

Schlumberger

Company: **Vecta Oil & Gas Ltd**

Well: **Little Bear 44-28**

Field: **Wildcat**

County: **Cheyenne**

State: **Colorado**

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Field: **Wildcat**
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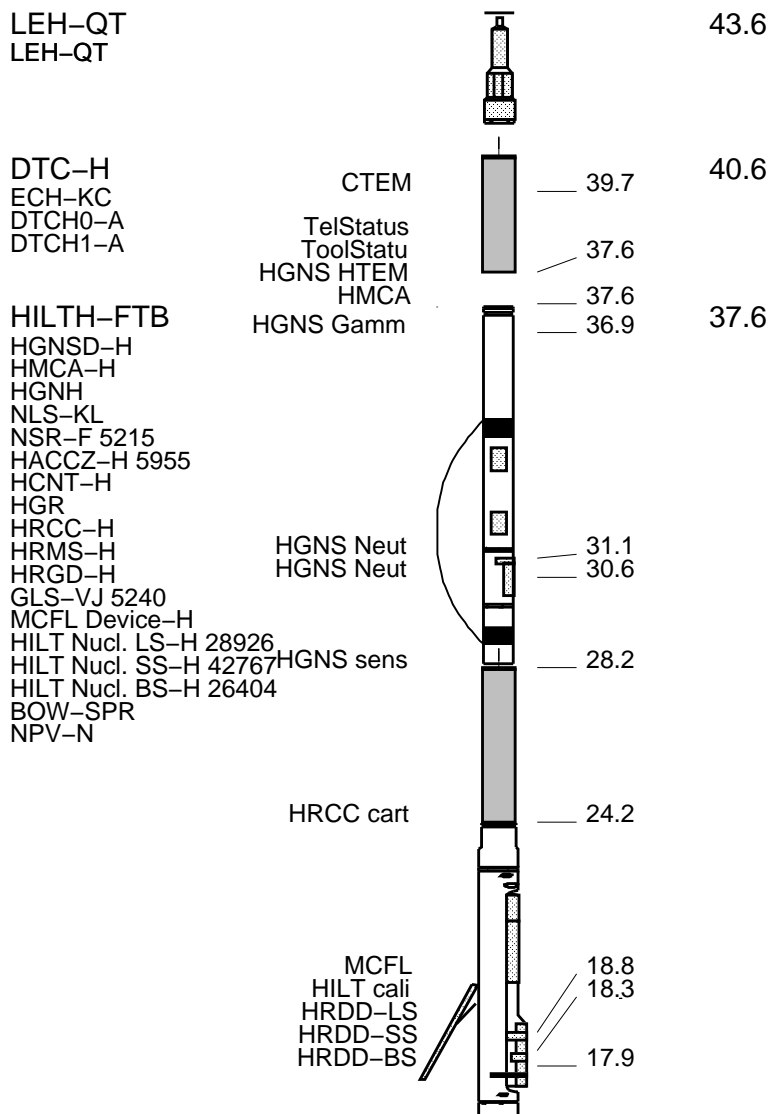
County: **Cheyenne** State: **Colorado**

1

[illegible]

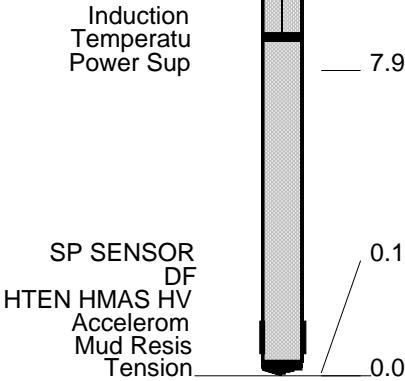
Logging Date				
Run Number				
Depth Driller				
Schlumberger Depth				
Bottom Log Interval				
Top Log Interval				
Casing Driller Size @ Depth		@		
Casing Schlumberger				
Bit Size				
Type Fluid In Hole				
Density		Viscosity		
Fluid Loss		PH		
Source Of Sample				
RM @ Measured Temperature		@		
RMF @ Measured Temperature		@		
RMC @ Measured Temperature		@		
Source RMF		RMF		
RM @ MRT		RMF @ MRT	@	@
Maximum Recorded Temperatures				
Circulation Stopped		Time		
Logger On Bottom		Time		
Unit Number		Location		
Recorded By				
Witnessed By				

OTHER SERVICES1	OTHER SERVICES2
OS1: MSIP	OS1:
OS2:	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
This is the first run in hole	
Toolstring run as per tool sketch	
Matrix: Repeat pass run on both Sandstone (2.65 g/cc) and Limestone (2.71 g/cc)	
Main pass run on Limestone (2.71 g/cc)	
All prints done using Limestone (2.71 g/cc) matrix	

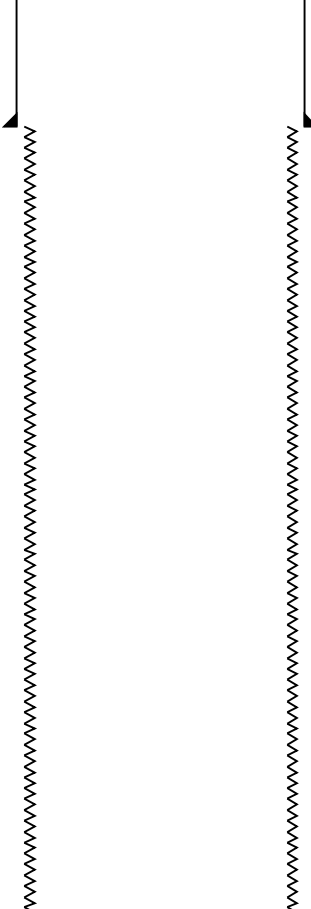


AIT-M
AMIS-A 39
AMRM-A

16.0



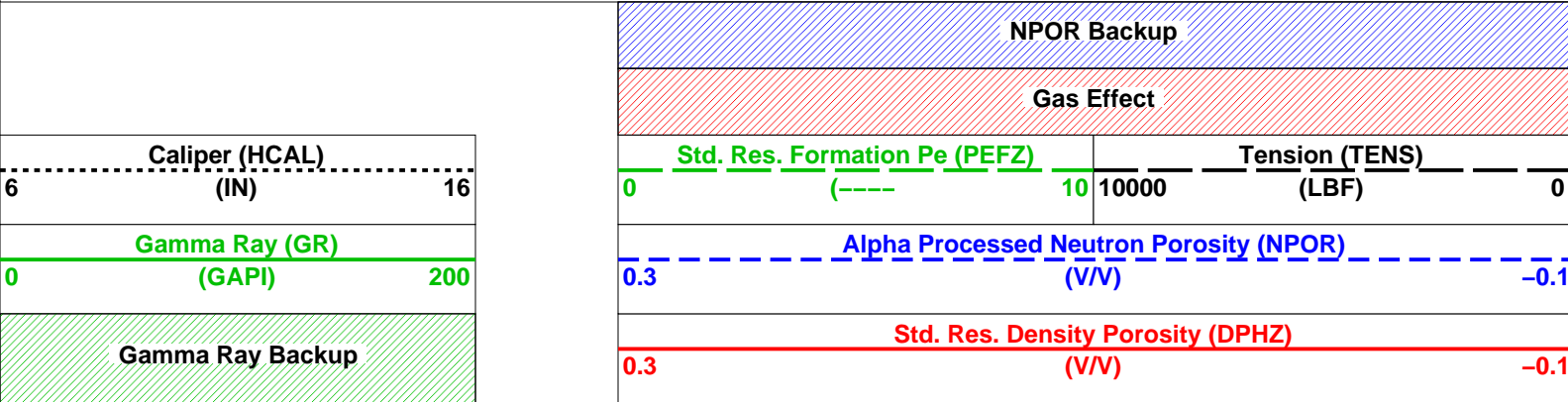
MAXIMUM STRING DIAMETER 4.88 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

Production String	(in)		(ft)	Well Schematic	(ft)	(in)		Casing String
	OD	ID	MD		MD	OD	ID	
					0.0	8.625		Casing String
					453.0 453.0	8.625 7.875		Casing Shoe Borehole Segment

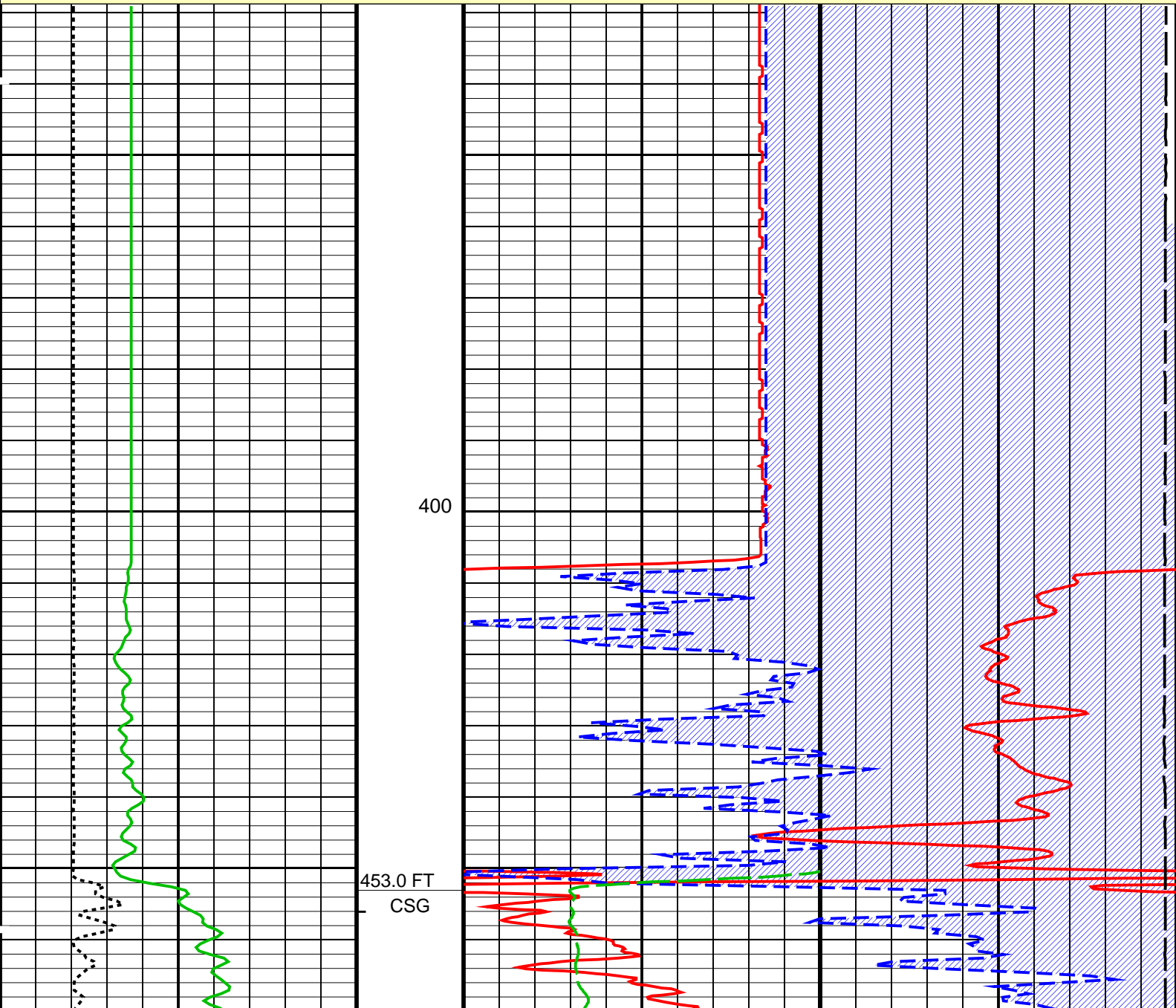
PIP SUMMARY

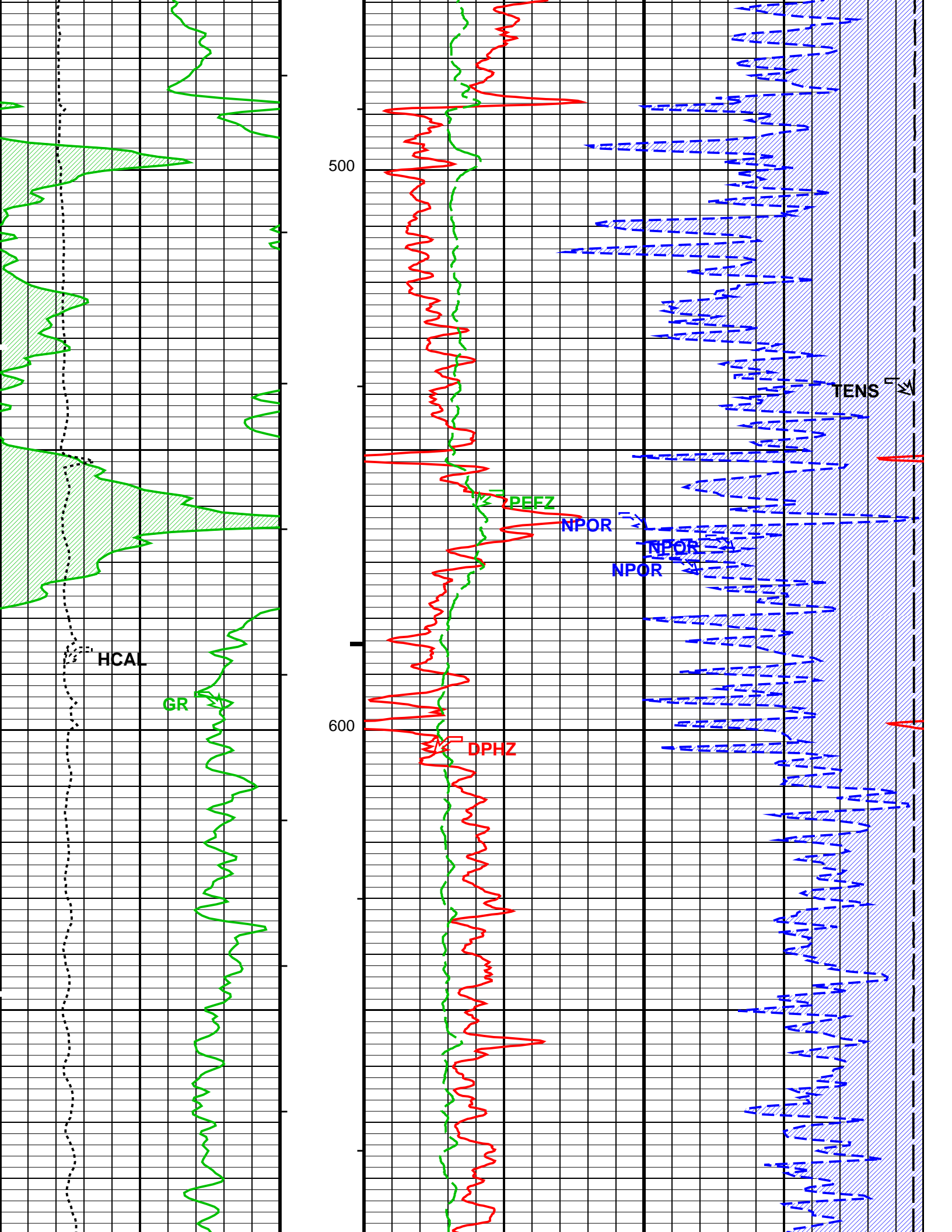
- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
- └ Integrated Cement Volume Minor Pip Every 10 F3
- └ Integrated Cement Volume Major Pip Every 100 F3

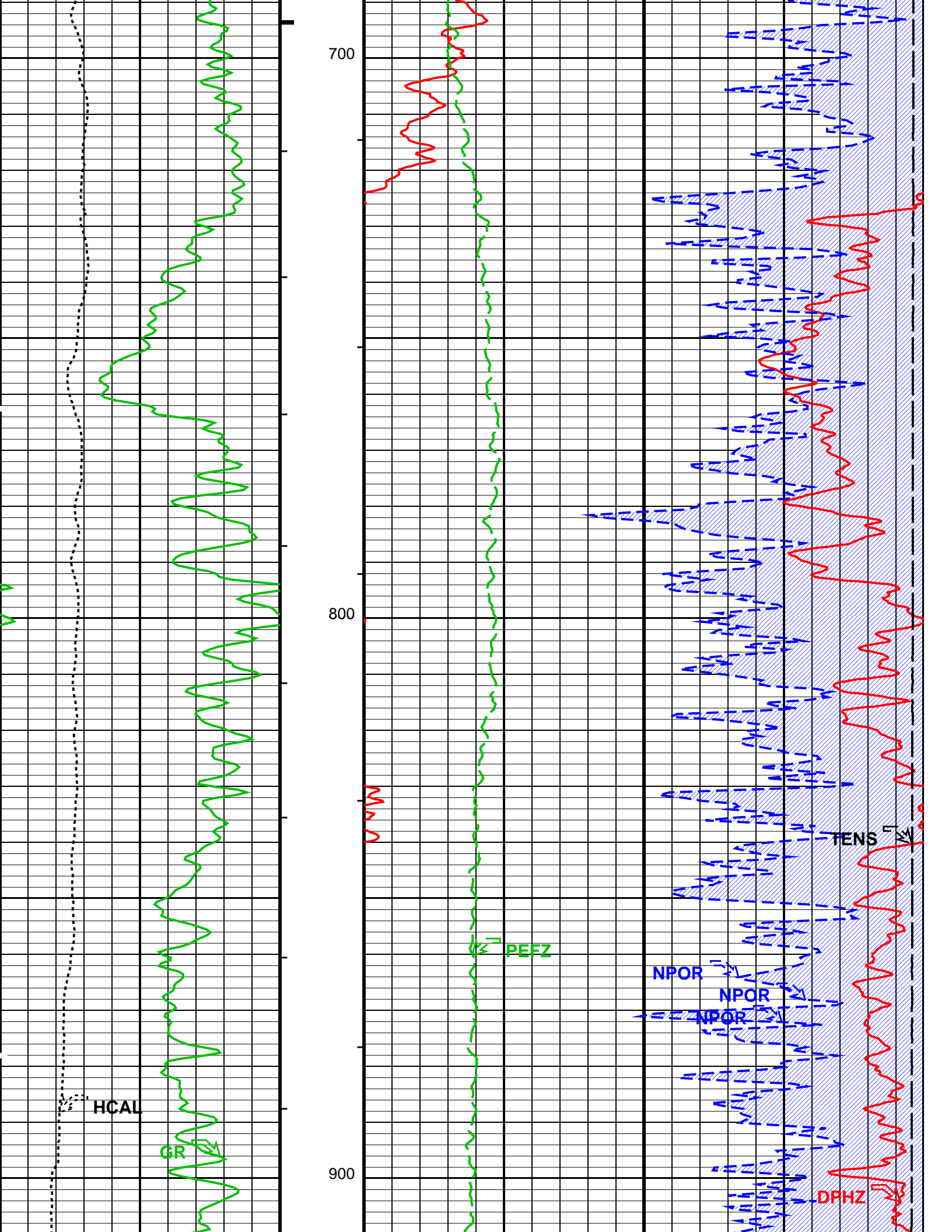
Time Mark Every 60 S

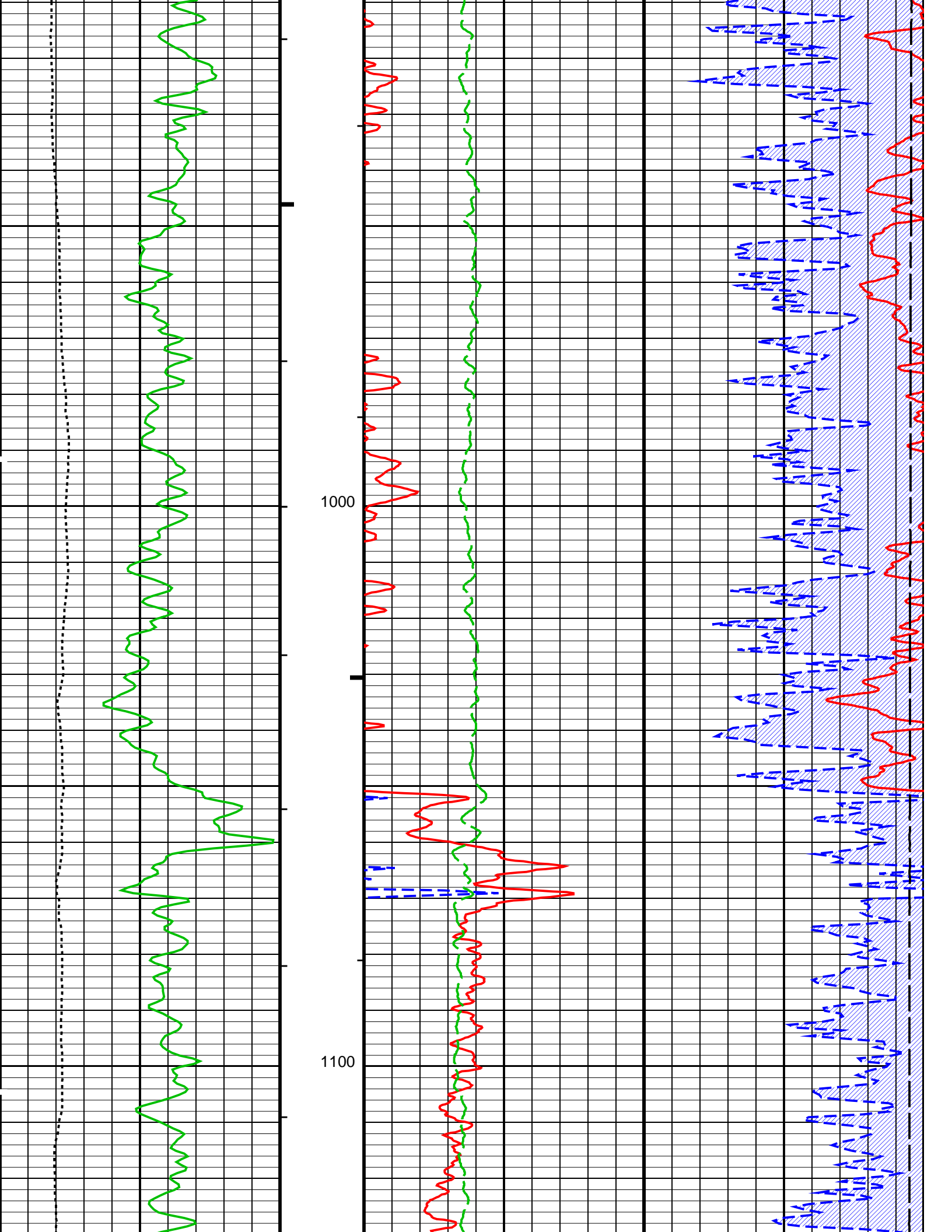


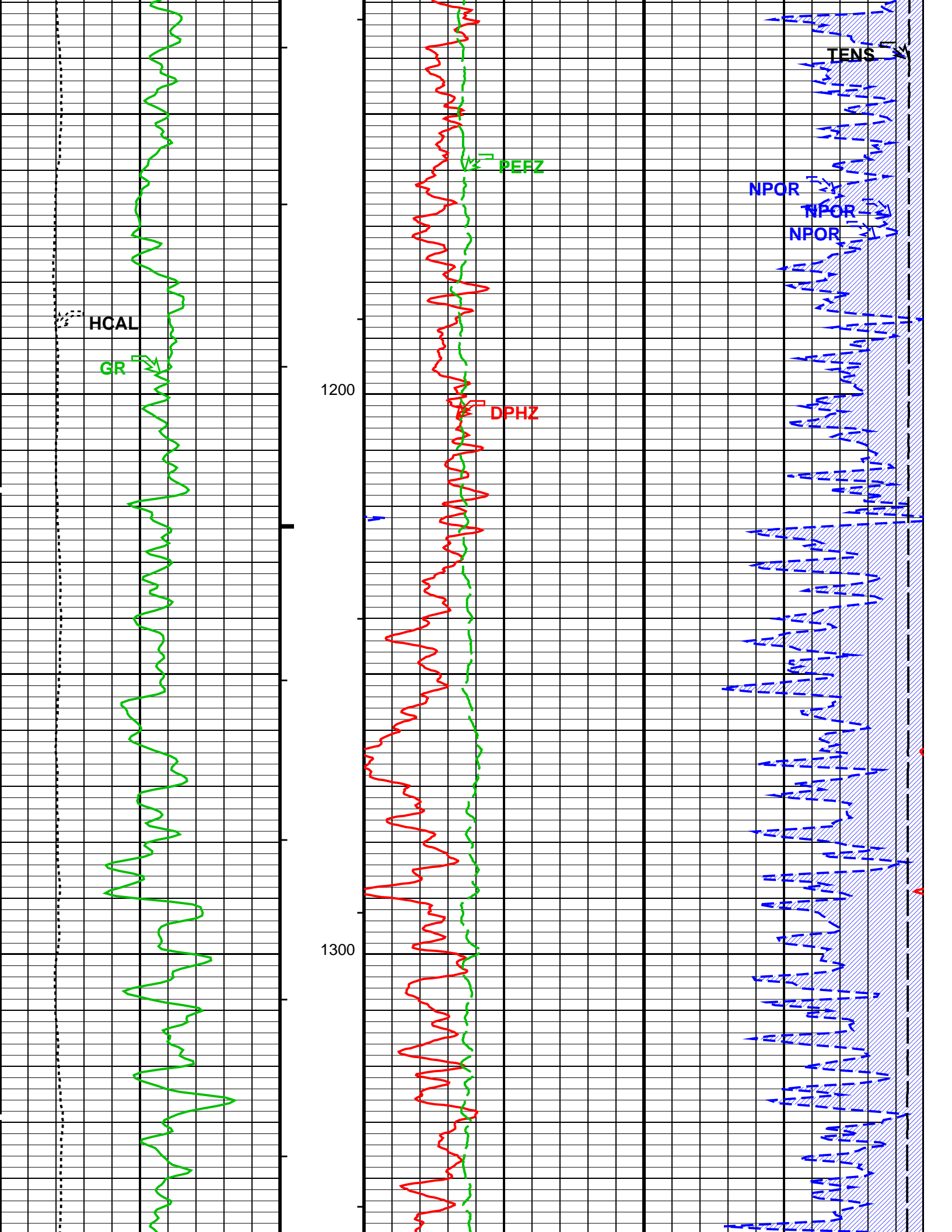
MAIN PASS: *** PLATFORM EXPRESS - NUCLEAR POROSITY ***

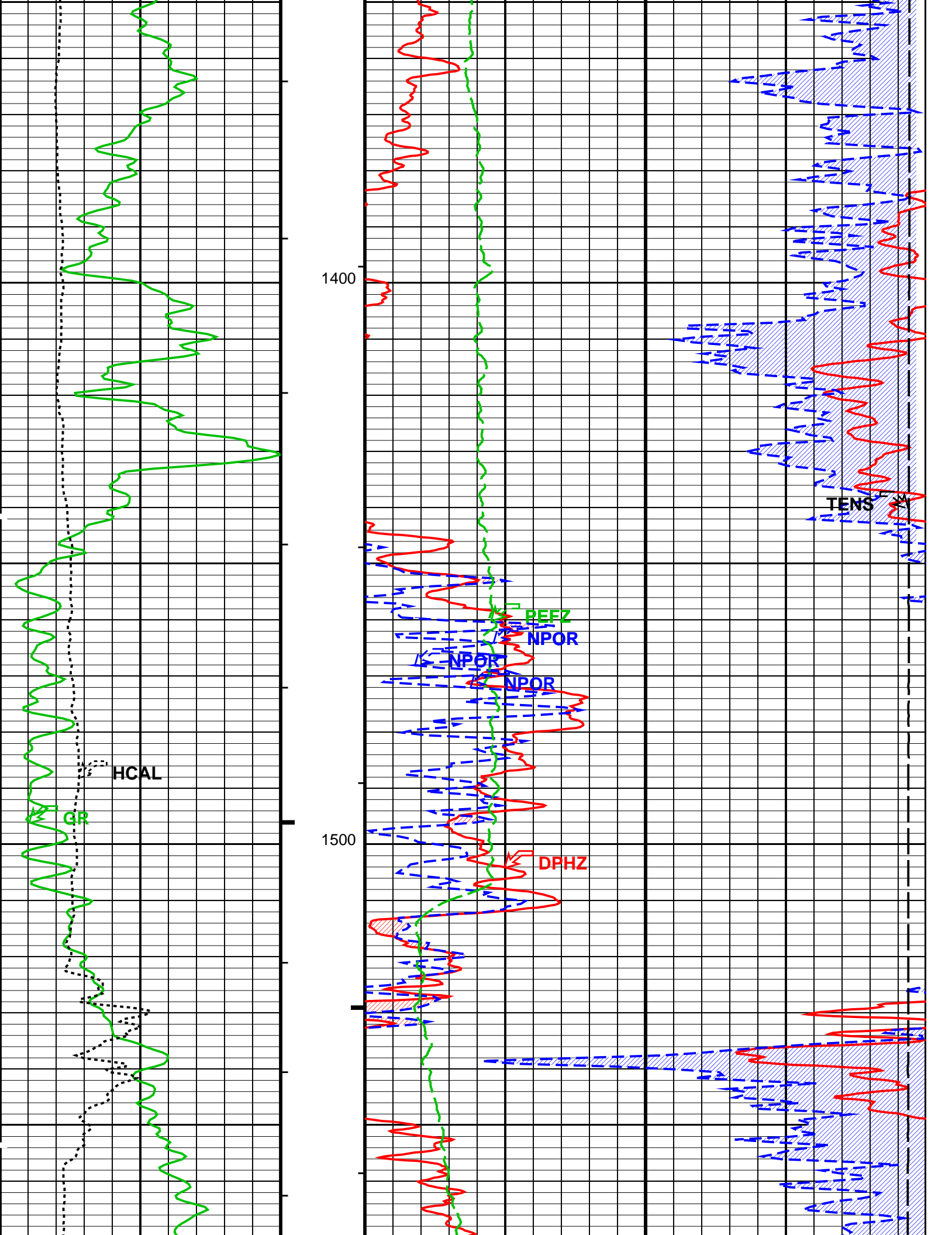


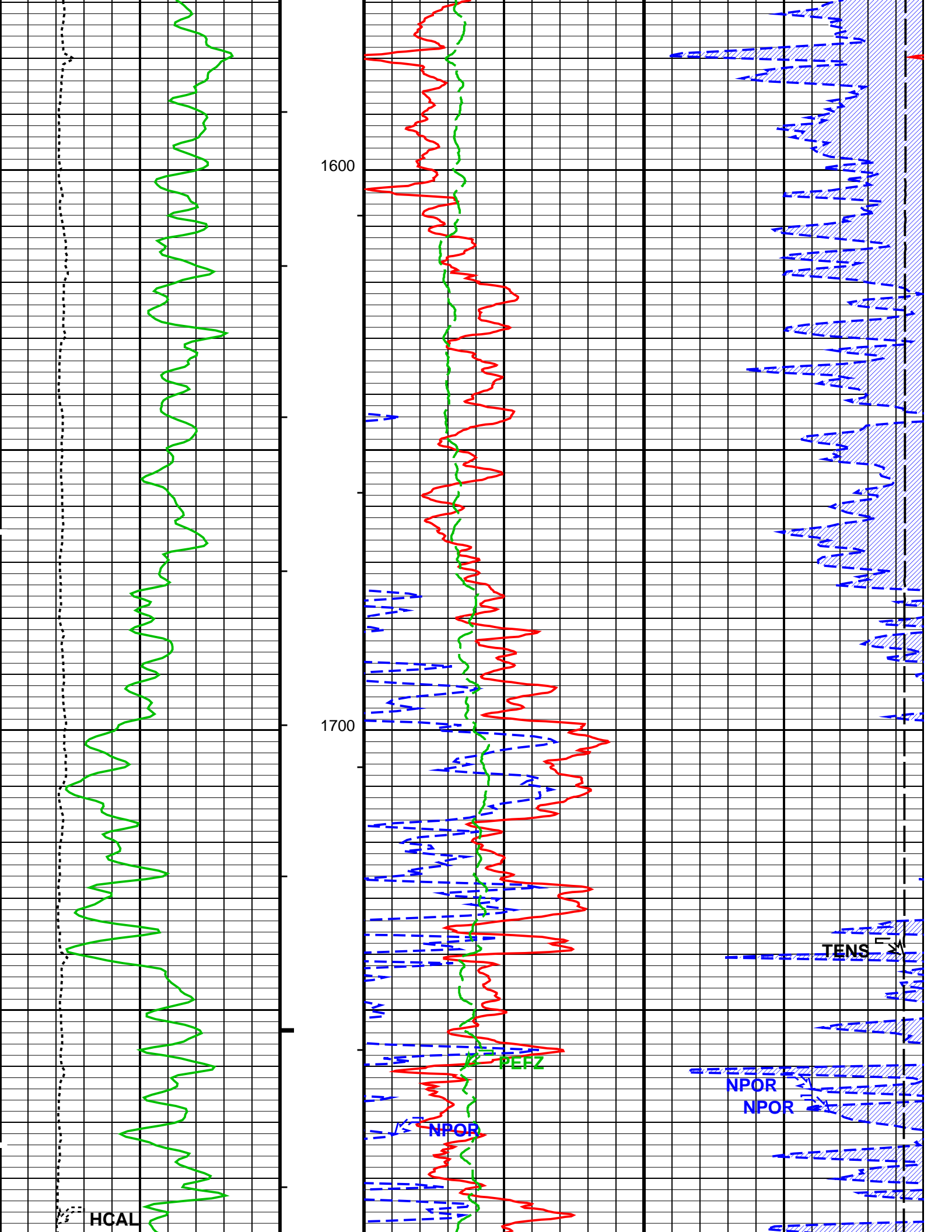


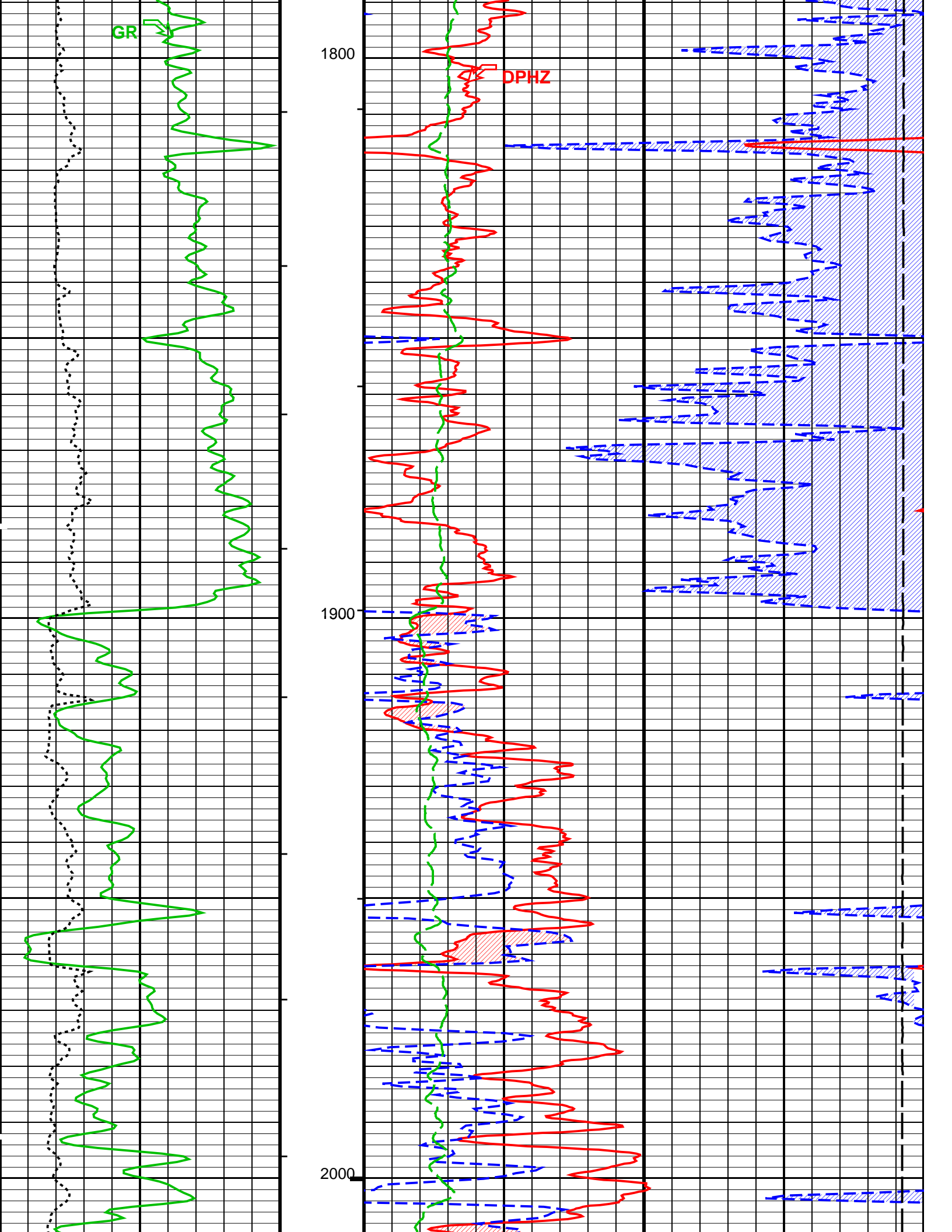


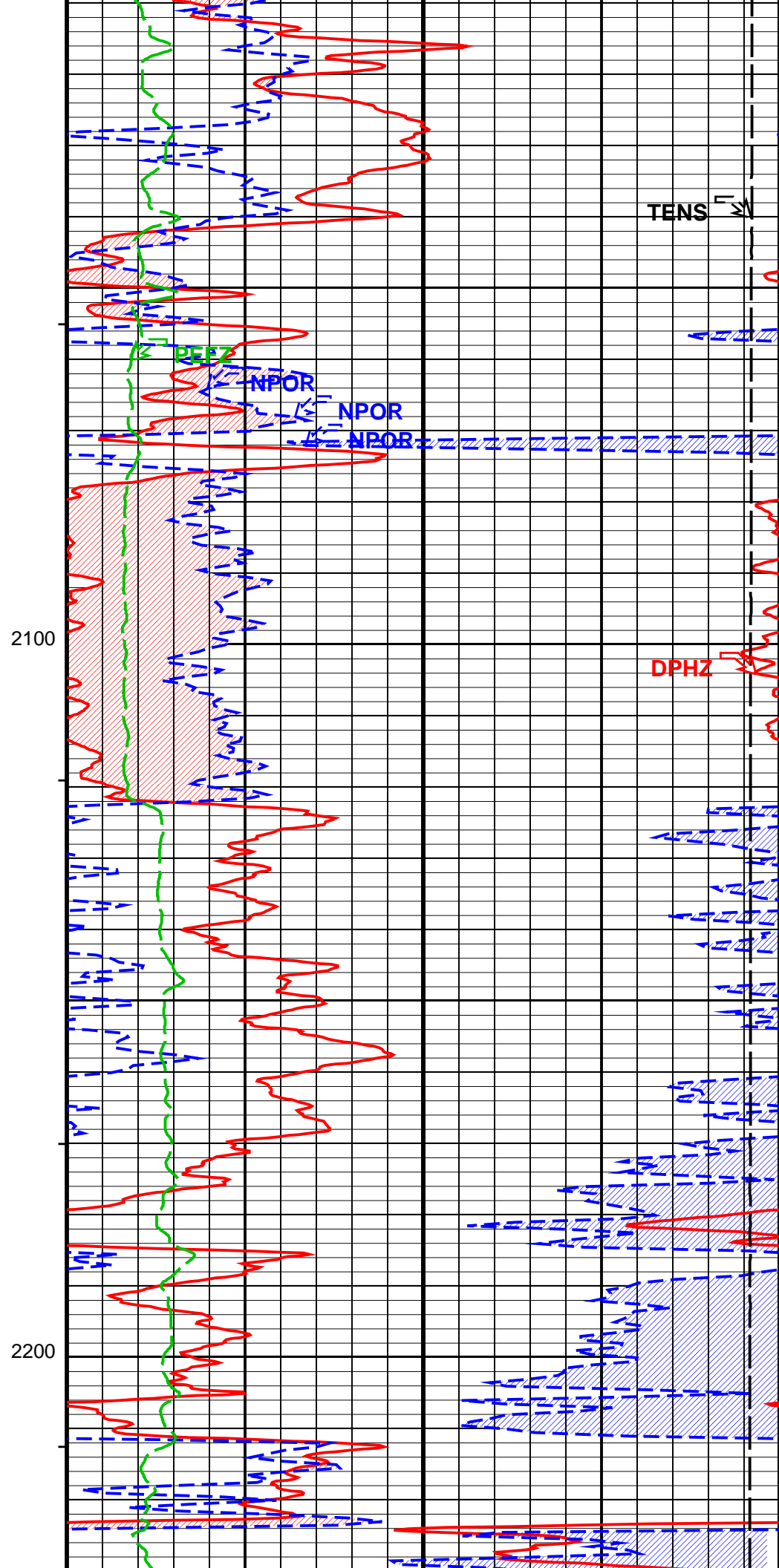
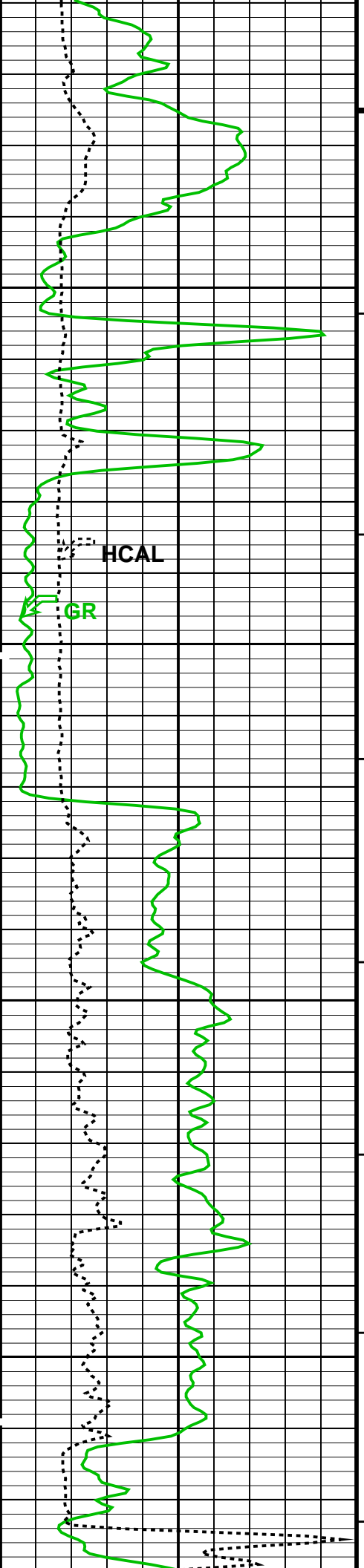


