RMWS
ROCKY MOUNTAIN WIRELINE SERVICE

SECTOR BOND LOG
GAMMA RAY / CCL

Company WILLIAMS PRODUCTION RMT COMPANY
Well PA 344 - 21
Field PARACHUTE
County GARFIELD State COLORADO
Location: API # : 05045184010000
SHL: 1893' FNL & 1769' FEL S28 T6S R95W
BHL: 857' FNL & 252' FEL S21 T6S R95W
SEC 21 TWP 6S RGE 95W
Other Services

Permanent Datum	G.L.	Elevation 5558'	Elevation K.B. 5582' D.F. 5581' G.L. 5558'
Log Measured From	K.B.	Ft Above PD 24'	
Drilling Measured From	K.B.		

Date	04 - 16 - 2010		
Run Number	ONE		
Depth Driller	8989'		
Present Depth Driller	7411'		
Depth Logger	7411'		
Bottom Logged Interval	7410'		
Top Log Interval	7000'		
Fluid Level	450'		
Type Fluid	WATER		
Max. Recorded Temp.	NA		
Estimated Cement Top	NA		
Equipment Number	208		
Location	GRAND JCT.		
Recorded By	INGRAM	MCBROOM	RICHARDS
Witnessed By	MR. GOWEN		

Borehole Record				Casing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	7.875"	SUFACE	8989'	4.5"	11.6#	SURFACE	8989'

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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: LOG WAS DEPTH CORRELATED USING BAKER RADIAL BOND LOG DATED 01-22-2010
MAIN PASS : 5" = 100'
MAIN PASS 1 CSG PSI = STATIC
MAIN PASS 2 CSG PSI = 2500

Calibration Report

Database File: 041610_williams_pa_344_21.db
Dataset Pathname: main/pass1
Dataset Creation: Fri Apr 16 13:55:16 2010 by Log Std Casedhole 08121

Gamma Ray Calibration Report

Serial Number:	TEKO234_359	
Tool Model:	TEKCO234	
Performed:	Wed Apr 14 14:51:32 2010	
Calibrator Value:	1.0	
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.7500	/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	TEKCO234_3025	
Tool Model:	TEKCO	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	895.533	ft

Master Calibration, performed Fri Apr 16 12:56:29 2010:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.014	0.319	0.000	81.196	266.053	-3.650
CAL	0.015	0.260				
5'	0.014	0.354	0.000	81.196	238.596	-3.364
SUM						
S1	0.003	0.484	0.000	100.000	208.003	-0.602
S2	0.003	0.424	0.000	100.000	237.442	-0.672
S3	0.003	0.392	0.000	100.000	257.028	-0.737
S4	0.003	0.424	0.000	100.000	237.277	-0.707
S5	0.003	0.441	0.000	100.000	228.215	-0.677
S6	0.003	0.445	0.000	100.000	226.223	-0.649
S7	0.003	0.488	0.000	100.000	205.984	-0.601
S8	0.003	0.508	0.000	100.000	197.879	-0.589

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	0.015	0.260	1.000	0.000

Air Zero Calibration, performed Fri Apr 16 12:47:40 2010:

