

Company: WPX ENERGY ROCKY MOUNTAIN, LLC

Well: CMU 323-33

Field: KOKAPELA

County: GARFIELD State: COLORADO

County: GARFIELD
Field: KOKAPELA
Location: SHL: 1762' FNL & 2614' FWL
Well: CMU 323-33
Company: WPX ENERGY ROCKY MOUNTAIN, LLC

***PLATFORM EXPRESS *** *MD*
COMPENSATED NEUTRON, LITHO-DENSITY
INDUCTION RESISTIVITY, GR, SP

Location:		SHL: 1762' FNL & 2614' FWL BHL: 2186' FNL & 1986' FWL	Elev. K.B. 7252.00 ft G.L. 7226.00 ft D.F. 7251.00 ft
Permanent Datum:	Ground Level	Kelly Bushing	Elev.: 26.00 ft above Perm.Datum
Log Measured From:	Kelly Bushing		
Drilling Measured From:	Kelly Bushing		
API Serial No.	Section:	Township:	Range:
05-045-22056-00	33	6S	90W

Logging Date	02-Sep-2013				
Run Number	TWO				
Depth Driller	10816.00 ft				
Schlumberger Depth	10827.00 ft				
Bottom Log Interval	10820.00 ft				
Top Log Interval	85.50 ft				
Casing Driller Size @ Depth	9.625 in @ 1163.00 ft				
Casing Schlumberger	1162.5 ft				
Bit Size	8.75 in				
Type Fluid In Hole	LSND				
MUD	Density	10.6 lbm/gal	38 s		
	Fluid Loss	PH	9.1		
	Source of Sample	Active Tank			
RM @ Meas Temp	1.6 ohm.m @ 75 degF				
RMF @ Meas Temp	1.24 ohm.m @ 75 degF				
RMC @ Meas Temp	2 ohm.m @ 75 degF				
Source RMF	RMC	Calculated	Calculated		
RM @ BHT	RMF @ BHT	0.57 @ 223.4	0.44 @ 223.4		
Max Recorded Temperatures					
Circulation Stopped		Time	21:30:00		
Logger on Bottom		Time	11:54:00		
Unit Number	Location:	2276	VERNAL		
Recorded By	KEVIN CROW				
Witnessed By	GARY VALLAD				

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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Operational Run Summary

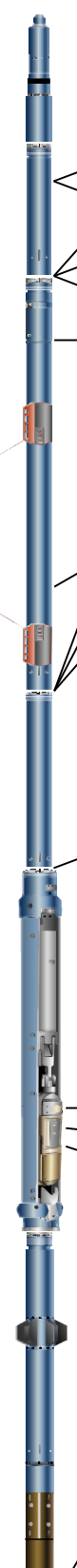
Parameter (unit)	TWO					
Date Log Started	02-Sep-2013					
Time Log Started	10:30:55					
Date Log Finished	02-Sep-2013					
Time Log Finished	15:16:46					
Top Log Interval (ft)	85.50					
Bottom Log Interval (ft)	10820.00					
Total Depth (ft)	10827.00					
Max Hole Deviation (deg)	0.00					
Azimuth of Max Deviation (deg)	0.00					
Bit Size (in)	8.750					
Logging Unit Number	2276					
Logging Unit Location	VERNAL					
Recorded By	KEVIN CROW					
Witnessed By	GARY VALLAD					
Service Order Number	CAU6-00058					

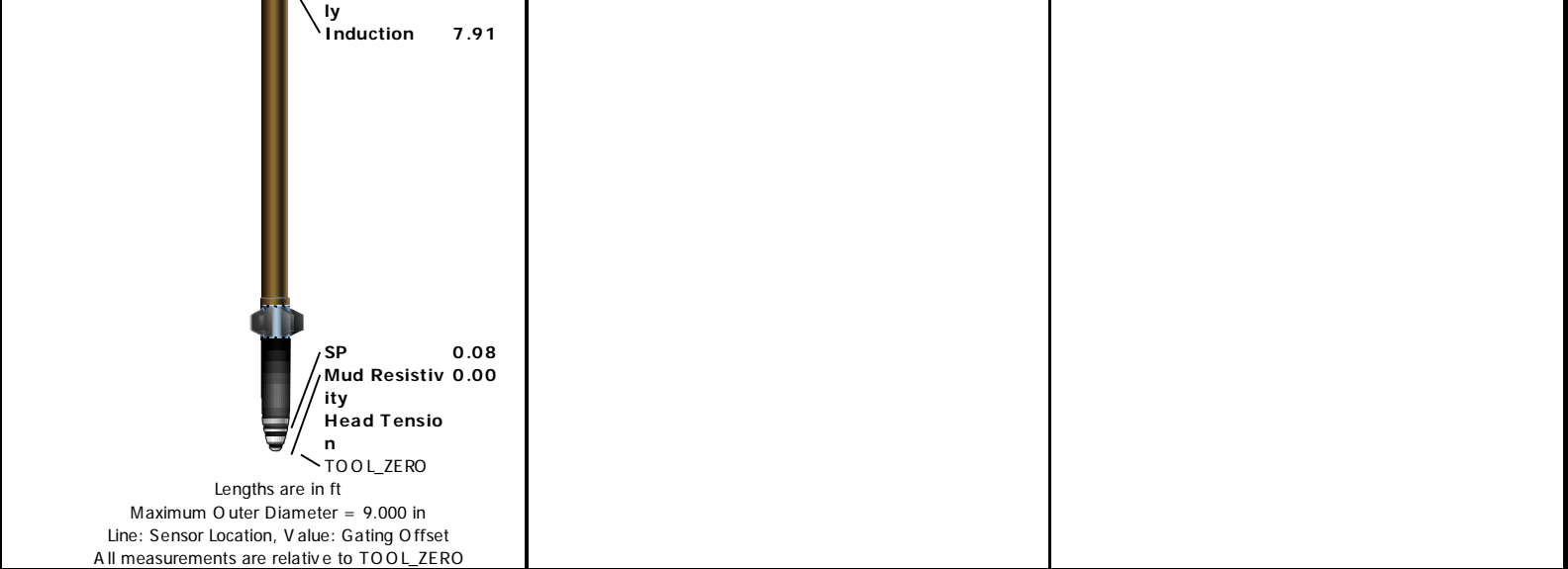
Borehole Fluids

Parameter(unit)	TWO					
Fluid Type	Water					
Fluid Name	LSND					
Max Recorded Temperatures (degF)	223.4					
Source of Sample	Active Tank					
Salinity (ppm)	3395.26					
Density (lbm/gal)	10.6					
Funnel Viscosity (s)	38					
Fluid Loss (cm3)						
PH	9.1					
Date/Time Circulation Stopped	01-Sep-2013 21:30:00					
Date Logger on Bottom	02-Sep-2013					
Time Logger on Bottom	11:54:00					
Source RMF	Calculated					
RMC	Calculated					
RM @ Meas Temp (ohm.m@degF)	1.6 @ 75					
RMF @ Meas Temp (ohm.m@degF)	1.24 @ 75					

RMC @ Meas Temp (ohm.m@degF)	2 @ 75				
RM @ BHT (ohm.m@degF)	0.57 @ 223.4				
RMF @ BHT (ohm.m@degF)	0.44 @ 223.4				
RMC @ BHT (ohm.m@degF)	0.71 @ 223.4				
Total Solid (%)					
High Gravity Solids (%)					

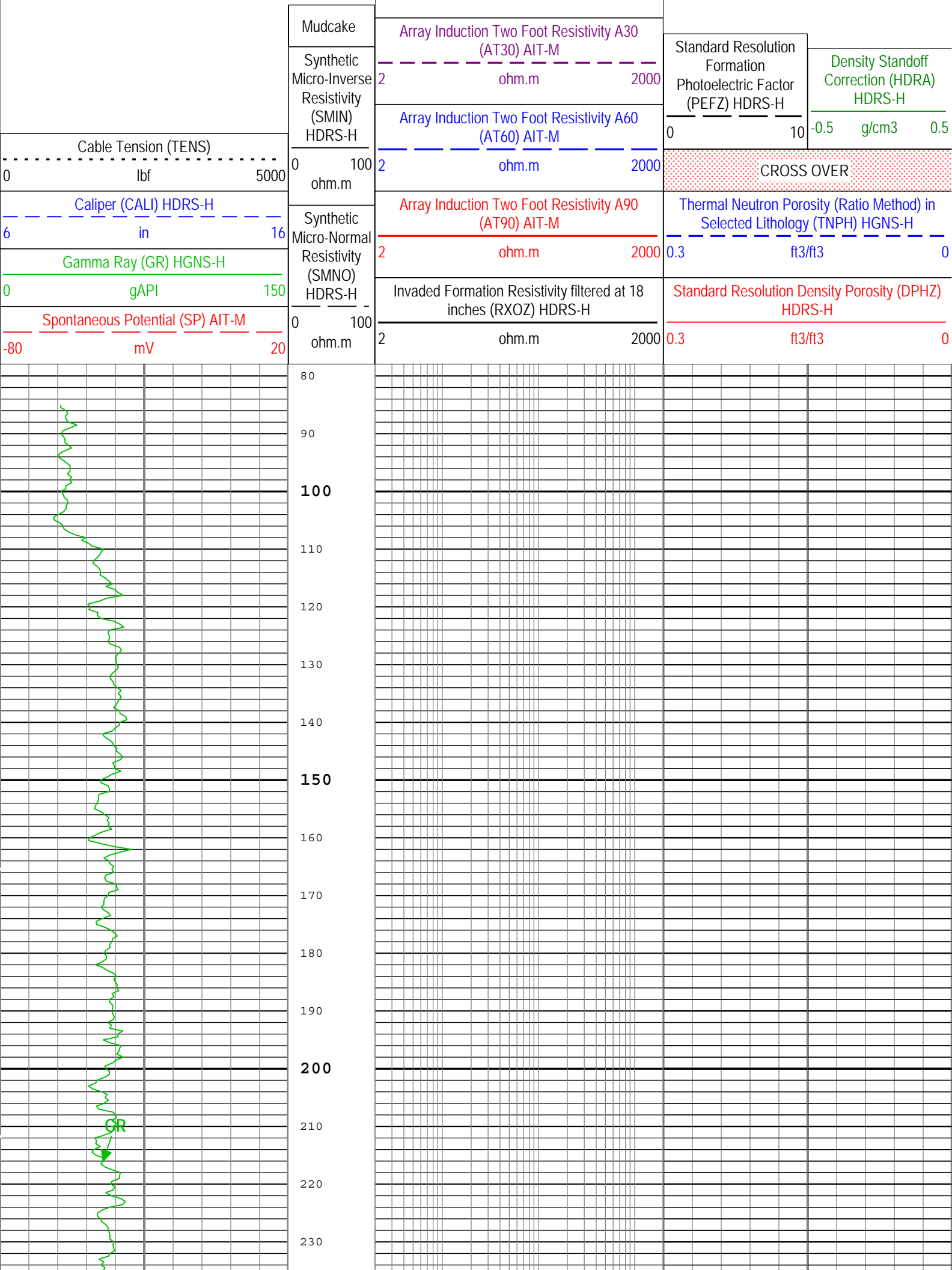
Remarks and Equipment Summary

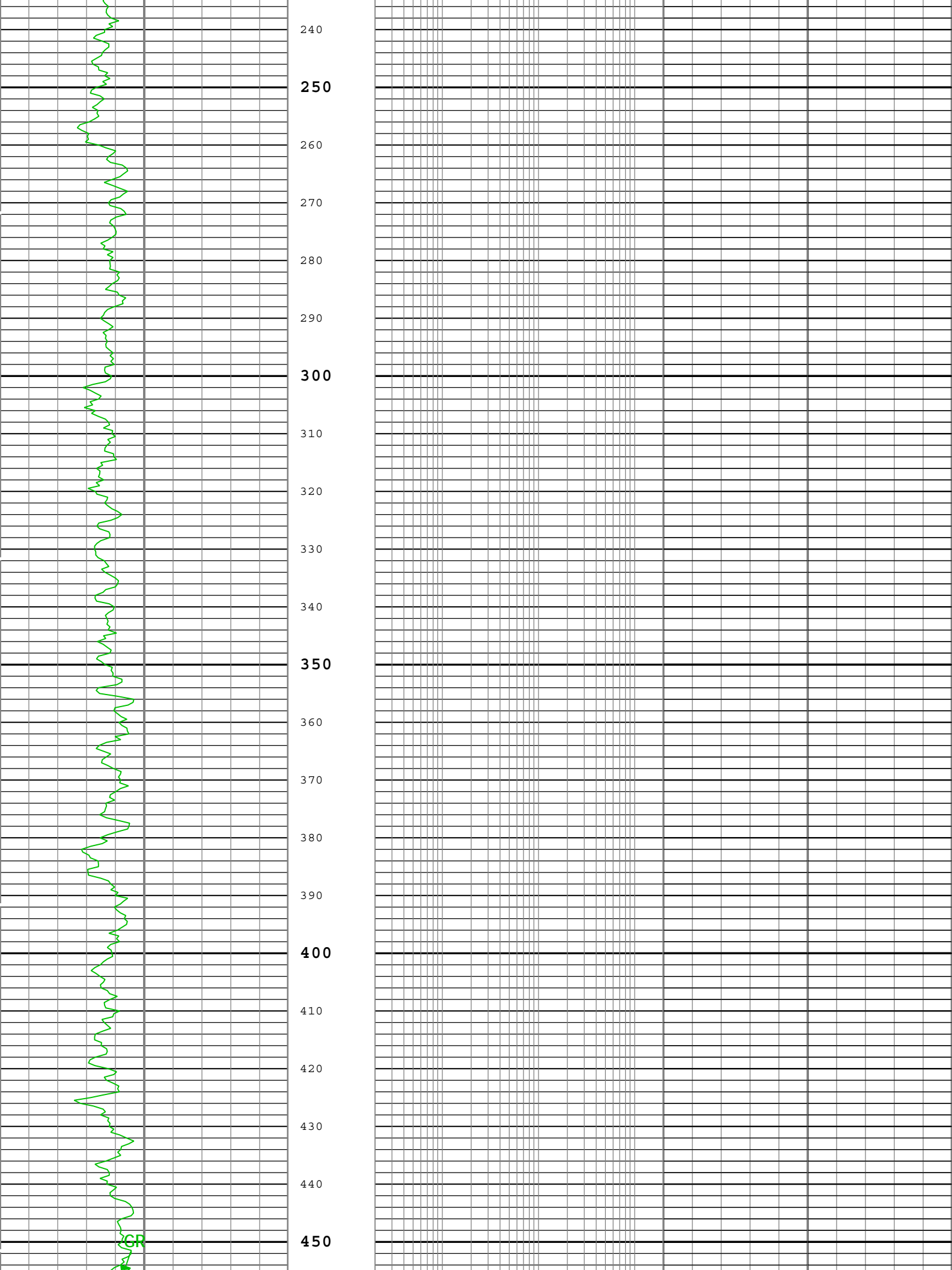
TWO: Toolstring				TWO: Remarks	
Equip name LEH-QT LEH-QT	Length 43.57	 MP name	Offset	THANK YOU FOR CHOOSING SCHLUMBERGER	
				CREW: KEVIN CROW, RON MORRIL, LUKE VEDDER	
DTC-H ECH-KC DTC-H	40.65	CTEM HV	39.75 0.00	ALL TOOLS RAN AS PER TOOL SKETCH	
				BOWSPRING RAN ON HGNS AND 1" STANDOFFS ON AIT	
HGNS-H:3799 HGNH:2795 NSR-F:5138 NPV-N HACCZ-H:1614 HMCA-H HGNS-H:3799	37.65	ToolStatus TelStatus Temperature GR	37.65 37.65 37.62 36.91	NEUTRON LOGGED USING SANDSTONE MATRIX, MDEN=2.68	
				HOLE SIZE CORRECTION AND STANDOFF CORRECTION APPLIED TO NEUTRON PROSITY	
HDRS-H:3969 ECH-MEB:3914 HRCC-H:4881 HRMS-H:3969 Long Spacing:28 642 GPV-Q Short Spacing:27 727 GSR-J:5234 Backscatter HRGD-H:4700	28.24	CNL Porosit y HMCA HGNS Accelerometer	30.57 28.24 28.24 0.00	AIT RAN IN COMPUTE STANDOFF MODE.	
				MAX TEMPERATURE TAKING FROM HGNS TEMPERATURE SENSOR = 223.4 F	
AIT-M:117 AMIS:117 AMRM:117	16.00	HRCC MCFL Caliper TLD Density	24.24 18.81 18.33 17.94	BOREHOLE CONDITIONS ADVERSELY AFFECT LOG QUALITY	
		Temperature Power Supp	7.91 7.91		

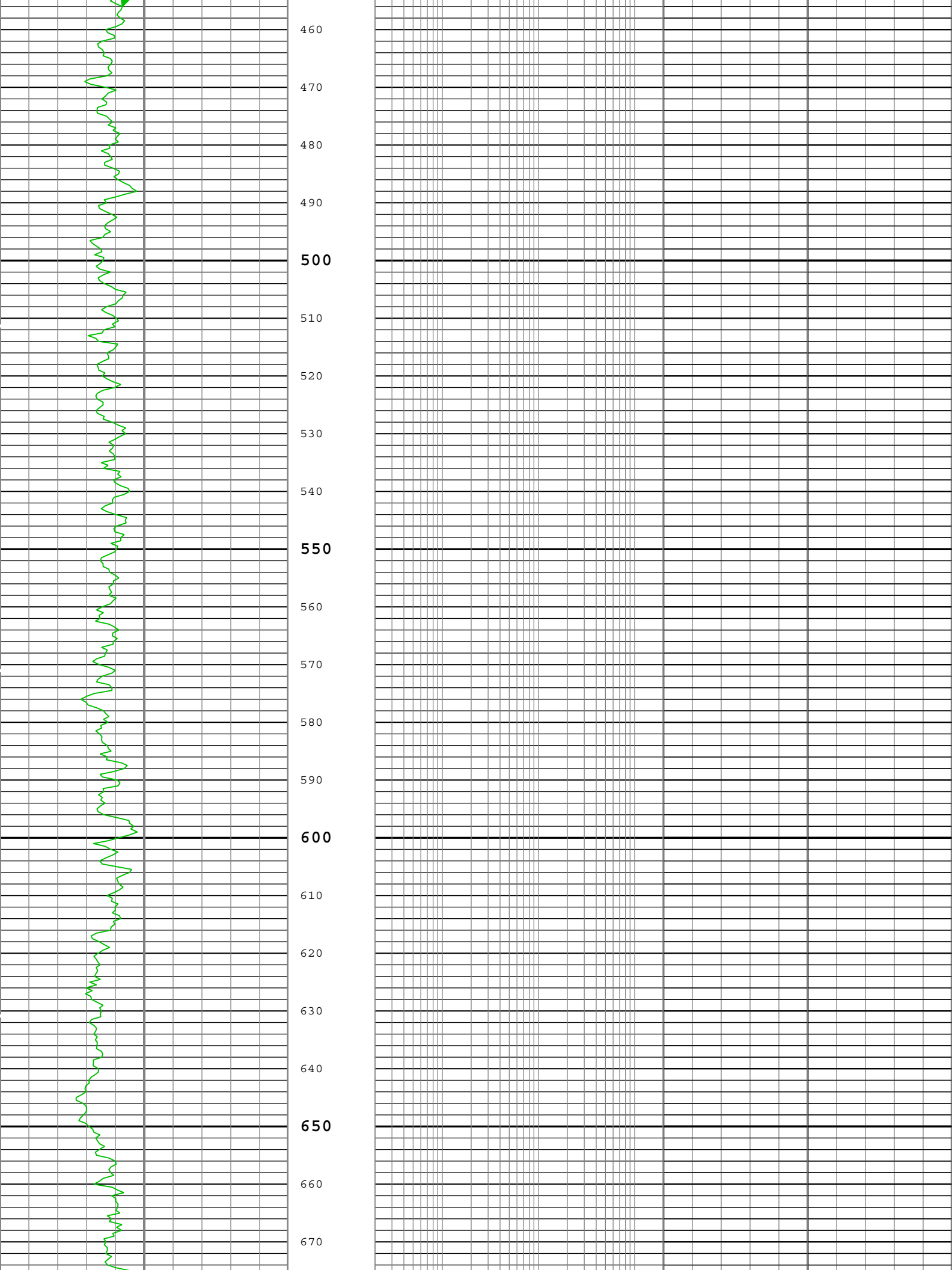


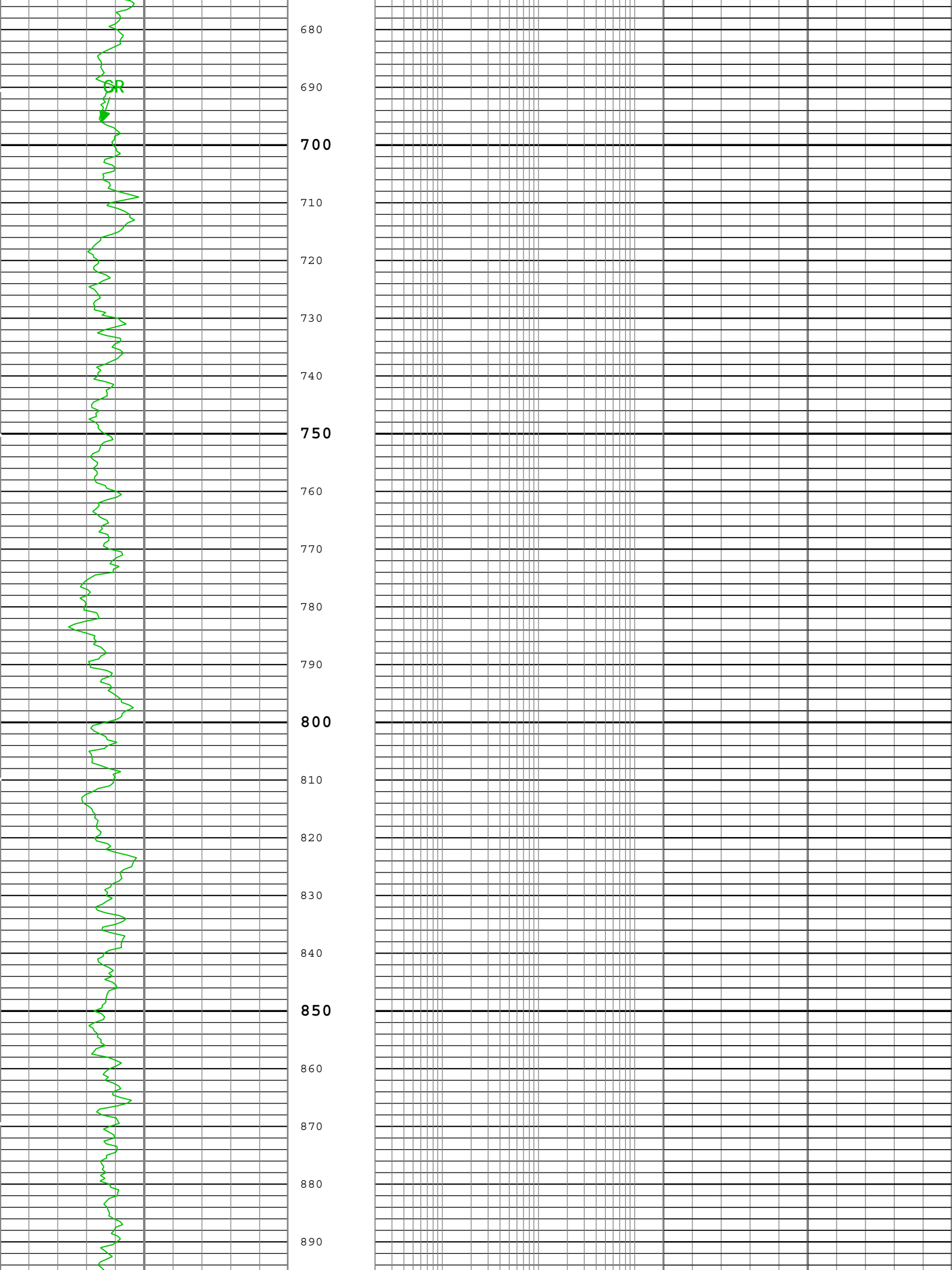
Depth Summary				
Depth Control Parameters		TWO		
Conveyance Type		Wireline		
Log Sequence		SUBSEQUENT RUN IN HOLE		
Depth Remark Parameters		TWO		
Depth Remark 1		ALL SCHLUMBERGER DEPTH CONTROL PROCEDURES FOLLOWED		
Depth Remark 2		IDW USED AS PRIMARY DEPTH CONTROL		
Depth Remark 3		Z-CHART USED AS SECONDARY DEPTH CONTROL.		
Depth Measuring Device		TWO		
Type		IDW-JA		
Serial Number		6380		
Calibration Date		11-MAR-2013		
Calibration Cable Type		7-46 AXS		
Wheel Correction 1		-4		
Wheel Correction 2		-4		
Tension Device		TWO		
Type		CMTD-B/A		
Serial Number		8093		
Calibration Date		13-AUG-2013		
Calibrator Serial Number		100518A		
Calibration Points		10		
Calibration RMS		22		
Calibration Peak Error		35		
Logging Cable		TWO		
Type		7-46A-XS		
Serial Number		U711148		
Logging Cable Length (ft)		19900.00		
TWO				

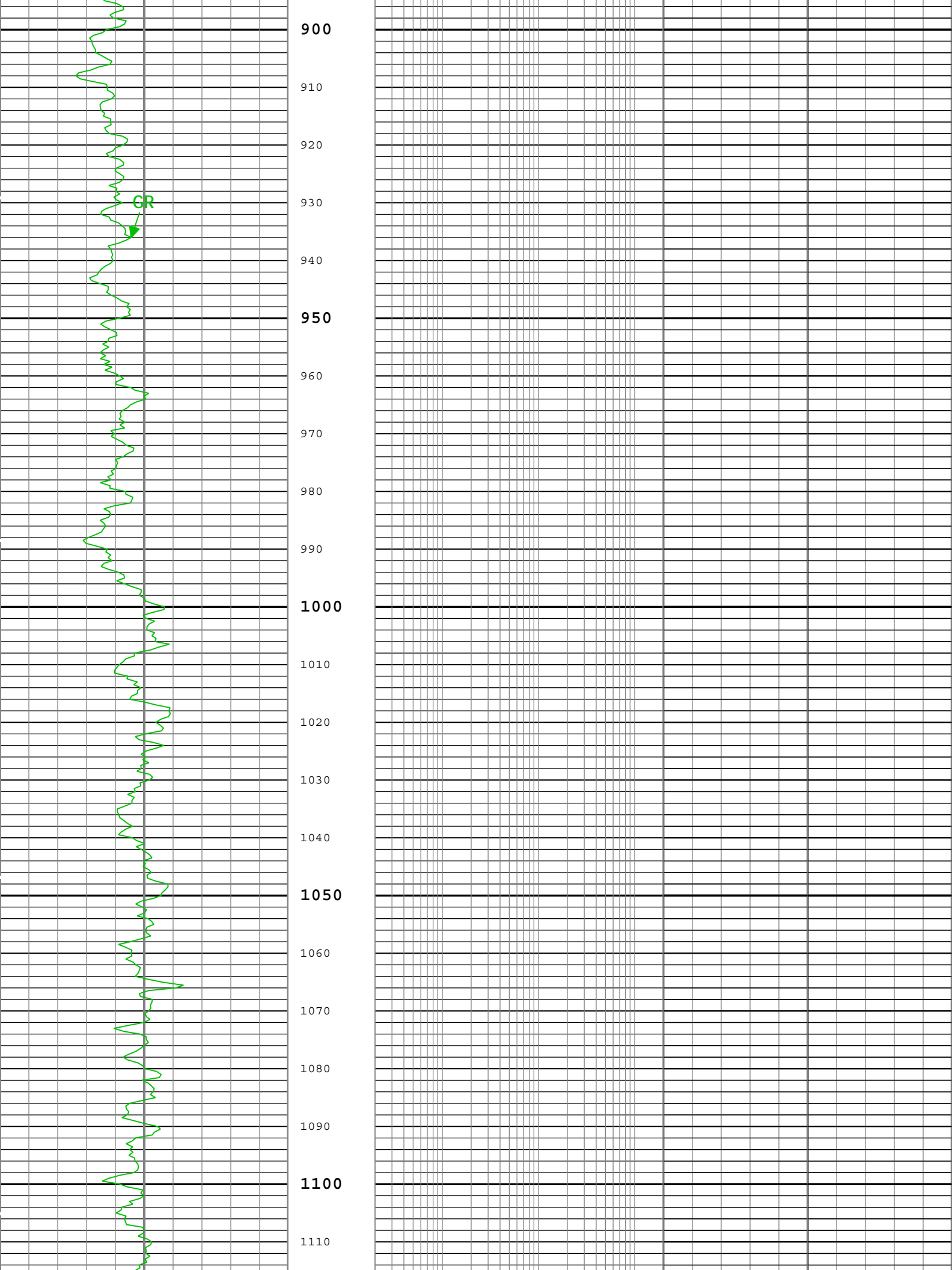
Integration Summary				
Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
IHV	Integrated Hole Volume	GCSE UP PASS	4486.07	ft3

