60 Arm Caliper
Metal Thickness
Casing Inspection
Log

Company Marathon Oil
Well Flowmaster Fee 24 34 15 WA 6H
Field Wolfcamp A
County Lea
State NewMexico Country USA

Company Marathon Oil
Well Flowmaster Fee 24 34 15 WA 6H
Field Wolfcamp A
County Lea
State New Mexico Country USA

Location: API # : 30-025-44683

Lat: 32.222391
Long: -103.465538

SEC TWP RGE

Other Services
N/A

Permanent Datum	Ground Level	Elevation	3523'
Log Measured From	27" Above Permanent Datum		
Drilling Measured From	Kelly Bushing		

Elevation
K.B. 3550'
D.F. 3549'
G.L. 3523'

Date	Januaray 25, 2019		
Run Number	One		
Depth Driller	17,240'		
Depth Logger	11360'		
Bottom Logged Interval	11360'		
Top Log Interval	Surface		
Open Hole Size	N/A		
Type Fluid	N/A		
Density / Viscosity	N/A		
Max. Recorded Temp.	Not Recorded		
Estimated Cement Top	Not Recorded		
Time Well Ready	10:30am		
Time Logger on Bottom	1pm		
Equipment Number	Hu 125		
Location	Levelland, Texas		
Recorded By	Sean Cates		
Witnessed By	Robbie Whitely		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
One	17.50"	Surface	1143'				
Two	12.25"	1143'	5309'				
Three	8.75"	5309'	11,683'				
Four	6.25"	11,683'	17,240'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	13.375"	54.5#	Surface	1143'
Prot. String	9.625"	40#	Surface	5309'
Production String	4.50"	13.5#	11,323'	17,240'
Liner	7"	29#	Surface	11,683'

<<< Fold Here >>>

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

27' KB Used

Main Pass

Database File	marathon fee 24 34 15 wa #006h.db
Dataset Pathname	pass3.2
Presentation Format	pr60im7
Dataset Creation	Fri Jan 25 19:31:50 2019
Charted by	Depth in Feet scaled 1:240

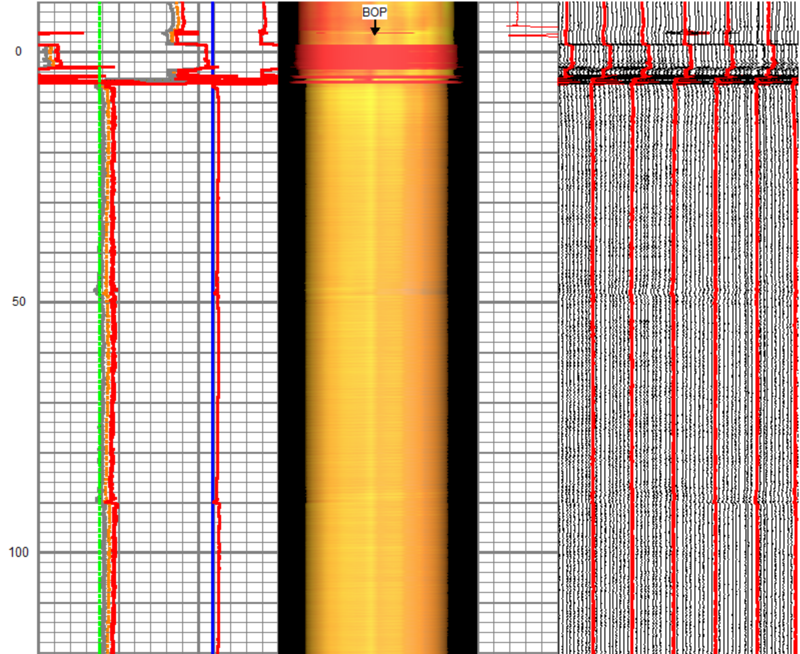
5.672 IDAV (in) 7
5.672 IDMN (in) 7
5.672 IDMX (in) 7
5.672 CASEID (in) 7

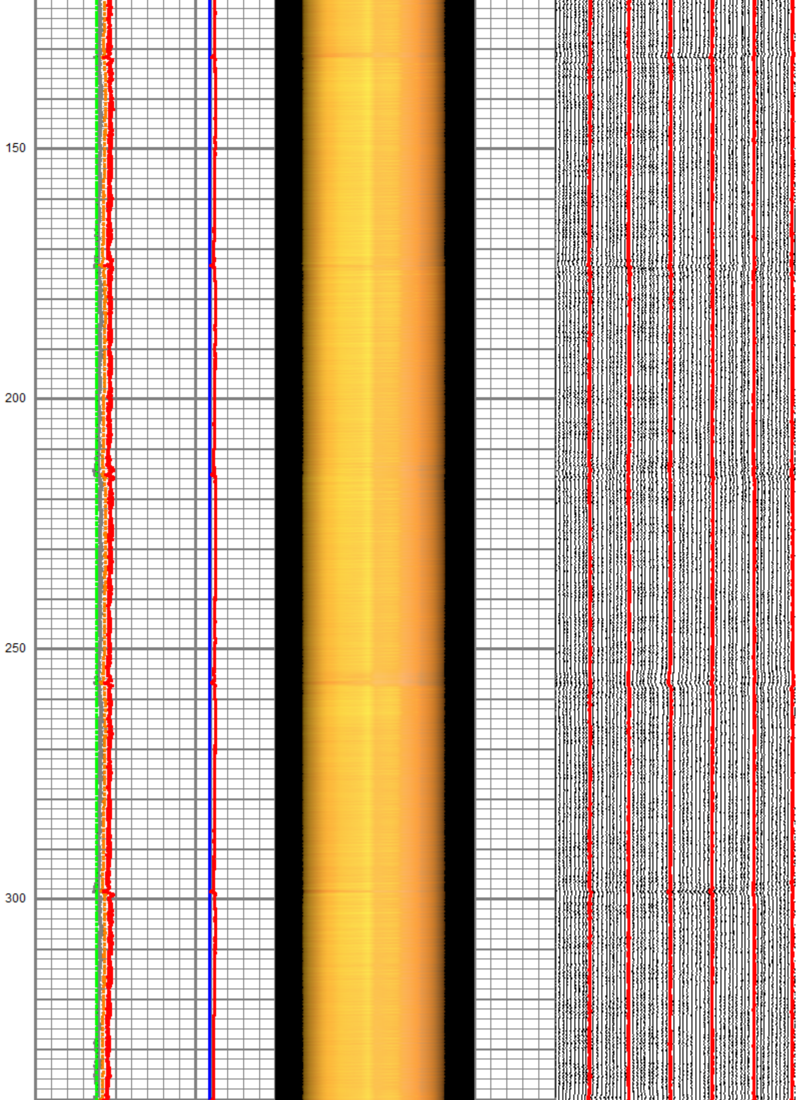
CASEID
6 (in) 7
6 IDAV (in) 7

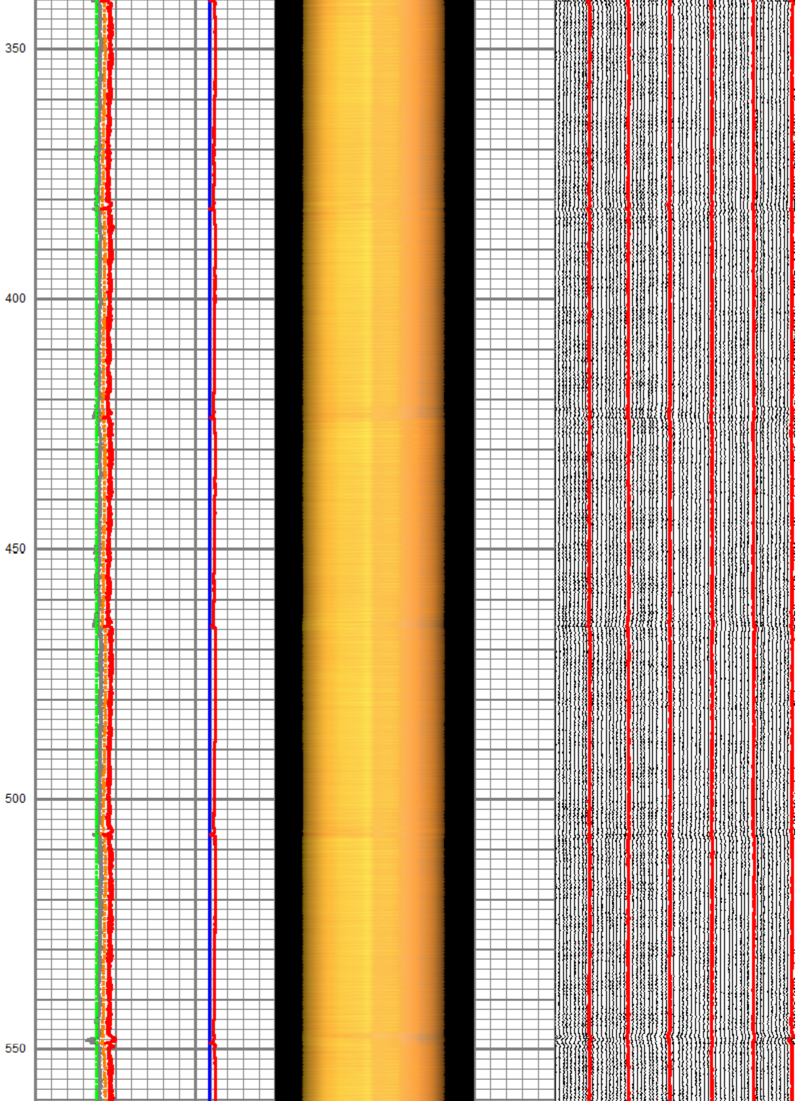
IMGMAP (in)

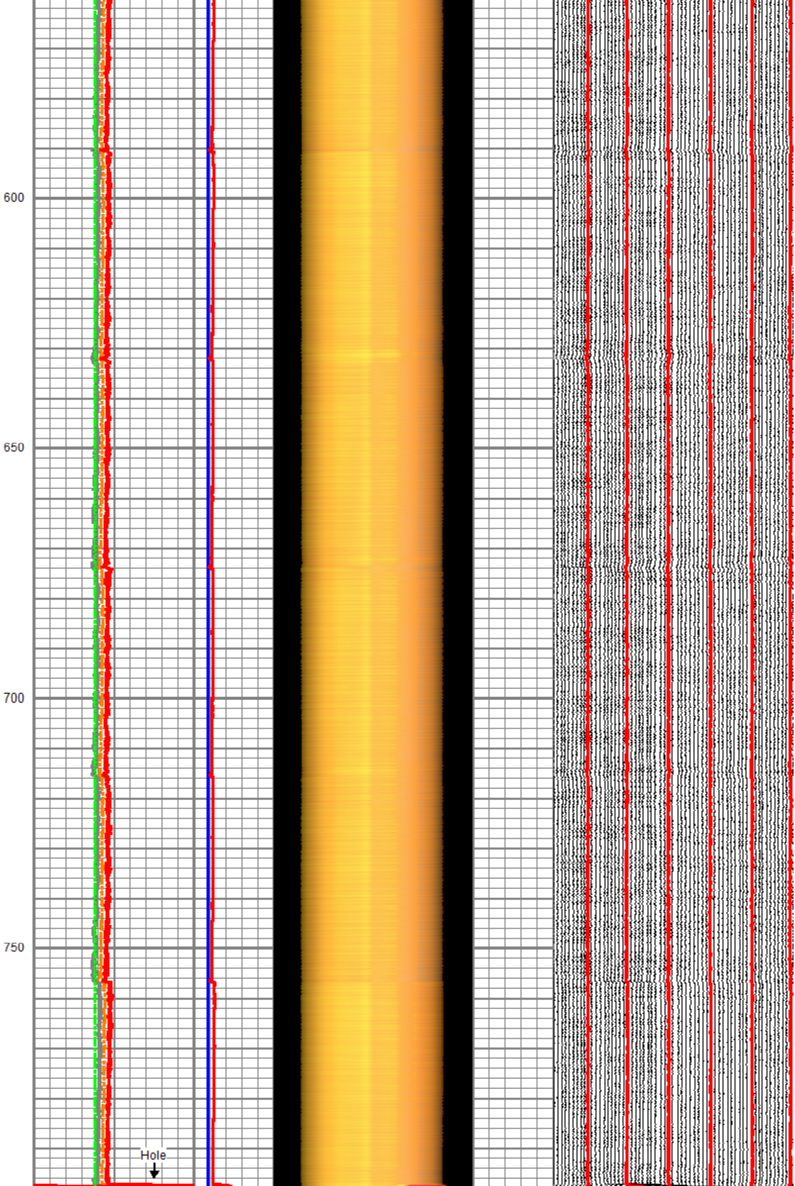
Thickness
0 (in) 0.8

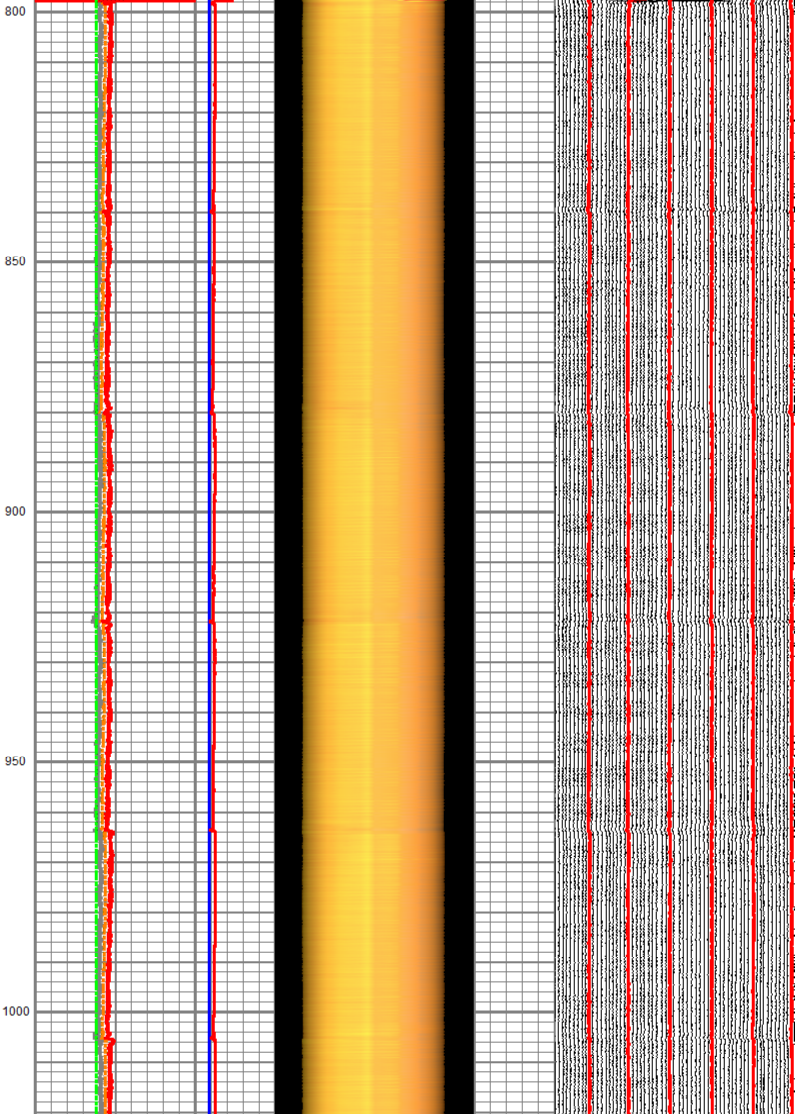
1.2 R20 (in) 7.2
0.2 R30 (in) 6.2
-0.8 R40 (in) 5.2
-1.8 R50 (in) 4.2
-2.8 R60 (in) 3.2

