

Well: Diamond T Sheep 7 92 1 26

Field: Sand Wash Basin Niobrara

County: Moffat State: Colorado

4 Arm Caliper

Hole and Cement Volume

County: Moffat
 Field: Sand Wash Basin Niobrara
 Location: SHL: 660' FNL & 930' FWL
 Well: Diamond T Sheep 7 92 1 26
 Company: Southwestern Energy Production Company

Location:		SHL: 660' FNL & 930' FWL	Elev.:	K.B. 6702.00 ft
Permanent Datum:	Ground Level		G.L. 6680.00 ft	
Log Measured From:	Kelly Bushing		D.F. 6702.00 ft	
Drilling Measured From:	Kelly Bushing			
API Serial No. 05-081-07804	Section: 26	Township: 7N	Range: 92W	

Logging Date: 28-Sep-2014

Run Number: TWO

Depth Driller: 9900.00 ft

Schlumberger Depth: 9900.00 ft

Bottom Log Interval: 9900.00 ft

Top Log Interval: 5682.00 ft

Casing Driller Size @ Depth: 9.625 in @ 5681.00 ft

Casing Schlumberger: 5682 ft

Bit Size: 8.75 in

Type Fluid In Hole: Oil

Density: 10 lbm/gal

Viscosity: 48 s

Fluid Loss: 4.2 cm3

PH: N/A

Source of Sample: N/A

RM @ Meas Temp: N/A

RMF @ Meas Temp: N/A

RMC @ Meas Temp: N/A

Source RMF: N/A

RM @ BHT: N/A

RMF @ BHT: N/A

Max Recorded Temperatures: 229 degF

Circulation Stopped: 27-Sep-2014 08:00:00

Logger on Bottom: 28-Sep-2014 20:50:13

Unit Number: 9108

Location: E Meadows/M Pace Fort Morgan

Recorded By: Sweeta Bose

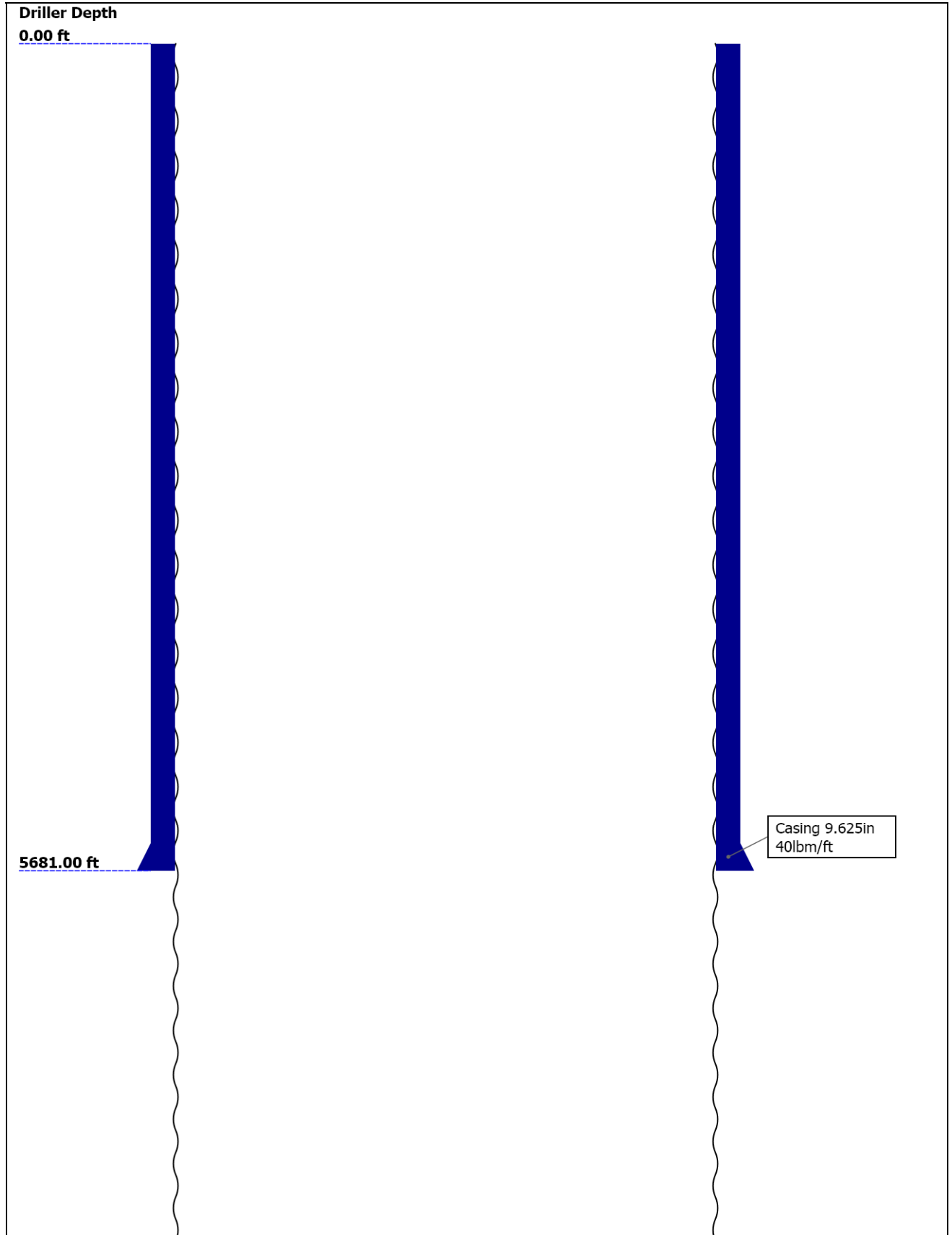
Disclaimer

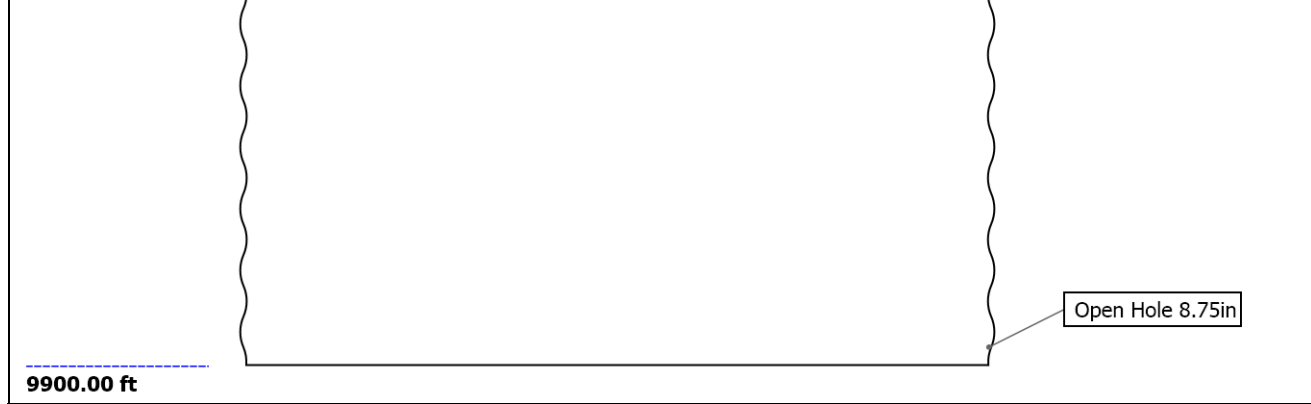
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Well Sketch





Borehole Size/Casing/Tubing Record

Bit						
Bit Size (in)	8.75					
Top Driller (ft)	0					
Top Logger (ft)	0					
Bottom Driller (ft)	9900					
Bottom Logger (ft)	9900					
Casing						
Size (in)	9.625					
Weight (lbm/ft)	40					
Inner Diameter (in)	8.835					
Grade	J55					
Top Driller (ft)	0					
Top Logger (ft)	0					
Bottom Driller (ft)	5681					
Bottom Logger (ft)	5682					

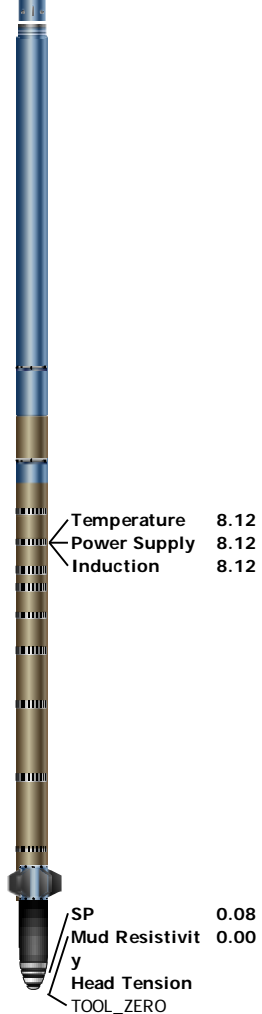
Borehole Fluids

Parameter(unit)	TWO					
Fluid Type	Oil					
Max Recorded Temperatures (degF)	229					
Source of Sample	Active Tank					
Salinity (ppm)	30000					
Density (lbm/gal)	10					
Funnel Viscosity (s)	48					
Fluid Loss (cm3)	4.2					
PH						
Date/Time Circulation Stopped	27-Sep-2014 08:00:00					
Date Logger on Bottom	28-Sep-2014					
Time Logger on Bottom	20:50:13					
Source RMF						
RMC	Pressed					
RM @ Meas Temp (ohm.m@degF)	N/A					
RMF @ Meas Temp (ohm.m@degF)	N/A					
RMC @ Meas Temp (ohm.m@degF)	N/A					

RM @ BHT (ohm.m@degF)	N/A				
RMF @ BHT (ohm.m@degF)	N/A				
RMC @ BHT (ohm.m@degF)	N/A				
Electricity Stability (V)					
Oil/Water	82/18 (4.50)				
Total Solid (%)	16				
High Gravity Solids (%)	13.8				

Remarks and Equipment Summary

TWO: Toolstring				TWO: Remarks
Equip name	Length	MP name	Offset	1. THIS IS THE SECOND RUN IN THE WELL.
LEH-QT LEH-QT	51.33			2. TOOL RAN AS PER TOOL SKETCH.
				3. MATRIX: LIMESTONE MDEN: 2.71 G/ML
EDTC-B EDTH-B EDTG-A EDTC-B	48.42			4. NEUTRON CORRECTIONS: BOREHOLE (BS), STANDOFF (0.125"), PRESSURE/TEMPERATURE
				5. WASHOUTS MAY ADVERSELY AFFECT LOGS.
		CTEM	44.92	6. TD: 9,900' CSG: 5,682'
		ACCZ	0.00	
		HV	0.00	
		Gamma Ray	43.05	
		TelStatus	41.92	
PPC-B:8195 PPC-B:8195	41.92			
		PPC-B Calipers	40.77	
AH-184[2]	35.4			
AH-184[1]	33.4			
Adaptor_Head[2]	31.4			
GPIT-F:770 GPIH-B GPIC-F:770 DHRU-F	27.4			
		GPIT-F Inclino meter	25.98	
		GPIT	0.00	
Adaptor_Head[1]	23.4			



