RMWS
ROCKY MOUNTAIN WIRELINE SERVICE

# CEMENT BOND LOG
# GAMMARAY / CCL
# TEMPERATURE

| | |
|---|---|
| Company | BILL BARRETT CORPORATION |
| Well | GGU FEDERAL 41D-29-691 |
| Field | GIBSON GULCH |
| County | GARFIELD |
| State | COLORADO |

Location: API # : 05-045-19795
SHL: 1224' FNL & 1308' FEL
BHL: 0165' FNL & 0664' FEL
SEC 29 TWP 6S RGE 91W

Other Services
3.75" GAUGE
RING

| | | | |
|---|---|---|---|
| Permanent Datum | G.L. | Elevation 6104' | Elevation<br>K.B. 6127'<br>D.F. 6126'<br>G.L. 6104' |
| Log Measured From | K.B. | 23' Ft Above PD | |
| Drilling Measured From | K.B. | | |

| | |
|---|---|
| Date | 04-01-2011 |
| Run Number | ONE |
| Depth Driller | 7575' |
| Present Depth Driller | 7491' |
| Depth Logger | 7491' |
| Bottom Logged Interval | 7491' |
| Top Log Interval | 2300' |
| Fluid Level | SURFACE |
| Type Fluid | WATER |
| Max. Recorded Temp. | 209.6° F |
| Estimated Cement Top | 2760' |
| Equipment Number | 216 |
| Location | GRAND JCT. |
| Recorded By | HARRIS |
| Witnessed By | MR. ETTER |

| Borehole Record | | | | Casing Record | | | |
|---|---|---|---|---|---|---|---|
| Run Number | Bit | From | To | Size | Weight | From | To |
| ONE | 8.75" | 736' | 5013' | 9.625" | 36# | SURFACE | 736' |
| TWO | 7.88" | 5013' | 7575' | 4.5" | 11.6# | SURFACE | 7575' |

<<< Fold Here >>>

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 WEATHERFORD OH LOG DATED 2-06-2011**
**SHORT JOINTS AT 5026' - 5048' AND 6208' - 6230'**
**MAIN PASS 5" = 100'**
**TEMP PASS 2" = 100'**
**CSG PSI = 0**

## Calibration Report

Database File: C:\Warrior\Data\MDP 11\040111_bbc_swanson_41D.db
Dataset Pathname: MAIN/pass3
Dataset Creation: Fri Apr 01 17:21:18 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: AJD00166
Tool Model: 020
Performed: Thu Jul 30 19:58:24 2009

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 1.2000 GAPI/cps

### Segmented Cement Bond Log Calibration Report

Serial Number: 1122
Tool Model: 004

Calibration Casing Diameter: 4.500 in
Calibration Depth: 112.813 ft

Master Calibration, performed Fri Apr 01 14:42:01 2011:

| | Raw (v) | | Calibrated (mv) | | Results | |
|---|---|---|---|---|---|---|
| | Zero | Cal | Zero | Cal | Gain | Offset |
| 3FT | 0.000 | 1.044 | 0.000 | 81.196 | 77.743 | 0.000 |
| 5FT | 0.000 | 0.999 | 0.000 | 81.196 | 81.276 | 0.000 |
| S1 | 0.000 | 1.087 | 0.000 | 100.000 | 91.963 | 0.000 |
| S2 | 0.000 | 1.101 | 0.000 | 100.000 | 90.840 | 0.000 |
| S3 | 0.000 | 1.044 | 0.000 | 100.000 | 95.794 | 0.000 |
| S4 | 0.000 | 1.029 | 0.000 | 100.000 | 97.178 | 0.000 |
| S5 | 0.000 | 1.022 | 0.000 | 100.000 | 97.883 | 0.000 |
| S6 | 0.000 | 1.028 | 0.000 | 100.000 | 97.279 | 0.000 |
| S7 | 0.000 | 1.066 | 0.000 | 100.000 | 93.766 | 0.000 |
| S8 | 0.000 | 1.090 | 0.000 | 100.000 | 91.774 | 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\mdp 11\040111_bbc_swanson_41d.db
Dataset Pathname: MAIN/pass4
Presentation Format: rmws_dsc
Dataset Creation: Sat Apr 02 14:34:21 2011
Charted by: Depth in Feet scaled 1:240

