ROCKY MOUNTAIN WIRELINE SERVICE

CEMENT BOND LOG
GAMMA RAY / CCL

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

Location: API # : 05045172000000

SHL: 1074' FNL & 1981' FEL
BHL: 0769' FNL & 2035' FWL

SEC 32 TWP 07S 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	2/19/09		
Run Number	ONE		
Depth Driller	5182'		
Present Depth Driller	4340'		
Depth Logger	4340'		
Bottom Logged Interval	4349'		
Top Log Interval	3000'		
Fluid Level	550'		
Type Fluid	WATER		
Max. Recorded Temp.	N/A		
Estimated Cement Top	3650'		
Equipment Number	218		
Location	GRAND JCT		
Recorded By	HARRIS	RAFF	
Witnessed By	MR. SNOW		

	Borehole Record			Casing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	13.5"	SURFACE	1114'	9.625"	32.3#	SURFACE	1114'
TWO	7.875"	1114'	5182'	4.5"	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

THIS LOG WAS DEPTH CORRELATED WITH THE HLS BOND LOG DATED ON 1/17/09

Calibration Report

Database File: 021909_williams_sg431-32.db
Dataset Pathname: pass4
Dataset Creation: Thu Feb 19 15:42:51 2009 by Log Std Casedhole 07122

Gamma Ray Calibration Report

Serial Number:	TEKCO234_315	
Tool Model:	TEKCO234	
Performed:	Thu Apr 24 14:57:35 2008	
Calibrator Value:	1.0	
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.9000	/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	TEKCO234_3025	
Tool Model:	TEKCO	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	1599.600	ft

Master Calibration, performed Thu Feb 19 15:23:55 2009:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.017	0.714	0.000	81.196	116.402	-1.929
CAL	0.000	0.643				
5'	0.017	0.858	0.000	81.196	96.633	-1.684
SUM						
S1	0.018	0.860	0.000	100.000	118.827	-2.175
S2	0.019	0.870	0.000	100.000	117.492	-2.204
S3	0.018	0.849	0.000	100.000	120.337	-2.135
S4	0.017	0.847	0.000	100.000	120.509	-2.094
S5	0.022	0.785	0.000	100.000	131.103	-2.864
S6	0.017	0.811	0.000	100.000	125.925	-2.136
S7	0.018	0.849	0.000	100.000	120.336	-2.205
S8	0.019	0.842	0.000	100.000	121.454	-2.296

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	0.643	1.000	0.000

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

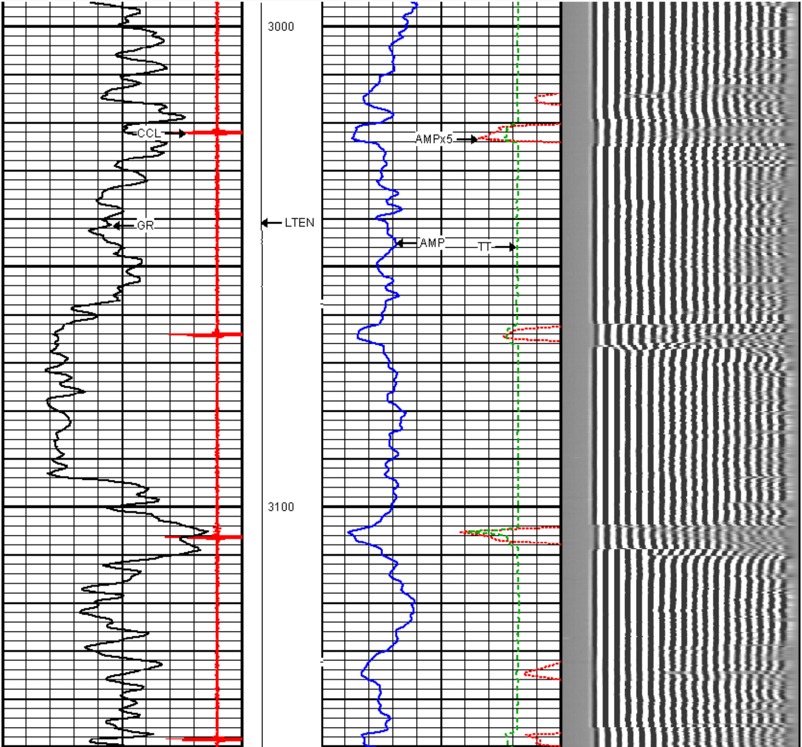
	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

