RELIANCE
OILFIELD SERVICES

Temperature
Gamma Ray
Casing Collar Log

Company	TEP Rocky Mountain LLC
Well	Federal RU 514-17
Field	Rulison
County	Garfield
State	Colorado

Company TEP Rocky Mountain LLC
Well Federal RU 514-17
Field Rulison
County Garfield State Colorado
Location: API # : 05-045-23733
SEC 17 TWP 7S RGE 93W

Other Services
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			Elevation
Permanent Datum	Ground Level	Elevation 8365.6'	K.B. 8389.6'
Log Measured From	Kelly Bushing	24 FT	D.F. 8388.6'
Drilling Measured From	Kelly Bushing		G.L. 8365.6'

Date	17-MAY-2018	
Run Number	One	
Depth Driller	10872 FT	
Depth Logger	10828 FT	
Bottom Logged Interval	10824 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	3800 FT	
Time Well Ready	ROA	
Time Logger on Bottom	10:40	
Equipment Number	HD-0359	
Location	Grand Junction, CO	
Recorded By	J.Donnelly	
Witnessed By	Bob Brown	

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	1137 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	10833 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 6945 FT to 6966 FT
Log ran from 10824 FT to Surface
Log ran with 0 PSI Surface Induced Pressure

Thank you for choosing Reliance Oilfield Services, LLC!!

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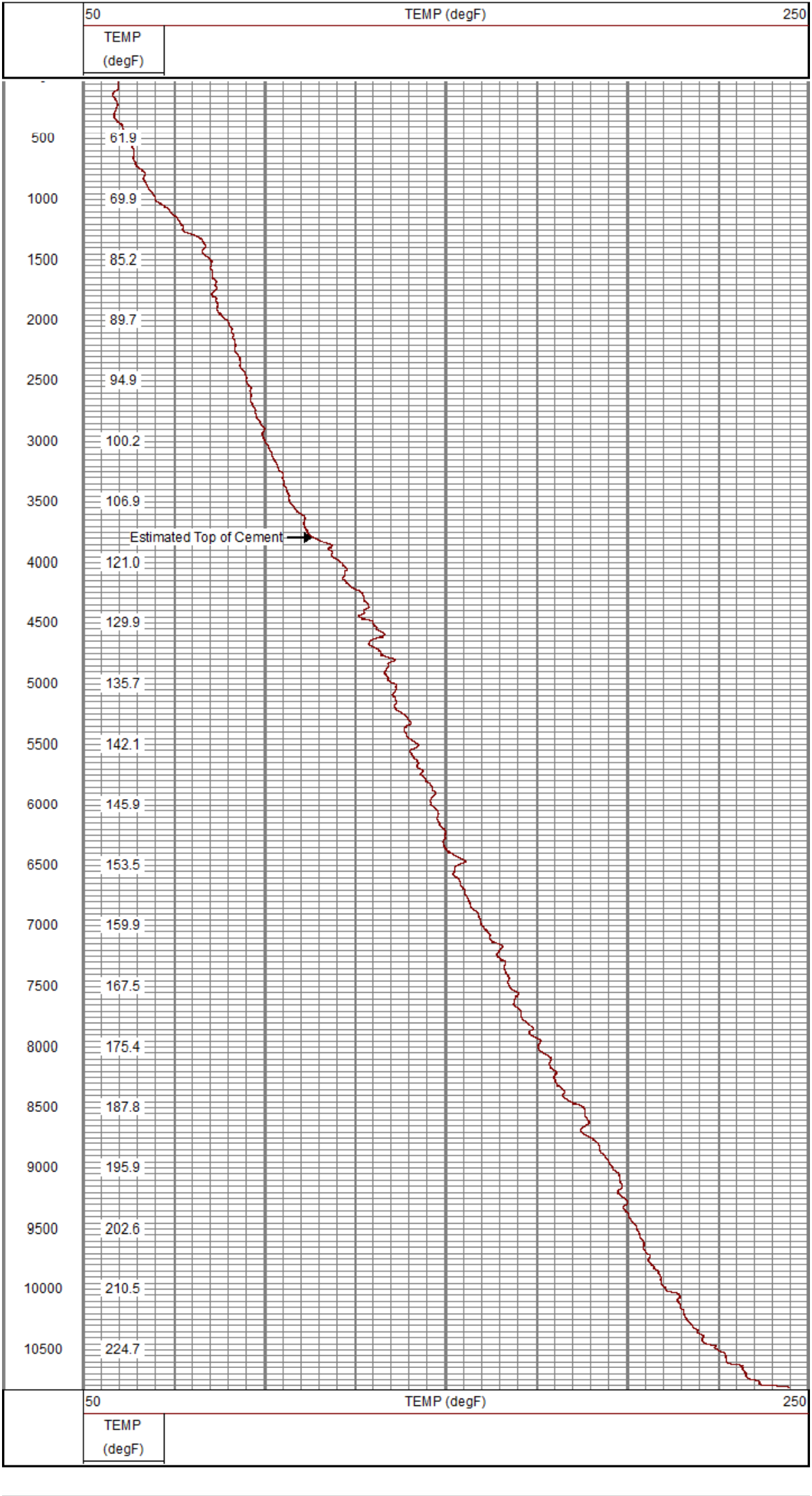
Main Pass (Quick Look)

Recorded with 0 PSI Surface Induced Pressure

Database File	tep\federal ru 514-17\tep_federal ru 514-17_temp_05-17-18.db
Dataset Pathname	merge4.5
Presentation Format	ros_temp_ql_tep
Dataset Creation	Thu May 17 14:30:15 2018
Charted by	Depth in Feet scaled 1:10000



