Company	Extraction Oil & Gas
Well	Berthoud Farms 8e-10-1n
Field	Wattenberg
County	Weld
State	Colorado

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CEMENT BOND LOG

Company **Extraction Oil & Gas**
Well **Berthoud Farms 8e-10-1n**
Field **Wattenberg**
County **Weld** **State** **Colorado**

API # : 05-123-45898
Location:

Surface:
1544' FSL & 858' FEL

SEC: 7 TWP: 4N RGE: 68W

Other Services

Elevation
K.B. 5062'
D.F. ----
G.L. 5033'

Permanent Datum: Ground Level Elevation: 5033'
Log Measured From: Kelly Bushing , 19' ft. above Permanent Datum.
Drilling Measured From: Kelly Bushing

Date	6/5/2018		
Run Number	ONE		
Plug Back T.D. Driller	----		
Plug Back T.D. Logger	----		
Bottom Logged Interval	6380'		
Top Log Interval	Surface		
Type Fluid	Water		
Density / Viscosity	8.4PPG		
Max. Recorded Temp.	185° F		
Time Logger on Bottom	0525		
Equipment Number	GD164		
Location	Casper, Wy		
Recorded By	Garrett Graham		
Witnessed By	Mr. Torres		

Casing Record				Tubing Record			
Size	Weight	From	To	Size	Weight	From	To
9 5/8"	36#	Surface	1500'				
5 1/2"	20#	Surface	13575'				

<<< 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.

Ticket # : RM0618PCBW594
Your Crew Today: Eric R. and Daniel H.
Log Correlated to: Well Head

Cement Data

Date Cemented	----
Primary / Squeeze	Primary
Type / Weight	----
Main Pass Press.	0 PSI
Repeat Pass Press.	0 PSI

Bond Index

Index %	Est Top Depth
20 % Bond	85'
40 % Bond	85'
60 % Bond	85'
80 % Bond	872'
100 % Bond	1431'

Comments

Estmated Cement Top @ 85'
(20% Bond)

Marker Joint Located @ 5870'

Thank you for using Gyrodata

Eric Regnier: Rocky Mountain Wireline Manager EricR@Gyrodata.com

Log Variables

Databasec:\programdata\warrior\data\20180605_extraction_bf_8e-10-1n_cbl\20180605_extraction_
Dataset field/well/run1/pass4/_vars_

Top - Bottom

BHTEMP_Src	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MAXAMPL mV	MaxAPIID in
TEMP	8.5	185	5.5	0.415	20	71.9	4.829
MINAMPL mV	MinAPIID in	MINATTN db/ft	PPT usec	TDEPTH ft			
2.6	4.643	0	239	6385			

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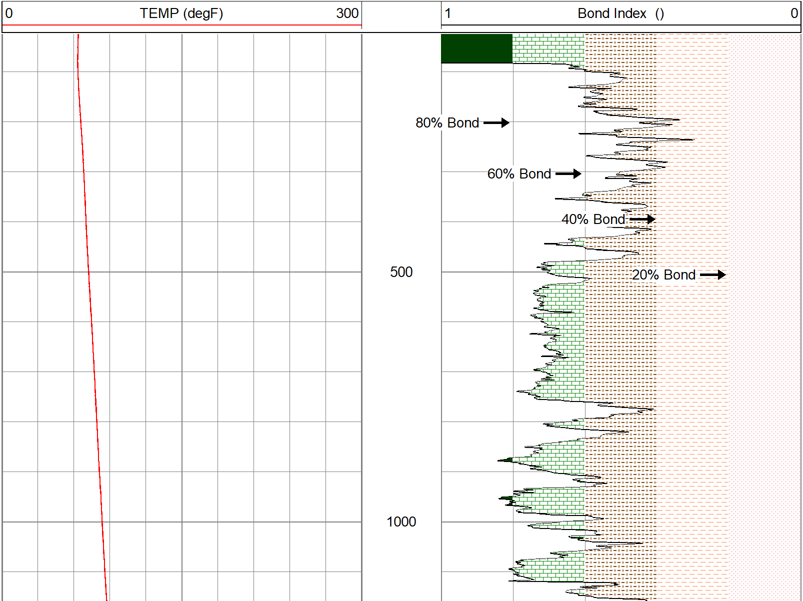
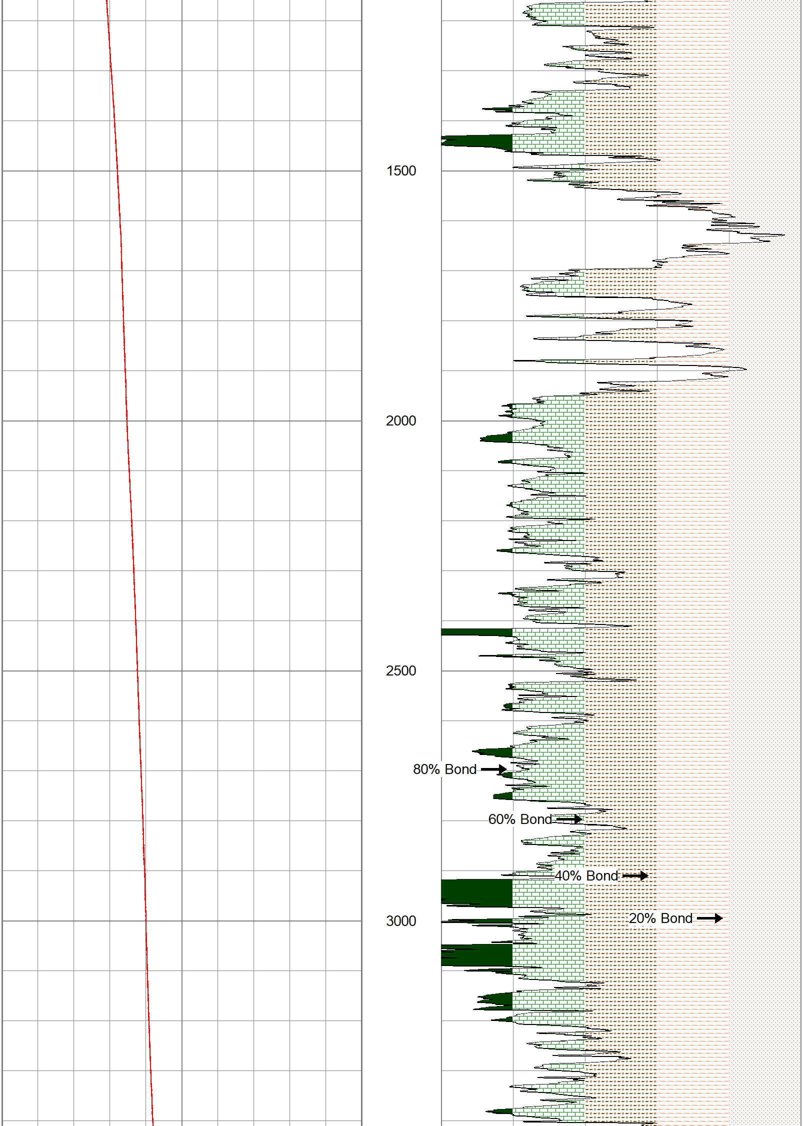
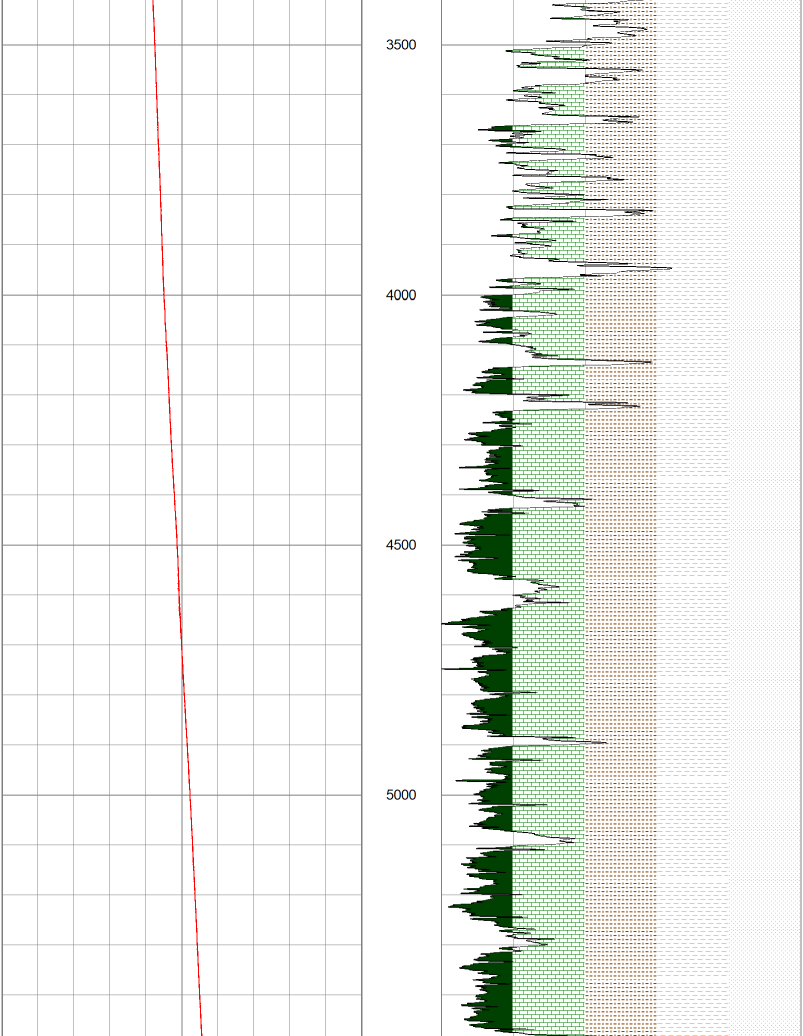
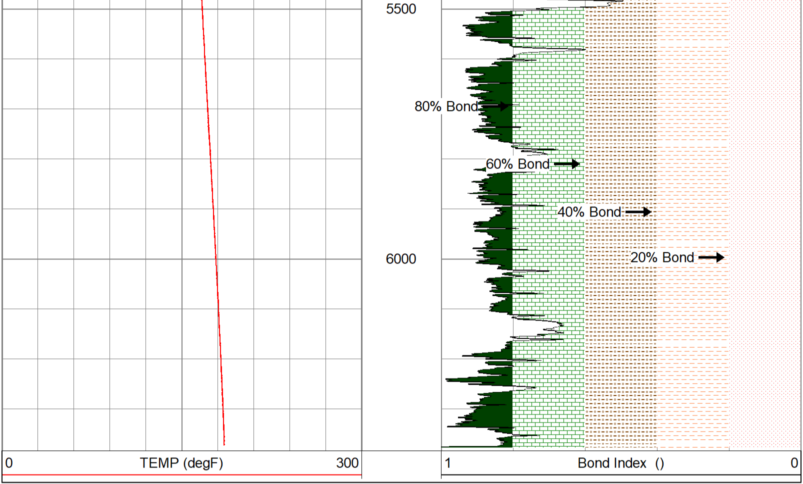
BOND INDEX

Database File 20180605_extraction_bf_8e-10-1n_cbl\20180605_extraction_bf_8e-10-1n_cbl.db
Dataset Pathname BOND
Presentation Format bondindex
Dataset Creation Tue Jun 05 07:42:40 2018
Charted by Depth in Feet scaled 1:2400









