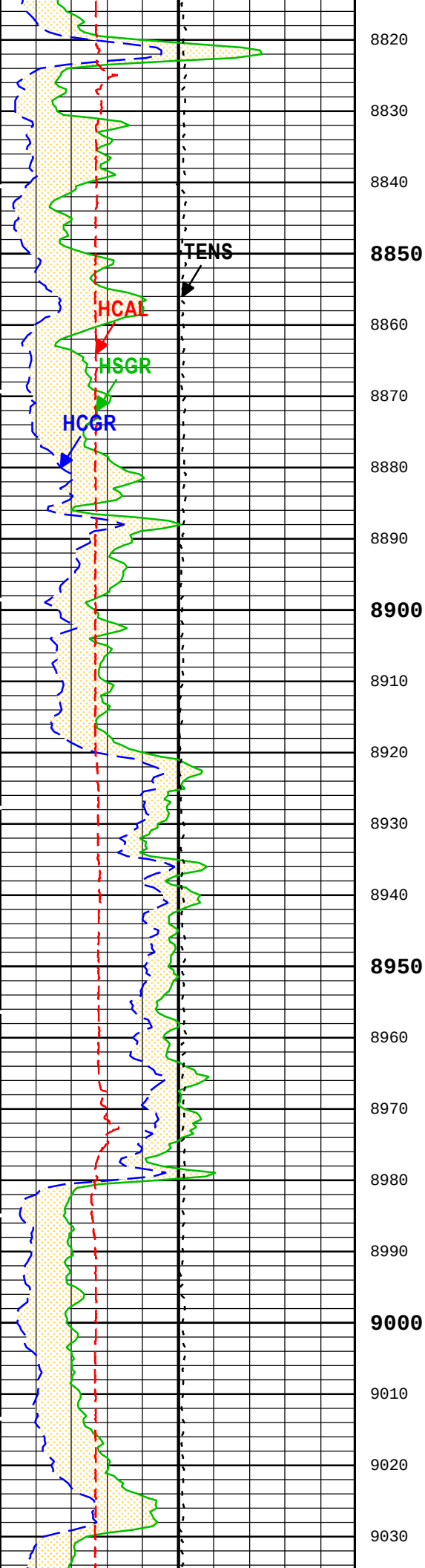
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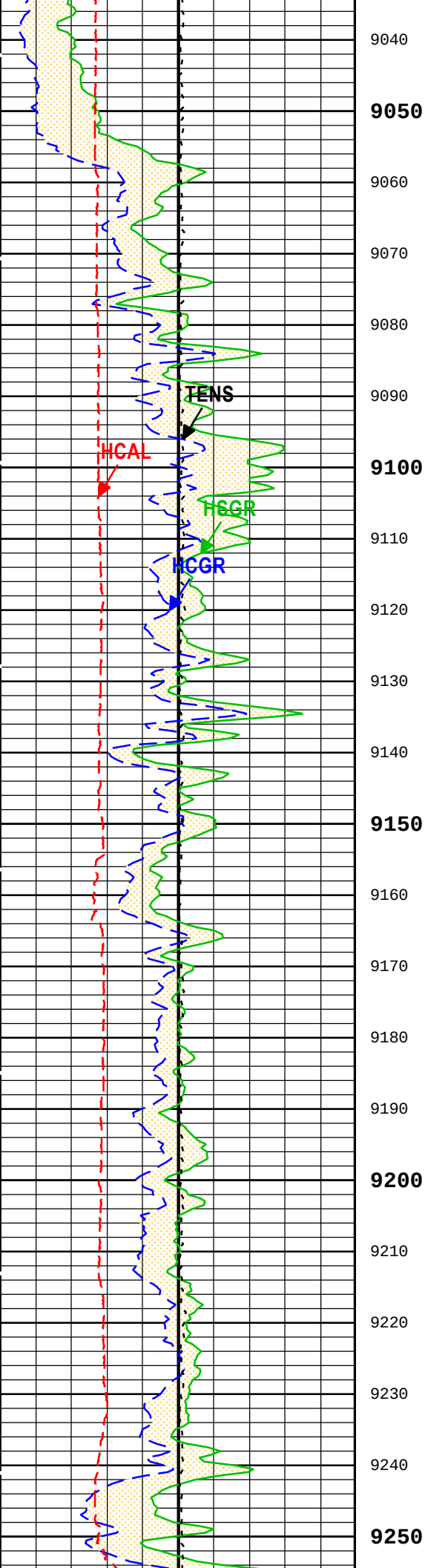


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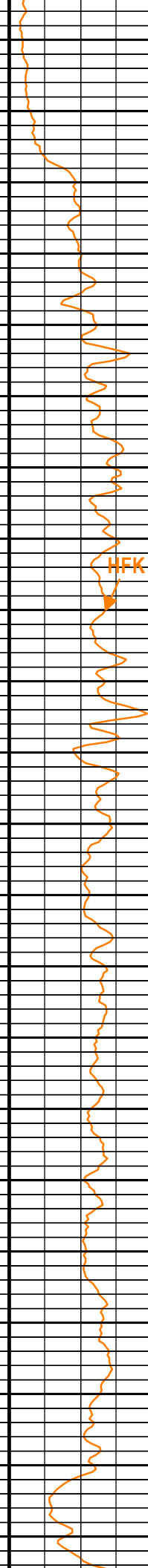
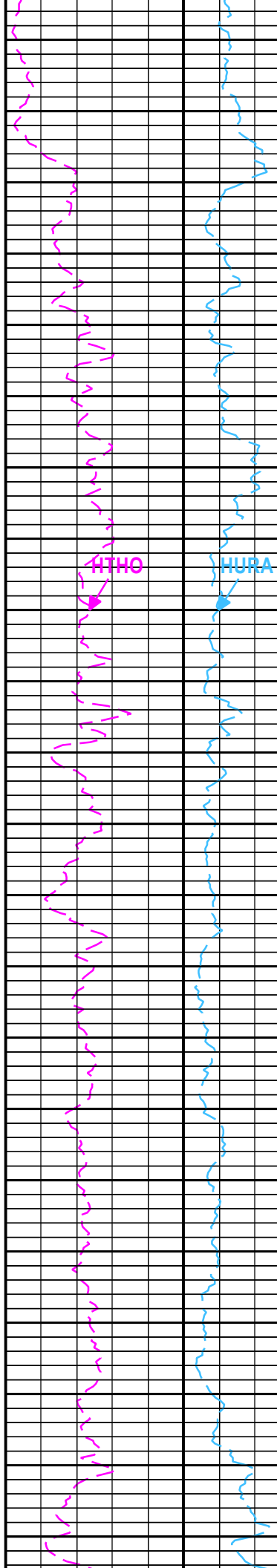
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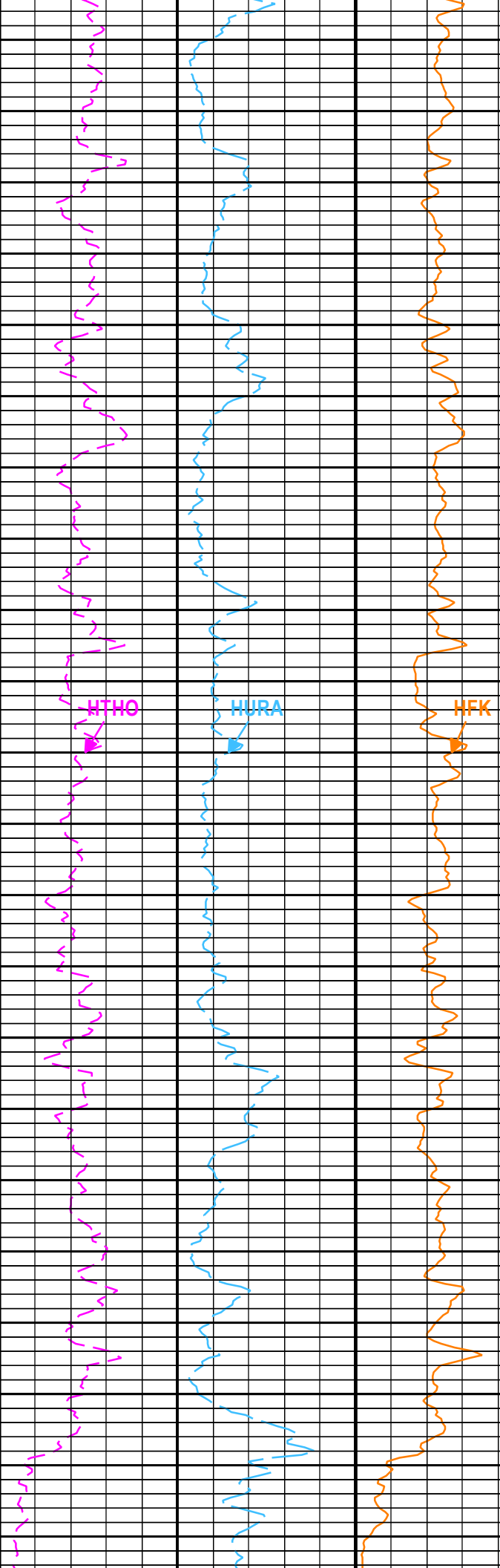
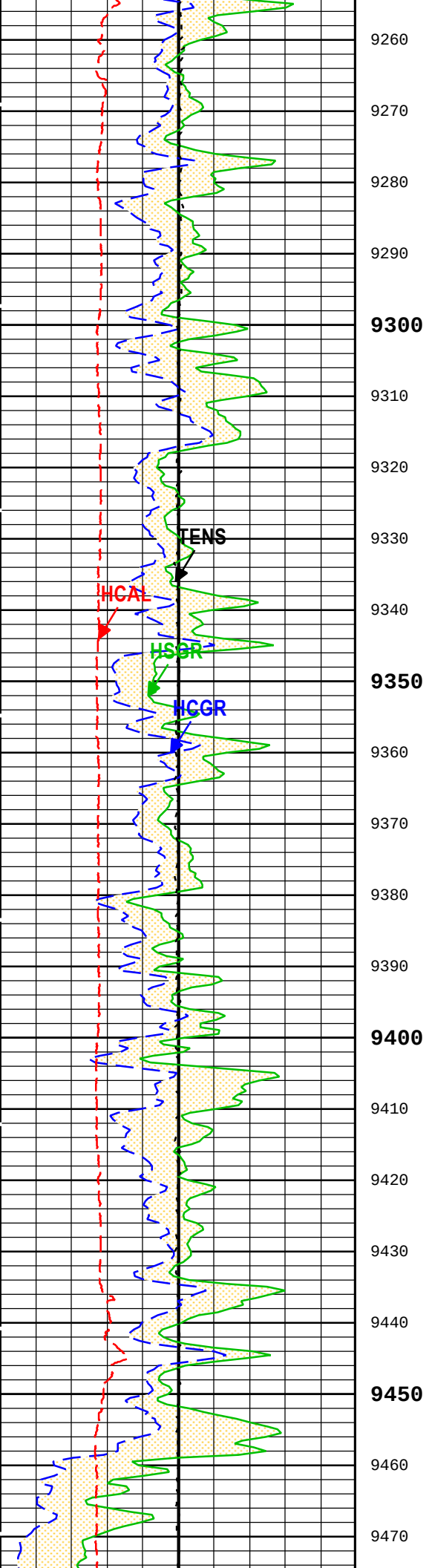
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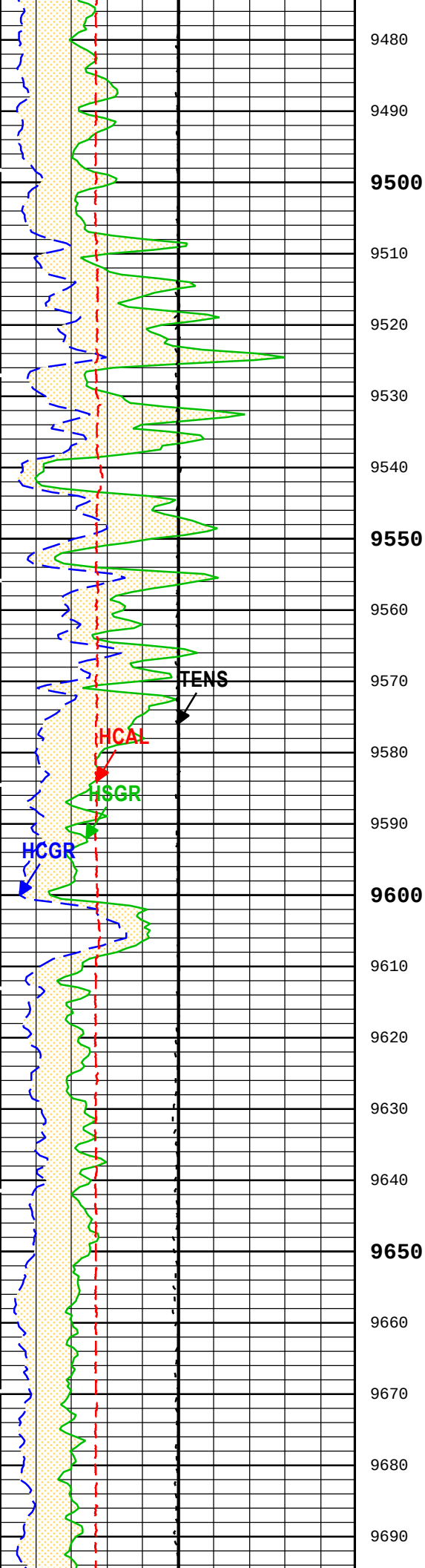




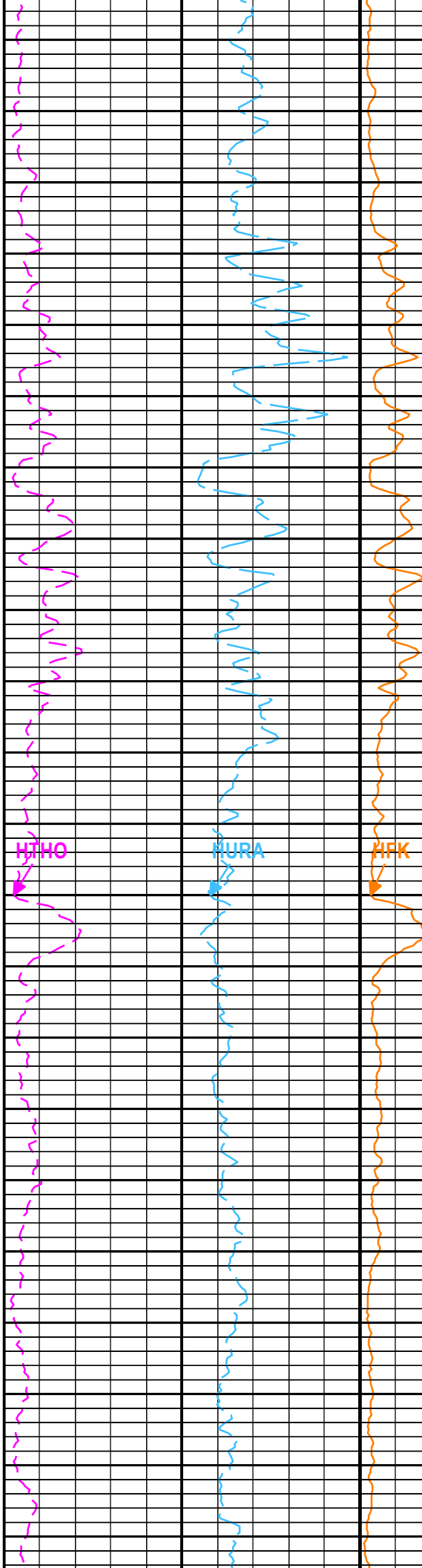
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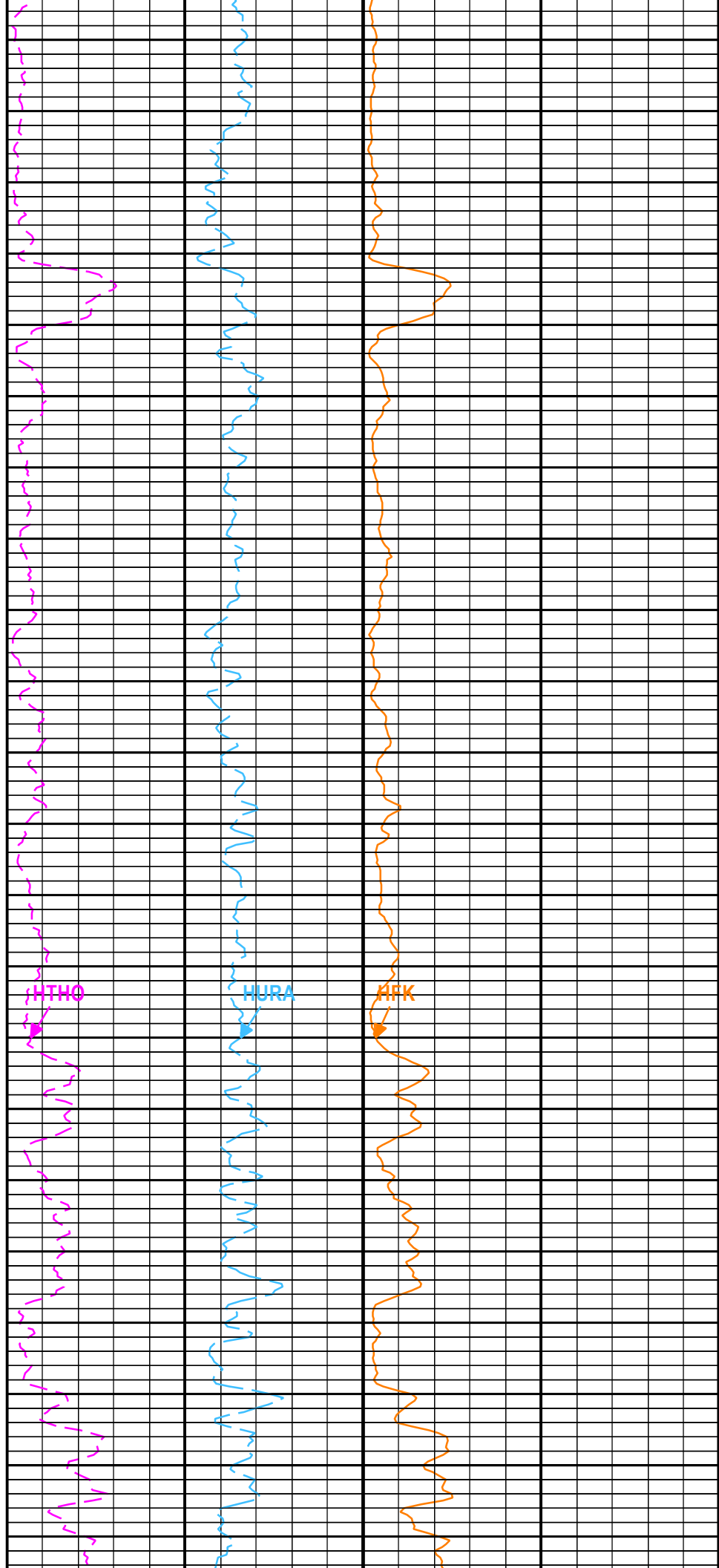
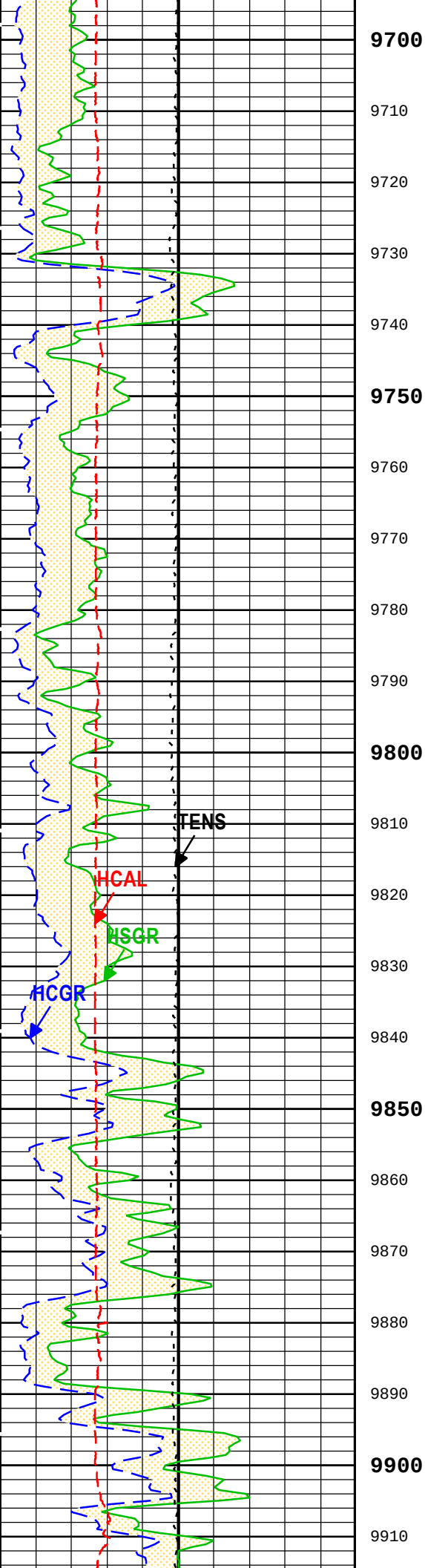