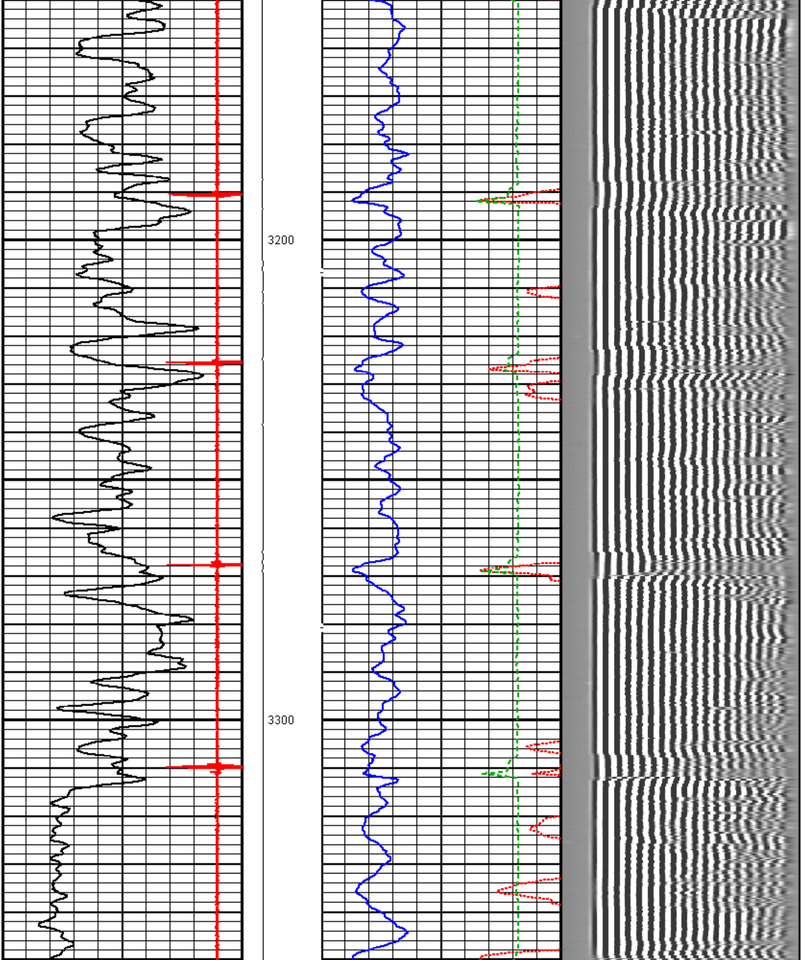
RMWS
ROCKY MOUNTAIN WIRELINE SERVICE

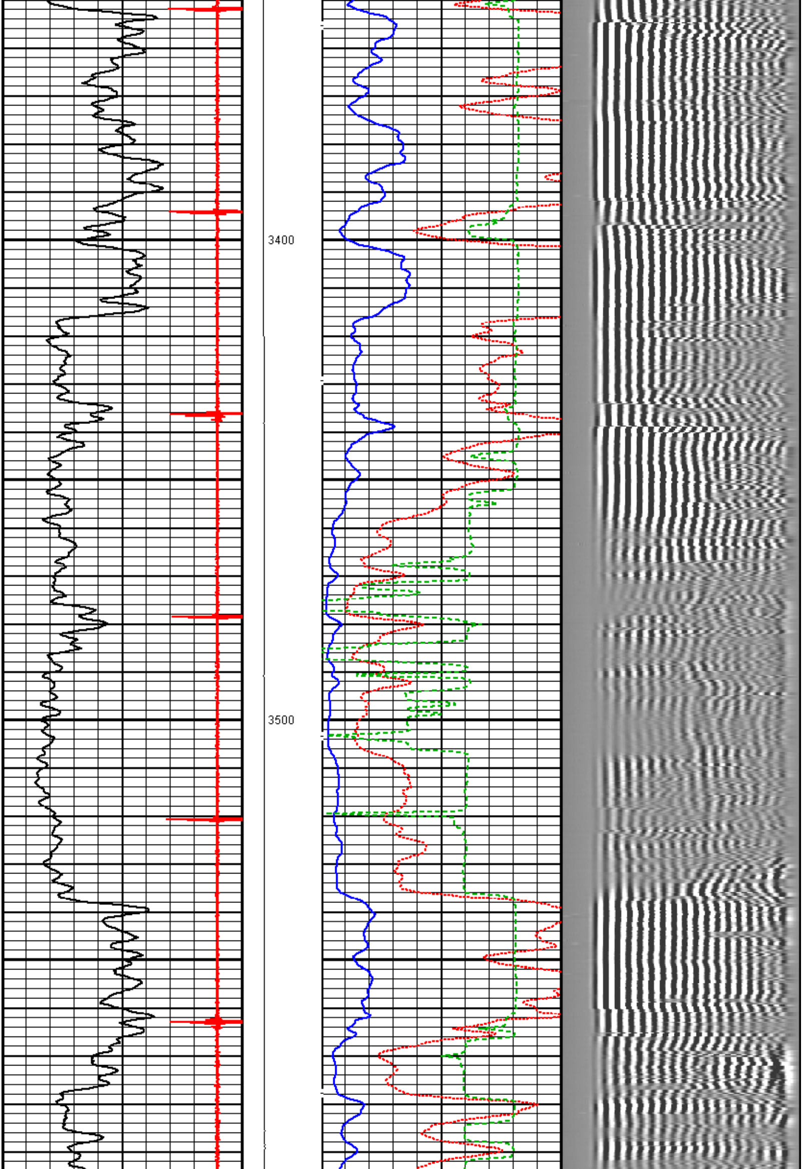
MAIN PASS 5" = 100'

