HALLIBURTON

CEMENT BOND LOG

Company CARRIZO
Well GAFFNEY 2-29-8-61
Field WILDCAT
County WELD State CO

Company	CARRIZO
Well	GAFFNEY 2-29-8-61
Field	WILDCAT
County	WELD
State	CO

API No.: 05-123-38575 Serv #: 901044473
Location: LAT: 40.6338° LONG: -104.23827°

Sec: 29 Twp: 8N Rge: 61W

Other Services
N/A

Permanent Datum	GL	Elevation	4991'	Elevation
Log Measured From	KB , 17 Ft. above perm. datum			K.B. 5008' D.F. 5007' G.L. 4991'
Drilling Measured From	KB			

Date @ Time Logged	16-JAN-2014	Type Fluid in Hole	FRESH WATER
Run No.	ONE	Density of Fluid	8.33
Depth - Driller	13973'	Fluid Level	SURFACE
Depth - Logger	6044'	Cement Top Est. Logged	1985'
Bottom - Logged Interval	6032'	Equipment / Location	11874896 / BRIGHTON
Top - Log Interval	133'	Recorded by	JOSHUA MCDANIEL
Max. Recorded Temp.	200	Witnessed by	KIRK WILLIAMS

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
				7	23	0	5858'

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HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

Comments

PRIMARY DEPTH REFERENCE

TOL @ 5858'

ESTIMATED TOP OF CEMENT @ 1985'

MAX TEMP = 200 DEG F

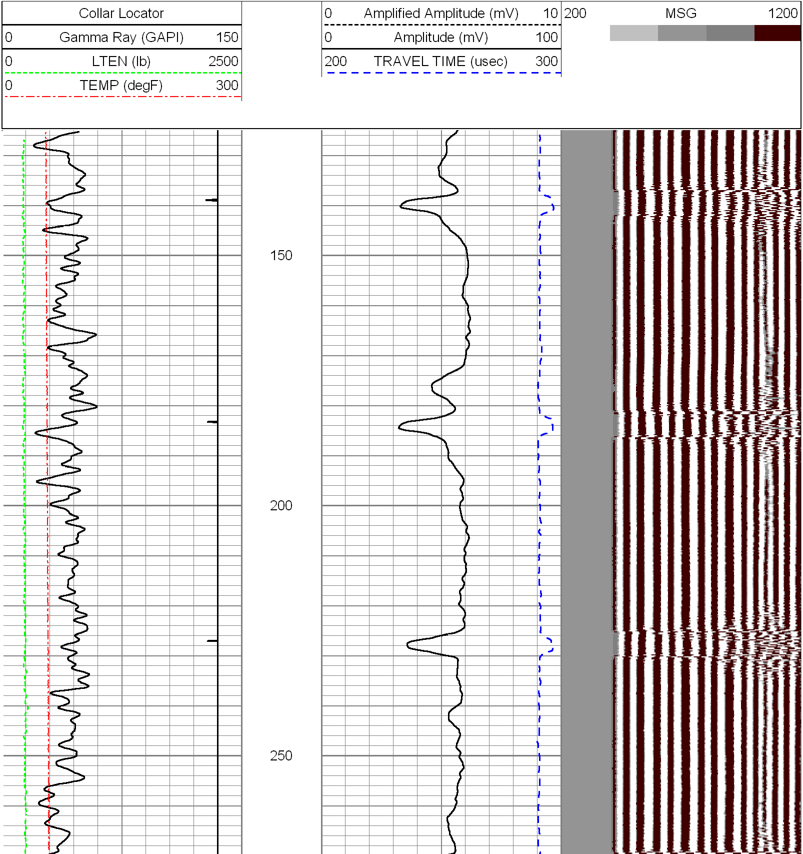
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES!

