

Company: Noble Energy, Inc

Well: Marie D04-74-1HN

Field: Wattenberg

County: Weld State: Colorado

Platform Express			
Hi-Res Triple Combo			
Rush Print			
County: Weld		Field: Wattenberg	
Location: Lat/Long : 40.247910/-104.553130		Well: Marie D04-74-1HN	
Company: Noble Energy, Inc		Location:	
Lat/Long : 40.247910/-104.553130		Elev.: K.B. 4744.00 ft	
SHL : 236' FSL X 1813' FEL SWSE		G.L. 4720.00 ft	
D.F. 4743.00 ft			
Permanent Datum:		Ground Level	
Log Measured From:		Kelly Bushing	
Drilling Measured From:		Kelly Bushing	
API Serial No. 05-123-38305-00		Section: 4	
Township: 3N		Range: 64W	

Logging Date	25-Dec-2013				
Run Number	Run 1				
Depth Driller	7130.00 ft				
Schlumberger Depth	7123.00 ft				
Bottom Log Interval	7123.00 ft				
Top Log Interval	677.00 ft				
Casing Driller Size @ Depth	9.625 in @ 687.00 ft				
Casing Schlumberger	677 ft				
Bit Size	8.75 in				
Type Fluid In Hole	Chemical Gel				
MUD	Density	9.6 lbm/gal	35 s		
	Fluid Loss	PH 8.5 cm3	9.3		
	Source of Sample	Flowline			
RM @ Meas Temp	1.39 ohm.m @ 89 degF				
RMF @ Meas Temp	1.04 ohm.m @ 89 degF				
RMC @ Meas Temp	1.74 ohm.m @ 89 degF				
Source RMF	RMC	Calculated	Calculated		
RM @ BHT	RMF @ BHT	0.61 @ 212	0.46 @ 212		
Max Recorded Temperatures					
Circulation Stopped	Time	25-Dec-2013	14:30:00		
Logger on Bottom	Time	25-Dec-2013	22:24:44		
Unit Number	Location:	9108	Fort Morgan		
Recorded By	Heather Hoffman / Arvin Shi				
Witnessed By	Johnny Sanchez				

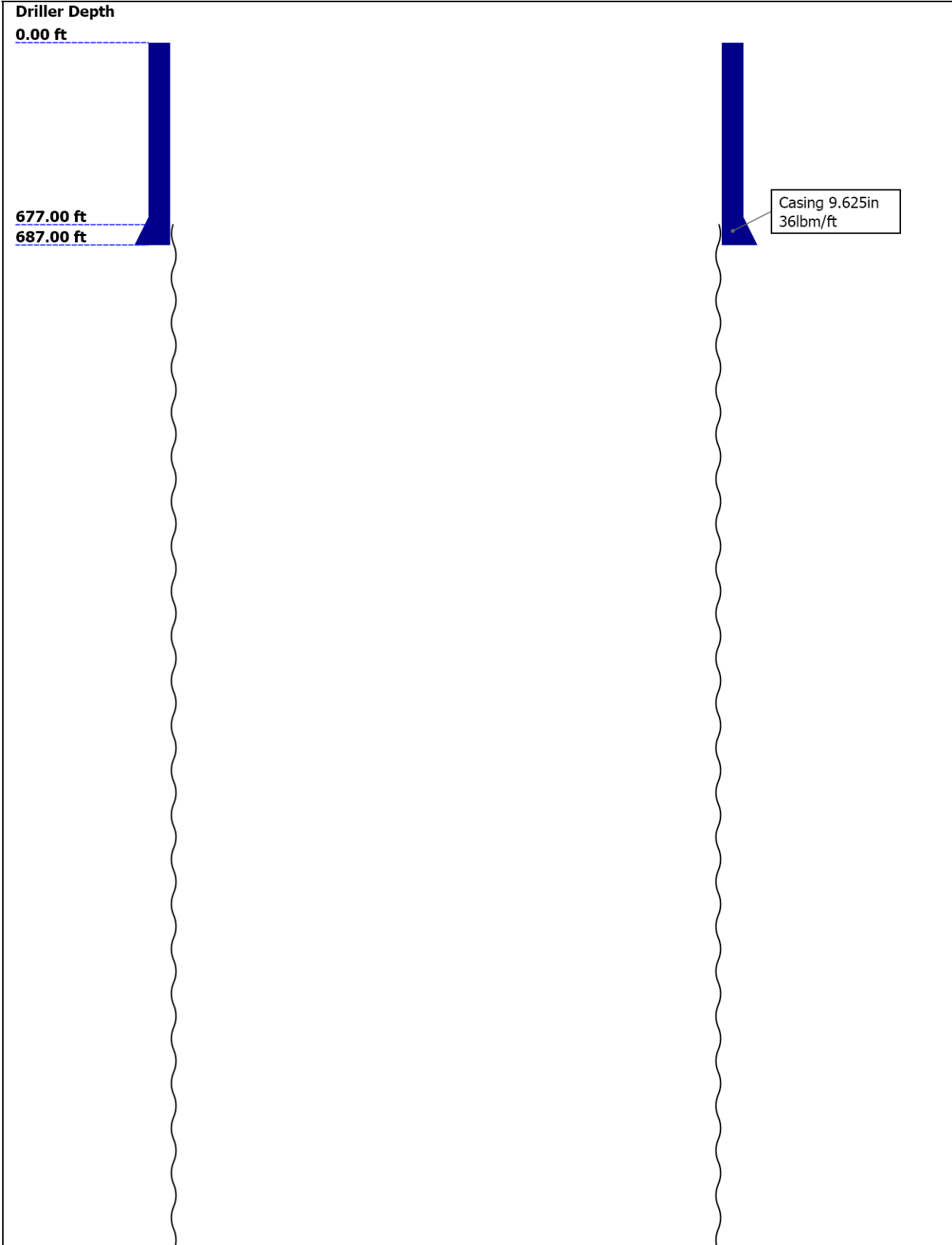
Disclaimer

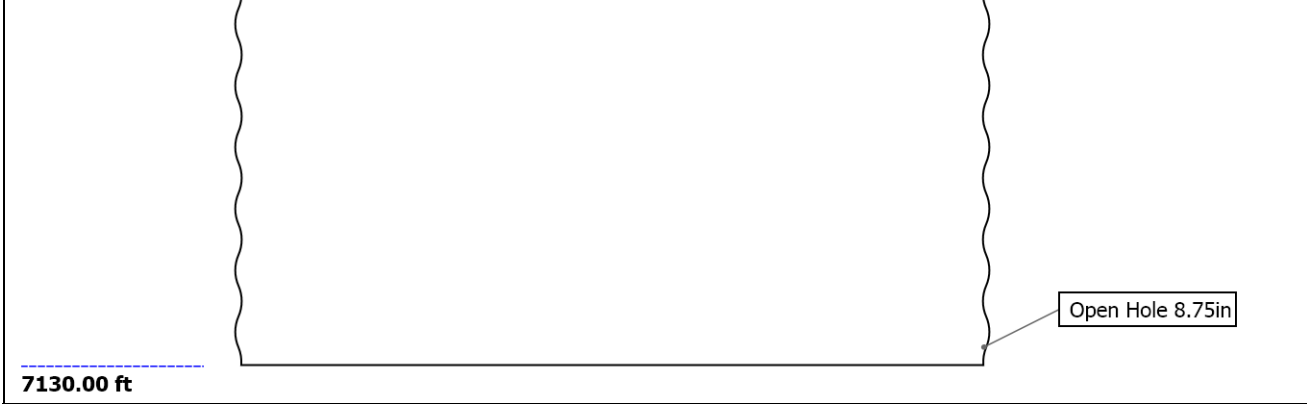
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Well Sketch





Borehole Size/Casing/Tubing Record

Bit						
Bit Size (in)	8.75					
Top Driller (ft)	677					
Top Logger (ft)	677					
Bottom Driller (ft)	7130					
Bottom Logger (ft)	7123					
Casing						
Size (in)	9.625					
Weight (lbm/ft)	36					
Inner Diameter (in)	8.921					
Grade	N/A					
Top Driller (ft)	0					
Top Logger (ft)	0					
Bottom Driller (ft)	687					
Bottom Logger (ft)	677					

Remarks and Equipment Summary

Run 1: Toolstring				Run 1: Remarks	
<div><div><div>Equip name</div><div>LEH-QT</div><div>LEH-QT</div></div><div><div>Length</div><div>80.96</div></div><div><div>MP name</div><div></div></div><div><div>Offset</div><div></div></div></div> <div></div>	This is the first run hole				
	Toolstring run as per tool sketch				
	Matrix: Limestone (2.71 g/cc)				
	<div><div><div>DTC-H</div><div>ECH-KC:10472</div><div>DTC-H</div></div><div><div>Length</div><div>78.04</div></div><div><div>MP name</div><div></div></div><div><div>Offset</div><div></div></div></div> <div><div><div>CTEM</div><div>HV</div></div><div>77.14</div><div>0.00</div></div> <div><div><div>TelStatus</div><div>ToolStatus</div></div><div>75.04</div><div>75.04</div></div> <div><div><div>HNGS-BA:152</div><div>HEH-K:149</div><div>HNGS-BA:152</div></div><div><div>Length</div><div>75.04</div></div><div><div>MP name</div><div></div></div><div><div>Offset</div><div></div></div></div> <div><div><div>GR</div></div><div>72.06</div></div> <div><div><div>HNGC-B:250</div><div>HNGH-A:87</div><div>HNGC-B:250</div></div><div><div>Length</div><div>66.85</div></div><div><div>MP name</div><div></div></div><div><div>Offset</div><div></div></div></div> <div><div><div>Tel Status</div></div><div>65.1</div></div>				

HGNS-H 63.35
HGNH:3912
NSR-F:5215
NPV-N
HACCZ-H:5955
HMCA-H
HGNS-H



Temperatur e 63.32
GR 62.61

CNL Porosi ty 56.28
HMCA 53.94
HGNS 53.94
Accelerome ter 0.00

HDRS-H:4826 53.94
ECH-MEB:4711
HRCC-H
HRMS-H:4826
Long Spacing:28910
GSR-J:5240
Short Spacing
Backscatter
GPV-Q
HRGD-H:4791

HRCC 49.94

MCFL 44.51
Caliper 44.03
TLD Densit y 43.64

AH-184[2] 41.7

NEXT-A:7 39.7
NEXH-A:7
PNG-G
NEXS-A:7

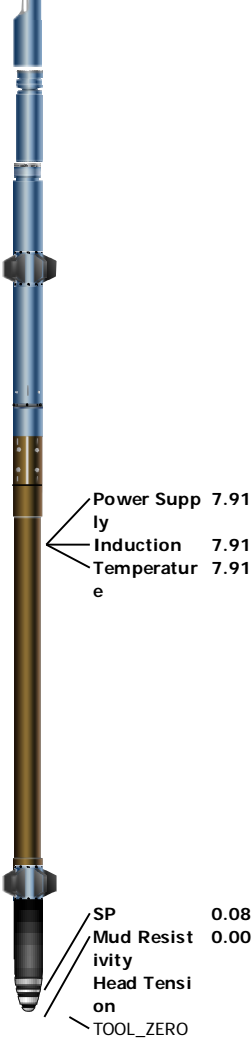
Spect 33.82
Status 32.41

ILE-F 26.00



AH-184[1] 18.00

AIT-M:208 16.00
AMIS:208
AMRM



Lengths are in ft

Maximum Outer Diameter = 9.000 in

Line: Sensor Location, Value: Gating Offset

All measurements are relative to TOOL_ZERO

Depth Summary

Run 1

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

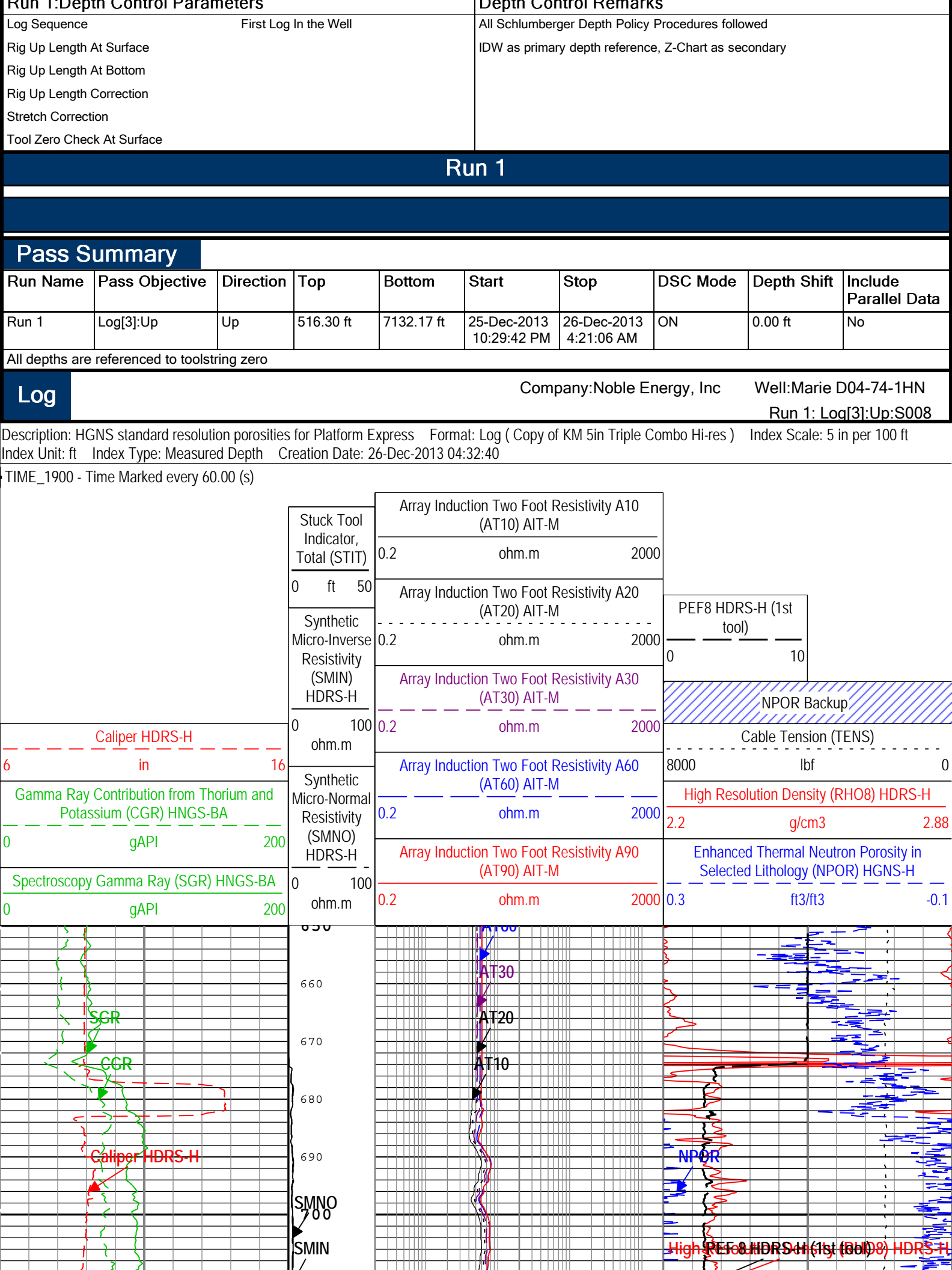
Type	CMTD-B/A		
Serial Number	147		
Calibration Date	19-Dec-2013		
Calibrator Serial Number	16		
Number of Calibration Points	10		
Calibration Root Mean Square Error	10		
Calibration Peak Error	16		

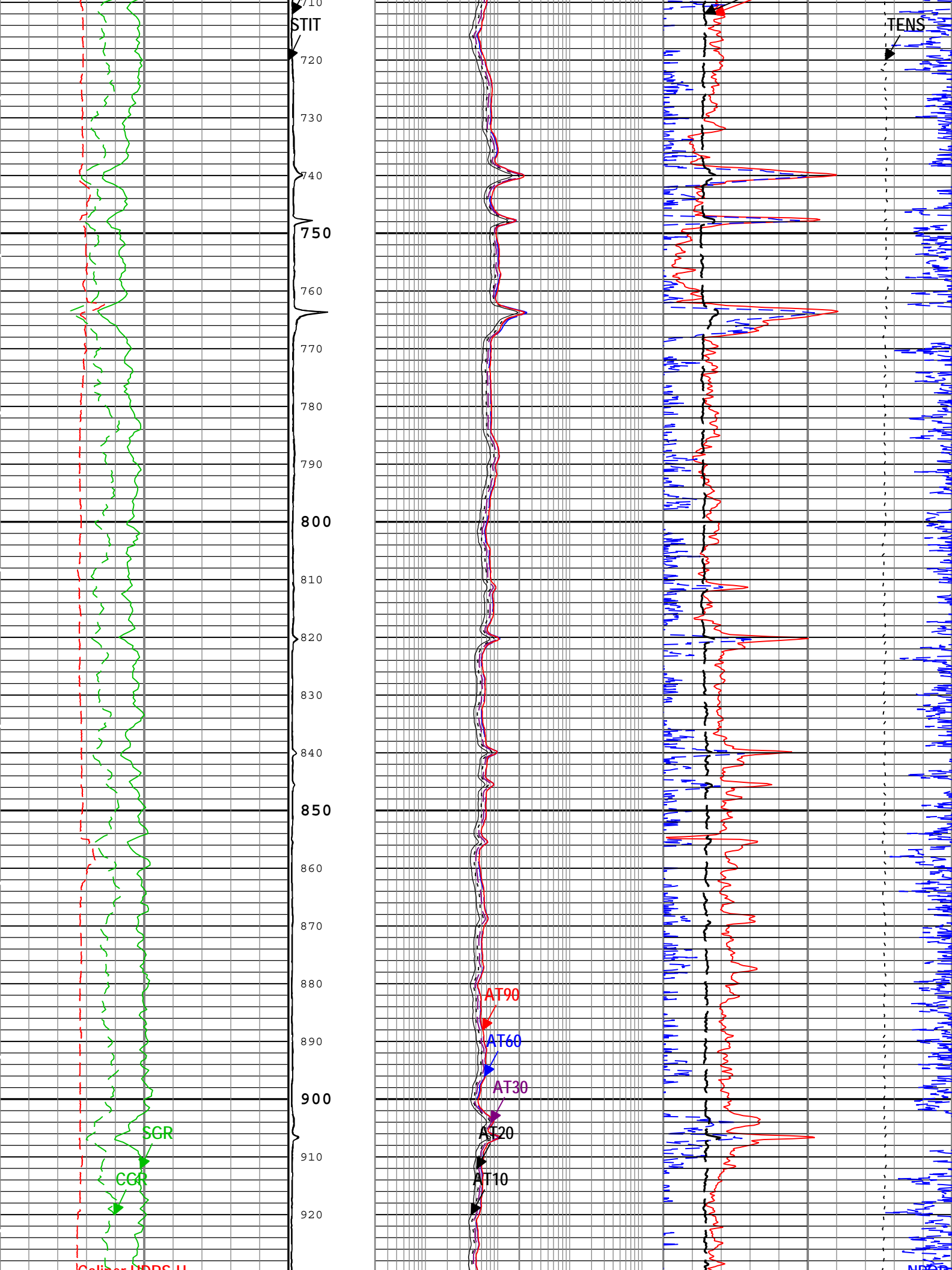
Logging Cable

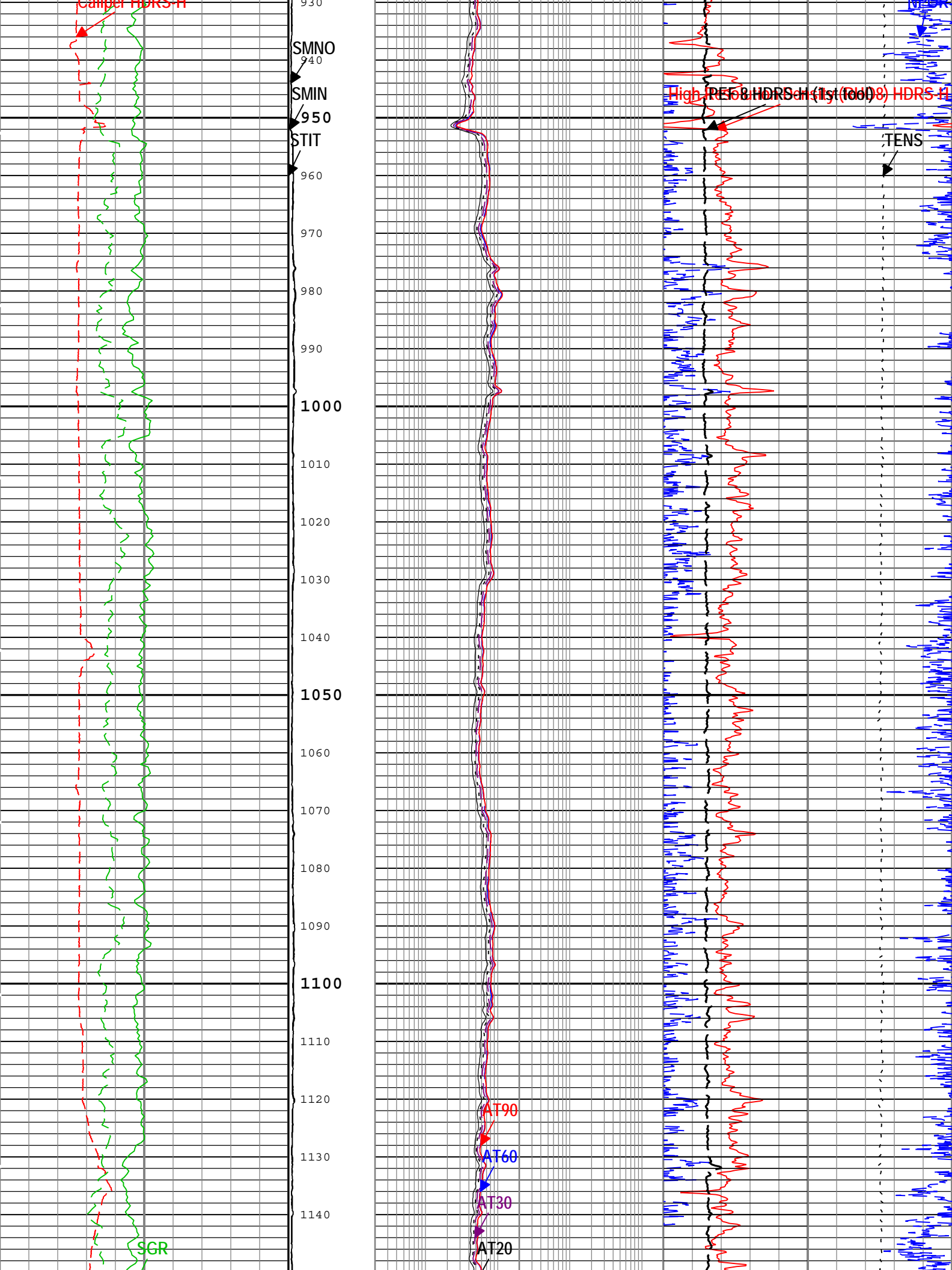
Type	7-46NT-XS		
Serial Number			
Length	24000.00 ft		
Conveyance Type	Wireline		
Rig Type	Land		

