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CEMENT BOND LOG

Company	Extraction Oil and Gas
Well	VT-LDS C3-16-18
Field	Wattenberg
County	Weld
State	CO

Company Extraction Oil and Gas
Well VT-LDS C3-16-18
Field Wattenberg
County Weld State CO

API #: 05-123-44418
Location: 1895' FNL & 554' FWL
Lat: 40.401290
Long: -104.656890

Other Services

SEC: 15 TWP: 5N RGE: 65W

Elevation
K.B. 4677
D.F. -----
G.L. 4648'

Permanent Datum:	Ground Level Elevation: 4648'
Log Measured From:	KB , 29 ft. above Permanent Datum.
Drilling Measured From:	KB
Date	14 Aug 2018
Run Number	One
Plug Back T.D. Driller	-----
Plug Back T.D. Logger	-----
Bottom Logged Interval	7977'
Top Log Interval	Surface
Type Fluid	-----
Density / Viscosity	-----
Max. Recorded Temp.	248°F
Time Logger on Bottom	11:00
Equipment Number	GD 164
Location	Casper, WY
Recorded By	J. Baker
Witnessed By	L Siegel

Casing Record				Tubing Record			
Size	Weight	From	To	Size	Weight	From	To
9 5/8"	36#	Surface	1500'				
5 1/2"	20#	Surface	20,510'				

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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 #: RM0818PCBW805
Your Crew Today: B. Kennicker, M. Vasquez, D. Hamilton
Log Correlated to: Surface

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	71'
40 % Bond	71'
60 % Bond	266'
80 % Bond	970'
100 % Bond	2500'

Comments

Estimated cement top at 71'
(20% Bond)

Marker Joint located at 7474'

Thank you for using Gyrodata

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

Log Variables

Databased:\warrior\data\2018_08_13_extraction_vt_lds_c3_16_18_cbl\2018_08_14_extraction_vt_
Dataset field/well/run1/pass3/_vars_

Top - Bottom

BHTEMP_Src	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MAXAMPL mV	MaxAPIID in
TEMP	8.5	248	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	237	0

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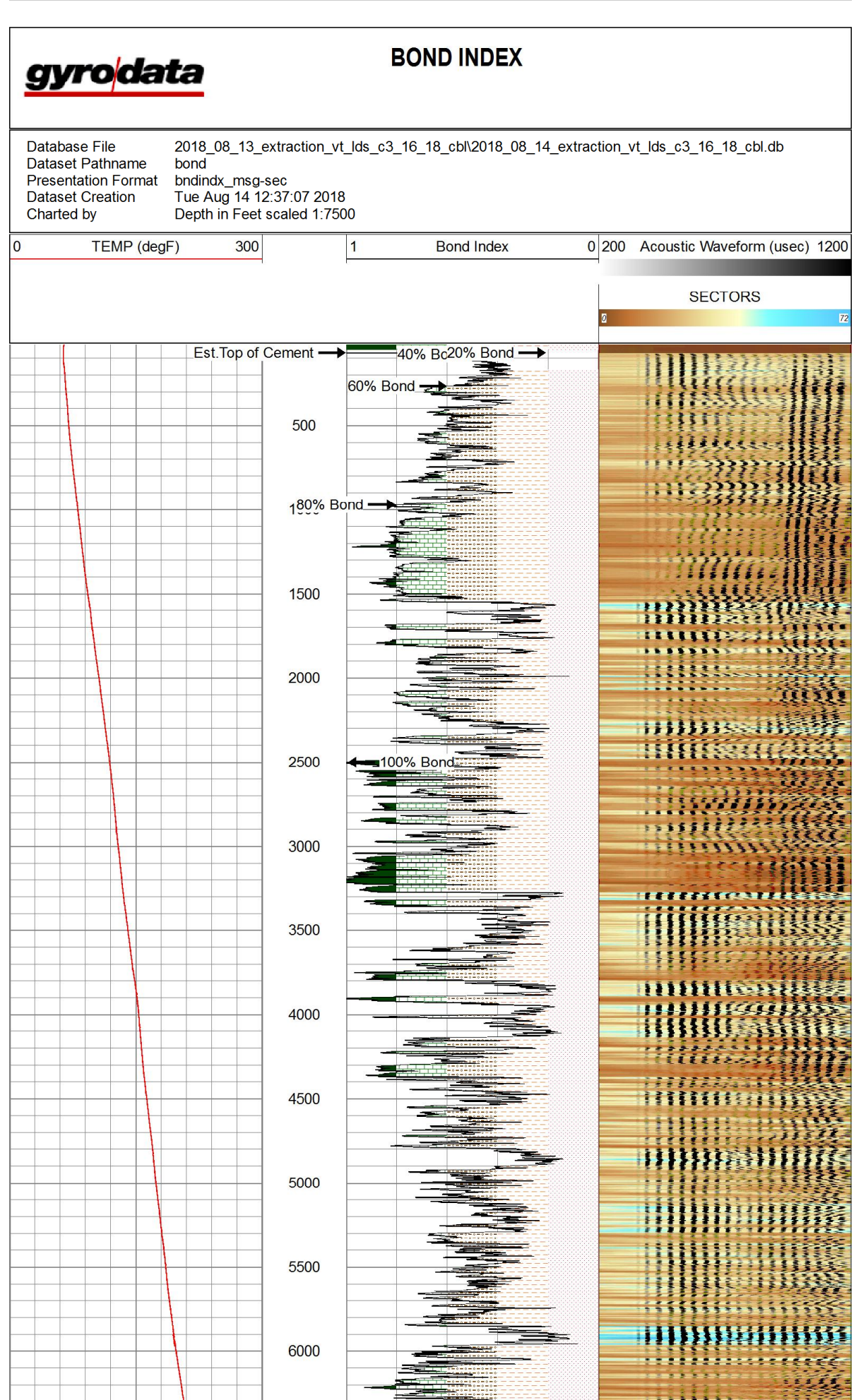
BOND INDEX

