

HALLIBURTON

RESERVOIR
MONITORING
TOOL - ELITE

Company	URSA OPERATING COMPANY		
Well	YATER 43C-18-07-95		
Field	PARACHUTE		
County	Garfield	State	CO
Company URSA OPERATING COMPANY			
Well YATER 43C-18-07-95			
Field PARACHUTE			
County GARFIELD State CO			
API No.: 05045227500000		Serv #: 902306491	
Location: SHL: 1692 FSL & 1107 FWL		Other Services	
Sec: 17 Twp: 7S Rge: 95W		JUNK BASKET CBL-M	

Permanent Datum	GROUND LEVEL				Elevation	5519	Elevation	
Log Measured From	KB , 17 Ft. above perm. datum						K.B. 5536	
Drilling Measured From	KB						D.F. 5536	
							G.L. 5519	
Date @ Time Logged	04/11/2015 @ 22:00				Type Fluid in Hole	FRESH WATER		
Run No.	ONE				Density of Fluid	8.4#		
Depth - Driller	7035				Fluid Level	52		
Depth - Logger	6801				Cement Top Est. Logged	SEE LOG		
Bottom - Logged Interval	6768				Equipment / Location	11072147 / BRIGHTON		
Top - Log Interval	3540				Recorded by	J. SCHMIDT		
Max. Recorded Temp.	234 F				Witnessed by	J. CORNETT		
CEMENTING DATA	Surface		Protection		Production		Liner	
	String		String		String			
Date / Time Cemented								
Primary / Squeeze								
Expected								
Compressive Strength	psi@	hrs	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	Size	Weight	From	To	
CONDUCTOR	24	0	60	16		0	60	
SURFACE	12.25	60	1817	8.625		0	1817	
PRODUCTION	7.875	1817	7035	4.5	11.6	0	6869	

<<< Fold Here >>>

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

TOOLS WERE RAN IN 4.5" 11.6# CASING.

RMT3D-A RAN IN SIGMA MODE WITH A GENERATOR VOLTAGE OF 80.

YOUR CREW: L. SIMONS & M. MEYER

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES.

Service Ticket No. 902306491

API No. 05045227500000

PGM Ver WARRIOR 8

The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client

EQUIPMENT DATA

GAMMA							
Run No.	ONE	Run No.	ONE	Run No.	ONE	Run No.	
Serial No.	12105787	Serial No.	12386763	Serial No.	12210524	Serial No.	
Model No.	TTTCU-002	Model No.	CBL-M	Model No.	RMT3D-A	Model No.	
Diameter	1.69"	Diameter	2.75"	Diameter	2.125"	Diameter	

LOGGING DATA

General Data

Pass	Depths		Well Head	Speed	Logging Run Comments		
No.	From	To	Pressure	Ft/Min			
MAIN	TD	SURFACE	0 psi	15 fpm			

	GAMMA		CBL		RMT3D			
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
	0	200	0	100	60	0		

DIRECTIONAL INFORMATION

Maximum Deviation		deg. @		KOP		
-------------------	--	--------	--	-----	--	--

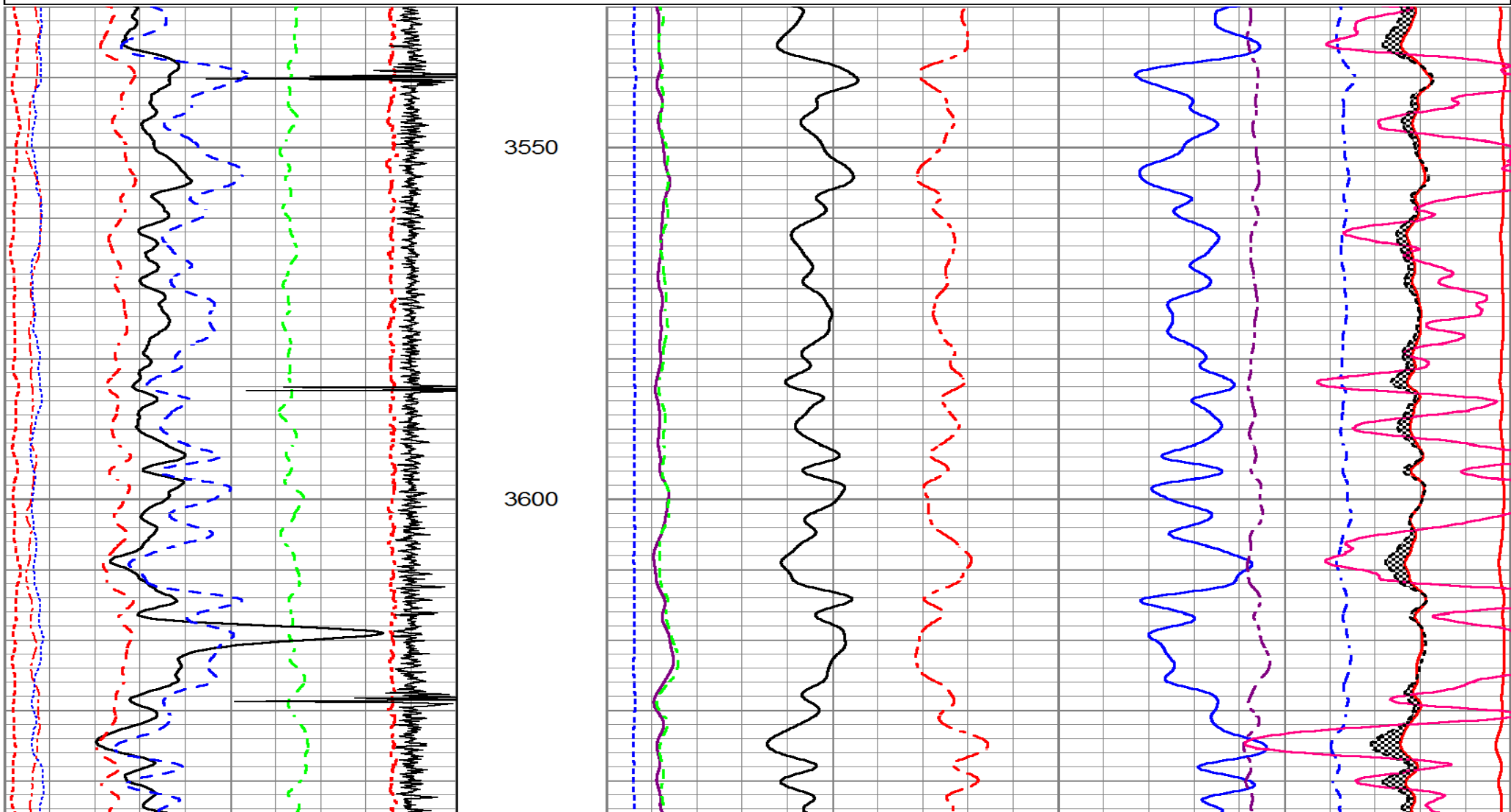
MAIN PASS

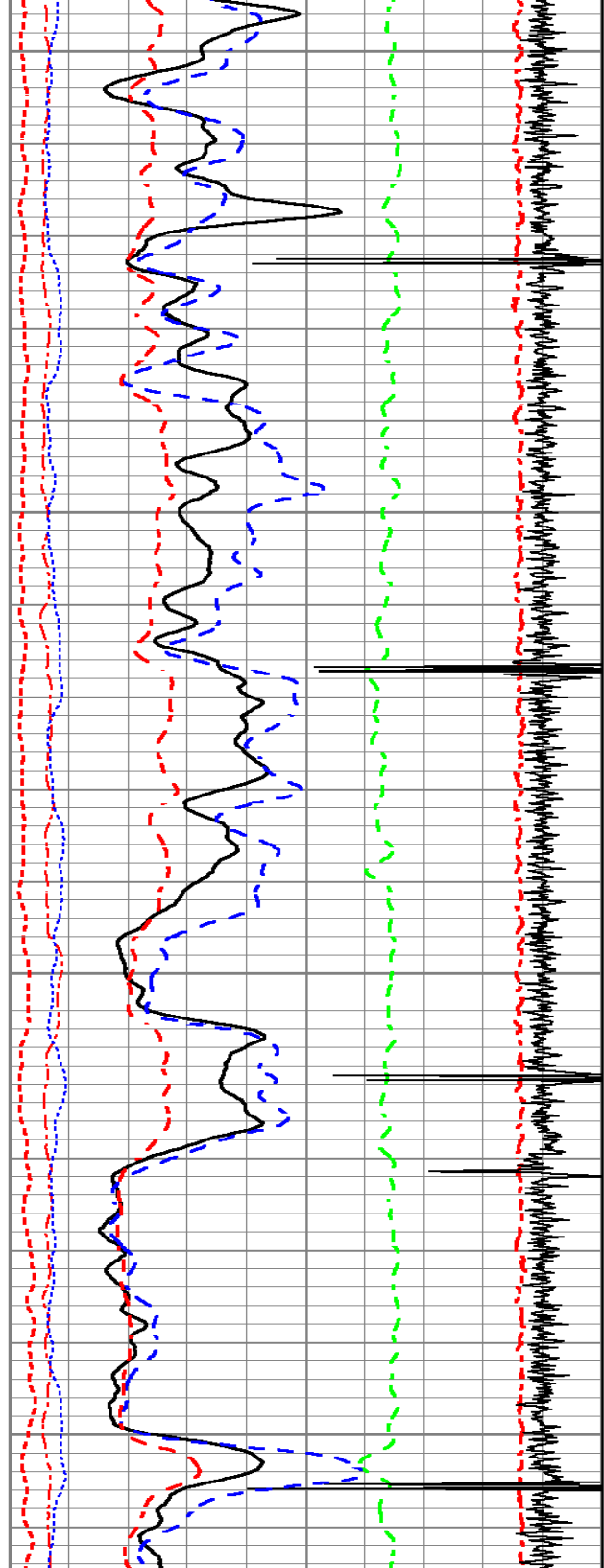
HALLIBURTON

5" = 100'

Database File yater_43c_2.db
Dataset Pathname TEST2
Presentation Format 1-URSA-2

200	Rm3SGBN	0	TENSION	60	Rm3SGIN				0
0	Rm3OAI2	100		0	Rm3SATG ()				1
0	GR (GAPI)	200		2	Rm3RNF	0.5	60000	Rm3NCAP	0
-20	LSPD (ft/min)	20		0	Rm3RIN	15	60000	Rm3FCAP	0
-540	CCL	60		0	Rm3RICF	6	100000	Rm3FSIN	0
10	Rm3SGFF	40		0	Rm3YH1	1	60000	Rm3LCAP	0
0	Rm3SGFN	100		0	Rm3YH2	1	100000	Rm3NSIN	0
0	Rm3CFTR1	1							
0	Rm3CFTR2	1							



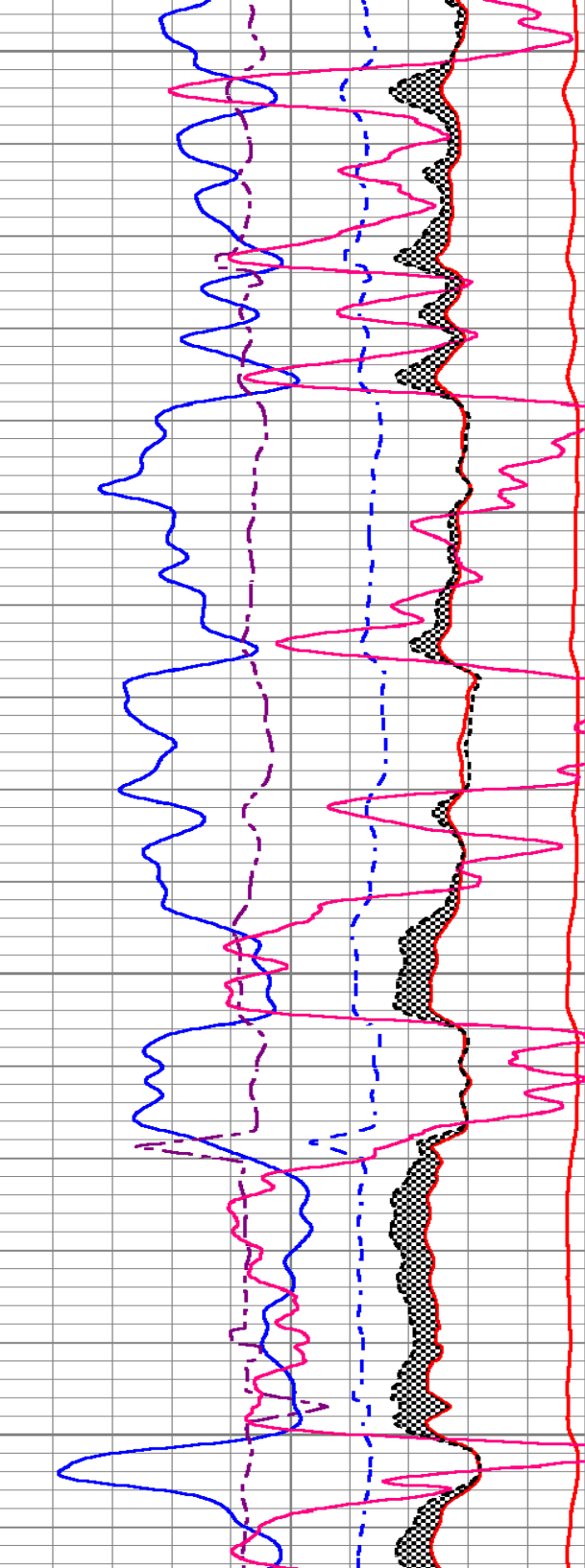
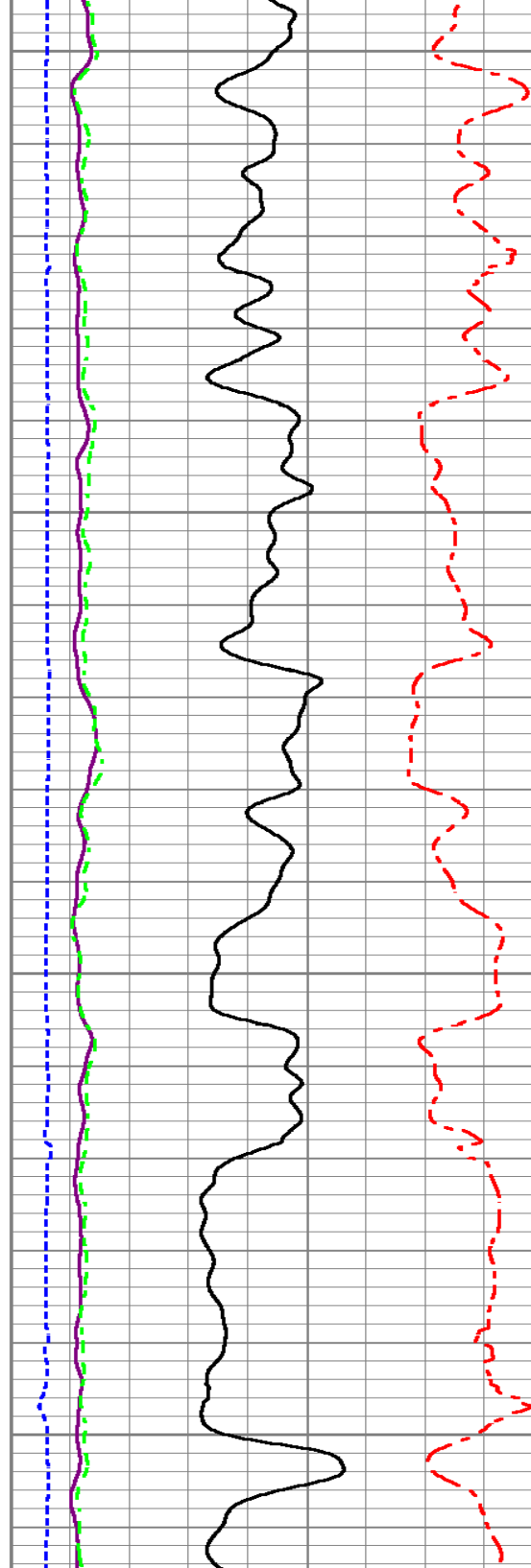


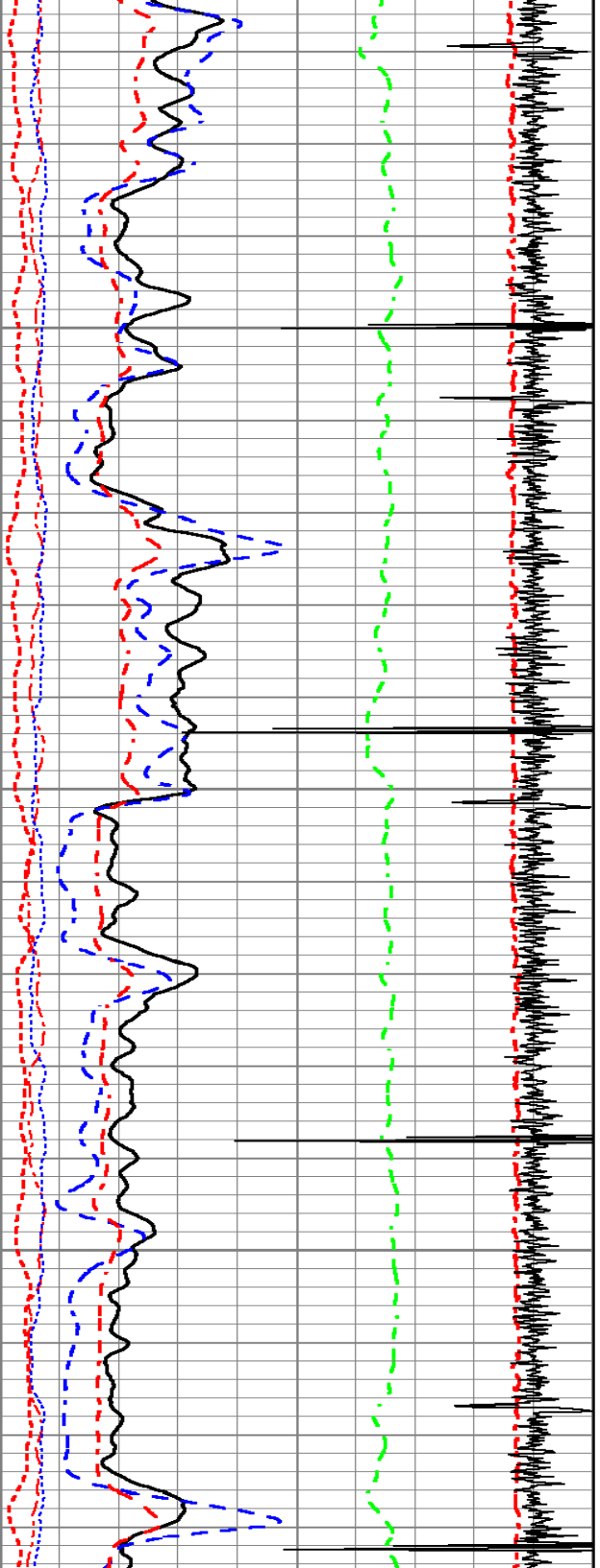
3650

3700

3750

3800

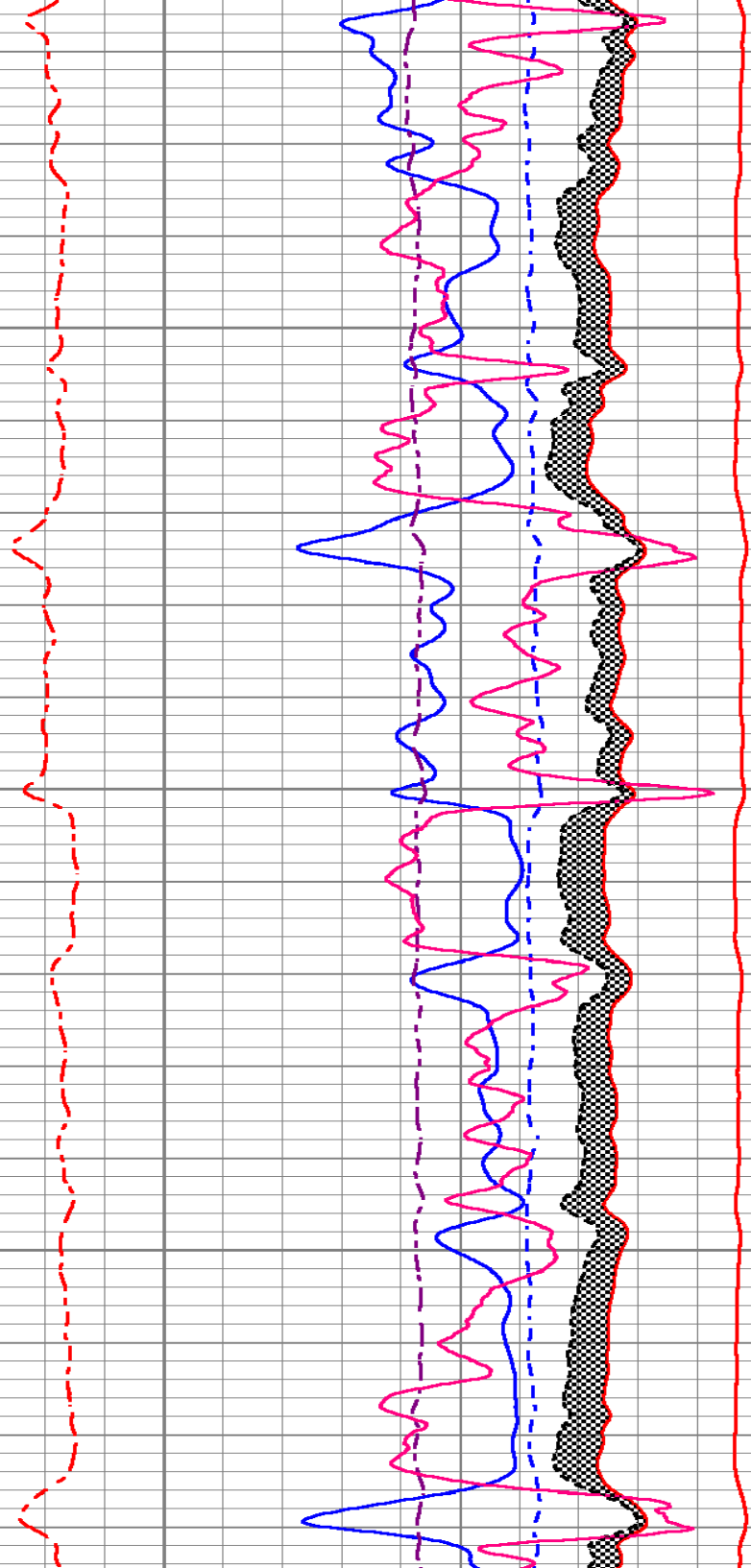
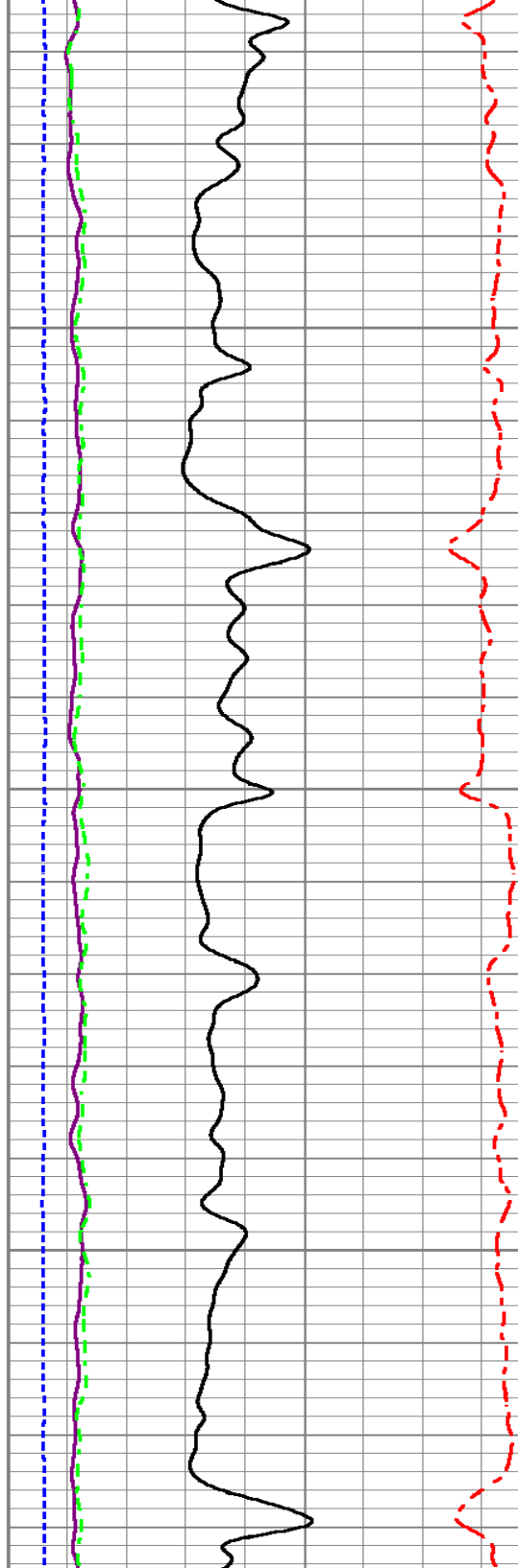


