Cement Bond Log

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Company	Extraction
Well	Silverback 25N-20-3N
Field	DJ Horizontal Niobrara
County	Weld
State	Colorado

Company Extraction
Well Silverback 25N-20-3N
Field DJ Horizontal Niobrara
County Weld **State** Colorado

API # : 05-123-42282
Location: NE/NW
300 FNL
1463 FWL

Other Services

SEC: 36 TWP: 12N RGE: 62W

Elevation	
K.B.	5206
D.F.	5305
G.L.	5281

Permanent Datum: Ground Level Elevation: 5281
Log Measured From: Kelly Bushing , 25 ft. above Permanent Datum.
Drilling Measured From: Kelly Bushing

Date	09 October 2017
Run Number	One
Plug Back T.D. Driller	----
Plug Back T.D. Logger	----
Bottom Logged Interval	7170
Top Log Interval	Surface
Type Fluid	Water
Density / Viscosity	----
Max. Recorded Temp.	220
Time Logger on Bottom	11:15
Equipment Number	GD114
Location	Casper
Recorded By	Zack Fabre
Witnessed By	Mr. Hackford

Casing Record				Tubing Record			
Size	Weight	From	To	Size	Weight	From	To
9 5/8	36	0	1500				
7	20	0	16552				

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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 # : RM1017WLOW681
Your Crew Today: Kennicker, Adams, Yarbro
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	220
40 % Bond	335
60 % Bond	1592
80 % Bond	1775
100 % Bond	1868

Comments

Estimated Top of Cement
(20% Bond Index) @ 220'

Thank you for using Gyrodata
Eric Regnier: Rocky Mountain Wireline Manager EricR@Gyrodata.com

Log Variables

Databased:\warrior\data\2017-10-09_extraction_silverback 25n-20-3n_cbl\2017-10-09_extraction_s
Dataset field/well/run1/pass4.2/_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
MaxAPIWall in	MINAMPL mV	MinAPIID in	MINATTN db/ft	PPT usec			
0.361	1.9	4.751	0	239			

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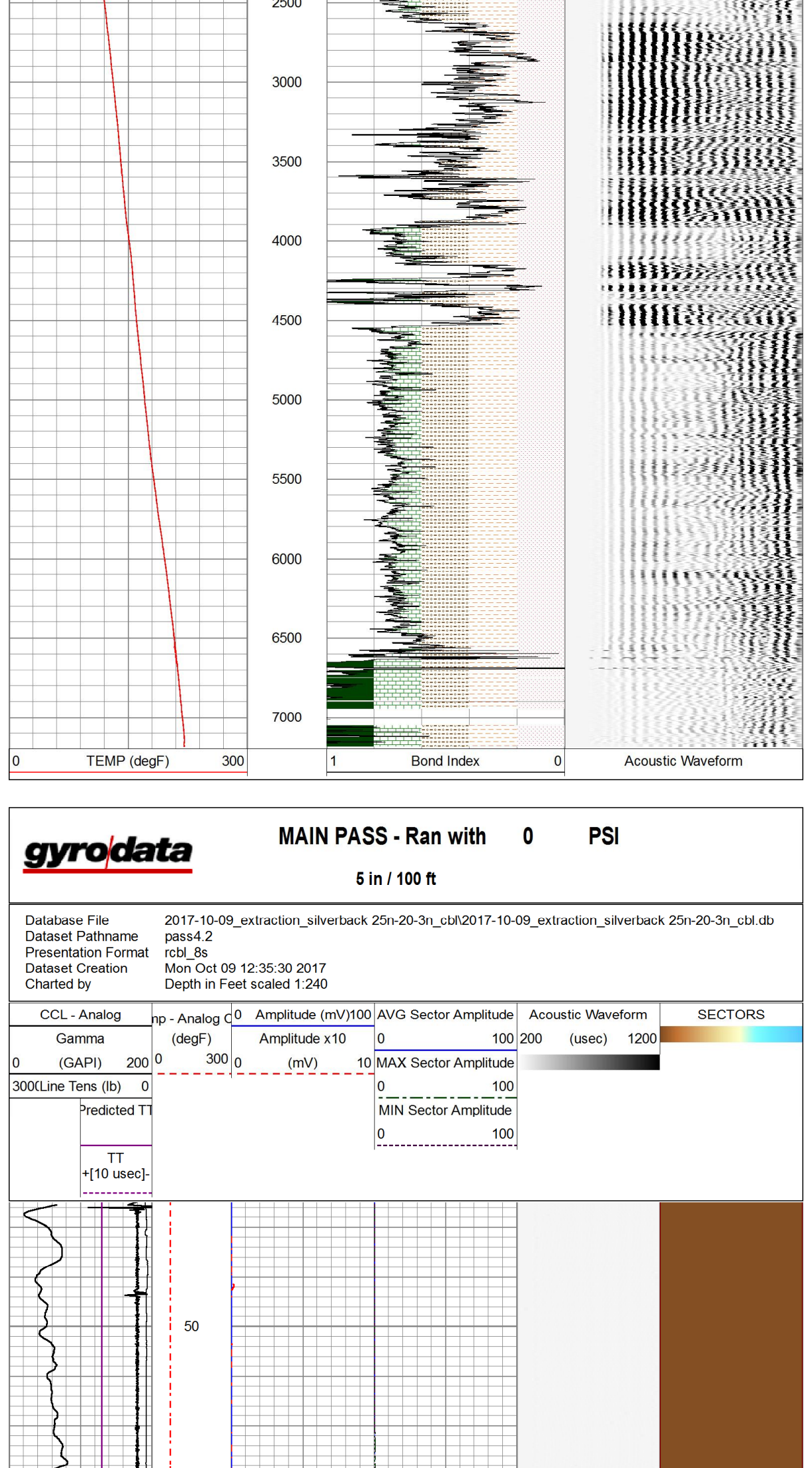
BOND INDEX

