RMWS
ROCKY MOUNTAIN WIRELINE SERVICE

CEMENT BOND LOG
GAMMA RAY / CCL
TEMPERATURE

Company	**BILL BARRETT CORPORATION**
Well	**KAUFMAN 31B-24-692**
Field	**MAMM CREEK**
County	**GARFIELD** State **COLORADO**

Location: API # : 054-045-19921
SHL: 1414' FNL & 2199' FEL
BHL: 0856' FNL & 1958' FEL

Other Services
3.75" OD
GAUGE RING

SEC 24 TWP 6S RGE 92W

Permanent Datum	G.L.	Elevation	5765'	Elevation	K.B. 5788' D.F. 5788' G.L. 5765'
Log Measured From	K.B.	Ft Above PD	23'		
Drilling Measured From	K.B.				

Date	11-25-2011	
Run Number	ONE	
Depth Driller	7435'	
Present Depth Driller	7355'	
Depth Logger	7355'	
Bottom Logged Interval	7354'	
Top Log Interval	1900'	
Fluid Level	SURFACE	
Type Fluid	WATER	
Max. Recorded Temp.	207.9° F	
Estimated Cement Top	2550'	
Equipment Number	214	
Location	GRAND JCT.	
Recorded By	COVINGTON	HANNA
Witnessed By	MR. ETTER	

Borehole Record			Casing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	8.750"	840'	5404'	9.625"	36#	SURFACE	840'
TWO	7.880"	5404'	7435'	4.500"	11.6#	SURFACE	7434'

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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 TO WEATHERFORD OPEN HOLE LOG
DATED: 09-24-2011

SHORT JOINT: 5392' TO 5425' & 6407' TO 6438'

MAIN PASS: 5" = 100'
TEMP PASS: 2" = 100'
CSG PSI: STATIC

Calibration Report

Database File: c:\warrior\data\kaufman 6\kaufman_31b_24_692_cbl_112511.db
Dataset Pathname: MAIN/MERGE1.1
Dataset Creation: Fri Nov 25 13:44:34 2011

Temperature Calibration Report

Serial Number: 217894
Tool Model: 016
Performed: Fri Oct 24 13:23:59 2008

Point #	Reading		Reference	
1	13298.00	cps	75.97	degF
2	17844.00	cps	104.32	degF
3	29434.00	cps	175.71	degF
4	41028.00	cps	246.70	degF
5	52674.00	cps	317.75	degF
6	58555.00	cps	353.61	degF
7		cps		degF
8		cps		degF
9		cps		degF
10		cps		degF

Gamma Ray Calibration Report

Serial Number: 000001
Tool Model: 020
Performed: Sun Jun 13 13:33:21 1993

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 1.0000 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: 1122
Tool Model: 004

Calibration Casing Diameter: 4.500 in
Calibration Depth: 422.764 ft

Master Calibration, performed Fri Nov 25 08:35:31 2011:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.000	0.551	0.000	81.196	78.556	-0.004
5FT	0.000	0.657	0.000	81.196	80.689	-0.003
S1	0.000	0.631	0.000	100.000	158.579	0.000
S2	0.000	0.604	0.000	100.000	165.489	0.000
S3	0.000	0.529	0.000	100.000	189.140	0.000
S4	0.000	0.491	0.000	100.000	203.660	0.000
S5	0.000	0.493	0.000	100.000	203.029	0.000
S6	0.000	0.532	0.000	100.000	187.821	0.000
S7	0.000	0.584	0.000	100.000	171.095	0.000
S8	0.000	0.631	0.000	100.000	158.407	0.000

Calibration Report

Serial Number: 1122
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 6\kaufman_31b_24_692_cbl_112511.db
Dataset Pathname: MAIN/MERGE1.1
Presentation Format: rmws_dsc
Dataset Creation: Fri Nov 25 13:44:34 2011
Charted by: Depth in Feet scaled 1:240

14000	Collar Locator	19600	LTEN	0	AMP AMPLITUDE (mV)	20	200	VDL	1200
0	Gamma Ray (GAPI)	150	0 (lb) 3000	0	AMPLITUDE (mV)	100			
				380	TRAVEL TIME (usec)	180			

