HALLIBURTON

CEMENT BOND LOG

Company CARRIZO
Well NELSON RANCHES 1-33-10-59
Field WILDCAT
County WELD State CO

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Well NELSON RANCHES 1-33-10-59
Field WILDCAT
County WELD State CO

API No.: 05-123-37593-0000 Serv #: 900859329
Location: LAT: 40.804320° LONG: -103.981150°

Sec: 28 Twp: 10N Rge: 59W

Other Services
N/A

Permanent Datum	GL	Elevation	5214'
Log Measured From	KB , 12 Ft. above perm. datum		
Drilling Measured From	KB		

Elevation
K.B. 5226'
D.F. 5225'
G.L. 5214'

Date @ Time Logged	2-NOV-2013	Type Fluid in Hole	FRESH WATER
Run No.	ONE	Density of Fluid	8.33
Depth - Driller	12430'	Fluid Level	SURFACE
Depth - Logger	4650'	Cement Top Est. Logged	1060'
Bottom - Logged Interval	4636'	Equipment / Location	11874896 / BRIGHTON
Top - Log Interval	75'	Recorded by	CHRIS CRADDOCK
Max. Recorded Temp.	200	Witnessed by	PHILLIP LINK

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	4592'

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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 @ 4592'

ESTIMATED TOP OF CEMENT @ 1060'

MAX TEMP = 200 DEG F

THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES!

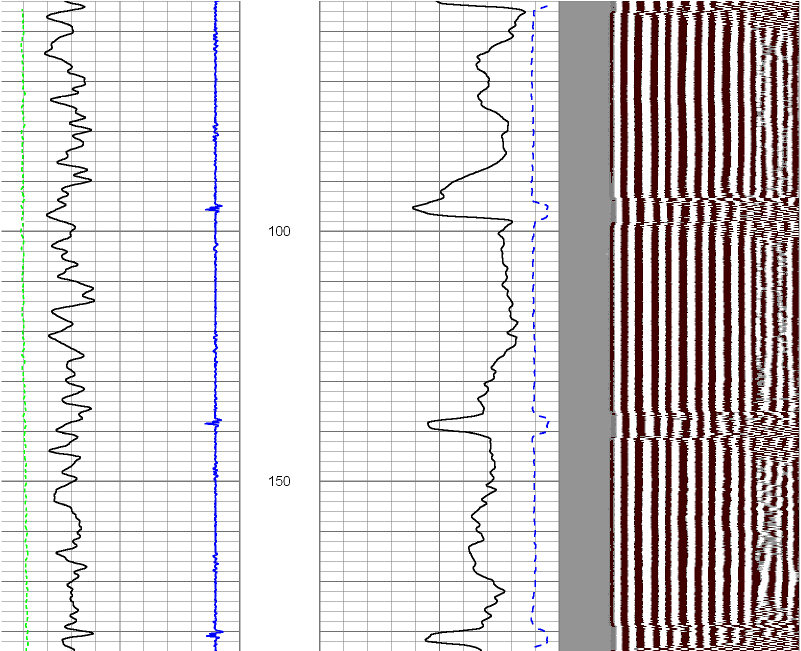
HALLIBURTON

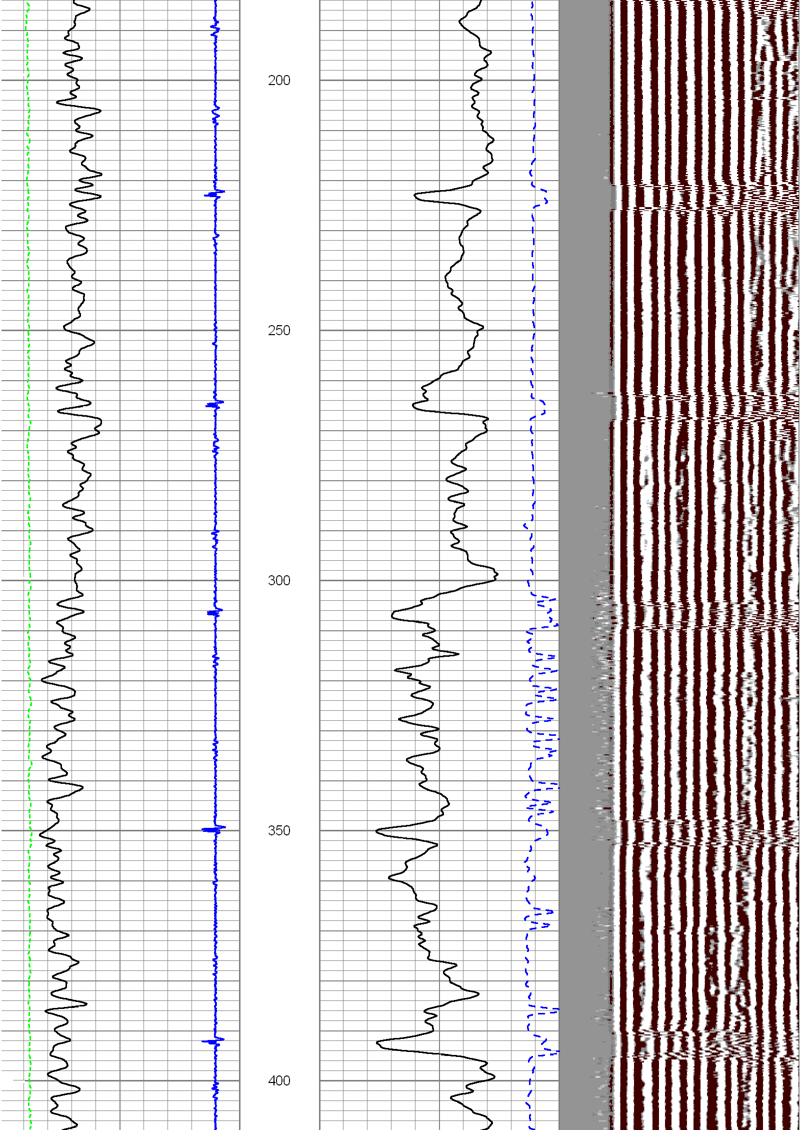
MAIN PASS (1000 PSI)