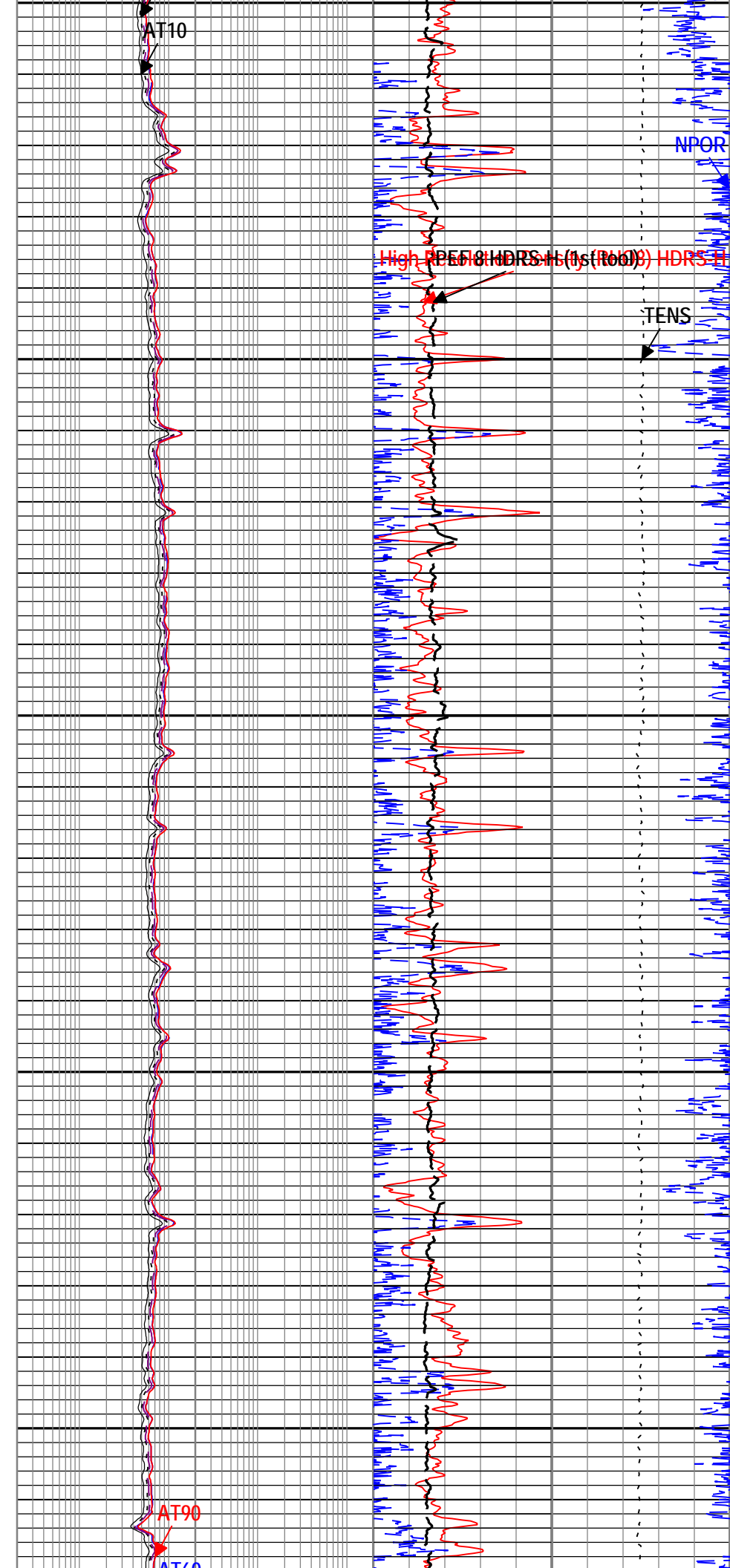
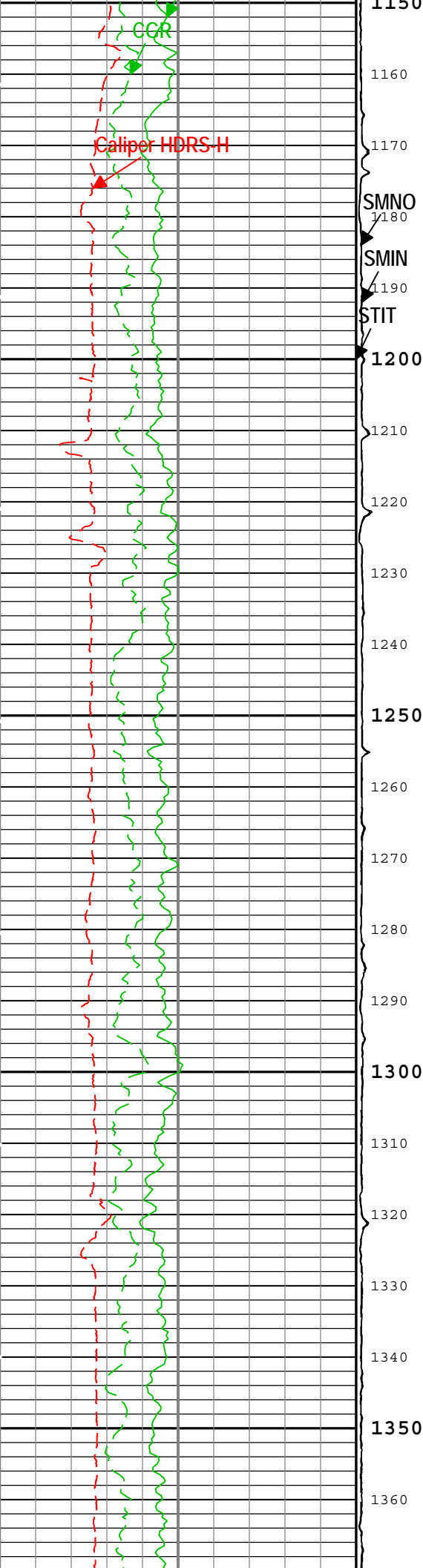
Run 1 Depth Control Parameters

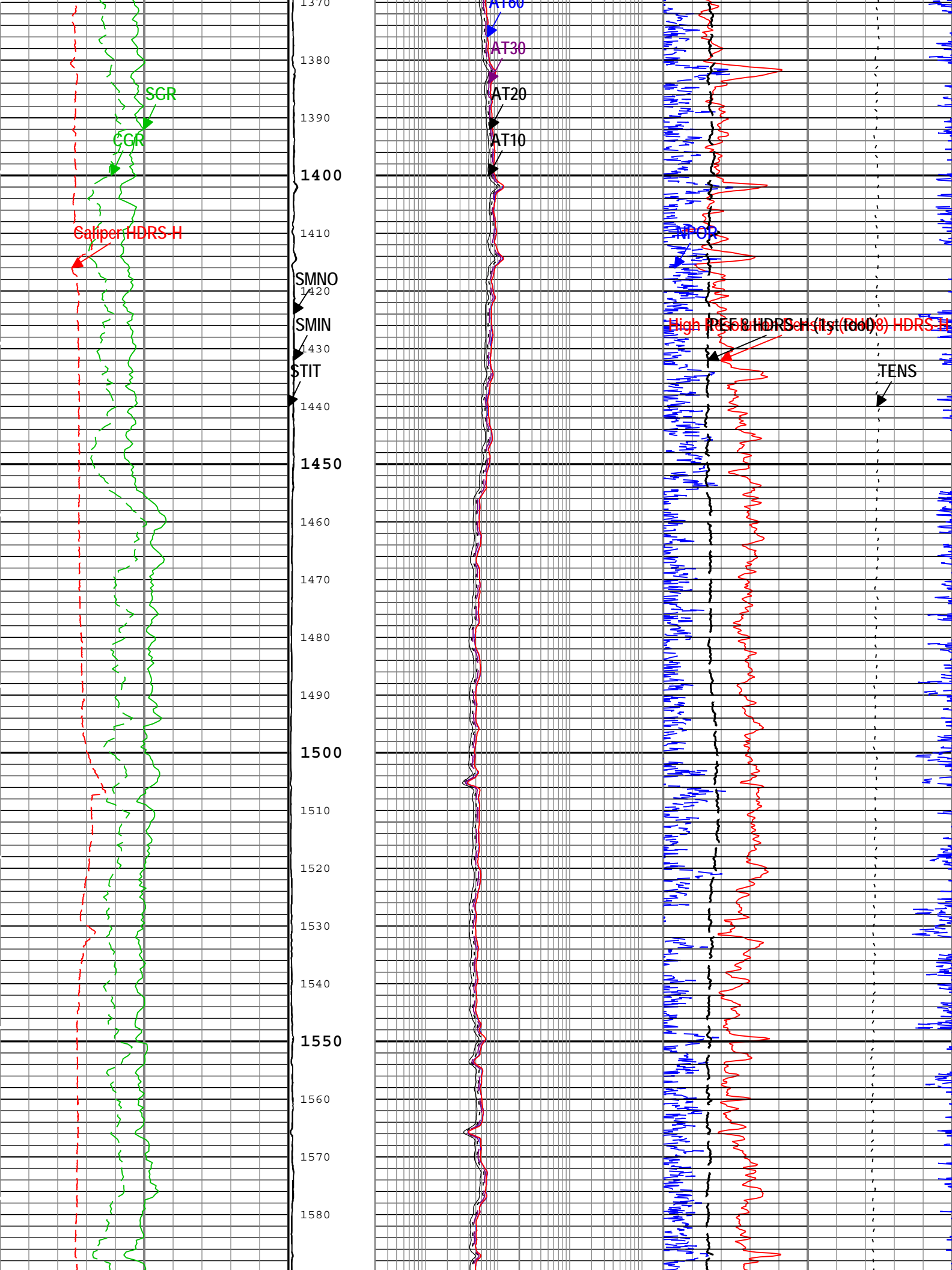
Depth Control Remarks

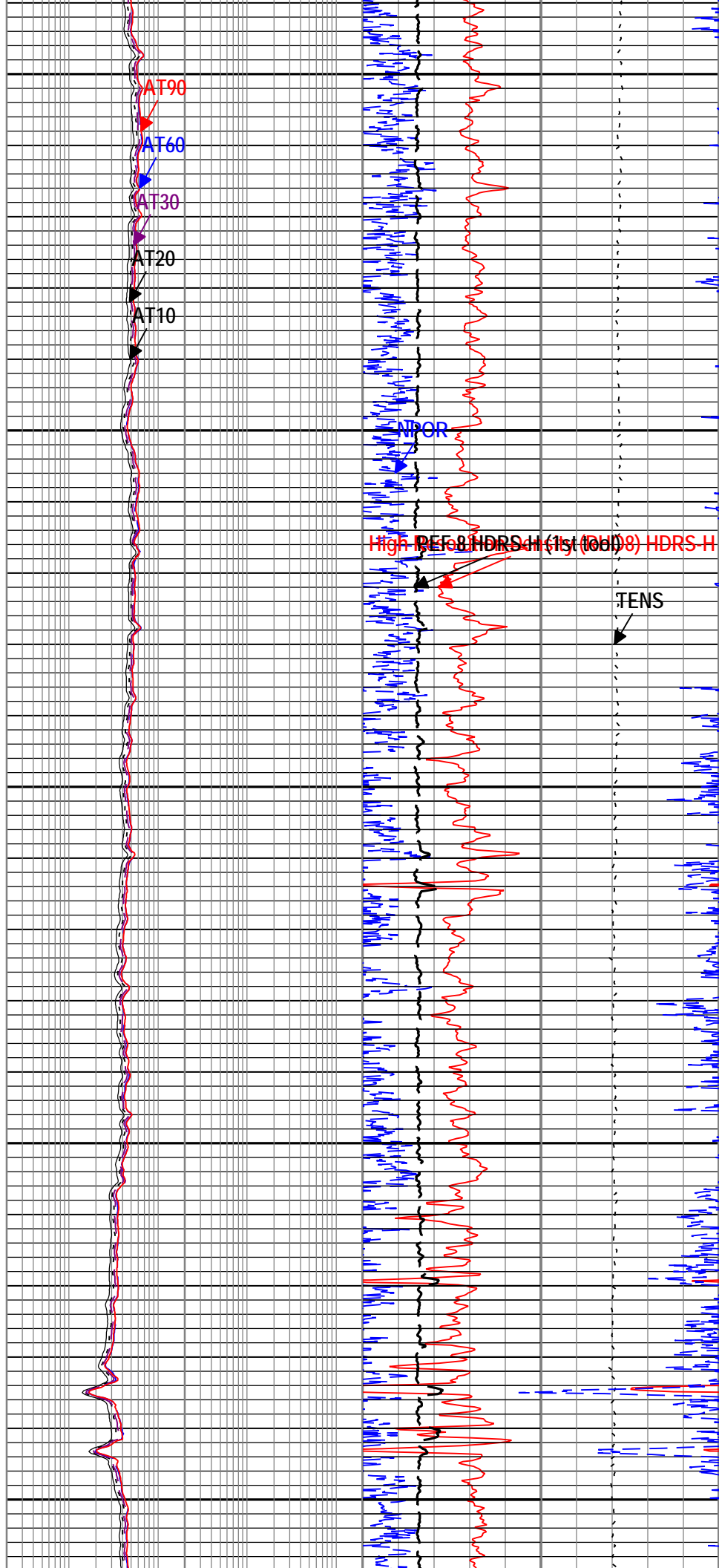
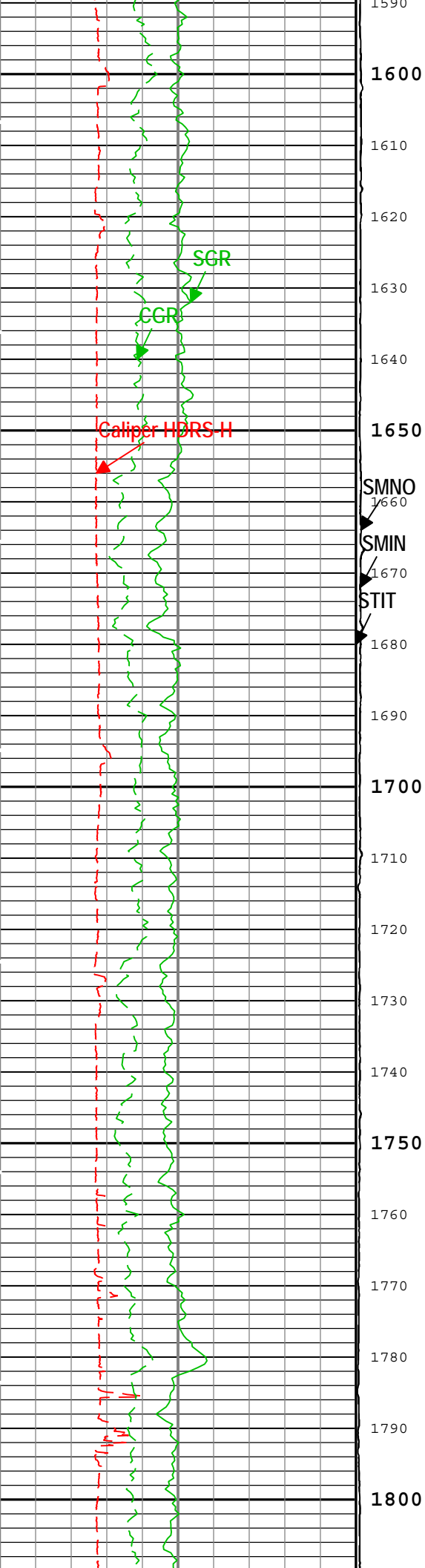


