



MULTI ARM CALIPER LOG

Company		GREAT WESTERN OPERATING COMPANY	
Well		SCHAEFER LD 13-032HC	
Field		WATTENBERG	
County		ADAMS	
State		COLORADO	
Location:		API # : 05-001-10254	
Permanent Datum		SWSE	
Log Measured From		SEC 24 TWP 1S RGE 67W	
Drilling Measured From		GROUND LEVEL Elevation 5,022'	
		KELLY BUSHING	
		KELLY BUSHING	
		Elevation	
		K.B. 5,041'	
		D.F. 5,021'	
		G.L. 5,021'	
Date		08 DEC 2019	
Run Number		ONE	
Depth Driller			
Depth Logger		7,580'	
Bottom Logged Interval		7,550'	
Top Log Interval		SURFACE	
Open Hole Size		8-1/2"	
Type Fluid			
Density / Viscosity			
Max. Recorded Temp.			
Estimated Cement Top			
Time Well Ready		0930	
Time Logger on Bottom		10:00	
Equipment Number		65	
Location		PLATTEVILLE, CO	
Recorded By		B. TURNBULL	
Witnessed By		B. ELLIS	
Run Number			
Bit		From To	
Size		Weight From To	
Casing Record		Top Bottom	
Surface String		9-5/8" 35# SURFACE 1,784'	
Prot. String		5-1/2" 17# SURFACE 18,218'	
Production String			
Liner		SHORT JOINT 6859' - 6869'	

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

LOG CORRELATED TO KLX CEMENT BOND / GAMMA RAY LOG DATED 07 MARCH 2019
CORRECTED +11.5'

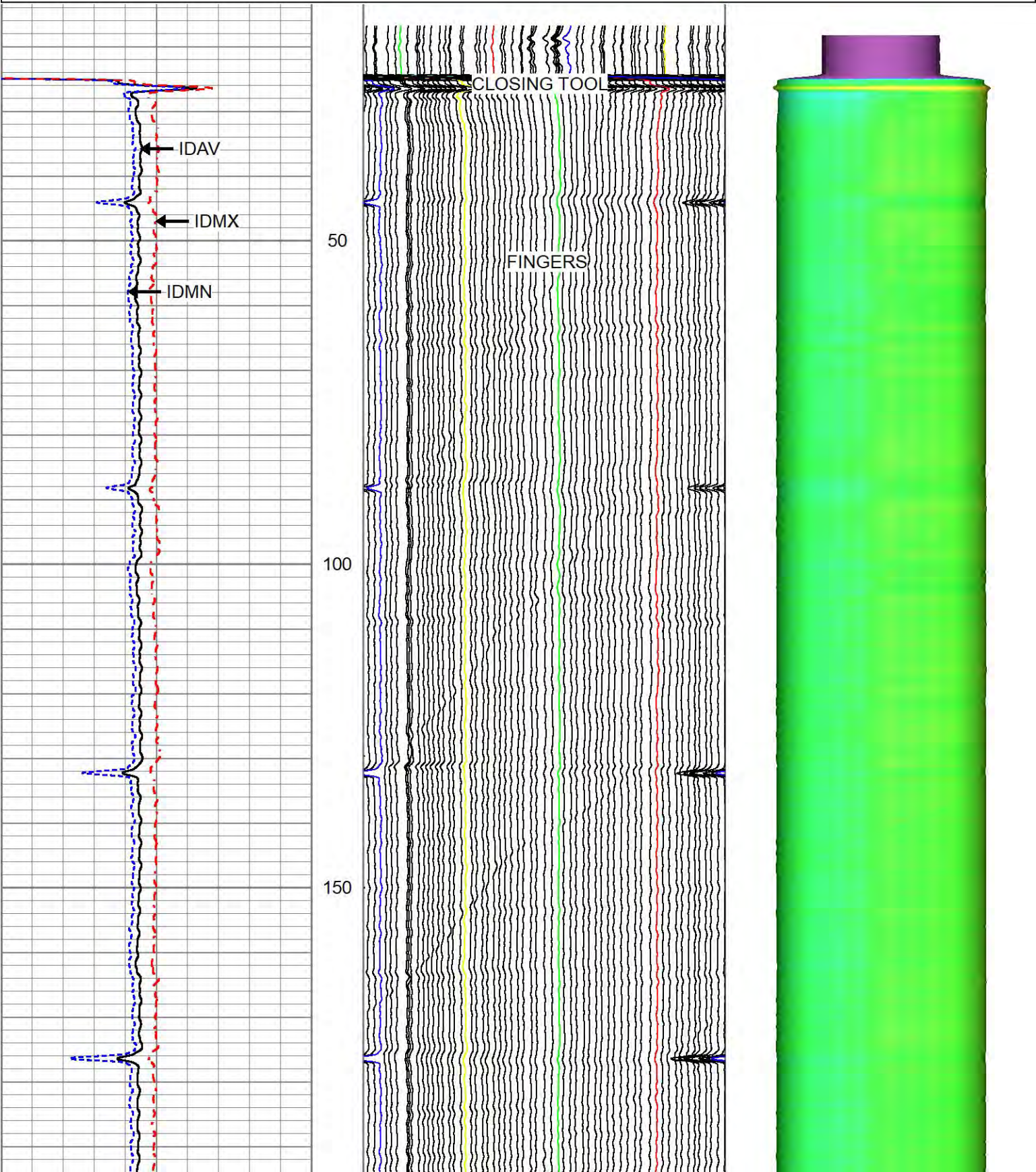
THANK YOU FOR USING KLX ENERGY SERVICES

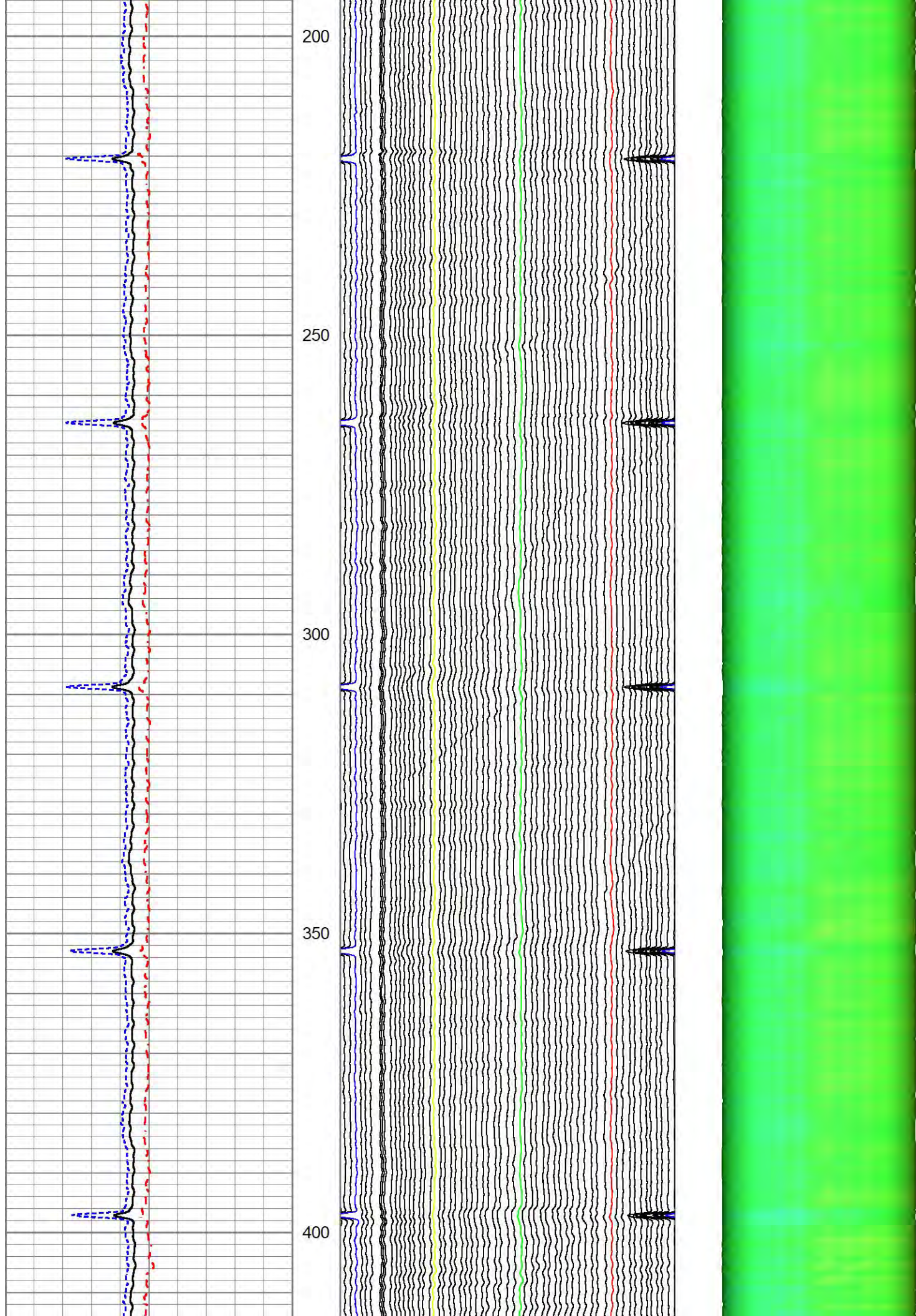


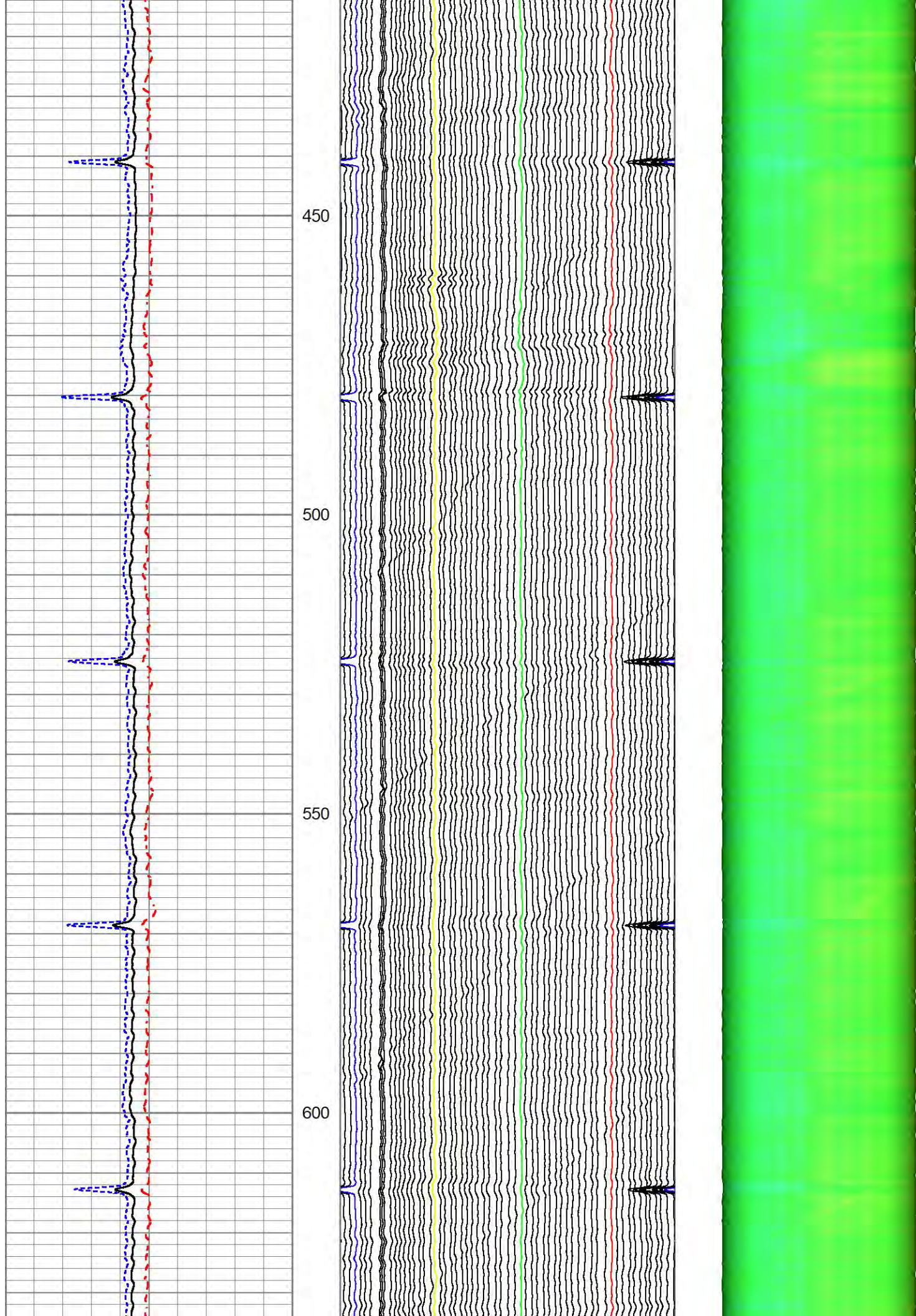
MAIN PASS

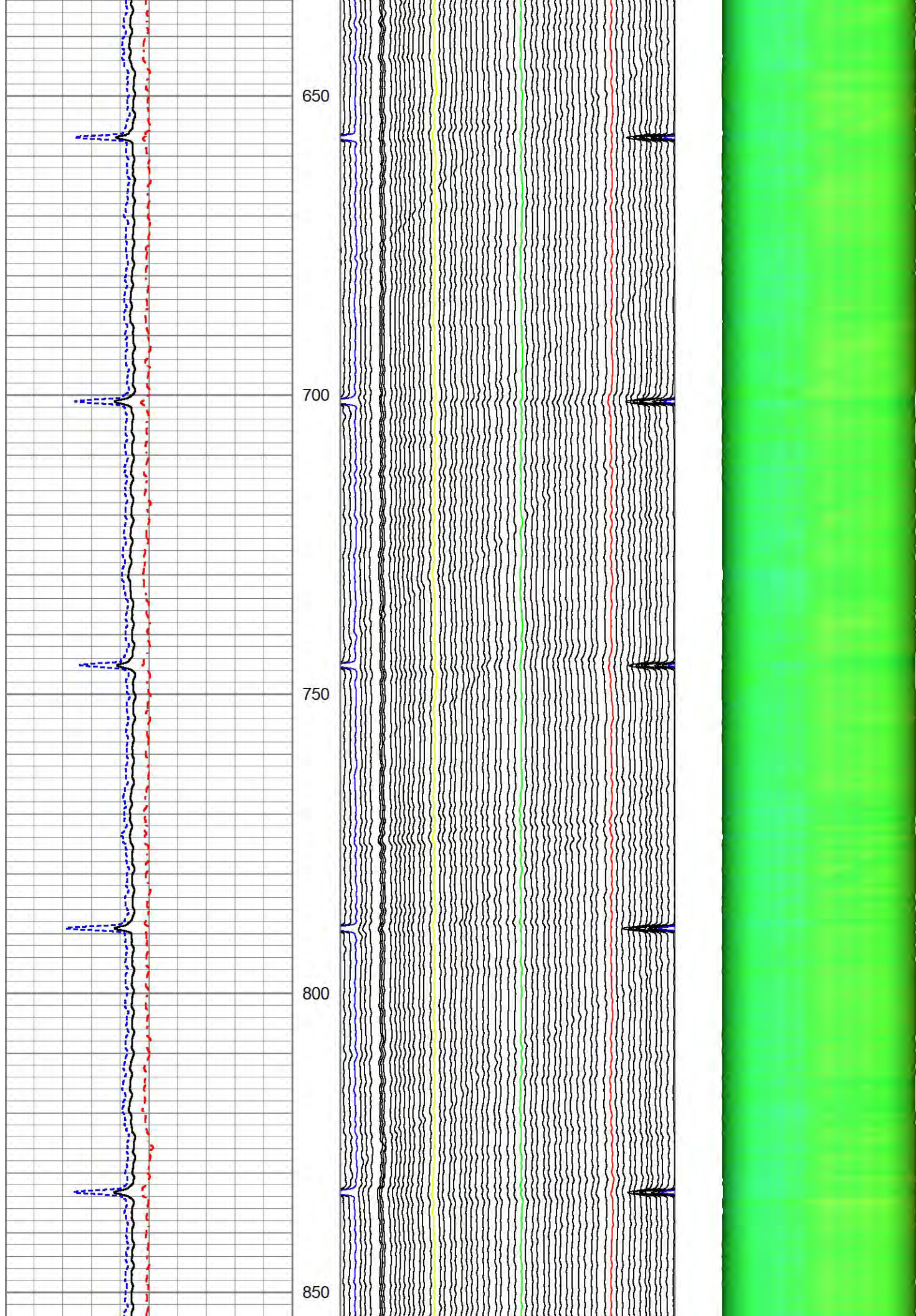
Database File	gw_schaefer_13-032hc_mac60_12-8-19.db
Dataset Pathname	pass4
Presentation Format	mac60_3dmap
Dataset Creation	Sun Dec 08 09:56:20 2019
Charted by	Depth in Feet scaled 1:240