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OILFIELD SERVICES

Main Pass

Recorded with 0 PSI Surface Induced Pressure

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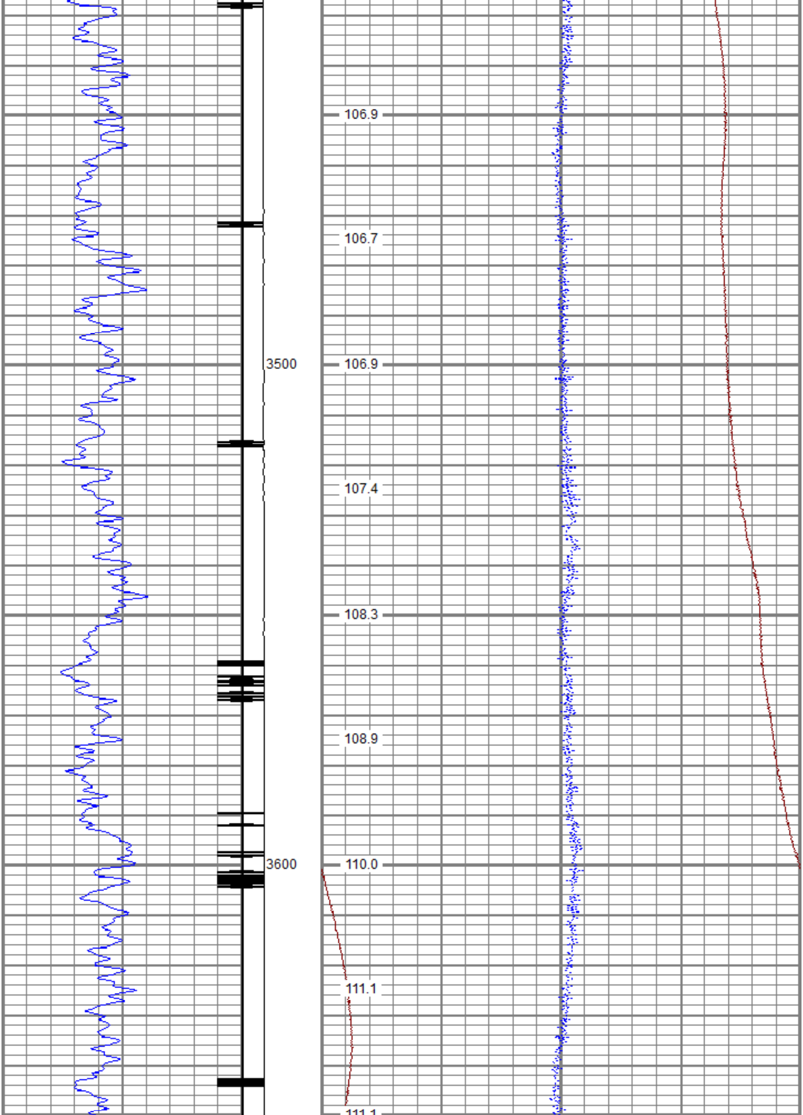
Dataset Creation	Thu May 17 14:00:41 2018
Charted by	Depth in Feet scaled 1:240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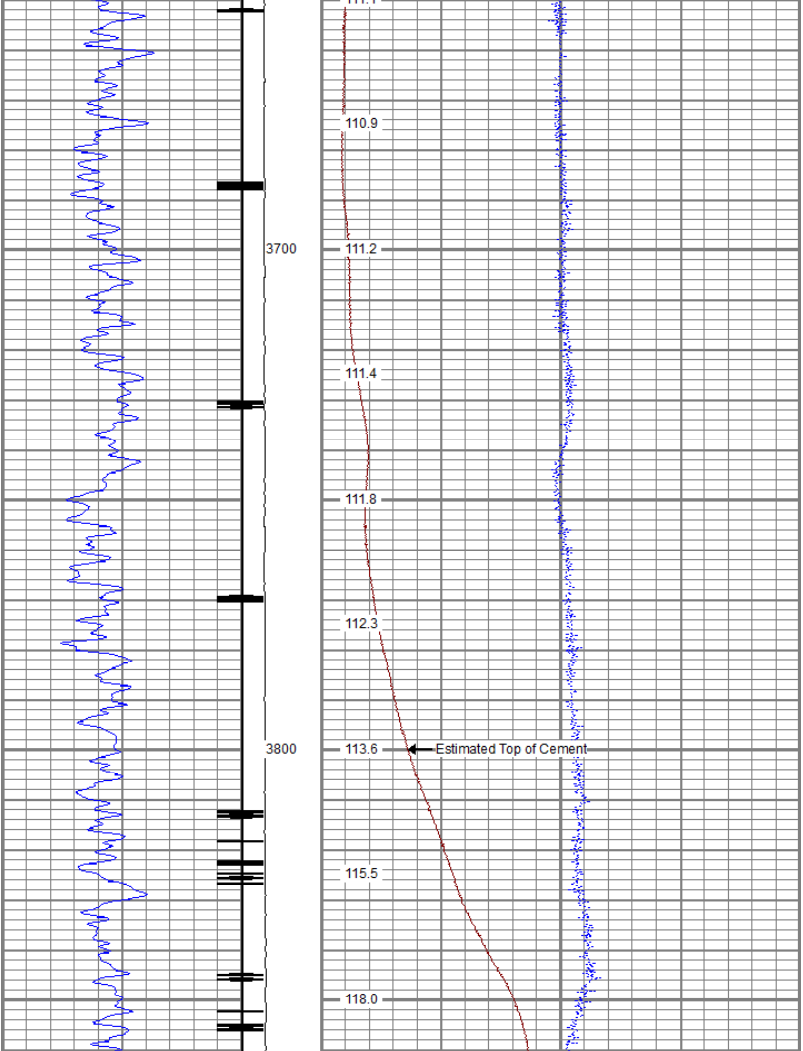
106.9
107.4
108.3
108.9
3600
110.0
111.1
111.1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113.6
Estimated Top of Cement
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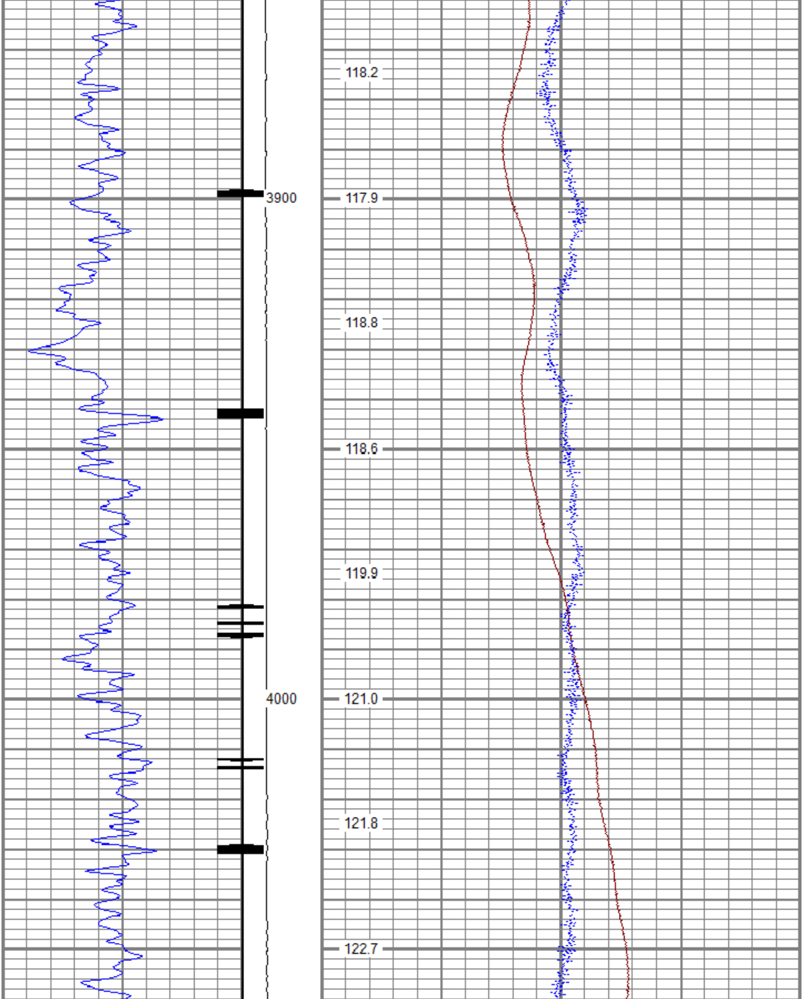
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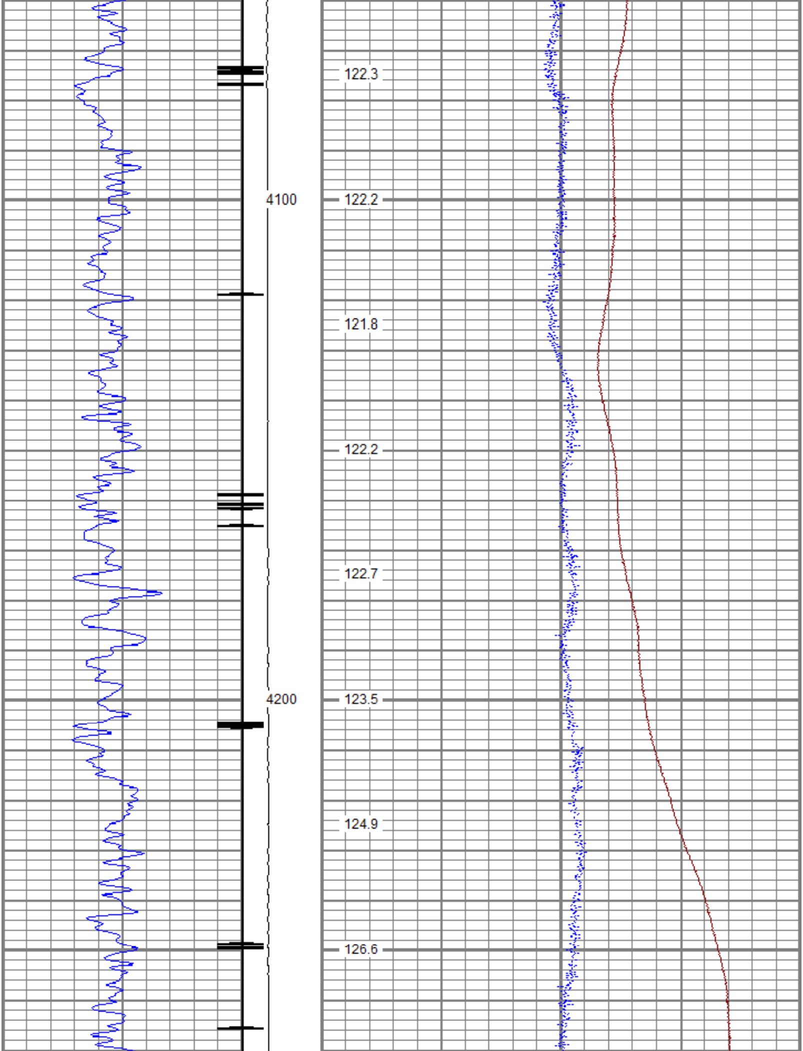