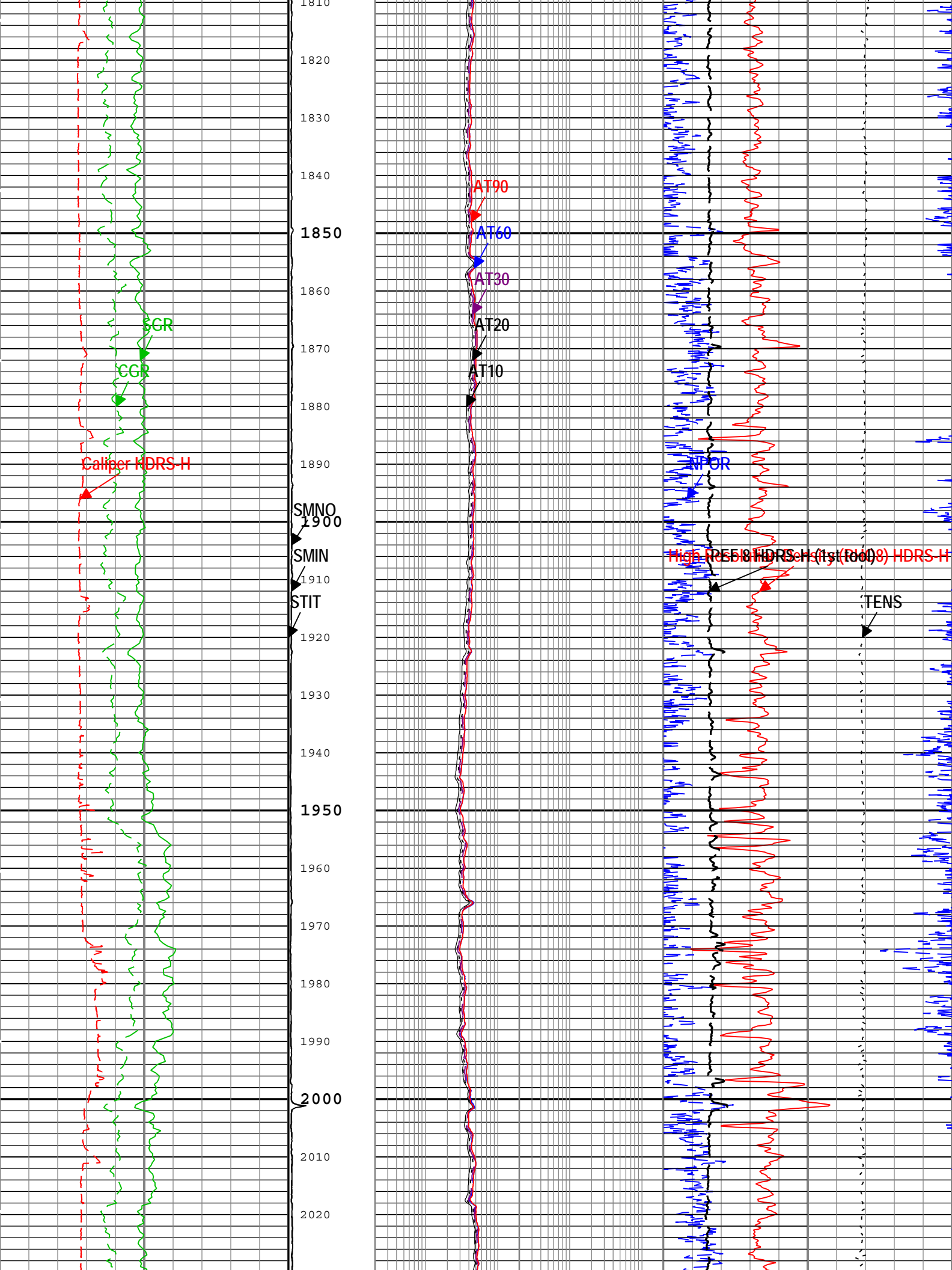


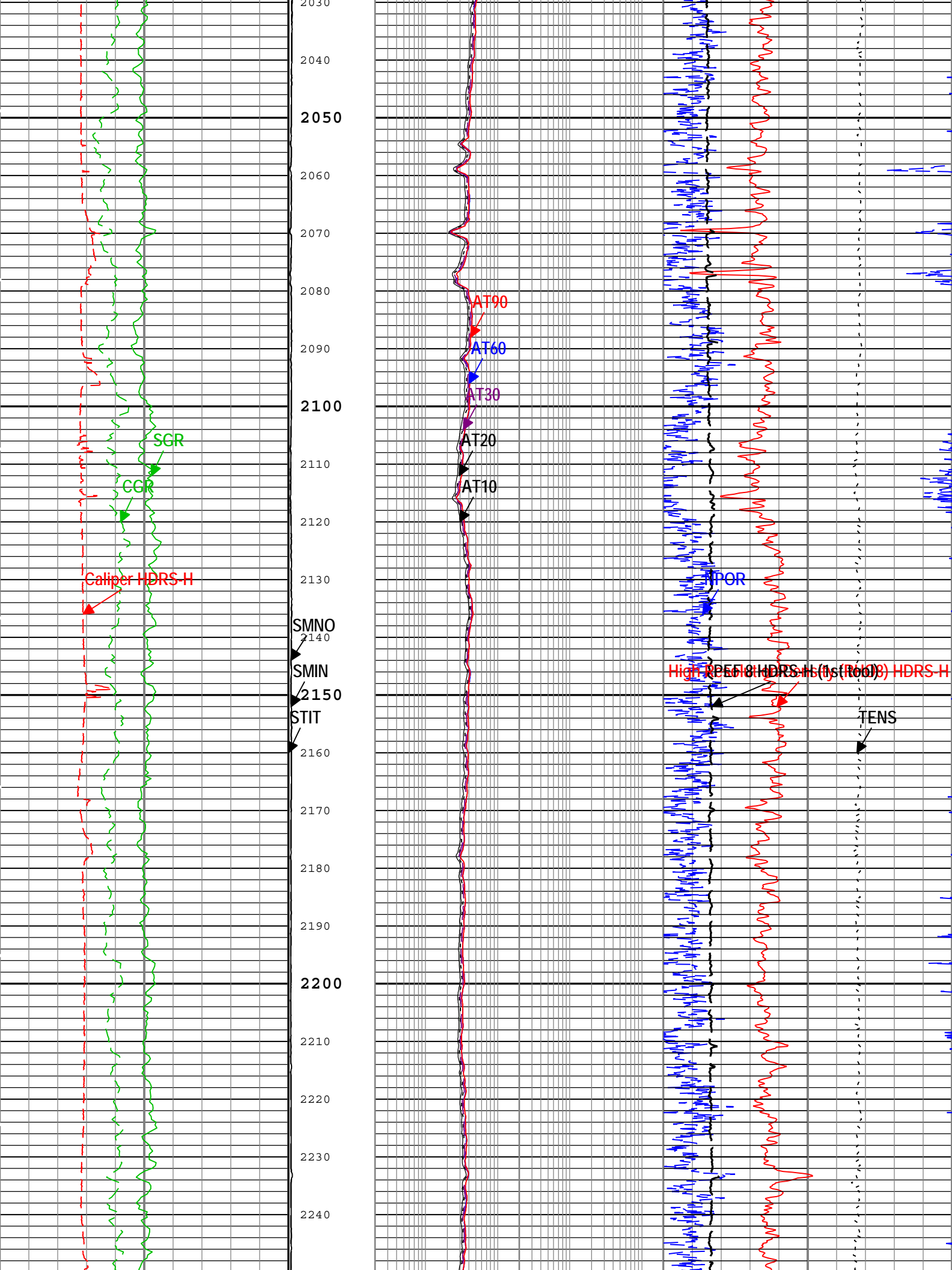


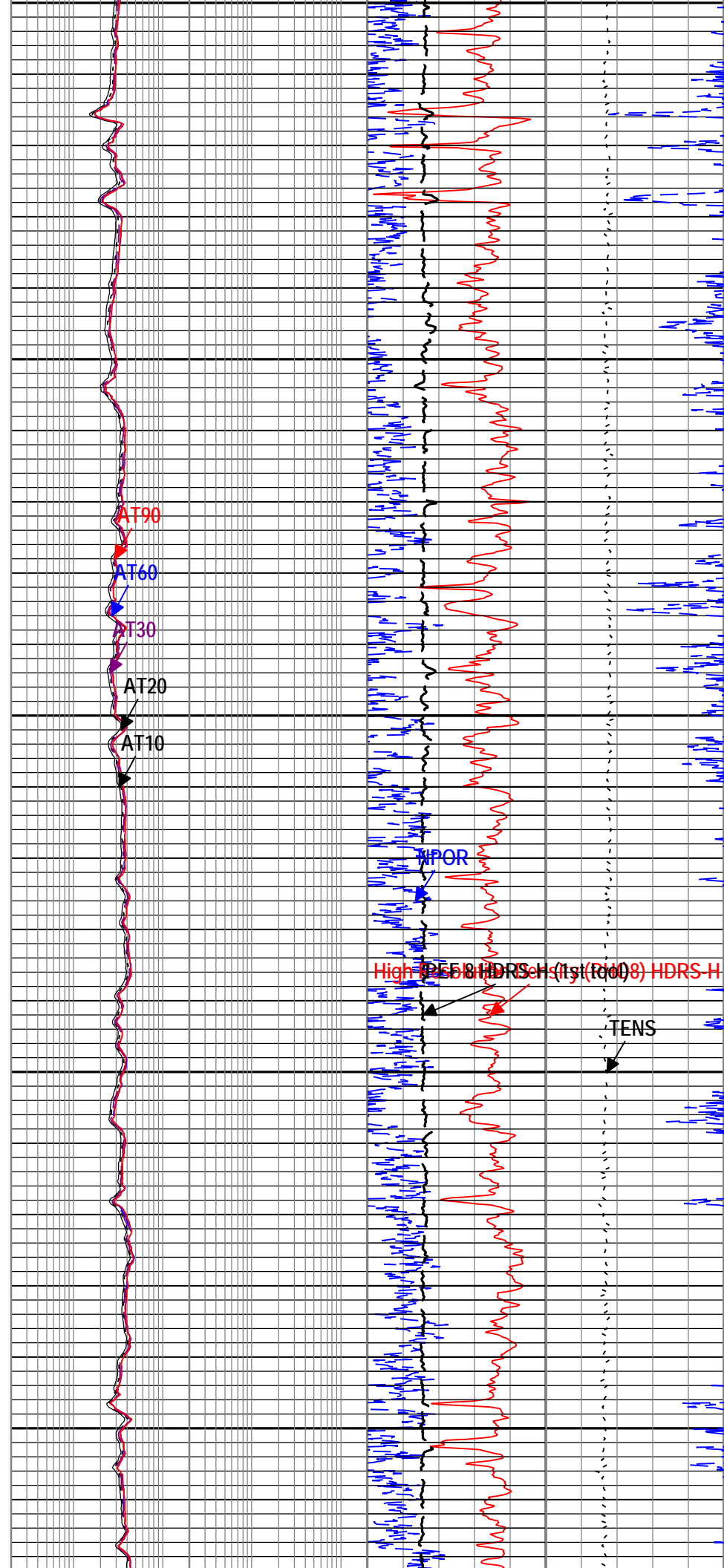
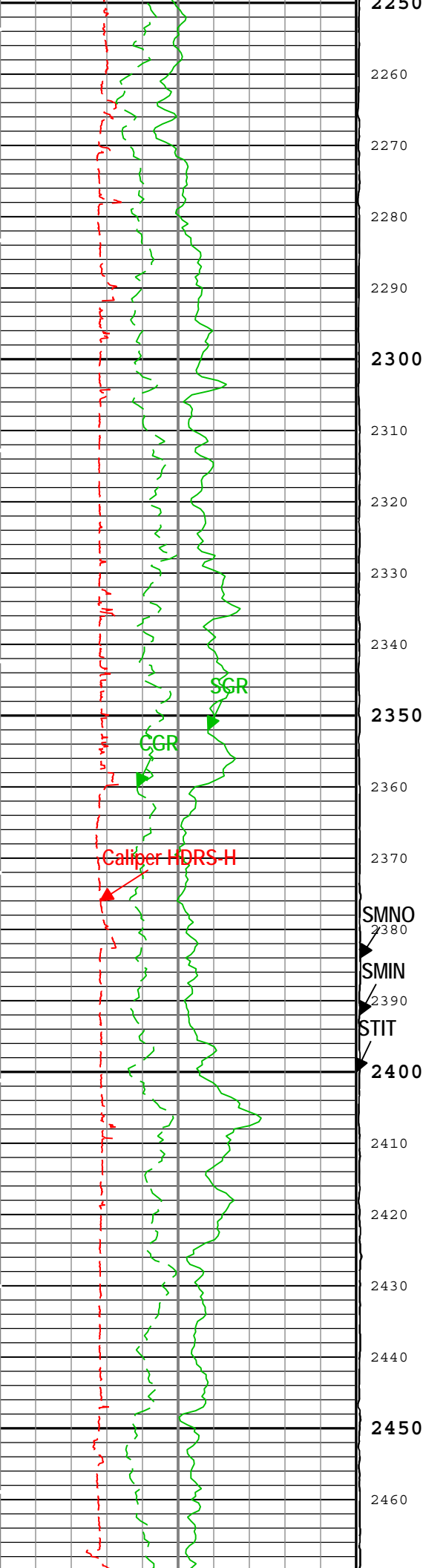


