

HALLIBURTON

RESERVOIR MONITOR
TOOL - ELITE

Company		URSA OPERATING COMPANY	
Well		YATER 12C-17-07-95	
Field		PARACHUTE	
County		GARFIELD	State CO
Company		URSA OPERATING COMPANY	
Well		YATER 12C-17-07-95	
Field		PARACHUTE	
County		GARFIELD	State CO
API No.:		05-045-22882-0000	Serv #: 902308623
Location:		SURFACE HOLE LOCATION: 1754' FSL & 1106' FWL	
Other Services		CBL GAUGE RING	
Permanent Datum		GROUND LEVEL Elevation 5519'	
Log Measured From		KB , 17 Ft. above perm. datum	
Drilling Measured From		KB	
Date @ Time Logged		11 APR 2015	
Run No.		ONE	
Depth - Driller		6953'	
Depth - Logger		6903'	
Bottom - Logged Interval		6903'	
Top - Log Interval		3549'	
Max. Recorded Temp.		236 DEG F	
CEMENTING DATA		Surface String	
Date / Time Cemented		N/A	
Primary / Squeeze		N/A	
Expected Compressive Strength		psi@ hrs	
Cement Volume		/	
Cement Type / Weight		/	
Formulation		/	
Mud Type / Mud Wgt.		/	
Borehole Record		Casing & Tubing Record	
Run Number		Bit From To	
ONE		12.25" SURFACE 1779' 1779' 8.625" 32.0# SURFACE 1779'	
TWO		7.875" 1779' 6953' 4.5" 11.6# SURFACE 6953'	

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HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

Comments

HES CBL LOG DATED 11 APR 2015 IS THE PRIMARY DEPTH REFERENCE FOR THIS WELL.

GR-CBL-RMT RAN IN COMBINATION.

LOG INTERVALS PER CUSTOMER REQUEST.

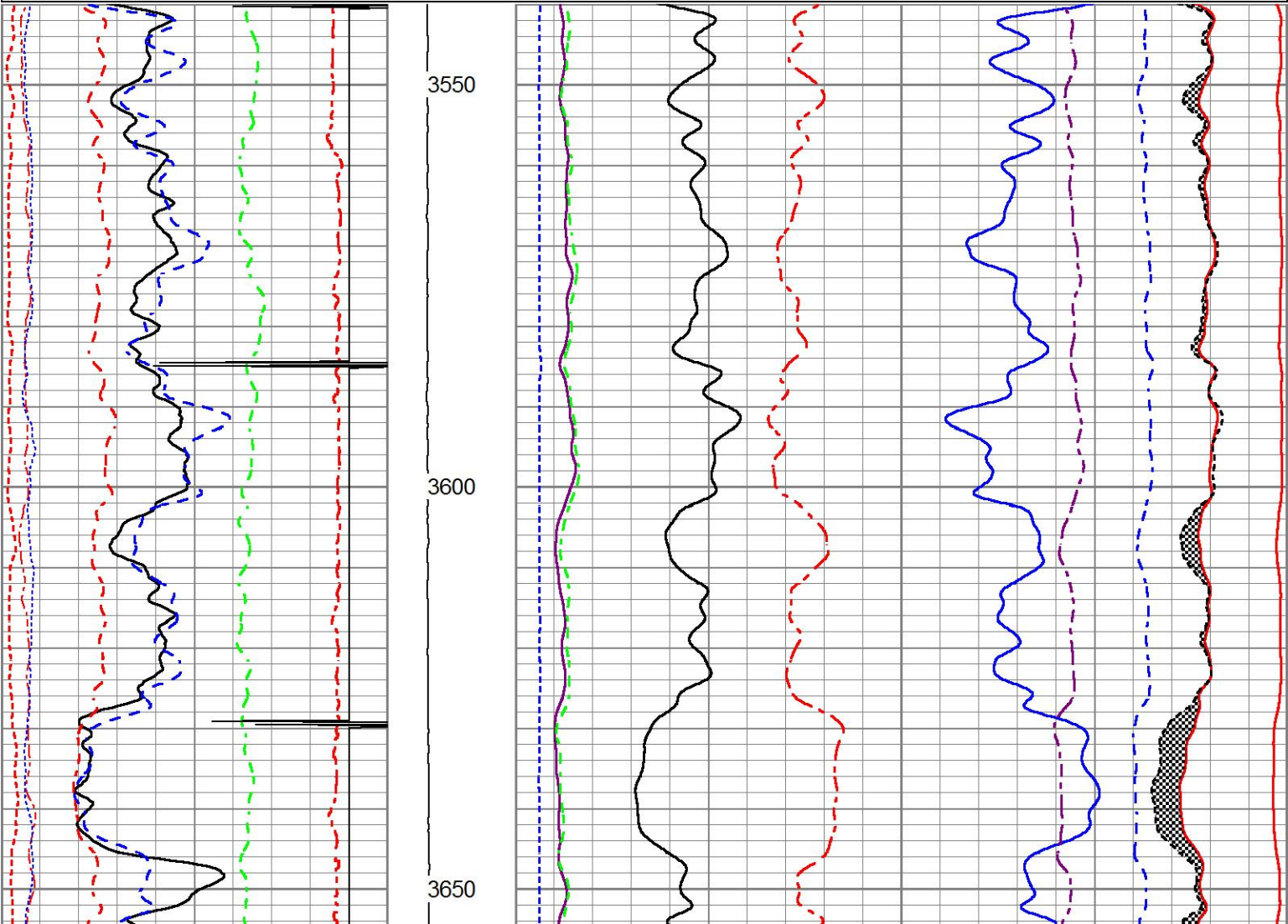
SHORT JOINTS @: 4121' - 4131', 5240' - 5250', 6408' - 6418'.

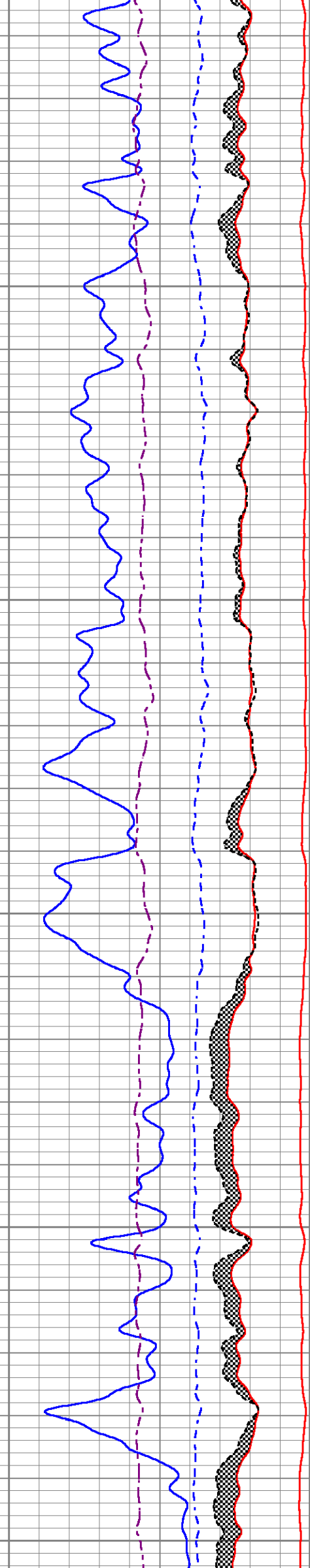
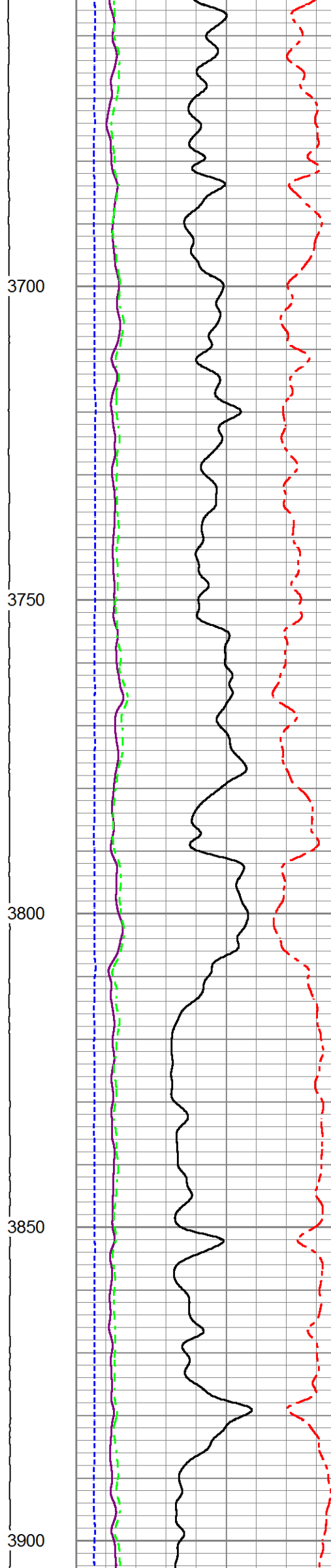
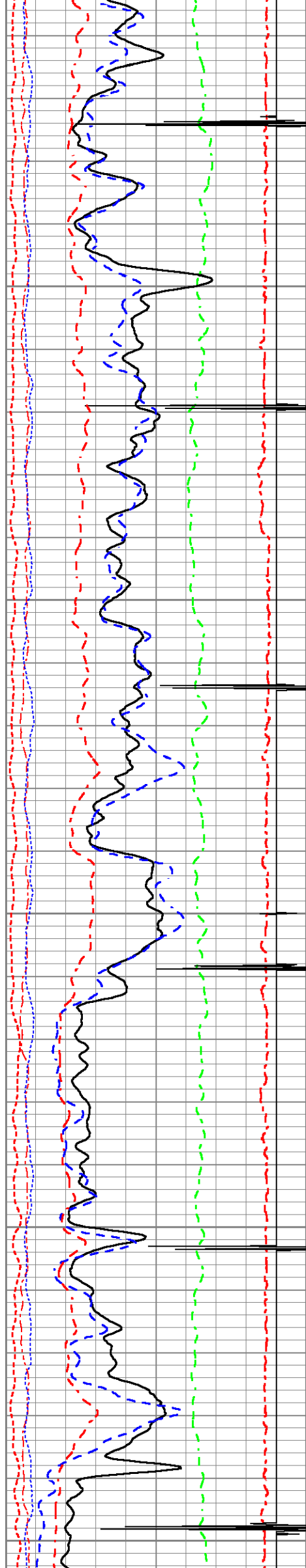
THANK YOU FOR CHOOSING AHLLIBURTON ENERGY SERVICES.