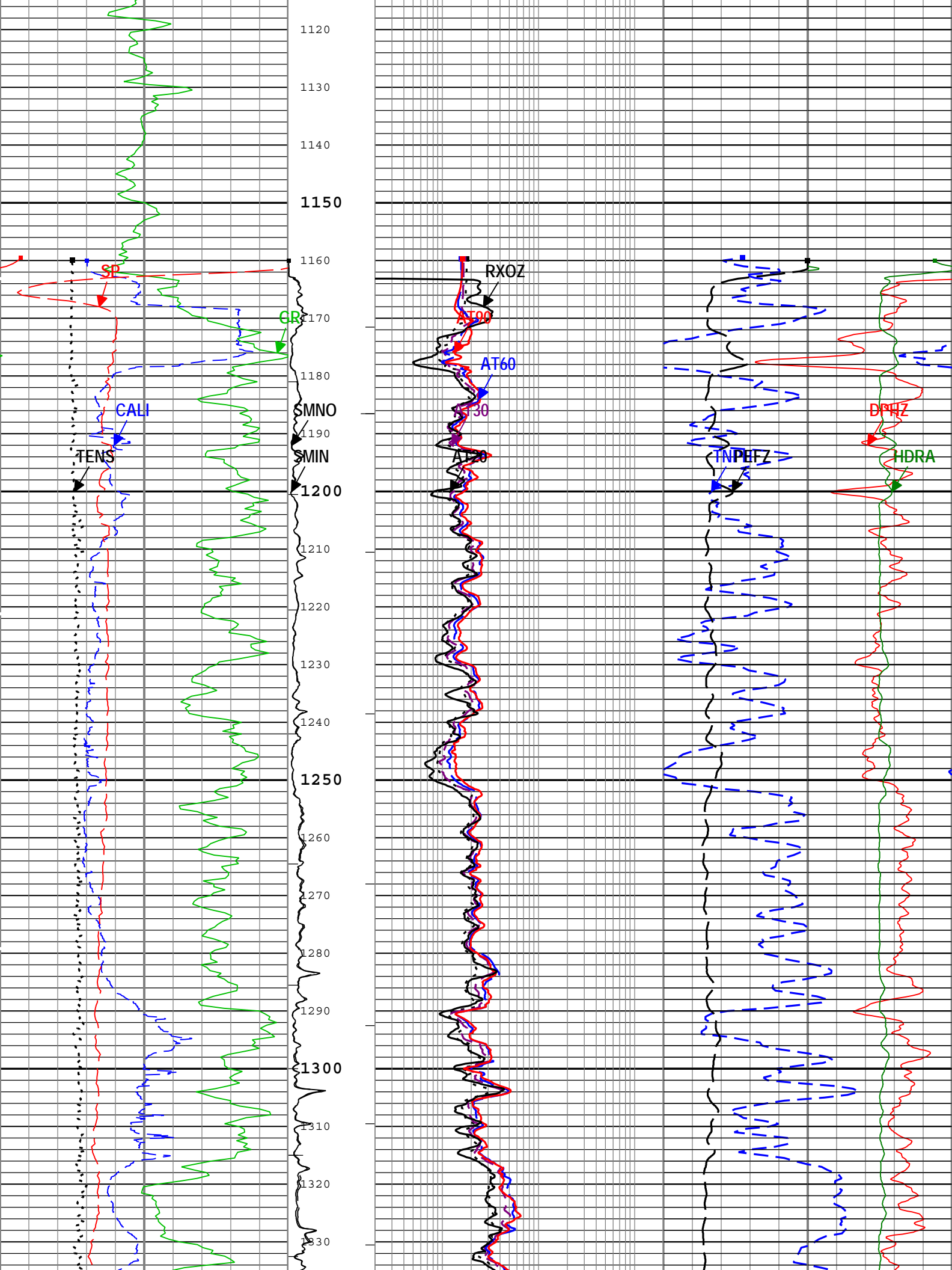


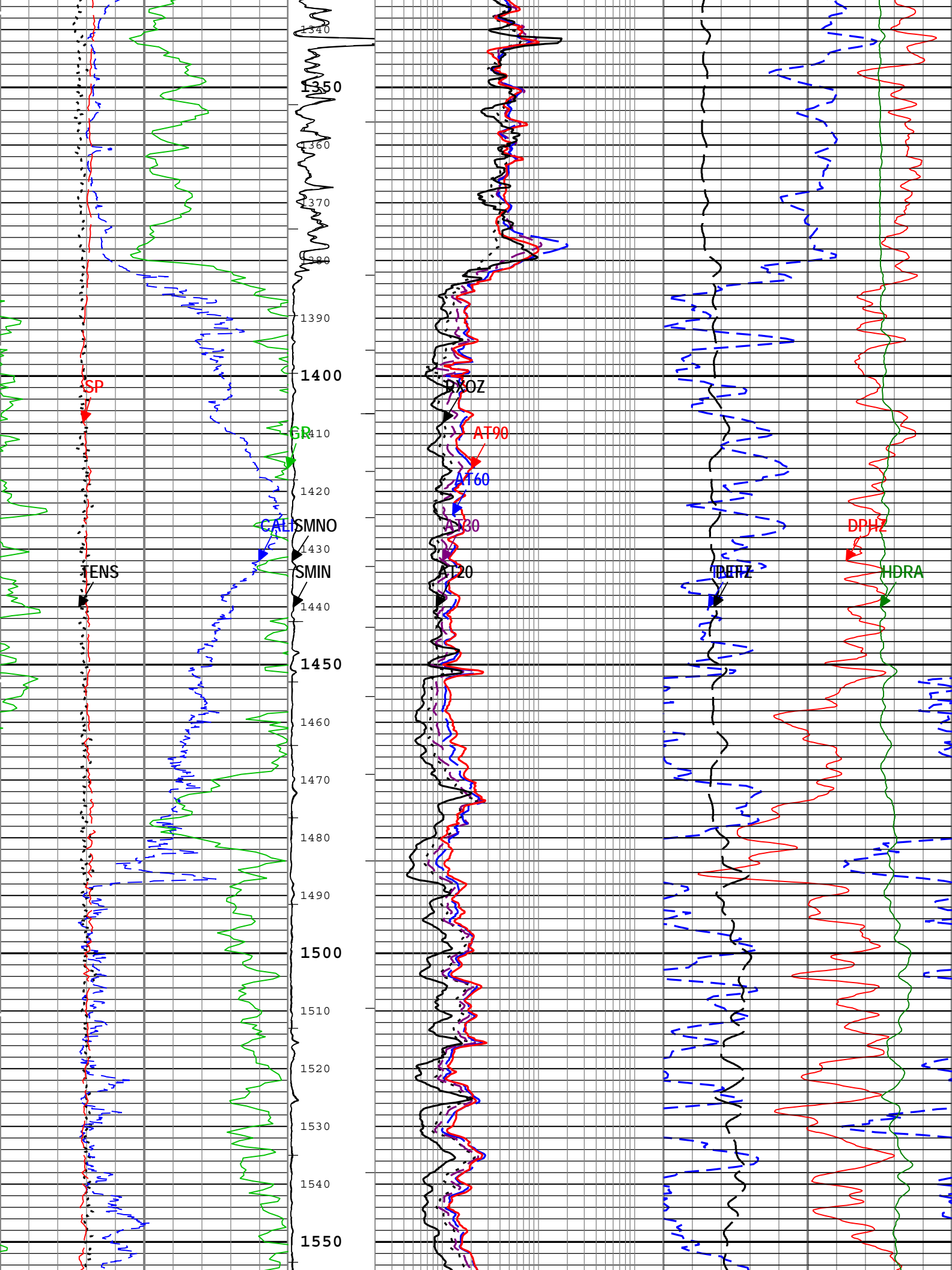


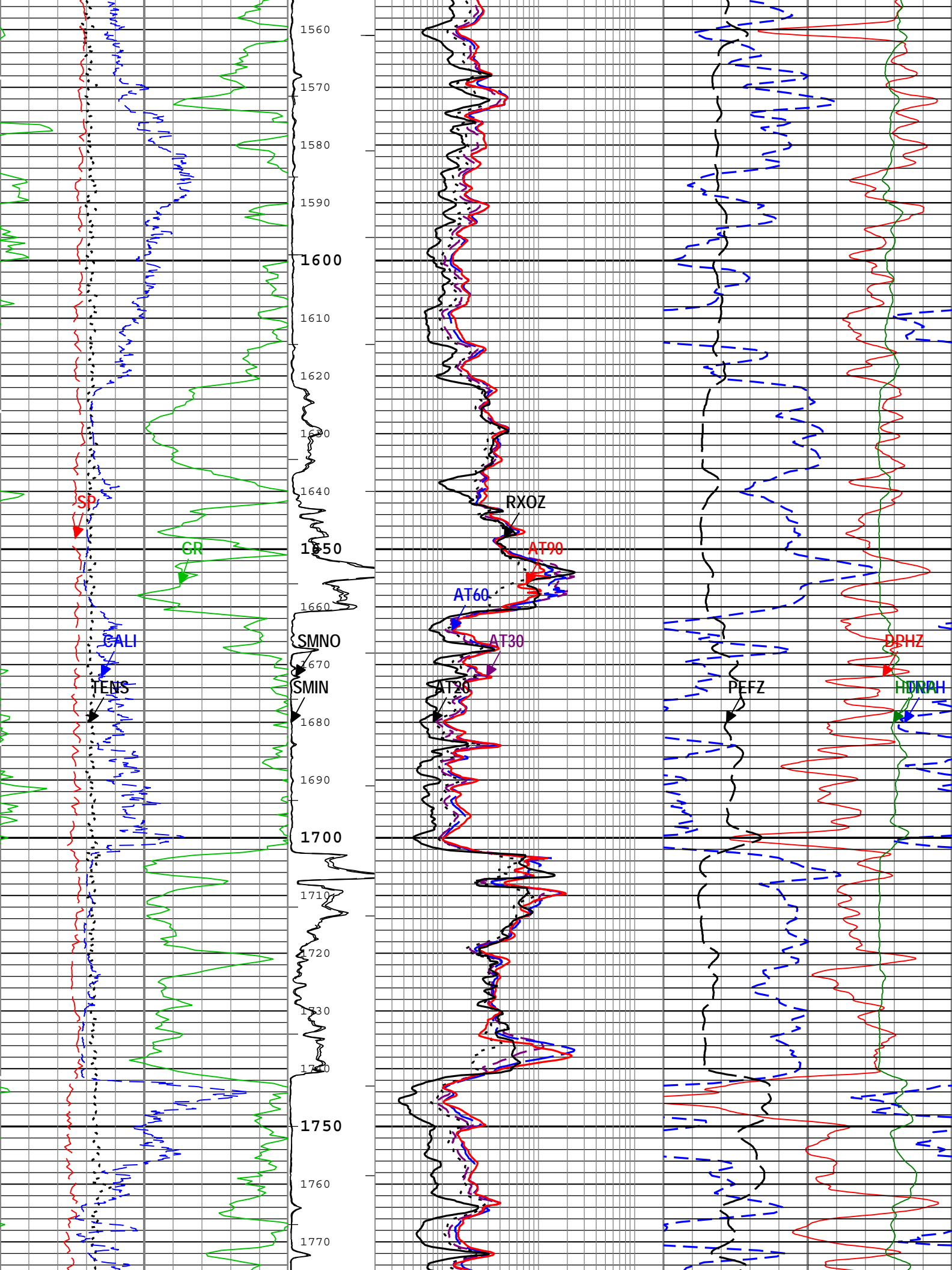


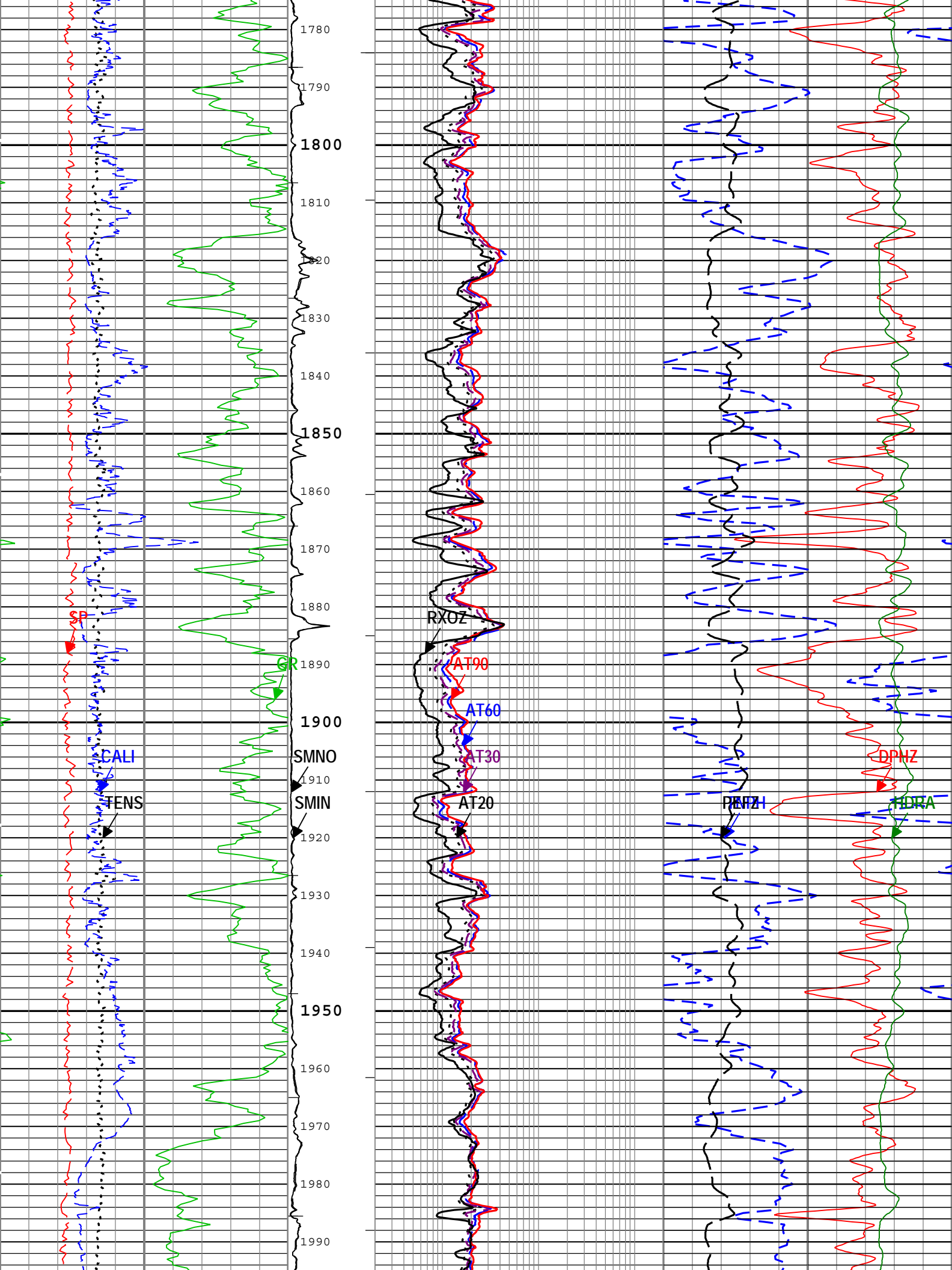


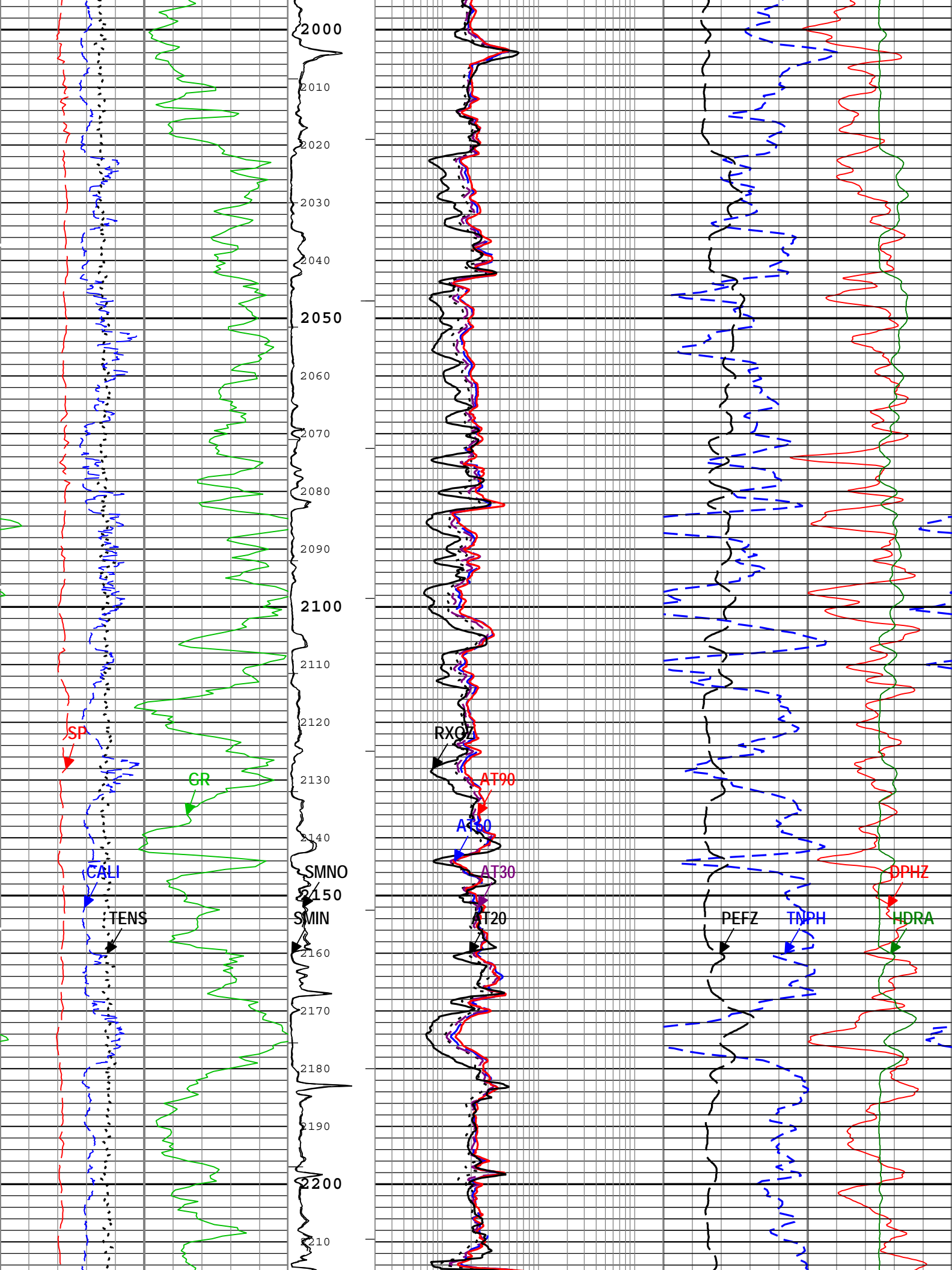


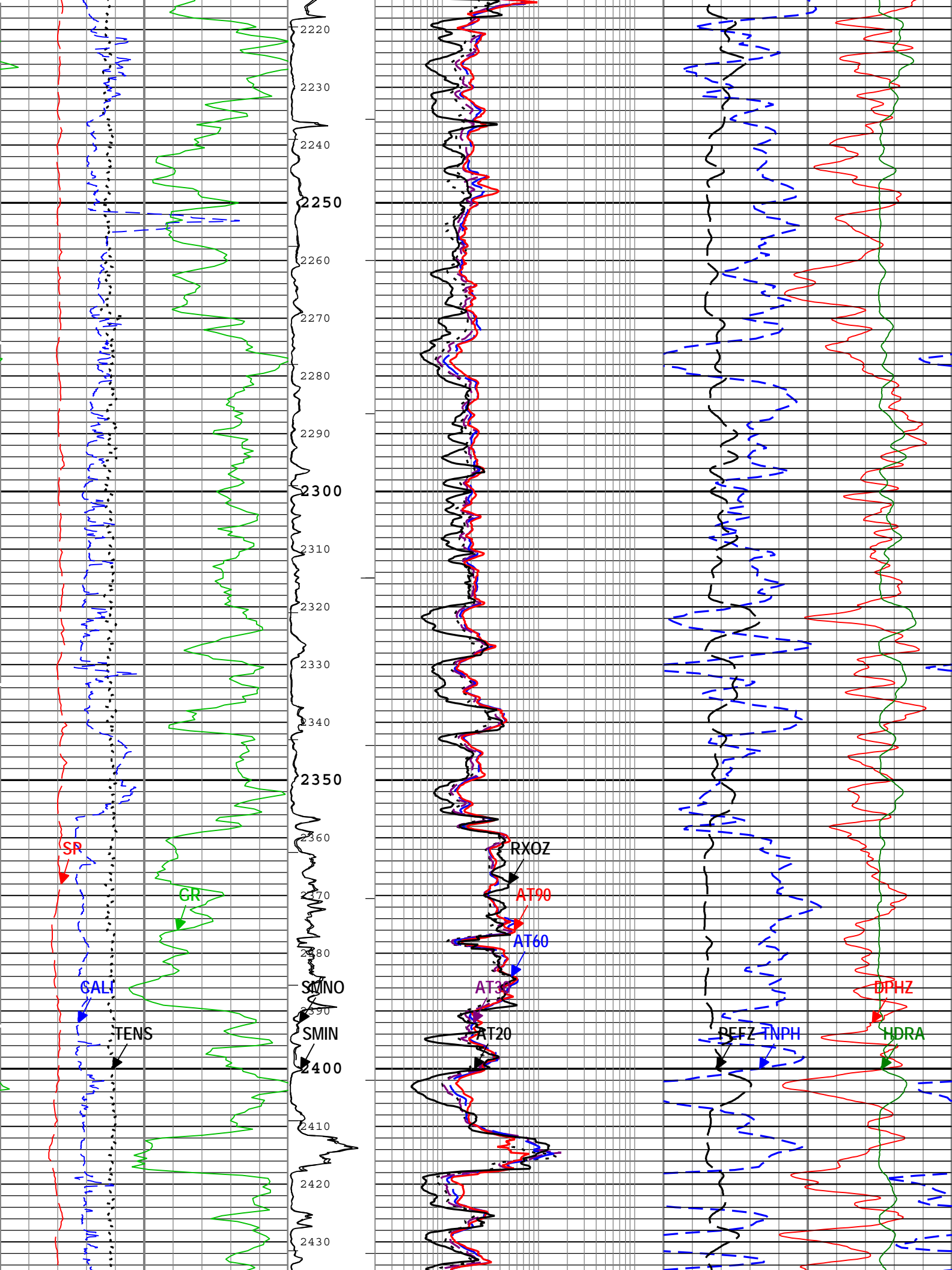


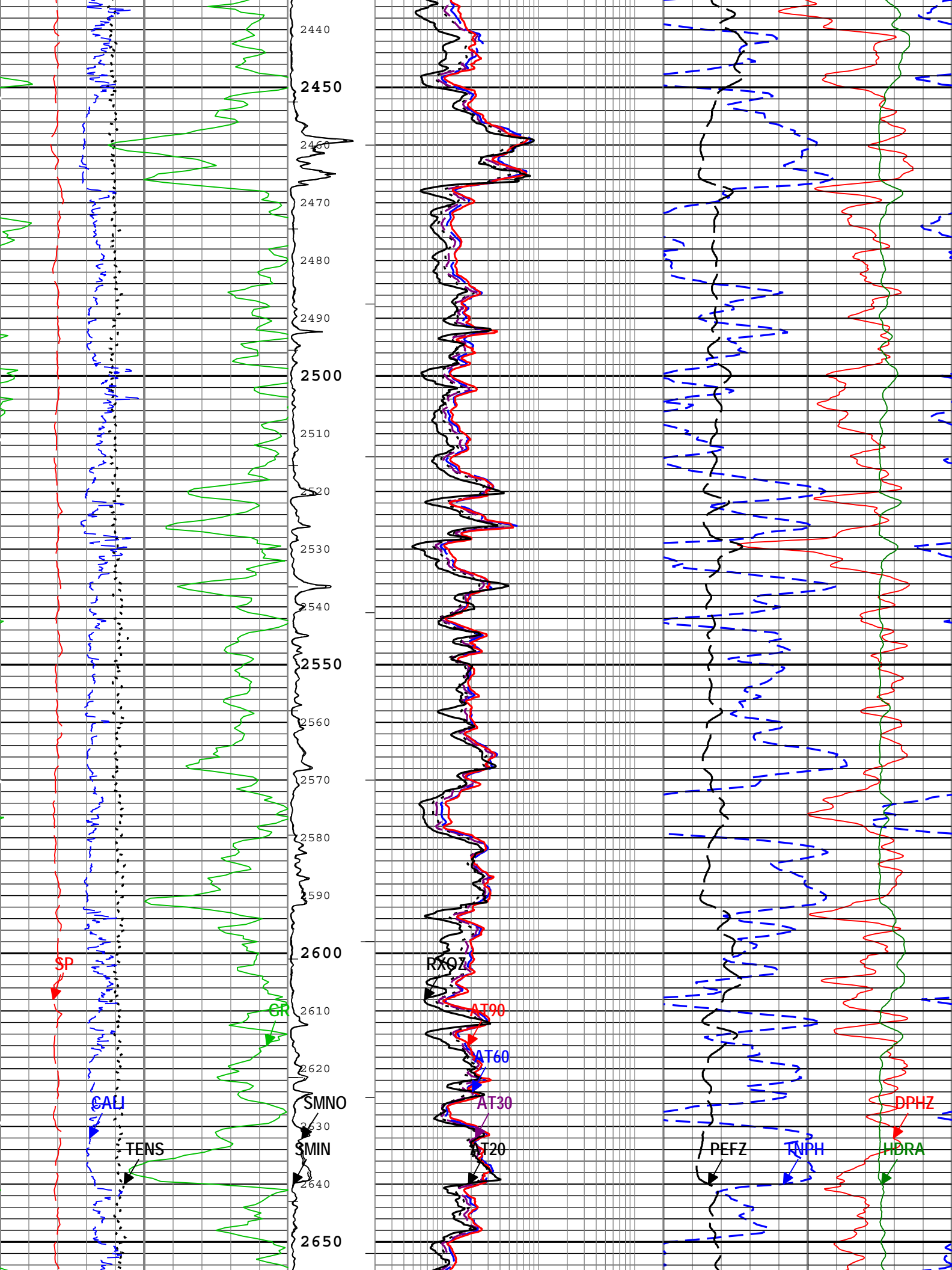


