**RELIANCE** OILFIELD SERVICES

# Temperature
# Gamma Ray
# Casing Collar Log

Company TEP Rocky Mountain LLC
Well Youberg SR 41-12
Field Rulison
County Garfield
State Colorado

Company TEP Rocky Mountain LLC
Well Youberg SR 41-12
Field Rulison
County Garfield State Colorado
Location: API # : 05-045-23294
SEC 12 TWP 7S RGE 94W
Other Services

| | | | |
|---|---|---|---|
| Permanent Datum | Ground Level | Elevation 7254' | Elevation |
| Log Measured From | Kelly Bushing | 24 FT | K.B. 7278'<br>D.F. 7277'<br>G.L. 7254' |
| Drilling Measured From | Kelly Bushing | | |

| | |
|---|---|
| Date | 13-AUG-2017 |
| Run Number | One |
| Depth Driller | 9883 FT |
| Depth Logger | 9826 FT |
| Bottom Logged Interval | 9826 FT |
| Top Log Interval | Surface |
| Open Hole Size | 8.750" |
| Type Fluid | Fresh Water |
| Density / Viscosity | 8.34 lb/gal |
| Max. Recorded Temp. | 226 °F |
| Estimated Cement Top | 4210 FT |
| Time Well Ready | ROA |
| Time Logger on Bottom | 18:42 |
| Equipment Number | HD-0359 |
| Location | Grand Junction |
| Recorded By | J.Donnelly |
| Witnessed By | Danny Bonnette |

| 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 | 1225 FT |
| Intermediate #1 | 4 1/2 | 11.6 | P-110 | Surface | 9824 FT |
| Intermediate #2 | | | | | |
| Liner | | | | | |

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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.

## Comments

Log ran per customer request
Depth referenced to Kelly Bushing at 24 FT
Marker joint logged from 6340 FT to 6360 FT
Estimated Top of Cement is 4210 FT

Thank you for choosing Reliance Oilfield Services, LLC!!

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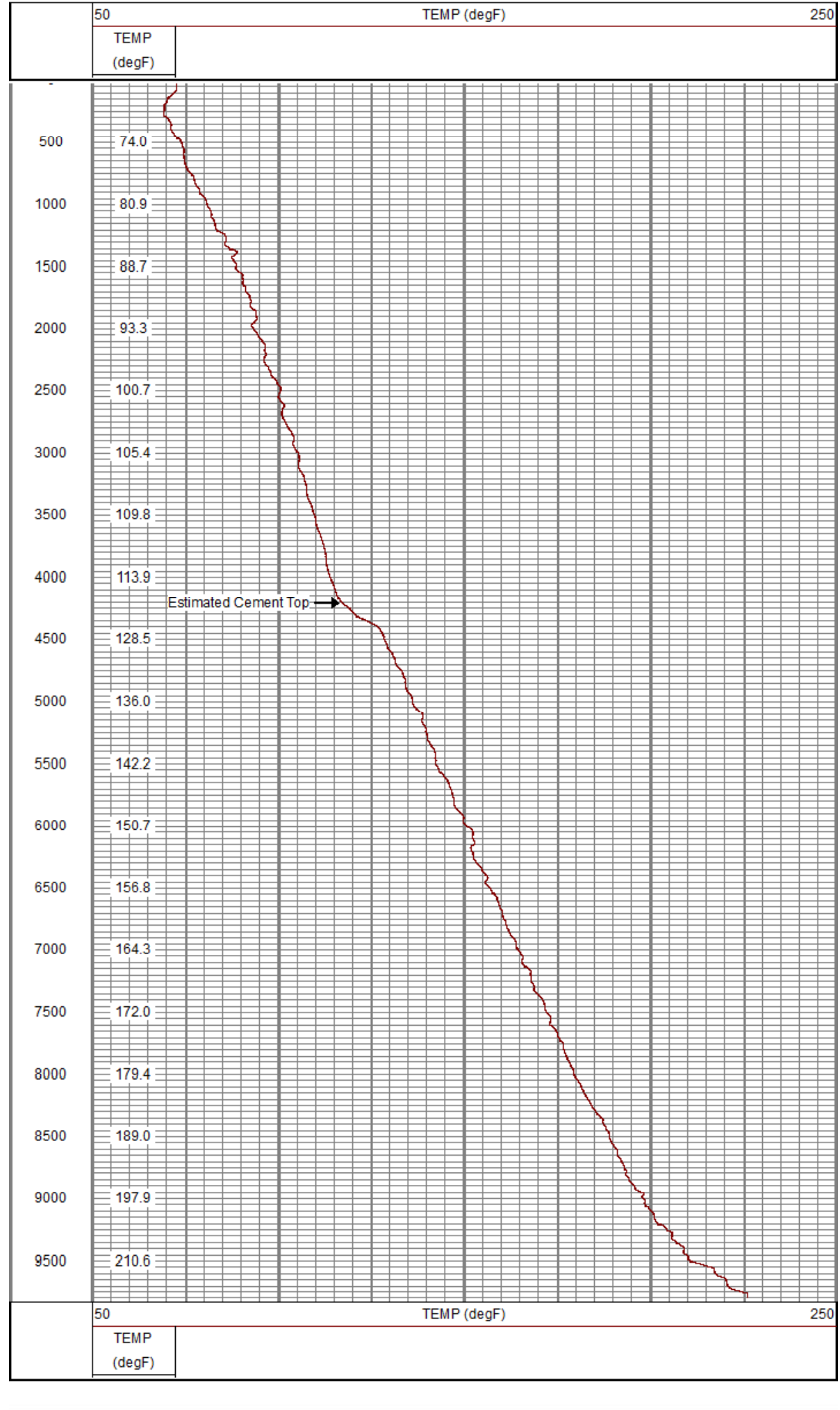
**RELIANCE** OILFIELD SERVICES

# Main Pass (Quick Look)

Database File tep_youberg sr 41-12\processed_tep_youberg sr 41-12_temp_08-13-17.db
Dataset Pathname main.1
Presentation Format ros_temp_ql_tep
Dataset Creation Sun Aug 13 20:18:02 2017
Charted by Depth in Feet scaled 1:10000



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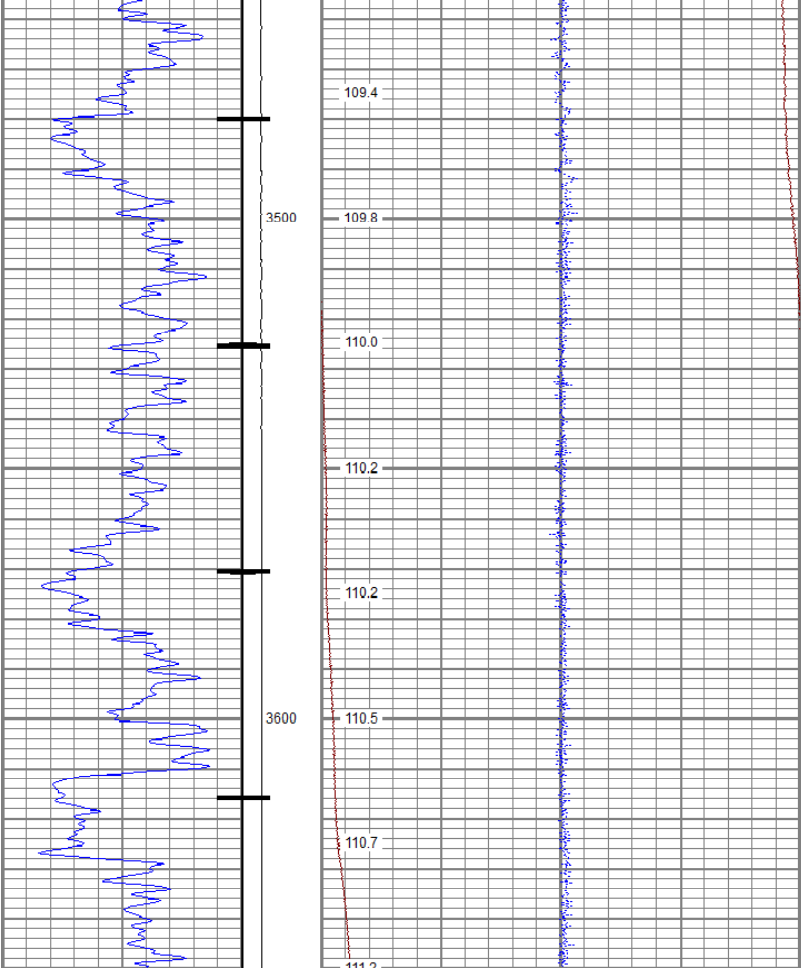
**RELIANCE** OILFIELD SERVICES