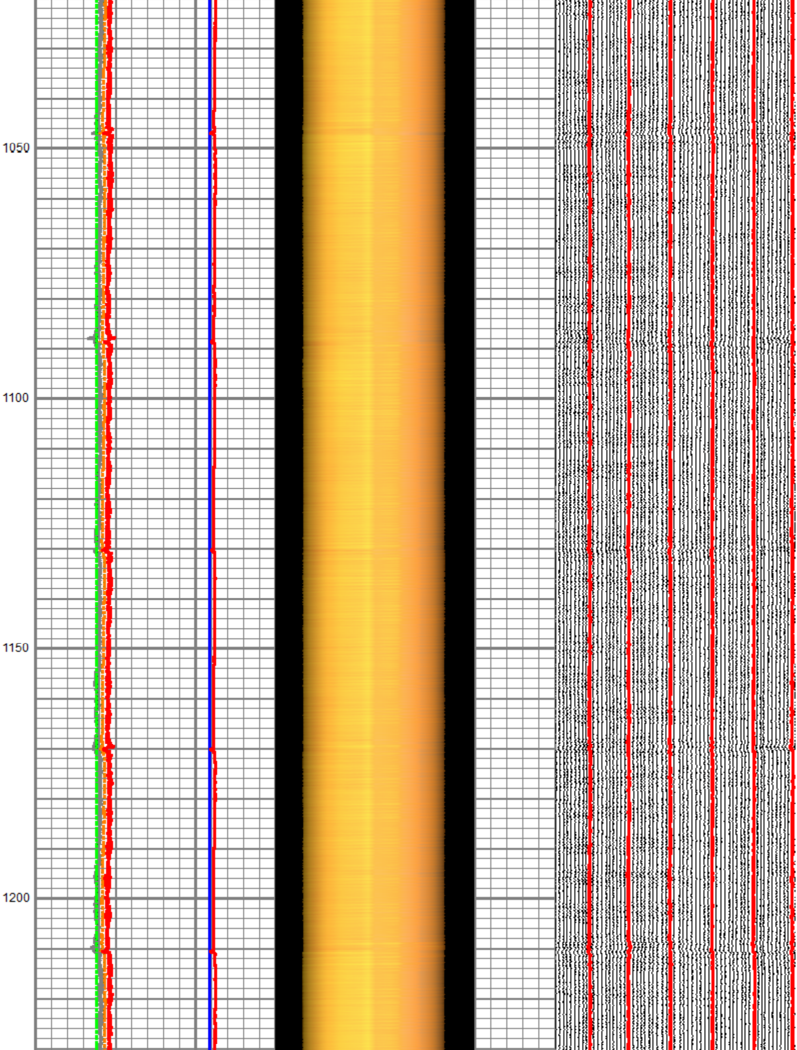


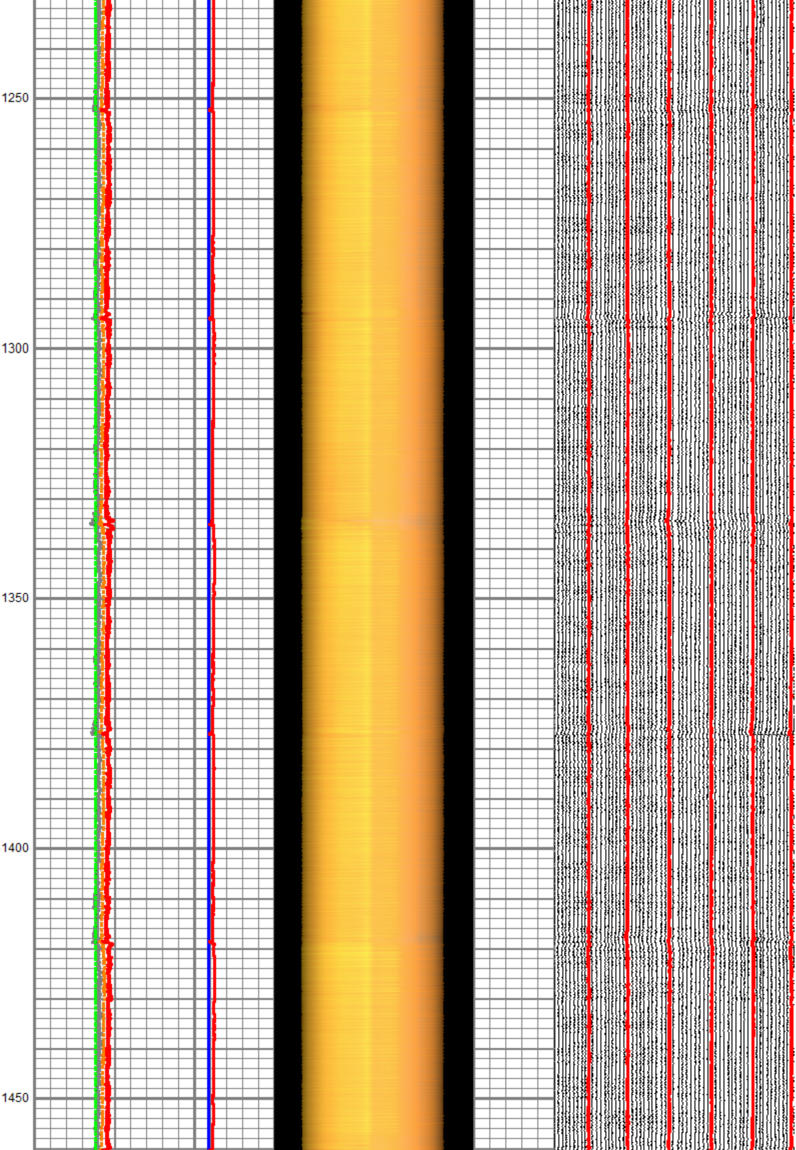


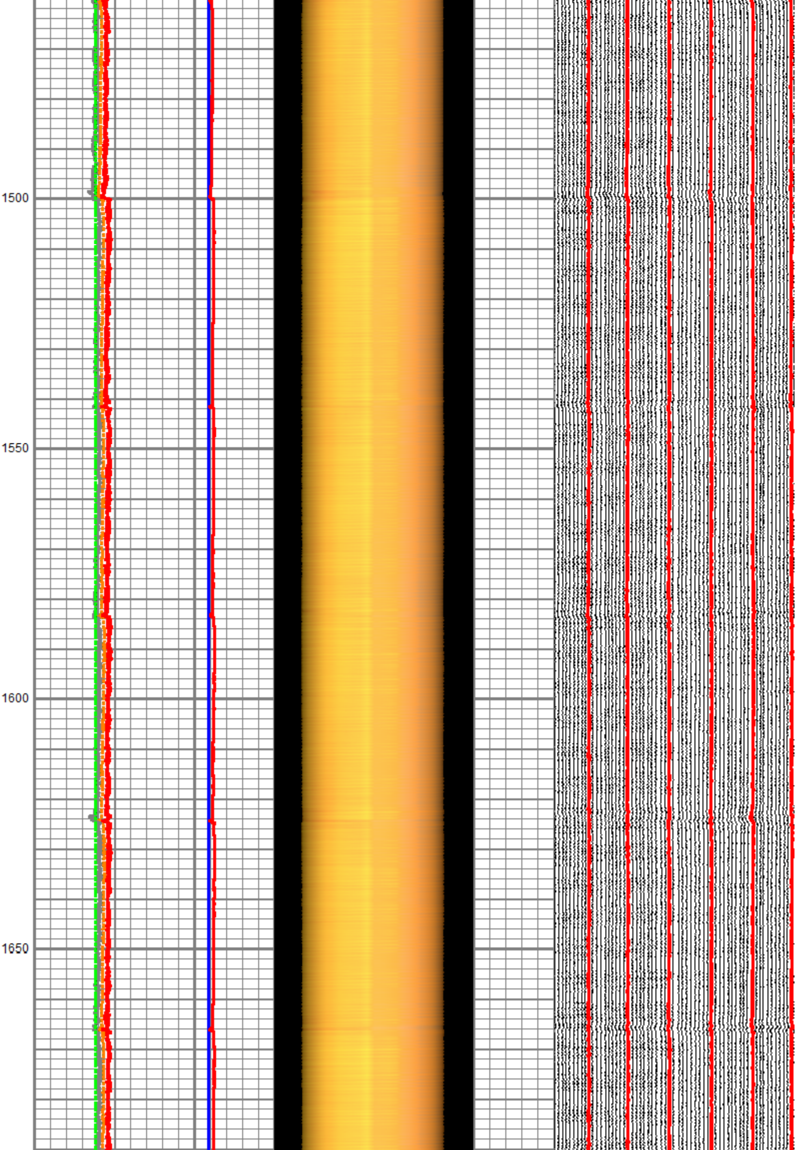


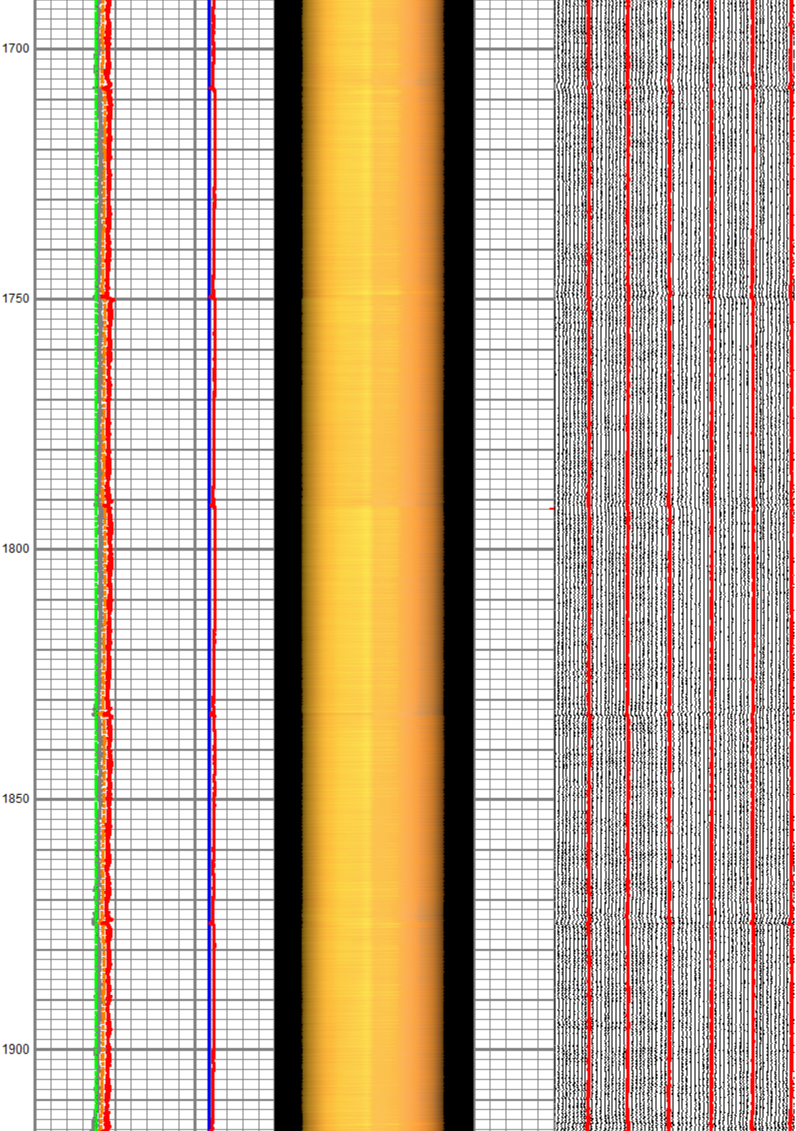


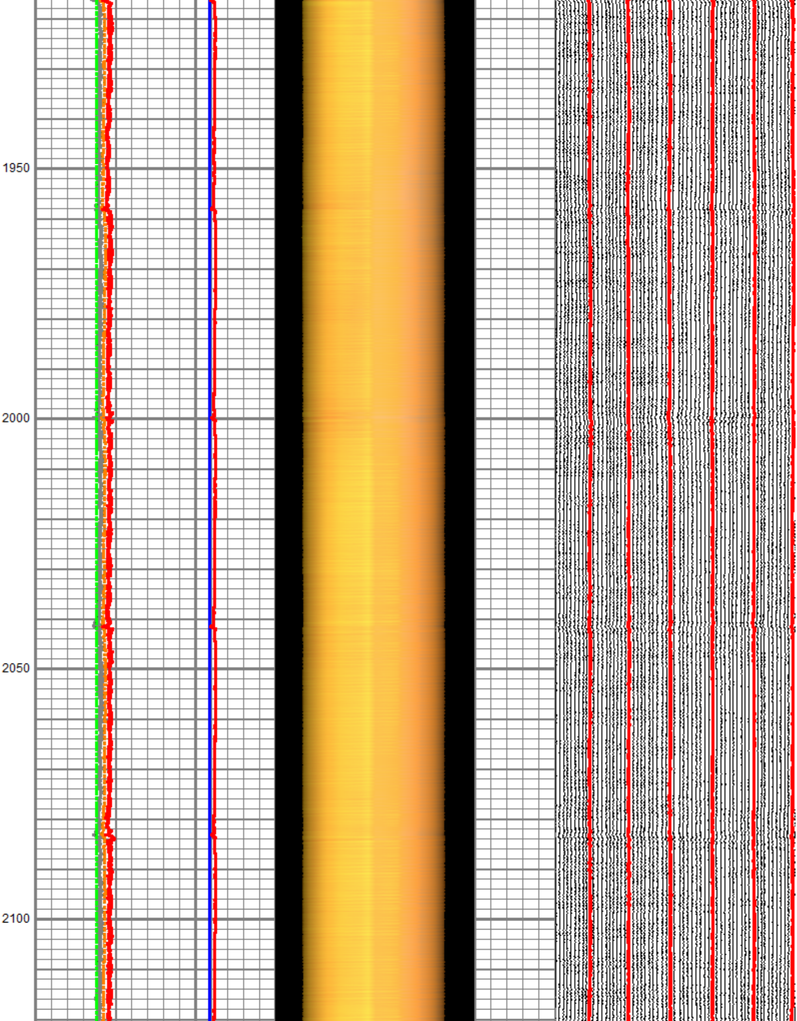


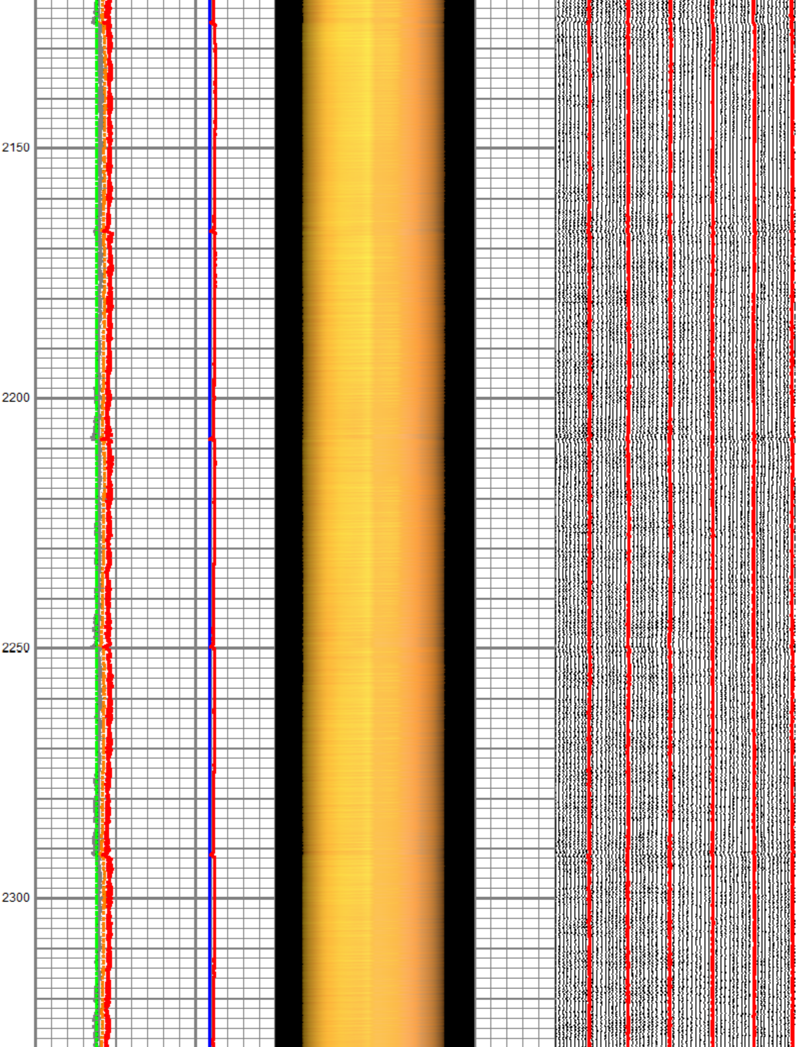


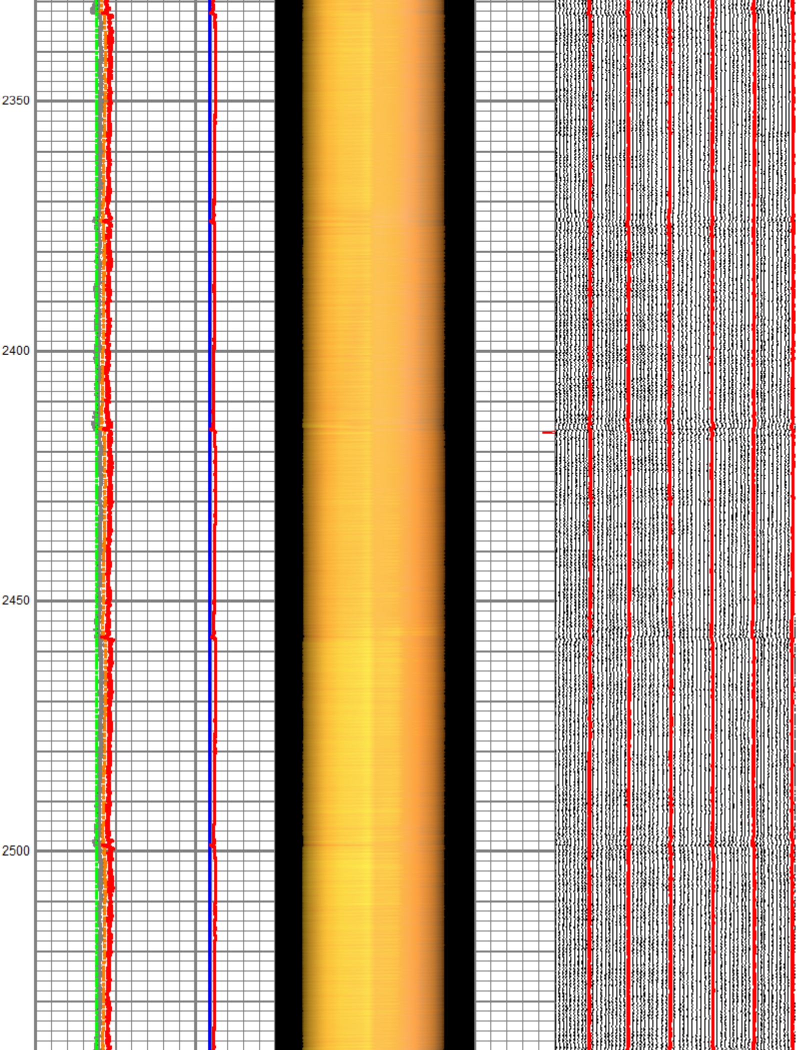


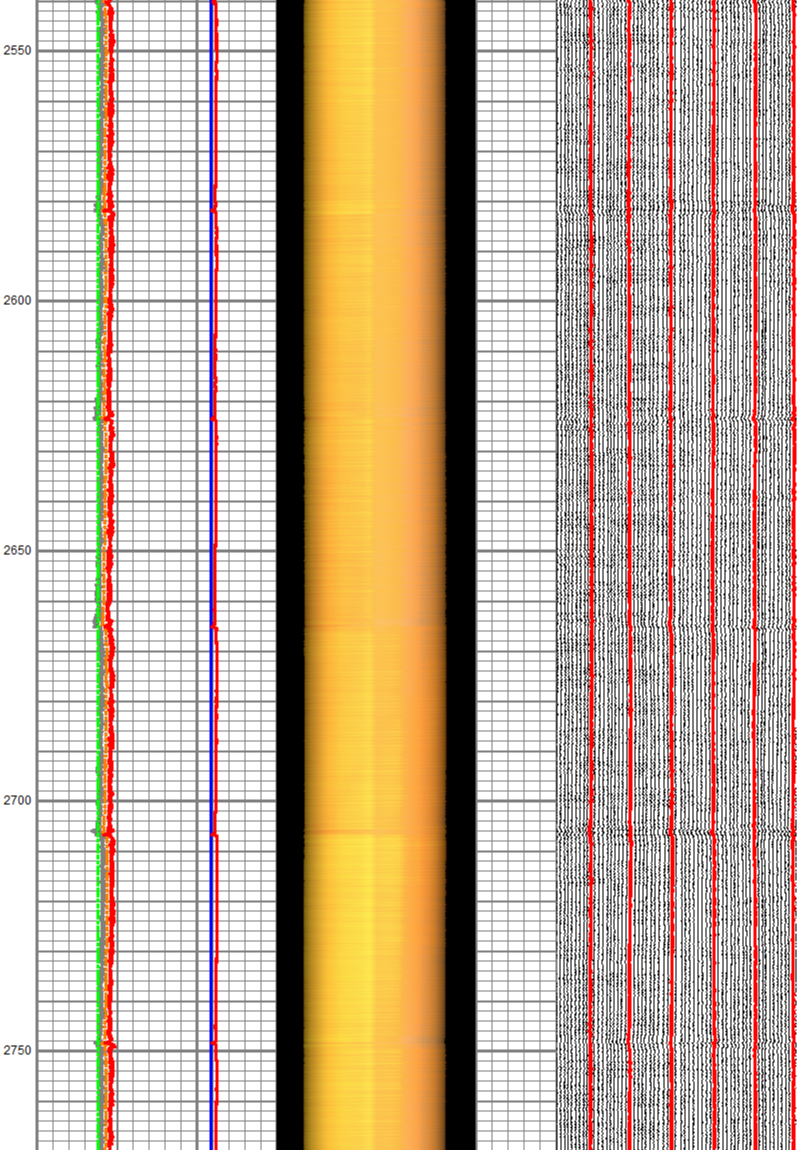


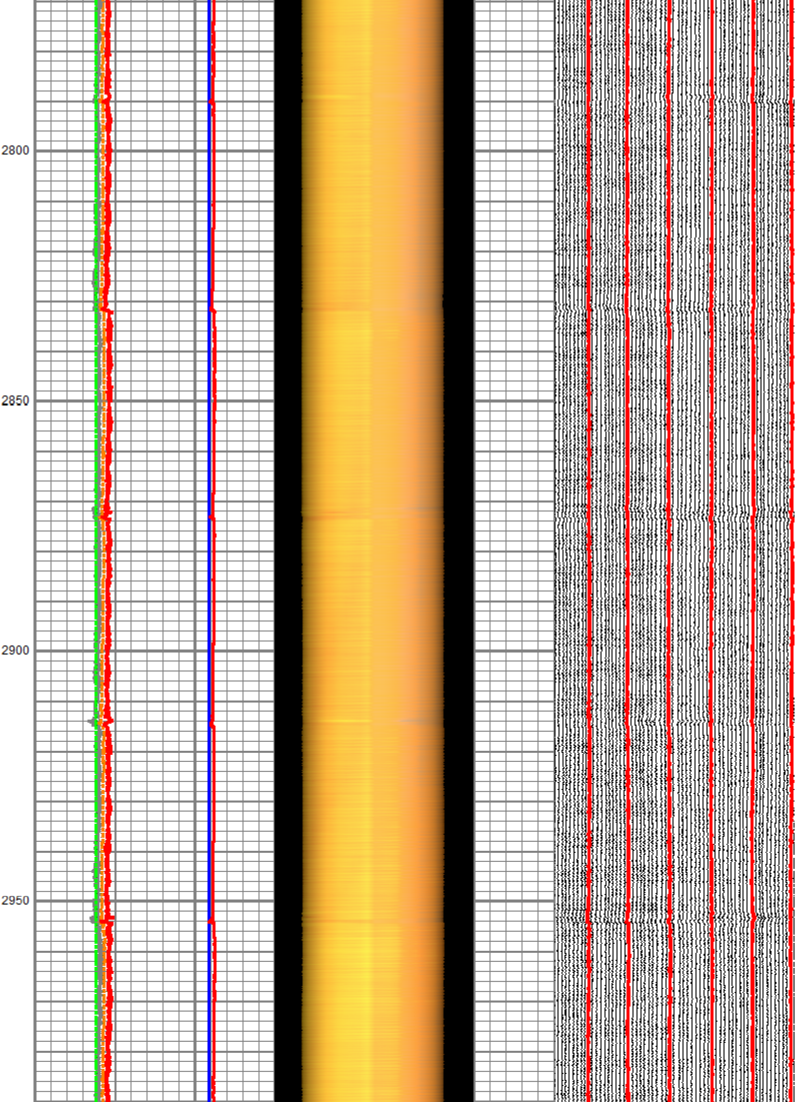


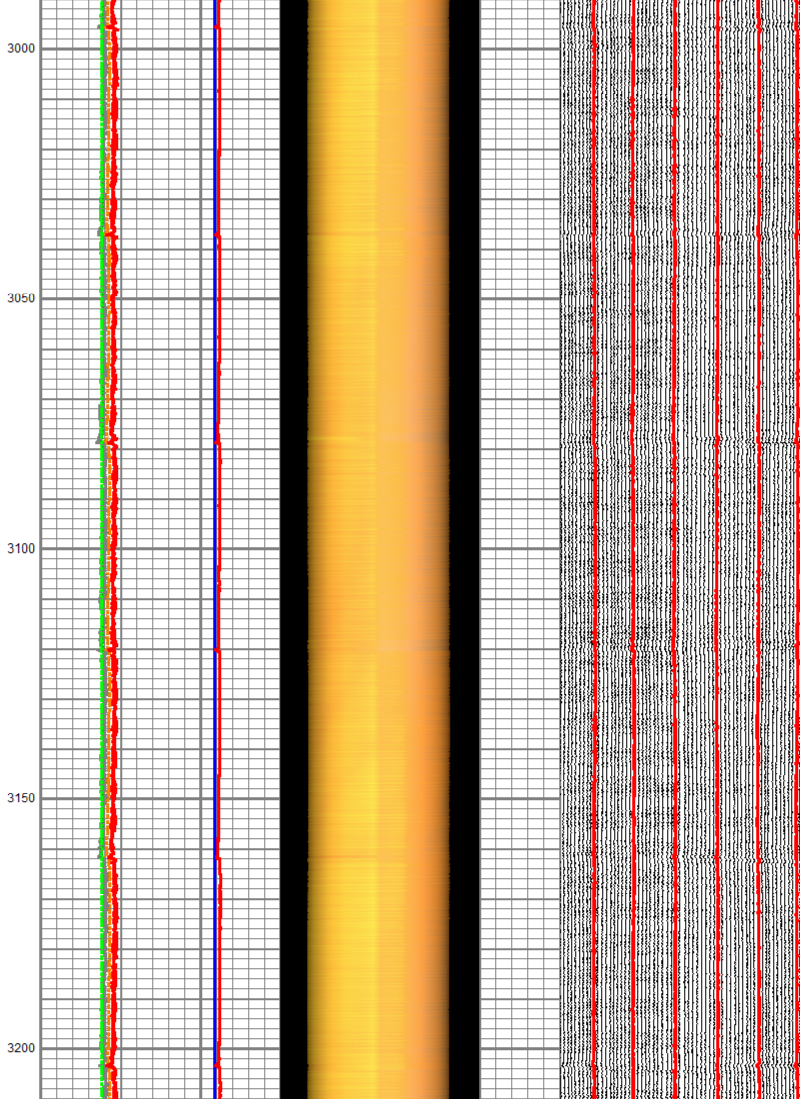


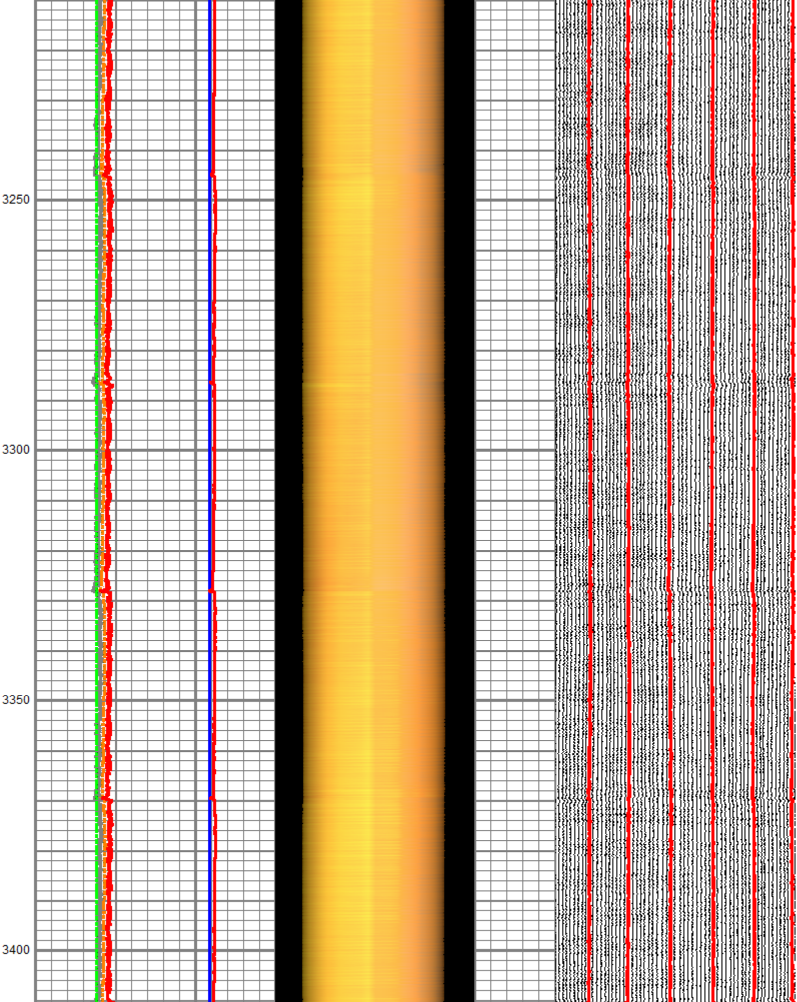


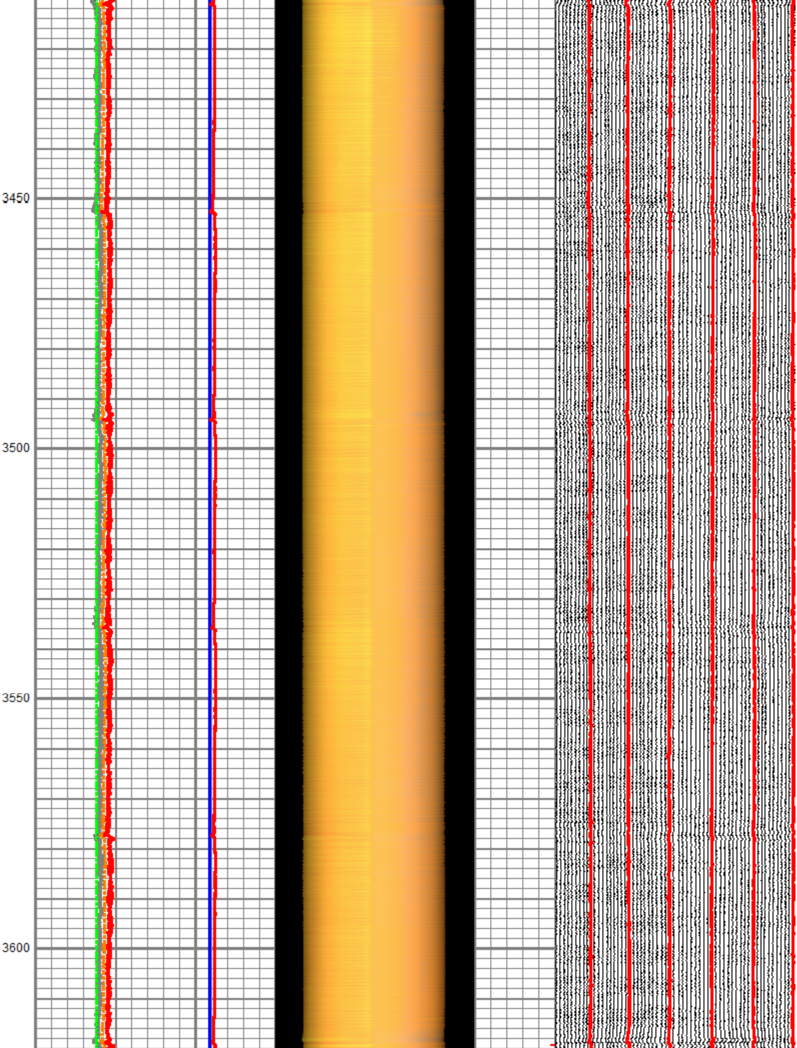


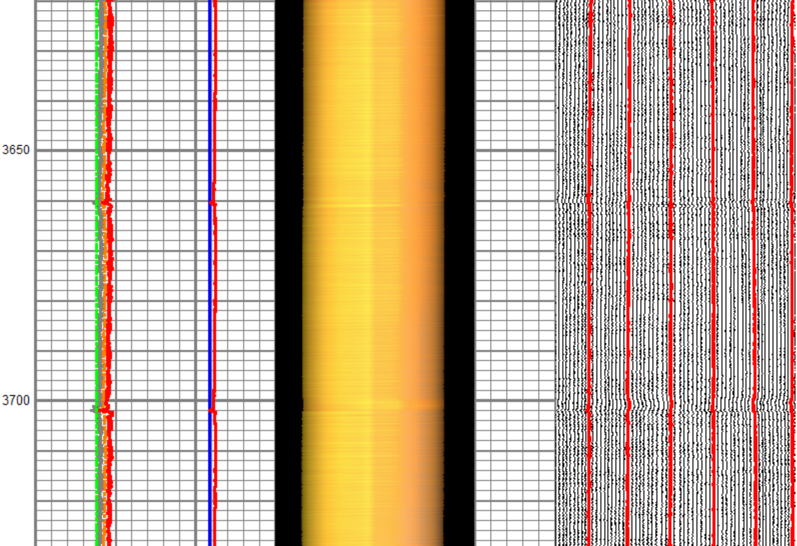


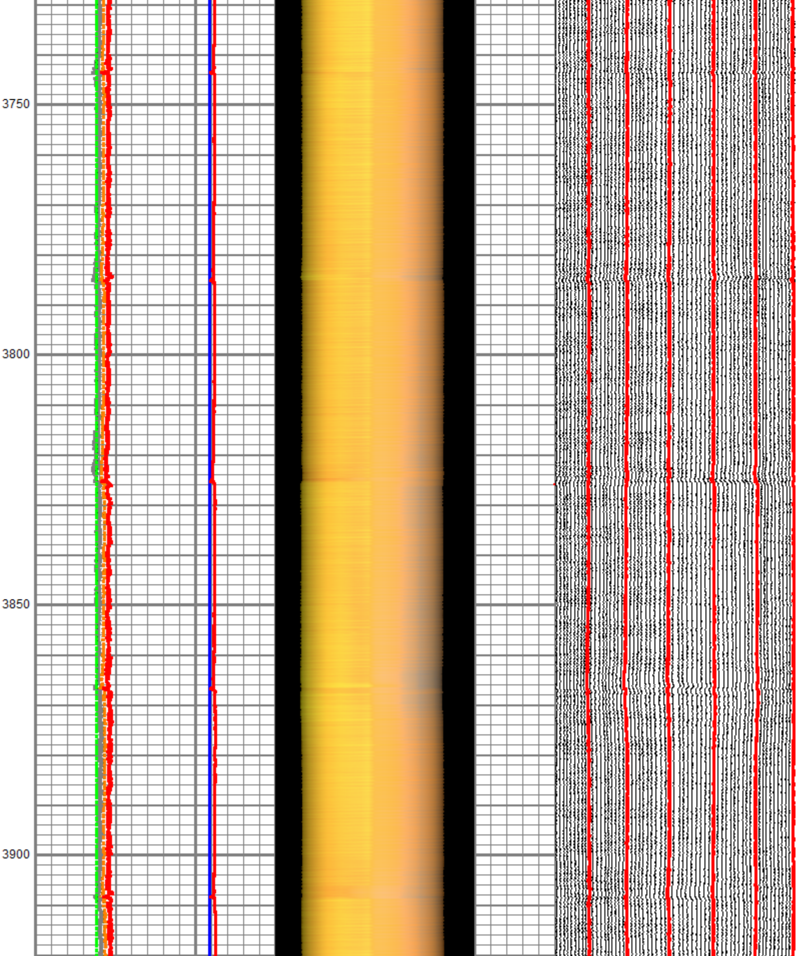


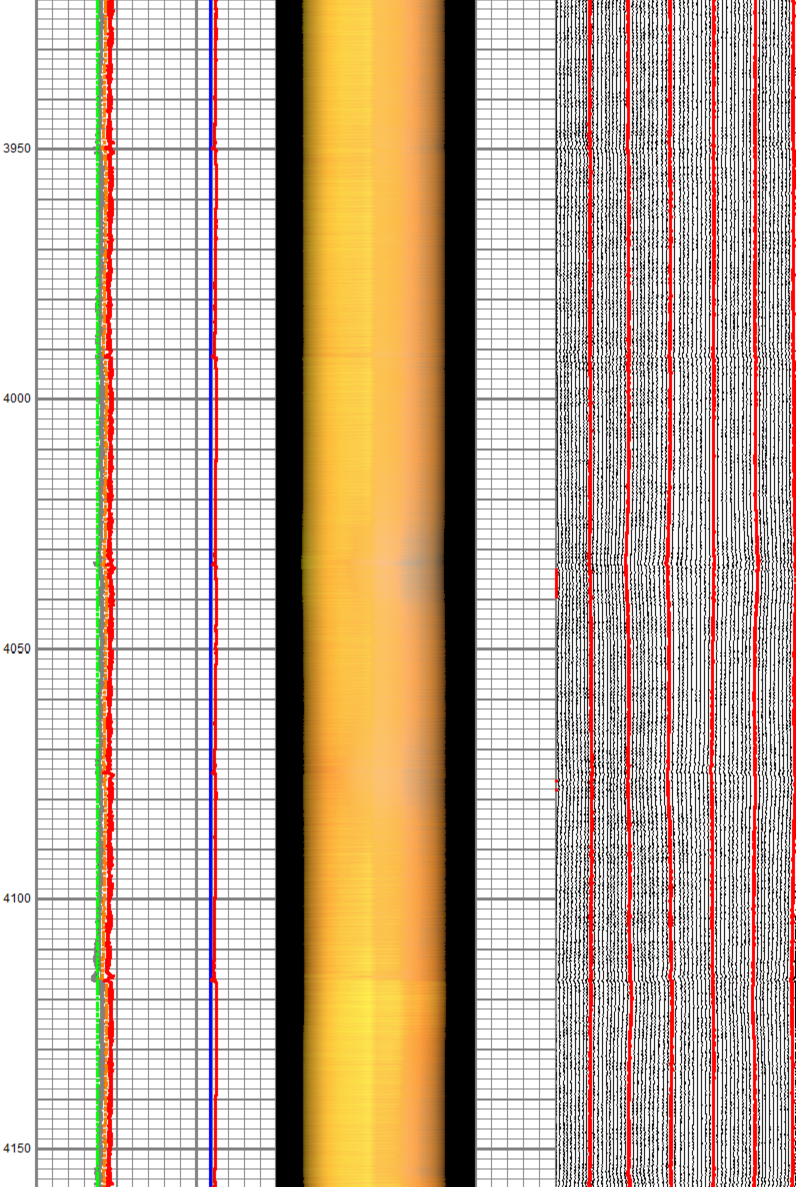


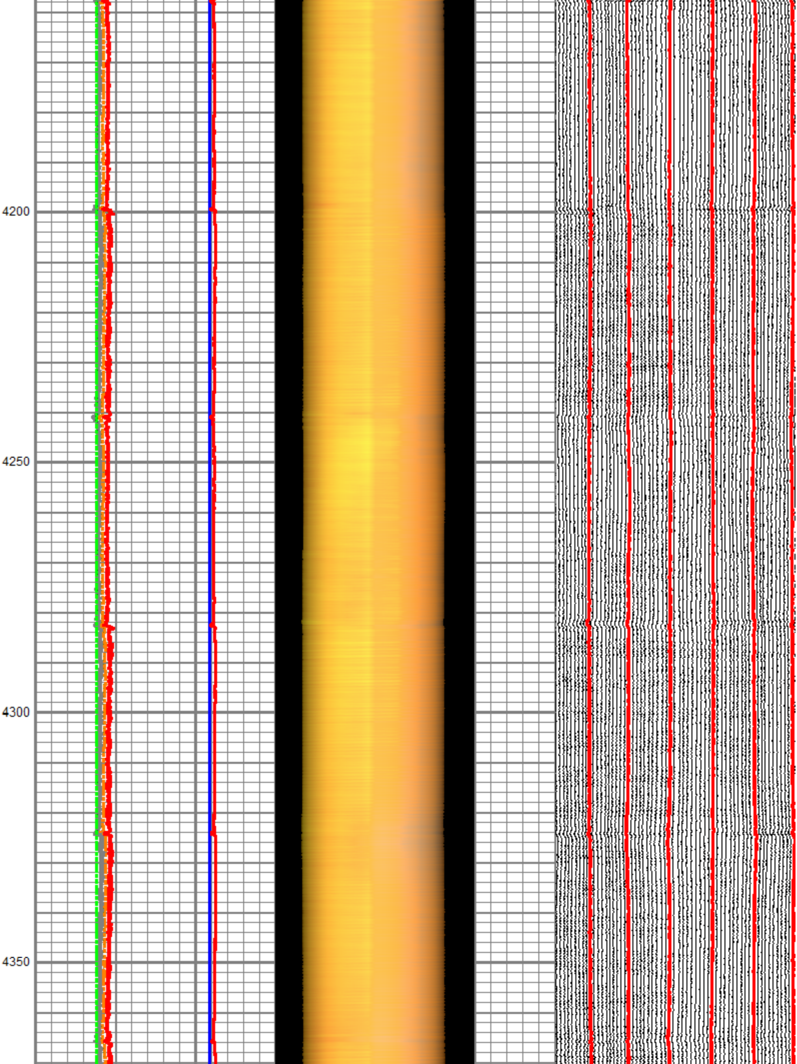


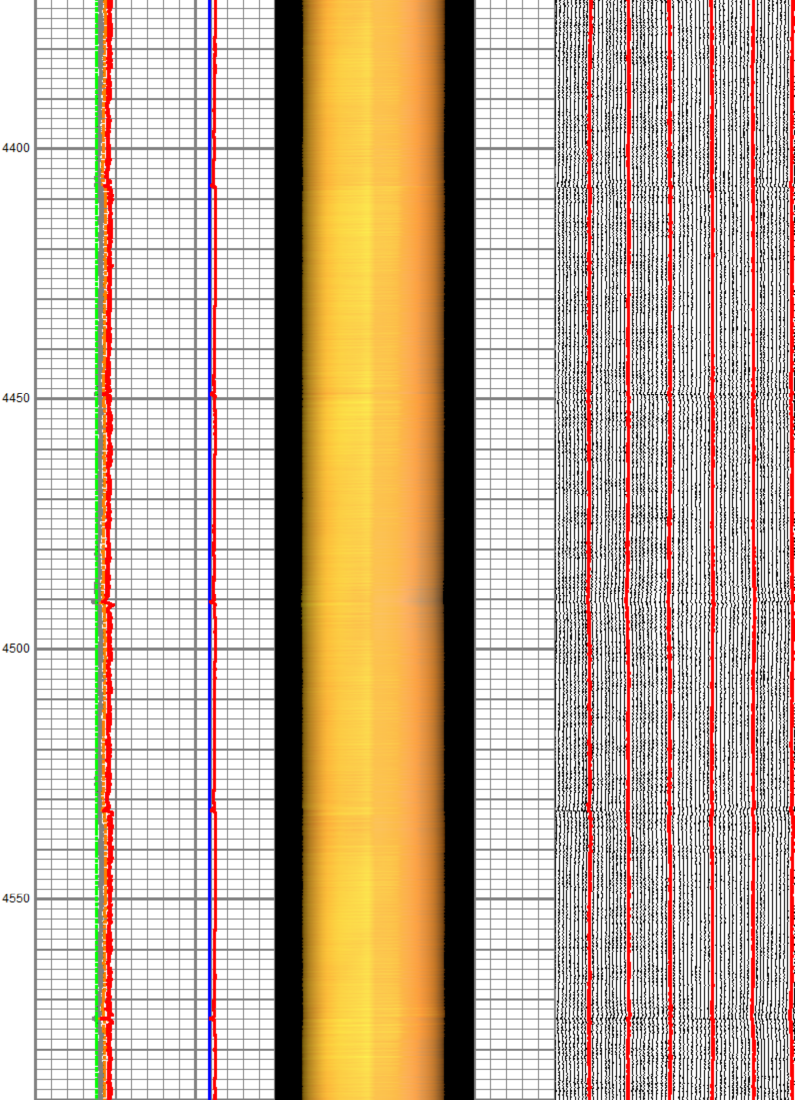


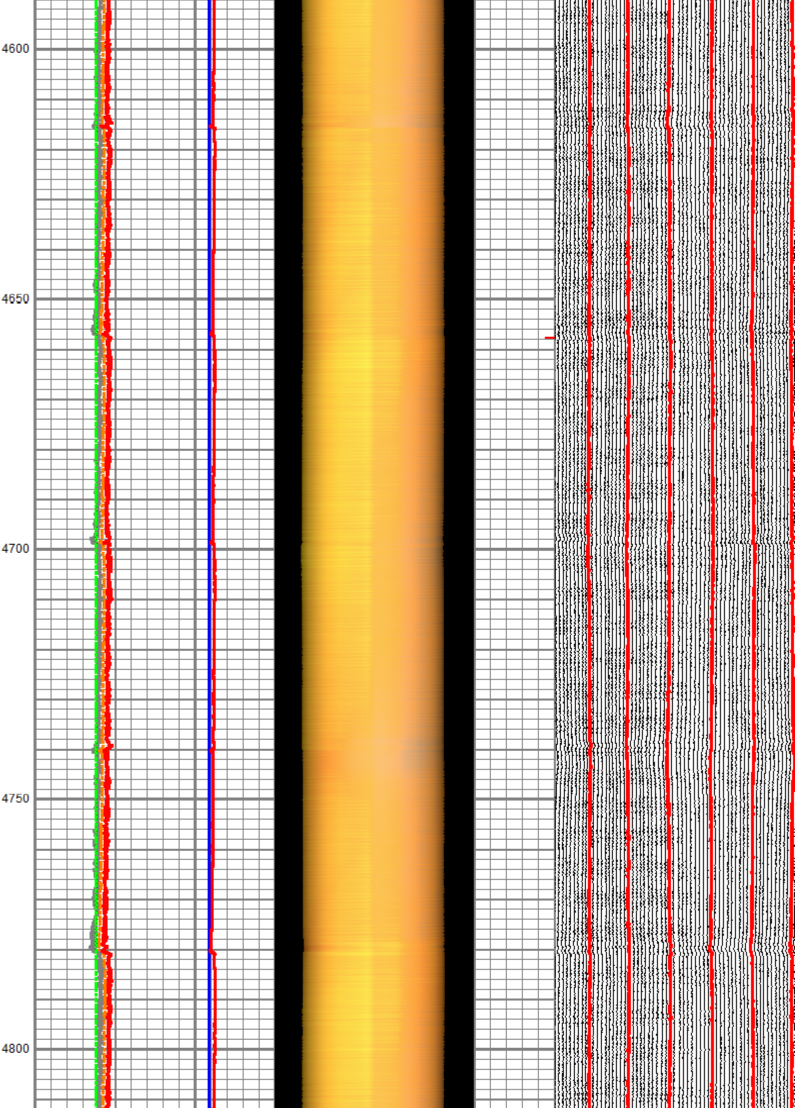


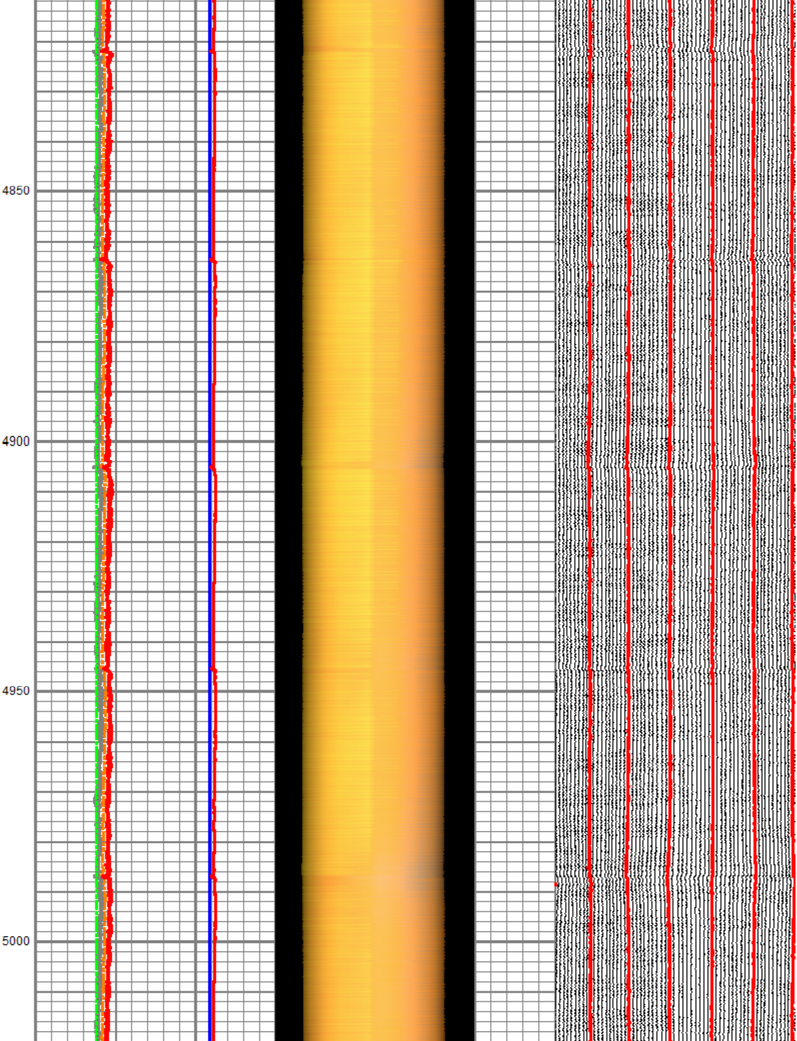

3750
3800
3850
3900

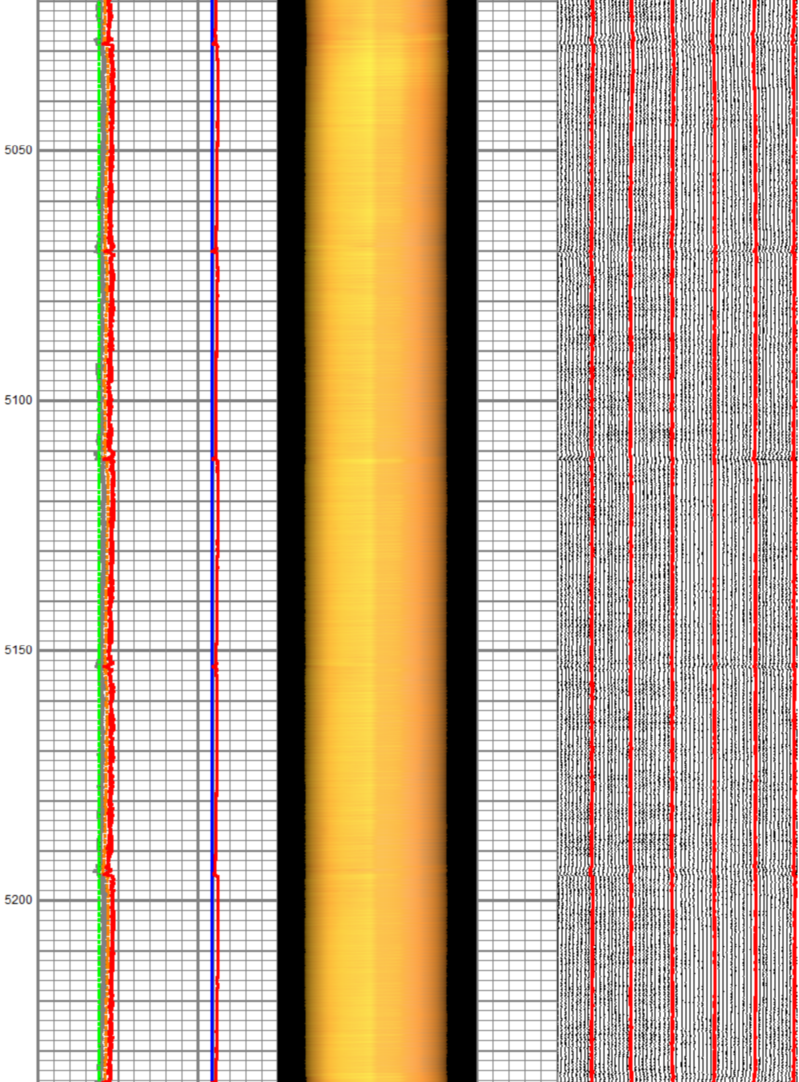

3950
4000
4050
4100
4150

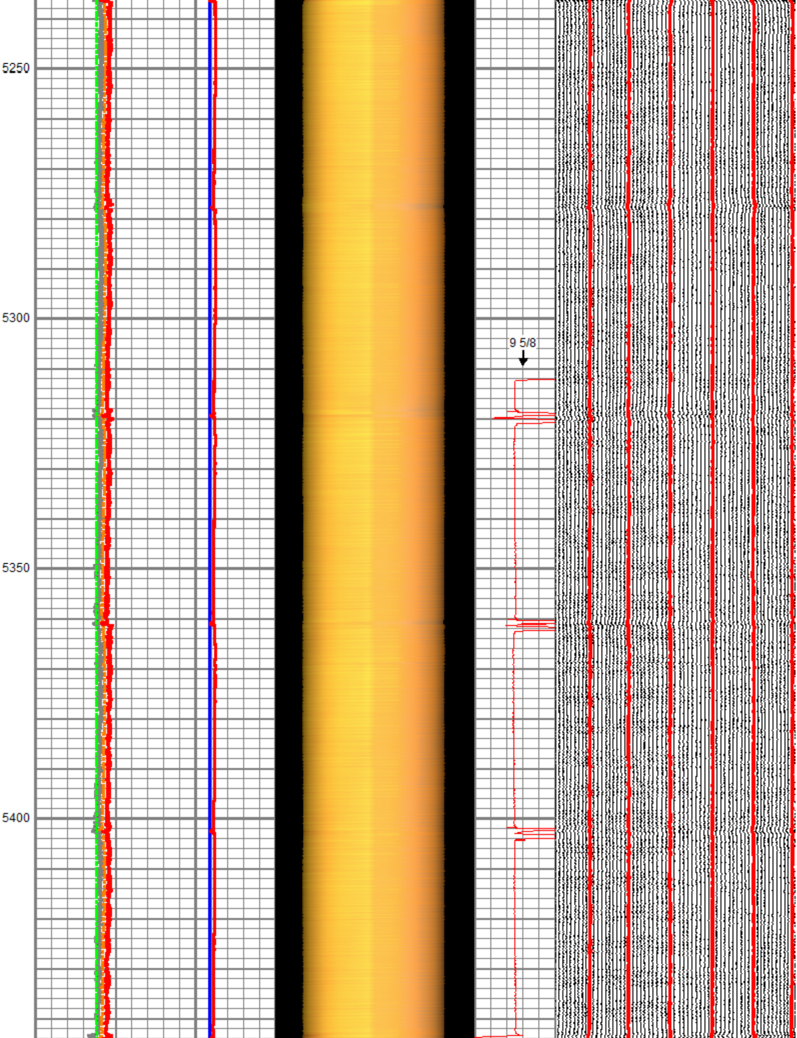

4200
4250
4300
4350

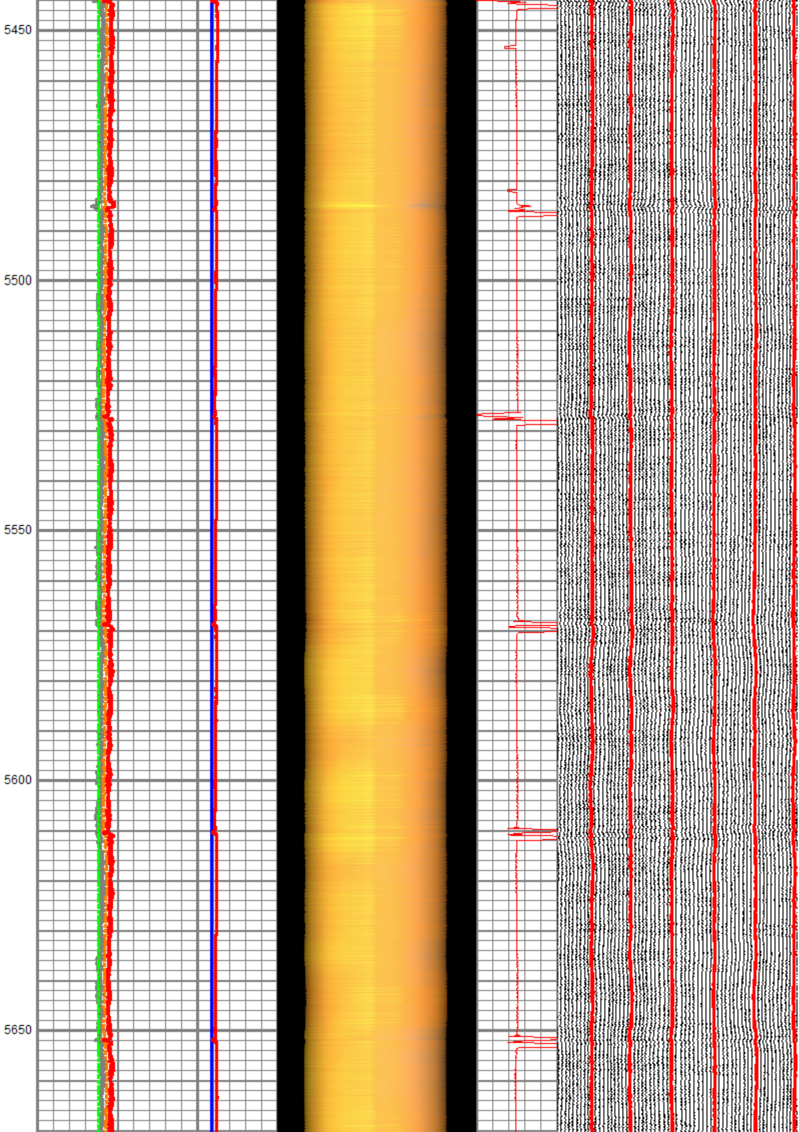

4400
4450
4500
4550

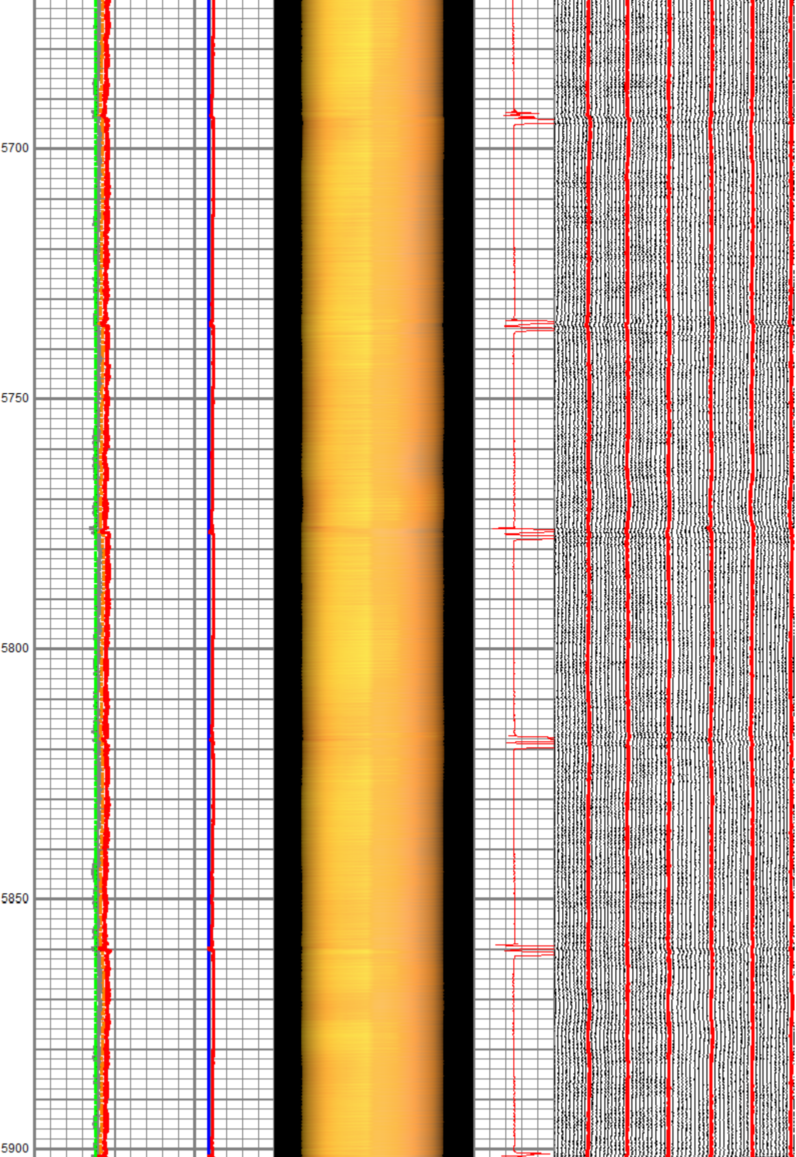