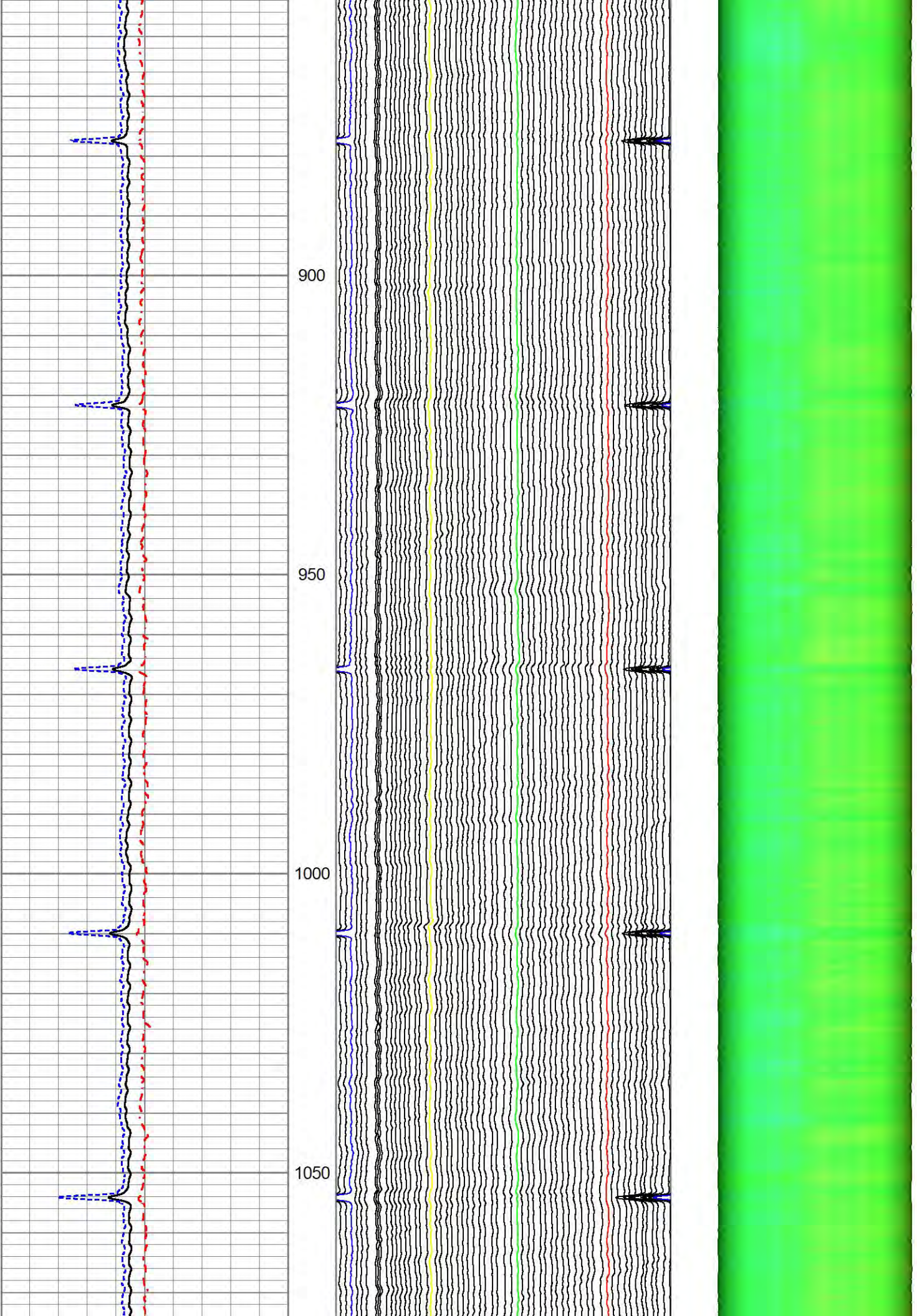
4.5	IDAV (in)	5.5	0.56	FING15 (in)	2.96	0	Casing Image (in)	100
4.5	IDMN (in)	5.5	1.16	FING30 (in)	3.56	4.284	(in)	5.5
4.5	IDMX (in)	5.5	1.76	FING45 (in)	4.16			
			0	60 RADII .04" INC. (in)	2.4			