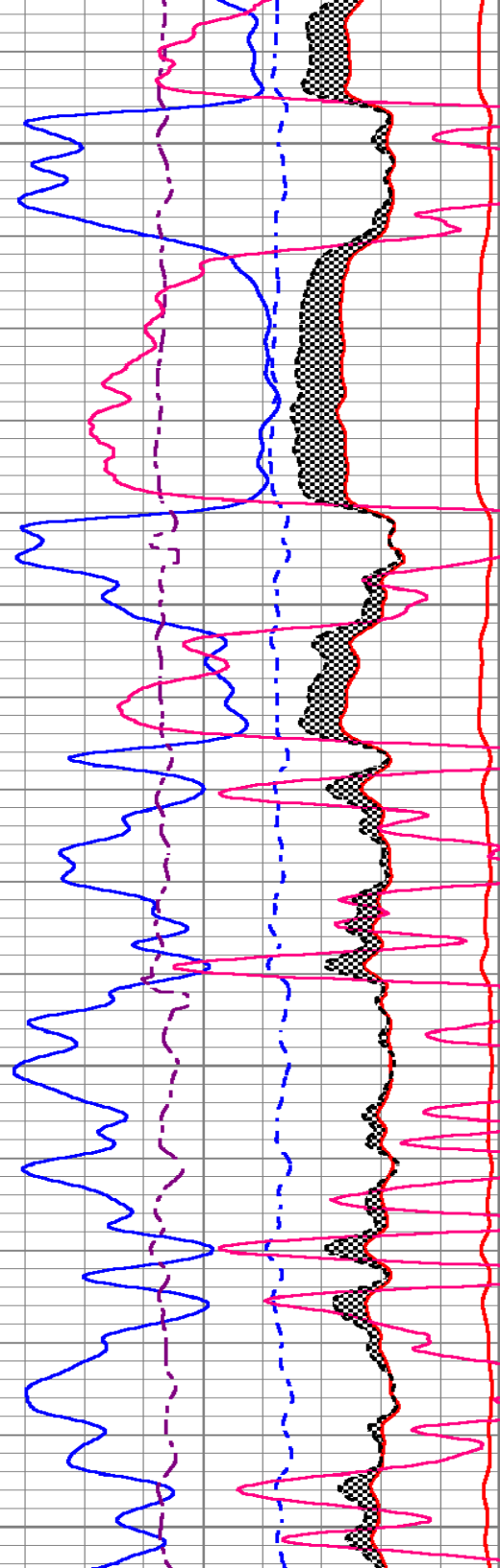
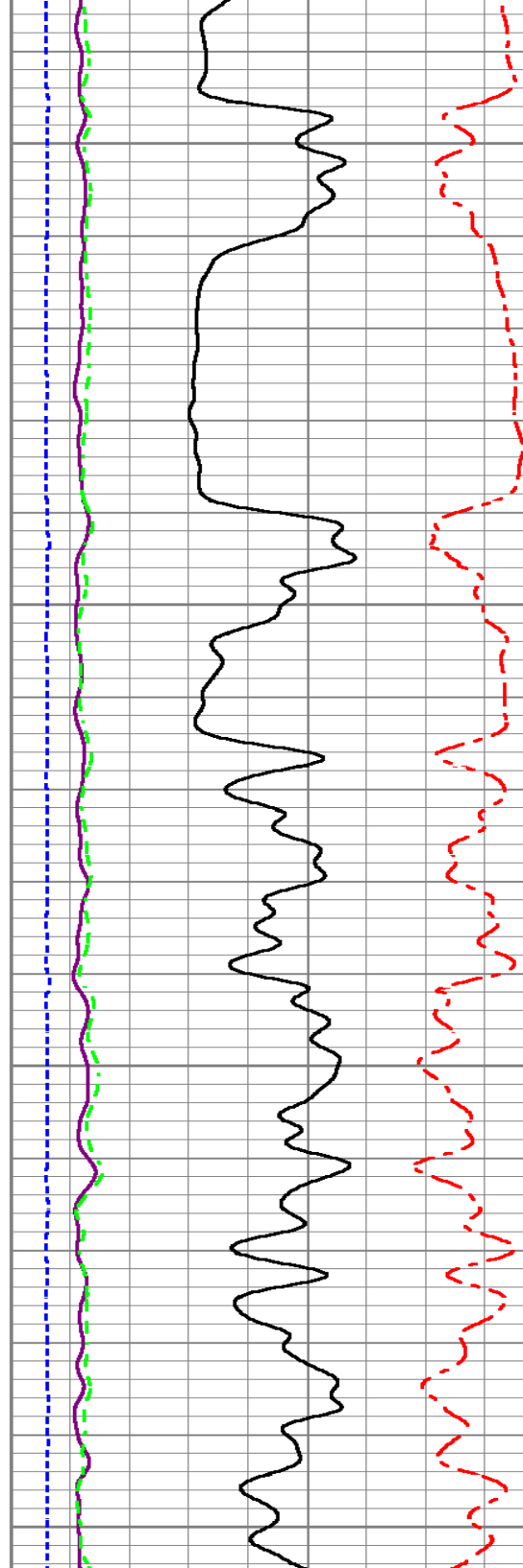
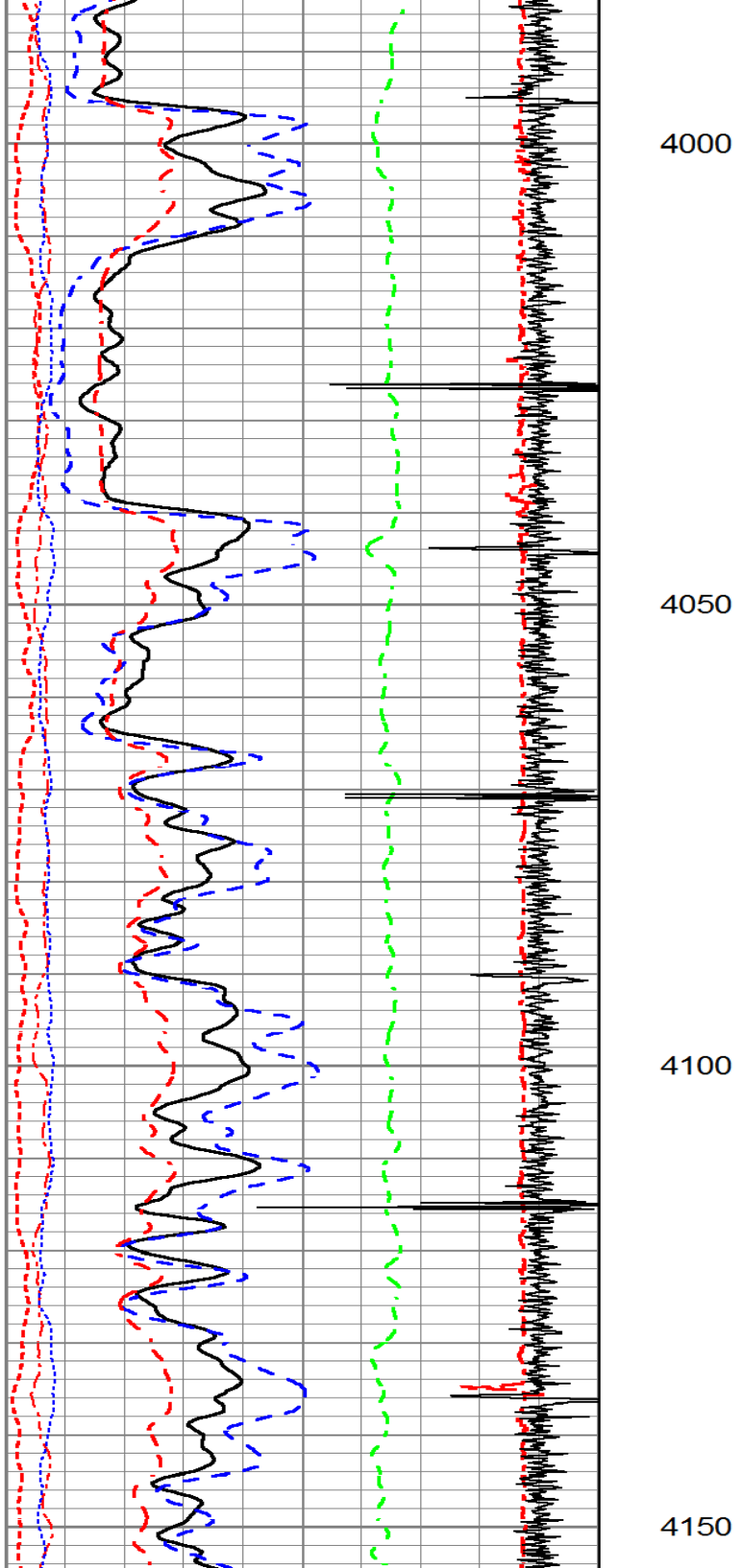


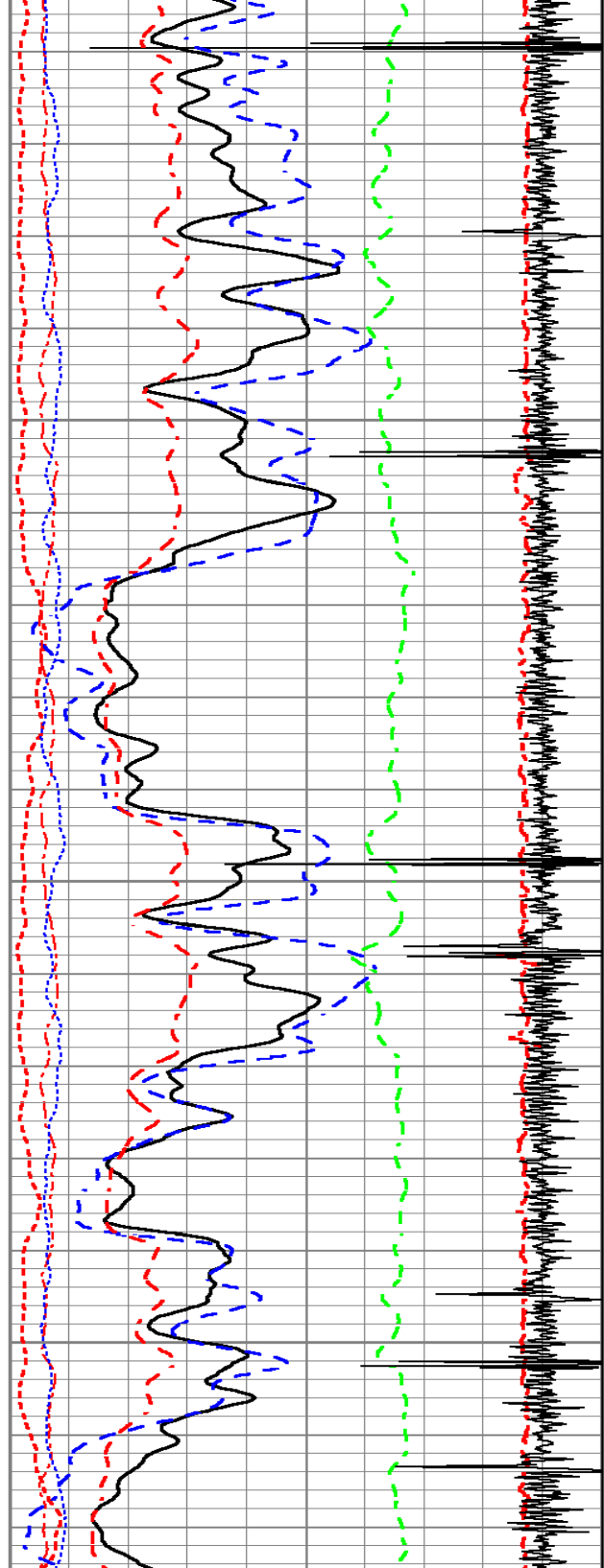
3850

3900

3950



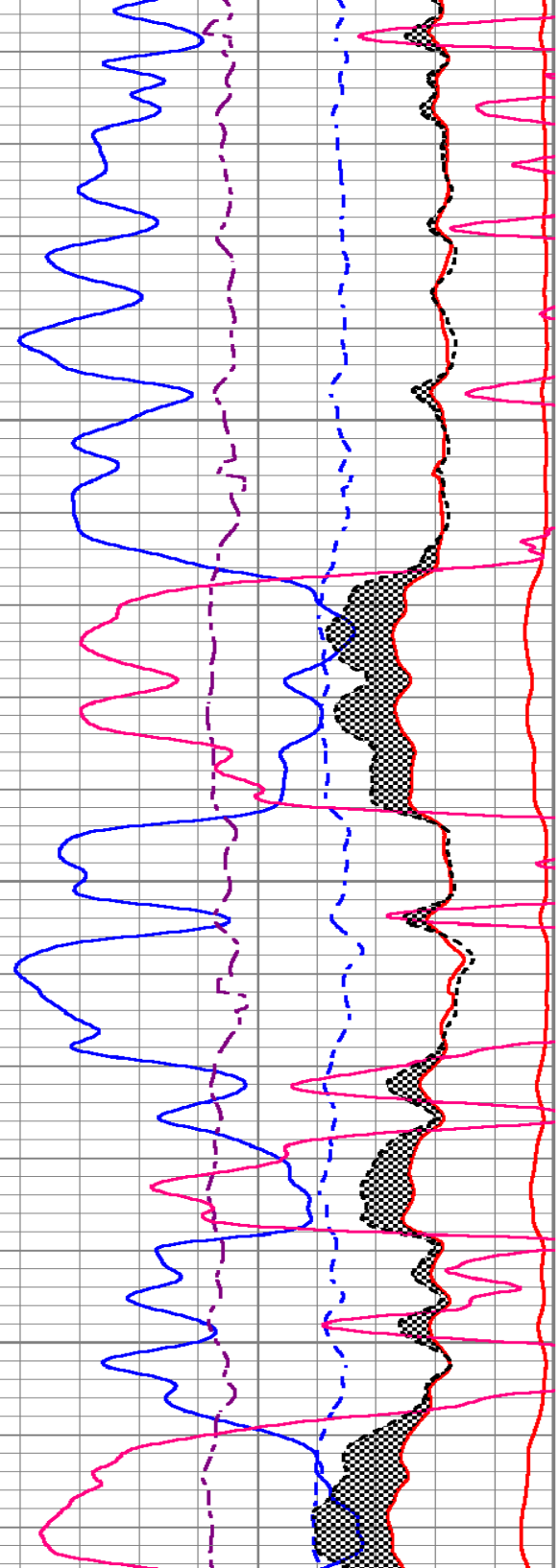
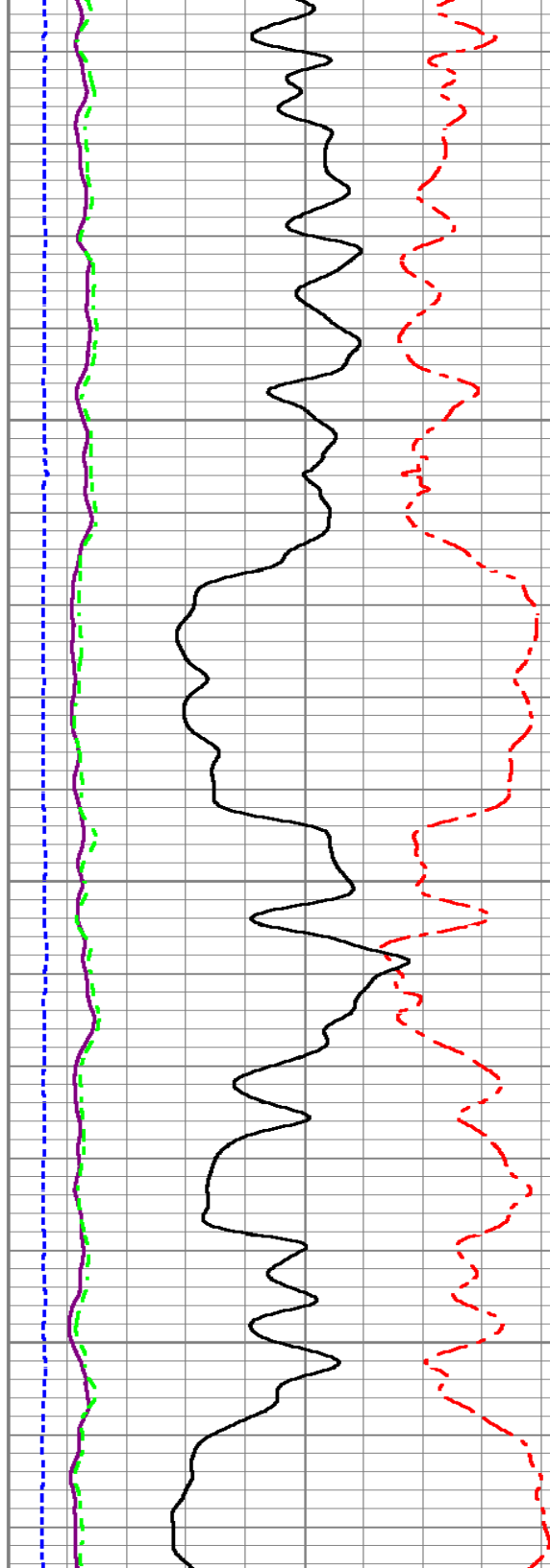


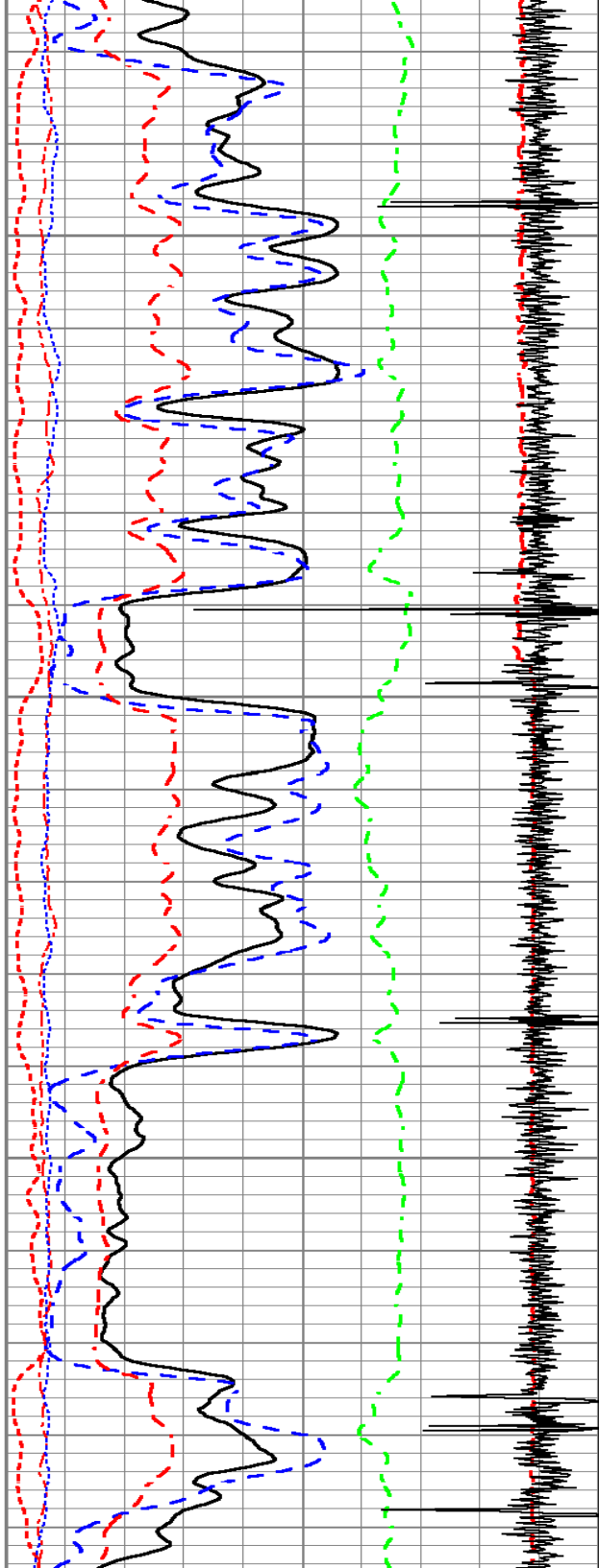


4200

4250

4300

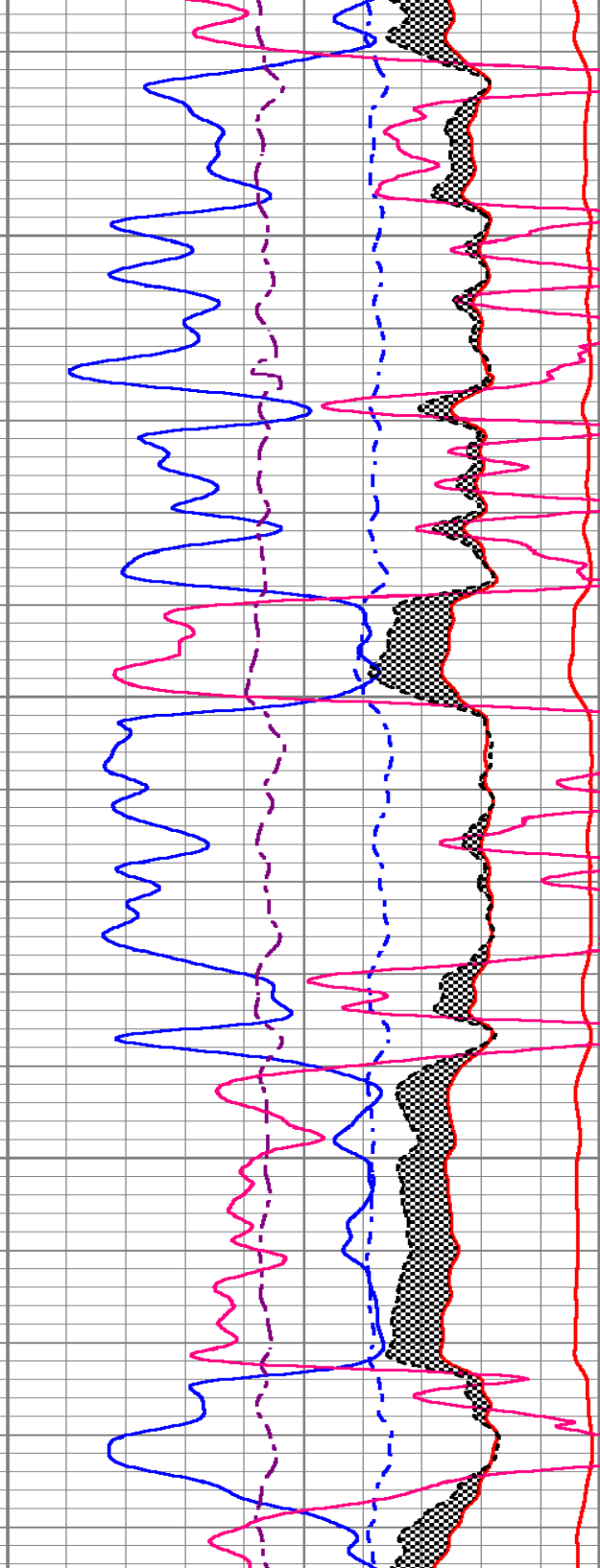
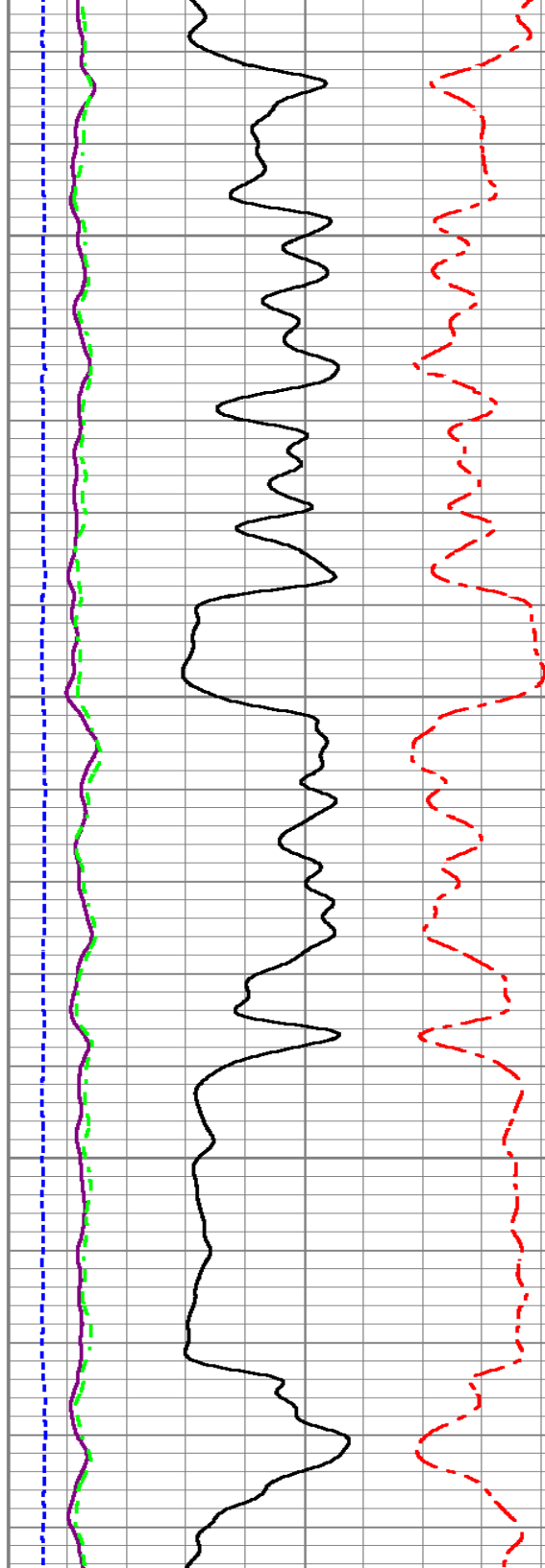


