RELIANCE OILFIELD SERVICES

Temperature
Gamma Ray
Casing Collar Log

Company TEP Rocky Mountain LLC
Well Clough NR 411-3
Field Rulison
County Garfield
State Colorado

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Well Clough NR 411-3
Field Rulison
County Garfield State Colorado
API # : 05-045-23900

Location: SEC 3 TWP 6S RGE 94W

Other Services

Permanent Datum Ground Level Elevation 6719.1'
Log Measured From Kelly Bushing 24 FT
Drilling Measured From Kelly Bushing

Elevation
K.B. 6743.1'
D.F. 6742.1'
G.L. 6719.1'

Date	30-JUL-2018
Run Number	One
Depth Driller	10820 FT
Depth Logger	10726 FT
Bottom Logged Interval	10726 FT
Top Log Interval	Surface
Open Hole Size	8.750"
Type Fluid	Fresh Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	241°F
Estimated Cement Top	5989 FT
Time Well Ready	ROA
Time Logger on Bottom	12:00
Equipment Number	HD-0359
Location	Grand Junction, CO
Recorded By	Z. Fisher
Witnessed By	Bob Brown

Borehole Record

Run Number	Bit	From	To

Tubing Record

Size	Weight	From	To

Casing Record	Size (in)	Wgt (lbs/Ft)	Grade	Top	Bottom
Surface Casing	9 5/8	32.3	H-40	Surface	1124 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	10779 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 as per customer request
Depth referenced to Kelly Bushing at 24 FT
Marker Joint logged from 6506 FT to 6528 FT
Log ran from 10726 FT to Surface
Log ran with 0 PSI Surface Induced Pressure

Thank you for choosing Reliance Oilfield Services, LLC!!

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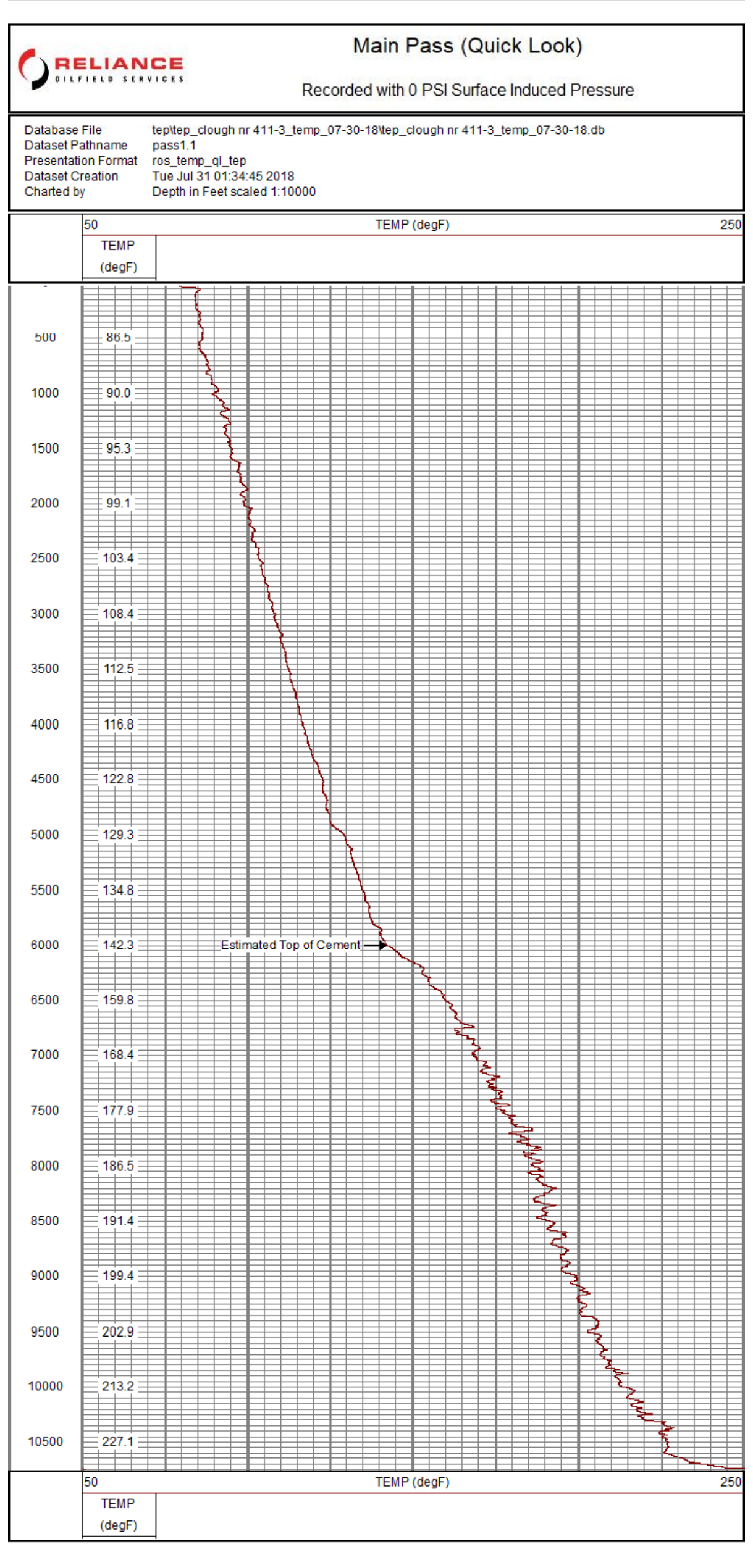
Main Pass (Quick Look)

Recorded with 0 PSI Surface Induced Pressure

Database File tep\tep_clough nr 411-3_temp_07-30-18\tep_clough nr 411-3_temp_07-30-18.db
Dataset Pathname pass1.1
Presentation Format ros_temp_ql_tep
Dataset Creation Tue Jul 31 01:34:45 2018
Charted by Depth in Feet scaled 1:10000