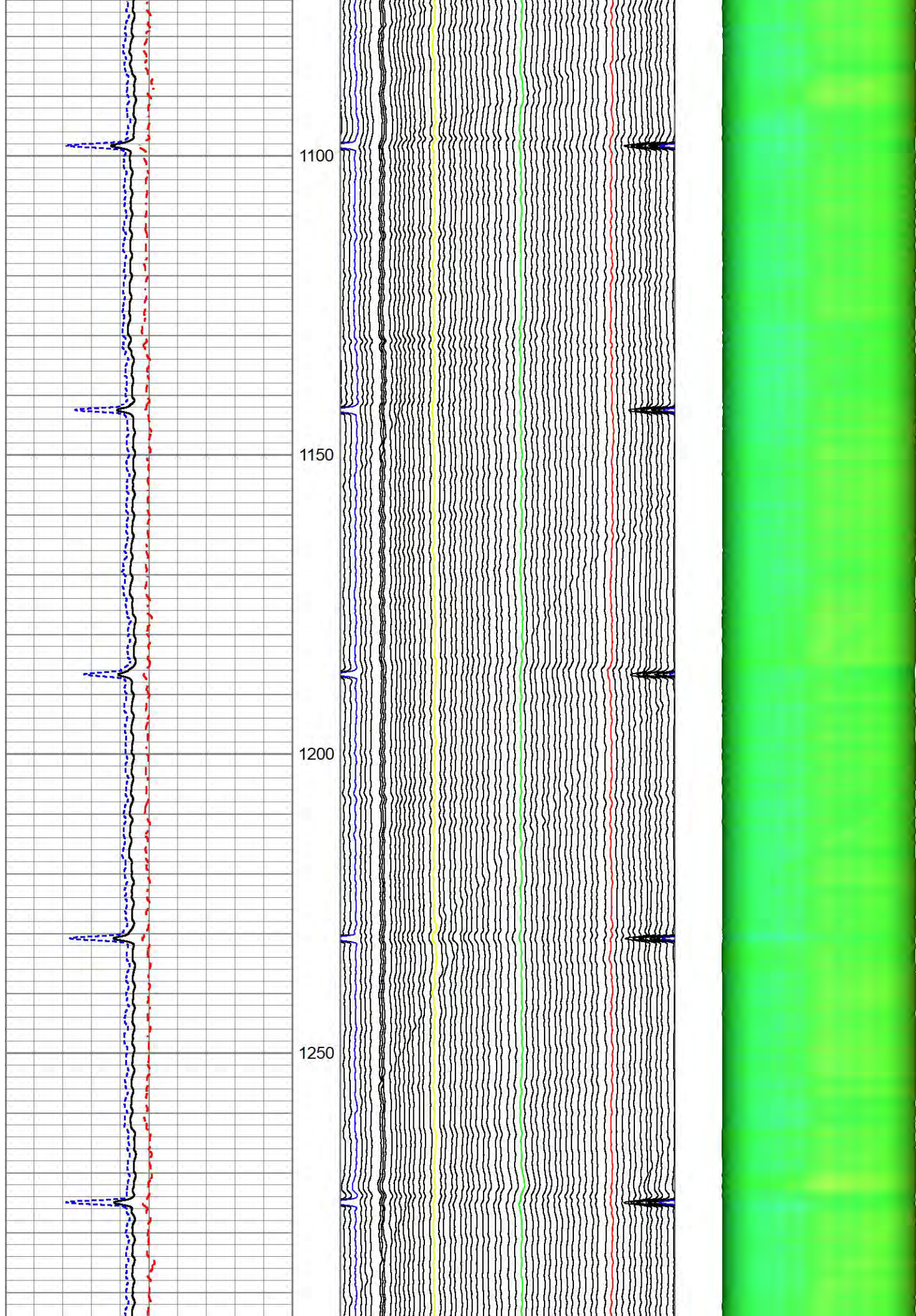


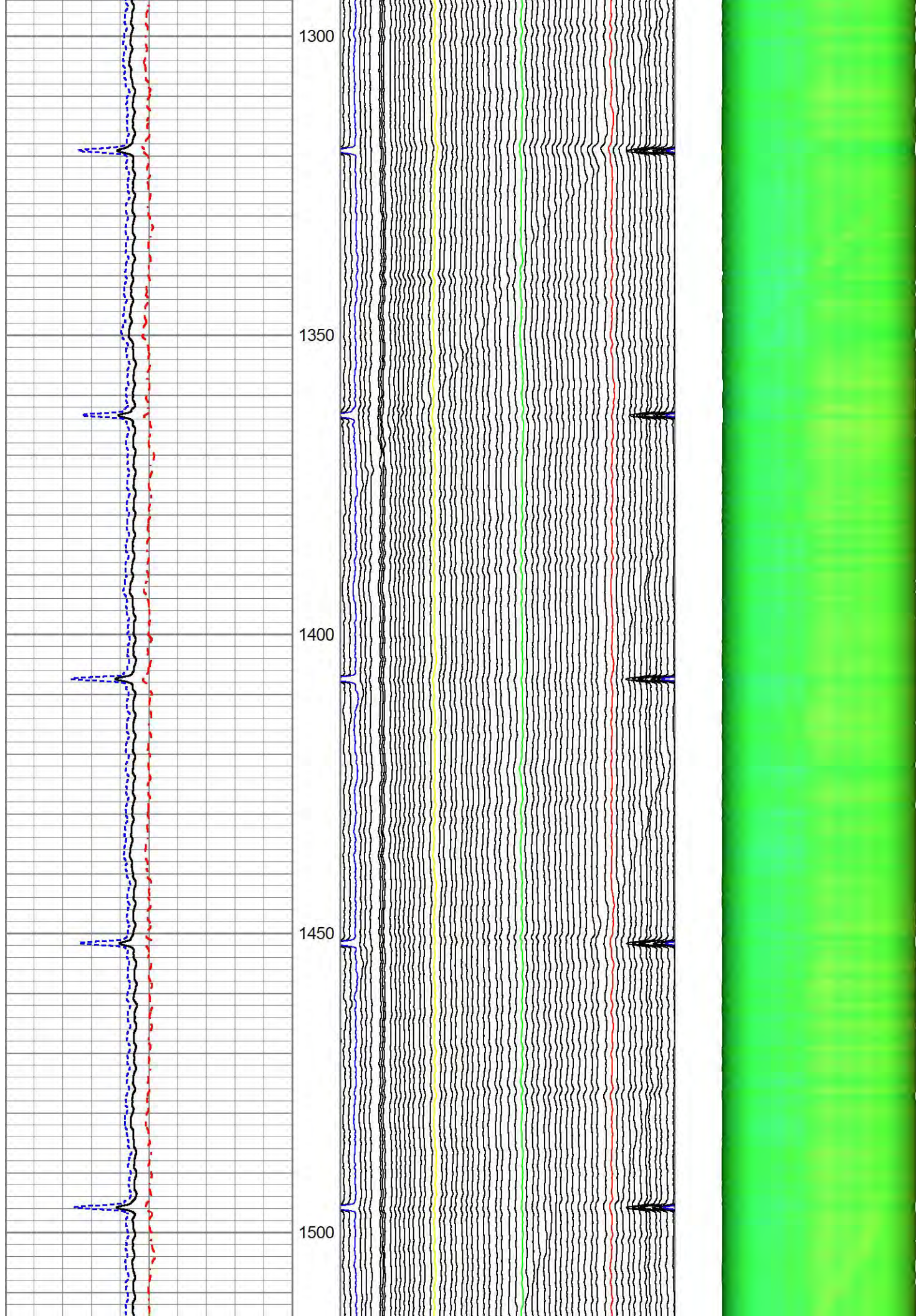


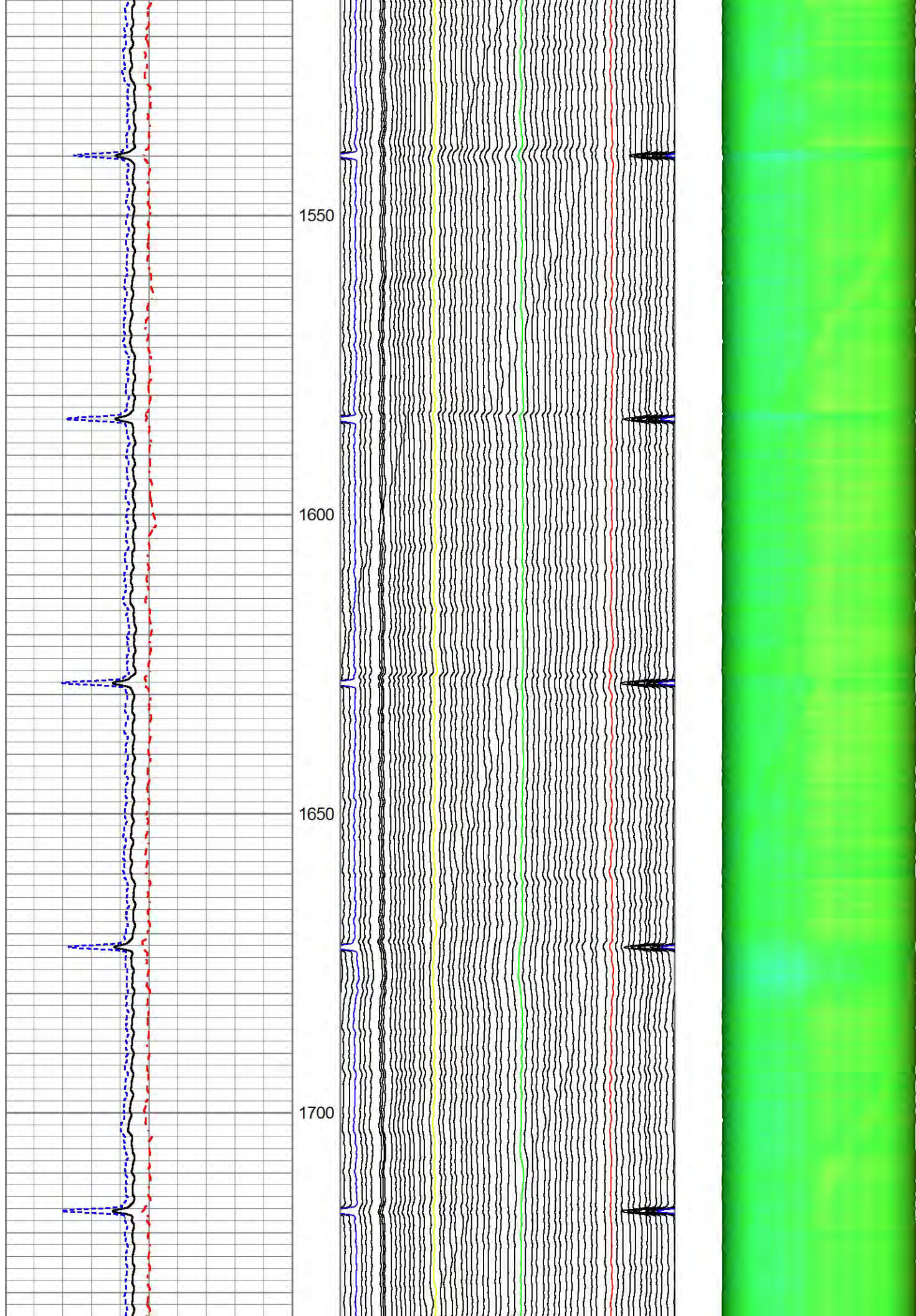


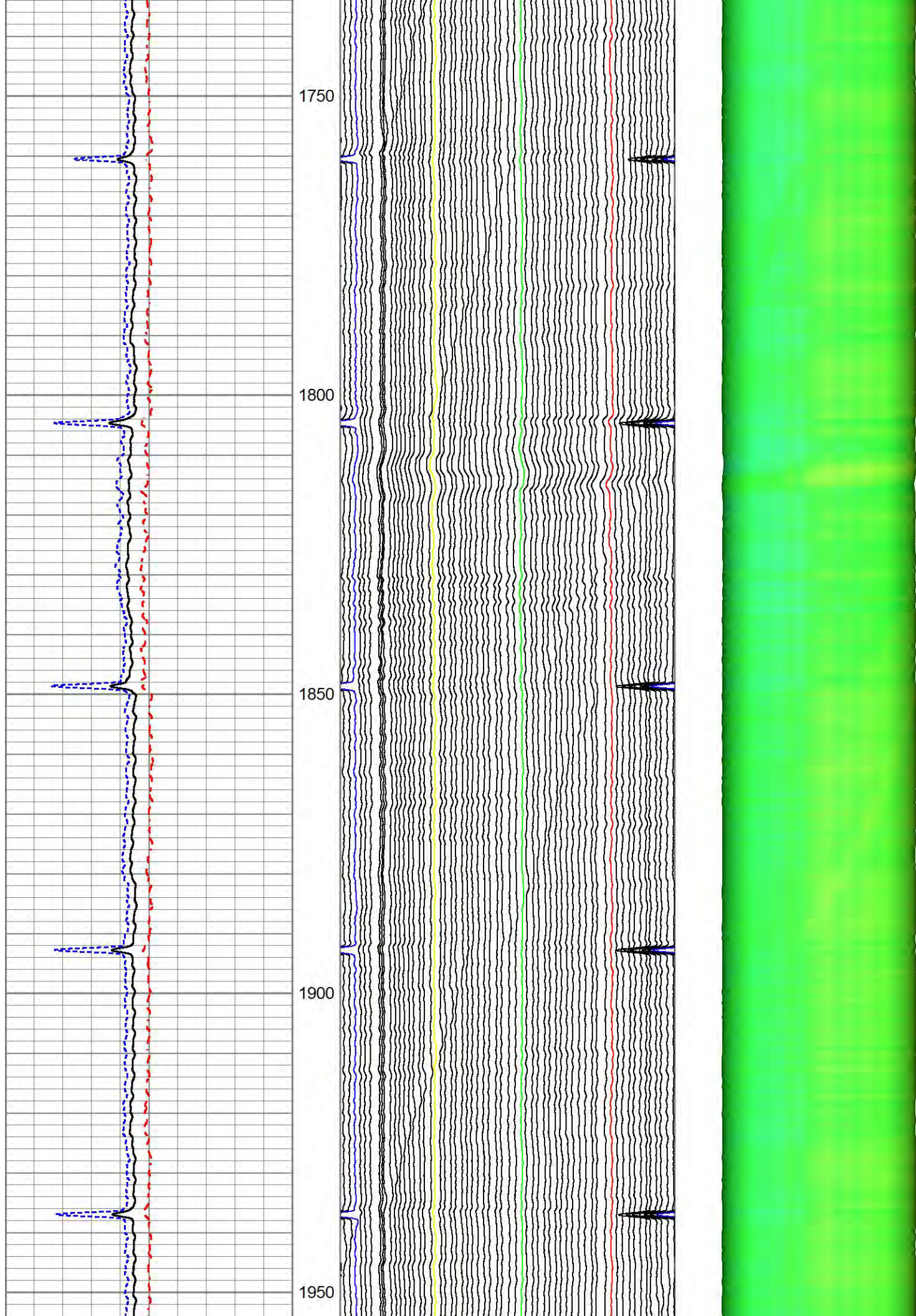


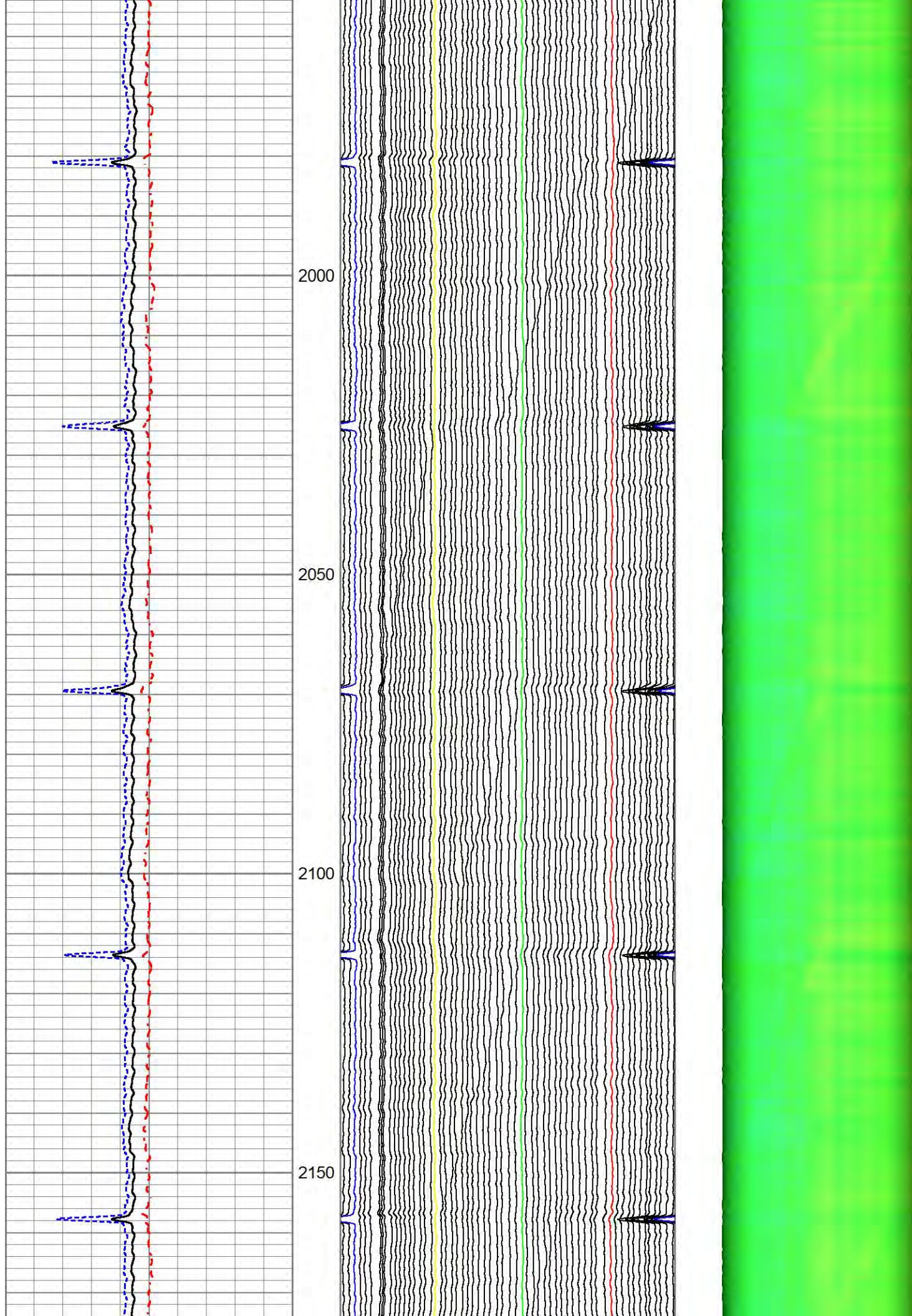




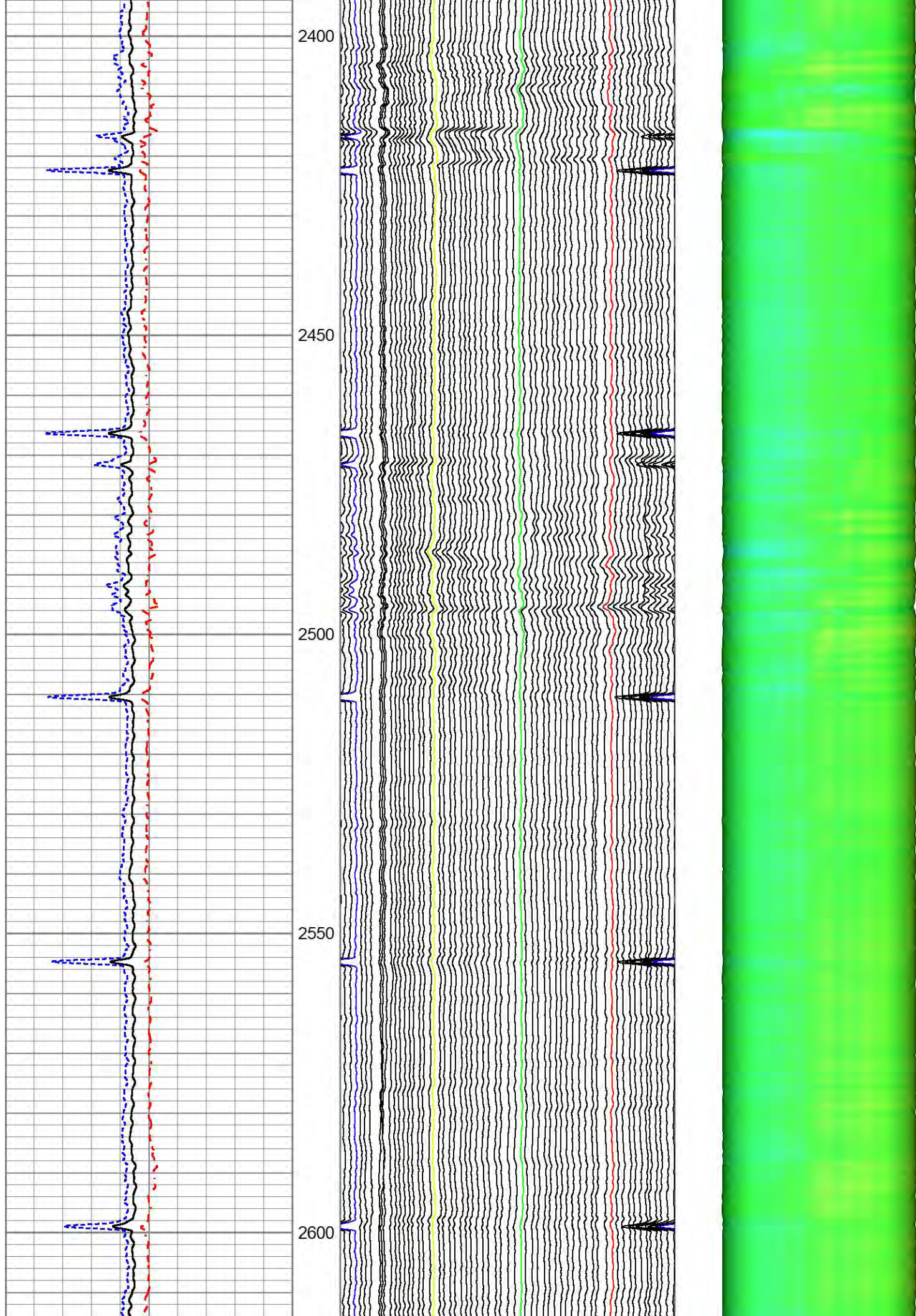


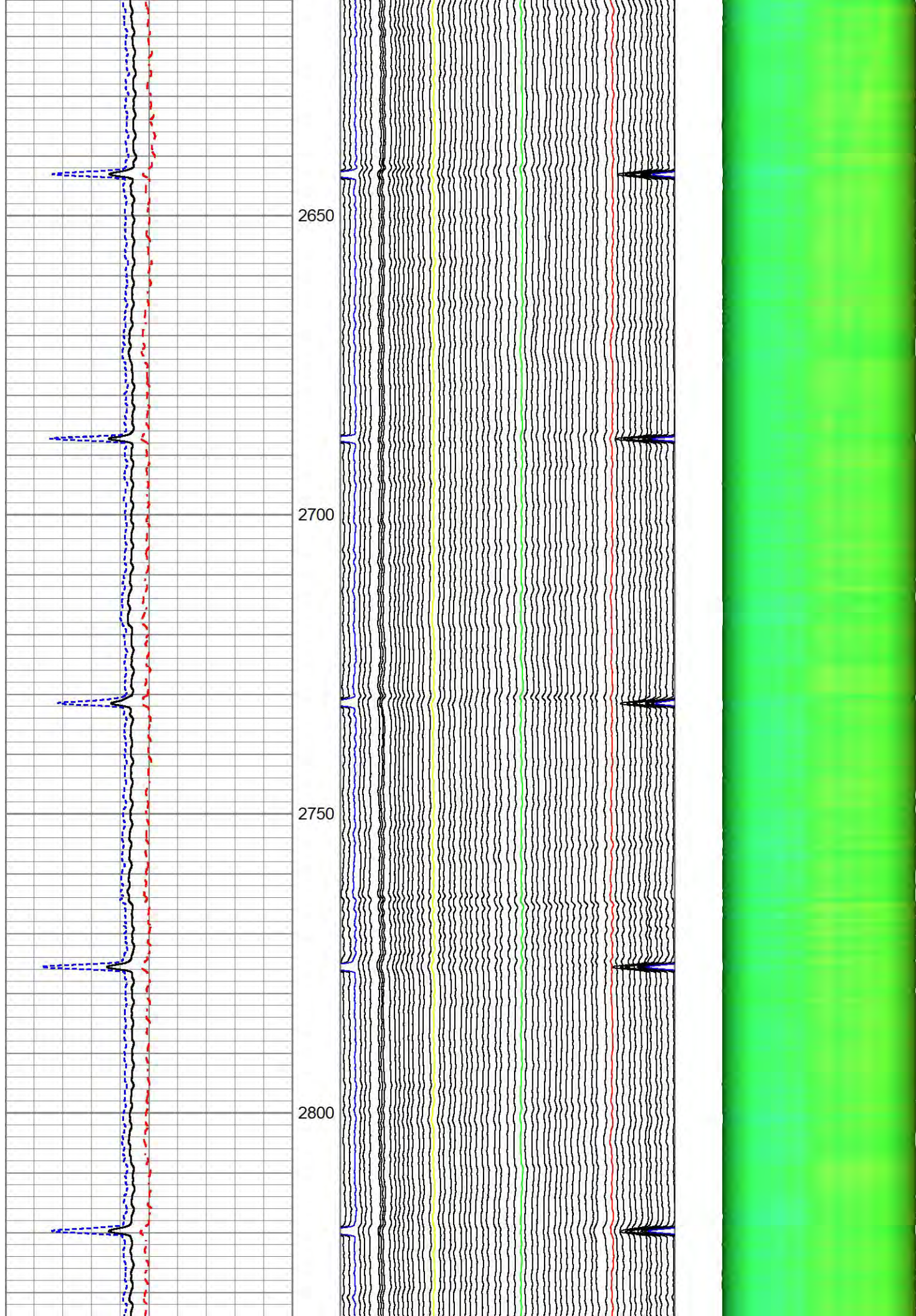


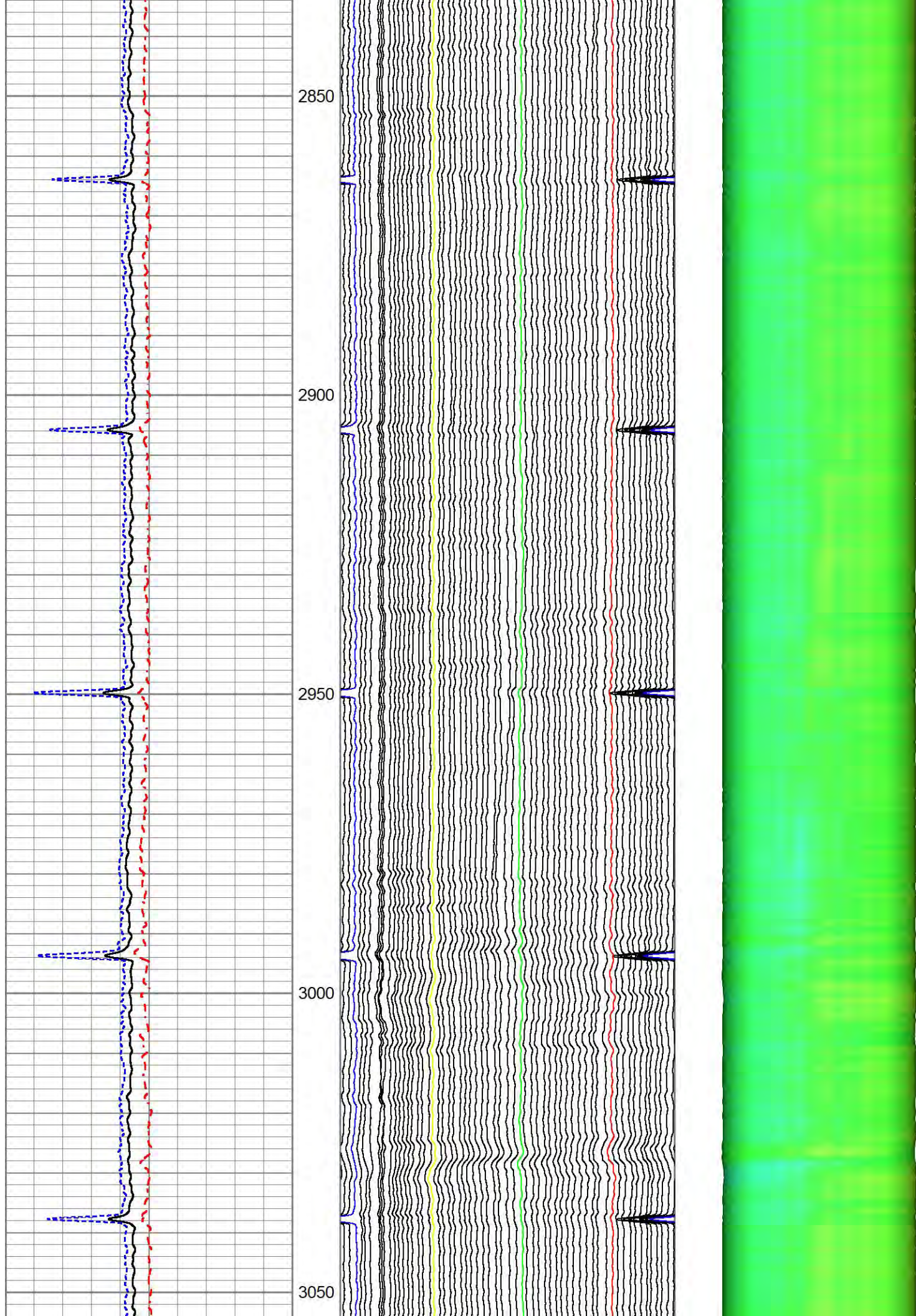


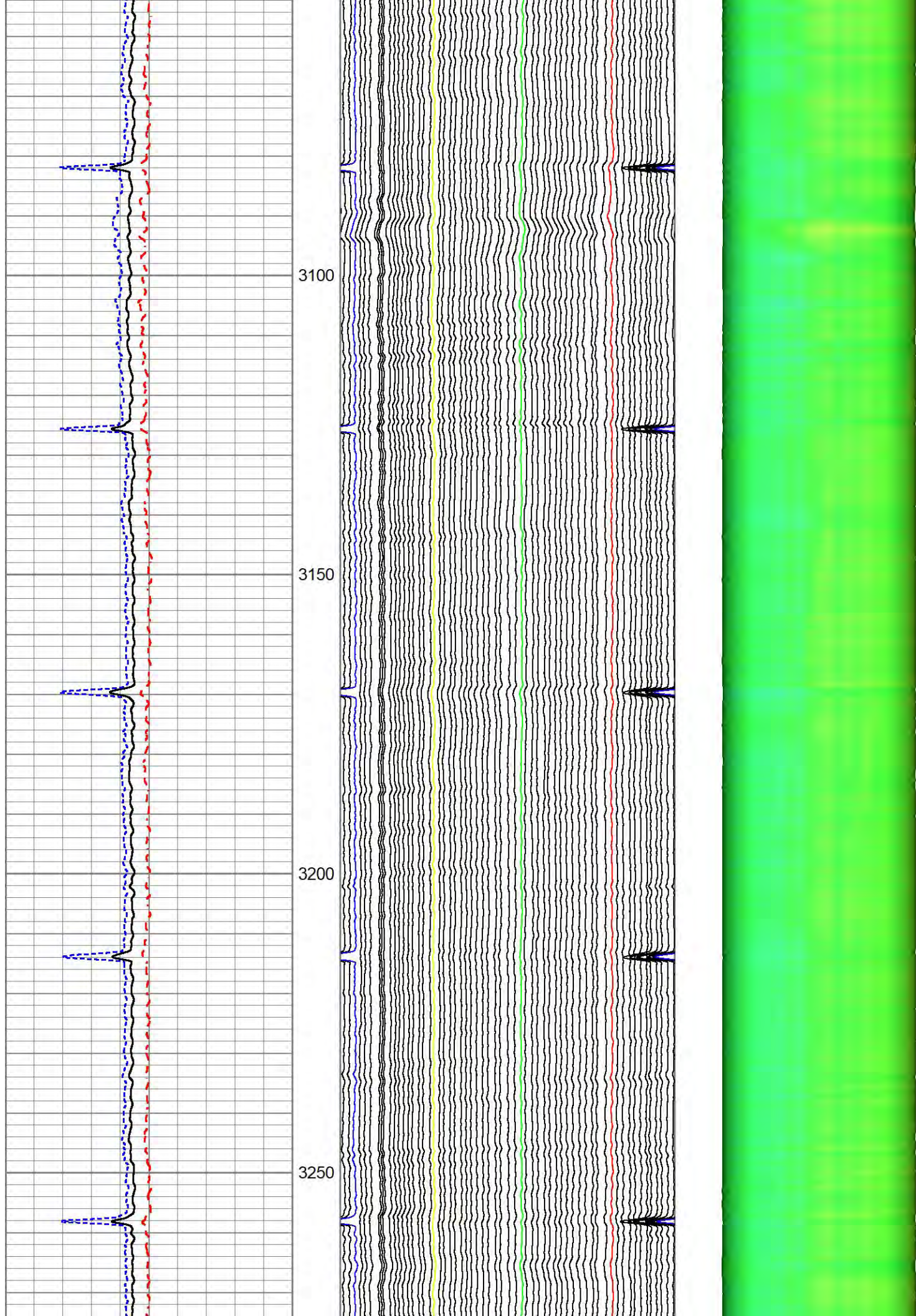


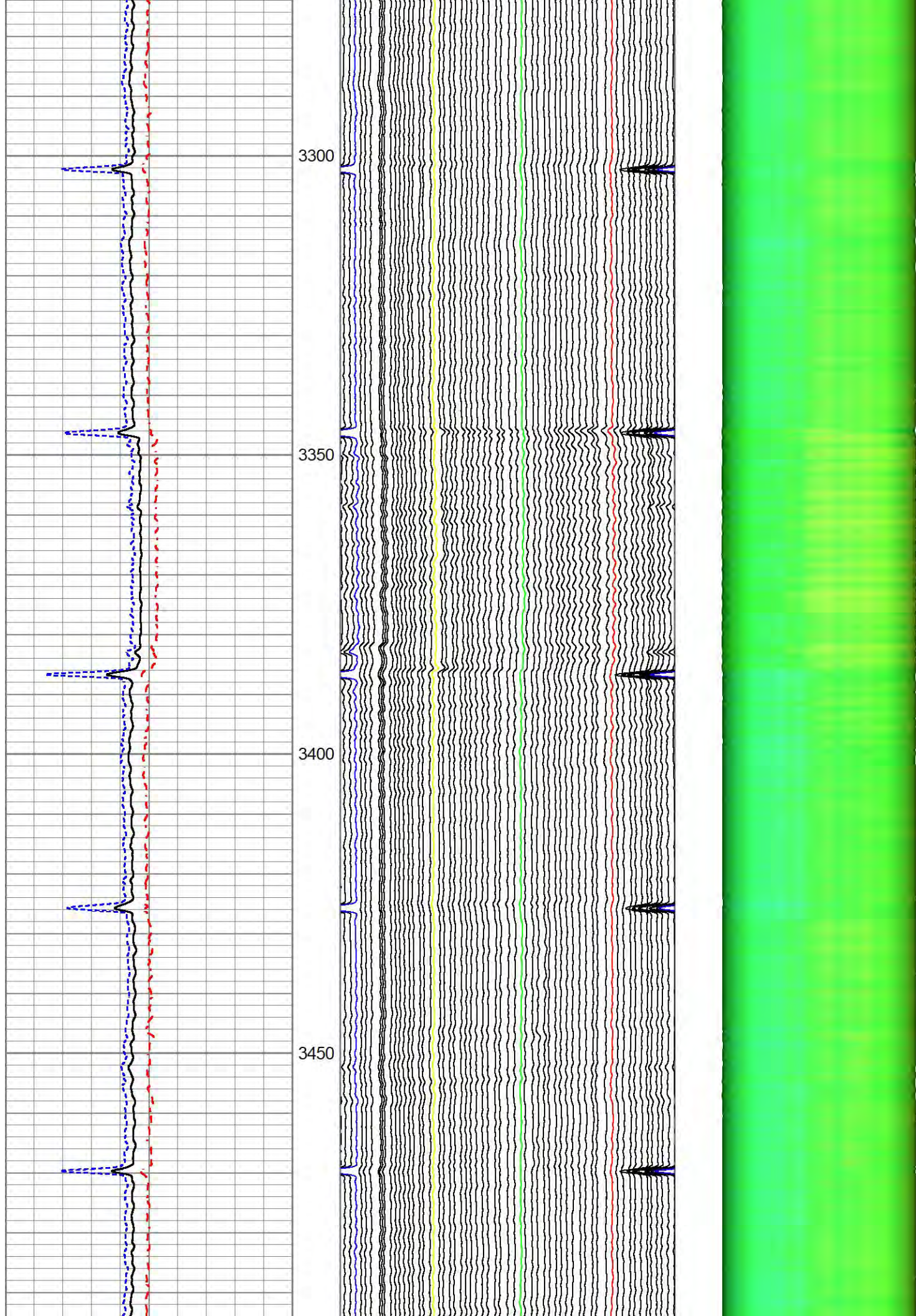


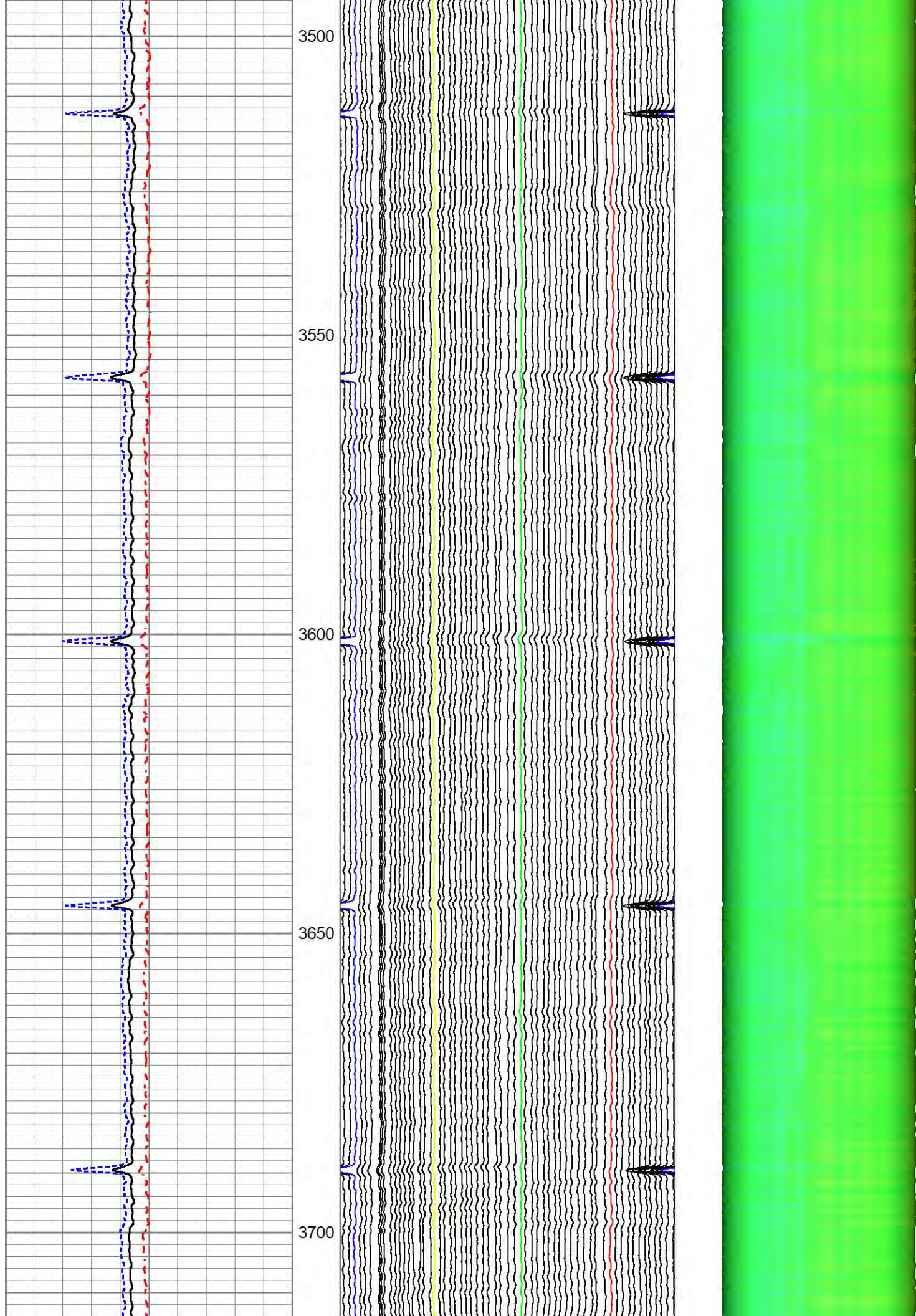


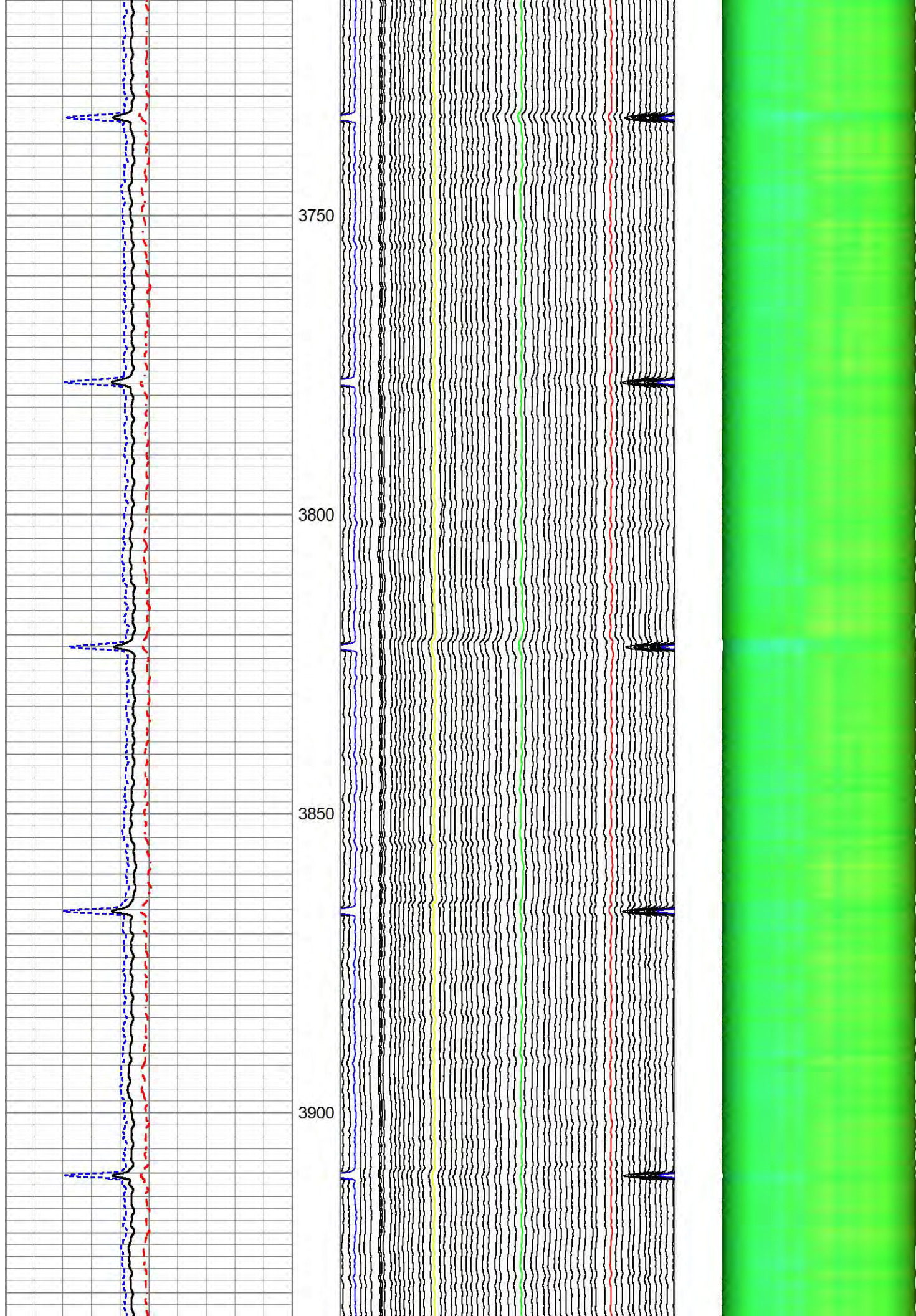


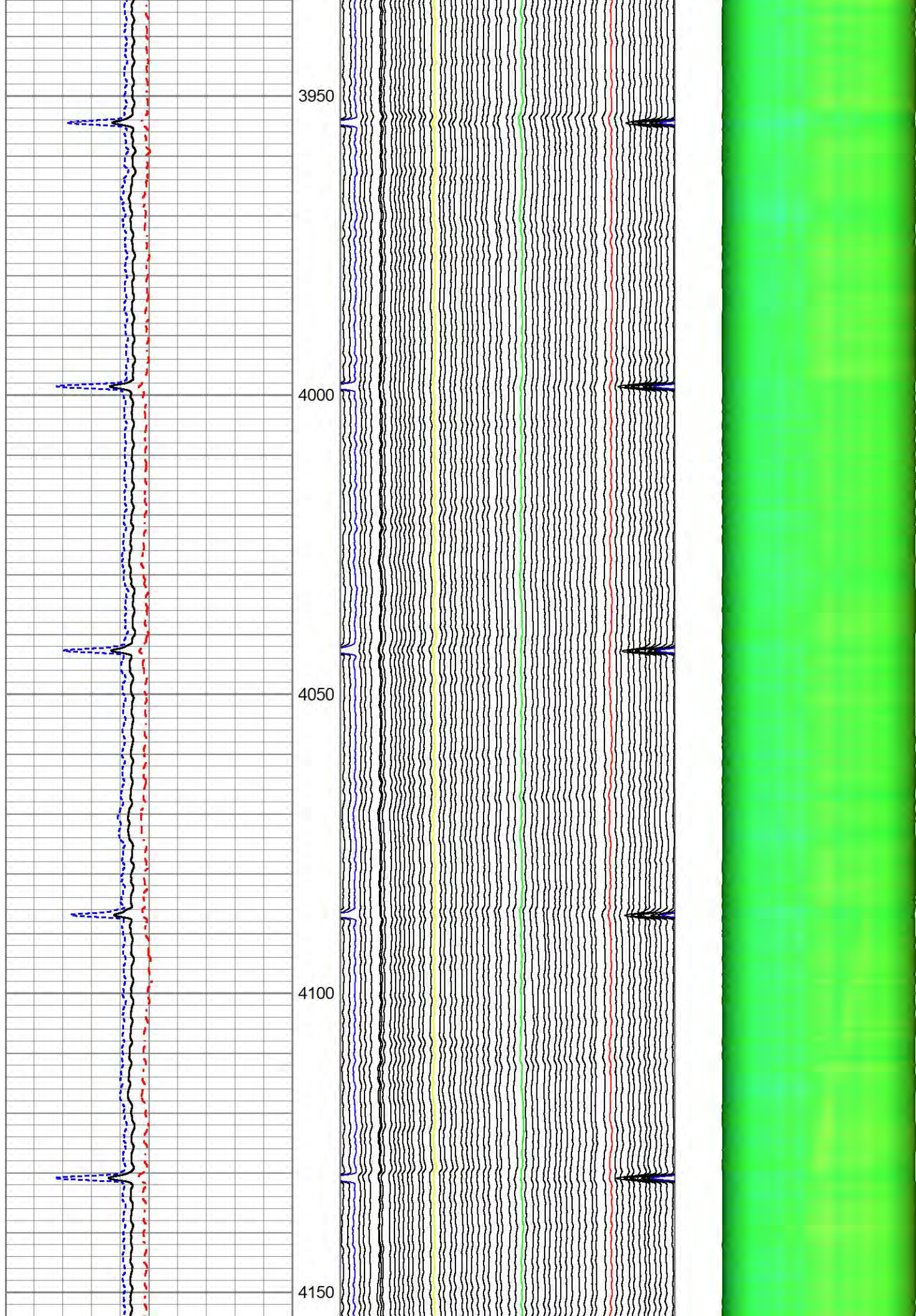


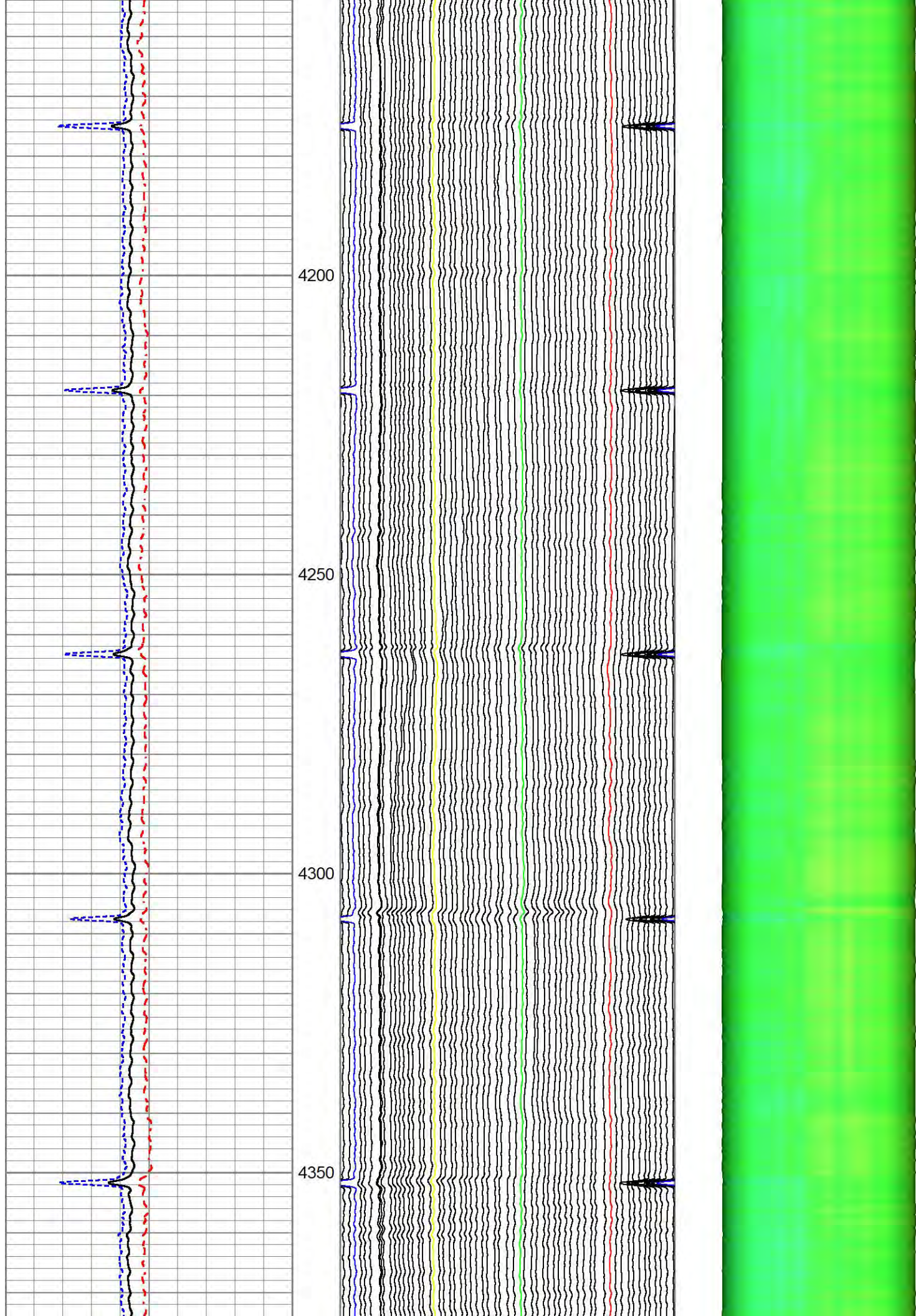


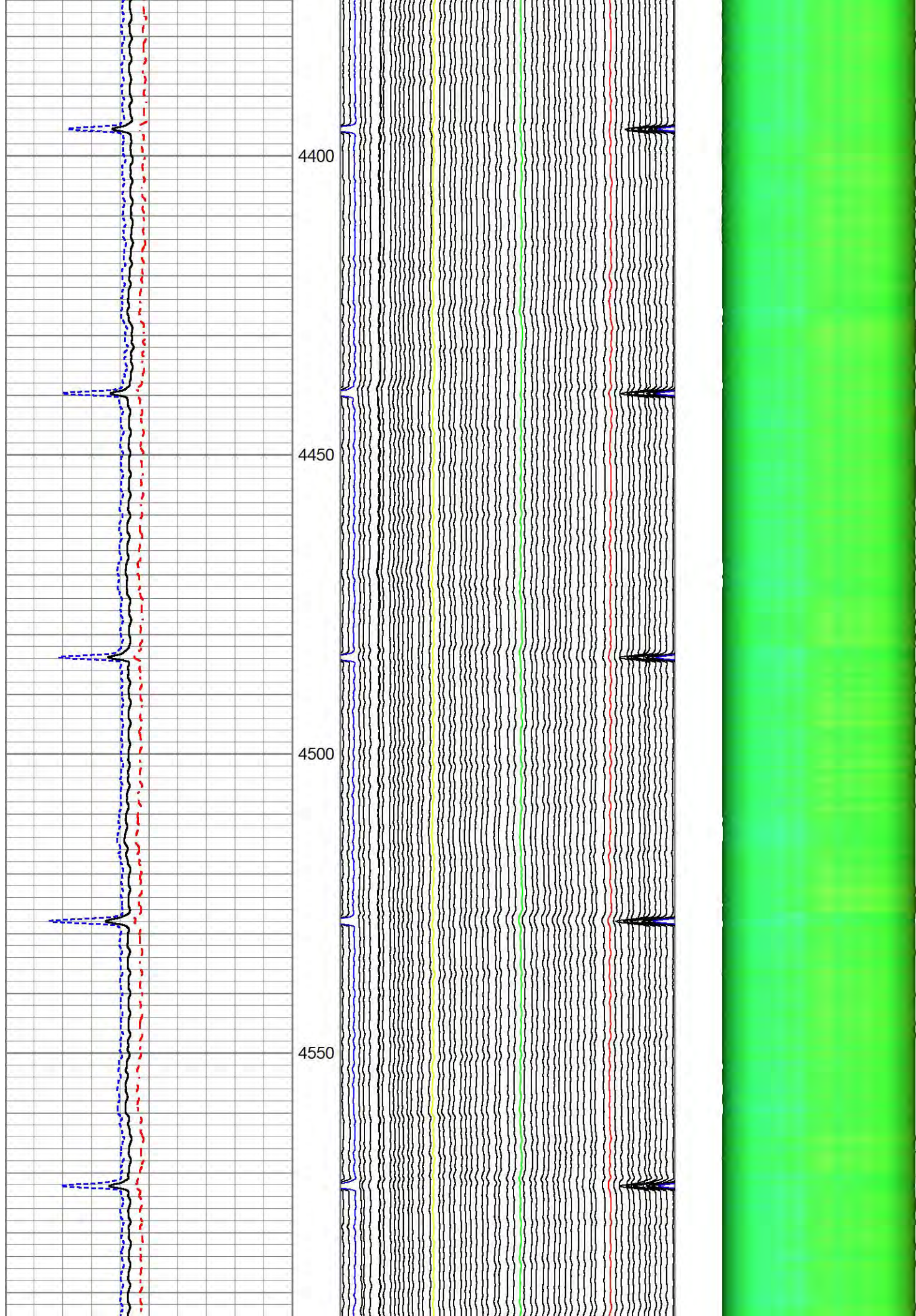


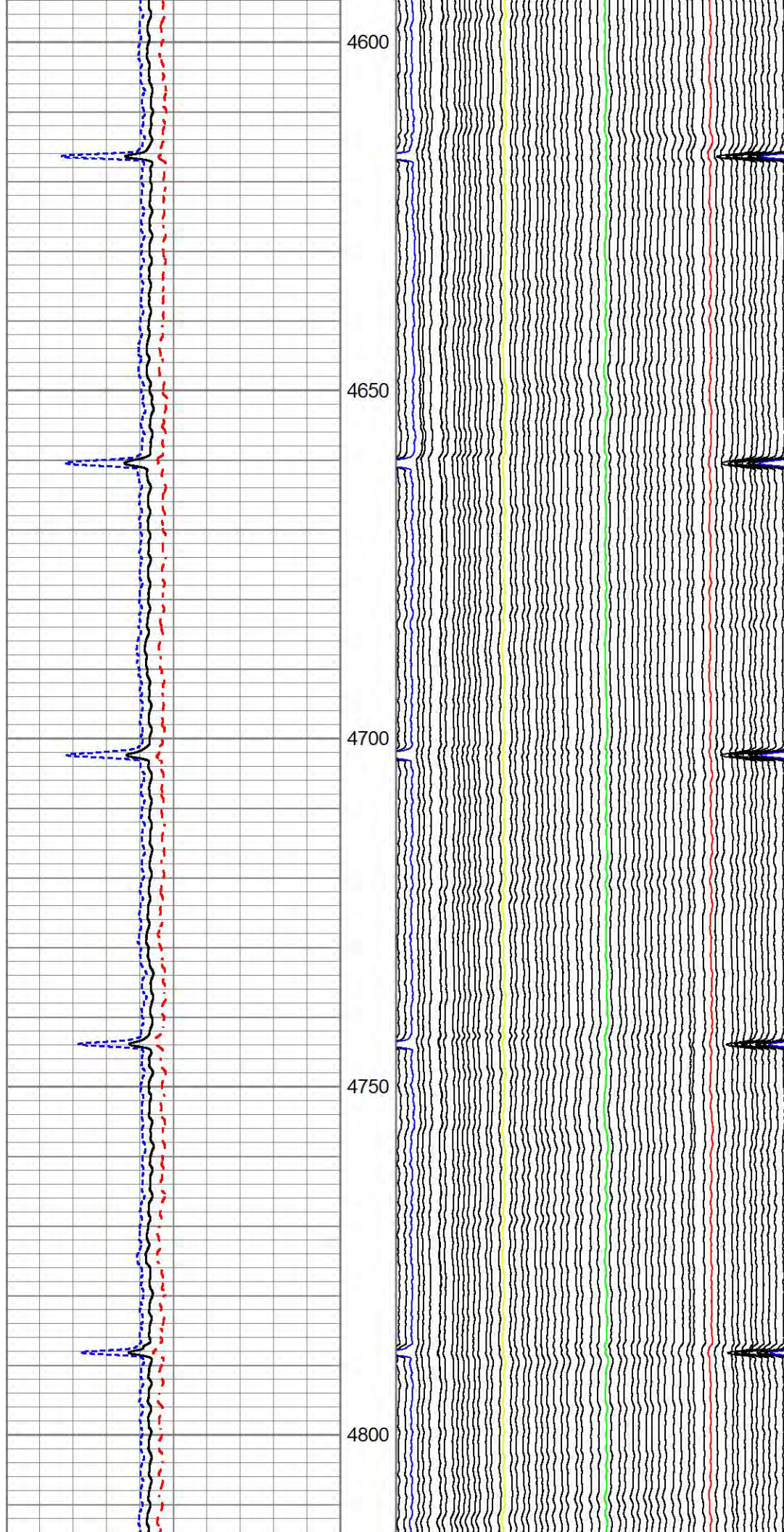


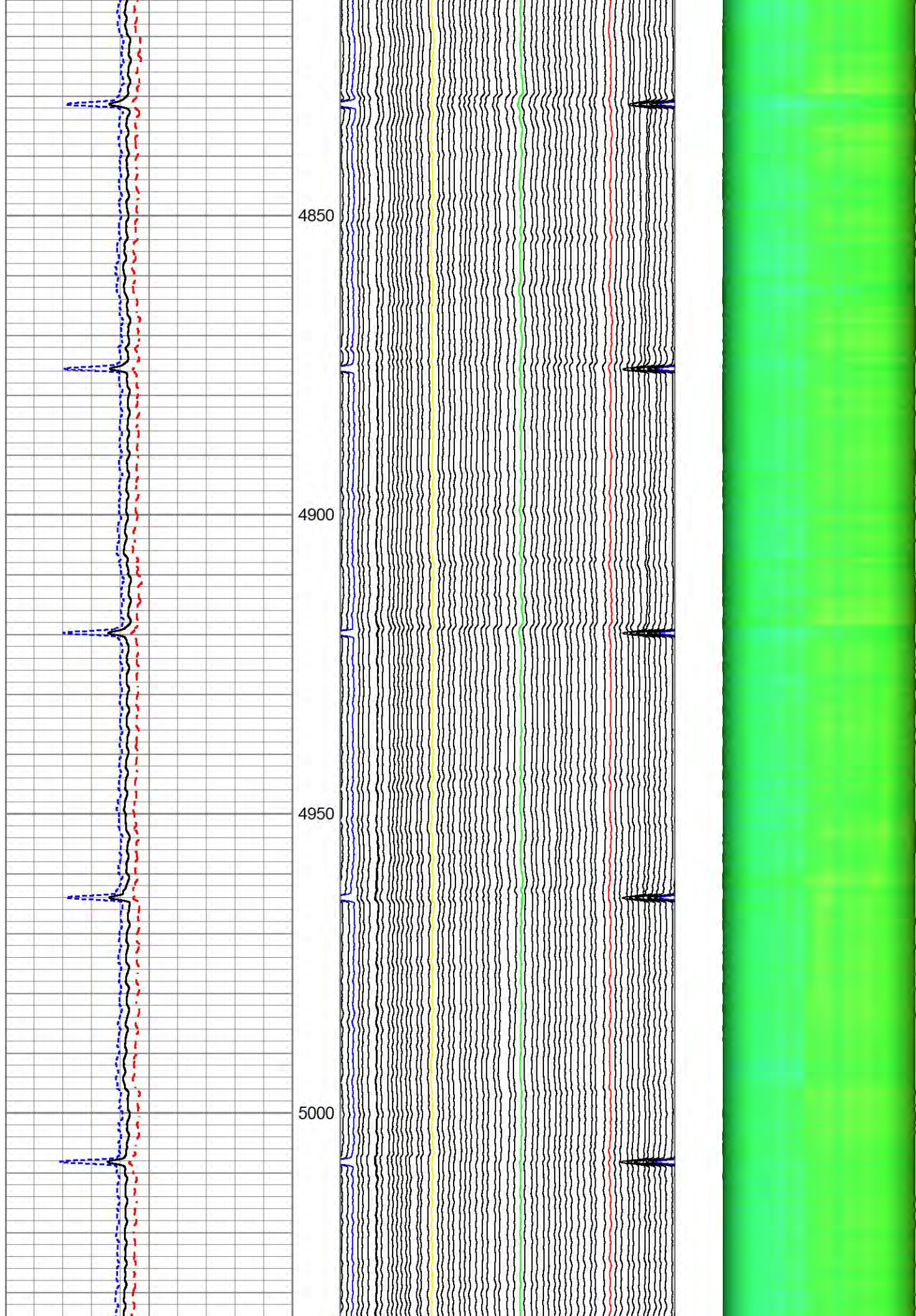


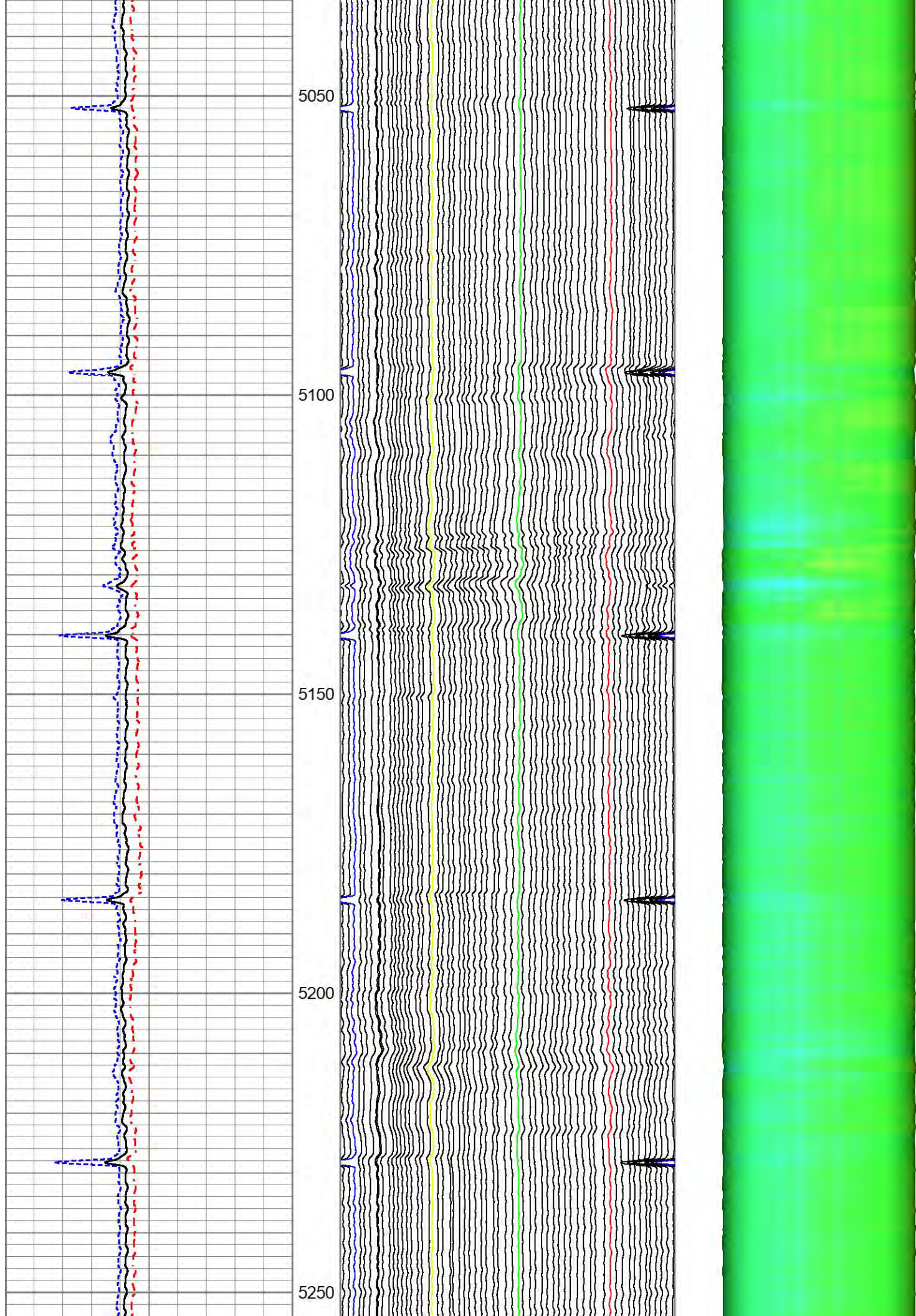


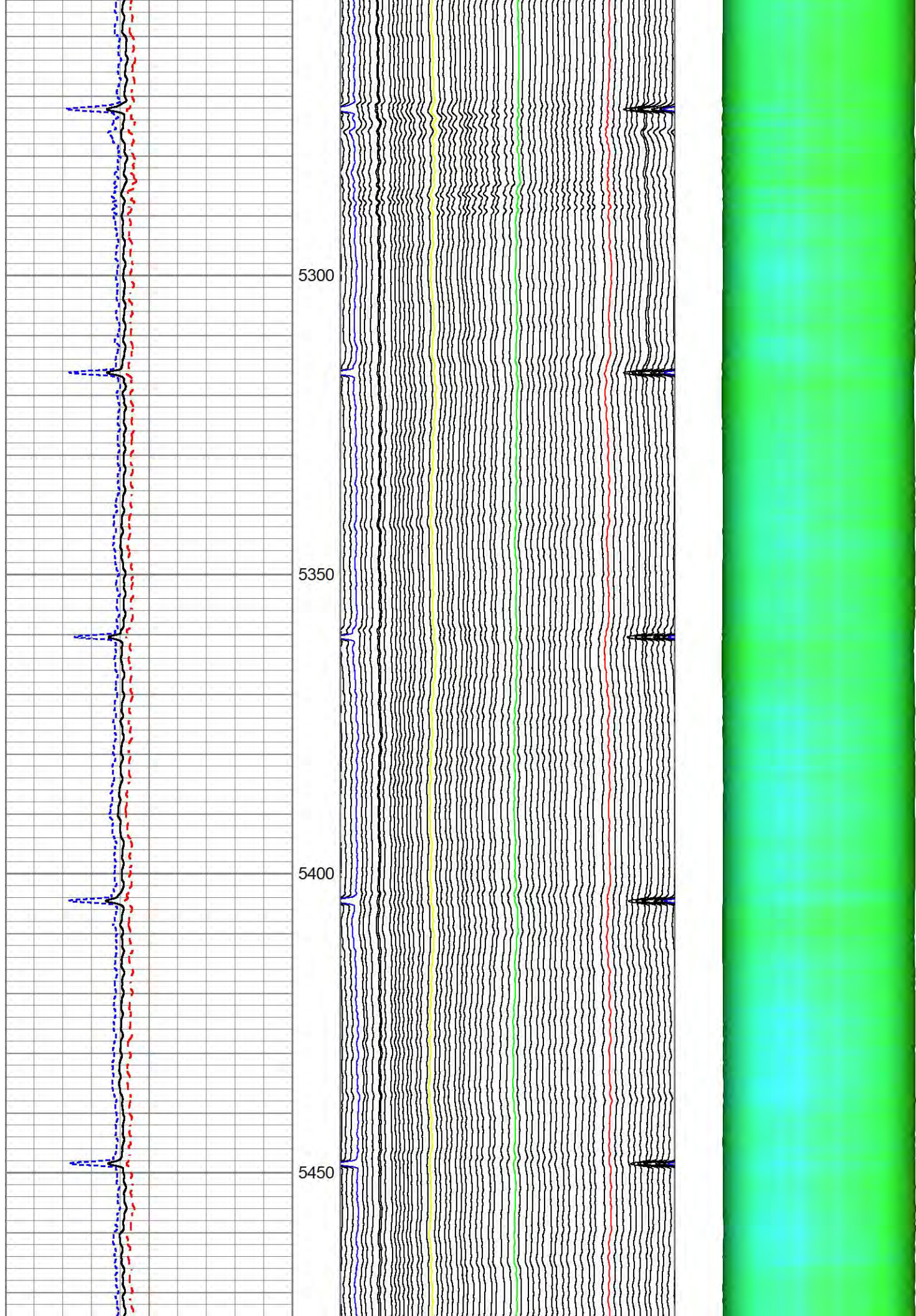


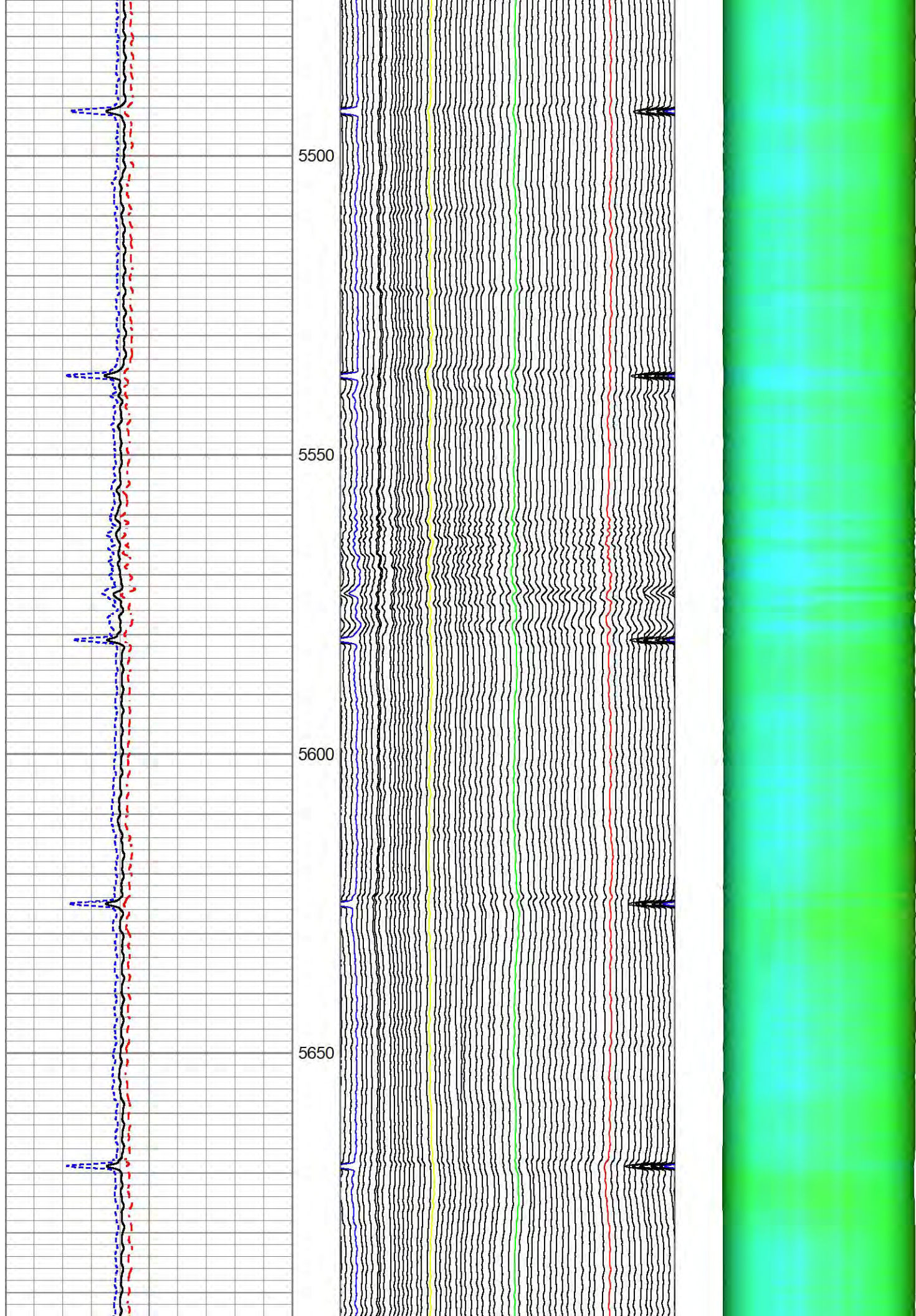


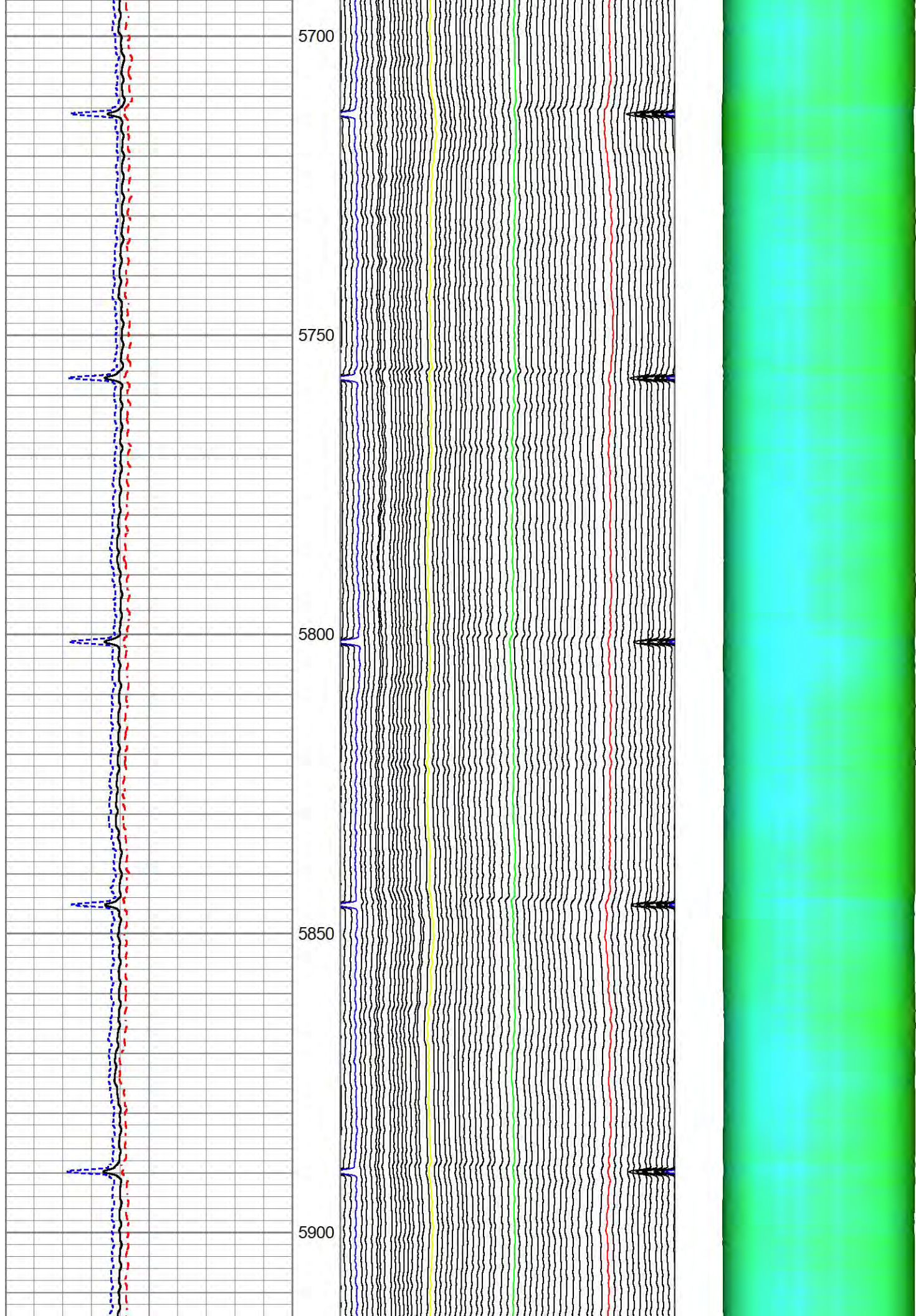


