NABORS
COMPLETION & PRODUCTION SERVICES CO.

GAMMA RAY CCL
CEMENT BOND SECTOR VDL

Company	NOBLE ENERGY INC.		
Well	LOEFFLER K01-66-1HN		
Field	WATTENBERG		
County	WELD	State	COLORADO

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Well LOEFFLER K01-66-1HN
Field WATTENBERG
County WELD
State COLORADO

Location: API #: 0512335834
SW/NW
SEC 1 TWP 4N RGE 66W

Other Services

Permanent Datum	GL	Elevation	4667
Log Measured From	KB		
Drilling Measured From	KB		

Elevation
K.B. 4683
D.F.
G.L. 4667

Date	NOVEMBER 5, 2014		
Run Number	ONE		
Depth Driller	11303		
Depth Logger	7274		
Bottom Logged Interval	7273		
Top Log Interval	SURFACE		
Open Hole Size	8-3/4		
Type Fluid	WATER		
Density / Viscosity	N/A		
Max. Recorded Temp.	264°F		
Estimated Cement Top	930		
Time Well Ready	BAYOU RIG		
Time Logger on Bottom	2-3/4 PROBE		
Equipment Number	4838		
Location	45		
Recorded By	GREG NOLAN		
Witnessed By	MITCH TRUMBLE		

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	16	634.5
Prot. String				
Production String	7	26# P-110-IC	16	7386.1
Liner	4-1/2	11.6# P-110-IC	7283.1	11288

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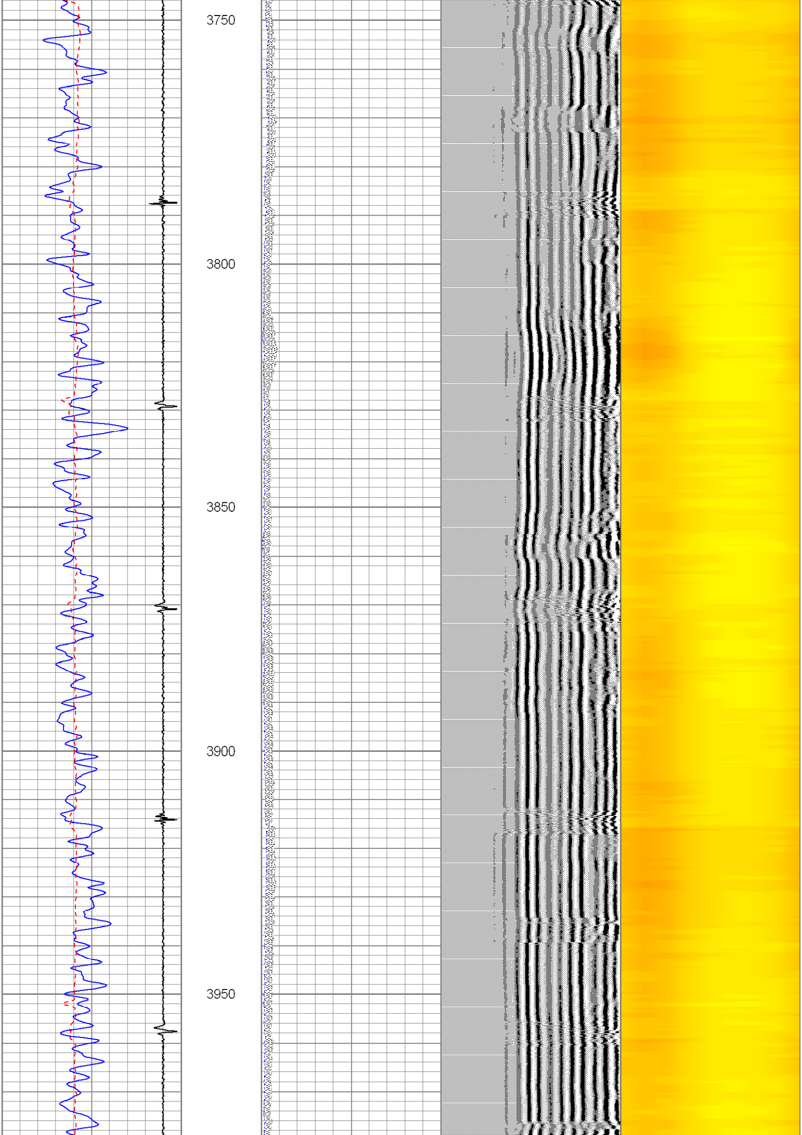
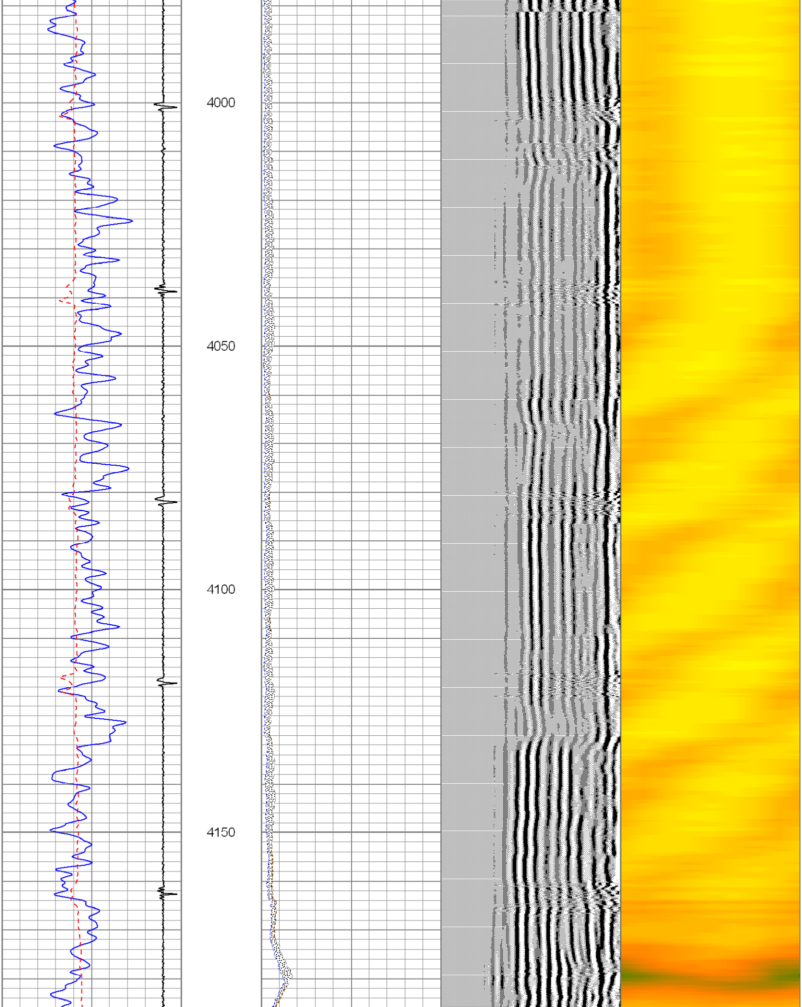
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