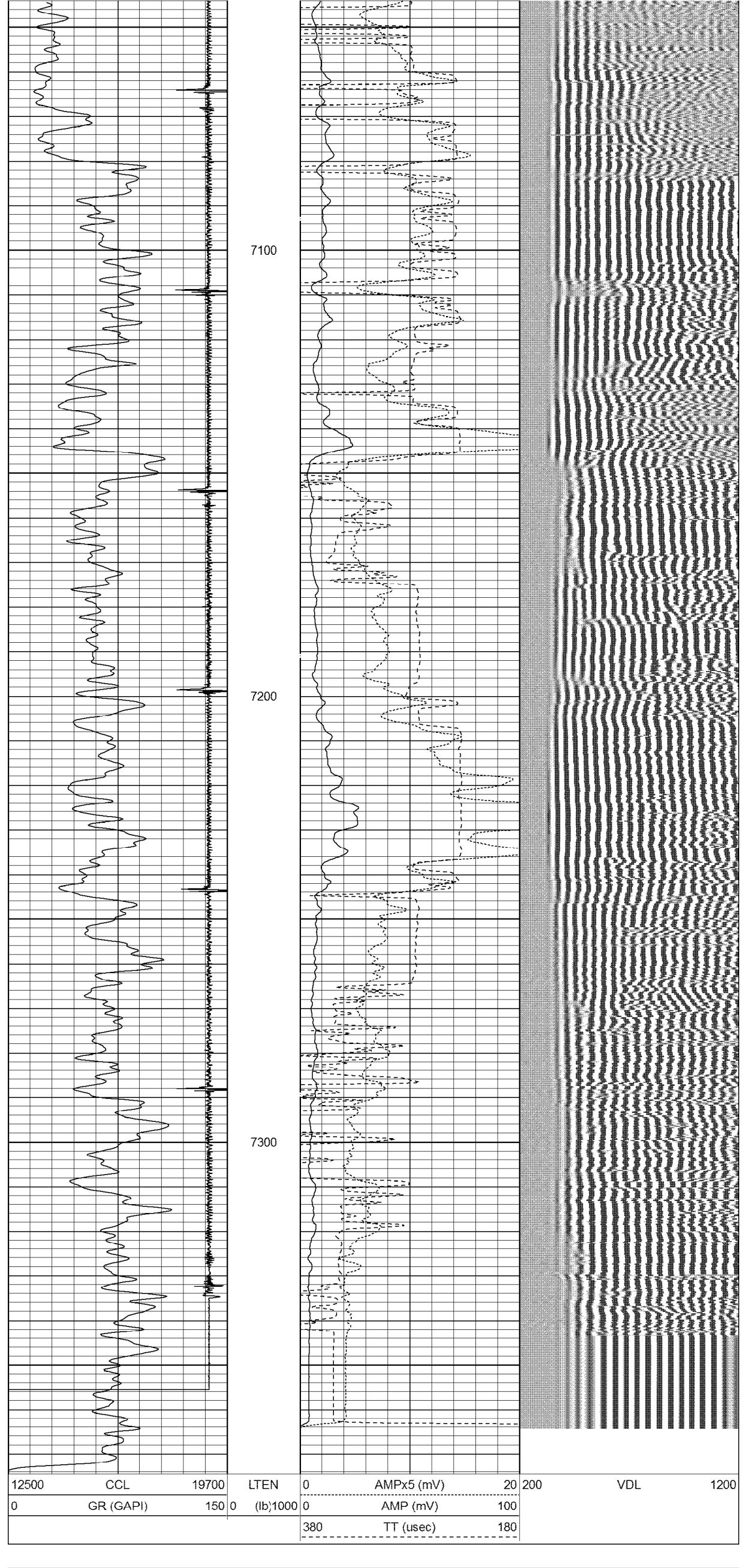
14000 Collar Locator 19600 | LTEN | 0 AMP AMPLITUDE (mV) 20 | 200 VDL 1200
0 Gamma Ray (GAPI) 150 | 0 (lb) 3000 | 0 AMPLITUDE (mV) 100
380 TRAVEL TIME (usec) 180

ROCKY MOUNTAIN WIRELINE SERVICE

REPEAT PASS

Database File: c:\warrior\data\kaufman 6\kaufman_31b_24_692_cbl_112511.db
Dataset Pathname: DOWN/REPEAT1.1
Presentation Format: rmws_dsc
Dataset Creation: Fri Nov 25 13:59:10 2011 by Calc SCH 110930
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) 1000 | 0 AMP (mV) 100
380 TT (usec) 180