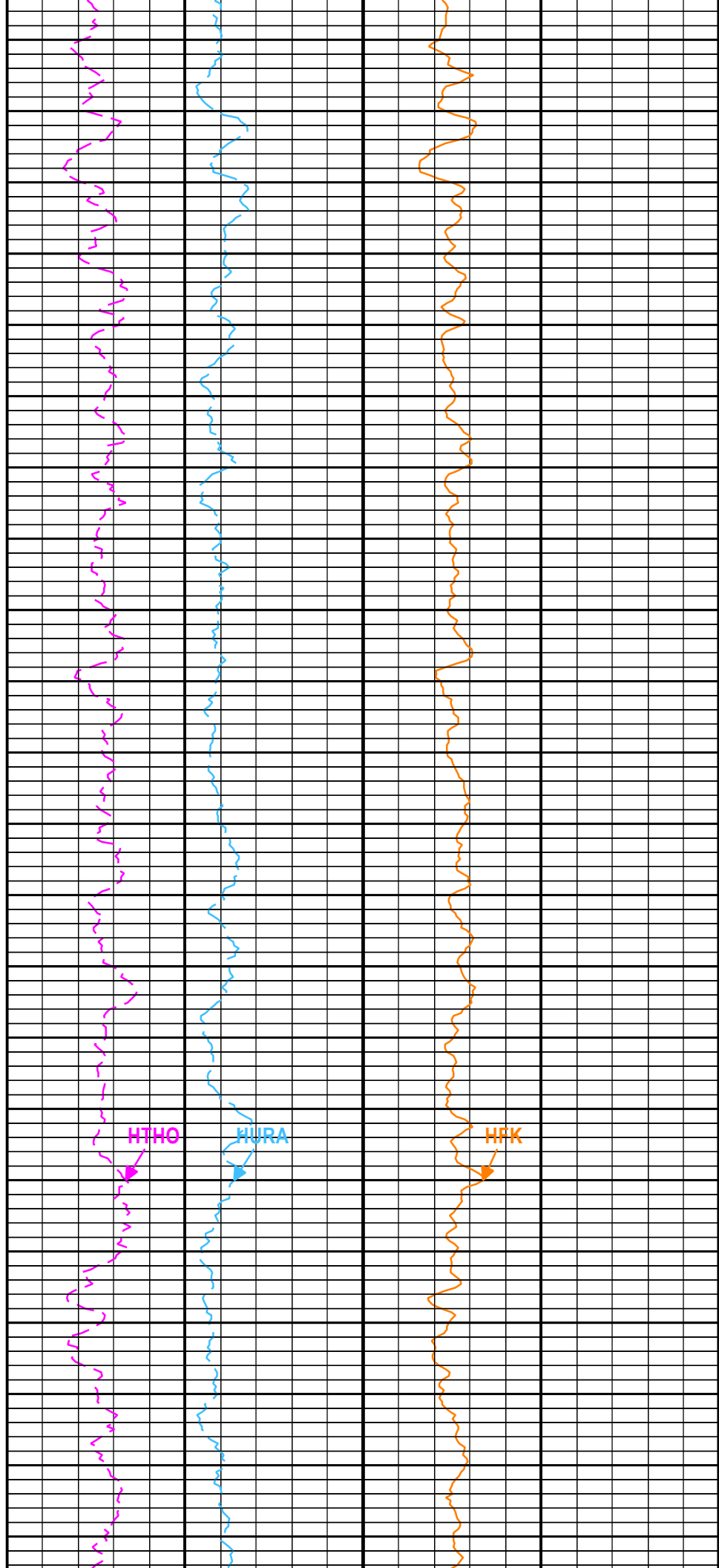
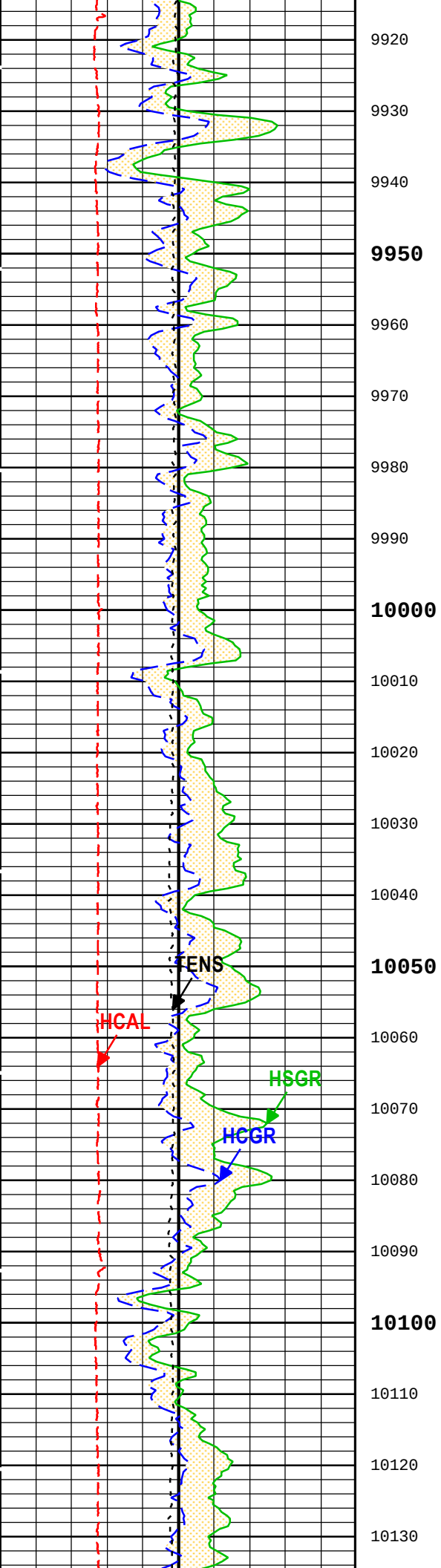


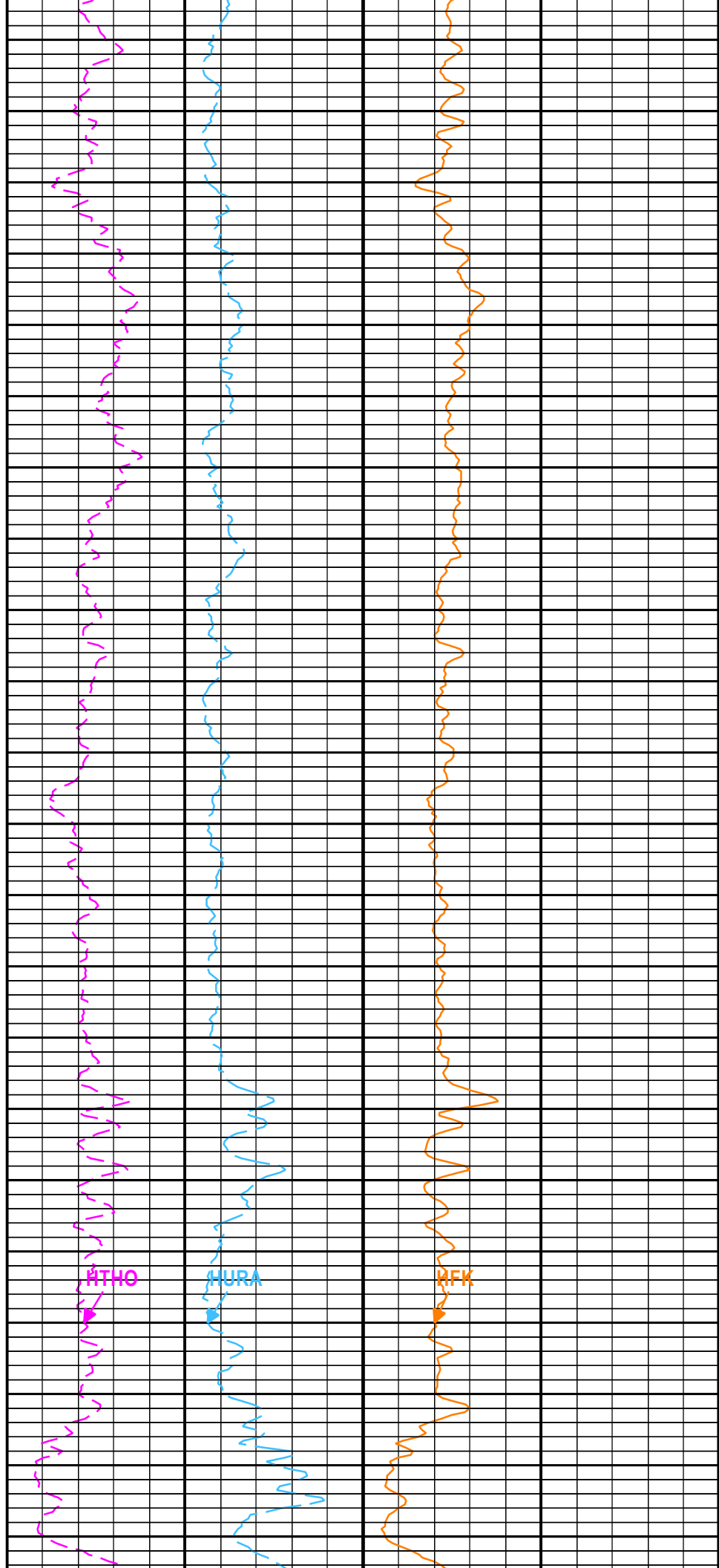
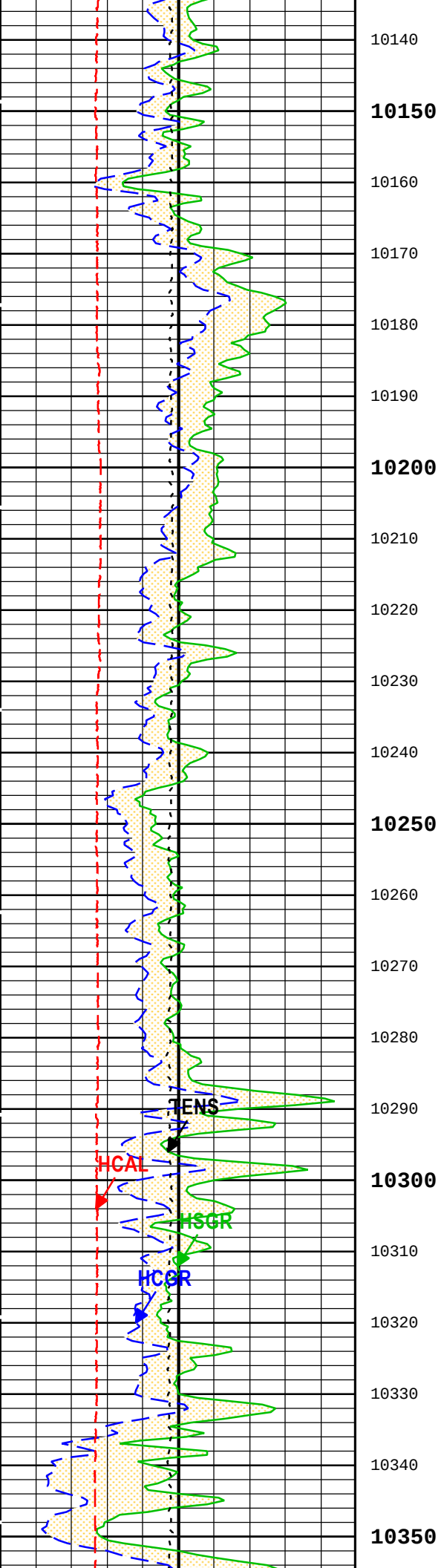