Lengths are in ft
 Maximum Outer Diameter = 5.000 in
 Line: Sensor Location, Value: Gating Offset
 All measurements are relative to TOOL_ZERO

Depth Summary

TWO

Depth Measuring Device

Type	IDW-B		
Serial Number			
Calibration Date			
Calibrator Serial Number			
Calibration Cable Type			
Wheel Correction 1	0		
Wheel Correction 2	0		

Tension Device

Type	CMTD-B/A		
Serial Number			
Calibration Date			
Calibrator Serial Number			
Number of Calibration Points	0		

Logging Cable

Type	7-46A-XS		
Serial Number			
Length	21000.00 ft		
Conveyance Type	Wireline		
Rig Type	Triple		

TWO:Depth Control Parameters **Depth Control Remarks**

Log Sequence	First Log In the Well	
Rig Up Length At Surface		

Rig Up Length At Bottom
 Rig Up Length Correction
 Stretch Correction
 Tool Zero Check At Surface

Composite 2

Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
IHV	Integrated Hole Volume	GCSE_UP_PASS, GCSE_DOWN_PASS:TWO	1686.58	ft3
ICV	Integrated Cement Volume	GCSE_UP_PASS, GCSE_DOWN_PASS:TWO, FCD	1030.85	ft3

Software Version

Acquisition System	Version
MaxWell	4.0.9163.3000
Application Patch	Patch-SP-10767_22480-4.0.9163.3001

Computation	Description	Version
Borehole	Borehole Ensemble provides common Borehole Parameters and Channels	4.0.9469.3000
DepthCorrection	DepthCorrection	4.0.9469.3000

Tool Elements	Description	Software Version	Firmware Version
PPC-B	PPC-B Element is used for usual logging at wellsite and check/diagnostics.	4.0.9526.3000	1.0
EDTC-B	Enhanced Digital Telemetry Cartridge - B	4.0.9469.3000	

Composite Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
TWO	Log[2]:Up	Up	7000.97 ft	9915.68 ft	28-Sep-2014 8:39:52 PM	28-Sep-2014 10:17:27 PM	ON	1.56 ft	No
TWO	Main[3]:Up	Up	5939.89 ft	7302.28 ft	28-Sep-2014 10:23:38 PM	29-Sep-2014 12:01:16 AM	ON	0.94 ft	No

All depths are referenced to toolstring zero

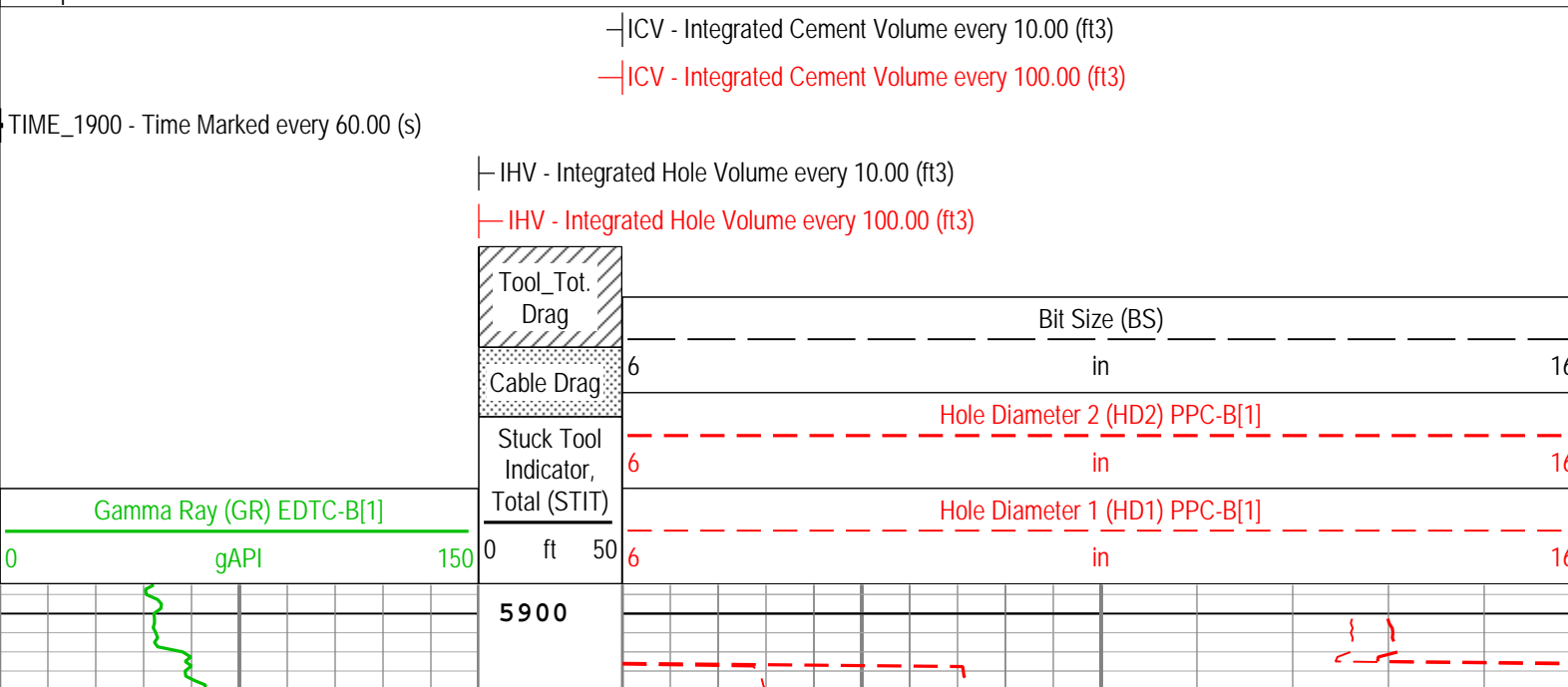
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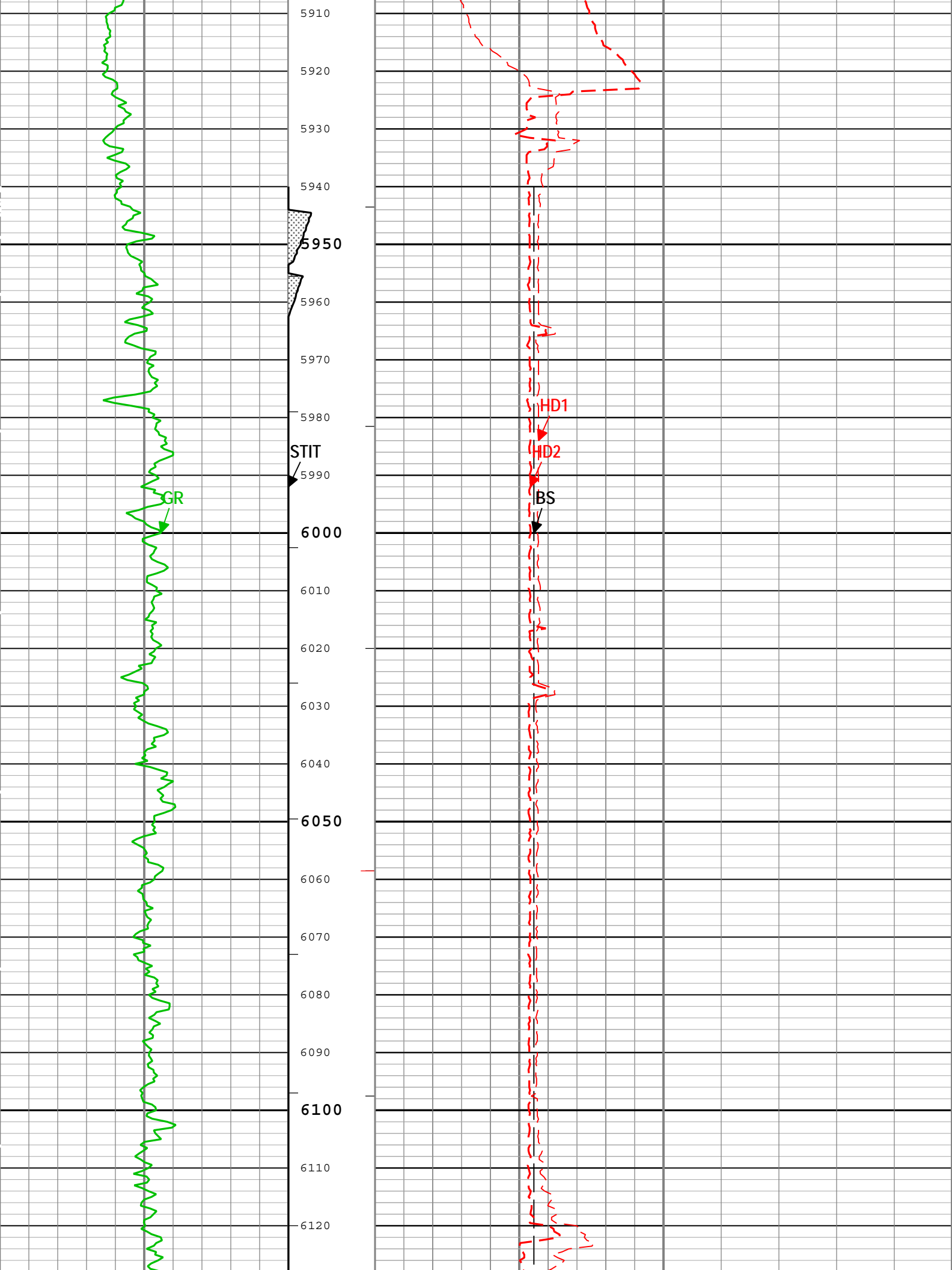
Company:Southwestern Energy Production Company

