CEMENT BOND LOG

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Company	EXTRACTION OIL & GAS
Well	WINDSOR LV D-14H
Field	WATTENBERG
County	WELD
State	CO

Company **EXTRACTION OIL & GAS**
Well **WINDSOR LV D-14H**
Field **WATTENBERG**
County **WELD** State **CO**

API No.: 05-123-38173 Serv #: 1004
Location: 1309' FNL & 265' FEL
LAT: 40.490690
LONG: -104.852250

Other Services
TEMPERATURE
CCL

Sec: 14 Twp: 6N Rge: 67W

Permanent Datum	GROUND LEVEL	Elevation 4846'	Elevation	
Log Measured From	KB , 24 Ft. above perm. datum		K.B.	4870'
Drilling Measured From	KB		D.F.	4869'
			G.L.	4846'

Date @ Time Logged	5 JAN 2015 @ 1000 HRS	Type Fluid in Hole	WATER
Run No.	ONE	Density of Fluid	8.4 PPG
Depth - Driller	11,620'	Fluid Level	30'
Depth - Logger	7290'	Cement Top Est. Logged	1848'
Bottom - Logged Interval	7290'	Equipment / Location	GD 114 / CASPER,WY
Top - Log Interval	SURFACE	Recorded by	J. BAKER
Max. Recorded Temp.	235°F	Witnessed by	TROY

CEMENTING DATA	Surface String	Protection String	Production String	Liner
Date / Time Cemented				
Primary / Squeeze				
Expected				
Compressive Strength	psi@ hrs	psi@ hrs	psi@ hrs	psi@ hrs
Cement Volume	/	/	/	/
Cement Type / Weight	/	/	/	/
Formulation	/	/	/	/
Mud Type / Mud Wgt.	/	/	/	/

Borehole Record			Casing & Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
				9 5/8"	36#	SURFACE	700'
				7"	26#	SURFACE	7600'
				4 1/2"	11.6#	6600'	11,926'

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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

Cement Bond Log was the initial log ran on the well dated1/05/2015
Cement top was estimated at 1848'
Max temp on bottom was 235°F
Kick off Point was unknow to logging crew

Your crew today was B. Kennicker, M. Stewart

Thank you for using Gyrodata Logging Services, Casper, WY

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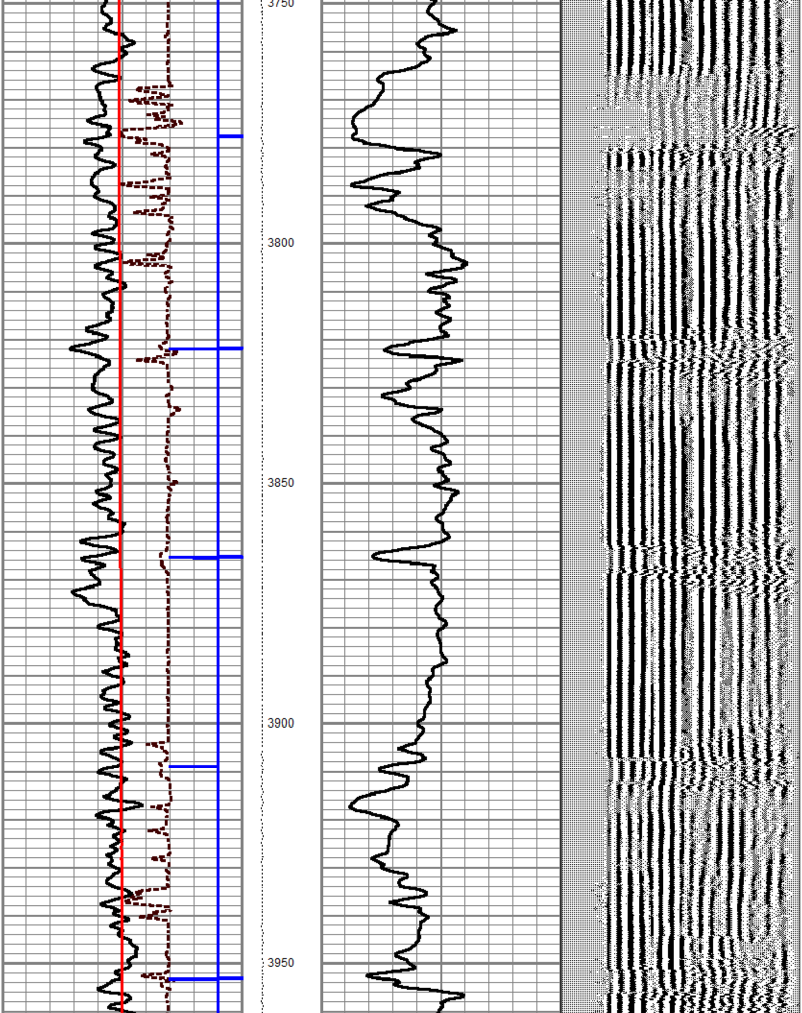
CEMENT BOND PRESENTATION

