

# Bit Run Summary

Type		Petrofree SBM									
Mud weight	ppg	10.05									
Solids	%	13.3									
Chlorides	mg/L	204100									
Rm	ohm.m@°C	n/a									
Rmf	ohm.m@°C	n/a									
Rmc	ohm.m@°C	n/a									
Potassium	%	0.0									
<b>Environmental data</b>											
<b>GR</b>											
Mud weight	ppg	10.05									
Bit size	in.	8.5									
<b>Resistivity</b>											
<b>Neutron porosity</b>											
Hole Size	in.	8.5									
Mud weight	ppg	10.05									
Temperature	°C	120.0									
Mud salinity	ppm	27227									
Formation salinity											
Recording rate 1	SEC	5 sec.									
Recording rate 2	SEC	5 sec.									
Filtering GR		3 pt.									
Filtering density		3 pt.									
Filtering Neutron		3 pt.									
Company representative	B. Steel	T. Paltridge	R. Bain								
Schlumberger D&M Personnel	J. Dolan	M. Y. Tan	D. Hastie	T. Auger	C. Soper	B. Hanson					

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#### OTHER SERVICES FOR RUN2

Xceed\* RSS  
D&I Survey

#### REMARKS: RUN NUMBER 2

8-1/2 in. hole section was drilled from 845.0 m to 4955.0 m.

Depth is referenced to Driller's Depth.

All data presented is from tool memory.

GR corrected for mud weight, tool and bit size.

ARC\*6 resistivity is corrected for bit size, mud resistivity and borehole temperature.

Neutron porosity is calculated with a limestone matrix and is corrected for bit size, borehole salinity, temperature and mud hydrogen index.

PEF readings were affected by the presence of Barite in the mud system.

Caliper data spikes are due to stick and slip while drilling.

Mud type is Petrofree SBM.

POOH due to TD.

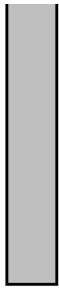
# EQUIPMENT DESCRIPTION

RUN2

## DOWNHOLE EQUIPMENT

6-3/4 in. ADN*6C	Neutron F	34.72	36.69
S/N: 0403	Neutron N	34.57	
8-1/4 in. Stabiliser	Density S	33.70	
NSR-M A202	Density L	33.60	
GSR-J A1994	UltraSonic	33.22	
Software: V8.3A02	R-O Port	32.46	
6-3/4 in. Sonic*6			30.09
S/N: 34641	Receiver	27.03	
Software: V6.4B01	R-O Port	26.63	
	Transmitter	23.59	
6-3/4 in. PowerPulse*			22.80
MDC FA28	D&I	18.55	
MEC 1080			
MDI 491			
MVC 095			
Software: V8.0C00			
	R-O Port	11.48	
8-3/8 in. In Line Stabiliser T5	T3	11.38	14.89
S/N: S15535-2	T1	11.07	
6-3/4 in. ARC*6	Gamma Ray	10.77	13.79
S/N: 669	Receiver	10.41	
Software: V9.0B00	T2	10.36	
	T4	10.11	
	ARC APRS	9.80	
		9.65	
6-3/4 in. Xceed* RSS			7.88

S/N: 059



Reed Hycalog PDC Bit  
RSX 162 S/N: 209390  
OD 8-1/2 in.

0.00

0.23

Maximum string diameter 8.50 in.  
All lengths in Meters

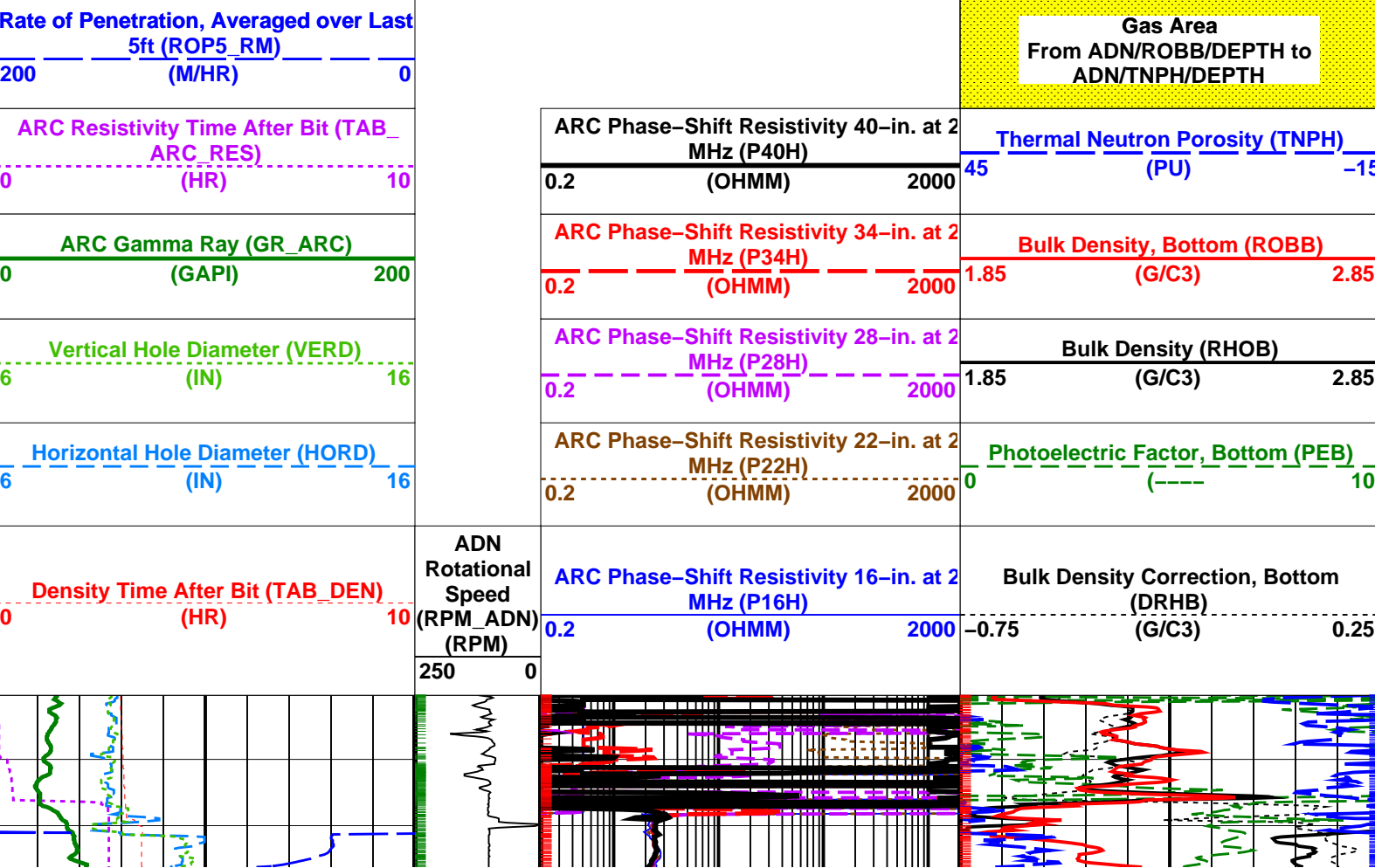
IDEAL Version: ID10\_0C\_04  
IDF

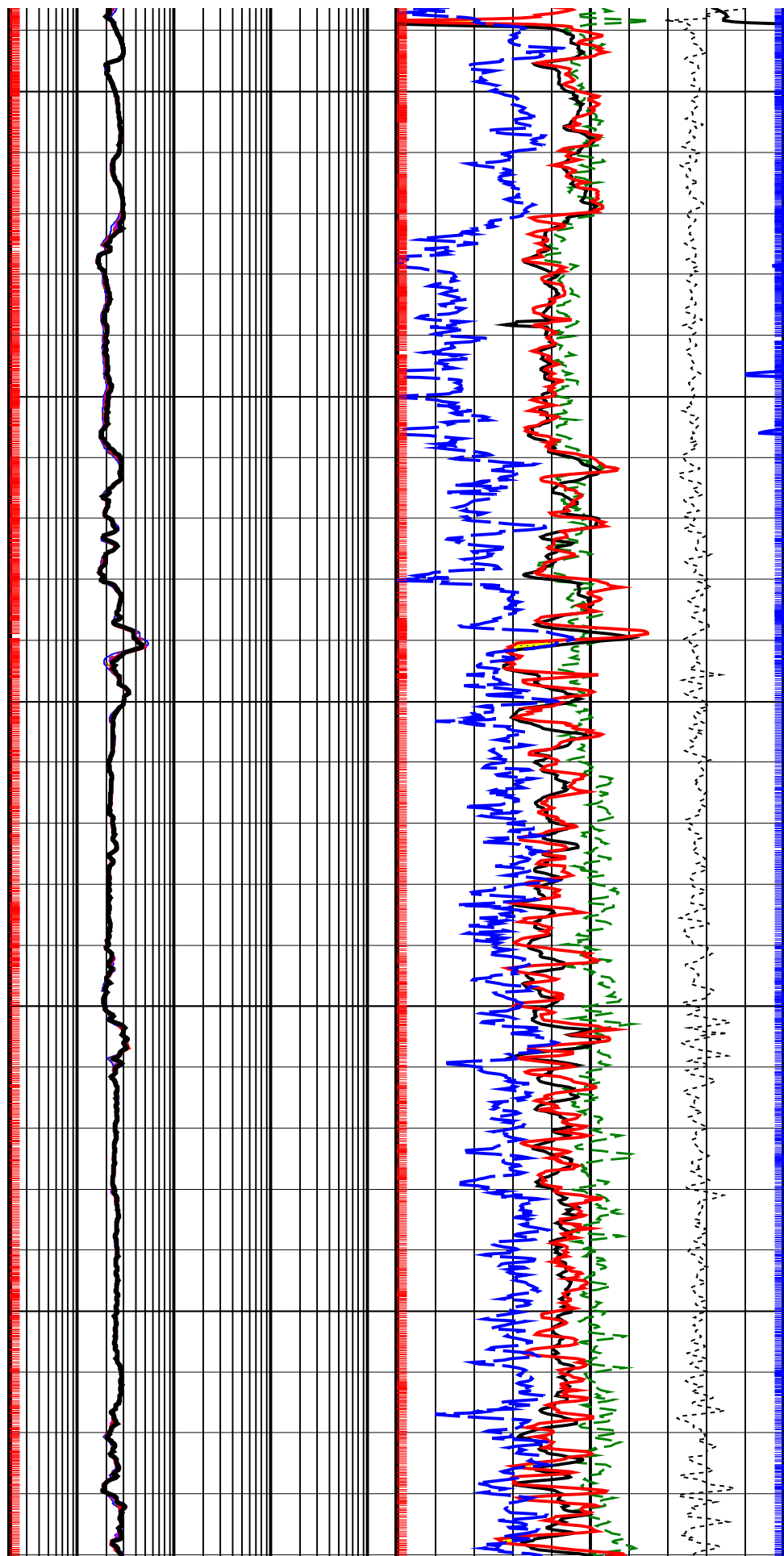
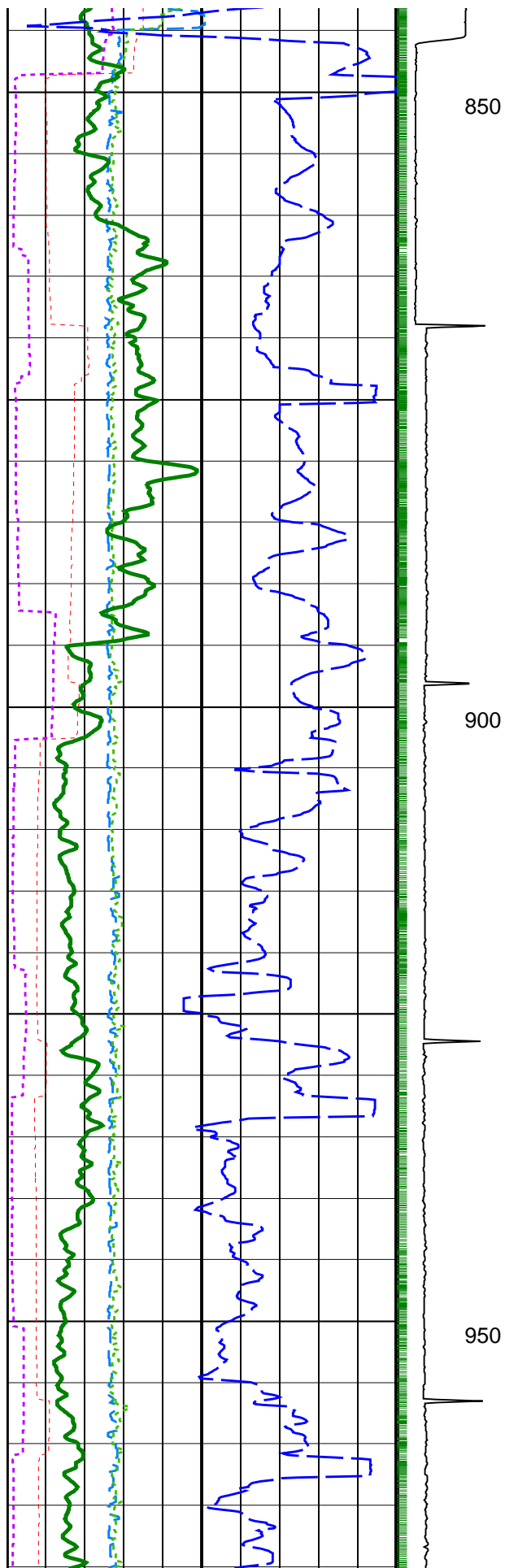
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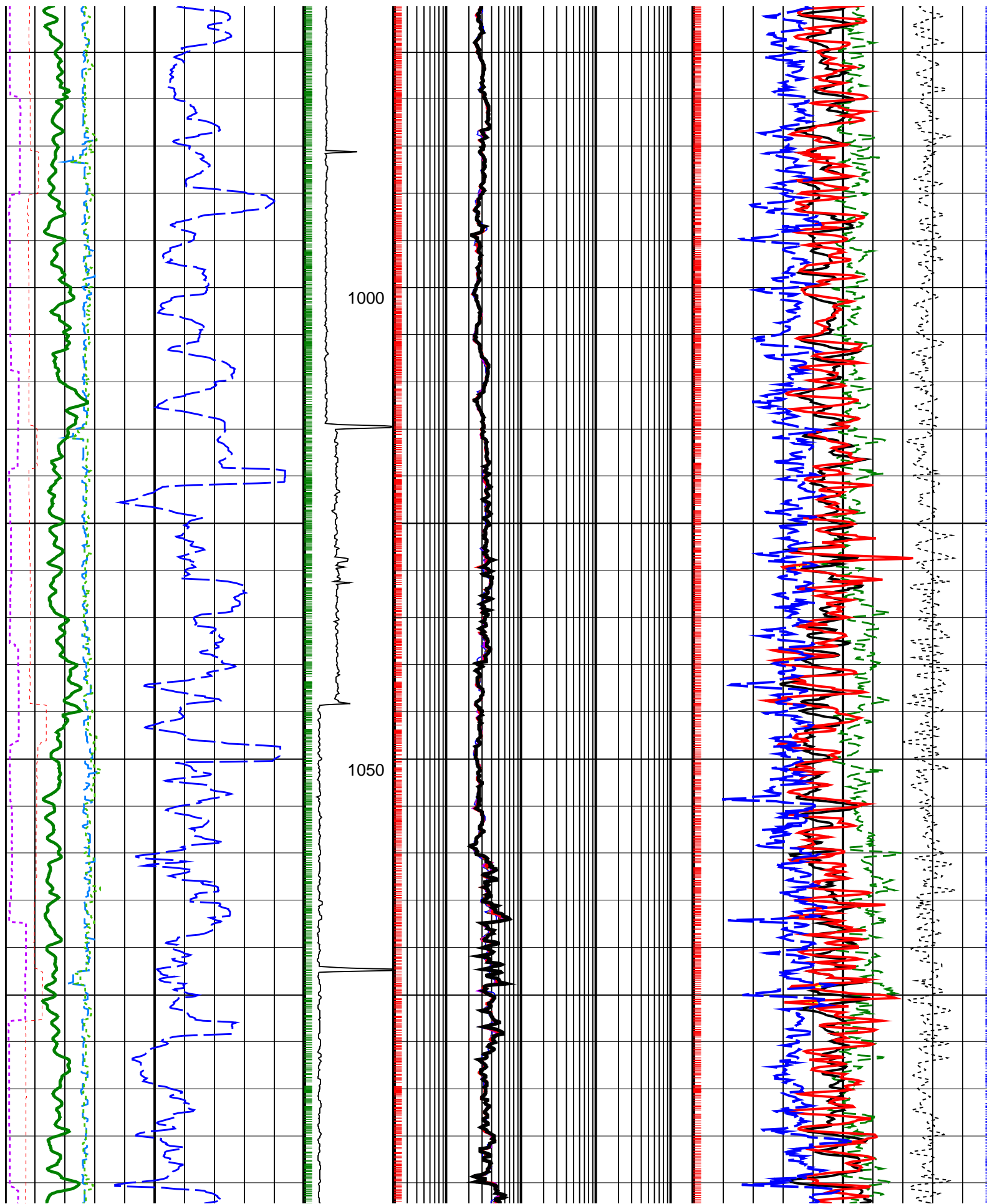
PIP SUMMARY

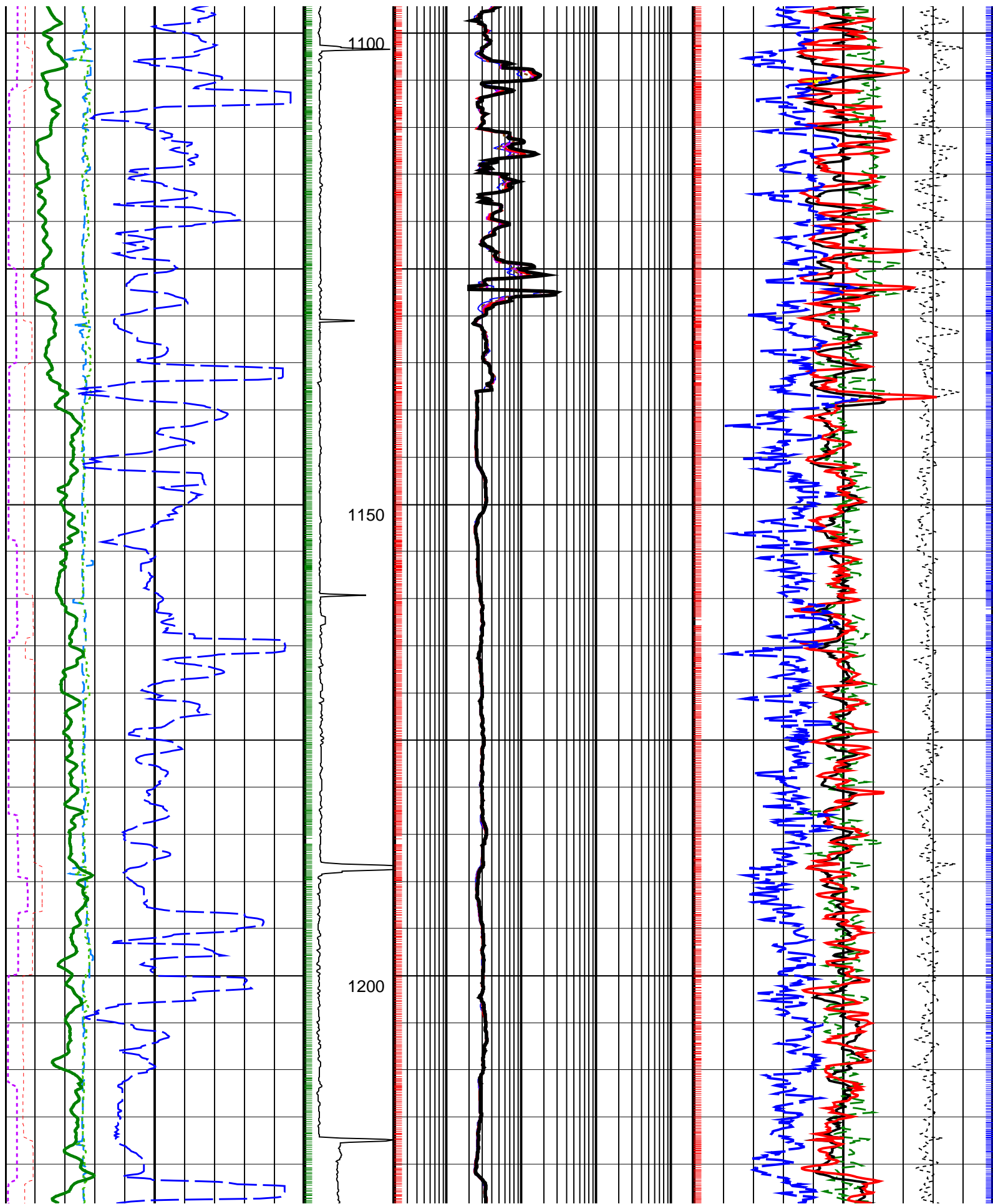
Density Ticks, 0.1 ft      Neutron Ticks, 0.1 ft

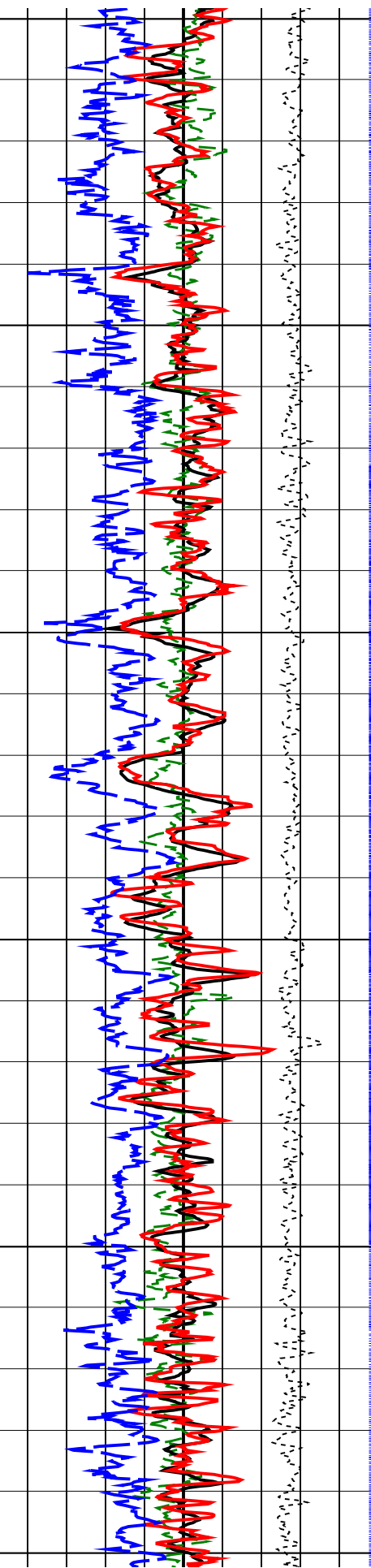
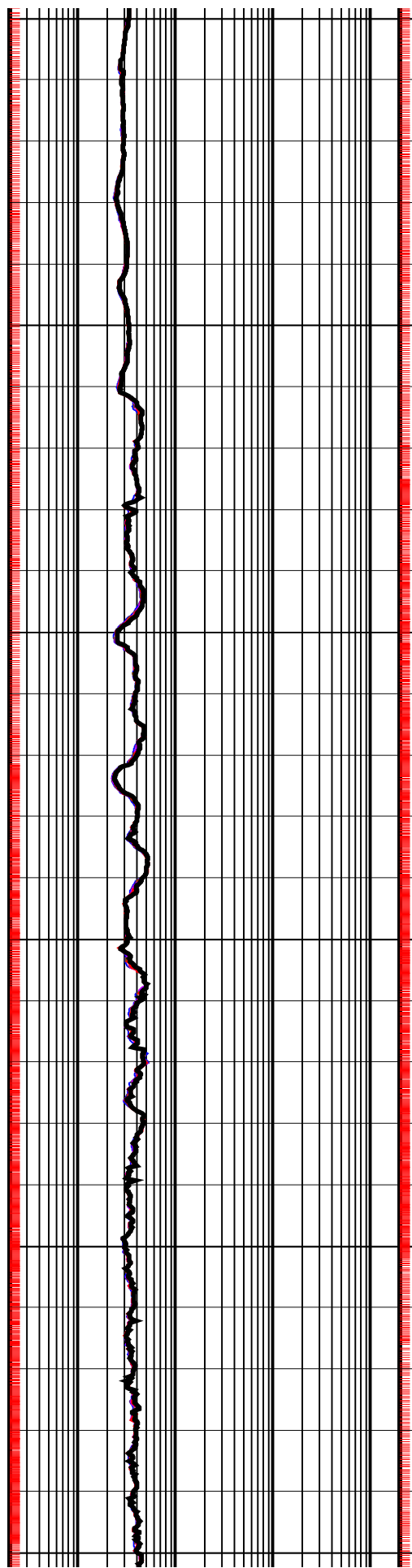
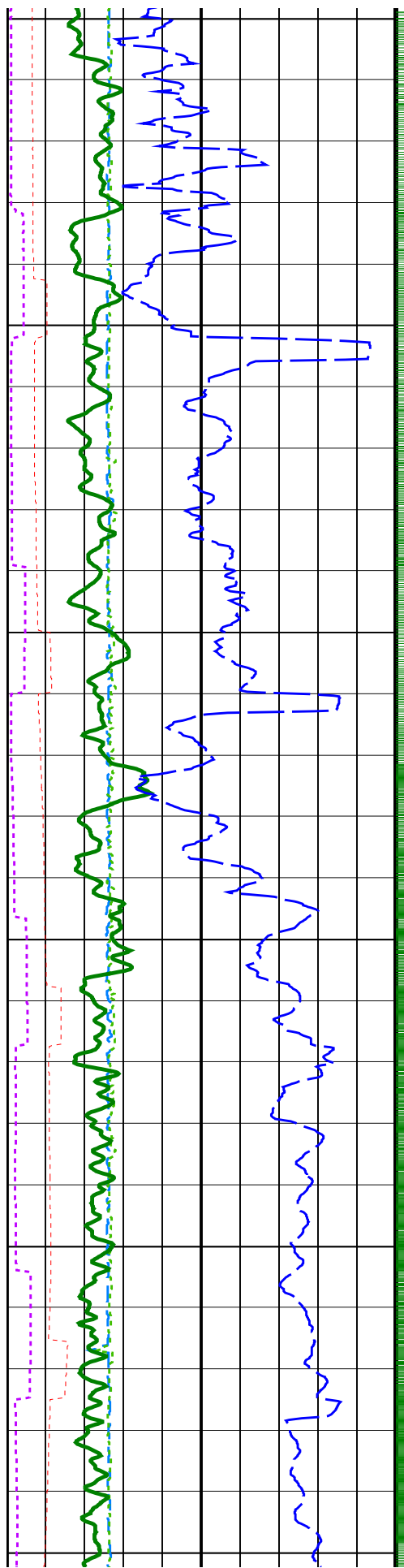
ARC Resistivity Samples  
ARC Gamma Ray Samples

