

**Three Detector Litho-Density /
Compensated Neutron Log
Final Composite 1" & 2"**

Company: PB ENERGY STORAGE SERVICES, INC

Well: DCP Linam Ranch AGI #2

Field: AGI; Bone Spring-Wolfcamp

County: Lea State: New Mexico

Three Detector Litho-Density

Compensated Neutron Log

Final Composite 1" & 2"

County:		Lea			
Field:		AGI; Bone Spring-Wolfcamp			
Location:		1600' FSL & 1750' FWL			
Well:		DCP Linam Ranch AGI #2			
Company:		PB ENERGY STORAGE SERVICES, INC			
		Location:			
		1600' FSL & 1750' FWL	Elev.:	K.B.	3763.00 ft
				G.L.	3738.00 ft
				D.F.	3762.00 ft
			Permanent Datum:	Ground Level	Elev.:
Log Measured From:	Kelly Bushing	25.00 ft	above Perm.Datum		
Drilling Measured From:	Kelly Bushing				
API Serial No.	Section:	Township:	Range:		
30-025-42139	30	18S	37E		

Logging Date	01-Nov-2014	30-Nov-2014	10-Dec-2014
Run Number	One	Two	Run 3a
Depth Driller	3220.00 ft	8630.00 ft	9234.00 ft
Schlumberger Depth	3226.75 ft	8630.00 ft	9234.00 ft
Bottom Log Interval	3205.84 ft	8587.00 ft	9247.00 ft
Top Log Interval	1580.67 ft	3219.50 ft	8594.00 ft
Casing Driller Size @ Depth	20 in @ 1570.00 ft	13.375 in @ 3220.00 ft	9.625 in @ 8604.00 ft
Casing Schlumberger	1580.67 ft	3219.5 ft	8594 ft
Bit Size	17.5 in	12.25 in	8.5 in
Type Fluid In Hole	Salt Brine	Salt Brine	Fresh Water
Density	9.8 lbm/gal	8.8 lbm/gal	10.1 lbm/gal
Fluid Loss	0 cm3	0 cm3	0 cm3
Source of Sample	Active Tank	Active Tank	Active Tank
RM @ Meas Temp	0.06 ohm.m @ 64.5 degF	9 ohm.m @ 80 degF	1.09 ohm.m @ 62.2 degF
RMF @ Meas Temp	0.04 ohm.m @ 75 degF	7.5 ohm.m @ 80 degF	0.75 ohm.m @ 75 degF
RMC @ Meas Temp	0.06 ohm.m @ 75 degF	0.06 ohm.m @ 75 degF	0.89 ohm.m @ 75 degF
Source RMF	RMC	Pressed	Calculated
RM @ BHT	RMF @ BHT	6.85 @ 107.3	0.52 @ 138
Max Recorded Temperatures	107.3 degF	125 degF	138 degF
Circulation Stopped	Time	30-Nov-2014	08:00:00
Logger on Bottom	Time	05:26:09	04:38:04
Unit Number	Location:	2133	2381
Recorded By	Emil Ludick	Tyler Bolton	Matt Clardy/ Phil Lacasse
Witnessed By	Russell Bentley	Russell Bentley	Russell Bentley

RUN 1

Disclaimer

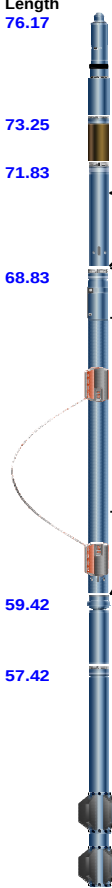
THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (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.

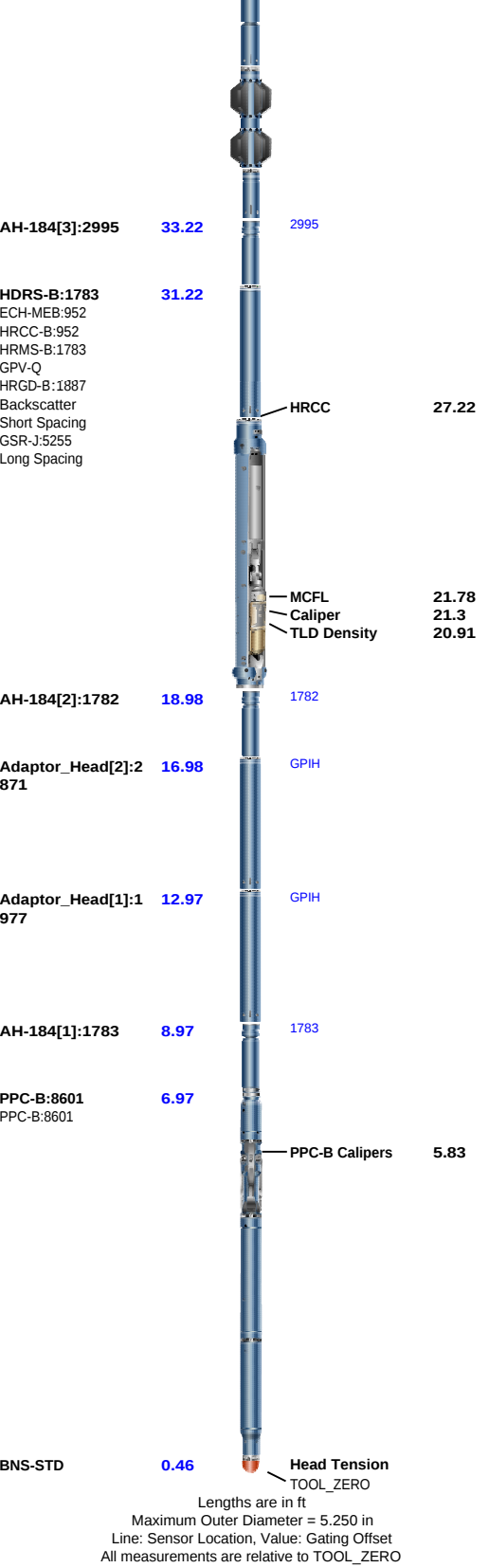
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11. Tail

Remarks and Equipment Summary

One: Toolstring				One: Remarks		
Equip name LEH-QT:3338 LEH-QT:3338	Length 76.17	MP name	Offset	THANK YOU FOR CHOOSING SCHLUMBERGER!		
AH-369:1858	73.25		70.93 0.00	LOGGER REQUESTED: 00:00 01-NOV-2014 LOGGER ARRIVED: 18:00 31-OCT-2014 RIG READY: 03:00 01-NOV-2014 RIG: PRECISION 107		
				CREW: E. LUDICK, M. MARTINEZ, J. MENDOZA		
DTC-H:8131 ECH-KC:10149 DTC-H:8131	71.83		68.82 68.82 68.8	TOOLS RUN AS PER TOOL SKETCH AND PRESENTATIONS AS PER CLIENT REQUES		
HGNS-B:3960 HGNH:3721 NPV-N NSR-F:5061 HMCA-B HGNS-B:3960 HACCZ-B:4001	68.83		68.08	CALIPERS CHECKED IN CASING WITH INNER CASING ID OF 19.00 INCHES.		
AH-107:3858	59.42		61.75 59.42 59.42 0.00	HRLA RUN WITH 4 FOUR FIN 1.5 INCH STANDOFFS.		
				HGNS ECCENTRALIZED WITH STANDARD BOWSPRING. HGNS TEMP. SENSOR USED TO DETERMINE MAXIMUM BOREHOLE TEMPE		
				HGNS WEAR RING 0.125".		
HRLT-B:1884 HRUH-B:994 HRUC-B:979 HRLS-B:1884 HRLH-B:790 HRLC-B:790 AH-270:959	57.42		45.65	MATRIX LIMESTONE GIVEN BY CLIENT WITH LOGS PRESENTED ON LIMESTONE COMPATIBLE SCALE.		
				MATRIX LIMESTONE DENSITY 2.71 g/cc AND FLUID DENSITY 1.1 g/cc.		
				PPC USED TO DETERMIN HOLE VOLUME.		



Depth Summary			
One			
Depth Measuring Device			
Type	IDW-B		
Serial Number	6307		
Calibration Date	02-SEP-2014		
Calibrator Serial Number			
Calibration Cable Type	7-46P-XS		
Wheel Correction 1	-2		
Wheel Correction 2	-1		
Tension Device			
Type	CMTR-B/A		

Type	CMTD-B/A		
Serial Number	3872		
Calibration Date	03-OCT-2014		
Calibrator Serial Number	1019		
Number of Calibration Points	0		

Logging Cable

Type	7-46P-XS		
Serial Number	U713011		
Length	19700.00 ft		
Conveyance Type	Wireline		
Rig Type	Land		

One:Depth Control Parameters		Depth Control Remarks
Log Sequence	Subsequent Trip To the Well	IDW USED AS PRIMARY DEPTH CONTROL DEVICE.
Reference Log Name	AIT	Z-CHART USED AS SECONDARY DEPTH CONTROL DEVICE.
Reference Log Run Number	One	FOLLOWED SCHLUMBERGER FULL DEPTH CONTROL POLICY DATED APRIL 7TH, 2012.
Reference Log Date	12-Oct-2014	STRETCH CORRECTION OF 3.59 ft APPLIED BY COMPARING MAIN PASS TO CORRELATION LOG.
Subsequent Trip Down Log Correction		ALL LOGS CORRELATED CORRELATION LOG.

Disclaimer RUN 2

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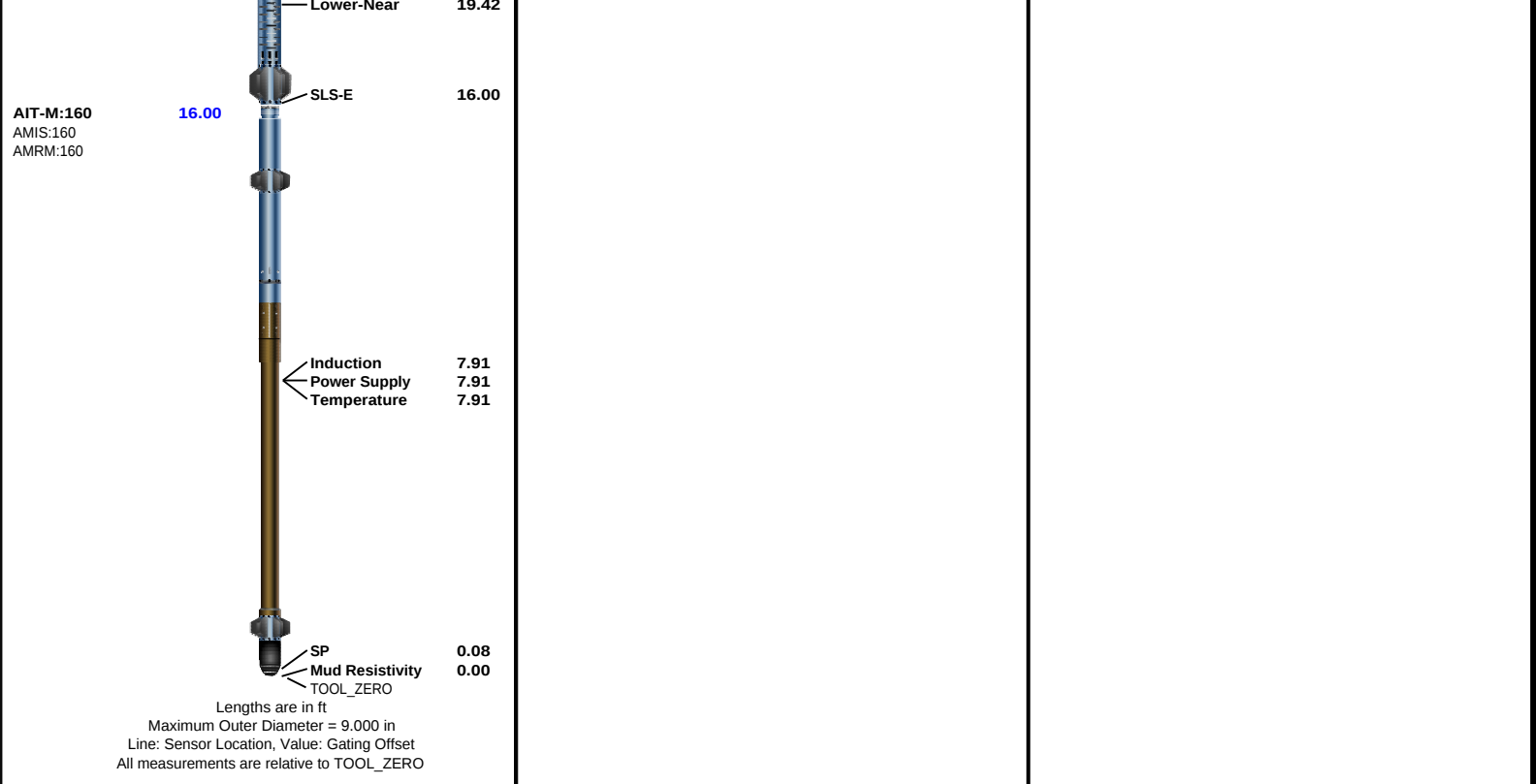
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11. Tail	

Remarks and Equipment Summary

Two: Toolstring				Two: Remarks
Equip name LEH-QC:1317	Length 82.94	MP name	Offset	Toolstring run as per toolsketch.
				Bowspring used to eccentralize HGNS.
EDTC-B:9071	80.48			0.125" standoff created by wear-ring on HGNS

Tool Name	Tool Type	Depth (ft)	Depth (m)
CTEM	CTEM	76.98	22.86
ACCZ	ACCZ	0.00	0.00
HV	HV	0.00	0.00
Gamma Ray	Gamma Ray	75.11	22.93
TelStatus	TelStatus	73.98	22.65
HNGS-BA:84	HNGS-BA:84	73.98	22.65
HEH-K:1035	HEH-K:1035		
HNGS-BA:84	HNGS-BA:84		
GR	GR	70.99	21.63
HNGC-B:610	HNGC-B:610	65.79	20.05
HNGH-A:4094	HNGH-A:4094		
HNGC-B:610	HNGC-B:610		
Tel Status	Tel Status	64.04	19.52
HGNS-B:951	HGNS-B:951	62.29	19.00
HGNH:3894	HGNH:3894		
NPV-N	NPV-N		
NSR-F:2683	NSR-F:2683		
HACCZ-B:448	HACCZ-B:448		
HMCA-B	HMCA-B		
HGNS-B:951	HGNS-B:951		
CNL Porosity	CNL Porosity	55.21	16.53
HMCA	HMCA	52.88	16.02
HGNS	HGNS	52.88	16.02
Accelerometer	Accelerometer	0.00	0.00
HDRS-B:1829	HDRS-B:1829	52.88	16.02
ECH-MEB:952	ECH-MEB:952		
HRCC-B:839	HRCC-B:839		
HRMS-B:1829	HRMS-B:1829		
Short Spacing:27483	Short Spacing:27483		
Backscatter	Backscatter		
Long Spacing:28774	Long Spacing:28774		
GSR-J:5339	GSR-J:5339		
HRGD-B:3968	HRGD-B:3968		
GPV-Q	GPV-Q		
HRCC	HRCC	48.88	14.69
MCFL	MCFL	43.45	13.24
Caliper	Caliper	42.96	13.09
TLD Density	TLD Density	42.57	13.00
AH-184:4882	AH-184:4882	40.64	12.39
AH-107	AH-107	38.64	11.78
DSL-T-H:8091	DSL-T-H:8091	36.64	11.17
ECH-KH:8585	ECH-KH:8585		
DSL-C-H:8091	DSL-C-H:8091		
SLS-E:1561	SLS-E:1561		
CBL 3ft Upper-Near	CBL 3ft Upper-Near	24.17	7.37
VDL 5ft Upper-Far	VDL 5ft Upper-Far	23.17	7.07
Delta-T	Delta-T	21.79	6.64
Lower-Far	Lower-Far	20.42	6.23



Depth Summary			
	Two		
Depth Measuring Device			
Type	IDW-JA		
Serial Number	5910		
Calibration Date	02-Jun-2014		
Calibrator Serial Number			
Calibration Cable Type	7-46P XS		
Wheel Correction 1	-2		
Wheel Correction 2	-1		
Tension Device			
Type	CMTD-B/A		
Serial Number	5044		
Calibration Date	18-Oct-2014		
Calibrator Serial Number	80725A		
Number of Calibration Points	10		
Calibration Root Mean Square Error	19		
Calibration Peak Error	36		
Logging Cable			
Type	7-46P-XS		
Serial Number	U711059		
Length	15500.00 ft		
Conveyance Type	Wireline		
Rig Type	Land		
Two:Depth Control Parameters		Depth Control Remarks	
Log Sequence	Subsequent Trip To the Well	All primary and secondary depth control procedures followed. IDW used as primary depth control device. Z-chart used as secondary depth control device.	
Reference Log Name	Platform Express-CNL		
Reference Log Run Number	One		
Reference Log Date	01-Nov-2014		
Subsequent Trip Down Log Correction	7.29 ft		
Disclaimer		RUN 3	

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|--|---|

Operational Run Summary

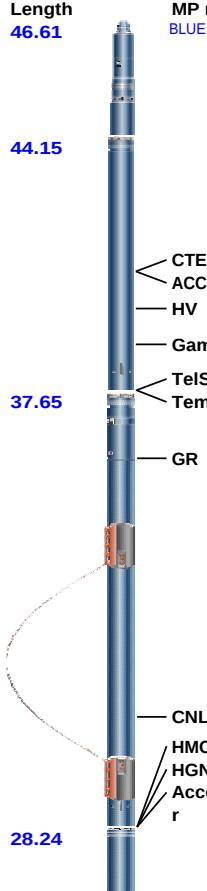
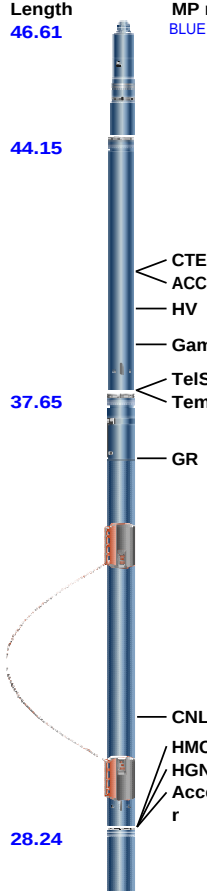
Parameter (unit)	Run 3a					
Date Log Started	10-Dec-2014					
Time Log Started	03:52:06					
Date Log Finished	10-Dec-2014					
Time Log Finished	06:35:47					
Top Log Interval (ft)	8594.00					
Bottom Log Interval (ft)	9247.00					
Total Depth (ft)	9247.00					
Max Hole Deviation (deg)	0.00					
Azimuth of Max Deviation (deg)	0.00					
Bit Size (in)	8.500					
Logging Unit Number	2381					
Logging Unit Location	Midland, TX					
Recorded By	Matt Clardy/ Phil Lacasse					
Witnessed By	Russell Bentley					
Service Order Number	DOM2-00023					

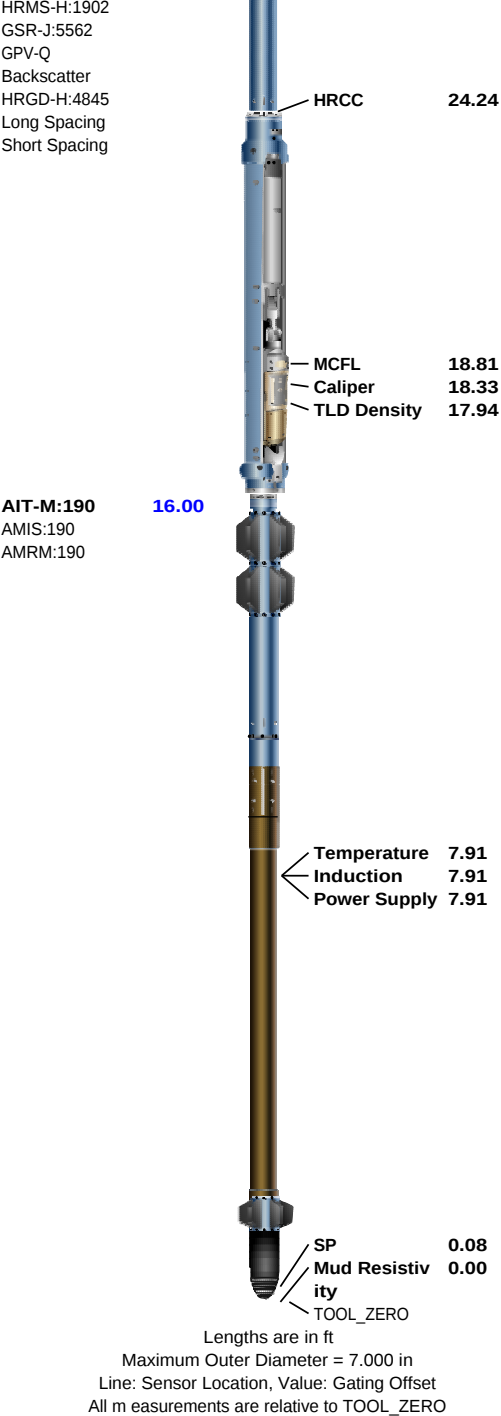
Borehole Fluids

Parameter(unit)	Run 3a					
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Fluid Type	Water					
Fluid Name	Fresh Water					
Max Recorded Temperatures (degF)	138					
Source of Sample	Active Tank					
Salinity (ppm)	500					
Density (lbm/gal)	10.1					
Funnel Viscosity (s)	42					
Fluid Loss (cm3)	0					
PH	10.5					
Date/Time Circulation Stopped	09-Dec-2014 08:00:00					
Date Logger on Bottom	10-Dec-2014					
Time Logger on Bottom	04:38:04					
Source RMF	Calculated					
RMC	Calculated					
RM @ Meas Temp (ohm.m@degF)	1.09 @ 62.2					
RMF @ Meas Temp (ohm.m@degF)	0.75 @ 75					
RMC @ Meas Temp (ohm.m@degF)	0.89 @ 75					
RM @ BHT (ohm.m@degF)	0.52 @ 138					
RMF @ BHT (ohm.m@degF)	0.42 @ 138					
RMC @ BHT (ohm.m@degF)	0.5 @ 138					
Total Solid (%)	10					
High Gravity Solids (%)						

Remarks and Equipment Summary

Run 3a: Toolstring				Run 3a: Remarks
Equip name LEH-QC	Length 46.61	MP name BLUE	Offset	Max recorded temperature from downhole thermometer = 138 degF.
EDTC-B:8101 EDTH-B:8101 EDTG-A:77002 EDTC-B:8101	44.15			Tool String run as per tool sketch (3x 1.5 in Standoffs, Bowspring).
				Cement volume calculated using 7.0 inch future casing diameter.
				Hole size and standoff correction applied to neutron porosity.
				Logs Run from 9247 ft to Casing as per client request. Repeat performed for 300ft from 9247 ft as per client request.
				Thank you for choosing Schlumberger! Schlumberger Wireline - Midland, TX - 432-694-0000
HGNS-H:3720 HGNH:3917 NPV-N NSR-F:5317 HGNS-H:3720 HMCA-H HACCZ-H:4665	37.65			Rig: Precision #107. Schlumberger Crew: Mohammed, Ozzy, Matt & Phil.
HDRS-H:1902 ECH-MEB:3979 HRCC-H:3931	28.24			Logs performed on a Limestone matrix (2.71 g/cc). Mud Properties: MW = 10.1 lb/gal; FD = 1.00 g/cc.