# Main Pass

Database File tep_youberg sr 41-12\processed_tep_youberg sr 41-12_temp_08-13-17.db
Dataset Pathname main
Presentation Format ros_temp_tep
Dataset Creation Sun Aug 13 18:42:36 2017
Charted by Depth in Feet scaled 1:240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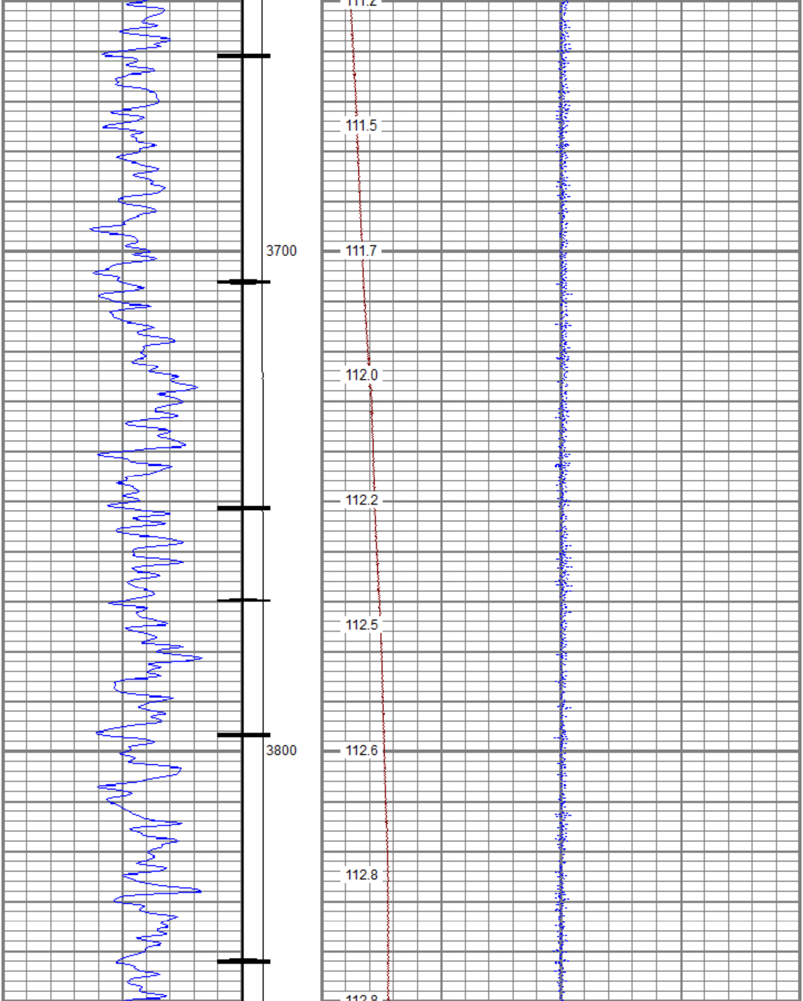
109.8
110.0
110.2
110.2
3600
110.5
110.7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112.2
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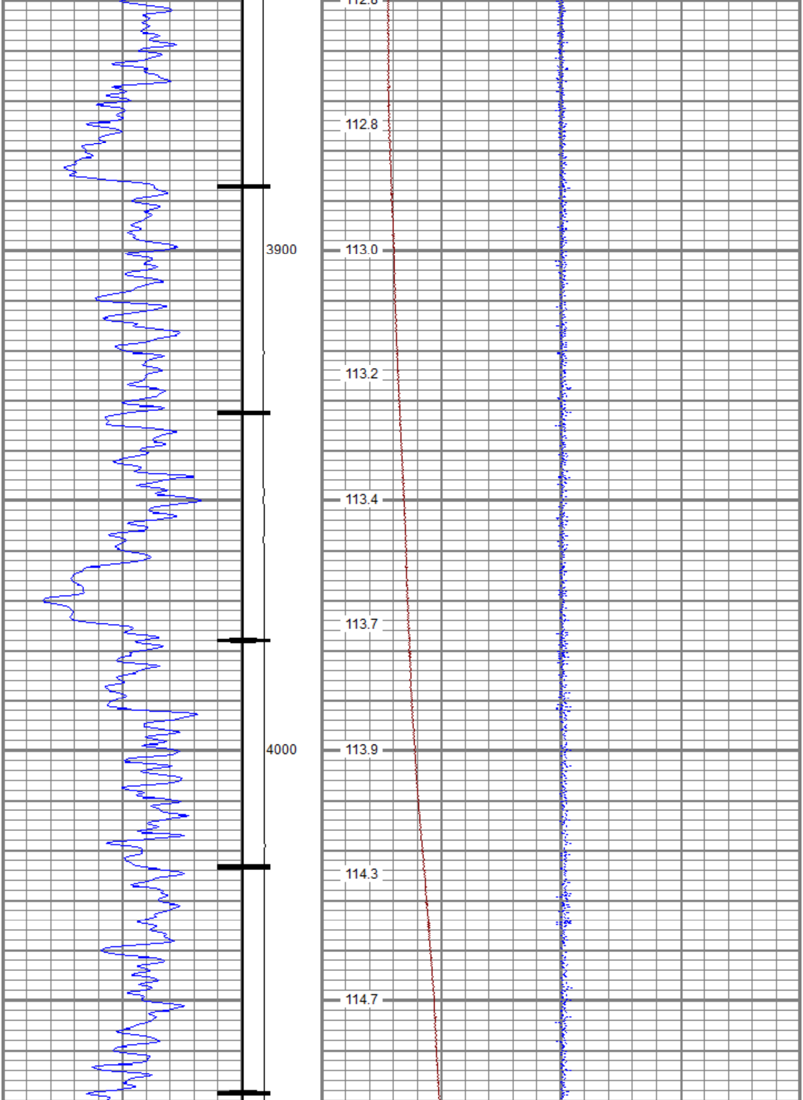
112.6
112.8



