

HALLIBURTON

RESERVOIR MONITOR
TOOL-ELITE

Company		URSA OPERATING COMPANY	
Well	YATER 12D-17-07-95		
Field	PARACHUTE		
County	GARFIELD	State	CO
Company		URSA OPERATING COMPANY	
Well	YATER 12D-17-07-95		
Field	PARACHUTE		
County	GARFIELD	State	CO
API No.:	05-045-22761-0000	Serv #:	902306456
Location:		SURFACE HOLE LOCATION: 1742' FSL AND 1107' FWL	
Location:		SURFACE HOLE LOCATION: 1742' FSL AND 1107' FWL	
BOTTOM HOLE LOCATION: 2371' FNL AND 0660' FWL		CBL GAUGE RING	
Sec: 17 Twp: 07S Rge: 95W			
Permanent Datum		GROUND LEVEL Elevation 5519'	
Log Measured From	KB		K.B. 5536'
Drilling Measured From	KB		D.F. 5535'
		G.L. 5519'	
Date @ Time Logged	11 APR 2015	Type Fluid in Hole	WATER
Run No.	ONE	Density of Fluid	8.4 #
Depth - Driller	6856'	Fluid Level	72'
Depth - Logger	6798'	Cement Top Est. Logged	1550'
Bottom - Logged Interval	6798'	Equipment / Location	10971668 / G.J.
Top - Log Interval	3440'	Recorded by	D. SOLIS
Max. Recorded Temp.	235 DEG F	Witnessed by	UNATTENDED
CEMENTING DATA		Surface	Protection
	String	String	String
	N/A	N/A	N/A
Date / Time Cemented	N/A		N/A
Primary / Squeeze			
Expected Compressive Strength	psi@ hrs	psi@ hrs	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	1742'
TWO	7.875"	1742'	6856'
		Size	Weight
		8.625"	32.0#
		4.5"	11.6#
		From	To
		SURFACE	1742'
		SURFACE	6846'

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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

CORRELATED TO HES DENSITY-NEUTRON-RESISTIVITY LOG DATED 18-MAR-15.

GR-CBL-RMT RAN IN COMBINATION.

LOG INTERVALS AS PER CUSTOMER REQUEST.

SHORT JOINTS @: 4250' - 4260', 5277' - 5287', AND 6307' - 6317'.

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES.

Service Ticket No.	902306456	API No.	05-045-22761-0000	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.	FROM	TO	Pressure	TEMP				
ONE	6798'	3440'	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	700'		

