ALLIED WIRELINE

Cement Bond
Variable Density Log
W/ Gamma Ray/CCL

Company	Bonanza Creek Energy
Well	State Antelope 31-34-16HNB
Field	Wattenberg
County	Weld
State	Colorado

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Field	Wattenberg		
County	Weld	State	Colorado

Location: API # : 05-123-37404

655' FNL & 1730' FEL

SEC 16 TWP 5 N RGE 62 W

Other Services

None

Permanent Datum	Ground Level	Elevation	4772'
Log Measured From	Kelly Bushing 15' APD		
Drilling Measured From	Kelly Bushing		

Elevation

K.B. 4787'
D.F. 4786'
G.L. 4772'

Date	14th August, 2013		
Run Number	One		
Depth Driller	11096'		
Depth Logger	6556'		
Bottom Logged Interval	6544'		
Top Log Interval	1350'		
Open Hole Size	8 3/4"		
Type Fluid	Water		
Density / Viscosity	-		
Max. Recorded Temp.	-		
Estimated Cement Top	6455'		
Time Well Ready	1130		
Time Logger on Bottom	1230		
Equipment Number	12029		
Location	Brighton, CO		
Recorded By	R.Grissom		
Witnessed By	Kurt Dodge		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
1	13.5"	Surface	450'				
2	8.75"	450'	6871'				
3	6.125"	6871'	11096'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9 5/8"	36#	Surface	450'
Prot. String				
Production String	7"	26#	Surface	6871'
Liner	4.5"	11.6#	6771'	11096'
Short Joint				

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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

Well logged using 15' KB

Main Pass and Repeat Pass logged with zero pressure on surface.

Your Crew Today. R.Grissom, E.Soto, T.Arguello, N.Grasty

Thank You for using Allied Wireline

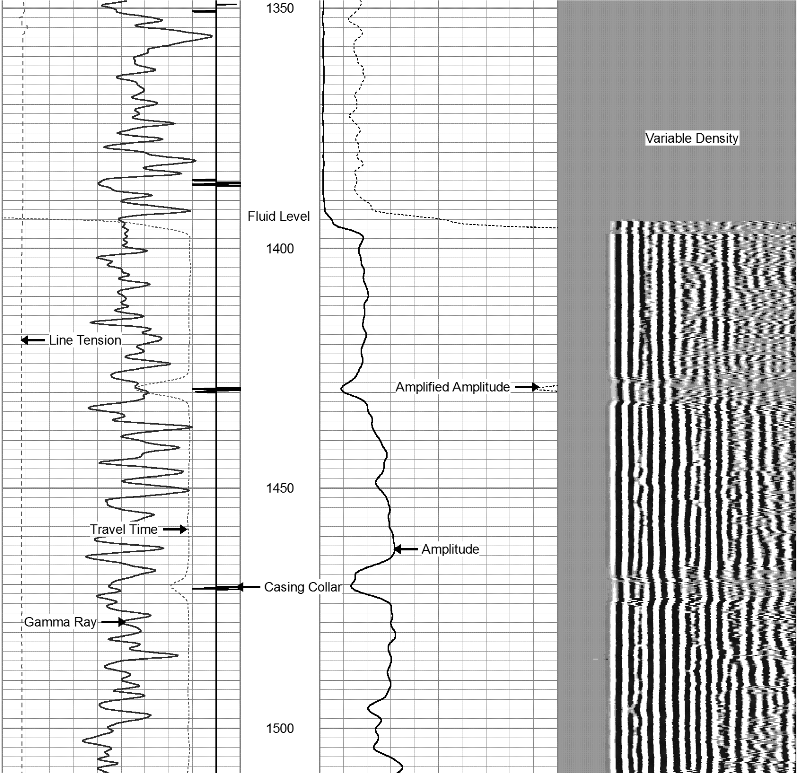
(303) 659-4609

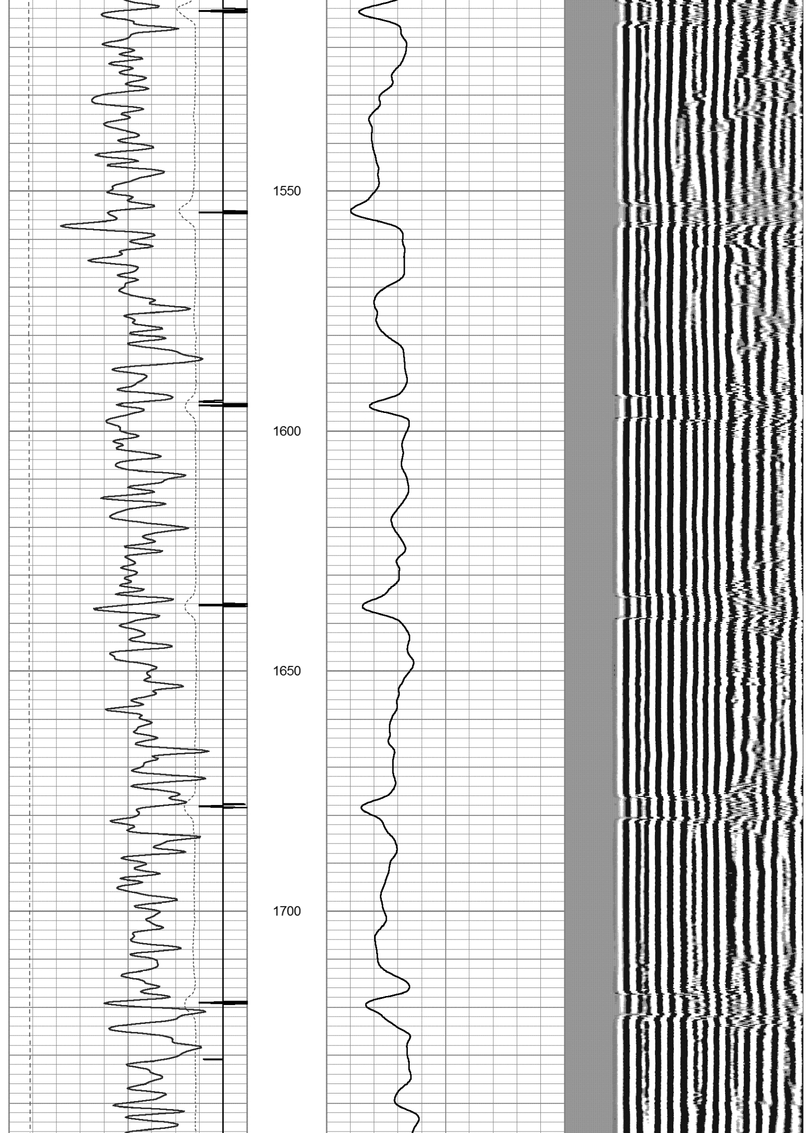
ALLIED WIRELINE

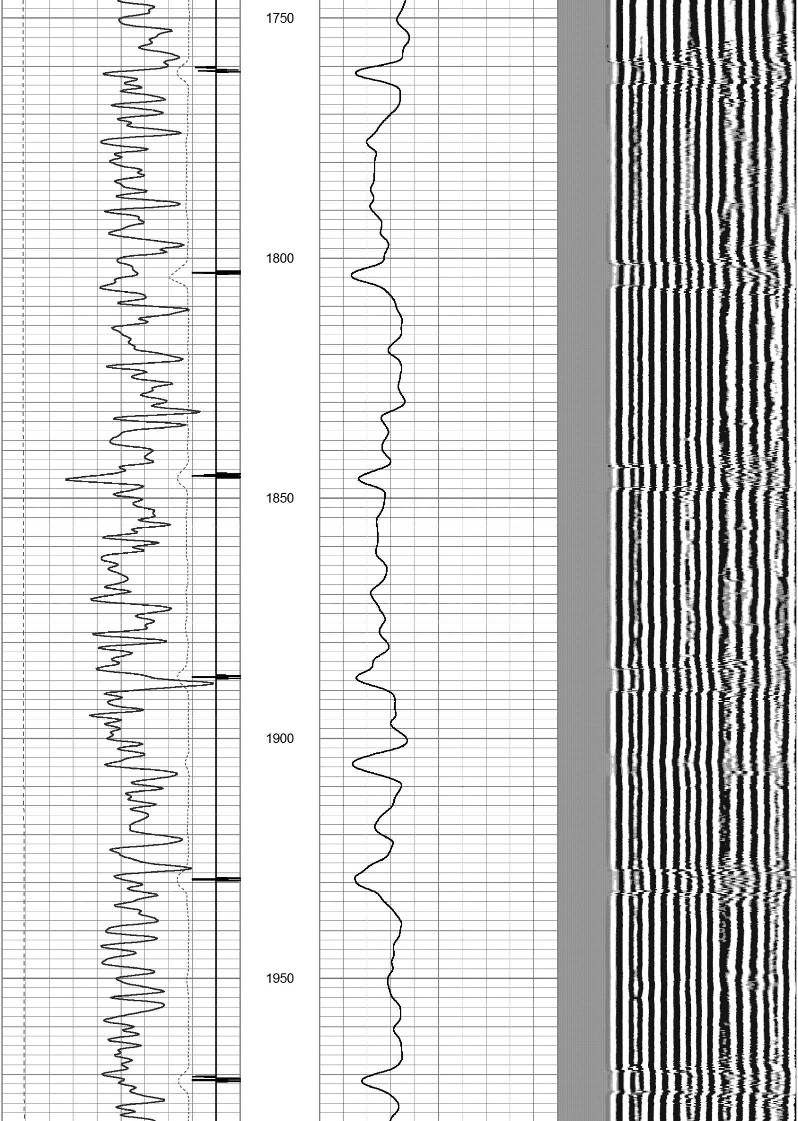
Main Pass (0 Pressure)