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BOND INDEX

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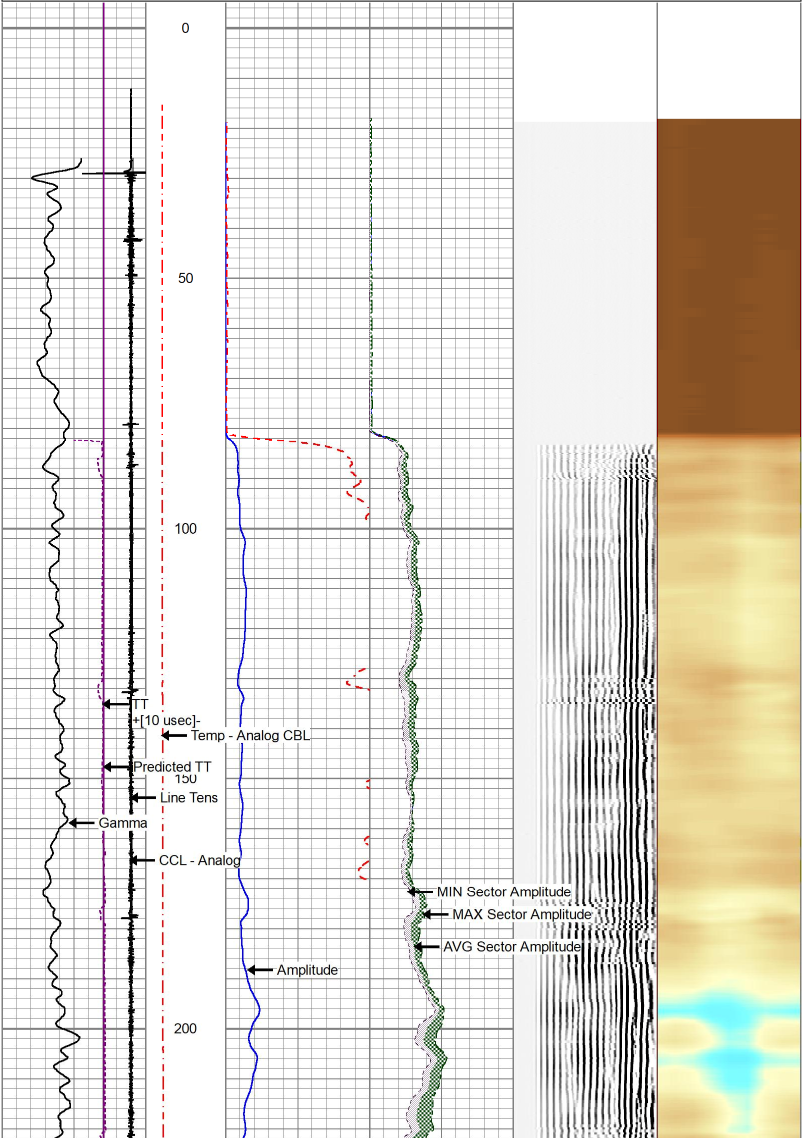
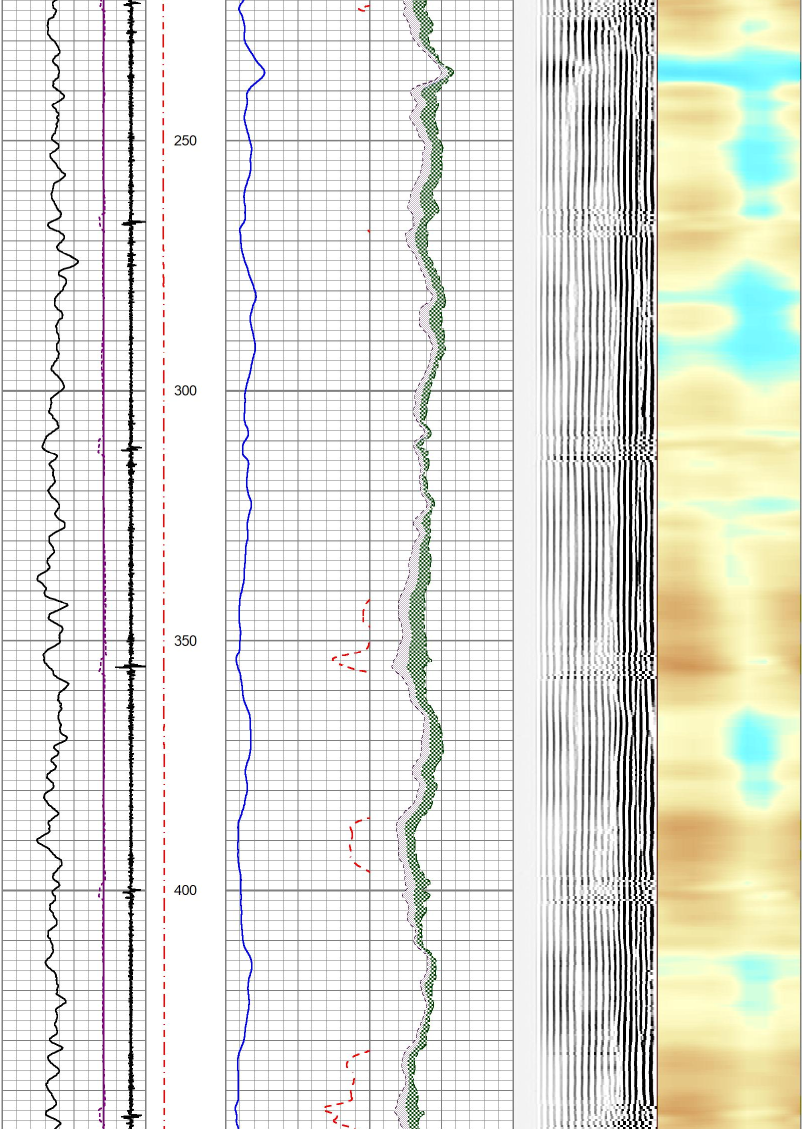
MAIN PASS - Ran with 0 PSI

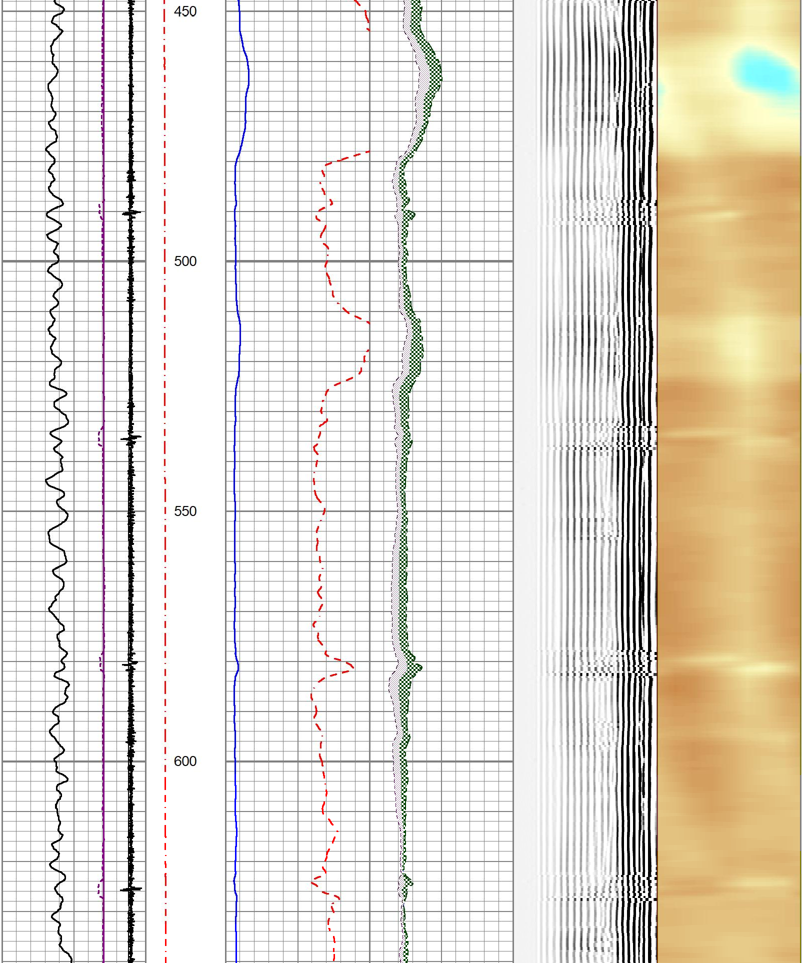
5 in / 100 ft

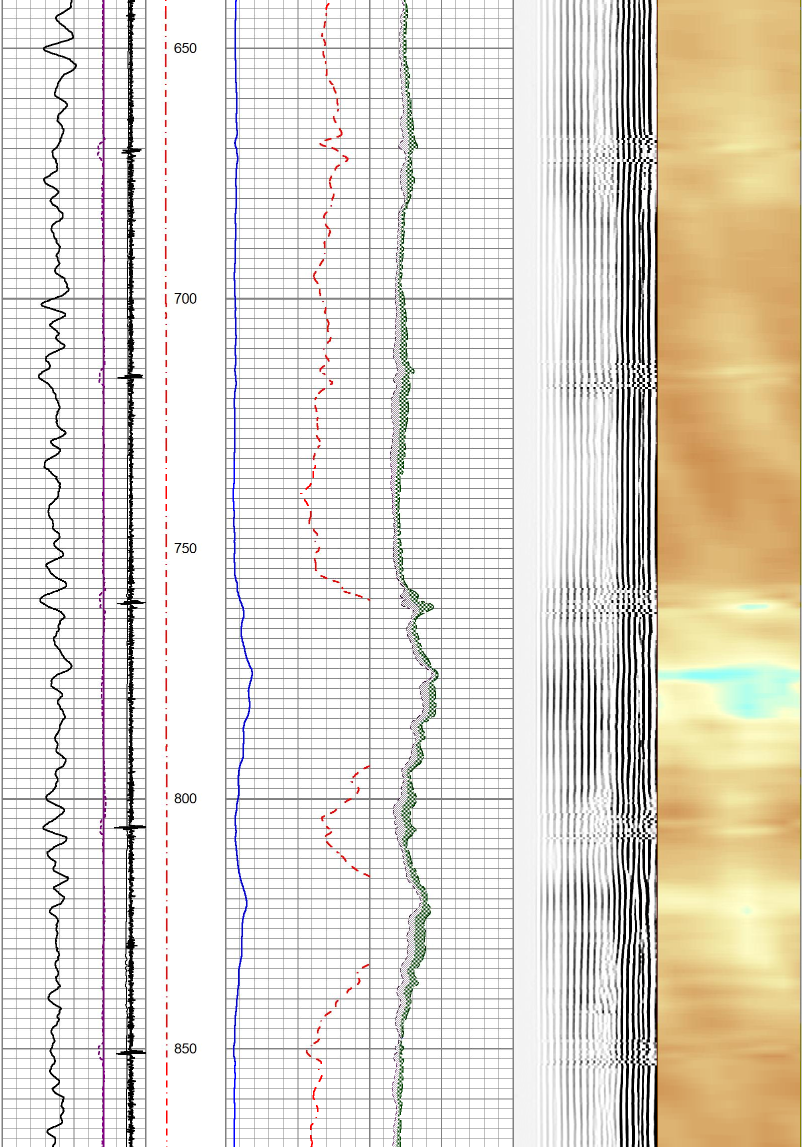
Database File	20180605_extraction_bf_8e-10-1n_cbl\20180605_extraction_bf_8e-10-1n_cbl.db
Dataset Pathname	pass4
Presentation Format	rcbl_8s
Dataset Creation	Tue Jun 05 05:30:47 2018
Charted by	Depth in Feet scaled 1:240

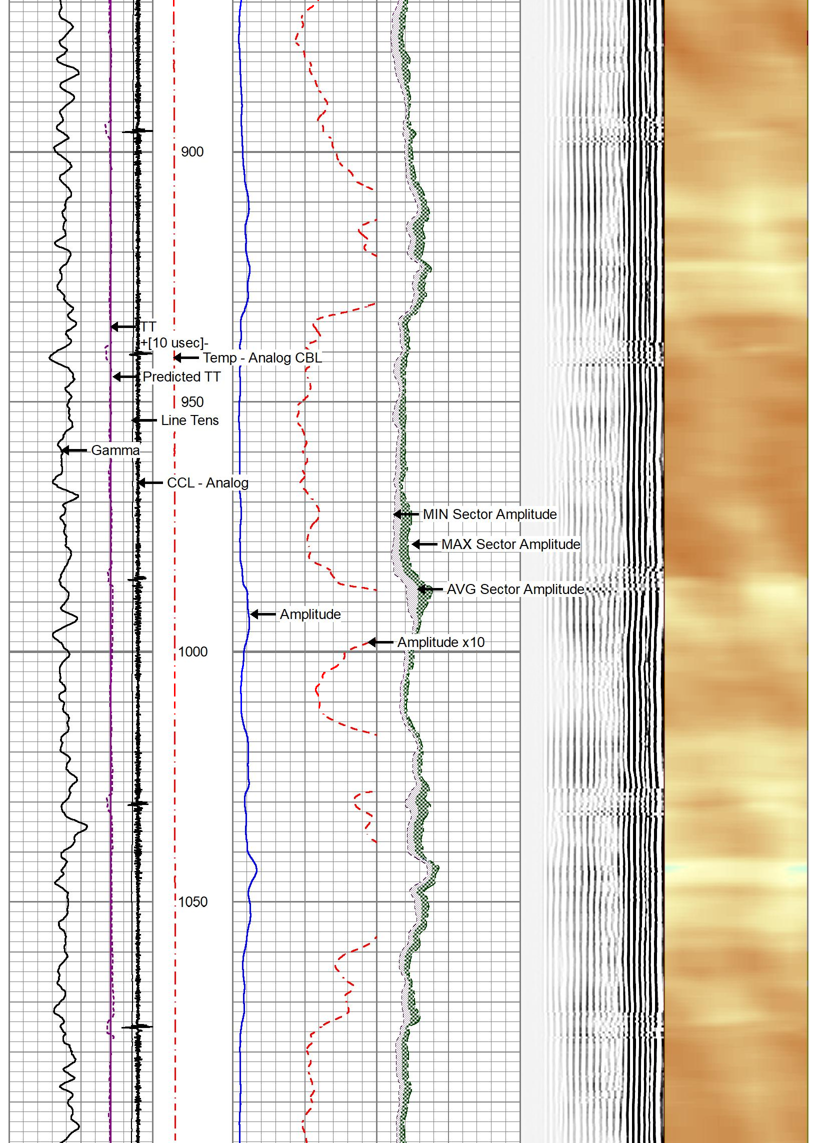
CCL - Analog	np - Analog C	0 Amplitude (mV)100	AVG Sector Amplitude	Acoustic Waveform	SECTORS
Gamma	(degF)	Amplitude x10	0 100	200 1200	0 72
0 (GAPI) 200	0 300	0 (mV) 10	MAX Sector Amplitude		
300(Line Tens (lb) 0			0 100		
Predicted TT			MIN Sector Amplitude		
TT +[10 usec]-			0 100		