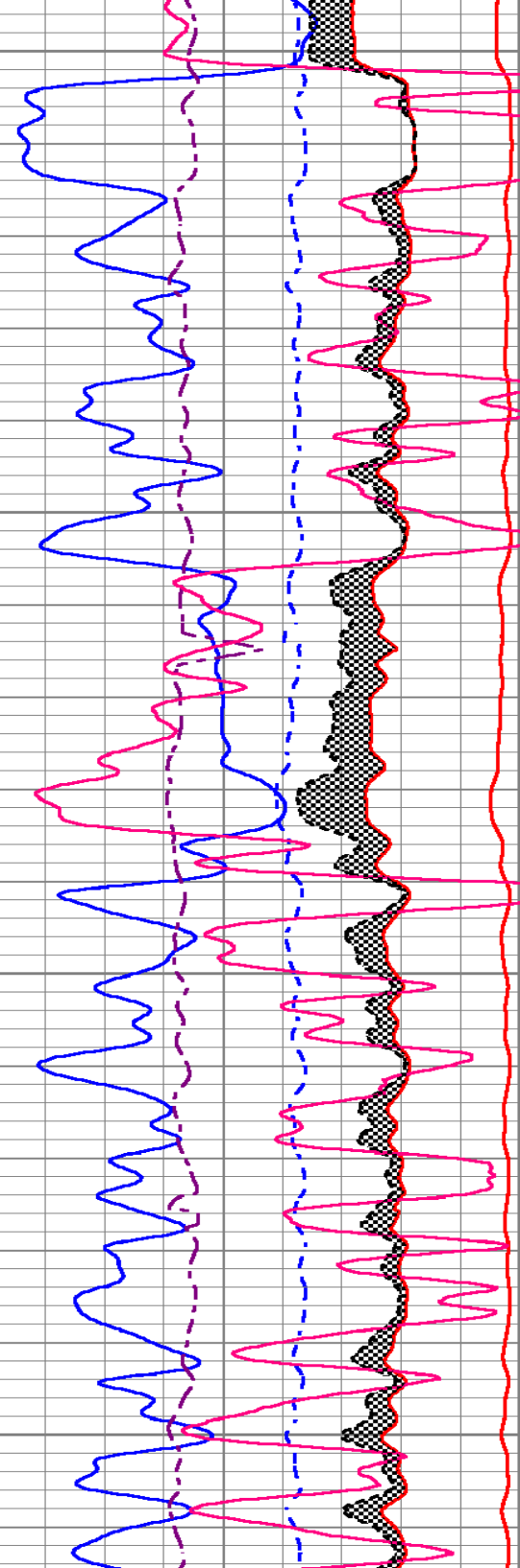
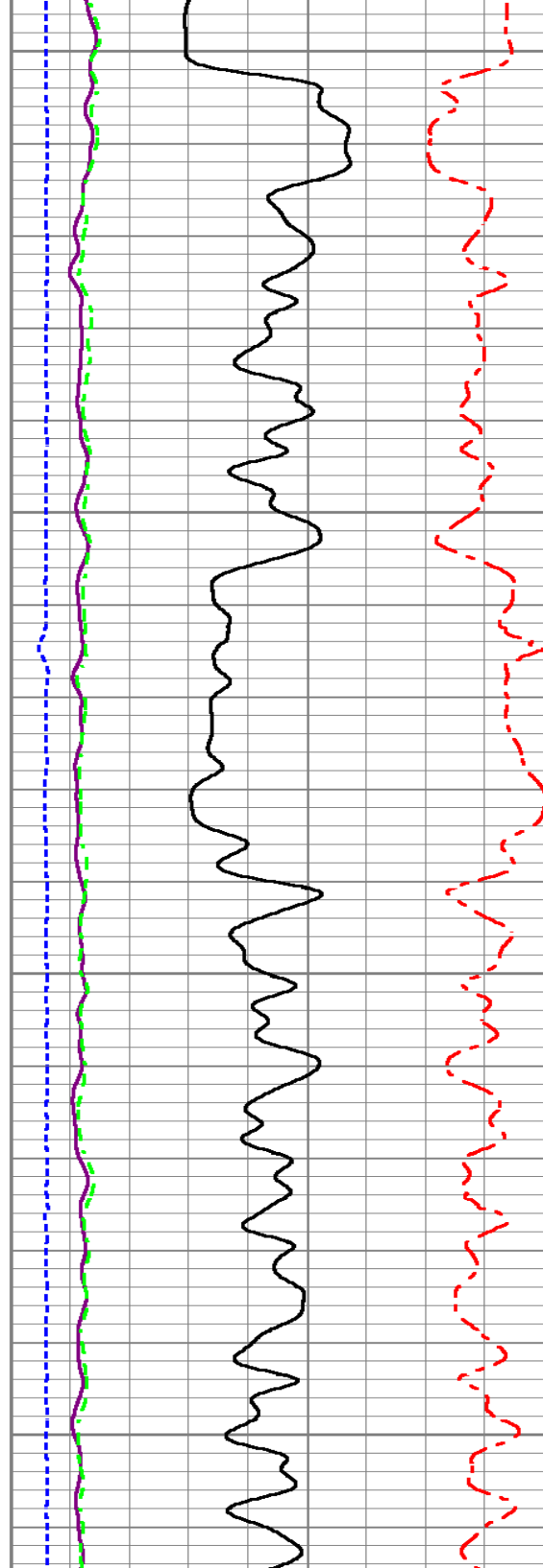
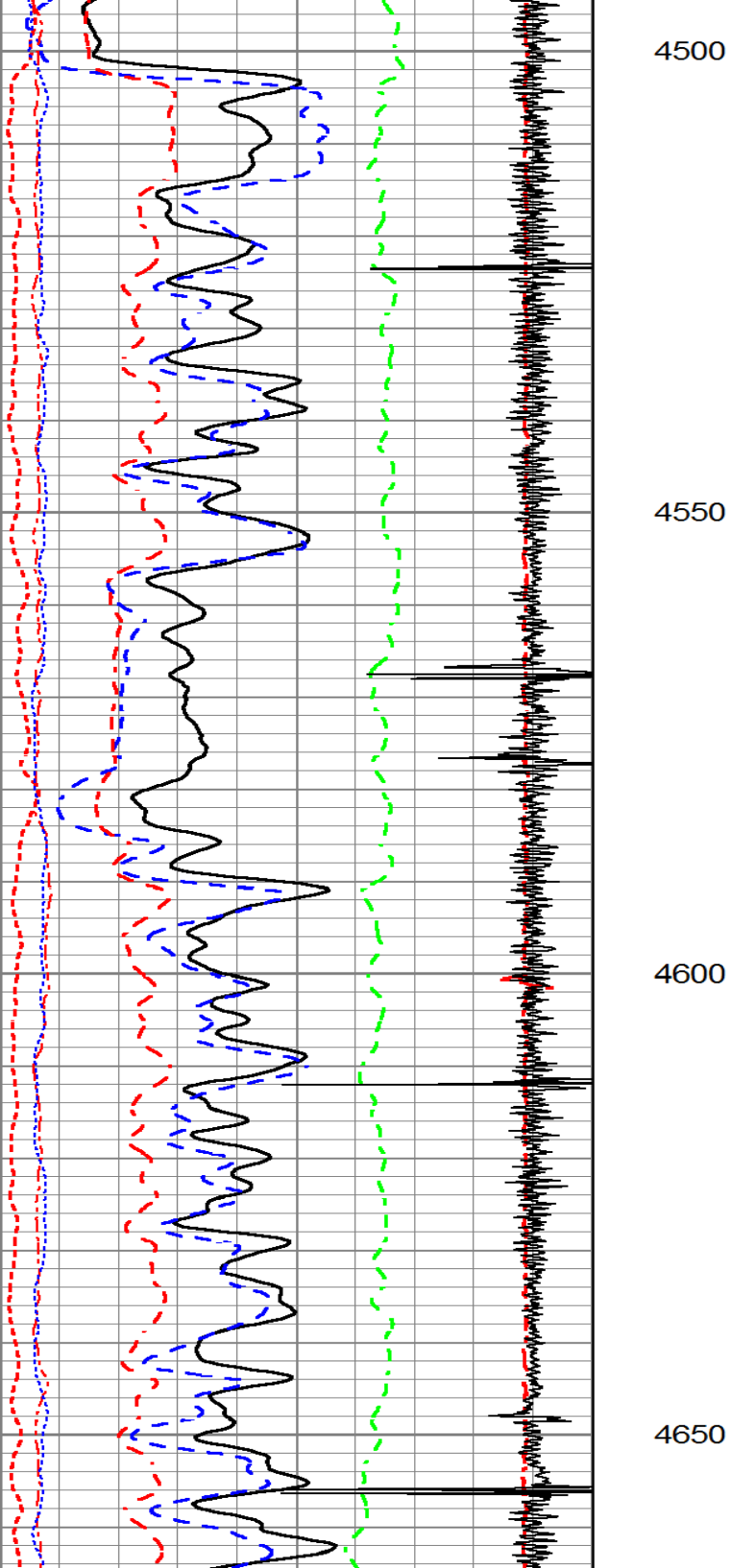


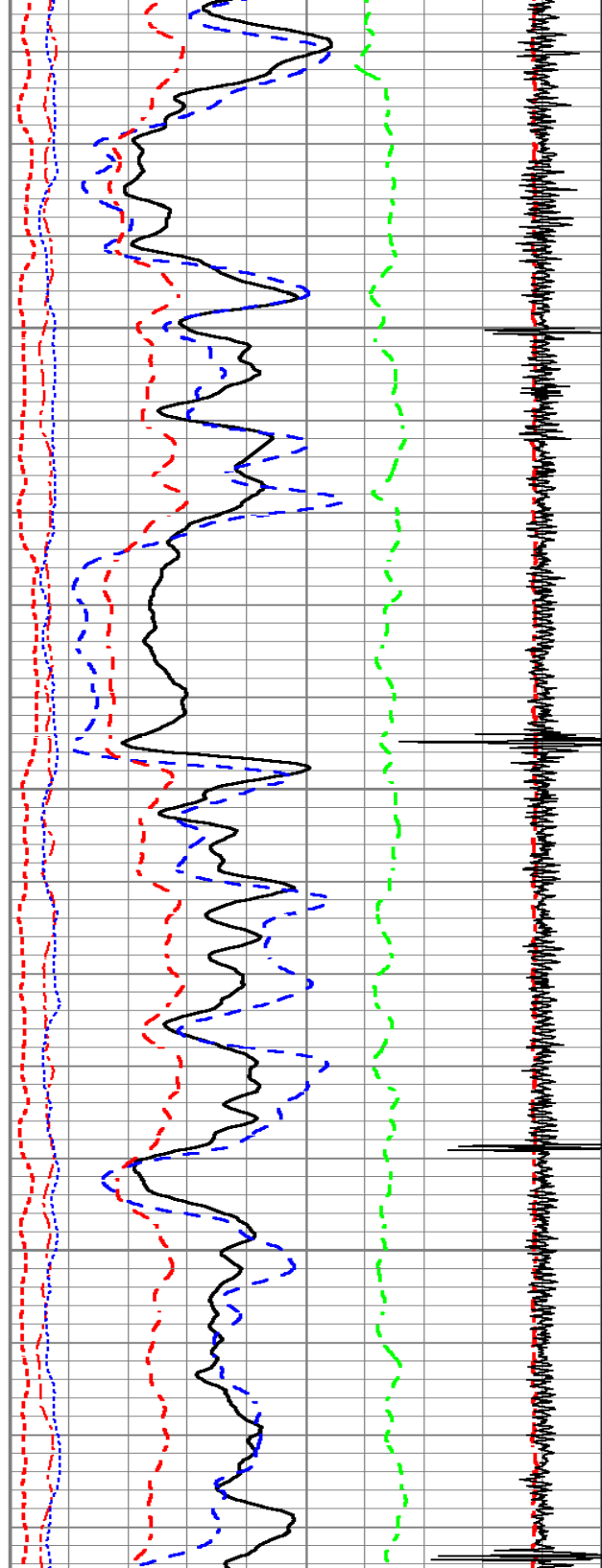
4350

4400

4450



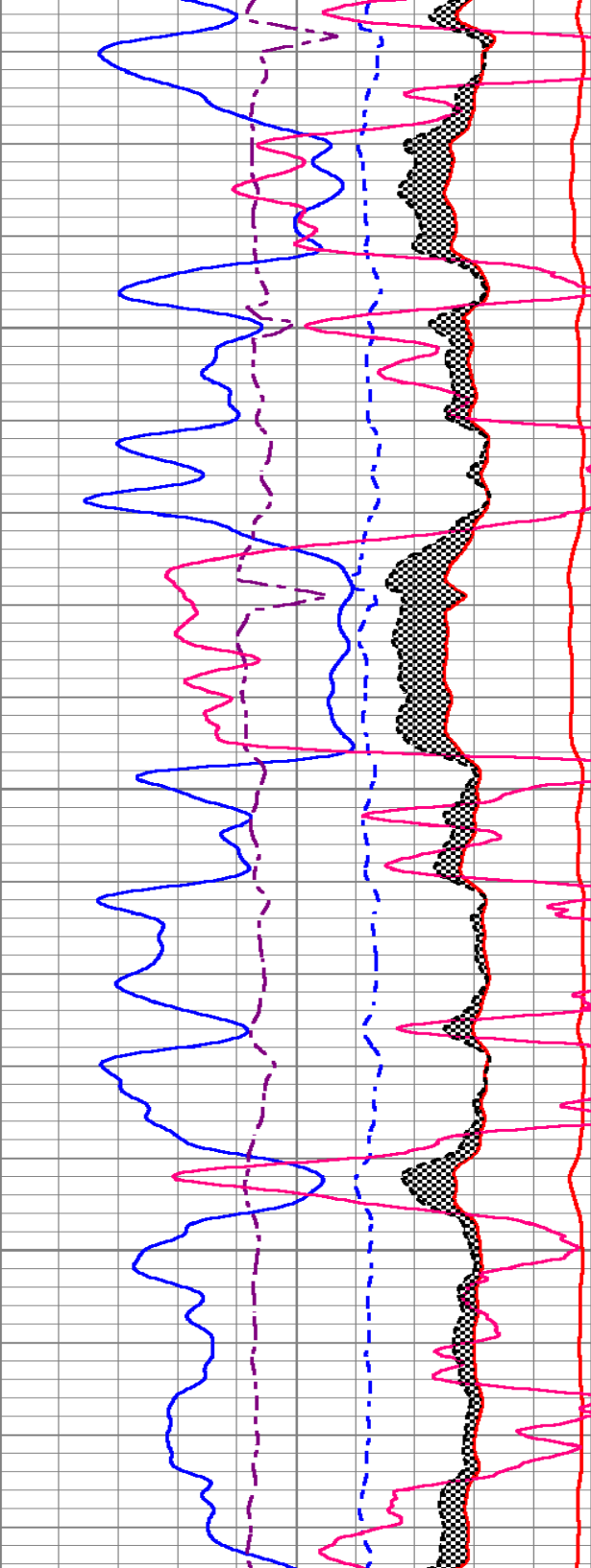
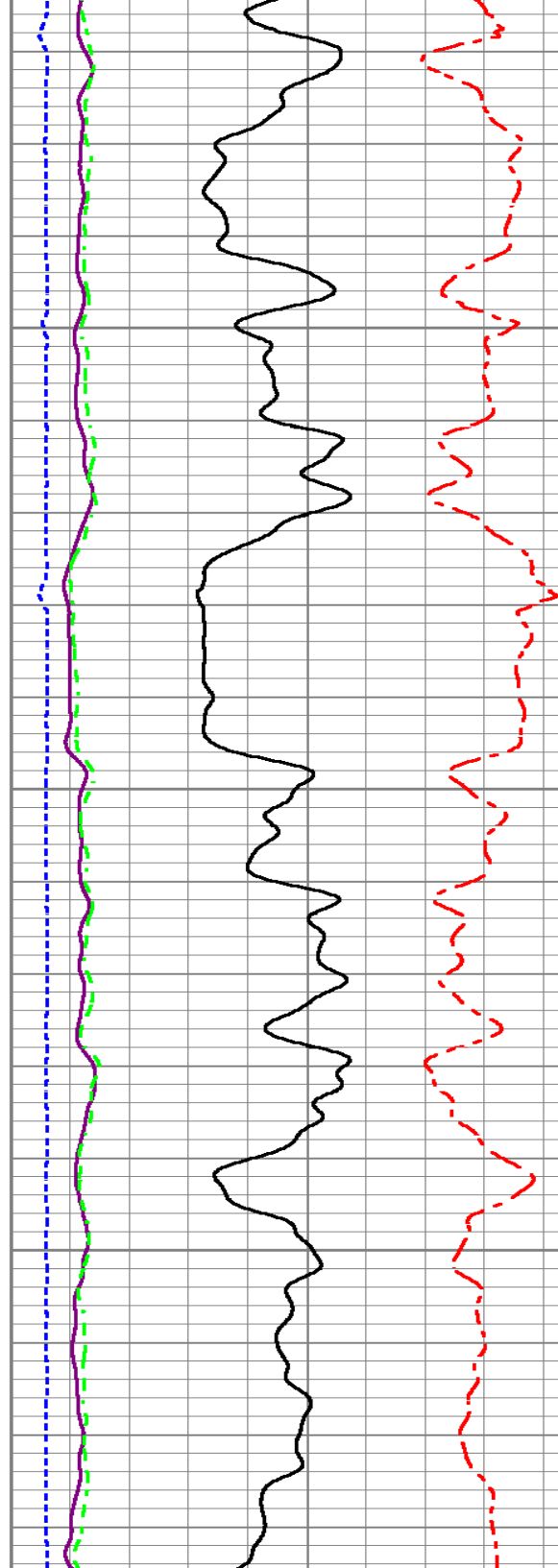


