Company	TEP Rocky Mountain LLC
Well	Federal RU 23-17
Field	Rulison
County	Garfield
State	Colorado

RELIANCE
OILFIELD SERVICES

Temperature
Gamma Ray
Casing Collar Log

Company	TEP Rocky Mountain LLC		
Well	Federal RU 23-17		
Field	Rulison		
County	Garfield	State	Colorado
Location:	API # : 05-045-23739 1888' FSL & 2440' FWL NESW SEC 17 TWP 7S RGE 93W	Other Services	--
Permanent Datum	Ground Level	Elevation 8365.6'	Elevation
Log Measured From	Kelly Bushing	24 FT	K.B. 8389.6' D.F. 8388.6' G.L. 8365.6'
Drilling Measured From	Kelly Bushing		

Date	15-MAR-2018
Run Number	One
Depth Driller	10425 FT
Depth Logger	10368 FT
Bottom Logged Interval	10368 FT
Top Log Interval	Surface
Open Hole Size	8.750"
Type Fluid	Fresh Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	251°F
Estimated Cement Top	4810 FT
Time Well Ready	ROA
Time Logger on Bottom	14:45
Equipment Number	HD-0359
Location	Grand Junction, CO
Recorded By	J. Donnelly
Witnessed By	D. Leatherman

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	1102 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	10384 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 6654 FT to 6675 FT
Log ran from 10368 FT to Surface
Log ran with 0 PSI Surface Induced Pressure

Thank you for choosing Reliance Oilfield Services, LLC!!

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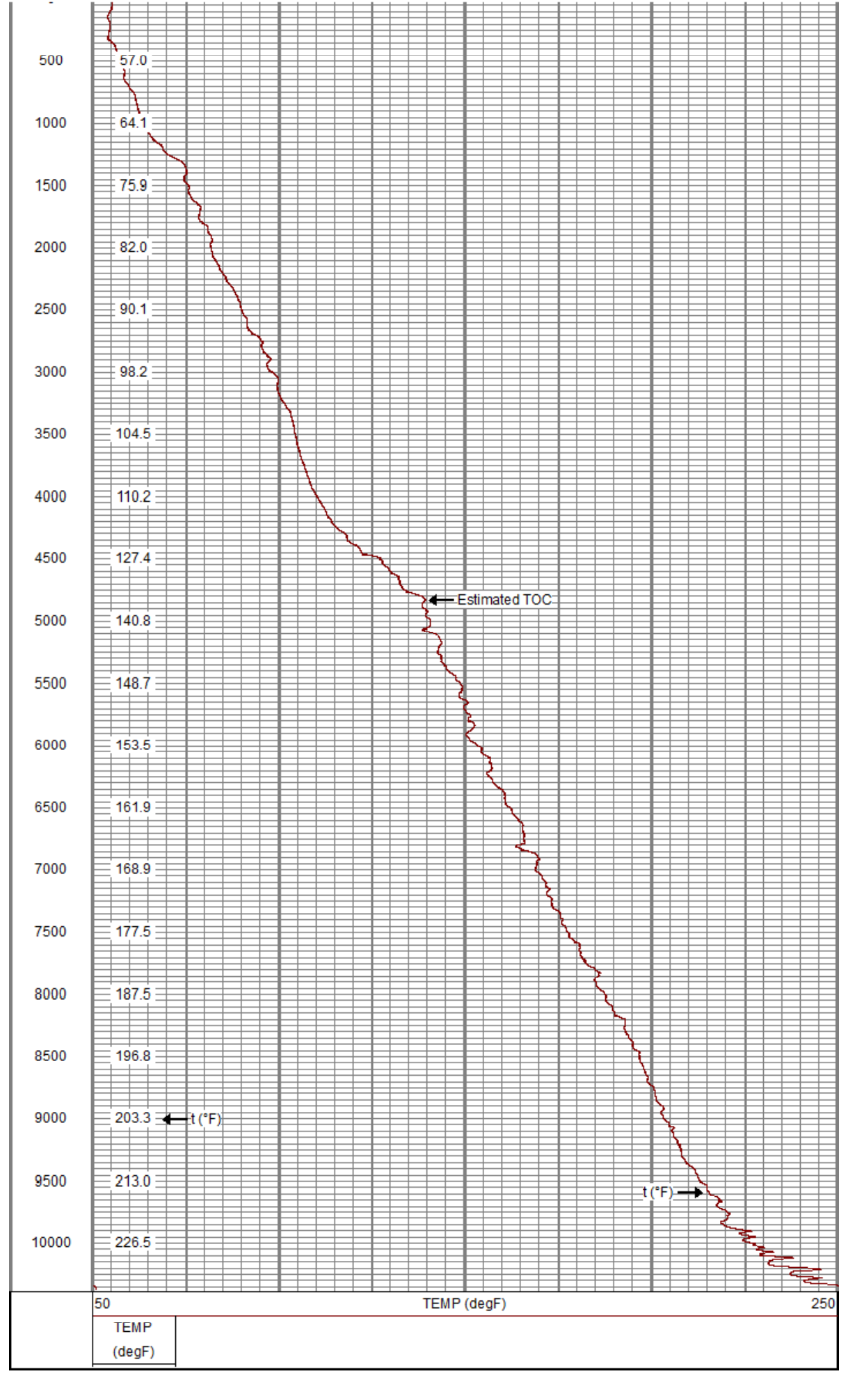
Main Pass (Quick Look)

Recorded with 0 PSI Surface Induced Pressure

Database File	new folder (5)\tep_federal ru 23-17_temp_03-15-18.db
Dataset Pathname	mainQL
Presentation Format	ros_temp_ql_tep
Dataset Creation	Thu Mar 15 16:18:43 2018
Charted by	Depth in Feet scaled 1:10000



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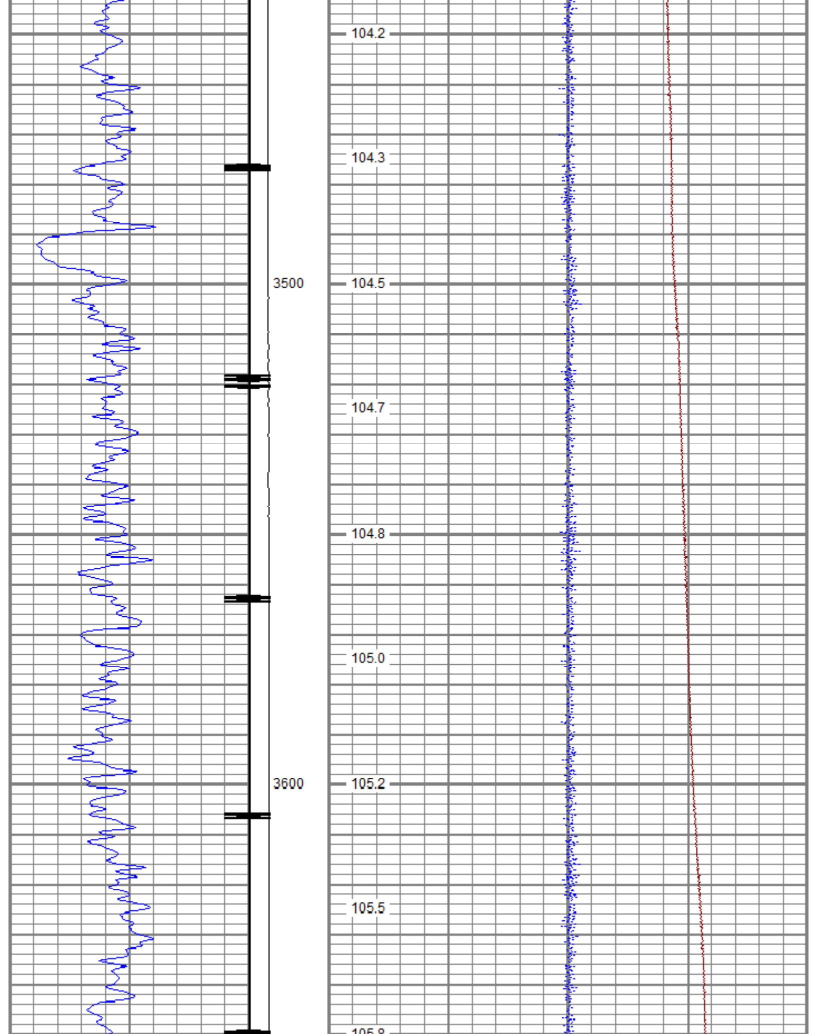
Main Pass