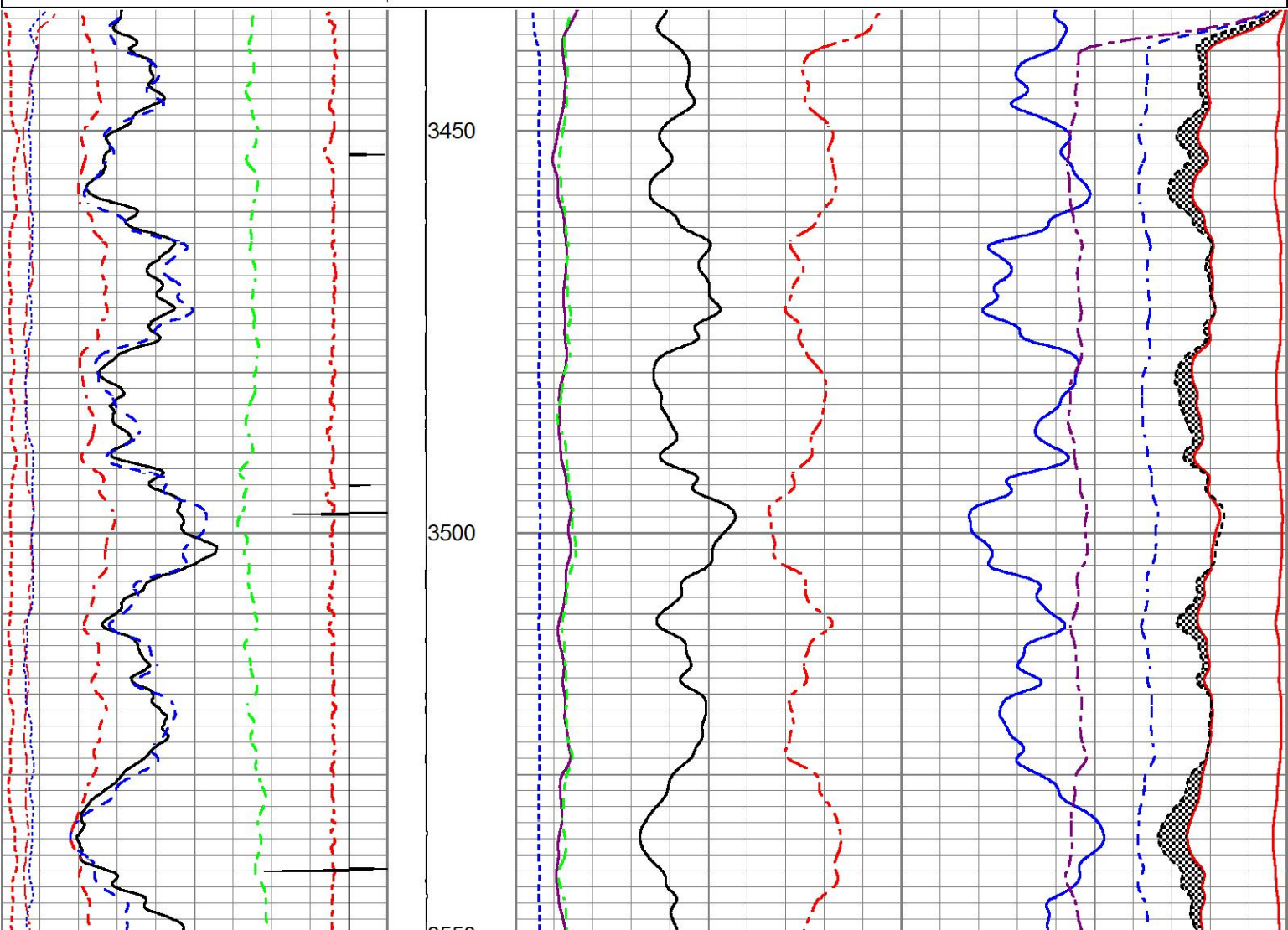
HALLIBURTON

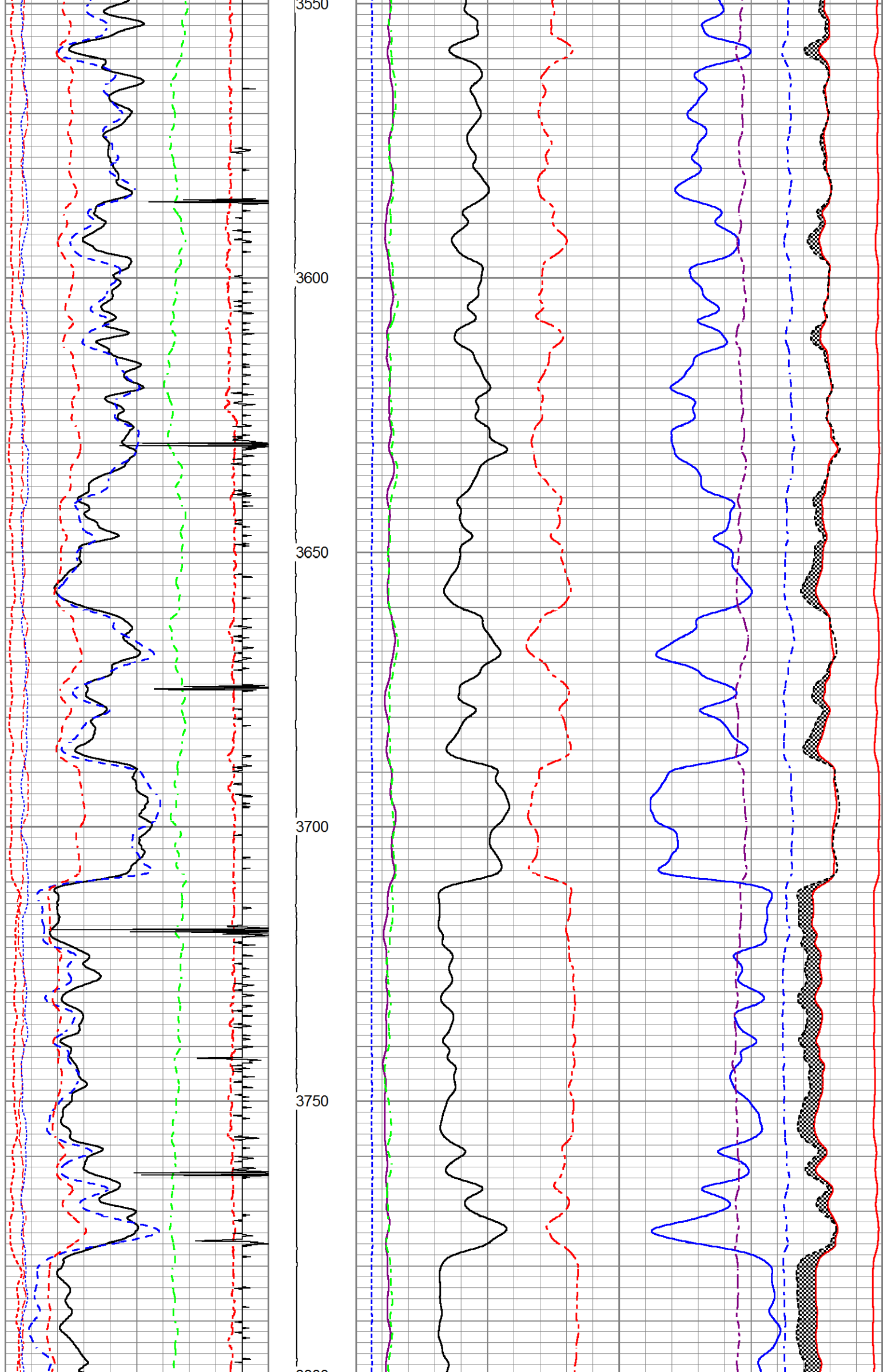
MAIN LOG SECTION

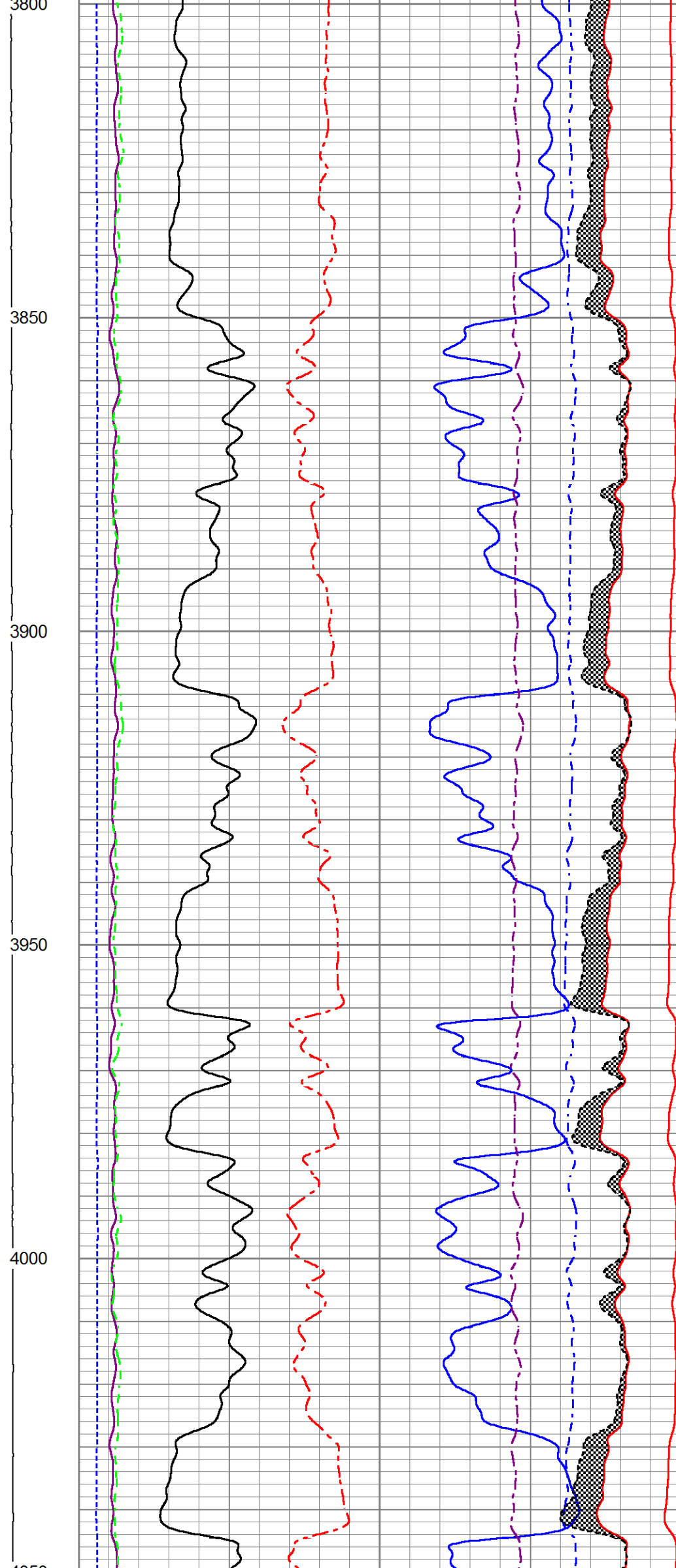
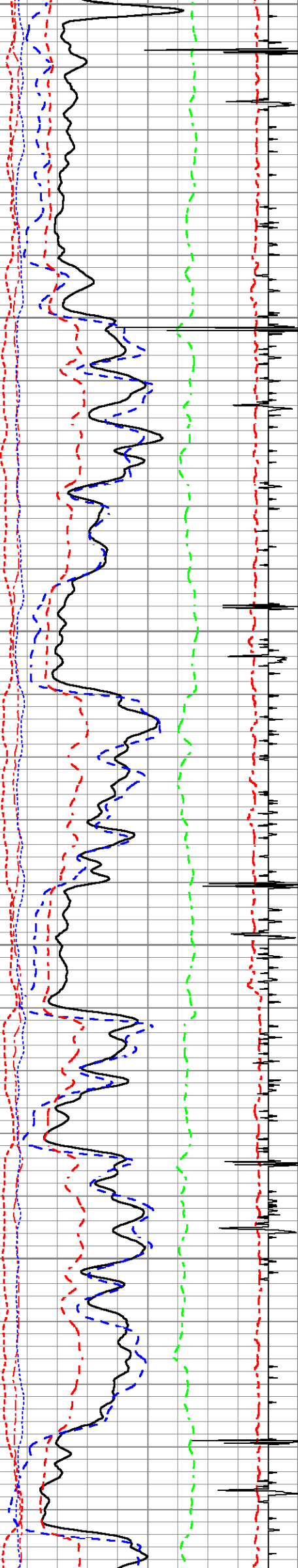
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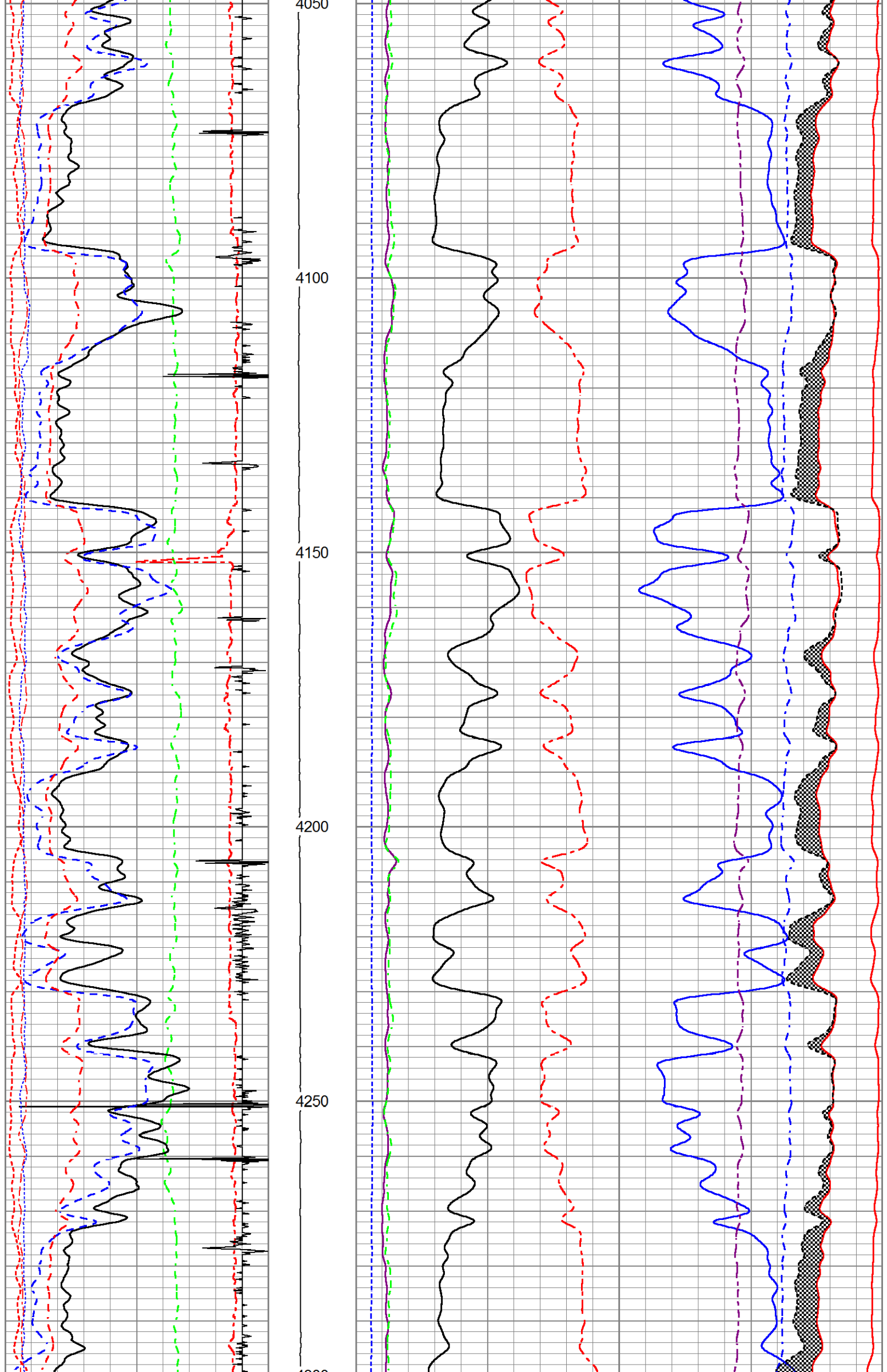
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Dataset Pathname	MAIN1
Presentation Format	RMT3D_~4
Dataset Creation	Sat Apr 11 13:02:49 2015
Charted by	Depth in Feet scaled 1:240