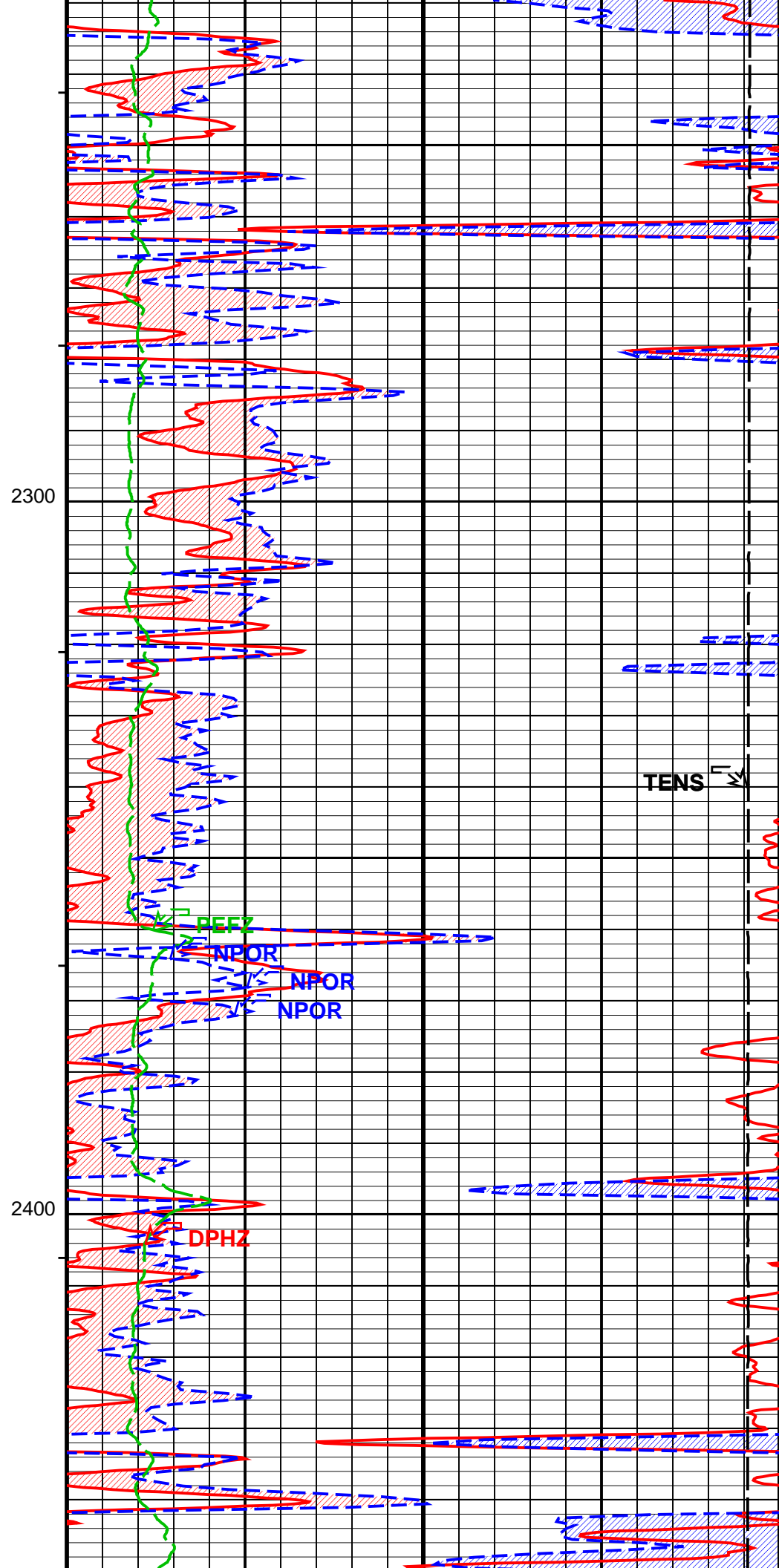
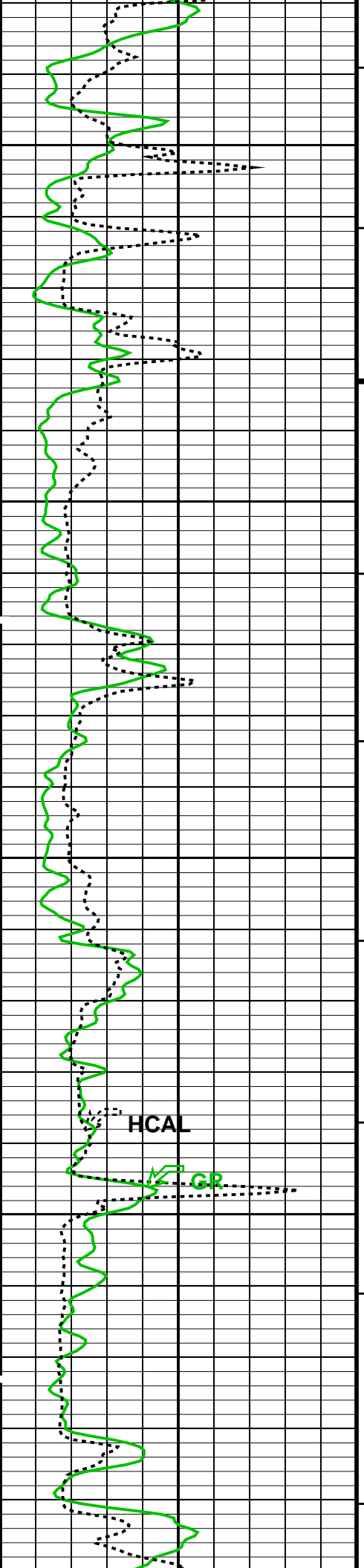


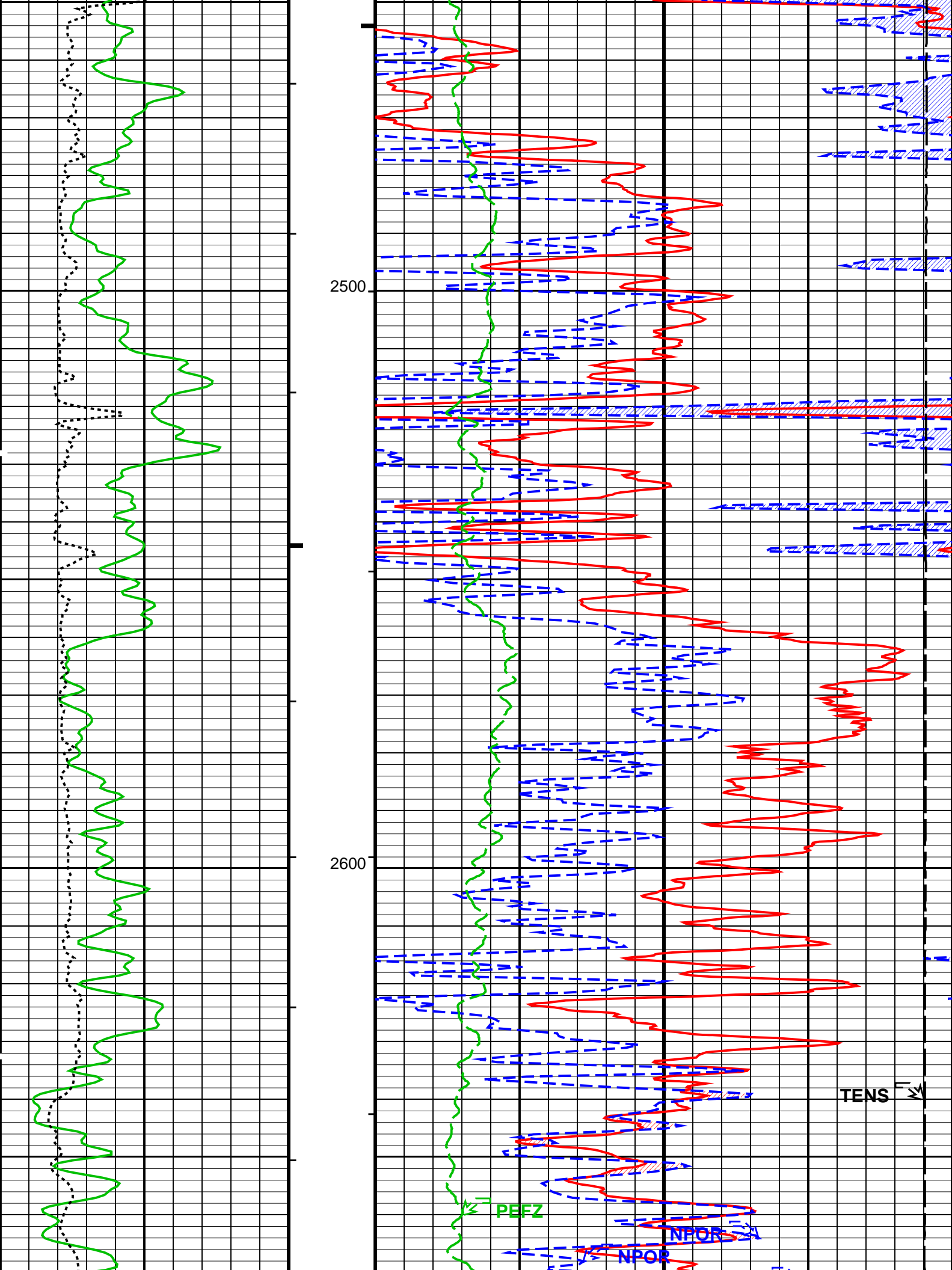


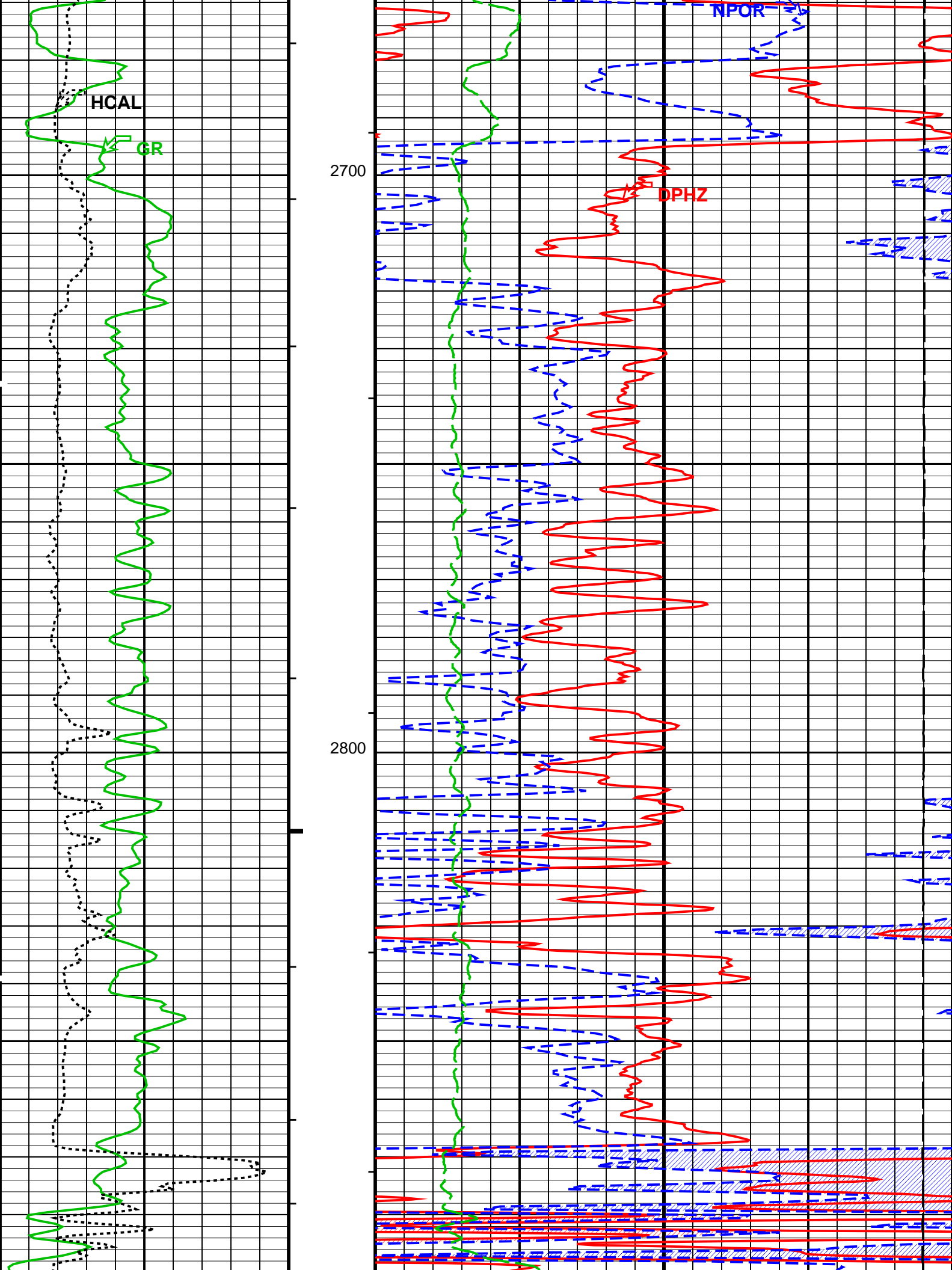


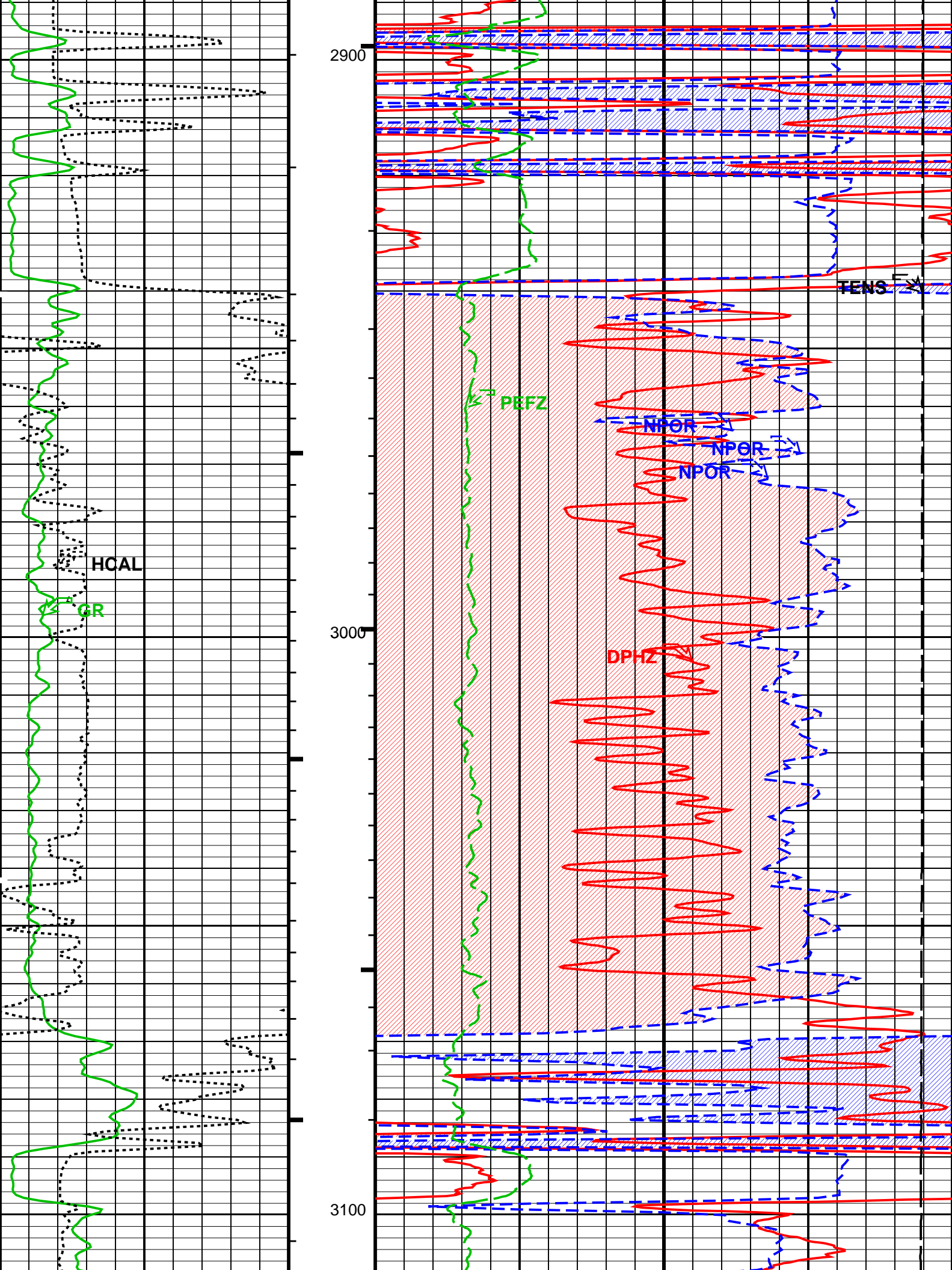


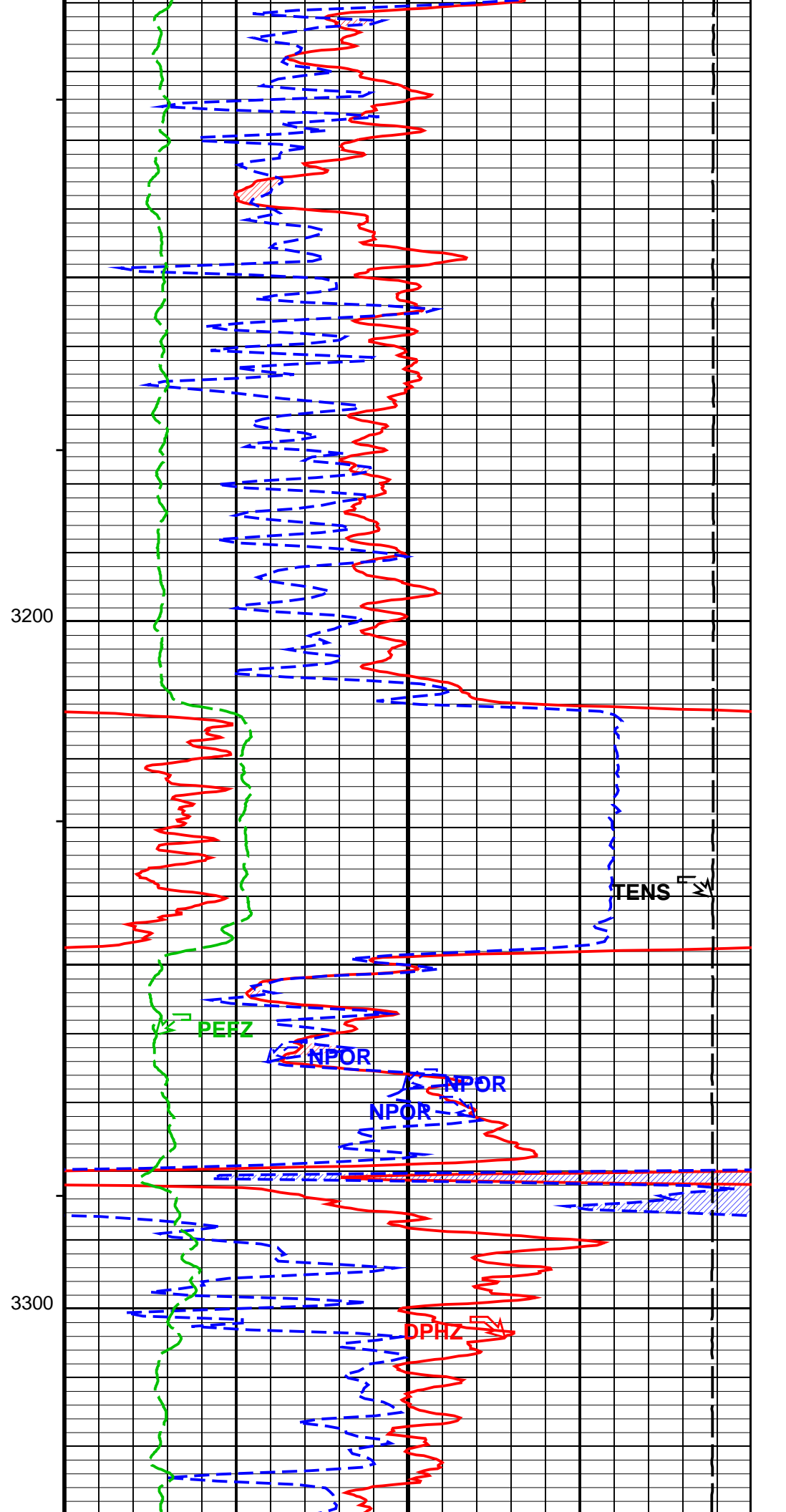
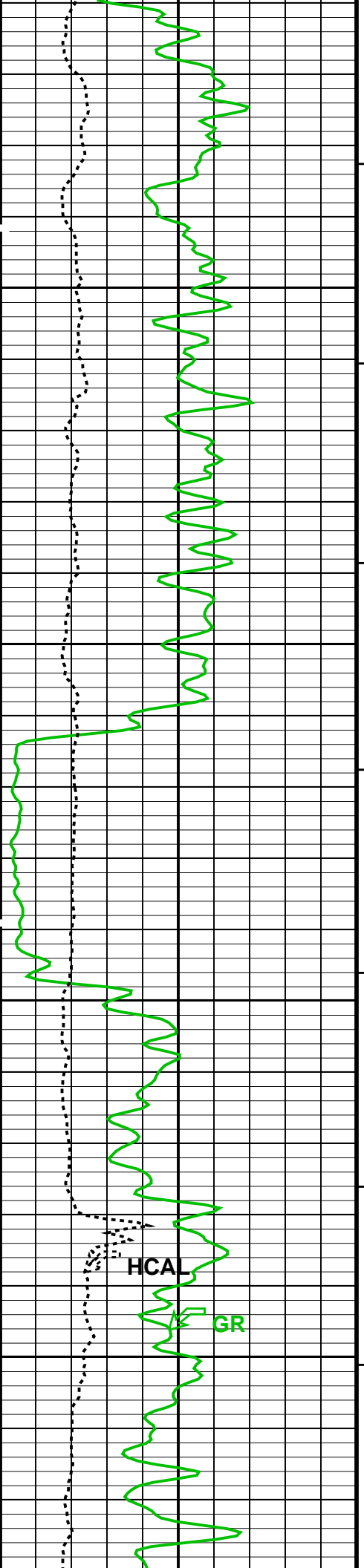


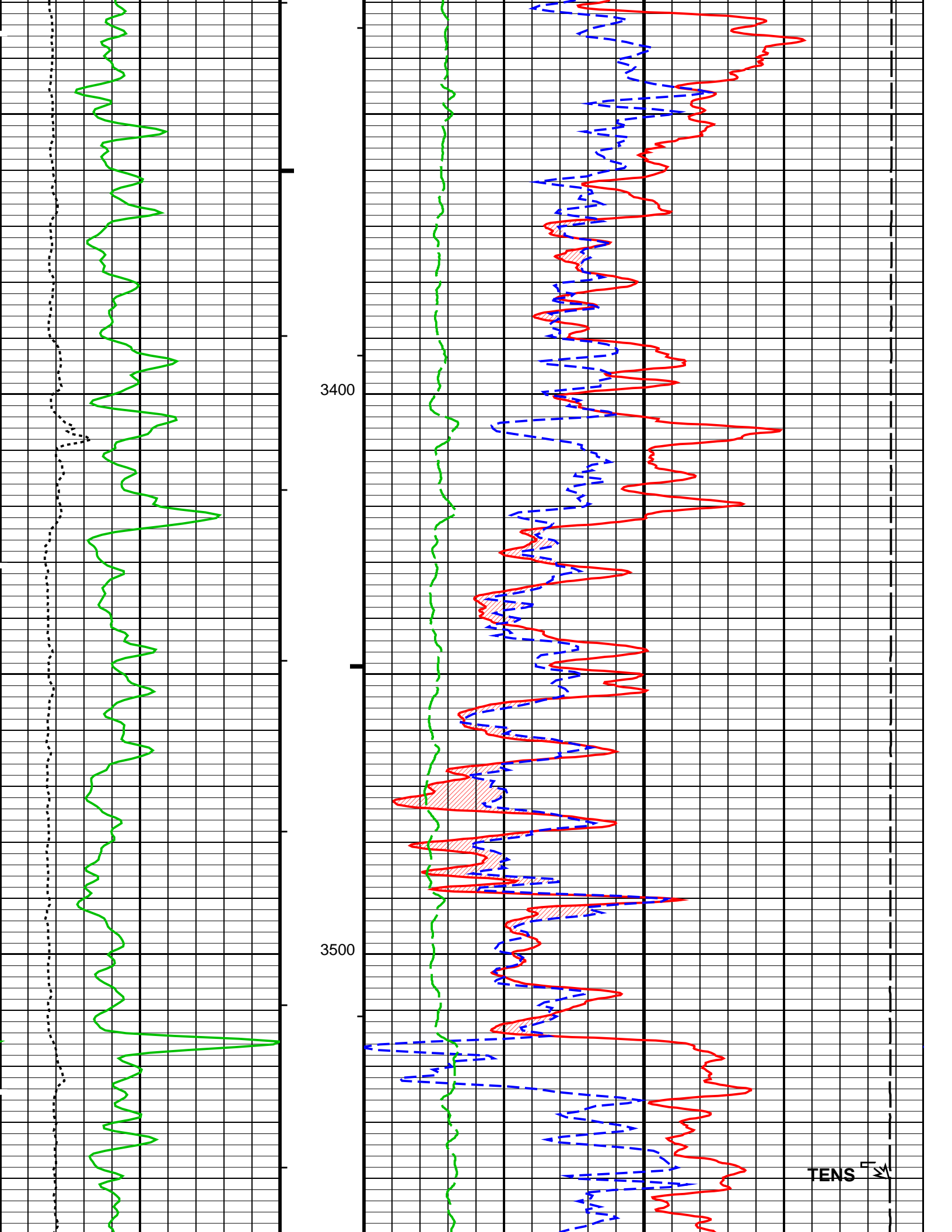


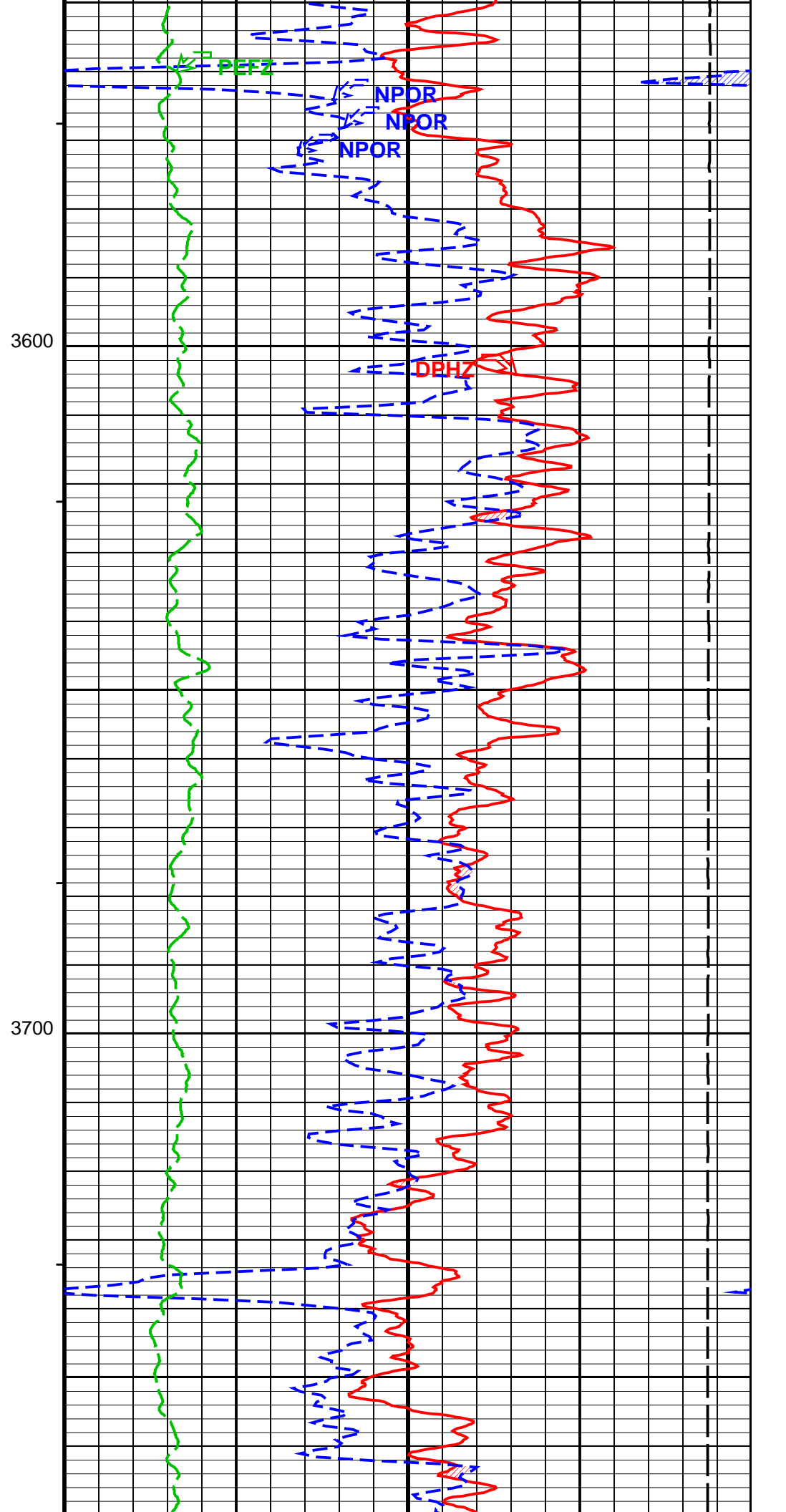
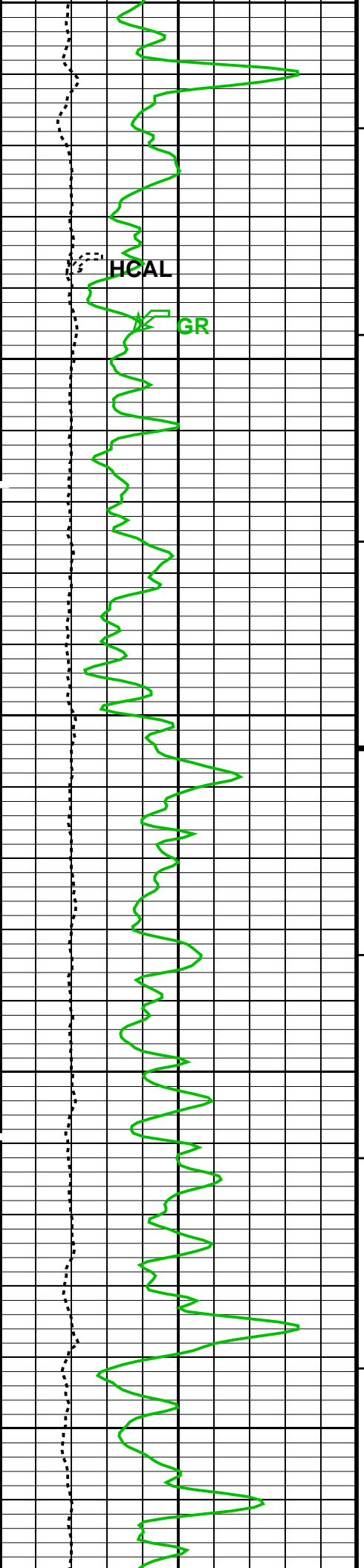