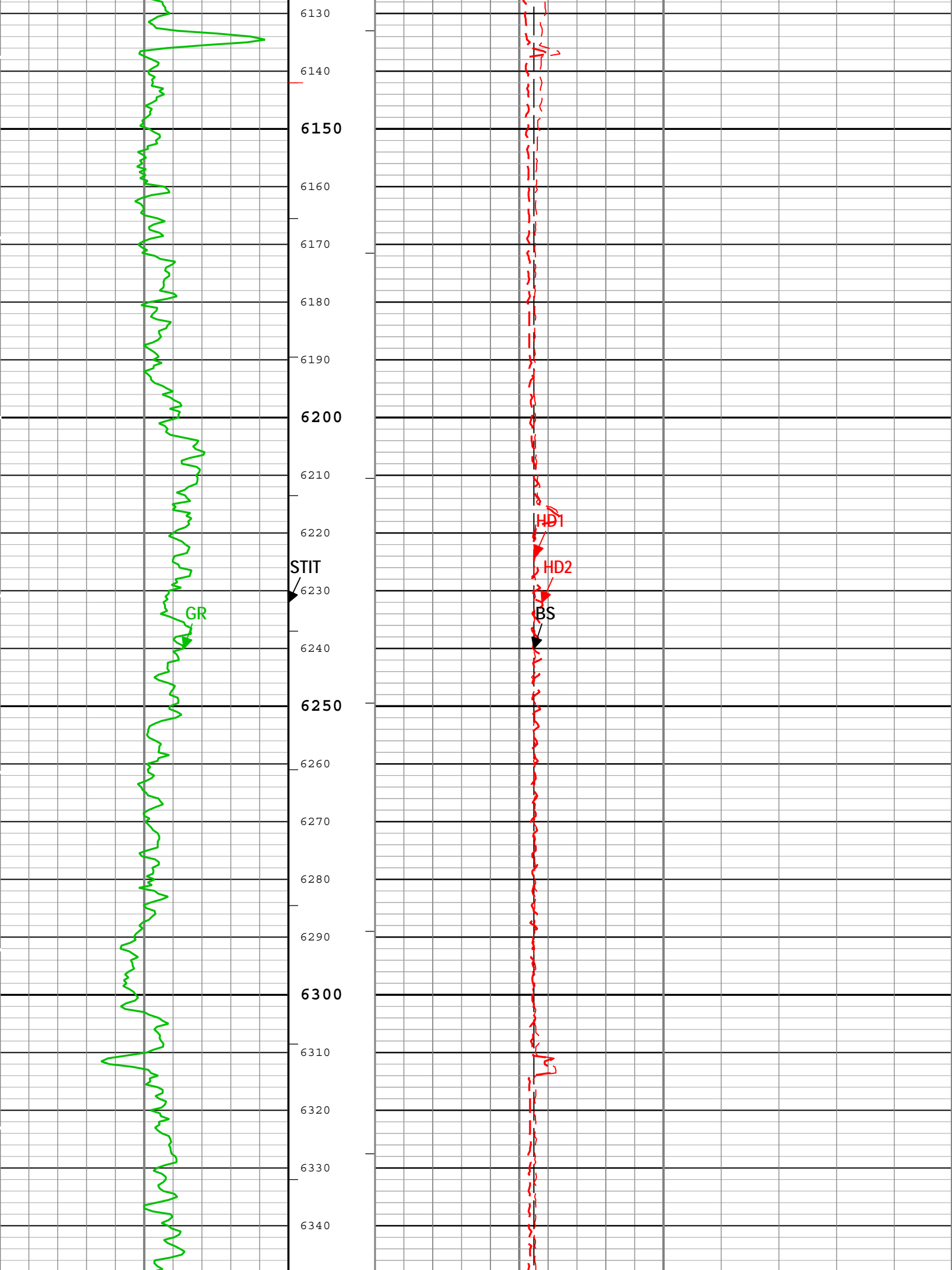
Well:Diamond T Sheep 7 92 1 26

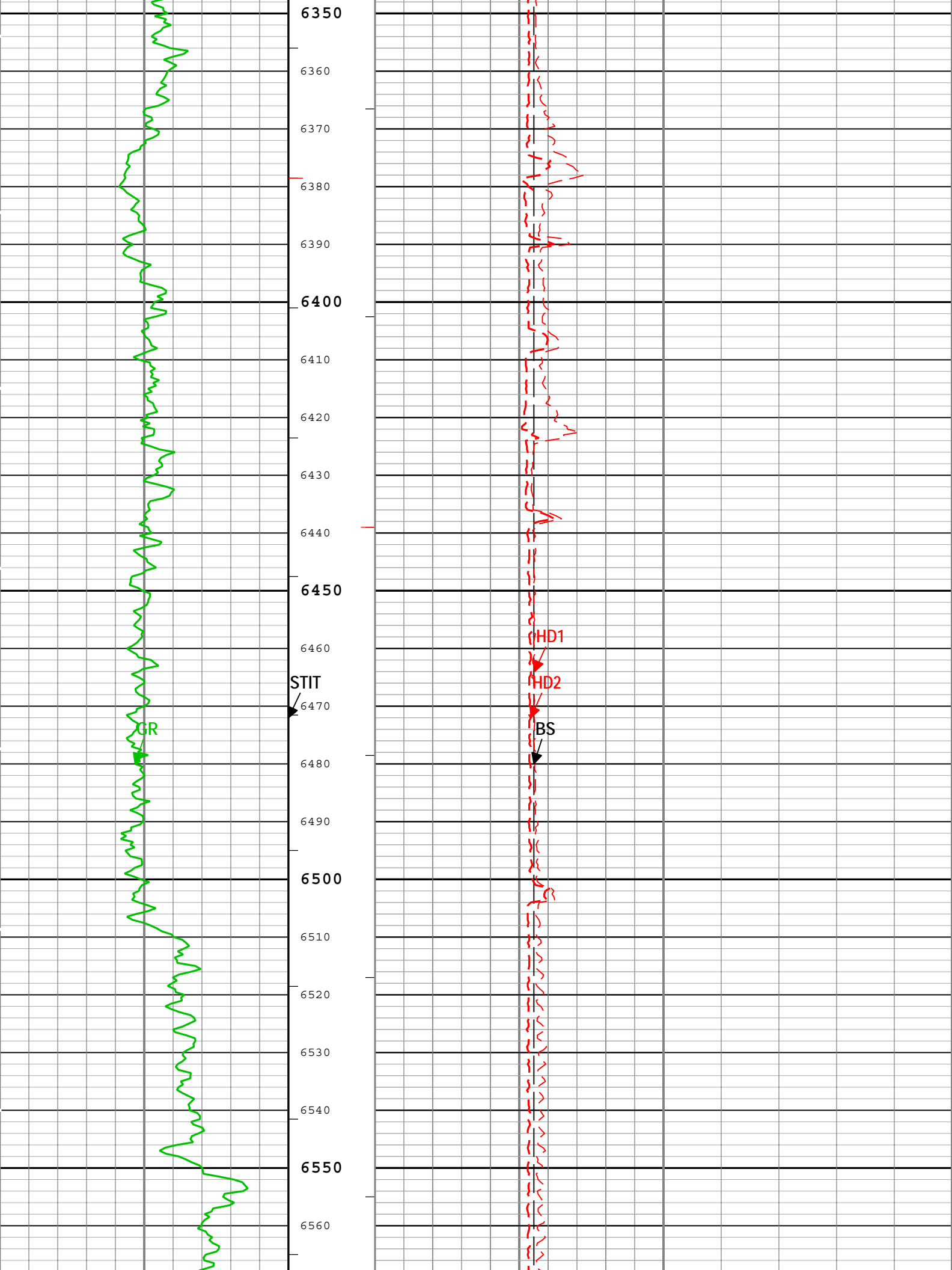
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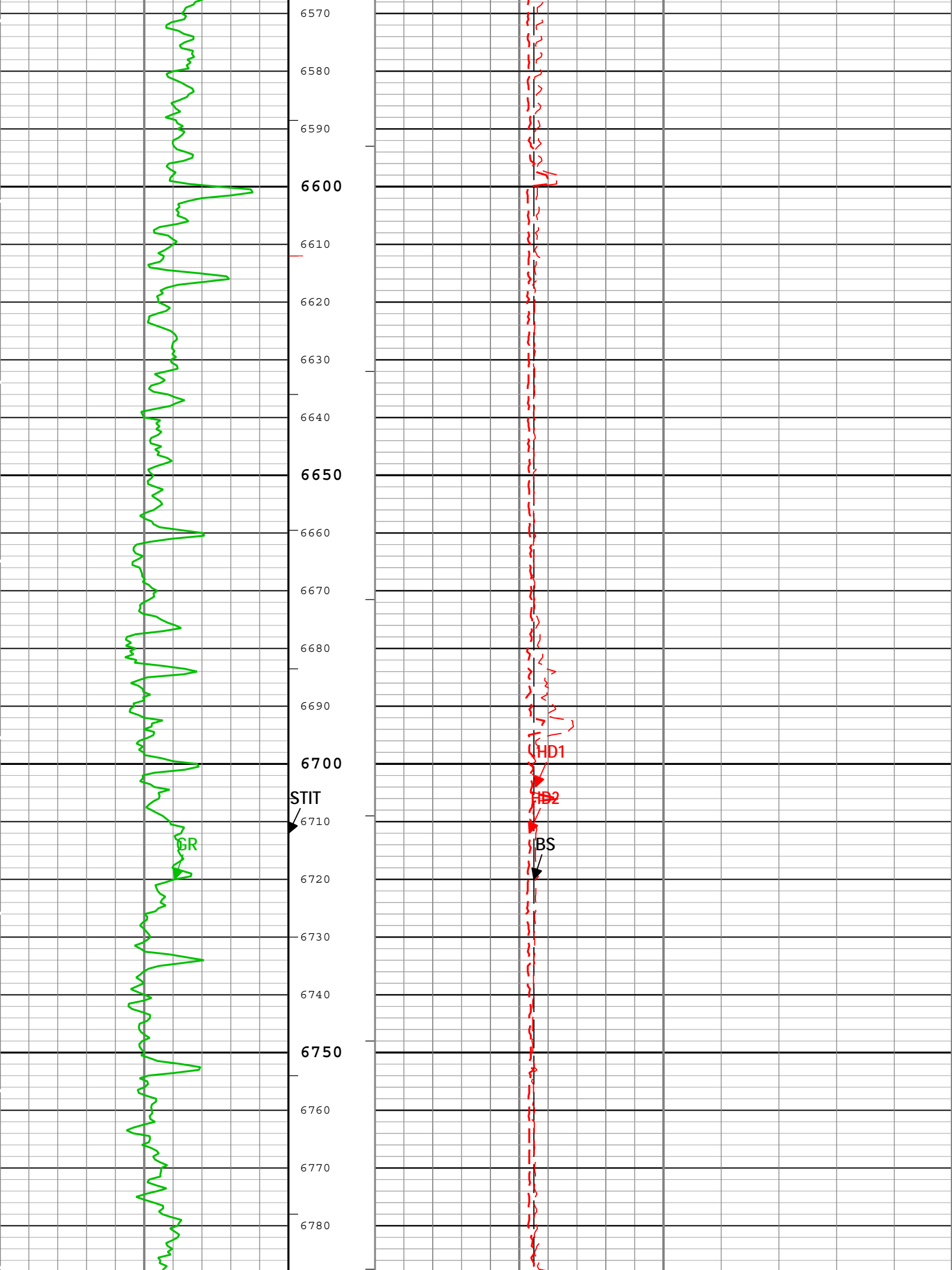
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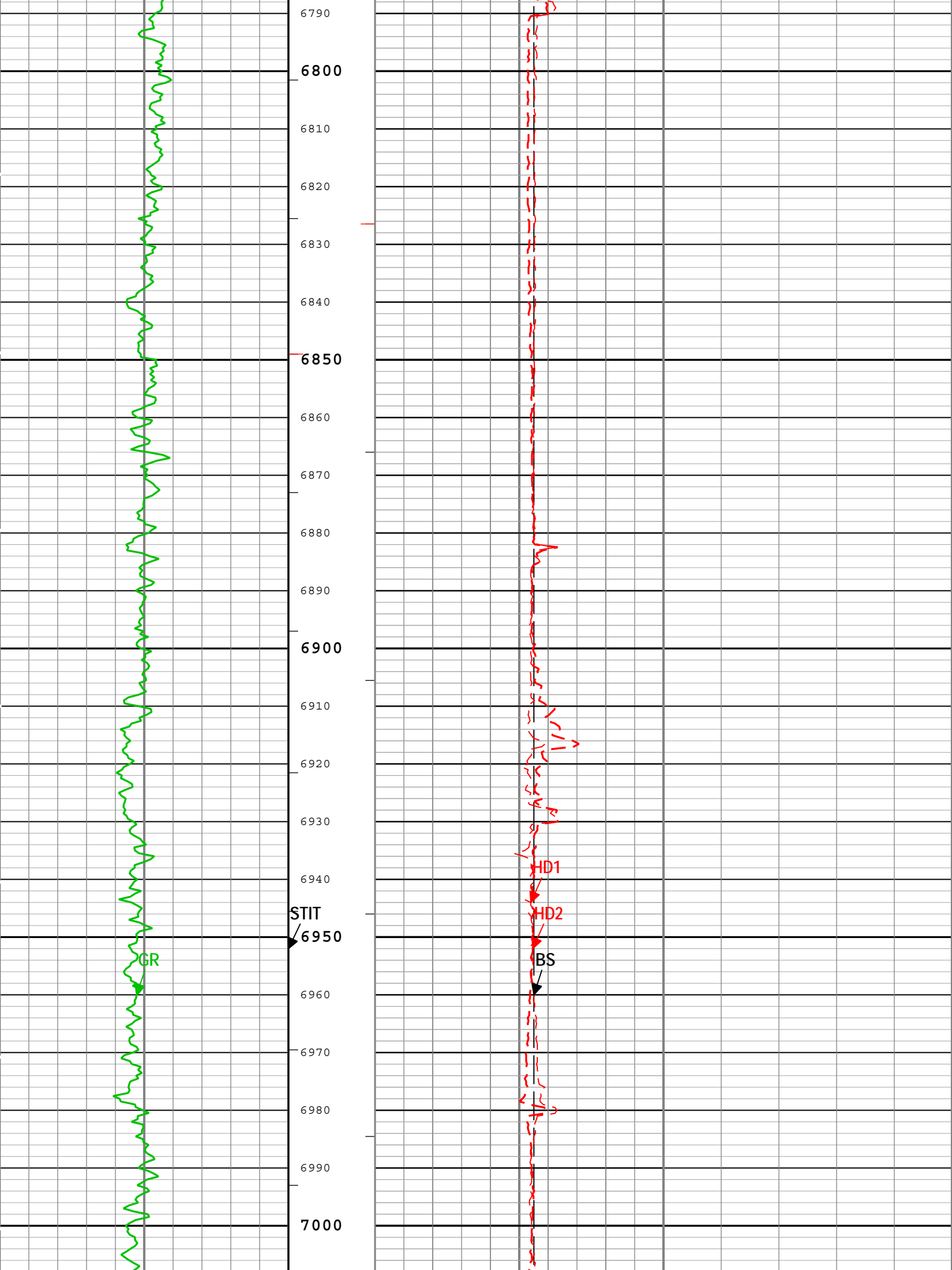


