NABORS
COMPLETION & PRODUCTION SERVICES CO.

GAMMA RAY CCL
CEMENT BOND SECTOR VDL

Company	NOBLE ENERGY INC.
Well	WAHLERT AC23-69HN
Field	WATTENBERG
County	WELD
State	COLORADO

Company NOBLE ENERGY INC.
Well WAHLERT AC23-69HN
Field WATTENBERG
County WELD State COLORADO

Location: API #: 0512337156
BHL: 0' FNL & 535' FWL
NE/NE
Other Services

SEC 23 TWP 7N RGE 63W

Permanent Datum	GL	Elevation 4803	Elevation
Log Measured From	KB		K.B. 4803
Drilling Measured From	KB		D.F.
			G.L. 4790

Date	OCTOBER 1, 2013	
Run Number	ONE	
Depth Driller	10841	
Depth Logger	6962	
Bottom Logged Interval	6962	
Top Log Interval	SURFACE	
Open Hole Size	8-3/4	
Type Fluid	WATER	
Density / Viscosity	N/A	
Max. Recorded Temp.	223°F	
Estimated Cement Top	738	
Time Well Ready	PORTABLE MAST	
Time Logger on Bottom	2-3/4 PROBE 101020/785	
Equipment Number	4838	
Location	45	
Recorded By	GREG NOLAN	
Witnessed By	BILL MANSFIELD	

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# J-55	13	696
Prot. String				
Production String	7	26# P-110 IC	13	7071
Liner	4-1/2	11.6# P-110	6977.5	10831

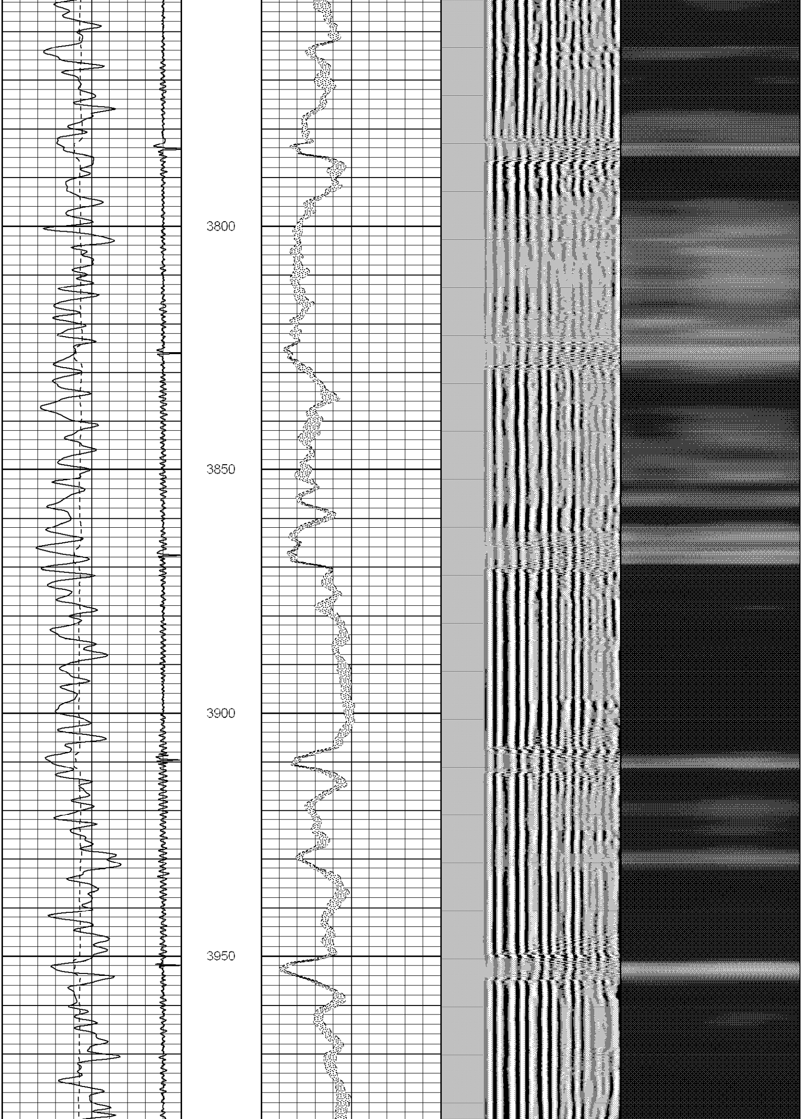
<<< Fold Here >>>

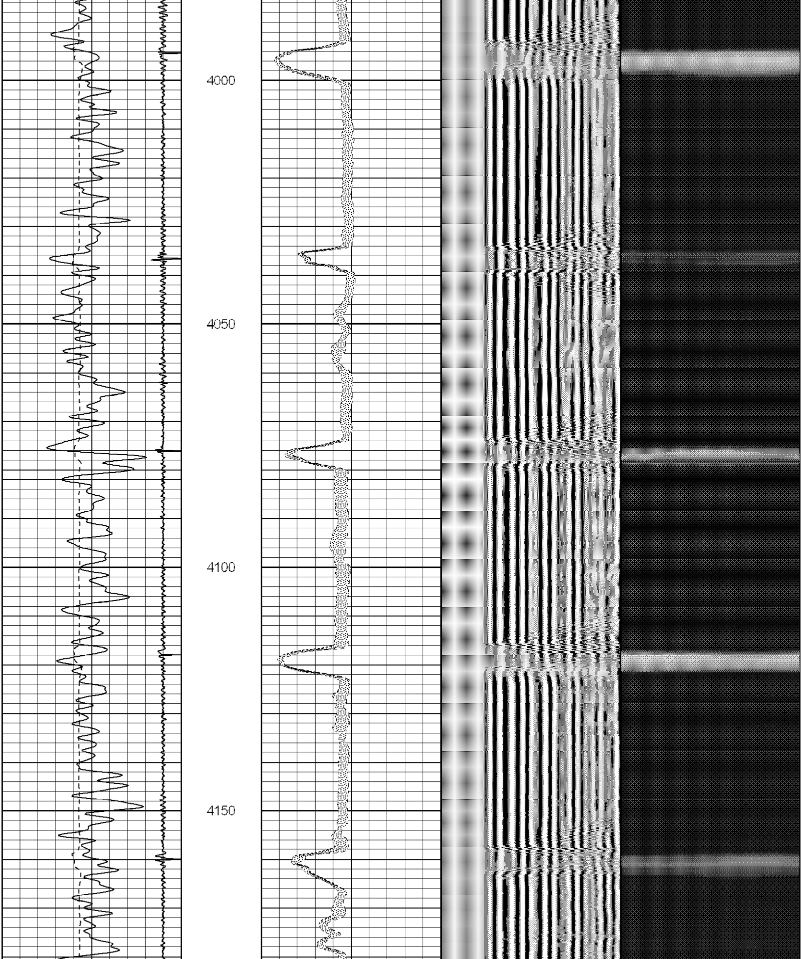
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

