RELIANCE
OILFIELD SERVICES

# Radial Cement Bond
# Gamma Ray
# Casing Collar Log

Company TEP Rocky Mountain LLC
Well Strait Bottom Ranch SG 322-22
Field Grand Valley
County Garfield State Colorado

Company TEP Rocky Mountain LLC
Well Strait Bottom Ranch SG 322-22
Field Grand Valley
County Garfield
State Colorado

Location: API # : 05-045-24012

SEC 22 TWP 7S RGE 96W

Other Services
---

| | | | |
|---|---|---|---|
| Permanent Datum | Ground Level | Elevation | 5665' |
| Log Measured From | Kelly Bushing | 24 FT | |
| Drilling Measured From | Kelly Bushing | | |

Elevation
K.B. 5689'
D.F. 5688'
G.L. 5665'

| | | | |
|---|---|---|---|
| Date | 07-APR-2020 | | |
| Run Number | One | | |
| Depth Driller | 6198 FT | | |
| Depth Logger | 6138 FT | | |
| Bottom Logged Interval | 6123 FT | | |
| Top Log Interval | Surface | | |
| Open Hole Size | 8.750" | | |
| Type Fluid | Fresh Water | | |
| Density / Viscosity | 8.34 lb/gal | | |
| Max. Recorded Temp. | 189°F | | |
| Estimated Cement Top | See Log | | |
| Time Well Ready | ROA | | |
| Time Logger on Bottom | 11:20 | | |
| Equipment Number | HD-0359 | | |
| Location | Grand Junction, CO | | |
| Recorded By | A. Ellsworth | | |
| Witnessed By | --- | | |

| Borehole Record | | | | Tubing Record | | | |
|---|---|---|---|---|---|---|---|
| Run Number | Bit | From | To | Size | Weight | From | To |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| Casing Record | Size (in) | Wgt (lbs/Ft) | Grade | Top | Bottom |
|---|---|---|---|---|---|
| Surface Casing | 9 5/8 | 32.3 | H-40 | Surface | 1002 FT |
| Intermediate #1 | 4 1/2 | 11.6 | P-110 | Surface | 6154 FT |
| Intermediate #2 | | | | | |
| Liner | | | | | |

<<< 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.

## Comments

Log ran as per customer request
Depth referenced to Kelly Bushing at 24 FT
Marker Joint logged from 3618 - 3640 FT
Log ran with 0 PSI Surface Induced Pressure

Thank you for choosing Reliance Oilfield Services, LLC!!

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## Main Pass

Recorded With 0 PSI Surface Induced Pressure

| | |
|---|---|
| Database File | tep\tep_strait bottom ranch sg 322-22_rbl_04-07-20\processed_tep_strait bottom ranch sg 322-22_rbl_04- |
| Dataset Pathname | Main.1 |
| Presentation Format | ros_radii_tep |
| Dataset Creation | Wed Apr 08 09:59:29 2020 |
| Charted by | Depth in Feet scaled 1:240 |

Gamma Ray
0 (GAPI) 200
Line Speed
-150 (ft/min) 150
Line Tension
0 (lb) 2000
Differential Temperature
-2 (degF) 2
Temperature
0 (degF) 20
*Casing Collar Locator*

3' Amplitude
0 (mV) 100
3' Amplitude x 5
0 (mV) 20
3' Travel Time
300 (usec) 200

5' Variable Density Log
200 (usec) 1200

Sector Map

Average Amplitude
0 150
Mimimum Amplitude
0 150
Maximum Amplitude
0 150

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# Repeat Pass

Recorded With 0 PSI Surface Induced Pressure

| | |
|---|---|
| Database File | tep\tep_strait bottom ranch sg 322-22_rbl_04-07-20\processed_tep_strait bottom ranch sg 322-22_rbl_04- |
| Dataset Pathname | Repeat.2 |
| Presentation Format | ros_radii_tep |
| Dataset Creation | Wed Apr 08 10:07:39 2020 |
| Charted by | Depth in Feet scaled 1:240 |