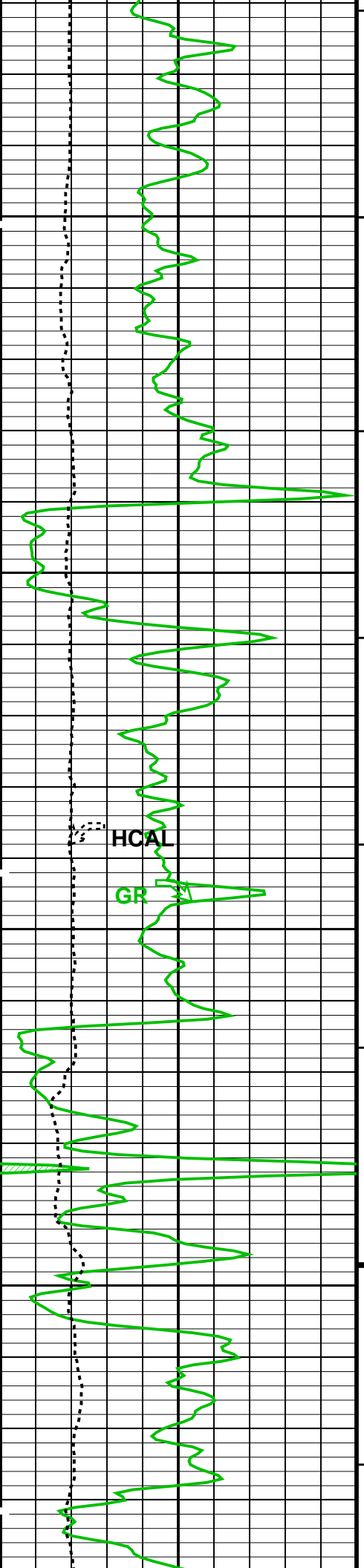












3800

3900

HCAL

GR

PEFZ

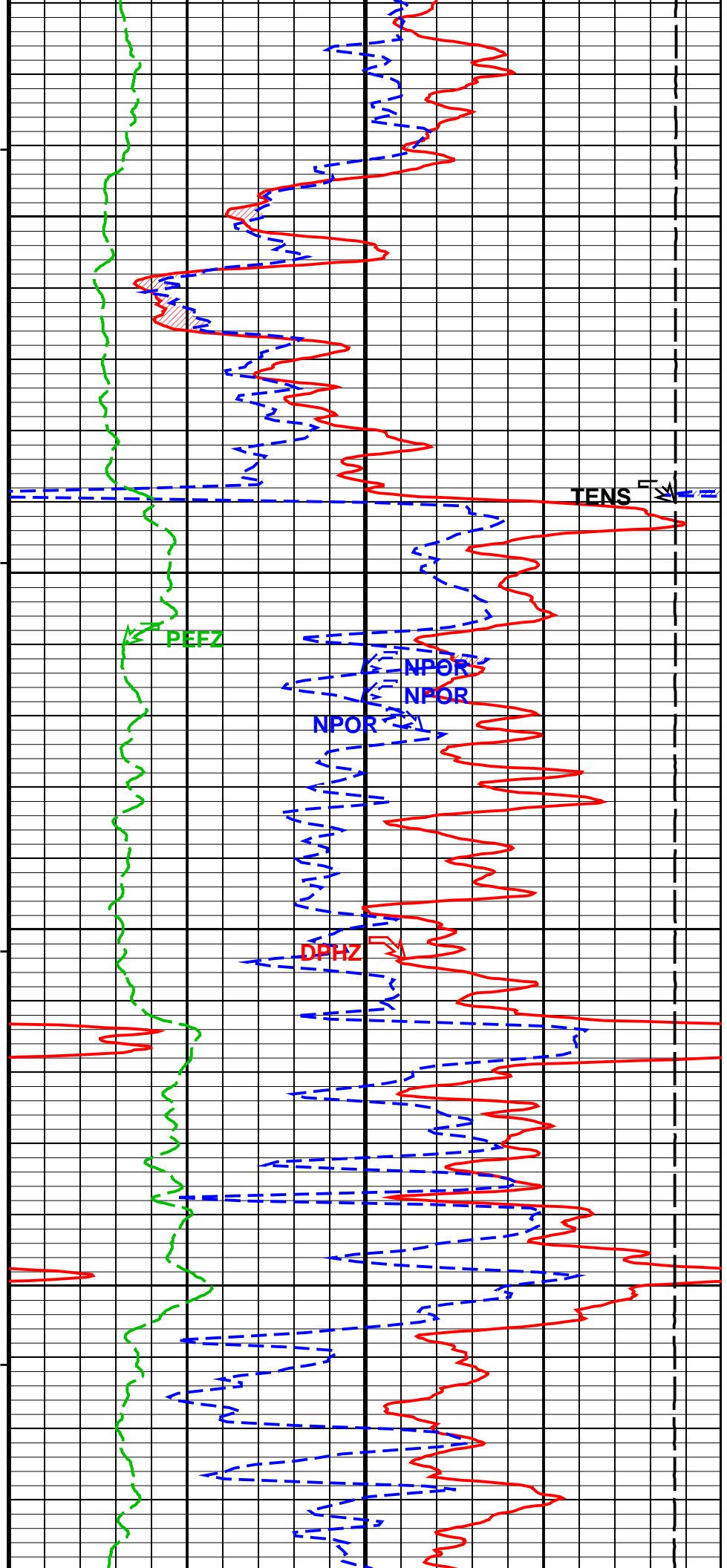
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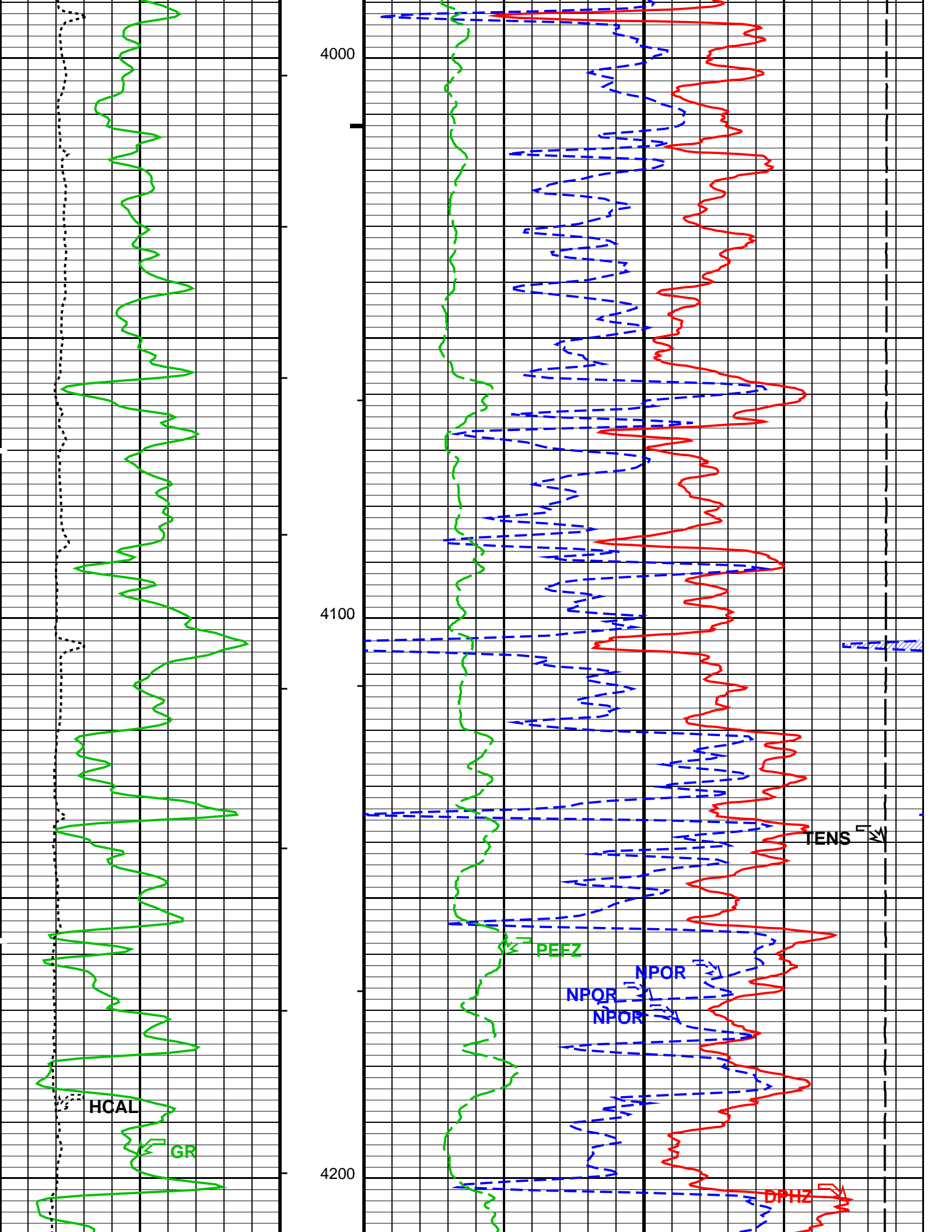
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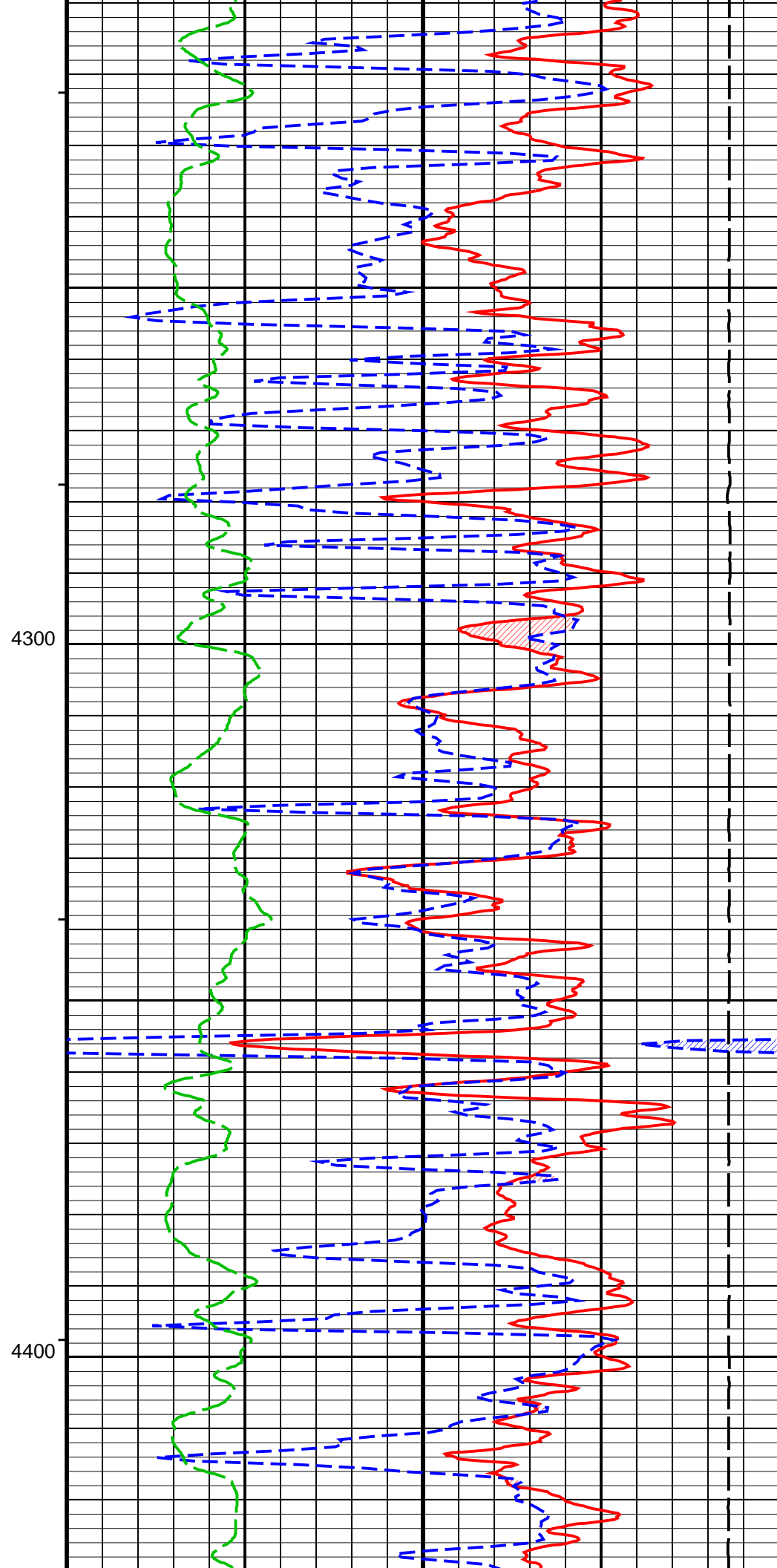
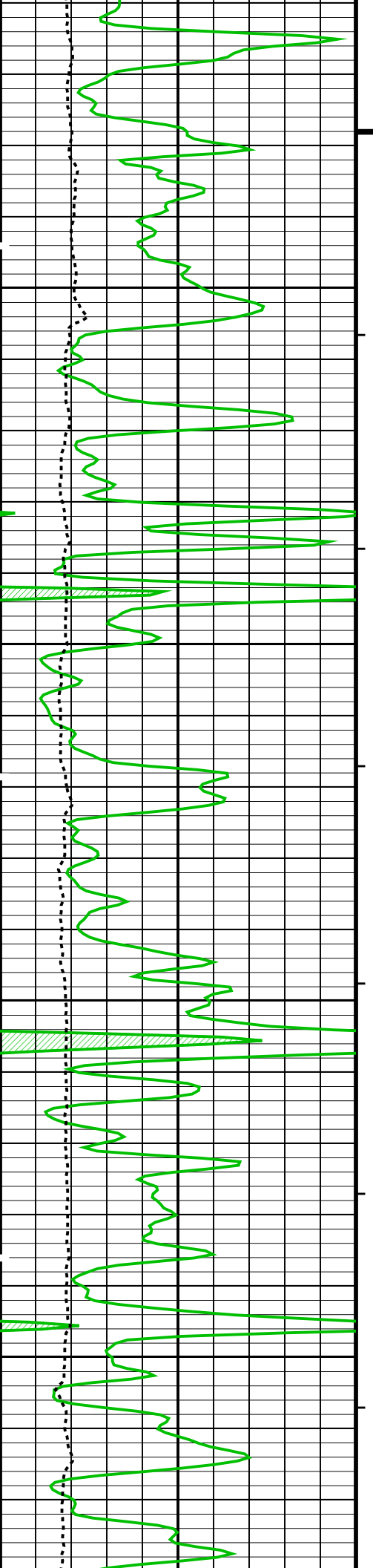
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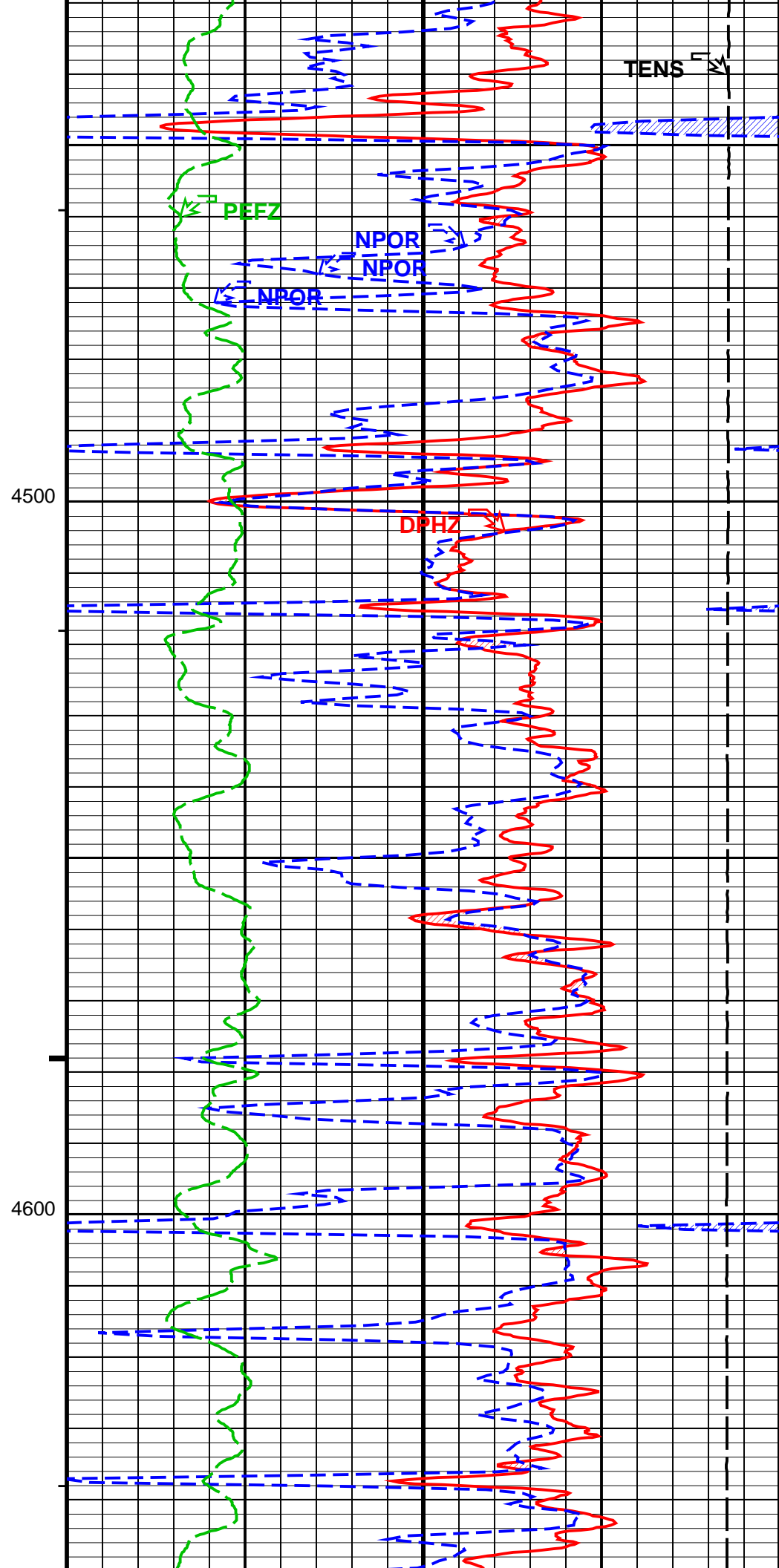
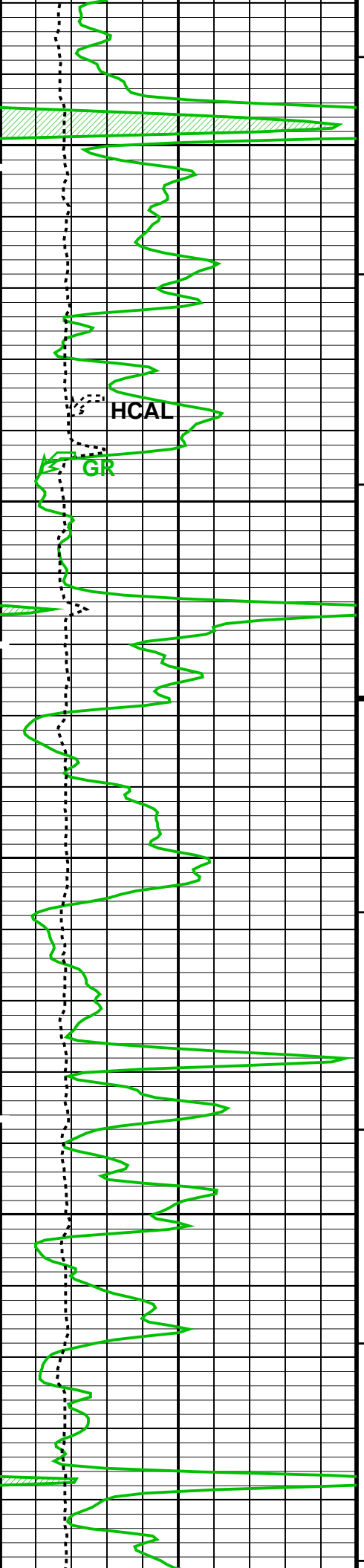
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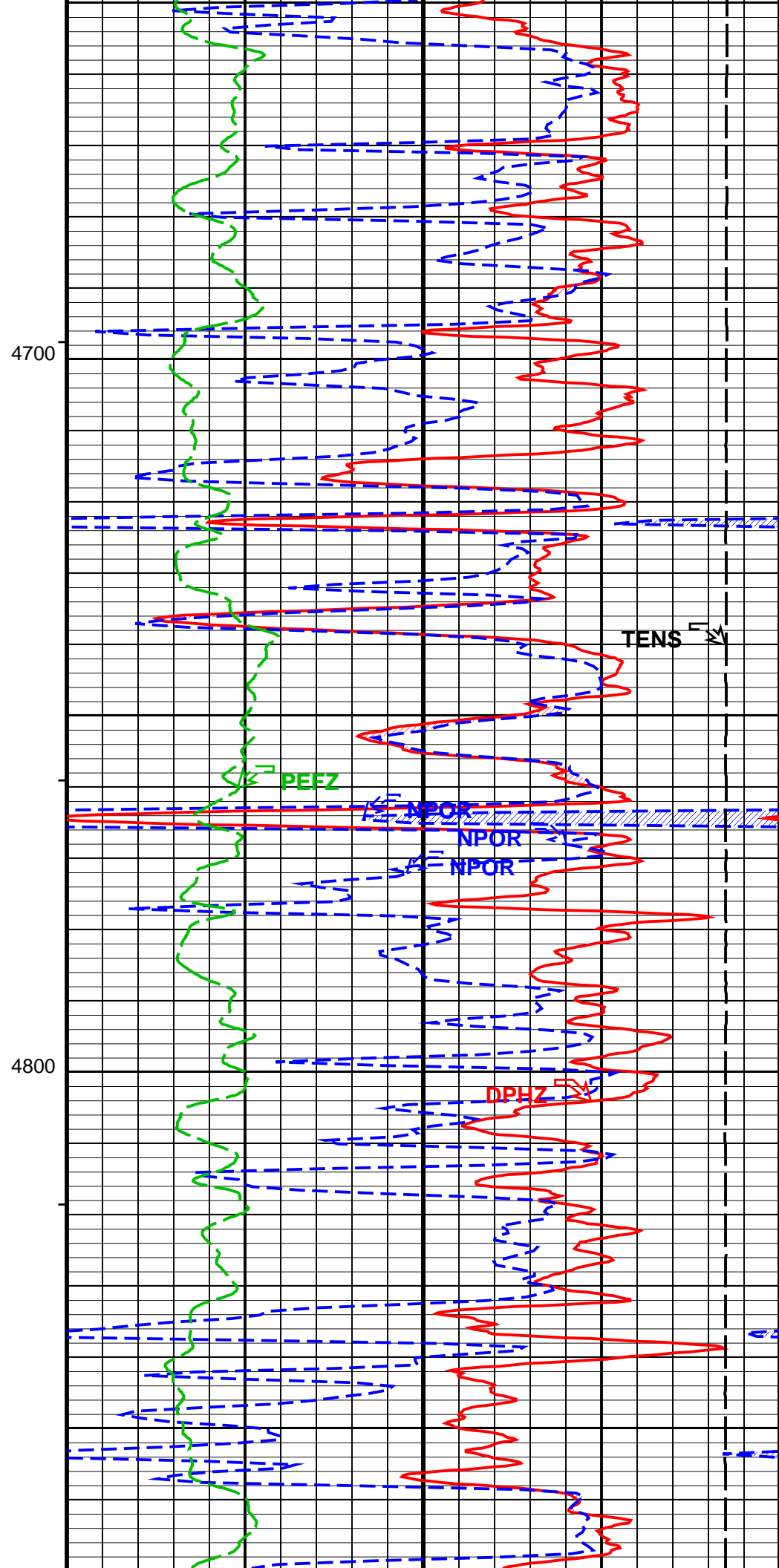
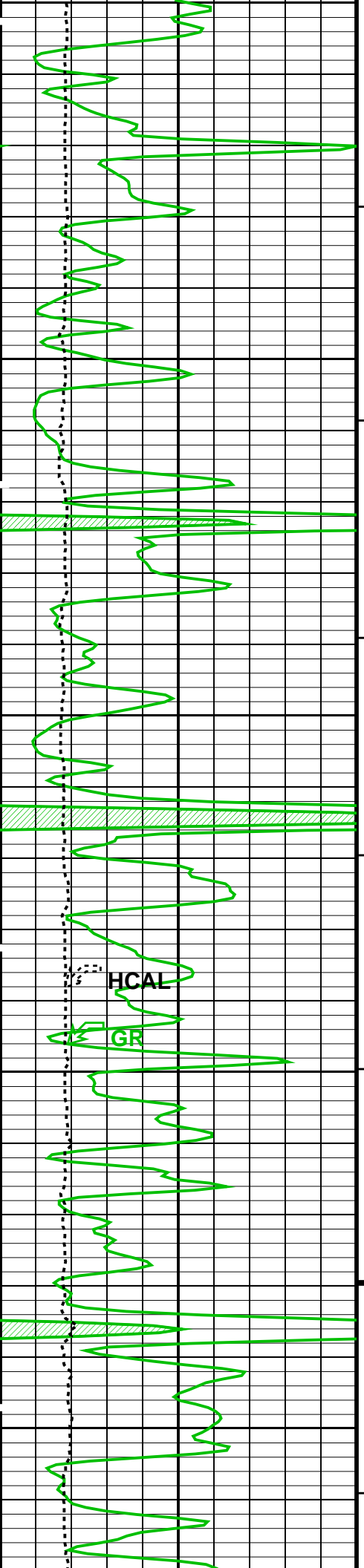
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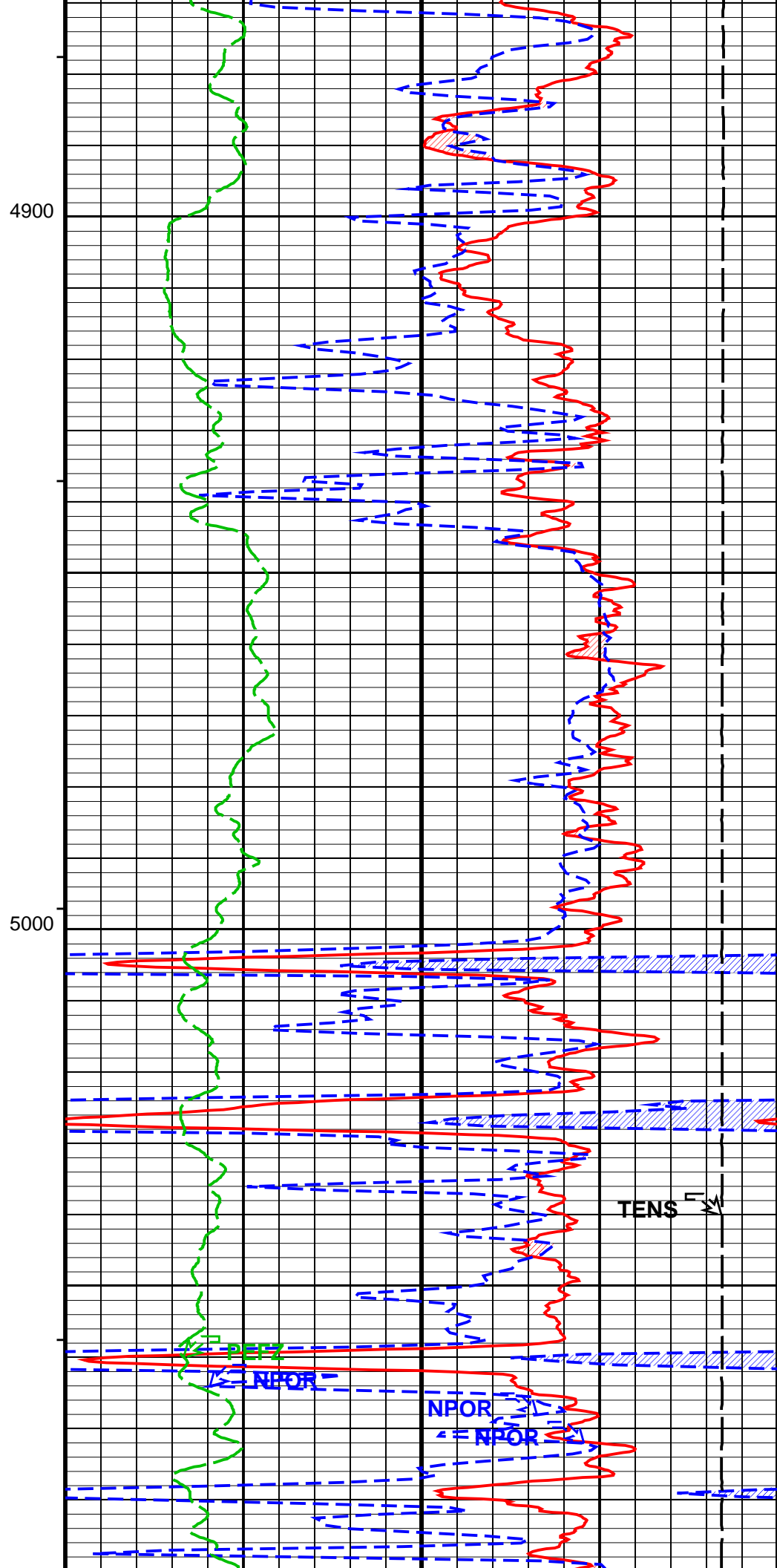
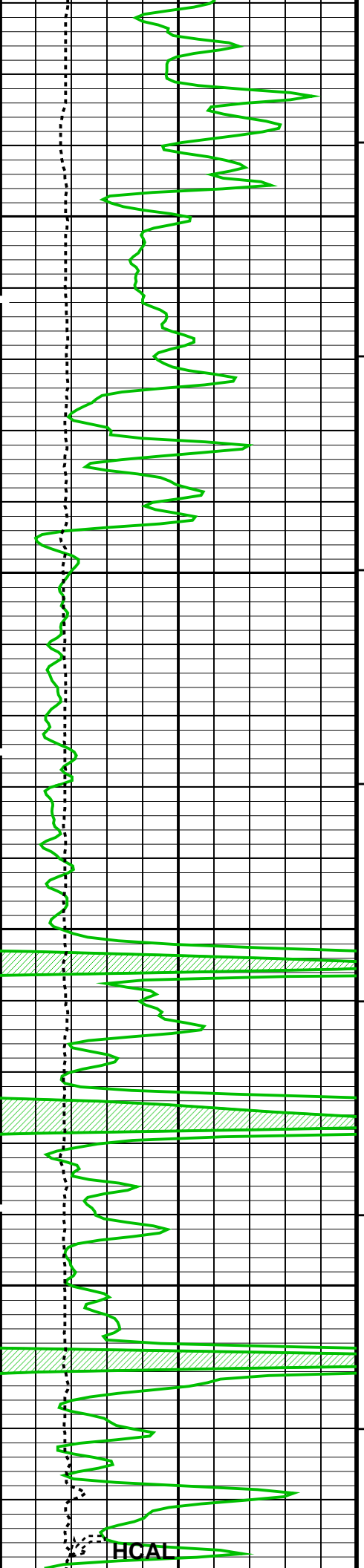


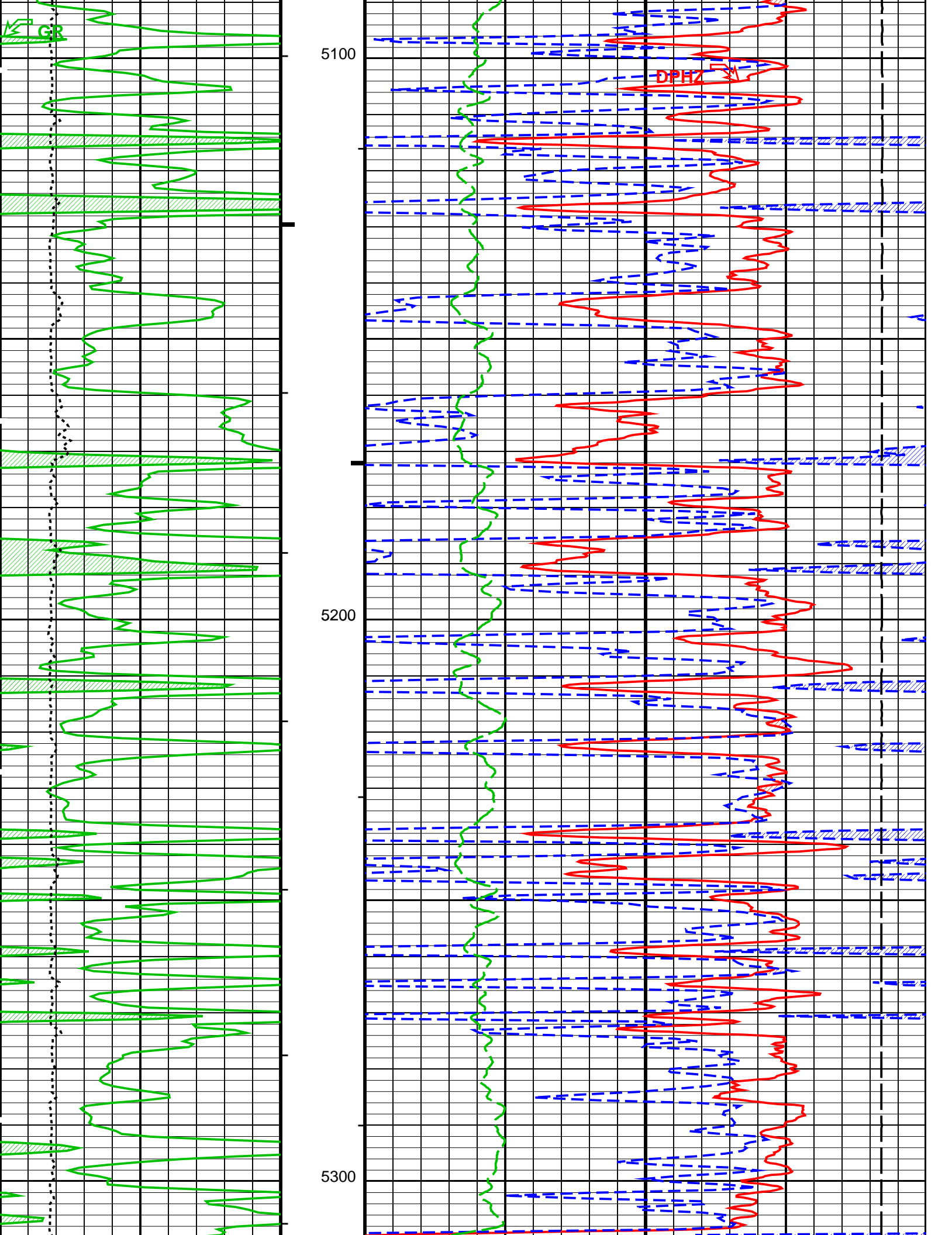


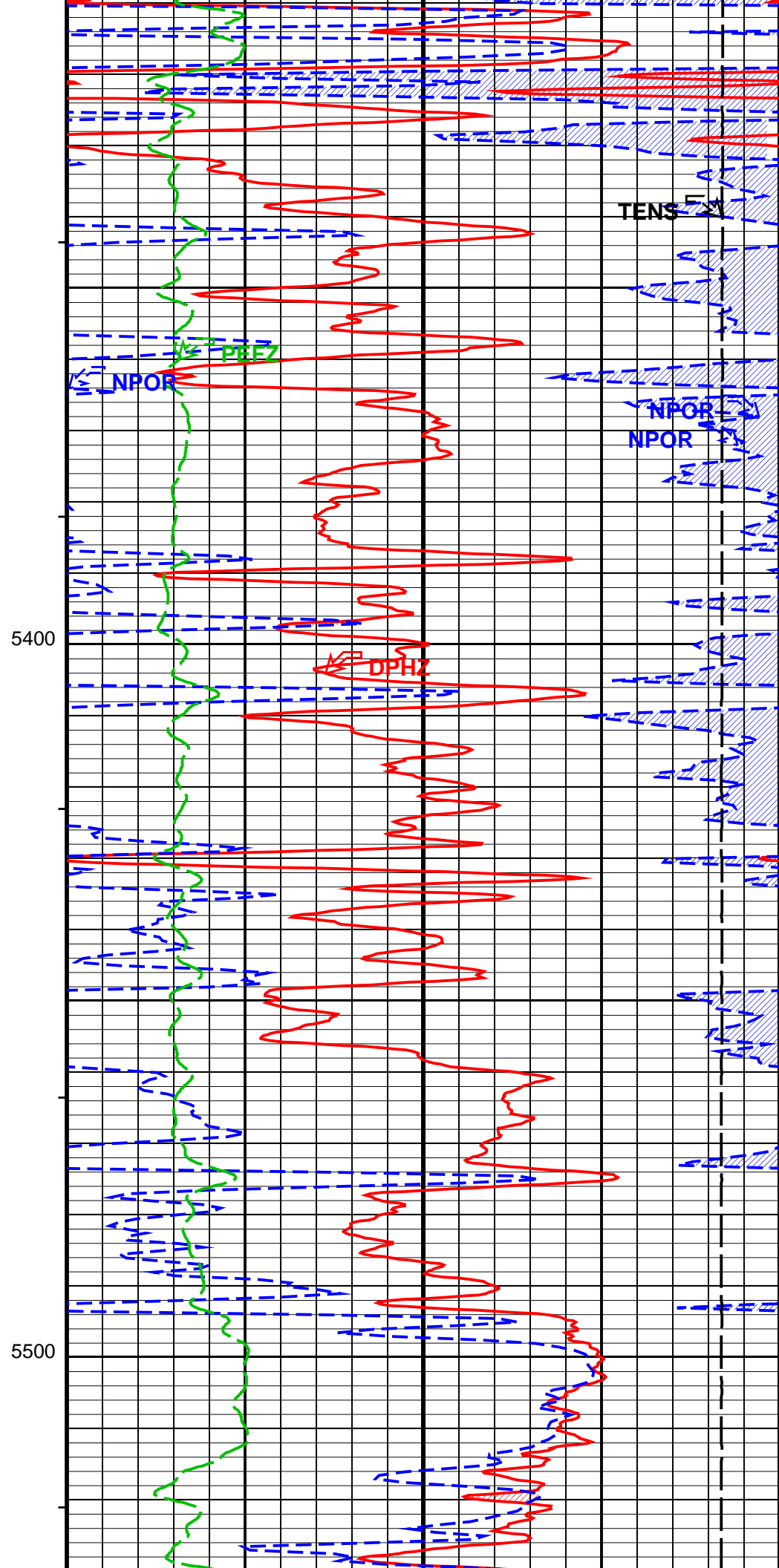
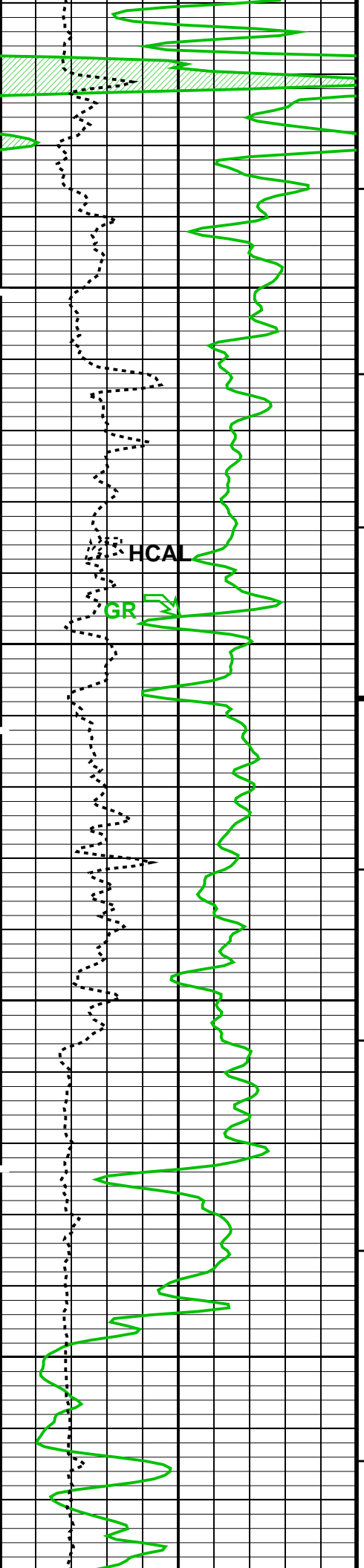