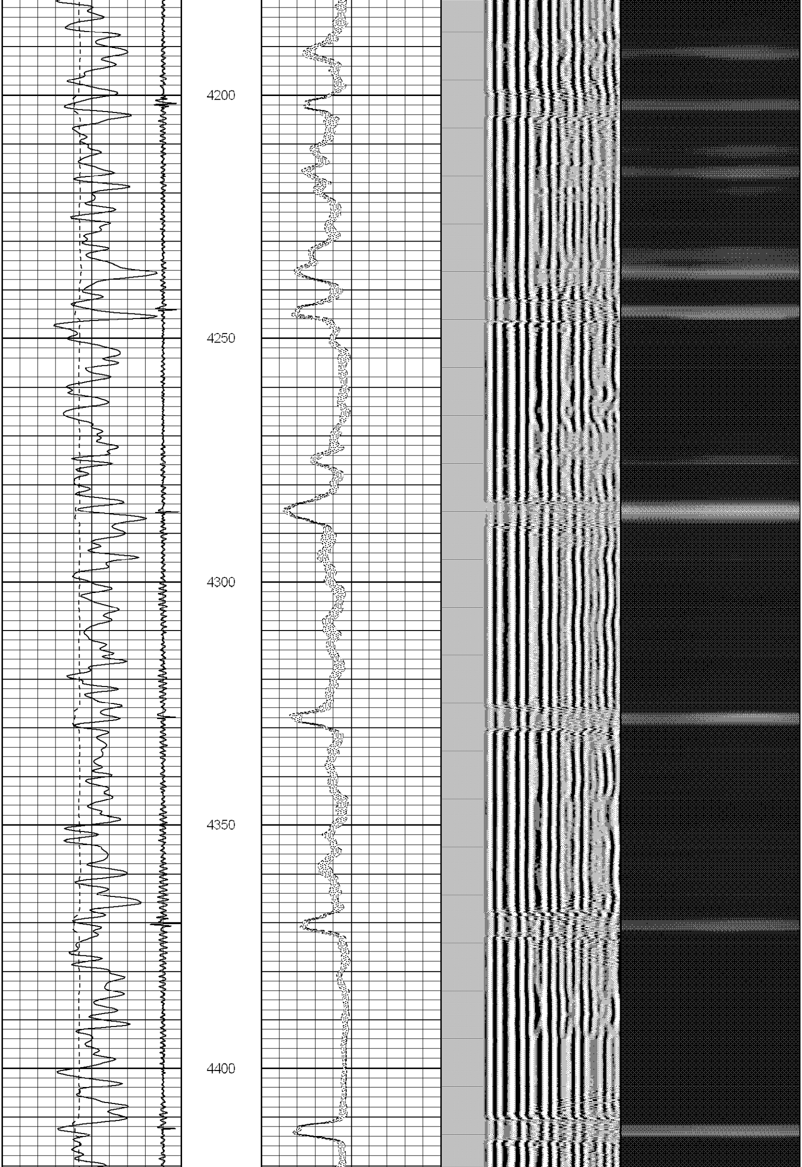
Comments

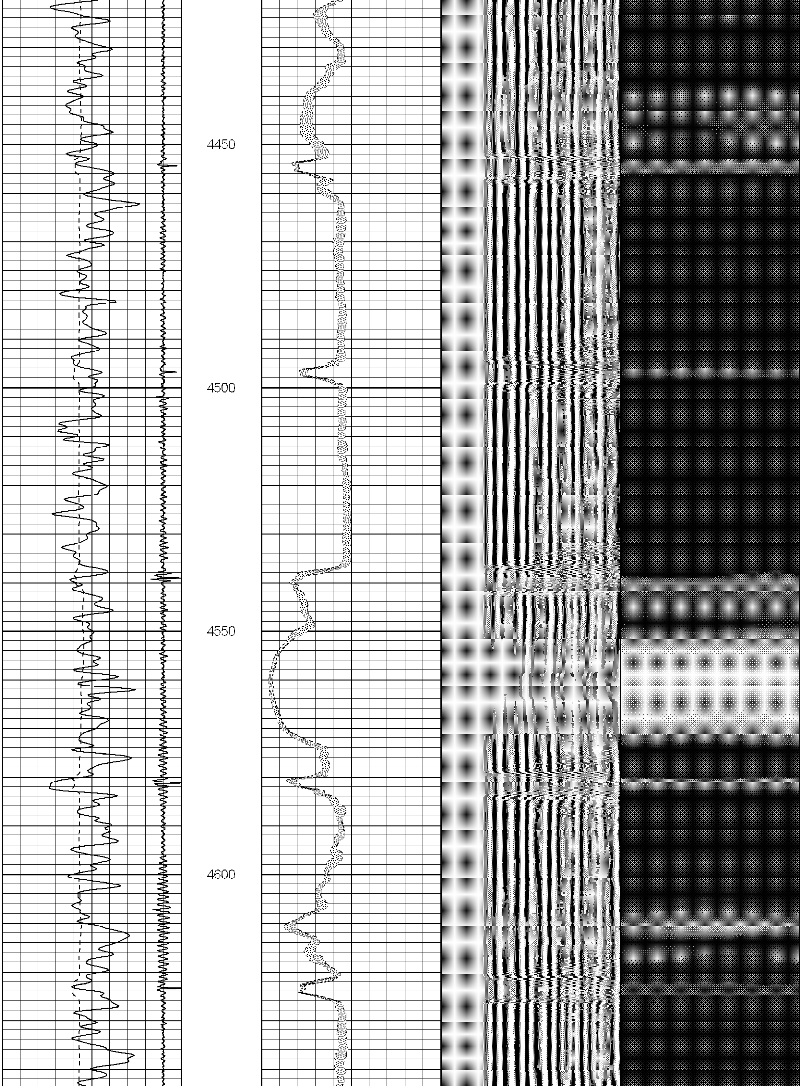
THANK YOU FOR CHOOSING NCPS!!!
LOG NOT CORRELATED
WCR 71 & WCR 80, S.1, W INTO
NORTHERNMOST WELL OF A 4 WELL PAD