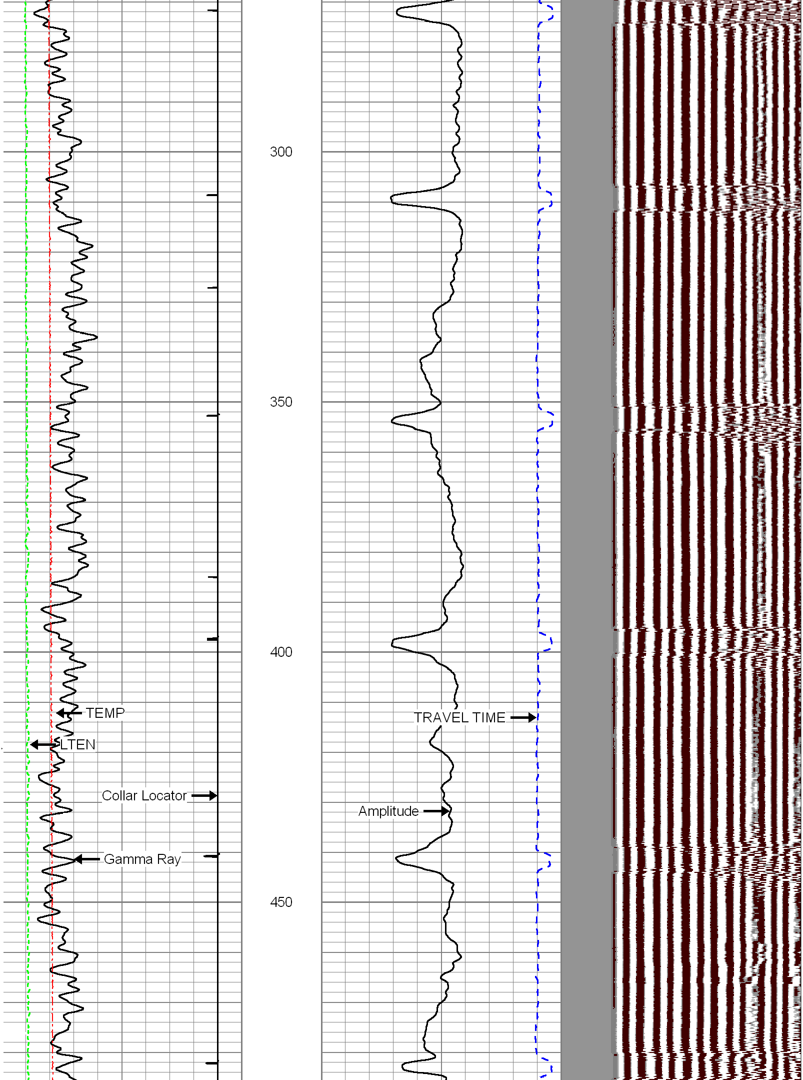
HALLIBURTON

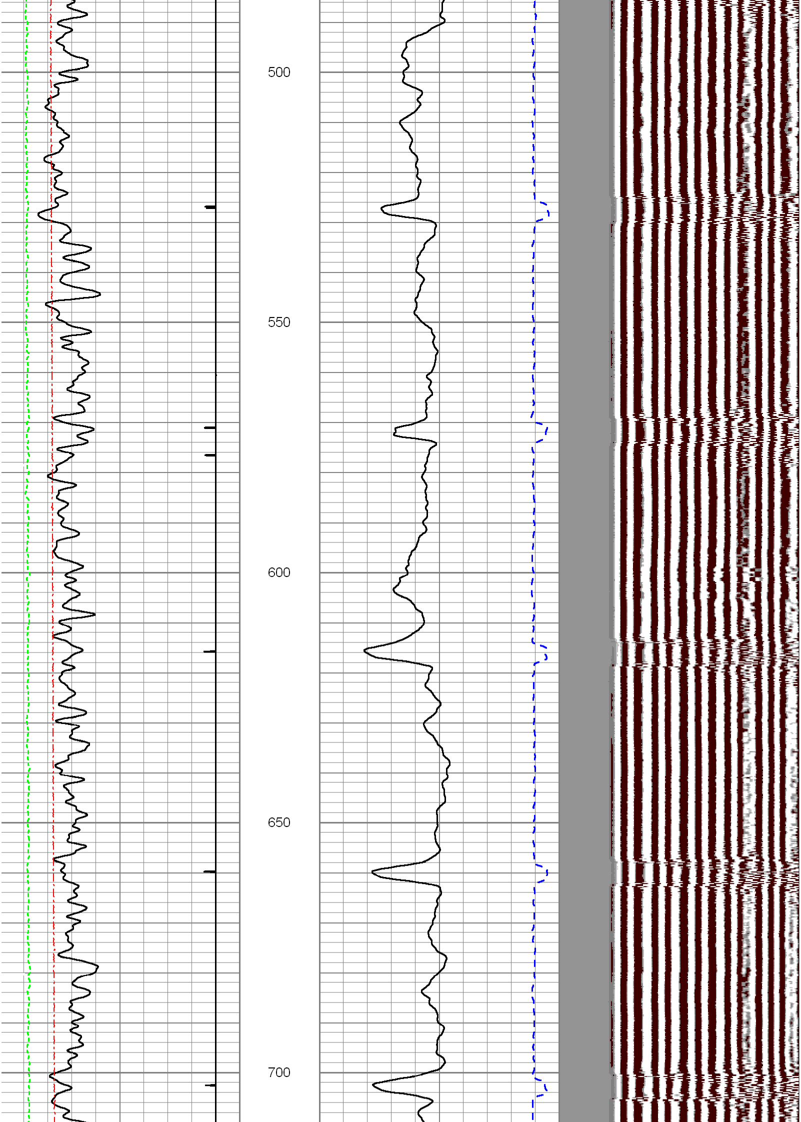
MAIN PASS 1000 PSI

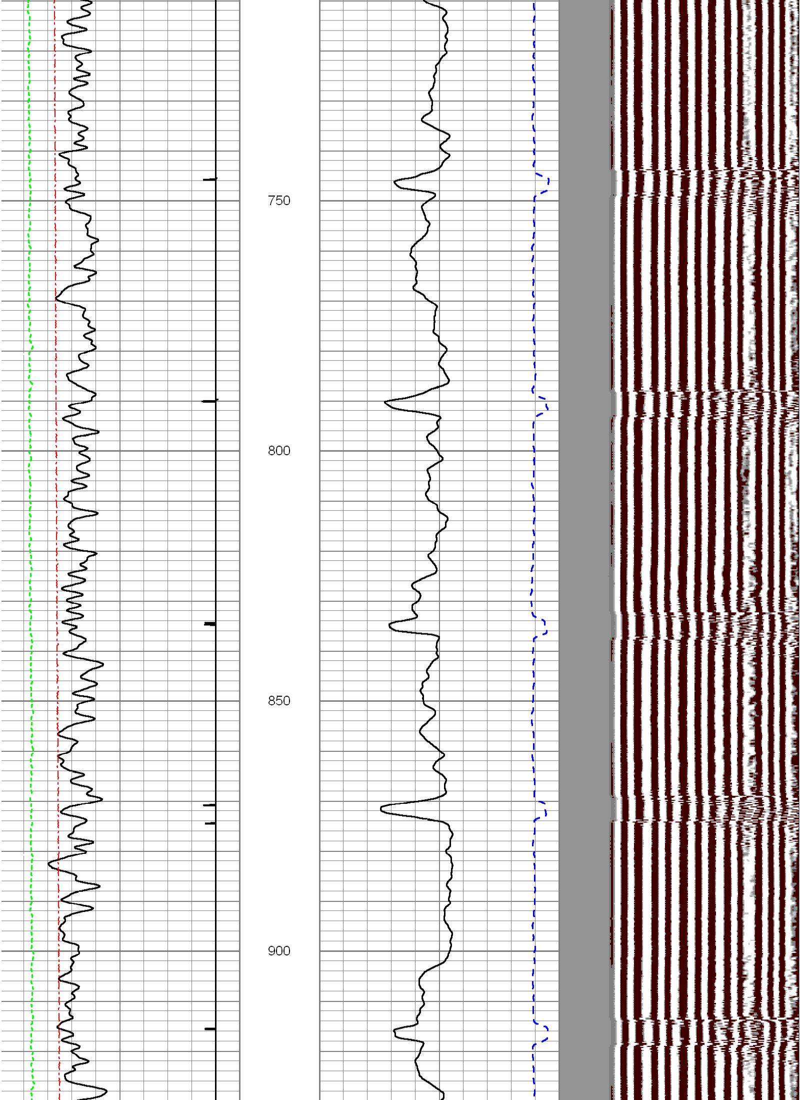
SCALE: 5"=100'

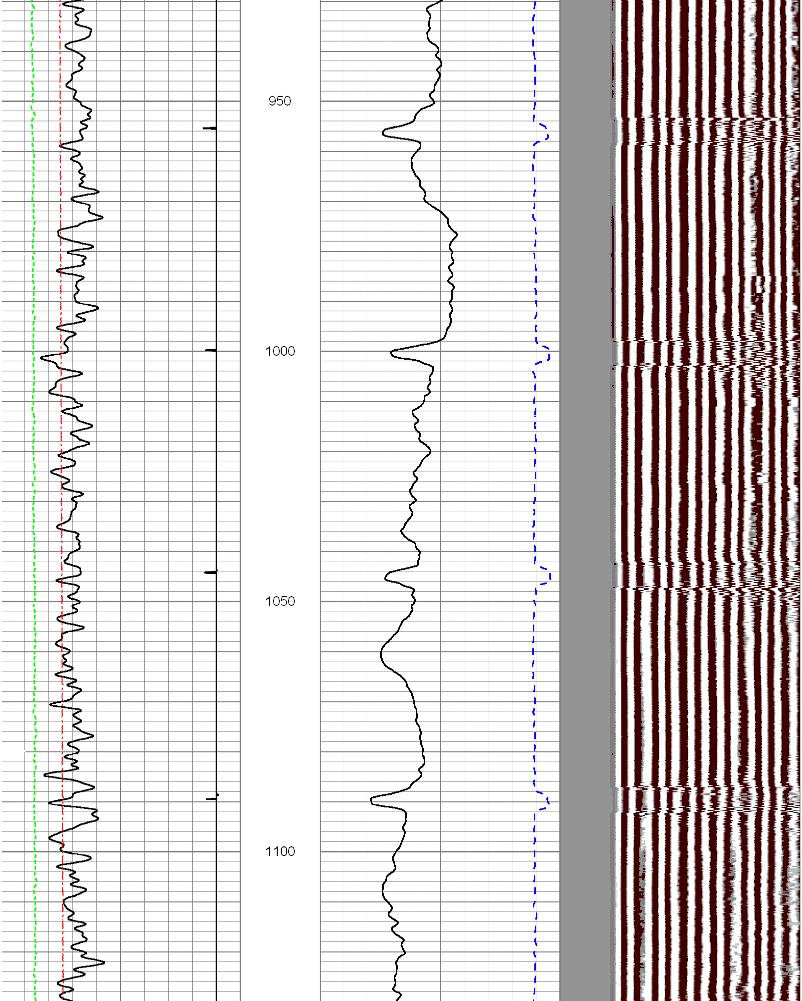
Database File:	carizo.db
Dataset Pathname:	pass51
Presentation Format:	1cbl
Dataset Creation:	Sun Dec 15 14:56:41 2013 by Log Halliburton Casedho
Charted by:	Depth in Feet scaled 1:240