Depth Summary

Run 3a

Depth Measuring Device

Type	IDW-B		
Serial Number	6568		
Calibration Date	28-Jul-2014		
Calibrator Serial Number			
Calibration Cable Type	7-46P/AXS		
Wheel Correction 1	-4		
Wheel Correction 2	-3		

Tension Device

Type	CMTD-B/A		
Serial Number	8100		
Calibration Date	18-Nov-2014		
Calibrator Serial Number	U713032		
Number of Calibration Points	10		
Calibration Root Mean Square Error	16		

Calibration Peak Error	20		
Logging Cable			
Type	7-46P-XS		
Serial Number	U713032		
Length	23800.00 ft		
Conveyance Type	Wireline		
Rig Type			
Run 3a:Depth Control Parameters		Depth Control Remarks	
Log Sequence	First Log In the Well	All Schlumberger depth control procedures to date followed. All passes correlated to previous SLB log in well dated 11/30/14.	
Rig Up Length At Surface		CMTD used as primary tension control. CMTD last calibrated on 11-Nov-2014.	
Rig Up Length At Bottom		IDW used as primary means of depth control. Z-chart used as secondary means of depth control. IDW calibrated on 28-Jul-2014.	
Rig Up Length Correction			
Stretch Correction			
Tool Zero Check At Surface			

Main Pass 2" = 100'

Integration Summary	
Integration Summary The integration of the three models (Cognitive-Behavioral, Psychodynamic, and Humanistic) provides a comprehensive framework for understanding human behavior. This summary outlines the key components and their interrelationships. Key Components: Cognitive-Behavioral Model: Focuses on the relationship between thoughts, feelings, and behaviors. It emphasizes the role of learning and conditioning in shaping behavior. Psychodynamic Model: Emphasizes the influence of unconscious processes and early childhood experiences on current behavior. It explores the internal conflicts and drives that shape personality. Humanistic Model: Focuses on the individual's potential for growth and self-actualization. It emphasizes the importance of a supportive environment and the role of the therapist in facilitating client development. Integration: The integration of these models allows for a more holistic understanding of the client. For example, a therapist might use cognitive-behavioral techniques to address specific symptoms while also exploring the underlying psychodynamic issues and providing a humanistic, supportive environment.	

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ICV	Integrated Cement Volume	HVAS, FCD	1889.09	ft3
IHV	Integrated Hole Volume	HVAS	3507.4	ft3

Software Version	
------------------	--

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

Computation	Description	Version
Borehole	Borehole Ensemble provides common Borehole Parameters and Channels	4.0.9469.3000
HENVIR	Computation Ensemble for the HGNS Neutron environmental corrections	4.0.9360.3000

Tool Elements	Description	Software Version	Firmware Version
HRGD-B	HILT Resistivity Gamma-Ray Density Device, 125 degC	4.0.9385.3000	3.0
HGNS-B	HILT Gamma-Ray and Neutron Sonde, 125 degC	4.0.9385.3000	2.0
HRCC-B	HILT High-Resolution Control Cartridge, 125 degC	4.0.9385.3000	2.0

Pass Summary	
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Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
One	Main[5]:Up	Up	810.48 ft	3245.53 ft	01-Nov-2014 5:51:35 AM	01-Nov-2014 6:34:07 AM	ON	3.59 ft	Yes

All depths are referenced to toolstring zero

Log	Company:PB ENERGY STORAGE SERVICES, INC	Well:DCP Linam Ranch AGI #2
		One: Main[5]:Up:S012

Description: HRLT BASIC LOG Format: Log (Porosity 2 inch General) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:53:35		
Channel	Source	Sampling
CALI	HDRS-B:HRCC-B:HRCC-B	1in
GR_CAL	HGNS-B:HGNS-B:HGNS-B	6in
HDRA	HDRS-B:HRMS-B:HRGD-B	2in
ICV	Borehole	6in
IHV	Borehole	6in
RHOZ	HDRS-B:HRMS-B:HRGD-B	2in
TENS	WLWorkflow	1in
TIME_1900	WLWorkflow	0.1in
TNPH	HGNS-B:HGNS-B:HGNS-B	6in

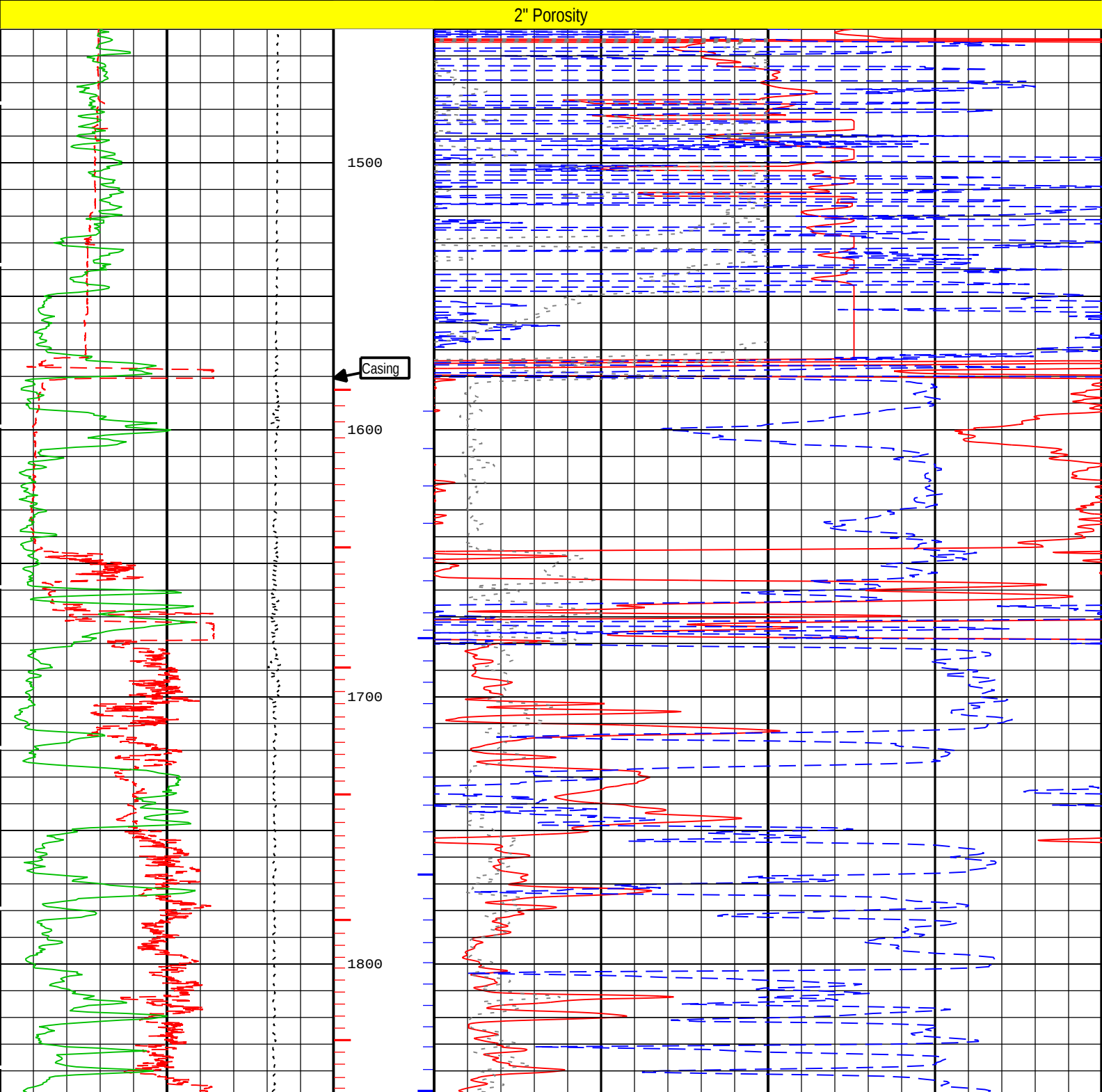
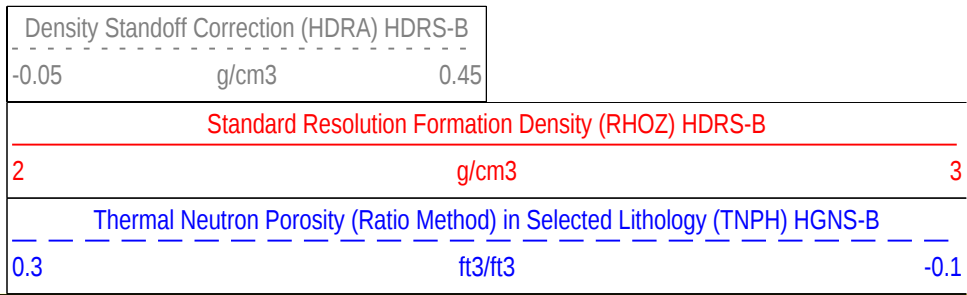
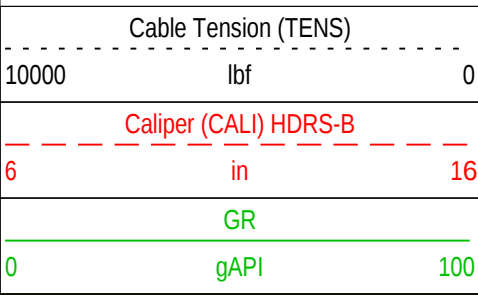
TIME_1900 - Time Marked every 60.00 (s)

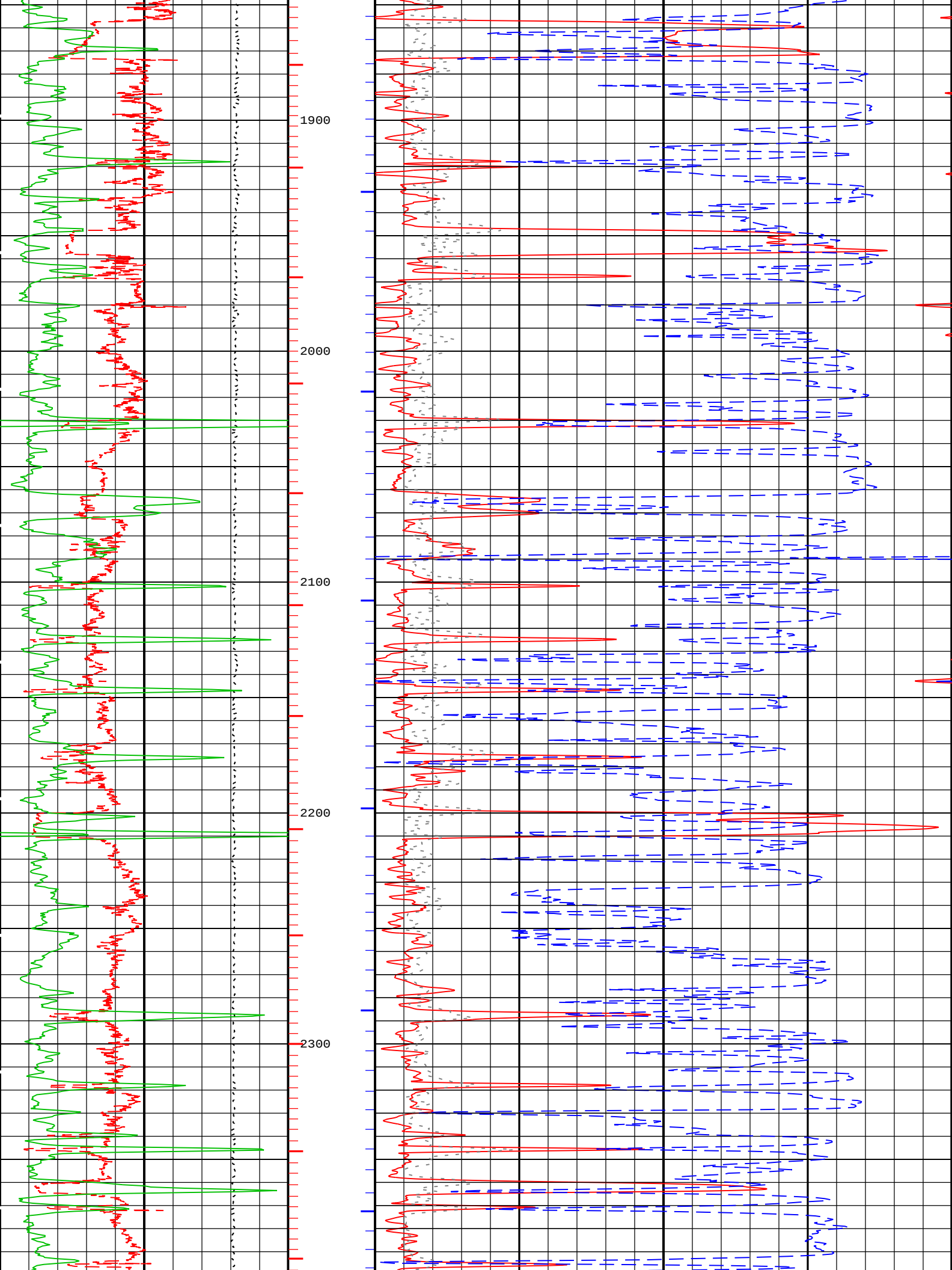
IHV - Integrated Hole Volume every 100.00 (ft3)

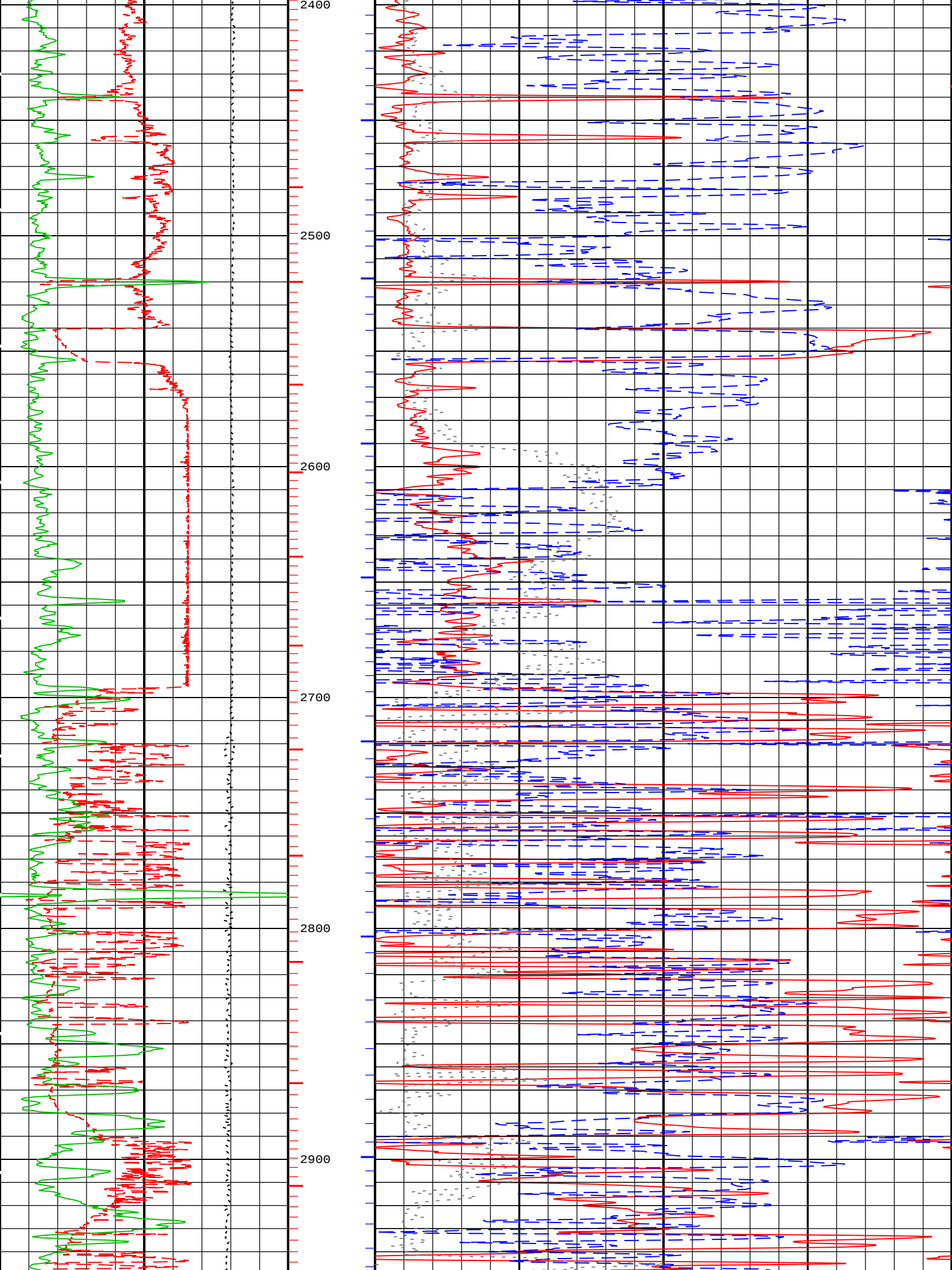
IHV - Integrated Hole Volume every 10.00 (ft3)

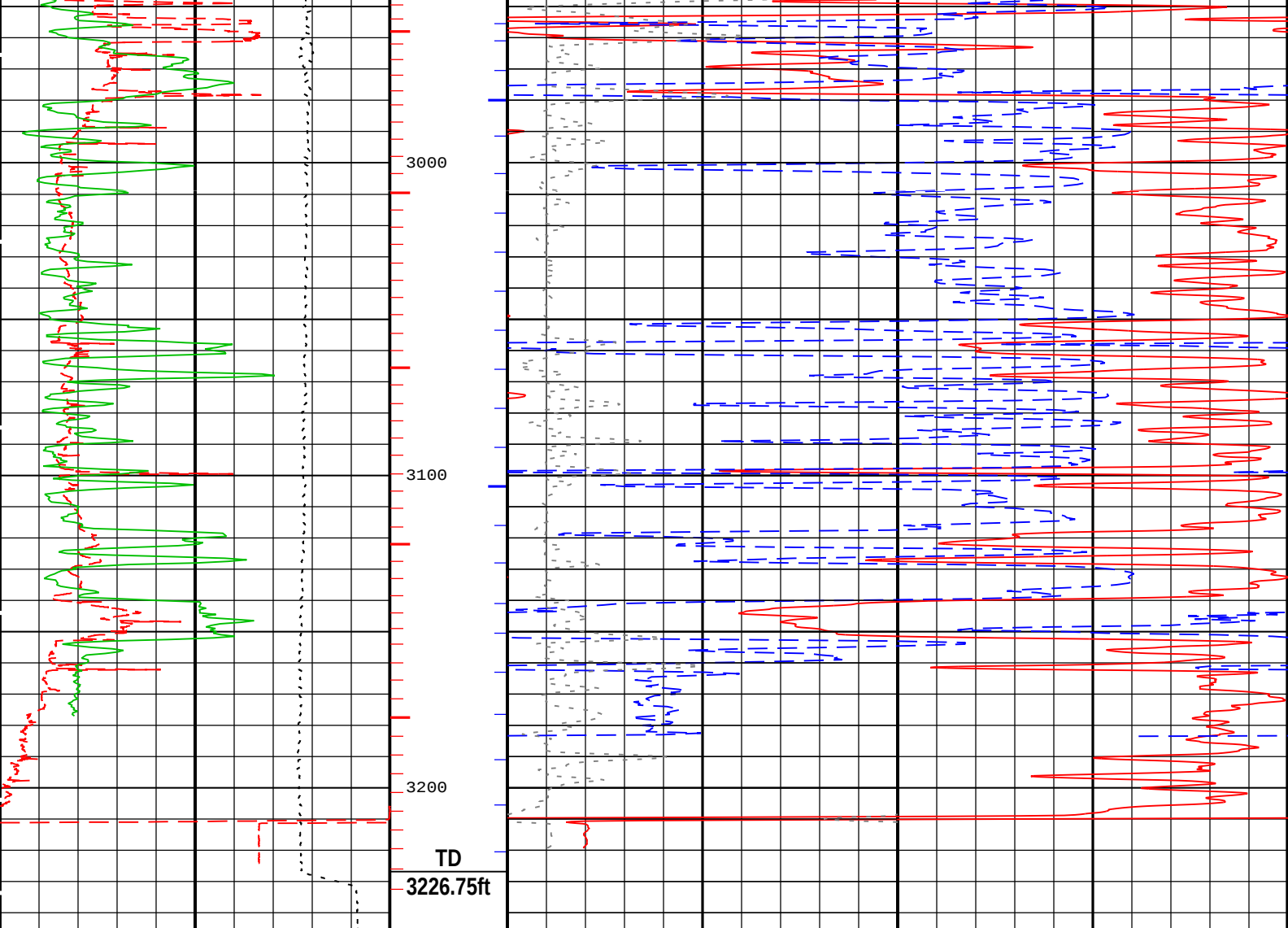
ICV - Integrated Cement Volume every 100.00 (ft3)

ICV - Integrated Cement Volume every 10.00 (ft3)









2" Porosity			
Cable Tension (TENS)		Standard Resolution Formation Density (RHOZ) HDRS-B	
10000	lbf	2	g/cm3
Caliper (CALI) HDRS-B		Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-B	
6	in	0.3	ft3/ft3
GR		Density Standoff Correction (HDRA) HDRS-B	
0	gAPI	-0.05	g/cm3
			0.45
		ICV - Integrated Cement Volume every 10.00 (ft3)	
		ICV - Integrated Cement Volume every 100.00 (ft3)	
		IHV - Integrated Hole Volume every 10.00 (ft3)	
TIME_1900 - Time Marked every 60.00 (s)			
		IHV - Integrated Hole Volume every 100.00 (ft3)	
Description: HRLT BASIC LOG Format: Log (Porosity 2 inch General) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:53:35			

Main Pass 2" = 100'				
Integration Summary				
Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ICV	Integrated Cement Volume	HVAS, FCD		ft3
IHV	Integrated Hole Volume	HVAS		ft3
Software Version				

Acquisition System	Version
MaxWell	4.0.9163.3000
Application Patch	Patch-SP-10767_22480-4.0.9163.3001
	Patch-NPD_CMRTF_SP3-23787-4.0.9530.3002

Computation	Description		Version
Borehole	Borehole Ensemble provides common Borehole Parameters and Channels		4.0.9469.3000
HENVIR	Computation Ensemble for the HGNS Neutron environmental corrections		4.0.9033.3000
Tool Elements	Description	Software Version	Firmware Version
HRGD-B	HILT Resistivity Gamma-Ray Density Device, 125 degC	4.0.9486.3000	3.0
HNGS-BA	HNGS Sonde Element	4.0.9469.3000	2.0
HGNS-B	HILT Gamma-Ray and Neutron Sonde, 125 degC	4.0.9033.3000	2.0
HRCC-B	HILT High-Resolution Control Cartridge, 125 degC	4.0.9486.3000	2.0

Log	Company:PB ENERGY STORAGE SERVICES, INC	Well:DCP Linam Ranch AGI #2
		Two: Main[3]:Up:S021

Description: HRLT BASIC LOG Format: Log (Porosity 2 inch General) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:36:40

Channel	Source	Sampling
CALI	HDRS-B:HRCC-B:HRCC-B	1in
CGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
HDRA	HDRS-B:HRMS-B:HRGD-B	2in
ICV	Borehole	6in
IHV	Borehole	6in
RHOZ	HDRS-B:HRMS-B:HRGD-B	2in
SGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
TENS	WLWorkflow	1in
TIME_1900	WLWorkflow	0.1in
TNPH	HGNS-B:HGNS-B:HGNS-B	6in

— IHV - Integrated Hole Volume every 100.00 (ft3)