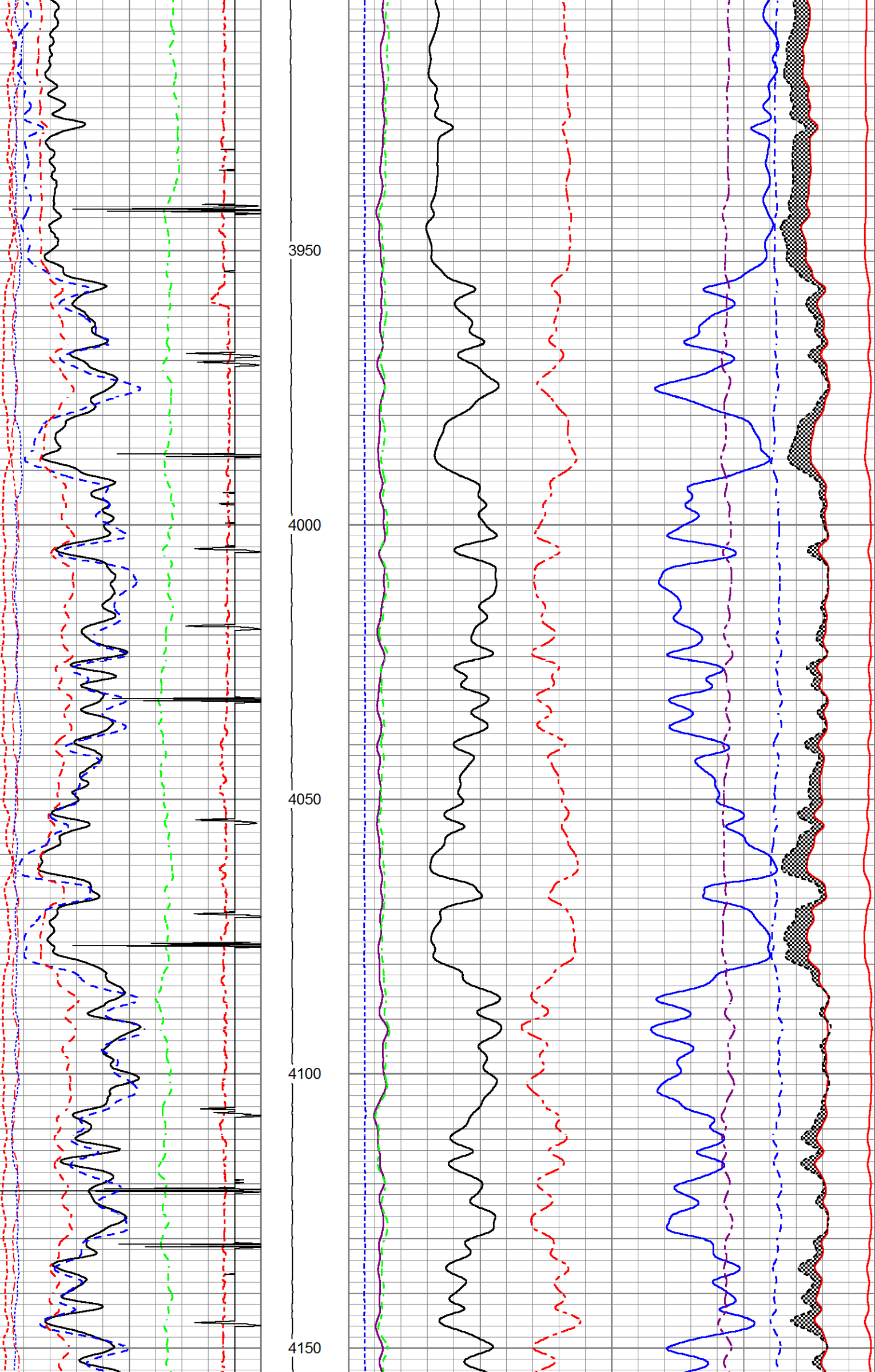
Service Ticket No.		902308623		API No.		05-045-22721-0000		PGM Ver		14.11.12001	
The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client											
EQUIPMENT DATA											
TELEMETRY			CEMENT BOND LOG			RESERVOIR MONITOR TOOL					
Run No.		ONE		Run No.		ONE		Run No.		ONE	
Serial No.		12159411		Serial No.		11794522		Serial No.		12270722	
Model No.		TTTC-U-002		Model No.		CBL-M		Model No.		RMT3D-A	
Diameter		1.688"		Diameter		2.75"		Diameter		2.125"	
LOGGING DATA											
General Data											
Pass		Depths			Well Head		Speed		Logging Run Comments		
No		From		To		Pressure		Ft/Min			

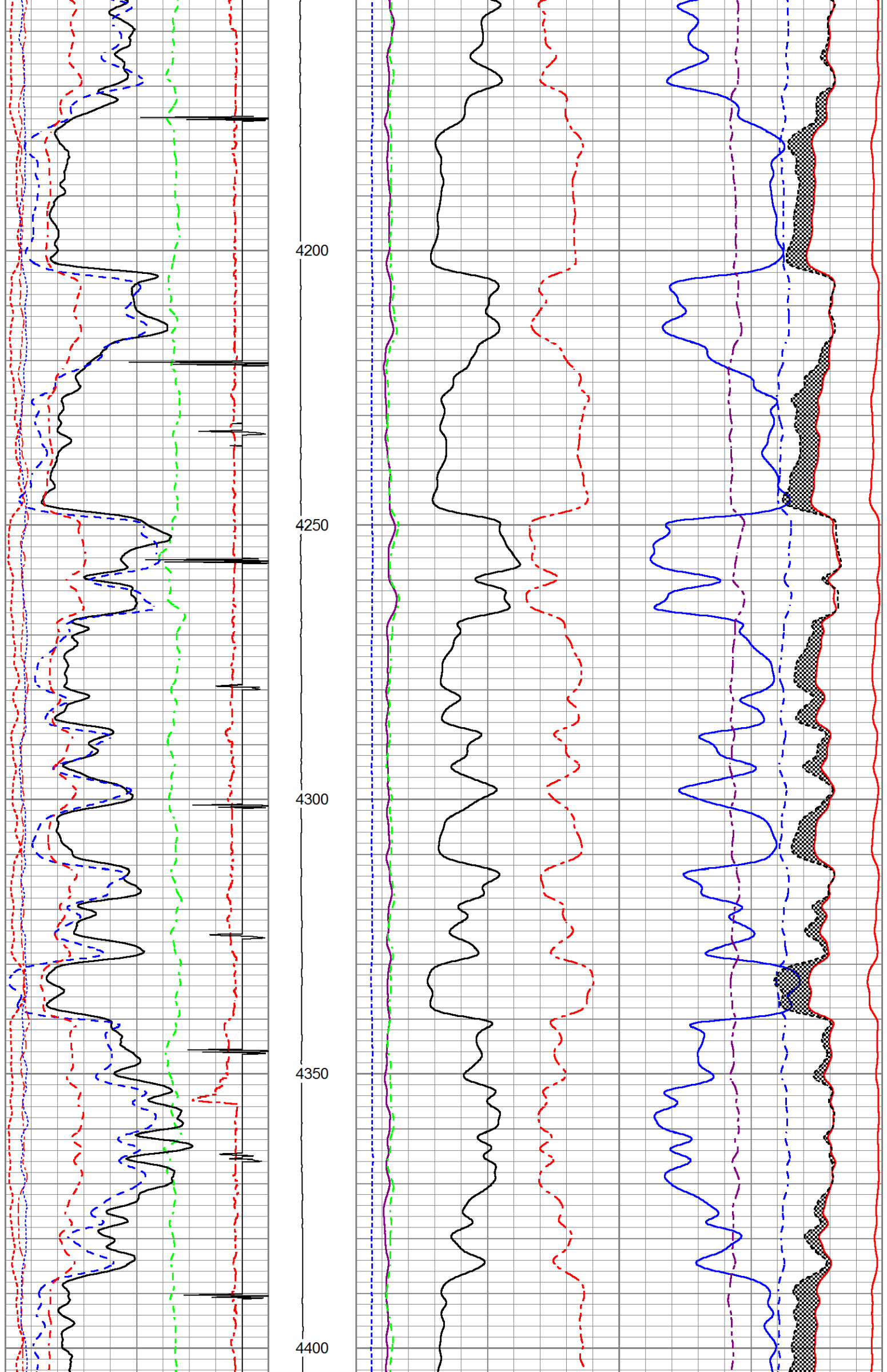
No.	1	2	3	4	5	6	7	8
ONE	6903'	3549'	0	15	MAIN LOG SECTION			
	GAMMA RAY		RM3SGBN		RM3RNF		RM3SGIN	
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
ONE	0	200	200	0	2	0.5	60	0
DIRECTIONAL INFORMATION								
Maximum Deviation		N/A	deg. @	N/A	KOP	481'		