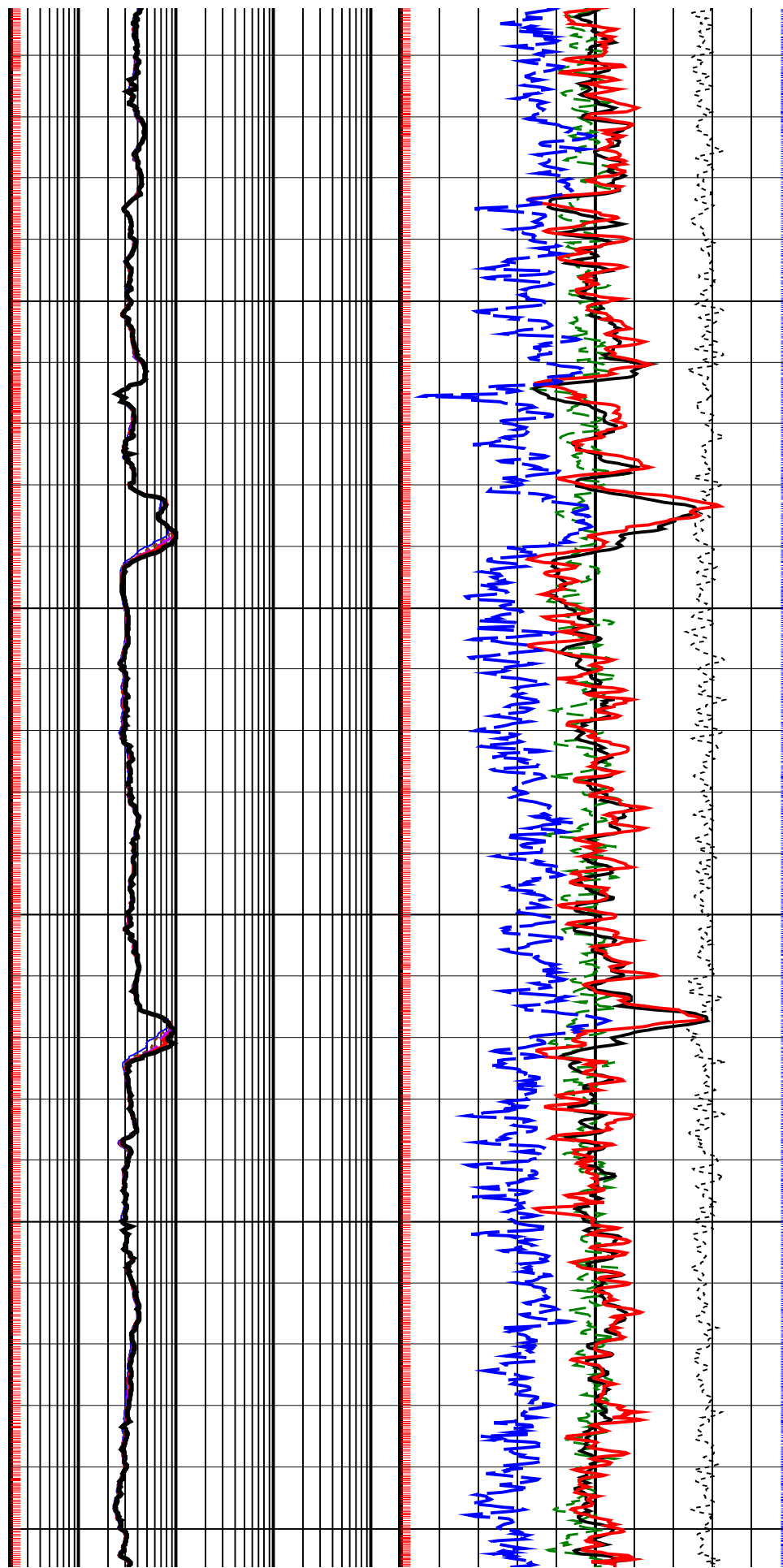
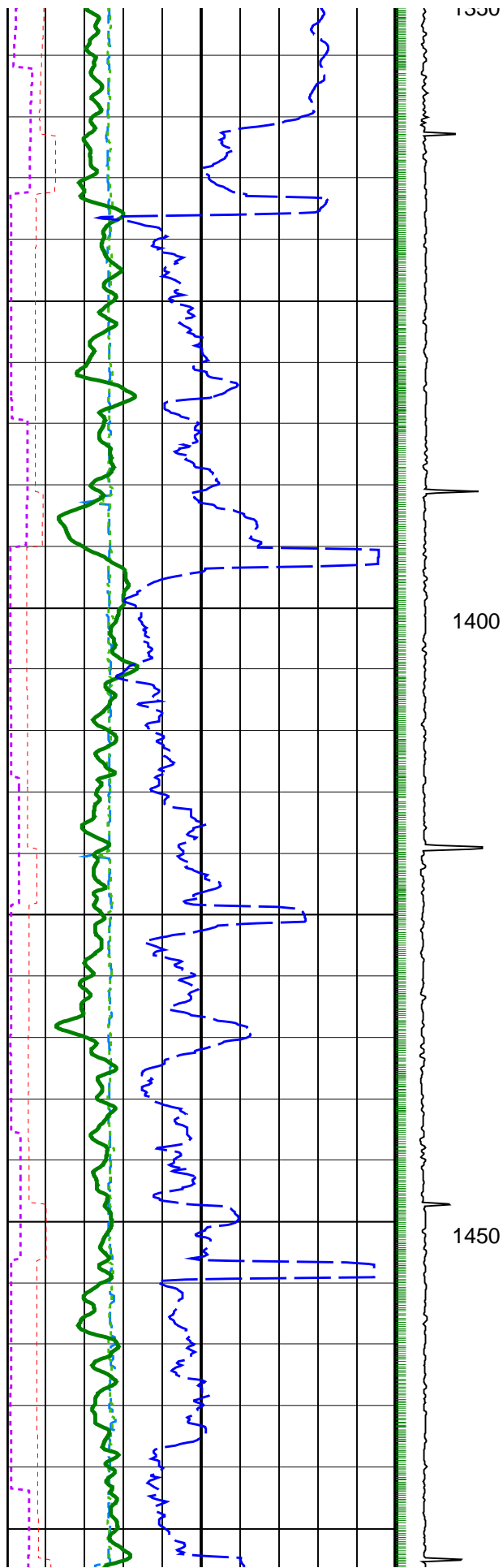


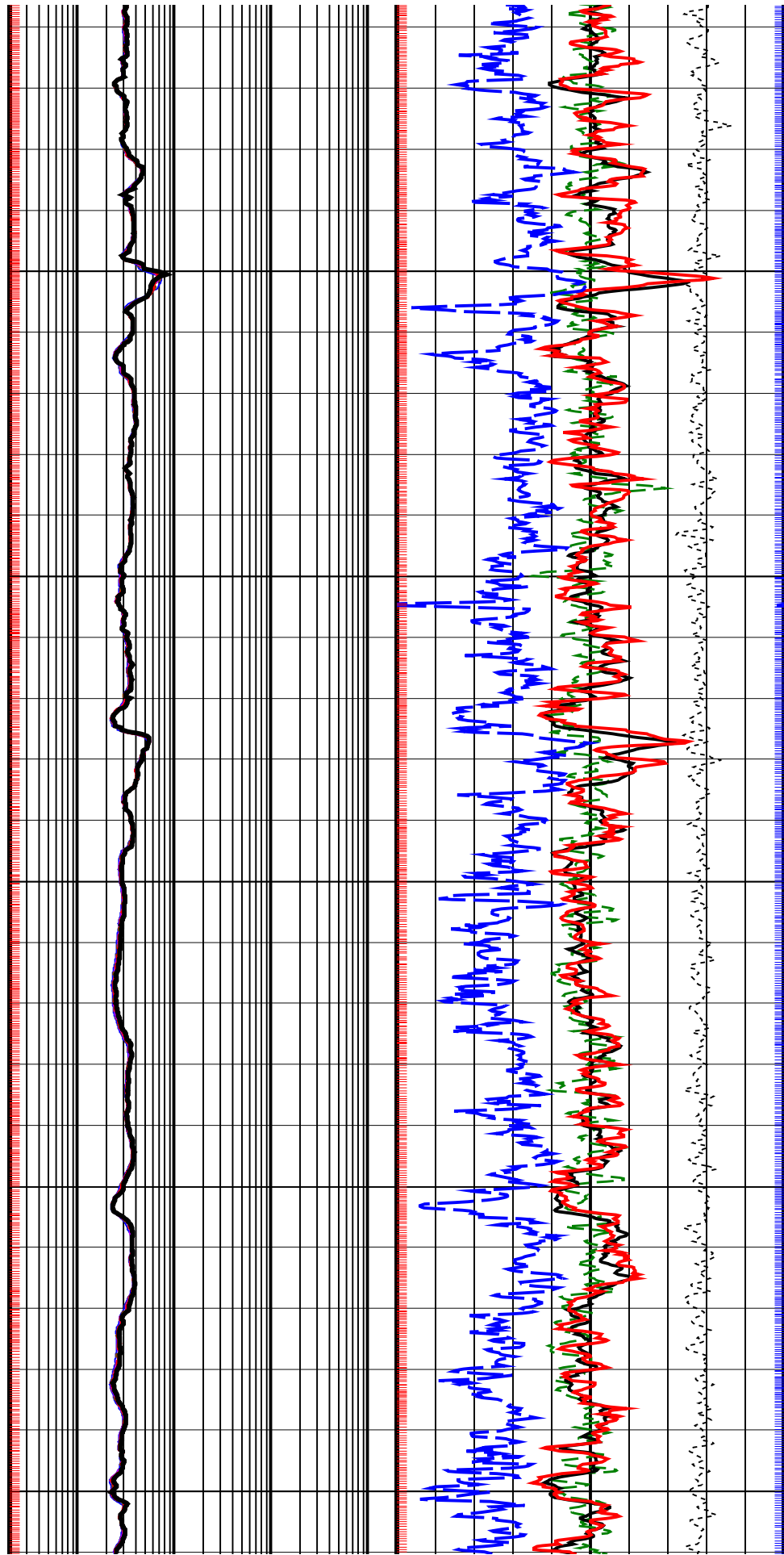
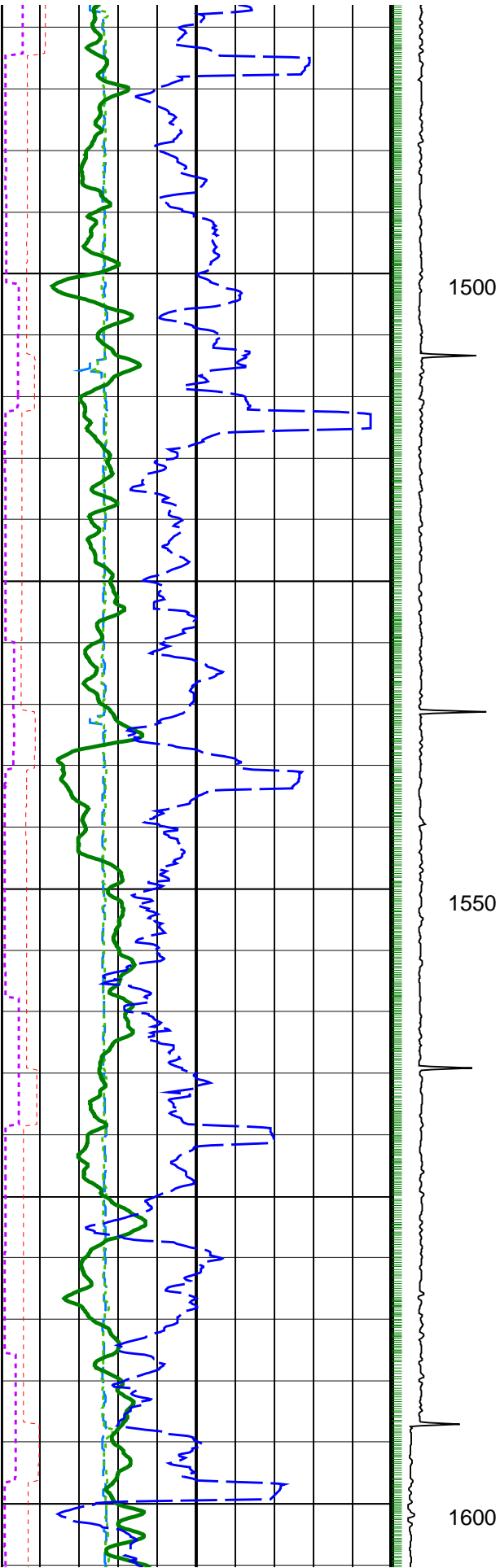


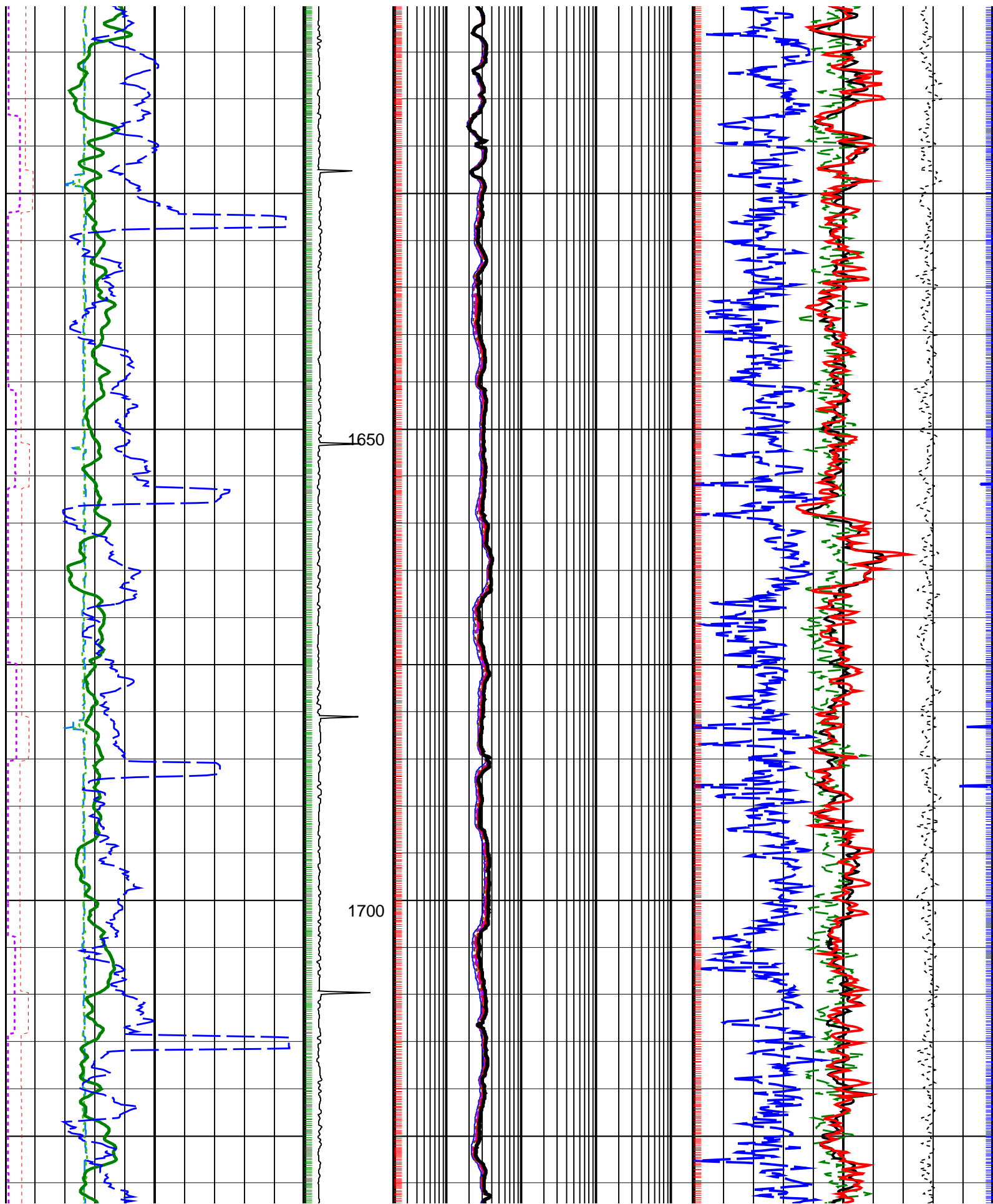


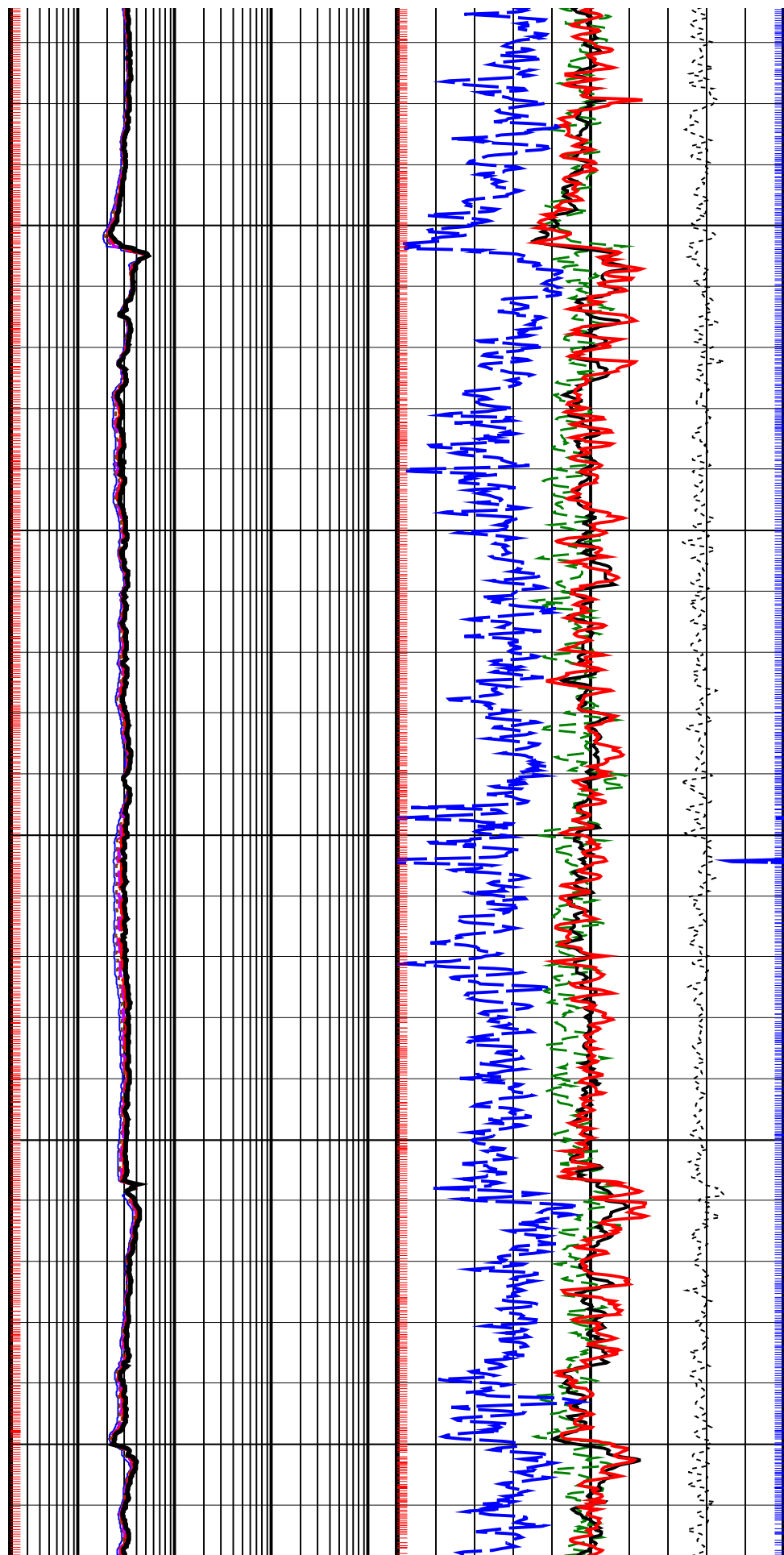
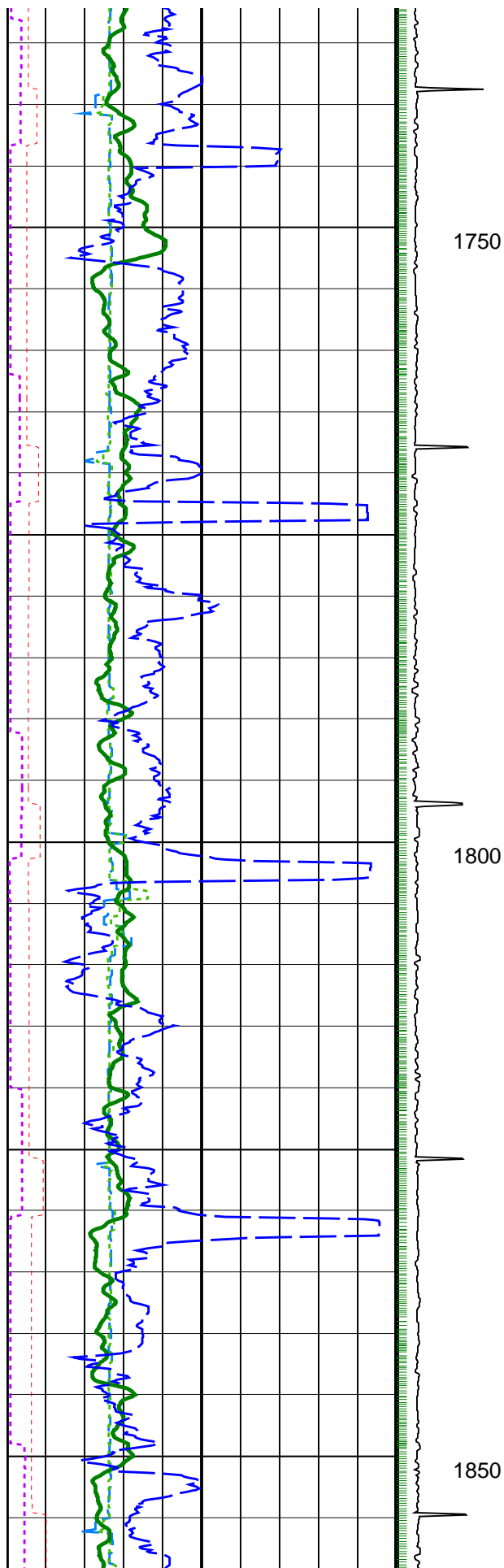


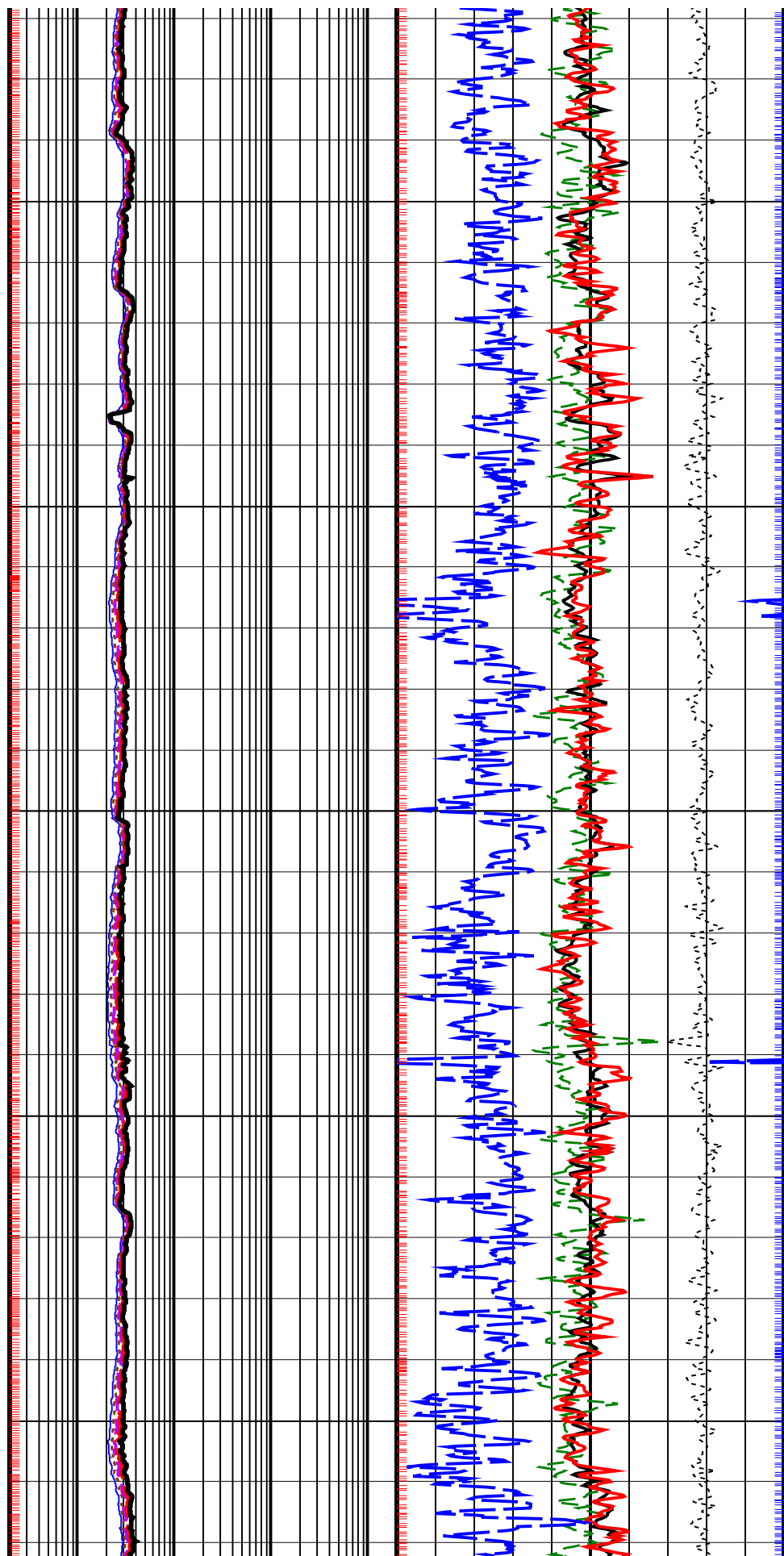
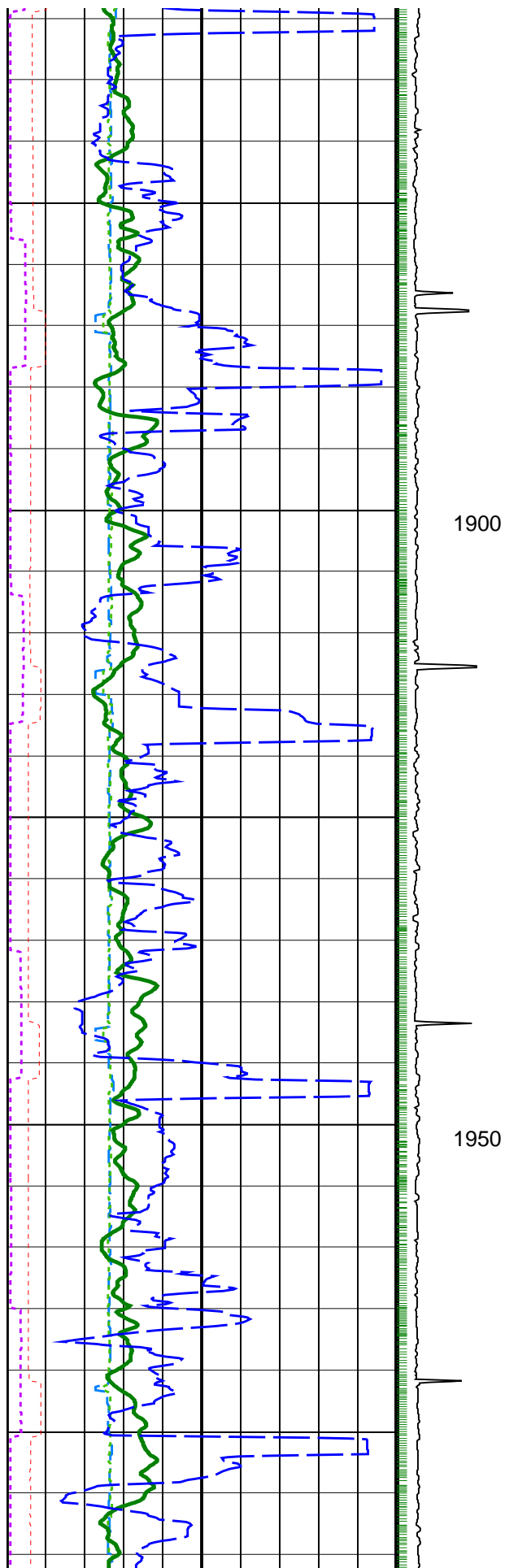