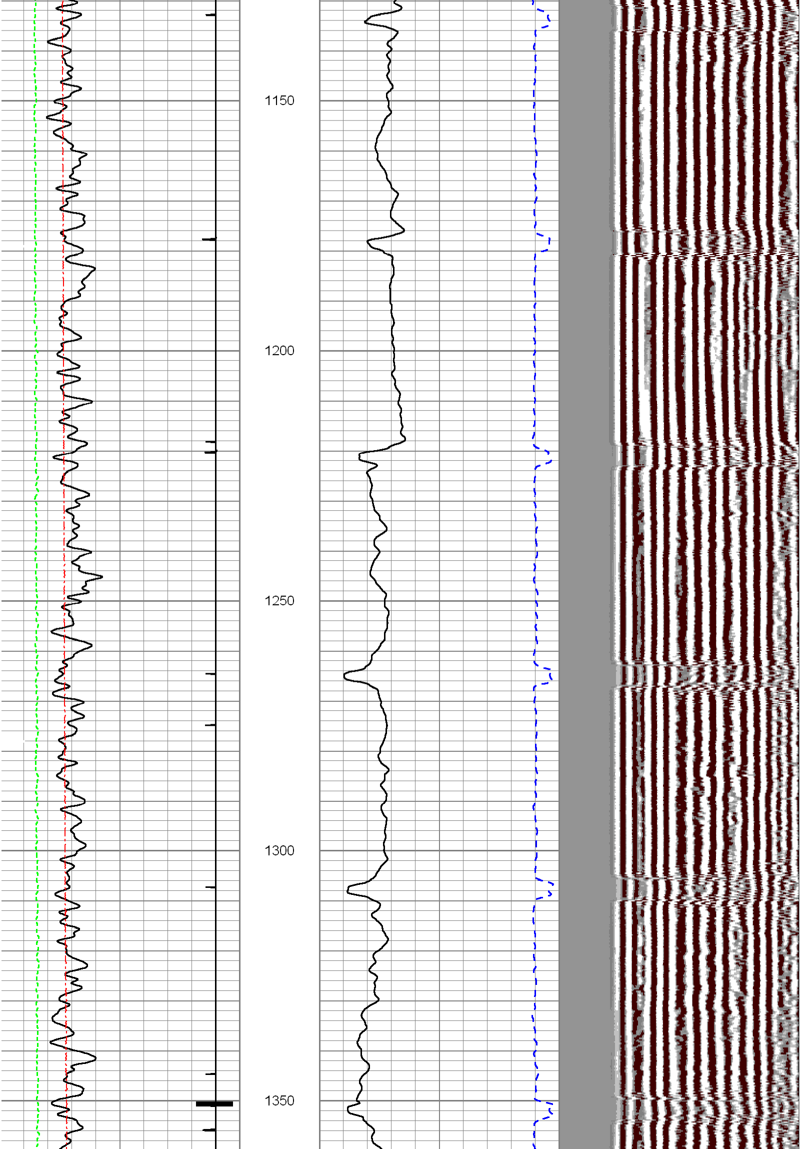


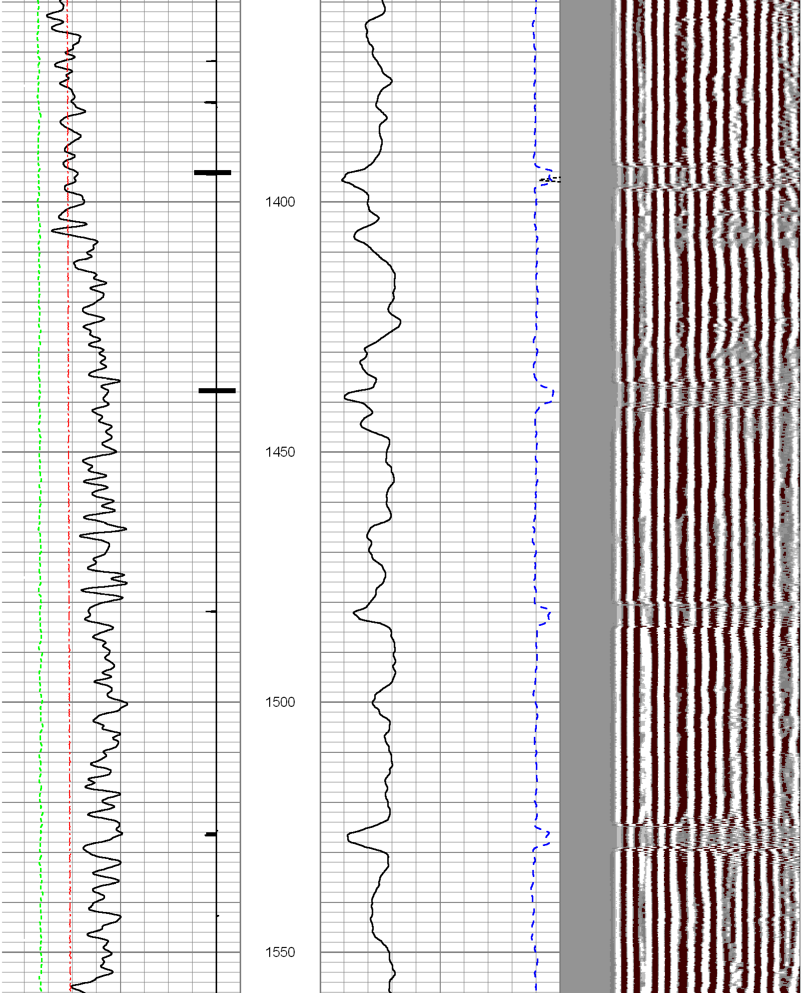


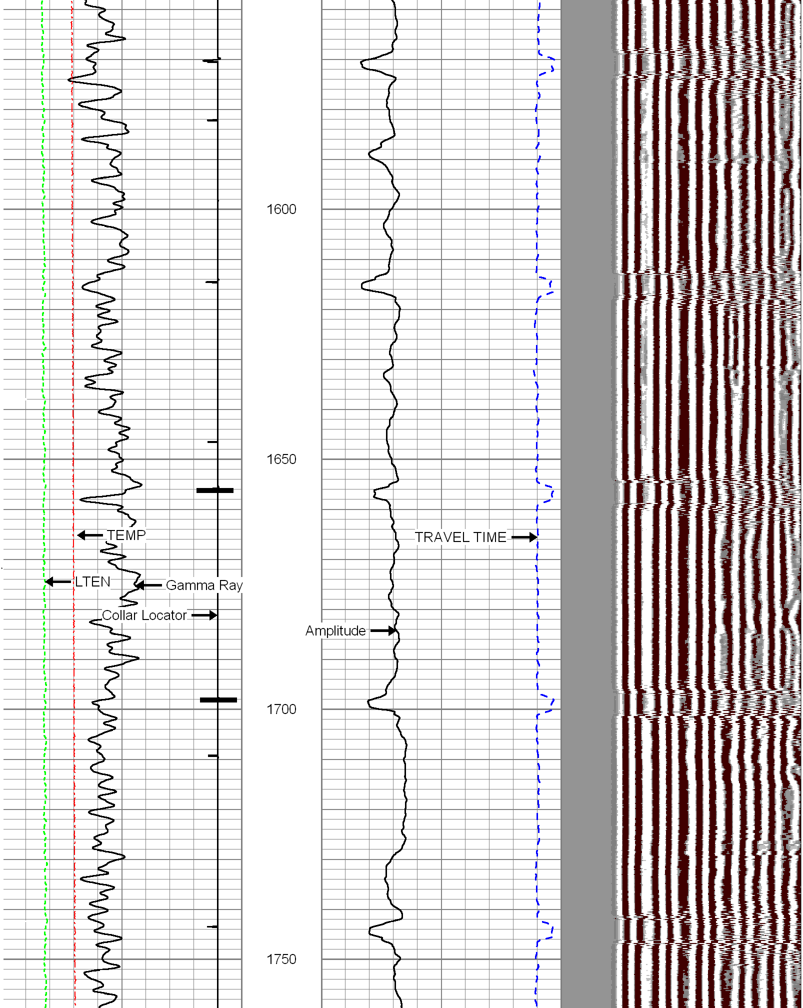


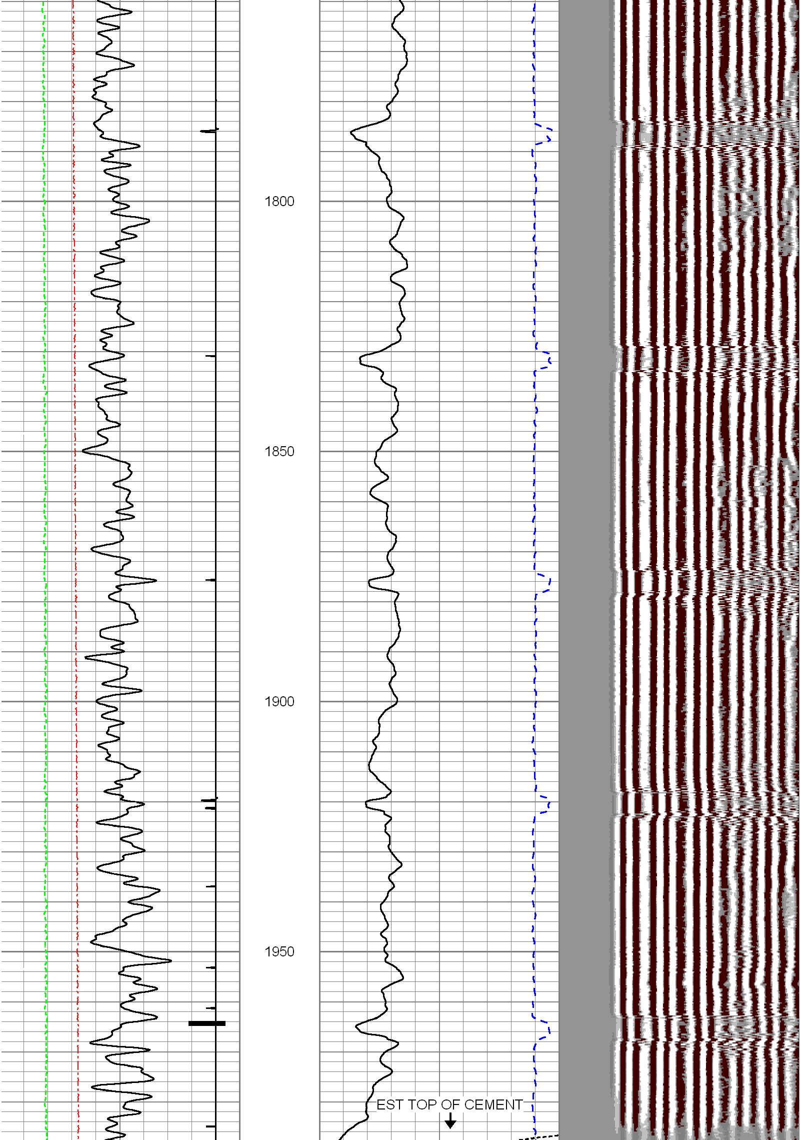