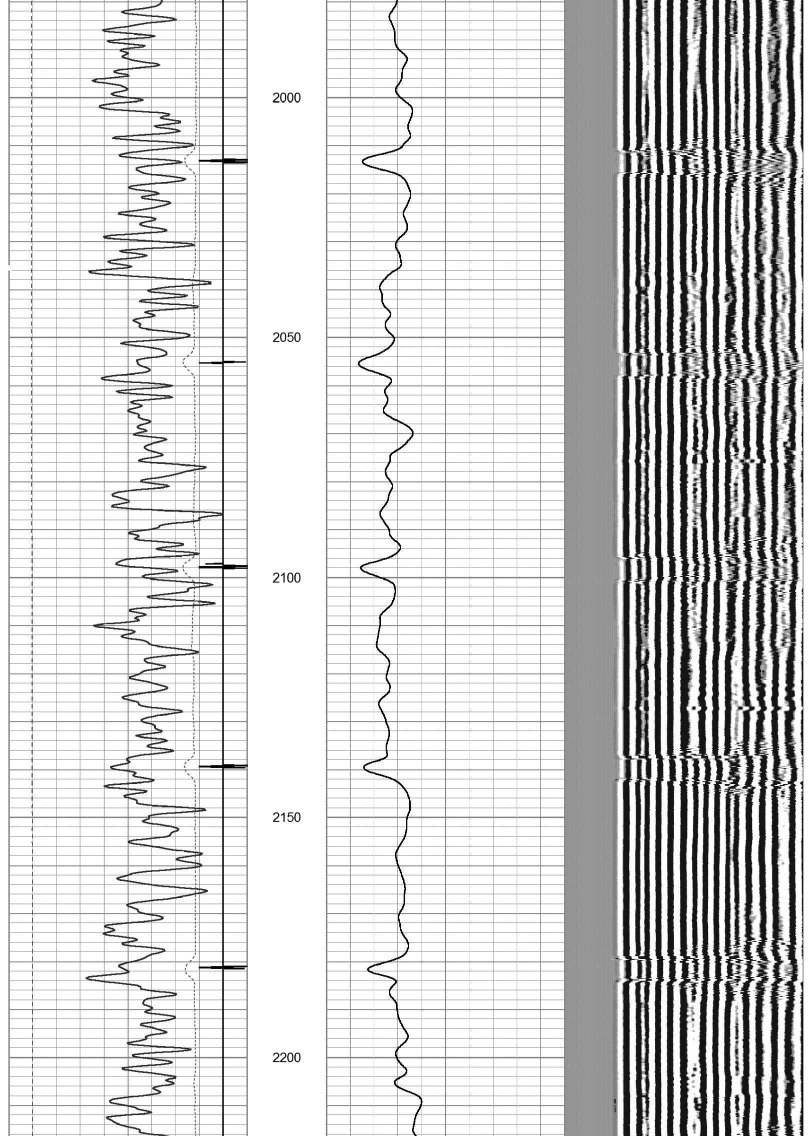
Database File:	c:\users\engineers\desktop\brtn logs\bonanza creek\state antelope 31-34-16\bonanza_creek_state_antelope_31
Dataset Pathname:	pass3
Presentation Format:	cblprobe
Dataset Creation:	Wed Aug 14 12:53:37 2013 by Log SCH 120126
Charted by:	Depth in Feet scaled 1:240

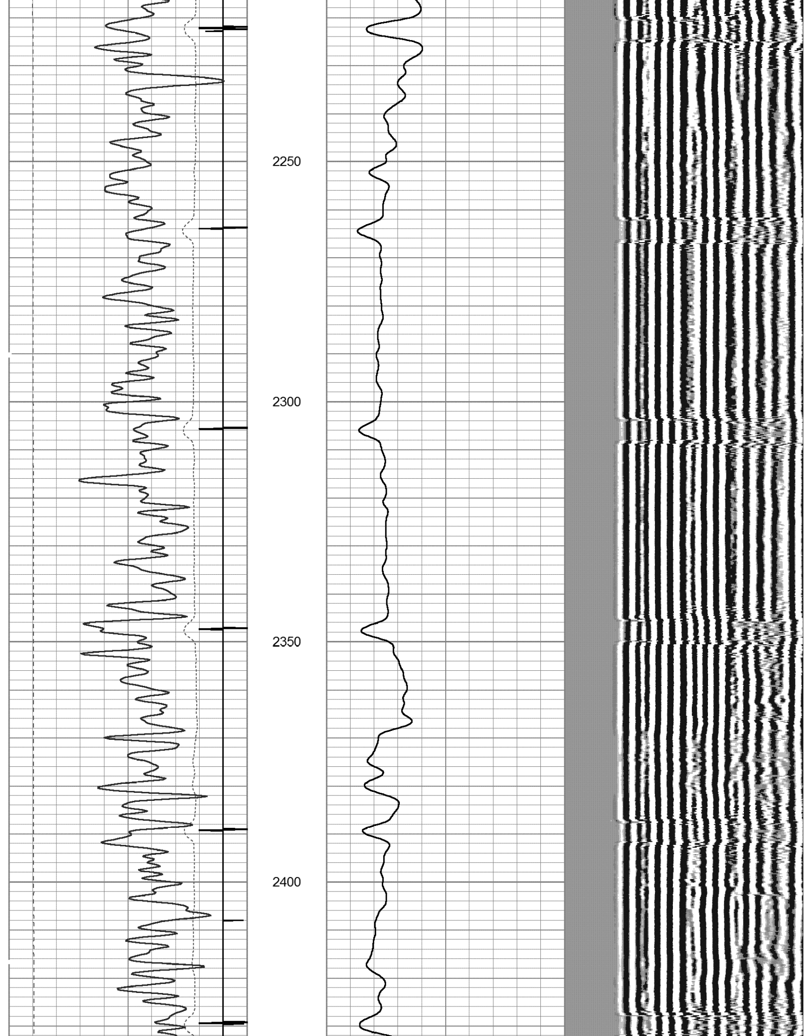
440	Travel Time (usec)	240	0	Amplitude (mV)	100	200	Variable Density	1200
9	*Casing Collar*	-1	0	Amplified Amplitude (mV)	10			
0	Gamma Ray (GAPI)	150						
0	Line Tension (lb)	5000						