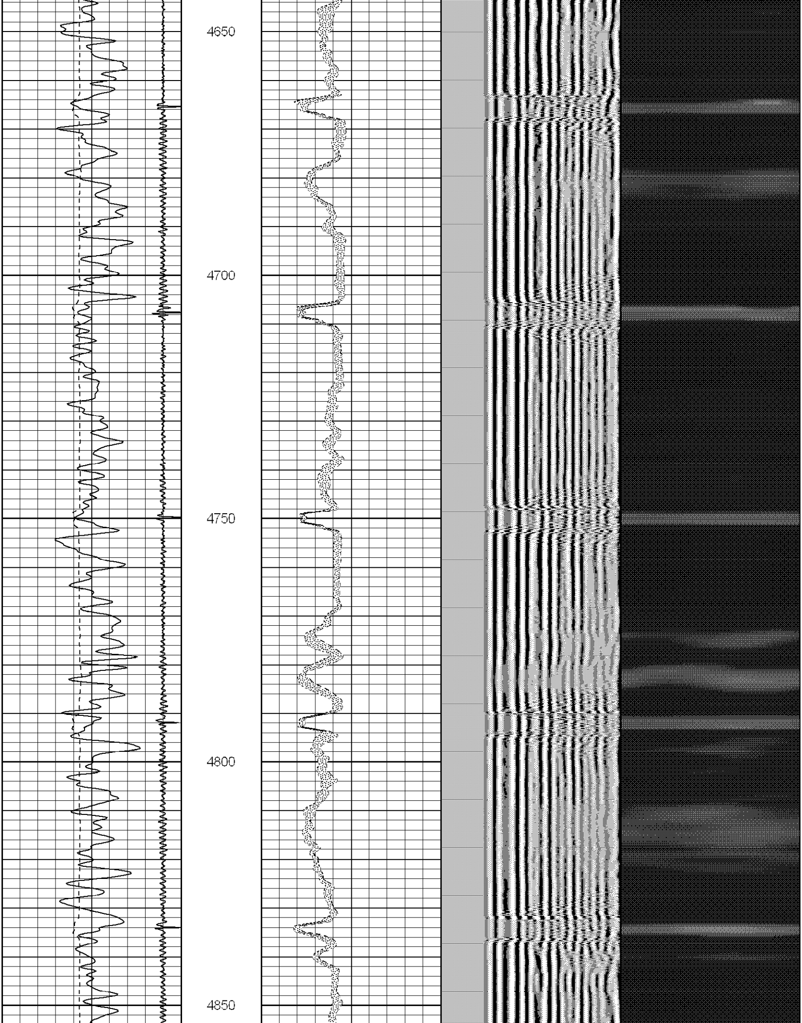
Database File:	cbl noble wahlert ac23-69hn.db
Dataset Pathname:	pass3
Presentation Format:	sector2
Dataset Creation:	Tue Oct 01 08:40:57 2013 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