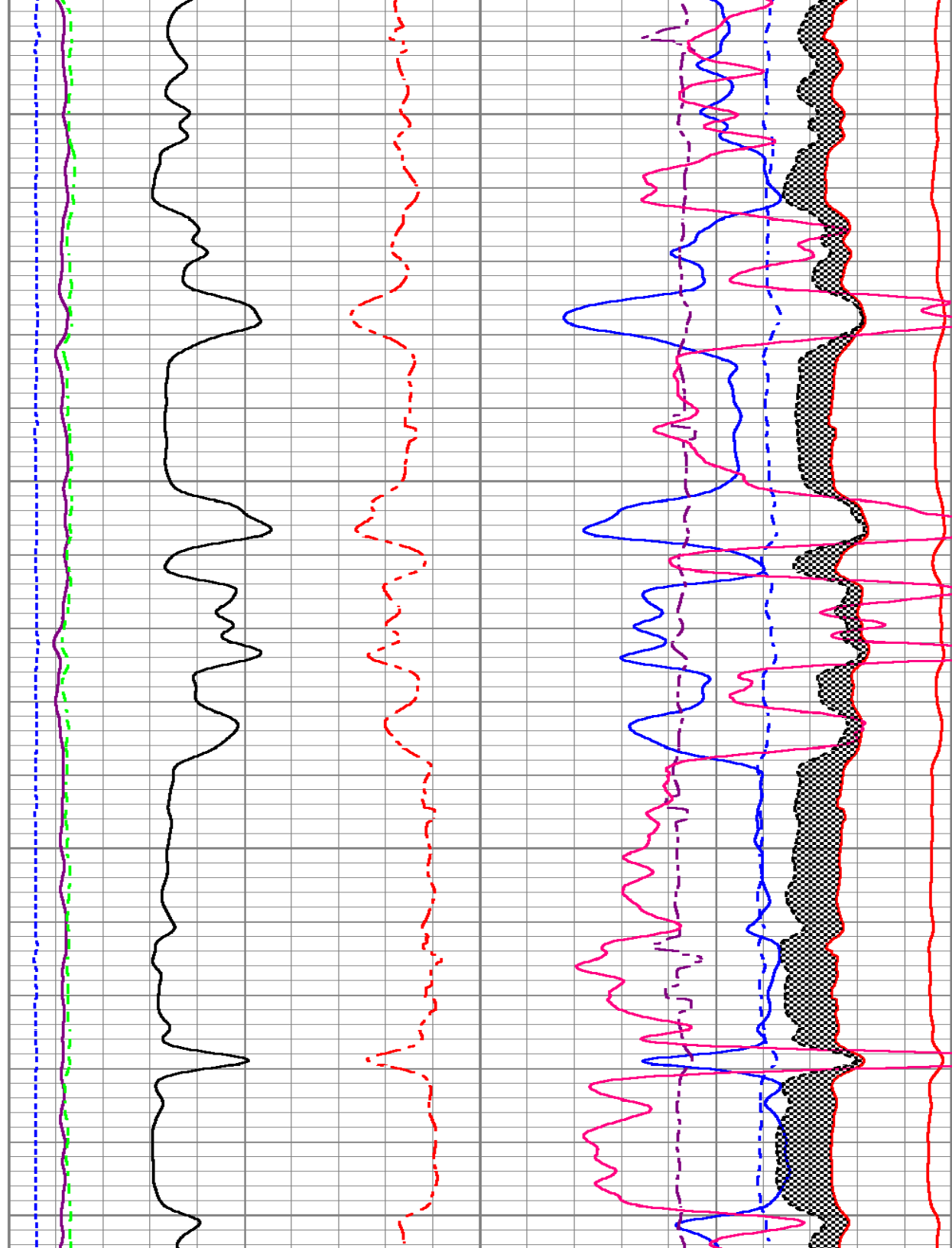
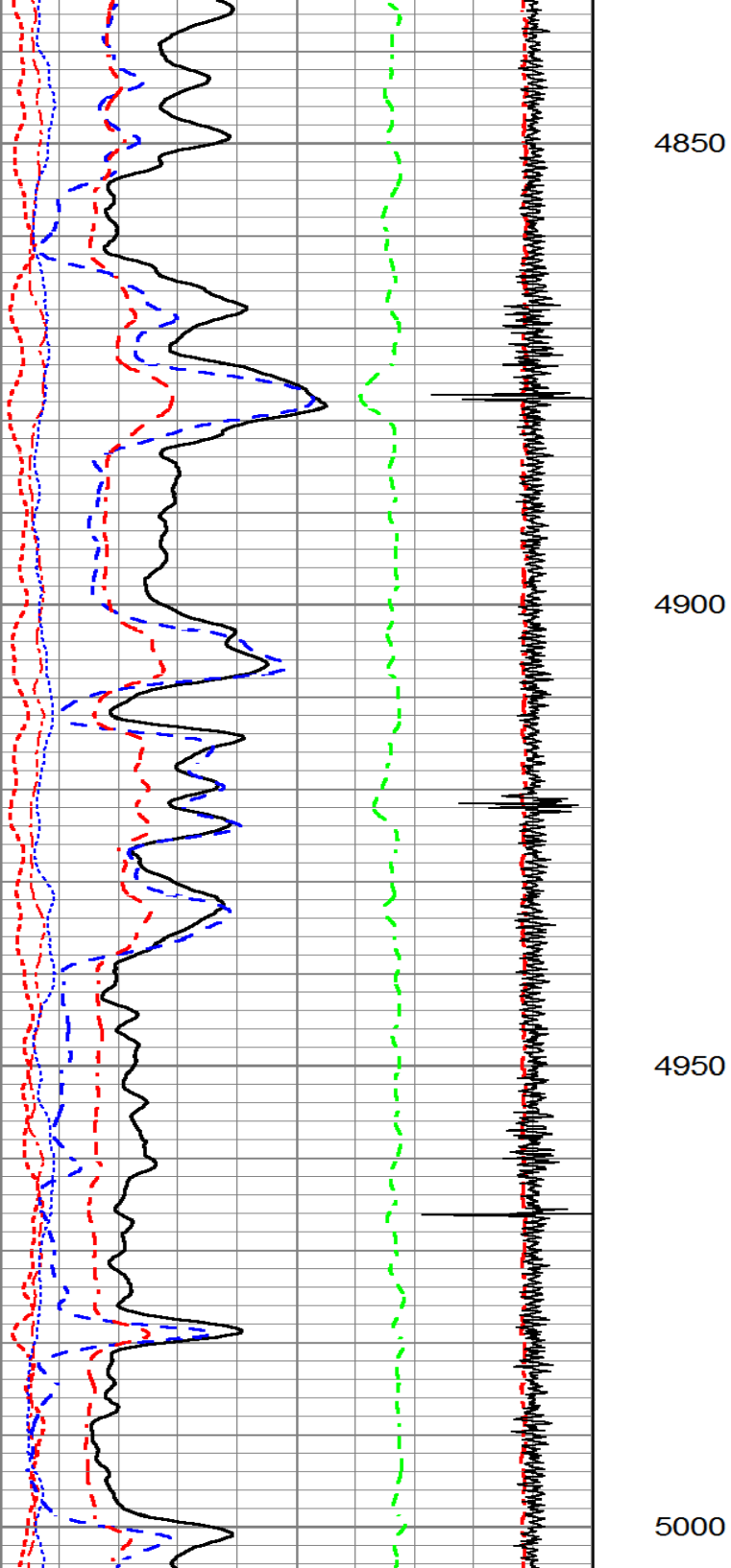


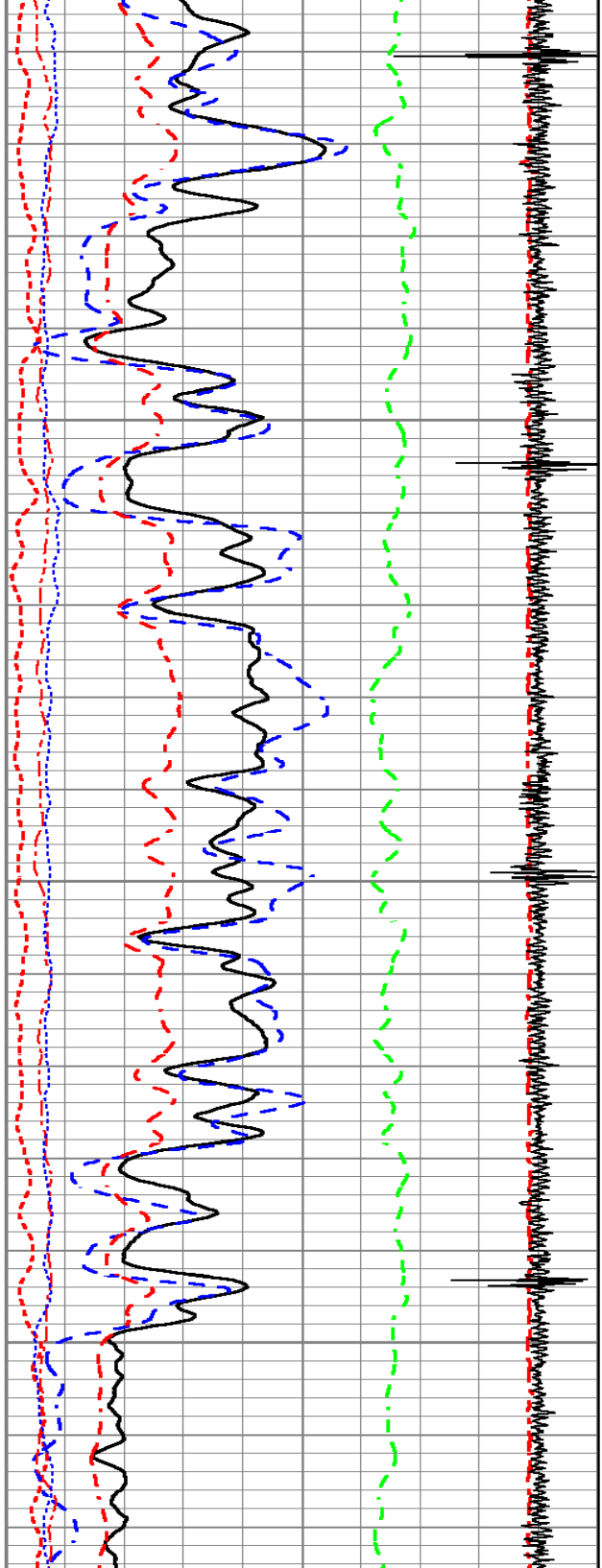
4700

4750

4800



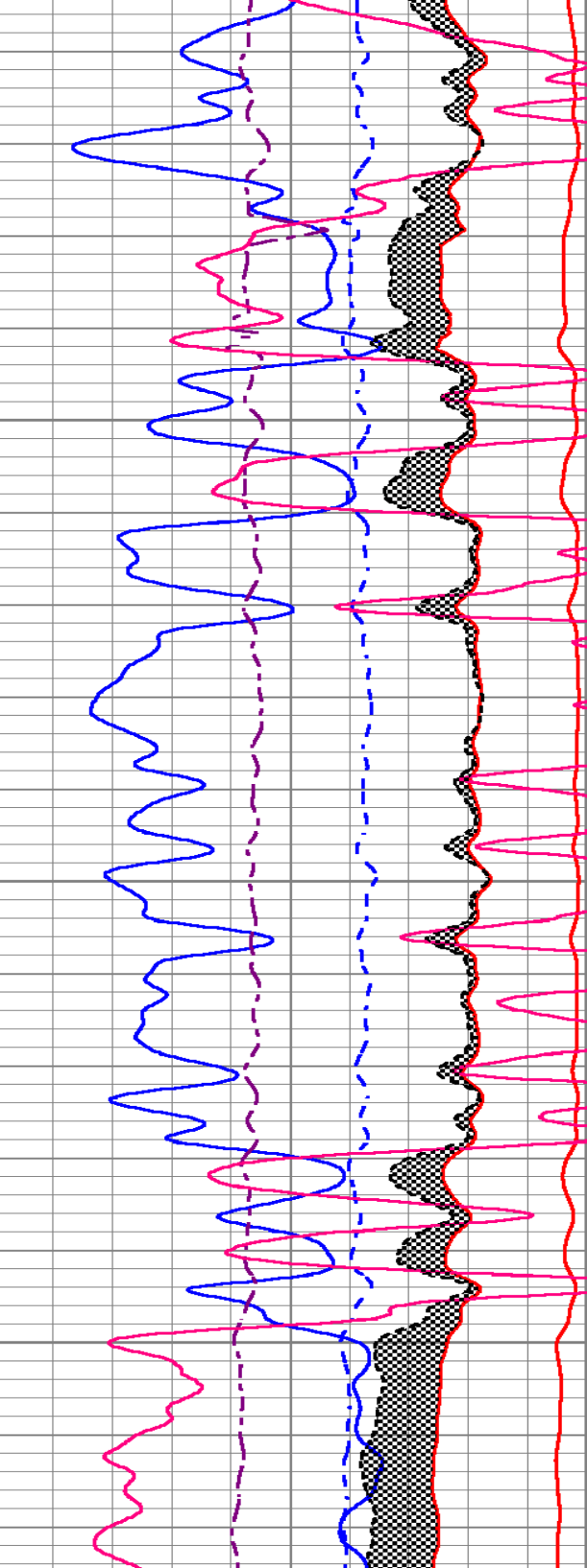
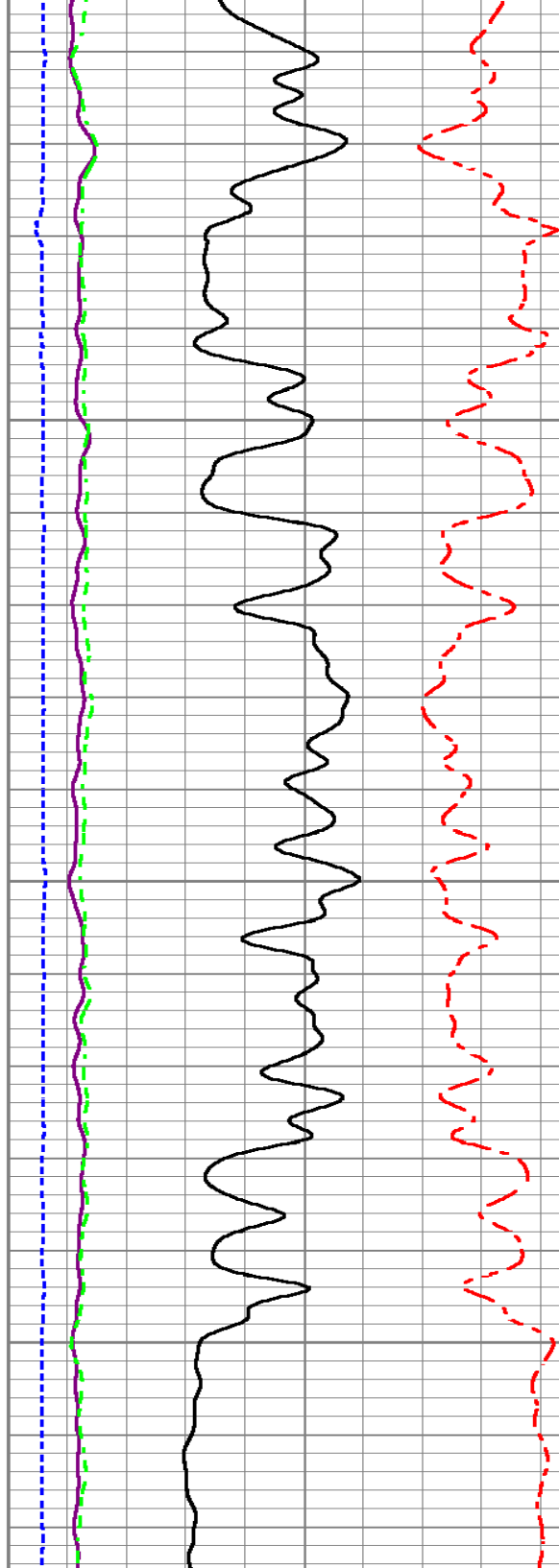


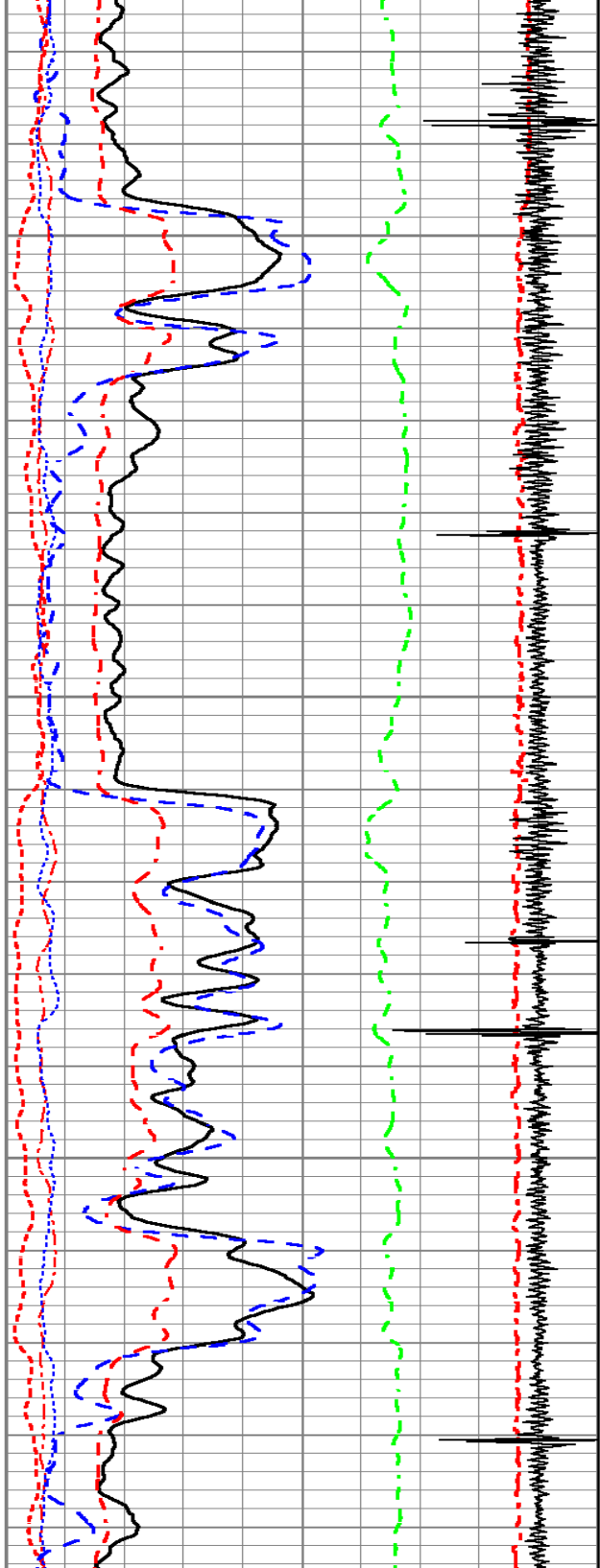


5050

5100

5150

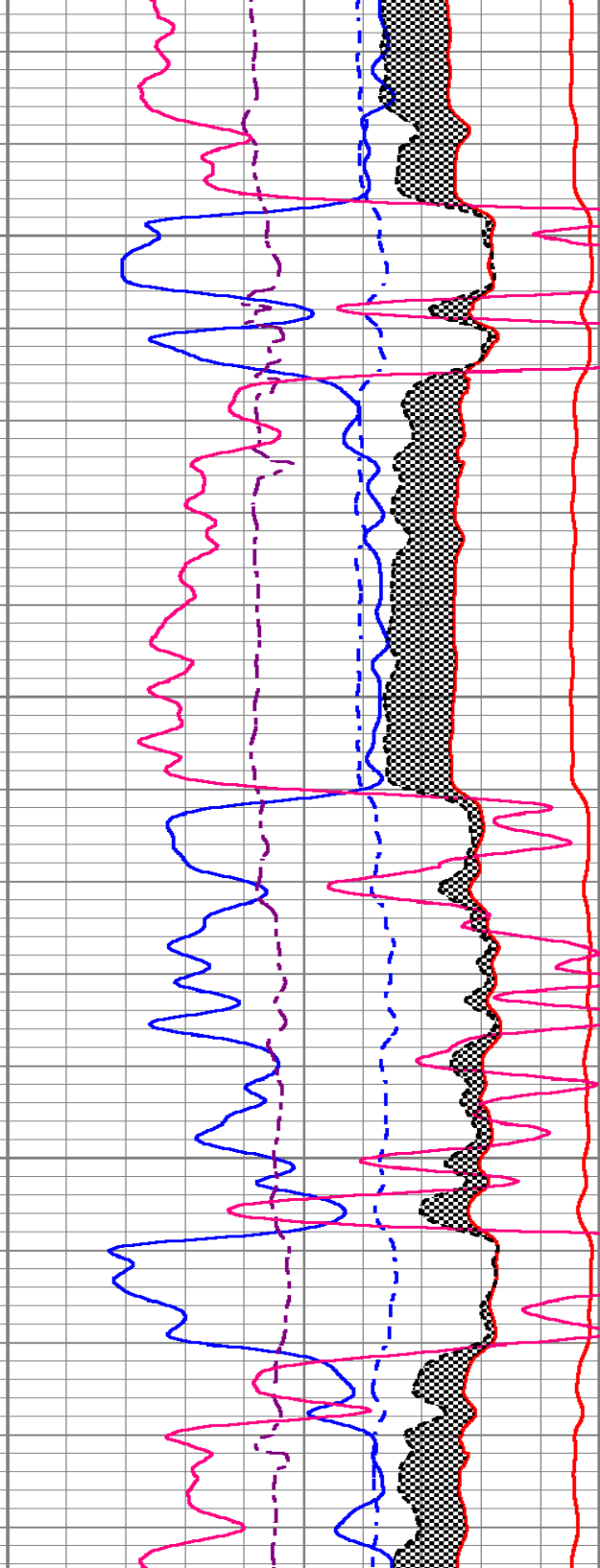
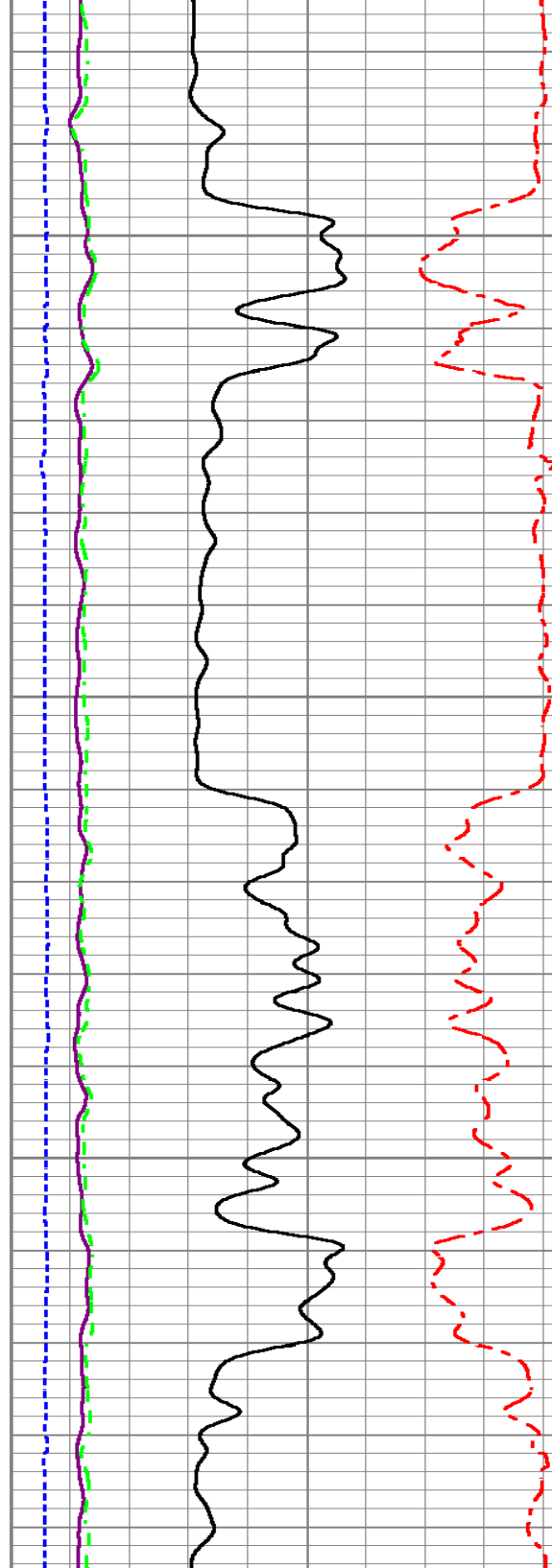


