RELIANCE OILFIELD SERVICES

Temperature
Gamma Ray
Casing Collar Log

Company	TEP Rocky Mountain LLC
Well	Federal RU 24-17
Field	Rulison
County	Garfield
State	Colorado

Company TEP Rocky Mountain LLC
Well Federal RU 24-17
Field Rulison
County Garfield State Colorado

Location: API # : 05-045-23749

SEC 17 TWP 7S RGE 93W

Other Services
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Permanent Datum	Ground Level	Elevation	8365.6'
Log Measured From	Kelly Bushing	24 FT	
Drilling Measured From	Kelly Bushing		

Elevation
K.B. 8389.6'
D.F. 8388.6'
G.L. 8365.6'

Date	03-JUN-2018		
Run Number	One		
Depth Driller	10357 FT		
Depth Logger	10293 FT		
Bottom Logged Interval	10289 FT		
Top Log Interval	Surface		
Open Hole Size	8.750"		
Type Fluid	Fresh Water		
Density / Viscosity	8.34 lb/gal		
Max. Recorded Temp.	238°F		
Estimated Cement Top	4635 FT		
Time Well Ready	ROA		
Time Logger on Bottom	23:45		
Equipment Number	HD-0359		
Location	Grand Junction, CO		
Recorded By	Z. Fisher		
Witnessed By	Craig Borgstede		

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	1131 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	10301 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 6611 FT to 6632 FT
Log ran from 10289 FT to Surface
Log ran with 0 PSI Surface Induced Pressure

Thank you for choosing Reliance Oilfield Services, LLC!!

RELIANCE OILFIELD SERVICES

Main Pass (Quick Look)

Recorded with 0 PSI Surface Induced Pressure

Database File	tep_federal ru 24-17_temp_06-03-18\processed_tep_federal ru 24-17_temp_06-03-18.db
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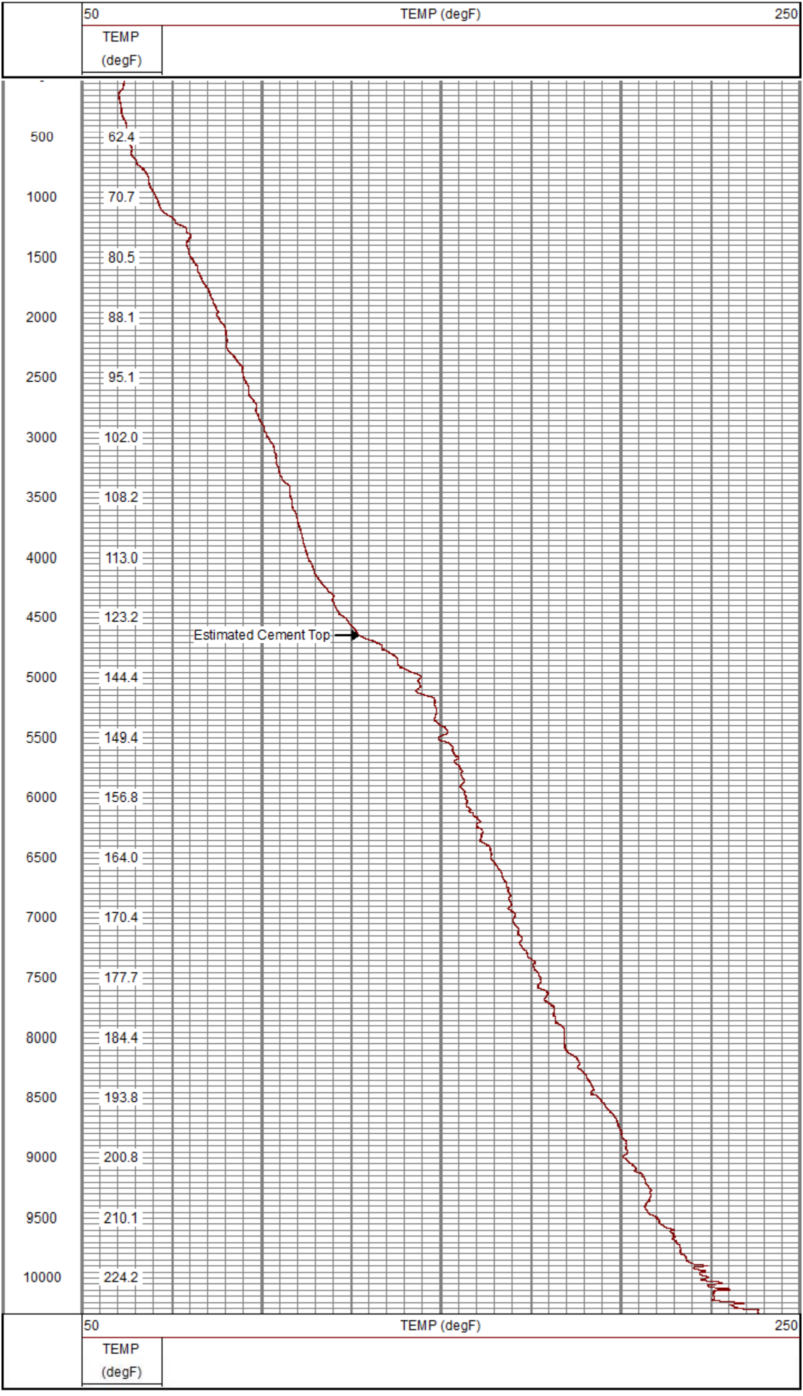
Presentation Format	ros_temp_ql_tep
Dataset Creation	Mon Jun 04 02:06:06 2018
Charted by	Depth in Feet scaled 1:10000



