CEMENT BOND LOG

Company Extraction Oil and Gas, Inc.
Well Rinn Valley East N17-20-10C
Field Wattenberg
County Weld
State Colorado

Company Extraction Oil and Gas, Inc.
Well Rinn Valley East N17-20-10C
Field Wattenberg
County Weld State Colorado
API # : 05 123 41179
Location: SE/SE 197 FSL 449 FEL
SEC: 2N TWP: 25 RGE: 68W
Other Services
Elevation
K.B. 4962
D.F. 4961
G.L. 4937

Permanent Datum: Ground Level Elevation: 4937
Log Measured From: Kelly Bushing , 25 ft. above Permanent Datum.
Drilling Measured From: Kelly Bushing

Date	22 September 2018
Run Number	One
Plug Back T.D. Driller	----
Plug Back T.D. Logger	----
Bottom Logged Interval	8290
Top Log Interval	Surface
Type Fluid	Water
Density / Viscosity	----
Max Recorded Temp.	237
Time Logger on Bottom	16:30
Equipment Number	GD114
Location	Casper, WY
Recorded By	GS Yarbro
Witnessed By	Mr. Cary

Casing Record				Tubing Record			
Size	Weight	From	To	Size	Weight	From	To
9 5/8	----	25	----				
5 1/2	----	25	----				

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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.

Ticket # : RM0918PCBW901
Your Crew Today: Graham, Pena
Log Correlated to: Surface

Cement Data	
Date Cemented	----
Primary / Squeeze	Primary
Type / Weight	----
Main Pass Press.	Zero
Repeat Pass Press.	Zero

Bond Index

Index %	Est Top Depth
20 % Bond	510
40 % Bond	685
60 % Bond	1044
80 % Bond	----
100 % Bond	----

Comments

Estimated Top of Cement
(20% Bond Index) @ 510'

Thank you for using Gyrodata

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

Log Variables

Databased:\warrior\data\20180922_extraction_rinn valley east n17-20-10c_cbl\20180922_extraction
Dataset field/well/run1/pass3.1/_vars_

Top - Bottom

BHTEMP_Src	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MAXAMPL mV	MaxAPIID in
TEMP	8.5	100	5.5	0.361	20	71.9	4.923

MINAMPL mV	MinAPIID in	MINATTN db/ft	PPT usec	TDEPTH ft
1.9	4.751	0	235	0

BOND INDEX

Database File 20180922_extraction_rinn valley east n17-20-10c_cbl\20180922_extraction_rinn valley east n17-20-10c_c
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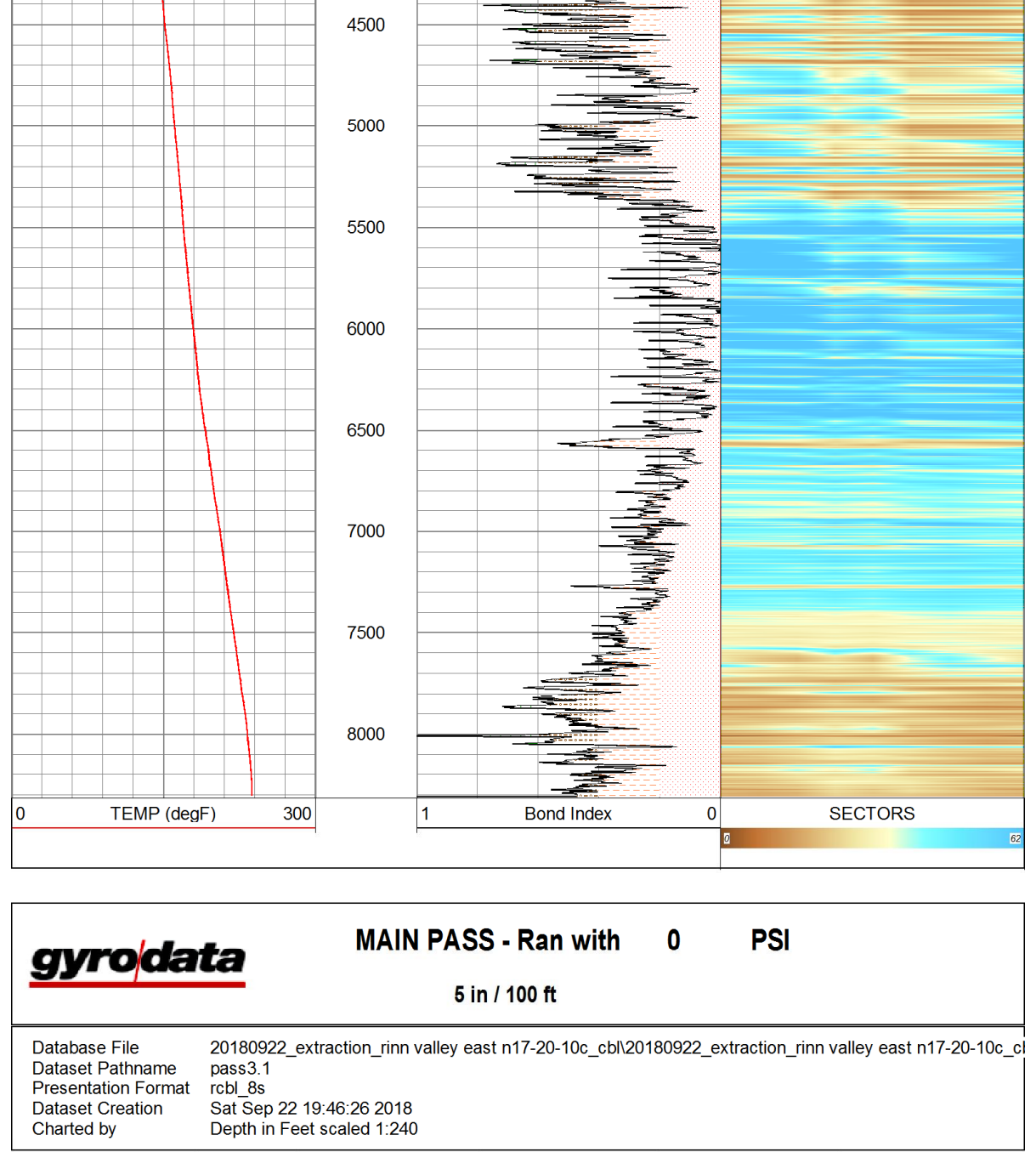
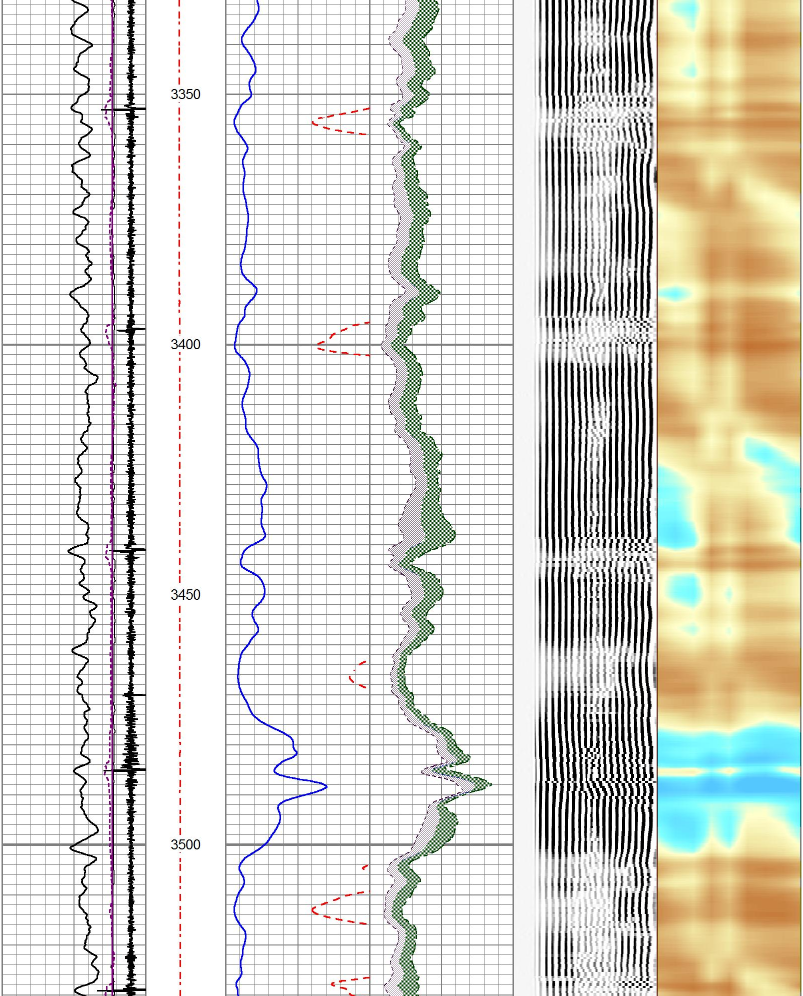
Presentation Format BNDIND~1
Dataset Creation Sat Sep 22 19:51:14 2018
Charted by Depth in Feet scaled 1:7500