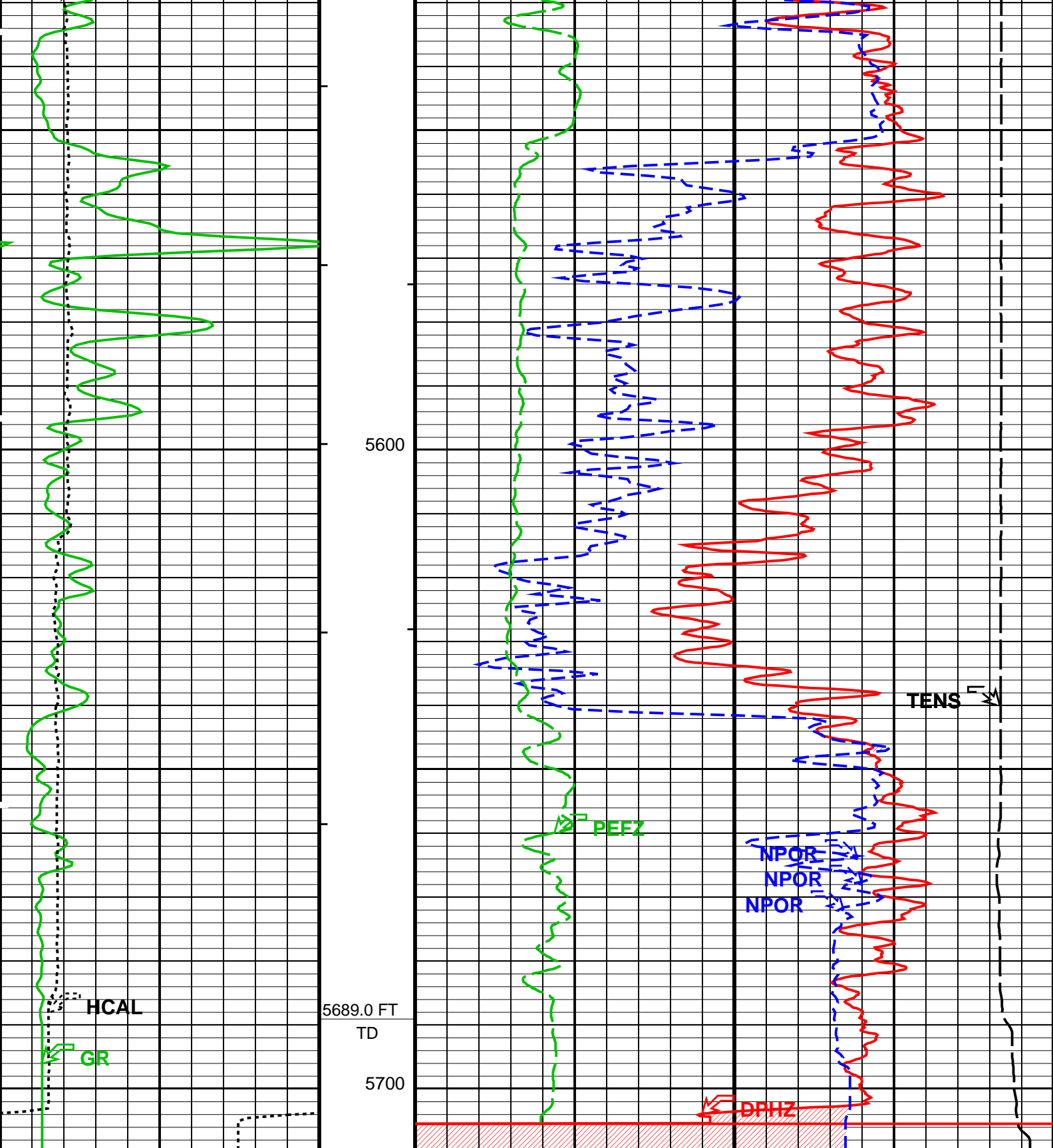




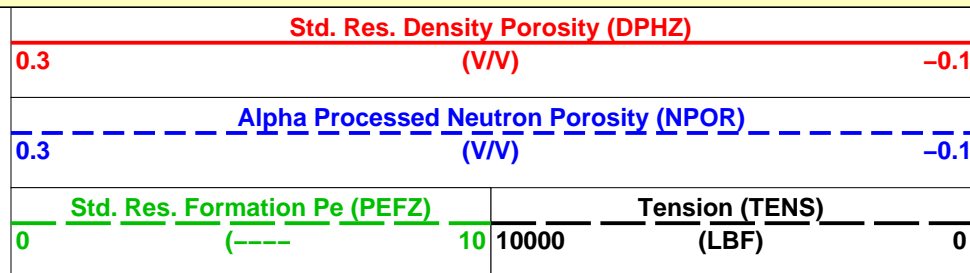
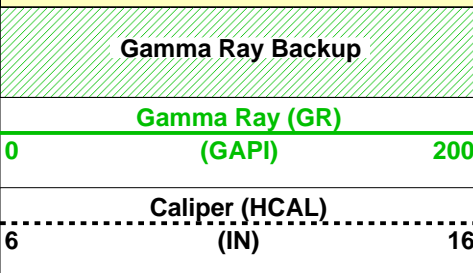








MAIN PASS: *** PLATFORM EXPRESS - NUCLEAR POROSITY ***



Gas Effect

PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
 - └ Integrated Cement Volume Minor Pip Every 10 F3
 - └ Integrated Cement Volume Major Pip Every 100 F3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
AIT-M: Array Induction Tool – M			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	68	DEGF
HILTH-FTB: High resolution Integrated Logging Tool-DTS			
BHFL	Borehole Fluid Type	WATER	
BHFL_TLD	HILT Nuclear Mud Base	WATER	
BHS	Borehole Status	OPEN	
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
FD	Fluid Density	1	G/C3
FSAL	Formation Salinity	–50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCLF	Germany Coal-like Formation Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
HSCO	Hole Size Correction Option	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MDEN	Matrix Density	2.71	G/C3
MWCO	Mud Weight Correction Option	NO	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	HiRes	
NSAR	HRDD Depth Sampling Rate	1	IN
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	68	DEGF
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	YES	
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
FCD	Future Casing (Outer) Diameter	5.5	IN
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	68	DEGF
PERT: Preliminary Evaluation – Real Time			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	68	DEGF
STI: Stuck Tool Indicator			
TDL	Total Depth – Logger	5689.00	FT
System and Miscellaneous			
BS	Bit Size	7.875	IN
BSAL	Borehole Salinity	–50000.00	PPM
CSIZ	Current Casing Size	8.625	IN
CWEI	Casing Weight	24.00	LB/F
DFD	Drilling Fluid Density	8.40	LB/G
DO	Depth Offset for Playback	0.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
MST	Mud Sample Temperature	75.00	DEGF
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	0.7147	OHMM
TD	Total Depth	5689	FT

OP System Version: 18C0-147

AIT-M	18C0-147	HILTH-FTB	18C0-147
DTC-H	18C0-147		

Input DLIS Files

DEFAULT	MERGE_AIT_026L	FN:1	PRODUCER	10-Apr-2012 16:37	5709.5 FT	328.0 FT
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Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_032PUP	FN:28	PRODUCER	10-Apr-2012 16:52
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Schlumberger

PORO HI RES 10" = 100'

MAXIS Field Log

Input DLIS Files

DEFAULT	MERGE_AIT_026L	FN:1	PRODUCER	10-Apr-2012 16:37	5709.5 FT	328.0 FT
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Output DLIS Files

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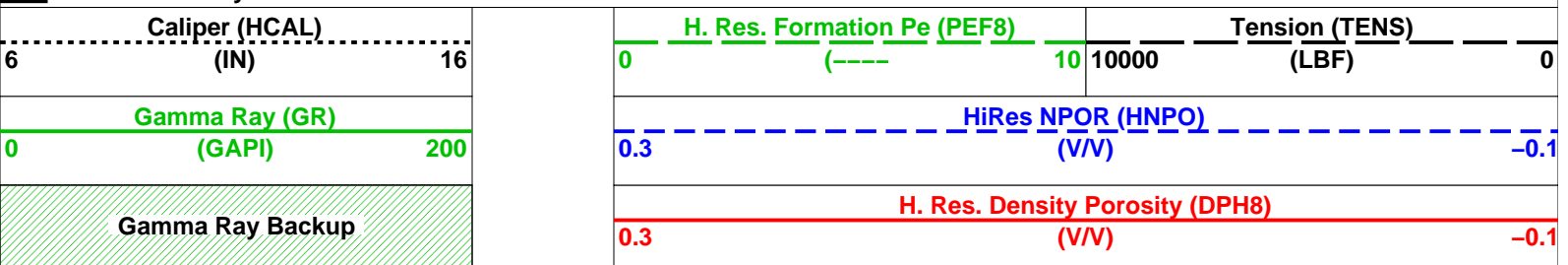
OP System Version: 18C0-147

AIT-M	18C0-147	HILTH-FTB	18C0-147
DTC-H	18C0-147		

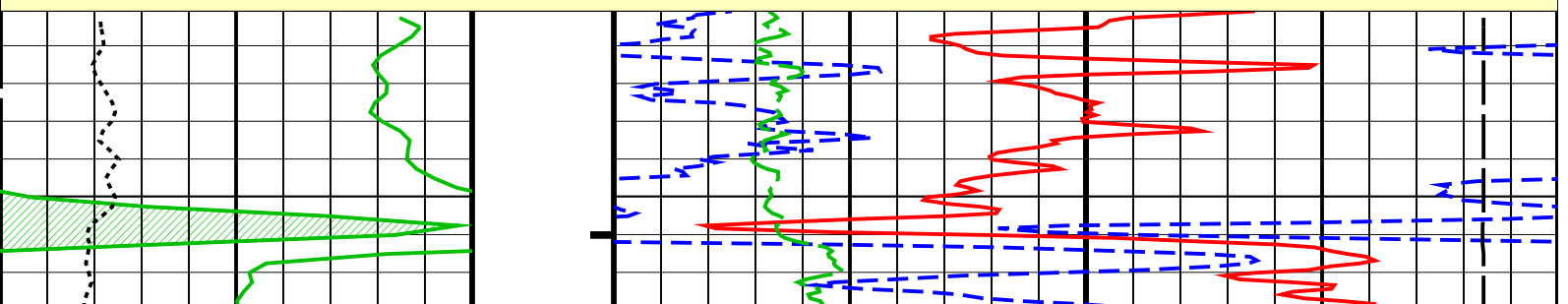
PIP SUMMARY

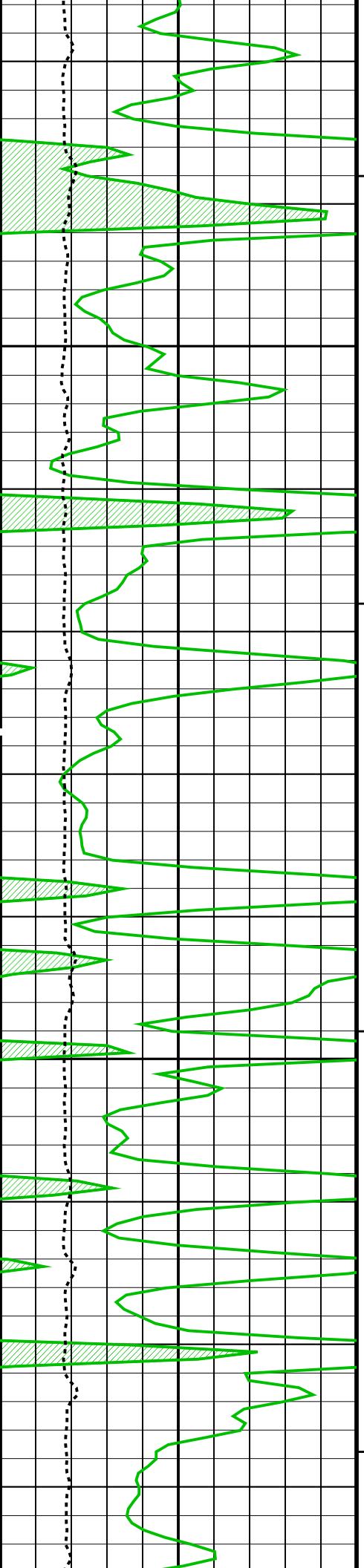
- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
- └ Integrated Cement Volume Minor Pip Every 10 F3
- └ Integrated Cement Volume Major Pip Every 100 F3

Time Mark Every 60 S



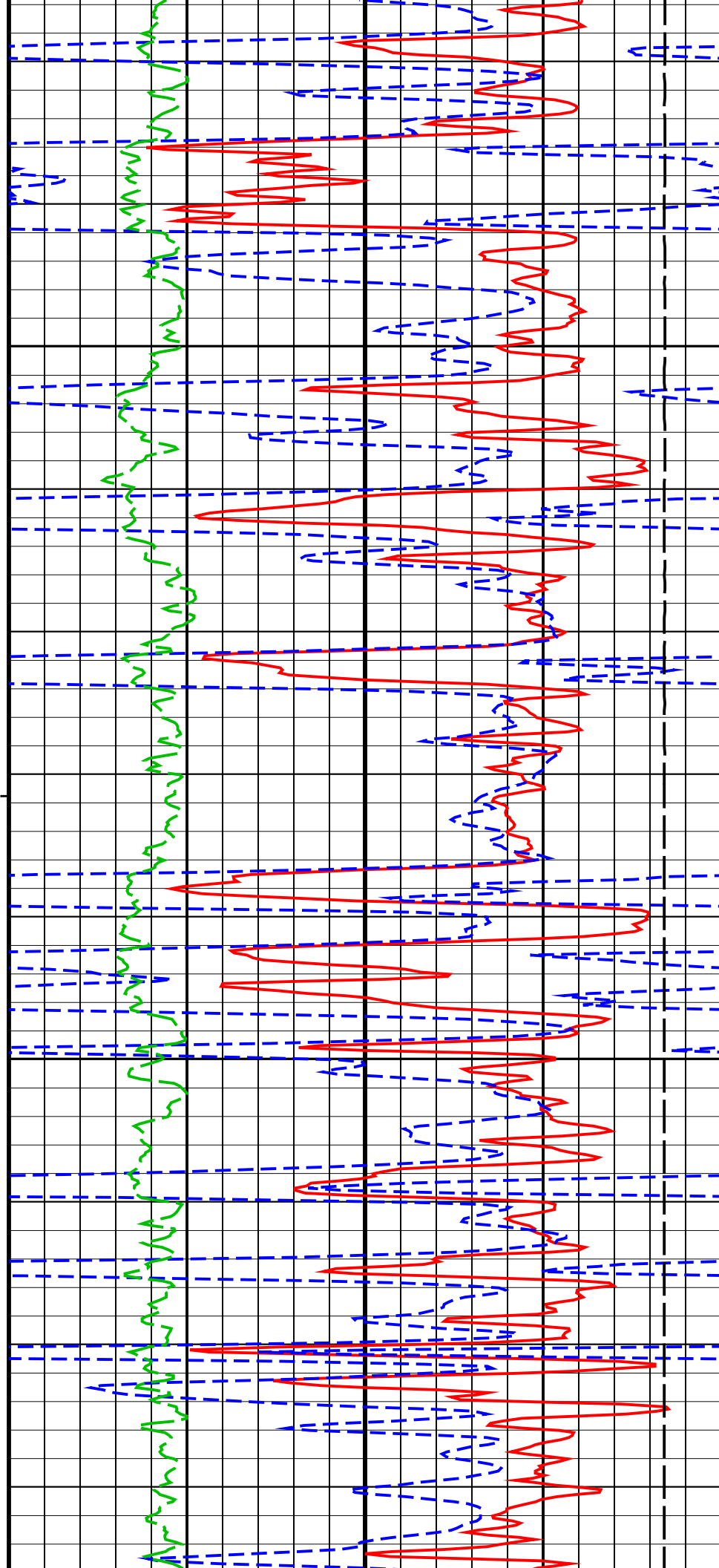
MAIN PASS: *** PLATFORM EXPRESS - NUCLEAR POROSITY ***

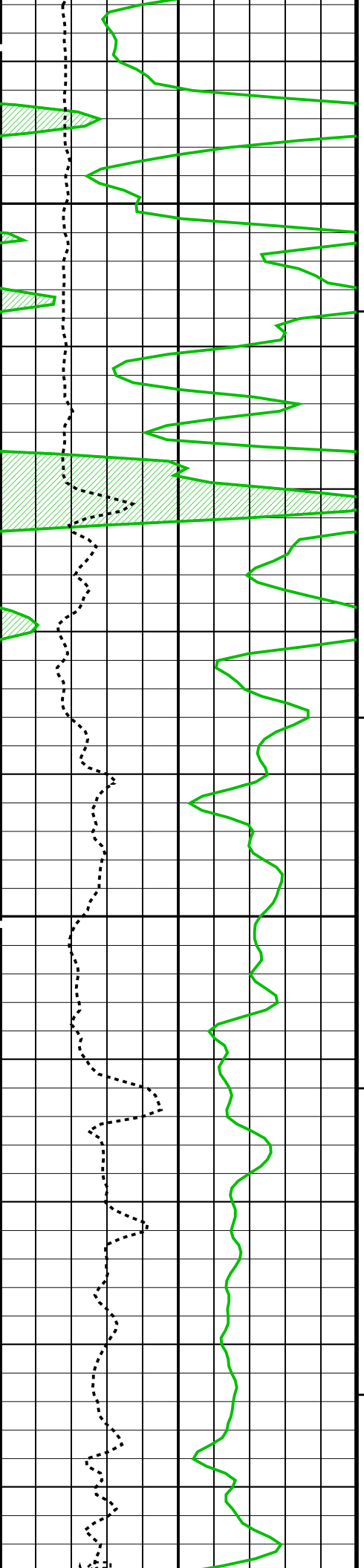




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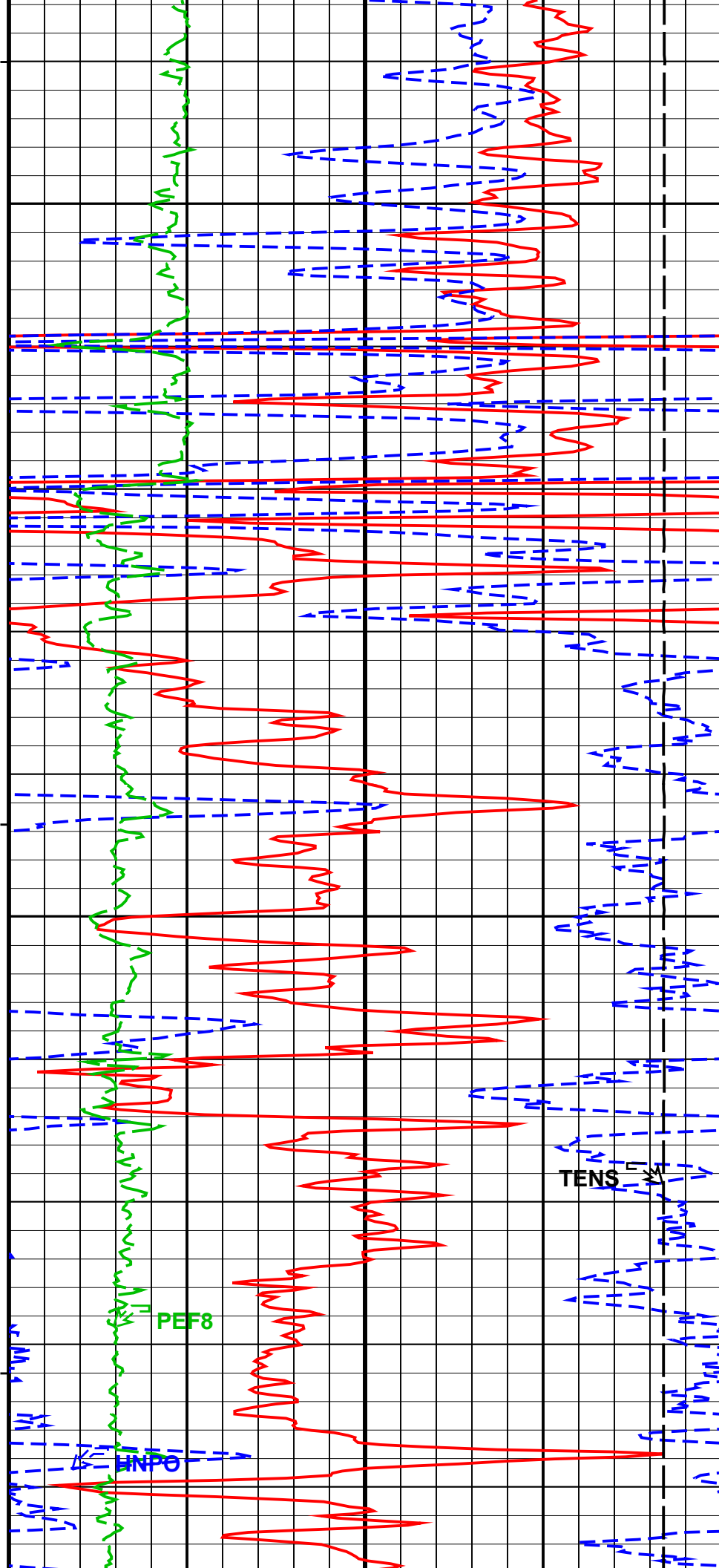
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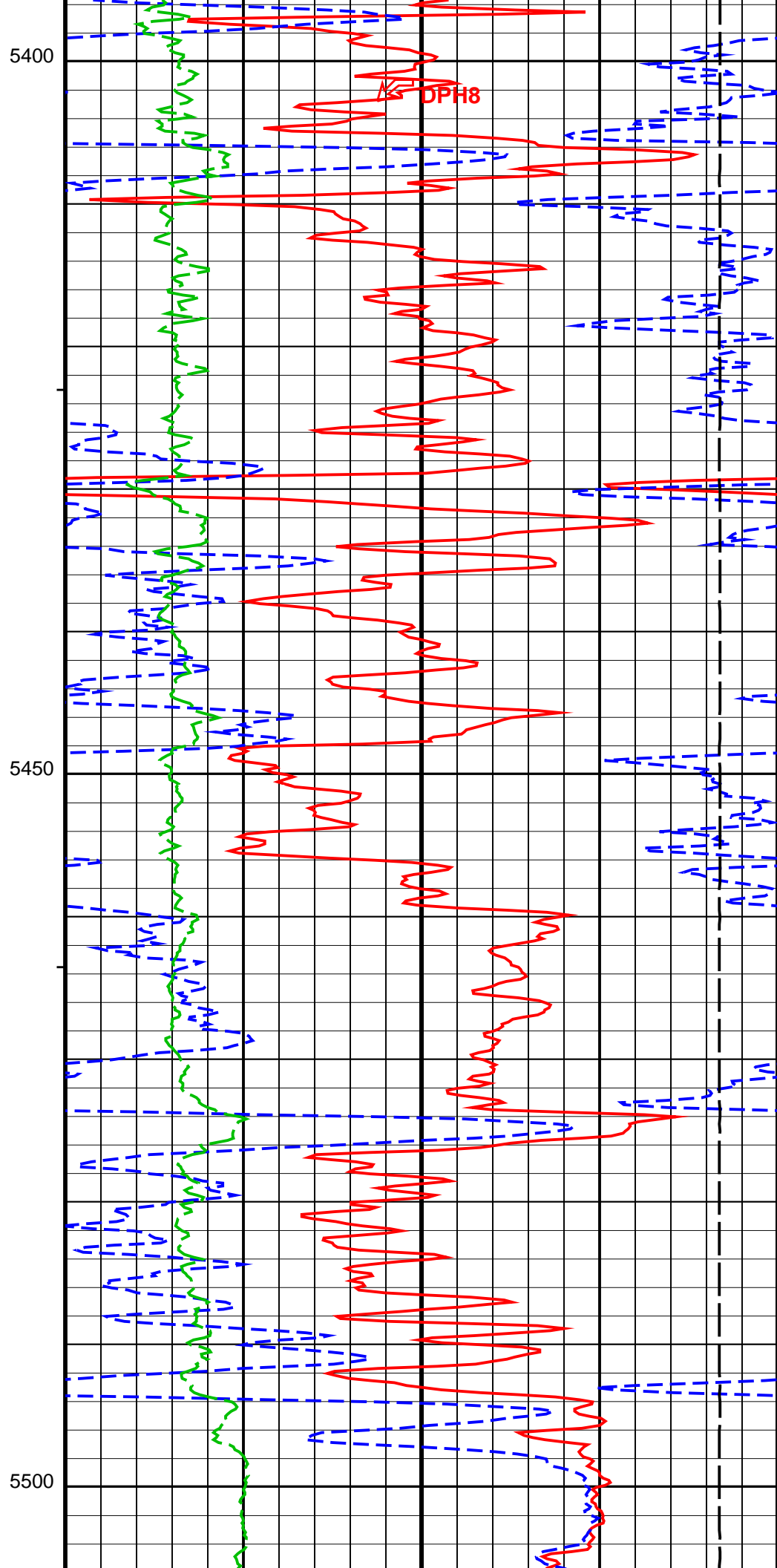
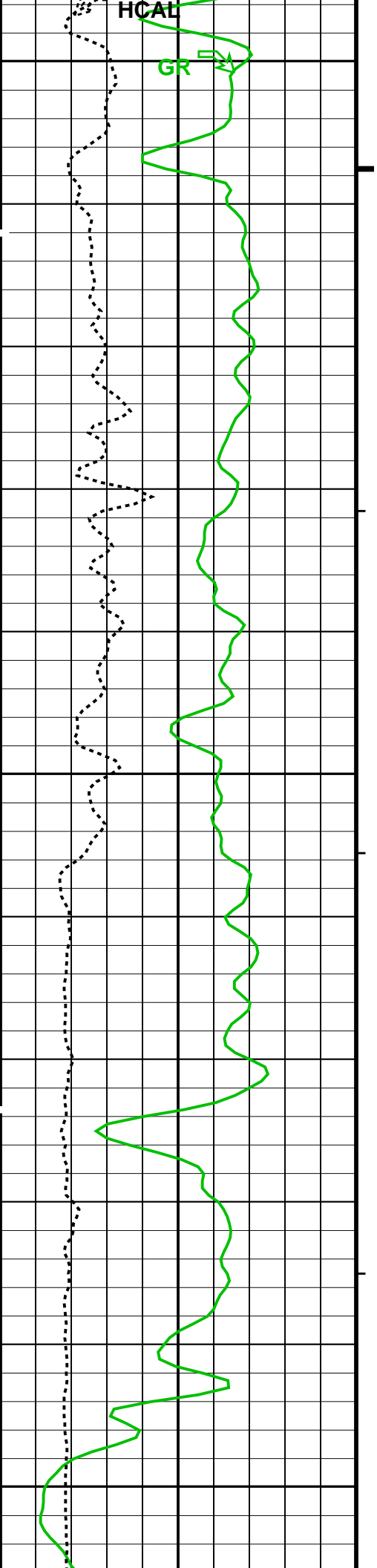


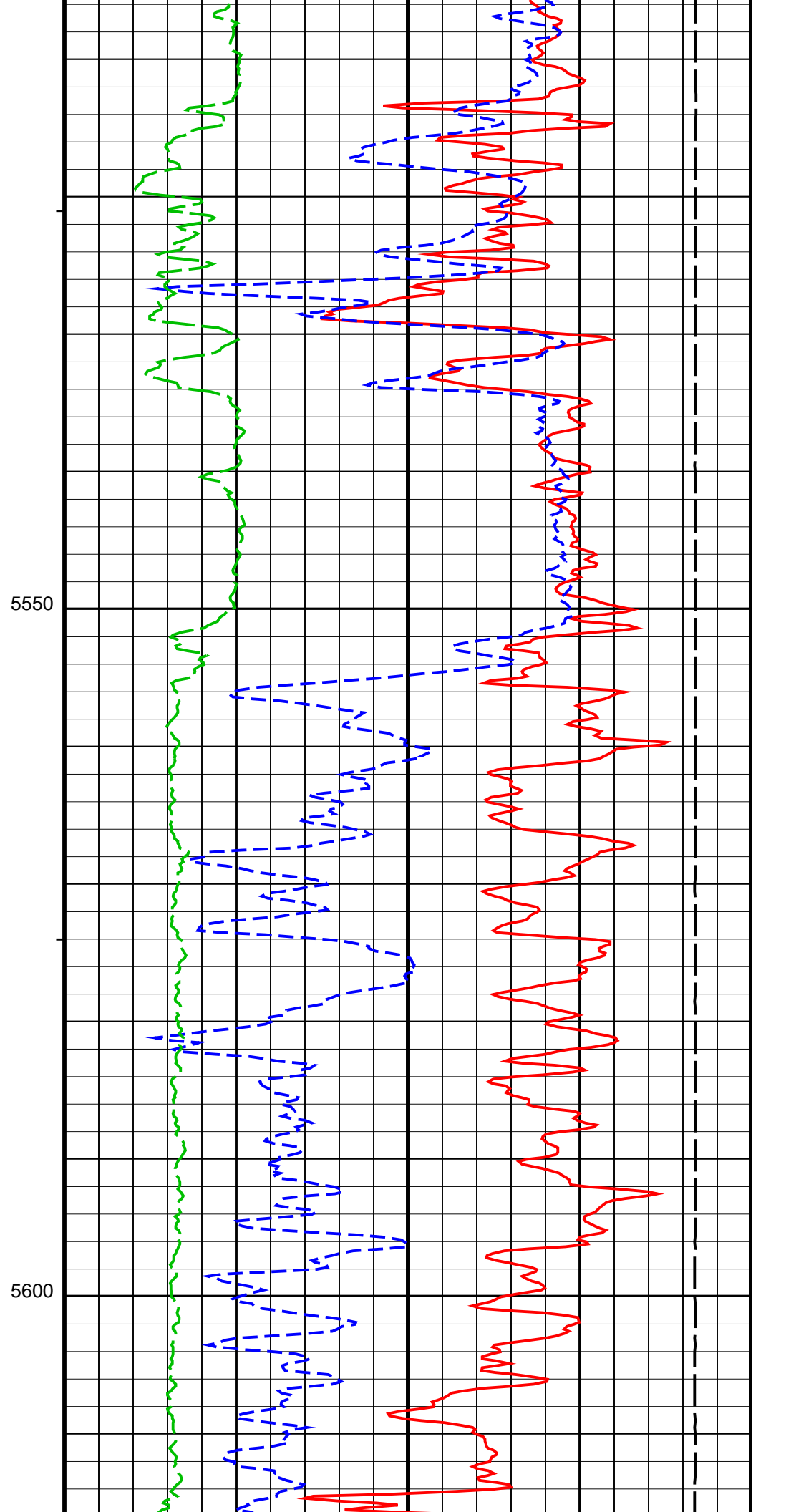
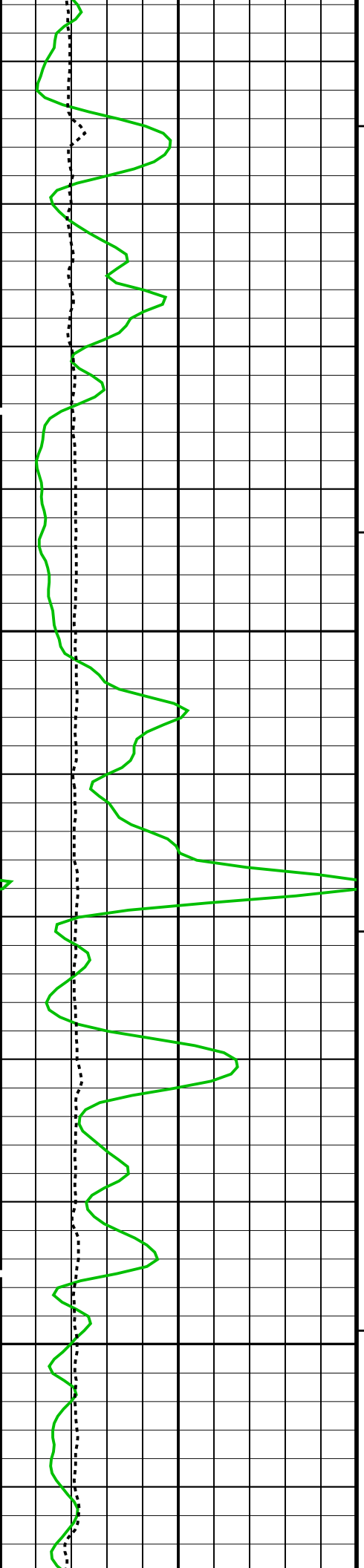


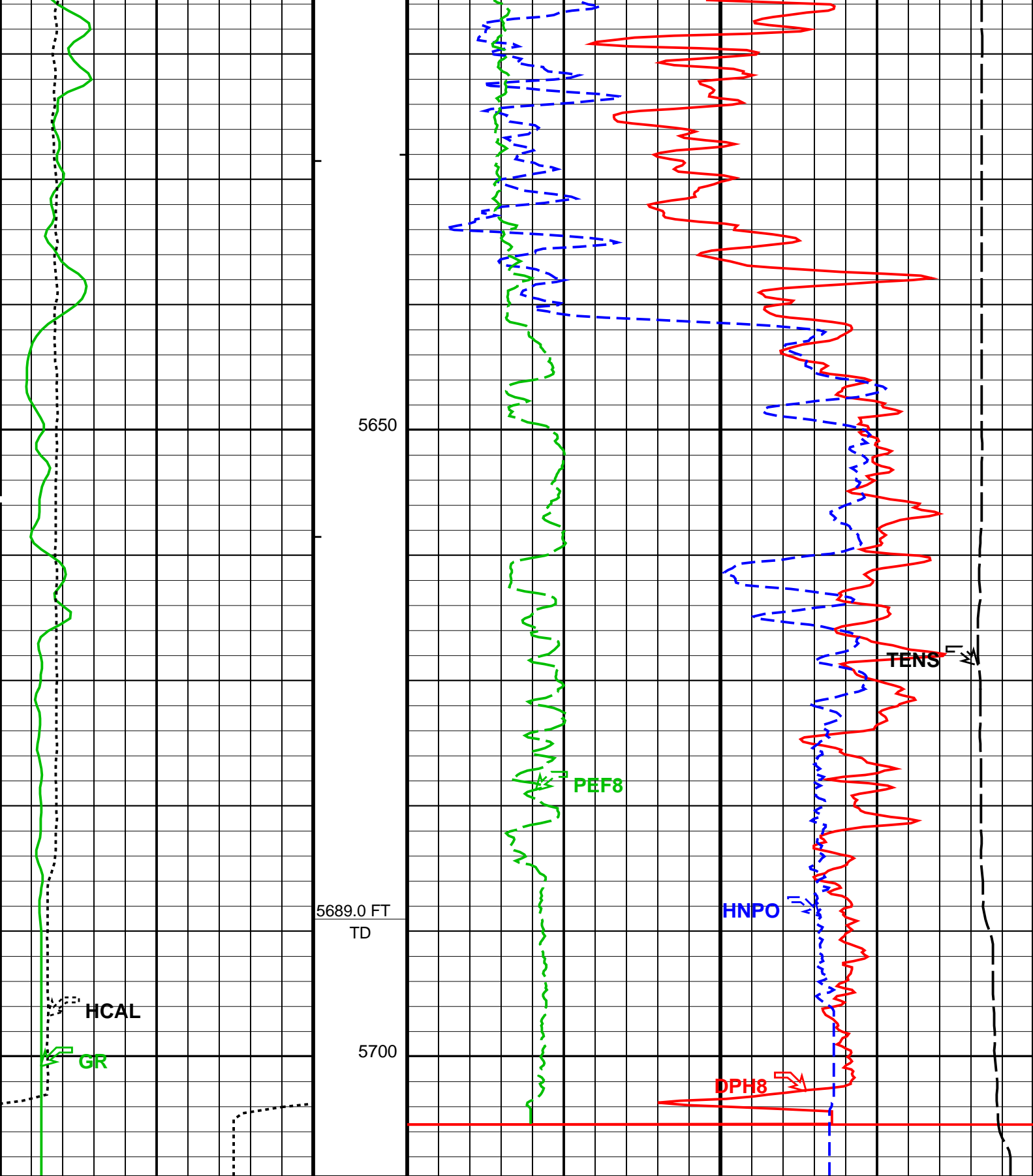
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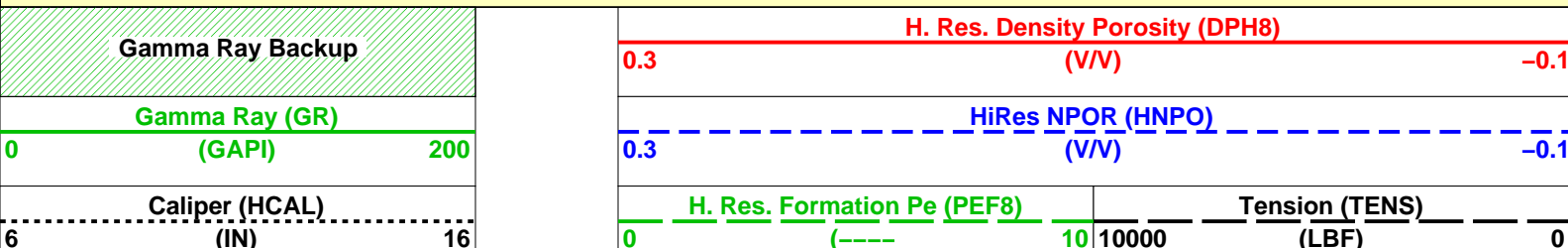