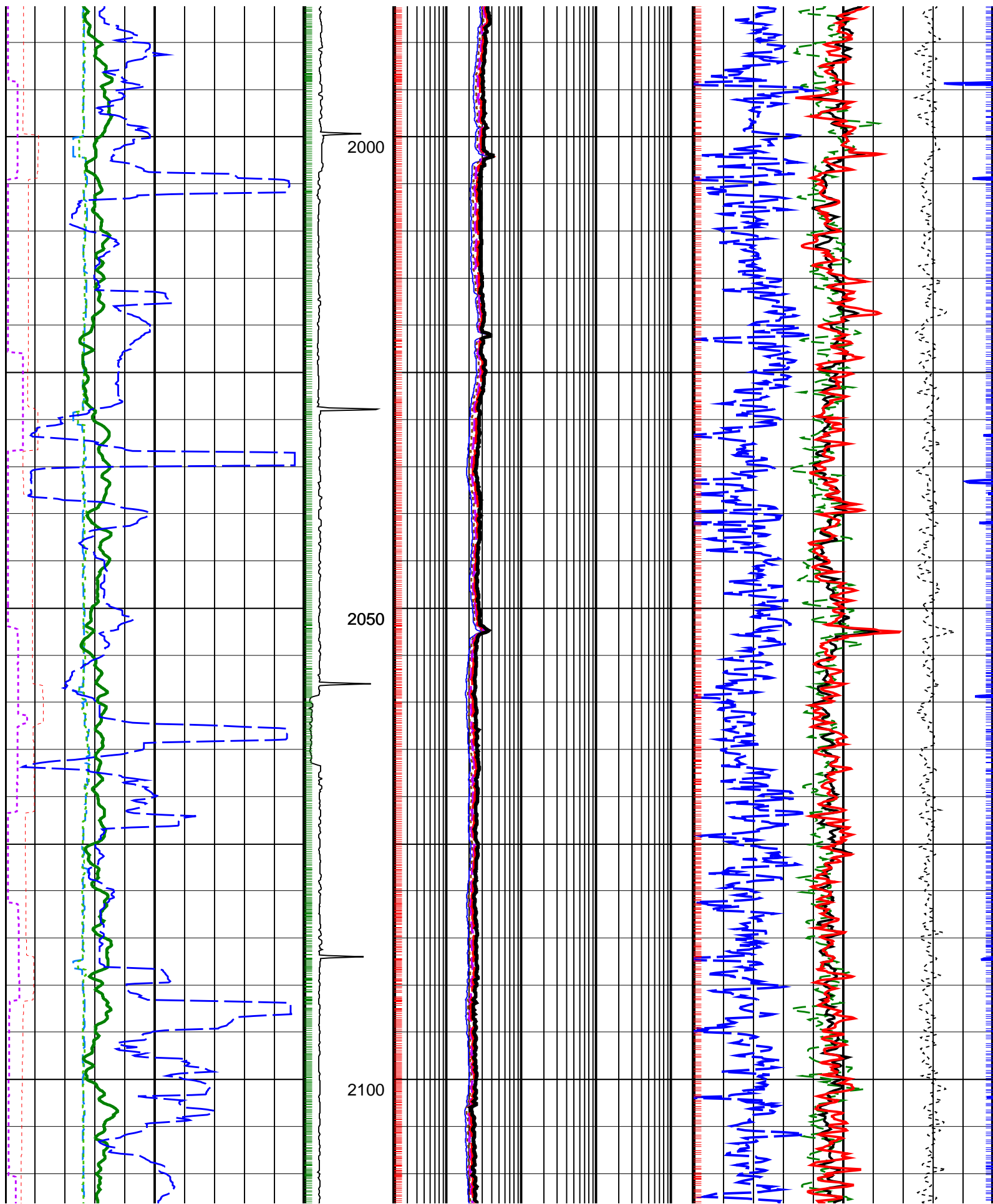


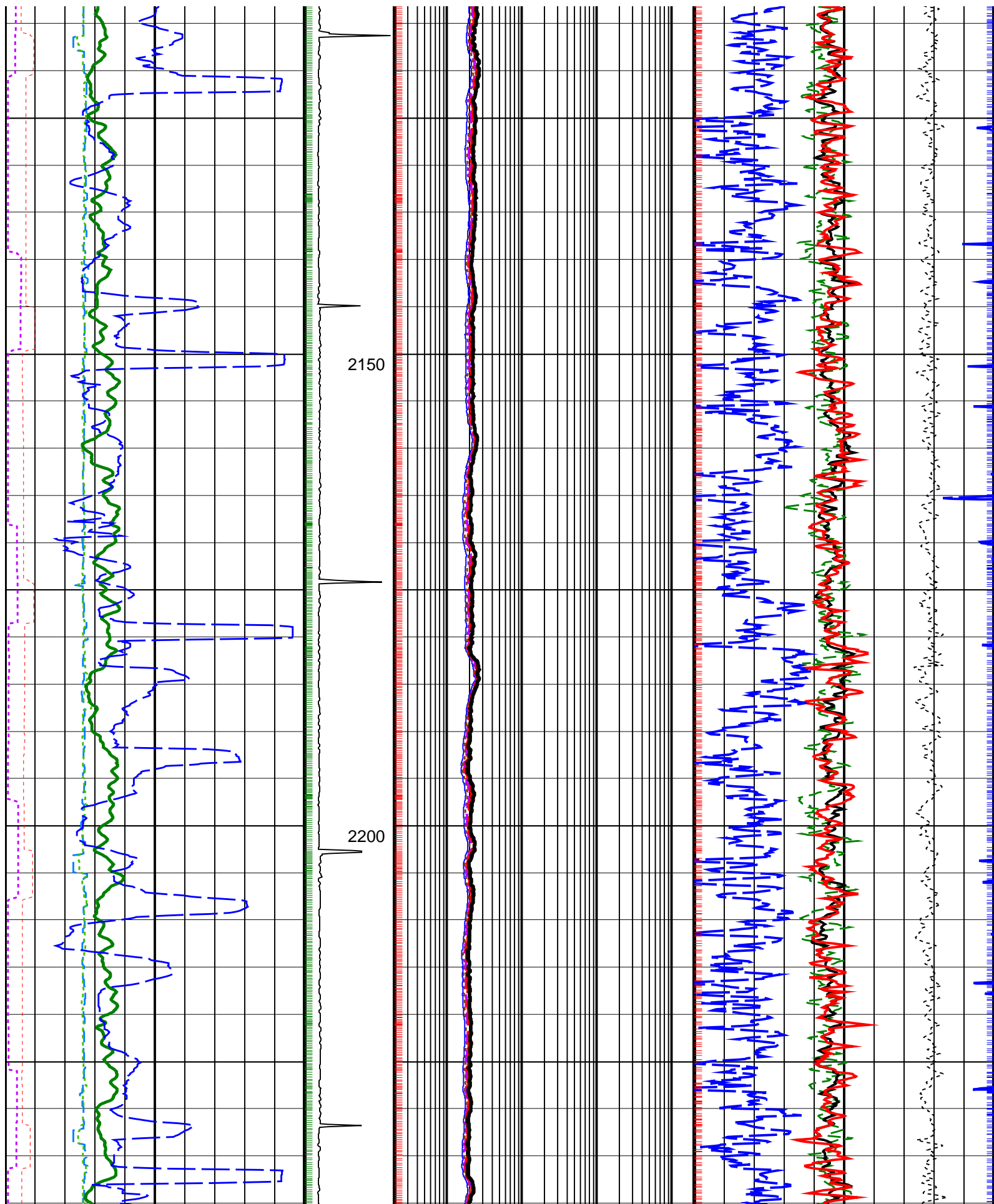


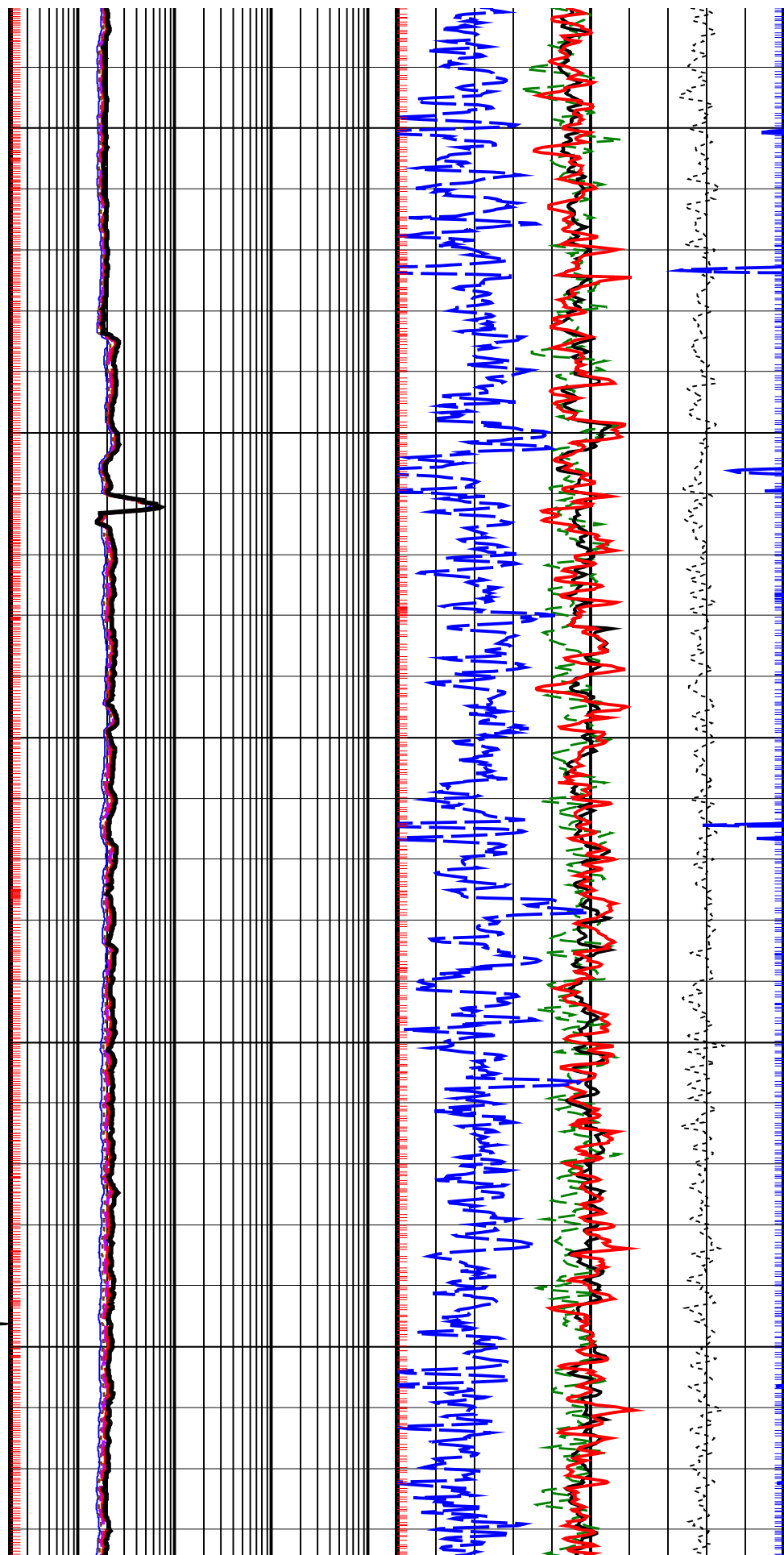
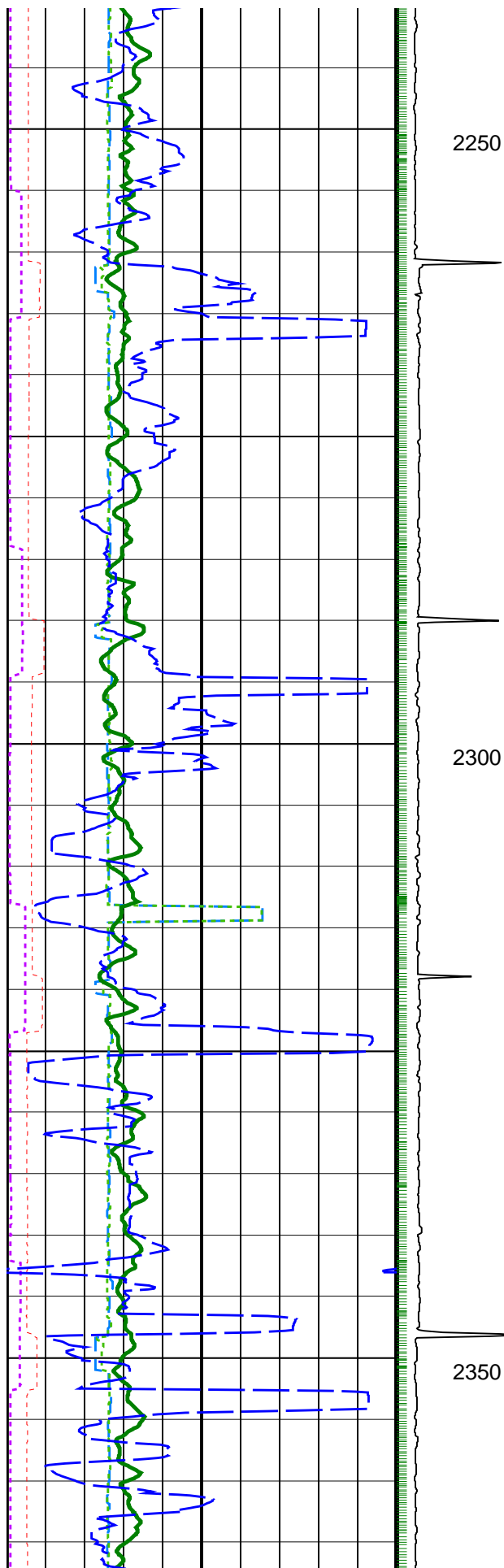


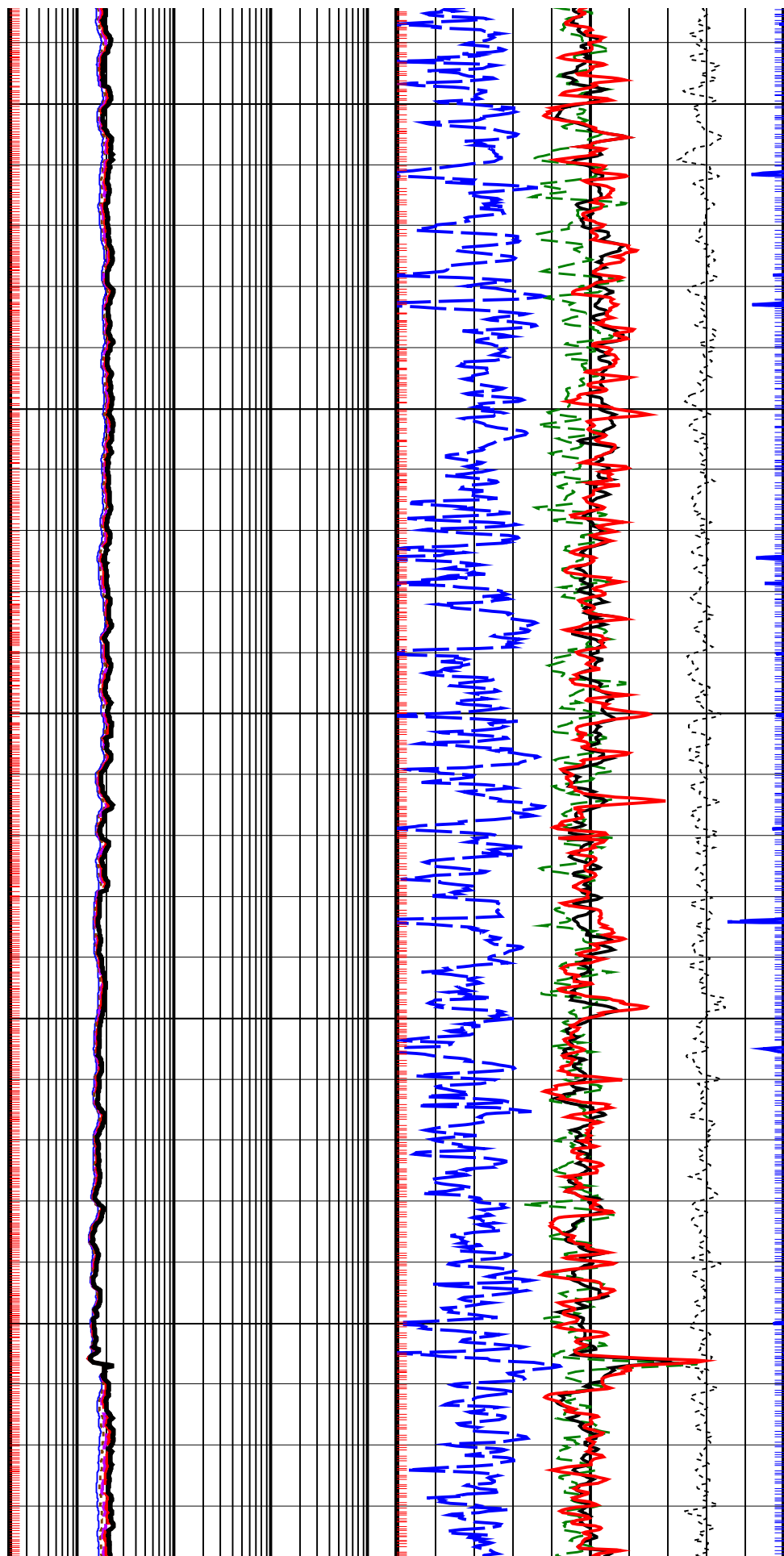
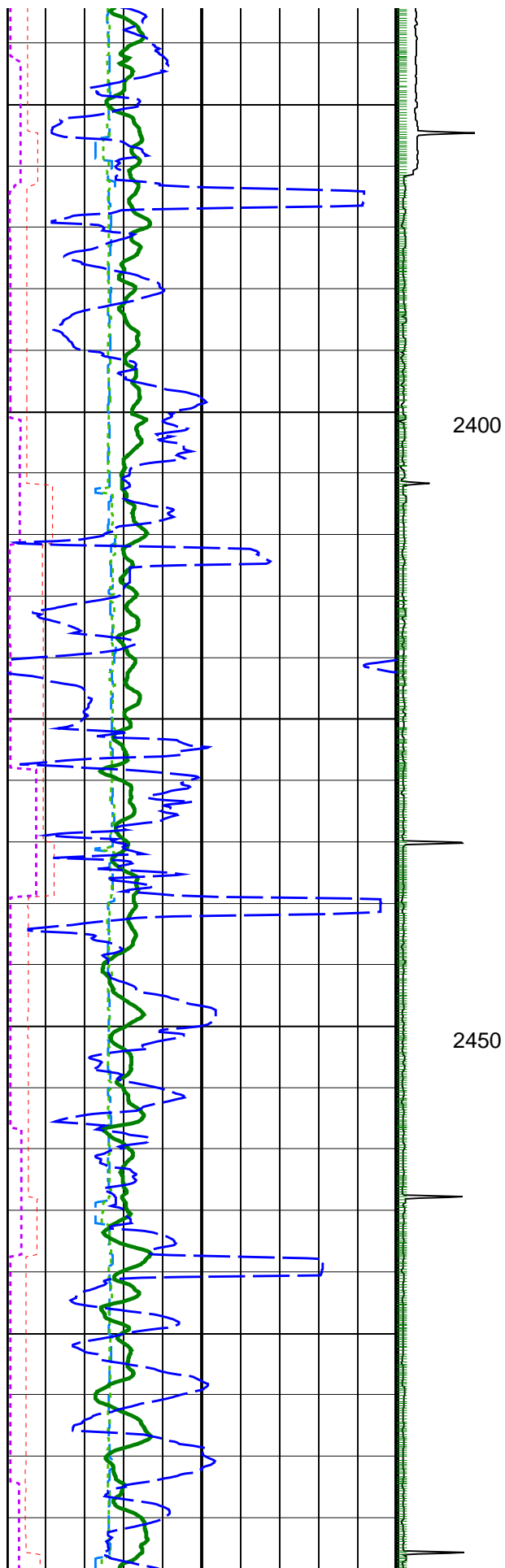