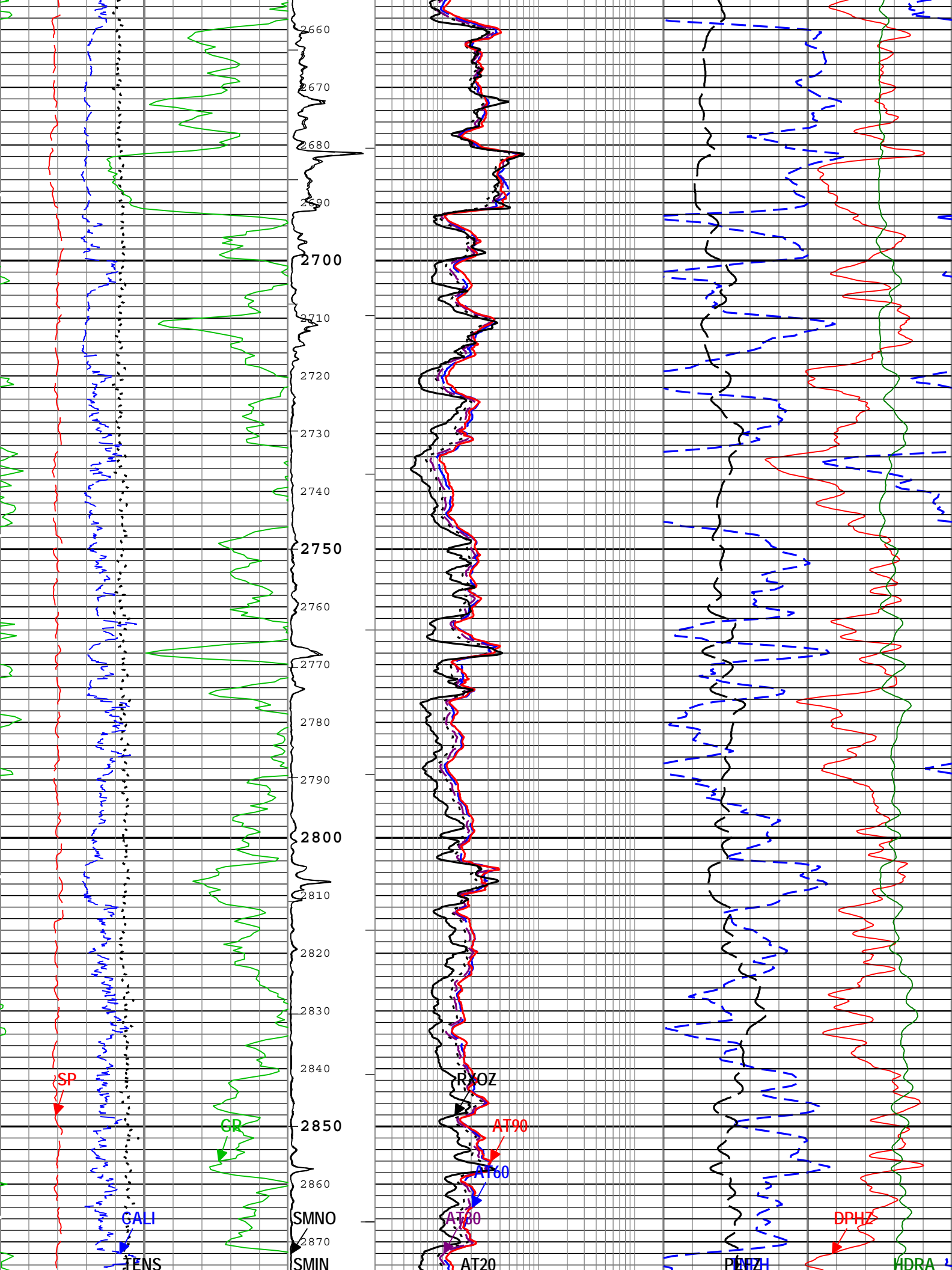


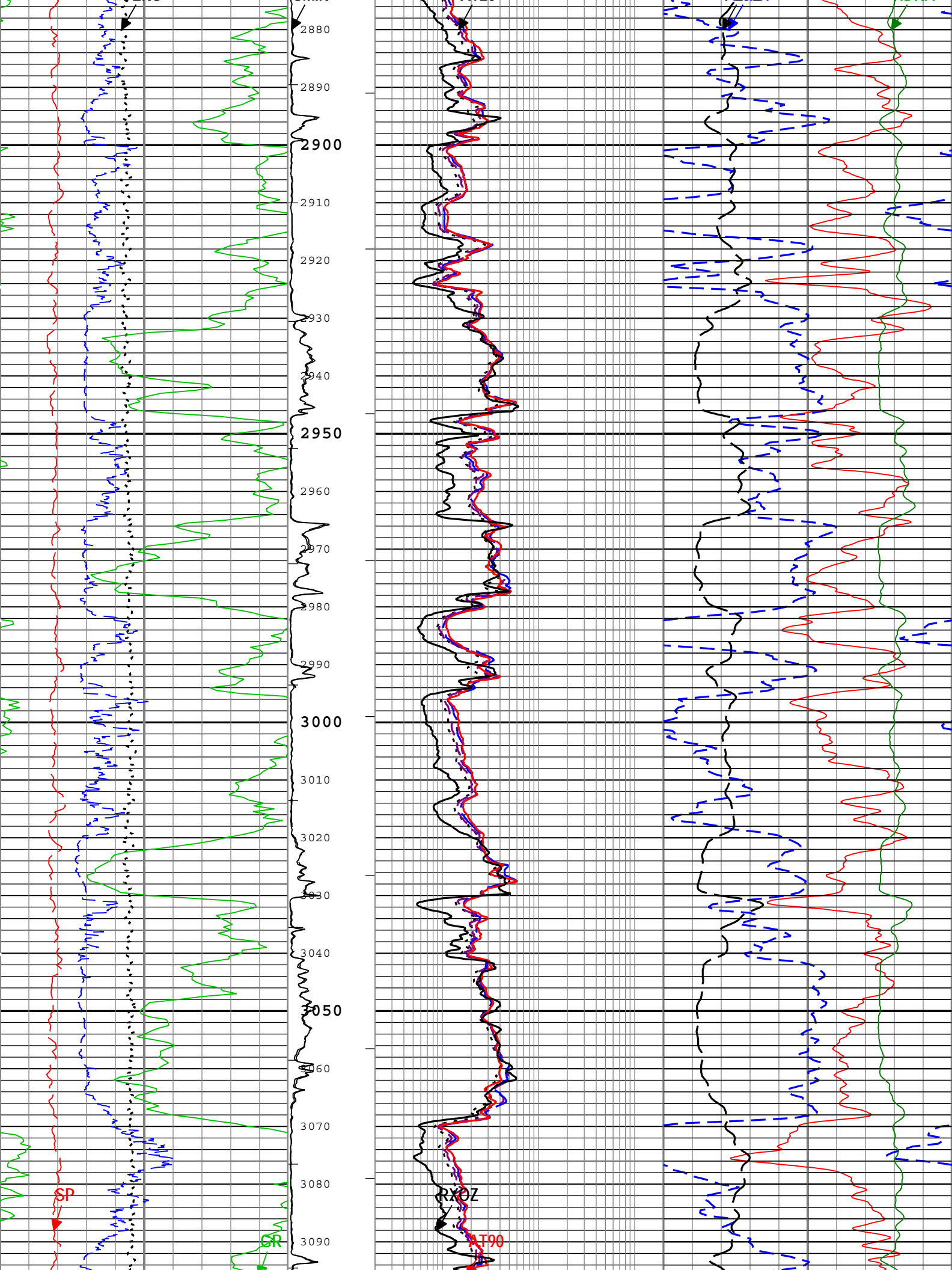


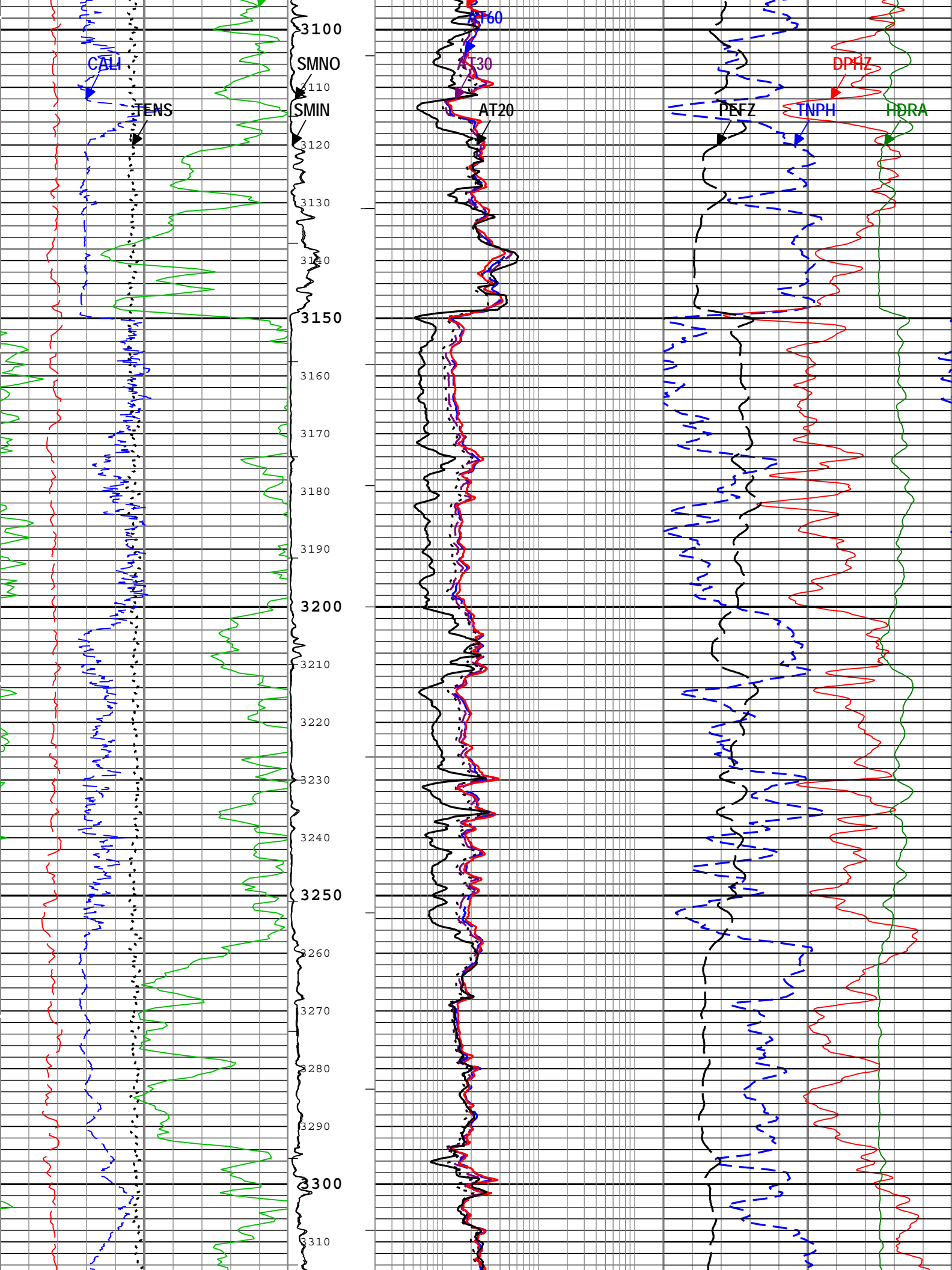


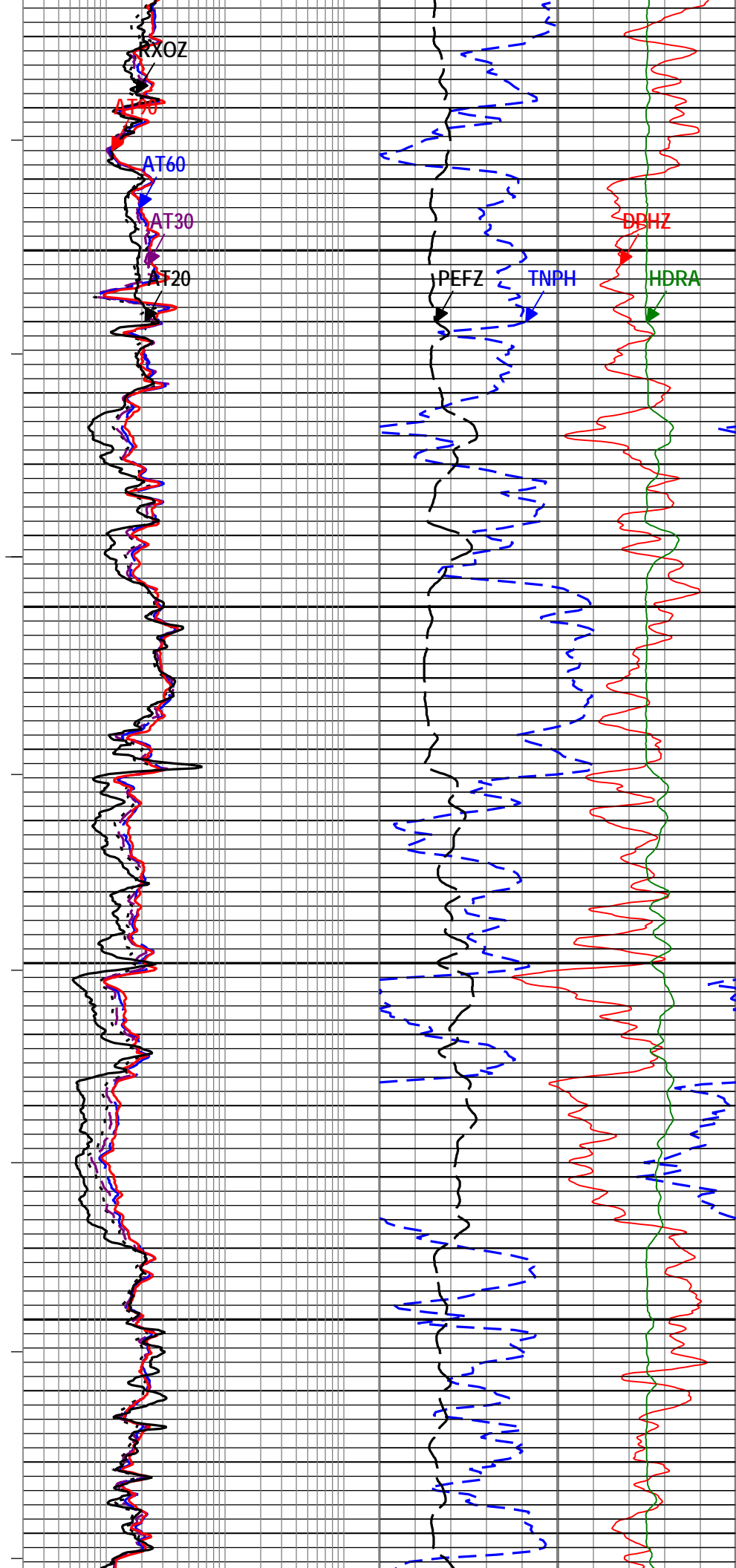
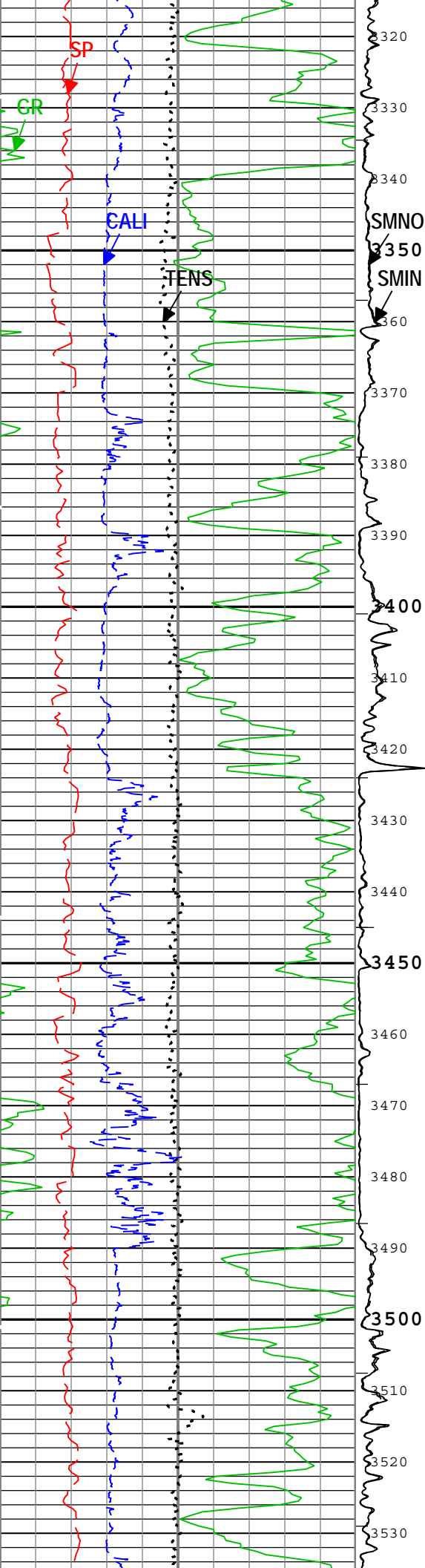


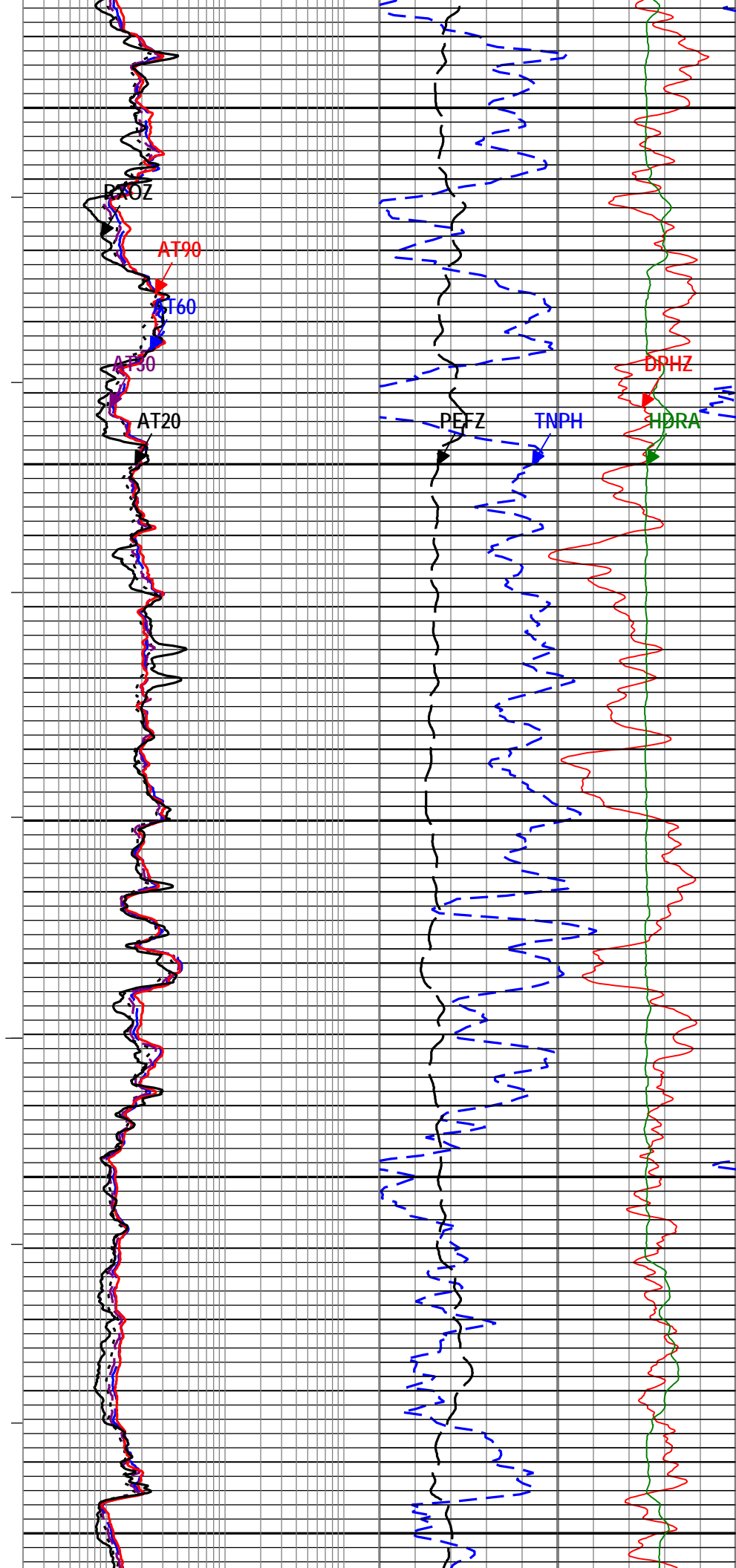
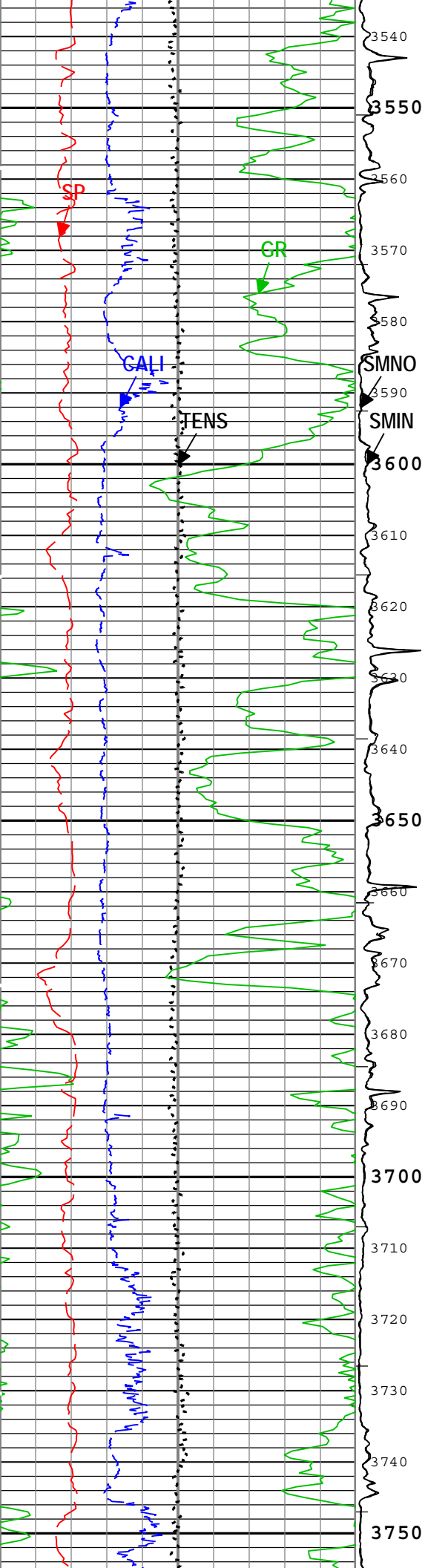


