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CEMENT BOND LOG

Company	Extraction Oil and Gas
Well	Rinn Valley East N17-20-4C
Field	Wattenberg
County	Weld
State	CO

Company Extraction Oil and Gas
Well Rinn Valley East N17-20-4C
Field Wattenberg
County Weld State CO

API #: 05-123-47315
Location: 870' FSL & 1772' FEL
Lat: 40.133876
Long: -105.023986

SEC: 17 TWP: 2N RGE: 68W

Other Services

Elevation
K.B. 4944'
D.F. -----
G.L. 4915'

Permanent Datum: Ground Level Elevation: 4915'
Log Measured From: Kelly Bushing , 29 ft. above Permanent Datum.
Drilling Measured From: Kelly Bushing

Date	30 Sept 2018
Run Number	One
Plug Back T.D. Driller	-----
Plug Back T.D. Logger	-----
Bottom Logged Interval	7769'
Top Log Interval	Surface
Type Fluid	-----
Density / Viscosity	-----
Max. Recorded Temp.	238°F
Time Logger on Bottom	13:00
Equipment Number	GD 114
Location	Casper, WY
Recorded By	J. Baker
Witnessed By	

Casing Record				Tubing Record			
Size	Weight	From	To	Size	Weight	From	To
9 5/8"	36#	Surface	1500'				
5 1/2"	20#	Surface	17,619'				

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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 # : RM0918PCBW932
Your Crew Today: D. Hamilton, A. Maxwell
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	386'
40 % Bond	1189'
60 % Bond	1208'
80 % Bond	4050'
100 % Bond	-----

Comments

Estimated cement top at 386'
(20% Bond)

Marker joint located at 6,965'

Thank you for using Gyrodata

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

Log Variables

Databased:\warrior\data\2018_09_30_extraction_rinn_valley_east_n17_20_4c_cbl\2018_09_30_ext
Dataset field/well/run1/MAINPASS/_vars_

Top - Bottom

BHTEMP_Src	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MAXAMPL mV	MaxAPIID in
TEMP	8.5	238	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	238	0

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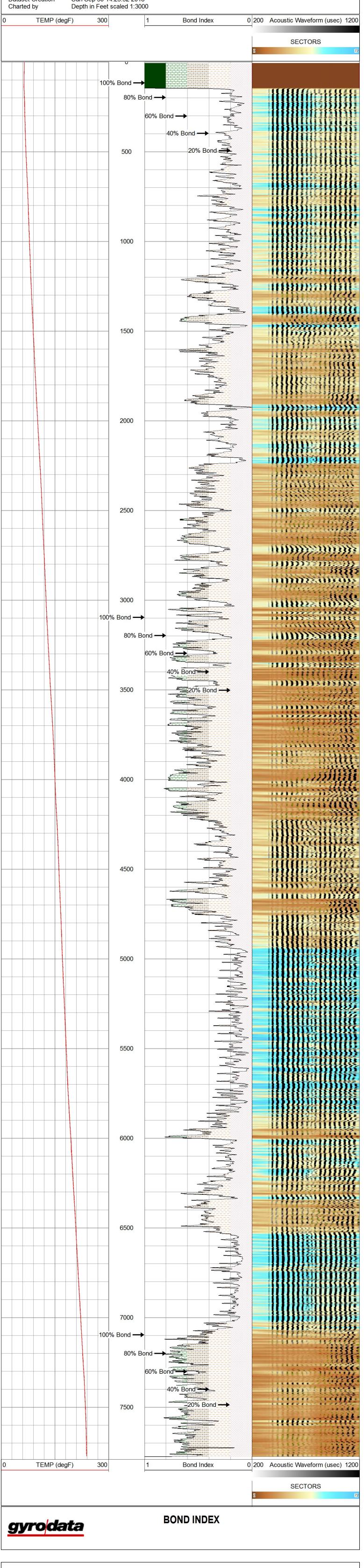
BOND INDEX

Database File	2018_09_30_extraction_rinn_valley_east_n17_20_4c_cbl\2018_09_30_extraction_rinn_valley_east_n17_2
Dataset Pathname	BOND
Presentation Format	bndindx_msg-sec
Dataset Creation	Sun Sep 30 14:23:52 2018
Charted by	Depth in Feet scaled 1:3000