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Main Pass

Recorded with 0 PSI Surface Induced Pressure

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Dataset Pathname pass1
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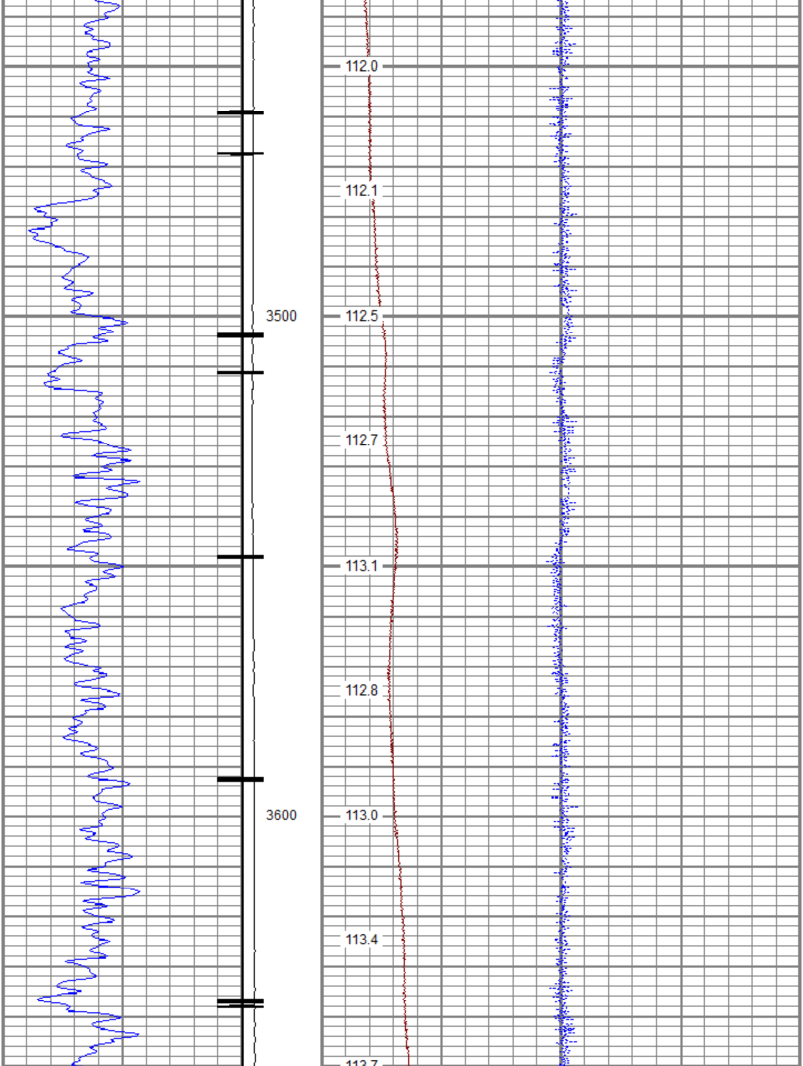
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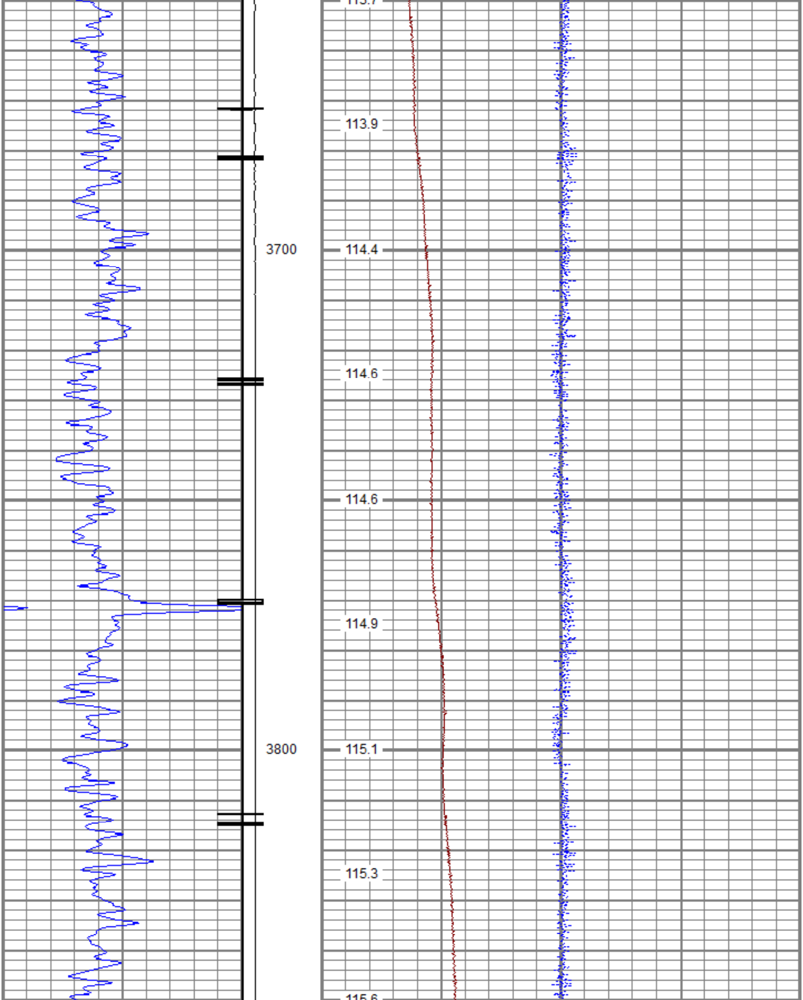
113.4
113.7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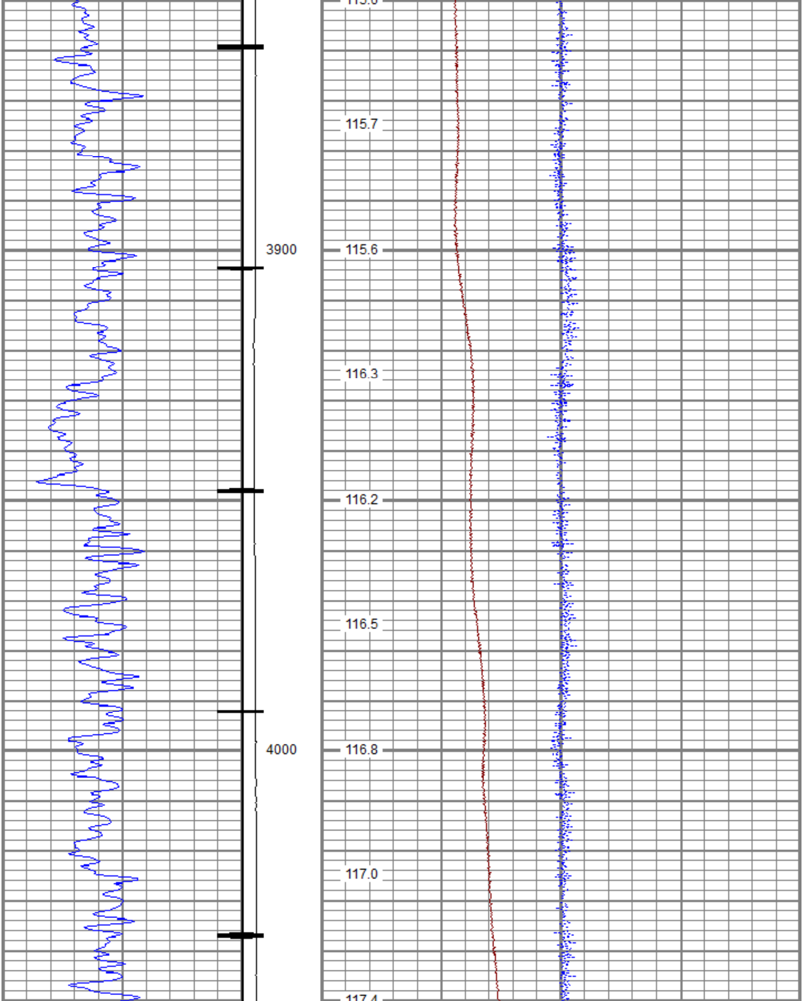