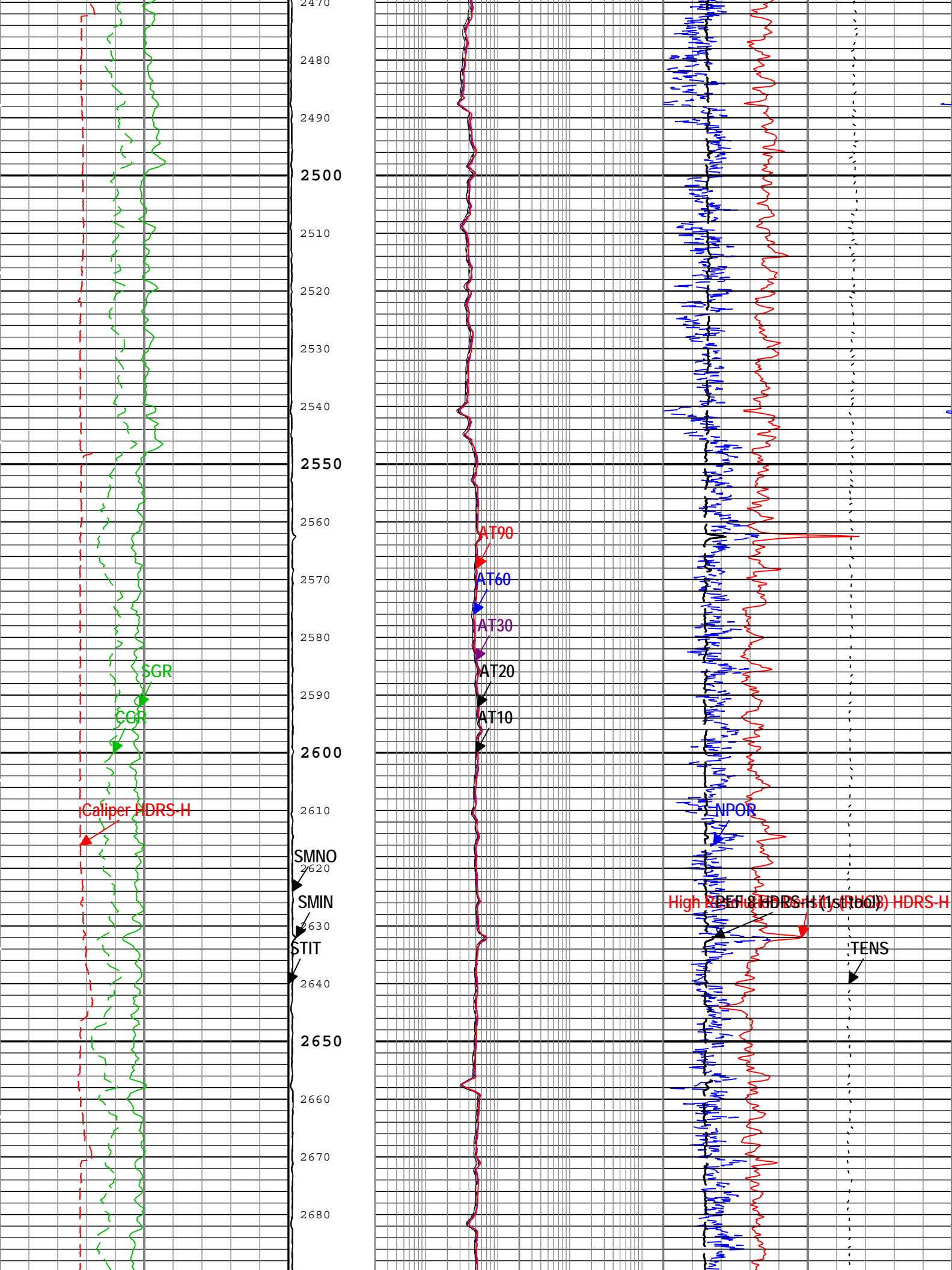


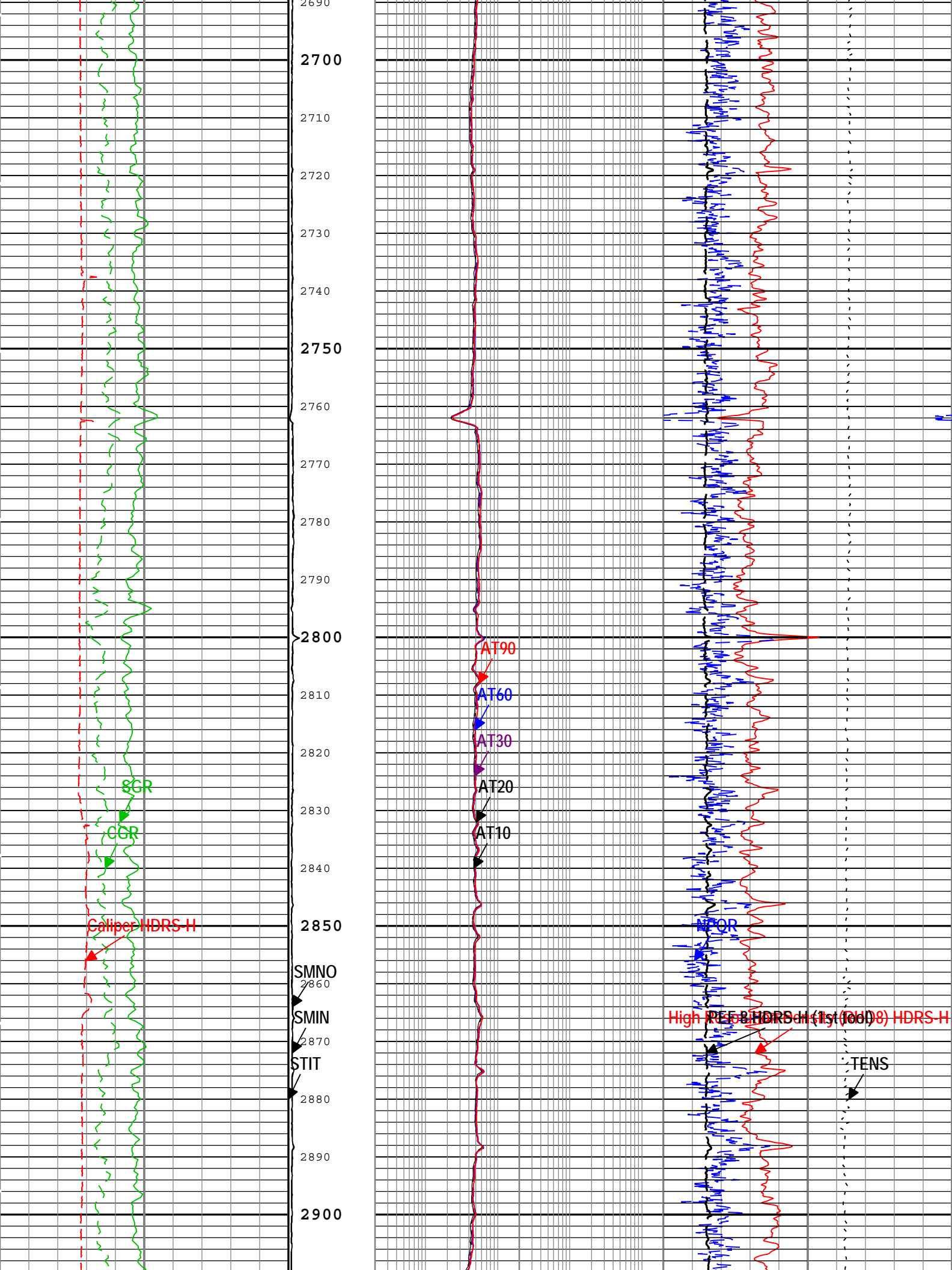


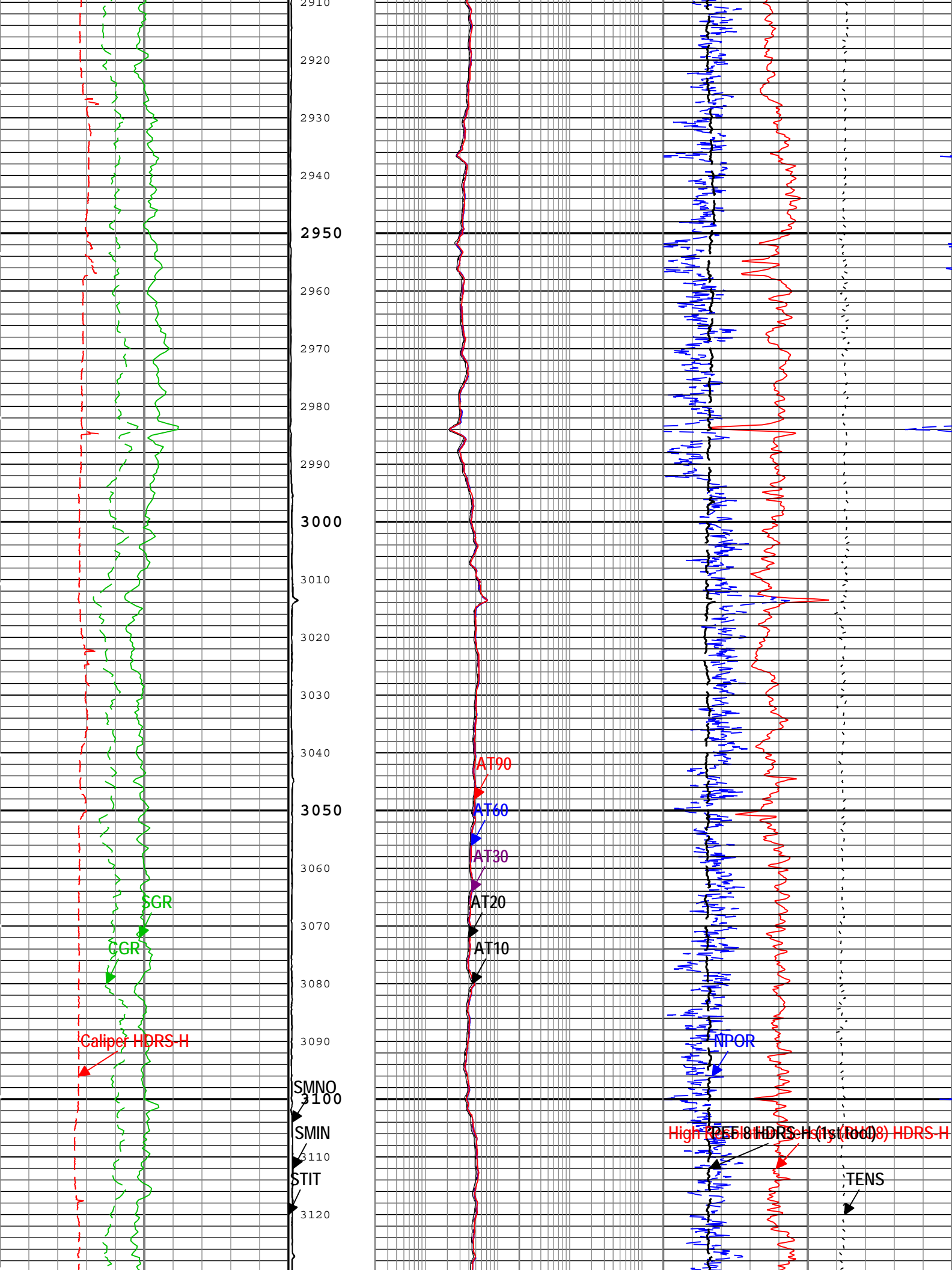


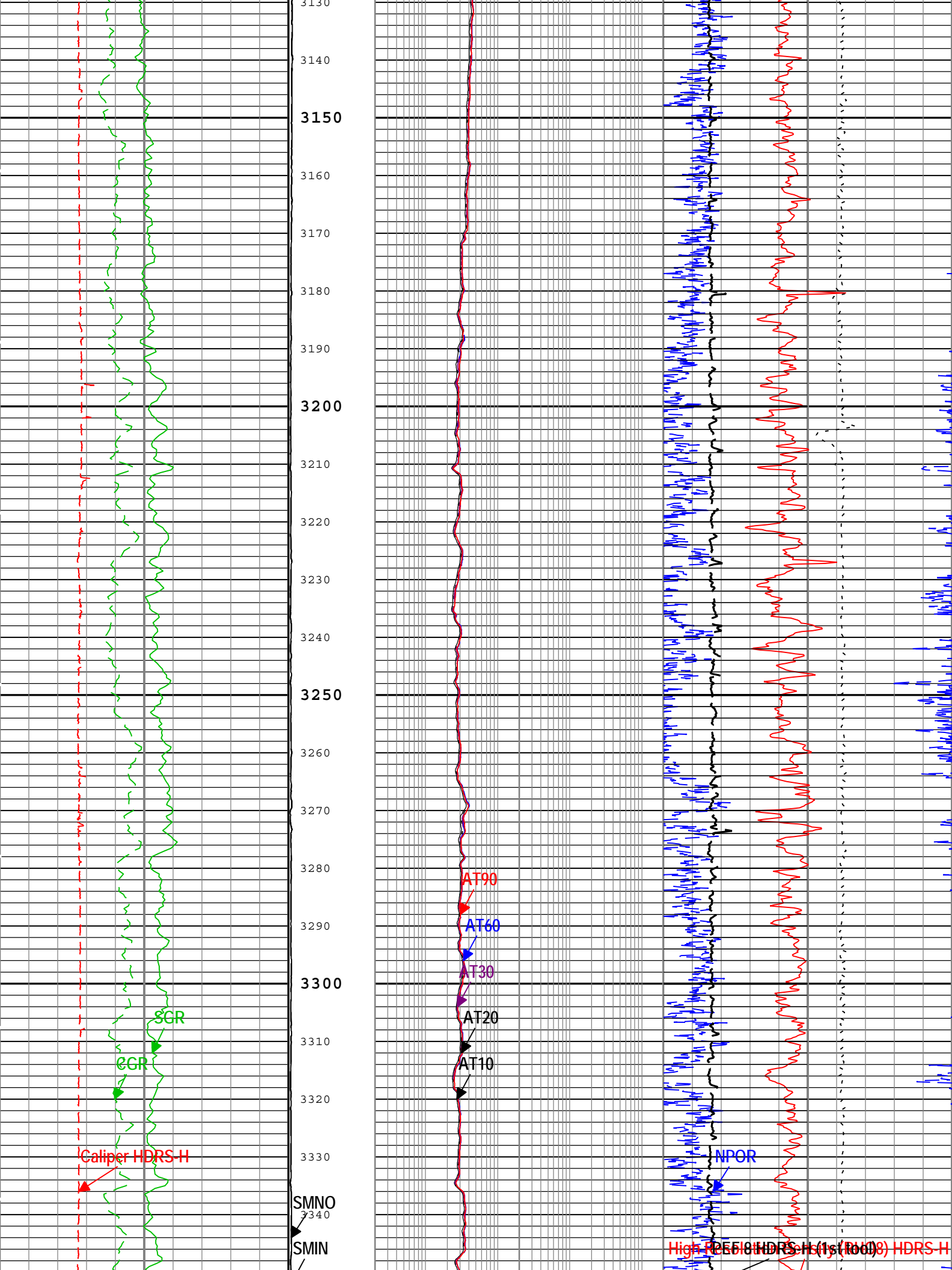


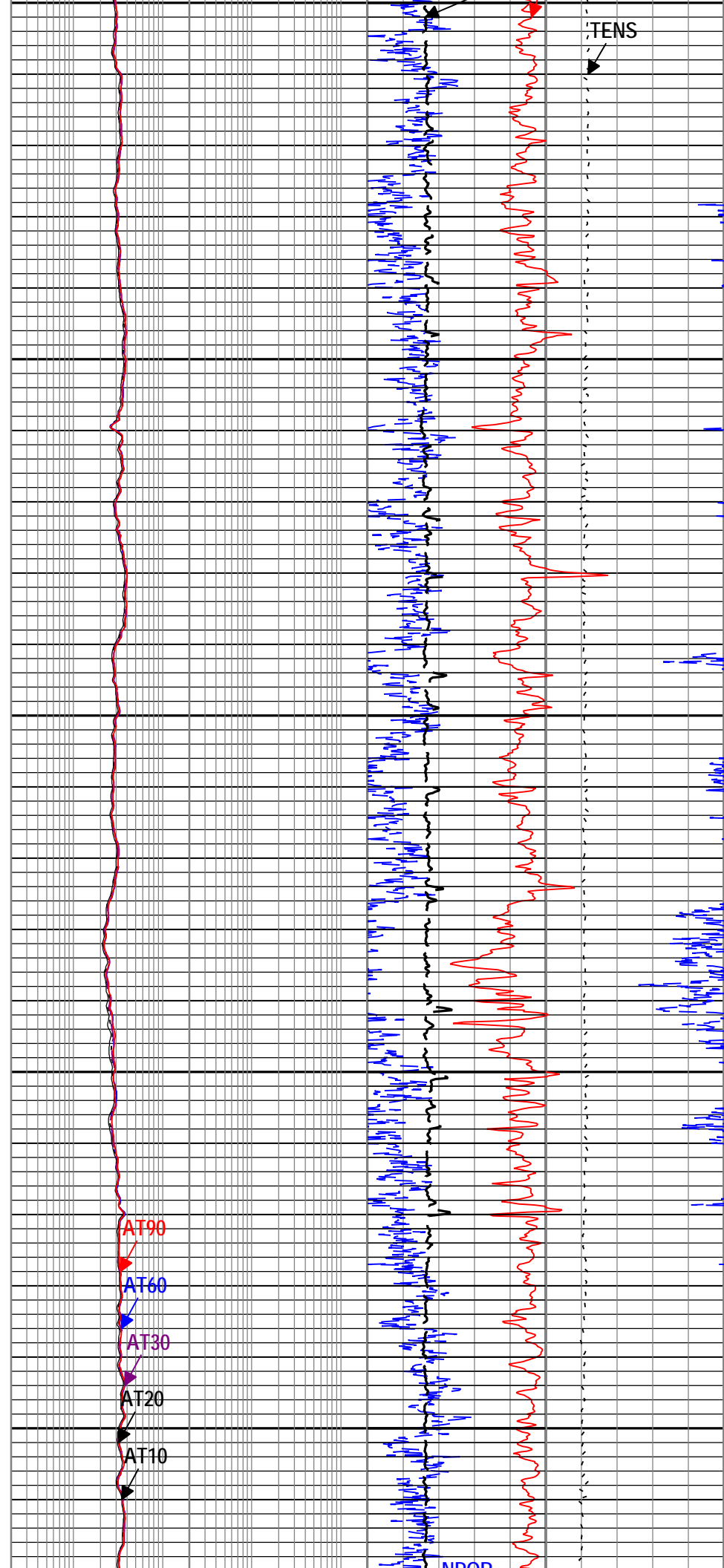
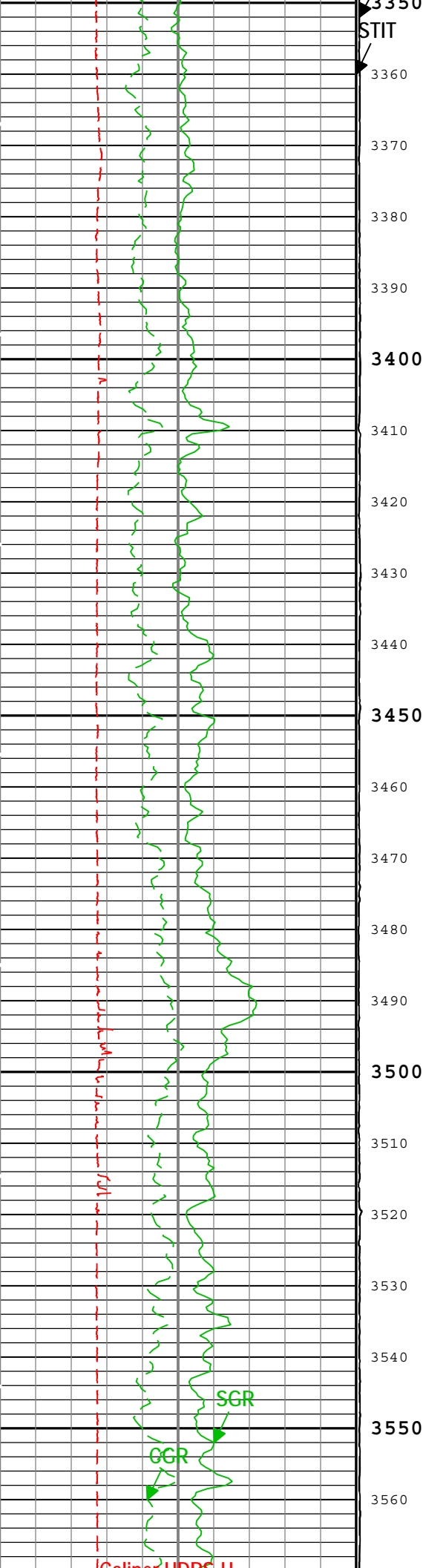


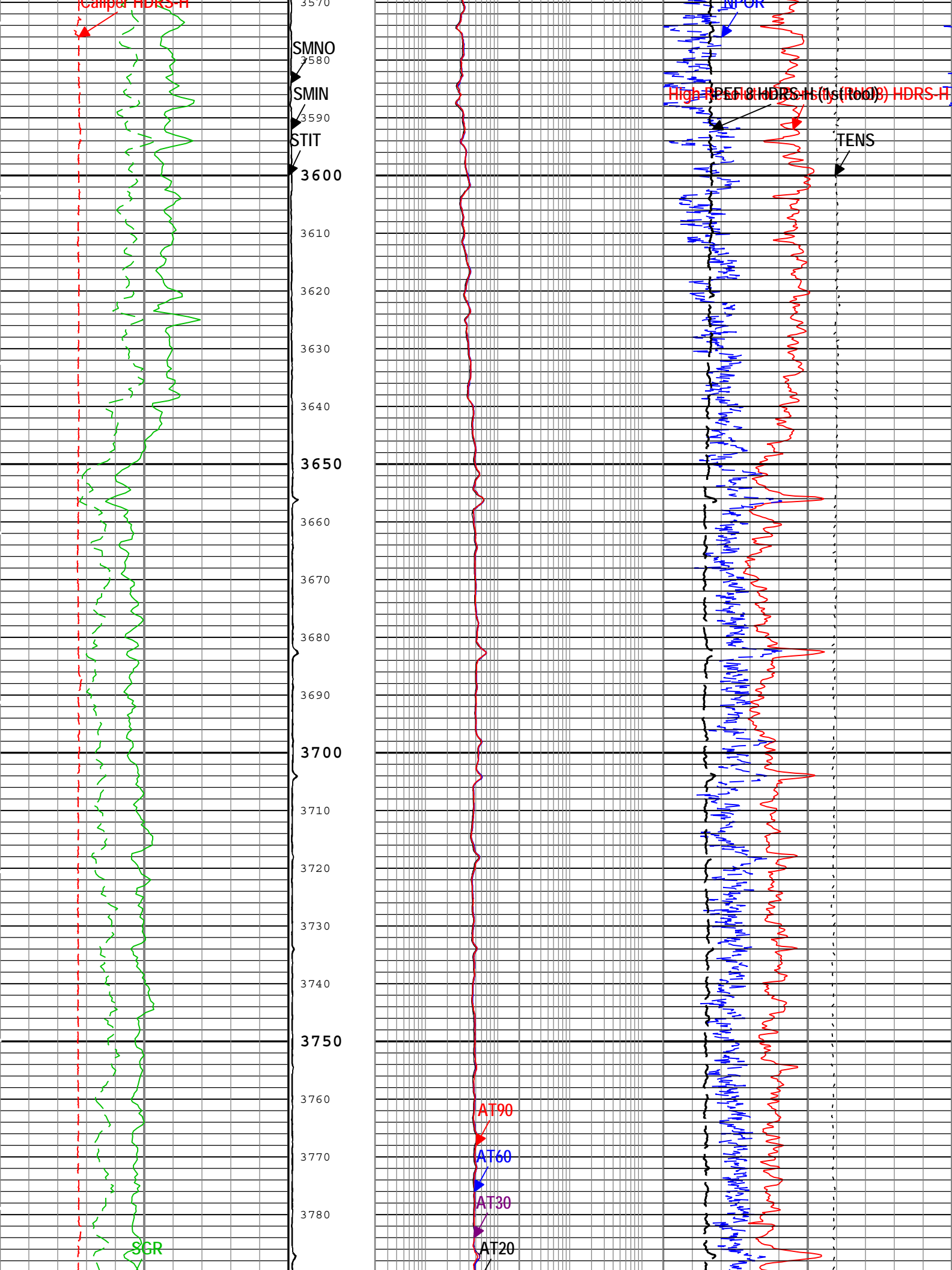


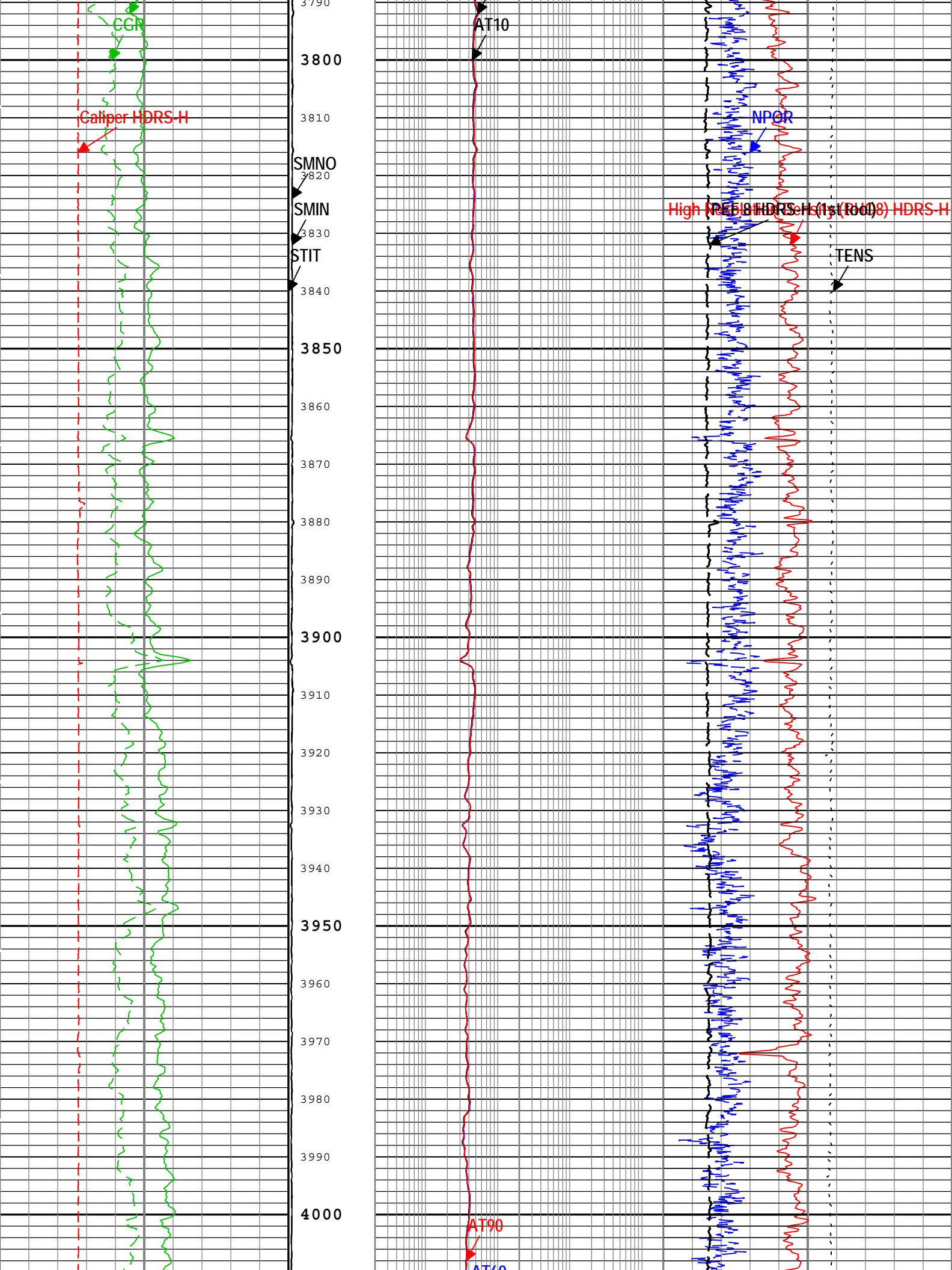


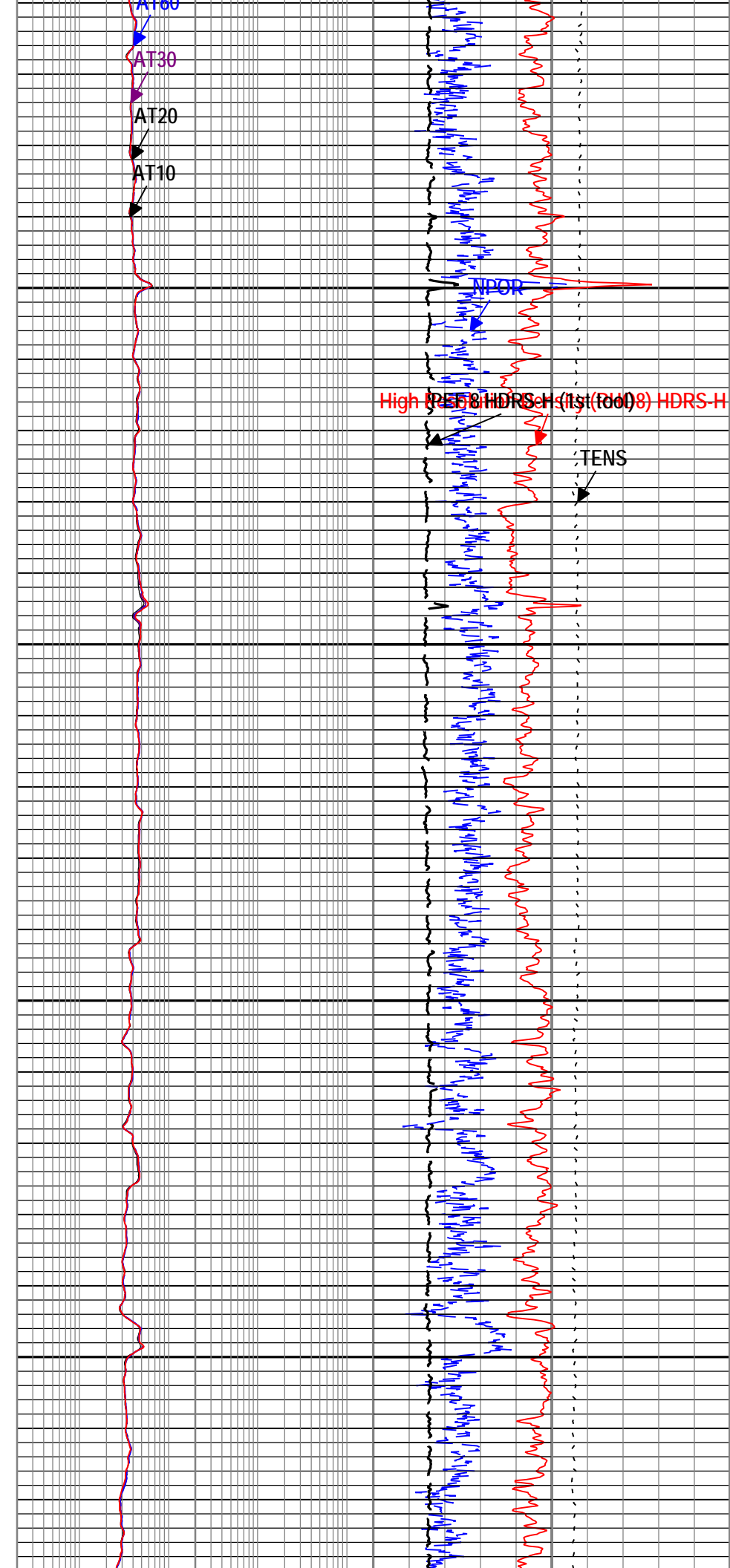
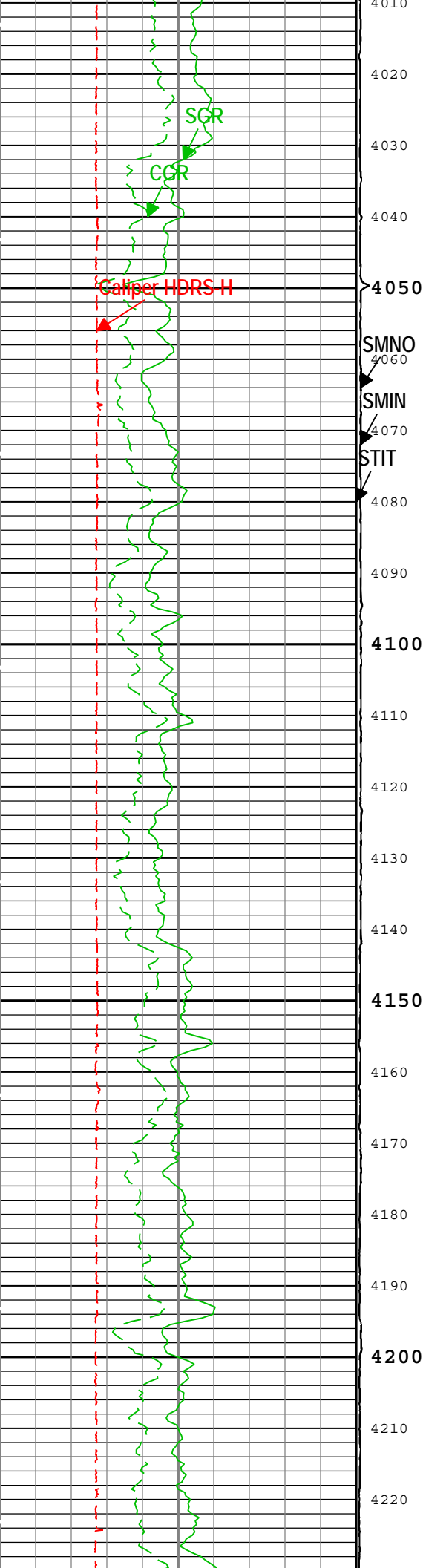


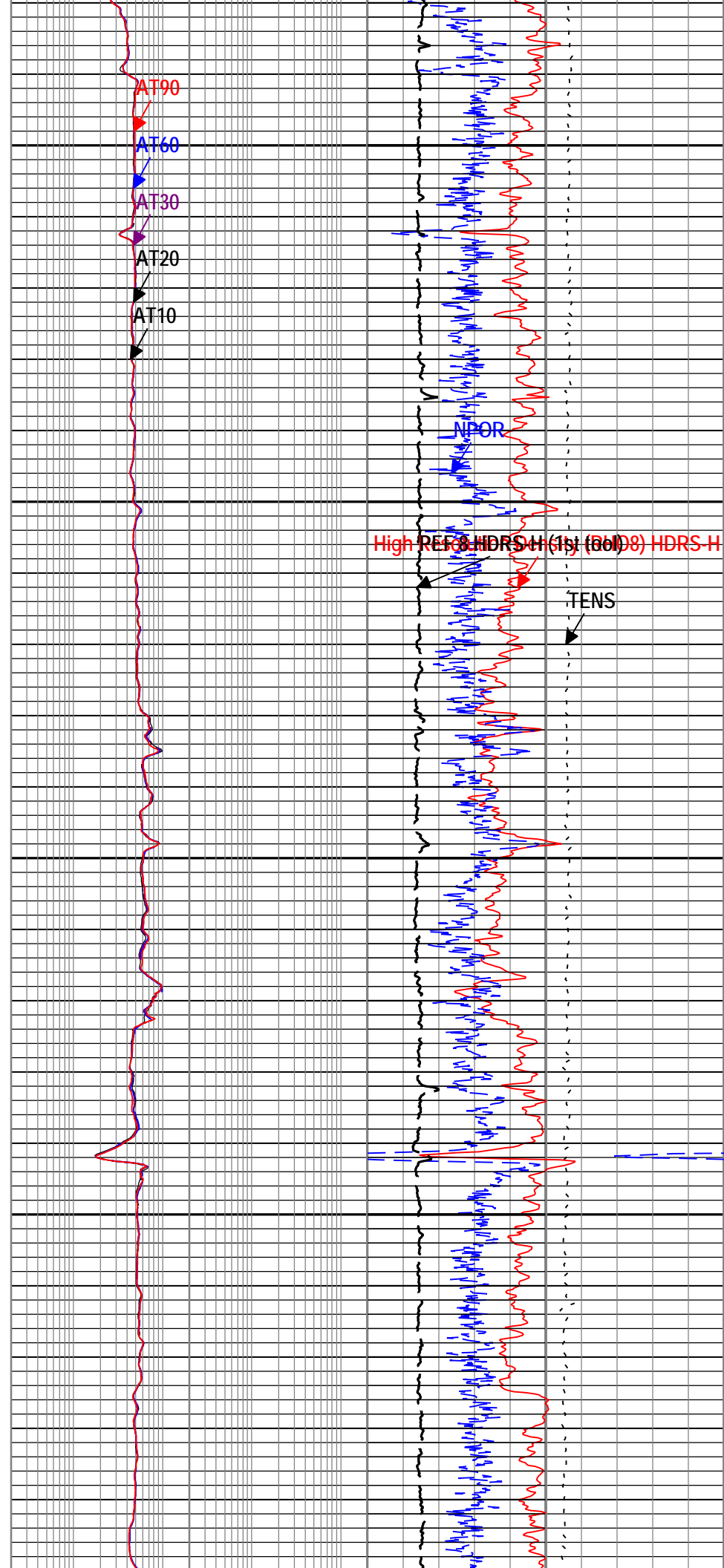
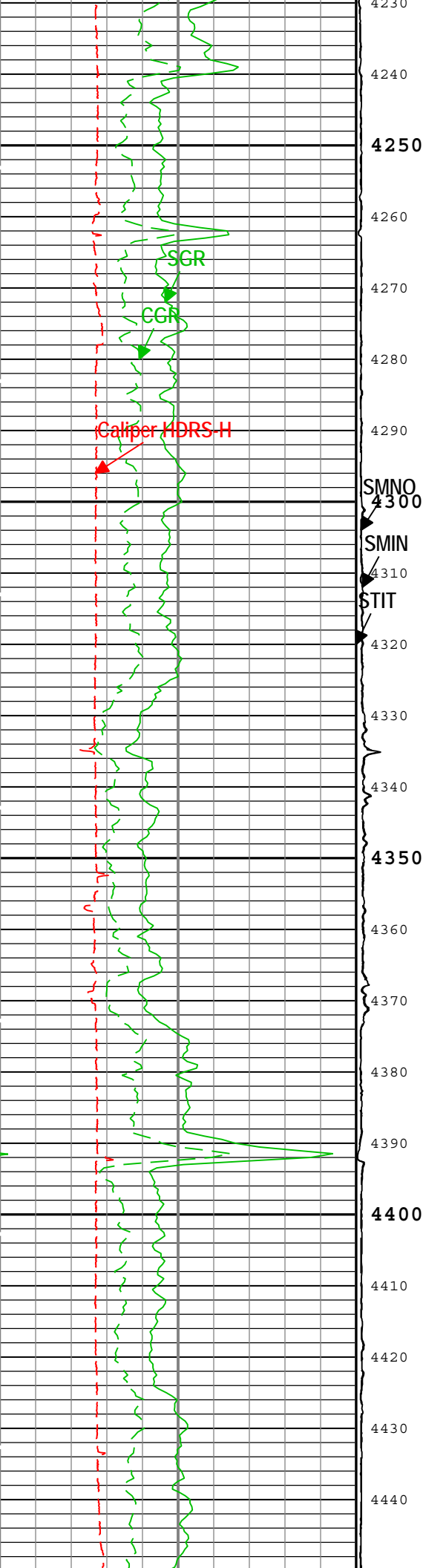