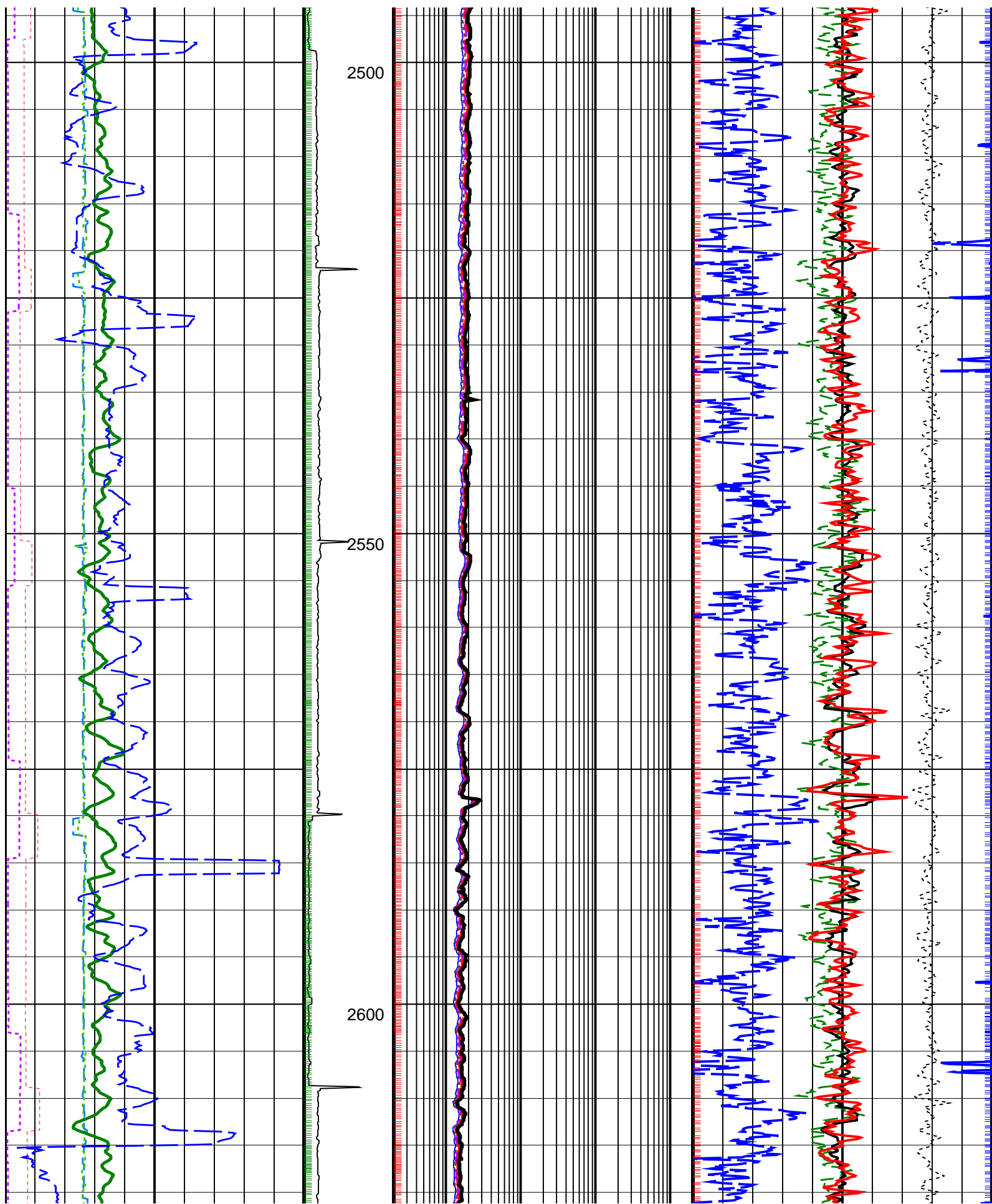


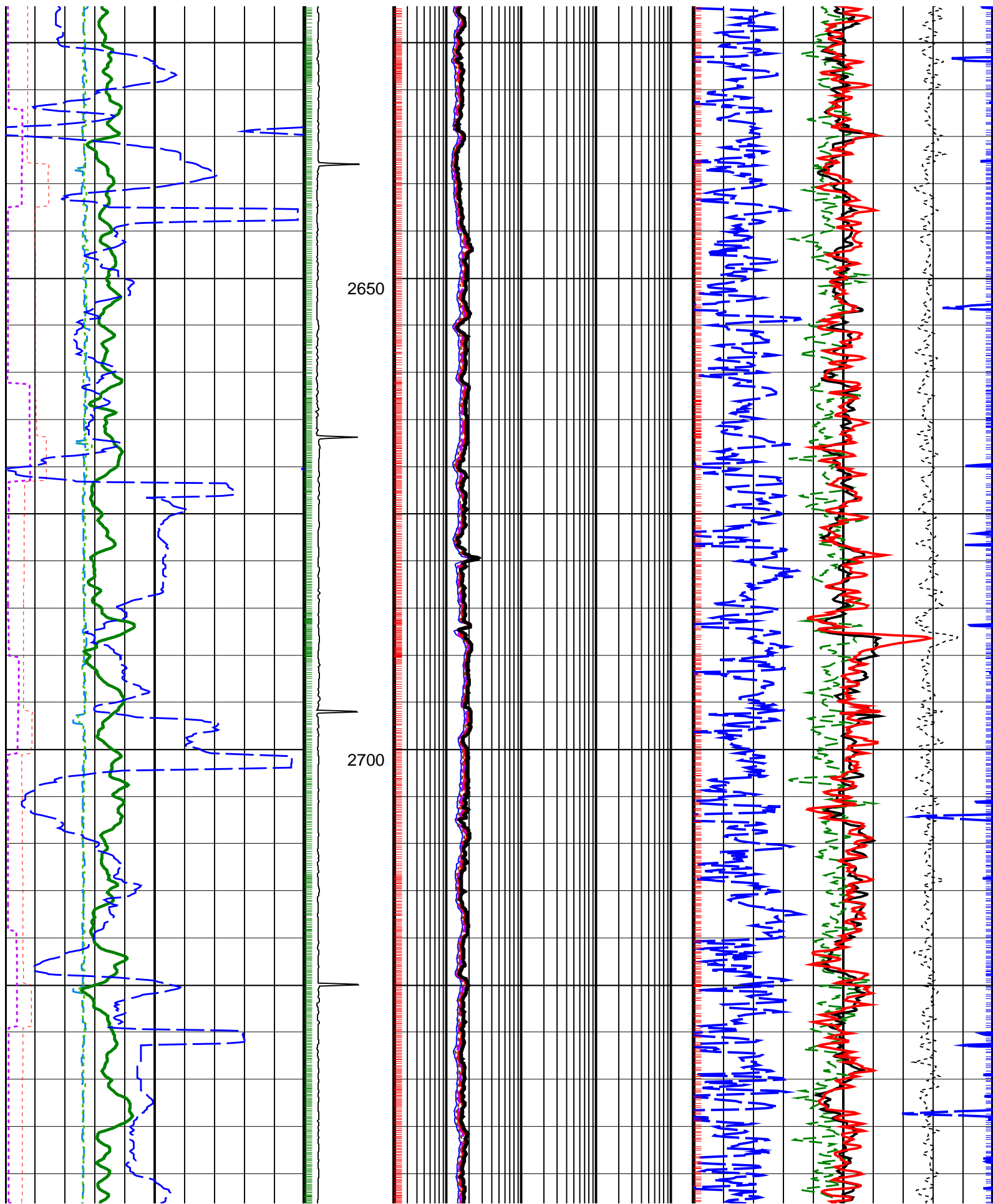


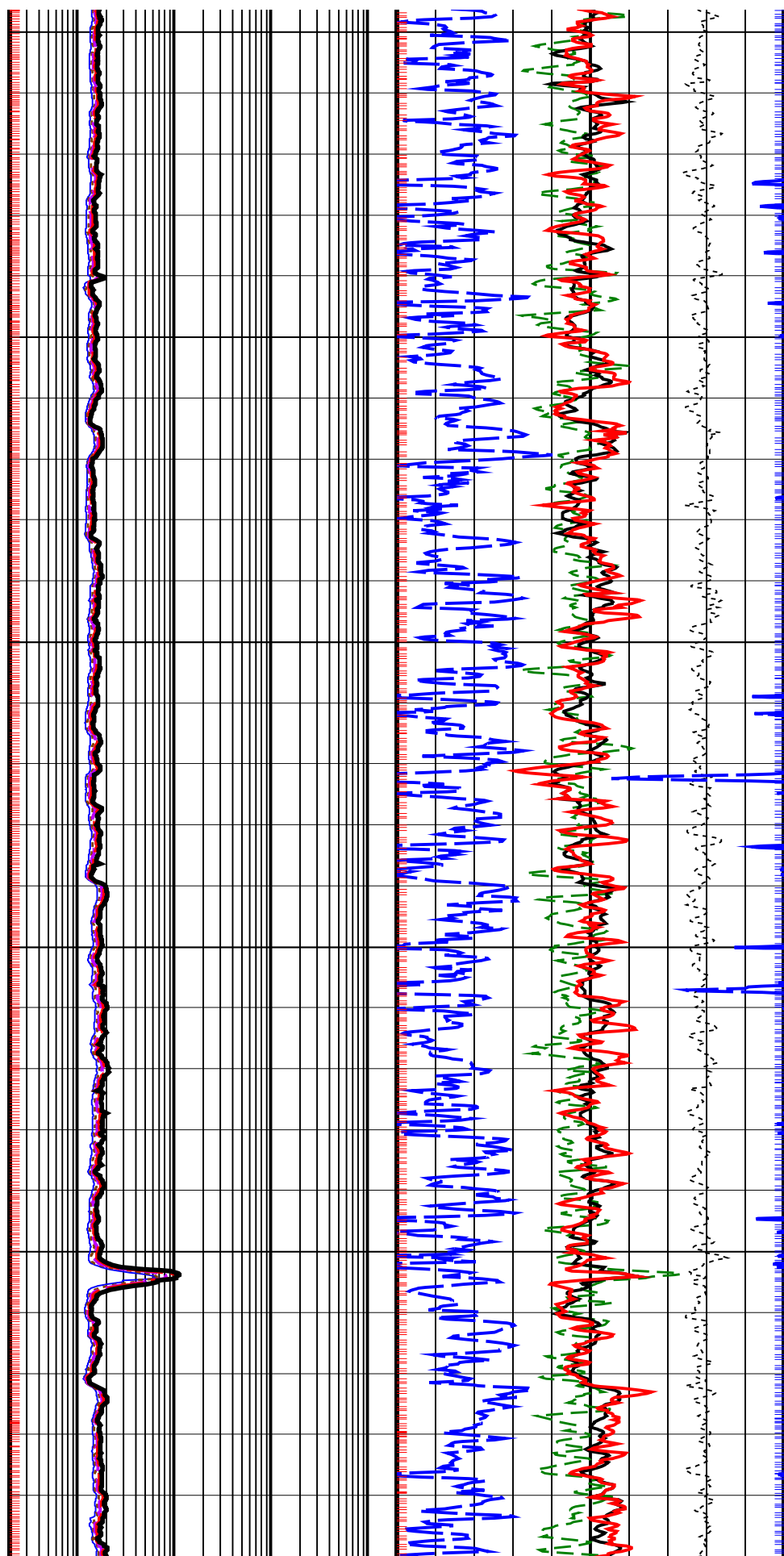
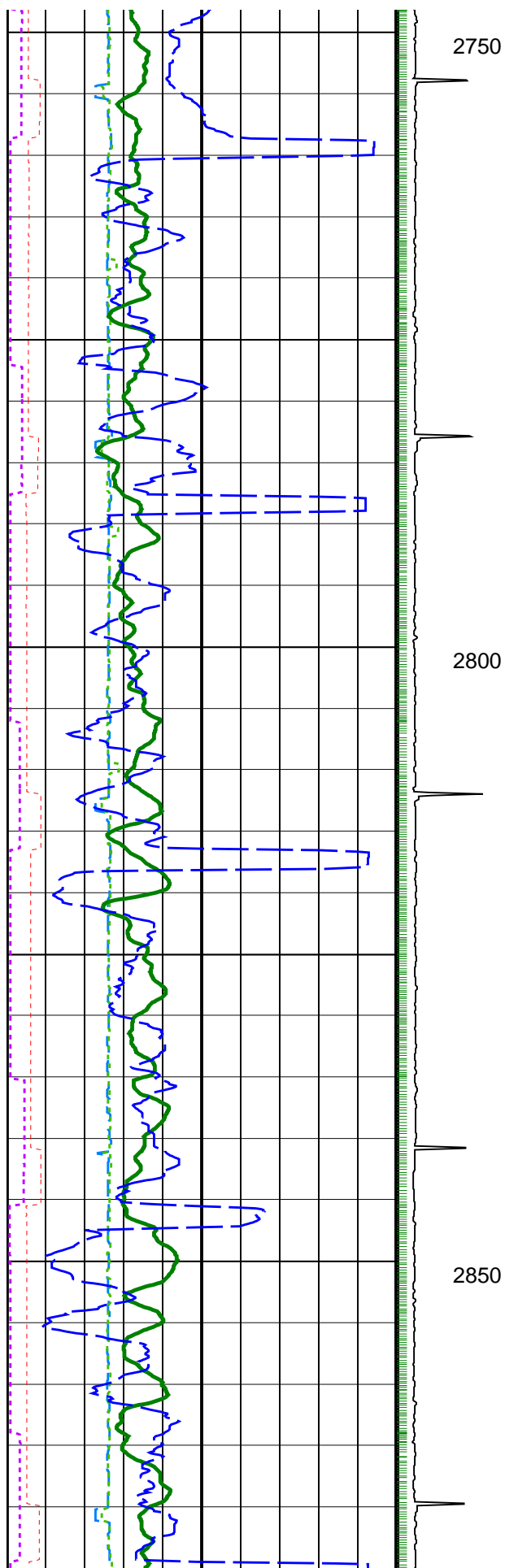


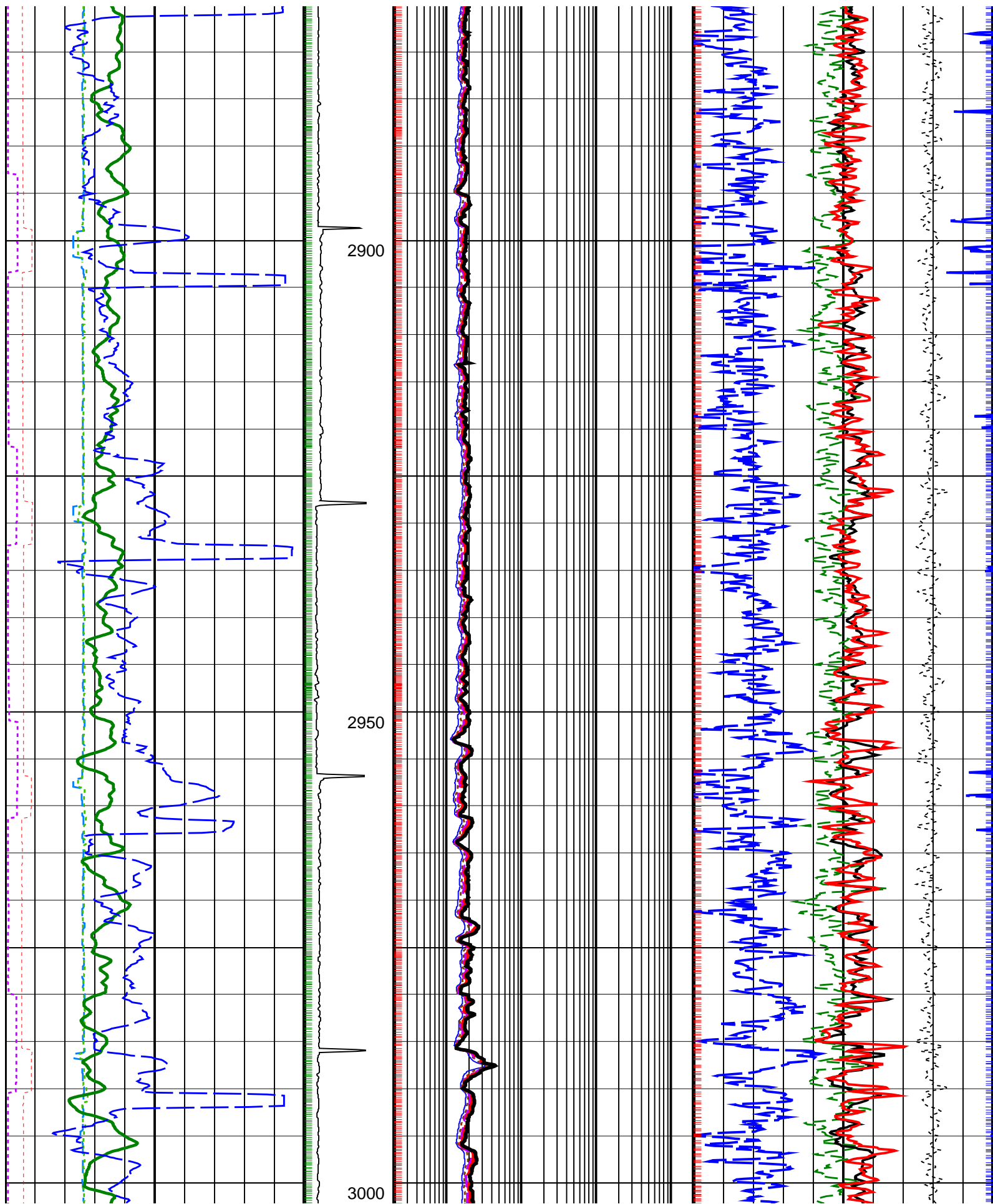


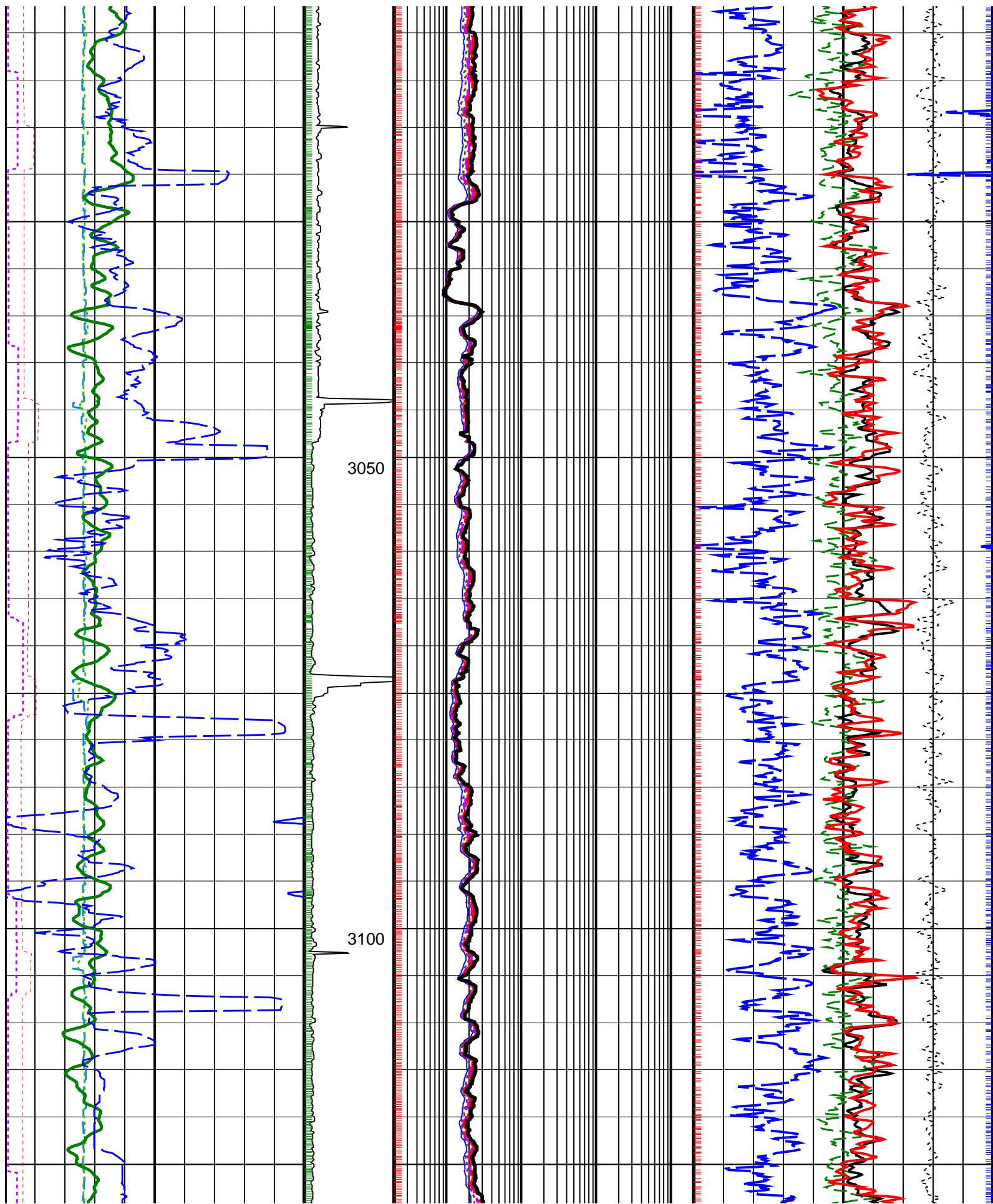


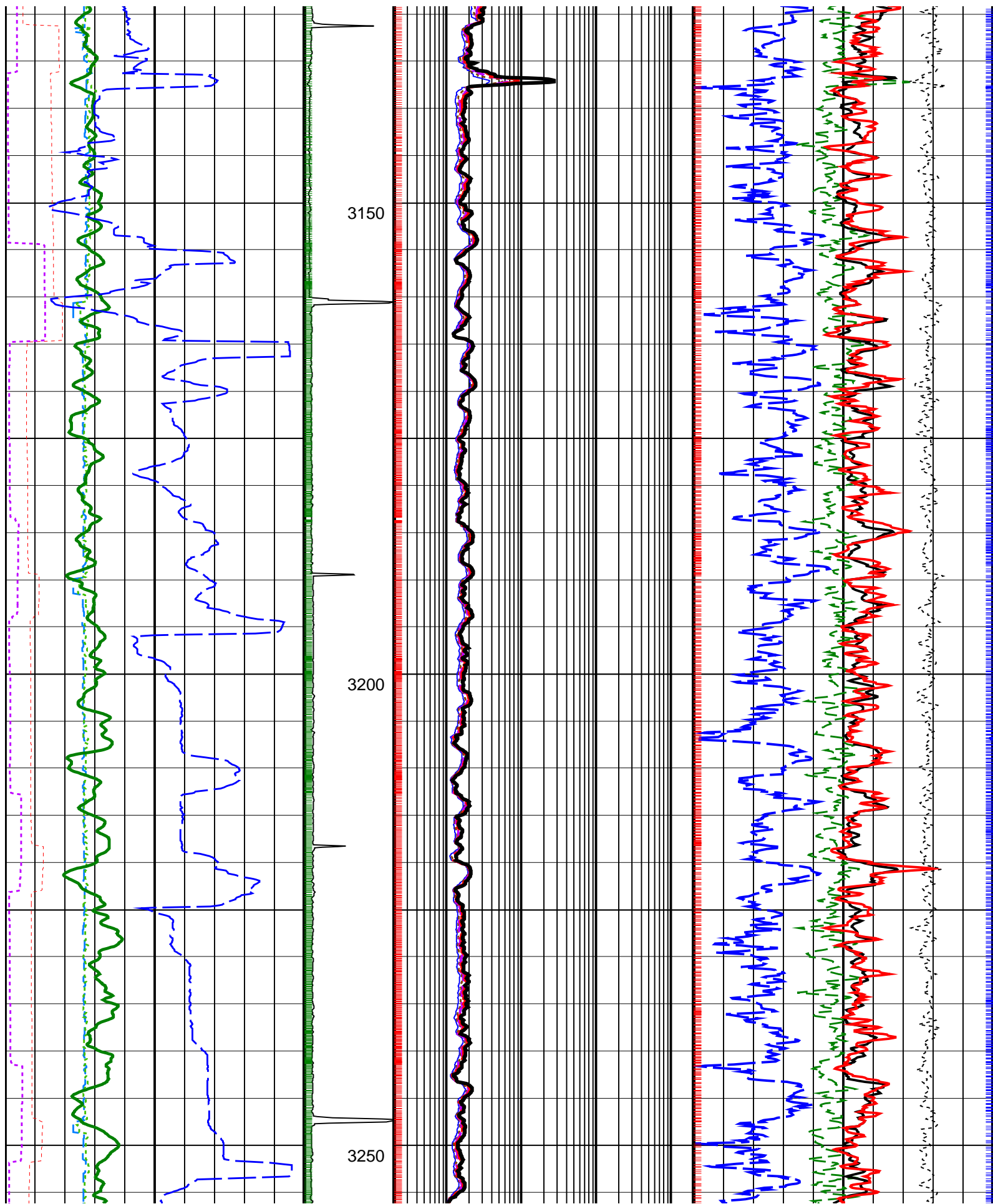


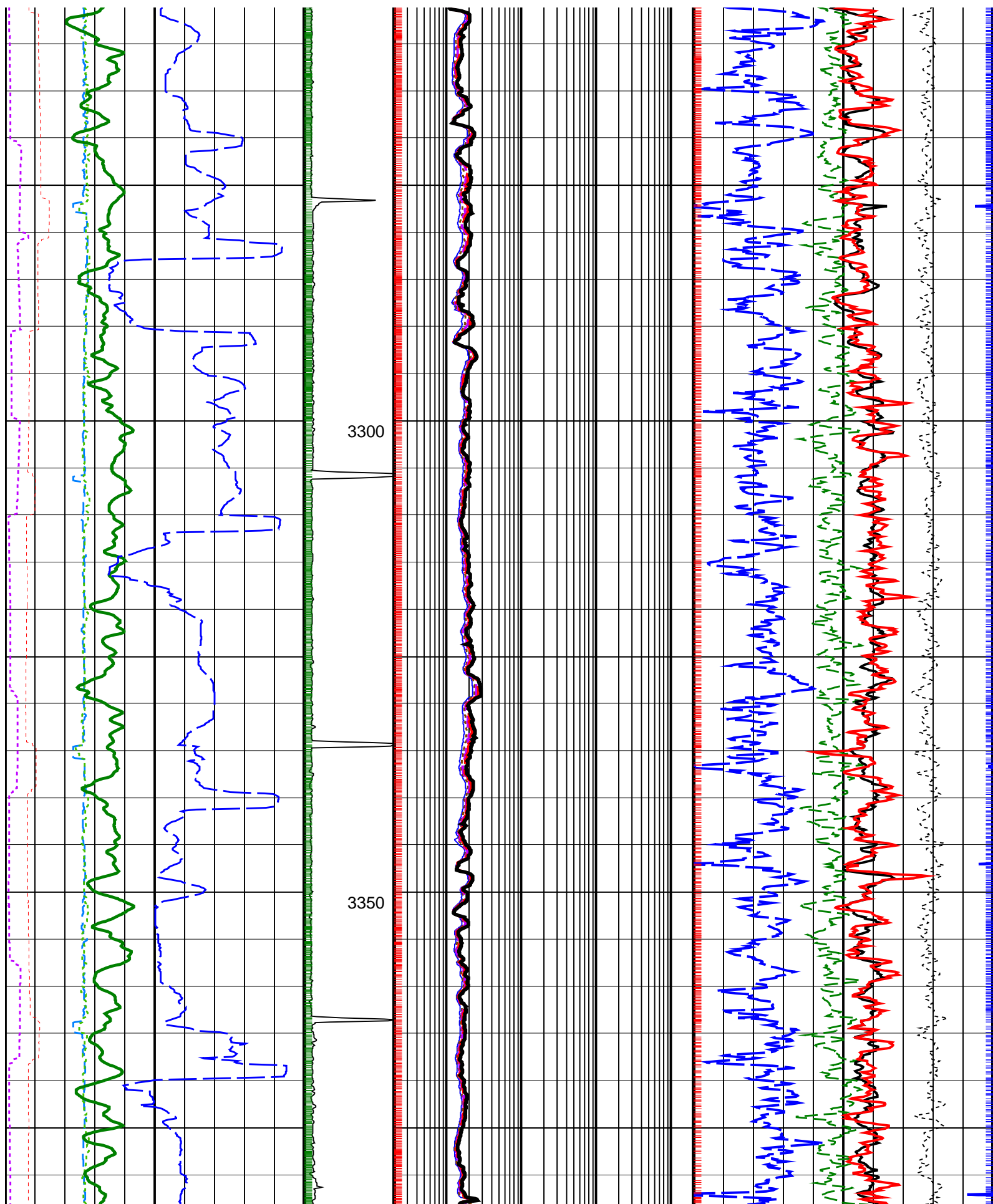


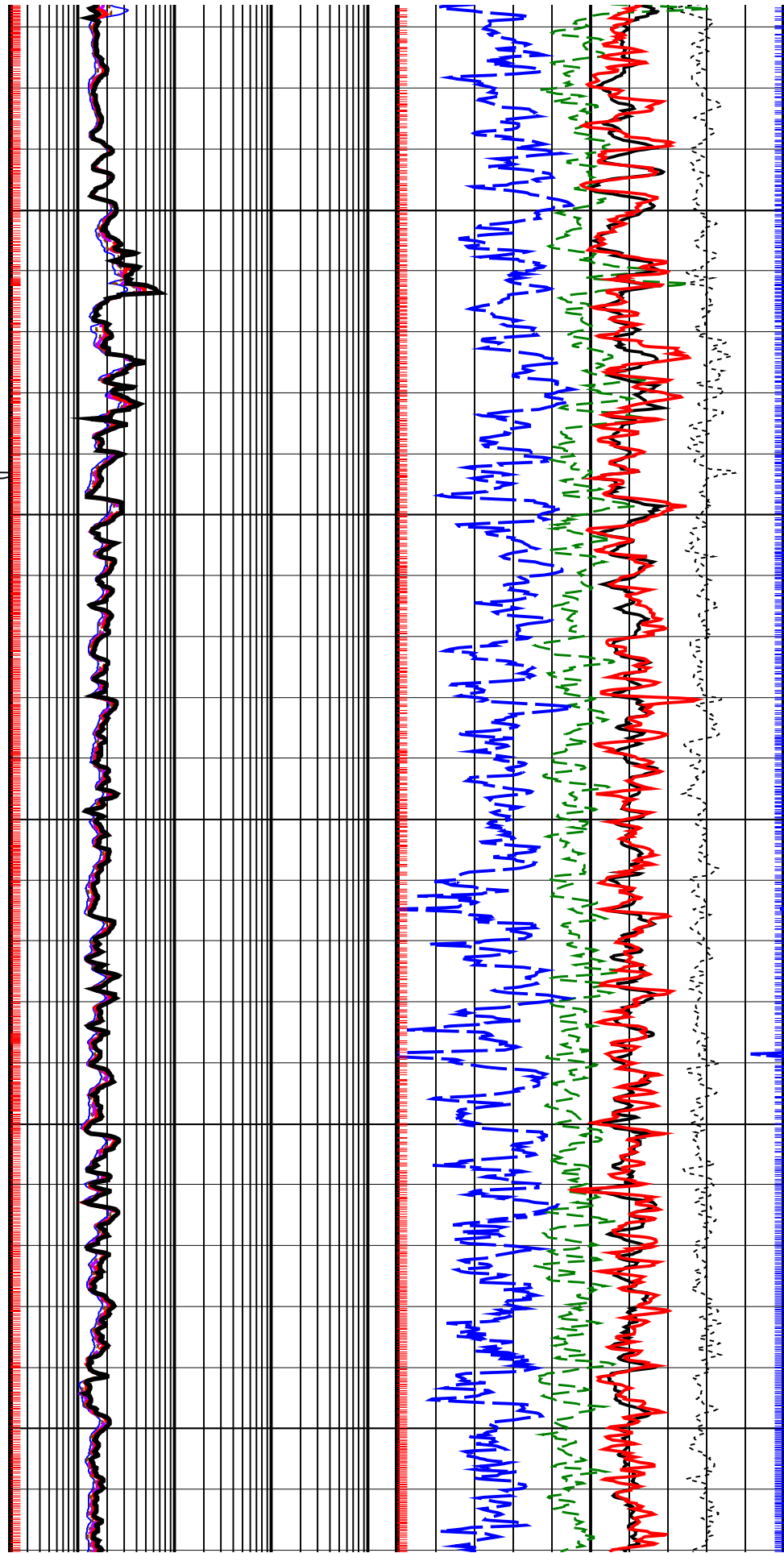
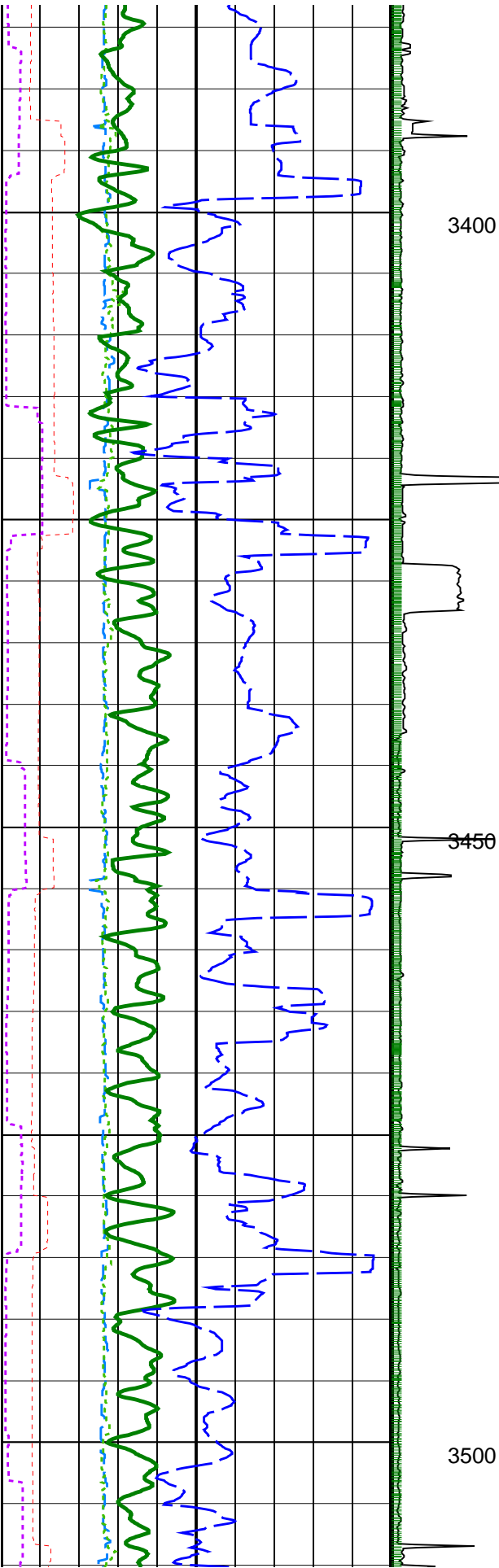