MAIN PASS: *** PLATFORM EXPRESS - NUCLEAR POROSITY ***



PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
 - └ Integrated Cement Volume Minor Pip Every 10 F3
 - └ Integrated Cement Volume Major Pip Every 100 F3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
AIT-M: Array Induction Tool - M			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	68	DEGF
HILTH-FTB: High resolution Integrated Logging Tool-DTS			
BHFL	Borehole Fluid Type	WATER	
BHFL_TLD	HILT Nuclear Mud Base	WATER	
BHS	Borehole Status	OPEN	
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
FD	Fluid Density	1	G/C3
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCLF	Germany Coal-like Formation Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
HSCO	Hole Size Correction Option	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MDEN	Matrix Density	2.71	G/C3
MWCO	Mud Weight Correction Option	NO	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	HiRes	
NSAR	HRDD Depth Sampling Rate	1	IN
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	68	DEGF
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	YES	
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
FCD	Future Casing (Outer) Diameter	5.5	IN
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	68	DEGF
PERT: Preliminary Evaluation - Real Time			
BHS	Borehole Status	OPEN	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	68	DEGF
STI: Stuck Tool Indicator			
TDL	Total Depth - Logger	5689.00	FT
System and Miscellaneous			
BS	Bit Size	7.875	IN
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	8.625	IN
CWEI	Casing Weight	24.00	LB/F
DFD	Drilling Fluid Density	8.40	LB/G
DO	Depth Offset for Playback	0.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
MST	Mud Sample Temperature	75.00	DEGF
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	0.7147	OHMM
TD	Total Depth	5689	FT

AIT-M	18C0-147	HILTH-FTB	18C0-147
DTC-H	18C0-147		

Input DLIS Files

DEFAULT	MERGE_AIT_026L	FN:1	PRODUCER	10-Apr-2012 16:37	5709.5 FT	328.0 FT
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Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_032PUP	FN:28	PRODUCER	10-Apr-2012 16:52
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Schlumberger

REPEAT ANALYSIS

MAXIS Field Log

Input DLIS Files

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Output DLIS Files

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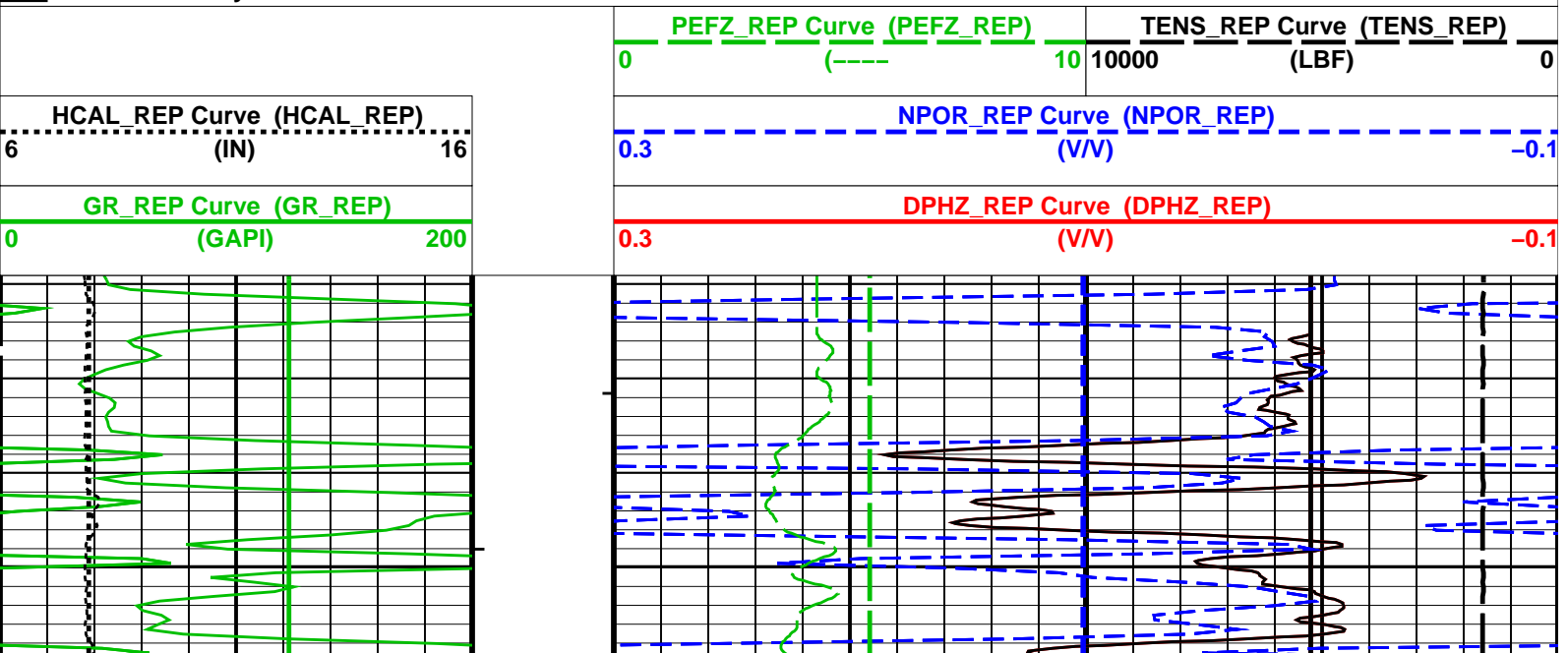
OP System Version: 18C0-147

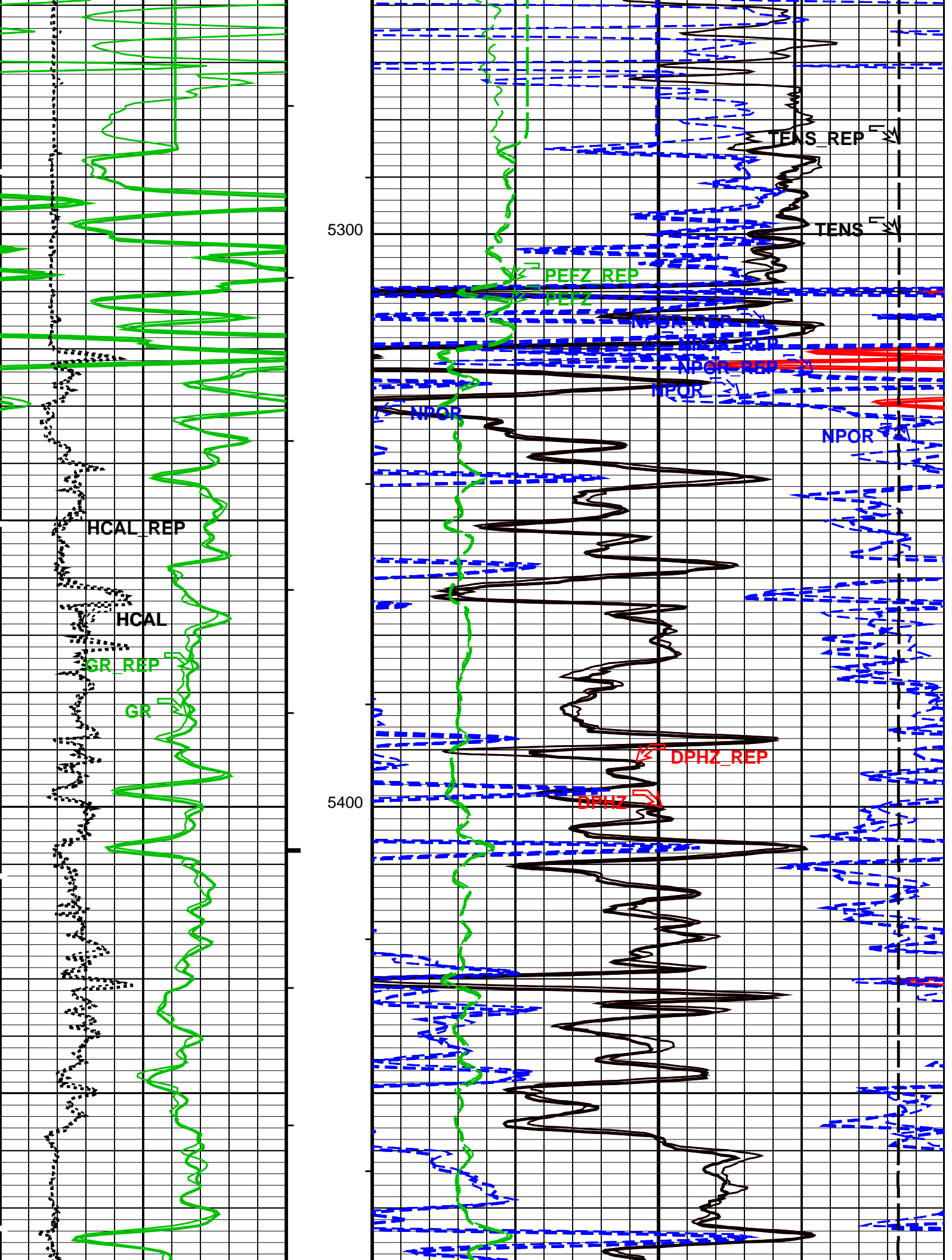
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DTC-H	18C0-147		

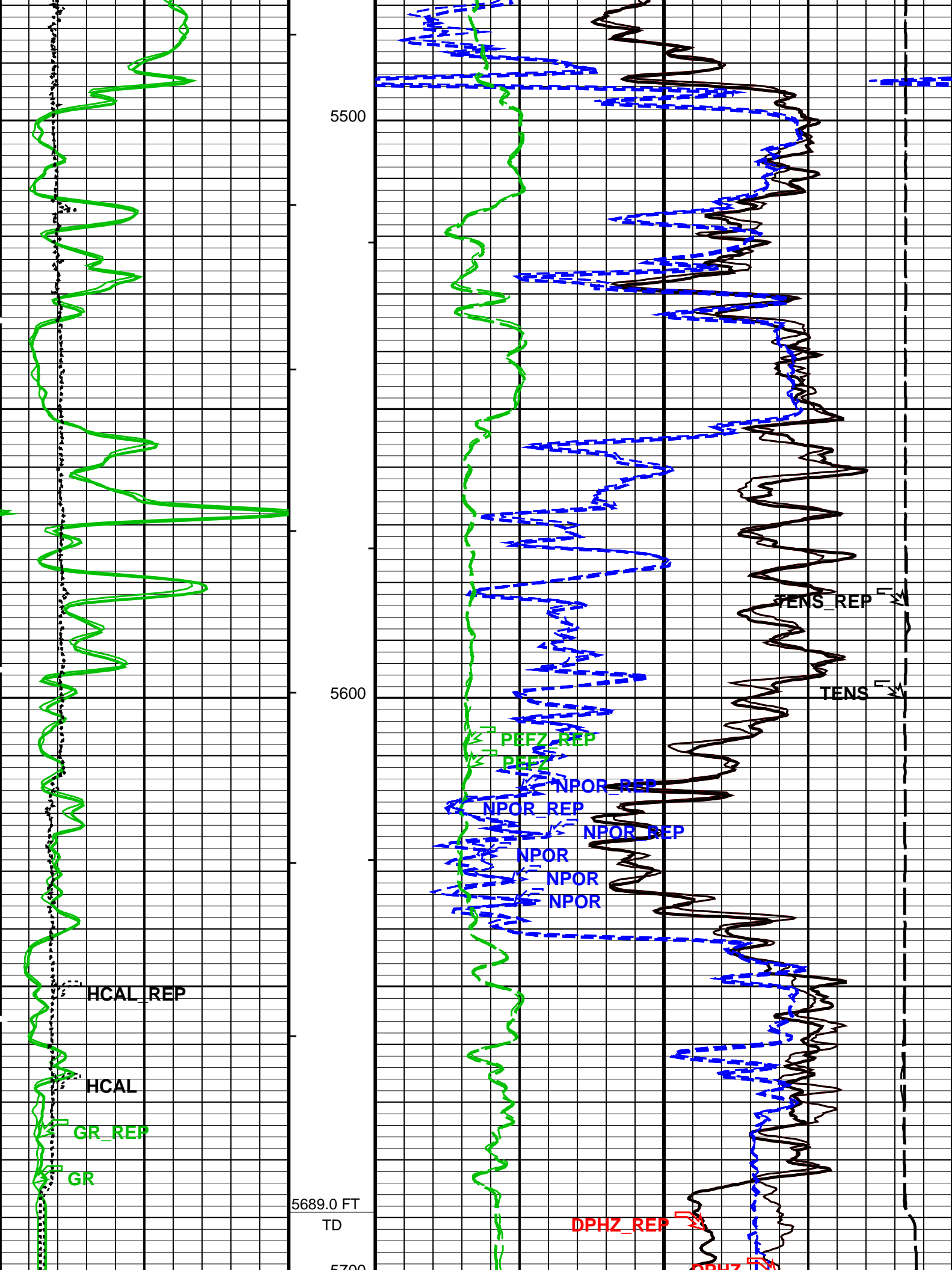
PIP SUMMARY

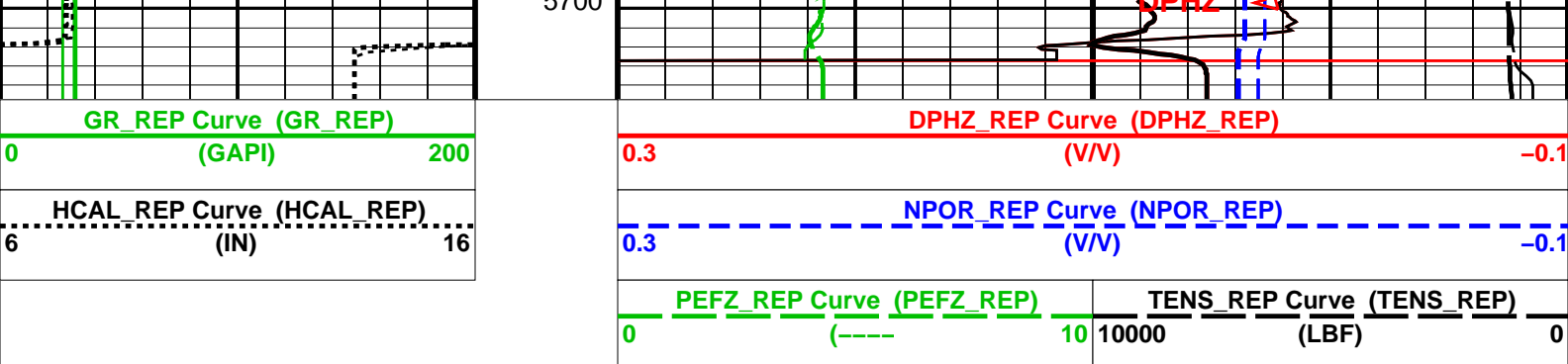
- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
- └ Integrated Cement Volume Minor Pip Every 10 F3
- └ Integrated Cement Volume Major Pip Every 100 F3

Time Mark Every 60 S









PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 10 F3
- └ Integrated Hole Volume Major Pip Every 100 F3
- └ Integrated Cement Volume Minor Pip Every 10 F3
- └ Integrated Cement Volume Major Pip Every 100 F3

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
AIT-M: Array Induction Tool - M		
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	HCAL
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
GGRD	Geothermal Gradient	0.01 DF/F
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE
SHT	Surface Hole Temperature	68 DEGF
HILTH-FTB: High resolution Integrated Logging Tool-DTS		
BHFL	Borehole Fluid Type	WATER
BHFL_TLD	HILT Nuclear Mud Base	WATER
BHS	Borehole Status	OPEN
BSCO	Borehole Salinity Correction Option	NO
CCCO	Casing & Cement Thickness Correction Option	NO
DHC	Density Hole Correction	BS
FD	Fluid Density	1 G/C3
FSAL	Formation Salinity	-50000 PPM
FSAL	Formation Salinity Correction Option	NO
GCLF	Germany Coal-like Formation Option	NO
GCSE	Generalized Caliper Selection	HCAL
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
GGRD	Geothermal Gradient	0.01 DF/F
HSC	Hole Size Correction Option	YES
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE
MCCO	Mud Cake Correction Option	NO
MCOR	Mud Correction	NATU
MDEN	Matrix Density	2.71 G/C3
MWCO	Mud Weight Correction Option	NO
NAAC	HRDD APS Activation Correction	OFF
NMT	HILT Nuclear Mud Type	NOBARITE
NPRM	HRDD Processing Mode	HiRes
NSAR	HRDD Depth Sampling Rate	1 IN
PTCO	Pressure/Temperature Correction Option	NO
SDAT	Standoff Data Source	SOCN
SHT	Surface Hole Temperature	68 DEGF
SOCN	Standoff Distance	0.125 IN
SOCO	Standoff Correction Option	YES
HOLEV: Integrated Hole/Cement Volume		
BHS	Borehole Status	OPEN
FCD	Future Casing (Outer) Diameter	5.5 IN
GCSE	Generalized Caliper Selection	HCAL
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
GGRD	Geothermal Gradient	0.01 DF/F
HVCS	Integrated Hole Volume Caliper Selection	AUTOMATIC
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE
SHT	Surface Hole Temperature	68 DEGF
PERT: Preliminary Evaluation - Real Time		
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	HCAL
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
GGRD	Geothermal Gradient	0.01 DF/F
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE
SHT	Surface Hole Temperature	68 DEGF
STI: Stuck Tool Indicator		
TDL	Total Depth - Logger	5689.00 FT
System and Miscellaneous		
BS	Bit Size	7.875 IN

BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	8.625	IN
CWEI	Casing Weight	24.00	LB/F
DFD	Drilling Fluid Density	8.40	LB/G
DO	Depth Offset for Playback	0.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
MST	Mud Sample Temperature	75.00	DEGF
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	0.7147	OHMM
TD	Total Depth	5689	FT

Format: PORO_REP

Vertical Scale: 5" per 100'

Graphics File Created: 10-Apr-2012 16:52

OP System Version: 18C0-147			
AIT-M	18C0-147	HILTH-FTB	18C0-147
DTC-H	18C0-147		

Input DLIS Files						
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Output DLIS Files						
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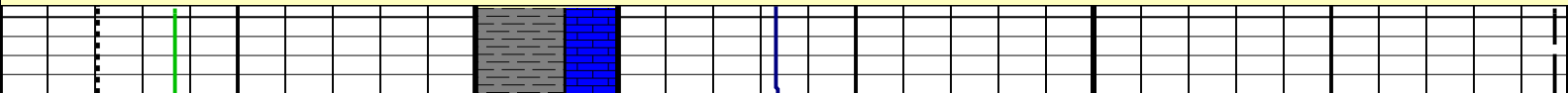
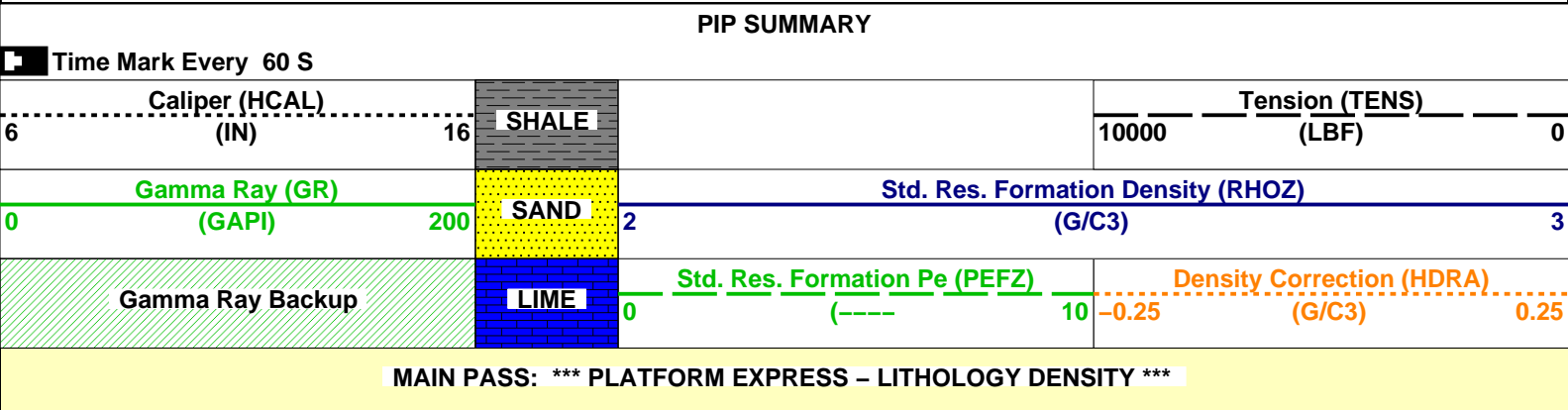
Schlumberger

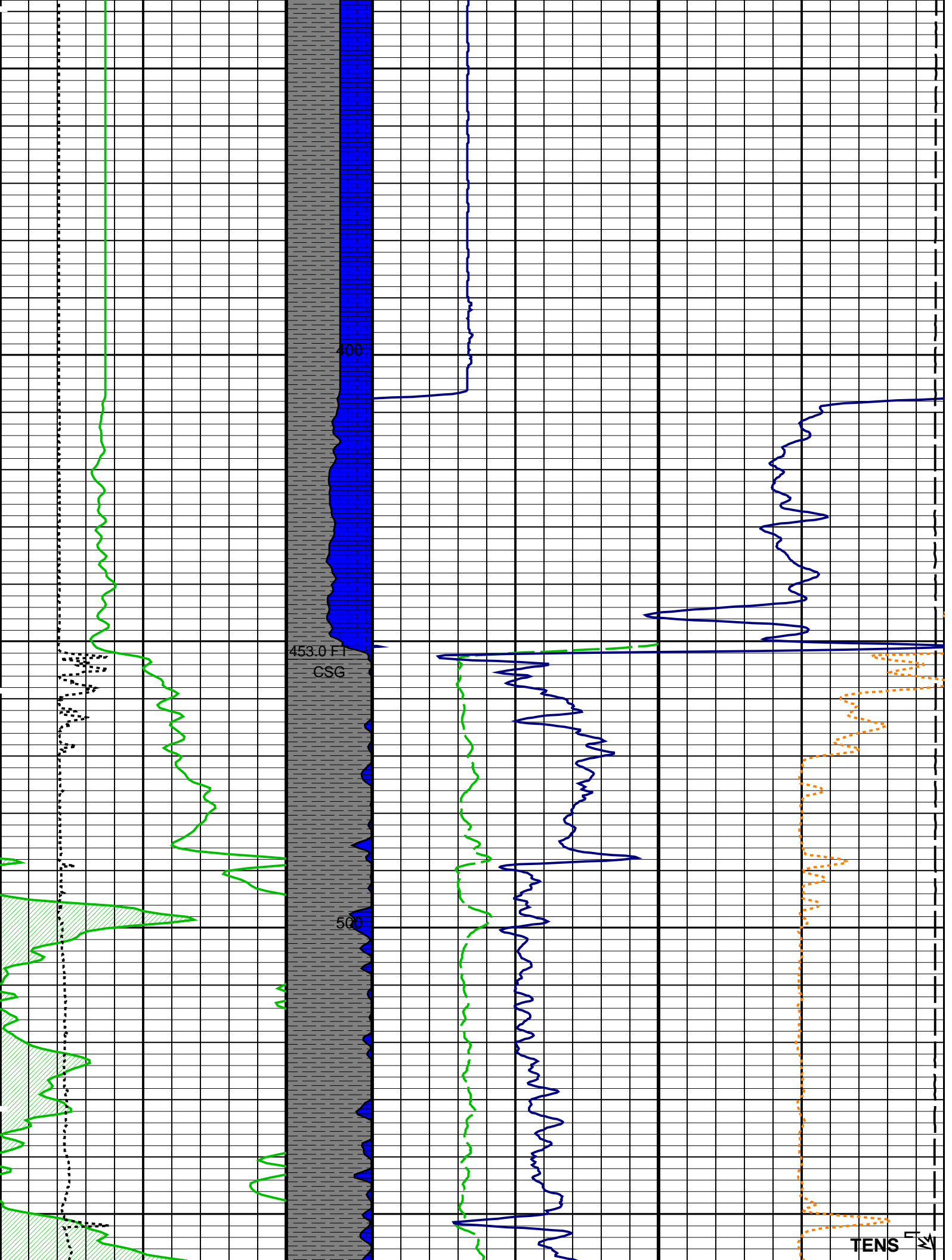
MAIN DENSITY LOG 5" = 100'

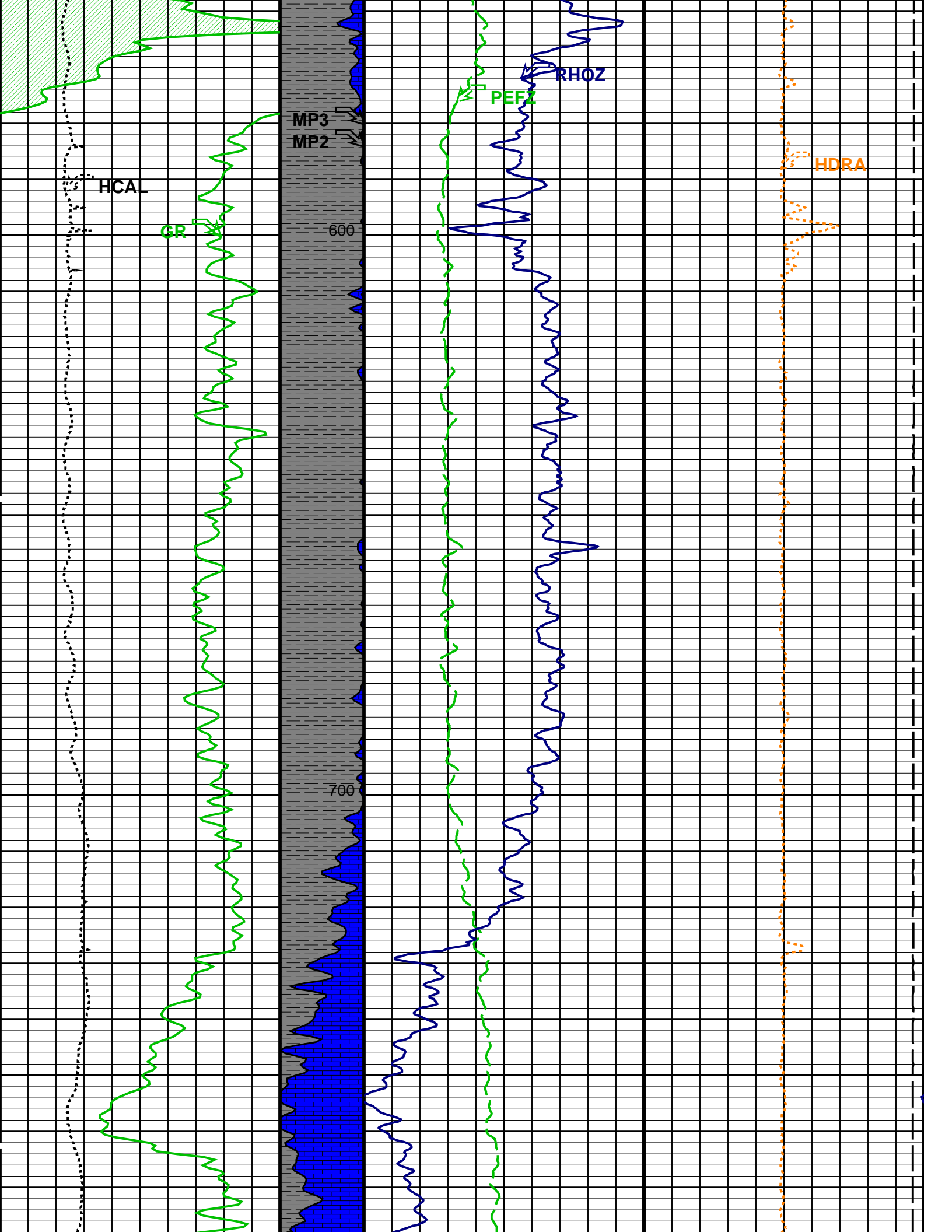
MAXIS Field Log

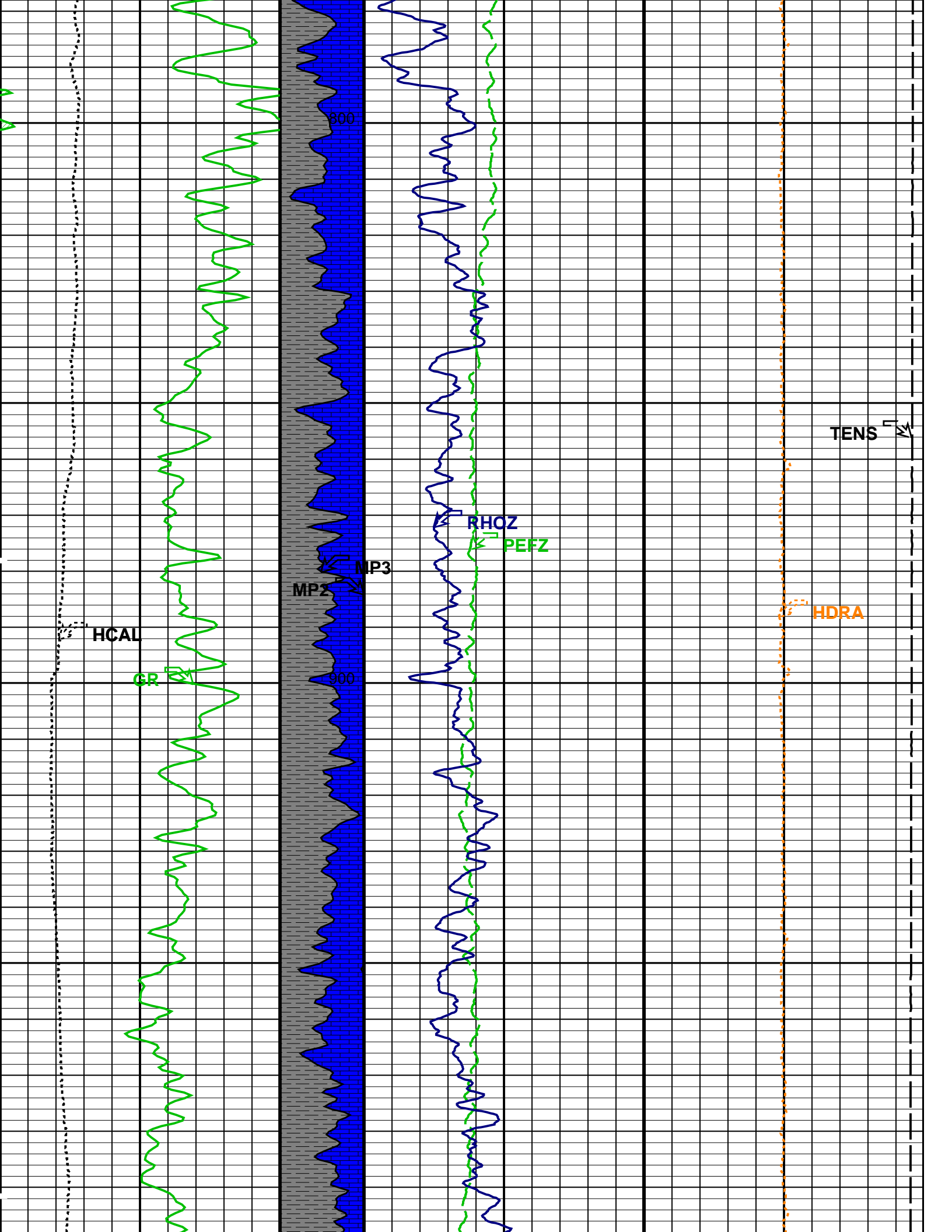
Input DLIS Files						
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Output DLIS Files						
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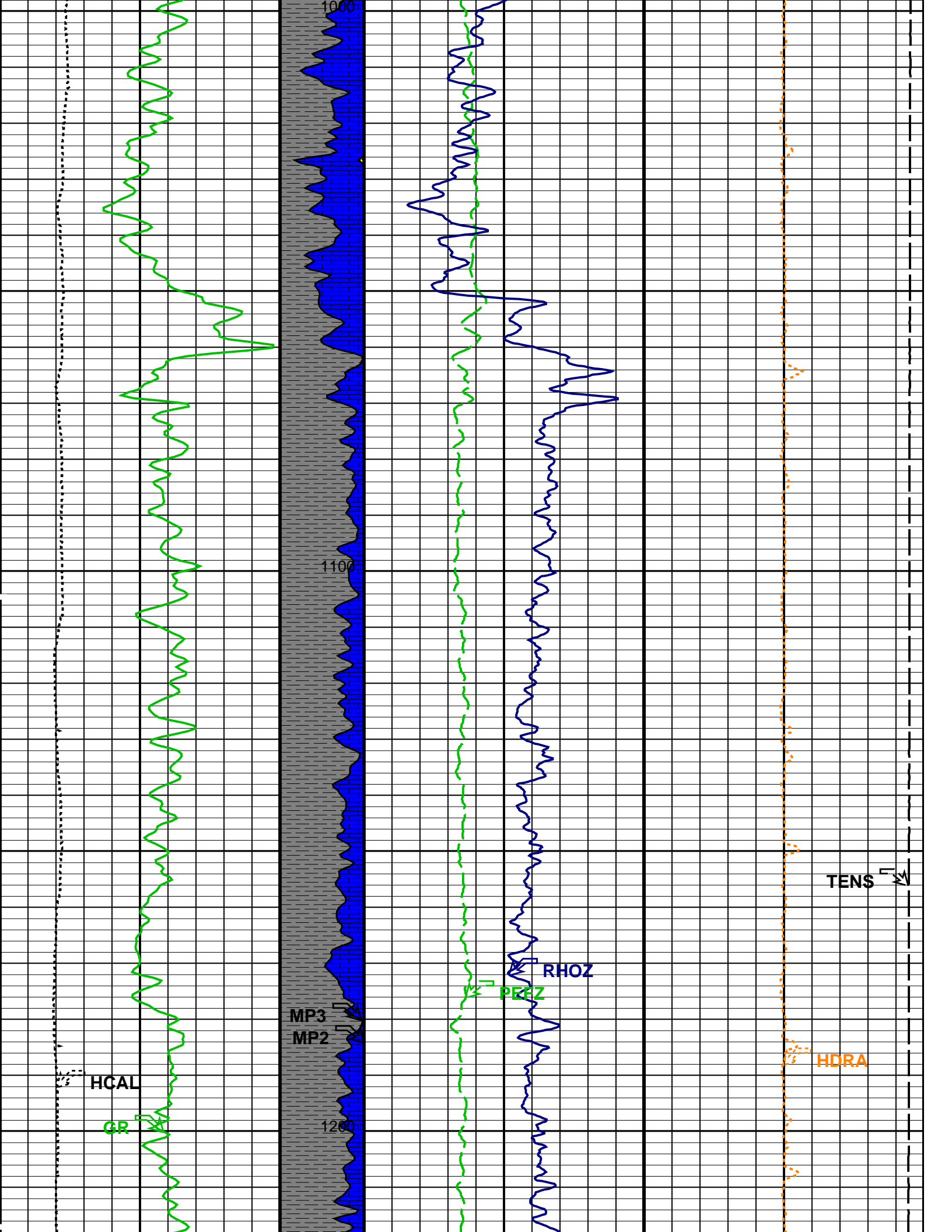
OP System Version: 18C0-147			
AIT-M	18C0-147	HILTH-FTB	18C0-147
DTC-H	18C0-147		