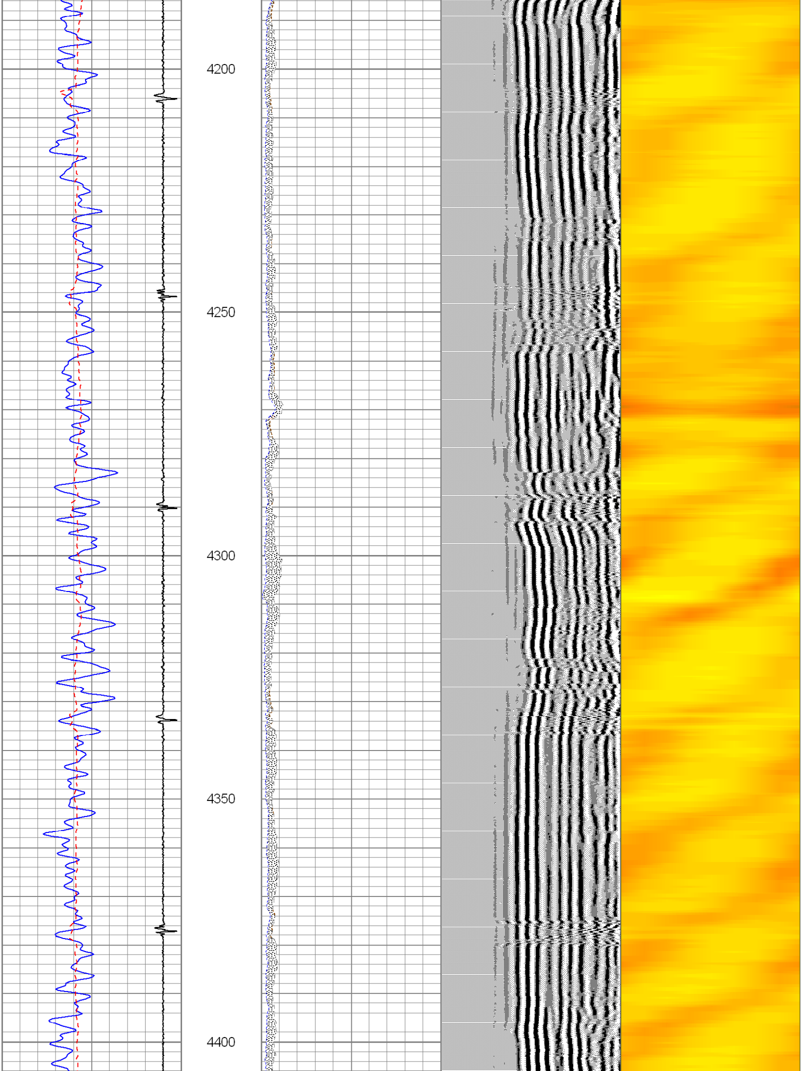
Comments

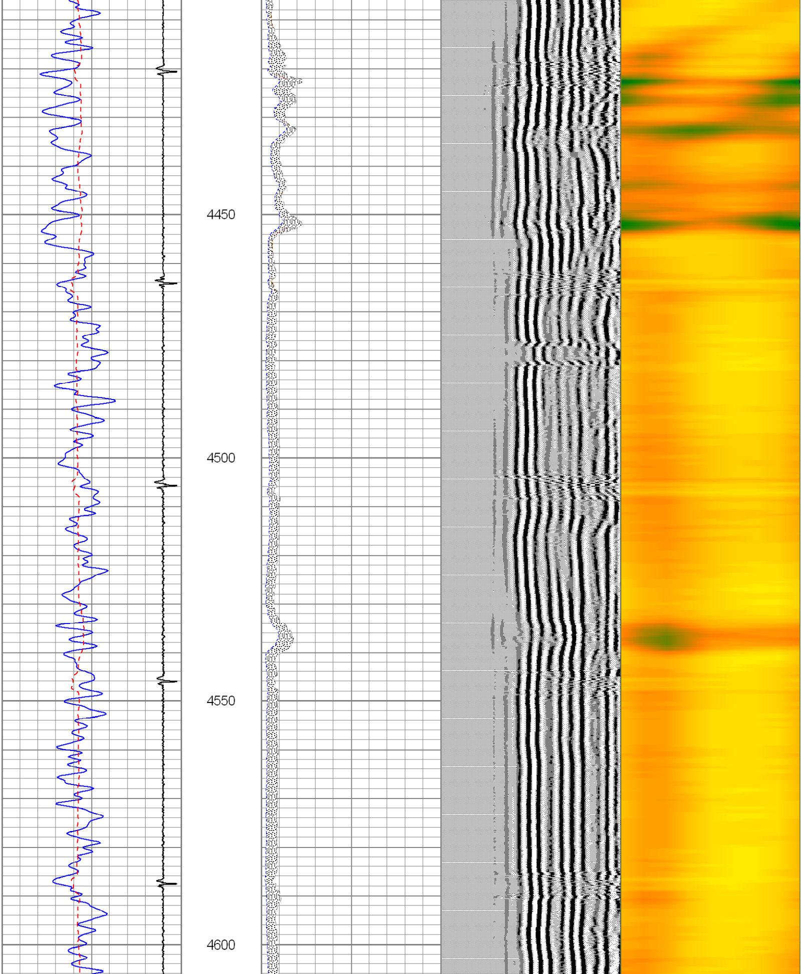
THANK YOU FOR CHOOSING NCPS!!!!
LOG CORRELATED TO NABORS GAMMA RAY CCL,
CEMENT BOND SECTOR VDL LOG DATED NOVEMBER 26, 2013
WCR 394 & WCR 35, S.3, E INTO
SECOND WELL FROM THE EAST OF A 5 WELL PAD

