CEMENT BOND LOG

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Company	Extraction Oil and Gas Inc.
Well	GP Cody Fed 20E-15-2N
Field	Wattenberg
County	Weld
State	Colorado

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Field Wattenberg
County Weld **State** Colorado

API # : 05 123 50285
Location: NE/NE
682 FNL
1305 FEL

Other Services

SEC: 20 TWP: 05N RGE: 65W

Elevation
K.B. 4702
D.F. ----
G.L. 4673

Permanent Datum: Kelly Bushing Elevation: 4673
Log Measured From: Ground Level , 29 ft. above Permanent Datum.
Drilling Measured From: Ground Level

Date	26 February 2020
Run Number	One
Plug Back T.D. Driller	----
Plug Back T.D. Logger	----
Bottom Logged Interval	7240
Top Log Interval	Surface
Type Fluid	Water
Density / Viscosity	----
Max. Recorded Temp.	246
Time Logger on Bottom	10:00
Equipment Number	GD140
Location	Casper
Recorded By	GS Yarbro
Witnessed By	Manuel Parras

Casing Record				Tubing Record			
Size	Weight	From	To	Size	Weight	From	To
9 5/8	36	29	----				
5 1/2	20	29	----				

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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 # : RM0220PCBW179
Your Crew Today: J. Haycock, B Enloe
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	1920
40 % Bond	3520
60 % Bond	6650
80 % Bond	6880
100 % Bond	6880

Comments

Estimated Top of Cement
(20 % Bond Index) at 1920 feet

Thank you for using Gyrodata

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

Log Variables

Databased:\warrior\data\20200226_extraction_gp cody fed 20e-15-2n_cbl\20200226_extraction_gp
Dataset field/well/run1/pass4.1/_vars_

Top - Bottom

BHTEMP_Src	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MAXAMPL mV	MaxAPIID in	MINAMPL mV	MinAPIID in
TEMP	5.5	0.304	17	71.9	5.023	1.1	4.865
MINATTN db/ft	PPT usec	Z_NA_1	Z_NA_2	Z_NA_3			
0	243	0	0	0			