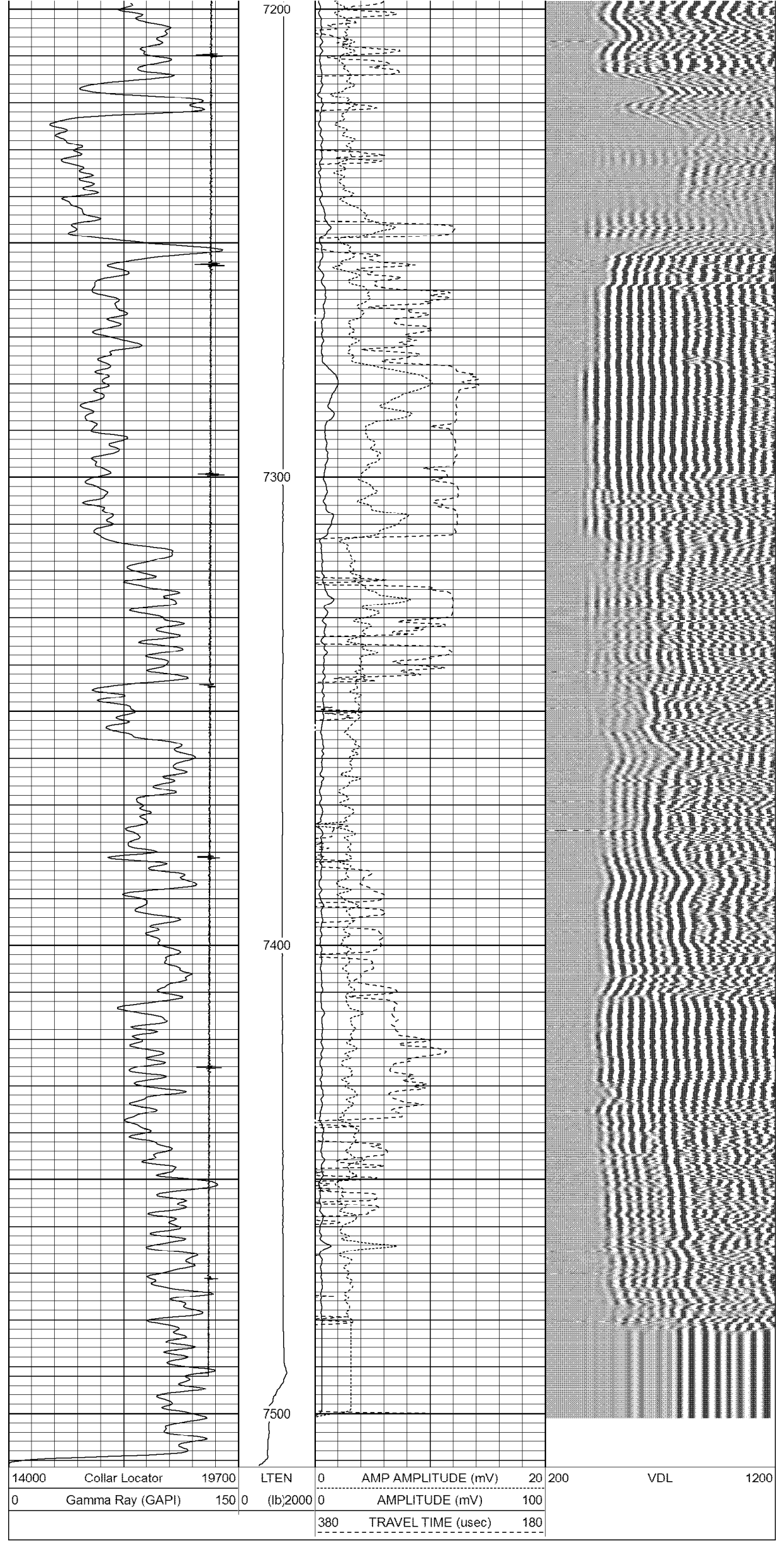
| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 14000 | Collar Locator | 19600 | LTEN | | 0 | AMP AMPLITUDE (mV) | 20 | 200 | VDL | 1200 |
| 0 | Gamma Ray (GAPI) | 150 | 0 | (lb) 2000 | 0 | AMPLITUDE (mV) | 100 | | | |
| | | | | | 380 | TRAVEL TIME (usec) | 180 | | | |