Recorded with 0 PSI Surface Induced Pressure

Database File	new folder (5)\tep_federal ru 23-17_temp_03-15-18.db
Dataset Pathname	main
Presentation Format	ros_temp_tep
Dataset Creation	Thu Mar 15 15:45:23 2018
Charted by	Depth in Feet scaled 1:240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104.5
104.7
104.8
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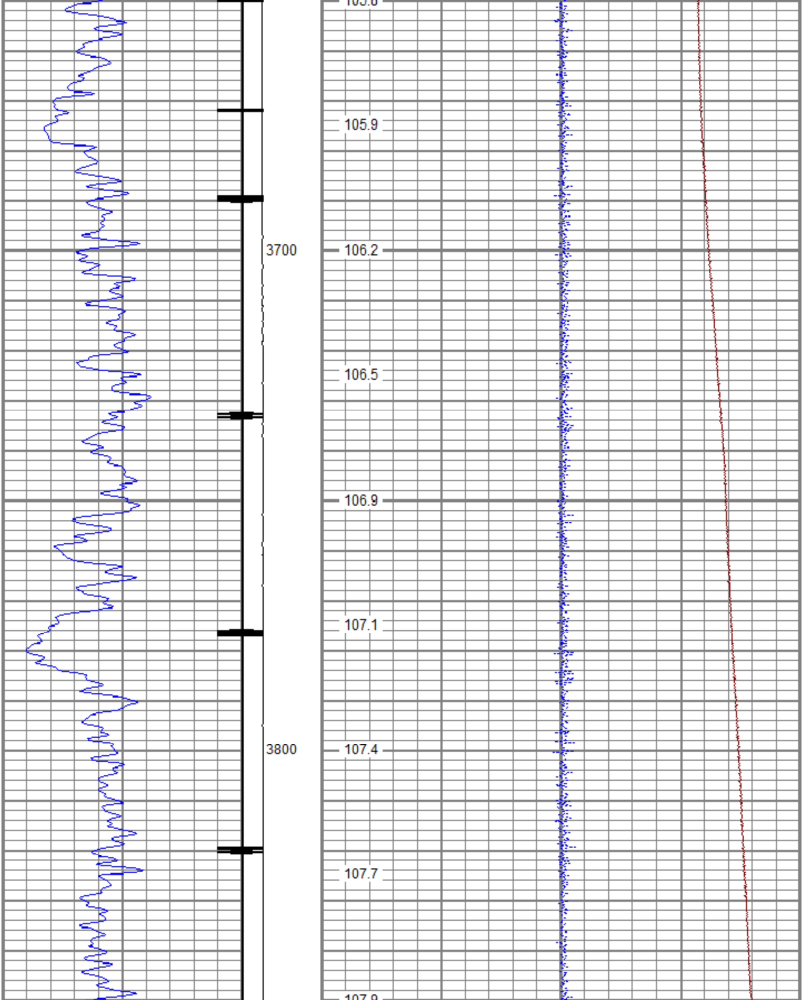
3600
105.2
105.5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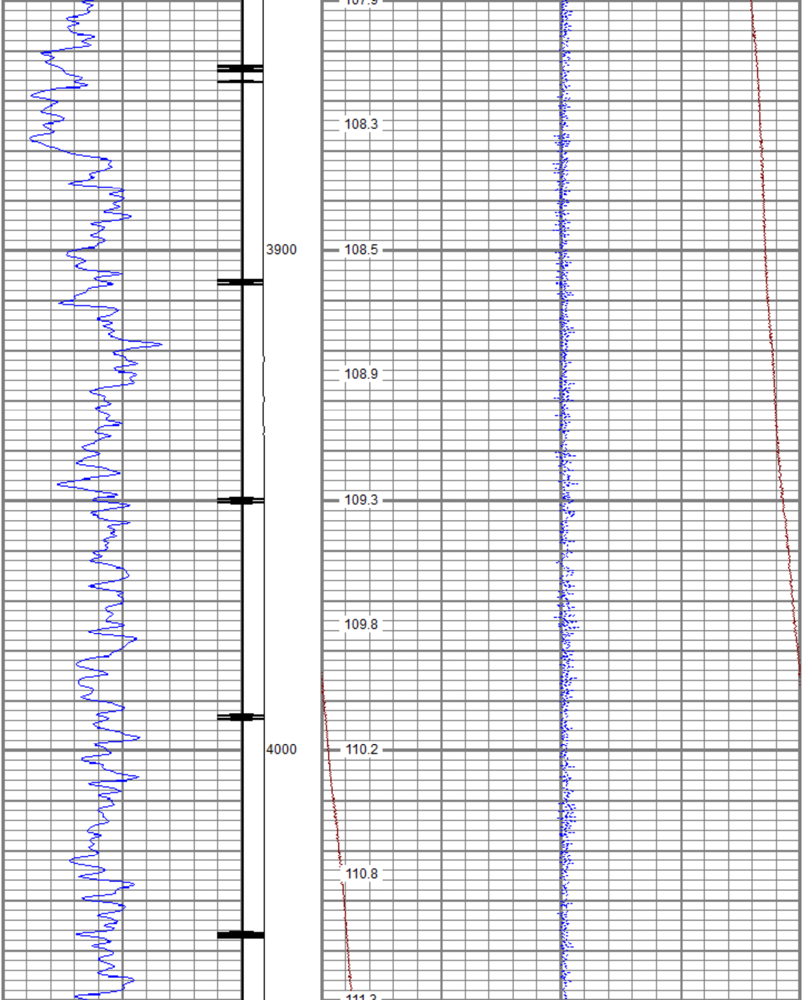