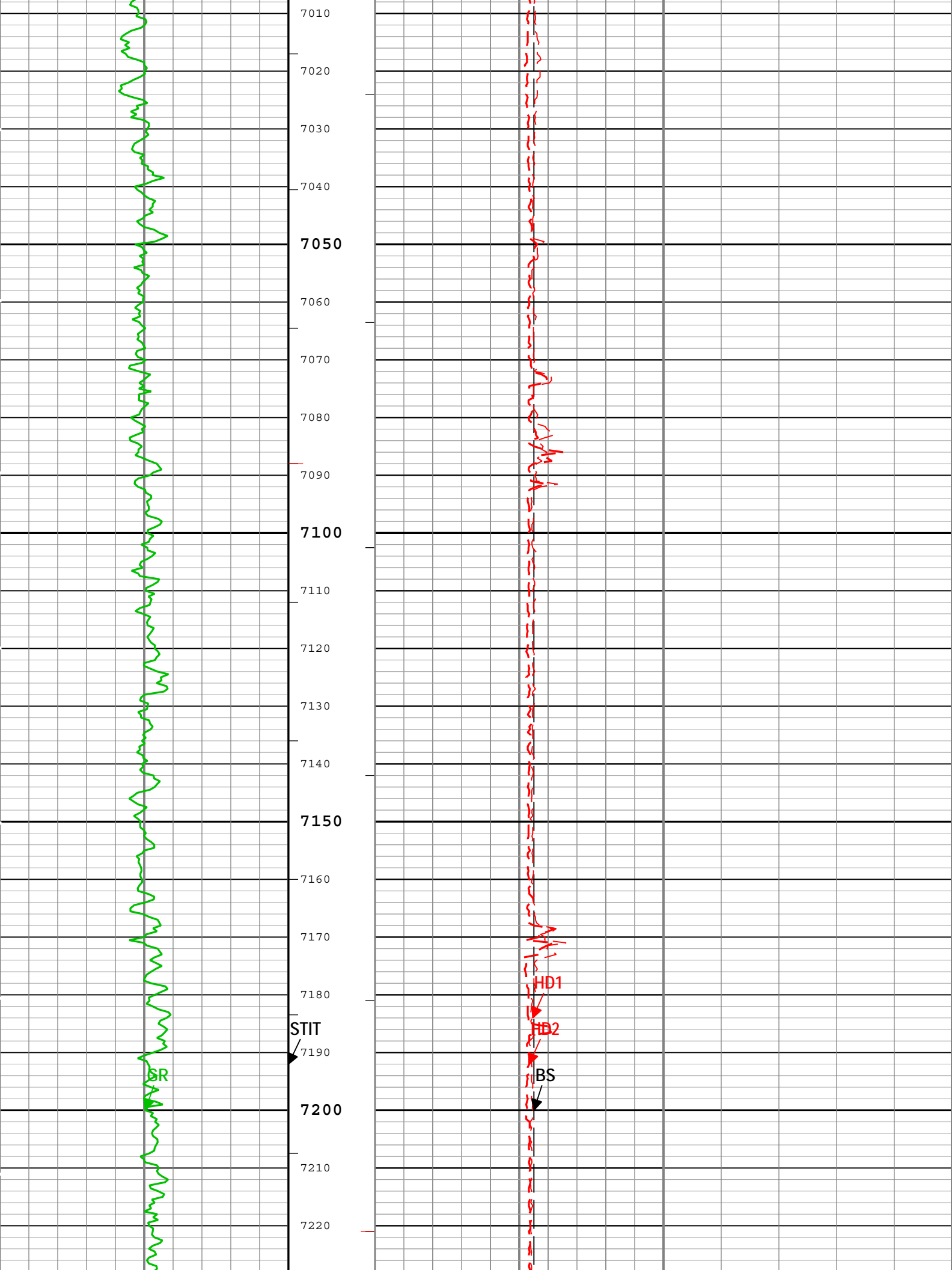


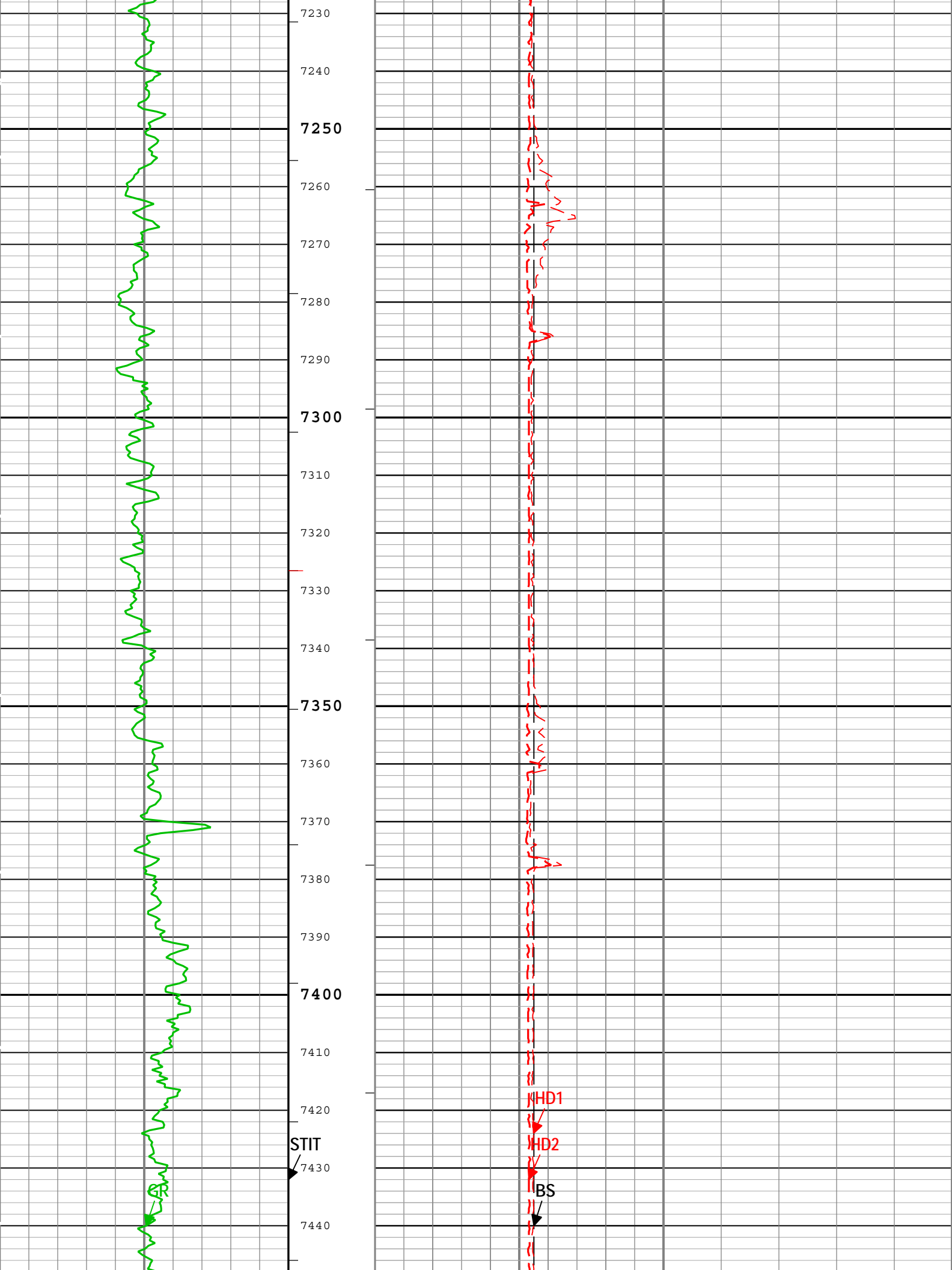


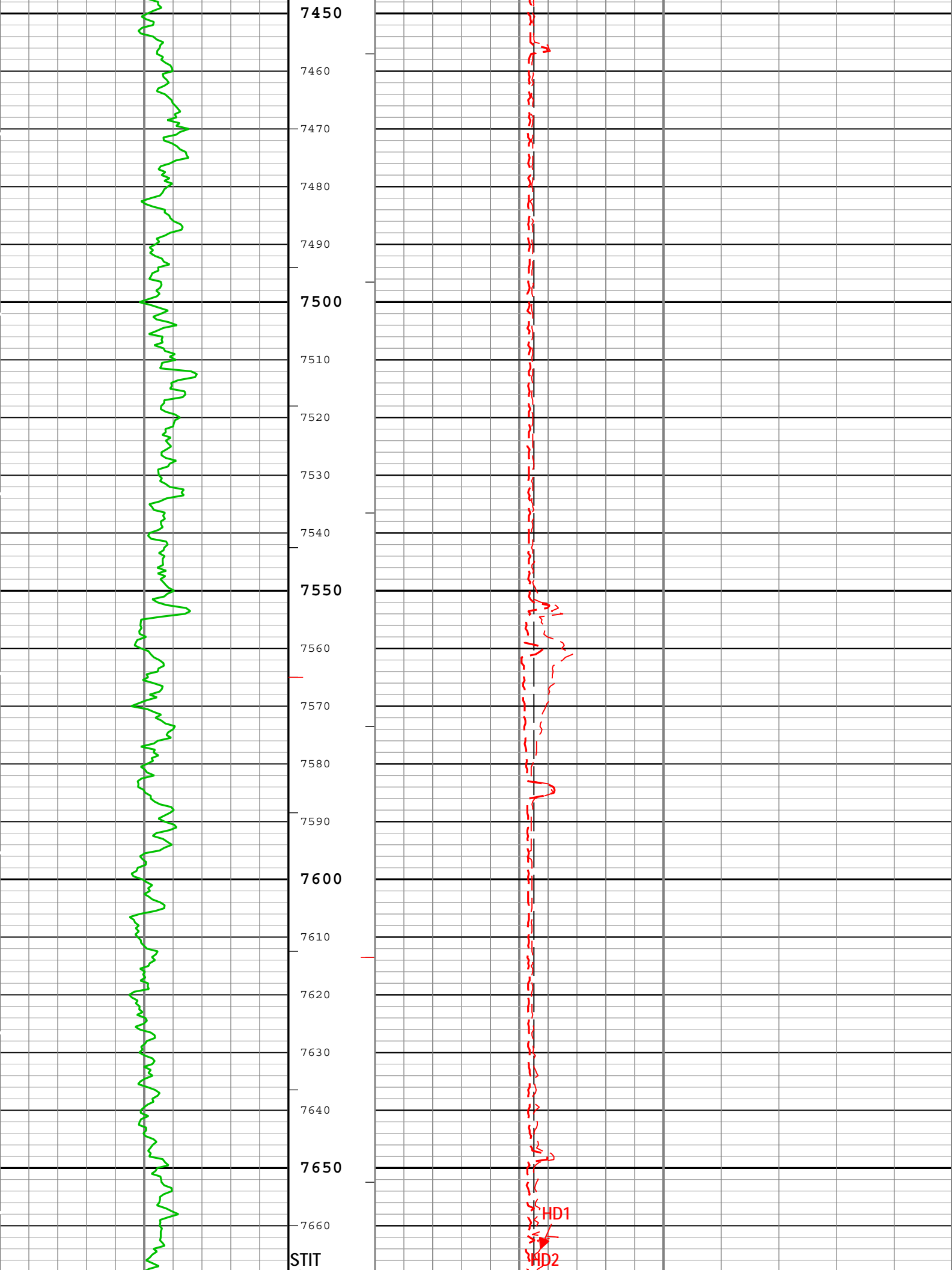












7450

7460

7470

7480

7490

7500

7510

7520

7530

7540

7550

7560

7570

7580

7590

7600

7610

7620

7630

7640