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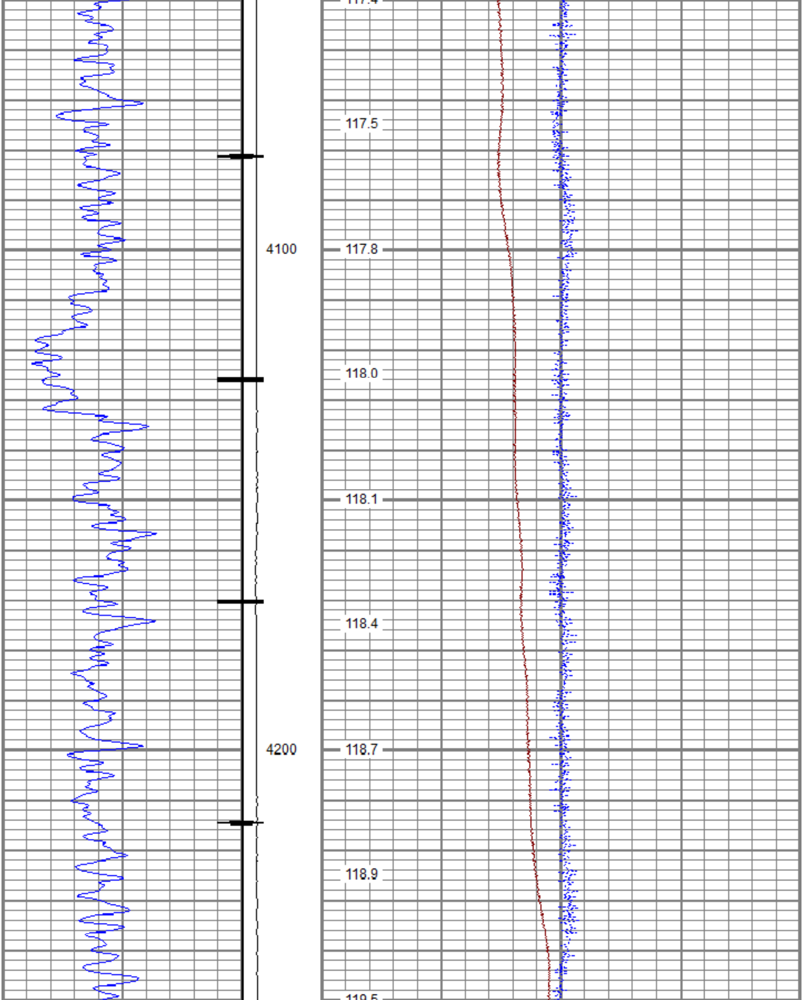
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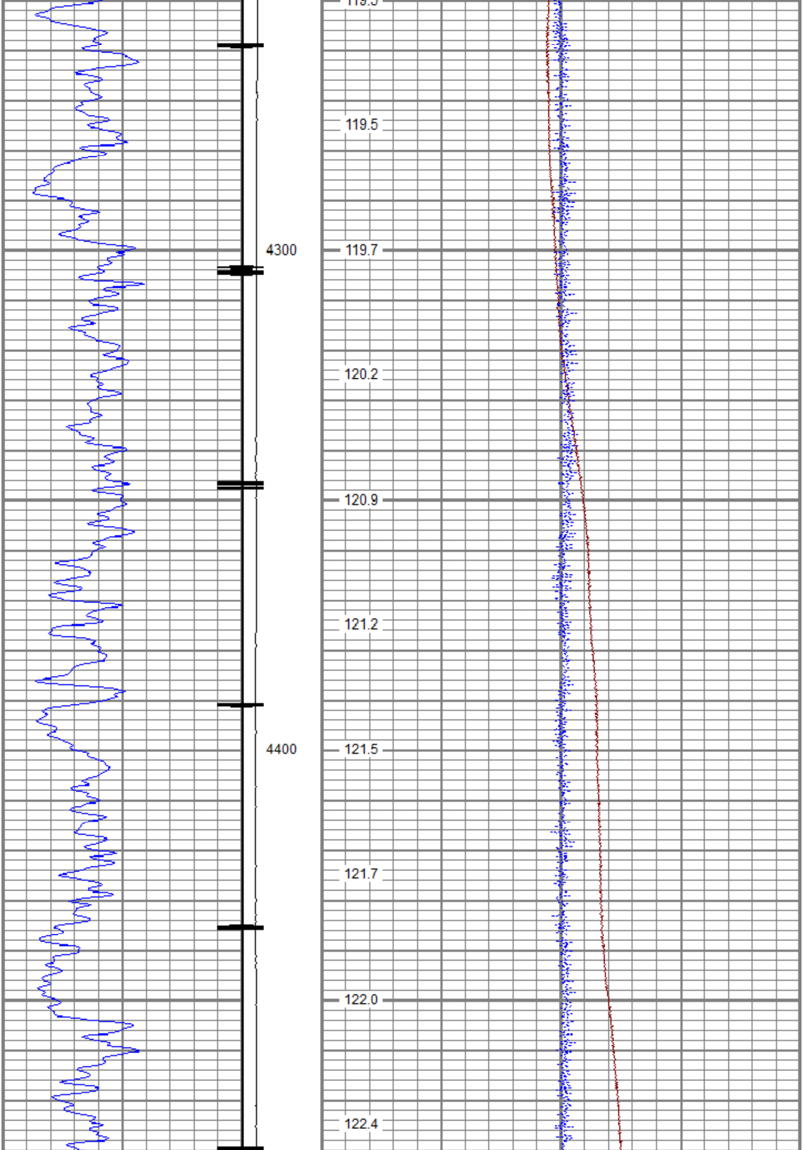
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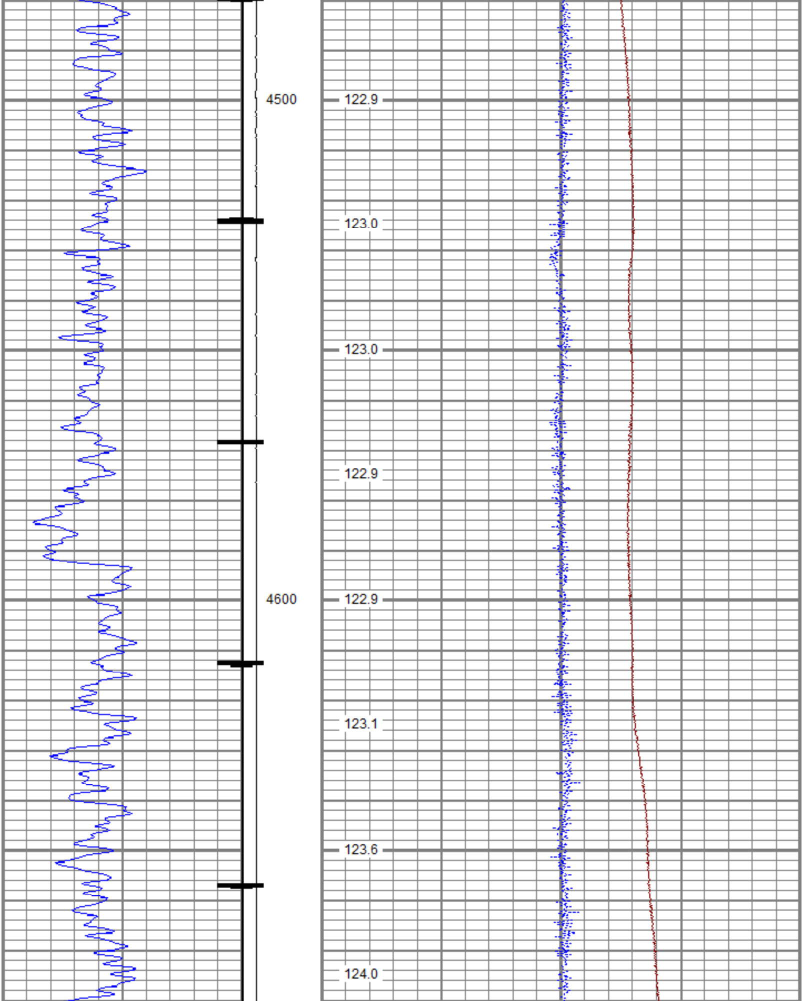
122.4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123.6