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4000
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113.2
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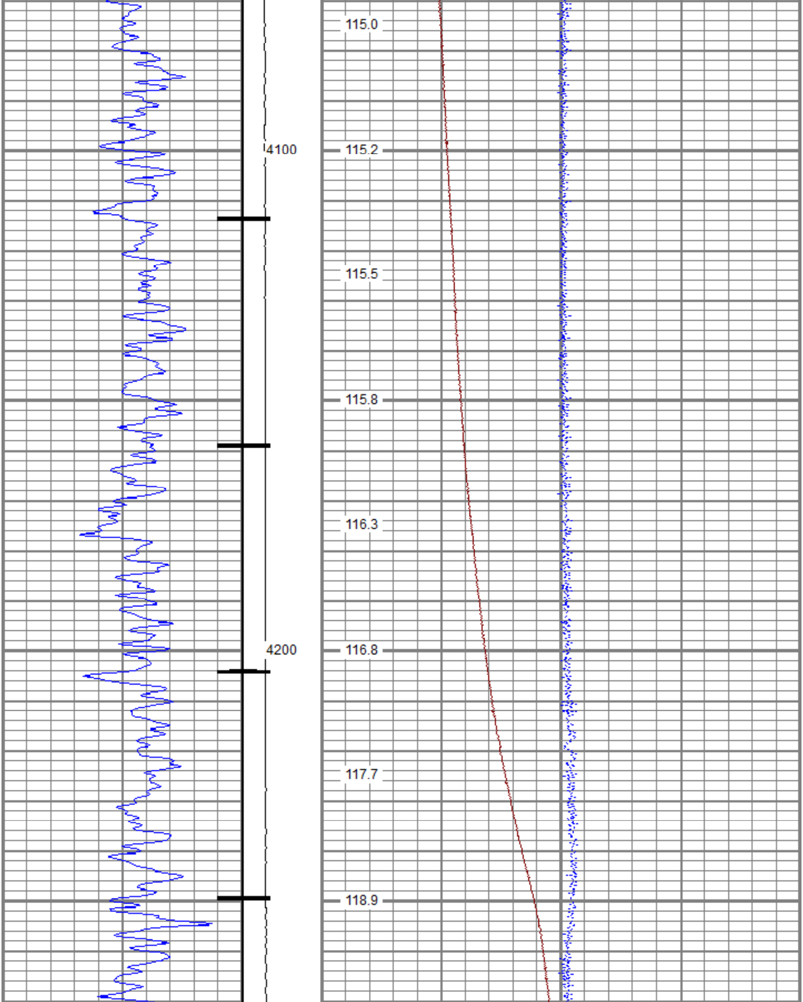
114.7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4100
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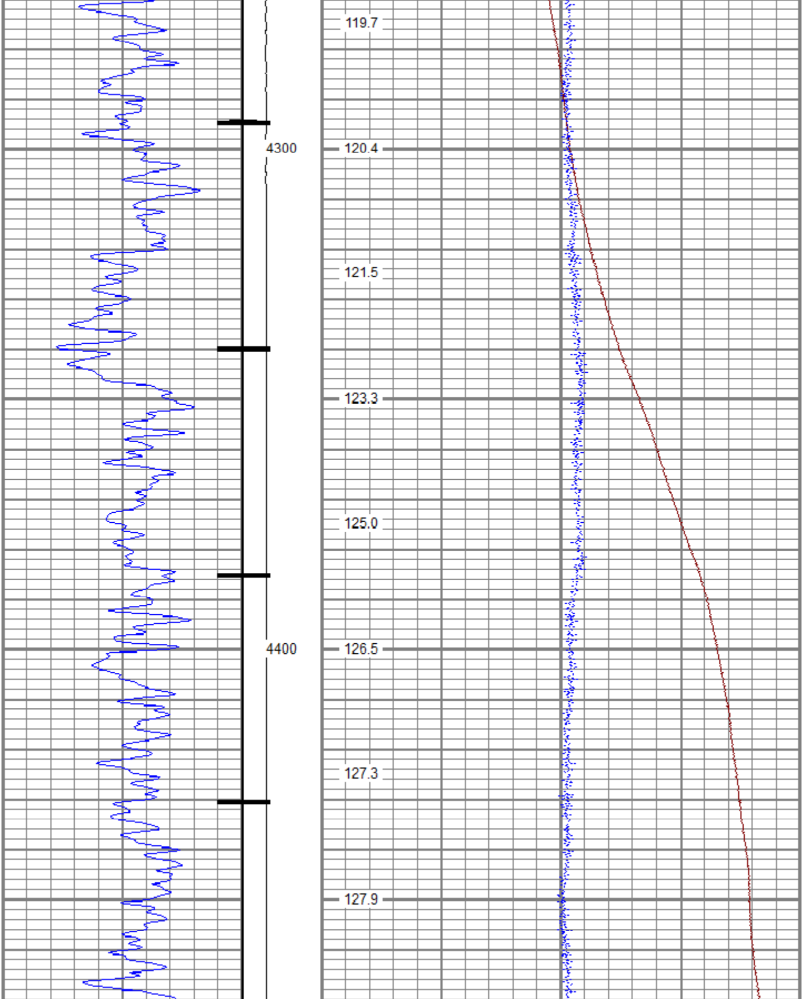
116.8
117.7
118.9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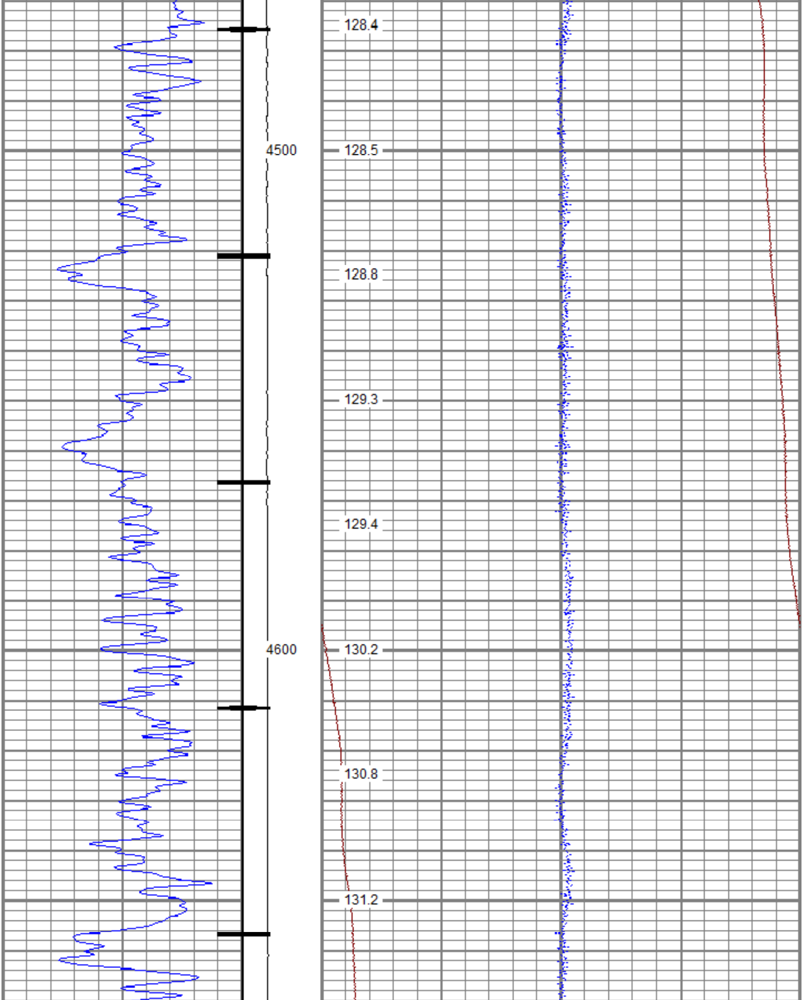
