RMWS
ROCKY MOUNTAIN WIRELINE SERVICE

SECTOR BOND LOG
GAMMA RAY / CCL

Company	**WILLIAMS PRODUCTION RMT CO.**
Well	**SG 431-32**
Field	**GRAND VALLEY**
County	**GARFIELD**
State	**COLORADO**

Location: API # : 05045172000000

SHL: 1074' FNL, 1981' FEL
BHL: 769' FNL, 2035' FWL

SEC 32 TWP 7S RGE 96W

Other Services

Permanent Datum	G.L.	Elevation	5318'	
Log Measured From	K.B.	Ft Above PD	25'	
Drilling Measured From	K.B.			

Elevation
K.B. 5343"
D.F. 5342'
G.L. 5318'

Date	2/2/09		
Run Number	ONE		
Depth Driller	5182'		
Present Depth Driller	5130'		
Depth Logger	5119'		
Bottom Logged Interval	5118'		
Top Log Interval	3900'		
Fluid Level	FULL		
Type Fluid	WATER		
Max. Recorded Temp.	N/A		
Estimated Cement Top	4230'		
Equipment Number	216		
Location	GRAND JCT.		
Recorded By	MONTANO	MCBROOM	
Witnessed By	MR. SNOW	MR. DODSON	

	Borehole Record			Casing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	13.5"	SURFACE	1114'	9 5/8"	32.3#	SURFACE	1114'
TWO	7.875"	1114'	5182'	4 1/2"	11.6#	SURFACE	5162'

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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.

WARRIOR 7.0 SOFTWARE - Comments

NOTE: THIS LOG WAS DEPTH CORRELATED TO THE HLS ACBL DATED 1/17/09.