MAIN PASS - Ran with 0 PSI

5 in / 100 ft

Database File 20180922_extraction_rinn valley east n17-20-10c_cbl\20180922_extraction_rinn valley east n17-20-10c_c
Dataset Pathname pass3.1
Presentation Format rcbl_8s
Dataset Creation Sat Sep 22 19:46:26 2018
Charted by Depth in Feet scaled 1:240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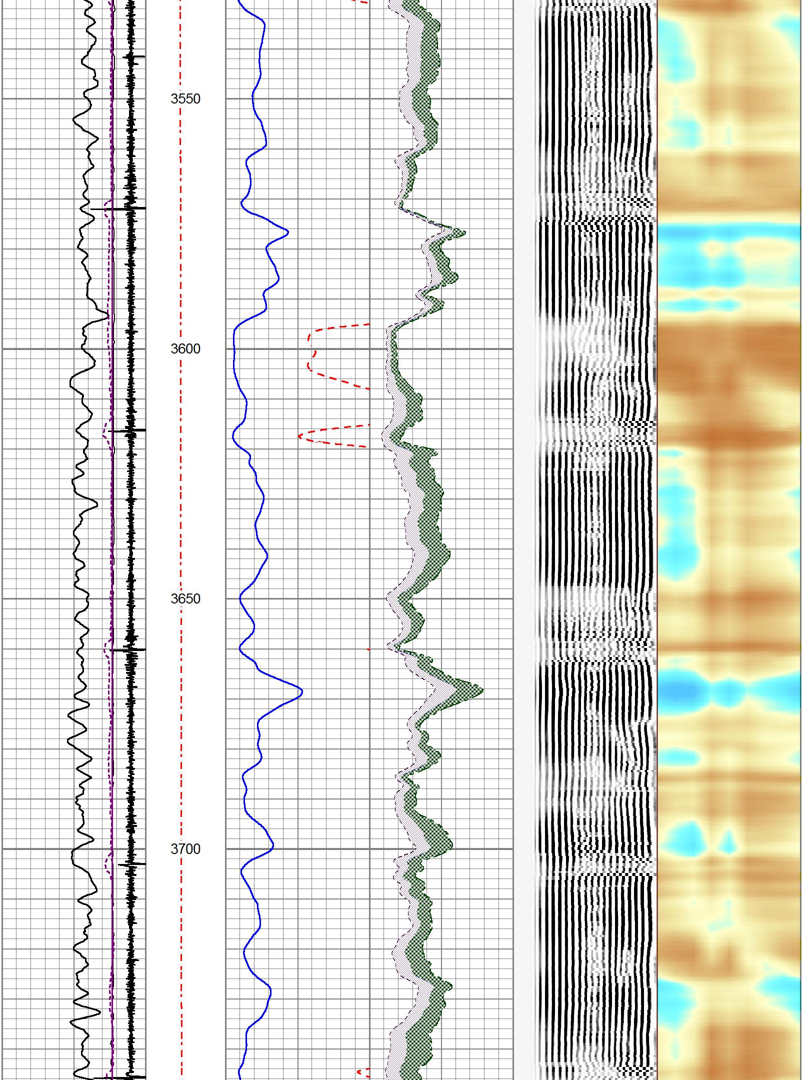