106.5
106.9
107.1
3800
107.4
107.7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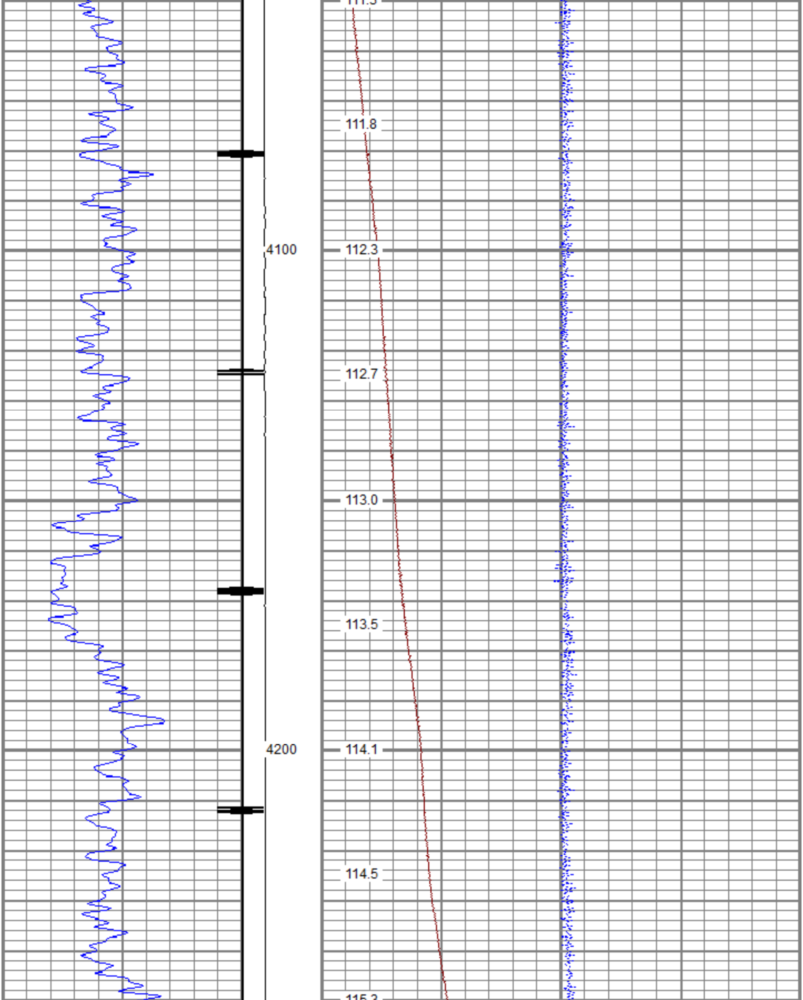
4000
110.2
110.8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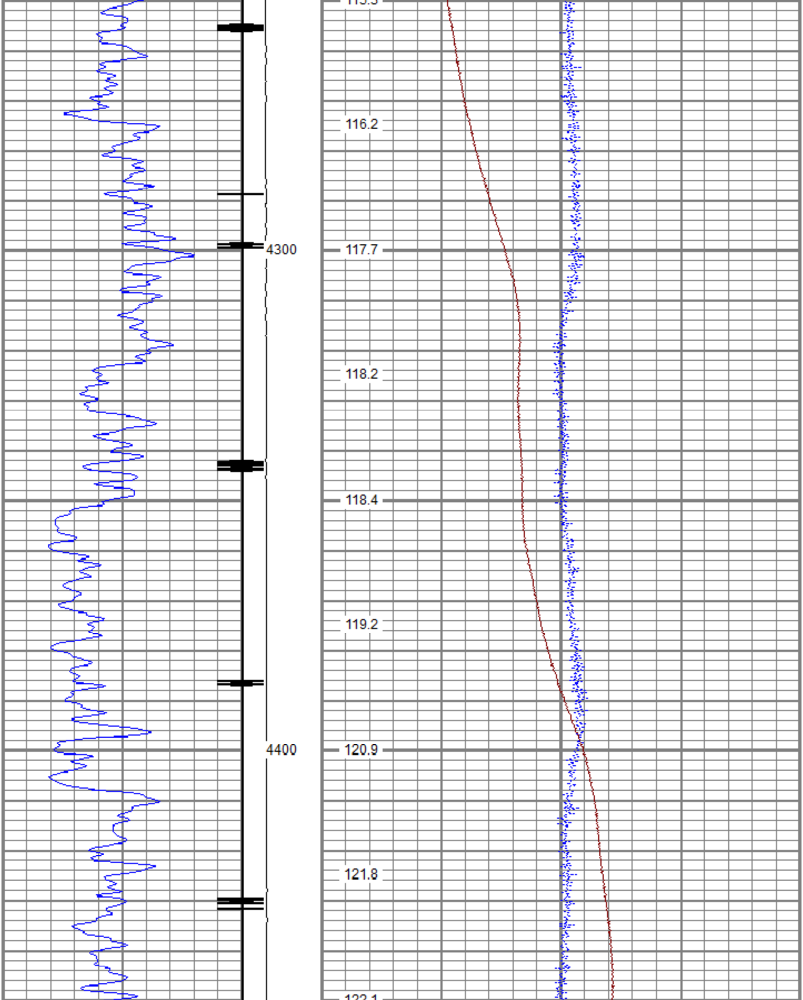
113.0
113.5
4200
114.1
114.5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4400
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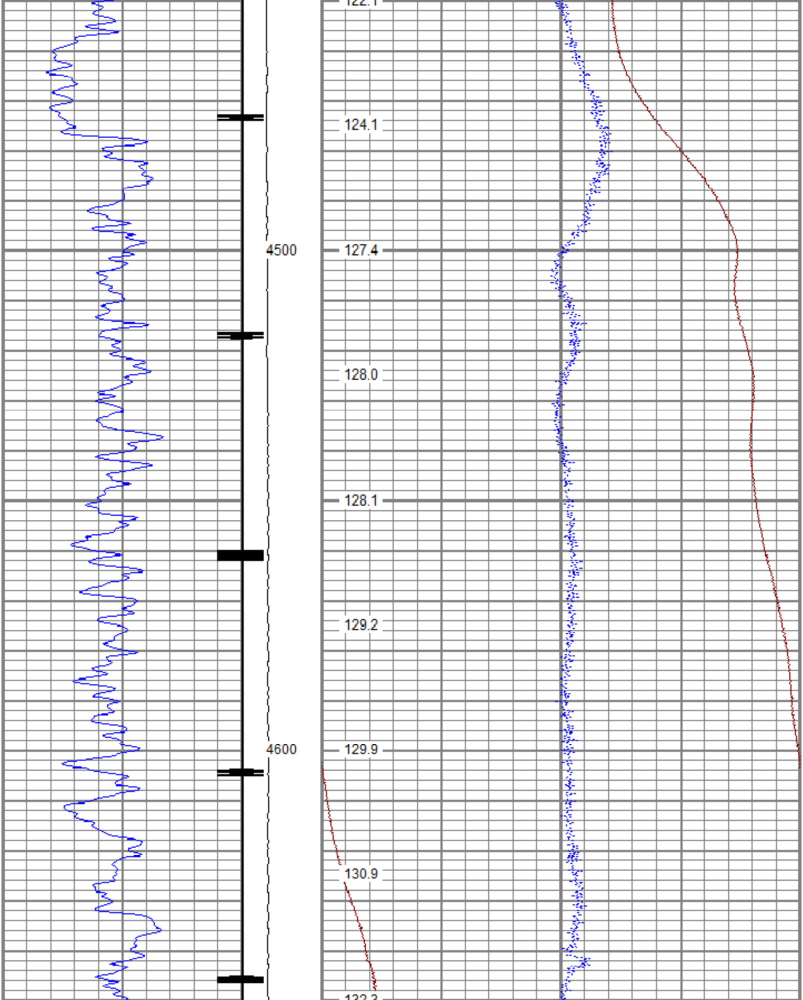
117.7
118.2
118.4
119.2
120.9