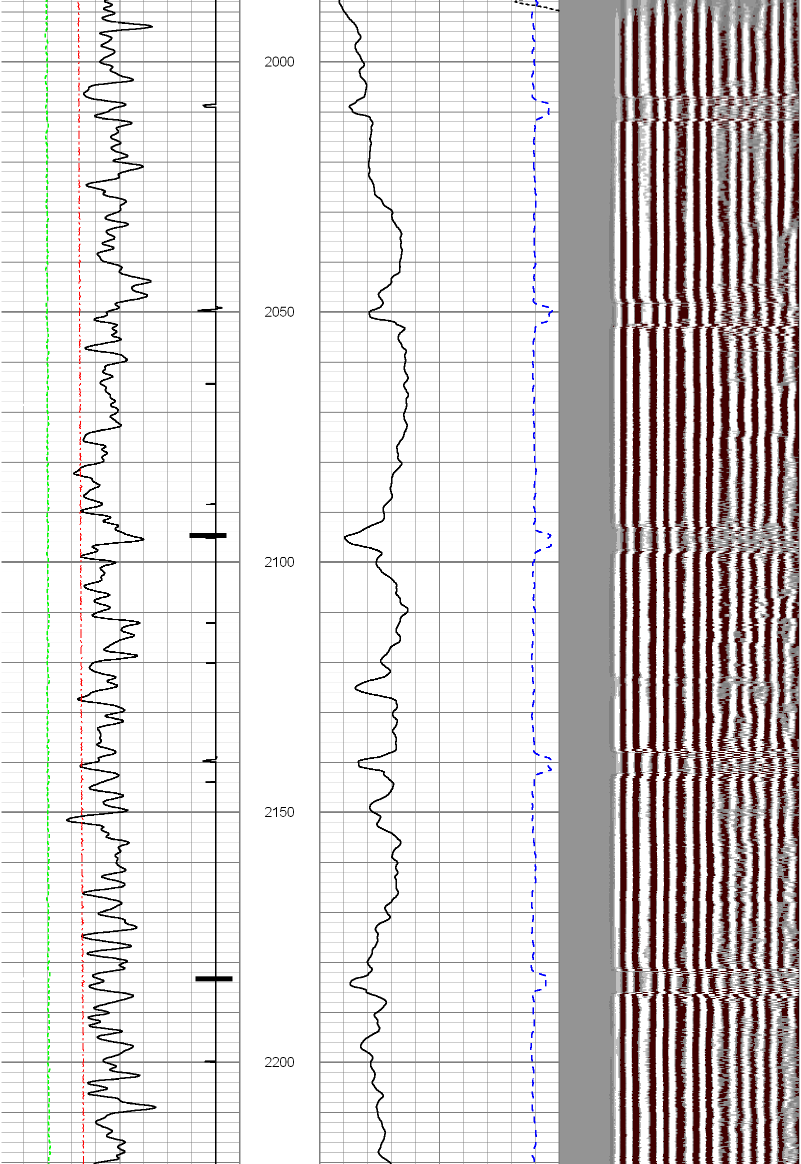


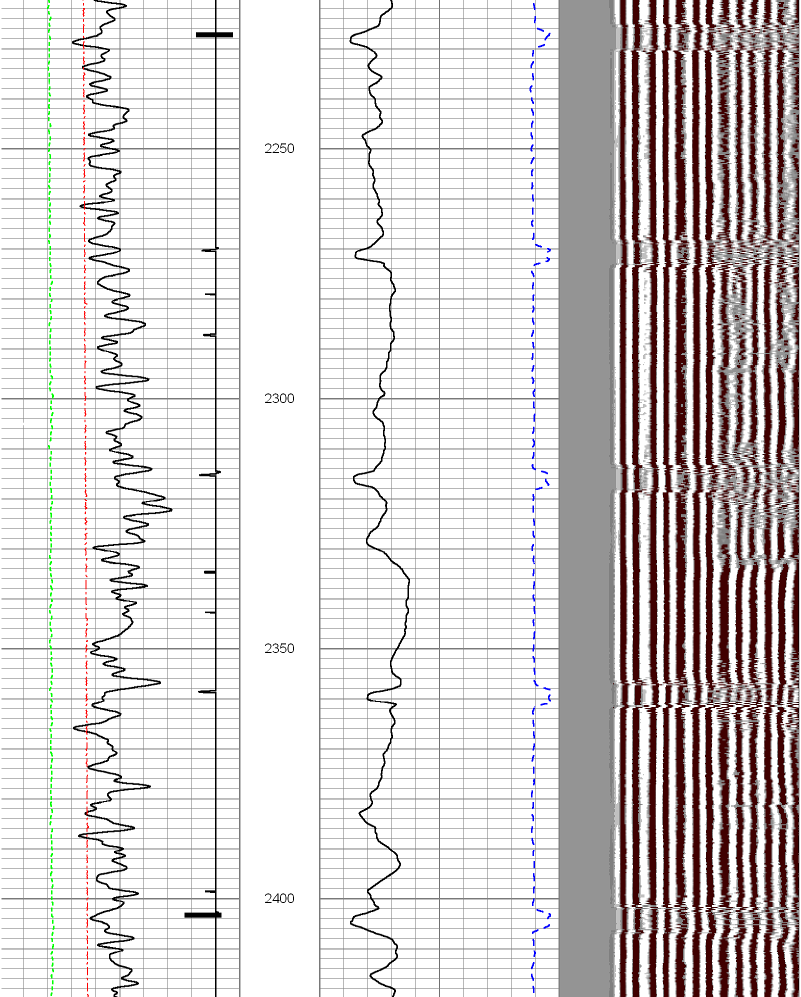


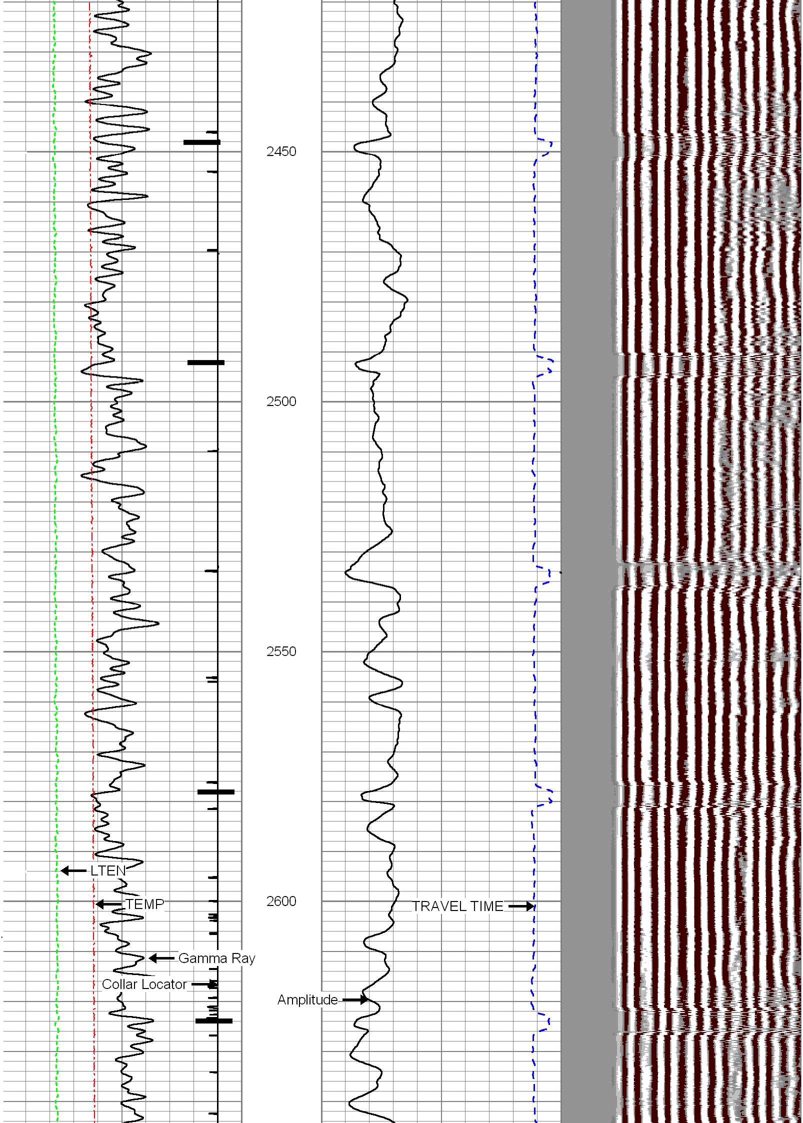