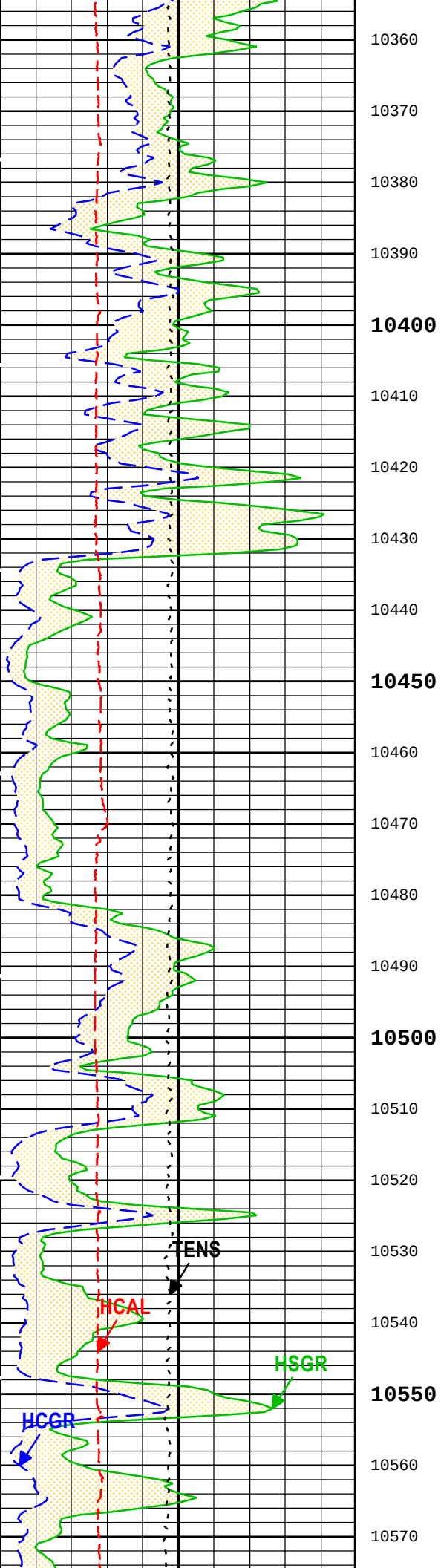
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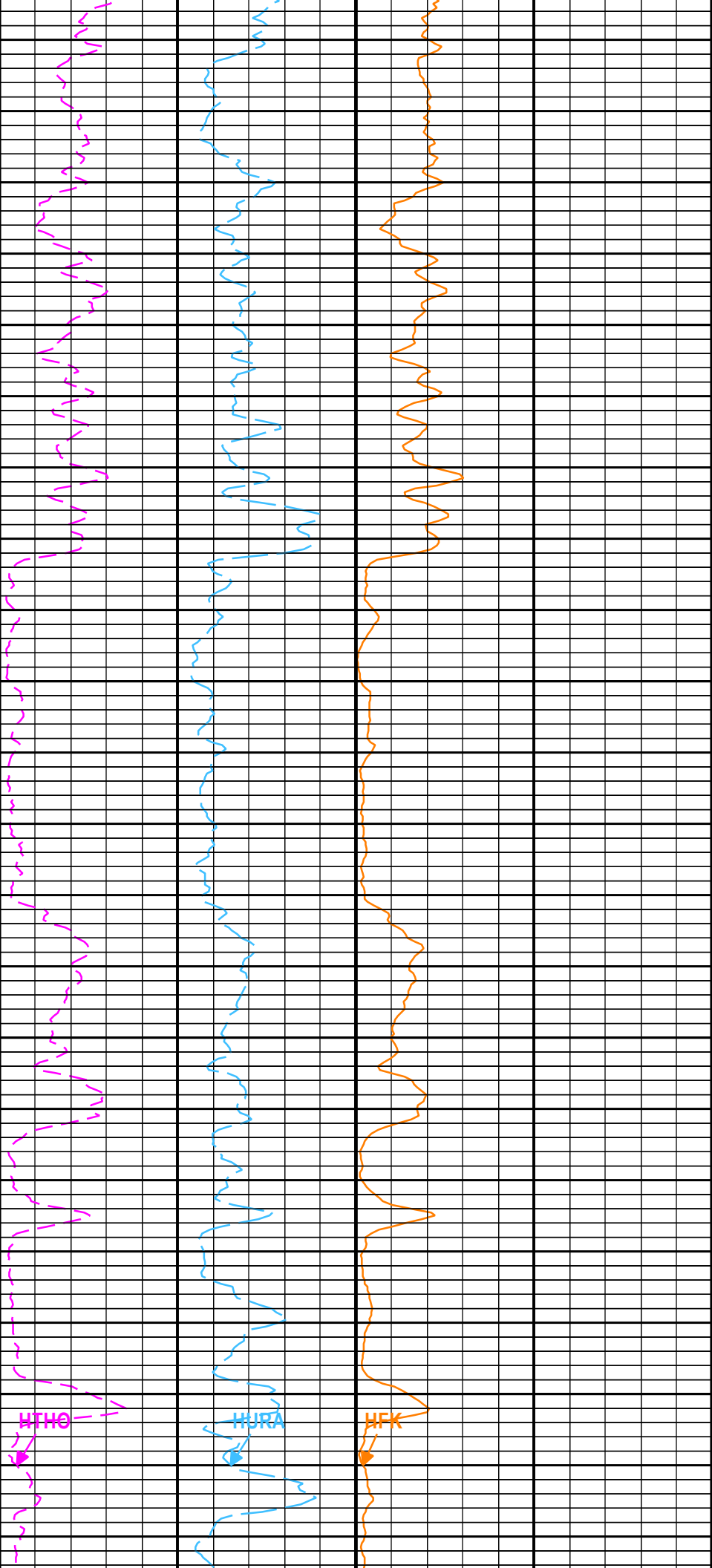
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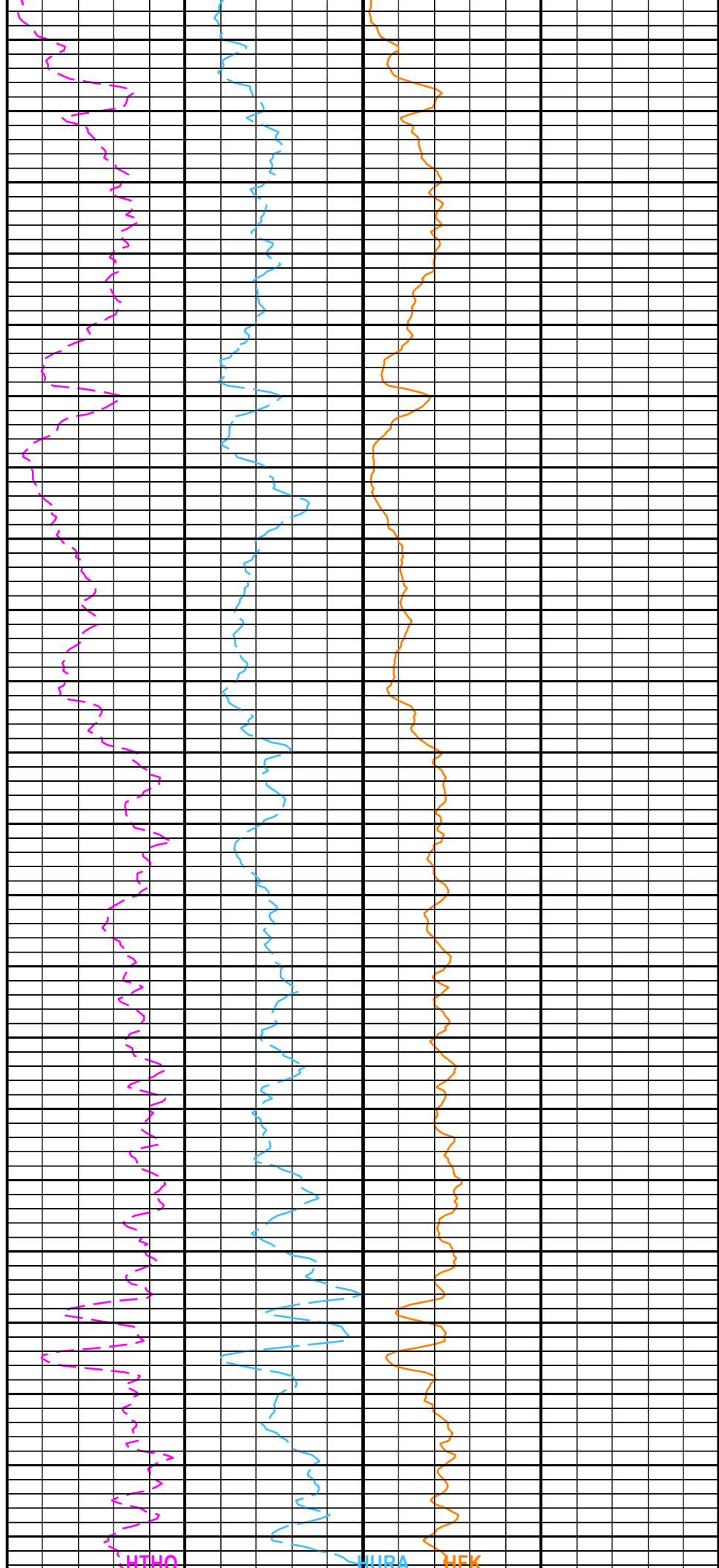
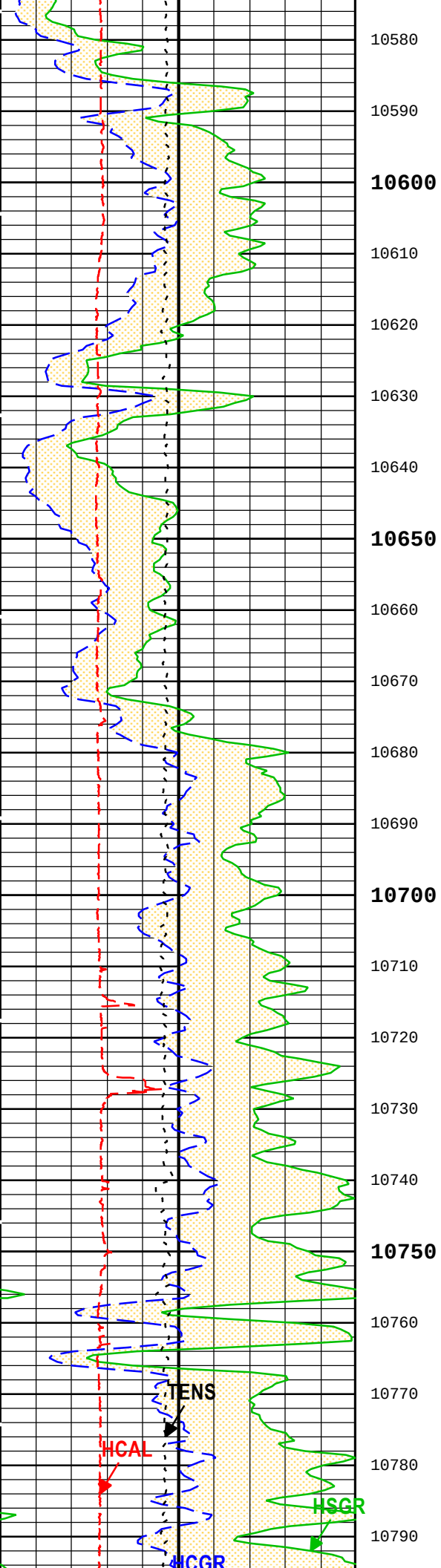
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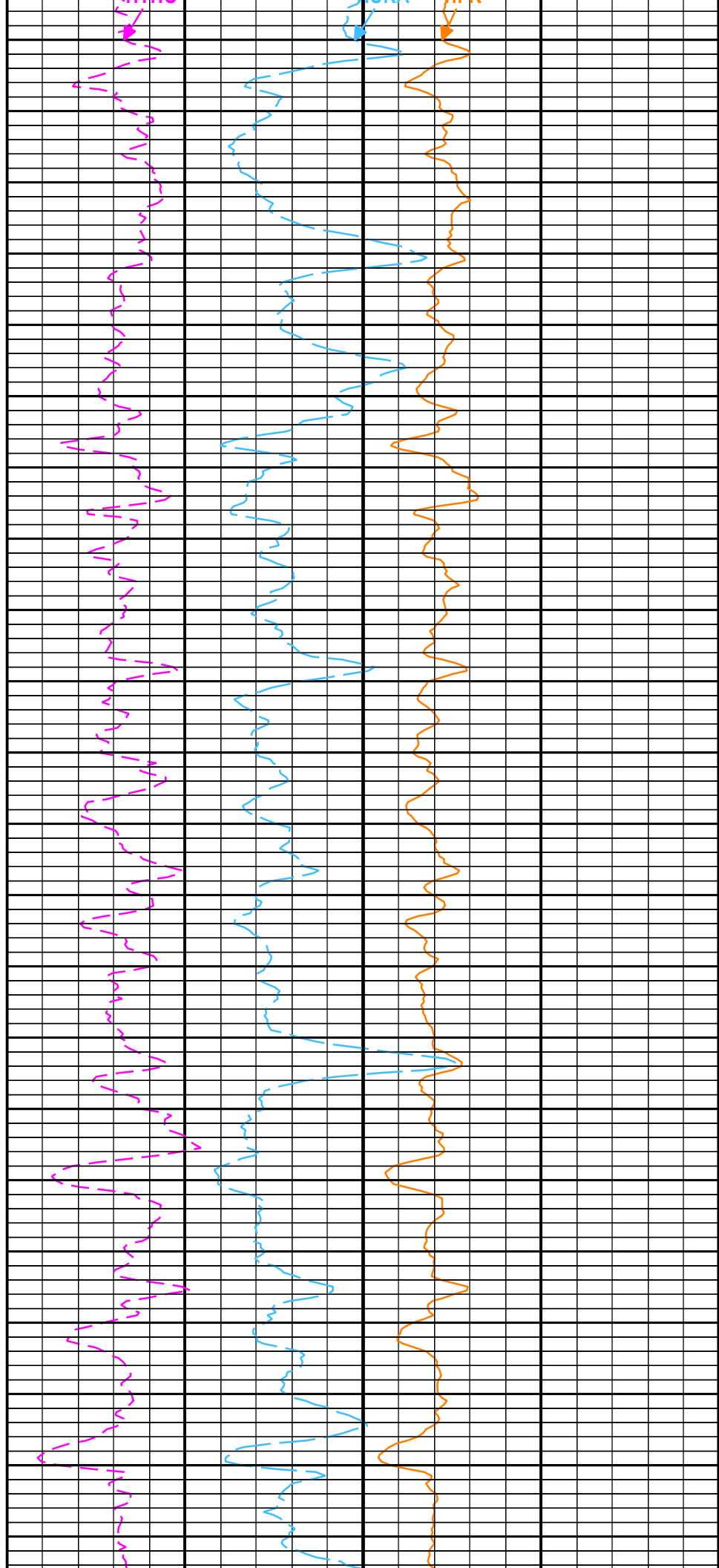
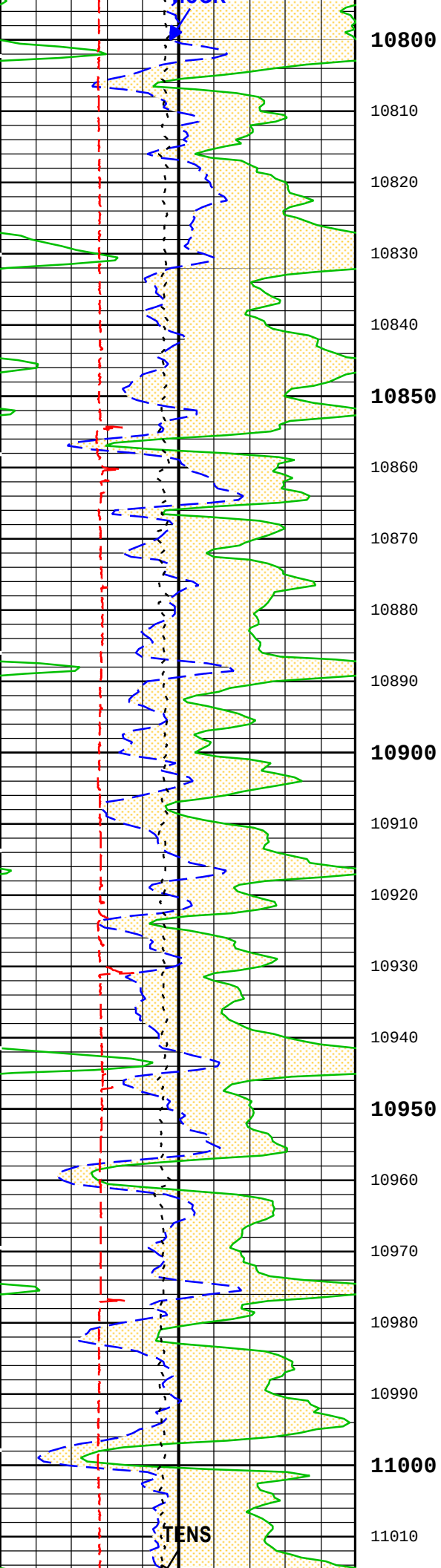