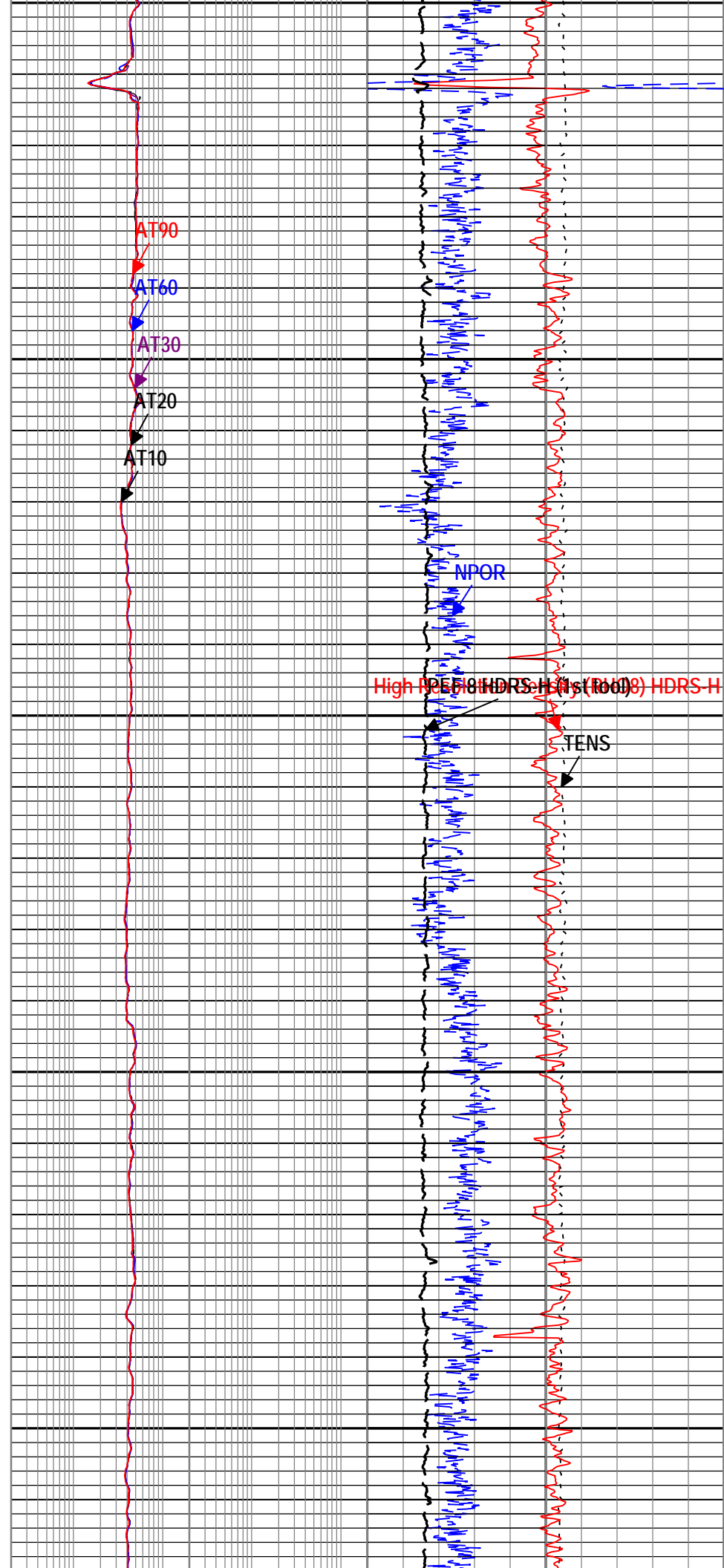
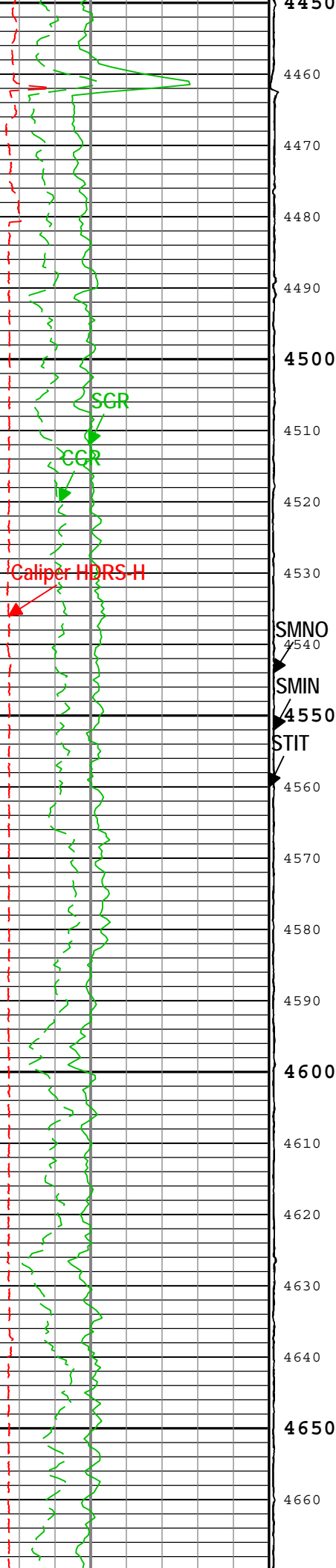


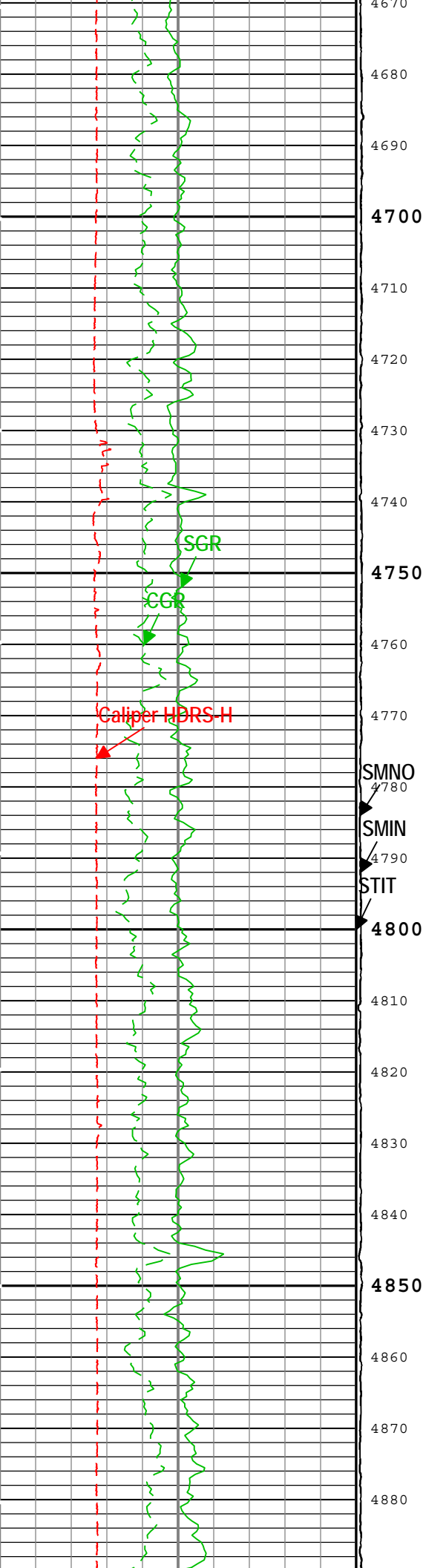




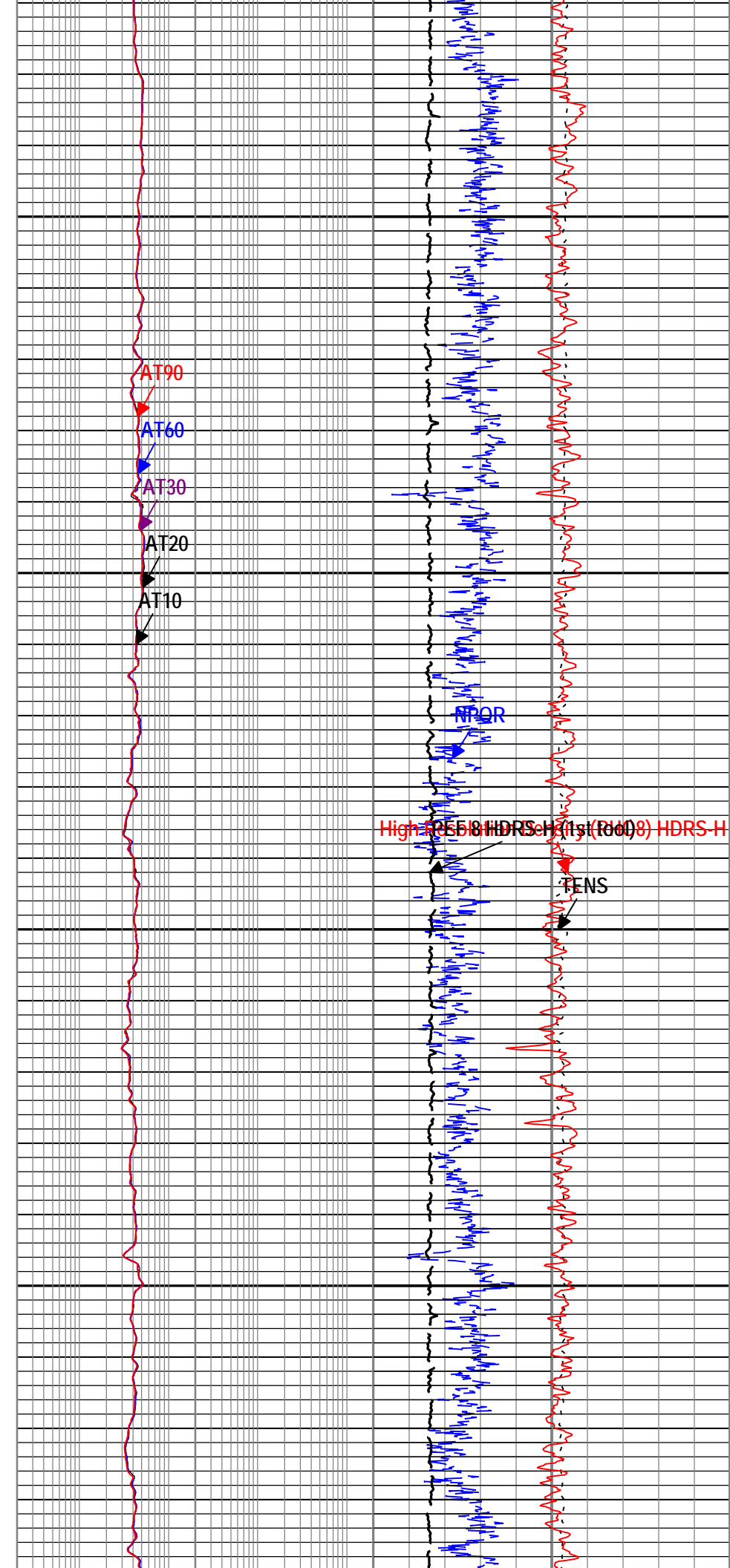




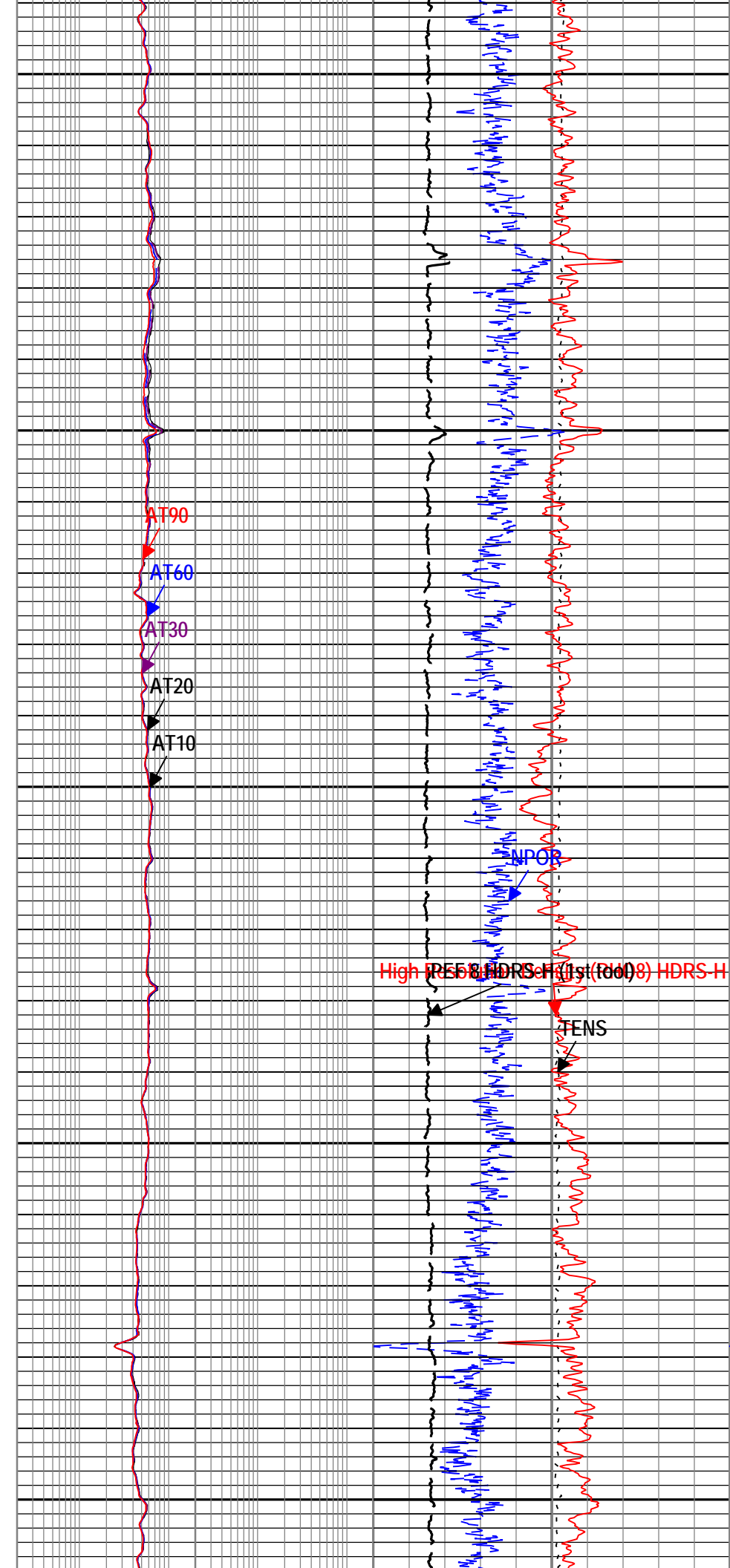
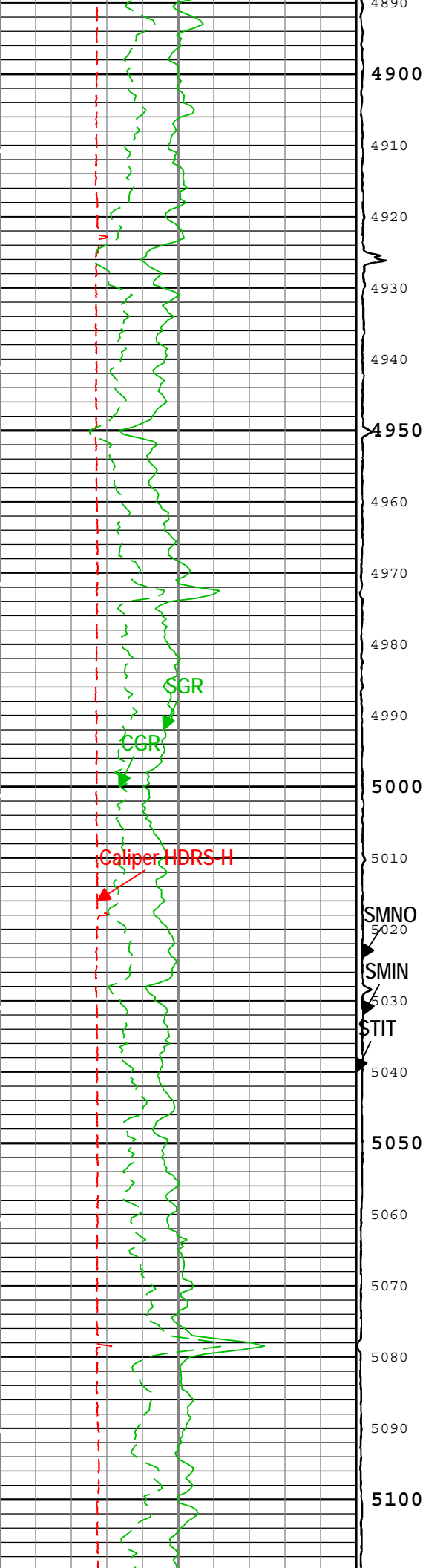