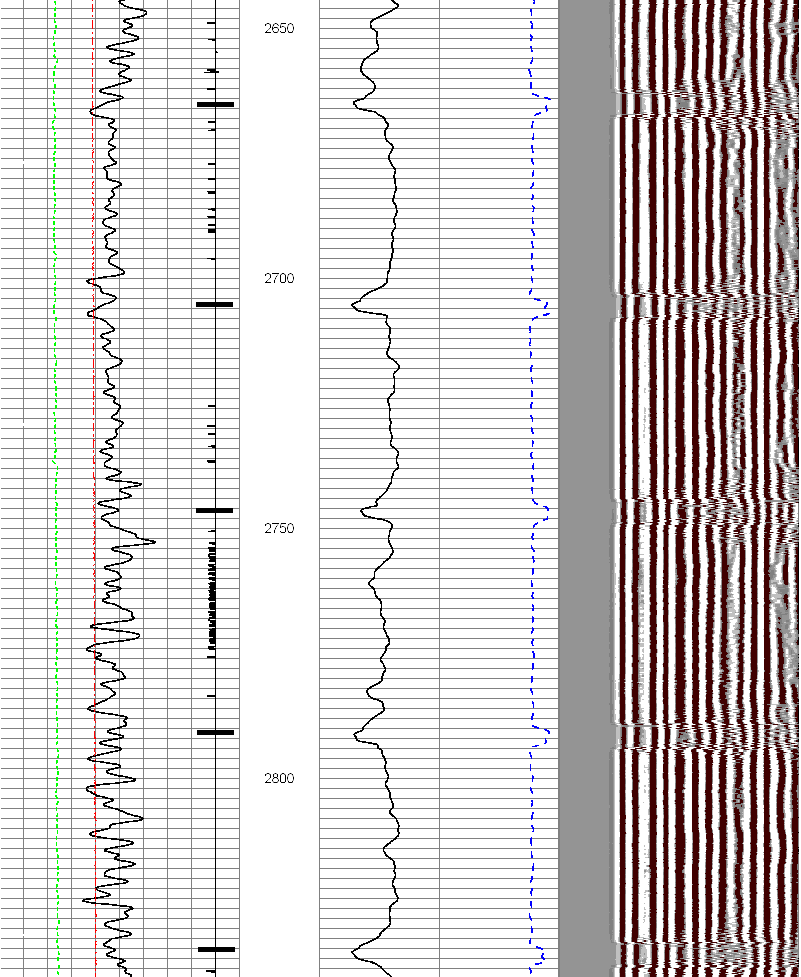


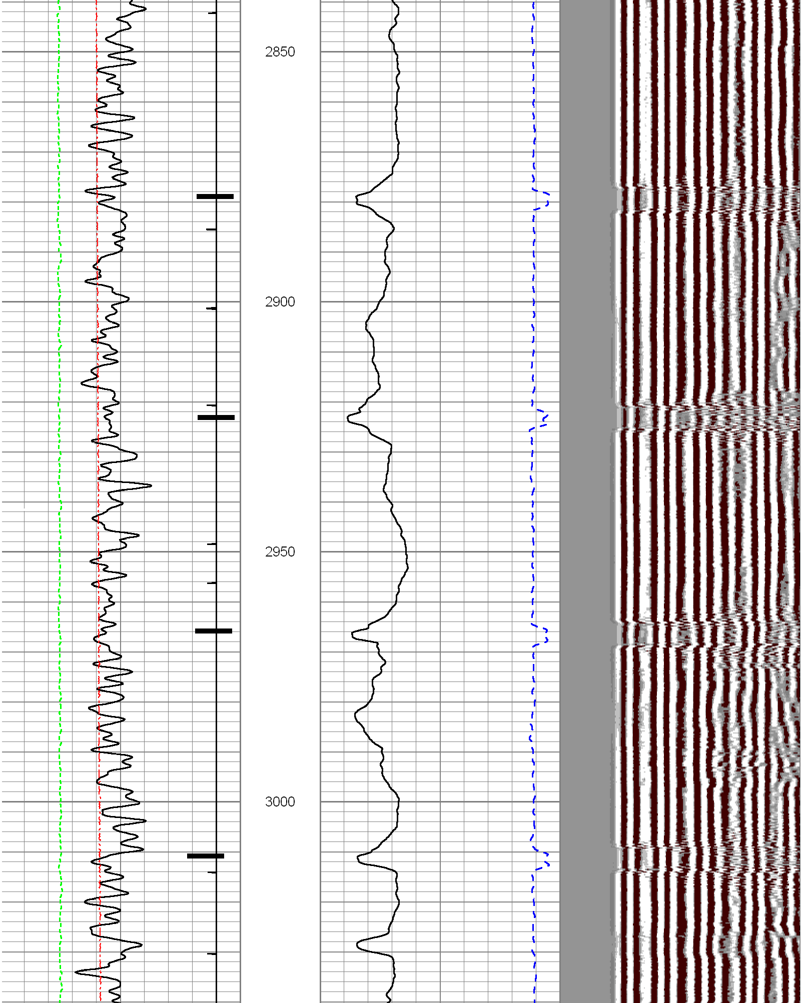


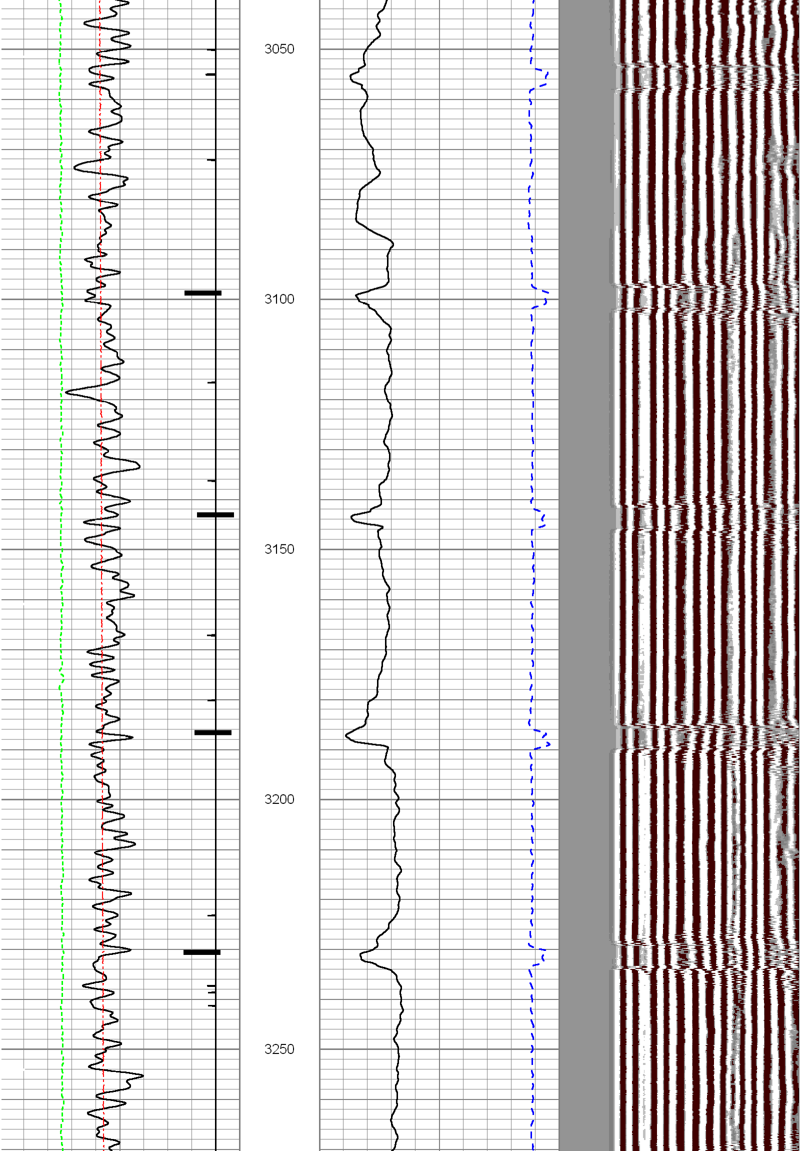


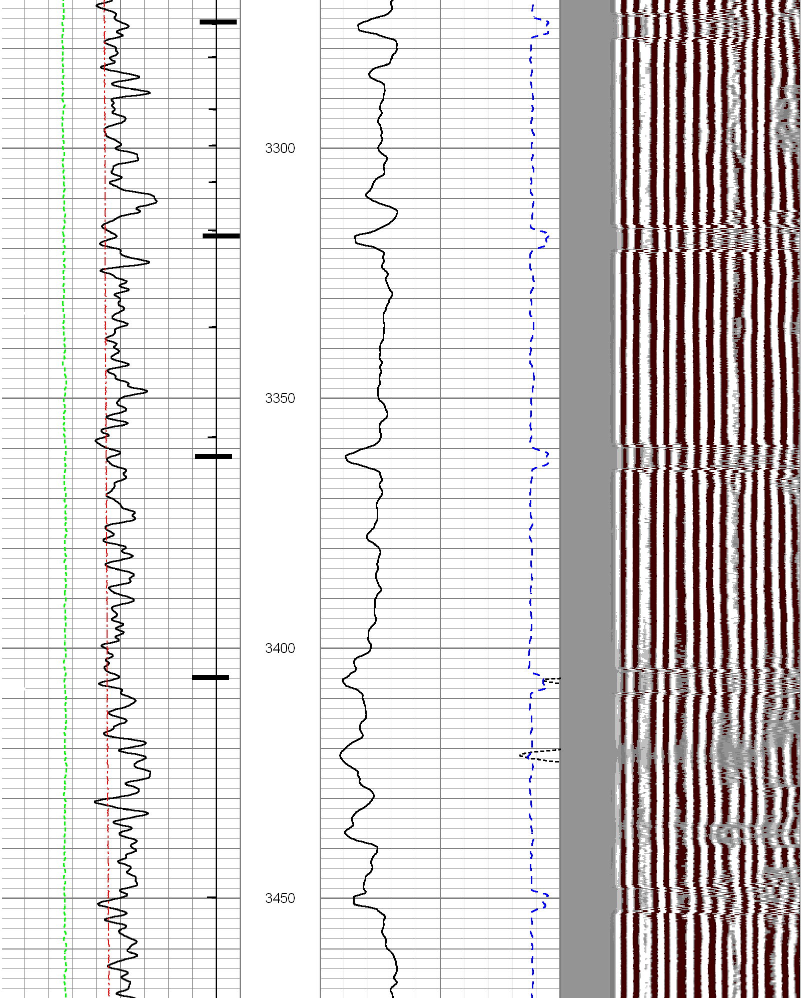


