CEMENT BOND LOG

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Company	Extraction Oil and Gas
Well	WS-Sunrise 4-5-5
Field	Wattenberg
County	Weld
State	Colorado

Company Extraction Oil and Gas
Well WS-Sunrise 4-5-5
Field Wattenberg
County Weld State Colorado

API # : 05-123-46049
Location: SW/SE
251 FSL
1668 FEL

SEC: 32 TWP: 6N RGE: 65W

Other Services

Elevation
K.B. 4667
D.F. 4666
G.L. 4642

Permanent Datum: Ground Level Elevation: 4642
Log Measured From: Kelly Bushing , 25 ft. above Permanent Datum.
Drilling Measured From: Kelly Bushing

Date	26 March 2018	
Run Number	One	
Plug Back T.D. Driller	----	
Plug Back T.D. Logger	----	
Bottom Logged Interval	7050	
Top Log Interval	Surface	
Type Fluid	Water	
Density / Viscosity	----	
Max. Recorded Temp.	246	
Time Logger on Bottom	14:15	
Equipment Number	GD112	
Location	Casper	
Recorded By	GS Yarbro	
Witnessed By	Hackford/Stephens	

Casing Record				Tubing Record			
Size	Weight	From	To	Size	Weight	From	To
9 5/8	36	25	----				
5 1/2	20	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 # : RM0318PCBW365
Your Crew Today: Kennicker, Staker, Tad-y
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	106
40 % Bond	106
60 % Bond	106
80 % Bond	1670
100 % Bond	2700

Comments

Estimated Top of Cement
(60% Bond Index) @ 106'

Thank you for using Gyrodata

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

Log Variables

Databased:\warrior\data\20180326_extraction_wssunrise 4-5-5_cbl\20180326_extraction_wssunrise
Dataset field/well/run1/pass3.1/_vars_

Top - Bottom

BHTEMP_Src	BOREID in	BOTTEMP degF	CASEID in	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MAXAMPL mV
TEMP	8.5	100	4.778	5.5	0.361	20	71.9

MaxAPIID in	MaxAPIWall in	MINAMPL mV	MinAPIID in	MINATTN db/ft	PPT usec
4.923	0.361	1.9	4.751	0	237

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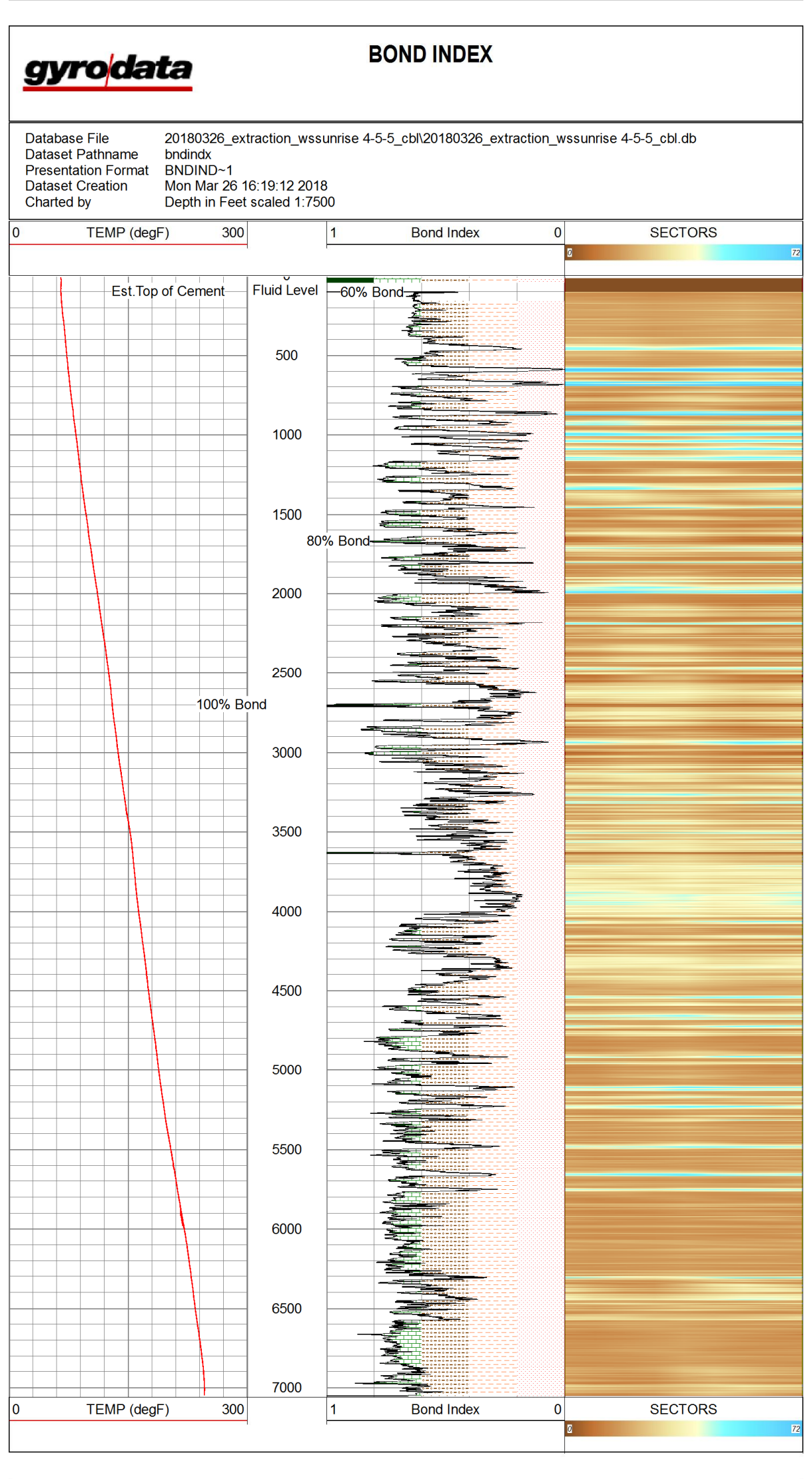
BOND INDEX