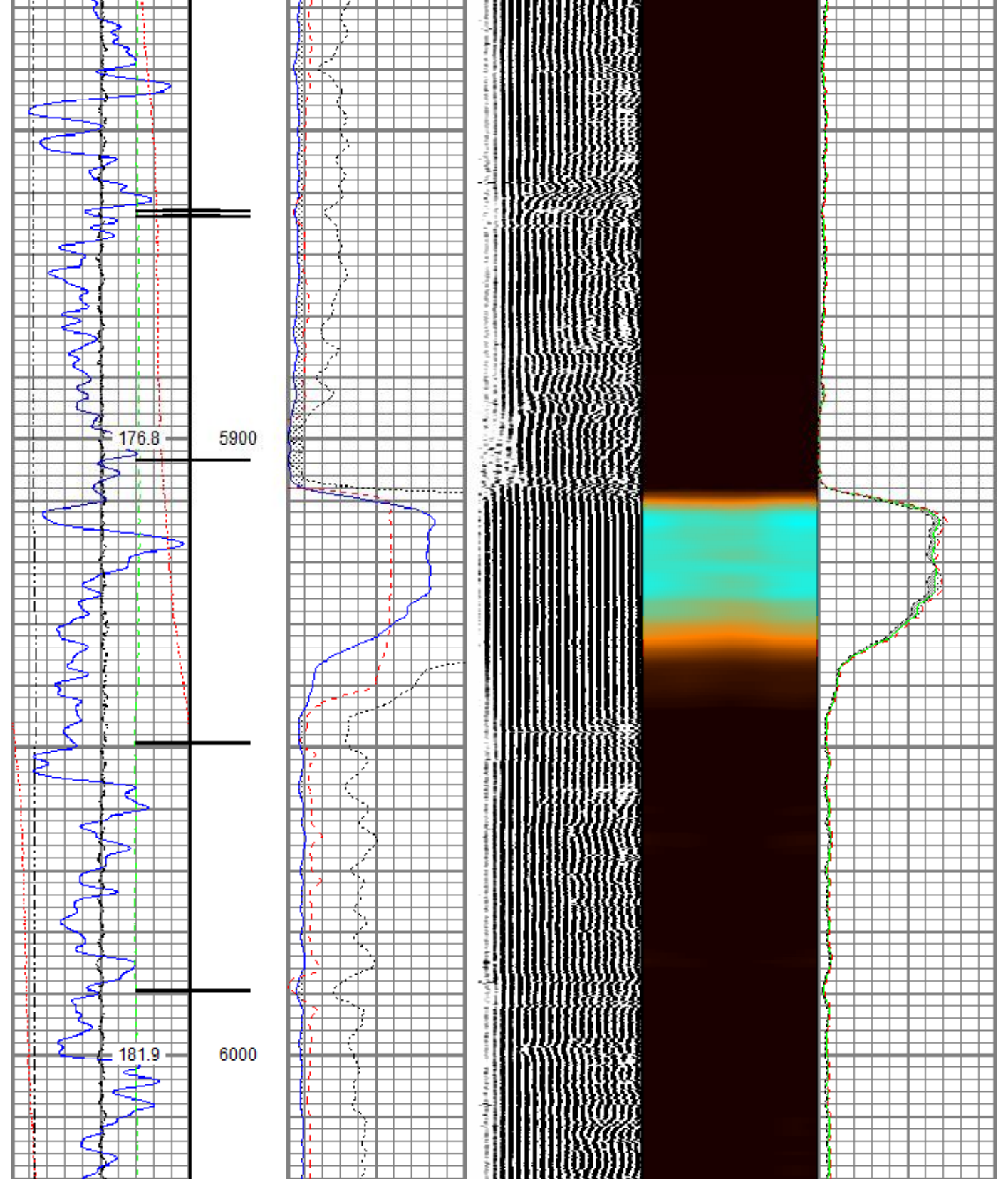
Gamma Ray
0 (GAPI) 200
Line Speed
-150 (ft/min) 150
Line Tension
0 (lb) 2000
Differential Temperature
-2 (degF) 2
Temperature
0 (degF) 20