RELIANCE OILFIELD SERVICES

Main Pass

Recorded with 0 PSI Surface Induced Pressure

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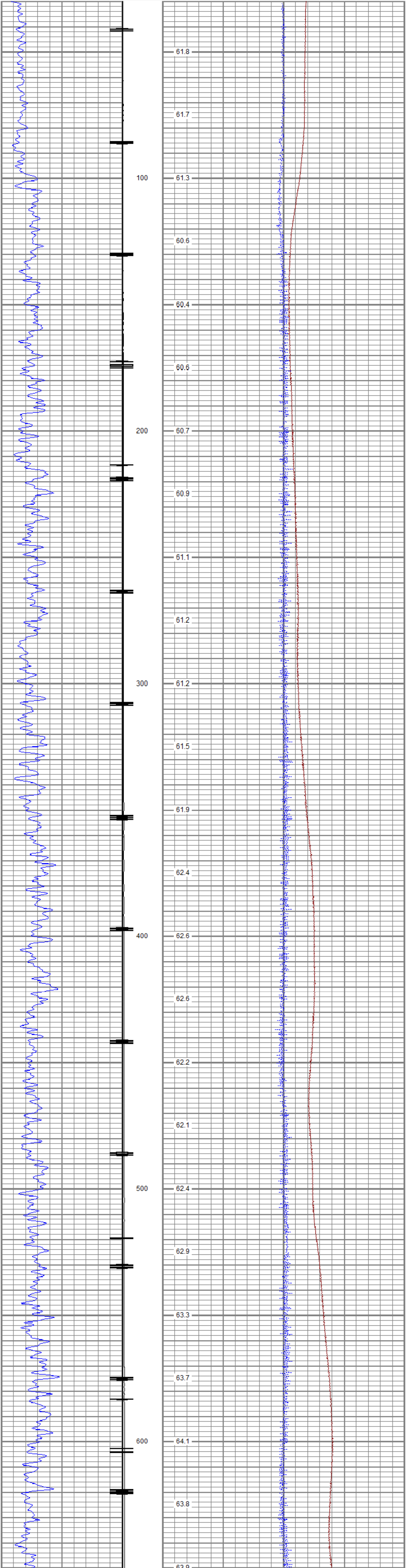
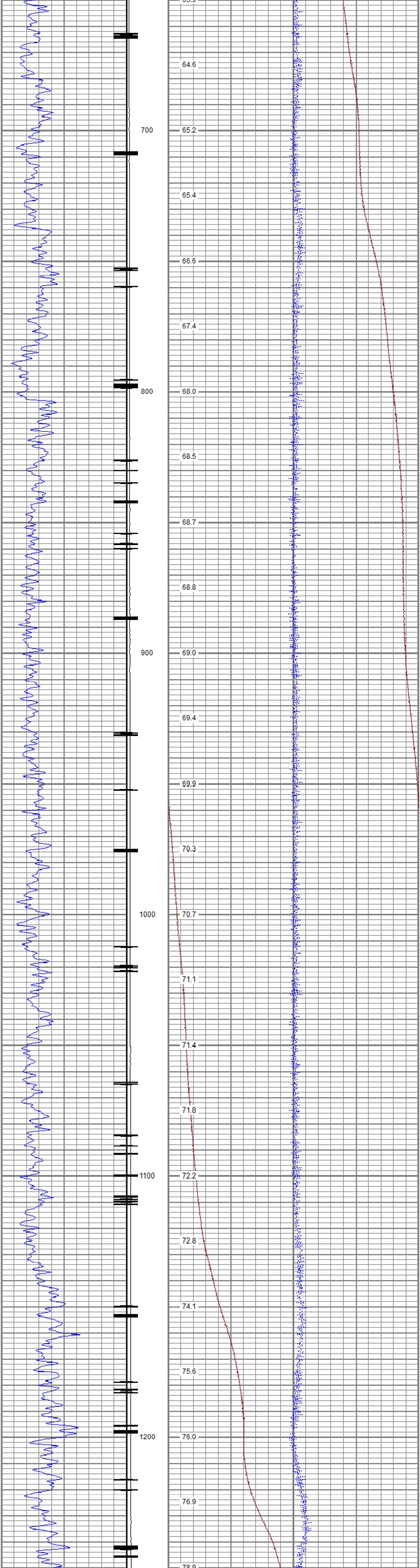
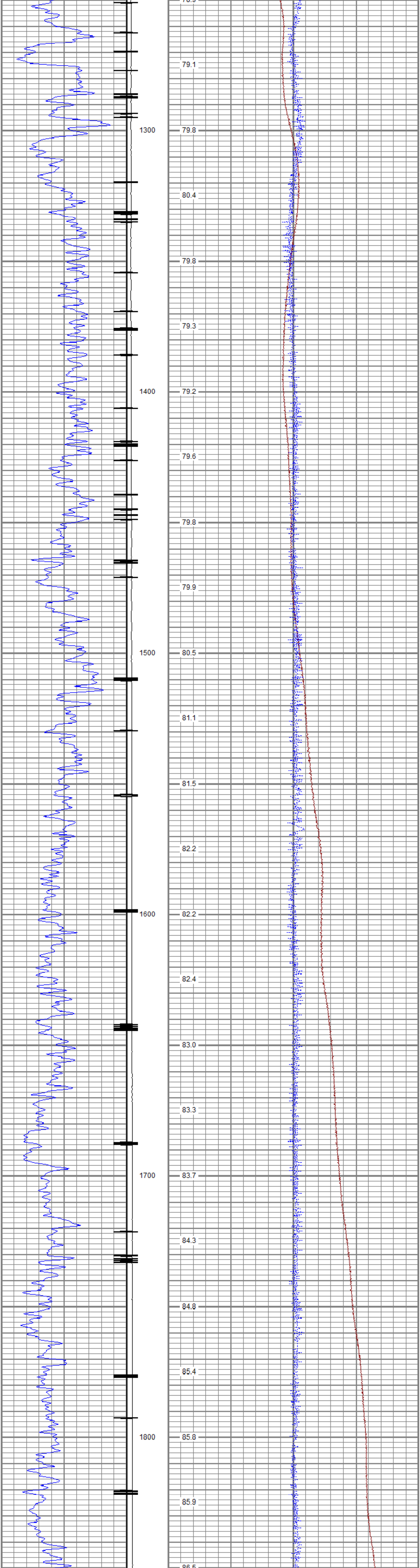
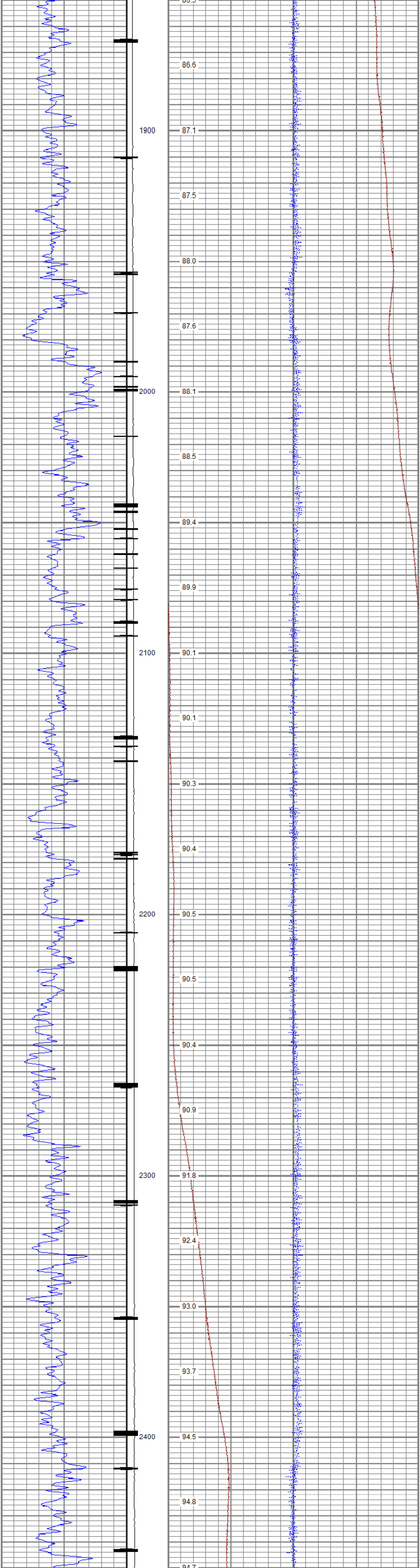
Dataset Creation	Mon Jun 04 00:46:24 2018
Charted by	Depth in Feet scaled 1:240