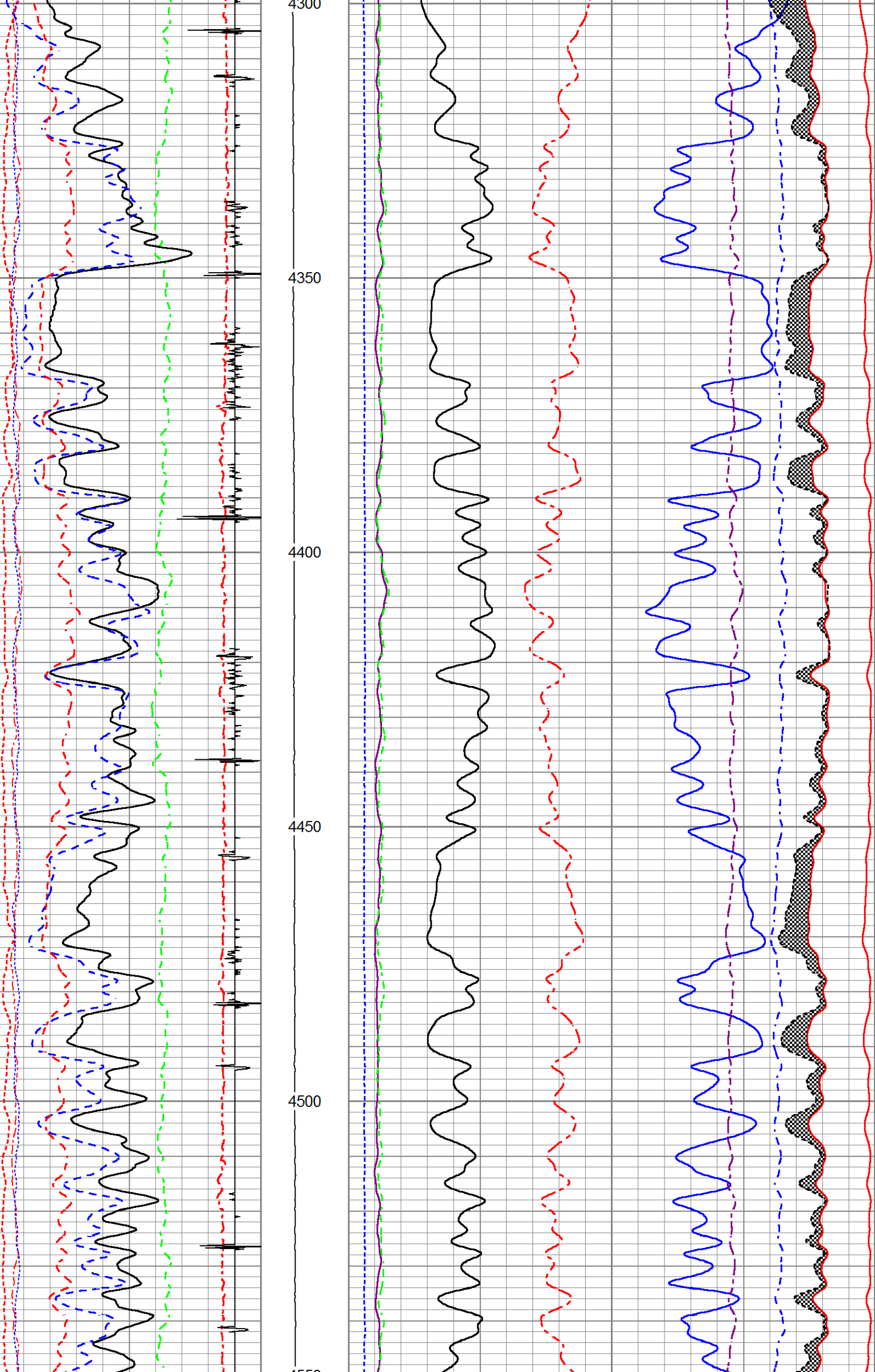
200	Rm3SGBN	0	TENSION	60	Rm3SGIN				0
0	Rm3OAI2	100		2	Rm3RNF	0.5	60000	Rm3NCAP	0
0	GR (GAPI)	200		0	Rm3RIN	15	60000	Rm3FCAP	0
-20	LSPD (ft/min)	20		0	Rm3RICF	6	100000	Rm3FSIN	0
-540	CCL	60		0	Rm3YH1	1	60000	Rm3LCAP	0
10	Rm3SGFF	40		0	Rm3YH2	1	100000	Rm3NSIN	0
0	Rm3SGFN	100							
0	Rm3CFTR1	1						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