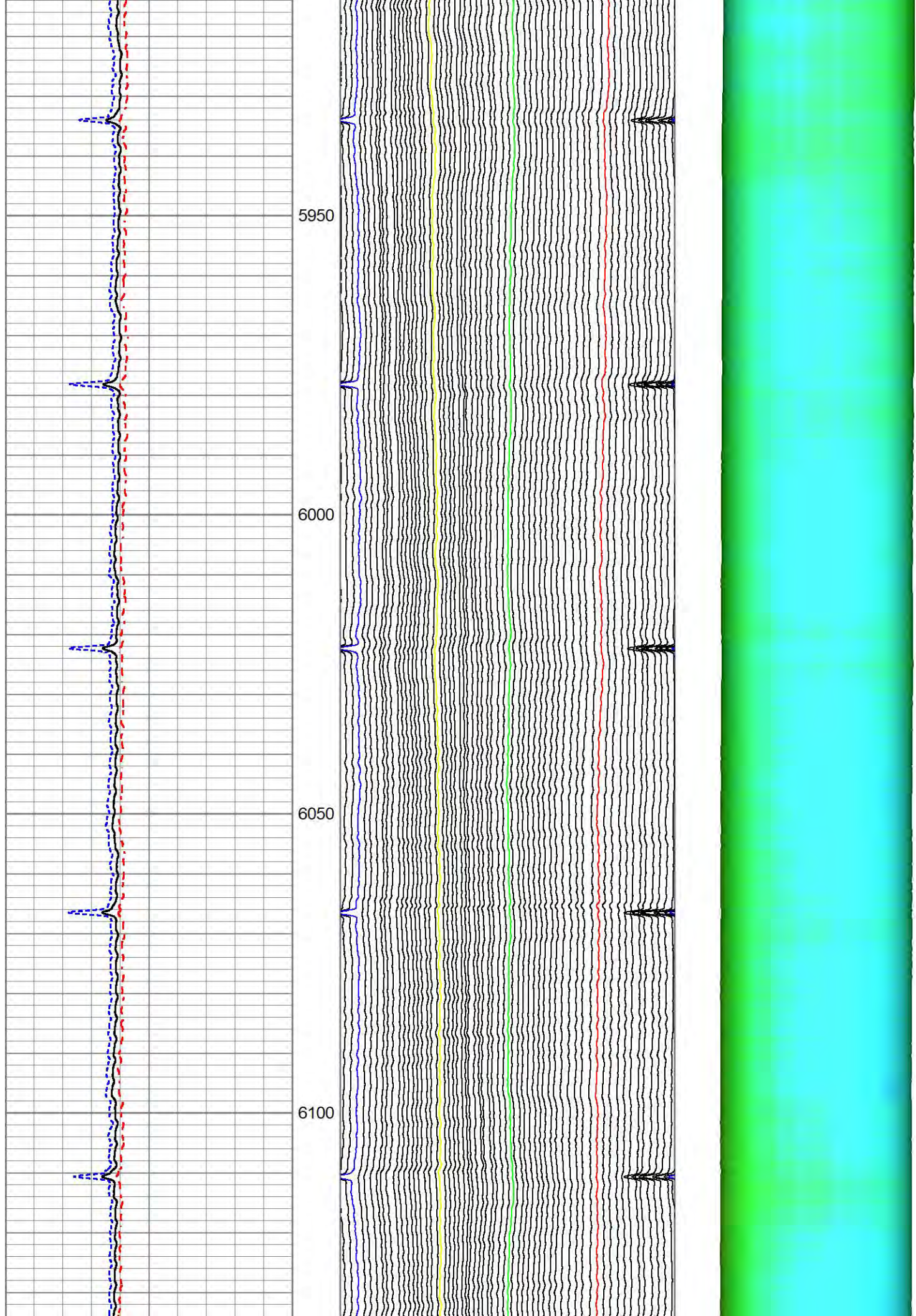


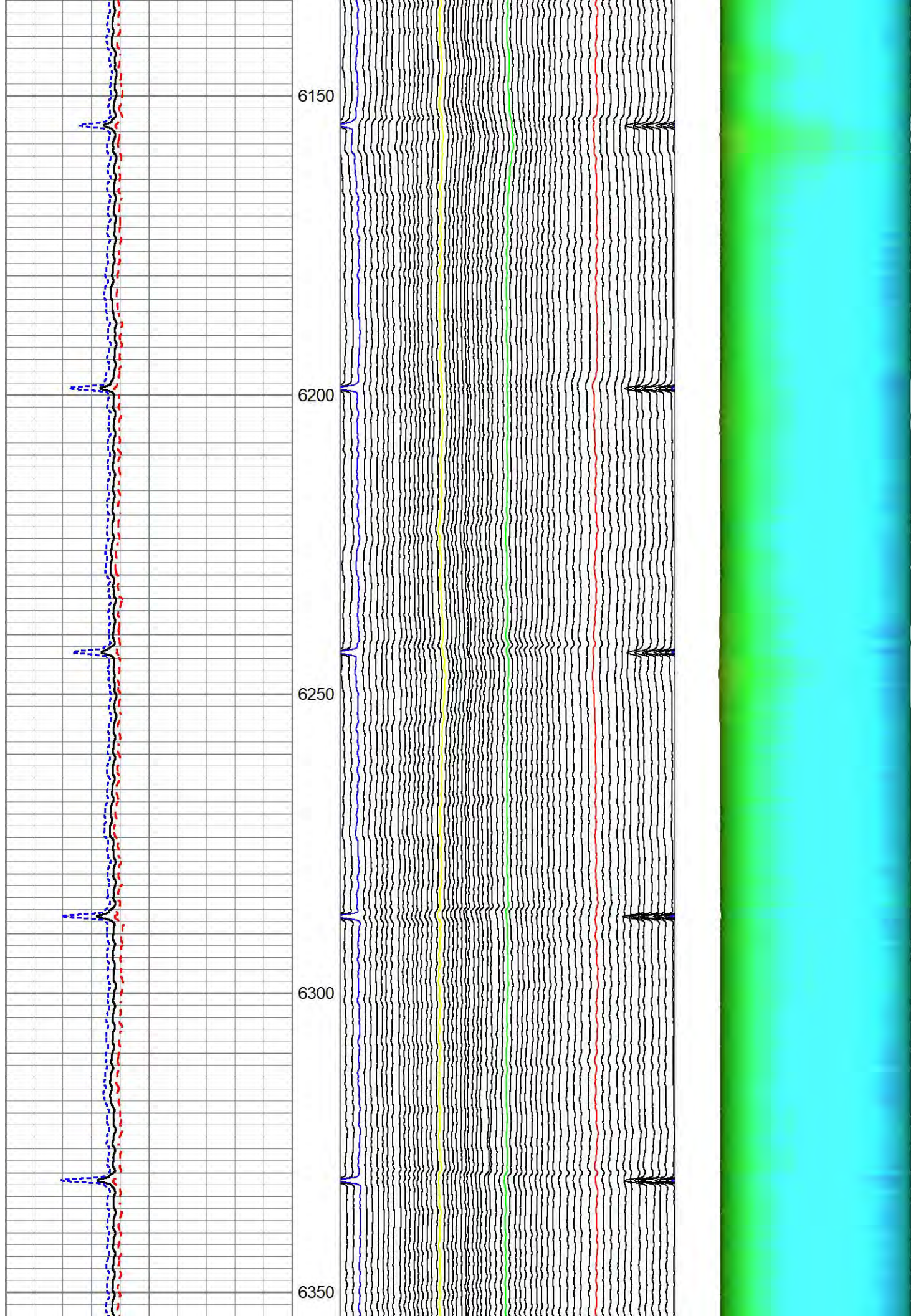


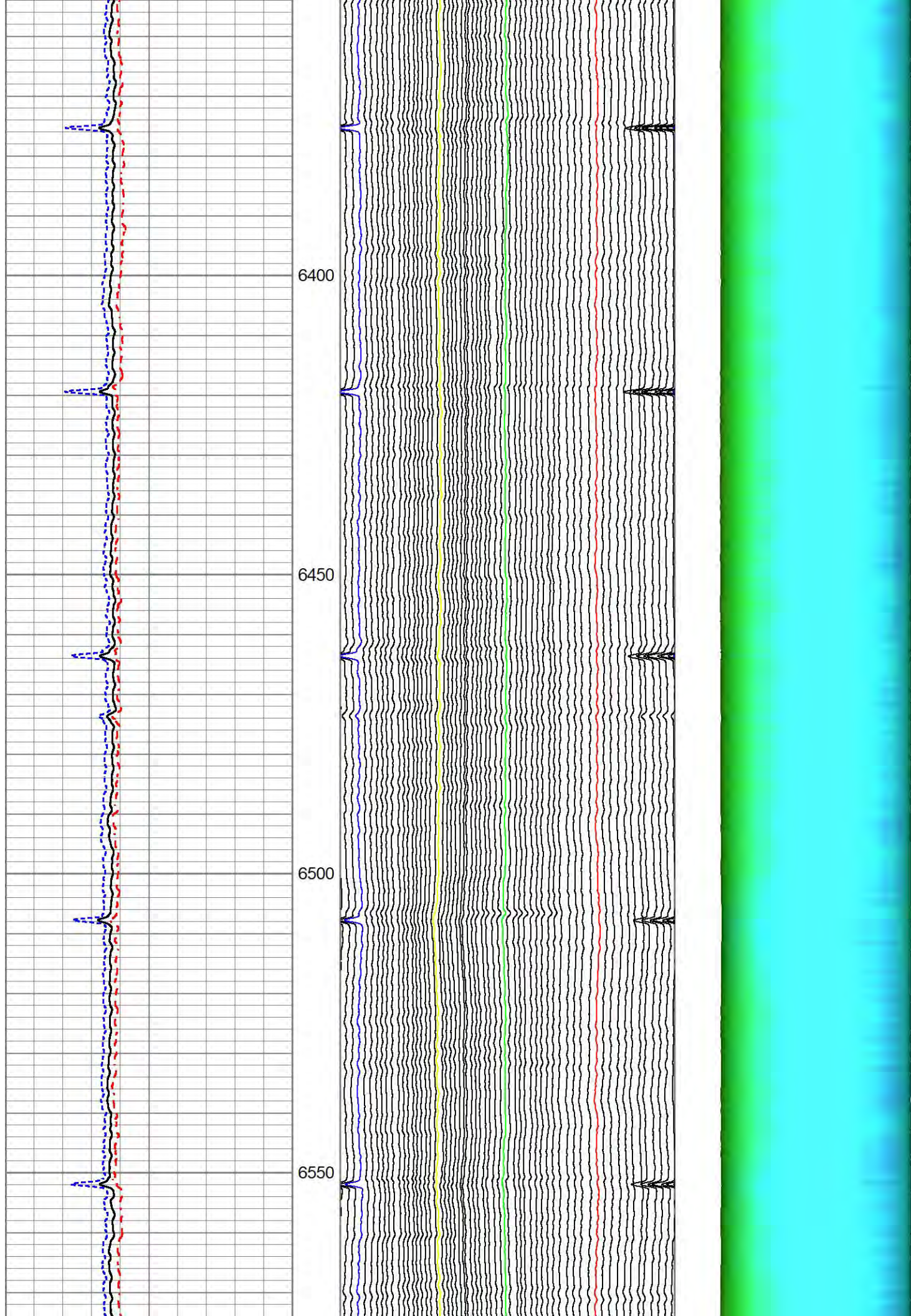


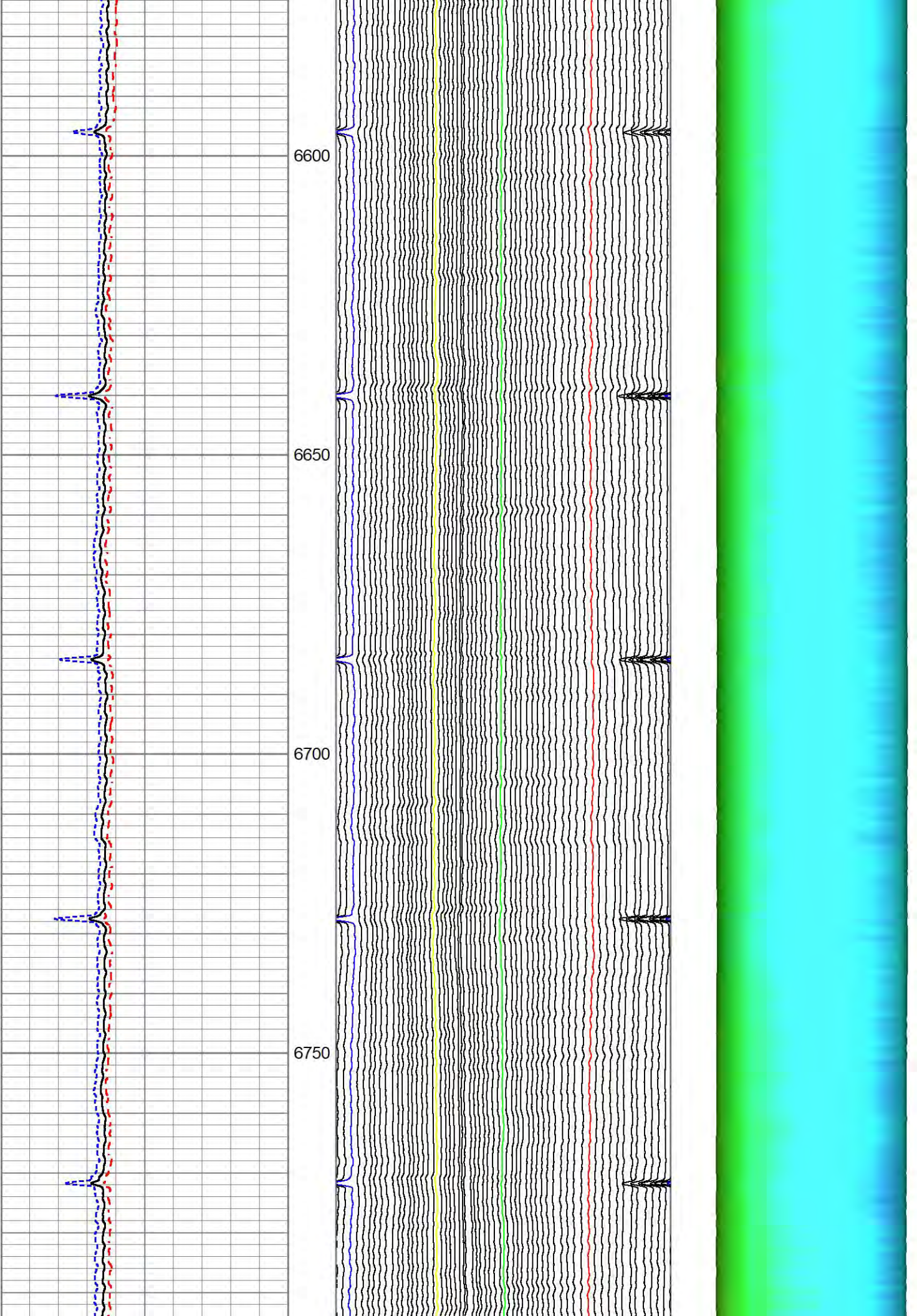


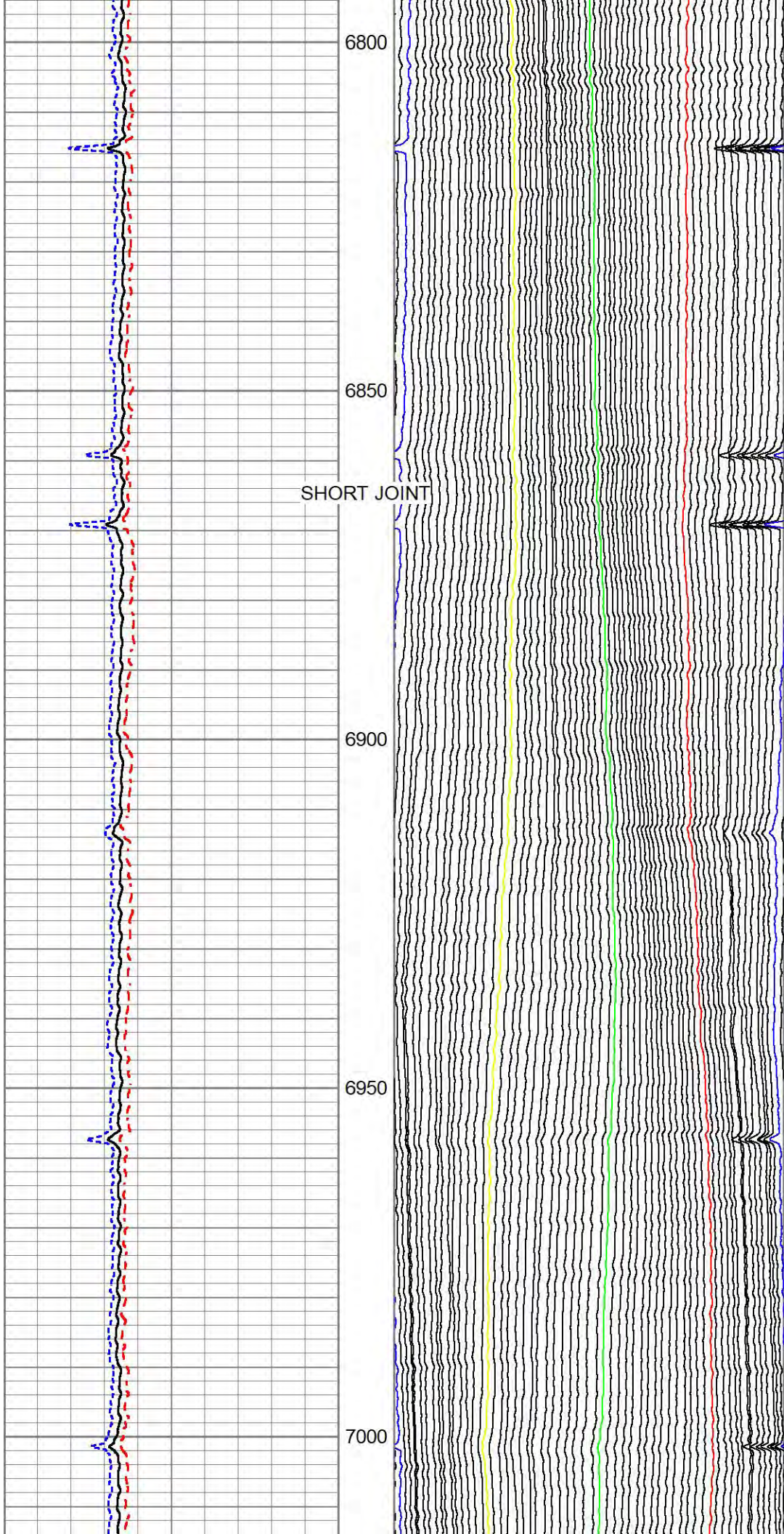


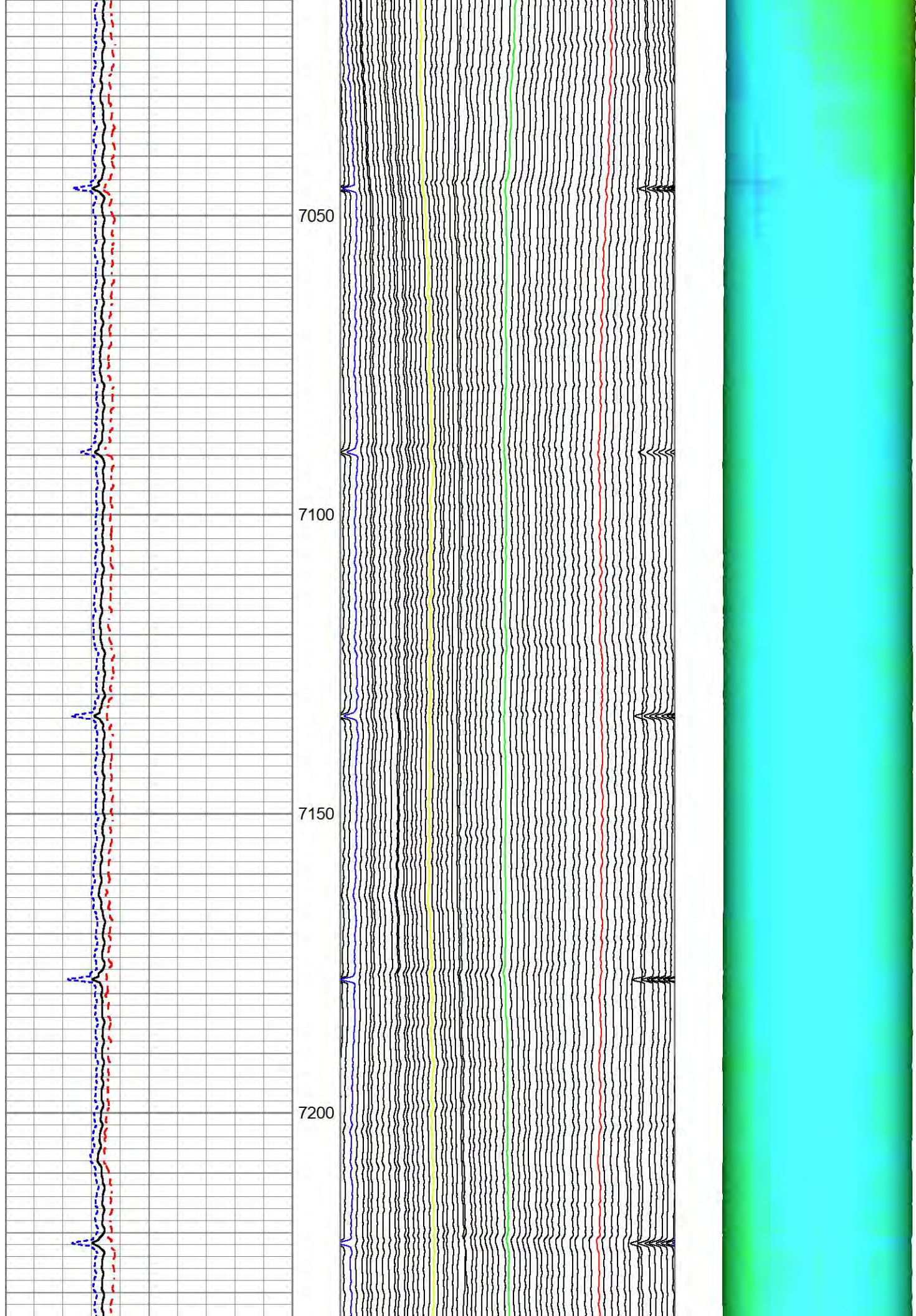


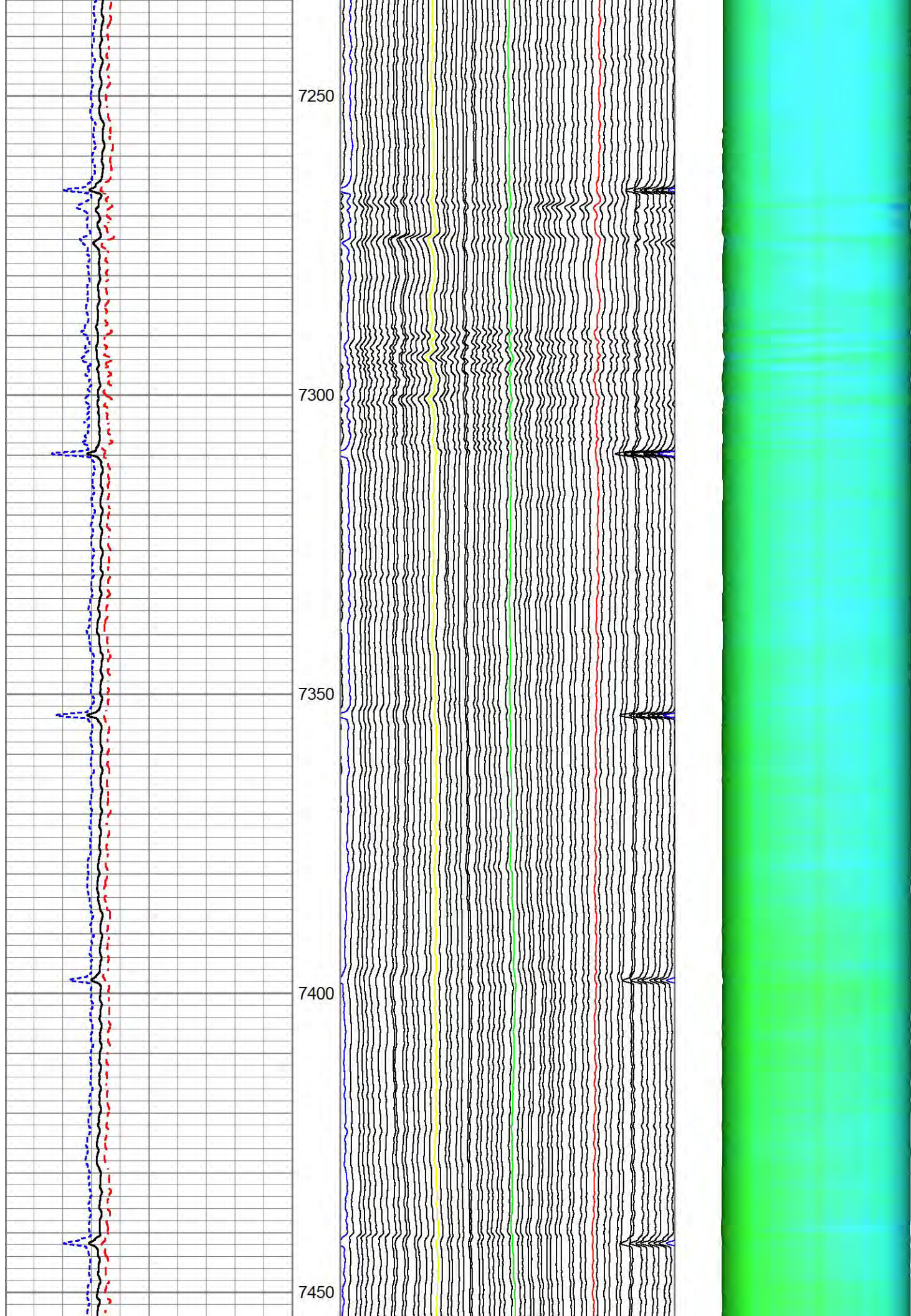


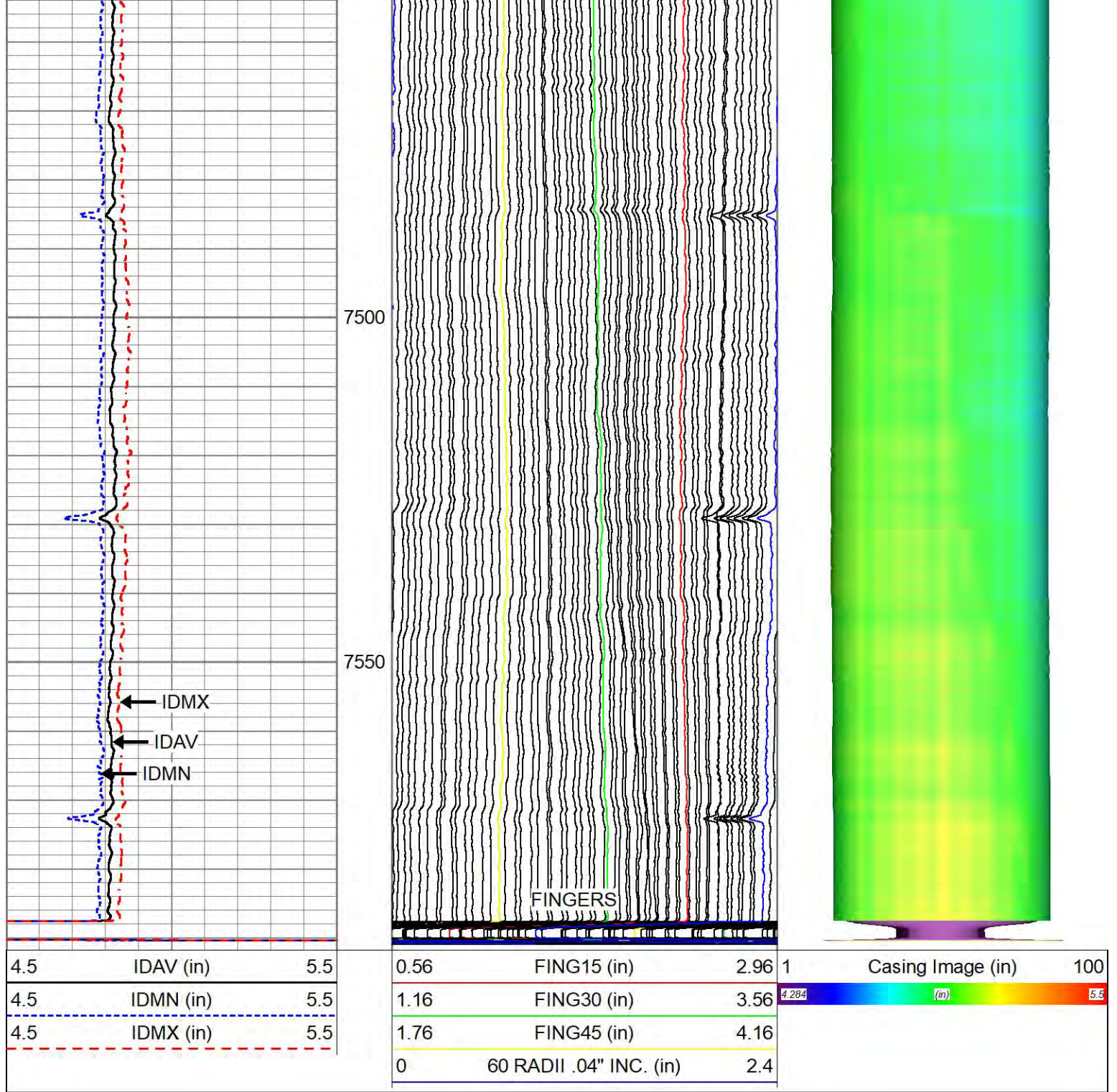





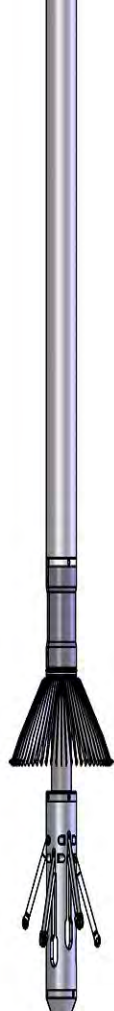








Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
ACCZ	5.00					

ACCZ	5.00				MAC60-ProbeMAC60 (FW1606-002)	7.40	3.63	85.00					
ACCY	5.00												
ACCX	5.00												
ETEMP	2.50												
Meas	1.17												
Dataset: gw_schaefer_13-032hc_mac60_12-8-19.db: field/well/run1/pass4 Total length: 7.40 ft Total weight: 85.00 lb O.D.: 3.63 in													

Calibration Report						
Database File	gw_schaefer_13-032hc_mac60_12-8-19.db					
Dataset Pathname	pass4					
Dataset Creation	Sun Dec 08 09:56:20 2019					