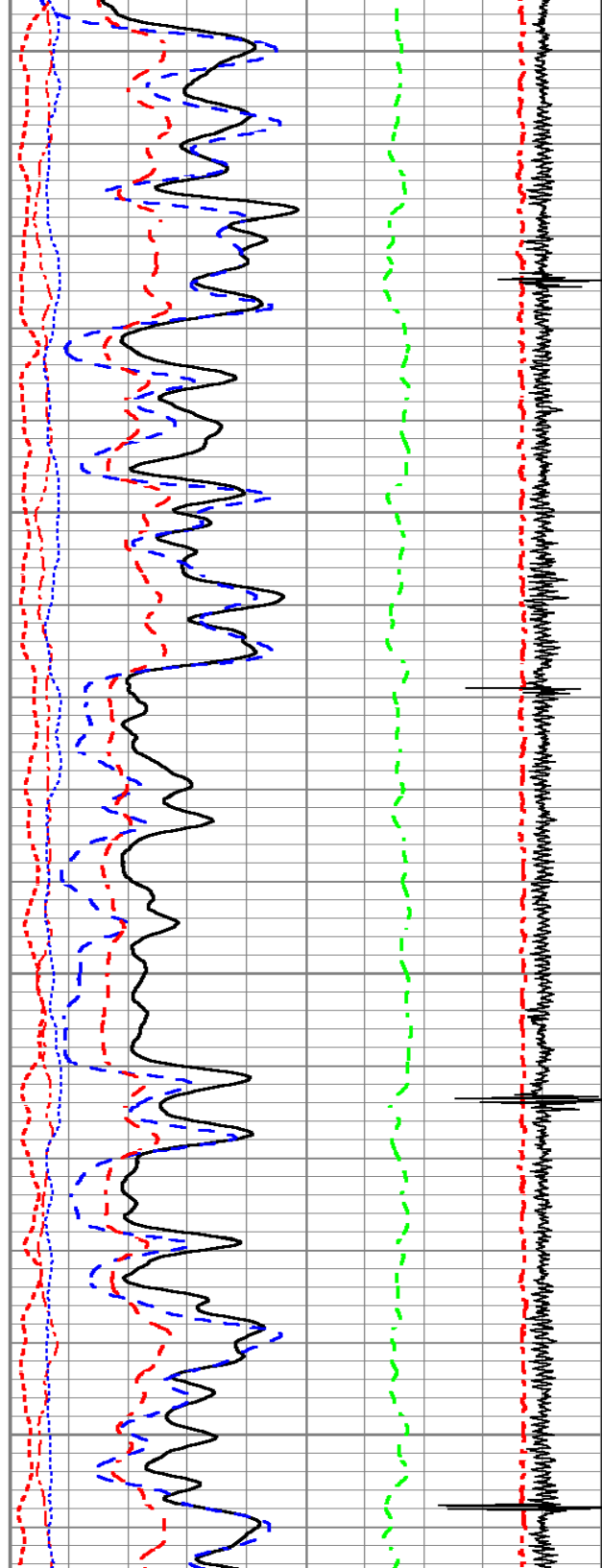


5200

5250

5300



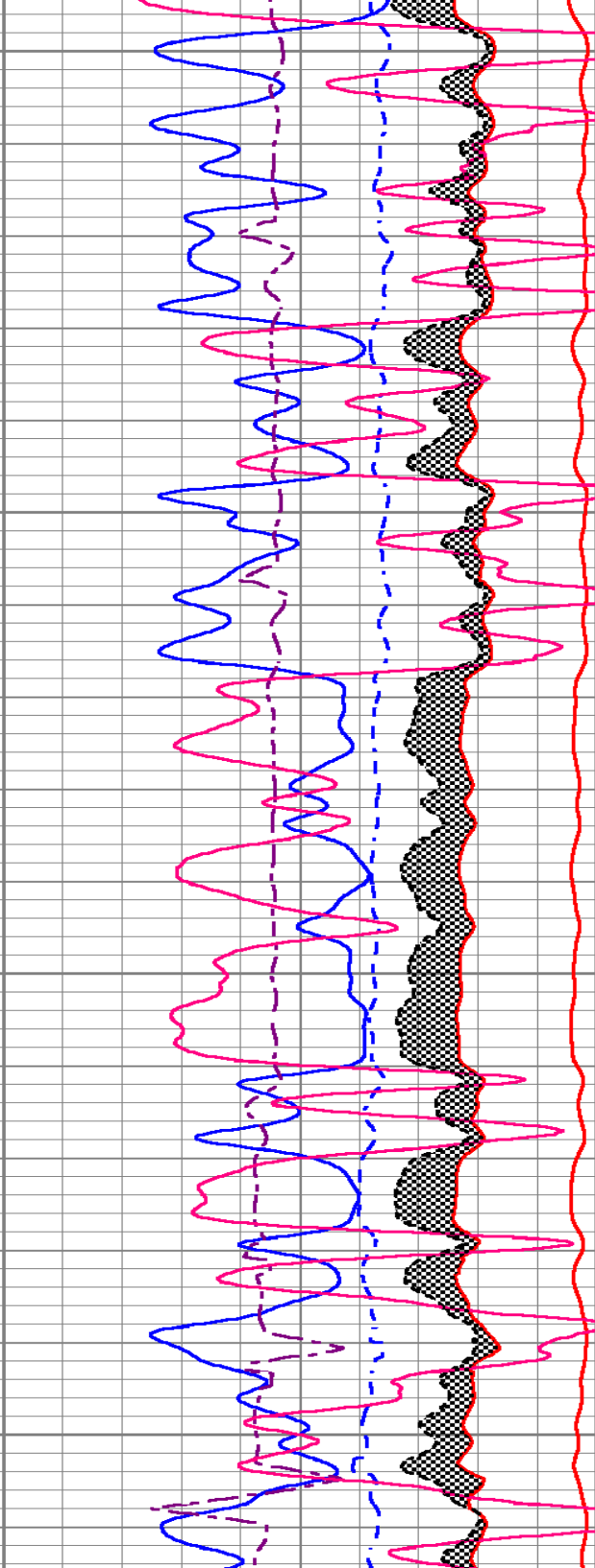
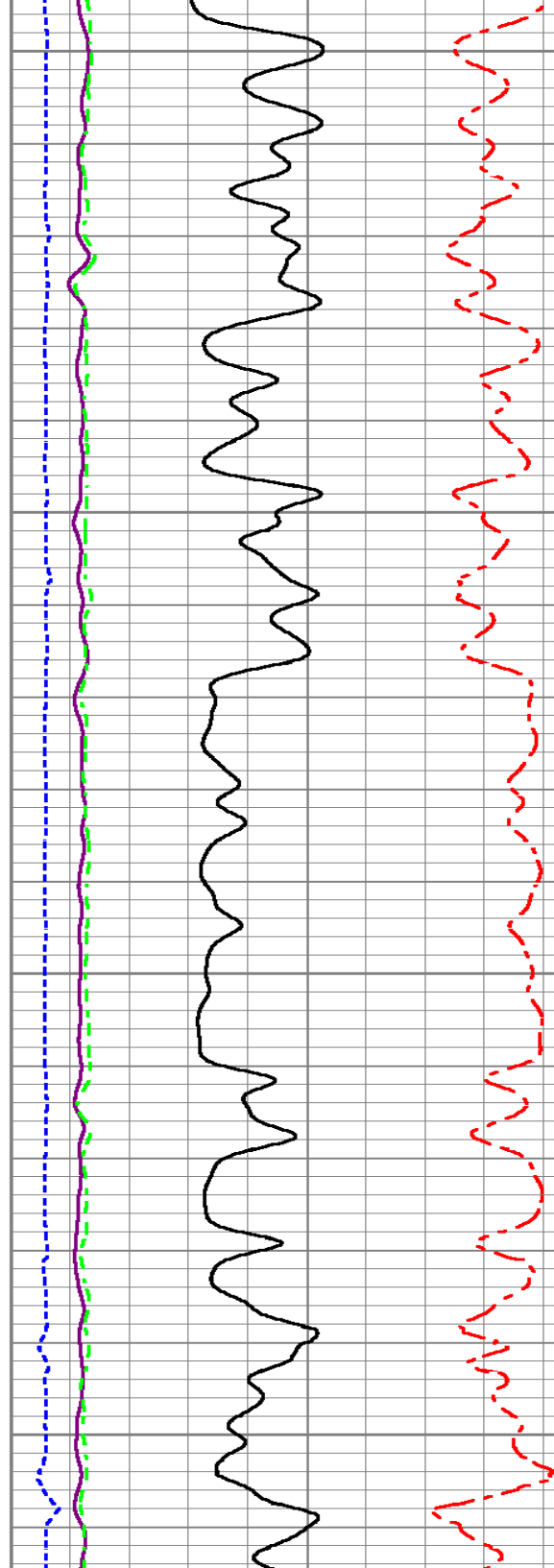


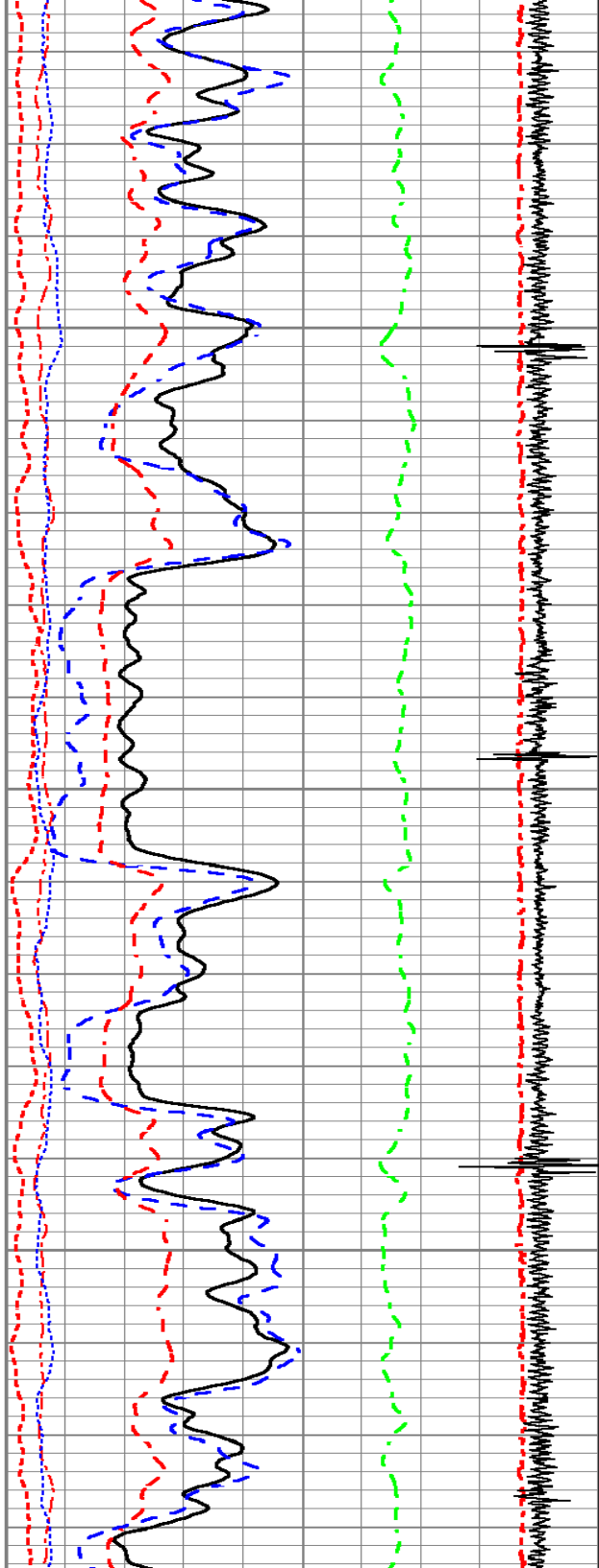
5350

5400

5450

5500

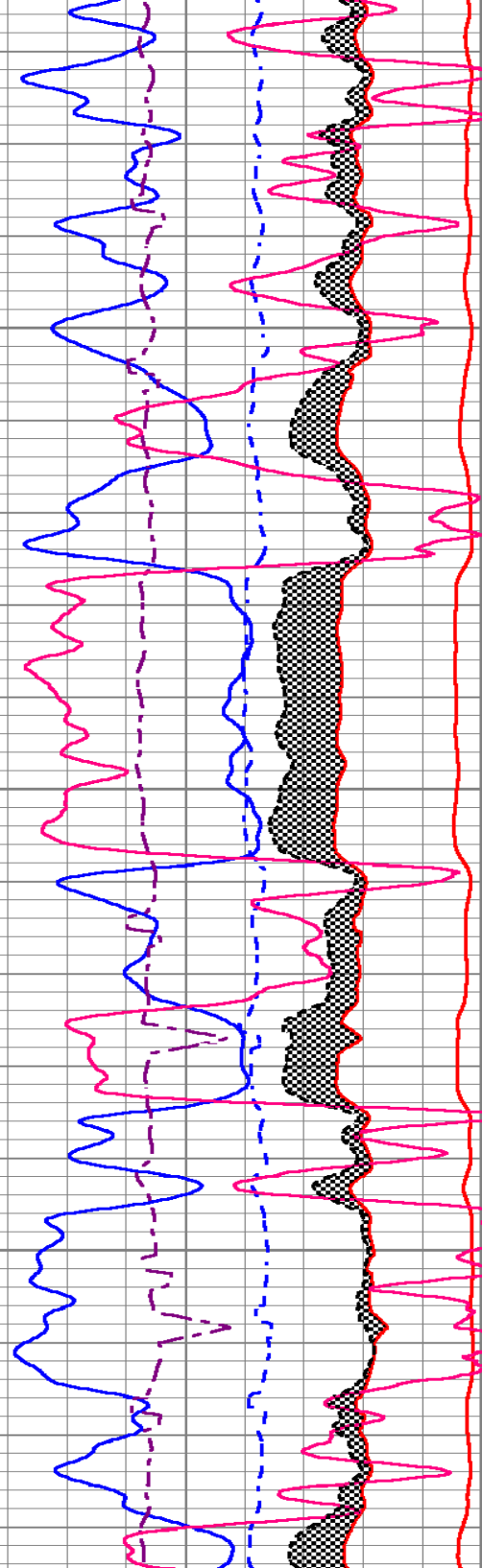
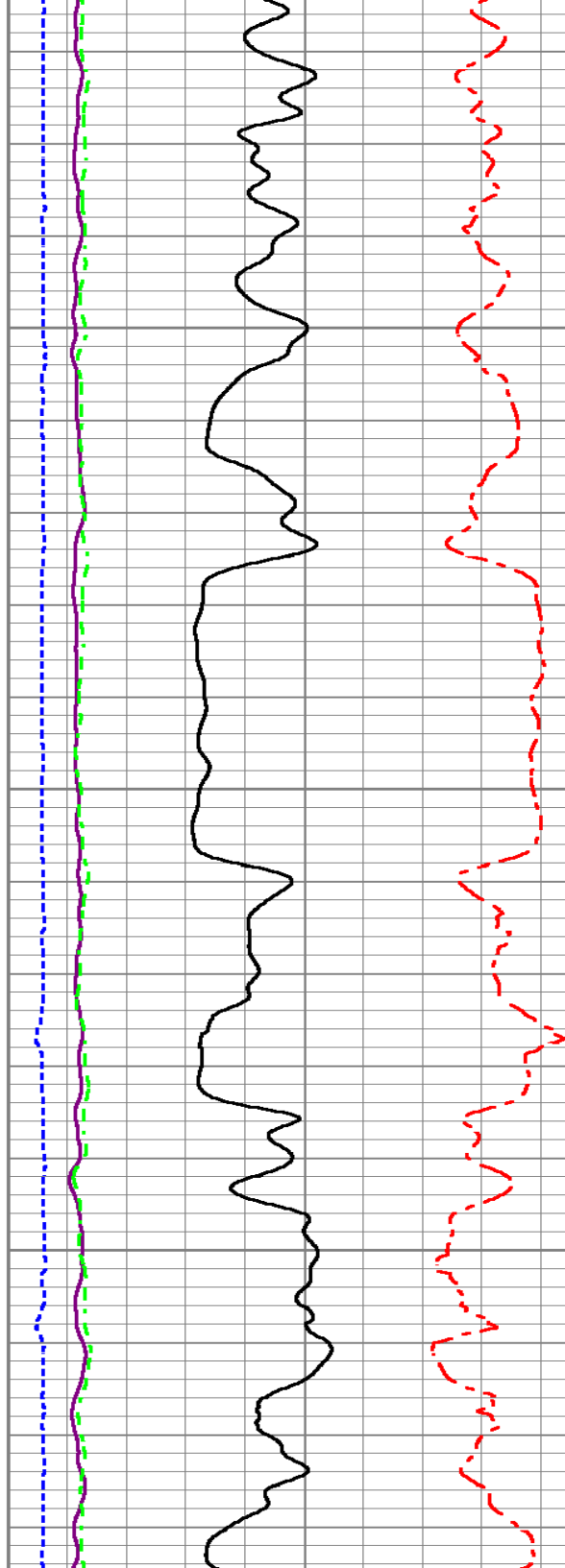


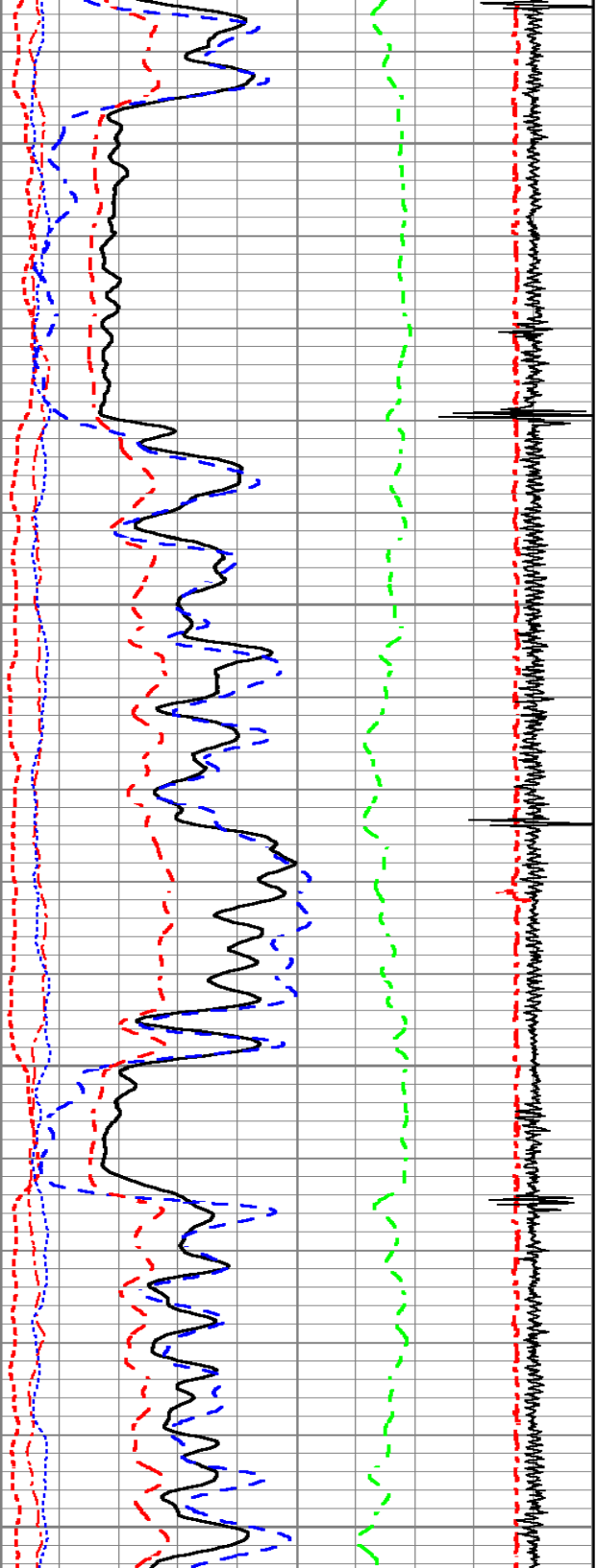


5550

5600

5650



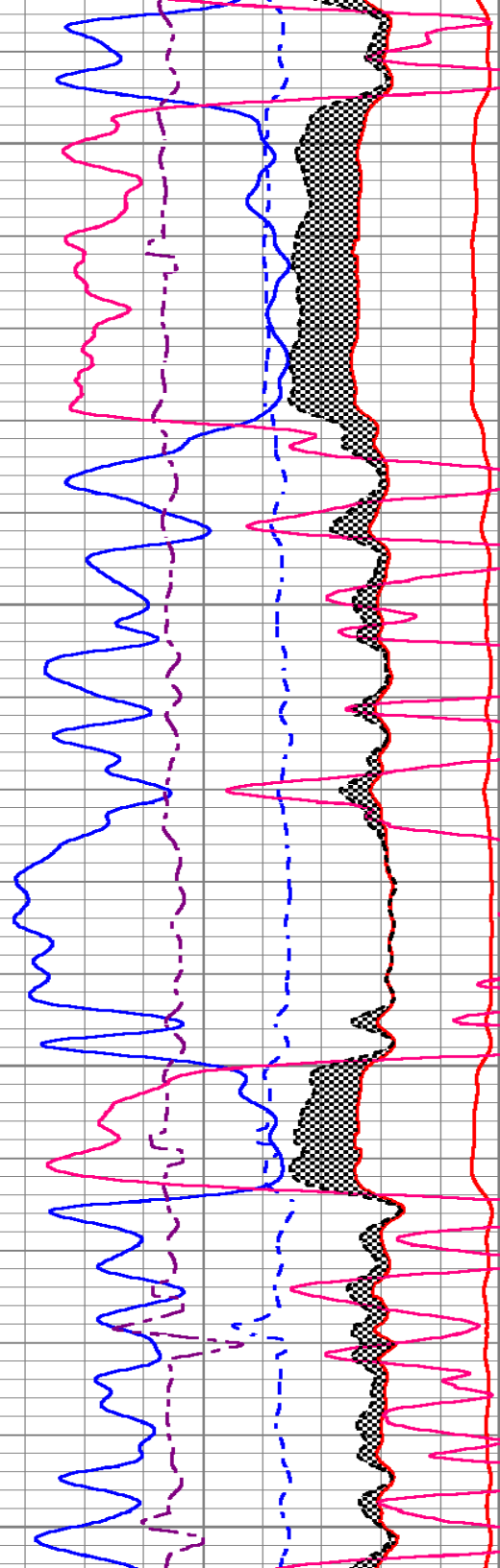
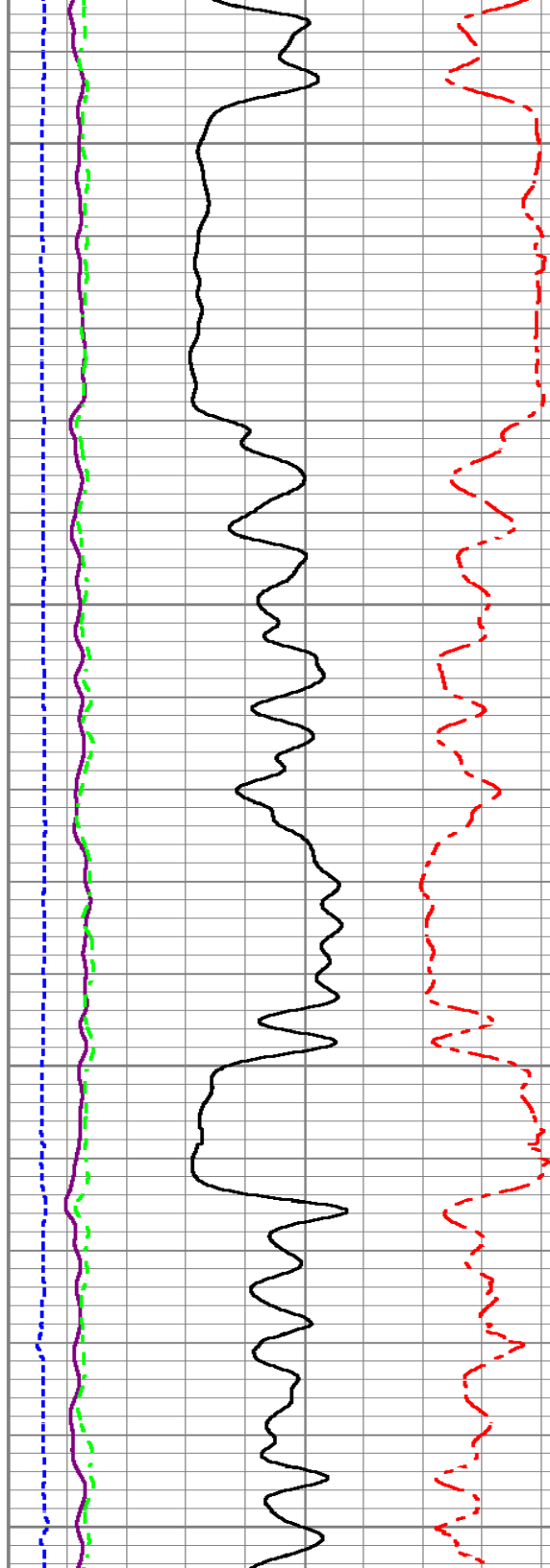