# MAIN PASS

# REPEAT PASS

Database File: c:\warrior\data\mdp 11\040111_bbc_swanson_41d.db
Dataset Pathname: REPEAT/pass1
Presentation Format: rmws_dsc
Dataset Creation: Fri Apr 01 15:08:02 2011 by Log Std Casedhole 07122
Charted by: Depth in Feet scaled 1:240

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 14000 | Collar Locator | 19700 | LTEN | | 0 | AMP AMPLITUDE (mV) | 20 | 200 | VDL | 1200 |
| 0 | Gamma Ray (GAPI) | 150 | 0 | (lb) 2000 | 0 | AMPLITUDE (mV) | 100 | | | |
| | | | | | 380 | TRAVEL TIME (usec) | 180 | | | |



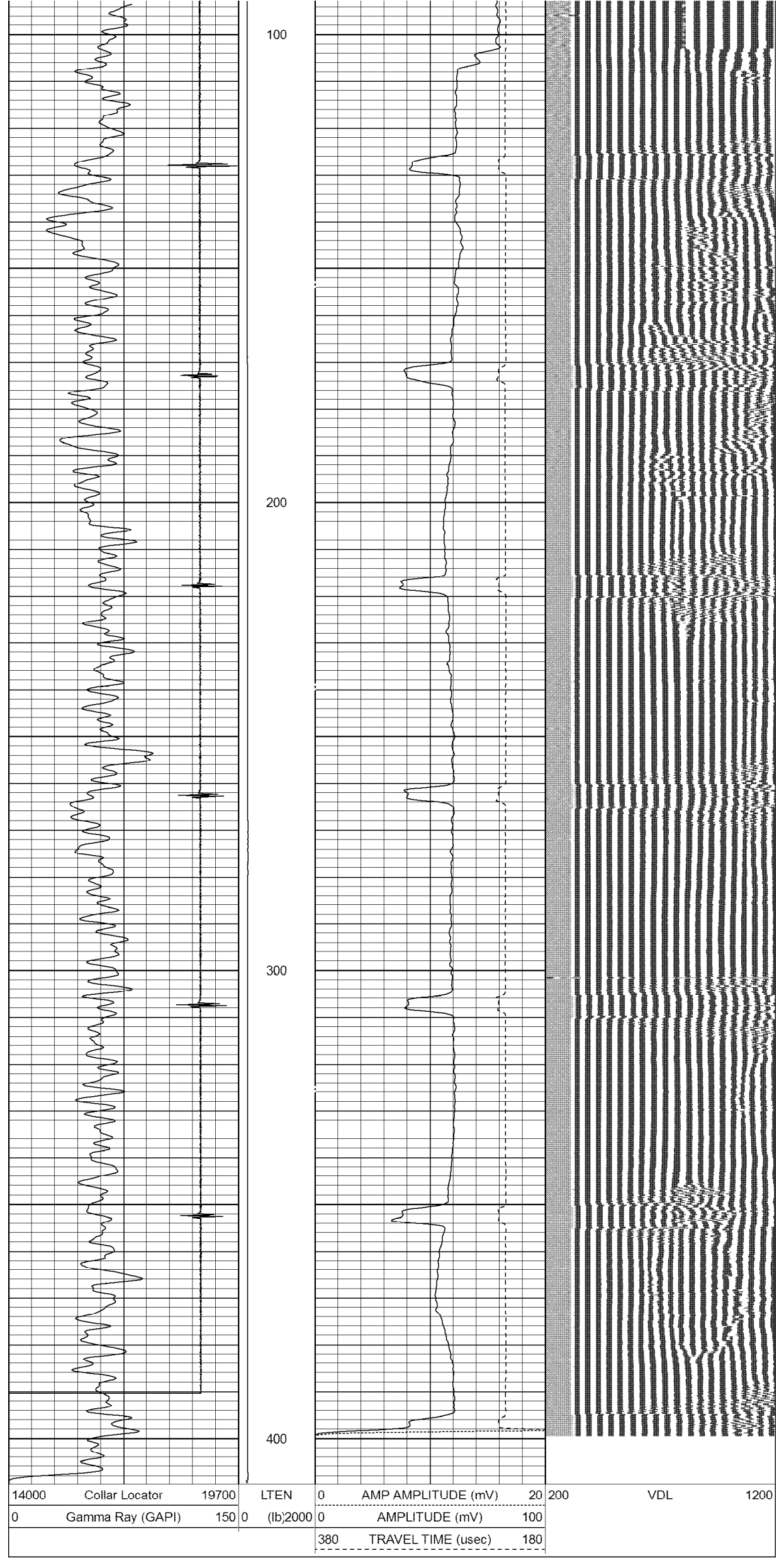
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 14000 | Collar Locator | 19700 | LTEN | | 0 | AMP AMPLITUDE (mV) | 20 | 200 | VDL | 1200 |
| 0 | Gamma Ray (GAPI) | 150 | 0 | (lb) 2000 | 0 | AMPLITUDE (mV) | 100 | | | |
| | | | | | 380 | TRAVEL TIME (usec) | 180 | | | |