60 Arm Multi Sensor Caliper Calibration Report						
Serial Number:	FW1606-002					
Tool Model:	ProbeMAC60					
Performed:	Sun Dec 08 08:28:16 2019					
Ref ID:	5.00	6.00	7.00	8.00	9.00	10.00
Arm1	2.47	2.99	3.48	3.99	4.49	4.93
Arm2	2.47	2.98	3.48	3.99	4.48	4.93
Arm3	2.49	3.00	3.50	4.01	4.50	4.94
Arm4	2.47	2.99	3.48	3.99	4.49	4.93
Arm5	2.48	3.00	3.49	4.00	4.49	4.93
Arm6	2.30	2.81	3.34	3.86	4.37	4.76
Arm7	2.44	2.96	3.46	3.98	4.47	4.91
Arm8	2.44	2.96	3.47	3.98	4.47	4.92
Arm9	2.45	2.97	3.48	3.98	4.46	4.90
Arm10	2.42	2.94	3.44	3.94	4.43	4.89
Arm11	2.44	2.97	3.47	3.98	4.47	4.91
Arm12	2.45	2.97	3.48	3.98	4.47	4.92
Arm13	2.46	2.98	3.48	3.99	4.47	4.92
Arm14	2.46	2.98	3.49	4.00	4.48	4.93
Arm15	2.46	2.98	3.49	4.00	4.48	4.93

Arm15	2.46	2.99	3.49	4.00	4.48	4.94
Arm16	2.46	2.99	3.49	3.99	4.48	4.94
Arm17	2.43	2.95	3.47	3.98	4.47	4.93
Arm18	2.49	3.01	3.52	4.03	4.51	4.95
Arm19	2.49	3.01	3.52	4.01	4.49	4.95