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121.8
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122.7
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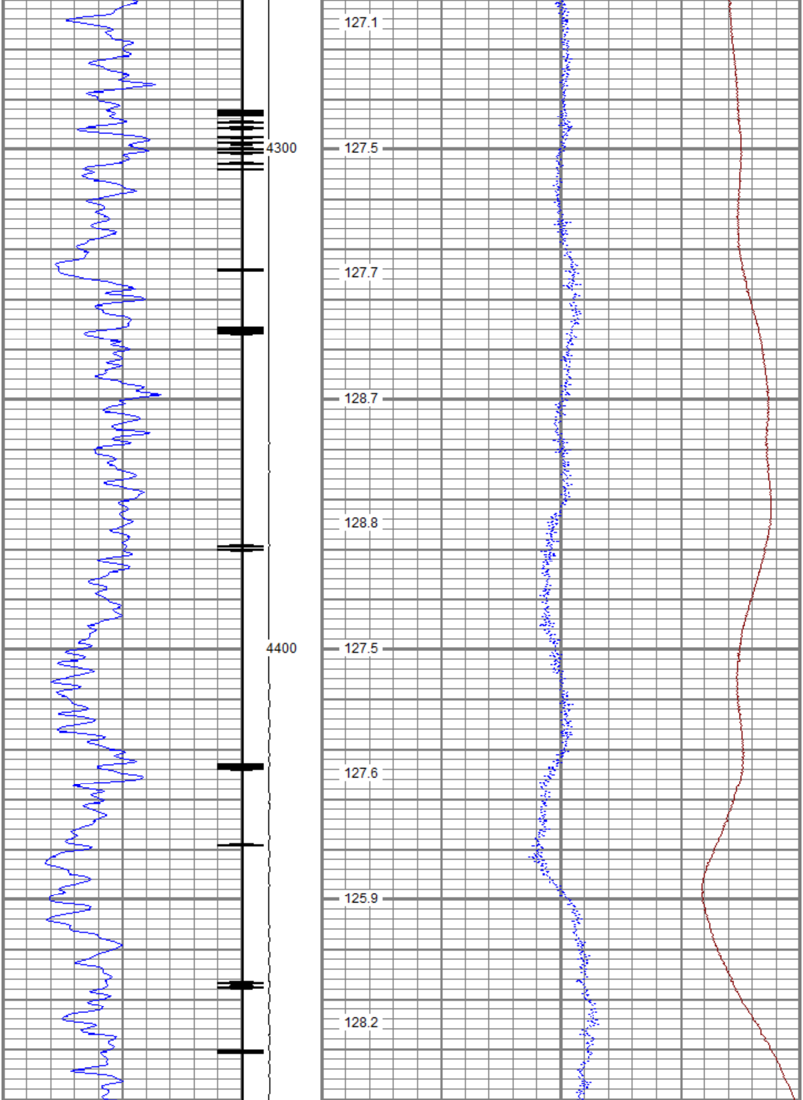
123.5
124.9
126.6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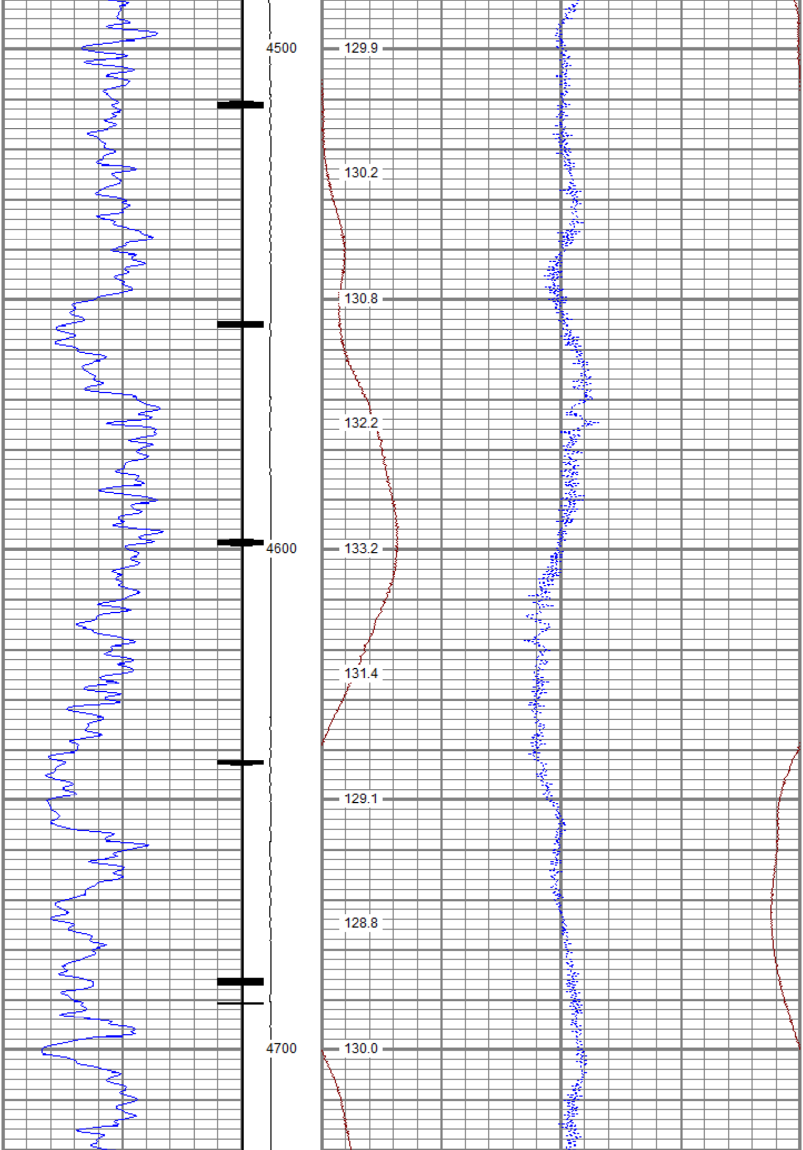