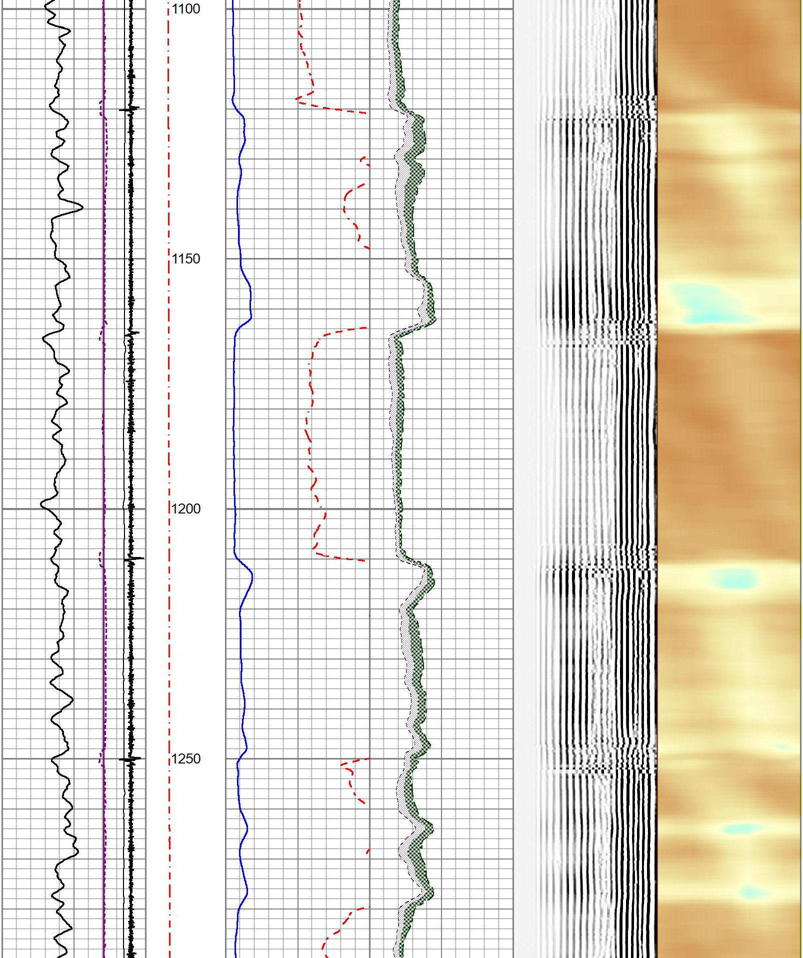


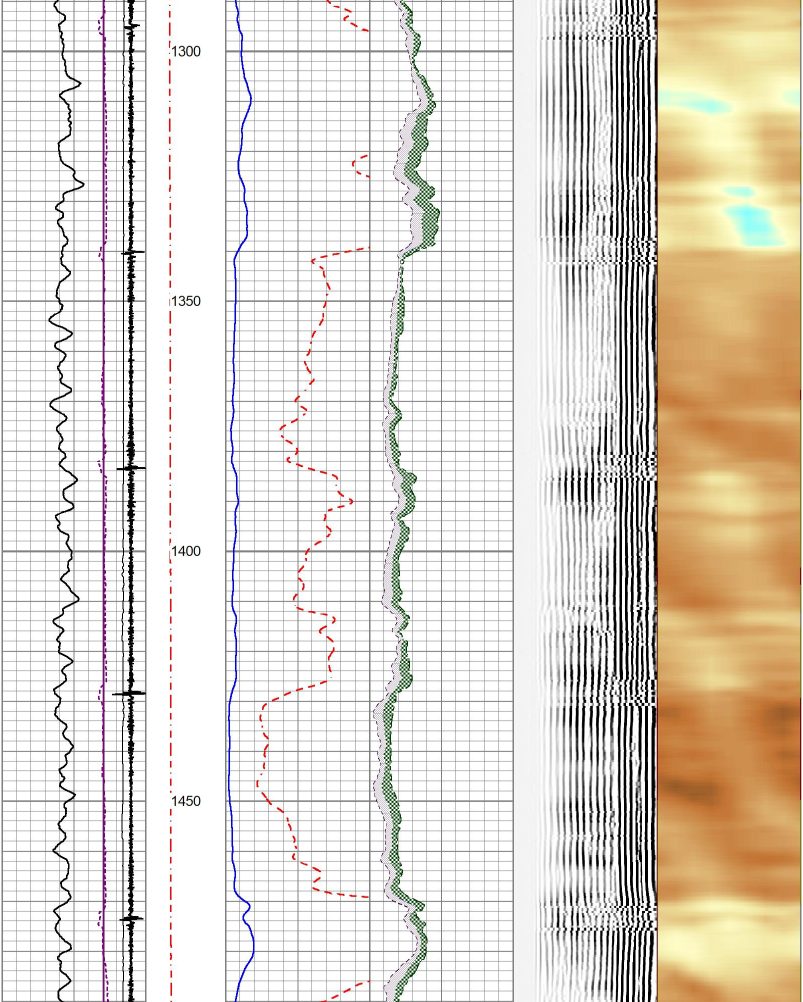


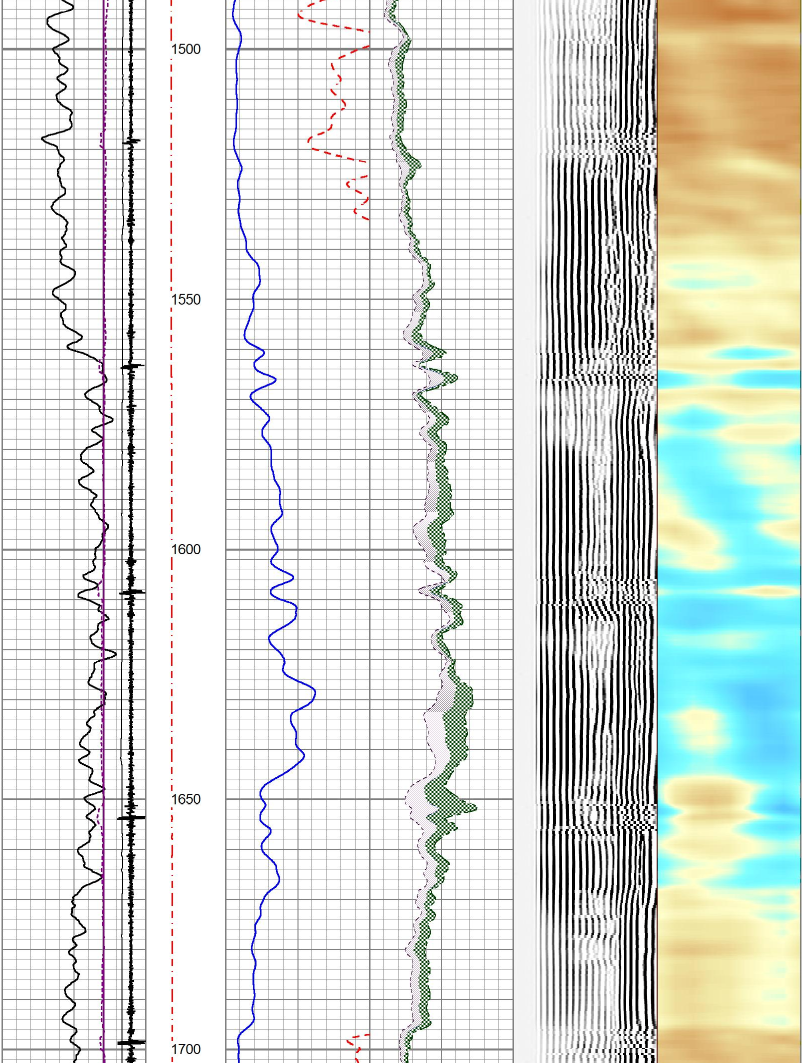


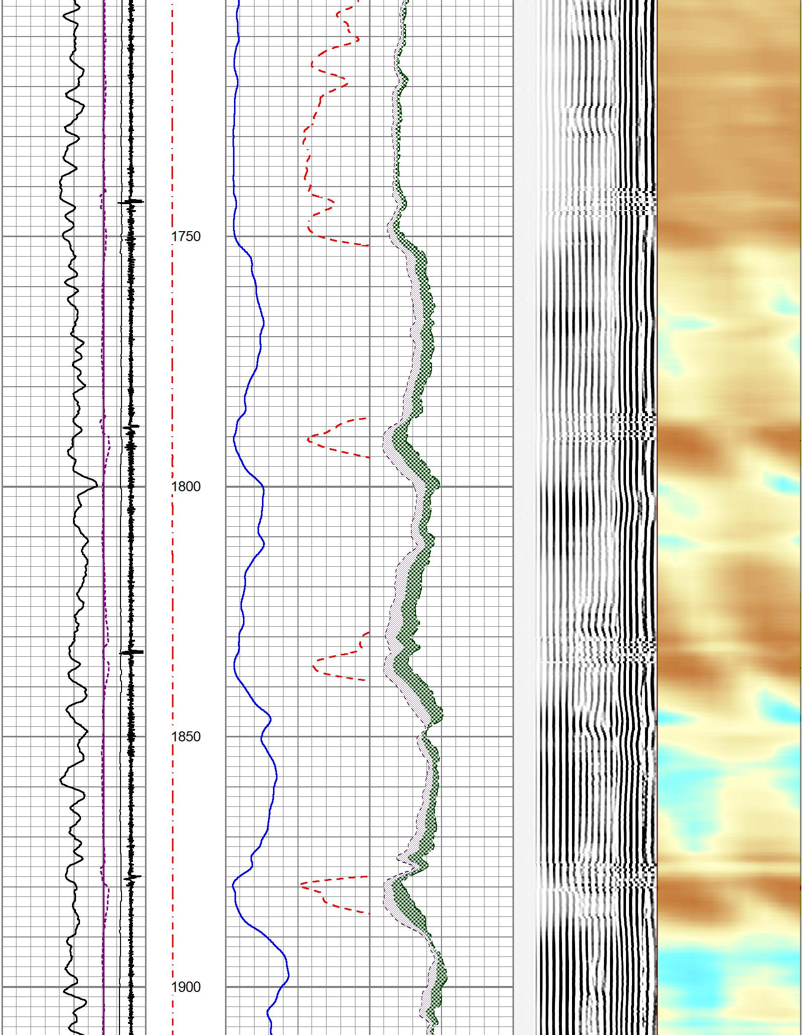


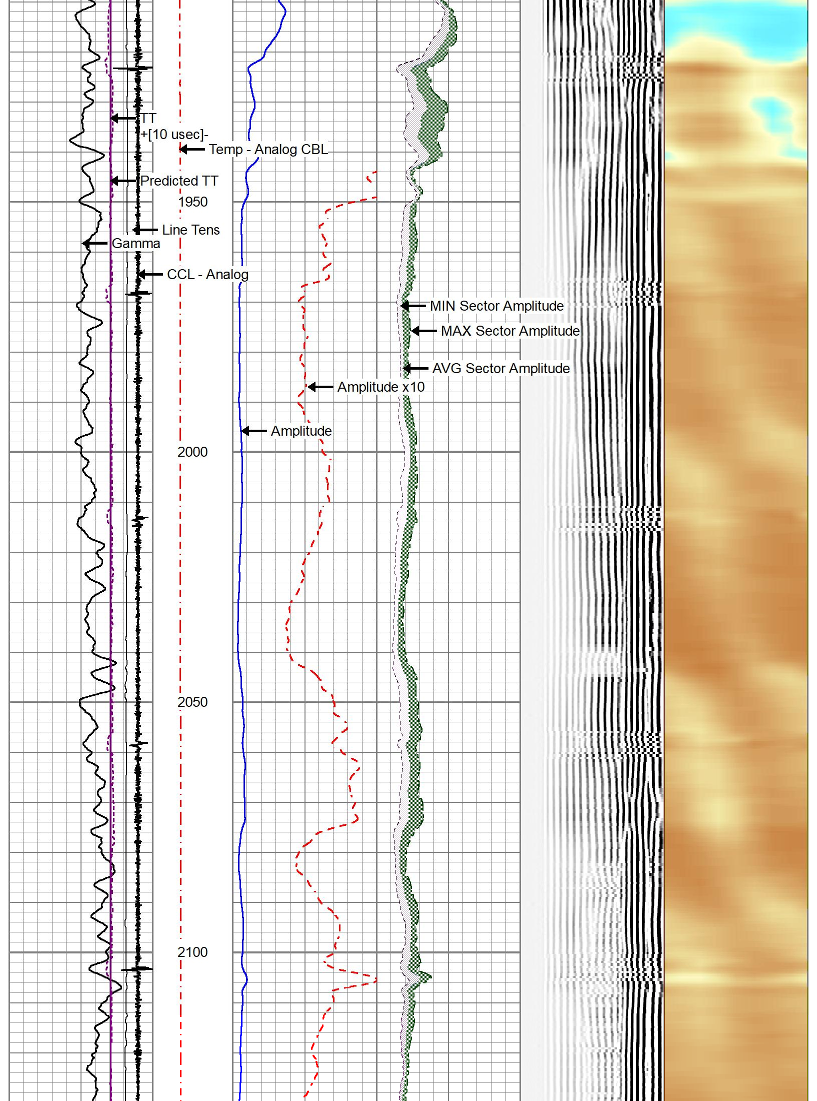


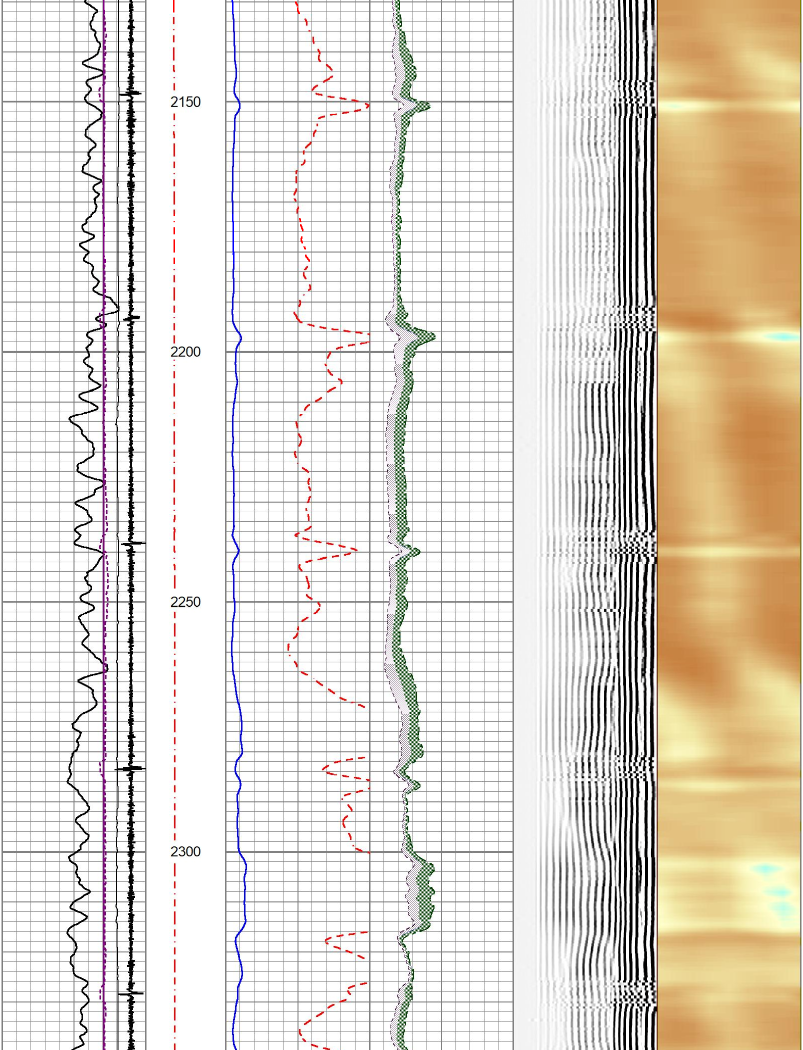


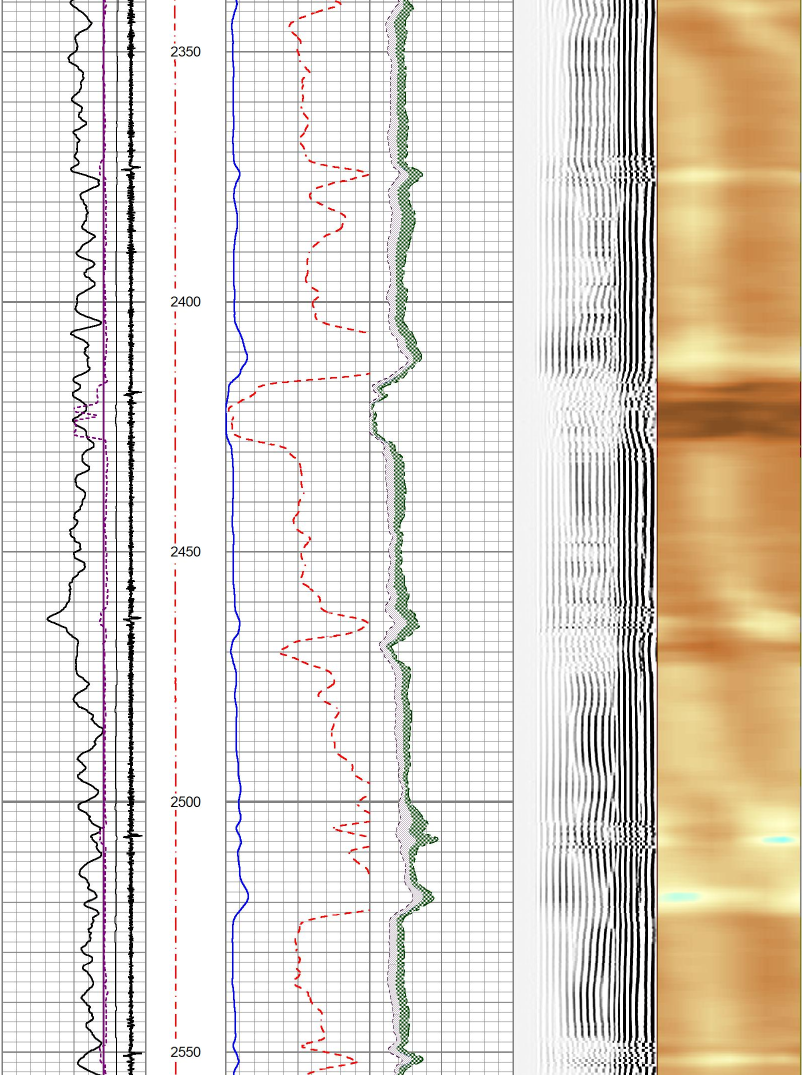


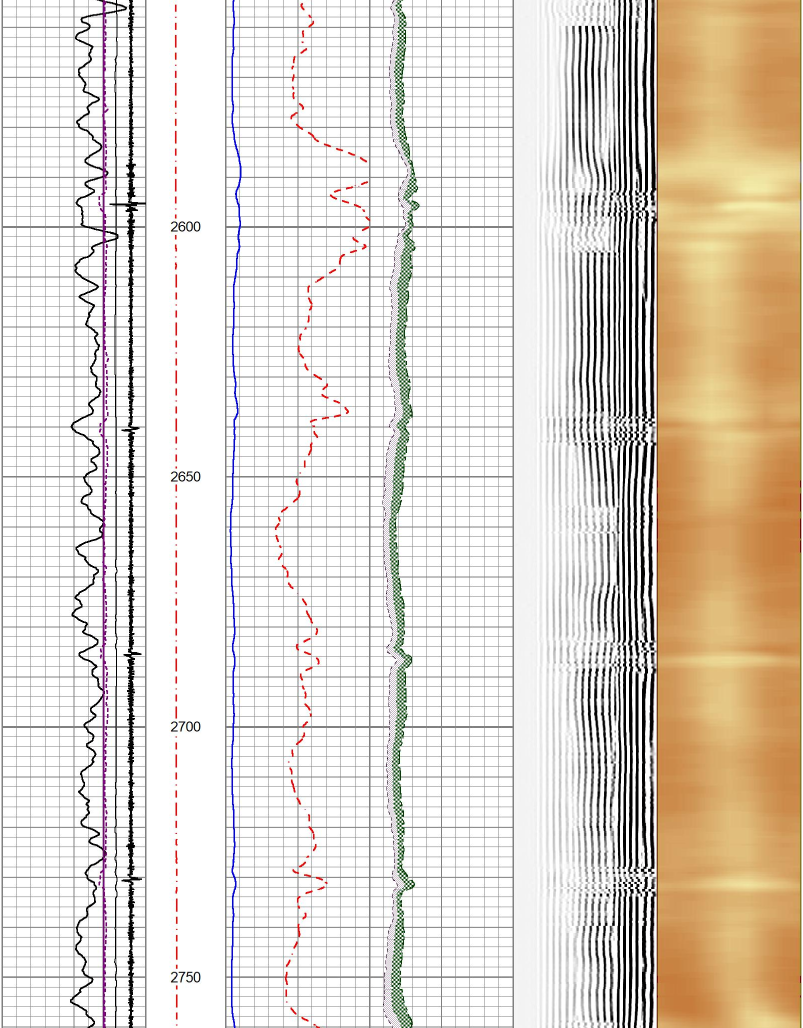


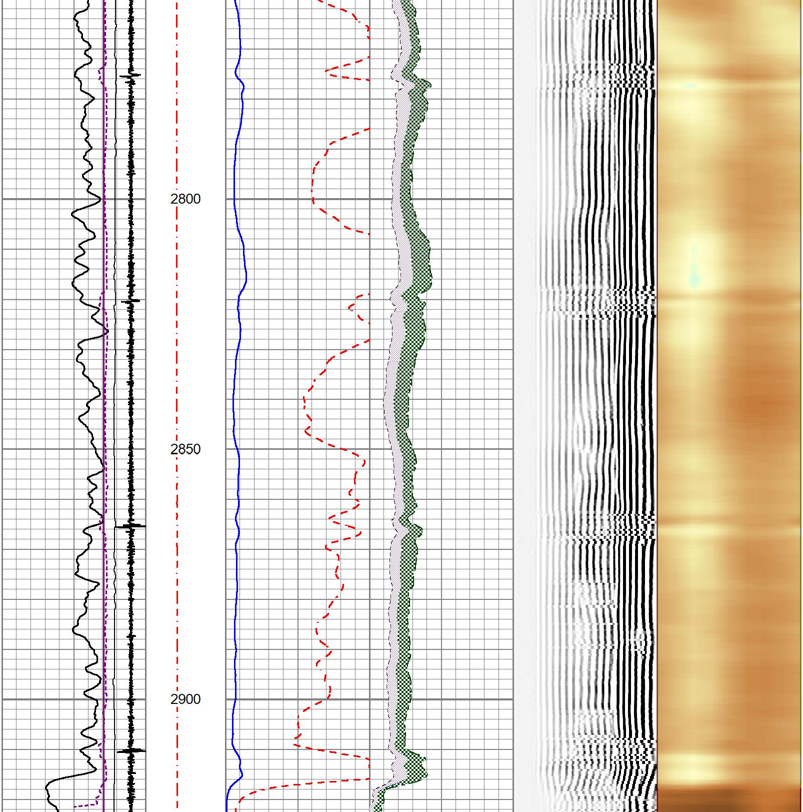


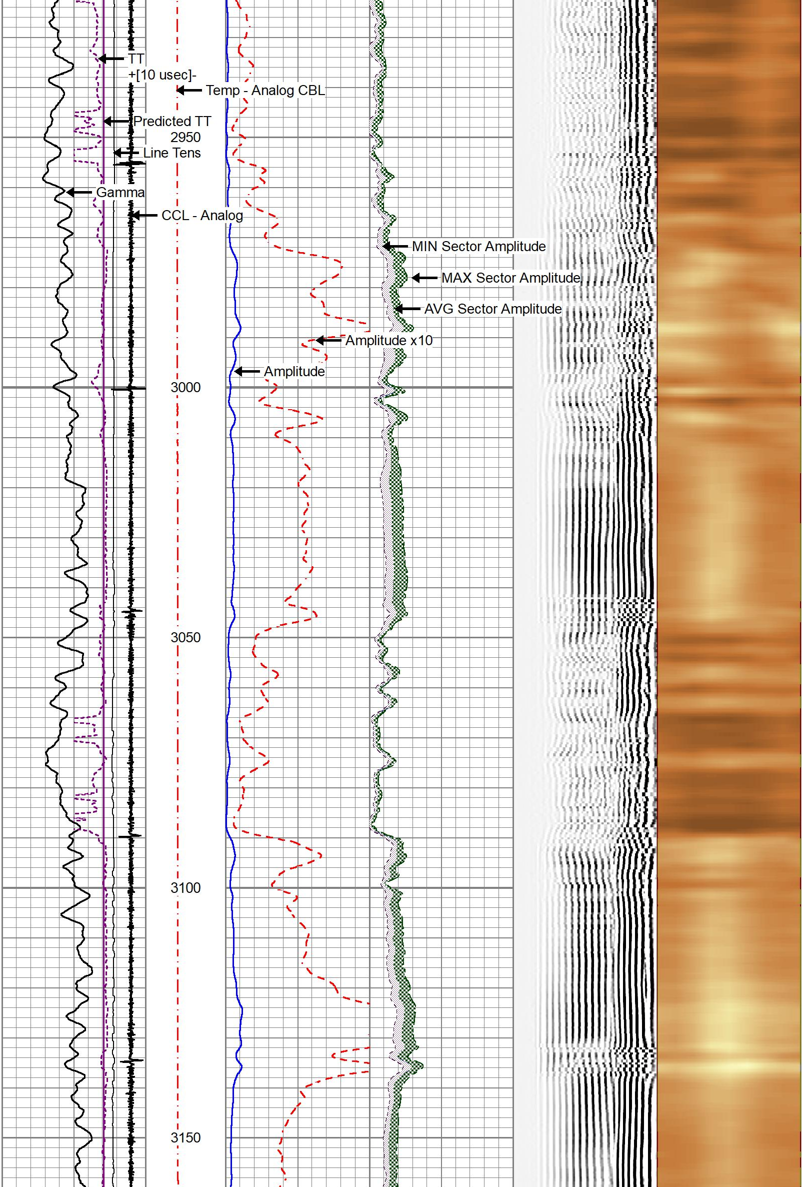


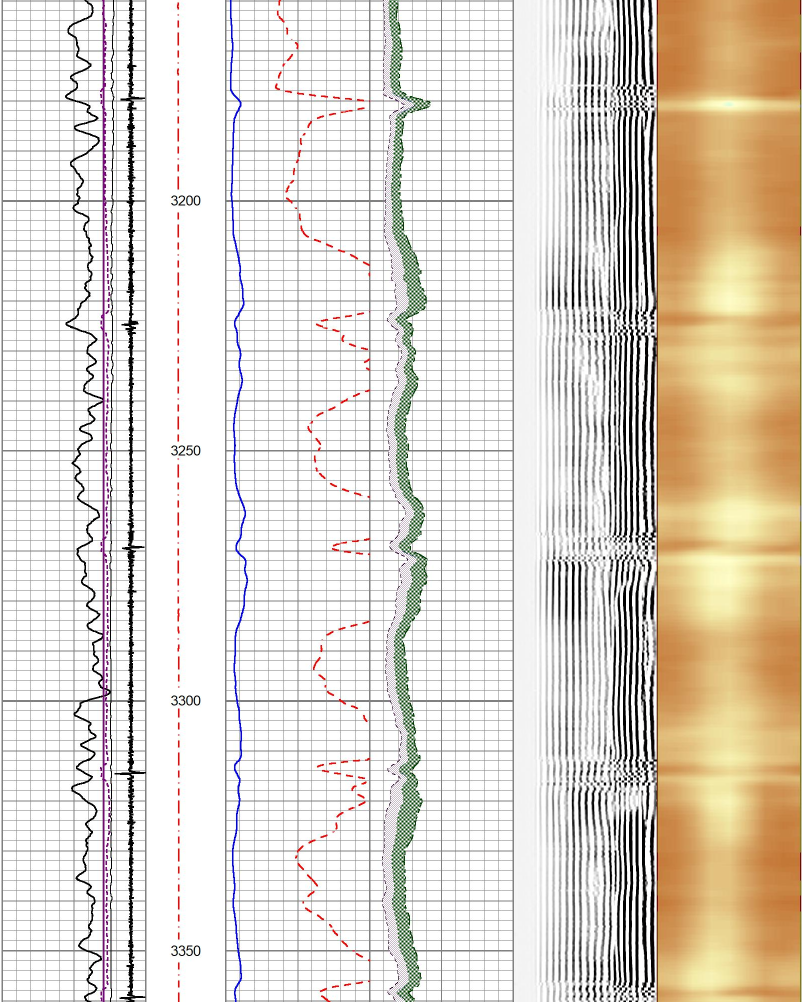


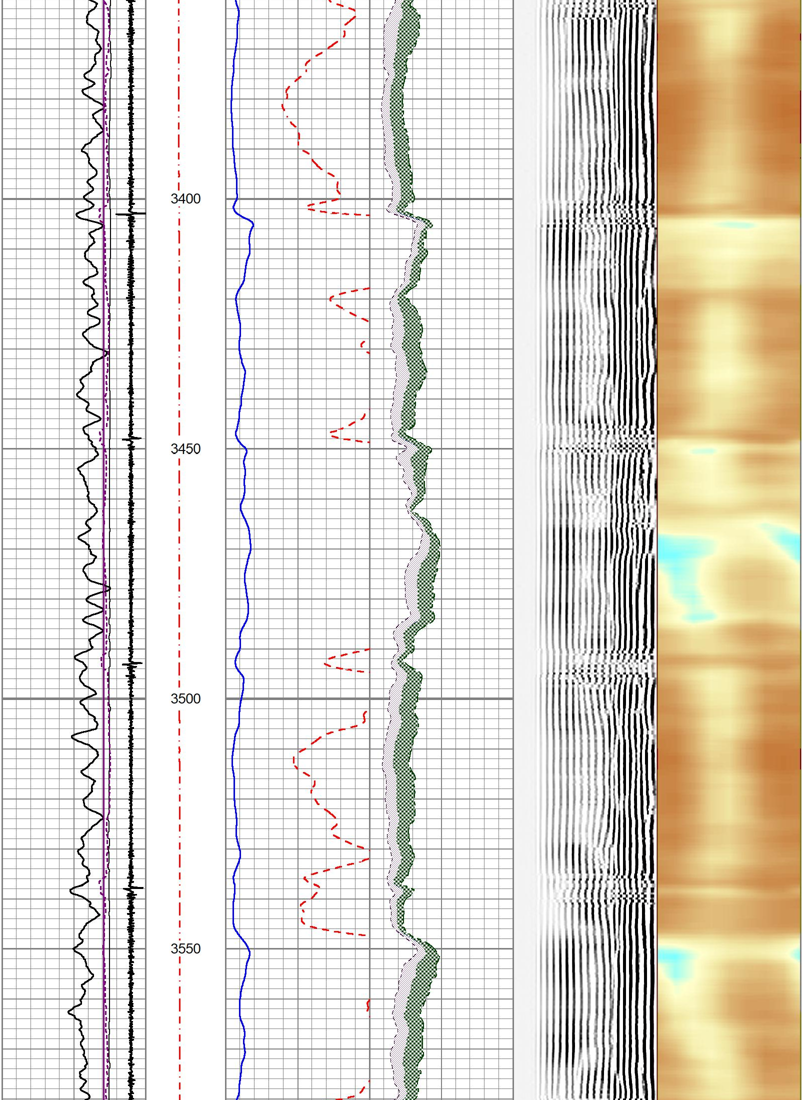


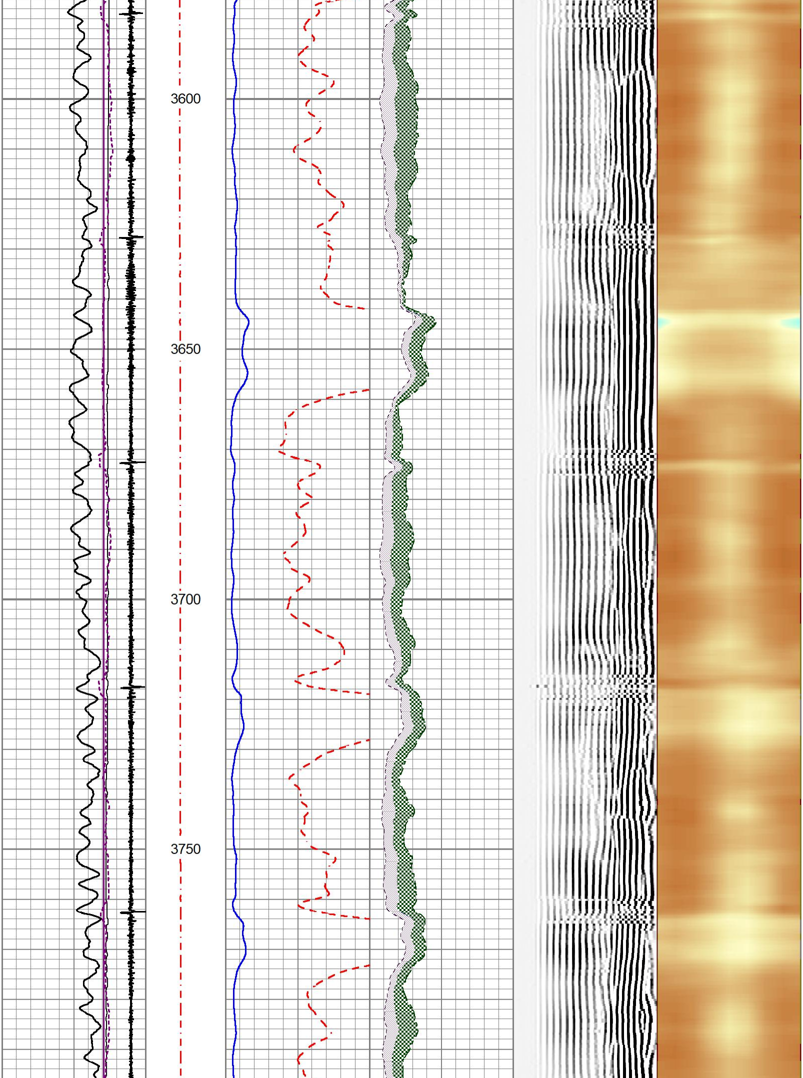


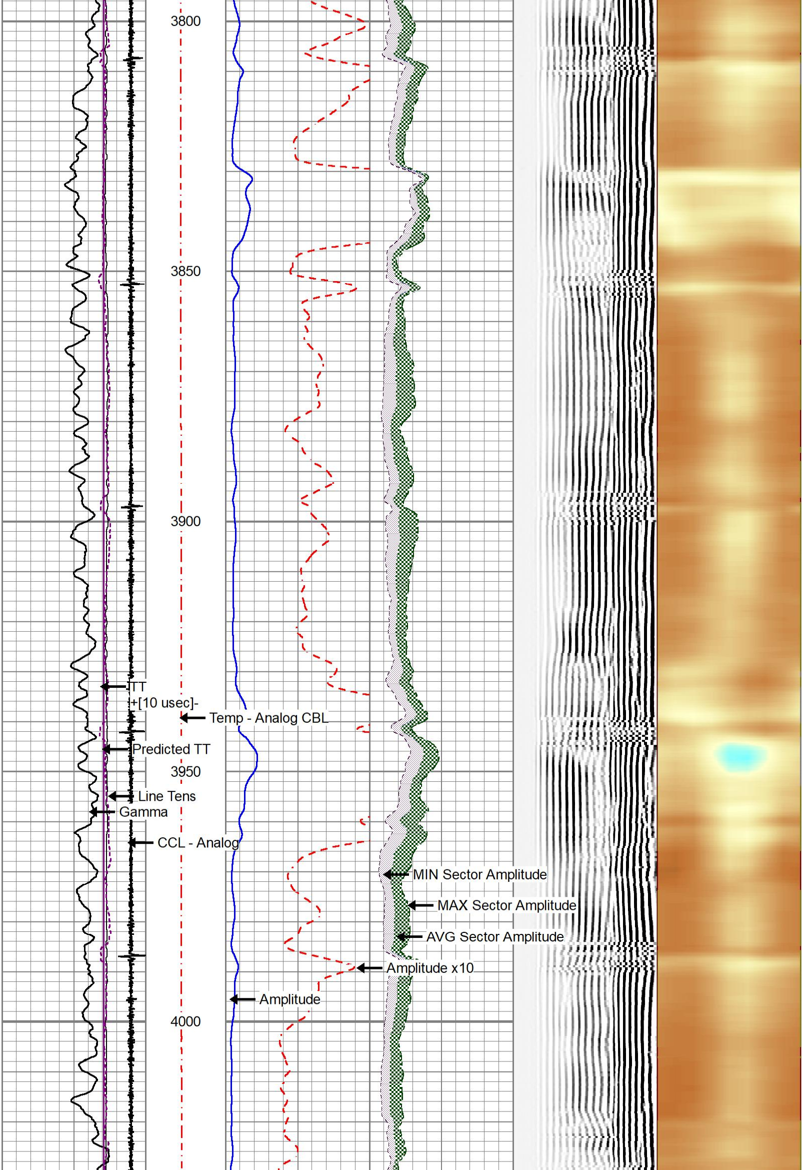


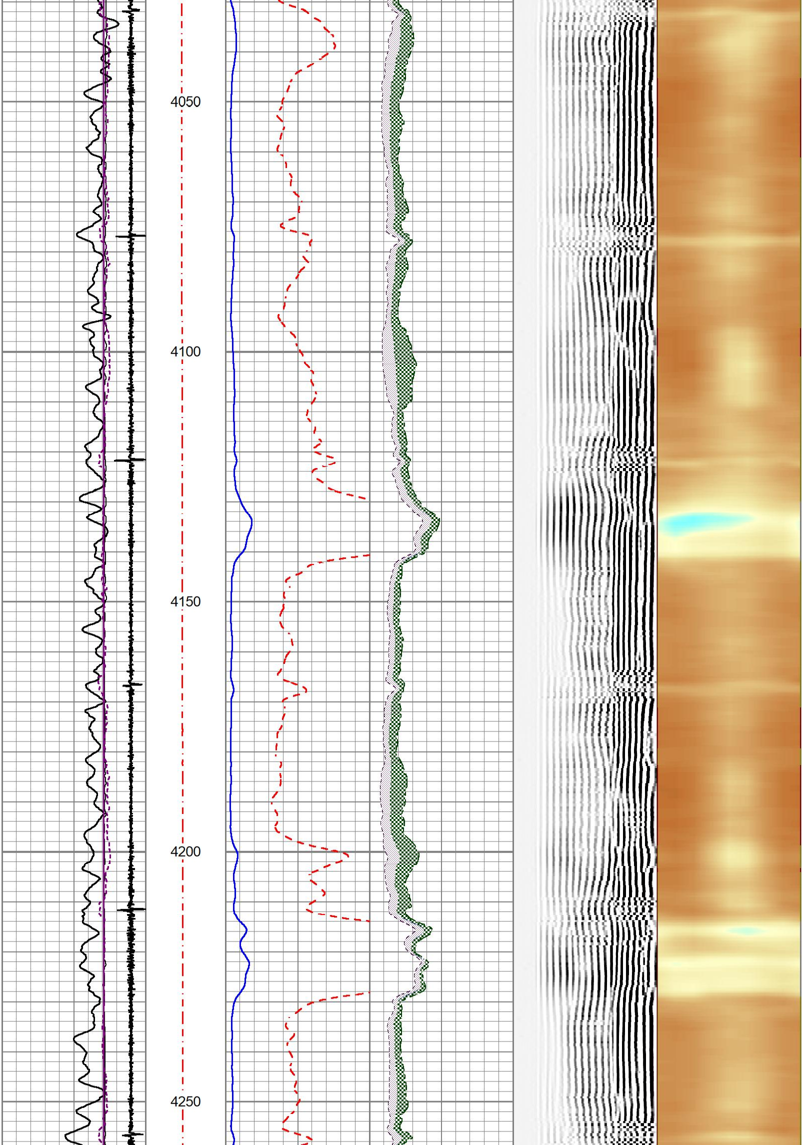


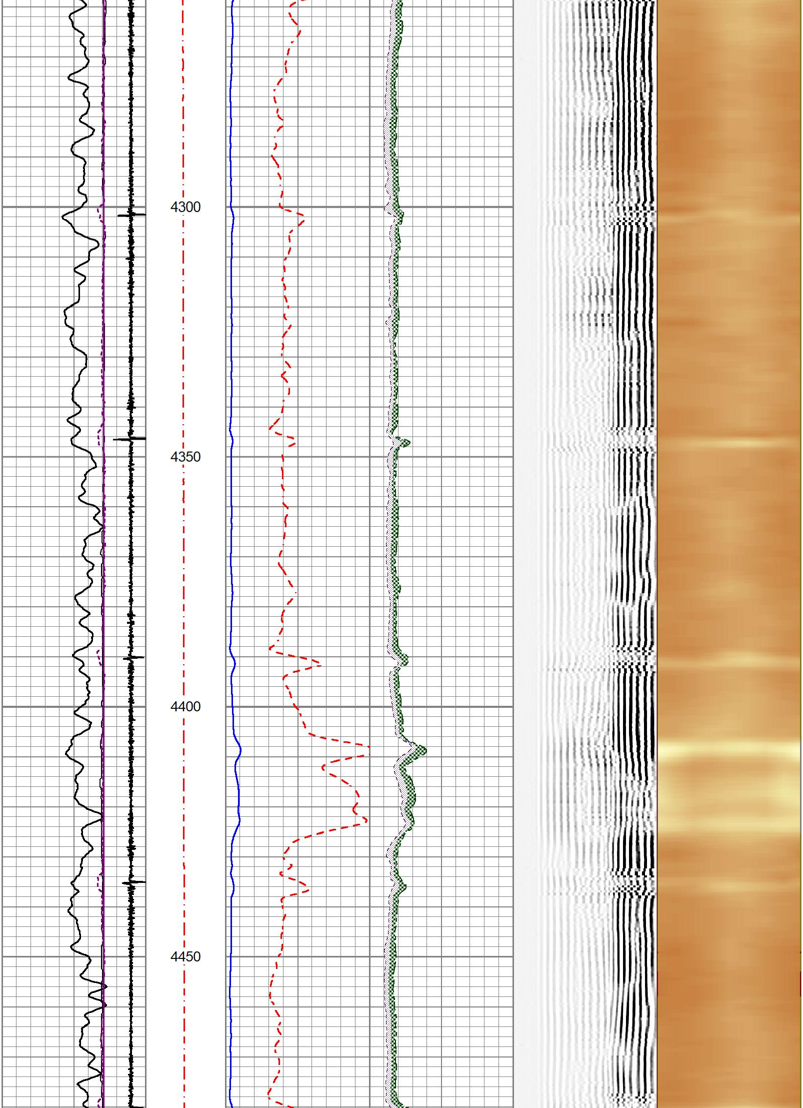


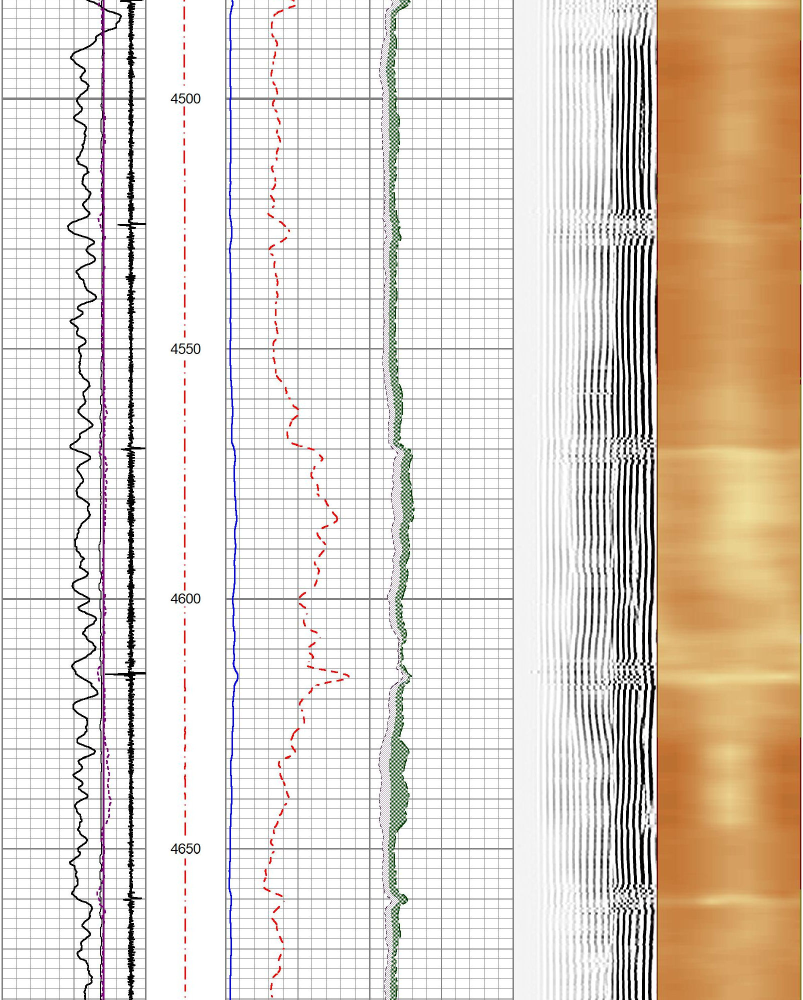