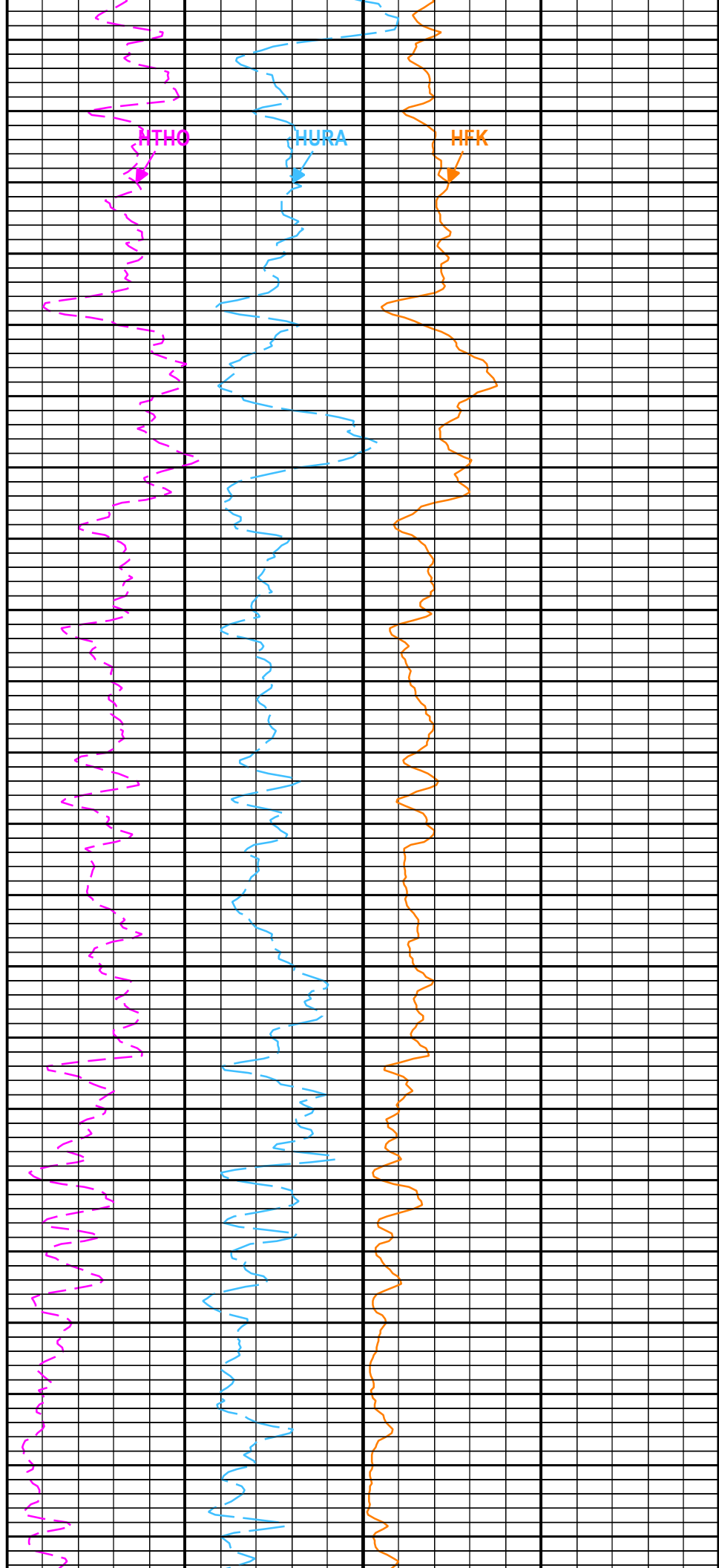
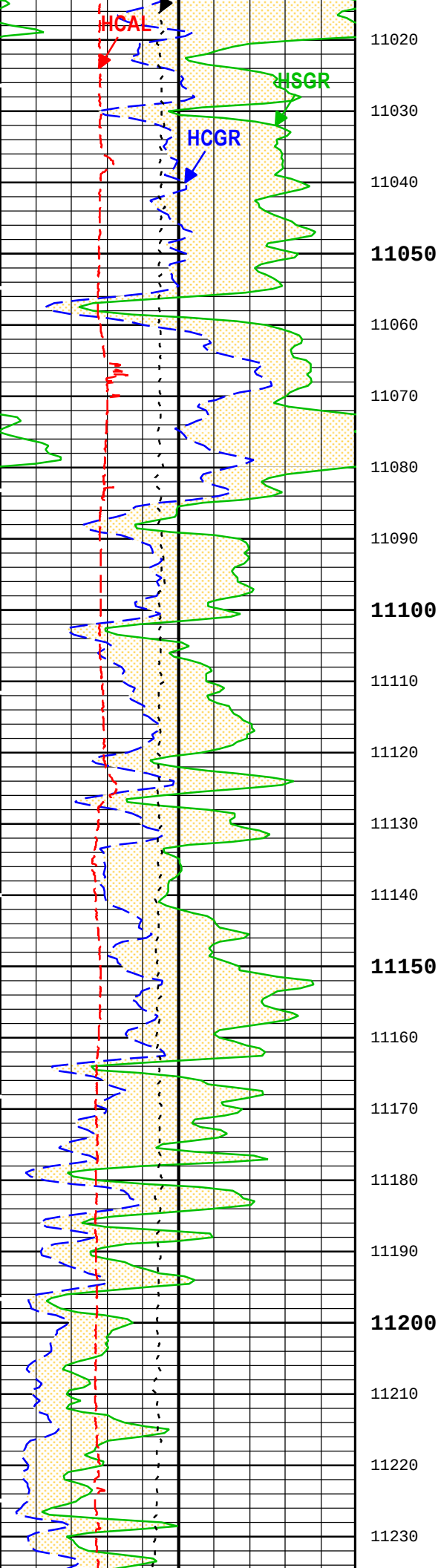
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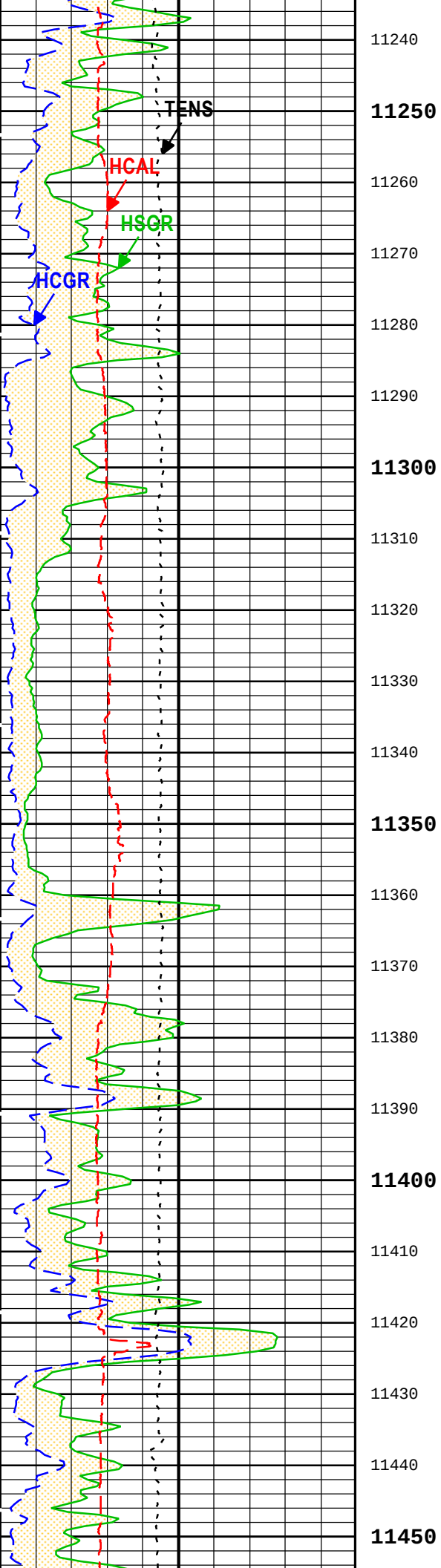
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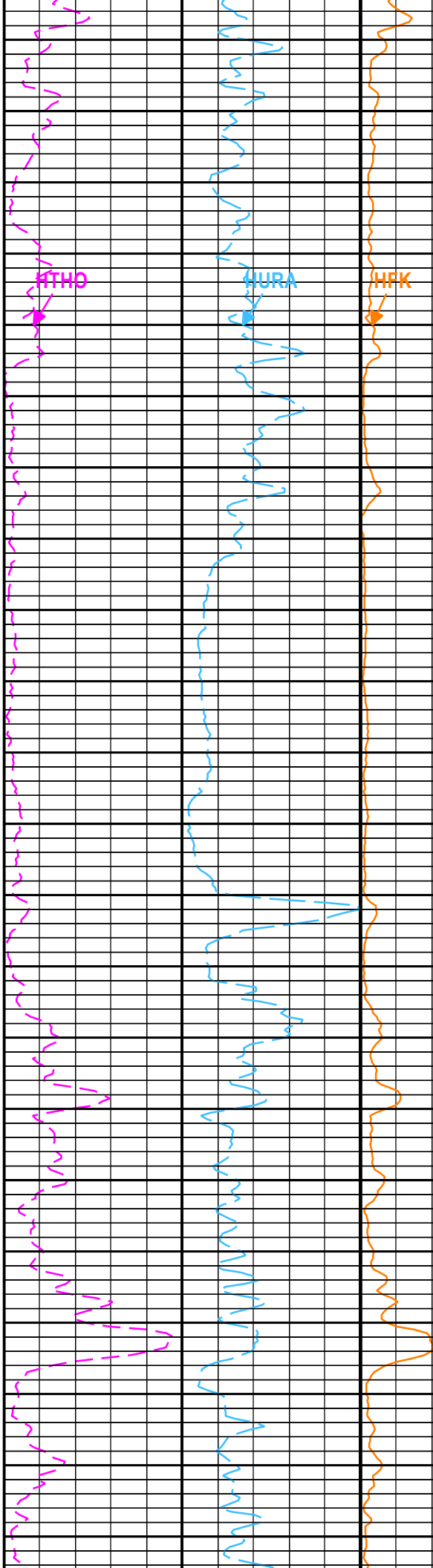


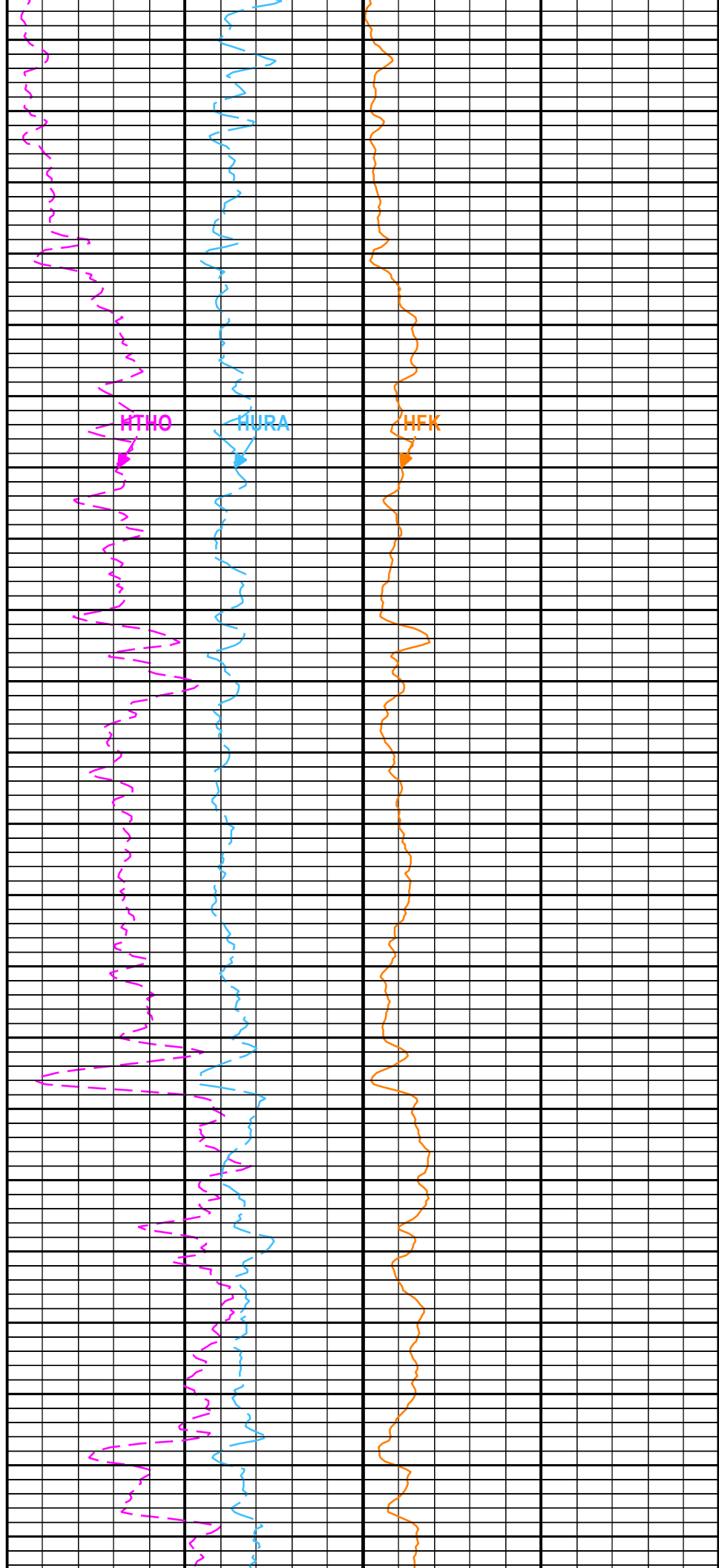
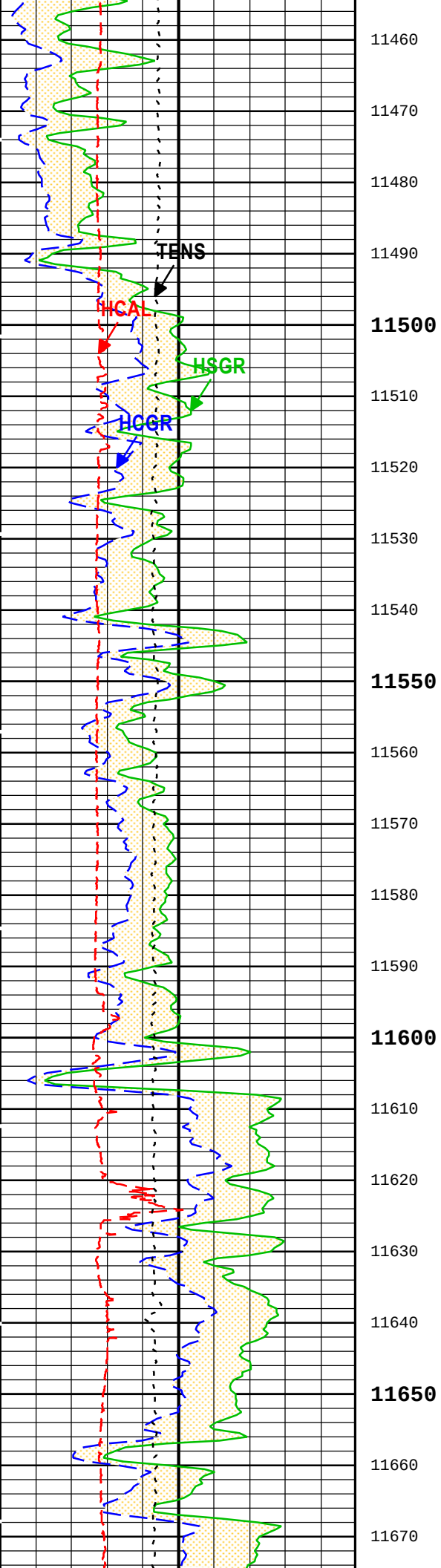


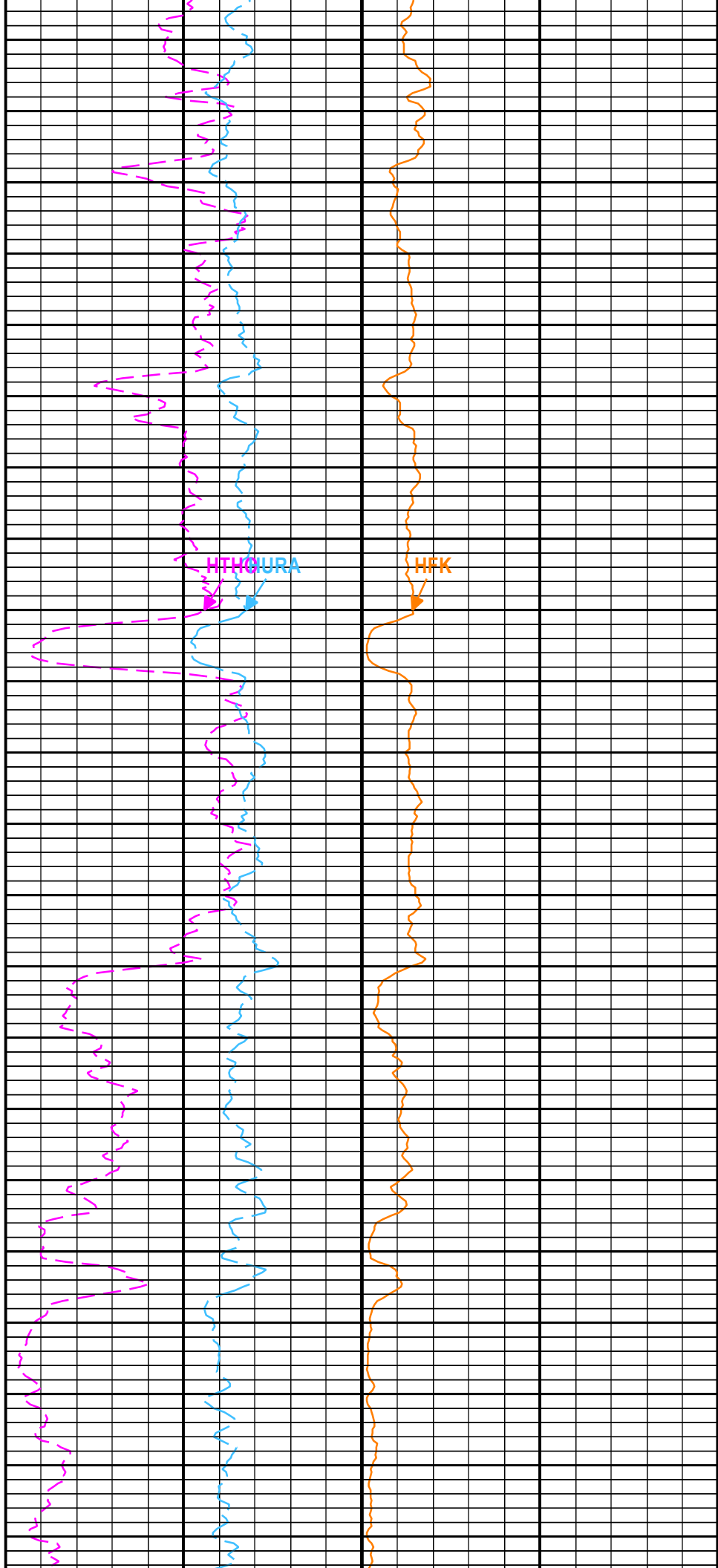
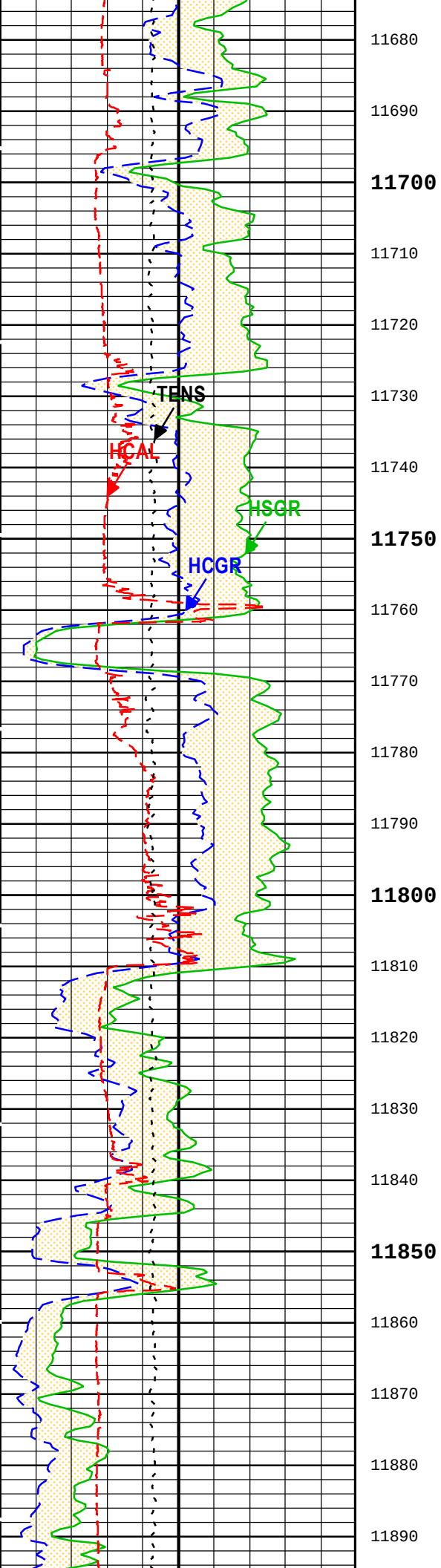


