RADIAL CEMENT BOND LOG

ALLIED HORIZONTAL WIRELINE SERVICES

Company	BAYSWATER EXPLORATION AND PRODUCTION
Well	CARLSON C-15-16HN
Field	WATTENBERG
County	WELD
State	COLORADO
Country	USA

Company	BAYSWATER EXPLORATION AND PRODUCTION
Well	CARLSON C-15-16HN
Field	WATTENBERG
County	WELD
State	COLORADO
Country	USA

Location: API #: 05-123-41711

SEC 15 TWP 65W RGE 5N

Other Services: NONE

Permanent Datum	GL	Elevation	4621FT
Log Measured From	KB (+23FT FROM PD)		
Drilling Measured From	KELLY BUSHING		

Elevation
K.B. 4644FT
D.F. 4643FT
G.L. 4621FT

Date	13 AUG 2015	
Run Number	ONE	
Depth Driller	7250FT	
Depth Logger	6860FT	
Bottom Logged Interval	6859FT	
Top Log Interval	0FT	
Open Hole Size	8.75IN	
Type Fluid	WATER	
Density / Viscosity	N/A	
Max. Recorded Temp.	N/A	
Estimated Cement Top	1850FT	
Time Well Ready	06:00HRS	
Time Logger on Bottom	06:45HRS	
Equipment Number	13034	
Location	BRIGHTON	
Recorded By	OSTLER, SCHAAF	RALL
Witnessed By	SCOTT	

	Borehole Record			Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	8.75IN	7250FT	0FT	7IN	29#	7250	0FT

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9 5/8IN	36#	0FT	840FT
Prot. String				
Production String	7IN	29#	0FT	7250FT
Liner				

<<< 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

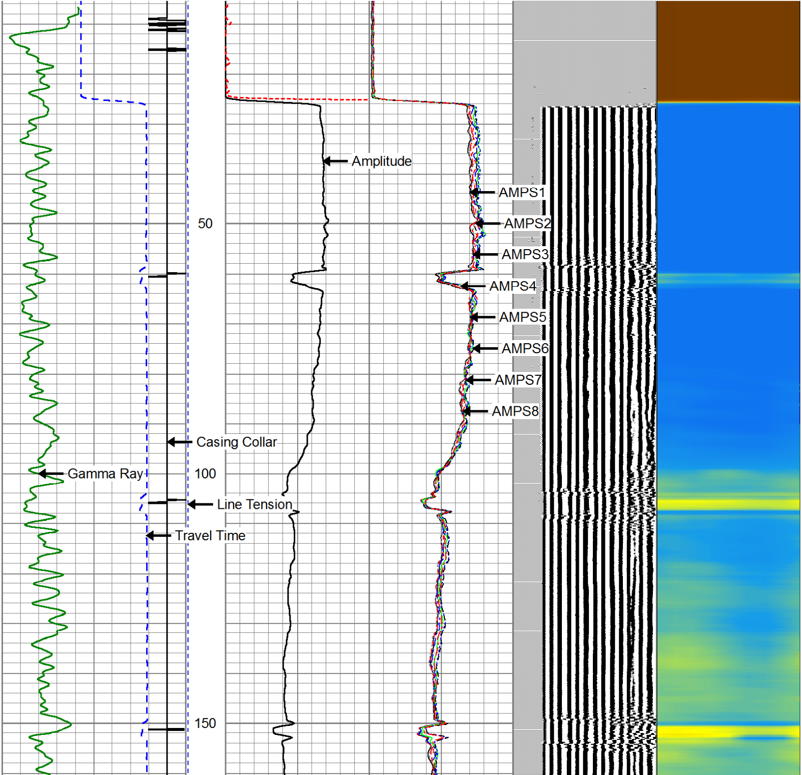
WELL WAS LOGGED WITH 0 PSI AT THE WELL HEAD
LOG WAS MEASURED FROM KB +23FT AT GROUND LEVEL
ITEMS MARKED N/A INDICATE INFORMATION NOT PROVIDED BY CUSTOMER
TOOL WAS CENTRALIZED USING OVER THE TOOL GEMOCO CENTRALIZERS

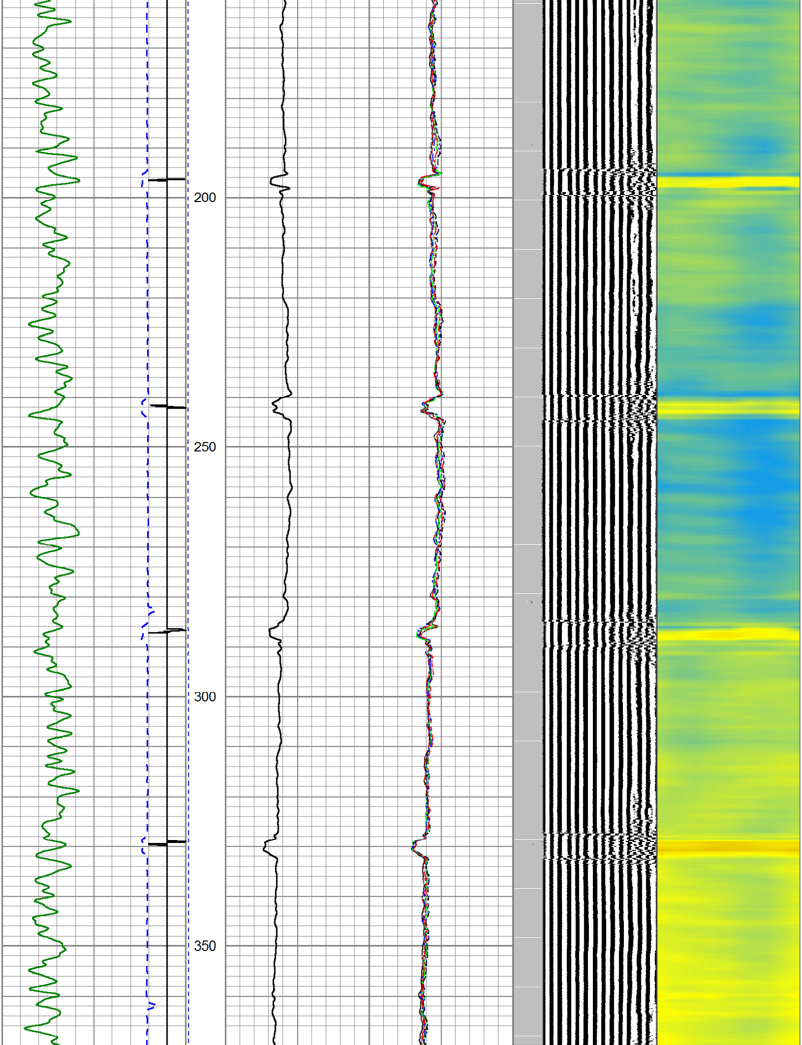
ALLIED HORIZONTAL WIRELINE SERVICES

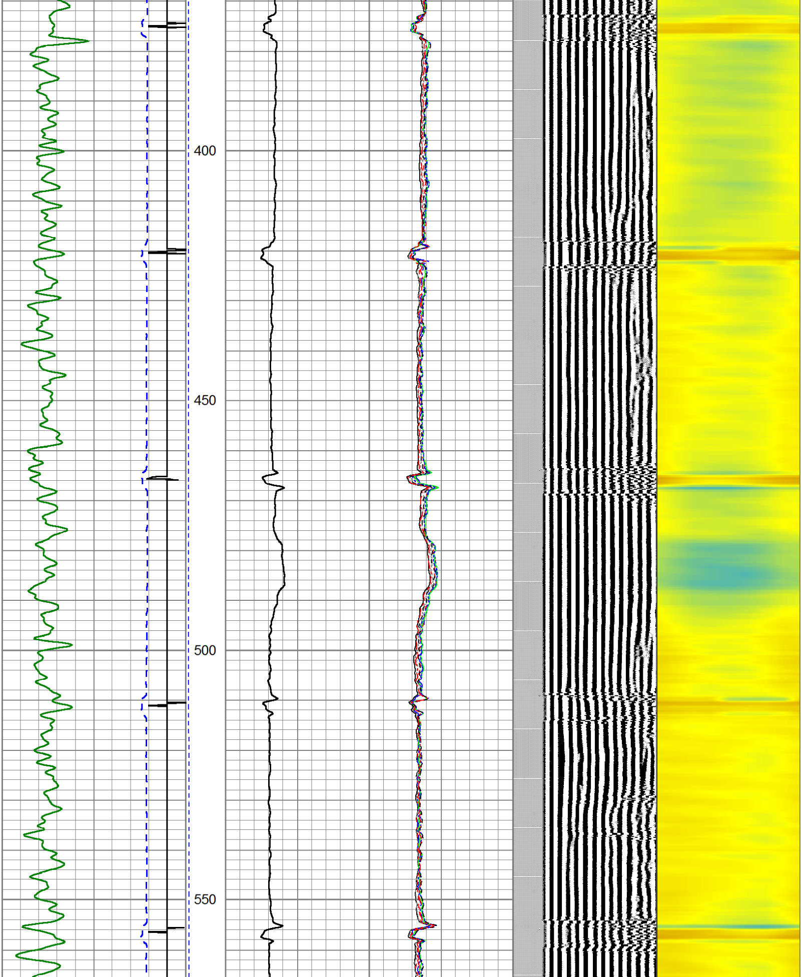
MAIN PASS (0PSI)

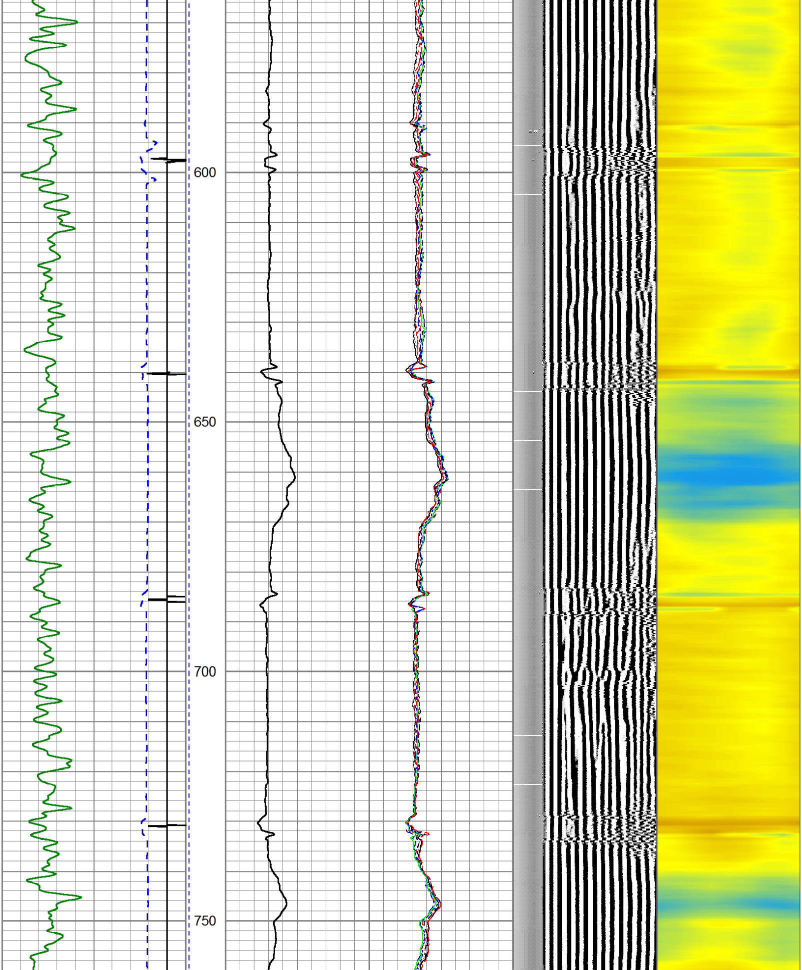
Database File:	bayswater_carlson c-15-16hn_rcbl.db
Dataset Pathname:	pass11
Presentation Format:	ahws_rcbl
Dataset Creation:	Thu Aug 13 07:00:36 2015 by Log 7.0 B1
Charted by:	Depth in Feet scaled 1:240