4600
4650
4700
4750
4800

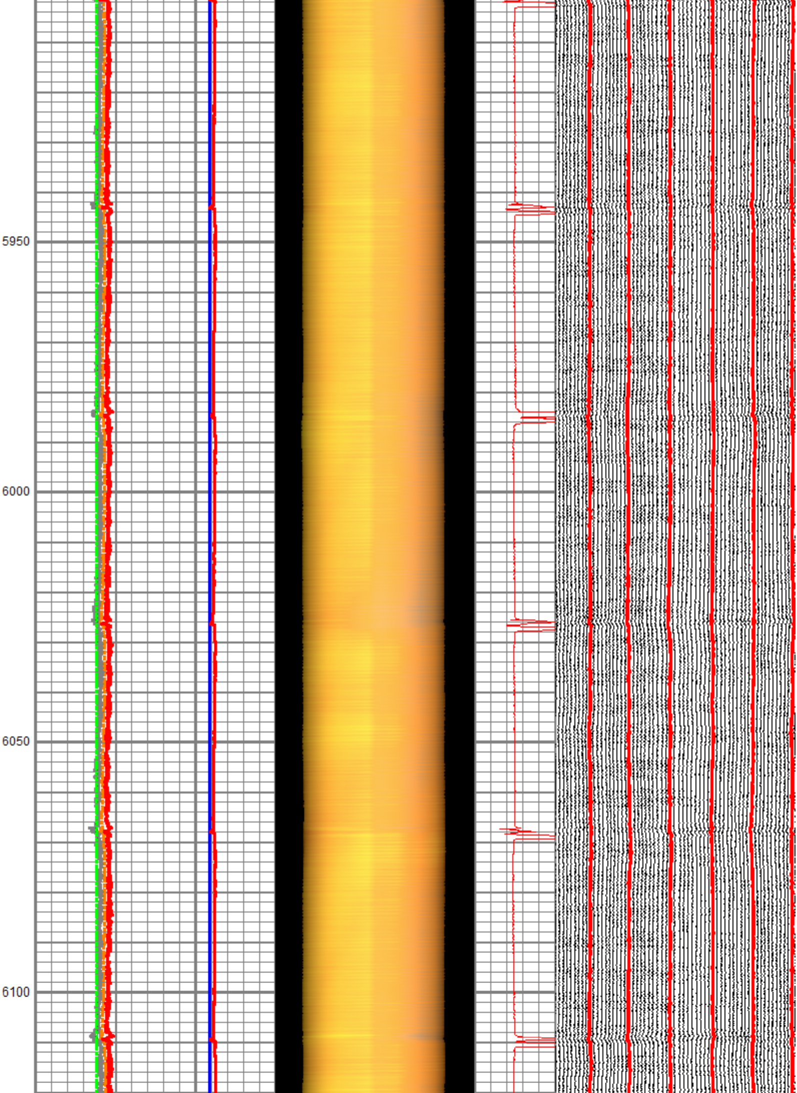

4850
4900
4950
5000

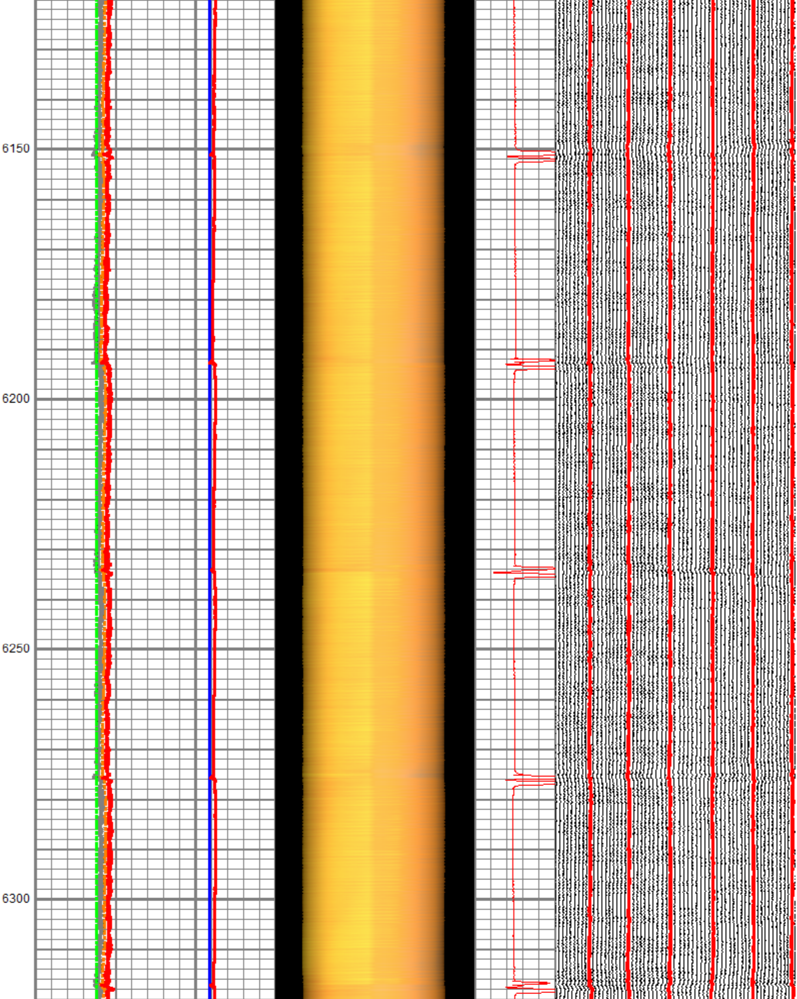

5050
5100
5150
5200

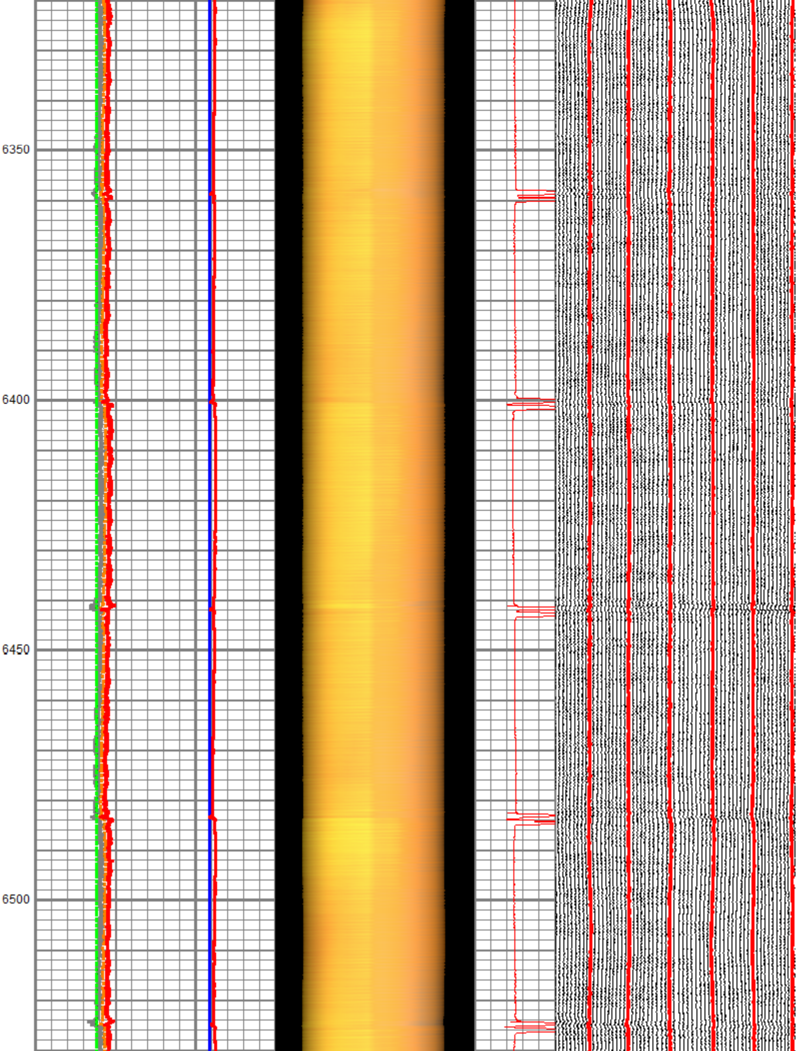

5250
5300
5350
5400
9 5/8

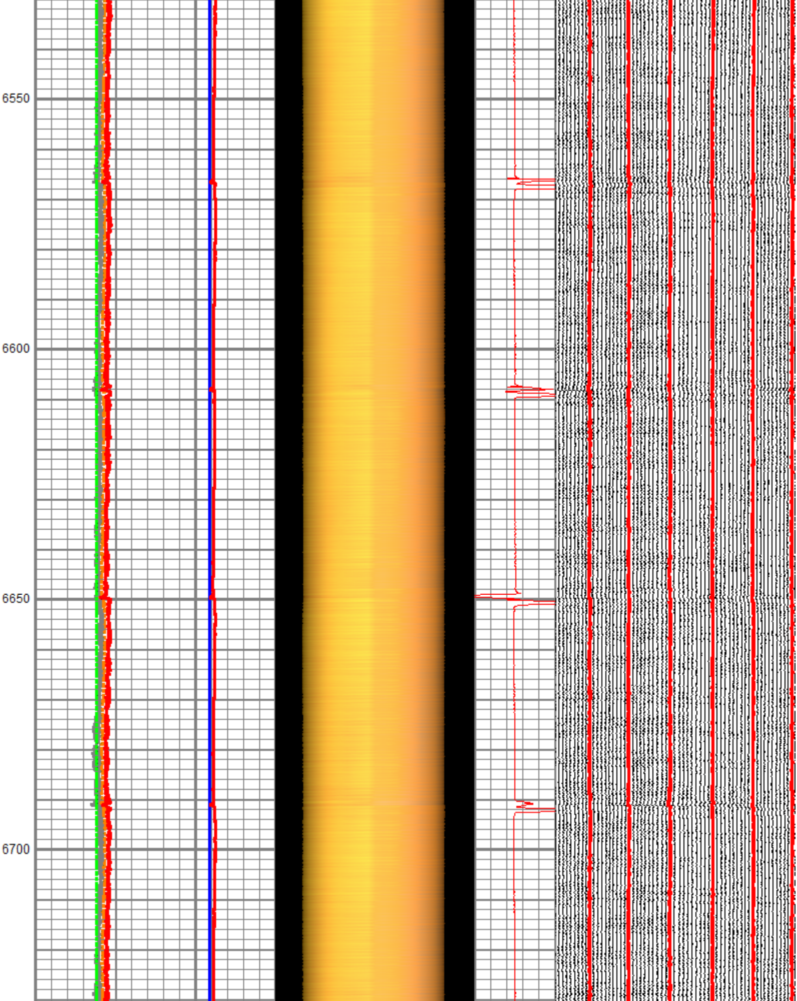

5450
5500
5550
5600
5650

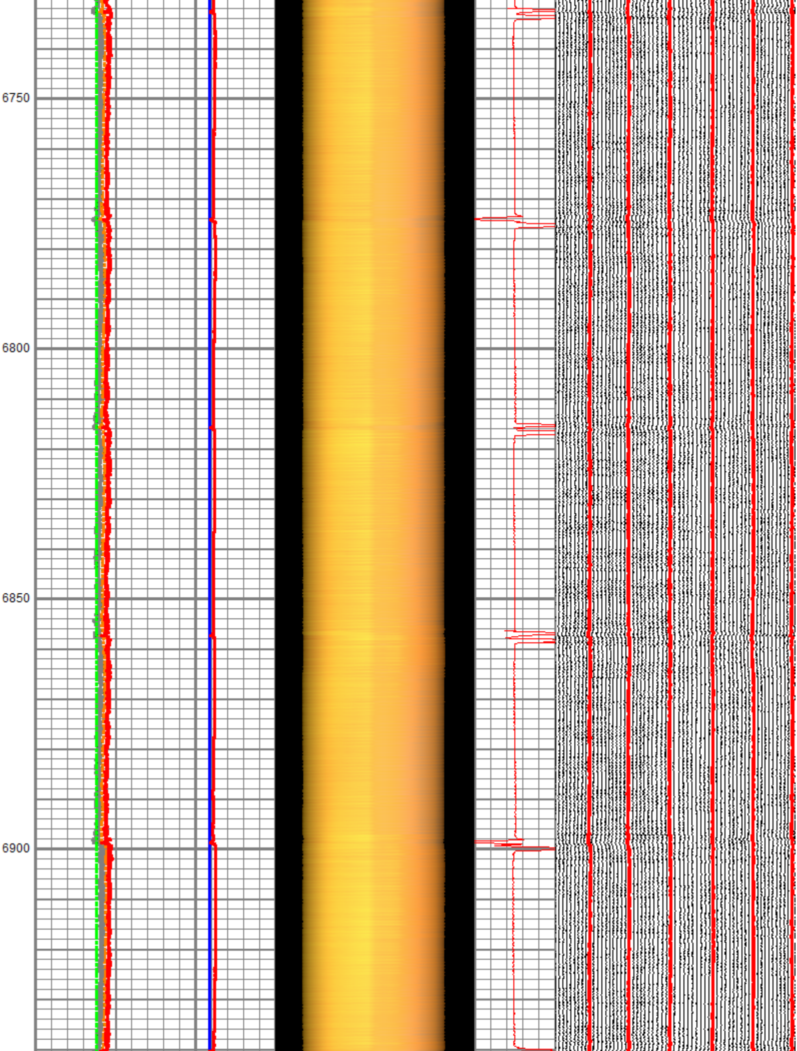

5700
5750
5800
5850
5900

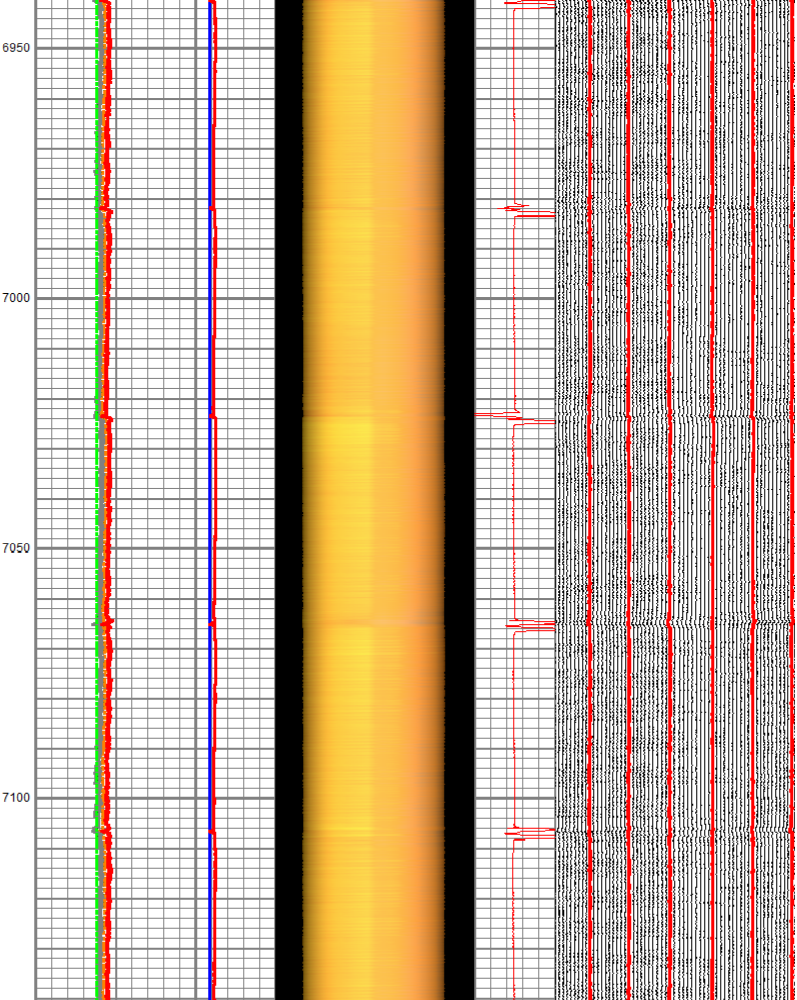

5950
6000
6050
6100

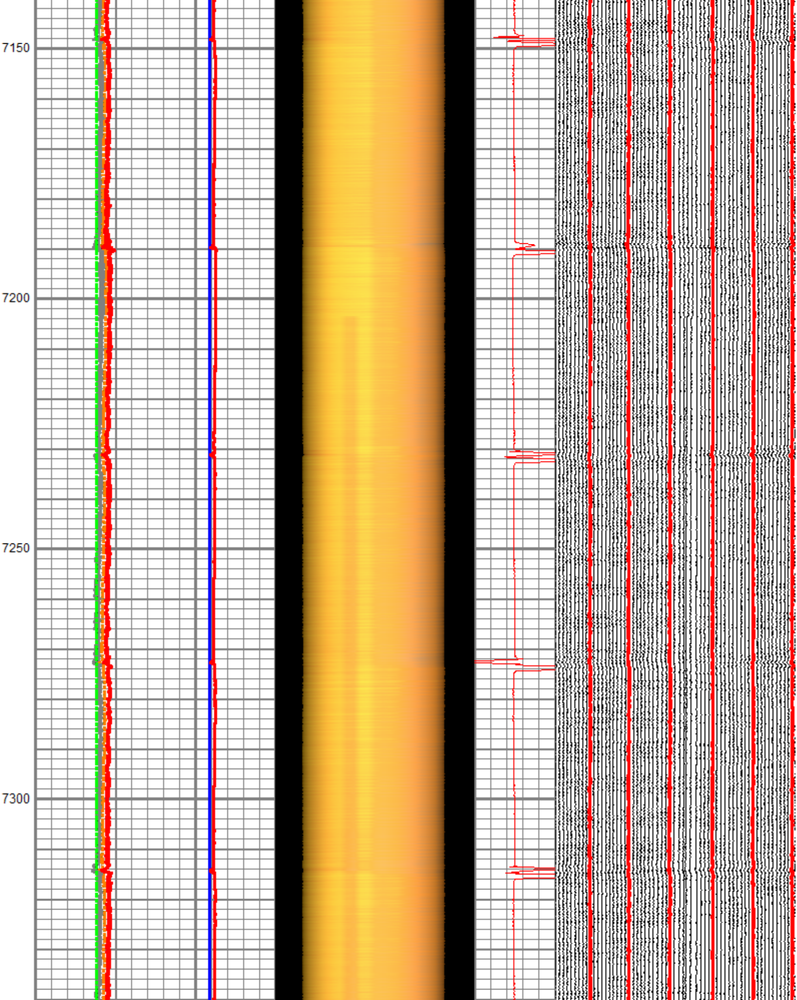

6150
6200
6250
6300

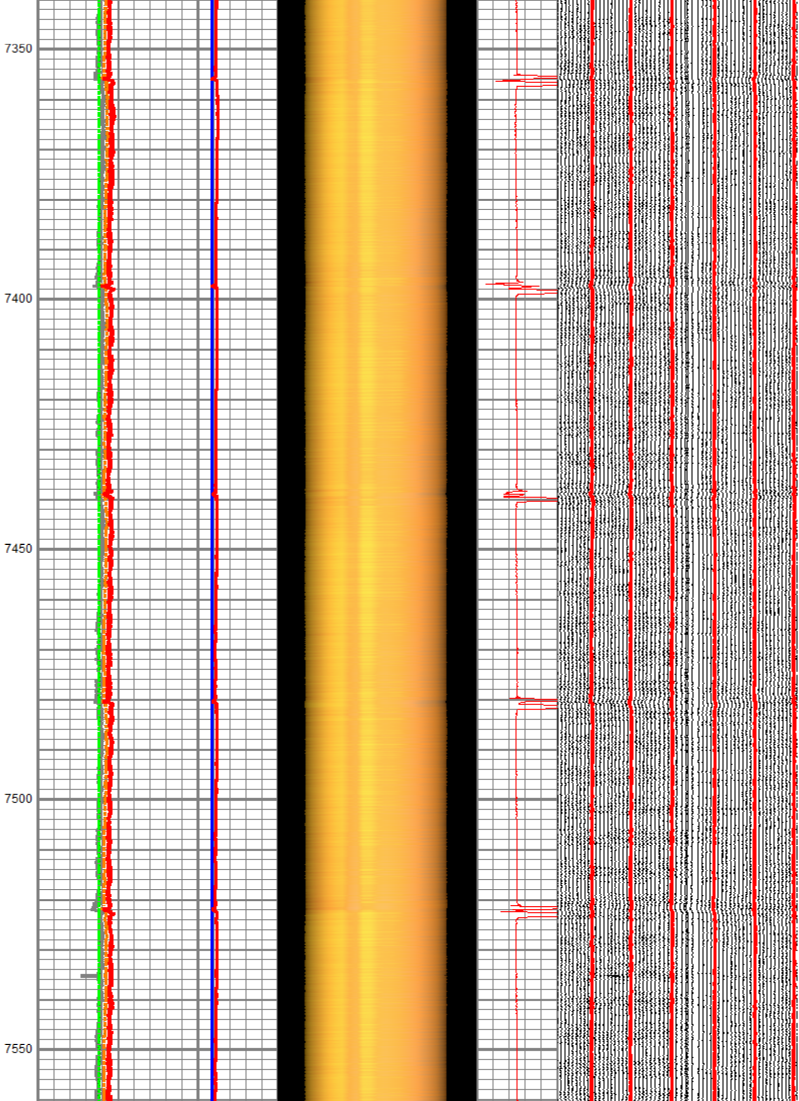

6350
6400
6450
6500

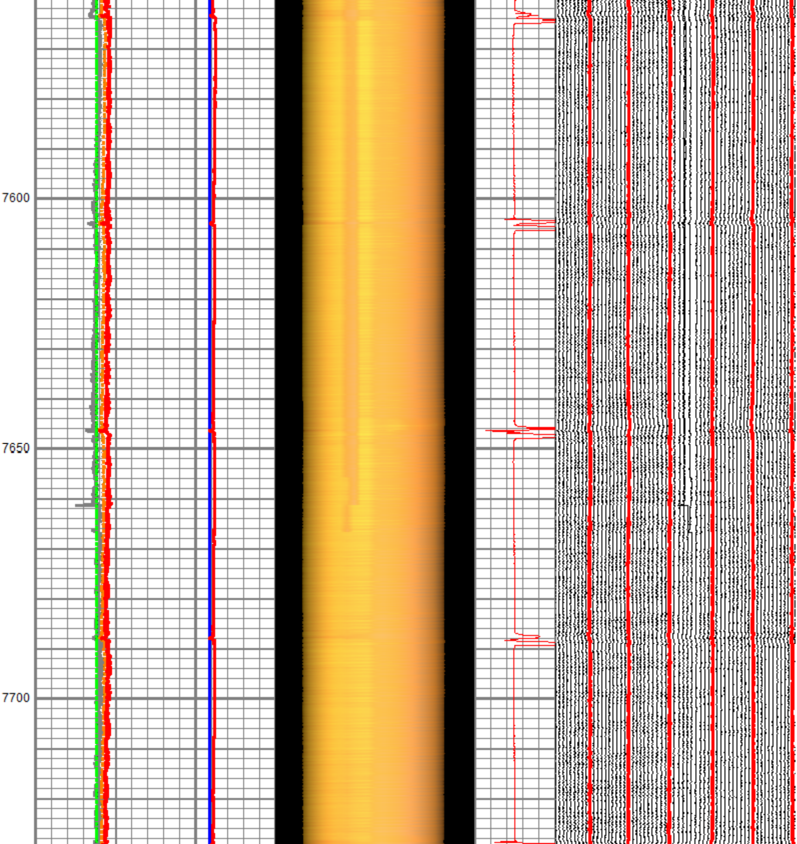

6550
6600
6650
6700

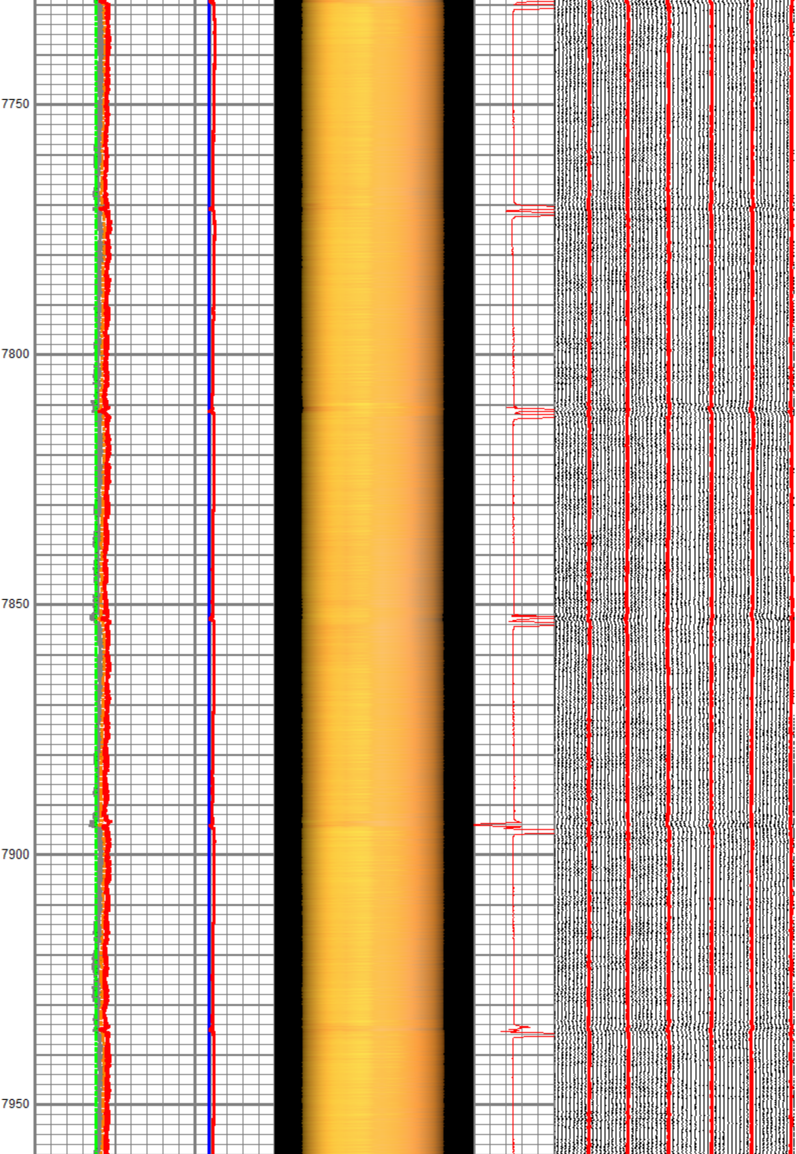

6750
6800
6850
6900

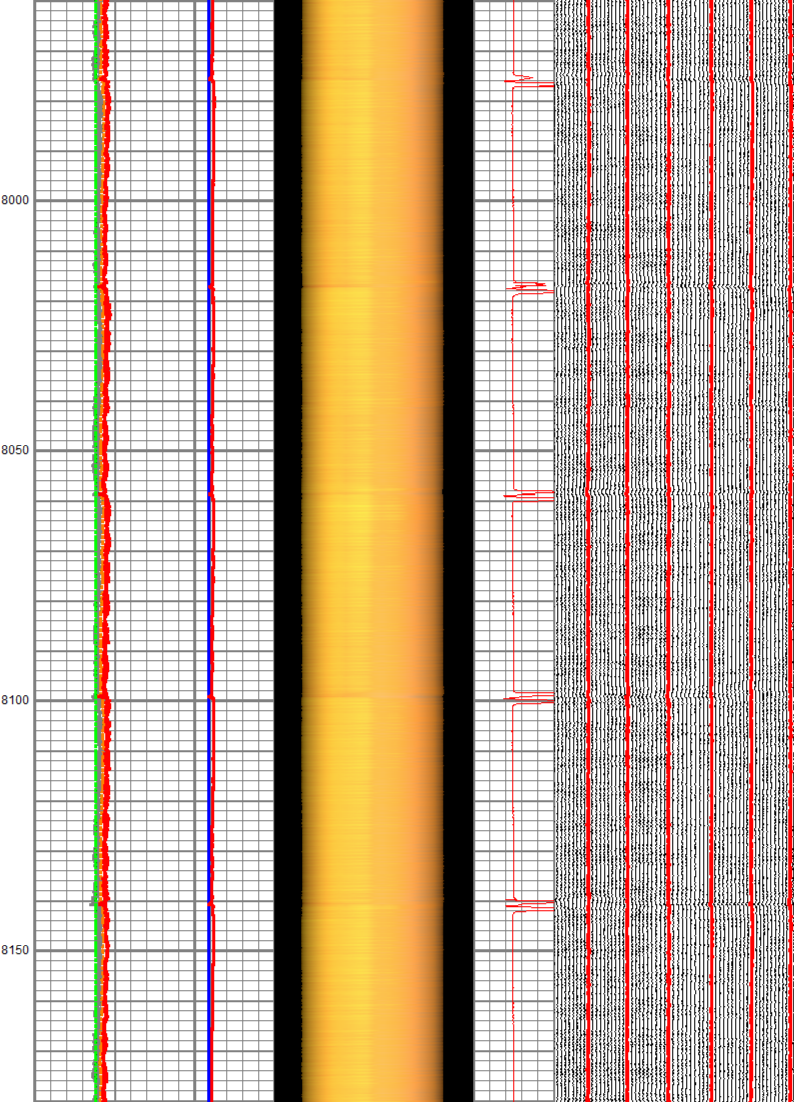

6950
7000
7050
7100

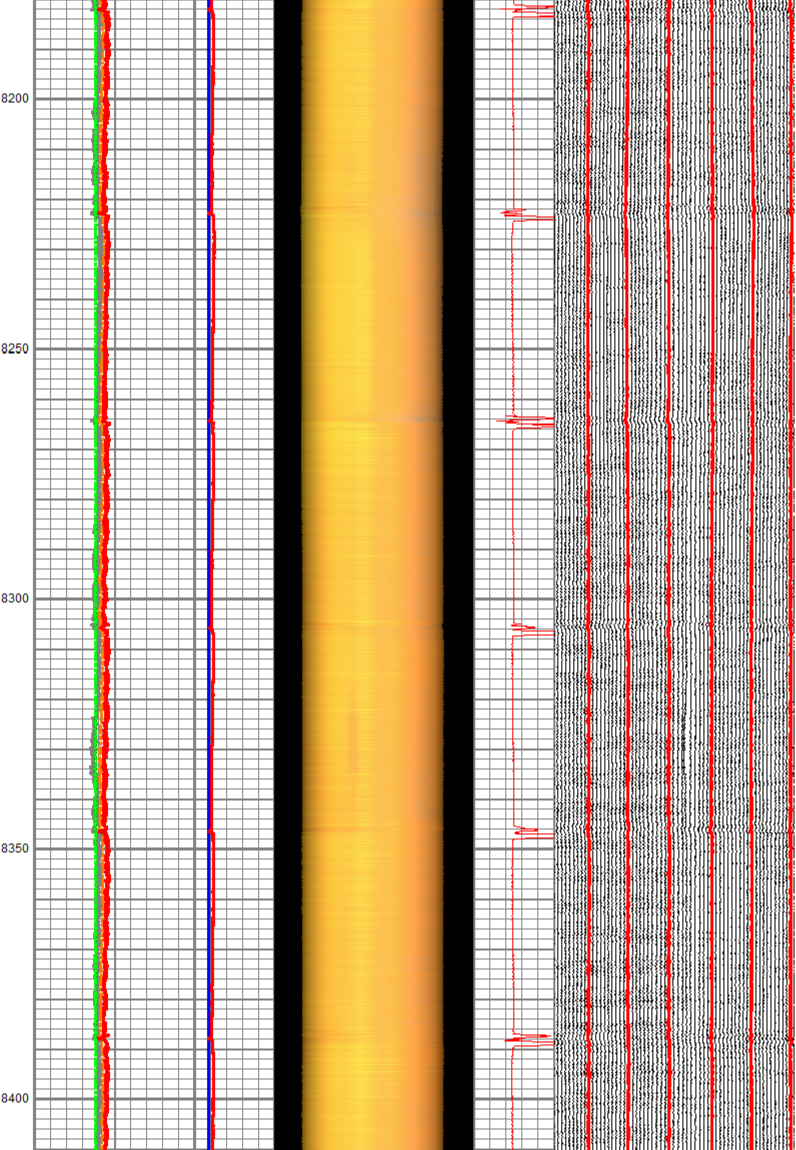

7150
7200
7250
7300

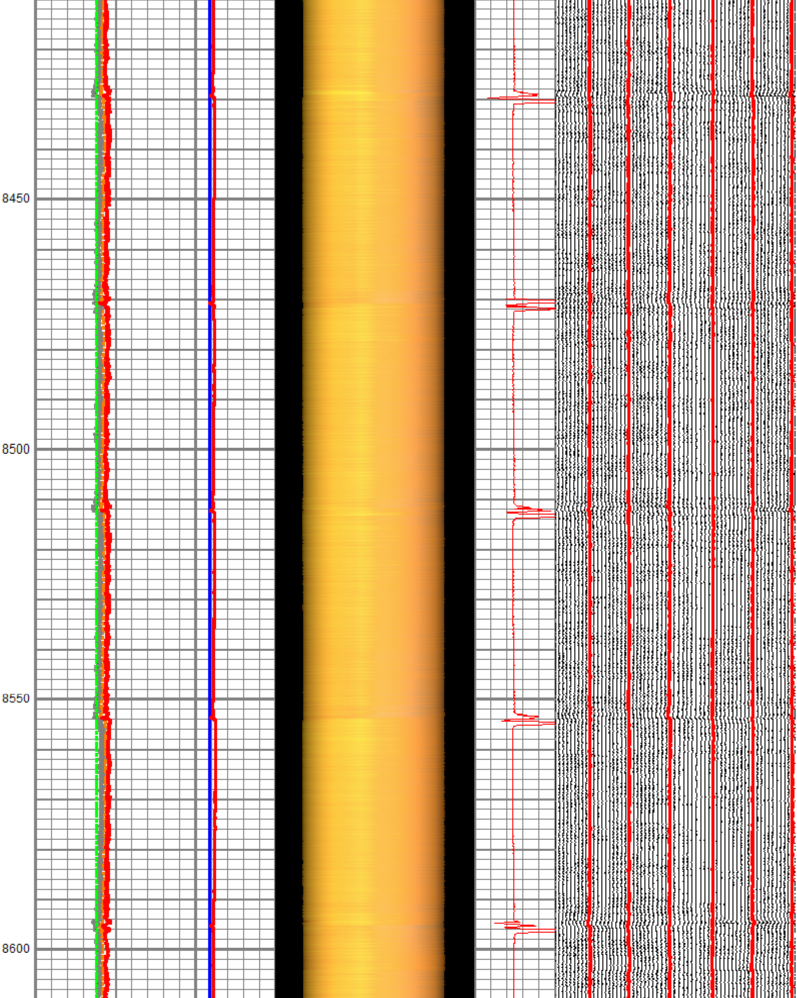

7350
7400
7450
7500
7550

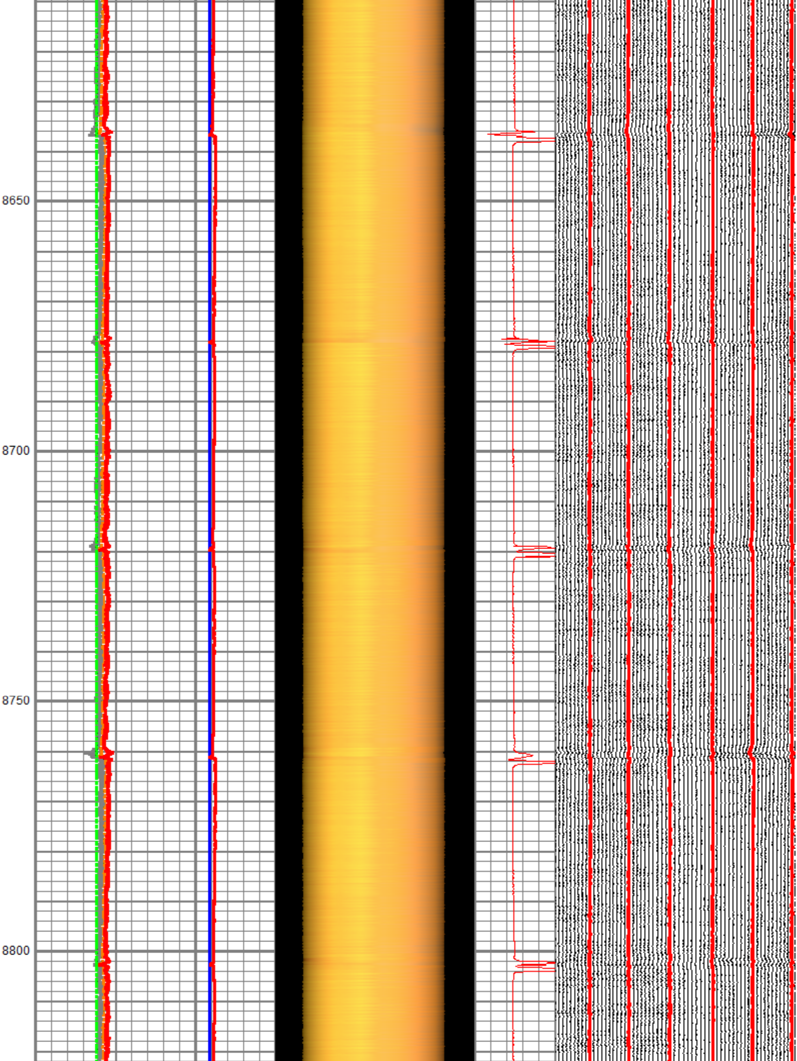

7600
7650
7700

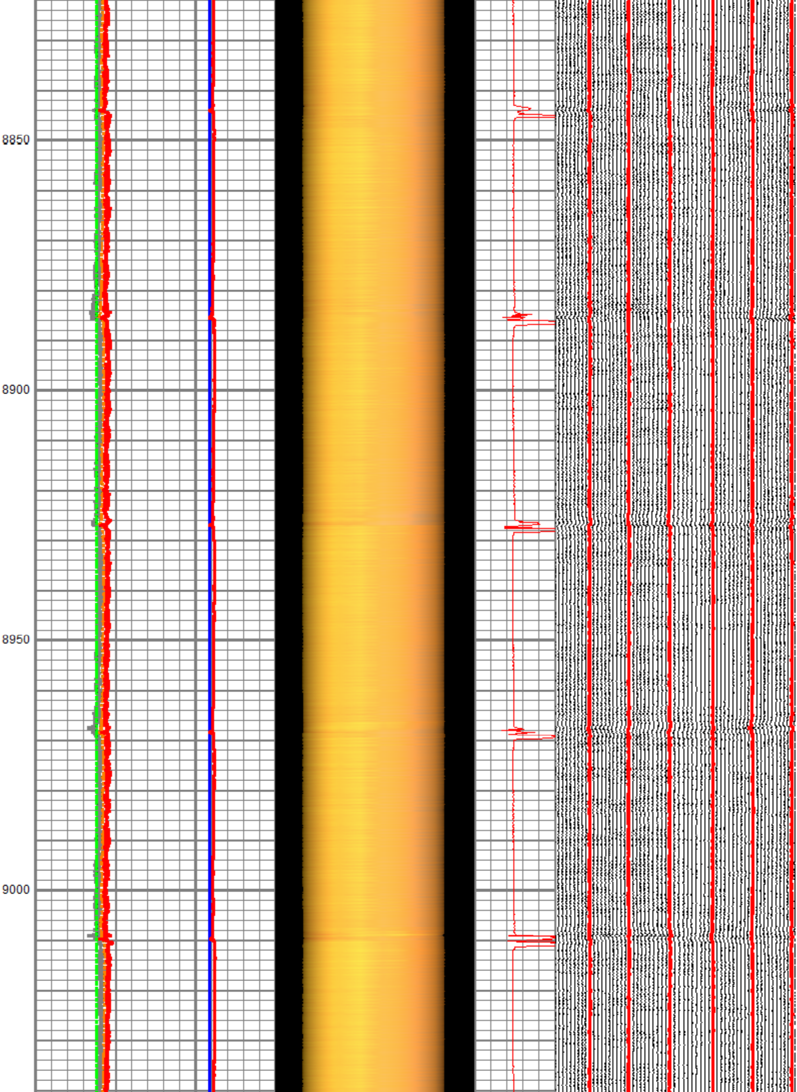


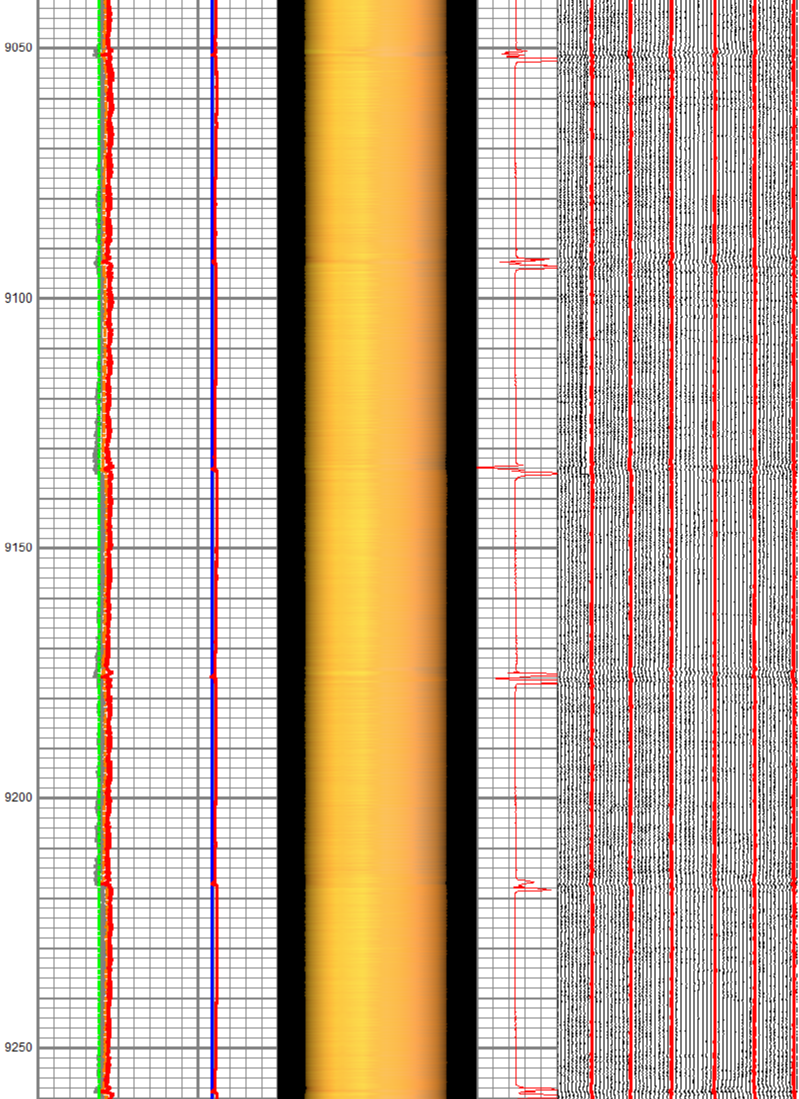


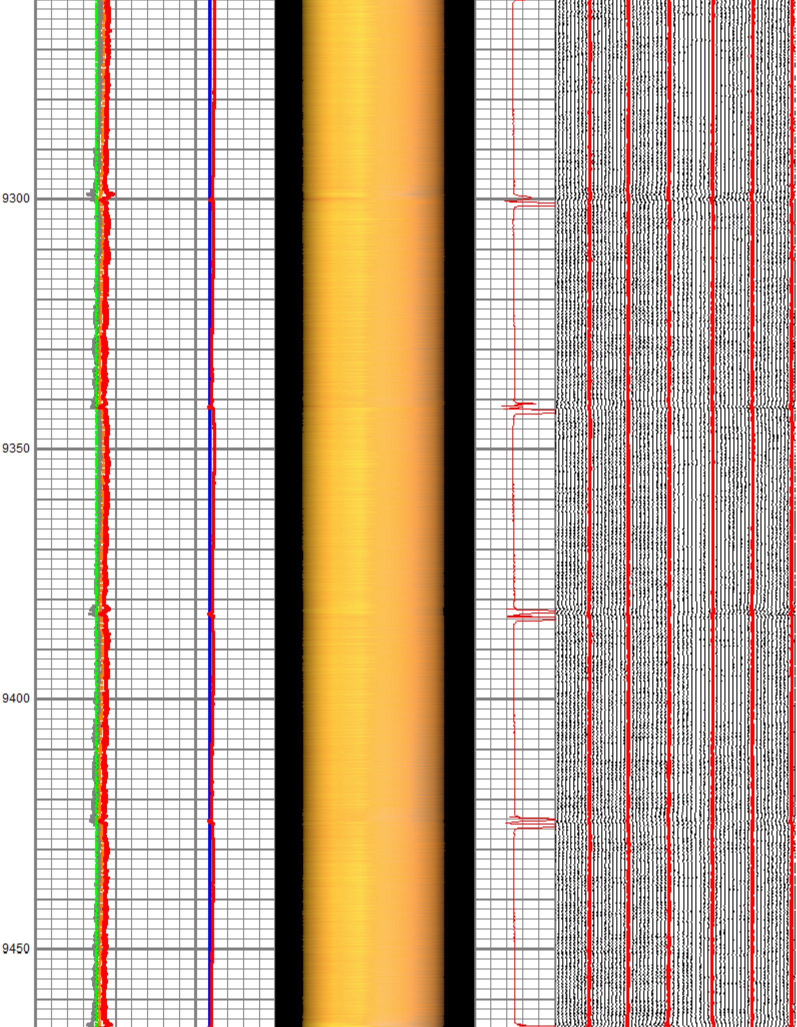


