

Company: CAERUS PICEANCE LLC

Well: PUCKETT 42D-2

Field: WILDCAT

County: GARFIELD State: COLORADO

County: GARFIELD
Field: WILDCAT
Location: SHL: S2 T7S R97W
Well: PUCKETT 42D-2
Company: CAERUS PICEANCE LLC

Platform Express
Combo Print
AIT-TLD-CNL-GR

Location:	SHL: S2 T7S R97W 2489 FNL, 1153 FEL LAT: 39.475678 \ LONG: -108.180261	Elev.: K.B. 8508.00 ft G.L. 8478.00 ft D.F. 8507.00 ft
Permanent Datum:	Ground Level	Elev.: 8478.00 f
Log Measured From:	Kelly Bushing	30.00 ft above Perm.Datum
Drilling Measured From:	Kelly Bushing	
API Serial No.	Section: 2	Township: 7S Range: 97W
05-045-22618		

Logging Date 19-Apr-2015

Run Number ONE

Depth Driller 8895.00 ft

Schlumberger Depth 8830.00 ft

Bottom Log Interval 8830.00 ft

Top Log Interval 2521.00 ft

Casing Driller Size @ Depth 9.625 in @ 2532.00 ft

Casing Schlumberger 2521 ft

Bit Size 8.75 in

Type Fluid In Hole WBM

Density Viscosity 9.4 lbm/gal 59 s

Fluid Loss PH 5.2 cm3 9

MUD Source of Sample Flowline

RM @ Meas Temp 1.85 ohm.m @ 54 degF

RMF @ Meas Temp 1.39 ohm.m @ 54 degF

RMC @ Meas Temp 2.31 ohm.m @ 54 degF

Source RMF RMC Calculated Calculated

RM @ BHT RMF @ BHT 0.57 @ 191 0.43 @ 191

Max Recorded Temperatures 191 degF

Circulation Stopped 19-Apr-2015 03:30:00

Logger on Bottom 19-Apr-2015 11:18:00

Unit Number 9108 FORT MORGAN, C

Recorded By BENJAMIN MARMON

Witnessed By WHITEY COTTAM

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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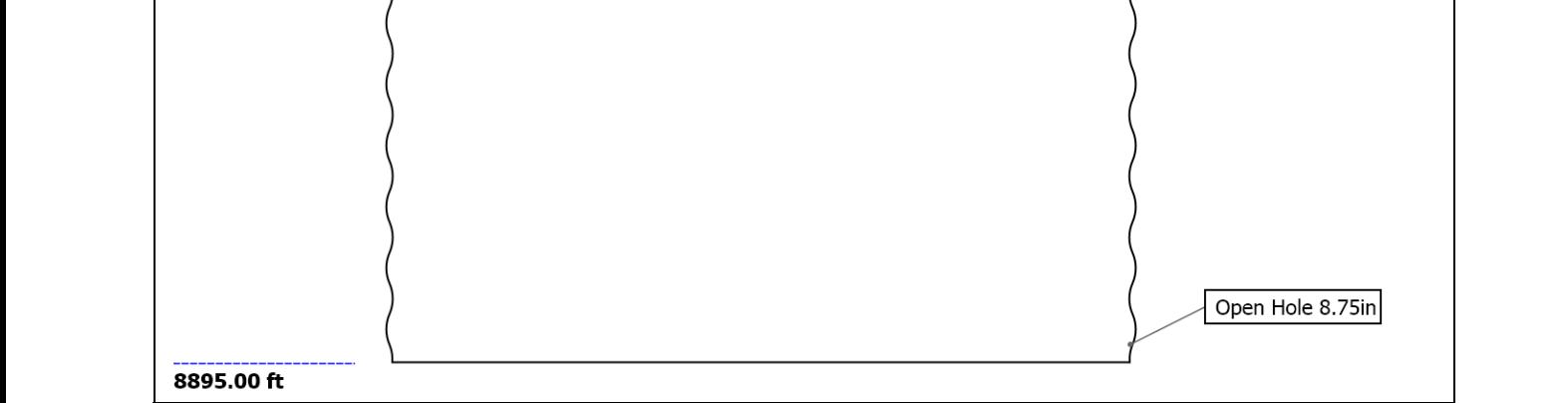
Well Sketch

Driller Depth

0.00 ft

2532.00 ft

Casing 9.625in
36lbm/ft



Borehole Size/Casing/Tubing Record						
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Bit						
Bit Size (in)	8.75					
Top Driller (ft)	0					
Top Logger (ft)	0					
Bottom Driller (ft)	8895					
Bottom Logger (ft)	8830					
Casing						
Size (in)	9.625					
Weight (lbm/ft)	36					
Inner Diameter (in)	8.921					
Grade	K55					
Top Driller (ft)	0					
Top Logger (ft)	0					
Bottom Driller (ft)	2532					
Bottom Logger (ft)	2521					

Operational Run Summary						
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Parameter (unit)	ONE					
Date Log Started	19-Apr-2015					
Time Log Started	10:29:57					
Date Log Finished	19-Apr-2015					
Time Log Finished	16:31:57					
Top Log Interval (ft)						
Bottom Log Interval (ft)						
Total Depth (ft)	8895.00					
Max Hole Deviation (deg)						
Azimuth of Max Deviation (deg)						
Bit Size (in)	8.750					
Logging Unit Number	9108					
Logging Unit Location	FORT MORGAN, CO.					
Recorded By	BENJAMIN					

	MARMON					
Witnessed By	WHITEY COTTAM					
Service Order Number	D5ND-00033					

Remarks and Equipment Summary

ONE: Toolstring			ONE: Remarks
Equip name LEH-QT LEH-QT	Length 113.38	MP name Offset	1. THIS IS THE FIRST LOG IN THE WELL.
			2. TOOLS RAN AS PER TOOL SKETCH.
			3. MATRIX: SANDSTONE. MDEN: 2.68 G/ML.
EDTC-B:862 9 EDTH-B:8652 EDTG-A:7779 2 EDTC-B:8629	110.47		4. NEUTRON CORRECTIONS: BOREHOLE (BS), STANDOFF (0.125"), PRESSURE/TEMPERATURE.
		CTEM 106.97 ACCZ 0.00 HV 0.00 Gamma Ra 105.1 y TelStatus 103.97 Temperatu 103.94 re GR 103.23	5. TD NOT TAGGED AS PER CLIENTS REQUEST. LOGGER DEPTH IS 8830'.
			6. CASING SHOE AT 2521'.
HGNS-H:473 6 HGNH:2987 NPV-N NSR-F:5068 HGNS-H:4736 HMCA-H HACCZ-H:361 6	103.97		6. CALIPERS CLOSED AT 4969' TO
			7. CALIPER SHIFTED 0.256" IN CASING
		CNL Porosity 96.89 HMCA 94.56 HGNS 94.56 Accelerometer 0.00	
HDRS-H:386 3 ECH-MEB:289 8 HRCC-H:3828 HRMS-H:3863 Backscatter Long Spacing GPV-Q Short Spacing HRGD-H:3760 GSR-J:5471	94.56	HRCC 90.56	
		MCFL 85.13 Caliper 84.64 TLD Density 84.25	
AH-184[2]: 3916	82.32		
AH-184[1]: 2746	80.32		
GPIT-F GPIH-B:3717 DHRU-F GPIC-F	78.32	GPIT-F Inc linometer 76.9	
Adaptor_Head	74.32	GPIT 0.00	

PPC-B[2]:81 70.32
93
PPC-B:8193



PPC-B Cal
ipers 69.17

MAST-B:807 63.8
5
ECH-SF:8157
MAPC-BA:815
9
MAMS-BA:80
75
MASS-BA:811
0
MAXS-BA:832
7

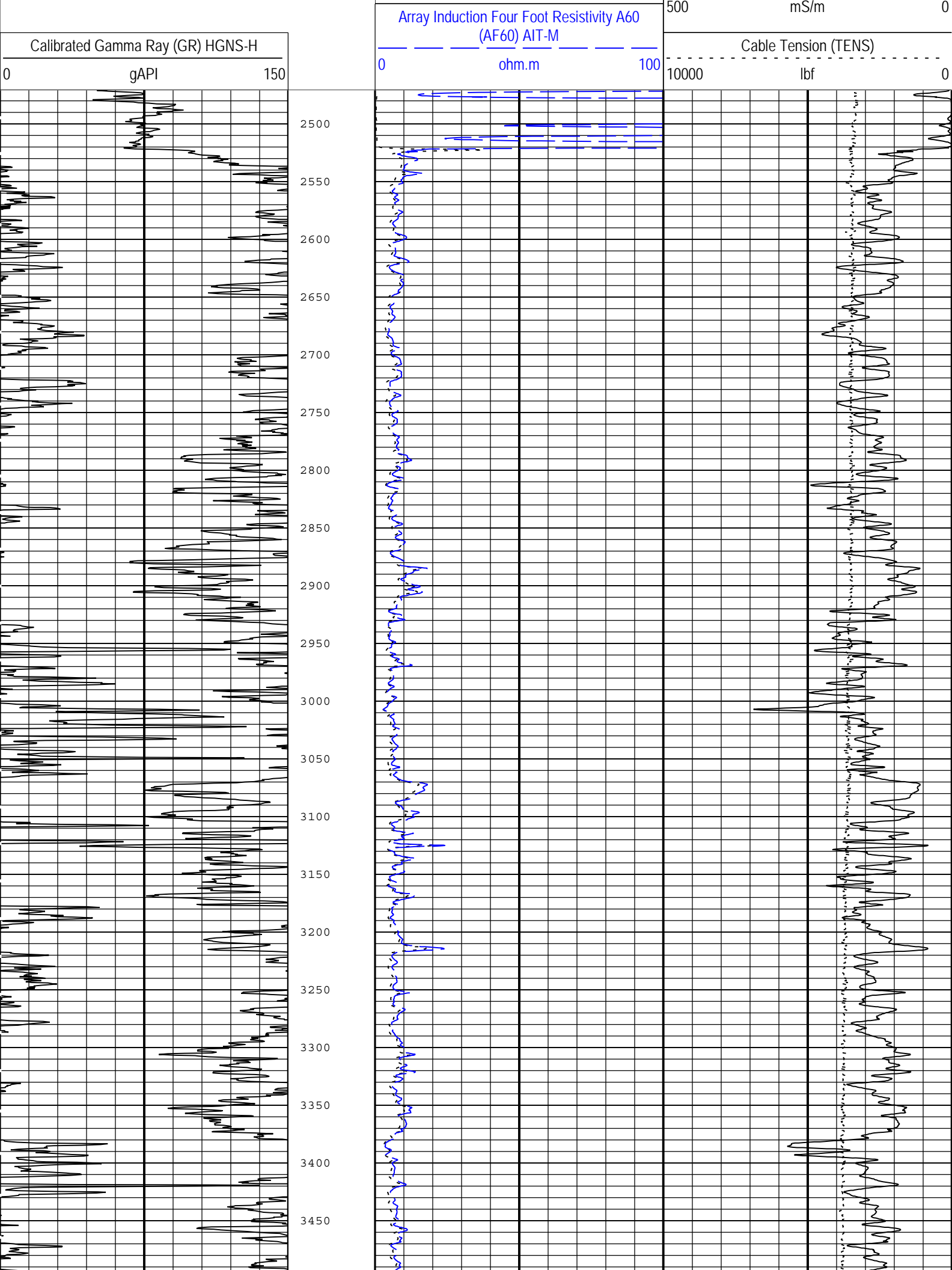
MAMS 48.36

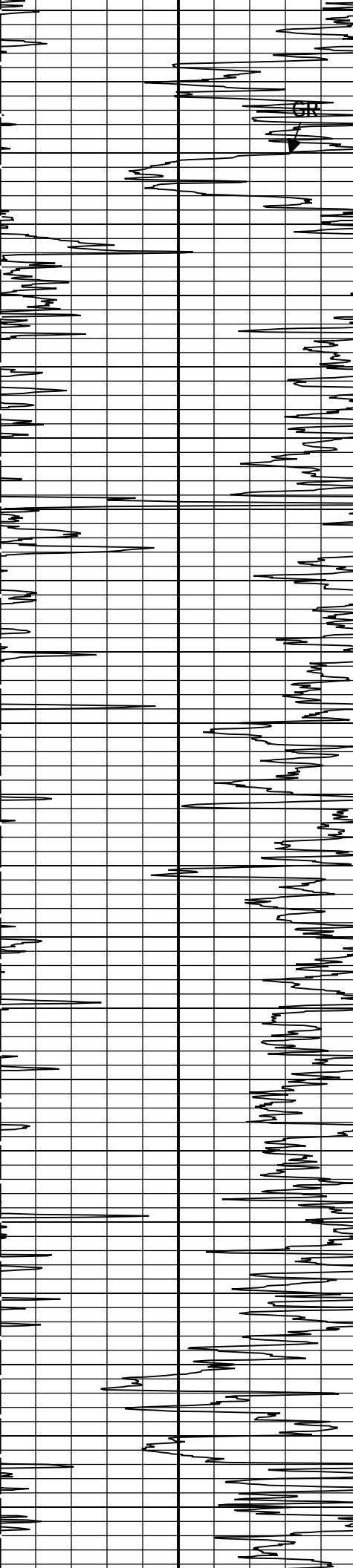


Depth Summary

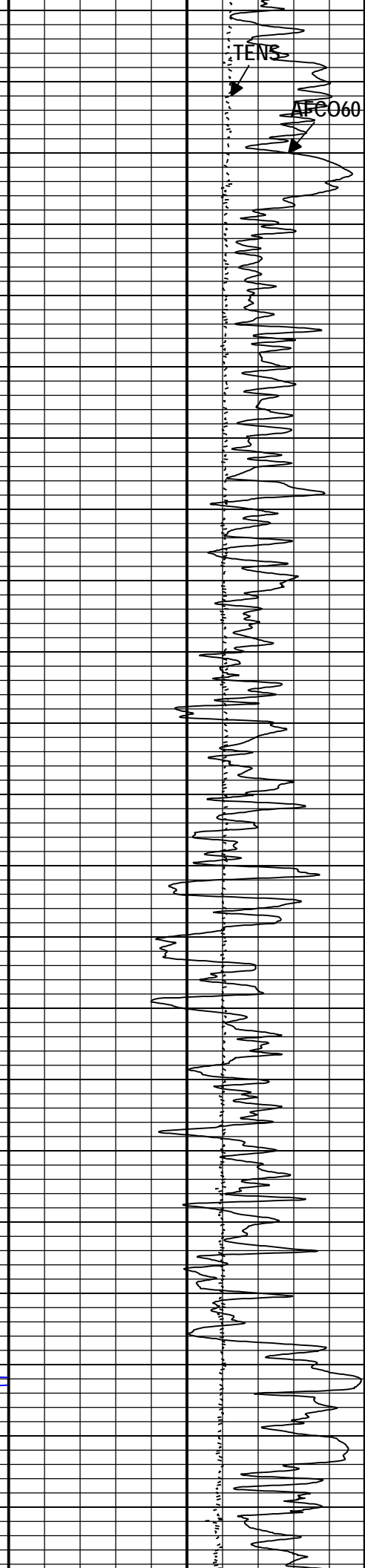
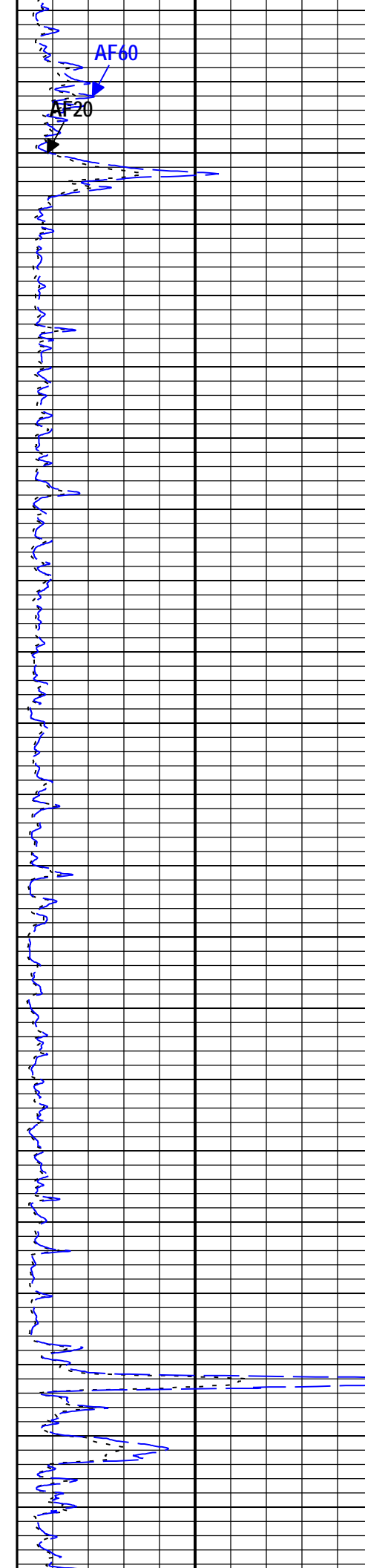
ONE		
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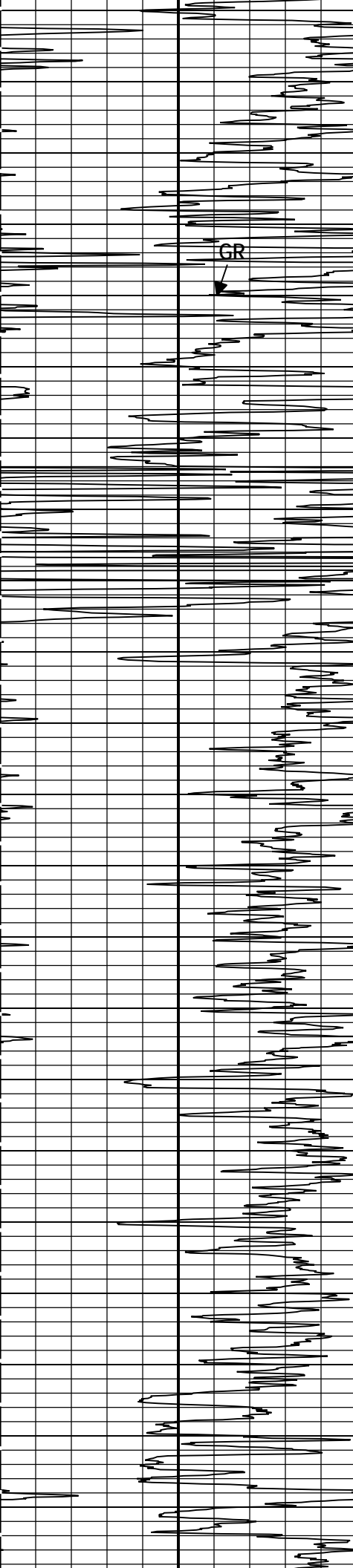
Depth Measuring Device									
Type	IDW-JA								
Serial Number	6780								
Calibration Date	11-DEC-2015								
Calibrator Serial Number									
Calibration Cable Type	7-46 AXS								
Wheel Correction 1	-2								
Wheel Correction 2	-2								
Tension Device									
Type	CMTD-B/A								
Serial Number	171								
Calibration Date	26-Mar-2015								
Calibrator Serial Number	78805A								
Number of Calibration Points	10								
Calibration Root Mean Square Error	14								
Calibration Peak Error	26								
Logging Cable									
Type	7-46A-XS								
Serial Number	U713071								
Length	17000.00 ft								
Conveyance Type	Wireline								
Rig Type	LAND								
ONE:Depth Control Parameters					Depth Control Remarks				
Log Sequence	First Log In the Well				1. ALL SCHLUMBERGER DPETH CONTROL PROCEDURES WERE FOLLOWED DURING LOGGING OPERATIONS. 2. IDW WAS USED AS PRIMARY DEPTH CONTROL MEASURE. 3. Z-CHART WAS USED AS SECONDARY DEPTH CONTROL MEASURE. 4. STRETCH CORRECTION: 9.9'				
Rig Up Length At Surface									
Rig Up Length At Bottom									
Rig Up Length Correction									
Stretch Correction									
Tool Zero Check At Surface									
ONE									
Main Pass - Induction									
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Main[3]:Up	Up	2154.88 ft	8835.73 ft	19-Apr-2015 11:50:25 AM	19-Apr-2015 3:33:25 PM	ON	0.00 ft	No
All depths are referenced to toolstring zero									
Log					Company:CAERUS PICEANCE LLC			Well:PUCKETT 42D-2	
ONE: Main[3]:Up:S012									
Description: Format: Log (AIT) Index Scale: 1 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 19-Apr-2015 17:15:02									
Channel	Source	Sampling							
AF20	AIT-M:AMIS:AMIS	3in							
AF60	AIT-M:AMIS:AMIS	3in							
AFCO60	AIT-M:AMIS:AMIS	3in							
GR_CAL	HGNS-H:HGNS-H:HGNS-H	6in							
TENS	WLWorkflow	6in							
TIME_1900	WLWorkflow	0.1in							
TIME_1900 - Time Marked every 60.00 (s)									
					Array Induction Four Foot Resistivity A20 (AF20) AIT-M				
					0 ohm.m 100				
					Array Induction Four Foot Conductivity A60 (AFCO60) AIT-M				



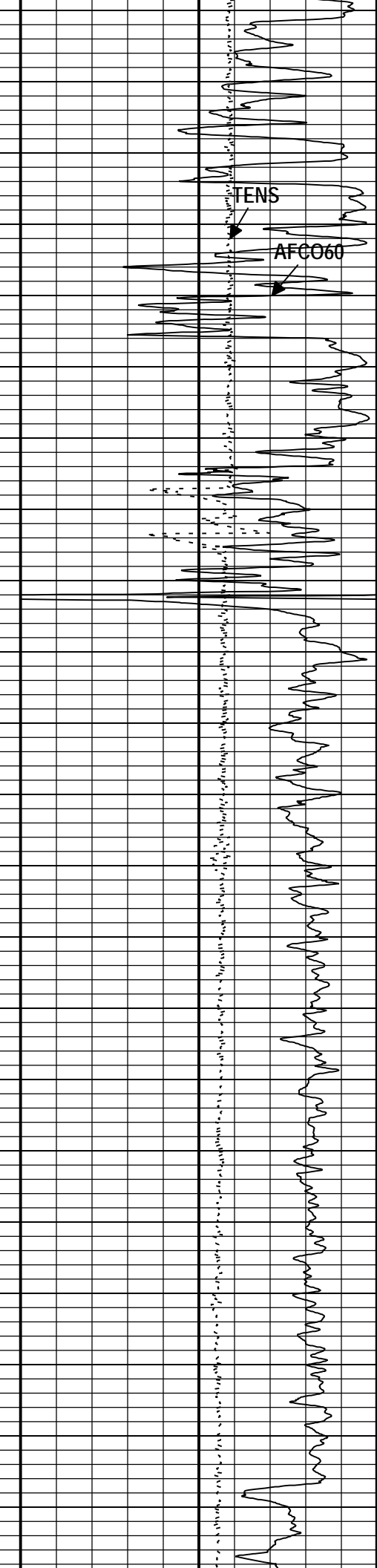
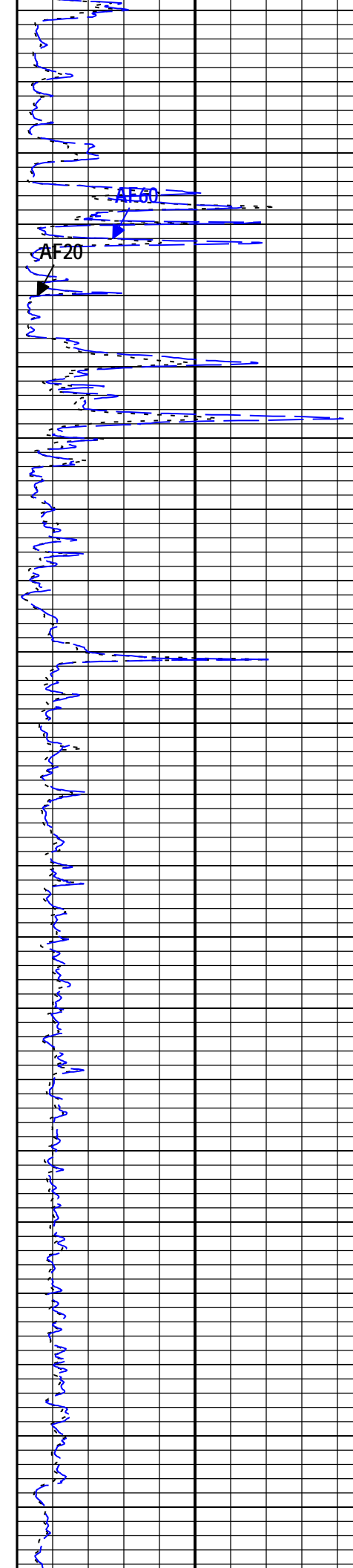


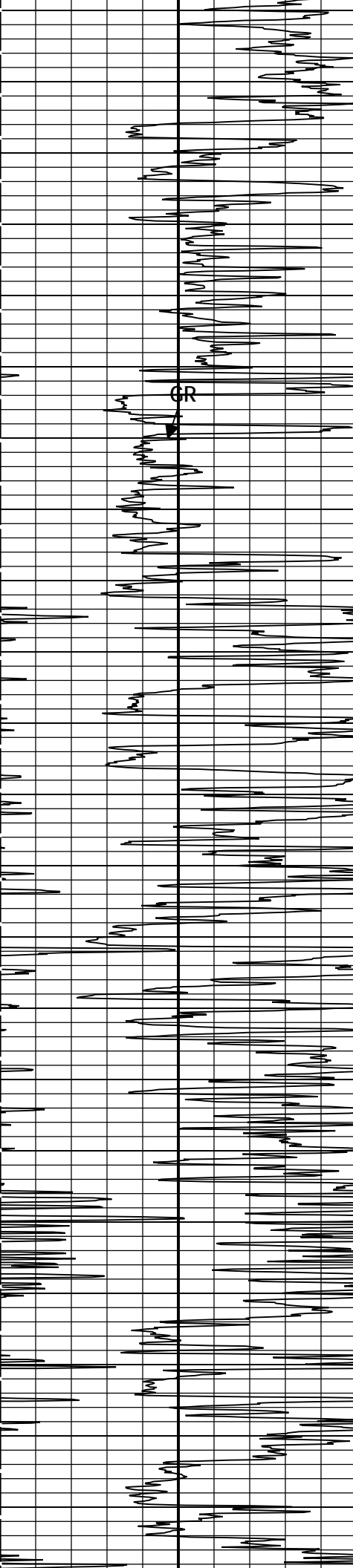
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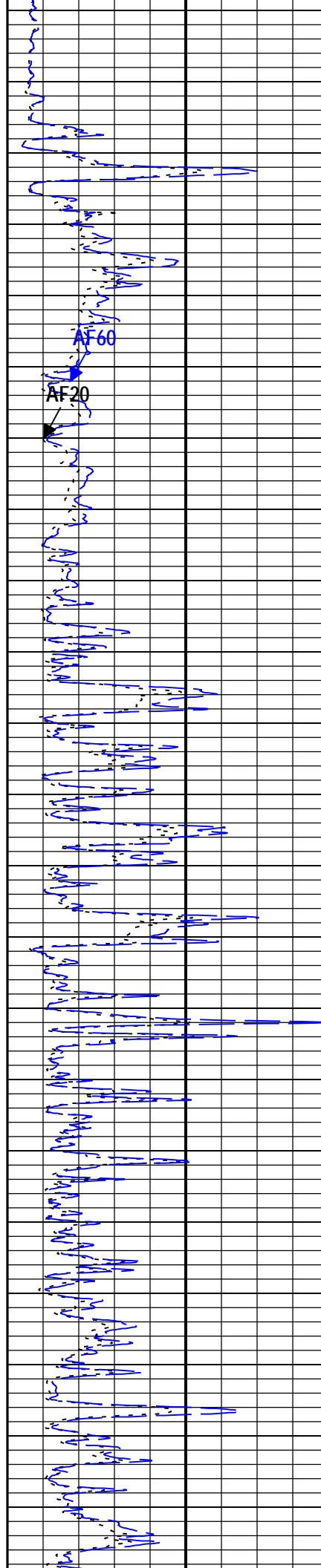


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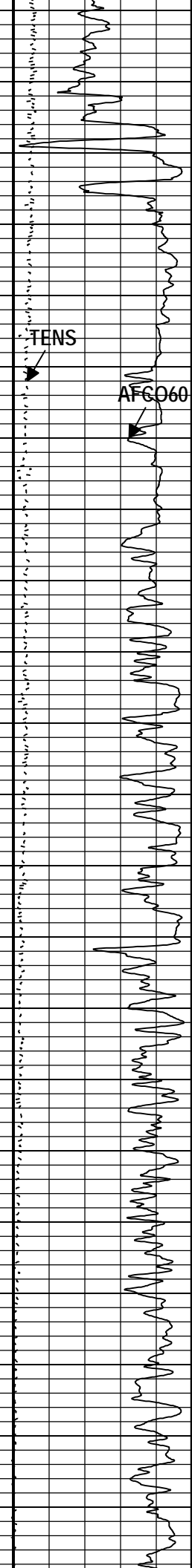




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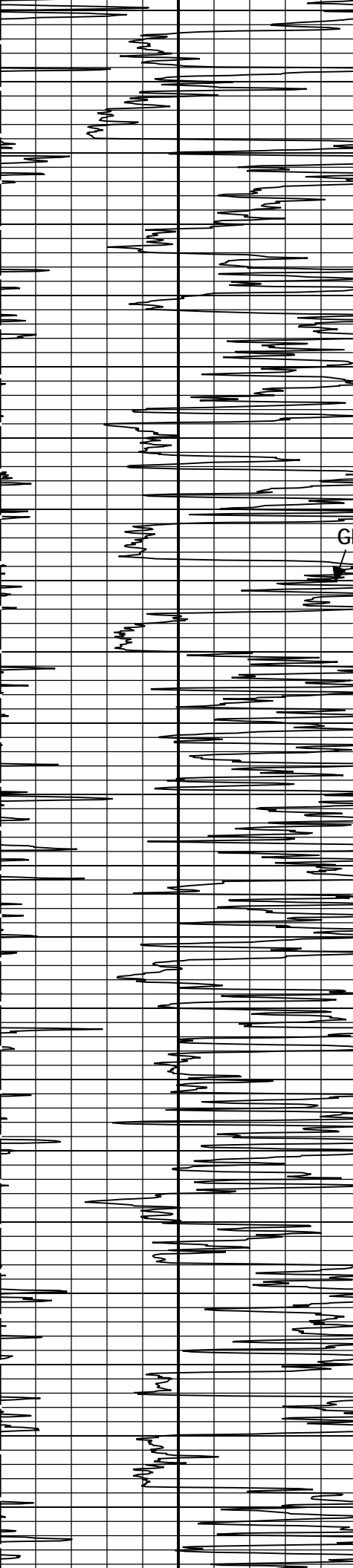


AF60
AF20



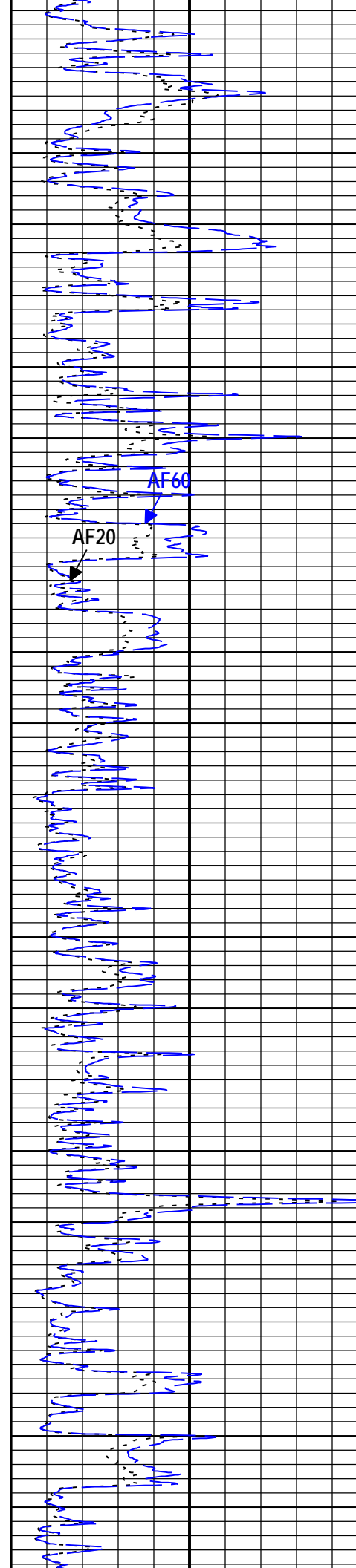
TENS

AF6060



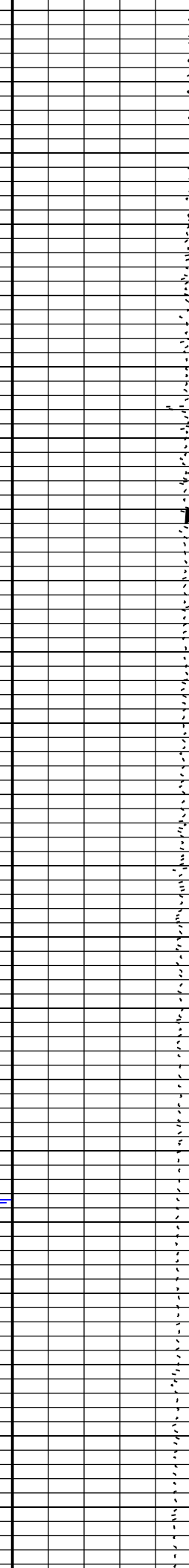
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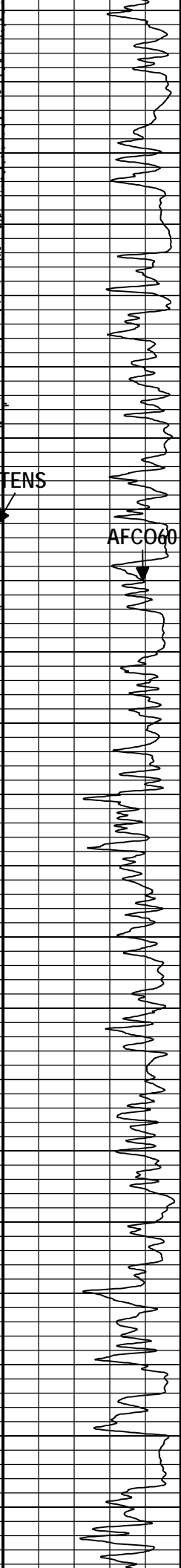


AF20

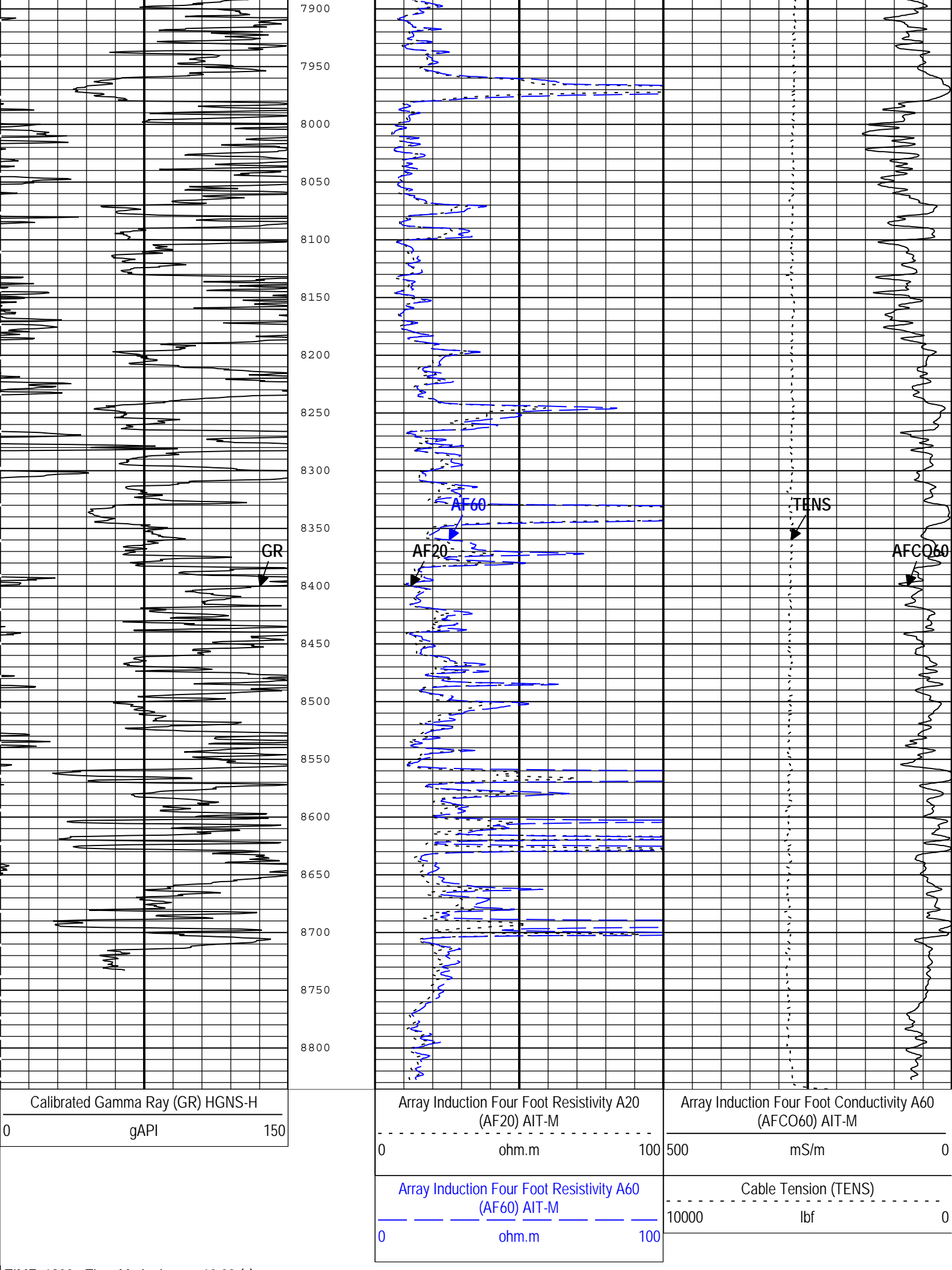
AF60



FENS



AF60



TIME_1900 - Time Marked every 60.00 (s)

Description: Format: Log (AIT) Index Scale: 1 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 19-Apr-2015 17:15:02

ONE

Main Pass - Density

Software Version

Acquisition System

Maxwell

Version

5.2.40401.3100

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Main[3]:Up	Up	2154.88 ft	8835.73 ft	19-Apr-2015 11:50:25 AM	19-Apr-2015 3:33:25 PM	ON	0.00 ft	No

All depths are referenced to toolstring zero

Log

Company:CAERUS PICEANCE LLC

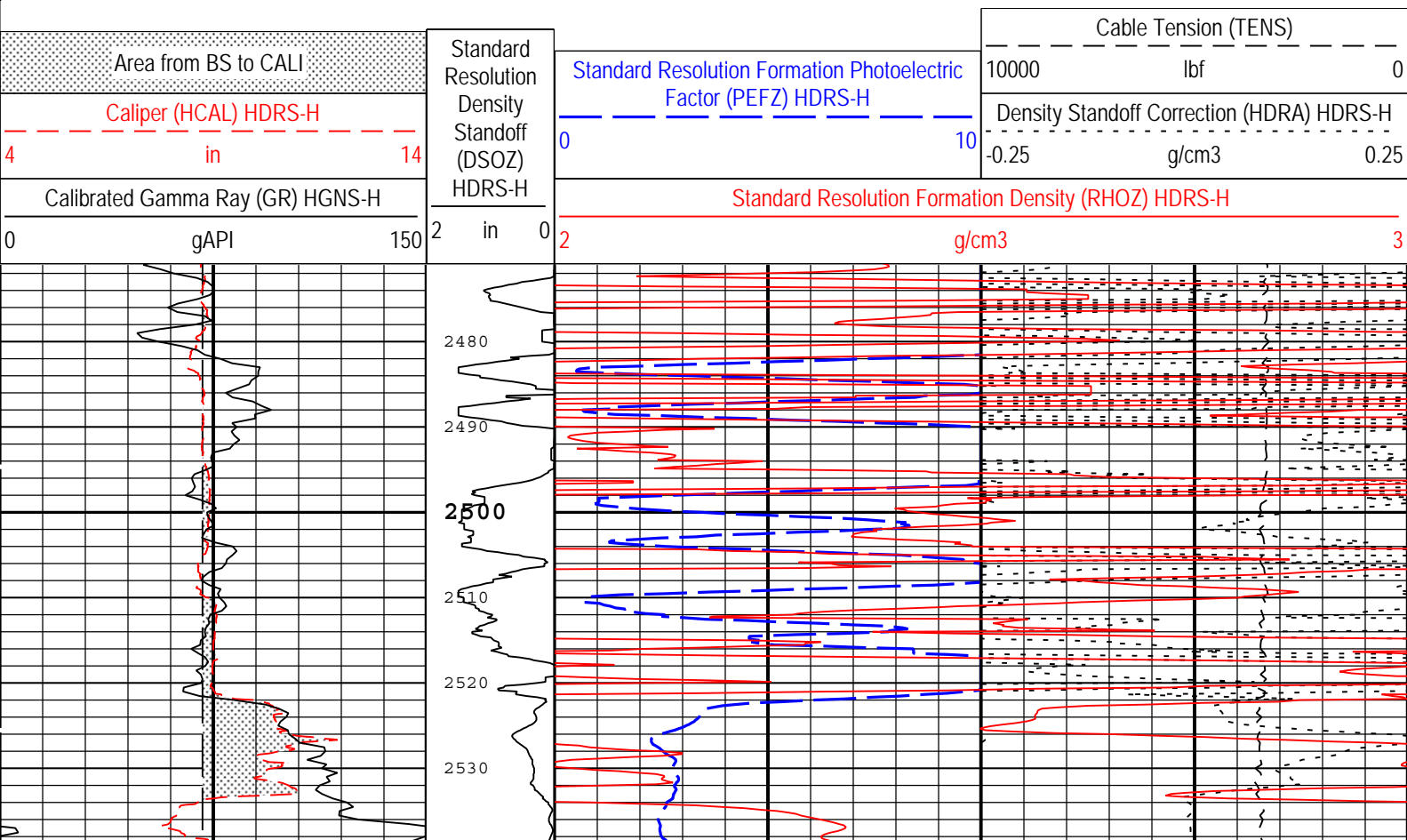
Well:PUCKETT 42D-2

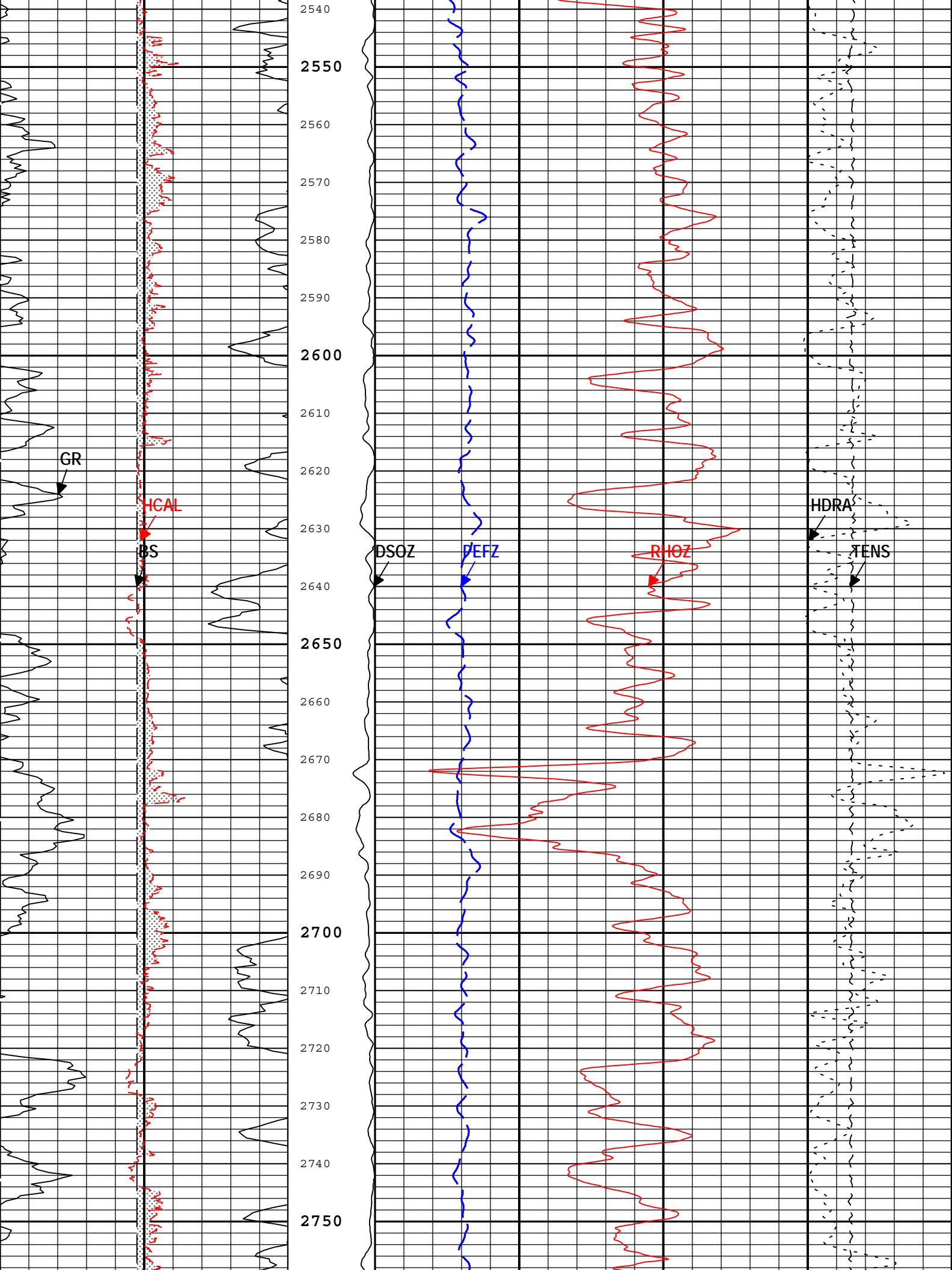
ONE: Main[3]:Up:S012

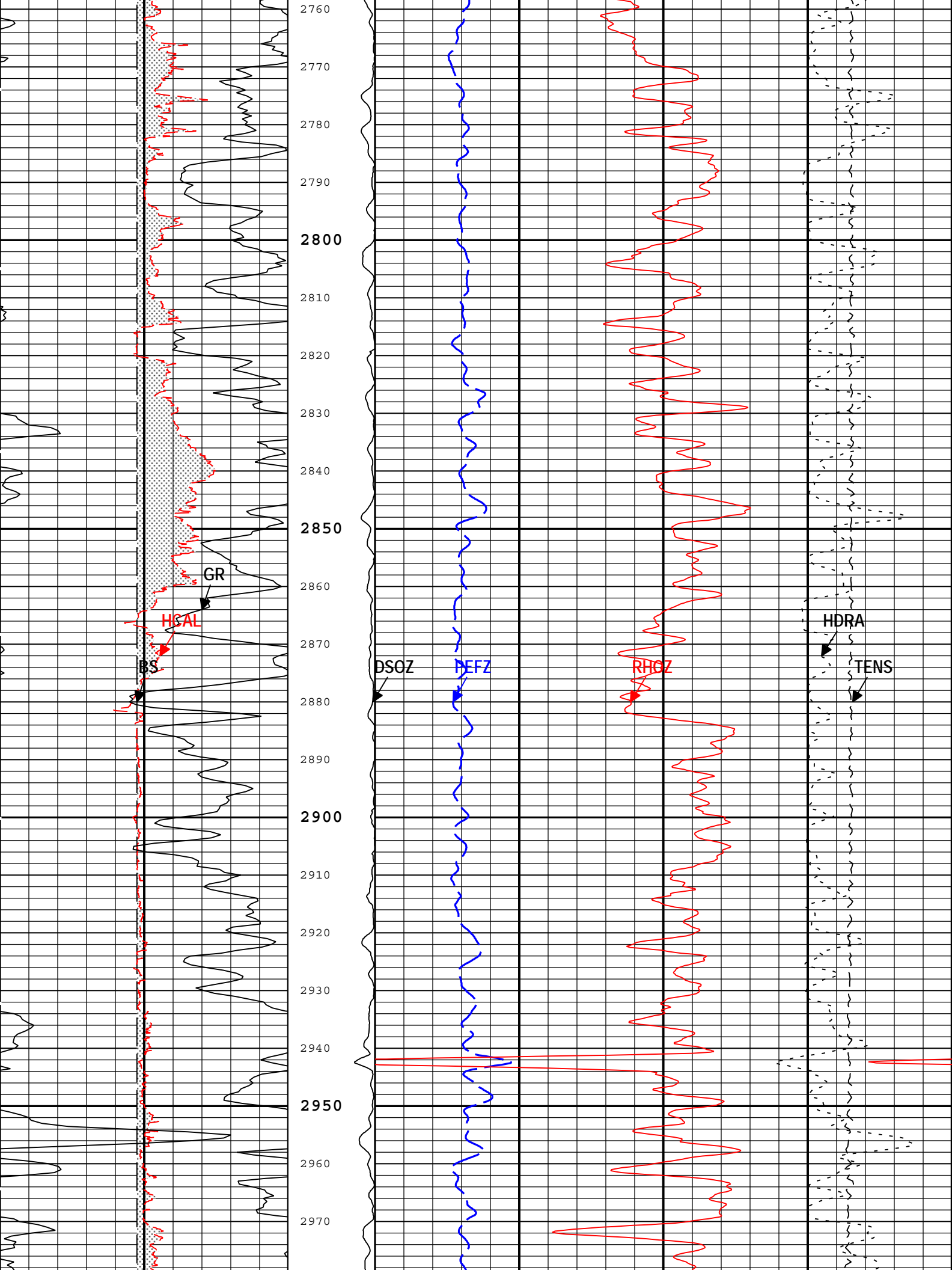
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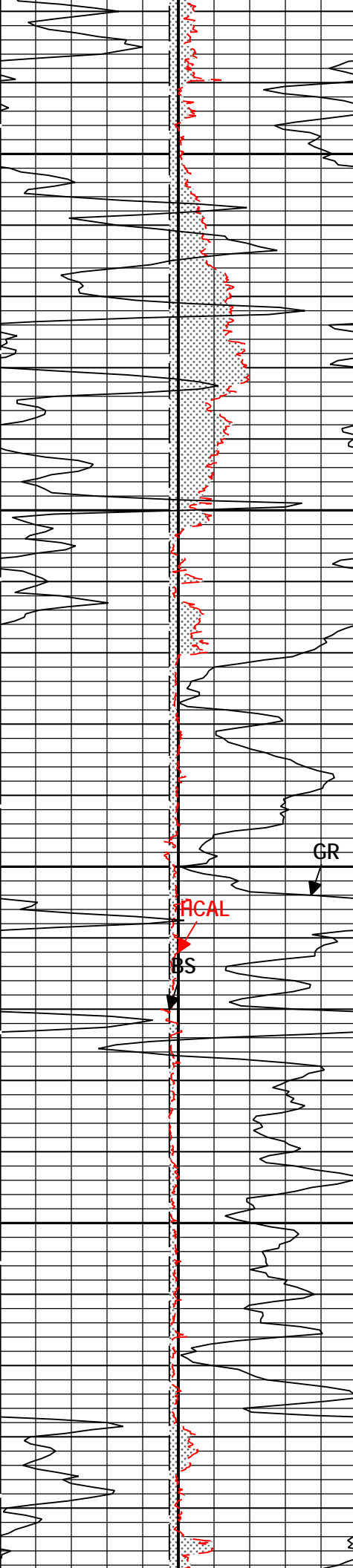
Channel	Source	Sampling
BS	Borehole	6in
CALI	HDRS-H:HRCC-H:HRCC-H	1in
DSOZ	HDRS-H:HRMS-H:HRGD-H	2in
GR_CAL	HGNS-H:HGNS-H:HGNS-H	6in
HDRA	HDRS-H:HRMS-H:HRGD-H	2in
PEFZ	HDRS-H:HRMS-H:HRGD-H	2in
RHOZ	HDRS-H:HRMS-H:HRGD-H	2in
TENS	WLWorkflow	6in
TIME_1900	WLWorkflow	0.1in