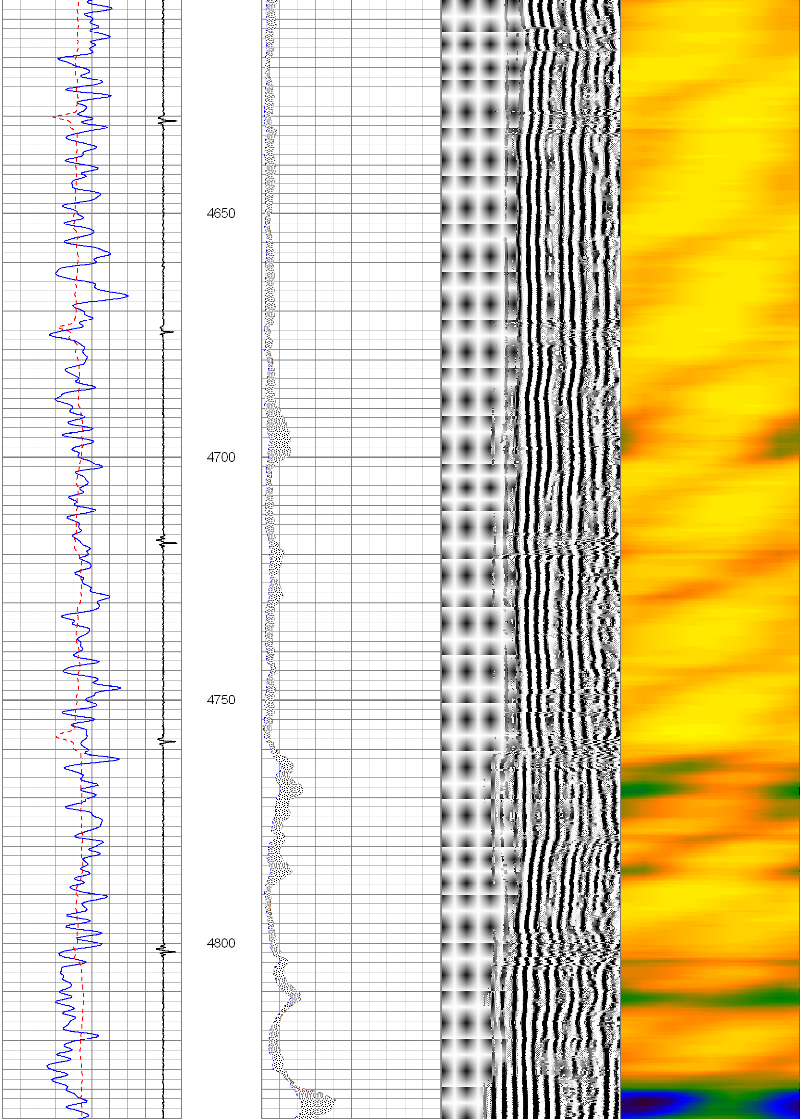
Database File:	cbl noble loeffler k01-66-1second log.db
Dataset Pathname:	pass4
Presentation Format:	sector2
Dataset Creation:	Wed Nov 05 09:48:36 2014 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