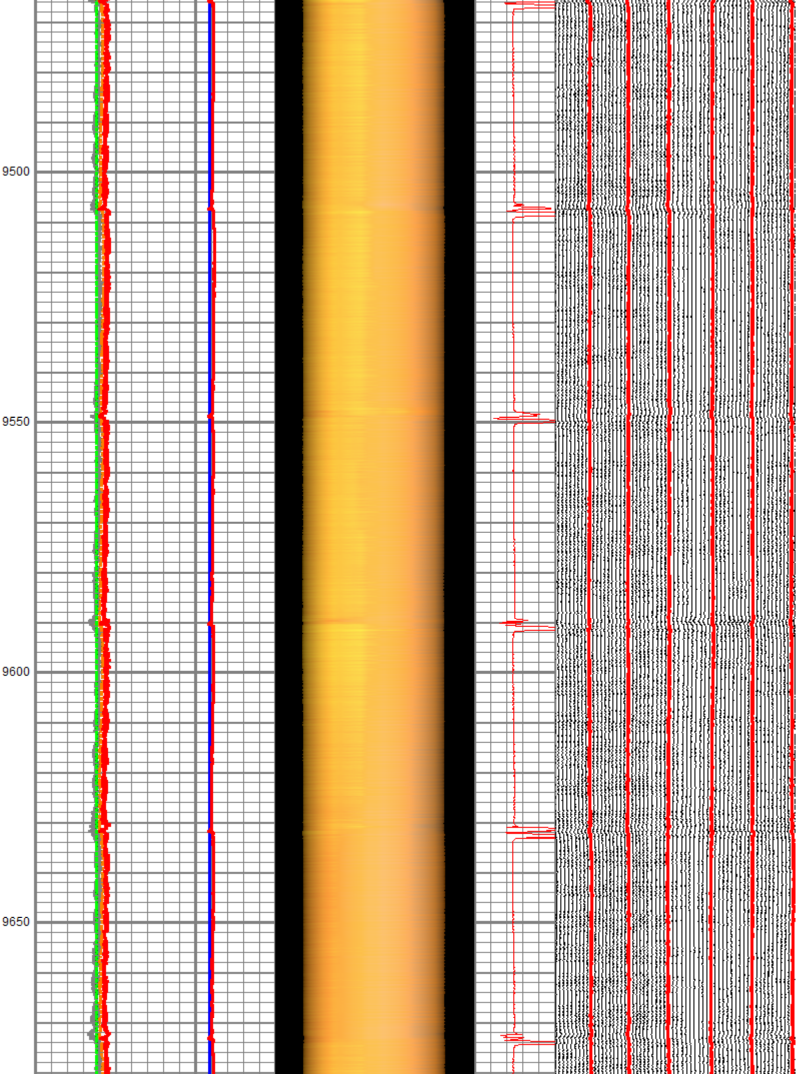


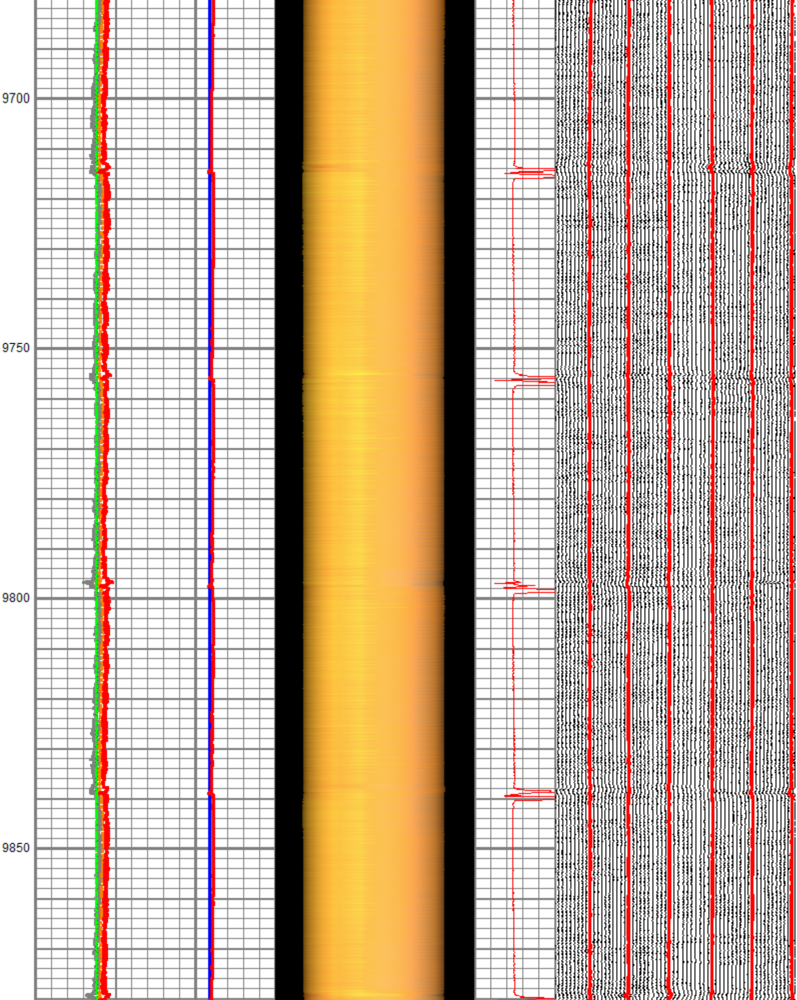


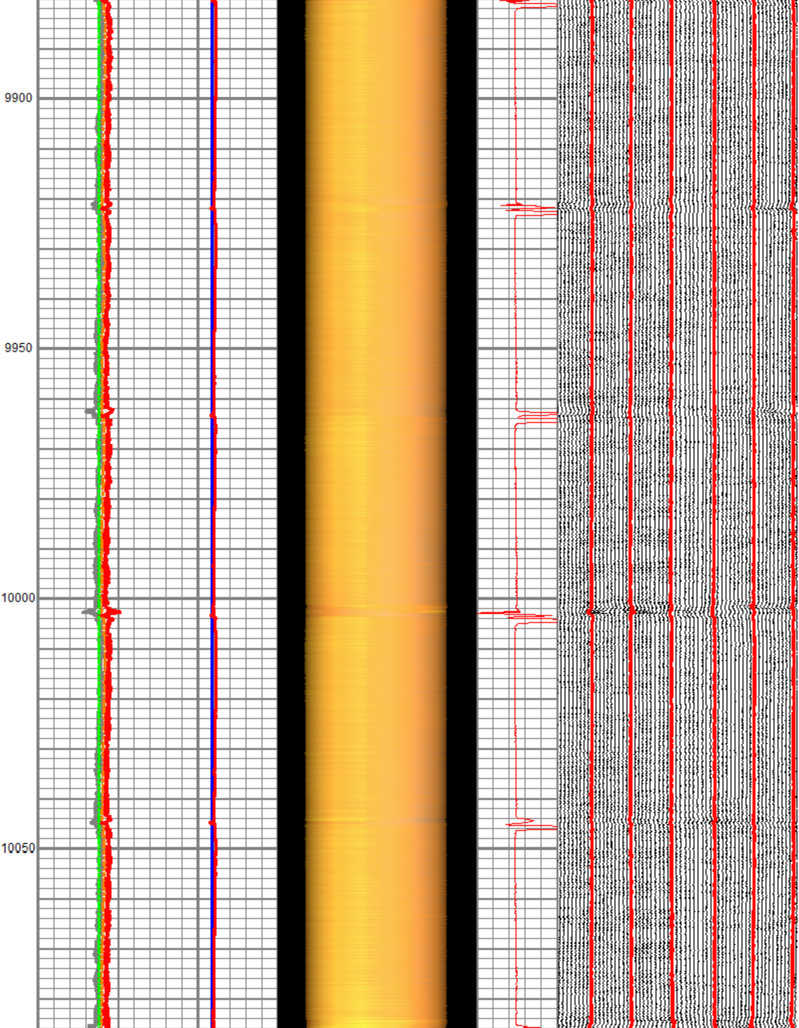


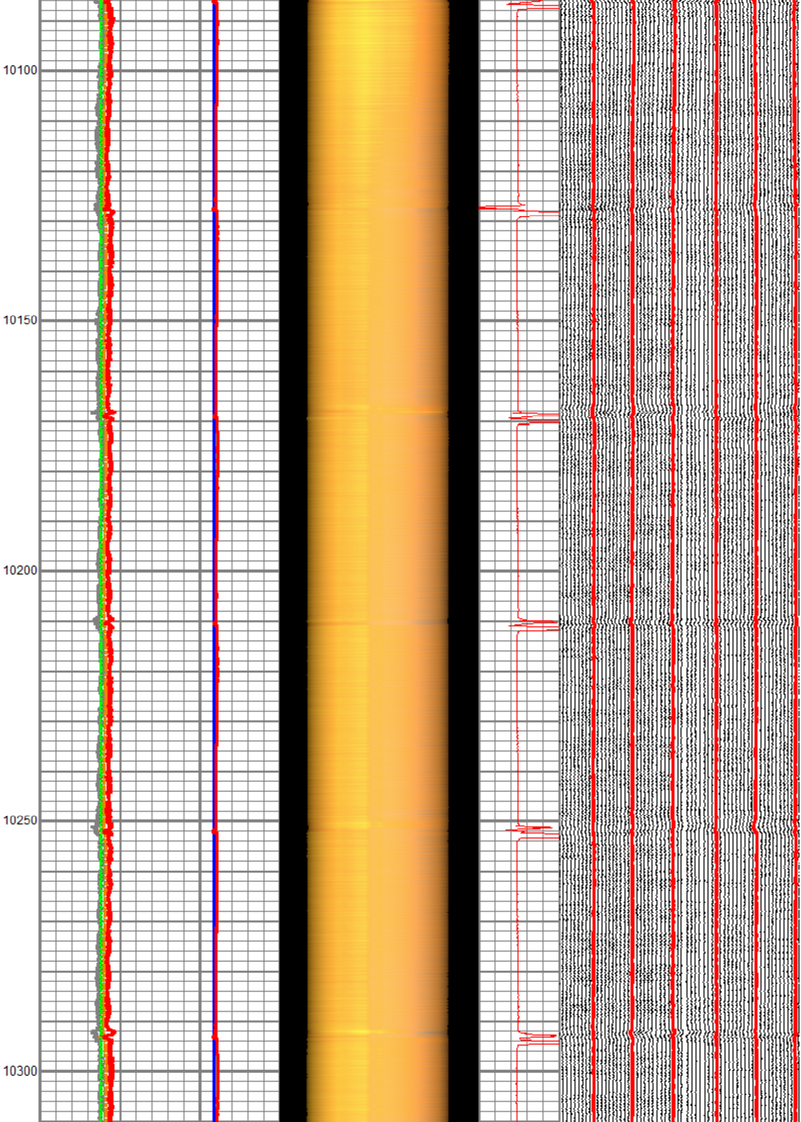


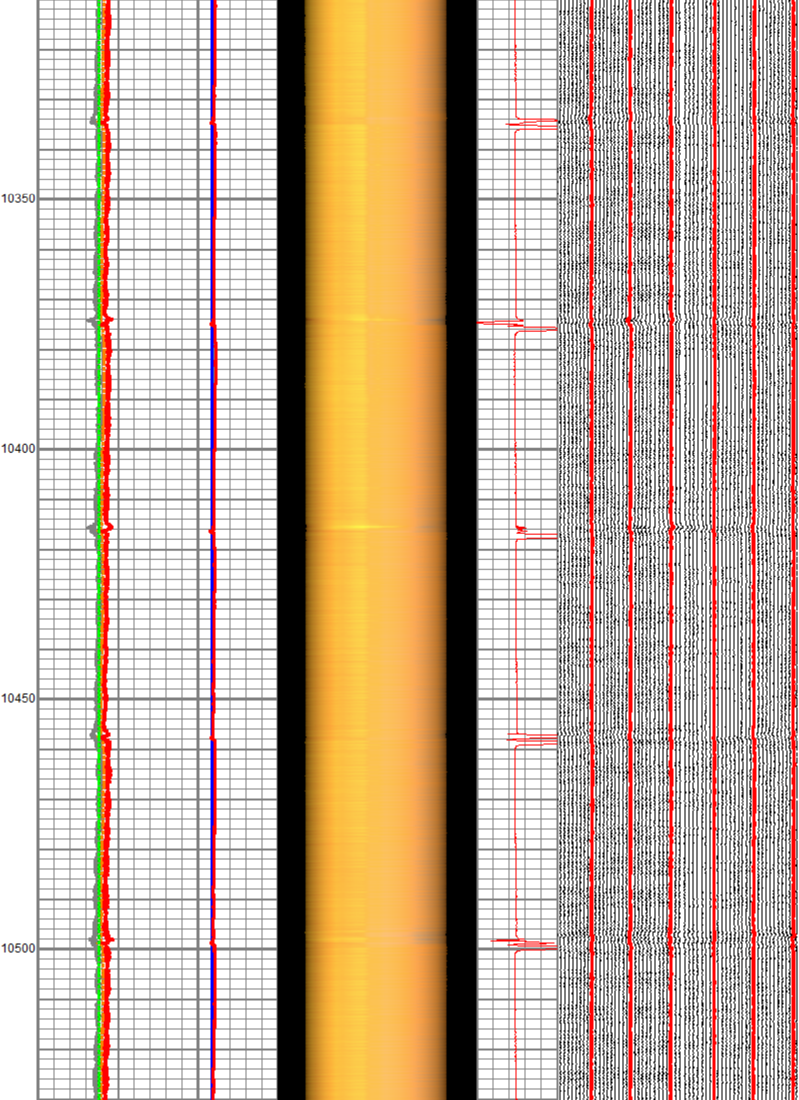


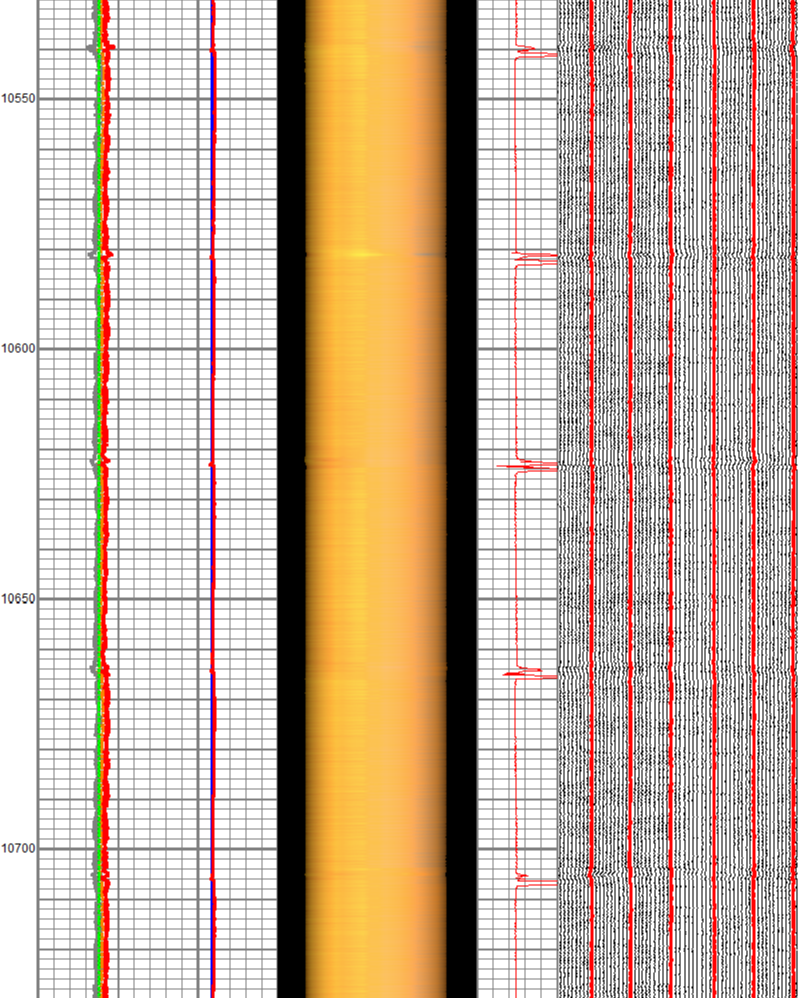


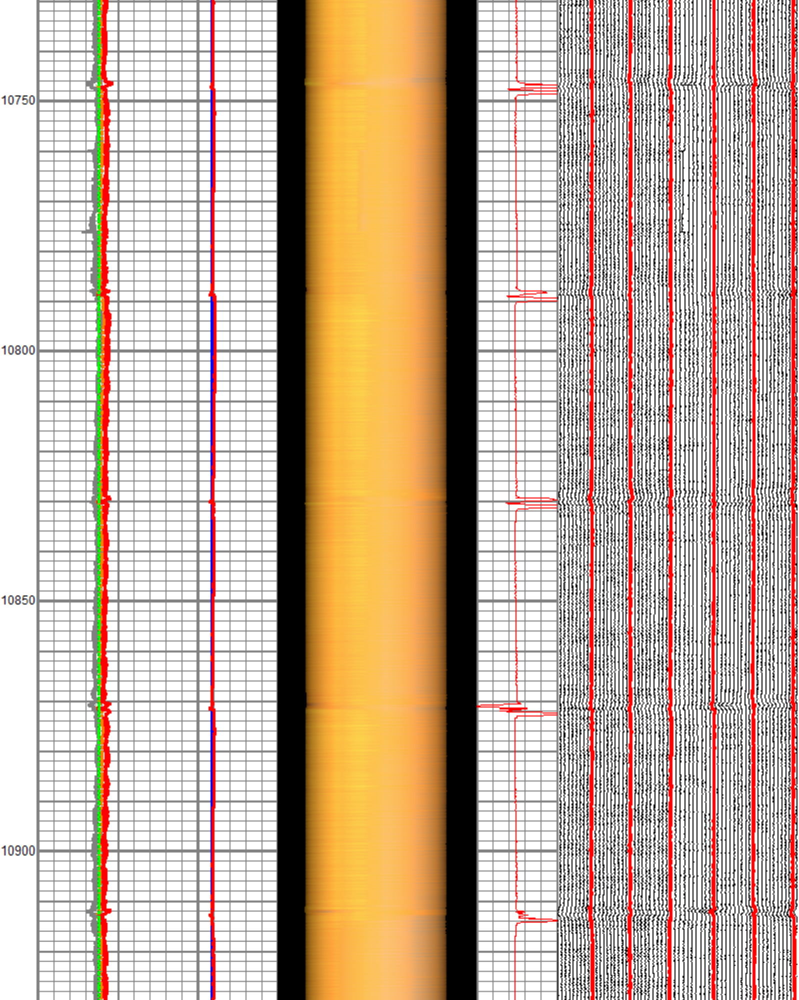


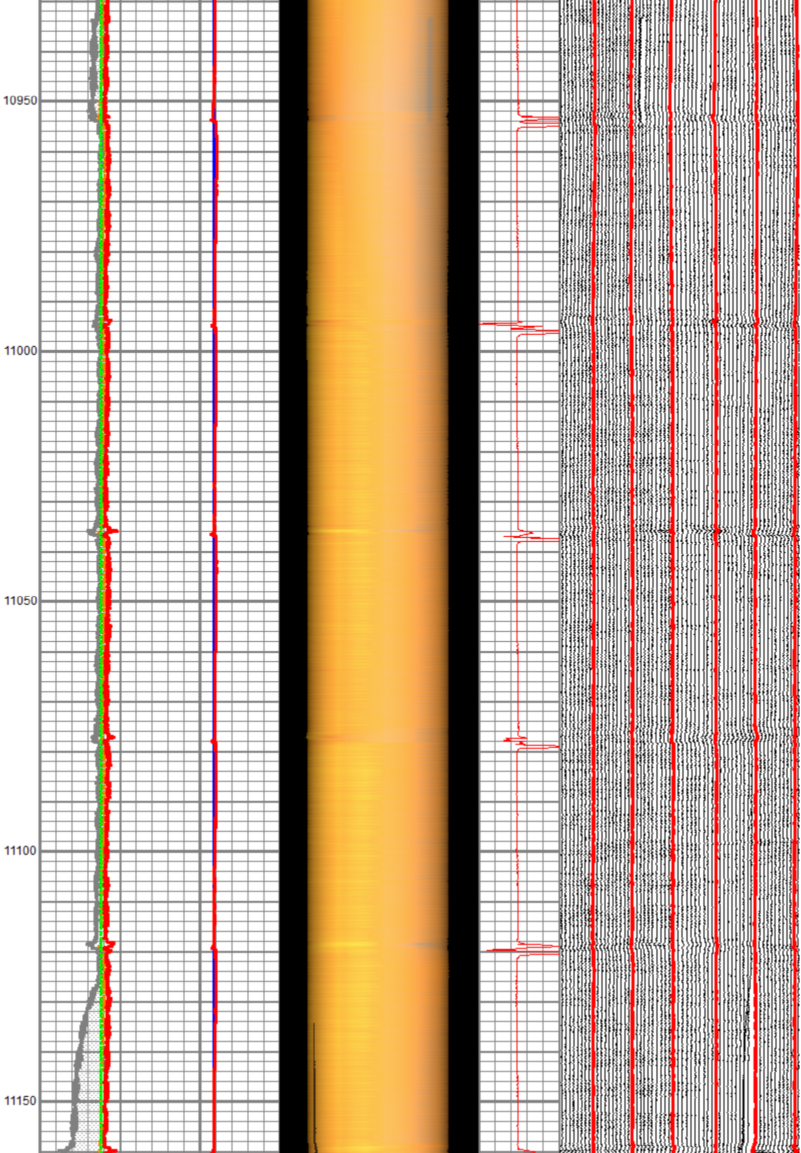


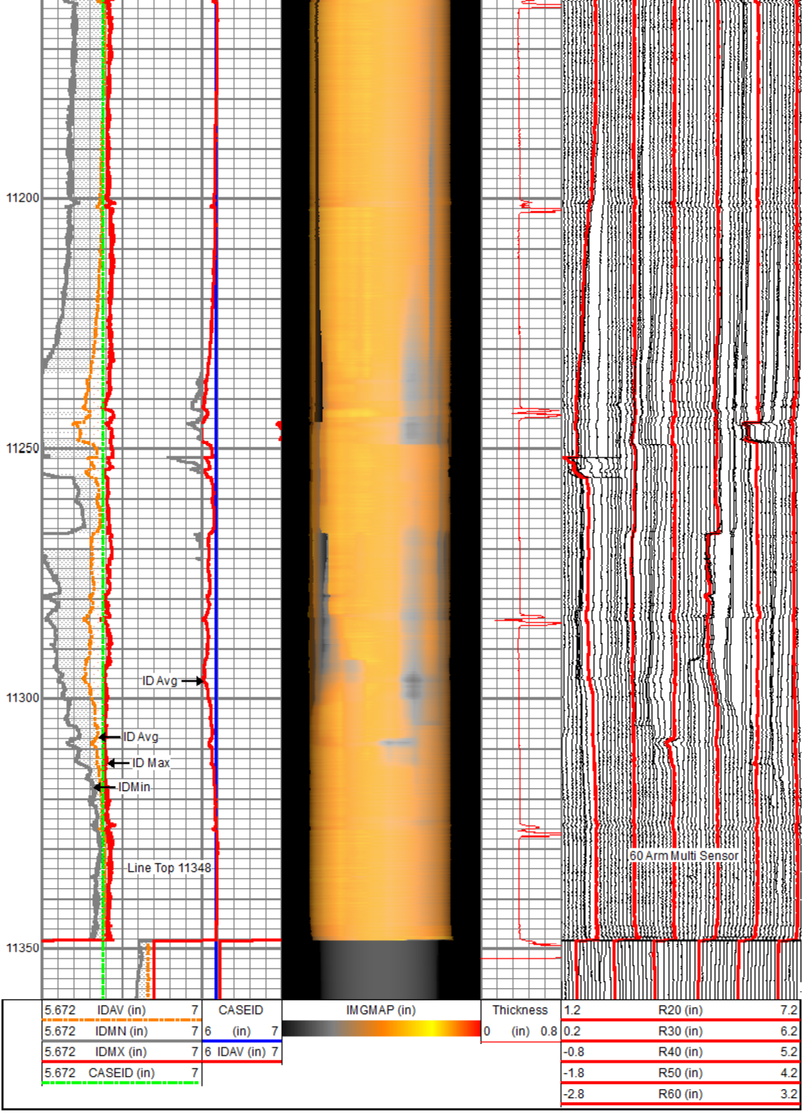






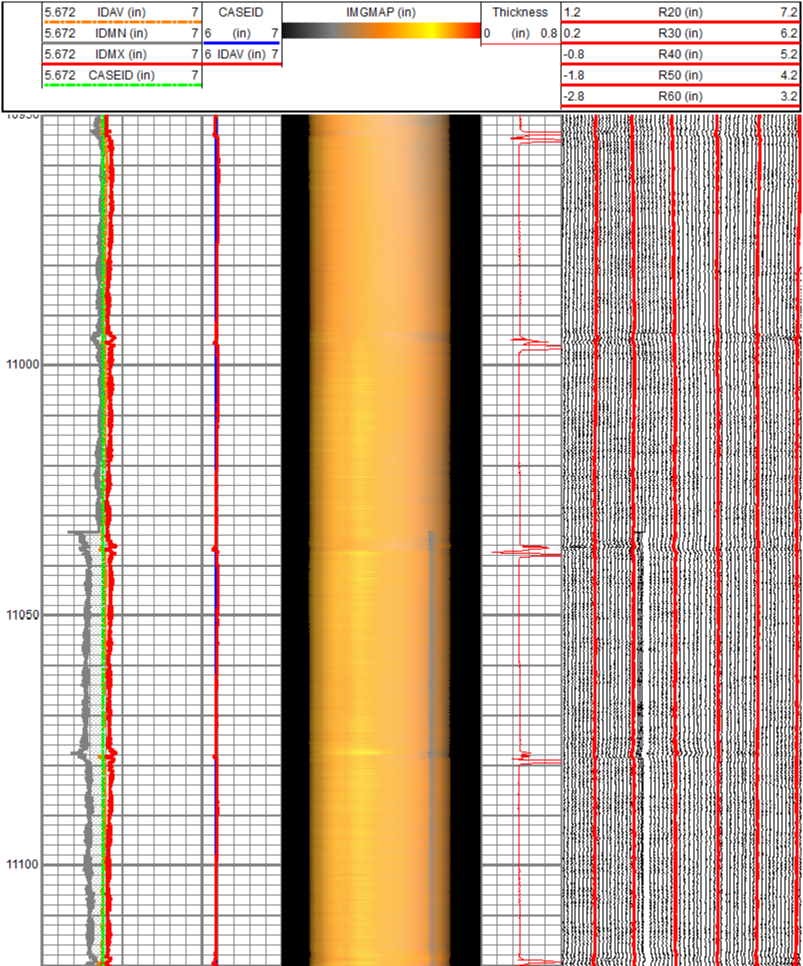


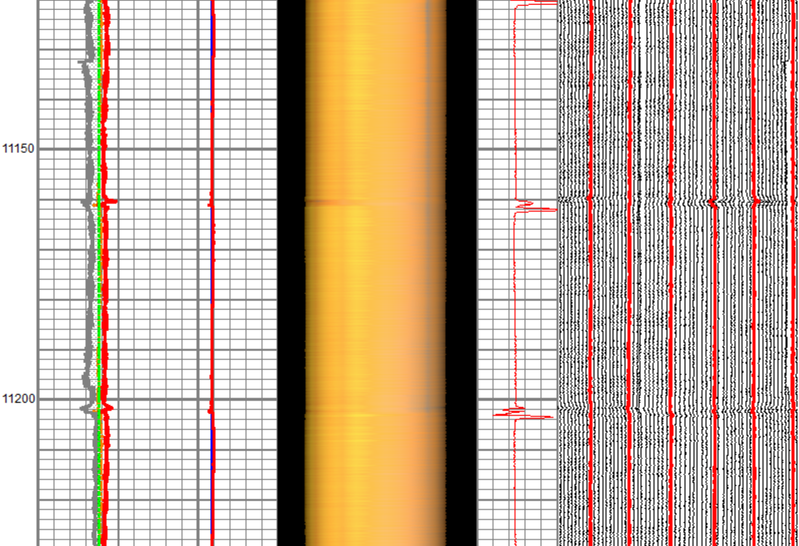


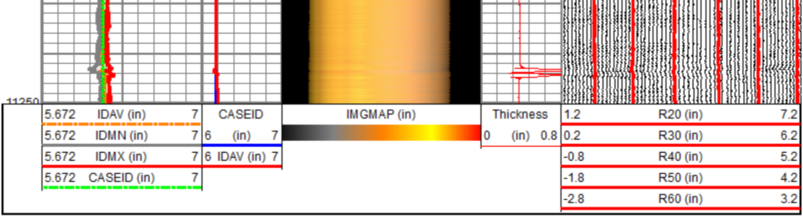


Repeat Section

Database File	marathon fee 24 34 15 wa #006h.db
Dataset Pathname	pass1.1
Presentation Format	pr60im7
Dataset Creation	Fri Jan 25 19:30:55 2019
Charted by	Depth in Feet scaled 1:240







Log Variables

DatabaseC:\ProgramData\Warrior\Data\marathon fee 24 34 15 wa #006h.db
Dataset field/well/run1/pass3.2/_vars_

Top - Bottom

BOREID in	BOTTEMP degF	CASEID in	CASEOD in	CASETHCK in	MinAPIWall in	PERFS	SRFTEMP degF	TDEPTH ft
8.75	100	6.184	7	0.408	0.356	No	0	17240

Variable Description

BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEID : Casing I.D.
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
MinAPIWall : Minimum API Wall Thickness
PERFS : Perforation Flag
SRFTEMP : Surface Temperature
TDEPTH : Total Depth

Calibration Report

Database File	marathon fee 24 34 15 wa #006h.db
Dataset Pathname	pass3.2
Dataset Creation	Fri Jan 25 19:31:50 2019

60 Arm Multi Sensor Caliper Calibration Report

Serial Number:	FW1212-235
Tool Model:	60_INCL
Performed:	Fri Jan 25 12:17:28 2019

Ref ID:	5.00	6.00	7.00	8.00	-	-
Arm1	2.34	2.79	3.28	3.80	-	-
Arm2	2.61	3.07	3.53	4.01	-	-
Arm3	2.82	3.25	3.68	4.12	-	-
Arm4	2.54	3.02	3.49	3.95	-	-
Arm5	2.74	3.17	3.63	4.09	-	-
Arm6	2.60	3.05	3.50	3.95	-	-
Arm7	2.41	2.87	3.36	3.86	-	-
Arm8	2.73	3.17	3.61	4.05	-	-
Arm9	2.48	2.94	3.42	3.91	-	-
Arm10	2.25	2.73	3.22	3.72	-	-
Arm11	2.88	3.42	3.96	4.44	-	-
Arm12	2.50	2.97	3.48	3.99	-	-
Arm13	1.41	1.78	2.35	3.07	-	-
Arm14	2.22	2.59	3.00	3.42	-	-
Arm15	2.69	3.12	3.58	4.04	-	-
Arm16	2.55	3.00	3.49	3.98	-	-
Arm17	1.65	2.03	2.63	3.36	-	-
Arm18	2.01	2.53	3.08	3.61	-	-