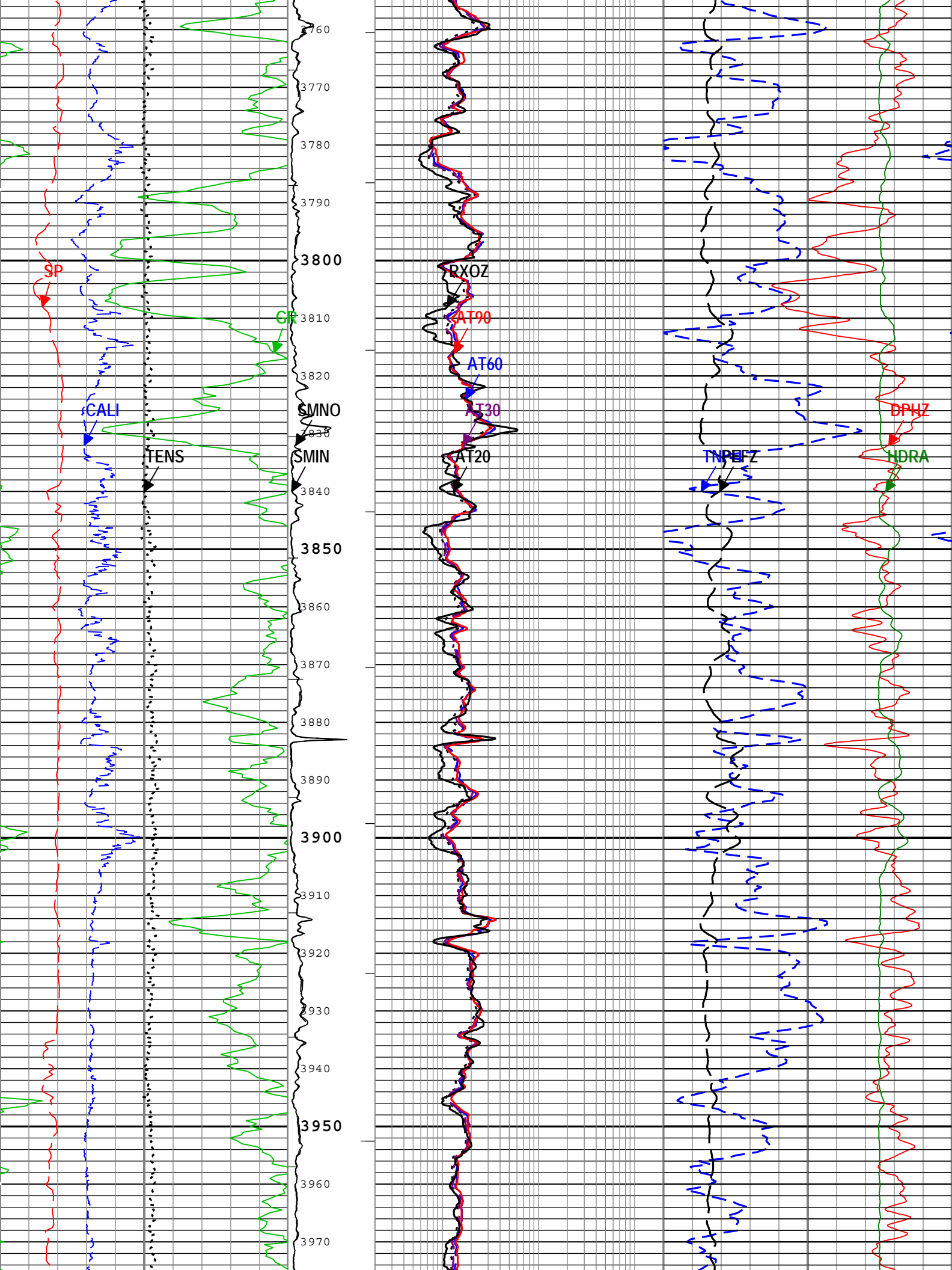


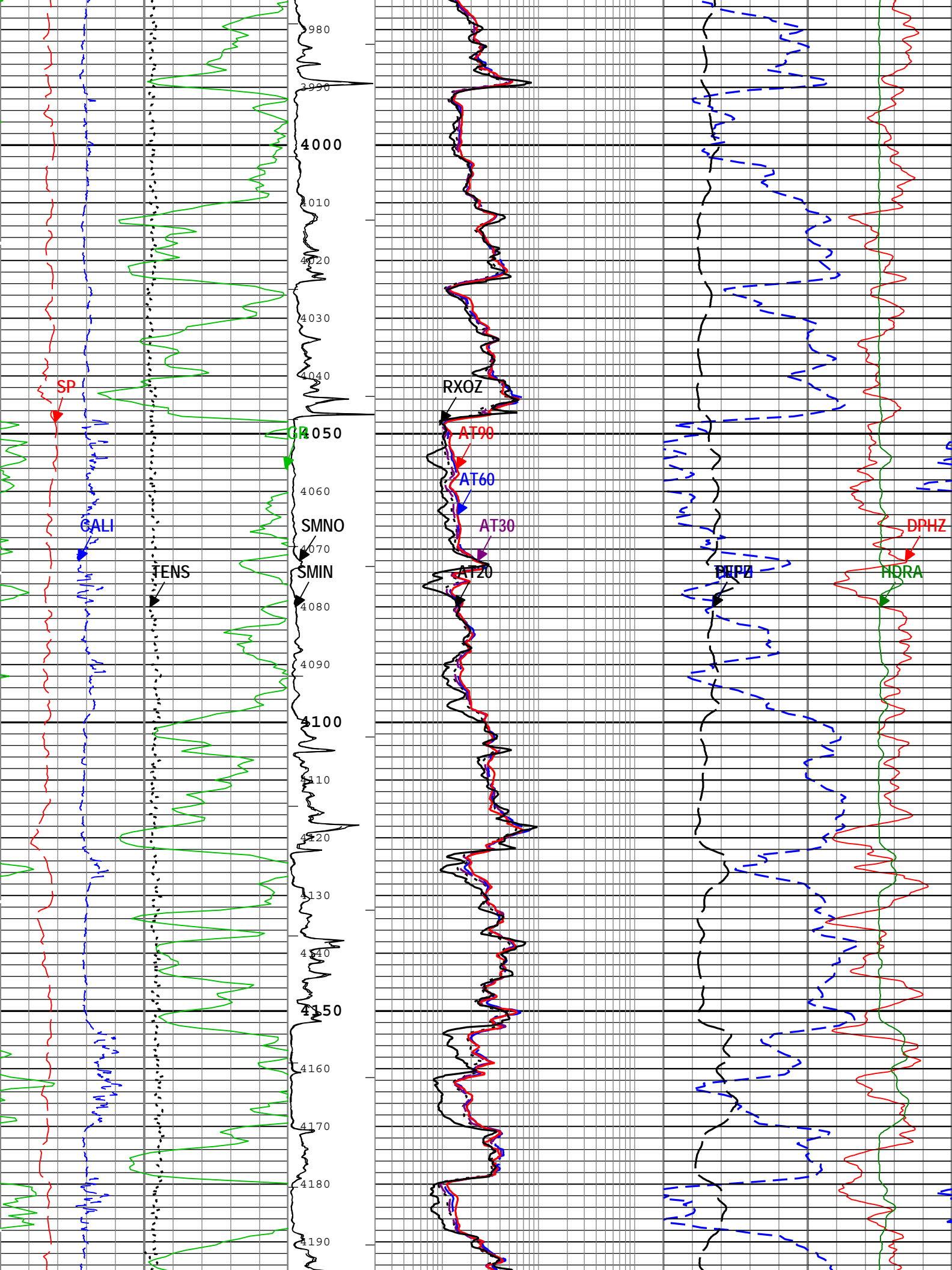


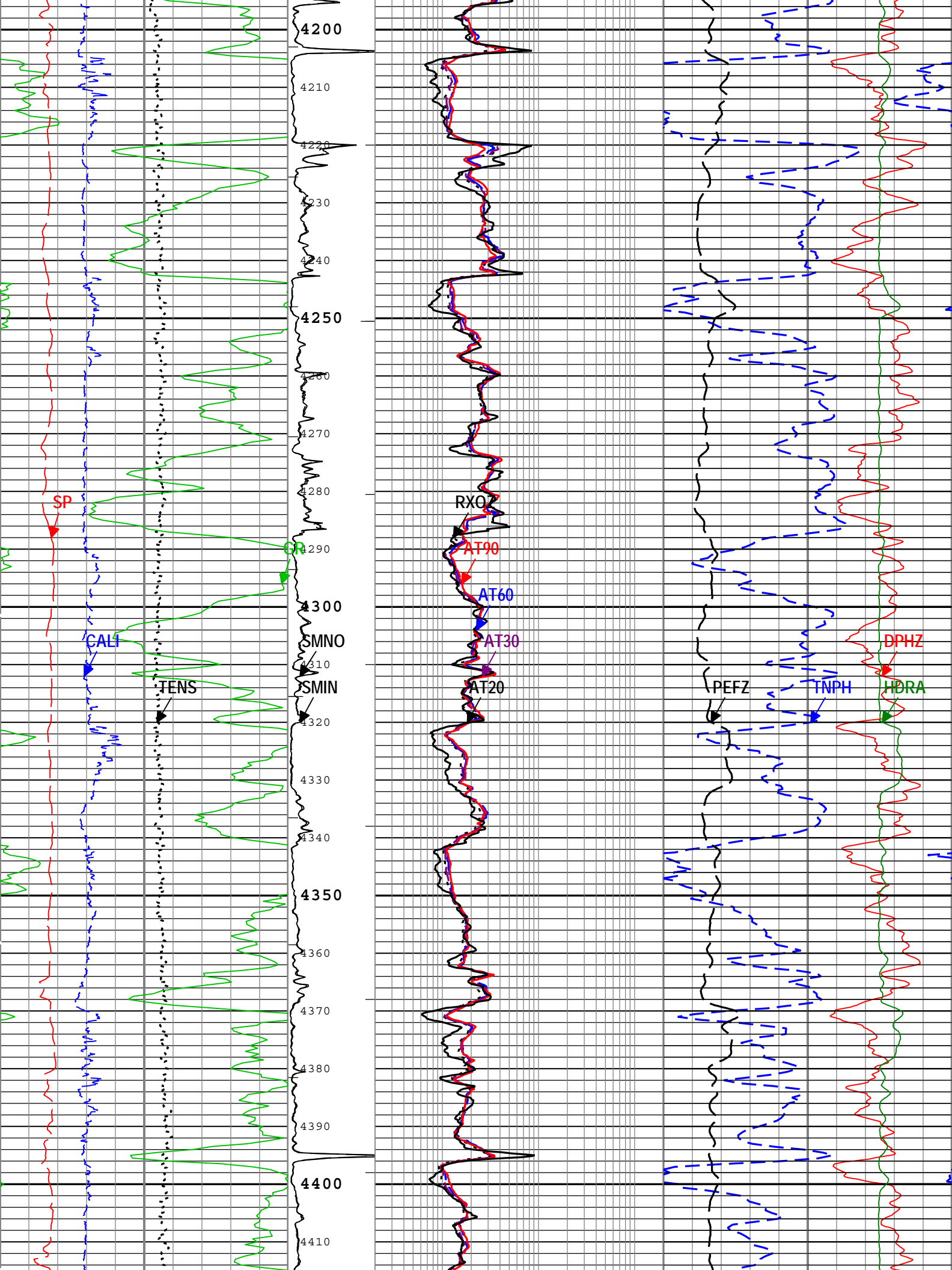


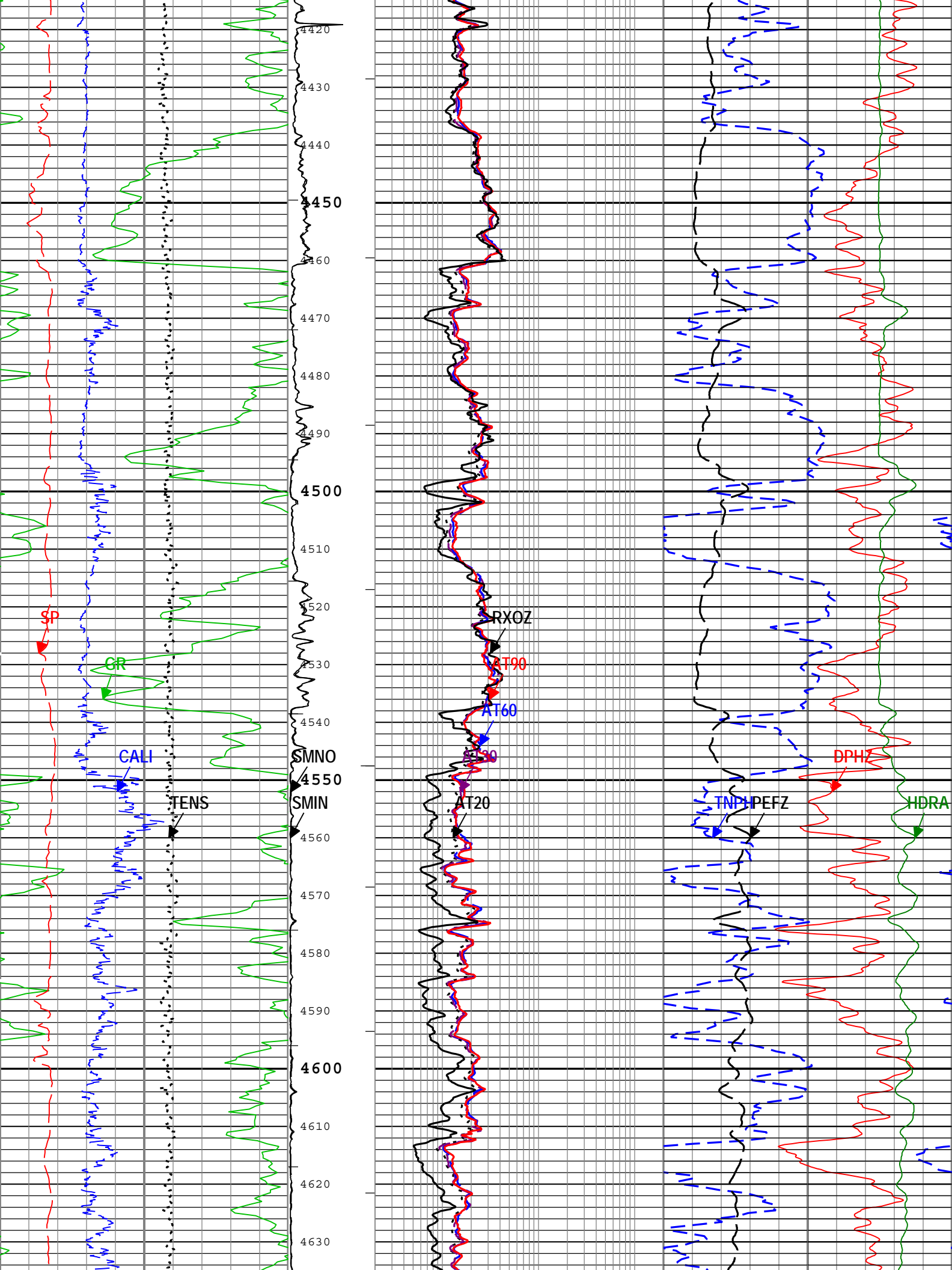


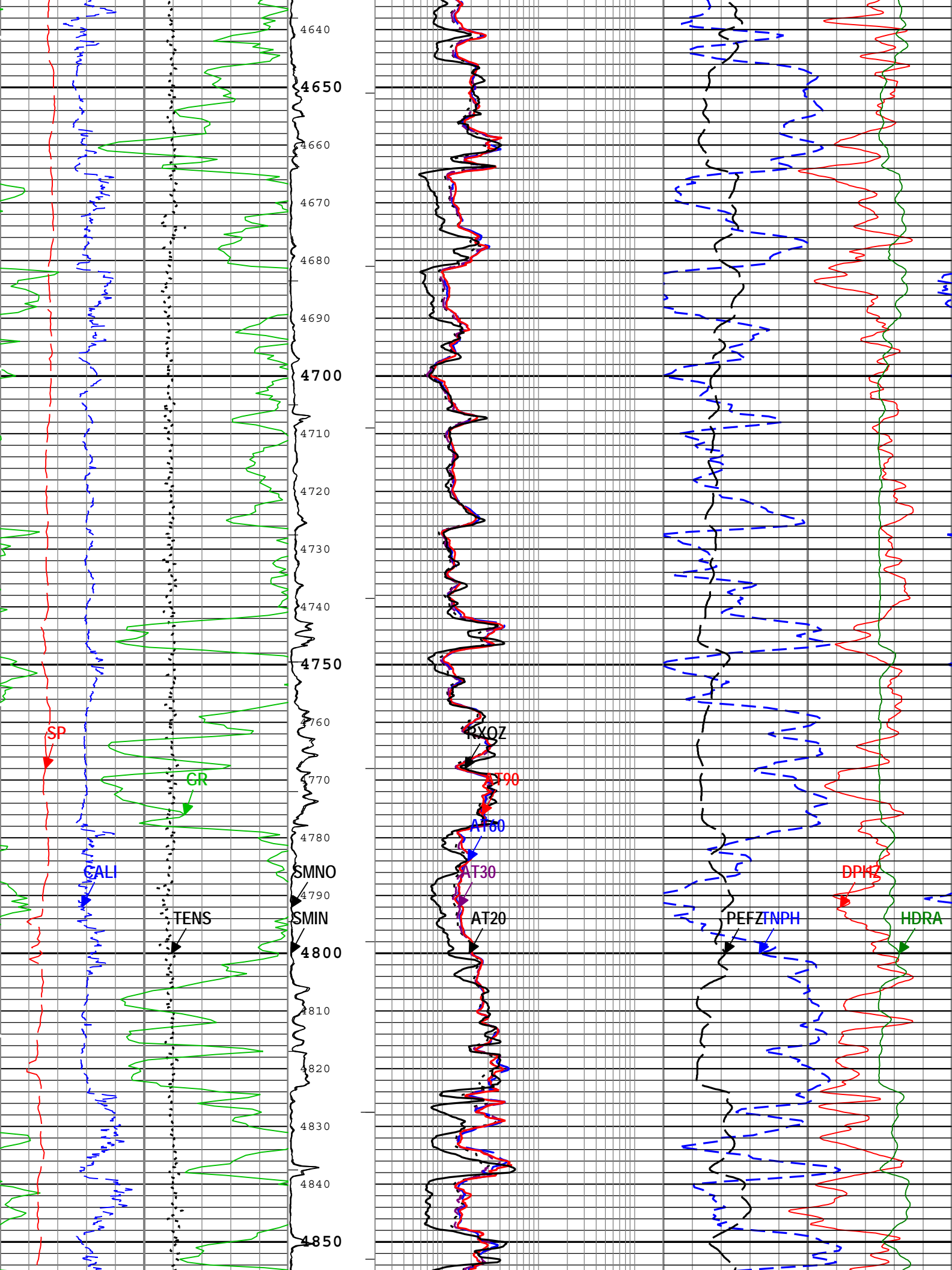


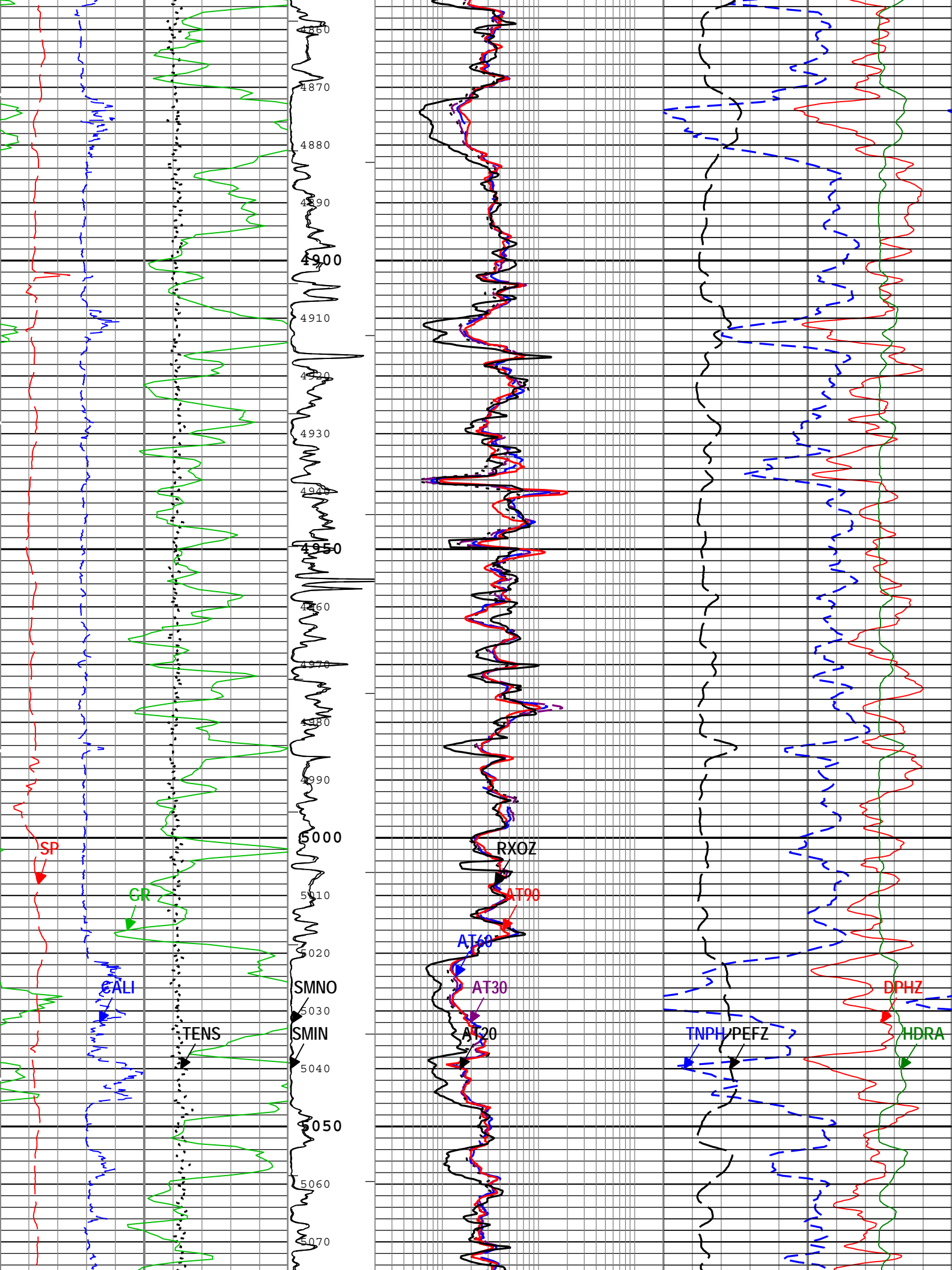


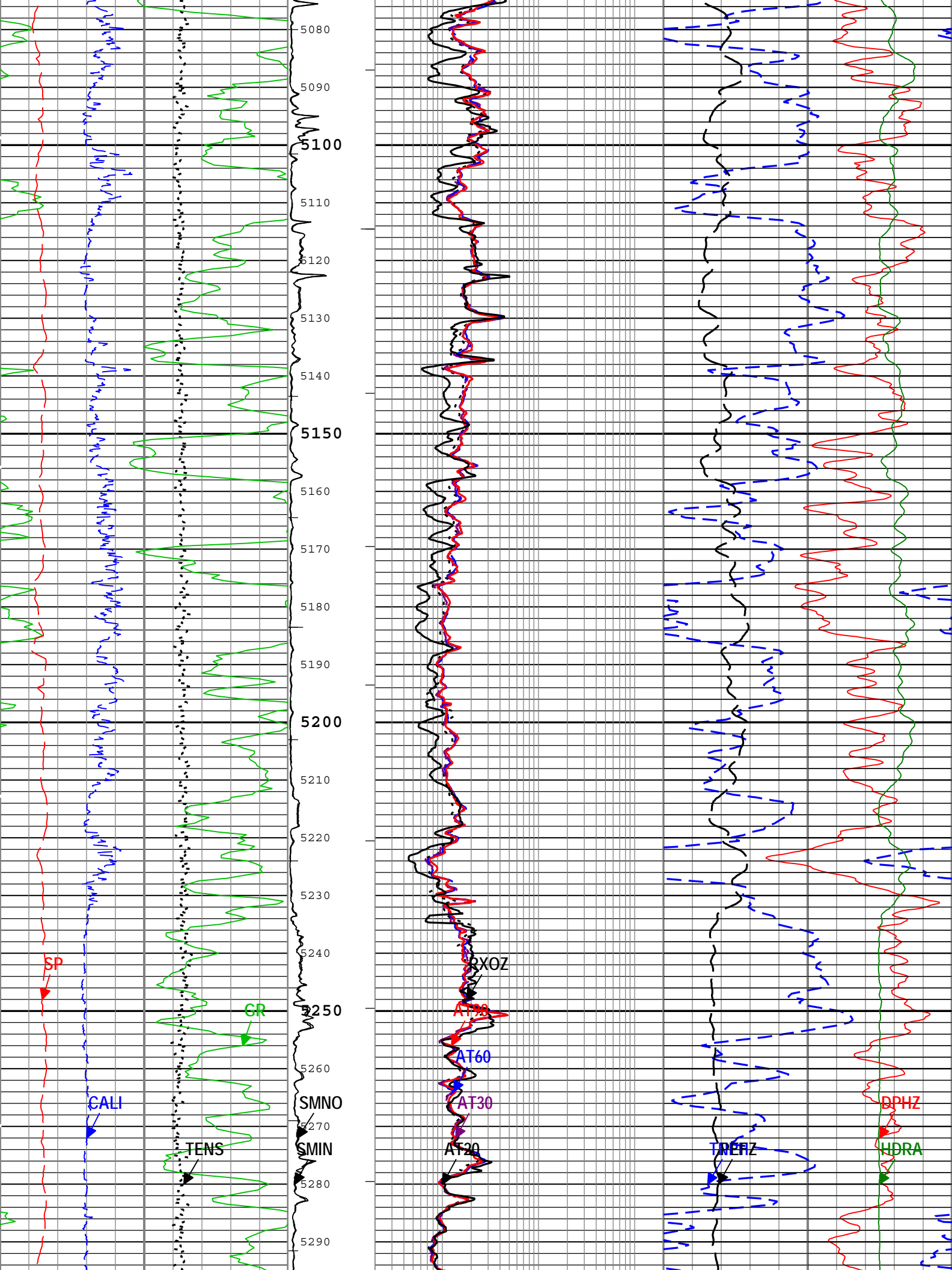


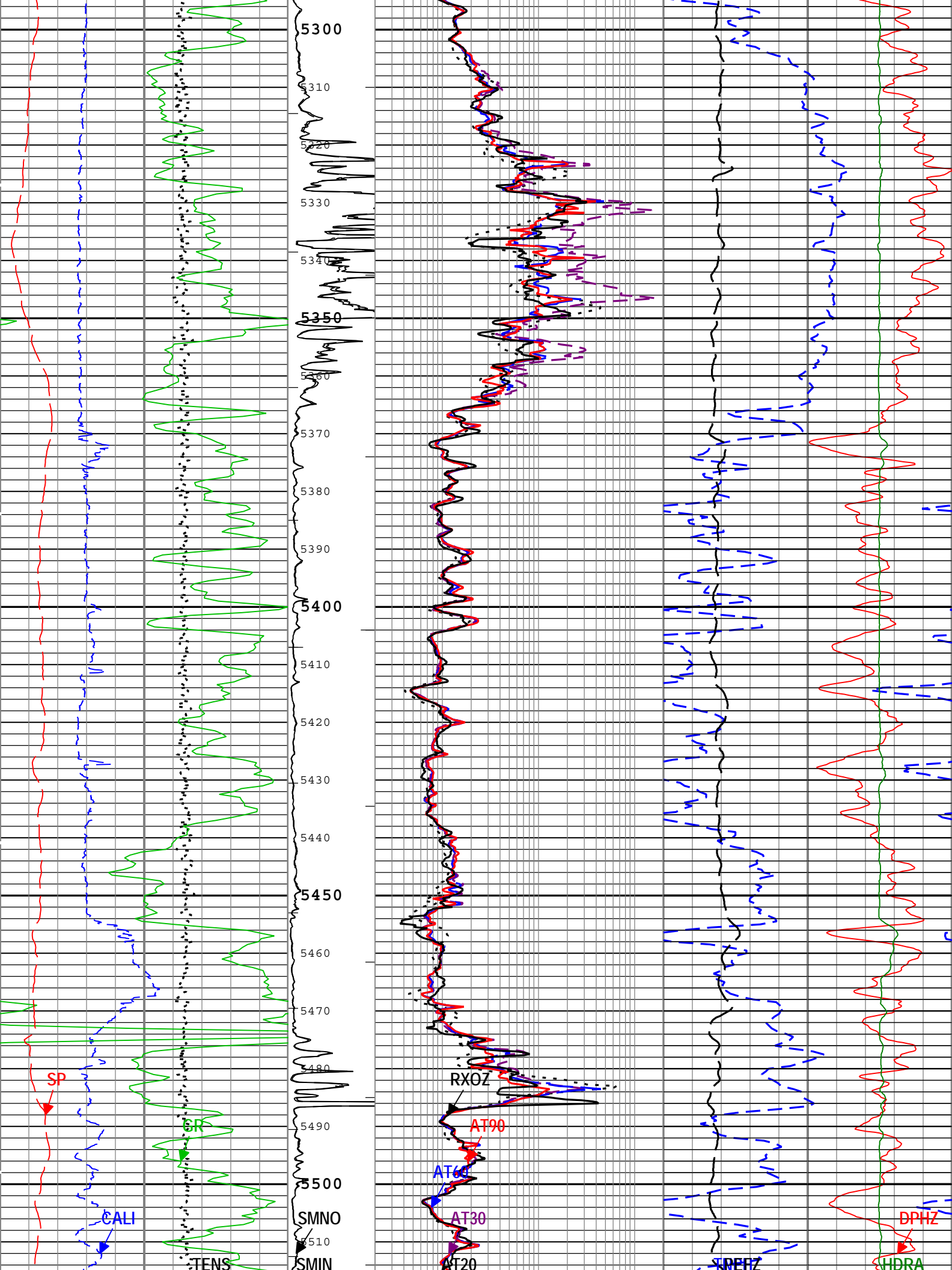


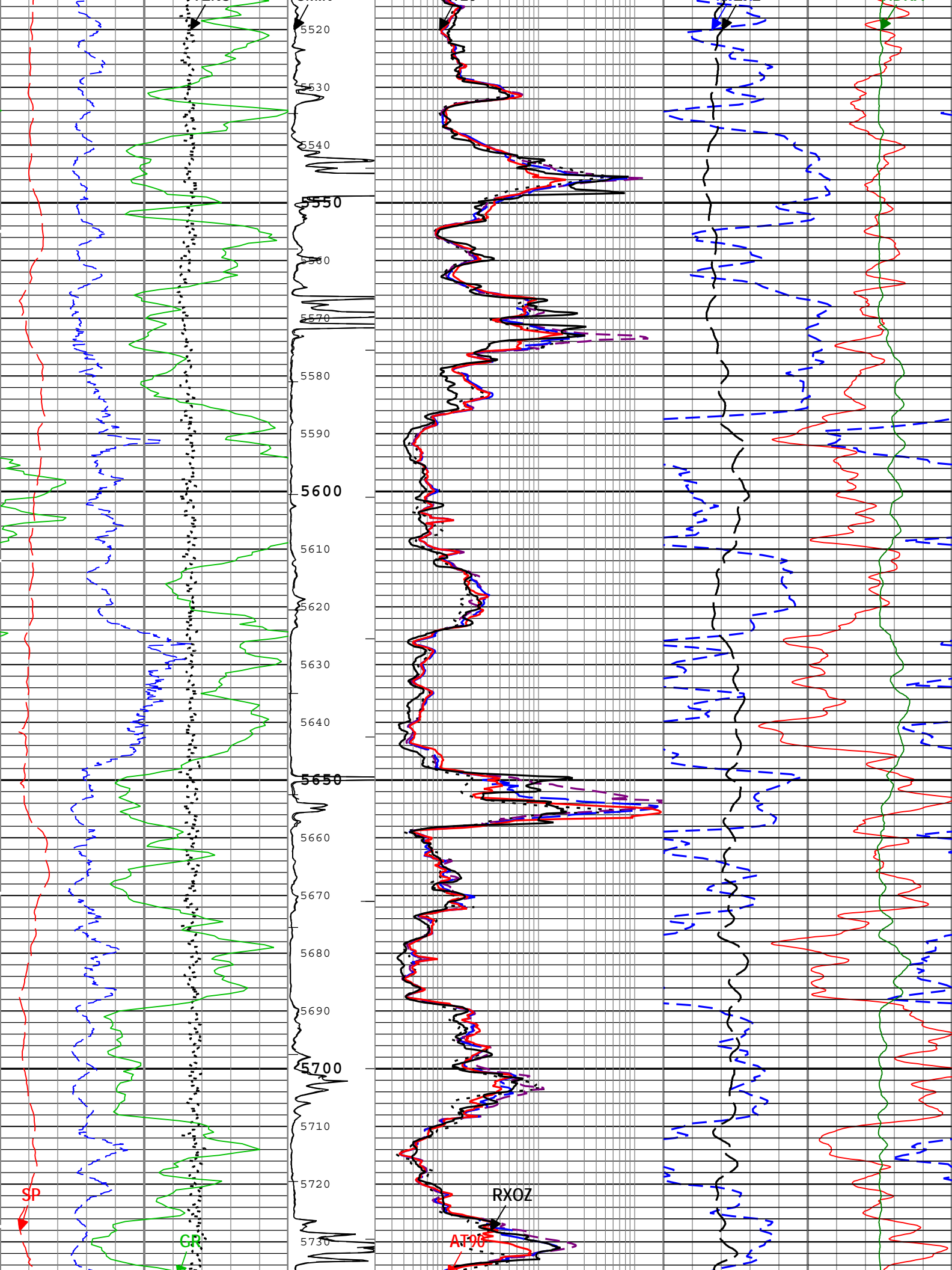


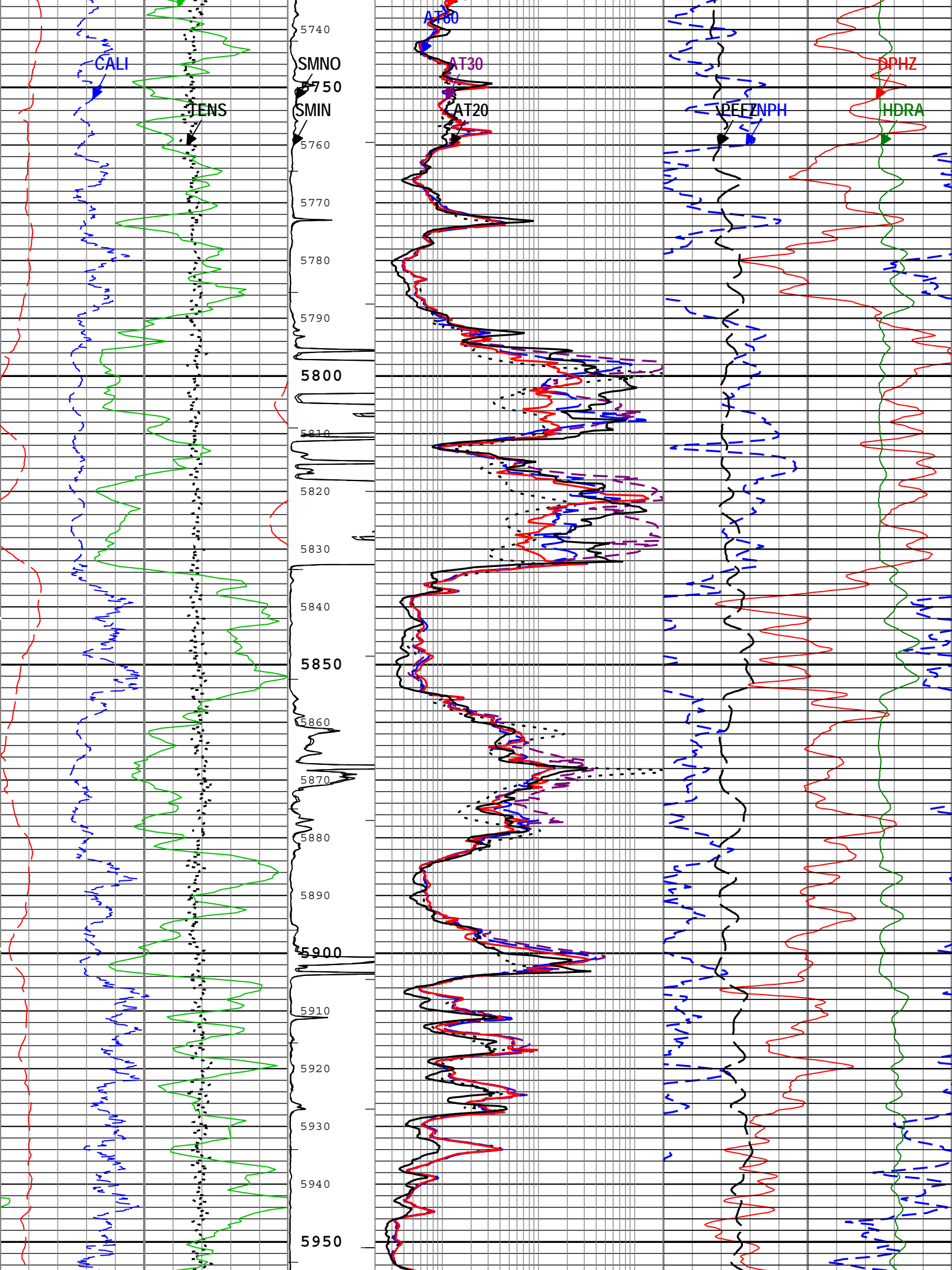


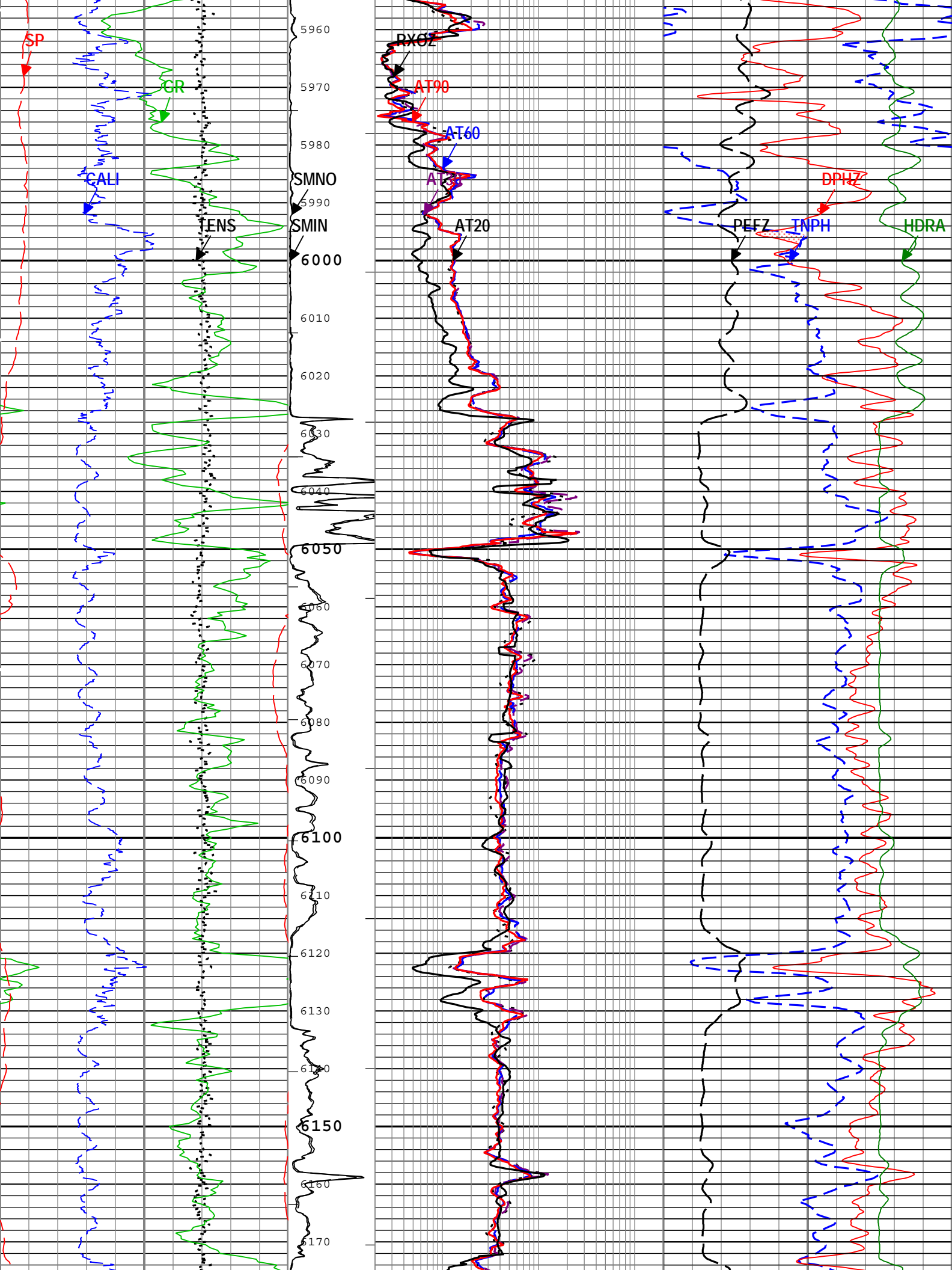


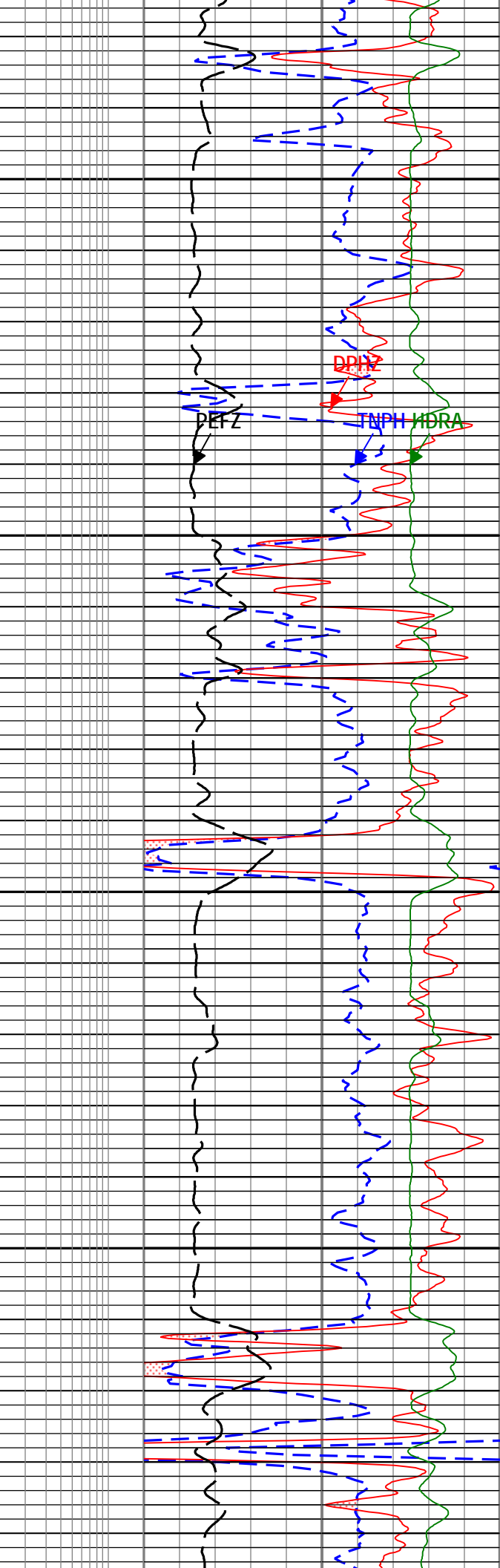
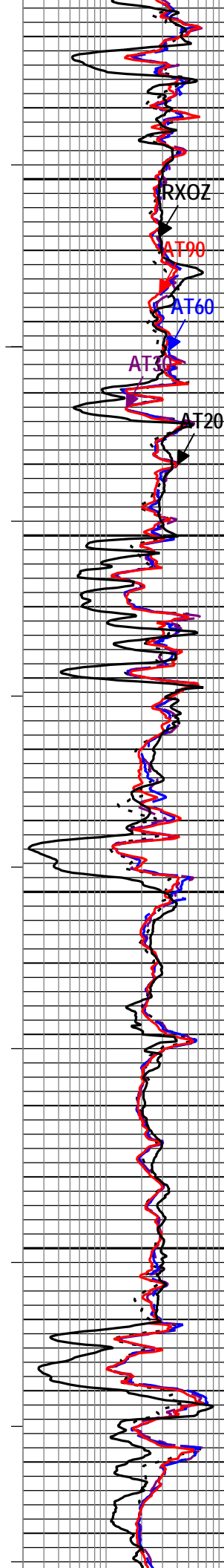
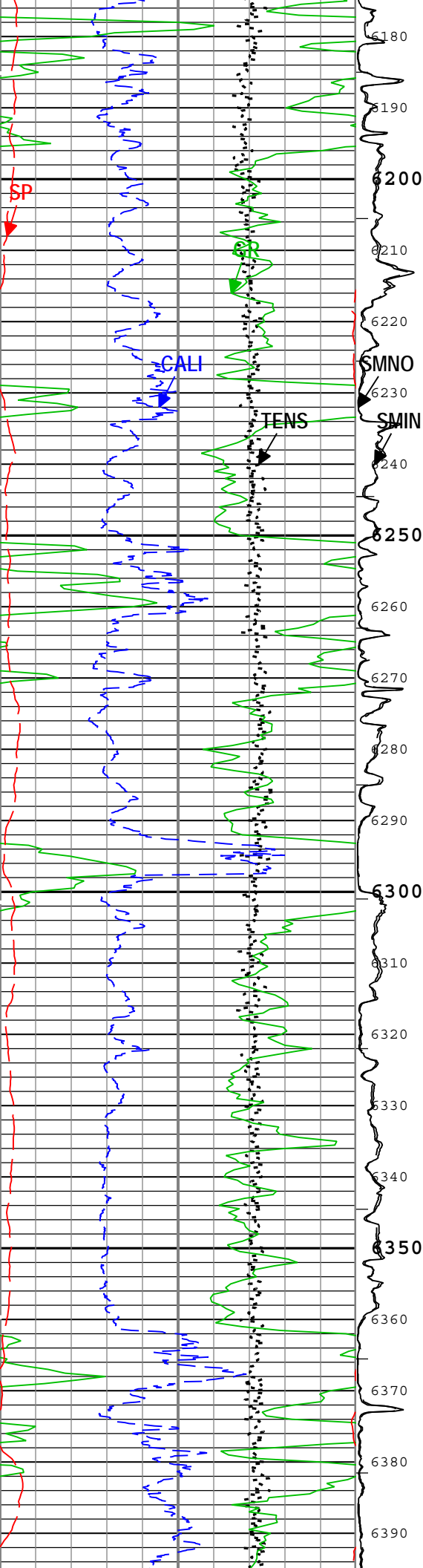