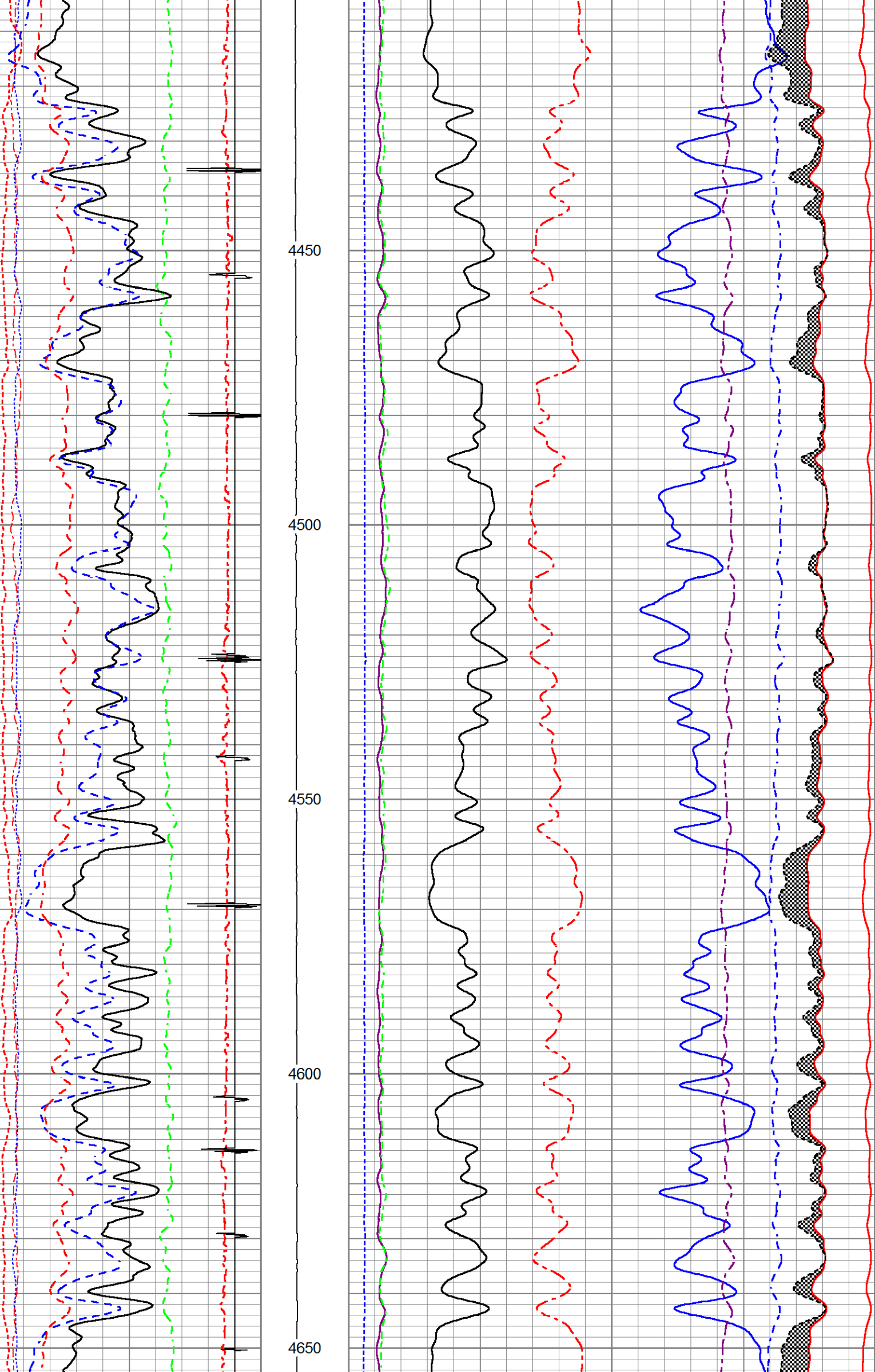
MAIN LOG SECTION									
HALLIBURTON									
5" = 100'									
Database File		yater_12c_3dcombo.db							
Dataset Pathname		MAIN1							
Presentation Format		RMT3D_~4							
Dataset Creation		Sat Apr 11 19:40:43 2015							
Charted by		Depth in Feet scaled 1:240							
200	Rm3SGBN	0	TENSION	60	Rm3SGIN				0
0	Rm3OAI2	100		2	Rm3RNF	0.5	60000	Rm3NCAP	0
0	GR (GAPI)	200		0	Rm3RIN	15	60000	Rm3FCAP	0
-20	LSPD (ft/min)	20		0	Rm3RICF	6	100000	Rm3FSIN	0
-540	CCL	60		0	Rm3YH1	1	60000	Rm3LCAP	0
10	Rm3SGFF	40		0	Rm3YH2	1	100000	Rm3NSIN	0
0	Rm3SGFN	100							
0	Rm3CFTR1	1							
0	Rm3CFTR2	1							