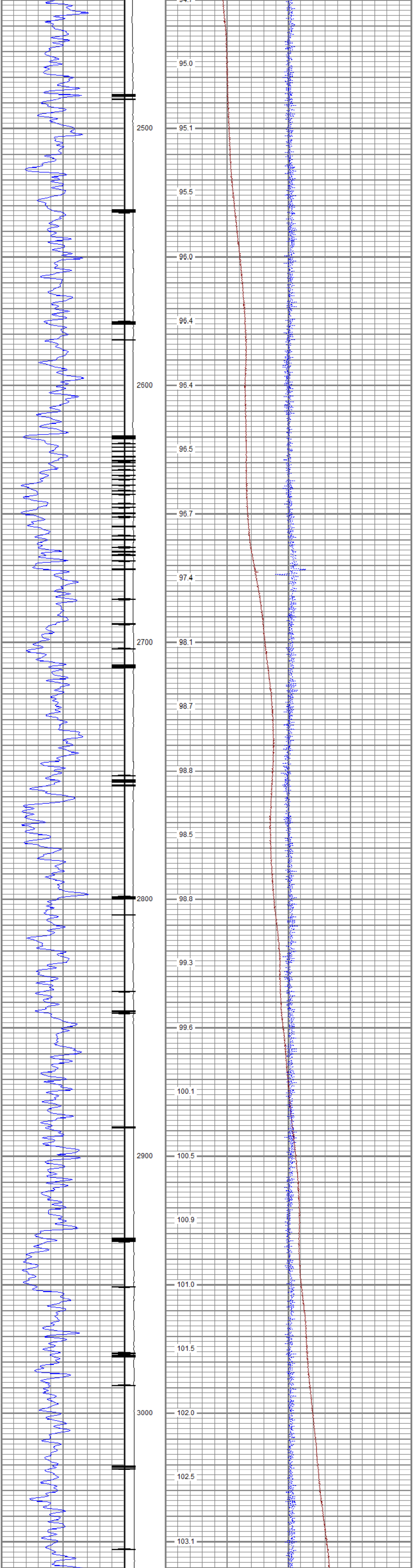
0 Gamma Ray (GAPI) 120	LTEN	50 TEMP (degF) 70
Casing Collar Locator	0 (lb2000	-1 DTMP (degF) 1
		TEMP (degF)