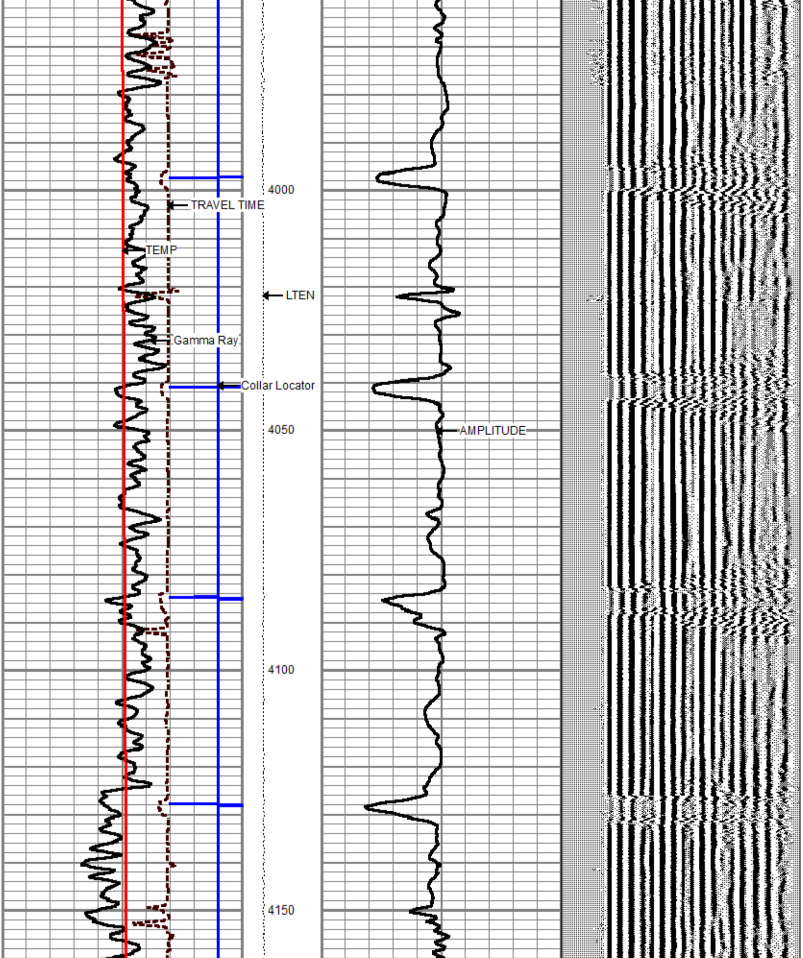
MAIN LOG SECTION / 0 PSI

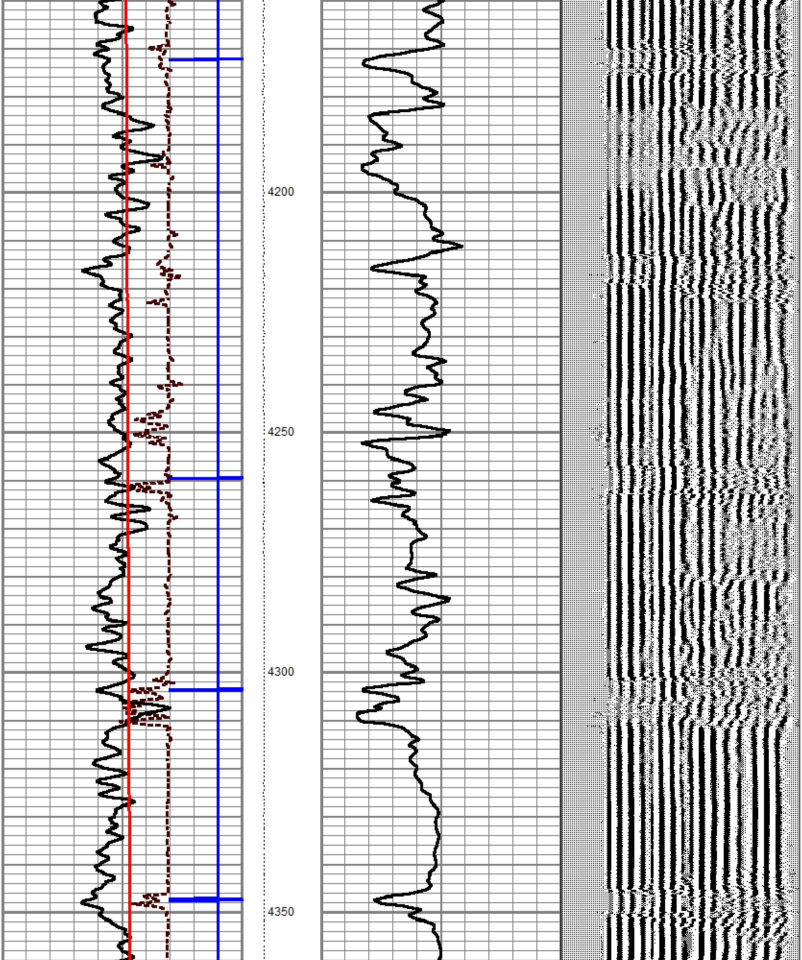
5" = 100'

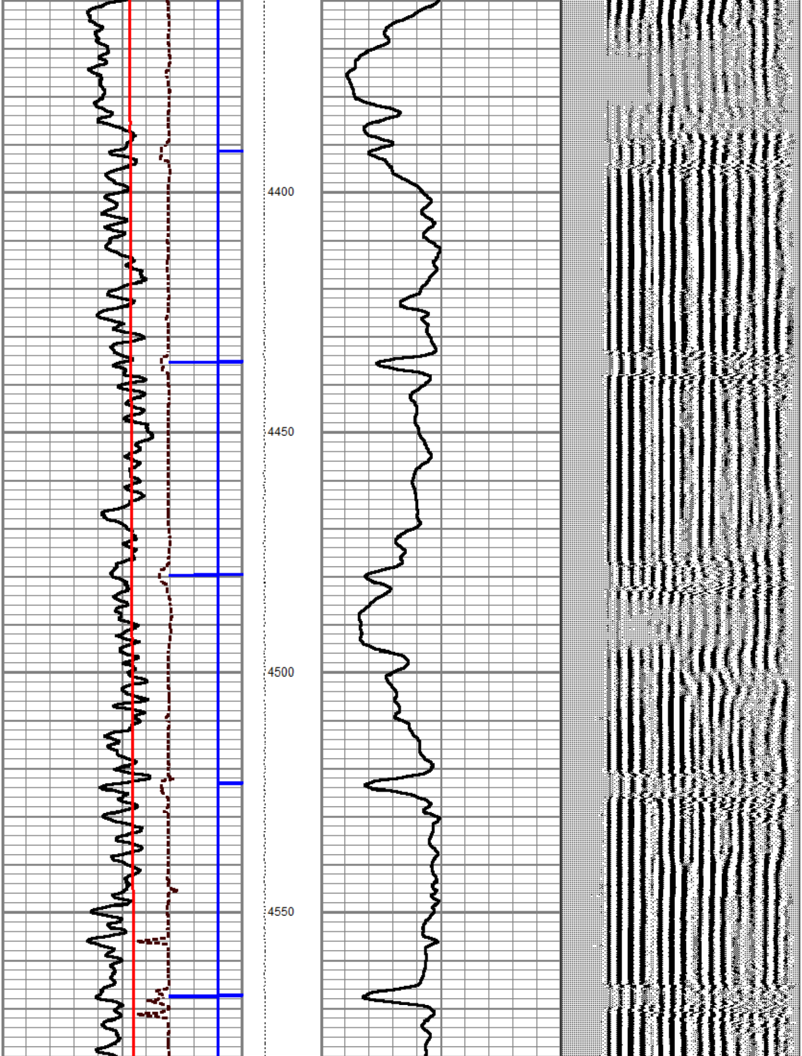
Database File	2015_extraction_windsor_lv_d_14_h.db
Dataset Pathname	pass3.4
Presentation Format	cbl_drs
Dataset Creation	Mon Jan 05 13:10:53 2015
Charted by	Depth in Feet scaled 1:240

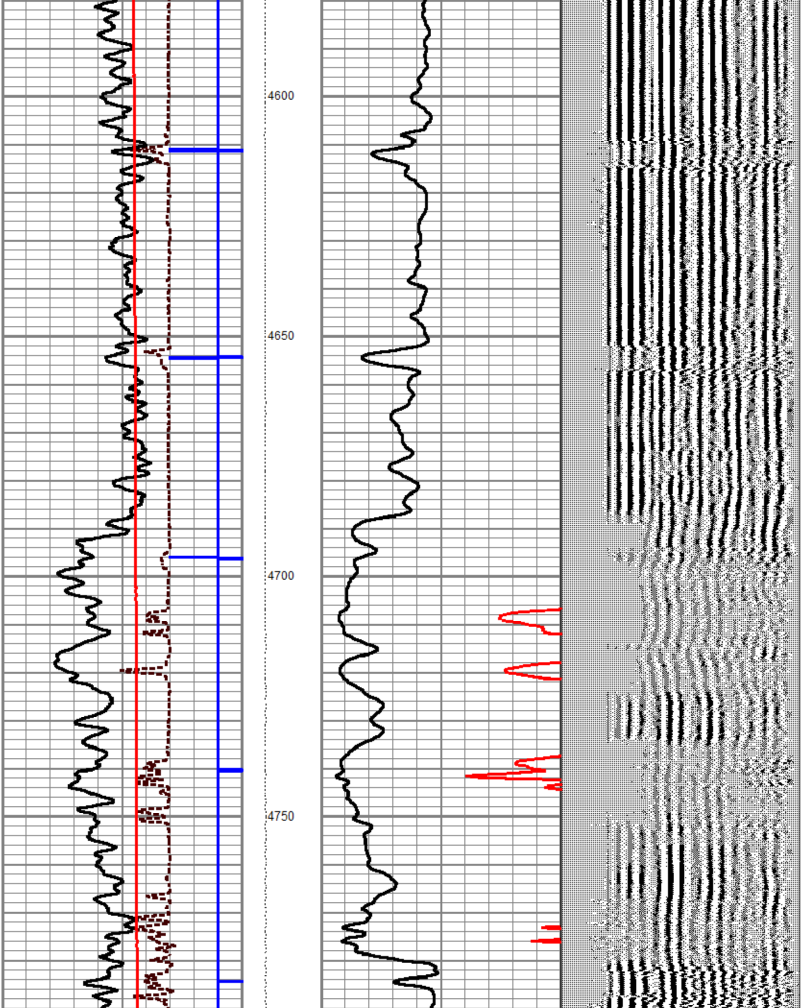
400	TRAVEL TIME (usec)	200	LTEN	0 AMP AMPLITUDE x 10 (mV) 10	200 VDL	1200
9	Collar Locator	-1	0 (lb) 2000	0 AMPLITUDE (mV) 100		
0	Gamma Ray	200				
0	TEMP (degF)	300				