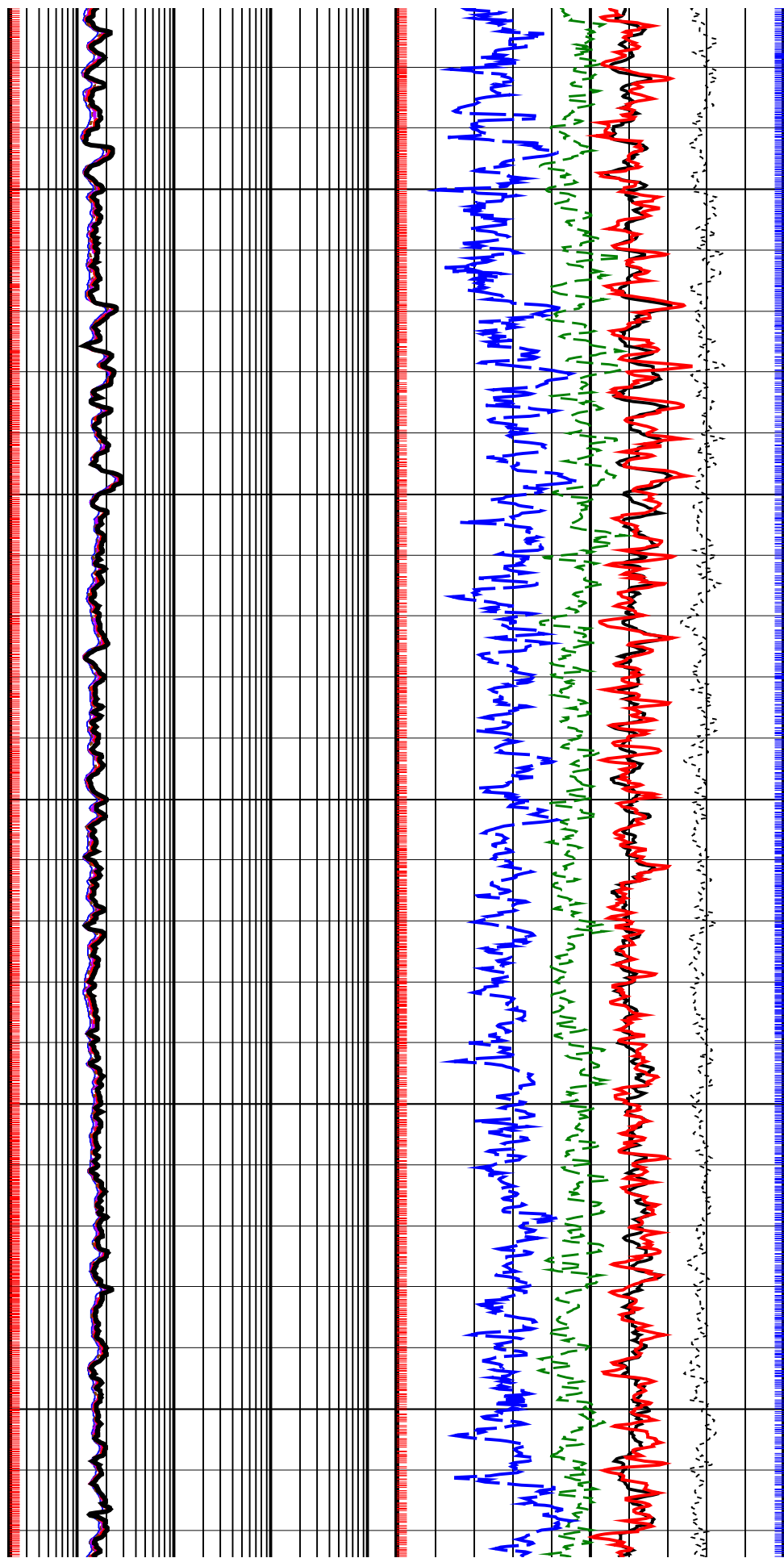
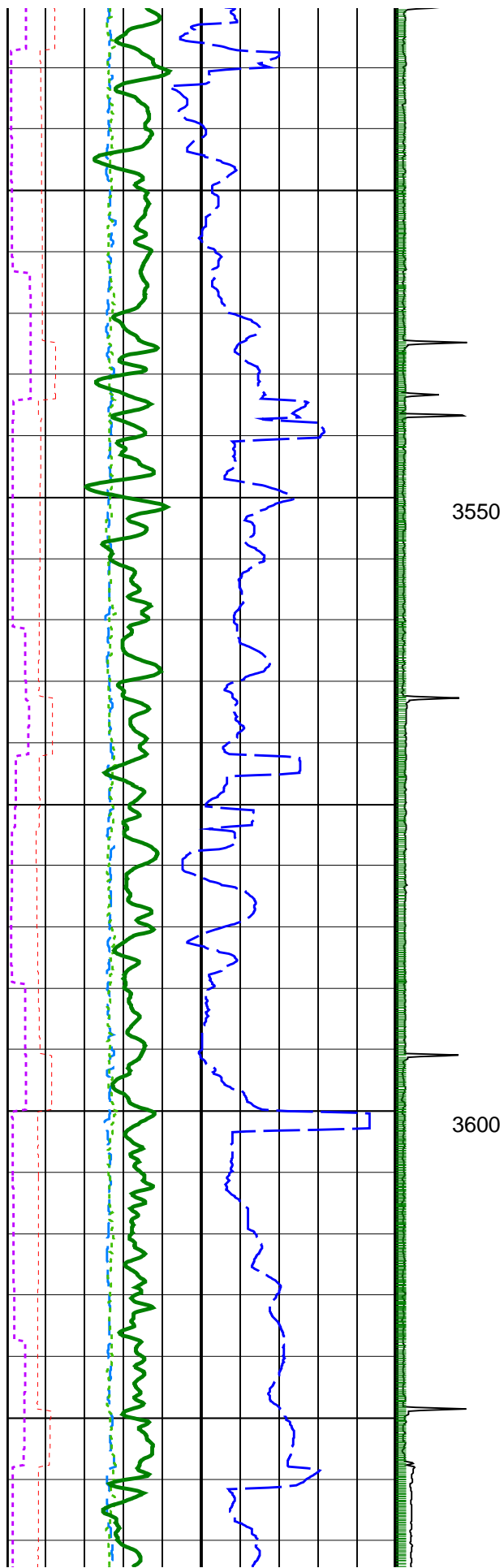


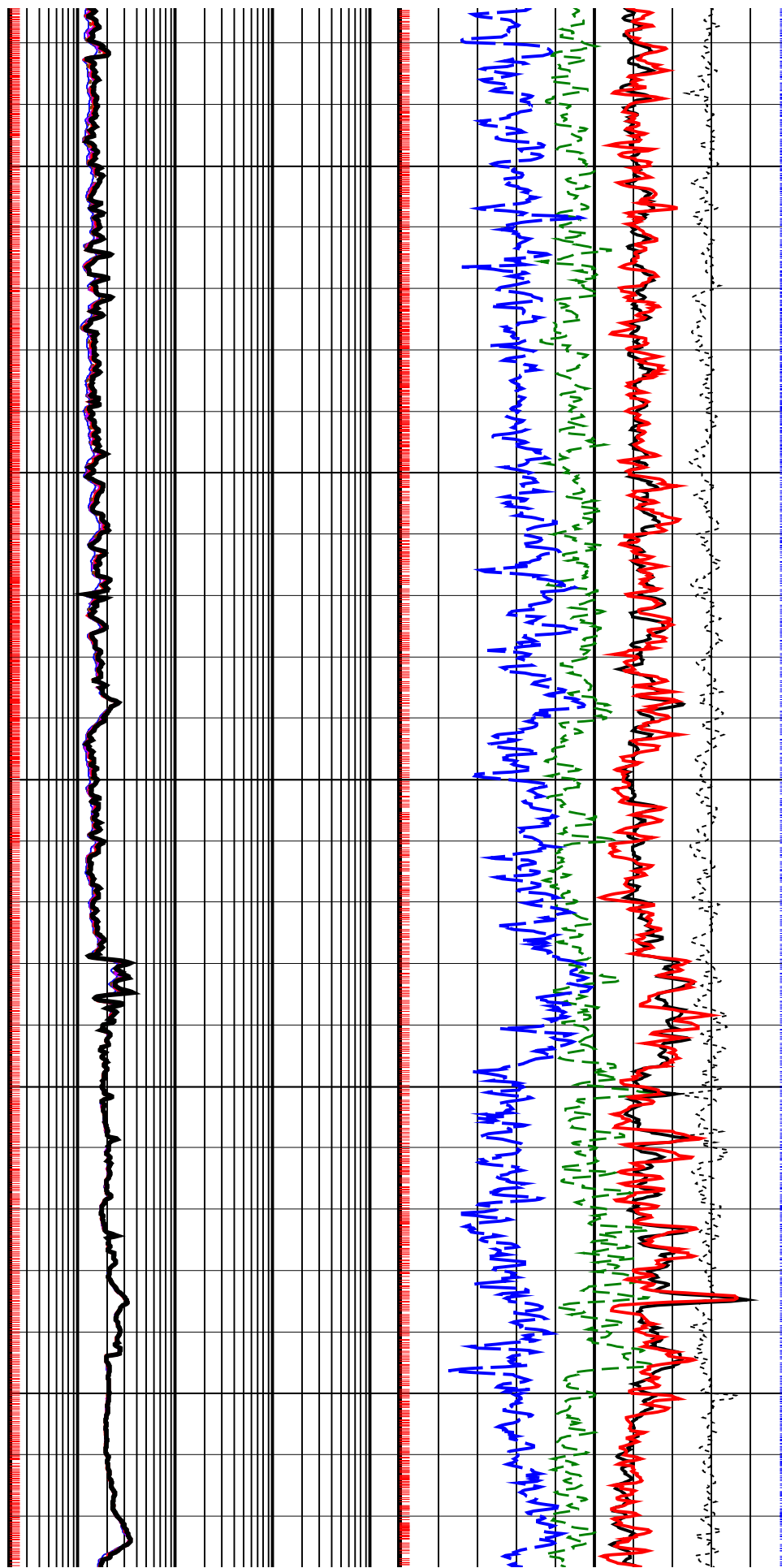
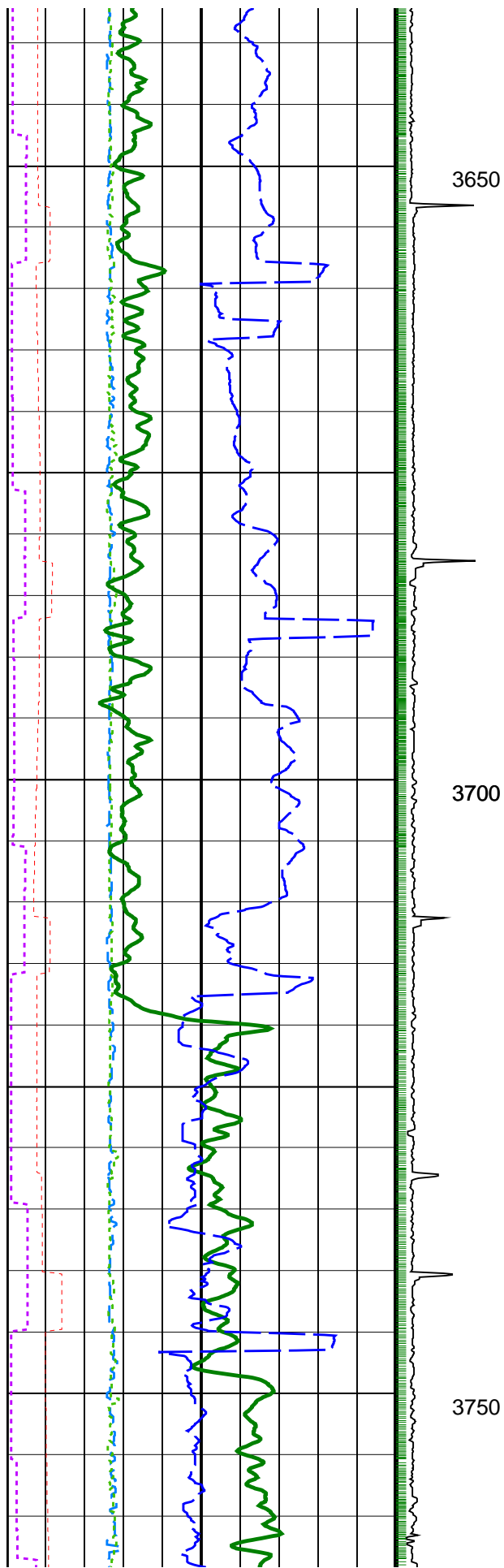


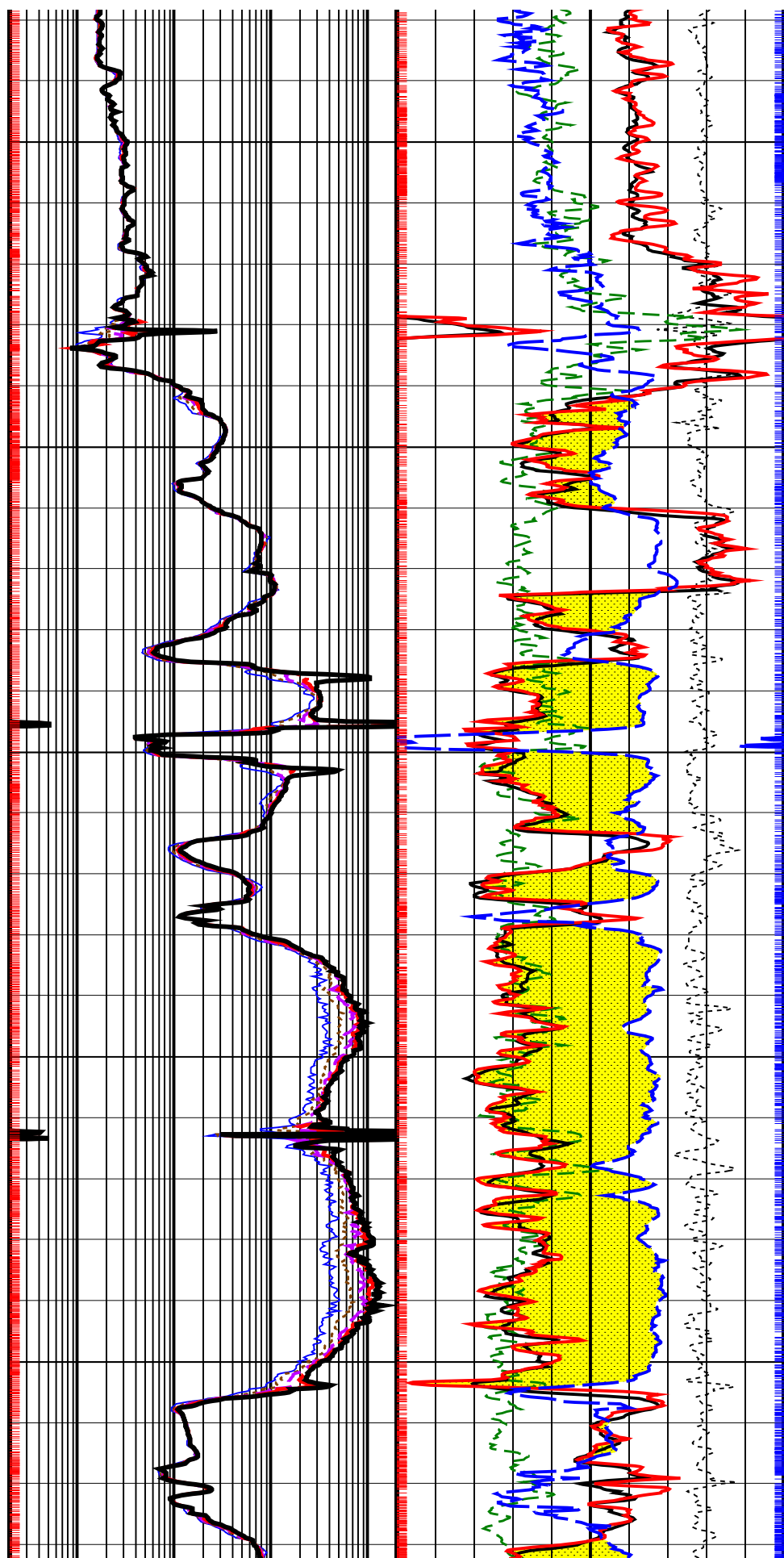
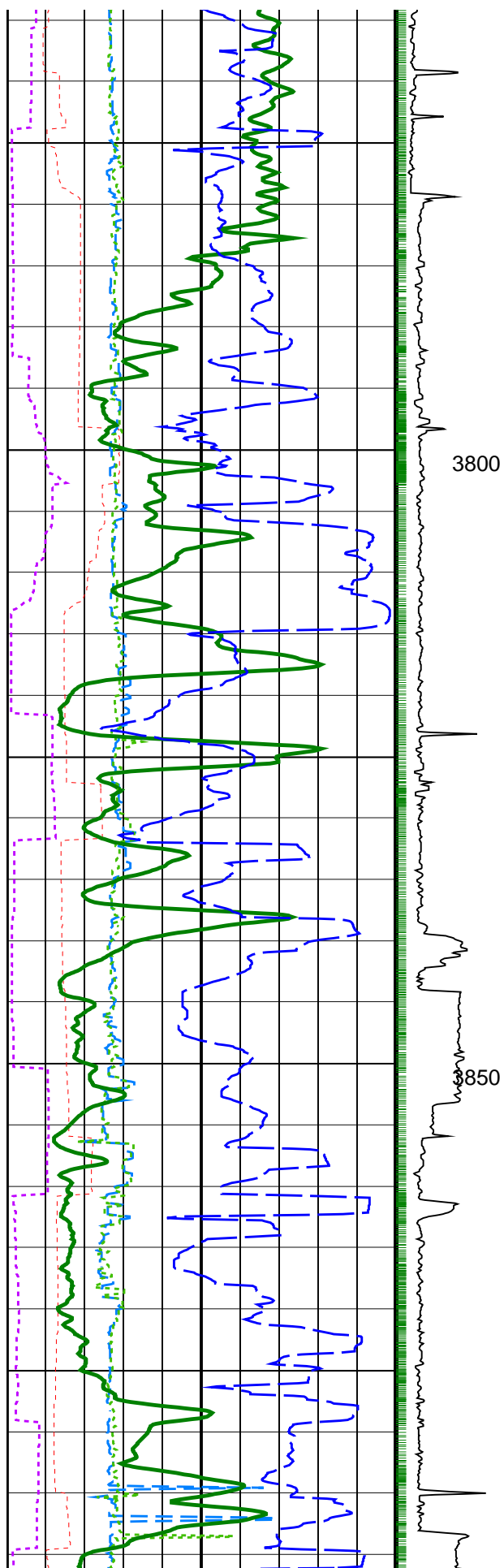