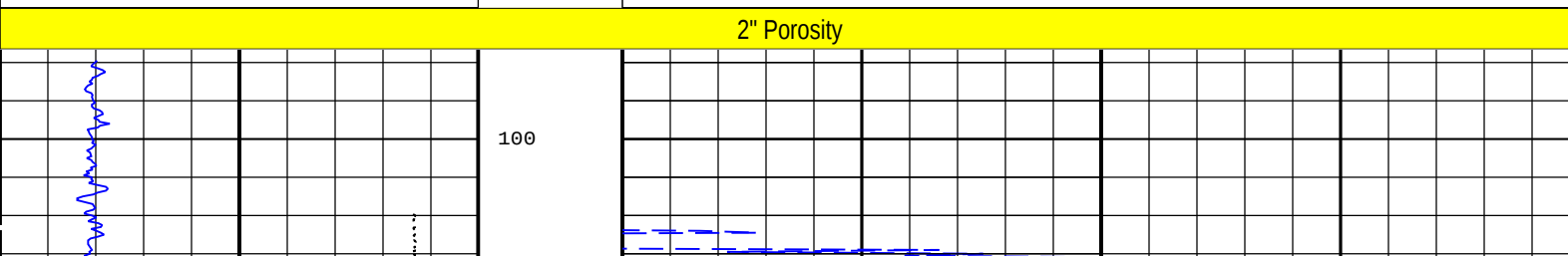
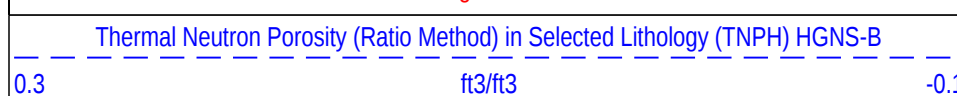
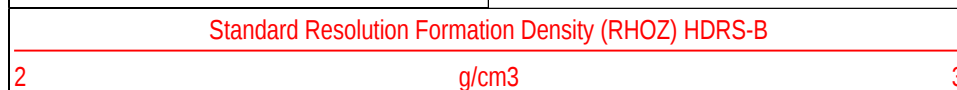
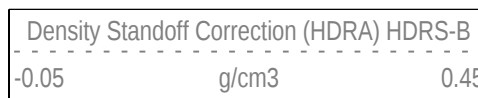
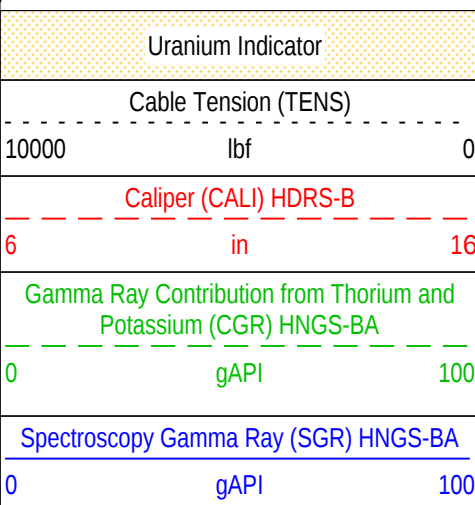
└ IHV - Integrated Hole Volume every 10.00 (ft3)

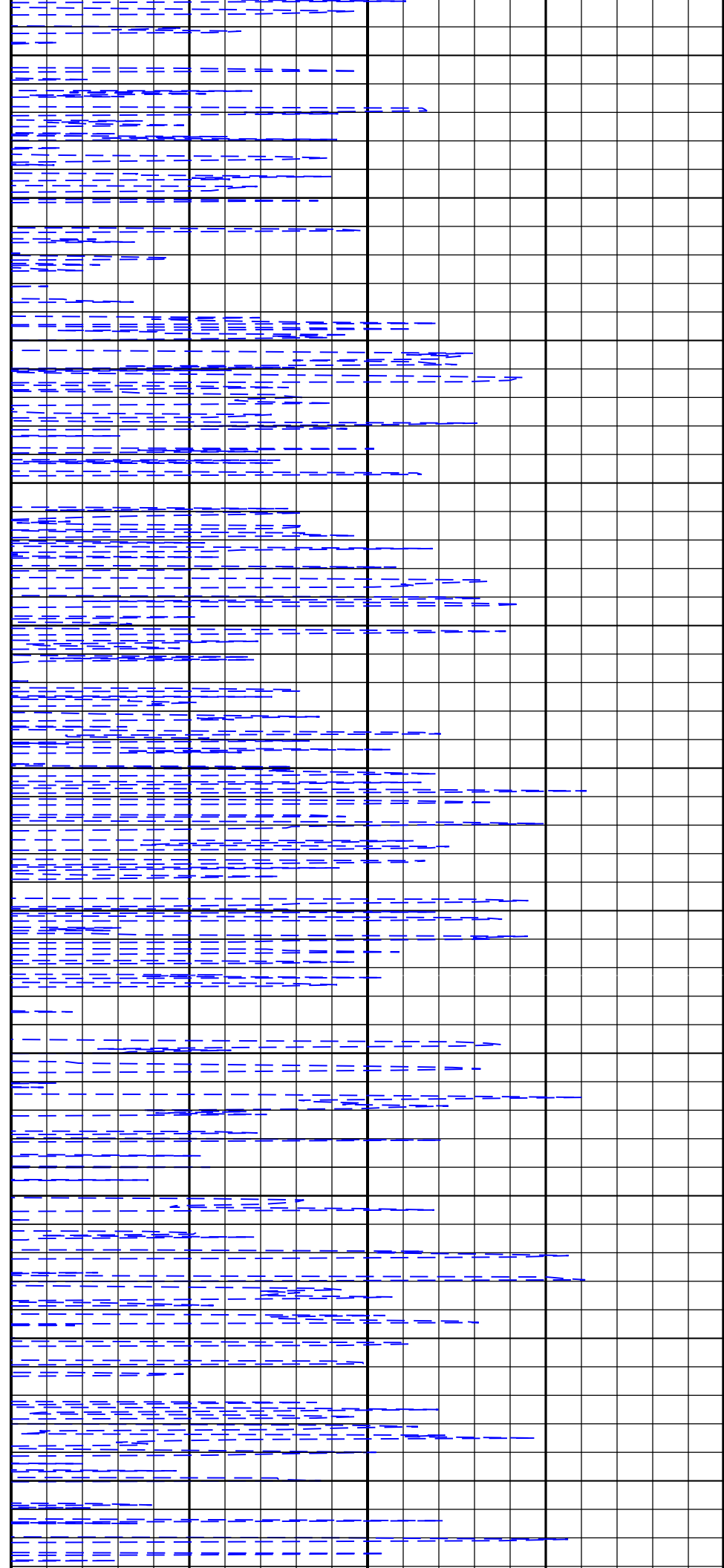
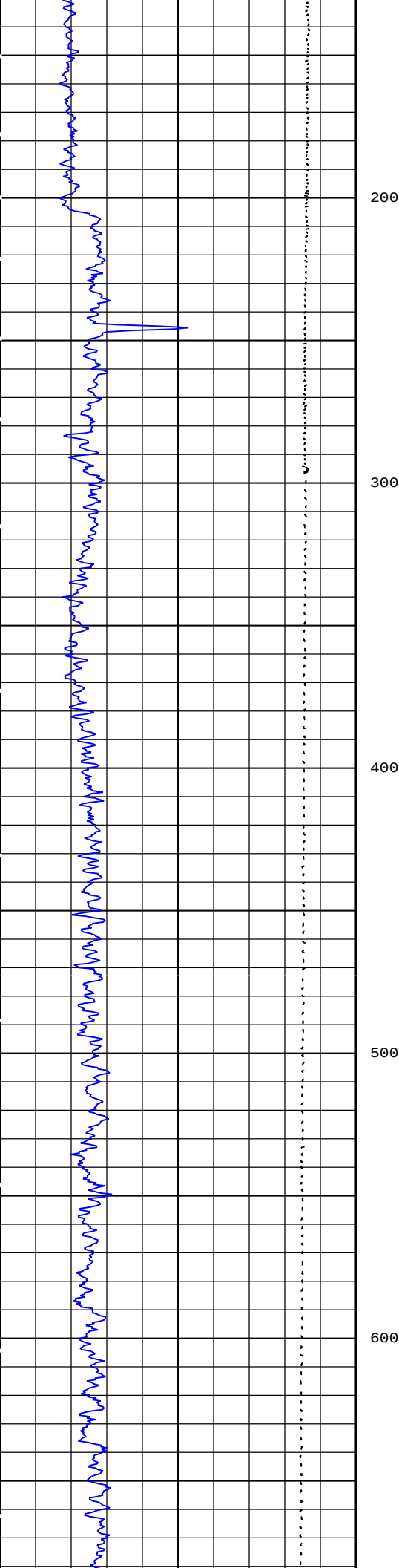
—ICV - Integrated Cement Volume every 100.00 (ft3)

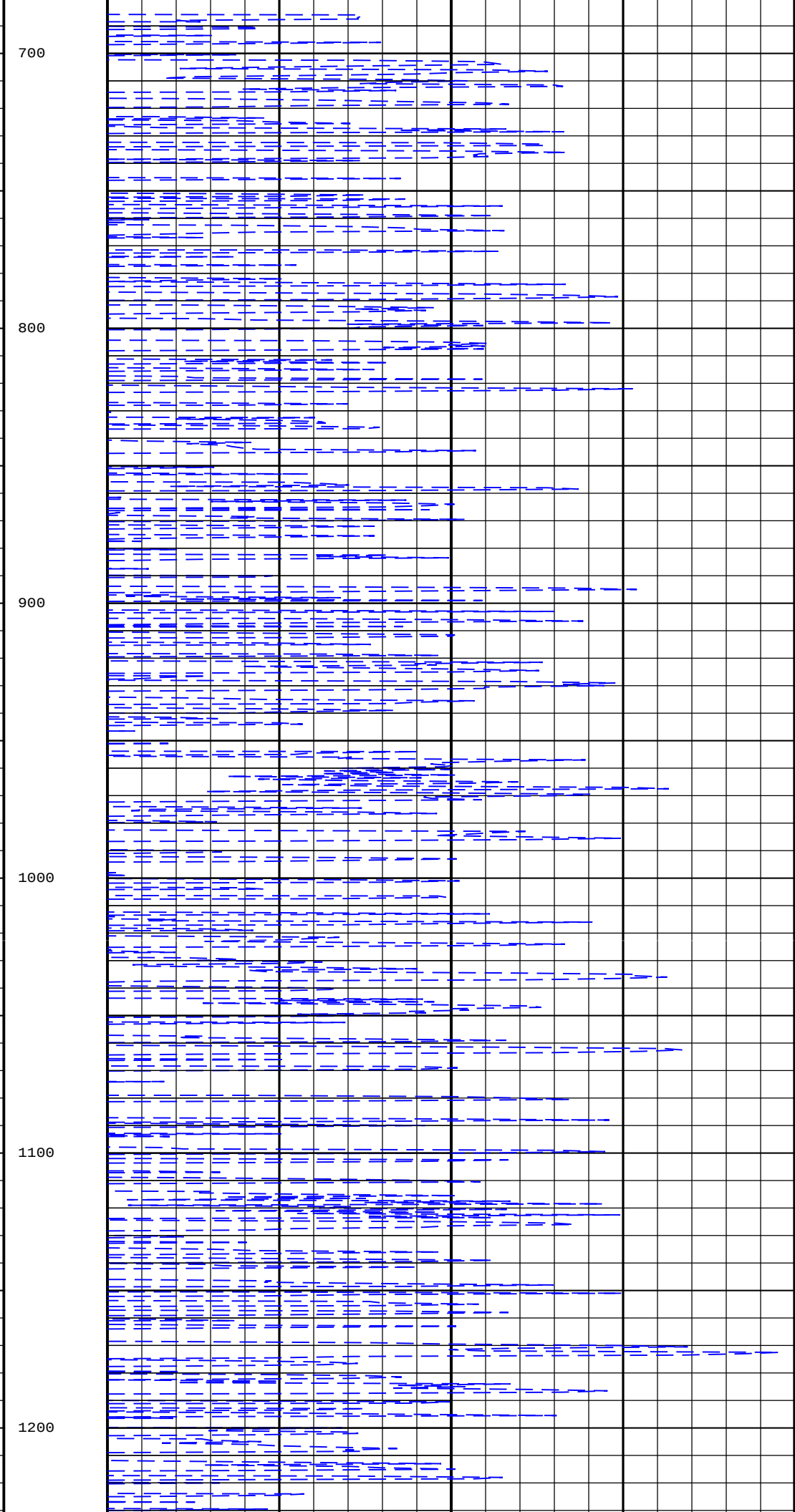
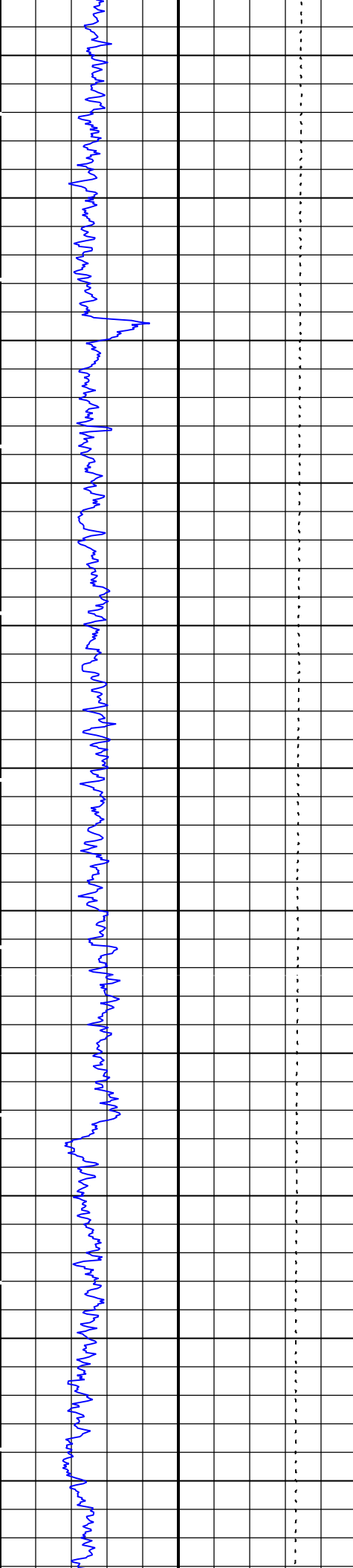
—ICV - Integrated Cement Volume every 10.00 (ft3)

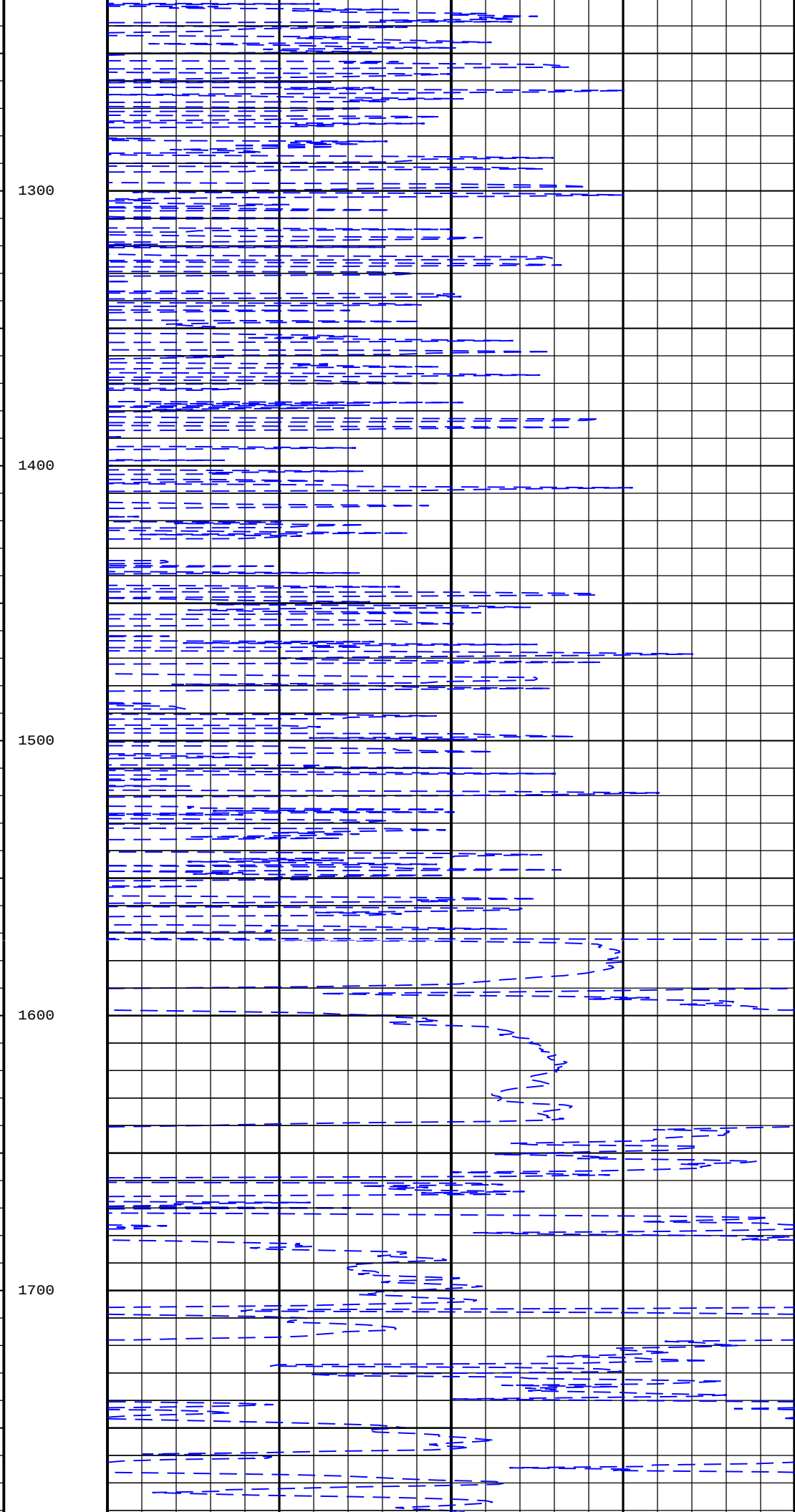
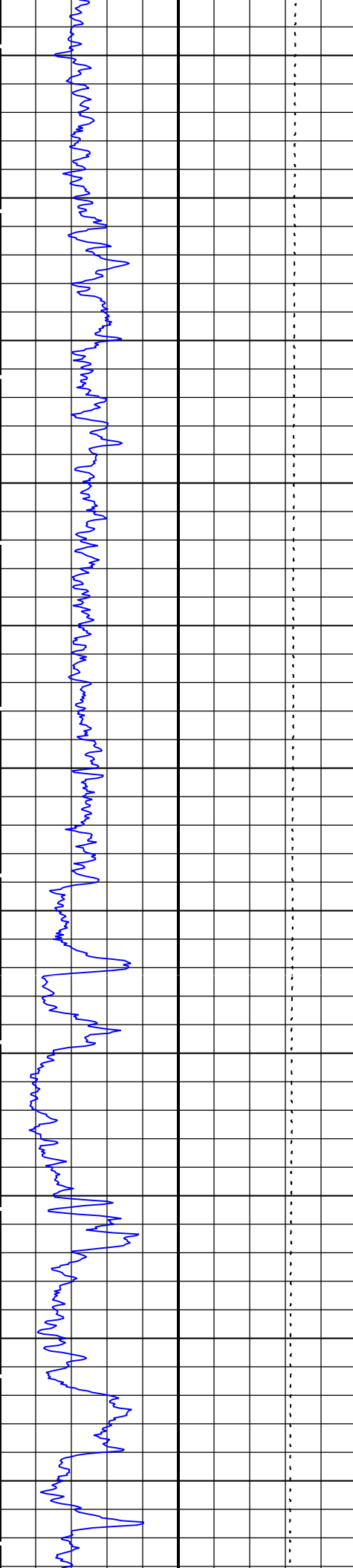
RUN 2

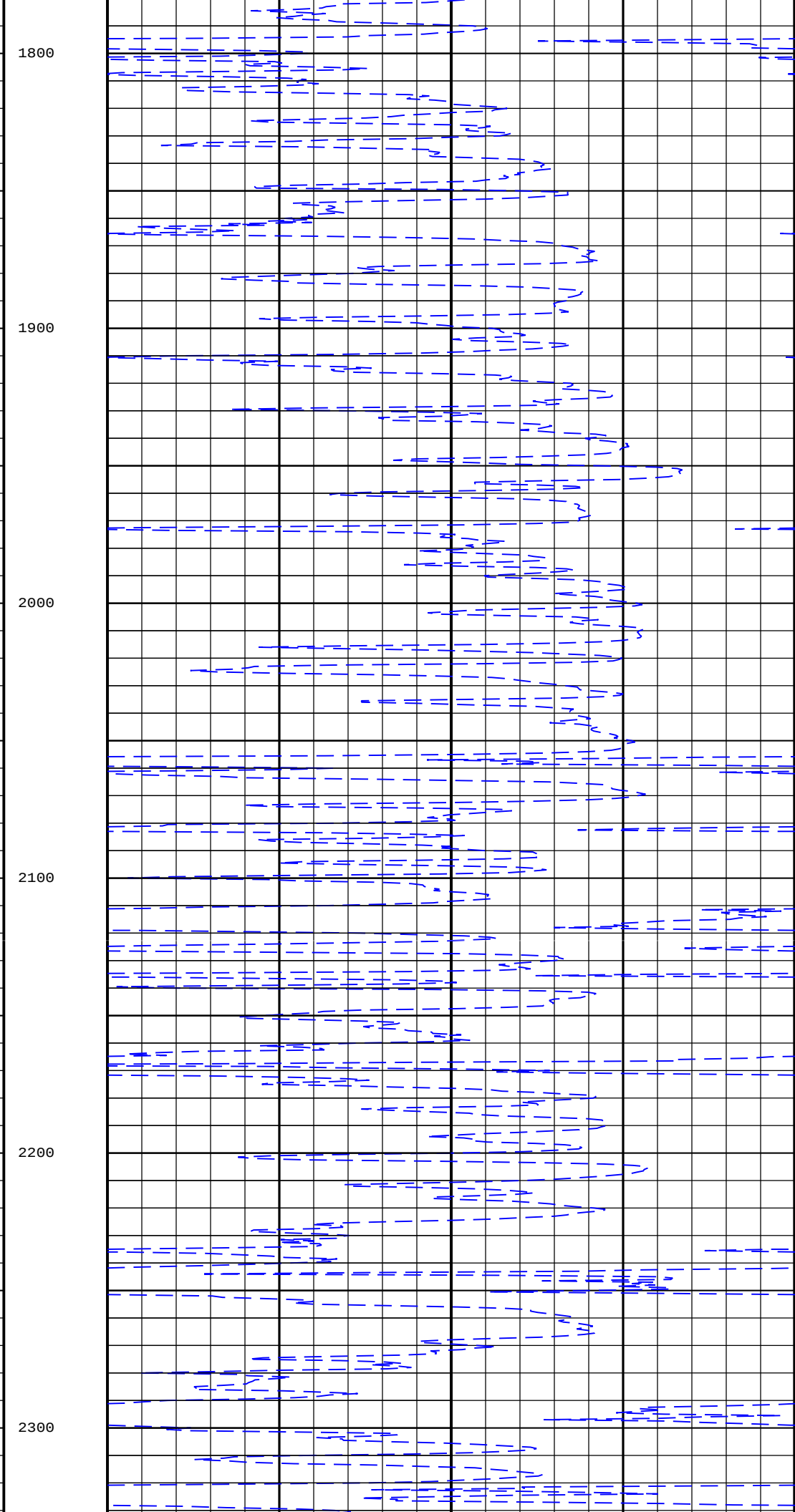
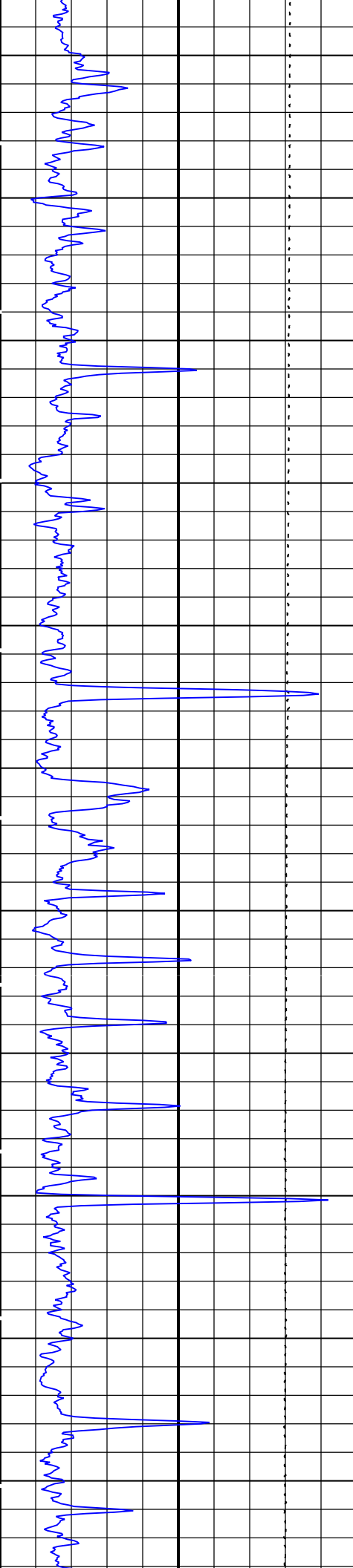
TIME 1900 - Time Marked every 60.00 (s)