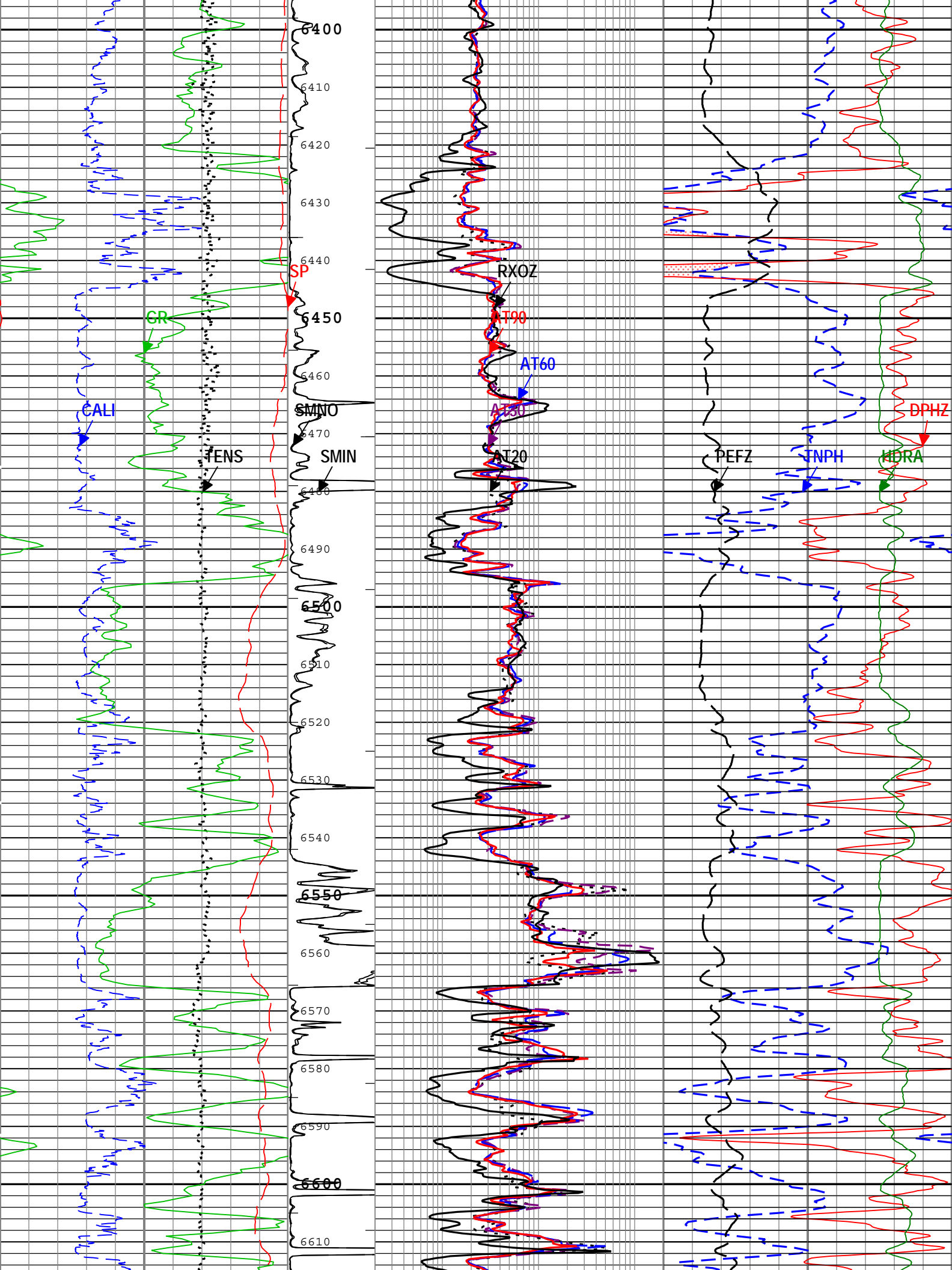


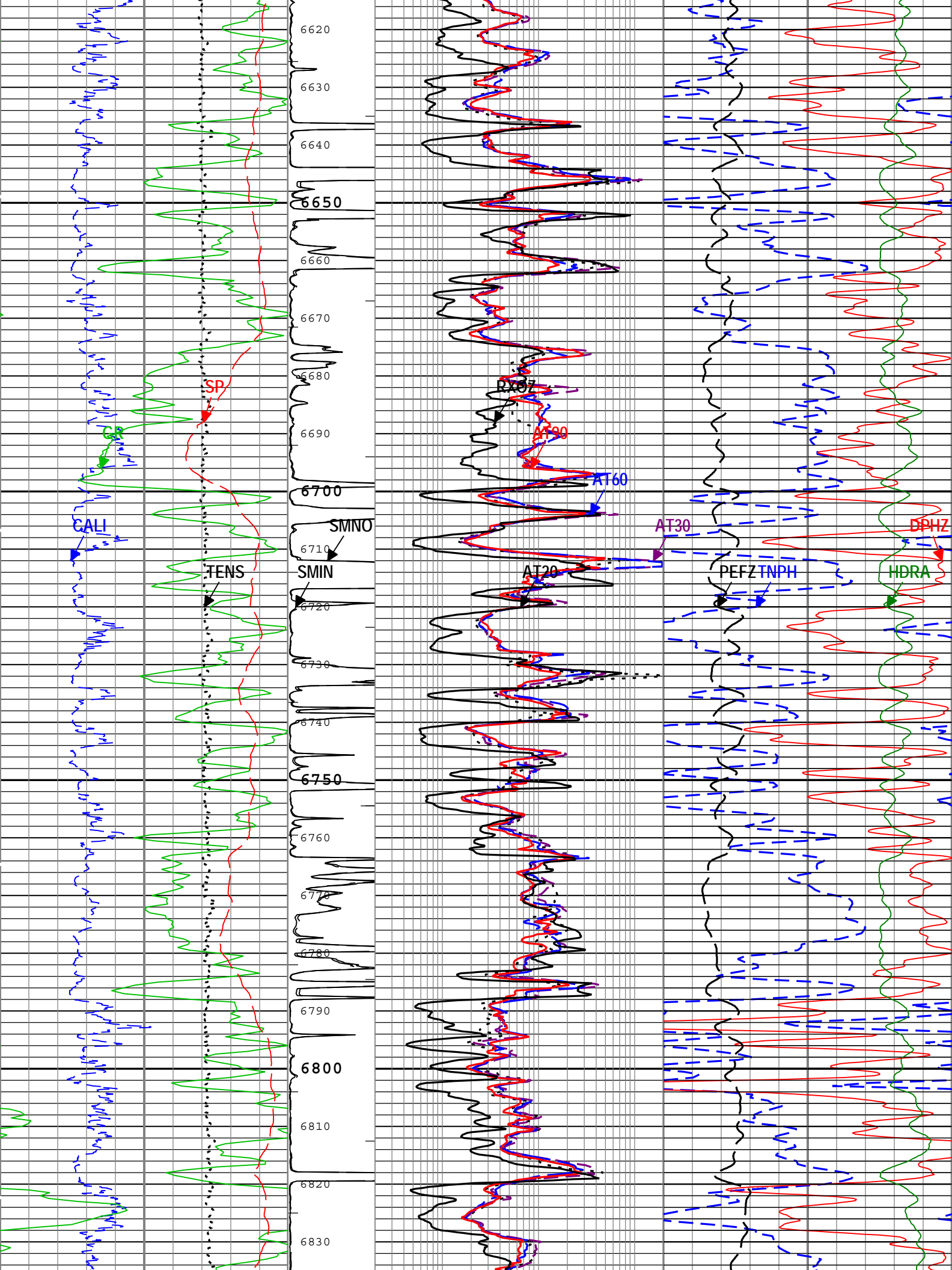


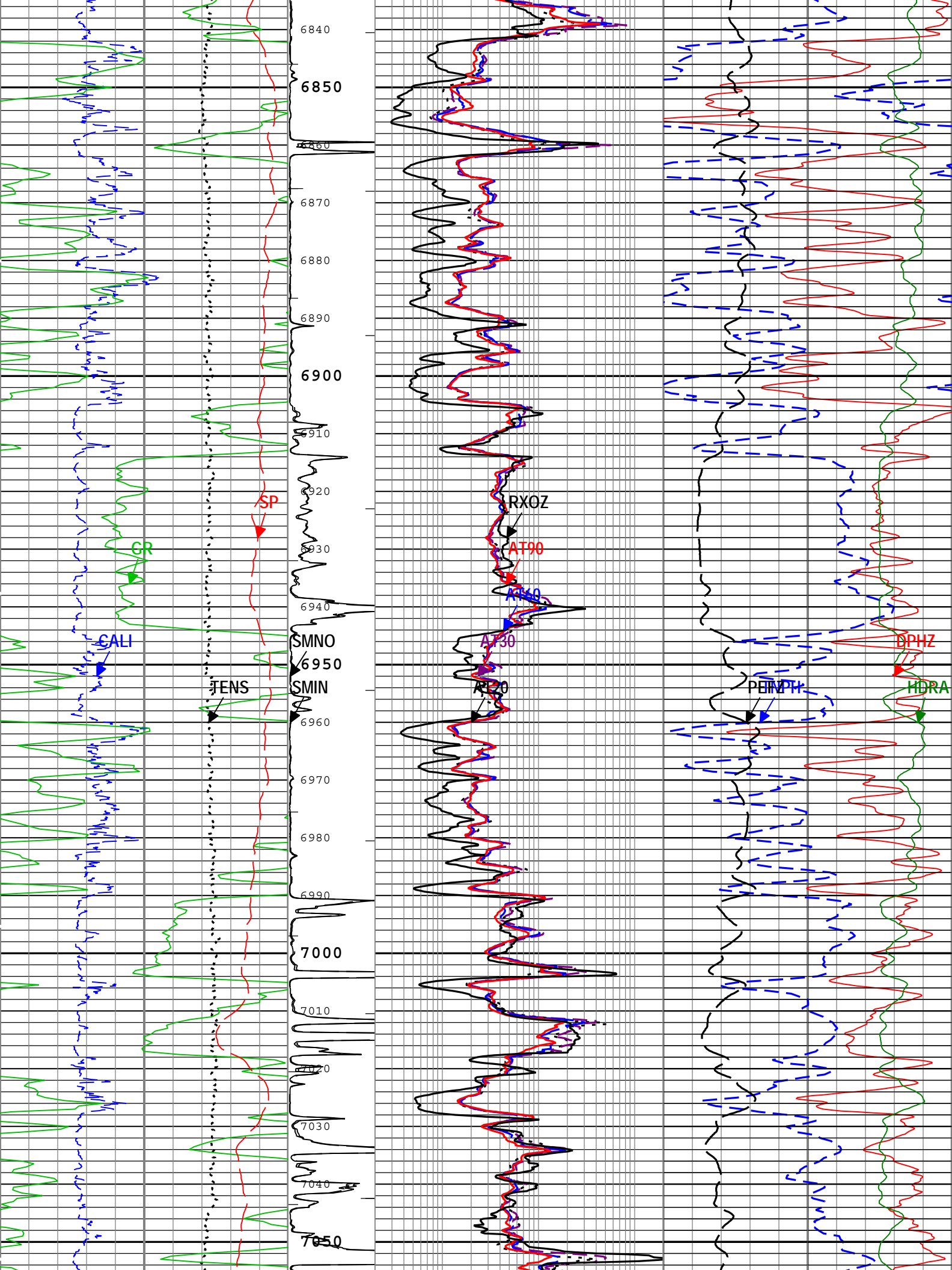


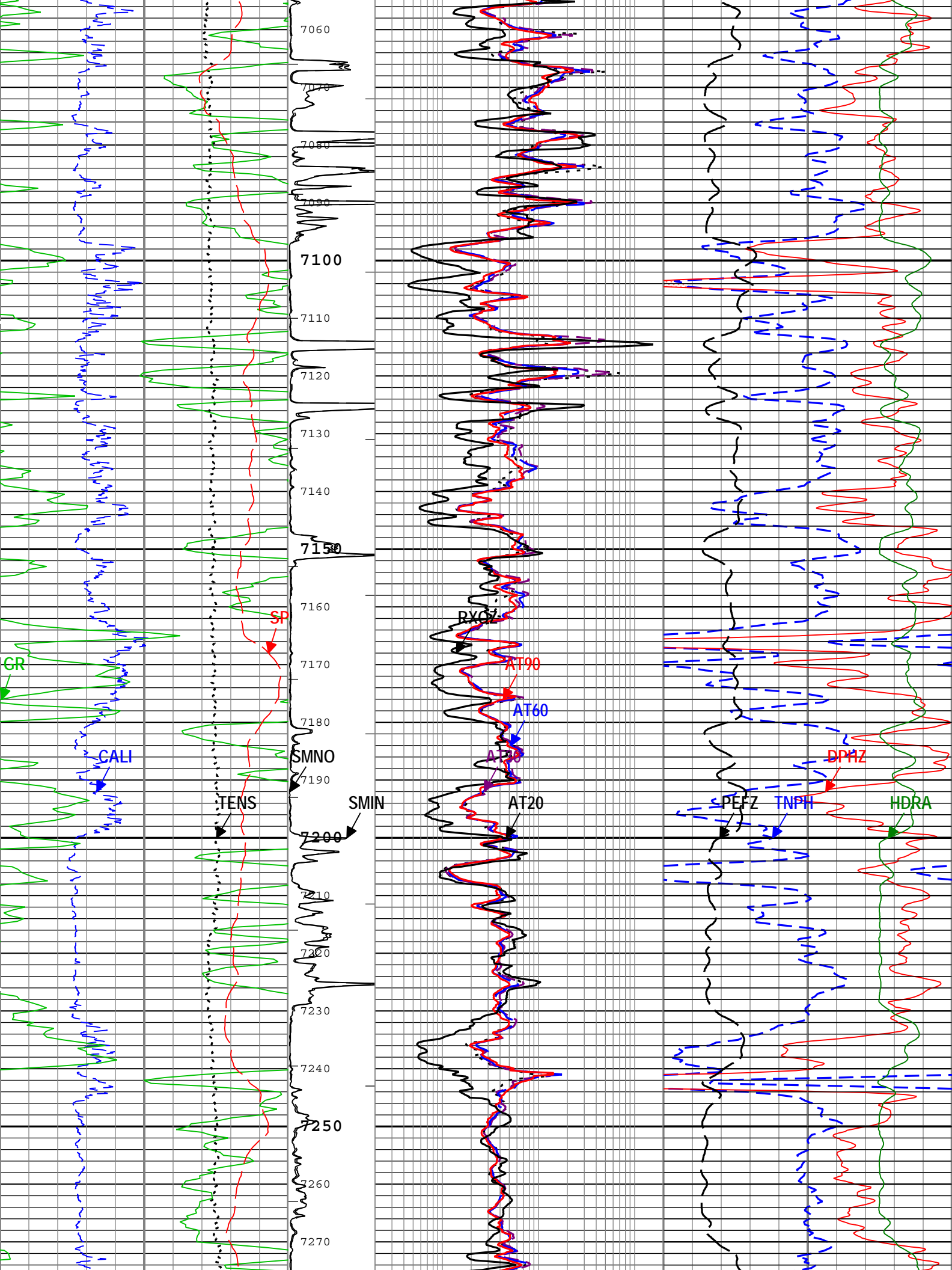


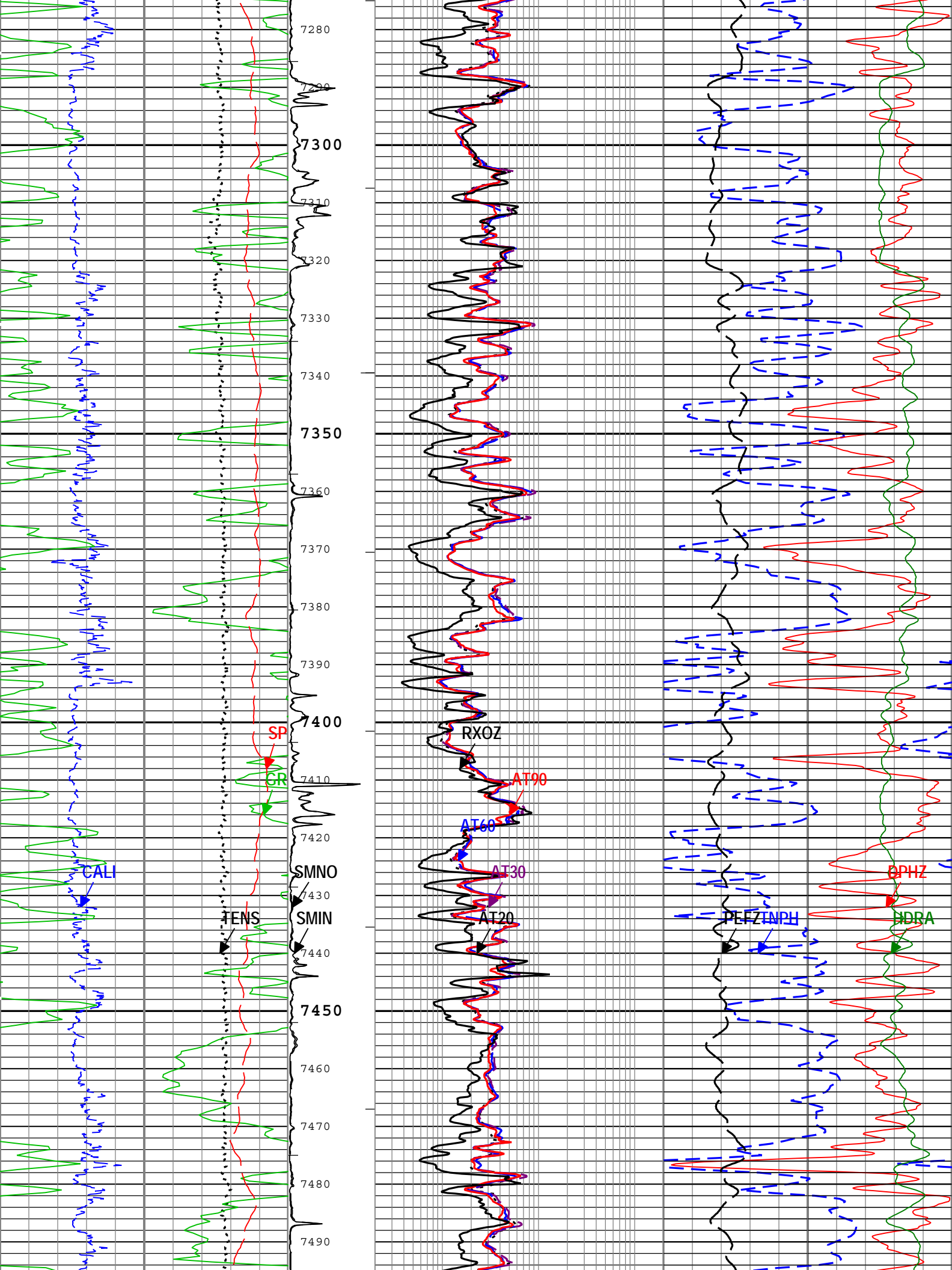


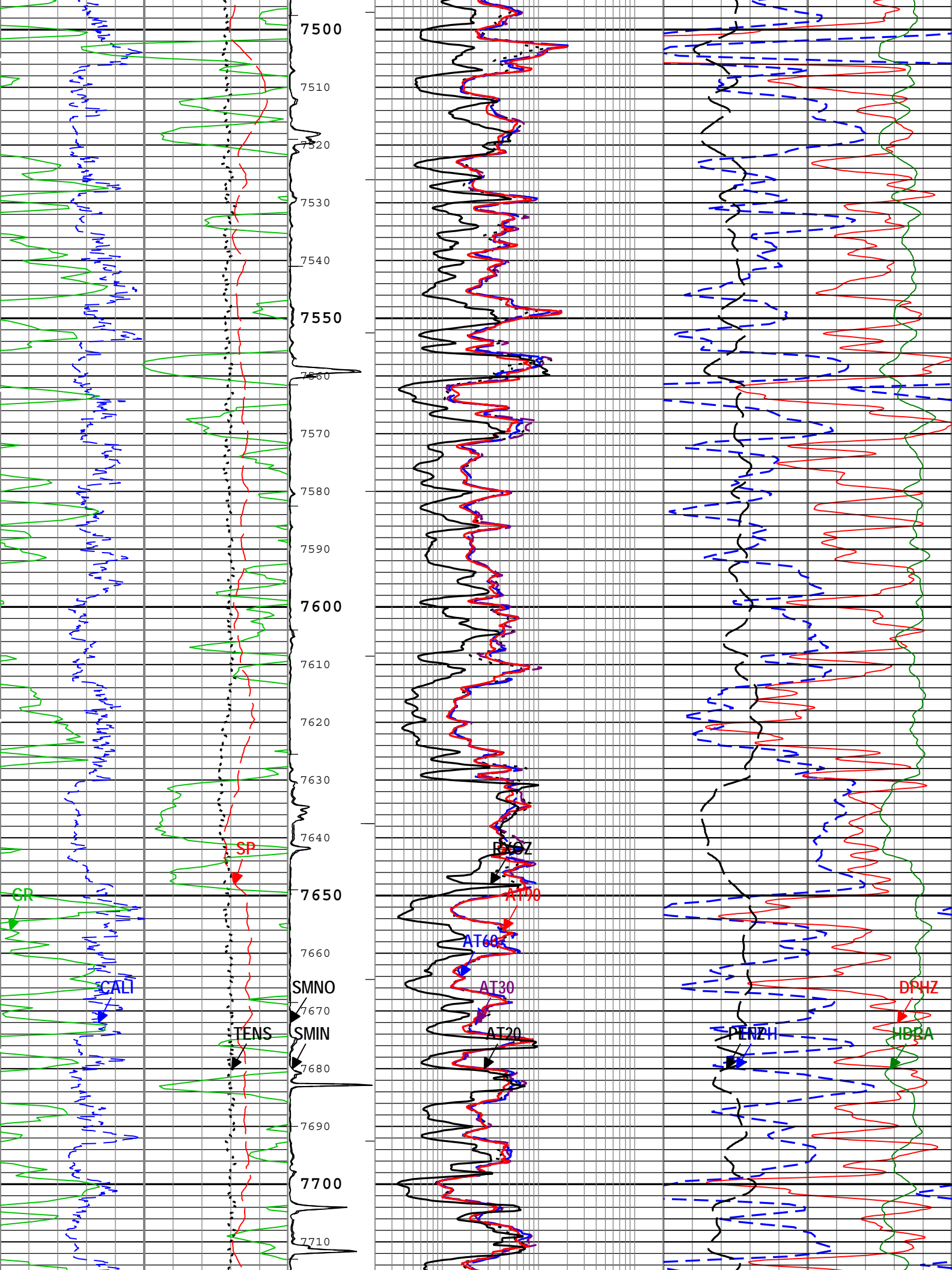


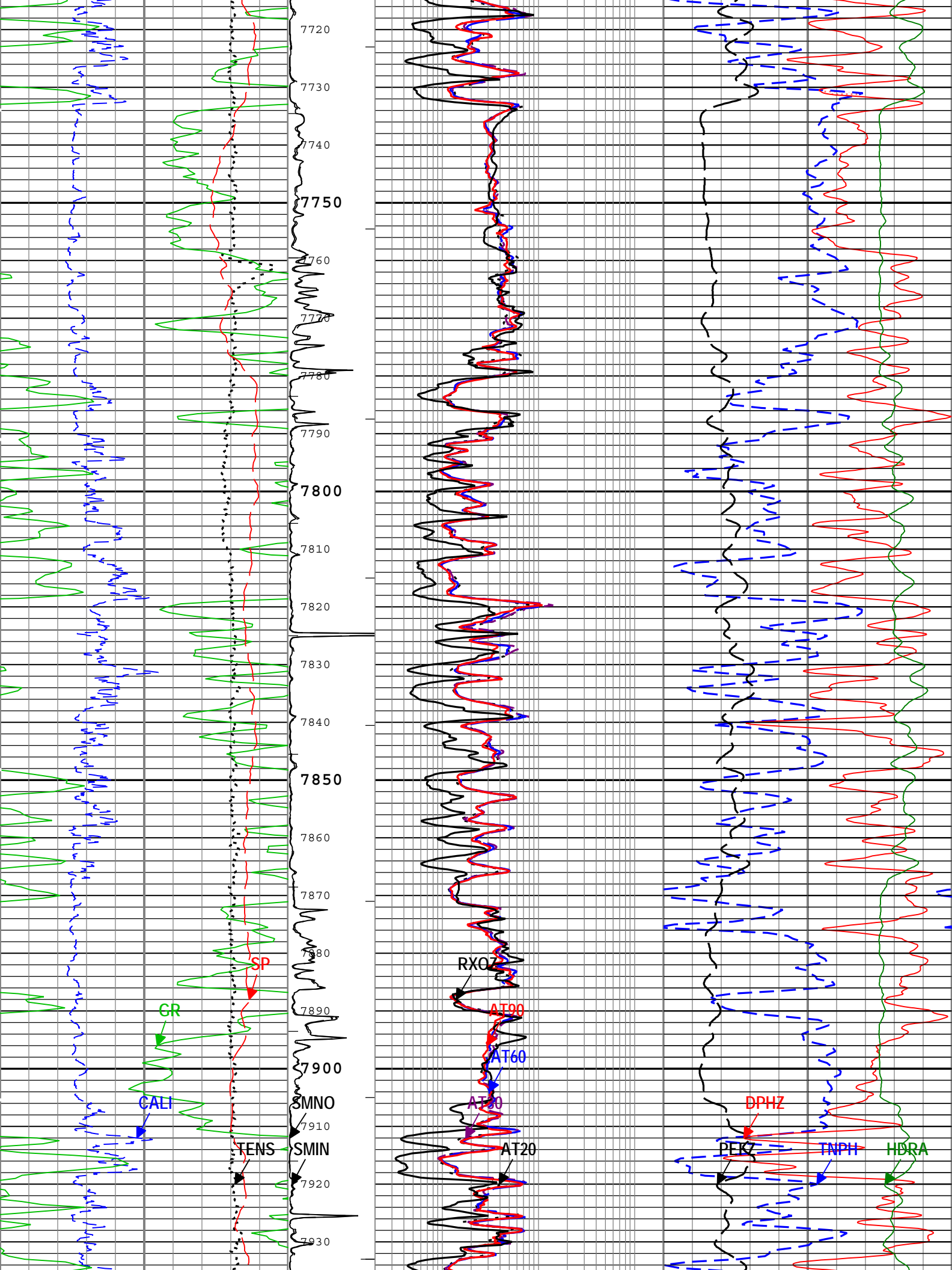


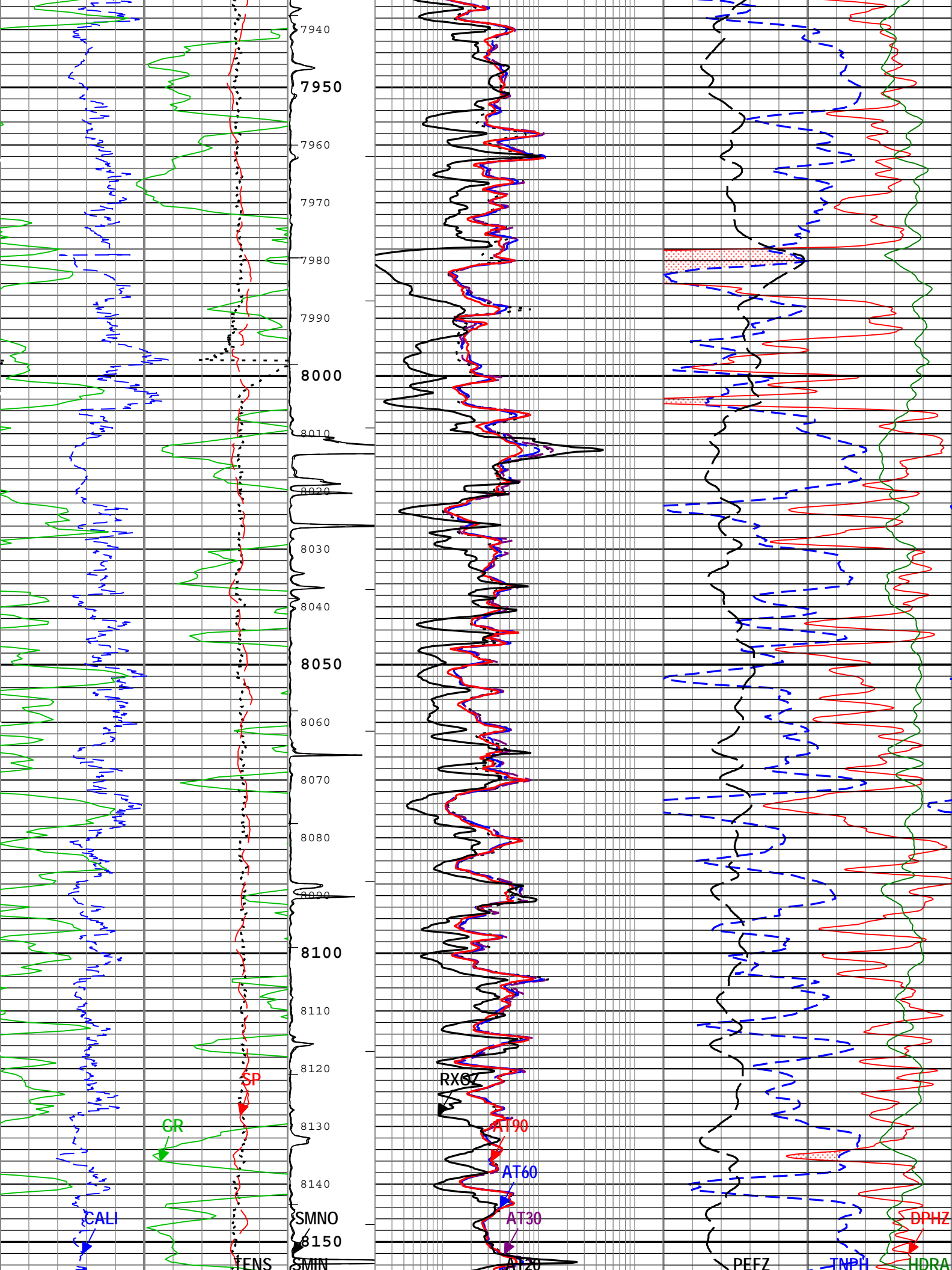


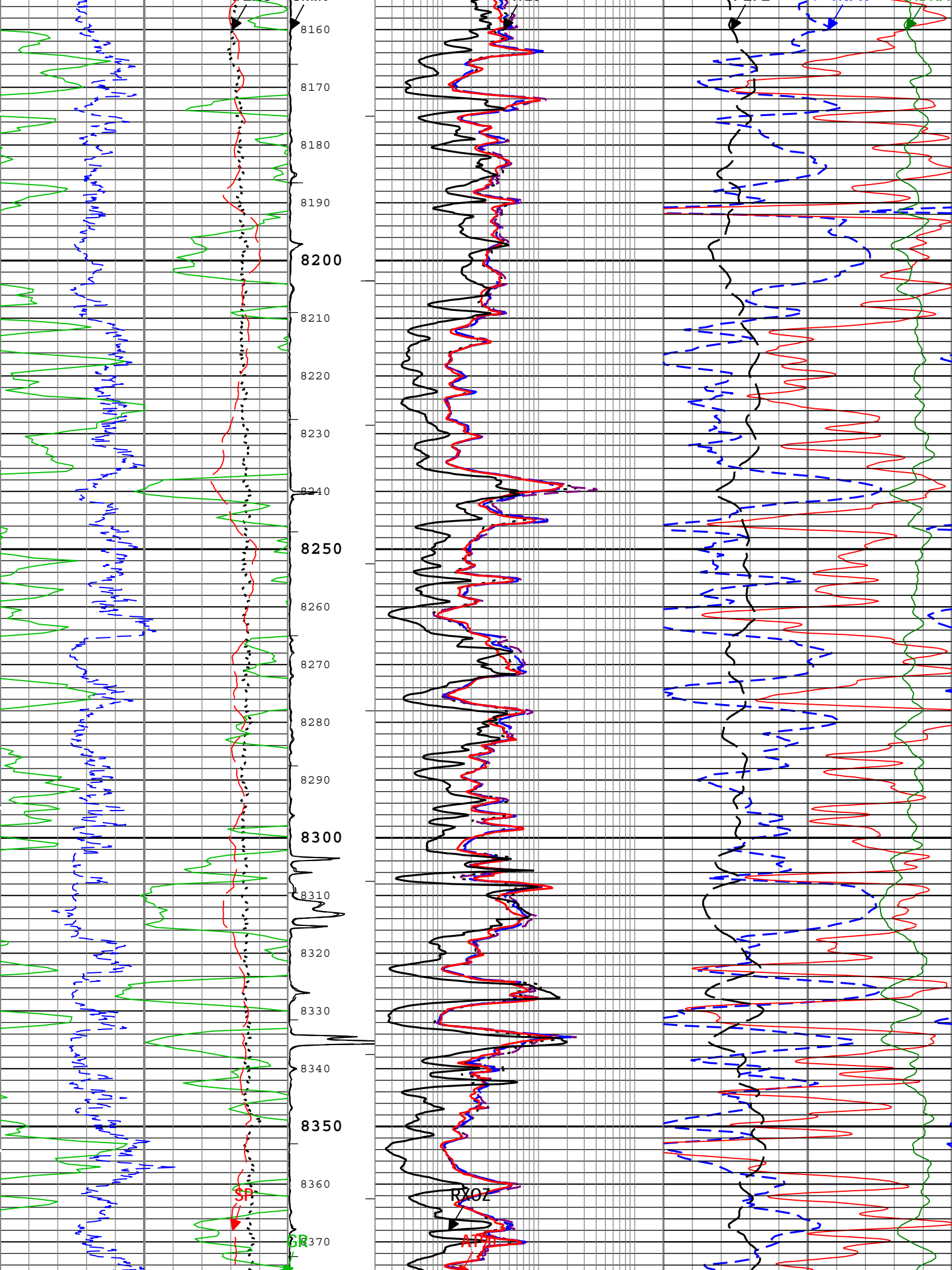


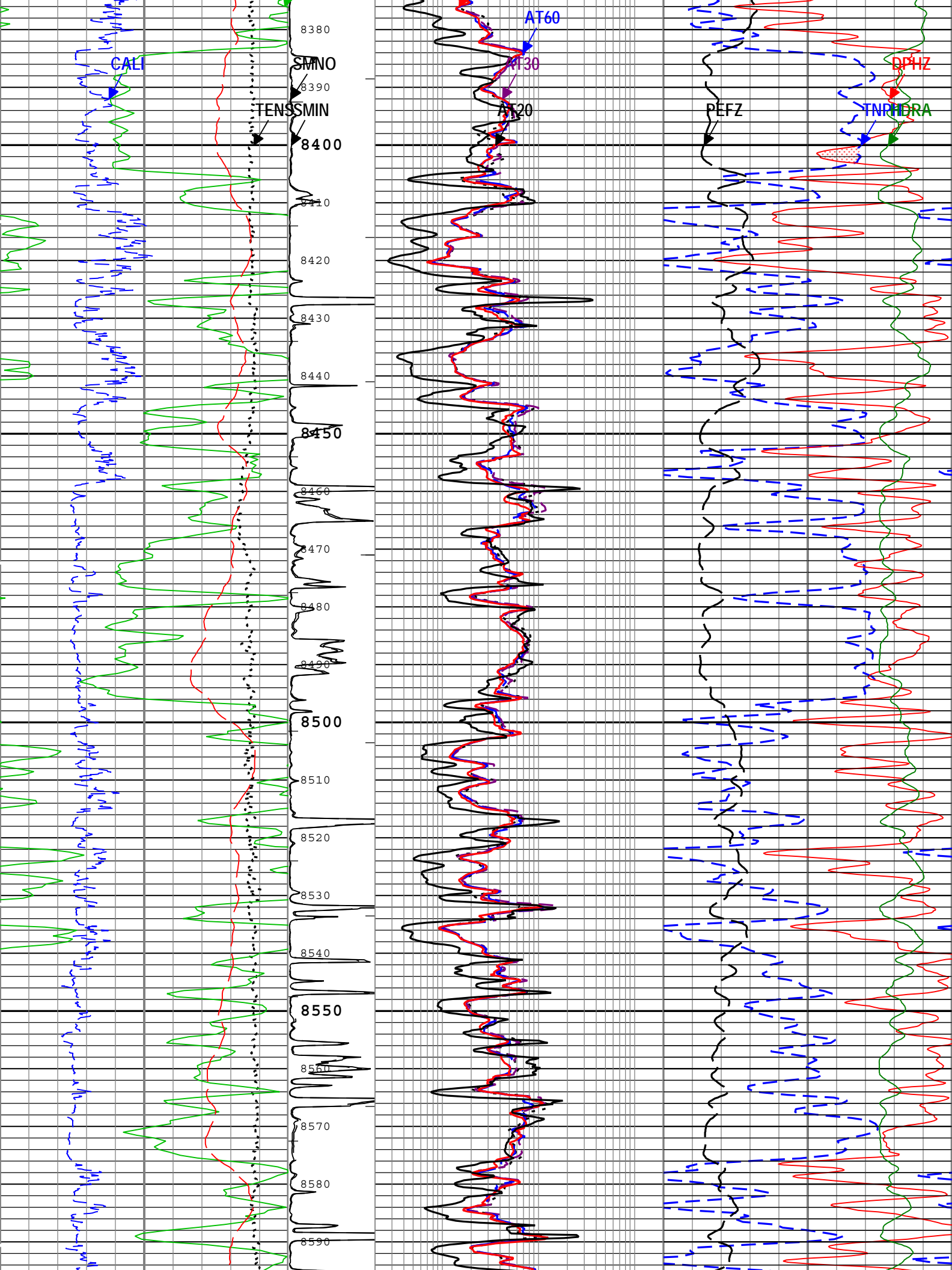


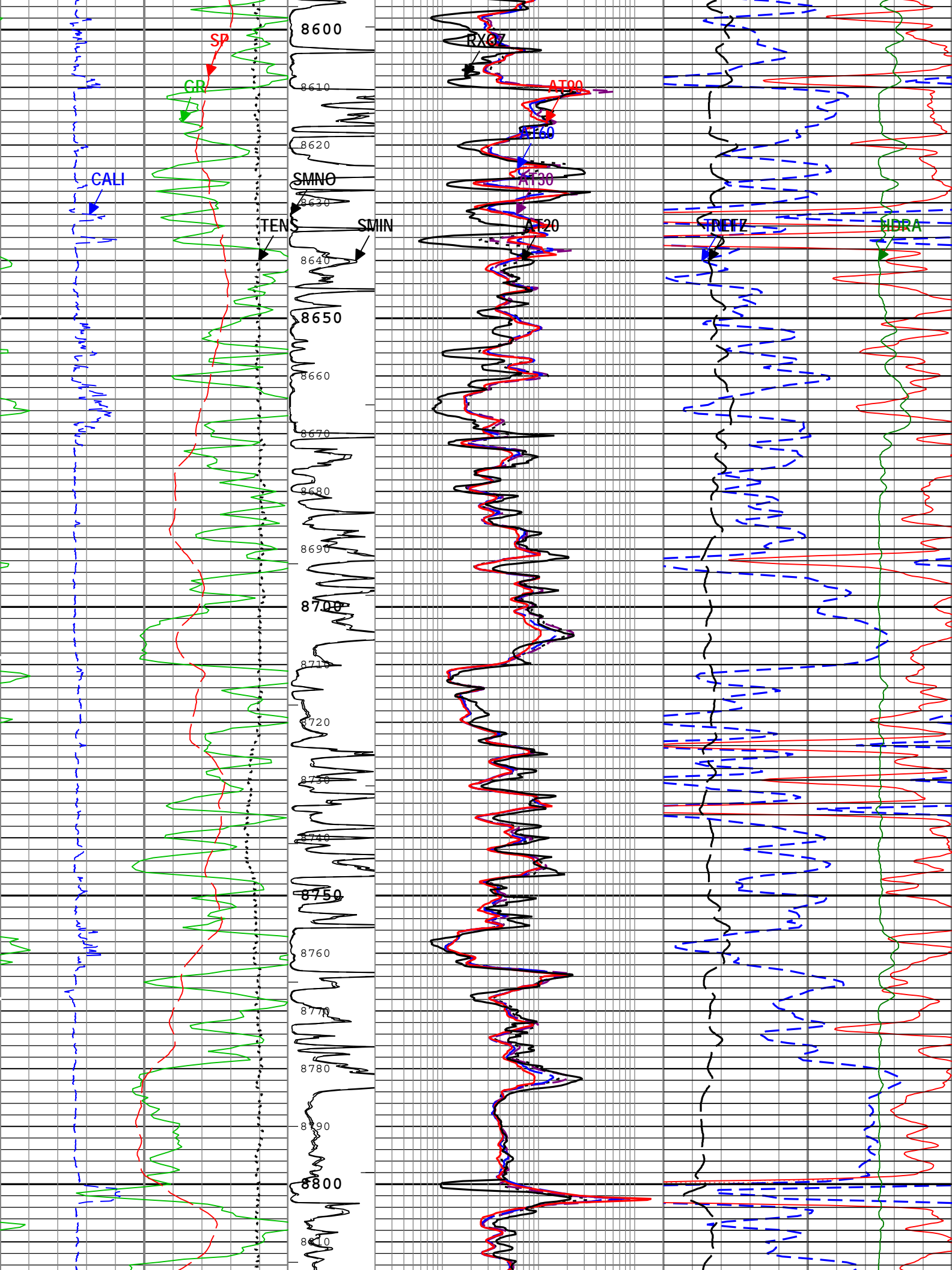


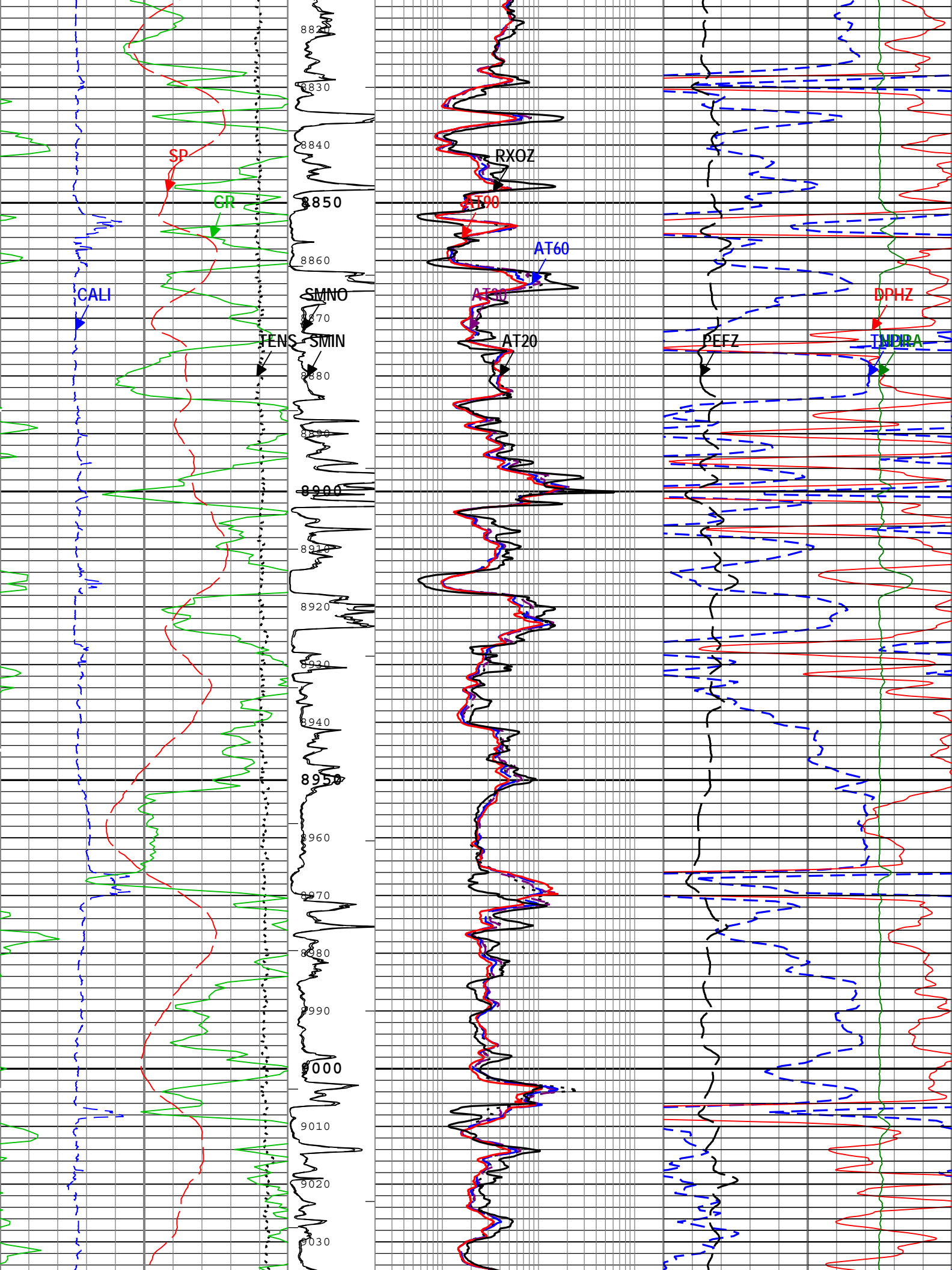


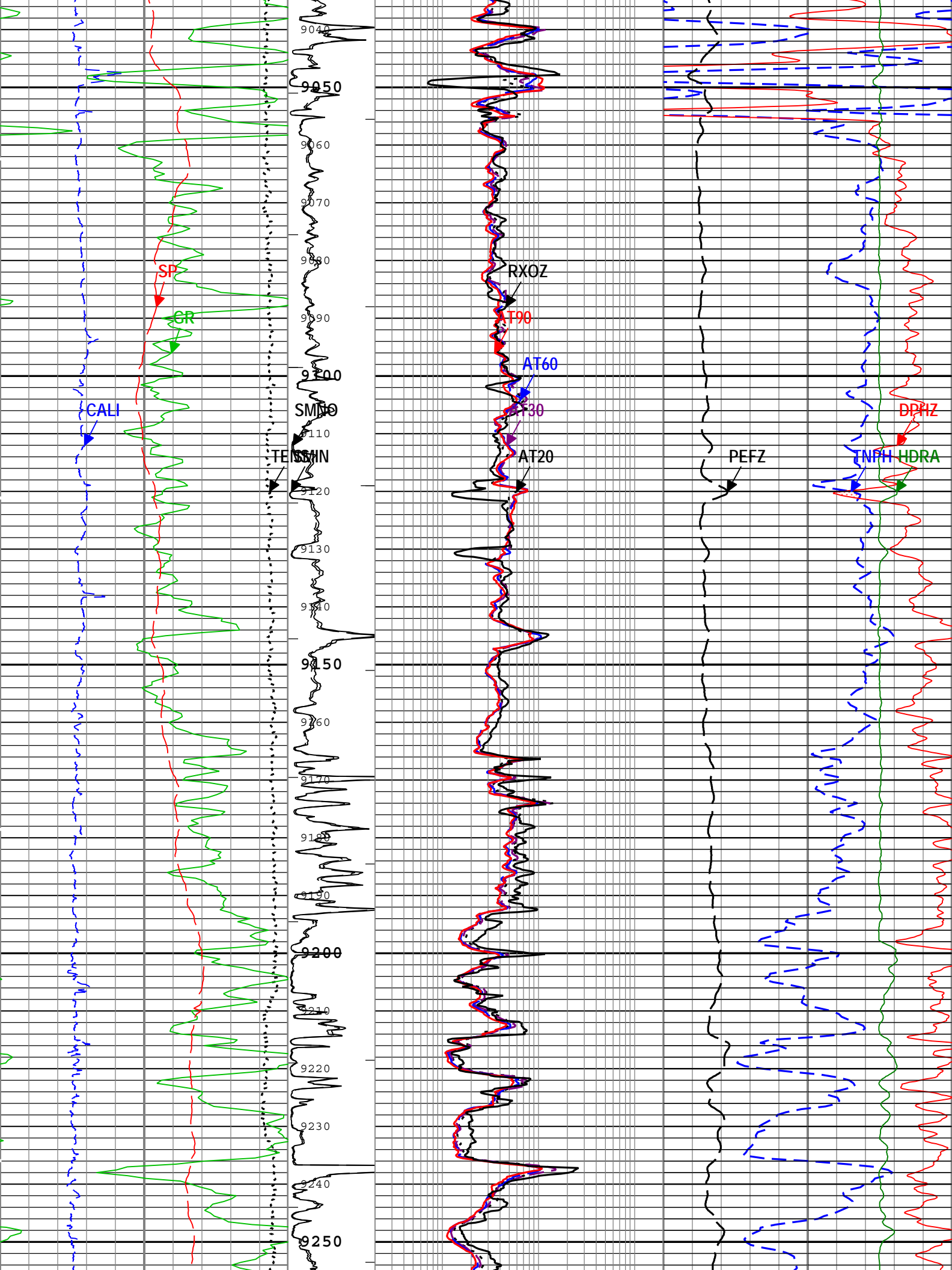


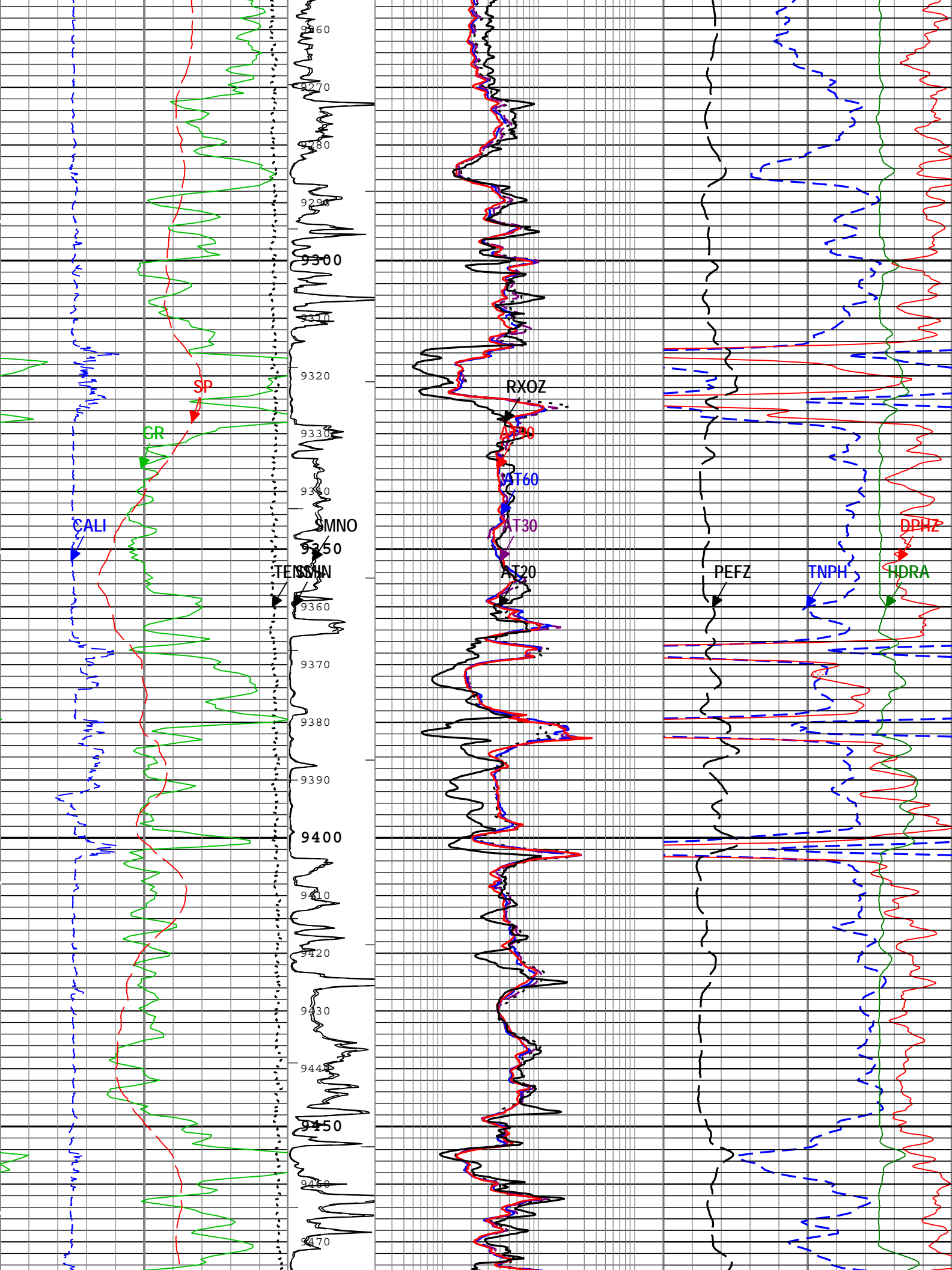


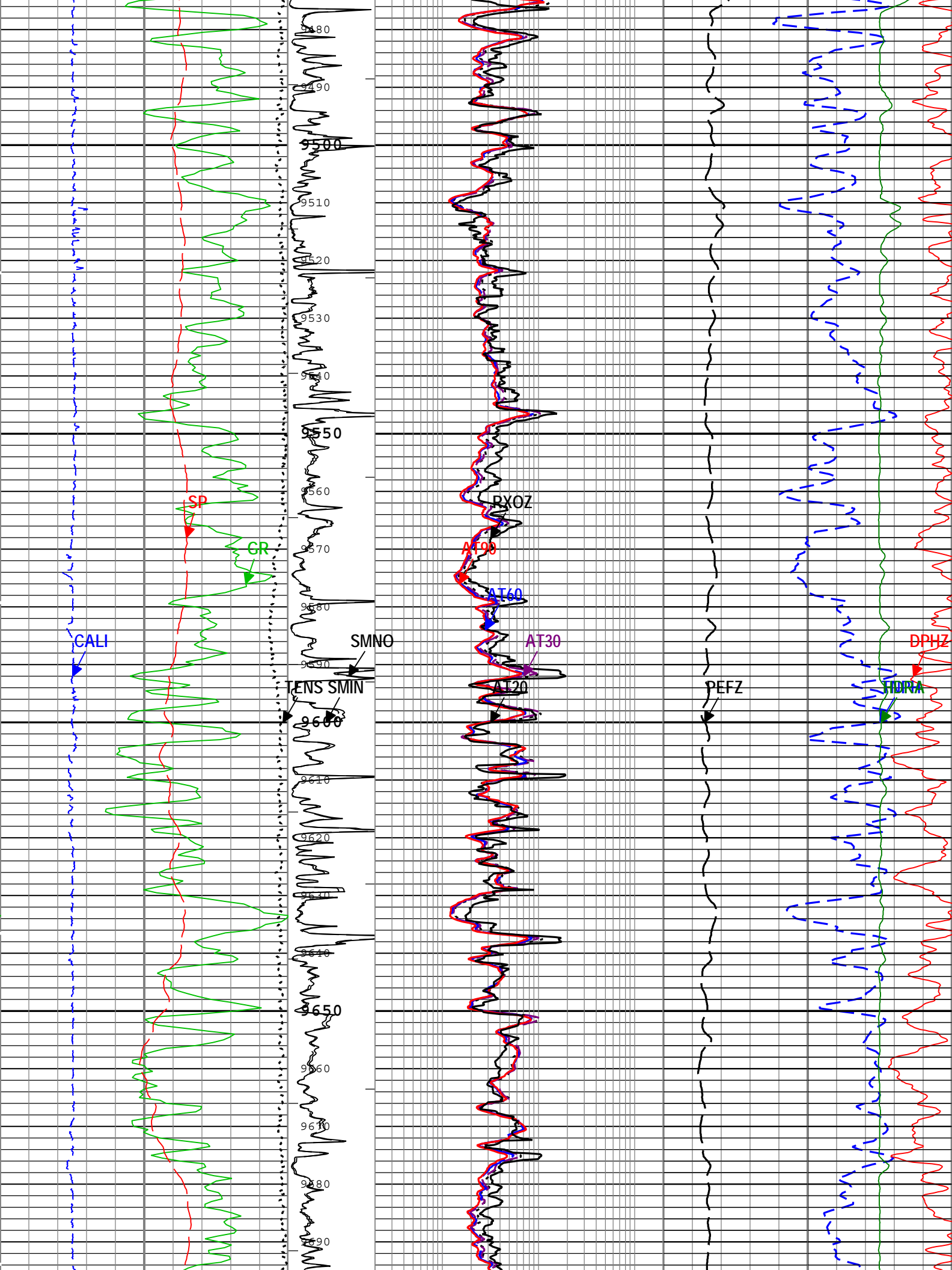


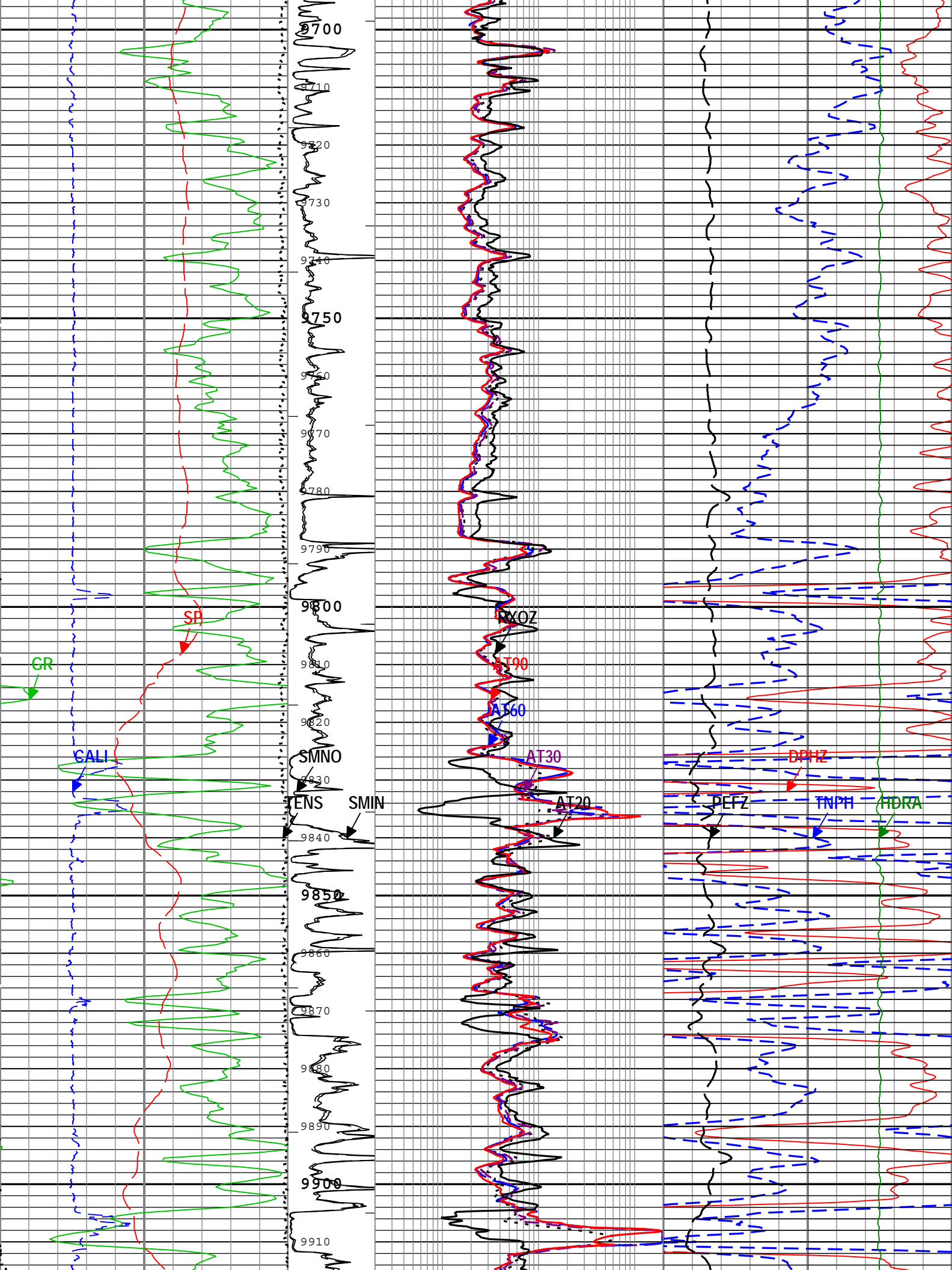


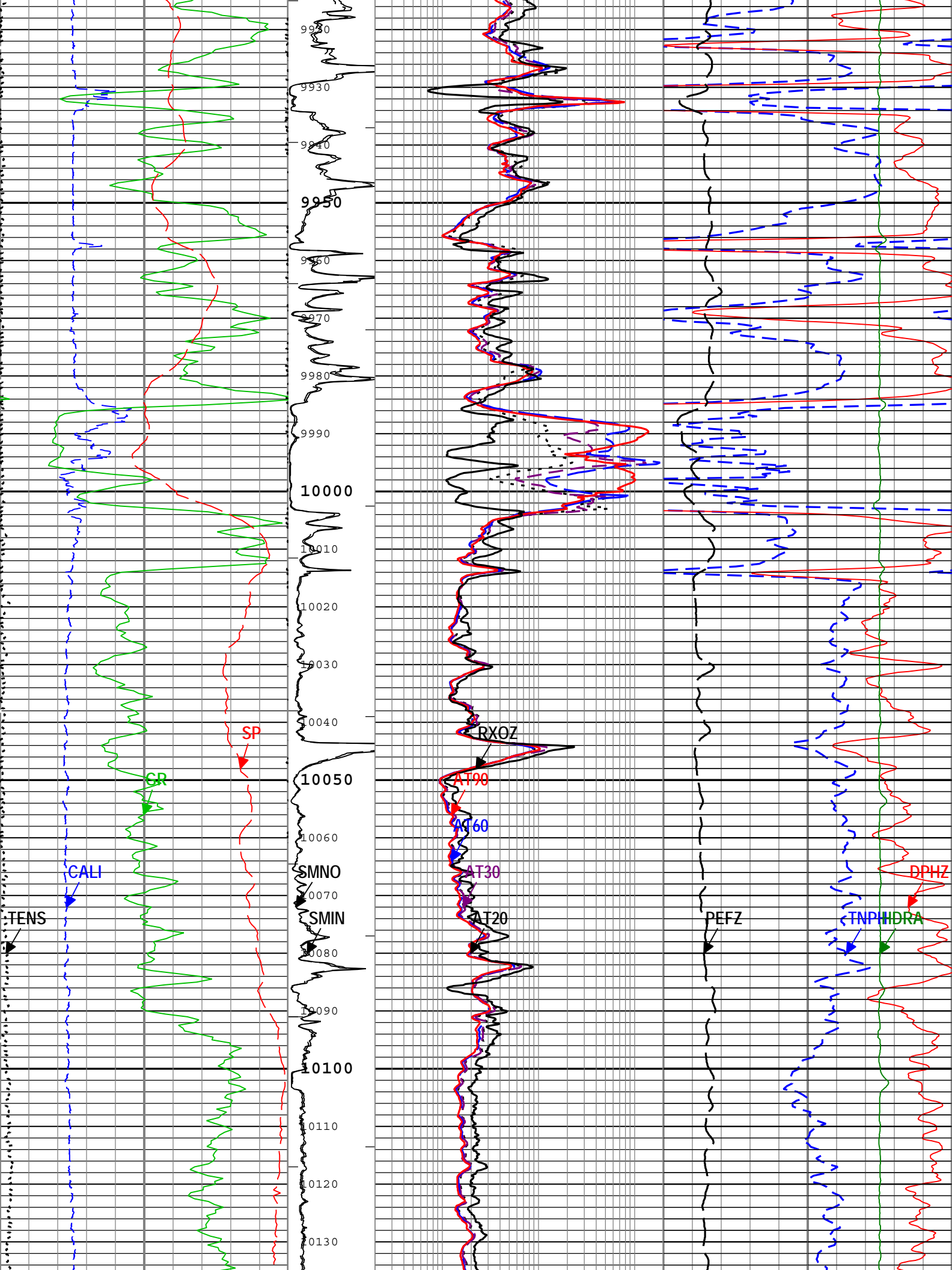


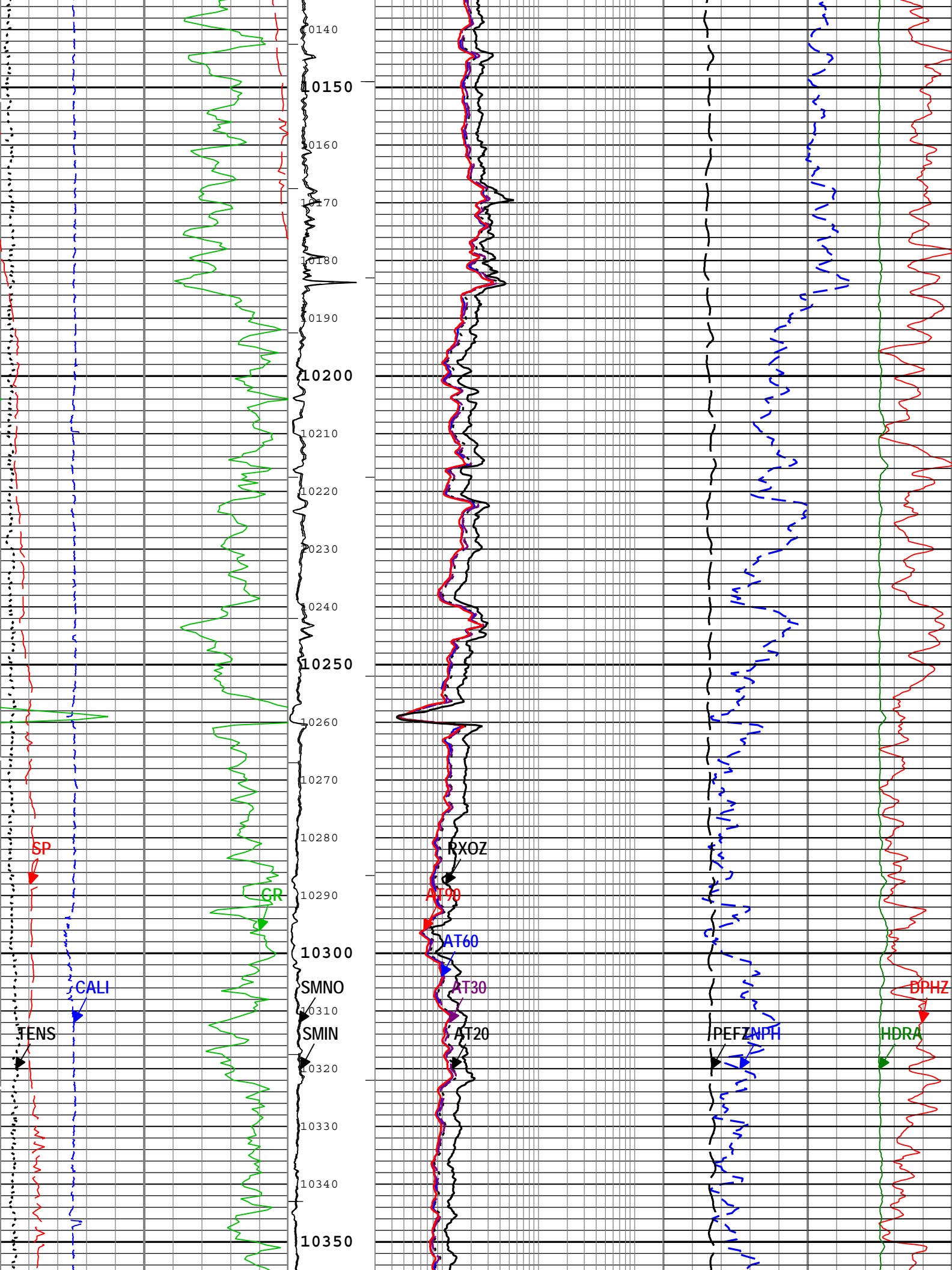


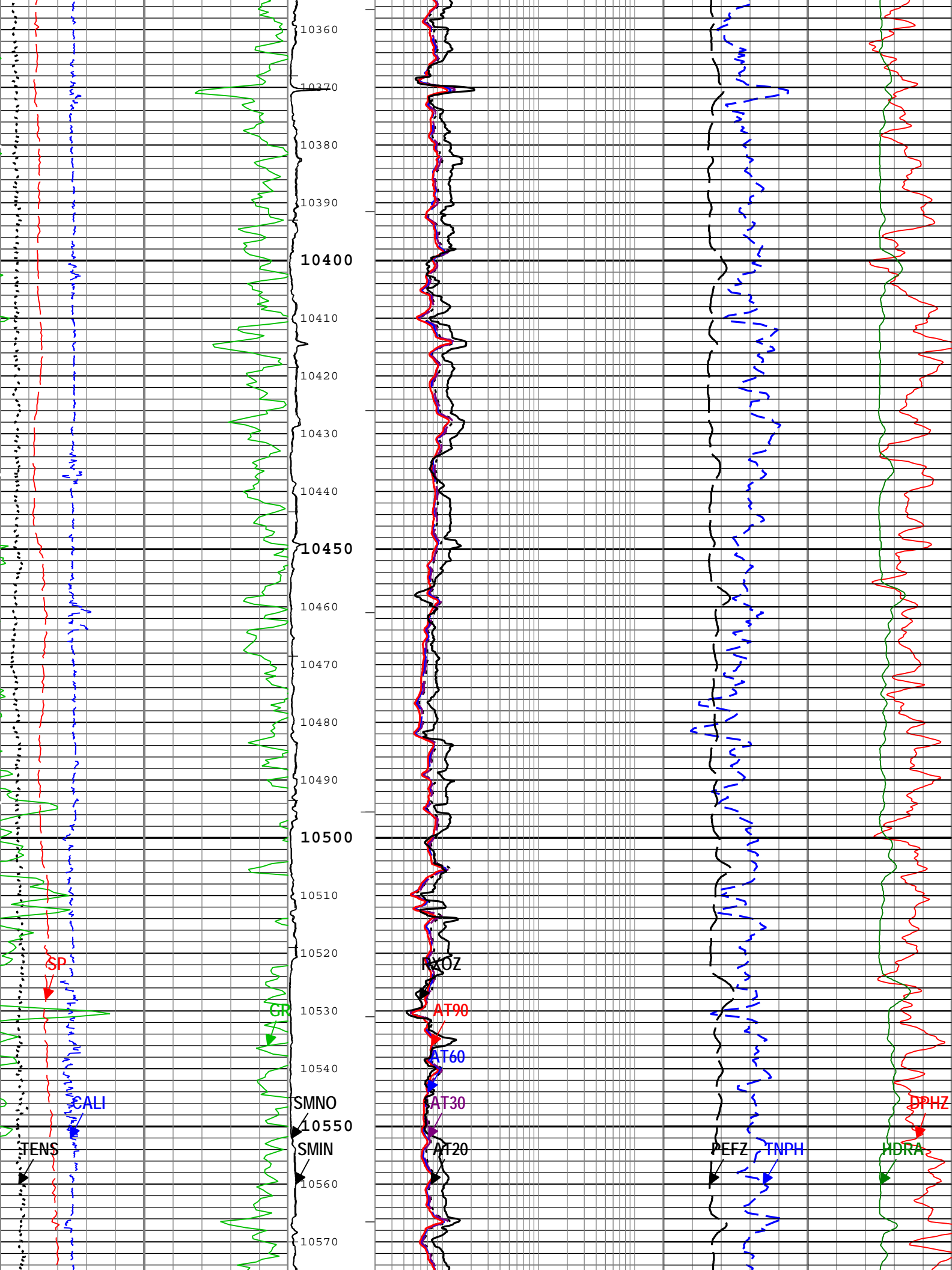


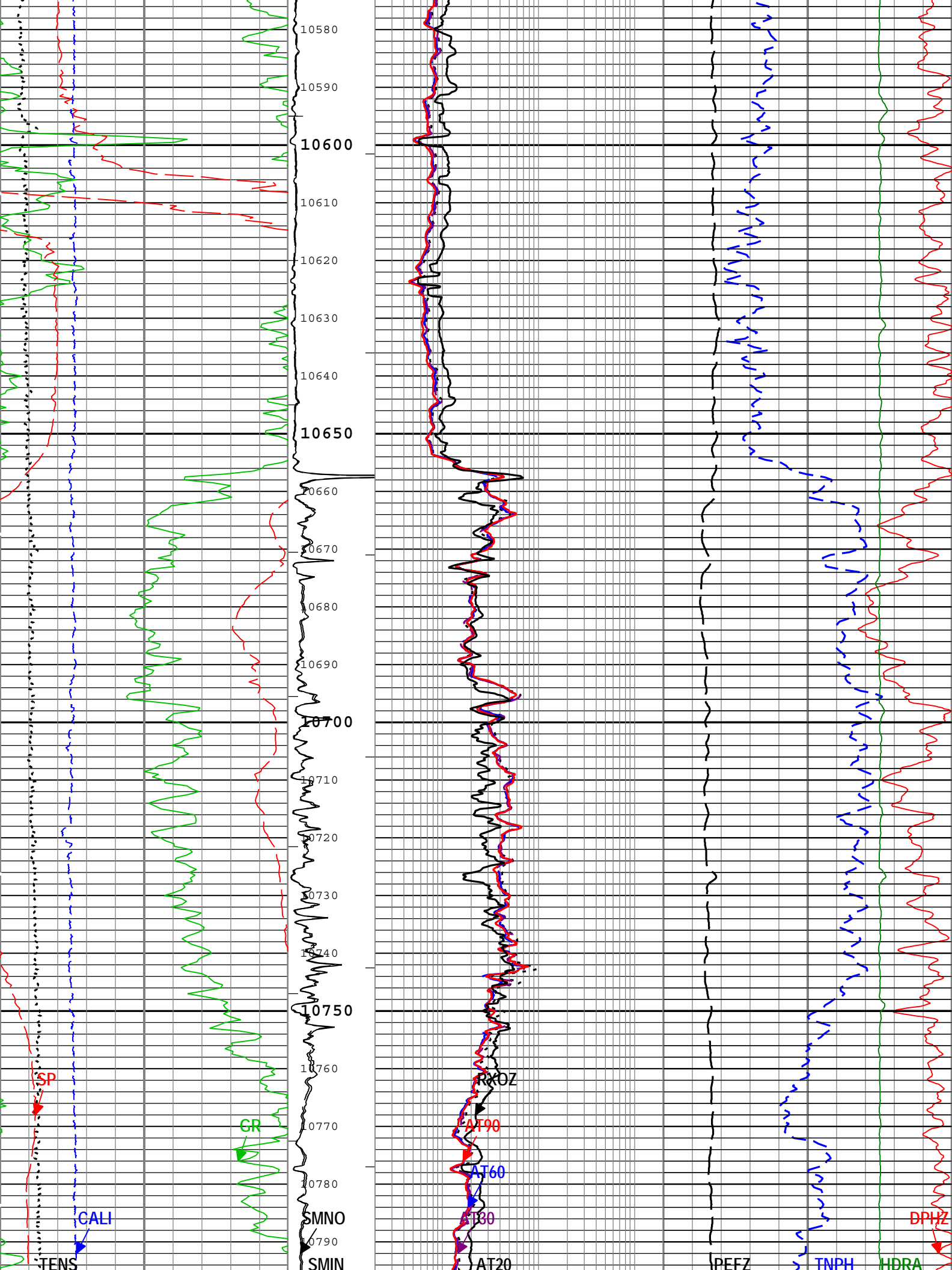


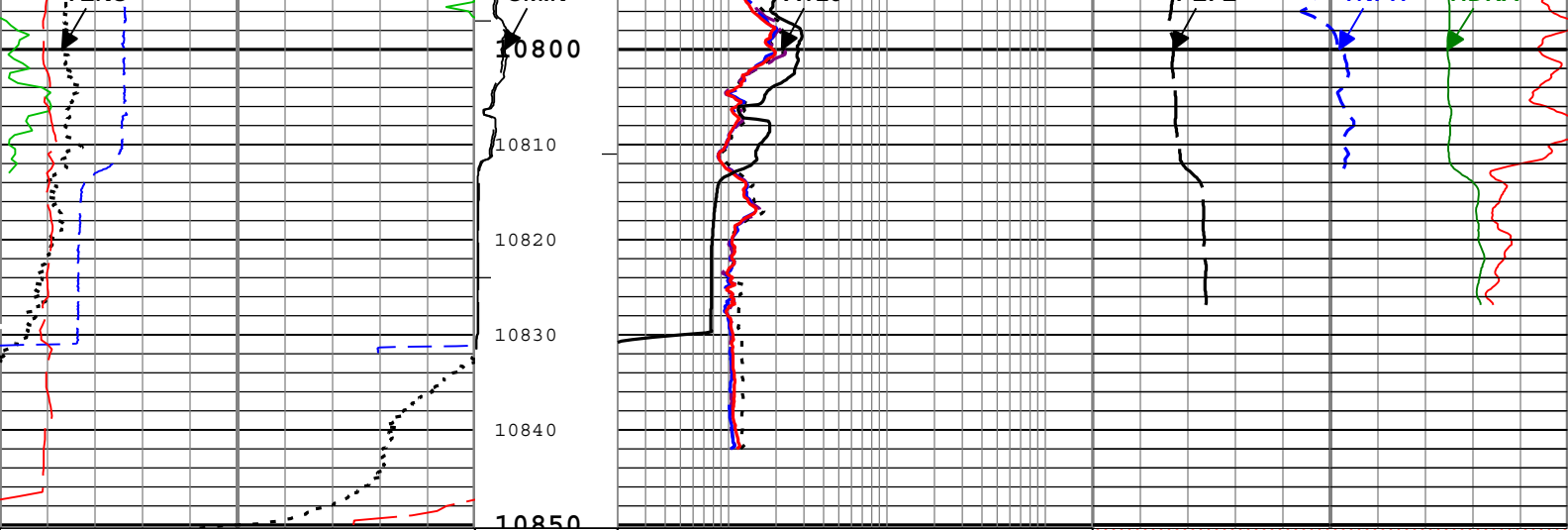












Cable Tension (TENS)		Mudcake		Array Induction Two Foot Resistivity A20 (AT20) AIT-M		CROSS OVER	
0 5000 lbf		2 2000 ohm.m		2 2000 ohm.m		Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-H	
Caliper (CALI) HDRS-H		Synthetic Micro-Inverse Resistivity (SMIN) HDRS-H		Array Induction Two Foot Resistivity A30 (AT30) AIT-M		0.3 ft3/ft3 0	