121.8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124.1
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127.4
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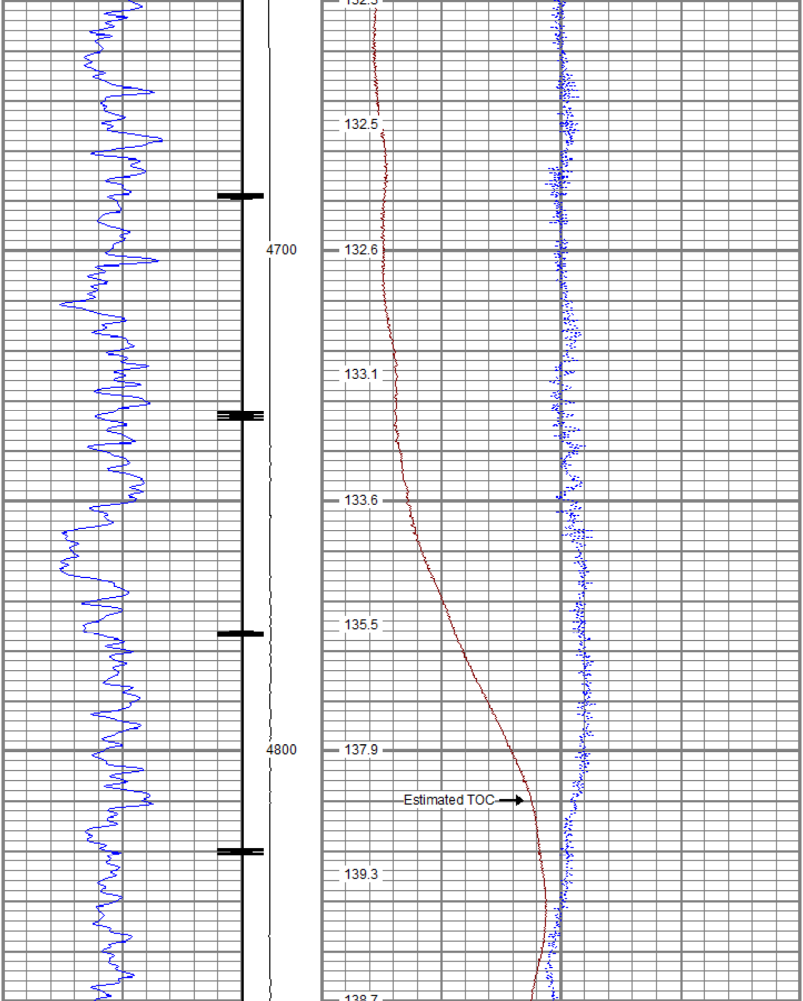
128.1
129.2
4600
129.9
130.9
132.3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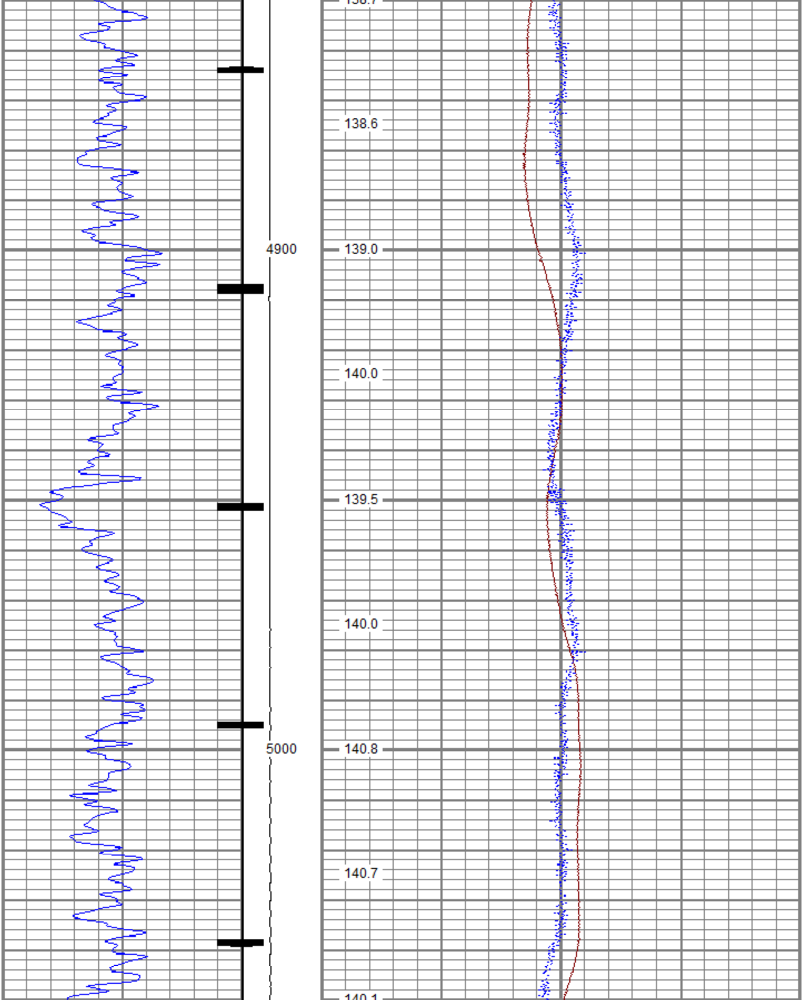
4800
132.5
132.6
133.1
133.6
135.5
137.9
Estimated TOC
139.3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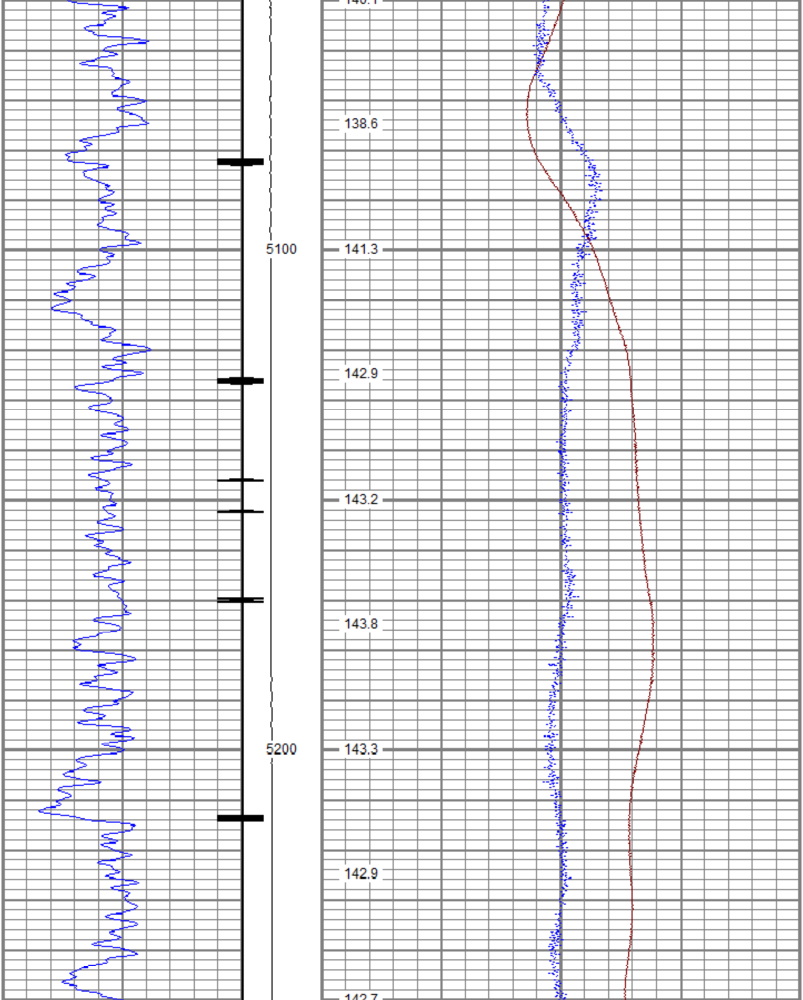