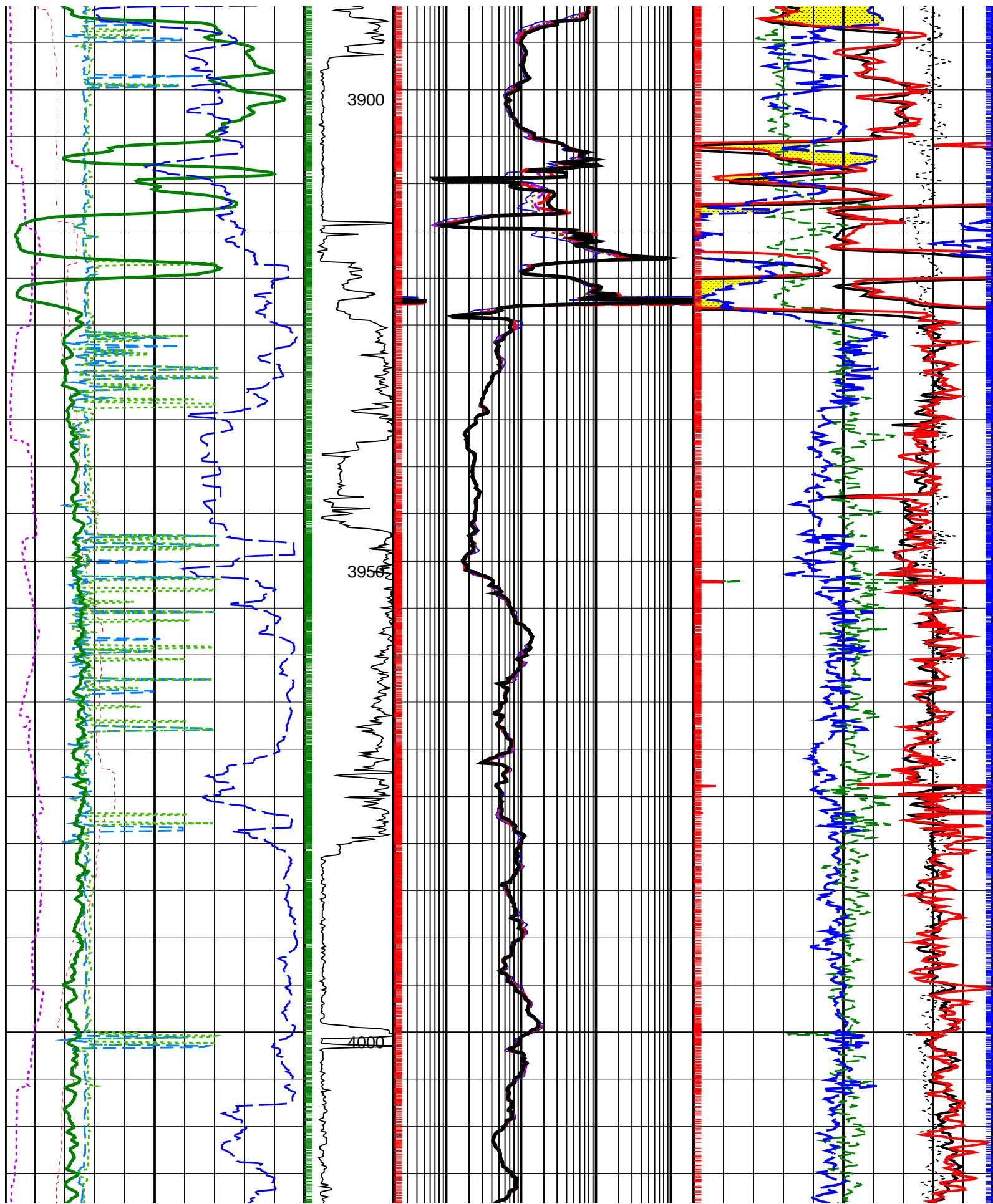


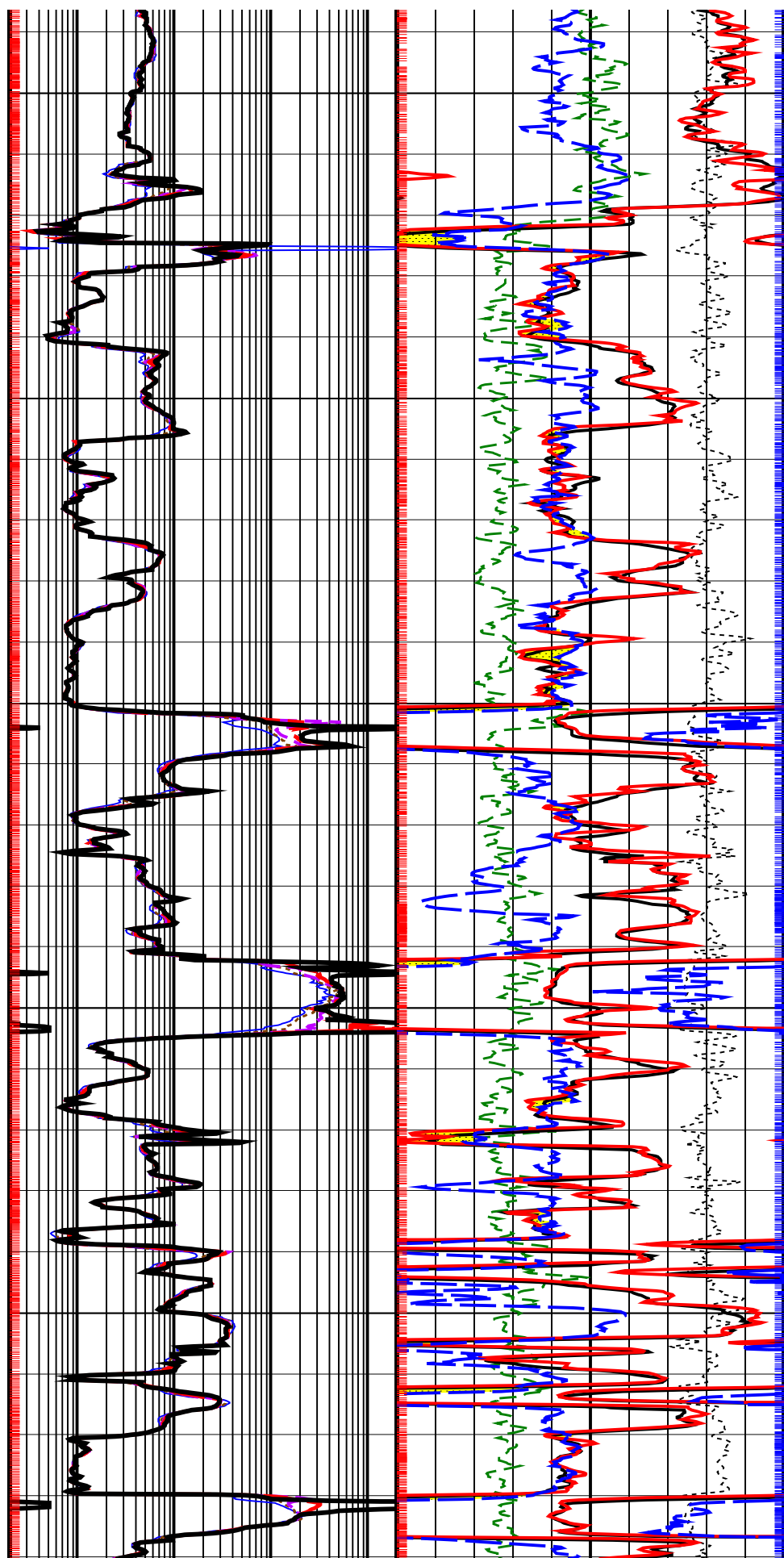
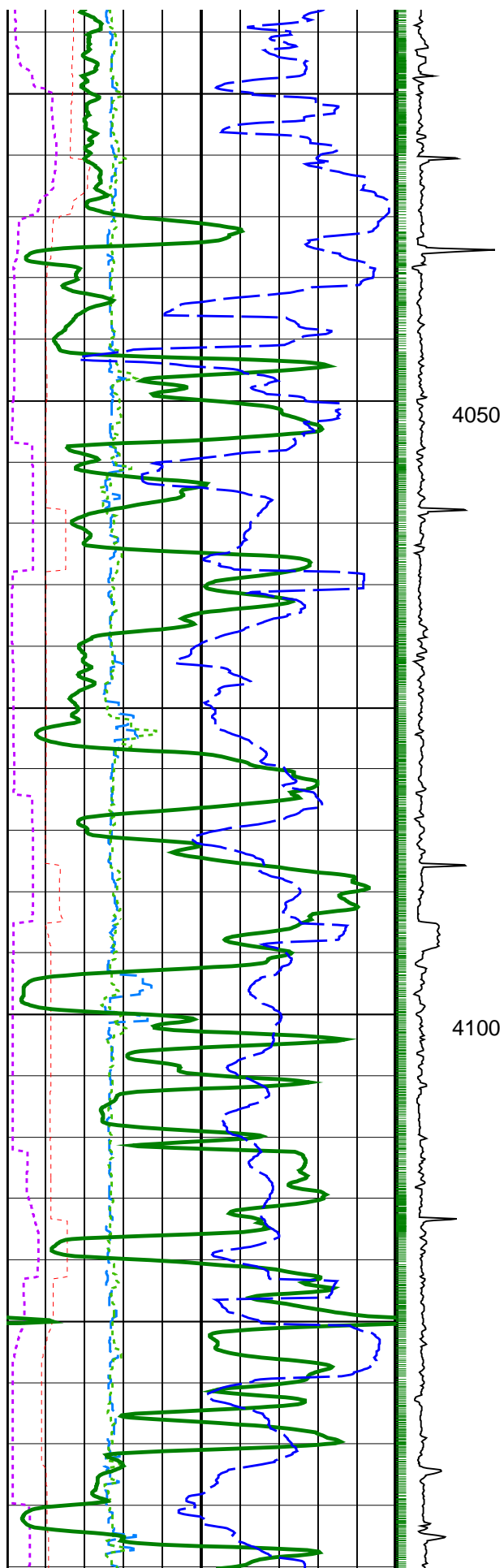


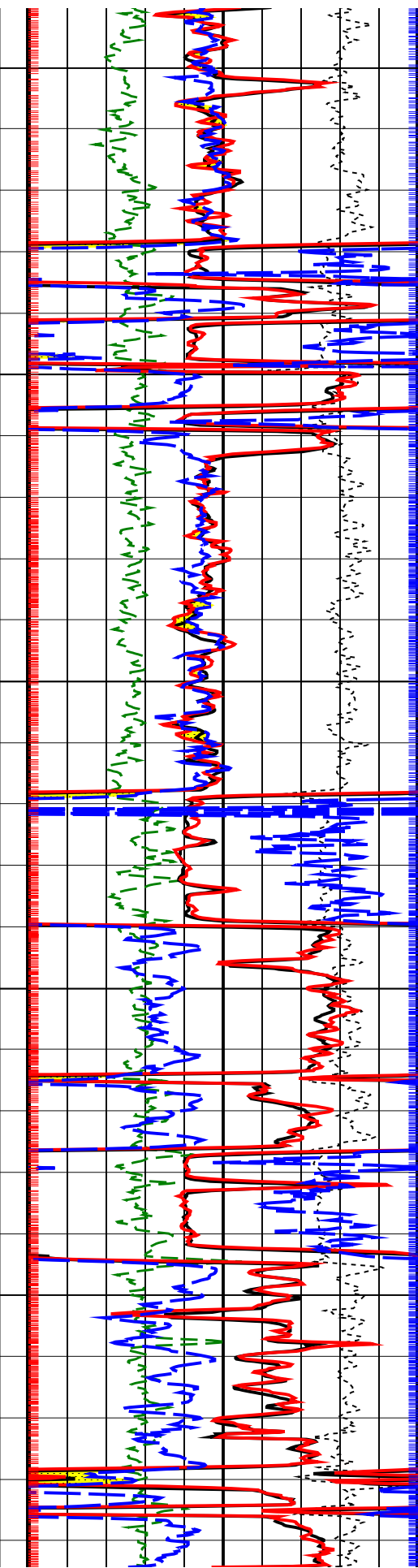
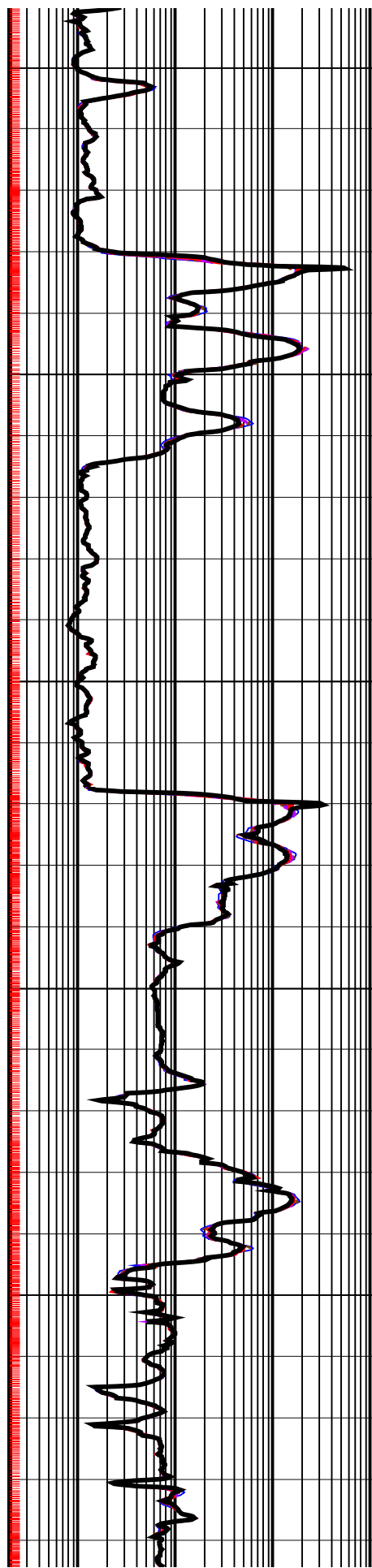
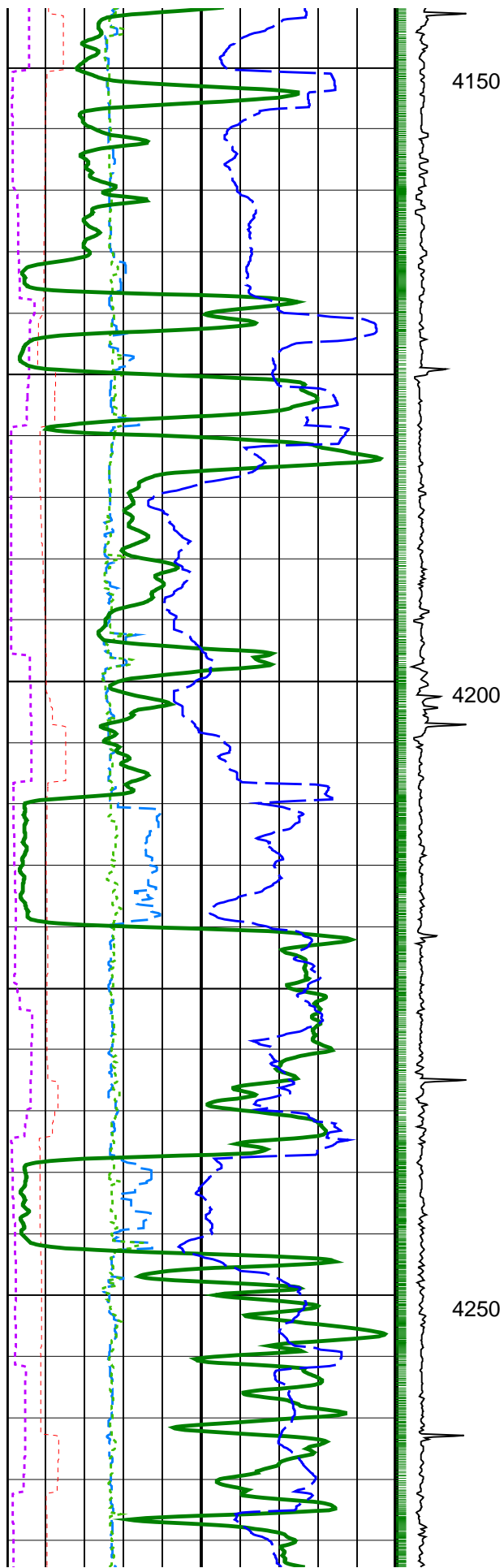


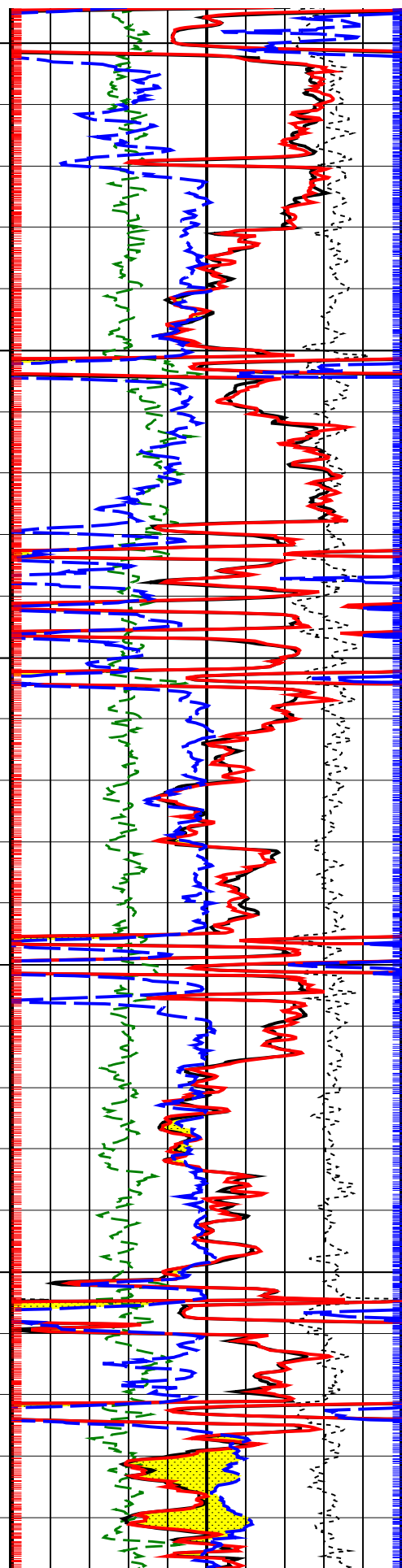
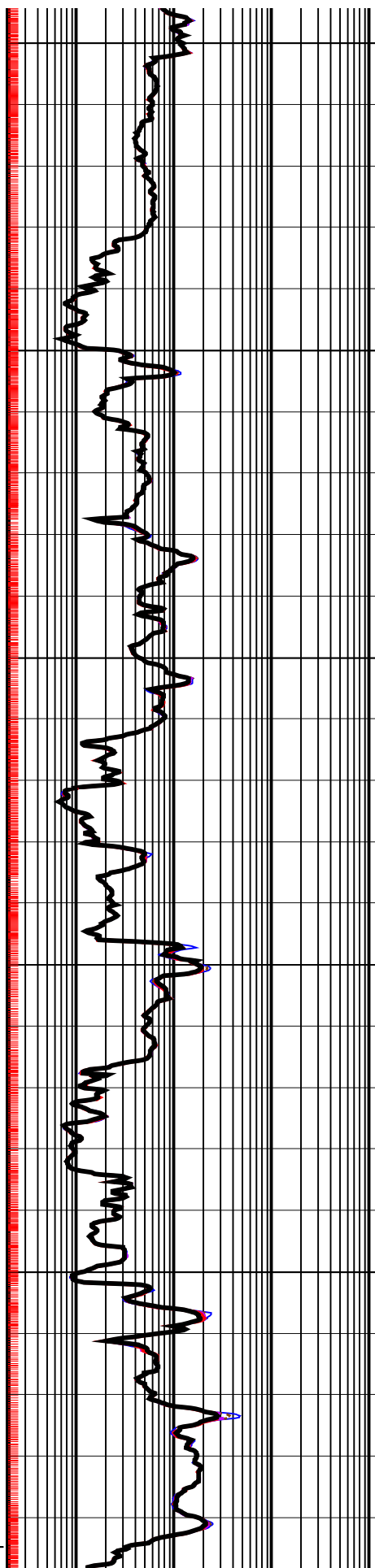
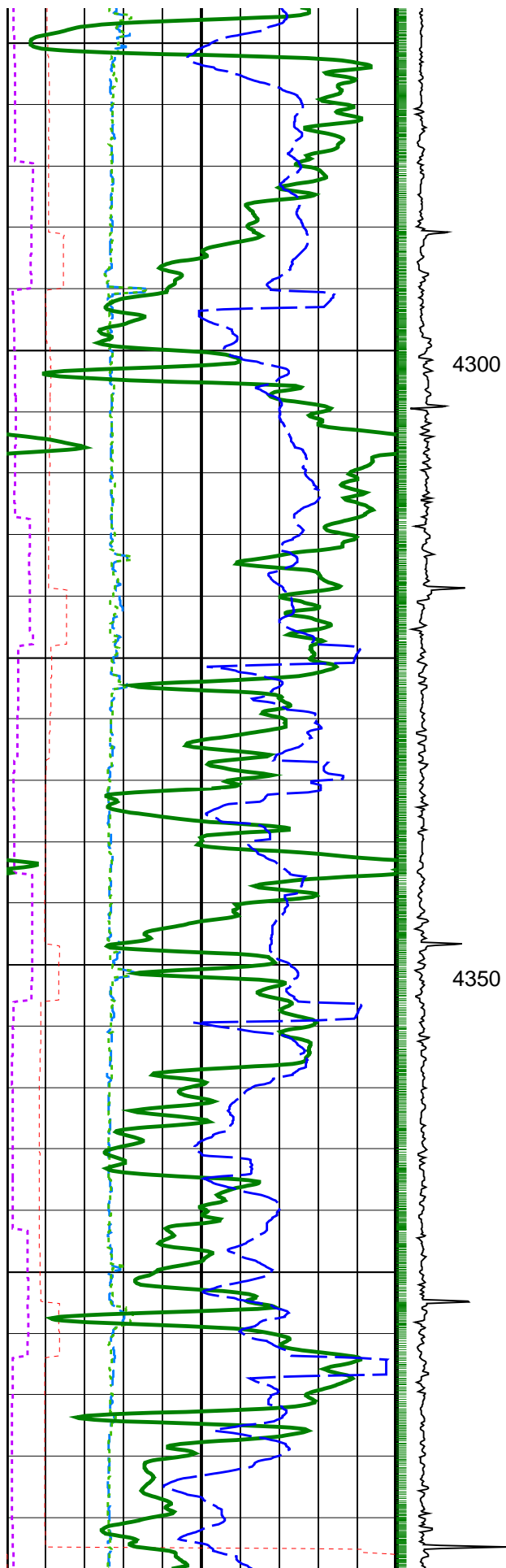


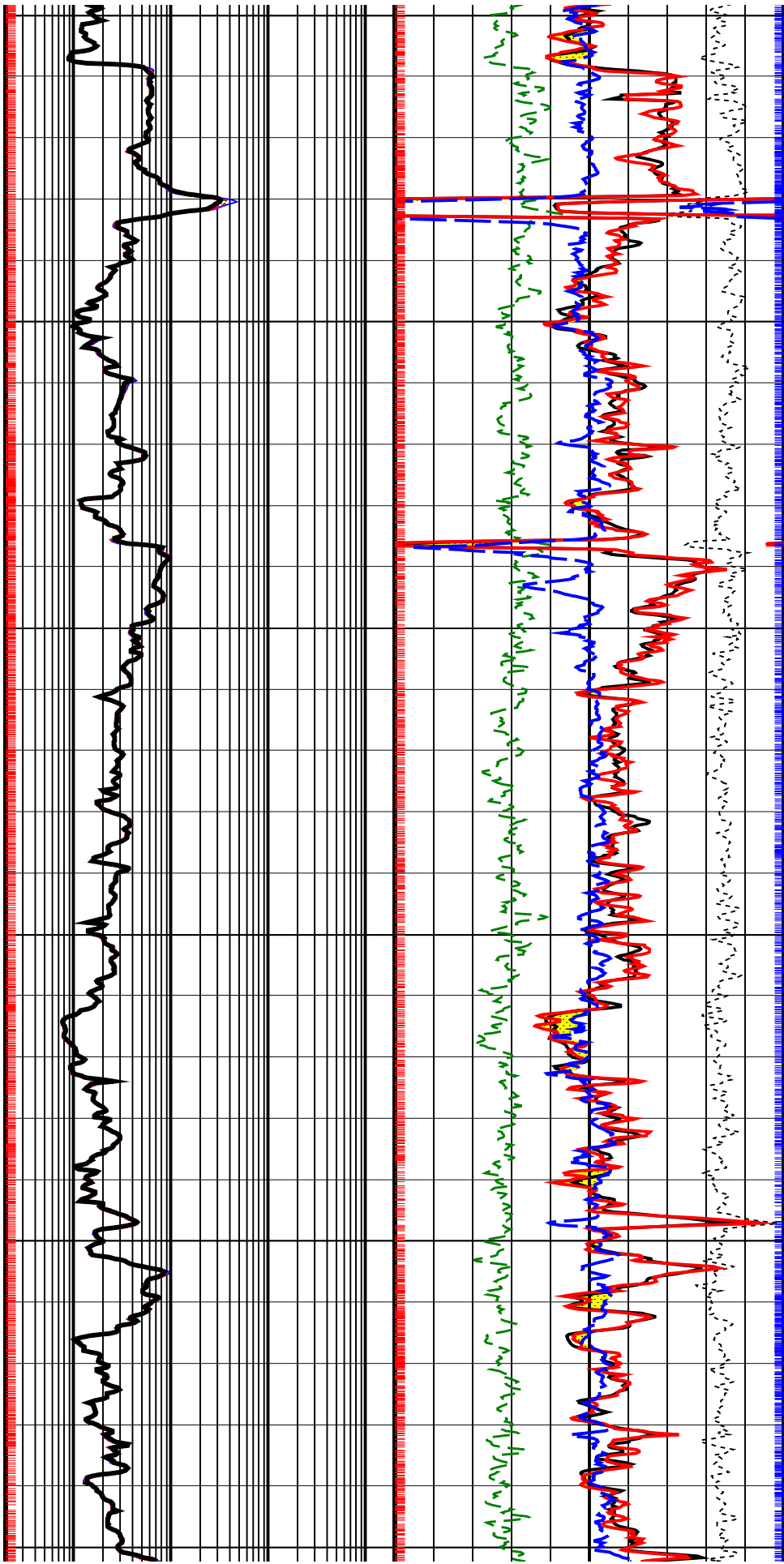
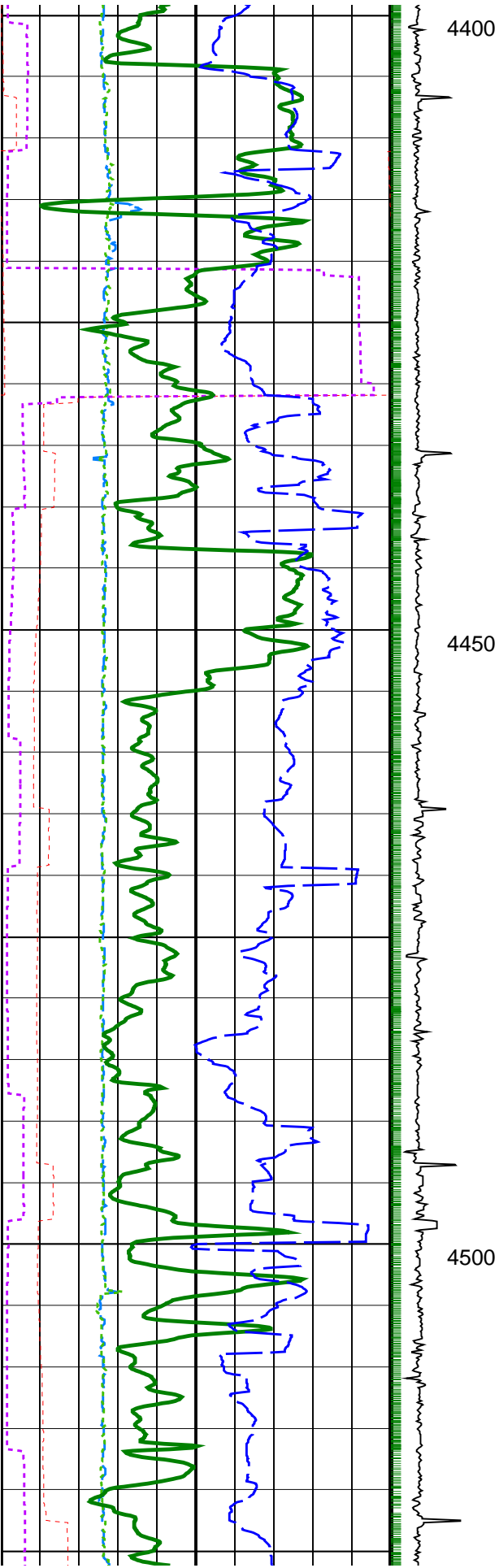