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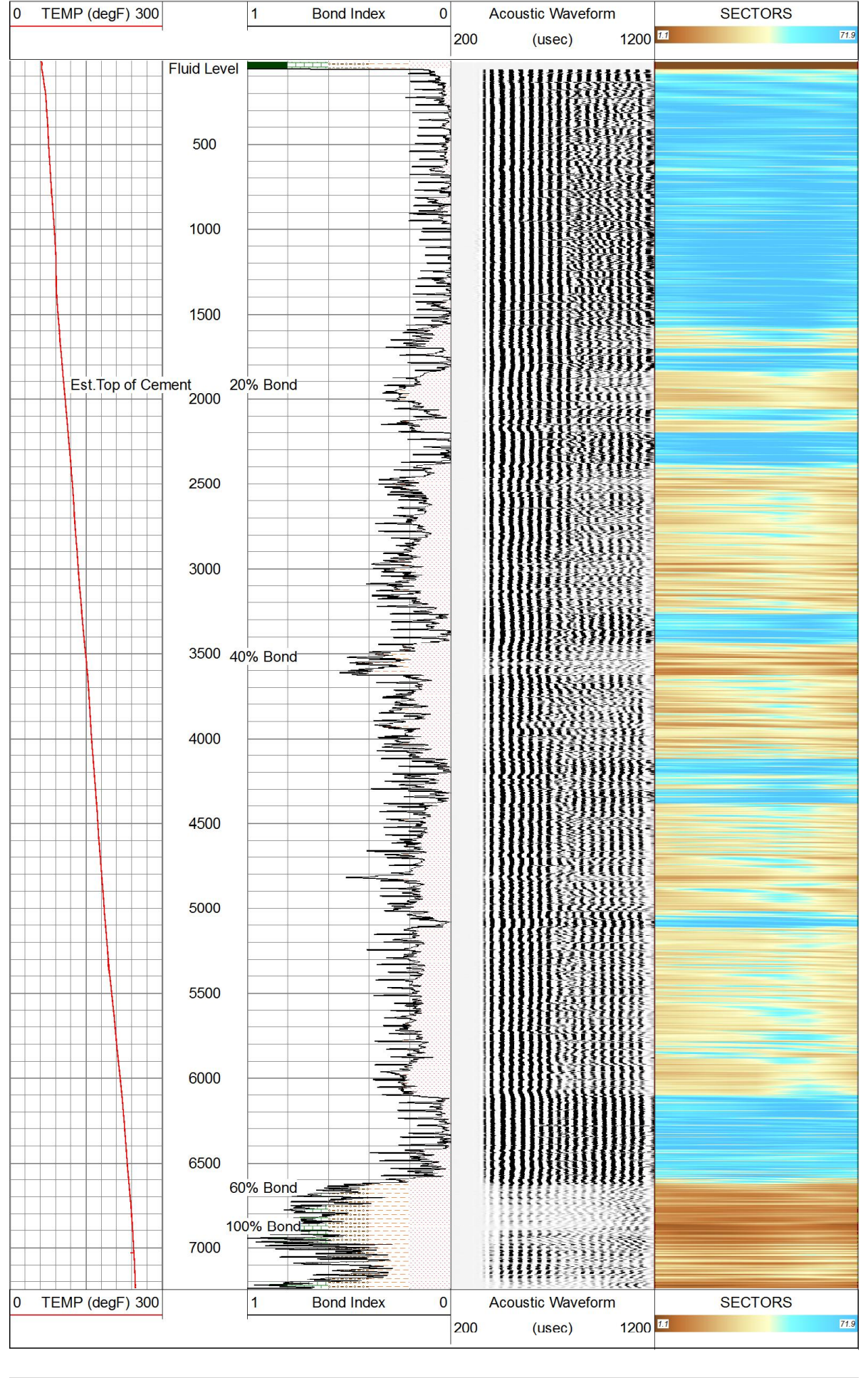
BOND INDEX

Calculated for 3500 PSI Compressive Strength Cement

Database File 20200226_extraction_gp cody fed 20e-15-2n_cbl\20200226_extraction_gp cody fed 20e-15-2n_cbl.db
Dataset Pathname ./././bndindx
Presentation Format BNDIND~1
Dataset Creation Wed Feb 26 11:28:00 2020
Charted by Depth in Feet scaled 1:7500



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MAIN PASS - Ran with Zero PSI

5 in / 100 ft

Database File 20200226_extraction_gp cody fed 20e-15-2n_cbl\20200226_extraction_gp cody fed 20e-15-2n_cbl.db
Dataset Pathname pass4.1
Presentation Format rcbl_8s
Dataset Creation Wed Feb 26 11:25:45 2020
Charted by Depth in Feet scaled 1:240