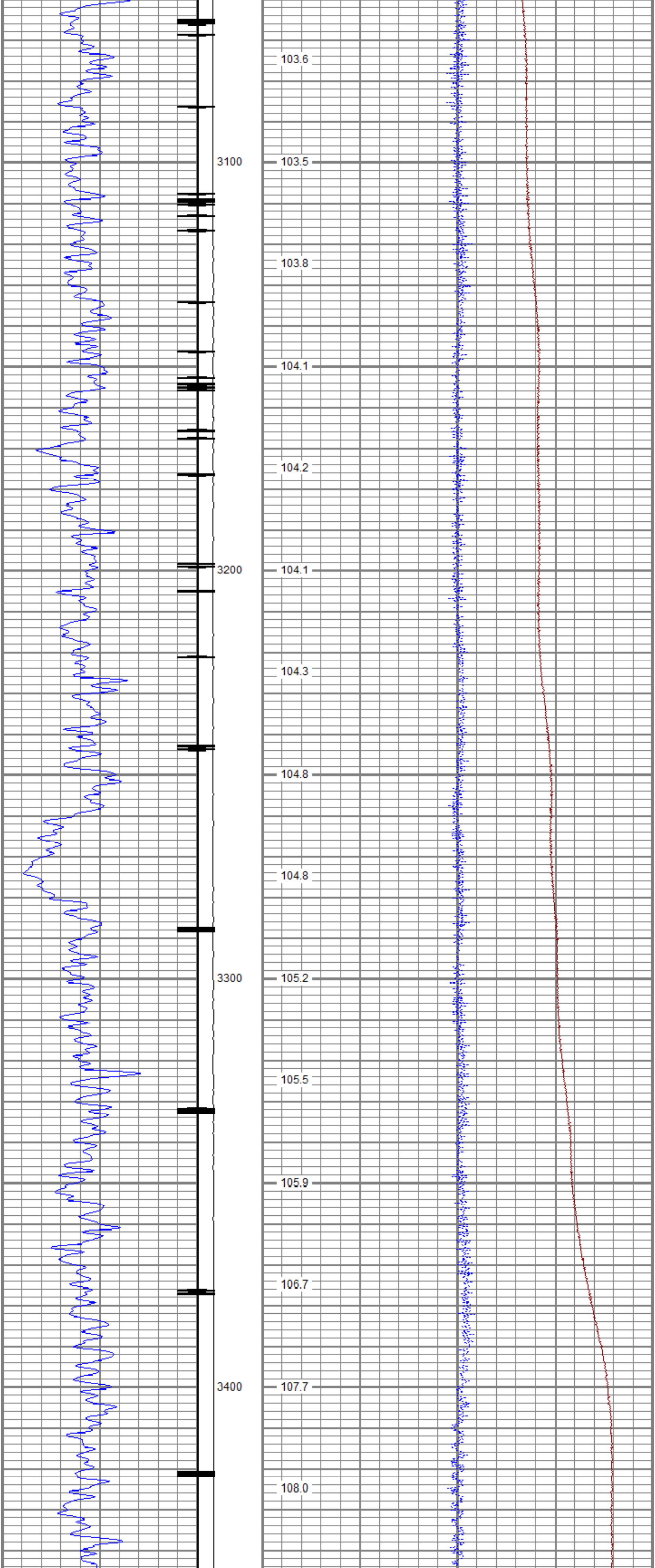


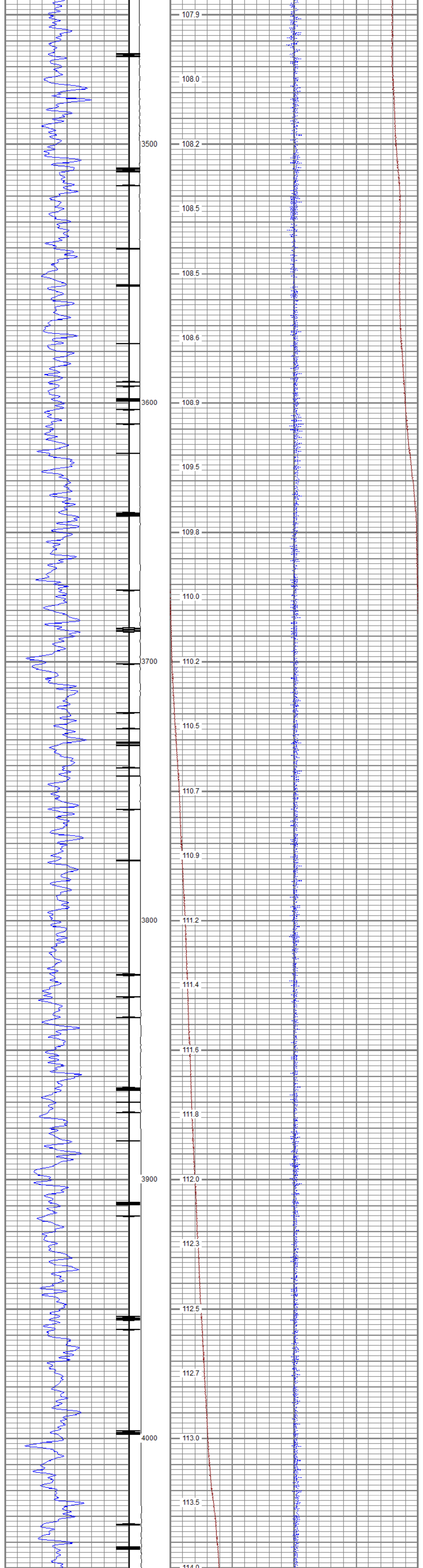












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110.7
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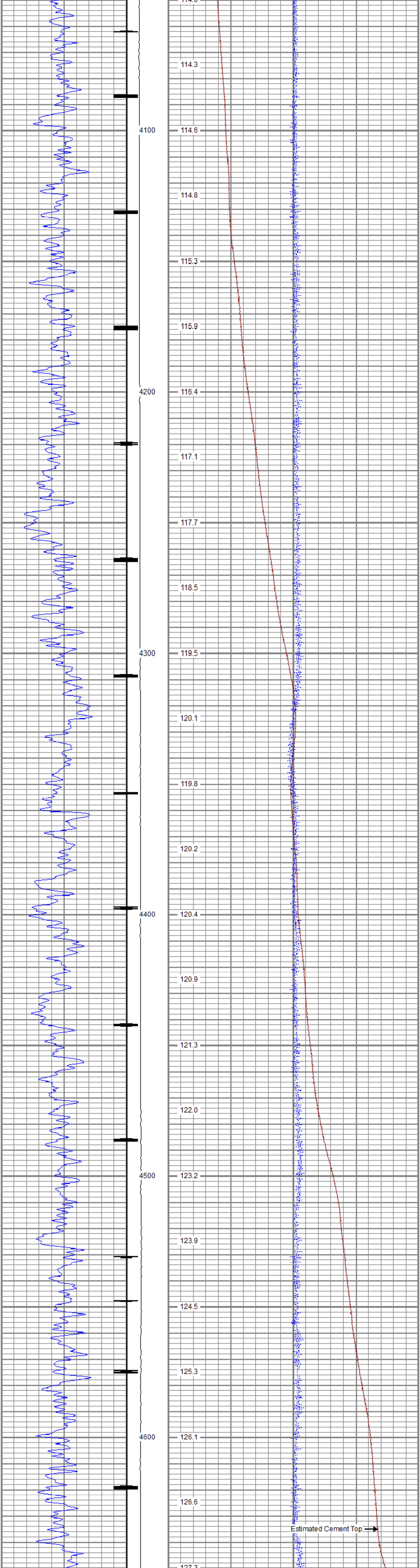
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119.8