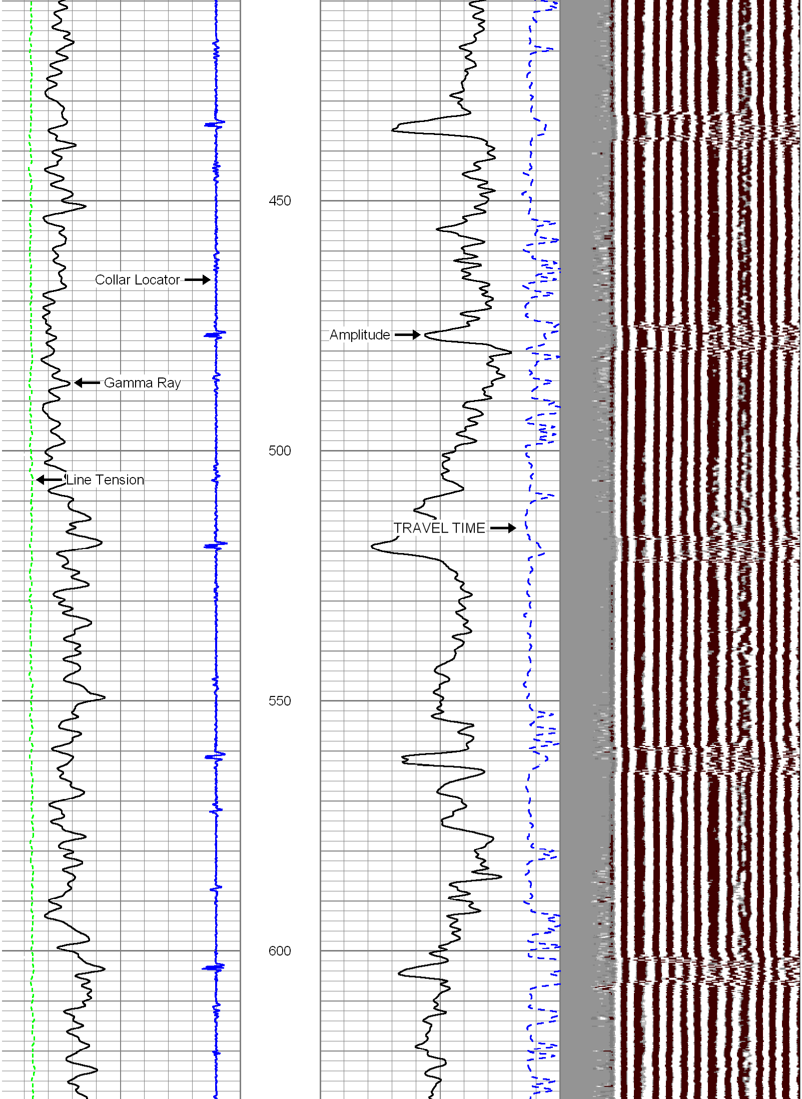
SCALE: 5"=100'

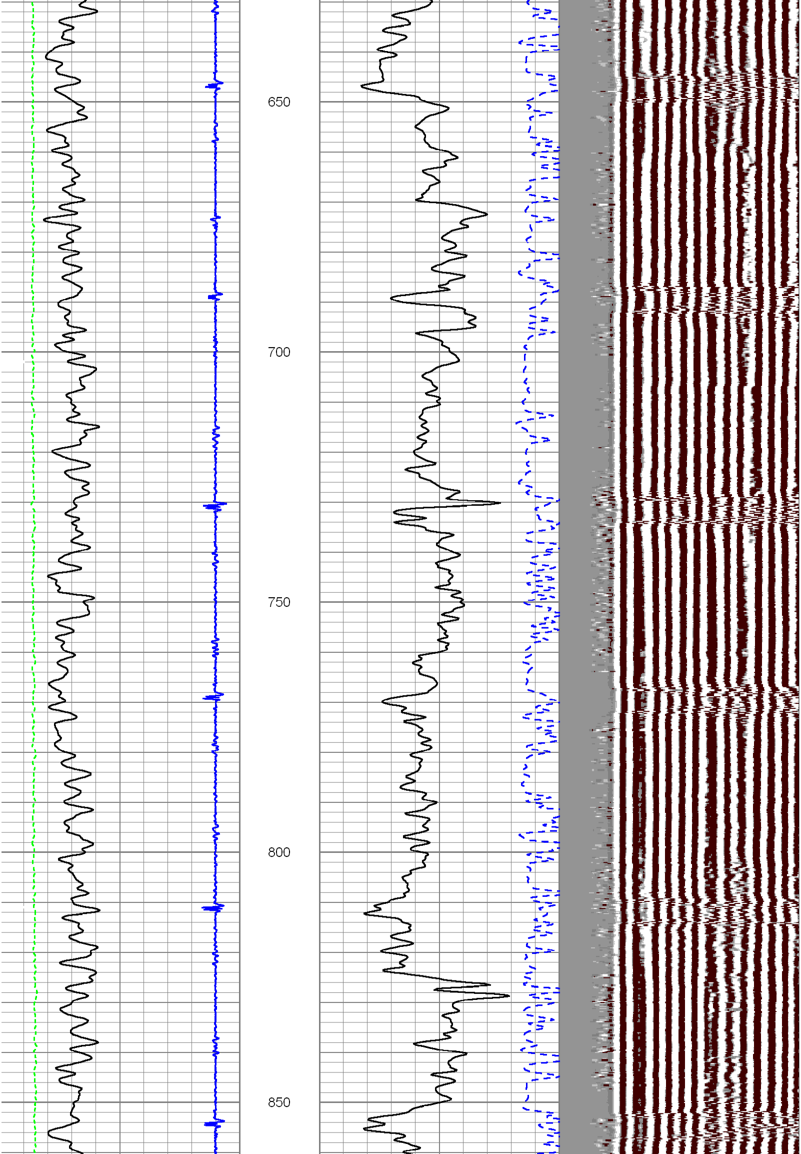
Database File: nelson ranch 1-33-10-59.db
Dataset Pathname: pass23
Presentation Format: 1cbl
Dataset Creation: Sat Nov 02 18:56:46 2013 by Log Halliburton Casedho
Charted by: Depth in Feet scaled 1:240

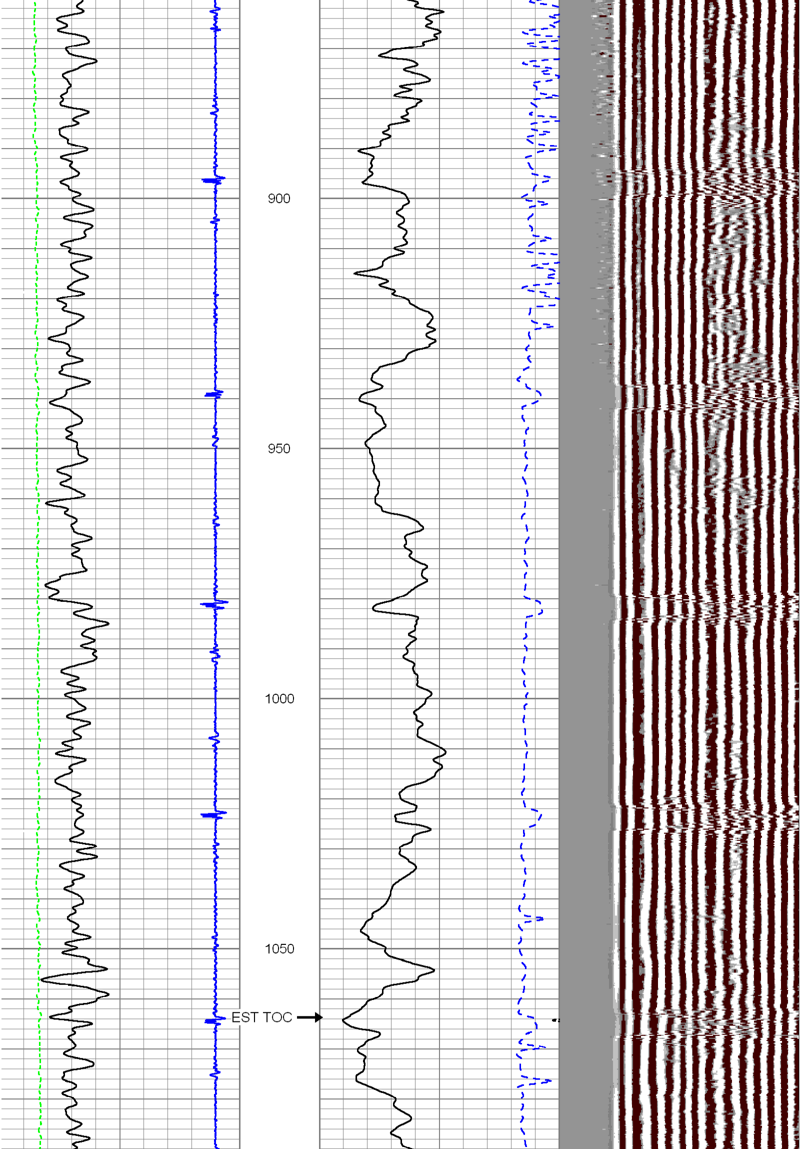
Min	Curve	Max
9	Collar Locator	-1
0	Gamma Ray (GAPI)	150
0	LTEN (lb)	2500
0	MINMK	10
0	Amplified Amplitude (mV)	10
0	Amplitude (mV)	100
200	TRAVEL TIME (usec)	300
200	MSG	1200