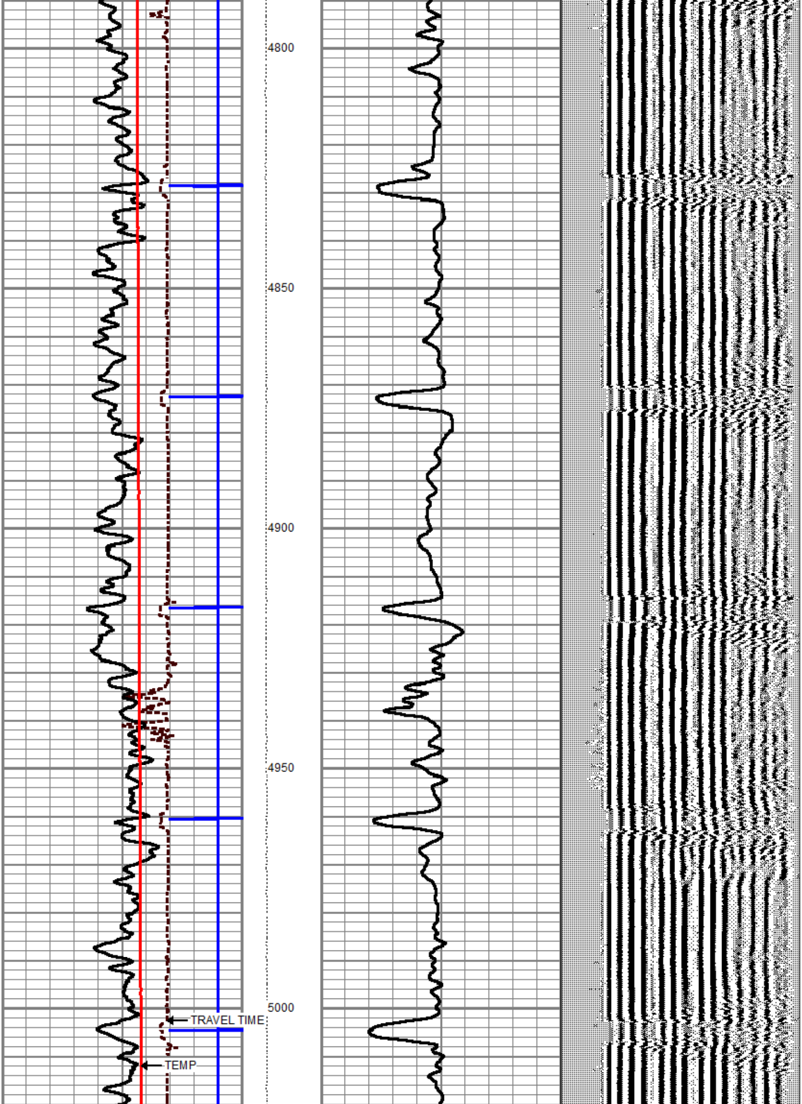


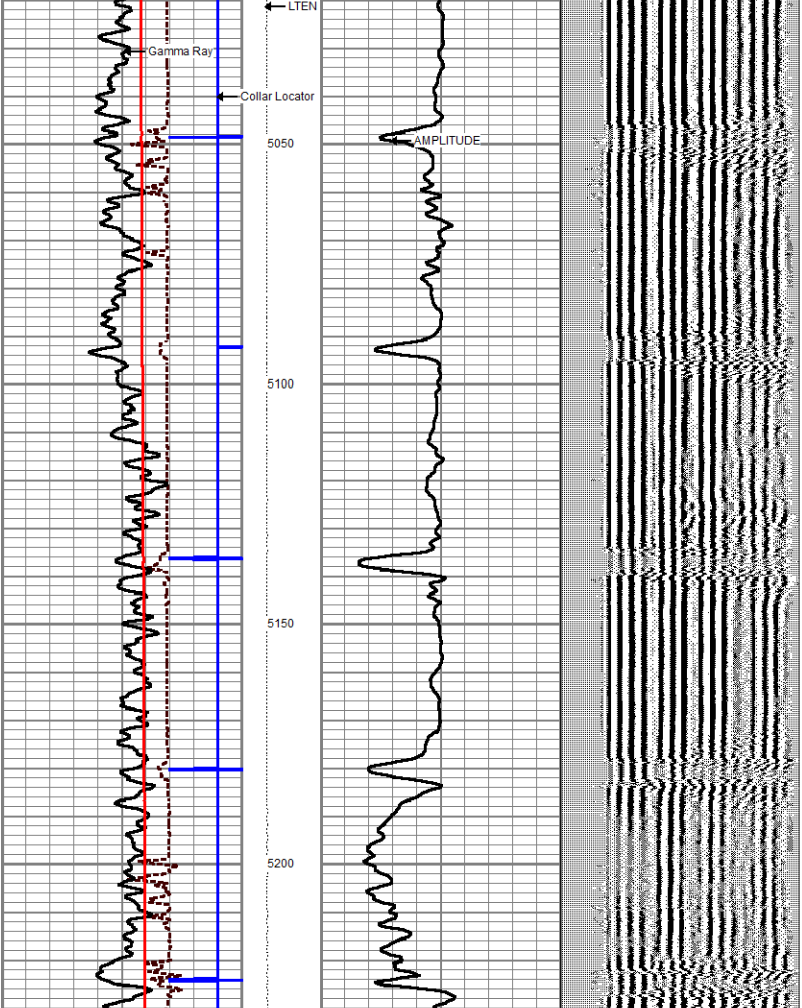


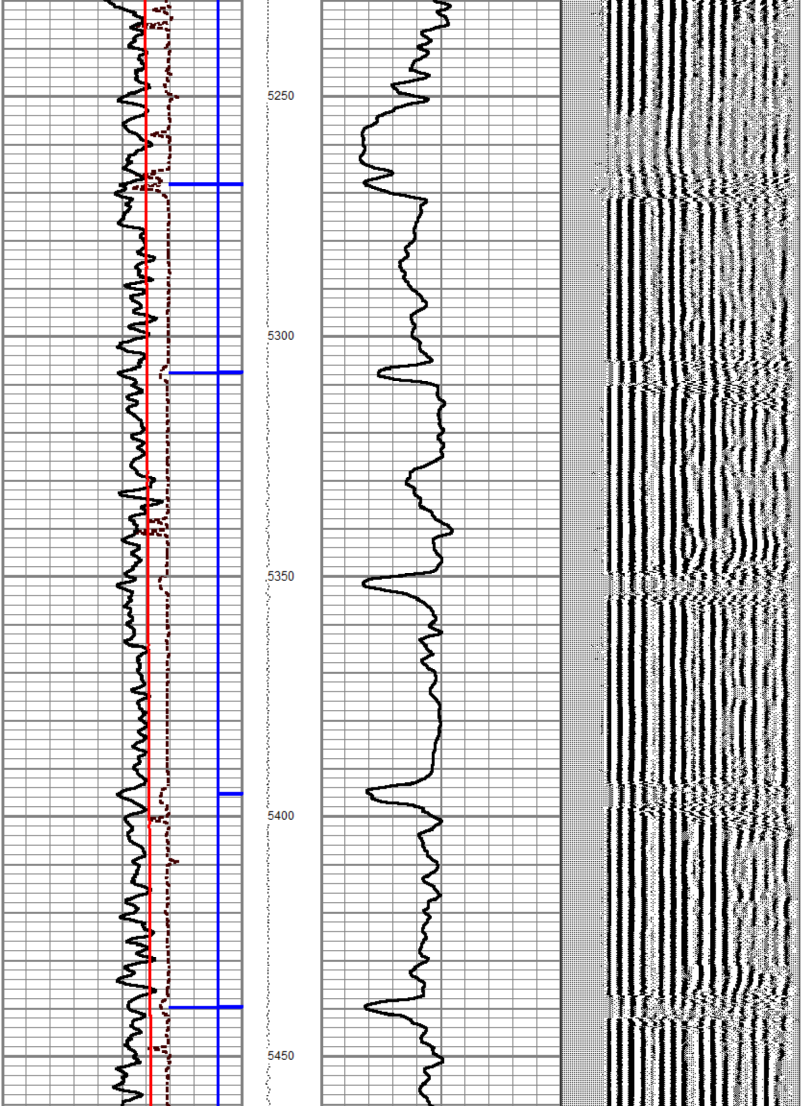


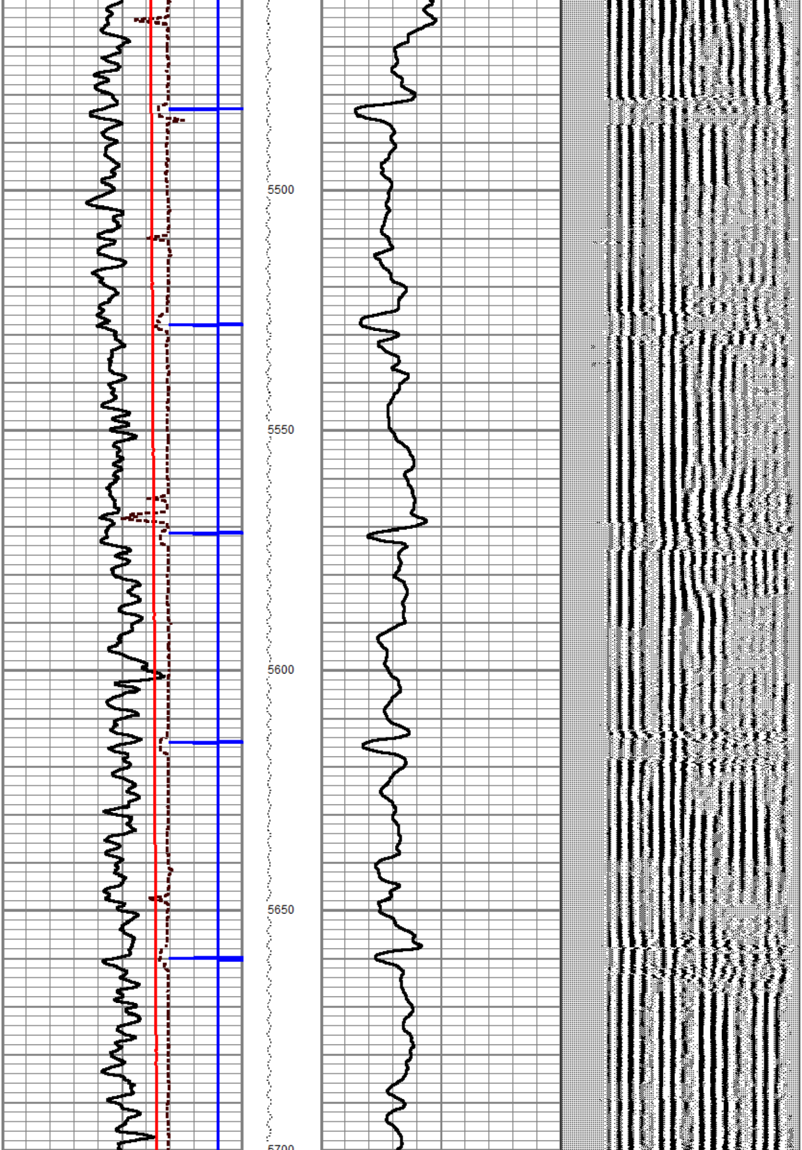


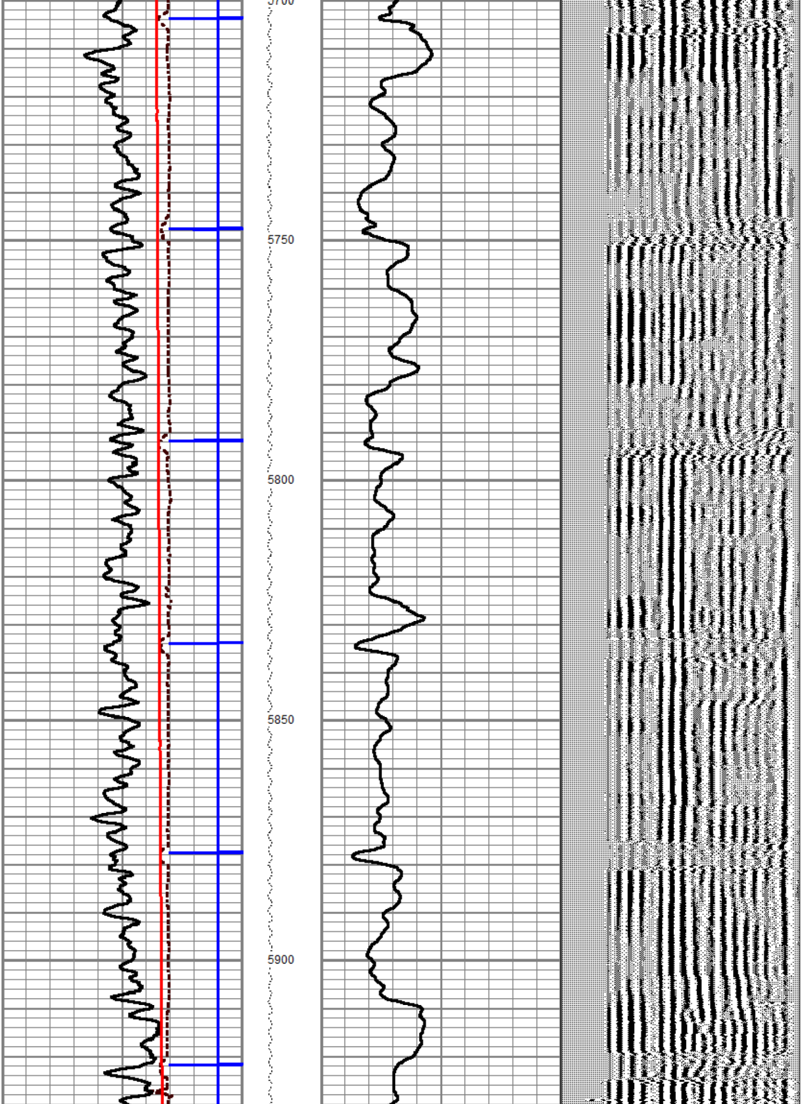


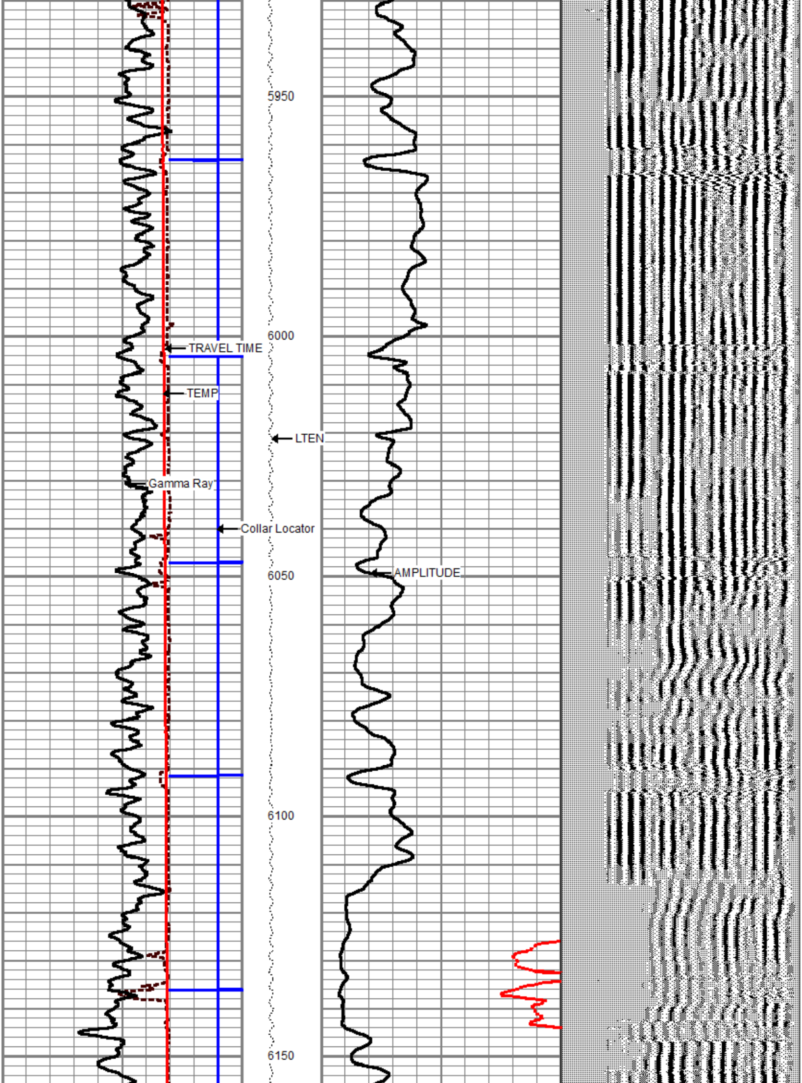


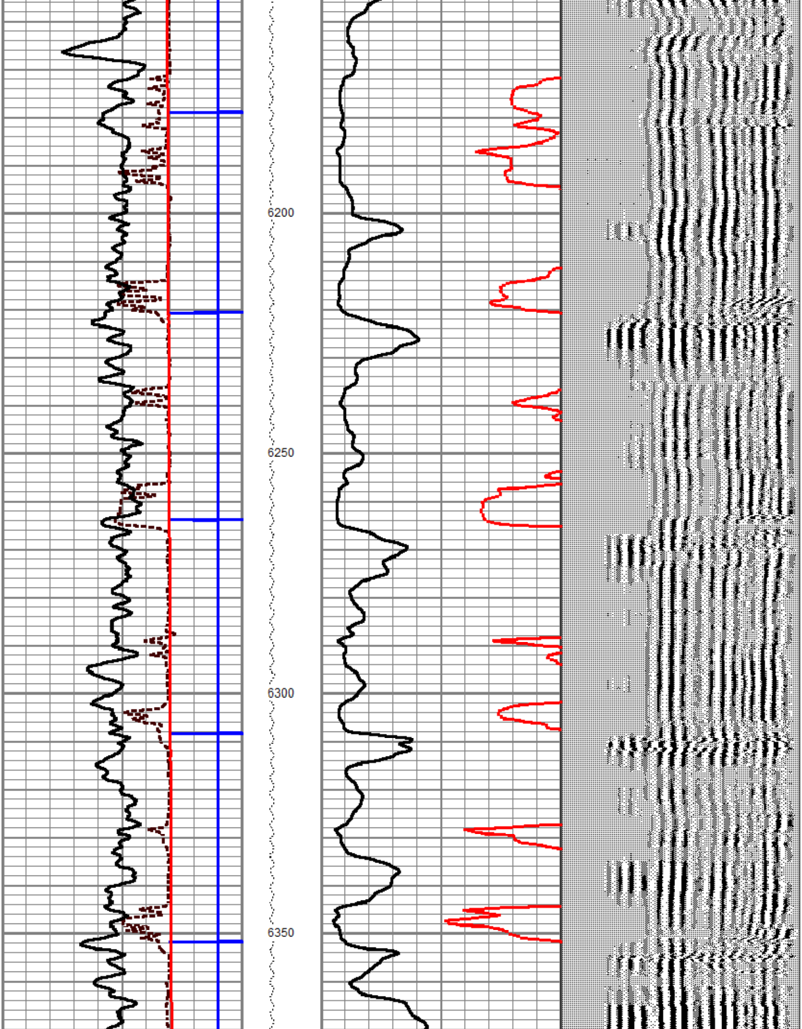