6 16 in		0 100 ohm.m		2 2000 ohm.m		Standard Resolution Density Porosity (DPHZ) HDRS-H	
Gamma Ray (GR) HGNS-H		Synthetic Micro-Normal Resistivity (SMNO) HDRS-H		Array Induction Two Foot Resistivity A60 (AT60) AIT-M		0.3 ft3/ft3 0	
0 150 gAPI		0 100 ohm.m		2 2000 ohm.m		Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H	
Spontaneous Potential (SP) AIT-M				Array Induction Two Foot Resistivity A90 (AT90) AIT-M		Density Standoff Correction (HDRA) HDRS-H	
-80 20 mV				2 2000 ohm.m		-0.5 g/cm3 0.5	
				Invaded Formation Resistivity filtered at 18 inches (RXOZ) HDRS-H			
				2 2000 ohm.m			

TIME_1900 - Time Marked every 60.00 (s)

— 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)

Description: Triple Combo standard resolution template for Platform Express Format: Log (Triple combo) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 02-Sep-2013 16:09:16

Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
ABHM	Array Induction Borehole Correction Mode	AIT-M	Compute Standoff	
ABLM	Array Induction Basic Logs Mode	AIT-M	Normal	
ACDE	Array Induction Casing Detection Enable	AIT-M	Yes	
ASTA	Array Induction Tool Standoff	AIT-M	1	in