140.0
5000
140.8
140.7
140.1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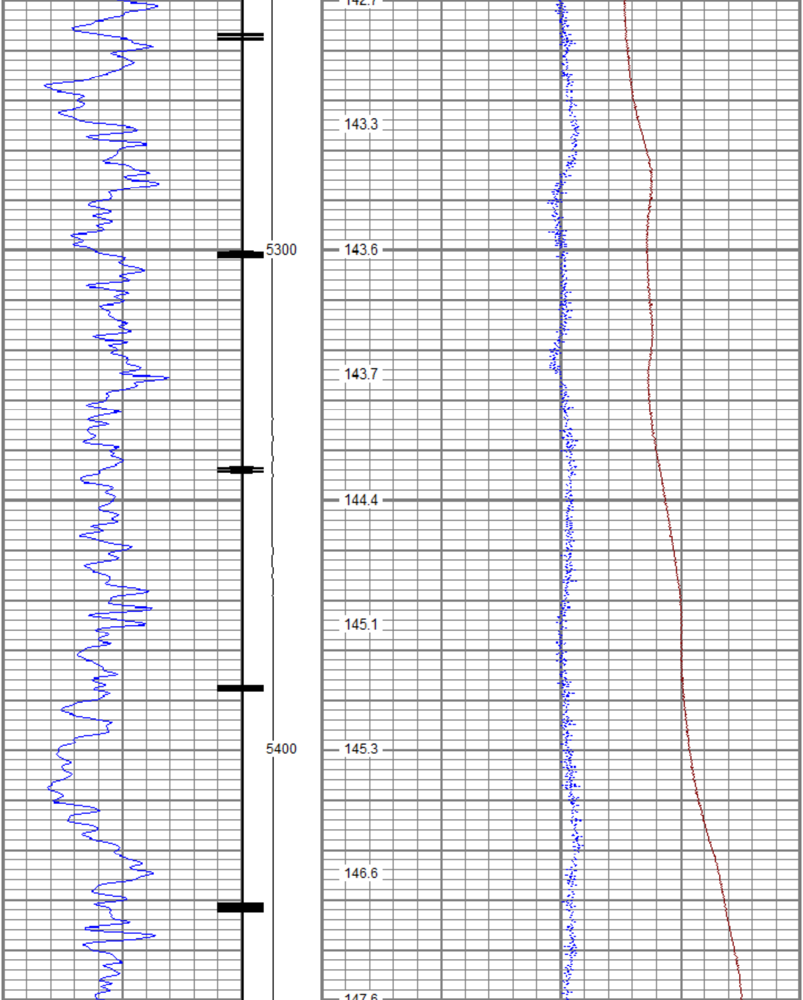
143.3
142.9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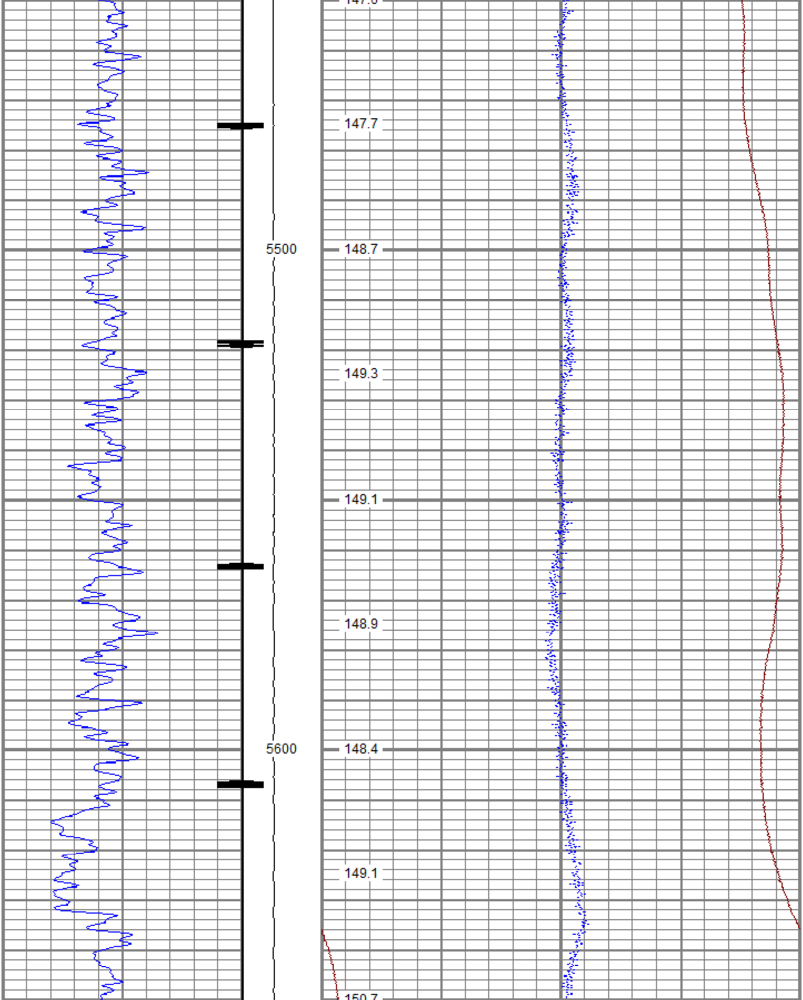
5400
145.3
146.6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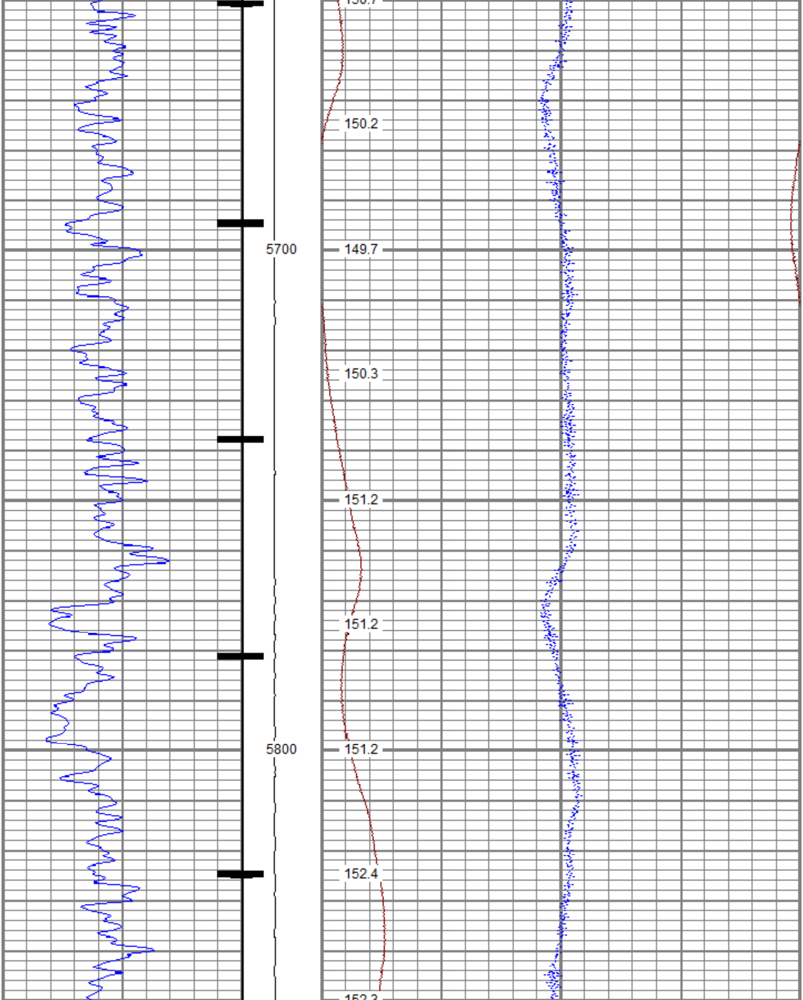
148.4
149.1
150.7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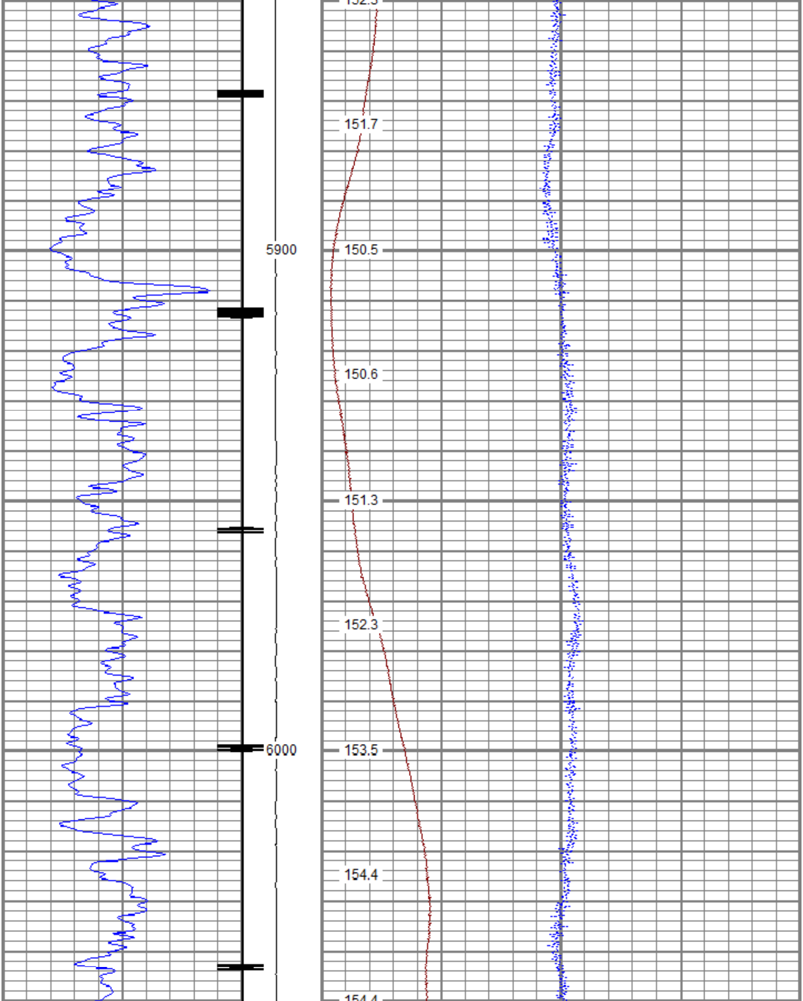
5800
151.2
152.4