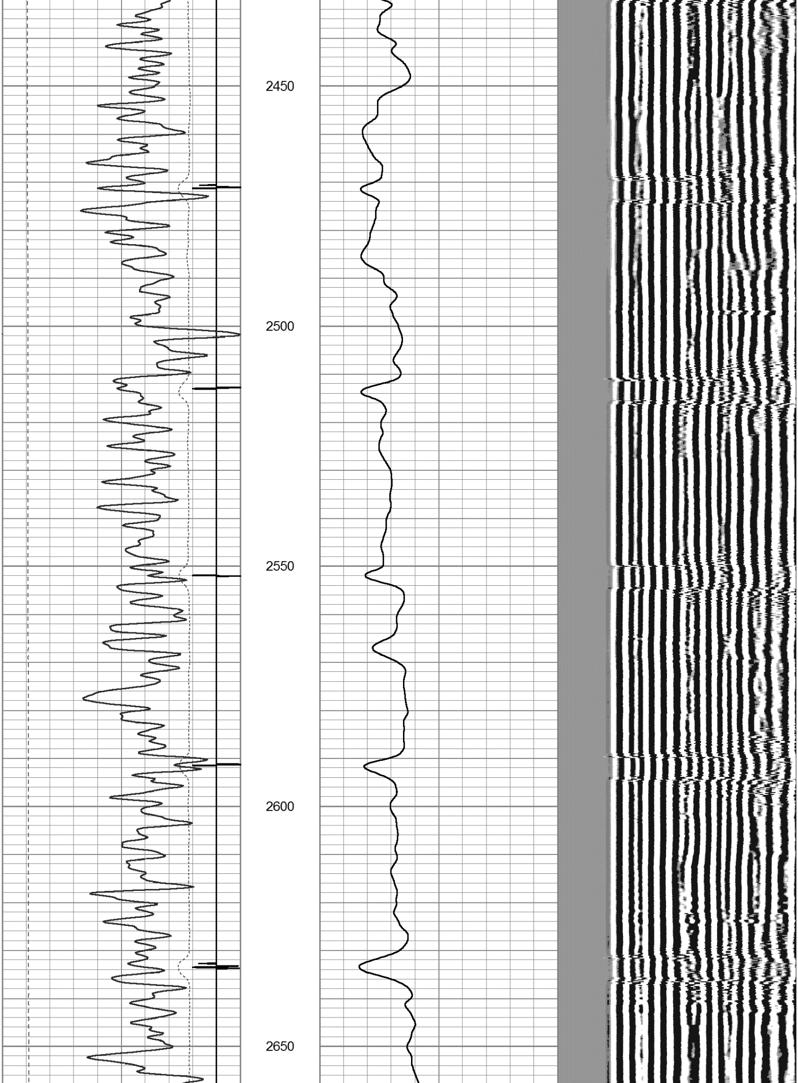


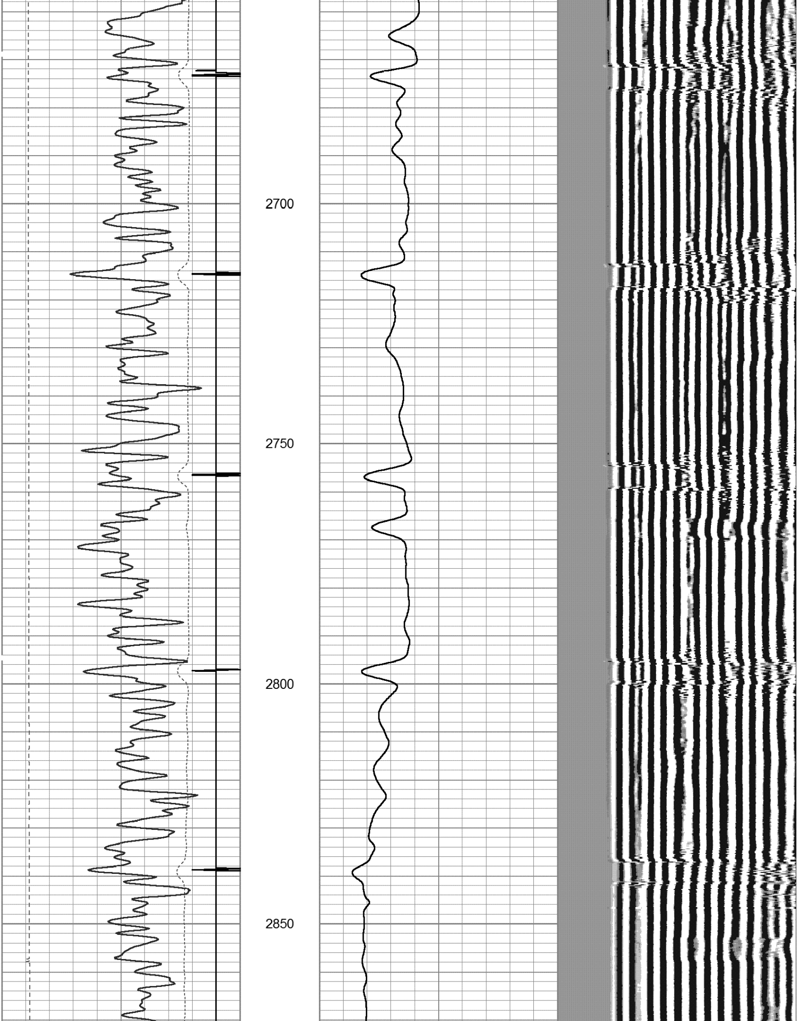


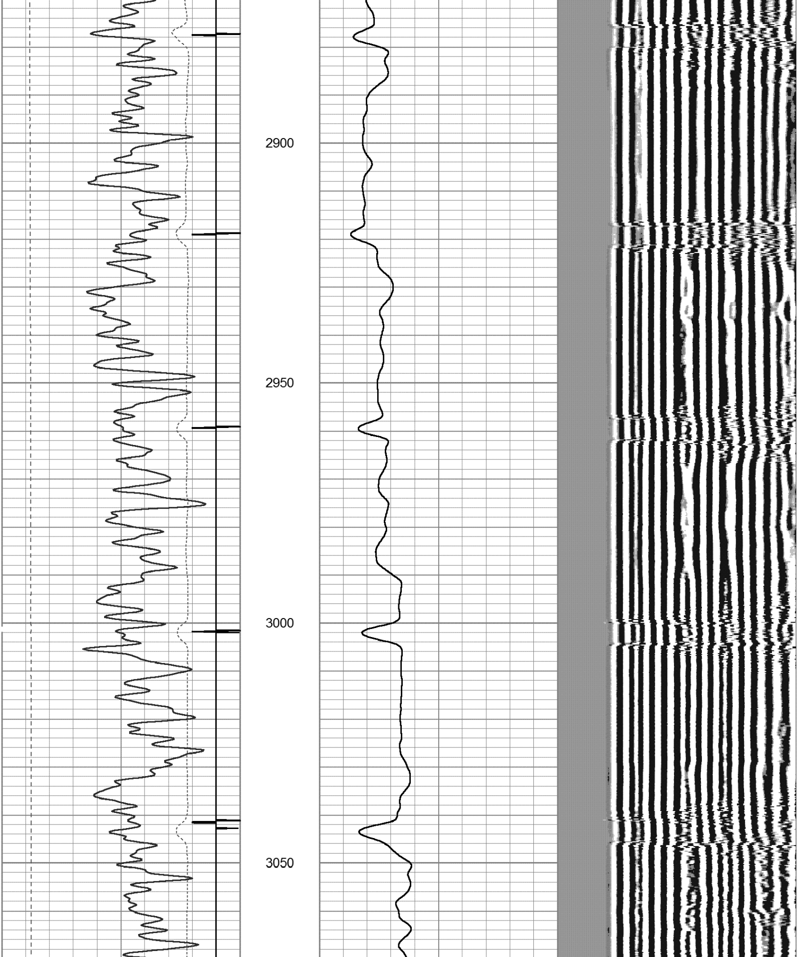


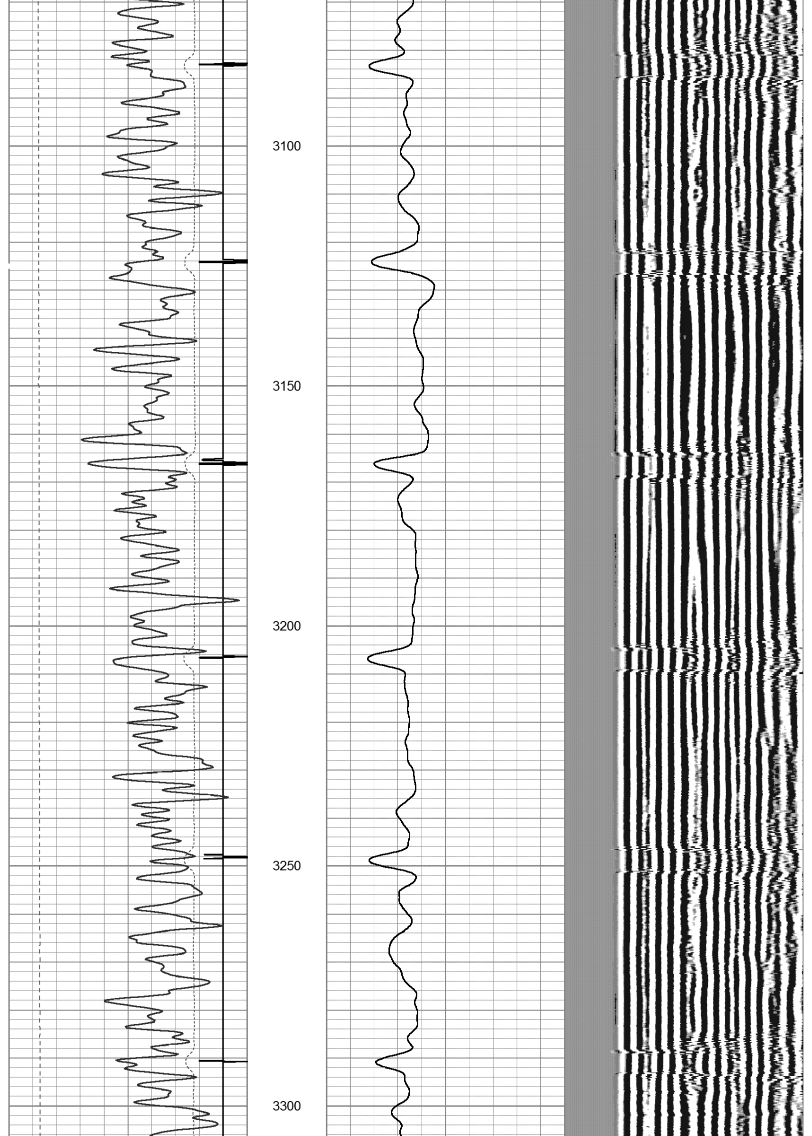


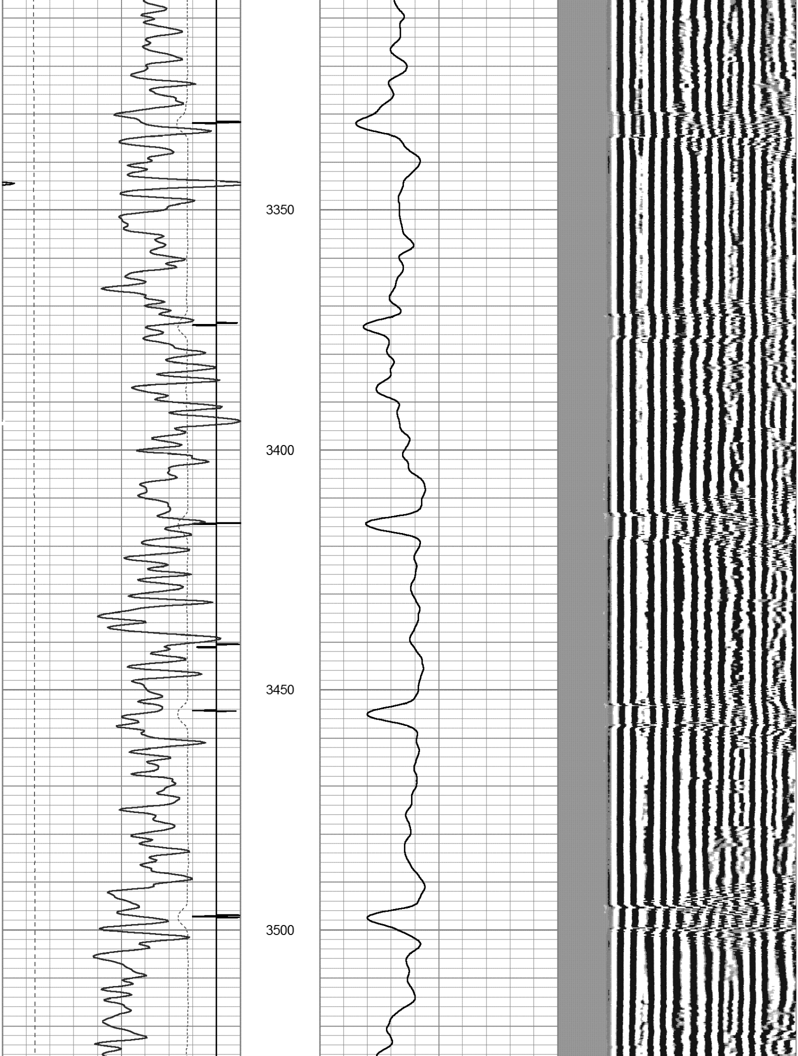


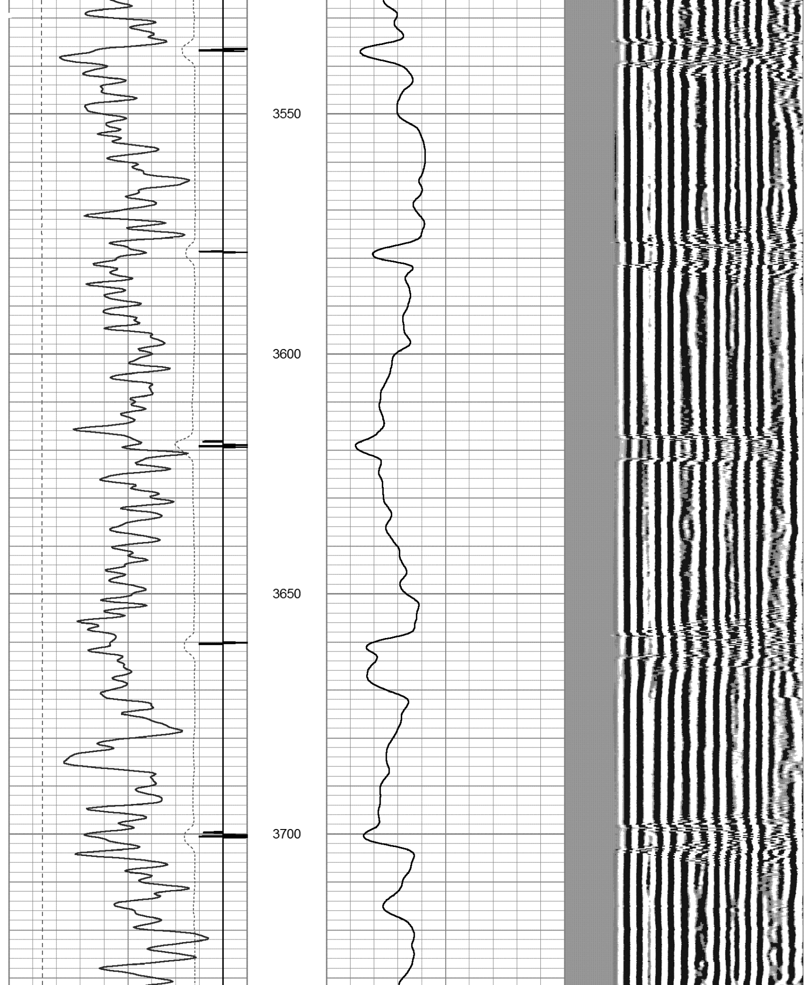


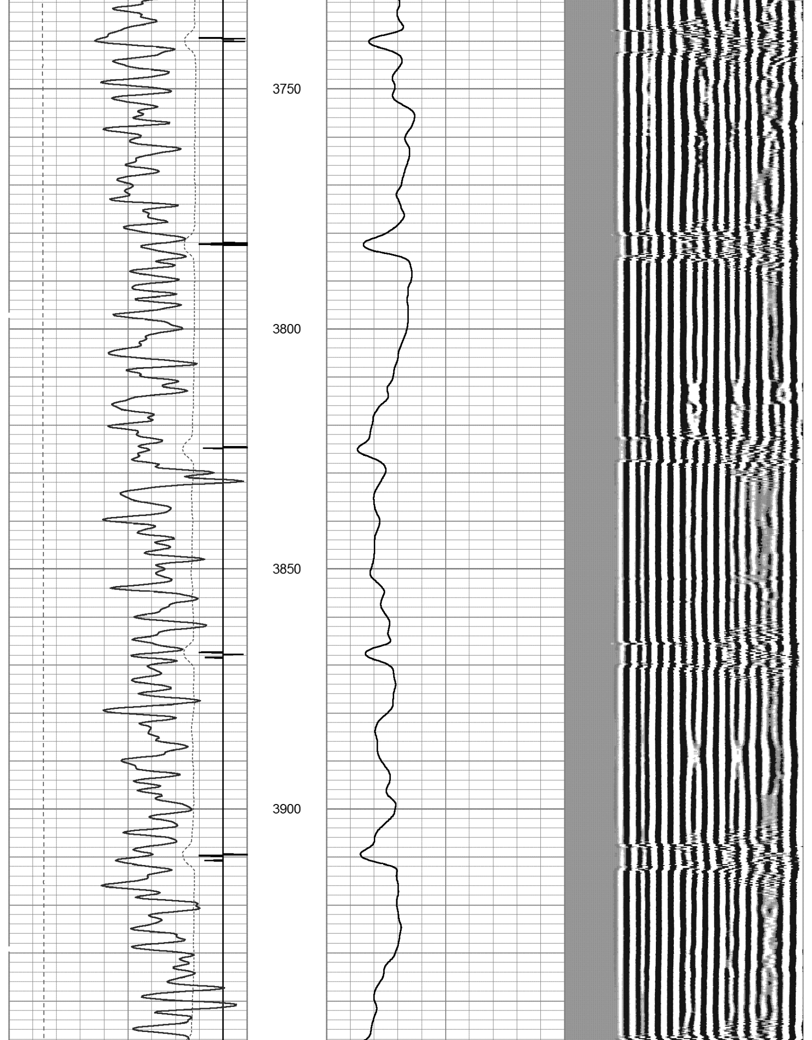


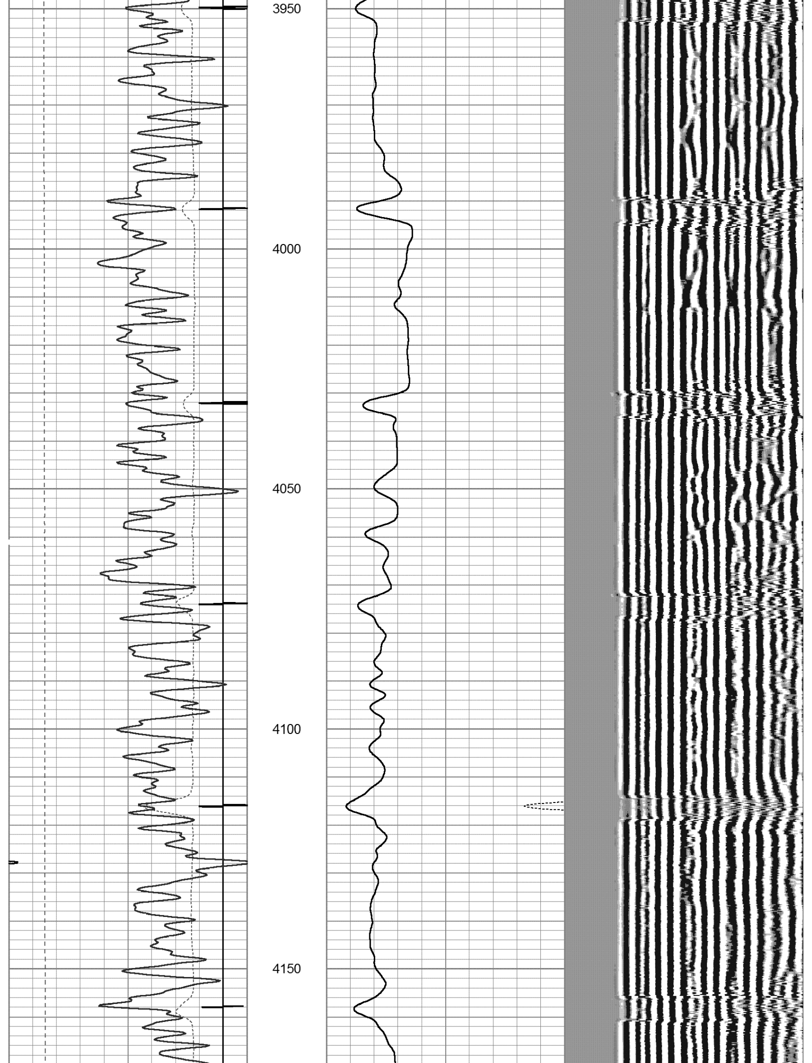


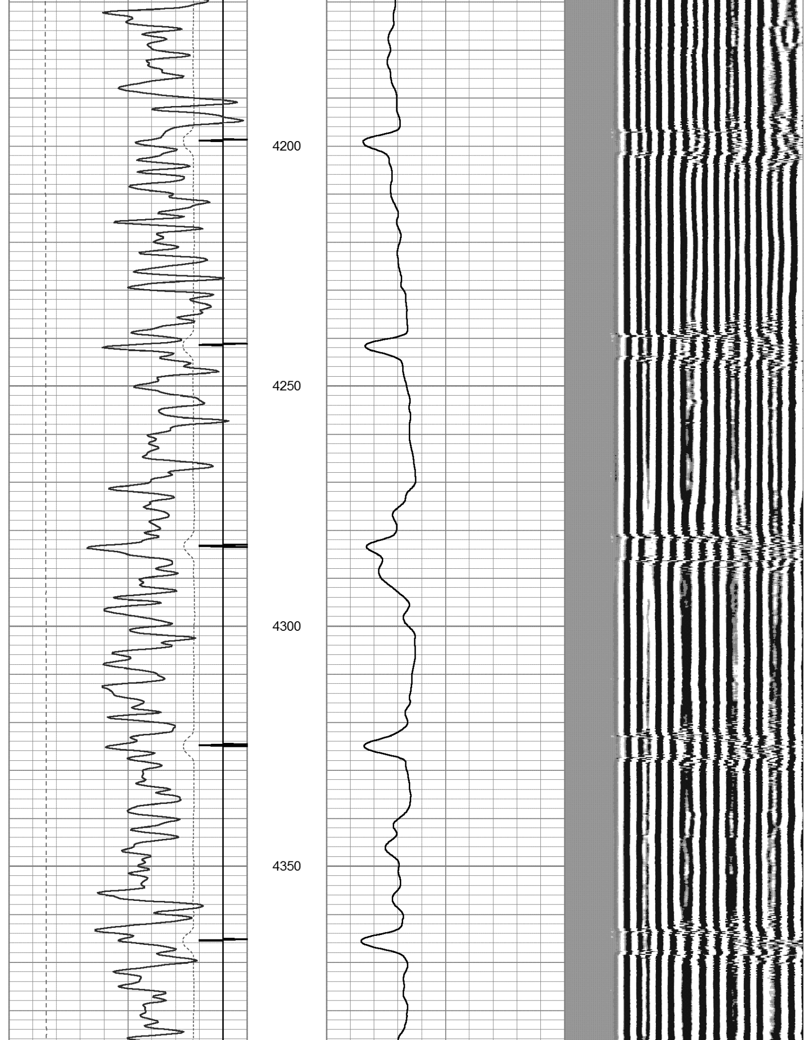


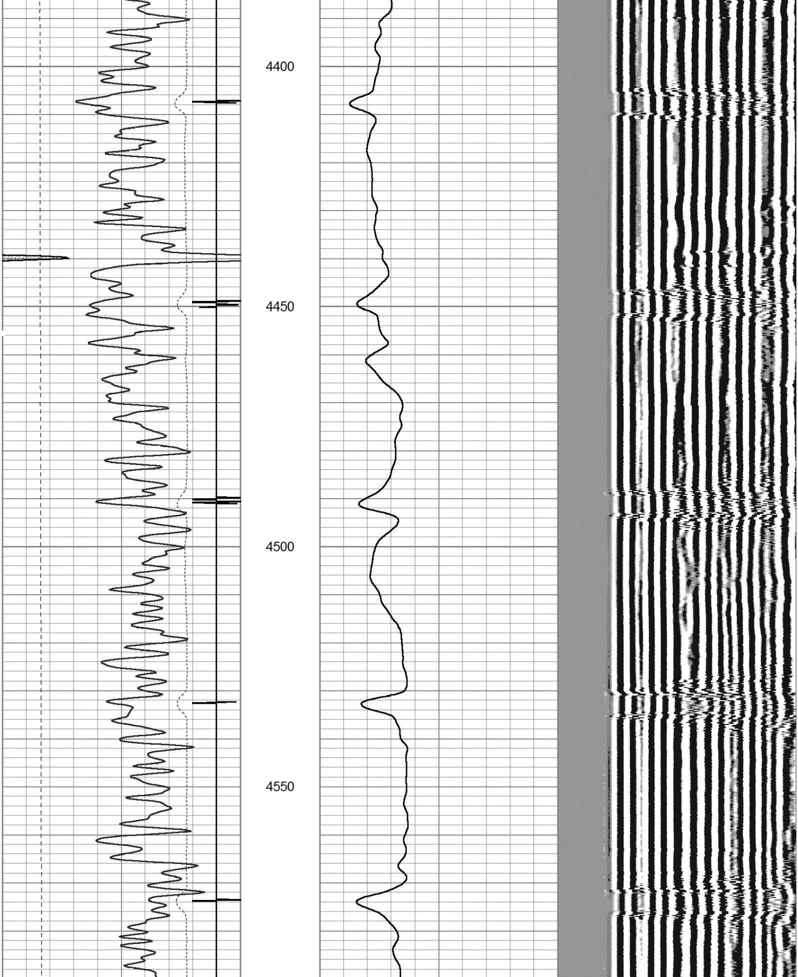


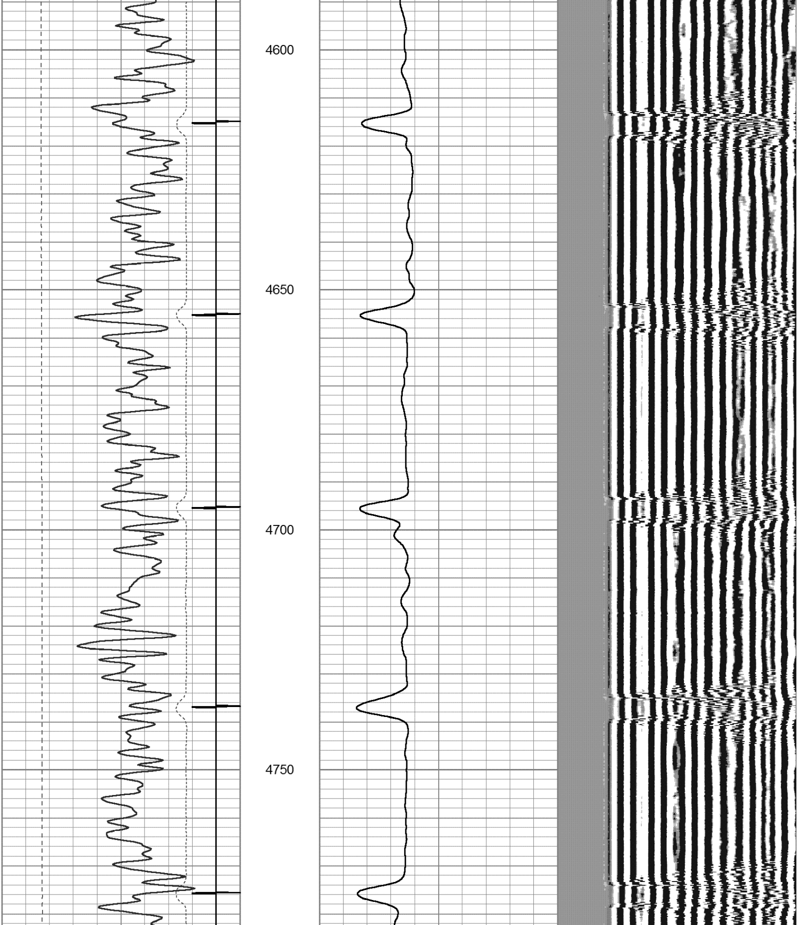


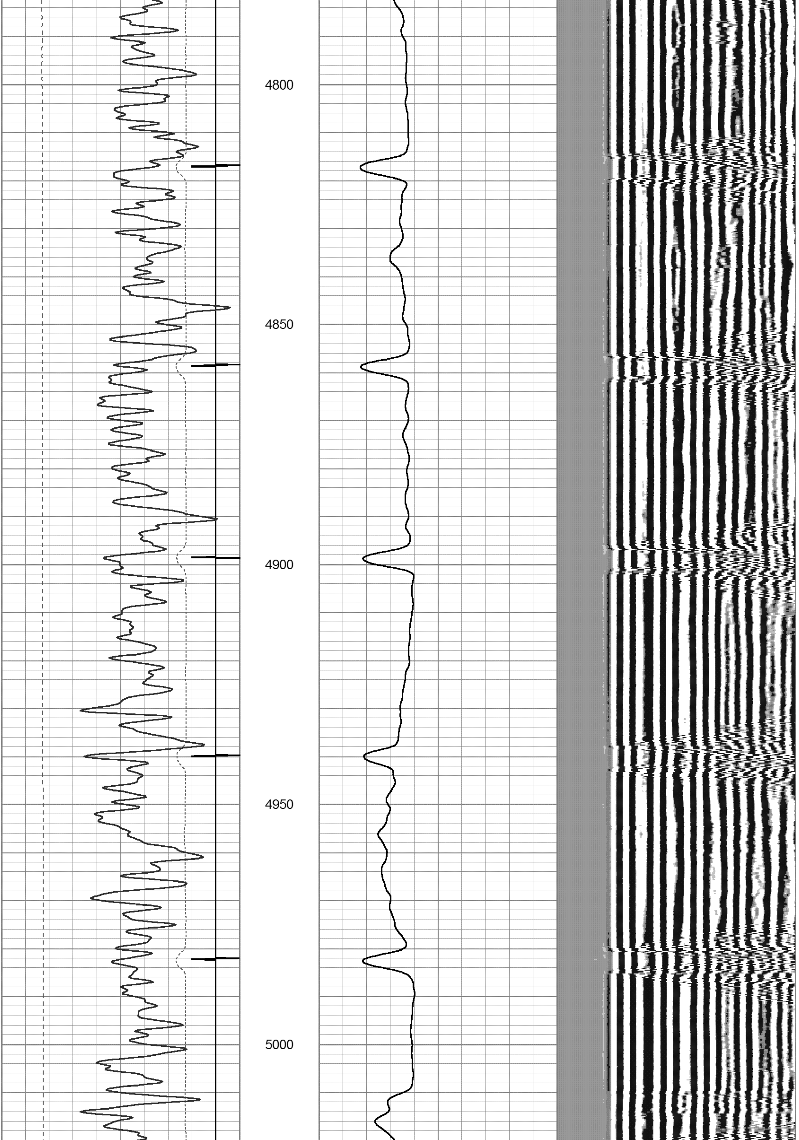


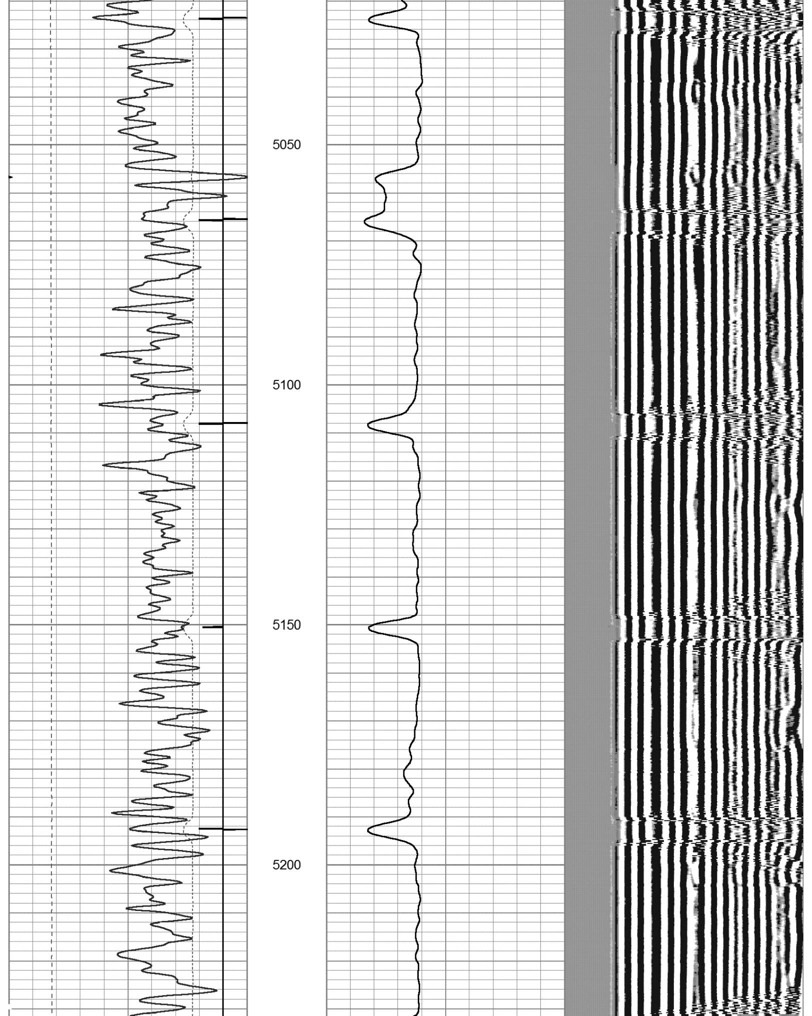


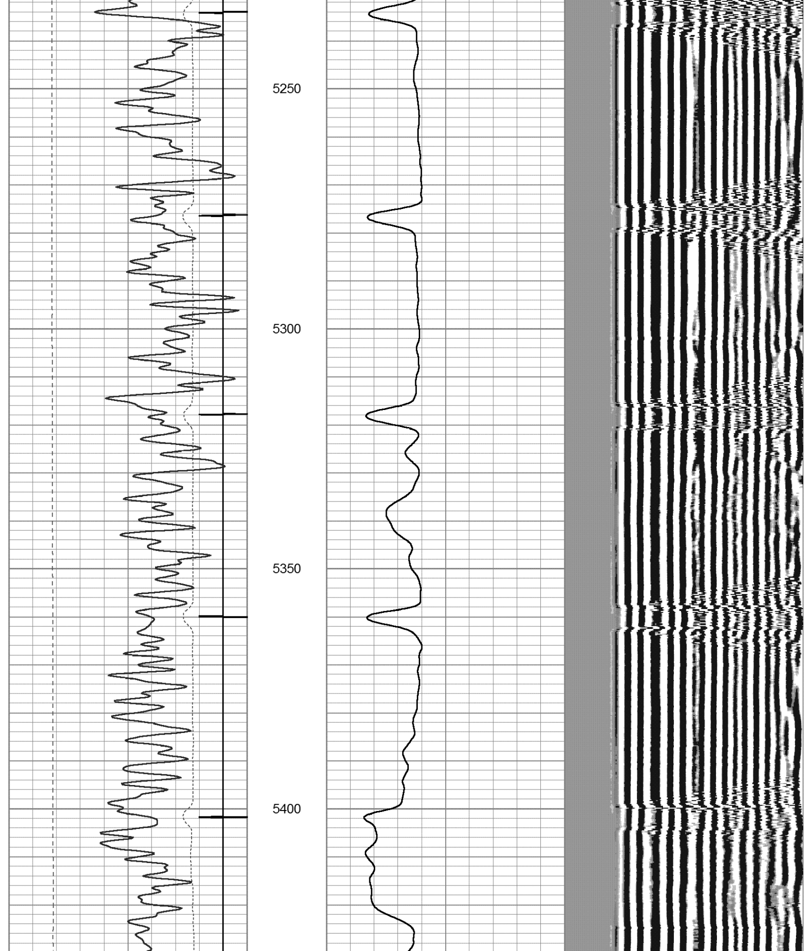


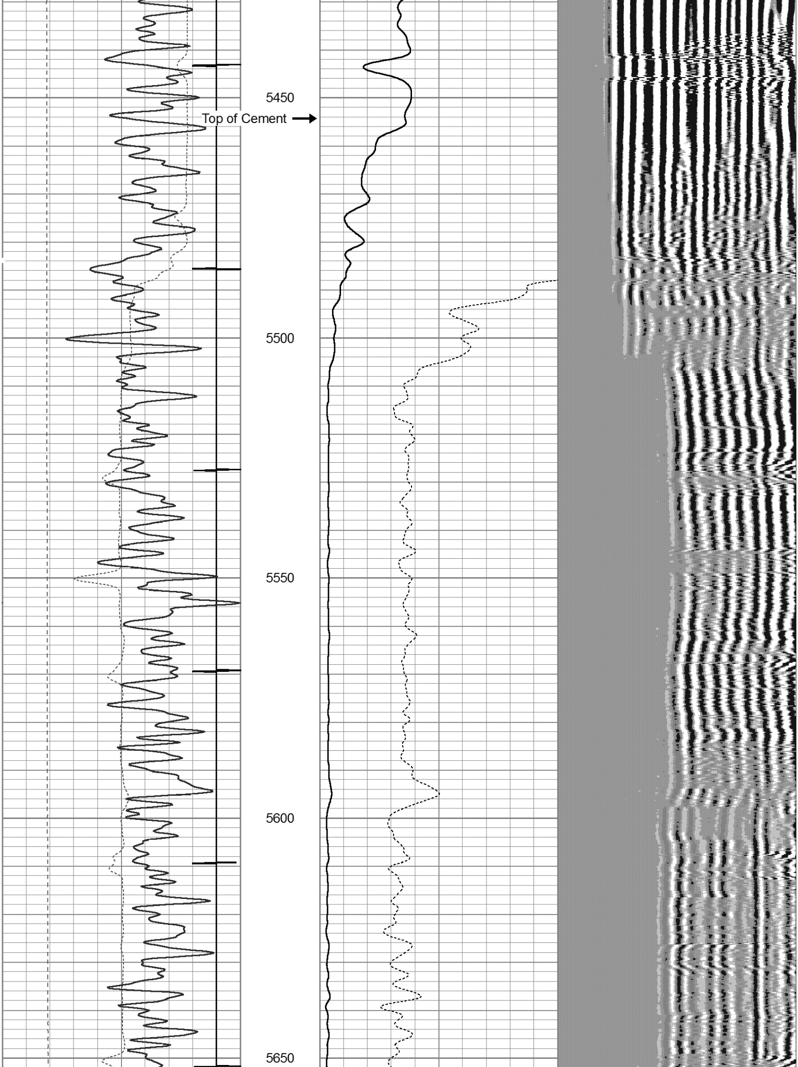


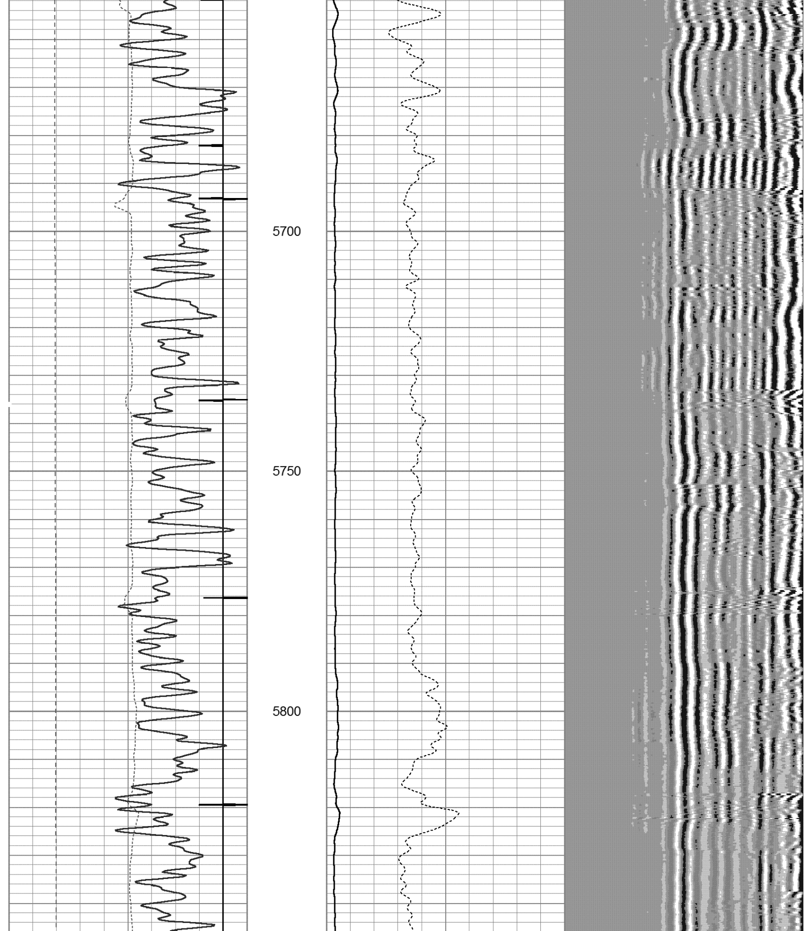


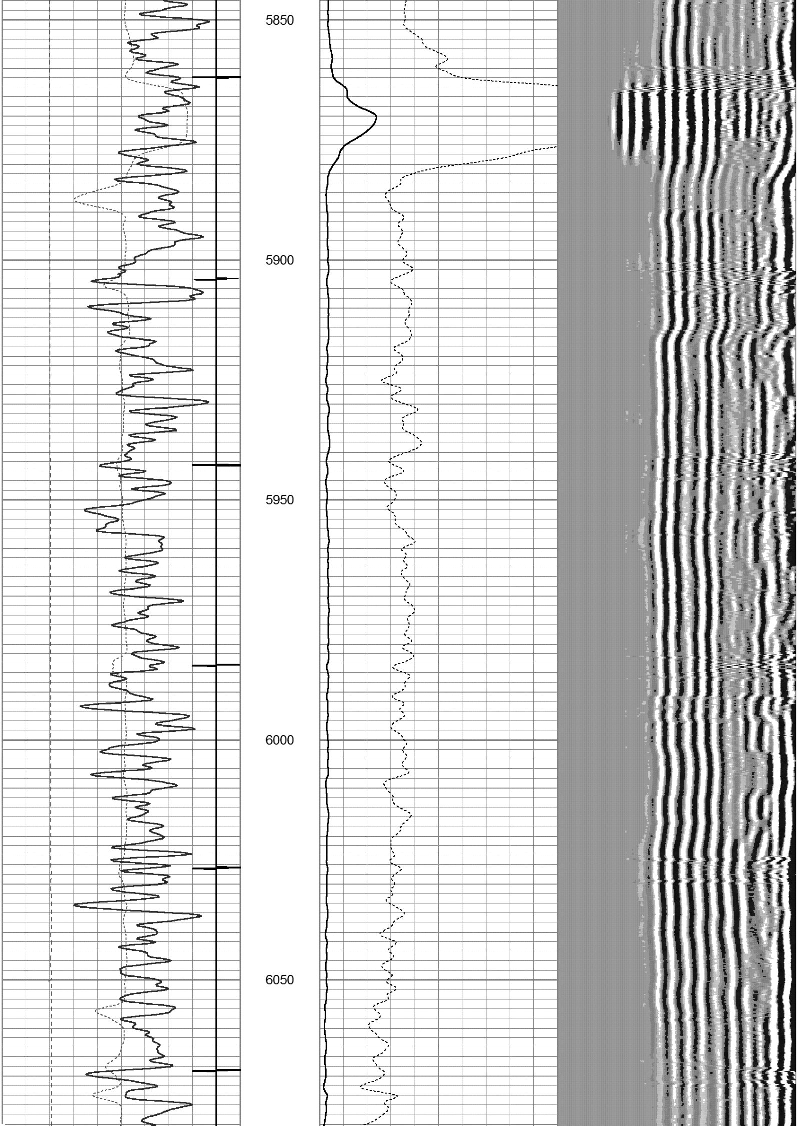