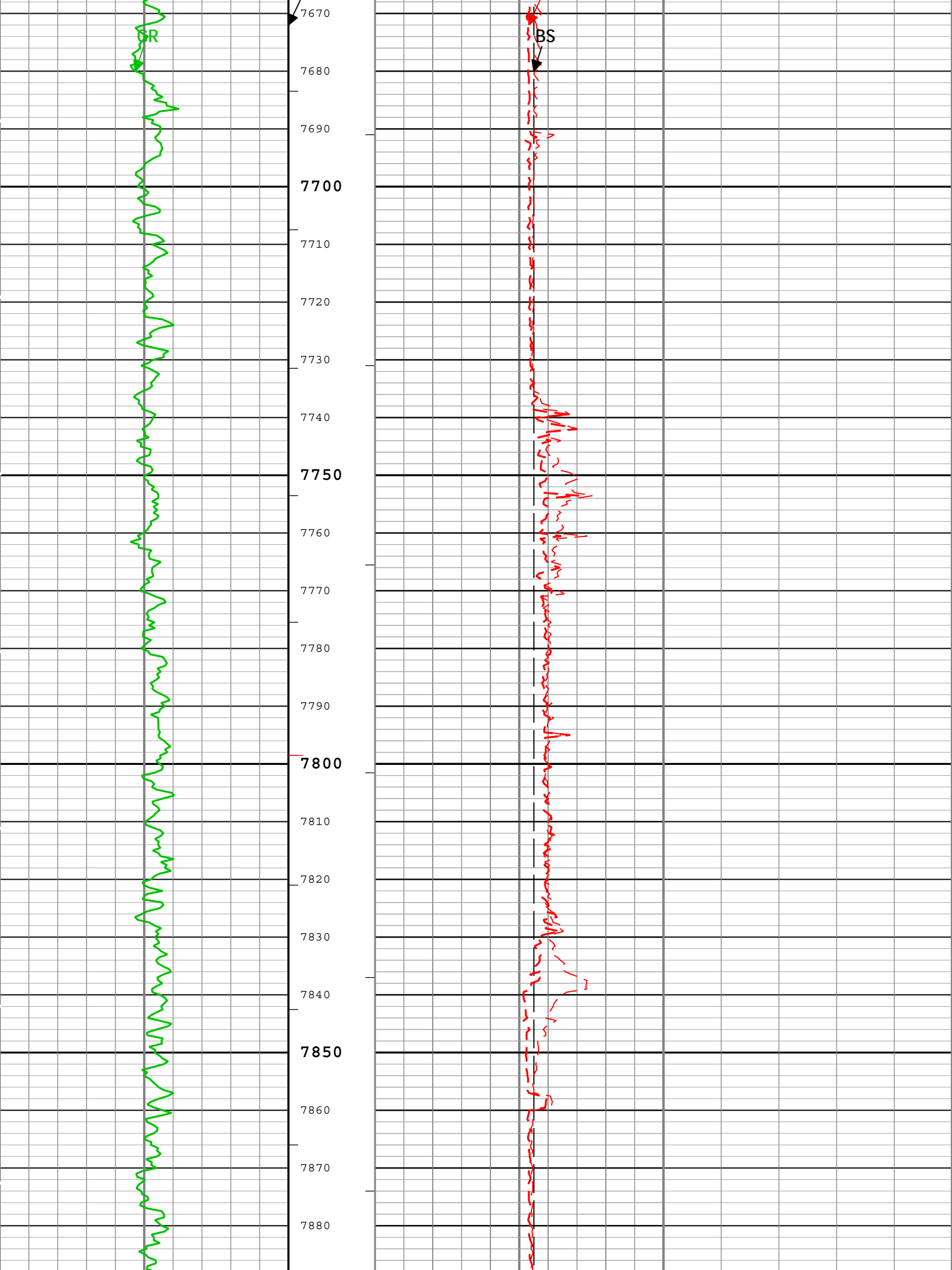
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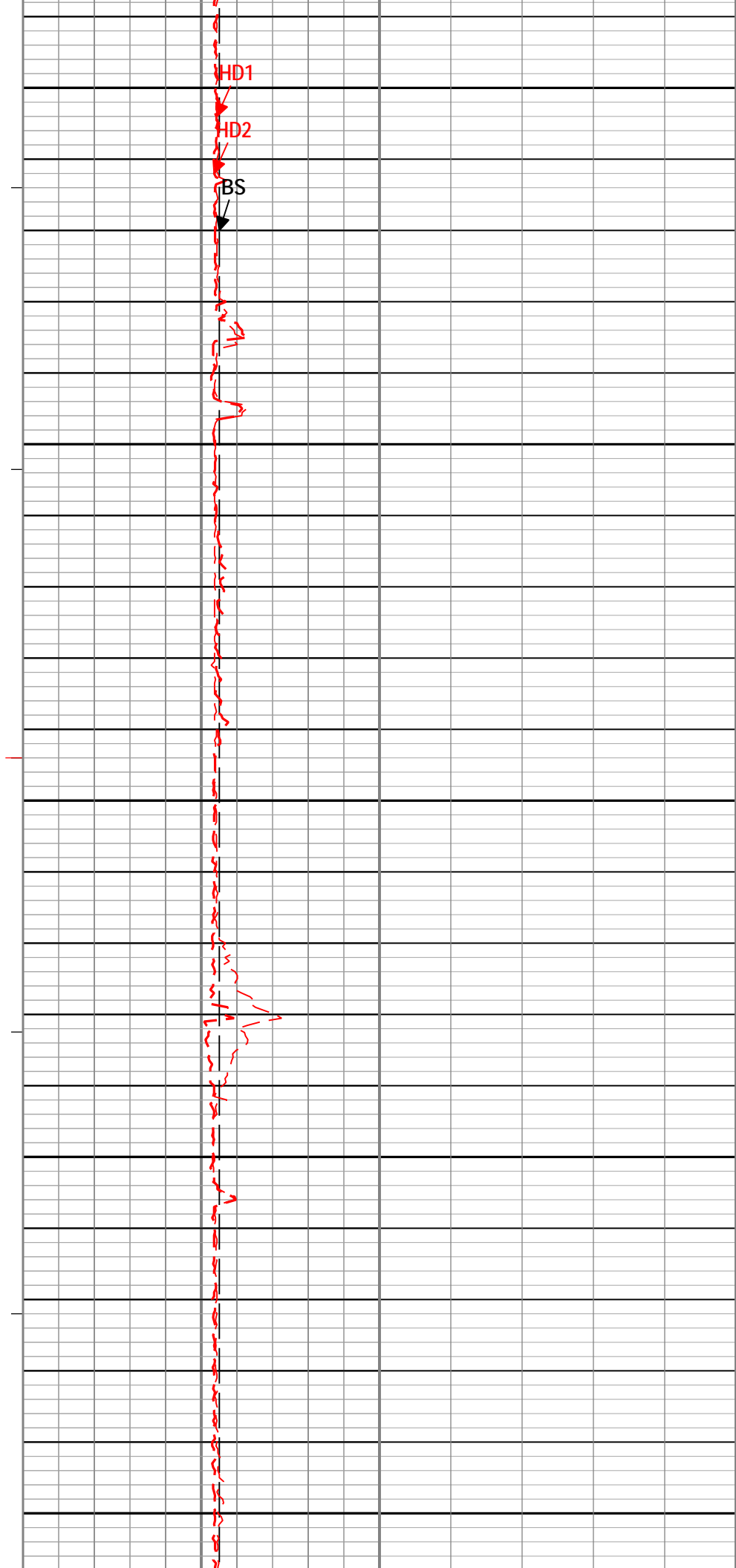
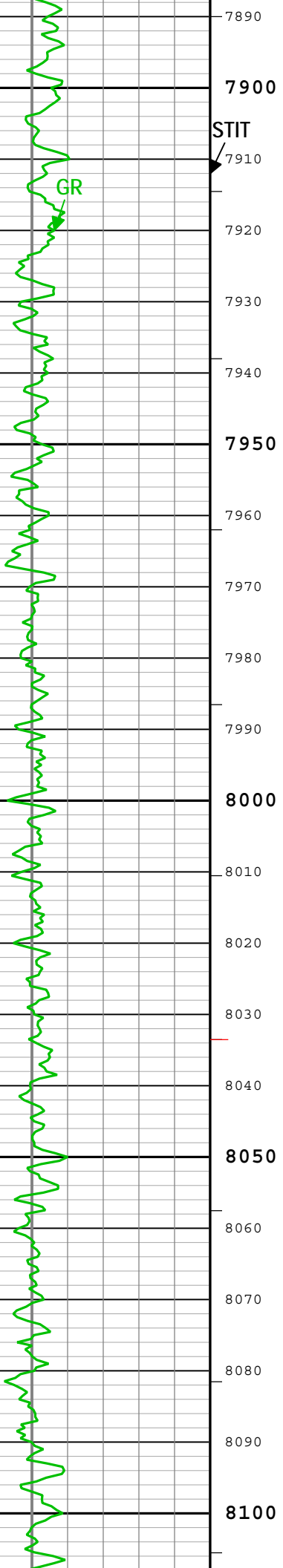
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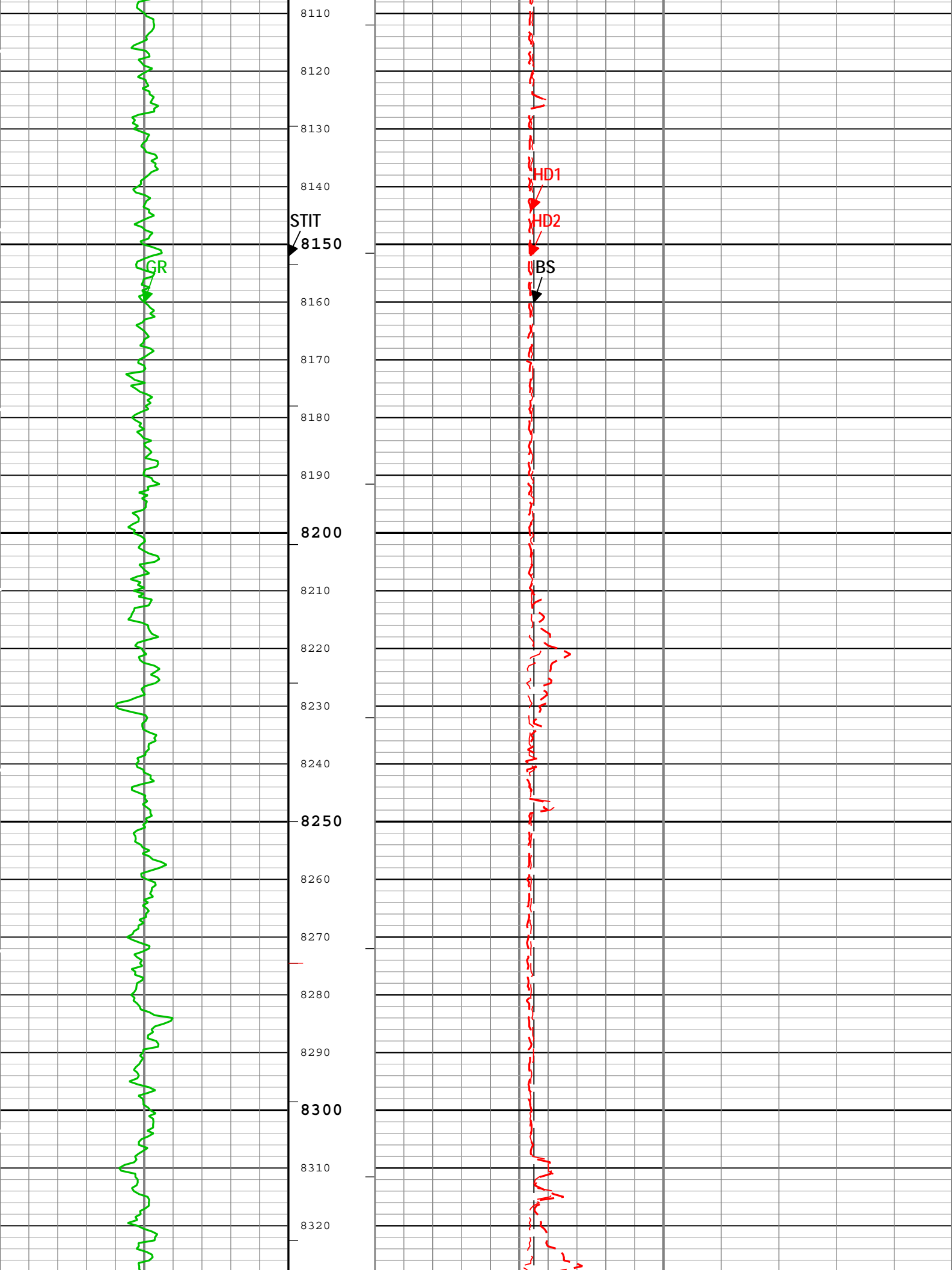