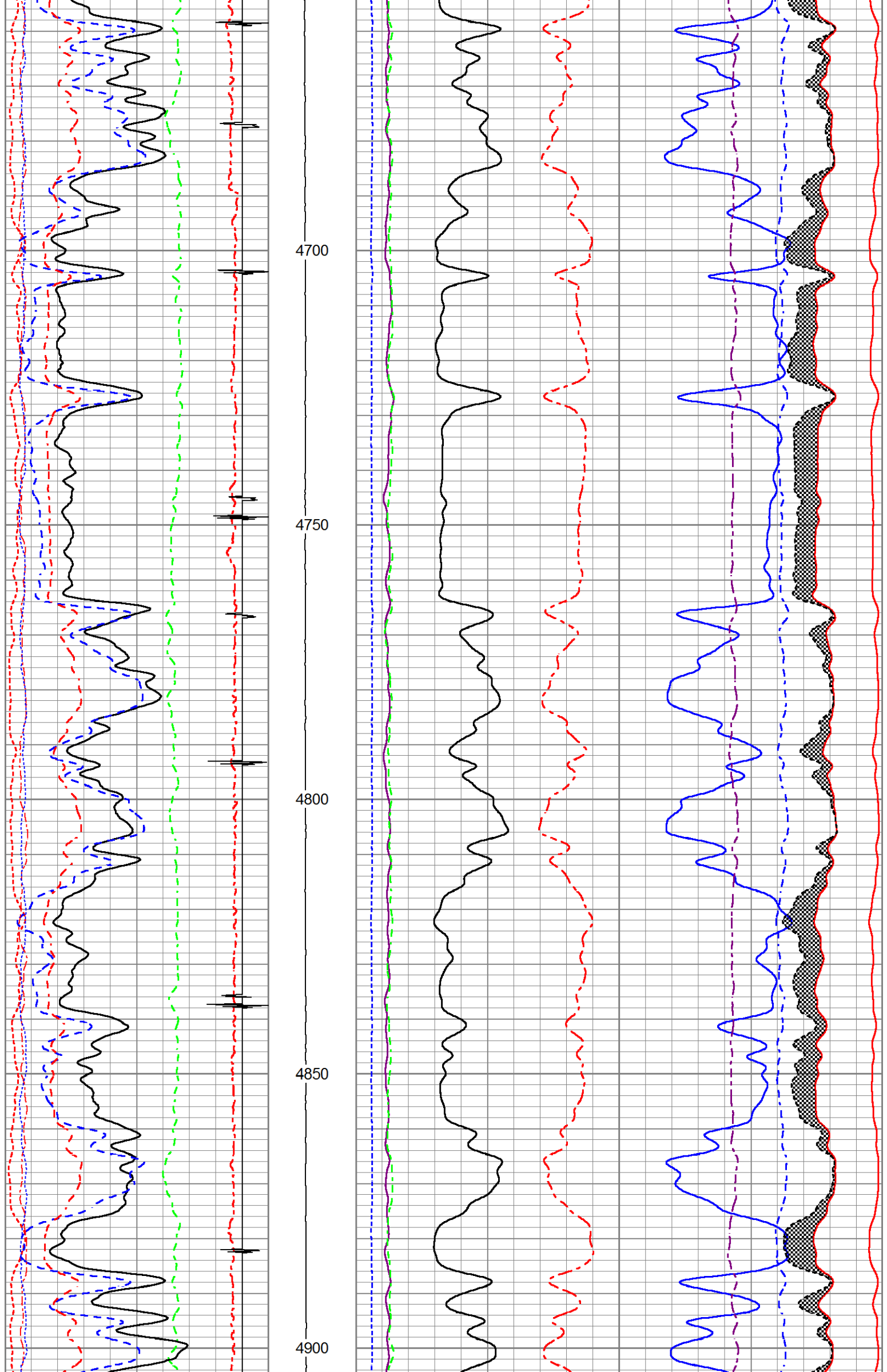


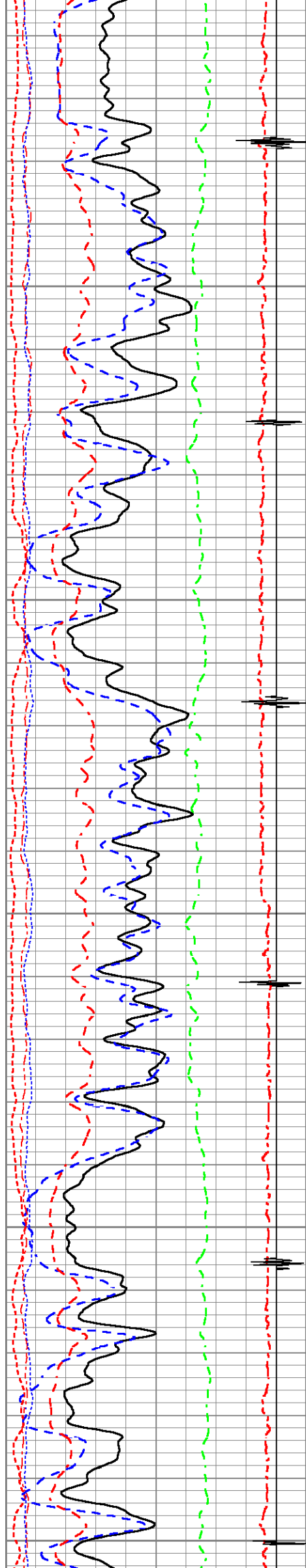












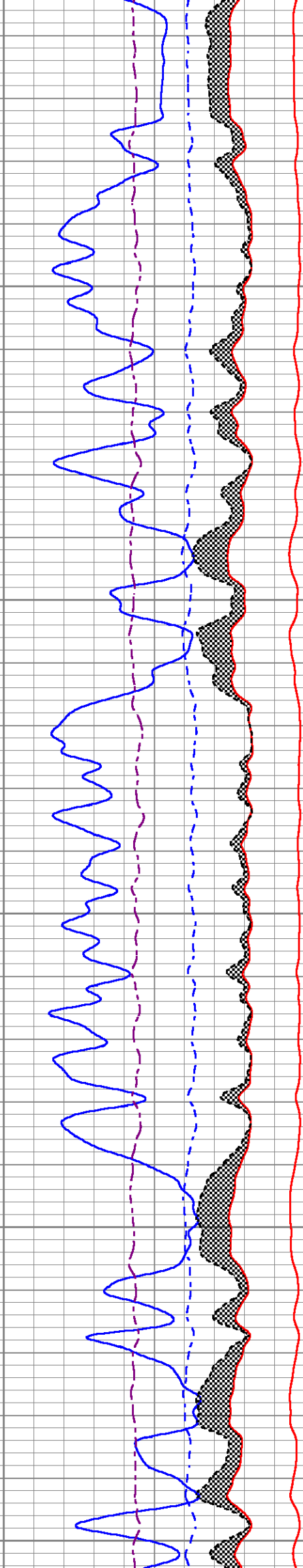
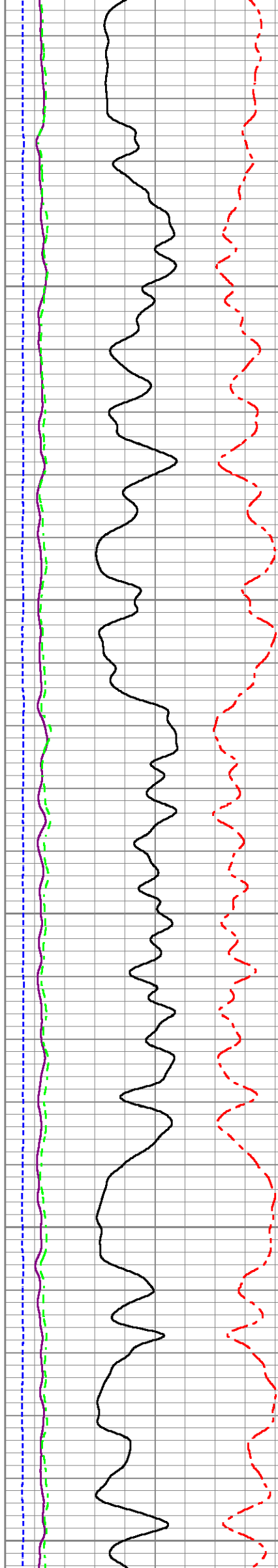
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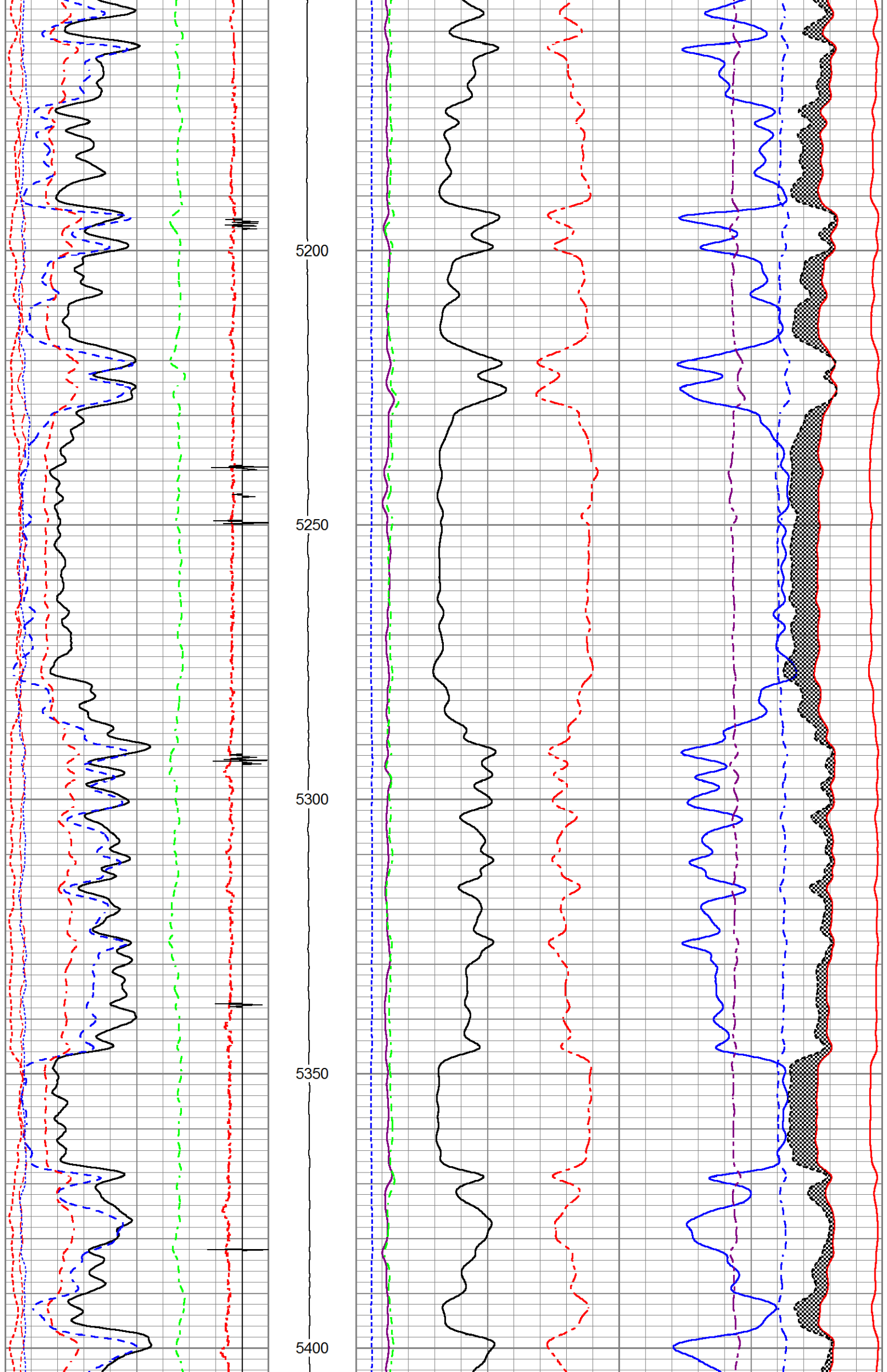