Arm20	2.36	2.88	3.41	3.91	4.39	4.86
Arm21	2.52	3.04	3.55	4.04	4.52	4.98
Arm22	2.51	3.02	3.55	4.05	4.53	4.99
Arm23	2.52	3.04	3.56	4.06	4.54	4.99
Arm24	2.44	2.96	3.49	3.98	4.47	4.93
Arm25	2.52	3.05	3.57	4.07	4.54	5.00
Arm26	2.51	3.02	3.54	4.04	4.52	4.99
Arm27	2.50	3.03	3.55	4.05	4.53	4.99
Arm28	2.51	3.03	3.56	4.06	4.54	5.00
Arm29	2.52	3.04	3.56	4.05	4.53	5.01
Arm30	2.53	3.04	3.57	4.07	4.55	5.02
* Bad						

Ref ID:	5.00	6.00	7.00	8.00	9.00	10.00
Arm31	2.52	3.04	3.56	4.08	4.56	5.03
Arm32	2.55	3.06	3.59	4.09	4.57	5.03
Arm33	2.56	3.08	3.60	4.10	4.58	5.04
Arm34	2.56	3.07	3.59	4.10	4.58	5.03
Arm35	2.57	3.09	3.61	4.11	4.59	5.05
Arm36	2.54	3.06	3.58	4.09	4.58	5.03
Arm37	2.56	3.08	3.61	4.11	4.59	5.04
Arm38	2.56	3.08	3.60	4.11	4.60	5.06
Arm39	2.56	3.08	3.61	4.12	4.60	5.05
Arm40	2.58	3.09	3.61	4.12	4.60	5.05
Arm41	2.57	3.09	3.62	4.13	4.62	5.05
Arm42	2.40	2.92	3.44	3.96	4.47	4.93
Arm43	2.57	3.08	3.59	4.10	4.59	5.04