TIME_1900 - Time Marked every 60.00 (s)

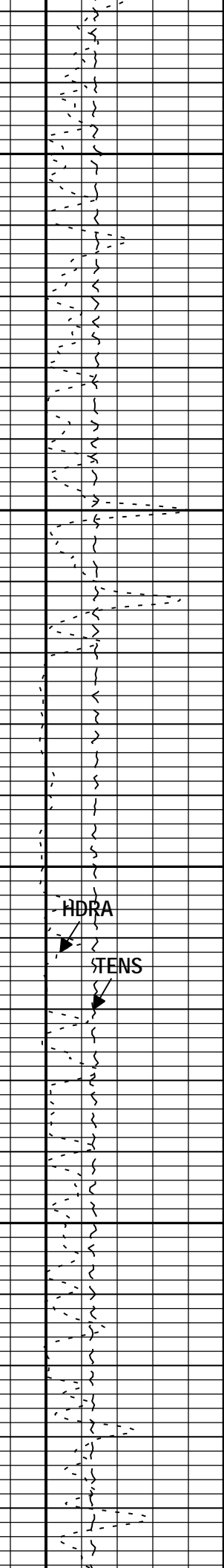
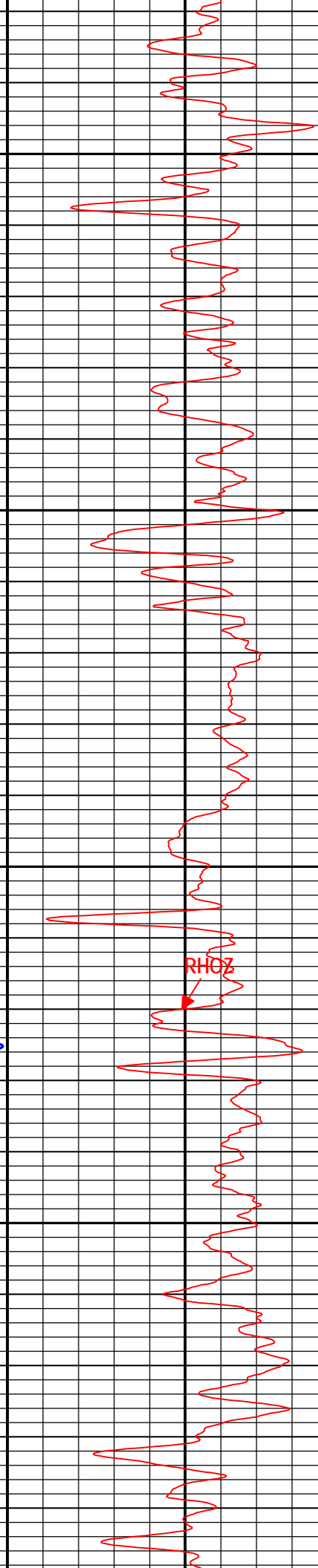
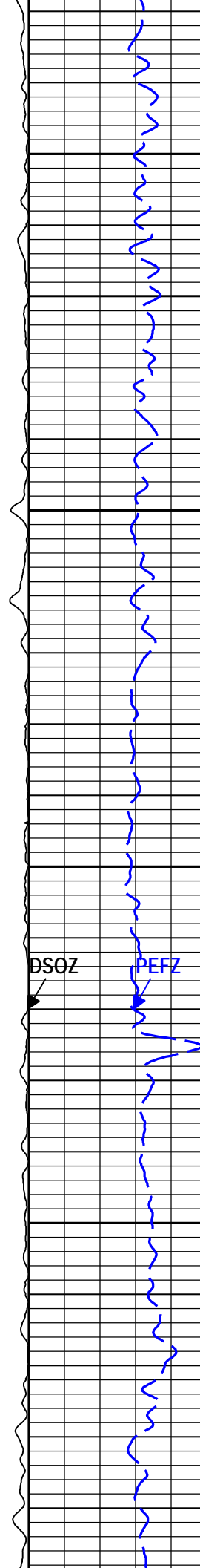








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FCAL

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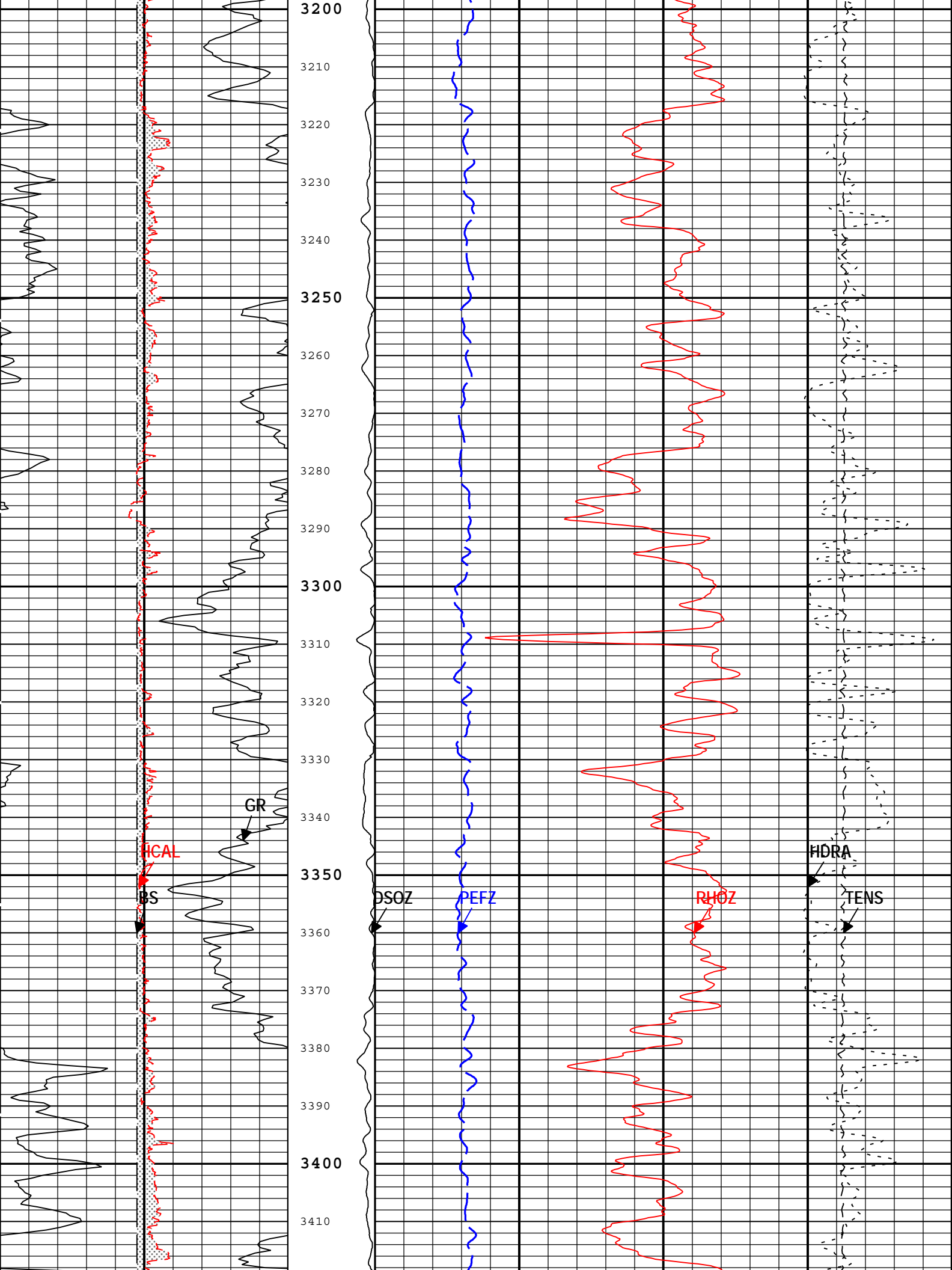
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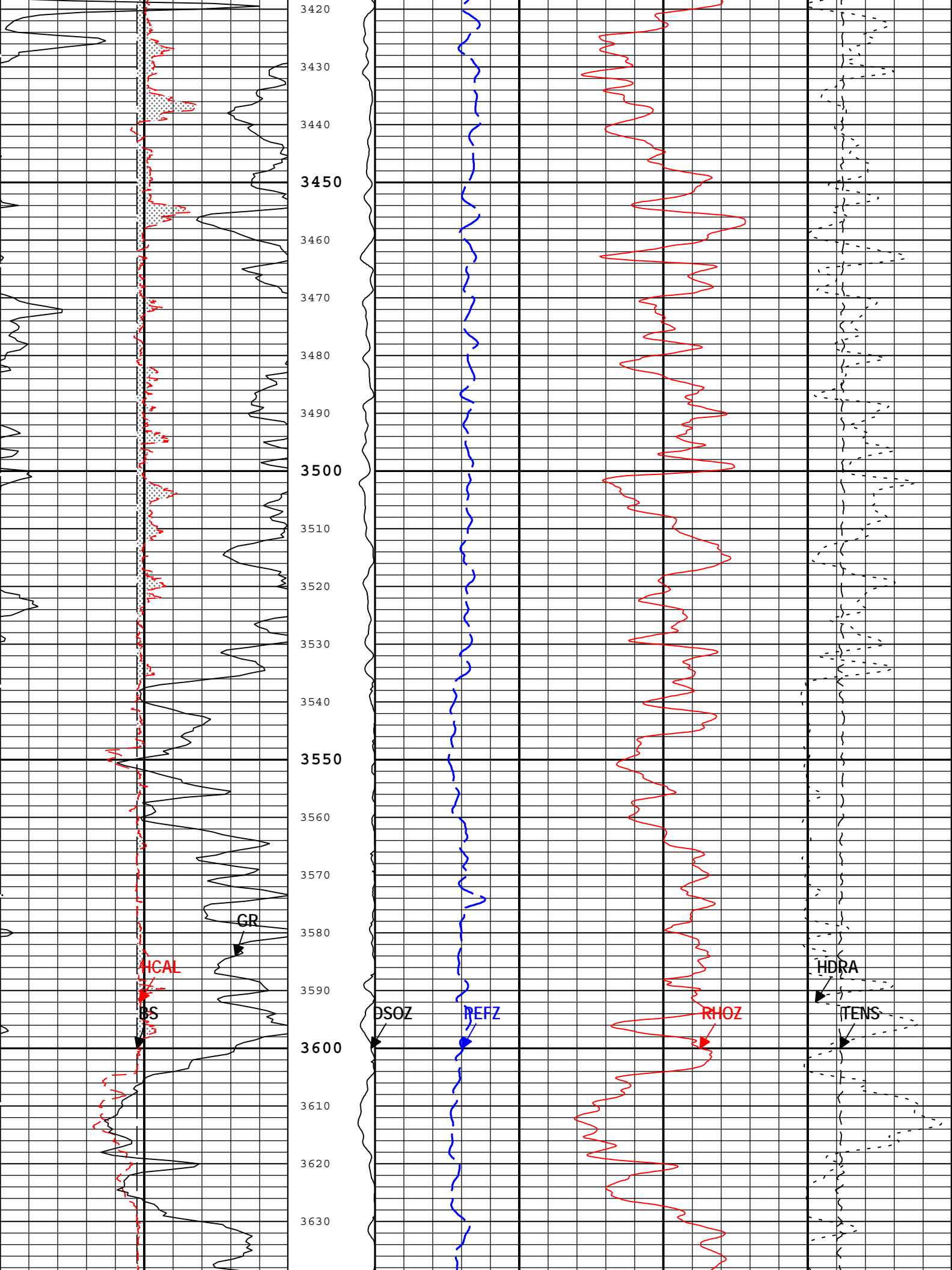
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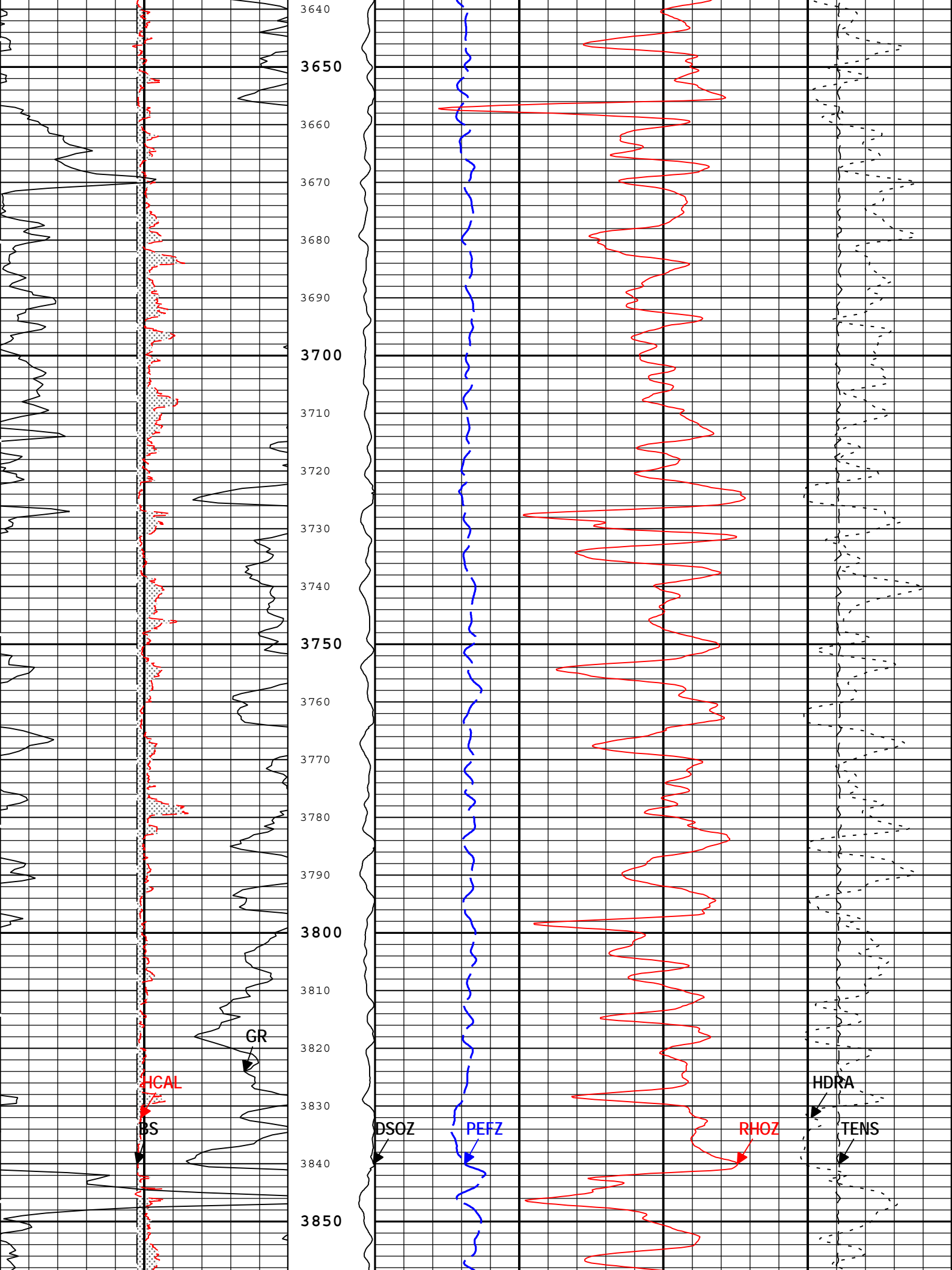
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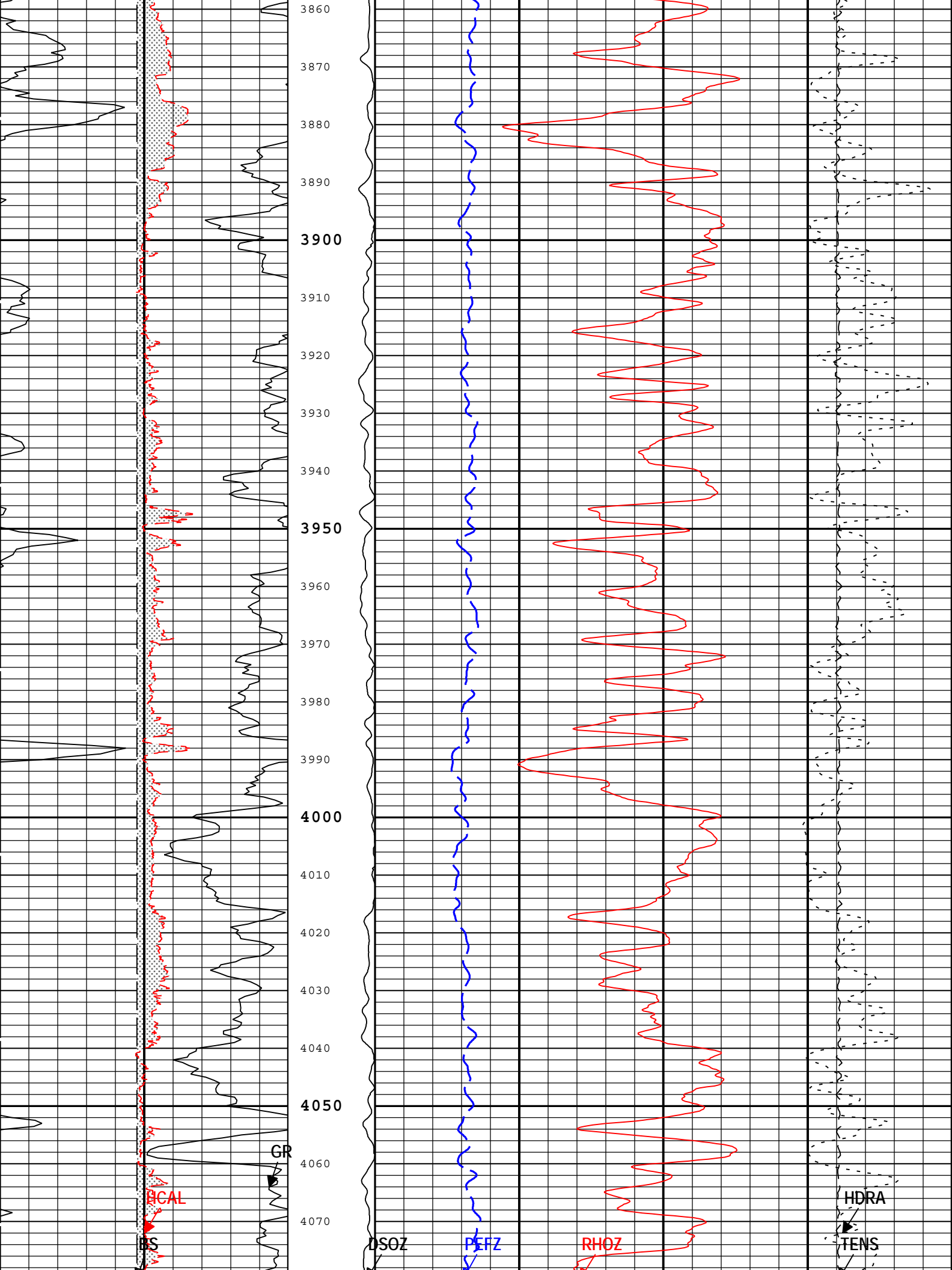
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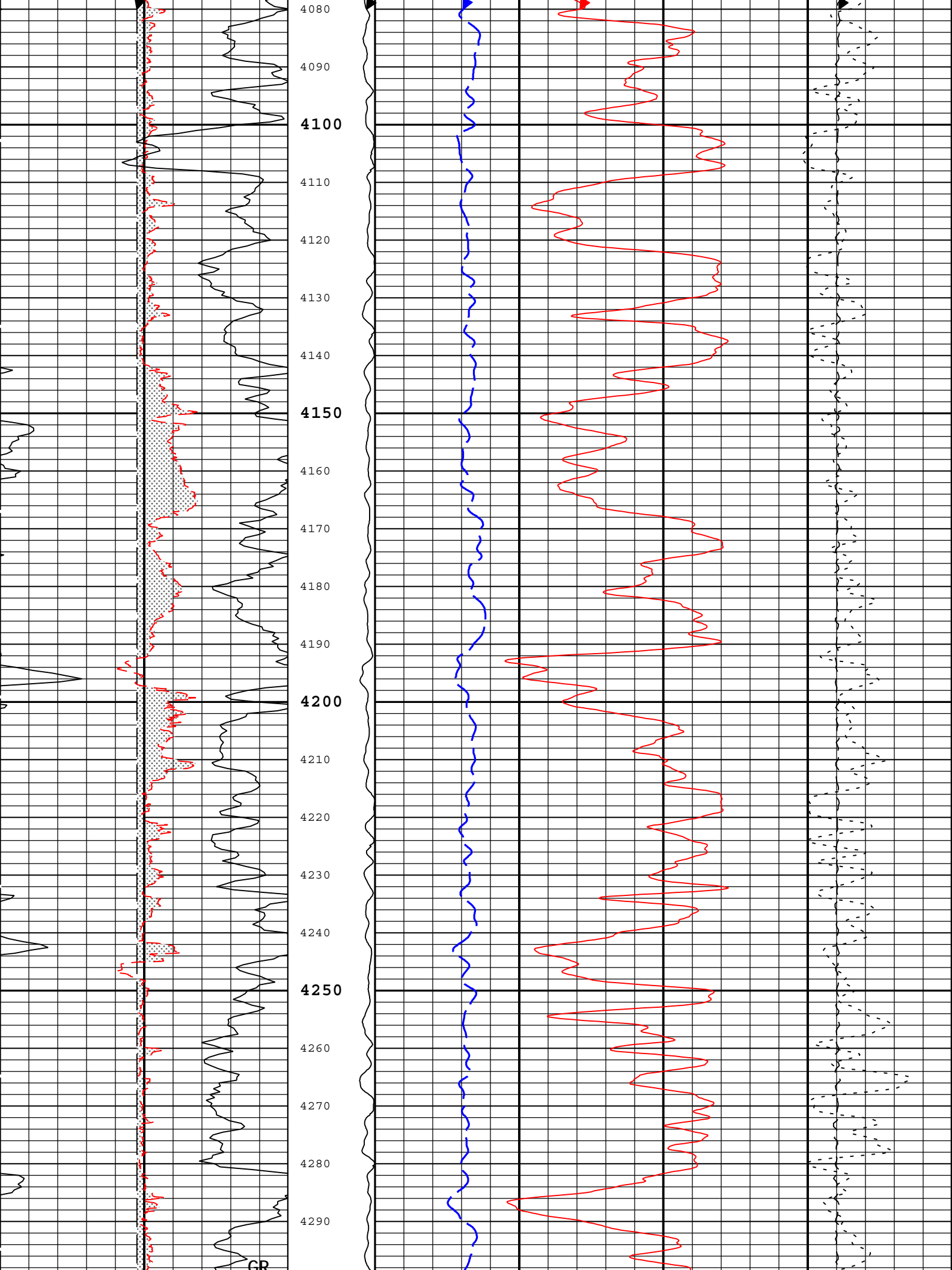
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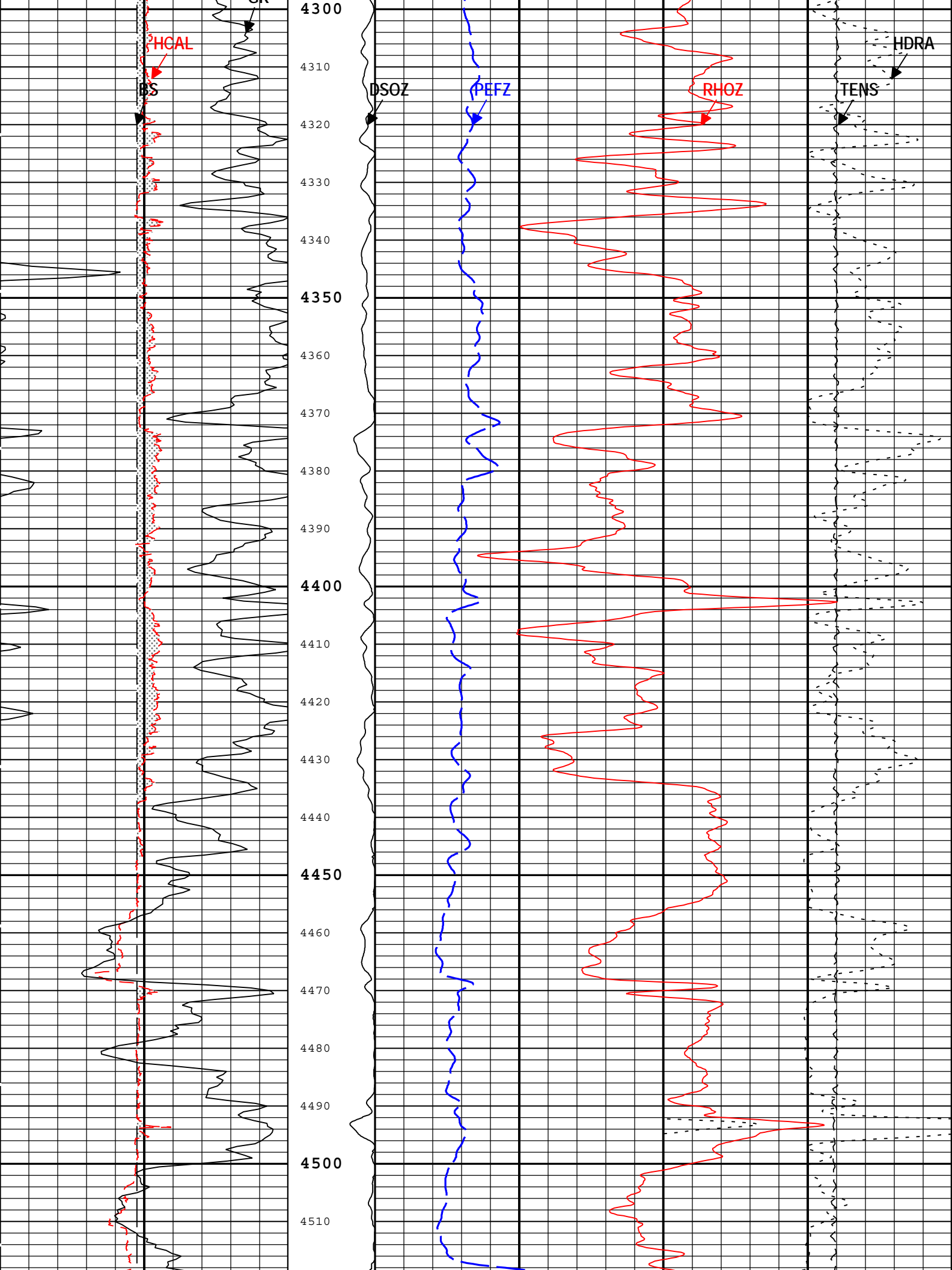