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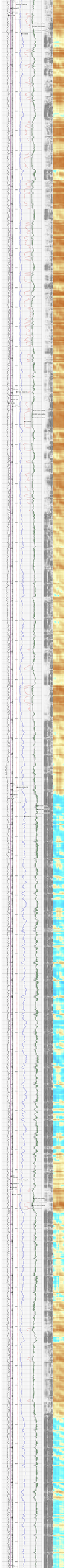
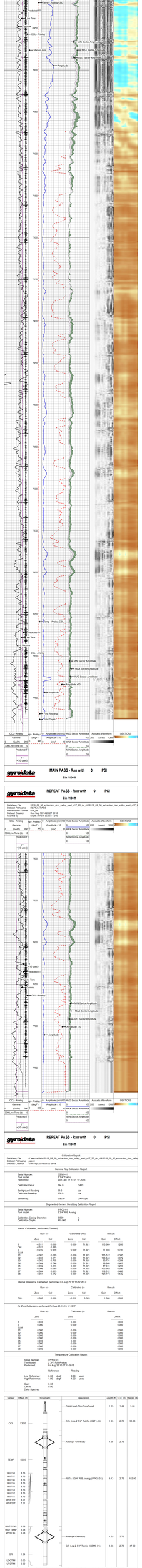
MAIN PASS - Ran with 0 PSI

5 in / 100 ft

Database File	2018_09_30_extraction_rinn_valley_east_n17_20_4c_cbl\2018_09_30_extraction_rinn_valley_east_n17_2
Dataset Pathname	MAINPASS
Presentation Format	rcbl_8s
Dataset Creation	Sun Sep 30 14:22:30 2018
Charted by	Depth in Feet scaled 1:240





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MAIN PASS - Ran with 0 PSI

6 in / 100 ft

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REPEAT PASS - Ran with 0 PSI

6 in / 100 ft

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REPEAT PASS - Ran with 0 PSI

6 in / 100 ft

Calibration Report

Database File: d:\wesmo\data\2016_08_30_extraction_mm_valley_east_in17_20_4a_cdr2016_08_30_extraction_mm_valley_east_in17_20_4a.mdb
Dataset Pathname: pass3
Dataset Creation: Sun Sep 30 13:09:05 2016

Gamma Ray Calibration Report

Serial Number:	DESPI-01
Test Date:	2-Oct-2015
Performed:	Mon Dec 07 23:01:16 2015
Calibrator Value:	194.0 GAPI
Background Reading:	19.5 cps
Calibrator Reading:	369.5 cps
Sensitivity:	0.5639 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	SPPCS-01
Tool Model:	2 3/4" RSB Analog
Calibration Casing Diameter:	5.500 in
Calibration Depth:	410.000 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
T	-0.011	0.639	0.000	71.921	110.509	1.260
T2	-0.011	0.639				
T*	-0.003	0.816	0.000	71.921	77.645	0.160
SUM						
S1	-0.003	0.620	0.000	71.921	113.512	0.345
S2	-0.003	0.780	0.000	71.921	126.644	0.372
S3	-0.003	0.780	0.000	71.921	93.731	0.238
S4	-0.004	0.816	0.000	71.921	87.877	0.220
S5	-0.004	0.816	0.000	71.921	87.941	0.220
S6	-0.004	0.989	0.000	71.921	103.602	0.090
S7	-0.004	0.989	0.000	71.921	102.882	0.090
S8	-0.004	0.772	0.000	71.921	128.174	0.542

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

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.012	0.320	1.000	0.000

At Zero Calibration, performed Fri Aug 25 15:15:12 2017:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
T	0.000	0.000	0.000
SUM	0.000	0.000	0.000
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:	SPPCS-01
Tool Model:	2 3/4" RSB Analog
Performed:	Fri Aug 26 10:37:15 2016

	Reference	Reading	
Low Reference:	0.00 degF	0.00 usec	
High Reference:	1.00 degF	1.00 usec	
Gain:	0.10		
Offset:	0.00		
Delay Spacing:	5.00		

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
CCL	13.00		--Cable Head,TitanConnType2	1.03	1.44	3.60
			--CCL,Log-2 3/4" TwinCo (9321-09)	1.83	2.75	33.00
TEMP	16.03		--Antelope-Overbody	1.25	2.75	
WVF38	8.76		--WBTA-2 3/4" RSB Analog (PPCZ-01)	9.13	2.75	102.50
WVF37	8.76					
WVF36	8.76					
WVF35	8.76					
WVF34	8.76					
WVF33	8.76					
WVF32	8.76					
WVF31	8.76					
WVF30	8.76					
WVF29	7.01					
WVF31NC	3.68					
WVF30NP	3.68					
WVF CAL	3.68		--Antelope-Overbody	1.25	2.75	
GR	1.04		--GR,Log-2 3/4" TwinCo (9E3M9-01)	3.68	2.75	47.00
LCCTM	0.00					
UCCTM	0.00					

Dataset: 2016_08_30_extraction_mm_valley_east_in17_20_4a_cdr.db Bestwellstart:MAINPASS
Total length: 13.87 ft
Total weight: 185.60 lb
O.D: 2.75 in

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Company	Extraction Oil and Gas
Well	Rice Valley East Nr7-20-4Z
Field	Wattenberg
County	Weld
State	CO
Country	U.S.A.