Arm44	2.59	3.09	3.61	4.12	4.60	5.05
Arm45	2.56	3.07	3.60	4.12	4.60	5.03
Arm46	2.52	3.03	3.55	4.07	4.56	5.01
Arm47	2.55	3.06	3.58	4.09	4.58	5.02
Arm48	2.52	3.03	3.54	4.06	4.55	5.00
Arm49	2.54	3.04	3.56	4.07	4.57	5.01
Arm50	2.53	3.04	3.56	4.08	4.57	5.01
Arm51	2.51	3.02	3.54	4.06	4.55	4.98
Arm52	2.53	3.04	3.54	4.04	4.53	4.99
Arm53	2.52	3.03	3.54	4.06	4.55	4.98
Arm54	2.49	3.01	3.51	4.02	4.52	4.96
Arm55	2.50	3.00	3.51	4.02	4.51	4.96
Arm56	2.47	2.98	3.49	4.02	4.51	4.94
Arm57	2.45	2.97	3.46	3.97	4.47	4.93
Arm58	2.46	2.98	3.48	3.99	4.48	4.93
Arm59	2.48	2.99	3.48	4.00	4.49	4.93
Arm60	2.46	2.98	3.48	3.99	4.49	4.93
* Bad						

PROBE Verifications Calibration Report						
Performed:	Pre Verification		Post Verification		Casing Check	
	Mon Mar 18 12:53:03 2019					
Ref ID:	6.00		0.00		0.00	in
Min.	5.98		0.00		0.00	in
Max.	6.00		0.00		0.00	in
Avg.	5.99		0.00		0.00	in
Dia1	5.99		0.00		0.00	in
Dia2	5.99		0.00		0.00	in
