KLX
Energy Services

V.D.L. C.C.L. GAMMA RAY CEMENT BOND LOG

Company	BONANZA CREEK ENEERGY
Well	STATE ANTELOPE 44-21-16 XRLNB
Field	WATTENBERG
County	WELD
State	COLORADO Country USA

Company	BONANZA CREEK ENEERGY		
Well	STATE ANTELOPE 44-21-16 XRLNB		
Field	WATTENBERG		
County	WELD	Country	USA
State	COLORADO		
Location:	API #: 05-123-42765		Other Services
	SHL: 410' FSL X 419' FEL		N/A
	SEC 21 TWP 5N RGE 62W		
Permanent Datum	GL	Elevation 4678'	Elevation
Log Measured From	KB 17'		K.B. 4695'
Drilling Measured From	KB		D.F. 4694' G.L. 4678'

Date	7-SEPT-2017
Run Number	ONE
Depth Driller	16,247'
Depth Logger	6432'
Bottom Logged Interval	6420'
Top Log Interval	SURFACE
Open Hole Size	N/A
Type Fluid	WATER
Density / Viscosity	8.34 PPG
Max. Recorded Temp.	N/A
Estimated Cement Top	SURFACE
Time Well Ready	ROA
Time Logger on Bottom	11:05
Equipment Number	411468
Location	PLATTEVILLE, CO
Recorded By	R. AZEVEDO
Witnessed By	K. DODGE

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9-5/8"	36#	SURFACE	1623'
Prot. String				
Production String	5.5"	17#	SURFACE	16,247'
Liner				

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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.

Comments

LOG RAN AS PER CUSTOMER REQUEST
DEPTH REFENCE TO 17' KB
LOG RAN WITH O PSI SURFACE INDUCED PRESSURE
NO DEBRIS FOUND UPON RETRIEVAL OF TOOLS
LOG RAN FROM AS DEEP AS POSSIBLE TO SURFACE

THANK YOU FOR CHOOSING KLX ENERGY SERVICES

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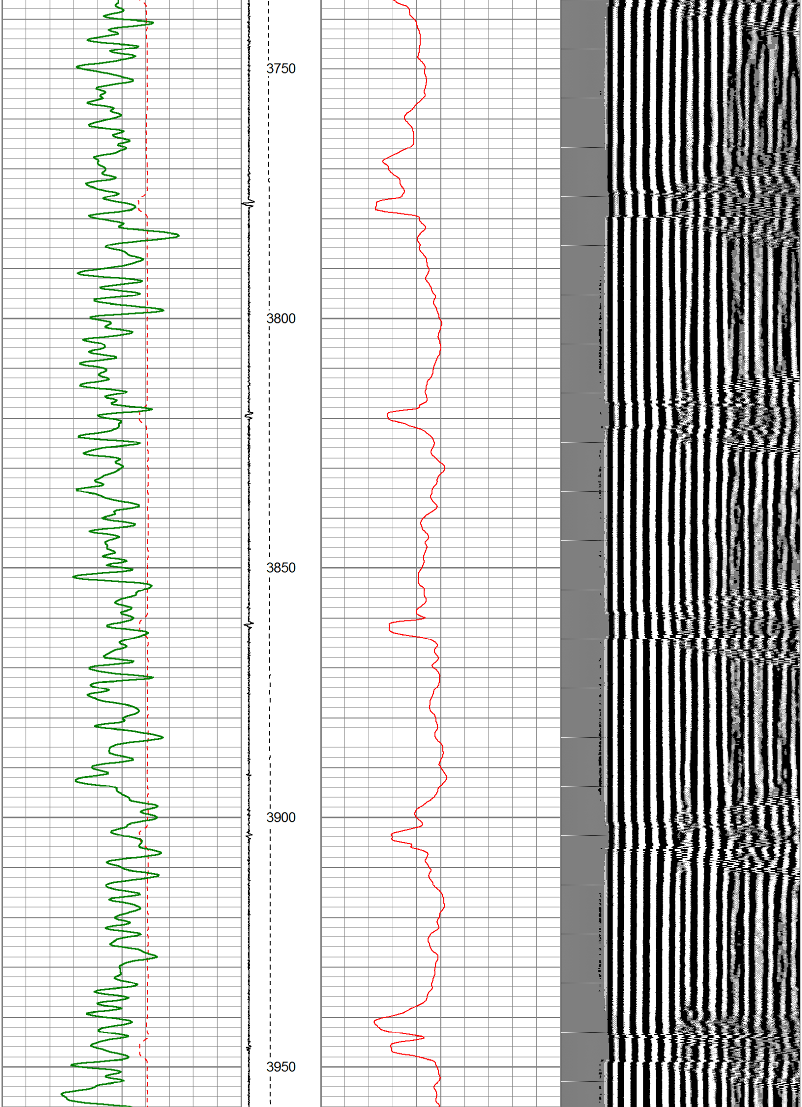
Energy Services