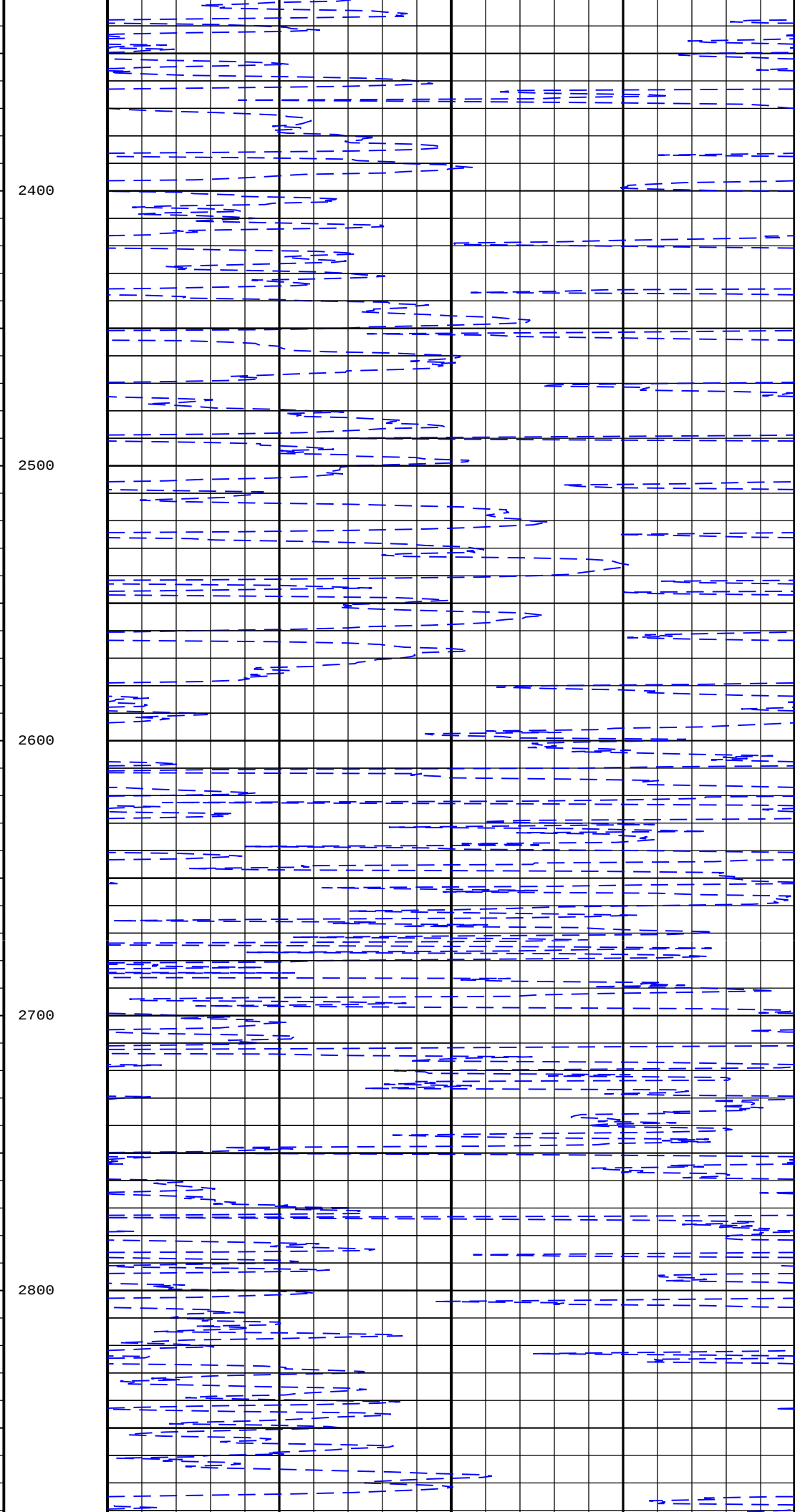
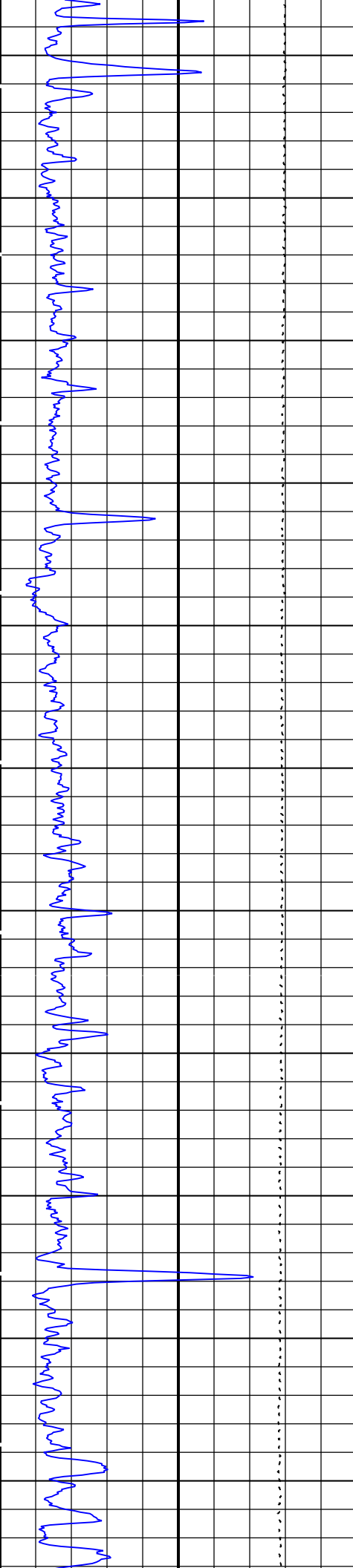


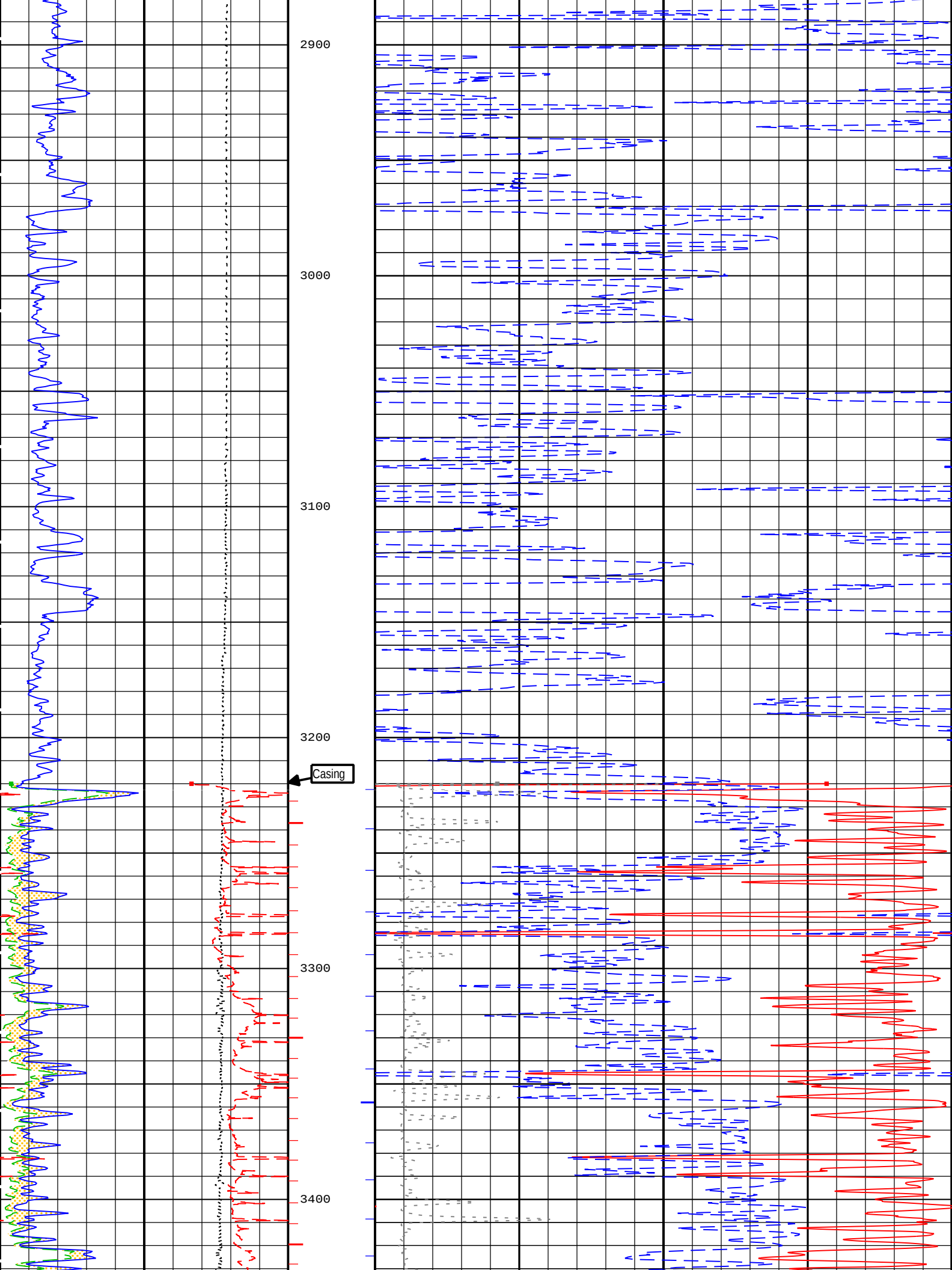


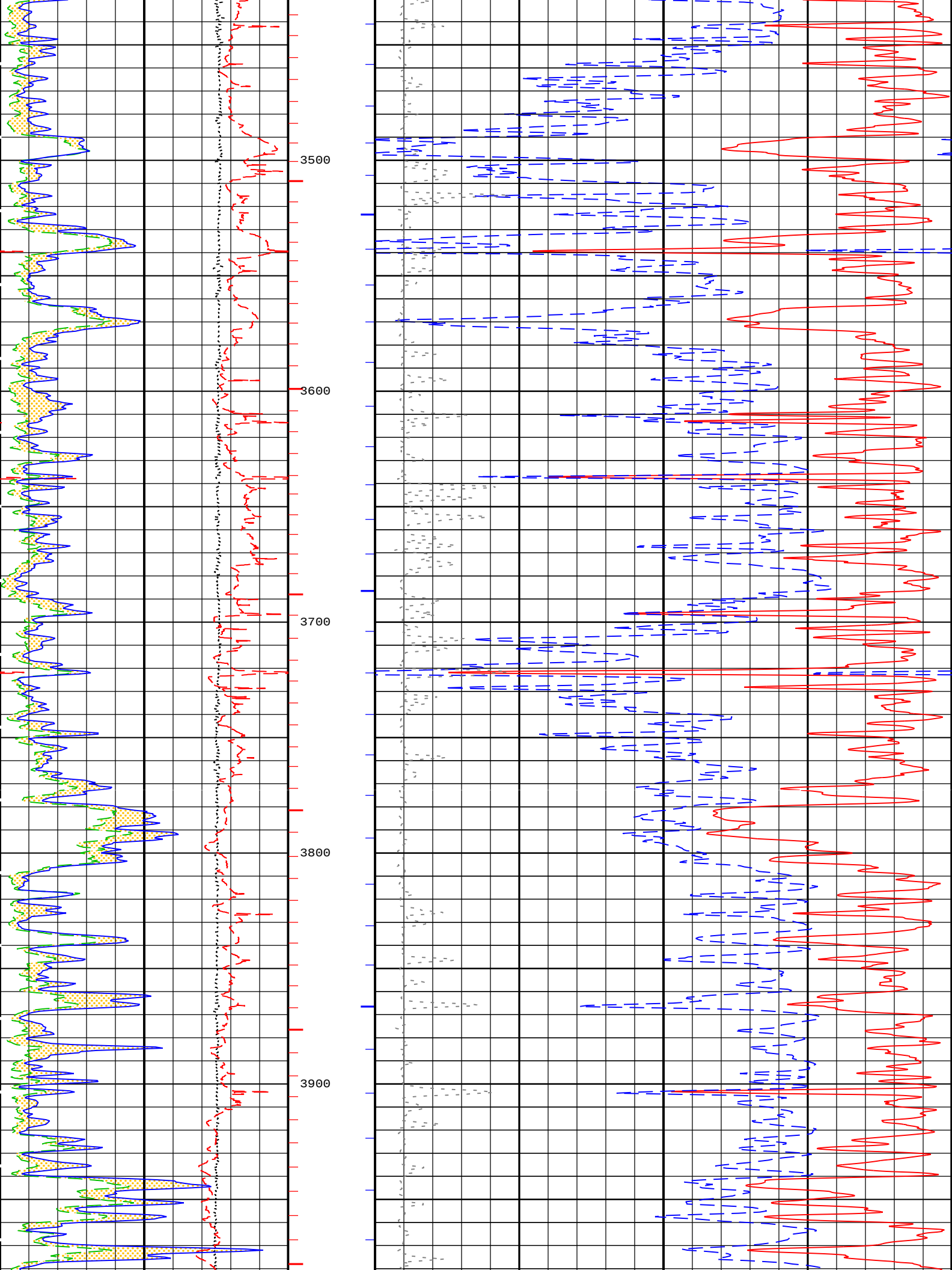


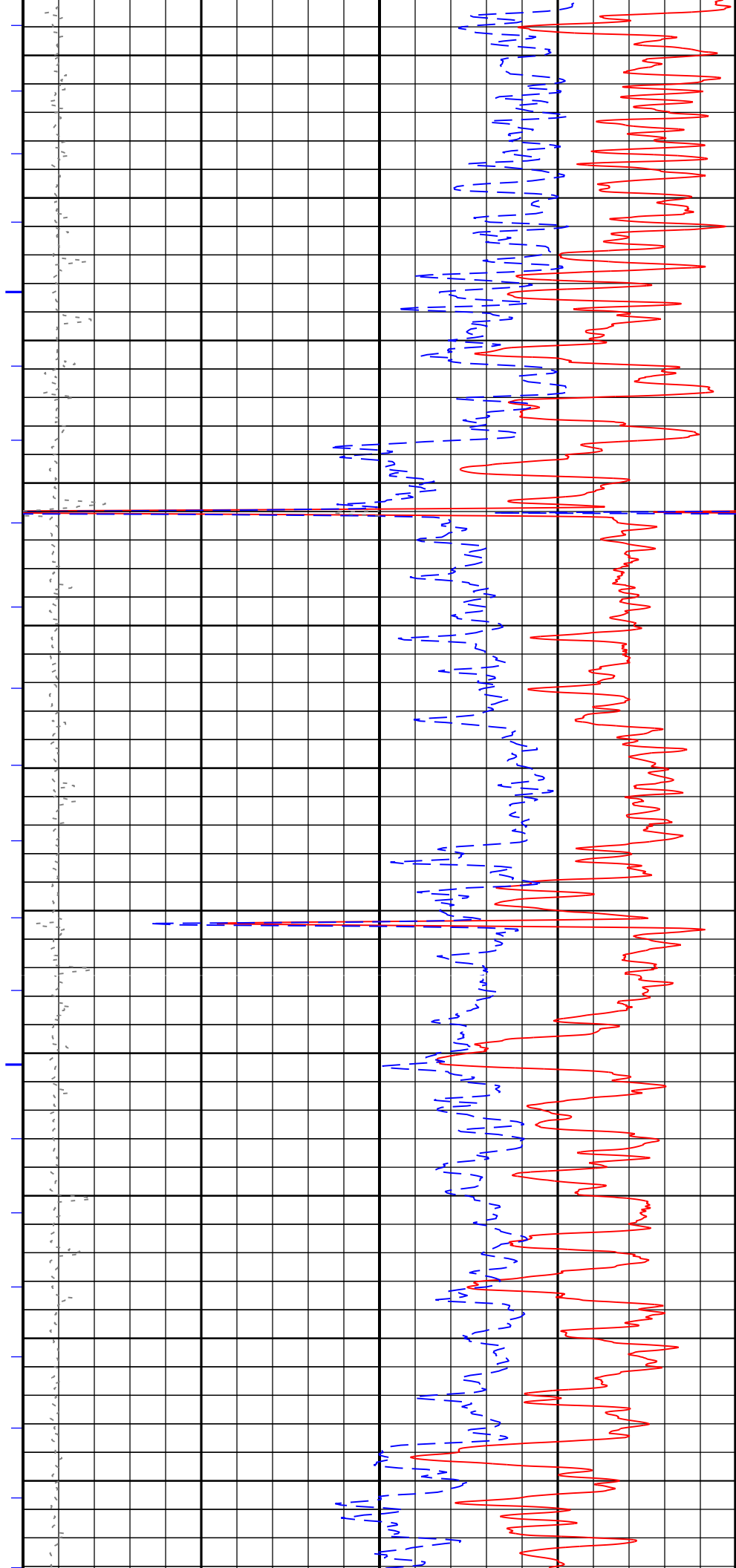
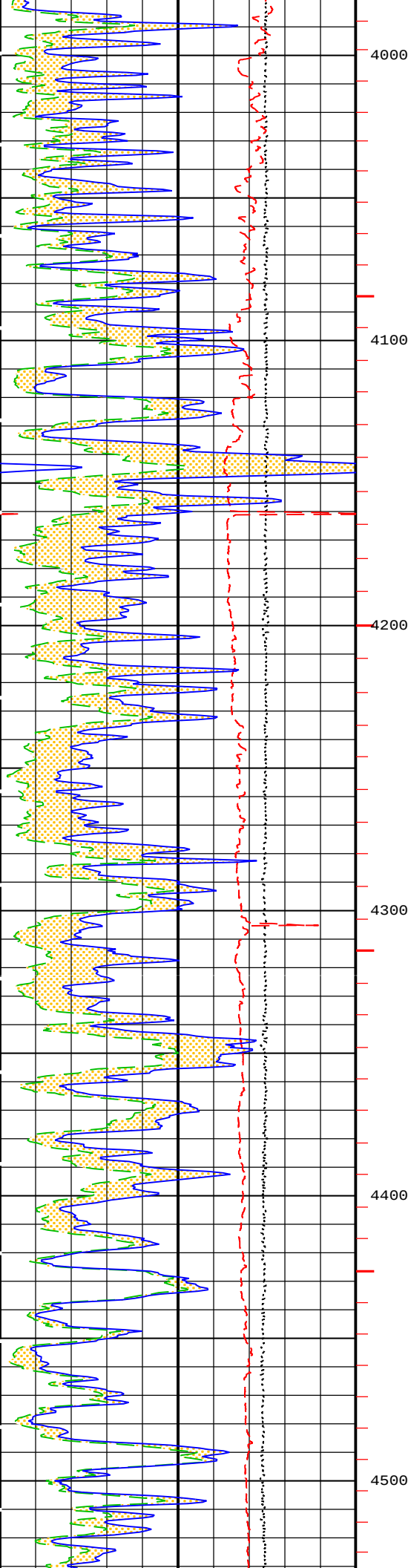


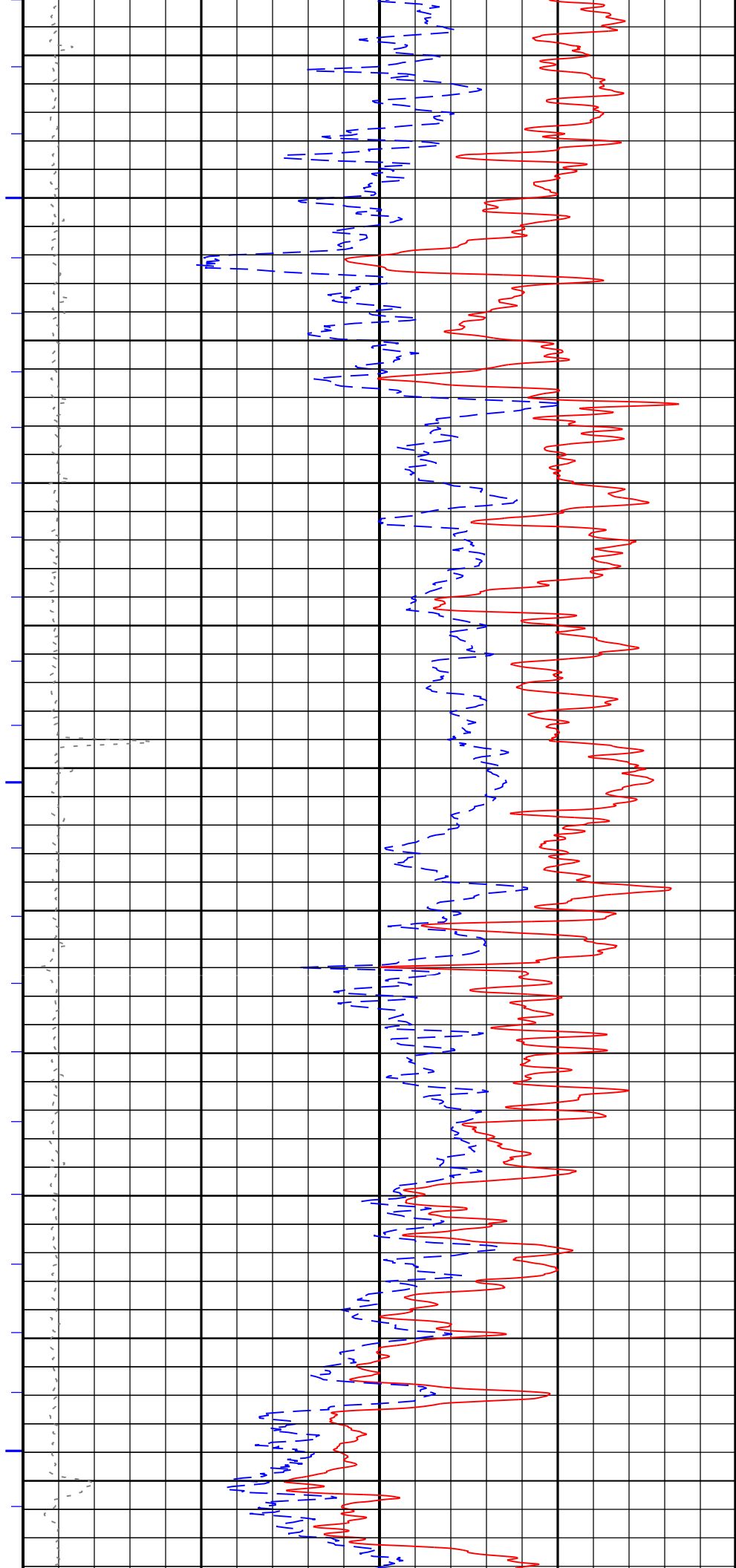
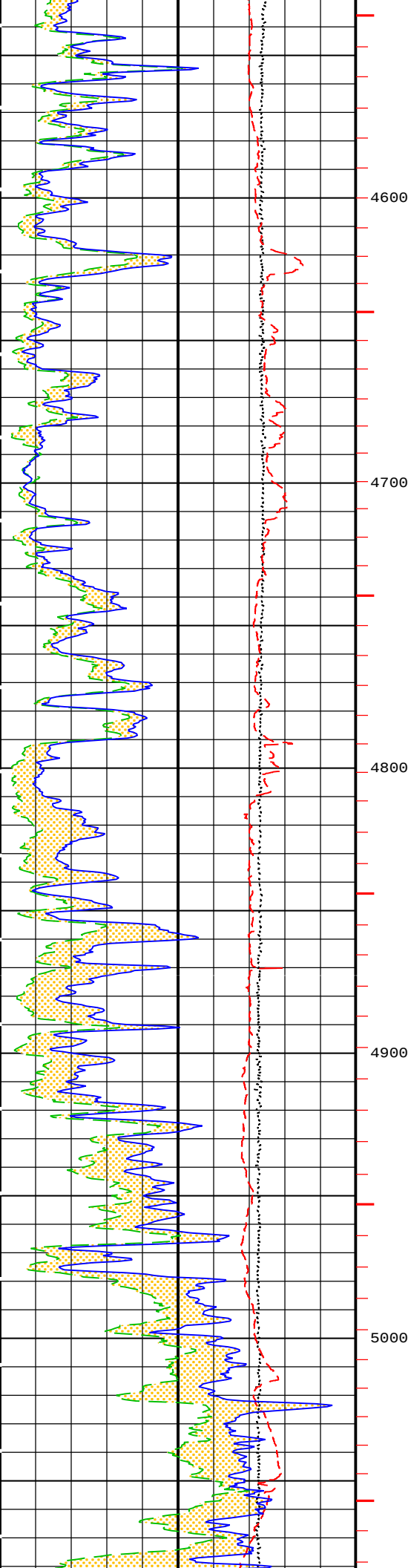