Arm19	2.64	3.09	3.55	4.00	-	-
Arm20	2.39	2.86	3.35	3.84	-	-
Arm21	2.44	2.92	3.43	3.92	-	-
Arm22	2.48	2.97	3.48	3.98	-	-
Arm23	2.79	3.23	3.72	4.19	-	-
Arm24	2.97	3.52	4.07	4.57	-	-
Arm25	2.36	2.95	3.54	4.09	-	-
Arm26	2.22	2.73	3.28	3.85	-	-
Arm27	2.25	2.73	3.26	3.80	-	-
Arm28	2.48	2.89	3.33	3.77	-	-
Arm29	2.86	3.30	3.75	4.20	-	-
Arm30	2.41	2.84	3.29	3.73	-	-

* Bad

Ref ID:	5.00	6.00	7.00	8.00	-	-
Arm31	1.58	1.75	2.08	2.61	-	-
Arm32	2.78	3.21	3.63	4.06	-	-
Arm33	2.27	2.77	3.29	3.80	-	-
Arm34	2.69	3.18	3.69	4.19	-	-
Arm35	2.42	2.92	3.42	3.93	-	-
Arm36	2.76	3.21	3.68	4.14	-	-
Arm37	2.76	3.25	3.76	4.29	-	-
Arm38	2.68	3.15	3.61	4.08	-	-
Arm39	2.53	3.01	3.50	4.02	-	-
Arm40	2.49	3.00	3.52	4.05	-	-
Arm41	2.36	2.87	3.38	3.91	-	-
Arm42	2.70	3.18	3.67	4.18	-	-
Arm43	2.20	2.72	3.28	3.89	-	-
Arm44	2.70	3.17	3.61	4.07	-	-
Arm45	2.50	3.00	3.49	4.00	-	-
Arm46	2.65	3.14	3.63	4.14	-	-
Arm47	2.38	2.83	3.28	3.79	-	-
Arm48	2.38	2.88	3.38	3.90	-	-
Arm49	2.56	3.03	3.49	3.99	-	-
Arm50	2.80	3.17	3.55	3.96	-	-
Arm51	2.53	2.99	3.44	3.93	-	-