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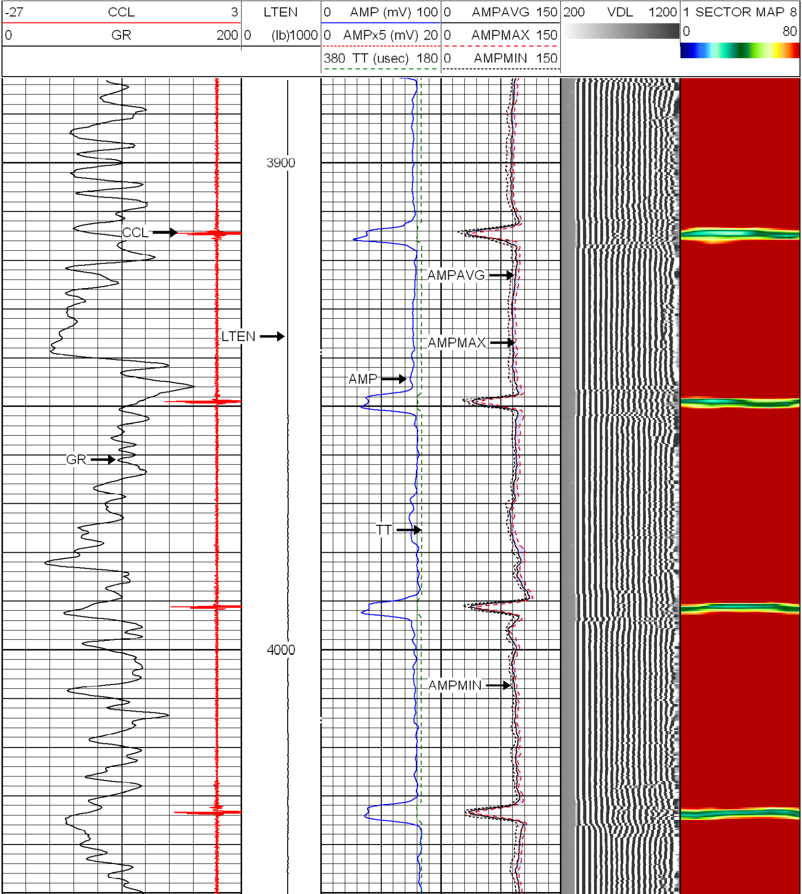
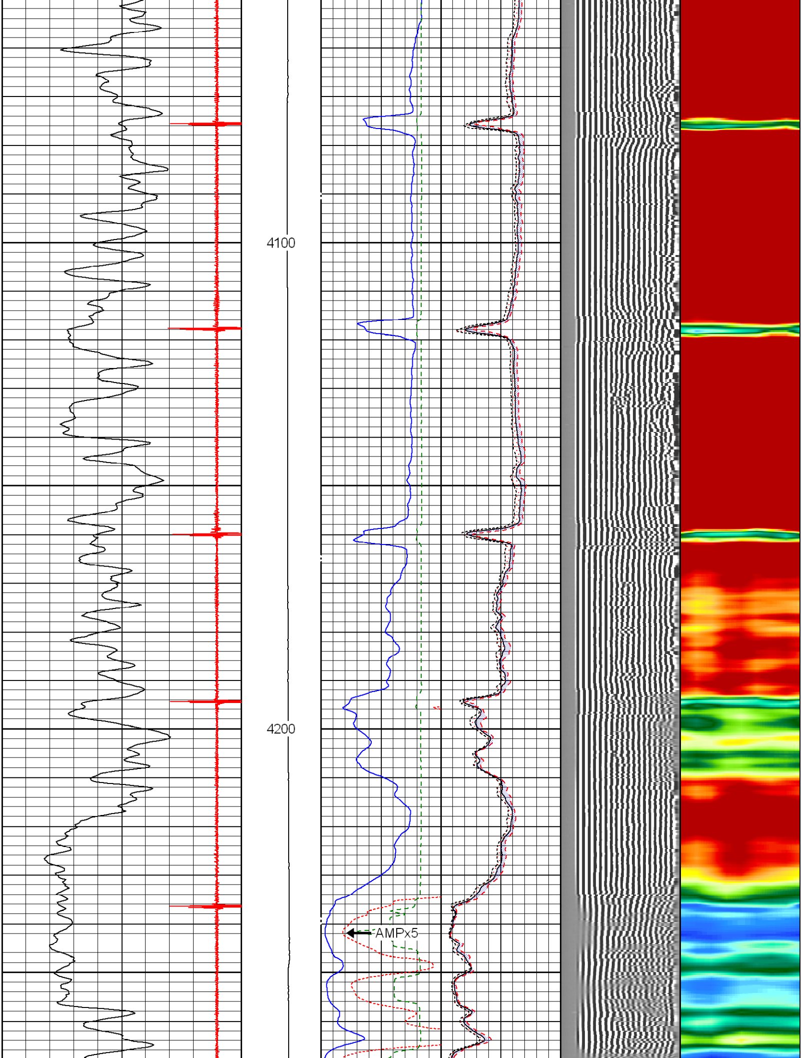