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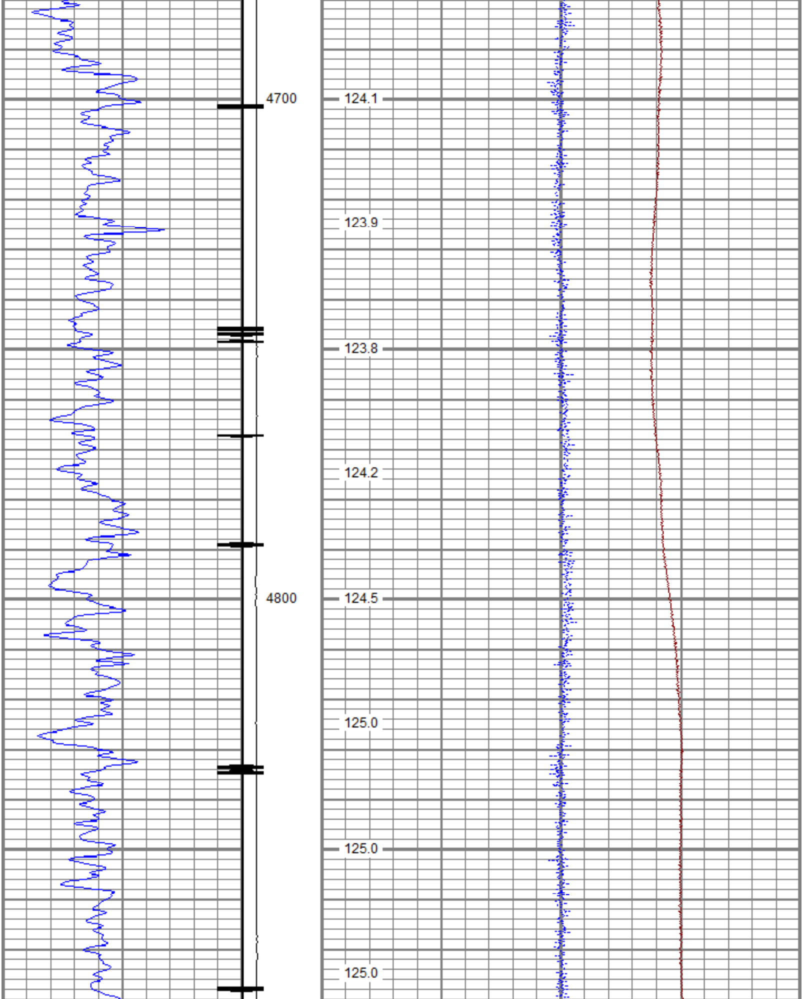
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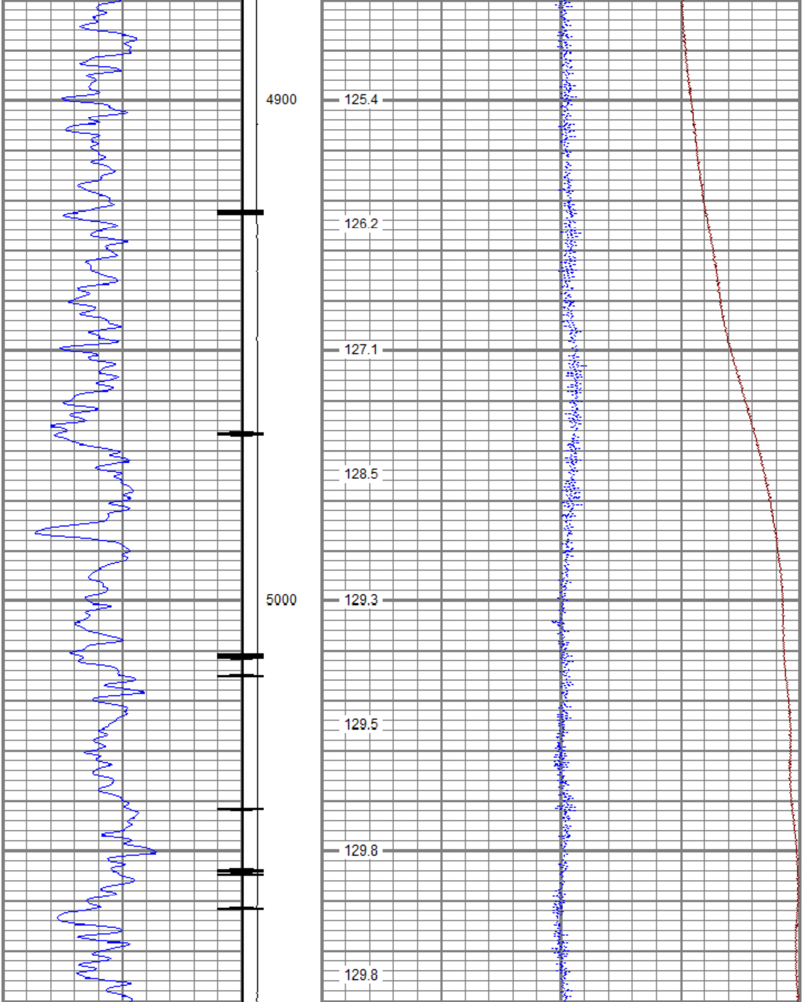
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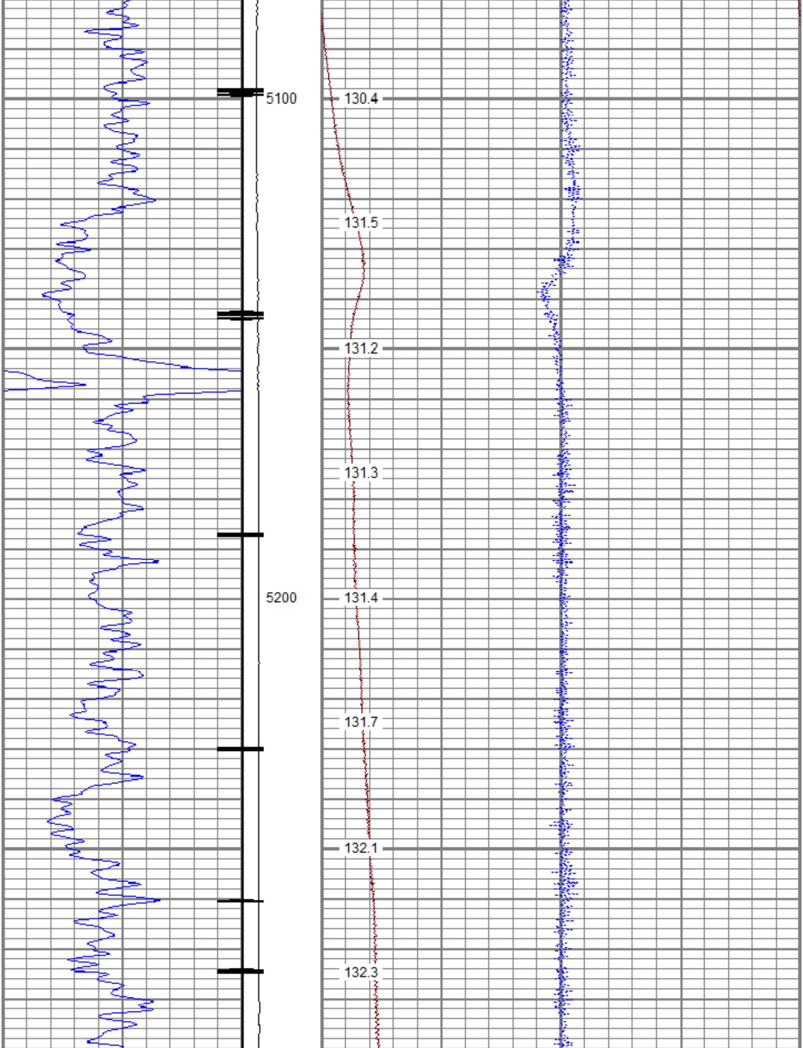
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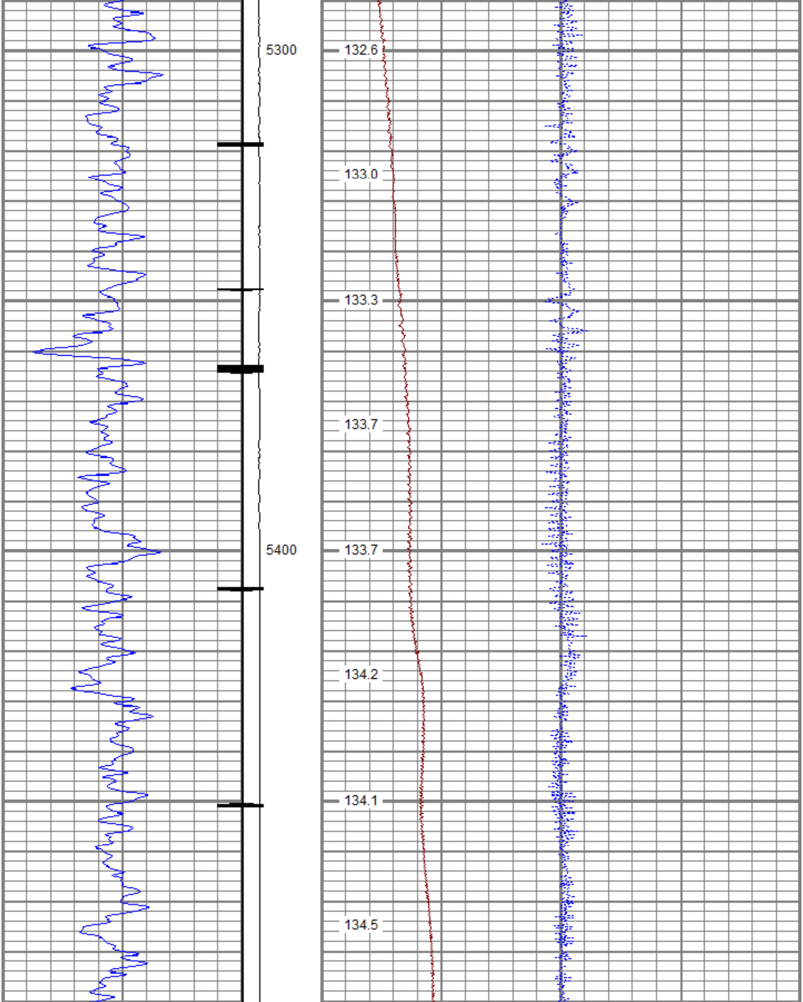
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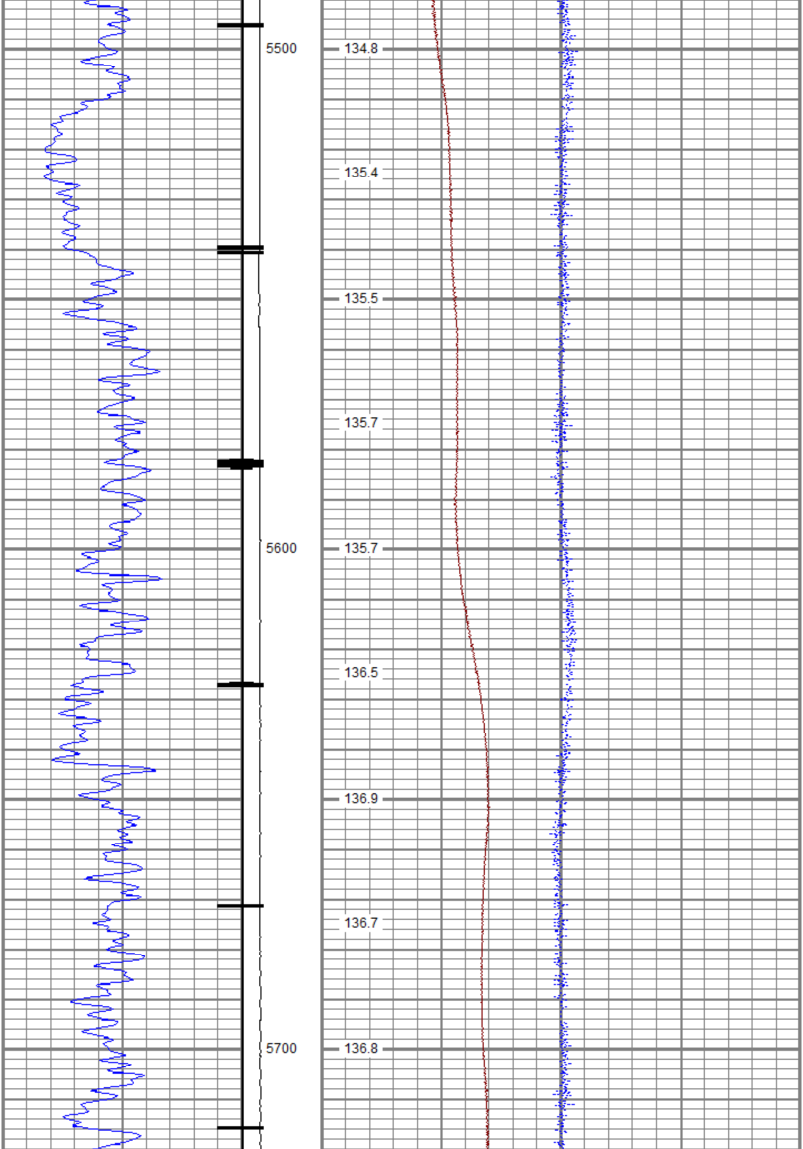