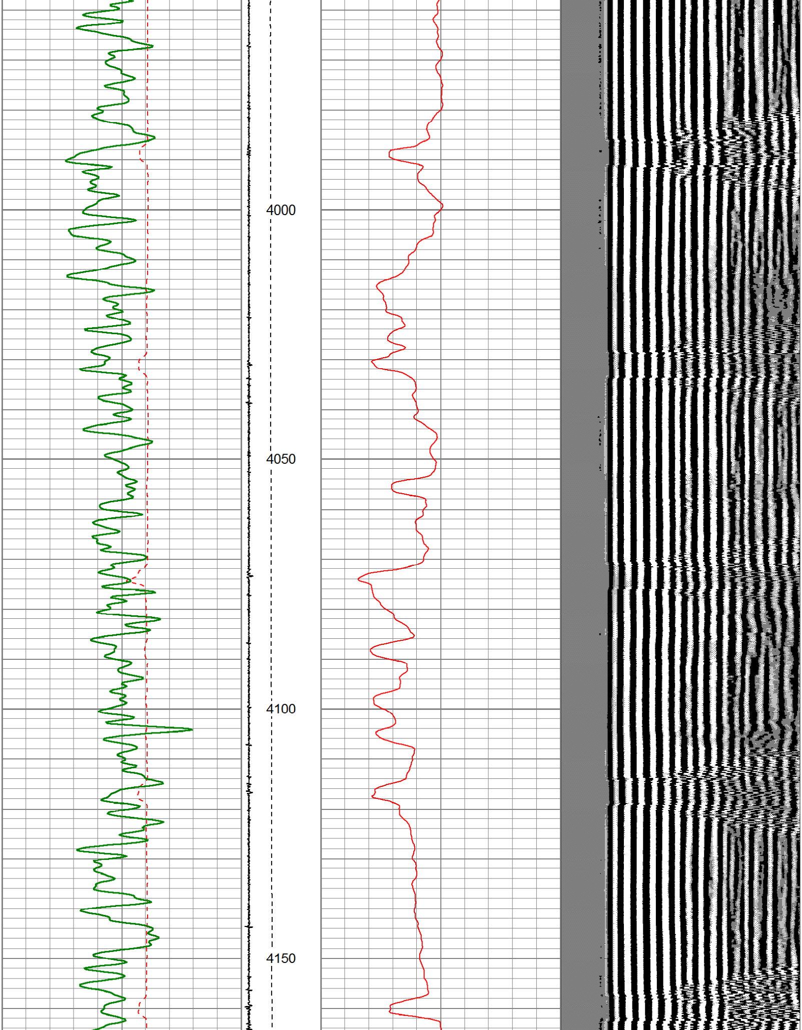
5.5" MAIN PASS

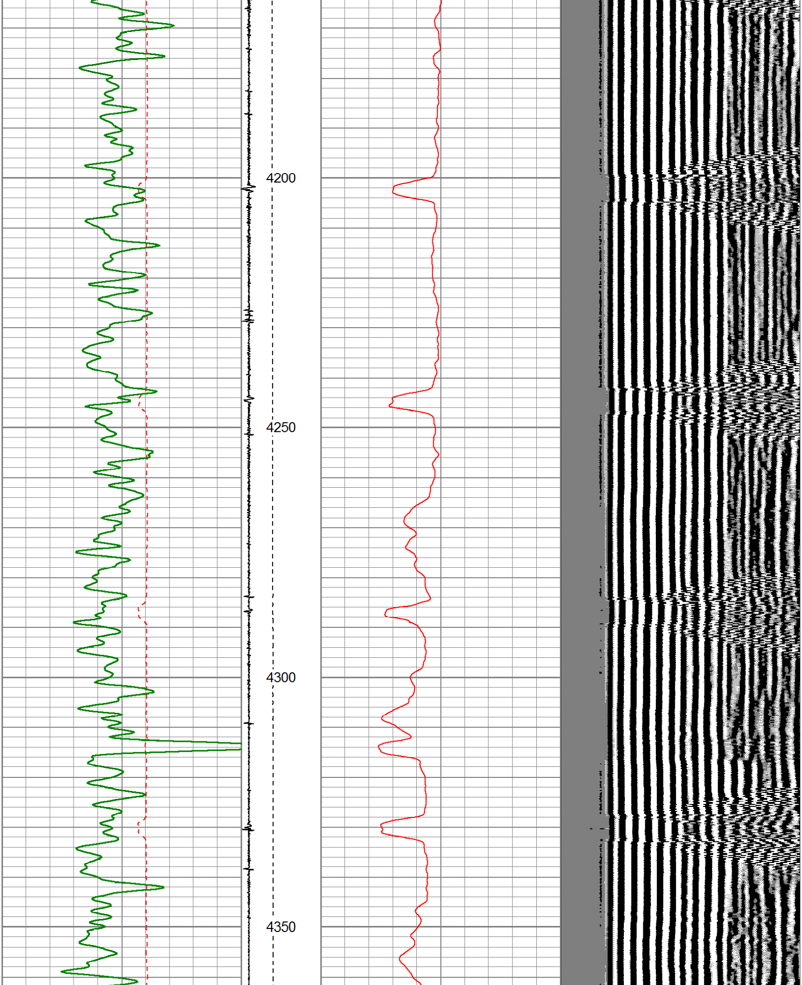
LOG RAN WITH O PSI SURFACE INDUCED PRESSURE

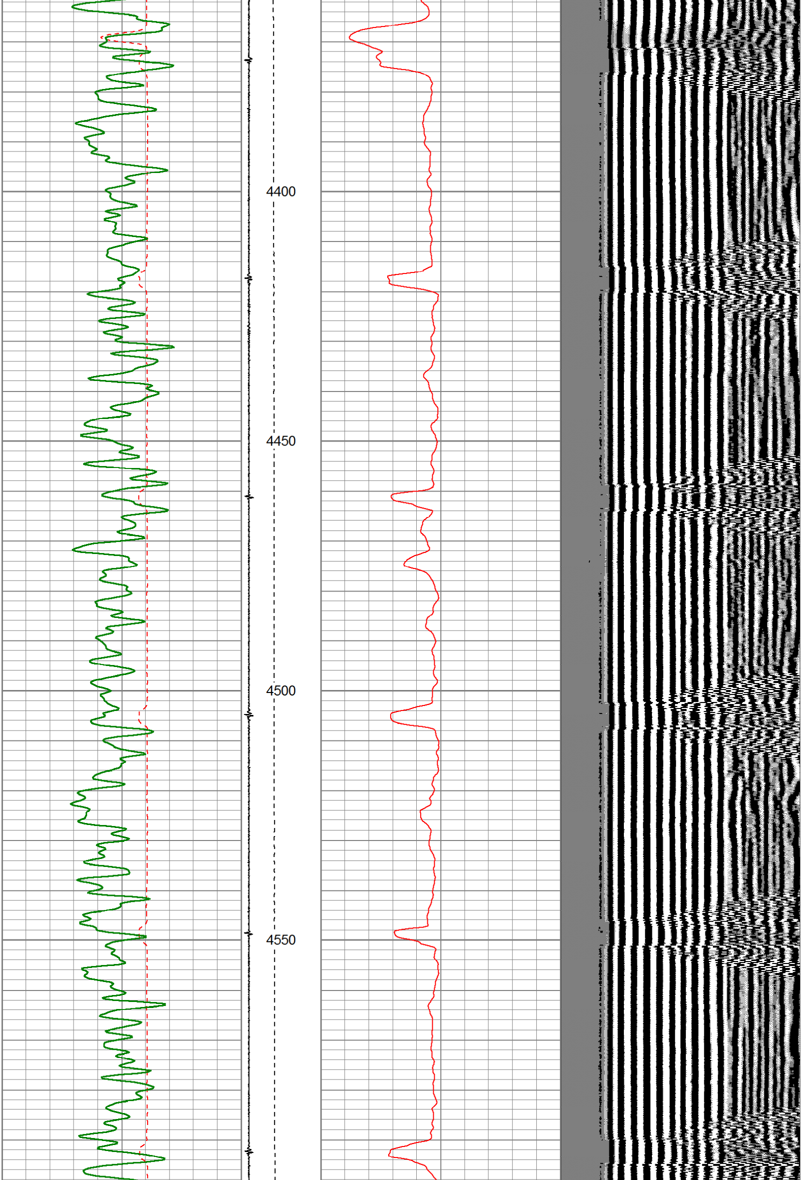
Database File: c:\warrior\data\bonanza creek\state antelope 44-21-16 xrlnb cbl.db
Dataset Pathname: pass2
Presentation Format: cbl_drs