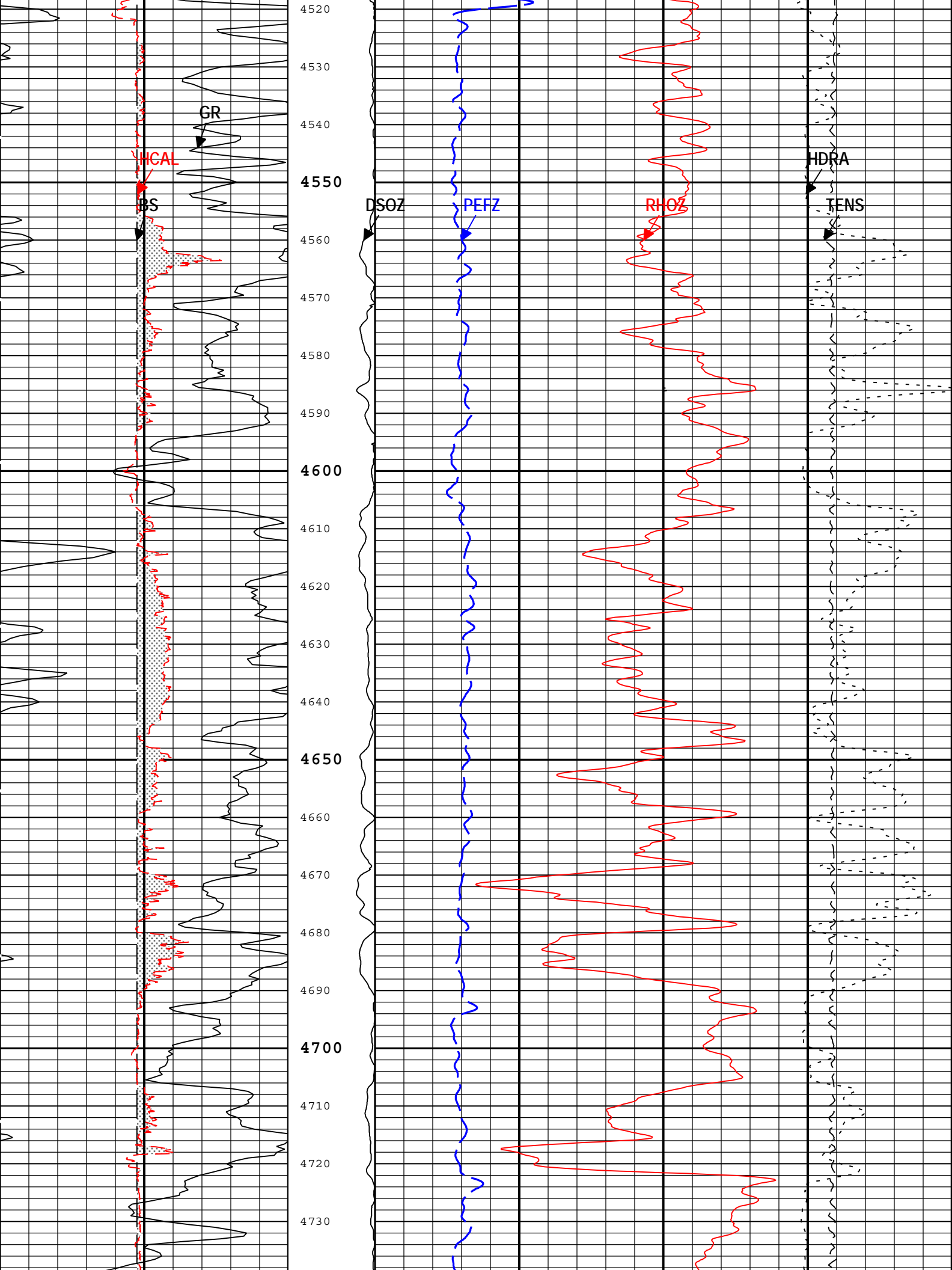


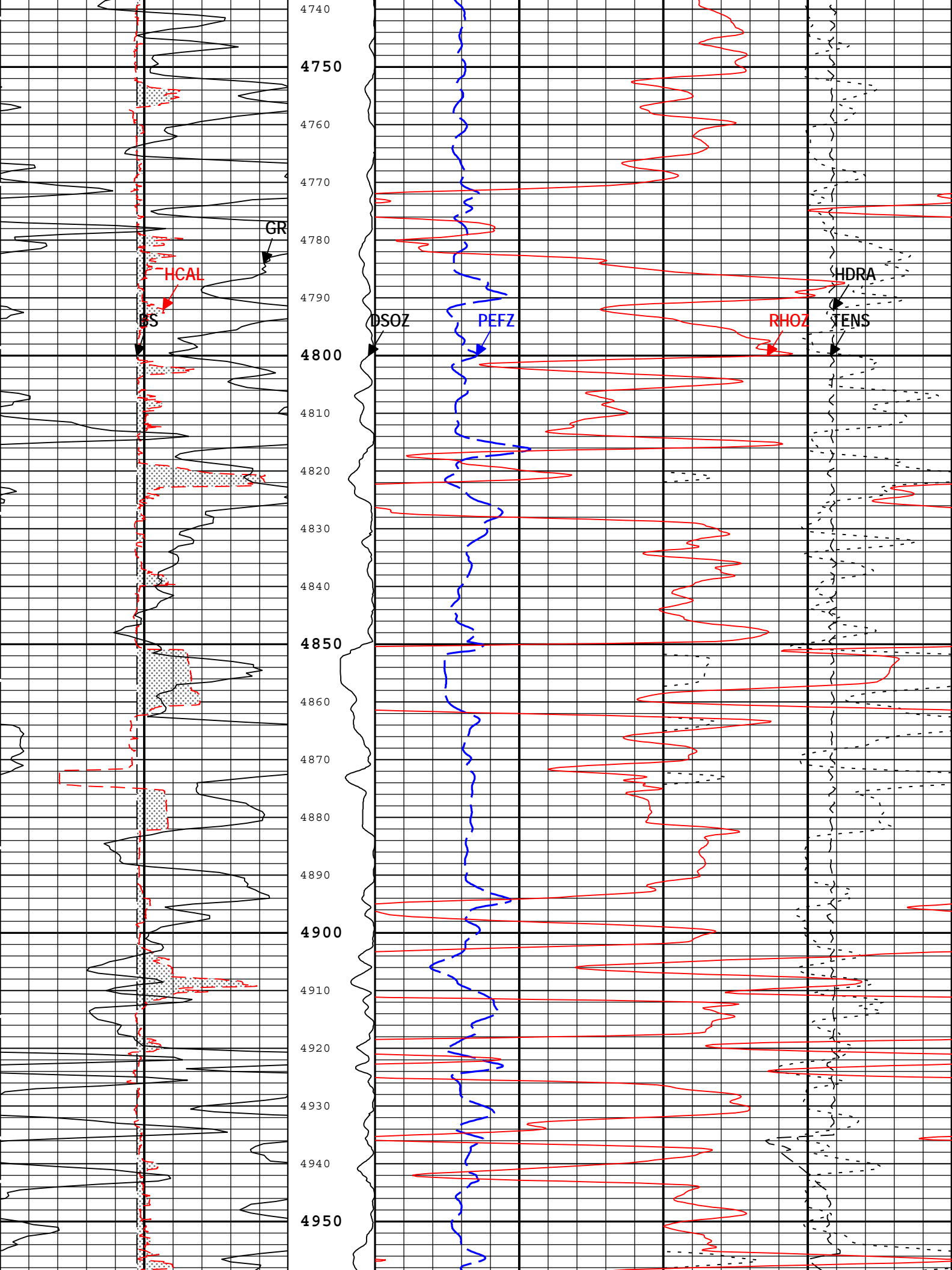


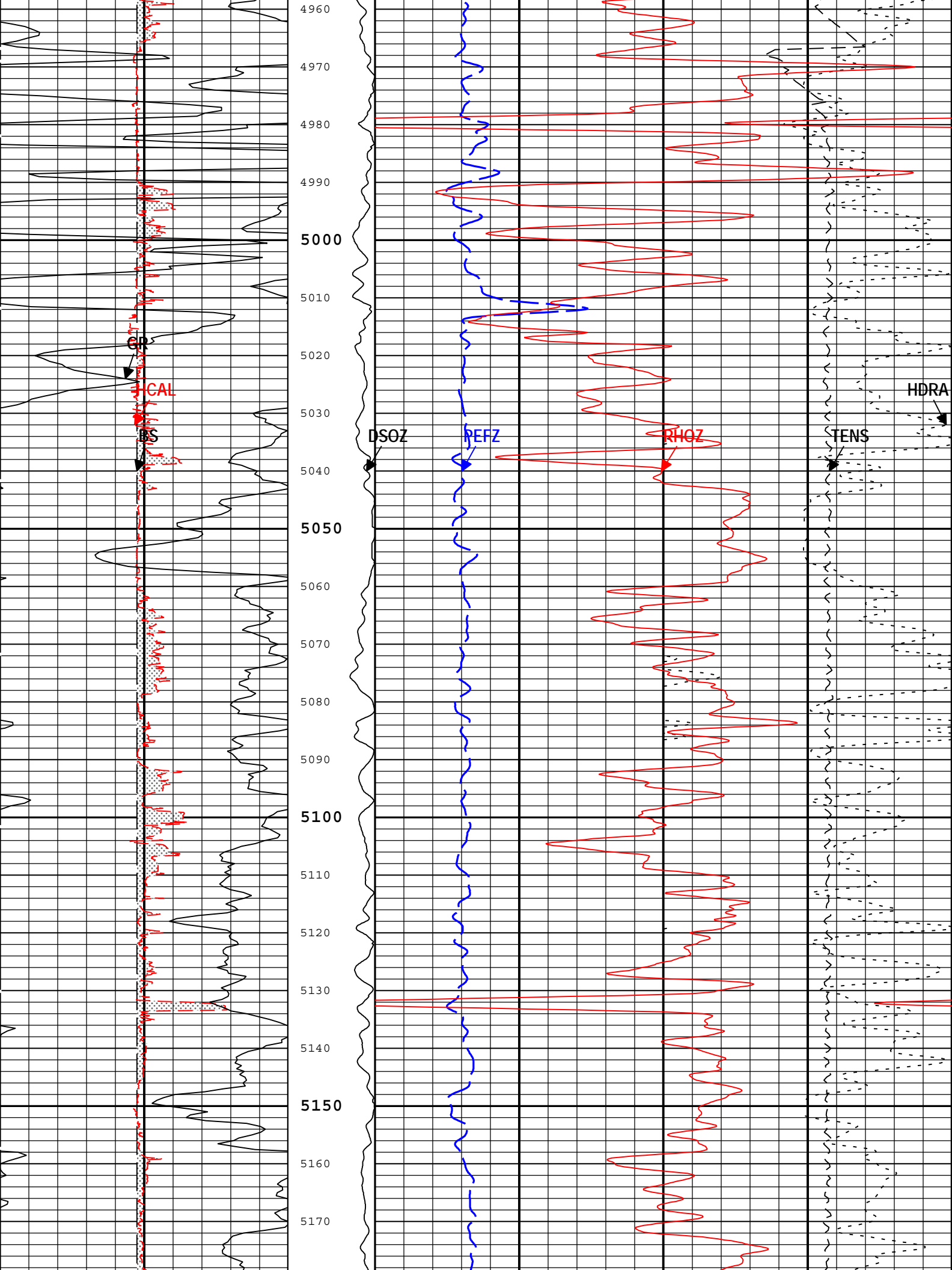


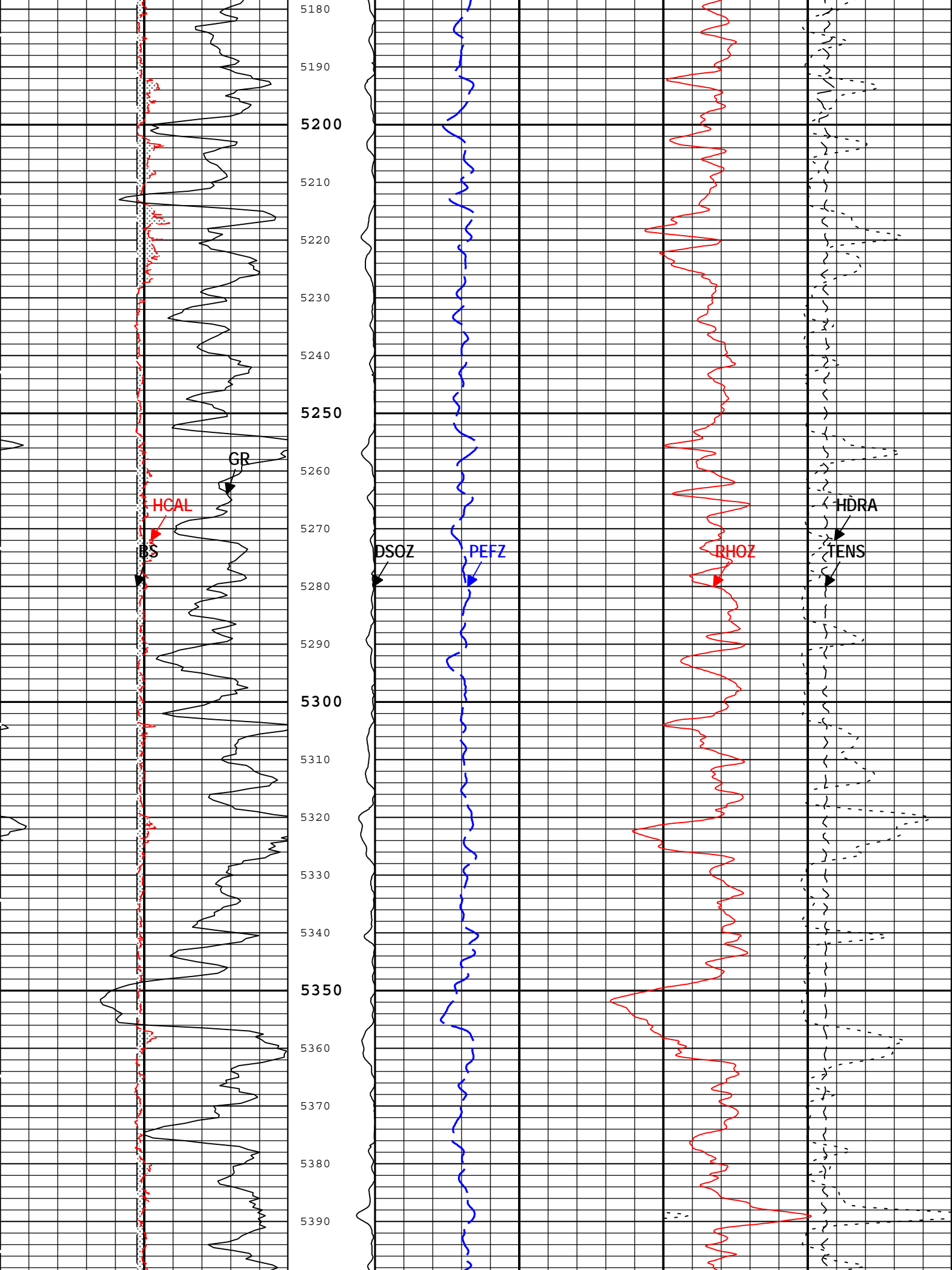


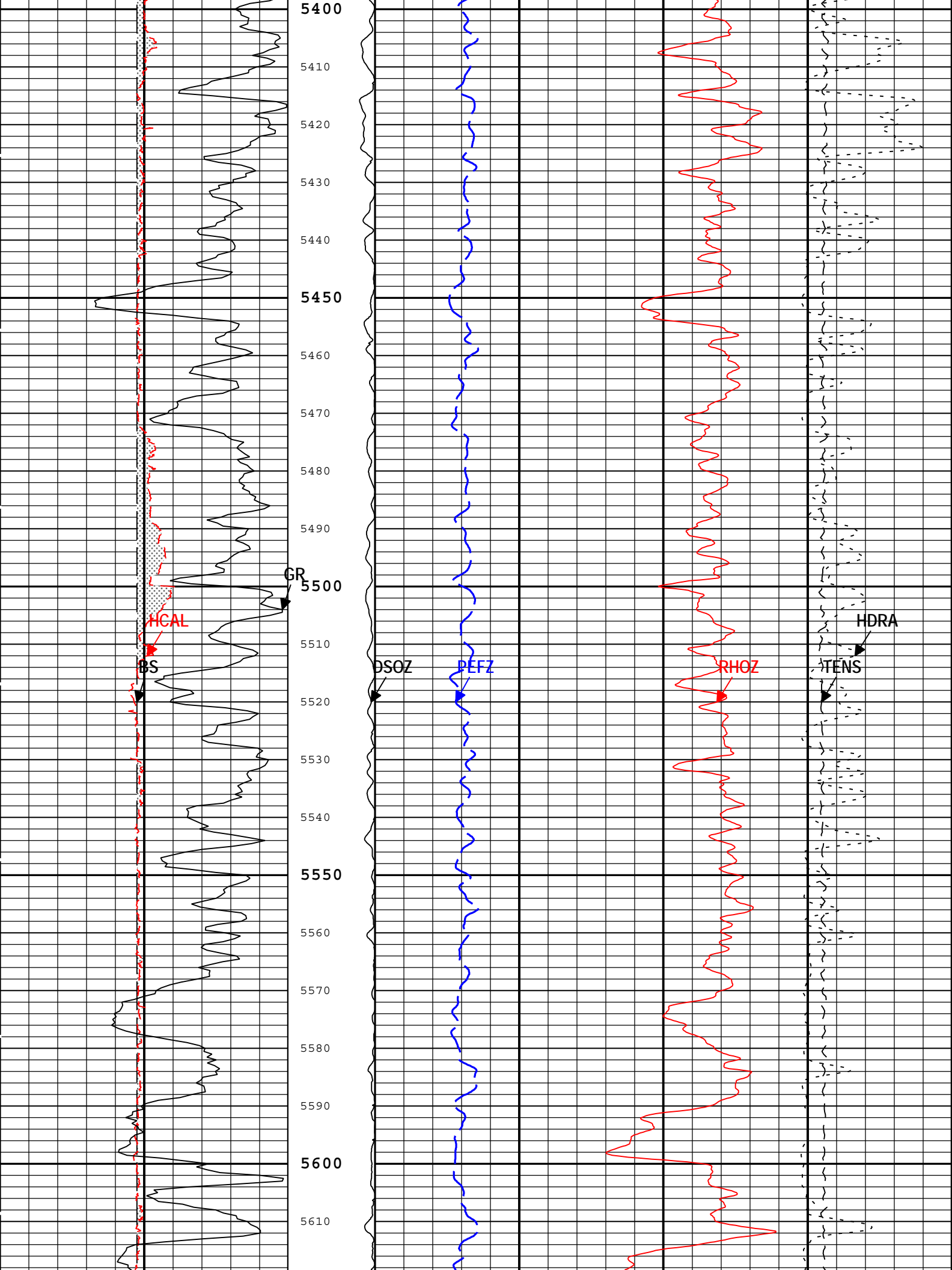


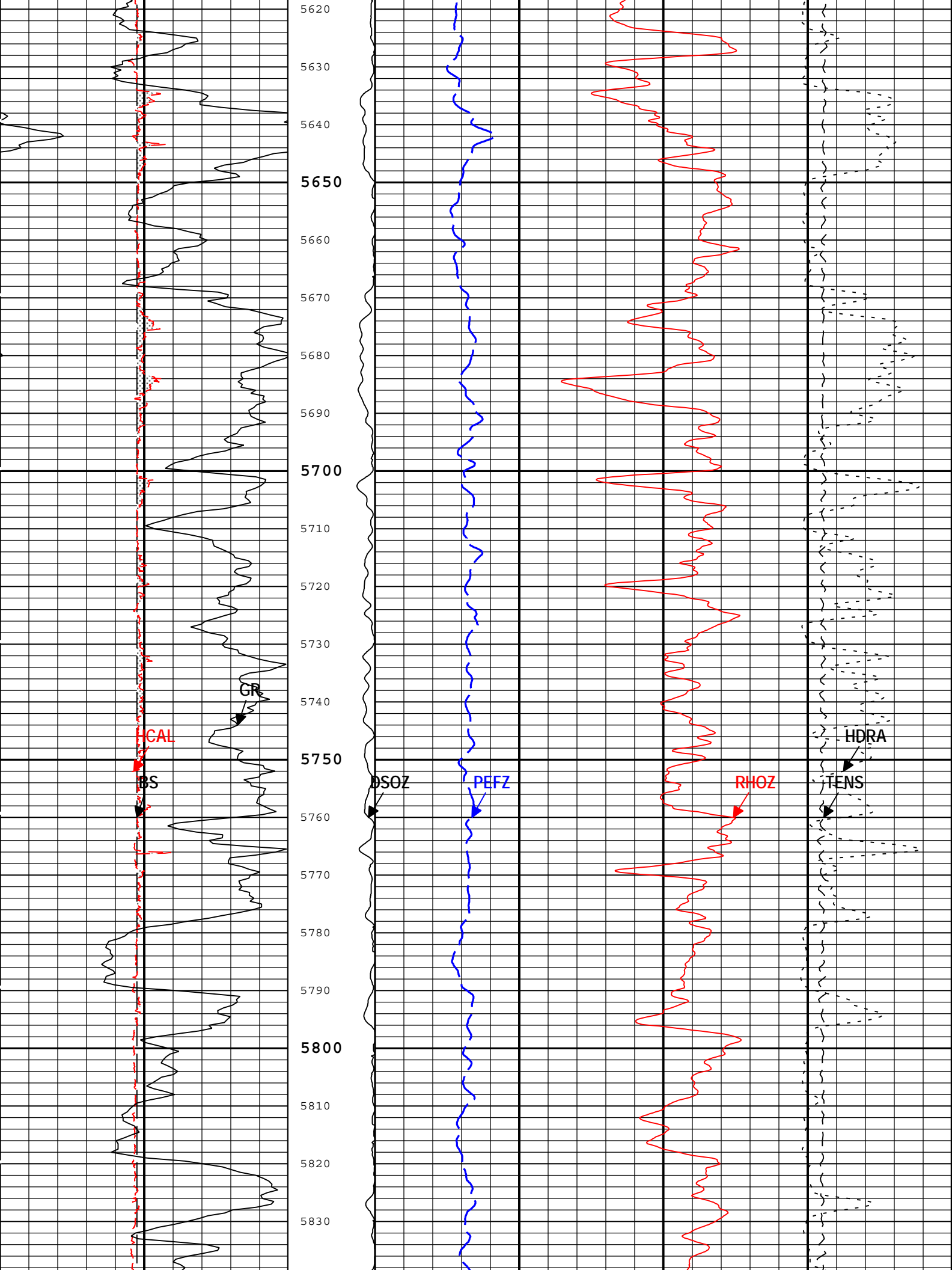


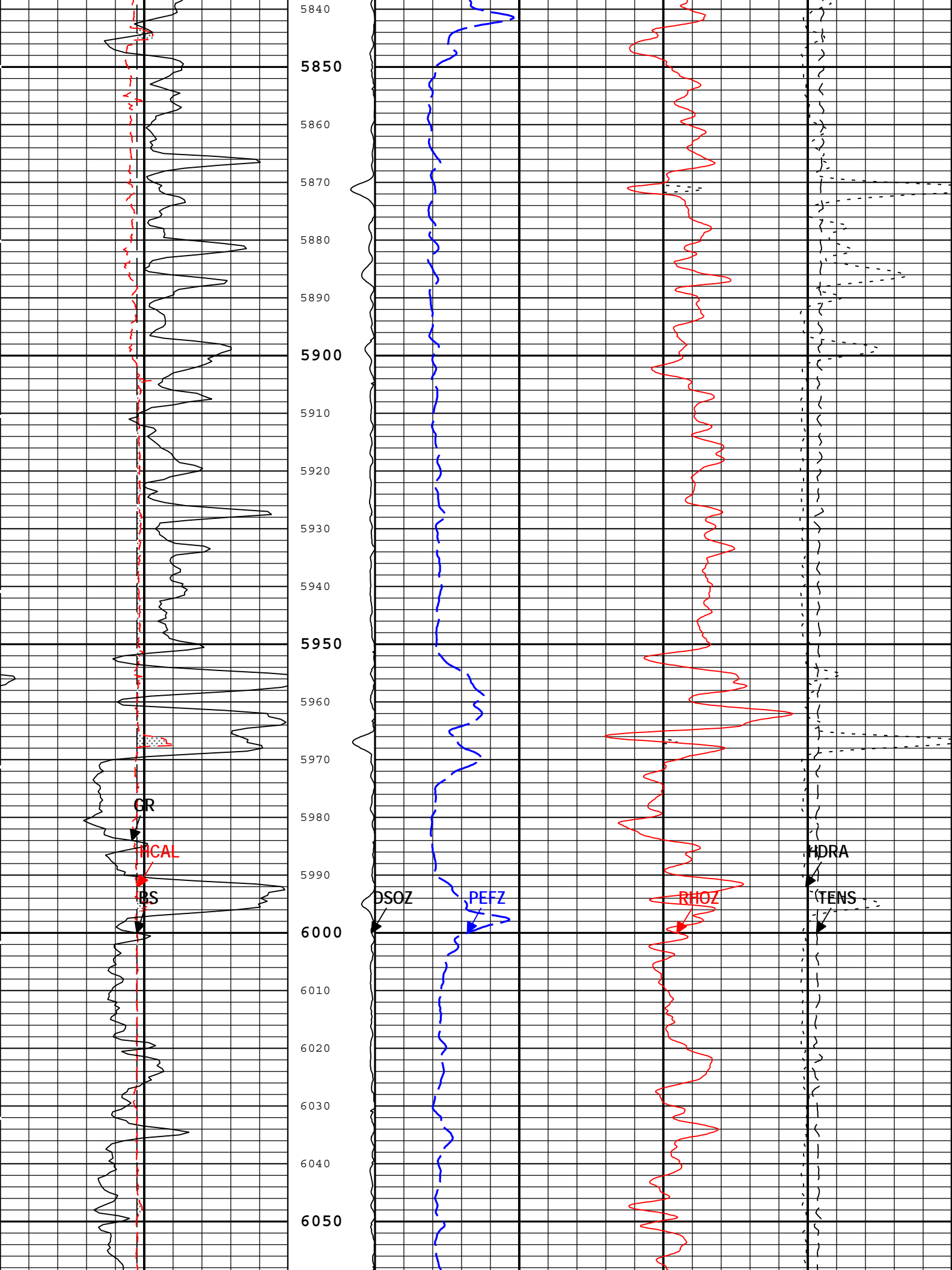


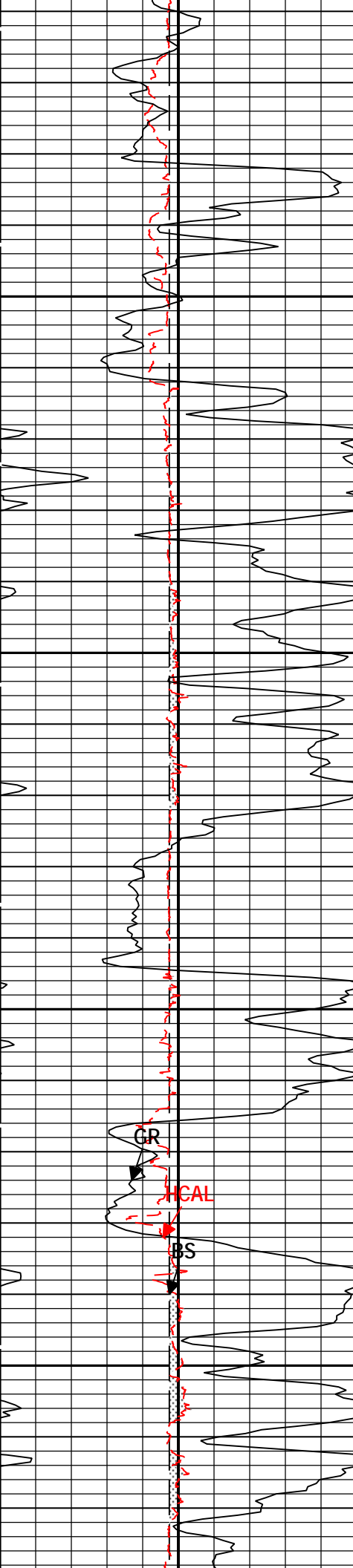




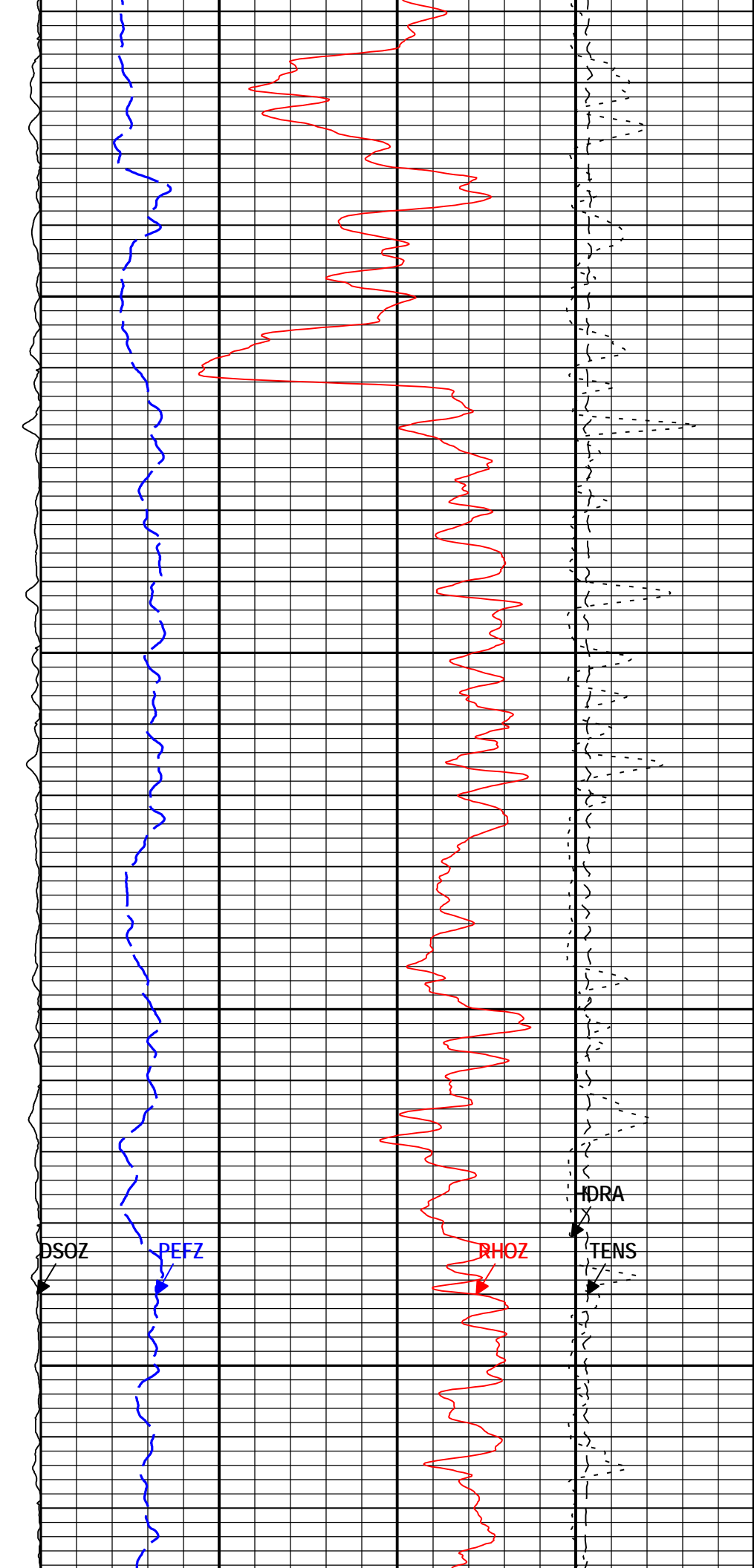


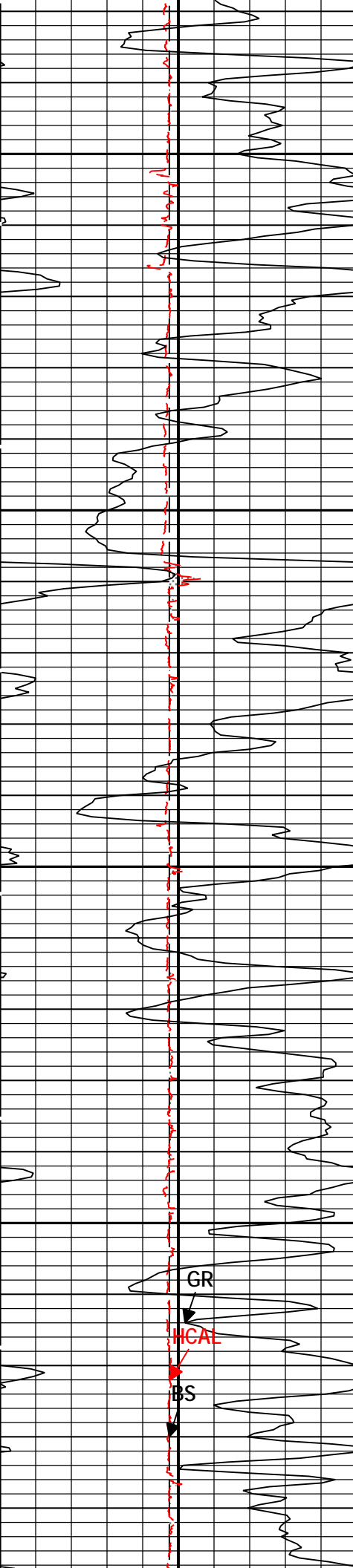




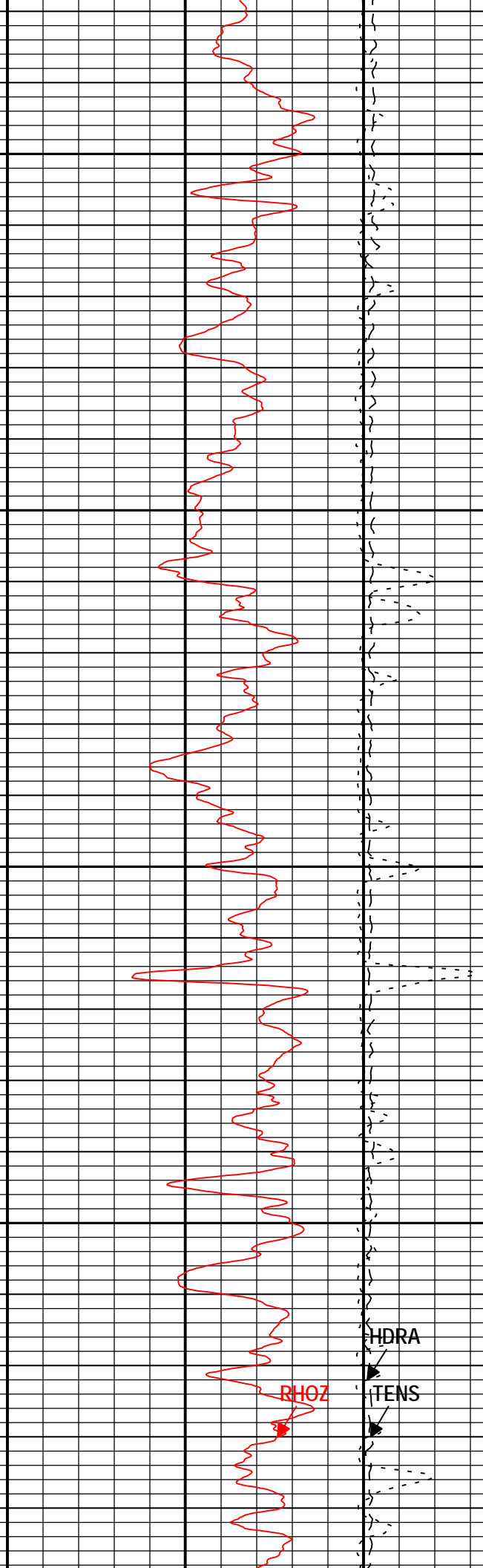
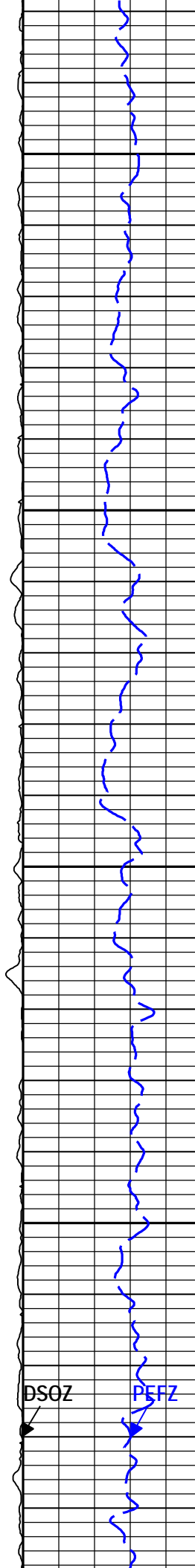


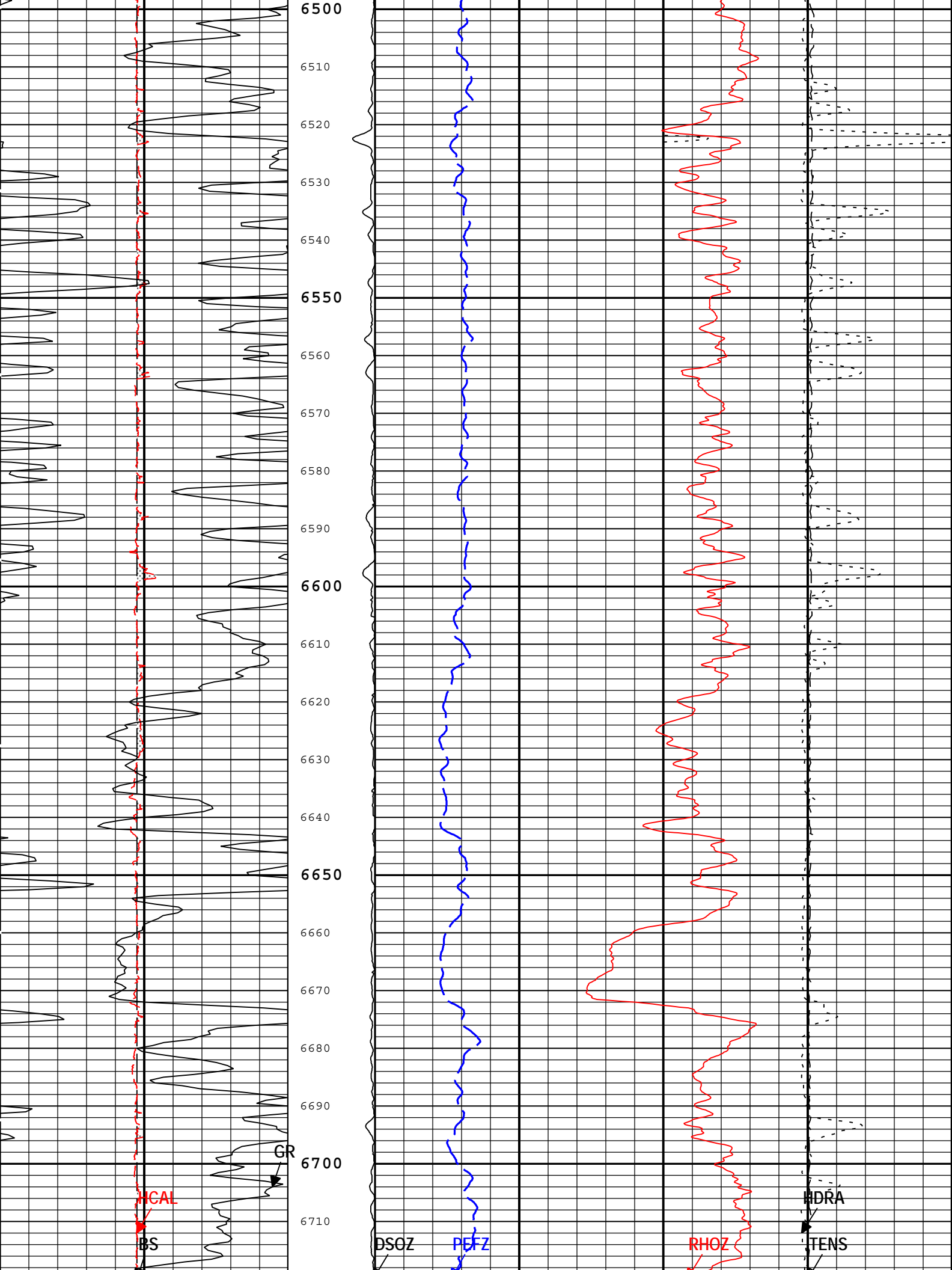
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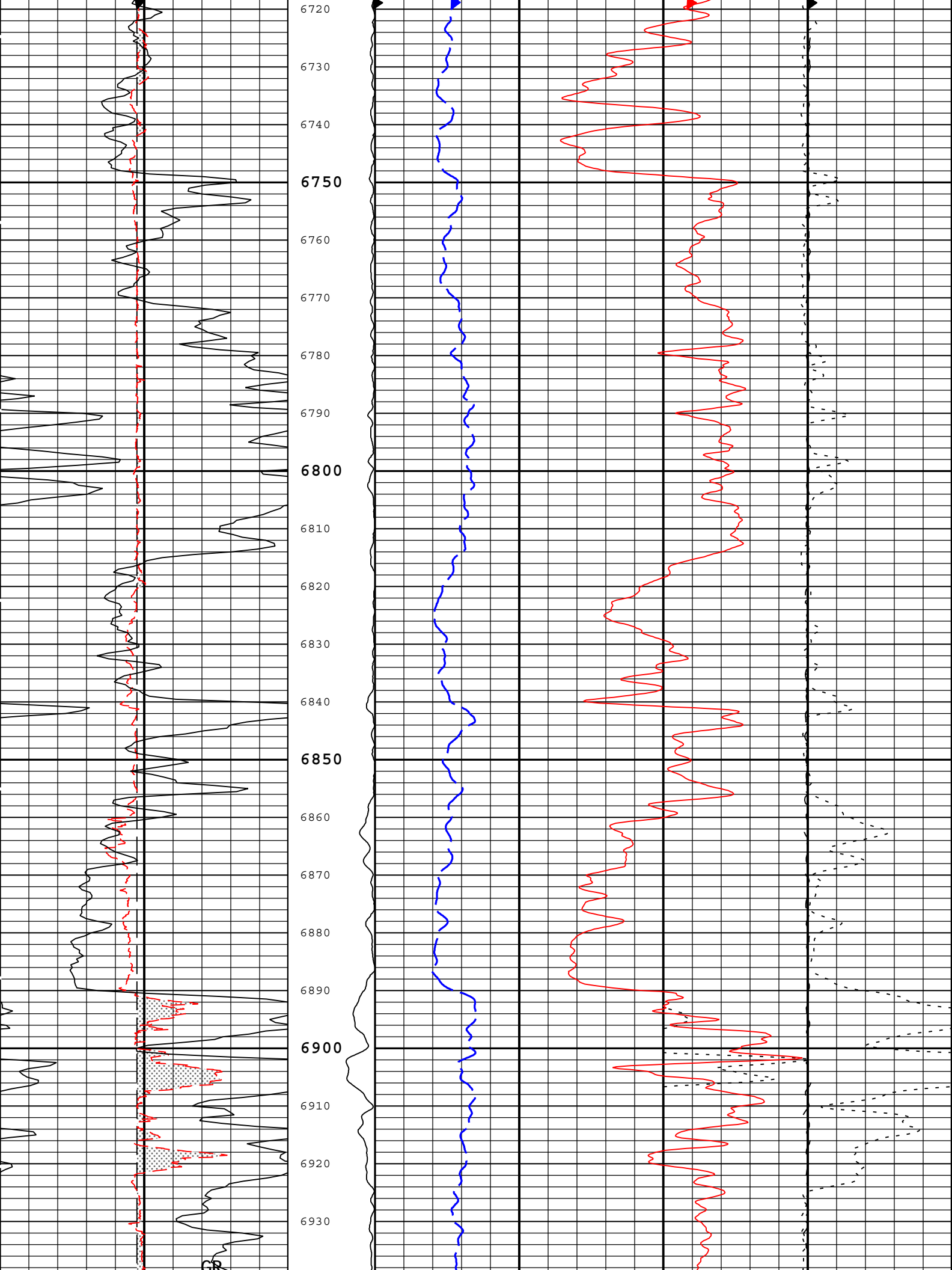


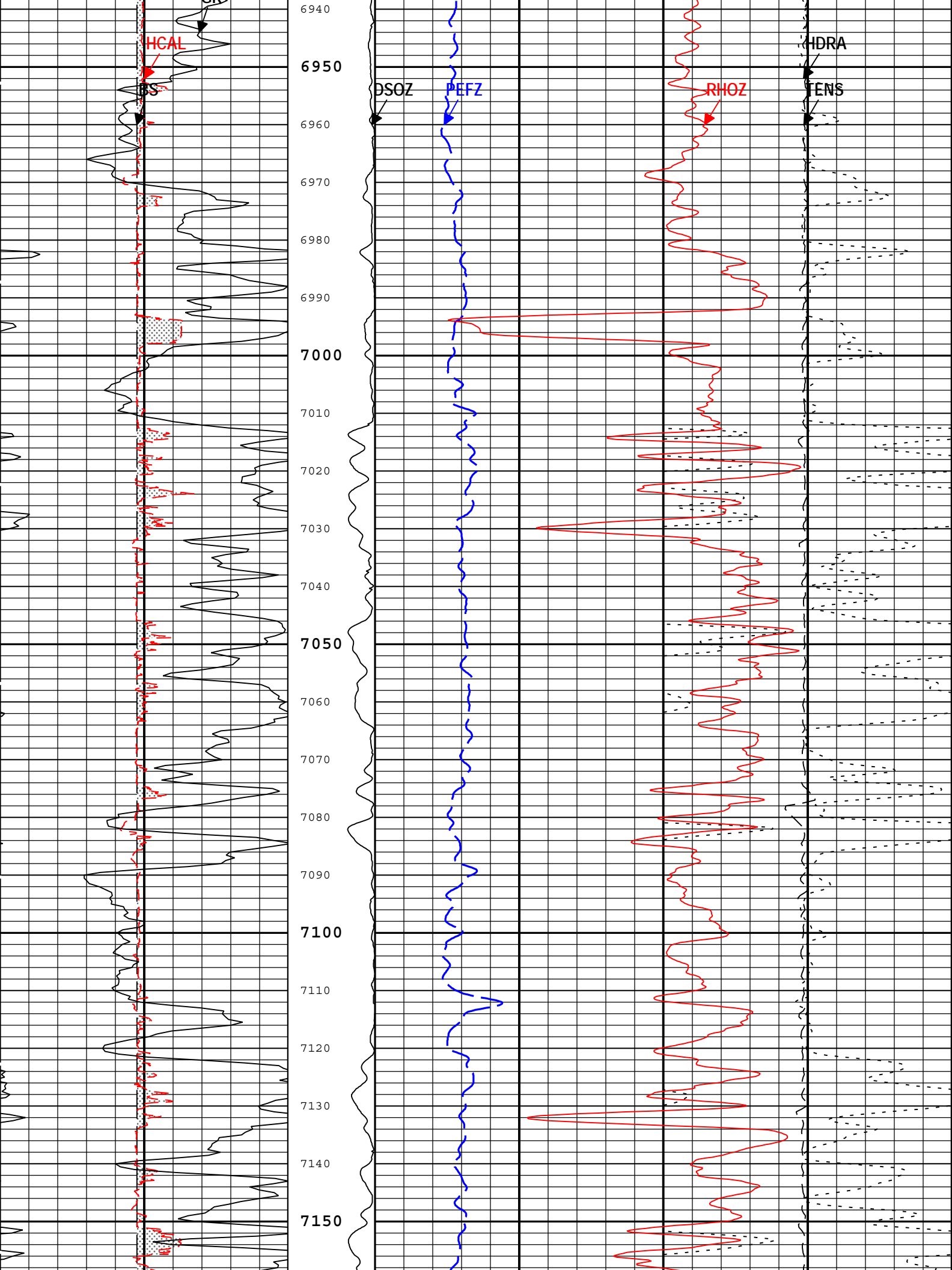


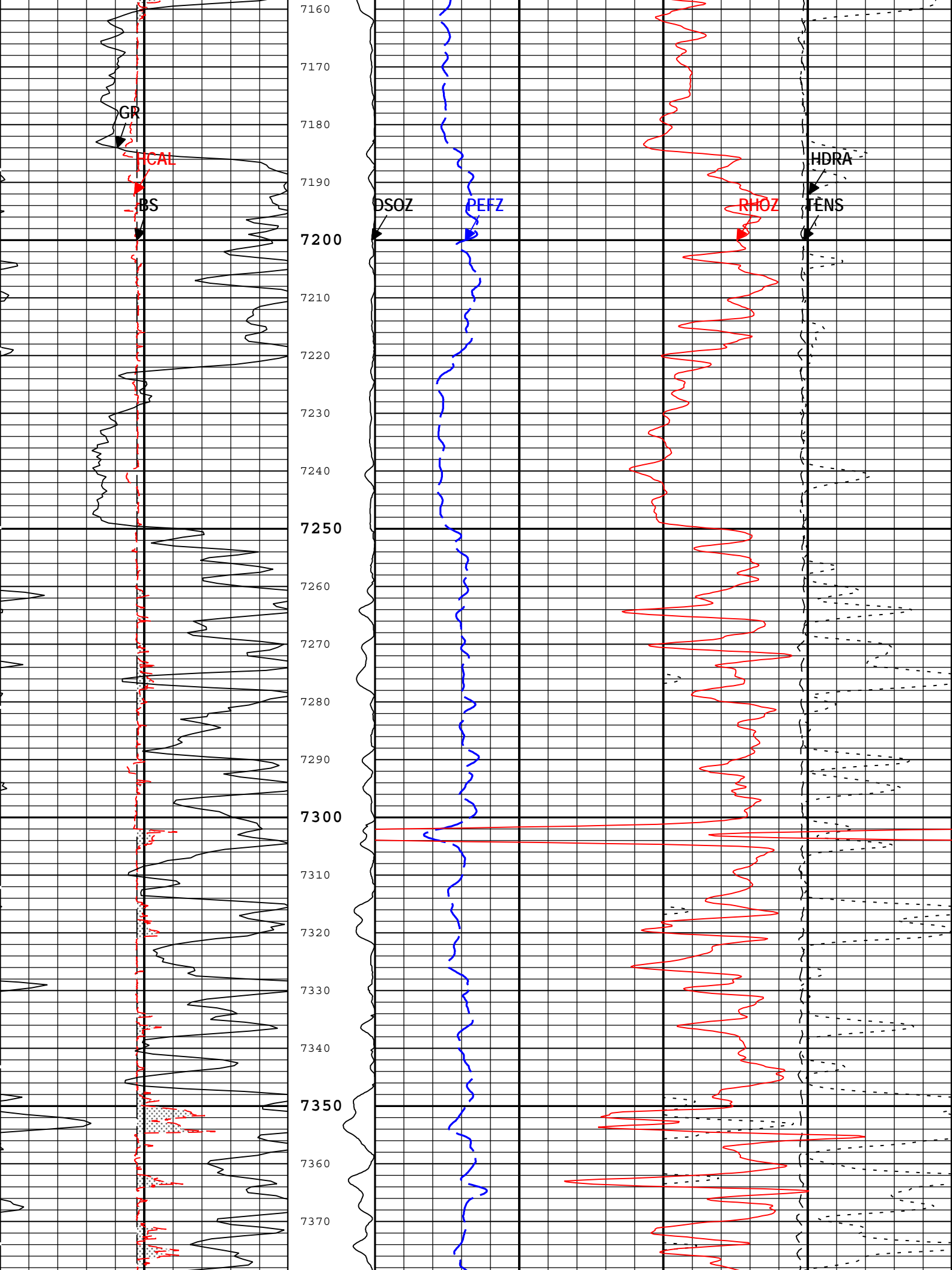
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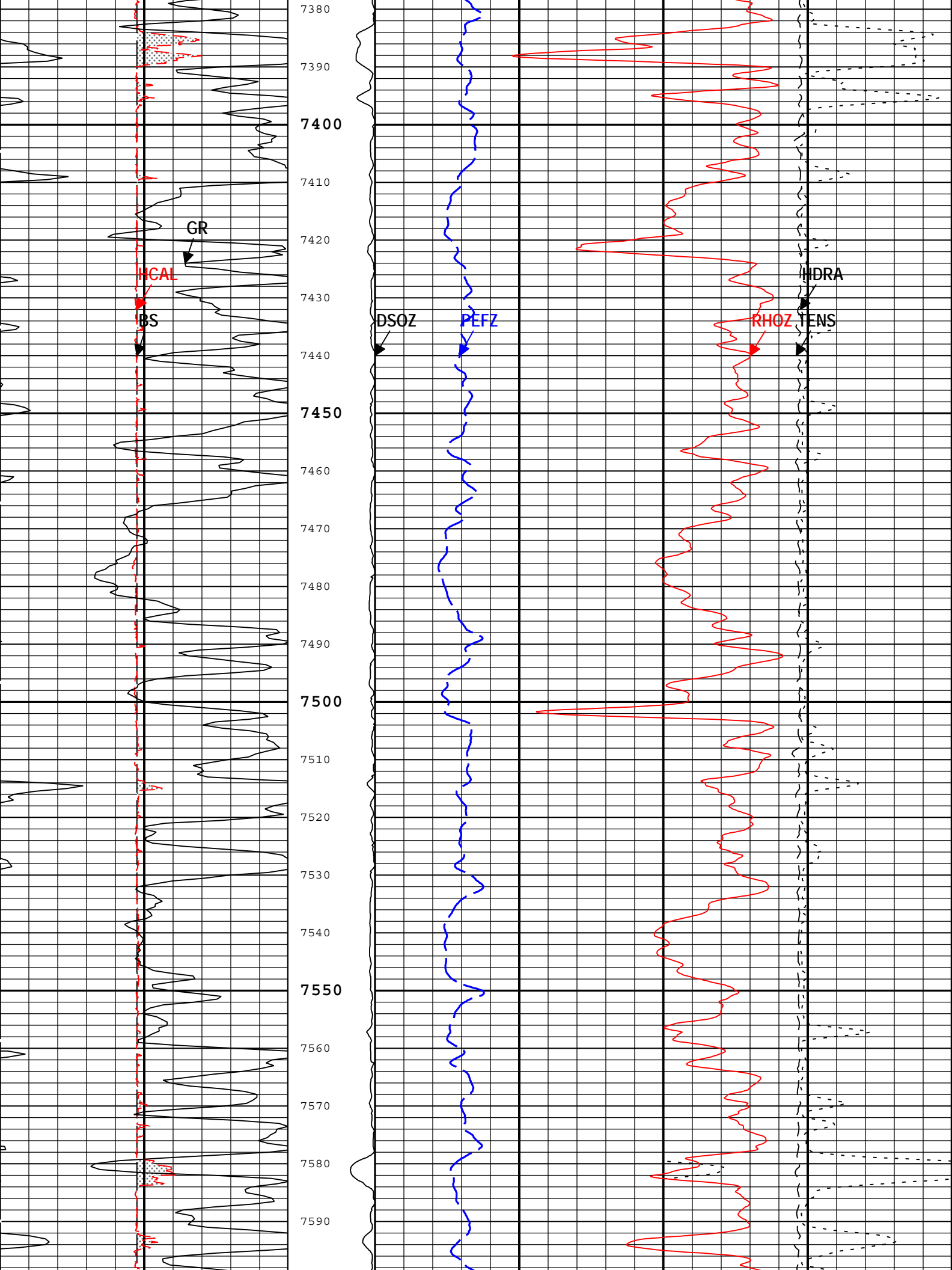


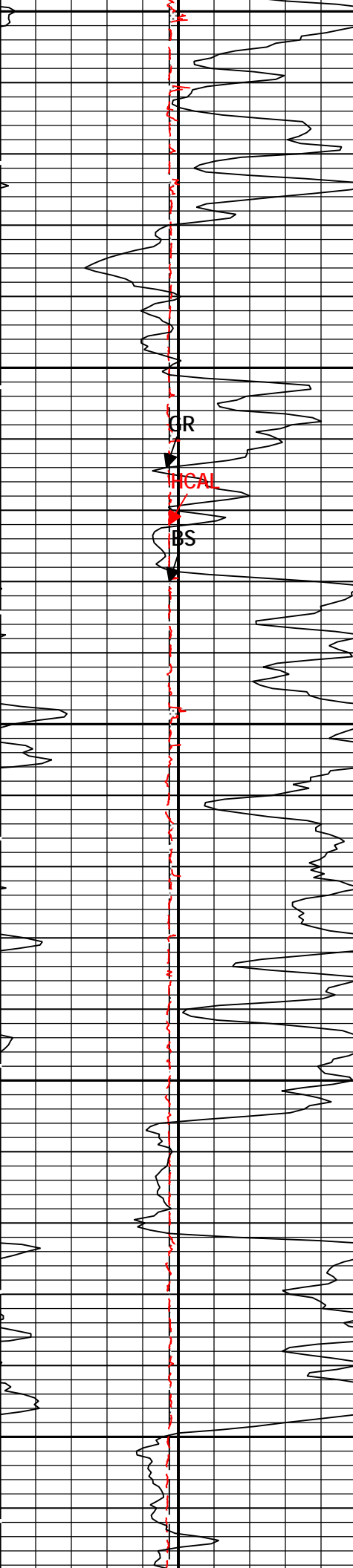




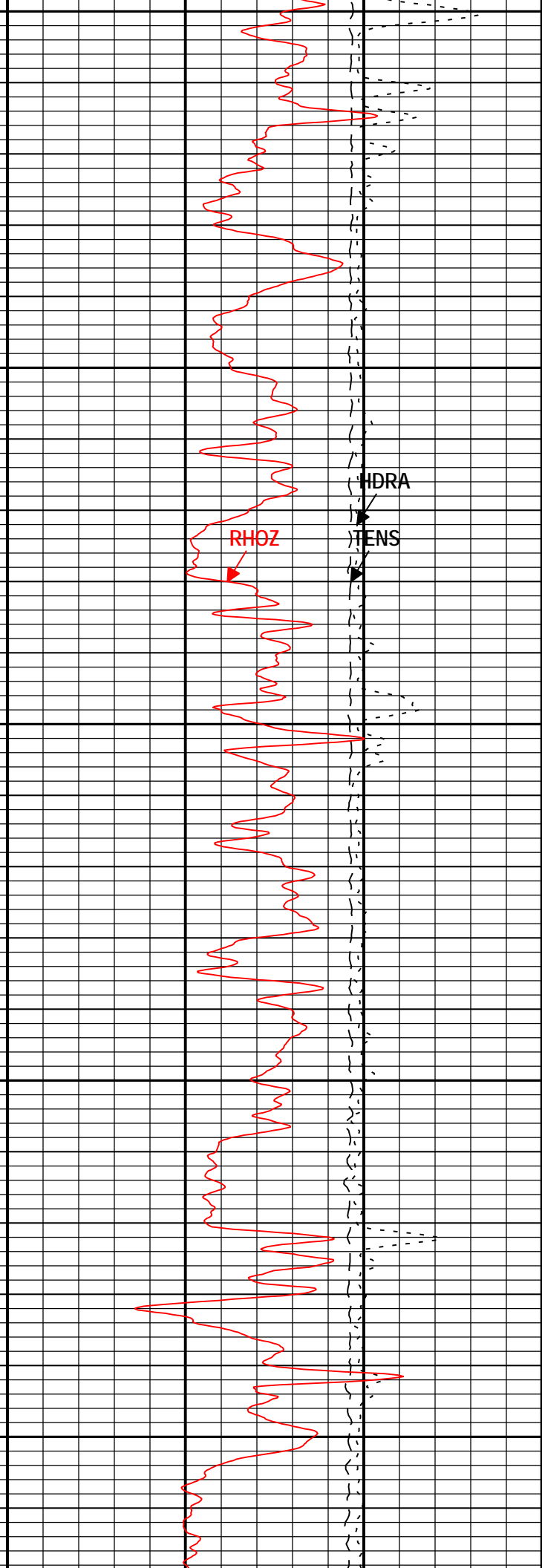
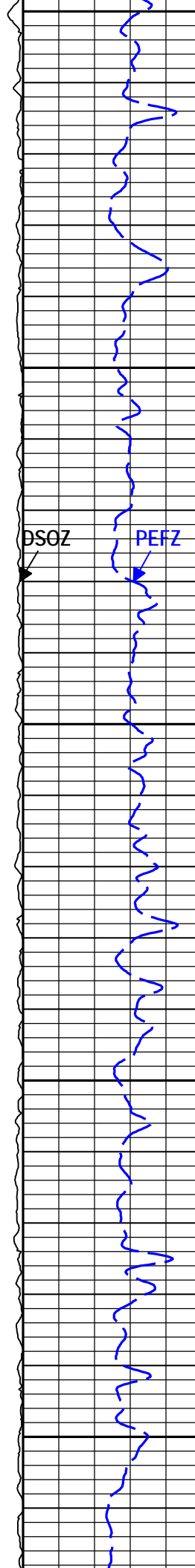


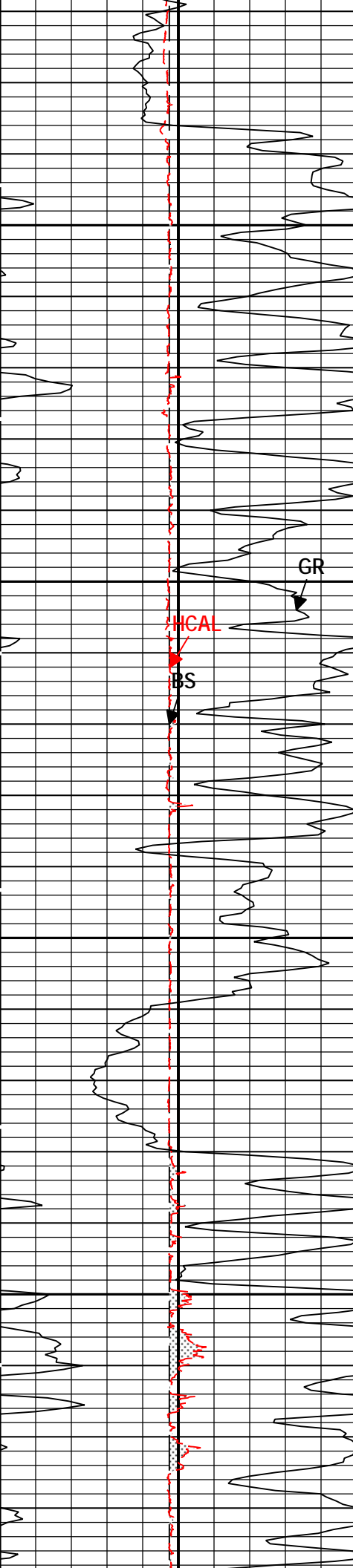




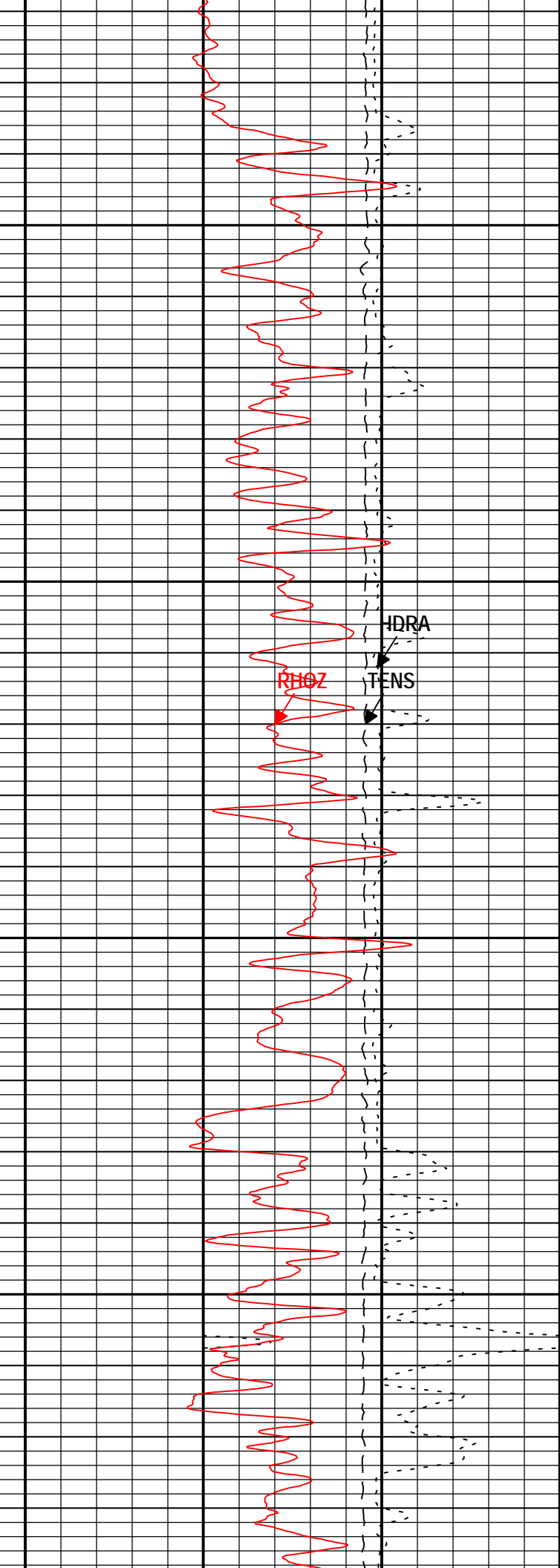
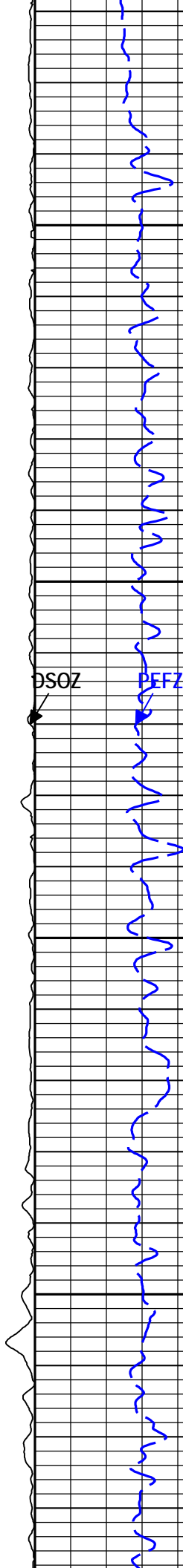