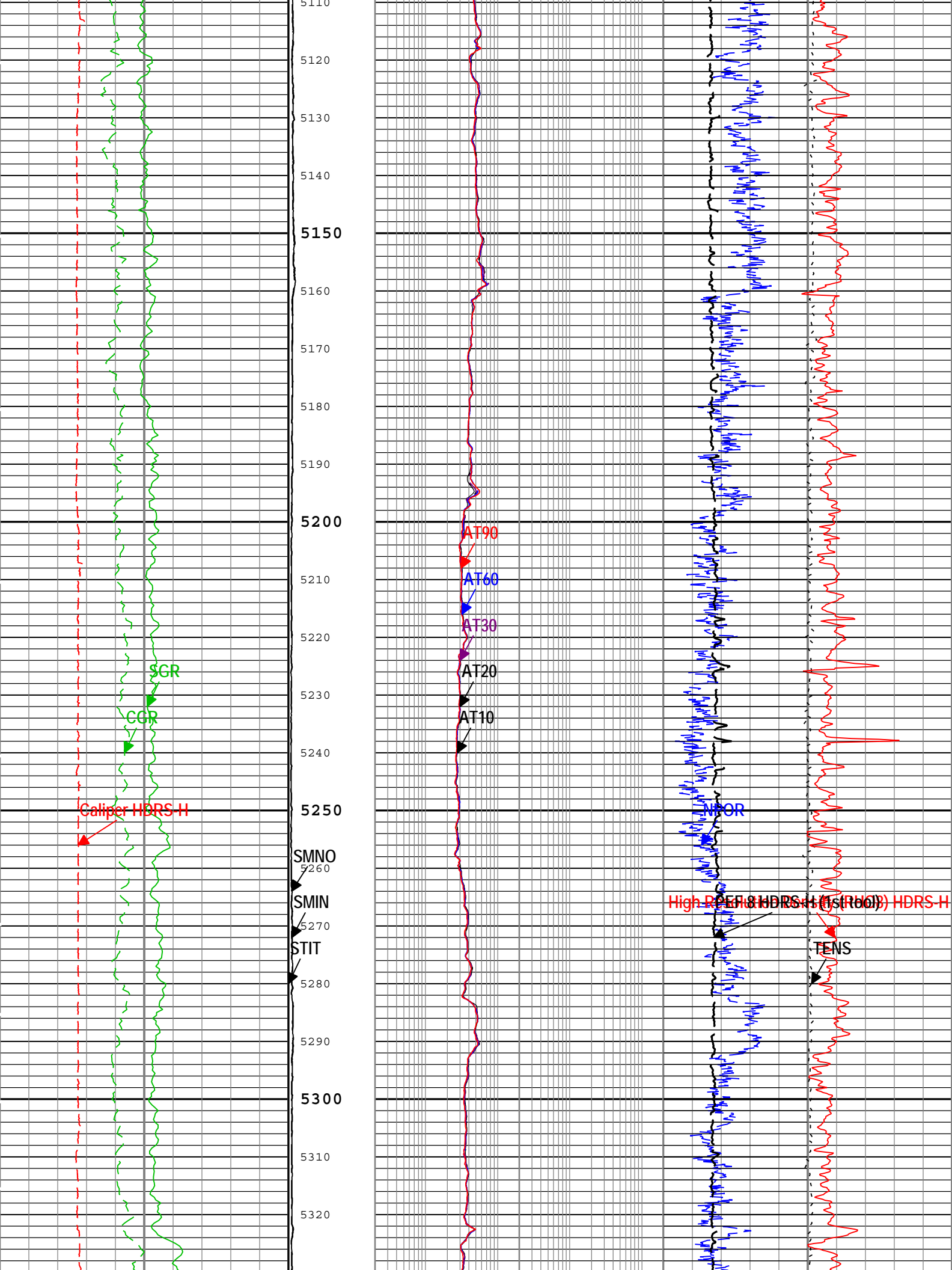


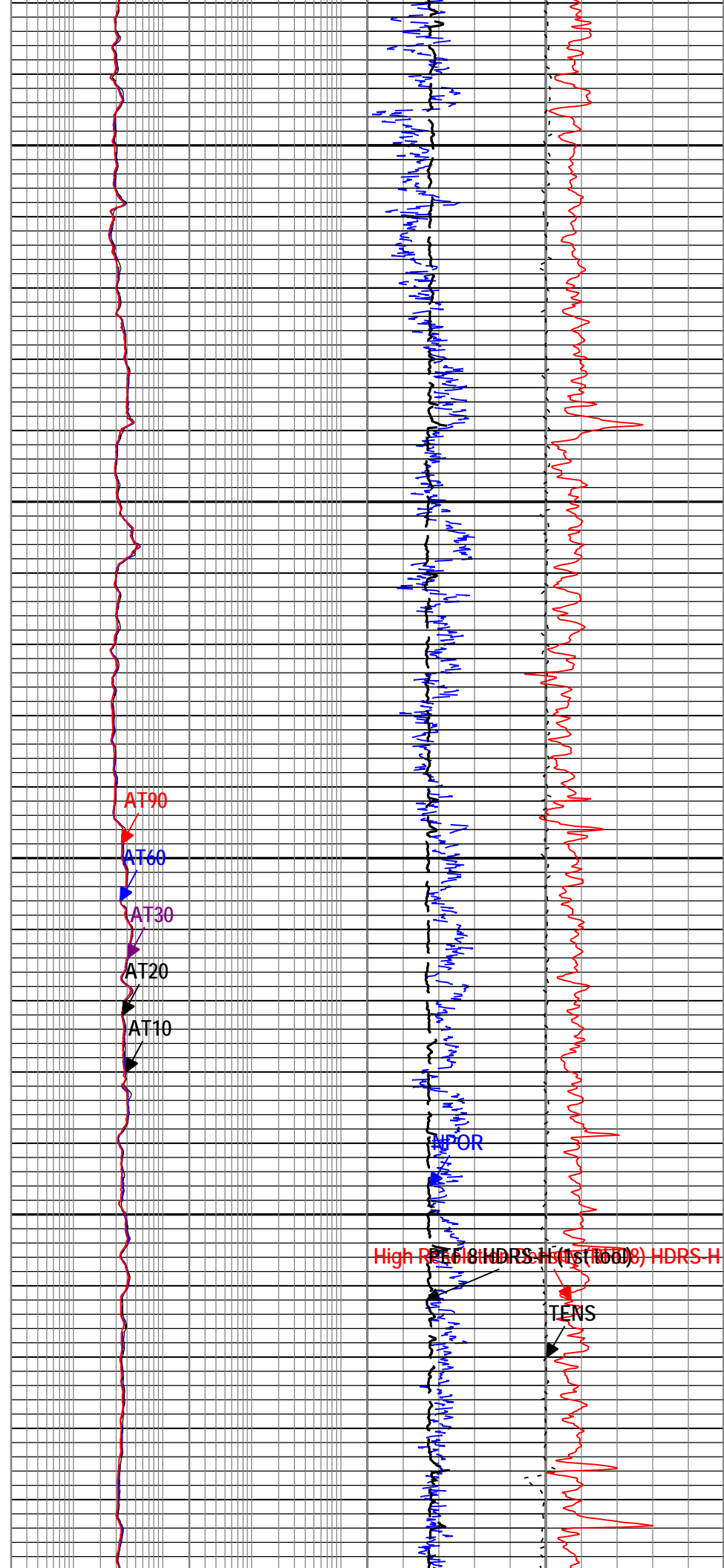
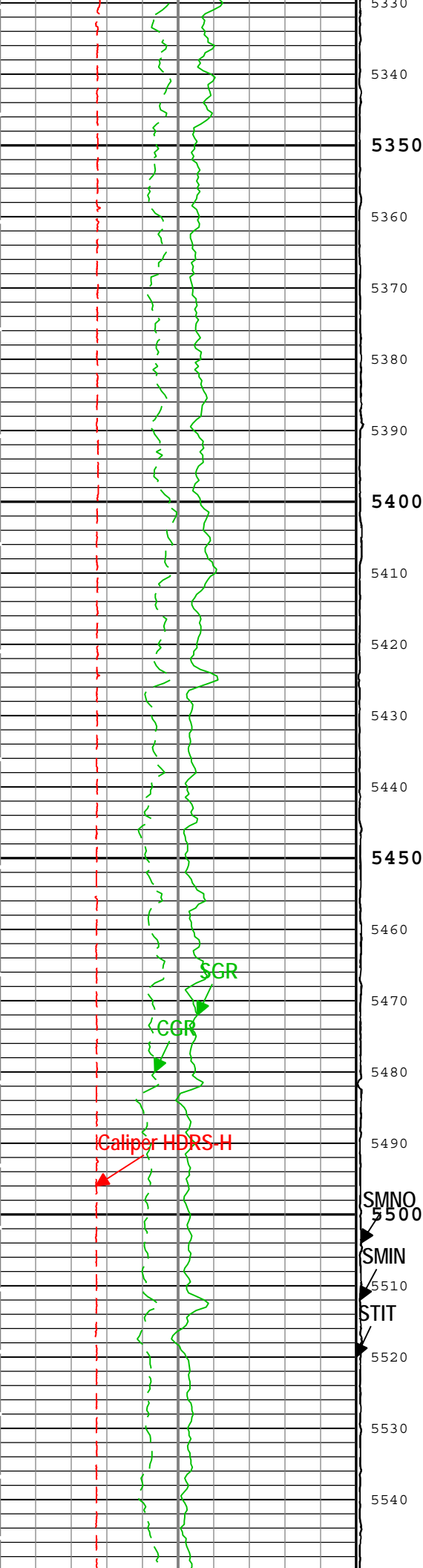
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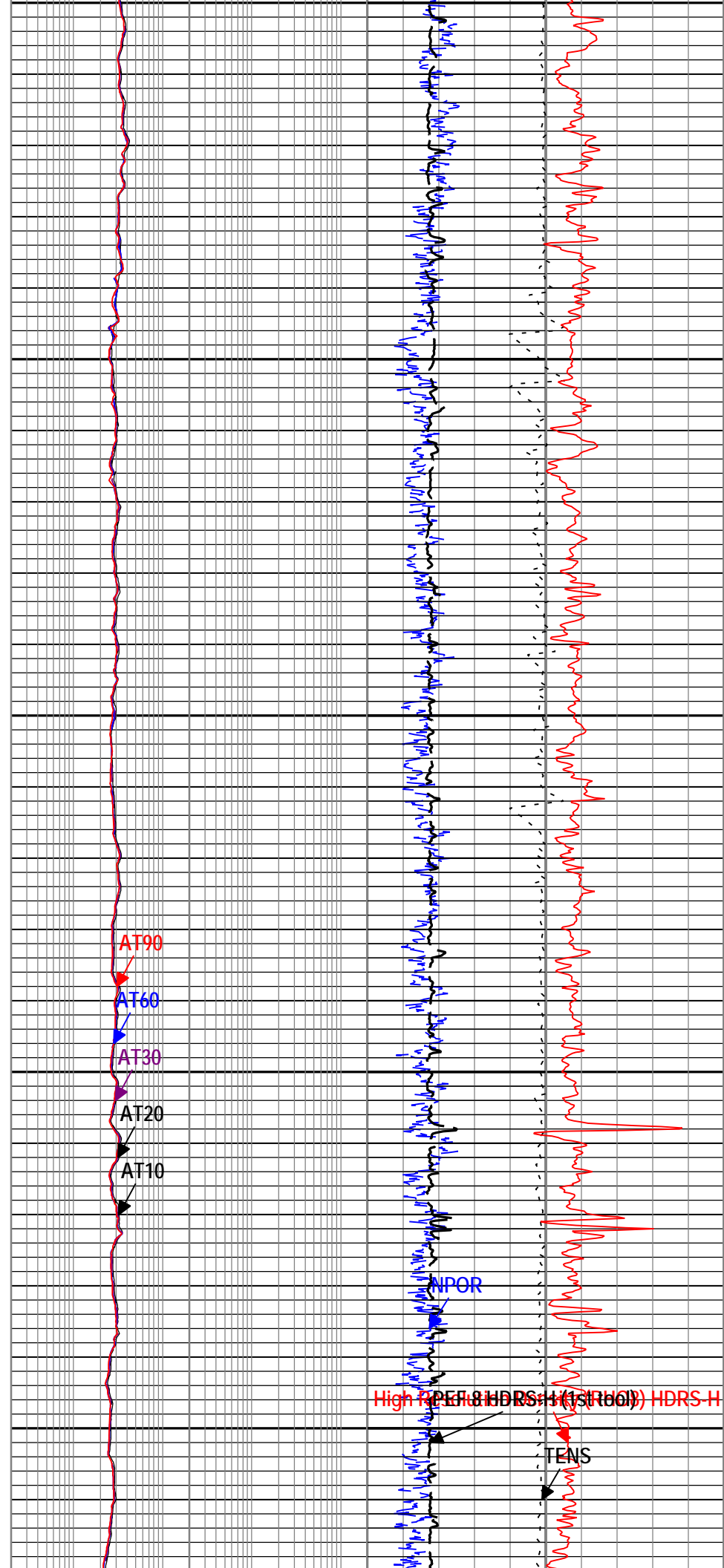
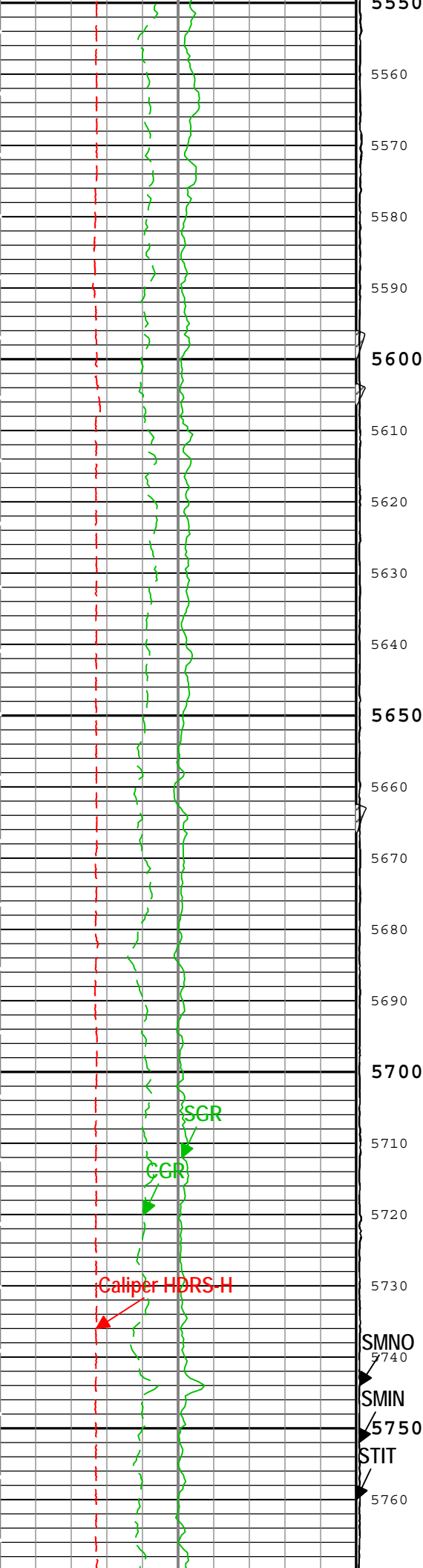


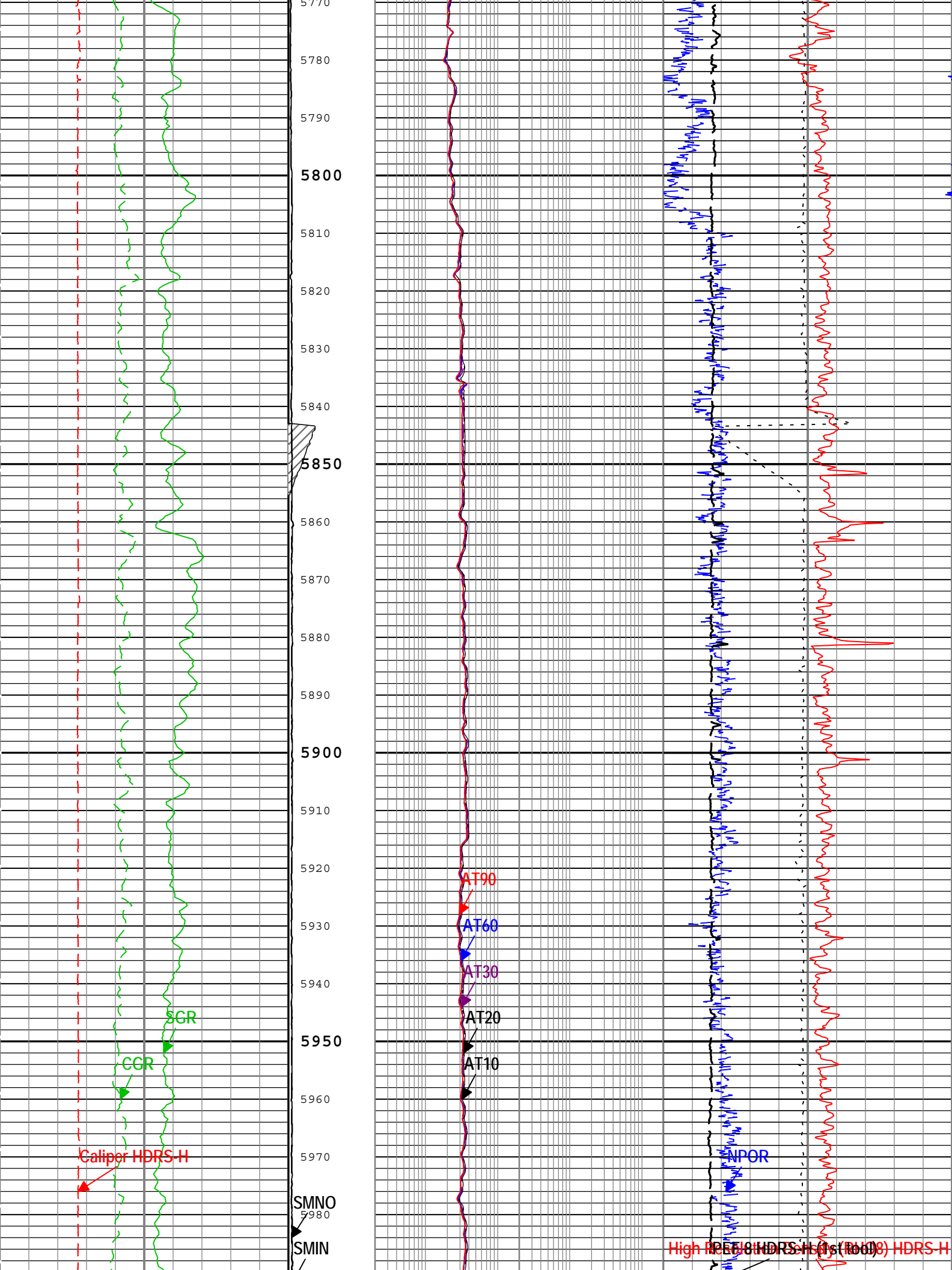
High P558 HDRS-H (1st (Red)) HDRS-H

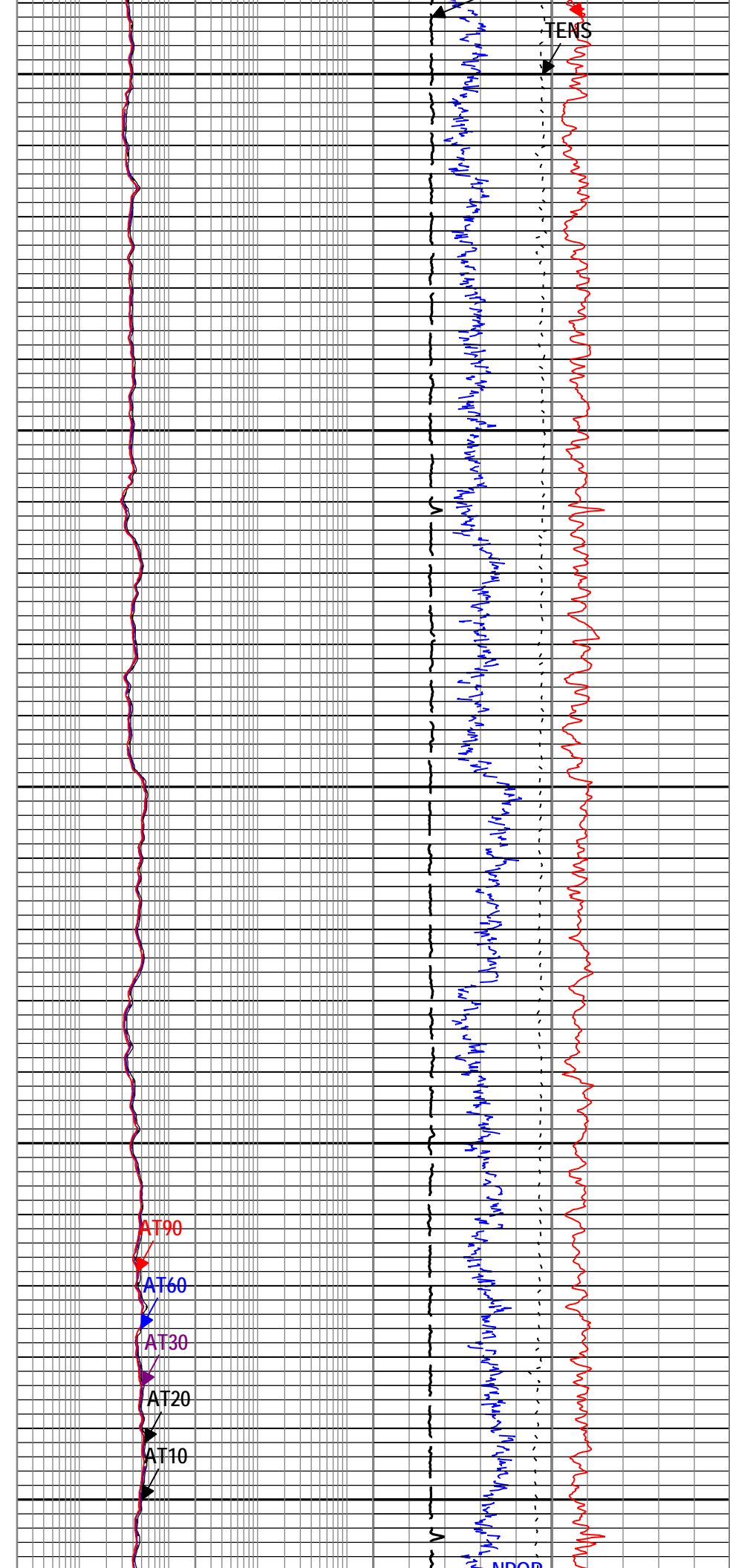
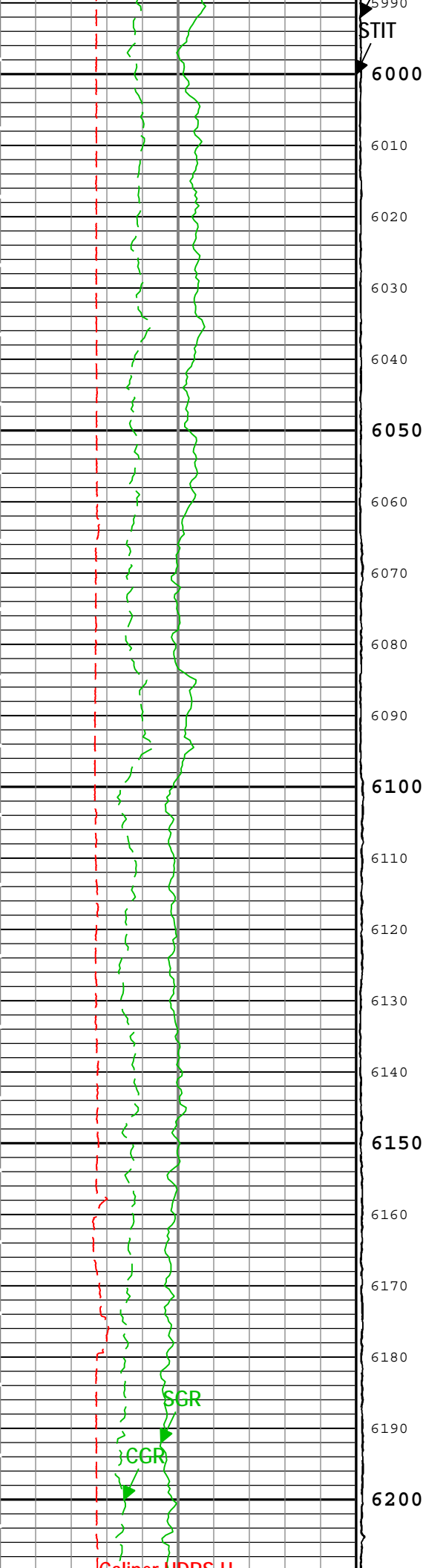