Database File	2017-10-09_extraction_silverback 25n-20-3n_cbl\2017-10-09_extraction_silverback 25n-20-3n_cbl.db
Dataset Pathname	./././bndindx
Presentation Format	BONDIN~3
Dataset Creation	Mon Oct 09 12:40:52 2017
Charted by	Depth in Feet scaled 1:7500



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MAIN PASS - Ran with 0 PSI

5 in / 100 ft

Database File	2017-10-09_extraction_silverback 25n-20-3n_cbl\2017-10-09_extraction_silverback 25n-20-3n_cbl.db
Dataset Pathname	pass4.2
Presentation Format	rcbl_8s
Dataset Creation	Mon Oct 09 12:35:30 2017
Charted by	Depth in Feet scaled 1:240

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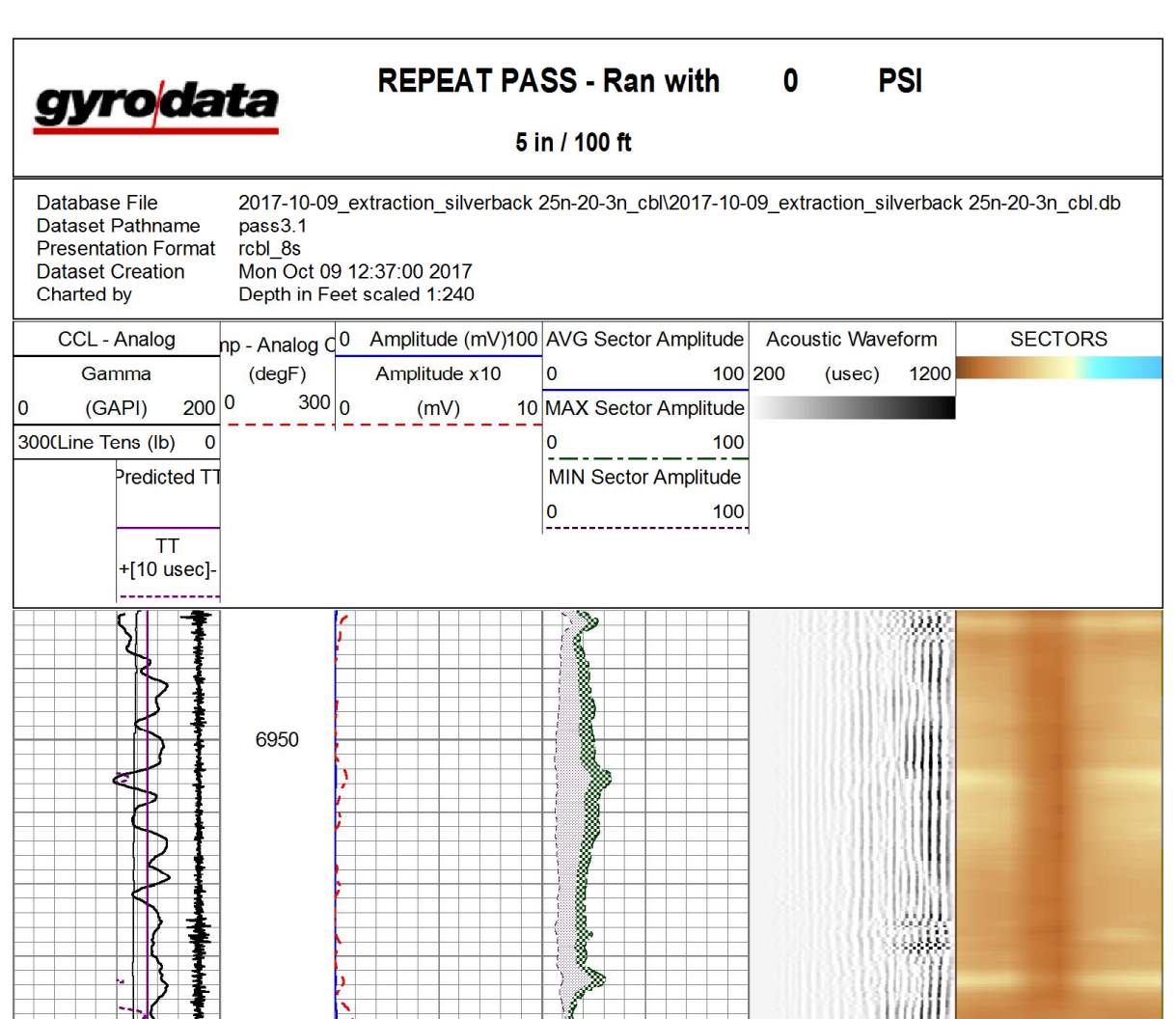
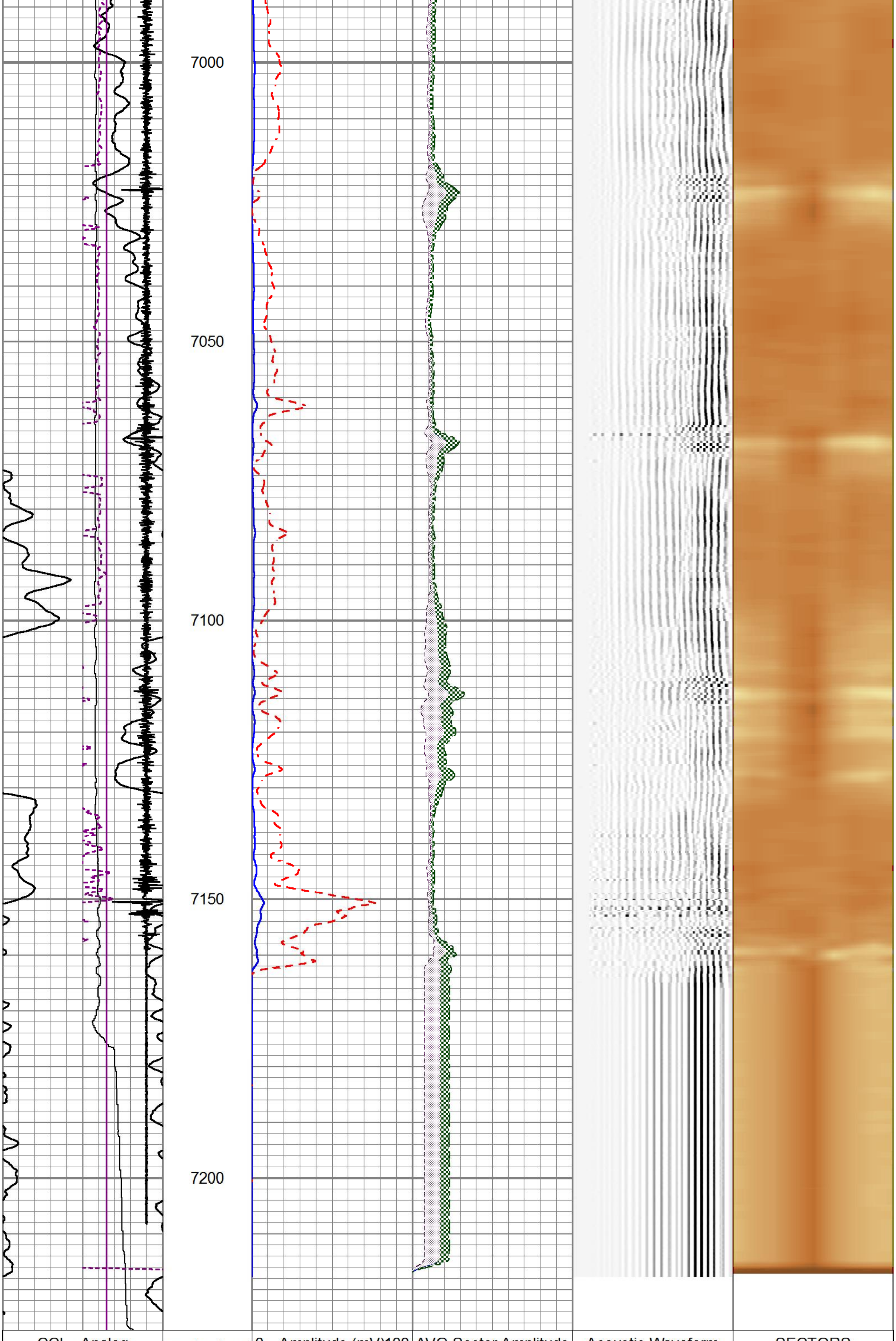
REPEAT PASS - Ran with 0 PSI