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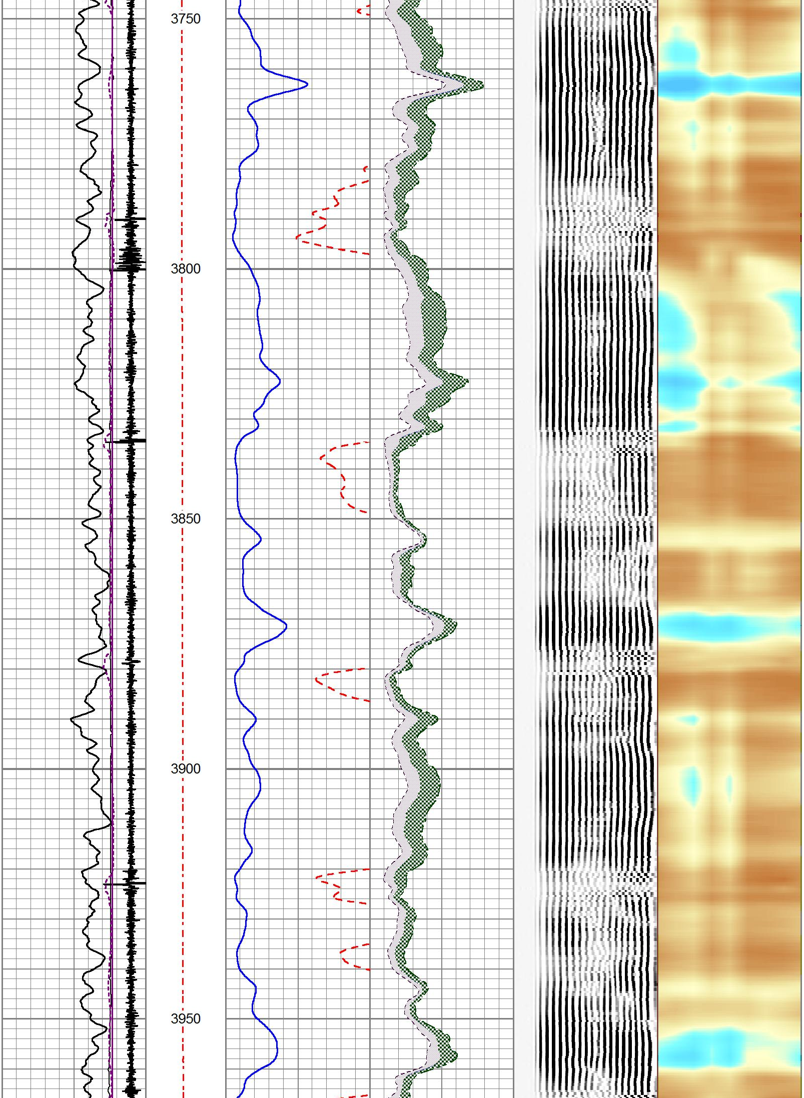
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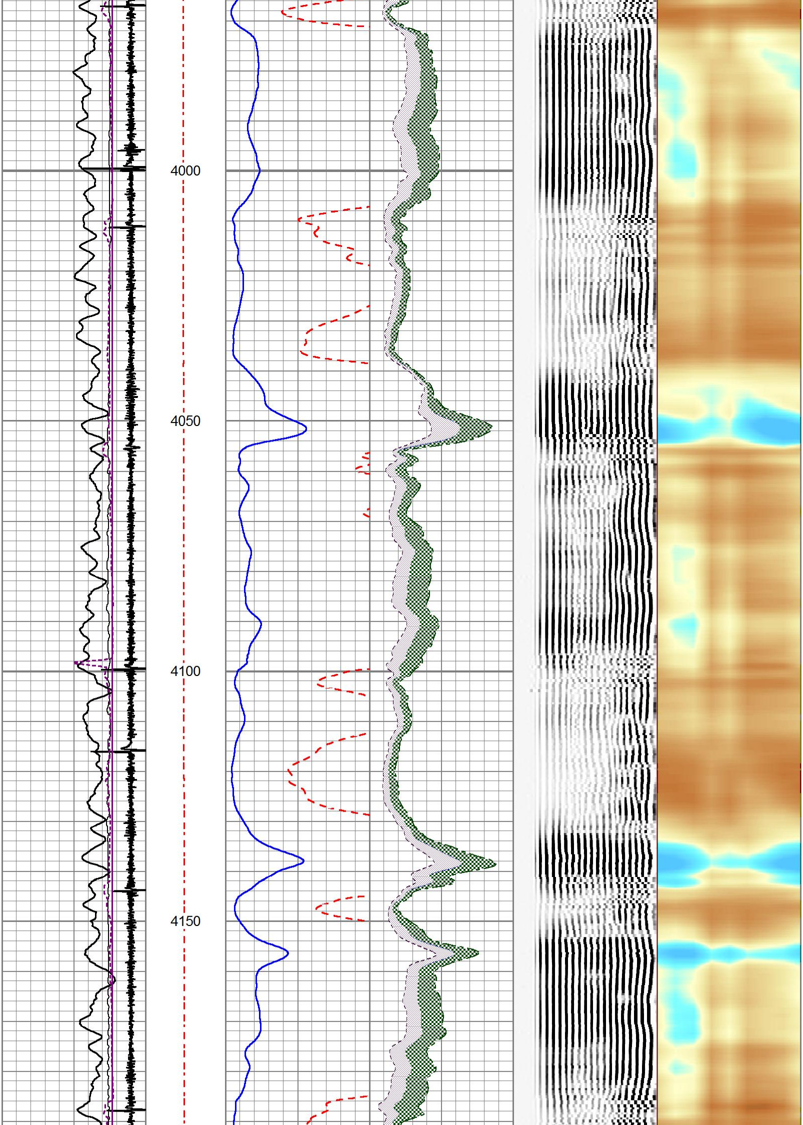
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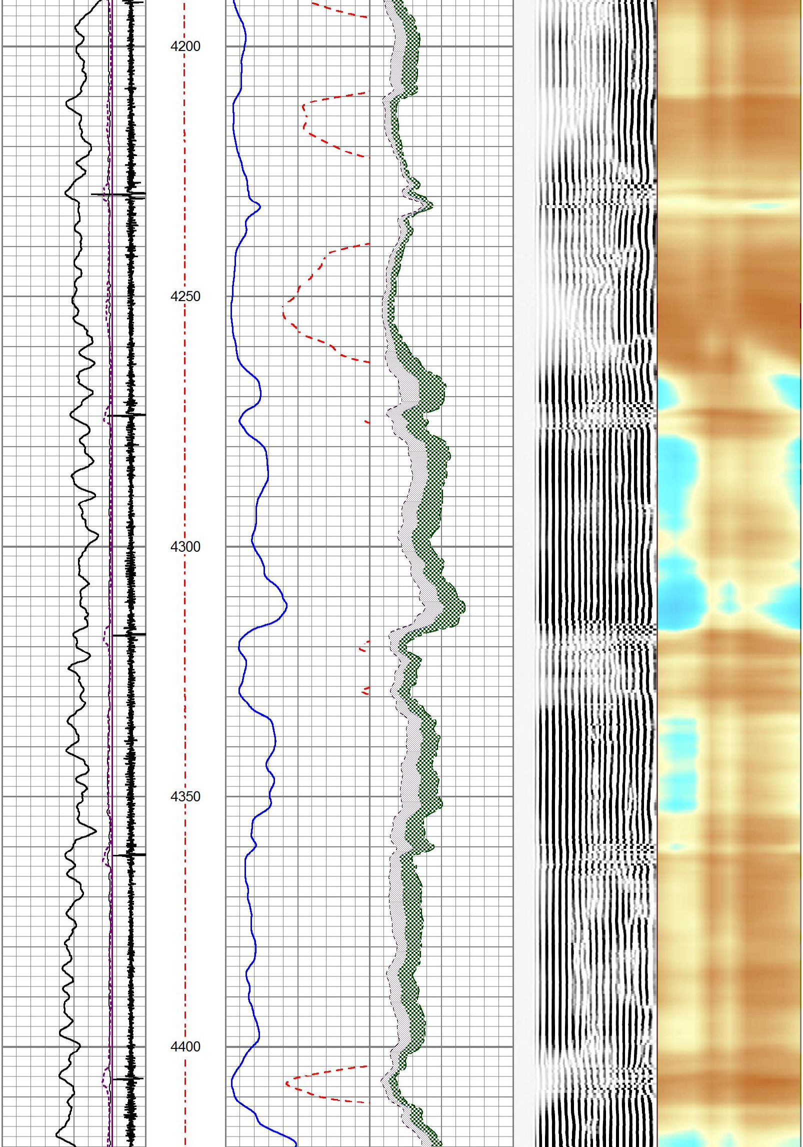