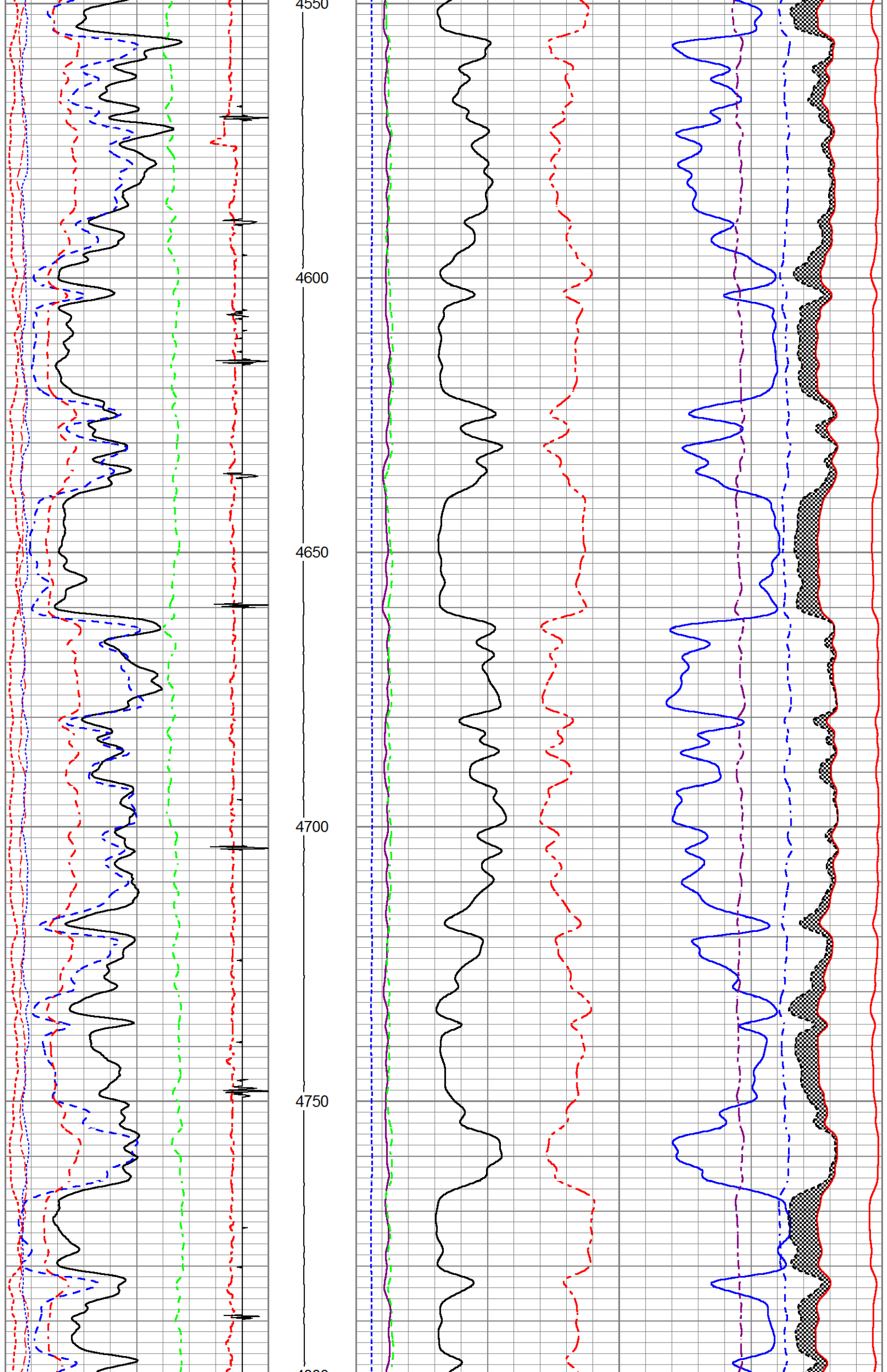


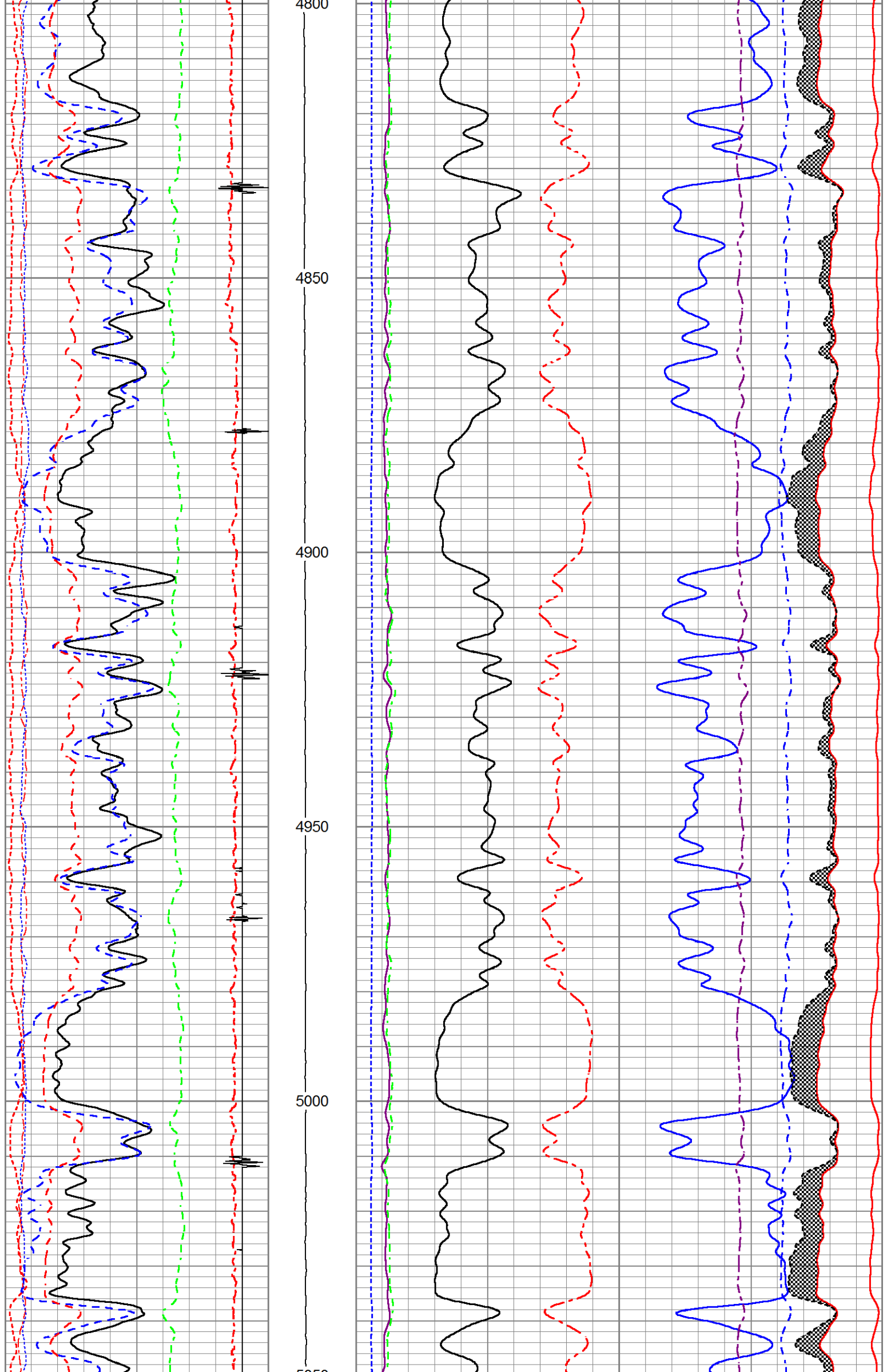


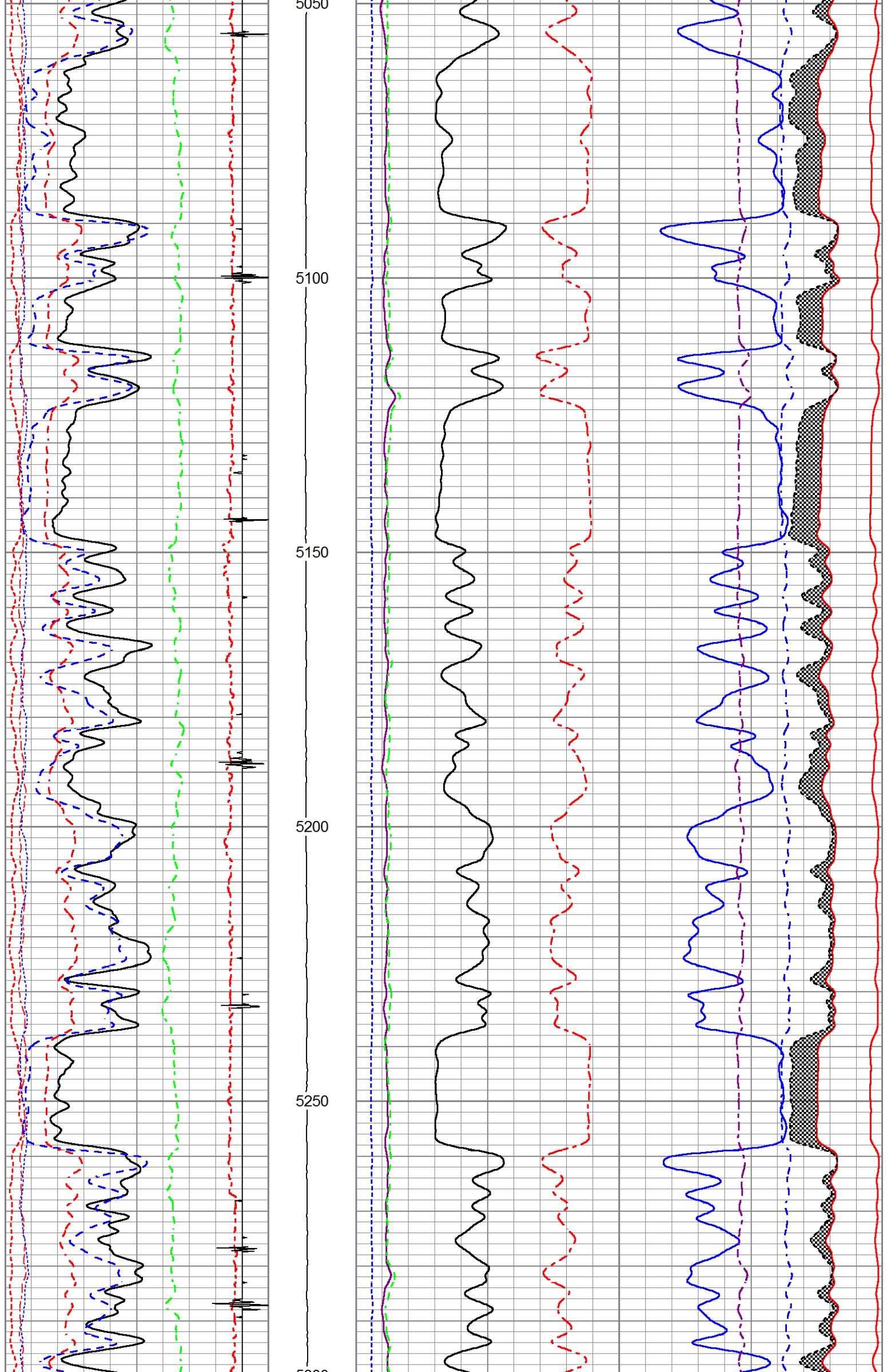