Database File 2018_08_13_extraction_vt_lds_c3_16_18_cbl\2018_08_14_extraction_vt_lds_c3_16_18_cbl.db
Dataset Pathname bond
Presentation Format bndindx_msg-sec
Dataset Creation Tue Aug 14 12:37:07 2018
Charted by Depth in Feet scaled 1:7500



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BOND INDEX

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MAIN PASS - Ran with 0 PSI

5 in / 100 ft

Database File 2018_08_13_extraction_vt_lds_c3_16_18_cbl\2018_08_14_extraction_vt_lds_c3_16_18_cbl.db
Dataset Pathname pass3
Presentation Format rcbl_8s
Dataset Creation Tue Aug 14 11:02:45 2018
Charted by Depth in Feet scaled 1:240

3300
3350
3400
3450
3500
3550
3600
3650
3700
3750
3800
3850
3900
3950
4000
4050
4100
4150
TT
(10 usec)
Temp - Analog CBL
Predicted TT
Line Tens
Gamma
CCL - Analog
MIN Sector Amplitude
MAX Sector Amplitude
AVG Sector Amplitude
Amplitude x10
Amplitude
4200
4250
4300
4350
4400
4450
4500
4550
4600
4650
4700
4750
4800
4850
4900
4950
5000
5050
5100
5150
5200
5250
5300
5350
5400
5450
5500
5550
5600
5650
5700
5750
5800
5850
5900
5950
6000
6050
6100
6150
6200
6250
6300
6350
6400
6450
6500
6550
6600
6650
6700
6750
6800
6850
6900
6950
7000
7050
7100
7150
7200
7250

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MAIN PASS - Ran with 0 PSI

5 in / 100 ft

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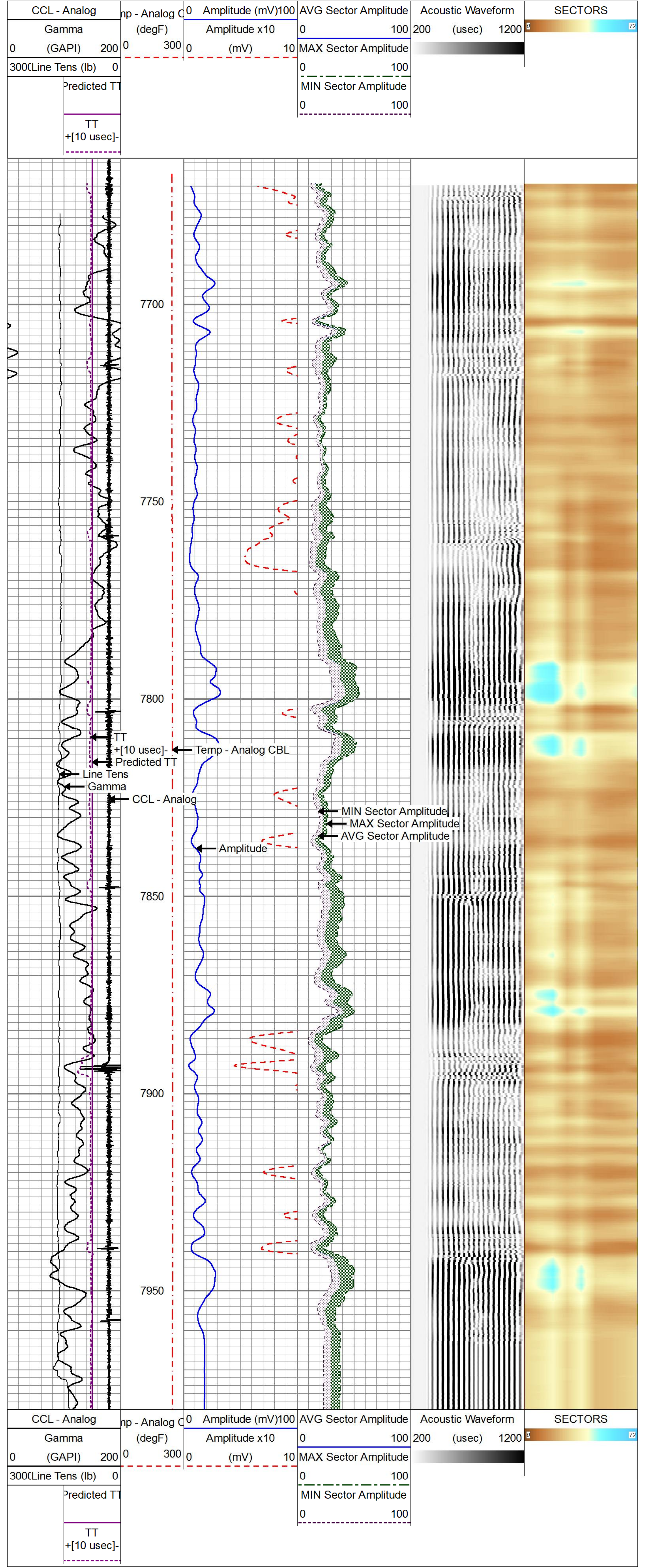
REPEAT PASS - Ran with 0 PSI