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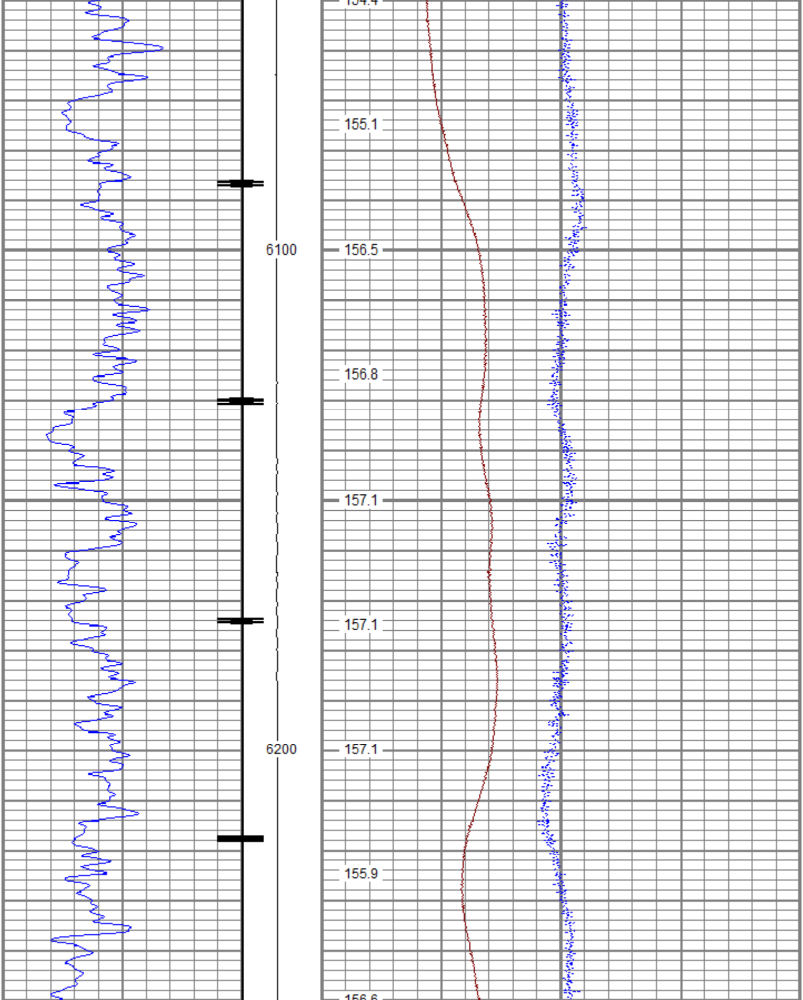
152.3
6000
153.5
154.4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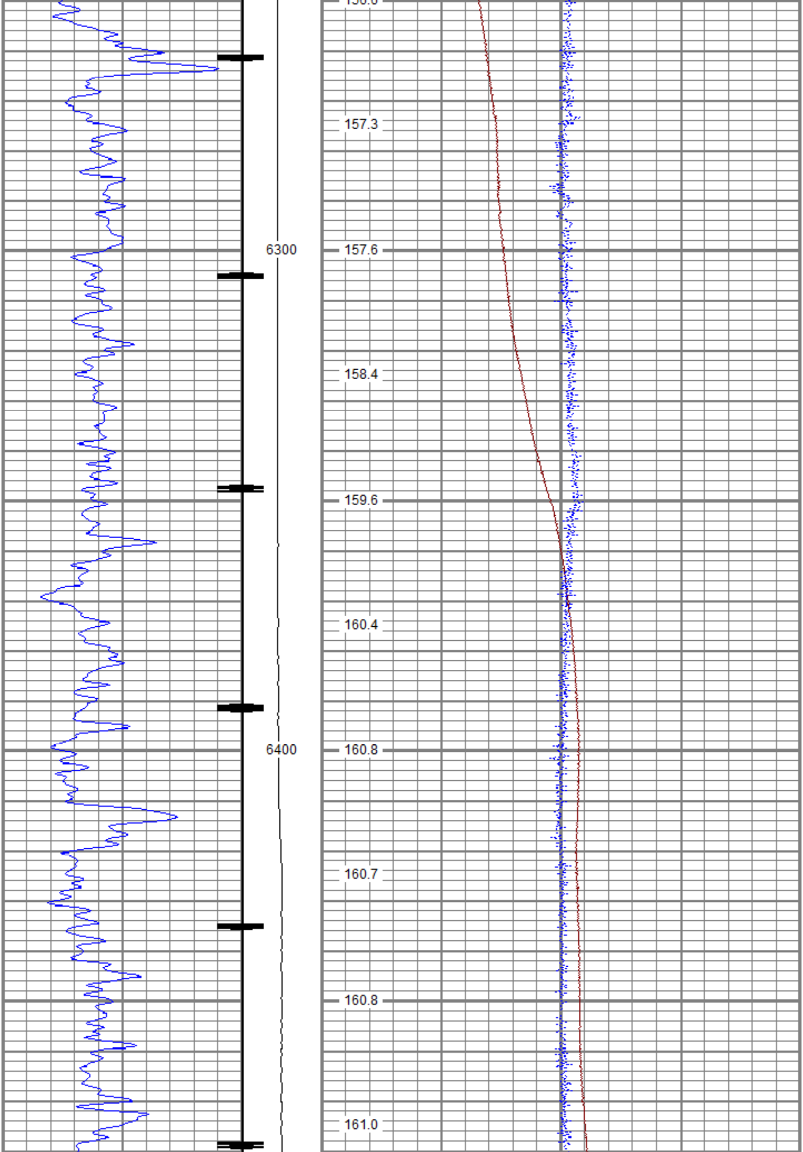
6200
155.1
156.5
156.8
157.1
157.1
157.1
155.9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6300
157.6
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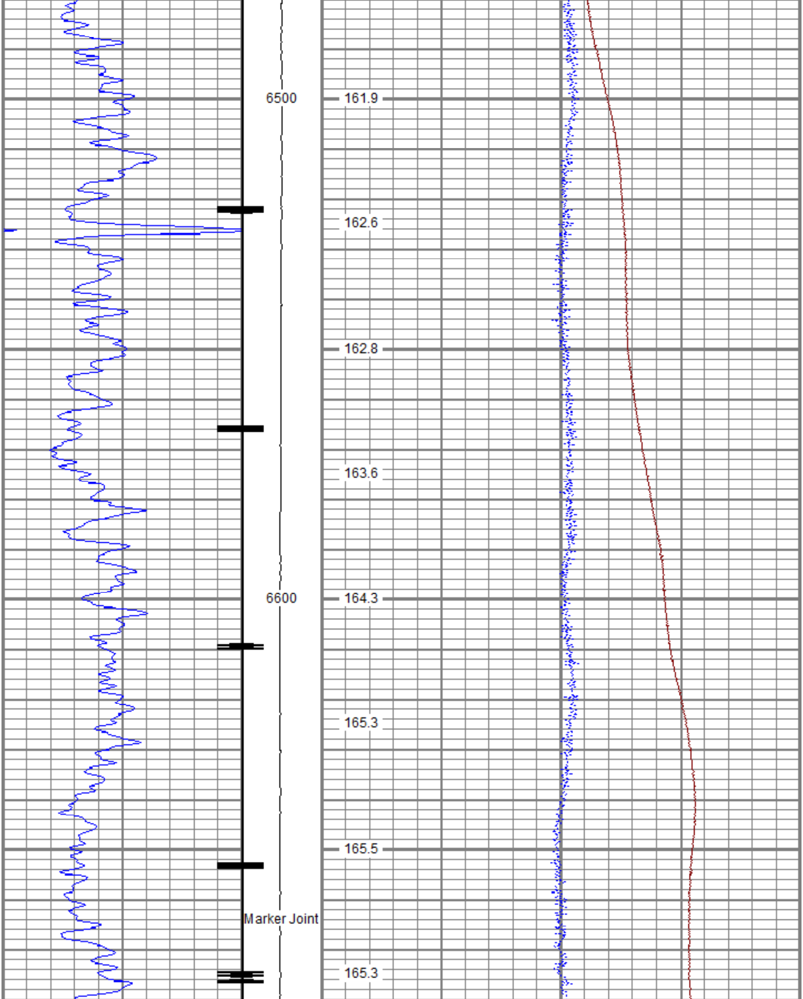
159.6
160.4
6400
160.8
160.7
160.8