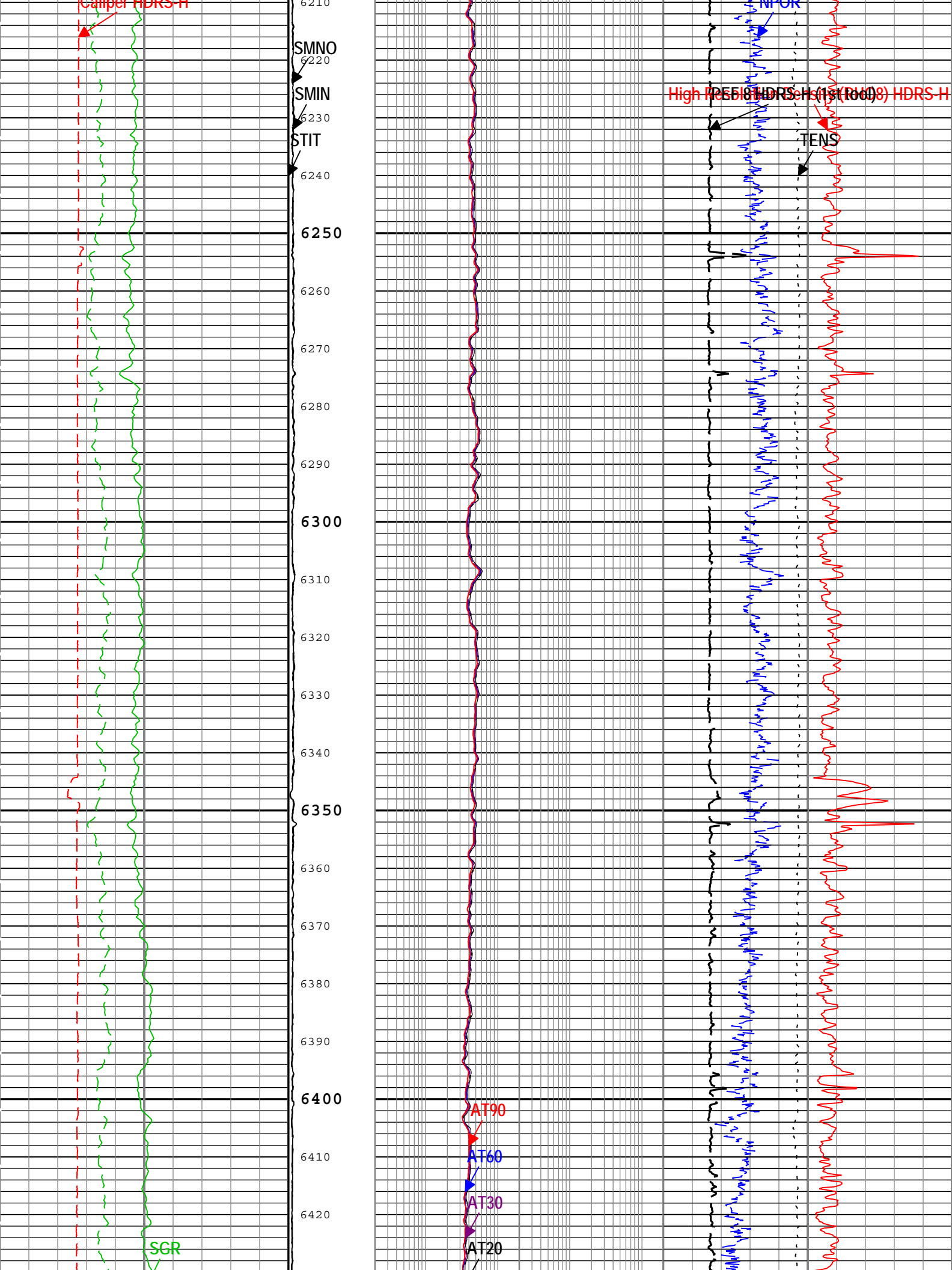


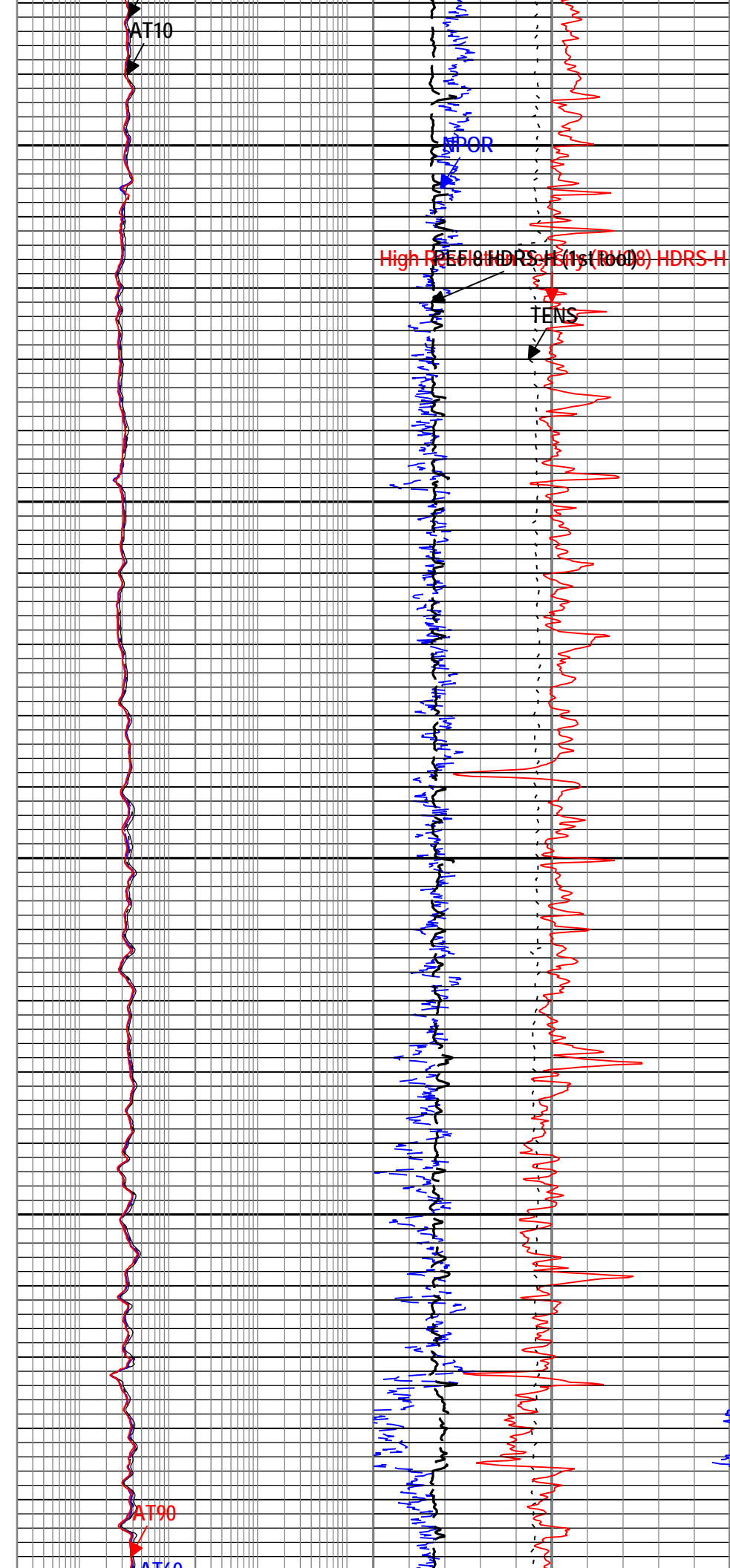
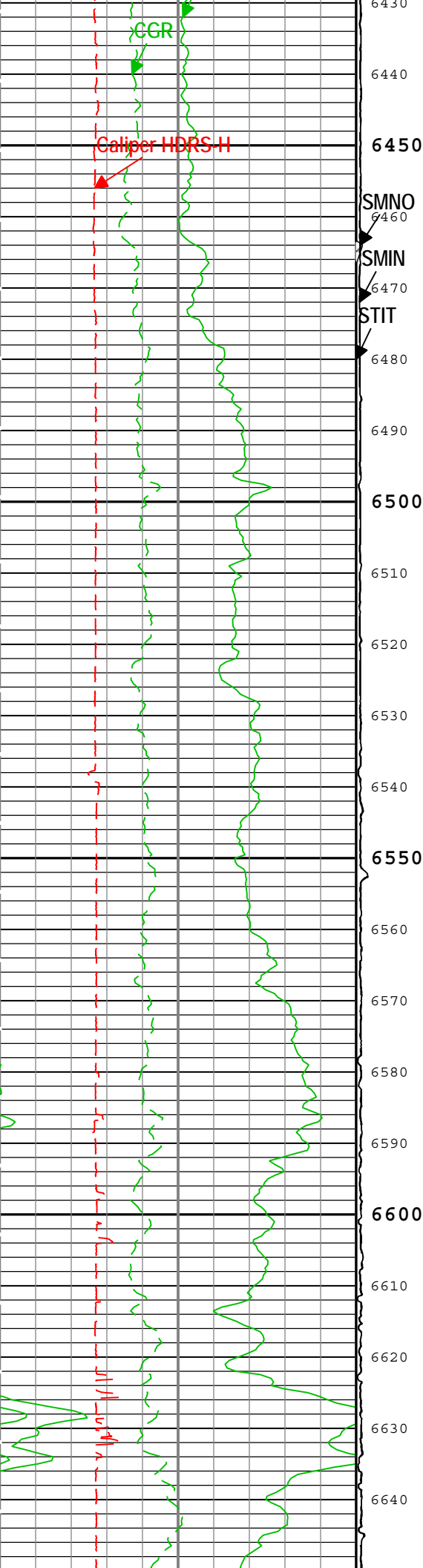


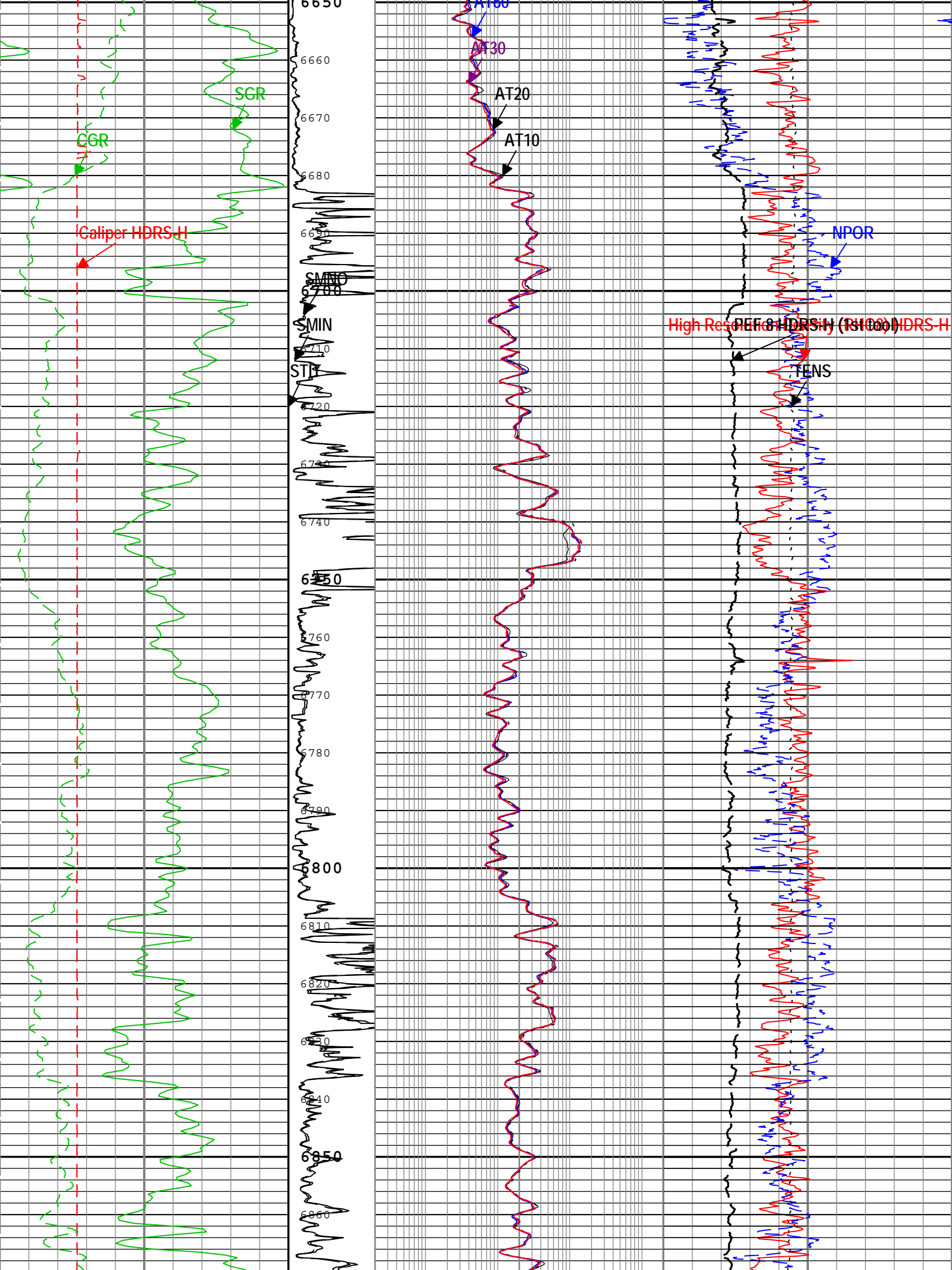


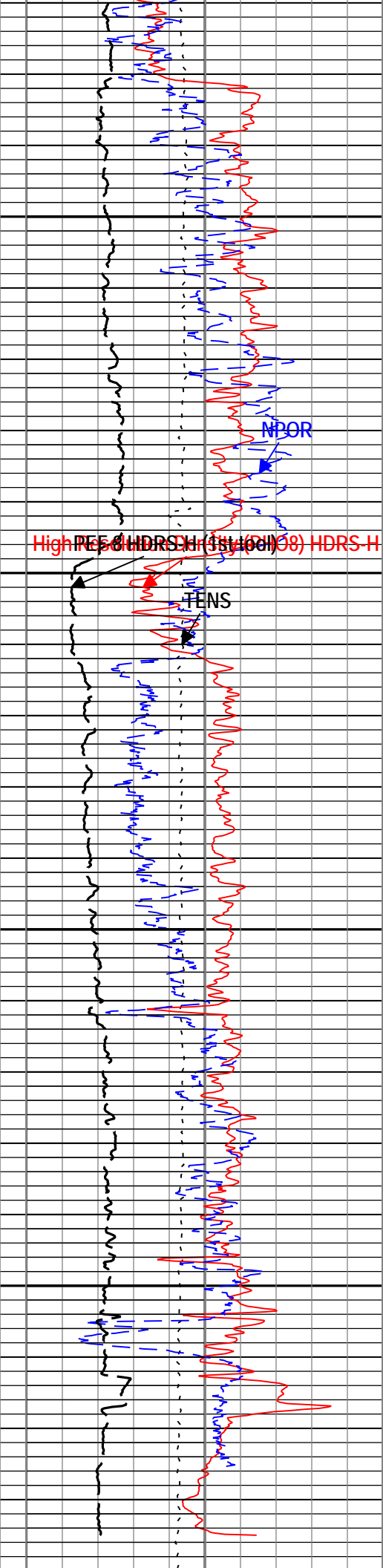
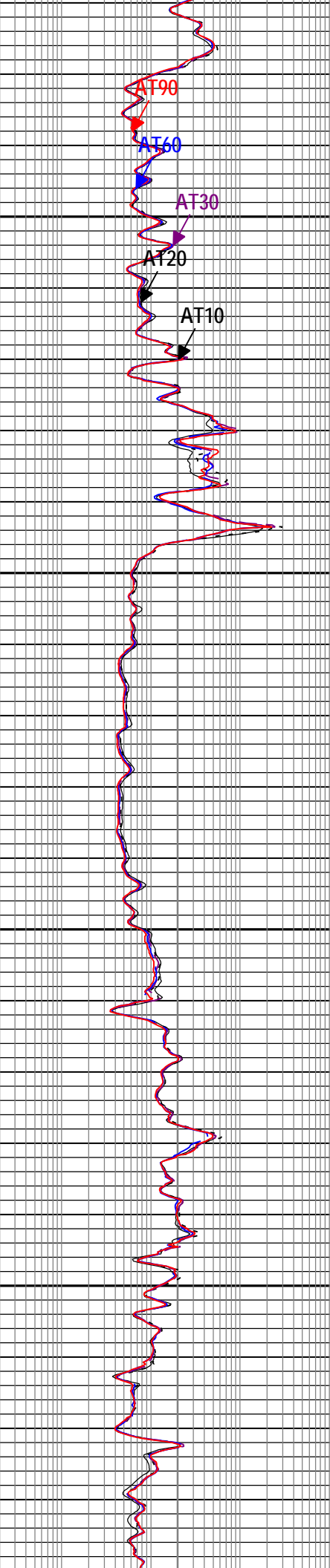
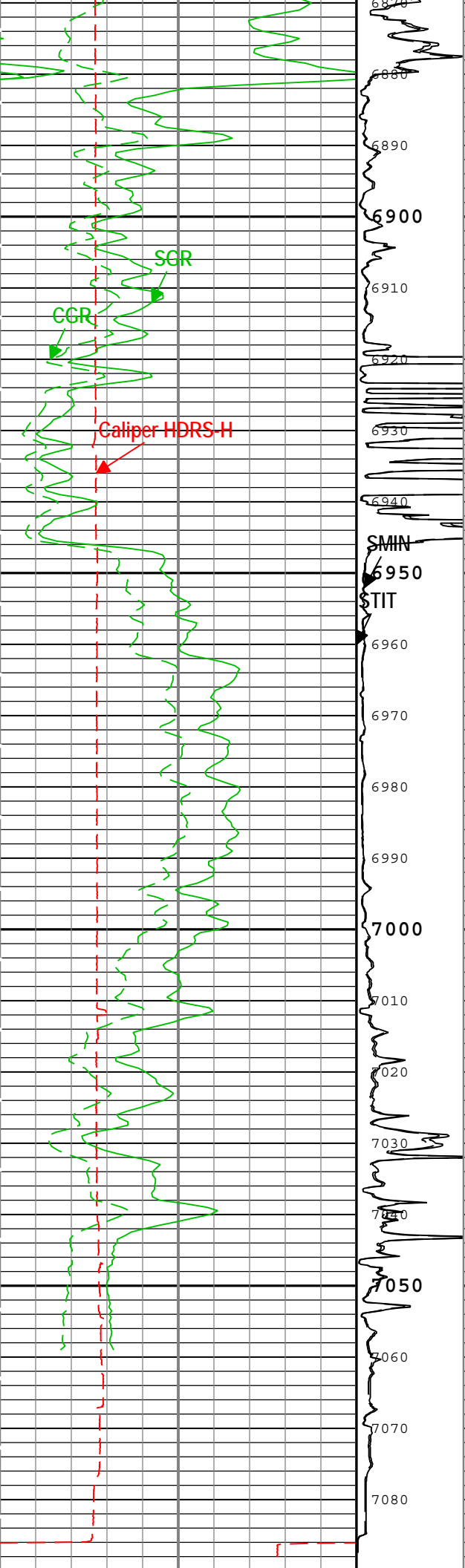


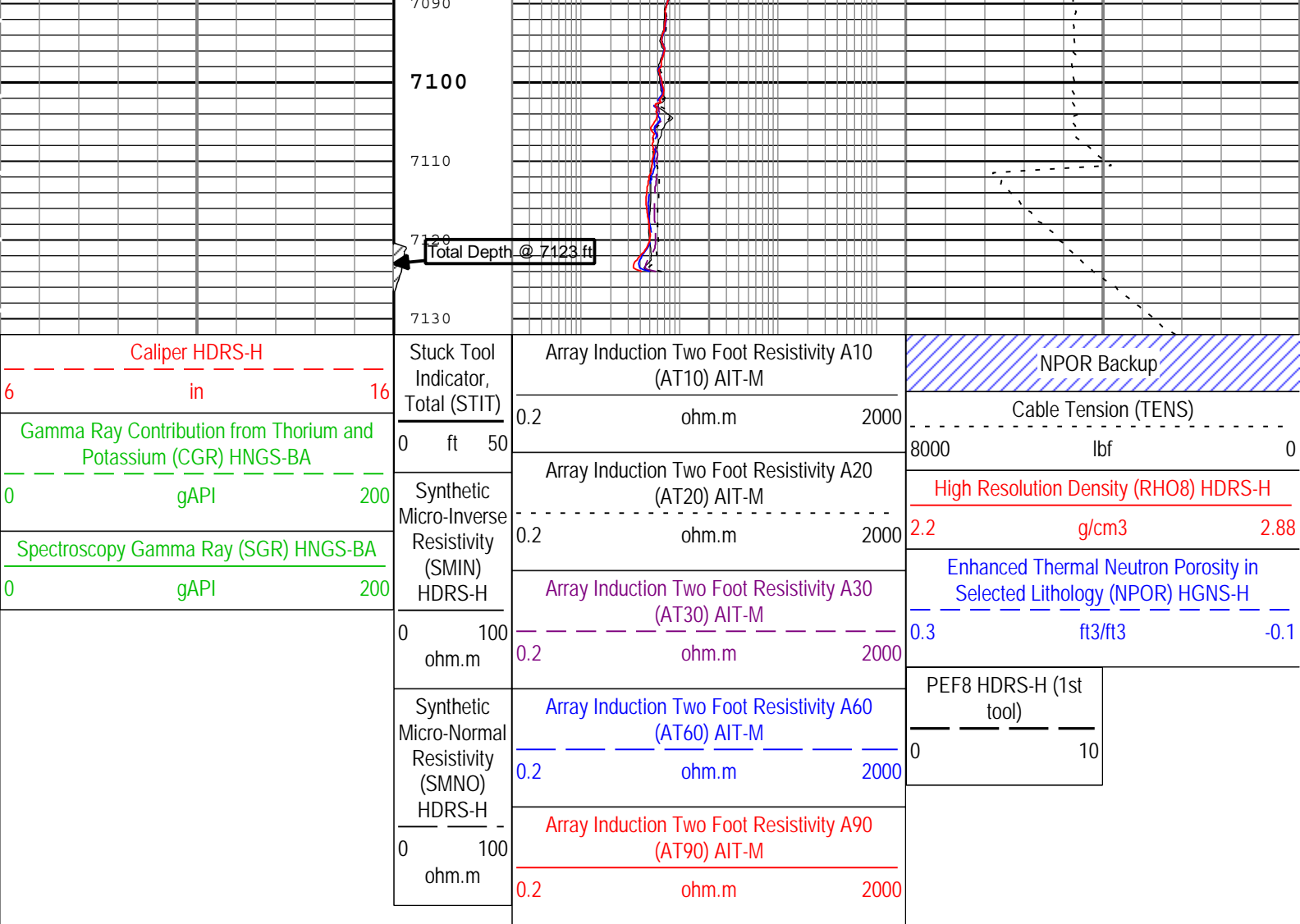












TIME_1900 - Time Marked every 60.00 (s)

Description: HGNS standard resolution porosities for Platform Express Format: Log (Copy of KM 5in Triple Combo Hi-res) Index Scale: 5 in per 100 ft
Index Unit: ft Index Type: Measured Depth Creation Date: 26-Dec-2013 04:32:40

Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
ABHM	Array Induction Borehole Correction Mode	AIT-M	Compute Standoff	
ACDE	Array Induction Casing Detection Enable	AIT-M	Yes	
ASTA	Array Induction Tool Standoff	AIT-M	1.625	in
BARI	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	212	degF
BS	Bit Size	WLSESSION	8.75	in
BSAL	Borehole Salinity	Borehole	0	ppm
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	0.233	in
CBLO	Casing Bottom (Logger)	WLSESSION	677	ft
CDEN	Cement Density	HGNS-H	2	g/cm3
DBCC	Barite Constant Correction Flag	HNGS-BA	None	
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	9.6	lbm/gal
DFT	Drilling Fluid Type	Borehole	Water	
DFT_WATER	Drilling Fluid Water Type	Borehole	Chemical Gel	
DHC	Density Hole Correction	HDRS-H	Bit Size	

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	AMF	
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	
HSCO	Hole Size Correction Option	HGNS-H	Yes	
MATR	Rock Matrix for Neutron Porosity Corrections	Borehole	LIMESTONE	
MFST	Mud Filtrate Sample Temperature	Borehole	89	degF
NPRM	HRDD Nuclear Processing Mode	HDRS-H	Very High Resolution	
RMFS	Resistivity of Mud Filtrate Sample	Borehole	1.04	ohm.m
SGRC	Standard Gamma Ray Correction Flag	HNGS-BA	Yes	
SOCO	Standoff Correction Option	HGNS-H	Yes	
TD	Total Measured Depth	Borehole	7130	ft

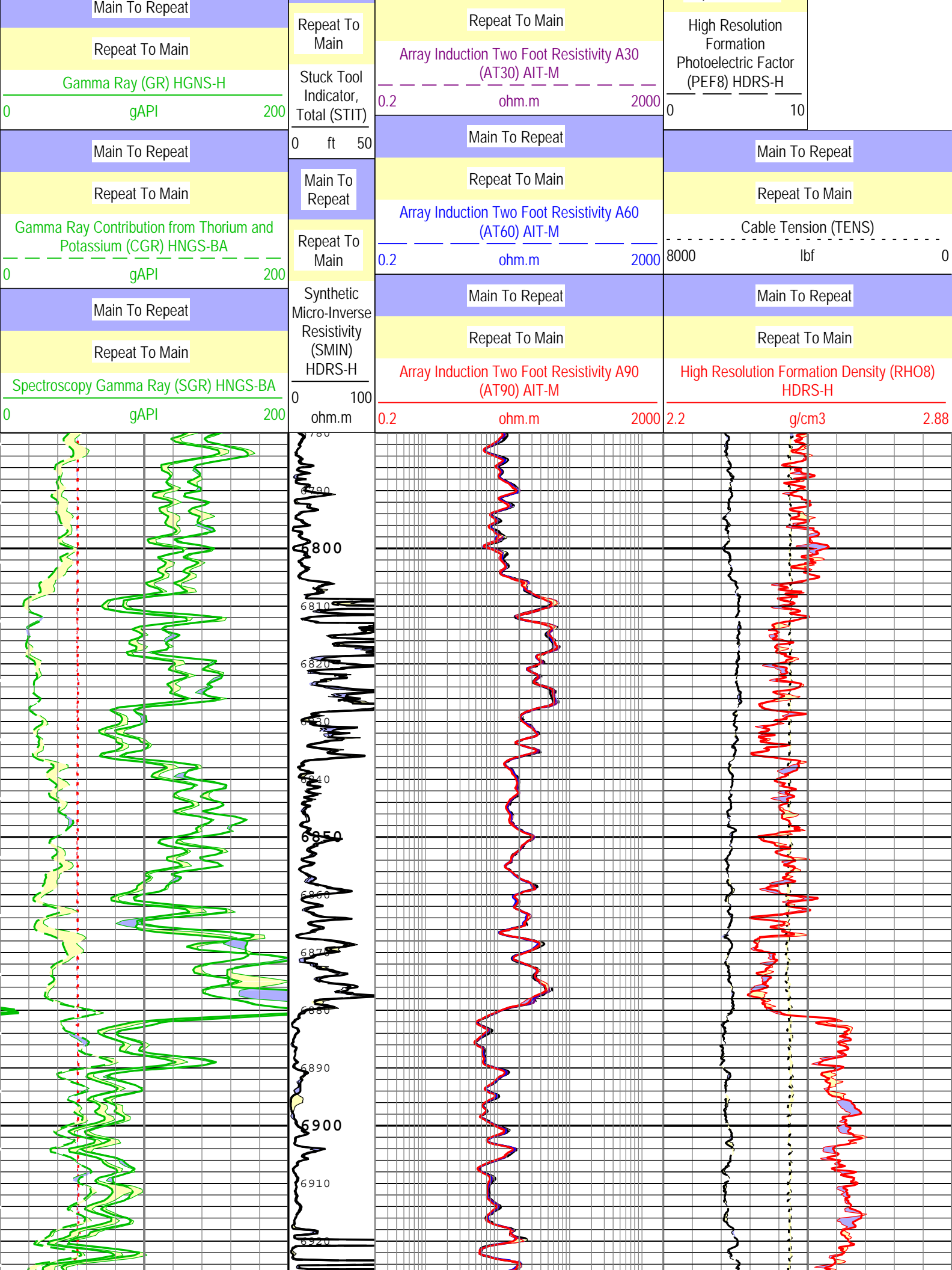
Tool Control Parameters				
Parameter	Description	Tool	Value	Unit
HMCA_BRD_TYPE	HMCA Board Type	HGNS-H	1	
HRGD_BRD_TYPE	HRGD Board Type	HDRS-H	WITH_HET	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	900	ft/h
Run 1				