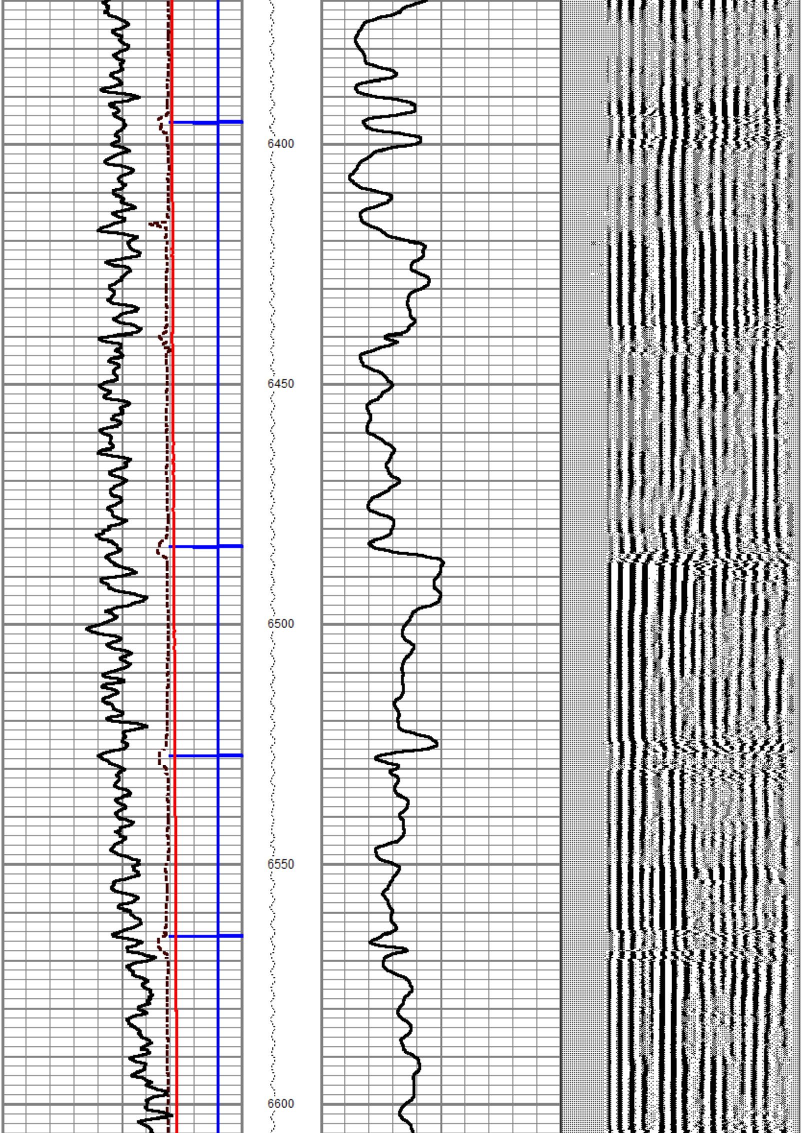


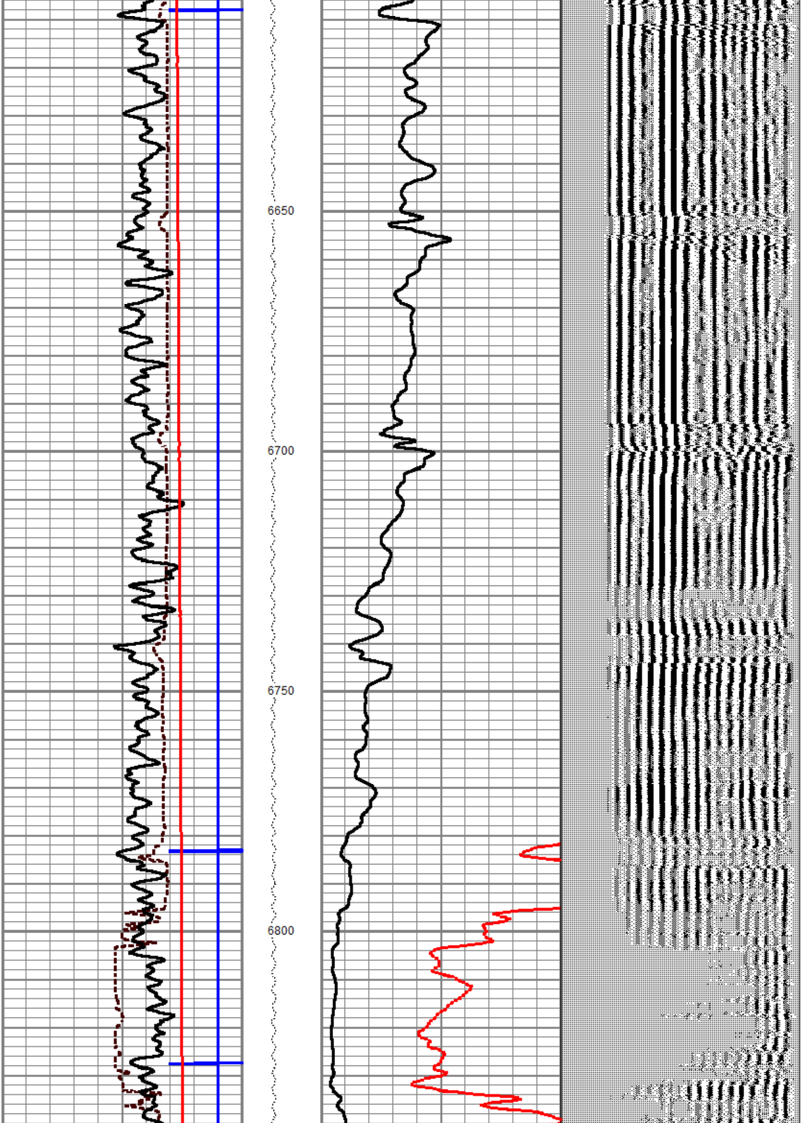


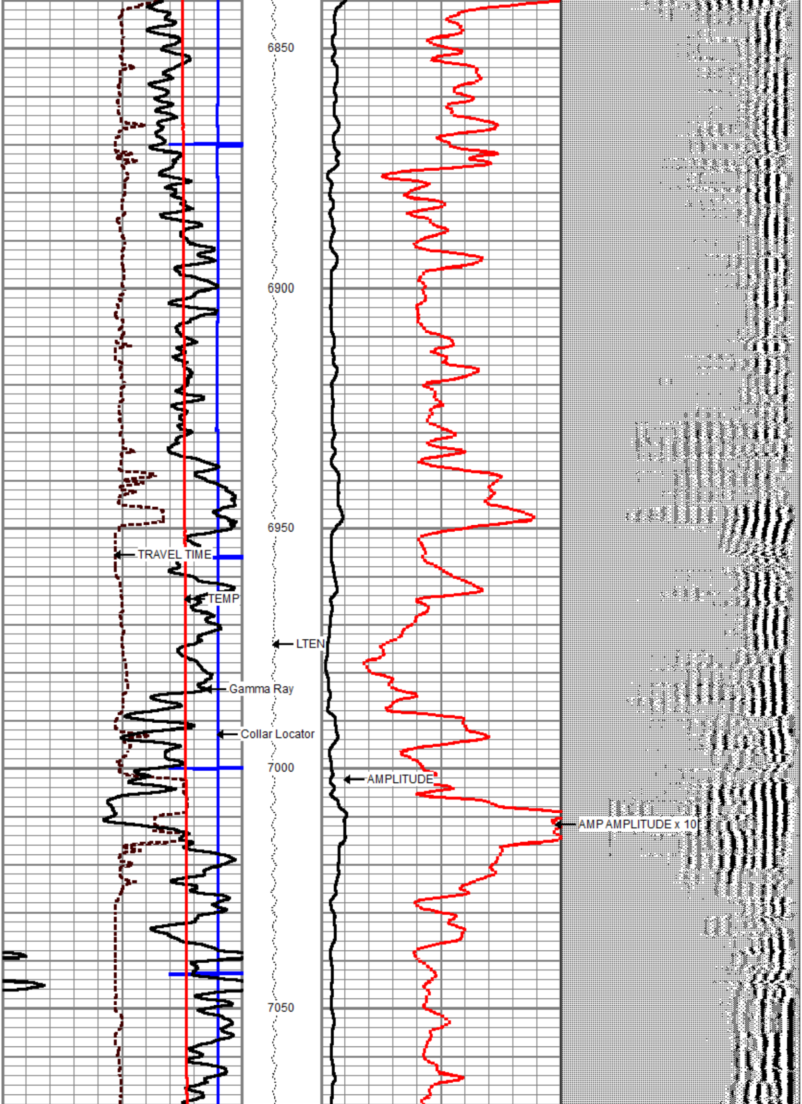


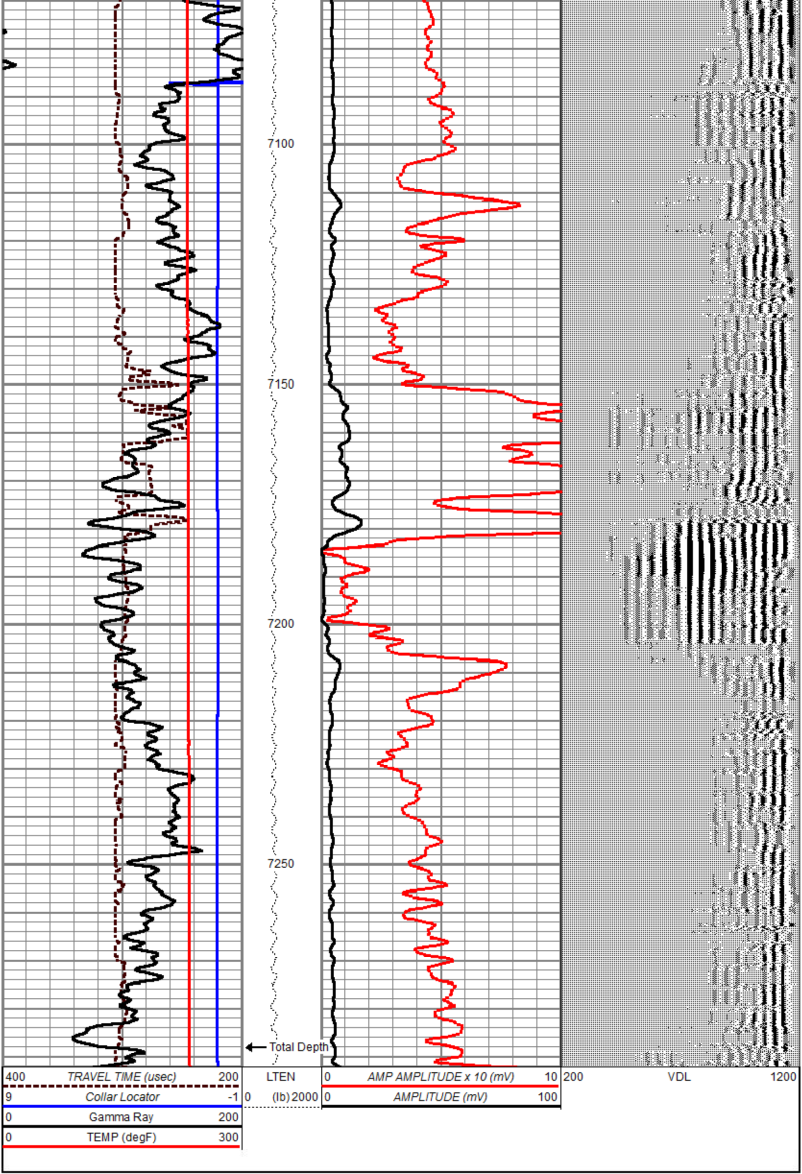












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CEMENT BOND PRESENTATION

MAIN LOG SECTION / 0 PSI
5" = 100'