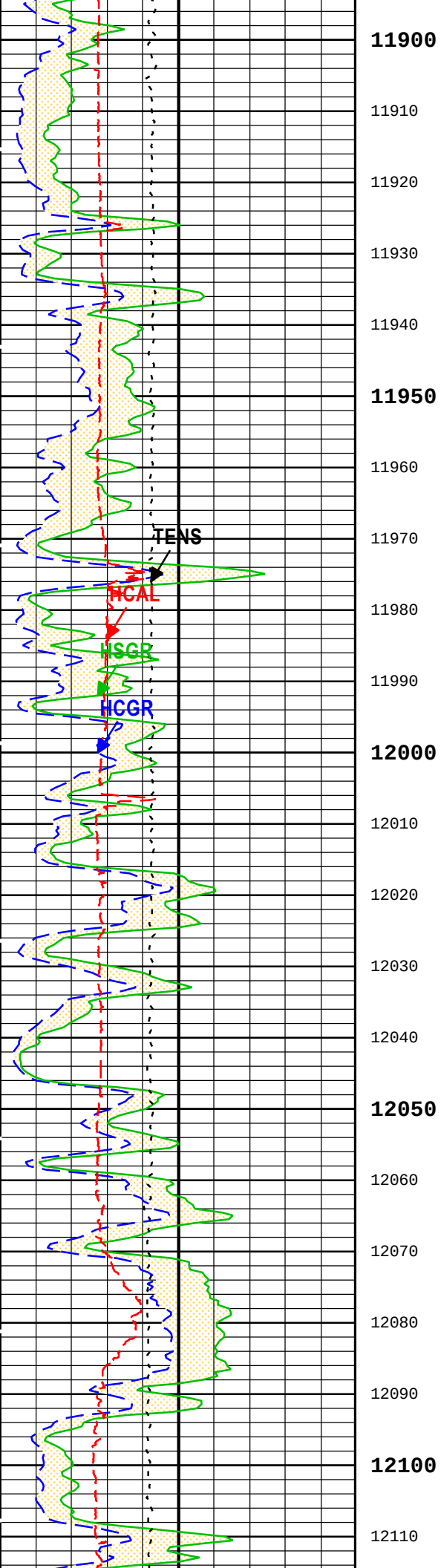


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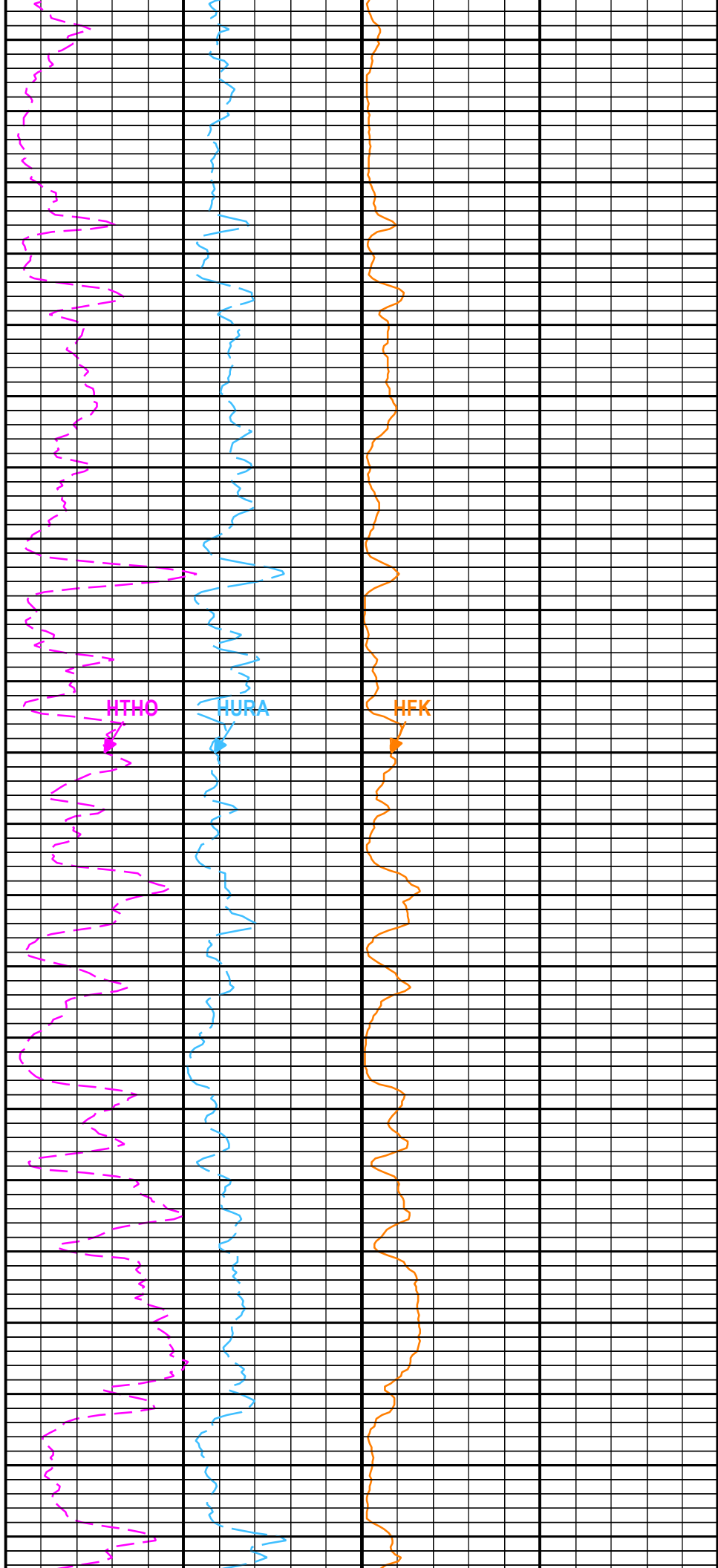
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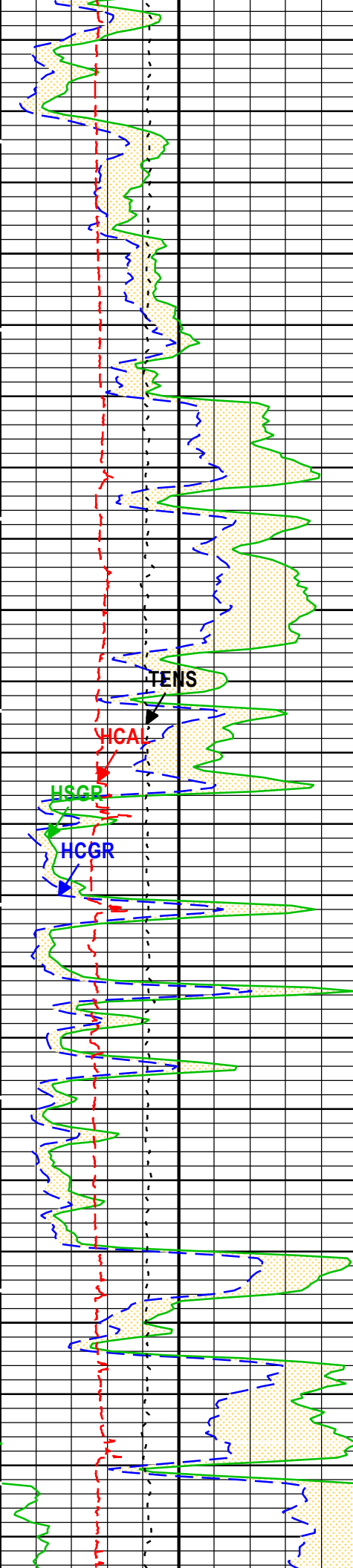
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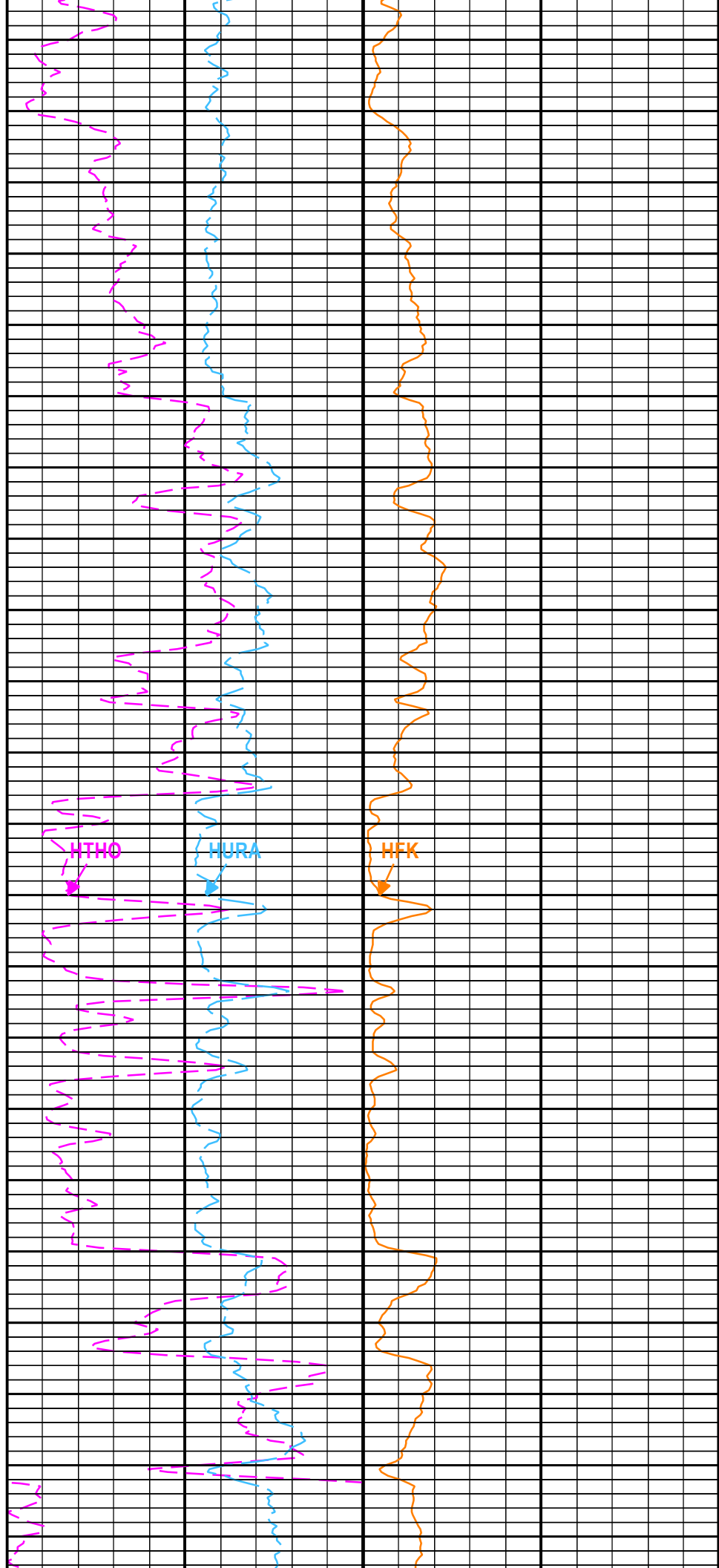
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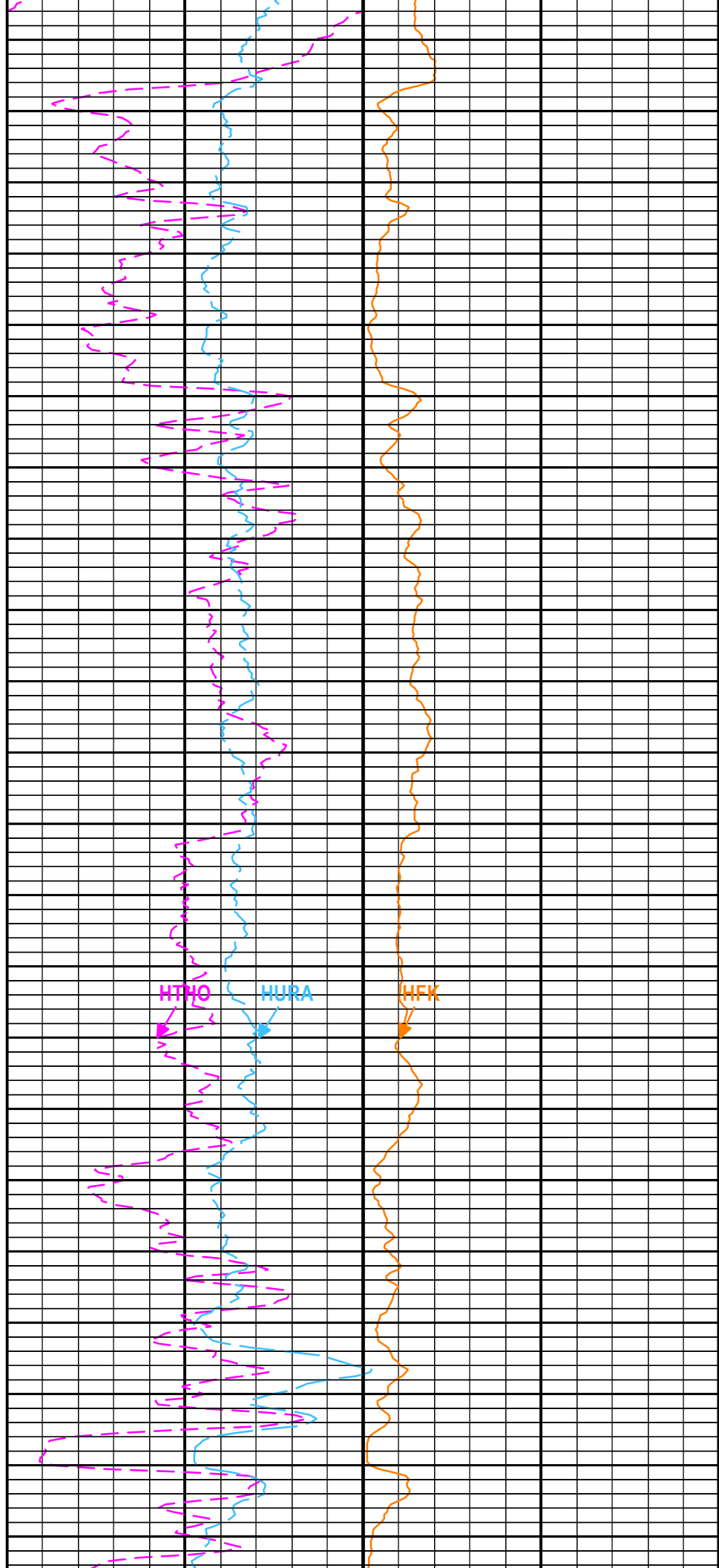
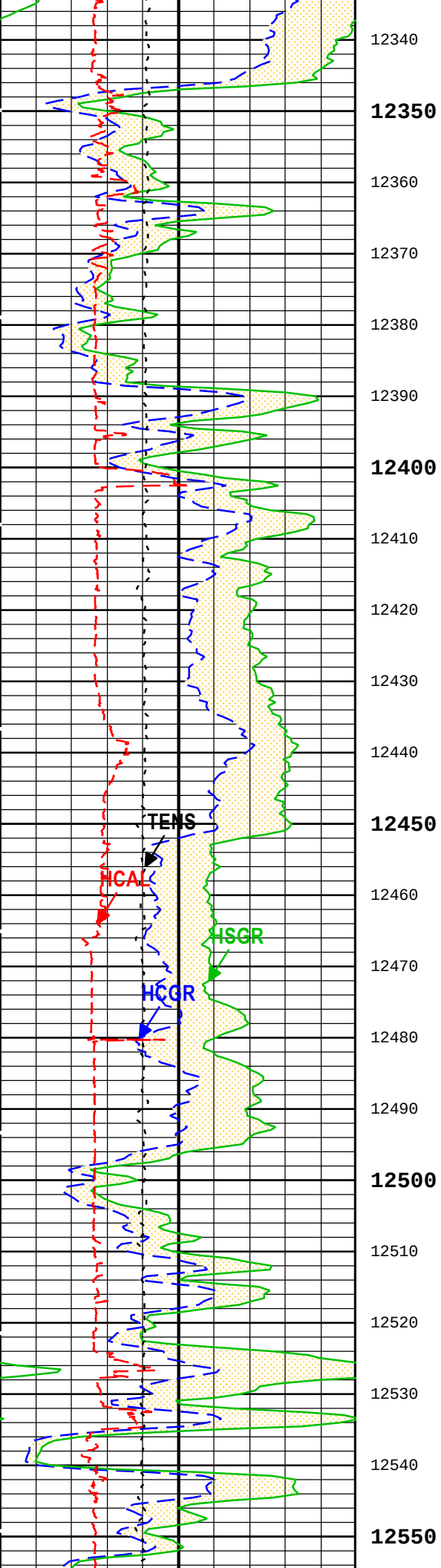
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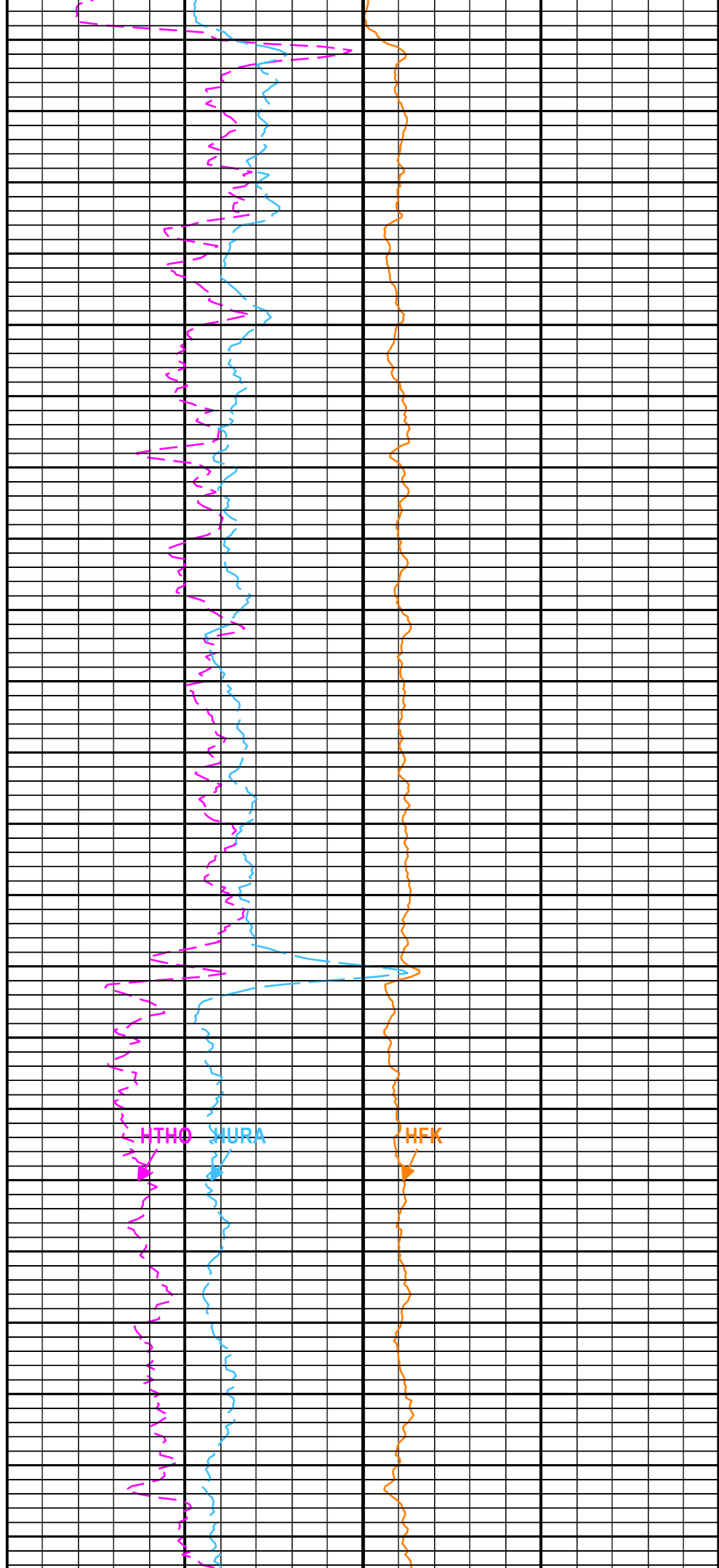
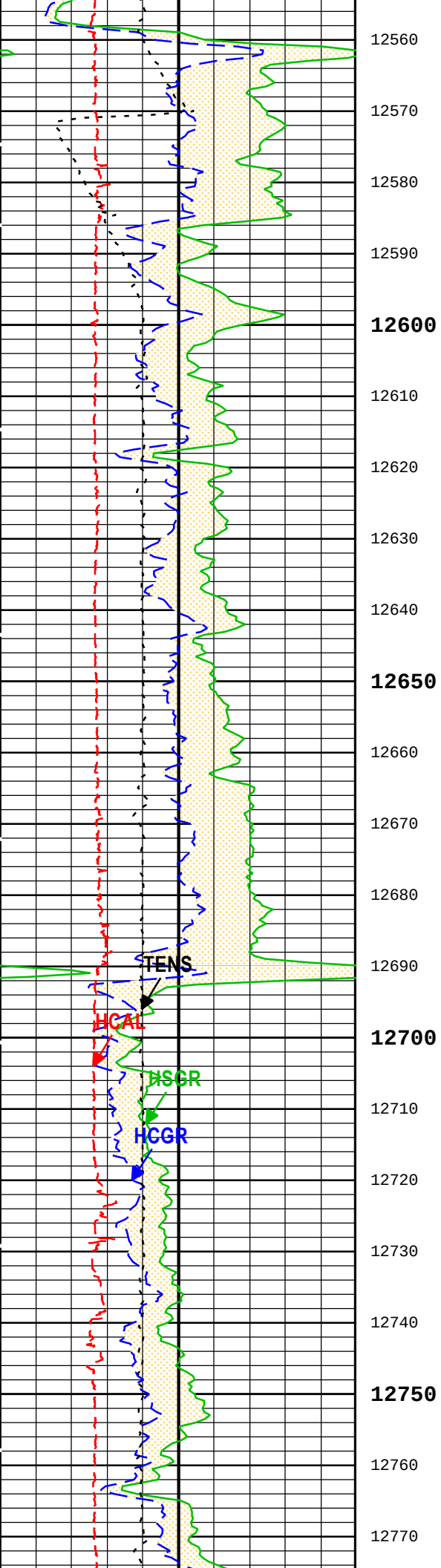