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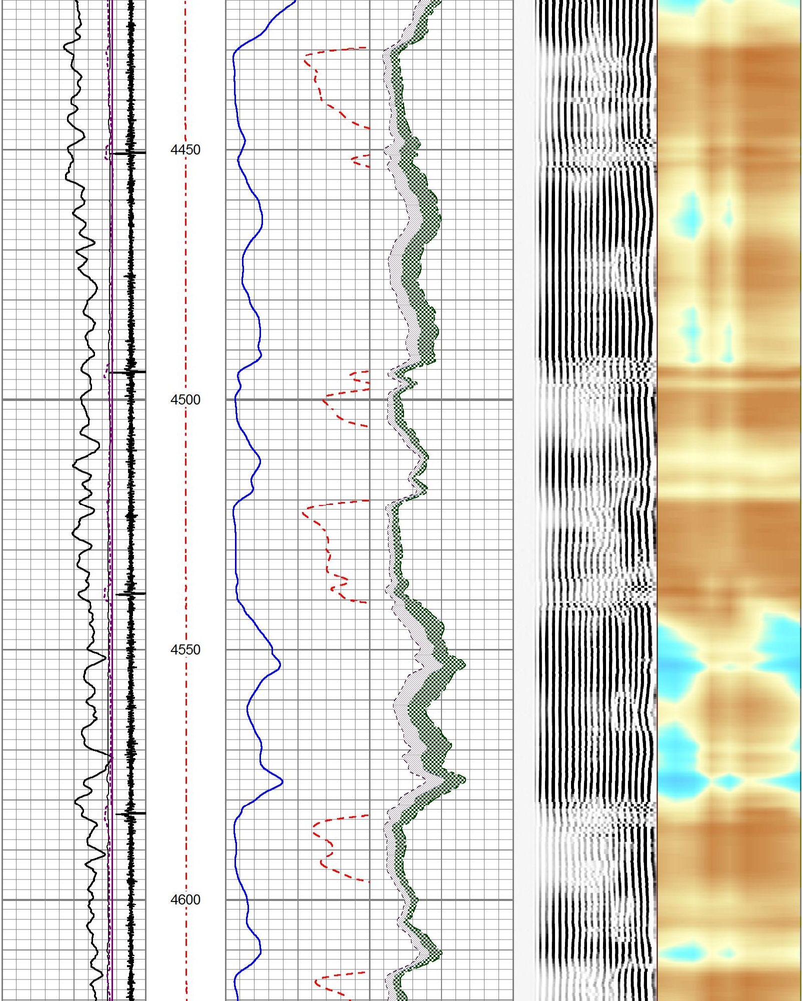
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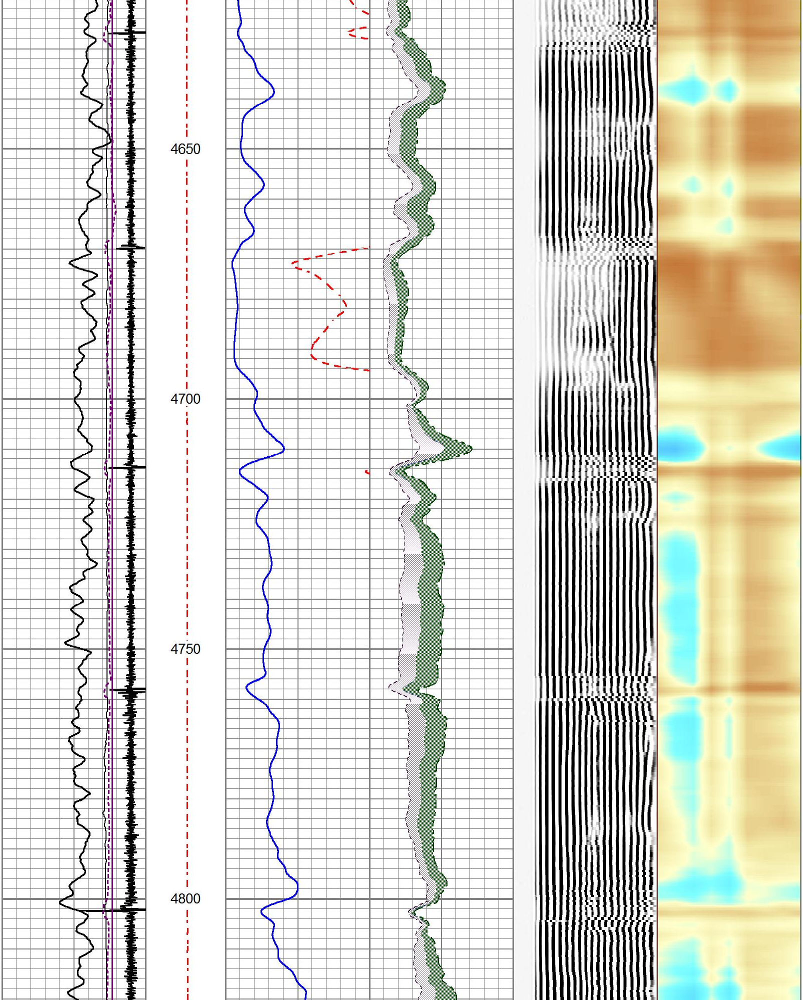
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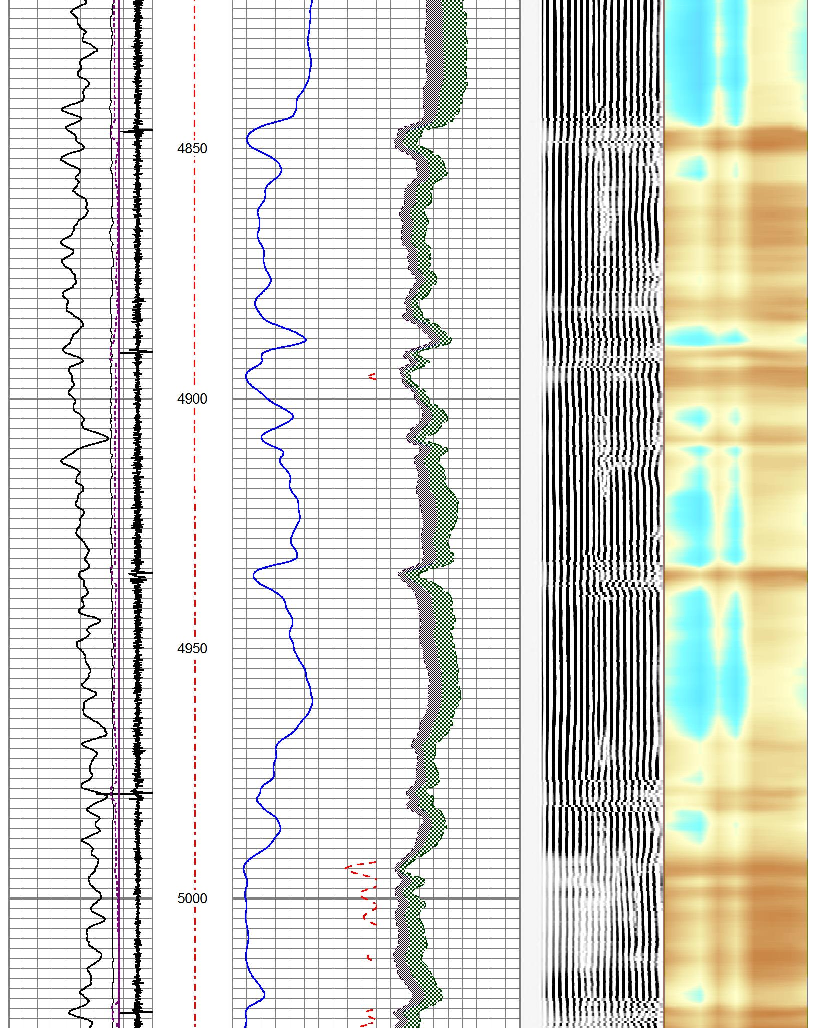
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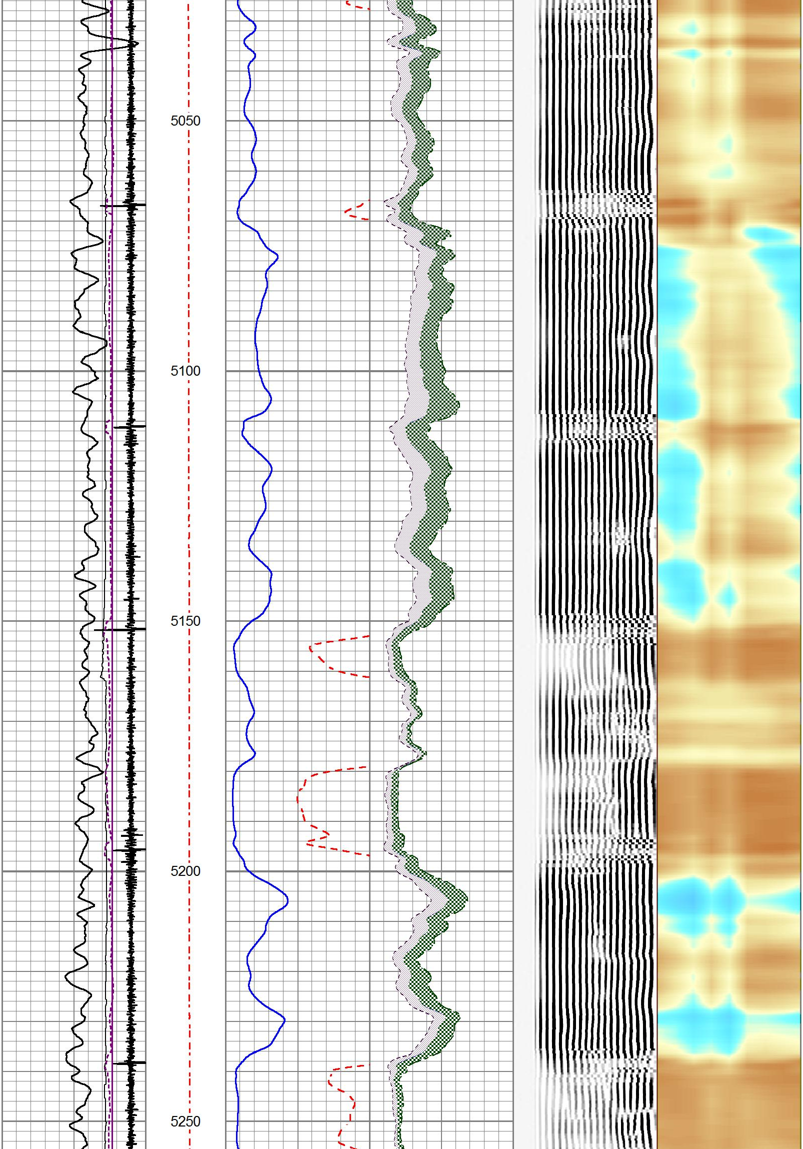