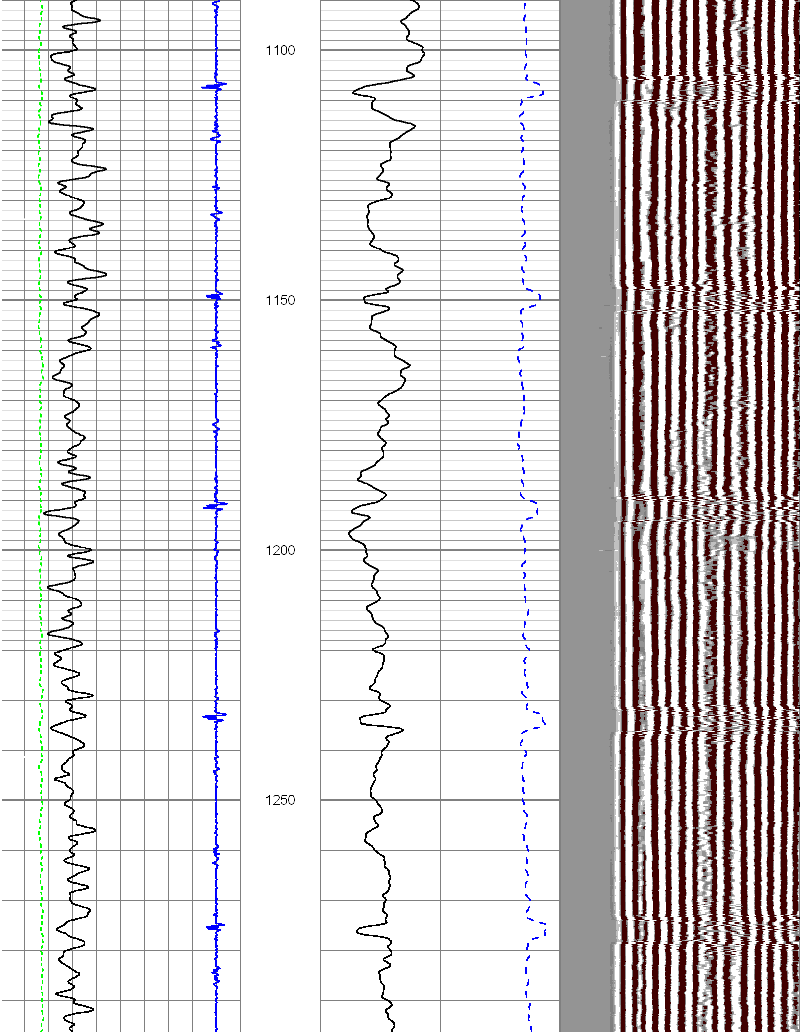


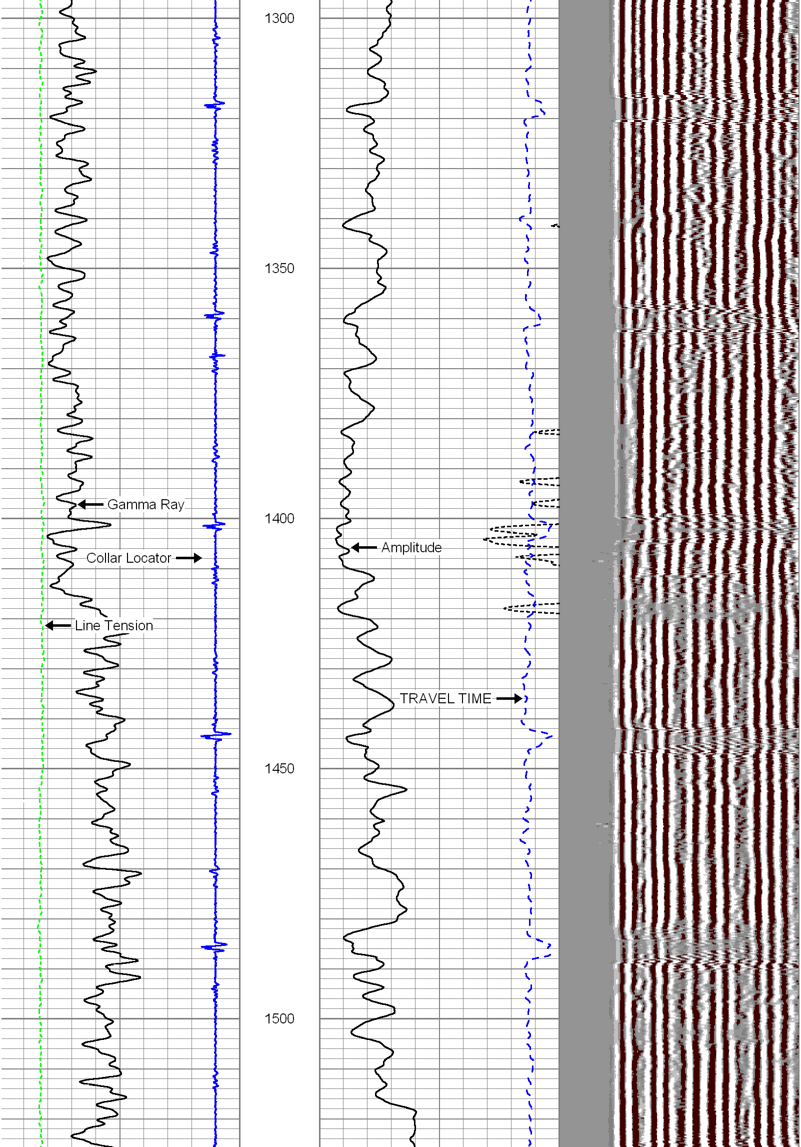


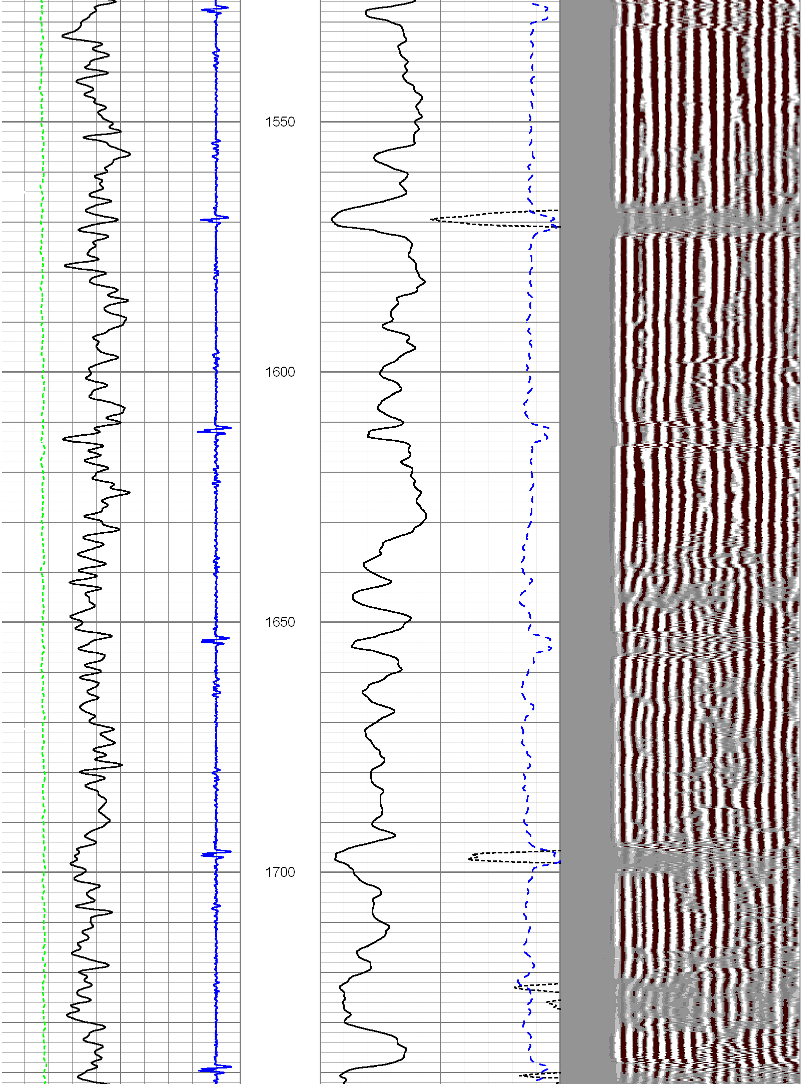


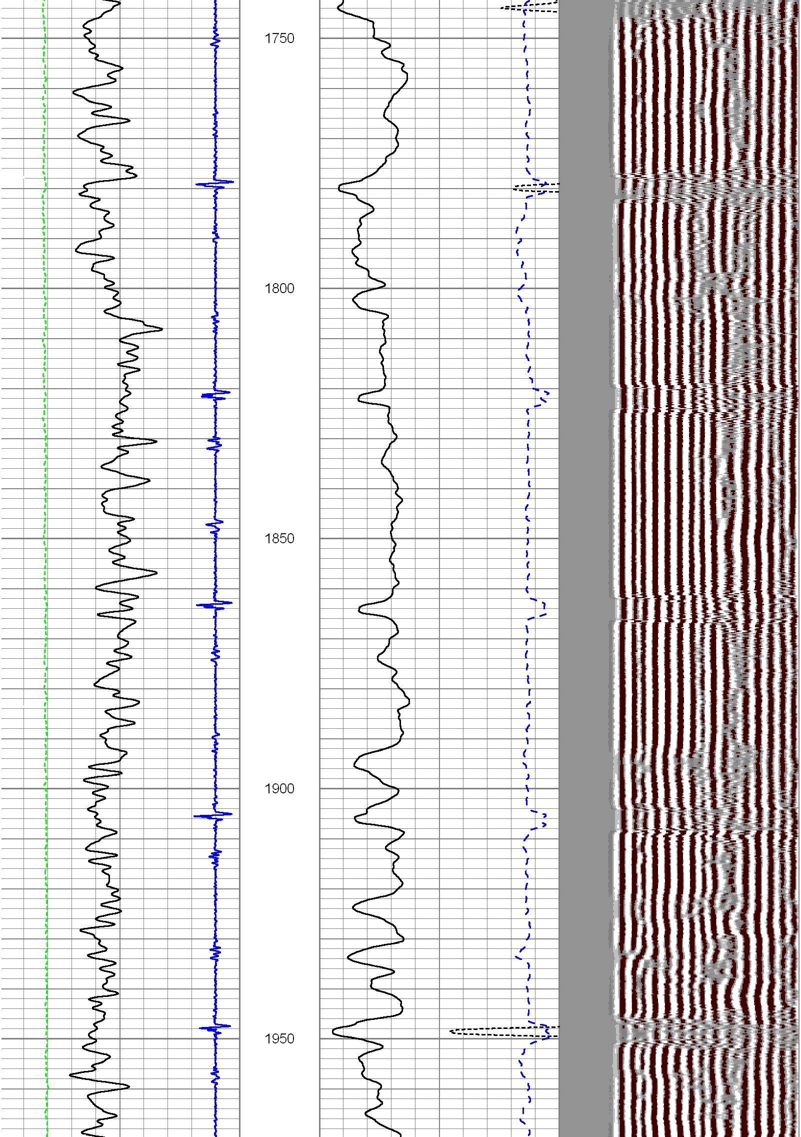