# REPEAT PASS

# FREE PIPE PASS

Database File: c:\warrior\data\mdp 11\040111_bbc_swanson_41d.db
Dataset Pathname: FREE/pass1
Presentation Format: rmws_dsc
Dataset Creation: Fri Apr 01 14:43:34 2011 by Log Std Casedhole 07122
Charted by: Depth in Feet scaled 1:240

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 14000 | Collar Locator | 19700 | LTEN | | 0 | AMP AMPLITUDE (mV) | 20 | 200 | VDL | 1200 |
| 0 | Gamma Ray (GAPI) | 150 | 0 | (lb) 2000 | 0 | AMPLITUDE (mV) | 100 | | | |
| | | | | | 380 | TRAVEL TIME (usec) | 180 | | | |



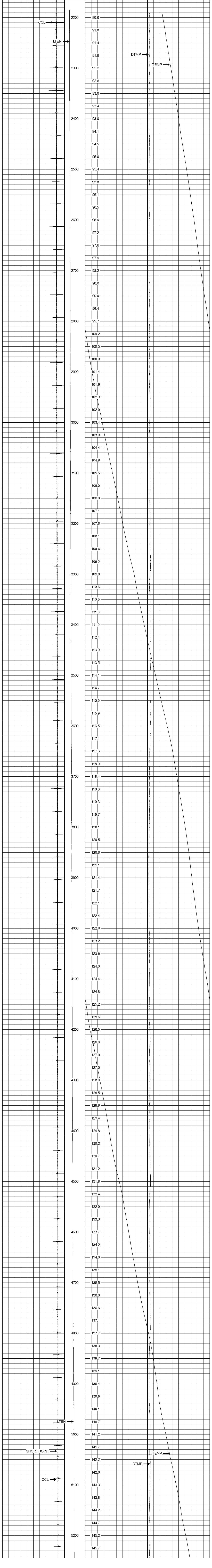
| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 14000 | Collar Locator | 19700 | LTEN | | 0 | AMP AMPLITUDE (mV) | 20 | 200 | VDL | 1200 |
| 0 | Gamma Ray (GAPI) | 150 | 0 | (lb) 2000 | 0 | AMPLITUDE (mV) | 100 | | | |
| | | | | | 380 | TRAVEL TIME (usec) | 180 | | | |