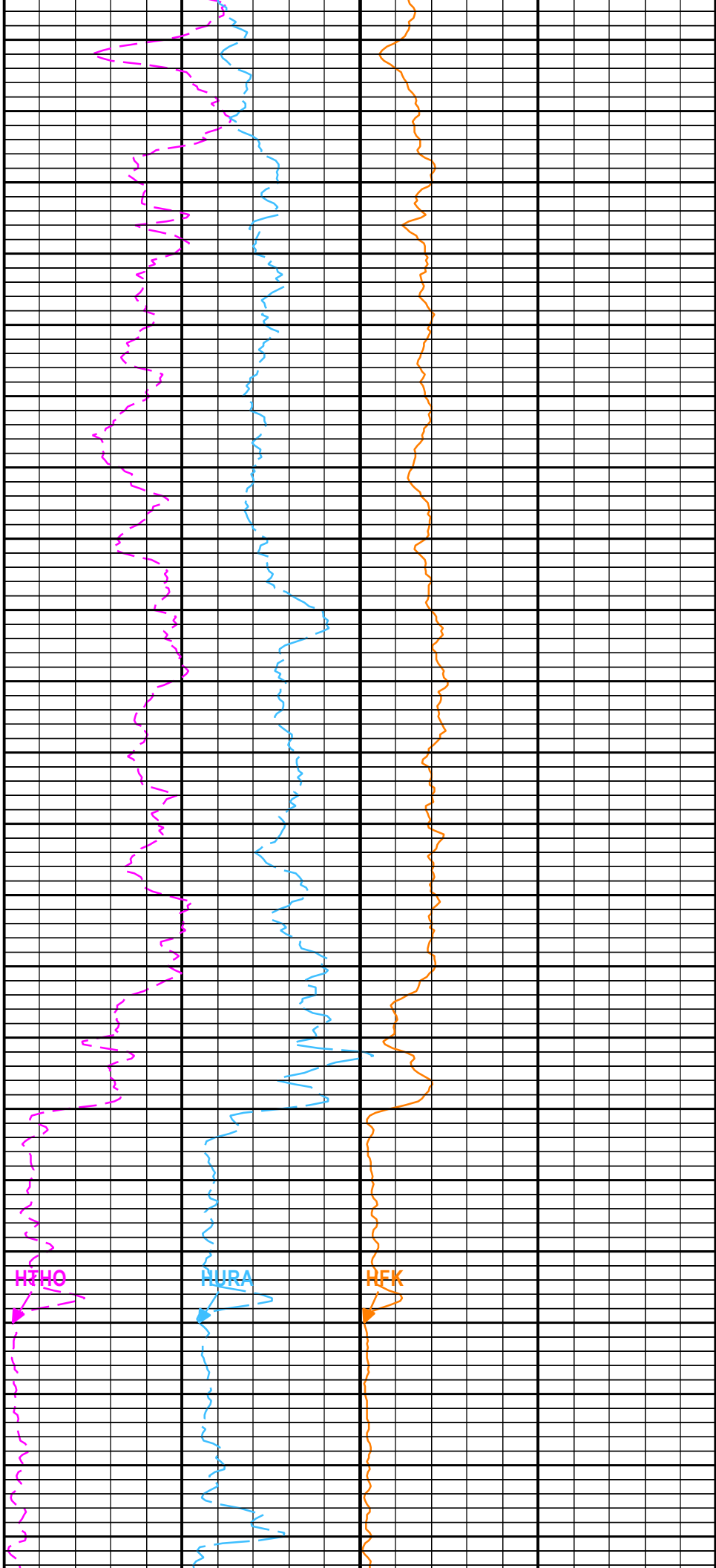
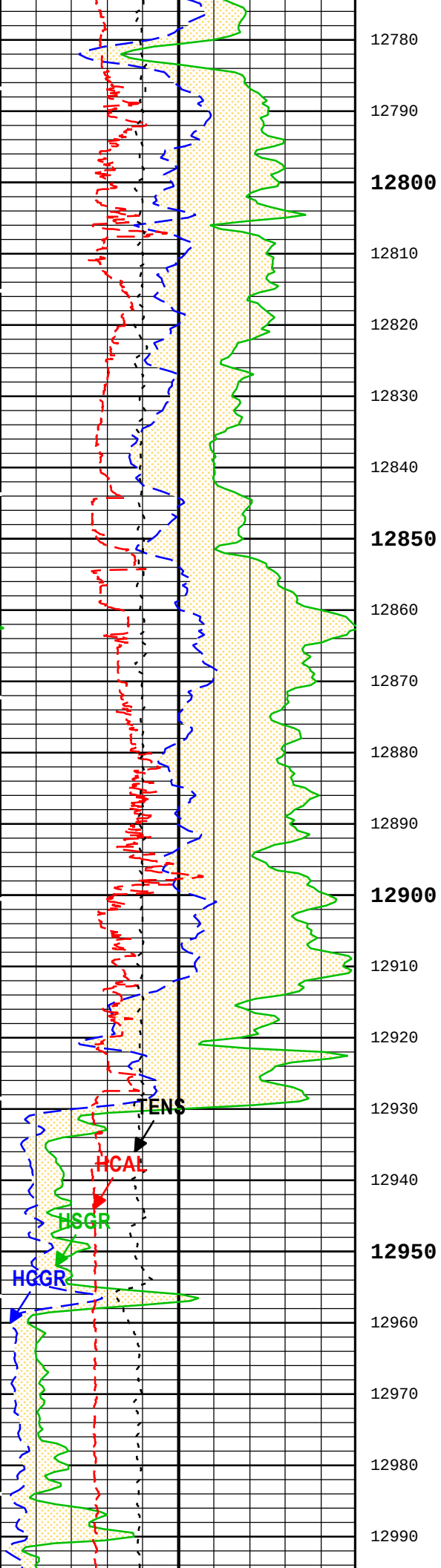


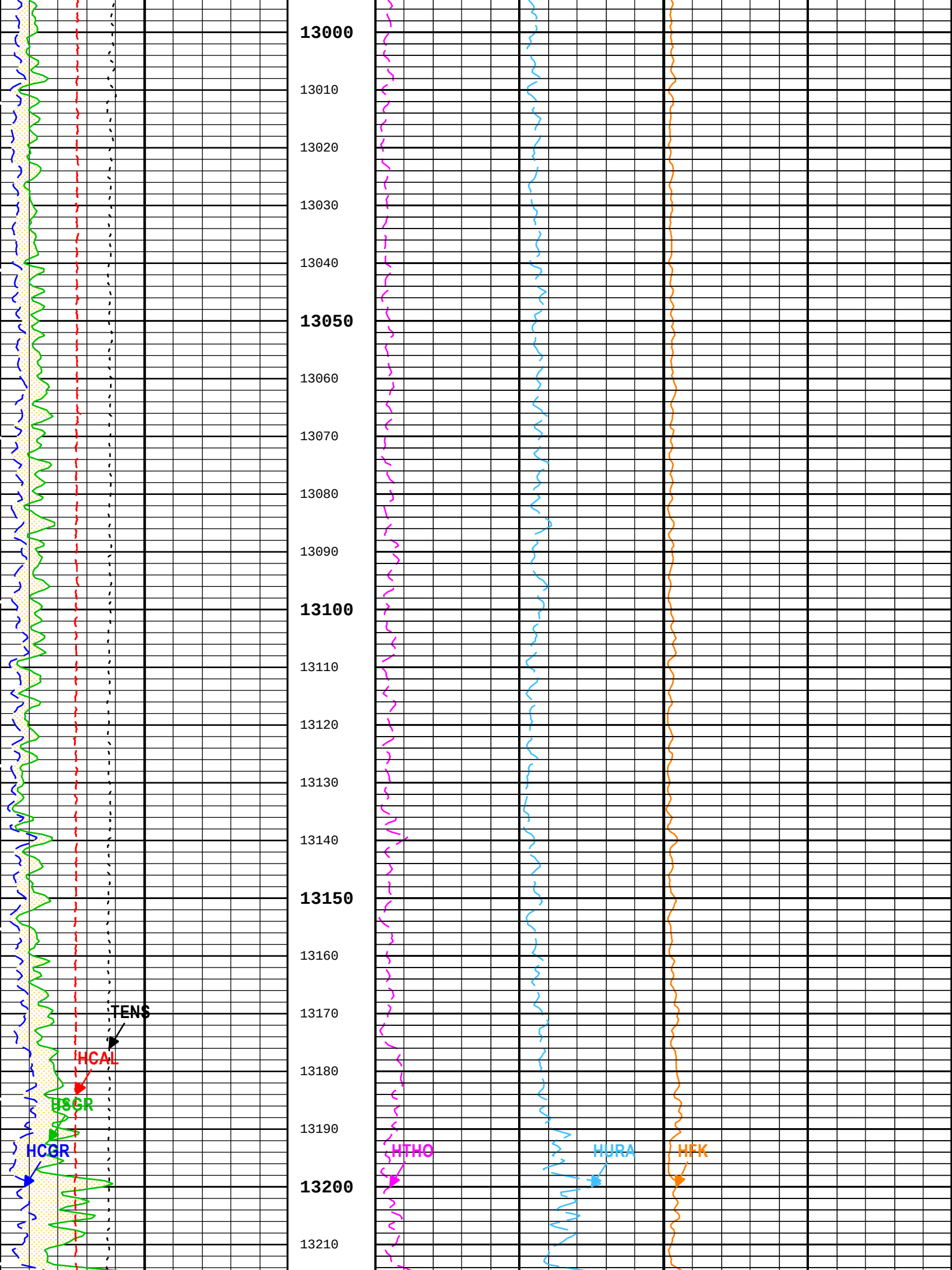
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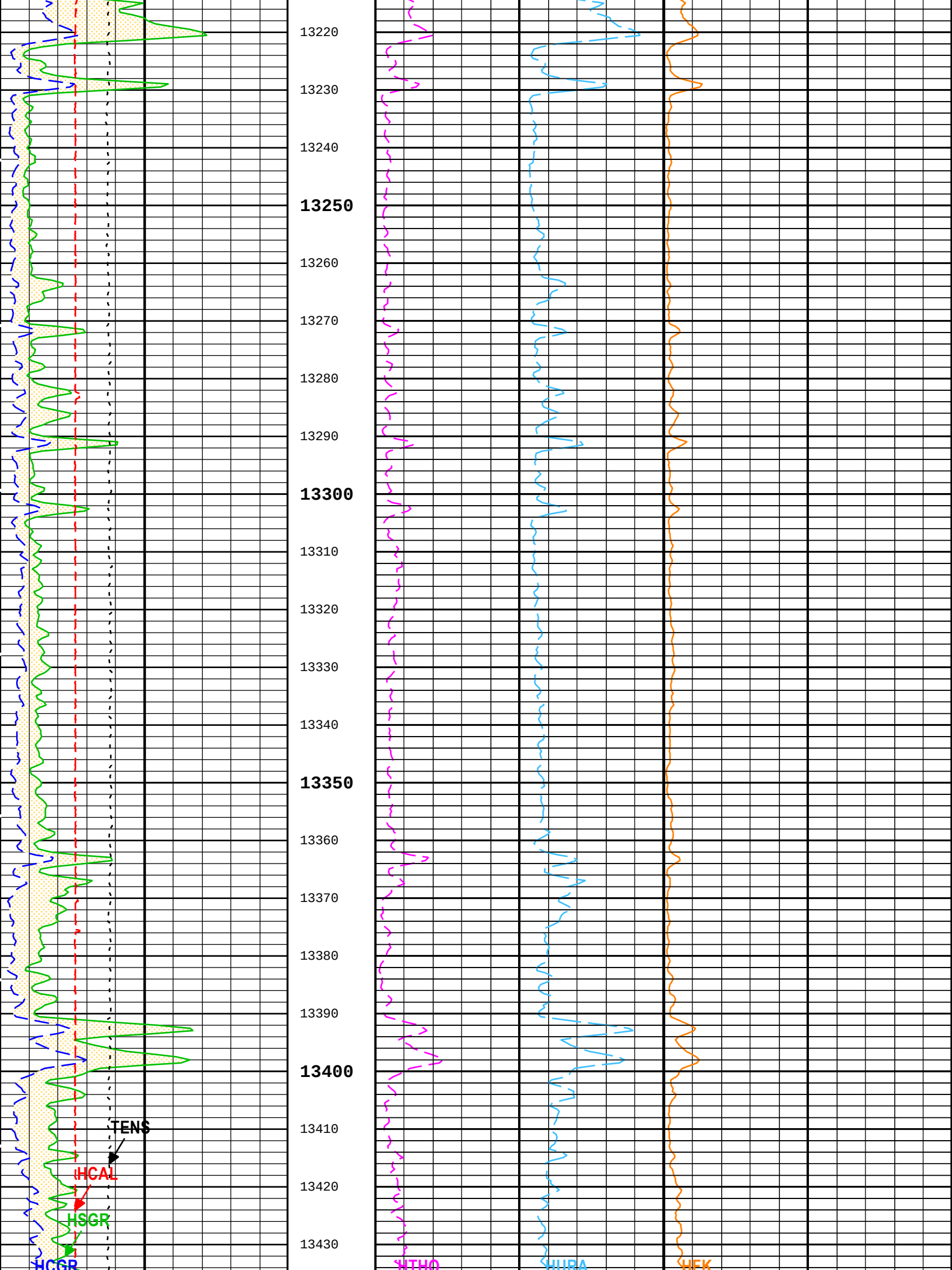