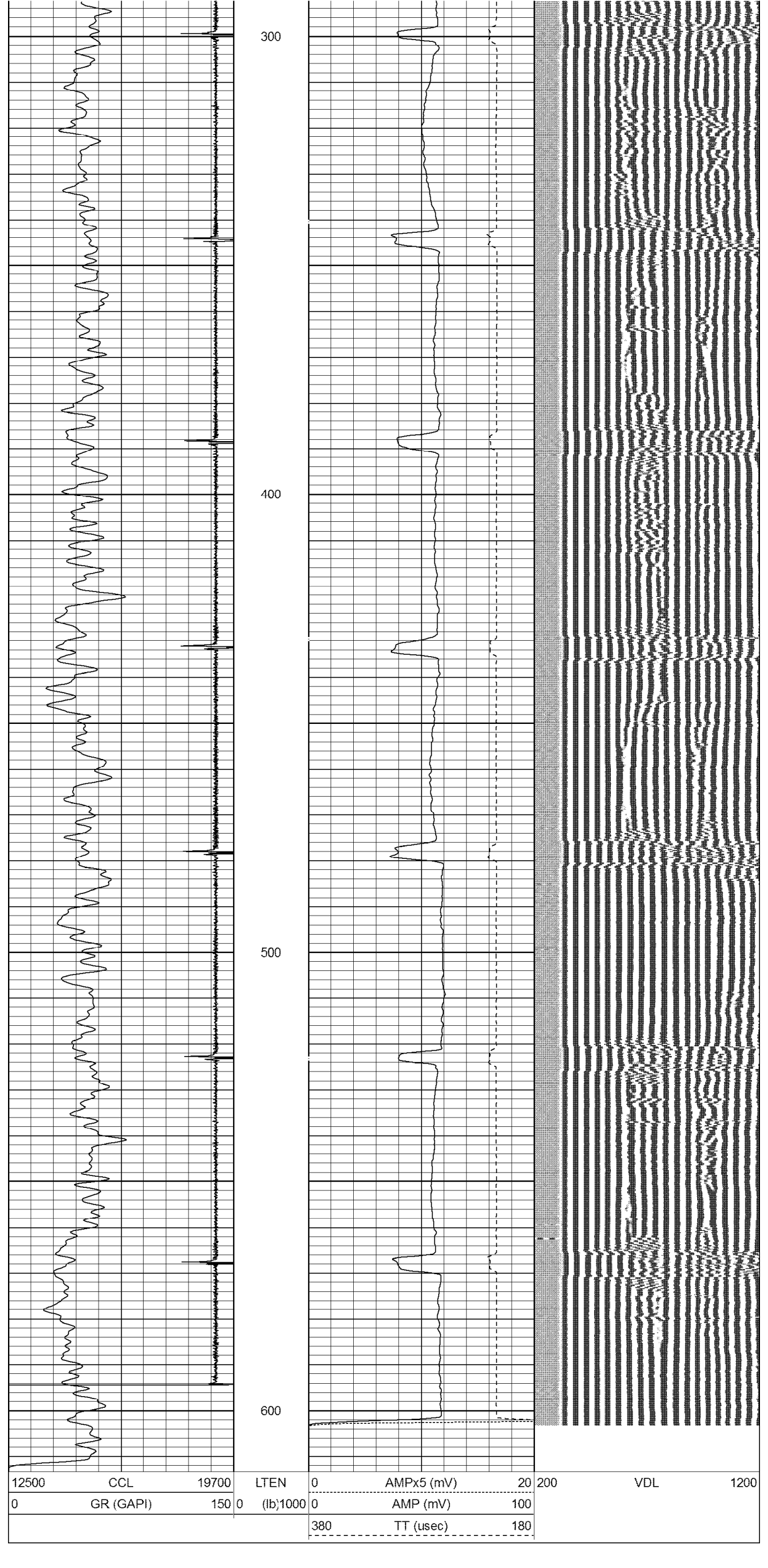
12500 CCL 19700 | LTEN | 0 AMPx5 (mV) 20 | 200 VDL 1200
0 GR (GAPI) 150 | 0 (lb) 1000 | 0 AMP (mV) 100
380 TT (usec) 180

ROCKY MOUNTAIN WIRELINE SERVICE

FREE PIPE PASS

Database File: c:\warrior\data\kaufman 6\kaufman_31b_24_692_cbl_112511.db
Dataset Pathname: REPEAT/FREEPIPE1
Presentation Format: rmws_dsc
Dataset Creation: Fri Nov 25 13:56:58 2011 by Calc SCH 110930
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) 1000 | 0 AMP (mV) 100
380 TT (usec) 180