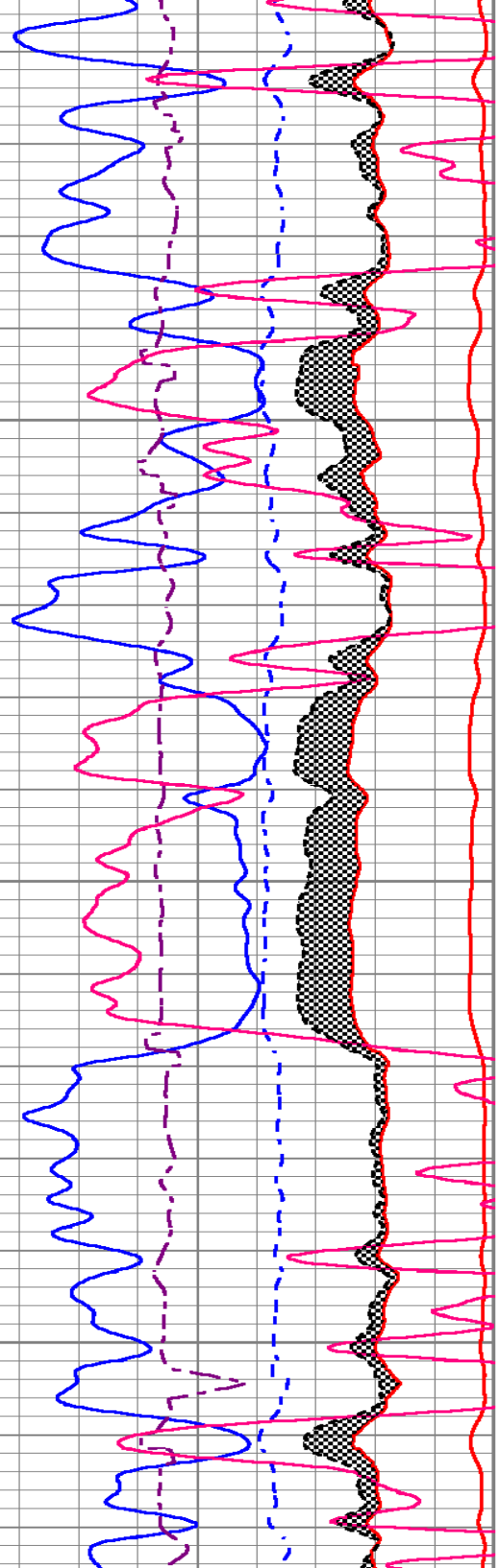
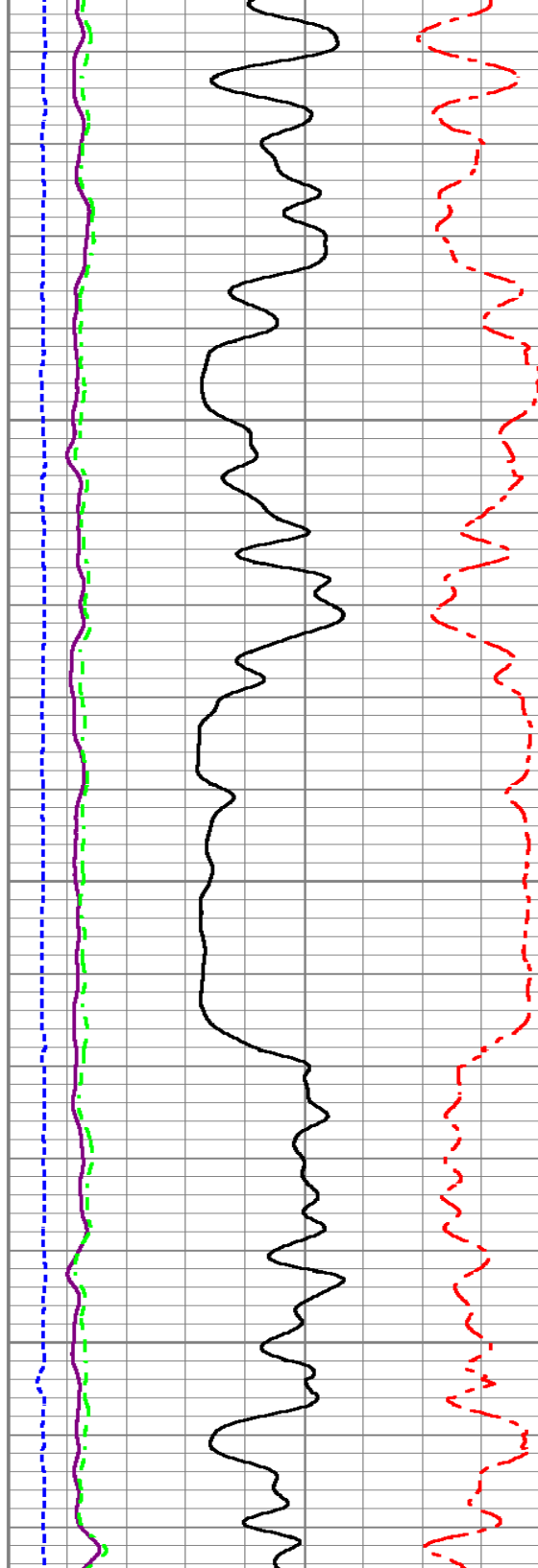
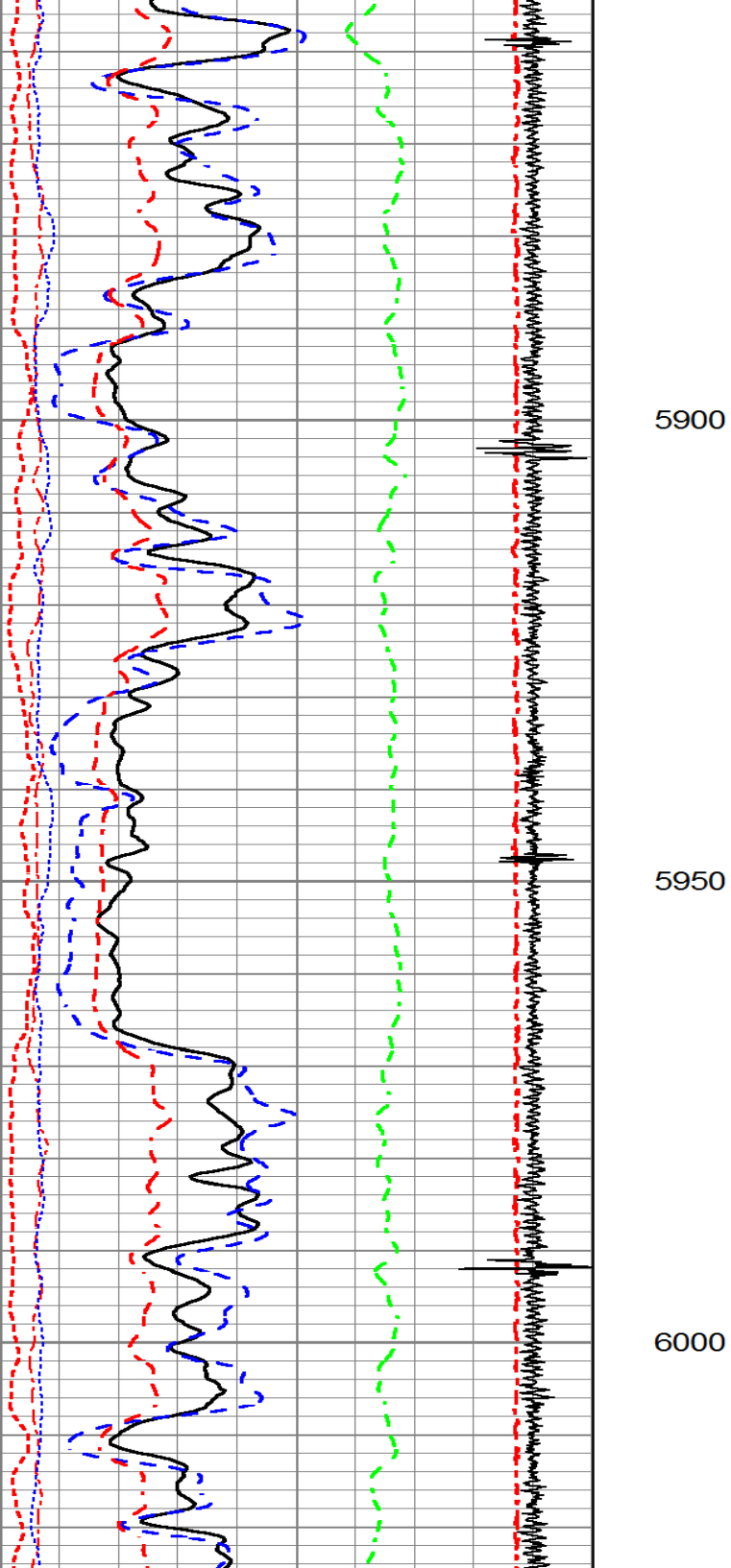
5700

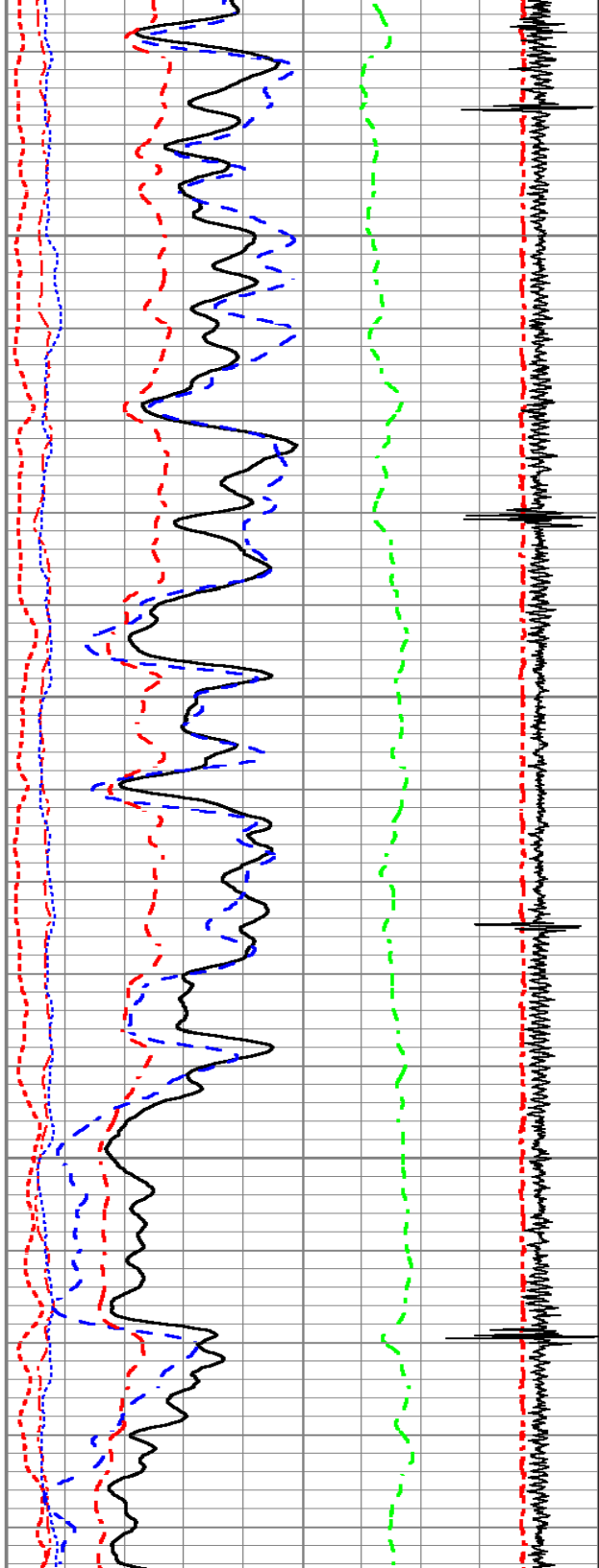
5750

5800

5850



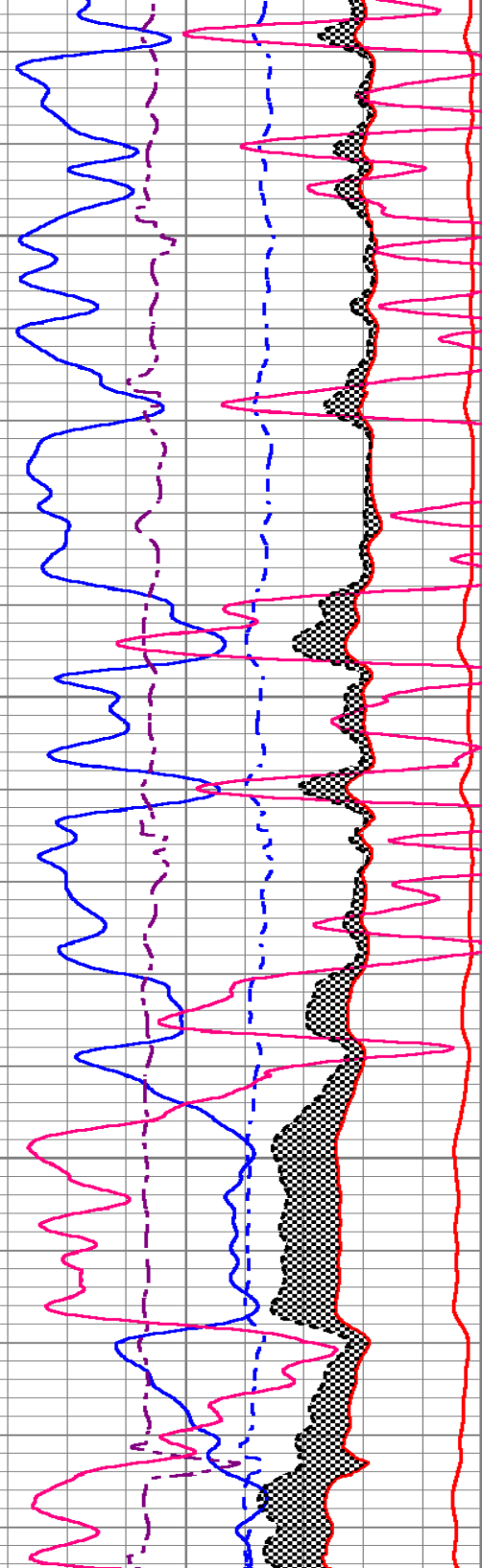
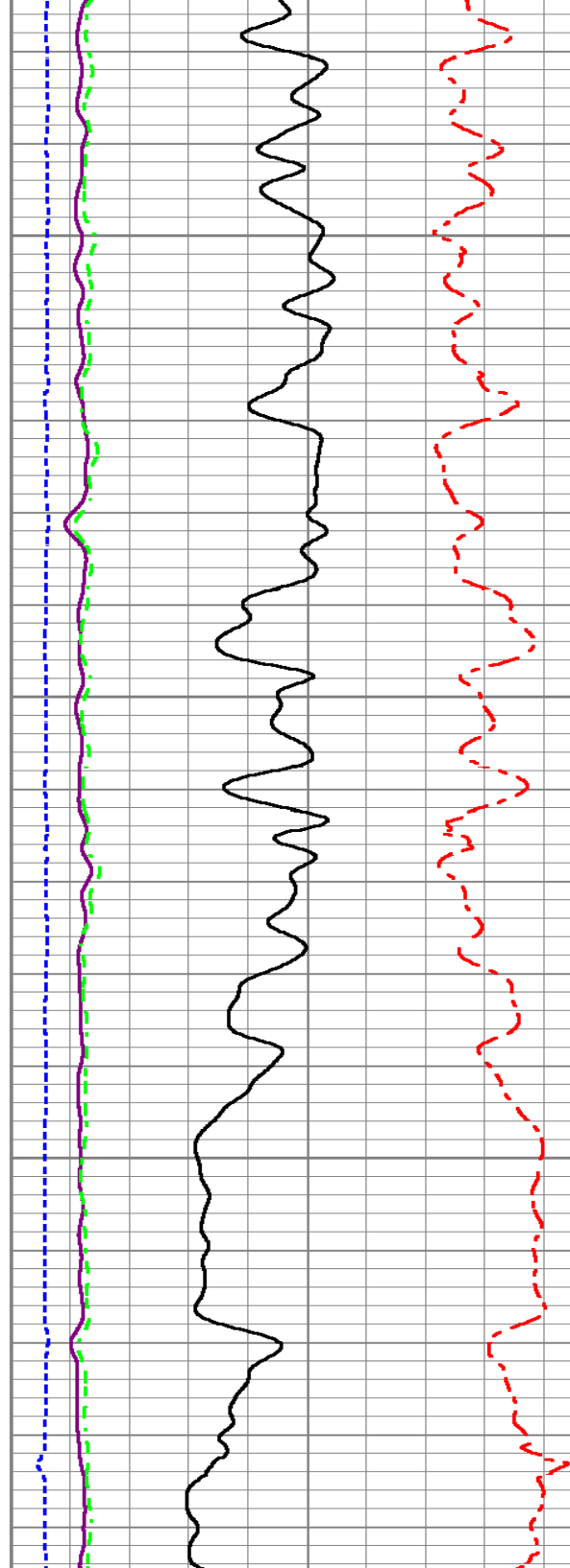


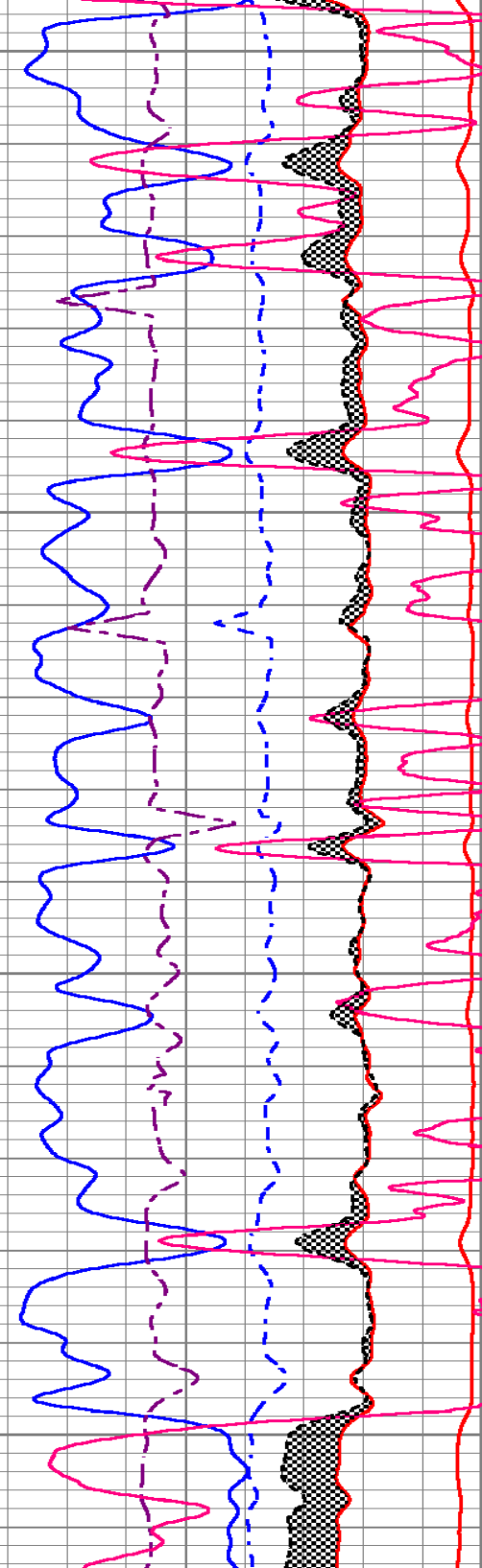
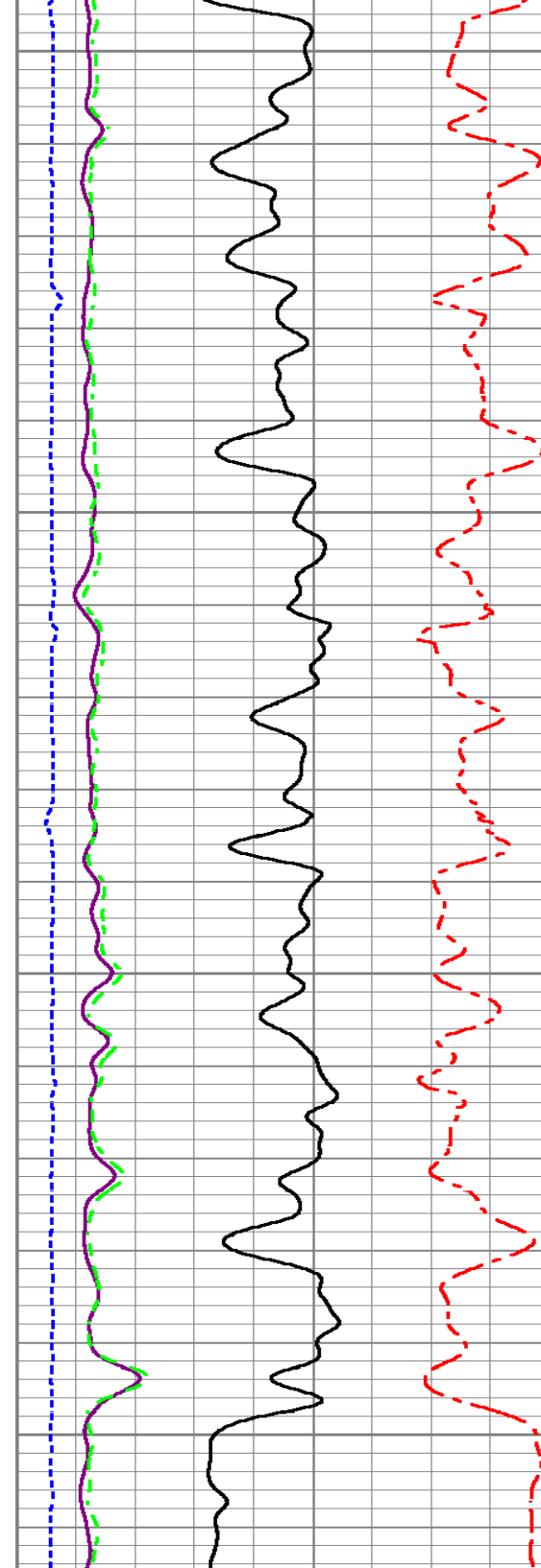
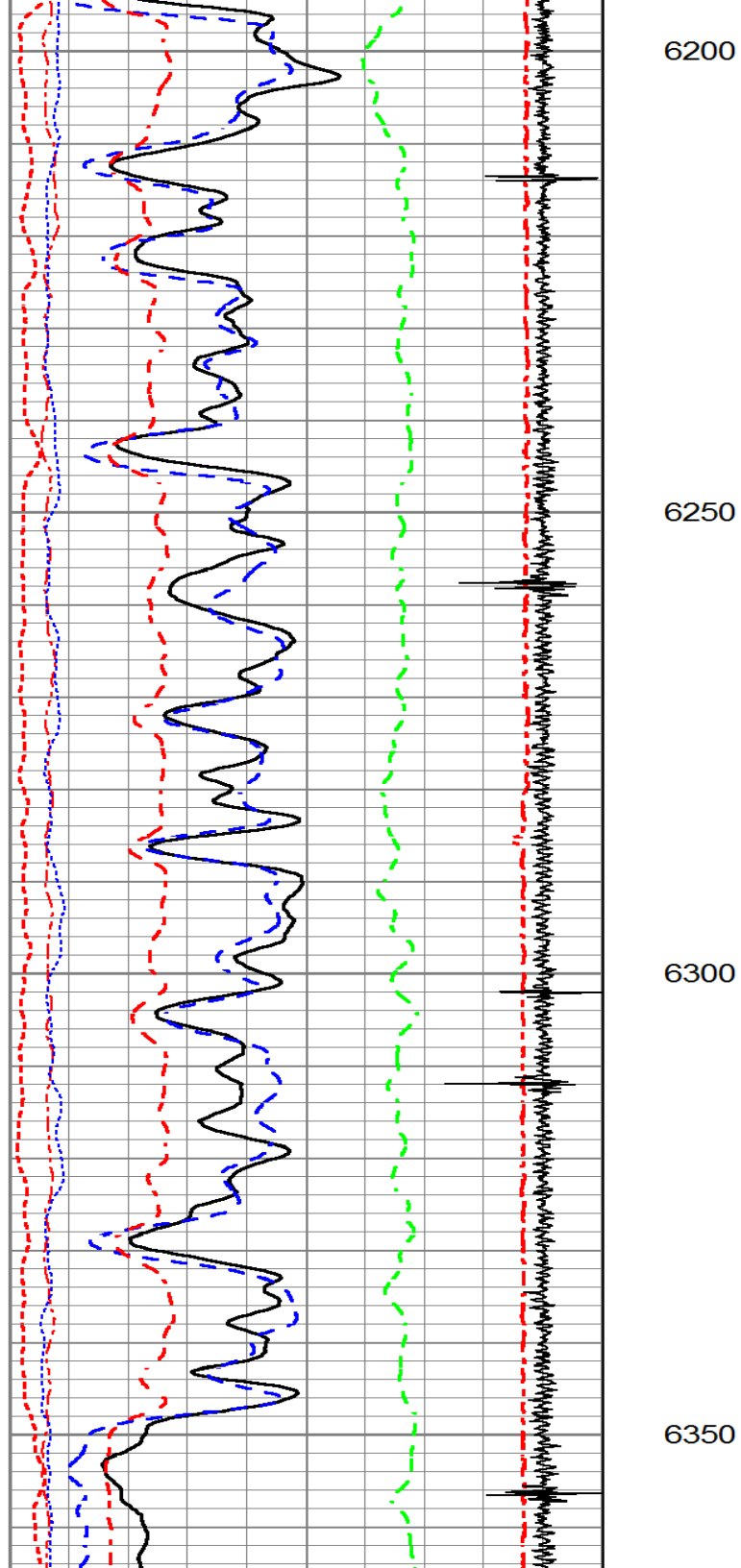