Database File 20180326_extraction_wssunrise 4-5-5_cbl\20180326_extraction_wssunrise 4-5-5_cbl.db
Dataset Pathname bndindx
Presentation Format BNDIND~1
Dataset Creation Mon Mar 26 16:19:12 2018
Charted by Depth in Feet scaled 1:7500



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MAIN PASS - Ran with 0 PSI

5 in / 100 ft

Database File 20180326_extraction_wssunrise 4-5-5_cbl\20180326_extraction_wssunrise 4-5-5_cbl.db
Dataset Pathname pass3.1
Presentation Format rcbl_8s
Dataset Creation Mon Mar 26 16:15:41 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 (usec) 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		

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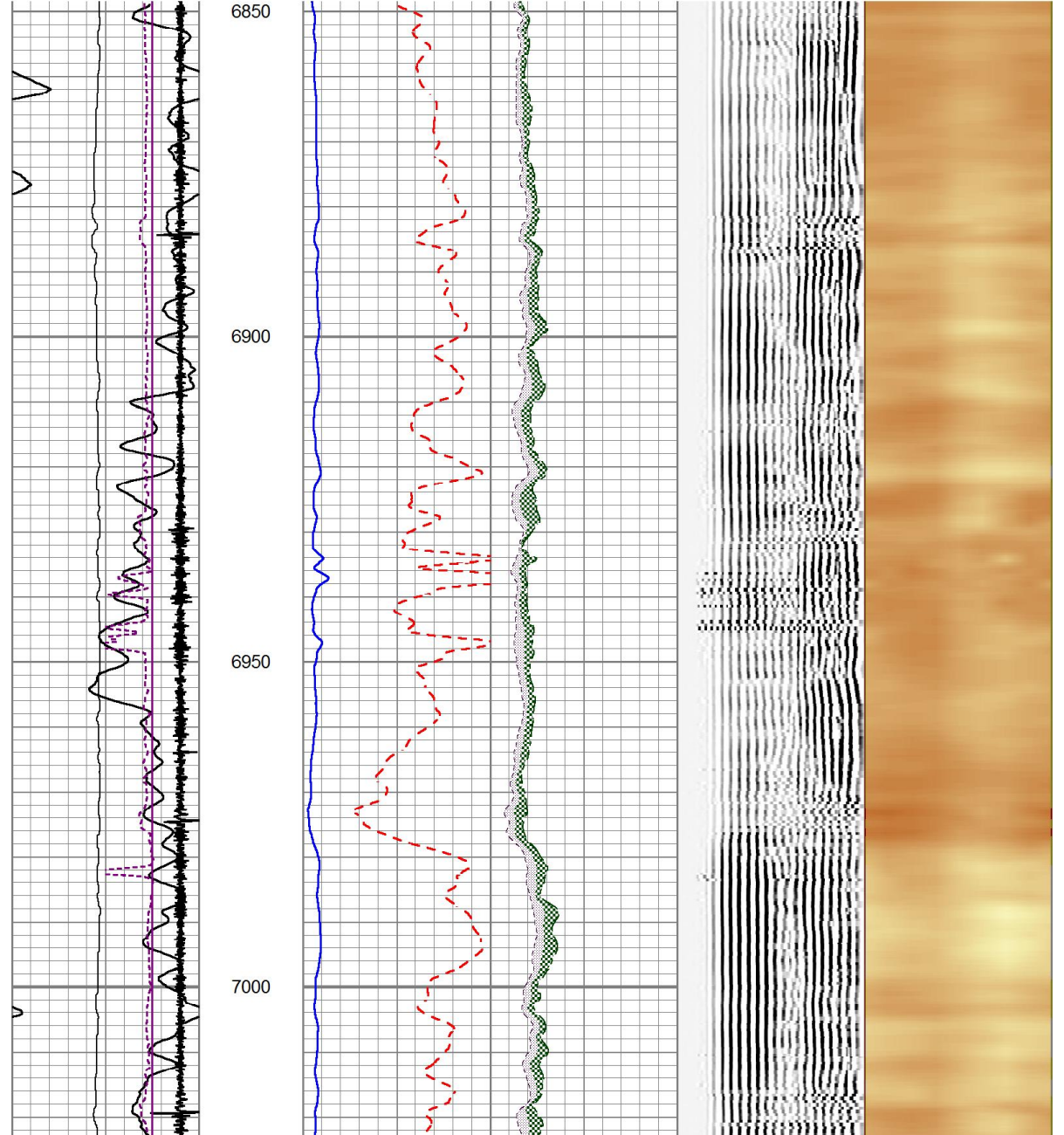
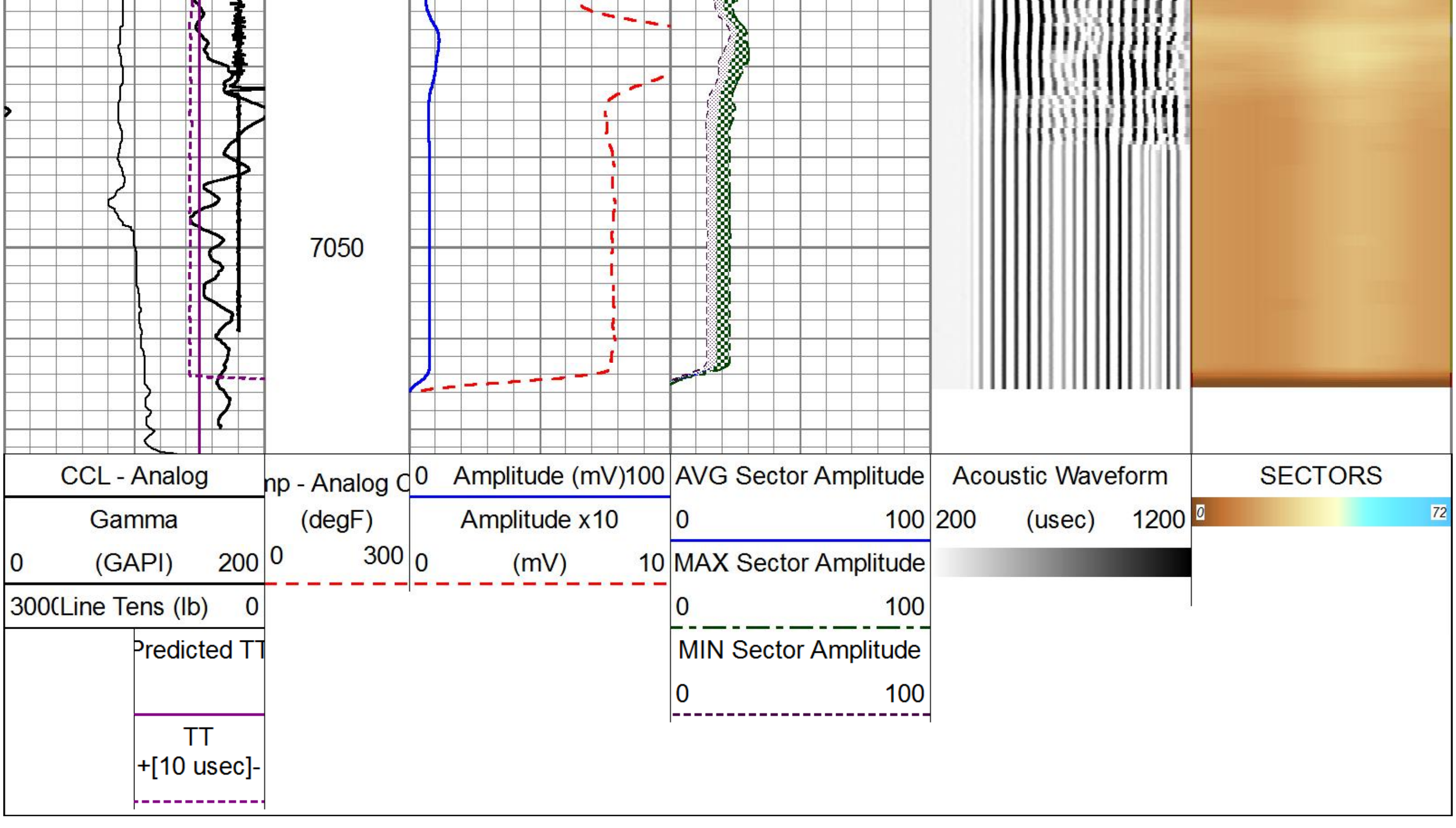
REPEAT PASS - Ran with 0 PSI