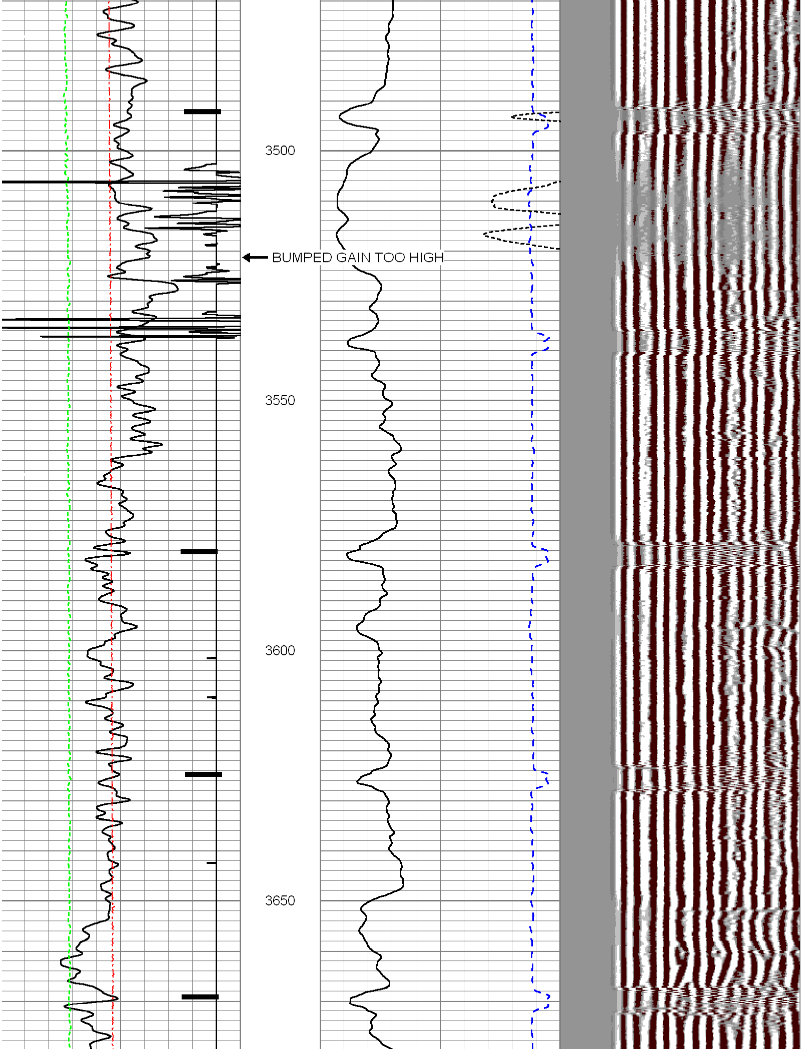


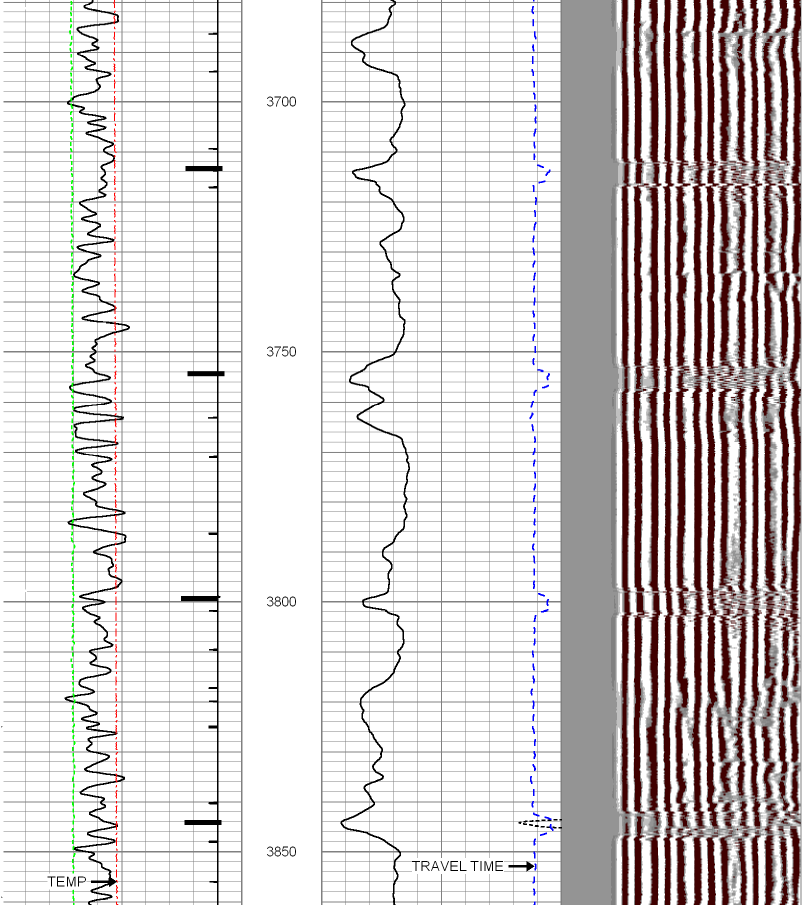












Collar Locator								
0	Gamma Ray (GAPI)	150	0	Amplified Amplitude (mV)	10	200	MSG	1200
0	LTEN (lb)	2500	0	Amplitude (mV)	100			
0	TEMP (degF)	300	200	TRAVEL TIME (usec)	300			

HALLIBURTON

MAIN PASS 1000 PSI

SCALE: 5"=100'