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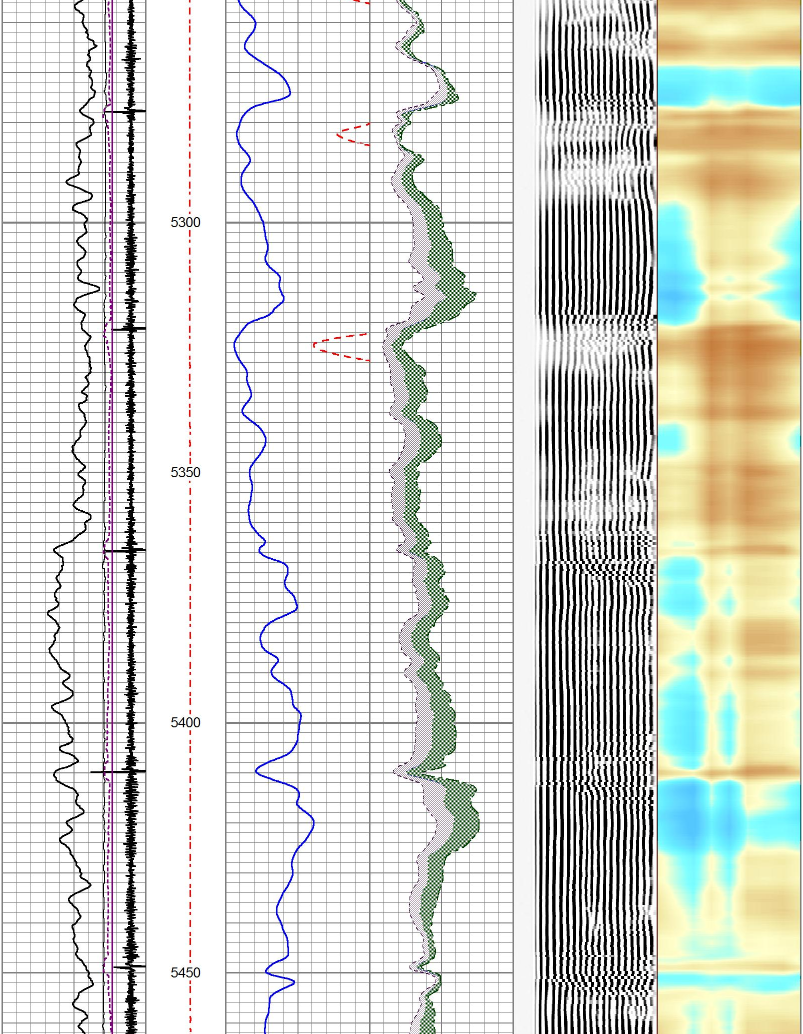
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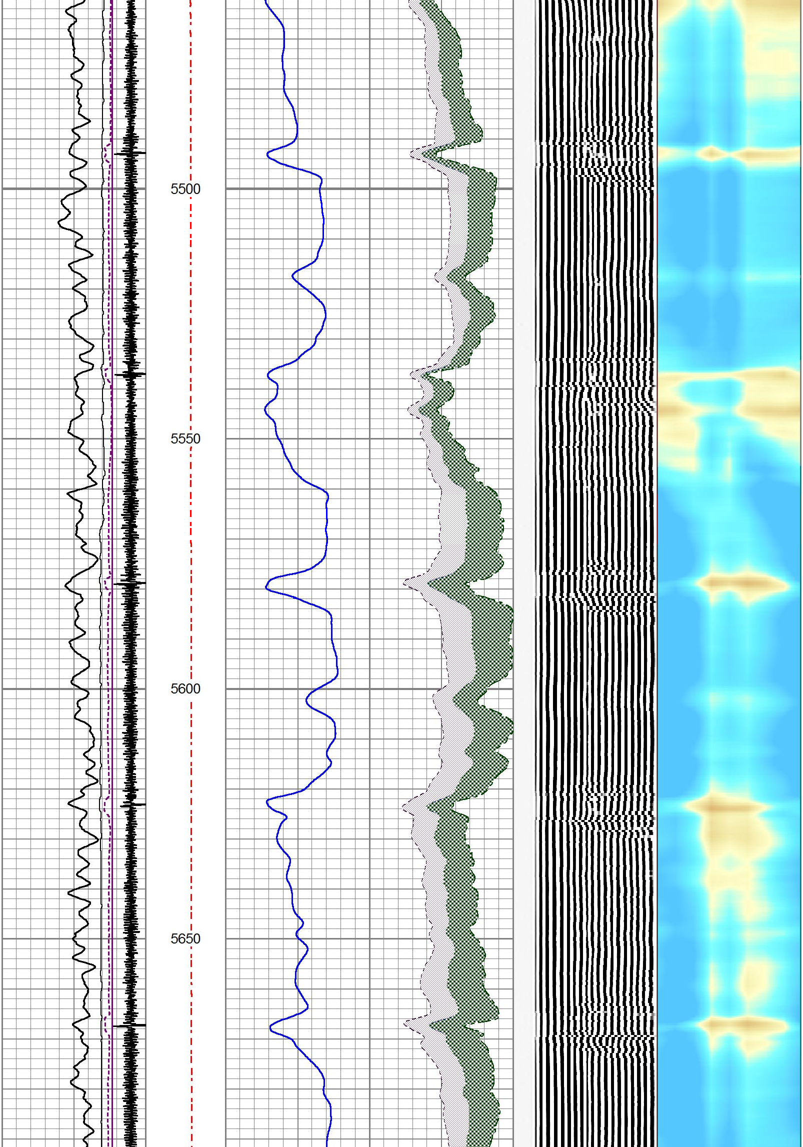
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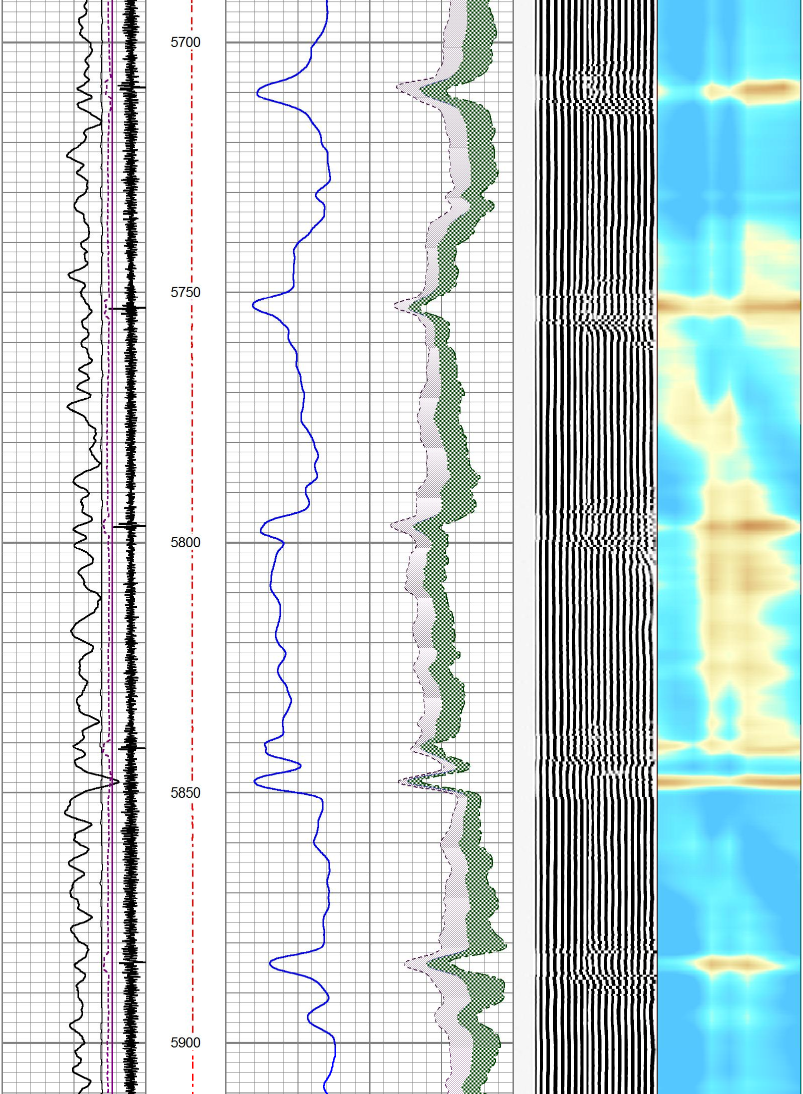