Arm52	1.58	1.99	2.44	2.99	-	-
Arm53	2.65	3.19	3.74	4.28	-	-
Arm54	2.45	2.91	3.40	3.94	-	-
Arm55	2.75	3.22	3.69	4.17	-	-
Arm56	2.60	3.05	3.52	4.01	-	-
Arm57	2.50	2.98	3.48	4.00	-	-
Arm58	2.68	3.11	3.56	4.02	-	-
Arm59	2.48	2.97	3.46	3.97	-	-
Arm60	2.47	2.94	3.40	3.88	-	-

* Bad

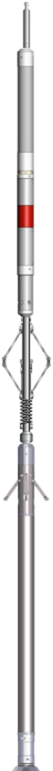
PROBE verifications Calibration Report

Performed:	Pre Verification Fri Jan 25 12:18:13 2019	Post Verification Wed Nov 30 14:28:26 2016	Casing Check Fri Jan 25 13:55:38 2019	
Ref ID:	8.00	6.00	6.18	in
Min.	8.00	5.92	6.14	in
Max.	8.00	6.03	6.25	in
Avg.	8.00	5.97	6.20	in
Dia1	8.00	5.98	6.16	in
Dia2	8.00	5.97	6.14	in
Dia3	8.00	5.97	6.21	in
Dia4	8.00	5.94	6.24	in
Dia5	8.00	5.97	6.22	in
Dia6	8.00	5.96	6.23	in
Dia7	8.00	5.99	6.25	in
Dia8	8.00	6.01	6.19	in
Dia9	8.00	6.03	6.24	in
Dia10	8.00	6.00	6.24	in
Dia11	8.00	6.02	6.25	in
Dia12	8.00	5.97	6.22	in
Dia13	8.00	5.95	6.21	in
Dia14	8.00	5.96	6.20	in
Dia15	8.00	5.93	6.21	in
Dia16	8.00	5.92	6.22	in
Dia17	8.00	5.94	6.15	in
Dia18	8.00	5.94	6.22	in
Dia19	8.00	5.96	6.21	in
Dia20	8.00	5.94	6.18	in