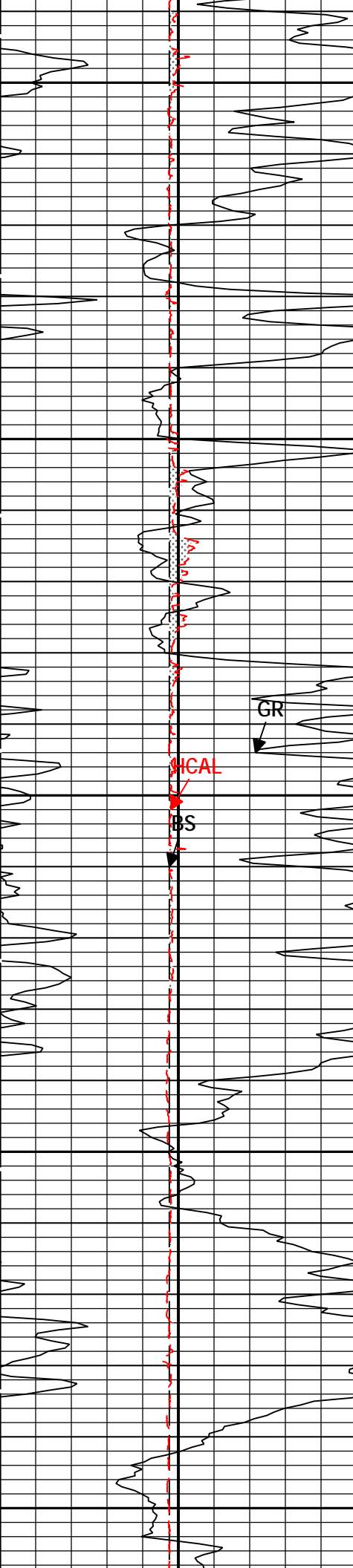
7600
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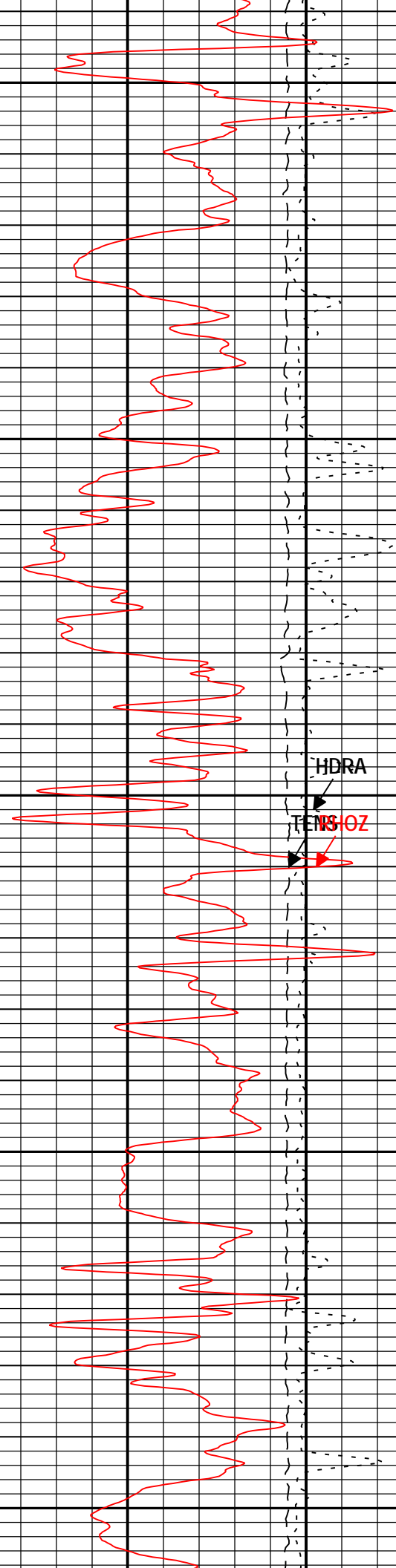
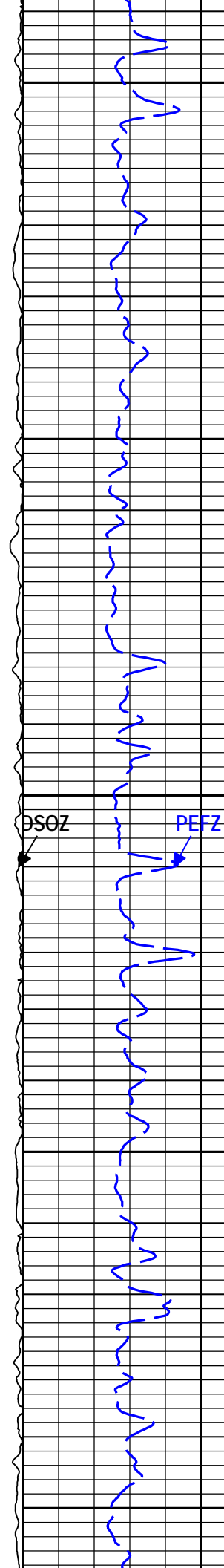


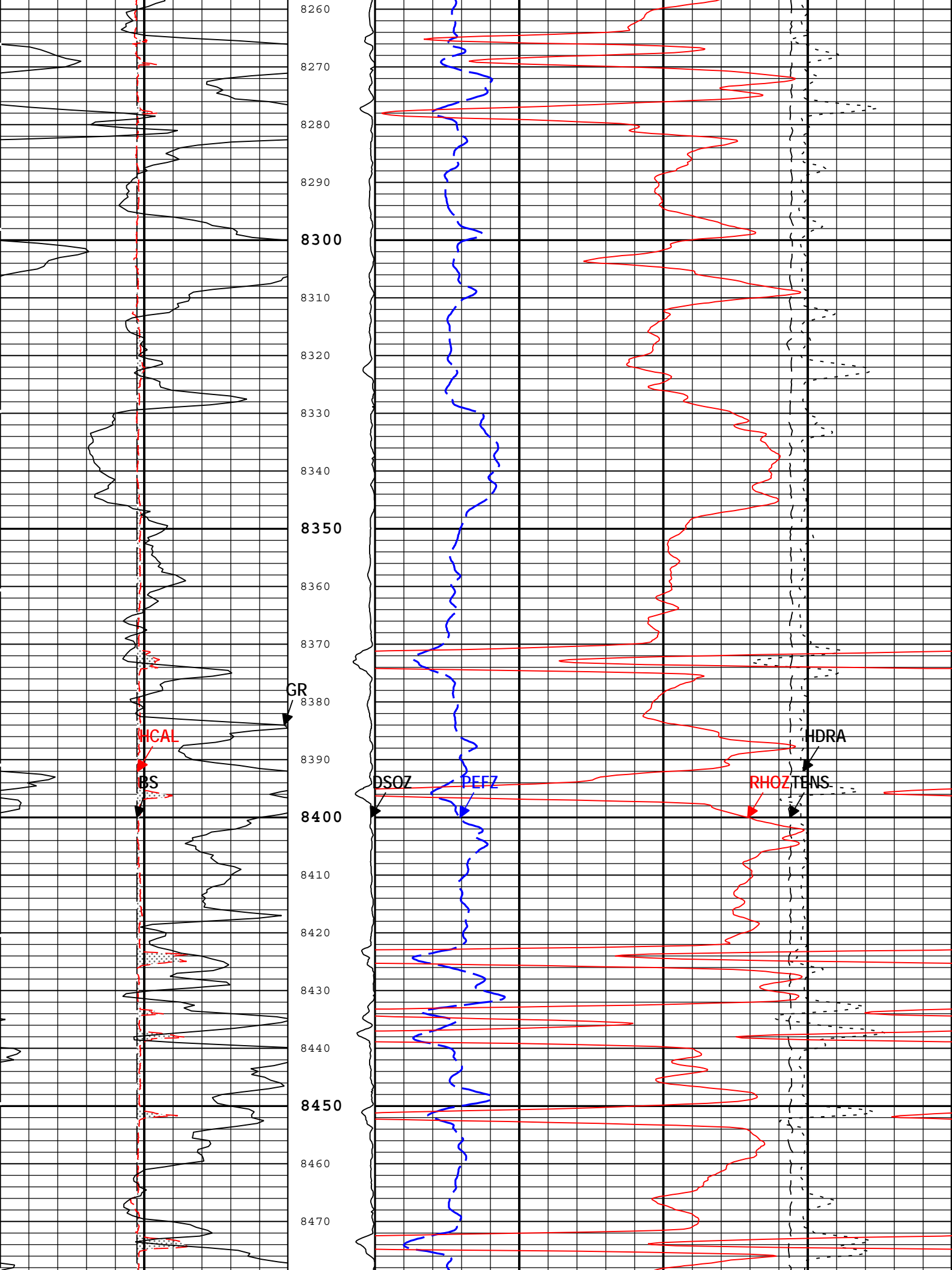
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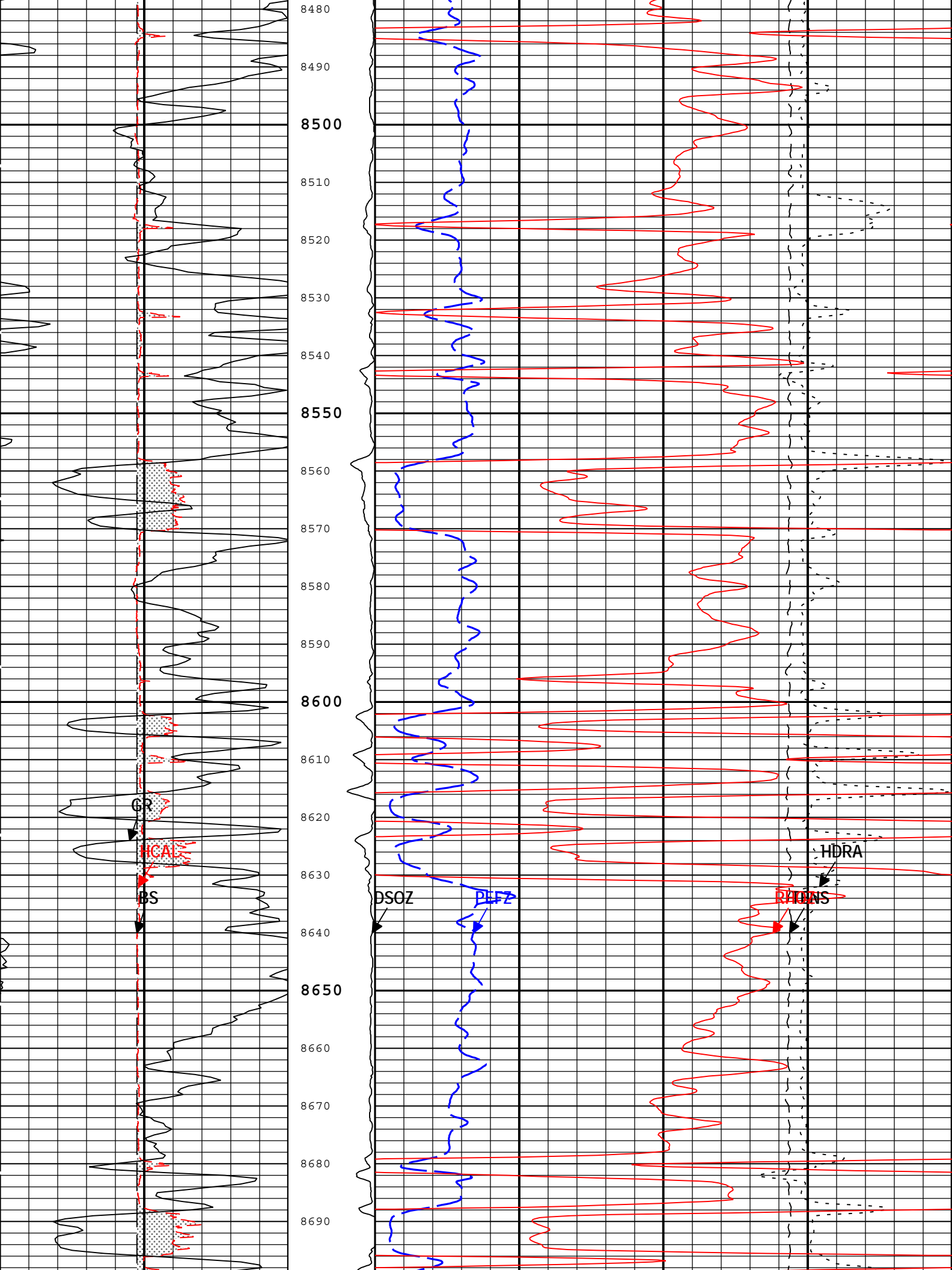


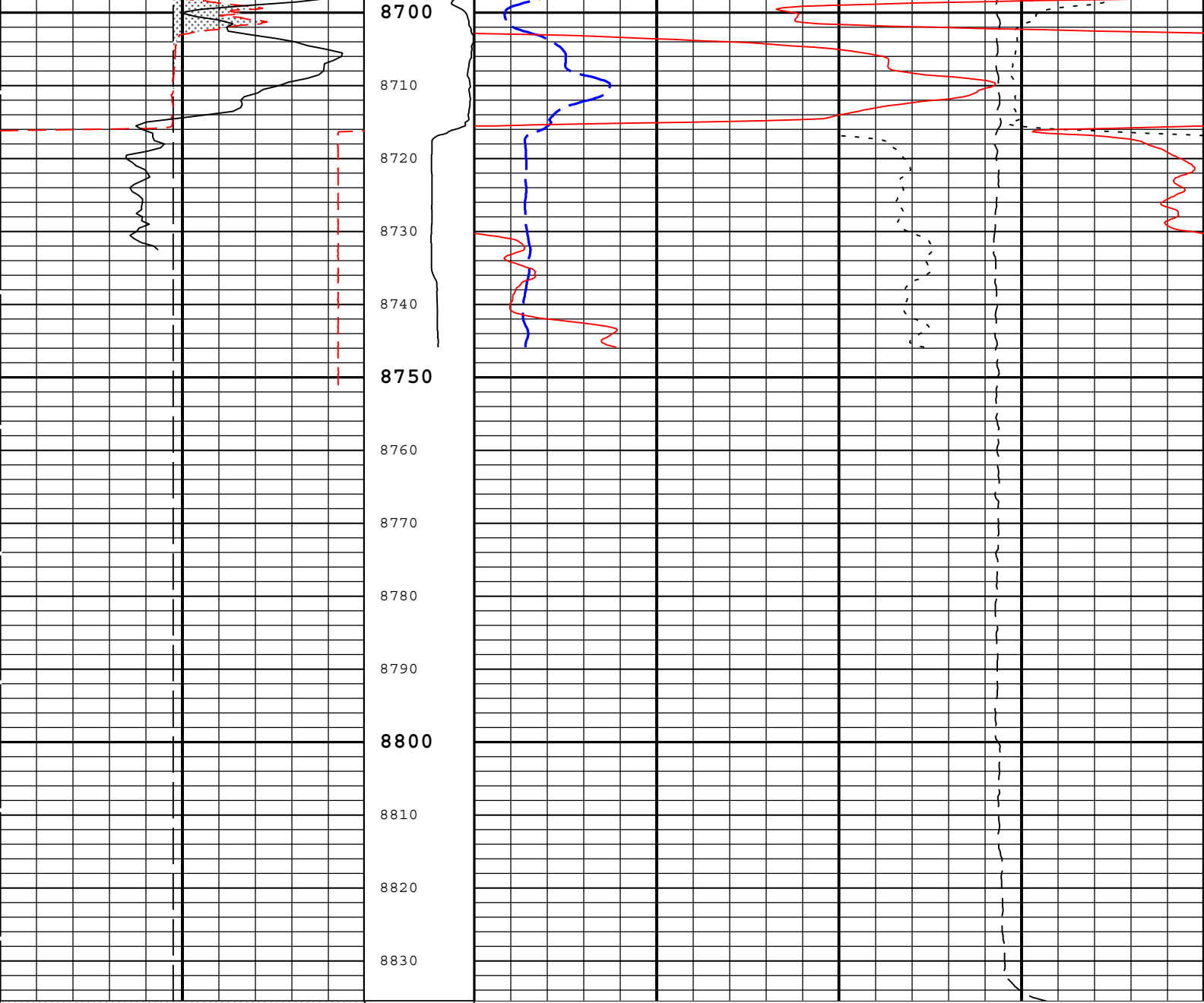


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8220
8230
8240
8250









Area from BS to CALI		Standard Resolution Formation Density (RHOZ) HDRS-H	
Caliper (HCAL) HDRS-H		g/cm3	
4	in	14	3
Calibrated Gamma Ray (GR) HGNS-H		Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H	
0	gAPI	150	10
2		Cable Tension (TENS)	
in		lbf	
0		Density Standoff Correction (HDRA) HDRS-H	
		g/cm3	
		-0.25	
		0.25	

TIME_1900 - Time Marked every 60.00 (s)

Description: Format: Log (Dens) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 19-Apr-2015 17:15:06

Channel Processing Parameters

ONE: Parameters

Parameter	Description	Tool	Value	Unit
ISSBAR	Barite Mud Presence Flag	Borehole	No	
BS	Bit Size	WLSESSION	8.75	in
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	0.256	in
CBLO	Casing Bottom (Logger)	WLSESSION	2521	ft
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	9.4	lbm/gal

	Drilling Fluid Type	Borehole	Water		
DHC	Density Hole Correction	HDRS-H	Bit Size		
Tool Control Parameters					
ONE: 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	
NPUC	Nuclear Pile-Up Correction	HDRS-H	On		
Time Zone Parameters					
Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
MAX_LOG_SPEED	2286	19-Apr-2015 11:50:25	19-Apr-2015 11:51:00	8835.73	8826.84
MAX_LOG_SPEED	2087	19-Apr-2015 11:51:00	19-Apr-2015 11:56:05	8826.84	8736.52
MAX_LOG_SPEED	2228	19-Apr-2015 11:56:05	19-Apr-2015 12:03:12	8736.52	8529.86
MAX_LOG_SPEED	2106	19-Apr-2015 12:03:12	19-Apr-2015 12:39:54	8529.86	7376.78
MAX_LOG_SPEED	2239	19-Apr-2015 12:39:54	19-Apr-2015 12:40:55	7376.78	7345.49
MAX_LOG_SPEED	2094	19-Apr-2015 12:40:55	19-Apr-2015 12:46:01	7345.49	7187.12
MAX_LOG_SPEED	2200	19-Apr-2015 12:46:01	19-Apr-2015 12:52:07	7187.12	6982.66
MAX_LOG_SPEED	2354	19-Apr-2015 12:52:07	19-Apr-2015 12:54:09	6982.66	6915.14
MAX_LOG_SPEED	2226	19-Apr-2015 12:54:09	19-Apr-2015 12:55:11	6915.14	6881.81
MAX_LOG_SPEED	2074	19-Apr-2015 12:55:11	19-Apr-2015 12:56:12	6881.81	6848.4
MAX_LOG_SPEED	2202	19-Apr-2015 12:56:12	19-Apr-2015 13:10:28	6848.4	6388.77
MAX_LOG_SPEED	2352	19-Apr-2015 13:10:28	19-Apr-2015 13:13:32	6388.77	6292.75
MAX_LOG_SPEED	2188	19-Apr-2015 13:13:32	19-Apr-2015 13:14:34	6292.75	6260.8
MAX_LOG_SPEED	2312	19-Apr-2015 13:14:34	19-Apr-2015 13:16:36	6260.8	6197.58
MAX_LOG_SPEED	2188	19-Apr-2015 13:16:36	19-Apr-2015 13:17:37	6197.58	6166.09
MAX_LOG_SPEED	2301	19-Apr-2015 13:17:37	19-Apr-2015 13:20:40	6166.09	6072.52
MAX_LOG_SPEED	2161	19-Apr-2015 13:20:40	19-Apr-2015 13:23:43	6072.52	5979.46
MAX_LOG_SPEED	2330	19-Apr-2015 13:23:43	19-Apr-2015 13:24:44	5979.46	5948.52
MAX_LOG_SPEED	2192	19-Apr-2015 13:24:44	19-Apr-2015 13:25:45	5948.52	5917.6
MAX_LOG_SPEED	2314	19-Apr-2015 13:25:45	19-Apr-2015 13:27:47	5917.6	5856.22
MAX_LOG_SPEED	2462	19-Apr-2015 13:27:47	19-Apr-2015 13:32:53	5856.22	5703.01
MAX_LOG_SPEED	2610	19-Apr-2015 13:32:53	19-Apr-2015 13:34:54	5703.01	5641.88
MAX_LOG_SPEED	2398	19-Apr-2015 13:34:54	19-Apr-2015 13:37:58	5641.88	5548.26
MAX_LOG_SPEED	2581	19-Apr-2015 13:37:58	19-Apr-2015 13:40:00	5548.26	5486.28
MAX_LOG_SPEED	2440	19-Apr-2015 13:40:00	19-Apr-2015 13:42:02	5486.28	5424.2
MAX_LOG_SPEED	2619	19-Apr-2015 13:42:02	19-Apr-2015 13:44:04	5424.2	5362.77
MAX_LOG_SPEED	2485	19-Apr-2015 13:44:04	19-Apr-2015 13:48:08	5362.77	5238.65
MAX_LOG_SPEED	2625	19-Apr-2015 13:48:08	19-Apr-2015 13:52:11	5238.65	5124.85
MAX_LOG_SPEED	2781	19-Apr-2015 13:52:11	19-Apr-2015 14:01:19	5124.85	4935.57
MAX_LOG_SPEED	3058	19-Apr-2015 14:01:19	19-Apr-2015 14:05:22	4935.57	4935.56
MAX_LOG_SPEED	2903	19-Apr-2015 14:05:22	19-Apr-2015 14:14:31	4935.56	4755.46
MAX_LOG_SPEED	2721	19-Apr-2015 14:14:31	19-Apr-2015 14:16:33	4755.46	4696.76
MAX_LOG_SPEED	2939	19-Apr-2015 14:16:33	19-Apr-2015 14:23:39	4696.76	4495.64
MAX_LOG_SPEED	2779	19-Apr-2015 14:23:39	19-Apr-2015 14:25:41	4495.64	4439.92

MAX_LOG_SPEED	3016	19-Apr-2015 14:25:41	19-Apr-2015 15:00:08	4439.92	3315.66
MAX_LOG_SPEED	3175	19-Apr-2015 15:00:08	19-Apr-2015 15:33:25	3315.66	2154.88

All depth are at tool zero.

Composite 1

Main Pass - Triple Combo

Software Version

Acquisition System	Version
Maxwell	5.2.40401.3100

Composite Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Main[3]:Up	Up	2154.88 ft	8835.73 ft	19-Apr-2015 11:50:25 AM	19-Apr-2015 3:33:25 PM	ON	0.00 ft	No
ONE	Log[4]:Up	Up	1949.23 ft	2225.17 ft	19-Apr-2015 3:46:38 PM	19-Apr-2015 3:54:26 PM	ON	0.00 ft	No
ONE	Log[6]:Up	Up	202.86 ft	2002.51 ft	19-Apr-2015 4:03:27 PM	19-Apr-2015 4:31:09 PM	ON	0.00 ft	No

All depths are referenced to toolstring zero

Log	Company:CAERUS PICEANCE LLC	Well:PUCKETT 42D-2
		Composite 1:S012

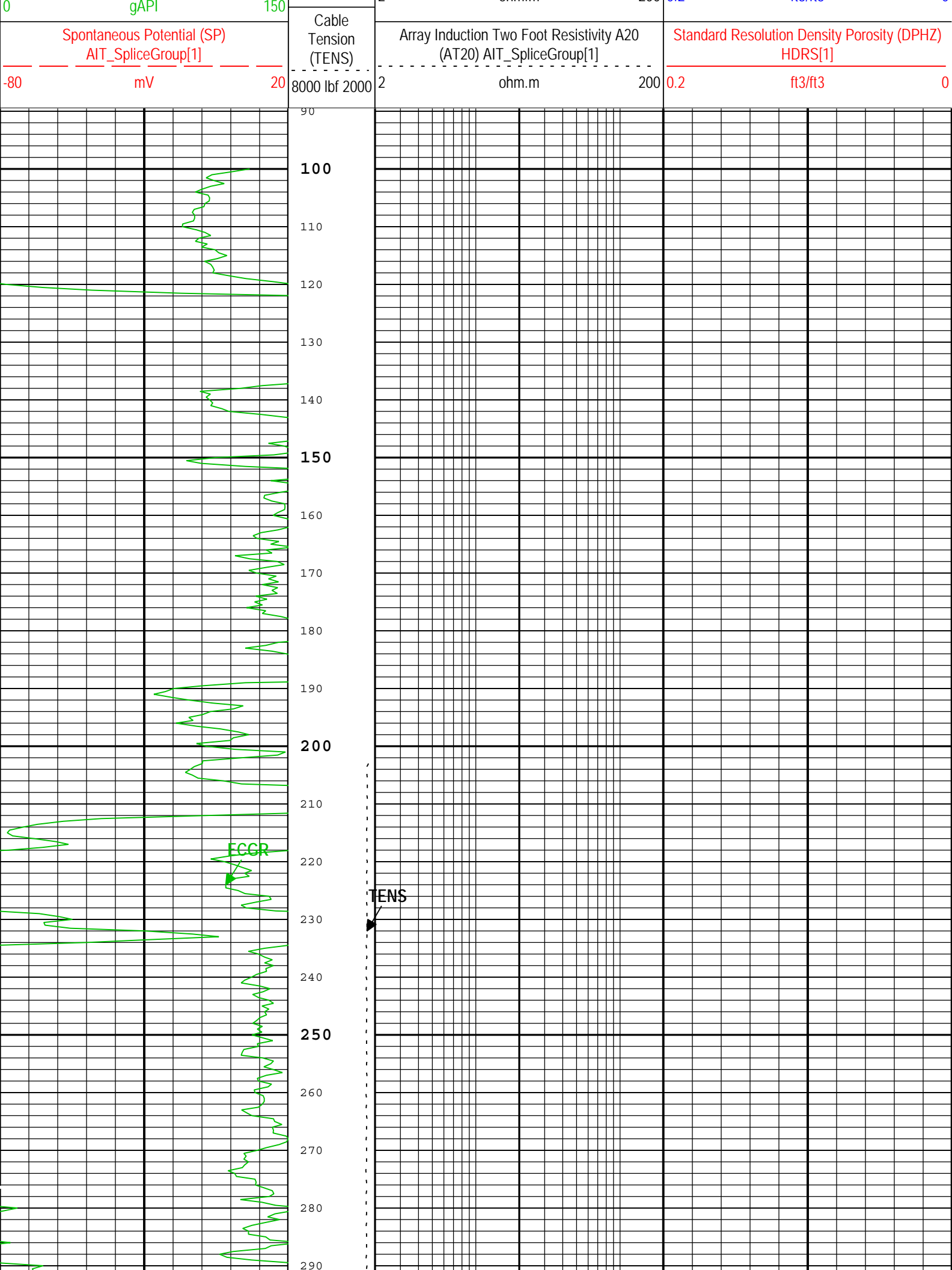
Description: Format: Log (Combo_Fax) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 19-Apr-2015 17:15:17

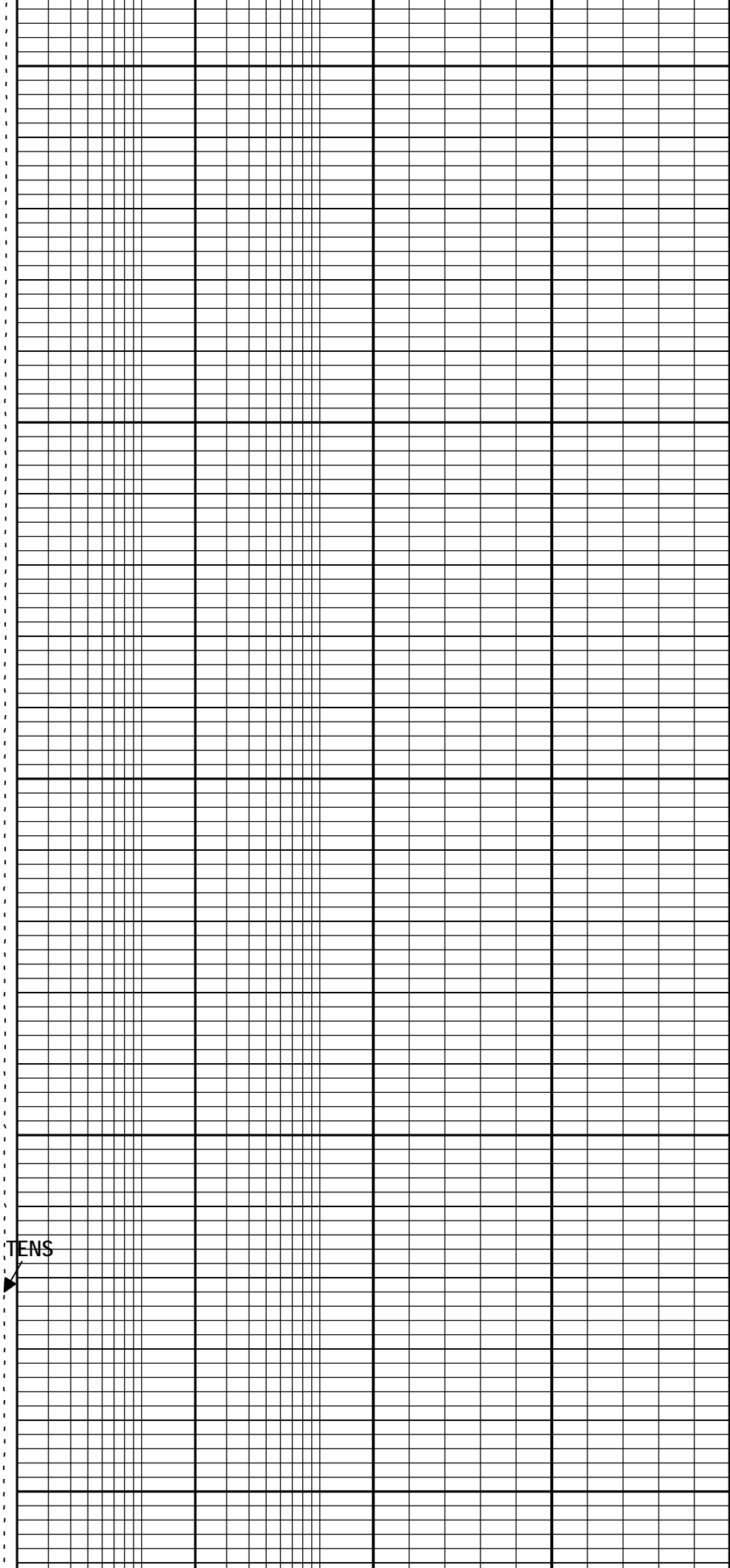
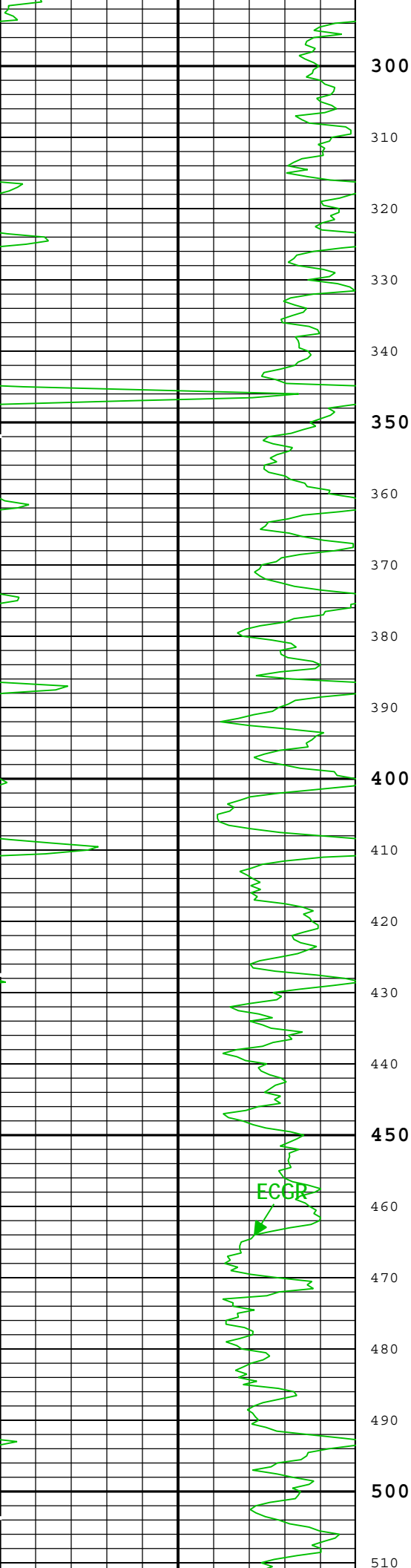
Channel	Source	Sampling
AT10	AIT_SpliceGroup[1]:AMIS[1]:AMIS[1]	3in
AT20	AIT_SpliceGroup[1]:AMIS[1]:AMIS[1]	3in
AT30	AIT_SpliceGroup[1]:AMIS[1]:AMIS[1]	3in
AT60	AIT_SpliceGroup[1]:AMIS[1]:AMIS[1]	3in
AT90	AIT_SpliceGroup[1]:AMIS[1]:AMIS[1]	3in
BS	Borehole	6in
CALI	HDRS[1]:HRCC-H[1]:HRCC-H[1]	1in
DPHZ	HDRS[1]:HRMS-H[1]:HRGD-H[1]	2in
GR	HGNS[1]:HGNS-H[1]:HGNS-H[1]	6in
NPOR	HGNS[1]:HGNS-H[1]:HGNS-H[1]	6in
SP	AIT_SpliceGroup[1]:AMIS[1]:AMIS[1]	6in
STIT	DepthCorrection	6in
TENS	WLWorkflow	6in
TIME_1900	WLWorkflow	0.1in

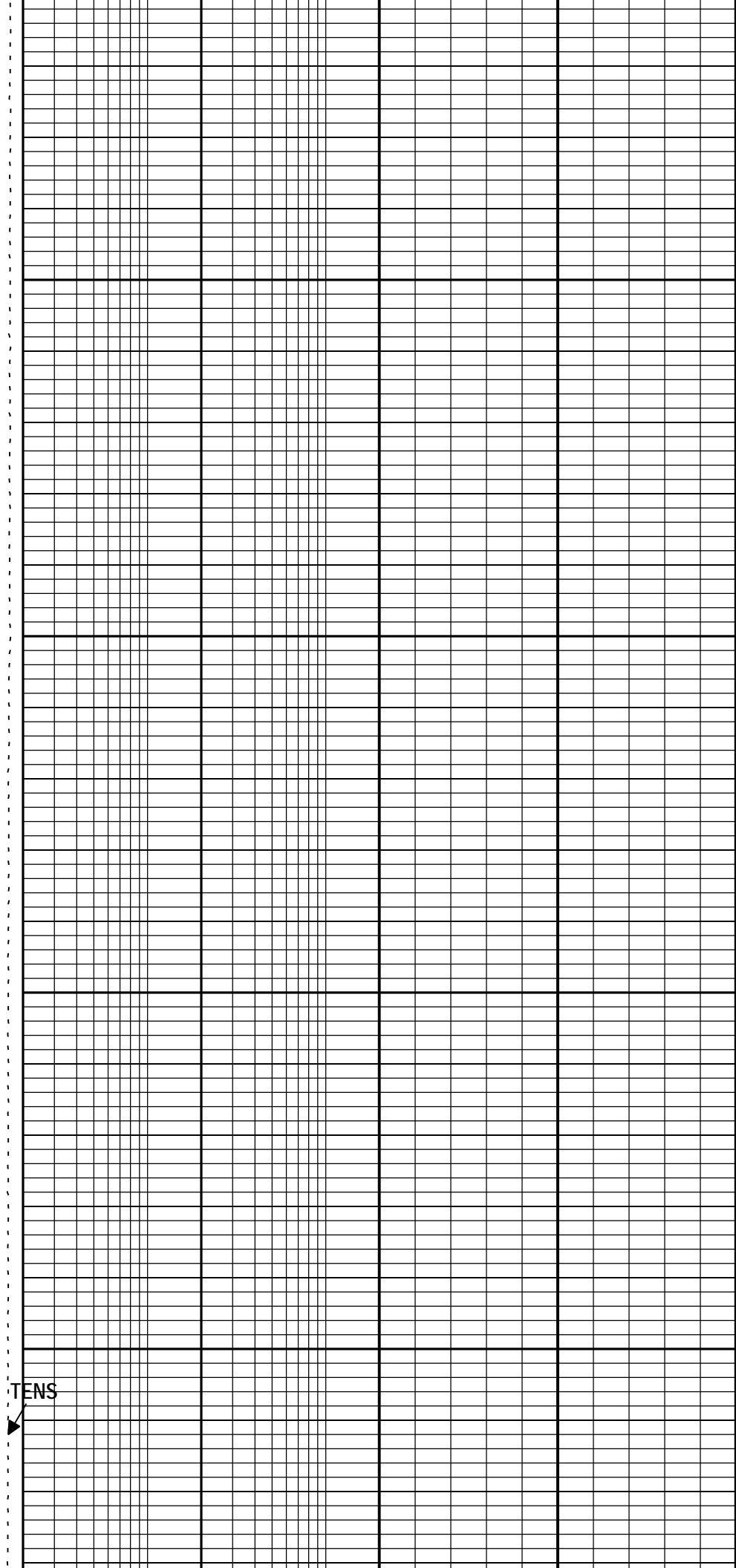
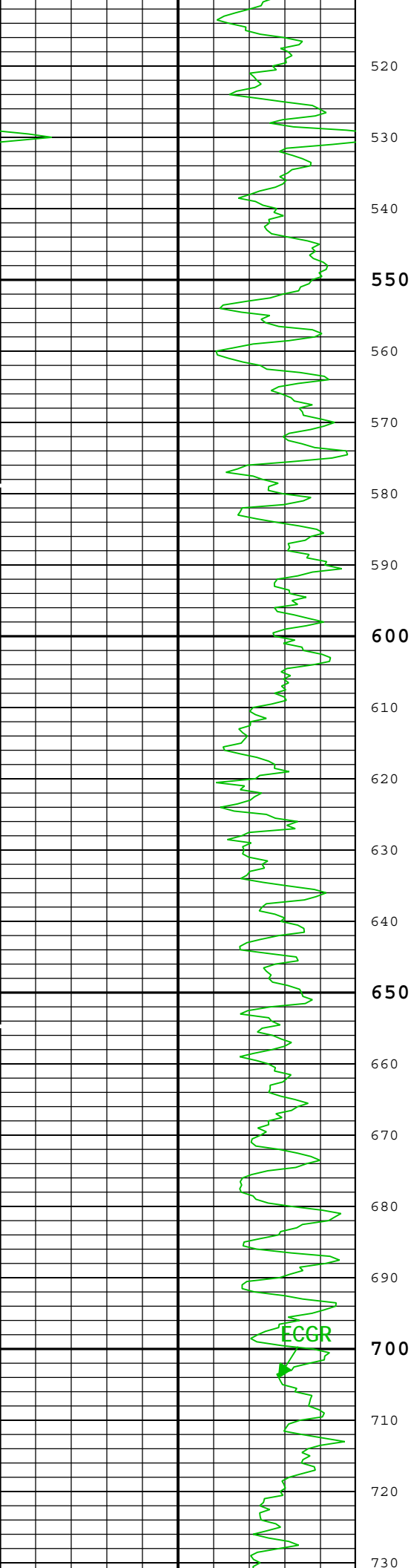
TIME_1900 - Time Marked every 60.00 (s)

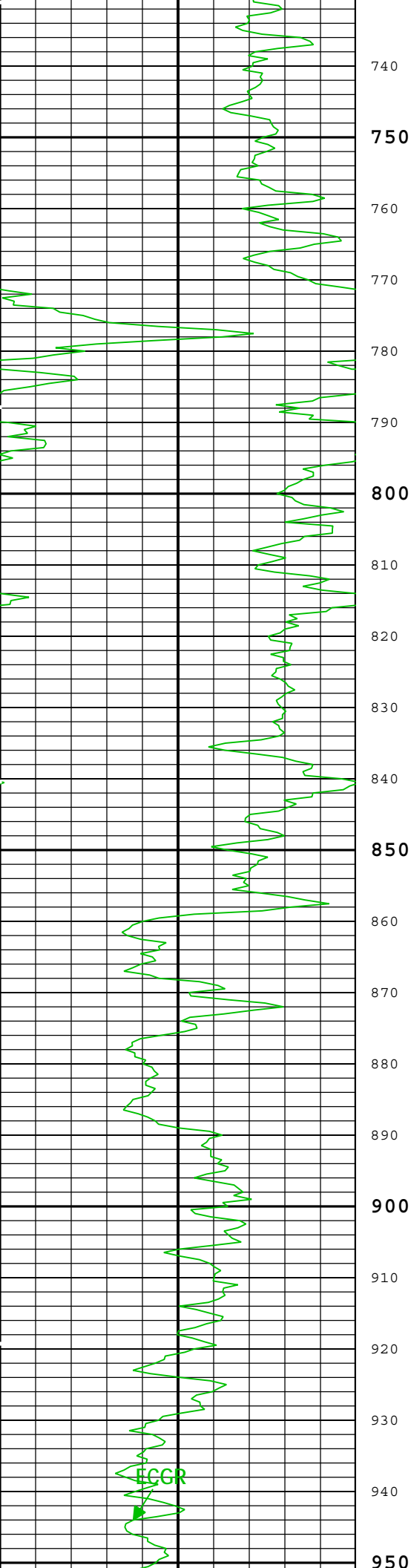
Area from BS to Cali		Array Induction Two Foot Resistivity A30 (AT30) AIT_SpliceGroup[1]			
		2	ohm.m	200	
		Array Induction Two Foot Resistivity A60 (AT60) AIT_SpliceGroup[1]			
		2	ohm.m	200	
		Array Induction Two Foot Resistivity A90 (AT90) AIT_SpliceGroup[1]			
		2	ohm.m	200	
		Array Induction Two Foot Resistivity A10 (AT10) AIT_SpliceGroup[1]			
		2	ohm.m	200	
		Enhanced Thermal Neutron Porosity in Selected Lithology (NPOR) HGNS[1]			
		0.2	ft3/ft3		

Caliper (HCAL) HDRS[1]	Stuck Tool Indicator, Total (STIT)
4 in 14	0 ft 50
Gamma Ray (ECGR) HGNS[1]	