3' Amplitude
0 (mV) 100
3' Amplitude x 5
0 (mV) 20
3' Travel Time
300 (usec) 200

5' Variable Density Log
200 (usec) 1200

Sector Map

Average Amplitude
0 150
Mimimum Amplitude
0 150
Maximum Amplitude
0 150



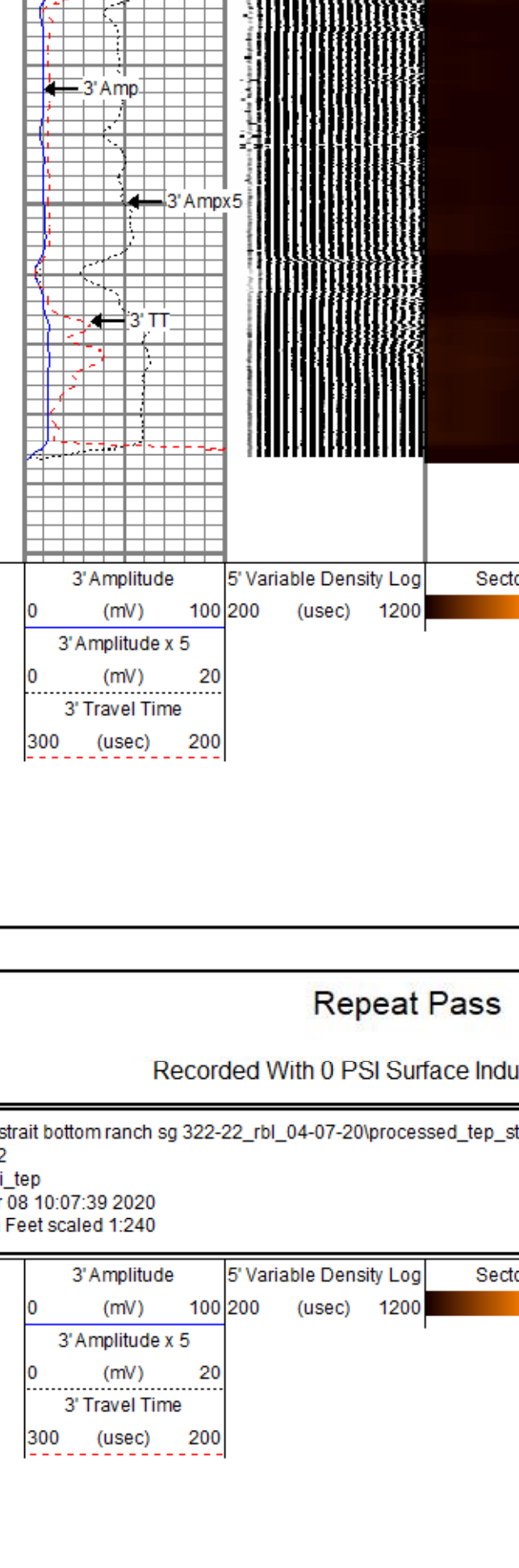
Gamma Ray
0 (GAPI) 200
Line Speed
-150 (ft/min) 150
Line Tension
0 (lb) 2000
Differential Temperature
-2 (degF) 2
Temperature
0 (degF) 20