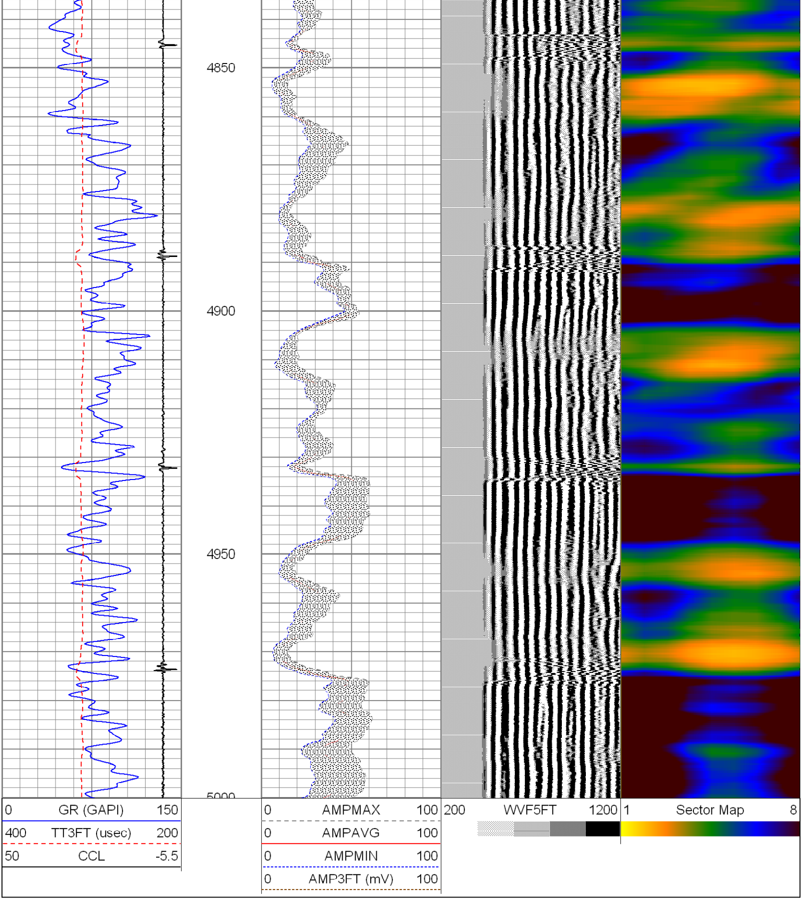




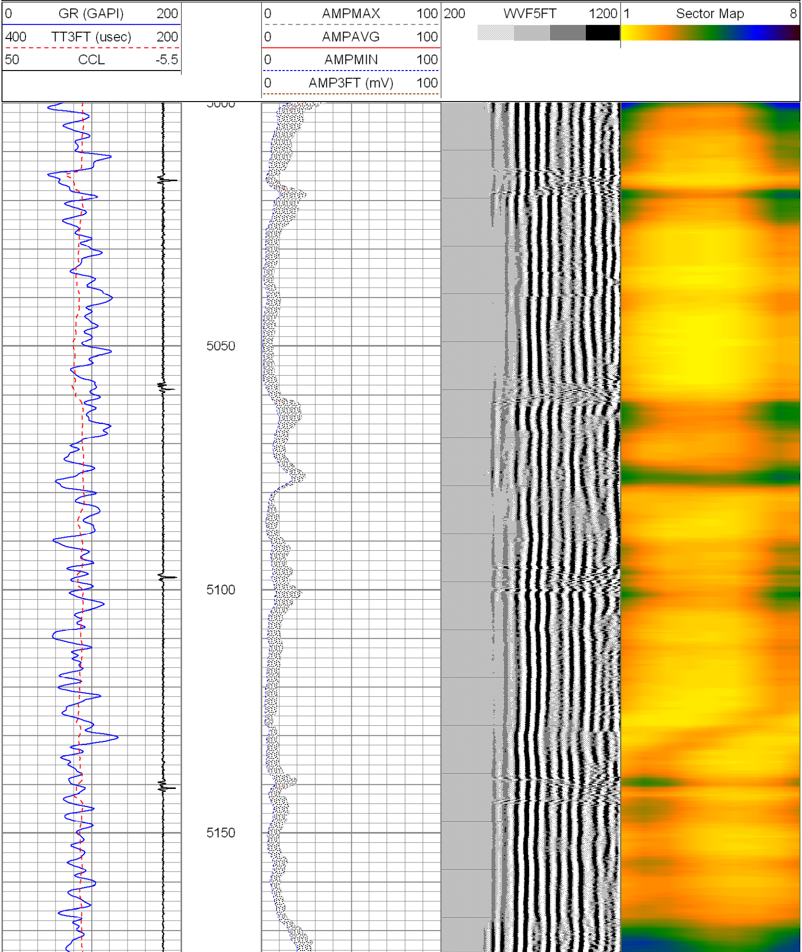


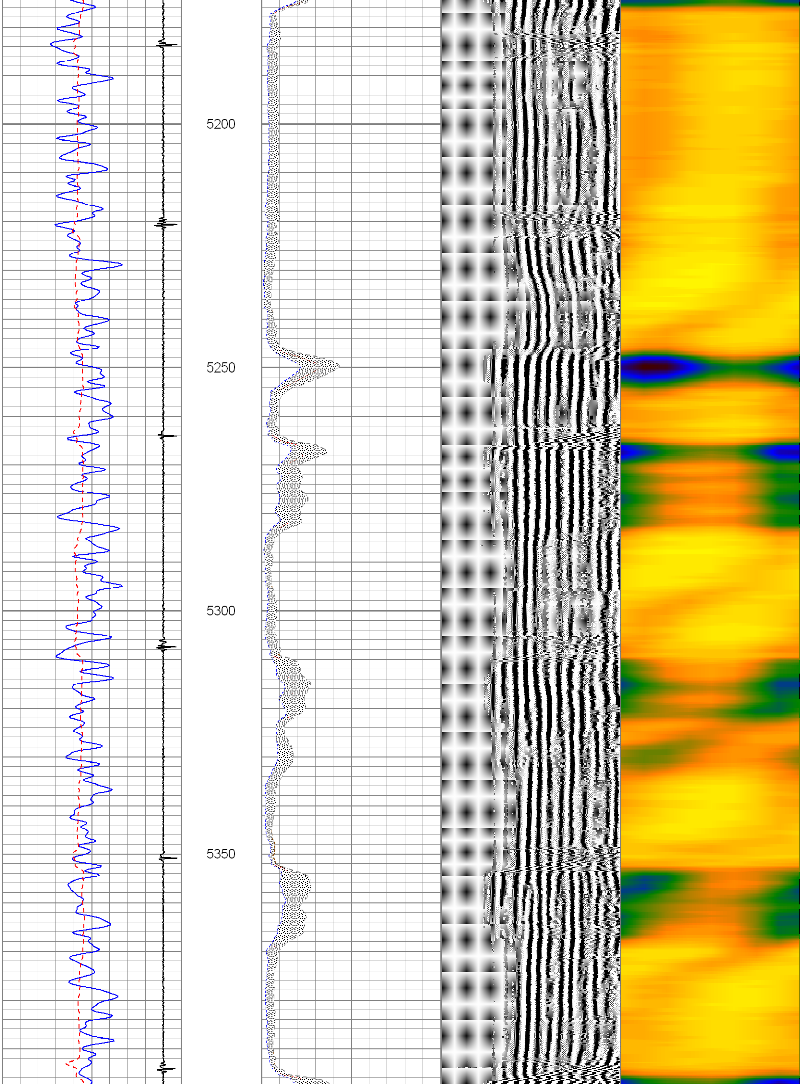


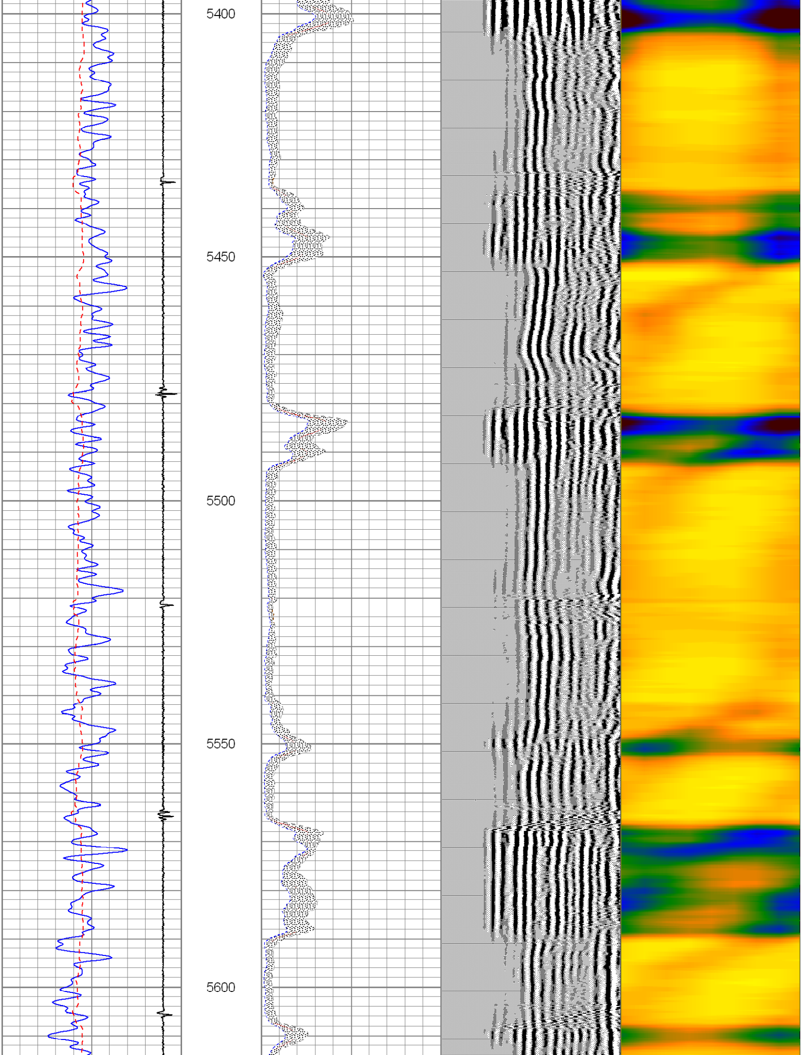


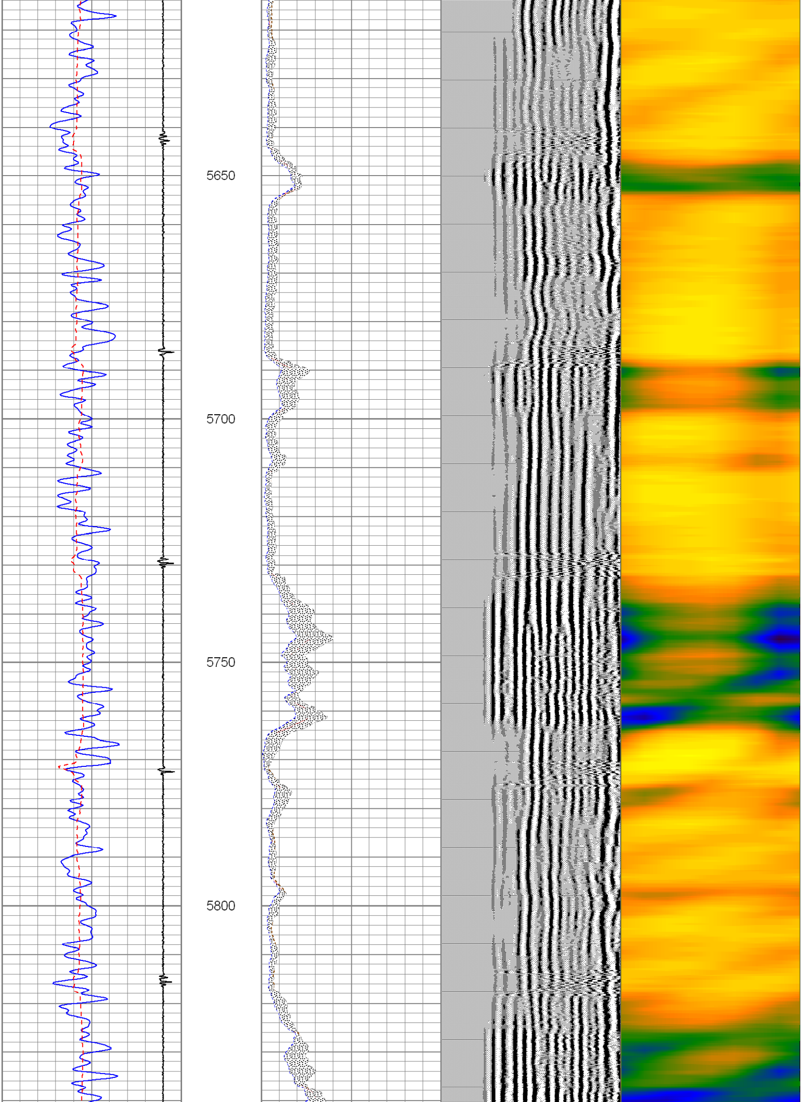