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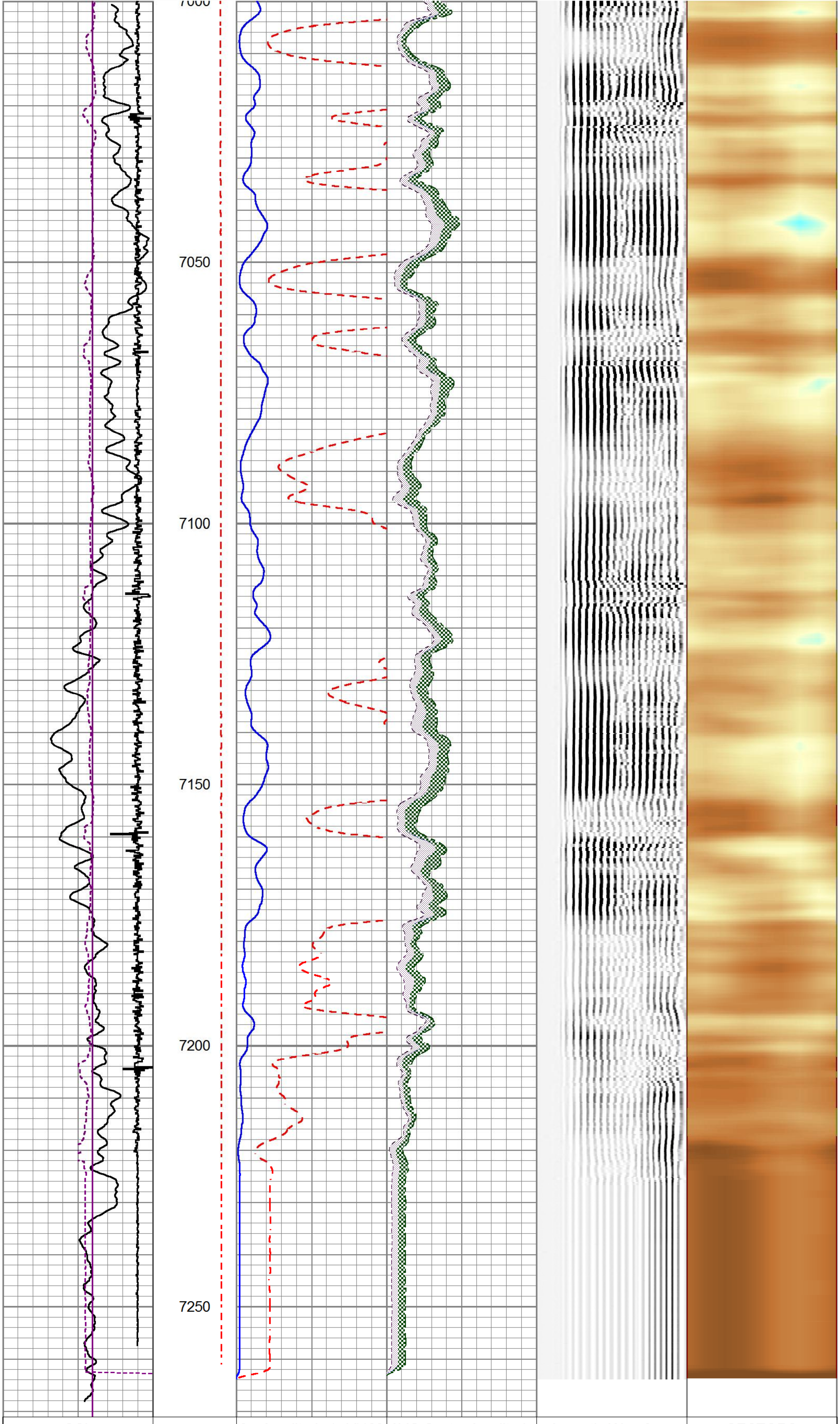
REPEAT PASS - Ran with Zero PSI

5 in / 100 ft

Database File	20200226_extraction_gp cody fed 20e-15-2n_cbl\20200226_extraction_gp cody fed 20e-15-2n_cbl.db
Dataset Pathname	pass3.1
Presentation Format	rcbl_8s
Dataset Creation	Wed Feb 26 11:27:35 2020
Charted by	Depth in Feet scaled 1:240

CCL	Temp	0 Amplitude (mV) 100	AVG Sector Amplitude	Acoustic Waveform	SECTORS
Gamma	(degF)	Amplitude x10	0 100	200 (usec) 1200	1.1 71.9
0 (GAPI) 200	0 300	0 (mV) 10	MAX Sector Amplitude		
300(Line Tens (lb) 0			0 100		
Predicted TT			MIN Sector Amplitude		
			0 100		
TT					

+[10 usec]-



CCL Gamma 0 (GAPI) 200 300(Line Tens (lb) 0 Predicted TT TT +[10 usec]-	Temp (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 1.1 71.9