3' Amplitude
0 (mV) 100
3' Amplitude x 5
0 (mV) 20
3' Travel Time
300 (usec) 200

5' Variable Density Log
200 (usec) 1200

Sector Map

Average Amplitude
0 150
Mimimum Amplitude
0 150
Maximum Amplitude
0 150



| Sensor | Offset (ft) | Description | Length (ft) | O.D. (in) | Weight (lb) |
|---|---|---|---|---|---|
| | | Titan CHD-14375 GO<br>Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck | 1.03 | 1.44 | 3.60 |
| | | BTA-MUD<br>BTA 2-3/4" Roller 6 Arm Centralizer with Reversible Ends | 2.92 | 2.72 | 25.00 |
| TEMP | 17.08 | | | | |
| WVFS8 | 14.84 | Probe Radii-2750 RBT (FW0712-020)<br>Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub | 9.39 | 2.75 | 105.00 |
| WVFS7 | 14.84 | | | | |
| WVFS6 | 14.84 | | | | |
| WVFS5 | 14.84 | | | | |
| WVFS4 | 14.84 | | | | |
| WVFS3 | 14.84 | | | | |
| WVFS2 | 14.84 | | | | |
| WVFS1 | 14.84 | | | | |
| WVFCAL | 14.84 | | | | |
| WVF3FT | 14.84 | | | | |
| WVF5FT | 13.84 | | | | |
| | | BTA-MUD<br>BTA 2-3/4" Roller 6 Arm Centralizer with Reversible Ends | 2.92 | 2.72 | 25.00 |
| CCL$2 | 6.79 | | | | |
| CCL$1 | 6.79 | | | | |
| GR | 5.55 | Probe GR-CCL-2750 GOB (070319)<br>Probe 2-3/4" rev.2 Digital Scintillation Gamma Ray/CCL Combined with GO Bottom | 4.51 | 2.75 | 55.00 |
| | | BTA-MUD<br>BTA 2-3/4" Roller 6 Arm Centralizer with Reversible Ends | 2.92 | 2.72 | 25.00 |
| LOCTIM | 0.00 | | | | |
| UTCTIM | 0.00 | GO BN-14375<br>GO 1-7/16" Bull Nose with Go Box Top | 0.25 | 1.44 | 1.00 |

Dataset: processed_tep_strait bottom ranch sg 322-22_rbl_04-07-20.db: field/well/run1/Main.1
Total length: 23.93 ft
Total weight: 239.60 lb
O.D.: 2.75 in

## Calibration Report

Database File c:\programdata\warrior\data\tep\tep_strait bottom ranch sg 322-22_rbl_04-07-20\processed_tep_strait bottom
Dataset Pathname Main.1
Dataset Creation Wed Apr 08 09:59:29 2020

### Gamma Ray Calibration Report

| | | |
|---|---|---|
| Serial Number: | 070319 | |
| Tool Model: | 2750 GOB | |
| Performed: | (Not Performed) | |
| 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: | FW0712-020 | |
| Tool Model: | 2750 RBT | |
| Calibration Casing Diameter: | 4.500 | in |
| Calibration Depth: | 152.583 | ft |

Master Calibration, performed (Derived):

| | Raw (v) | | Calibrated (mv) | | Results | |
|---|---|---|---|---|---|---|
| | Zero | Cal | Zero | Cal | Gain | Offset |
| 3' | -0.002 | 0.896 | 0.800 | 81.196 | 89.494 | 1.023 |
| CAL | -0.005 | 0.754 | | | | |
| 5' | 0.005 | 0.836 | 0.800 | 81.196 | 96.767 | 0.315 |
| SUM | | | | | | |
| S1 | -0.003 | 0.761 | 0.000 | 100.000 | 130.811 | 0.427 |
| S2 | -0.002 | 0.821 | 0.000 | 100.000 | 121.462 | 0.281 |
| S3 | -0.003 | 0.940 | 0.000 | 100.000 | 105.971 | 0.364 |
| S4 | 0.002 | 1.007 | 0.000 | 100.000 | 99.454 | -0.196 |
| S5 | 0.009 | 1.023 | 0.000 | 100.000 | 98.631 | -0.899 |
| S6 | 0.007 | 0.953 | 0.000 | 100.000 | 105.614 | -0.697 |
| S7 | 0.002 | 0.827 | 0.000 | 100.000 | 121.213 | -0.205 |
| S8 | -0.002 | 0.764 | 0.000 | 100.000 | 130.514 | 0.267 |

Air Zero Calibration, performed Tue Apr 07 09:05:10 2020:

| | 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 |

### Temperature Calibration Report

| | | |
|---|---|---|
| Serial Number: | FW0712-020 | |
| Tool Model: | 2750 RBT | |
| Performed: | Mon Oct 01 11:32:14 2018 | |
| | Reference | Reading |
| Low Reference: | 100.00 degF | 109.43 degF |
| High Reference: | 350.00 degF | 405.87 degF |
| Gain: | 0.84 | |
| Offset: | 7.72 | |
| Delta Spacing | 1 | |

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| | |
|---|---|
| Company | TEP Rocky Mountain LLC |
| Well | Strait Bottom Ranch SG 322-22 |
| Field | Grand Valley |
| County | Garfield |
| State | Colorado |