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CEMENT BOND LOG

Company	Extraction Oil and as Inc.
Well	Northwest A 520-25-10N
Field	Wattenberg
County	Broomfield
State	Colorado

Company: Extraction Oil and as Inc.
Well: Northwest A 520-25-10N
Field: Wattenberg
County: Broomfield State: Colorado
API #: 05 014 20790
Location: NW/NW 1289 FNL 814 FWL
Other Services
SEC: 9 TWP: 1S RGE: 68W
Elevation: K.B. 5343, D.F. ----, G.L. 5314

Permanent Datum:	Ground Level	Elevation: 5314
Log Measured From:	Kelly Bushing	, 29 ft. above Permanent Datum.
Drilling Measured From:	Kelly Bushing	
Date	16 January 2020	
Run Number	One	
Plug Back T.D. Driller	----	
Plug Back T.D. Logger	----	
Bottom Logged Interval	9520	
Top Log Interval	Surface	
Type Fluid	Water	
Density / Viscosity	----	
Max. Recorded Temp.	235	
Time Logger on Bottom	10:40	
Equipment Number	GD170	
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 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 # : RM0120PCBW111
Your Crew Today: Baker, Enloe, Obgard
Log Correlated to: Surface

Cement Data	
Date Cemented	----
Primary / Squeeze	Primary
Type / Weight	----
Main Pass Press.	Zero
Repeat Pass Press.	Zero

Comments

Estimated Top of Cement
(20 % Bond Index) at 2400 feet

Bond Index

Index %	Est Top Depth
20 % Bond	2400
40 % Bond	3500
60 % Bond	4695
80 % Bond	6440
100 % Bond	----

Thank you for using Gyrodata

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

Log Variables

Databased:\warrior\data\20200116_extraction northwest a s20-25-10n_cbl\20200116_extraction no
Dataset field/well/run1/pass3/_vars_

Top - Bottom

BHTEMP_Src	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MAXAMPL mV	MaxAPIID in	MINAMPL mV	MinAPIID in
TEMP	5.5	0.361	20	71.9	4.923	2.1	4.751

MINATTN db/ft	PPT usec	Z_NA_1	Z_NA_2	Z_NA_3
0	237	0	0	0

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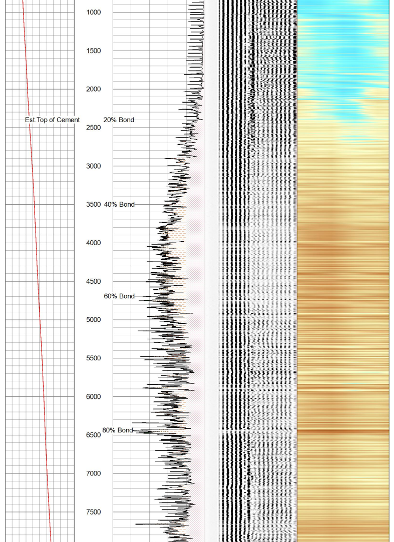
BOND INDEX

Calculated for 3000 PSI Compressive Strength Cement

Database File	20200116_extraction northwest a s20-25-10n_cbl\20200116_extraction northwest a s20-25-10n_cbl.db
Dataset Pathname	./././bndindx
Presentation Format	BNDIND~1
Dataset Creation	Thu Jan 16 12:24:32 2020
Charted by	Depth in Feet scaled 1:7500



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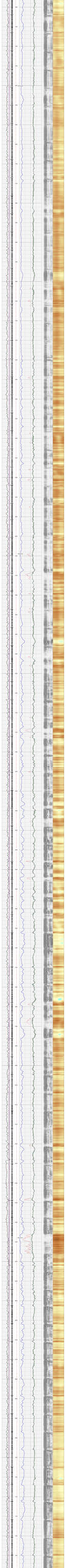
MAIN PASS - Ran with Zero PSI

5 in / 100 ft

Database File	20200116_extraction northwest a s20-25-10n_cbl\20200116_extraction northwest a s20-25-10n_cbl.db
Dataset Pathname	pass3
Presentation Format	rcbl_8s
Dataset Creation	Thu Jan 16 10:44:21 2020
Charted by	Depth in Feet scaled 1:240



