RMWS
ROCKY MOUNTAIN WIRELINE SERVICE

CEMENT BOND LOG
GAMMA RAY / CCL
TEMPERATURE

Company	BILL BARRETT CORPORATION
Well	KAUFMAN 24A - 24 - 692
Field	MAMM CREEK
County	GARFIELD
State	COLORADO
API # :	05 - 045 - 19645

Location: SHL: 1755' FSL & 2406' FEL
BHL: 0164' FSL & 1970' FWL

Other Services
3.75" GAUGE RING

SEC 24 TWP 6S RGE 92W

Permanent Datum	G.L.	Elevation	5843'	Elevation
Log Measured From	K.B.	Ft Above PD	23'	K.B. 5866'
Drilling Measured From	K.B.			D.F. 5585'
				G.L. 5843'

Date	09 - 09 - 2011
Run Number	ONE
Depth Driller	7968'
Present Depth Driller	NA
Depth Logger	7916'
Bottom Logged Interval	7915'
Top Log Interval	2500'
Fluid Level	SURFACE
Type Fluid	WATER
Max. Recorded Temp.	210.2° F
Estimated Cement Top	3126'
Equipment Number	208
Location	GRAND JCT.
Recorded By	INGRAM
Witnessed By	MR. BEAUXIS

	Borehole Record			Casing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	8.750"	856'	4079'	9.625"	36#	SURFACE	856'
TWO	7.875"	4079'	7968'	4.5"	11.6#	SURFACE	7968'

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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 WEATHERFORD OPEN HOLE LOG DATED 8-28-11
SHORT JOINT: 5955' TO 5989' & 6960' TO 6990'
MAIN PASS 5" = 100'
TEMP PASS 2" = 100'
CSG PSI = STATIC

Calibration Report

Database File:	C:\Warrior\Data\Kaufman 7 Pad\kaufman_24a_24_692_cbl_090911.db
Dataset Pathname:	MAIN/pass1.2
Dataset Creation:	Fri Sep 09 13:55:53 2011 by Calc Std Casedhole 10121

Temperature Calibration Report

Serial Number:	216611
Tool Model:	016
Performed:	Fri Oct 24 13:21:19 2008

Point #	Reading		Reference	
1	11136.00	cps	63.28	degF
2	17489.00	cps	104.70	degF
3	28778.00	cps	175.60	degF
4	40401.00	cps	250.00	degF
5	51742.00	cps	321.75	degF
6	57178.00	cps	355.95	degF
7		cps		degF
8		cps		degF
9		cps		degF
10		cps		degF

Gamma Ray Calibration Report

Serial Number:	217692	
Tool Model:	020	
Performed:	Wed Apr 06 13:50:00 2011	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.1000	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	1123	
Tool Model:	004	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	267.267	ft

Master Calibration, performed Tue Sep 06 21:06:38 2011:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.004	1.073	1.000	81.196	78.624	0.801
5FT	-0.001	0.972	1.000	81.196	77.192	0.795
S1	0.004	1.101	0.000	100.000	91.142	-0.386
S2	0.004	1.034	0.000	100.000	97.007	-0.349
S3	0.007	0.967	0.000	100.000	104.157	-0.751
S4	0.005	0.982	0.000	100.000	102.343	-0.500
S5	0.006	1.039	0.000	100.000	96.866	-0.622
S6	0.006	1.114	0.000	100.000	90.291	-0.549
S7	0.007	1.144	0.000	100.000	87.993	-0.643
S8	0.007	1.140	0.000	100.000	88.287	-0.641

Calibration Report

Serial Number:	1123
Tool Model:	004
Performed:	

	Reference (degF)	Reading ()
Low:	0.000	0.000
High:	1.000	1.000
	Gain = 1.000	Offset= 0.000

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MAIN PASS

Database File:	c:\warrior\data\kaufman 7 pad\kaufman_24a_24_692_cbl_090911.db
Dataset Pathname:	MAIN/pass1.2
Presentation Format:	rmws_dsc
Dataset Creation:	Fri Sep 09 13:55:53 2011 by Calc Std Casedhole 10121
Charted by:	Depth in Feet scaled 1:240