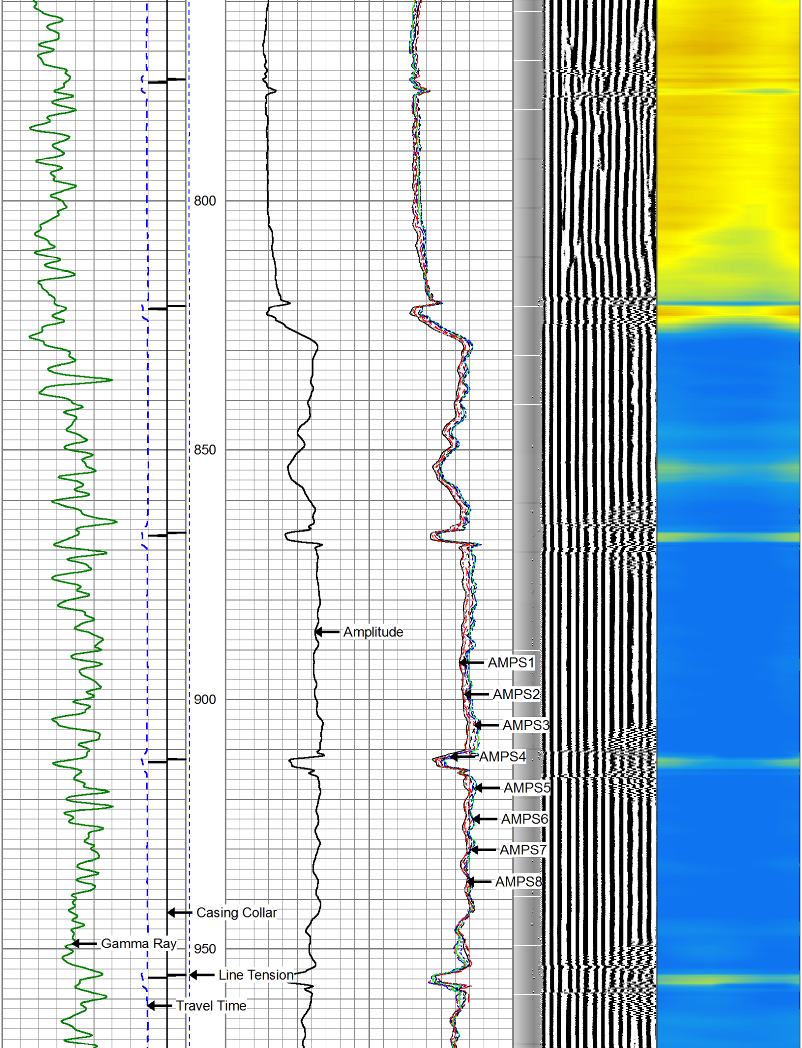
444 *Travel Time (usec)* 244	e Tens	0 Amplitude (mV) 100	-5 AMPS1 150	Variable Density	1 Cement Map 8
9 *Casing Collar* -1	(lb)	Amplified Amplitude	-5 AMPS2 150	200 1200	0 100
0 Gamma Ray (GAPI) 150	(2500	0 (mV) 10	-5 AMPS3 150		
			-5 AMPS4 150		
			-5 AMPS5 150		
			-5 AMPS6 150		
			-5 AMPS7 150		
			-5 AMPS8 150		