	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

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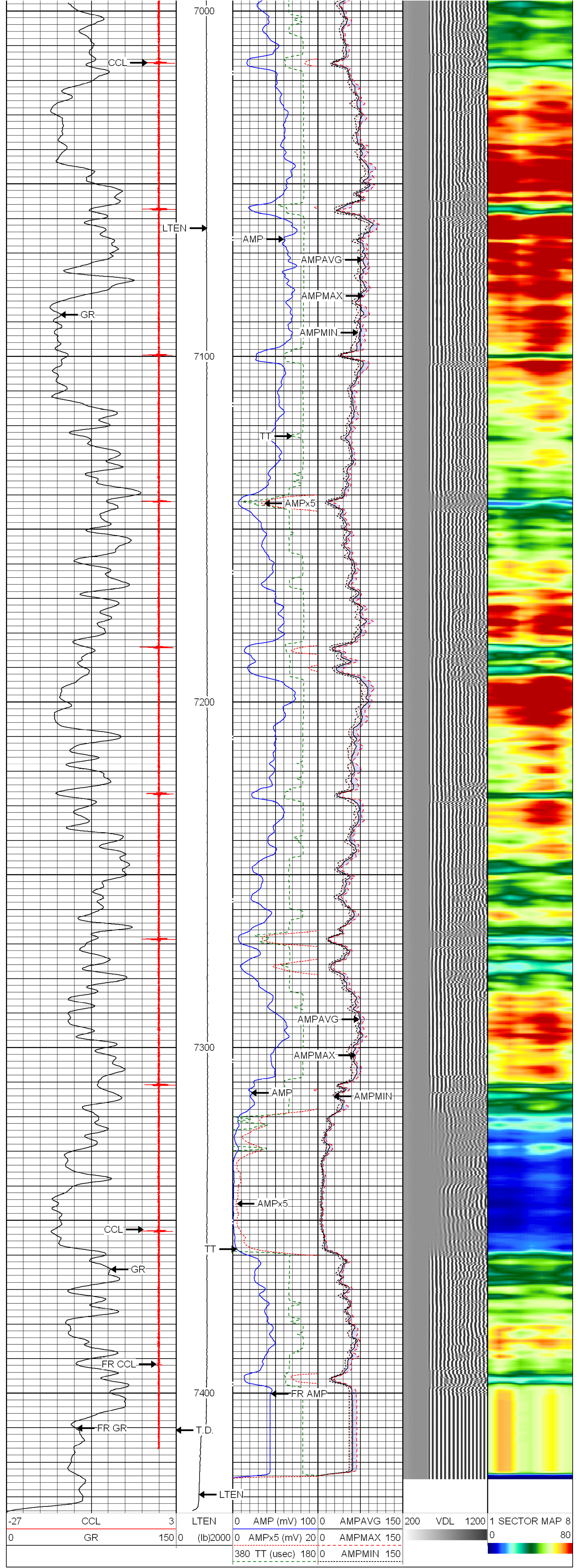
MAIN PASS

CSG PSI = STATIC

Database File: 041610_williams_pa_344_21.db
Dataset Pathname: main/pass1
Presentation Format: rmws_scbl
Dataset Creation: Fri Apr 16 13:55:16 2010 by Log Std Casedhole 08121
Charted by: Depth in Feet scaled 1:240



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MAIN PASS

CSG PSI = STATIC

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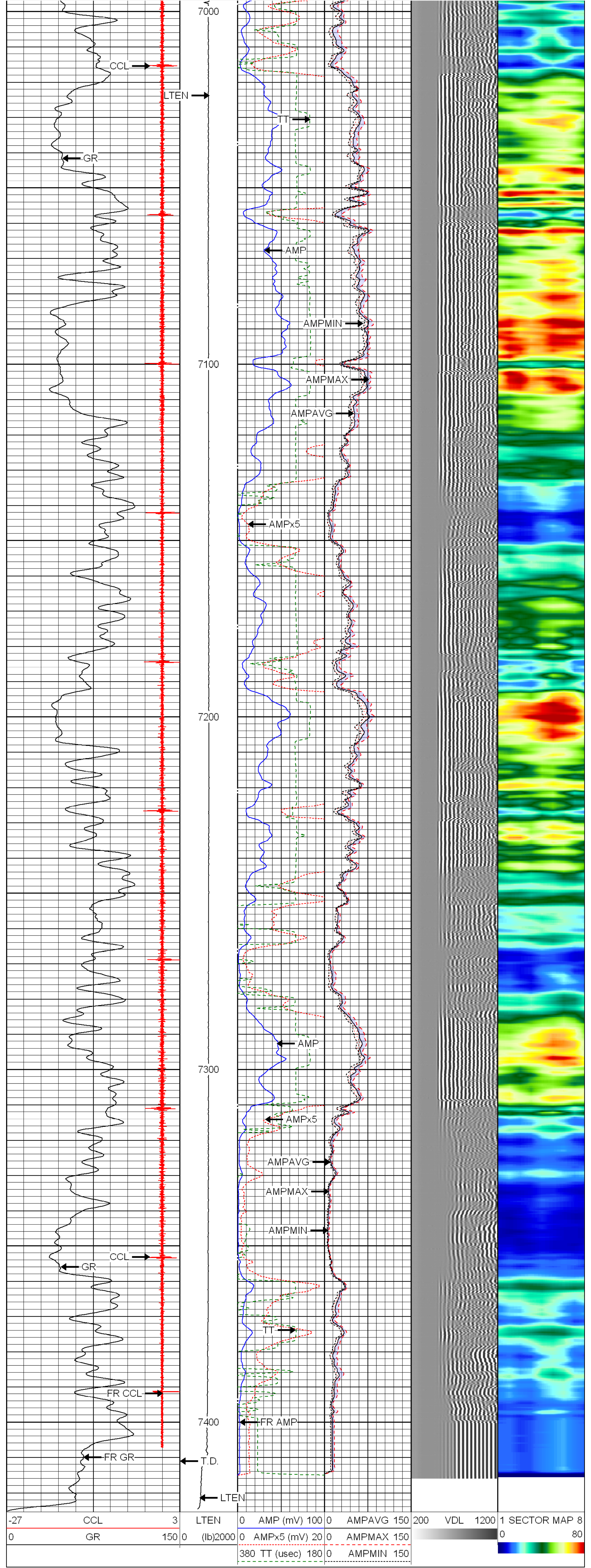
MAIN PASS