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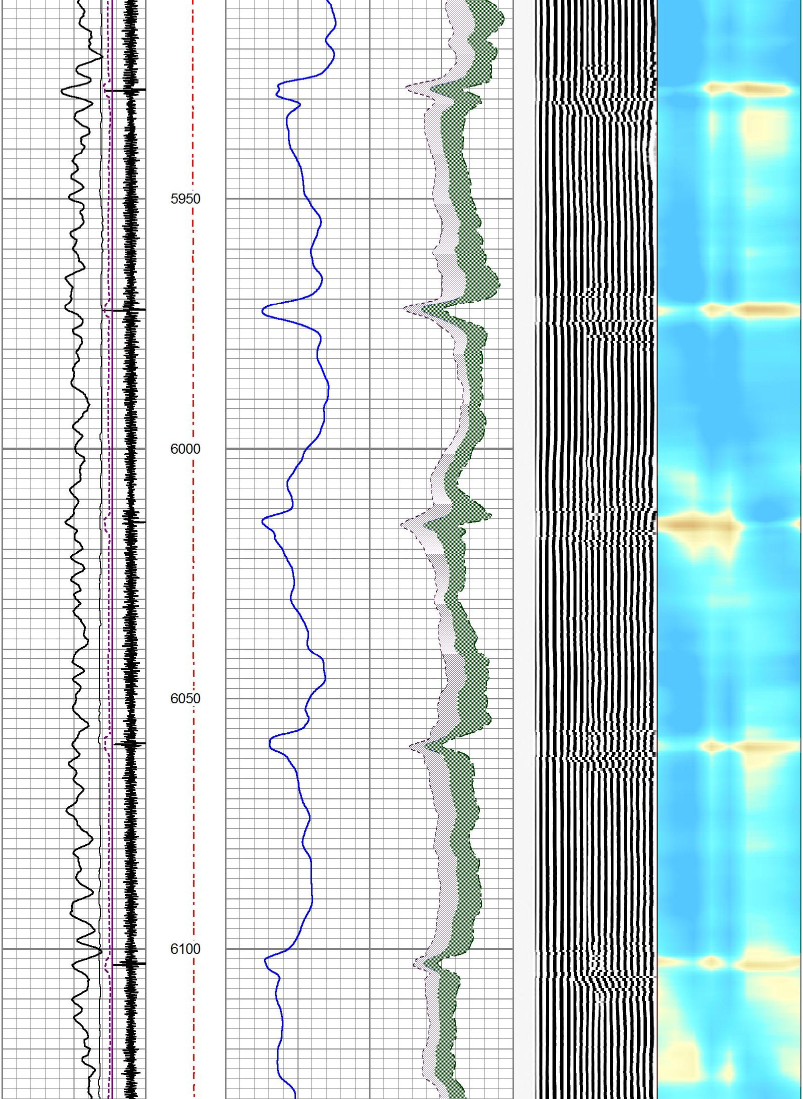
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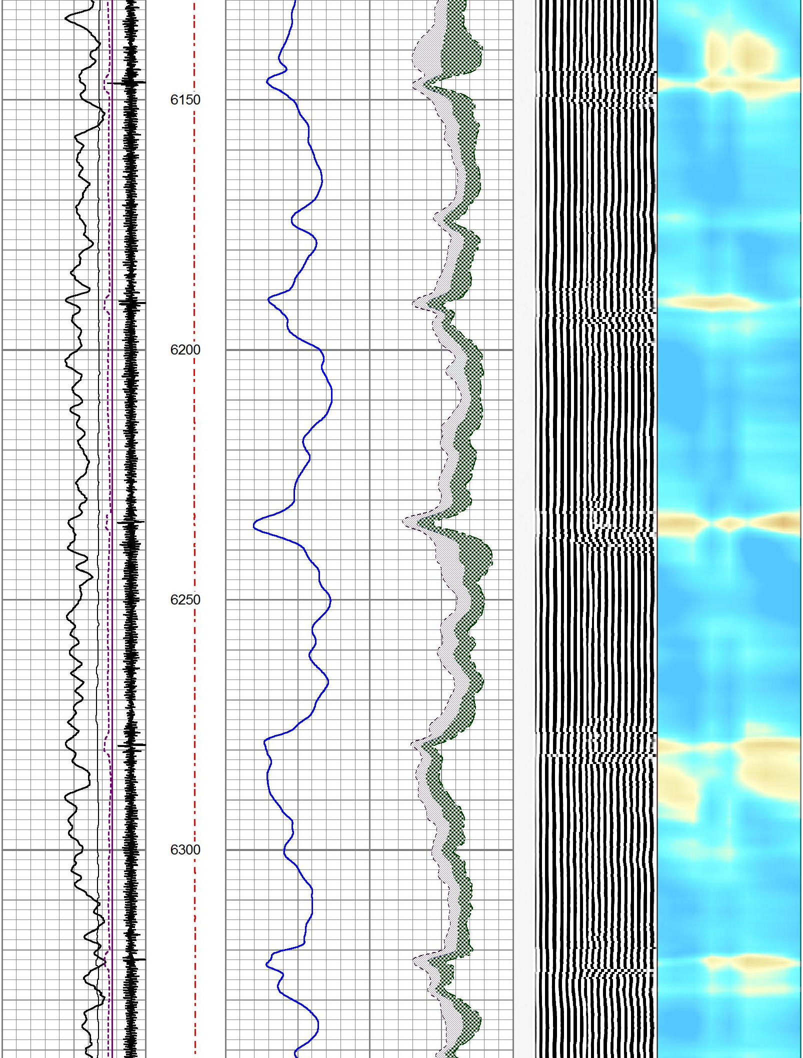
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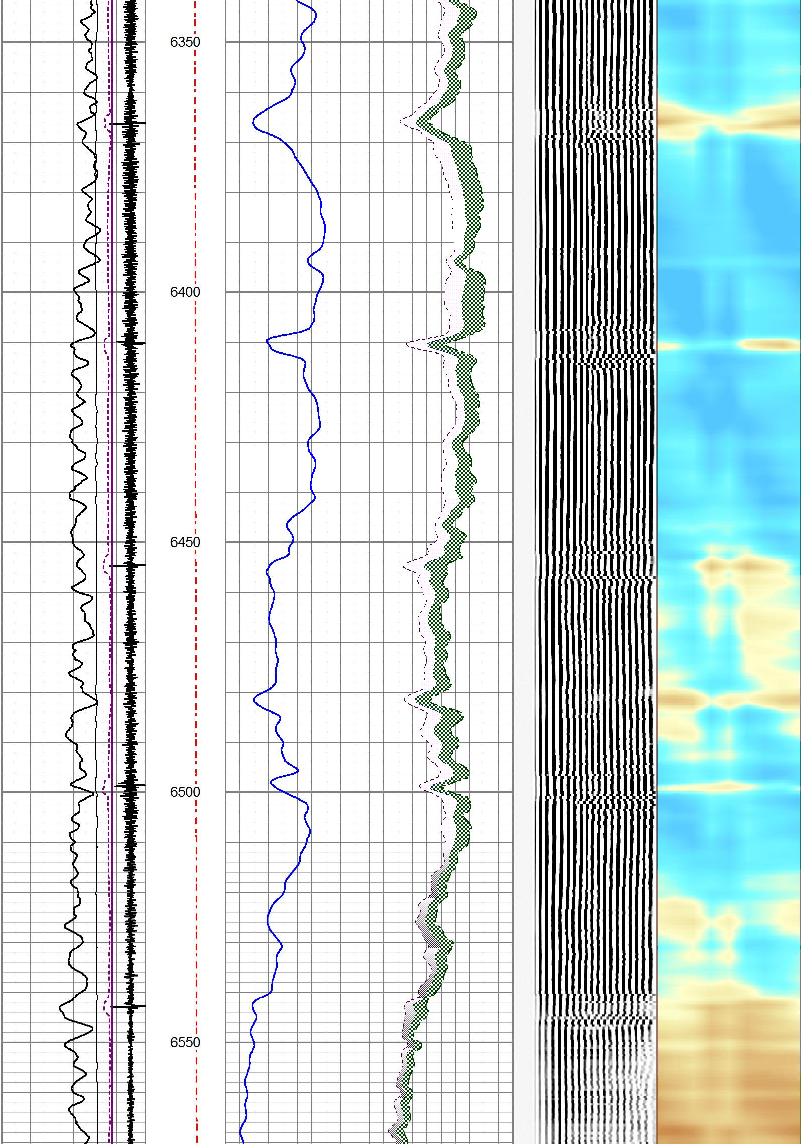
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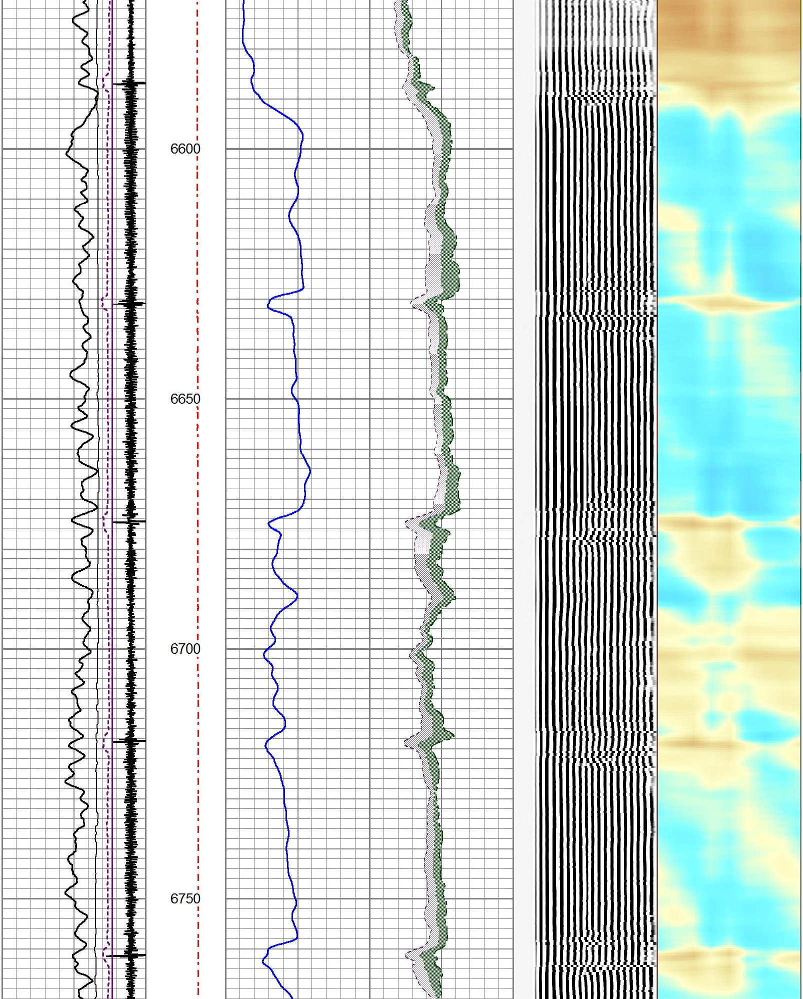