161.0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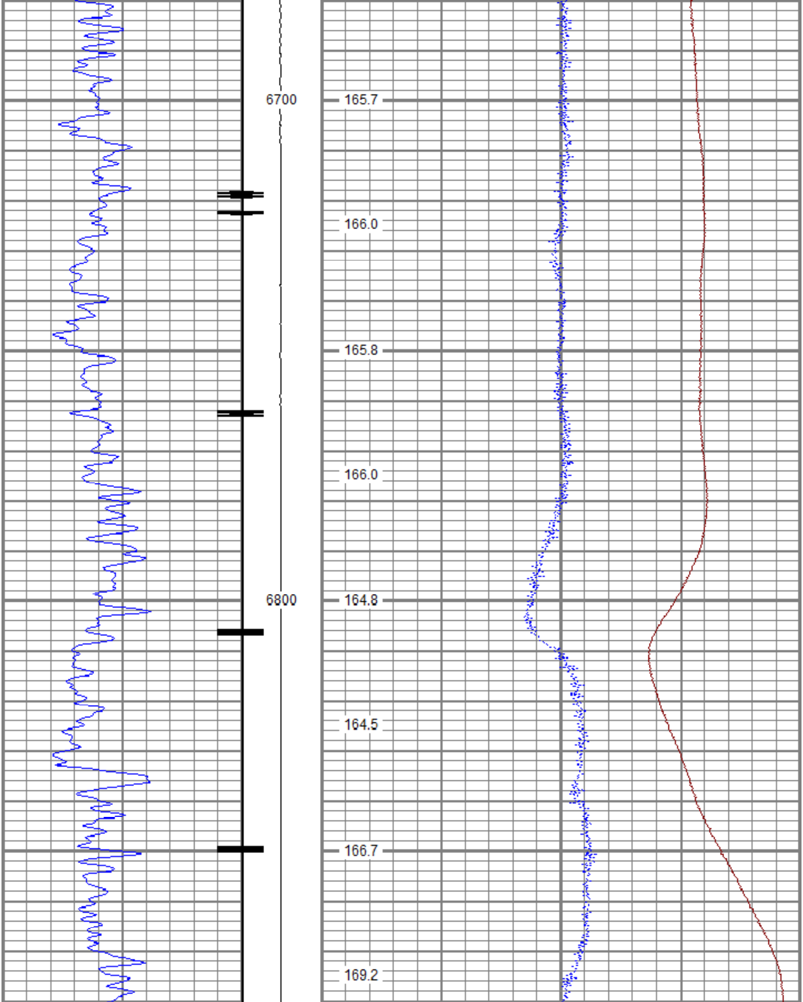
161.9
162.6
162.8
163.6
6600
164.3
165.3
165.5
Marker Joint
165.3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165.8
166.0
6800
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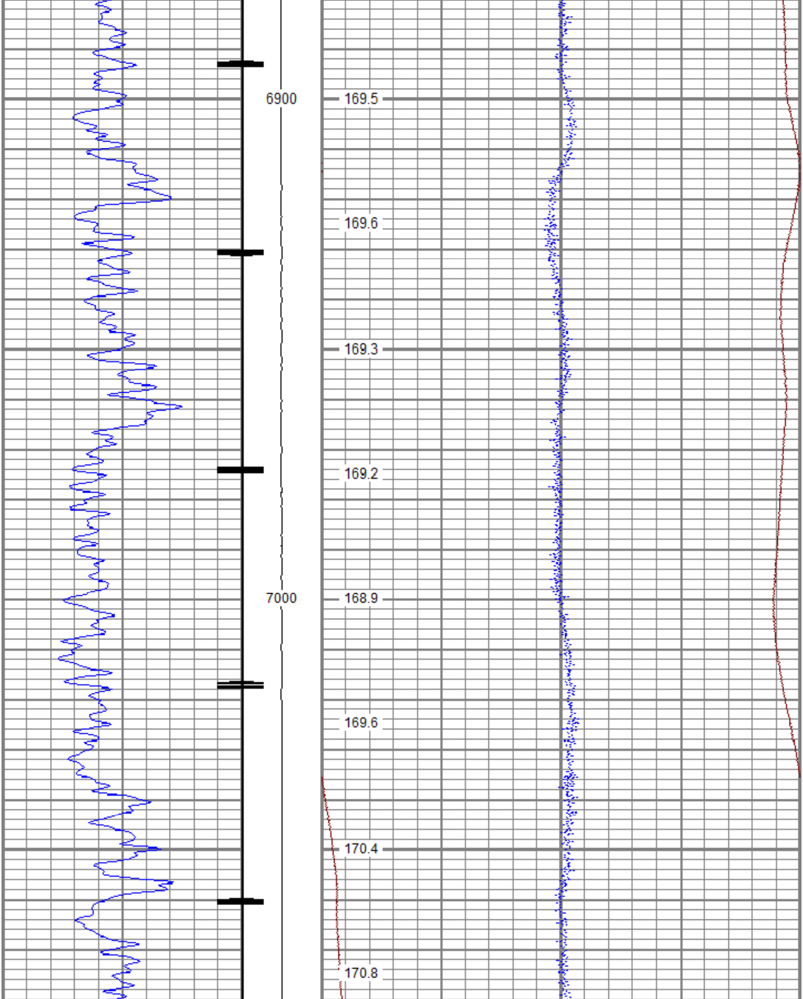
166.7
169.2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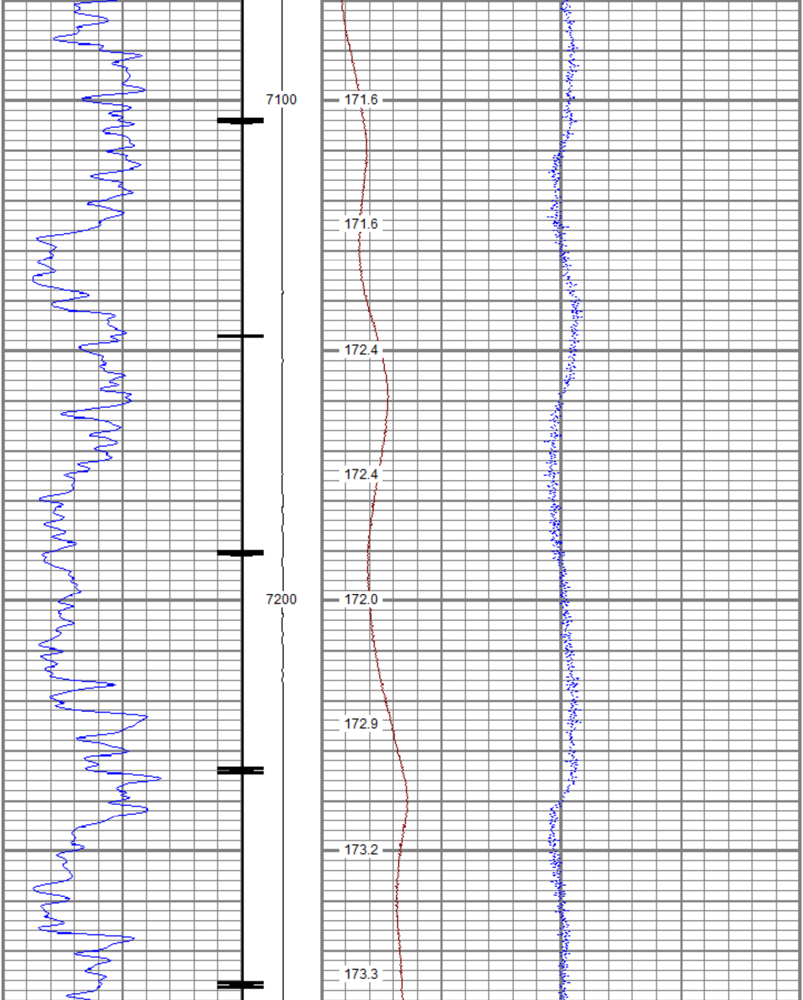
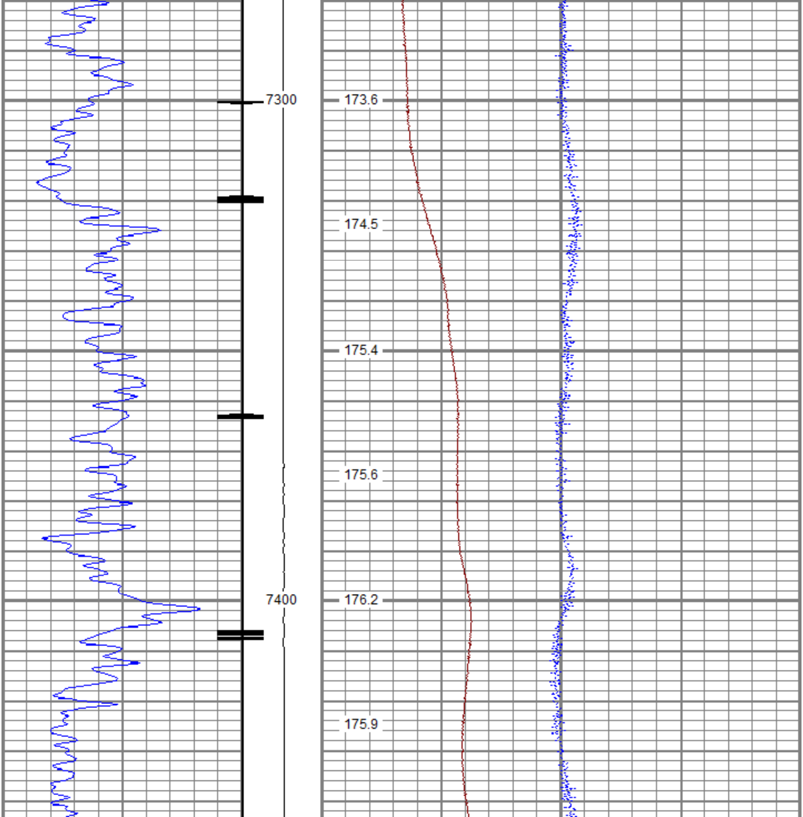
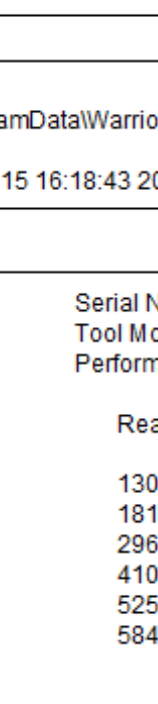