12500 CCL 19700 | LTEN | 0 AMPx5 (mV) 20 | 200 VDL 1200
0 GR (GAPI) 150 | 0 (lb) 3000 | 0 AMP (mV) 100
380 TT (usec) 180

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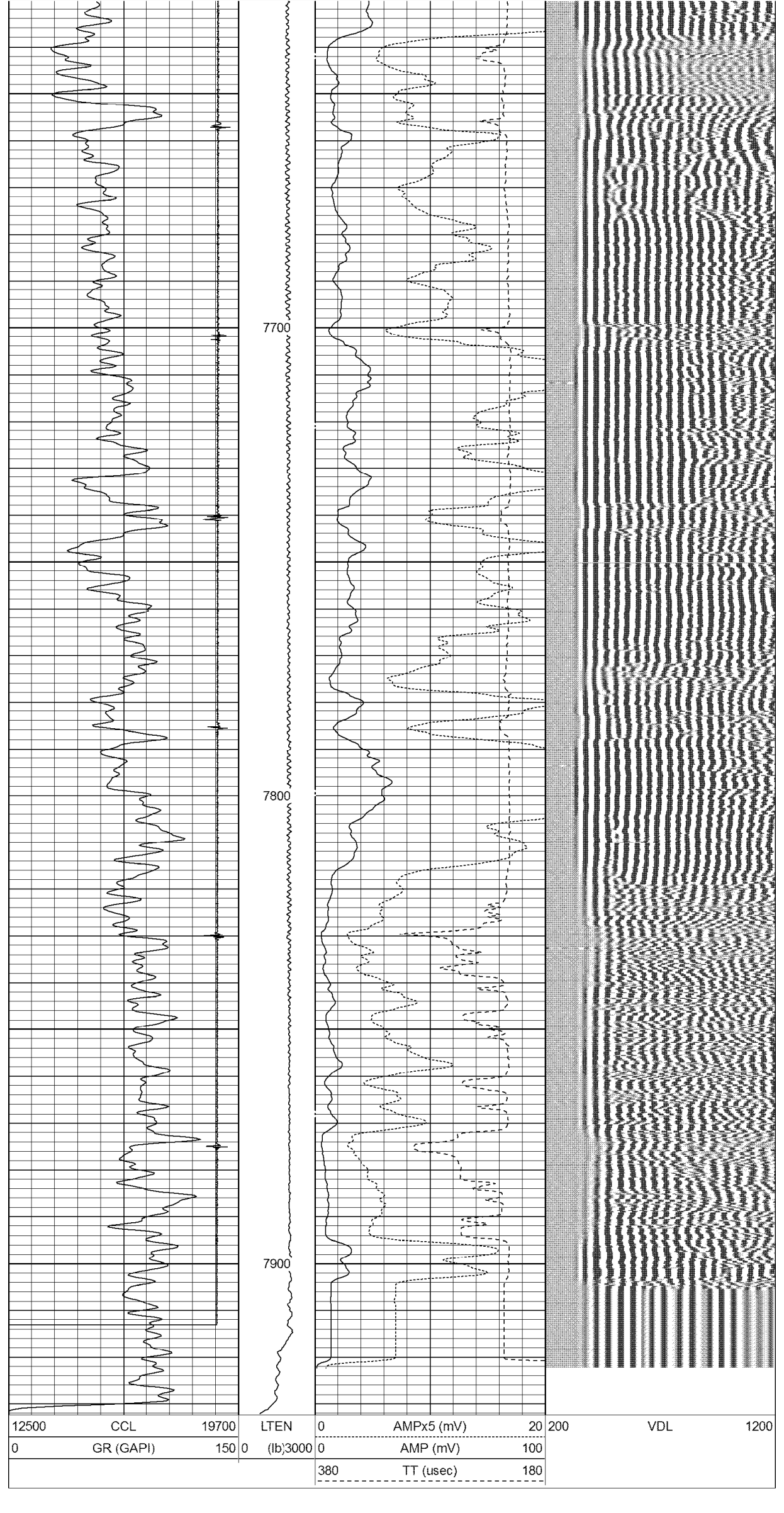
REPEAT PASS

Database File: c:\warrior\data\kaufman 7 pad\kaufman_24a_24_692_cbl_090911.db
Dataset Pathname: REPEAT/pass1.1
Presentation Format: rmws_dsc
Dataset Creation: Fri Sep 09 13:56:59 2011 by Calc Std Casedhole 10121
Charted by: Depth in Feet scaled 1:240