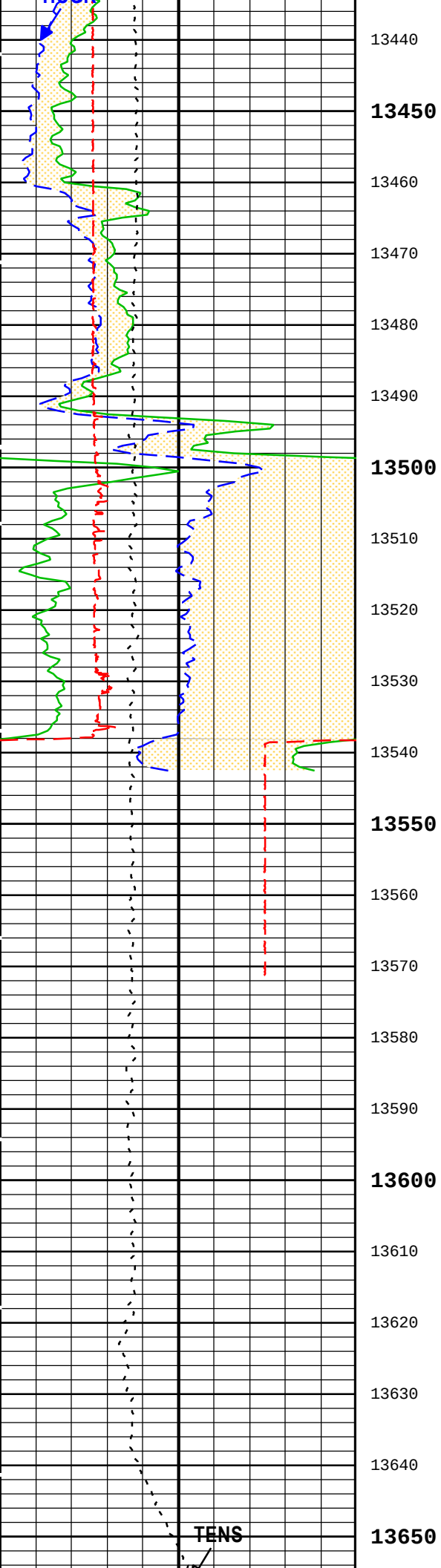












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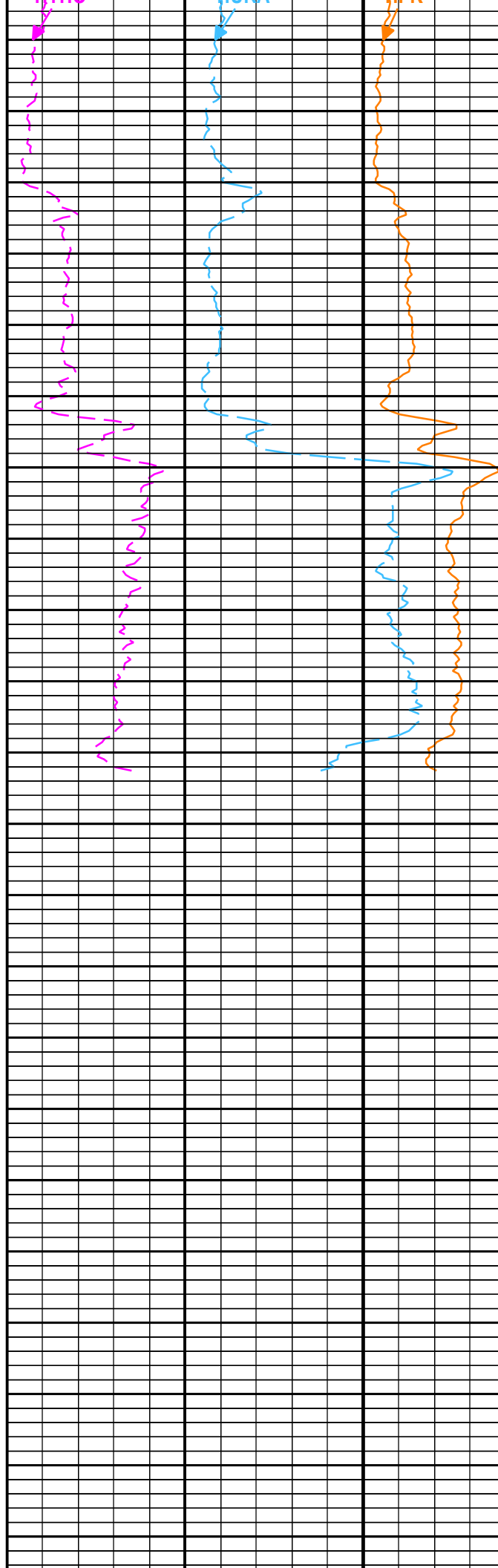
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MAX_LOG_SPEED	1690	29-Nov-2016 16:31:18	29-Nov-2016 16:52:49	13498.77	12933.39
MAX_LOG_SPEED	1800	29-Nov-2016 16:52:49	29-Nov-2016 17:06:06	12933.39	12571.73
MAX_LOG_SPEED	1770	29-Nov-2016 17:06:06	29-Nov-2016 17:09:10	12571.73	12488.53
MAX_LOG_SPEED	1800	29-Nov-2016 17:09:10	29-Nov-2016 17:12:14	12488.53	12400.95
MAX_LOG_SPEED	1753	29-Nov-2016 17:12:14	29-Nov-2016 17:13:15	12400.95	12371.38
MAX_LOG_SPEED	1800	29-Nov-2016 17:13:15	29-Nov-2016 17:16:19	12371.38	12286.82
MAX_LOG_SPEED	1729	29-Nov-2016 17:16:19	29-Nov-2016 17:18:21	12286.82	12231.58
MAX_LOG_SPEED	1800	29-Nov-2016 17:18:21	29-Nov-2016 17:22:26	12231.58	12122.52
MAX_LOG_SPEED	1781	29-Nov-2016 17:22:26	29-Nov-2016 17:23:28	12122.52	12095.38
MAX_LOG_SPEED	1800	29-Nov-2016 17:23:28	29-Nov-2016 17:30:37	12095.38	11897.92
MAX_LOG_SPEED	1692	29-Nov-2016 17:30:37	29-Nov-2016 17:31:39	11897.92	11869.47
MAX_LOG_SPEED	1800	29-Nov-2016 17:31:39	29-Nov-2016 17:40:51	11869.47	11616.36
MAX_LOG_SPEED	1794	29-Nov-2016 17:40:51	29-Nov-2016 17:45:58	11616.36	11474.54
MAX_LOG_SPEED	1651	29-Nov-2016 17:45:58	29-Nov-2016 17:47:00	11474.54	11446.18
MAX_LOG_SPEED	1747	29-Nov-2016 17:47:00	29-Nov-2016 17:49:02	11446.18	11389.42
MAX_LOG_SPEED	1629	29-Nov-2016 17:49:02	29-Nov-2016 17:56:13	11389.42	11190.26
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MAX_LOG_SPEED	1663	29-Nov-2016 18:21:45	29-Nov-2016 18:27:54	10469.58	10293.28
MAX_LOG_SPEED	1753	29-Nov-2016 18:27:54	29-Nov-2016 18:43:16	10293.28	9859.61
MAX_LOG_SPEED	1660	29-Nov-2016 18:43:16	29-Nov-2016 19:01:43	9859.61	9334.22
MAX_LOG_SPEED	1756	29-Nov-2016 19:01:43	29-Nov-2016 19:06:50	9334.22	9189.58
MAX_LOG_SPEED	1800	29-Nov-2016 19:06:50	29-Nov-2016 19:09:53	9189.58	9102.28
MAX_LOG_SPEED	1723	29-Nov-2016 19:09:53	29-Nov-2016 19:37:30	9102.28	8327.82
MAX_LOG_SPEED	1626	29-Nov-2016 19:37:30	29-Nov-2016 19:47:43	8327.82	8046.58
MAX_LOG_SPEED	1770	29-Nov-2016 19:47:43	29-Nov-2016 19:50:48	8046.58	7964.6
MAX_LOG_SPEED	1659	29-Nov-2016 19:50:48	29-Nov-2016 19:57:59	7964.6	7768.42
MAX_LOG_SPEED	1768	29-Nov-2016 19:57:59	29-Nov-2016 20:02:05	7768.42	7656.38
MAX_LOG_SPEED	1663	29-Nov-2016 20:02:05	29-Nov-2016 20:07:11	7656.38	7519.44
MAX_LOG_SPEED	1775	29-Nov-2016 20:07:11	29-Nov-2016 20:09:14	7519.44	7463.56
MAX_LOG_SPEED	1654	29-Nov-2016 20:09:14	29-Nov-2016 20:14:22	7463.56	7324
MAX_LOG_SPEED	1757	29-Nov-2016 20:14:22	29-Nov-2016 20:16:25	7324	7267.91
MAX_LOG_SPEED	1607	29-Nov-2016 20:16:25	29-Nov-2016 20:23:35	7267.91	7071.09
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MAX_LOG_SPEED	1800	29-Nov-2016 20:28:41	29-Nov-2016 21:18:45	6929.06	5563.46
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MAX_LOG_SPEED	1800	29-Nov-2016 21:19:46	29-Nov-2016 21:21:49	5535.53	5478.22
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MAX_LOG_SPEED	1741	29-Nov-2016 21:34:06	29-Nov-2016 21:35:07	5142.02	5114.37
MAX_LOG_SPEED	1600	29-Nov-2016 21:35:07	29-Nov-2016 21:37:09	5114.37	5058.65

MAX_LOG_SPEED	1717	29-Nov-2016 21:37:09	29-Nov-2016 21:42:17	5058.65	4918.42
MAX_LOG_SPEED	1800	29-Nov-2016 21:42:17	29-Nov-2016 21:44:20	4918.42	4862.3
MAX_LOG_SPEED	1631	29-Nov-2016 21:44:20	29-Nov-2016 21:46:22	4862.3	4807.08
MAX_LOG_SPEED	1756	29-Nov-2016 21:46:22	29-Nov-2016 21:50:28	4807.08	4696.12
MAX_LOG_SPEED	1637	29-Nov-2016 21:50:28	29-Nov-2016 22:15:05	4696.12	3217.06
MAX_LOG_SPEED	1778	29-Nov-2016 22:15:05	29-Nov-2016 22:16:07	3217.06	3144.43
MAX_LOG_SPEED	1645	29-Nov-2016 22:16:07	29-Nov-2016 22:53:59	3144.43	305.57
MAX_LOG_SPEED	1728	29-Nov-2016 22:53:59	29-Nov-2016 22:56:13	305.57	213.72

All depth are at tool zero.

Run 1A

Repeat Pass 5" = 100'

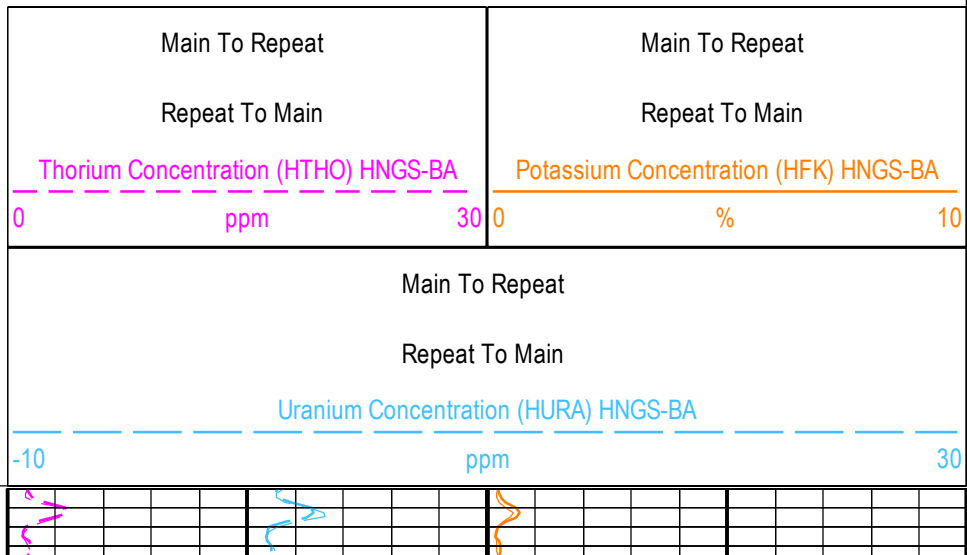
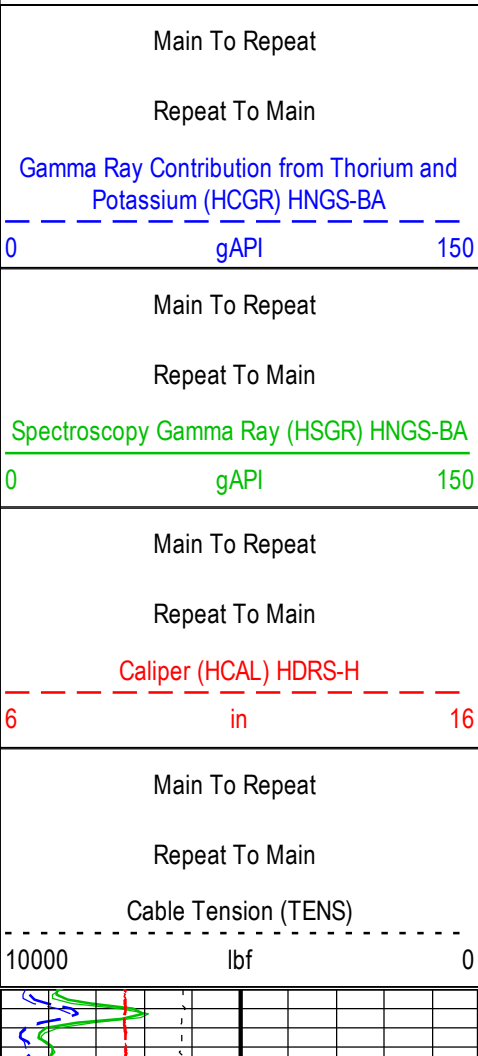
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run 1A	Repeat[2]:Up	Up	13314.45 ft	13665.97 ft	29-Nov-2016 4:09:12 PM	29-Nov-2016 4:21:23 PM	ON	13.10 ft	Yes
Run 1A	Main[3]:Up	Up	213.72 ft	13662.08 ft	29-Nov-2016 4:25:05 PM	29-Nov-2016 10:56:13 PM	ON	13.82 ft	Yes