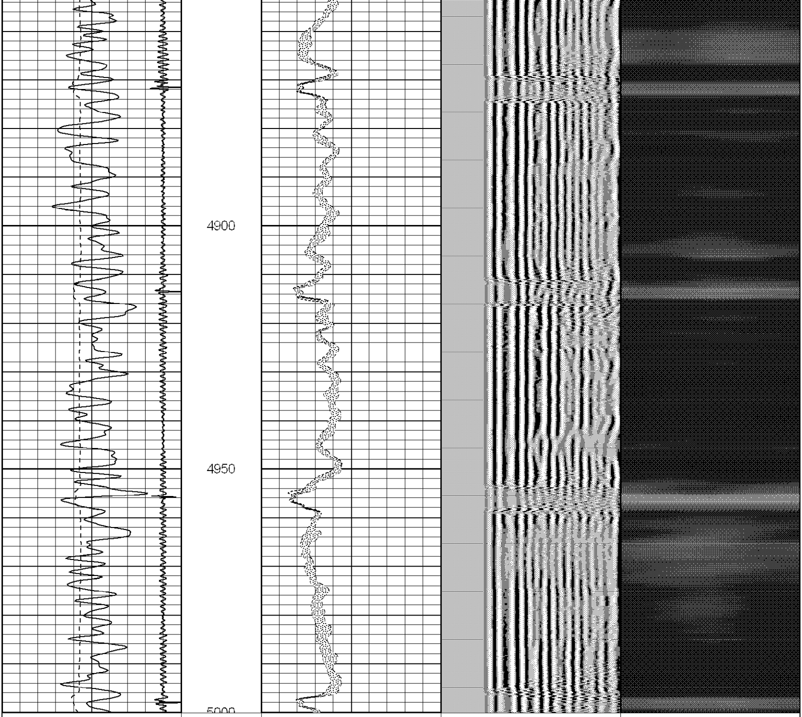








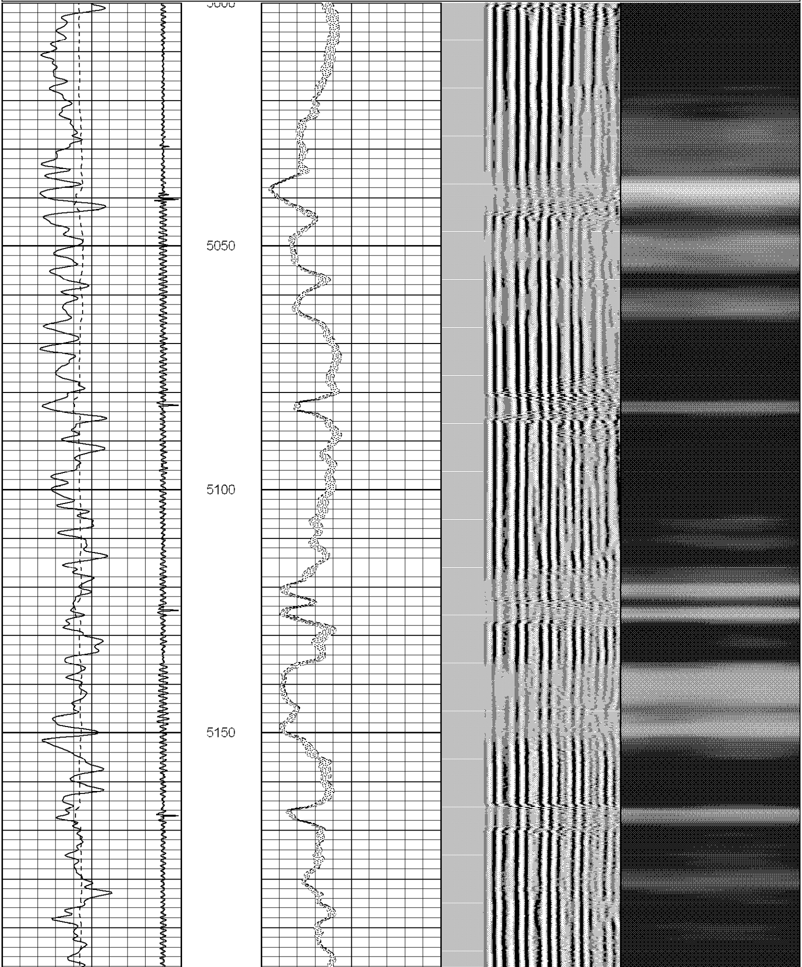


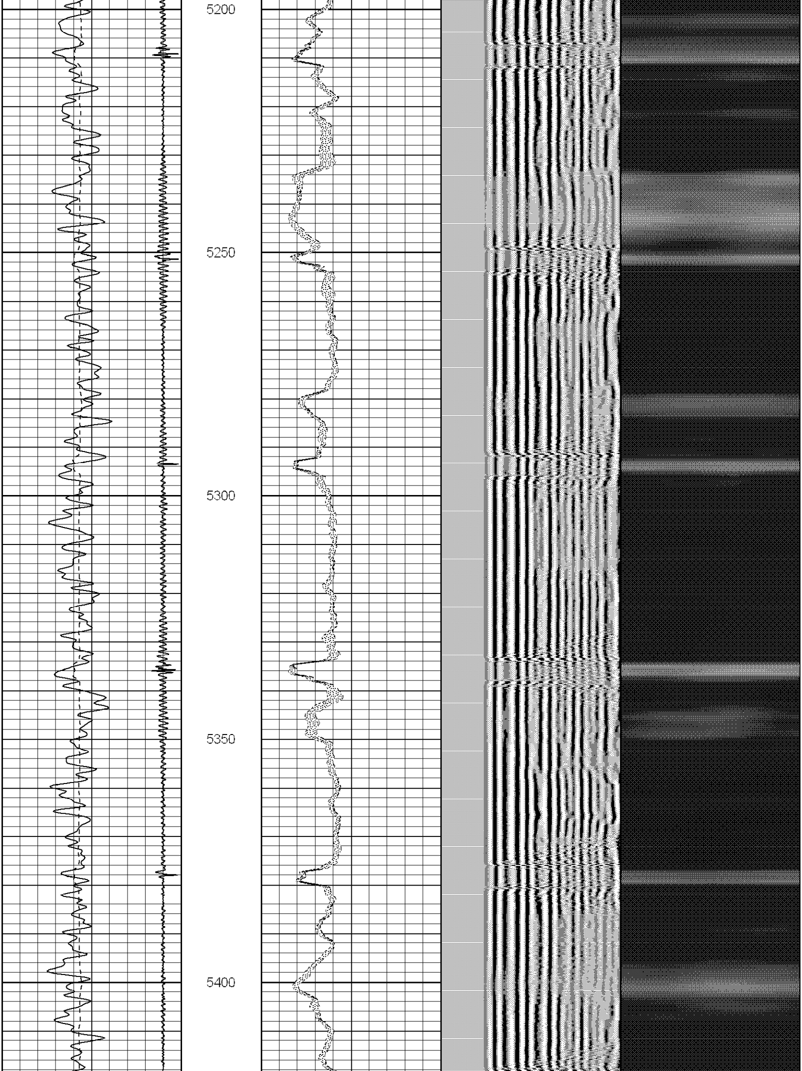


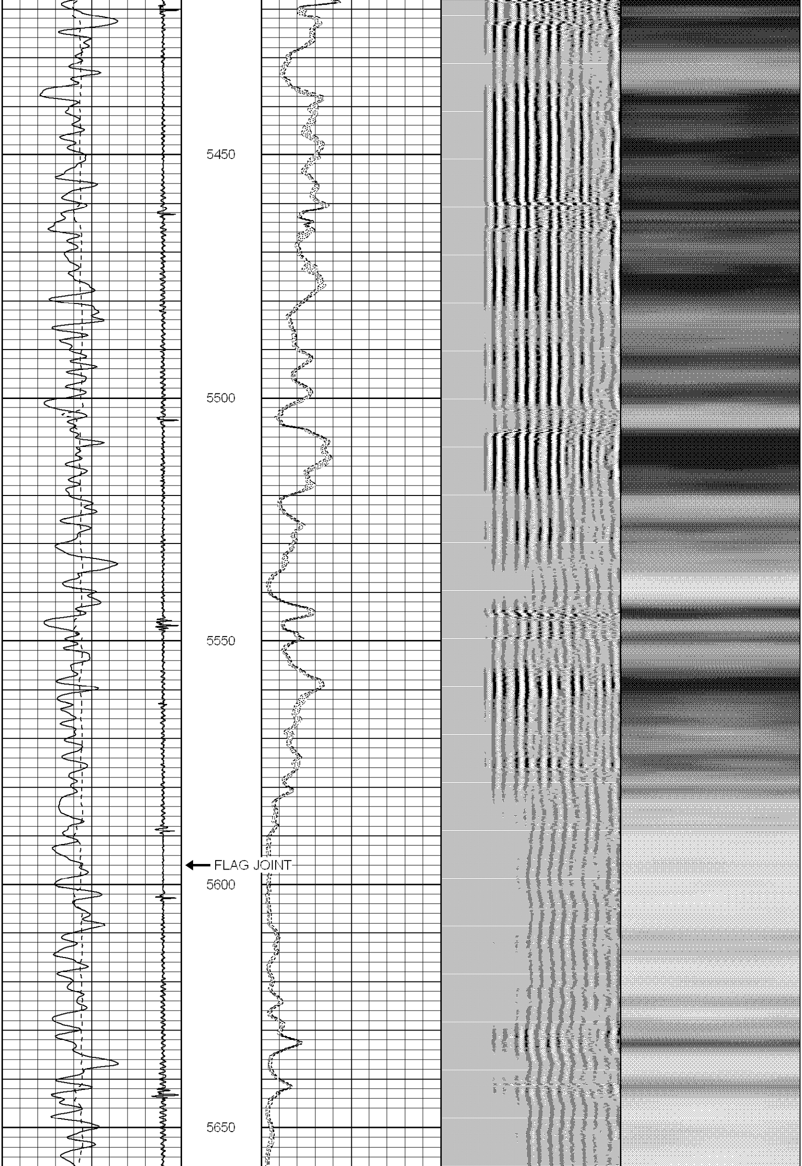
0 GR (GAPI) 150	0 AMPMAX 100	200 WVF5FT 1200	1 Sector Map 8
400 TT3FT (usec) 200	0 AMPAVG 100		