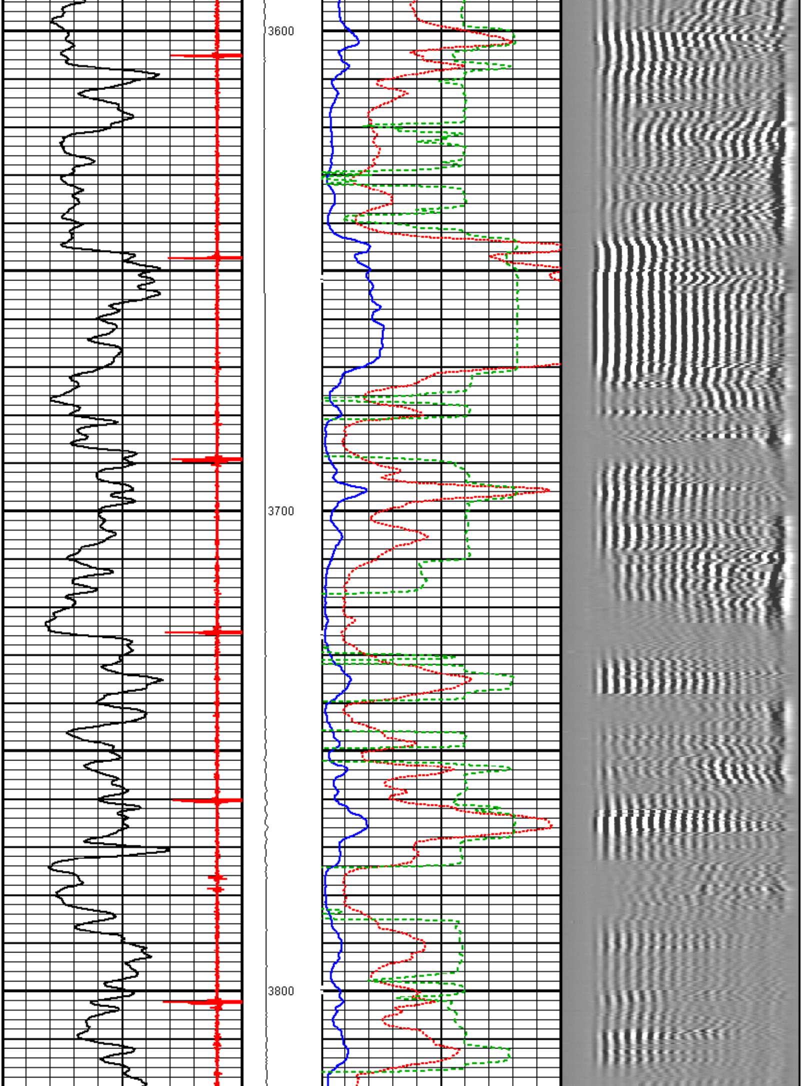
Database File:	021909_williams_sg431-32.db
Dataset Pathname:	pass4
Presentation Format:	rmws_dsc
Dataset Creation:	Thu Feb 19 15:42:51 2009 by Log Std Casedhole 07122
Charted by:	Depth in Feet scaled 1:240