128.2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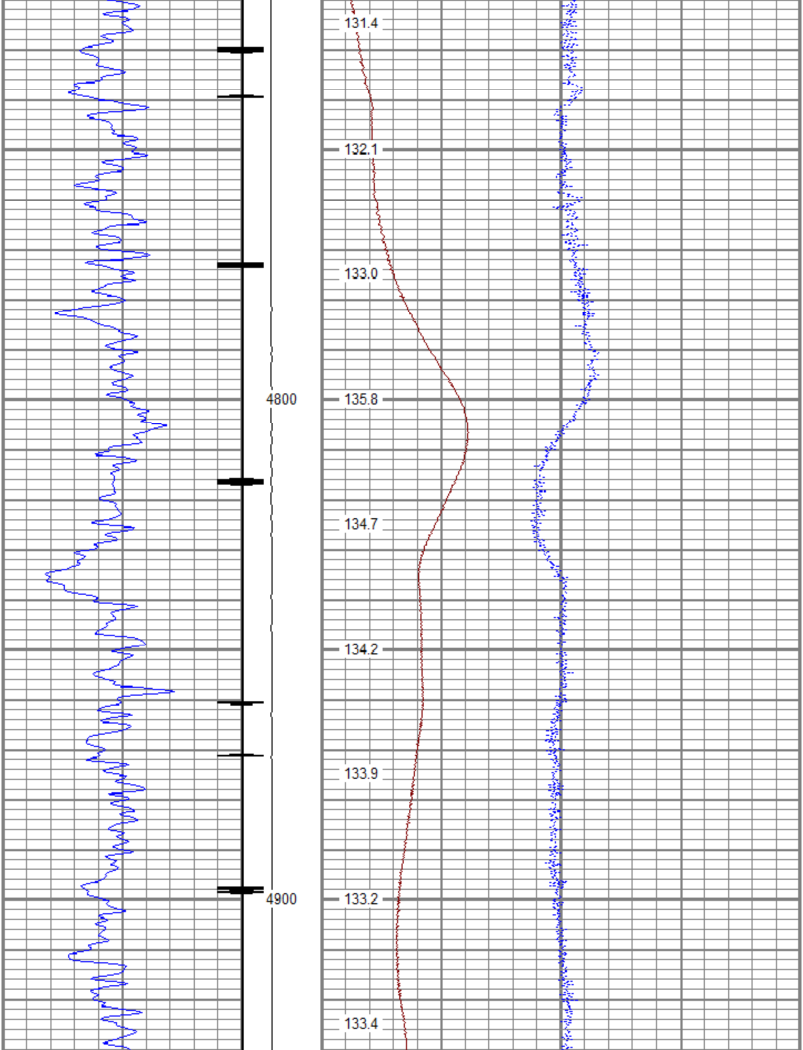
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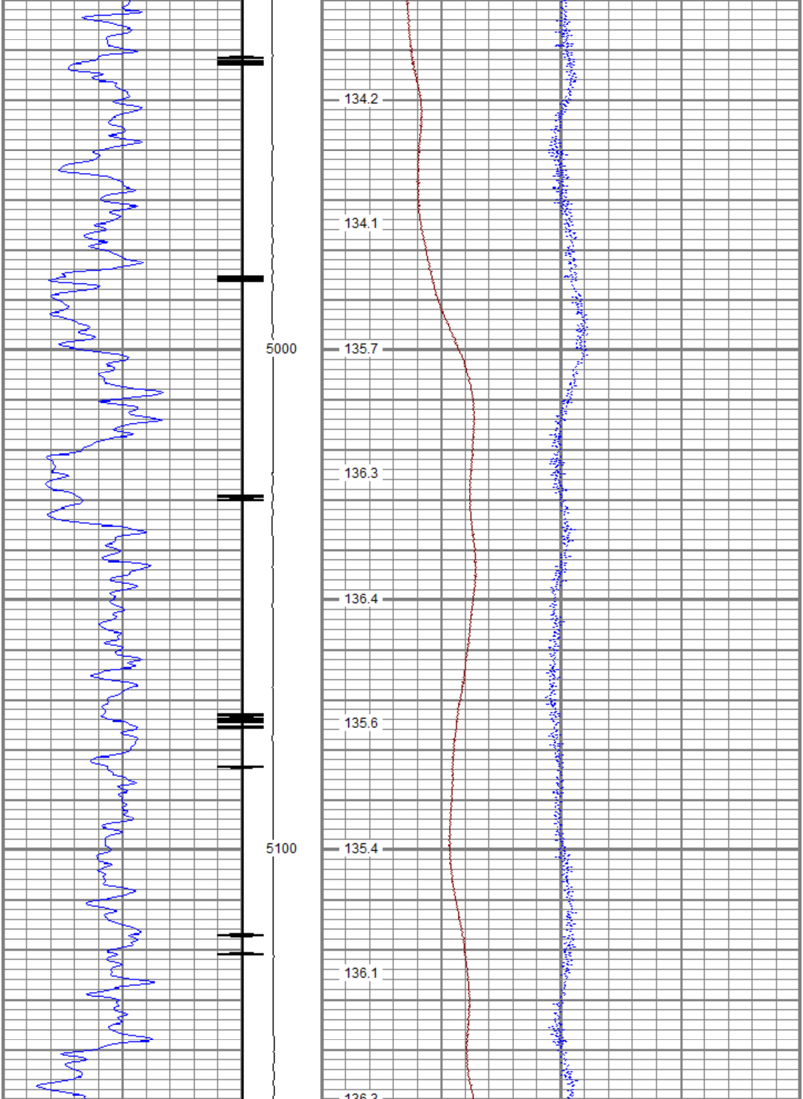
133.4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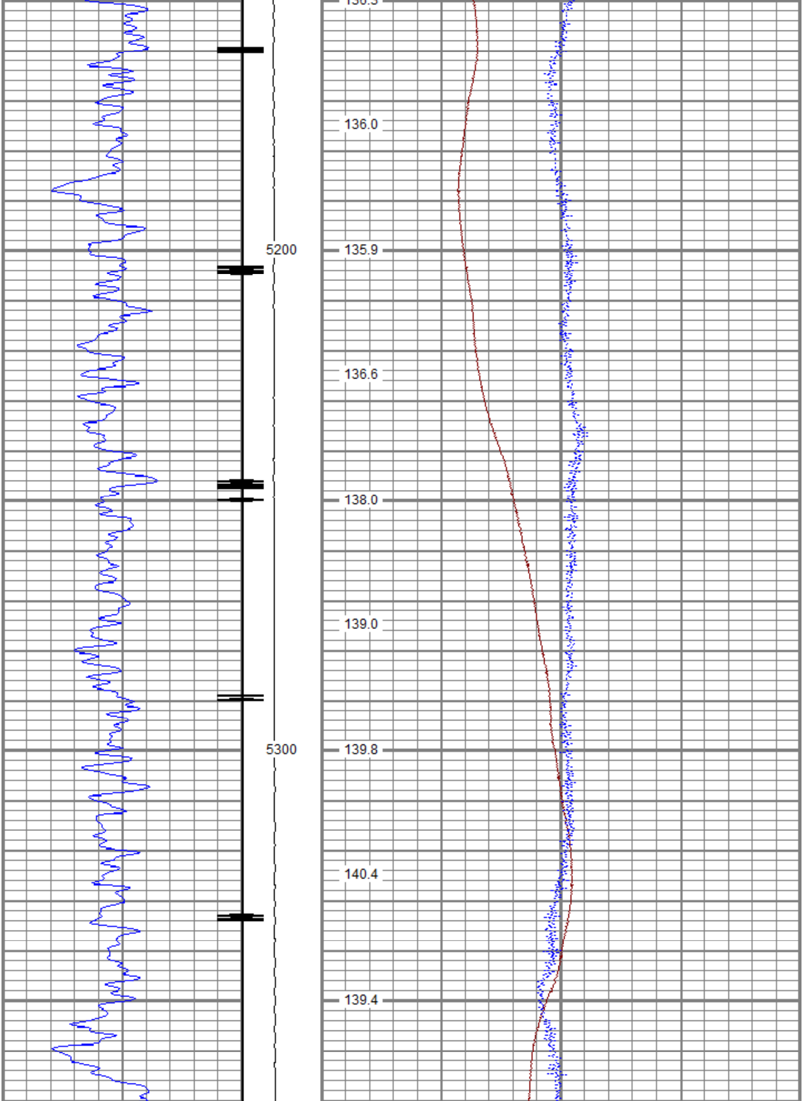
136.3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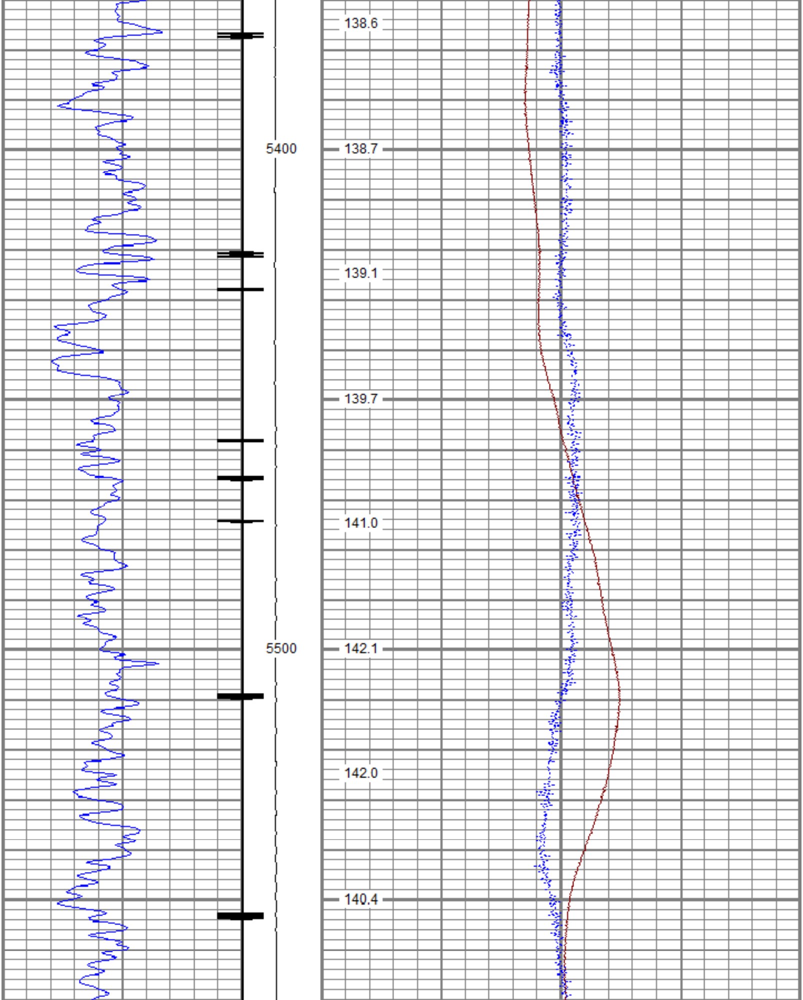