CSG PSI = 2500

Database File: 041610_williams_pa_344_21.db
Dataset Pathname: main/pass2
Presentation Format: rmws_scbl
Dataset Creation: Fri Apr 16 14:17:02 2010 by Log Std Casedhole 08121
Charted by: Depth in Feet scaled 1:240



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MAIN PASS

CSG PSI = 2500

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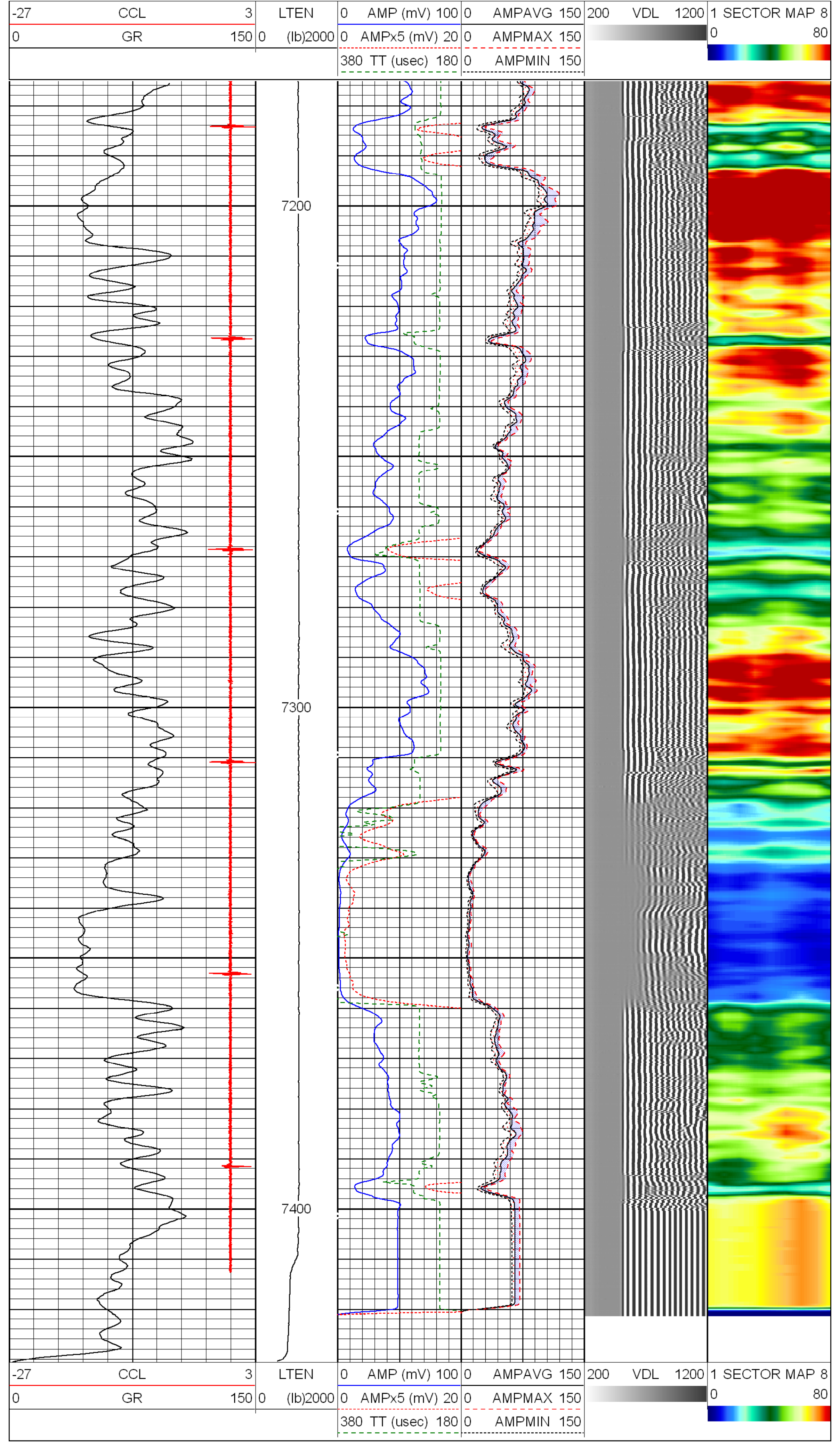
REPEAT PASS