127.9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128.8
129.3
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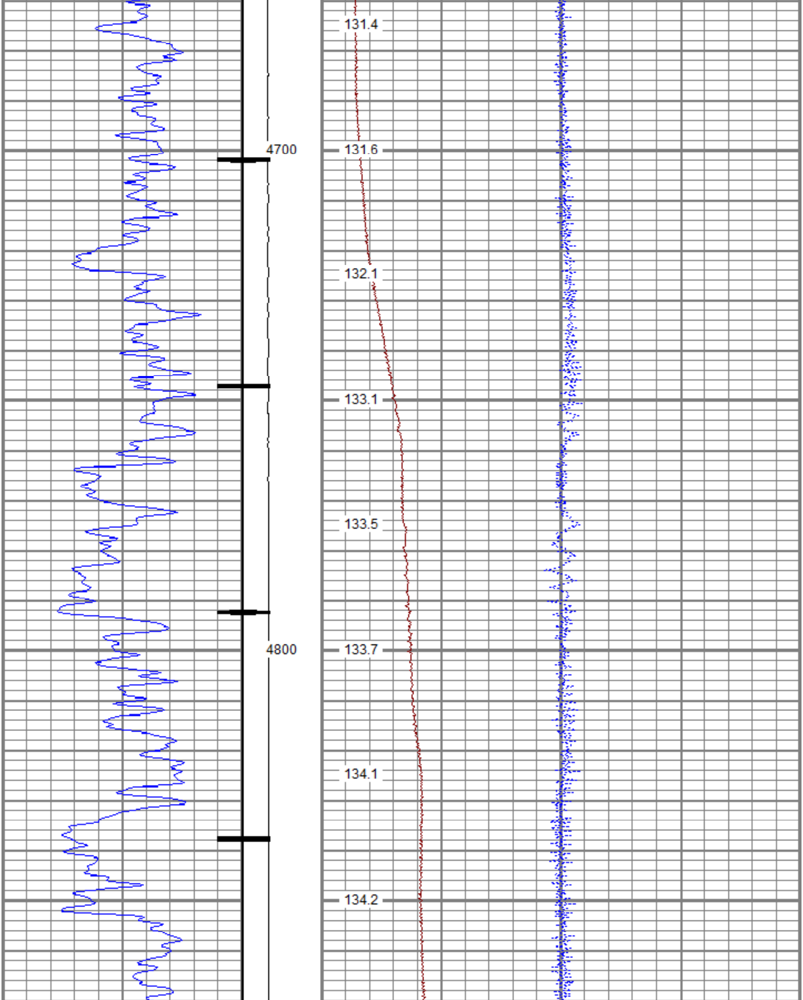
130.2
130.8
131.2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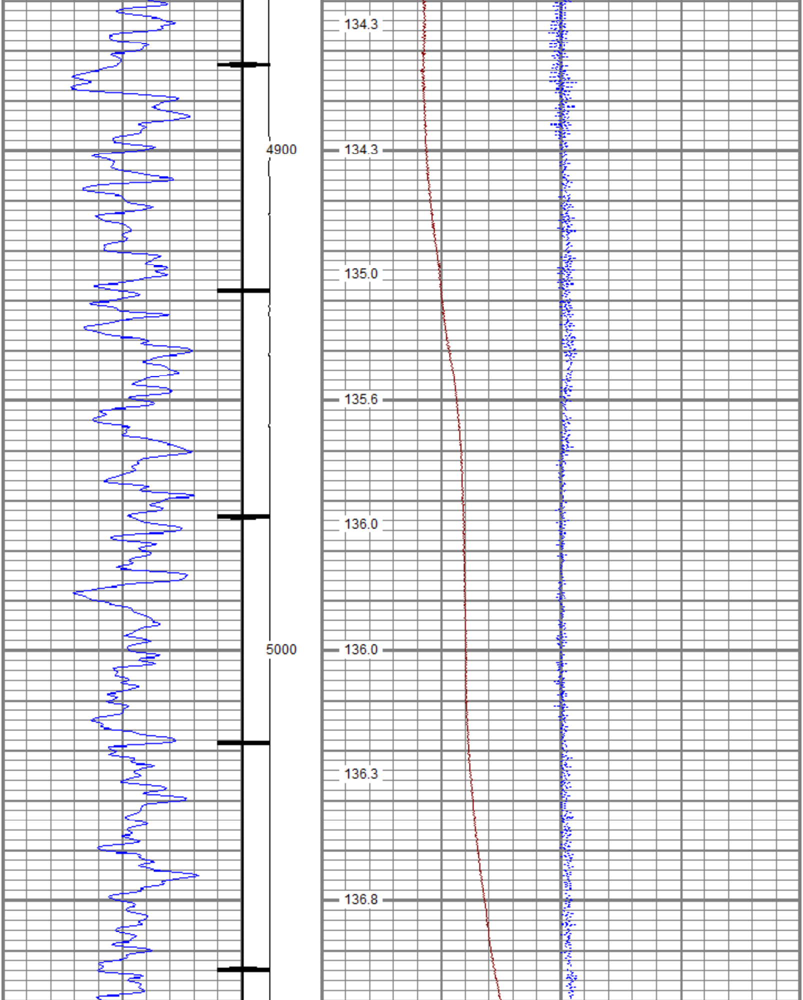
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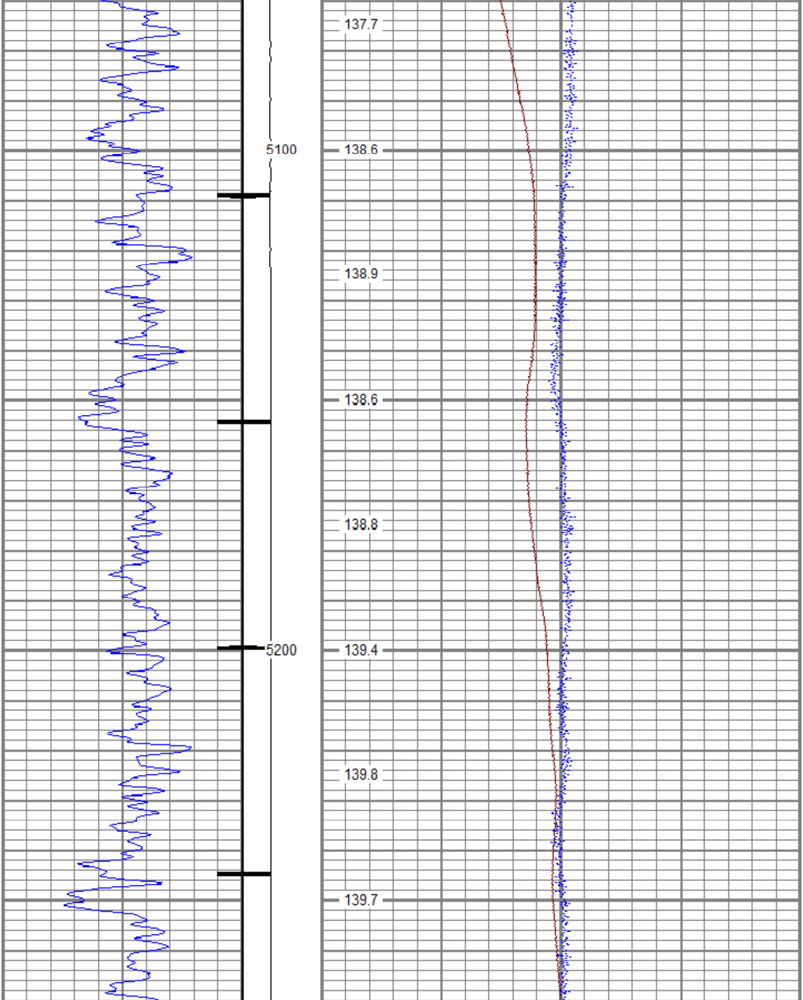
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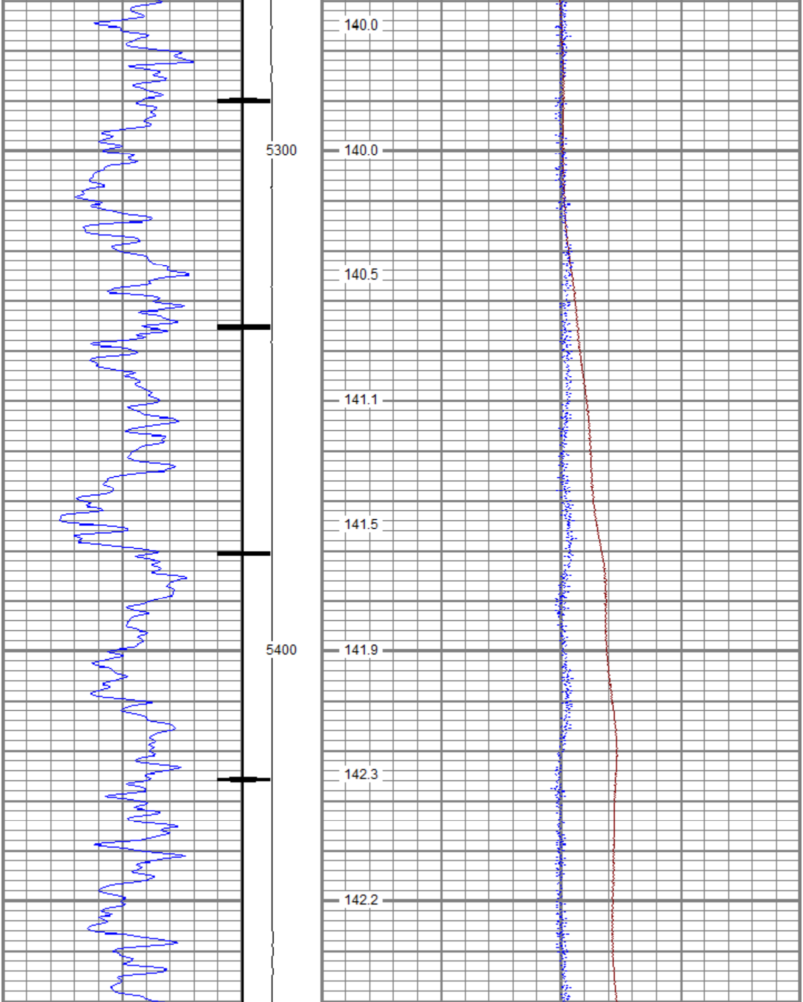
139.7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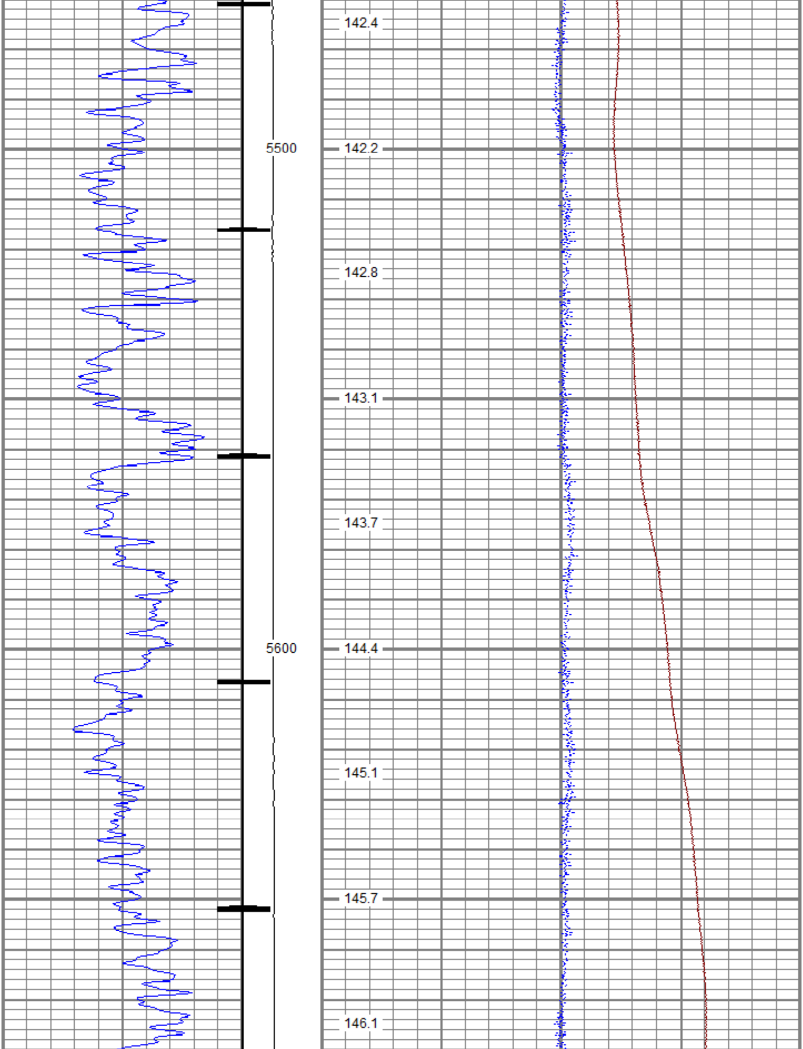