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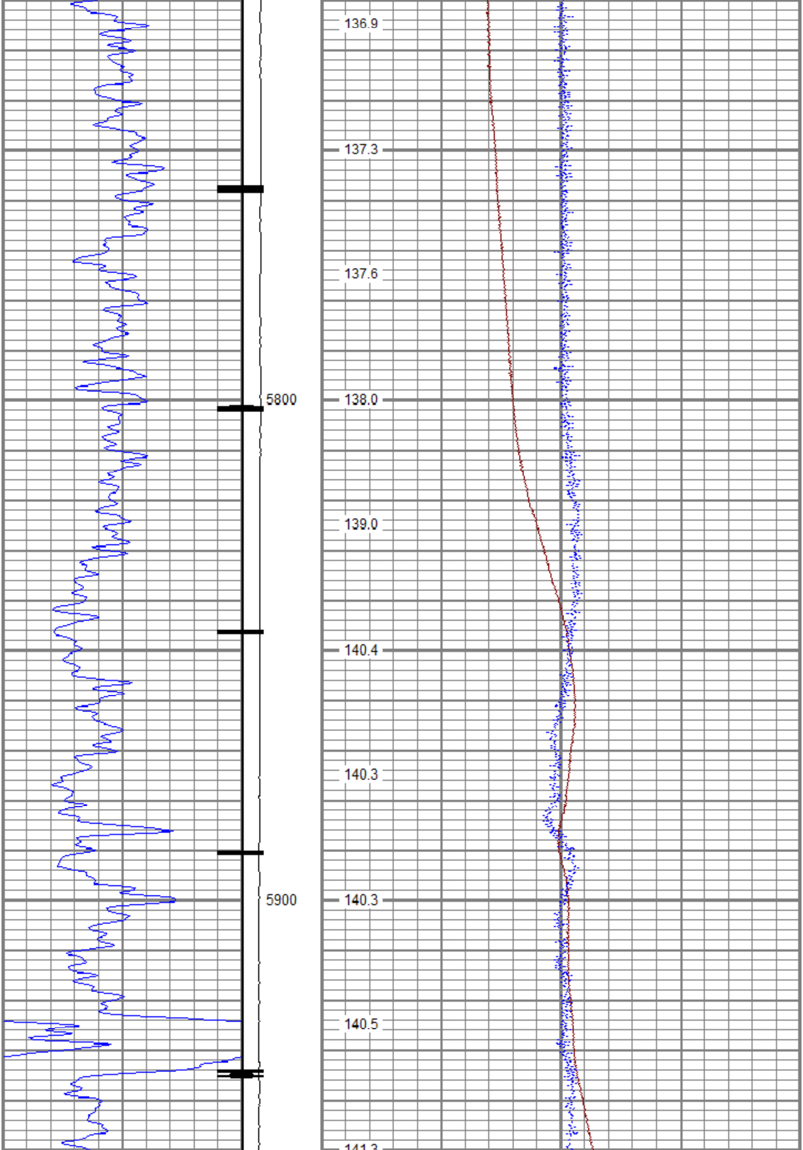
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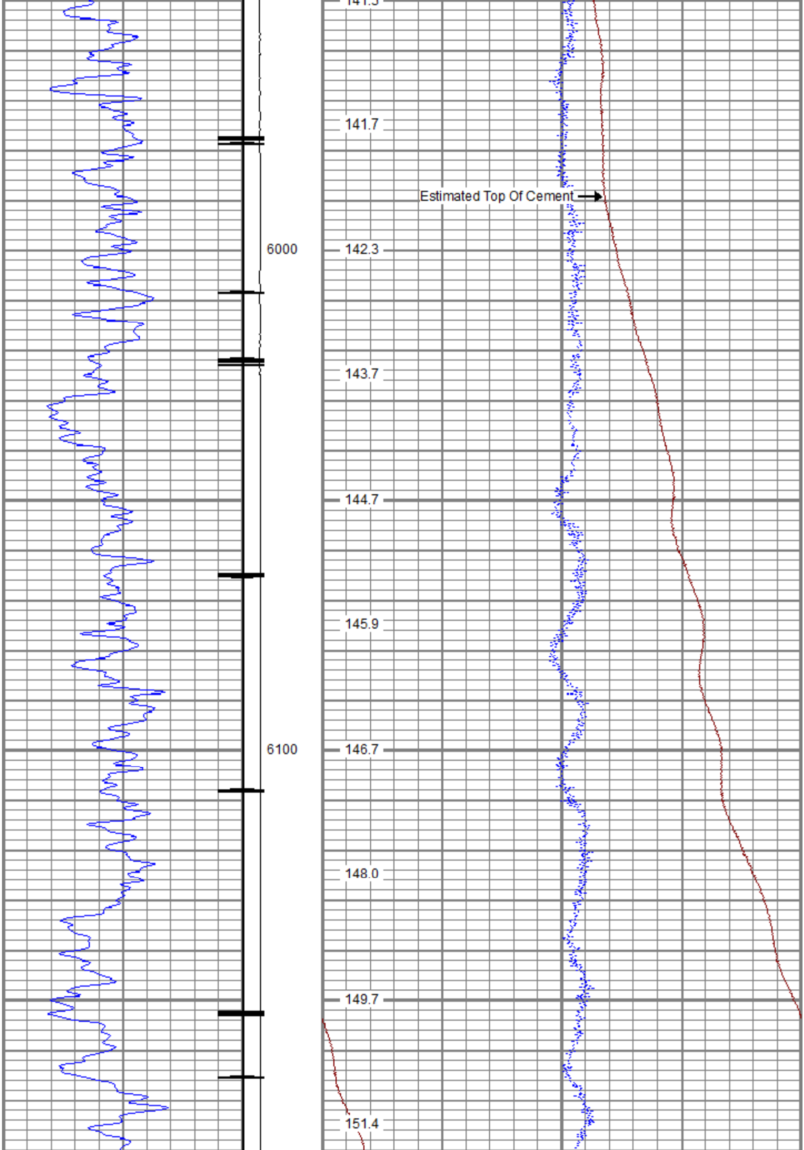
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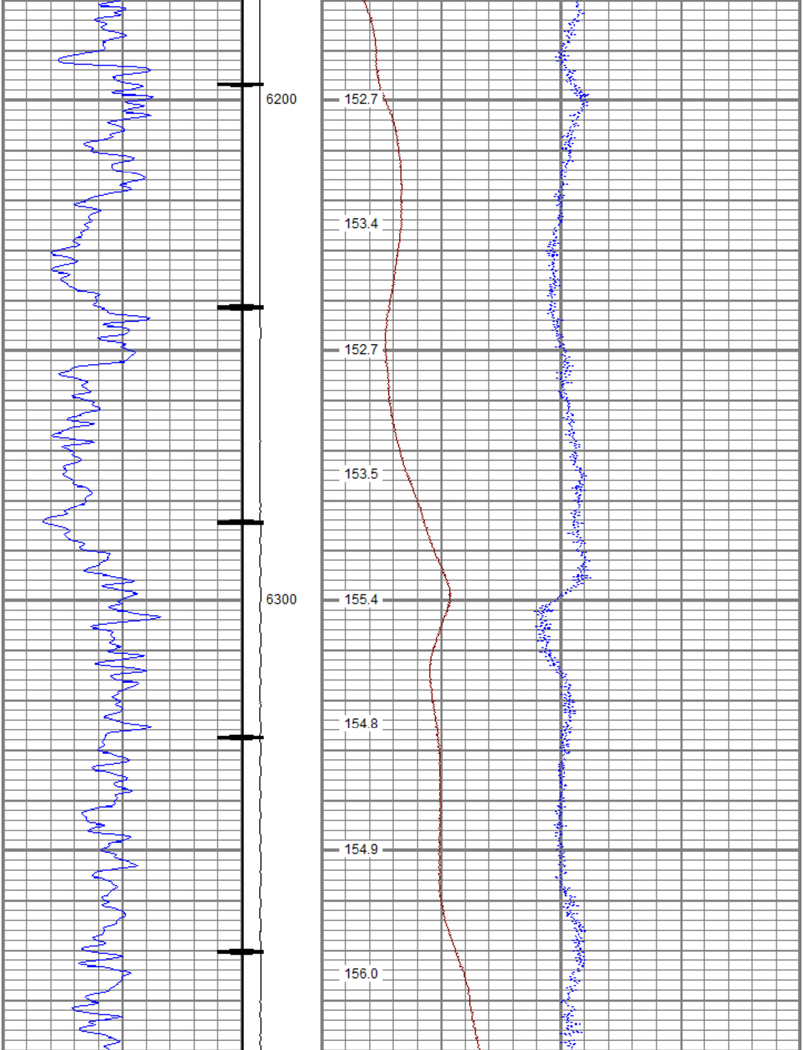
Estimated Top Of Cement
6000
142.3
143.7
144.7
145.9
6100
146.7
148.0
149.7
151.4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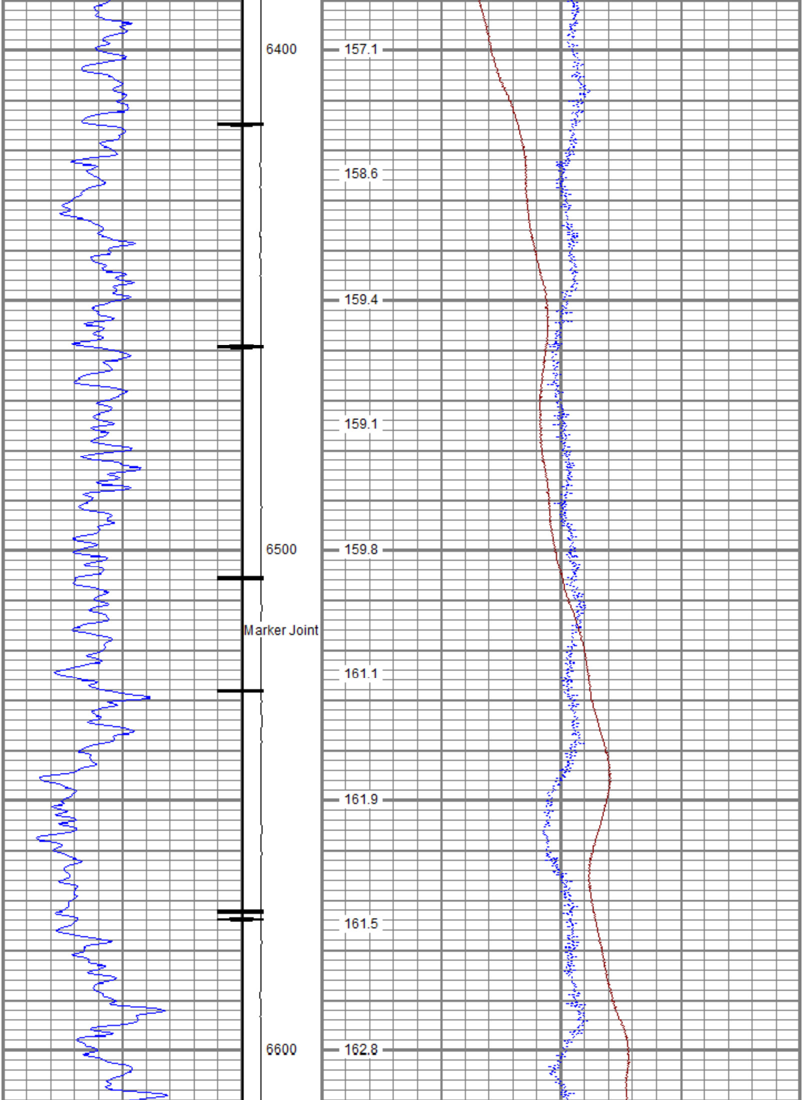