50 CCL -5.5	0 AMPMIN 100		
	0 AMP3FT (mV) 100		

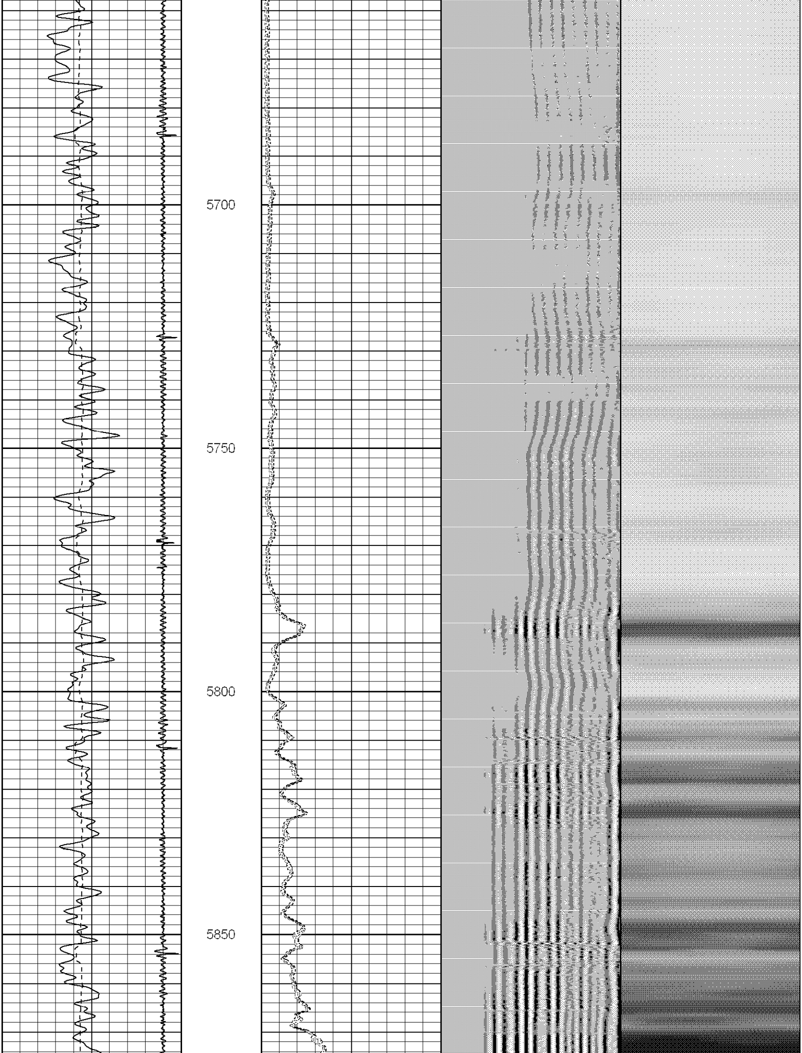
Database File: cbl noble wahlert ac23-69hn.db
Dataset Pathname: pass2
Presentation Format: sector2
Dataset Creation: Tue Oct 01 08:22:50 2013 by Log SCH 120430
Charted by: Depth in Feet scaled 1:240