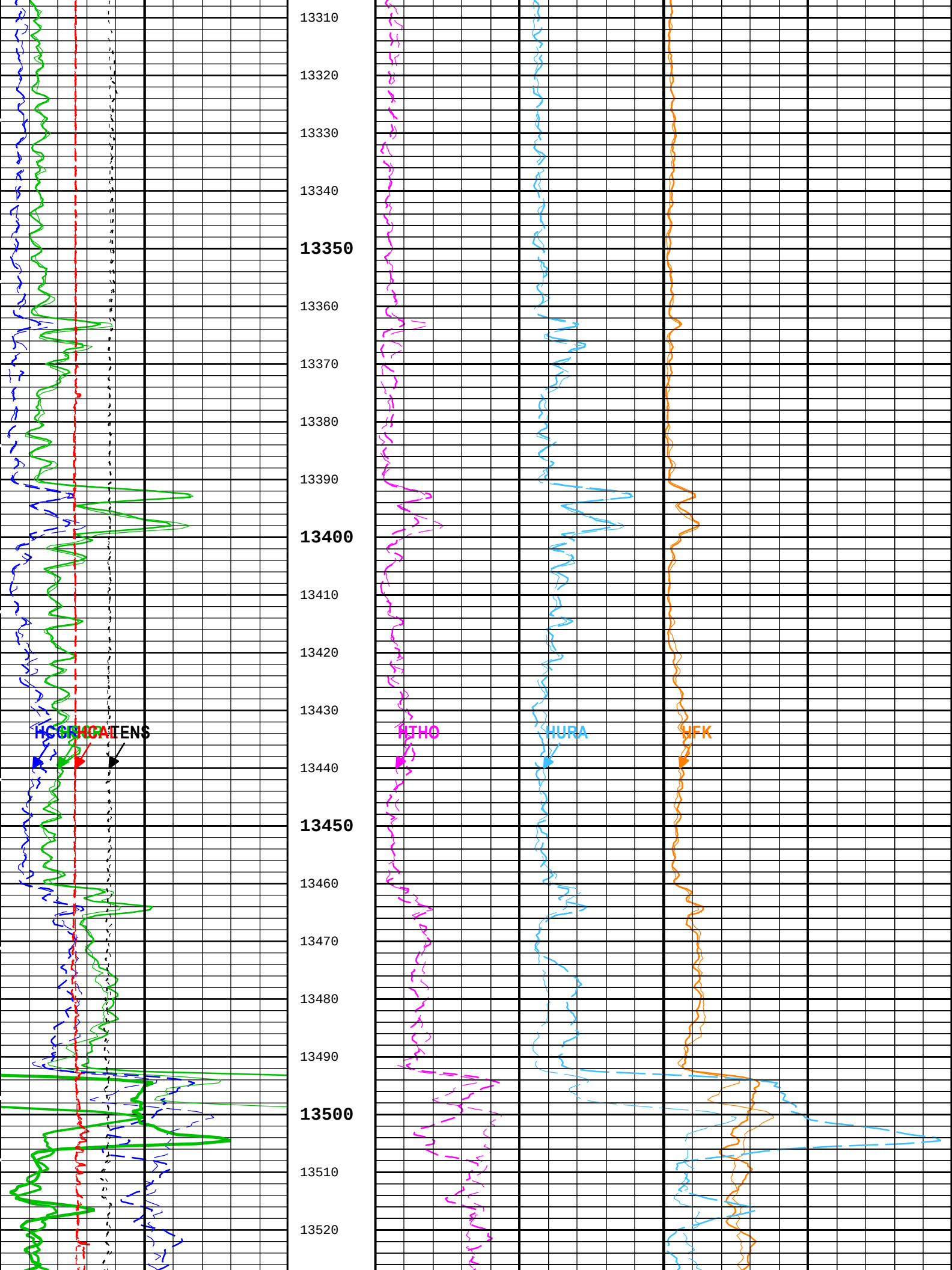
All depths are referenced to toolstring zero

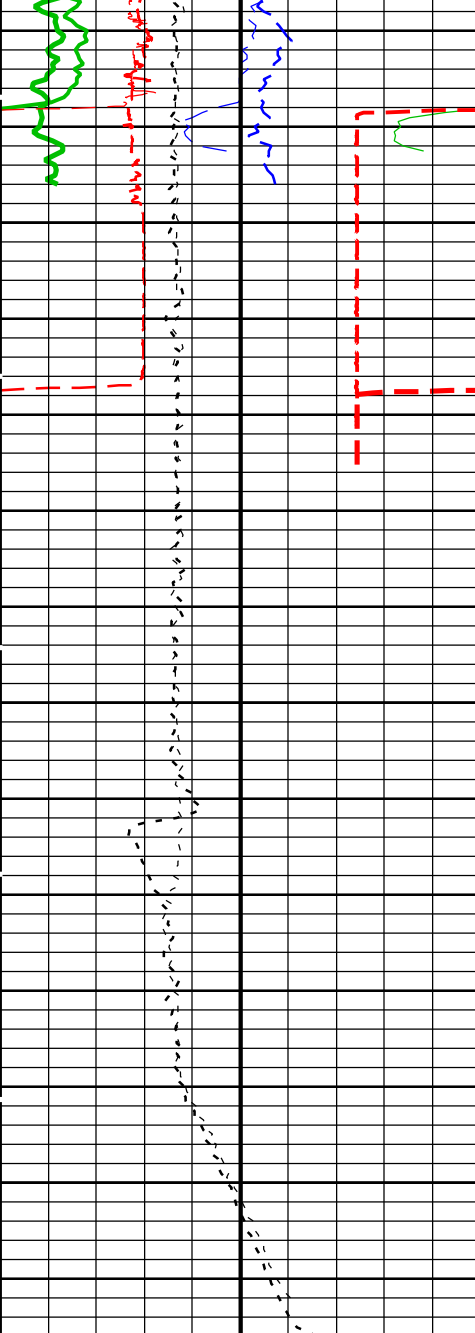
Log	Company:DCP Midstream LP Well:Zia AGI D2 Run 1A: Main[3]:Up:S008
-----	--

Description: Format: Log (Spectral 5 inch RA) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:50:27

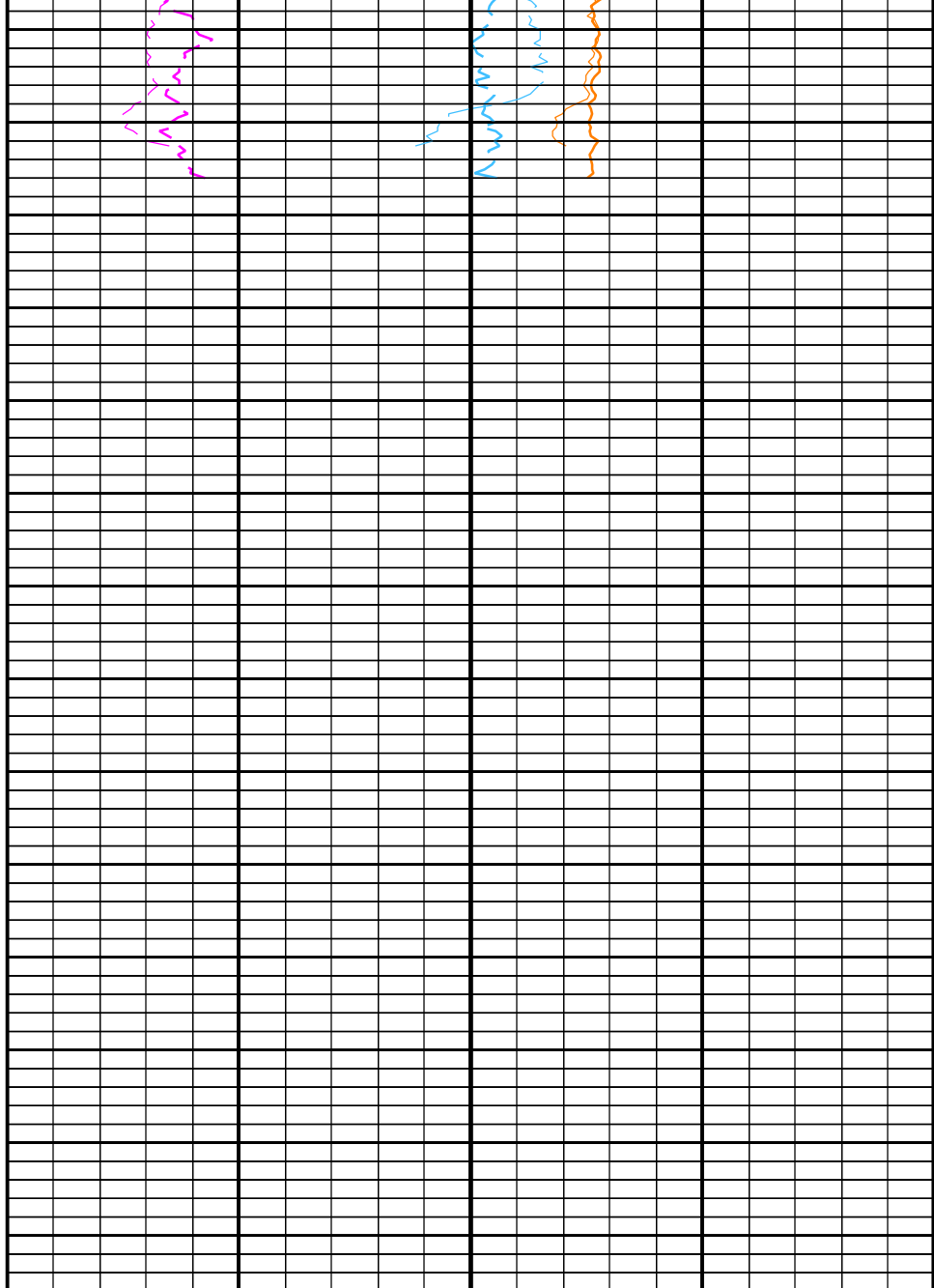
TIME_1900 - Time Marked every 60.00 (s)







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Main To Repeat
Repeat To Main
Gamma Ray Contribution from Thorium and Potassium (HCGR) HNGS-BA
gAPI 0 150

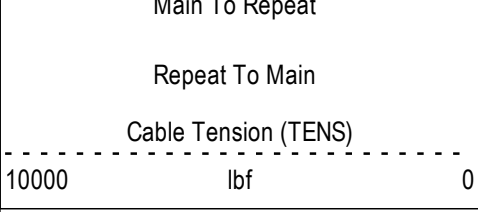
Main To Repeat
Repeat To Main
Spectroscopy Gamma Ray (HSGR) HNGS-BA
gAPI 0 150

Main To Repeat
Repeat To Main
Caliper (HCAL) HDRS-H
in 6 16

Main To Repeat
Repeat To Main
Uranium Concentration (HURA) HNGS-BA
ppm -10 30

Main To Repeat Repeat To Main Thorium Concentration (HTHO) HNGS-BA ppm 0 30	Main To Repeat Repeat To Main Potassium Concentration (HFK) HNGS-BA % 0 10
--	---

Main To Repeat
Repeat To Main



TIME_1900 - Time Marked every 60.00 (s)

Description: Format: Log (Spectral 5 inch RA) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2016 00:50:27

Calibration Report

HNGS-BA (Hostile-environment Natural Gamma-ray Sonde) Calibration - Run Run 1A

Primary Equipment :		
HNGS Sonde Element	HNGS-BA	378
Auxiliary Equipment :		
Hostile Natural Gamma Ray Cartridge	HNGC-B	638
HNGS Housing Element	HEH-K	1000
		0

Calibration History - Calibration History

Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
- 0		Master	----	----	----	----	

HNGS Background and Na22 Set Point Determination - Detector 1 Check

Master (EEPROM):		19:20:12 14-Sep-2016		Before (Measured):		13:01:22 28-Nov-2016	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Na 511 Peak Location		Master	40.000	37.500	38.570	42.500	
		Before	40.000	37.500	39.567	42.500	
		Before-Master	-----	-----	0.997	-----	
Na 511 Peak Resolution	%	Master	15.500	12.000	14.465	19.000	
		Before	15.500	12.000	13.872	19.000	
		Before-Master	-----	-----	-0.593	-----	
High Voltage DAC Value	V	Master			904.928		
		Before	1150.000	850.000	927.451	1600.000	
		Before-Master	-----	-----	22.523	-----	
Na 1785 Peak Location		Master	142.650	135.000	139.928	150.300	
		Before	142.650	135.000	142.113	150.300	
		Before-Master	-----	-----	2.185	-----	
Na 1785 Peak Resolution	%	Master	8.500	6.500	7.951	11.000	
		Before	8.500	6.500	7.213	11.000	
		Before-Master	-----	-----	-0.738	-----	
Temperature - 0	degF	Master	-----	-----	-----	-----	
		Before	59.900	-20.002	62.636	140.000	
		Before-Master	-----	-----	-----	-----	
Na Count Rate	CPS	Master	45.000	10.000	17.130	100.000	
		Before	45.000	10.000	15.576	100.000	
		Before-Master	-----	-----	-1.554	-----	

HNGS Background and Na22 Set Point Determination - Detector 2 Check

Master (EEPROM):		19:20:12 14-Sep-2016		Before (Measured):		13:01:22 28-Nov-2016	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Na 511 Peak Location		Master	40.000	37.500	39.489	42.500	
		Before	40.000	37.500	39.707	42.500	
		Before-Master	----	----	0.218	----	
Na 511 Peak Resolution	%	Master	15.500	12.000	13.419	19.000	
		Before	15.500	12.000	14.719	19.000	
		Before-Master	----	----	1.300	----	
High Voltage DAC Value	V	Master			936.462		
		Before	1150.000	850.000	1033.498	1600.000	
		Before-Master	----	----	97.036	----	
Na 1785 Peak Location		Master	142.650	135.000	141.908	150.300	

		Before Before-Master	142.650 ----	135.000 ----	141.698 -0.210	150.300 ----	
Na 1785 Peak Resolution	%	Master	8.500	6.500	7.835	11.000	
		Before	8.500	6.500	8.198	11.000	
		Before-Master	----	----	0.363	----	
Temperature - 0	degF	Master	----	----	----	----	
		Before	59.900	-20.002	62.557	140.000	
		Before-Master	----	----	----	----	
Na Count Rate	CPS	Master	45.000	10.000	17.060	100.000	
		Before	45.000	10.000	15.563	100.000	
		Before-Master	----	----	-1.497	----	

HNGS Background and Na22 Set Point Determination - Ratio of Detector 1 to Detector 2

Master (EEPROM):		19:20:12 14-Sep-2016		Before (Measured):		13:01:22 28-Nov-2016	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Coincidence Count Rate Ratio		Master			1.000		
		Before	1.000	0.950	0.999	1.050	
		Before-Master	----	----	-0.001	----	

HNGS Background and Na22 Set Point Determination - Detector 1 Calibration

Master (EEPROM):		19:20:12 14-Sep-2016		Before (Measured):		13:01:22 28-Nov-2016	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Th Peak Location		Master	209.630	201.000	207.684	218.250	
		Before	----	----	----	----	
		Before-Master	----	----	----	----	
Th Peak Resolution	%	Master	7.000	5.000	6.287	9.000	
		Before	----	----	----	----	
		Before-Master	----	----	----	----	
Background Count Rate	CPS	Master			101.490		
		Before	142.500	10.000	89.774	265.000	
		Before-Master	----	----	-11.716	----	
Gain Ratio		Master	1.000	0.940	1.024	1.060	
		Before	----	----	----	----	
		Before-Master	----	----	----	----	

HNGS Background and Na22 Set Point Determination - Detector 2 Calibration

Master (EEPROM):		19:20:12 14-Sep-2016		Before (Measured):		13:01:22 28-Nov-2016	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Th Peak Location		Master	209.630	201.000	211.067	218.250	
		Before	----	----	----	----	
		Before-Master	----	----	----	----	
Th Peak Resolution	%	Master	7.000	5.000	5.846	9.000	
		Before	----	----	----	----	
		Before-Master	----	----	----	----	
Background Count Rate	CPS	Master			103.898		
		Before	142.500	10.000	92.571	265.000	
		Before-Master	----	----	-11.327	----	
Gain Ratio		Master	1.000	0.940	1.017	1.060	
		Before	----	----	----	----	
		Before-Master	----	----	----	----	

HNGS Background and Na22 Set Point Determination - Detector 1 Calibration

Master (EEPROM):		19:20:12 14-Sep-2016		Before (Measured):		13:01:22 28-Nov-2016	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Na 511 Peak Set Point		Master	40.000	38.000	40.000	43.500	
		Before	----	----	----	----	
		Before-Master	----	----	----	----	

HNGS Background and Na22 Set Point Determination - Detector 2 Calibration

Master (EEPROM):		19:20:12 14-Sep-2016		Before (Measured):		13:01:22 28-Nov-2016	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Na 511 Peak Set Point		Master	40.000	38.000	41.000	43.500	
		Before	----	----	----	----	
		Before-Master	----	----	----	----	

Company:	DCP Midstream LP	Schlumberger
Well:	Zia AGI D2	
Field:	AGI Devonian Exploration	
County:	Lea	
State:	New Mexico	

Spectral Gamma Ray

****FIELD PRINT****