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142.1
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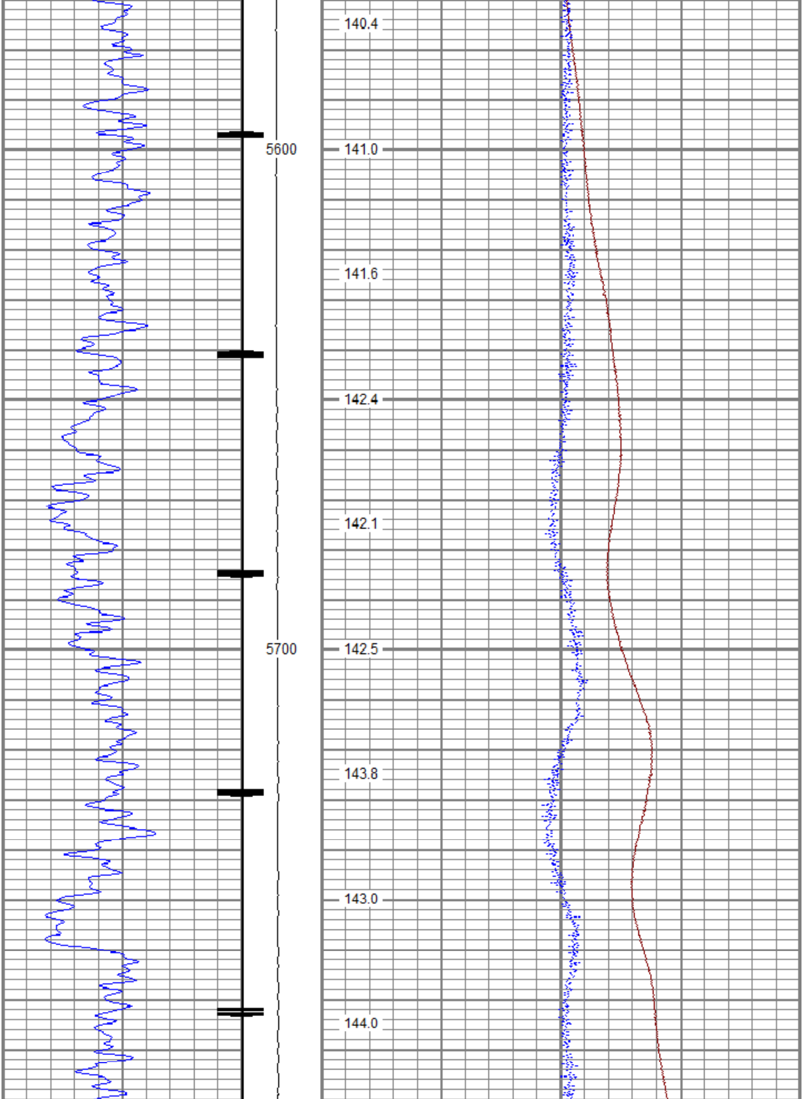
140.4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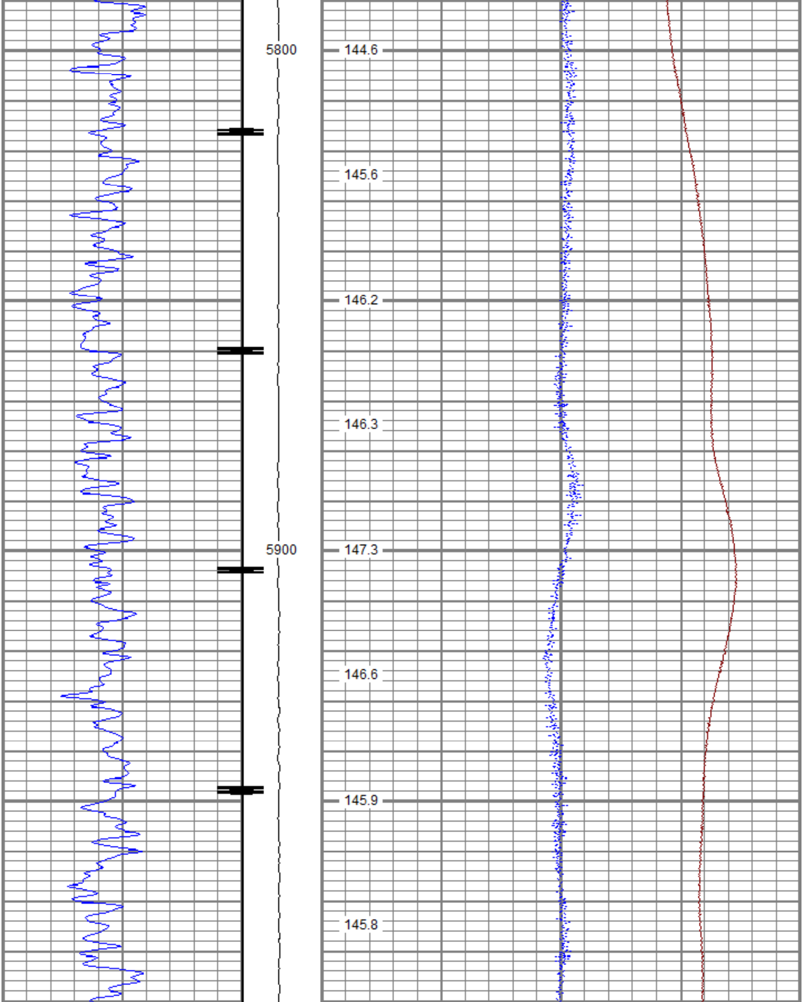
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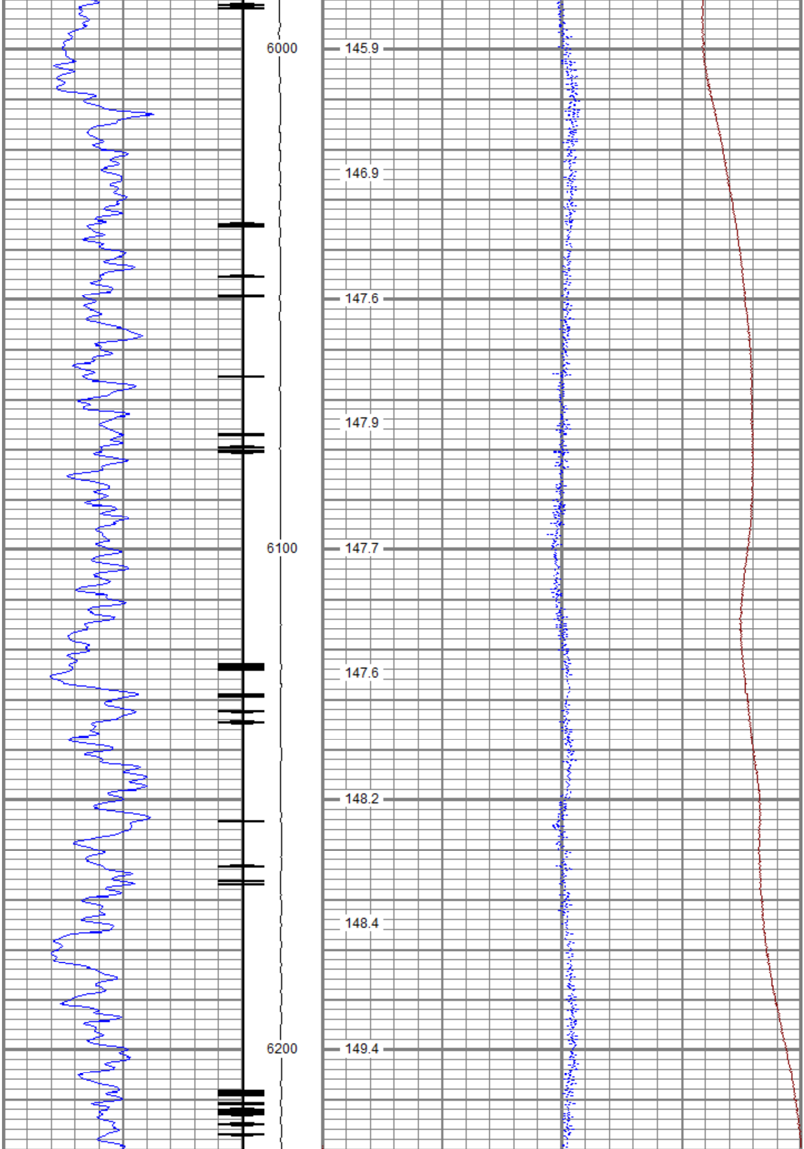