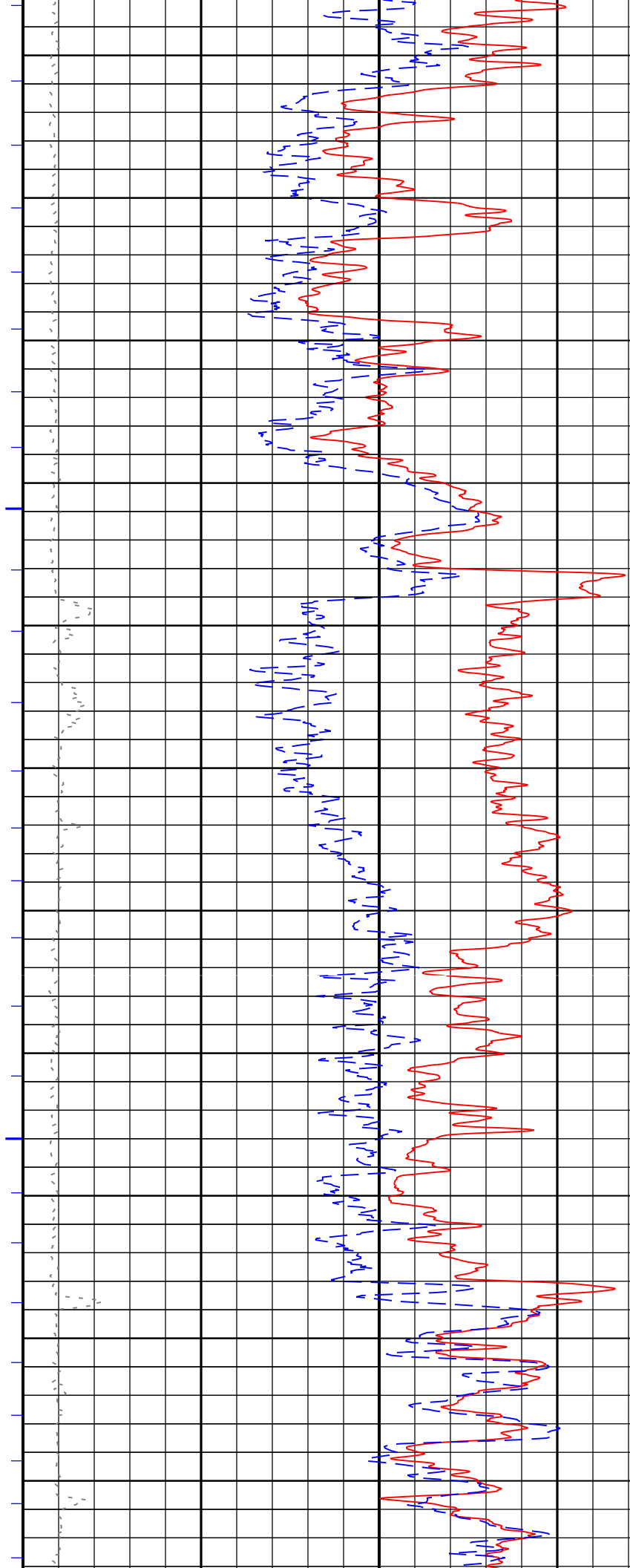
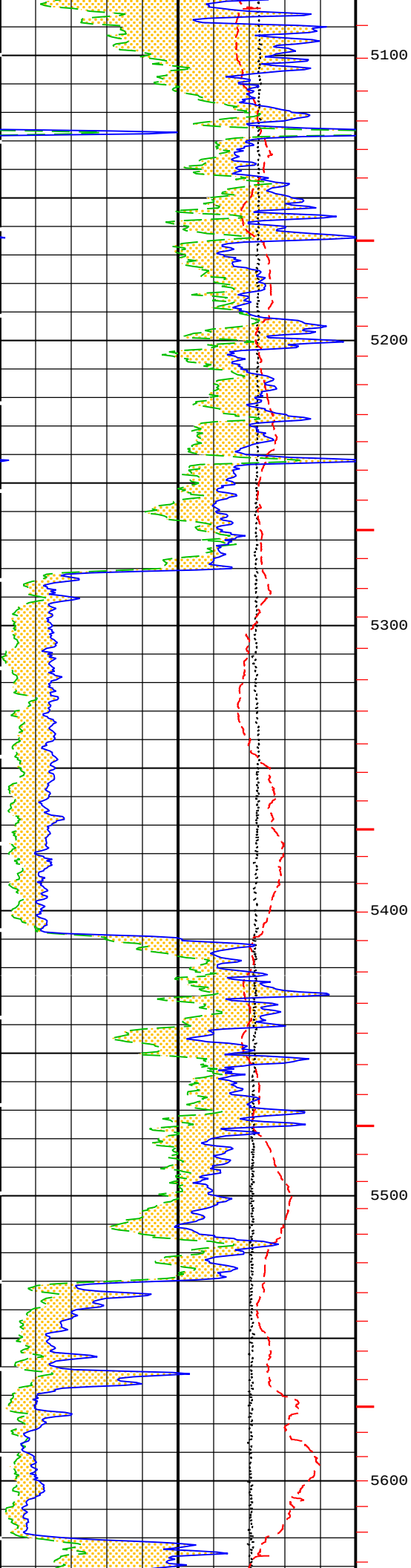


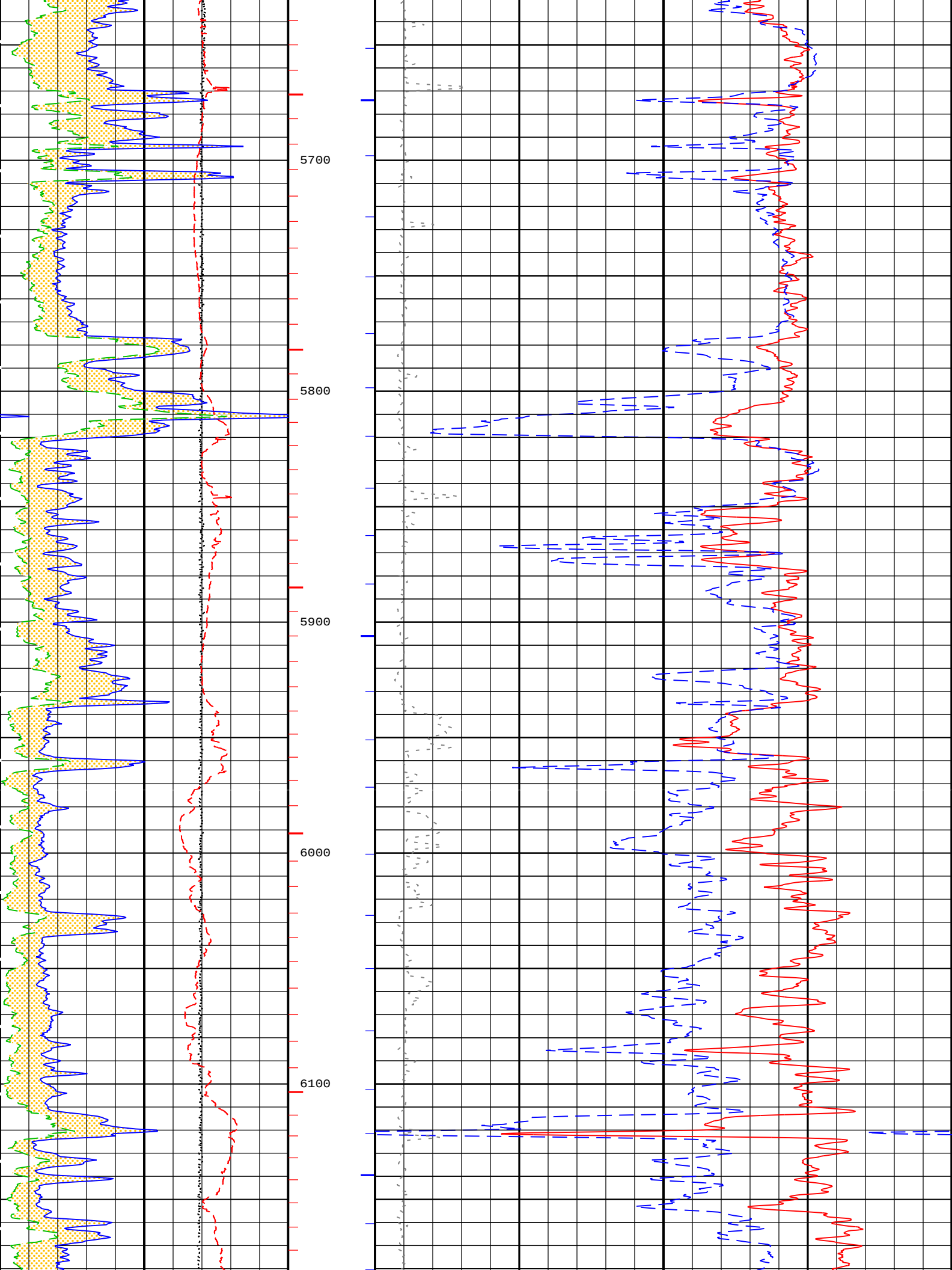


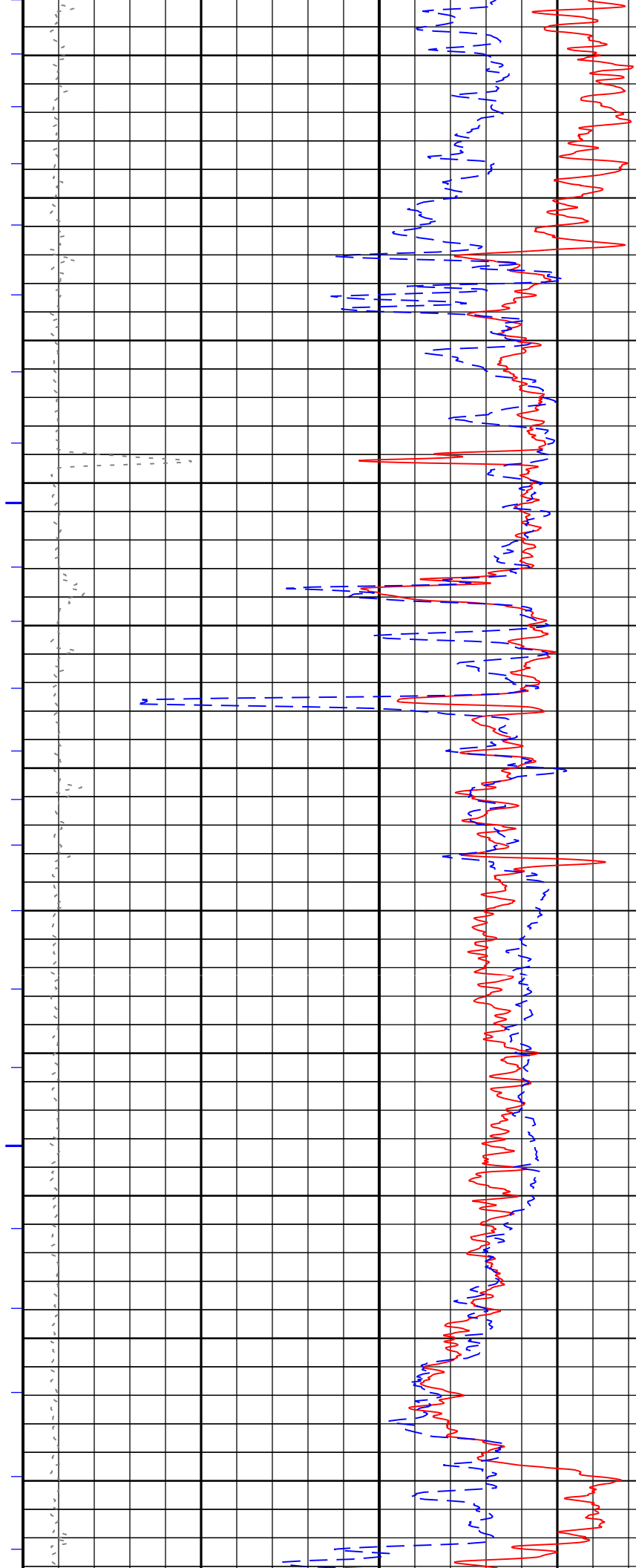
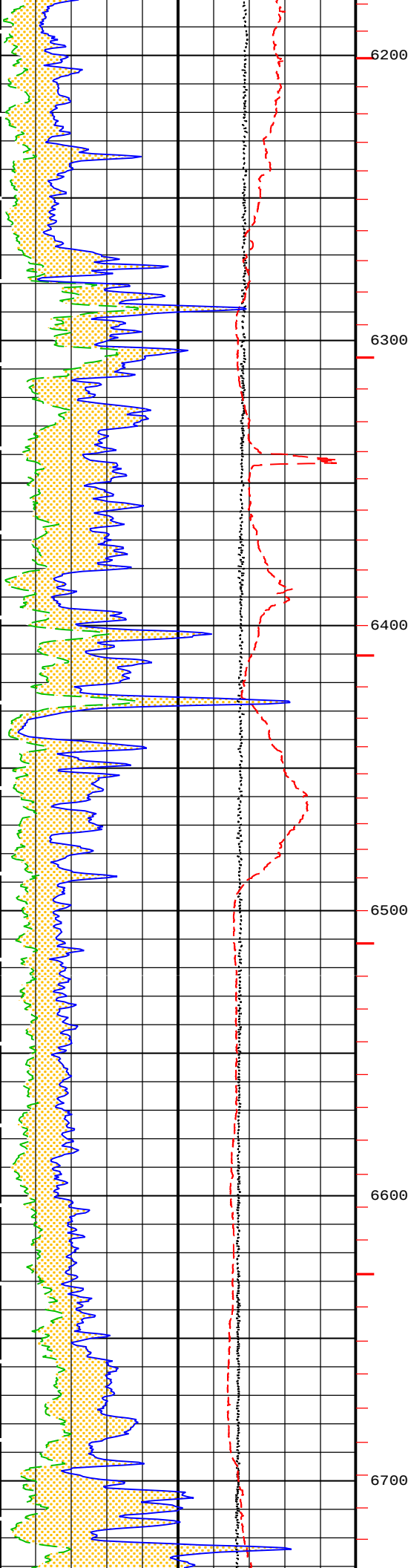


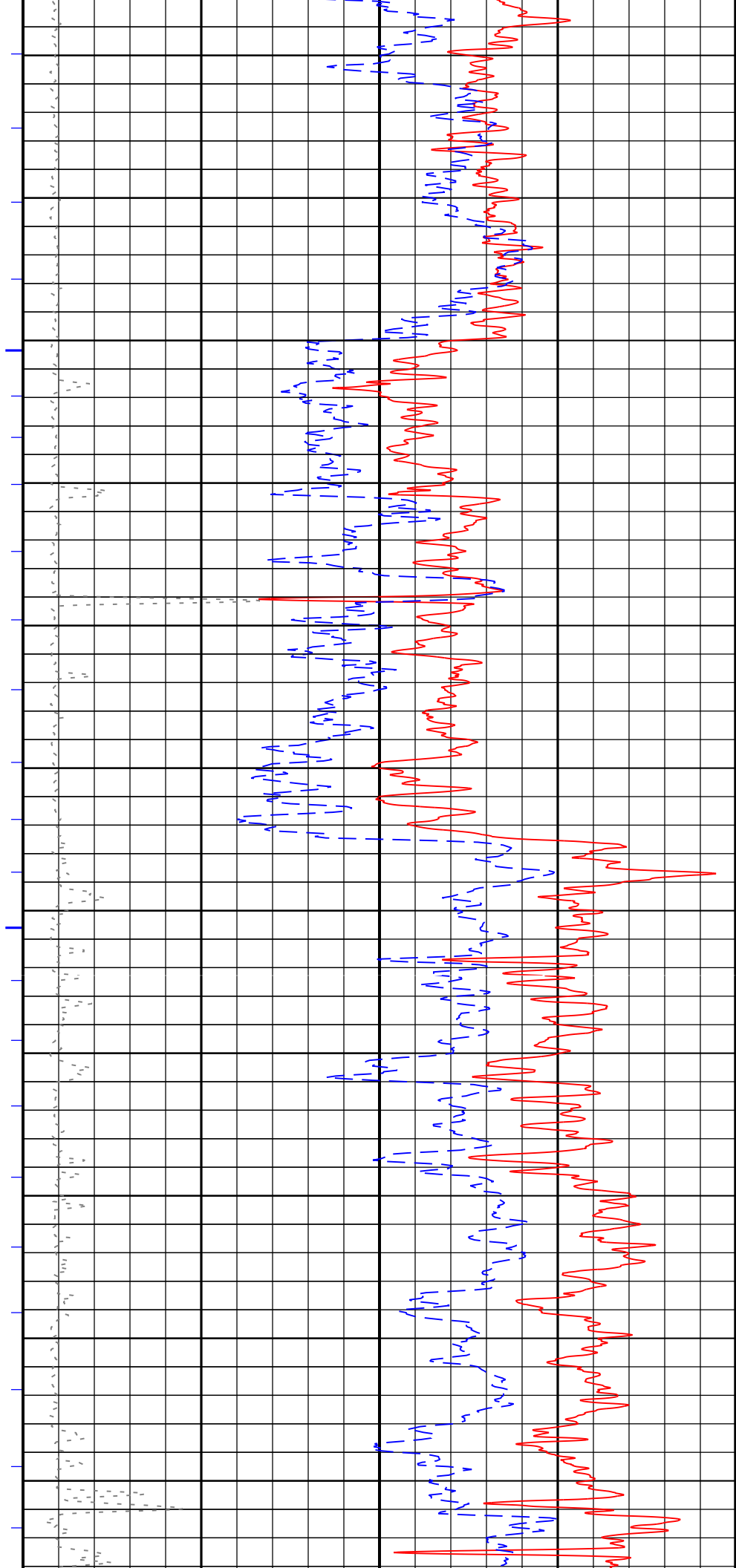
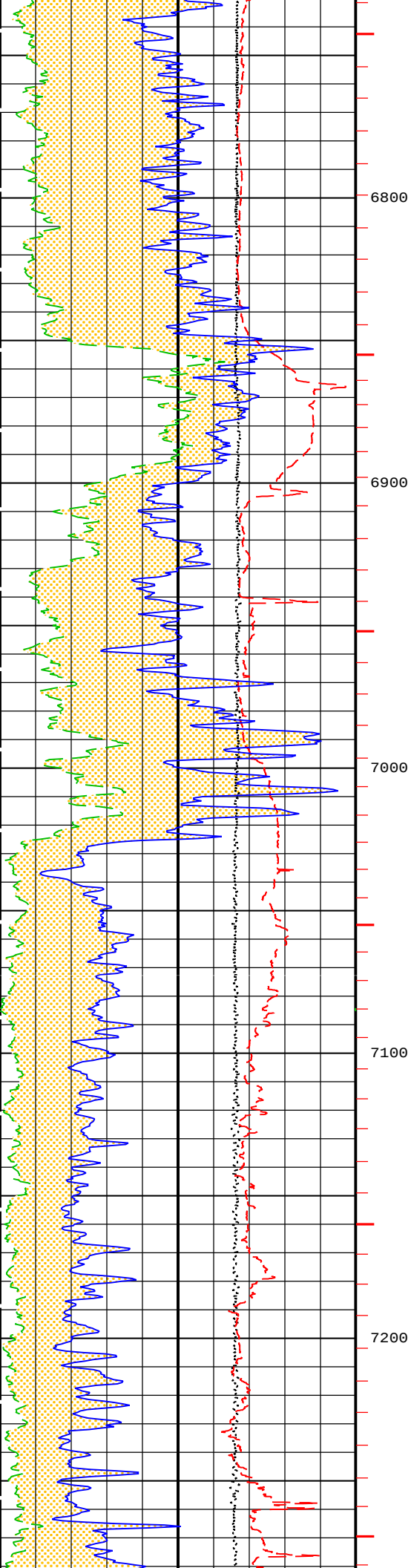