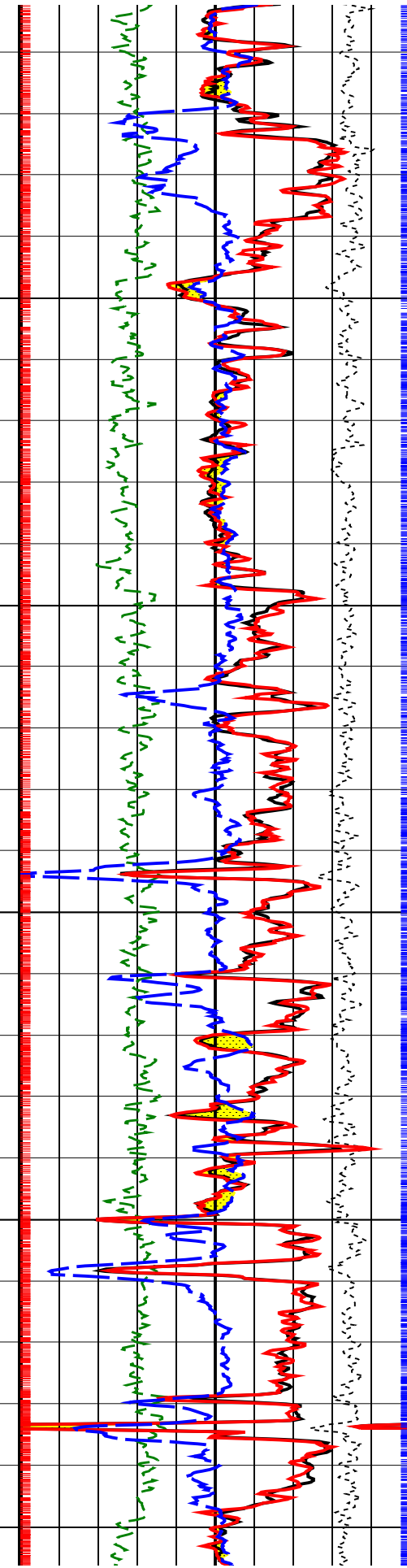
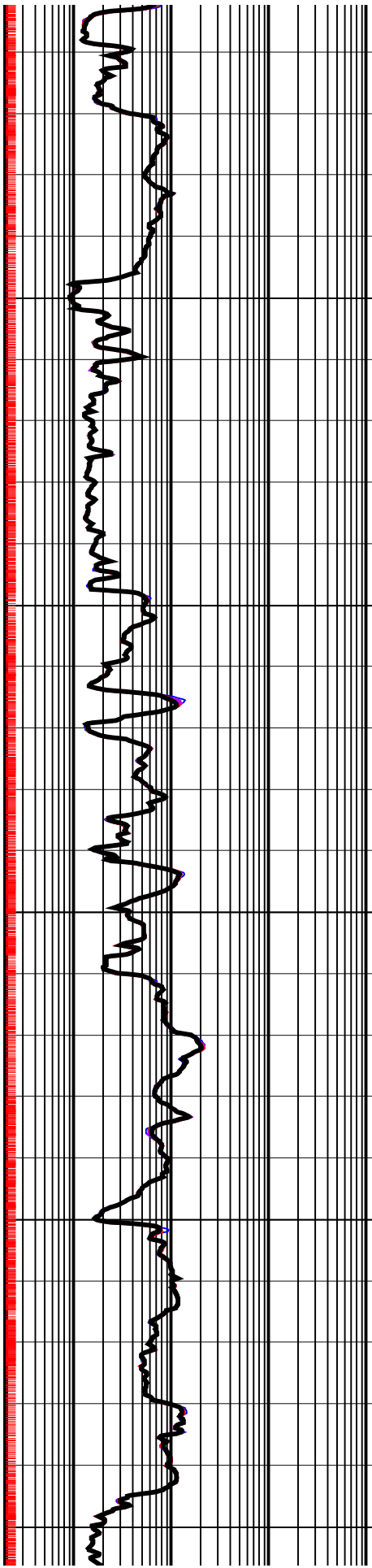
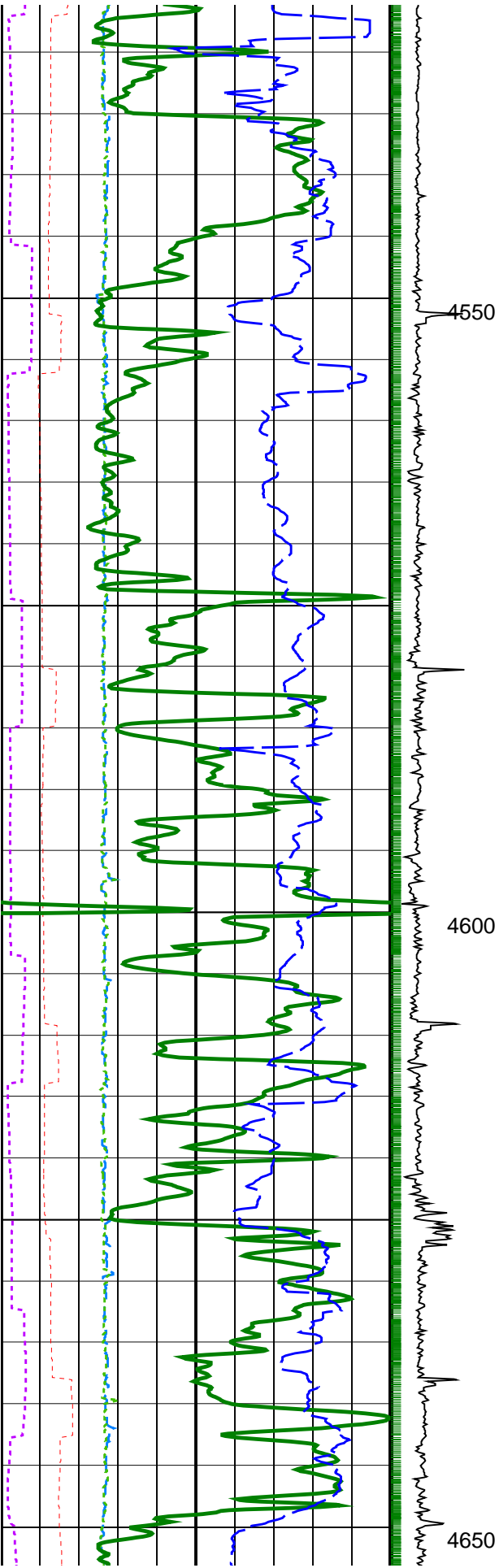


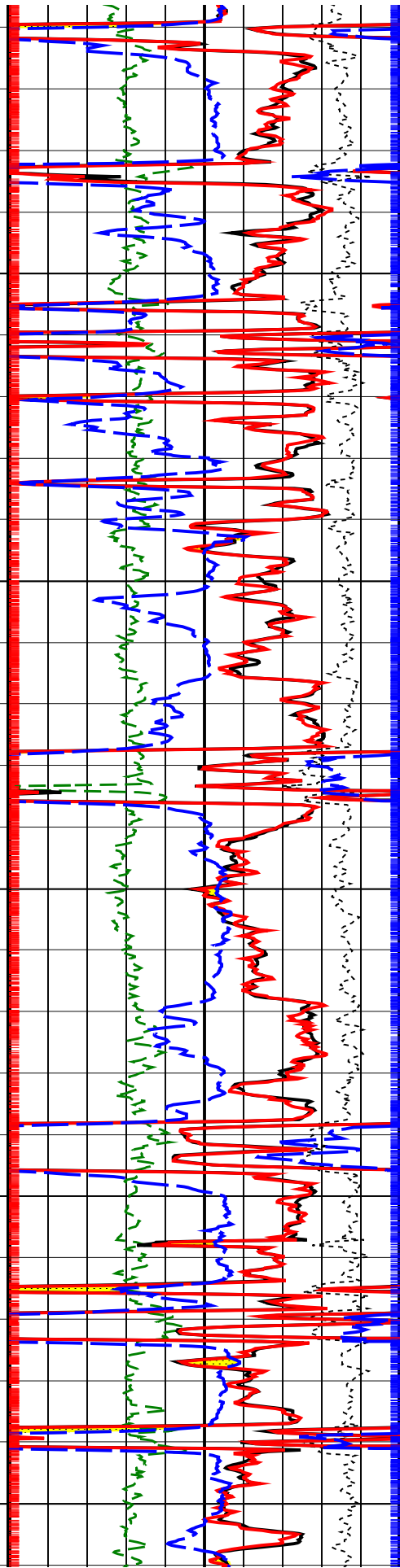
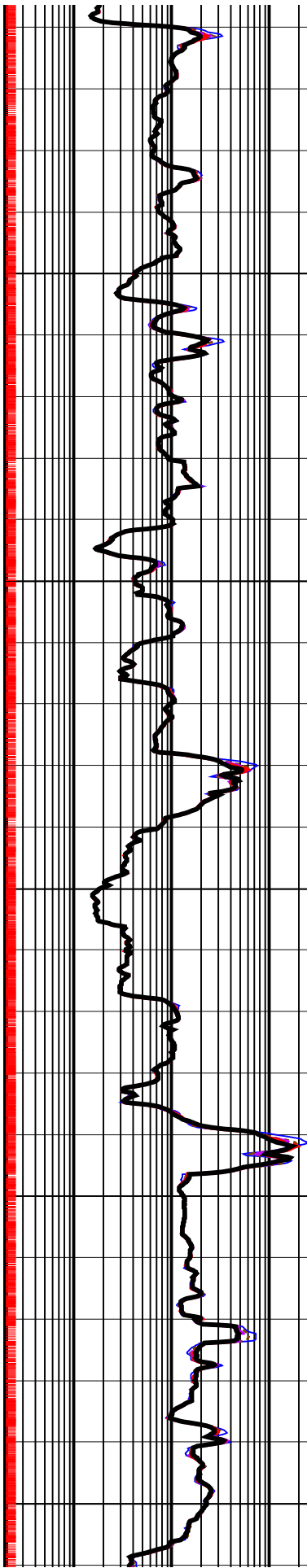
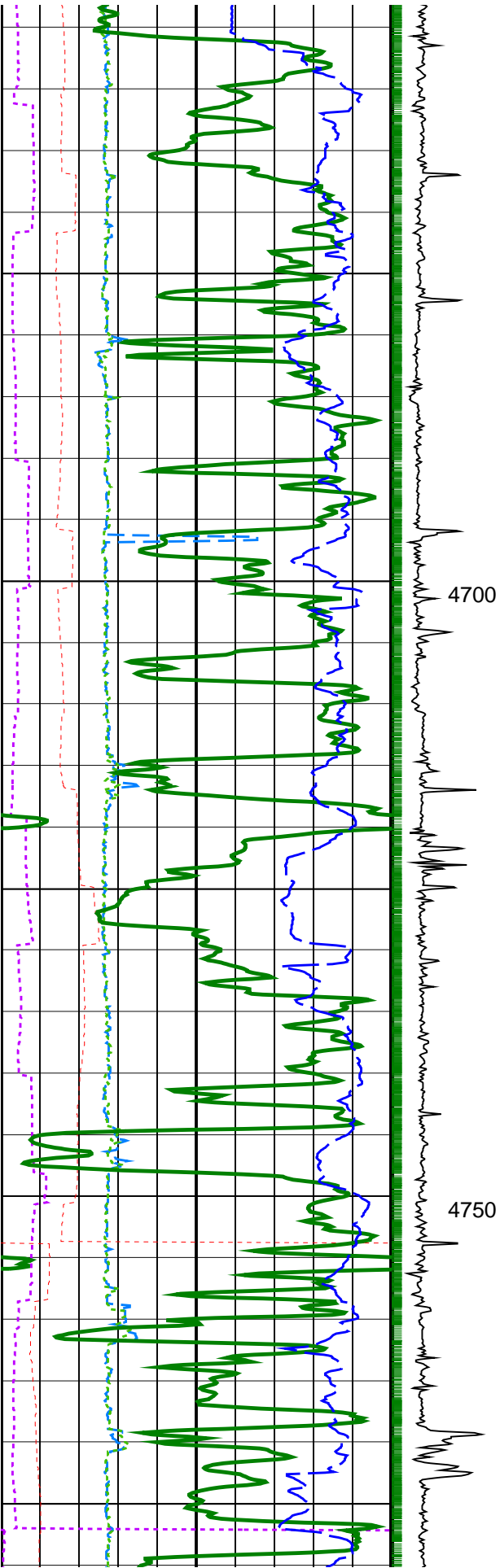


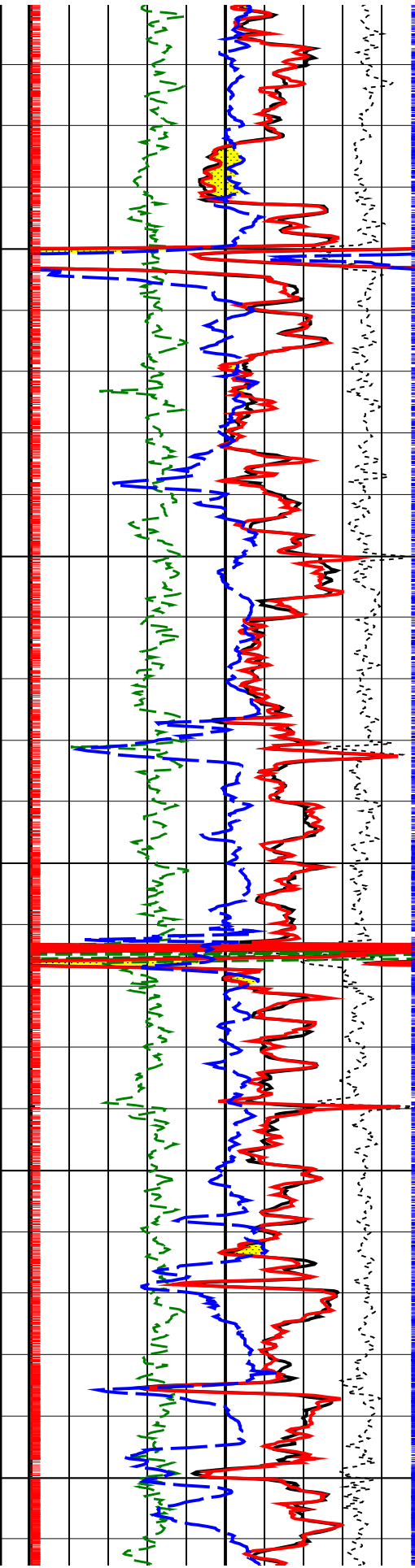
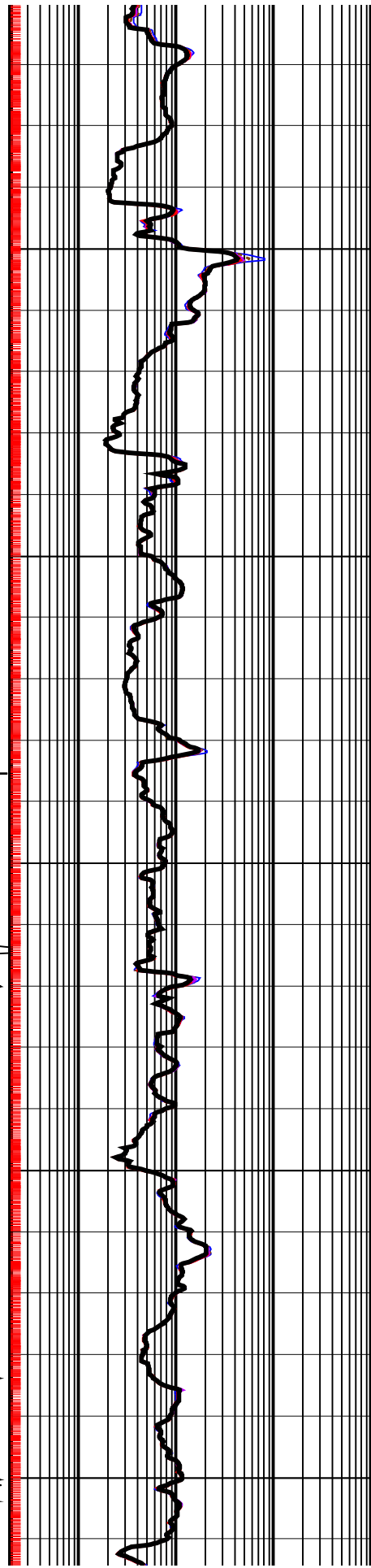
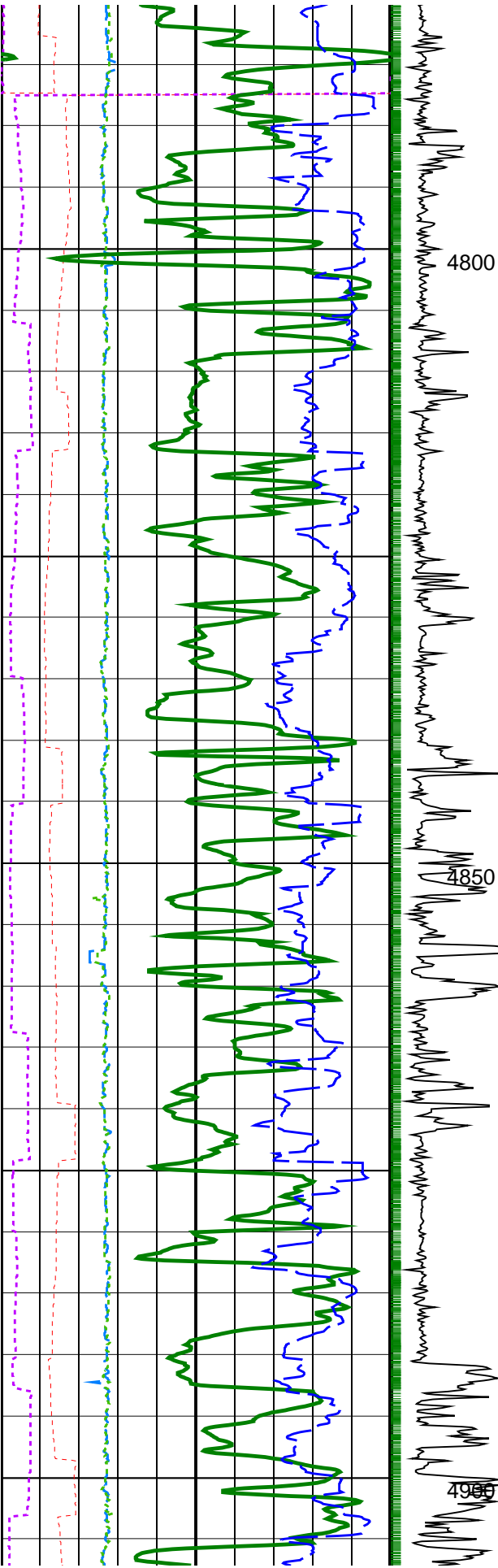


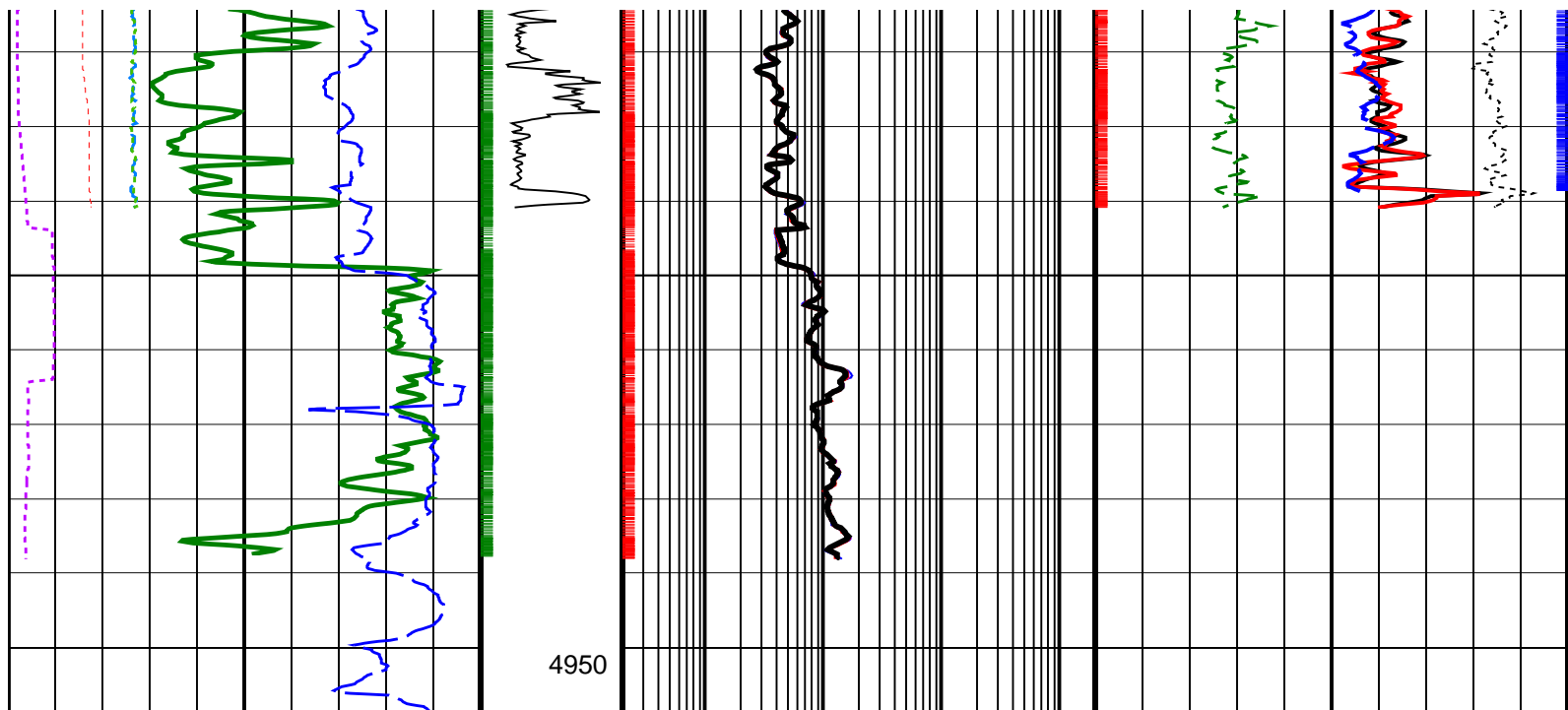












<b>Density Time After Bit (TAB_DEN)</b> (HR)	ADN Rotational Speed (RPM_ADN) (RPM)	<b>ARC Phase-Shift Resistivity 16-in. at 2 MHz (P16H)</b> (OHMM)	<b>Bulk Density Correction, Bottom (DRHB)</b> (G/C3)
0 10	250 0	0.2 2000	-0.75 0.25
<b>Horizontal Hole Diameter (HORD)</b> (IN)		<b>ARC Phase-Shift Resistivity 22-in. at 2 MHz (P22H)</b> (OHMM)	<b>Photoelectric Factor, Bottom (PEB)</b> (-----)
6 16		0.2 2000	0 10
<b>Vertical Hole Diameter (VERD)</b> (IN)		<b>ARC Phase-Shift Resistivity 28-in. at 2 MHz (P28H)</b> (OHMM)	<b>Bulk Density (RHOB)</b> (G/C3)
6 16		0.2 2000	1.85 2.85
<b>ARC Gamma Ray (GR_ARC)</b> (GAPI)		<b>ARC Phase-Shift Resistivity 34-in. at 2 MHz (P34H)</b> (OHMM)	<b>Bulk Density, Bottom (ROBB)</b> (G/C3)
0 200		0.2 2000	1.85 2.85
<b>ARC Resistivity Time After Bit (TAB_ARC_RES)</b> (HR)		<b>ARC Phase-Shift Resistivity 40-in. at 2 MHz (P40H)</b> (OHMM)	<b>Thermal Neutron Porosity (TNPH)</b> (PU)
0 10		0.2 2000	45 -15
<b>Rate of Penetration, Averaged over Last 5ft (ROP5_RM)</b> (M/HR)			<b>Gas Area</b> <b>From ADN/ROBB/DEPTH to</b> <b>ADN/TNPH/DEPTH</b>
200 0			

#### PIP SUMMARY

Density Ticks, 0.1 ft ▮

Neutron Ticks, 0.1 ft ▮

▮ ARC Resistivity Samples  
 ▮ ARC Gamma Ray Samples

**IDEAL Version: ID10\_0C\_04**  
 IDF

Primary Equipment:

6.75-in. Azimuthal Density Neutron / Equipment Identification




Tool Name and Serial Number  
Collar Type and Serial Number  
Chassis Type and Serial Number  
Stabilizer Type and Serial Number  
Neutron Logging Source  
Density Logging Source  
Stabilizer Size  
Calibration Status

ADN6 – CA 0403  
ADDC – AA 0403  
ADSE – EA 18  
Clamp-On Stabiliser 699198  
NSR – M 202  
GSR – J/Z 1994  
8.25 – in.  
Valid

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6.75-in. Azimuthal Density Neutron Calibration




Density: Magnesium Block

Phase	LS window 3 – Mg CPS	Value	Phase	SS window 1 – Mg CPS	Value	Phase	SS window 3 – Mg CPS	Value
Master		1052	Master		2361	Master		6156
	250.0 (Minimum) 4125 (Nominal) 8000 (Maximum)			700.0 (Minimum) 9350 (Nominal) 18000 (Maximum)			2500 (Minimum) 23750 (Nominal) 45000 (Maximum)	

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6.75-in. Azimuthal Density Neutron Calibration




Density: Aluminum Block

Phase	LS window 3 – Al CPS	Value	Phase	SS window 1 – Al CPS	Value	Phase	SS window 3 – Al CPS	Value
Master		163.3	Master		1238	Master		3922
	50.00 (Minimum) 725.0 (Nominal) 1400 (Maximum)			500.0 (Minimum) 4250 (Nominal) 8000 (Maximum)			1500 (Minimum) 15750 (Nominal) 30000 (Maximum)	

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6.75-in. Azimuthal Density Neutron Calibration



Density: Background

Phase	LS window 3 – Background CPS	Value	Phase	SS window 1 – Background CPS	Value	Phase	SS window 3 – Background CPS	Value
Master		33.84	Master		106.5	Master		474.2
	15.00 (Minimum) 82.50 (Nominal) 150.0 (Maximum)			40.00 (Minimum) 220.0 (Nominal) 400.0 (Maximum)			150.0 (Minimum) 825.0 (Nominal) 1500 (Maximum)	

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6.75-in. Azimuthal Density Neutron Calibration
















Density: Water Block Check

Phase	Long spacing water density G/C3	Value	Phase	Short spacing water density G/C3	Value
Master		1.030	Master		1.120
	1.024 (Minimum) 1.039 (Nominal) 1.054 (Maximum)			1.096 (Minimum) 1.126 (Nominal) 1.156 (Maximum)	


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6.75-in. Azimuthal Density Neutron Calibration

Neutron: 3-Point Calibration

Phase	Far 1 tube 1 Air Point Measure CPS	Value	Phase	Far 1 tube 1 Rod Point Measure CPS	Value	Phase	Far 1 tube 1 H2O Point Measure CPS	Value
Master		17.01	Master		4.142	Master		2.060
	15.00 (Minimum) 19.05 (Nominal) 21.00 (Maximum)			4.000 (Minimum) 4.857 (Nominal) 5.500 (Maximum)			1.900 (Minimum) 2.363 (Nominal) 2.700 (Maximum)	
Phase	Far 1 tube 2 Air Point Measure CPS	Value	Phase	Far 1 tube 2 Rod Point Measure CPS	Value	Phase	Far 1 tube 2 H2O Point Measure CPS	Value
Master		18.12	Master		4.335	Master		2.137
	16.00 (Minimum) 19.05 (Nominal) 22.00 (Maximum)			4.000 (Minimum) 4.857 (Nominal) 5.500 (Maximum)			1.900 (Minimum) 2.363 (Nominal) 2.800 (Maximum)	
Phase	Far 1 tube 3 Air Point Measure CPS	Value	Phase	Far 1 tube 3 Rod Point Measure CPS	Value	Phase	Far 1 tube 3 H2O Point Measure CPS	Value
Master		17.15	Master		4.188	Master		2.066
	15.00 (Minimum) 19.05 (Nominal) 21.00 (Maximum)			4.000 (Minimum) 4.857 (Nominal) 5.500 (Maximum)			1.900 (Minimum) 2.363 (Nominal) 2.700 (Maximum)	
Phase	Far 2 tube 1 Air Point Measure CPS	Value	Phase	Far 2 tube 1 Rod Point Measure CPS	Value	Phase	Far 2 tube 1 H2O Point Measure CPS	Value
Master		17.52	Master		4.365	Master		2.173
	15.00 (Minimum) 19.05 (Nominal) 21.00 (Maximum)			4.000 (Minimum) 4.857 (Nominal) 5.500 (Maximum)			1.900 (Minimum) 2.363 (Nominal) 2.700 (Maximum)	
Phase	Far 2 tube 2 Air Point Measure CPS	Value	Phase	Far 2 tube 2 Rod Point Measure CPS	Value	Phase	Far 2 tube 2 H2O Point Measure CPS	Value
Master		18.07	Master		4.211	Master		1.982