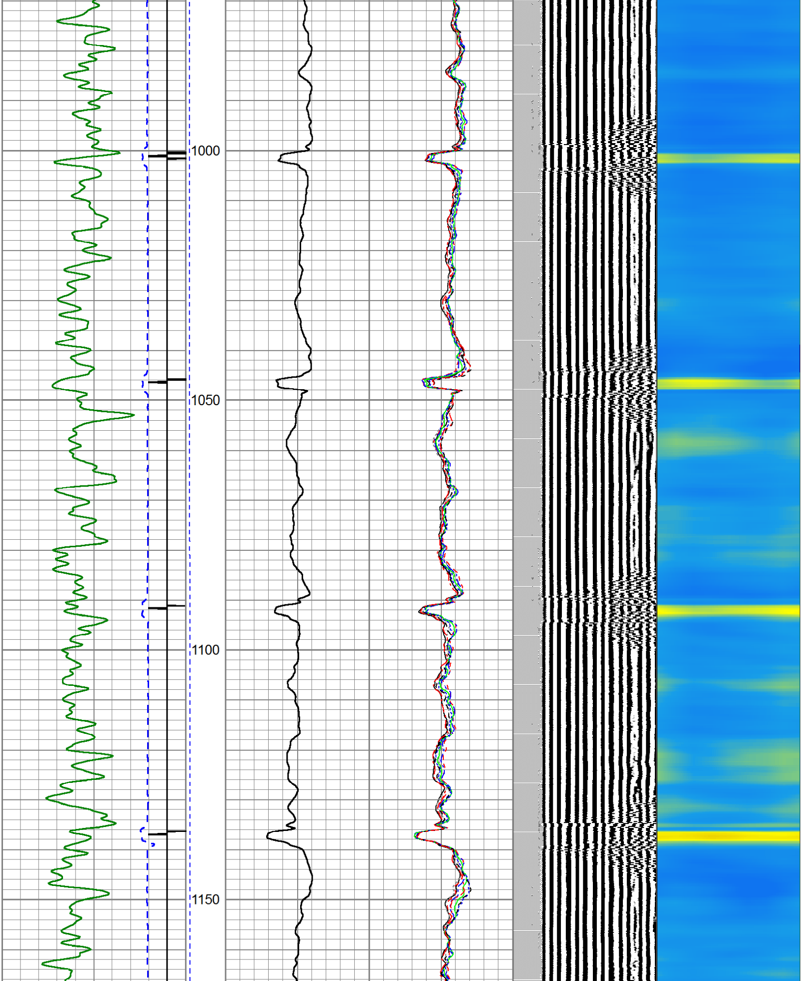


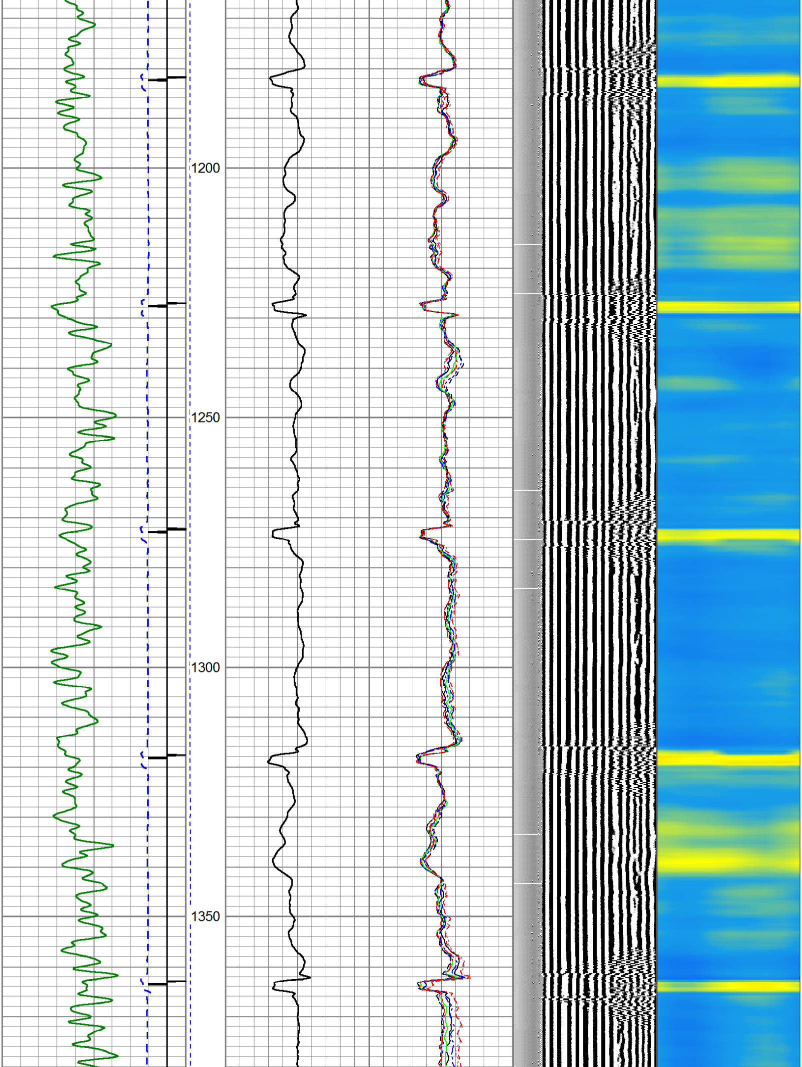


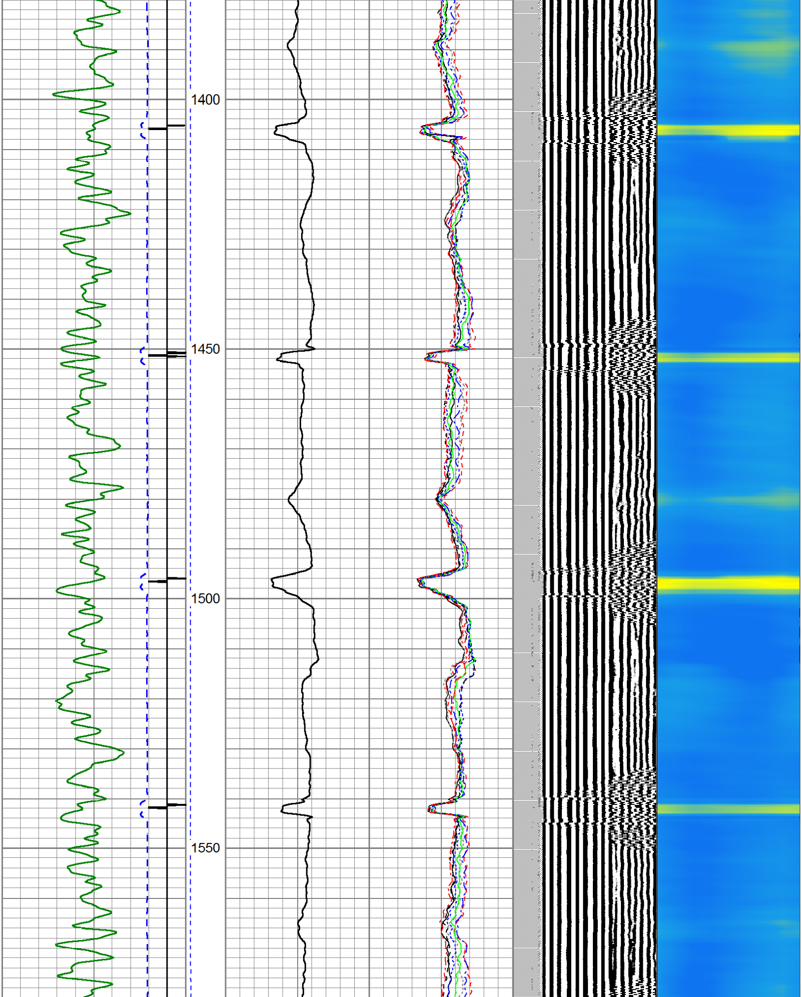


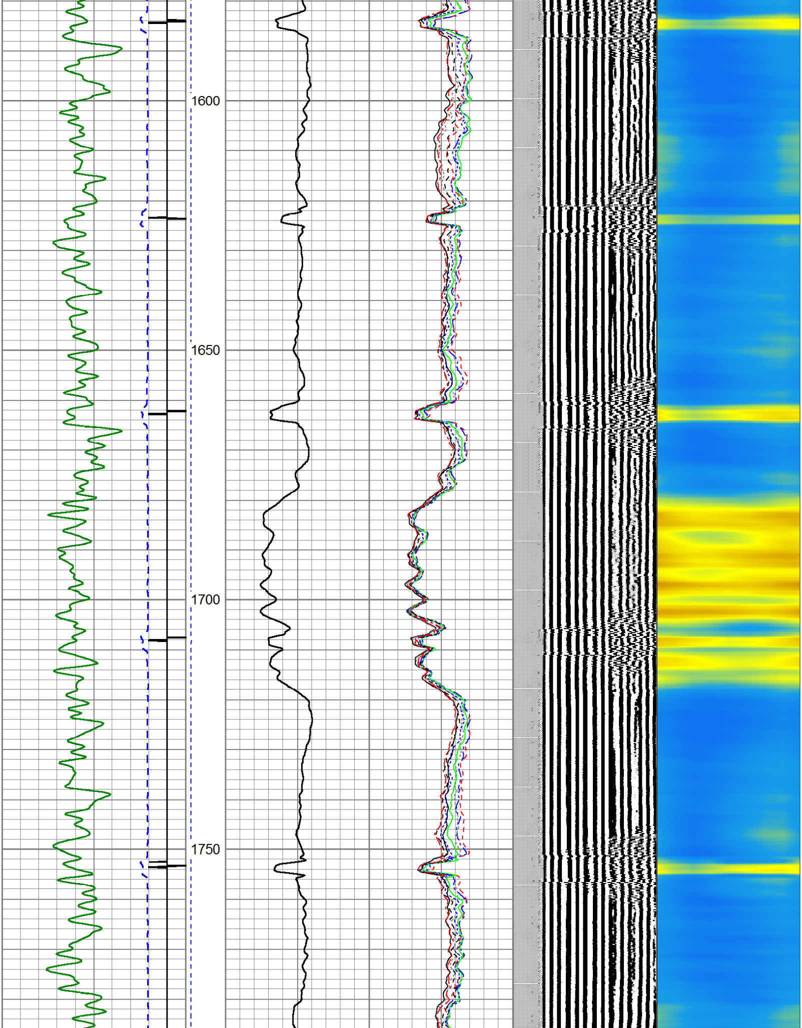


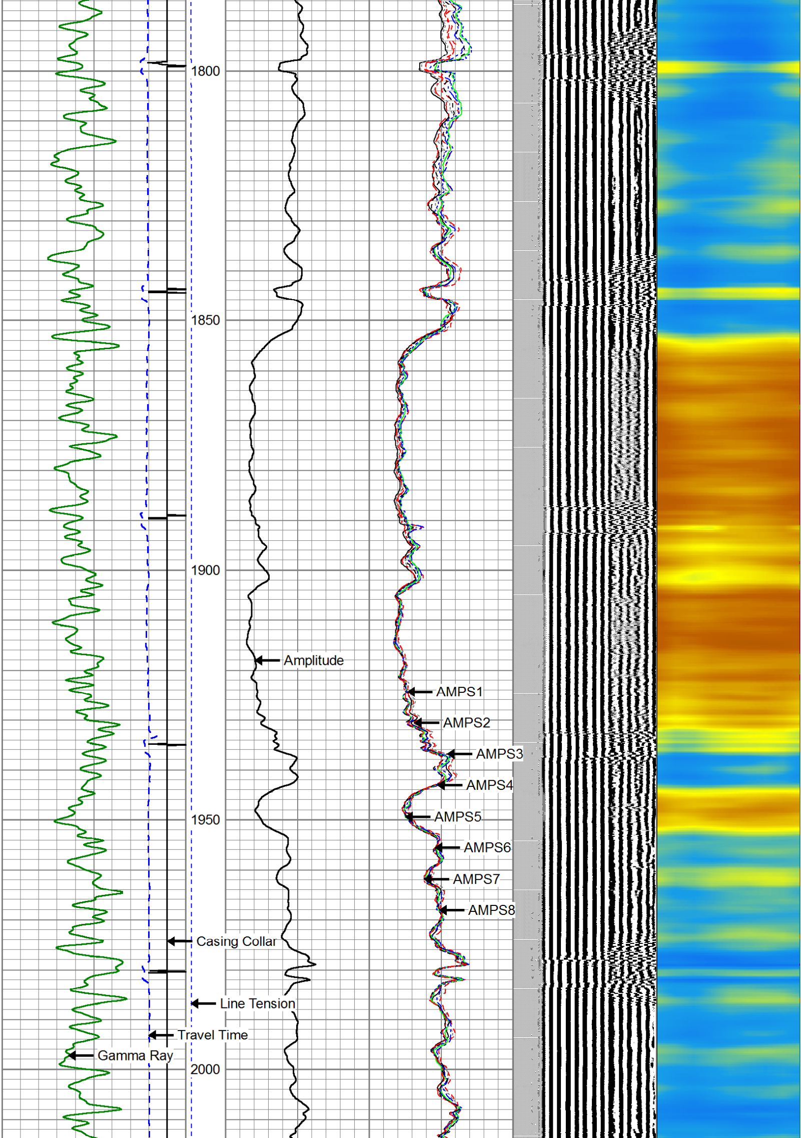


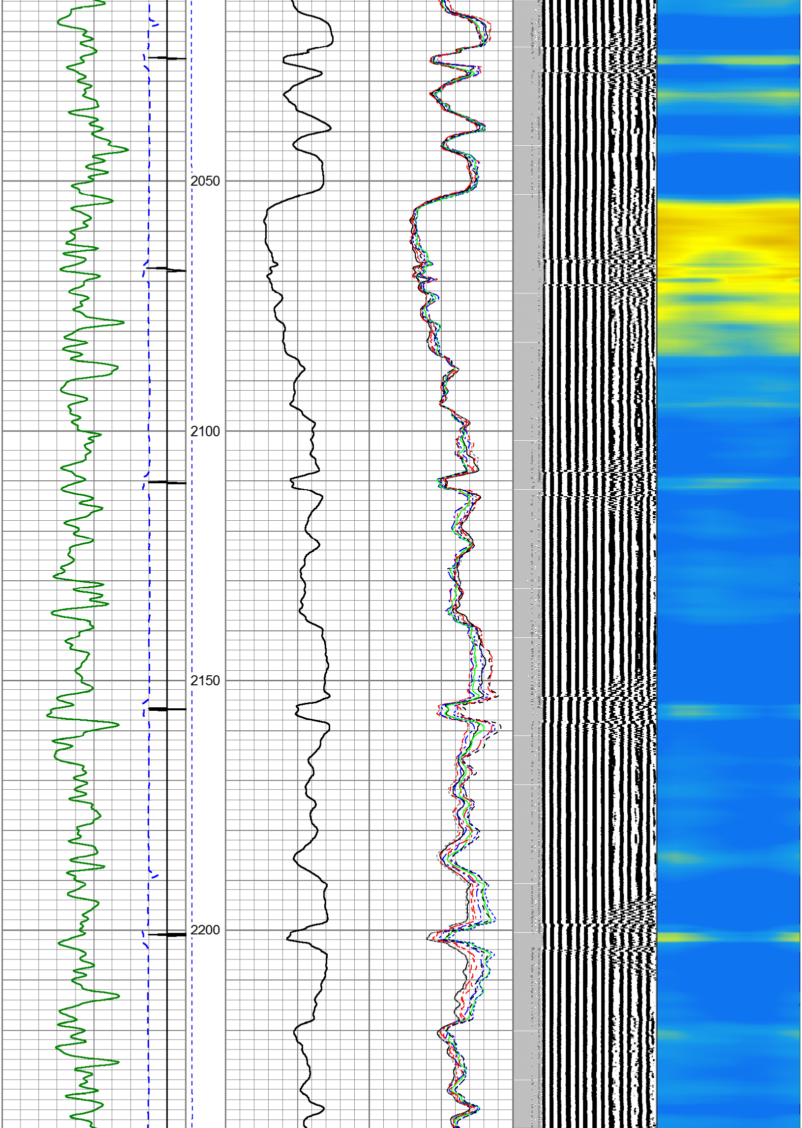


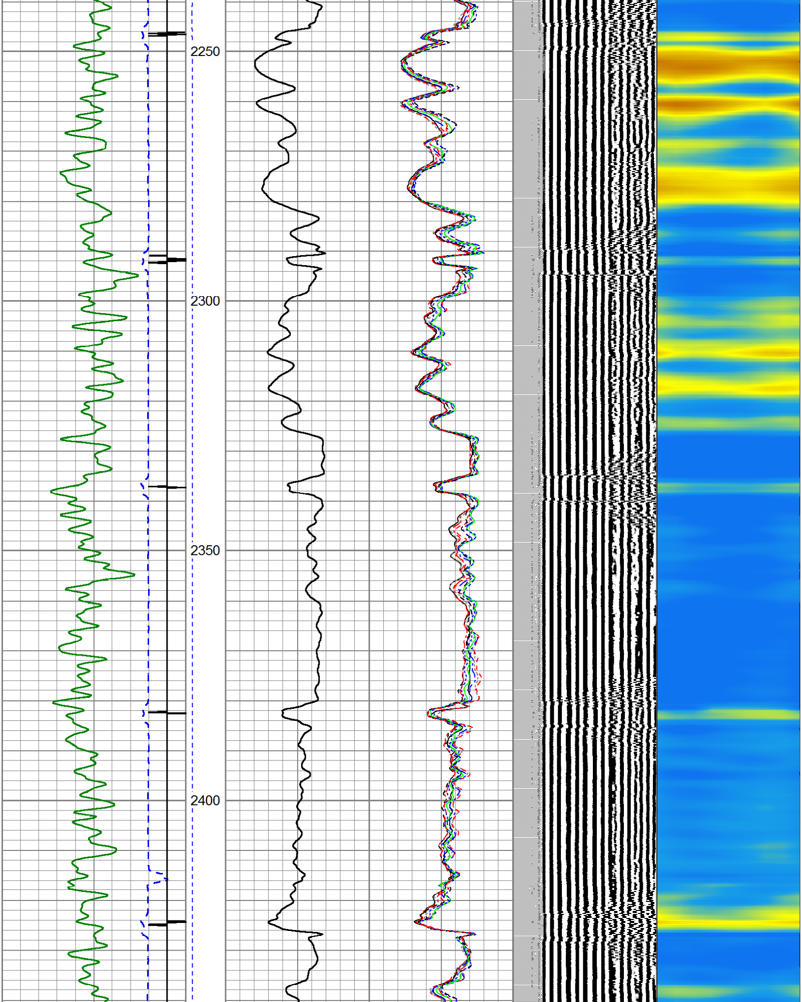