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147.6
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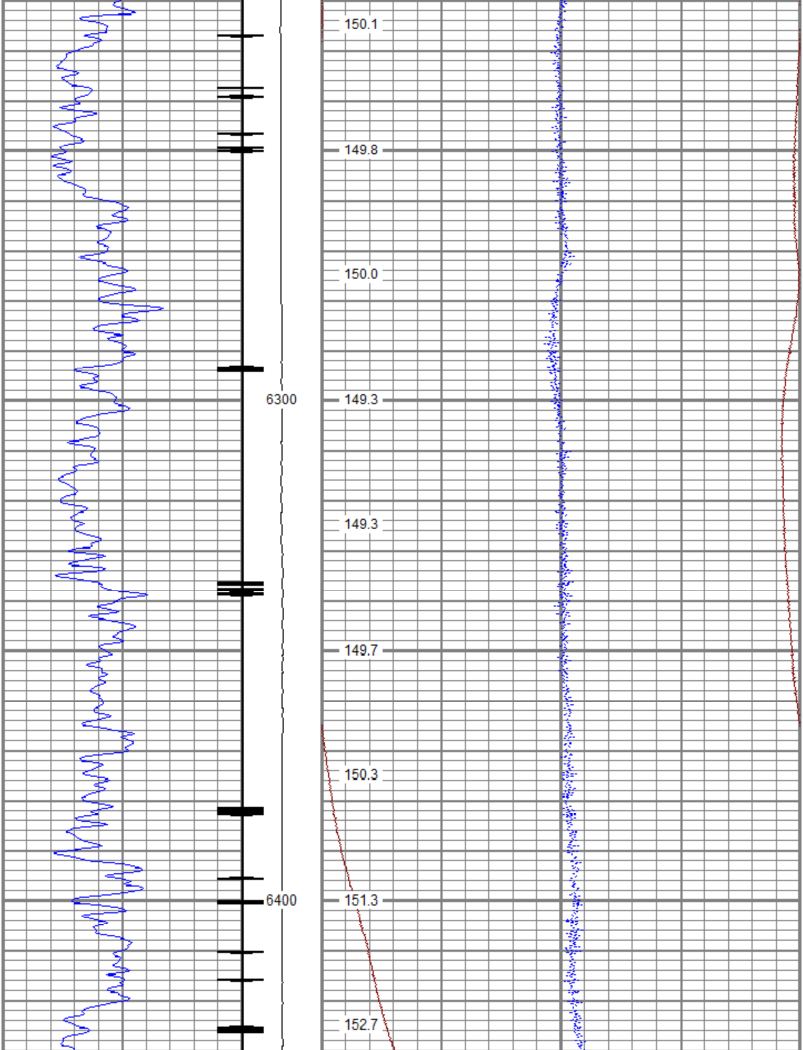
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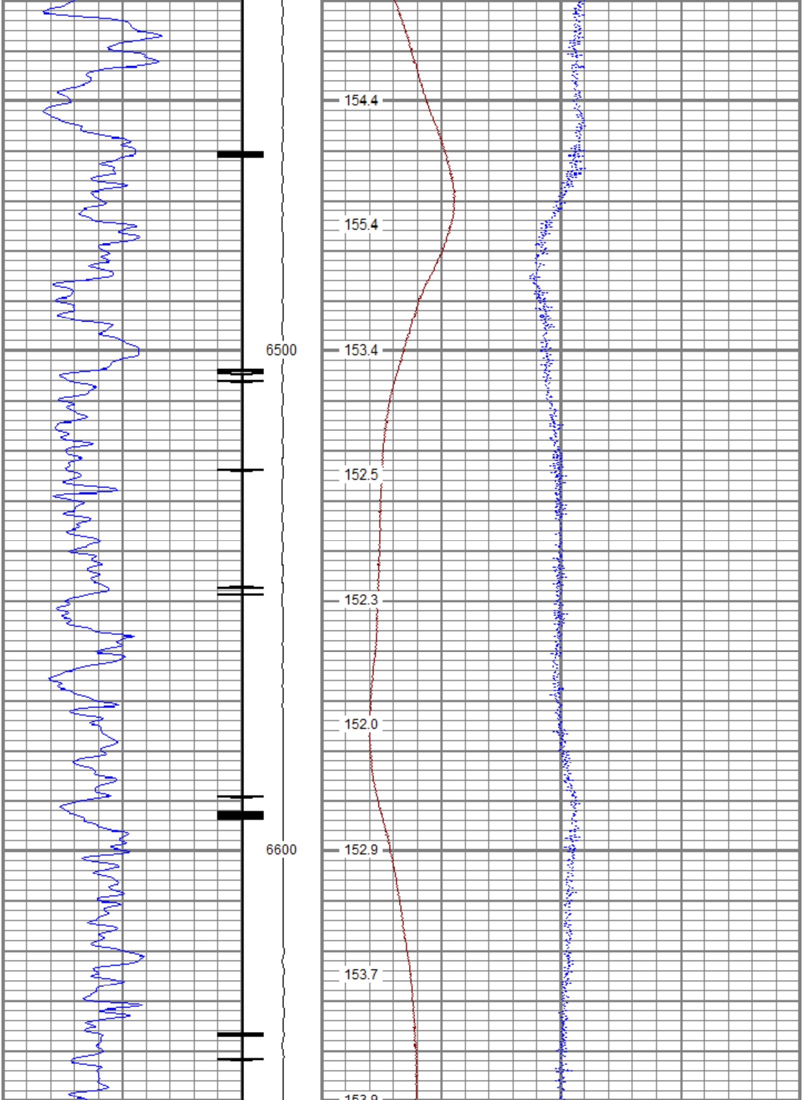
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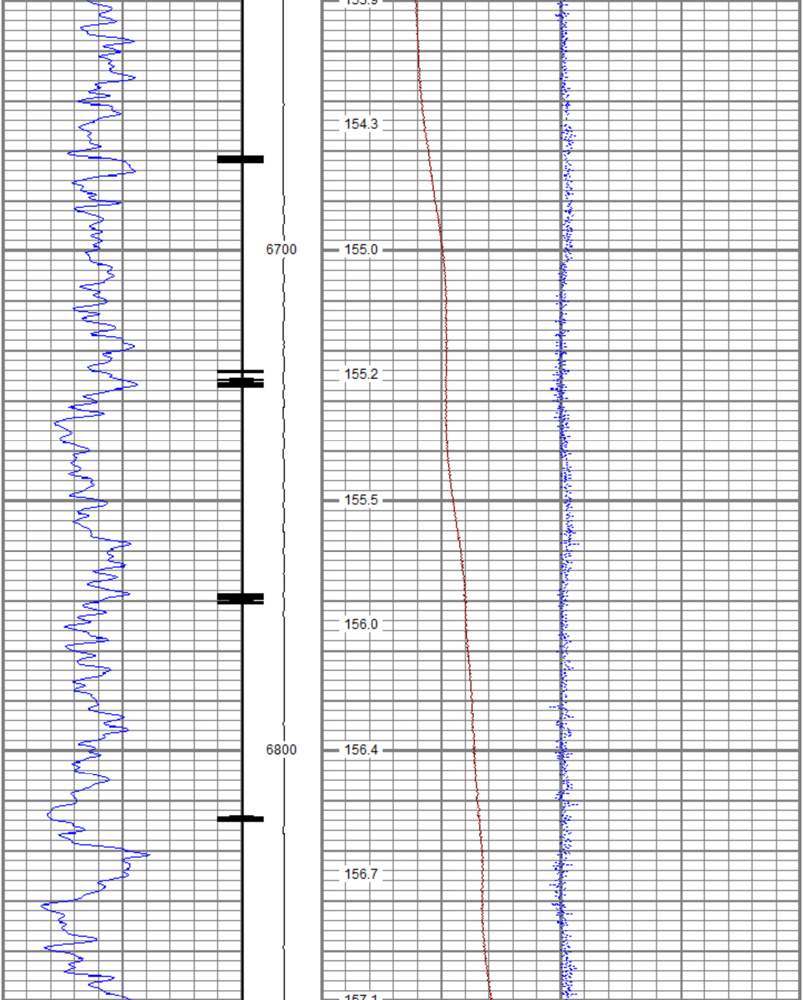