<div><div>16.00 (Minimum)</div><div>19.05 (Nominal)</div><div>22.00 (Maximum)</div></div>						<div><div>4.000 (Minimum)</div><div>4.857 (Nominal)</div><div>5.500 (Maximum)</div></div>						<div><div>1.900 (Minimum)</div><div>2.363 (Nominal)</div><div>2.800 (Maximum)</div></div>														
Phase	Far	2	tube	3	Air	Point Measure	CPS	Value	Phase	Far	2	tube	3	Rod	Point Measure	CPS	Value	Phase	Far	2	tube	3	H2O	Point Measure	CPS	Value
Master								17.03	Master								4.348	Master							2.060	
<div><div>15.00 (Minimum)</div><div>19.05 (Nominal)</div><div>21.00 (Maximum)</div></div>						<div><div>4.000 (Minimum)</div><div>4.857 (Nominal)</div><div>5.500 (Maximum)</div></div>						<div><div>1.900 (Minimum)</div><div>2.363 (Nominal)</div><div>2.700 (Maximum)</div></div>														
Phase	Near	1	tube	1	Air	Point Measure	CPS	Value	Phase	Near	1	tube	1	Rod	Point Measure	CPS	Value	Phase	Near	1	tube	1	H2O	Point Measure	CPS	Value
Master								458.8	Master								722.7	Master							319.9	
<div><div>400.0 (Minimum)</div><div>487.5 (Nominal)</div><div>540.0 (Maximum)</div></div>						<div><div>610.0 (Minimum)</div><div>768.8 (Nominal)</div><div>850.0 (Maximum)</div></div>						<div><div>270.0 (Minimum)</div><div>343.7 (Nominal)</div><div>390.0 (Maximum)</div></div>														
Phase	Near	2	tube	1	Air	Point Measure	CPS	Value	Phase	Near	2	tube	1	Rod	Point Measure	CPS	Value	Phase	Near	2	tube	1	H2O	Point Measure	CPS	Value
Master								454.0	Master								727.3	Master							320.0	
<div><div>400.0 (Minimum)</div><div>487.5 (Nominal)</div><div>540.0 (Maximum)</div></div>						<div><div>610.0 (Minimum)</div><div>768.8 (Nominal)</div><div>850.0 (Maximum)</div></div>						<div><div>270.0 (Minimum)</div><div>343.7 (Nominal)</div><div>390.0 (Maximum)</div></div>														

Master: 21-Jun-2005 11:22			
6.75-in. Azimuthal Density Neutron Calibration			
Neutron: Water Block Check			
Phase	Far Neutron water porosity PU		Value
Master			92.83
	90.00 (Minimum)	100.0 (Nominal)	125.0 (Maximum)

6.75-in. Array Resistivity Compensated / Equipment Identification

Primary Equipment:

Tool Name and Serial Number	ARC6 – BA	669
ARC675 Calibration Status	Valid	

Master: 21-Jun-2005 17:38														
6.75-in. Array Resistivity Compensated Calibration														
Resistivity: Air														
Phase	Phase-Shift T1			Value	Phase	Phase-Shift T2			Value	Phase	Phase-Shift T3			Value
Master				1.268	Master				-1.170	Master				1.197
	-3.900 (Minimum)	0.1000 (Nominal)	4.100 (Maximum)			-3.900 (Minimum)	0.1000 (Nominal)	4.100 (Maximum)			-3.900 (Minimum)	0.1000 (Nominal)	4.100 (Maximum)	
Phase	Phase-Shift T4			Value	Phase	Phase-Shift T5			Value	Phase	Phase-Shift T1 at 400KHz			Value
Master				-1.217	Master				1.178	Master				-0.01753
	-3.900 (Minimum)	0.1000 (Nominal)	4.100 (Maximum)			-3.900 (Minimum)	0.1000 (Nominal)	4.100 (Maximum)			-3.900 (Minimum)	0.1000 (Nominal)	4.100 (Maximum)	
Phase	Phase-Shift T2 at 400KHz			Value	Phase	Phase-Shift T3 at 400KHz			Value	Phase	Phase-Shift T4 at 400KHz			Value
Master				-0.06656	Master				0.006531	Master				-0.06732
	-3.900 (Minimum)	0.1000 (Nominal)	4.100 (Maximum)			-3.900 (Minimum)	0.1000 (Nominal)	4.100 (Maximum)			-3.900 (Minimum)	0.1000 (Nominal)	4.100 (Maximum)	
Phase	Phase-Shift T5 at 400KHz			Value										
Master				-0.002529										
	-3.900 (Minimum)	0.1000 (Nominal)	4.100 (Maximum)											

Master: 21-Jun-2005 17:38	
6.75-in. Array Resistivity Compensated Calibration	
Resistivity Array	



1	176.60	0.04	183.64	0.00	176.60	-0.02	-8.30	1.92	8.52	166.98	0.00	TIP	None
2	184.83	1.13	182.03	8.23	184.83	-0.01	-8.38	1.92	8.60	167.12	4.04	GYR	None
3	213.43	3.56	179.37	28.60	213.40	0.14	-9.55	1.92	9.74	168.66	2.59	GYR	None
4	223.59	3.72	184.92	10.16	223.54	0.24	-10.20	1.89	10.37	169.47	1.04	GYR	None
5	242.62	4.46	196.22	19.03	242.52	0.65	-11.52	1.64	11.64	171.88	1.80	GYR	None
6	271.64	8.75	218.77	29.02	271.35	2.68	-14.32	-0.05	14.32	180.21	5.18	GYR	None
7	300.55	10.26	241.47	28.91	299.87	6.65	-17.27	-3.69	17.66	192.07	4.23	GYR	None
8	329.43	14.91	265.50	28.88	328.07	12.76	-18.79	-9.66	21.12	207.21	7.28	GYR	None
9	358.38	18.09	268.20	28.95	355.83	20.96	-19.22	-17.87	26.24	222.91	3.45	GYR	None
10	376.71	19.26	267.42	18.33	373.19	26.80	-19.45	-23.73	30.68	230.67	1.99	MWD	None
11	405.38	22.00	267.42	28.67	400.02	36.87	-19.90	-33.82	39.24	239.53	2.91	MWD	None
12	434.55	26.55	267.16	29.17	426.60	48.83	-20.47	-45.80	50.16	245.92	4.76	MWD	None
13	463.47	30.39	267.57	28.92	452.02	62.57	-21.10	-59.57	63.19	250.49	4.05	MWD	None
14	492.68	34.12	269.90	29.21	476.72	78.07	-21.43	-75.15	78.14	254.08	4.10	MWD	None
15	521.56	37.60	271.58	28.88	500.12	94.83	-21.20	-92.06	94.47	257.03	3.82	MWD	None
16	550.51	41.70	271.67	28.95	522.41	113.09	-20.68	-110.52	112.44	259.40	4.32	MWD	None
17	579.54	44.80	271.95	29.03	543.55	132.74	-20.05	-130.40	131.93	261.26	3.26	MWD	None
18	608.87	48.46	271.91	29.33	563.69	153.80	-19.33	-151.70	152.93	262.74	3.80	MWD	None
19	638.03	52.67	271.80	29.16	582.21	176.04	-18.60	-174.21	175.20	263.90	4.40	MWD	None
20	667.20	55.95	271.13	29.17	599.22	199.47	-18.00	-197.89	198.71	264.80	3.47	MWD	None
21	695.98	60.12	271.59	28.78	614.46	223.62	-17.42	-222.29	222.97	265.52	4.44	MWD	None
22	725.38	64.35	273.81	29.40	628.15	249.25	-16.18	-248.27	248.80	266.27	4.83	MWD	None
23	754.29	64.78	274.68	28.91	640.57	274.85	-14.25	-274.31	274.68	267.03	0.94	MWD	None
24	783.25	65.32	275.18	28.96	652.78	300.53	-11.99	-300.47	300.70	267.71	0.74	MWD	None
25	818.77	67.01	273.50	35.52	667.14	332.38	-9.54	-332.86	333.00	268.36	1.96	MWD	None
26	854.11	67.18	274.13	35.34	680.89	364.35	-7.37	-365.34	365.42	268.84	0.52	MWD	None
27	883.53	67.37	274.24	29.42	692.26	390.97	-5.39	-392.41	392.44	269.21	0.22	MWD	None
28	912.19	67.47	274.39	28.66	703.26	416.91	-3.40	-418.79	418.81	269.53	0.18	MWD	None
29	941.56	67.64	274.39	29.37	714.47	443.52	-1.32	-445.86	445.86	269.83	0.18	MWD	None
30	970.95	67.57	274.58	29.39	725.67	470.14	0.80	-472.95	472.95	270.10	0.20	MWD	None

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Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/100f)	Srvy tool type	Tool Corr (deg)
31	1000.05	67.26	274.68	29.10	736.85	496.45	2.97	-499.73	499.74	270.34	0.34	MWD	None
32	1029.41	66.85	275.24	29.36	748.29	522.90	5.31	-526.66	526.69	270.58	0.68	MWD	None
33	1057.37	66.83	275.77	27.96	759.29	547.99	7.77	-552.25	552.31	270.81	0.53	MWD	None
34	1087.17	65.53	276.46	29.80	771.33	574.53	10.68	-579.36	579.46	271.06	1.48	MWD	None
35	1115.97	65.95	276.52	28.80	783.16	600.06	13.65	-605.45	605.60	271.29	0.45	MWD	None
36	1144.88	66.14	276.01	28.91	794.90	625.77	16.53	-631.71	631.93	271.50	0.53	MWD	None
37	1173.62	66.62	273.57	28.74	806.41	651.54	18.73	-657.95	658.21	271.63	2.42	MWD	None
38	1202.81	66.84	271.28	29.19	817.95	677.99	19.86	-684.74	685.02	271.66	2.21	MWD	None
39	1231.62	66.76	271.15	28.81	829.30	704.19	20.42	-711.21	711.50	271.64	0.15	MWD	None
40	1260.58	66.85	271.17	28.96	840.70	730.54	20.96	-737.82	738.12	271.63	0.10	MWD	None
41	1289.26	66.39	271.05	28.68	852.08	756.60	21.47	-764.14	764.45	271.61	0.50	MWD	None
42	1318.24	66.25	271.26	28.98	863.72	782.87	22.01	-790.68	790.98	271.59	0.25	MWD	None
43	1347.08	66.51	270.71	28.84	875.28	809.03	22.46	-817.10	817.41	271.57	0.60	MWD	None
44	1376.15	67.18	270.40	29.07	886.71	835.52	22.72	-843.82	844.13	271.54	0.76	MWD	None
45	1405.05	67.15	270.07	28.90	897.92	861.94	22.83	-870.46	870.76	271.50	0.32	MWD	None
46	1434.14	67.43	269.66	29.09	909.15	888.58	22.76	-897.29	897.58	271.45	0.49	MWD	None
47	1462.93	67.01	268.80	28.79	920.30	914.97	22.41	-923.84	924.11	271.39	0.95	MWD	None
48	1492.22	67.44	268.83	29.29	931.64	941.83	21.85	-950.84	951.09	271.32	0.45	MWD	None
49	1521.04	67.82	268.79	28.82	942.61	968.34	21.30	-977.48	977.71	271.25	0.40	MWD	None
50	1549.99	67.58	268.90	28.95	953.59	994.99	20.76	-1004.26	1004.48	271.18	0.27	MWD	None
51	1579.01	68.11	269.05	29.02	964.54	1021.72	20.28	-1031.13	1031.33	271.13	0.58	MWD	None
52	1608.07	68.31	269.31	29.06	975.33	1048.54	19.89	-1058.11	1058.30	271.08	0.33	MWD	None
53	1636.95	68.63	269.58	28.88	985.92	1075.23	19.63	-1084.98	1085.16	271.04	0.43	MWD	None
54	1666.13	68.90	270.38	29.18	996.49	1102.23	19.62	-1112.18	1112.35	271.01	0.83	MWD	None
55	1695.25	68.90	271.14	29.12	1006.98	1129.14	19.98	-1139.34	1139.52	271.00	0.74	MWD	None
56	1724.30	69.09	271.81	29.05	1017.39	1155.96	20.68	-1166.45	1166.64	271.02	0.69	MWD	None
57	1753.32	69.21	272.75	29.02	1027.72	1182.72	21.76	-1193.55	1193.75	271.04	0.93	MWD	None
58	1782.48	69.09	272.97	29.15	1038.09	1209.56	23.12	-1220.76	1220.98	271.08	0.25	MWD	None
59	1811.46	69.33	273.59	28.99	1048.38	1236.22	24.67	-1247.81	1248.06	271.13	0.66	MWD	None
60	1840.15	69.21	274.40	28.69	1058.54	1262.56	26.54	-1274.58	1274.86	271.19	0.81	MWD	None

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Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/100f)	Srvy tool type	Tool Corr (deg)
61	1869.23	69.00	274.33	29.08	1068.91	1289.19	28.60	-1301.67	1301.98	271.26	0.23	MWD	None
62	1897.95	68.96	274.92	28.72	1079.21	1315.44	30.77	-1328.39	1328.75	271.33	0.59	MWD	None
63	1926.96	68.73	275.07	29.01	1089.68	1341.90	33.12	-1355.34	1355.75	271.40	0.28	MWD	None
64	1956.12	68.62	275.18	29.16	1100.29	1368.45	35.55	-1382.40	1382.86	271.47	0.16	MWD	None
65	1985.11	68.49	275.64	28.99	1110.89	1394.80	38.09	-1409.26	1409.78	271.55	0.47	MWD	None

66	2013.72	68.42	275.77	28.61	1121.39	1420.75	40.74	-1435.74	1436.32	271.63	0.15	MWD	None
67	2043.27	68.42	276.11	29.55	1132.26	1447.53	43.58	-1463.07	1463.72	271.71	0.33	MWD	None
68	2072.90	68.54	276.03	29.63	1143.13	1474.37	46.50	-1490.48	1491.21	271.79	0.15	MWD	None
69	2101.21	68.59	276.22	28.31	1153.47	1500.03	49.31	-1516.68	1517.48	271.86	0.20	MWD	None
70	2130.32	68.73	276.28	29.11	1164.07	1526.42	52.26	-1543.64	1544.52	271.94	0.16	MWD	None
71	2159.55	68.71	275.76	29.23	1174.68	1552.95	55.12	-1570.72	1571.69	272.01	0.51	MWD	None
72	2187.89	68.23	275.09	28.34	1185.08	1578.69	57.61	-1596.97	1598.01	272.07	0.85	MWD	None
73	2217.05	67.62	273.94	29.16	1196.04	1605.16	59.74	-1623.91	1625.00	272.11	1.28	MWD	None
74	2246.05	67.18	272.93	29.00	1207.18	1631.49	61.34	-1650.63	1651.77	272.13	1.08	MWD	None
75	2275.35	67.02	272.33	29.30	1218.58	1658.09	62.58	-1677.59	1678.76	272.14	0.60	MWD	None
76	2303.96	66.99	272.08	28.61	1229.76	1684.09	63.59	-1703.91	1705.09	272.14	0.25	MWD	None
77	2333.53	66.77	271.98	29.57	1241.37	1710.94	64.56	-1731.09	1732.29	272.14	0.25	MWD	None
78	2362.66	66.57	271.60	29.13	1252.91	1737.37	65.39	-1757.82	1759.04	272.13	0.42	MWD	None
79	2391.16	66.42	271.10	28.50	1264.27	1763.23	66.01	-1783.95	1785.17	272.12	0.52	MWD	None
80	2420.52	66.29	270.97	29.36	1276.05	1789.86	66.49	-1810.84	1812.06	272.10	0.18	MWD	None
81	2449.48	66.28	270.92	28.96	1287.70	1816.11	66.93	-1837.35	1838.57	272.09	0.05	MWD	None
82	2478.43	65.90	271.06	28.95	1299.43	1842.32	67.39	-1863.81	1865.03	272.07	0.42	MWD	None
83	2507.38	65.86	271.31	28.95	1311.26	1868.47	67.93	-1890.23	1891.45	272.06	0.24	MWD	None
84	2536.36	65.70	271.62	28.98	1323.15	1894.60	68.61	-1916.65	1917.88	272.05	0.34	MWD	None
85	2565.38	65.56	271.63	29.02	1335.12	1920.74	69.36	-1943.07	1944.31	272.04	0.15	MWD	None
86	2594.40	65.45	271.70	29.02	1347.15	1946.84	70.13	-1969.47	1970.72	272.04	0.13	MWD	None
87	2623.43	65.17	271.70	29.03	1359.28	1972.91	70.91	-1995.83	1997.09	272.03	0.29	MWD	None
88	2652.00	64.93	271.51	28.57	1371.33	1998.52	71.63	-2021.73	2023.00	272.03	0.32	MWD	None
89	2681.57	64.64	272.01	29.57	1383.93	2024.95	72.46	-2048.47	2049.75	272.03	0.55	MWD	None
90	2710.44	64.64	271.97	28.87	1396.29	2050.72	73.36	-2074.54	2075.84	272.03	0.04	MWD	None

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Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/100f)	Srvy tool type	Tool Corr (deg)
91	2739.43	65.30	272.01	28.99	1408.56	2076.66	74.27	-2100.79	2102.10	272.02	0.69	MWD	None
92	2768.43	65.78	271.99	29.00	1420.57	2102.73	75.20	-2127.17	2128.50	272.02	0.50	MWD	None
93	2797.42	66.38	272.44	28.99	1432.32	2128.88	76.22	-2153.65	2155.00	272.03	0.76	MWD	None
94	2826.48	66.53	272.48	29.06	1443.93	2155.16	77.36	-2180.27	2181.64	272.03	0.16	MWD	None
95	2855.34	66.71	272.69	28.86	1455.38	2181.27	78.56	-2206.73	2208.13	272.04	0.28	MWD	None
96	2884.25	67.03	272.95	28.91	1466.74	2207.47	79.87	-2233.29	2234.71	272.05	0.42	MWD	None
97	2913.38	67.05	273.01	29.13	1478.10	2233.88	81.26	-2260.07	2261.53	272.06	0.06	MWD	None
98	2942.34	67.73	273.21	28.96	1489.24	2260.19	82.71	-2286.77	2288.26	272.07	0.74	MWD	None
99	2971.33	68.13	273.23	28.99	1500.13	2286.63	84.22	-2313.59	2315.12	272.08	0.42	MWD	None
100	3000.41	68.89	273.44	29.08	1510.78	2313.24	85.79	-2340.60	2342.17	272.10	0.82	MWD	None
101	3029.44	69.28	273.36	29.03	1521.15	2339.91	87.40	-2367.67	2369.28	272.11	0.42	MWD	None
102	3058.81	69.90	273.38	29.37	1531.39	2366.98	89.02	-2395.15	2396.80	272.13	0.64	MWD	None
103	3088.07	69.80	273.29	29.26	1541.47	2394.00	90.62	-2422.57	2424.27	272.14	0.14	MWD	None
104	3116.50	69.65	273.74	28.43	1551.32	2420.22	92.25	-2449.19	2450.93	272.16	0.48	MWD	None
105	3145.03	69.35	274.06	28.53	1561.31	2446.45	94.07	-2475.85	2477.64	272.18	0.45	MWD	None
106	3174.90	69.05	274.28	29.87	1571.92	2473.84	96.10	-2503.70	2505.55	272.20	0.37	MWD	None
107	3203.62	69.10	274.16	28.72	1582.17	2500.15	98.08	-2530.45	2532.35	272.22	0.13	MWD	None
108	3231.95	69.12	273.82	28.33	1592.28	2526.13	99.92	-2556.86	2558.81	272.24	0.34	MWD	None
109	3261.85	69.20	274.34	29.90	1602.91	2553.55	101.91	-2584.73	2586.74	272.26	0.50	MWD	None
110	3290.76	69.38	274.16	28.91	1613.14	2580.07	103.91	-2611.70	2613.77	272.28	0.26	MWD	None
111	3320.19	68.08	272.09	29.43	1623.81	2607.06	105.41	-2639.08	2641.18	272.29	2.41	MWD	None
112	3348.99	66.80	269.60	28.80	1634.86	2633.40	105.80	-2665.67	2667.77	272.27	2.79	MWD	None
113	3378.00	65.47	267.82	29.01	1646.60	2659.79	105.21	-2692.19	2694.25	272.24	2.21	MWD	None
114	3406.72	64.01	265.64	28.72	1658.86	2685.71	103.73	-2718.12	2720.10	272.19	2.60	MWD	None
115	3436.65	62.50	263.31	29.93	1672.33	2712.42	101.16	-2744.72	2746.58	272.11	2.62	MWD	None
116	3465.56	61.00	260.46	28.91	1686.01	2737.88	97.57	-2769.93	2771.65	272.02	3.08	MWD	None
117	3493.87	59.97	257.54	28.31	1699.96	2762.45	92.87	-2794.11	2795.65	271.90	2.95	MWD	None
118	3522.76	58.80	254.12	28.89	1714.68	2787.12	86.79	-2818.21	2819.55	271.76	3.34	MWD	None
119	3551.72	57.78	250.60	28.96	1729.90	2811.33	79.33	-2841.68	2842.79	271.60	3.33	MWD	None
120	3580.80	56.75	246.98	29.08	1745.63	2835.04	70.49	-2864.48	2865.35	271.41	3.37	MWD	None

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Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/100f)	Srvy tool type	Tool Corr (deg)
121	3609.60	55.55	243.69	28.80	1761.68	2857.84	60.51	-2886.22	2886.85	271.20	3.16	MWD	None
122	3638.76	54.93	240.03	29.16	1778.31	2880.18	49.22	-2907.34	2907.75	270.97	3.21	MWD	None
123	3667.68	54.16	235.71	28.92	1795.09	2901.51	36.70	-2927.28	2927.51	270.72	3.80	MWD	None
124	3696.68	53.30	231.28	29.00	1812.25	2921.86	22.80	-2946.07	2946.16	270.44	3.86	MWD	None
125	3725.76	53.25	227.13	29.08	1829.64	2941.24	7.58	-2963.71	2963.72	270.15	3.49	MWD	None
126	3754.65	53.96	223.06	28.89	1846.79	2959.59	-8.83	-2980.17	2980.18	269.83	3.54	MWD	None
127	3783.54	54.77	220.16	28.89	1863.62	2977.21	-26.39	-2995.76	2995.87	269.50	2.63	MWD	None
128	3812.61	56.01	216.05	29.07	1880.14	2994.17	-45.21	-3010.51	3010.85	269.14	3.78	MWD	None
129	3841.38	57.08	212.30	28.77	1896.00	3009.98	-65.07	-3023.99	3024.69	268.77	3.50	MWD	None
130	3870.13	58.41	211.89	28.75	1911.35	3025.32	-85.67	-3036.90	3038.11	268.38	1.46	MWD	None

131	3899.29	57.91	210.71	29.16	1926.73	3040.69	-106.83	-3049.77	3051.64	267.99	1.17	MWD	None
132	3928.90	57.02	210.67	29.61	1942.65	3055.97	-128.30	-3062.51	3065.20	267.60	0.92	MWD	None
133	4015.78	53.81	210.04	86.88	1991.96	3099.42	-190.01	-3098.66	3104.48	266.49	1.14	MWD	None
134	4044.33	51.58	209.51	28.55	2009.27	3113.03	-209.72	-3109.94	3117.00	266.14	2.42	MWD	None
135	4073.26	50.24	207.64	28.93	2027.51	3126.11	-229.43	-3120.68	3129.11	265.80	2.08	MWD	None
136	4102.29	46.16	206.56	29.03	2046.85	3138.27	-248.69	-3130.54	3140.41	265.46	4.37	MWD	None
137	4131.17	40.46	206.33	28.88	2067.86	3149.20	-266.42	-3139.37	3150.65	265.15	6.02	MWD	None
138	4159.95	38.23	206.44	28.78	2090.12	3159.25	-282.76	-3147.47	3160.15	264.87	2.36	MWD	None
139	4188.95	34.73	205.10	29.00	2113.43	3168.60	-298.28	-3154.98	3169.04	264.60	3.77	MWD	None
140	4217.63	33.53	204.72	28.68	2137.17	3177.12	-312.88	-3161.75	3177.20	264.35	1.30	MWD	None
141	4246.94	29.53	204.89	29.31	2162.15	3185.20	-326.79	-3168.18	3184.99	264.11	4.16	MWD	None
142	4275.84	25.05	205.43	28.90	2187.82	3192.26	-338.78	-3173.81	3191.84	263.91	4.73	MWD	None
143	4304.81	21.47	206.80	28.97	2214.44	3198.51	-349.05	-3178.83	3197.94	263.73	3.81	MWD	None
144	4333.81	16.56	208.03	29.00	2241.85	3203.84	-357.44	-3183.17	3203.18	263.59	5.18	MWD	None
145	4362.92	15.37	209.00	29.11	2269.83	3208.50	-364.48	-3186.99	3207.77	263.48	1.28	MWD	None
146	4391.85	14.29	210.79	28.93	2297.80	3212.94	-370.90	-3190.68	3212.16	263.37	1.24	MWD	None
147	4420.81	13.66	214.12	28.96	2325.90	3217.39	-376.80	-3194.43	3216.57	263.27	1.07	MWD	None
148	4450.08	13.49	215.04	29.27	2354.35	3221.95	-382.46	-3198.32	3221.11	263.18	0.29	MWD	None
149	4478.92	13.79	215.54	28.84	2382.38	3226.53	-388.01	-3202.25	3225.68	263.09	0.34	MWD	None
150	4507.60	13.77	217.99	28.68	2410.23	3231.26	-393.48	-3206.34	3230.40	263.00	0.62	MWD	None

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Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/ 100f)	Srvy tool type	Tool Corr (deg)
151	4536.72	13.73	218.40	29.12	2438.52	3236.18	-398.92	-3210.62	3235.31	262.92	0.11	MWD	None
152	4565.55	13.24	221.77	28.82	2466.55	3241.10	-404.06	-3214.94	3240.24	262.84	0.98	MWD	None
153	4594.41	12.52	224.81	28.87	2494.69	3246.05	-408.75	-3219.35	3245.20	262.76	1.04	MWD	None
154	4623.34	11.59	227.49	28.93	2522.98	3250.88	-412.94	-3223.70	3250.04	262.70	1.14	MWD	None
155	4652.25	10.43	224.62	28.91	2551.36	3255.30	-416.76	-3227.68	3254.48	262.64	1.35	MWD	None
156	4681.21	9.15	221.43	28.96	2579.90	3259.08	-420.36	-3231.05	3258.28	262.59	1.46	MWD	None
157	4710.37	8.01	218.08	29.16	2608.73	3262.26	-423.69	-3233.84	3261.47	262.54	1.30	MWD	None
158	4739.18	7.04	216.13	28.81	2637.29	3264.89	-426.70	-3236.12	3264.13	262.49	1.06	MWD	None
159	4768.38	6.52	215.64	29.20	2666.29	3267.23	-429.49	-3238.14	3266.49	262.44	0.55	MWD	None
160	4797.13	5.98	217.69	28.75	2694.87	3269.40	-432.00	-3240.00	3268.68	262.41	0.62	MWD	None
161	4826.21	5.62	212.03	29.08	2723.80	3271.36	-434.41	-3241.68	3270.66	262.37	0.71	MWD	None
162	4855.07	5.36	211.06	28.86	2752.53	3273.08	-436.76	-3243.13	3272.41	262.33	0.29	MWD	None
163	4883.83	5.16	209.56	28.76	2781.16	3274.68	-439.04	-3244.46	3274.03	262.29	0.26	MWD	None
164	4913.00	5.07	210.11	29.17	2810.22	3276.24	-441.29	-3245.75	3275.62	262.26	0.11	MWD	None
165	4934.41	4.85	211.39	21.41	2831.55	3277.38	-442.88	-3246.70	3276.77	262.23	0.35	MWD	None
166	4955.00	4.80	211.50	20.59	2852.07	3278.46	-444.36	-3247.60	3277.86	262.21	0.08	Projection to TD	

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Company: **ESSO Australia Pty. Ltd.**

**Schlumberger**

Well: **BMB-B17**

Field: **Bream B**

Rig: **ENSCO 102**

**8.5 in. Section**

State: **Victoria**

**VISION Service  
1:500 Measured Depth  
Recorded Mode Log**