6300
155.4
154.8
154.9
156.0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Marker Joint
161.1
161.9
161.5
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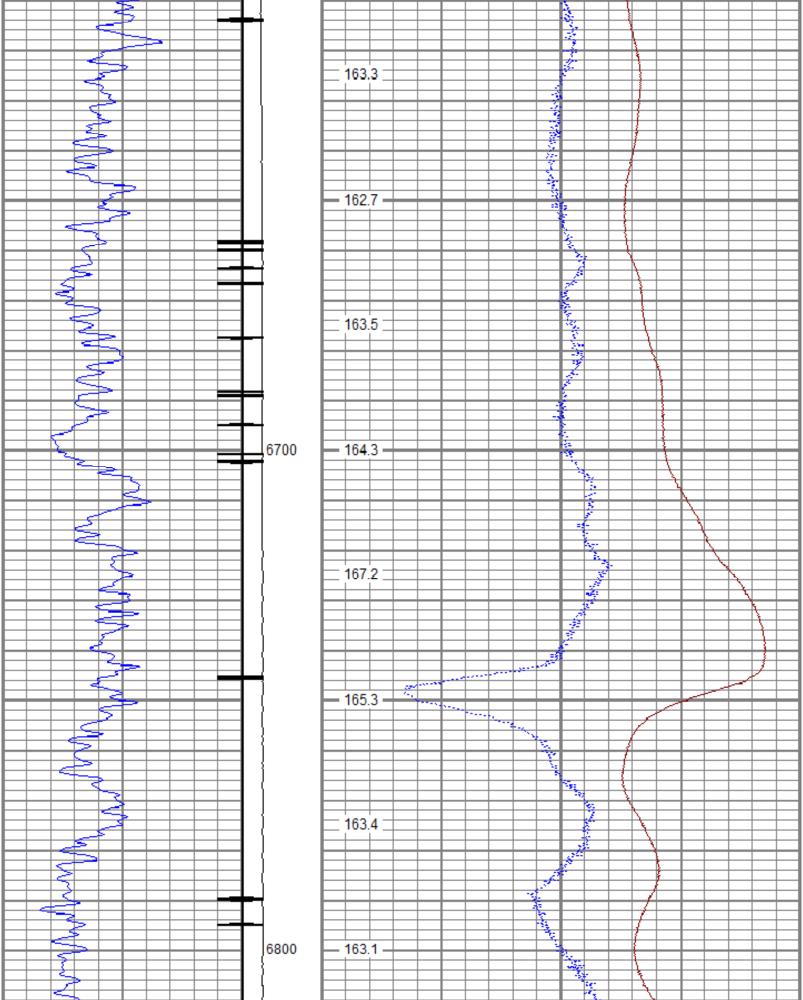
162.8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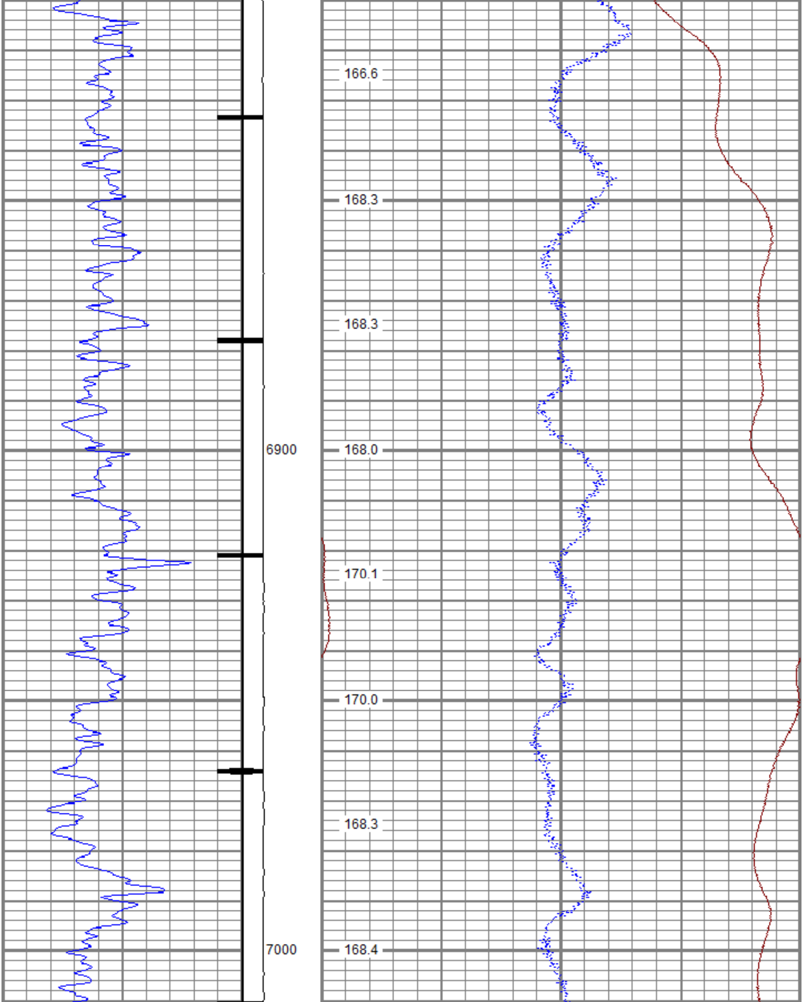
163.4
163.1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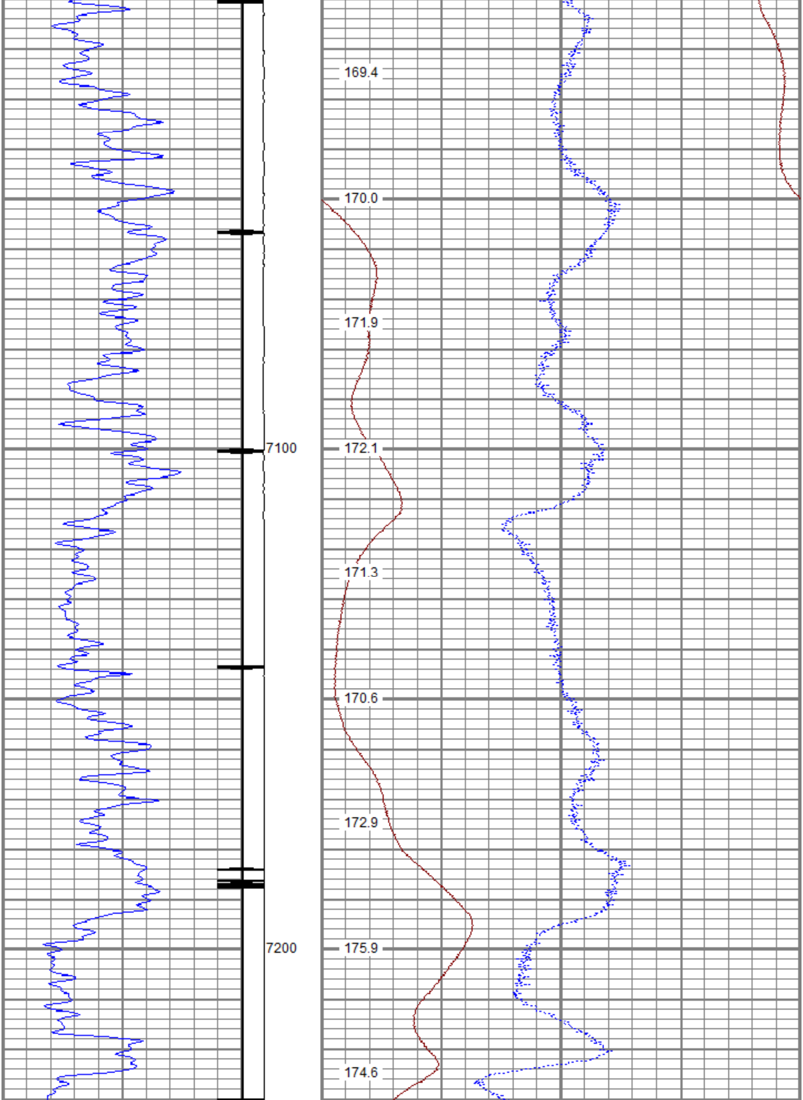