# FREE PIPE PASS

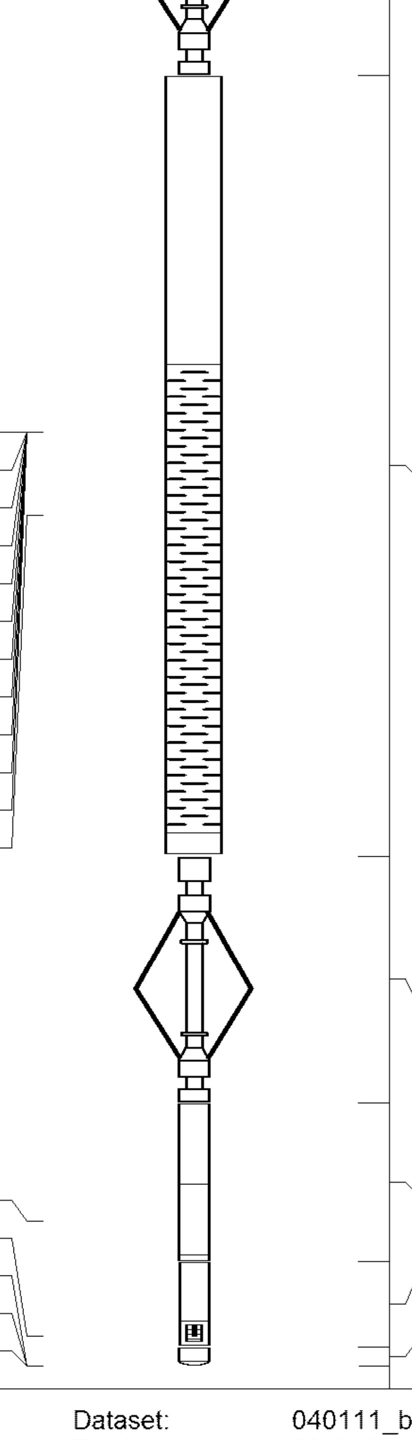
# TEMP PASS

Database File: c:\warrior\data\mdp 11\040111_bbc_swanson_41d.db
Dataset Pathname: MAIN/pass2
Presentation Format: rmws_tem
Dataset Creation: Fri Apr 01 17:05:02 2011
Charted by: Depth in Feet scaled 1:600

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 14000 | CCL | 19700 | LTEN | | 50 | TEMP (degF) | 75 |
| | | | 0 | (lb) 2000 | -0.5 | DTMP (degF) | 0.5 |
| | | | | | TEMP (degF) | | |



# TEMP PASS

| Sensor | Offset (ft) | Schematic | Description | Len (ft) | OD (in) | Wt (lb) |
|---|---|---|---|---|---|---|
| | |  | CHD-AES (000001)<br>Cable Head | 1.04 | 1.69 | 2.00 |
| | | | XTU-002 (217217)<br>Crossover Ultrawire Toolbus To Ultralink | 1.58 | 1.69 | 6.50 |
| CCL | 19.17 | | CCL-028 (1037)<br>CCL UW 3 1/8" SONDEX | 1.61 | 3.13 | 36.00 |
| | | | PRC-022 (215771)<br>( 6 ARM 2 3/8" ROLLER CENTRALIZER SONDEX ) | 3.00 | 2.38 | 21.40 |
| WVF3FT<br>WVFS1<br>WVFS2<br>WVFS3<br>WVFS4<br>WVFS5<br>WVFS6<br>WVFS7<br>WVFS8<br>CBLTEMP<br>CBLROT<br>WVF5FT | 11.32<br>11.32<br>11.32<br>11.32<br>11.32<br>11.32<br>11.32<br>11.32<br>11.32<br>11.32<br>11.32<br>10.32 | | RBT-004 (1122)<br>Radial Bond Tool (UW 3 1/8) | 9.47 | 3.13 | 140.00 |
| | | | PRC-022 (215770)<br>( 6 ARM 2 3/8" ROLLER CENTRALIZER SONDEX ) | 3.00 | 2.38 | 21.40 |
| GR | 1.76 | | PGR-020 (AJD00166)<br>Production Gamma Ray | 1.93 | 1.69 | 9.50 |
| TEMP | 0.37 | | PRT-016 (217894)<br>Platinum Resistance Thermometer | 1.04 | 1.69 | 6.00 |
| TSTAMP<br>ITEMPX<br>HVOLTX | 0.00<br>0.00<br>0.00 | | BUL-006 (212965)<br>Bullnose Terminator | 0.22 | 1.69 | 1.20 |

| | |
|---|---|
| Dataset: | 040111_bbc_swanson_41D.db: field/well/MAIN/pass3 |
| Total Length: | 22.90 ft |
| Total Weight: | 244.00 lb |
| O.D. | 3.13 in |

| | |
|---|---|
| Company | BILL BARRETT CORPORATION |
| Well | GGU FEDERAL 41D-29-691 |
| Field | GIBSON GULCH |
| County | GARFIELD |
| State | COLORADO |