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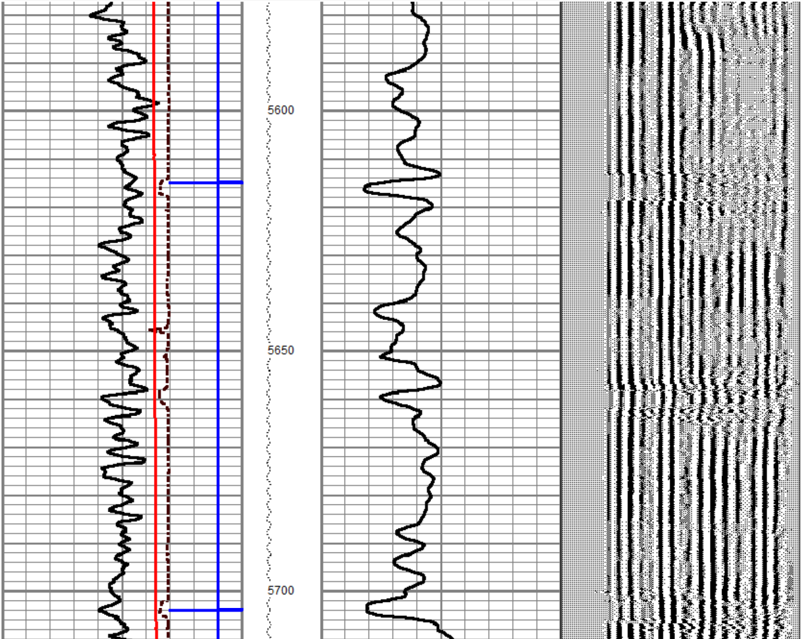
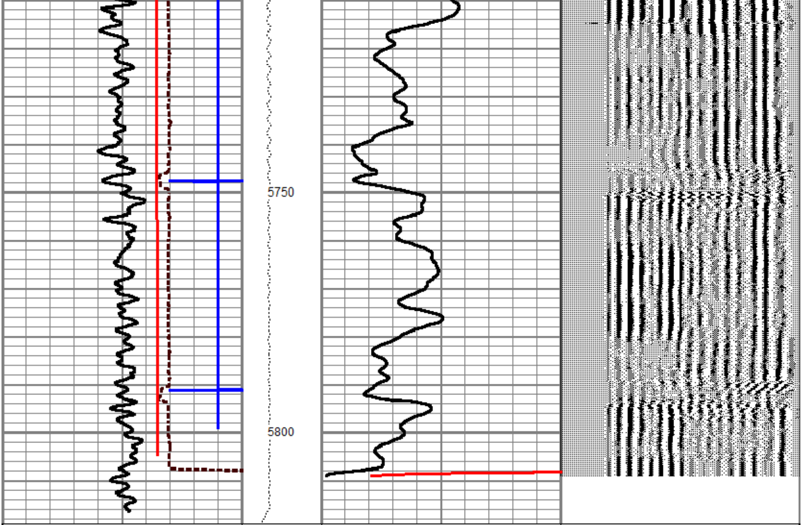
CEMENT BOND PRESENTATION

REPEAT LOG SECTION / 0 PSI
5" = 100'

Database File	2015_extraction_windsor_lv_d_14_h.db
Dataset Pathname	pass2
Presentation Format	cbl_drs