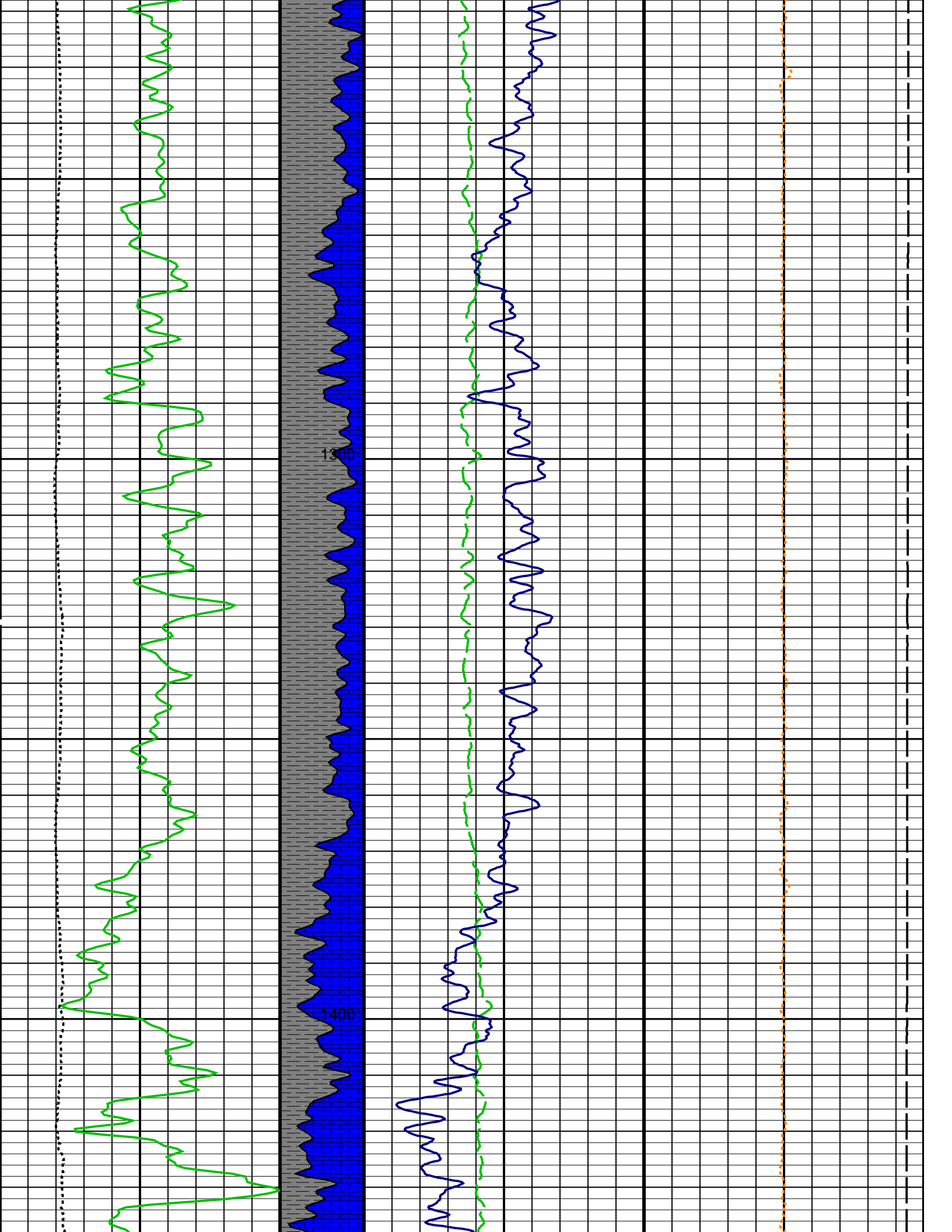


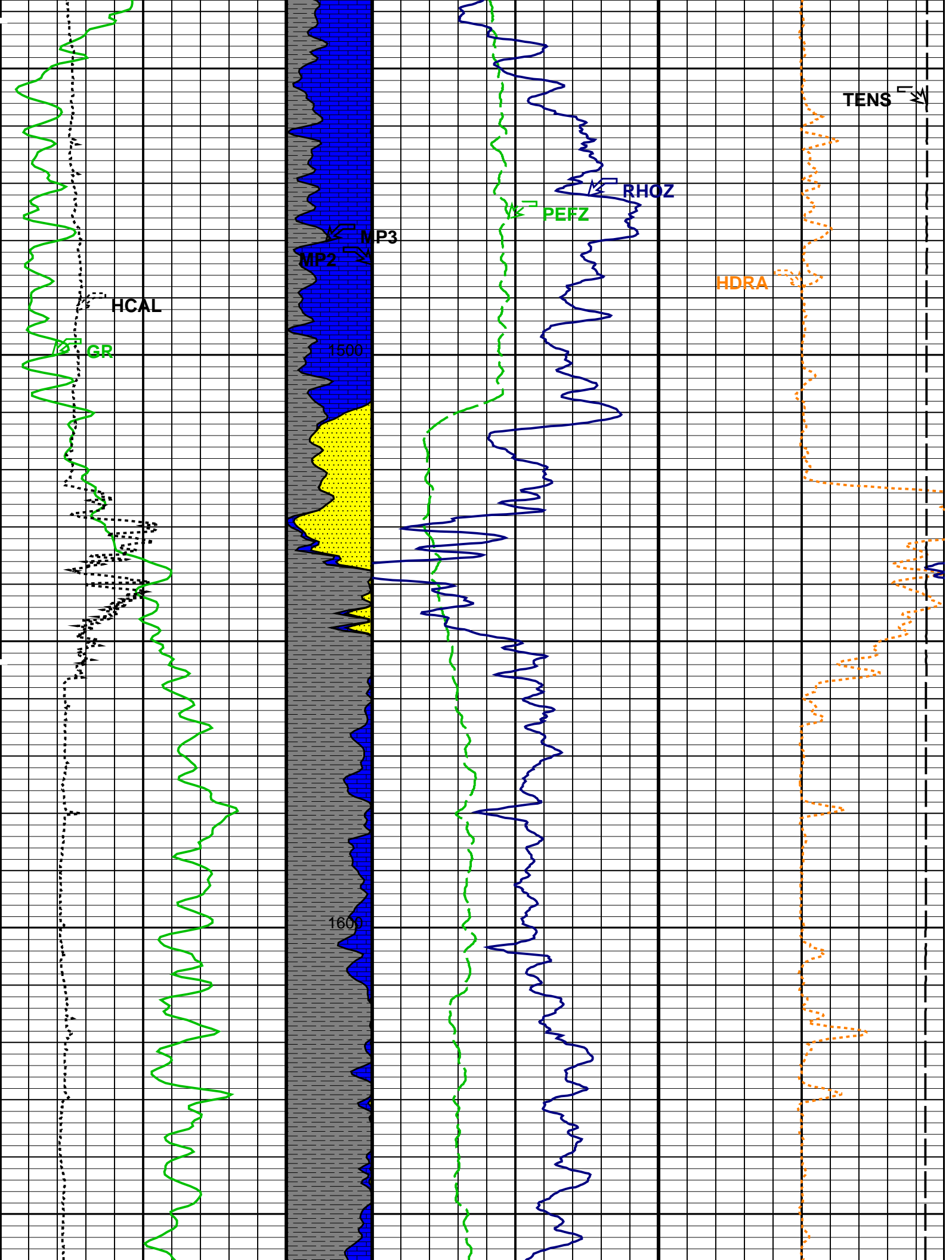


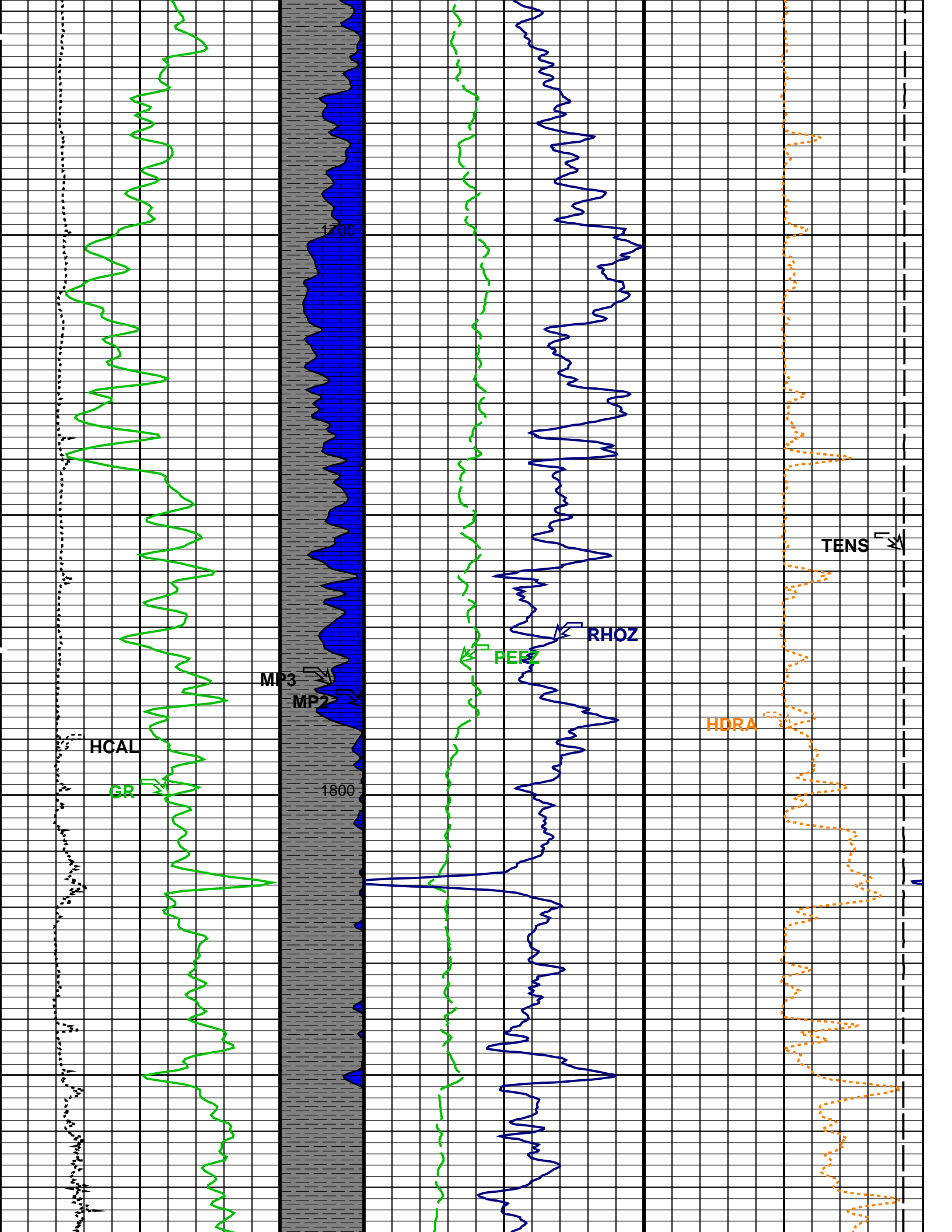


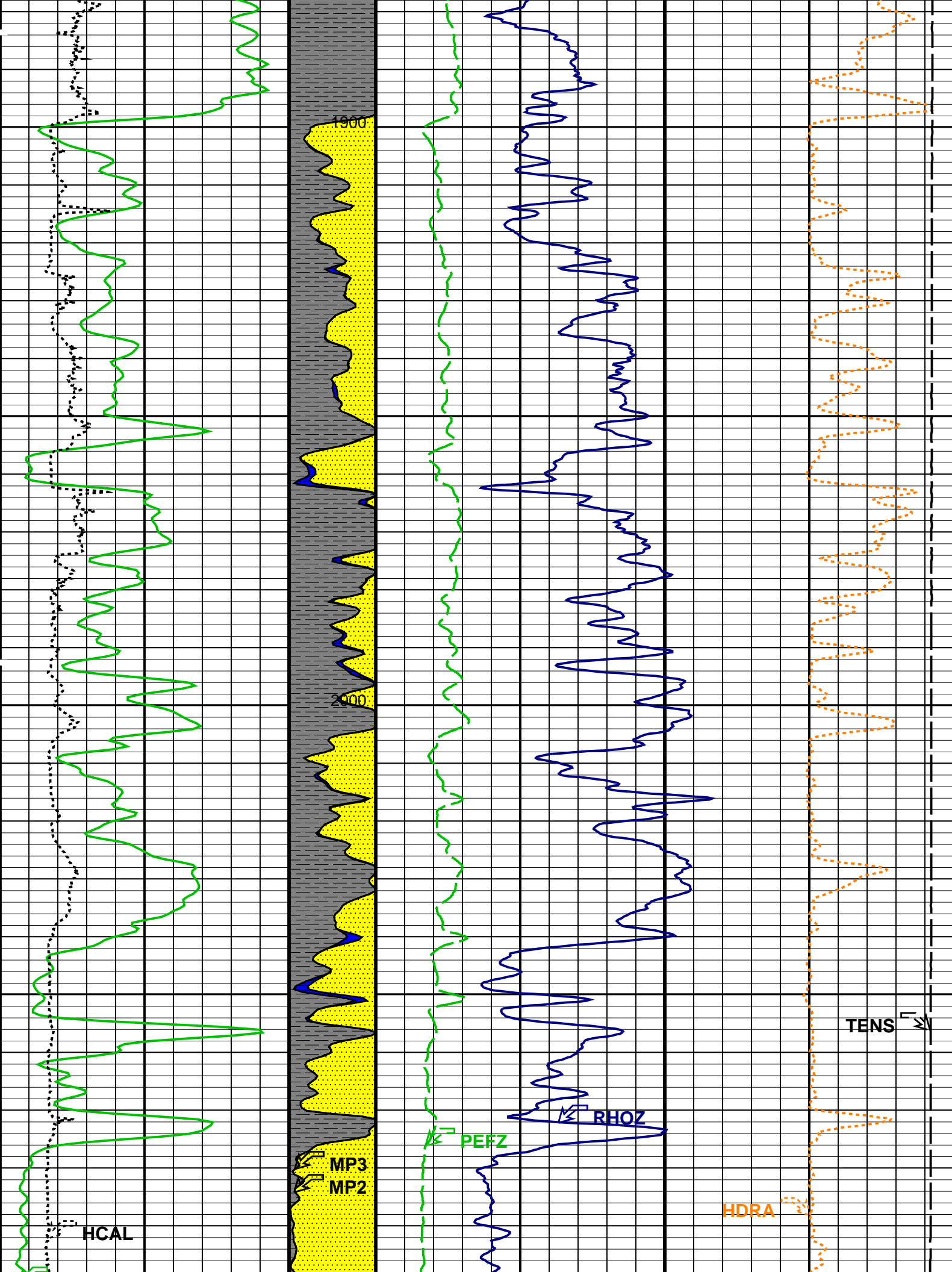


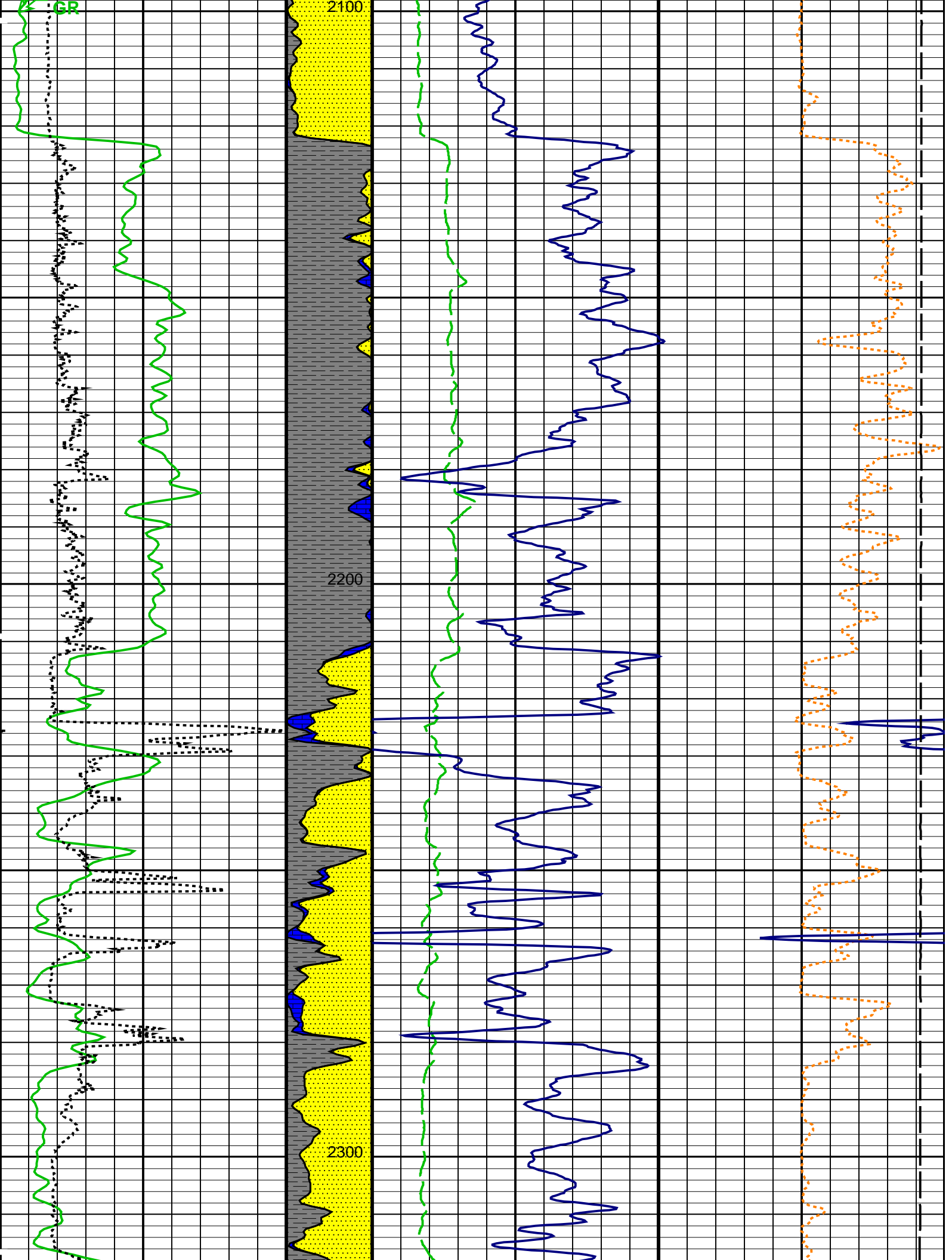


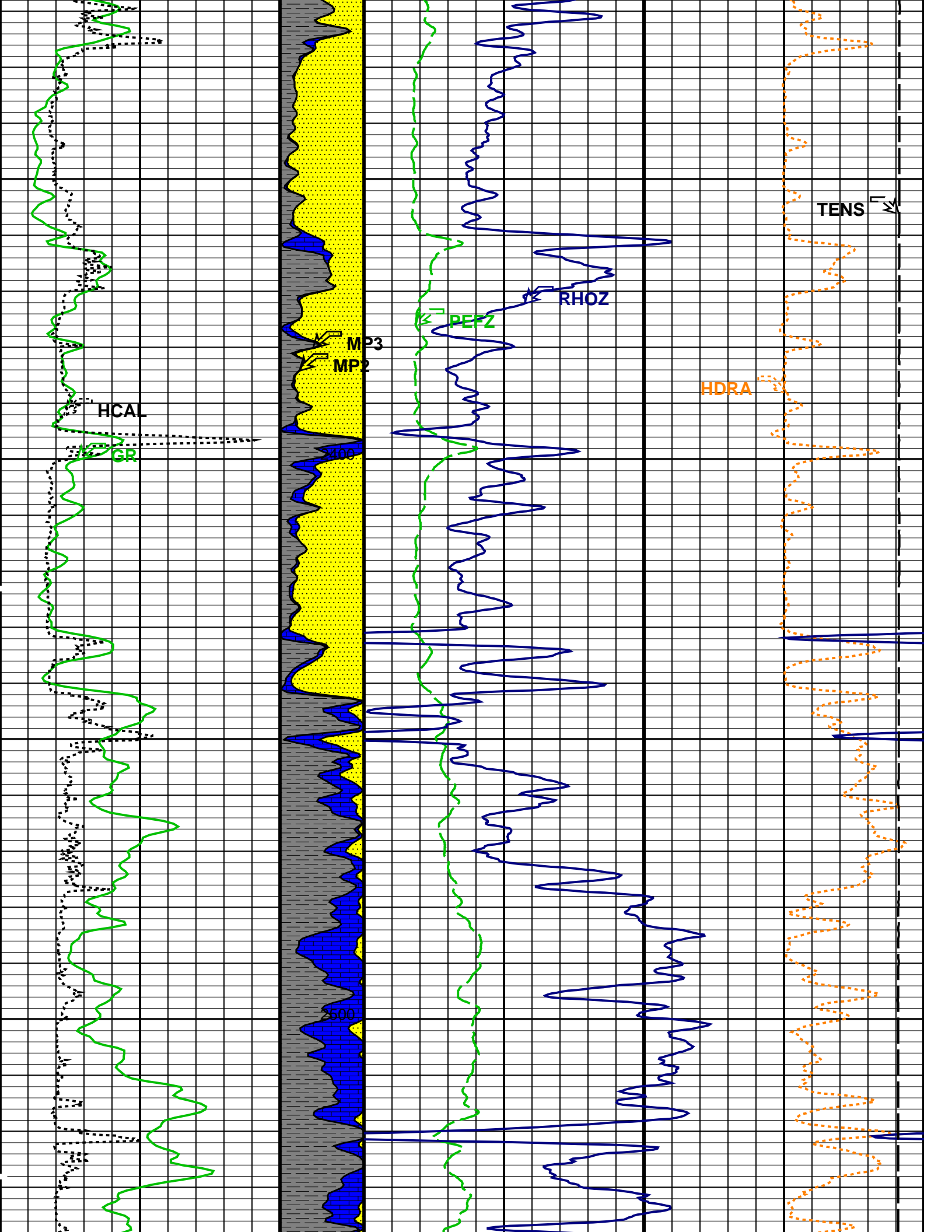


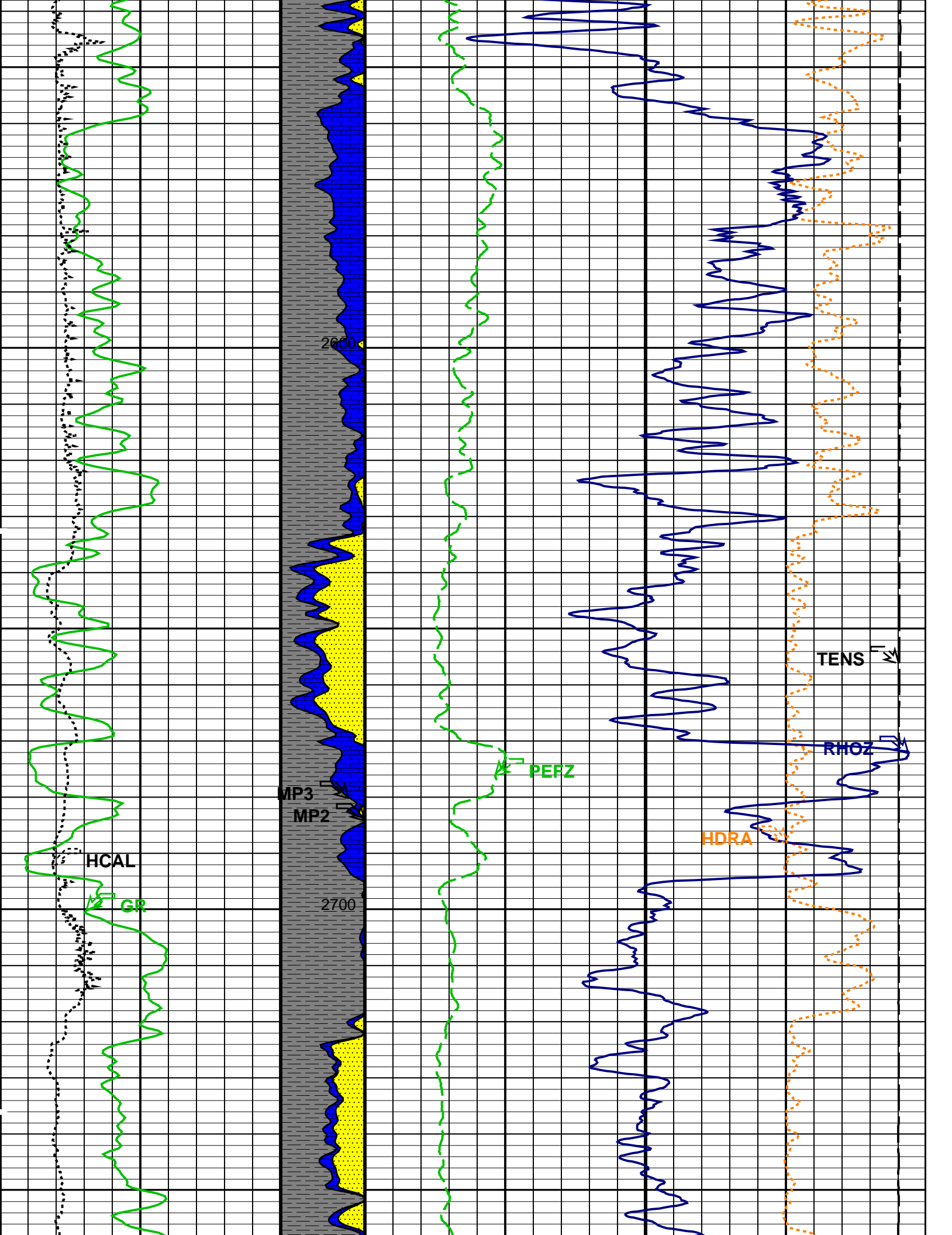


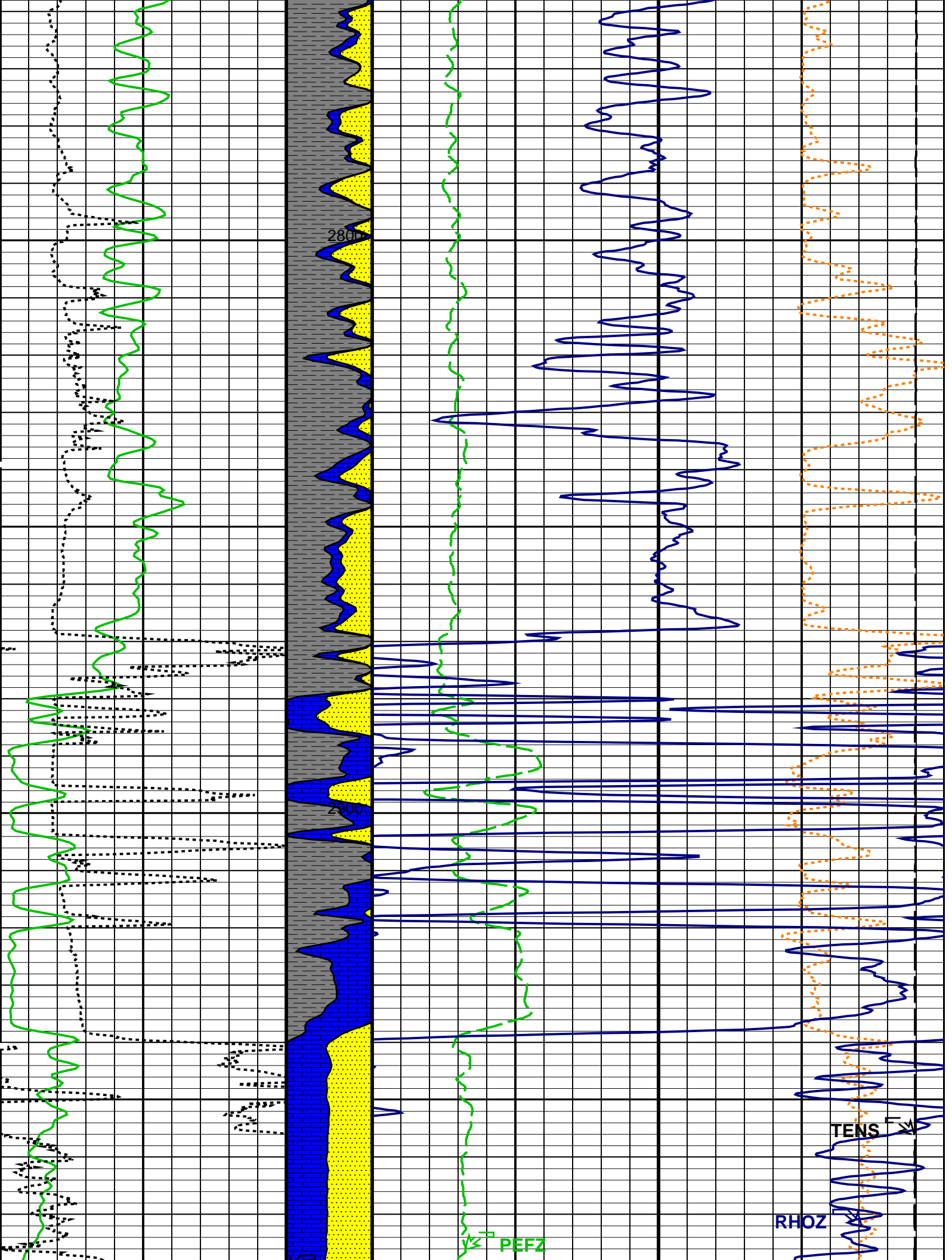


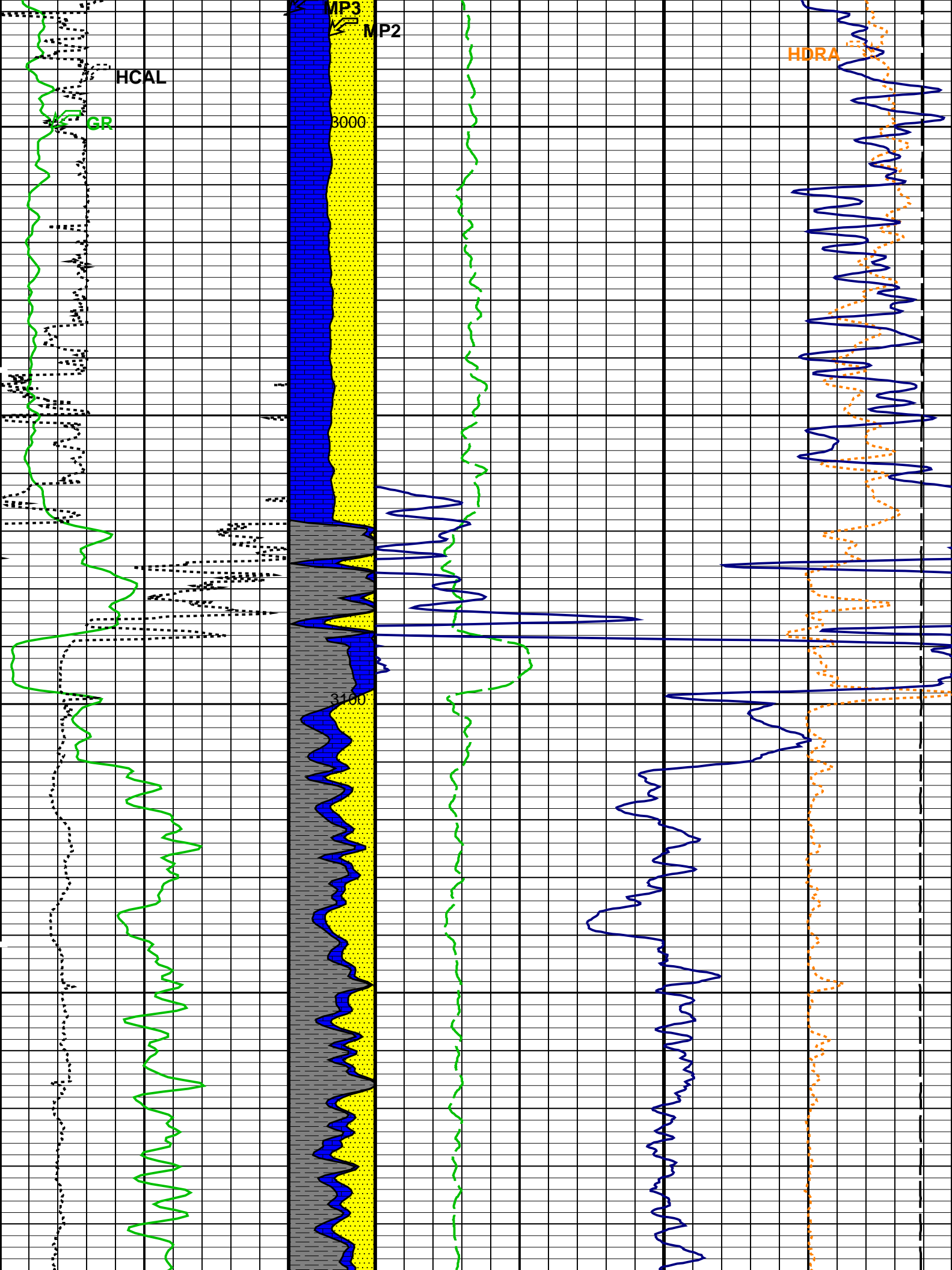


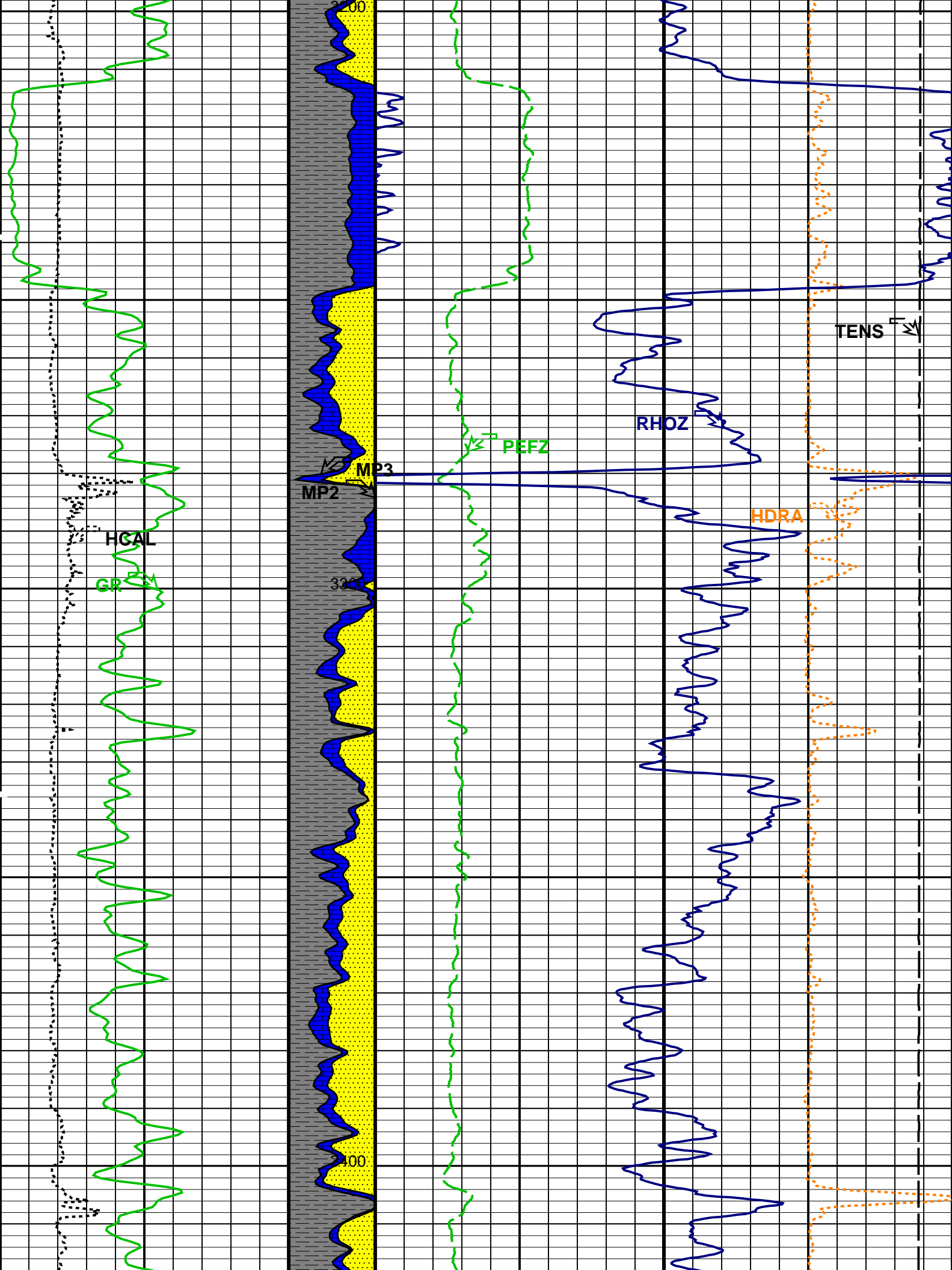


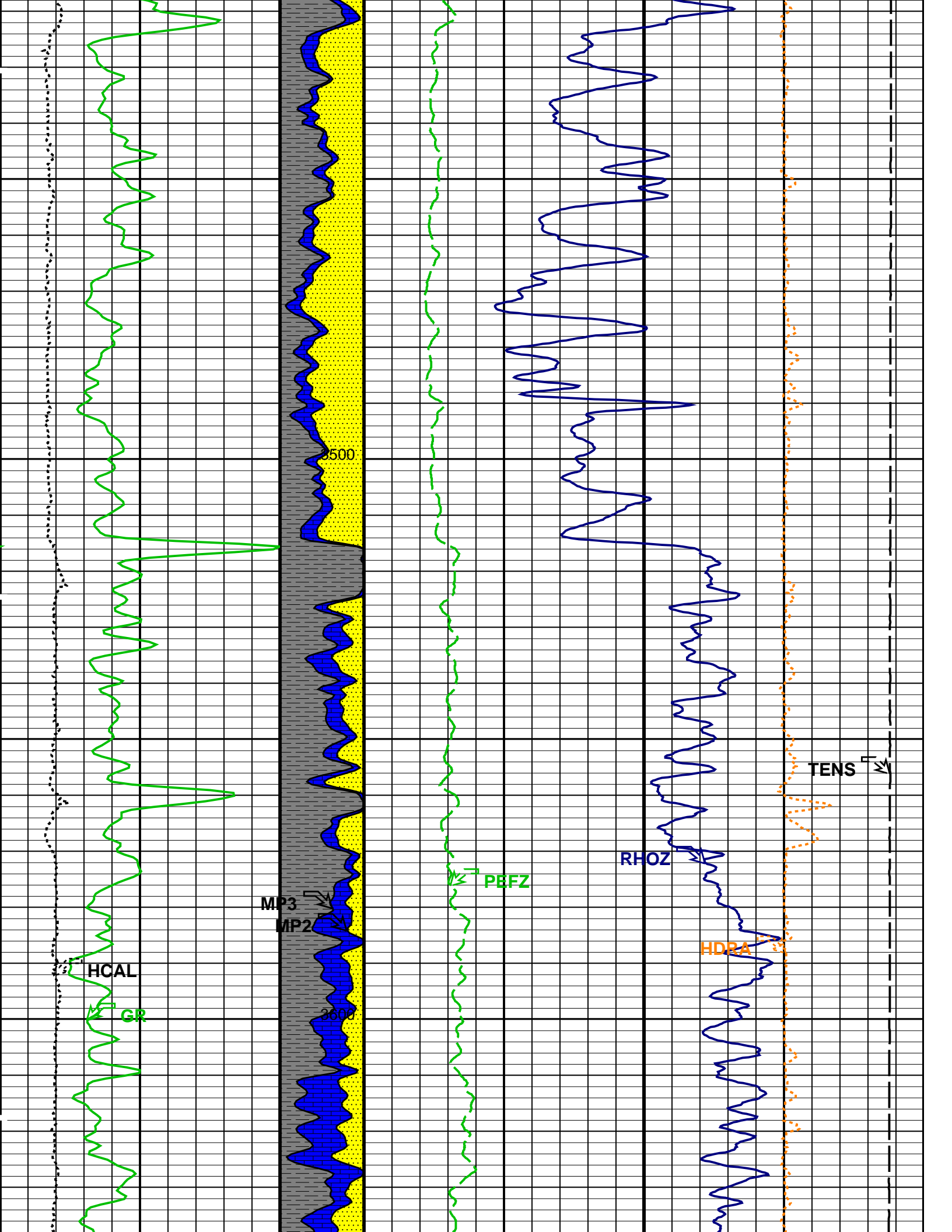


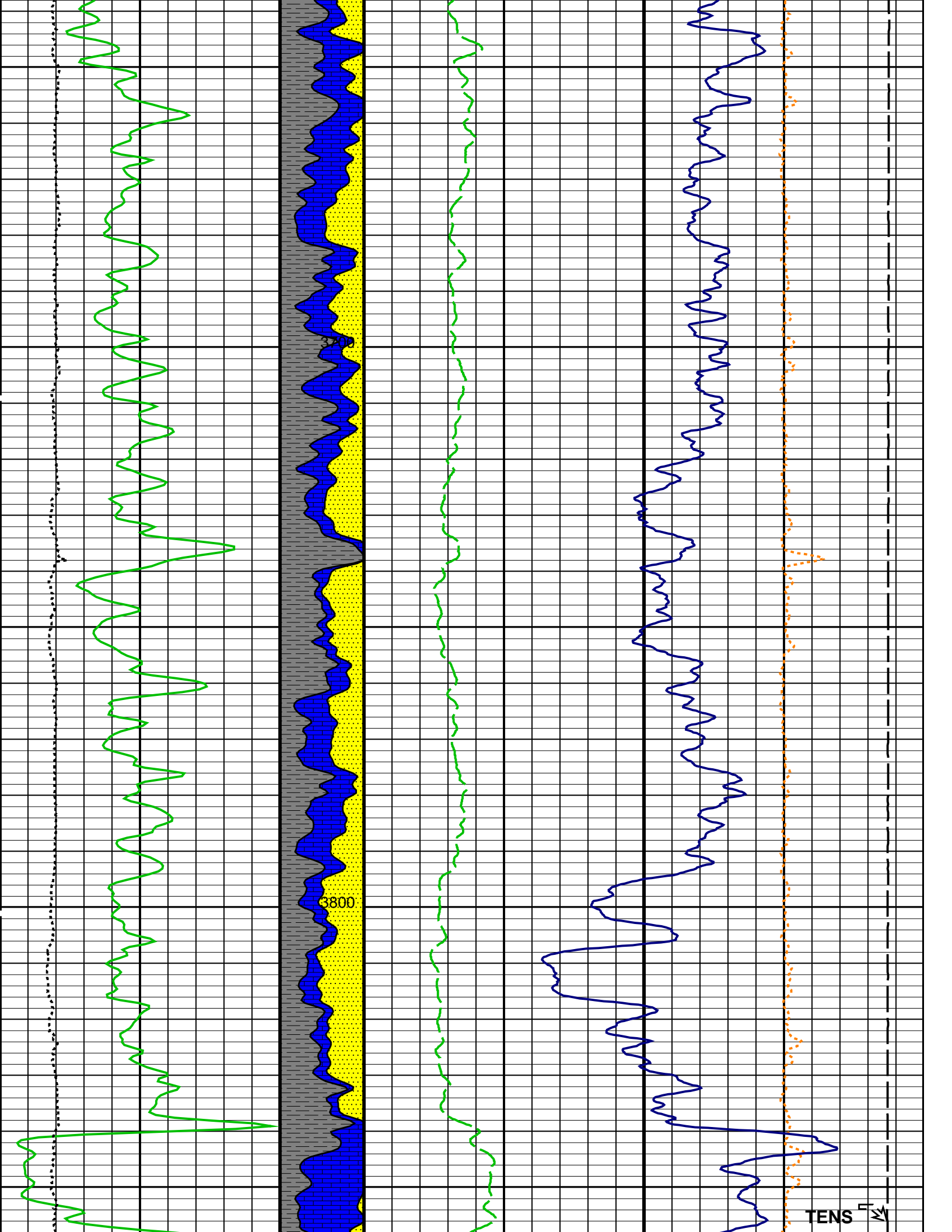


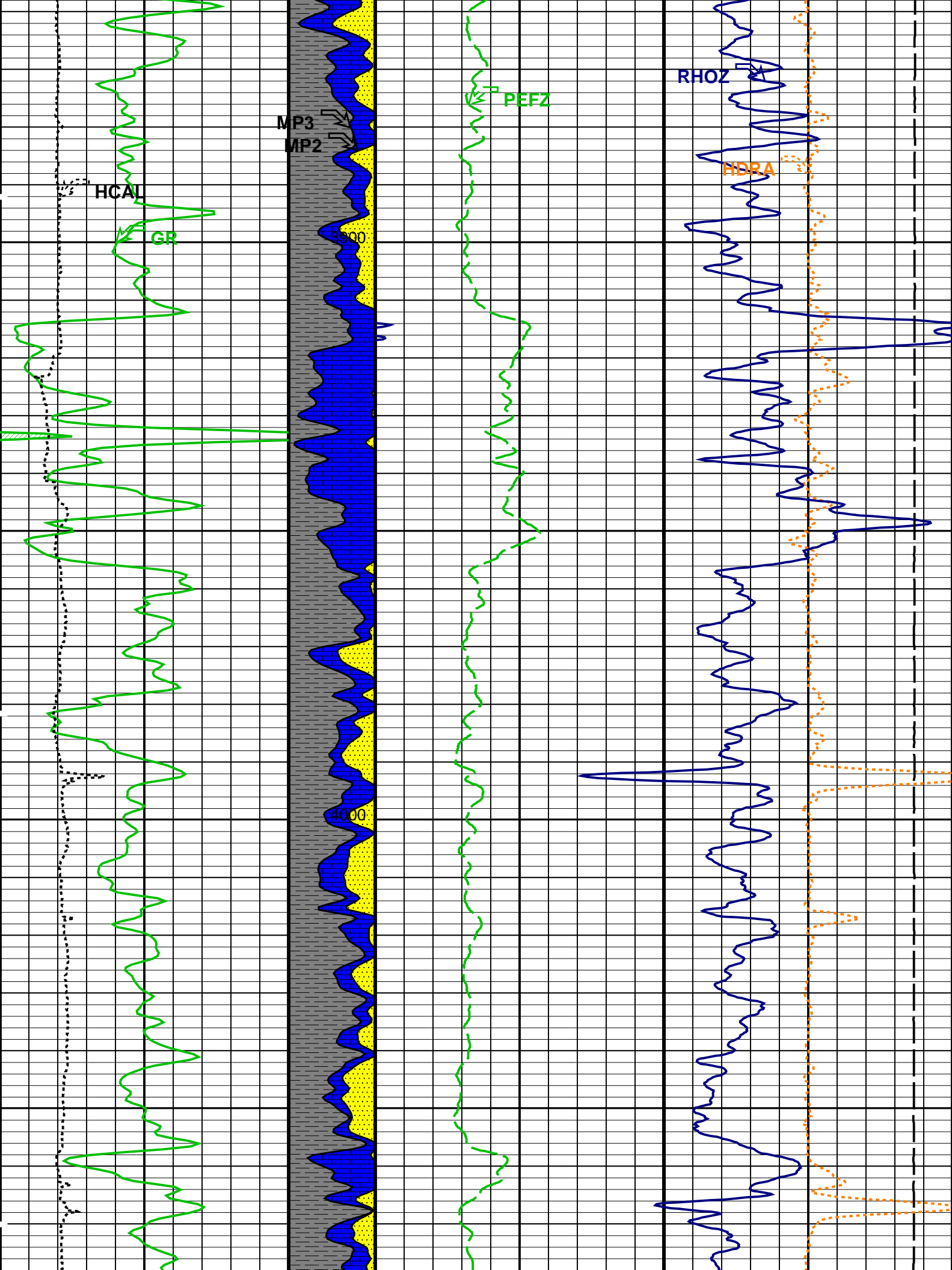


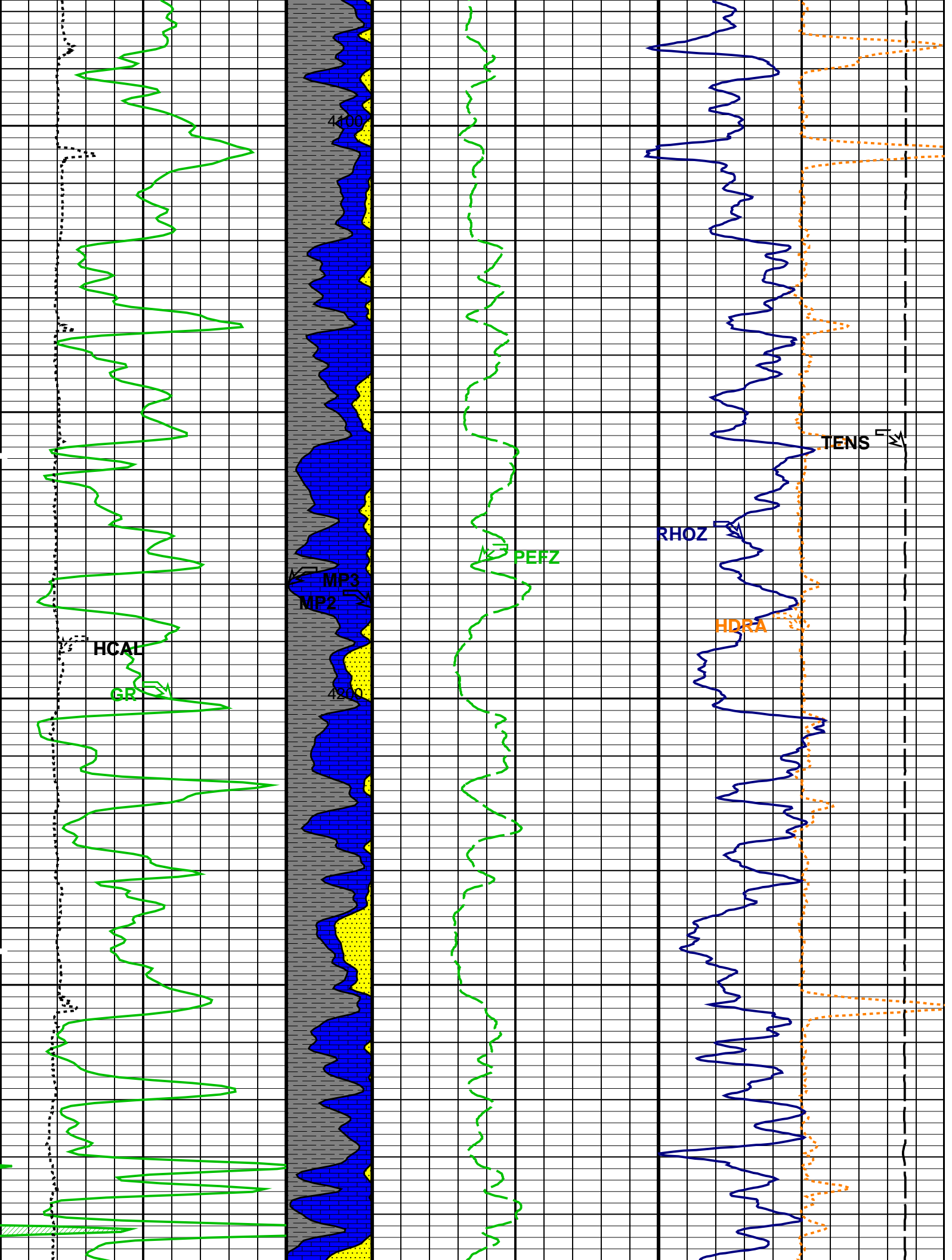


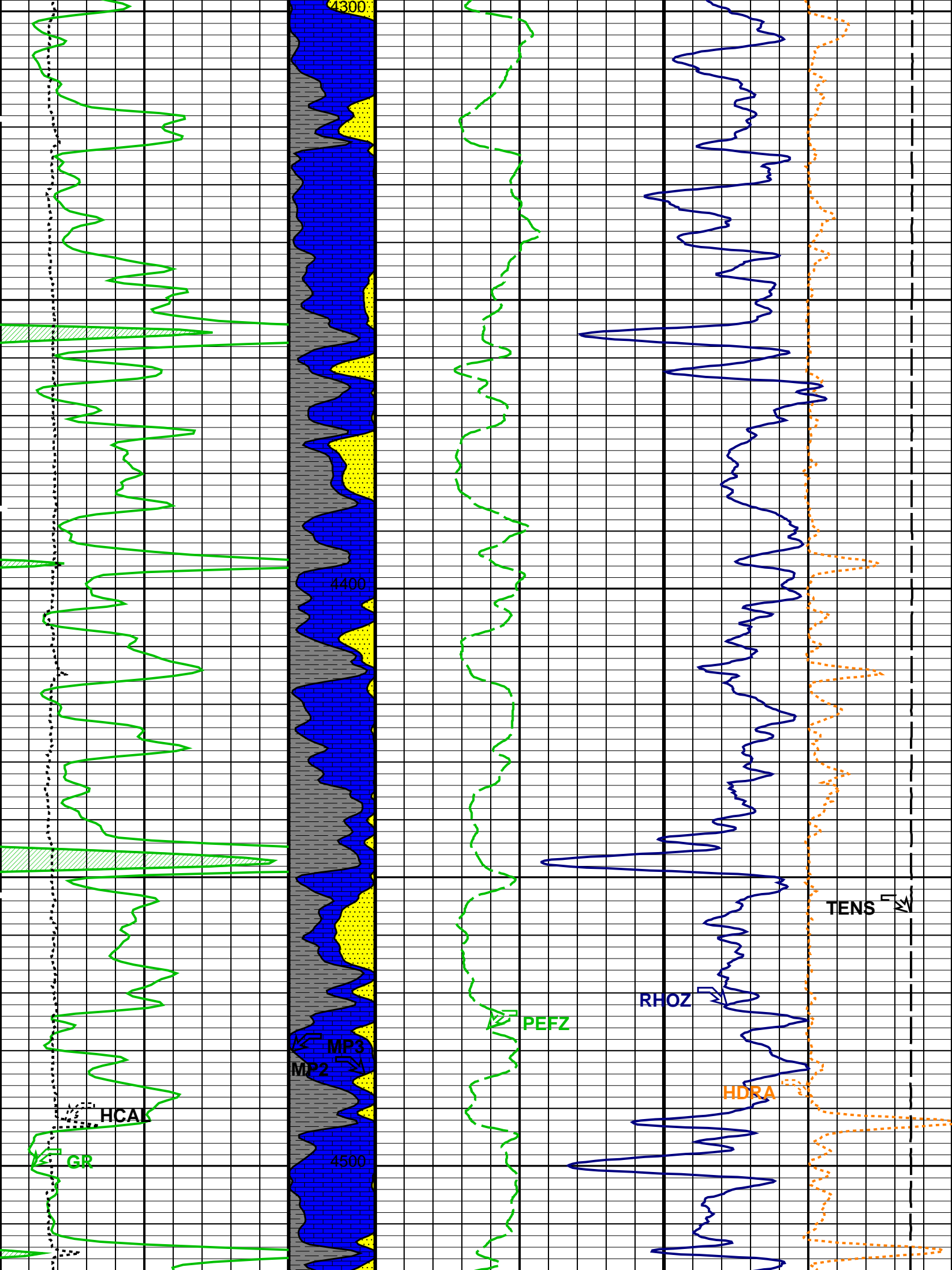


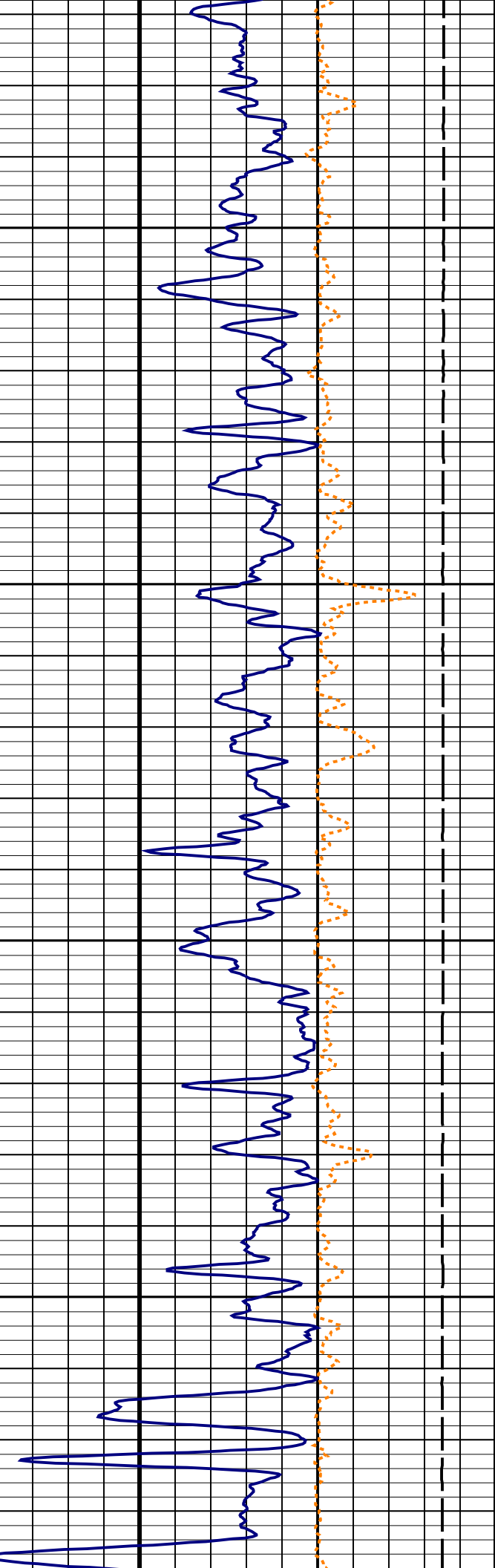
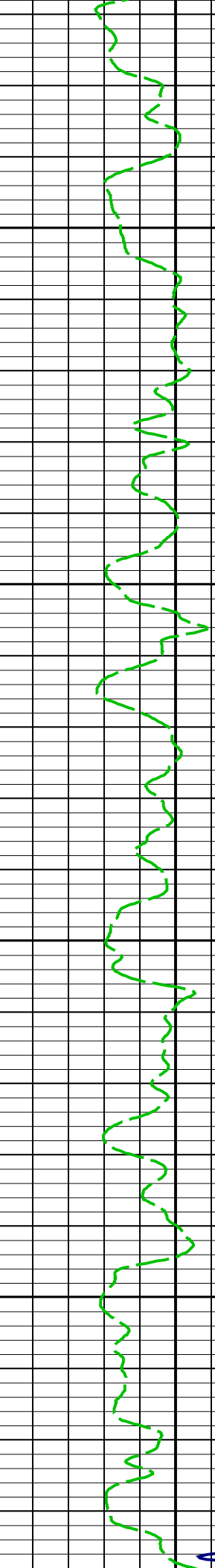
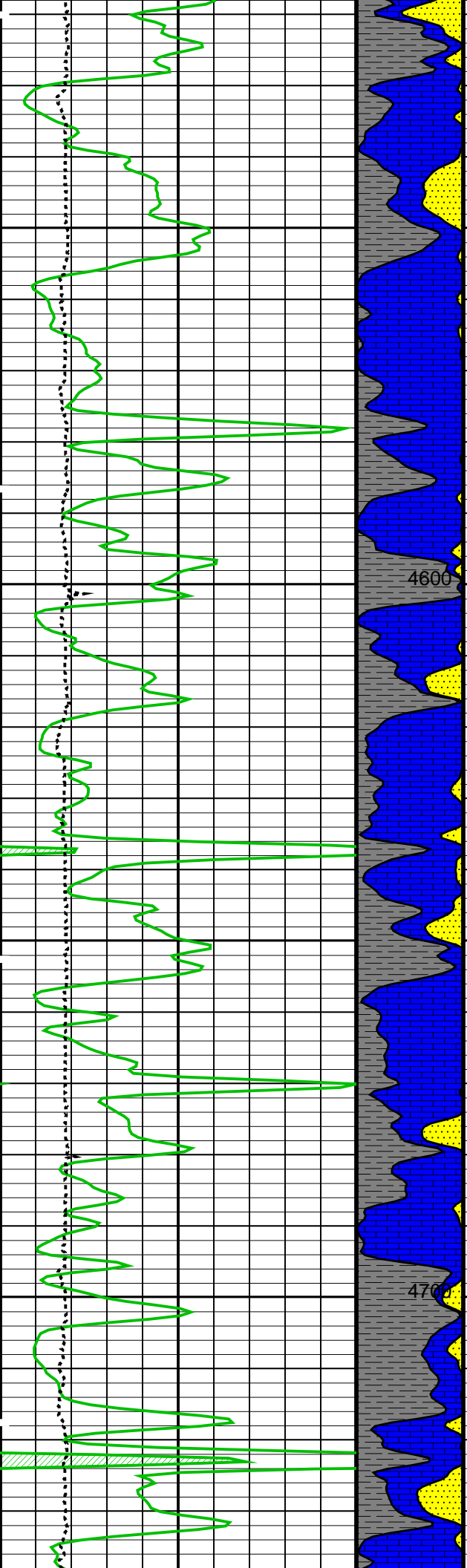


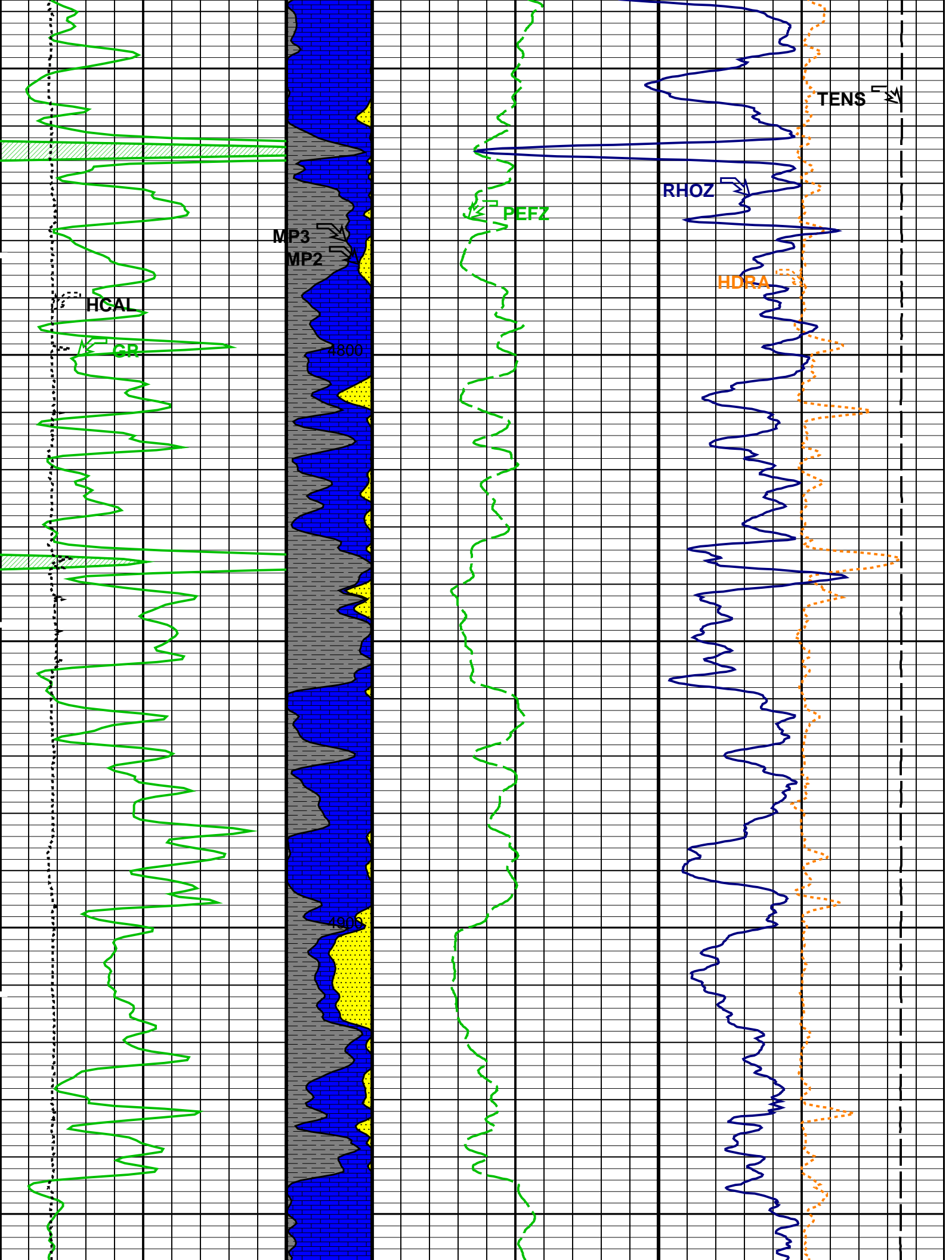


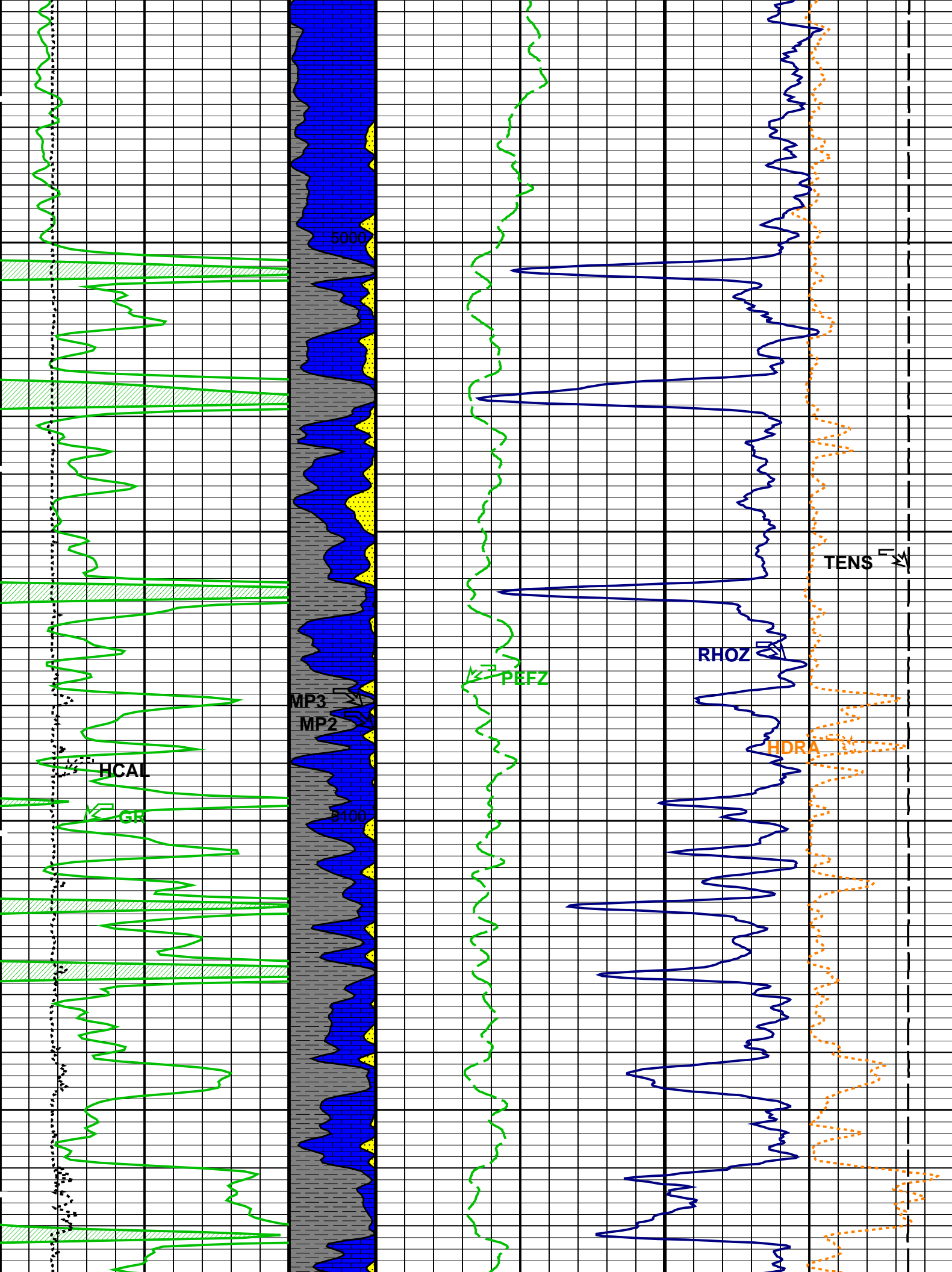


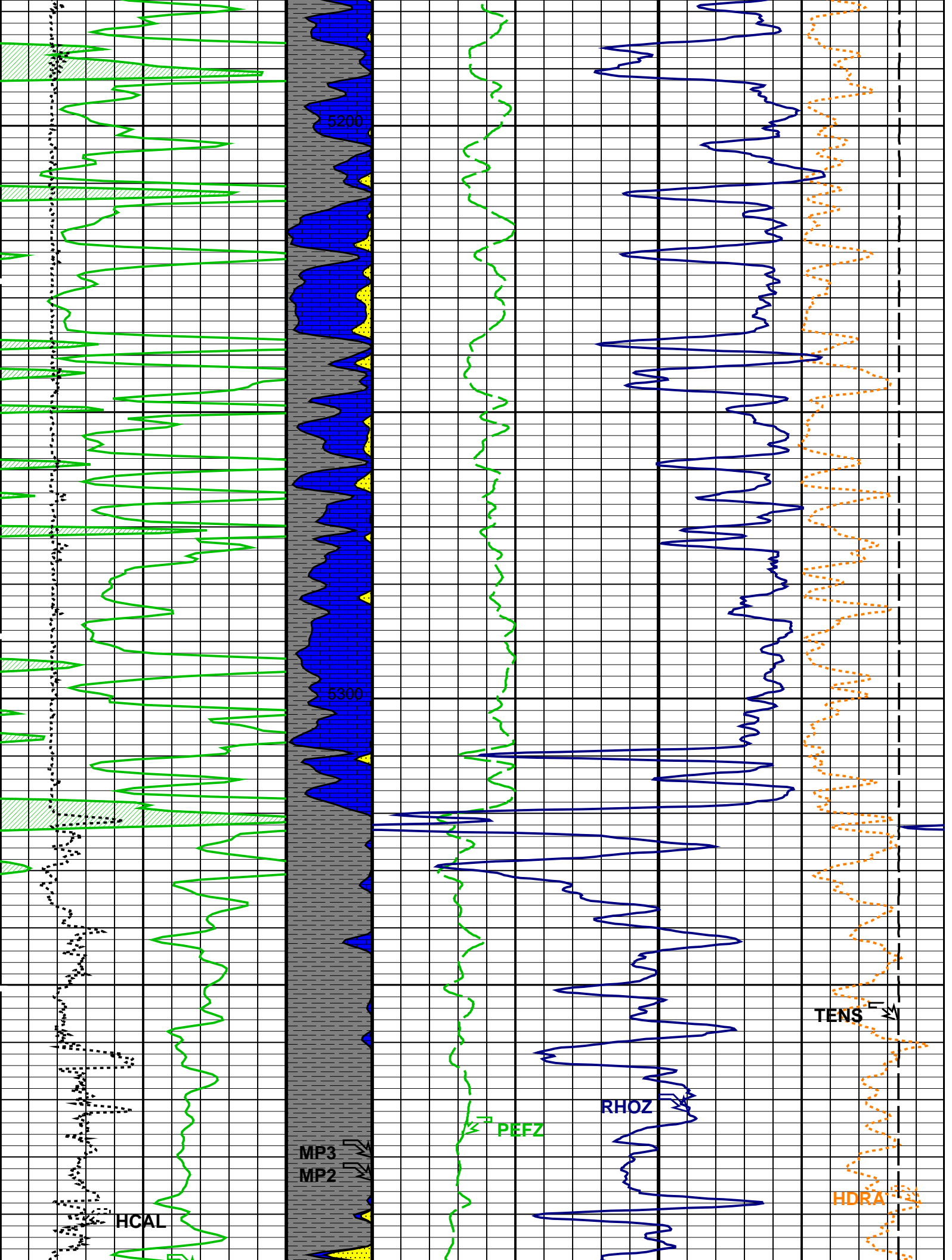


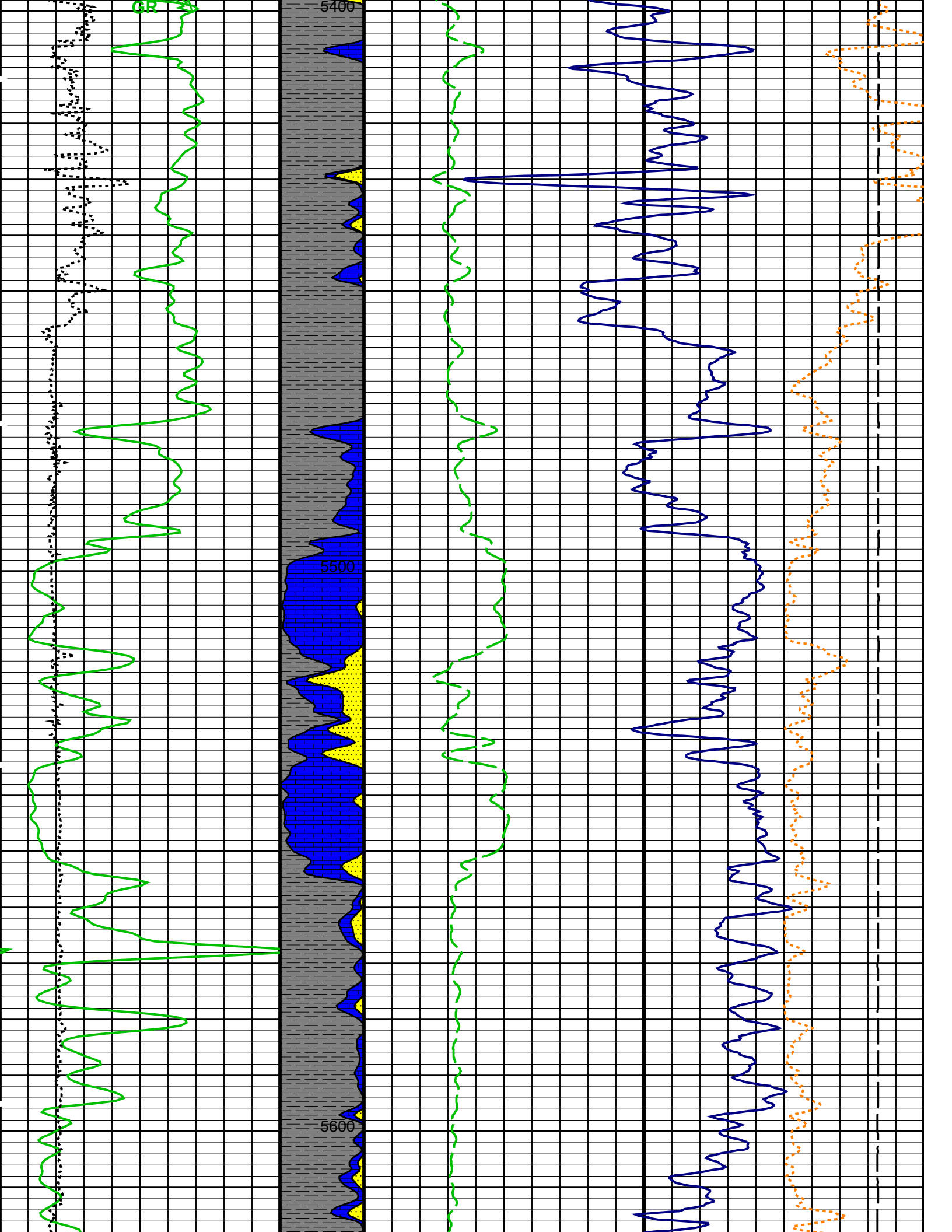


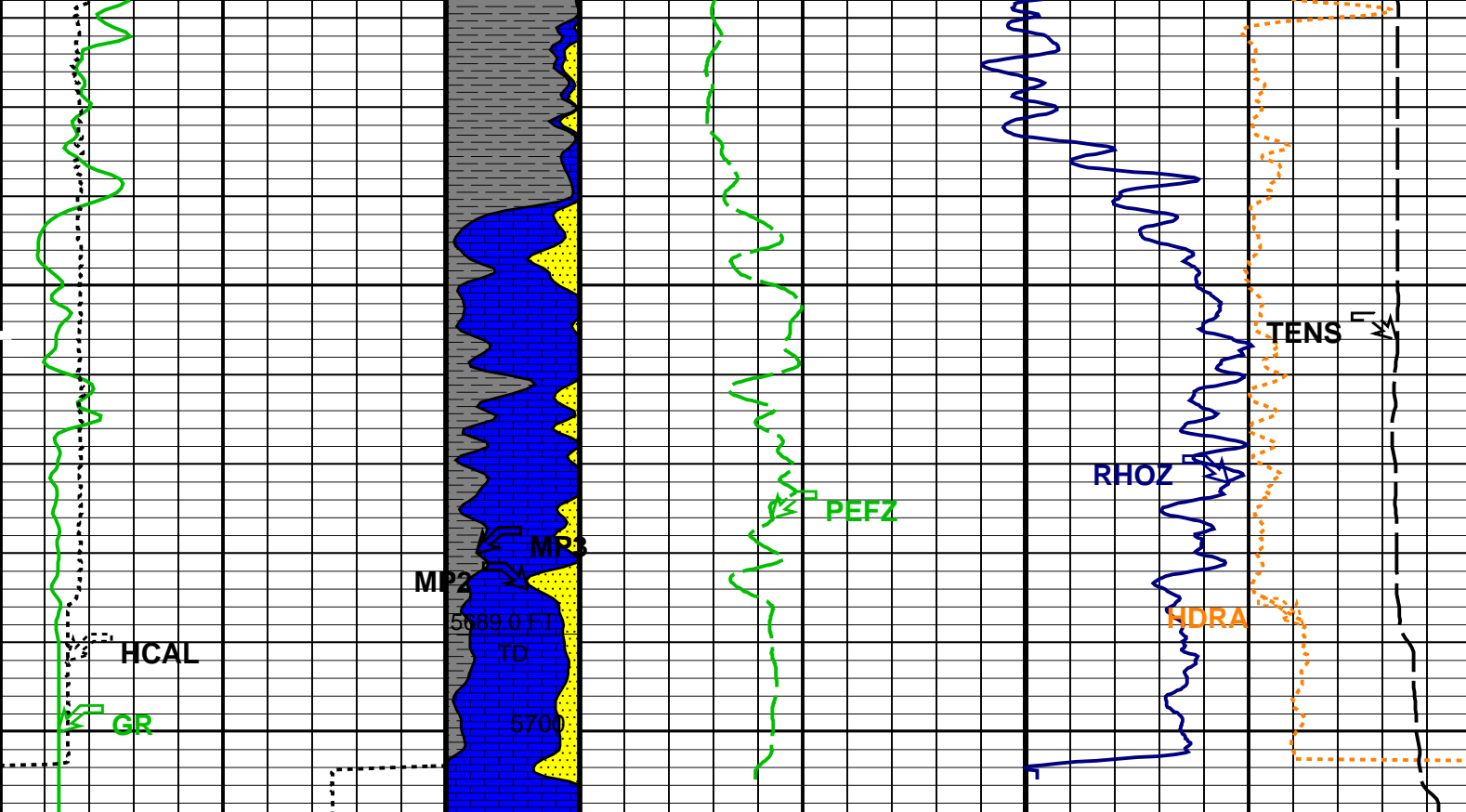




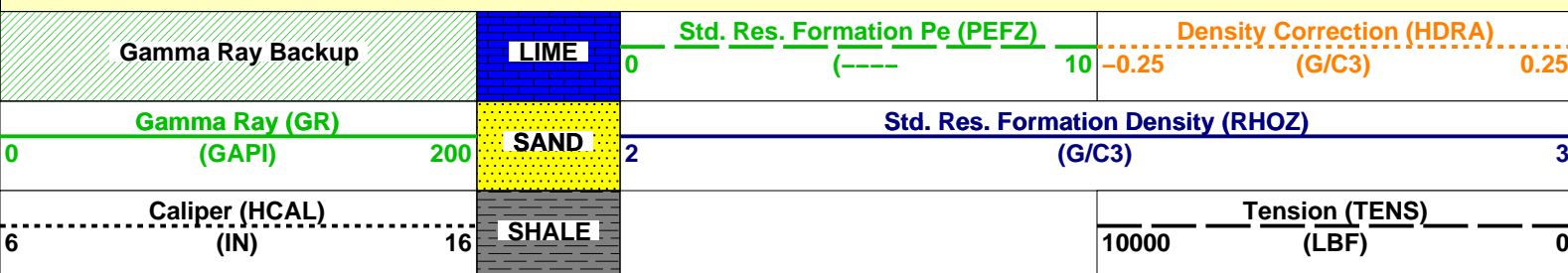








MAIN PASS: *** PLATFORM EXPRESS - LITHOLOGY DENSITY ***



PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
AIT-M: Array Induction Tool - M		
BHT	Bottom Hole Temperature (used in calculations)	143 DEGF
FEXP	Form Factor Exponent	2
FNUM	Form Factor Numerator	1
GGRD	Geothermal Gradient	0.01 DF/F
GTSE	Generalized Temperature Selection	HSTS_HTEM
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE
SHT	Surface Hole Temperature	68 DEGF
HILTH-FTB: High resolution Integrated Logging Tool-DTS		
BHFL_TLD	HILT Nuclear Mud Base	WATER
BHT	Bottom Hole Temperature (used in calculations)	143 DEGF
DHC	Density Hole Correction	BS
FD	Fluid Density	1 G/C3
FEXP	Form Factor Exponent	2
FNUM	Form Factor Numerator	1
GCLF	Germany Coal-like Formation Option	NO
GGRD	Geothermal Gradient	0.01 DF/F
GTSE	Generalized Temperature Selection	HSTS_HTEM
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE
NAAC	HRDD APS Activation Correction	OFF
NMT	HILT Nuclear Mud Type	NOBARITE
NPRM	HRDD Processing Mode	HiRes
NSAR	HRDD Depth Sampling Rate	1 IN
SHT	Surface Hole Temperature	68 DEGF
FEQL: Formation Evaluation Quick Look		
FEXP	Form Factor Exponent	2
FNUM	Form Factor Numerator	1