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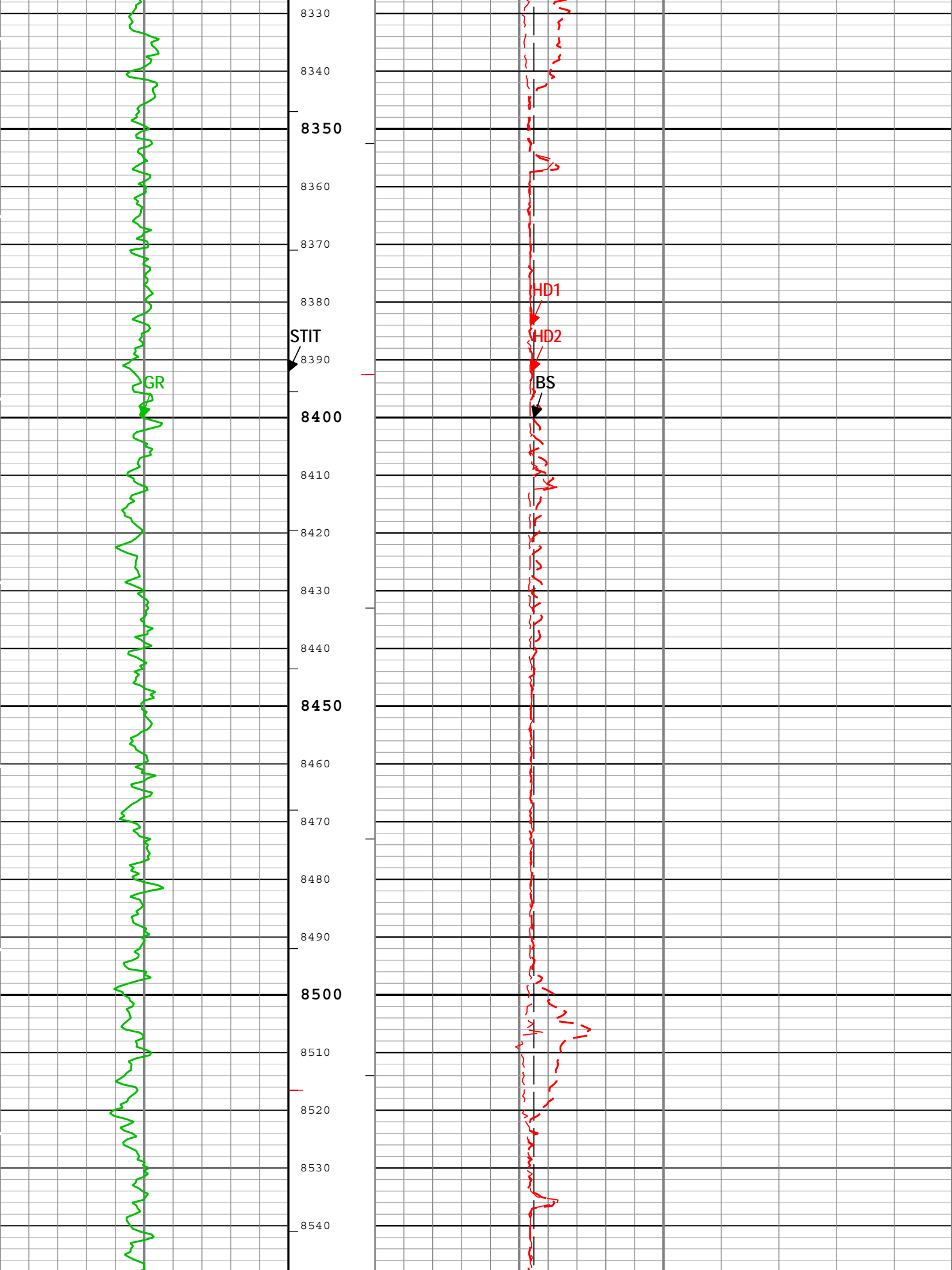
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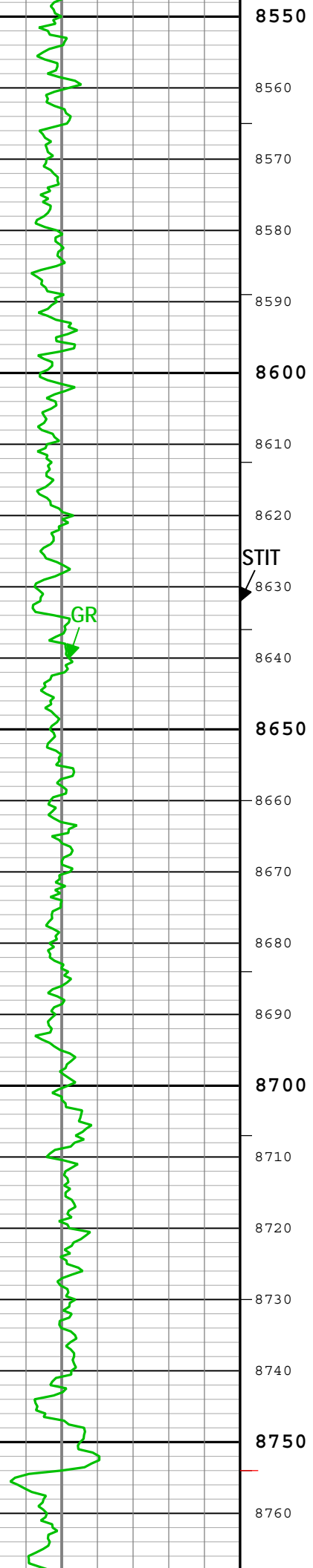
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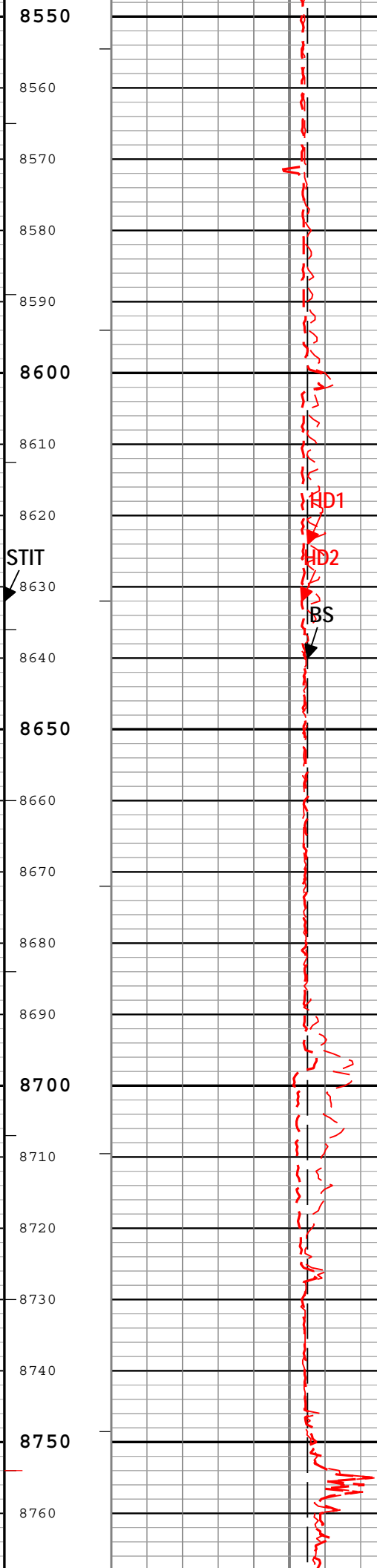