5 in / 100 ft

Database File	20180326_extraction_wssunrise 4-5-5_cbl\20180326_extraction_wssunrise 4-5-5_cbl.db
Dataset Pathname	pass2.1
Presentation Format	rcbl_8s
Dataset Creation	Mon Mar 26 16:16:58 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 (usec) 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		





Calibration Report

Database File	d:\warrior\data\20180326_extraction_wssunrise 4-5-5_cbl\20180326_extraction_wssunrise 4-5-5_cbl.db
Dataset Pathname	pass3.1
Dataset Creation	Mon Mar 26 16:15:41 2018

Gamma Ray Calibration Report

Serial Number:	ISHV2-03	
Tool Model:	2 3/4" TekCo	
Performed:	Tue Dec 13 00:23:06 2016	
Calibrator Value:	194.0	GAPI
Background Reading:	58.9	cps
Calibrator Reading:	300.8	cps
Sensitivity:	0.8020	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

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.001	1.533	0.000	71.921	46.888	0.028
CAL	0.000	0.290				
5'	0.002	1.988	0.000	71.921	36.222	-0.072
SUM						
S1	0.029	1.176	0.000	72.000	62.759	-1.797
S2	0.033	1.291	0.000	72.000	57.241	-1.871
S3	0.034	1.588	0.000	72.000	46.330	-1.581
S4	0.034	2.008	0.000	72.000	36.463	-1.223
S5	0.037	2.083	0.000	72.000	35.183	-1.286
S6	0.036	1.646	0.000	72.000	44.718	-1.588
S7	0.034	1.389	0.000	72.000	53.130	-1.789
S8	0.029	1.218	0.000	72.000	60.543	-1.767

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:

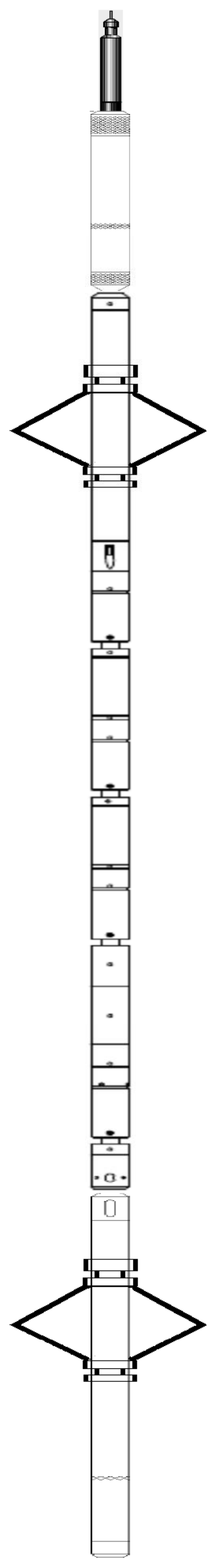
	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

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

Schematic



Description	Length (ft)	O.D. (in)	Weight (lb
CableHead-TitanConeType2	1.03	1.44	3.60
CCL_Log-2 3/4" TekCo (IPSN7-03)	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 (ISHV2-03)	3.68	2.75	47.00

Dataset:	20180326_extraction_wssunrise 4-5-5_cbl.db: field/well/run1/pass3.1
Total length:	15.67 ft
Total weight:	185.60 lb
O.D.:	2.75 in

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Company	Extraction Oil and Gas
Well	WS-Sunrise 4-5-5
Field	Wattenberg
County	Weld
State	Colorado
Country	U.S.A.