	HOLEV: Integrated Hole/Cement Volume			
BHT	Bottom Hole Temperature (used in calculations)	143	DEGF	
GGRD	Geothermal Gradient	0.01	DF/F	
GTSE	Generalized Temperature Selection	HSTS_HTEM		
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE		
SHT	Surface Hole Temperature	68	DEGF	
	PERT: Preliminary Evaluation – Real Time			
BDPS	Bulk Density Processing Selector	Standard		
BHT	Bottom Hole Temperature (used in calculations)	143	DEGF	
CLIM	Caliper Limit for Bad Hole	999	IN	
CNPS	Corrected Neutron Porosity Selector	NPHI		
DRUL	DRHO Upper Limit	999	G/C3	
FCAL	Caliper Presence Flag	PRESENT		
FCGR	CGR Presence Flag	PRESENT		
FEXP	Form Factor Exponent	2		
FLDT	Bulk Density Presence Flag	PRESENT		
FNUM	Form Factor Numerator	1		
FSON	Sonic Presence Flag	ABSENT		
GGRD	Geothermal Gradient	0.01	DF/F	
GTSE	Generalized Temperature Selection	HSTS_HTEM		
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE		
PMAX	PHI Maximum	0.5	CFCF	
POUT	Porosity Output Lithology	LIMESTONE		
RG21	RHO Grain (2–Mineral Model, Min–1)	2.71	G/C3	
RG22	RHO Grain (2–Mineral Model, Min–2)	2.644	G/C3	
RG23	RHO Grain (2–Mineral Model, Min–3)	2.877	G/C3	
RG31	RHO Grain (3–Mineral Model, Min–1)	2.71	G/C3	
RG32	RHO Grain (3–Mineral Model, Min–2)	2.644	G/C3	
RG33	RHO Grain (3–Mineral Model, Min–3)	2.877	G/C3	
RTLF	RT Limit Flag	NO_LIMIT		
RWF	Resistivity of Free Water	0.02	OHMM	
SHT	Surface Hole Temperature	68	DEGF	
UF	U Fluid	0.398		
UM21	U Matrix (2–Mineral Model, Min–1)	13.77		
UM22	U Matrix (2–Mineral Model, Min–2)	4.779		
UM23	U Matrix (2–Mineral Model, Min–3)	8.997		
UM31	U Matrix (3–Mineral Model, Min–1)	13.77		
UM32	U Matrix (3–Mineral Model, Min–2)	4.779		
UM33	U Matrix (3–Mineral Model, Min–3)	8.997		
	System and Miscellaneous			
BS	Bit Size	7.875	IN	
DFD	Drilling Fluid Density	8.40	LB/G	
DO	Depth Offset for Playback	0.0	FT	
DORL	Depth Offset for Repeat Analysis	0.0	FT	
PP	Playback Processing	RECOMPUTE		
RMFS	Resistivity of Mud Filtrate Sample	0.7147	OHMM	
TD	Total Depth	5689	FT	
TWS	Temperature of Connate Water Sample	100.00	DEGF	

Format: DENS Vertical Scale: 5" per 100' Graphics File Created: 10–Apr–2012 16:52

OP System Version: 18C0–147

AIT–M	18C0–147	HILTH–FTB	18C0–147
DTC–H	18C0–147		

Input DLIS Files

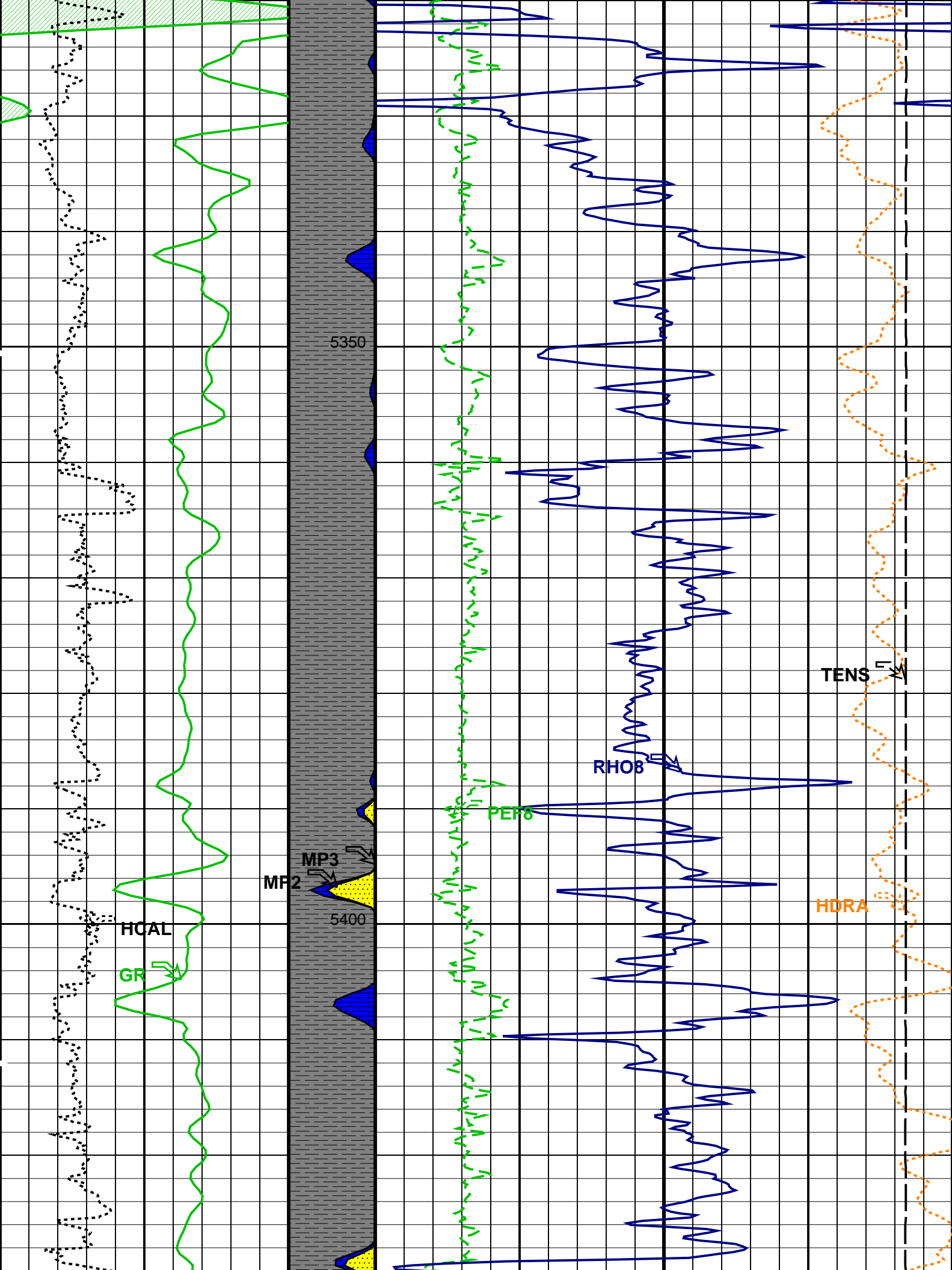
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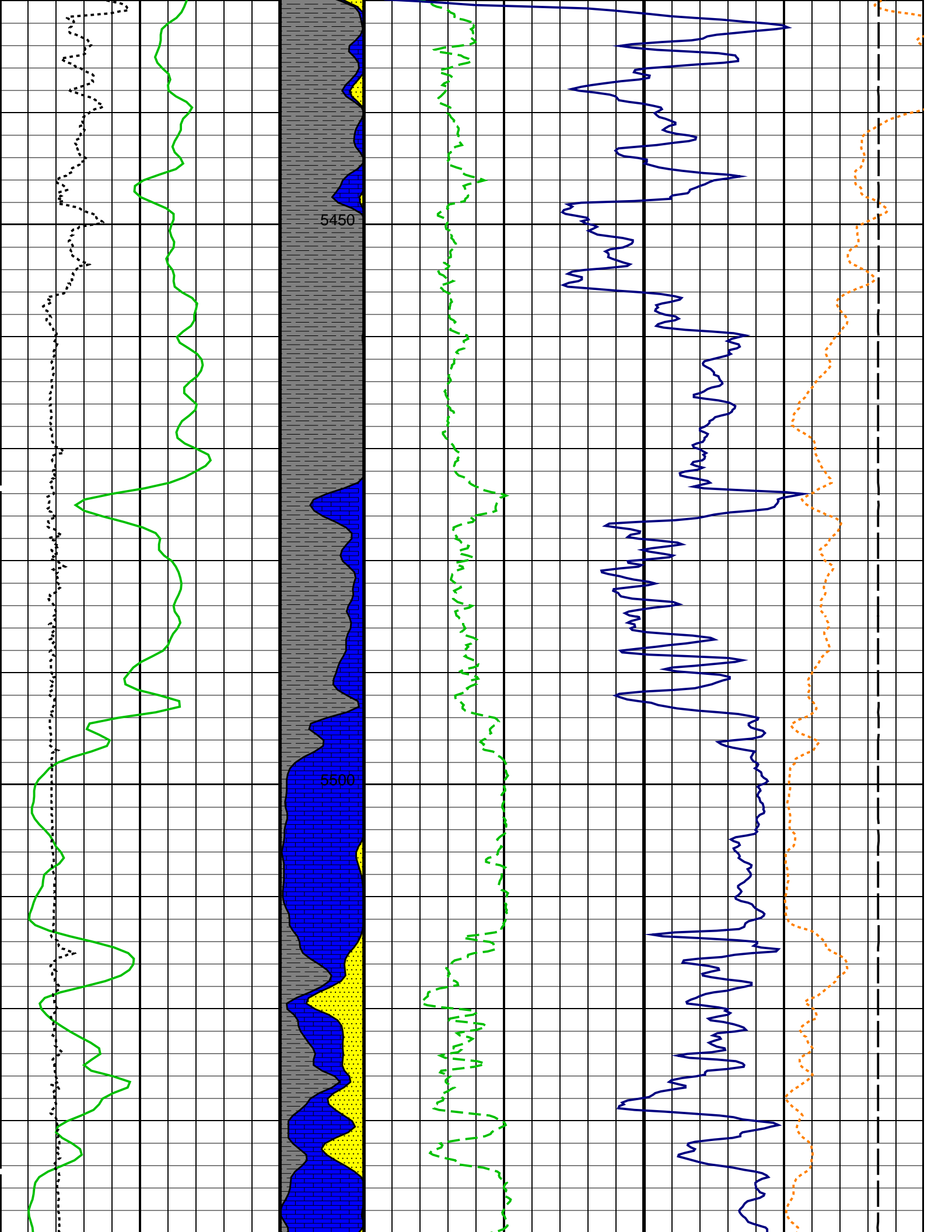
Output DLIS Files

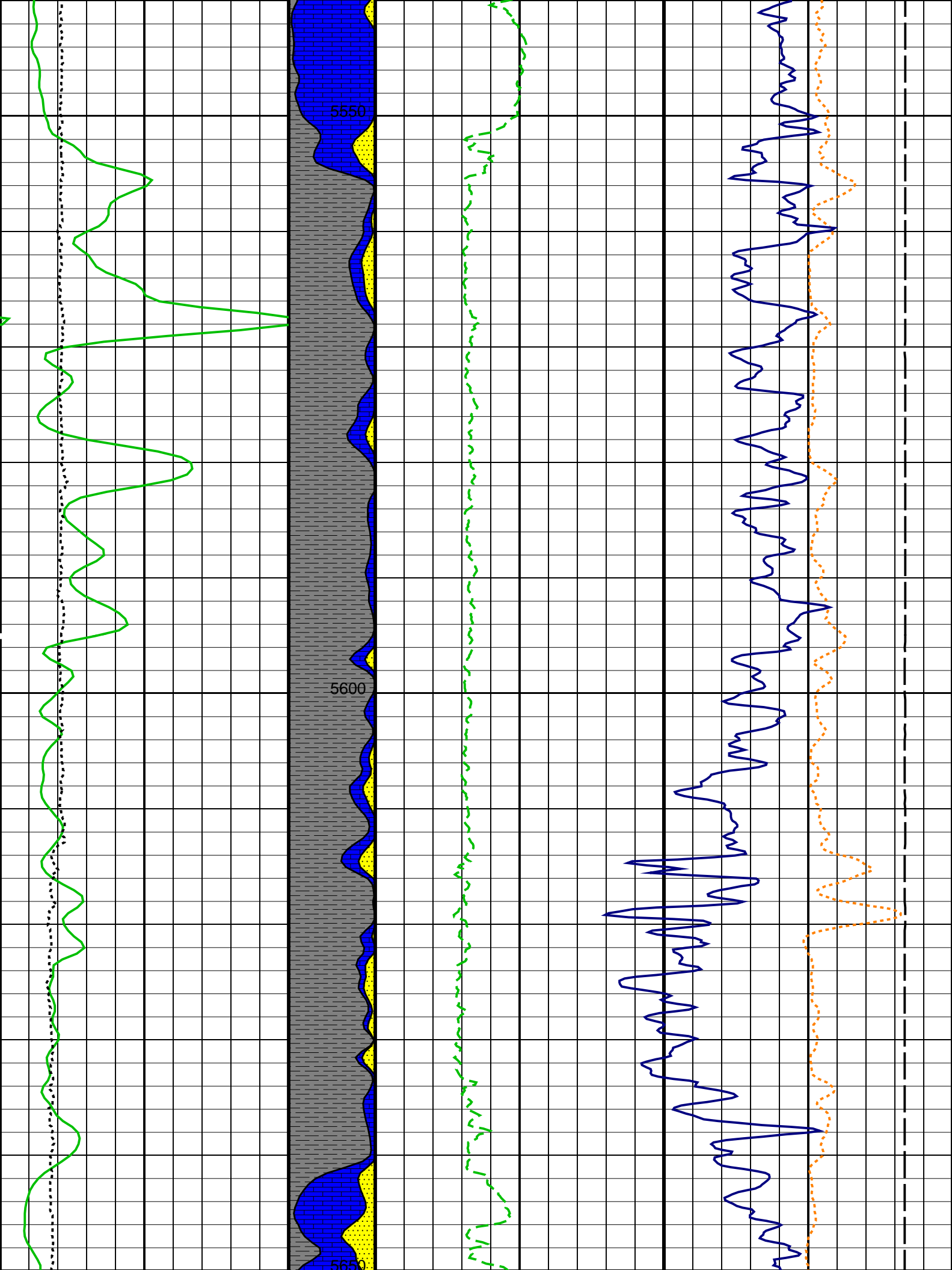
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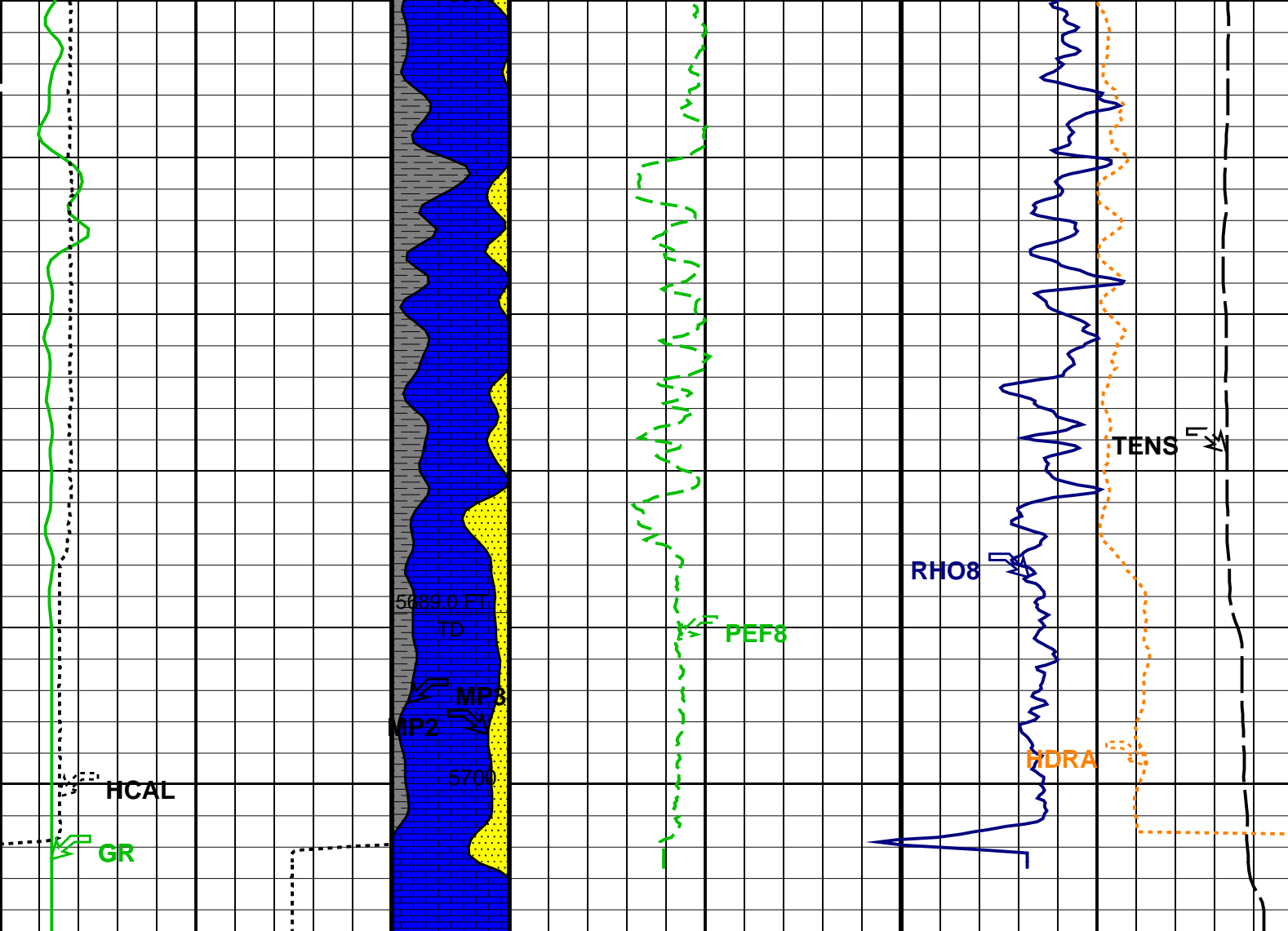
Schlumberger

DENSITY HI RES 10" = 100'









MAIN PASS: *** PLATFORM EXPRESS – LITHOLOGY DENSITY ***

Gamma Ray Backup	LIME	0	H. Res. Formation Pe (PEF8)	10	Density Correction (HDRA)	-0.25	0.25
			(---		(G/C3)		
Gamma Ray (GR)	SAND	200	H. Res. Formation Density (RHO8)				
(GAPI)			(G/C3)				
0			2			3	
Caliper (HCAL)	SHALE	16	Tension (TENS)				
(IN)			(LBF)				
6			10000			0	

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
AIT-M: Array Induction Tool – M			
BHT	Bottom Hole Temperature (used in calculations)	143	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GGRD	Geothermal Gradient	0.01	DF/F
GTSE	Generalized Temperature Selection	HSTS_HTEM	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	68	DEGF
HILTH-FTB: High resolution Integrated Logging Tool-DTS			
BHFL_TLD	HILT Nuclear Mud Base	WATER	
BHT	Bottom Hole Temperature (used in calculations)	143	DEGF
DHC	Density Hole Correction	BS	
FD	Fluid Density	1	G/C3
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCLF	Germany Coal-like Formation Option	NO	
GGRD	Geothermal Gradient	0.01	DF/F

GGRD	Geothermal Gradient	0.01	DF/F
GTSE	Generalized Temperature Selection		
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	HiRes	
NSAR	HRDD Depth Sampling Rate	1	IN
SHT	Surface Hole Temperature	68	DEGF
FEQL: Formation Evaluation Quick Look			
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
HOLEV: Integrated Hole/Cement Volume			
BHT	Bottom Hole Temperature (used in calculations)	143	DEGF
GGRD	Geothermal Gradient	0.01	DF/F
GTSE	Generalized Temperature Selection	HSTS_HTEM	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	68	DEGF
PERT: Preliminary Evaluation – Real Time			
BDPS	Bulk Density Processing Selector	Standard	
BHT	Bottom Hole Temperature (used in calculations)	143	DEGF
CLIM	Caliper Limit for Bad Hole	999	IN
CNPS	Corrected Neutron Porosity Selector	NPHI	
DRUL	DRHO Upper Limit	999	G/C3
FCAL	Caliper Presence Flag	PRESENT	
FCGR	CGR Presence Flag	PRESENT	
FEXP	Form Factor Exponent	2	
FLDT	Bulk Density Presence Flag	PRESENT	
FNUM	Form Factor Numerator	1	
FSON	Sonic Presence Flag	ABSENT	
GGRD	Geothermal Gradient	0.01	DF/F
GTSE	Generalized Temperature Selection	HSTS_HTEM	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
PMAX	PHI Maximum	0.5	CFCF
POUT	Porosity Output Lithology	LIMESTONE	
RG21	RHO Grain (2–Mineral Model, Min–1)	2.71	G/C3
RG22	RHO Grain (2–Mineral Model, Min–2)	2.644	G/C3
RG23	RHO Grain (2–Mineral Model, Min–3)	2.877	G/C3
RG31	RHO Grain (3–Mineral Model, Min–1)	2.71	G/C3
RG32	RHO Grain (3–Mineral Model, Min–2)	2.644	G/C3
RG33	RHO Grain (3–Mineral Model, Min–3)	2.877	G/C3
RTLF	RT Limit Flag	NO_LIMIT	
RWF	Resistivity of Free Water	0.02	OHMM
SHT	Surface Hole Temperature	68	DEGF
UF	U Fluid	0.398	
UM21	U Matrix (2–Mineral Model, Min–1)	13.77	
UM22	U Matrix (2–Mineral Model, Min–2)	4.779	
UM23	U Matrix (2–Mineral Model, Min–3)	8.997	
UM31	U Matrix (3–Mineral Model, Min–1)	13.77	
UM32	U Matrix (3–Mineral Model, Min–2)	4.779	
UM33	U Matrix (3–Mineral Model, Min–3)	8.997	
System and Miscellaneous			
BS	Bit Size	7.875	IN
DFD	Drilling Fluid Density	8.40	LB/G
DO	Depth Offset for Playback	0.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	0.7147	OHMM
TD	Total Depth	5689	FT
TWS	Temperature of Connate Water Sample	100.00	DEGF

Format: DENS_HI_RES Vertical Scale: 10" per 100' Graphics File Created: 10–Apr–2012 16:52

OP System Version: 18C0–147

AIT–M	18C0–147	HILTH–FTB	18C0–147
DTC–H	18C0–147		

Input DLIS Files

DEFAULT	MERGE_AIT_026L	FN:1	PRODUCER	10–Apr–2012 16:37	5709.5 FT	328.0 FT
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Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_032PUP	FN:28	PRODUCER	10–Apr–2012 16:52
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MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Array Induction Tool – M Wellsite Calibration – Electronics Calibration Check – Thru Cal Mag. & Phase							
Master: 26-Jan-2012 16:11 Before: 10-Apr-2012 6:39							
Thru Cal Magnitude – 0	0	0.6131	0.6134	N/A	N/A	N/A	V
Thru Cal Magnitude – 1	0	1.256	1.257	N/A	N/A	N/A	V
Thru Cal Magnitude – 2	0	0.6230	0.6234	N/A	N/A	N/A	V
Thru Cal Magnitude – 3	0	0.7038	0.7042	N/A	N/A	N/A	V
Thru Cal Magnitude – 4	0	1.315	1.316	N/A	N/A	N/A	V
Thru Cal Magnitude – 5	0	1.911	1.912	N/A	N/A	N/A	V
Thru Cal Magnitude – 6	0	1.906	1.908	N/A	N/A	N/A	V
Thru Cal Magnitude – 7	0	1.361	1.362	N/A	N/A	N/A	V
Thru Cal Phase – 0	0	183.8	183.7	N/A	N/A	N/A	DEG
Thru Cal Phase – 1	0	182.7	182.6	N/A	N/A	N/A	DEG
Thru Cal Phase – 2	0	179.0	178.9	N/A	N/A	N/A	DEG
Thru Cal Phase – 3	0	178.2	178.1	N/A	N/A	N/A	DEG
Thru Cal Phase – 4	0	172.0	171.9	N/A	N/A	N/A	DEG
Thru Cal Phase – 5	0	170.3	170.2	N/A	N/A	N/A	DEG
Thru Cal Phase – 6	0	170.3	170.2	N/A	N/A	N/A	DEG
Thru Cal Phase – 7	0	169.6	169.5	N/A	N/A	N/A	DEG

Array Induction Tool – M Wellsite Calibration – Electronics Calibration Check – Auxiliary

Master: 26-Jan-2012 16:11 Before: 10-Apr-2012 6:39

Array Induction SPA Plus	991.0	991.5	991.6	N/A	N/A	N/A	MV
Array Induction SPA Zero	0	-0.2500	-0.2198	N/A	N/A	N/A	MV
Array Induction Temperature PI	0.9170	0.9184	0.9184	N/A	N/A	N/A	V
Array Induction Temperature Ze	0	-0.0002500	-0.0002217	N/A	N/A	N/A	V

Array Induction Tool – M Wellsite Calibration – Test Loop Gain Correction

Master: 26-Jan-2012 16:11

Test Loop Gain Correctio – 0	0	1.014	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 1	0	1.016	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 2	0	1.014	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 3	0	1.012	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 4	0	0.9946	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 5	0	0.9890	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 6	0	0.9984	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 7	0	1.006	N/A	N/A	N/A	N/A	V
Test Loop Gain Correctio – 0	0	0.4704	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 1	0	0.6871	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 2	0	0.1215	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 3	0	-0.06941	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 4	0	0.1235	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 5	0	-0.1023	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 6	0	0.2848	N/A	N/A	N/A	N/A	DEG
Test Loop Gain Correctio – 7	0	-0.005901	N/A	N/A	N/A	N/A	DEG

Array Induction Tool – M Wellsite Calibration – Sonde Error Correction

Master: 26-Jan-2012 16:11

R Sonde Error Correction – 0	0	-93.39	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 1	0	158.2	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 2	0	116.5	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 3	0	63.04	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 4	0	27.36	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 5	0	13.24	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 6	0	9.876	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 7	0	-1.618	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 0	0	-7.309	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 1	0	-334.4	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 2	0	10.73	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 3	0	-58.01	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 4	0	-12.80	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 5	0	-17.35	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 6	0	-3.765	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 7	0	4.594	N/A	N/A	N/A	N/A	MM/M

Array Induction Tool – M Wellsite Calibration – Mud Gain Correction							
Master: 26-Jan-2012 16:11							
Coarse – Mag, Real, Imag – 0	0	0.8718	N/A	N/A	N/A	N/A	N/A
Coarse – Mag, Real, Imag – 1	0	0.8718	N/A	N/A	N/A	N/A	N/A
Coarse – Mag, Real, Imag – 2	0	0.8718	N/A	N/A	N/A	N/A	N/A
Fine – Mag, Real, Imag – 0	0	0.8719	N/A	N/A	N/A	N/A	N/A
Fine – Mag, Real, Imag – 1	0	0.8719	N/A	N/A	N/A	N/A	N/A
Fine – Mag, Real, Imag – 2	0	0.8719	N/A	N/A	N/A	N/A	N/A
Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration							
Before: 10-Apr-2012 12:15							
EDTC Z-Axis Acceleration	32.19	N/A	32.00	N/A	N/A	N/A	F/S2
Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration							
Before: 10-Apr-2012 12:12							
Gamma Ray (Jig – Bkg)	136.3	N/A	136.3	N/A	N/A	12.40	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

Array Induction Tool – M / Equipment Identification			
Primary Equipment:			
Rm/SP Bottom Nose		AMRM – A	
Array Induction Sonde		AMIS – A	39
Auxiliary Equipment:			

Array Induction Tool – M Wellsite Calibration							
Electronics Calibration Check – Thru Cal Mag. & Phase							
Idx	Phase	Value	Thru Cal Magnitude V	Nominal	Value	Thru Cal Phase DEG	Nominal
0	Master	0.6131		0.6100	183.8		197.0
	Before	0.6134			183.7		
1	Master	1.256		1.270	182.7		196.0
	Before	1.257			182.6		
2	Master	0.6230		0.6200	179.0		192.0
	Before	0.6234			178.9		
3	Master	0.7038		0.7000	178.2		191.0
	Before	0.7042			178.1		
4	Master	1.315		1.340	172.0		185.0
	Before	1.316			171.9		
5	Master	1.911		1.960	170.3		182.0
	Before	1.912			170.2		
6	Master	1.906		1.960	170.3		181.0
	Before	1.908			170.2		
7	Master	1.361		1.410	169.6		175.0
	Before	1.362			169.5		
		60.00 % (Minimum)	(Nominal)	140.0 % (Maximum)	Nom -60.00 (Minimum)	(Nominal)	Nom + 60.00 (Maximum)
Master: 26-Jan-2012 16:11				Before: 10-Apr-2012 6:39			

Array Induction Tool – M Wellsite Calibration					
Electronics Calibration Check – Auxiliary					
Phase	Array Induction SPA Plus MV	Value	Phase	Array Induction SPA Zero MV	Value
Master		991.5	Master		-0.2500
Before		991.6	Before		-0.2198
	941.0 (Minimum)	991.0 (Nominal)		-50.00 (Minimum)	0 (Nominal)
		1040 (Maximum)			50.00 (Maximum)
Phase	Array Induction Temperature Plus V	Value	Phase	Array Induction Temperature Zero V	Value
Master		0.9184	Master		-0.0002500

Before		0.9184	Before		-0.0002217
0.8710 (Minimum)	0.9170 (Nominal)	0.9630 (Maximum)	-0.05000 (Minimum)	0 (Nominal)	0.05000 (Maximum)
Master: 26-Jan-2012 16:11			Before: 10-Apr-2012 6:39		

Array Induction Tool – M Wellsite Calibration							
Test Loop Gain Correction							
Idx	Value	Test Loop Gain Correction Magnitude			Value	Test Loop Gain Correction Phase DEG	
0	1.014				0.4704		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
1	1.016				0.6871		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
2	1.014				0.1215		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
3	1.012				-0.06941		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
4	0.9946				0.1235		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
5	0.9890				-0.1023		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
6	0.9984				0.2848		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
7	1.006				-0.005901		
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
Master: 26-Jan-2012 16:11							

Array Induction Tool – M Wellsite Calibration							
Sonde Error Correction							
Idx	Value	R Sonde Error Correction MM/M			Value	X Sonde Error Correction MM/M	
0	-93.39				-7.309		
		-231.0 (Minimum)	-56.00 (Nominal)	119.0 (Maximum)		-2250 (Minimum)	0 (Nominal) 2250 (Maximum)
1	158.2				-334.4		
		114.0 (Minimum)	159.0 (Nominal)	204.0 (Maximum)		-625.0 (Minimum)	0 (Nominal) 625.0 (Maximum)
2	116.5				10.73		
		66.00 (Minimum)	111.0 (Nominal)	156.0 (Maximum)		-350.0 (Minimum)	0 (Nominal) 350.0 (Maximum)
3	63.04				-58.01		
		39.00 (Minimum)	64.00 (Nominal)	89.30 (Maximum)		-250.0 (Minimum)	0 (Nominal) 250.0 (Maximum)
4	27.36				-12.80		
		15.00 (Minimum)	25.00 (Nominal)	35.00 (Maximum)		-63.00 (Minimum)	0 (Nominal) 63.00 (Maximum)
5	13.24				-17.35		
		4.000 (Minimum)	14.00 (Nominal)	24.00 (Maximum)		-50.00 (Minimum)	0 (Nominal) 50.00 (Maximum)
6	9.876				-3.765		
		5.000 (Minimum)	10.00 (Nominal)	15.00 (Maximum)		-30.00 (Minimum)	0 (Nominal) 30.00 (Maximum)
7	-1.618				4.594		
		-5.000 (Minimum)	0 (Nominal)	5.000 (Maximum)		-30.00 (Minimum)	0 (Nominal) 30.00 (Maximum)
Master: 26-Jan-2012 16:11							

Array Induction Tool – M Wellsite Calibration				
Mud Gain Correction				
Idx	Value	Coarse – Mag, Real, Imag		Fine – Mag, Real, Imag

0	0.8718				0.8719			
	0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)	
1	0.8718				0.8719			
	0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)	
2	0.8718				0.8719			
	0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)	
Master: 26-Jan-2012 16:11								

Enhanced DTS Cartridge / Equipment Identification

Primary Equipment:

EDTC Gamma Ray Detector
Enhanced DTS Cartridge

EDTG – A/B
EDTC – B

Auxiliary Equipment:

EDTC Housing

EDTH – B

Enhanced DTS Cartridge Wellsite Calibration			
EDTC Accelerometer Calibration			
Phase	EDTC Z-Axis Acceleration F/S2		Value
Before			32.00
	31.53 (Minimum)	32.19 (Nominal)	32.84 (Maximum)
Before: 10-Apr-2012 12:15			

Enhanced DTS Cartridge Wellsite Calibration											
Detector Calibration											
Phase	Gamma Ray Background GAPI		Value	Phase	Gamma Ray (Jig – Bkg) GAPI		Value	Phase	Gamma Ray (Calibrated) GAPI		Value
Before			59.61	Before			136.3	Before			165.0
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)		124.0 (Minimum)	136.3 (Nominal)	148.7 (Maximum)		150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)
Before: 10-Apr-2012 12:12											

Company: **Vecta Oil & Gas Ltd**

Schlumberger

Well: **Little Bear 44-28**

Field: **Wildcat**

County: **Cheyenne**

State: **Colorado**

Platform Express
Compensated Neutron
Litho Density