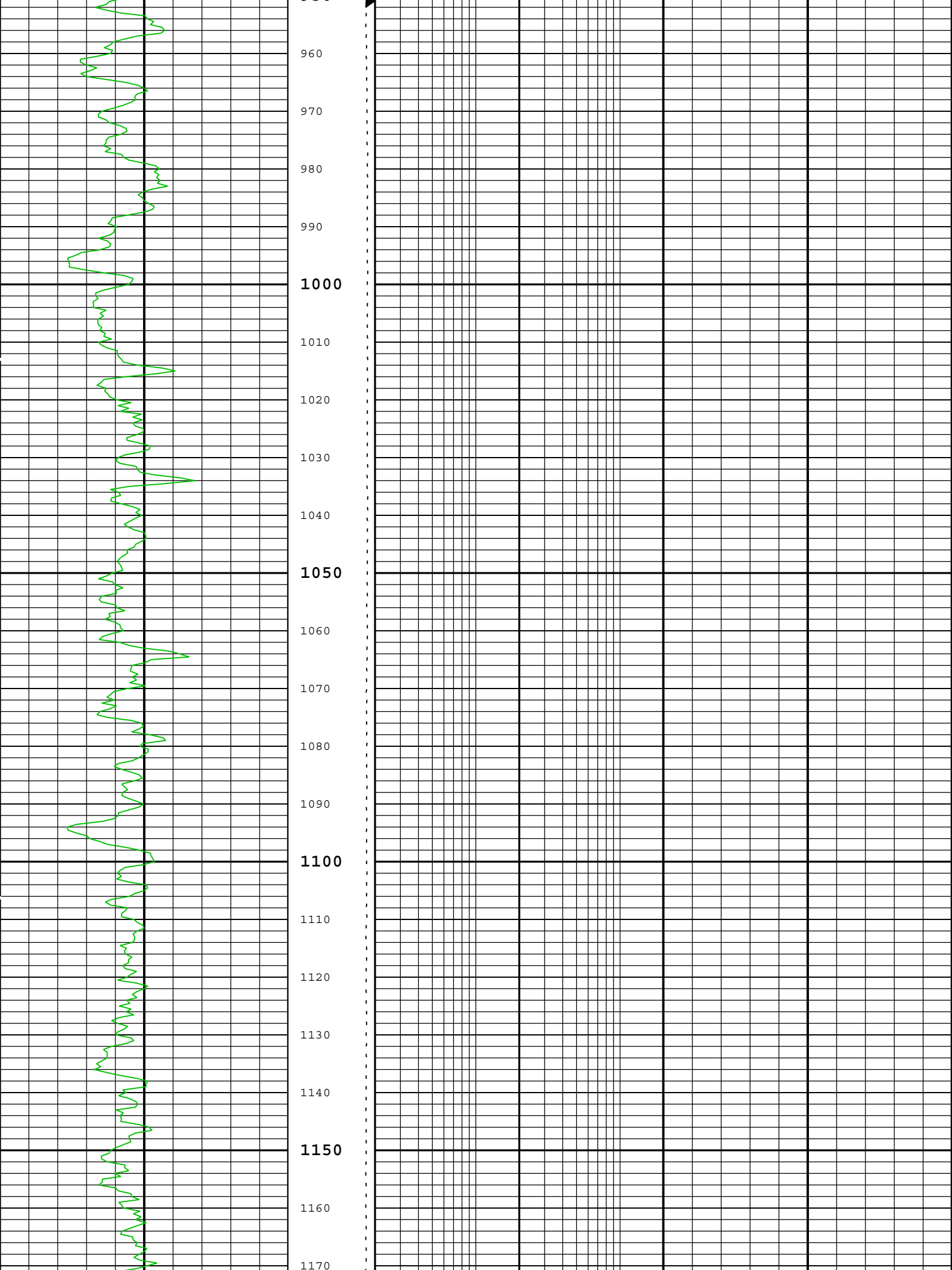


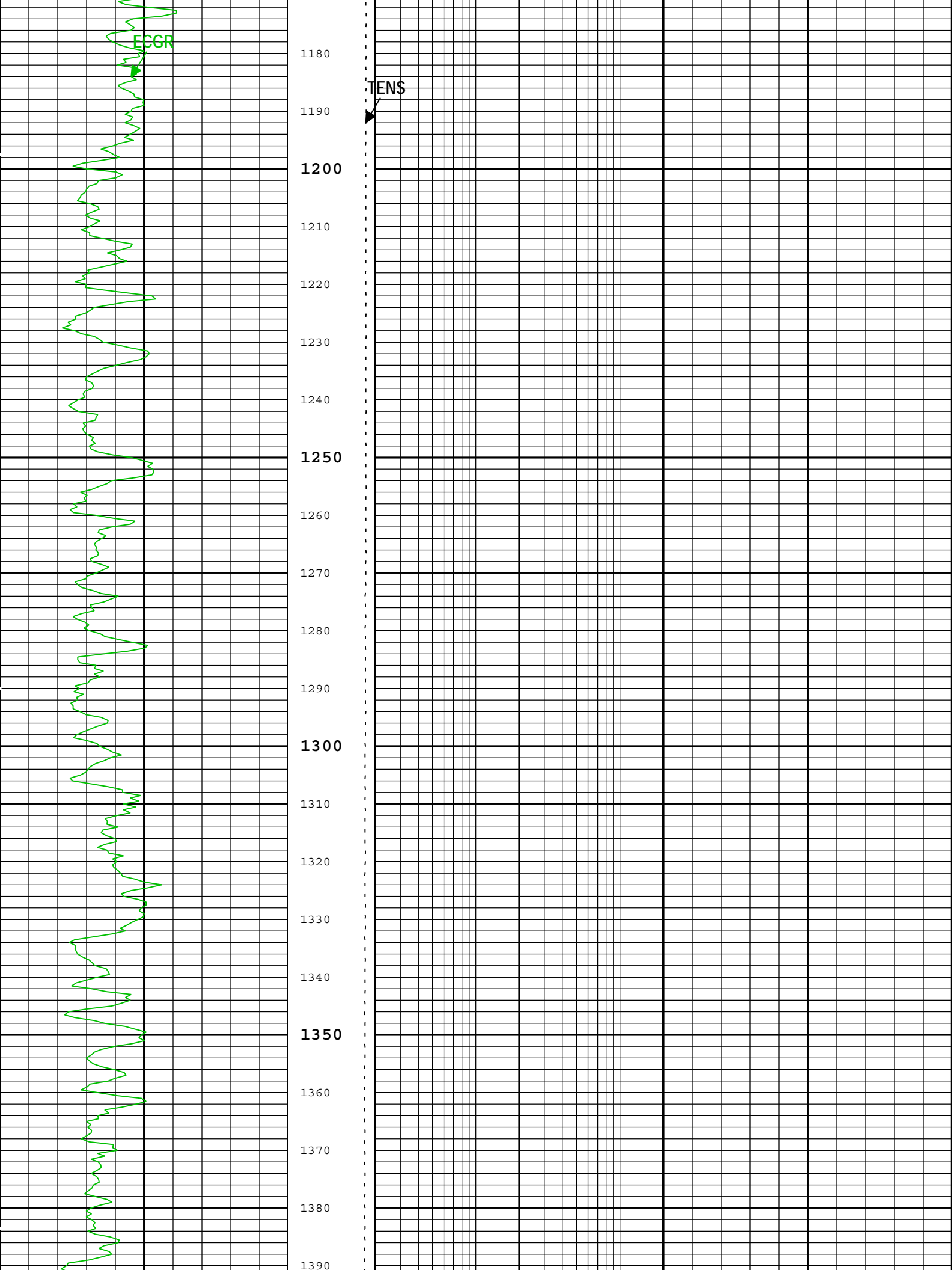


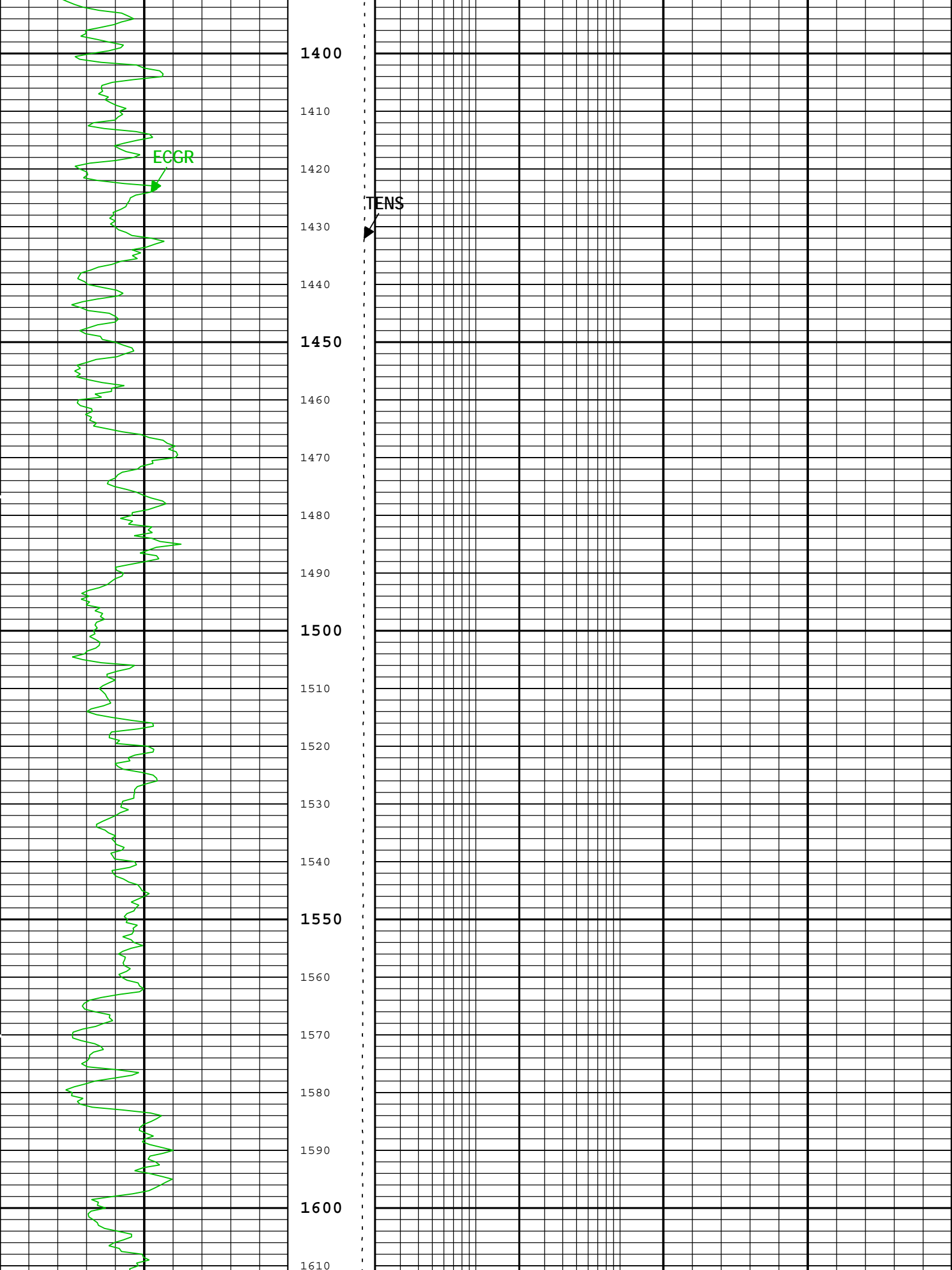


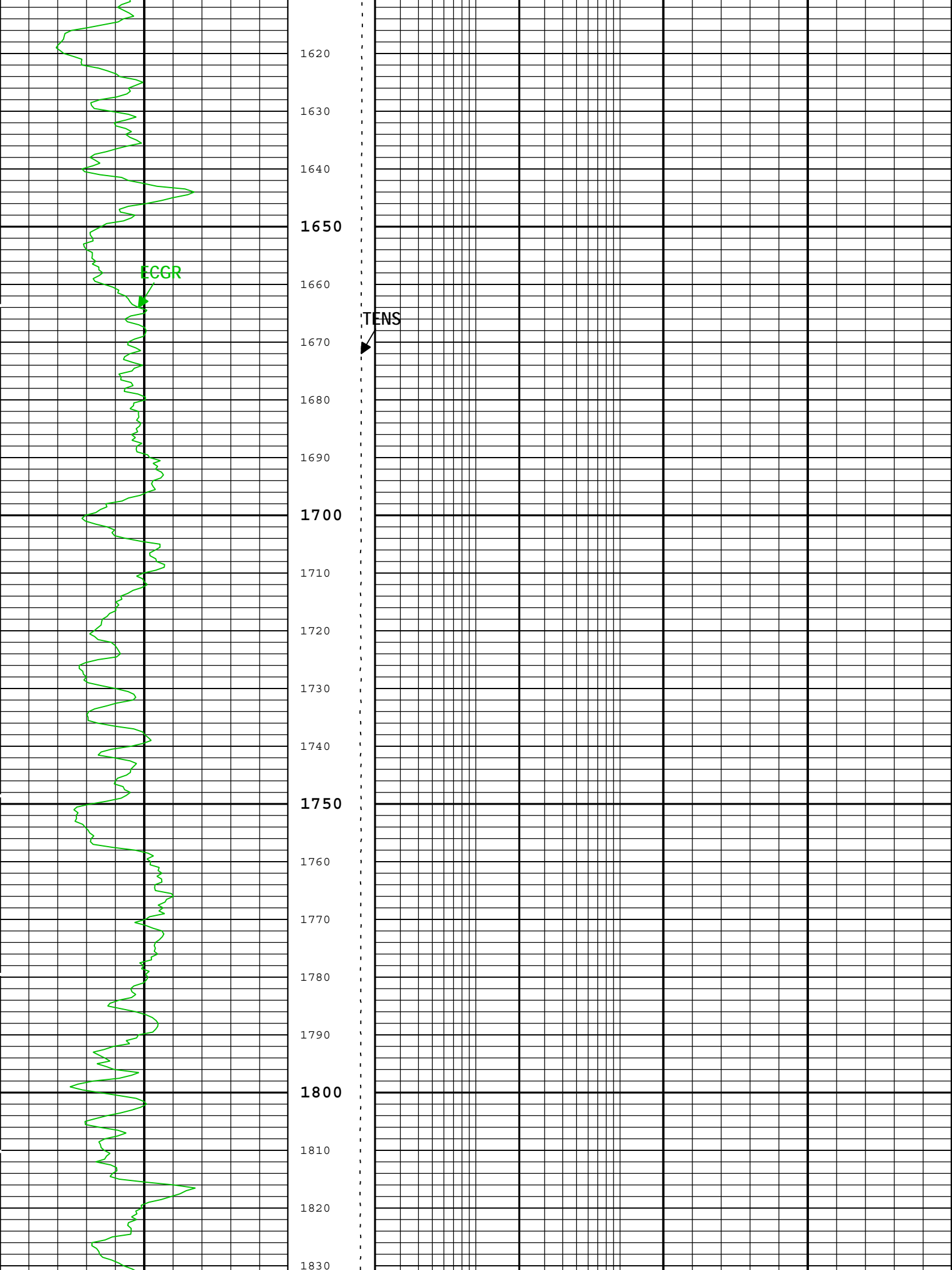
ECGR

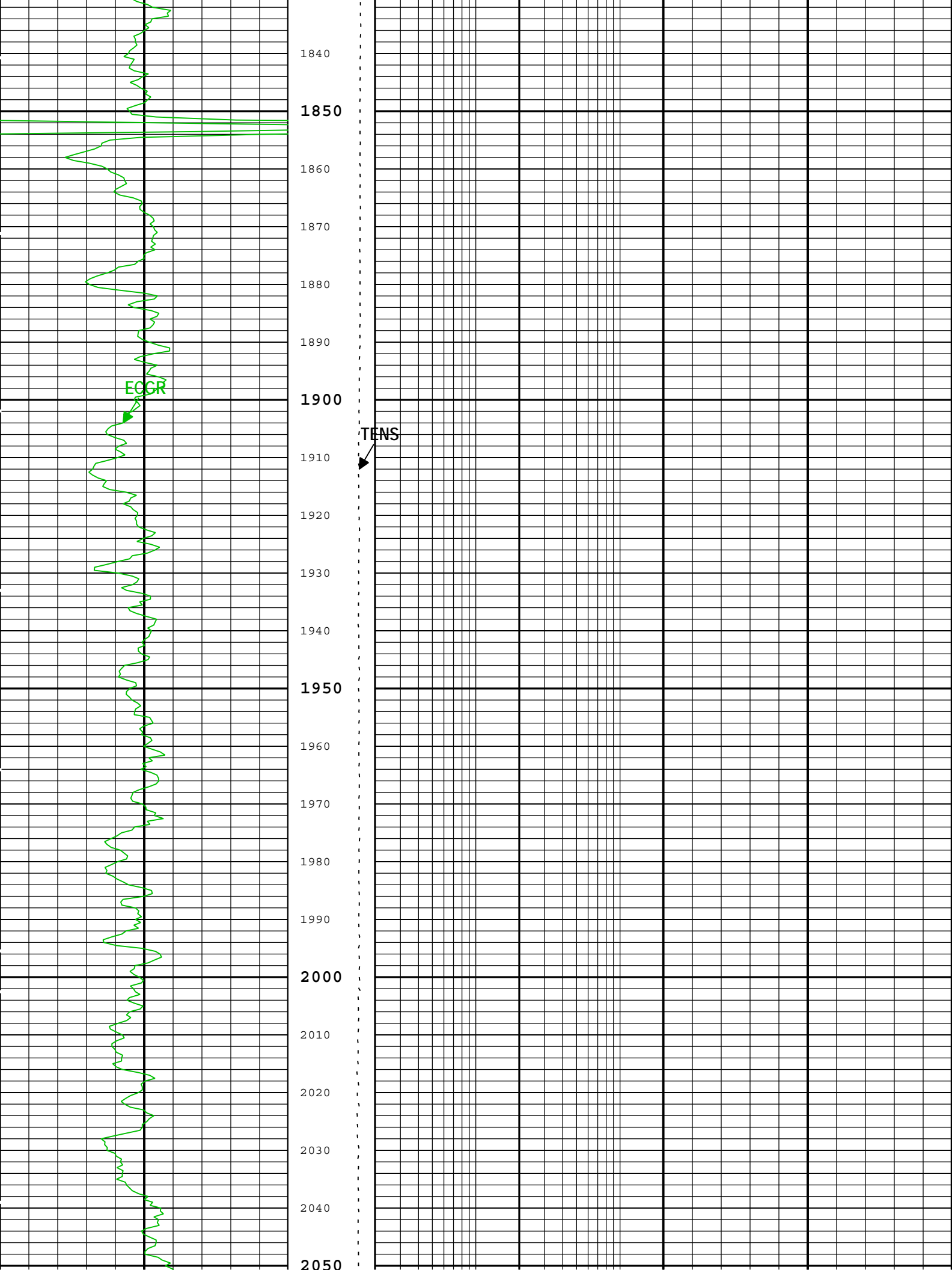
TENS

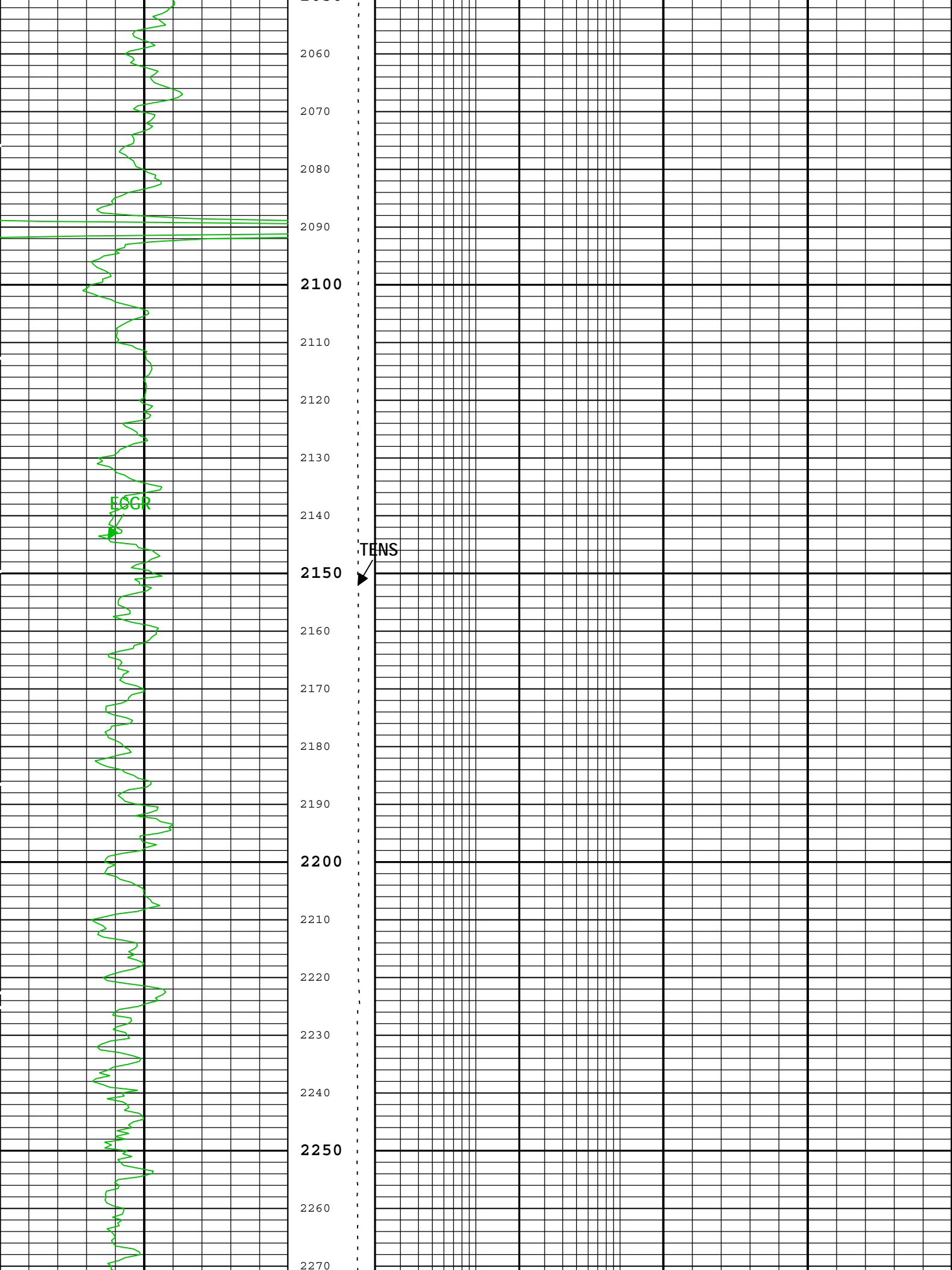


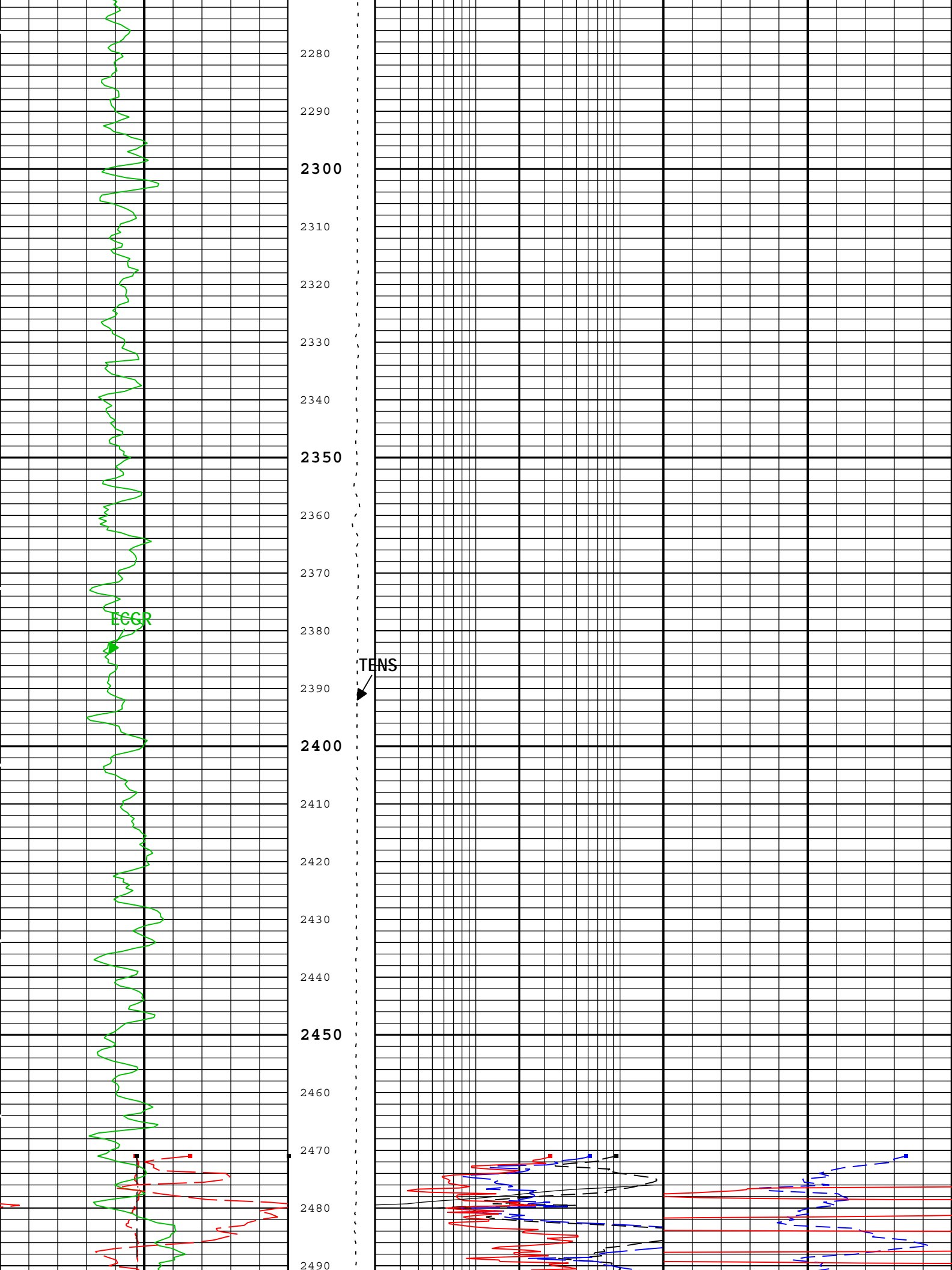


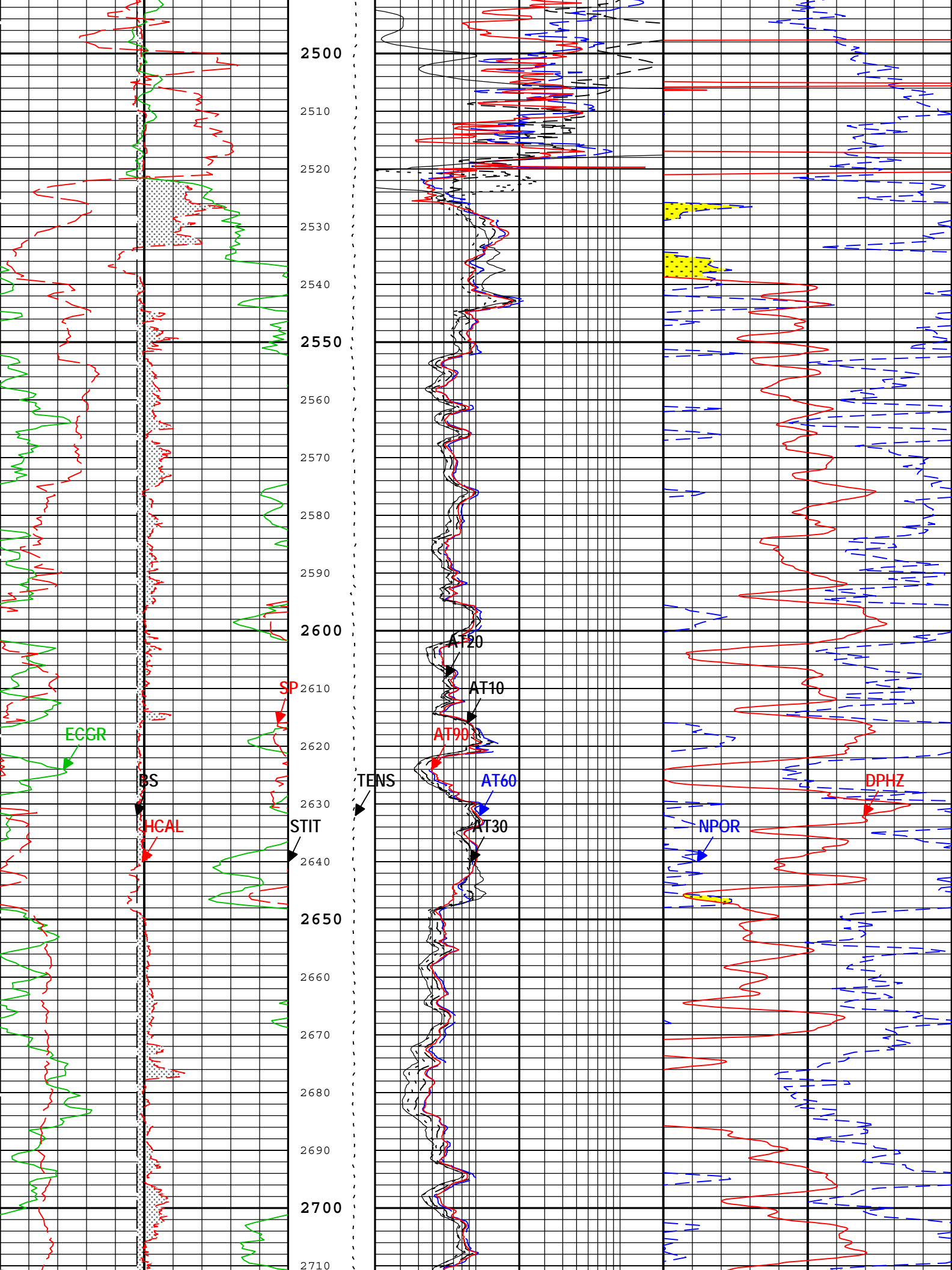


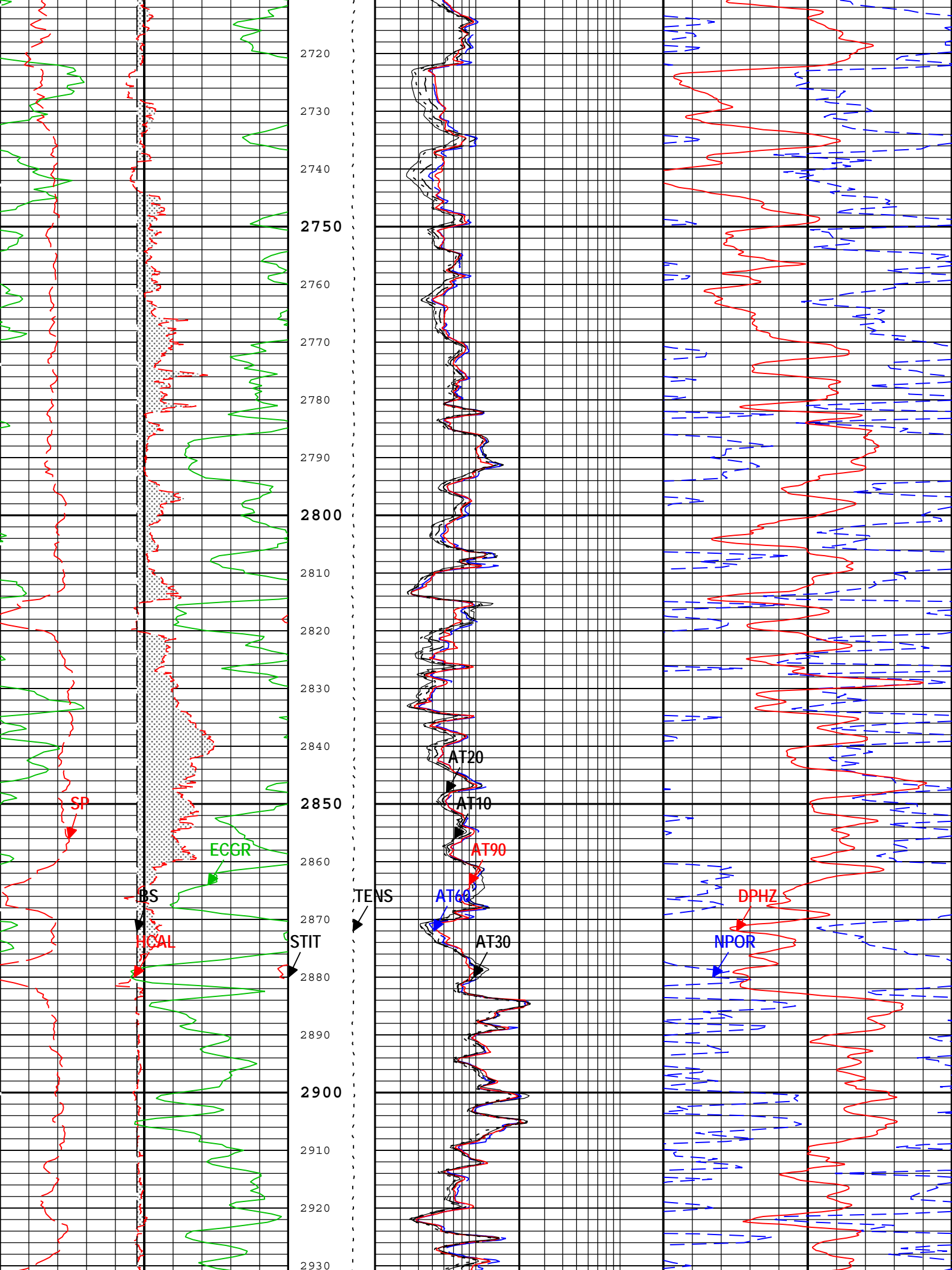


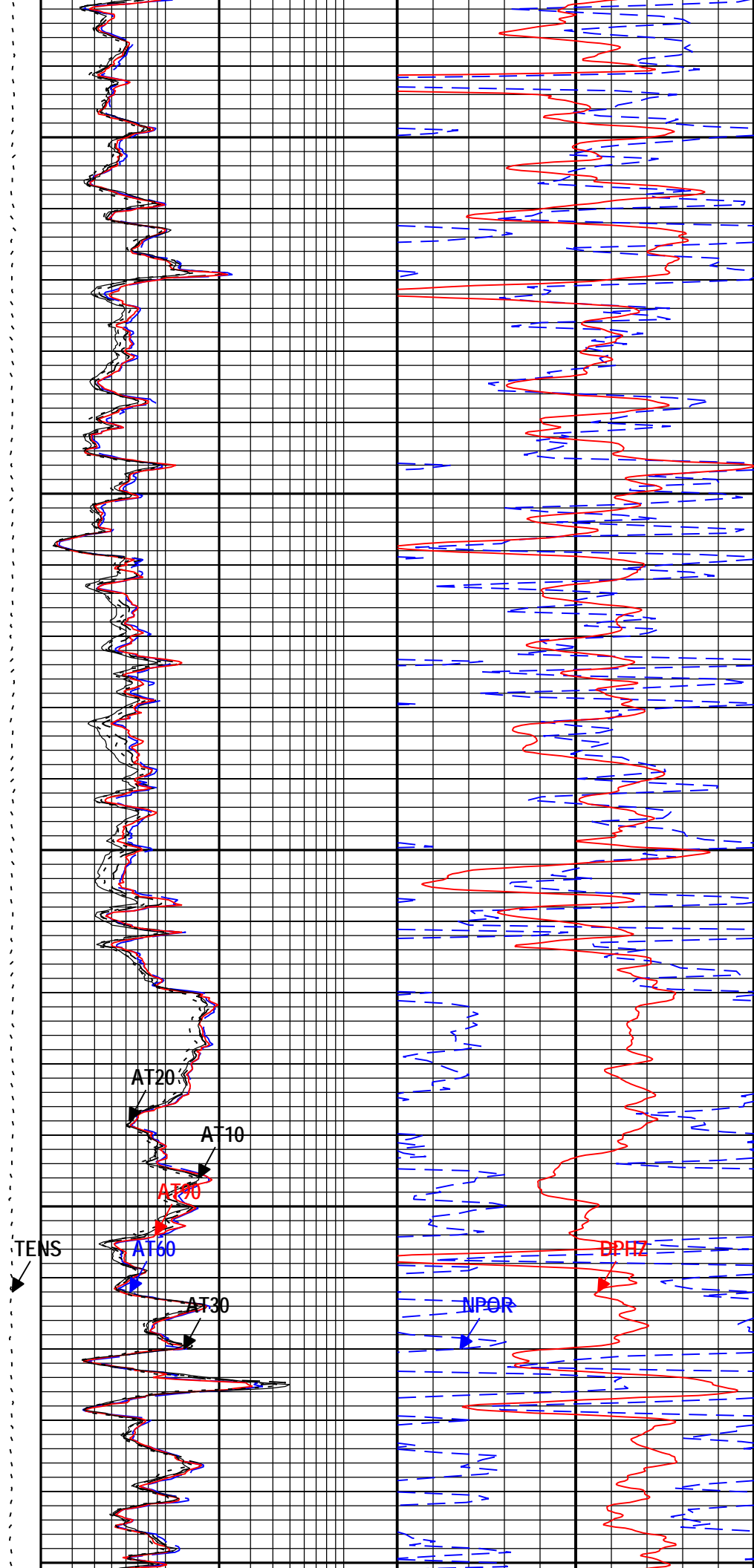
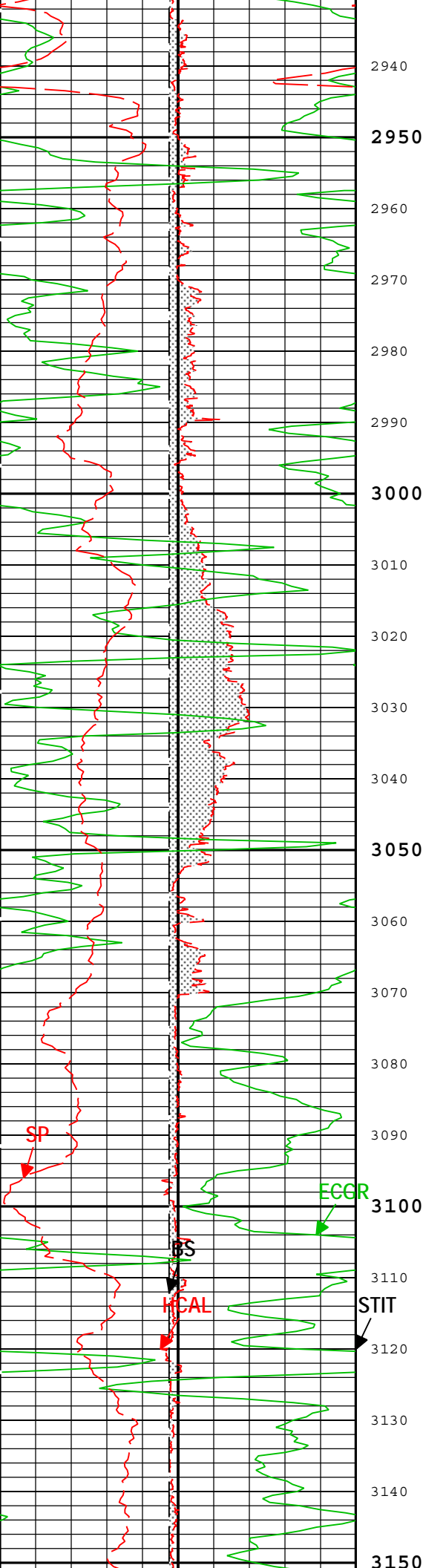


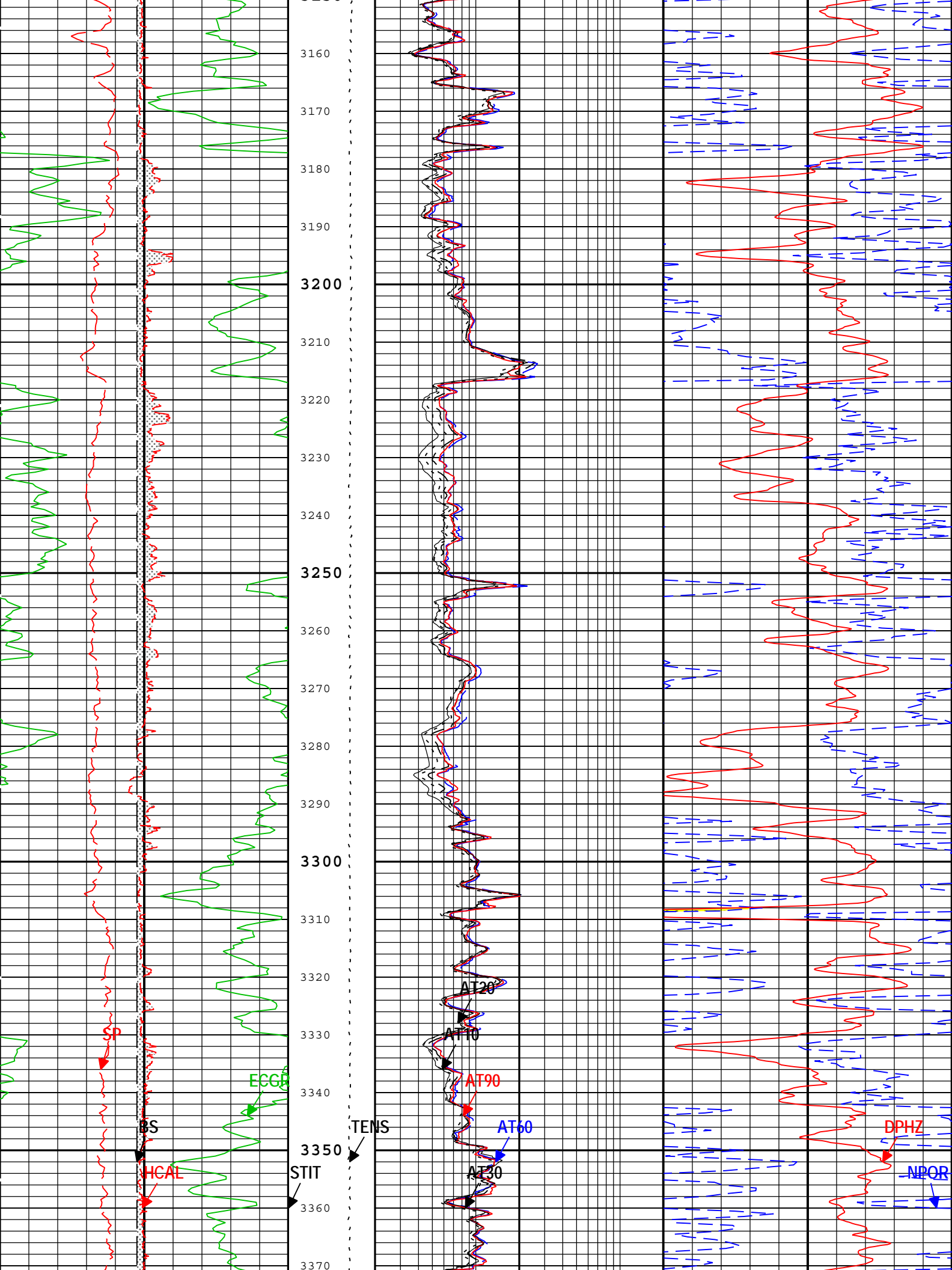


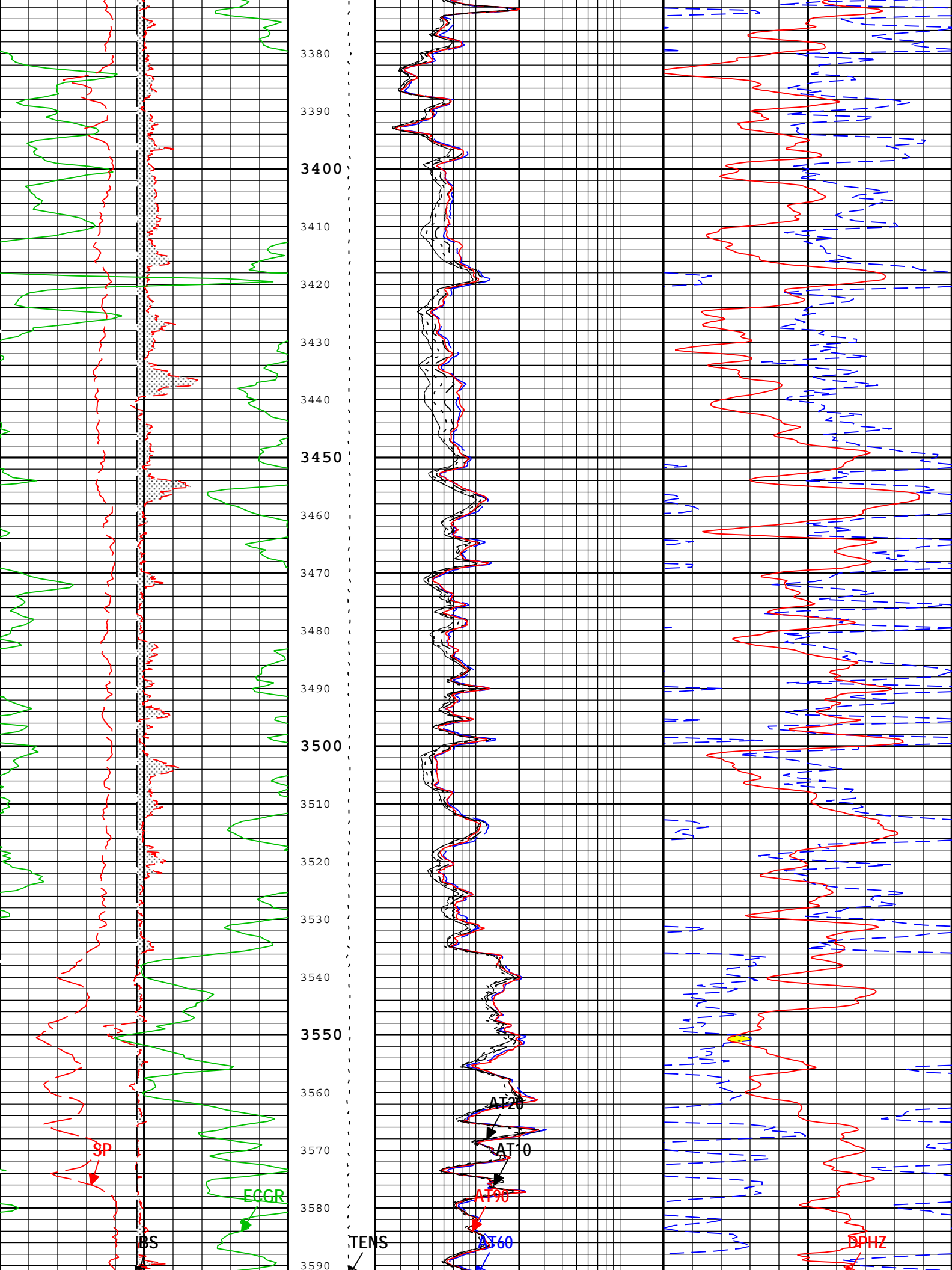


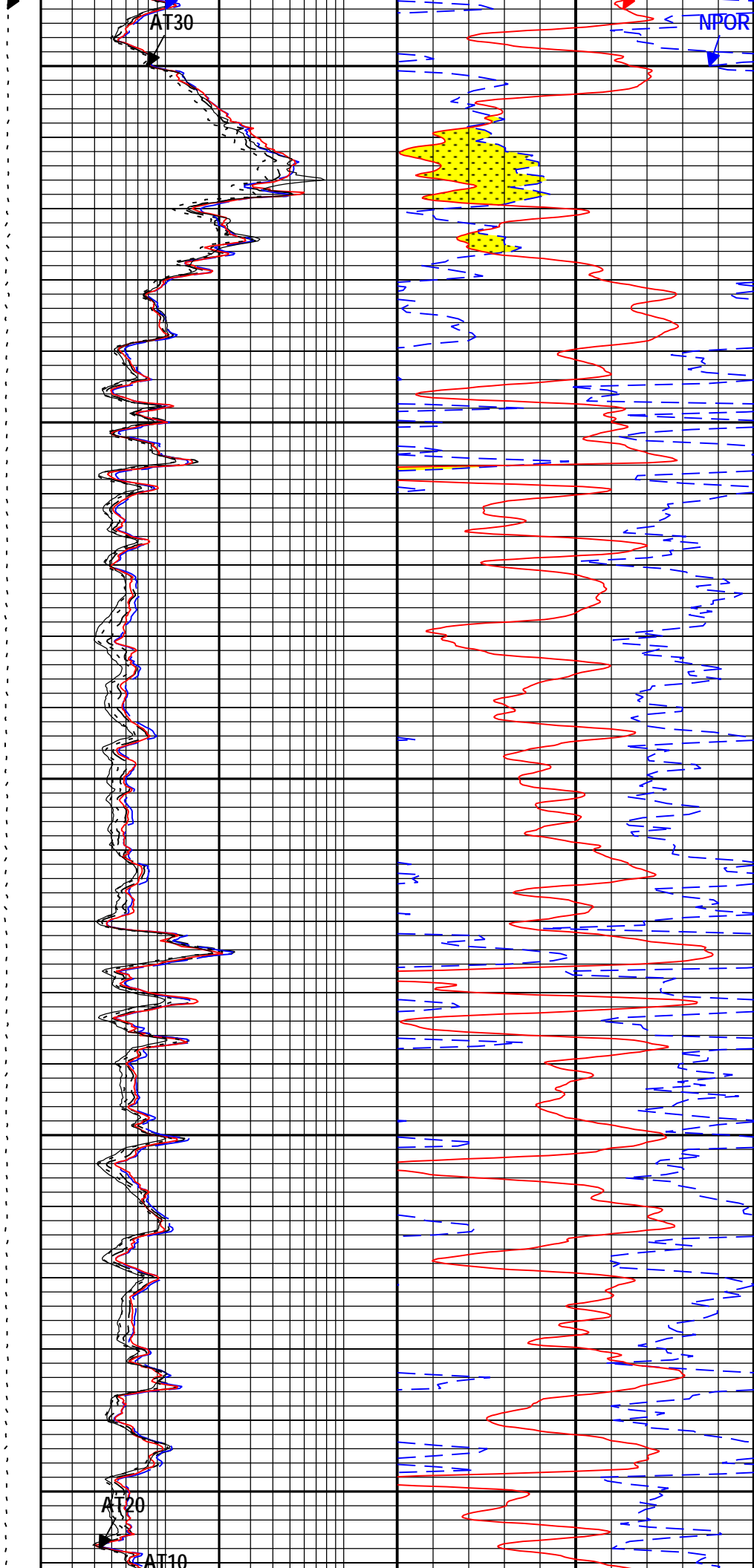
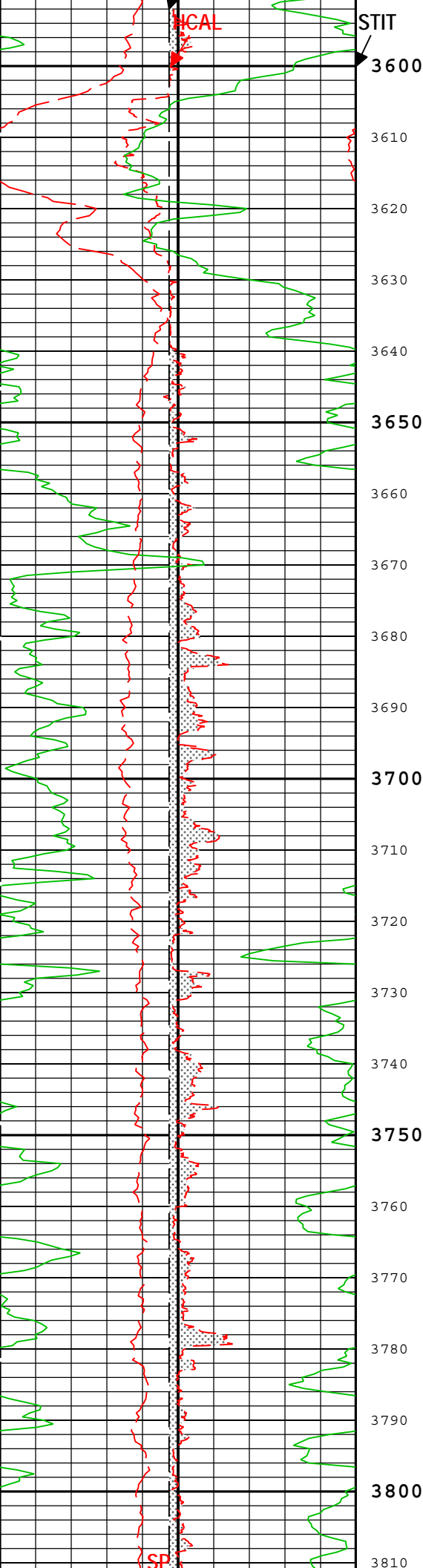


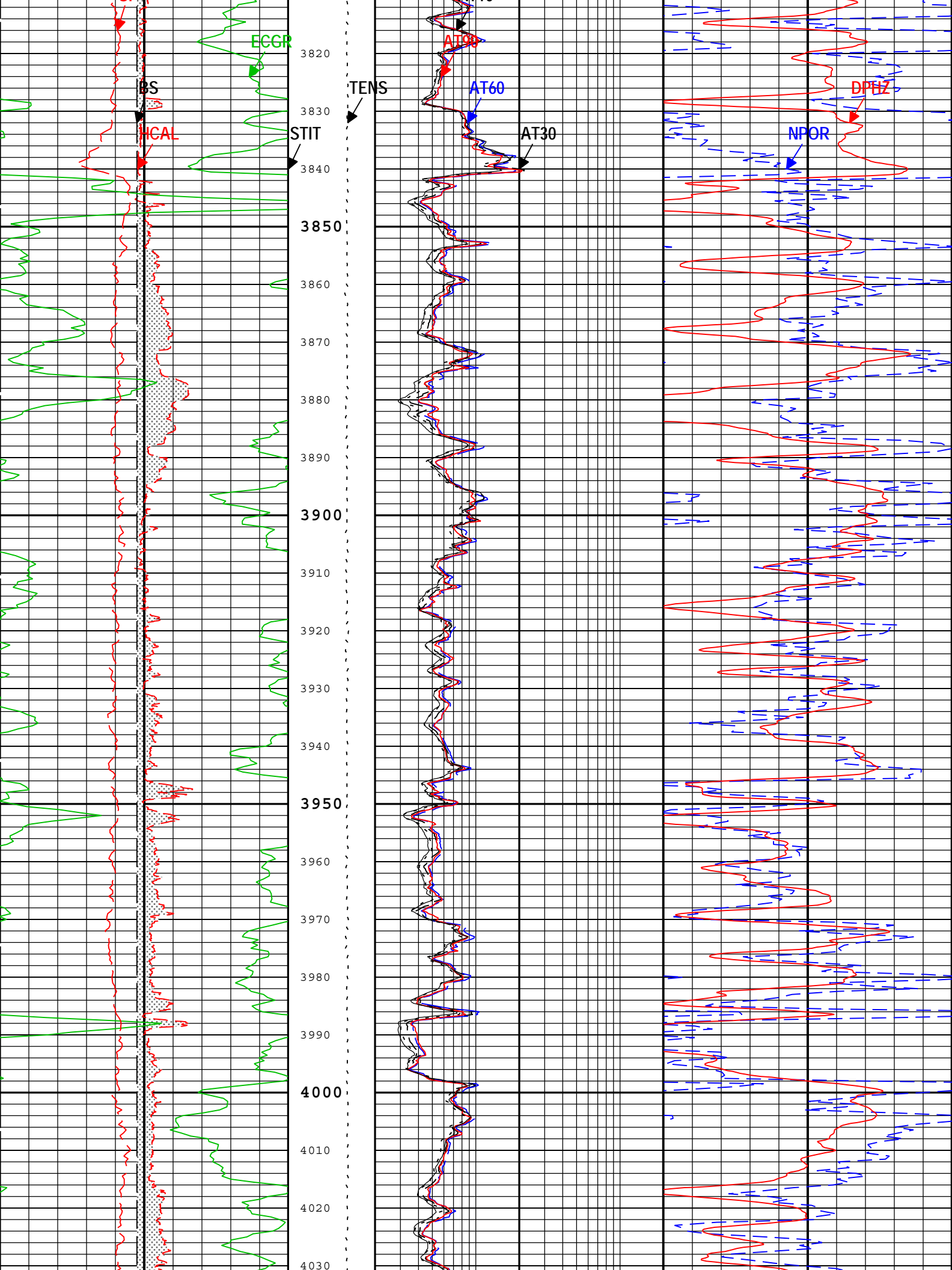


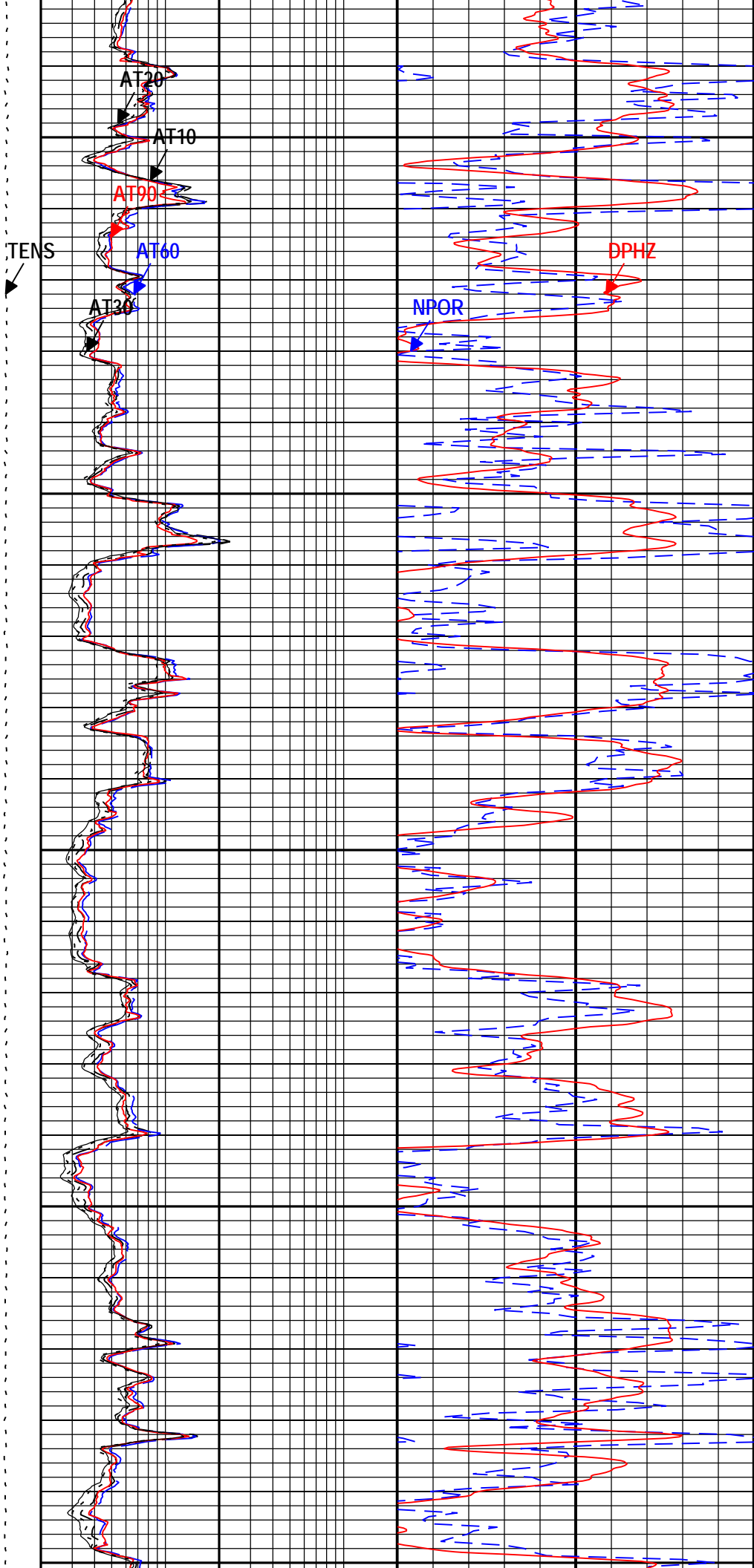
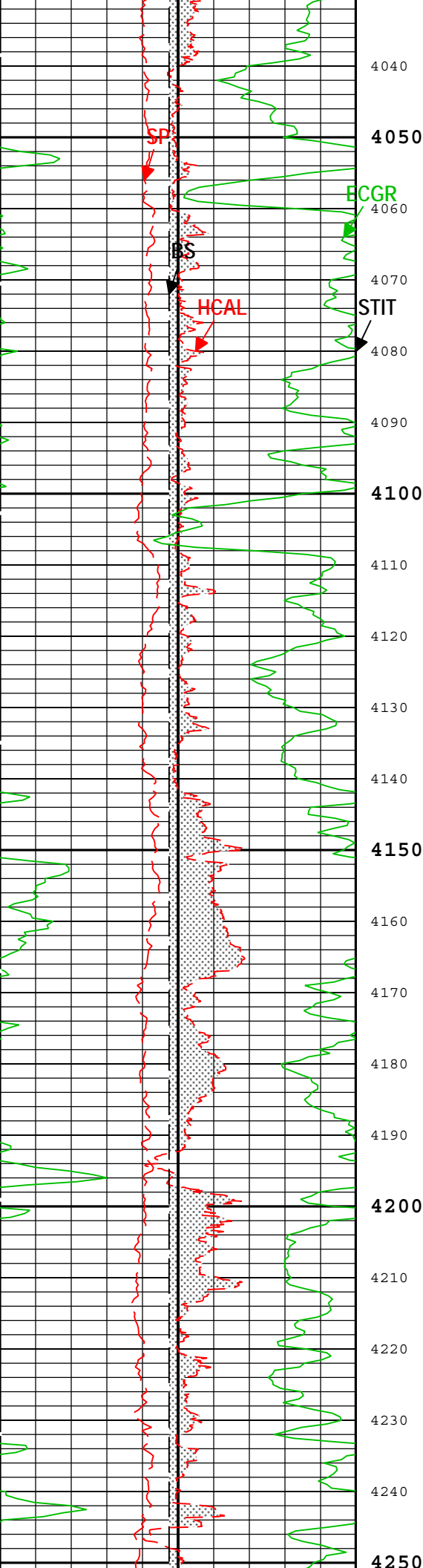