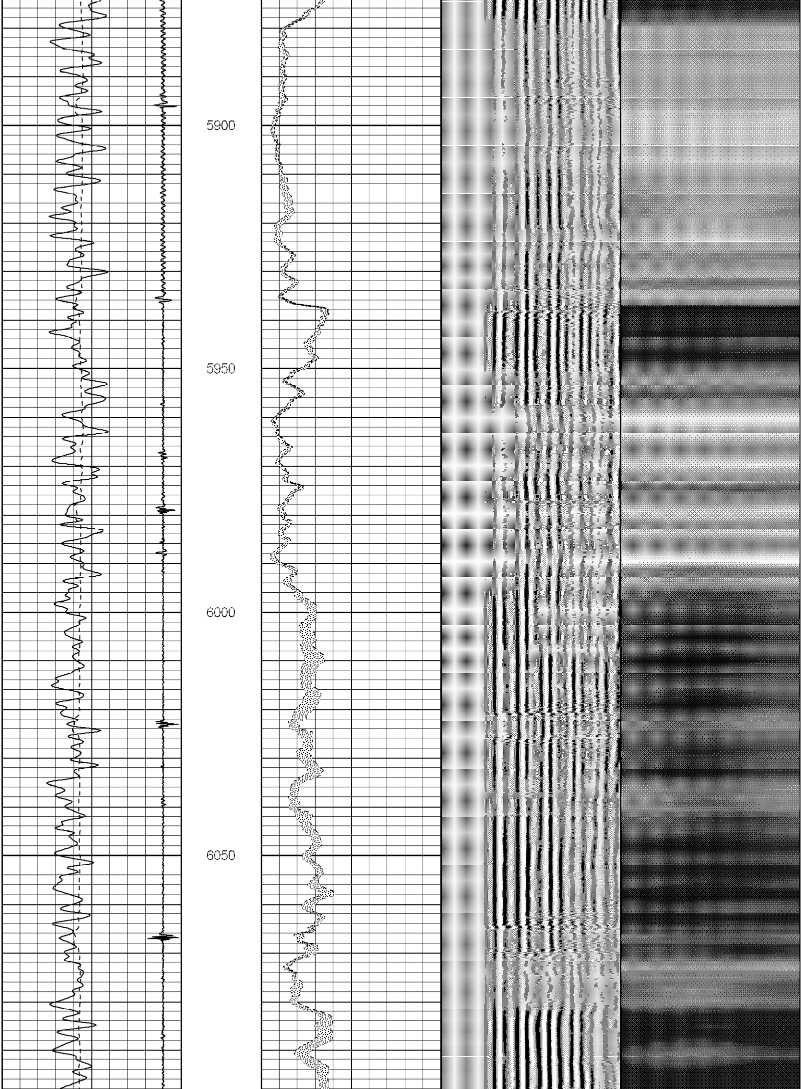
0 GR (GAPI) 200	0 AMPMAX 100	200 WVF5FT 1200	1 Sector Map 8
400 TT3FT (usec) 200	0 AMPAVG 100		
70 CCL -7.7	0 AMPMIN 100		
	0 AMP3FT (mV) 100		