12500 CCL 19700 | LTEN | 0 AMPx5 (mV) 20 | 200 VDL 1200
0 GR (GAPI) 150 | 0 (lb) 3000 | 0 AMP (mV) 100
380 TT (usec) 180



12500 CCL 19700 | LTEN | 0 AMPx5 (mV) 20 | 200 VDL 1200
0 GR (GAPI) 150 | 0 (lb) 3000 | 0 AMP (mV) 100
380 TT (usec) 180

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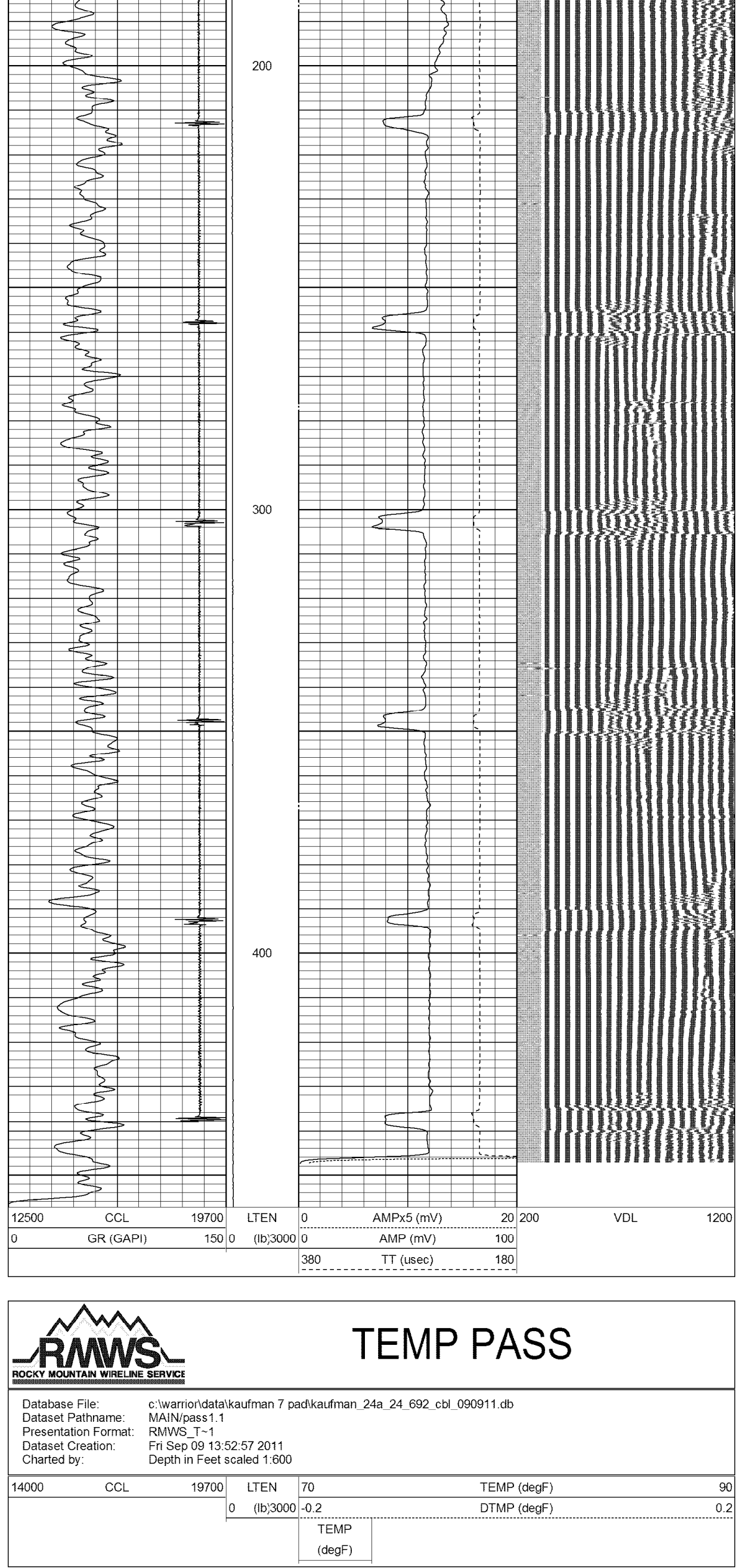
FREE PIPE PASS

Database File: c:\warrior\data\kaufman 7 pad\kaufman_24a_24_692_cbl_090911.db
Dataset Pathname: FREEPIPE/pass1.1
Presentation Format: rmws_dsc
Dataset Creation: Fri Sep 09 13:54:58 2011 by Calc Std Casedhole 10121
Charted by: Depth in Feet scaled 1:240