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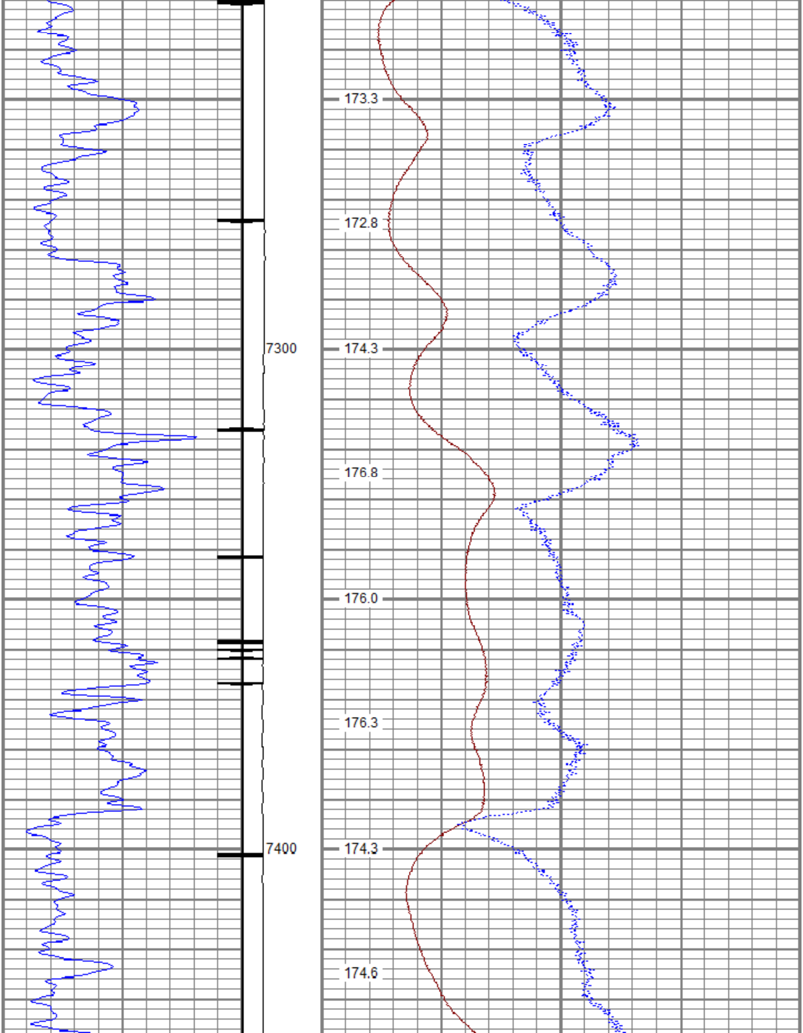
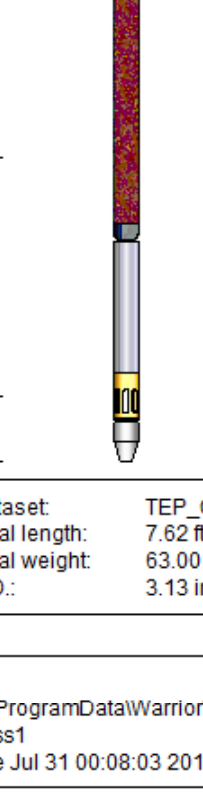
174.6