7100
171.6
171.6
172.4
172.4
7200
172.0
172.9
173.2
173.3


7300
173.6
174.5
175.4
175.6
7400
176.2
175.9

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 (10017430) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
CCL	3.70		UW CCL-028 (10018437) 3-1/8" Ultrawire Casing Collar Locator	1.61	3.13	36.00
GR	1.76		UW PGR-020 (10013899) Production Gamma Ray	1.92	1.69	9.50
TEMP	0.37		UW PRT-016 (10025093) Platinum Resistance Thermometer	1.04	1.69	5.20
TSTAMP	0.00		UW BUL-006 (10019616) Sondex Ultrawire Bullnose Terminator Sub	0.22	1.69	1.20

Dataset: TEP_Federal RU 23-17_TEMP_03-15-18.db: field/well/run1/mainQL
Total length: 7.62 ft
Total weight: 63.00 lb
O.D.: 3.13 in

Calibration Report

Database File C:\ProgramData\Warrior\Data\New folder (5)\TEP_Federal RU 23-17_TEMP_03-15-18.db
Dataset Pathname mainQL
Dataset Creation Thu Mar 15 16:18:43 2018

Temperature Calibration Report

Serial Number: 10025093
Tool Model: 016
Performed: Sun Nov 12 14:20:23 2017

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:	10013899	
Tool Model:	020	
Performed:	Sun Nov 12 06:37:04 2017	
Calibrator Value:	637.0	GAPI
Background Reading:	78.8	cps
Calibrator Reading:	1069.9	cps
Sensitivity:	0.6427	GAPI/cps

RELIANCE
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State	Colorado