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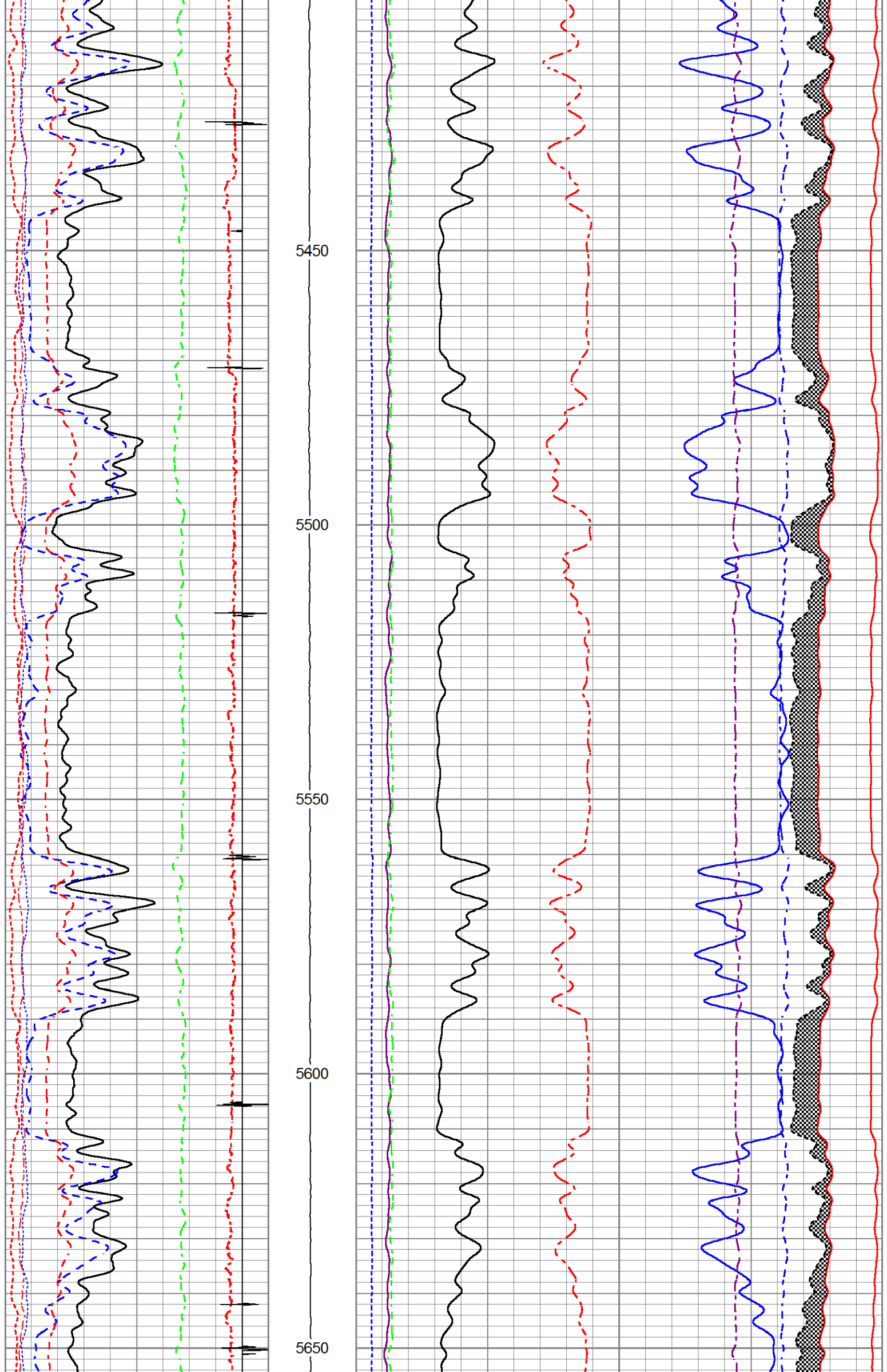
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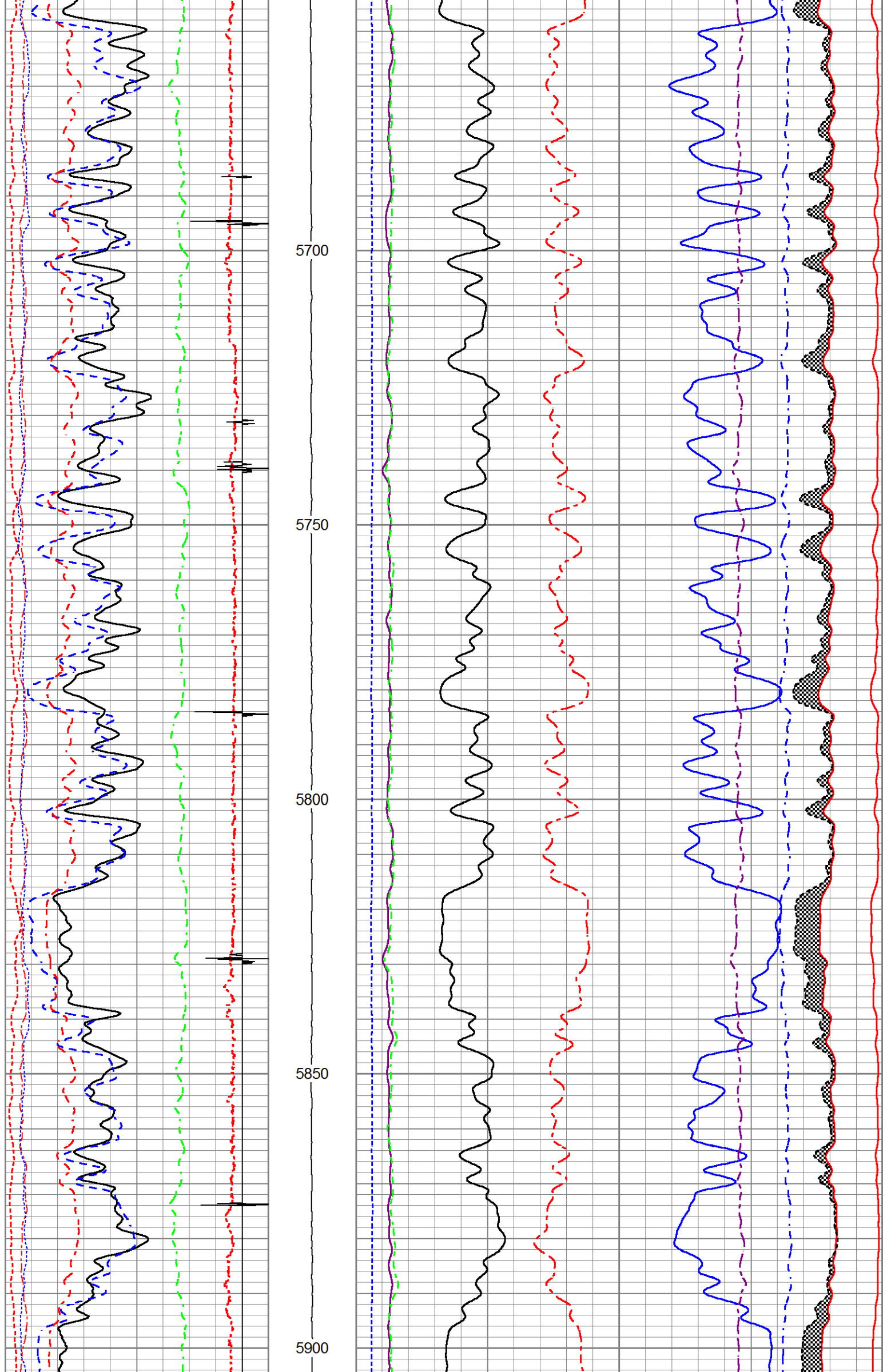