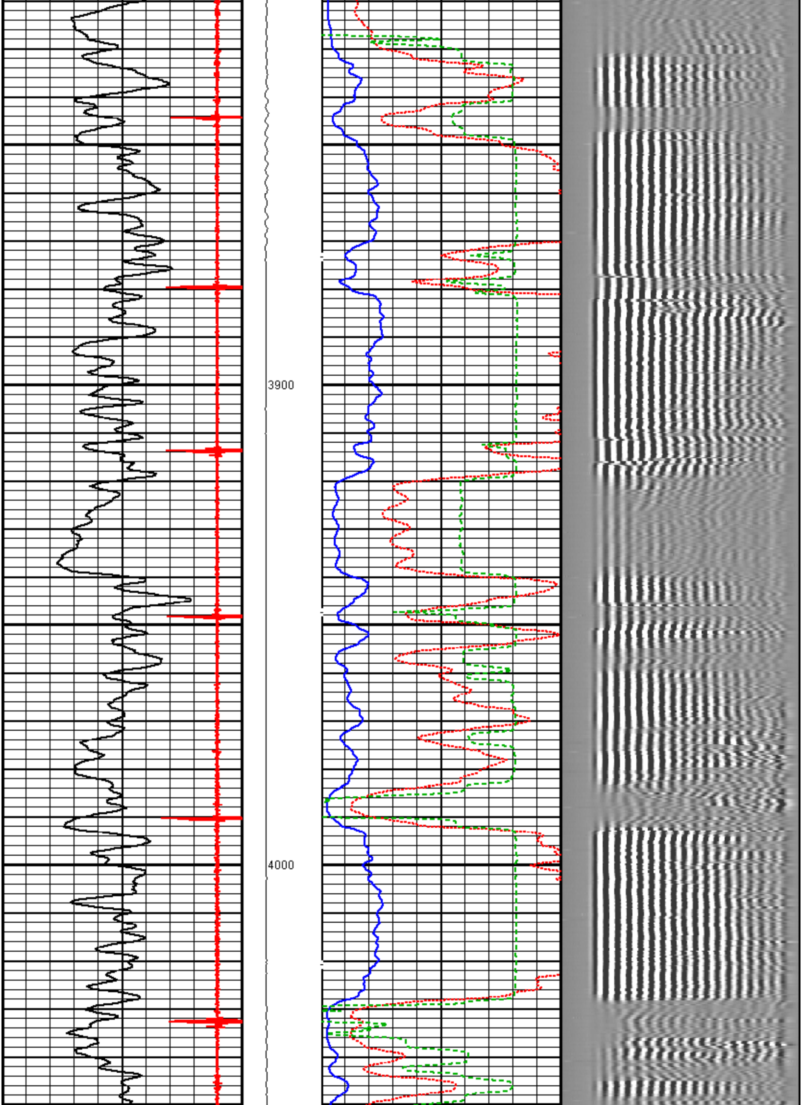
-27 Collar Locator 3	LTEN	0 AMP AMPLITUDE (mV) 20	200 VDL 1200
0 Gamma Ray 200	0 (lb) 2000	0 AMPLITUDE (mV) 100	
		380 TRAVEL TIME (usec) 180	