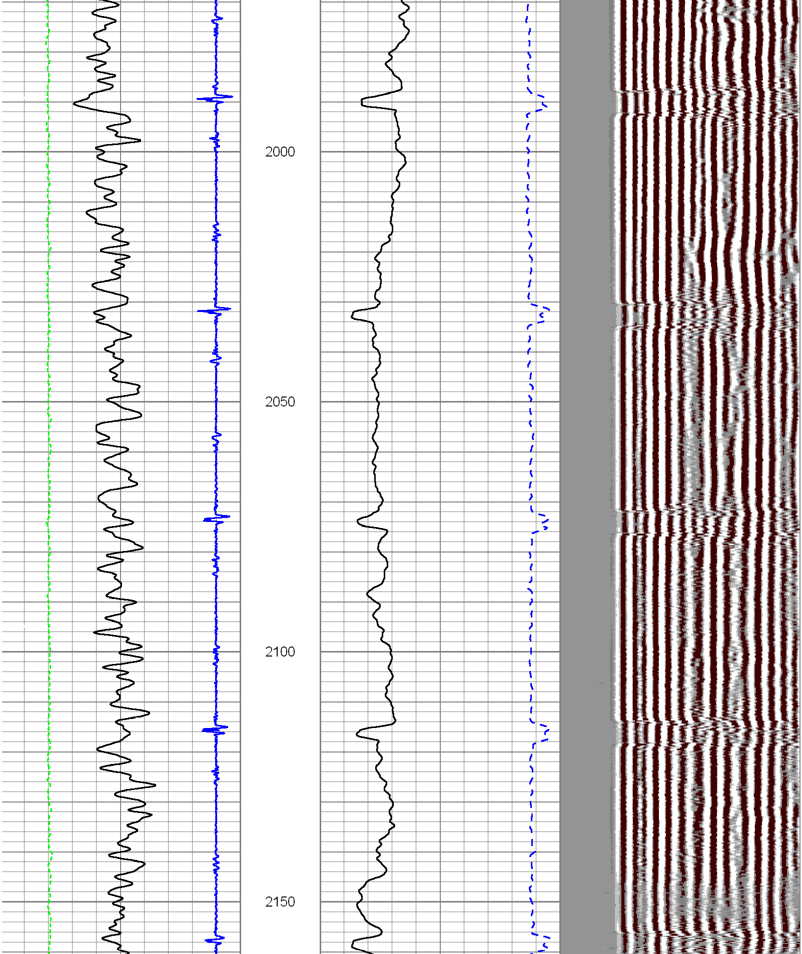


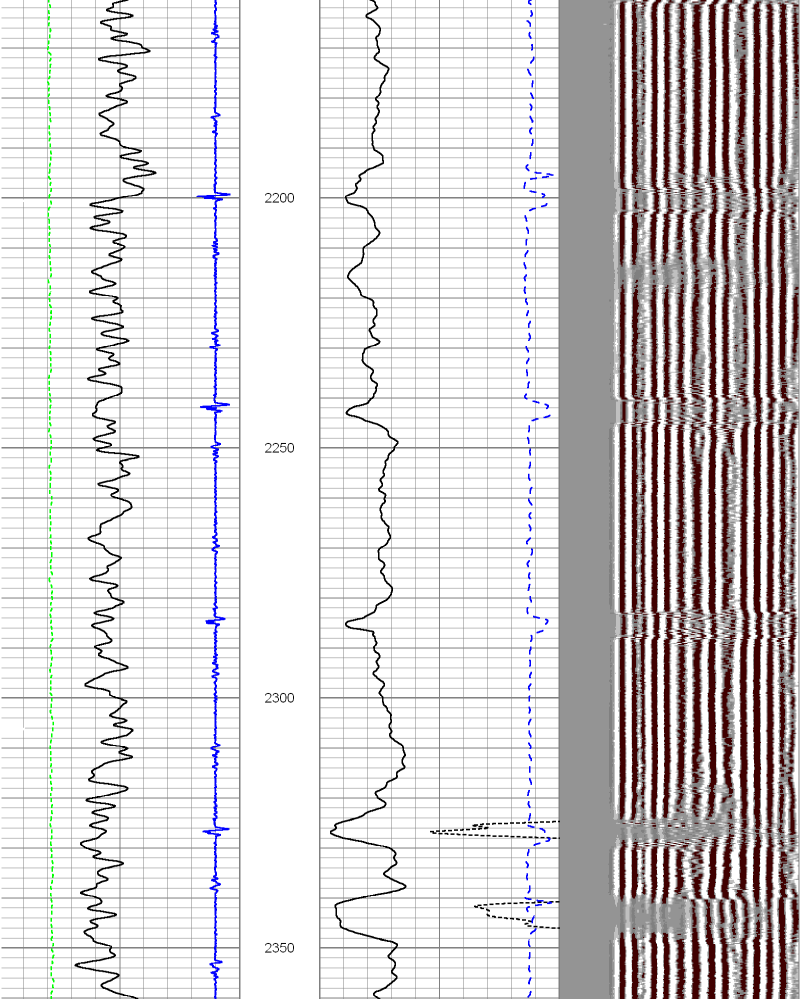


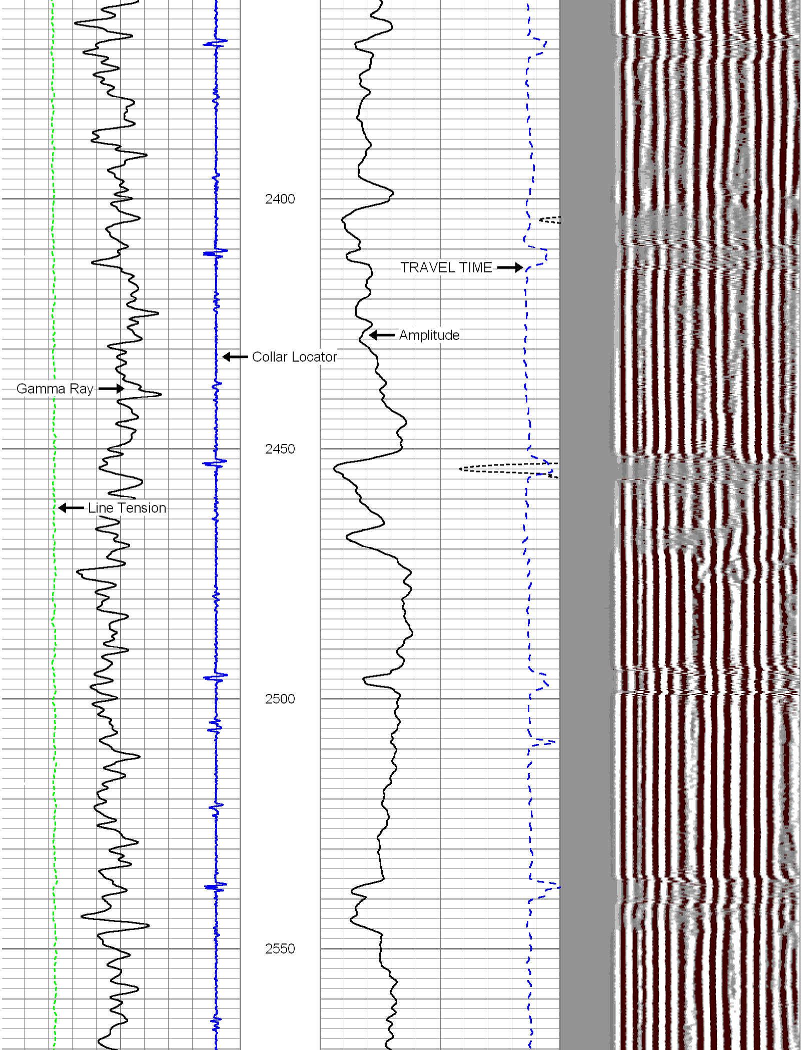


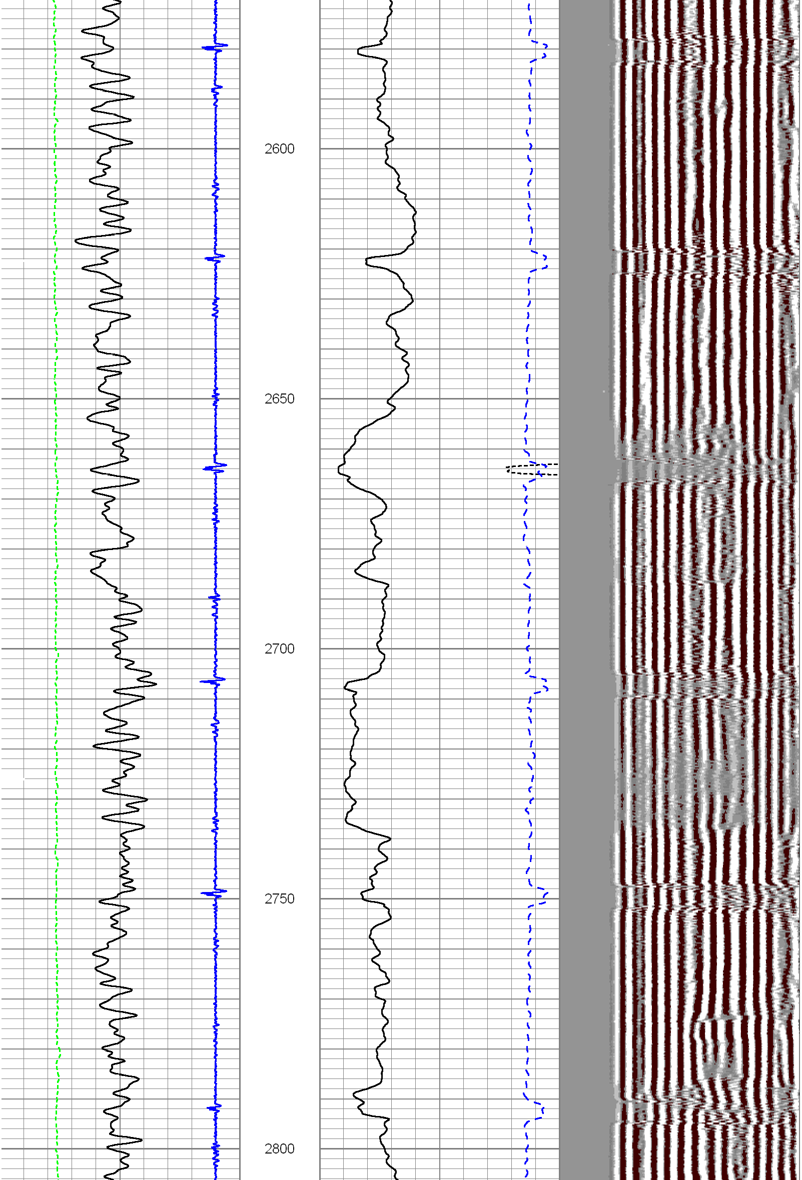