12500 CCL 19700 | LTEN | 0 AMPx5 (mV) 20 | 200 VDL 1200
0 GR (GAPI) 150 | 0 (lb) 3000 | 0 AMP (mV) 100
380 TT (usec) 180



12500 CCL 19700 | LTEN | 0 AMPx5 (mV) 20 | 200 VDL 1200
0 GR (GAPI) 150 | 0 (lb) 3000 | 0 AMP (mV) 100
380 TT (usec) 180

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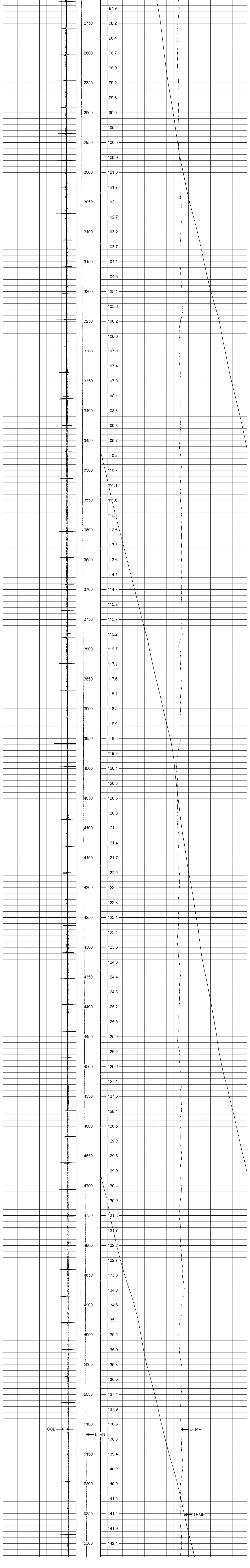
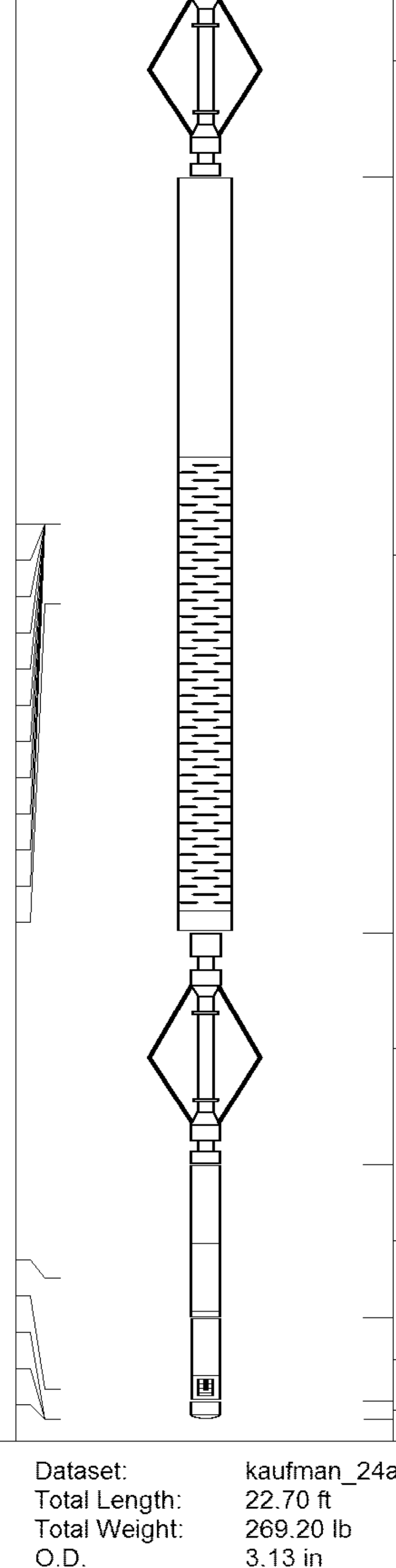
TEMP PASS

Database File: c:\warrior\data\kaufman 7 pad\kaufman_24a_24_692_cbl_090911.db
Dataset Pathname: MAIN/pass1.1
Presentation Format: RMWS_T~1
Dataset Creation: Fri Sep 09 13:52:57 2011
Charted by: Depth in Feet scaled 1:600

14000 CCL 19700 | LTEN | 70 TEMP (degF) 90
0 (lb) 3000 | -0.2 DTMP (degF) 0.2
TEMP (degF)



Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			CHD-AES (000001) Cable Head	1.04	1.69	2.00
			XTU-002 (216414) Crossover Ultrawire Toolbus To Ultralink	1.58	1.69	6.50
CCL	18.97		CCL-028 (1036) CCL UW 3 1/8" SONDEX	1.61	3.13	36.00
			PRC-062 (C-1099) 4ARM 2 3/4" ROLLER	2.90	2.75	34.00
WVF3FT WVFS1 WVFS2 WVFS3 WVFS4 WVFS5 WVFS6 WVFS7 WVFS8 CBLTEMP CBLROT WVF5FT	11.22 11.22 11.22 11.22 11.22 11.22 11.22 11.22 11.22 11.22 11.22 10.22		RBT-004 (1123) Radial Bond Tool (UW 3 1/8)	9.47	3.13	140.00
			PRC-062 (C-1100) 4ARM 2 3/4" ROLLER	2.90	2.75	34.00
GR	1.76		PGR-020 (217692) Production Gamma Ray	1.93	1.69	9.50
TEMP	0.37		PRT-016 (216611) Platinum Resistance Thermometer	1.04	1.69	6.00
TSTAMP ITEMPX HVOLTX	0.00 0.00 0.00		BUL-006 (212965) Bullnose Terminator	0.22	1.69	1.20

Dataset:	kaufman_24a_24_692_cbl_090911.db: field/well/MAIN/pass1.2
Total Length:	22.70 ft
Total Weight:	269.20 lb
O.D.	3.13 in

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Well	KAUFMAN 24A - 24 - 692
Field	MAMM CREEK
County	GARFIELD
State	COLORADO