Dataset Creation: Thu Sep 07 11:03:48 2017 by Log Std Casedhole 10081
Charted by: Depth in Feet scaled 1:240

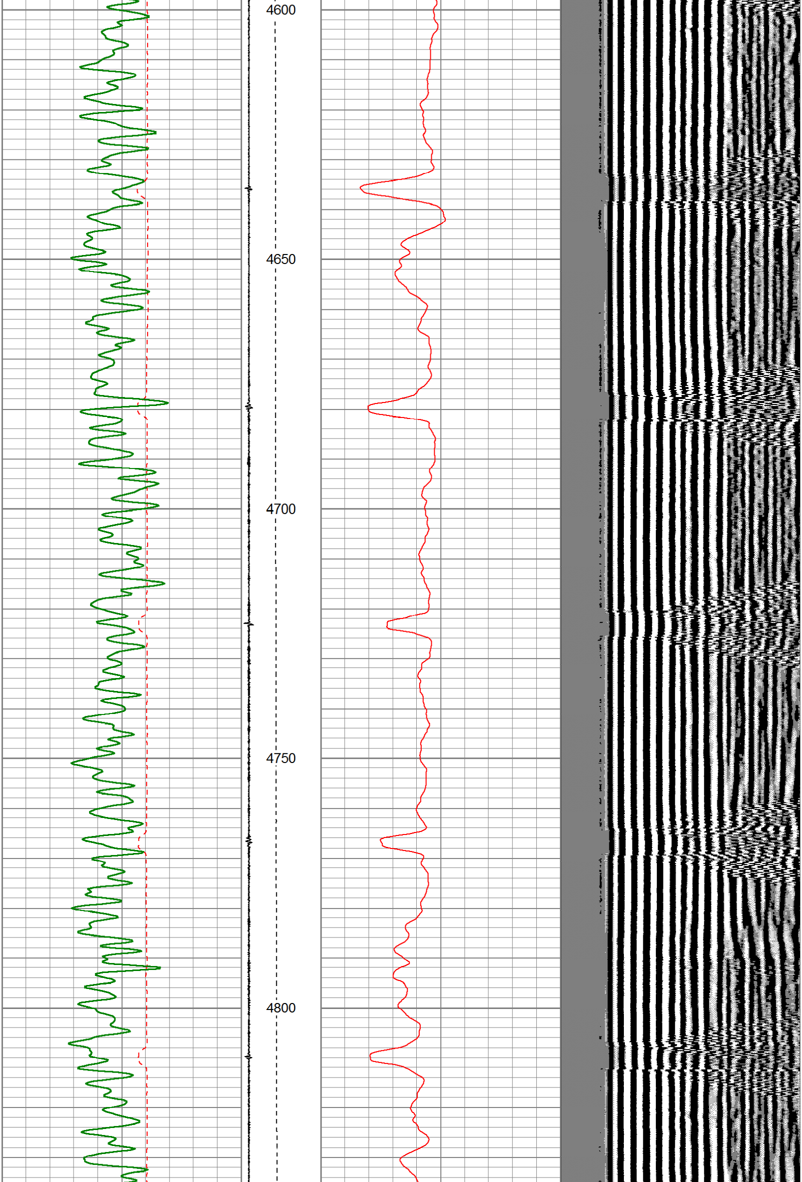
400 TRAVEL TIME (usec) 200	Collar Locator 0	AMP AMPLITUDE (mV) 10	200 VDL 1200
0 Gamma Ray 150	-1 9	0 AMPLITUDE (mV) 100	
	LTEN 0 (lb) 2000		