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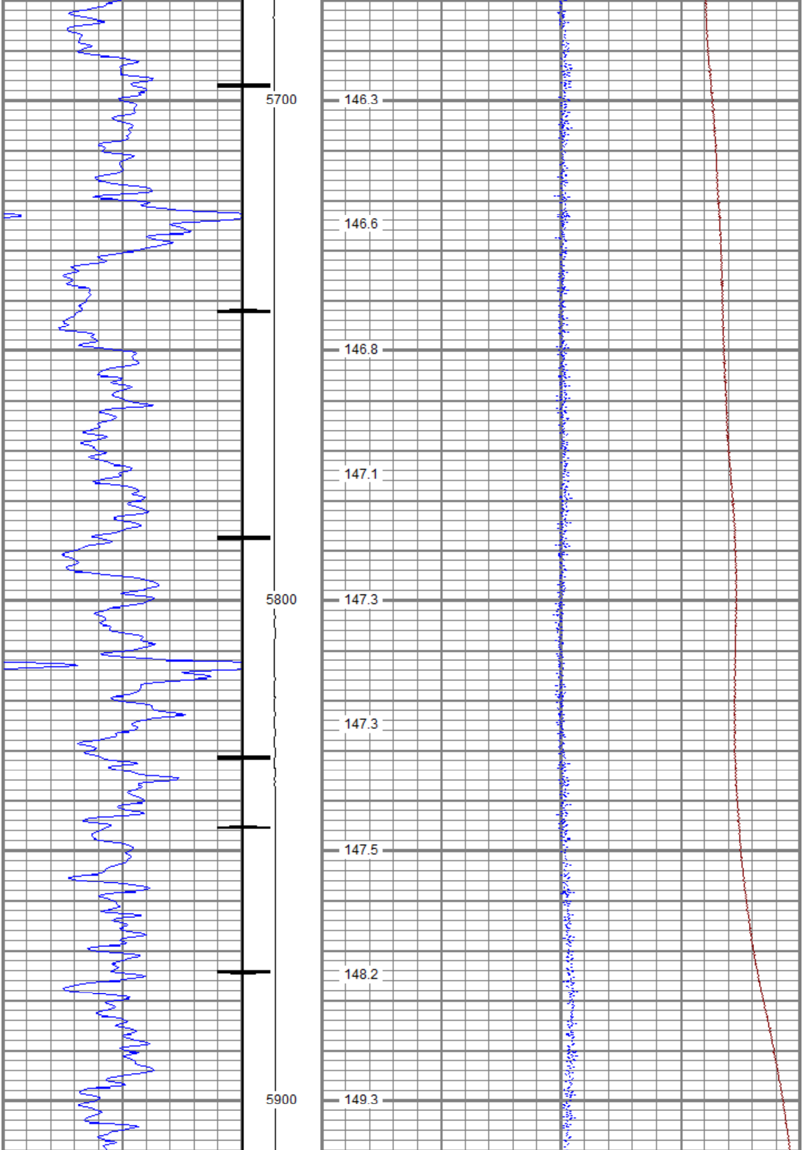
145.7
146.1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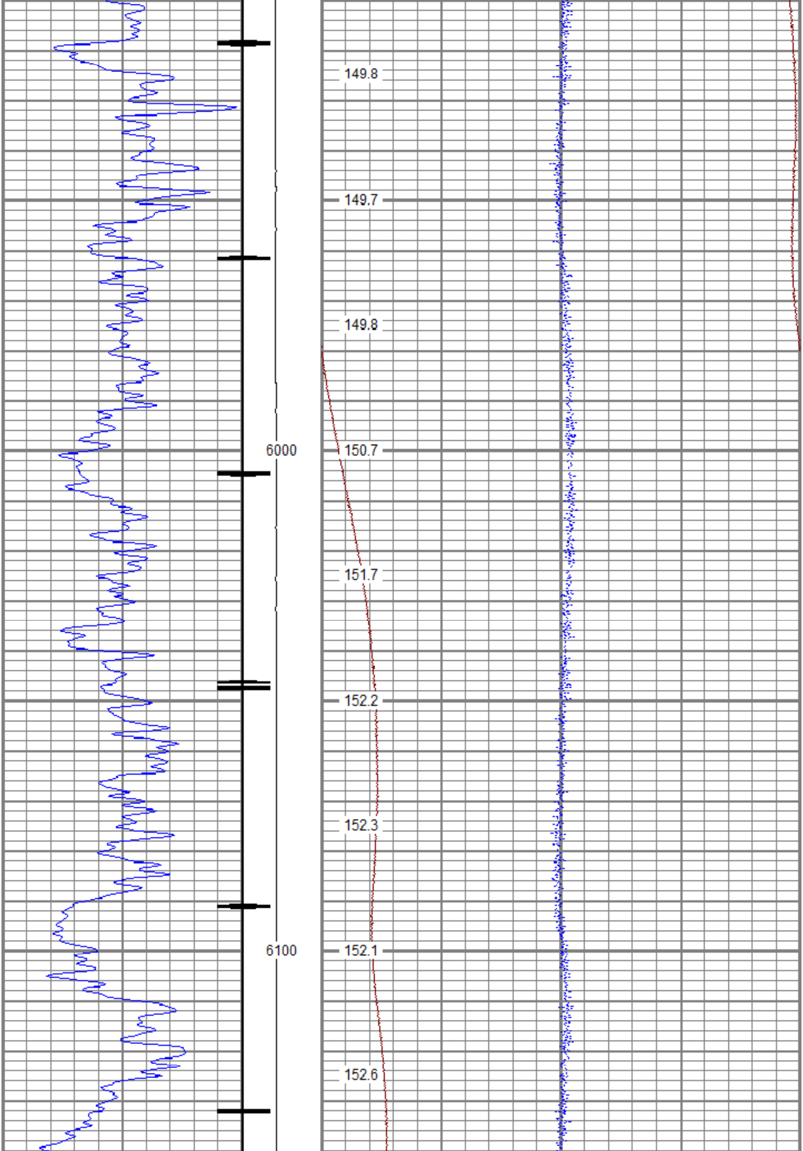
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149.7
149.8
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150.7
151.7
152.2
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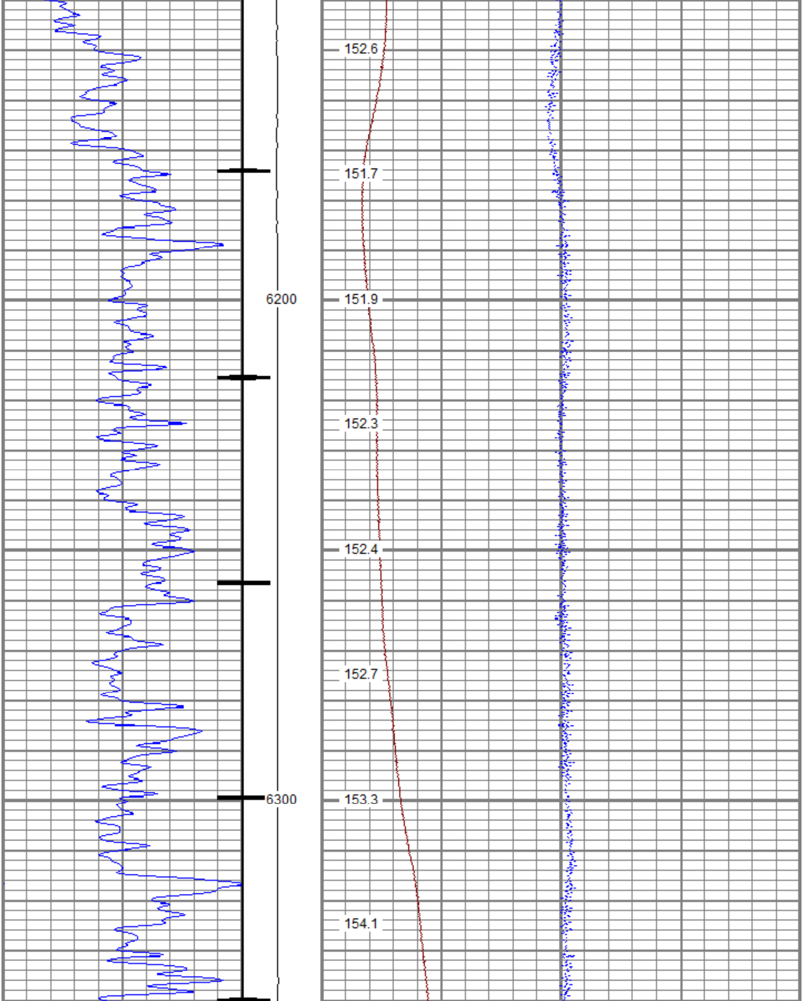
6100
152.1
152.6