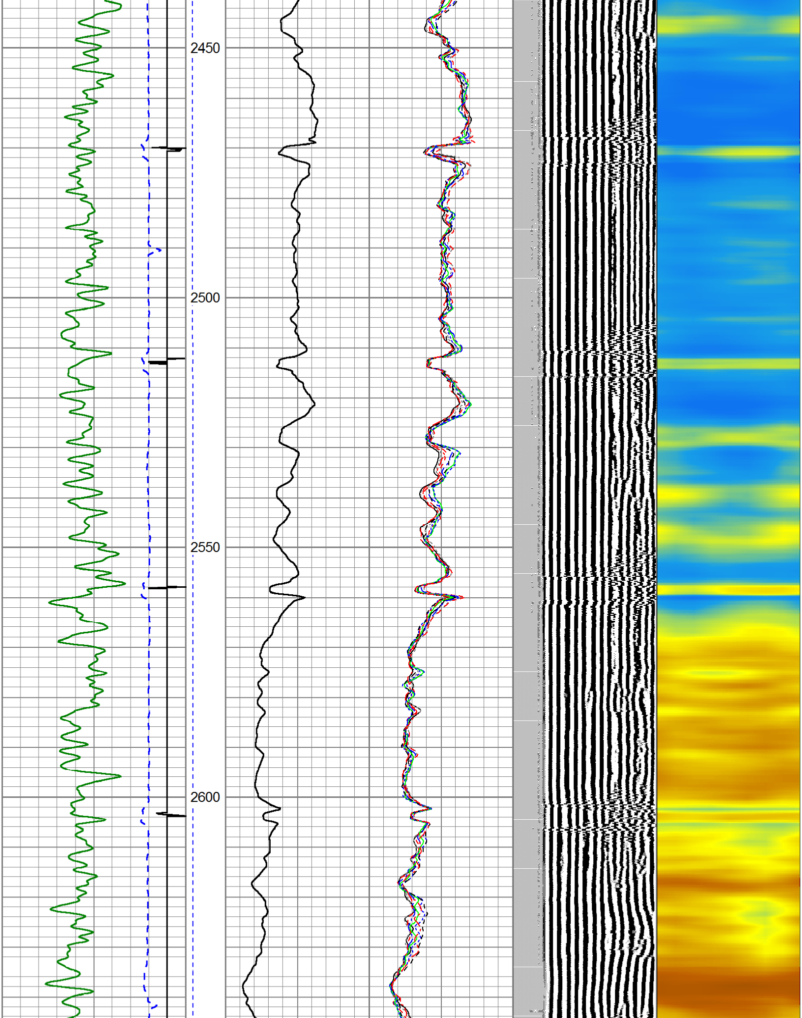


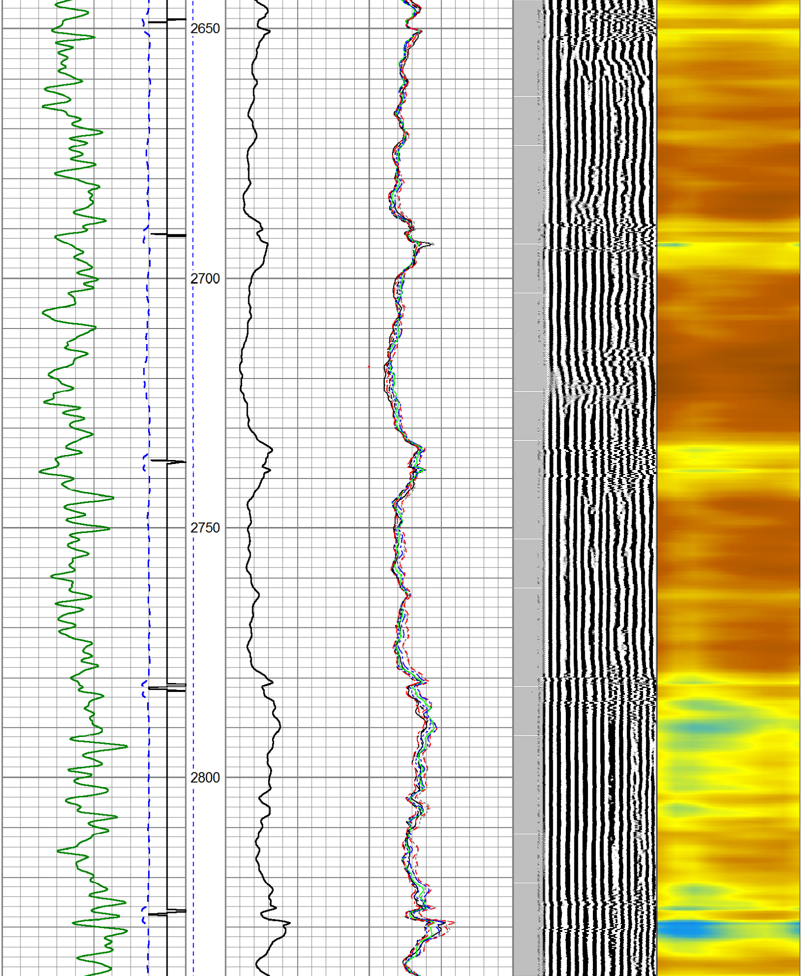


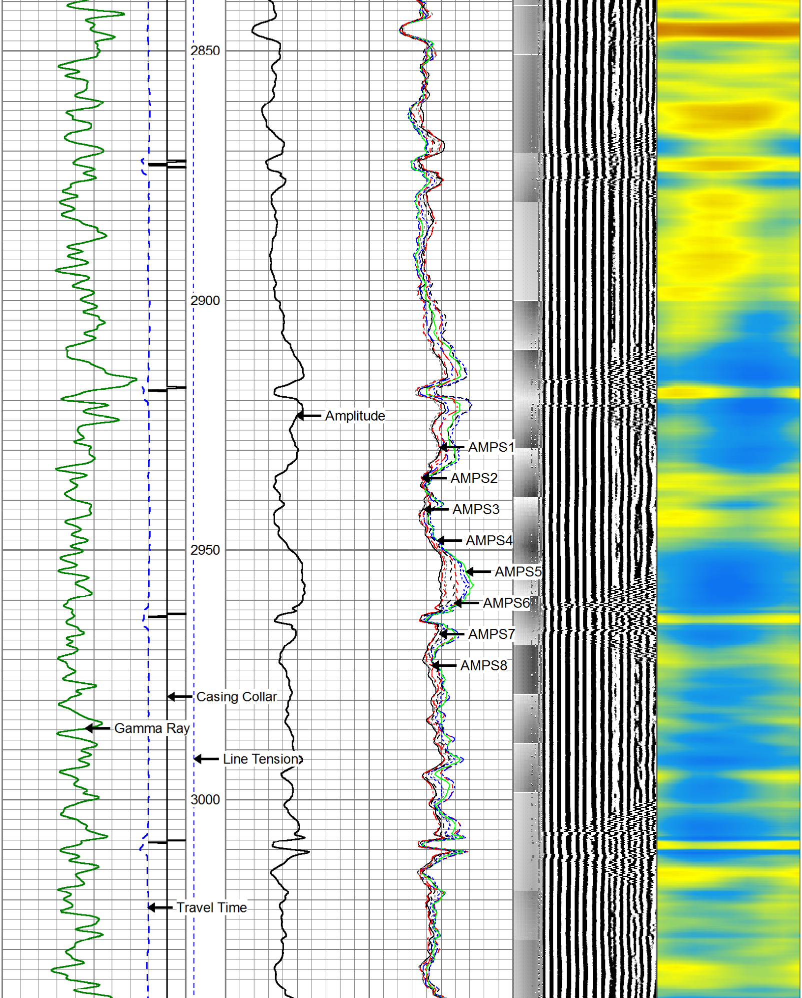


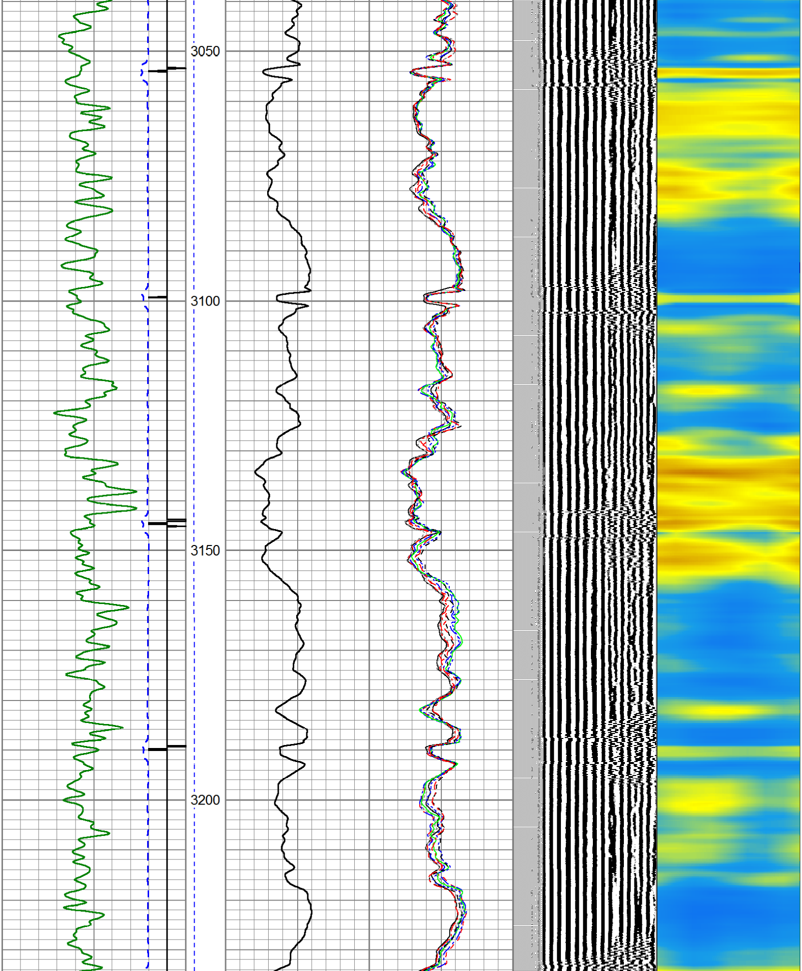


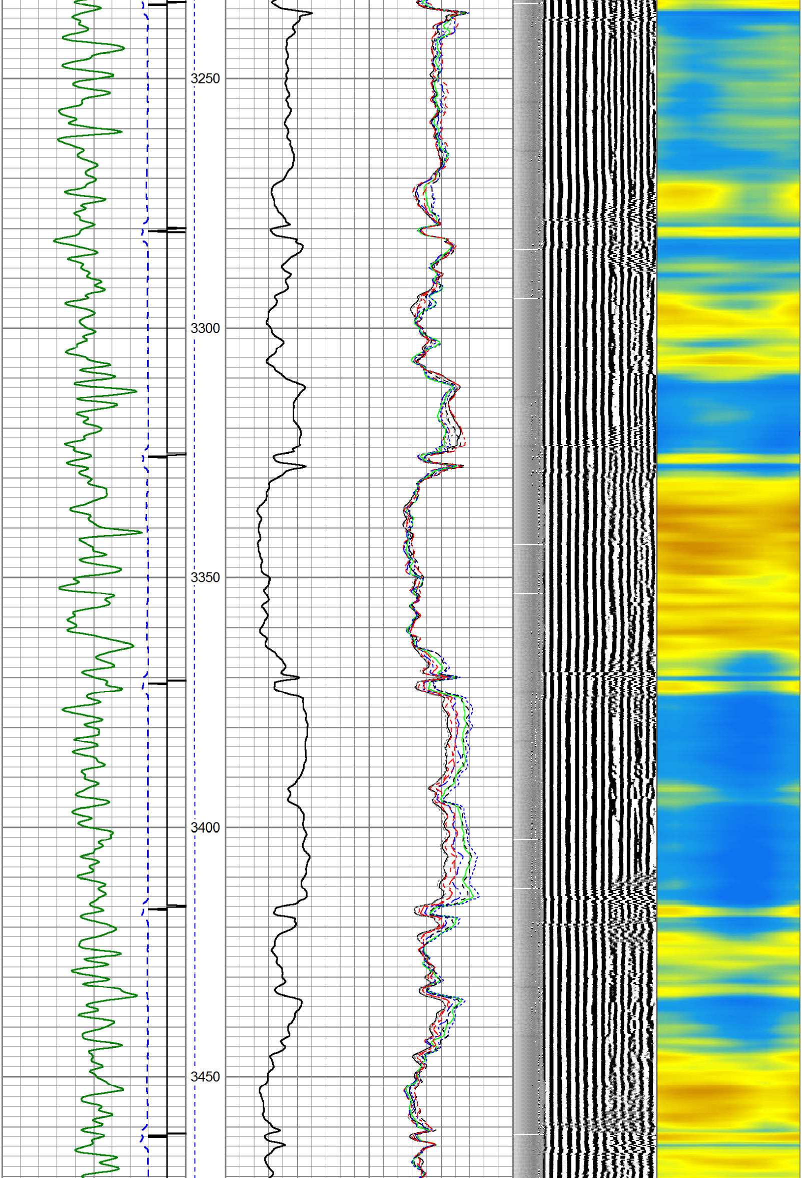


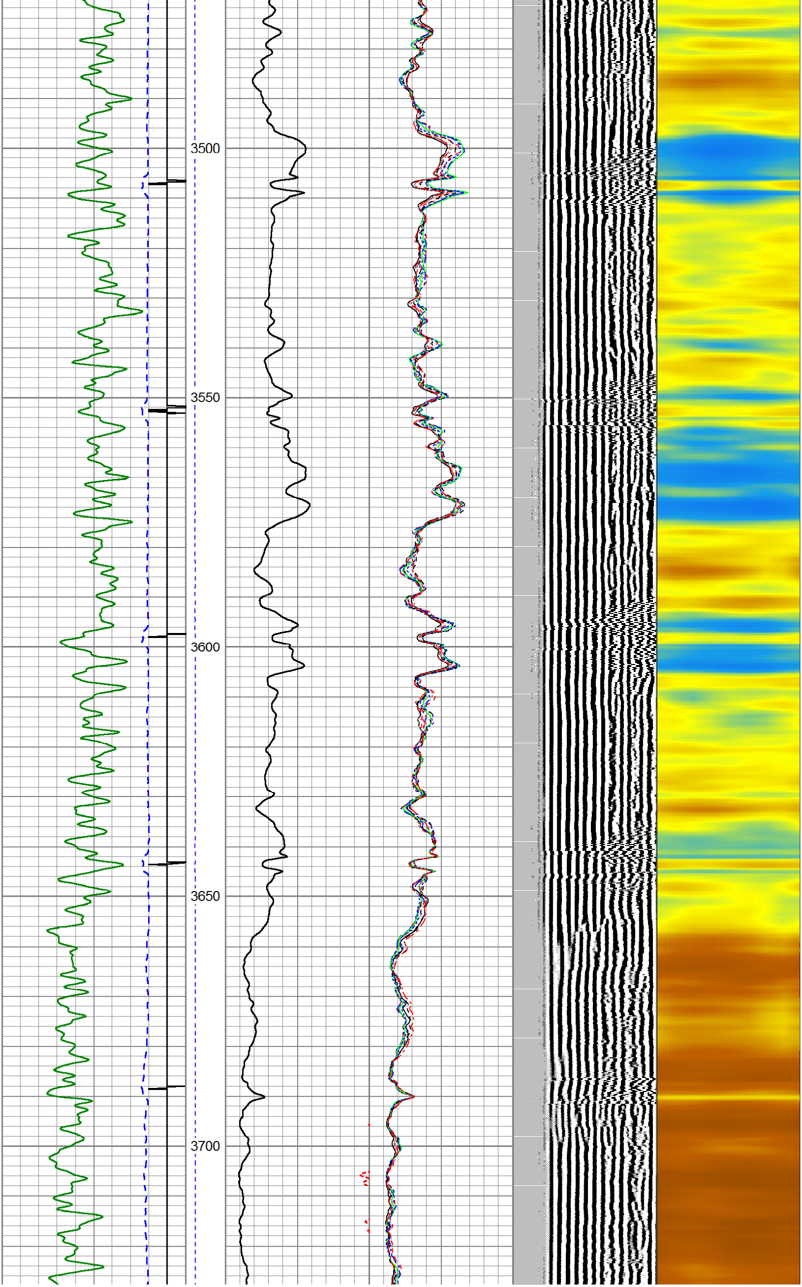


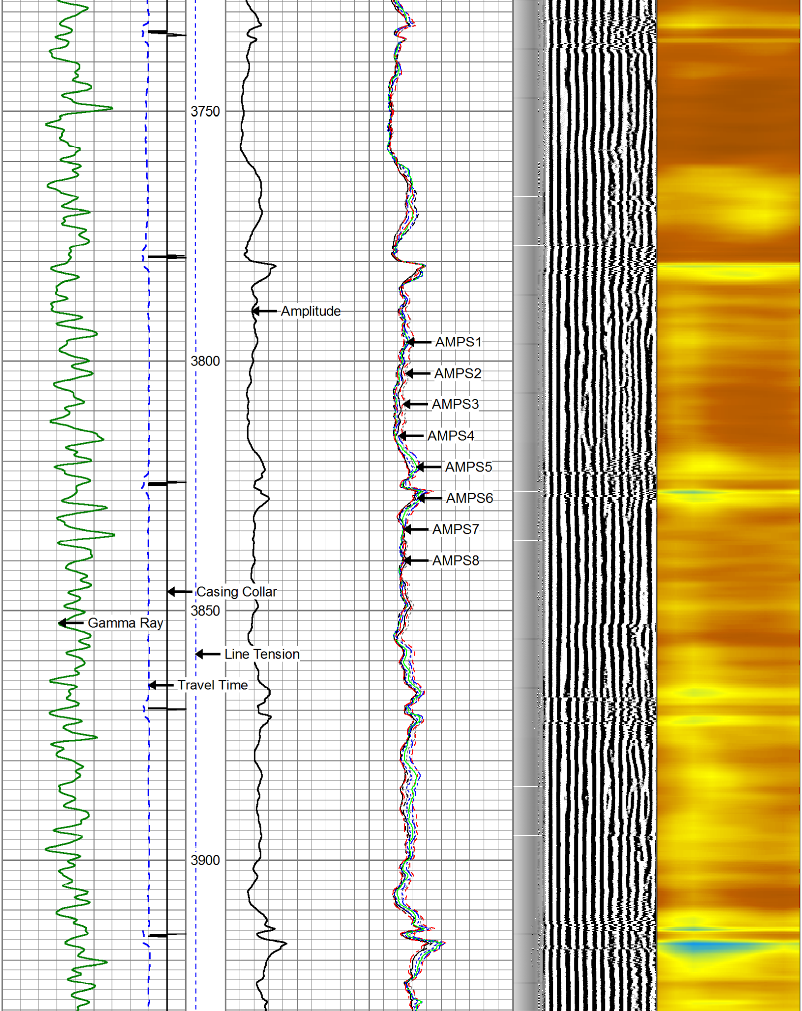


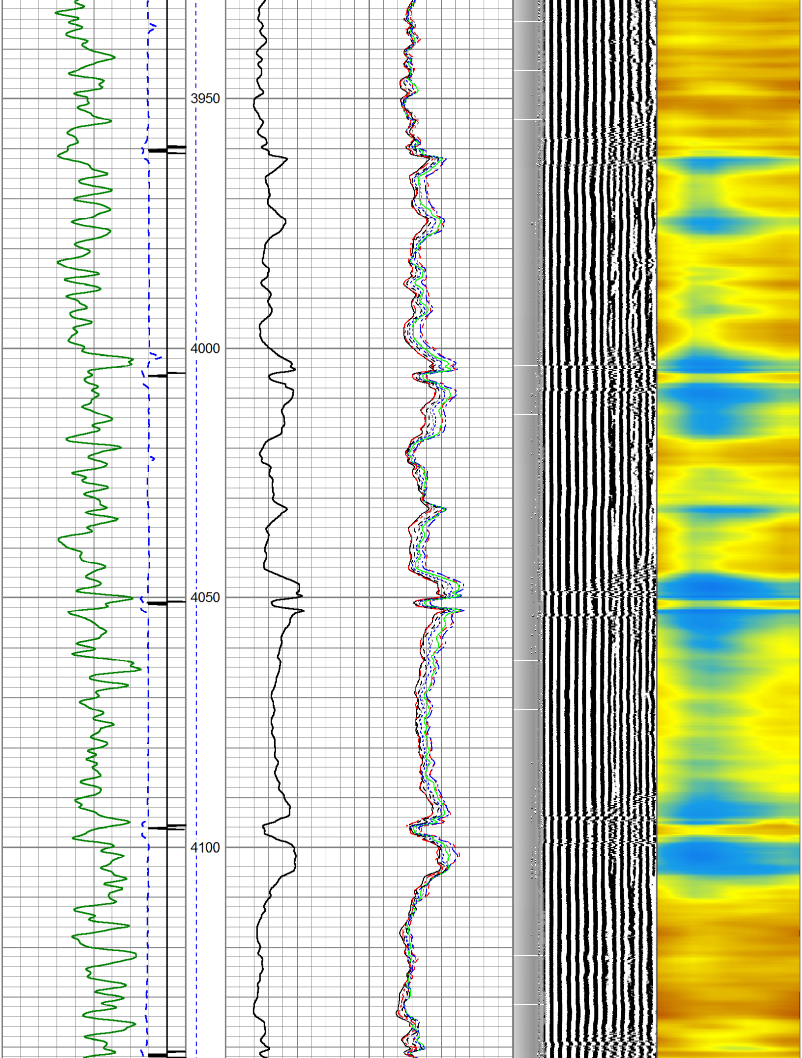