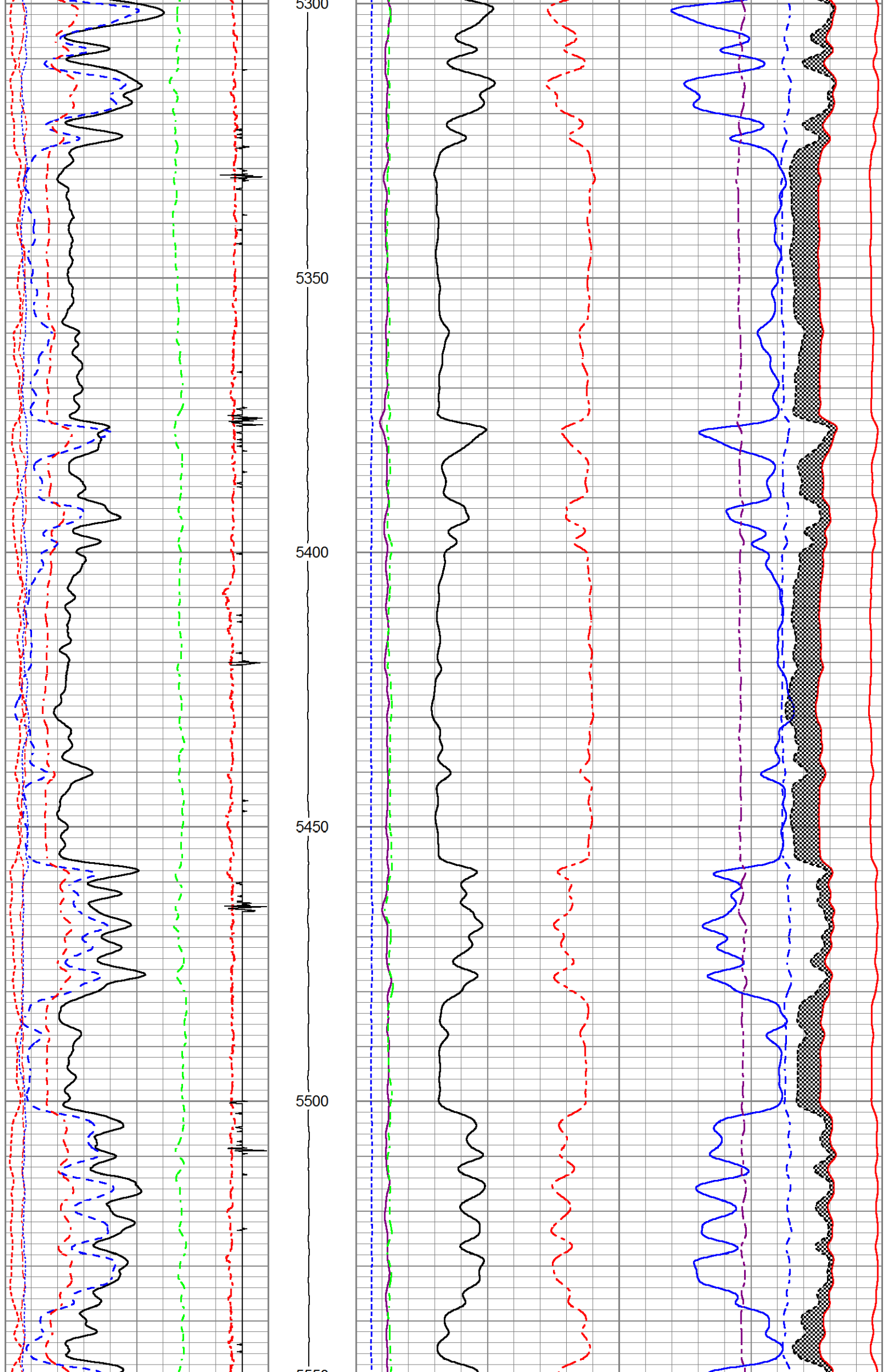


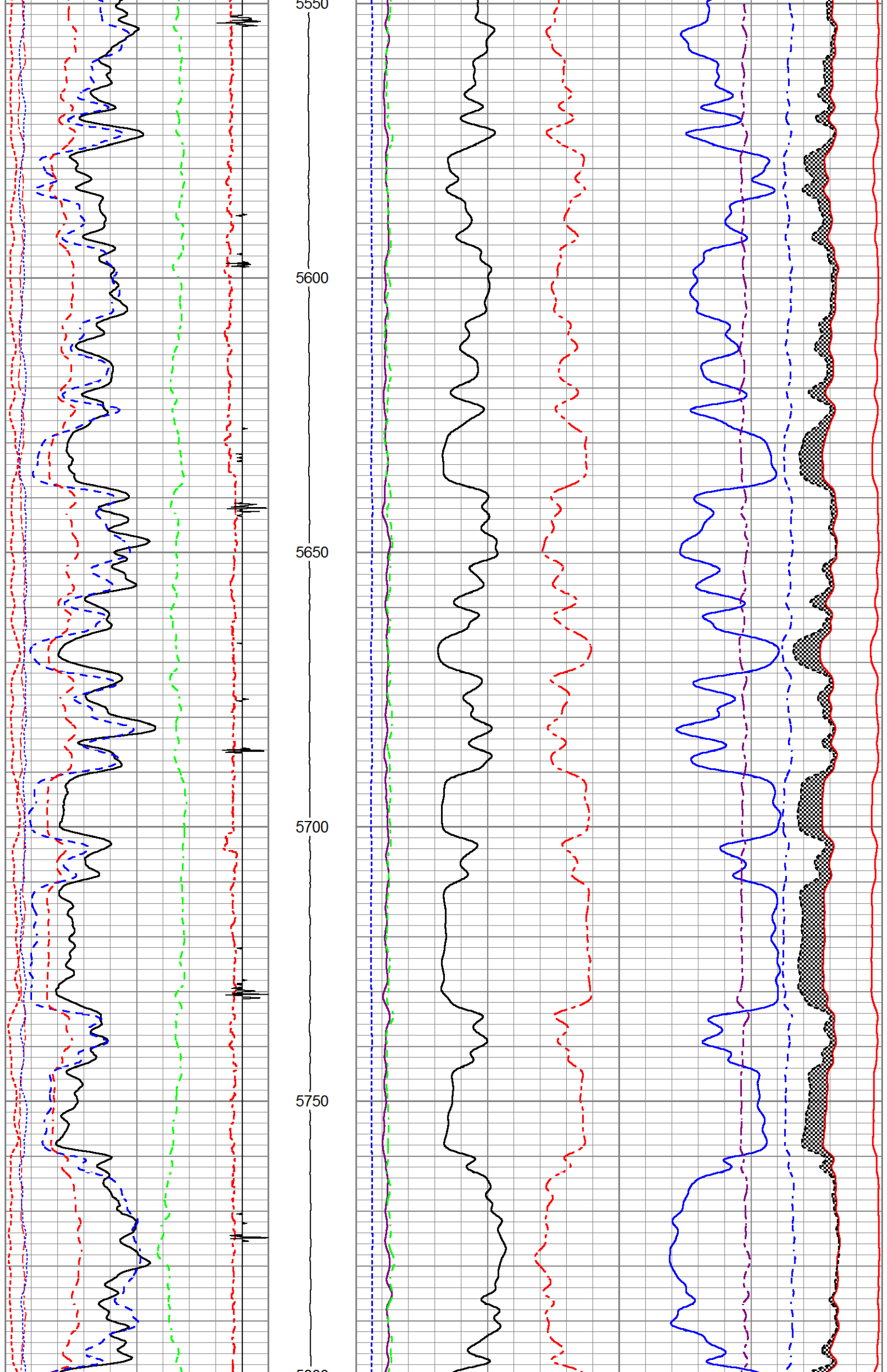


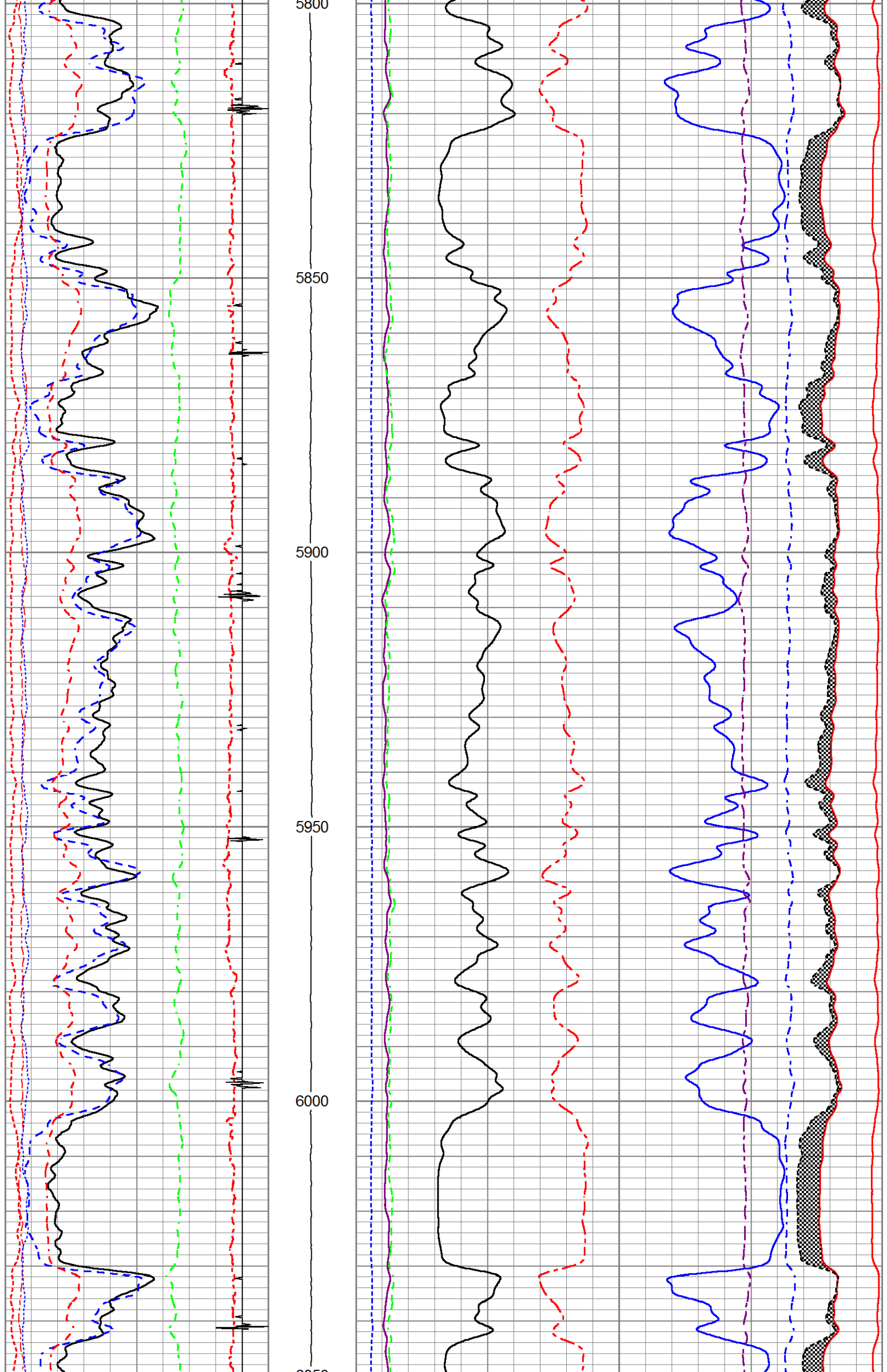