Dia21	8.00	5.97	6.20	in
Dia22	8.00	6.00	6.15	in
Dia23	8.00	5.97	6.20	in
Dia24	8.00	5.99	6.19	in
Dia25	8.00	6.01	6.19	in
Dia26	8.00	5.99	6.22	in
Dia27	8.00	5.99	6.23	in
Dia28	8.00	5.99	6.18	in
Dia29	8.00	5.97	6.20	in
Dia30	8.00	5.95	6.18	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

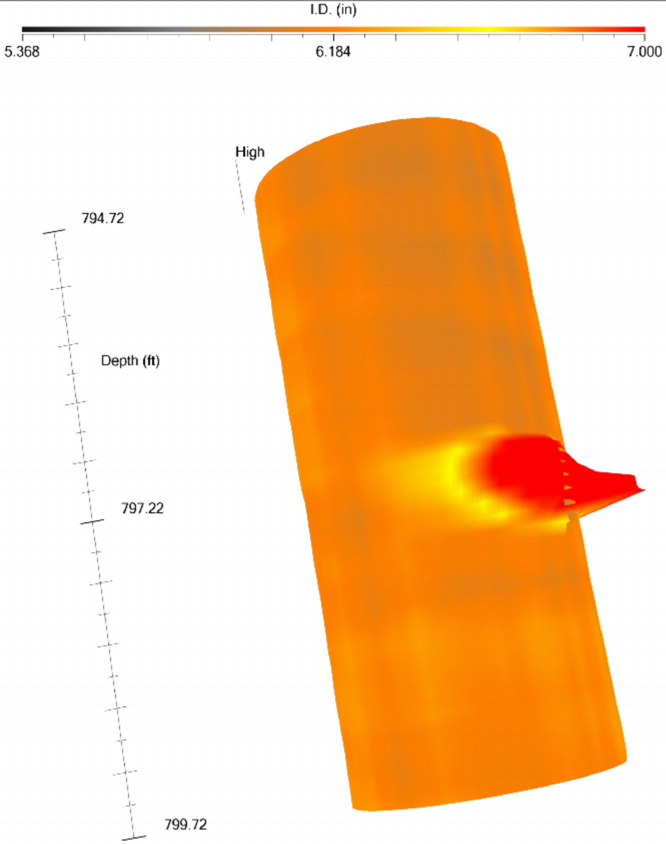
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			CHD-STNDRD (GOI) Standard Cable Head	1.00	1.38	10.00
			ETT-Probe (110508)	5.87	3.50	
MAGCAL	16.69					
Thickness	16.00					
DTHK	16.00					
			CENT-Probe Probe 2 3/4 Centralizer	2.75	2.75	20.00
ACCZ	7.75					
ACCY	7.75		Probe_MFCAL-60_INCL (FW1212-235)	9.00	3.62	85.00
ACCX	7.75					
ETEMP	5.25					

Meas	4.42		CENT-Probe Probe 2 3/4 Centralizer	2.75	2.75	20.00

Dataset: marathon fee 24 34 15 wa #006h.db: field/well/run1/pass3.2
Total length: 21.37 ft
Total weight: 135.00 lb
O.D.: 3.62 in

RENEGADE SERVICES

Company	Marathon Oil		
Well	Flowmaster Fee 24 34 15 WA 6H		
Field	Wolfcamp A		
County	Lea		
State	New Mexico	**Country**	USA

Borehole Image 3D MODEL
IMGMAP