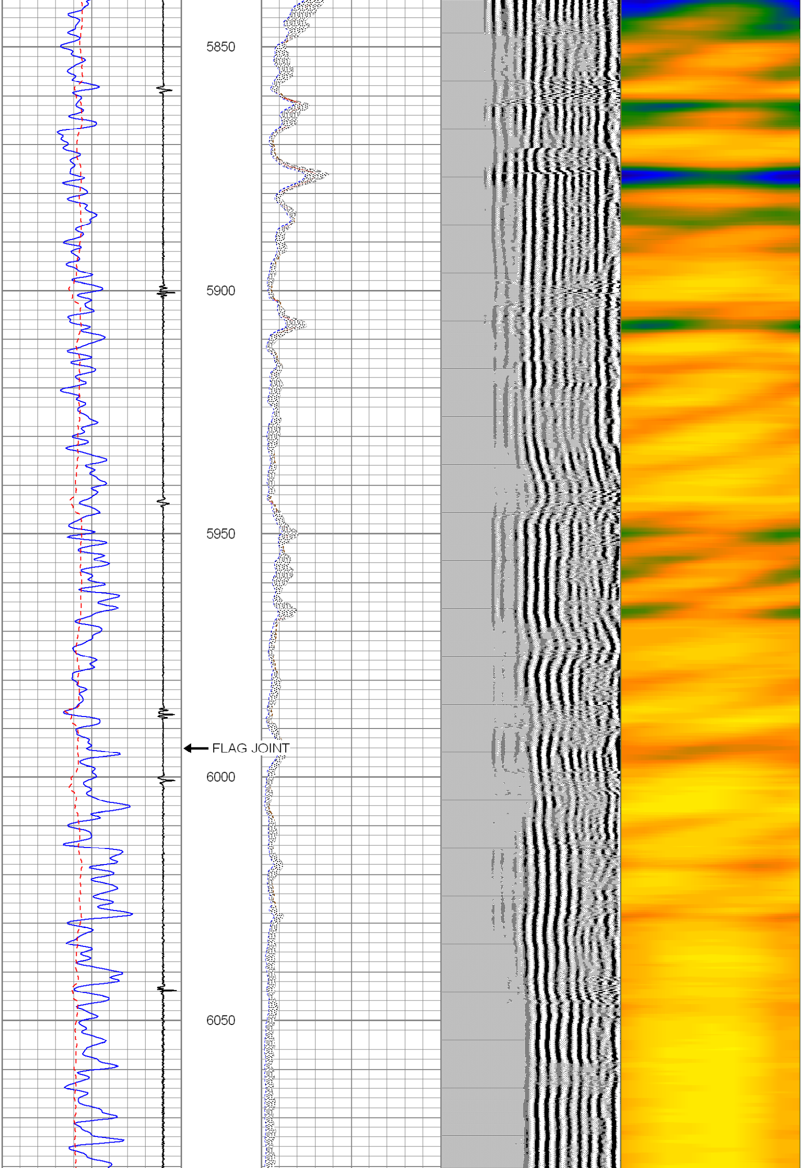
Database File:	cbl noble loeffler k01-66-1second log.db
Dataset Pathname:	pass3
Presentation Format:	sector2
Dataset Creation:	Wed Nov 05 09:28:24 2014 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