5 in / 100 ft

Database File	2017-10-09_extraction_silverback 25n-20-3n_cbl\2017-10-09_extraction_silverback 25n-20-3n_cbl.db
Dataset Pathname	pass3.1
Presentation Format	rcbl_8s
Dataset Creation	Mon Oct 09 12:37:00 2017
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 (usec) 1200	
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		

Calibration Report

Database File	d:\warrior\data\2017-10-09_extraction_silverback 25n-20-3n_cbl\2017-10-09_extraction_silverback 25n-20-3
Dataset Pathname	pass4.2
Dataset Creation	Mon Oct 09 12:35:30 2017

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:	199.253	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.003	1.286	0.000	71.921	56.064	-0.164
CAL	-0.008	0.770				
5'	-0.000	1.245	0.000	71.921	57.734	0.017
SUM						
S1	0.021	1.030	0.000	72.000	71.340	-1.490
S2	0.027	1.162	0.000	72.000	63.484	-1.740
S3	0.033	1.307	0.000	72.000	56.474	-1.839
S4	0.029	1.509	0.000	72.000	48.670	-1.433
S5	0.029	1.516	0.000	72.000	48.404	-1.392
S6	0.030	1.288	0.000	72.000	57.242	-1.743
S7	0.030	1.171	0.000	72.000	63.077	-1.863
S8	0.023	1.020	0.000	72.000	72.247	-1.671

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

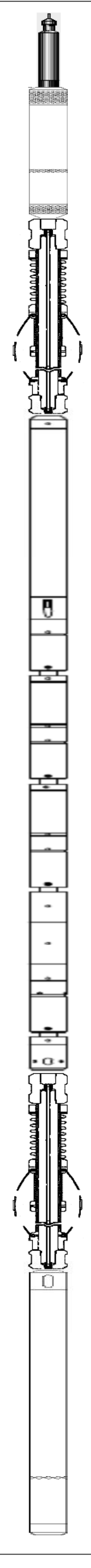
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.008	0.770	1.000	0.000

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)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
			CableHead-TitanConeType2	1.03	1.44	3.60
CCL	18.96		CCL_Log-2 3/4" TekCo (IX2S8-07) 450 Deg. CCL	1.83	2.75	33.00
			TekCo-275_Tekco 2 3/4" Tekco Adjustable SPRING Centralizer	2.73	2.75	25.00
TEMP	12.78					
WVFS8	11.49					
WVFS7	11.49		RBTA-2 3/4" RIB Analog (IT4B1-01) Radial Incremented Bond Tool with Temp	9.13	2.75	102.00
WVFS6	11.49					
WVFS5	11.49					
WVFS4	11.49					
WVFS3	11.49					
WVFS2	11.49					
WVFS1	11.49					
WVF3FT	10.74					
WVF5FT	9.74					
WVFSYNC	6.41					
WVFTEMP	6.41					
WVFCAL	6.41					
			TekCo-275_Tekco 2 3/4" Tekco Adjustable SPRING Centralizer	2.73	2.75	25.00
			GR_Log-2 3/4" TekCo (ISHV2-02) 400 Deg. Gamma Ray	3.68	2.75	47.00
GR	1.04					
LOCTIM	0.00					
UTCTIM	0.00					

Dataset:	2017-10-09_extraction_silverback 25n-20-3n_cbl.db: field/well/run1/pass4.2
Total length:	21.13 ft
Total weight:	235.60 lb
O.D.:	2.75 in

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Company	Extraction		
Well	Silverback 25N-20-3N		
Field	DJ Horizontal Niobrara		
County	Weld		
State	Colorado	**Country**	U.S.A.