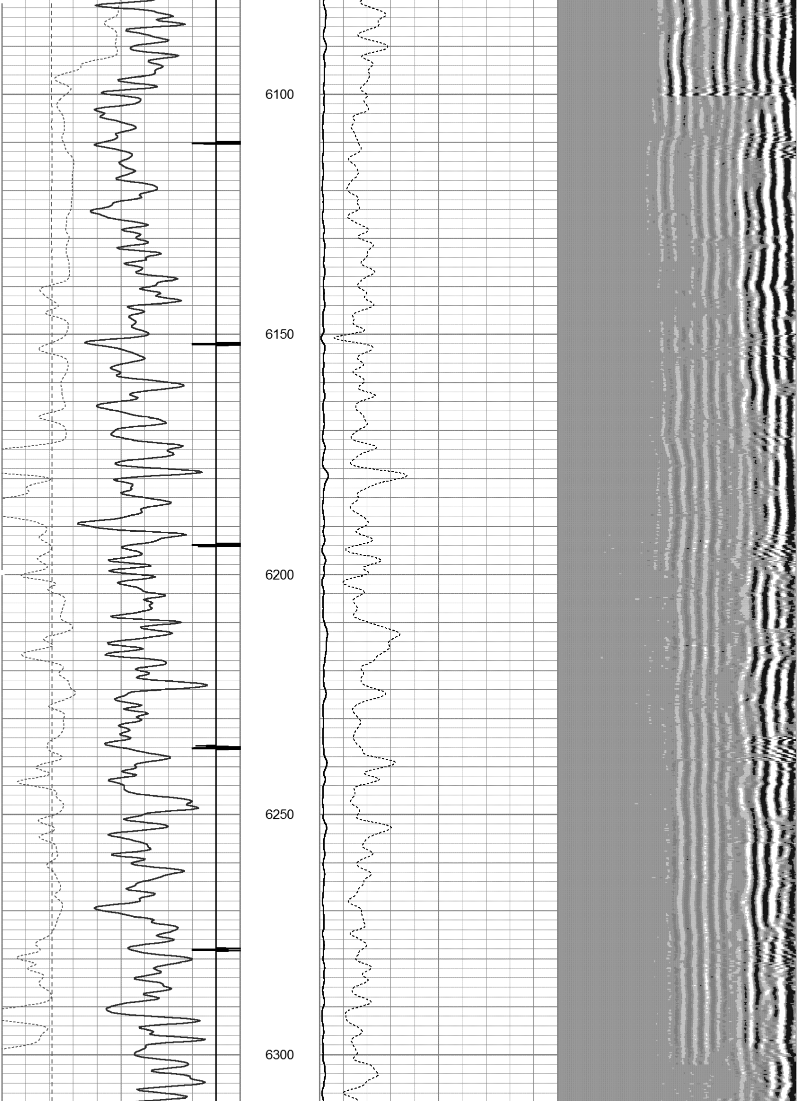


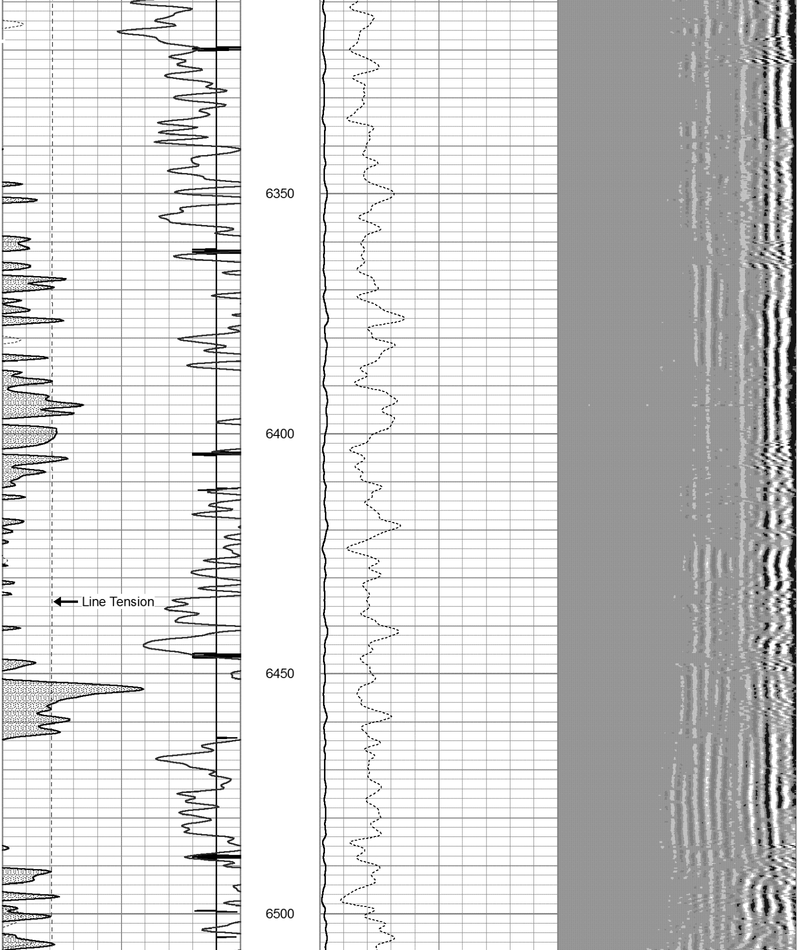


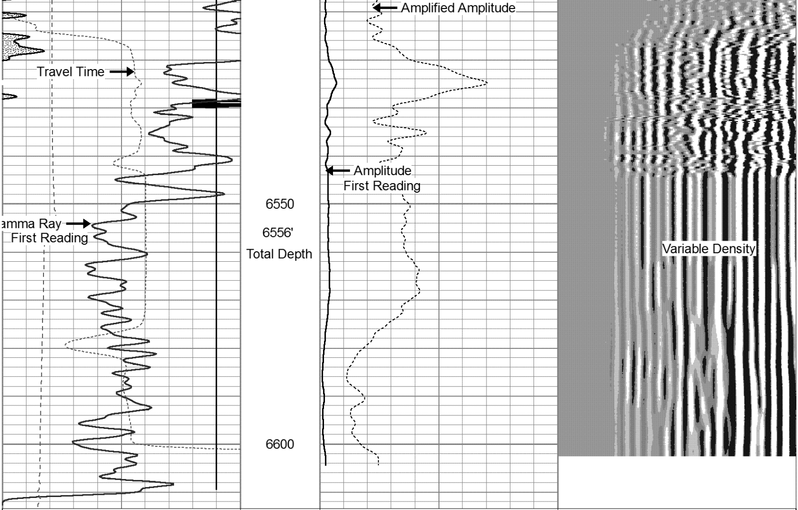












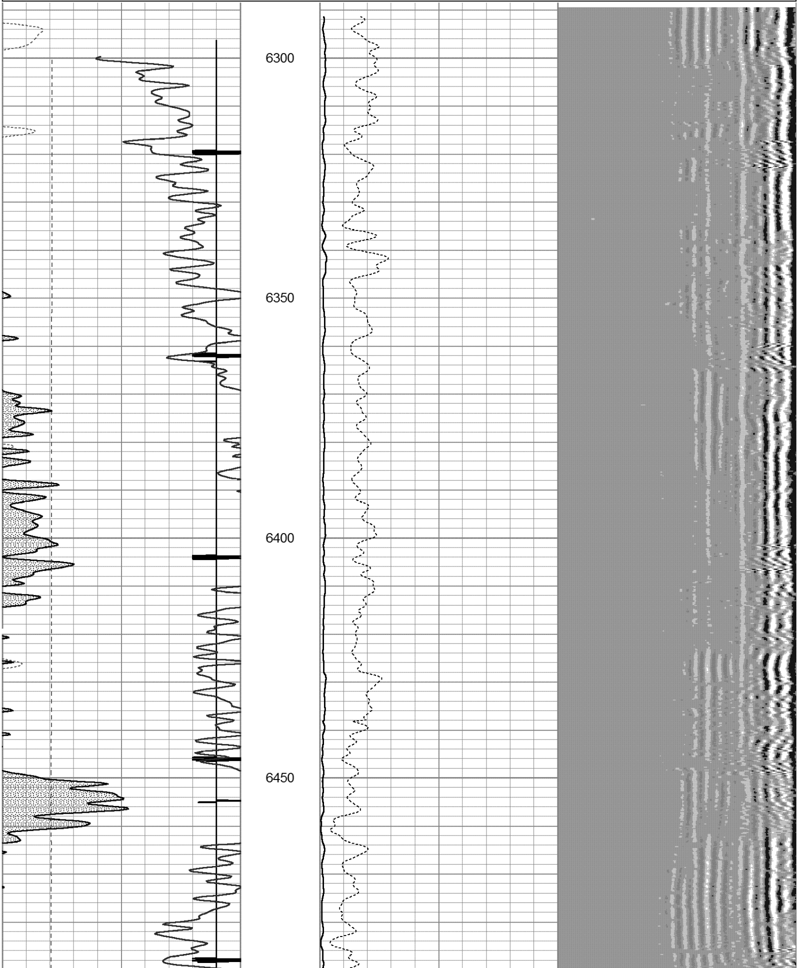
440	Travel Time (usec)	240	0	Amplitude (mV)	100	200	Variable Density	1200
9	*Casing Collar*	-1	0	Amplified Amplitude (mV)	10			
0	Gamma Ray (GAPI)	150						
0	Line Tension (lb)	5000						

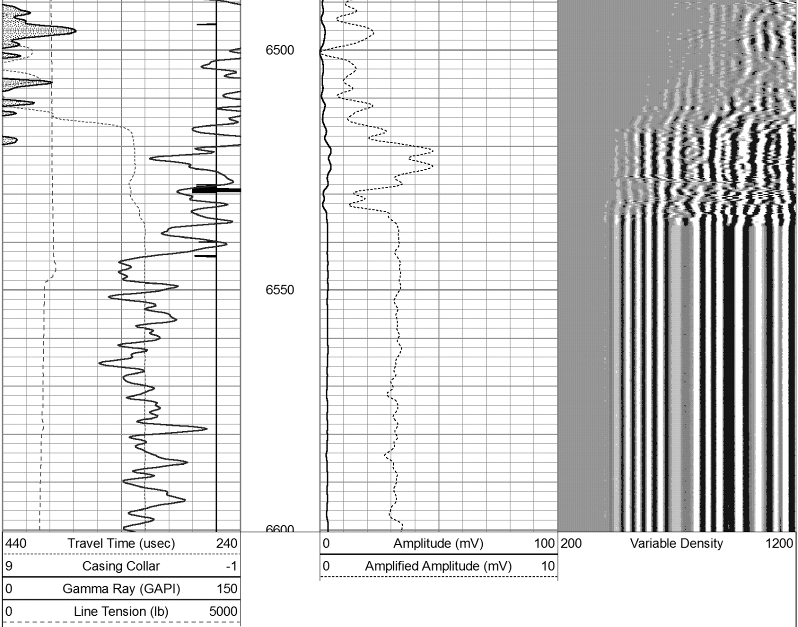
ALLIED WIRELINE

Repeat Section (0 Pressure)

Database File:	c:\users\engineers\desktop\brtn logs\bonanza creek\state antelope 31-34-16\bonanza_creek_state_antelope_31
Dataset Pathname:	pass2
Presentation Format:	cblprobe
Dataset Creation:	Wed Aug 14 12:45:04 2013 by Log SCH 120126
Charted by:	Depth in Feet scaled 1:240