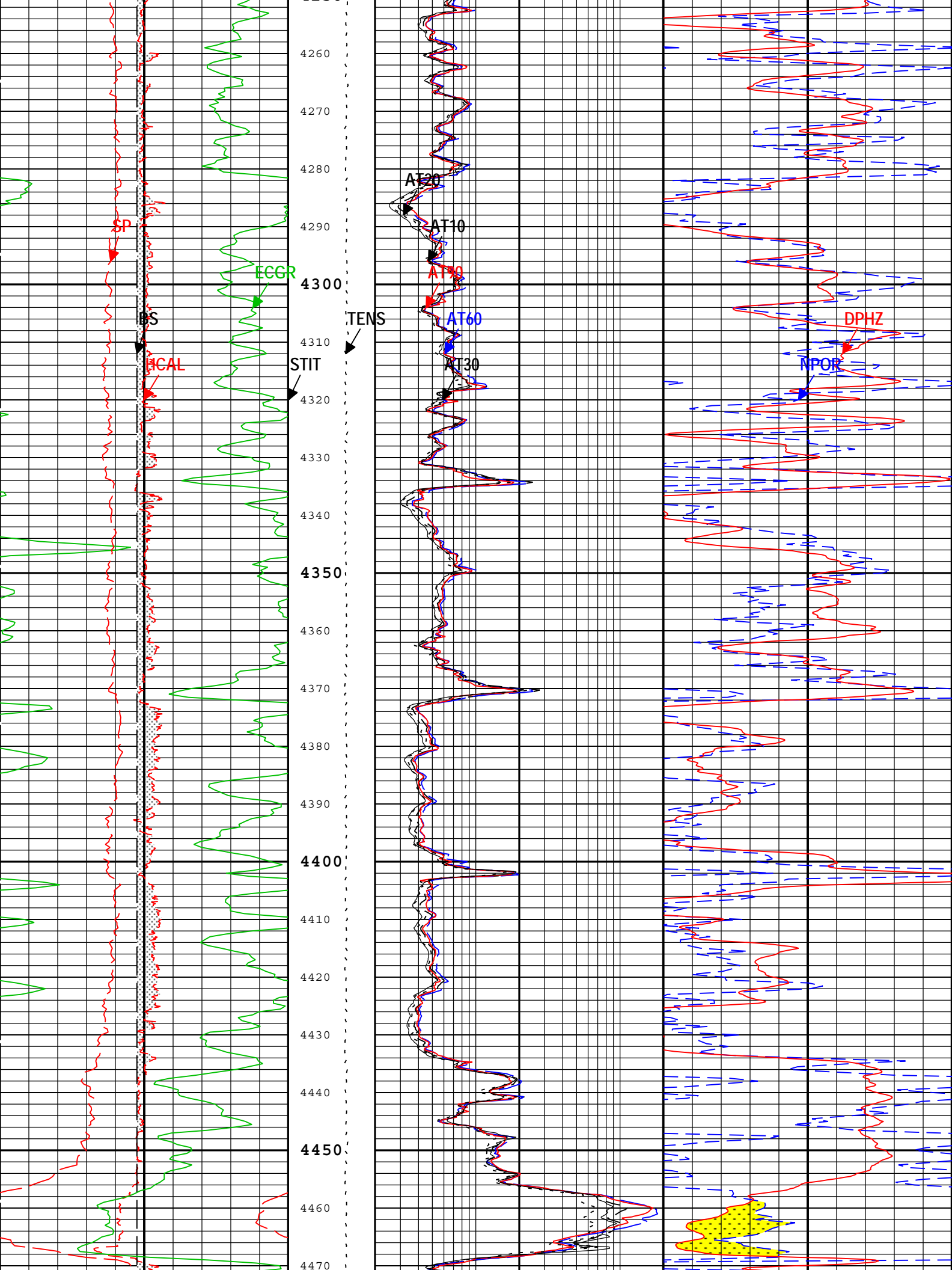


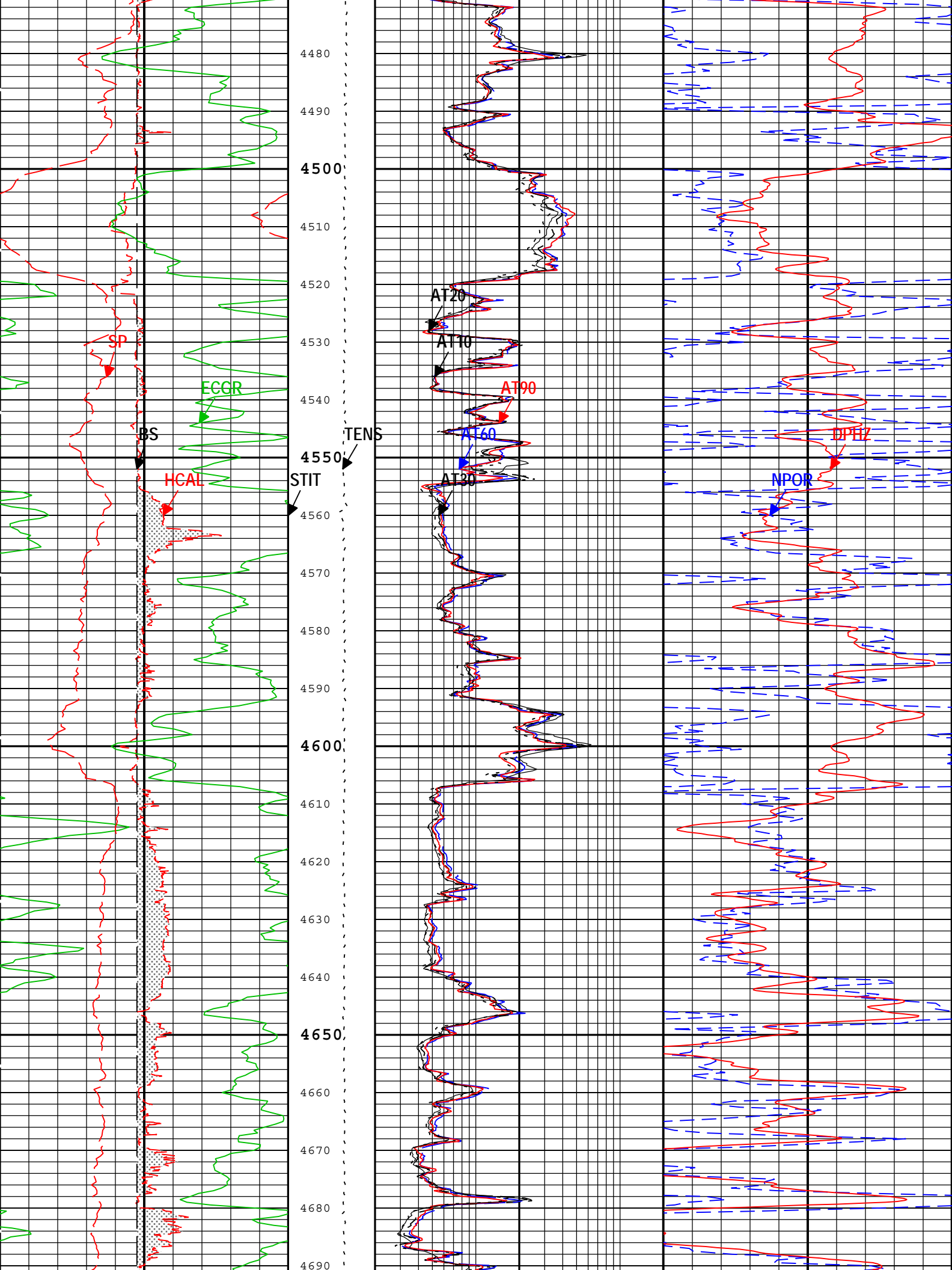


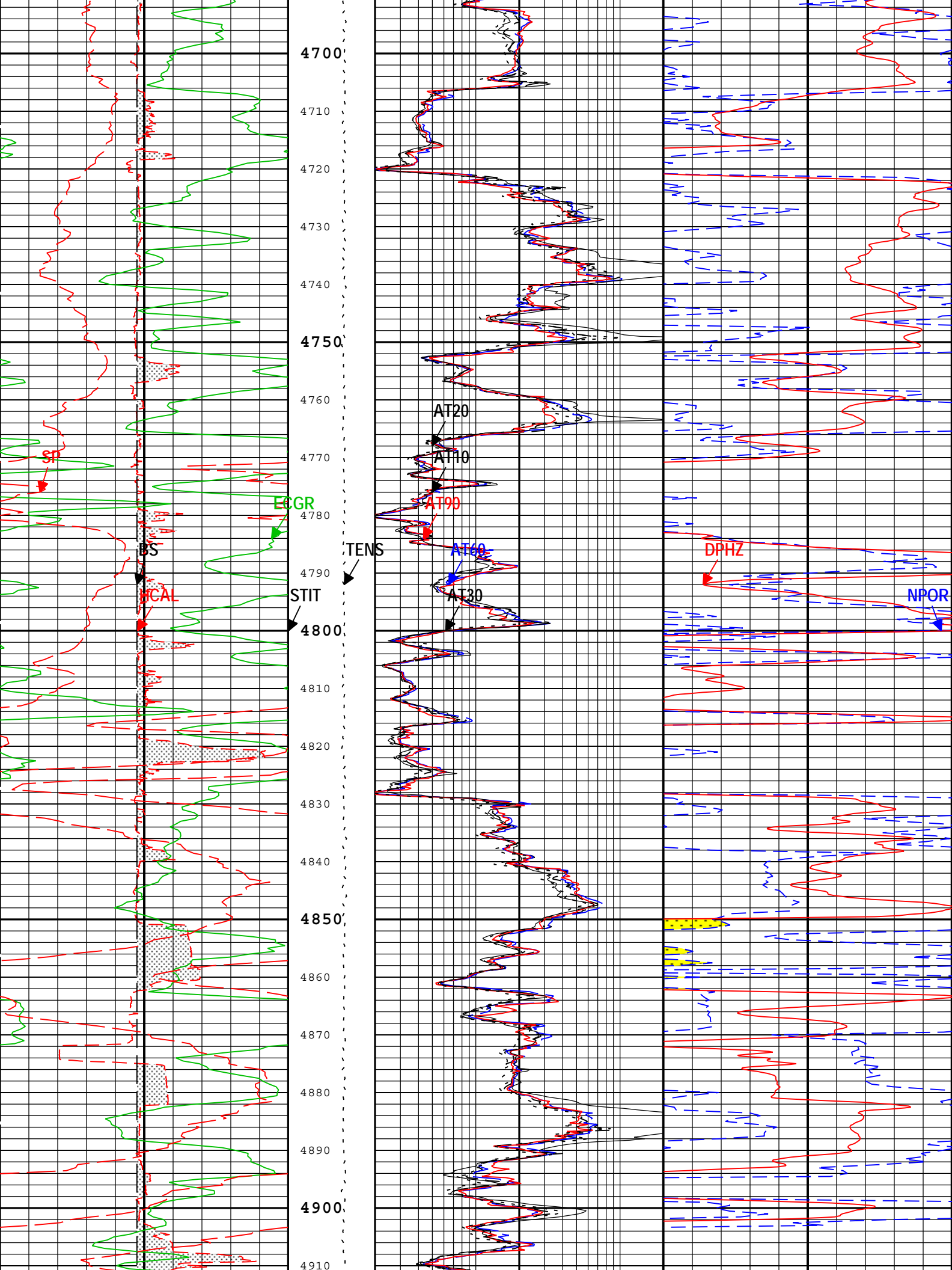


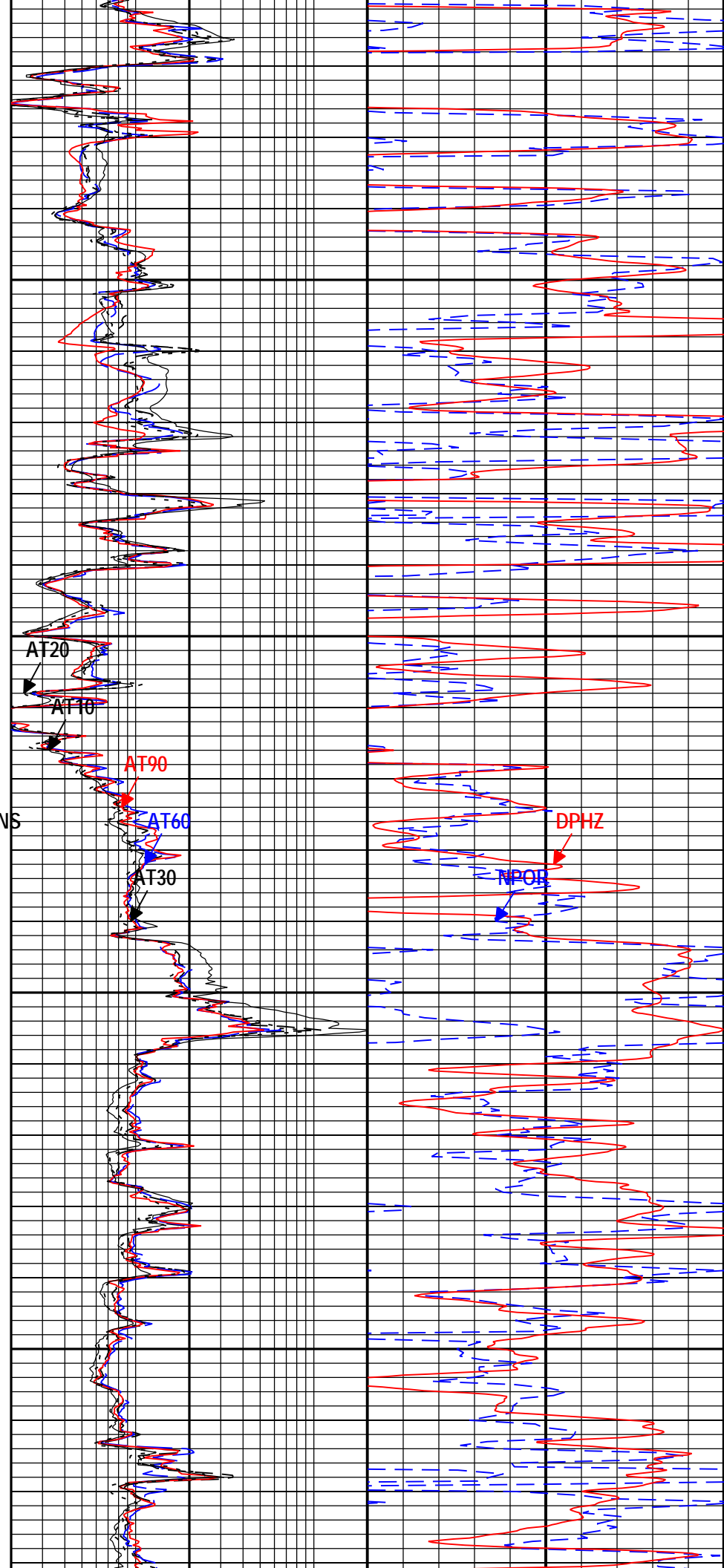
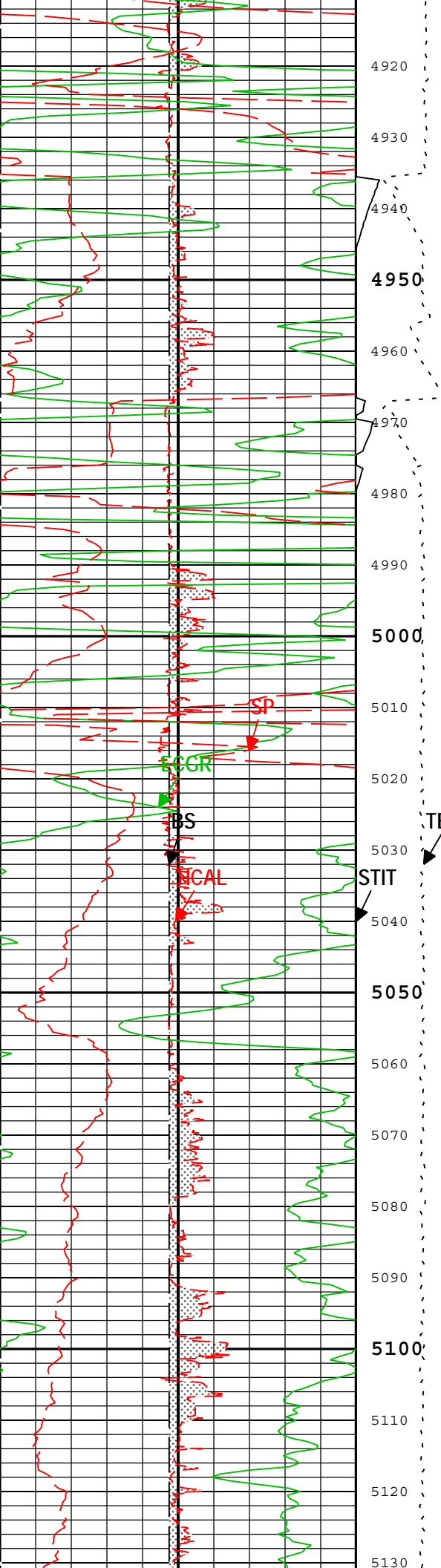


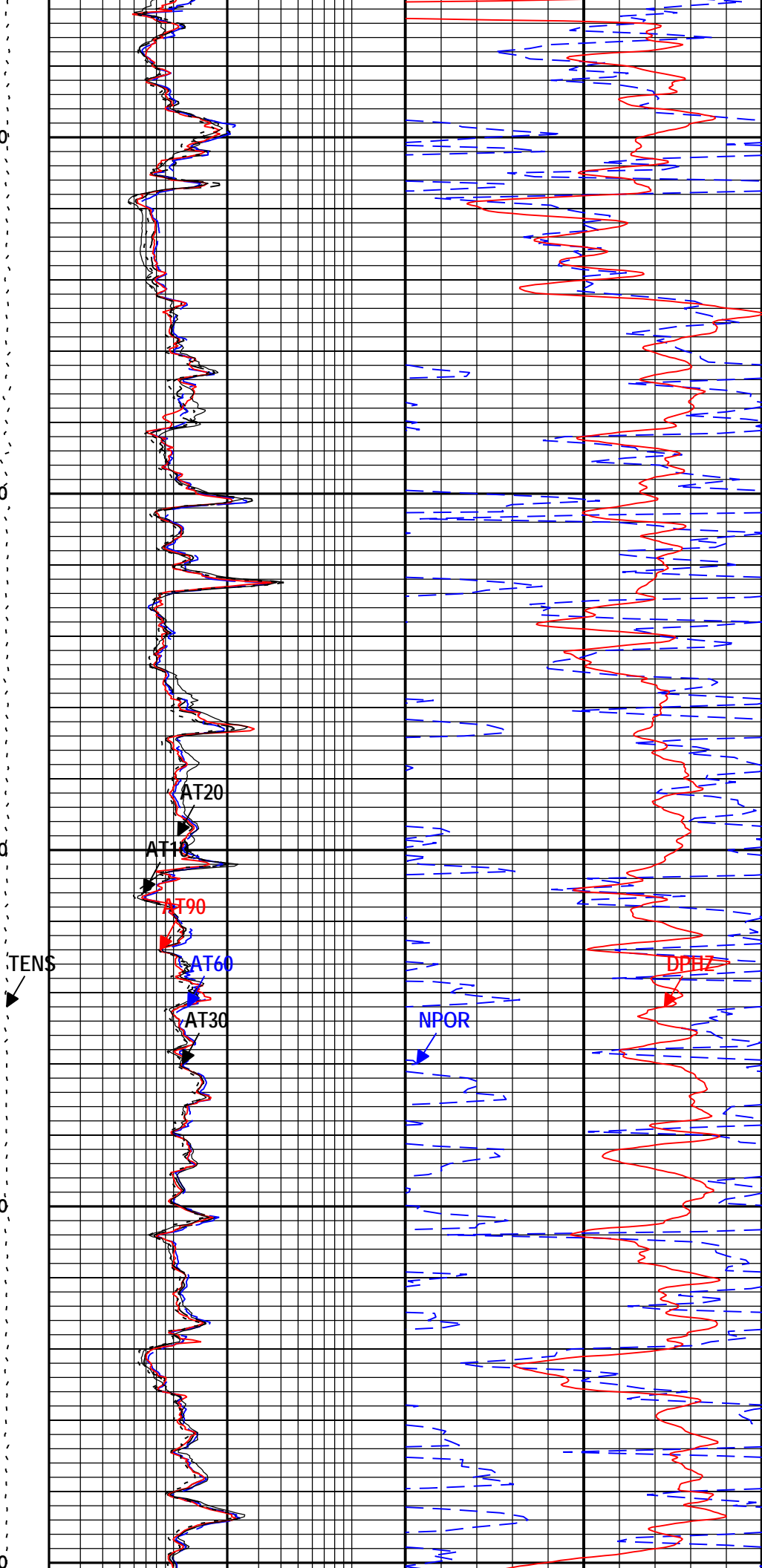
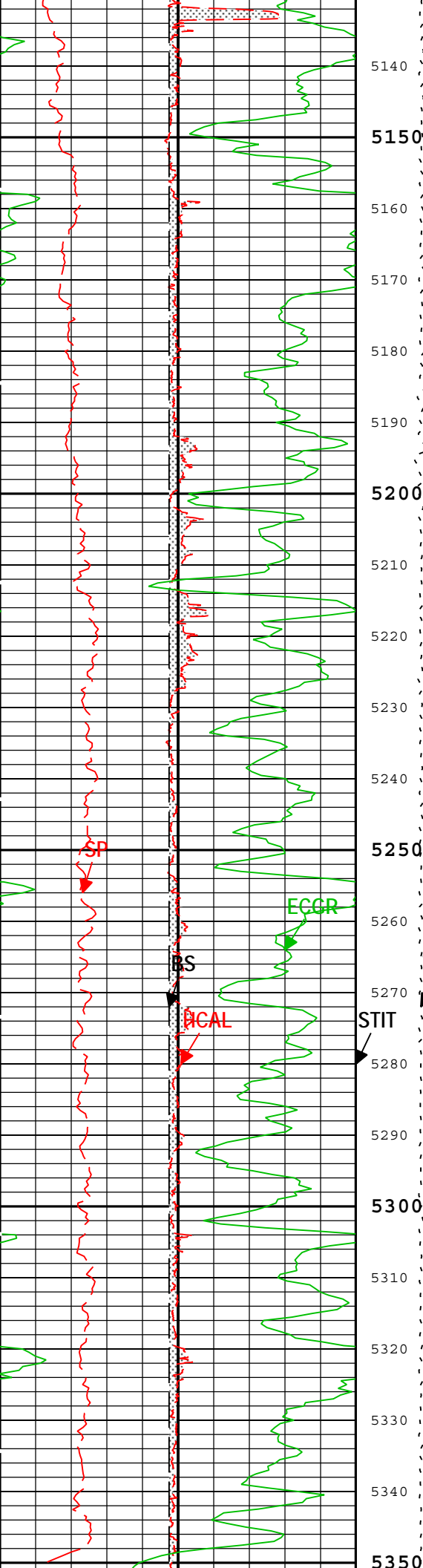


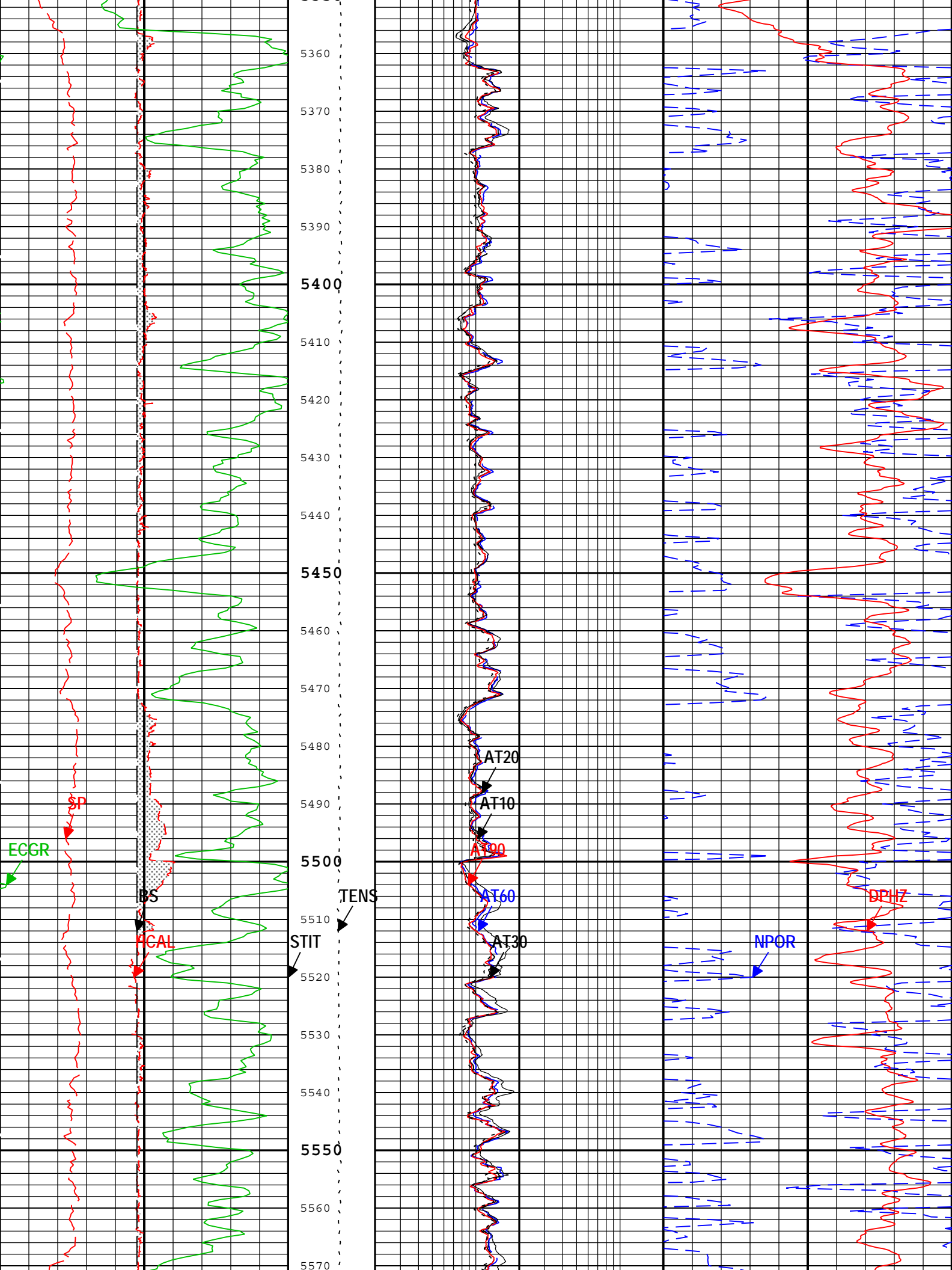


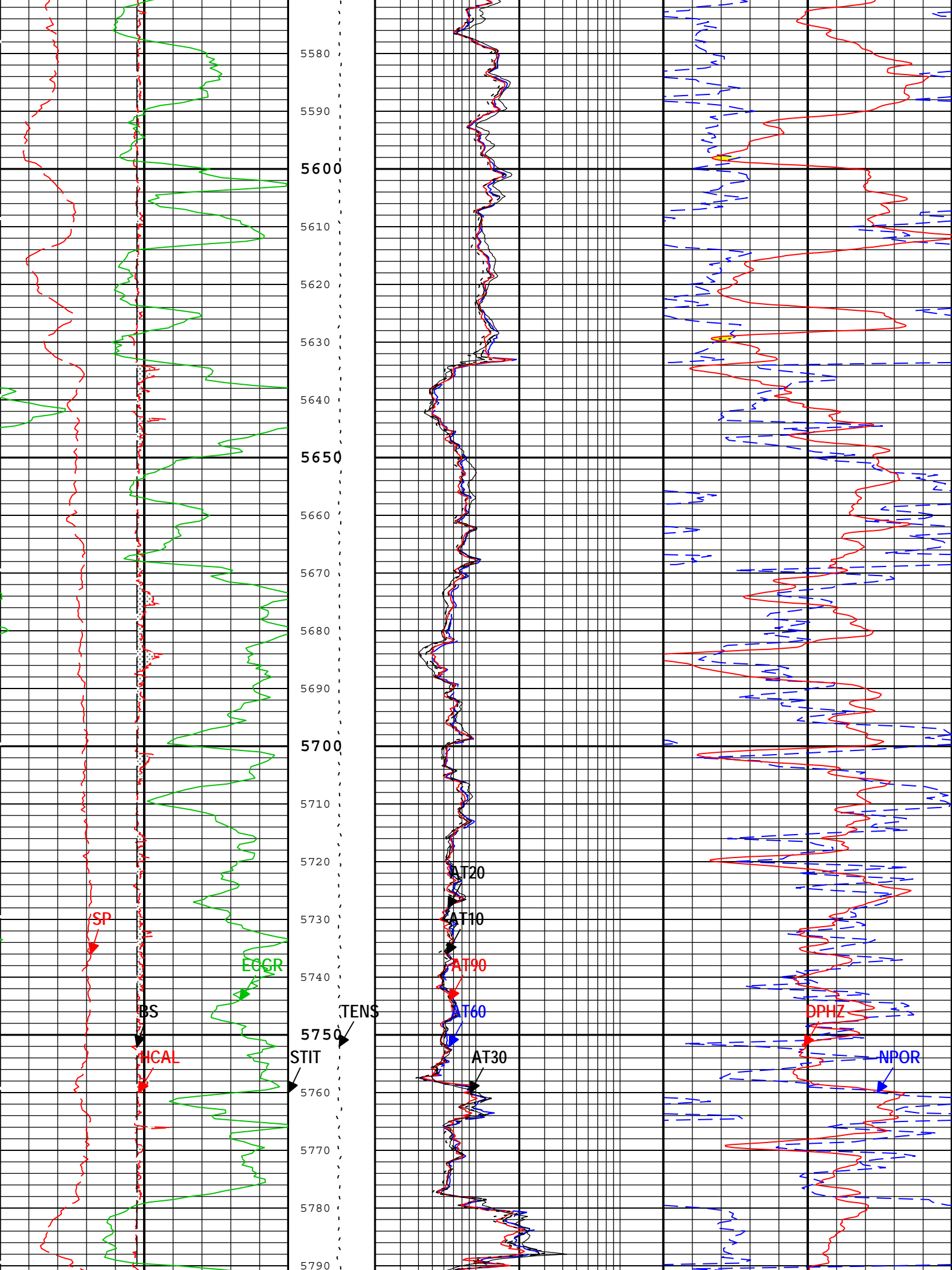


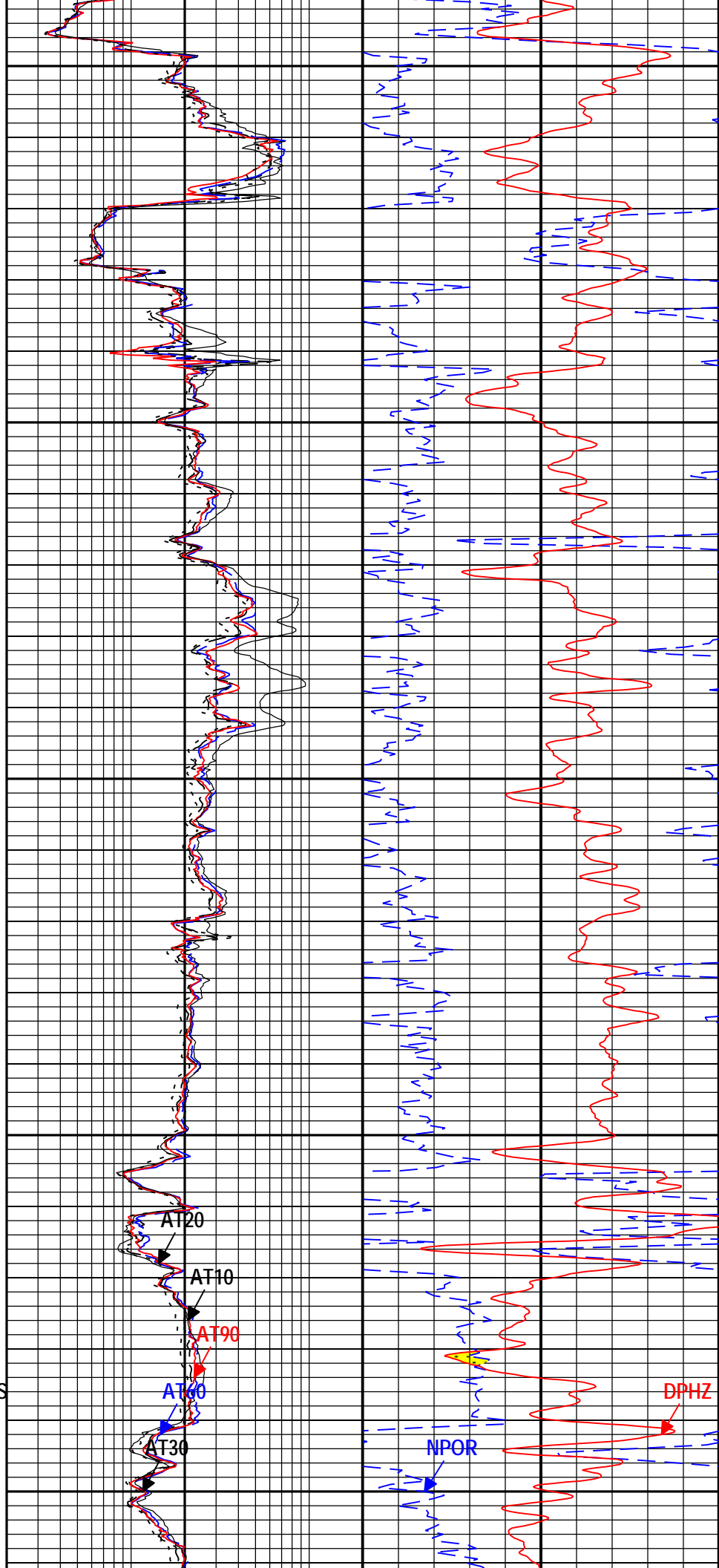
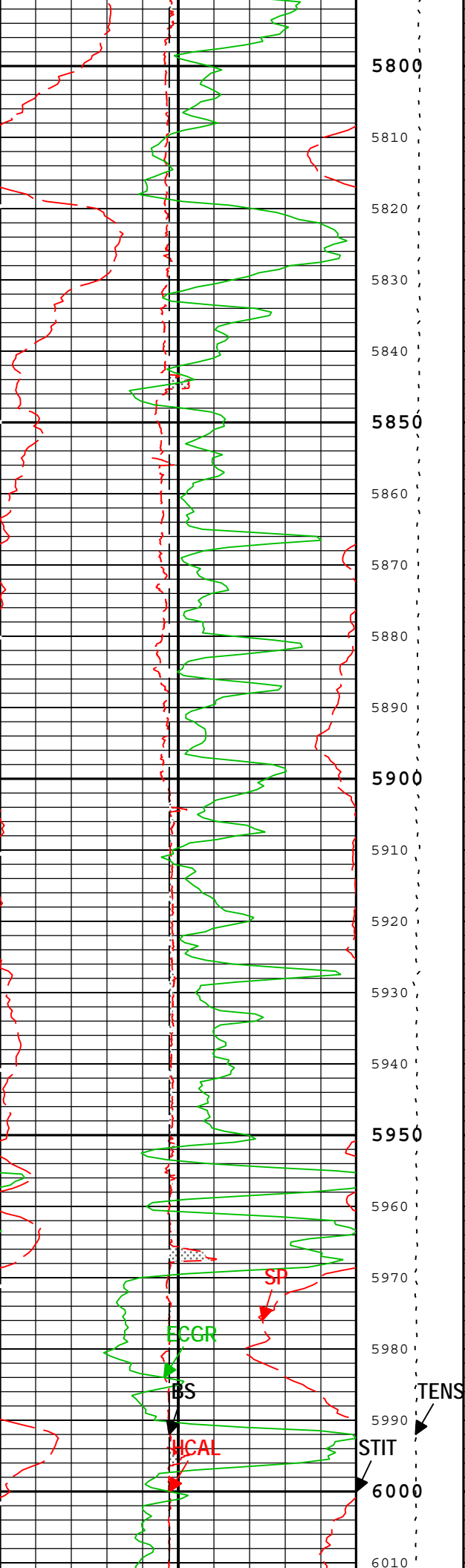


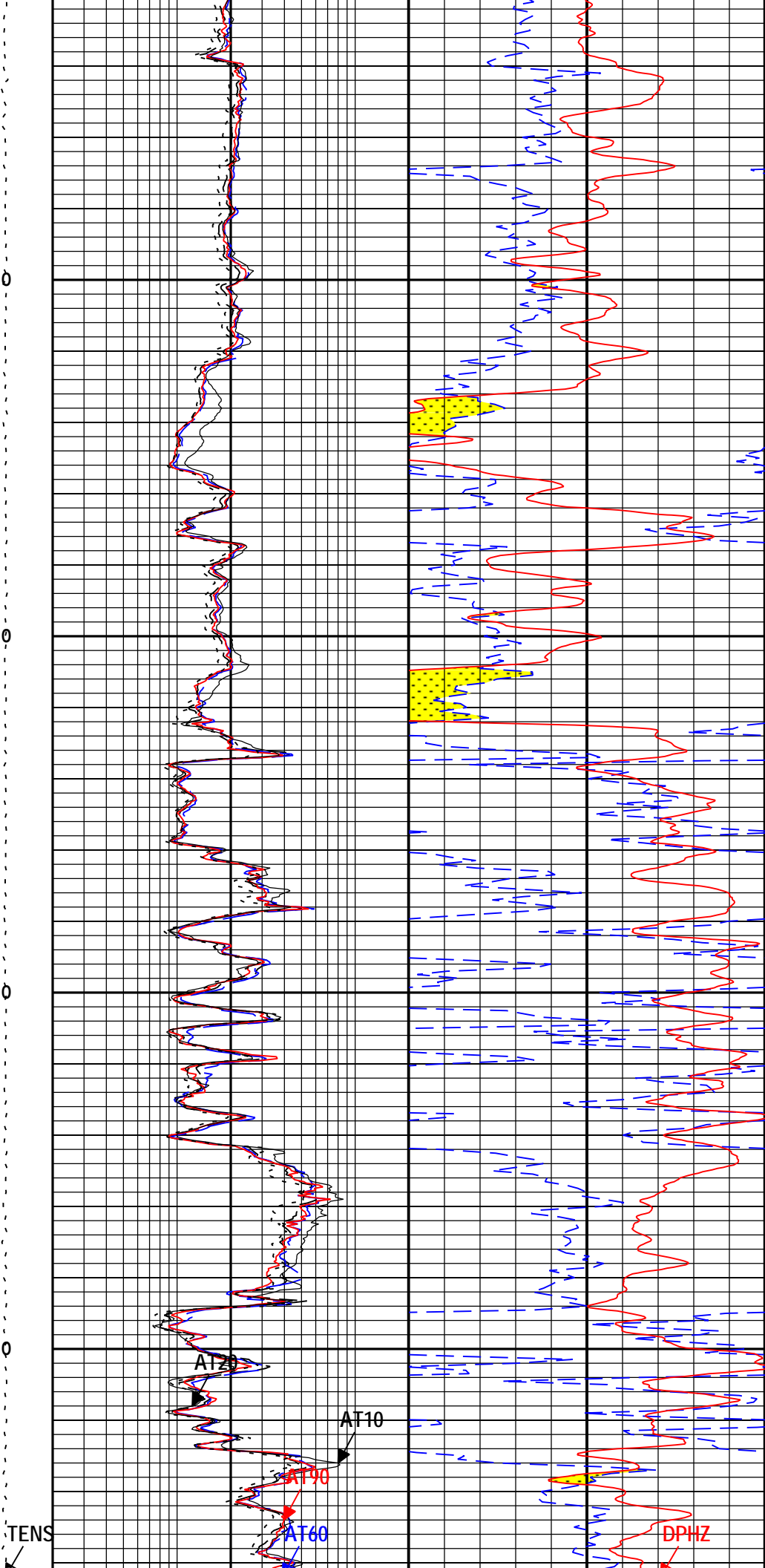
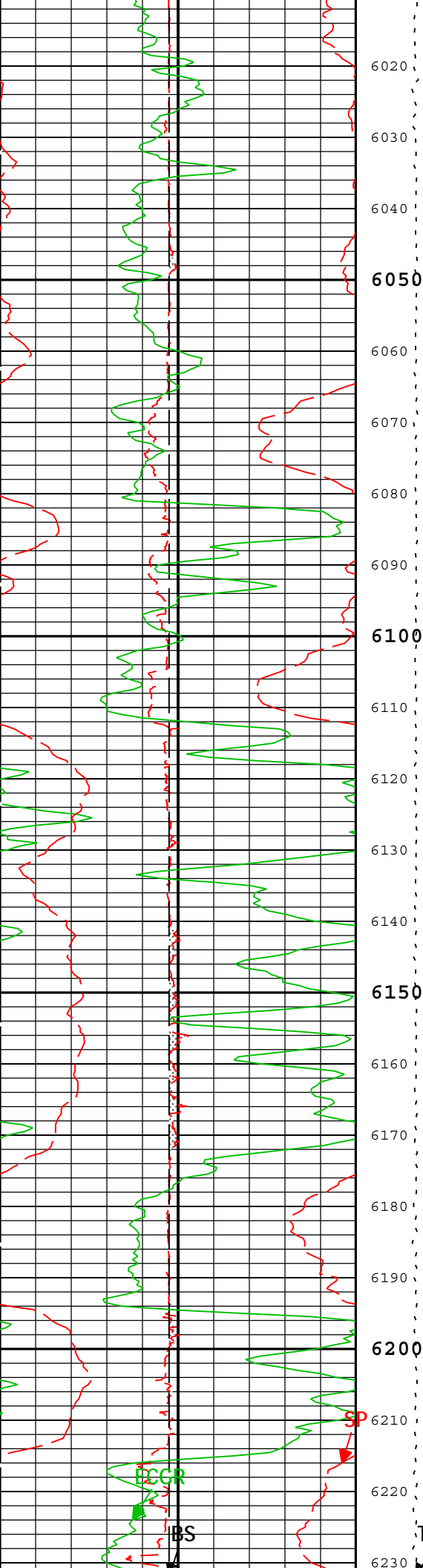