Calibration Report

Database File d:\warrior\data\20200226_extraction_gp cody fed 20e-15-2n_cbl\20200226_extraction_gp cody fed 20e-15-2
Dataset Pathname pass4.1
Dataset Creation Wed Feb 26 11:25:45 2020

Gamma Ray Calibration Report

Serial Number:	ISHV2-03	
Tool Model:	2 3/4" TekCo	
Performed:	Fri Sep 13 16:47:28 2019	
Calibrator Value:	194.0	GAPI
Background Reading:	58.0	cps
Calibrator Reading:	329.7	cps
Sensitivity:	0.7141	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: ISF06-04
Tool Model: 2 3/4" RIB Analog

Master Calibration, performed (Derived):

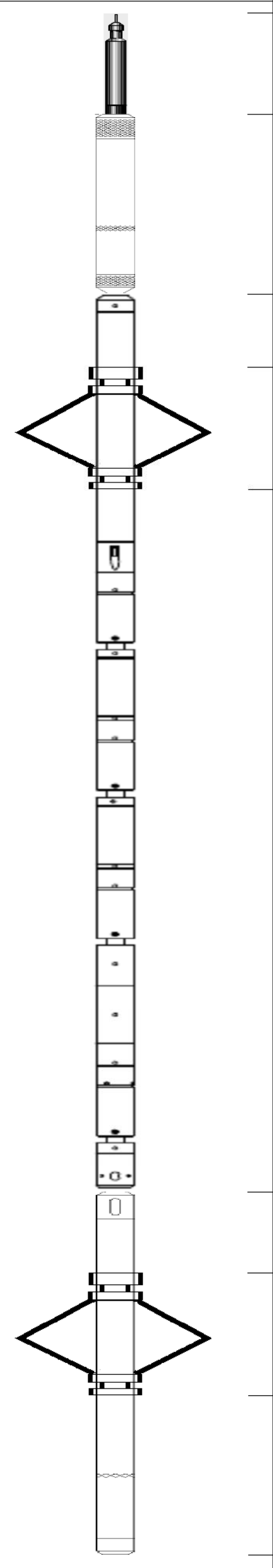
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.009	1.512	0.000	72.000	47.928	-0.446
CAL	-0.004	0.749				
5'	-0.001	1.996	0.000	72.000	36.048	0.031
SUM						
S1	0.033	1.728	0.000	72.000	42.470	-1.398
S2	0.029	1.522	0.000	72.000	48.225	-1.388
S3	0.032	1.457	0.000	72.000	50.543	-1.625
S4	0.042	1.474	0.000	72.000	50.300	-2.119
S5	0.050	1.536	0.000	72.000	48.441	-2.414
S6	0.050	1.680	0.000	72.000	44.171	-2.216
S7	0.045	1.909	0.000	72.000	38.635	-1.737
S8	0.037	1.864	0.000	72.000	39.410	-1.461

Temperature Calibration Report

Serial Number: ISF06-04
Tool Model: 2 3/4" RIB Analog
Performed: Tue Jan 08 14:48:09 2019

	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

Description	Length (ft)	O.D. (in)	Weight (lb
CableHead-TitanConeType2	1.03	1.44	3.60
CCL_Log-2 3/4" TekCo (IPSN7-002)	1.83	2.75	33.00
Antelope-Overbody	1.25	2.75	
RBTA-2 3/4" RIB Analog (ISF06-04)	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: 20200226_extraction_gp cody fed 20e-15-2n_cbl.db: field/well/run1/pass4.1
Total length: 15.67 ft
Total weight: 185.60 lb
O.D.: 2.75 in

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Company	**Extraction Oil and Gas Inc.**
Well	**GP Cody Fed 20E-15-2N**
Field	**Wattenberg**
County	**Weld**
State	**Colorado**
Country	**U.S.A.**