120.2
4400
120.4
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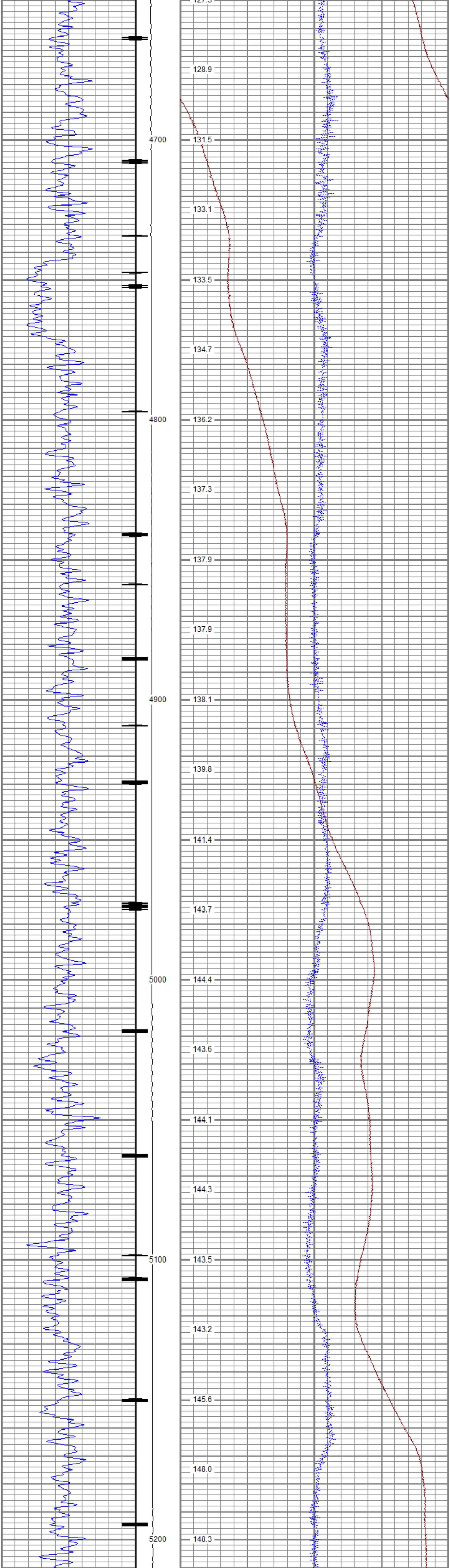
4600
126.1
126.6
Estimated Cement Top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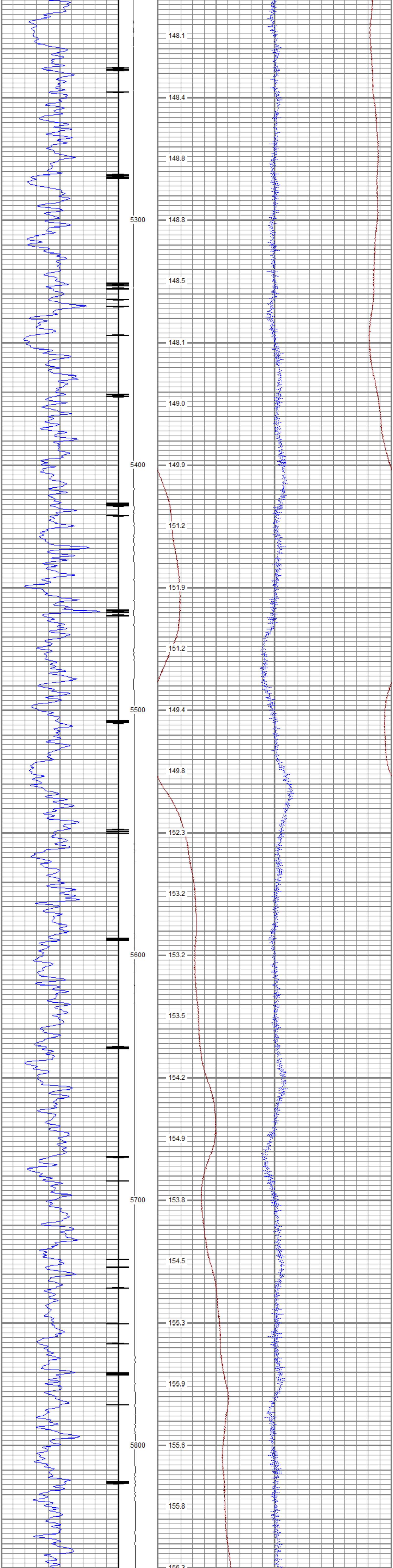
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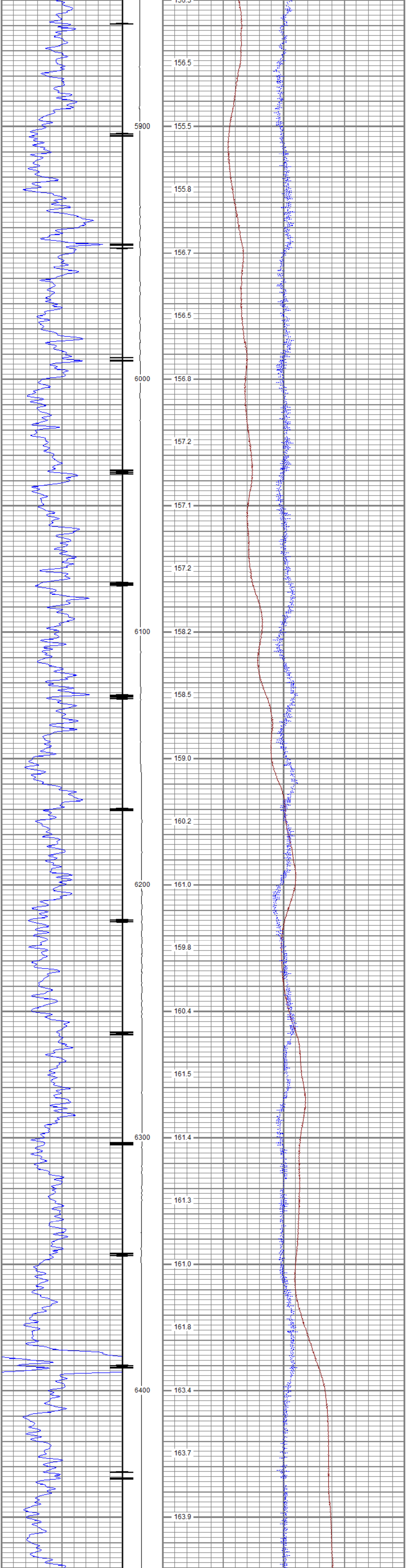