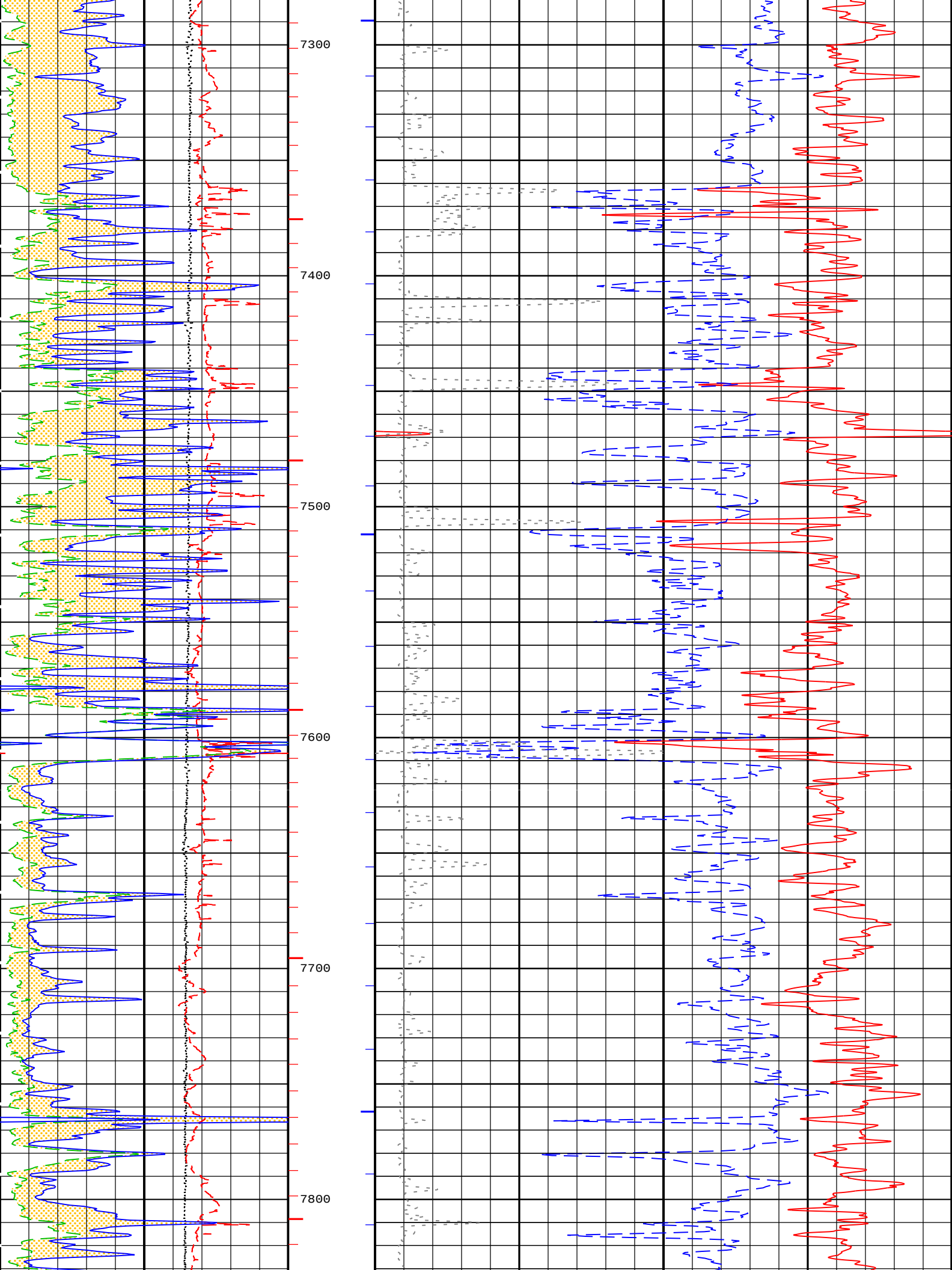


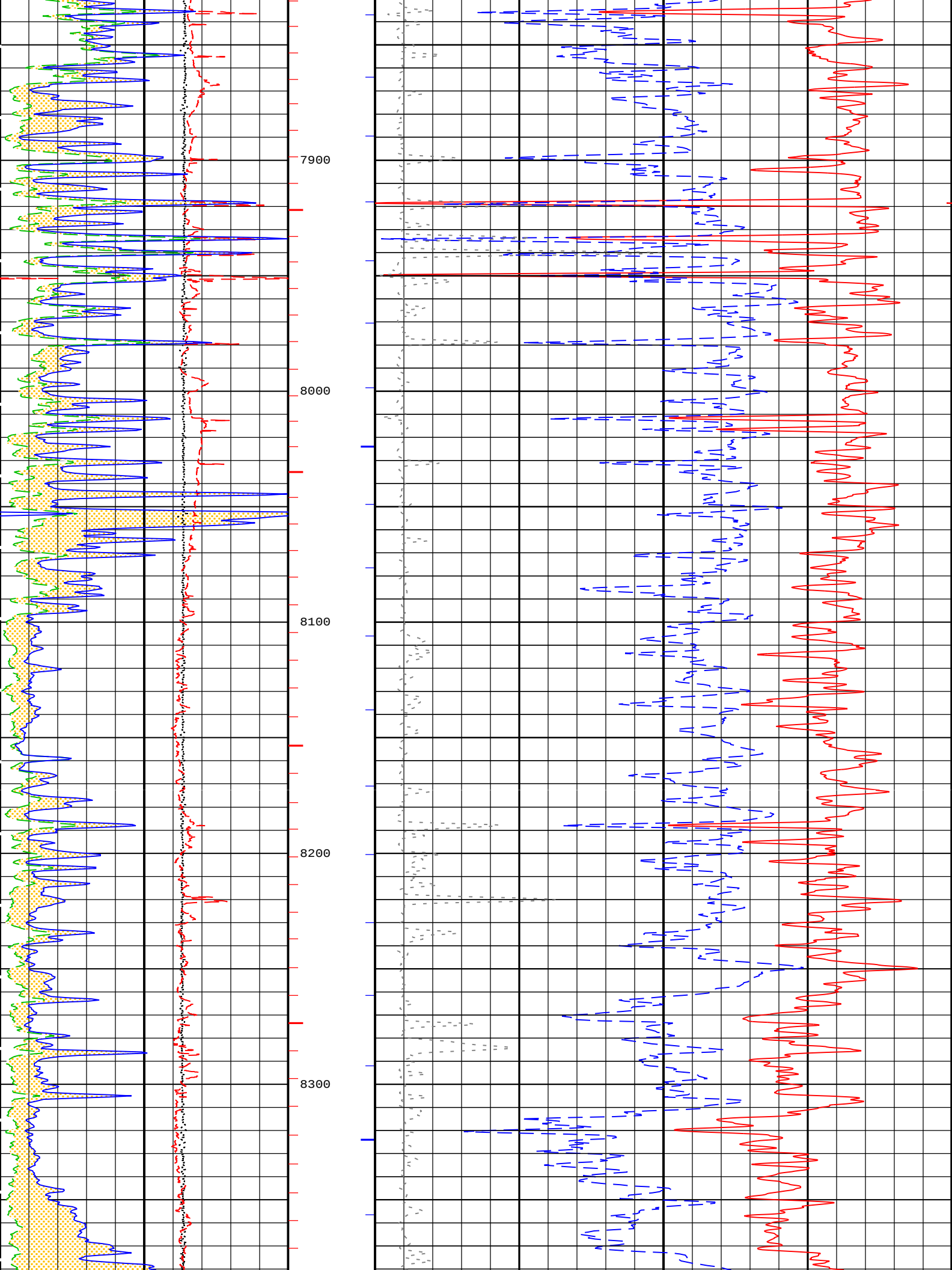


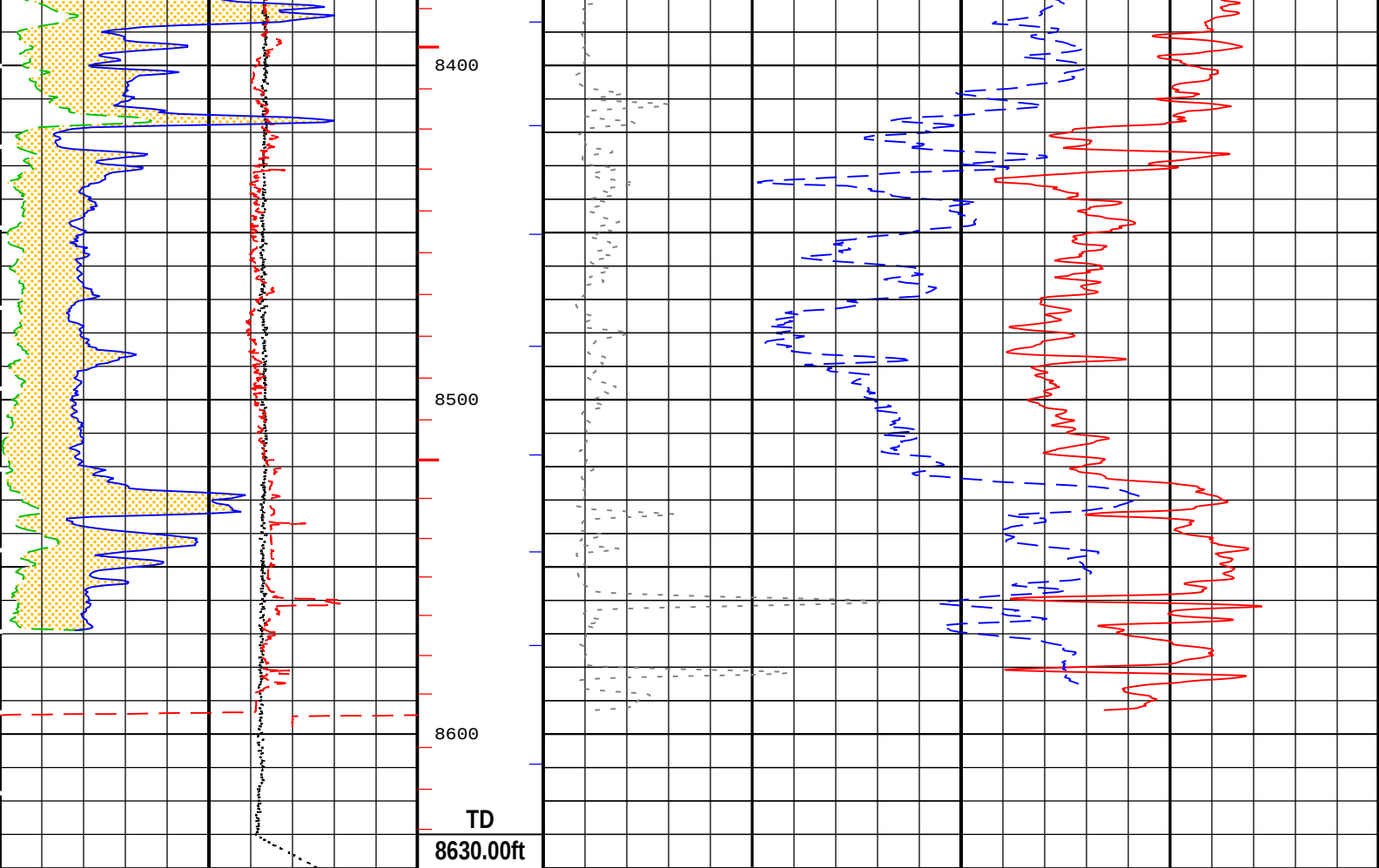












2" Porosity		
Uranium Indicator		
Cable Tension (TENS)		
10000	lbf	0
Caliper (CALI) HDRS-B		
6	in	16
Gamma Ray Contribution from Thorium and Potassium (CGR) HNGS-BA		
0	gAPI	100
Spectroscopy Gamma Ray (SGR) HNGS-BA		
0	gAPI	100
TIME_1900 - Time Marked every 60.00 (s)		
—ICV - Integrated Cement Volume every 10.00 (ft3)		
—ICV - Integrated Cement Volume every 100.00 (ft3)		
—IHV - Integrated Hole Volume every 10.00 (ft3)		
—IHV - Integrated Hole Volume every 100.00 (ft3)		

Description: HRLT BASIC LOG Format: Log (Porosity 2 inch General) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 20-Nov-2014 17:36:40

Main Pass 2" = 100'

Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
ICV	Integrated Cement Volume	GCSE_UP_PASS, FCD	96.97	ft3
IHV	Integrated Hole Volume	GCSE_UP_PASS	274.1	ft3

Software Version	
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Computation	Description		Version
Borehole	Borehole Ensemble provides common Borehole Parameters and Channels		4.0.9469.3000
HENVIR	Computation Ensemble for the HGNS Neutron environmental corrections		4.0.9469.3000
Tool Elements	Description	Software Version	Firmware Version
HRCC-H	HILT High-Resolution Control Cartridge, 150 degC	4.0.9575.3000	2.0
HGNS-H	HILT Gamma-Ray and Neutron Sonde, 150 degC	4.0.9575.3000	2.0
HRGD-H	HILT Resistivity Gamma-Ray Density Device, 150 degC	4.0.9575.3000	3.0
EDTC-B	Enhanced Digital Telemetry Cartridge - B	4.0.9469.3000	

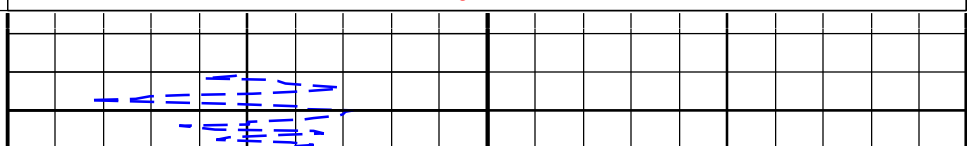
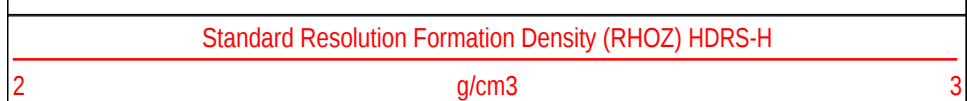
Pass Summary	
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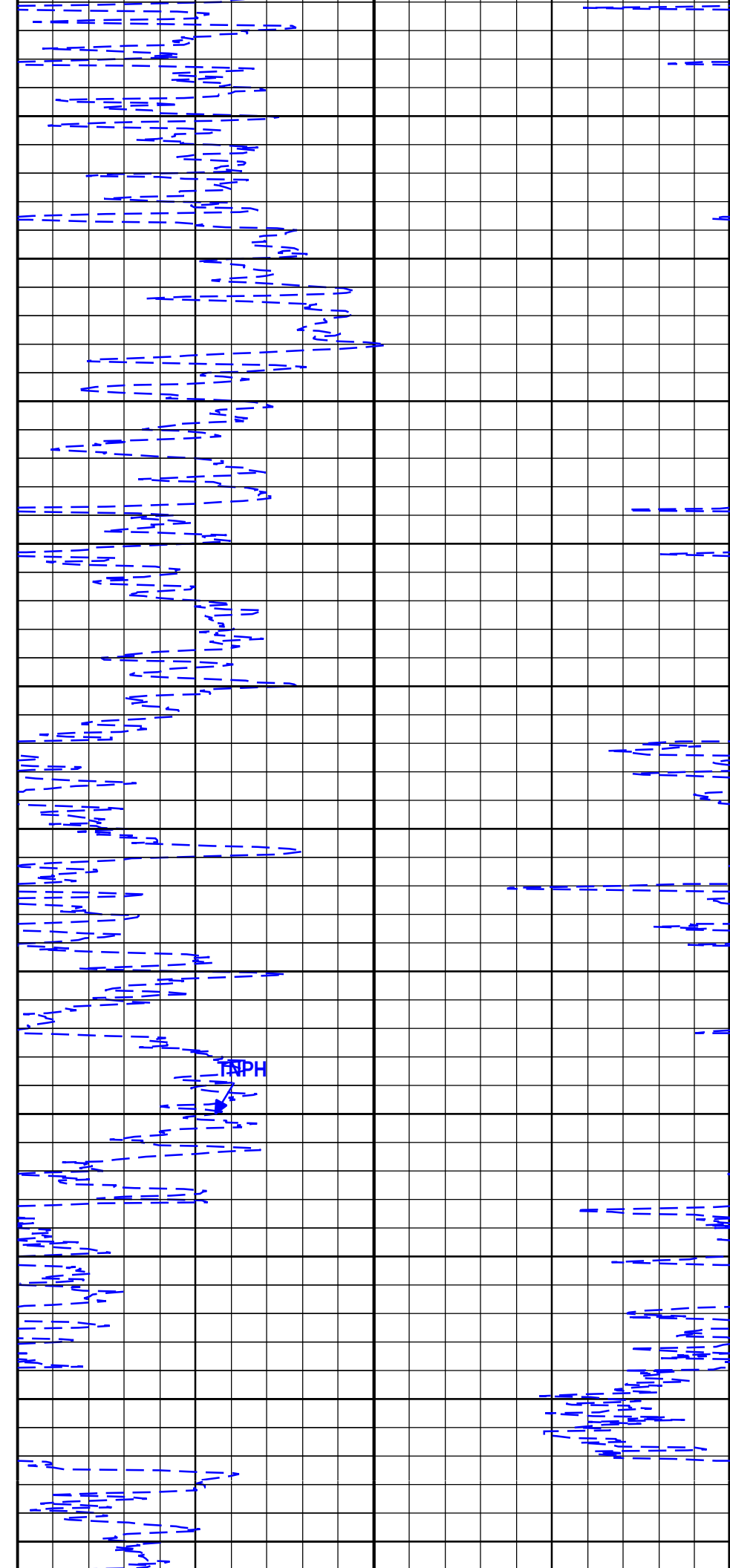
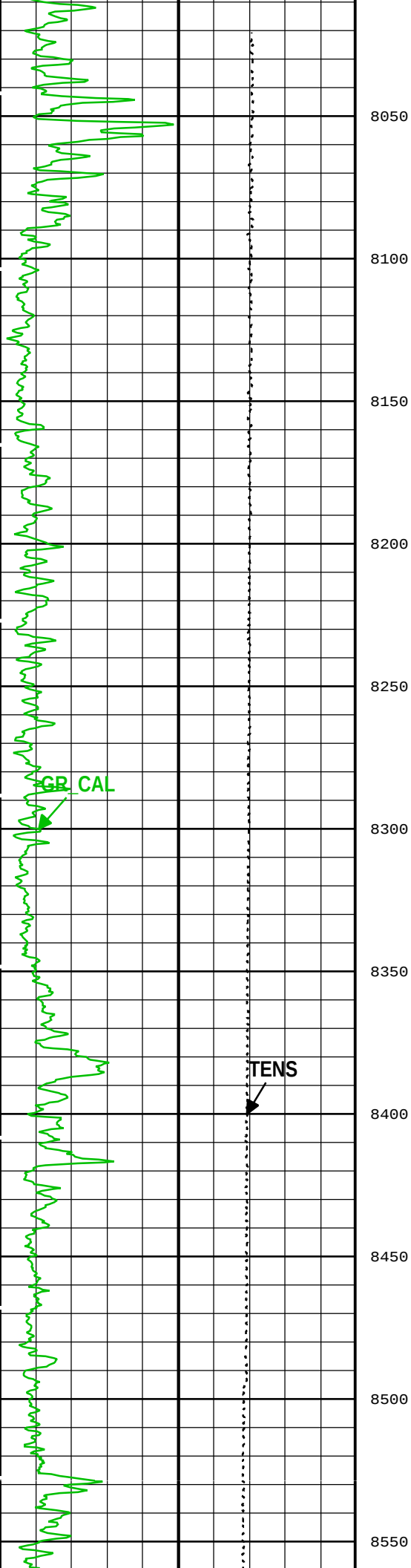
All depths are referenced to toolstring zero

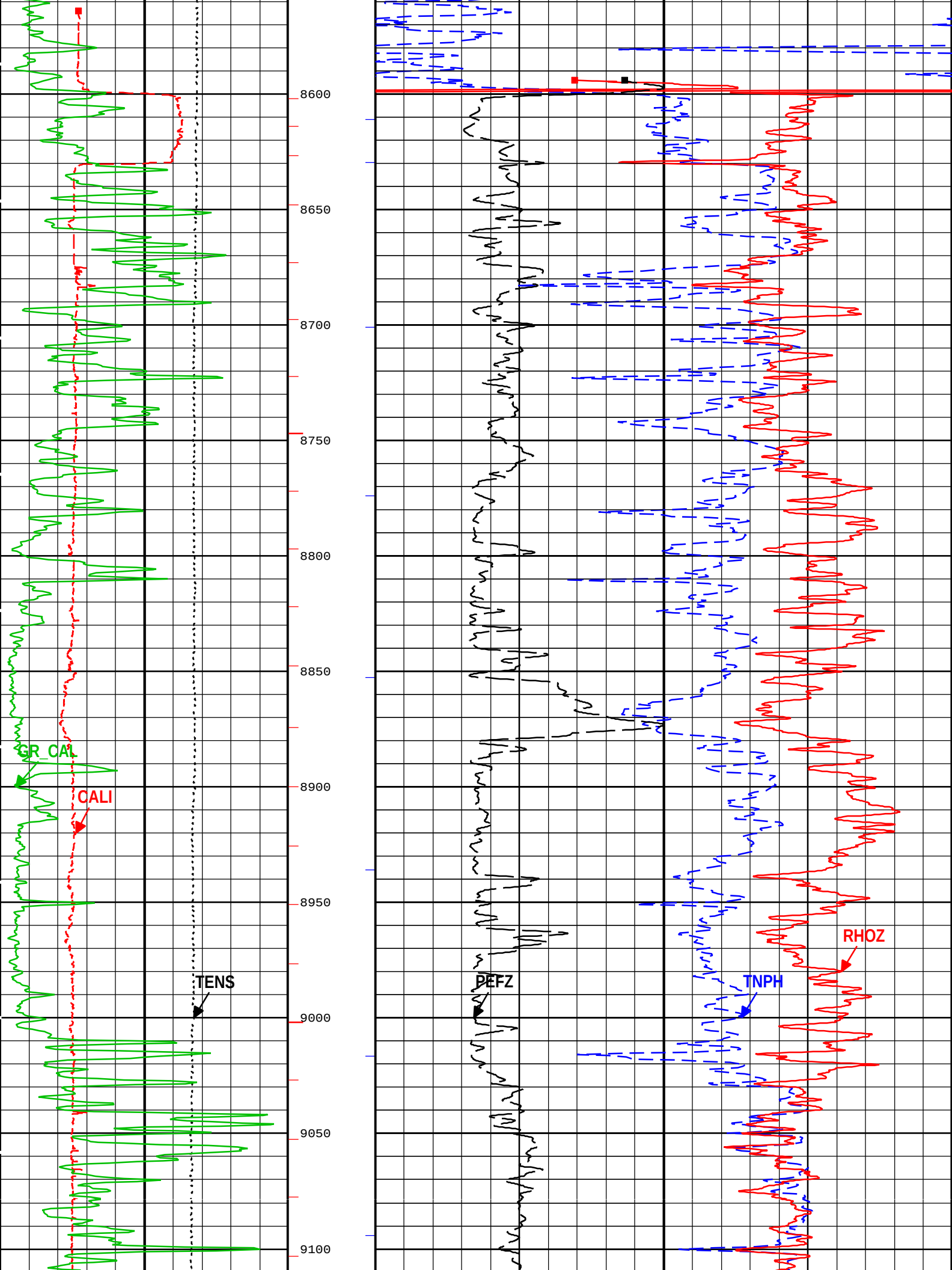
Log	Company:PB ENERGY STORAGE SERVICES, INC	Well:DCP Linam Ranch AGI #2
		Run 3a: Main[3]:Up:S012