440	Travel Time (usec)	240	0	Amplitude (mV)	100	200	Variable Density	1200
9	Casing Collar	-1	0	Amplified Amplitude (mV)	10			
0	Gamma Ray (GAPI)	150						
0	Line Tension (lb)	5000						





Calibration Report

Database File: C:\Users\Engineers\Desktop\BRTN LOGS\Bonanza Creek\State Antelope 31-34-16\bonanza_creek_state_antelo
Dataset Pathname: pass3
Dataset Creation: Wed Aug 14 12:53:37 2013 by Log SCH 120126

Gamma Ray Calibration Report

Serial Number:	110108-Dig	
Tool Model:	Probe275	
Performed:	Wed Jul 10 19:14:22 2013	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.8500	GAPI/cps

Temperature Calibration Report

Serial Number:	110108-Dig			
Tool Model:	Probe275			
Performed:	Sun Jun 13 13:33:21 1993			
	Reference		Reading	
Low Reference:	0.00	degF	0.00	cps
High Reference:	1.00	degF	1.00	cps
Gain:	1.00			
Offset:	0.00			
Delta Spacing	1			

Segmented Cement Bond Log Calibration Report

Serial Number:	101224	
Tool Model:	Probe	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	-0.017	ft

Master Calibration, performed Wed Aug 14 12:49:43 2013:

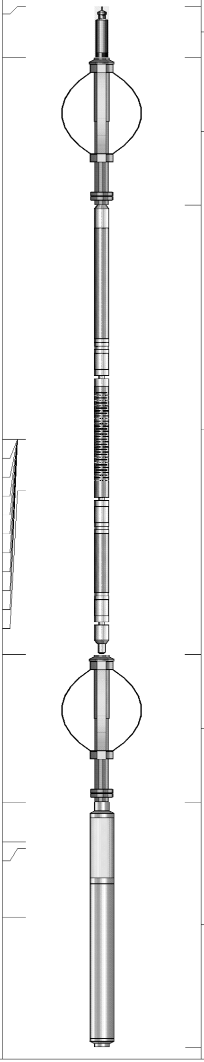
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.008	0.720	1.000	71.921	97.484	2.453
CAL	0.732	0.735				
5'	-0.008	0.802	1.000	71.921	87.507	1.739
SUM						
S1	0.000	0.746	0.000	100.000	134.108	-0.065
S2	-0.006	0.726	0.000	100.000	136.472	0.858
S3	-0.009	0.706	0.000	100.000	139.881	1.236
S4	-0.008	0.706	0.000	100.000	140.034	1.128