6200
6300
152.6
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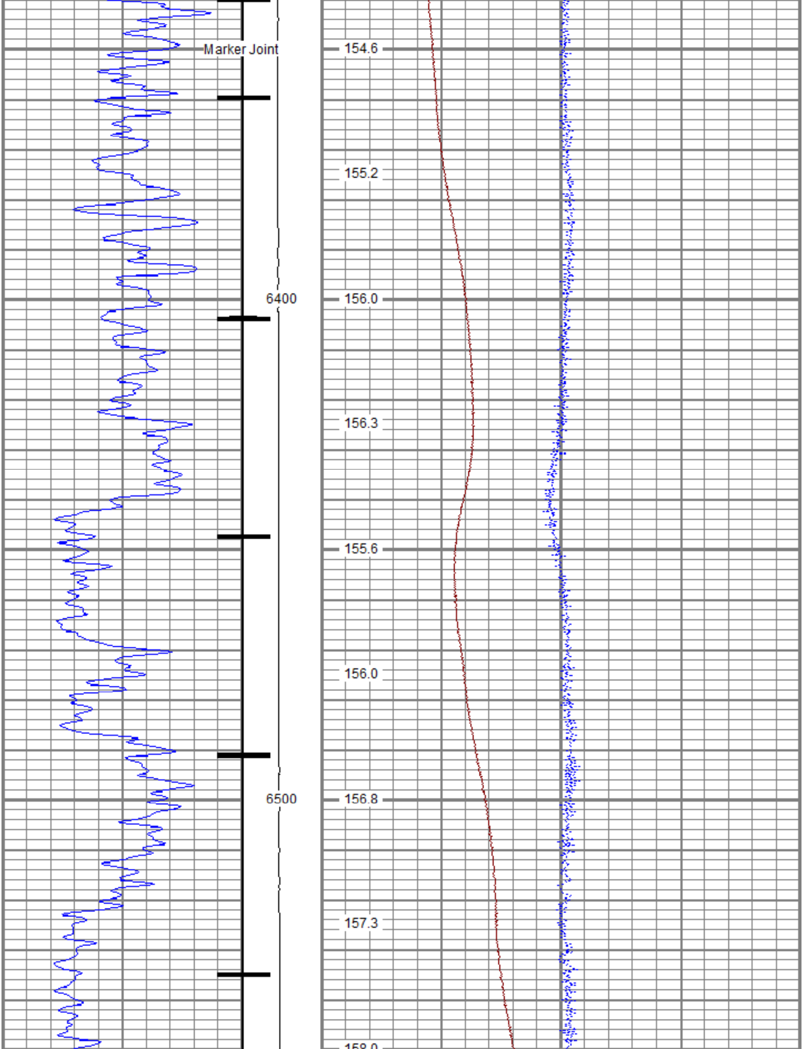
151.9
152.3
152.4
152.7
153.3
154.1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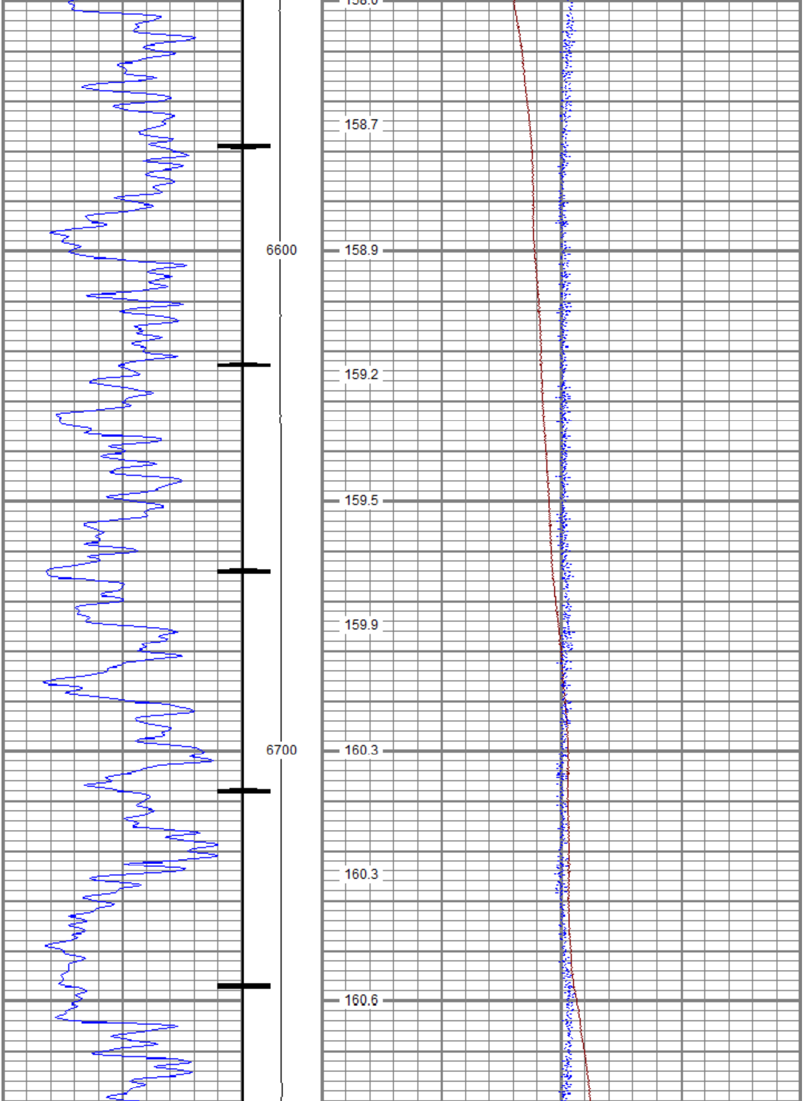
157.3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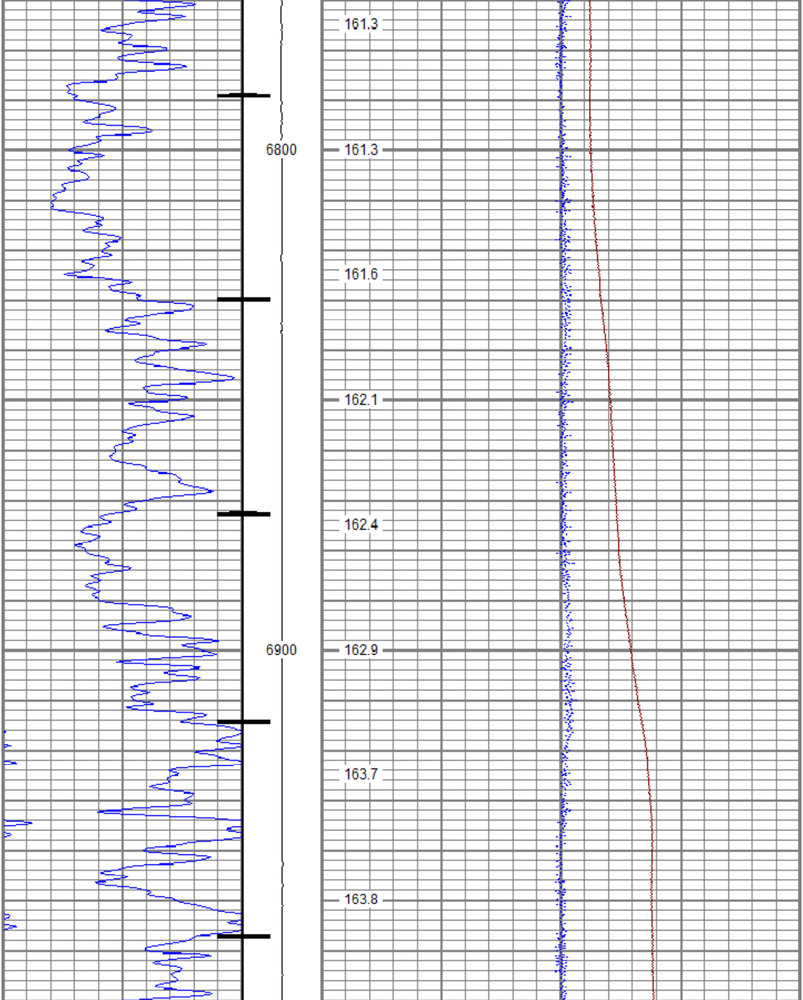
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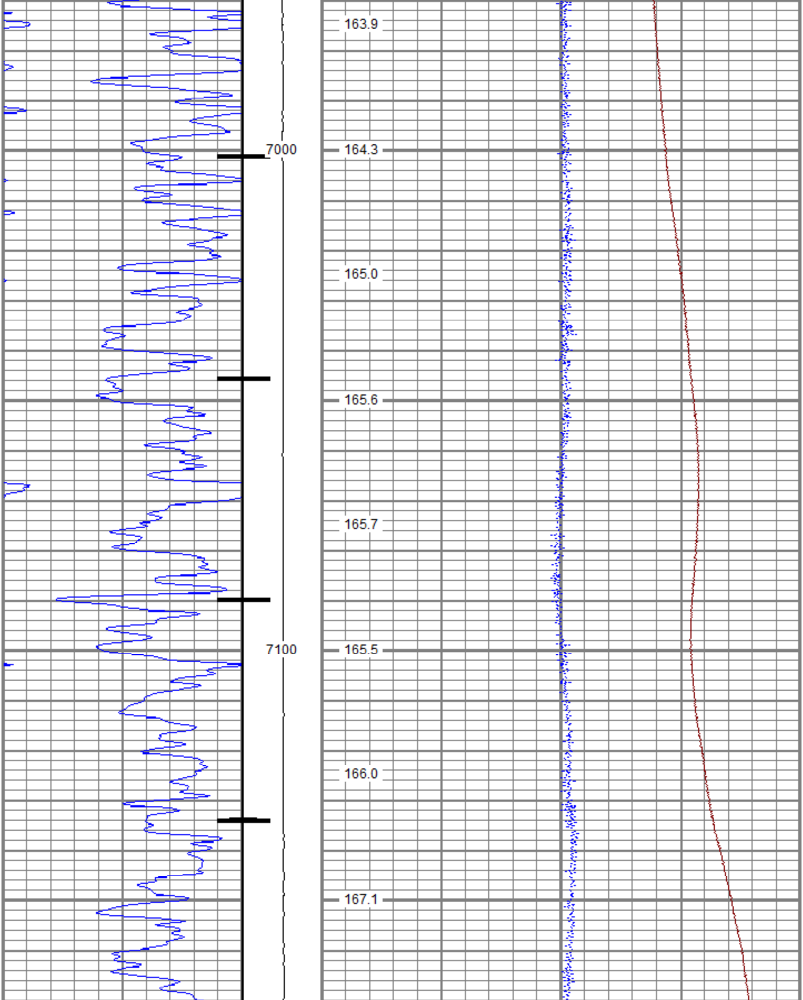
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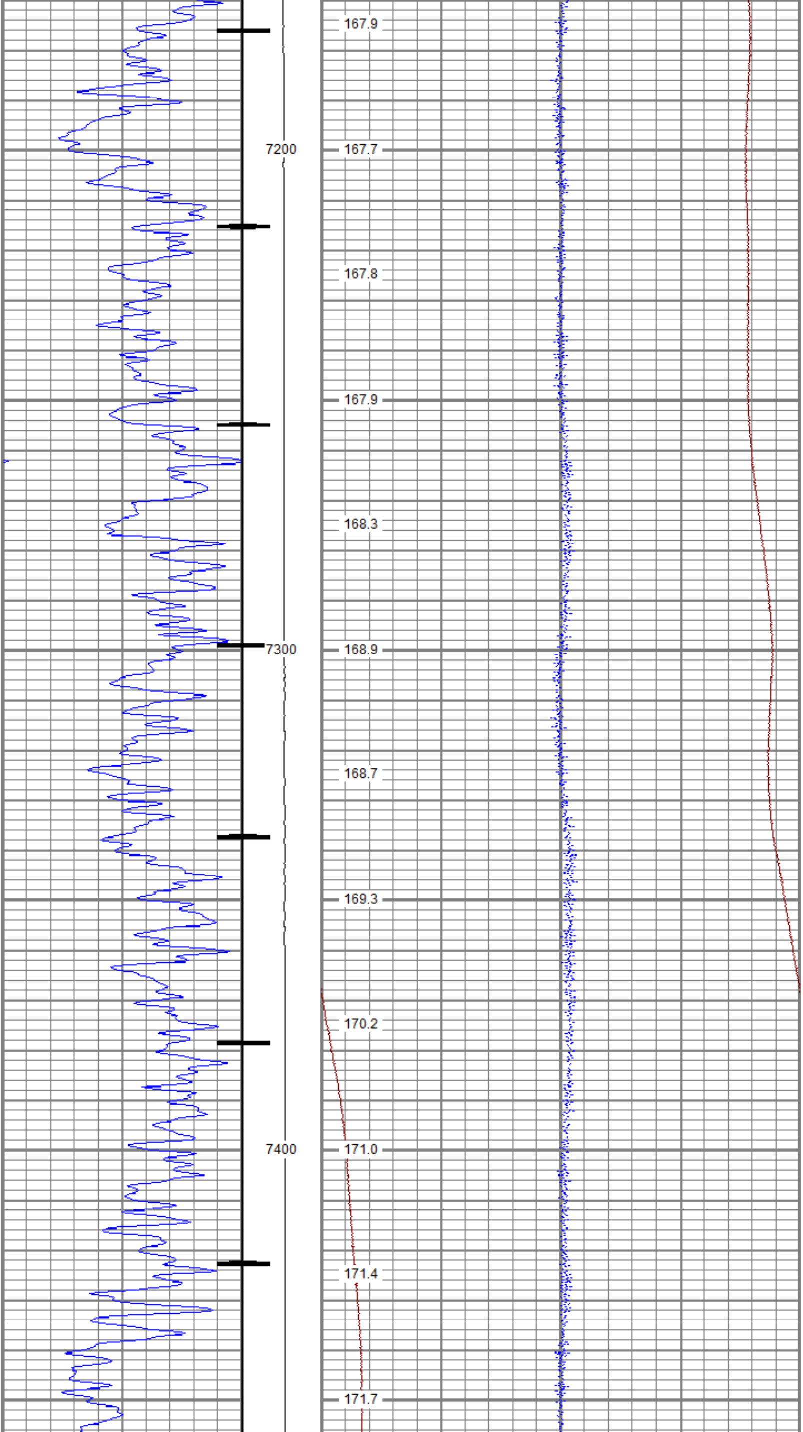