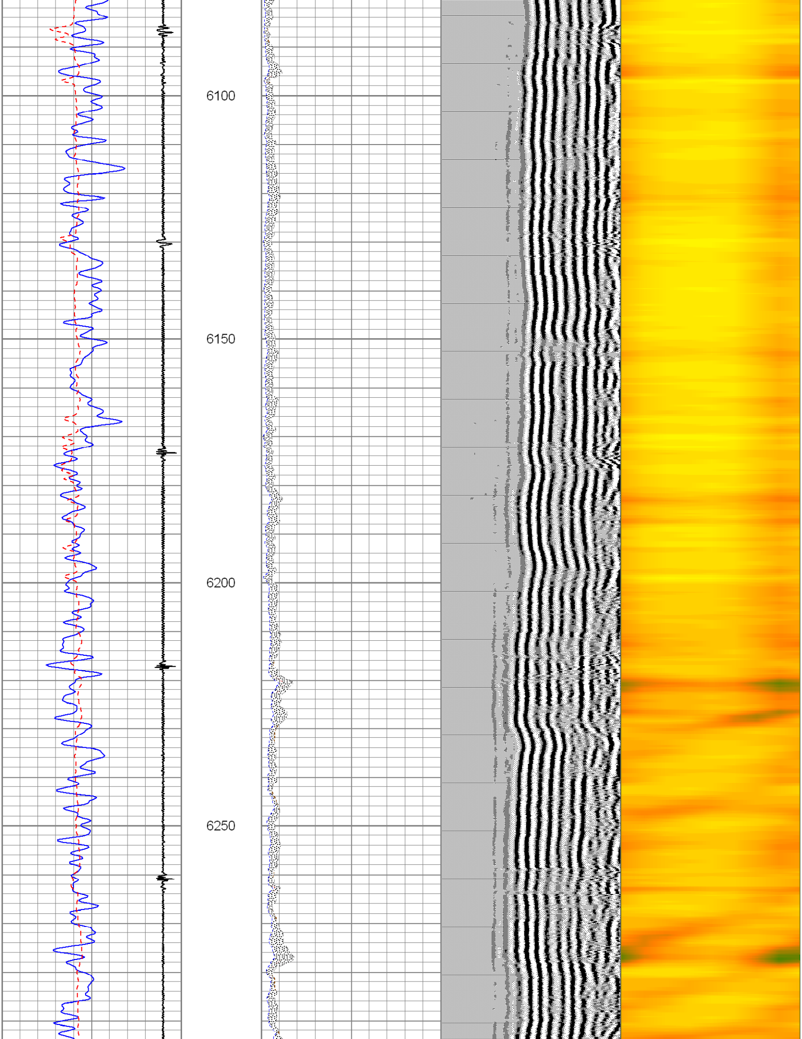


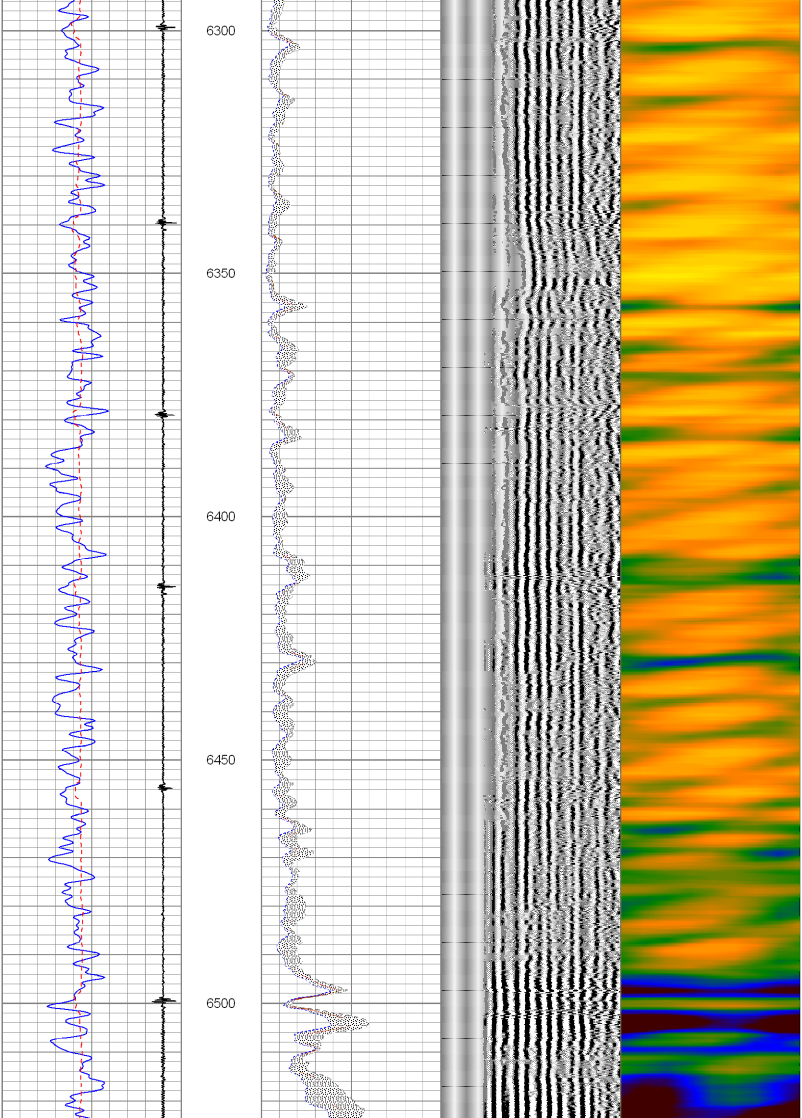


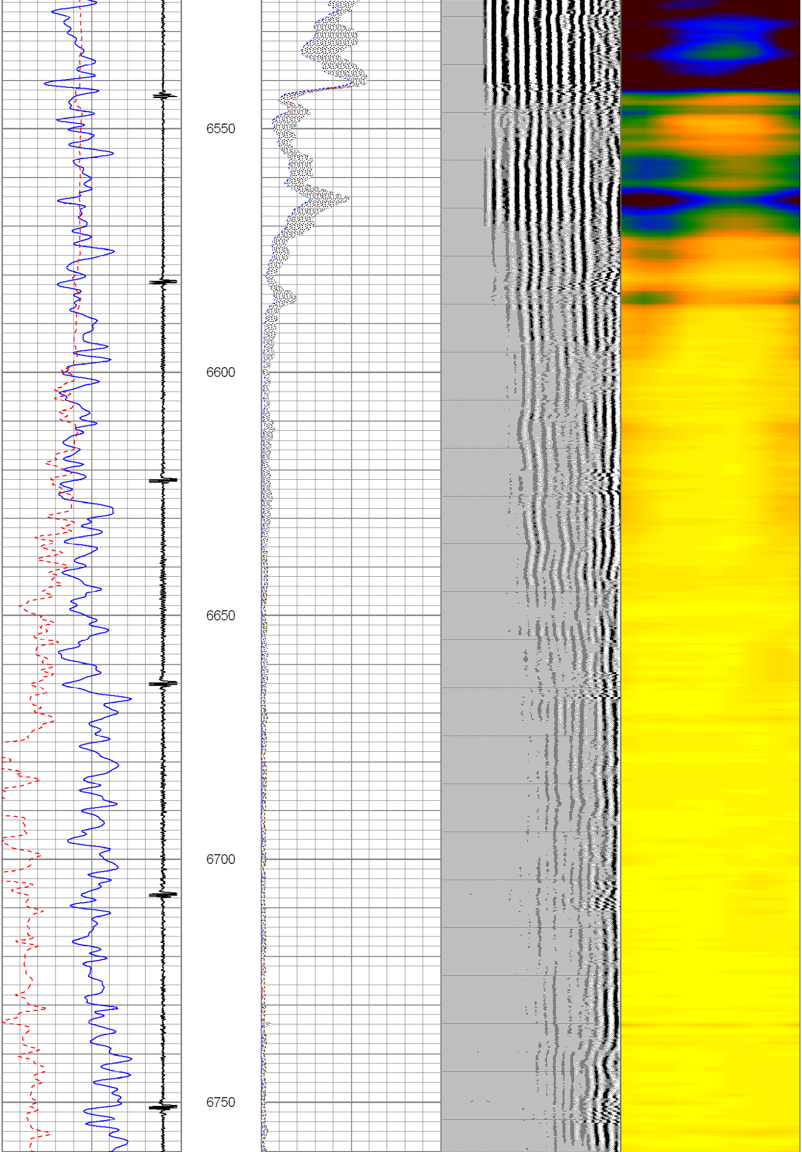


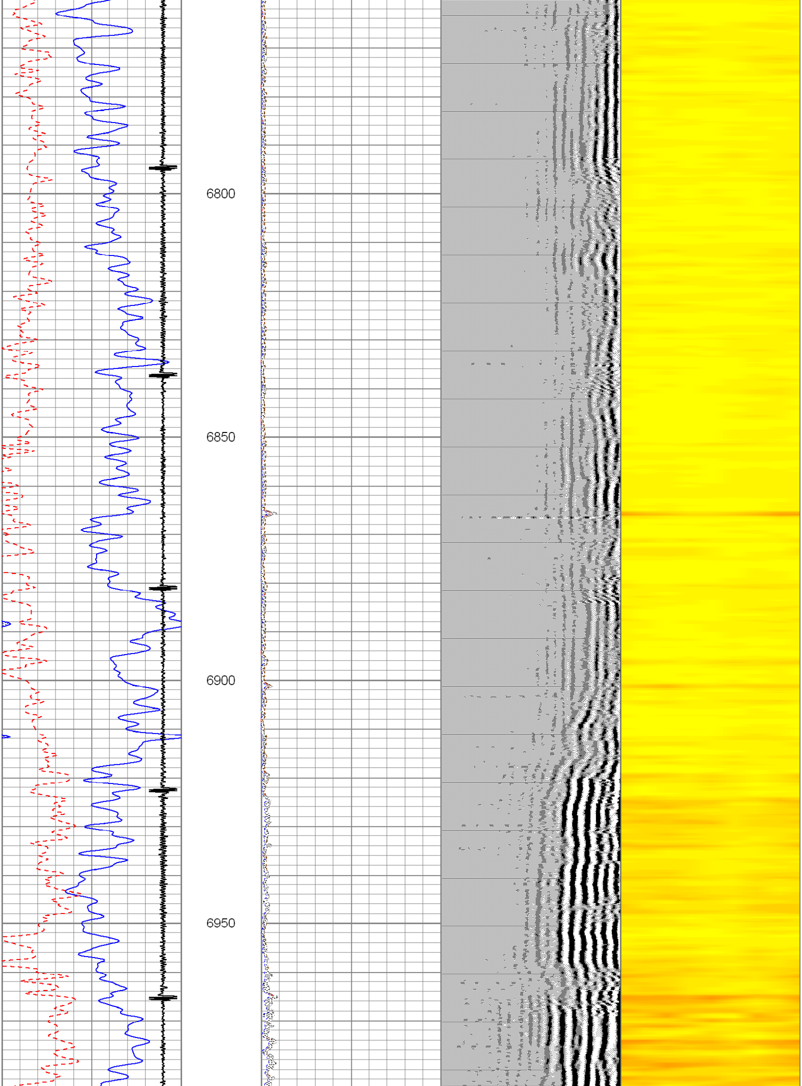


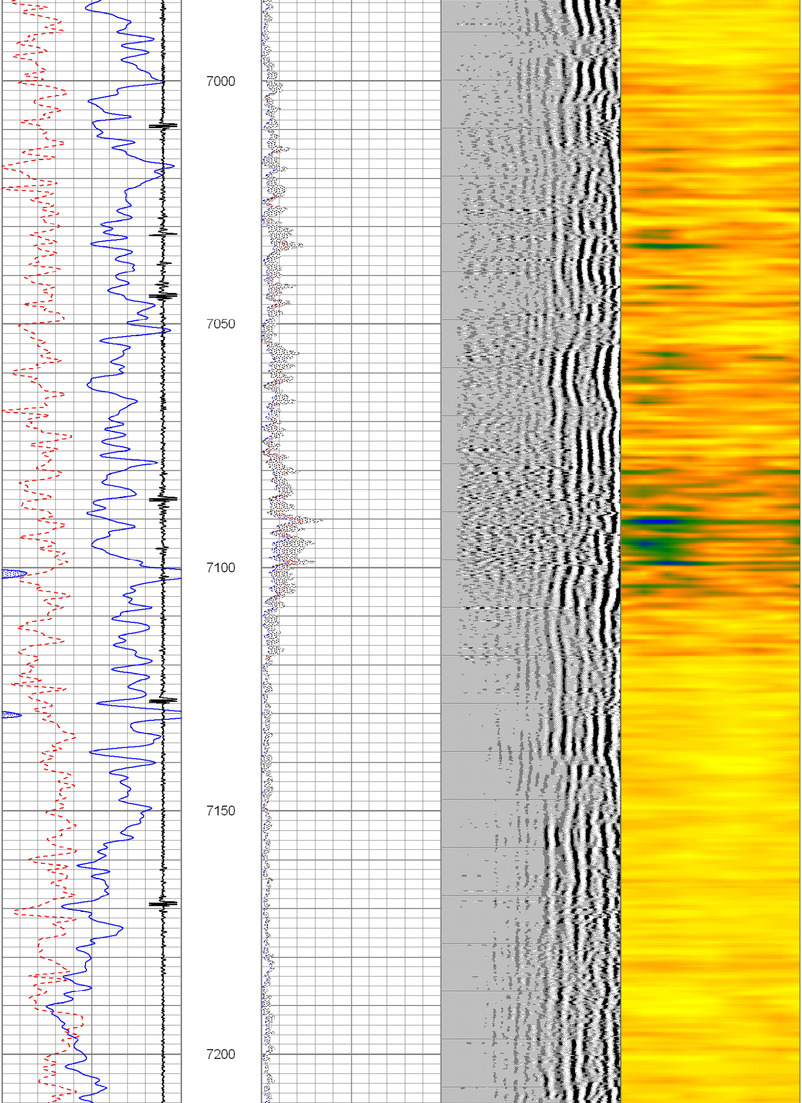


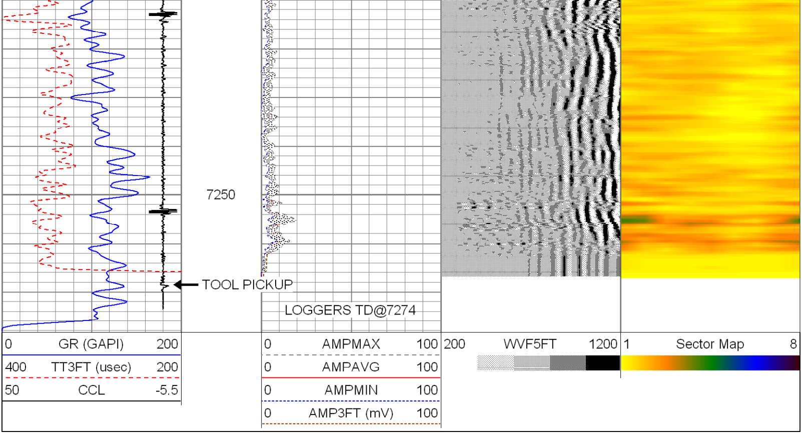












Calibration Report

Database File: cbl noble loeffler k01-66-1second log.db
Dataset Pathname: pass3
Dataset Creation: Wed Nov 05 09:28:24 2014 by Log SCH 120430

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 101010

SHOP CALIBRATION Tue Feb 25 11:27:35 2014

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	1.0				cps
		0.4000			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:	602.933	ft

Master Calibration, performed Wed Nov 05 09:12:26 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.007	2.496	1.500	62.165	24.380	1.319
CAL	0.007	2.500				
5'	0.007	2.500	1.500	62.165	24.333	1.332
SUM						
S1	0.007	2.500	0.000	62.165	24.931	-0.163
S2	0.008	2.500	0.000	62.165	24.948	-0.204
S3	0.007	2.496	0.000	62.165	24.982	-0.185
S4	0.007	2.432	0.000	62.165	25.638	-0.191
S5	0.007	2.352	0.000	62.165	26.515	-0.196
S6	0.007	2.370	0.000	62.165	26.311	-0.190
S7	0.007	2.498	0.000	62.165	24.962	-0.184
S8	0.007	2.500	0.000	62.165	24.939	-0.182

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	0.007	2.500	1.000	0.000

Air Zero Calibration, performed Wed Nov 05 09:06:04 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