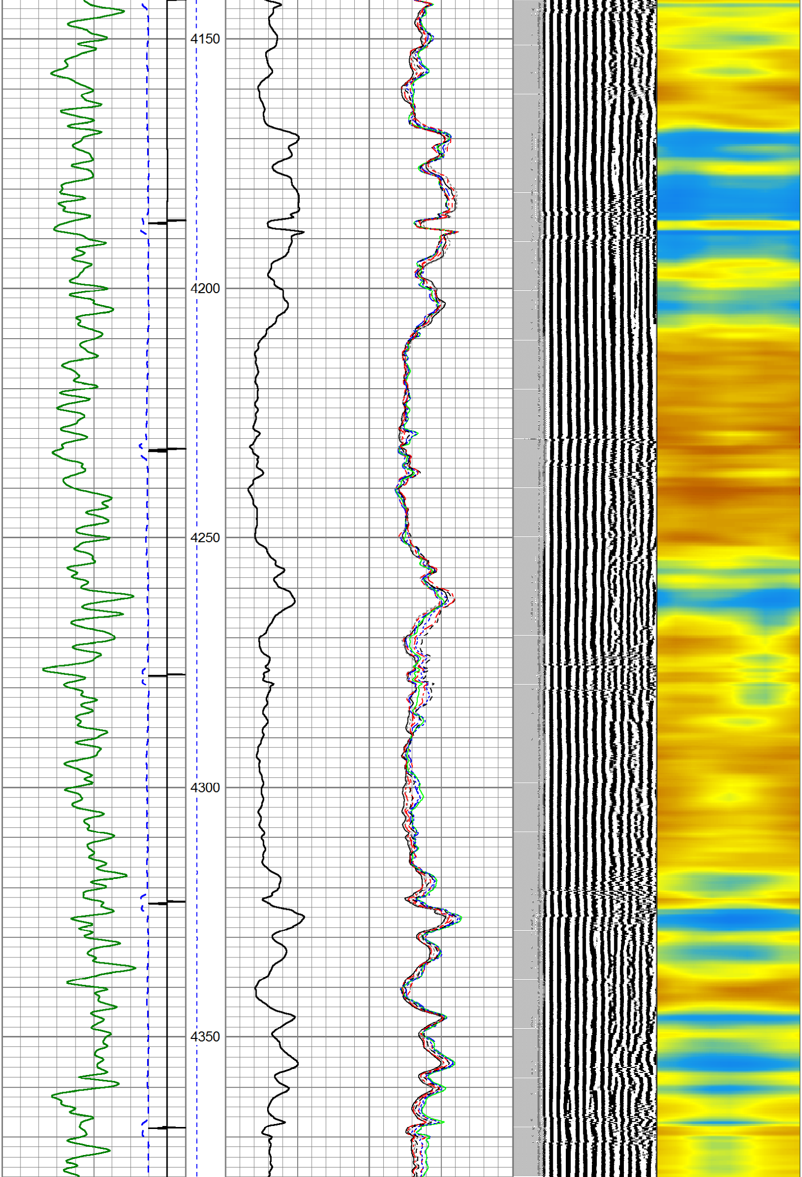


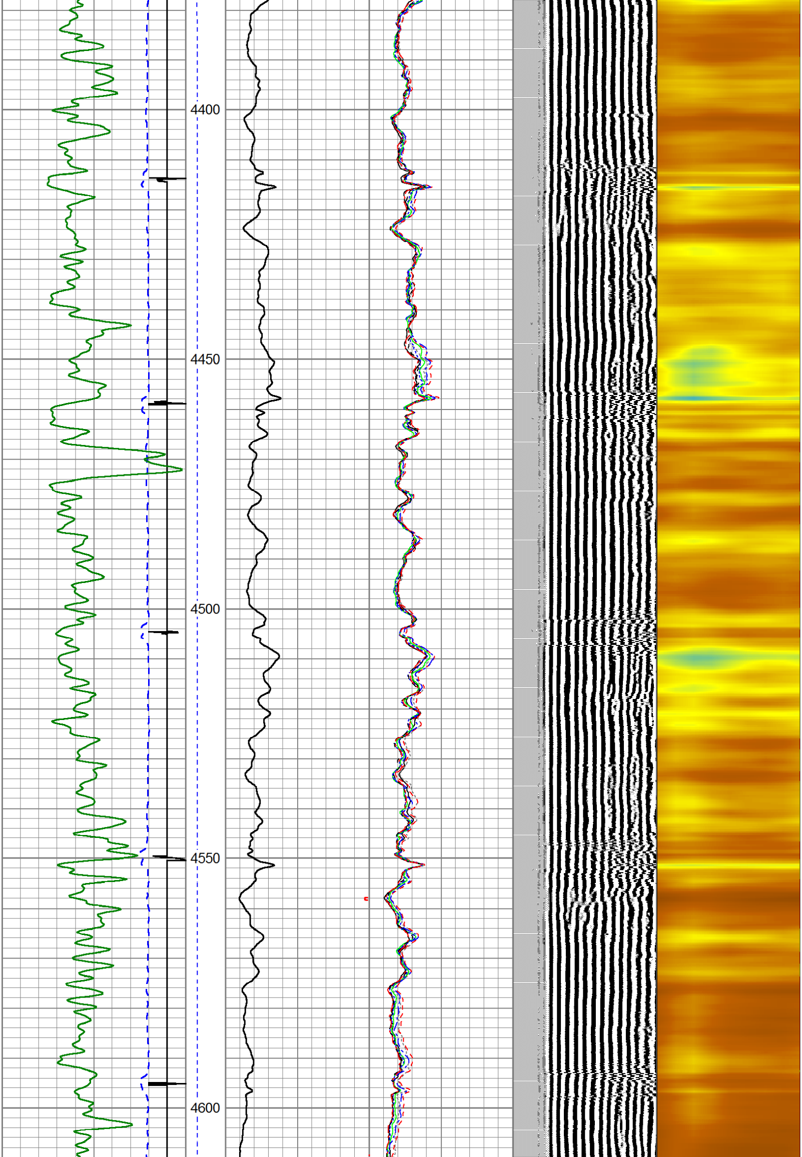


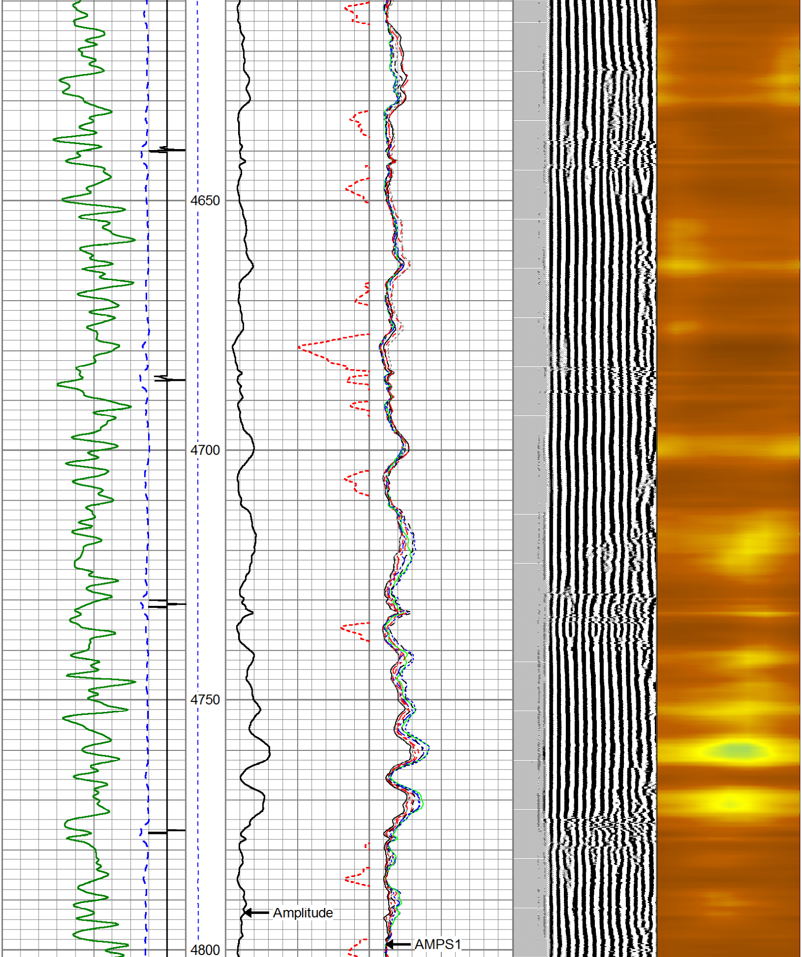


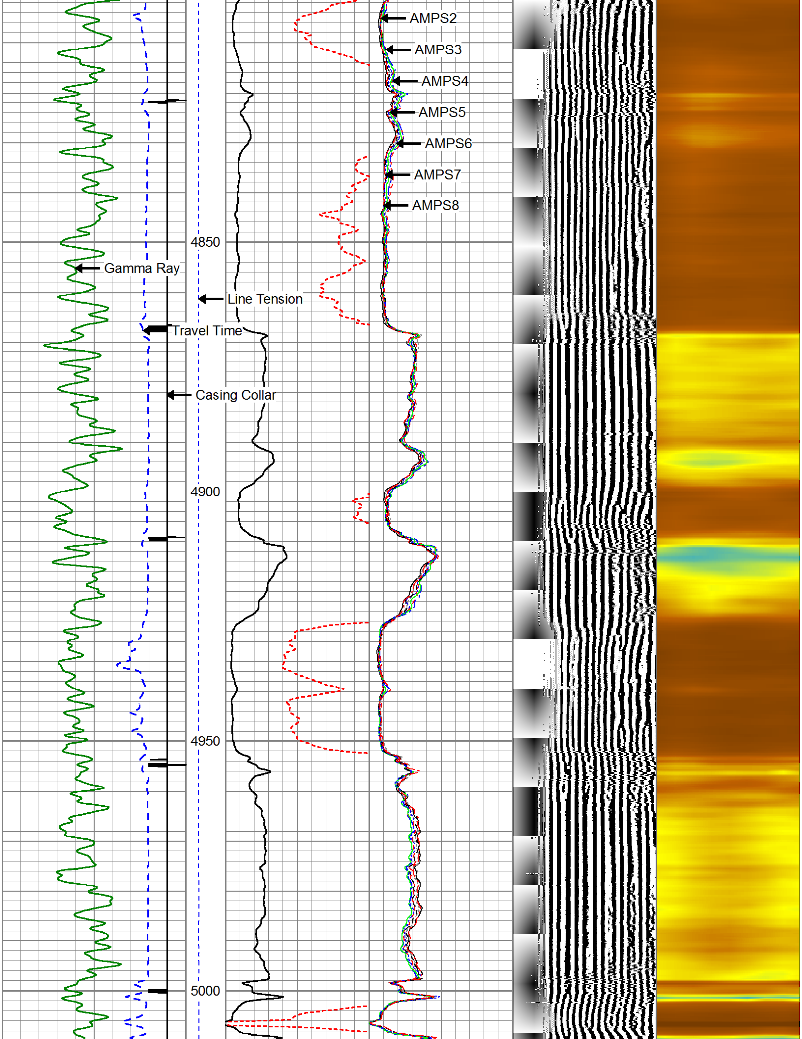


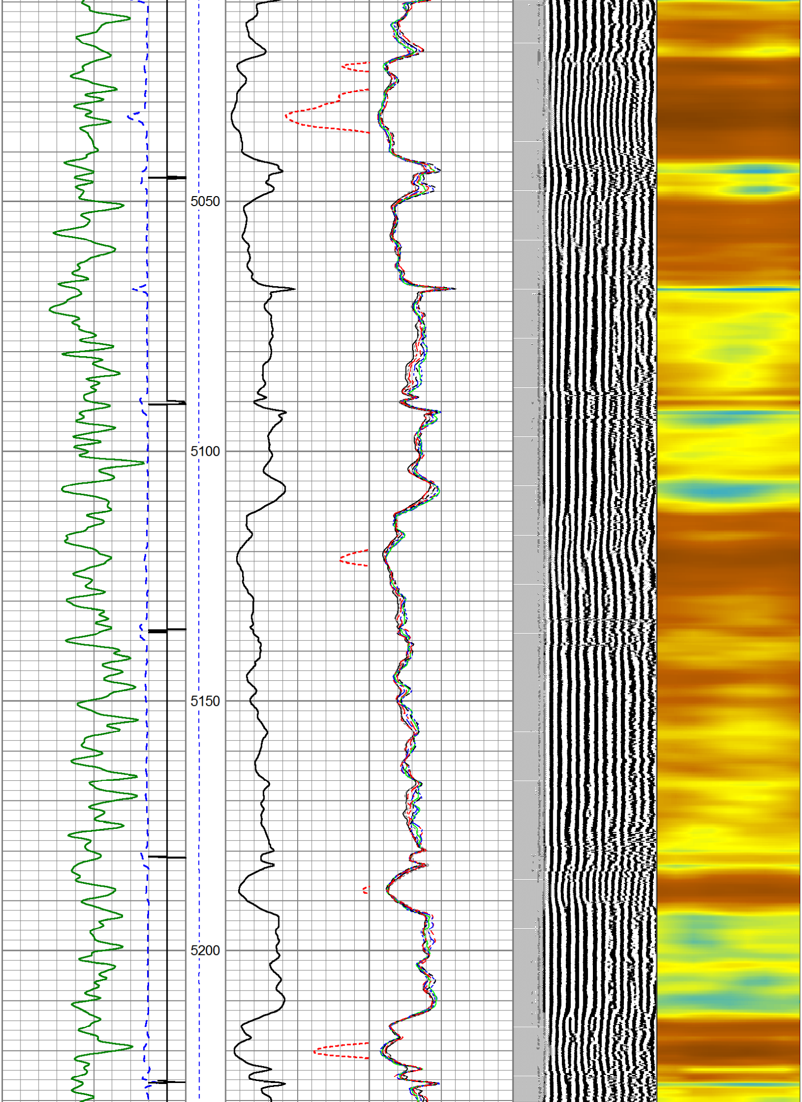


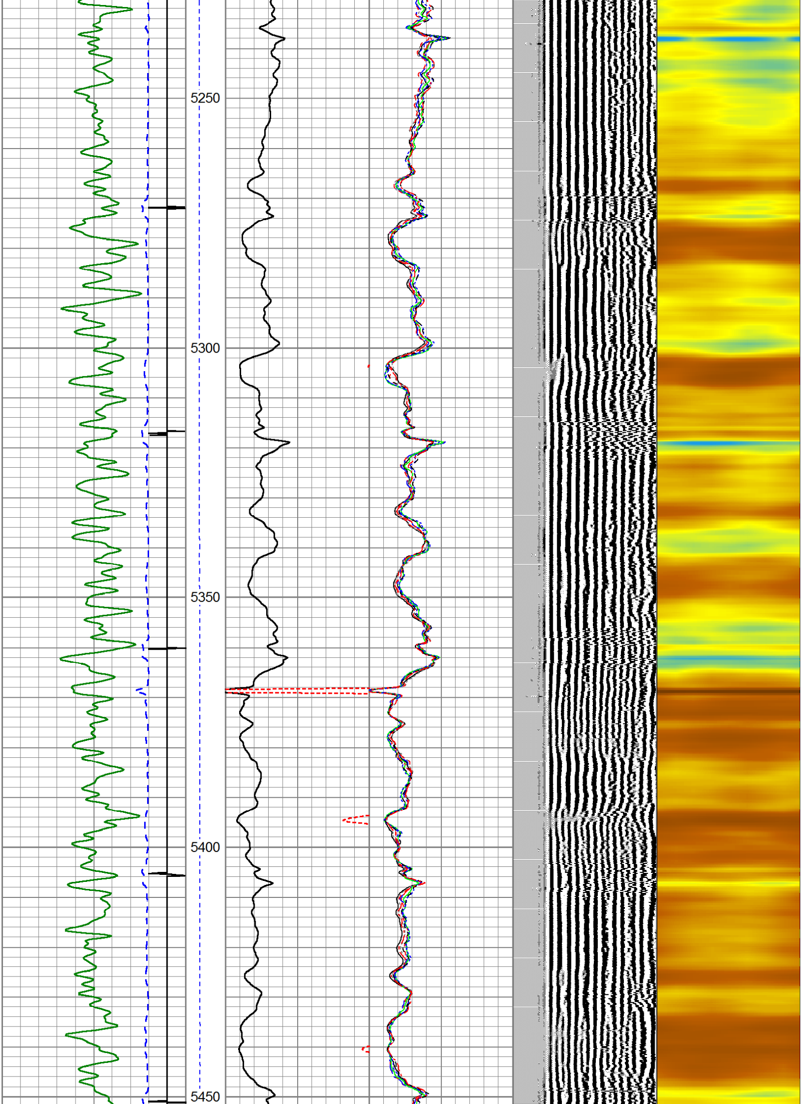


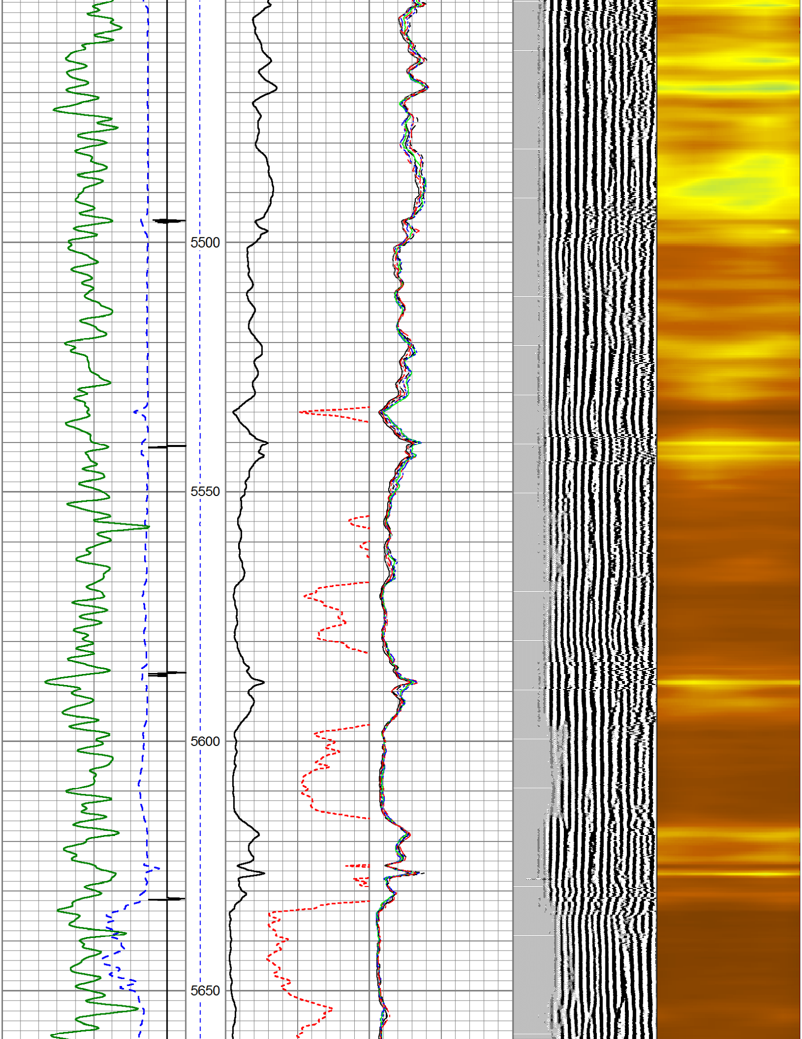