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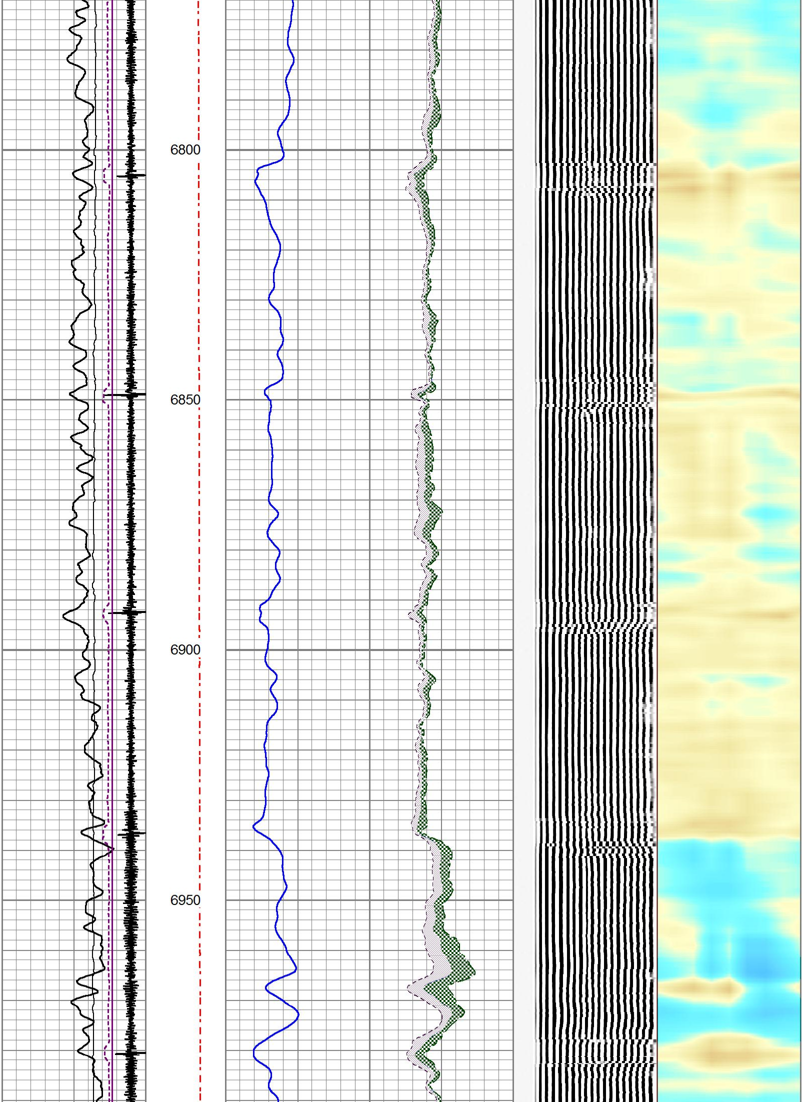
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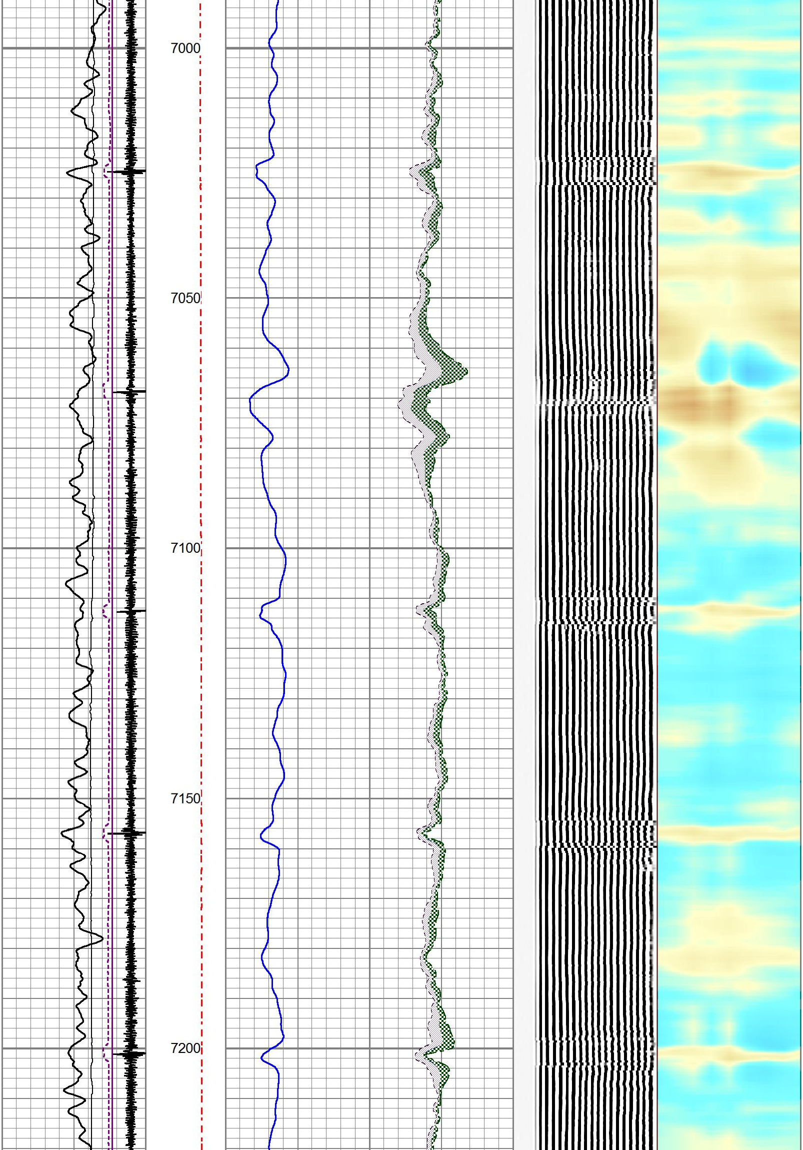
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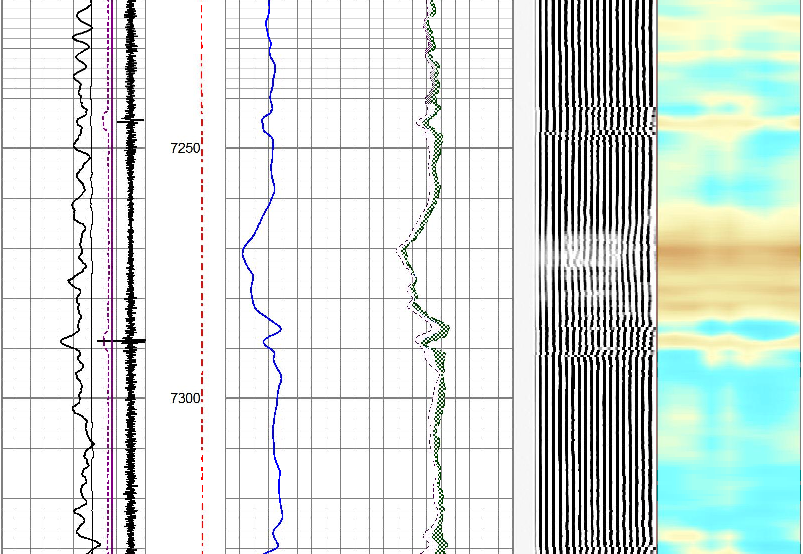
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7300