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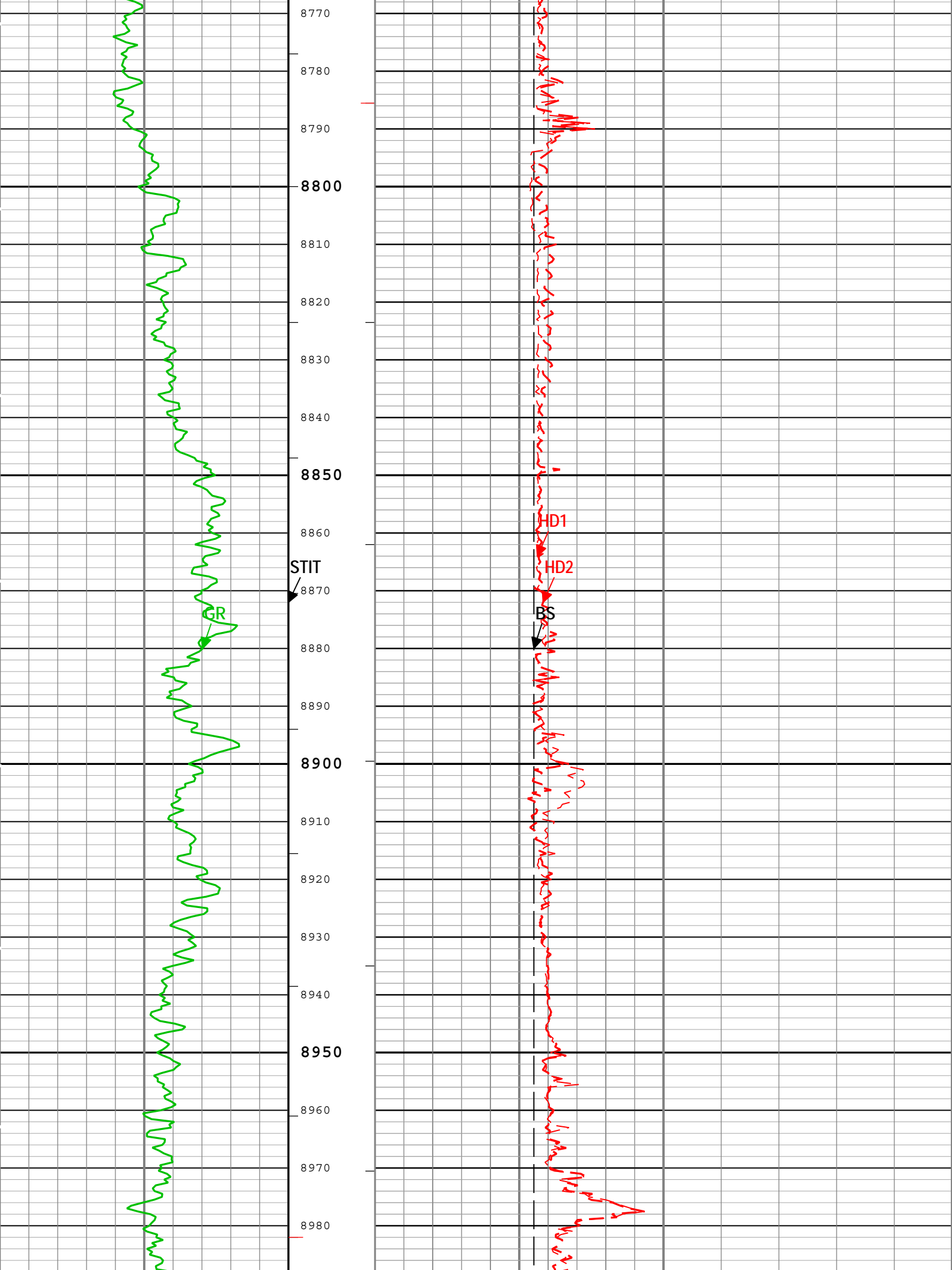
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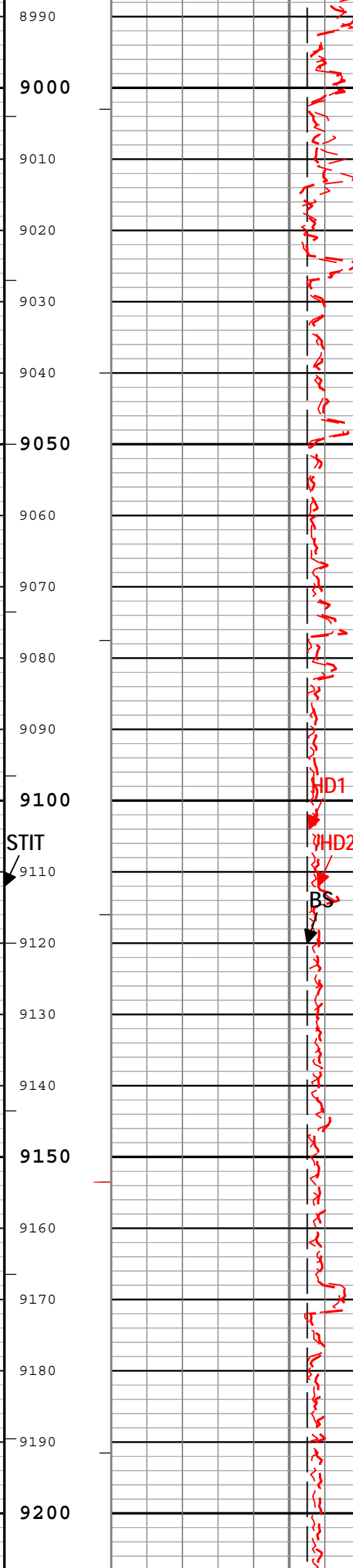
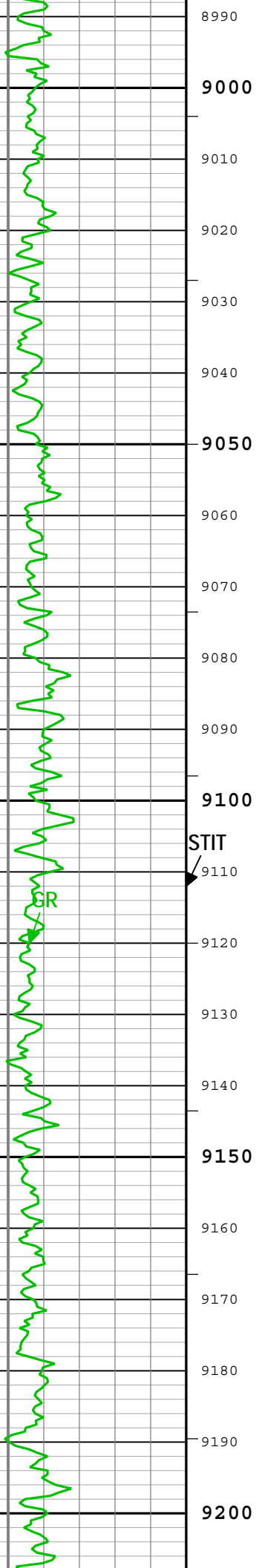


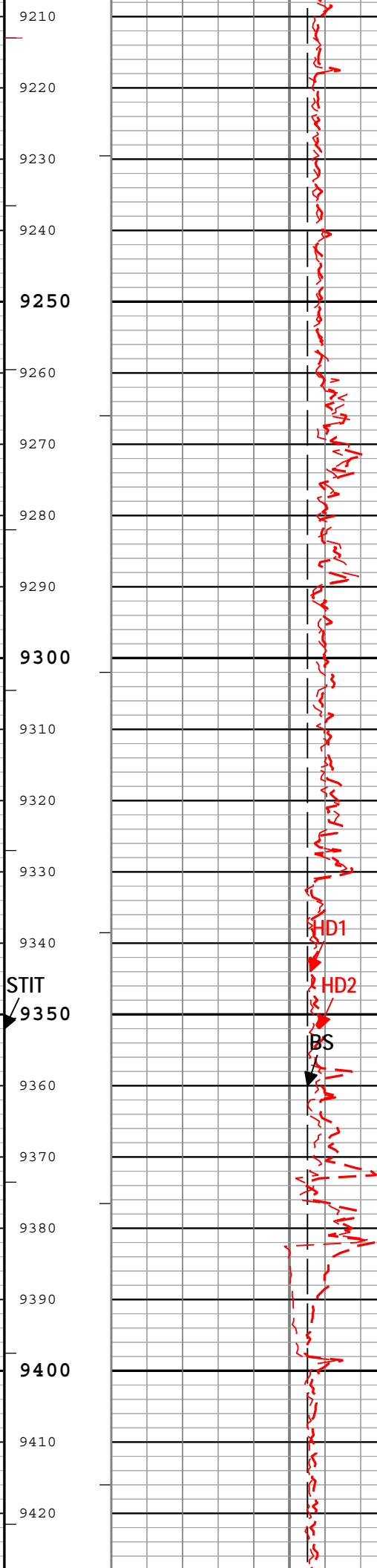
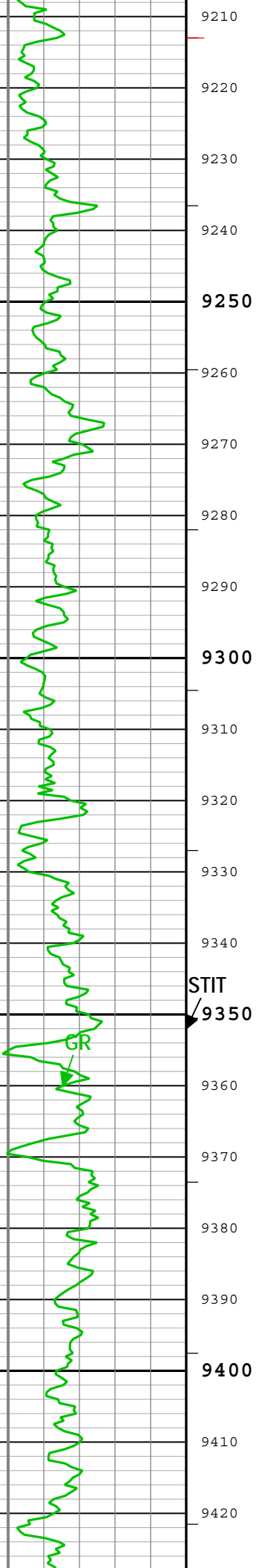
HD1