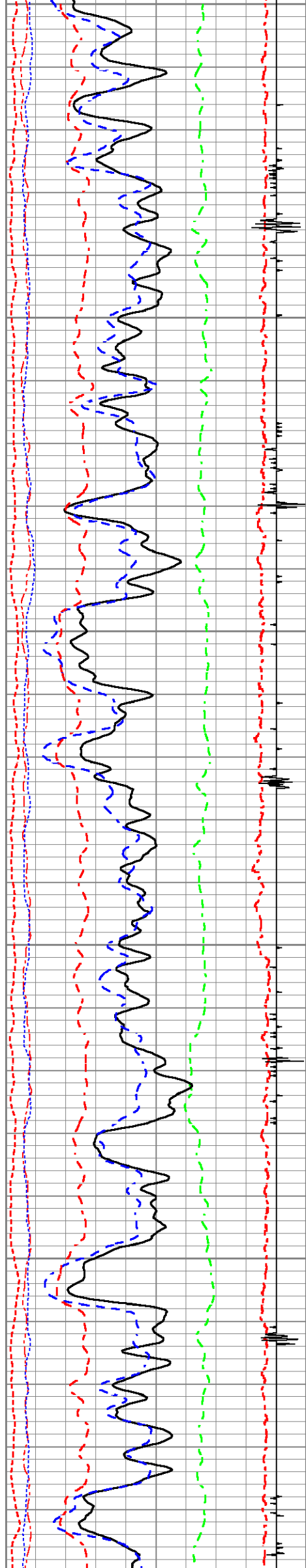




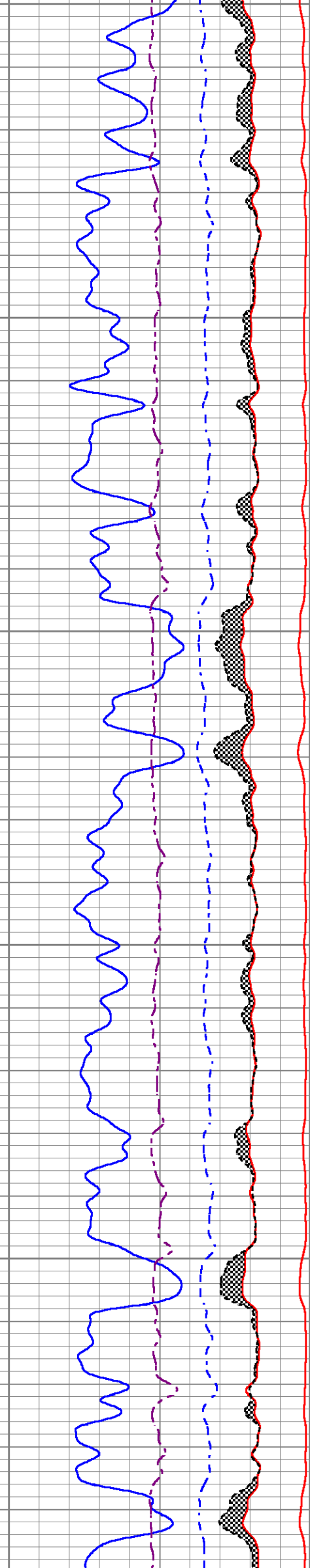
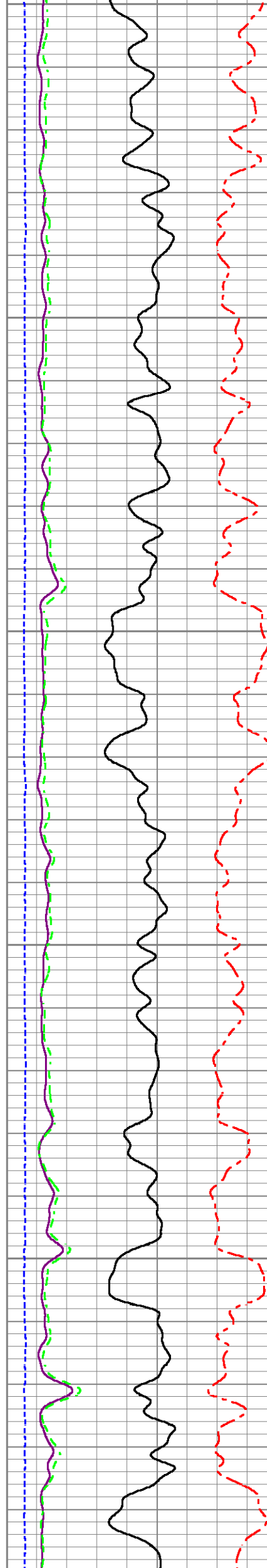