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 (usec) 1200

SECTORS
0 72

REPEAT PASS - Ran with 0 PSI

5 in / 100 ft

Database File	20180922_extraction_rinn valley east n17-20-10c_cbl\20180922_extraction_rinn valley east n17-20-10c_cl
Dataset Pathname	pass2.1
Presentation Format	rcbl_8s
Dataset Creation	Sat Sep 22 19:50:22 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]-

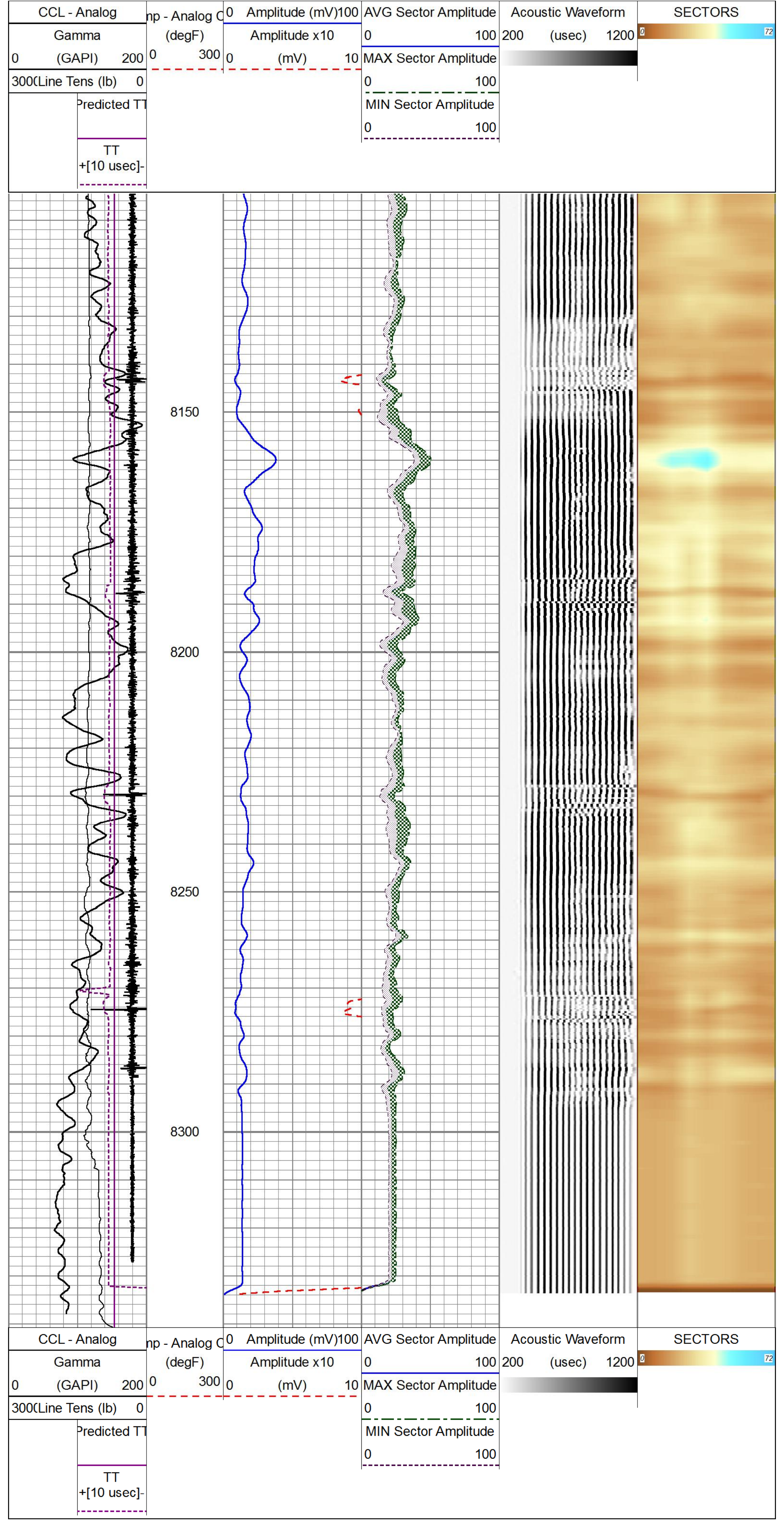
np - Analog C
(degF)
0 300

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 (usec) 1200

SECTORS
0 72



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 (usec) 1200

SECTORS
0 72

Calibration Report

Database File	d:\warrior\data\20180922_extraction_rinn valley east n17-20-10c_cbl\20180922_extraction_rinn valley east r
Dataset Pathname	pass3.1
Dataset Creation	Sat Sep 22 19:46:26 2018

Gamma Ray Calibration Report

Serial Number:	IXEM9-01	
Tool Model:	2 3/4" TekCo	
Performed:	Tue Dec 13 00:01:19 2016	
Calibrator Value:	194.0	GAPI
Background Reading:	59.5	cps
Calibrator Reading:	300.8	cps
Sensitivity:	0.8039	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	IPPO2-01	
Tool Model:	2 3/4" RIB Analog	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	0.000	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.008	1.316	0.000	72.000	54.380	0.410
CAL	0.000	0.750				
5'	-0.007	1.749	0.000	72.000	40.993	0.299
SUM						
S1	0.020	1.206	0.000	72.000	60.711	-1.209
S2	0.019	1.256	0.000	72.000	58.185	-1.084
S3	0.018	1.433	0.000	72.000	50.875	-0.897
S4	0.018	1.626	0.000	72.000	44.781	-0.801
S5	0.018	1.614	0.000	72.000	45.116	-0.806
S6	0.018	1.433	0.000	72.000	50.872	-0.917
S7	0.018	1.246	0.000	72.000	58.635	-1.035
S8	0.019	1.161	0.000	72.000	63.061	-1.210

Internal Reference Calibration, performed Fri Aug 25 16:15:12 2017:

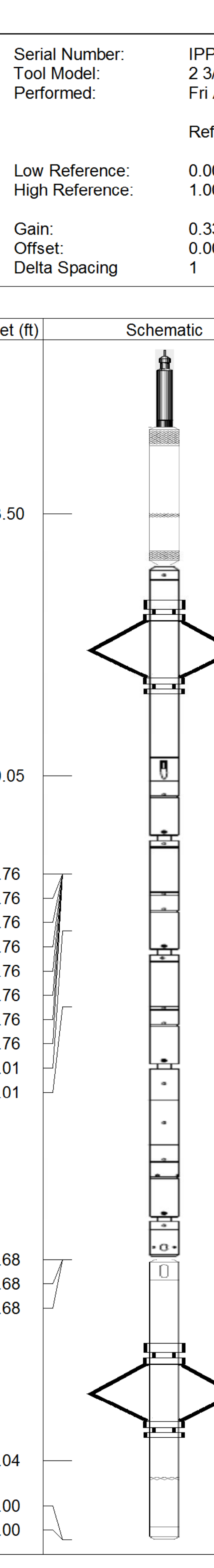
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.750	0.000	0.750	1.000	0.000

Air Zero Calibration, performed Fri Aug 25 16:15:12 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:	IPPO2-01			
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)	Description	Length (ft)	O.D. (in)	Weight (lb
		CableHead-TitanConeType2	1.03	1.44	3.60
CCL	13.50	CCL_Log-2 3/4" TekCo (IS2T1-09)	1.83	2.75	33.00
		Antelope-Overbody	1.25	2.75	
TEMP	10.05				
WVFS8	8.76				
WVFS7	8.76				
WVFS6	8.76				
WVFS5	8.76	RBTA-2 3/4" RIB Analog (IPPO2-01)	9.13	2.75	102.00
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				
		Antelope-Overbody	1.25	2.75	
		GR_Log-2 3/4" TekCo (IXEM9-01)	3.68	2.75	47.00
GR	1.04				
LOCTIM	0.00				
UTCTIM	0.00				

Dataset:	20180922_extraction_rinn valley east n17-20-10c_cbl.db: field/well/run1/pass3.1
Total length:	15.67 ft
Total weight:	185.60 lb
O.D.:	2.75 in

Company	Extraction Oil and Gas, Inc.		
Well	Rinn Valley East N17-20-10C		
Field	Wattenberg		
County	Weld		
State	Colorado	**Country**	U.S.A.