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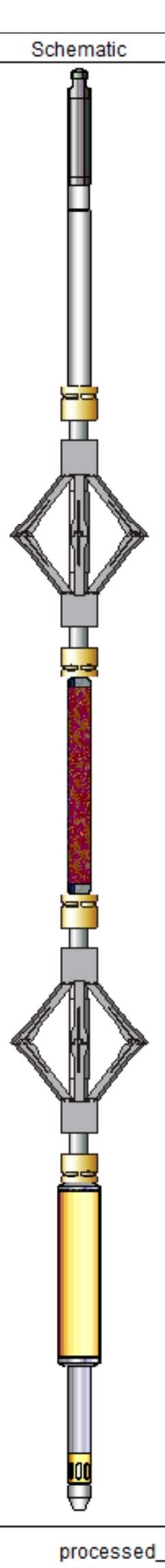
7300
7400
167.9
167.7
167.8
167.9
168.3
168.9
168.7
169.3
170.2
171.0
171.4
171.7

| Sensor | Offset (ft) | Schematic | Description | Length (ft) | O.D. (in) | Weight (lb |
|---|---|---|---|---|---|---|
| | |  | Titan_Electric_Cable_Heads-Titan_1-1<br>Electric Cable Head with 1" Fishing Neck | 11.03 | 1.69 | 5.40 |
| | | | UW_AGS-UW_AGS_001 (219135)<br>Sondex Adapter - GO Box to Sondex Pin | 0.21 | 1.69 | 1.00 |
| | | | UW_XTU-UW_XTU_002 (211461)<br>Crossover Ultrawire Toolbus to Ultralink | 1.58 | 1.69 | 6.50 |
| | | | DSS_RAC-RAC_5-Arm<br>5 Arm 2-3/4" Roller Centralizer | 2.55 | 2.75 | 32.00 |
| GR | 5.92 | | UW_PGR-UW_PGR_020 (10013902)<br>Production Gamma Ray | 1.92 | 1.69 | 9.50 |
| | | | DSS_RAC-RAC_5-Arm<br>5 Arm 2-3/4" Roller Centralizer | 2.55 | 2.75 | 32.00 |
| CCL | 1.77 | | UW_CCL-UW_CCL_028 (10026421)<br>3-1/8" Ultrawire Casing Collar Locator | 1.61 | 3.13 | 36.00 |
| TEMP<br>HVOLTX<br>ITEMPX | 0.37<br>0.00<br>0.00 | | UW_PRT-PRT_016 (10025093)<br>Platinum Resistance Thermometer | 1.04 | 1.69 | 5.20 |
| TSTAMP | 0.00 | | UW_BUL-UW_BUL_006 (10019730)<br>Sondex Ultrawire Bullnose Terminator | 0.22 | 1.69 | 1.20 |