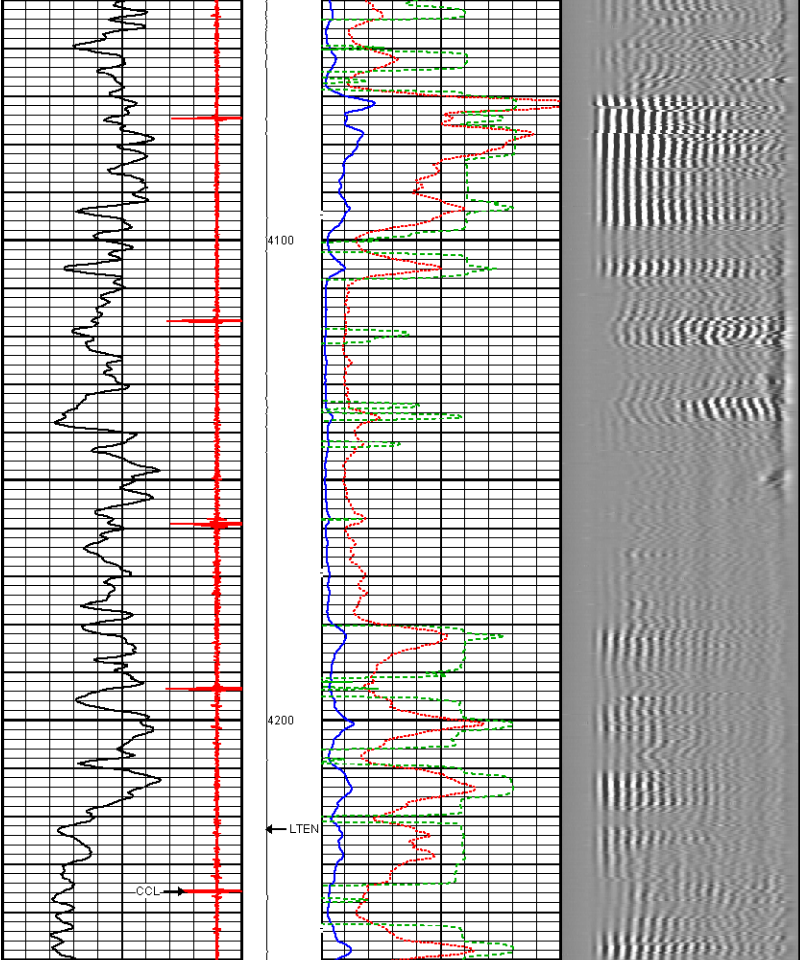


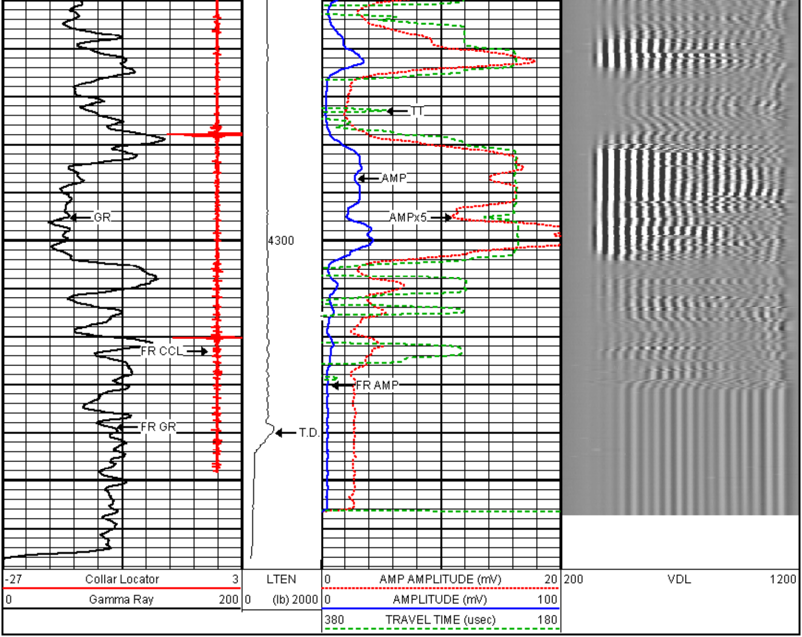












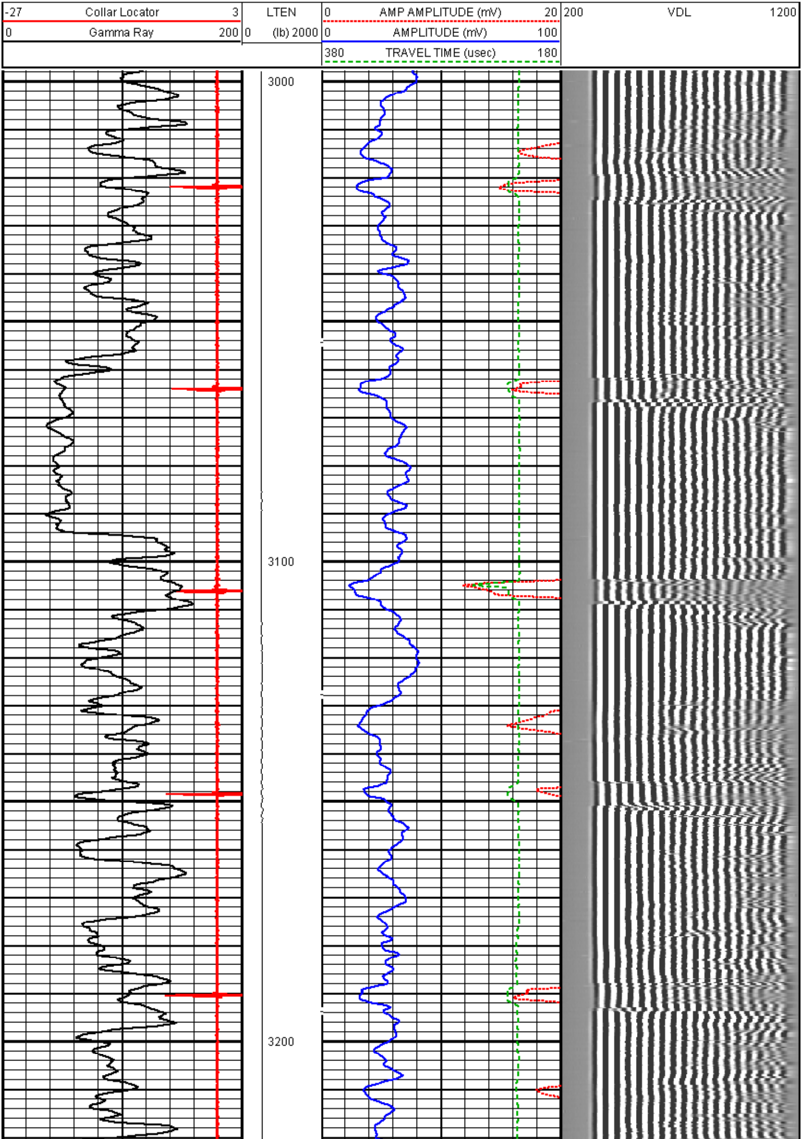
ROCKY MOUNTAIN WIRELINE SERVICE

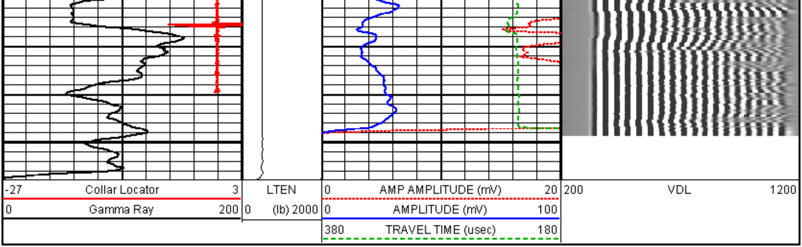
MAIN PASS 5" = 100'

ROCKY MOUNTAIN WIRELINE SERVICE

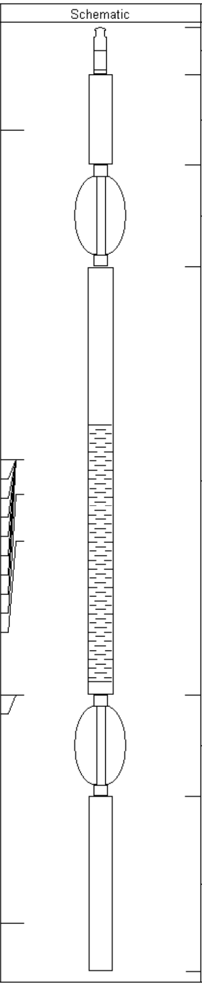
REPEAT SECTION 5" = 100'

Database File: 021909_williams_sg431-32.db
Dataset Pathname: pass5
Presentation Format: rmws_dsc
Dataset Creation: Thu Feb 19 16:03:48 2009 by Log Std Casedhole 07122
Charted by: Depth in Feet scaled 1:240





REPEAT SECTION 5" = 100'

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			STNDRD Standard Cable Head	1.00	1.43	2.00
CCL	17.83		CCL-TITAN275 (TITAN275_01) Titan 2 3/4" CCL	1.92	2.75	10.00
			TITAN169 tool test	2.17	1.69	5.00
WVFS1 WVFS2 WVFS3 WVFS4 WVFS5 WVFS6 WVFS7 WVFS8 WVF3FT WVF5FT WVFCAL WVFSYNC	10.85 10.85 10.85 10.85 10.85 10.85 10.85 10.85 10.10 9.10 5.85 5.85		SCBLTEKCO-TEKCO (TEKCO234_3025) Tekco 2 3/4" Radial Bond	9.08	2.75	50.00
			TITAN169 tool test	2.17	1.69	5.00
GR	1.00		GR-TEKCO234 (TEKCO234_315) Tekco 2 3/4" Gamma Ray	3.69	2.75	20.00

Dataset: 021909_williams_sg431-32.db: field/well/run1/pass4
Total Length: 20.02 ft
Total Weight: 92.00 lb
O.D. 2.75 in