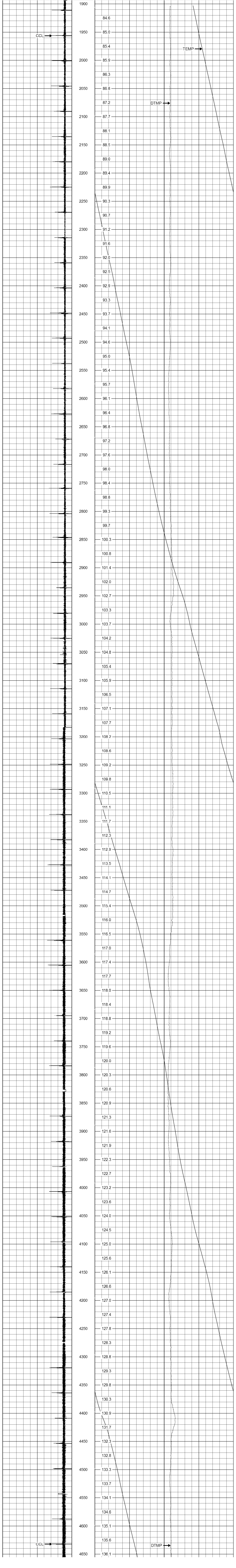
12500 CCL 19700 | LTEN | 0 AMPx5 (mV) 20 | 200 VDL 1200
0 GR (GAPI) 150 | 0 (lb) 1000 | 0 AMP (mV) 100
380 TT (usec) 180

ROCKY MOUNTAIN WIRELINE SERVICE

TEMP PASS

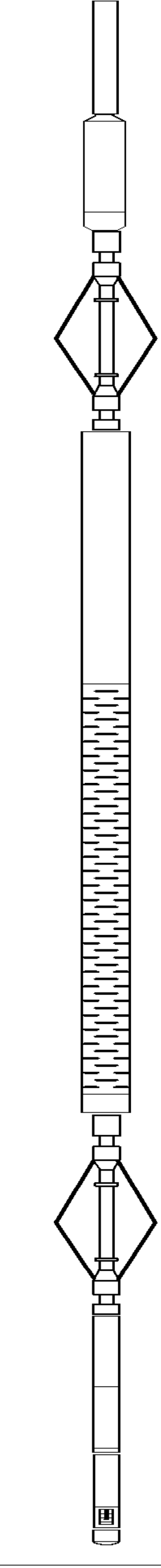
Database File: c:\warrior\data\kaufman 6\kaufman_31b_24_692_cbl_112511.db
Dataset Pathname: MAIN/TEMP1.1
Presentation Format: rmws_temp
Dataset Creation: Fri Nov 25 14:01:24 2011 by Calc SCH 110930
Charted by: Depth in Feet scaled 1:600

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



Sensor	Offset (ft)
CCL	18.71
WVF3FT	11.09
WVFS1	11.09
WVFS2	11.09
WVFS3	11.09
WVFS4	11.09
WVFS5	11.09
WVFS6	11.09
WVFS7	11.09
WVFS8	11.09
CBLTEMP	11.09
CBLROT	11.09
WVF5FT	10.09
GR	1.76
TEMP	0.37
TSTAMP	0.00
ITEMPX	0.00
HVOLTX	0.00

Schematic



Description	Len (ft)	OD (in)	Wt (lb)
CHD-AES (000001) Cable Head	1.04	1.69	2.00
XTU-001 (000001) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
CCL-028 (1037) CCL UW 3 1/8" SONDEX	1.61	3.13	36.00
PRC-034 (C-1213) Production Roller Centraliser (4 Arm) SONDEX	2.77	1.69	13.00
RBT-004 (1122) Radial Bond Tool (UW 3 1/8)	9.47	3.13	140.00
PRC-034 (C-1214) Production Roller Centraliser (4 Arm) SONDEX	2.77	1.69	13.00
PGR-020 (000001) Production Gamma Ray	1.93	1.69	9.50
PRT-016 (217894) Platinum Resistance Thermometer	1.04	1.69	6.00
BUL-006 (000002) Bullnose Terminator	0.22	1.69	1.20

Dataset:	kaufman_31b_24_692_cbl_112511.db: field/well/MAIN/MERGE1.1
Total Length:	22.43 ft
Total Weight:	227.20 lb
O.D.	3.13 in

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Well	KAUFMAN 31B-24-692
Field	MAMM CREEK
County	GARFIELD
State	COLORADO