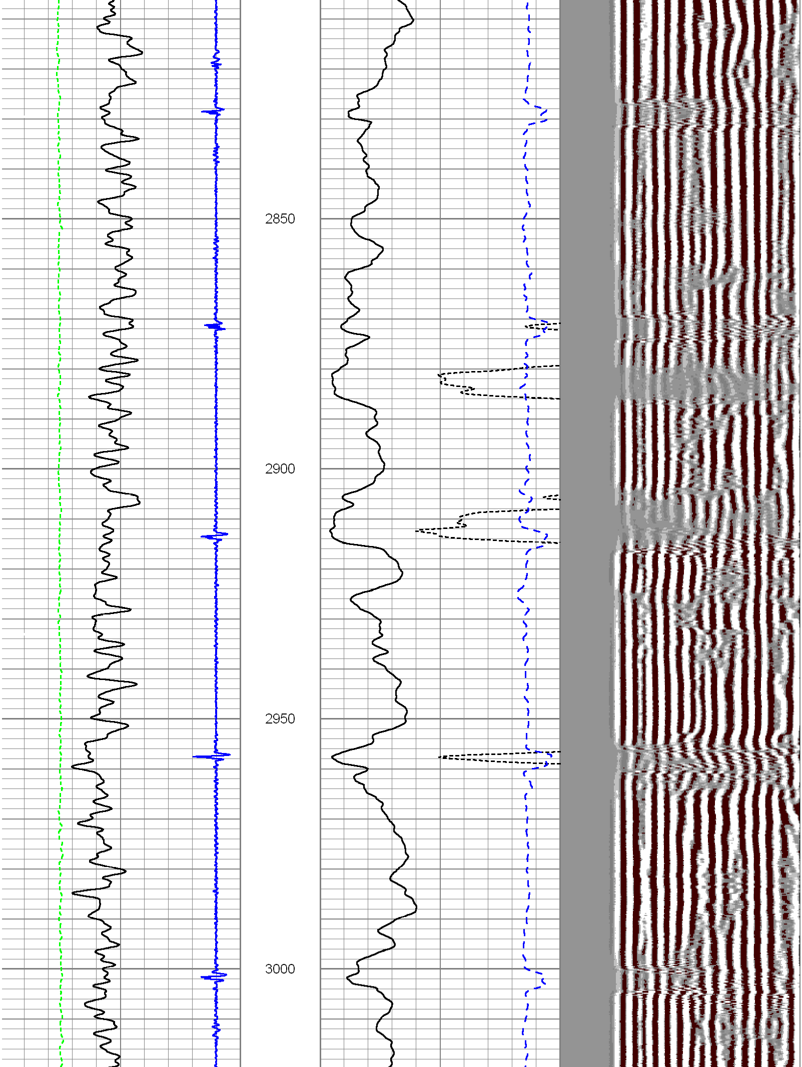


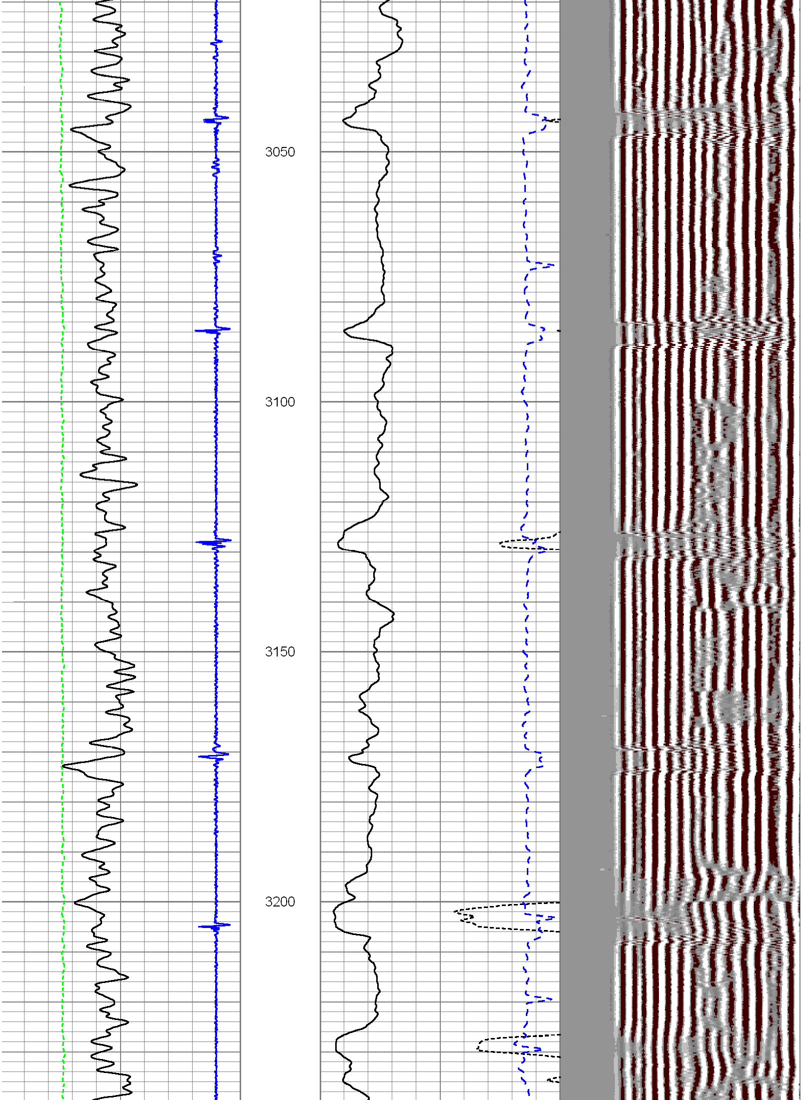


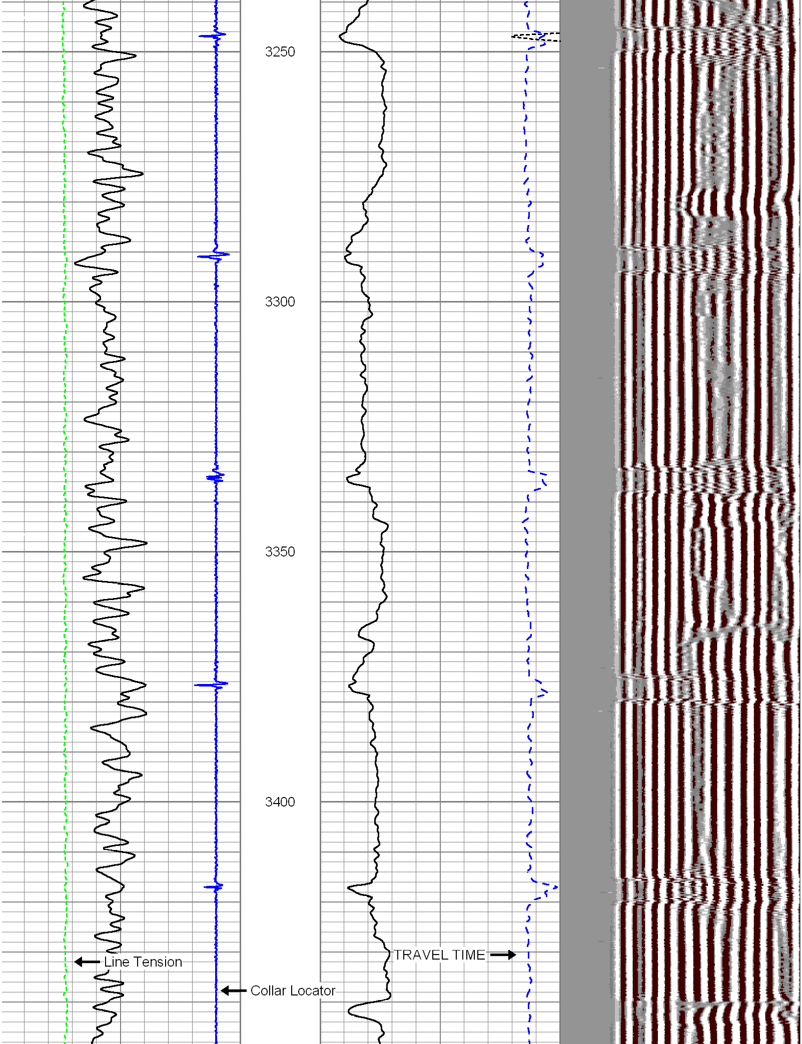