Database File: 041610_williams_pa_344_21.db
Dataset Pathname: repeat/pass1
Presentation Format: rmws_scbl
Dataset Creation: Fri Apr 16 13:45:57 2010 by Log Std Casedhole 08121
Charted by: Depth in Feet scaled 1:240



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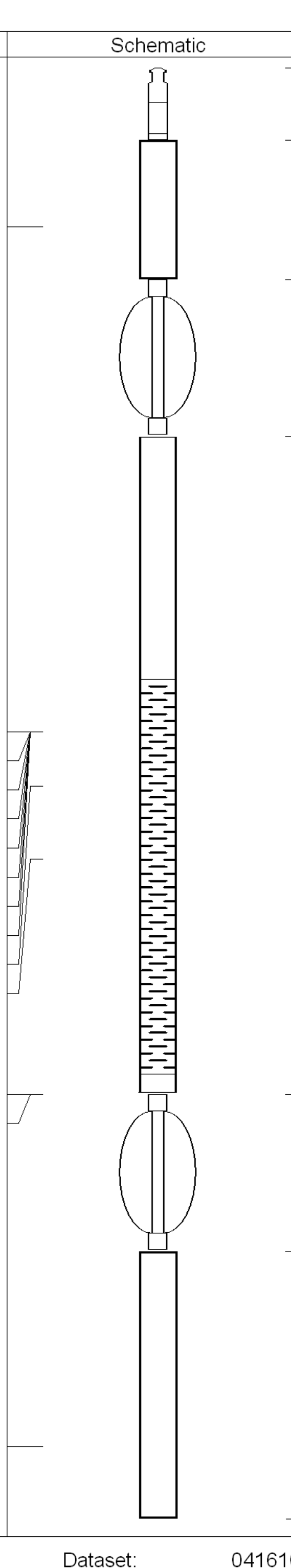
REPEAT PASS



Sensor	Offset (ft)	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 Titan 1 11/16" Centralizer	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 Titan 1 11/16" Centralizer	2.17	1.69	5.00
GR	1.00	GR-TEKCO234 (TEKCO234_359) Tekco 2 3/4" Gamma Ray	3.69	2.75	20.00

Dataset: 041610_williams_pa_344_21.db: field/well/main/pass1
Total Length: 20.02 ft
Total Weight: 92.00 lb
O.D.: 2.75 in