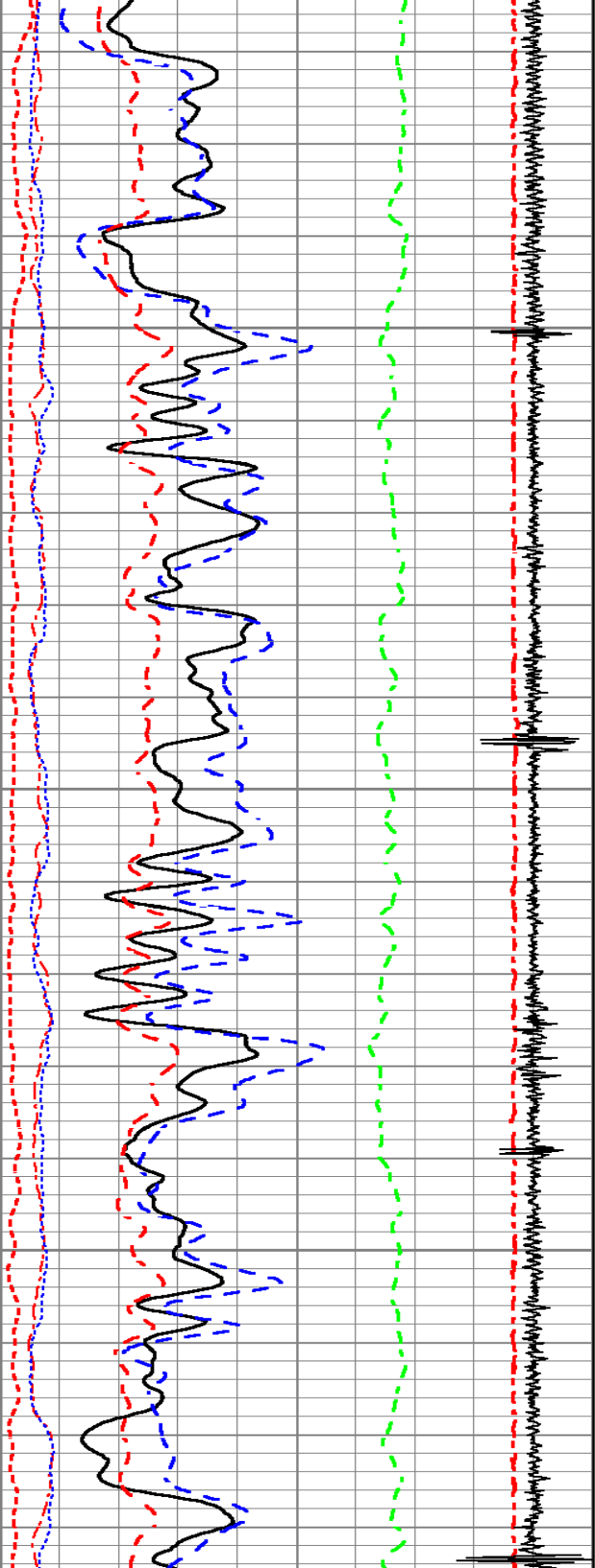
6050

6100

6150



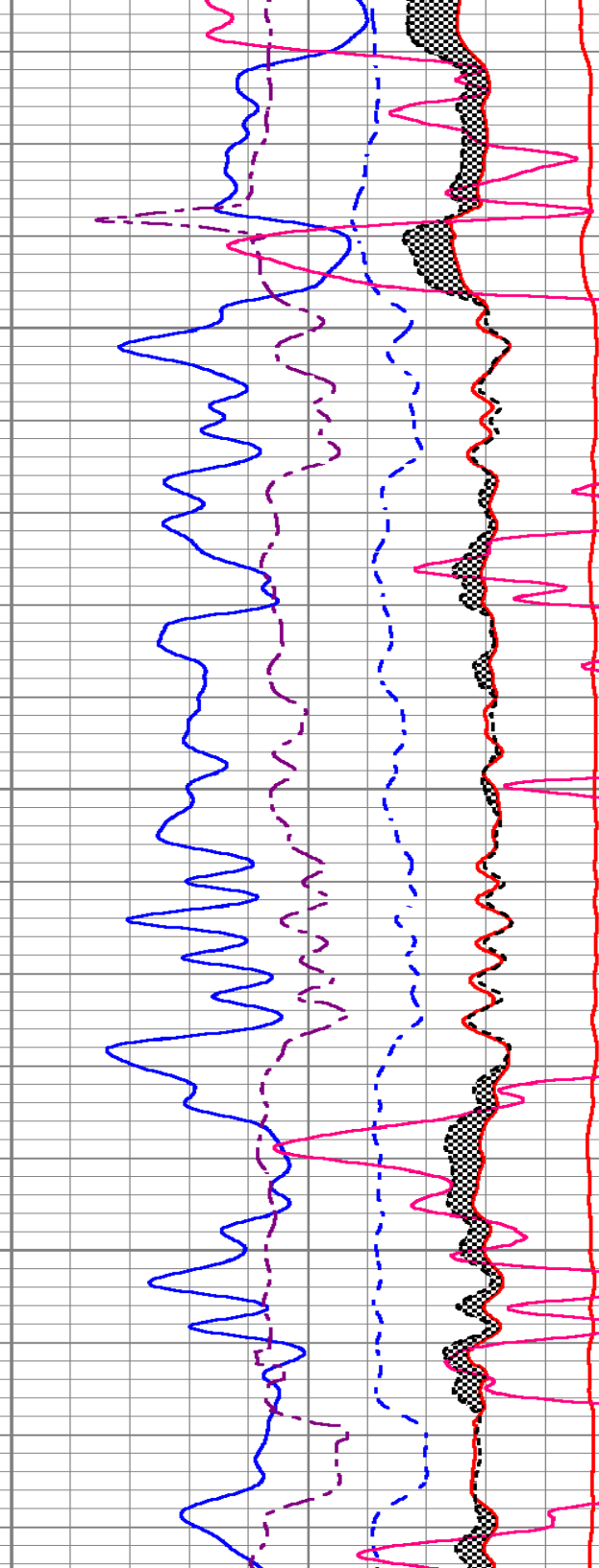
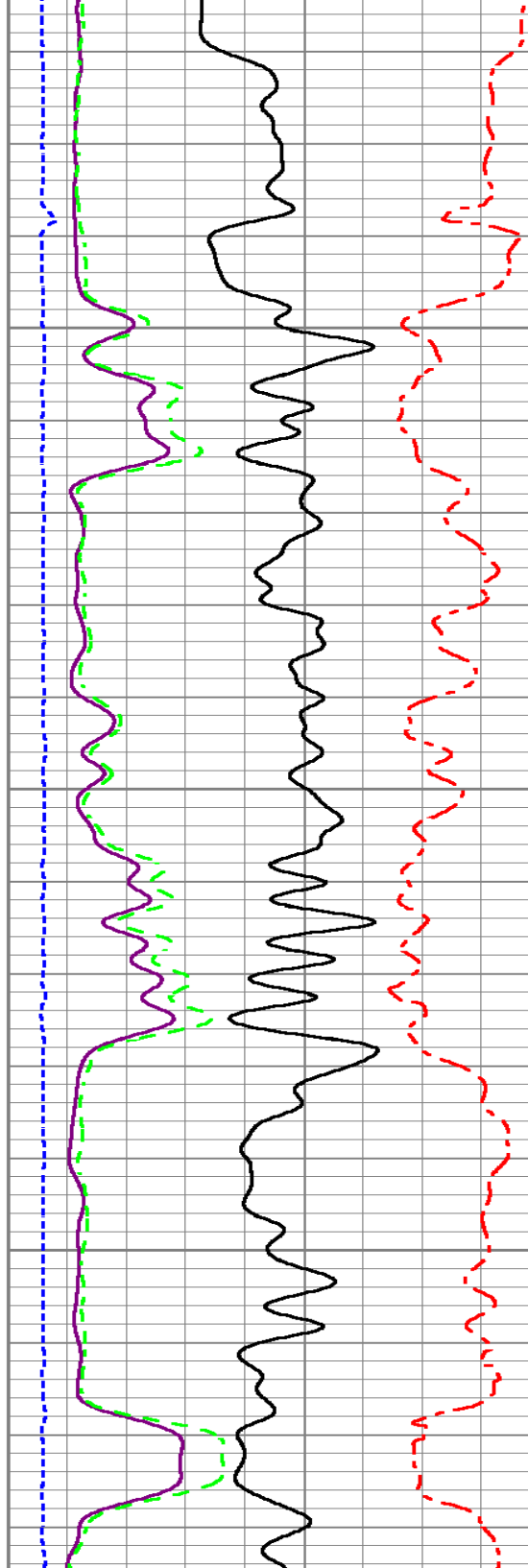


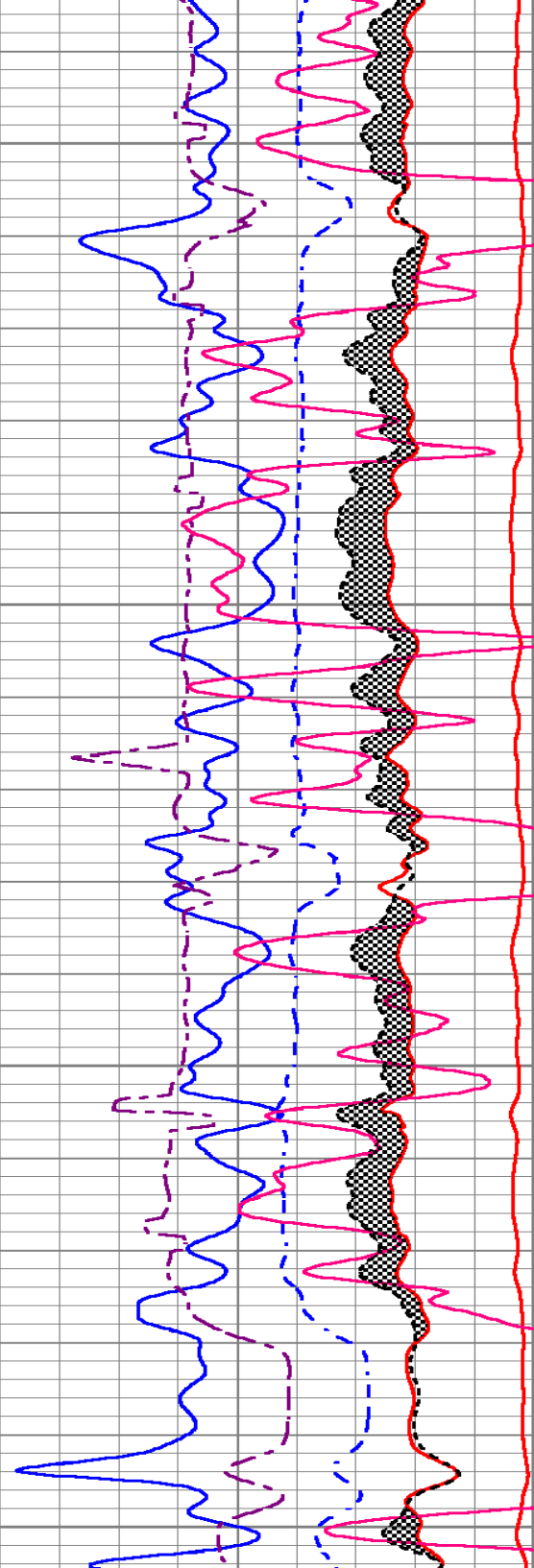
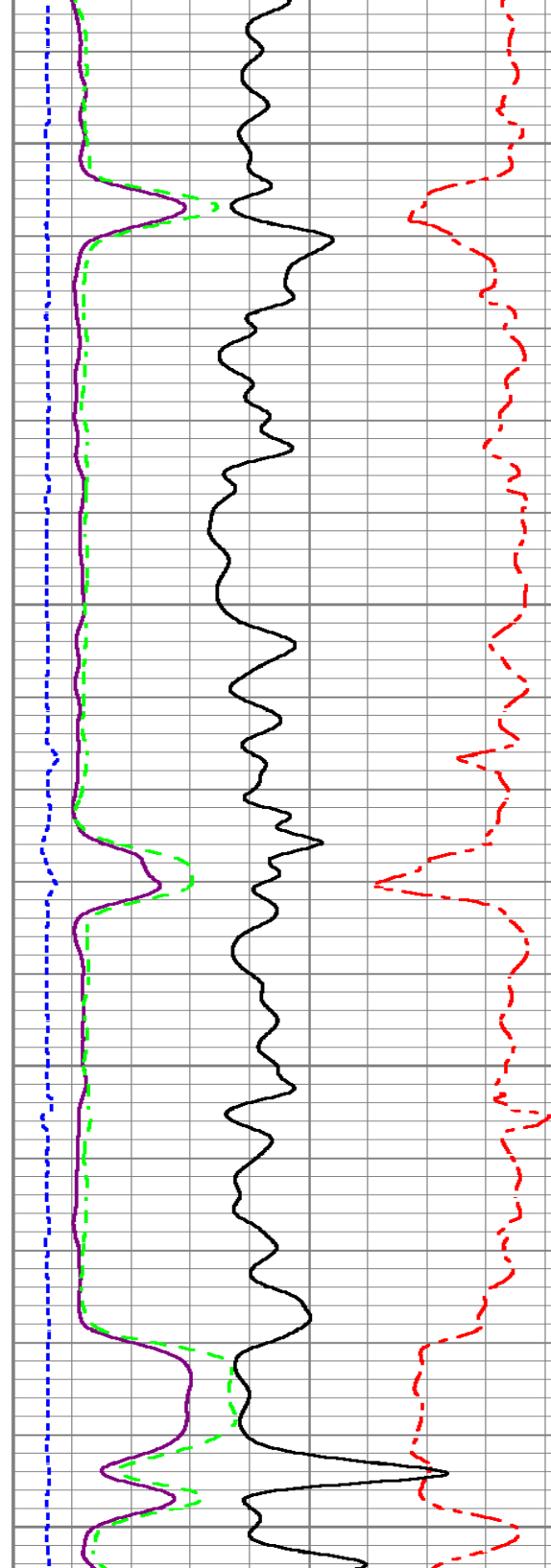
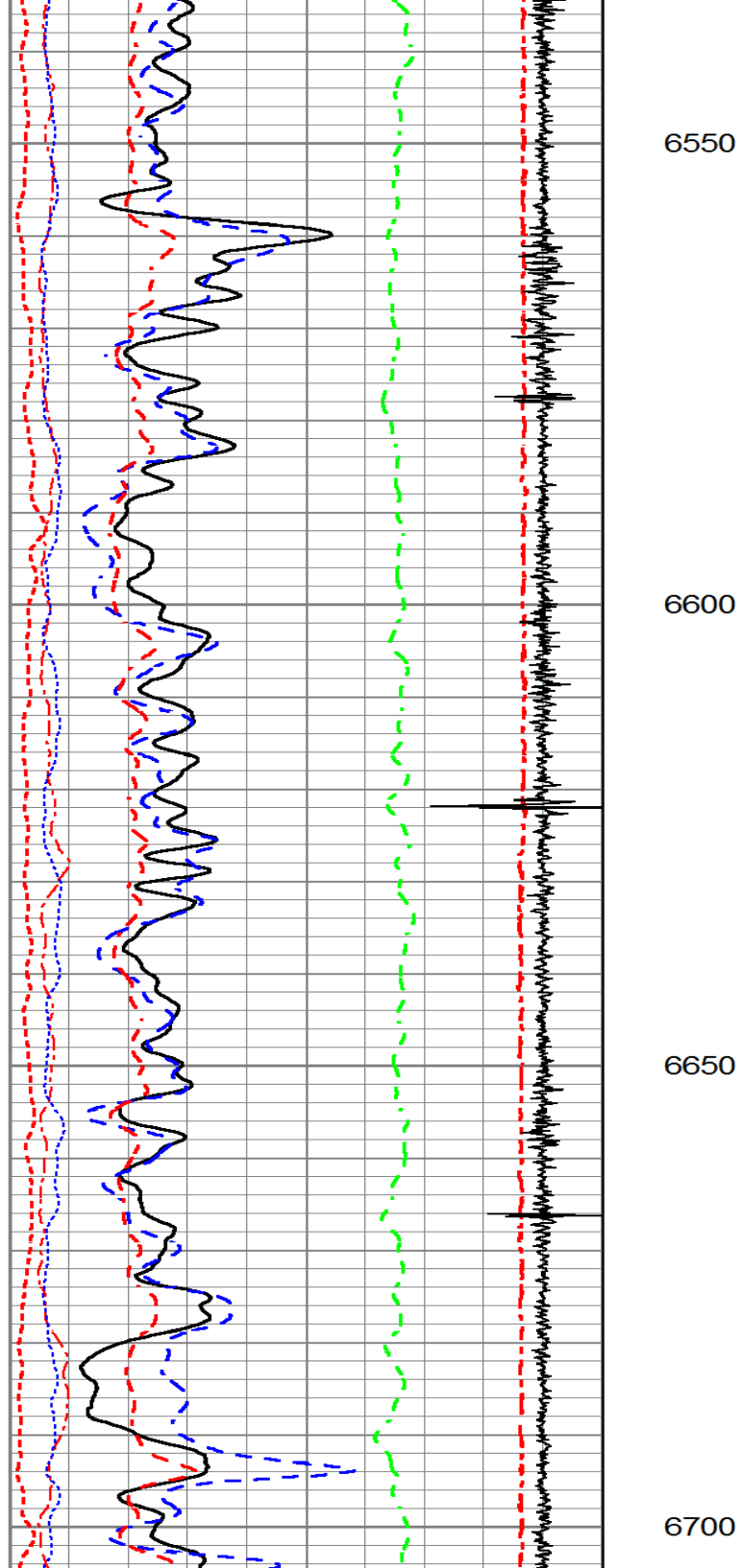


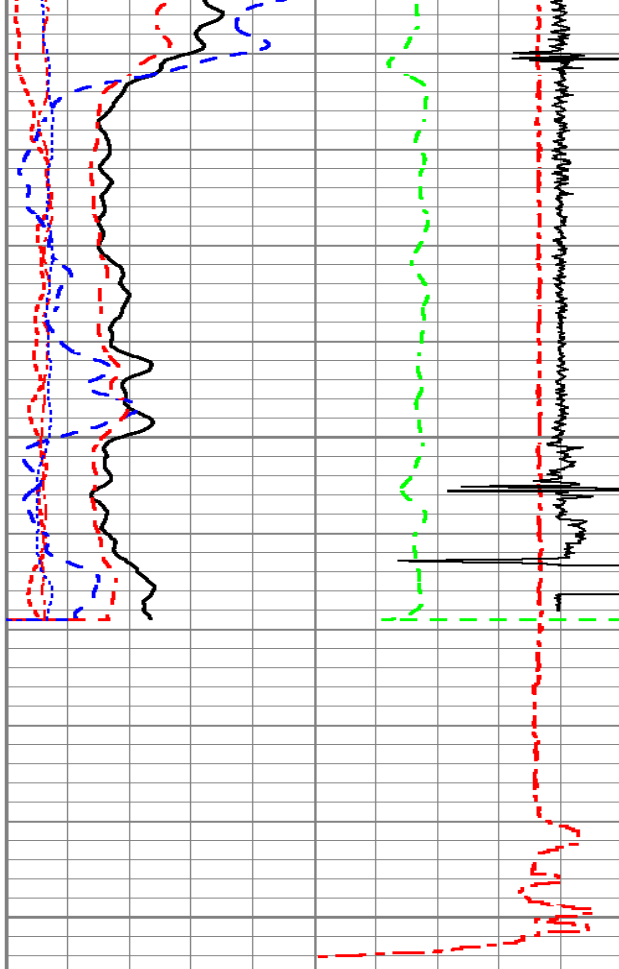
6400

6450

6500





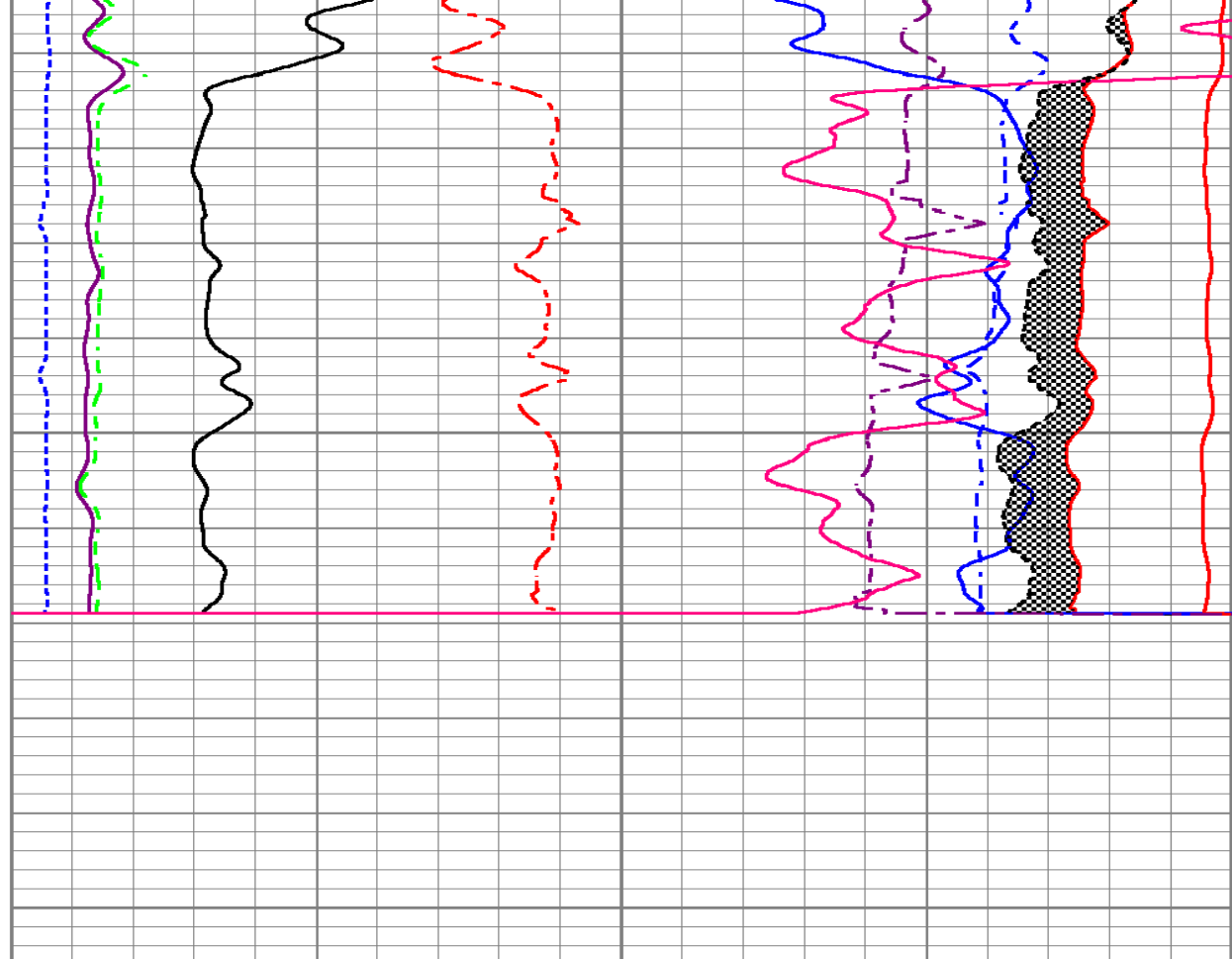


6750

6800

200	Rm3SGBN	0
0	Rm3OAI2	100
0	GR (GAPI)	200
-20	LSPD (ft/min)	20
-540	CCL	60
10	Rm3SGFF	40
0	Rm3SGFN	100
0	Rm3CFTR1	1
0	Rm3CFTR2	1