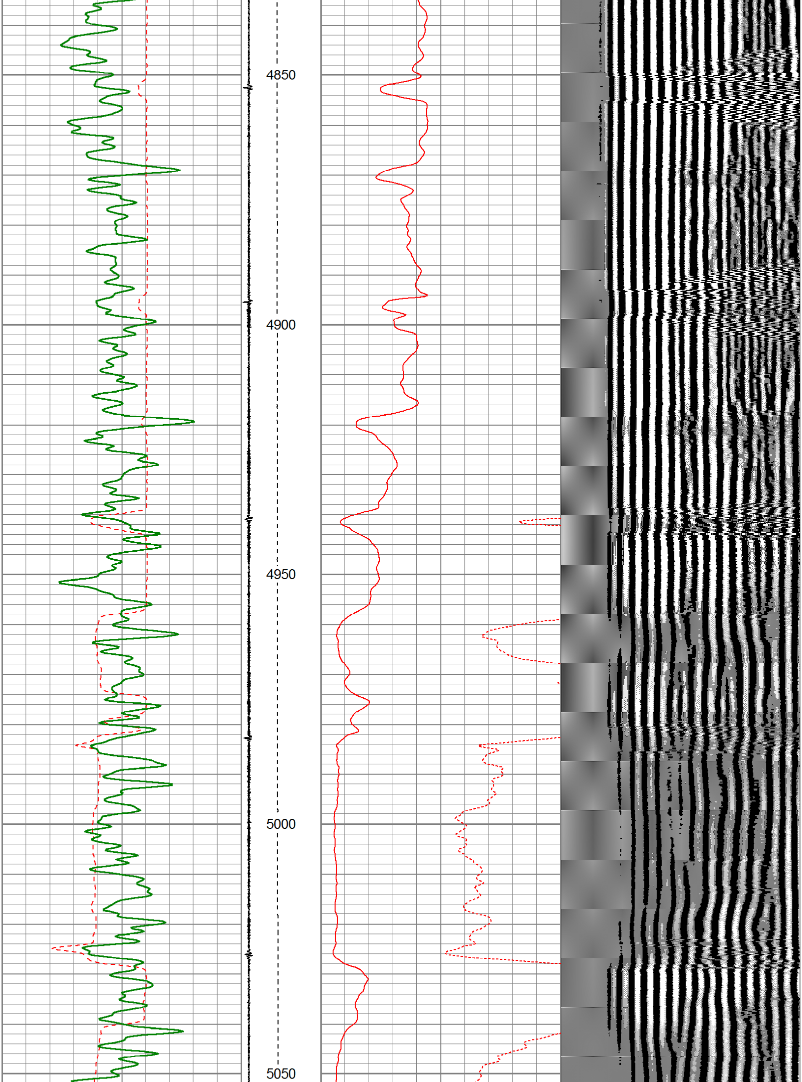


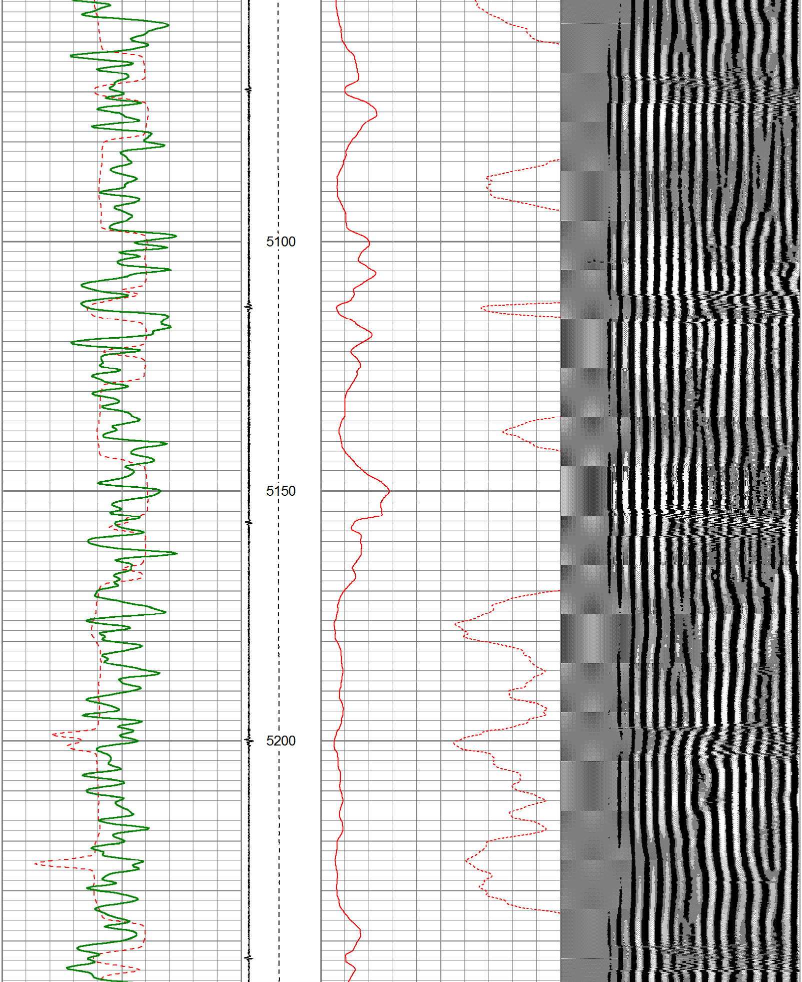


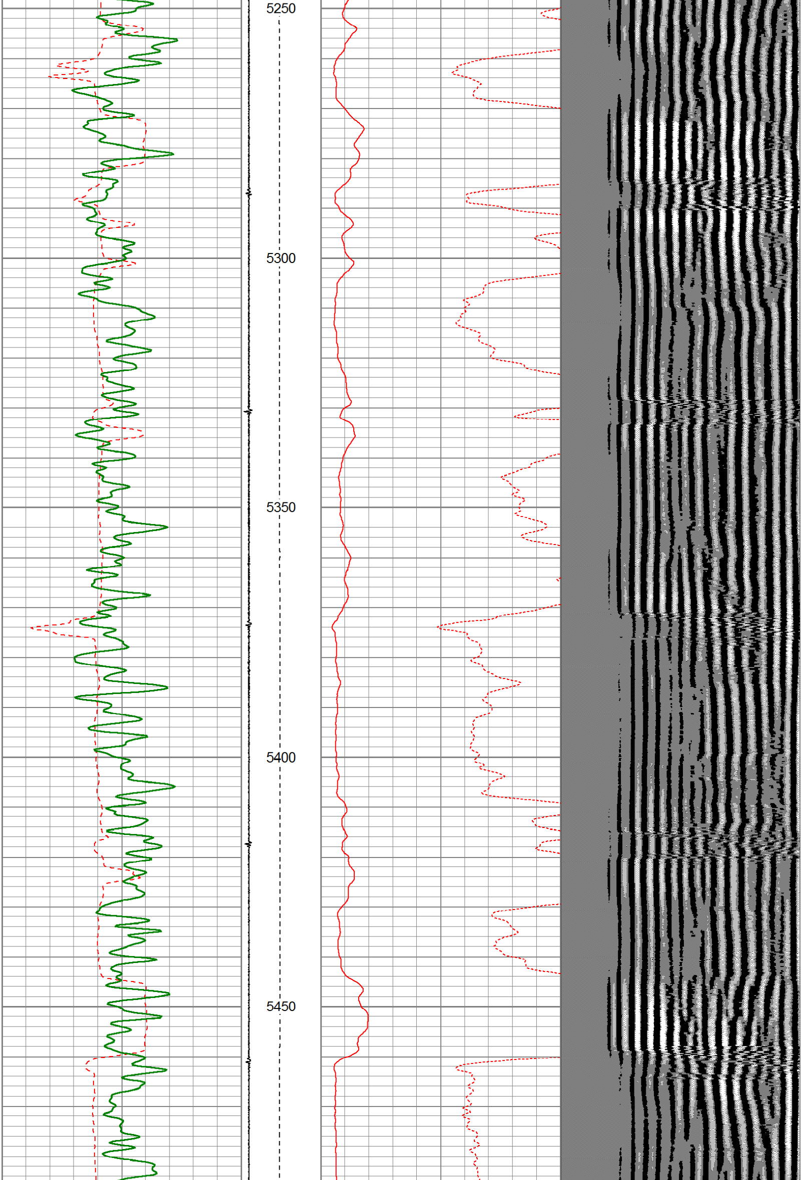