155.8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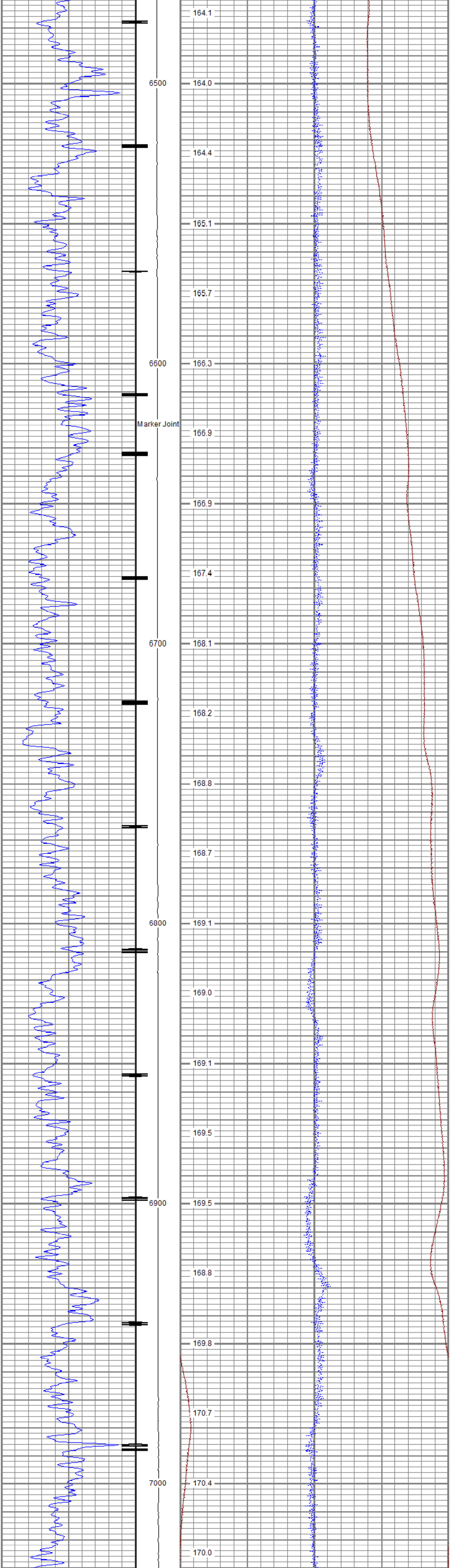
163.9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168.8
168.7
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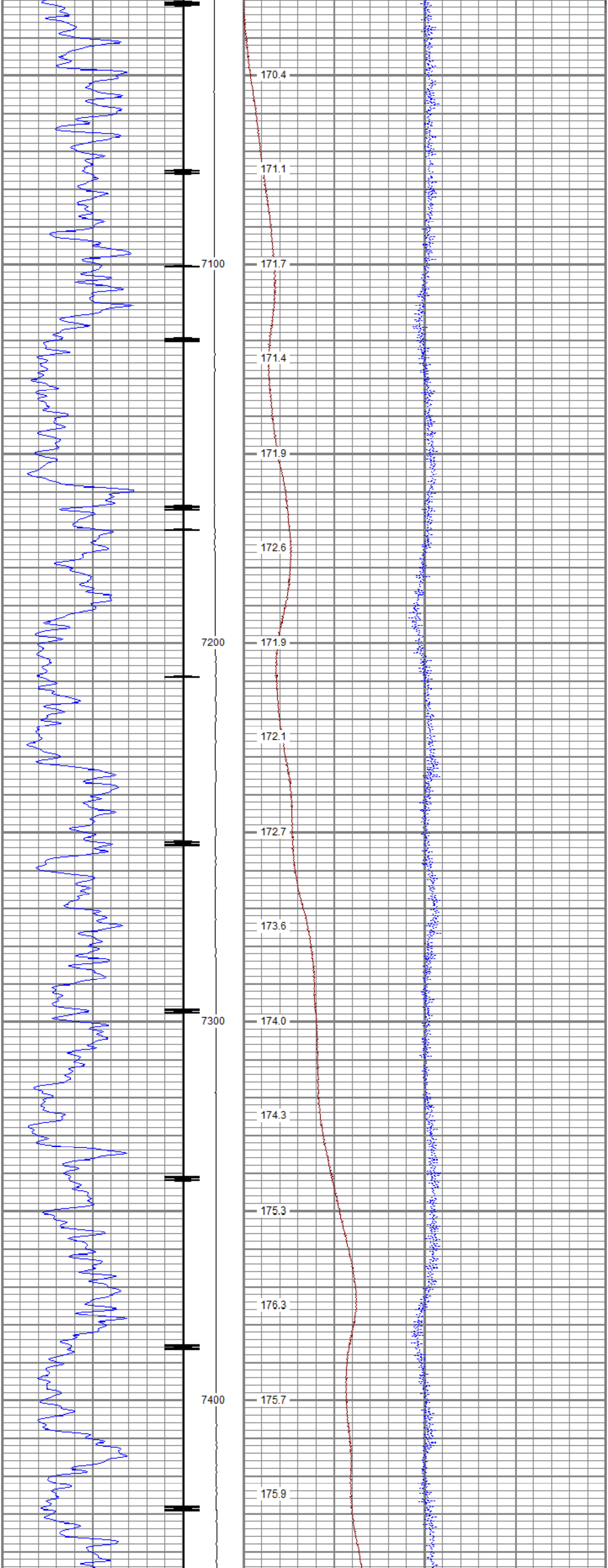