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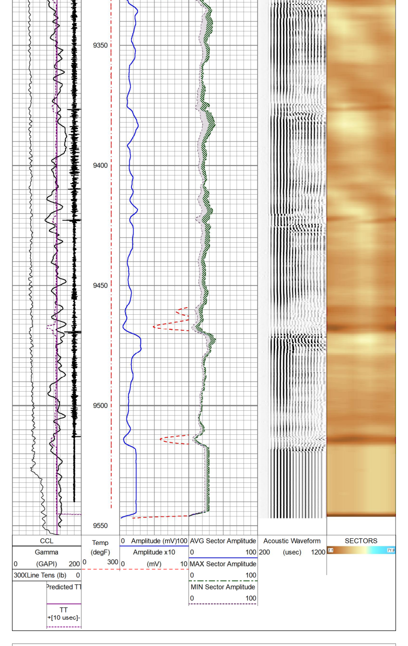
REPEAT PASS - Ran with Zero PSI

5 in / 100 ft

Database File	20200116_extraction northwest a s20-25-10n_cbl\20200116_extraction northwest a s20-25-10n_cbl.db
Dataset Pathname	pass2
Presentation Format	rcbl_8s
Dataset Creation	Thu Jan 16 10:40:31 2020
Charted by	Depth in Feet scaled 1:240



Calibration Report

Database File	d:\warrior\data\20200116_extraction northwest a s20-25-10n_cbl\20200116_extraction northwest a s20-25-1
Dataset Pathname	pass3
Dataset Creation	Thu Jan 16 10:44:21 2020

Gamma Ray Calibration Report

Serial Number:	IXEM9-01	
Tool Model:	2 3/4" TekCo	
Performed:	Fri Sep 13 16:16:19 2019	
Calibrator Value:	194.0	GAPI
Background Reading:	58.0	cps
Calibrator Reading:	330.4	cps
Sensitivity:	0.7121	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	IRB34-03
Tool Model:	2 3/4" RIB Analog

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.016	0.933	0.000	71.921	75.792	1.239
CAL	-0.004	0.746				
5'	0.001	1.030	0.000	71.921	69.881	-0.071
SUM						
S1	0.007	1.243	0.000	72.000	58.240	-0.415
S2	0.006	1.169	0.000	72.000	61.924	-0.365
S3	0.006	1.096	0.000	72.000	66.017	-0.369
S4	0.006	1.193	0.000	72.000	60.678	-0.362
S5	0.008	1.270	0.000	72.000	57.023	-0.435
S6	0.009	1.392	0.000	72.000	52.062	-0.471
S7	0.010	1.549	0.000	72.000	46.787	-0.470
S8	0.009	1.466	0.000	72.000	49.406	-0.452

Temperature Calibration Report

Serial Number:	IRB34-03	
Tool Model:	2 3/4" RIB Analog	
Performed:	Wed Jan 30 14:38:18 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)	Description	Length (ft)	O.D. (in)	Weight (lb)
		CableHead-TitanConeType2	1.03	1.44	3.60
CCL	13.50	CCL_Log-2 3/4" TekCo (IS2T1-08)	1.83	2.75	33.00
		Antelope-Overbody	1.25	2.75	
TEMP	10.05				
WVFS8	8.76				
WVFS7	8.76				
WVFS6	8.76	RBTA-2 3/4" RIB Analog (IRB34-03)	9.13	2.75	102.00
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				
		Antelope-Overbody	1.25	2.75	
		GR_Log-2 3/4" TekCo (IXEM9-01)	3.68	2.75	47.00
GR	1.04				
LOCTIM	0.00				
UTCTIM	0.00				
PMON	0.00				

Dataset:	20200116_extraction northwest a s20-25-10n_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 as Inc.
Well	Northwest A 520-25-10N
Field	Wattenberg
County	Broomfield
State	Colorado
Country	U.S.A.