Dia3	5.99		0.00		0.00	in

Dia4	5.98	0.00	0.00	in
Dia5	5.99	0.00	0.00	in
Dia6	5.98	0.00	0.00	in
Dia7	5.99	0.00	0.00	in
Dia8	5.98	0.00	0.00	in
Dia9	5.99	0.00	0.00	in
Dia10	5.99	0.00	0.00	in
Dia11	5.99	0.00	0.00	in
Dia12	5.99	0.00	0.00	in
Dia13	5.99	0.00	0.00	in
Dia14	5.99	0.00	0.00	in
Dia15	5.99	0.00	0.00	in
Dia16	5.98	0.00	0.00	in
Dia17	5.99	0.00	0.00	in
Dia18	5.99	0.00	0.00	in
Dia19	5.99	0.00	0.00	in
Dia20	5.99	0.00	0.00	in
Dia21	5.99	0.00	0.00	in
Dia22	5.99	0.00	0.00	in
Dia23	5.99	0.00	0.00	in
Dia24	5.99	0.00	0.00	in
Dia25	5.99	0.00	0.00	in
Dia26	5.99	0.00	0.00	in
Dia27	5.99	0.00	0.00	in
Dia28	5.99	0.00	0.00	in
Dia29	5.99	0.00	0.00	in
Dia30	5.98	0.00	0.00	in

Inclinometer Calibration Report					
Performed:	(Not Performed)				
	Low Read.	High Read.	Low Ref.	High Ref.	
X Accelerometer	0.00	1.00	0.00	1.00	gee
Y Accelerometer	0.00	1.00	0.00	1.00	gee
Z Accelerometer	0.00	1.00	0.00	1.00	gee