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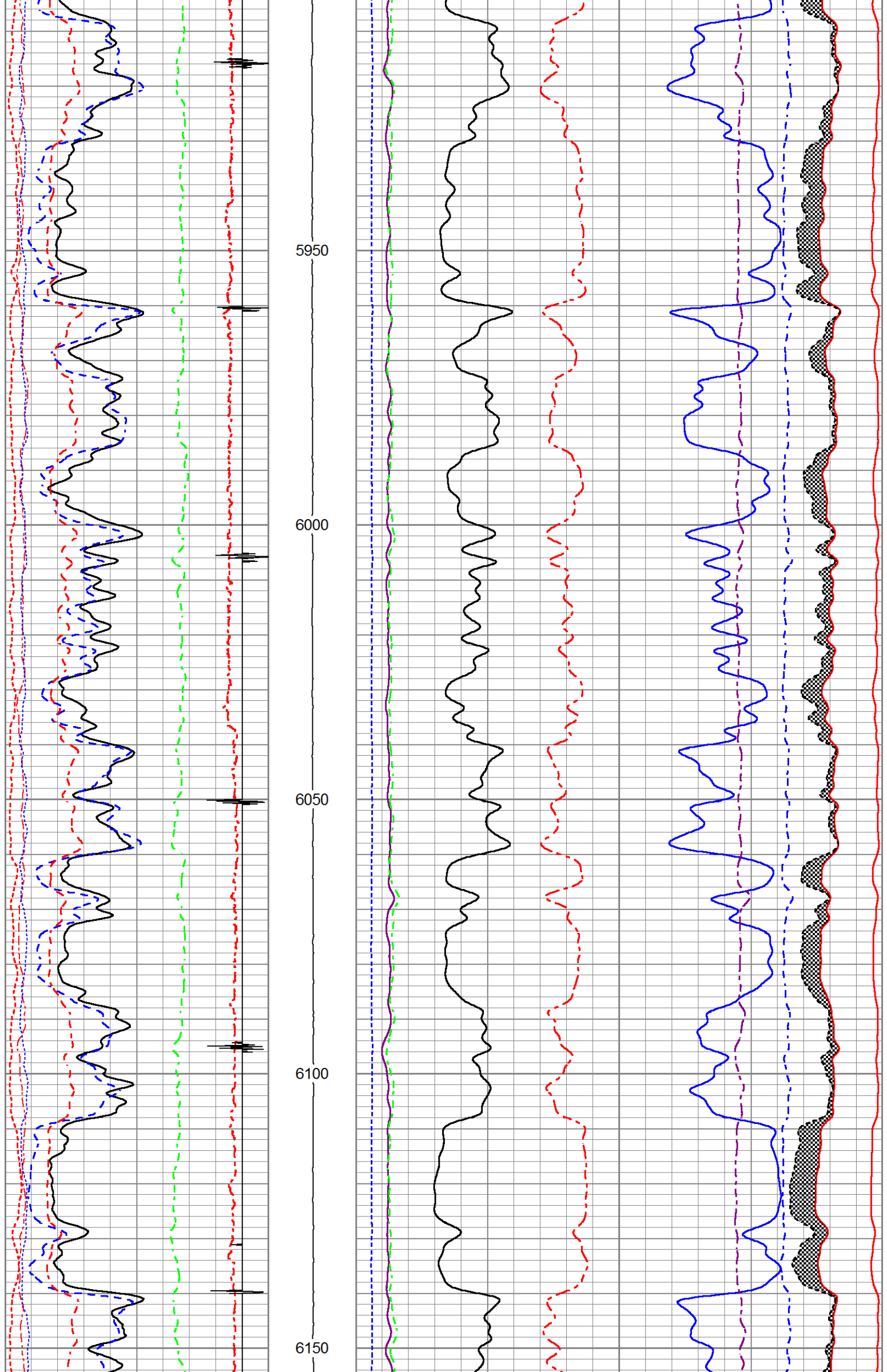
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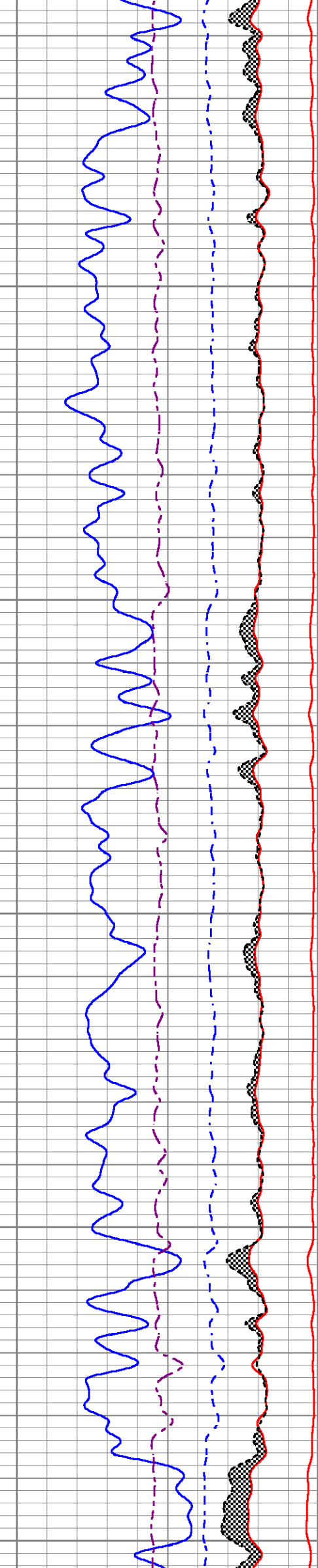
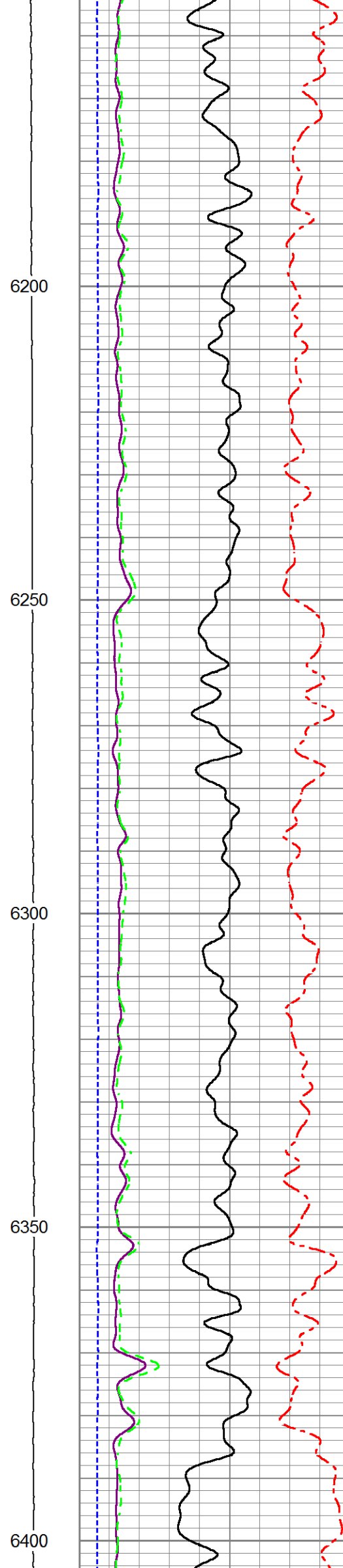
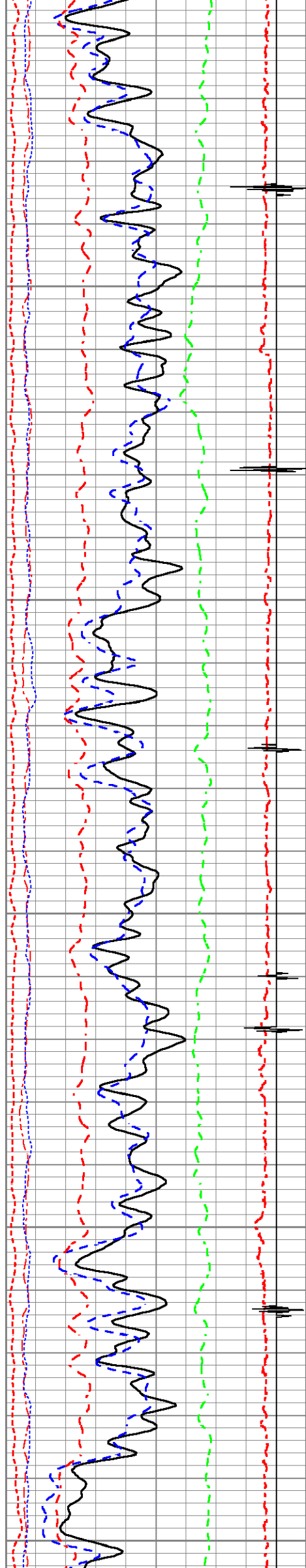