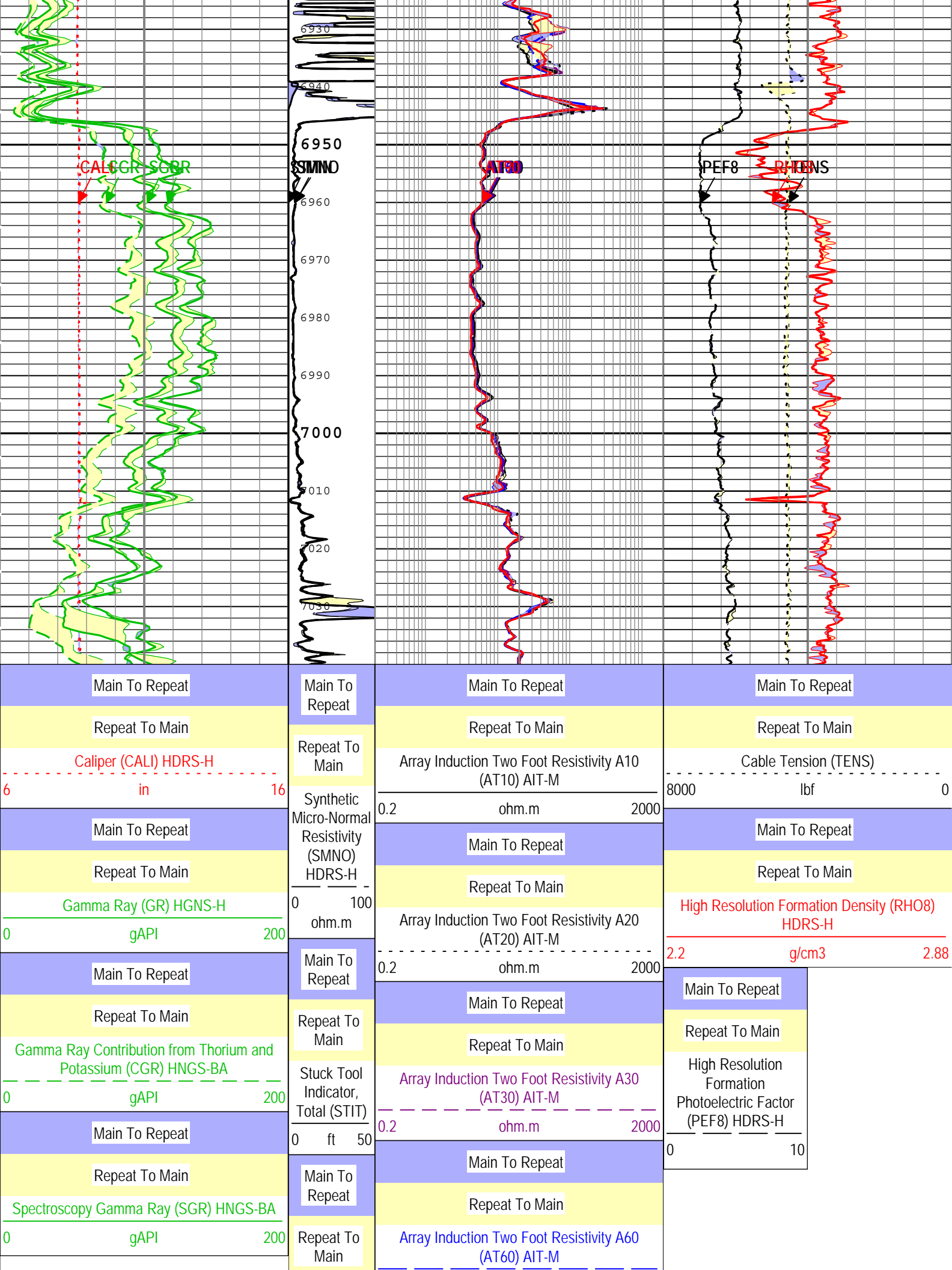
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run 1	Log[2]:Up	Up	6773.28 ft	7142.60 ft	25-Dec-2013 9:46:51 PM	25-Dec-2013 10:24:03 PM	ON	6.00 ft	No
Run 1	Log[3]:Up	Up	516.30 ft	7132.17 ft	25-Dec-2013 10:29:42 PM	26-Dec-2013 4:21:06 AM	ON	0.00 ft	No
All depths are referenced to toolstring zero									
Log		<div>Company:Noble Energy, Inc Well:Marie D04-74-1HN</div> <div>Run 1: Log[3]:Up:S008</div>							

Description: HGNS standard resolution porosities for Platform Express Format: Log (Copy of KM 5in Triple Combo Hi-res RA) Index Scale: 5 in per 100 ft
Index Unit: ft Index Type: Measured Depth Creation Date: 26-Dec-2013 04:32:44

TIME_1900 - Time Marked every 60.00 (s)

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Synthetic Micro-Inverse Resistivity (SMIN) HDRS-H	0.2		ohm.m	2000
	Main To Repeat			
	Repeat To Main			
	Array Induction Two Foot Resistivity A90 (AT90) AIT-M			
0	100		ohm.m	
0.2		ohm.m	2000	

TIME_1900 - Time Marked every 60.00 (s)

Description: HGNS standard resolution porosities for Platform Express Format: Log (Copy of KM 5in Triple Combo Hi-res RA) Index Scale: 5 in per 100 ft
Index Unit: ft Index Type: Measured Depth Creation Date: 26-Dec-2013 04:32:44

Calibration Report

AIT-M (Array Induction Tool - M) Calibration - Run 1

Primary Equipment :		
File code for AIT-MA Sonde Tool Element	AMIS	208
Auxiliary Equipment :		
File code for AIT Bottom Nose Tool Element	AMRM	

AIT Sonde Calibration - Test Loop Gain

Master (EEPROM):		12:32:54 20-Dec-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Test Loop Gain - 0		Master	1.000	0.950	1.013	1.050	
Test Loop Phase - 0	deg	Master	0	-3.000	0.568	3.000	
Test Loop Gain - 1		Master	1.000	0.950	1.015	1.050	
Test Loop Phase - 1	deg	Master	0	-3.000	0.671	3.000	
Test Loop Gain - 2		Master	1.000	0.950	1.013	1.050	
Test Loop Phase - 2	deg	Master	0	-3.000	0.158	3.000	
Test Loop Gain - 3		Master	1.000	0.950	1.014	1.050	
Test Loop Phase - 3	deg	Master	0	-3.000	0.192	3.000	
Test Loop Gain - 4		Master	1.000	0.950	0.996	1.050	
Test Loop Phase - 4	deg	Master	0	-3.000	0.148	3.000	
Test Loop Gain - 5		Master	1.000	0.950	0.987	1.050	
Test Loop Phase - 5	deg	Master	0	-3.000	-0.037	3.000	
Test Loop Gain - 6		Master	1.000	0.950	0.993	1.050	
Test Loop Phase - 6	deg	Master	0	-3.000	0.248	3.000	
Test Loop Gain - 7		Master	1.000	0.950	1.005	1.050	
Test Loop Phase - 7	deg	Master	0	-3.000	-0.054	3.000	

AIT Sonde Calibration - Sonde Error Correction

Master (EEPROM):		12:32:54 20-Dec-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Sonde Error Correction Real - 0	mS/m	Master	-----	-231.000	-61.425	119.000	
Sonde Error Correction Quad - 0		Master	-----	-2250.000	-110.616	2250.000	
Sonde Error Correction Real - 1	mS/m	Master	-----	114.000	156.631	204.000	
Sonde Error Correction Quad - 1		Master	-----	-625.000	-105.203	625.000	
Sonde Error Correction Real - 2	mS/m	Master	-----	66.000	120.890	156.000	
Sonde Error Correction Quad - 2		Master	-----	-350.000	-97.021	350.000	
Sonde Error Correction Real - 3	mS/m	Master	-----	39.000	52.953	89.000	
Sonde Error Correction Quad - 3		Master	-----	-250.000	-10.226	250.000	
Sonde Error Correction Real - 4	mS/m	Master	-----	15.000	26.839	35.000	
Sonde Error Correction Quad - 4		Master	-----	-63.000	1.426	63.000	
Sonde Error Correction Real - 5	mS/m	Master	-----	4.000	12.558	24.000	
Sonde Error Correction Quad - 5		Master	-----	-50.000	-8.037	50.000	
Sonde Error Correction Real - 6	mS/m	Master	-----	5.000	9.608	15.000	
Sonde Error Correction Quad - 6		Master	-----	-30.000	6.854	30.000	
Sonde Error Correction Real - 7	mS/m	Master	-----	-5.000	-1.791	5.000	
Sonde Error Correction Quad - 7		Master	-----	-30.000	2.572	30.000	

AIT Mud Calibration - Mud Calibration Gain

Master (EEPROM):		12:32:54 20-Dec-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Coarse Gain		Master	1.000	0.800	1.078	1.200	

[illegible]

		After Before-Master After-Before	----- ----- -----	----- ----- -----	0.000 ----- -----	----- ----- -----	
Thru Cal Phase - 6	deg	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	121.000 121.000 ----- ----- -----	-171.918 -169.038 ----- 2.880 -----	-119.000 -119.000 ----- ----- -----	
Thru Cal Mag - 7	V	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	0.846 0.846 ----- ----- -----	1.377 1.377 ----- 0.000 -----	1.974 1.974 ----- ----- -----	
Thru Cal Phase - 7	deg	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	115.000 115.000 ----- ----- -----	-174.013 -171.143 ----- 2.870 -----	-125.000 -125.000 ----- ----- -----	
SPA Zero	mV	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	-50.000 -50.000 ----- ----- -----	-0.022 -0.015 ----- 0.007 -----	50.000 50.000 ----- ----- -----	
SPA Plus	mV	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	941.000 941.000 ----- ----- -----	992.741 992.754 ----- 0.013 -----	1040.000 1040.000 ----- ----- -----	
Temperature Zero	V	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	-0.050 -0.050 ----- ----- -----	0.000 0.000 ----- 0.000 -----	0.050 0.050 ----- ----- -----	
Temperature Plus	V	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	0.870 0.870 ----- ----- -----	0.919 0.919 ----- 0.000 -----	0.960 0.960 ----- ----- -----	

HDRS-H (HILT Density and Rxo Sonde, 150 degC) Calibration - Run 1			
Primary Equipment :			
HILT High-Resolution Control Cartridge, 150 degC	HRCC-H		
HILT Resistivity Gamma-Ray Density Device, 150 degC	HRGD-H		4791
Auxiliary Equipment :			
HRDD Backscatter Detector	Backscatter		
HRDD Long Spacing Detector	Long Spacing		28910
HRDD Short Spacing Detector	Short Spacing		
Cesium 137 Gamma-Ray Logging Source	GSR-J		5240
HILT High-Resolution Control Cartridge, 150 degC	HRCC-H		
HILT High-Resolution Mechanical Sonde, 150 degC	HRMS-H		4826
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):		15:31:24 24-Dec-2013 Expired by 1 days					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Small Ring	in	Before	8.00	6.00	8.30	10.00	
Large Ring	in	Before	12.00	9.00	12.41	15.00	

HDRS Density Calibration - Inversion Results							
Master (EEPROM):		14:42:24 19-Dec-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	

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

Primary Equipment :			
	HILT Gamma-Ray and Neutron Sonde, 150 degC	HGNS-H	
Auxiliary Equipment :			
	HGNS Accelerometer, 150 degC	HACCZ-H	5955
	AmBe Neutron Logging Source	NSR-F	5215
Calibration Parameter :			
	Water Temperature		
	Housing Size		
	JIG-BKG (Jig minus background reference)	165	

HGNS Accelerometer Calibration - Accelerometer Accumulations

Before (Measured):		21:00:41 25-Dec-2013				
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit
AZ Vertical Measurement	ft/s2	Before	32.2	31.5	32.0	32.8

HGNS Accelerometer EEPROM - Accelerometer EEPROM Read

Master (EEPROM):		00:00:00 15-Jan-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	----	----	1155.700	----
Accelerometer Coefficients - 1		Master	----	----	26.890	----
Accelerometer Coefficients - 2		Master	----	----	-0.008	----
Accelerometer Coefficients - 3		Master	----	----	0.000	----
Accelerometer Coefficients - 4		Master	----	----	2.748	----
Accelerometer Coefficients - 5		Master	----	----	0.000	----
Accelerometer Coefficients - 6		Master	----	----	0.000	----
Accelerometer Coefficients - 7		Master	----	----	0.000	----
Accelerometer Coefficients - 8		Master	----	----	298.600	----
Accelerometer Coefficients - 9		Master	----	----	0.983	----

HGNS Neutron Calibration - HGNS Neutron Accumulations

Master (EEPROM):		13:41:08 21-Oct-2013		Before (Measured):		15:27:44 24-Dec-2013		After:	
						Expired by 1 days			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit			
Near Zero Measurement	1/s	Master	0	5.0	24.3	40.0			
		Before	0	5.0	25.4	40.0			
		After	----	----	----	----			
		Before-Master	----	-3.6	1.1	3.6			
		After-Before	----	----	----	----			
Far Zero Measurement	1/s	Master	0	5.0	28.6	40.0			
		Before	0	5.0	28.3	40.0			
		After	----	----	----	----			
		Before-Master	----	-4.3	-0.3	4.3			
		After-Before	----	----	----	----			
Near Plus Measurement	1/s	Master	6031.0	4700.0	5252.0	6900.0			
		Before	----	----	----	----			
		After	----	----	----	----			
		Before-Master	----	----	----	----			
		After-Before	----	----	----	----			
Far Plus Measurement	1/s	Master	2793.0	1900.0	2176.0	2900.0			
		Before	----	----	----	----			
		After	----	----	----	----			
		Before-Master	----	----	----	----			
		After-Before	----	----	----	----			
Near Corrected Plus Measurement	1/s	Master		4700.0	5324.0	6900.0			
		Before	----	----	----	----			
		After	----	----	----	----			
		Before-Master	----	----	----	----			
		After-Before	----	----	----	----			

Far Corrected Plus Measurement	1/s	Master		1900.0	2209.0	2900.0	
		Before	----	----	----	----	
		After	----	----	----	----	
		Before-Master	----	----	----	----	
		After-Before	----	----	----	----	

HGNS Gamma-Ray Calibration - Gamma-Ray Accumulations

Before (Measured): 15:32:00 24-Dec-2013 Expired by 1 days After:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RGR Zero Measurement	gAPI	Before	30.0	0	83.8	120.0	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RGR Plus Measurement	gAPI	Before	185.4	157.1	169.2	206.3	
		After	----	----	NOT DONE	----	
		After-Before	----	----	----	----	
GR Calibration Gain		Before	0.89	0.80	0.98	1.05	
		After	----	----	----	----	
		After-Before	----	----	----	----	

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

Primary Equipment :			HNGS Sonde Element			HNGS-BA		152	
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HNGS Background and Na22 Set Point Determination - Detector 1 Check

Master:		Before:			After:				
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit			
Na 511 Peak Location - 0		Master	----	----	----	----			
		Before	----	----	----	----			
		After	----	----	----	----			
		Before-Master	----	----	----	----			
		After-Before	----	----	----	----			
Na 511 Peak Resolution - 0	%	Master	----	----	----	----			
		Before	----	----	----	----			
		After	----	----	----	----			
		Before-Master	----	----	----	----			
		After-Before	----	----	----	----			
High Voltage DAC Value - 0	V	Master	----	----	----	----			
		Before	----	----	----	----			
		After	----	----	----	----			
		Before-Master	----	----	----	----			
		After-Before	----	----	----	----			
Na 1785 Peak Location - 0		Master	----	----	----	----			
		Before	----	----	----	----			
		After	----	----	----	----			
		Before-Master	----	----	----	----			
		After-Before	----	----	----	----			
Na 1785 Peak Resolution - 0	%	Master	----	----	----	----			
		Before	----	----	----	----			
		After	----	----	----	----			
		Before-Master	----	----	----	----			
		After-Before	----	----	----	----			
Temperature - 0	degF	Master	----	----	----	----			
		Before	----	----	----	----			
		After	----	----	----	----			
		Before-Master	----	----	----	----			
		After-Before	----	----	----	----			
Na Count Rate - 0	CPS	Master	----	----	----	----			
		Before	----	----	----	----			
		After	----	----	----	----			
		Before-Master	----	----	----	----			
		After-Before	----	----	----	----			

HNGS Background and Na22 Set Point Determination - Detector 2 Check

Master:		Before:			After:				
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit			
Na 511 Peak Location - 0		Master	----	----	----	----			
		Before	----	----	----	----			

		After Before-Master After-Before	----- ----- -----	----- ----- -----	----- ----- -----	----- ----- -----	
Na 511 Peak Resolution - 0	%	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	----- ----- ----- ----- -----	----- ----- ----- ----- -----	----- ----- ----- ----- -----	
High Voltage DAC Value - 0	V	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	----- ----- ----- ----- -----	----- ----- ----- ----- -----	----- ----- ----- ----- -----	
Na 1785 Peak Location - 0		Master Before After Before-Master After-Before	----- ----- ----- ----- -----	----- ----- ----- ----- -----	----- ----- ----- ----- -----	----- ----- ----- ----- -----	
Na 1785 Peak Resolution - 0	%	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	----- ----- ----- ----- -----	----- ----- ----- ----- -----	----- ----- ----- ----- -----	
Temperature - 0	degF	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	----- ----- ----- ----- -----	----- ----- ----- ----- -----	----- ----- ----- ----- -----	
Na Count Rate - 0	CPS	Master Before After Before-Master After-Before	----- ----- ----- ----- -----	----- ----- ----- ----- -----	----- ----- ----- ----- -----	----- ----- ----- ----- -----	

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

Master:		Before:		After:				
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Coincidence Count Rate Ratio - 0		Master	-----	-----	-----	-----		
		Before	-----	-----	-----	-----		
		After	-----	-----	-----	-----		
		Before-Master	-----	-----	-----	-----		
		After-Before	-----	-----	-----	-----		

HNGS Background and Na22 Set Point Determination - Detector 1 Calibration

Master:		Before:		After:				
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Th Peak Location - 0		Master	-----	-----	-----	-----		
		Before	-----	-----	-----	-----		
		After	-----	-----	-----	-----		
		Before-Master	-----	-----	-----	-----		
		After-Before	-----	-----	-----	-----		
Th Peak Resolution - 0	%	Master	-----	-----	-----	-----		
		Before	-----	-----	-----	-----		
		After	-----	-----	-----	-----		
		Before-Master	-----	-----	-----	-----		
		After-Before	-----	-----	-----	-----		
Background Count Rate - 0	CPS	Master	-----	-----	-----	-----		
		Before	-----	-----	-----	-----		
		After	-----	-----	-----	-----		
		Before-Master	-----	-----	-----	-----		
		After-Before	-----	-----	-----	-----		
Gain Ratio - 0		Master	-----	-----	-----	-----		
		Before	-----	-----	-----	-----		
		After	-----	-----	-----	-----		
		Before-Master	-----	-----	-----	-----		
		After-Before	-----	-----	-----	-----		

HNGS Background and Na22 Set Point Determination - Detector 2 Calibration

Master:		Before:		After:				
---------	--	---------	--	--------	--	--	--	--

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Th Peak Location - 0		Master	----	----	----	----		
		Before	----	----	----	----		
		After	----	----	----	----		
		Before-Master	----	----	----	----		
		After-Before	----	----	----	----		
Th Peak Resolution - 0	%	Master	----	----	----	----		
		Before	----	----	----	----		
		After	----	----	----	----		
		Before-Master	----	----	----	----		
		After-Before	----	----	----	----		
Background Count Rate - 0	CPS	Master	----	----	----	----		
		Before	----	----	----	----		
		After	----	----	----	----		
		Before-Master	----	----	----	----		
		After-Before	----	----	----	----		
Gain Ratio - 0		Master	----	----	----	----		
		Before	----	----	----	----		
		After	----	----	----	----		
		Before-Master	----	----	----	----		
		After-Before	----	----	----	----		

HNGB Background and Na22 Set Point Determination - Detector 1 Calibration

Master:		Before:		After:				
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Na 511 Peak Set Point - 0		Master	----	----	----	----		
		Before	----	----	----	----		
		After	----	----	----	----		
		Before-Master	----	----	----	----		
		After-Before	----	----	----	----		

HNGB Background and Na22 Set Point Determination - Detector 2 Calibration

Master:		Before:		After:				
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Na 511 Peak Set Point - 0		Master	----	----	----	----		
		Before	----	----	----	----		
		After	----	----	----	----		
		Before-Master	----	----	----	----		
		After-Before	----	----	----	----		

LEH-QT (Logging Equipment Head - QT, 3-3/8 inch 31 pin HPHT with Tension Sensor) Calibration - Run 1

Primary Equipment :							
Logging Equipment Head - QT, 3-3/8 inch 31 pin HPHT with Tension Sensor				LEH-QT			

HTEN Master Calibration - HTEN Master Calibration

Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
HTEN Shop Gain		Master	1.000	0.800	NOT DONE	4.500	
HTEN Shop Offset	lbf	Master	0	-1000.000	NOT DONE	1000.000	

HTEN Before Calibration - HTEN Before Calibration

Before:								
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
RHTE Zero Measurement - 0	lbf	Before	----	----	----	----		
RHTE Plus Measurement - 0	lbf	Before	----	----	----	----		
HTEN Gain - 0		Before	----	----	----	----		
HTEN Offset - 0	lbf	Before	----	----	----	----		

Company:	Noble Energy, Inc	Schlumberger
Well:	Marie D04-74-1HN	
Field:	Wattenberg	
County:	Weld	
State:	Colorado	
Platform Express		
Hi-Res Triple Combo		
Rush Print		