153.9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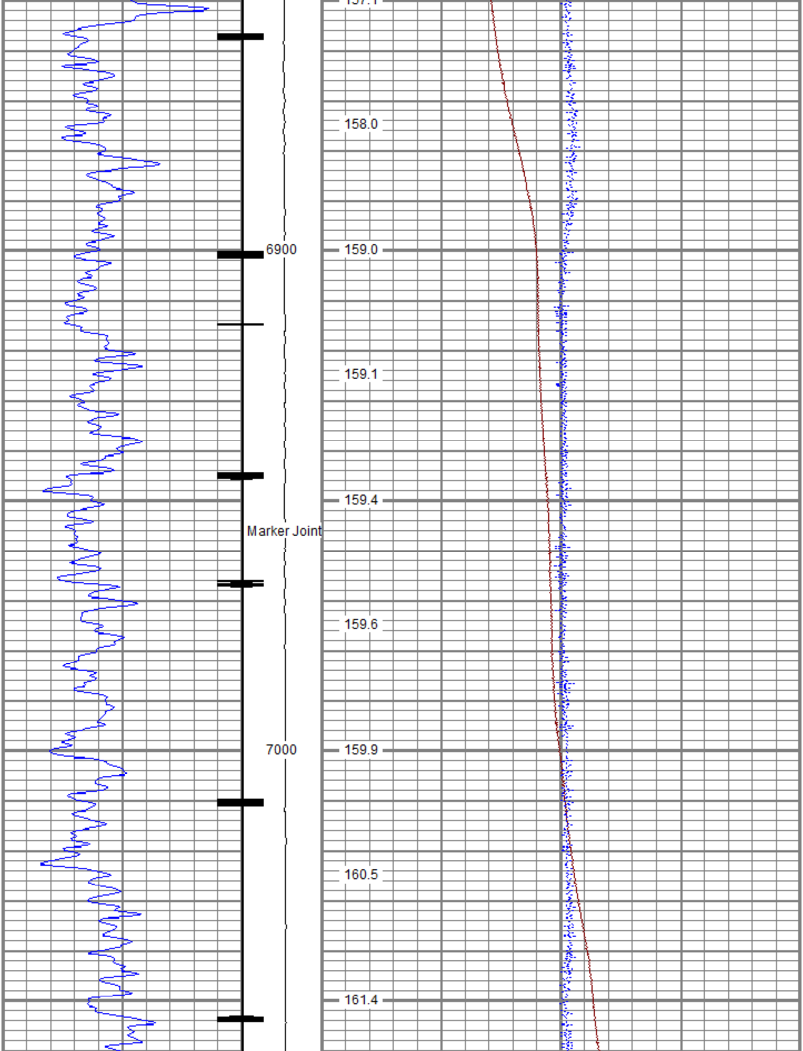
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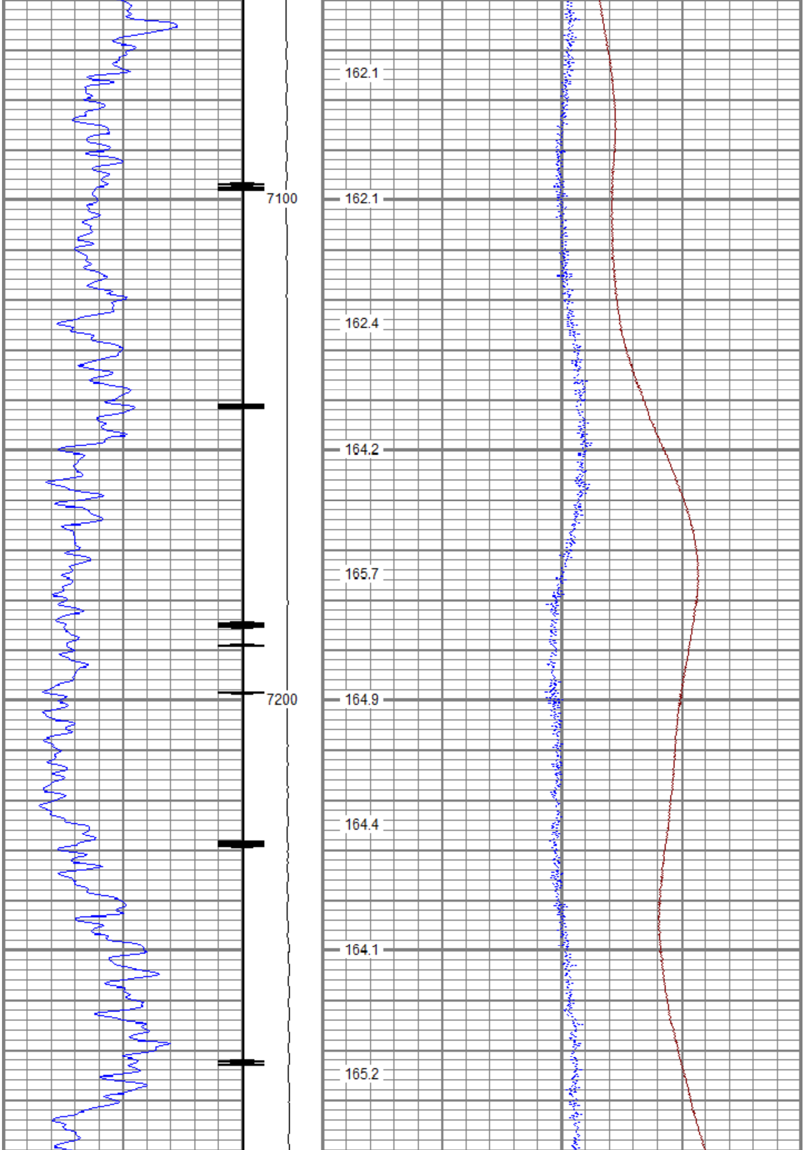
161.4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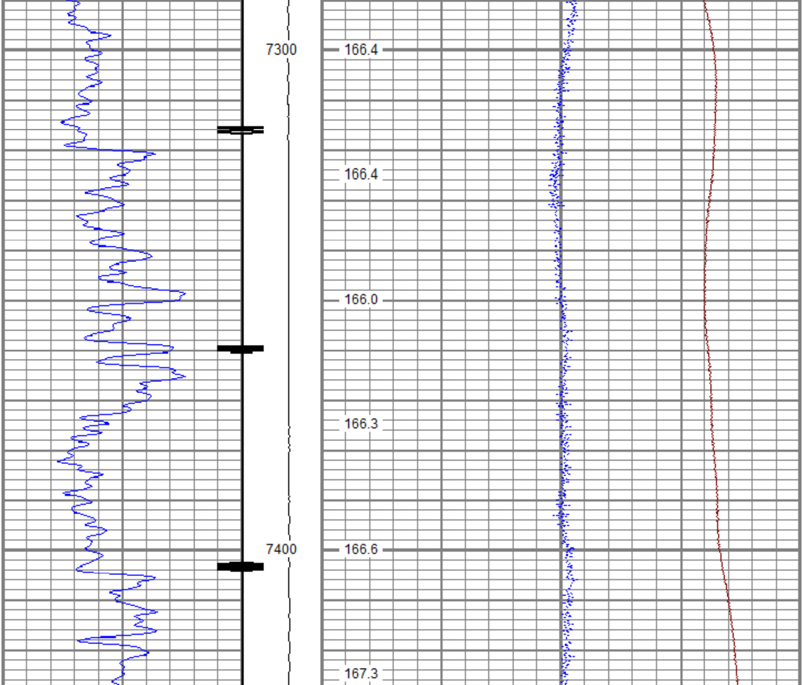
165.2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Calibration Report