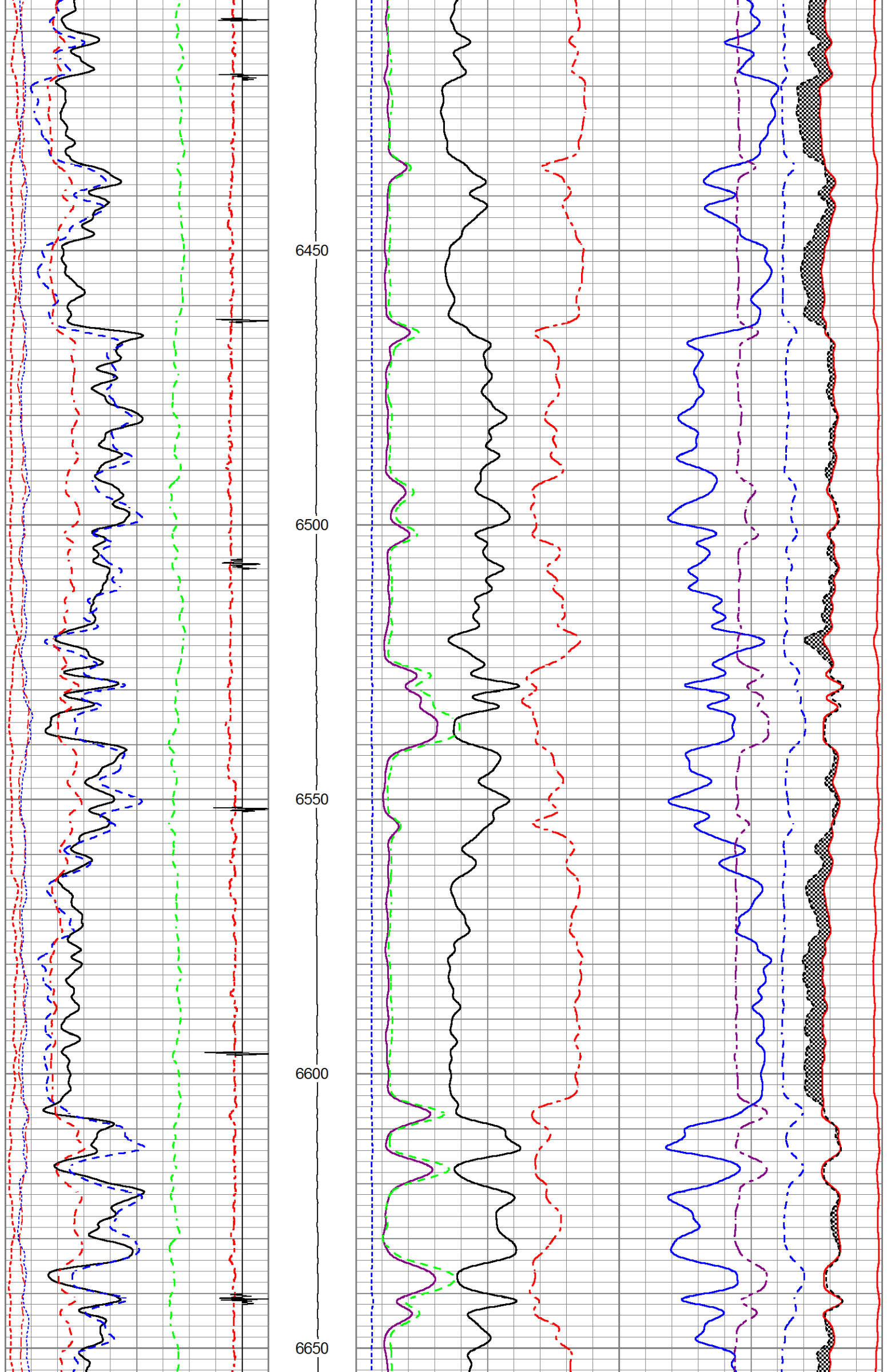


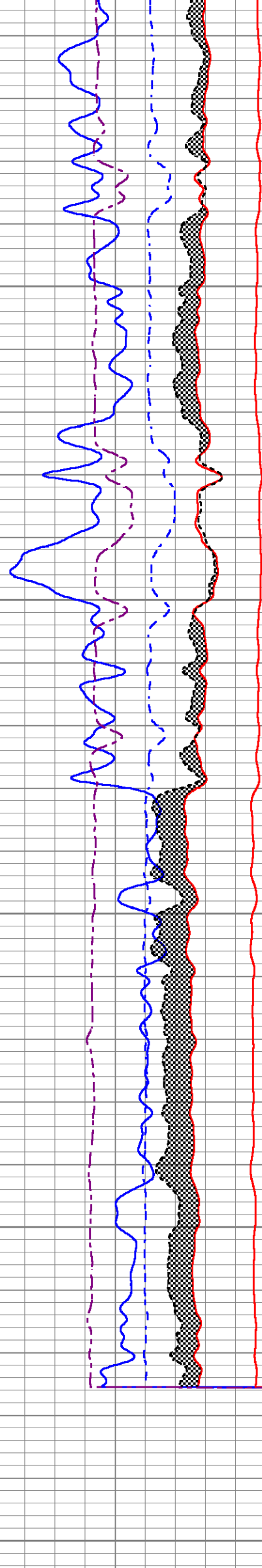
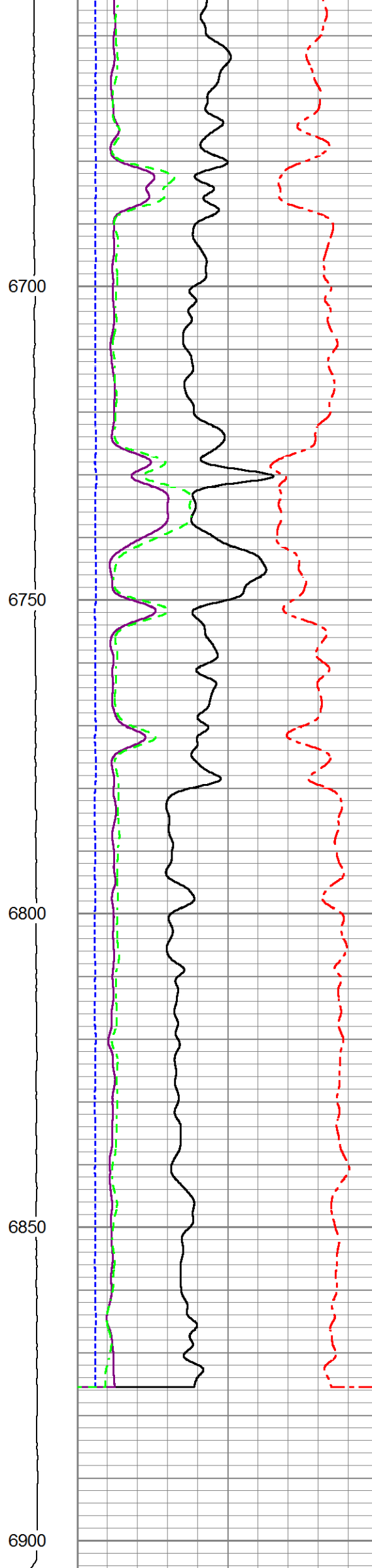
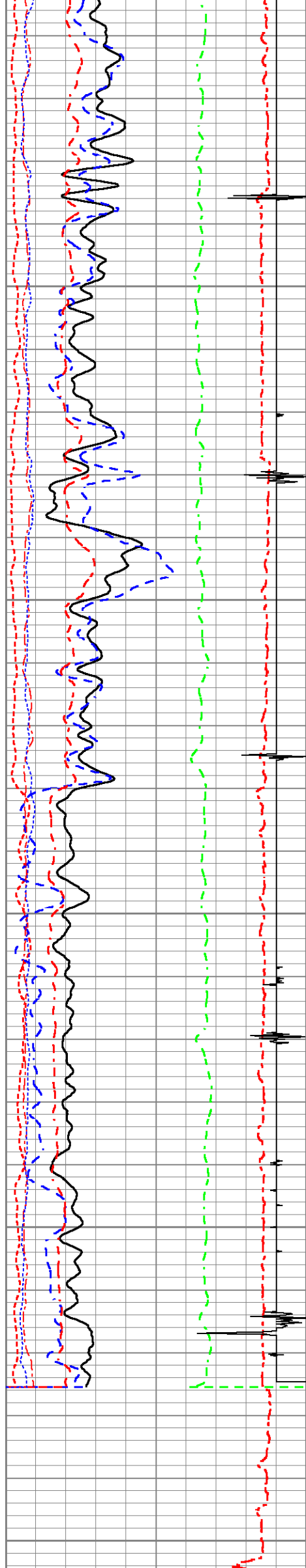












200	Rm3SGBN	0	TENSION	60	Rm3SGIN				0
0	Rm3OAI2	100		2	Rm3RNF	0.5	60000	Rm3NCAP	0
0	GR (GAPI)	200		0	Rm3RIN	15	60000	Rm3FCAP	0
-20	LSPD (ft/min)	20		0	Rm3RICF	6	100000	Rm3FSIN	0
-540	CCL	60		0	Rm3YH1	1	60000	Rm3LCAP	0
10	Rm3SGFF	40		0	Rm3YH2	1	100000	Rm3NSIN	0
0	Rm3SGFN	100							
0	Rm3CFTR1	1							
0	Rm3CFTR2	1							

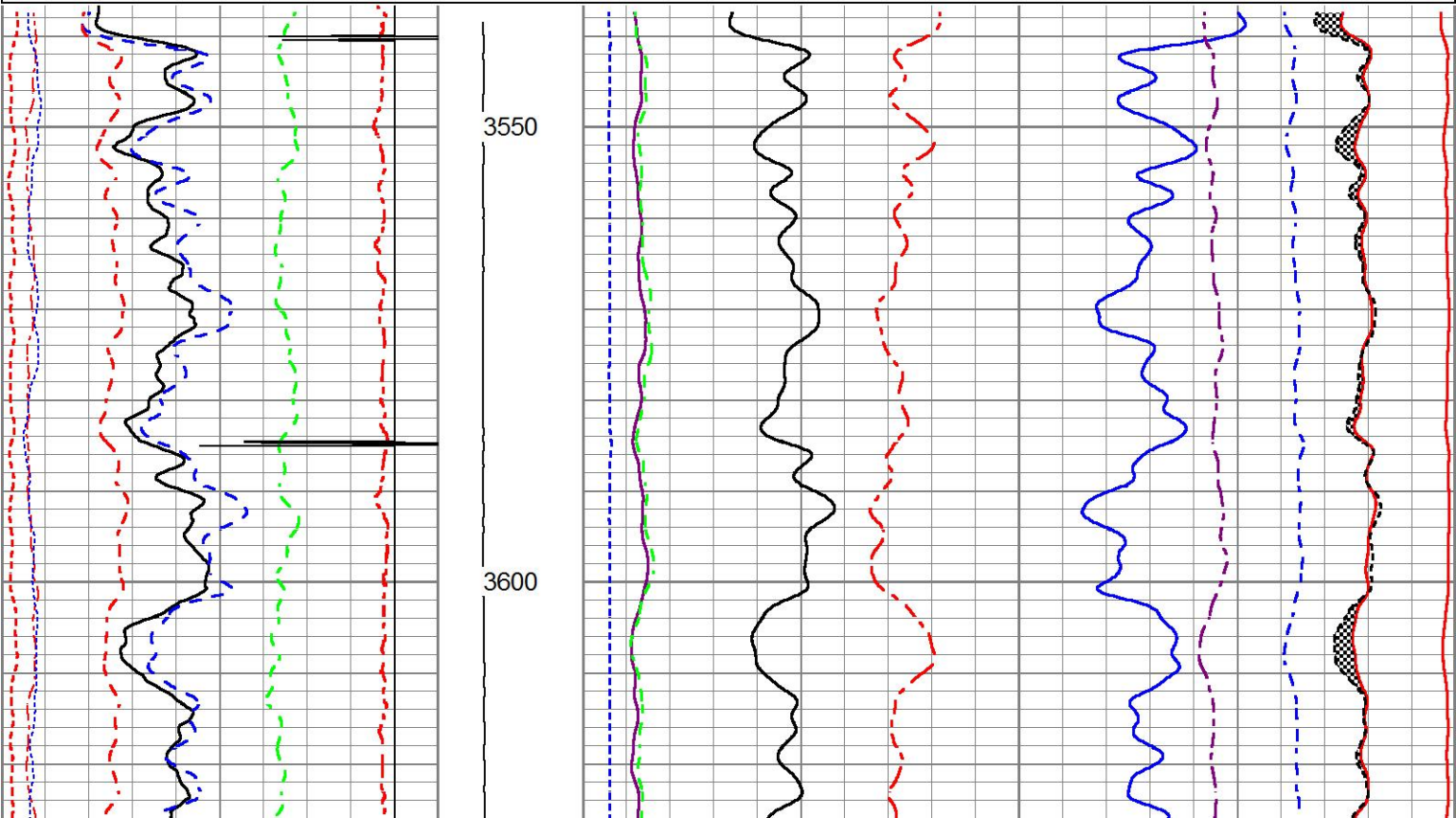
MAIN LOG SECTION

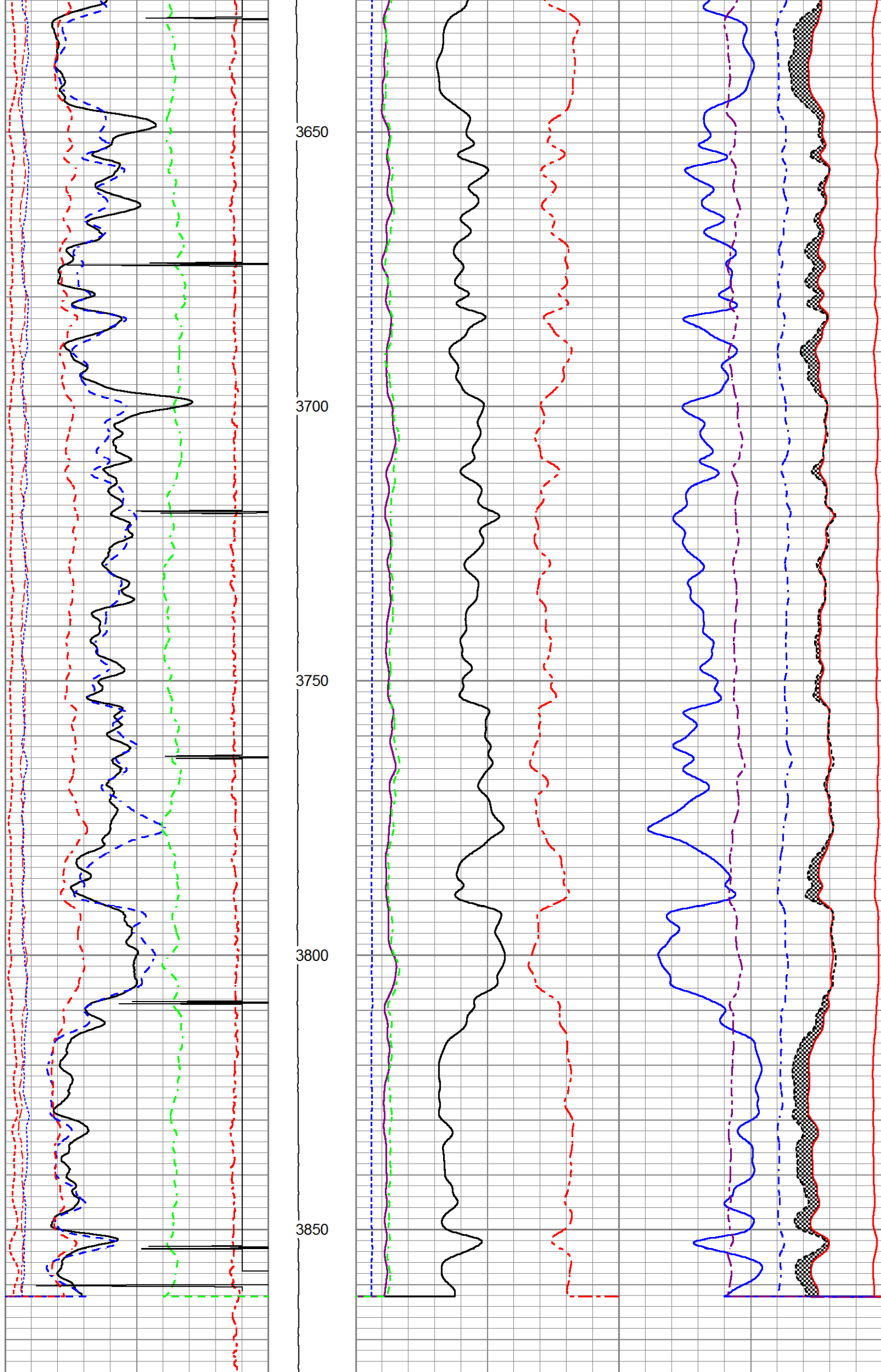
5" = 100'