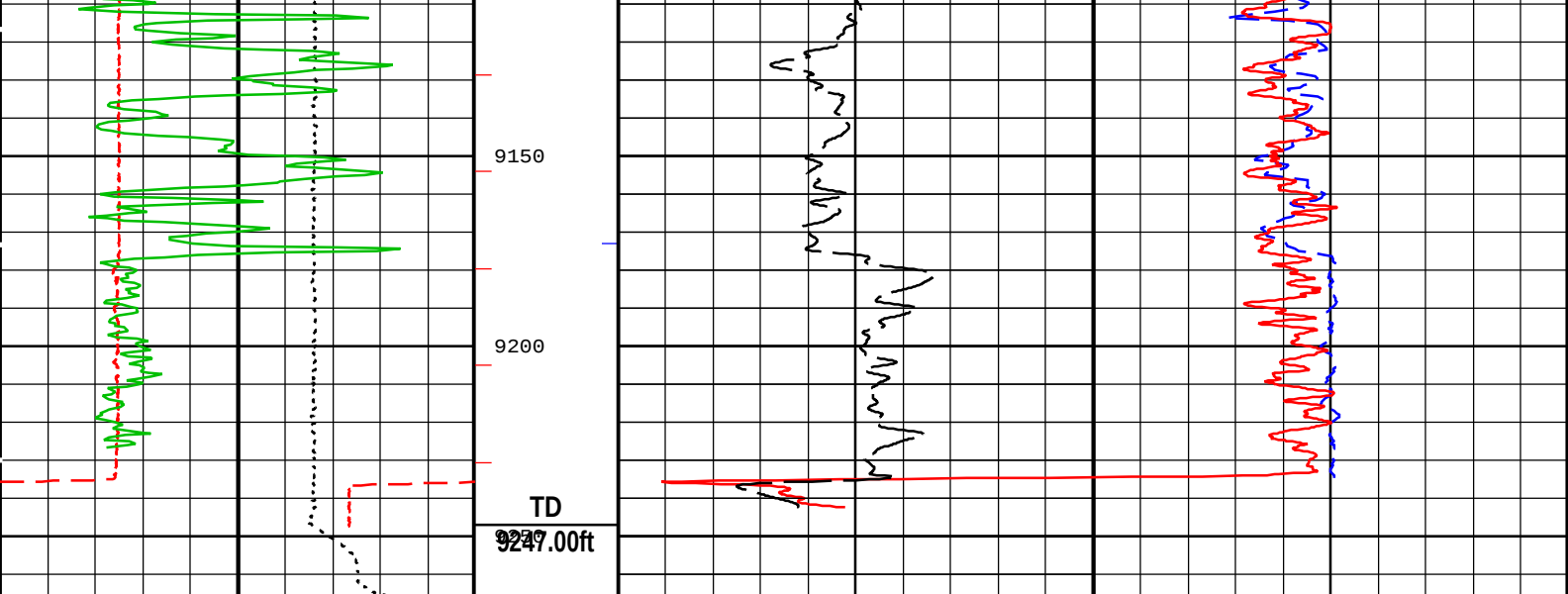
Channel	Source	Sampling
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RUN 3









Uranium Indicator		
Cable Tension (TENS)		
10000	lbf	0
Caliper (CALI) HDRS-H		
6	in	16
Calibrated Gamma Ray (GR_CAL) EDTC-B		
0	gAPI	150

TIME_1900 - Time Marked every 60.00 (s)

—ICV - Integrated Cement Volume every 10.00 (ft3)

—ICV - Integrated Cement Volume every 100.00 (ft3)

—IHV - Integrated Hole Volume every 10.00 (ft3)

—IHV - Integrated Hole Volume every 100.00 (ft3)

Description: HRLT BASIC LOG Format: Log (Porosity 2 inch General) Index Scale: 2 in per 100 ft Index Unit: ft Index Type: Measured Depth
Creation Date: 10-Dec-2014 09:18:51

Main Pass 1" = 100'

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
One	Main[5]:Up	Up	810.48 ft	3245.53 ft	01-Nov-2014 5:51:35 AM	01-Nov-2014 6:34:07 AM	ON	3.59 ft	Yes

All depths are referenced to toolstring zero

Log

Company:PB ENERGY STORAGE SERVICES, INC

Well:DCP Linam Ranch AGI #2

One: Main[5]:Up:S012

Description: HRLT BASIC LOG Format: Log (Porosity 1 inch General) Index Scale: 1 in per 100 ft
Index Unit: ft Index Type: Measured Depth Creation Date: 01-Nov-2014 06:53:42

Channel	Source	Sampling
CALI	HDRS-B:HRCC-B:HRCC-B	1in
GR_CAL	HGNS-B:HGNS-B:HGNS-B	6in
RHOZ	HDRS-B:HRMS-B:HRGD-B	2in
TIME_1900	WLWorkflow	0.1in
TNPH	HGNS-B:HGNS-B:HGNS-B	6in

TIME_1900 - Time Marked every 60.00 (s)

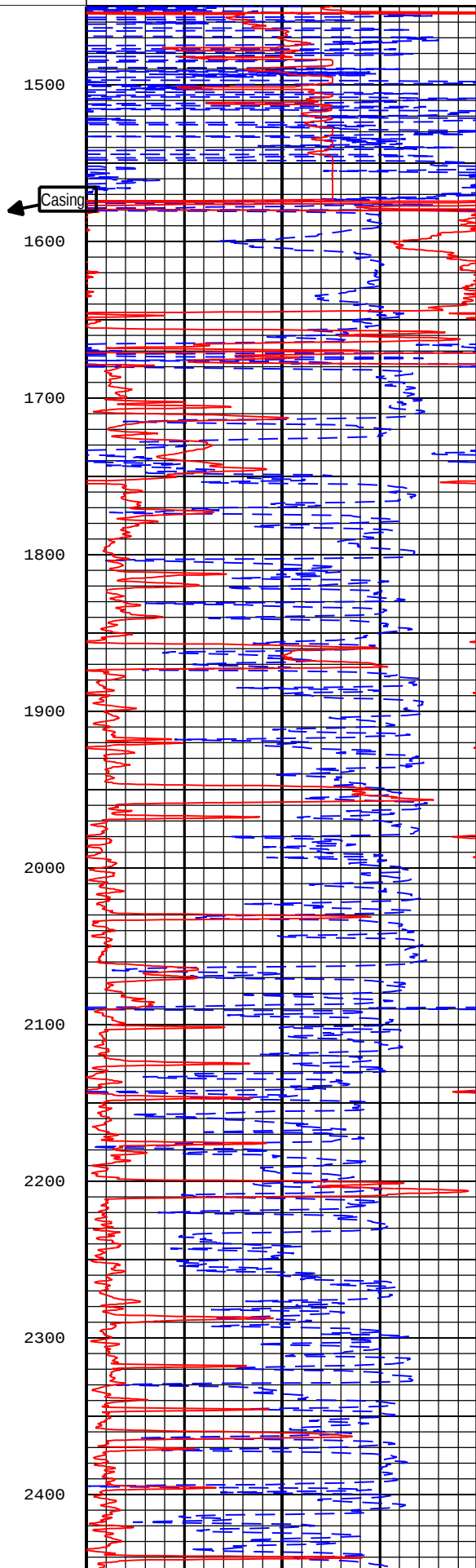
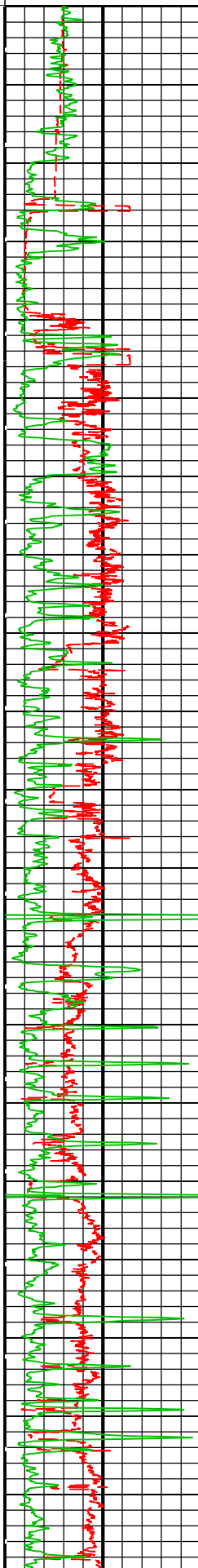
RUN 1

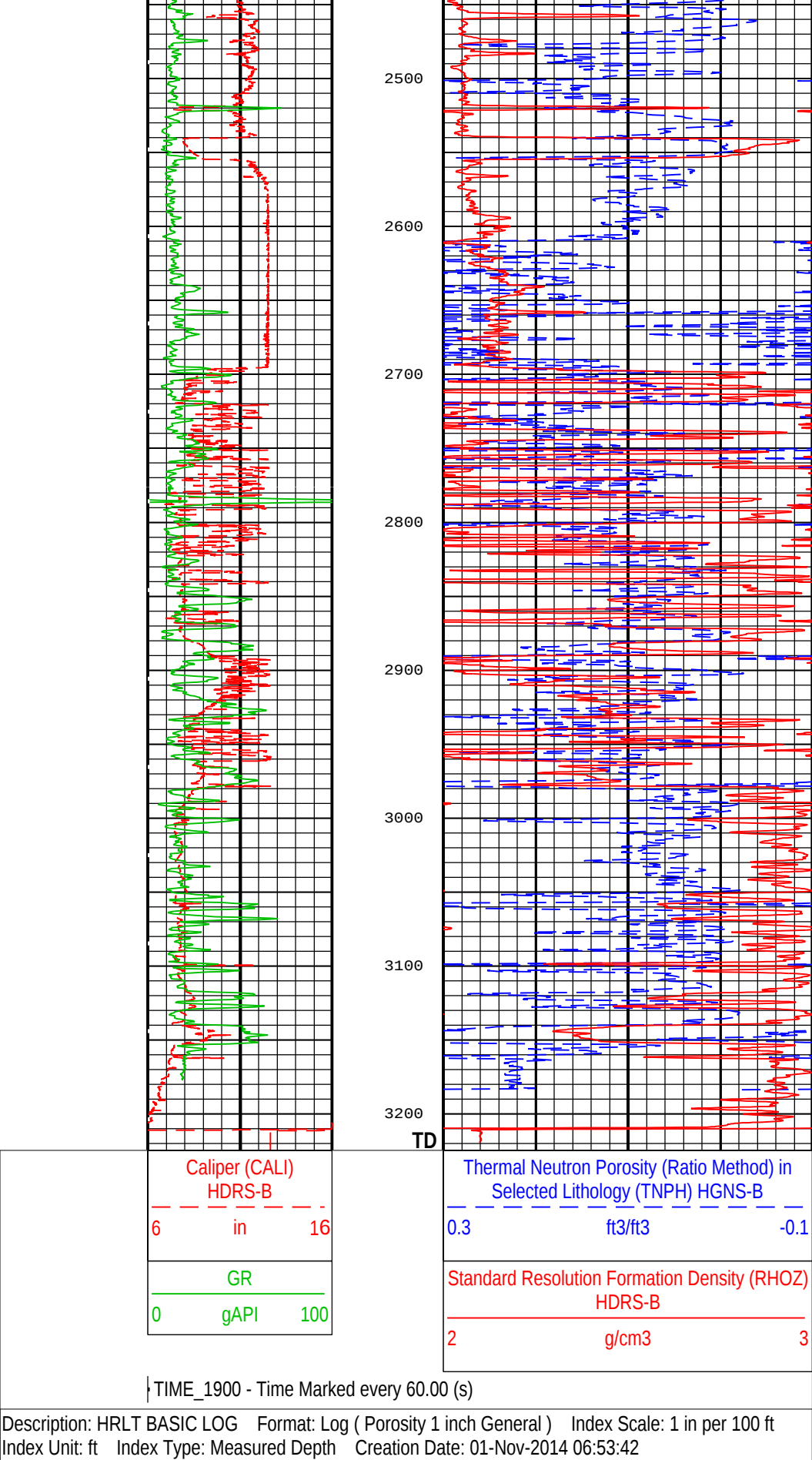
Caliper (CALI)

Thermal Neutron Porosity (Ratio Method) in
Selected Lithology (TNPH) HGNS-B

HDRS-B
6 in 16
GR
0 gAPI 100

0.3 ft3/ft3 -0.1
Standard Resolution Formation Density (RHOZ)
HDRS-B
2 g/cm3 3





Two

Main Pass 1" = 100'

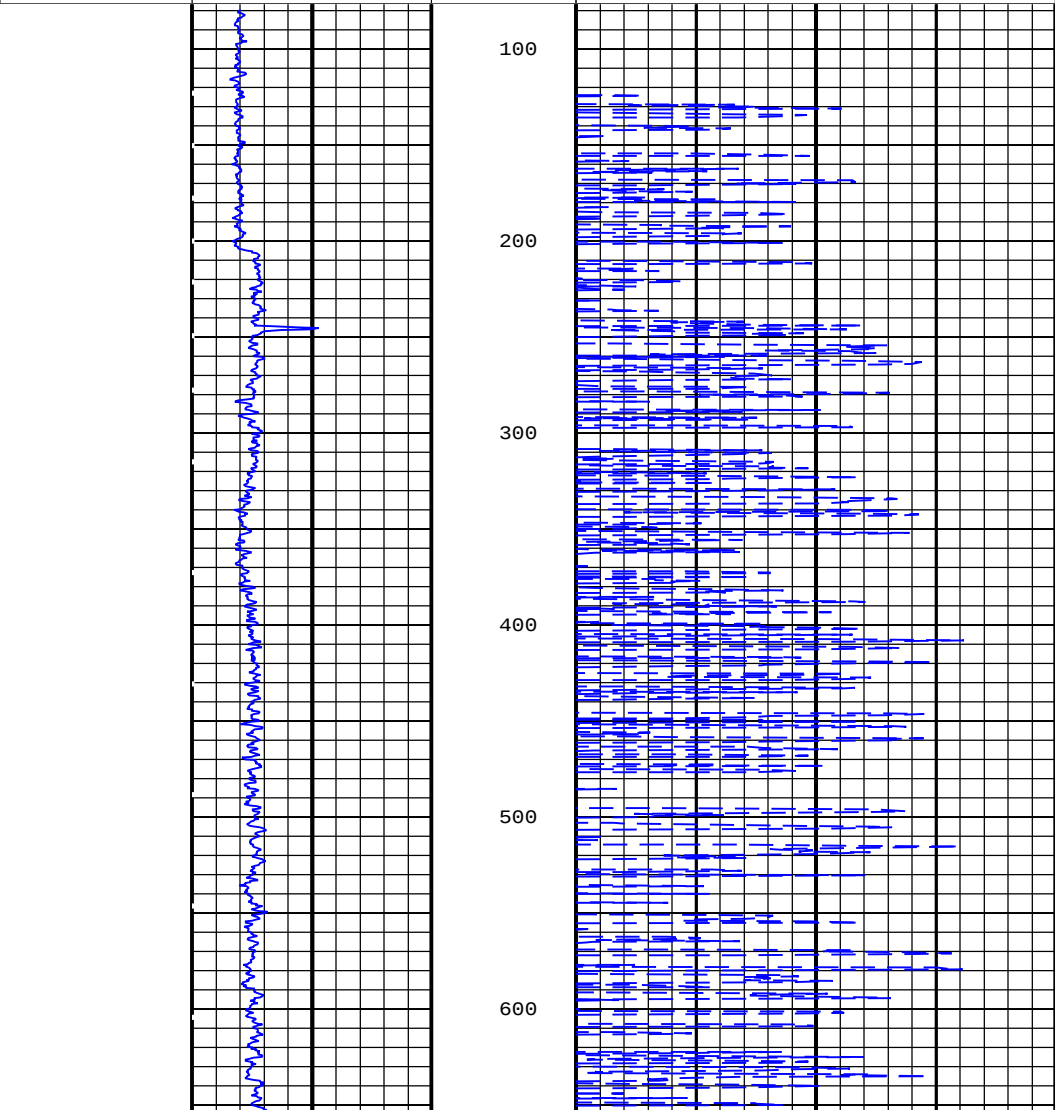
Log

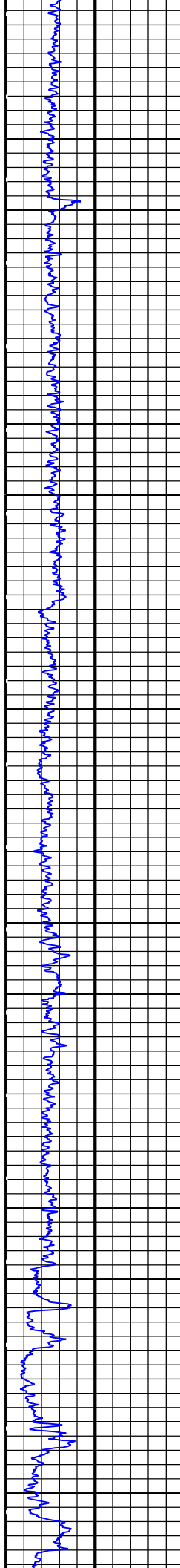
Company:PB ENERGY STORAGE SERVICES, INC

Well:DCP Linam Ranch AGI #2

Type: Main[2]L: Log[2021

Description: HRLT BASIC LOG Format: Log (Porosity 1 inch General) Index Scale: 1 in per 100 ft		
Index Unit: ft Index Type: Measured Depth Creation Date: 30-Nov-2014 17:36:51		
Channel	Source	Sampling
CALI	HDRS-B:HRCC-B:HRCC-B	1in
CGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
RHOZ	HDRS-B:HRMS-B:HRGD-B	2in
SGR	HNGS-BA:HNGS-BA:HNGS-BA	6in
TIME_1900	WLWorkflow	0.1in
TNPH	HGNS-B:HGNS-B:HGNS-B	6in
TIME_1900 - Time Marked every 60.00 (s)		
Uranium Indicator Caliper (CALI) HDRS-B 6 in 16 Gamma Ray Contribution from Thorium and Potassium (CGR) HNGS-BA 0 gAPI 100 Spectroscopy Gamma Ray (SGR) HNGS-BA 0 gAPI 100		
Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-B 0.3 ft3/ft3 -0.1 Standard Resolution Formation Density (RHOZ) HDRS-B 2 g/cm3 3		





700

800

900

1000

1100

1200

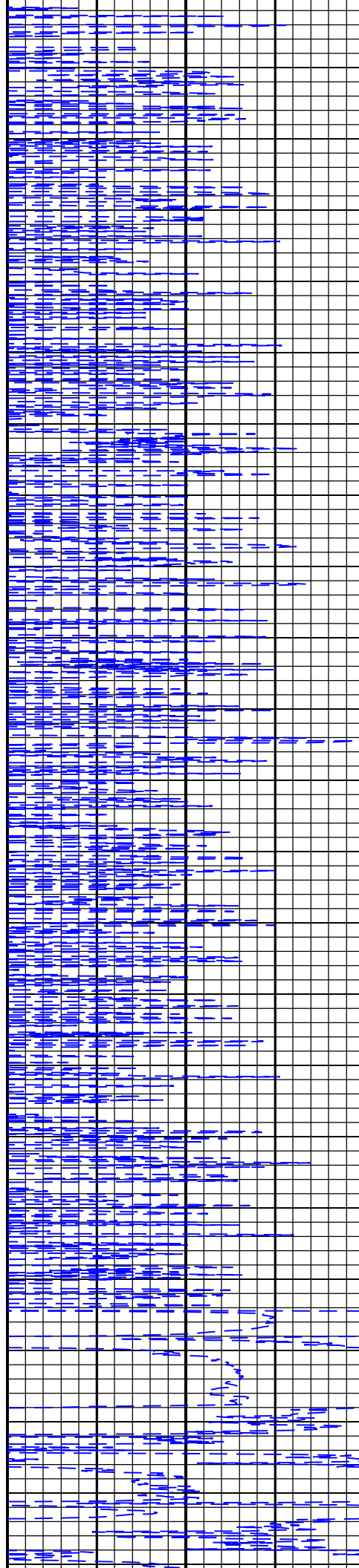
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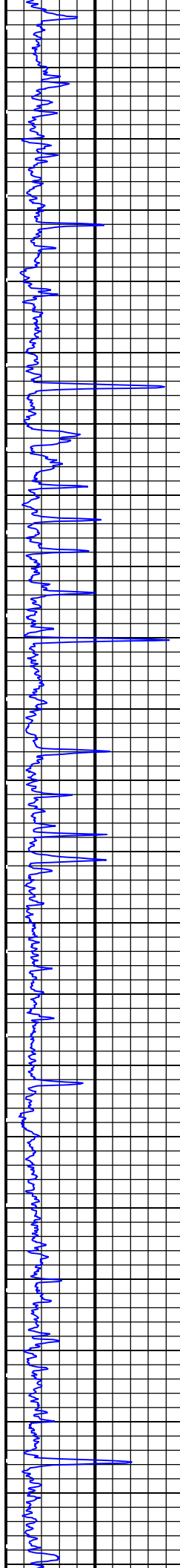
1400

1500

1600

1700





1800

1900

2000

2100

2200

2300

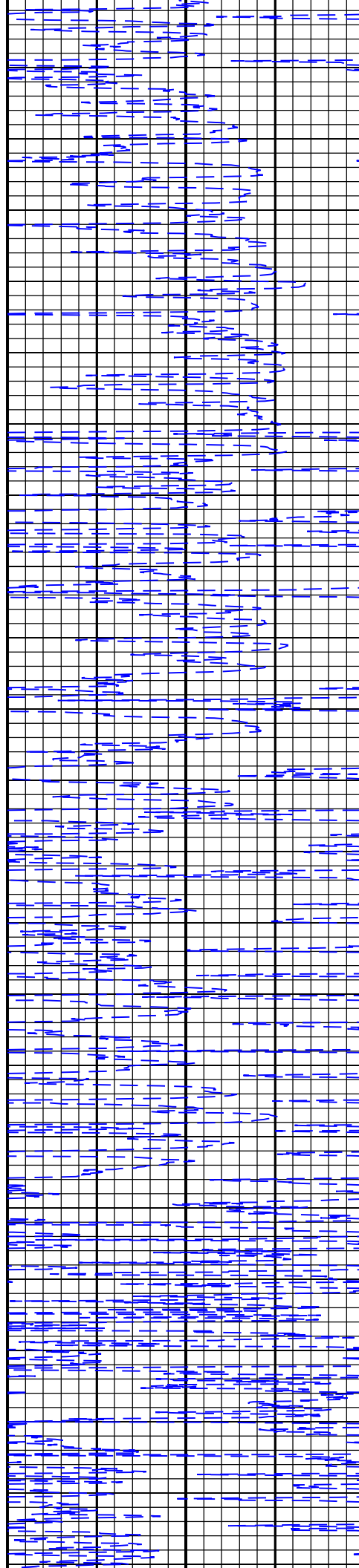
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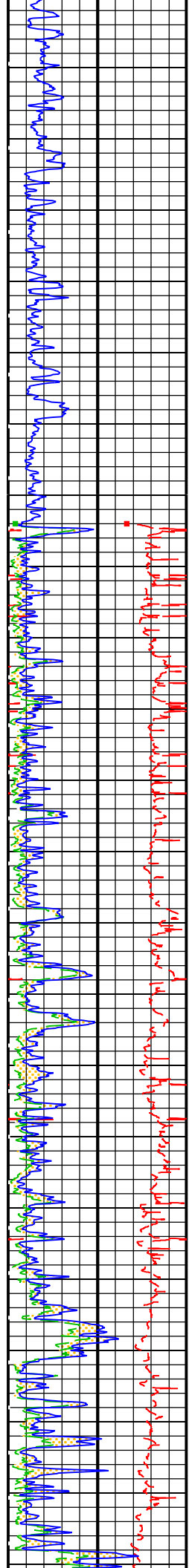
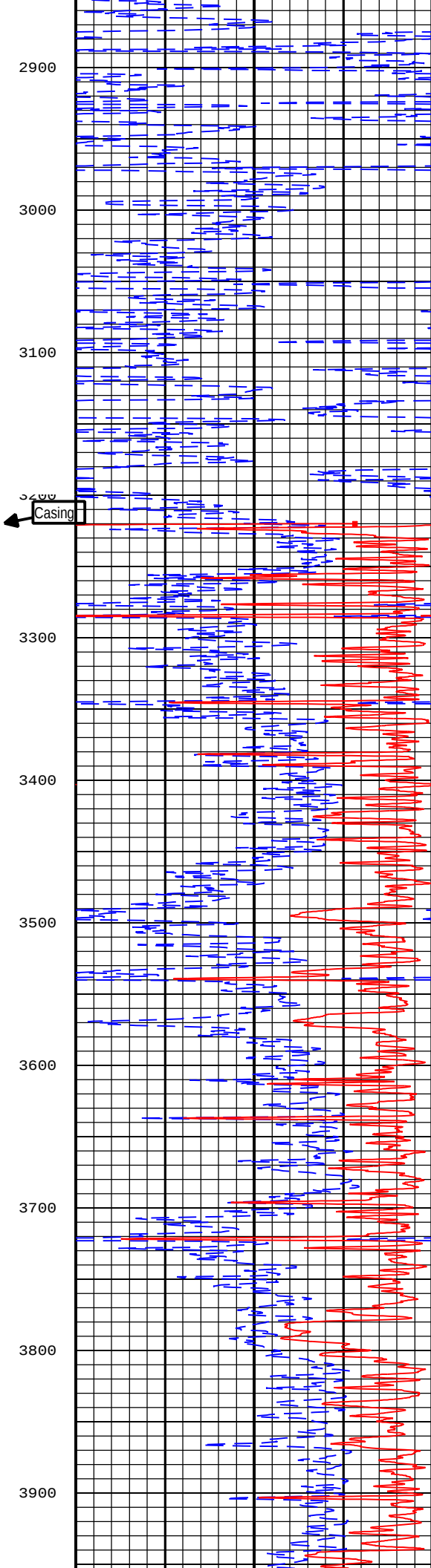
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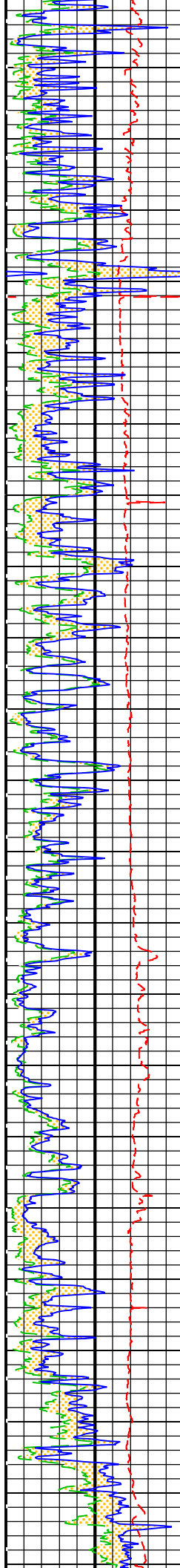
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2700