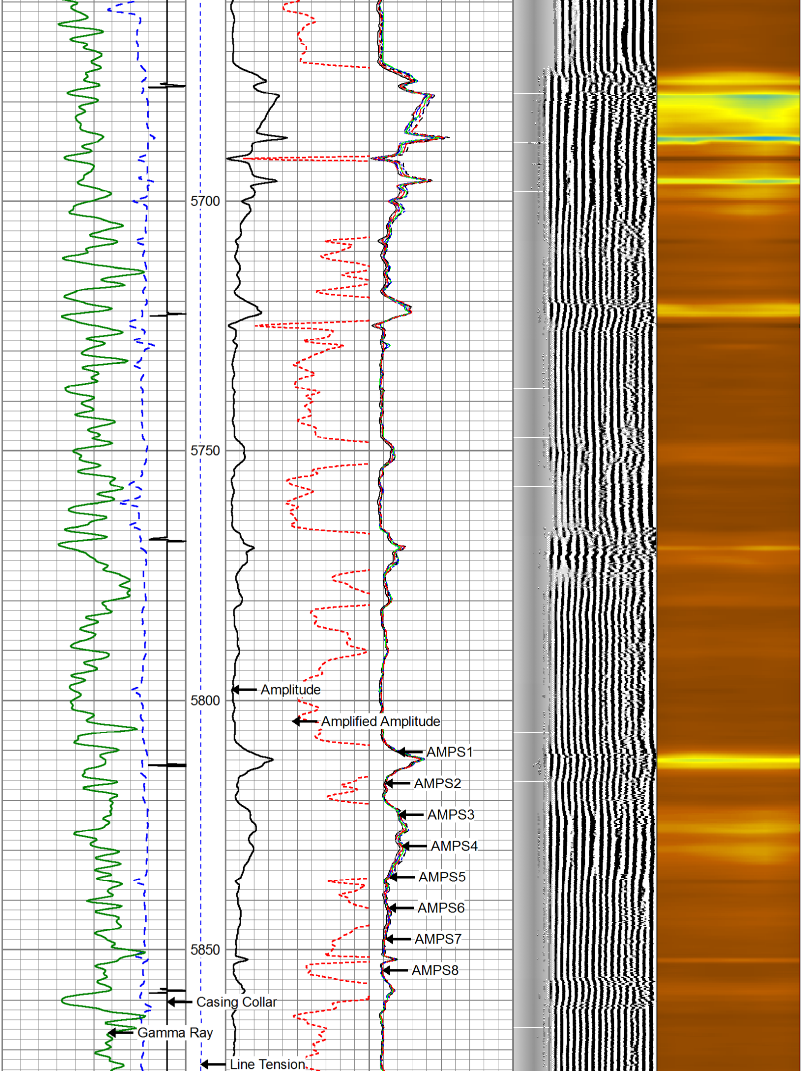


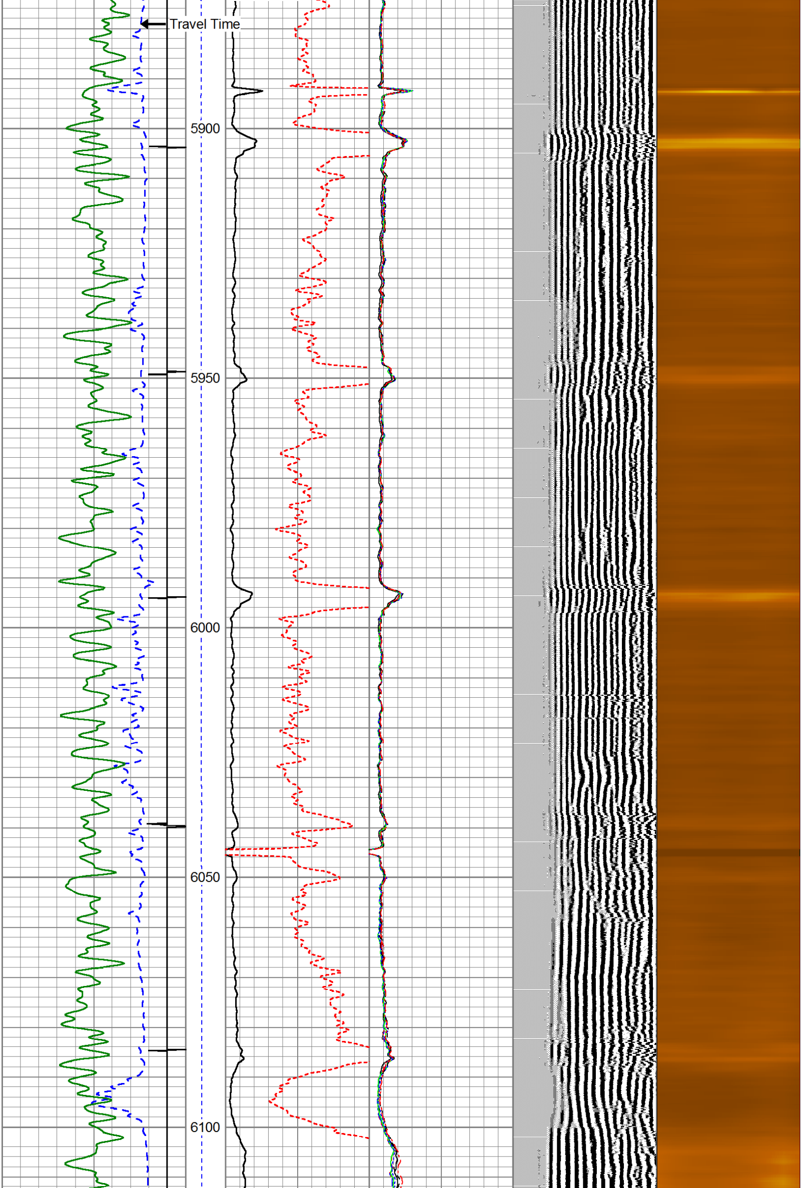


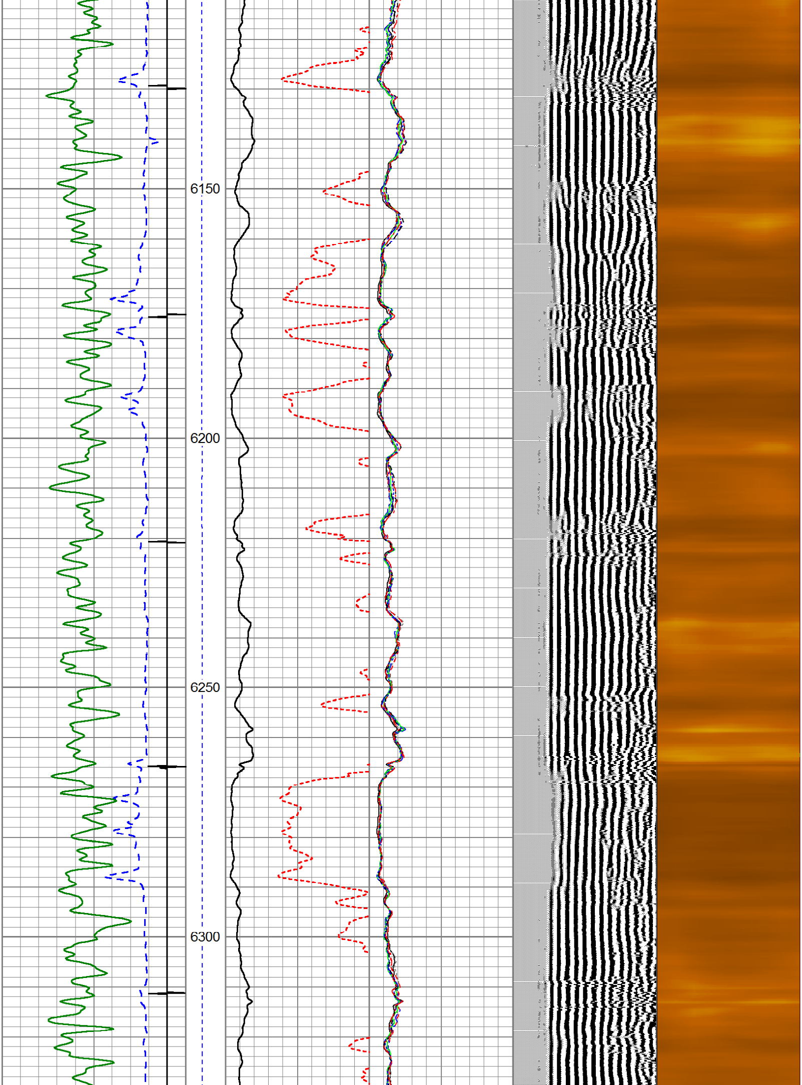


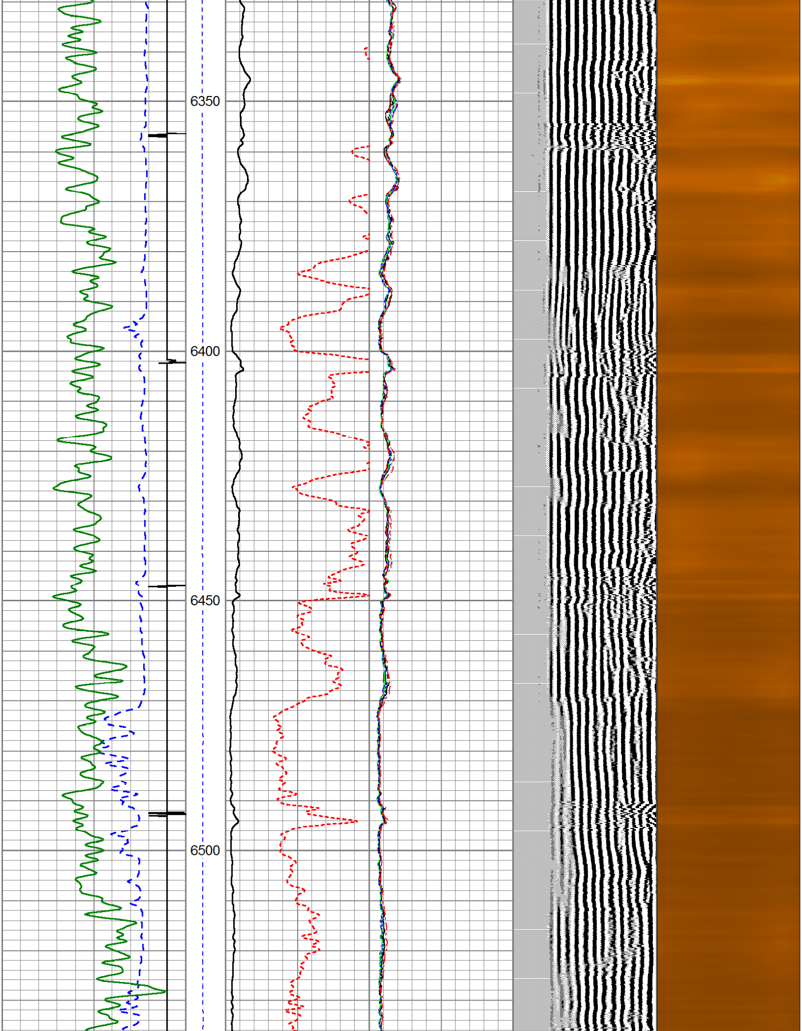


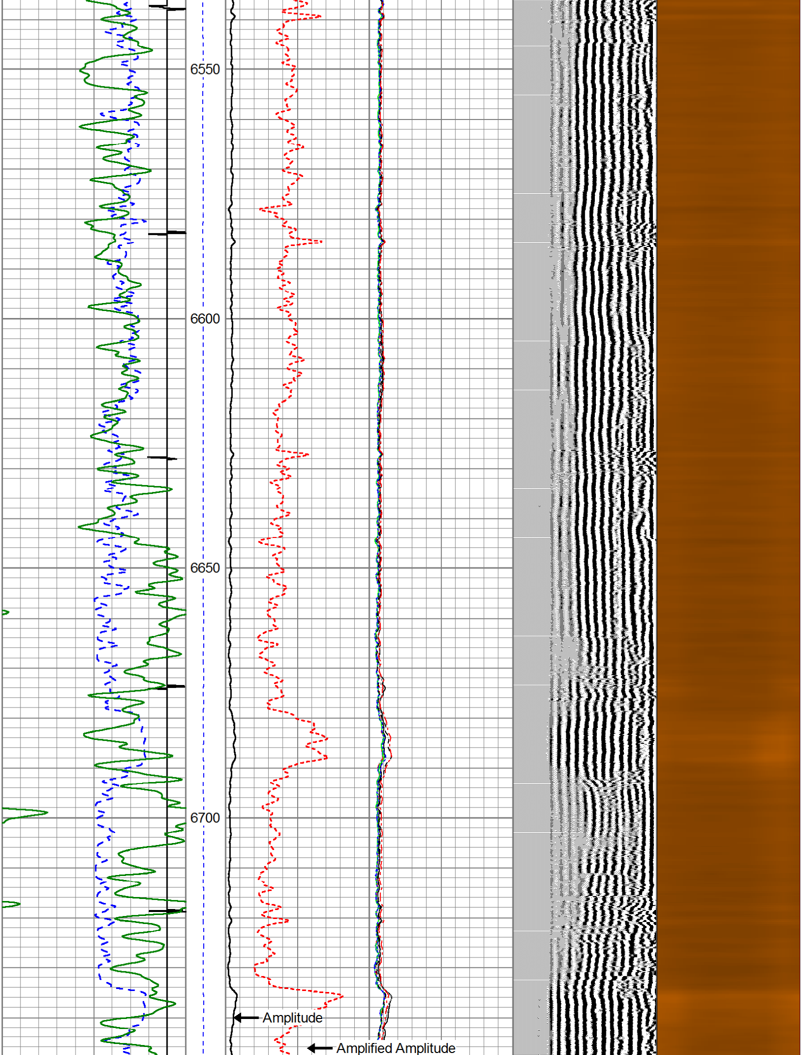


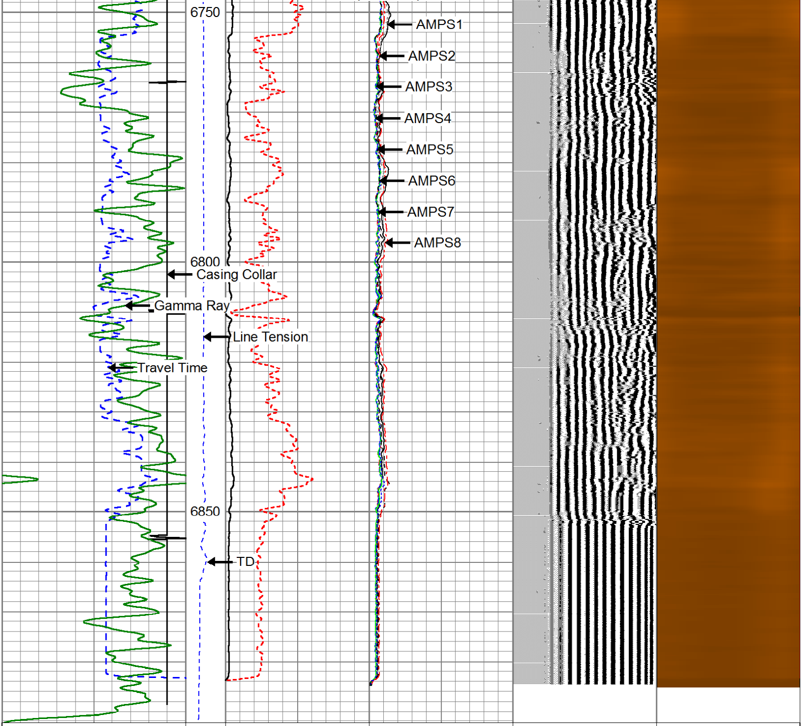












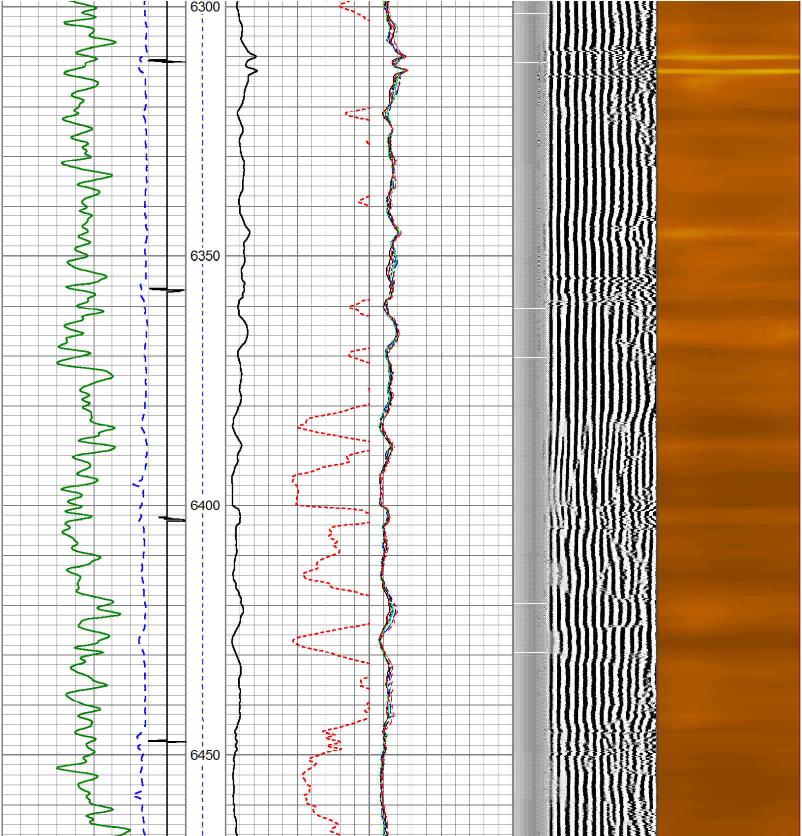
444 *Travel Time (usec)* 244	e Tens	0 Amplitude (mV)100	-5 AMPS1 150	Variable Density	1 Cement Map 8
9 *Casing Collar* -1	(lb)	Amplified Amplitude	-5 AMPS2 150	200 1200	0 100
0 Gamma Ray (GAPI) 150	(2500	0 (mV) 10	-5 AMPS3 150		
			-5 AMPS4 150		
			-5 AMPS5 150		
			-5 AMPS6 150		
			-5 AMPS7 150		
			-5 AMPS8 150		