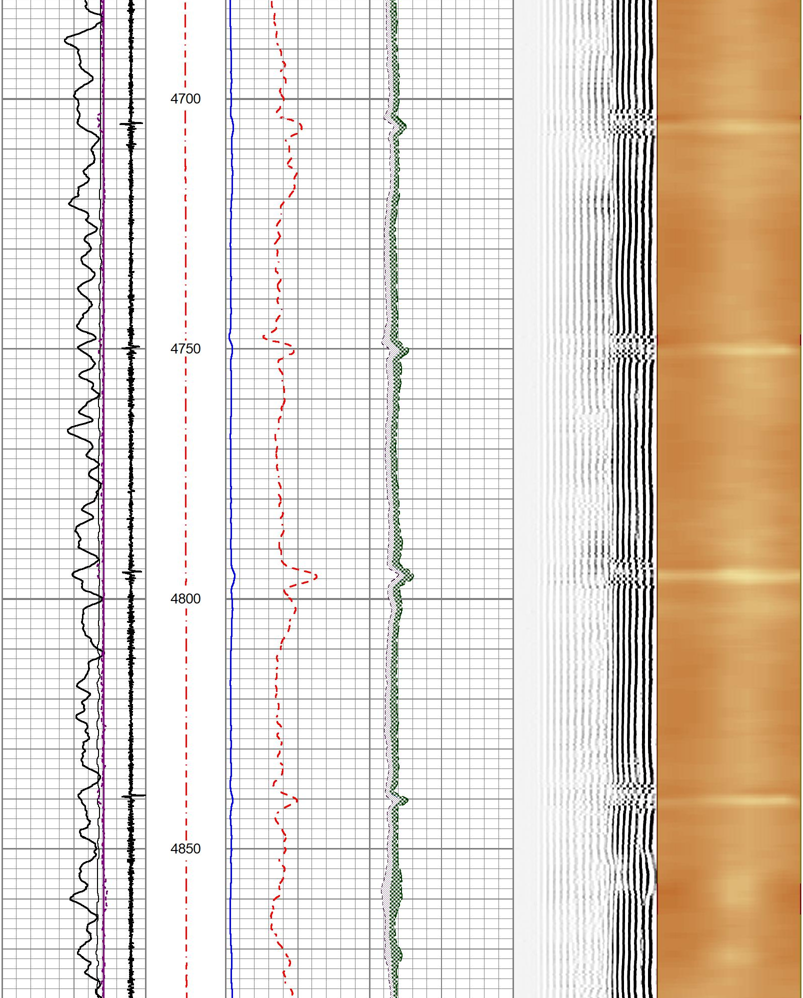


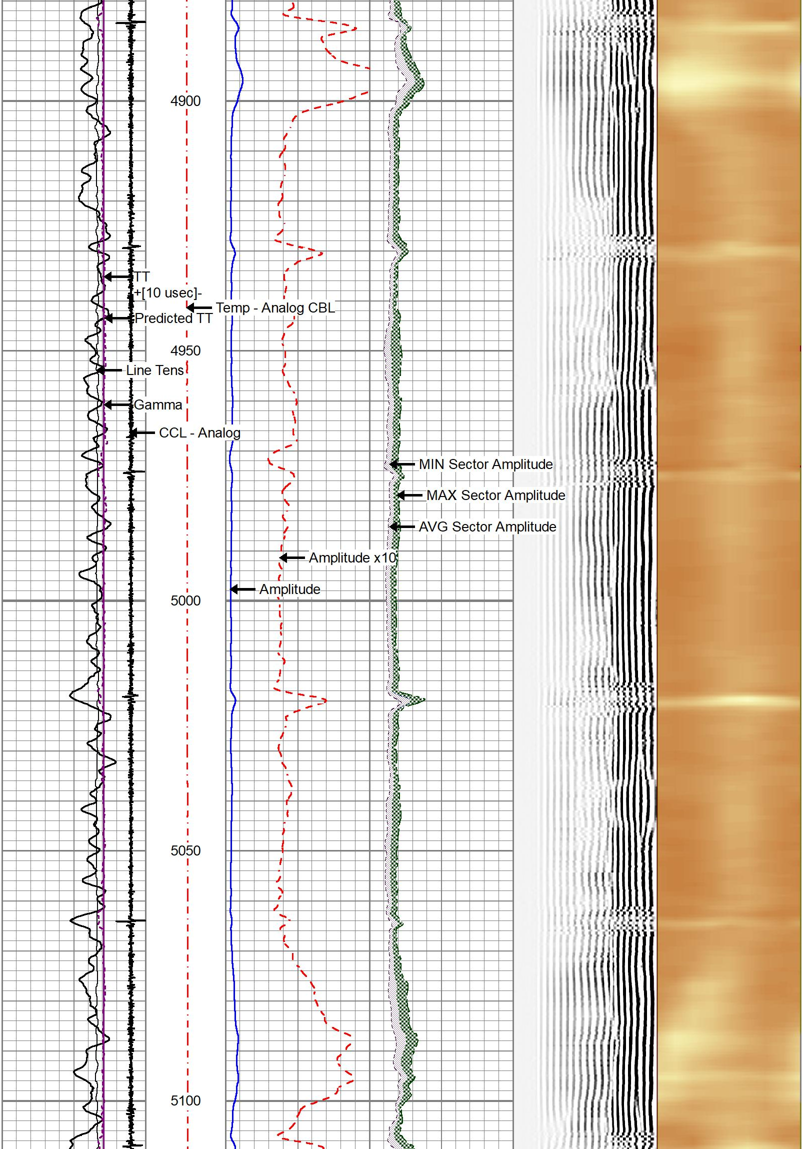


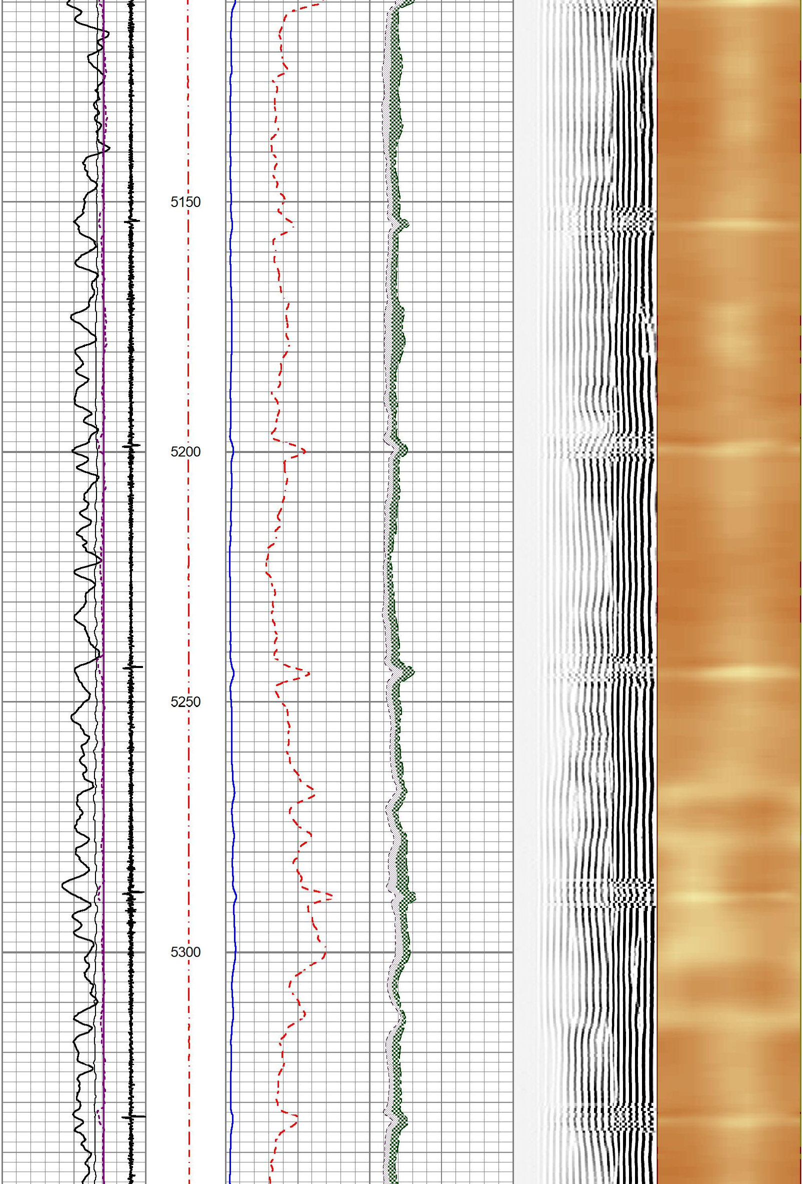


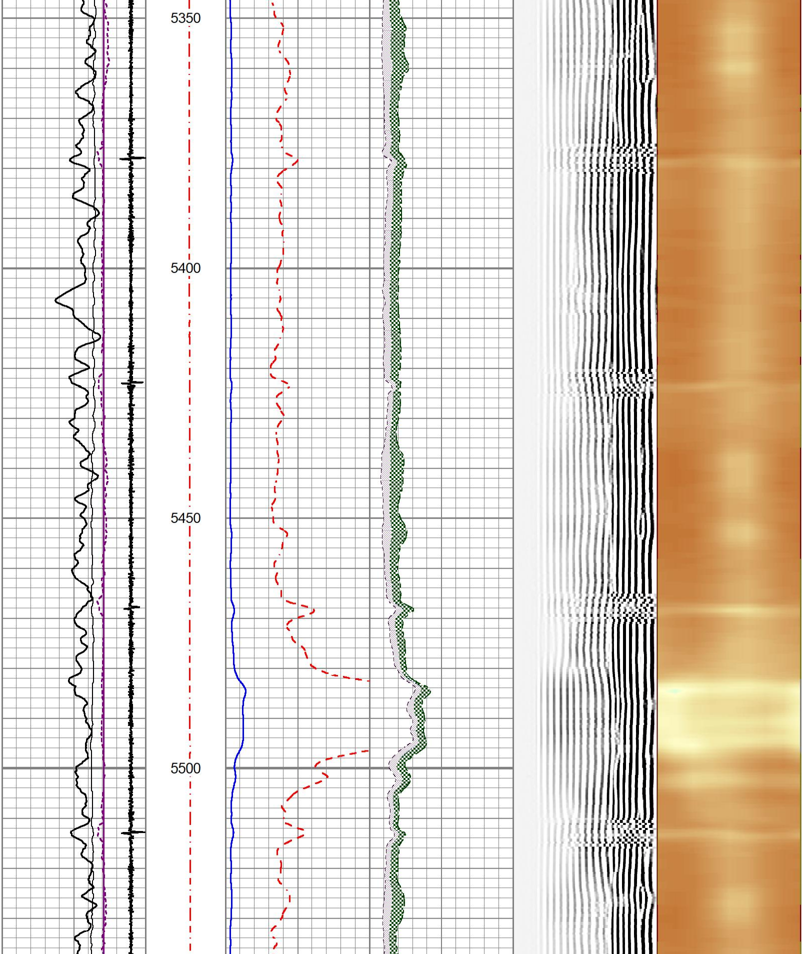


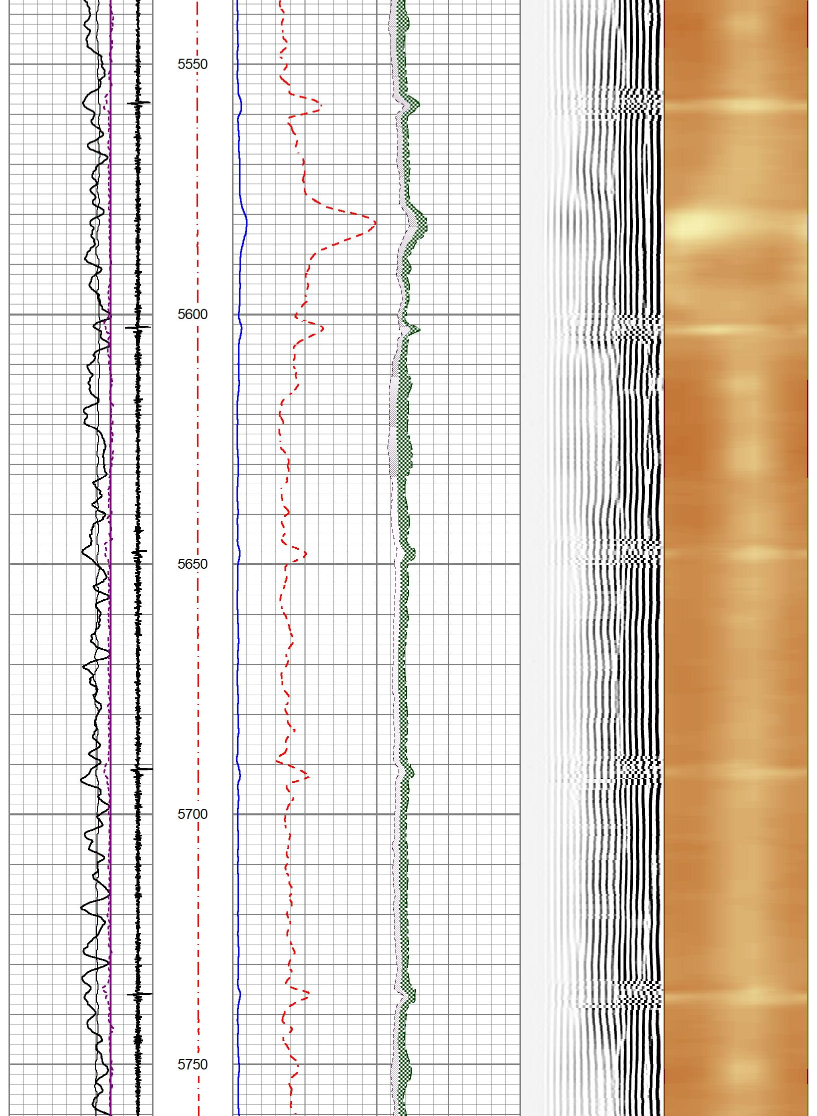


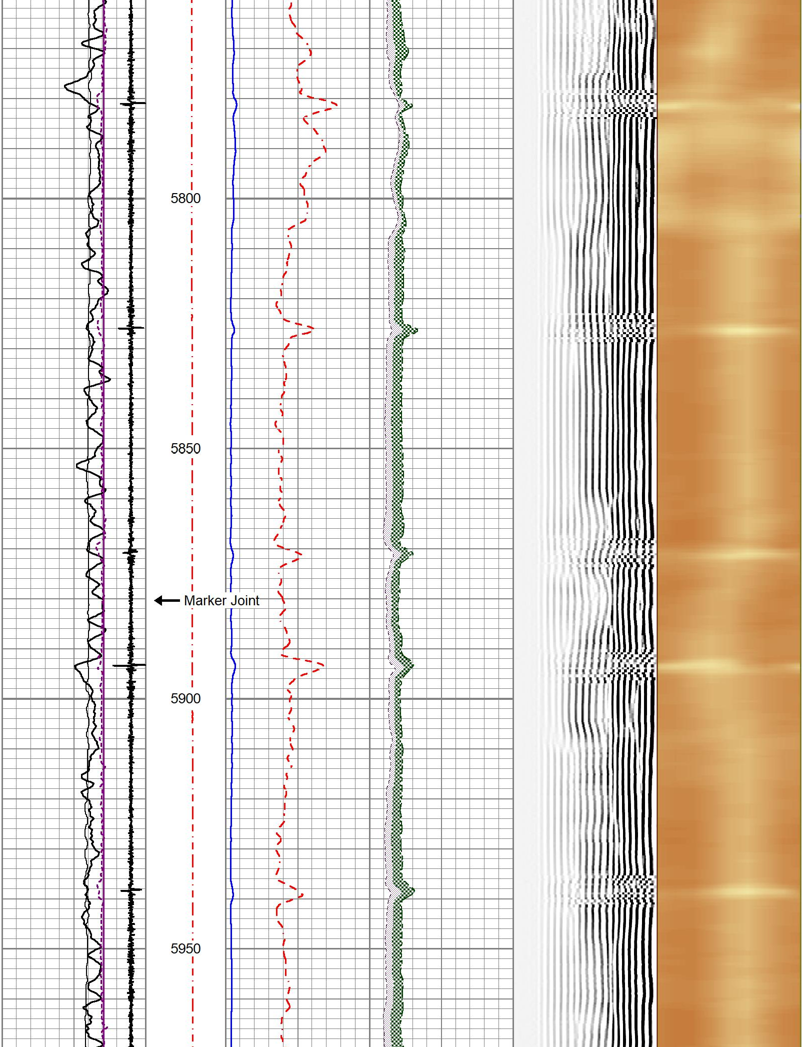


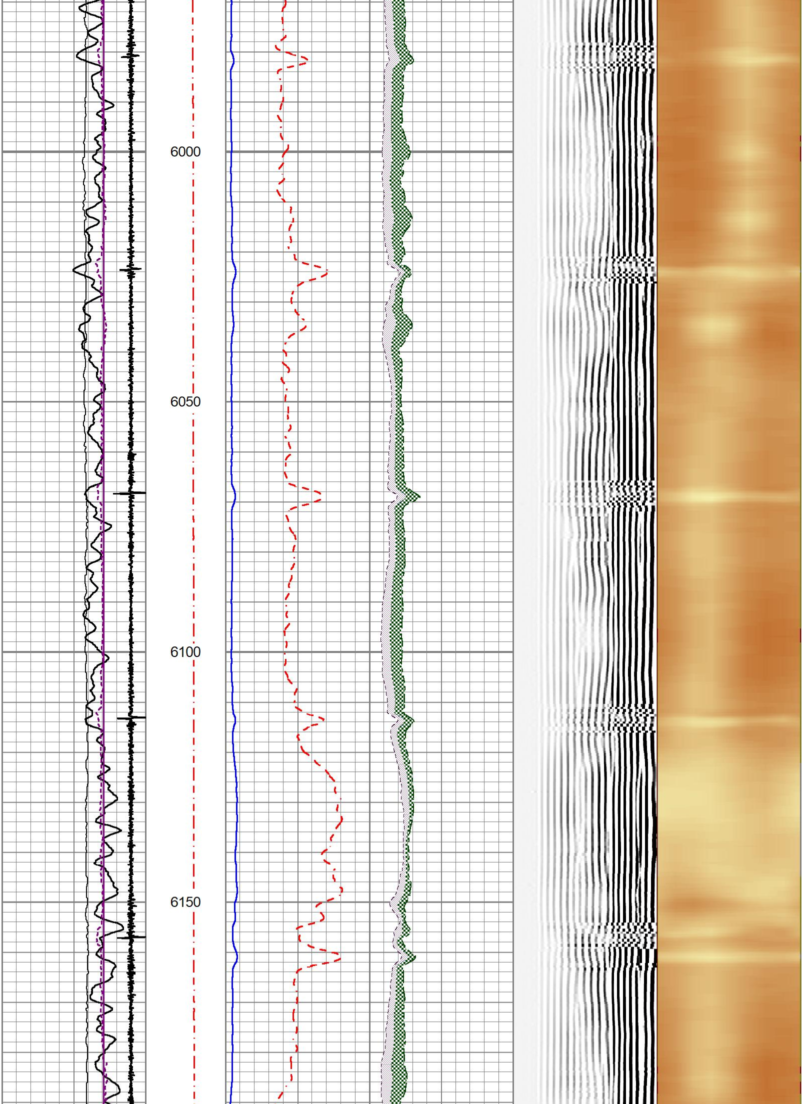


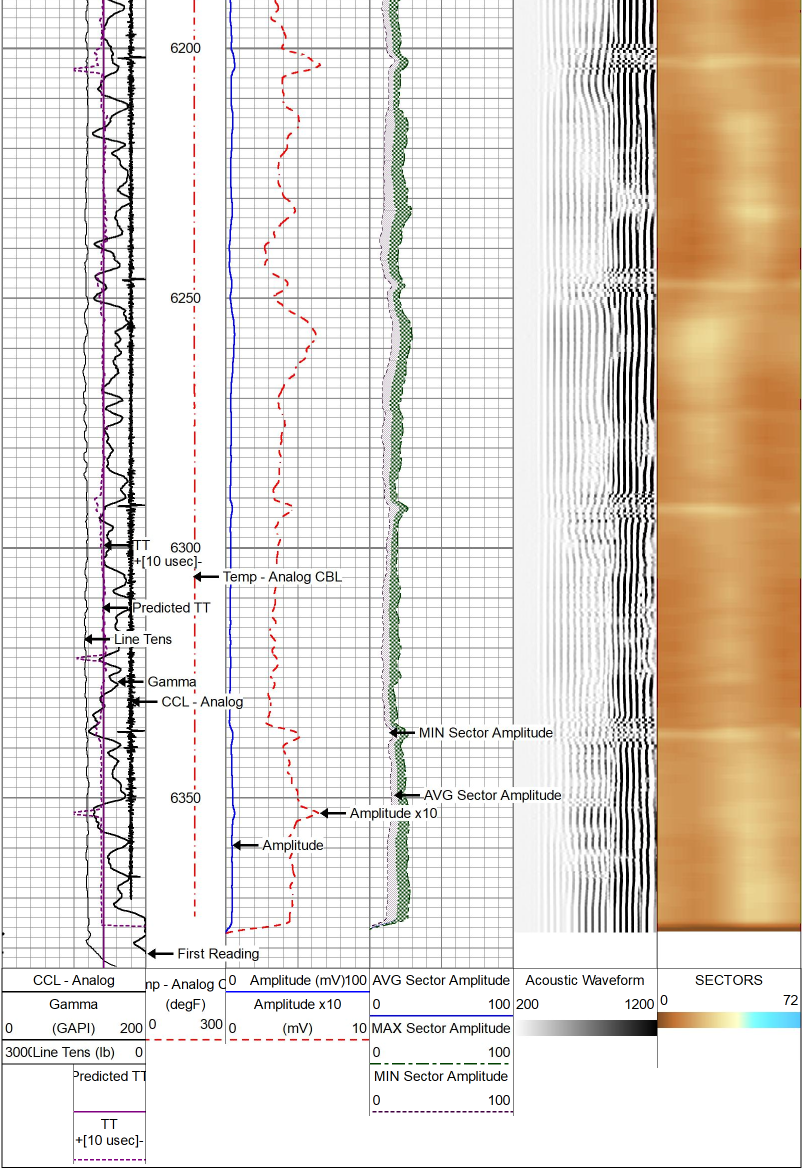












MAIN PASS - Ran with 0 PSI

5 in / 100 ft

REPEAT PASS - Ran with 0 PSI

5 in / 100 ft

Database File	20180605_extraction_bf_8e-10-1n_cbl\20180605_extraction_bf_8e-10-1n_cbl.db
Dataset Pathname	pass3
Presentation Format	rcbl_8s
Dataset Creation	Tue Jun 05 05:24:54 2018
Charted by	Depth in Feet scaled 1:240

CCL - Analog
Gamma
0 (GAPI) 200
300(Line Tens (lb) 0
Predicted TT
TT
+[10 usec]-