173.3
172.8
7300
174.3
176.8
176.0
176.3
7400
174.3
174.6

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Titan CHD-14375 GO Titan 1-7/16" Assembled Electric Cable Head w/ 1" Fishing Neck	1.03	1.44	3.60
			UW AGS-001 (211461) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00
			UW XTU-002 (10012277) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
CCL	3.70		UW CCL-028 (10009470) 3-1/8" Ultrawire Casing Collar Locator	1.61	3.13	36.00
GR	1.76		UW PGR-020 (10019072) Production Gamma Ray	1.92	1.69	9.50
TEMP	0.37		UW PRT-016 (10025095) Platinum Resistance Thermometer	1.04	1.69	5.20
TSTAMP	0.00		UW BUL-006 (10019730) Sondex Ultrawire Bullnose Terminator Sub	0.22	1.69	1.20

Dataset: TEP_Clough NR 411-3_TEMP_07-30-18.db: field/well/run1/pass1
Total length: 7.62 ft
Total weight: 63.00 lb
O.D.: 3.13 in

Calibration Report

Database File C:\ProgramData\Warrior\Data\TEP\TEP_Clough NR 411-3_TEMP_07-30-18\TEP_Clough NR 411-3_TEMP_
Dataset Pathname pass1
Dataset Creation Tue Jul 31 00:08:03 2018

Temperature Calibration Report

Serial Number: 10025095
Tool Model: 016
Performed: Thu Jun 14 14:48:56 2018

Point #	Reading		Reference	
1	12210.00	cps	68.00	degF
2	18050.00	cps	104.00	degF
3	23990.00	cps	140.00	degF
4	29970.00	cps	176.00	degF
5	36090.00	cps	212.00	degF
6	42120.00	cps	248.00	degF
7	48280.00	cps	284.00	degF
8	54470.00	cps	320.00	degF
9	60690.00	cps	356.00	degF
10		cps		degF

Gamma Ray Calibration Report

Serial Number: 10019072
Tool Model: 020
Performed: Sun Nov 12 05:37:04 2017

Calibrator Value: 637.0 GAPI

Background Reading: 78.8 cps
Calibrator Reading: 1069.9 cps

Sensitivity: 0.6427 GAPI/cps

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Company	TEP Rocky Mountain LLC
Well	Clough NR 411-3
Field	Rulison
County	Garfield
State	Colorado