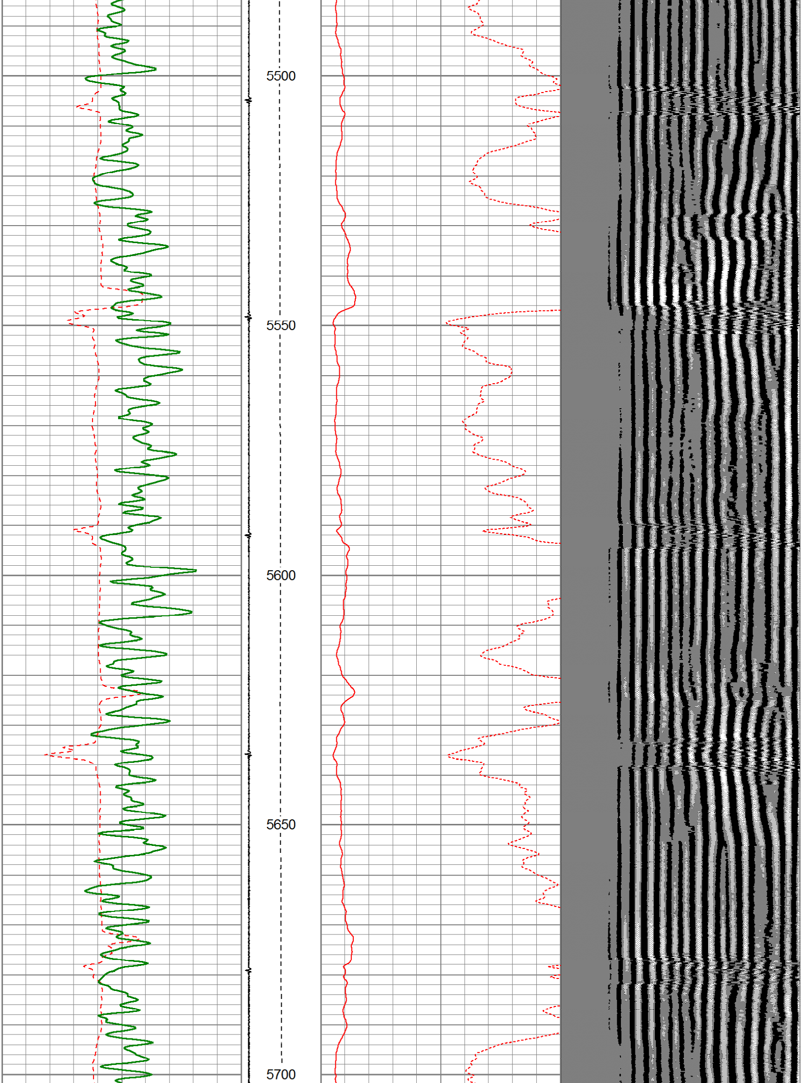


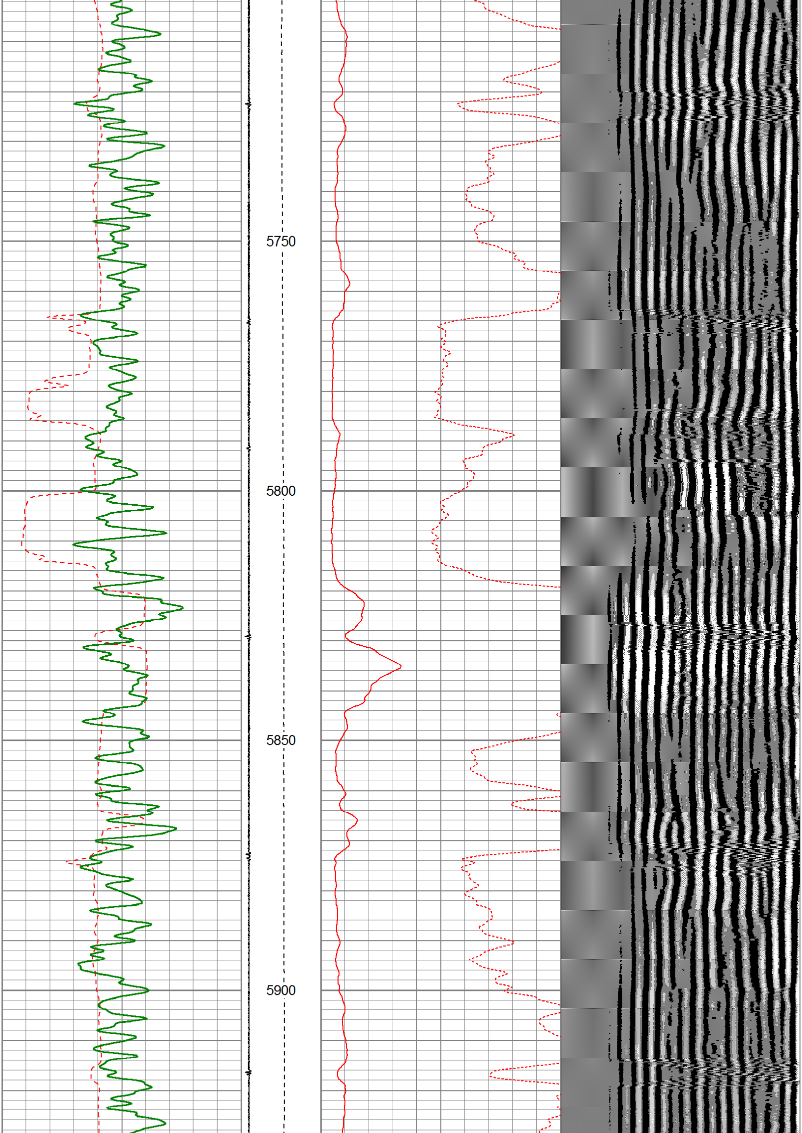


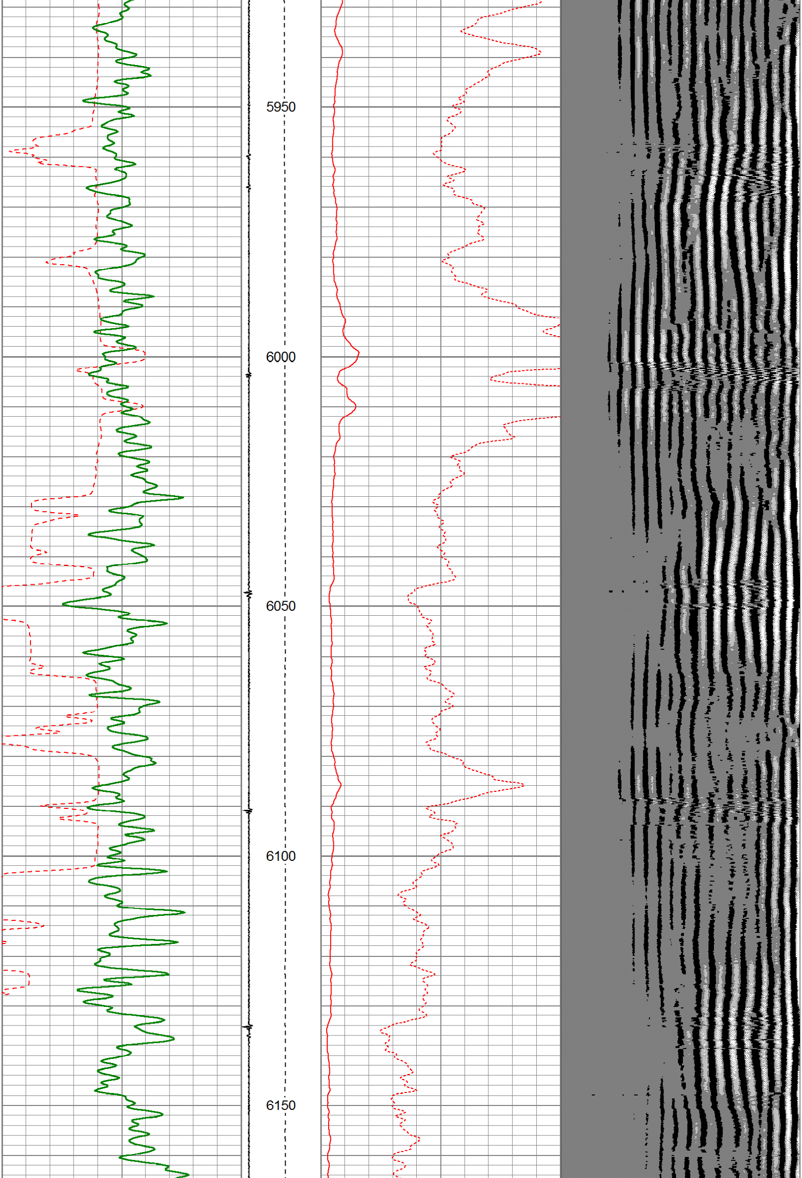