HD2

BS







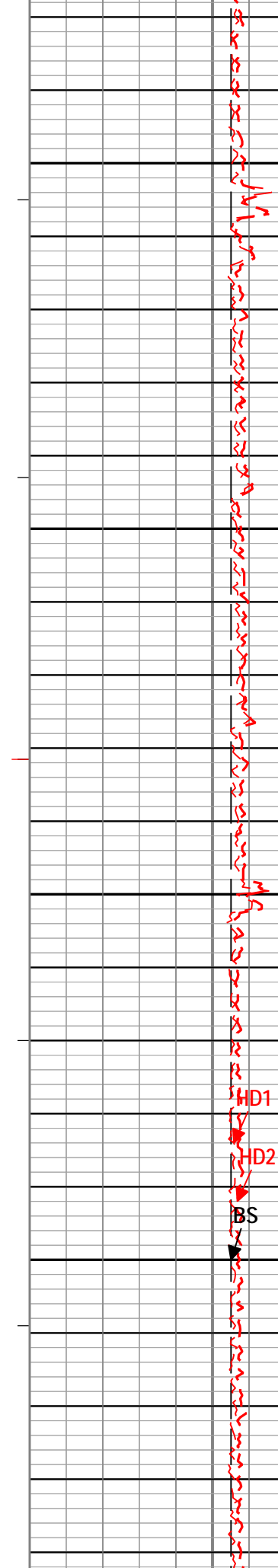
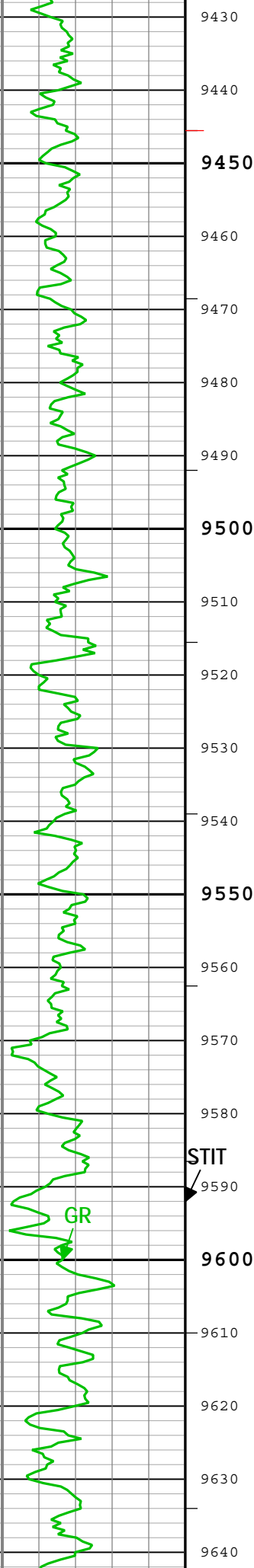
STIT

9350

HD1

HD2

BS



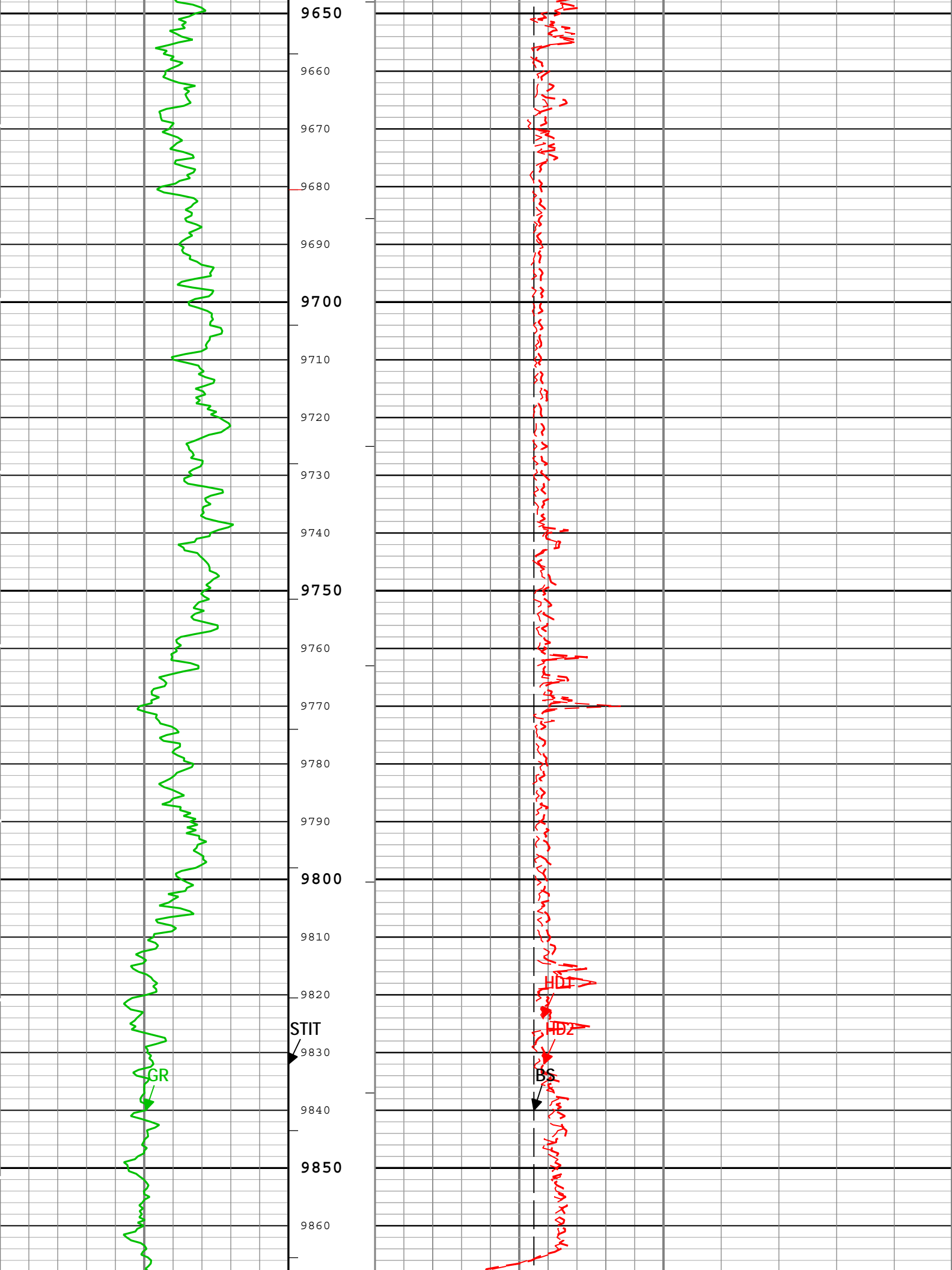
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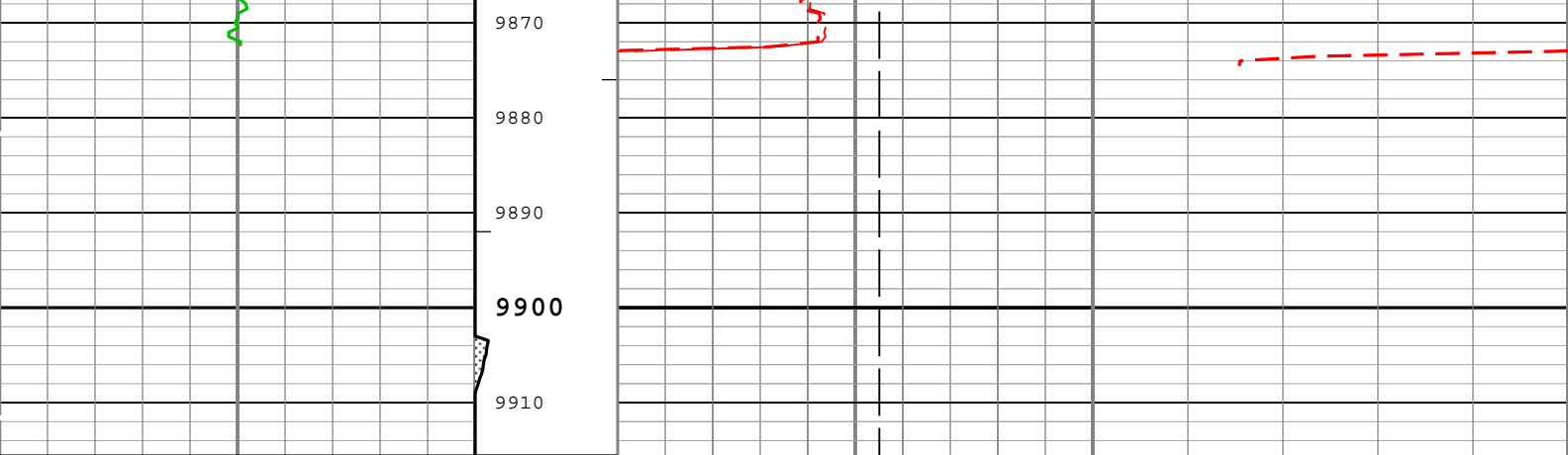
GR

HD1

HD2

BS





Gamma Ray (GR) EDTC-B[1]	0	gAPI	150	Tool_Tot. Drag	6	Bit Size (BS)	in	16
				Cable Drag	6		Hole Diameter 2 (HD2) PPC-B[1]	in
				Stuck Tool Indicator, Total (STIT)	6		Hole Diameter 1 (HD1) PPC-B[1]	in
				0 ft 50				

— 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)

Description: PPC-B:1_Logging Format: Log (PPC-B:1_Logging) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 29-Sep-2014 01:07:36

Channel Processing Parameters

TWO: Parameters

Parameter	Description	Tool	Value	Unit
BARI	Barite Mud Presence Flag	Borehole	Yes	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	8.75	in
CBLO	Casing Bottom (Logger)	WLSESSION	5682	ft
CDEN	Cement Density	EDTC-B	2	g/cm3
DFD	Drilling Fluid Density	Borehole	10	lbm/gal
FCD	Future Casing (Outer) Diameter	WLSESSION	5.5	in
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	HD1	

Tool Control Parameters

TWO: Parameters

Parameter	Description	Tool	Value	Unit
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	3600	ft/h

Company: Southwestern Energy Production Company

Schlumberger

Well: Diamond T Sheep 7 92 1 26

Field: Sand Wash Basin Niobrara

County: Moffat

4 Arm Caliper

Hole and Cement Volume