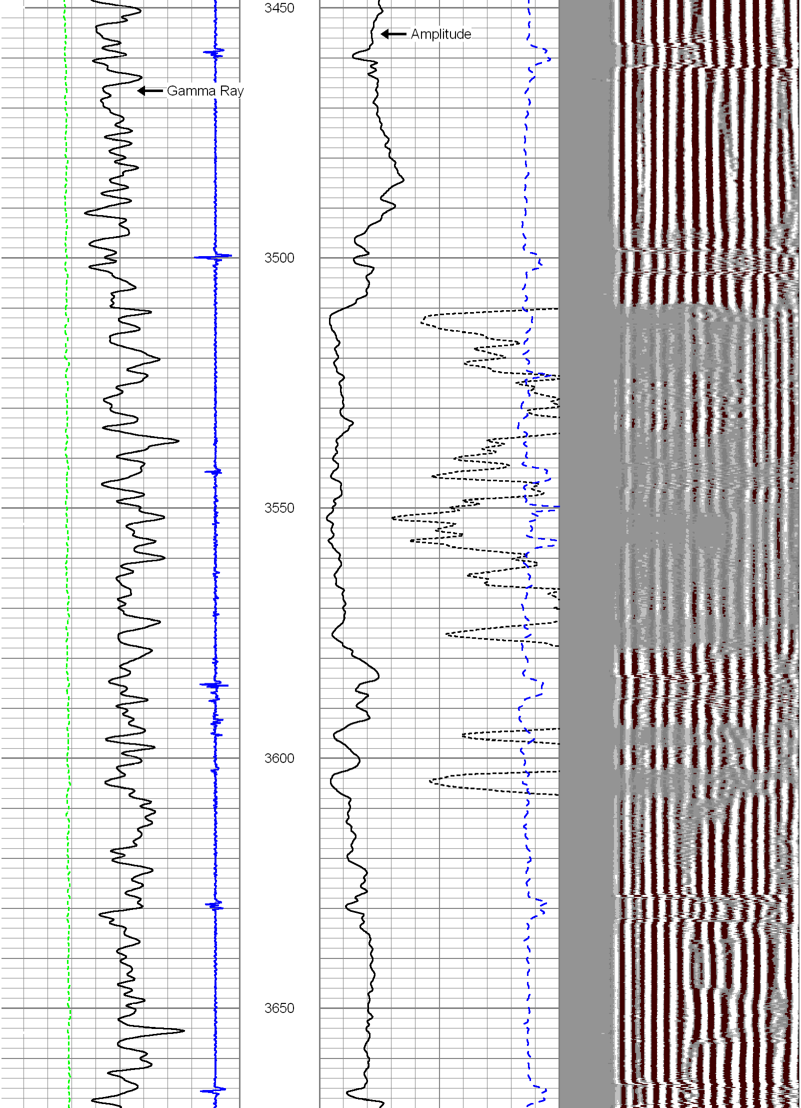


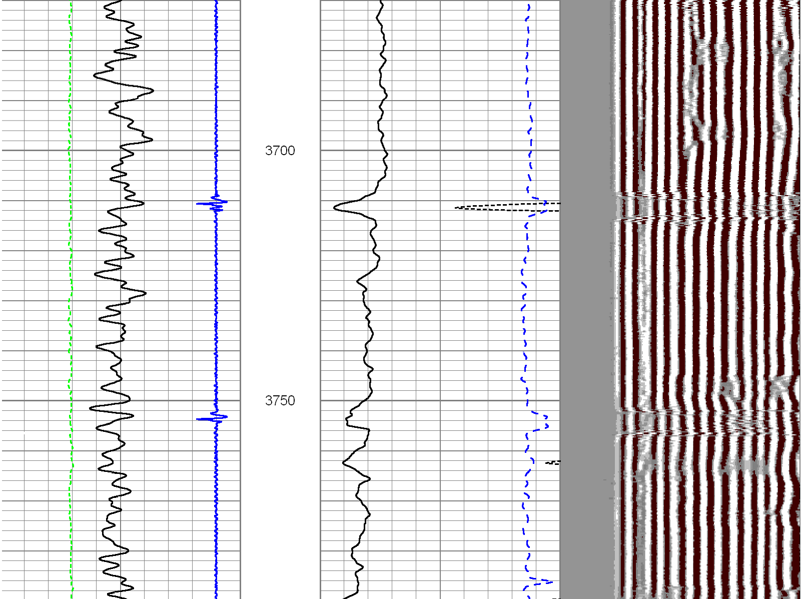












9 Collar Locator -1
0 Gamma Ray (GAPI) 150
0 LTEN (lb) 2500
0 MINMK 10

0 Amplified Amplitude (mV) 10
0 Amplitude (mV) 100
200 TRAVEL TIME (usec) 300

200 MSG 1200

HALLIBURTON

MAIN PASS (1000 PSI)

SCALE: 5"=100'

HALLIBURTON

REPEAT PASS (1000 PSI)