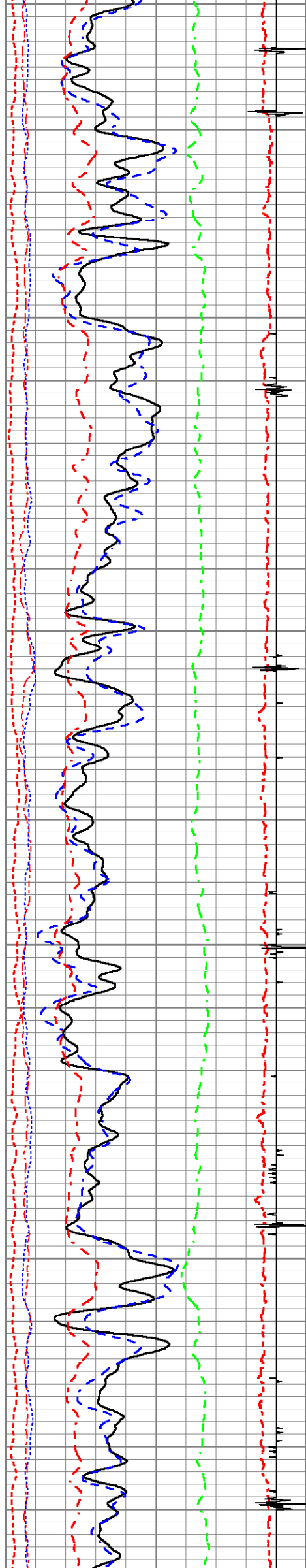




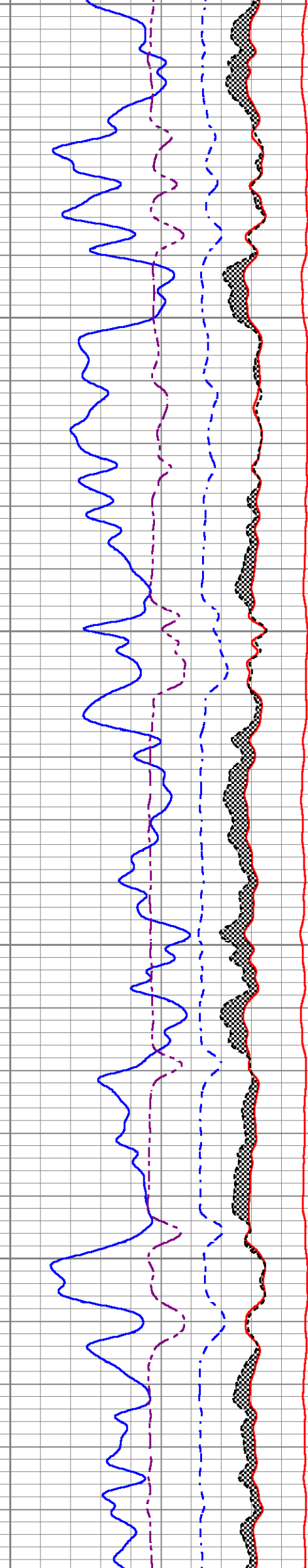


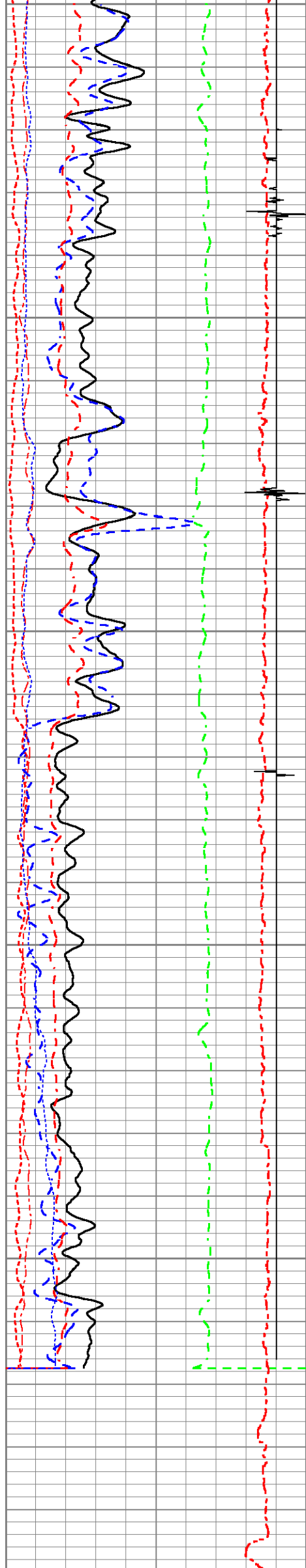
6050 6100 6150 6200 6250



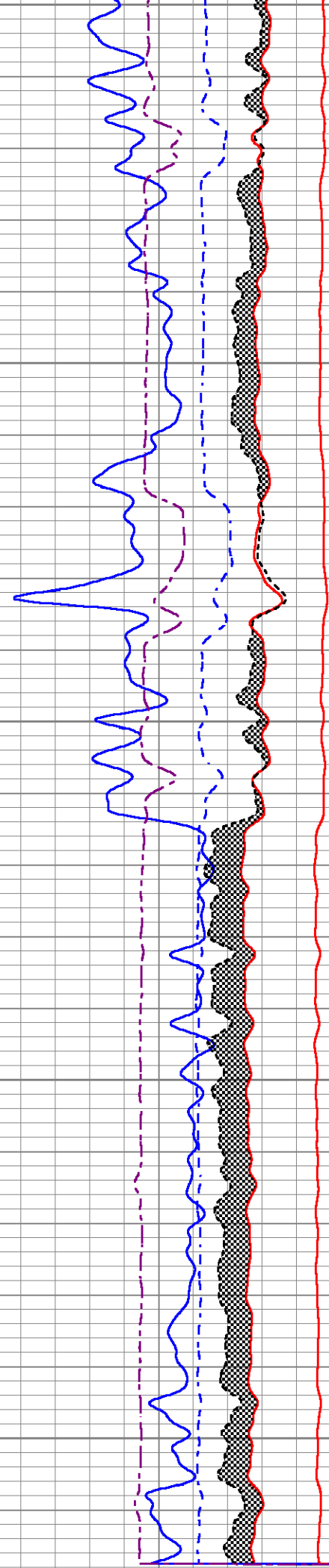
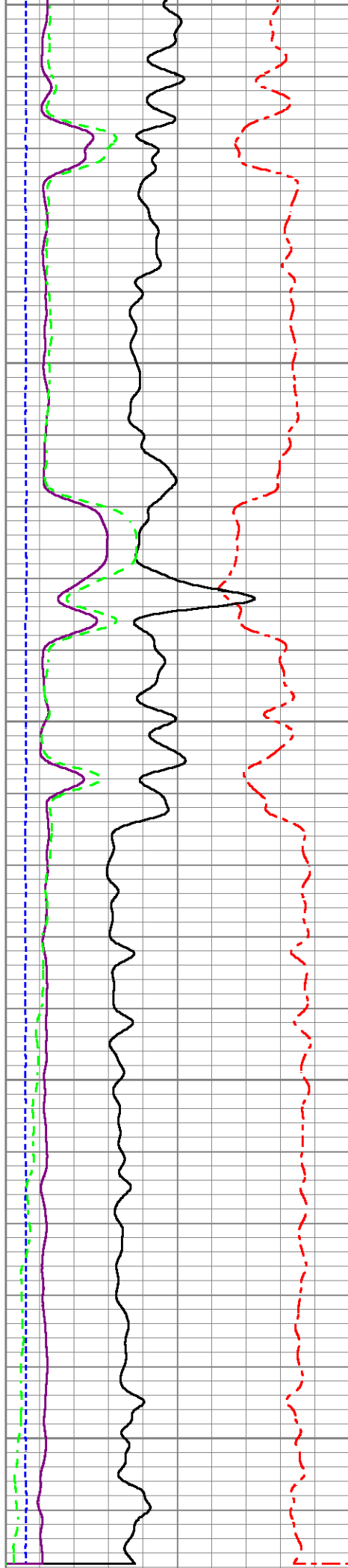


6300
6350
6400
6450
6500
6550





6530 6600 6650 6700 6750



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'

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REPEAT LOG SECTION

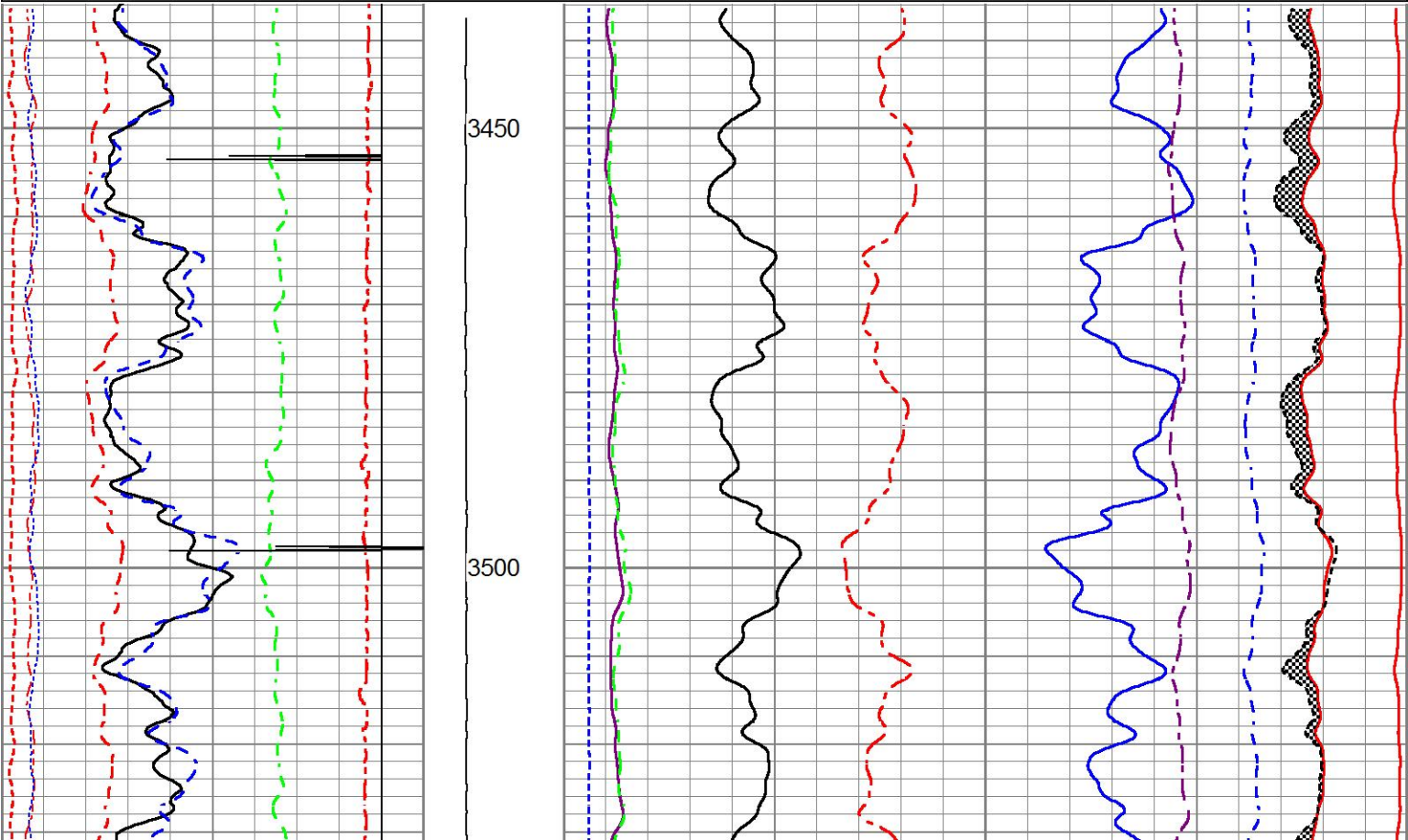
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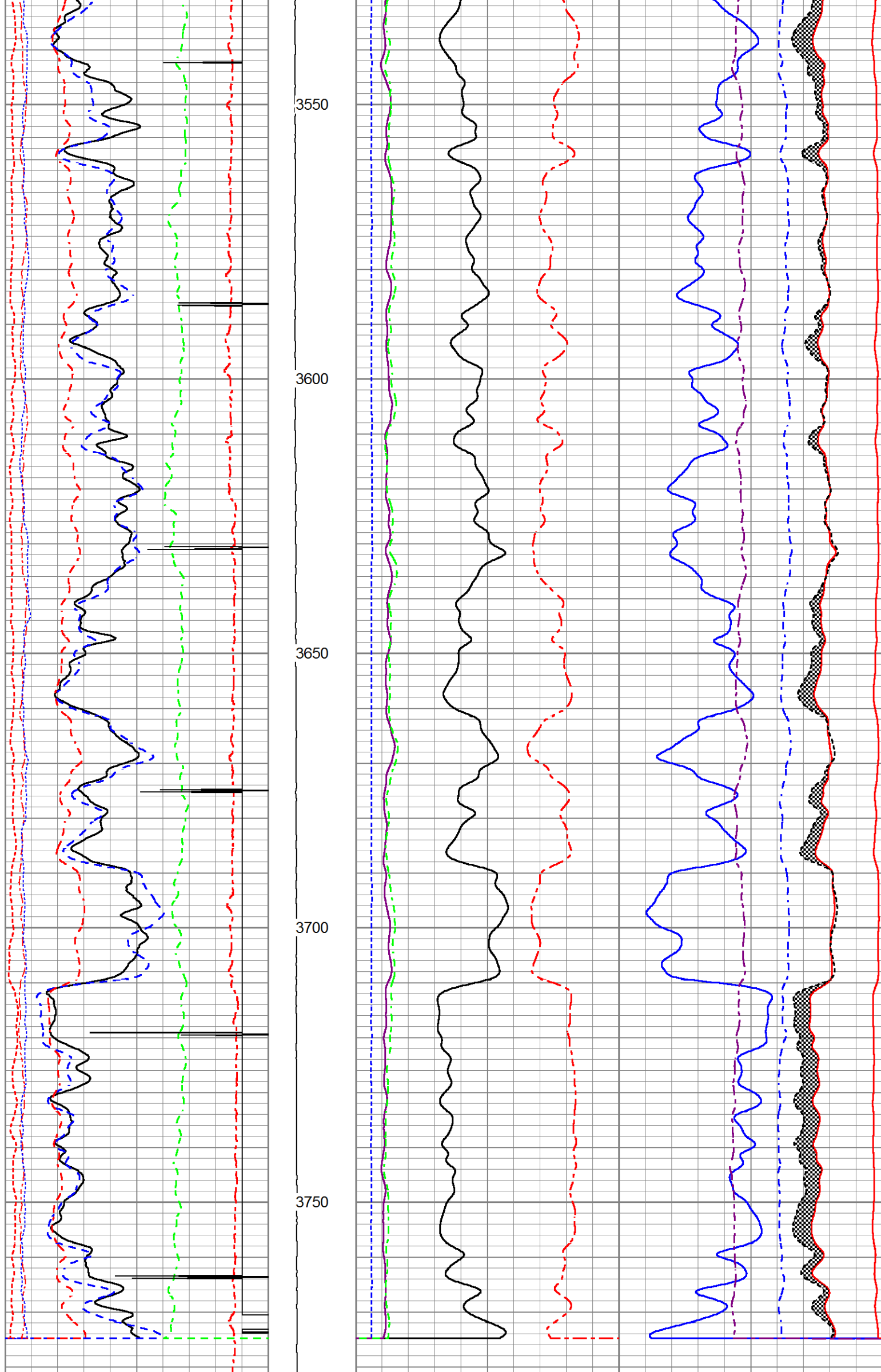
HALLIBURTON