Dataset Creation	Mon Jan 05 10:32:34 2015
Charted by	Depth in Feet scaled 1:240

Left	Curve	Right
400	TRAVEL TIME (usec)	200
9	Collar Locator	-1
0	Gamma Ray	200
0	TEMP (degF)	300
	LTEN	
0	(lb)	2000
0	AMP AMPLITUDE x 10 (mV)	10
0	AMPLITUDE (mV)	100
200	VDL	1200





400	TRAVEL TIME (usec)	200
9	Collar Locator	-1
0	Gamma Ray	200
0	TEMP (degF)	300
0	LTEN (lb)	2000
0	AMP AMPLITUDE x 10 (mV)	10
0	AMPLITUDE (mV)	100
200	VDL	1200

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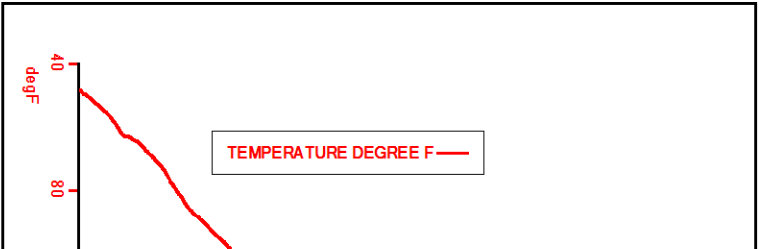
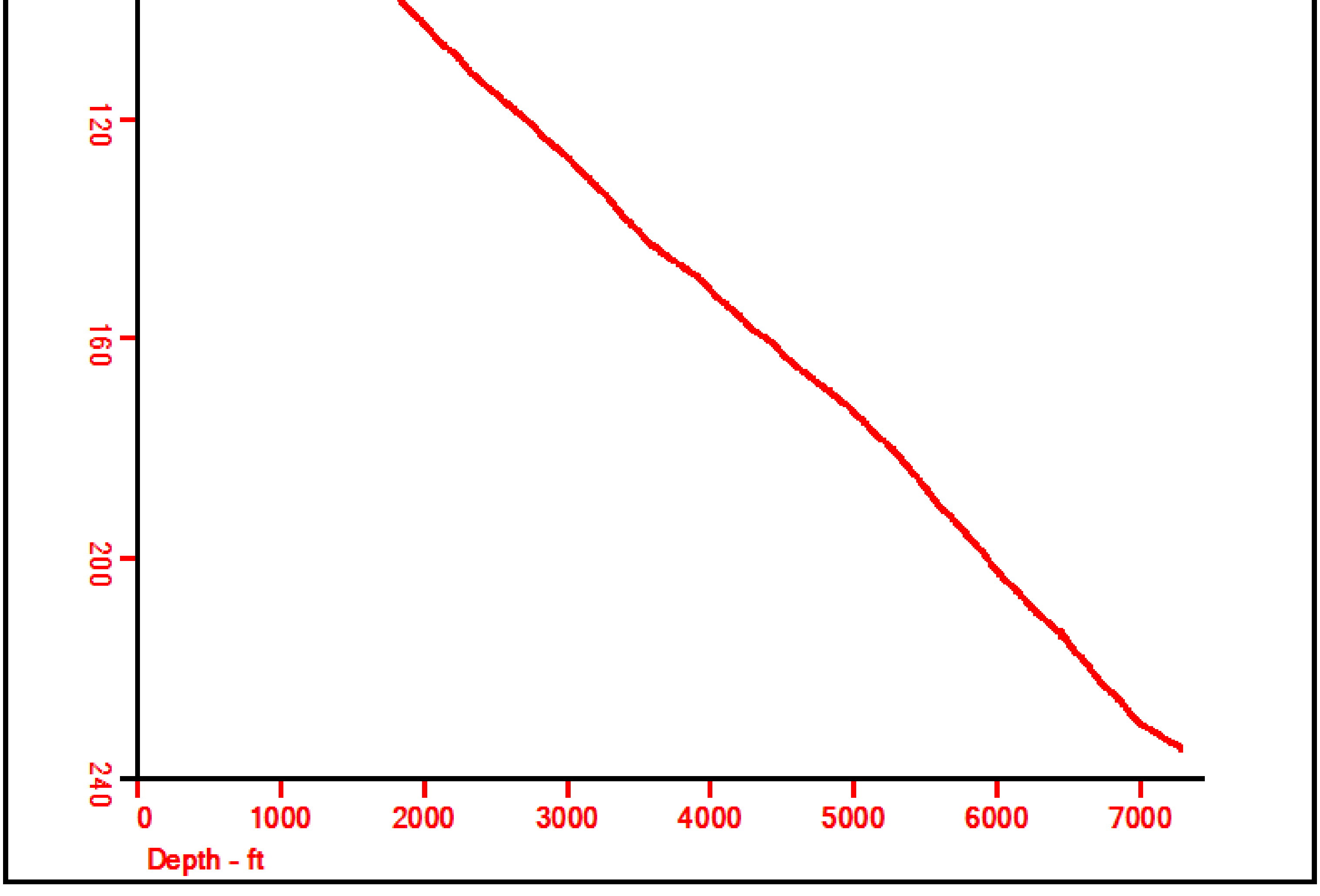
CEMENT BOND PRESENTATION