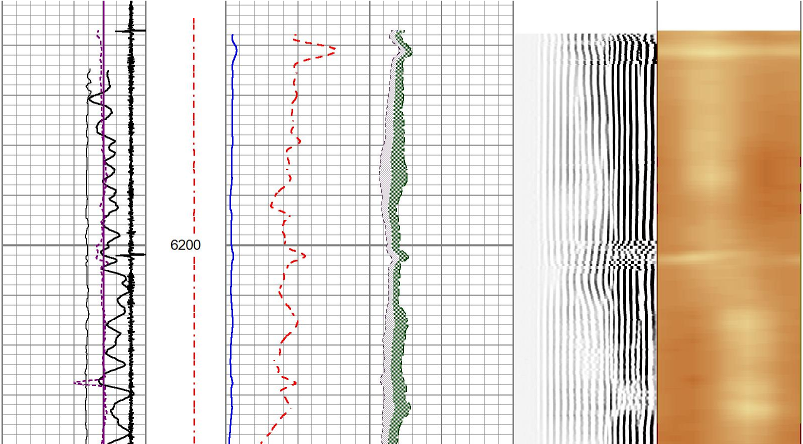
np - Analog C
(degF)
0 300

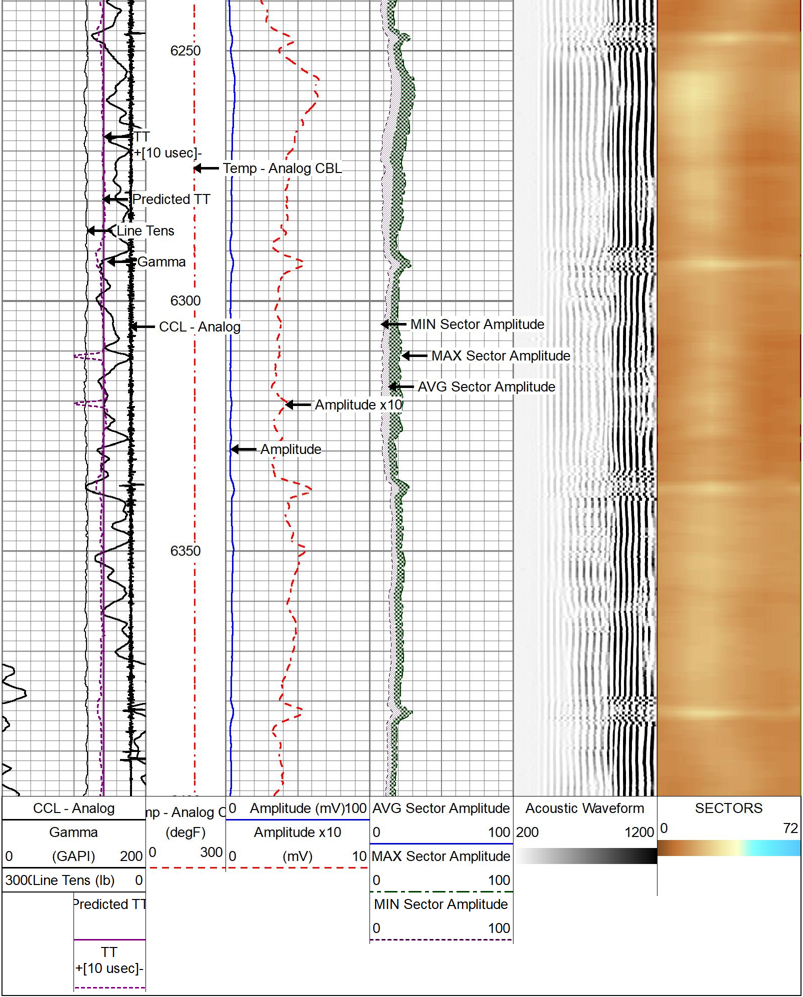
0 Amplitude (mV) 100
Amplitude x10
0 (mV) 10

AVG Sector Amplitude
0 100
MAX Sector Amplitude
0 100
MIN Sector Amplitude
0 100

Acoustic Waveform
200 1200

SECTORS
0 72





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REPEAT PASS - Ran with 0 PSI

5 in / 100 ft

Calibration Report

Database File	c:\programdata\warrior\data\20180605_extraction_bf_8e-10-1n_cbl\20180605_extraction_bf_8e-10-1n_cbl.d
Dataset Pathname	pass4
Dataset Creation	Tue Jun 05 05:30:47 2018

Gamma Ray Calibration Report

Serial Number:	ISHV2-02	
Tool Model:	2 3/4" TekCo	
Performed:	Tue Dec 13 00:15:13 2016	
Calibrator Value:	194.0	GAPI