| | |
|---|---|
| Dataset: | processed_tep_youberg sr 41-12_temp_08-13-17.db: field/well/run1/main |
| Total length: | 12.71 ft |
| Total weight: | 128.80 lb |
| O.D.: | 3.13 in |

## Calibration Report

| | |
|---|---|
| Database File | c:\programdata\warrior\data\tep_youberg sr 41-12\processed_tep_youberg sr 41-12_temp_08-13-17.db |
| Dataset Pathname | main |
| Dataset Creation | Sun Aug 13 18:42:36 2017 |

### Temperature Calibration Report

| | |
|---|---|
| Serial Number: | 10025093 |
| Tool Model: | PRT_016 |
| Performed: | Sun Oct 11 12:31:14 2015 |

| Point # | Reading | | Reference | |
|---|---|---|---|---|
| 1 | 13006.00 | cps | 68.00 | degF |
| 2 | 18181.00 | cps | 104.00 | degF |
| 3 | 29634.00 | cps | 176.00 | degF |
| 4 | 41077.00 | cps | 248.00 | degF |
| 5 | 52560.00 | cps | 320.00 | degF |
| 6 | 58409.00 | cps | 356.00 | degF |
| 7 | | cps | | degF |
| 8 | | cps | | degF |
| 9 | | cps | | degF |
| 10 | | cps | | degF |

### Gamma Ray Calibration Report

| | | |
|---|---|---|
| Serial Number: | 10013902 | |
| Tool Model: | UW_PGR_020 | |
| Performed: | (Not Performed) | |
| Calibrator Value: | 1.0 | GAPI |
| Background Reading: | 0.0 | cps |
| Calibrator Reading: | 1.0 | cps |
| Sensitivity: | 1.0000 | GAPI/cps |

RELIANCE
OILFIELD SERVICES

| | |
|---|---|
| Company | TEP Rocky Mountain LLC |
| Well | Youberg SR 41-12 |
| Field | Rulison |
| County | Garfield |
| State | Colorado |