REPEAT LOG SECTION / 0 PSI
5" = 100'





Log Variables

DatabaseC:\ProgramData\Warrior\Data\2015_extraction_windsor_lv_d_14_h.db
Dataset field/well/run1/pass3.4

Top - Bottom

BHTEMP_Src	PPT usec	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft	SRFTEMP degF	CASEOD in	PERFS	TDEPTH ft
1	0	26	62	1	0.8	0	7	0	0

BOTTEMP degF	BOREID in
250	7.875

Calibration Report

Database File	2015_extraction_windsor_lv_d_14_h.db
Dataset Pathname	pass3.4
Dataset Creation	Mon Jan 05 13:10:53 2015

Gamma Ray Calibration Report

Serial Number:	234GR-IPCD9-02	
Tool Model:	GR-Tek-Co	
Performed:	Tue Feb 25 16:32:03 2014	
Calibrator Value:	120.0	
Background Reading:	100.8	cps
Calibrator Reading:	244.7	cps
Sensitivity:	0.8337	/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	234RIBT-IPPO2-02 FIELD	
Tool Model:	275 H/T RIB with I/E Temp	
Calibration Casing Diameter:	7.000	in
Calibration Depth:	758.192	ft

Master Calibration, performed Mon Jan 05 13:10:51 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.025	0.332	1.000	62.165	171.145	5.357
CAL	0.000	0.286				
5'	0.072	0.529	1.000	62.165	133.747	-8.642
SUM						
S1	0.188	0.178	0.000	100.000	-9725.962	1829.038
S2	0.170	0.209	0.000	100.000	2559.704	-434.119
S3	0.137	0.237	0.000	100.000	999.897	-137.441
S4	0.142	0.258	0.000	100.000	858.190	-121.666
S5	0.170	0.258	0.000	100.000	1141.114	-193.852
S6	0.201	0.233	0.000	100.000	3103.554	-622.688
S7	0.206	0.204	0.000	100.000	-38648.689	7974.270
S8	0.200	0.172	0.000	100.000	-3614.370	721.477

Internal Reference Calibration, performed Thu Dec 25 20:11:00 2014:

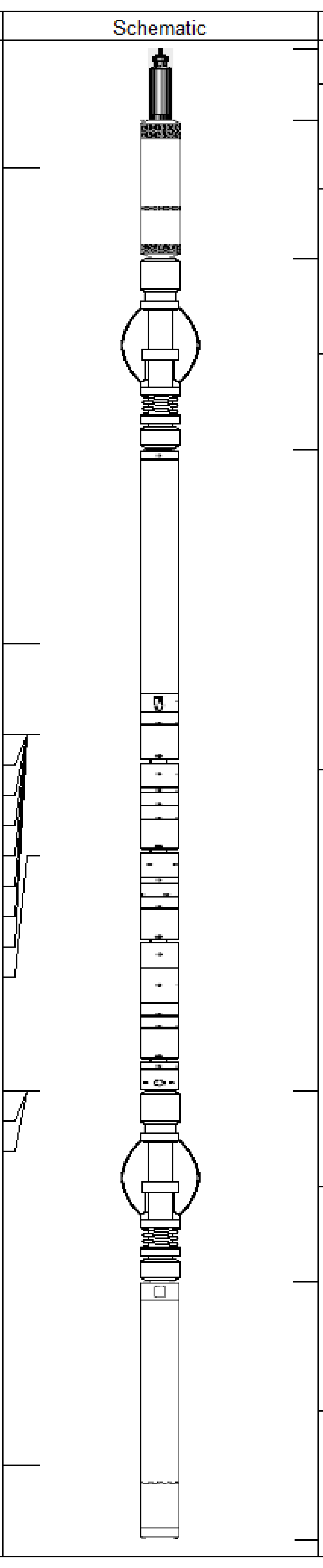
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.000	0.286	1.000	0.000

Air Zero Calibration, performed Thu Dec 25 19:19:50 2014:

	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:	234RIBT-IPPO2-02 FIELD			
Tool Model:	275 H/T RIB with I/E Temp			
Performed:	Tue Nov 25 12:50:38 2014			
	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	19.56
TEMP	12.77
WVFS8	11.48
WVFS7	11.48
WVFS6	11.48
WVFS5	11.48
WVFS4	11.48
WVFS3	11.48
WVFS2	11.48
WVFS1	11.48
WVF5FT	9.73
WVFSYNC	6.40
WVFTEMP	6.40
WVFCAL	6.40
GR	1.04

Description	Length (ft)	O.D. (in)	Weight (lb)
TitanConeType2 Cable Head 1 7/16 Cone Type II	1.03	1.44	3.60
CCL-275tekco (234CCL-IS2T1-08) 2 3/4" 450 Deg. "F" TekCo CCL Earth Mag	1.96	2.75	20.00
2.75 2 3/4" Tekco Adjustable Centralizer	2.73	2.75	25.00
275 H/T RIB with I/E Temp (234RIBT-IPPO2-029.13_D) Tekco 2.75" 450 Deg. F RIB with I/E Temp		2.75	102.00
2.75 2 3/4" Tekco Adjustable Centralizer	2.73	2.75	25.00
GR-GR-Tek-Co (234GR-IPCD9-02) Tekco 2 3/4" 400 Deg. F Logging Gamma Ray	3.67	2.75	40.00

Dataset:	2015_extraction_windsor_lv_d_14_h.db: field/well/run1/pass3.4
Total length:	21.25 ft
Total weight:	215.60 lb
O.D.:	2.75 in

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Company	**EXTRACTION OIL & GAS**
Well	**WINDSOR LV D-14H**
Field	**WATTENBERG**
County	**WELD**
State	**CO**
Country	**USA**