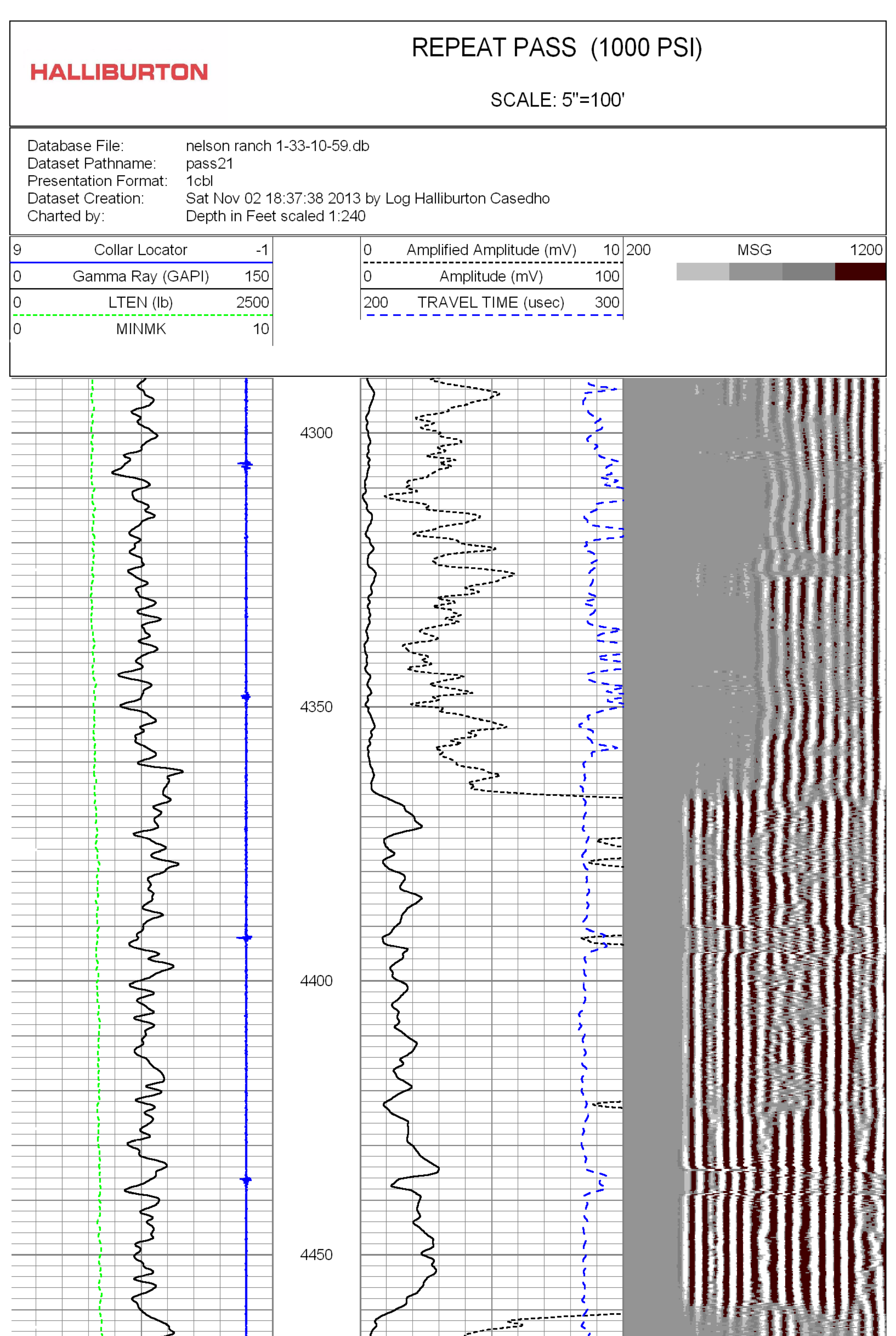
SCALE: 5"=100'

Database File: nelson ranch 1-33-10-59.db
Dataset Pathname: pass21
Presentation Format: 1cbl
Dataset Creation: Sat Nov 02 18:37:38 2013 by Log Halliburton Casedho
Charted by: Depth in Feet scaled 1:240

9 Collar Locator -1
0 Gamma Ray (GAPI) 150
0 LTEN (lb) 2500
0 MINMK 10

0 Amplified Amplitude (mV) 10
0 Amplitude (mV) 100
200 TRAVEL TIME (usec) 300

200 MSG 1200



9 Collar Locator -1
0 Gamma Ray (GAPI) 150
0 LTEN (lb) 2500
0 MINMK 10

0 Amplified Amplitude (mV) 10
0 Amplitude (mV) 100
200 TRAVEL TIME (usec) 300

200 MSG 1200

HALLIBURTON

REPEAT PASS (1000 PSI)

SCALE: 5"=100'

Log Variables

Database:C:\Warrior\Data\nelson ranch 1-33-10-59.db
Dataset: field/well/run1/pass23

Top - Bottom

PPT usec	MAXAMPL mV	MINAMPL mV	MINATTN db/ft	CMTTKCOR	CSTKCOR	SZCOR	CASED?
287	62	0	0.8	Off	Off	Off	Yes
LTH	**CMNTTHCK in**	**CASETHCK in**	**CASEOD in**	**PERFS**	**TDEPTH ft**	**BOTTEMP degF**	**BITSIZE in**
Limestone	0	0	7	0	0	226	7.875

Sensor Report

Database File: nelson ranch 1-33-10-59.db
Dataset Pathname: pass23
Dataset Creation: Sat Nov 02 18:56:46 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

Calibration Report

Database File: nelson ranch 1-33-10-59.db
Dataset Pathname: pass23
Dataset Creation: Sat Nov 02 18:56:46 2013 by Log Halliburton Casedho

Temperature Calibration Report

Serial Number: Tit1.3_02
Tool Model: Titan
Performed: Fri Jan 04 07:55:24 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

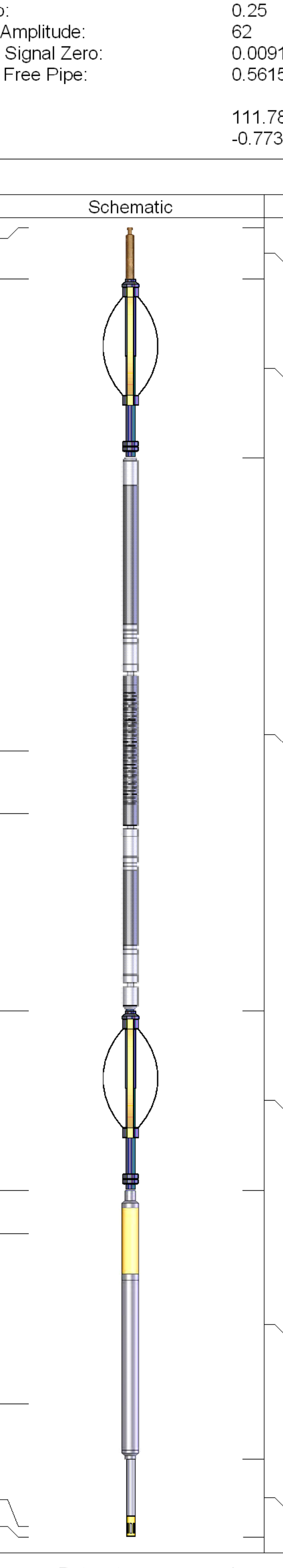
	Counts/Sec.	Gain	Offset	Jig	Units
SHOP CALIBRATION	Sat Nov 02 17:29:44 2013				
Background	134.0				cps
Calibrator	506.1				cps
		0.6530			GAPI/cps
PRIMARY VERIFICATION	Sat Nov 02 17:33:30 2013				
Background	87.0				cps
Calibrator	332.9				cps
Difference				245.9	GAPI
BEFORE SURVEY VERIFICATION	Sat Nov 02 17:37:35 2013				
Background	87.5				cps
Calibrator	331.7				cps
Difference				244.2	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: Sat Nov 02 17:56:34 2013

Depth: 86.0983 ft
Casing Diameter: 7 in

	3' Spacing	5' Spacing	
Signal Zero:	0.25	0.25	mV
Calibrated Amplitude:	62	62	mV
Reading at Signal Zero:	0.00915527	0.00432129	V
Reading in Free Pipe:	0.561572	0.468115	V
Gain:	111.781	133.141	
Offset:	-0.77339	-0.325341	



Sensor	Offset (ft)	Description	Len (ft)	OD (in)	Wt (lb)
STNDCH	21.09				
CENT	20.26	1_CABLEHEAD 1"OD CABLE HEAD	0.83	1.00	3.00
		Probe_275 Probe 2 3/4 Centralizer	2.88	2.75	35.00
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	35.00
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: nelson ranch 1-33-10-59.db: field/well/run1/pass23
Total Length: 21.09 ft
Total Weight: 173.00 lb
O.D. 2.75 in

Company	CARRIZO
Well	NELSON RANCHES 1-33-10-59
Field	WILDCAT
County	WELD
State	CO

HALLIBURTON

CEMENT BOND
LOG