BARI	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	Depth Zoned	in
BSAL	Borehole Salinity	Borehole	3395.26	ppm
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	0.119	in
CBLO	Casing Bottom (Logger)	WLSESSION	1162.5	ft
CDEN	Cement Density	HGNS-H	2	g/cm3

				0
CSODDRL	Casing Outer Diameter - Zoned along driller depths	WLSESSION	9.625	in
DFD	Drilling Fluid Density	Borehole	10.6	lbm/gal
DFT	Drilling Fluid Type	Borehole	Water	
DFT_WATER	Drilling Fluid Water Type	Borehole	LSND	
DHC	Density Hole Correction	HDRS-H	Bit Size	
FCD	Future Casing (Outer) Diameter	WLSESSION	4.5	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	AMF	
GTSE	Generalized Temperature Selection, from Measured or Computed Temperature	Borehole	CTEM	
HSCO	Hole Size Correction Option	HGNS-H	Yes	
MATR	Rock Matrix for Neutron Porosity Corrections	Borehole	SANDSTONE	
MDEN	Matrix Density for Density Porosity	Borehole	2.68	g/cm3
MFST	Mud Filtrate Sample Temperature	Borehole	75	degF
RMFS	Resistivity of Mud Filtrate Sample	Borehole	1.24	ohm.m
SOCO	Standoff Correction Option	HGNS-H	Yes	
SPDR	SP Drift Per Foot	AIT-M	0	mV/ft

Depth Zone Parameters			
Parameter	Value	Start (ft)	Stop (ft)
BS	13.5	78	1162.5
BS	8.75	1162.5	10850.33
All depth are actual.			