Background Reading:	59.8	cps
Calibrator Reading:	287.6	cps
Sensitivity:	0.8516	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	IT4B1-01	
Tool Model:	2 3/4" RIB Analog	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	0.000	ft

Calibration Depth: 0.000 ft

Master Calibration, performed Sun Jun 03 07:26:23 2018:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.004	1.074	0.000	71.921	67.201	-0.239
CAL	0.000	0.290				
5'	0.008	1.202	0.000	71.921	60.220	-0.471
SUM						
S1	0.014	0.832	0.000	72.000	88.002	-1.226
S2	0.017	0.904	0.000	72.000	81.139	-1.363
S3	0.033	1.015	0.000	72.000	73.353	-2.440
S4	0.049	1.118	0.000	72.000	67.386	-3.330
S5	0.058	1.171	0.000	72.000	64.715	-3.777
S6	0.043	1.000	0.000	72.000	75.267	-3.250
S7	0.026	0.977	0.000	72.000	75.716	-1.991
S8	0.017	0.854	0.000	72.000	86.079	-1.488

Internal Reference Calibration, performed Fri Aug 25 16:20:58 2017:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.290	0.000	0.290	1.000	0.000

Air Zero Calibration, performed Fri Aug 25 16:20:58 2017:

	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

Temperature Calibration Report

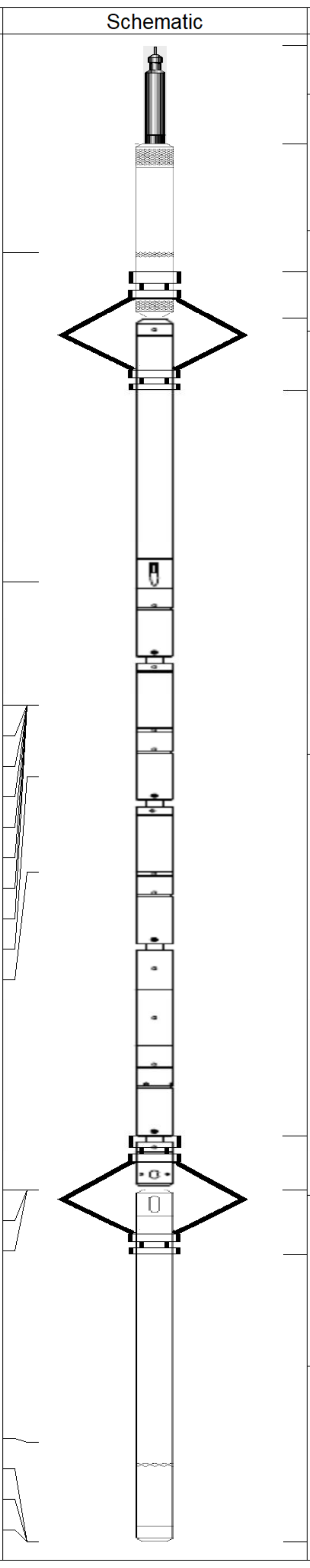
Serial Number: IT4B1-01
Tool Model: 2 3/4" RIB Analog
Performed: Fri Aug 26 11:07:15 2016

	Reference		Reading	
Low Reference:	0.00	degF	0.00	usec
High Reference:	1.00	degF	1.00	usec

Gain: 0.33
Offset: 0.00
Delta Spacing 1

Sensor	Offset (ft)
CCL	13.50
TEMP	10.05
WVFS8	8.76
WVFS7	8.76
WVFS6	8.76
WVFS5	8.76
WVFS4	8.76
WVFS3	8.76
WVFS2	8.76
WVFS1	8.76
WVF3FT	8.01
WVF5FT	7.01
WVFSYNC	3.68
WVFTEMP	3.68
WVFCAL	3.68
GR	1.04
LOCTIM	0.00
UTCTIM	0.00
PMON	0.00

Schematic



Description	Length (ft)	O.D. (in)	Weight (lb
CableHead-TitanConeType2	1.03	1.44	3.60
CCL_Log-2 3/4" TekCo (IS2T1-09)	1.83	2.75	33.00
Antelope-Overbody	1.25	2.75	
RBTA-2 3/4" RIB Analog (IT4B1-01)	9.13	2.75	102.00
Antelope-Overbody	1.25	2.75	
GR_Log-2 3/4" TekCo (ISHV2-02)	3.68	2.75	47.00

Dataset: 20180605_extraction_bf_8e-10-1n_cbl.db: field/well/run1/pass4
Total length: 15.67 ft
Total weight: 185.60 lb
O.D.: 2.75 in

gyrodata

Company	**Extraction Oil & Gas**
Well	**Berthoud Farms 8e-10-1n**
Field	**Wattenberg**
County	**Weld**
State	**Colorado**
Country	**U.S.A.**