Database File
Dataset Pathname
Presentation Format
Dataset Creation
Charted by

yater_12d_3dcombo.db
RMTRPT1
RMT3D_~4
Sat Apr 11 12:05:27 2015
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							





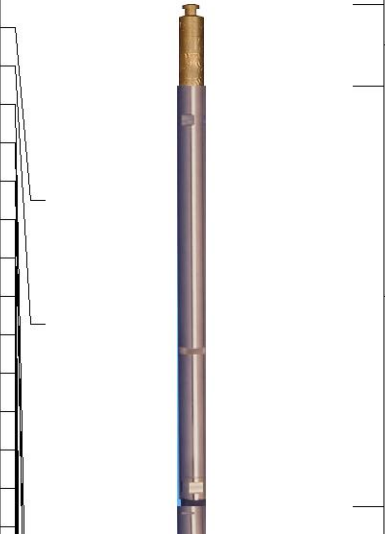
			3800						
200	Rm3SGBN	0		TENSION	60	Rm3SGIN			
0	Rm3OAI2	100		2	Rm3RNF	0.5	60000	Rm3NCAP	0
0	GR (GAPI)	200		0	Rm3RIN	15	60000	Rm3FCAP	0
-20	LSPD (ft/min)	20		0	Rm3RICF	6	100000	Rm3FSIN	0
-540	CCL	60		0	Rm3YH1	1	60000	Rm3LCAP	0
10	Rm3SGFF	40		0	Rm3YH2	1	100000	Rm3NSIN	0
0	Rm3SGFN	100							
0	Rm3CFTR1	1							
0	Rm3CFTR2	1							
REPEAT LOG SECTION									
HALLIBURTON									
5" = 100'									

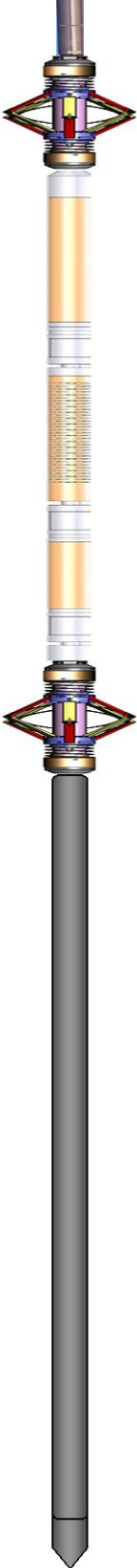
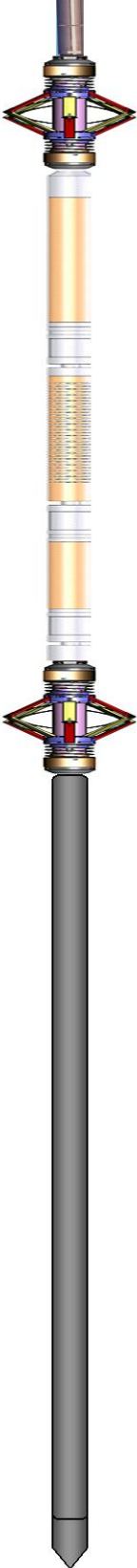
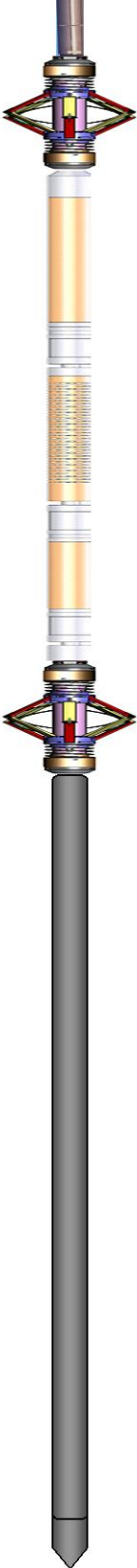
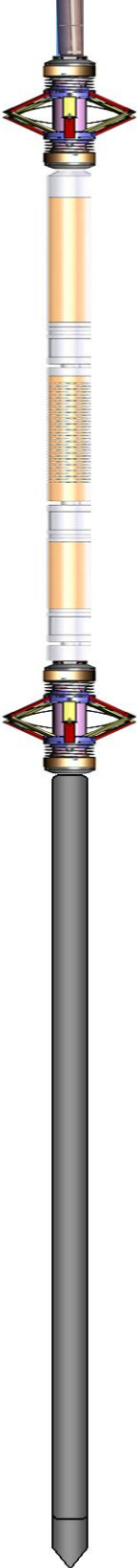
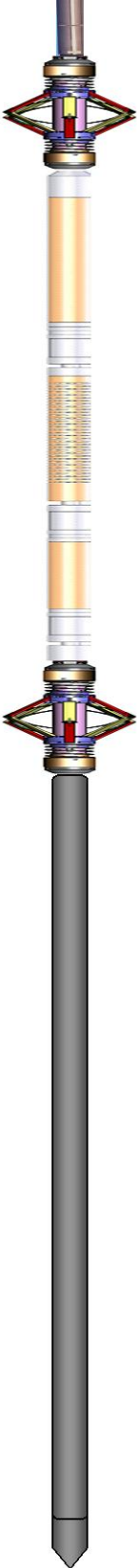
Log Variables							
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Dataset field/well/run1/MAIN1/_vars_							
Top - Bottom							
BHTEMP_Src	BHSAL2	BHSAL1	RUN3D?	POROSL2	POROSL1	POROS2	POROS1
TEMP	0	1	Yes	0	1	0	1
LTH	UHSGC	RHOCFL	RHO CF	SO in	BORSAL kppm	CASED?	MSGGN
Sandstone	NONE	0.15	0.25	0	150	Yes	1
USERFTT usec/ft	ZREF MRayl	CASEWGHT lb/ft	SRFTEMP degF	MudWgt lb/gal	CASETHCK in	CASEOD in	PERFS
0	1.7	11.6	0	8.4	0.25	4.5	0
TDEPTH ft	BOTTEMP degF	BITSIZE in					
0	100	7.875					

Database File		yater_12d_3dcombo.db		Calibration Report	
Dataset Pathname		MAIN1			
Dataset Creation		Sat Apr 11 13:02:49 2015			
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					
H	Channel 60	Expected Value 60 +/-2	Amplitude 0.0275	FWHM 5.26	Tol. <6.00
Fe	206	206 +/-2	0.0969	-----	-----
NGAIN = 0.996	NZOFF = 0.5				
Far Detector					
H	Channel 60	Expected Value 60 +/-2	Amplitude 0.0396	FWHM 5.02	Tol. <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 11:37:02 2015				
Free Pipe Calibration						
TT	Measured	246.4	Units	usec		
Amplitude		472.3		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	0.175					
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)
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					
Rm3GenClamp\0.00			HCBLM-A (11794522) Halliburton HCBLM Tool	9.38	2.75	116.00
Rm3LTemp	0.00					
Rm3LPMHV	0.00					
Rm3LPMI	0.00					
Rm3LPrgSt1	0.00					
Rm3LDetStat	0.00					
Rm3FTemp	0.00					
Rm3FPMHV	0.00					
Rm3FPMI	0.00		CENT-CASTM-CENT CAST M INLINE CENTRALIZER	2.16	3.13	25.00
Rm3FPrgSt1	0.00					
Rm3FDetStat	0.00					
Rm3NTemp	0.00					
Rm3NPMHV	0.00					
Rm3NPMI	0.00					
Rm3NPrGSt1	0.00					
Rm3NDetStat	0.00					
Rm3Genlonl	0.00					
Rm3Gen15Bus\0.00						
Rm3GenLvdsV	0.00					
Rm3GenSyncV	0.00					
Rm3GenClamp\0.00			RMT3D-A (12270722) RMT3D - 3 Detector RMT-I	15.17	2.13	86.00
Rm3GenP5V	0.00					
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					
Rm3GenIsPv	0.00					
Rm3GenIsPcmc	0.00					
Rm3GenRepPv	0.00					
Rm3GenRepV	0.00	Dataset: yater_12d_3dcombo.db: field/well/run1/MAIN1				
Rm3GenRepSv	0.00	Total length: 39.61 ft				
Rm3GenContSt	0.00	Total weight: 360.00 lb				
		O.D.: 3.13 in				

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