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	3600	ft/h

TWO								

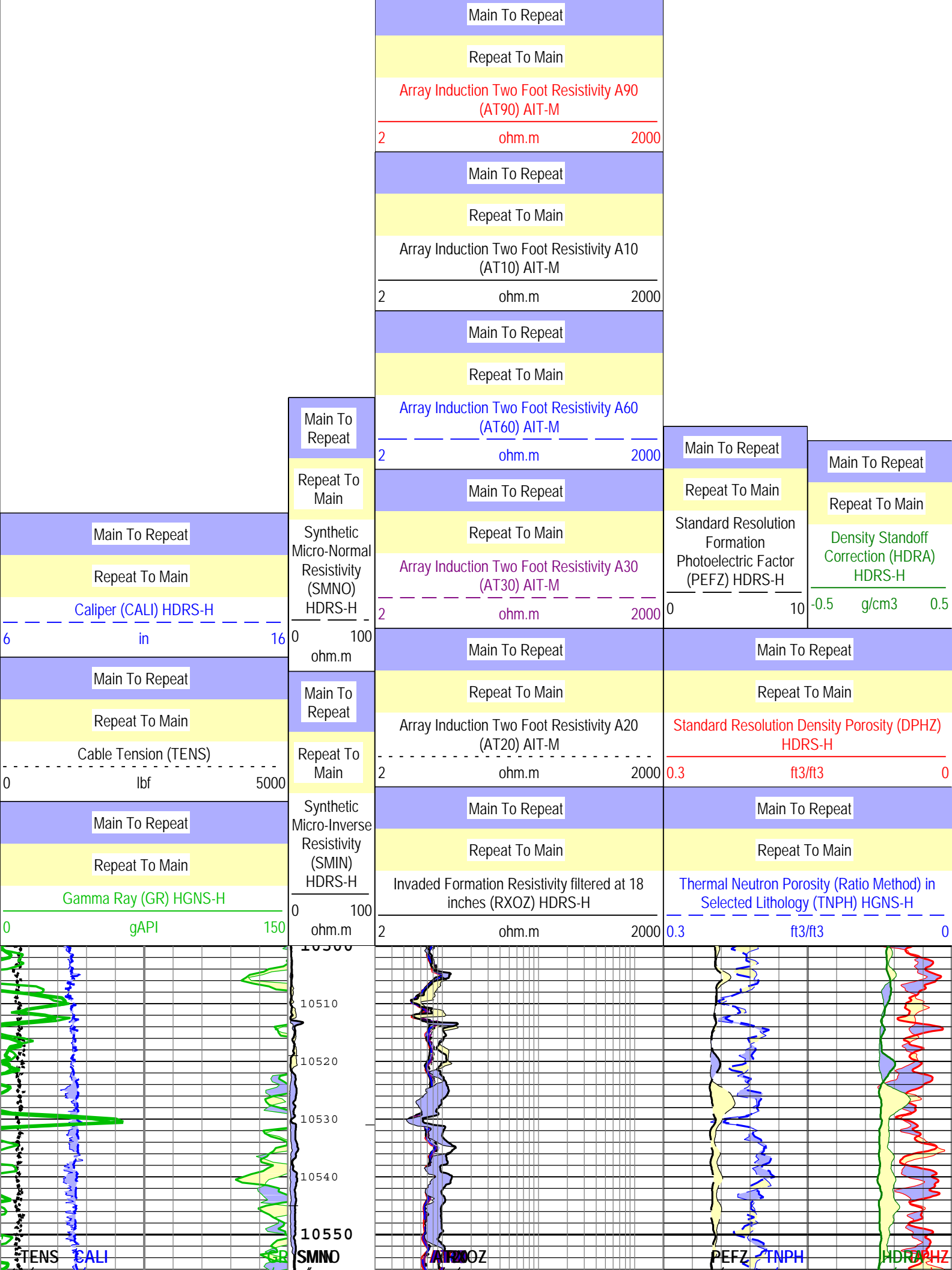
Pass Summary								
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Depth Shift	Include Parallel Data
TWO	Log[3]:Up	Up	10399.96 ft	10853.04 ft	02-Sep-2013 11:54:02 AM	02-Sep-2013 12:04:02 PM	17.97 ft	true
TWO	Log[4]:Up	Up	121.49 ft	10850.32 ft	02-Sep-2013 12:08:55 PM	02-Sep-2013 3:16:03 PM	19.40 ft	true

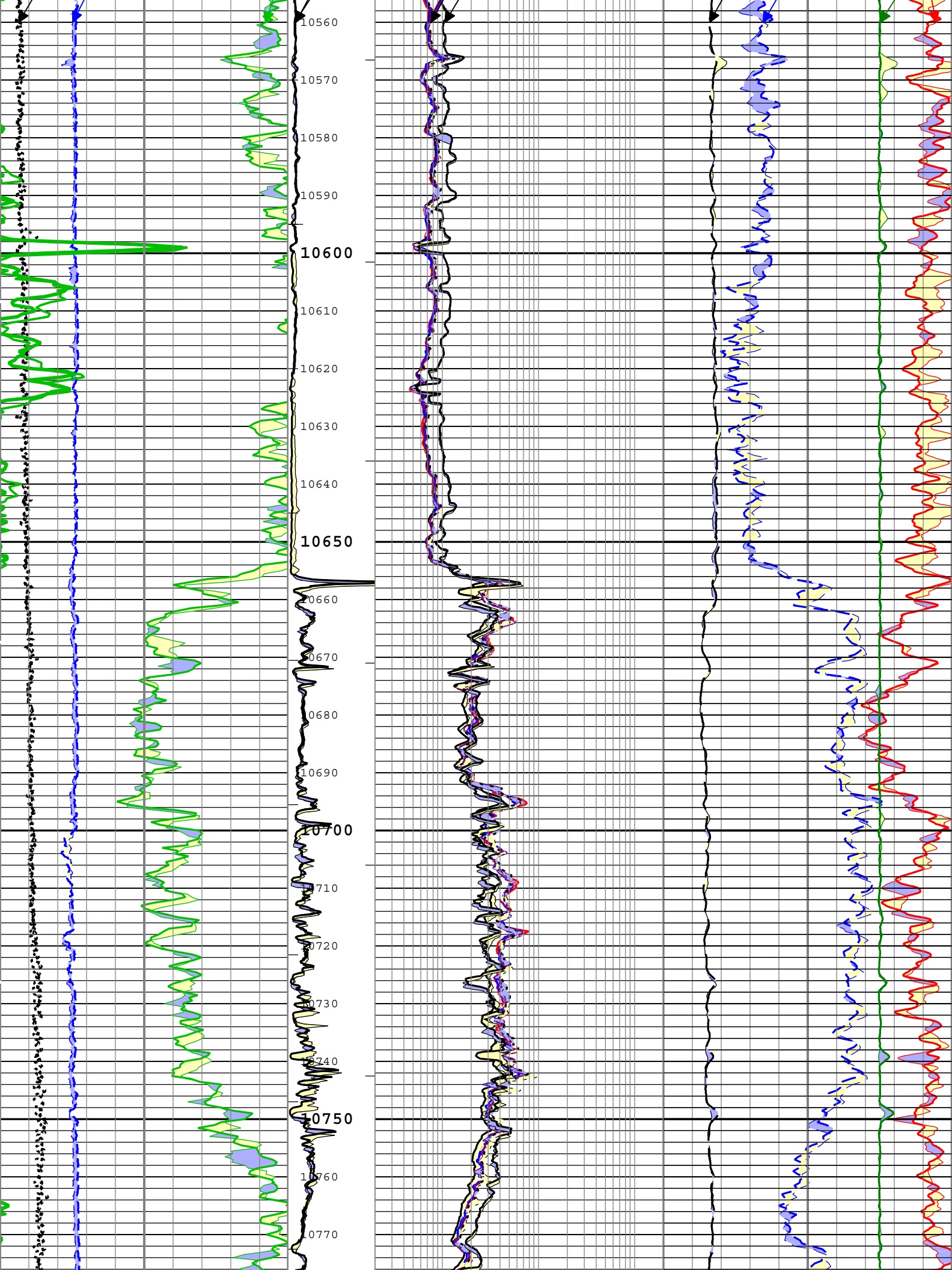
All depths are referenced to toolstring zero

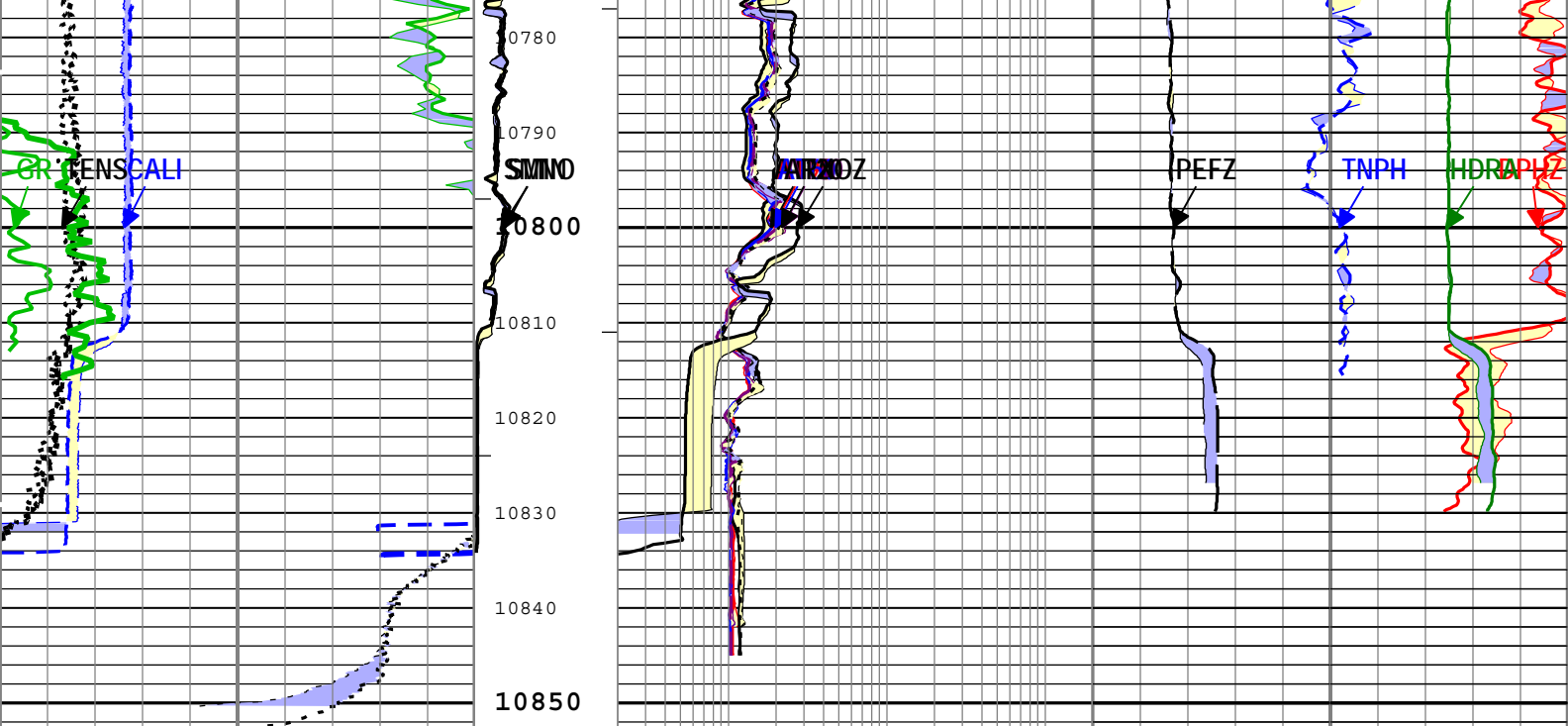
Log	TWO: Log[4]:Up
-----	----------------

Description: Triple Combo standard resolution template for Platform Express Format: Log (Triple combo RA) Index Scale: 5 in per 100 ft Index Unit: ft
Index Type: Measured Depth Creation Date: 02-Sep-2013 16:09:25

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







Main To Repeat		Main To Repeat	Main To Repeat		Main To Repeat					
Repeat To Main			Repeat To Main		Repeat To Main					
Caliper (CALI) HDRS-H			Array Induction Two Foot Resistivity A90 (AT90) AIT-M		Standard Resolution Density Porosity (DPHZ) HDRS-H					
6	in	16	2	ohm.m	2000	0.3	ft3/ft3	0		
Main To Repeat		Synthetic Micro-Normal Resistivity (SMNO) HDRS-H	Main To Repeat		Main To Repeat					
Repeat To Main			Repeat To Main		Repeat To Main					
Cable Tension (TENS)			Array Induction Two Foot Resistivity A10 (AT10) AIT-M		Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-H					
0	lbf	5000	2	ohm.m	2000	0.3	ft3/ft3	0		
Main To Repeat		Main To Repeat	Main To Repeat		Main To Repeat		Main To Repeat			
Repeat To Main			Repeat To Main		Repeat To Main		Repeat To Main			
Gamma Ray (GR) HGNS-H			Array Induction Two Foot Resistivity A60 (AT60) AIT-M		Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H		Density Standoff Correction (HDRA) HDRS-H			
0	gAPI	150	2	ohm.m	2000	0	10	-0.5	g/cm3	0.5
		Synthetic Micro-Inverse Resistivity (SMIN) HDRS-H	Main To Repeat							
			Repeat To Main							
			Array Induction Two Foot Resistivity A30 (AT30) AIT-M							
			Main To Repeat							
			Repeat To Main							
			Array Induction Two Foot Resistivity A20 (AT20) AIT-M							
			2	ohm.m	2000					
			Main To Repeat							
			Repeat To Main							

Repeat To Main		
Invaded Formation Resistivity filtered at 18 inches (RXOZ) HDRS-H		
2	ohm.m	2000

TIME_1900 - Time Marked every 60.00 (s)

└─ 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)

Description: Triple Combo standard resolution template for Platform Express Format: Log (Triple combo RA) Index Scale: 5 in per 100 ft Index Unit: ft
Index Type: Measured Depth Creation Date: 02-Sep-2013 16:09:25

Calibration Report

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

Primary Equipment :		
Array Induction Sonde - M	AMIS	117
Auxiliary Equipment :		
AITM Rm/SP Bottom Nose	AMRM	117

AIT Sonde Calibration - Test Loop Gain

Master (EEPROM):		17:21:40 13-Aug-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Test Loop Gain - 0		Master	1.000	0.950	1.021	1.050	
Test Loop Phase - 0	deg	Master	0	-3.000	1.358	3.000	
Test Loop Gain - 1		Master	1.000	0.950	1.021	1.050	
Test Loop Phase - 1	deg	Master	0	-3.000	1.270	3.000	
Test Loop Gain - 2		Master	1.000	0.950	1.021	1.050	
Test Loop Phase - 2	deg	Master	0	-3.000	0.312	3.000	
Test Loop Gain - 3		Master	1.000	0.950	1.019	1.050	
Test Loop Phase - 3	deg	Master	0	-3.000	0.372	3.000	
Test Loop Gain - 4		Master	1.000	0.950	1.001	1.050	
Test Loop Phase - 4	deg	Master	0	-3.000	0.184	3.000	
Test Loop Gain - 5		Master	1.000	0.950	0.999	1.050	
Test Loop Phase - 5	deg	Master	0	-3.000	-0.161	3.000	
Test Loop Gain - 6		Master	1.000	0.950	1.007	1.050	
Test Loop Phase - 6	deg	Master	0	-3.000	0.134	3.000	
Test Loop Gain - 7		Master	1.000	0.950	1.011	1.050	
Test Loop Phase - 7	deg	Master	0	-3.000	-0.160	3.000	

AIT Sonde Calibration - Sonde Error Correction

Master (EEPROM):		17:21:40 13-Aug-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Sonde Error Correction Real - 0	mS/m	Master	-----	-231.000	-70.320	119.000	
Sonde Error Correction Quad - 0		Master	-----	-2250.000	6.445	2250.000	
Sonde Error Correction Real - 1	mS/m	Master	-----	114.000	146.991	204.000	
Sonde Error Correction Quad - 1		Master	-----	-625.000	121.386	625.000	
Sonde Error Correction Real - 2	mS/m	Master	-----	66.000	109.267	156.000	
Sonde Error Correction Quad - 2		Master	-----	-350.000	-109.699	350.000	
Sonde Error Correction Real - 3	mS/m	Master	-----	39.000	61.610	89.000	
Sonde Error Correction Quad - 3		Master	-----	-250.000	-15.324	250.000	
Sonde Error Correction Real - 4	mS/m	Master	-----	15.000	24.179	35.000	
Sonde Error Correction Quad - 4		Master	-----	-63.000	-14.917	63.000	
Sonde Error Correction Real - 5	mS/m	Master	-----	4.000	13.684	24.000	
Sonde Error Correction Quad - 5		Master	-----	-50.000	-6.983	50.000	
Sonde Error Correction Real - 6	mS/m	Master	-----	5.000	9.428	15.000	
Sonde Error Correction Quad - 6		Master	-----	-30.000	-0.261	30.000	
Sonde Error Correction Real - 7	mS/m	Master	-----	-5.000	-1.634	5.000	
Sonde Error Correction Quad - 7		Master	-----	-30.000	0.352	30.000	

AIT Mud Calibration - Mud Calibration Gain

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Coarse Gain		Master	1.000	0.800	0.848	1.200	
Fine Gain		Master	1.000	0.800	0.842	1.200	

AIT Electronics Check - Thru Calibration Check

Master (EEPROM):	17:21:40 13-Aug-2013	Before (Measured):	18:06:23 30-Aug-2013 Expired by 1 days	After:
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Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Thru Cal Mag - 0	V	Master	----	0.366	0.630	0.854	
		Before	----	0.366	0.630	0.854	
		After	----	----	----	----	
		Before-Master	----	----	0.000	----	
		After-Before	----	----	----	----	
Thru Cal Phase - 0	deg	Master	----	137.000	-178.278	-103.000	
		Before	----	137.000	-178.321	-103.000	
		After	----	----	----	----	
		Before-Master	----	----	-0.043	----	
		After-Before	----	----	----	----	
Thru Cal Mag - 1	V	Master	----	0.762	1.290	1.778	
		Before	----	0.762	1.290	1.778	
		After	----	----	----	----	
		Before-Master	----	----	0.000	----	
		After-Before	----	----	----	----	
Thru Cal Phase - 1	deg	Master	----	136.000	-179.344	-104.000	
		Before	----	136.000	-179.387	-104.000	
		After	----	----	----	----	
		Before-Master	----	----	-0.043	----	
		After-Before	----	----	----	----	
Thru Cal Mag - 2	V	Master	----	0.372	0.639	0.868	
		Before	----	0.372	0.639	0.868	
		After	----	----	----	----	
		Before-Master	----	----	0.000	----	
		After-Before	----	----	----	----	
Thru Cal Phase - 2	deg	Master	----	132.000	177.144	-108.000	
		Before	----	132.000	177.101	-108.000	
		After	----	----	----	----	
		Before-Master	----	----	-0.043	----	
		After-Before	----	----	----	----	
Thru Cal Mag - 3	V	Master	----	0.420	0.721	0.980	
		Before	----	0.420	0.721	0.980	
		After	----	----	----	----	
		Before-Master	----	----	0.000	----	
		After-Before	----	----	----	----	
Thru Cal Phase - 3	deg	Master	----	131.000	176.400	-109.000	
		Before	----	131.000	176.358	-109.000	
		After	----	----	----	----	
		Before-Master	----	----	-0.042	----	
		After-Before	----	----	----	----	
Thru Cal Mag - 4	V	Master	----	0.804	1.353	1.876	
		Before	----	0.804	1.353	1.876	
		After	----	----	----	----	
		Before-Master	----	----	0.000	----	
		After-Before	----	----	----	----	
Thru Cal Phase - 4	deg	Master	----	125.000	170.306	-115.000	
		Before	----	125.000	170.263	-115.000	
		After	----	----	----	----	
		Before-Master	----	----	-0.043	----	
		After-Before	----	----	----	----	
Thru Cal Mag - 5	V	Master	----	1.176	1.967	2.744	
		Before	----	1.176	1.967	2.744	
		After	----	----	----	----	
		Before-Master	----	----	0.000	----	
		After-Before	----	----	----	----	
Thru Cal Phase - 5	deg	Master	----	122.000	168.695	-118.000	
		Before	----	122.000	168.655	-118.000	
		After	----	----	----	----	
		Before-Master	----	----	-0.040	----	

		After-Before	----	----	1.176	1.971	2.744	
Thru Cal Mag - 6	V	Before	----	----	1.176	1.971	2.744	
		After	----	----	----	----	----	
		Before-Master	----	----	----	0.000	----	
		After-Before	----	----	----	----	----	
Thru Cal Phase - 6	deg	Master	----	----	121.000	168.695	-119.000	
		Before	----	----	121.000	168.657	-119.000	
		After	----	----	----	----	----	
		Before-Master	----	----	----	-0.038	----	
		After-Before	----	----	----	----	----	
Thru Cal Mag - 7	V	Master	----	----	0.846	1.419	1.974	
		Before	----	----	0.846	1.419	1.974	
		After	----	----	----	----	----	
		Before-Master	----	----	----	0.000	----	
		After-Before	----	----	----	----	----	
Thru Cal Phase - 7	deg	Master	----	----	115.000	167.766	-125.000	
		Before	----	----	115.000	167.746	-125.000	
		After	----	----	----	----	----	
		Before-Master	----	----	----	-0.020	----	
		After-Before	----	----	----	----	----	
SPA Zero	mV	Master			-50.000	0.167	50.000	
		Before			-50.000	0.179	50.000	
		After	----	----	----	----	----	
		Before-Master	----	----	----	0.012	----	
		After-Before	----	----	----	----	----	
SPA Plus	mV	Master			941.000	991.200	1040.000	
		Before			941.000	991.197	1040.000	
		After	----	----	----	----	----	
		Before-Master	----	----	----	-0.003	----	
		After-Before	----	----	----	----	----	
Temperature Zero	V	Master			-0.050	0.000	0.050	
		Before			-0.050	0.000	0.050	
		After	----	----	----	----	----	
		Before-Master	----	----	----	0.000	----	
		After-Before	----	----	----	----	----	
Temperature Plus	V	Master			0.870	0.918	0.960	
		Before			0.870	0.918	0.960	
		After	----	----	----	----	----	
		Before-Master	----	----	----	0.000	----	
		After-Before	----	----	----	----	----	

HDRS-H (HILT Density and Rxo Sonde, 150 degC) Calibration - Run TWO			
Primary Equipment :			
HILT High-Resolution Control Cartridge, 150 degC	HRCC-H	4881	
HILT Resistivity Gamma-Ray Density Device, 150 degC	HRGD-H	4700	
Auxiliary Equipment :			
HRDD Backscatter Detector	Backscatter		
HRDD Long Spacing Detector	Long Spacing	28642	
HRDD Short Spacing Detector	Short Spacing	27727	
Cesium 137 Gamma-Ray Logging Source	GSR-J	5234	
HILT High-Resolution Control Cartridge, 150 degC	HRCC-H	4881	
HILT High-Resolution Mechanical Sonde, 150 degC	HRMS-H	3969	
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): 18:06:55 30-Aug-2013 Expired by 1 days							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Small Ring	in	Before	8.00	6.00	6.90	10.00	
Large Ring	in	Before	12.00	9.00	11.00	15.00	

HDRS Density Calibration - Inversion Results

Master (EEPROM):		15:19:08 13-Aug-2013					
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	2.604	2.670	
Pe Magnesium		Master	2.650	2.550	2.582	2.750	

HDRS Density Calibration - Deviation Summary

Master (EEPROM):		15:19:08 13-Aug-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Average Deviation	%	Master	0	-0.6000	0.4209	0.6000	
BS Max Deviation	%	Master	0	-1.6000	1.0309	1.6000	
SS Average Deviation	%	Master	0	-1.0000	0.3542	1.0000	
SS Max Deviation	%	Master	0	-2.5000	1.0180	2.5000	
LS Average Deviation	%	Master	0	-1.5000	0.6597	1.5000	
LS Max Deviation	%	Master	0	-3.5000	1.9637	3.5000	

HDRS Density Calibration - Background Summary

Master (EEPROM):		15:19:08 13-Aug-2013		Before (Measured):		18:08:34 30-Aug-2013 Expired by 1 days	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Window Ratio		Master	1.0000		0.7376		
		Before	0.7376	0.7007	0.7350	0.7745	
		Before-Master	-----	-----	-0.0026	-----	
BS Window Sum	1/s	Master	1		23417		
		Before	23417	22246	23427	24588	
		Before-Master	-----	-----	10	-----	
SS Window Ratio		Master	1.0000		0.4809		
		Before	0.4809	0.4569	0.4804	0.5050	
		Before-Master	-----	-----	-0.0005	-----	
SS Window Sum	1/s	Master	1		10545		
		Before	10545	10018	10570	11072	
		Before-Master	-----	-----	25	-----	
LS Window Ratio		Master	1.0000		0.2971		
		Before	0.2971	0.2822	0.3022	0.3120	
		Before-Master	-----	-----	0.0051	-----	
LS Window Sum	1/s	Master	1		1303		
		Before	1303	1237	1305	1368	
		Before-Master	-----	-----	2	-----	

HDRS Density Calibration - Photo-multiplier High Voltages

Master (EEPROM):		15:19:08 13-Aug-2013		Before (Measured):		18:08:34 30-Aug-2013 Expired by 1 days	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS PM High Voltage	V	Master		1000	1412	2400	
		Before		1000	1416	2400	
		Before-Master	-----	-100	4	100	
SS PM High Voltage	V	Master		1000	1628	2400	
		Before		1000	1623	2400	
		Before-Master	-----	-100	-5	100	
LS PM High Voltage	V	Master		1000	1642	2400	
		Before		1000	1627	2400	
		Before-Master	-----	-100	-15	100	

HDRS Density Calibration - Crystal Quality Resolutions

Master (EEPROM):		15:19:08 13-Aug-2013		Before (Measured):		18:08:34 30-Aug-2013 Expired by 1 days	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Crystal Resolution	%	Master		5.00	10.73	25.00	
		Before		5.00	10.93	25.00	
		Before-Master	-----	-1.00	0.20	1.00	
SS Crystal Resolution	%	Master		5.00	10.75	20.00	
		Before		5.00	10.72	20.00	
		Before-Master	-----	-1.00	-0.03	1.00	
LS Crystal Resolution	%	Master		5.00	8.92	20.00	
		Before		5.00	9.00	20.00	
		Before-Master	-----	-1.00	0.08	1.00	

HDRS MCFL Calibration - MCFL Accumulations

Before (Measured):		10:45:57 02-Sep-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Main Resistivity	ohm.m	Before	3875	3565	3840	4185	
Deep Resistivity	ohm.m	Before	3830	3524	3798	4136	
Shallow Resistivity	ohm.m	Before	3830	3524	3815	4136	

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

Primary Equipment :

HILT Gamma-Ray and Neutron Sonde, 150 degC HGNS-H 3799

Auxiliary Equipment :

HGNS Accelerometer, 150 degC HACCZ-H 1614

AmBe Neutron Logging Source NSR-F 5138

Calibration Parameter :

Water Temperature

Housing Size

JIG-BKG (Jig minus background reference) 165

HGNS Accelerometer Calibration - Accelerometer Accumulations

Before (Measured): 10:45:56 02-Sep-2013

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
AZ Vertical Measurement	ft/s2	Before	32.2	31.5	32.2	32.8	

HGNS Accelerometer EEPROM - Accelerometer EEPROM Read

Master (EEPROM): 00:00:00 15-May-2002

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	----	----	-3195.000	----	
Accelerometer Coefficients - 1		Master	----	----	3.177	----	
Accelerometer Coefficients - 2		Master	----	----	0.012	----	
Accelerometer Coefficients - 3		Master	----	----	0.000	----	
Accelerometer Coefficients - 4		Master	----	----	2.708	----	
Accelerometer Coefficients - 5		Master	----	----	0.000	----	
Accelerometer Coefficients - 6		Master	----	----	0.000	----	
Accelerometer Coefficients - 7		Master	----	----	0.000	----	
Accelerometer Coefficients - 8		Master	----	----	298.500	----	
Accelerometer Coefficients - 9		Master	----	----	1.005	----	

HGNS Neutron Calibration - HGNS Neutron Accumulations

Master (EEPROM): 10:37:48 28-Aug-2013 Before (Measured): 18:05:45 30-Aug-2013 After:
Expired by 1 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Near Zero Measurement	1/s	Master	0	5.0	28.0	40.0	
		Before	0	5.0	29.5	40.0	
		After	----	----	----	----	
		Before-Master	----	-4.2	1.5	4.2	
		After-Before	----	----	----	----	
Far Zero Measurement	1/s	Master	0	5.0	28.2	40.0	
		Before	0	5.0	31.2	40.0	
		After	----	----	----	----	
		Before-Master	----	-4.2	3.0	4.2	
		After-Before	----	----	----	----	
Near Plus Measurement - 0	1/s	Master	6031.0	4700.0	5537.0	6900.0	
		Before	----	----	----	----	
		After	----	----	----	----	
		Before-Master	----	----	----	----	
		After-Before	----	----	----	----	
Far Plus Measurement - 0	1/s	Master	2793.0	1900.0	2288.0	2900.0	
		Before	----	----	----	----	
		After	----	----	----	----	
		Before-Master	----	----	----	----	
		After-Before	----	----	----	----	
Near Corrected Plus Measurement - 0	1/s	Master		4700.0	5499.0	6900.0	
		Before	----	----	----	----	

		After	----	----	----	----	
		Before-Master	----	----	----	----	
		After-Before	----	----	----	----	
Far Corrected Plus Measurement - 0	1/s	Master		1900.0	2251.0	2900.0	
		Before	----	----	----	----	
		After	----	----	----	----	
		Before-Master	----	----	----	----	
		After-Before	----	----	----	----	

HGNS Gamma-Ray Calibration - Gamma-Ray Accumulations

Before (Measured): 18:10:26 30-Aug-2013 Expired by 1 days After:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RGR Zero Measurement	gAPI	Before	30.0	0	33.7	120.0	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RGR Plus Measurement	gAPI	Before	185.4	157.1	167.8	206.3	
		After			NOT DONE		
		After-Before	----	----	----	----	
GR Calibration Gain		Before	0.89	0.80	0.98	1.05	
		After	----	----	----	----	
		After-Before	----	----	----	----	

Company:	WPX ENERGY ROCKY MOUNTAIN, LLC	Schlumberger
Well:	CMU 323-33	
Field:	KOKAPELA	
County:	GARFIELD	
State:	COLORADO	

PLATFORM EXPRESS *MD*

COMPENSATED NEUTRON, LITHO-DENSITY

INDUCTION RESISTIVITY, GR, SP