2800







4000

4100

4200

4300

4400

4500

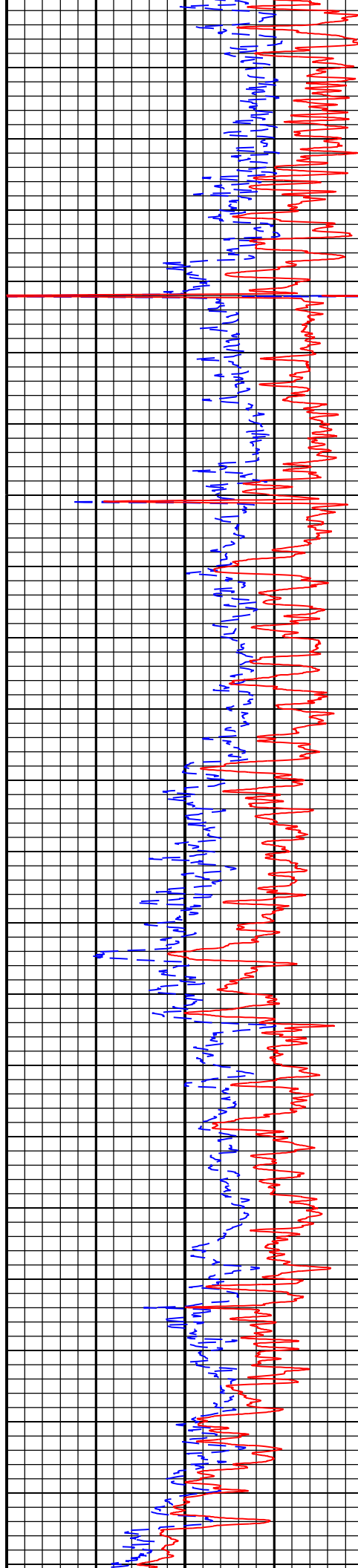
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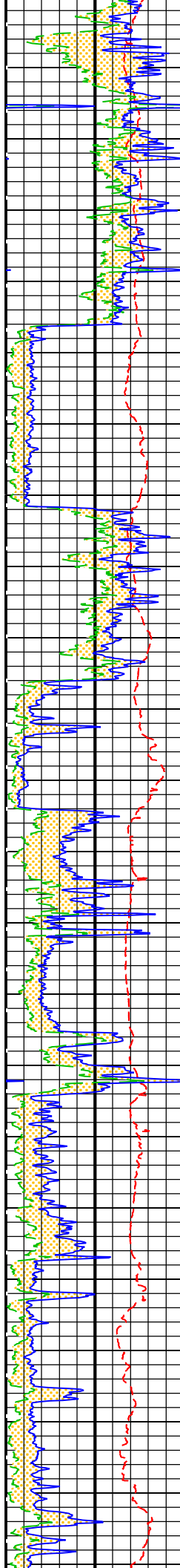
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4800

4900

5000





5100

5200

5300

5400

5500

5600

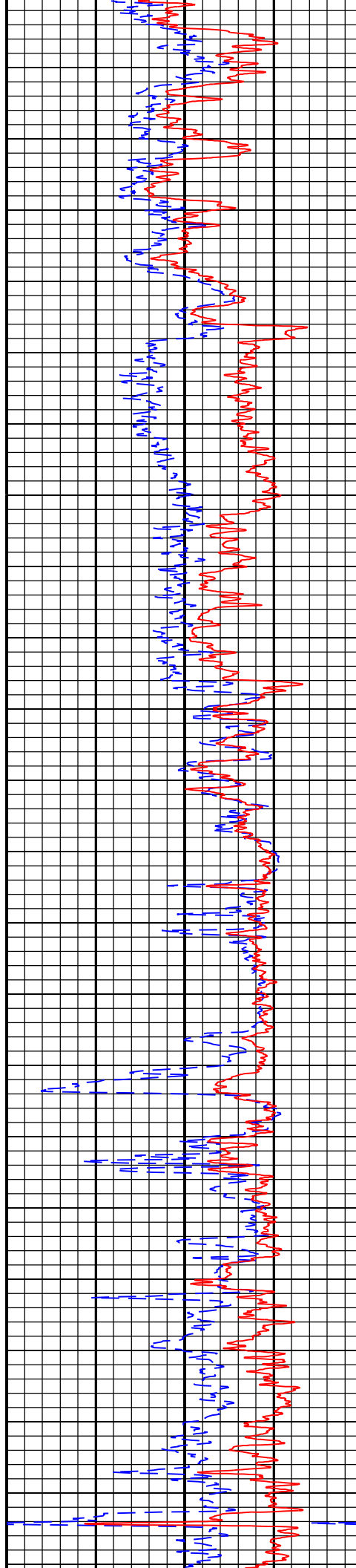
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5800

5900

6000

6100



6200

6300

6400

6500

6600

6700

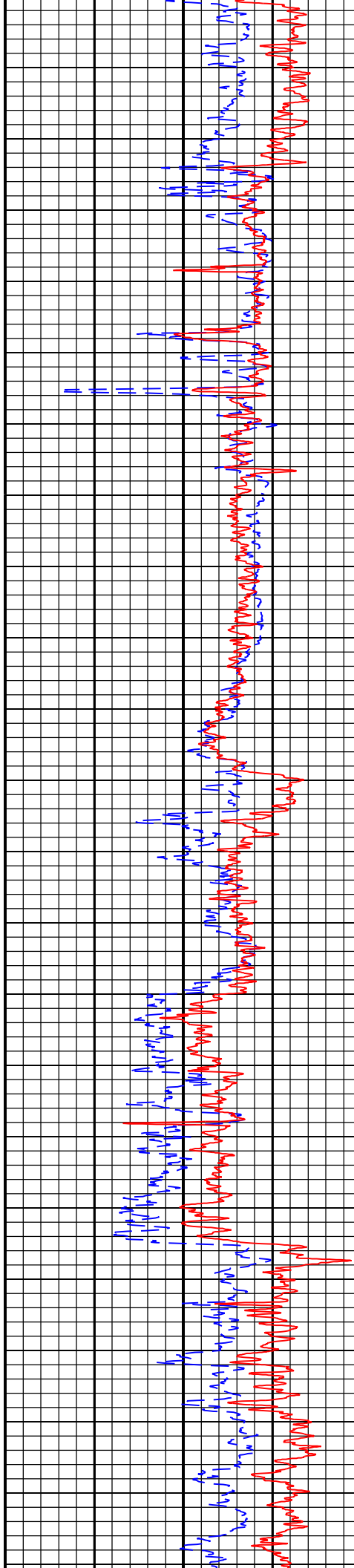
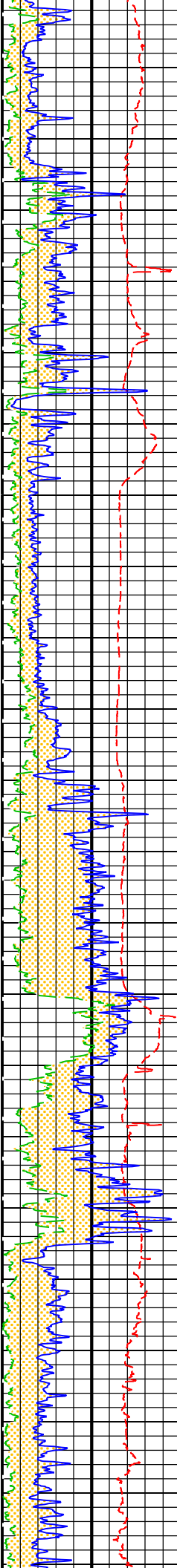
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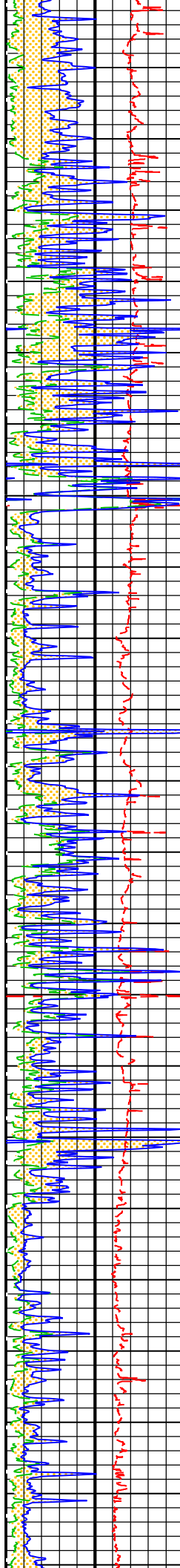
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7000

7100

7200





7300

7400

7500

7600

7700

7800

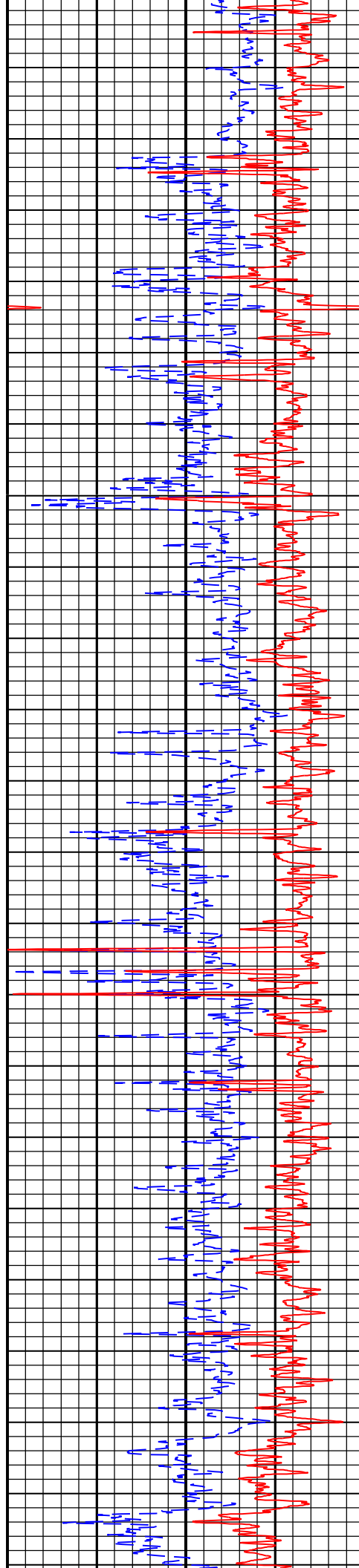
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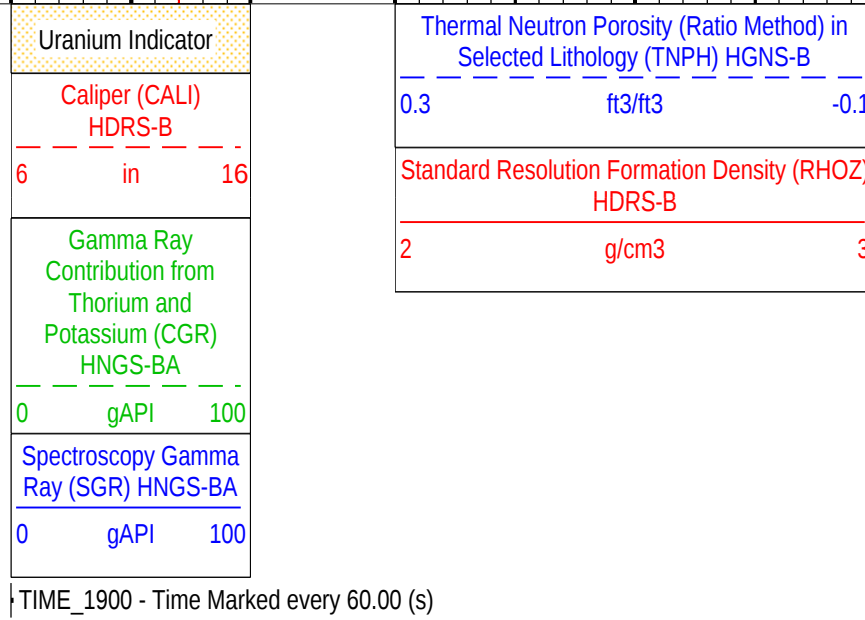
8000

8100

8200

8300





Run 3a									
Main Pass 1" = 100'									
Pass Summary									
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Run 3a	Main[3]:Up	Up	8020.70 ft	9265.70 ft	10-Dec-2014 4:51:32 AM	10-Dec-2014 5:17:20 AM	ON	6.53 ft	No
All depths are referenced to toolstring zero									
Log	Company:PB ENERGY STORAGE SERVICES, INC						Well:DCP Linam Ranch AGI #2		
	Run 3a: Main[3]:Up:S012								

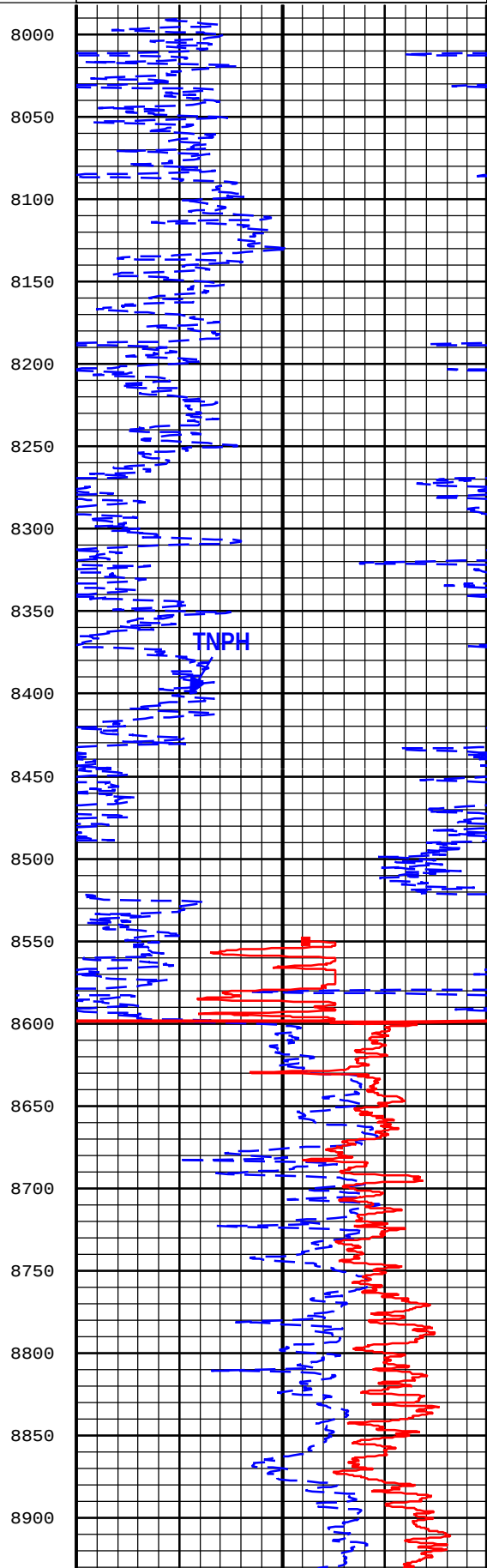
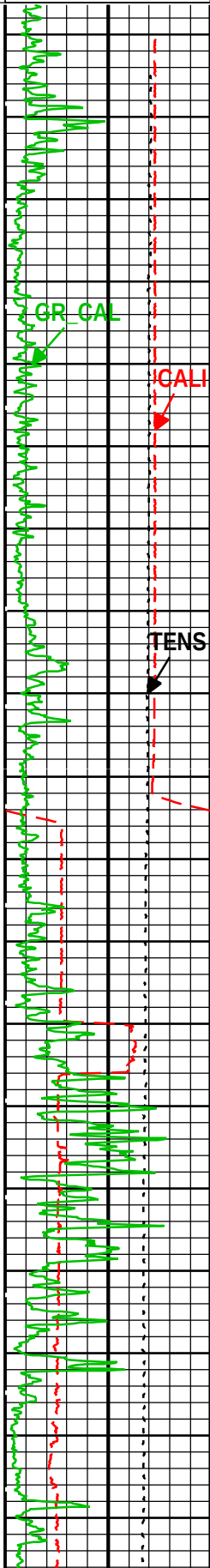
Description: HRLT BASIC LOG Format: Log (Porosity 1 inch General) Index Scale: 1 in per 100 ft		
Index Unit: ft Index Type: Measured Depth Creation Date: 10-Dec-2014 09:19:46		
Channel	Source	Sampling
CALI	HDRS-H:HRCC-H:HRCC-H	1in
GR_CAL	EDTC-B:EDTC-B:EDTC-B	6in
RHOZ	HDRS-H:HRMS-H:HRGD-H	2in
TENS	WLWorkflow	1in
TIME_1900	WLWorkflow	0.1in
TNPH	HGNS-H:HGNS-H:HGNS-H	6in

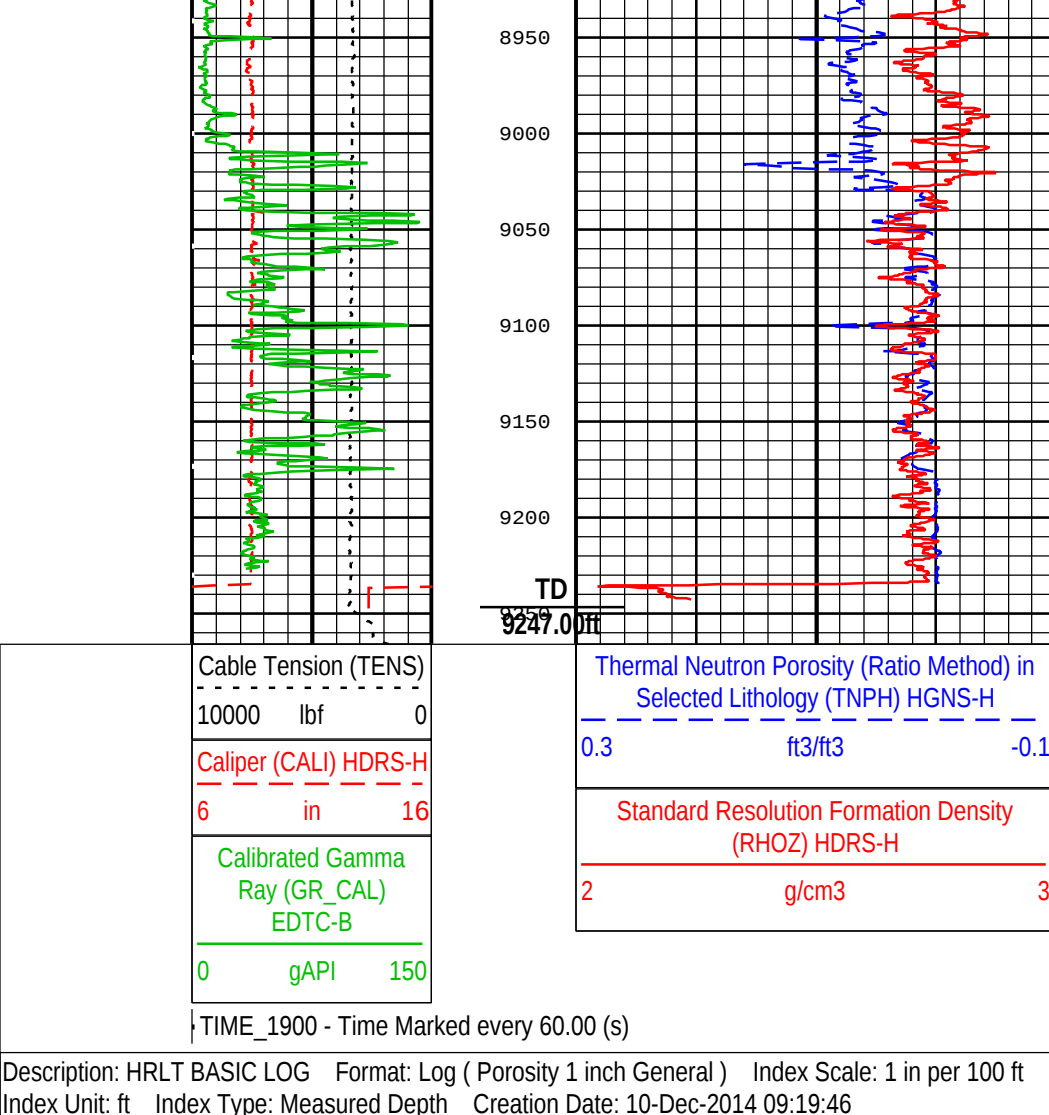
| TIME_1900 - Time Marked every 60.00 (s)

Cable Tension (TENS)	
10000	lbf
0	

RUN 3

10000	10	0
Caliper (CALI) HDRS-H		
6	in	16
Calibrated Gamma Ray (GR_CAL) EDTC-B		
0	gAPI	150
Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-H		
0.3	ft3/ft3	-0.1
Standard Resolution Formation Density (RHOZ) HDRS-H		
2	g/cm3	3





Company:	PB ENERGY STORAGE SERVICES, INC	Schlumberger
Well:	DCP Linam Ranch AGI #2	
Field:	AGI; Bone Spring-Wolfcamp	
County:	Lea	
State:	New Mexico	
Three Detector Litho-Density Compensated Neutron Log Final Composite 1" & 2"		