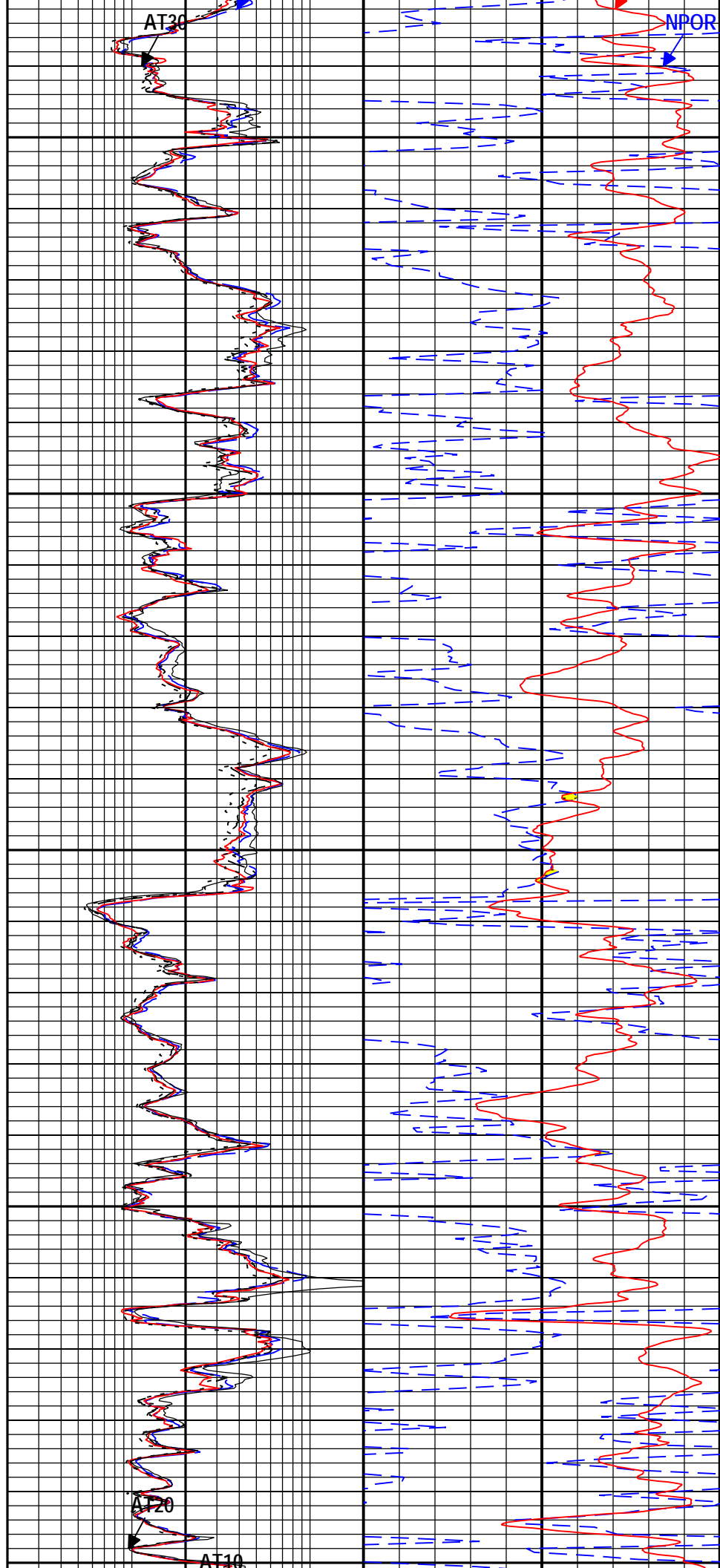
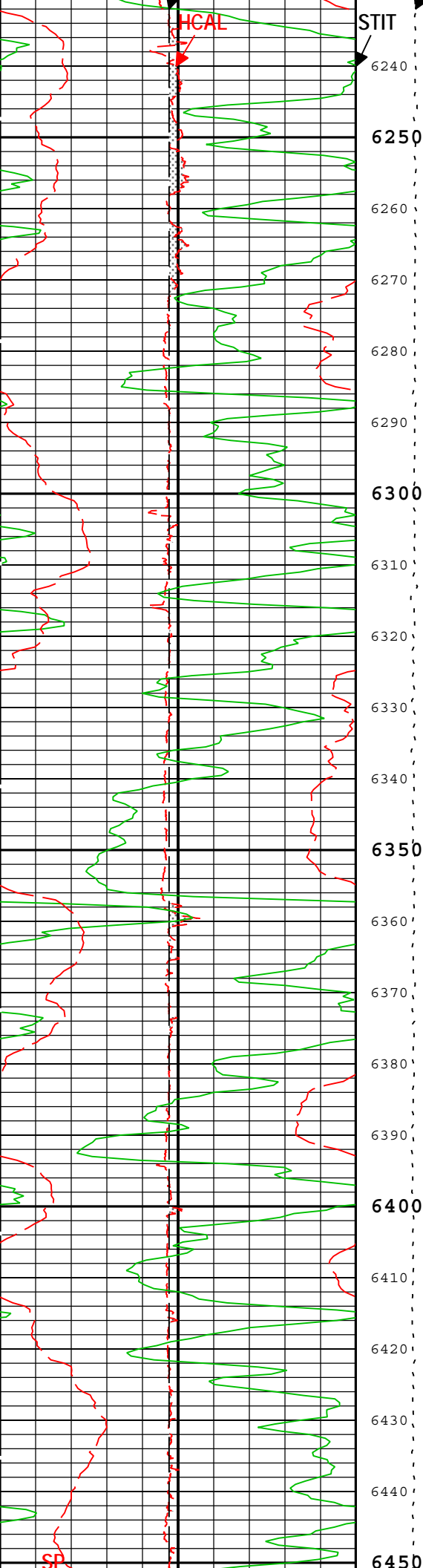


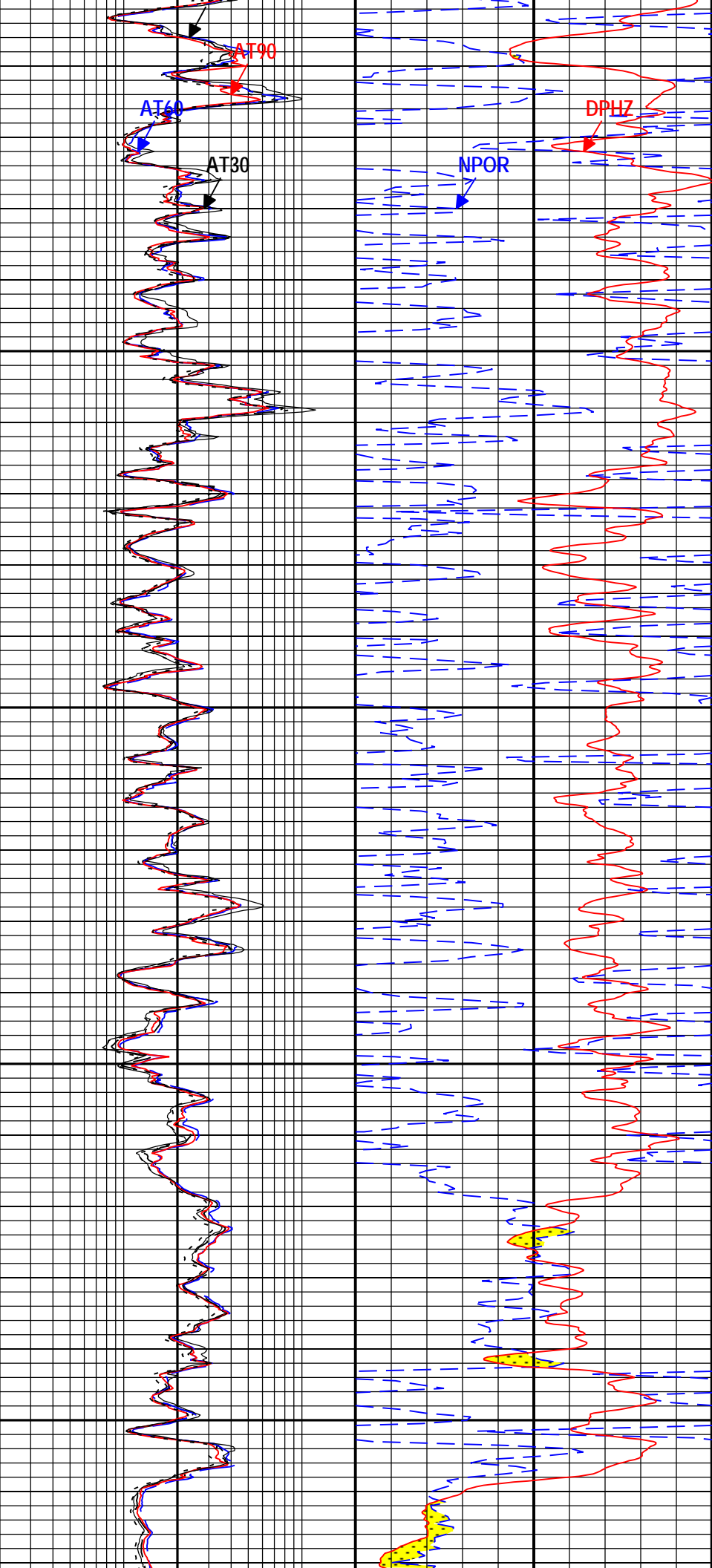
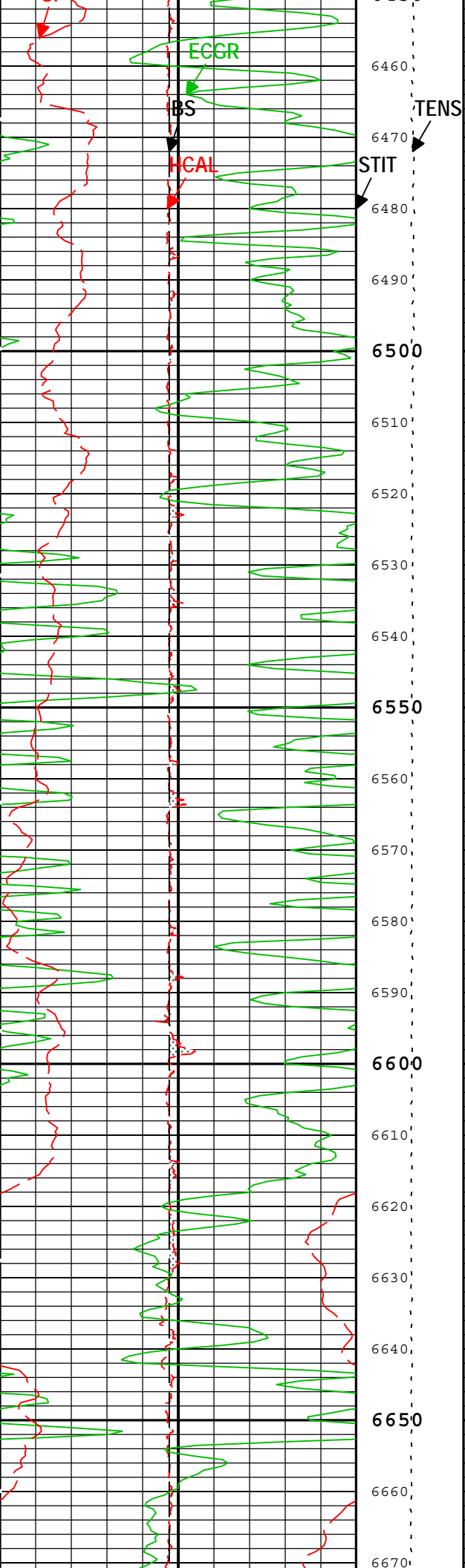


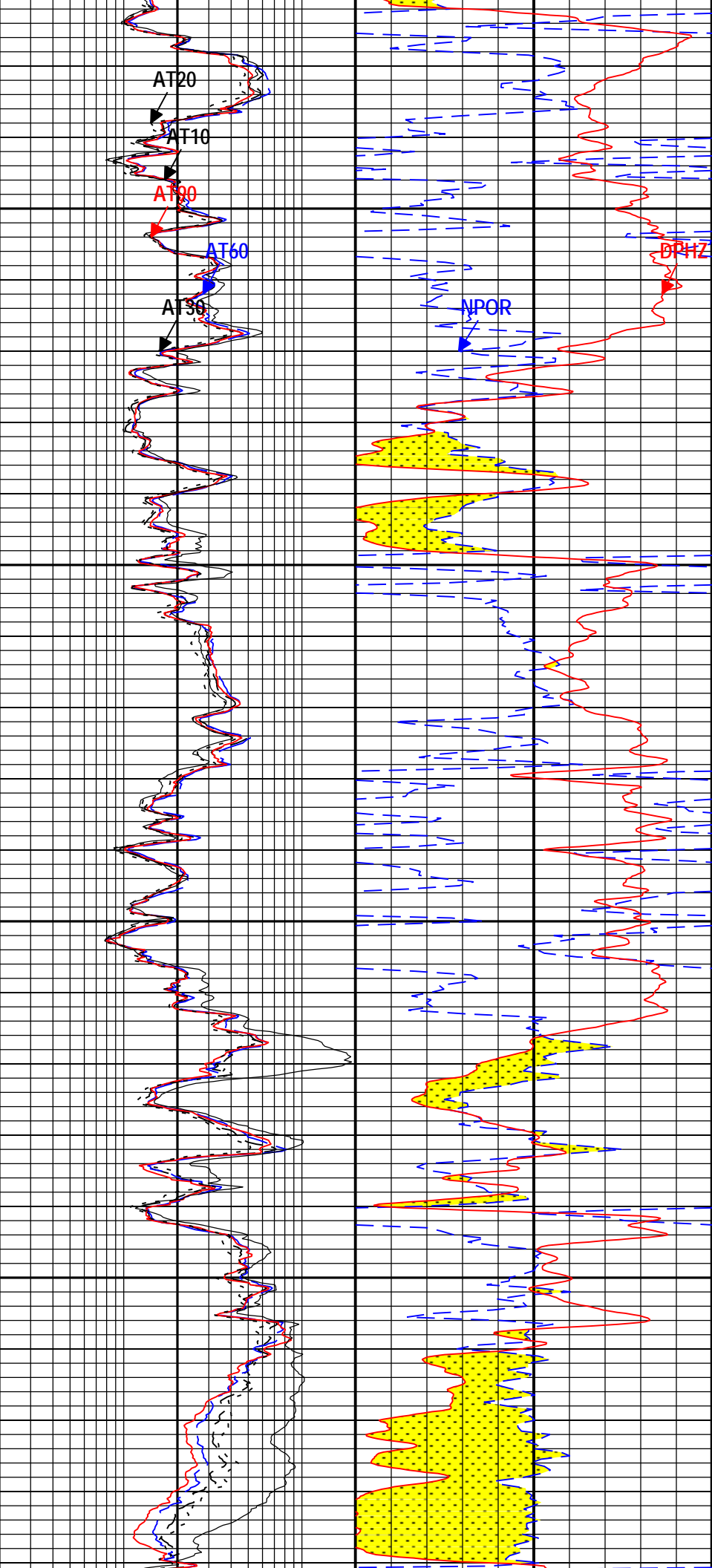
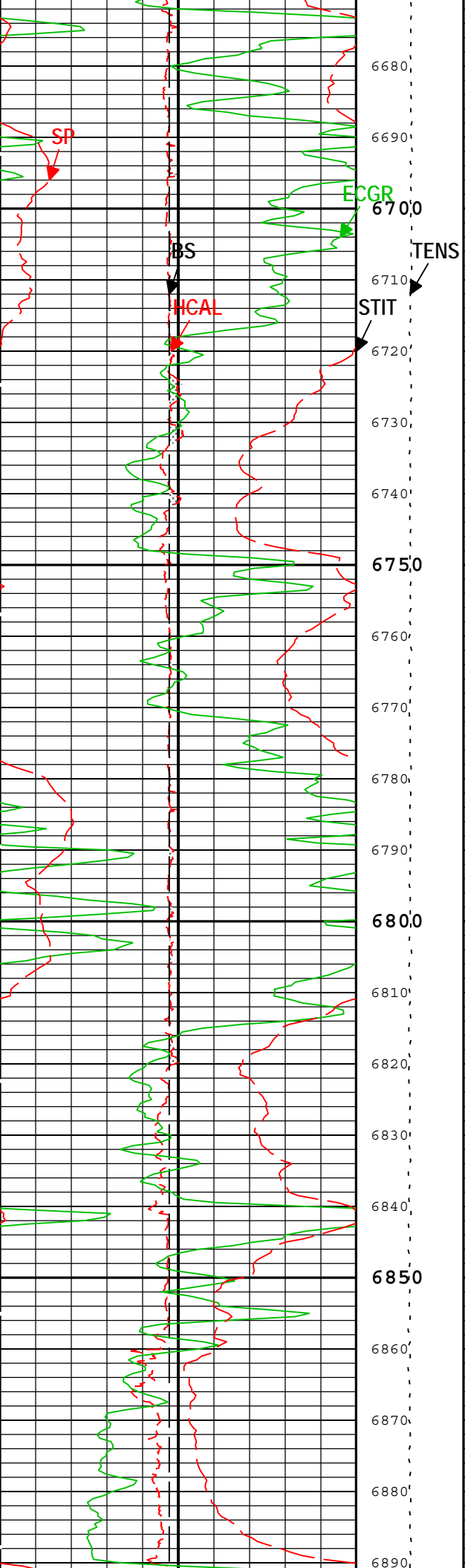


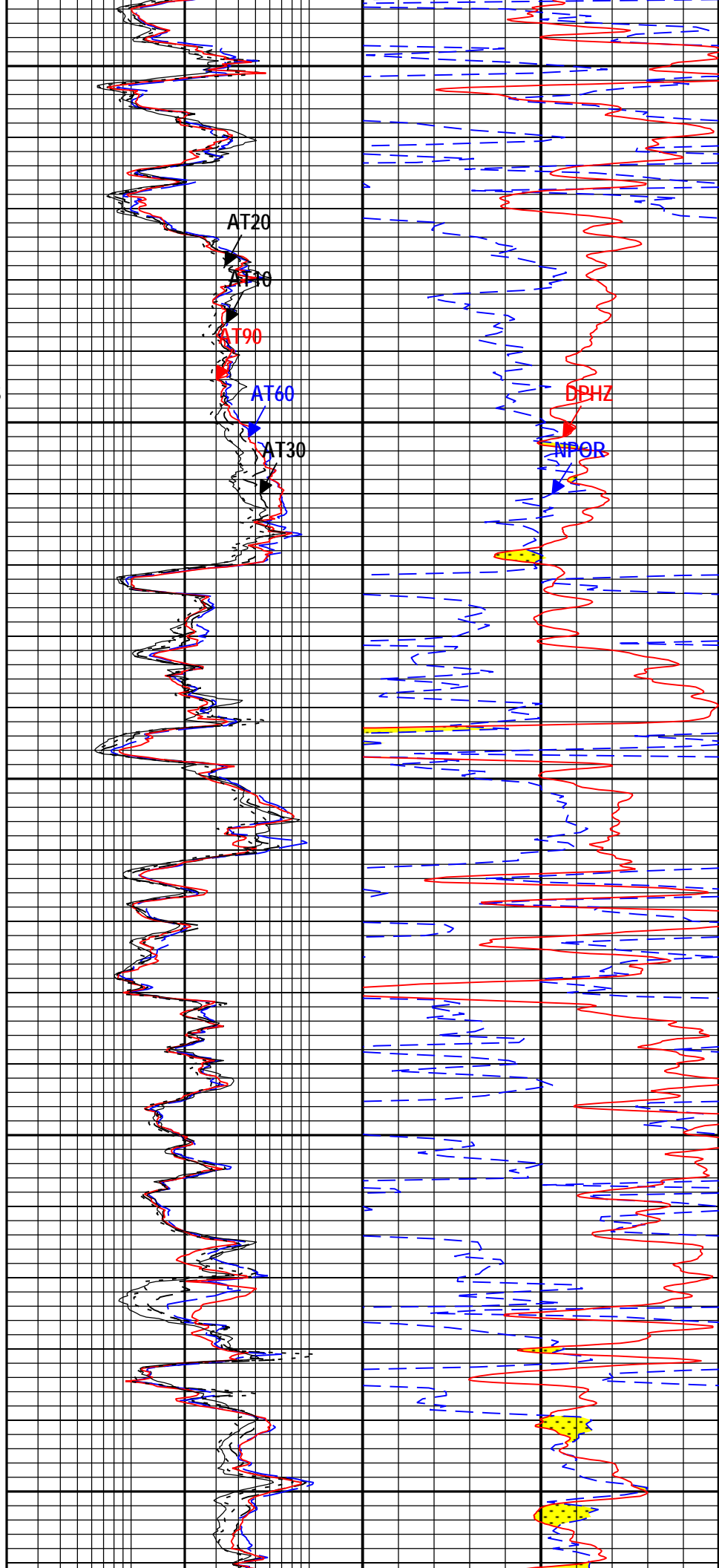
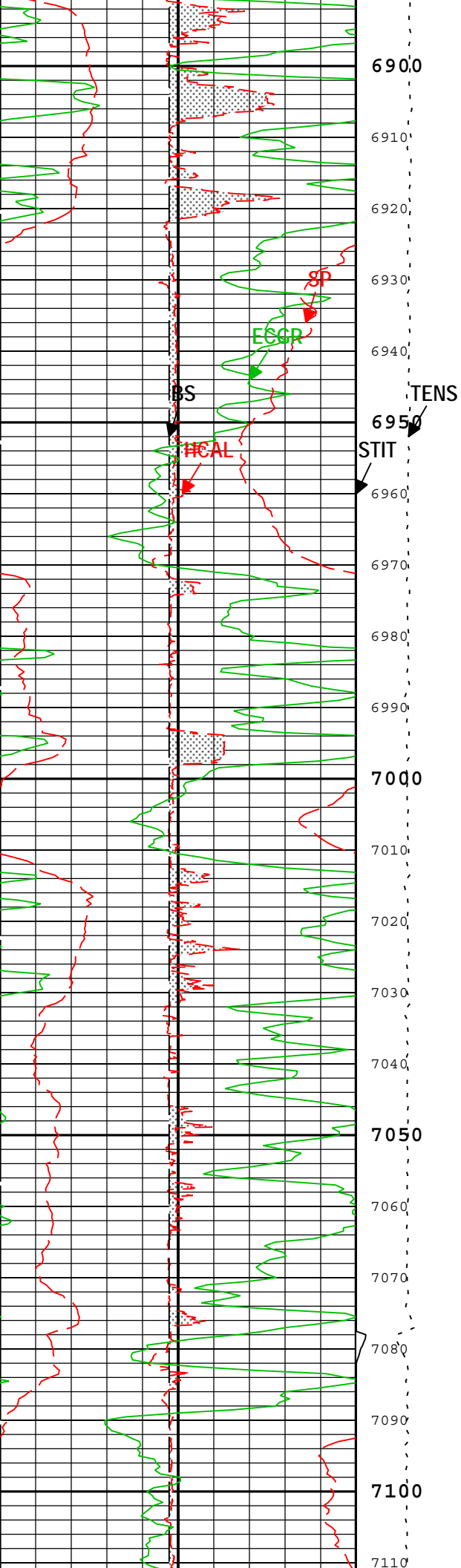


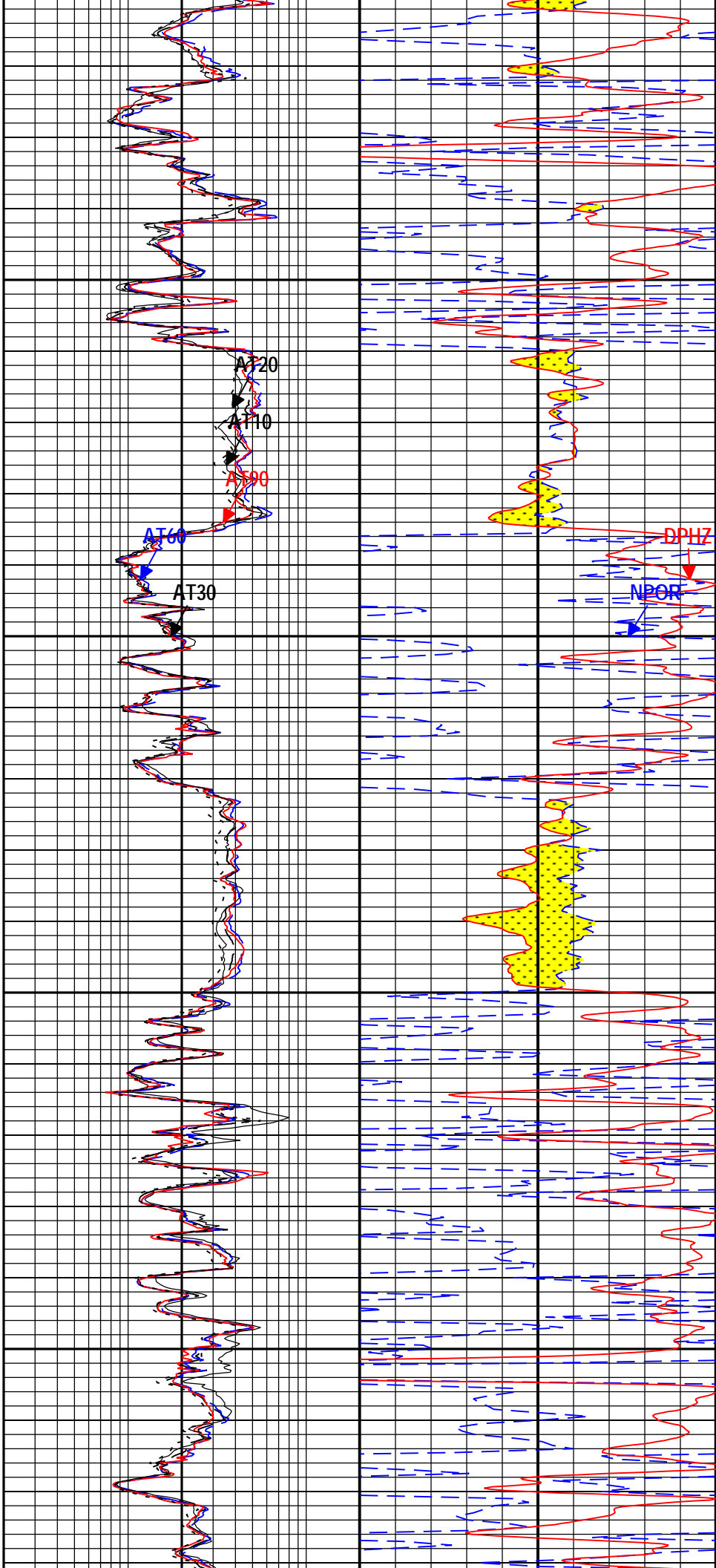
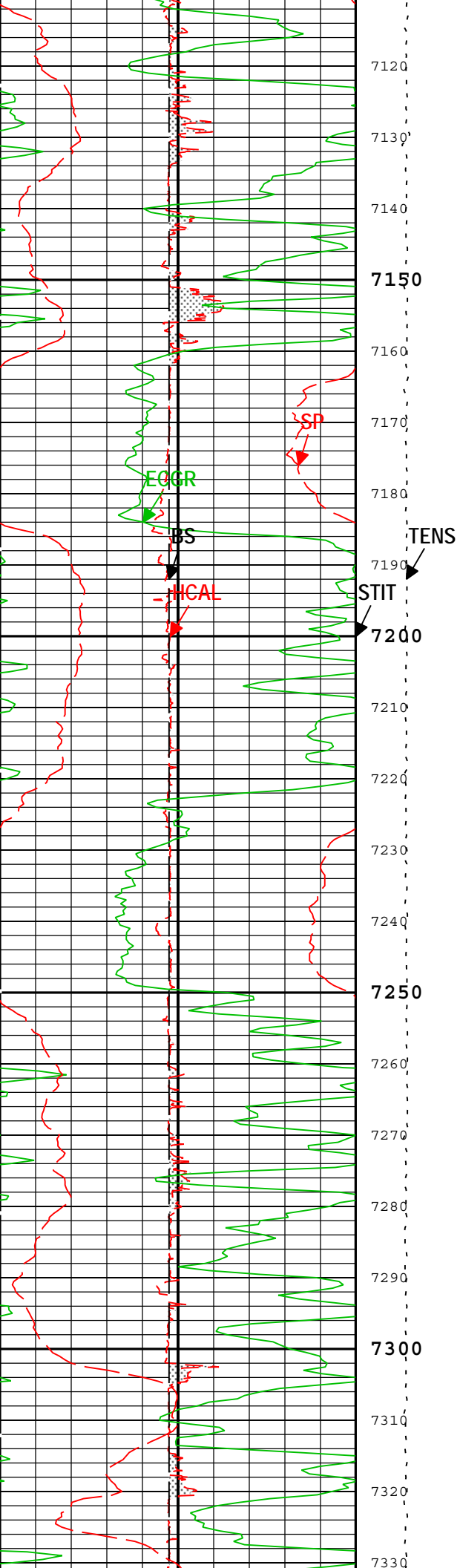


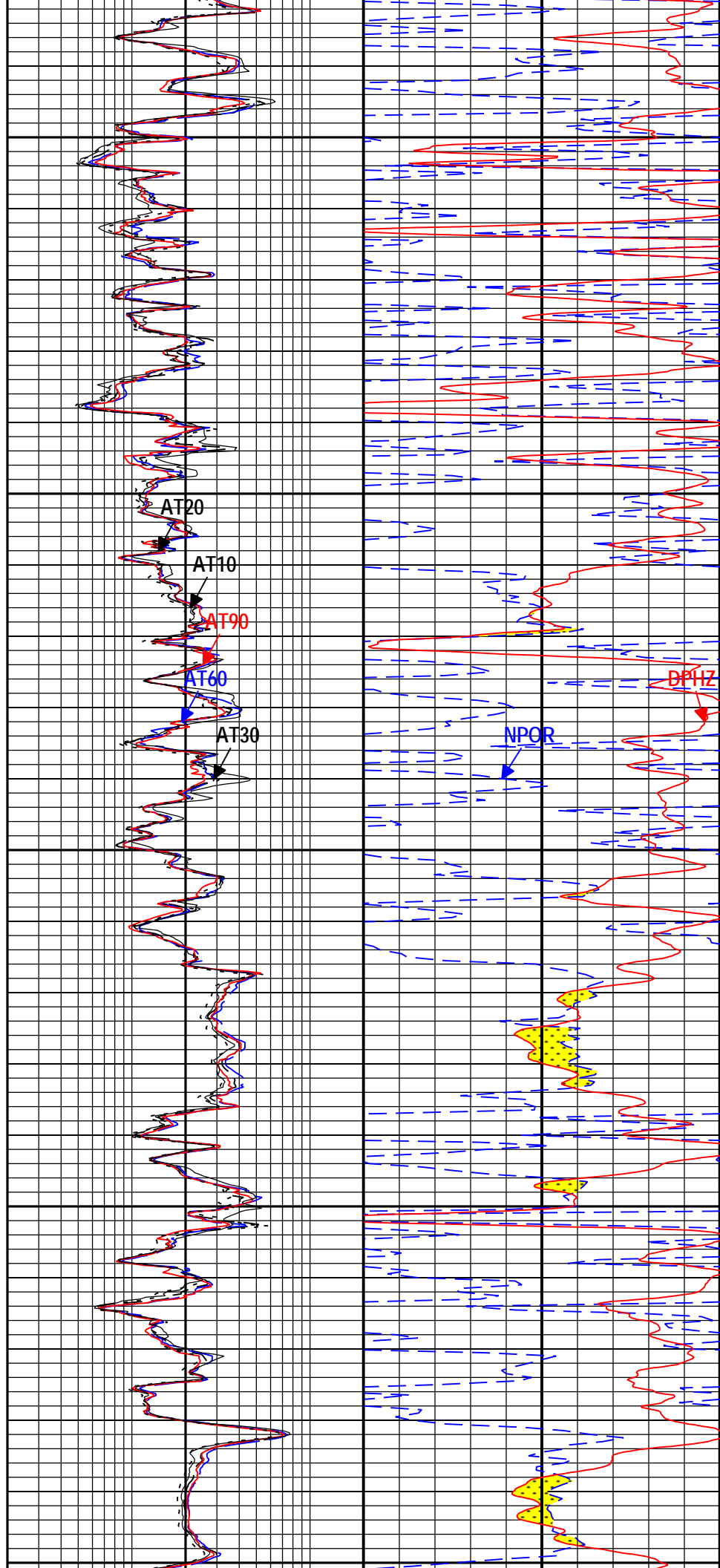
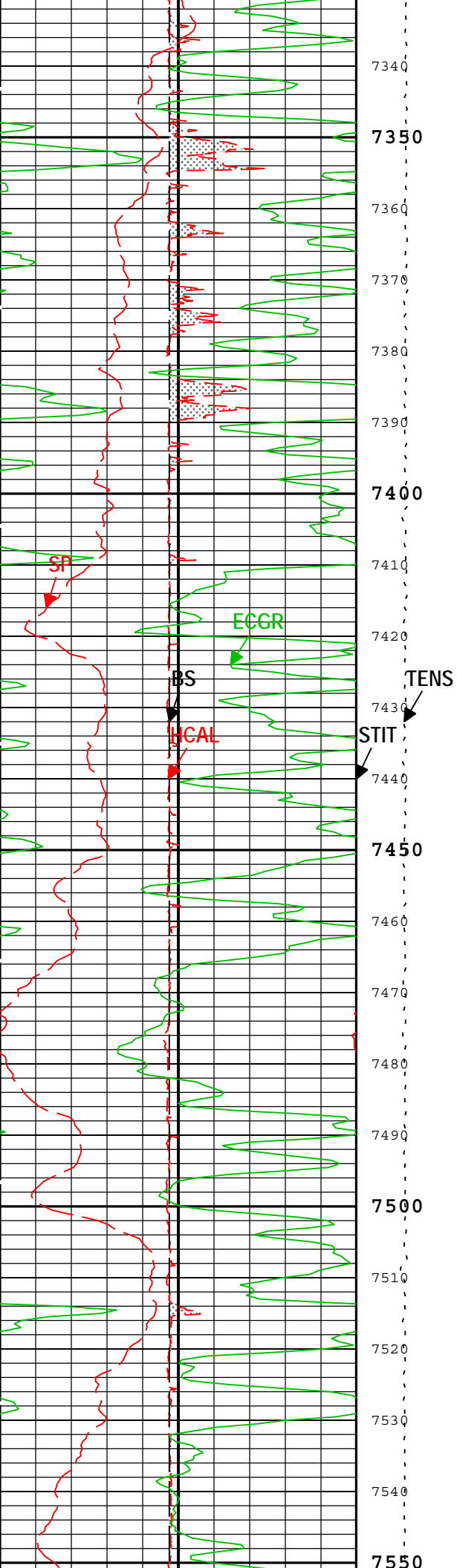


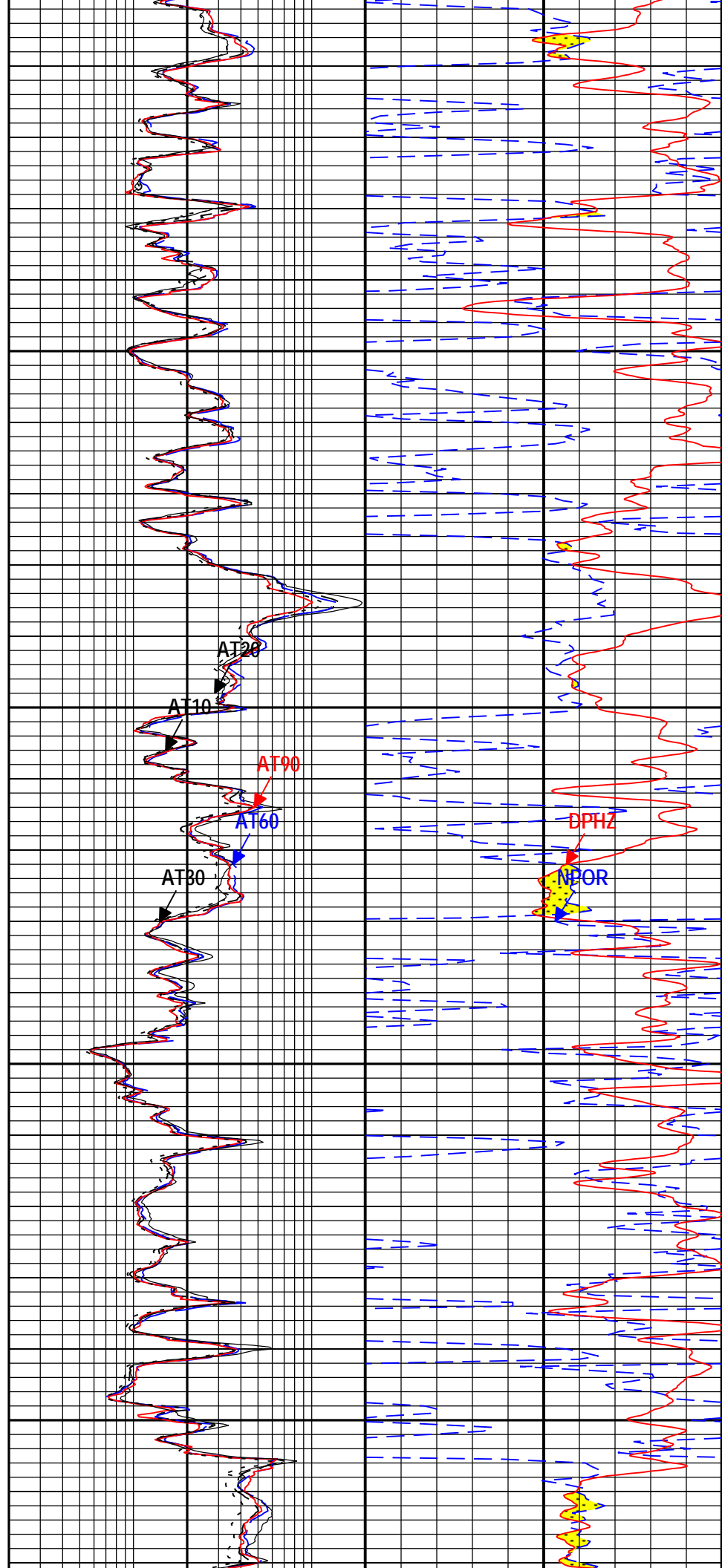
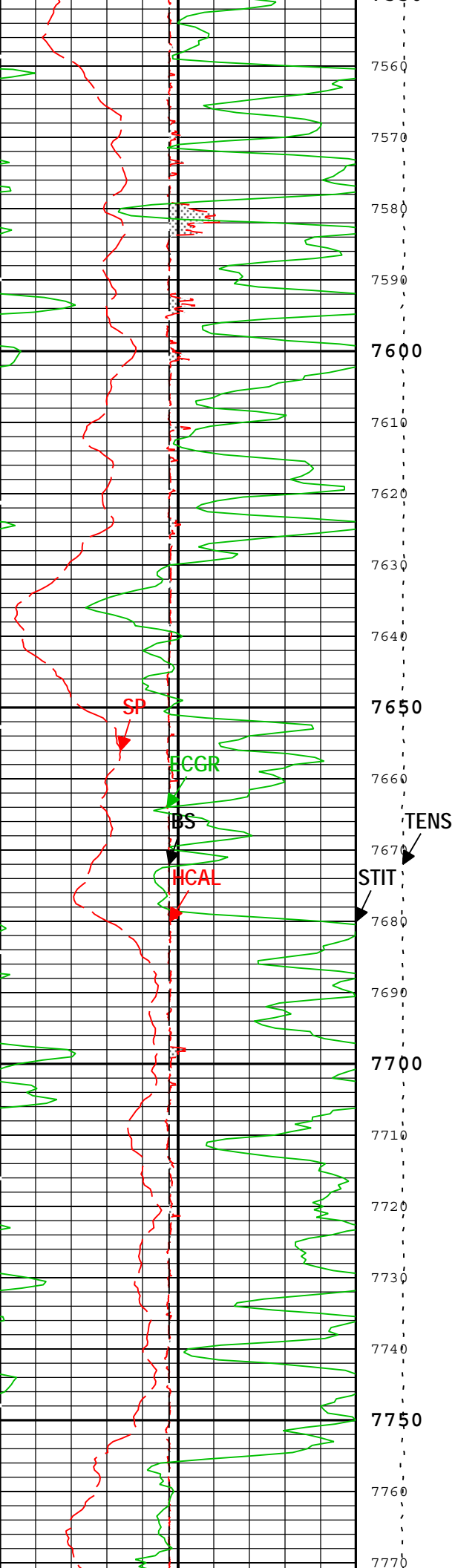


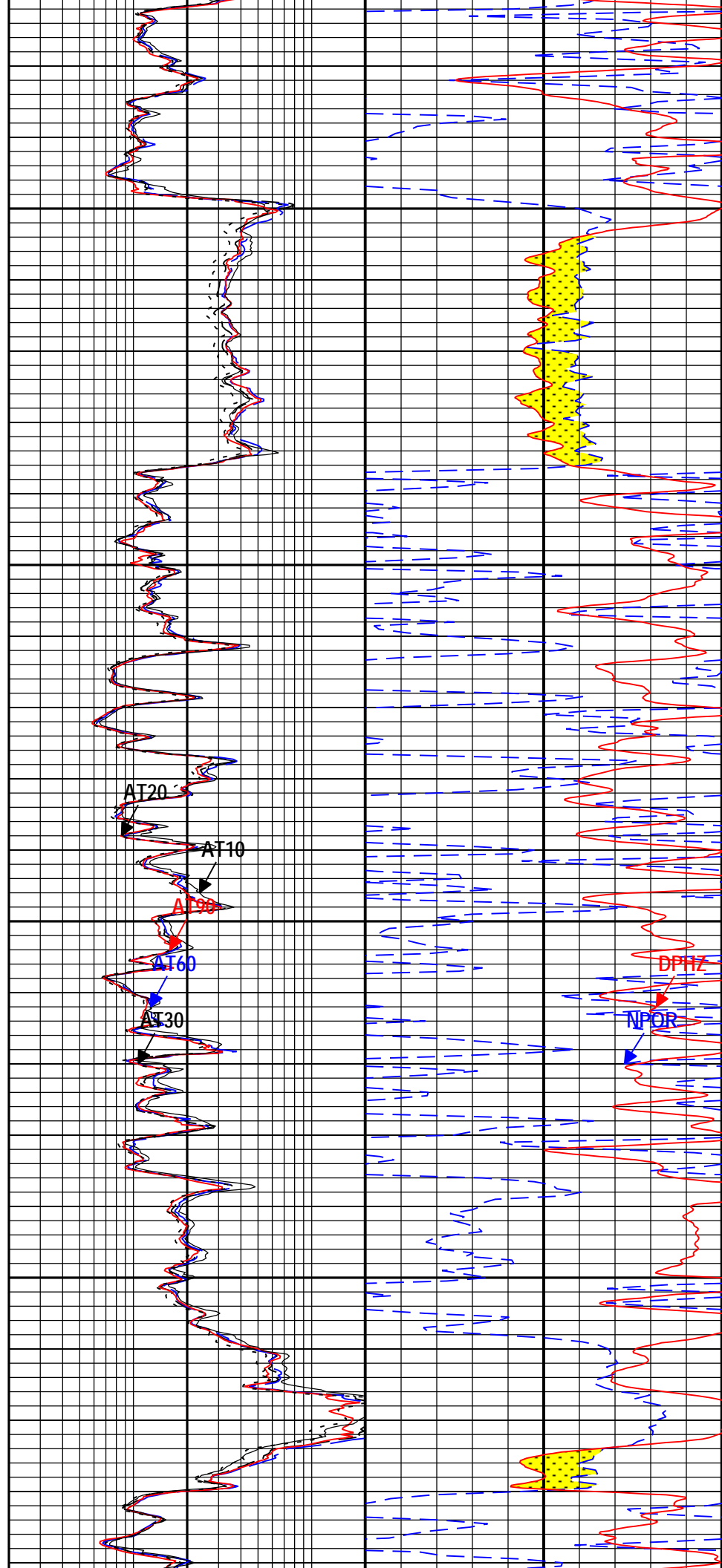
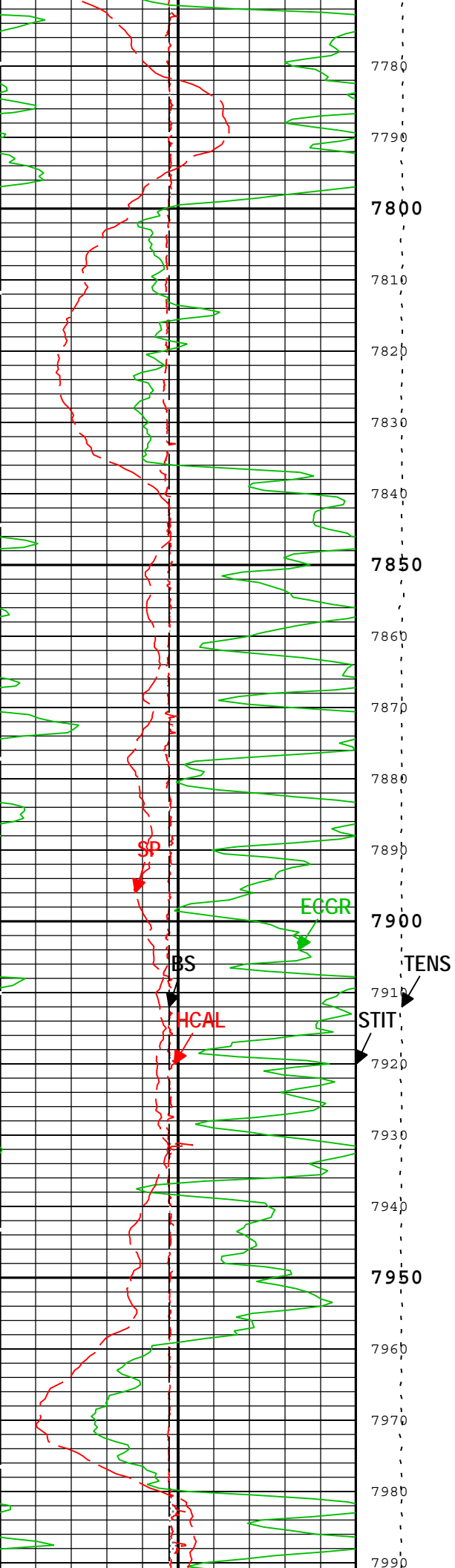


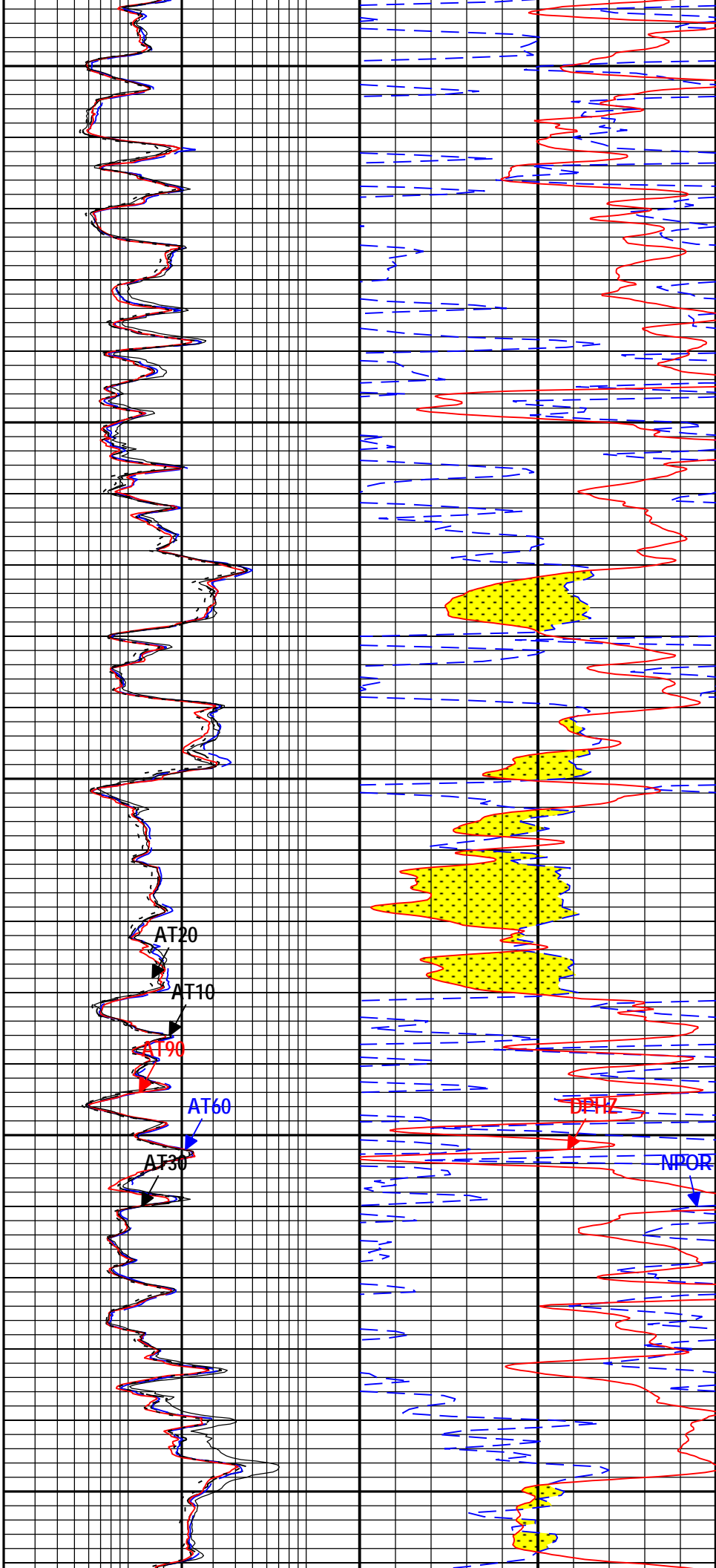
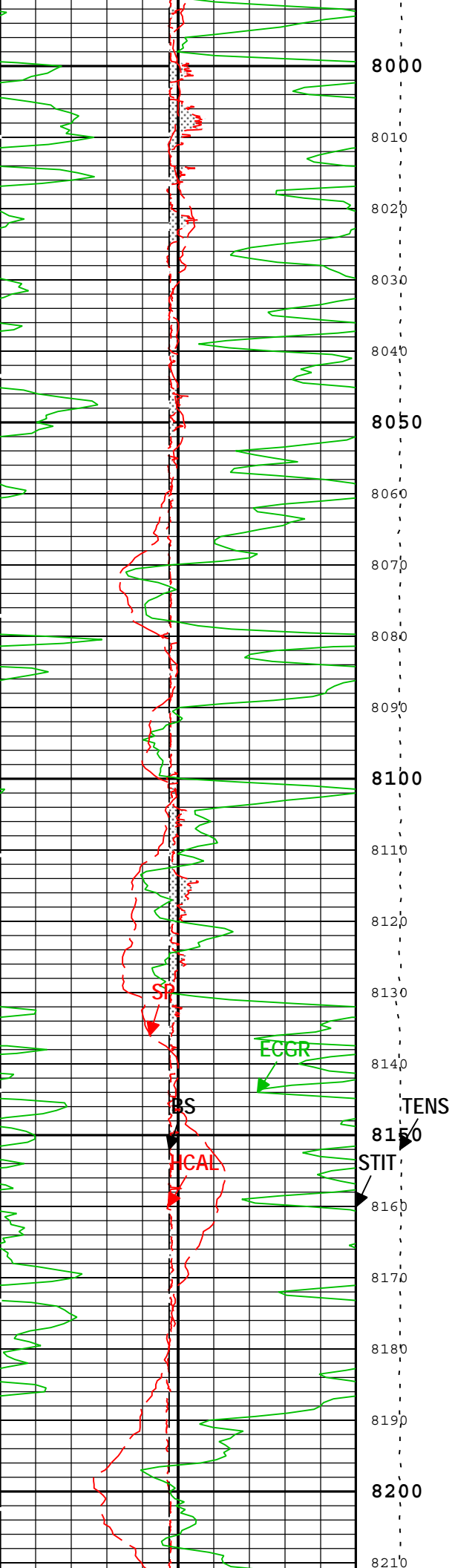