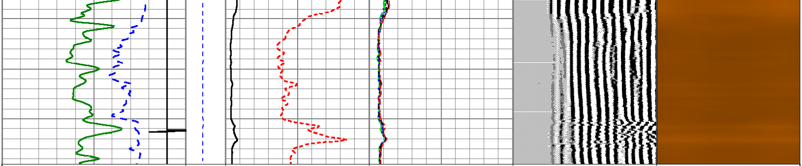
ALLIED
HORIZONTAL
WIRELINE SERVICES

REPEAT PASS (0 PSI)

Database File: bayswater_carlson c-15-16hn_rcbl.db
Dataset Pathname: pass9
Presentation Format: ahws_rcbl
Dataset Creation: Thu Aug 13 06:50:52 2015 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

444 Travel Time (usec) 244	e Tens	0 Amplitude (mV)100	-5 AMPS1 150	Variable Density	1 Cement Map 8
9 *Casing Collar* -1	(lb)	Amplified Amplitude	-5 AMPS2 150	200 1200	0 100
0 Gamma Ray (GAPI) 150	(2500	0 (mV) 10	-5 AMPS3 150		
			-5 AMPS4 150		
			-5 AMPS5 150		
			-5 AMPS6 150		
			-5 AMPS7 150		
			-5 AMPS8 150		





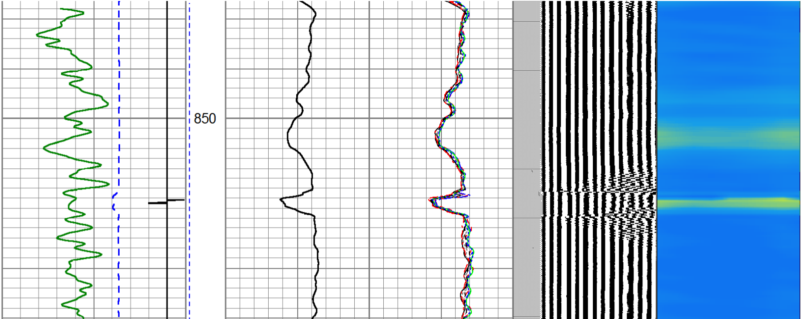
444 Travel Time (usec) 244	e Tens	0 Amplitude (mV)100	-5 AMPS1 150	Variable Density	1 Cement Map 8
9 *Casing Collar* -1	(lb)	Amplified Amplitude	-5 AMPS2 150	200 1200	0 100
0 Gamma Ray (GAPI) 150	(2500	0 (mV) 10	-5 AMPS3 150		
			-5 AMPS4 150		
			-5 AMPS5 150		
			-5 AMPS6 150		
			-5 AMPS7 150		
			-5 AMPS8 150		

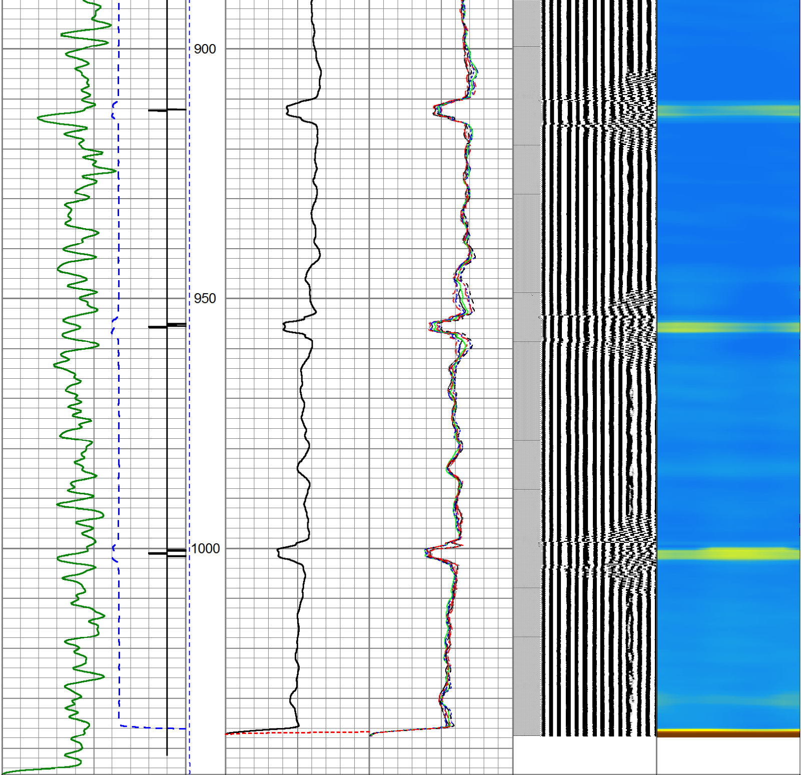
ALLIED
HORIZONTAL
WIRELINE SERVICES

FREE PIPE PASS (0 PSI)

Database File: bayswater_carlson c-15-16hn_rcbl.db
Dataset Pathname: pass4
Presentation Format: ahws_rcbl
Dataset Creation: Thu Aug 13 06:18:01 2015 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

412 Travel Time (usec) 212	e Tens	0 Amplitude (mV)100	-5 AMPS1 150	Variable Density	1 Cement Map 8
9 *Casing Collar* -1	(lb)	Amplified Amplitude	-5 AMPS2 150	200 1200	0 100
0 Gamma Ray (GAPI) 150	(2500	0 (mV) 10	-5 AMPS3 150		
			-5 AMPS4 150		
			-5 AMPS5 150		
			-5 AMPS6 150		
			-5 AMPS7 150		
			-5 AMPS8 150		





412 Travel Time (usec) 212	e Tens	0 Amplitude (mV)100	-5 AMPS1 150	Variable Density	1 Cement Map 8
9 *Casing Collar* -1	(lb)	Amplified Amplitude	-5 AMPS2 150	200 1200	0 100
0 Gamma Ray (GAPI) 150	(2500	0 (mV) 10	-5 AMPS3 150		
			-5 AMPS4 150		
			-5 AMPS5 150		
			-5 AMPS6 150		
			-5 AMPS7 150		
			-5 AMPS8 150		

Log Variables

Database:C:\Warrior\Data\bayswater_carlson c-15-16hn_rcbl.db
Dataset: field/well/run1/pass11

Top - Bottom

PPT	CASEWGHT	MAXAMPL	MINAMPL	MINATTN	SRFTEMP	CASEOD	PERFS
usec	lb/ft	mV	mV	db/ft	degF	in	
284	29	62.2	1	0.8	65	7	0

TDEPTH	BOTTEMP	BOREID
ft	degF	in
7250	120	8.75

Calibration Report

Database File:	bayswater_carlson c-15-16hn_rcbl.db
Dataset Pathname:	pass11
Dataset Creation:	Thu Aug 13 07:00:36 2015 by Log 7.0 B1

Gamma Ray Calibration Report

Serial Number:	110109-Dig	
Tool Model:	Probe275	
Performed:	Wed Aug 12 23:03:04 2015	
Calibrator Value:	1022.0	GAPI
Background Reading:	79.6	cps
Calibrator Reading:	1548.2	cps
Sensitivity:	0.6959	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	111107	
Tool Model:	PROBE_BH	
Calibration Casing Diameter:	7.000	in

Calibration Casing Diameter: 7.000 in
Calibration Depth: 945.242 ft

Master Calibration, performed Thu Aug 13 06:15:47 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.023	1.403	0.000	62.165	45.046	-1.022
CAL	0.016	1.874				
5'	0.058	1.255	0.000	62.165	51.929	-3.000
SUM						
S1	0.054	1.573	0.000	100.000	65.835	-3.532
S2	0.026	1.682	0.000	100.000	60.355	-1.547
S3	0.023	1.565	0.000	100.000	64.860	-1.507
S4	0.032	1.423	0.000	100.000	71.883	-2.291
S5	0.030	1.257	0.000	100.000	81.534	-2.469
S6	0.027	1.147	0.000	100.000	89.244	-2.407
S7	0.020	1.140	0.000	100.000	89.358	-1.831
S8	0.020	1.332	0.000	100.000	76.191	-1.486

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.016	1.874	1.000	0.000

Air Zero Calibration, performed Wed Dec 31 17:00:00 1969:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

Service Ticket No. 42057 API No. 05-123-41711 PGM Ver WARRIOR 7.0 CH

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

EQUIPMENT DATA

PROBE 2.75 RADII		PROBE GR-CCL					
Run No.	1	Run No.	1	Run No.		Run No.	
Serial No.	111107	Serial No.	110109	Serial No.		Serial No.	
Model No.	RADII 275	Model No.	GR 275	Model No.		Model No.	
Diameter	2.75IN	Diameter	2.75IN	Diameter		Diameter	

LOGGING DATA

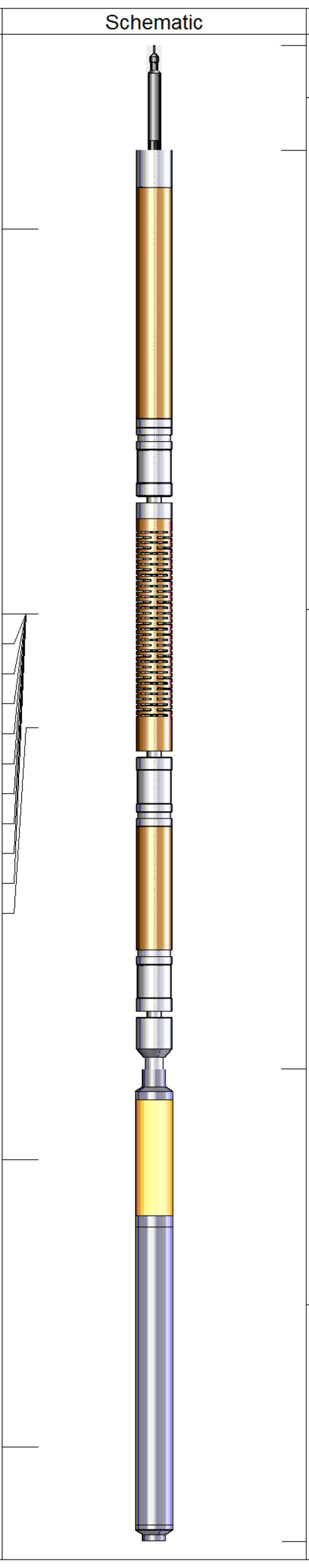
General Data

Pass	Depths		Well Head	Speed	Logging Run Comments
No.	From	To	Pressure	Ft/Min	
12	6499FT	6299FT	0	100	REPEAT PASS
14	6860'	0FT	0	100	MAIN PASS

	AMP 3FT		SECTORS		VDL		GAMMA RAY	
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
12	0	100	-5	150	0	1200	0	150
14	0	100	-5	150	0	1200	0	150

DIRECTIONAL INFORMATION

Maximum Deviation	N/A	deg. @		KOP	N/A	



Sensor	Offset (ft)
Headvolt	12.50
WVF3FT	8.83
WVFCAL	8.83
WVFS1	8.83
WVFS2	8.83
WVFS3	8.83
WVFS4	8.83
WVFS5	8.83
WVFS6	8.83
WVFS7	8.83
WVFS8	8.83
WVF5FT	7.75
CCL	3.63
GR	0.89

Description	Len (ft)	OD (in)	Wt (lb)
CHD-STNDRD (GOI) Standard Cable Head	1.00	1.69	10.00
RBT-PROBE_BH (111107) Probe Radii Bond Tool with Digital Telemetry	8.75	2.75	90.00
GR-Probe275 (110109-Dig)	4.50	2.75	57.00

Dataset: bayswater_carlson c-15-16hn_rcbl.db: field/well/run1/pass11
Total Length: 14.25 ft
Total Weight: 157.00 lb
O.D. 2.75 in

ALLIED HORIZONTAL WIRELINE SERVICES

Company	BAYSWATER EXPLORATION AND PRODUCTION
Well	CARLSON C-15-16HN
Field	WATTENBERG
County	WELD
State	COLORADO
Country	USA