TENSION



60	Rm3SGIN	0
0	Rm3SATG ()	1
2	Rm3RNF	0.5
0	Rm3RIN	15
0	Rm3RICF	6
0	Rm3YH1	1
0	Rm3YH2	1
60000	Rm3NCAP	0
60000	Rm3FCAP	0
100000	Rm3FSIN	0
60000	Rm3LCAP	0
100000	Rm3NSIN	0

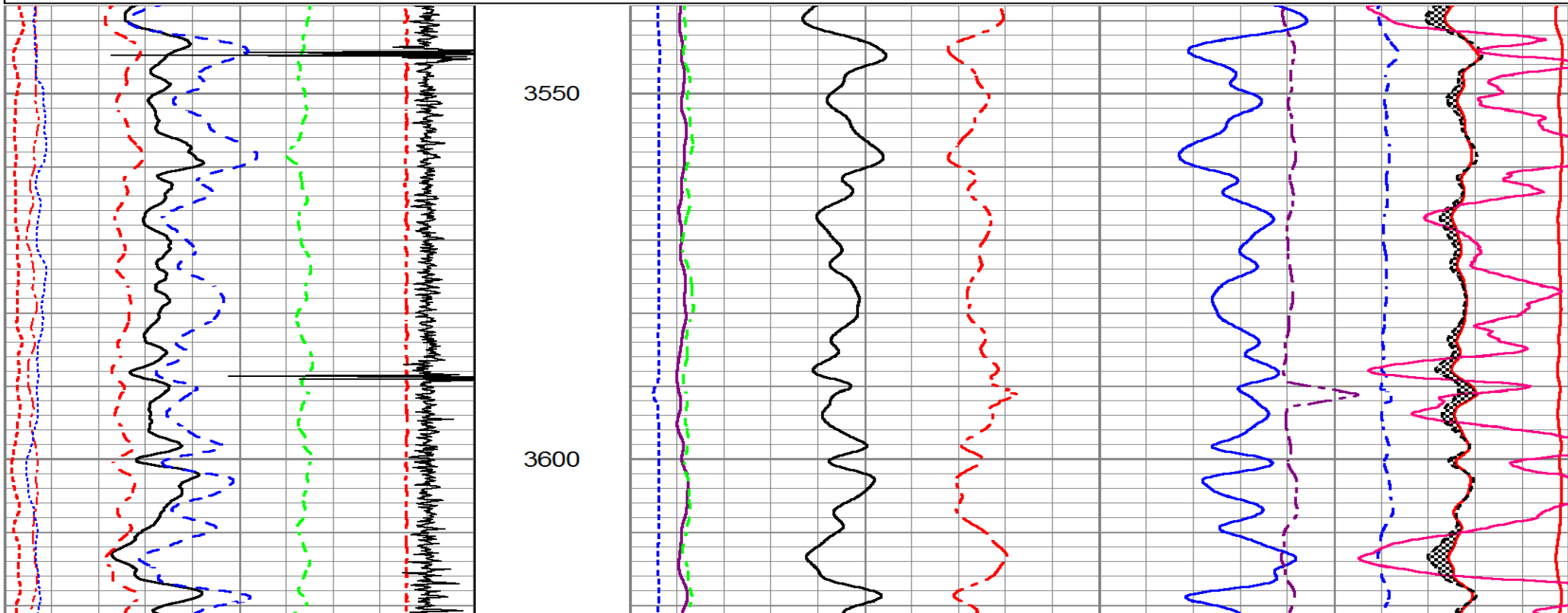
HALLIBURTON

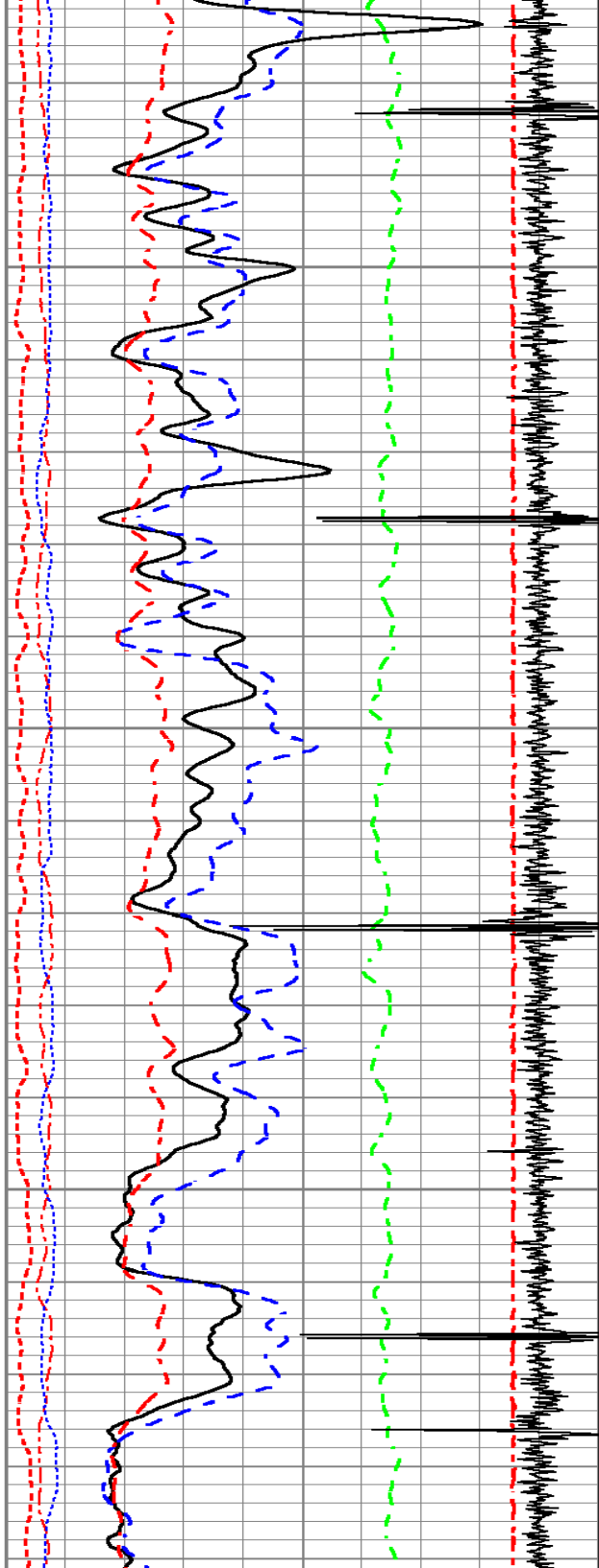
MAIN PASS

5" = 100'

Database File yater_43c_2.db
 Dataset Pathname RPT1
 Presentation Format 1_URSA~2
 Dataset Creation Sun Apr 12 09:54:56 2015
 Charted by Depth in Feet scaled 1:240

200	Rm3SGBN	0	TENSION	60	Rm3SGIN	0
0	Rm3OAI2	100		0	Rm3SATG ()	1
0	GR (GAPI)	200		2	Rm3RNF	0.5
-20	LSPD (ft/min)	20		0	Rm3RIN	15
-540	CCL	60		0	Rm3RICF	6
10	Rm3SGFF	40		0	Rm3YH1	1
0	Rm3SGFN	100		0	Rm3YH2	1
0	Rm3CFTR1	1				
0	Rm3CFTR2	1				

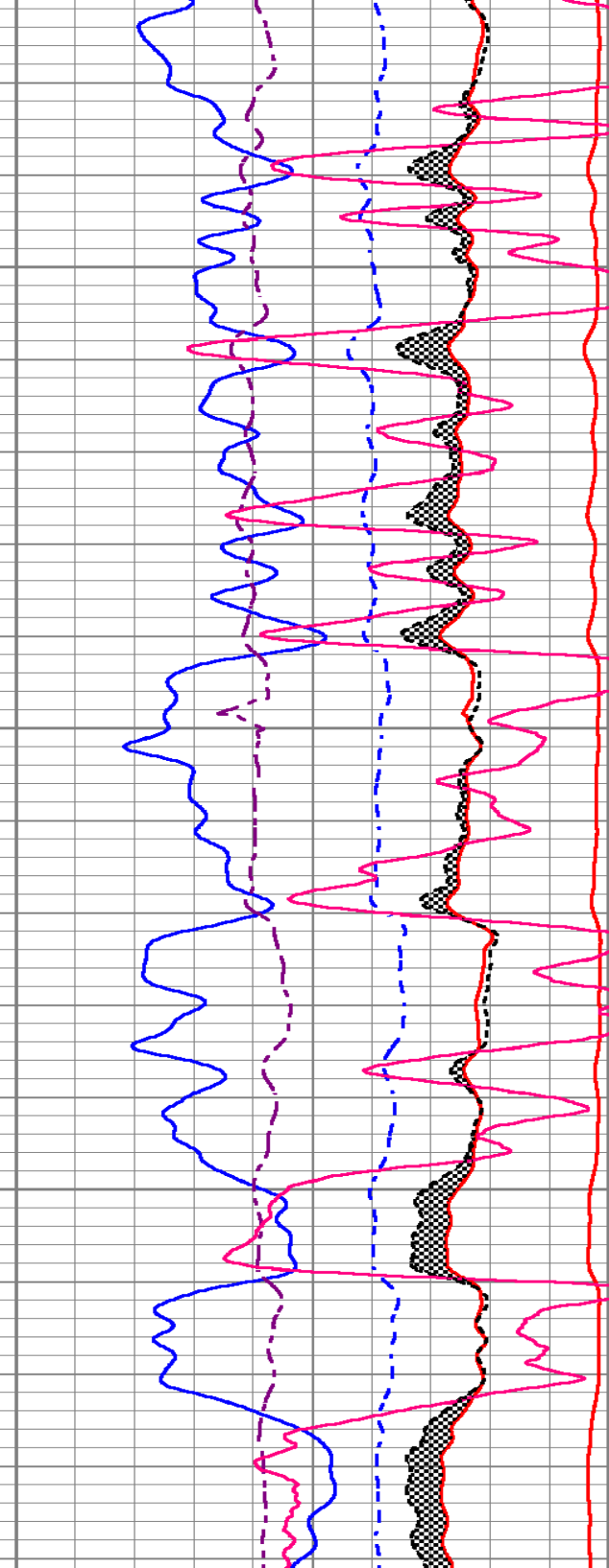
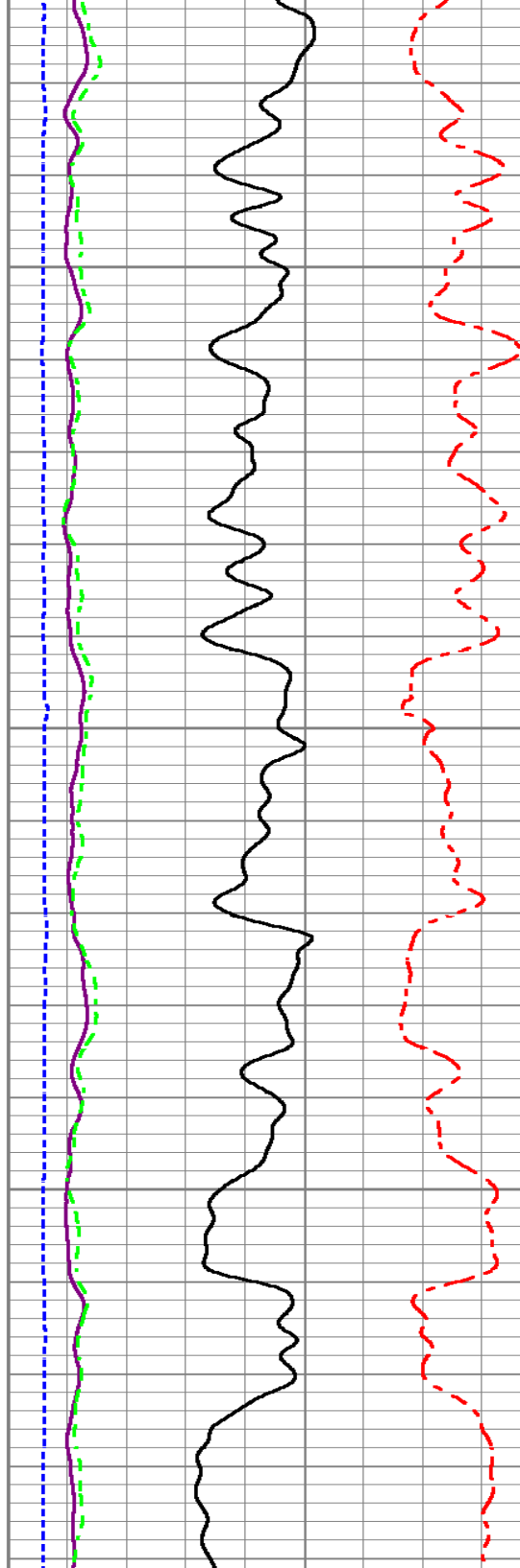


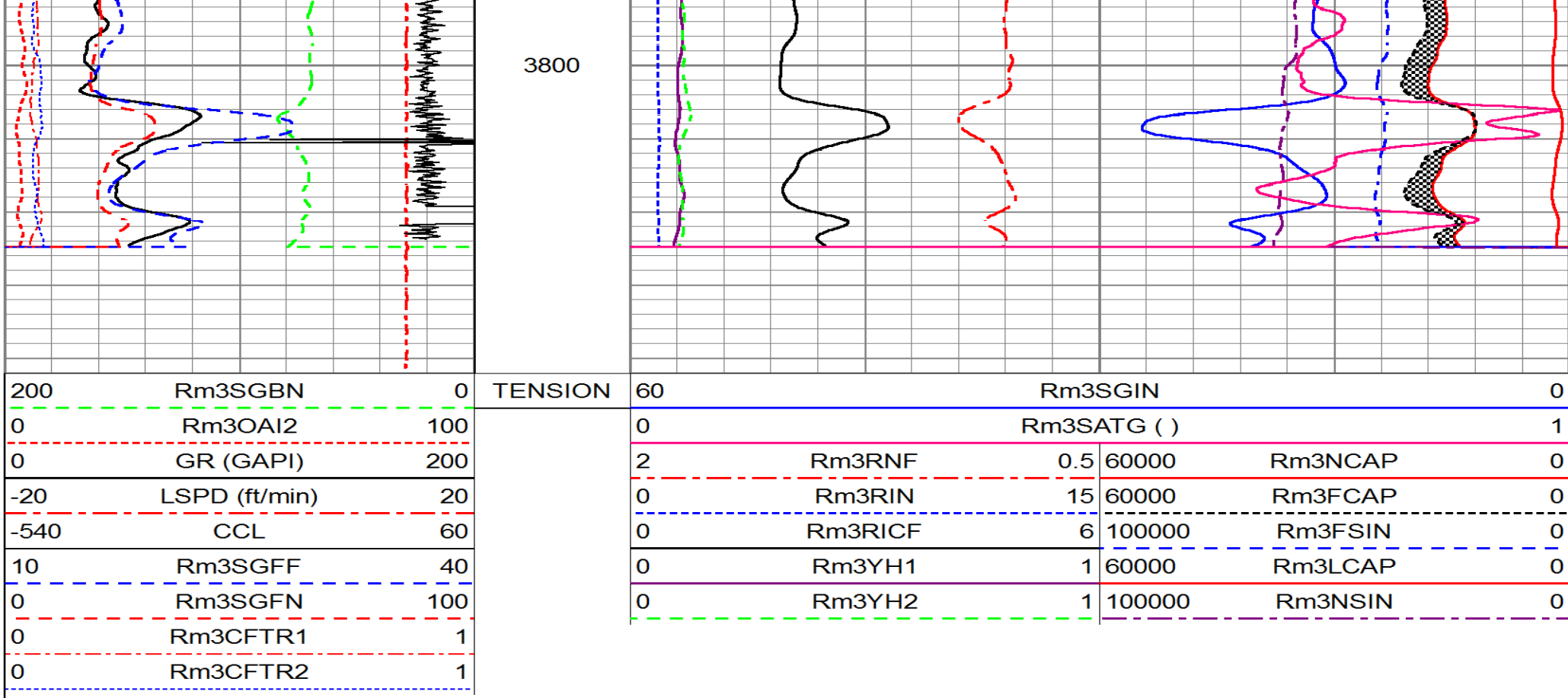


3650

3700

3750





HALLIBURTON

REPEAT PASS

5" = 100'

Log Variables							
DatabaseC:\ProgramData\Warrior\Data\yater_43c_2.db							
Dataset field/well/run1/TEST2/_vars_							
Top - Bottom							
BHTEMP_Src	BHSAL2	BHSAL1	RUN3D?	POROSL2	POROSL1	POROS2	POROS1
TEMP	0	1	Yes	0	1	0	1
LTH	UHSGC	RHOCFL	RHOCF	SO in	BORSAL kppm	CASED?	MSGGN
Sandstone	NONE	0.15	0.25	0	150	Yes	1
USERFTT	ZREF	CASEWGHT	SRFTEMP	MudWgt	CASETHCK	CASEOD	PERFS

usec/ft 0	MRayl 1.7	lb/ft 11.6	degF 0	lb/gal 8.4	in 0.25	in 4.5	0
TDEPTH ft 0	BOTTEMP degF 100	BITSIZE in 7.875					

Calibration Report	
Database File	yater_43c_2.db
Dataset Pathname	TEST2
Dataset Creation	Sun Apr 12 10:28:45 2015
Reservoir Monitor Tool I (3 Detector) Calibration Report	
Serial-Model:	12210524-A
Shop Calibration Performed:	Thu Apr 09 16:10:18 2015

Carbon/Oxygen Mode						
Stabilization						
Result	Logged	Expected Value	Diff.	Tol.	Units	
GENV	80.00	80.00	0.00	+/-15.00	V	
ITCR2	3268	3250	18	+/-250	cps	
Near Detector						
H	Channel	Expected Value	Amplitude	FWHM	Tol.	
Fe	60	60 +/-2	0.0270	5.53	<6.00	
NGAIN = 0.997	206	206 +/-2	0.0972	-----	-----	
Far Detector						
H	Channel	Expected Value	Amplitude	FWHM	Tol.	
Fe	61	60 +/-2	0.0350	5.60	<6.50	
FGAIN = 0.995	209	208 +/-2	0.0909	-----	-----	
Flask Temperature	62.2 degF					
Result	Logged	Expected Value	Diff.	Tol.	Units	
NFER	2.14	2.10	0.04	+/-0.10		

FFER	1.82	1.80	0.02	+/-0.30	
LFER	1.26	1.60	-0.34	+/-0.60	
COIR2	0.44	0.45	-0.01	+/-0.02	
LIRI2	1.65	1.64	0.01	+/-0.05	
TCCR2	4744	5000	-256	+/-1000	cps
ITCR2	3168	3200	-32	+/-250	cps

Sigma Mode					
Stabilization					
Result	Logged	Expected Value	Diff.	Tol.	Units
GENV	81.00	80.00	1.00	+/-15.00	V
FCAP	10086	10000	86	+/-500	cps
Horizontal Water Tank					
Result	Logged	Expected Value	Diff.	Tol.	Units
NFER	2.10	2.10	-0.00	+/-0.10	
FFER	1.94	1.80	0.14	+/-0.30	
LFER	1.35	1.60	-0.25	+/-0.60	
N/F Normalizer	0.931	0.935	-0.004		
N/L Normalizer	0.106	0.111	-0.005		
N/F Inel Norm	0.601	0.610	-0.009		
N/L Inel Norm	0.056	0.055	0.001		
RNF	1.074	1.070	0.004	+/-0.120	
RNL	9.435	9.000	0.435	+/-1.000	
RINC	1.665	1.640	0.025	+/-0.180	
RINCL	17.945	18.000	-0.055	+/-2.000	
SGFN	24.10	24.00	0.10	+/-0.50	cu
SGFF	22.92	22.85	0.07	+/-0.50	cu
SGFL	22.01	22.00	0.01	+/-1.00	cu
FSIN	23934	24000	-66	+/-2000	cps
LSIN	2264	2400	-136	+/-500	cps
FCAP	10083	10000	83	+/-1000	cps
LCAP	1148	1200	-52	+/-200	cps
NFTR	0.84			<5.00	
FFTR	0.88			<5.00	
LFTR	1.14			<5.00	
NBKG	192			<500	cps
FBKG	110			<500	cps
LBKG	29			<500	cps
RTN	0.421	0.400	0.021	+/-0.100	usec
RTF	0.447	0.400	0.047	+/-0.100	usec

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:	12386763-A
Calibration Performed:	Sun Apr 12 03:38:14 2015

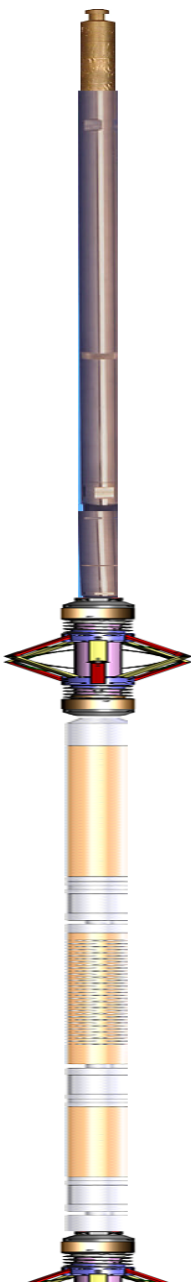
Free Pipe Calibration		
TT	Measured	Units
Amplitude	245.7	usec
Log Base Line	643.0	mV
	-5.7	mV
Calibration References and Gain		
Name	Value	Units
Pipe O.D.	4.500	in
Pipe Weight	11.6	lb/ft
Pipe Ref. Amp.	81.2	mV
Amp. Gain	0.125	

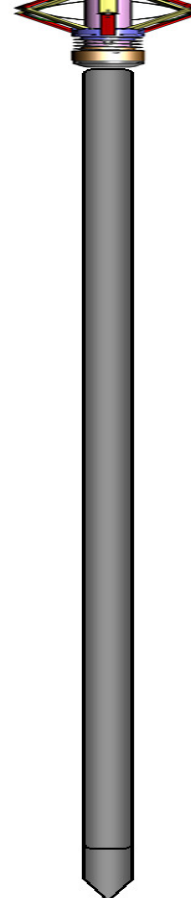
Gamma Ray Calibration Report

Type / Serial:	002 / 12105787
----------------	----------------

SHOP CALIBRATION		Fri Apr 10 15:01:55 2015			
	Counts/Sec.	Gain	Offset	Jig	Units
Background	37.7				cps
Calibrator	384.0				cps
		1.2112			GAPI/cps
PRIMARY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI
BEFORE SURVEY VERIFICATION					
Background	0.0				cps

Calibrator Difference	0.0	0.0	cps 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 (12105787) 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		XHU-003 (000001) Crossover Halliburton 1553 to Ultrawire	1.58	1.69	7.00
Rm3NBACK	7.75					
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		HCBLM-A (12386763) 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					

Rm3FPrgSt1	0.00		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		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				
Rm3GenIsppv	0.00				
Rm3GenIsppcmd	0.00				
Rm3GenRepPv	0.00	Dataset:	yater_43c_2.db: field/well/run1/TEST2		
Rm3GenRepV	0.00	Total length:	39.61 ft		
Rm3GenRepSv	0.00	Total weight:	360.00 lb		
Rm3GenContSta	0.00	O.D.:	3.13 in		

Company	URSA OPERATING COMPANY				
Well	YATER 43C-18-07-95				
Field	PARACHUTE				
County	GARFIELD		State	CO	
HALLIBURTON		RESORVOIR MONITORING TOOL - ELITE			