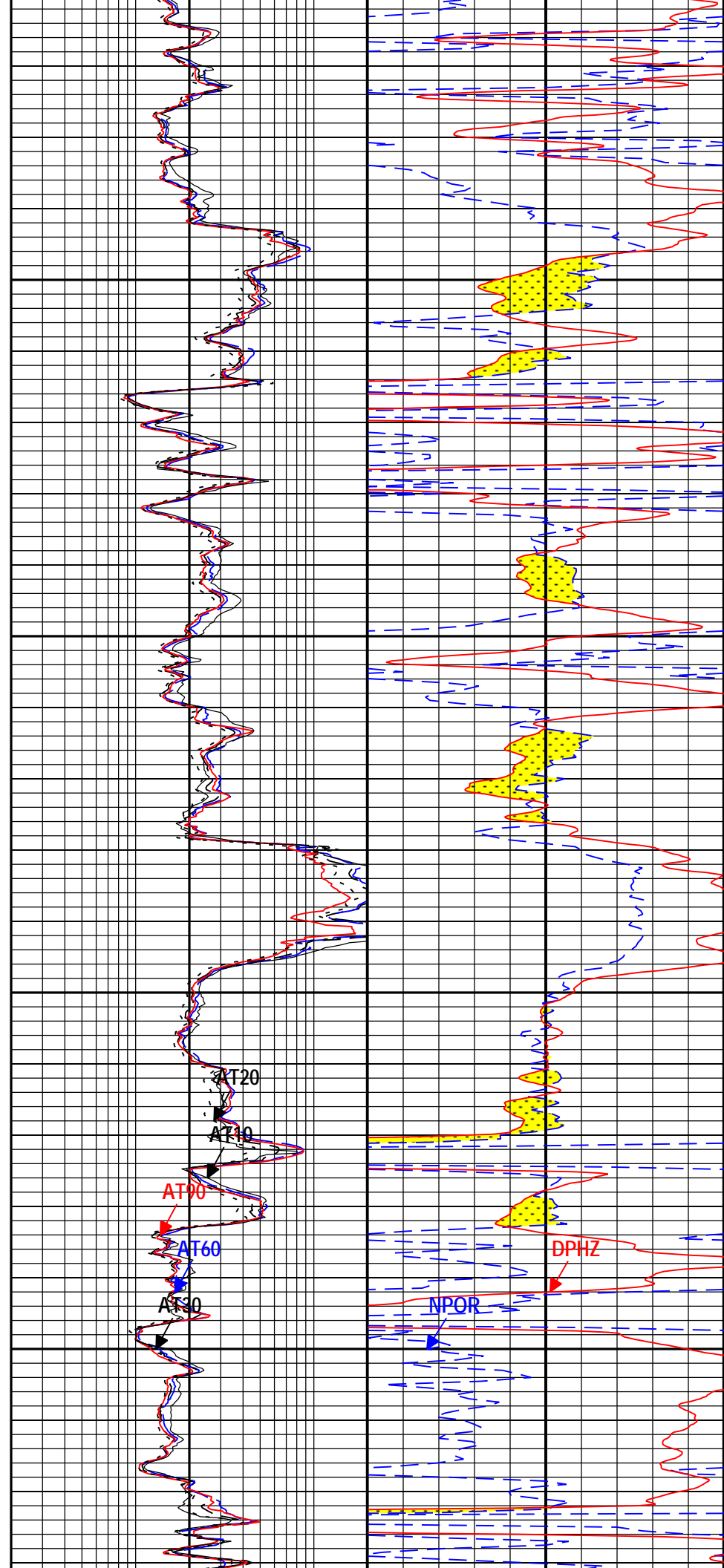
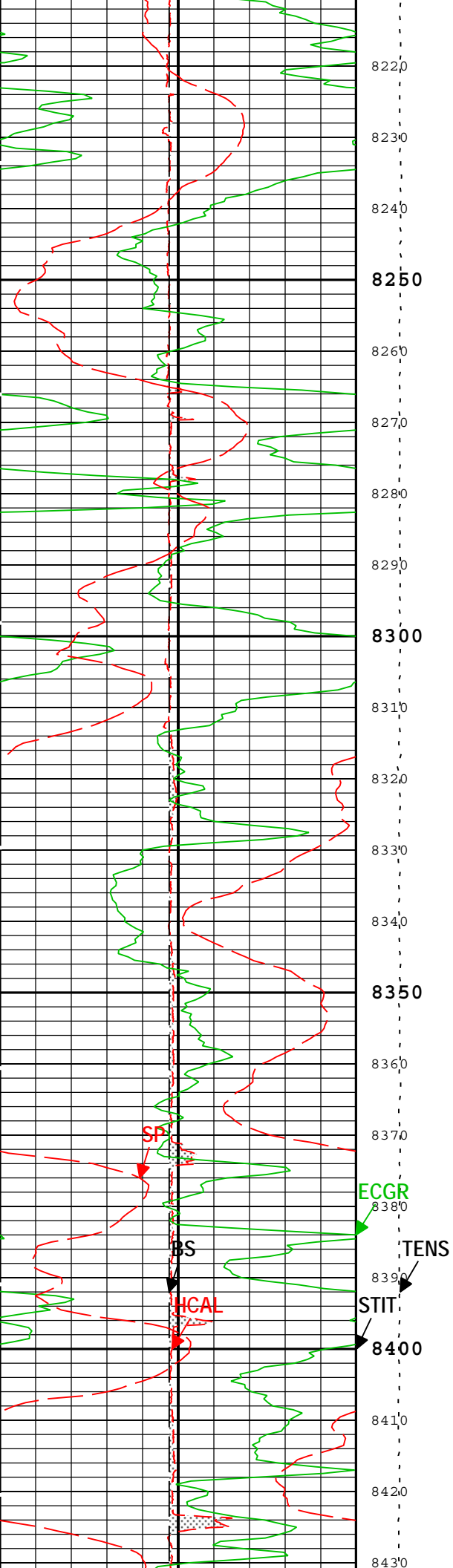


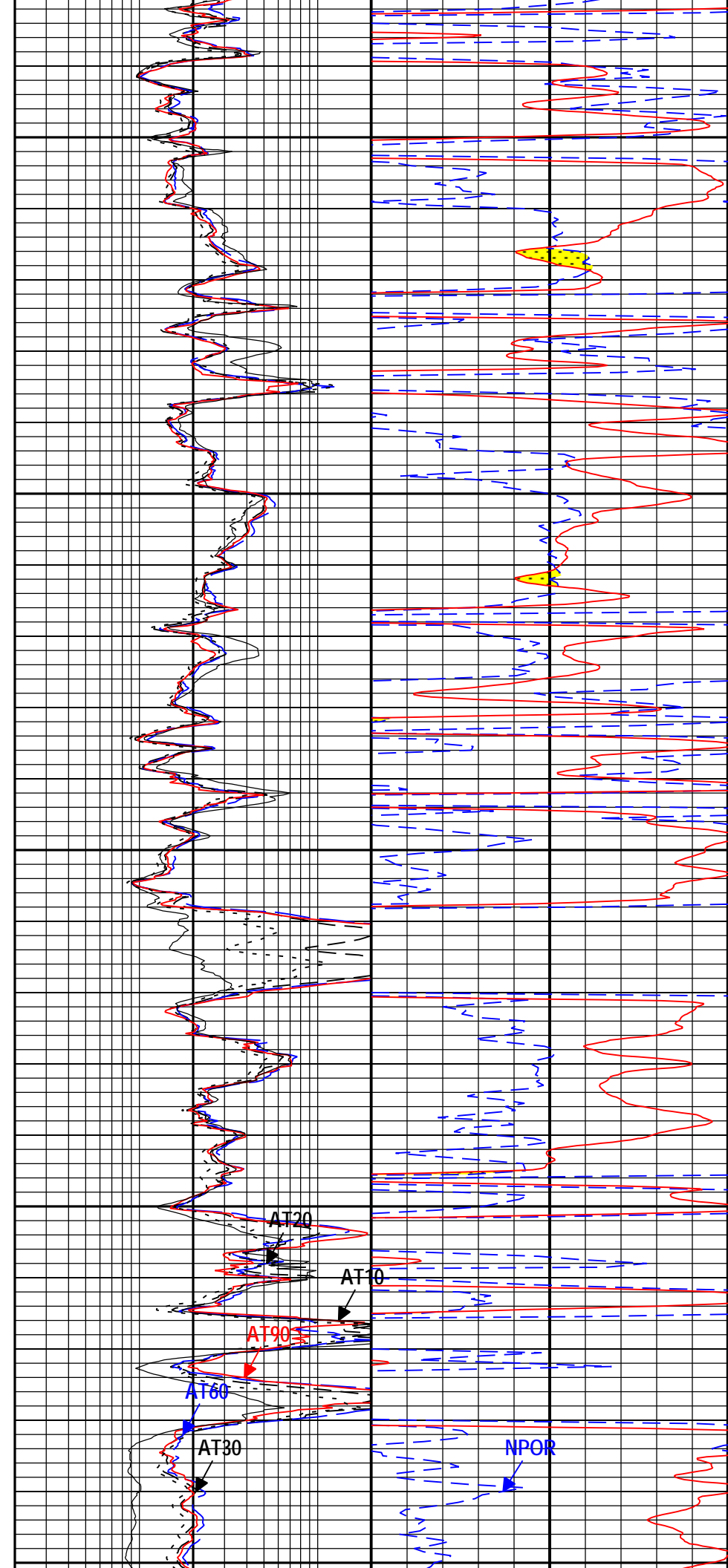
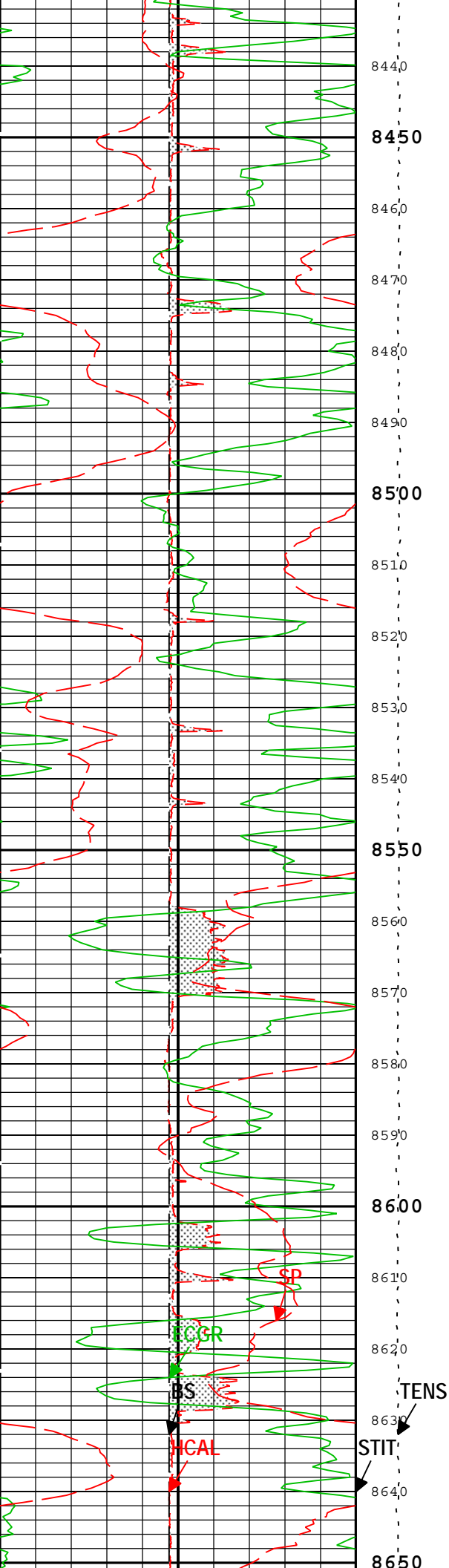


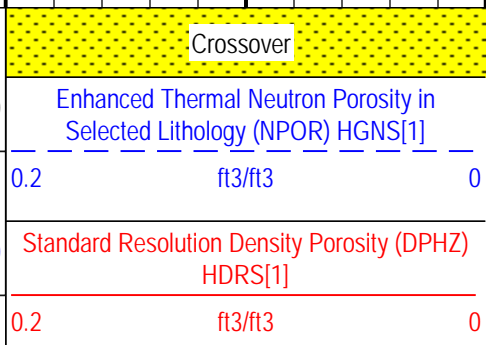
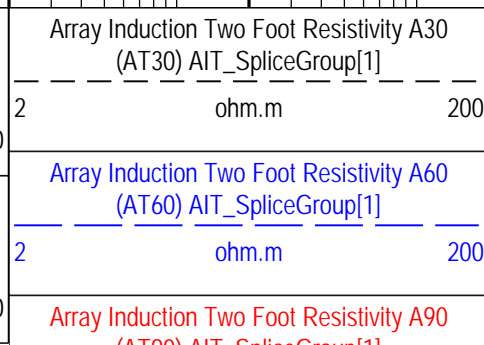
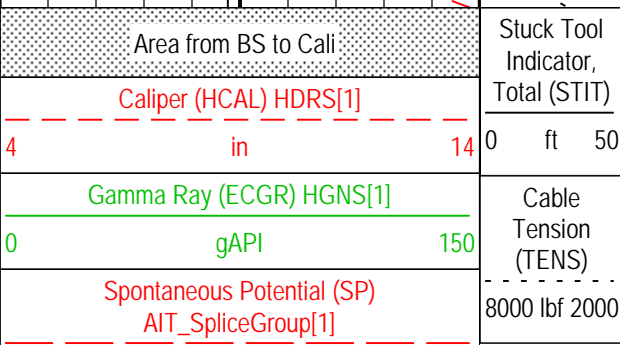












-80	mV	20
-----	----	----

2	(A190) AIT_SpliceGroup[1] ohm.m	200
Array Induction Two Foot Resistivity A10 (AT10) AIT_SpliceGroup[1]		
2	ohm.m	200
Array Induction Two Foot Resistivity A20 (AT20) AIT_SpliceGroup[1]		
2	ohm.m	200

TIME_1900 - Time Marked every 60.00 (s)

Description: Format: Log (Combo_Fax) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 19-Apr-2015 17:15:17

Channel Processing Parameters

ONE: Parameters

Parameter	Description	Tool	Value	Unit
AAPL	Array Induction Answer Product Level(Depth Log/View only)	AIT-M	Radial	
ABHM	Array Induction Borehole Correction Mode	AIT-M	Compute Mud Resistivity	
ACEN	Array Induction Tool Centering Flag (in Borehole)	AIT-M	Centered	
AMRF	Array Induction Mud Resistivity Factor	AIT-M	1	
ASTA	Array Induction Tool Standoff	AIT-M	0.8	in
ATSE	Array Induction Temperature Selection(Sonde Error Correction)	AIT-M	Internal	
ISSBAR	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BHT	Bottom Hole Temperature	Borehole	191	degF
BS	Bit Size	WLSESSION	8.75	in
BSAL	Borehole Salinity	Borehole	0	ppm
BSCO	Borehole Salinity Correction Option	HGNS-H	Yes	
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	0.256	in
CBLO	Casing Bottom (Logger)	WLSESSION	2521	ft
CCCO	Casing & Cement Thickness Correction Option	HGNS-H	No	
CDEN	Cement Density	HGNS-H	2	g/cm3
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	9.4	lbm/gal
DFT	Drilling Fluid Type	Borehole	Water	
DFT_WATER	Drilling Fluid Water Type	Borehole	WBM	
DHC	Density Hole Correction	HDRS-H	Bit Size	
FD	Fluid Density	Borehole	1	g/cm3
FSAL	Formation Salinity	Borehole	0	ppm
FSCO	Formation Salinity Correction Option	HGNS-H	No	
GCLF	Coal-Like Formation	HDRS-H	No	
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	
GR_MULTIPLIER	Gamma Ray Multiplier	HGNS-H	1	
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	
MCCO	Mud Cake Correction Option	HGNS-H	No	
MDEN	Matrix Density for Density Porosity	Borehole	2.68	g/cm3
MEST	Mud Filtrate Sample Temperature	Borehole	54	degF

MR-ST	Mud Filtrate Sample Temperature	Borehole	34	deg
MWCO	Mud Weight Correction Option	HGNS-H	No	
NAAC	Switch for the correction of formation activation by the APS	HDRS-H	Off	
NPRM	HRDD Nuclear Processing Mode	HDRS-H	Standard Resolution	
NTCO	HRDD Nuclear Temperature Correction Option	HDRS-H	On	
PTCO	Pressure Temperature Correction Option	HGNS-H	No	
RMFS	Resistivity of Mud Filtrate Sample	Borehole	1.39	ohm.m
SOCN	Standoff Distance	HGNS-H	0.125	in
SOCO	Standoff Correction Option	HGNS-H	Yes	
SPDR	SP Drift Per Foot	AIT-M	0	mV/ft
TD	Total Measured Depth	Borehole	8895	ft
HISC	Tool Position: Centered or Eccentered	HGNS-H	Eccentered	

Tool Control Parameters

ONE: 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
NDTC	Nuclear Dead Time Correction	HDRS-H	On	
NPUC	Nuclear Pile-Up Correction	HDRS-H	On	
STSO_HRDD	Temperature Source for the Density Algorithm	HDRS-H	HET data channel	

ONETime Zoned Parameters

Pass Main[3]:Up

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
MAX_LOG_SPEED	2286	19-Apr-2015 11:50:25	19-Apr-2015 11:51:00	8835.73	8826.84
MAX_LOG_SPEED	2087	19-Apr-2015 11:51:00	19-Apr-2015 11:56:05	8826.84	8736.52
MAX_LOG_SPEED	2228	19-Apr-2015 11:56:05	19-Apr-2015 12:03:12	8736.52	8529.86
MAX_LOG_SPEED	2106	19-Apr-2015 12:03:12	19-Apr-2015 12:39:54	8529.86	7376.78
MAX_LOG_SPEED	2239	19-Apr-2015 12:39:54	19-Apr-2015 12:40:55	7376.78	7345.49
MAX_LOG_SPEED	2094	19-Apr-2015 12:40:55	19-Apr-2015 12:46:01	7345.49	7187.12
MAX_LOG_SPEED	2200	19-Apr-2015 12:46:01	19-Apr-2015 12:52:07	7187.12	6982.66
MAX_LOG_SPEED	2354	19-Apr-2015 12:52:07	19-Apr-2015 12:54:09	6982.66	6915.14
MAX_LOG_SPEED	2226	19-Apr-2015 12:54:09	19-Apr-2015 12:55:11	6915.14	6881.81
MAX_LOG_SPEED	2074	19-Apr-2015 12:55:11	19-Apr-2015 12:56:12	6881.81	6848.4
MAX_LOG_SPEED	2202	19-Apr-2015 12:56:12	19-Apr-2015 13:10:28	6848.4	6388.77
MAX_LOG_SPEED	2352	19-Apr-2015 13:10:28	19-Apr-2015 13:13:32	6388.77	6292.75
MAX_LOG_SPEED	2188	19-Apr-2015 13:13:32	19-Apr-2015 13:14:34	6292.75	6260.8
MAX_LOG_SPEED	2312	19-Apr-2015 13:14:34	19-Apr-2015 13:16:36	6260.8	6197.58
MAX_LOG_SPEED	2188	19-Apr-2015 13:16:36	19-Apr-2015 13:17:37	6197.58	6166.09
MAX_LOG_SPEED	2301	19-Apr-2015 13:17:37	19-Apr-2015 13:20:40	6166.09	6072.52
MAX_LOG_SPEED	2161	19-Apr-2015 13:20:40	19-Apr-2015 13:23:43	6072.52	5979.46
MAX_LOG_SPEED	2330	19-Apr-2015 13:23:43	19-Apr-2015 13:24:44	5979.46	5948.52
MAX_LOG_SPEED	2192	19-Apr-2015 13:24:44	19-Apr-2015 13:25:45	5948.52	5917.6
MAX_LOG_SPEED	2314	19-Apr-2015 13:25:45	19-Apr-2015 13:27:47	5917.6	5856.22
MAX_LOG_SPEED	2462	19-Apr-2015 13:27:47	19-Apr-2015 13:32:53	5856.22	5703.01
MAX_LOG_SPEED	2610	19-Apr-2015 13:32:53	19-Apr-2015 13:34:54	5703.01	5641.88

MAX_LOG_SPEED	2398	19-Apr-2015 13:34:54	19-Apr-2015 13:37:58	5641.88	5548.26
MAX_LOG_SPEED	2581	19-Apr-2015 13:37:58	19-Apr-2015 13:40:00	5548.26	5486.28
MAX_LOG_SPEED	2440	19-Apr-2015 13:40:00	19-Apr-2015 13:42:02	5486.28	5424.2
MAX_LOG_SPEED	2619	19-Apr-2015 13:42:02	19-Apr-2015 13:44:04	5424.2	5362.77
MAX_LOG_SPEED	2485	19-Apr-2015 13:44:04	19-Apr-2015 13:48:08	5362.77	5238.65
MAX_LOG_SPEED	2625	19-Apr-2015 13:48:08	19-Apr-2015 13:52:11	5238.65	5124.85
MAX_LOG_SPEED	2781	19-Apr-2015 13:52:11	19-Apr-2015 14:01:19	5124.85	4935.57
MAX_LOG_SPEED	3058	19-Apr-2015 14:01:19	19-Apr-2015 14:05:22	4935.57	4935.56
MAX_LOG_SPEED	2903	19-Apr-2015 14:05:22	19-Apr-2015 14:14:31	4935.56	4755.46
MAX_LOG_SPEED	2721	19-Apr-2015 14:14:31	19-Apr-2015 14:16:33	4755.46	4696.76
MAX_LOG_SPEED	2939	19-Apr-2015 14:16:33	19-Apr-2015 14:23:39	4696.76	4495.64
MAX_LOG_SPEED	2779	19-Apr-2015 14:23:39	19-Apr-2015 14:25:41	4495.64	4439.92
MAX_LOG_SPEED	3016	19-Apr-2015 14:25:41	19-Apr-2015 15:00:08	4439.92	3315.66
MAX_LOG_SPEED	3175	19-Apr-2015 15:00:08	19-Apr-2015 15:33:25	3315.66	2154.88

Pass Log[4]:Up					
MAX_LOG_SPEED	3175	19-Apr-2015 15:46:38	19-Apr-2015 15:46:51	2225.17	2225.08
MAX_LOG_SPEED	3238	19-Apr-2015 15:46:51	19-Apr-2015 15:54:26	2225.08	1949.23

Pass Log[6]:Up					
MAX_LOG_SPEED	3282	19-Apr-2015 16:03:27	19-Apr-2015 16:17:40	2002.51	1227.92
MAX_LOG_SPEED	3096	19-Apr-2015 16:17:40	19-Apr-2015 16:20:42	1227.92	947.36
MAX_LOG_SPEED	2921	19-Apr-2015 16:20:42	19-Apr-2015 16:31:09	947.36	202.86

All depth are at tool zero.					
ONE					
Repeat					

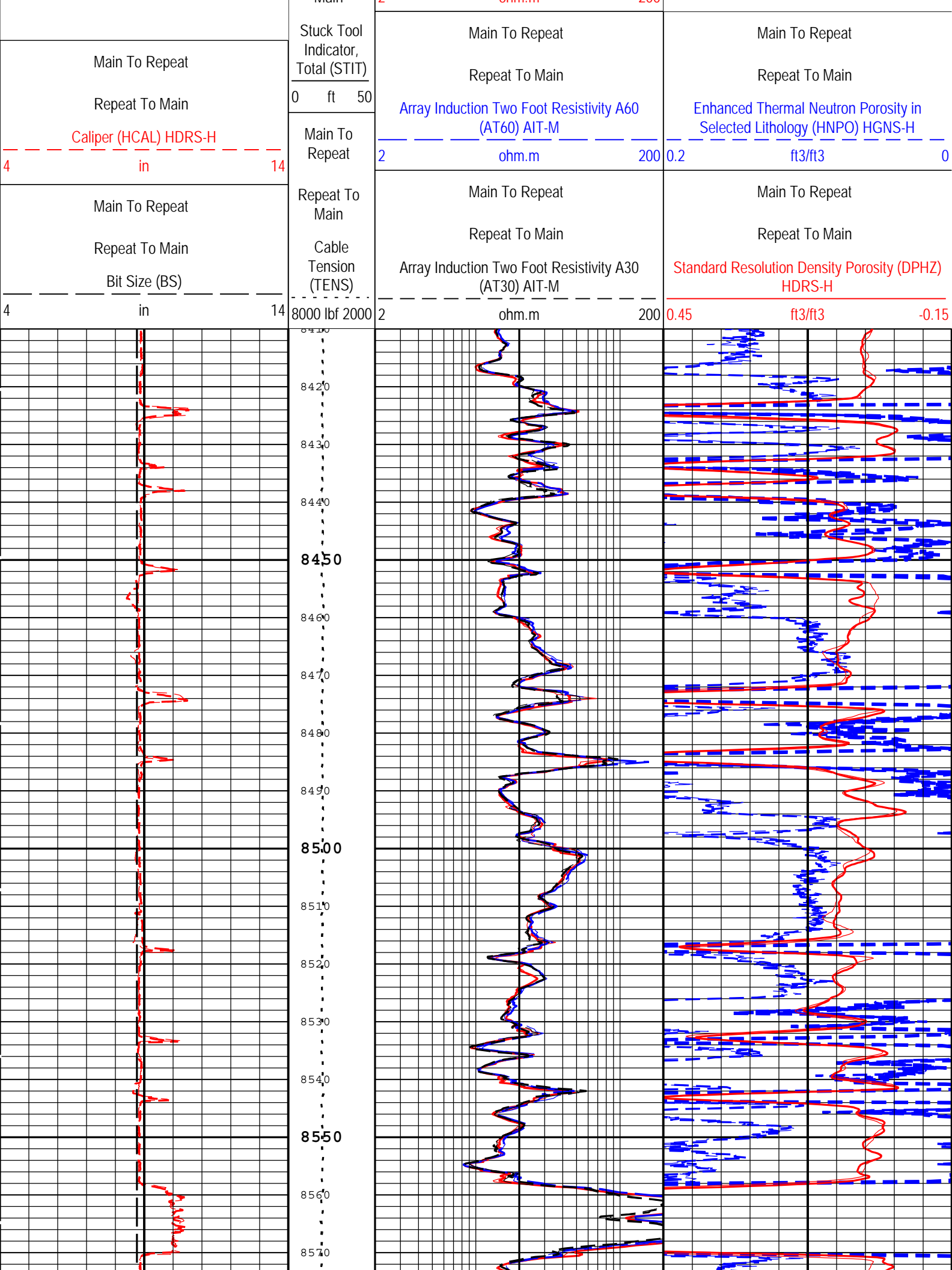
Software Version					
Acquisition System				Version	
Maxwell				5.2.40401.3100	

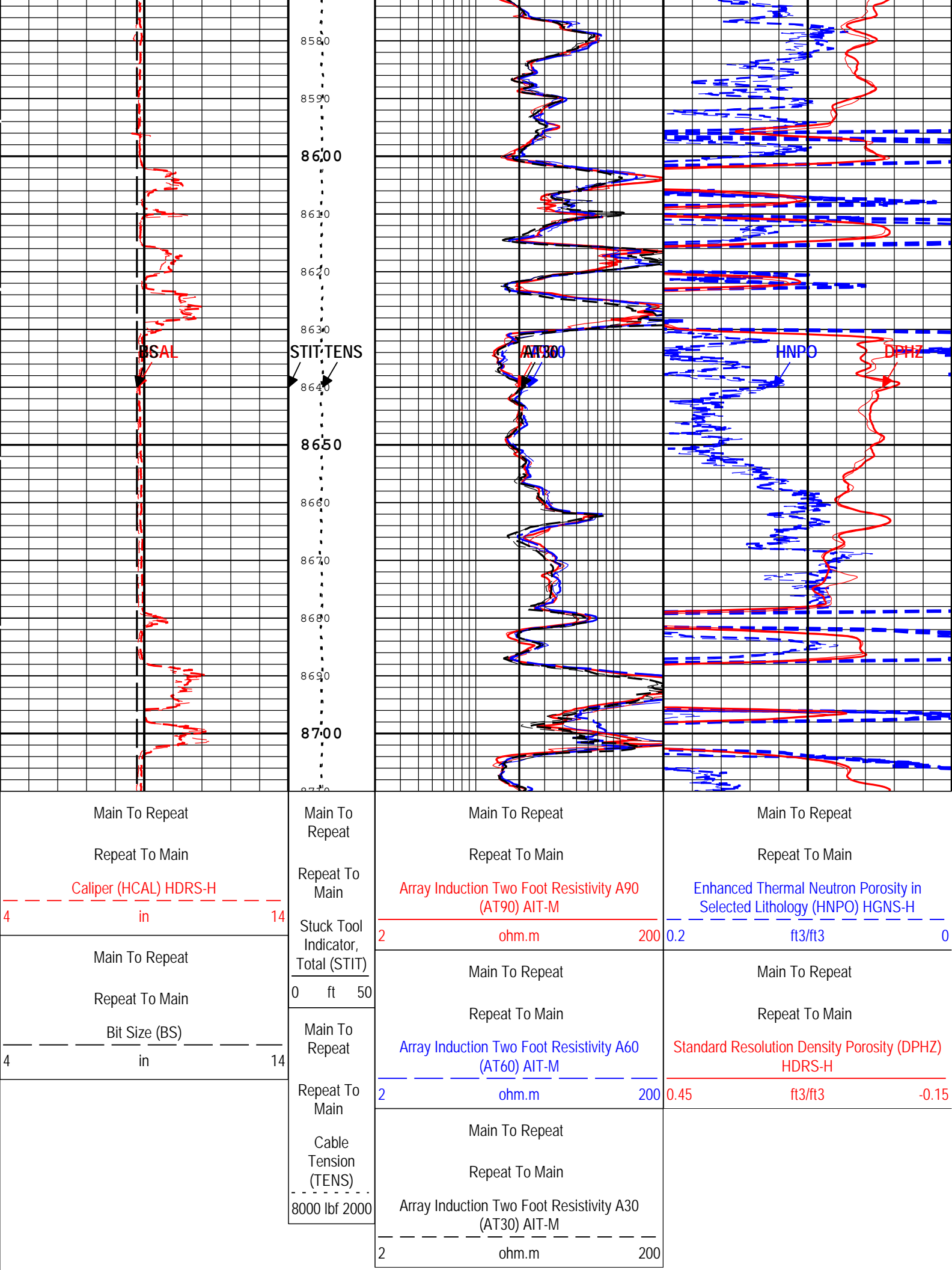
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
ONE	Log[2]:Up	Up	8323.98 ft	8838.76 ft	19-Apr-2015 11:19:40 AM	19-Apr-2015 11:38:04 AM	ON	9.11 ft	No
ONE	Main[3]:Up	Up	2154.88 ft	8835.73 ft	19-Apr-2015 11:50:25 AM	19-Apr-2015 3:33:25 PM	ON	0.00 ft	No

All depths are referenced to toolstring zero									
Log		Company:CAERUS PICEANCE LLC				Well:PUCKETT 42D-2			
						ONE: Main[3]:Up:S012			

Description: Format: Log (Combo_Fax RA) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 19-Apr-2015 17:15:26

TIME_1900 - Time Marked every 60.00 (s)									
		Main To Repeat							
		Repeat To Main							





Main To Repeat

Repeat To Main

Caliper (HCAL) HDRS-H

in

Main To Repeat

Repeat To Main

Bit Size (BS)

in

Main To Repeat

Repeat To Main

Stuck Tool Indicator, Total (STIT)

0 ft 50

Main To Repeat

Repeat To Main

Cable Tension (TENS)

8000 lbf 2000

Main To Repeat

Repeat To Main

Array Induction Two Foot Resistivity A90 (AT90) AIT-M

ohm.m

Main To Repeat

Repeat To Main

Array Induction Two Foot Resistivity A60 (AT60) AIT-M

ohm.m

Main To Repeat

Repeat To Main

Array Induction Two Foot Resistivity A30 (AT30) AIT-M

ohm.m

Main To Repeat

Repeat To Main

Enhanced Thermal Neutron Porosity in Selected Lithology (HNPO) HGNS-H

ft3/ft3

Main To Repeat

Repeat To Main

Standard Resolution Density Porosity (DPHZ) HDRS-H

ft3/ft3

Channel Processing Parameters

ONE: Parameters

Parameter	Description	Tool	Value	Unit
ABHM	Array Induction Borehole Correction Mode	AIT-M	Compute Mud Resistivity	
ACEN	Array Induction Tool Centering Flag (in Borehole)	AIT-M	Centered	
ASTA	Array Induction Tool Standoff	AIT-M	0.8	in
ISSBAR	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BHT	Bottom Hole Temperature	Borehole	191	degF
BS	Bit Size	WLSESSION	8.75	in
BSAL	Borehole Salinity	Borehole	0	ppm
BSCO	Borehole Salinity Correction Option	HGNS-H	Yes	
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	0.256	in
CBLO	Casing Bottom (Logger)	WLSESSION	2521	ft
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	9.4	lbm/gal
DFT	Drilling Fluid Type	Borehole	Water	
DFT_WATER	Drilling Fluid Water Type	Borehole	WBM	
DHC	Density Hole Correction	HDRS-H	Bit Size	
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	54	degF
RMFS	Resistivity of Mud Filtrate Sample	Borehole	1.39	ohm.m
SOCO	Standoff Correction Option	HGNS-H	Yes	
TD	Total Measured Depth	Borehole	8895	ft

Tool Control Parameters

ONE: 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
NPUC	Nuclear Pile-Up Correction	HDRS-H	On	

Time Zone Parameters

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
MAX_LOG_SPEED	2286	19-Apr-2015 11:50:25	19-Apr-2015 11:51:00	8835.73	8826.84
MAX_LOG_SPEED	2087	19-Apr-2015 11:51:00	19-Apr-2015 11:56:05	8826.84	8736.52
MAX_LOG_SPEED	2228	19-Apr-2015 11:56:05	19-Apr-2015 12:03:12	8736.52	8529.86
MAX_LOG_SPEED	2122	19-Apr-2015 12:03:12	19-Apr-2015 12:03:51	8529.86	7832.72

MAX_LOG_SPEED	2106	19-Apr-2015 12:03:12	19-Apr-2015 12:39:54	8529.86	7376.78
MAX_LOG_SPEED	2239	19-Apr-2015 12:39:54	19-Apr-2015 12:40:55	7376.78	7345.49
MAX_LOG_SPEED	2094	19-Apr-2015 12:40:55	19-Apr-2015 12:46:01	7345.49	7187.12
MAX_LOG_SPEED	2200	19-Apr-2015 12:46:01	19-Apr-2015 12:52:07	7187.12	6982.66
MAX_LOG_SPEED	2354	19-Apr-2015 12:52:07	19-Apr-2015 12:54:09	6982.66	6915.14
MAX_LOG_SPEED	2226	19-Apr-2015 12:54:09	19-Apr-2015 12:55:11	6915.14	6881.81
MAX_LOG_SPEED	2074	19-Apr-2015 12:55:11	19-Apr-2015 12:56:12	6881.81	6848.4
MAX_LOG_SPEED	2202	19-Apr-2015 12:56:12	19-Apr-2015 13:10:28	6848.4	6388.77
MAX_LOG_SPEED	2352	19-Apr-2015 13:10:28	19-Apr-2015 13:13:32	6388.77	6292.75
MAX_LOG_SPEED	2188	19-Apr-2015 13:13:32	19-Apr-2015 13:14:34	6292.75	6260.8
MAX_LOG_SPEED	2312	19-Apr-2015 13:14:34	19-Apr-2015 13:16:36	6260.8	6197.58
MAX_LOG_SPEED	2188	19-Apr-2015 13:16:36	19-Apr-2015 13:17:37	6197.58	6166.09
MAX_LOG_SPEED	2301	19-Apr-2015 13:17:37	19-Apr-2015 13:20:40	6166.09	6072.52
MAX_LOG_SPEED	2161	19-Apr-2015 13:20:40	19-Apr-2015 13:23:43	6072.52	5979.46
MAX_LOG_SPEED	2330	19-Apr-2015 13:23:43	19-Apr-2015 13:24:44	5979.46	5948.52
MAX_LOG_SPEED	2192	19-Apr-2015 13:24:44	19-Apr-2015 13:25:45	5948.52	5917.6
MAX_LOG_SPEED	2314	19-Apr-2015 13:25:45	19-Apr-2015 13:27:47	5917.6	5856.22
MAX_LOG_SPEED	2462	19-Apr-2015 13:27:47	19-Apr-2015 13:32:53	5856.22	5703.01
MAX_LOG_SPEED	2610	19-Apr-2015 13:32:53	19-Apr-2015 13:34:54	5703.01	5641.88
MAX_LOG_SPEED	2398	19-Apr-2015 13:34:54	19-Apr-2015 13:37:58	5641.88	5548.26
MAX_LOG_SPEED	2581	19-Apr-2015 13:37:58	19-Apr-2015 13:40:00	5548.26	5486.28
MAX_LOG_SPEED	2440	19-Apr-2015 13:40:00	19-Apr-2015 13:42:02	5486.28	5424.2
MAX_LOG_SPEED	2619	19-Apr-2015 13:42:02	19-Apr-2015 13:44:04	5424.2	5362.77
MAX_LOG_SPEED	2485	19-Apr-2015 13:44:04	19-Apr-2015 13:48:08	5362.77	5238.65
MAX_LOG_SPEED	2625	19-Apr-2015 13:48:08	19-Apr-2015 13:52:11	5238.65	5124.85
MAX_LOG_SPEED	2781	19-Apr-2015 13:52:11	19-Apr-2015 14:01:19	5124.85	4935.57
MAX_LOG_SPEED	3058	19-Apr-2015 14:01:19	19-Apr-2015 14:05:22	4935.57	4935.56
MAX_LOG_SPEED	2903	19-Apr-2015 14:05:22	19-Apr-2015 14:14:31	4935.56	4755.46
MAX_LOG_SPEED	2721	19-Apr-2015 14:14:31	19-Apr-2015 14:16:33	4755.46	4696.76
MAX_LOG_SPEED	2939	19-Apr-2015 14:16:33	19-Apr-2015 14:23:39	4696.76	4495.64
MAX_LOG_SPEED	2779	19-Apr-2015 14:23:39	19-Apr-2015 14:25:41	4495.64	4439.92
MAX_LOG_SPEED	3016	19-Apr-2015 14:25:41	19-Apr-2015 15:00:08	4439.92	3315.66
MAX_LOG_SPEED	3175	19-Apr-2015 15:00:08	19-Apr-2015 15:33:25	3315.66	2154.88

All depth are at tool zero.

Calibration Report

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

Primary Equipment :

File code for AIT-MA Sonde Tool Element AMIS 50

Auxiliary Equipment :

AITM Rm/SP Bottom Nose AMRM 50

AIT Sonde Calibration - Test Loop Gain

Master (EEPROM): 14:05:05 15-Apr-2015

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Test Loop Gain - 0		Master	1.000	0.950	1.016	1.050	
Test Loop Phase - 0	deg	Master	0	-3.000	0.561	3.000	
Test Loop Gain - 1		Master	1.000	0.950	1.016	1.050	

		Before-Master	-----	-----	0.000	-----	
Thru Cal Phase - 3	deg	Master	-----	131.000	-170.960	-109.000	
		Before	-----	131.000	-160.524	-109.000	
		Before-Master	-----	-----	10.436	-----	
Thru Cal Mag - 4	V	Master	-----	0.804	1.297	1.876	
		Before	-----	0.804	1.295	1.876	
		Before-Master	-----	-----	-0.002	-----	
Thru Cal Phase - 4	deg	Master	-----	125.000	-176.929	-115.000	
		Before	-----	125.000	-166.479	-115.000	
		Before-Master	-----	-----	10.450	-----	
Thru Cal Mag - 5	V	Master	-----	1.176	1.887	2.744	
		Before	-----	1.176	1.884	2.744	
		Before-Master	-----	-----	-0.003	-----	
Thru Cal Phase - 5	deg	Master	-----	122.000	-178.458	-118.000	
		Before	-----	122.000	-168.000	-118.000	
		Before-Master	-----	-----	10.458	-----	
Thru Cal Mag - 6	V	Master	-----	1.176	1.886	2.744	
		Before	-----	1.176	1.883	2.744	
		Before-Master	-----	-----	-0.003	-----	
Thru Cal Phase - 6	deg	Master	-----	121.000	-178.437	-119.000	
		Before	-----	121.000	-167.977	-119.000	
		Before-Master	-----	-----	10.460	-----	
Thru Cal Mag - 7	V	Master	-----	0.846	1.357	1.974	
		Before	-----	0.846	1.356	1.974	
		Before-Master	-----	-----	-0.001	-----	
Thru Cal Phase - 7	deg	Master	-----	115.000	-179.215	-125.000	
		Before	-----	115.000	-168.681	-125.000	
		Before-Master	-----	-----	10.534	-----	
SPA Zero	mV	Master		-50.000	0.160	50.000	
		Before		-50.000	0.086	50.000	
		Before-Master	-----	-----	-0.074	-----	
SPA Plus	mV	Master		941.000	988.067	1040.000	
		Before		941.000	987.666	1040.000	
		Before-Master	-----	-----	-0.401	-----	
Temperature Zero	V	Master		-0.050	0.000	0.050	
		Before		-0.050	0.000	0.050	
		Before-Master	-----	-----	0.000	-----	
Temperature Plus	V	Master		0.870	0.915	0.960	
		Before		0.870	0.915	0.960	
		Before-Master	-----	-----	0.000	-----	

HDRS-H (HILT Density and Rxo Sonde, 150 degC) Calibration - Run ONE			
Primary Equipment :			
HILT High-Resolution Control Cartridge, 150 degC	HRCC-H	3828	
HILT Resistivity Gamma-Ray Density Device, 150 degC	HRGD-H	3760	
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	5471	
HILT High-Resolution Control Cartridge, 150 degC	HRCC-H	3828	
HILT High-Resolution Mechanical Sonde, 150 degC	HRMS-H	3863	
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):		18:06:50 15-Apr-2015 Expired by 2 days					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	

Small Ring	in	Before	8.00	6.00	8.05	10.00
Large Ring	in	Before	12.00	9.00	12.38	15.00

HDRS Density Calibration - Inversion Results

Master (EEPROM):		12:00:00 23-Mar-2015					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Rho Aluminum	g/cm3	Master	2.596	2.586	2.595	2.606	
Rho Magnesium	g/cm3	Master	1.686	1.676	1.688	1.696	
Pe Aluminum		Master	2.570	2.470	2.536	2.670	
Pe Magnesium		Master	2.650	2.550	2.622	2.750	

HDRS Density Calibration - Deviation Summary

Master (EEPROM):		12:00:00 23-Mar-2015						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	<div></div>	<div></div>
BS Average Deviation	%	Master	0	-0.6000	0.3117	0.6000	<div></div>	<div></div>
BS Max Deviation	%	Master	0	-1.6000	0.7193	1.6000	<div></div>	<div></div>
SS Average Deviation	%	Master	0	-1.0000	0.4227	1.0000	<div></div>	<div></div>
SS Max Deviation	%	Master	0	-2.5000	1.0477	2.5000	<div></div>	<div></div>
LS Average Deviation	%	Master	0	-1.5000	1.0742	1.5000	<div></div>	<div></div>
LS Max Deviation	%	Master	0	-3.5000	3.1442	3.5000	<div></div>	<div></div>

HDRS Density Calibration - Background Summary

Master (EEPROM):		12:00:00 23-Mar-2015		Before (Measured):		18:01:20 15-Apr-2015 Expired by 2 days	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Window Ratio		Master	1.0000		0.7363		
		Before	0.7363	0.6995	0.7367	0.7731	
		Before-Master	-----	-----	0.0004	-----	
BS Window Sum	1/s	Master	1		23595		
		Before	23595	22415	23573	24774	
		Before-Master	-----	-----	-22	-----	
SS Window Ratio		Master	1.0000		0.4850		
		Before	0.4850	0.4607	0.4849	0.5092	
		Before-Master	-----	-----	-0.0001	-----	
SS Window Sum	1/s	Master	1		9633		
		Before	9633	9151	9615	10114	
		Before-Master	-----	-----	-18	-----	
LS Window Ratio		Master	1.0000		0.3025		
		Before	0.3025	0.2873	0.3033	0.3176	
		Before-Master	-----	-----	0.0008	-----	
LS Window Sum	1/s	Master	1		1166		
		Before	1166	1108	1157	1224	
		Before-Master	-----	-----	-9	-----	

HDRS Density Calibration - Photo-multiplier High Voltages

Master (EEPROM):		12:00:00 23-Mar-2015		Before (Measured):		18:01:20 15-Apr-2015 Expired by 2 days	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS PM High Voltage	V	Master		1000	1350	2400	<div><div></div></div>
		Before		1000	1384	2400	<div><div></div></div>
		Before-Master	-----	-100	34	100	<div><div></div></div>
SS PM High Voltage	V	Master		1000	1662	2400	<div><div></div></div>
		Before		1000	1664	2400	<div><div></div></div>
		Before-Master	-----	-100	2	100	<div><div></div></div>
LS PM High Voltage	V	Master		1000	1209	2400	<div><div></div></div>
		Before		1000	1200	2400	<div><div></div></div>
		Before-Master	-----	-100	-9	100	<div><div></div></div>

HDRS Density Calibration - Crystal Quality Resolutions

Master (EEPROM):		12:00:00 23-Mar-2015		Before (Measured):		18:01:20 15-Apr-2015		Expired by 2 days	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit			
BS Crystal Resolution	%	Master		5.00	10.55	25.00			
		Before		5.00	10.63	25.00			
		Before-Master	-----	-1.00	0.08	1.00			
SS Crystal Resolution	%	Master		5.00	9.62	20.00			
		Before		5.00	9.62	20.00			
		Before-Master	-----	-1.00	0.00	1.00			

[illegible]

HDRS MCFL Calibration - MCFL Accumulations

Before (Measured): 18:01:34 15-Apr-2015 Expired by 2 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Main Resistivity	ohm.m	Before	3875	3565	3868	4185		
Deep Resistivity	ohm.m	Before	3830	3524	3822	4136		
Shallow Resistivity	ohm.m	Before	3830	3524	3826	4136		

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

Primary Equipment :

HILT Gamma-Ray and Neutron Sonde, 150 degC

HGNS-H

4736

Auxiliary Equipment :

HGNS Accelerometer, 150 degC

HACCZ-H

3616

AmBe Neutron Logging Source

NSR-F

5068

Calibration Parameter :

Water Temperature

Housing Size

JIG-BKG (Jig minus background reference)

165

HGNS Accelerometer Calibration - Accelerometer Accumulations

Before (Measured): 10:36:28 19-Apr-2015

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-Feb-2005

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	----	----	-2323.000	----		
Accelerometer Coefficients - 1		Master	----	----	2.895	----		
Accelerometer Coefficients - 2		Master	----	----	0.001	----		
Accelerometer Coefficients - 3		Master	----	----	0.000	----		
Accelerometer Coefficients - 4		Master	----	----	2.764	----		
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	----	----	1.009	----		

HGNS Neutron Calibration - HGNS Neutron Accumulations

Master (EEPROM): 13:35:16 24-Mar-2015

Before (Measured): 17:53:55 15-Apr-2015 Expired by 2 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Near Zero Measurement	1/s	Master	0	5.0	27.7	40.0	
		Before	0	5.0	28.2	40.0	
		Before-Master	----	-4.2	0.5	4.2	
Far Zero Measurement	1/s	Master	0	5.0	27.8	40.0	
		Before	0	5.0	28.0	40.0	
		Before-Master	----	-4.2	0.2	4.2	
Near Plus Measurement	1/s	Master	6031.0	4700.0	5130.0	6900.0	
		Before	----	----	----	----	
		Before-Master	----	----	----	----	
Far Plus Measurement	1/s	Master	2793.0	1900.0	2180.0	2900.0	
		Before	----	----	----	----	
		Before-Master	----	----	----	----	
Near Corrected Plus Measurement	1/s	Master		4700.0	5104.0	6900.0	

		Before Before-Master	----	----	----	----	
Far Corrected Plus Measurement	1/s	Master Before Before-Master		1900.0	2149.0	2900.0	
HGNS Gamma-Ray Calibration - Gamma-Ray Accumulations							
Before (Measured): 18:15:12 15-Apr-2015 Expired by 2 days							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RGR Zero Measurement	gAPI	Before	30.0	0	82.1	120.0	
RGR Plus Measurement	gAPI	Before	185.4	157.1	164.4	206.3	
GR Calibration Gain		Before	0.89	0.80	1.00	1.05	

Company:	CAERUS PICEANCE LLC	Schlumberger
Well:	PUCKETT 42D-2	
Field:	WILDCAT	
County:	GARFIELD	
State:	COLORADO	
Platform Express		
Combo Print		
AIT-TLD-CNL-GR		