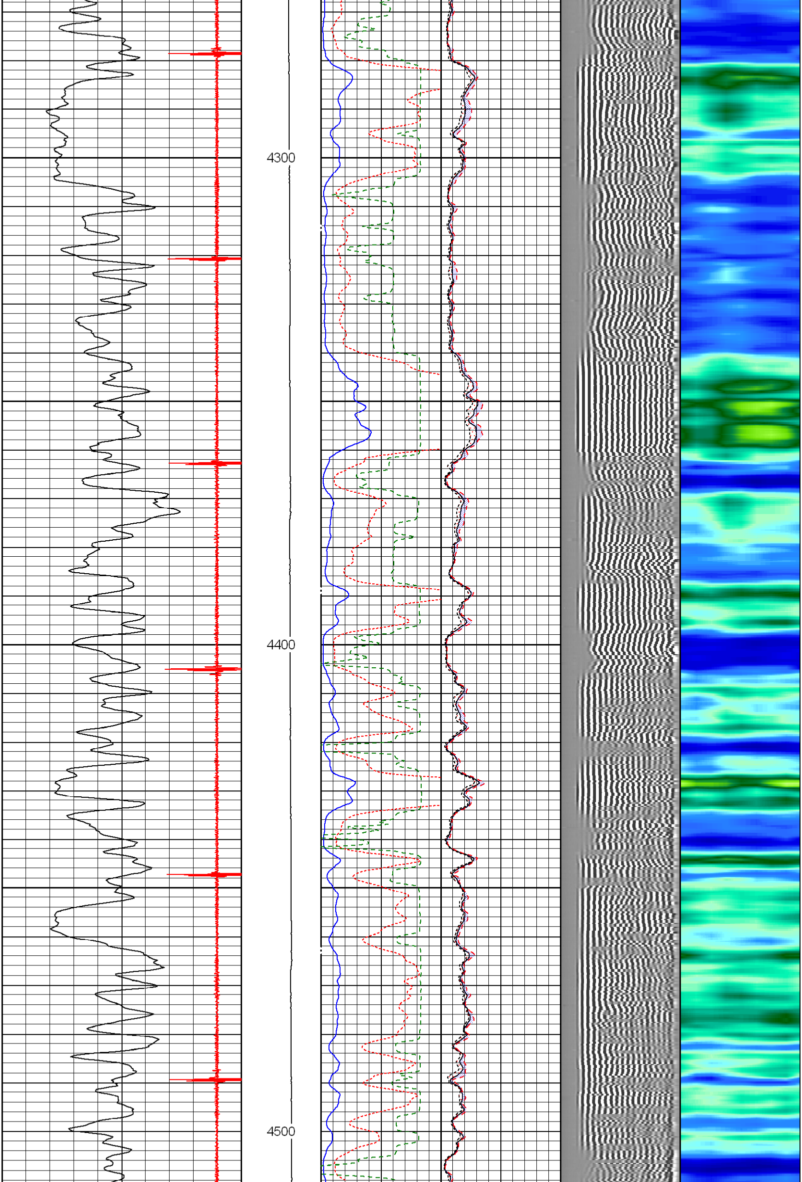
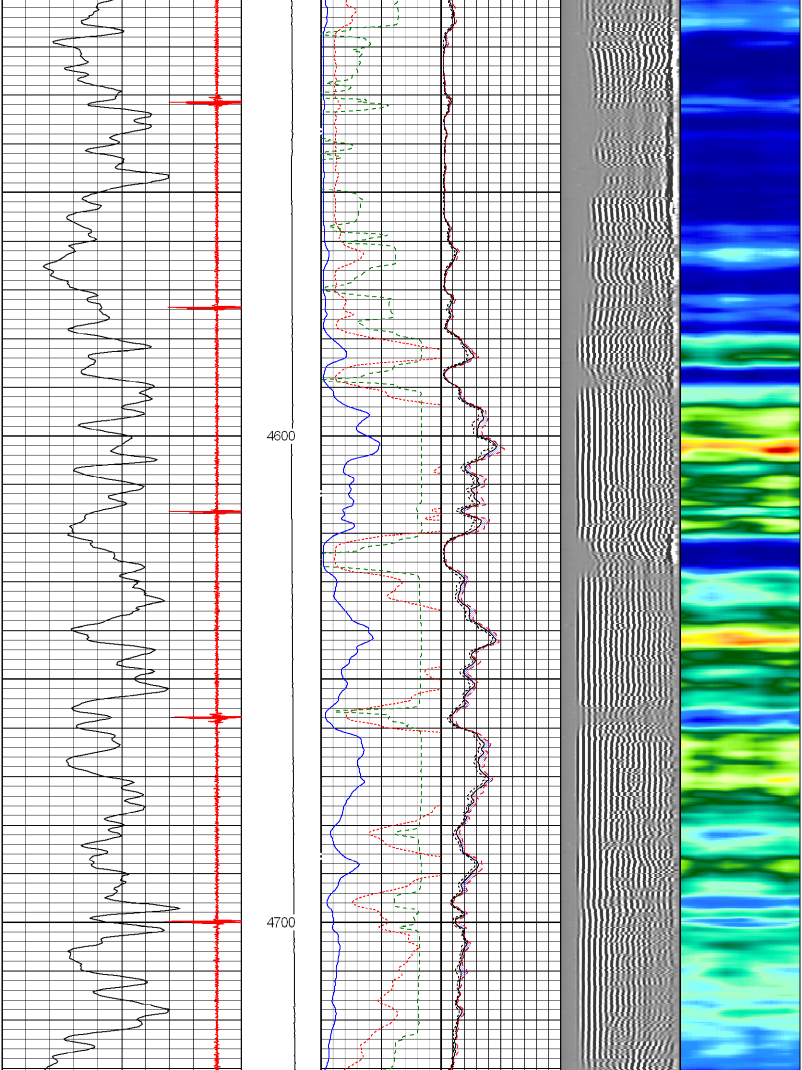
MAIN PASS 5" = 100'