5 in / 100 ft

Database File	2018_08_13_extraction_vt_lds_c3_16_18_cbl\2018_08_14_extraction_vt_lds_c3_16_18_cbl.db
Dataset Pathname	pass2
Presentation Format	rcbl_8s
Dataset Creation	Tue Aug 14 10:56:01 2018
Charted by	Depth in Feet scaled 1:240



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REPEAT PASS - Ran with 0 PSI

5 in / 100 ft

Calibration Report

Database File	d:\warrior\data\2018_08_13_extraction_vt_lds_c3_16_18_cbl\2018_08_14_extraction_vt_lds_c3_16_18_cbl.
Dataset Pathname	pass3
Dataset Creation	Tue Aug 14 11:02:45 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:	IPPO2-01	
Tool Model:	2 3/4" RIB Analog	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	344.560	ft

Master Calibration, performed Sun Aug 12 11:27:33 2018:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.008	0.908	0.000	71.921	79.912	-0.602
CAL	-0.000	0.503				
5'	0.010	1.188	0.000	71.921	61.037	-0.594
SUM						
S1	0.017	0.905	0.000	72.000	81.059	-1.357
S2	0.015	0.925	0.000	72.000	79.154	-1.187
S3	0.015	0.967	0.000	72.000	75.580	-1.104
S4	0.017	0.992	0.000	72.000	73.893	-1.279
S5	0.015	1.005	0.000	72.000	72.755	-1.102
S6	0.017	0.944	0.000	72.000	77.701	-1.346
S7	0.018	0.873	0.000	72.000	84.266	-1.525
S8	0.018	0.844	0.000	72.000	87.115	-1.550

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	0.000	-0.000	0.503	1.000	0.000

Air Zero Calibration, performed Fri Aug 25 16:15:12 2017:

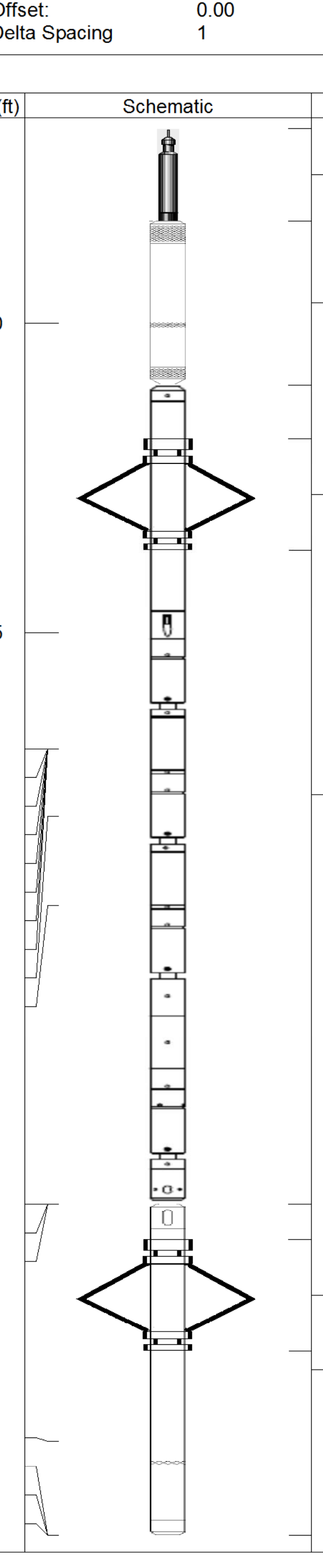
	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

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)
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 (IPSN7-03)	1.83	2.75	33.00
Antelope-Overbody	1.25	2.75	
RBTA-2 3/4" RIB Analog (IPPO2-01)	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:	2018_08_14_extraction_vt_lds_c3_16_18_cbl.db: field/well/run1/pass3
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	VT-LDS C3-16-18		
Field	Wattenberg		
County	Weld		
State	CO	**Country**	U.S.A.