S5	-0.008	0.726	0.000	100.000	136.186	1.114
S6	-0.008	0.718	0.000	100.000	137.741	1.121
S7	-0.007	0.714	0.000	100.000	138.631	1.034
S8	-0.008	0.724	0.000	100.000	136.602	1.121

Internal Reference Calibration, performed Wed Jul 10 20:06:34 2013:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.732	0.735	1.000	0.000

Air Zero Calibration, performed Wed Aug 14 12:05:09 2013:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	-0.008	0.000	0.000
5'	-0.009	0.000	0.001
SUM			
S1	0.000	0.000	0.000
S2	-0.006	0.000	-0.000
S3	-0.010	0.000	0.001
S4	-0.008	0.000	0.000
S5	-0.008	0.000	0.000
S6	-0.008	0.000	0.000
S7	-0.008	0.000	0.001
S8	-0.009	0.000	0.001

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
CHD	20.28					
			Titan Cable_head	1.00	1.44	10.00
CENT	19.28					
			Probe275 2.75" Centralizer	2.88	2.75	20.00
			RBT-Probe (101224) Probe Radii Bond Tool with Digital Telemetry	8.75	2.75	90.00
WVF3FT	11.84					
WVFCAL	11.84					
WVFS1	11.84					
WVFS2	11.84					
WVFS3	11.84					
WVFS4	11.84					
WVFS5	11.84					
WVFS6	11.84					
WVFS7	11.84					
WVFS8	11.84					
WVF5FT	10.84					
CENT	7.66					
			Probe275 2.75" Centralizer	2.88	2.75	20.00
GR	4.78					
TEMP	4.00					
CCL	3.88					
GR	2.54					
			GR-Probe275 (110108-Dig) Probe 2 3/4" Logging Gamma Ray	4.78	2.75	57.00

Dataset:	bonanza_creek_state_antelope_31_34_16_cbl.db: field/well/run1/pass3
Total Length:	20.28 ft
Total Weight:	197.00 lb
O.D.	2.75 in