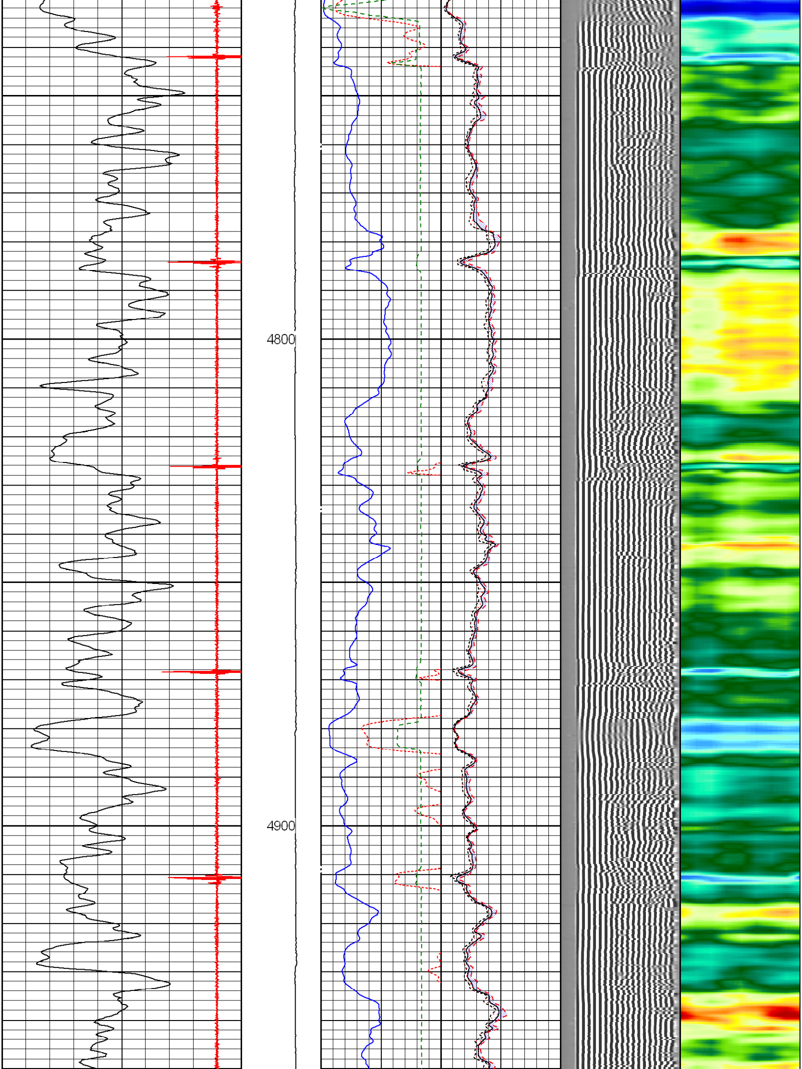
Database File:	020209_williams_sg_431-32.db
Dataset Pathname:	pass6
Presentation Format:	rmws_scbl
Dataset Creation:	Mon Feb 02 15:49:29 2009 by Log Std Casedhole 07122
Charted by:	Depth in Feet scaled 1:240