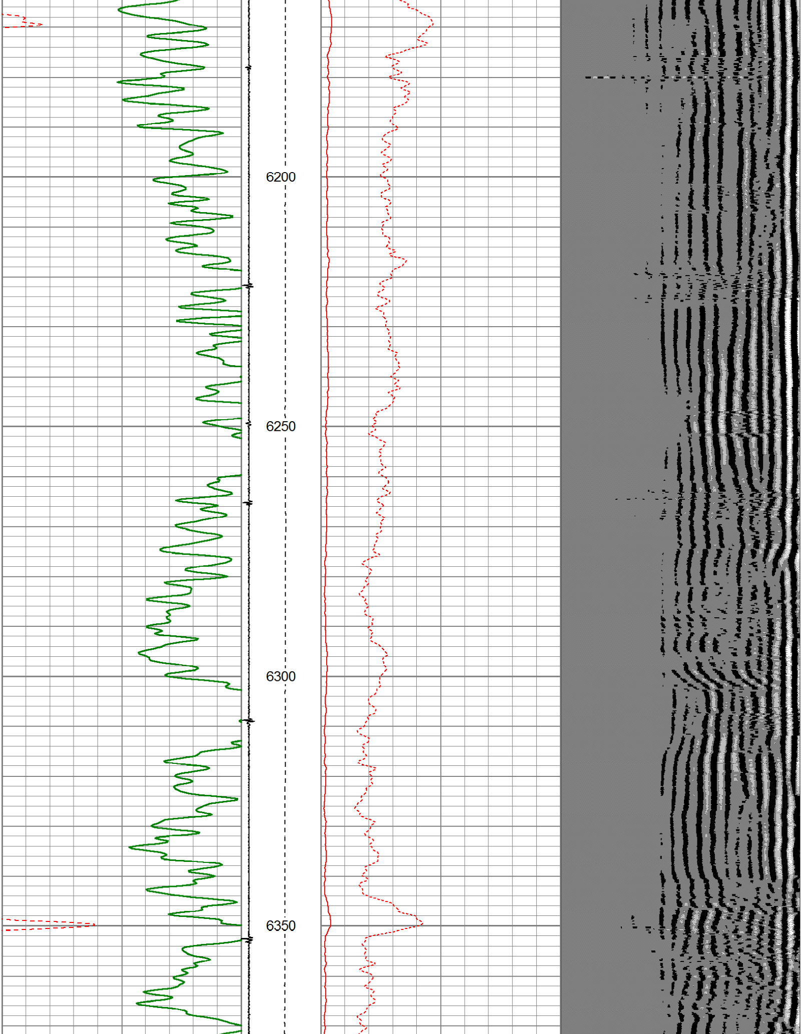


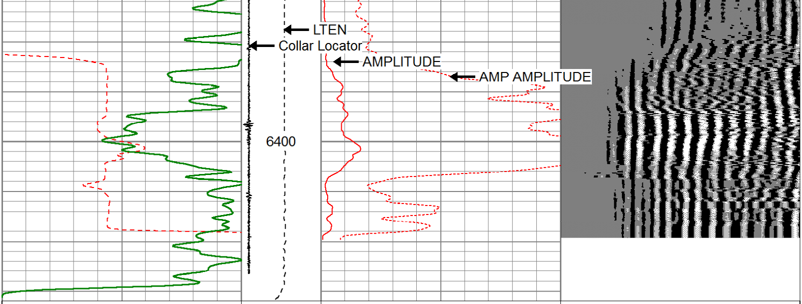












400 TRAVEL TIME (usec) 200	Collar Locator	0 AMP AMPLITUDE (mV) 10	200 VDL 1200
0 Gamma Ray 150	-1 9	0 AMPLITUDE (mV) 100	
	LTEN		
	0 (lb 2000		