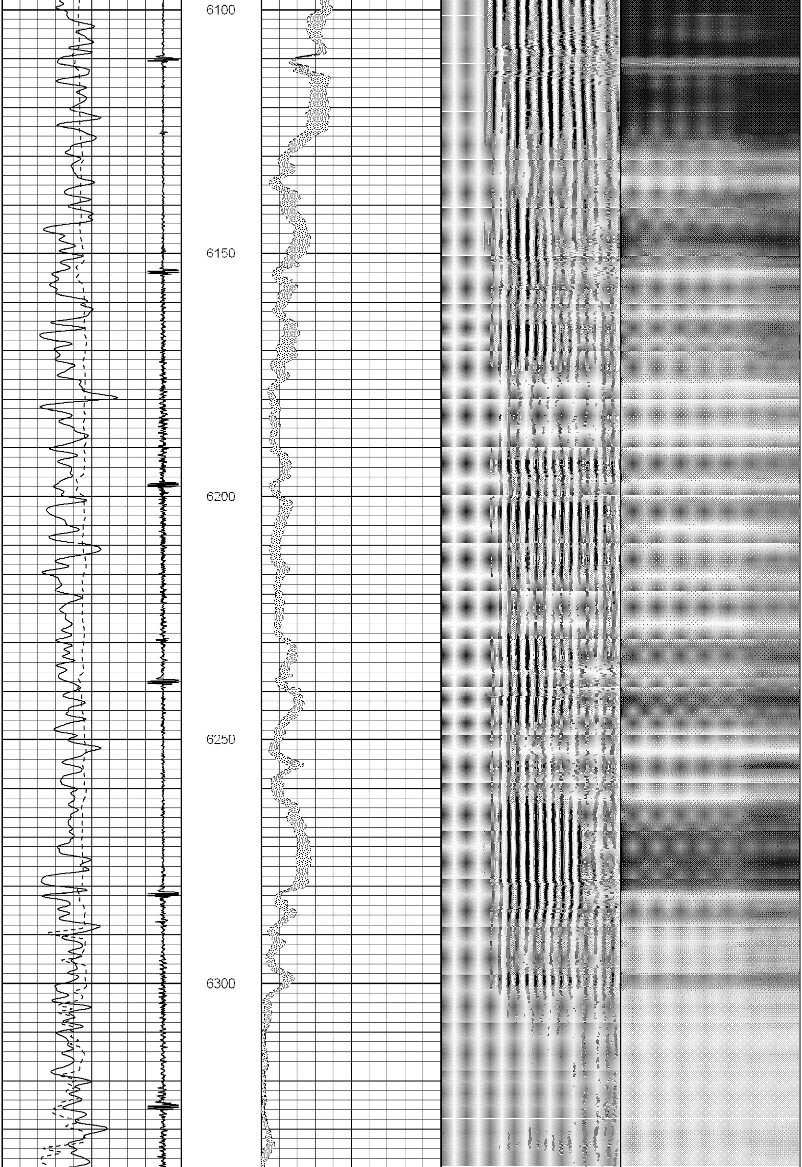


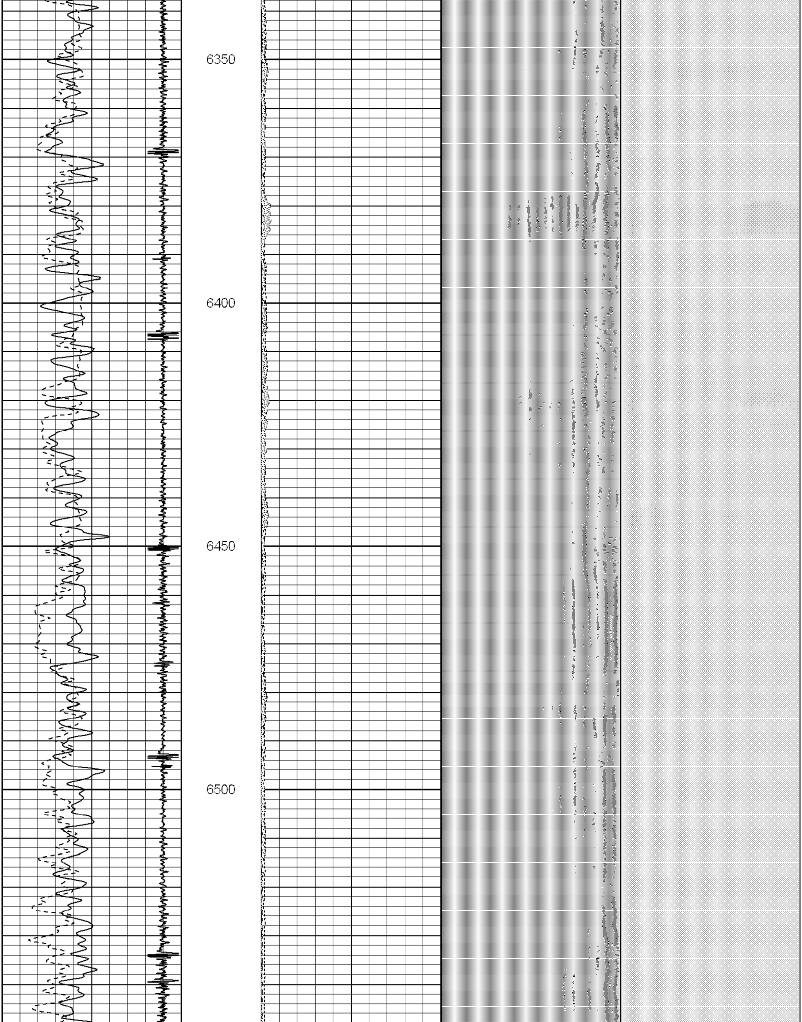


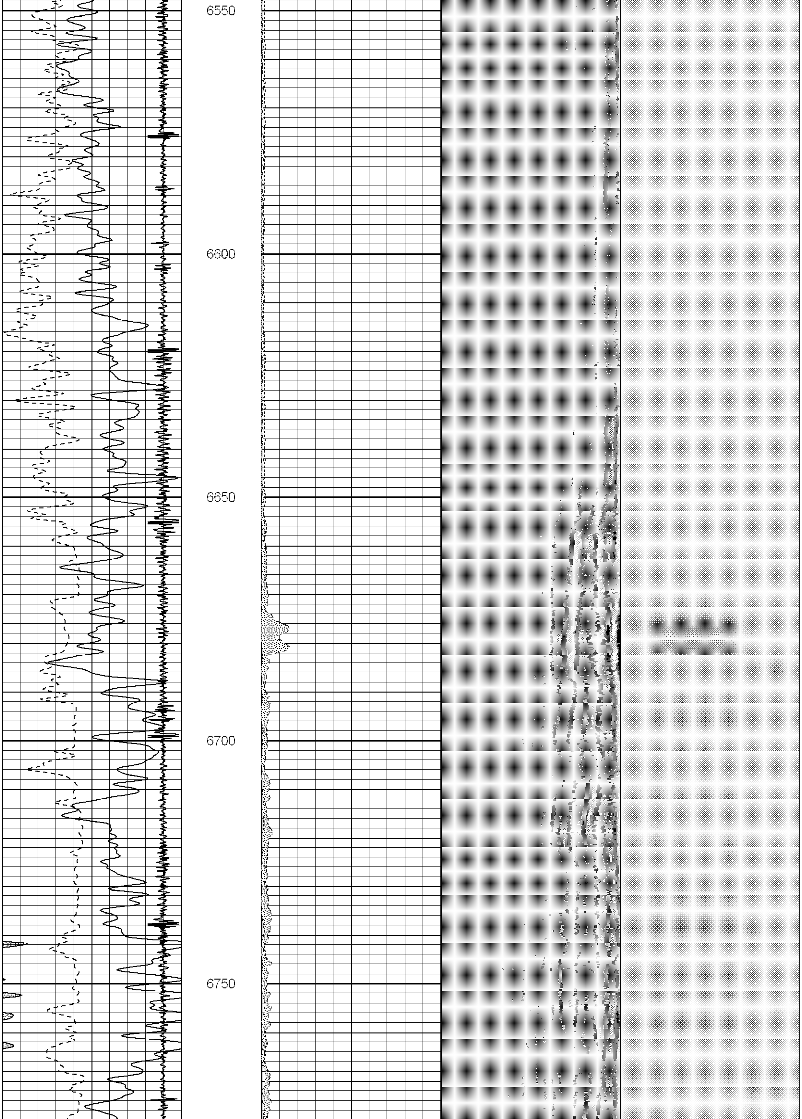


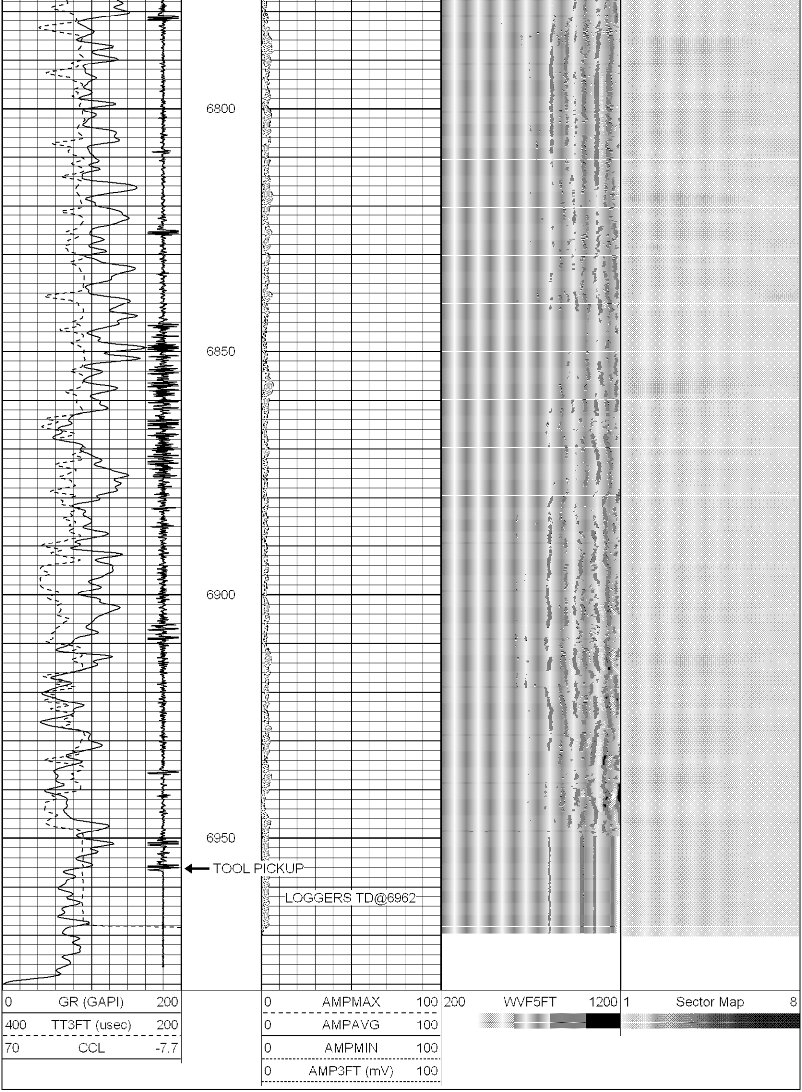












Calibration Report

Database File:	cbl noble wahlert ac23-69hn.db
Dataset Pathname:	pass2
Dataset Creation:	Tue Oct 01 08:22:50 2013 by Log SCH 120430

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 110785

SHOP CALIBRATION

Mon Sep 09 14:56:24 2013

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	1.0				cps
		0.4200			GAPI/cps

PRIMARY VERIFICATION

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

BEFORE SURVEY VERIFICATION

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

AFTER SURVEY VERIFICATION

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

Segmented Cement Bond Log Calibration Report

Serial Number:	101020	
Tool Model:	Probe	
Calibration Casing Diameter:	7.000	in
Calibration Depth:	542.800	ft

Master Calibration, performed Tue Oct 01 08:04:56 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.008	1.007	1.500	62.165	60.724	1.036
CAL	0.008	1.334				
5'	0.008	1.150	1.500	62.165	53.098	1.090
SUM						
S1	0.008	1.162	0.000	62.165	53.871	-0.408
S2	0.008	1.136	0.000	62.165	55.102	-0.422
S3	0.008	1.052	0.000	62.165	59.513	-0.461
S4	0.008	0.931	0.000	62.165	67.309	-0.510
S5	0.008	0.832	0.000	62.165	75.453	-0.581
S6	0.007	0.834	0.000	62.165	75.171	-0.559
S7	0.008	0.969	0.000	62.165	64.665	-0.506
S8	0.008	1.122	0.000	62.165	55.802	-0.426

Internal Reference Calibration, performed Fri Jan 13 14:30:16 2012:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.008	1.334	1.000	0.000

Air Zero Calibration, performed Tue Oct 01 06:41:46 2013:

	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