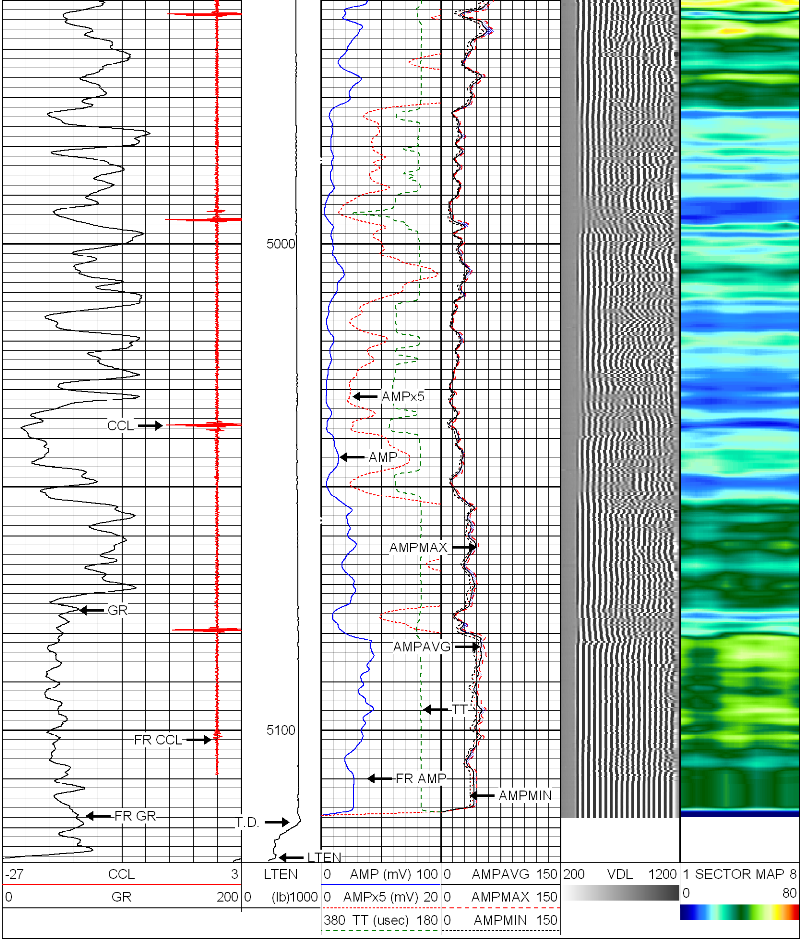












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MAIN PASS 5" = 100'

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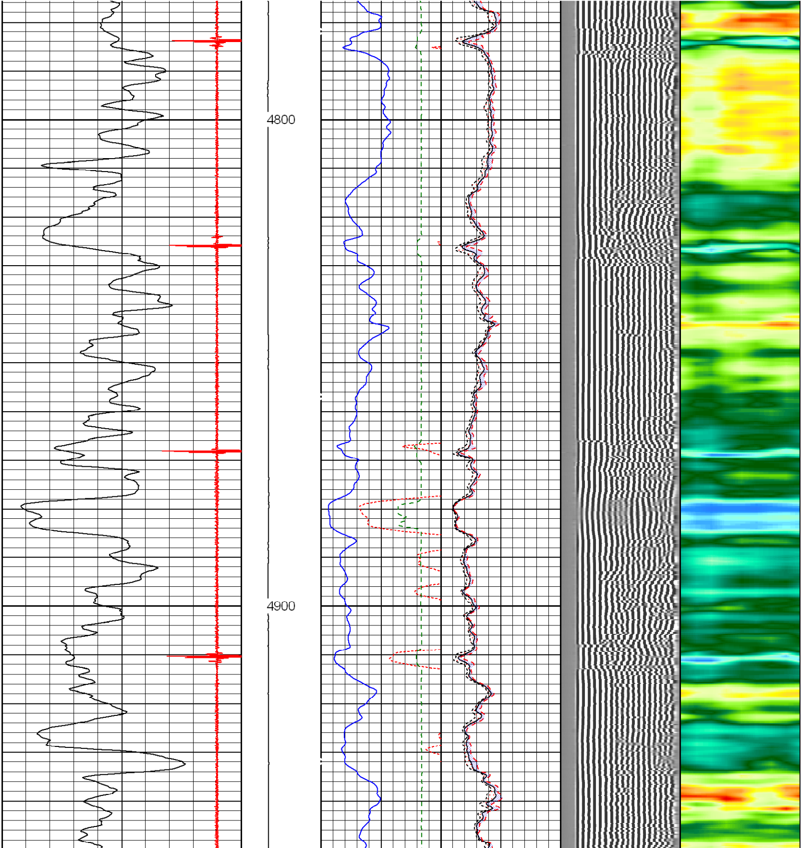
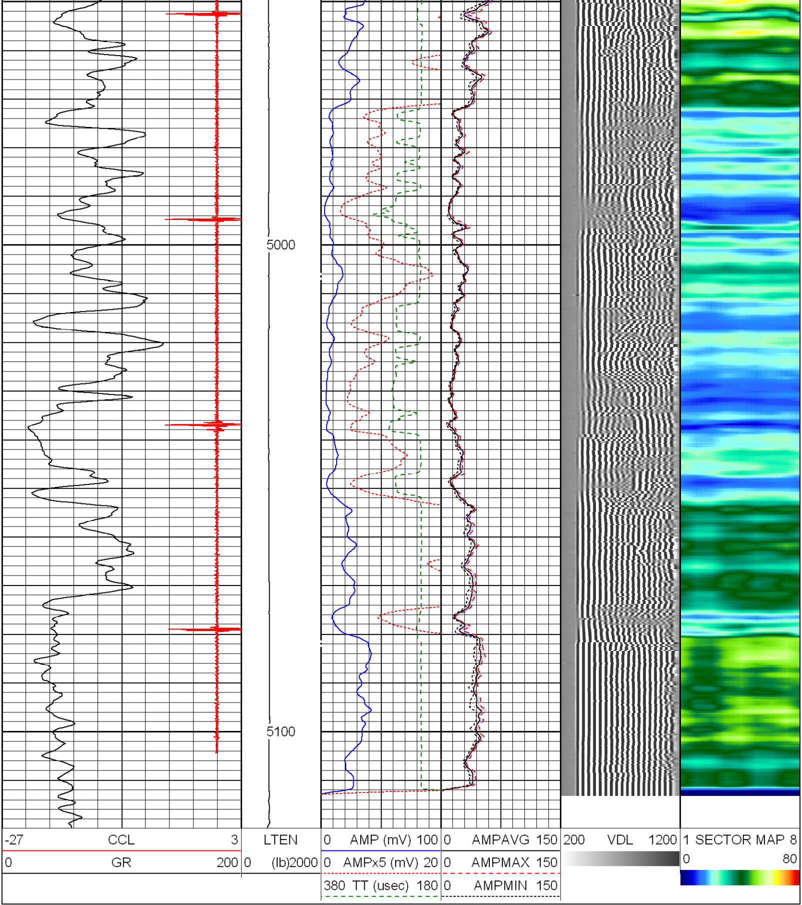
REPEAT SECTION 5" = 100'