170.0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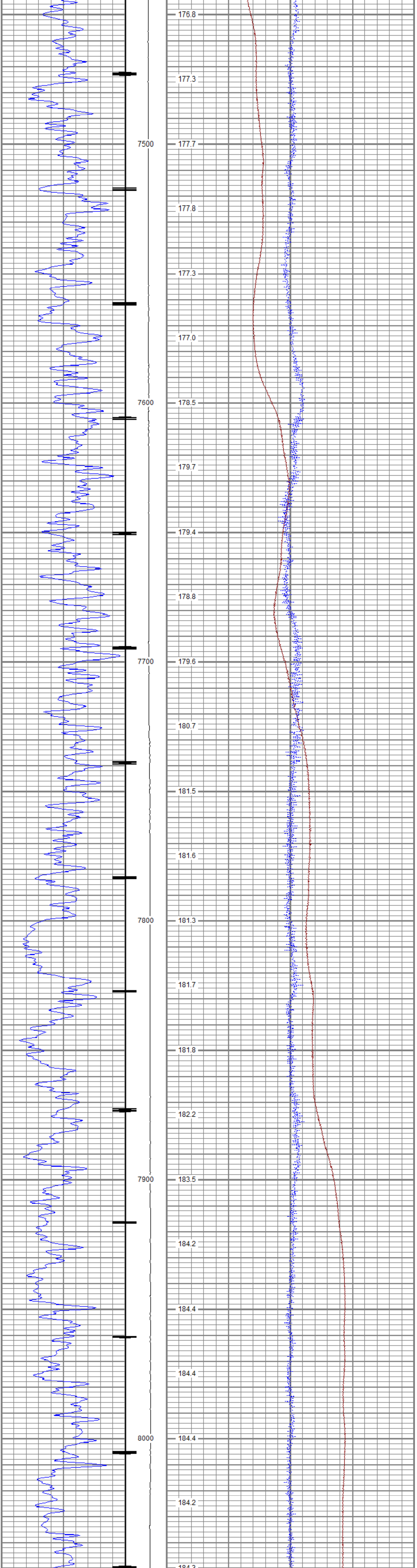
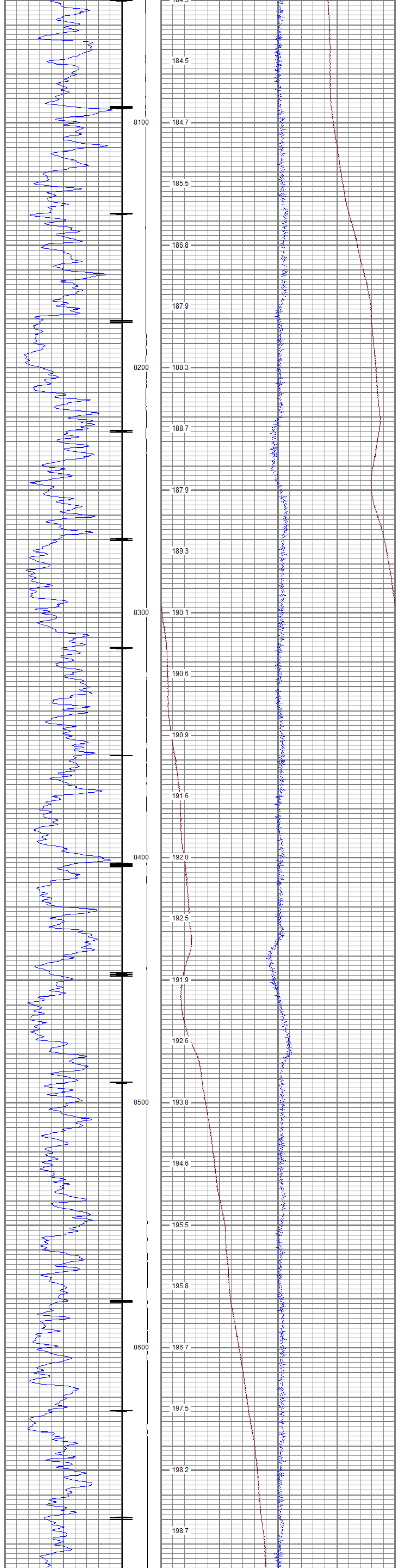
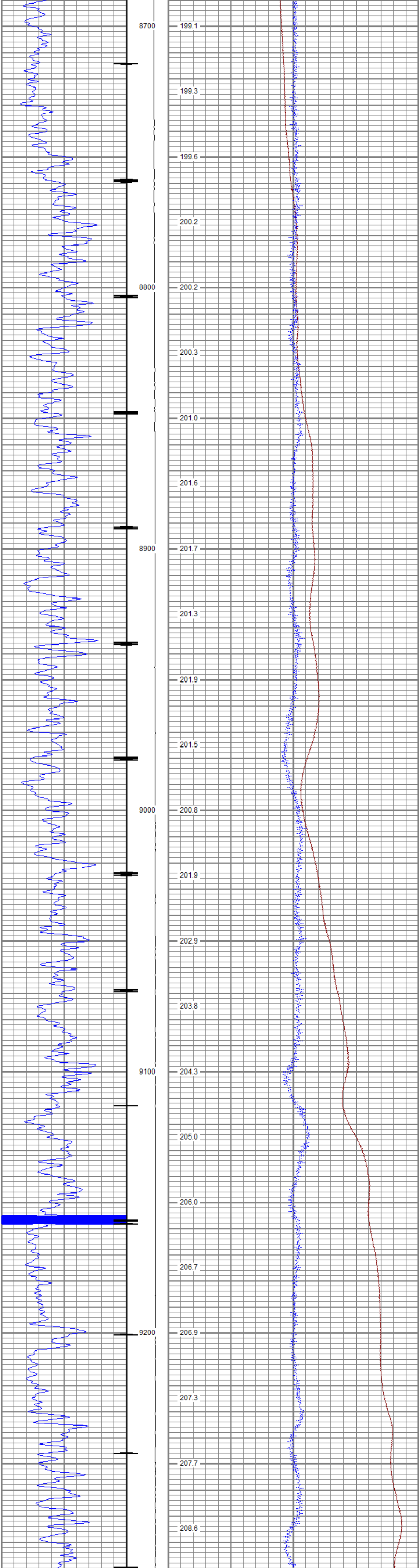
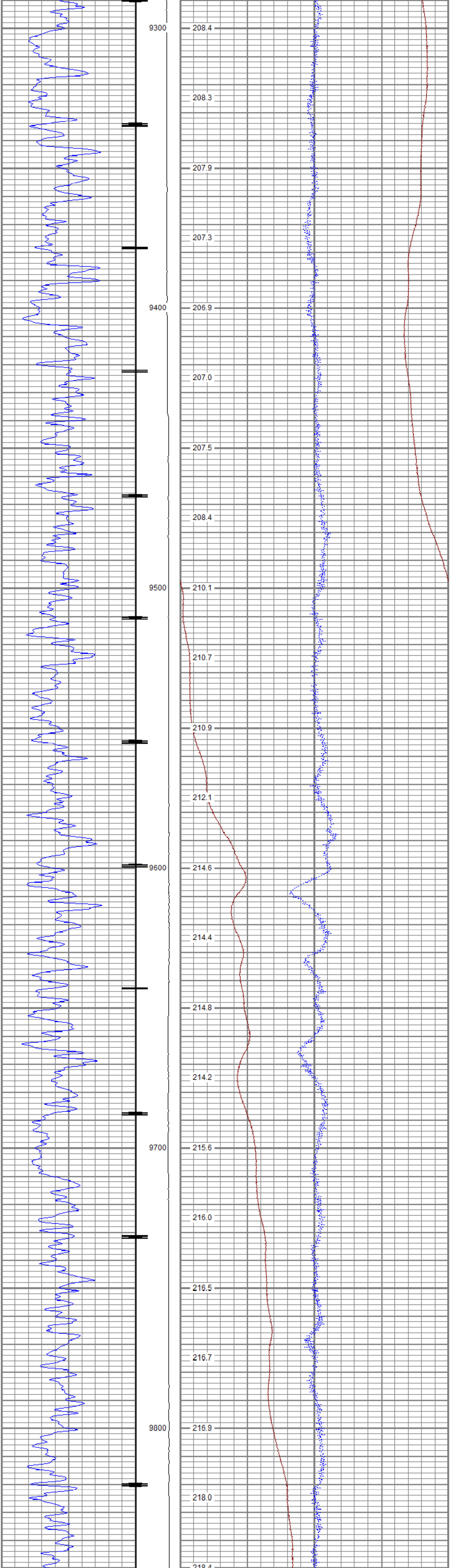
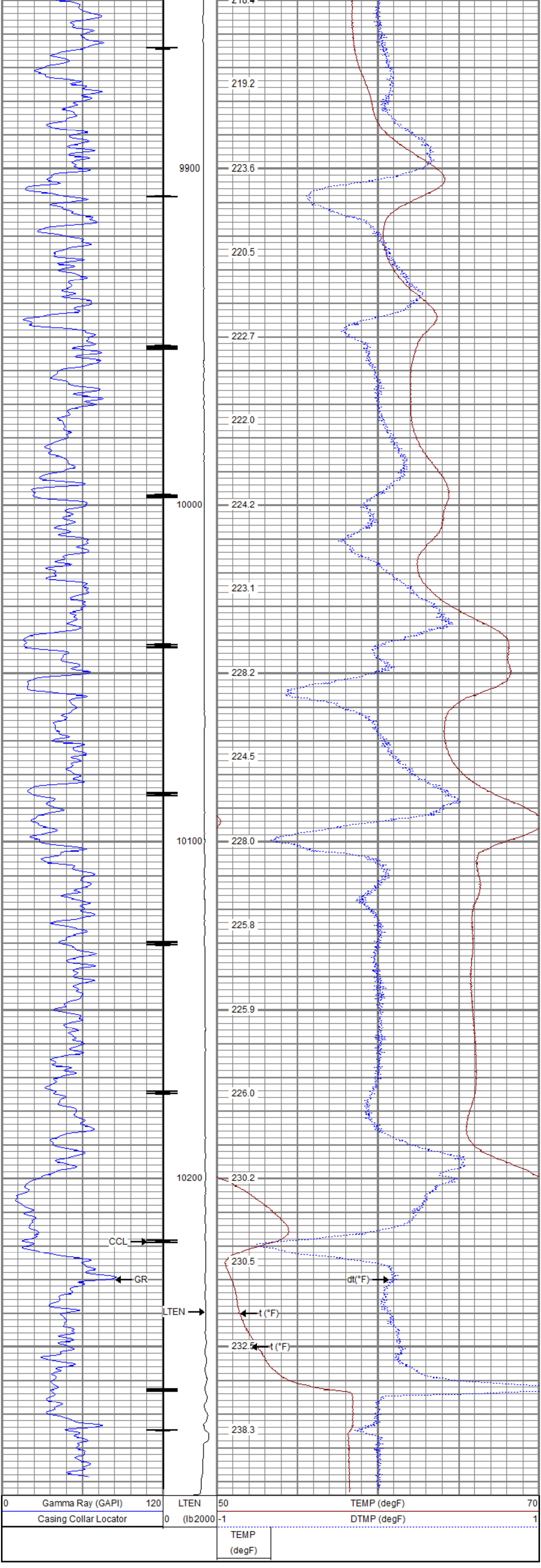
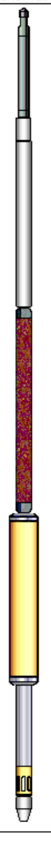










Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Titan CHD-14375 GO Titan 1-7/16" Assembled Electric Cable Head w/ 1" Fishing Neck	1.03	1.44	3.60
			UW AGS-001 (211461) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00
			UW XTU-002 (10012277) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
GR	3.37		UW PGR-020 (10019072) Production Gamma Ray	1.92	1.69	9.50
CCL	1.77		UW CCL-028 (10024821) 3-1/8" Ultrawire Casing Collar Locator	1.61	3.13	36.00
TEMP	0.37		UW PRT-016 (10025100) 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: PROCESSED_TEP_Federal RU 24-17_TEMP_06-03-18.db: field/well/run1/,ain
Total length: 7.62 ft
Total weight: 63.00 lb
O.D.: 3.13 in

Calibration Report

Database File C:\ProgramData\Warrior\Data\TEP_Federal RU 24-17_TEMP_06-03-18\PROCESSED_TEP_Federal RU 24-
Dataset Pathname ,ain
Dataset Creation Mon Jun 04 00:46:24 2018

Temperature Calibration Report

Serial Number: 10025100
Tool Model: 016
Performed: Sun Nov 12 13:30:03 2017

Point #	Reading		Reference	
1	13249.00	cps	68.00	degF
2	18454.00	cps	104.00	degF
3	29735.00	cps	176.00	degF
4	41457.00	cps	248.00	degF
5	52851.00	cps	320.00	degF
6	59128.00	cps	356.00	degF
7		cps		degF
8		cps		degF
9		cps		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

RELIANCE
OILFIELD SERVICES

Company	TEP Rocky Mountain LLC
Well	Federal RU 24-17
Field	Rulison
County	Garfield
State	Colorado