HALLIBURTON		REPEAT LOG SECTION	
		5" = 100'	

Database File	yater_12c_3dcombo.db
Dataset Pathname	RMTRPT1
Presentation Format	RMT3D_~4
Dataset Creation	Sat Apr 11 18:49:58 2015
Charted by	Depth in Feet scaled 1:240

200	Rm3SGBN	0	TENSION	60	Rm3SGIN				0
0	Rm3OAI2	100		2	Rm3RNF	0.5	60000	Rm3NCAP	0
0	GR (GAPI)	200		0	Rm3RIN	15	60000	Rm3FCAP	0
-20	LSPD (ft/min)	20		0	Rm3RICF	6	100000	Rm3FSIN	0
-540	CCL	60		0	Rm3YH1	1	60000	Rm3LCAP	0
10	Rm3SGFF	40		0	Rm3YH2	1	100000	Rm3NSIN	0
0	Rm3SGFN	100							
0	Rm3CFTR1	1							
0	Rm3CFTR2	1							





Reservoir Monitor Tool I (3 Detector) Calibration Report	
Serial-Model:	12270722-A
Shop Calibration Performed:	Thu Apr 09 15:04:28 2015

Carbon/Oxygen Mode

Stabilization

Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	87.00	80.00	7.00	+/-15.00	V
ITCR2	3296	3250	46	+/-250	cps

Near Detector

	Channel	Expected Value	Amplitude	FWHM	Tol.
H	60	60 +/-2	0.0275	5.26	<6.00
Fe	206	206 +/-2	0.0969	-----	-----
NGAIN = 0.996		NZOFF = 0.5			

Far Detector

	Channel	Expected Value	Amplitude	FWHM	Tol.
H	60	60 +/-2	0.0396	5.02	<6.50
Fe	209	208 +/-2	0.0913	-----	-----
FGAIN = 0.993		FZOFF = 0.0			

Flask Temperature 64.9 degF

Result	Logged	Expected Value	Diff.	Tol.	Units
NFER	2.14	2.10	0.04	+/-0.10	
FFER	1.81	1.80	0.01	+/-0.30	
LFER	1.13	1.60	-0.47	+/-0.60	
COIR2	0.45	0.45	-0.00	+/-0.02	
LIRI2	1.64	1.64	0.00	+/-0.05	
TCCR2	5198	5000	198	+/-1000	cps
ITCR2	3265	3200	65	+/-250	cps

Sigma Mode

Stabilization

Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	86.00	80.00	6.00	+/-15.00	V
FCAP	9873	10000	-127	+/-500	cps

Horizontal Water Tank

Result	Logged	Expected Value	Diff.	Tol.	Units
NFER	2.15	2.10	0.05	+/-0.10	
FFER	1.92	1.80	0.12	+/-0.30	
LFER	2.38	1.60	0.78	+/-0.60	
N/F Normalizer	0.946	0.935	0.011		
N/L Normalizer	0.106	0.111	-0.005		
N/F Inel Norm	0.610	0.610	-0.000		
N/L Inel Norm	0.056	0.055	0.001		
RNF	1.057	1.070	-0.013	+/-0.120	
RNL	9.420	9.000	0.420	+/-1.000	
RINC	1.640	1.640	-0.000	+/-0.180	
RINCL	18.001	18.000	0.001	+/-2.000	
SGFN	24.10	24.00	0.10	+/-0.50	cu
SGFF	22.94	22.85	0.09	+/-0.50	cu
SGFL	22.01	22.00	0.01	+/-1.00	cu
FSIN	23703	24000	-297	+/-2000	cps

LSIN	2207	2400	-193	+/-500	cps
FCAP	9992	10000	-8	+/-1000	cps
LCAP	1122	1200	-78	+/-200	cps
NFTR	0.83			<5.00	
FFTR	0.87			<5.00	
LFTR	1.18			<5.00	
NBKG	186			<500	cps
FBKG	99			<500	cps
LBKG	13			<500	cps
RTN	0.419	0.400	0.019	+/-0.100	usec
RTF	0.442	0.400	0.042	+/-0.100	usec
Calibration Software Modules					
HRMT3D Module	2015.3.19.0				
RMT3D Module	2015.3.19.1				
Log Data Acquisition Software Modules					
HRMT3D Module	2015.3.19.0				
RMT3D Module	2015.3.19.1				
Cement Bond Log Shop Calibration Report					
Serial-Model:		11794522-A			
Calibration Performed:		Sat Apr 11 18:23:08 2015			
Free Pipe Calibration					
TT	Measured	Units			
	245.7	usec			
Amplitude	609.7	mV			
Log Base Line	8.4	mV			
Calibration References and Gain					
Name	Value	Units			
Pipe O.D.	4.500	in			
Pipe Weight	11.6	lb/ft			
Pipe Ref. Amp.	81.2	mV			
Amp. Gain	0.135				
Gamma Ray Calibration Report					
Type / Serial:		002 / 12159411			
SHOP CALIBRATION		Sat Apr 11 11:13:47 2015			
	Counts/Sec.	Gain	Offset	Jig	Units
Background	39.6				cps
Calibrator	328.2				cps
		1.4140			GAPI/cps
PRIMARY VERIFICATION		Sat Apr 11 11:15:49 2015			
Background	55.1				cps
Calibrator	468.8				cps
Difference				413.6	GAPI
BEFORE SURVEY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI
AFTER SURVEY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
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Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
CCL	36.04		STNDCH-STND_CH 1.4375 IN CABLE HEAD	1.50	1.44	1.00
GR	33.78					
Temp	24.06					
TT3FT	21.81					
AMP3FT	21.81					
Rm3TLGT	8.75					
Rm3LBACK	8.75					
Rm3LCAPT	8.75		TTTCU-002 (12159411) Through Tubing Telemetry Cartridge - Ultrawire	7.65	1.69	100.00
Rm3LINEL	8.75					
Rm3TFGT	8.25					
Rm3FBACK	8.25					
Rm3FCAPT	8.25					
Rm3FINEL	8.25					
Rm3TNGT	7.75					
Rm3NBACK	7.75		XHU-003 (11899561) Crossover Halliburton 1553 to Ultrawire	1.58	1.69	7.00
Rm3NCAPT	7.75					
Rm3NINEL	7.75		CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
Rm3ImpBTEST	0.00					
Rm3ImpBCYC	0.00					
Rm3ImpBRGW	0.00					
Rm3ImpBRGO	0.00					
Rm3ImpState	0.00					
Rm3ImpPhase	0.00					
Rm3ImpCyc	0.00					
Rm3GenClampV	0.00					
Rm3LTemp	0.00		HCBLM-A (11794522) Halliburton HCBLM Tool	9.38	2.75	116.00
Rm3LPMHV	0.00					
Rm3LPMI	0.00					
Rm3LPrgSt1	0.00					
Rm3LDetStat	0.00					
Rm3FTemp	0.00					
Rm3FPMHV	0.00					
Rm3FPMI	0.00					
Rm3FPrgSt1	0.00		CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
Rm3FDetStat	0.00					
Rm3NTemp	0.00					
Rm3NPMHV	0.00					
Rm3NPMI	0.00					
Rm3NPrgSt1	0.00					
Rm3NDetStat	0.00					
Rm3GenIonI	0.00					
Rm3Gen15BusV	0.00					
Rm3GenLvdsV	0.00					
Rm3GenSyncV	0.00					
Rm3GenClampV	0.00					
Rm3GenP5V	0.00		RMT3D-A (12270722) RMT3D - 3 Detector RMT-I	15.17	2.13	86.00
Rm3GenP33V	0.00					
Rm3Gen200V	0.00					
Rm3GenP15VI	0.00					
Rm3GenTemp	0.00					
Rm3GenP5VI	0.00					
Rm3GenI	0.00					
Rm3GenPv	0.00					
Rm3GenCmd	0.00					
Rm3GenIspl	0.00					
Rm3GenIsplPv	0.00					
Rm3GenIsplCmc	0.00					
Rm3GenRepPv	0.00	Dataset: yater_12c_3dcombo.db: field/well/run1/MAIN1 Total length: 39.61 ft Total weight: 360.00 lb O.D.: 3.13 in				
Rm3GenRepV	0.00					
Rm3GenRepSv	0.00					
Rm3GenContSt	0.00					

Company	URSA OPERATING COMPANY		
Well	YATER 12C-17-07-95		
Field	PARACHUTE		
County	GARFIELD	State	CO
HALLIBURTON		RESERVOIR MONITOR TOOL - ELITE	