Database File: 020209_williams_sg_431-32.db
Dataset Pathname: pass5
Presentation Format: rmws_scbl
Dataset Creation: Mon Feb 02 15:41:27 2009 by Log Std Casedhole 07122
Charted by: Depth in Feet scaled 1:240

-27 CCL 3	LTEN	0 AMP (mV) 100	0 AMPAVG 150	200 VDL 1200	1 SECTOR MAP 8
0 GR 200	0 (lb)2000	0 AMPx5 (mV) 20	0 AMPMAX 150		0 80
		380 TT (usec) 180	0 AMPMIN 150		





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REPEAT SECTION 5" = 100'

Calibration Report

Database File: 020209_williams_sg_431-32.db
Dataset Pathname: pass6
Dataset Creation: Mon Feb 02 15:49:29 2009 by Log Std Casedhole 07122

Gamma Ray Calibration Report

Serial Number: TEKCO234_314
Tool Model: TEKCO234
Performed: Mon Feb 02 15:33:56 2009

Calibrator Value: 1.0

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.9600 /cps

Segmented Cement Bond Log Calibration Report

Serial Number: TEKCO234_3025
Tool Model: TEKCO

Calibration Casing Diameter: 4.500 in
Calibration Depth: 2814.529 ft

Master Calibration, performed Mon Feb 02 15:30:52 2009:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.017	0.798	0.000	81.196	103.913	-1.722
CAL	0.000	0.645				
5'	0.017	1.384	0.000	81.196	59.410	-1.035
SUM						
S1	0.018	1.251	0.000	100.000	81.101	-1.485
S2	0.019	1.453	0.000	100.000	69.701	-1.308
S3	0.018	1.595	0.000	100.000	63.420	-1.125
S4	0.017	1.397	0.000	100.000	72.494	-1.260
S5	0.022	1.399	0.000	100.000	72.626	-1.587
S6	0.017	1.335	0.000	100.000	75.898	-1.287
S7	0.018	1.201	0.000	100.000	84.577	-1.550
S8	0.019	1.129	0.000	100.000	90.073	-1.703

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.000	0.645	1.000	0.000

Air Zero Calibration, performed Mon Feb 02 15:02:27 2009:

	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