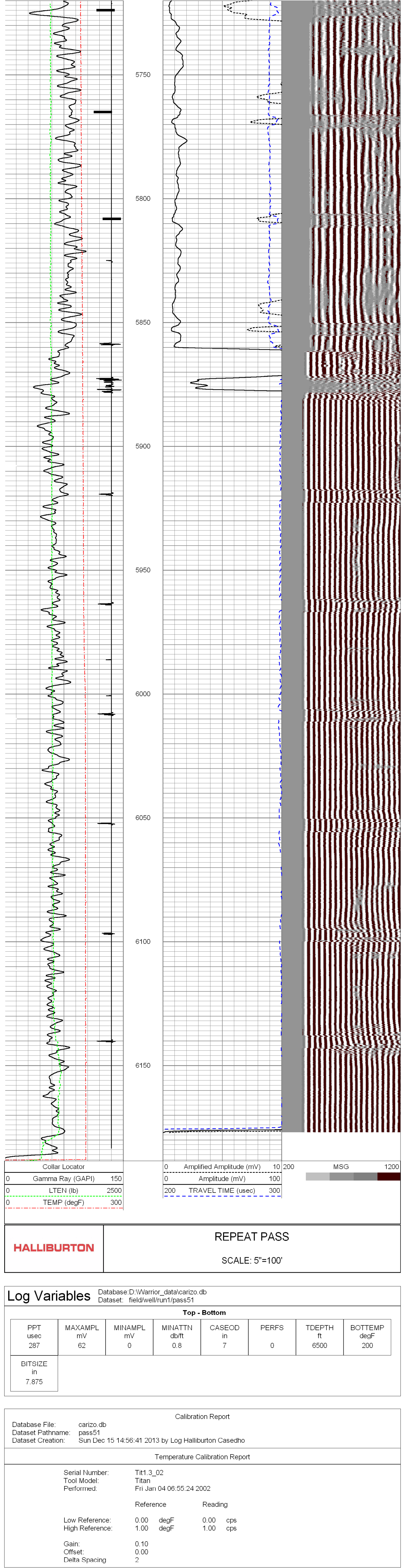
HALLIBURTON

REPEAT PASS

SCALE: 5"=100'

Database File: carizo.db
Dataset Pathname: pass49
Presentation Format: 1cbl
Dataset Creation: Sun Dec 15 14:49:10 2013 by Log Halliburton Casedho
Charted by: Depth in Feet scaled 1:240

Collar Locator								
0	Gamma Ray (GAPI)	150	0	Amplified Amplitude (mV)	10	200	MSG	1200
0	LTEN (lb)	2500	0	Amplitude (mV)	100			
0	TEMP (degF)	300	200	TRAVEL TIME (usec)	300			



Collar Locator								
0	Gamma Ray (GAPI)	150	0	Amplified Amplitude (mV)	10	200	MSG	1200
0	LTEN (lb)	2500	0	Amplitude (mV)	100			
0	TEMP (degF)	300	200	TRAVEL TIME (usec)	300			

HALLIBURTON

REPEAT PASS

SCALE: 5"=100'

Log Variables

Database:D:\Warrior_data\carizo.db
Dataset: field/well/run1/pass51

Top - Bottom

PPT usec	MAXAMPL mV	MINAMPL mV	MINATTN db/ft	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF
287	62	0	0.8	7	0	6500	200

BITSIZE in
7.875

Calibration Report

Database File: carizo.db
Dataset Pathname: pass51
Dataset Creation: Sun Dec 15 14:56:41 2013 by Log Halliburton Casedho

Temperature Calibration Report

Serial Number: Tit1.3_02
Tool Model: Titan
Performed: Fri Jan 04 06:55:24 2002

	Reference		Reading	
Low Reference:	0.00	degF	0.00	cps
High Reference:	1.00	degF	1.00	cps

Gain: 0.10
Offset: 0.00
Delta Spacing 2

Gamma Ray Calibration Report

Type / Serial: Probe / 275

SHOP CALIBRATION	Sat Dec 14 14:28:27 2013				
	Counts/Sec.	Gain	Offset	Jig	Units
Background	107.0				cps
Calibrator	454.8				cps
		0.6929			GAPI/cps
PRIMARY VERIFICATION	Sat Dec 14 14:33:15 2013				
Background	81.1				cps
Calibrator	313.9				cps
Difference				232.9	GAPI
BEFORE SURVEY VERIFICATION	Sun Dec 15 07:23:27 2013				
Background	54.9				cps
Calibrator	305.6				cps
Difference				250.7	GAPI
AFTER SURVEY VERIFICATION					
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

Cement Bond Log Calibration Report

Serial Number: 275
Tool Model: Probe
Performed: Tue Jan 14 10:13:31 2014

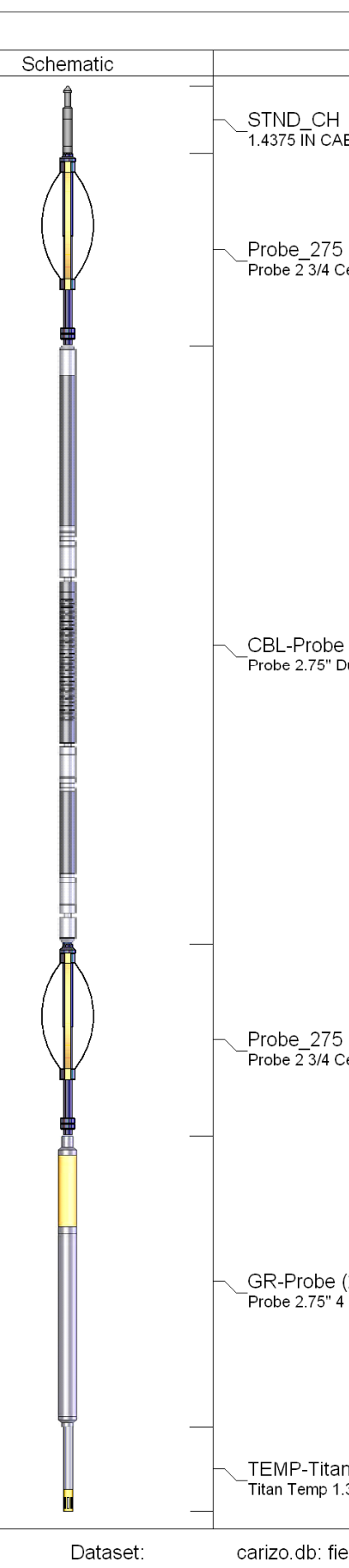
Depth: 322.018 ft
Casing Diameter: 5.5 in

	3' Spacing	5' Spacing	
Signal Zero:	0.25	0.25	mV
Calibrated Amplitude:	62	62	mV
Reading at Signal Zero:	-0.00131836	7.32422e-005	V
Reading in Free Pipe:	0.5104	0.505518	V
Gain:	120.672	122.17	
Offset:	0.409089	0.241052	

Sensor Report

Database File: carizo.db
Dataset Pathname: pass51
Dataset Creation: Sun Dec 15 14:56:41 2013 by Log Halliburton Casedho

Sensor Name	Offset (ft)
WVF3	12.65
WVF5	11.65
CCL	4.89
GR	2.15
TEMP	0.17
LLMTEN	0
Telemetry	0

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
STNDCH	21.25		STND_CH 1.4375 IN CABLE HEAD	1.00	1.44	1.00
CENT	20.25					
			Probe_275 Probe 2 3/4 Centralizer	2.88	2.75	10.00
WVF3	12.65		CBL-Probe (275) Probe 2.75" Dual Receiver Bond	8.92	2.75	60.00
WVF5	11.65					
CENT	8.46					
			Probe_275 Probe 2 3/4 Centralizer	2.88	2.75	10.00
GR	5.58					
CCL	4.89					
			GR-Probe (275) Probe 2.75" 4 Channel Pulse	4.33	2.75	30.00
GR	2.15					
TEMP	0.17		TEMP-Titan (Tit1.3_02) Titan Temp 1.3875	1.25	1.39	10.00
LLMTEN	0.00					

Dataset: carizo.db: field/well/run1/pass51
Total Length: 21.25 ft
Total Weight: 121.00 lb
O.D. 2.75 in

Company CARRIZO
Well GAFFNEY 2-29-8-61
Field WILDCAT
County WELD State CO

HALLIBURTON

CEMENT BOND LOG