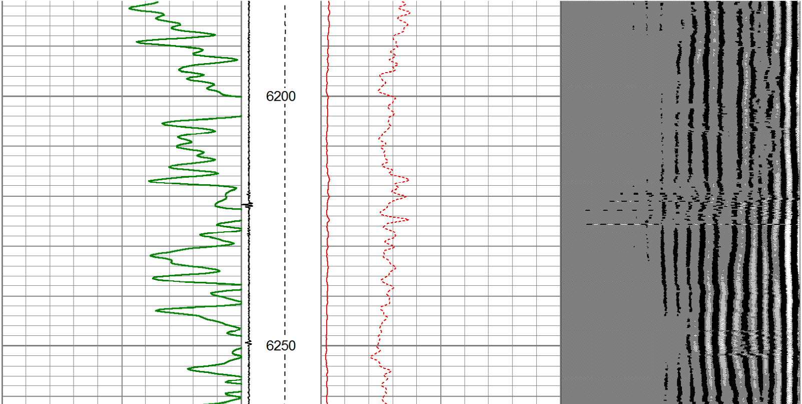
KLX Energy Services

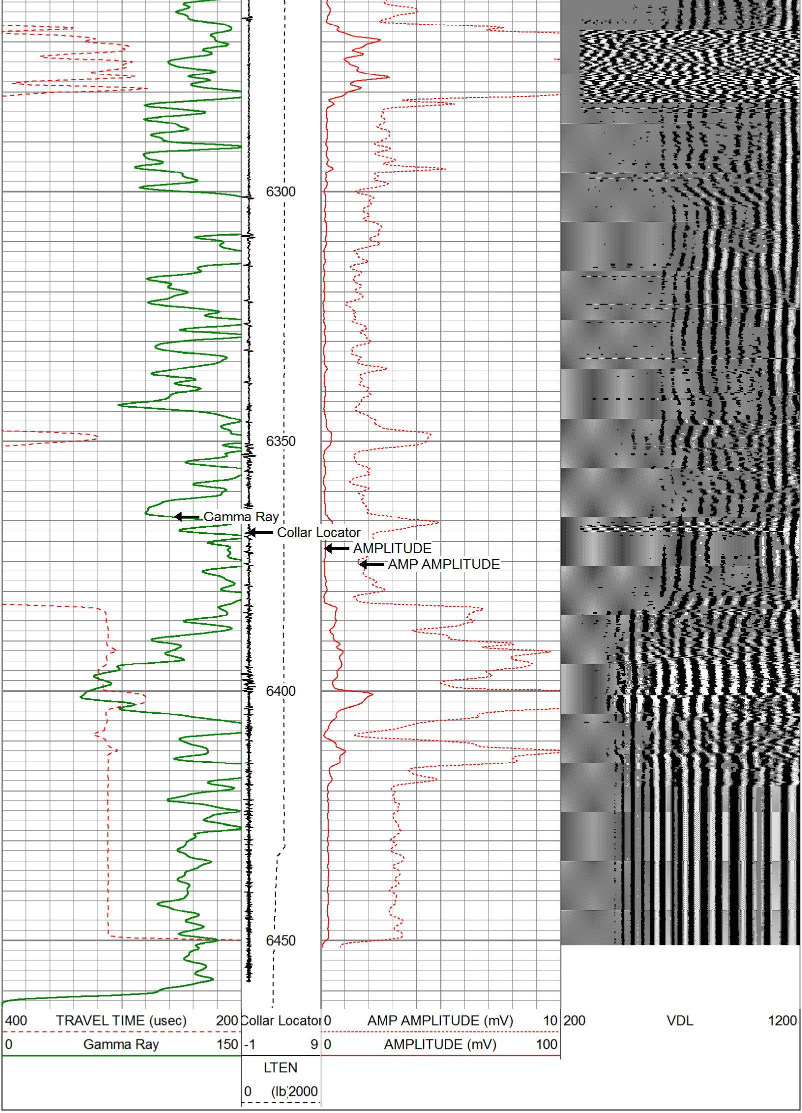
5.5" REPEAT PASS

LOG RAN WITH 0 PSI SURFACE INDUCED PRESSURE

Database File:	c:\warrior\data\bonanza creek\state antelope 44-21-16 xrlnb cbl.db
Dataset Pathname:	pass1
Presentation Format:	cbl_drs
Dataset Creation:	Thu Sep 07 10:58:13 2017 by Log Std Casedhole 10081
Charted by:	Depth in Feet scaled 1:240

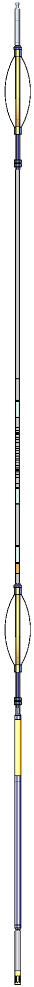
400 TRAVEL TIME (usec) 200	Collar Locator	0 AMP AMPLITUDE (mV) 10	200 VDL 1200
0 Gamma Ray 150	-1 9	0 AMPLITUDE (mV) 100	
	LTEN		
	0 (lb 2000		





Sensor	Offset (ft)
HEADVOLT	18.28
WVF3FT	13.70
WVFCAL	13.70
WVFS1	13.70
WVFS2	13.70
WVFS3	13.70
WVFS4	13.70
WVFS5	13.70
WVFS6	13.70
WVFS7	13.70
WVFS8	13.70
WVF5FT	12.62
CCL	5.25
GR	2.25
TEMP	0.17

Schematic



Description	Len (ft)	OD (in)	Wt (lb)
STNDRD Standard Cable Head	1.00	1.69	3.00
PT16875 1 11/16 Cemtralizer	2.92	1.69	5.00
RBT-PTS170 (FW1705-069) PROBE 1-11/16" RADII BOND TOOL	9.62	1.70	55.00
PT16875 1 11/16 Cemtralizer	2.92	1.69	5.00
GR_CCL-SDS (FW1703-011)	5.20	1.70	35.00
TEMP-1.375TEMP (080714) Temperature Tool	1.25	1.38	30.00

Dataset:	state antelope 44-21-16 xrlnb cbl.db: field/well/run1/pass2
Total Length:	22.90 ft
Total Weight:	133.00 lb
O.D.	1.70 in

Calibration Report

Database File: C:\Warrior\Data\Bonanza Creek\state antelope 44-21-16 xrlnb cbl.db
Dataset Pathname: pass2
Dataset Creation: Thu Sep 07 11:03:48 2017 by Log Std Casedhole 10081

Temperature Calibration Report

Serial Number: 080714
Tool Model: 1.375TEMP
Performed: Mon Aug 28 14:09:31 2017

	Reference	Reading
Low Reference:	0.00 degF	0.00 degF
High Reference:	100.00 degF	1000.00degF

Gain: 0.10
Offset: 0.00
Delta Spacing 2

Gamma Ray Calibration Report

Serial Number: FW1703-011
Tool Model: SDS
Performed: Tue Jul 11 16:35:19 2017

Calibrator Value: 1.0

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 1.0000 /cps

Segmented Cement Bond Log Calibration Report

Serial Number: FW1705-069
Tool Model: PTS170

Calibration Casing Diameter: 5.500 in
Calibration Depth: 286.061 ft

Master Calibration, performed Thu Sep 07 09:16:47 2017:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.002	0.990	0.700	71.921	71.807	0.836
CAL	0.002	1.008				
5'	0.002	1.009	0.700	71.921	70.704	0.546
SUM						
S1	0.009	1.007	0.000	100.000	100.116	-0.859
S2	0.008	0.989	0.000	100.000	101.959	-0.850
S3	0.008	0.982	0.000	100.000	102.651	-0.813
S4	0.010	1.000	0.000	100.000	101.092	-1.061
S5	0.008	1.007	0.000	100.000	100.055	-0.756
S6	0.008	0.998	0.000	100.000	101.004	-0.843
S7	0.005	0.993	0.000	100.000	101.176	-0.490
S8	0.015	0.985	0.000	100.000	103.054	-1.537

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.002	1.008	1.000	0.000

Air Zero Calibration, performed Wed Dec 31 17:00:00 1969:

	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

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Company	BONANZA CREEK ENEERGY		
Well	STATE ANTELOPE 44-21-16 XRLNB		
Field	WATTENBERG		
County	WELD		
State	COLORADO	Country	USA