Database File C:\ProgramData\Warrior\Data\TEP\Federal RU 514-17\TEP_Federal RU 514-17_TEMP_05-17-18.db
Dataset Pathname merge4.5
Dataset Creation Thu May 17 14:30:15 2018

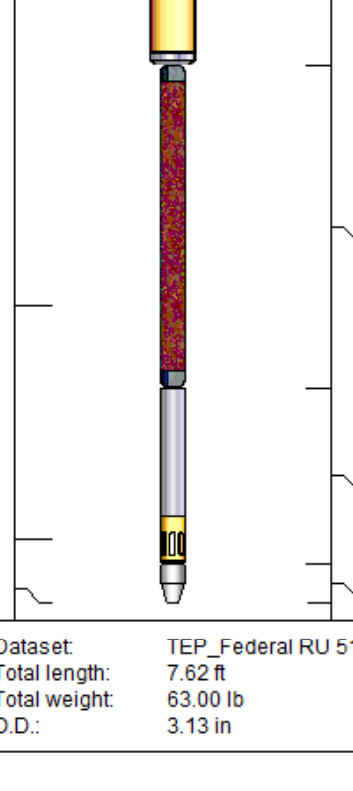
Temperature Calibration Report

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:	10019371	
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

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 (10024821) 3-1/8" Ultrawire Casing Collar Locator	1.61	3.13	36.00
GR	1.76		UW PGR-020 (10019371) Production Gamma Ray	1.92	1.69	9.50
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: TEP_Federal RU 514-17_TEMP_05-17-18.db: field/well/run1/merge4.5
Total length: 7.62 ft
Total weight: 63.00 lb
O.D.: 3.13 in

RELIANCE OILFIELD SERVICES

Company	TEP Rocky Mountain LLC
Well	Federal RU 514-17
Field	Rulison
County	Garfield
State	Colorado