Company TEP Rocky Mountain LLC
Well Federal RU 424-17
Field Rulison
County Garfield
State Colorado

RELIANCE OILFIELD SERVICES

Temperature Gamma Ray Casing Collar Log

Company TEP Rocky Mountain LLC
Well Federal RU 424-17
Field Rulison
County Garfield State Colorado
Location: API # : 05-045-23742
Other Services --
SEC 17 TWP 7S RGE 93W

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	26-MAY-2018
Run Number	One
Depth Driller	10491 FT
Depth Logger	10426 FT
Bottom Logged Interval	10421 FT
Top Log Interval	Surface
Open Hole Size	8.750"
Type Fluid	Fresh Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	245°F
Estimated Cement Top	4453 FT
Time Well Ready	ROA
Time Logger on Bottom	08:30
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	1105 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	10450 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 6363 FT to 6384 FT
Log ran from 10421 FT to Surface
Log ran with 0 PSI Surface Induced Pressure

Thank you for choosing Reliance Oilfield Services, LLC!!

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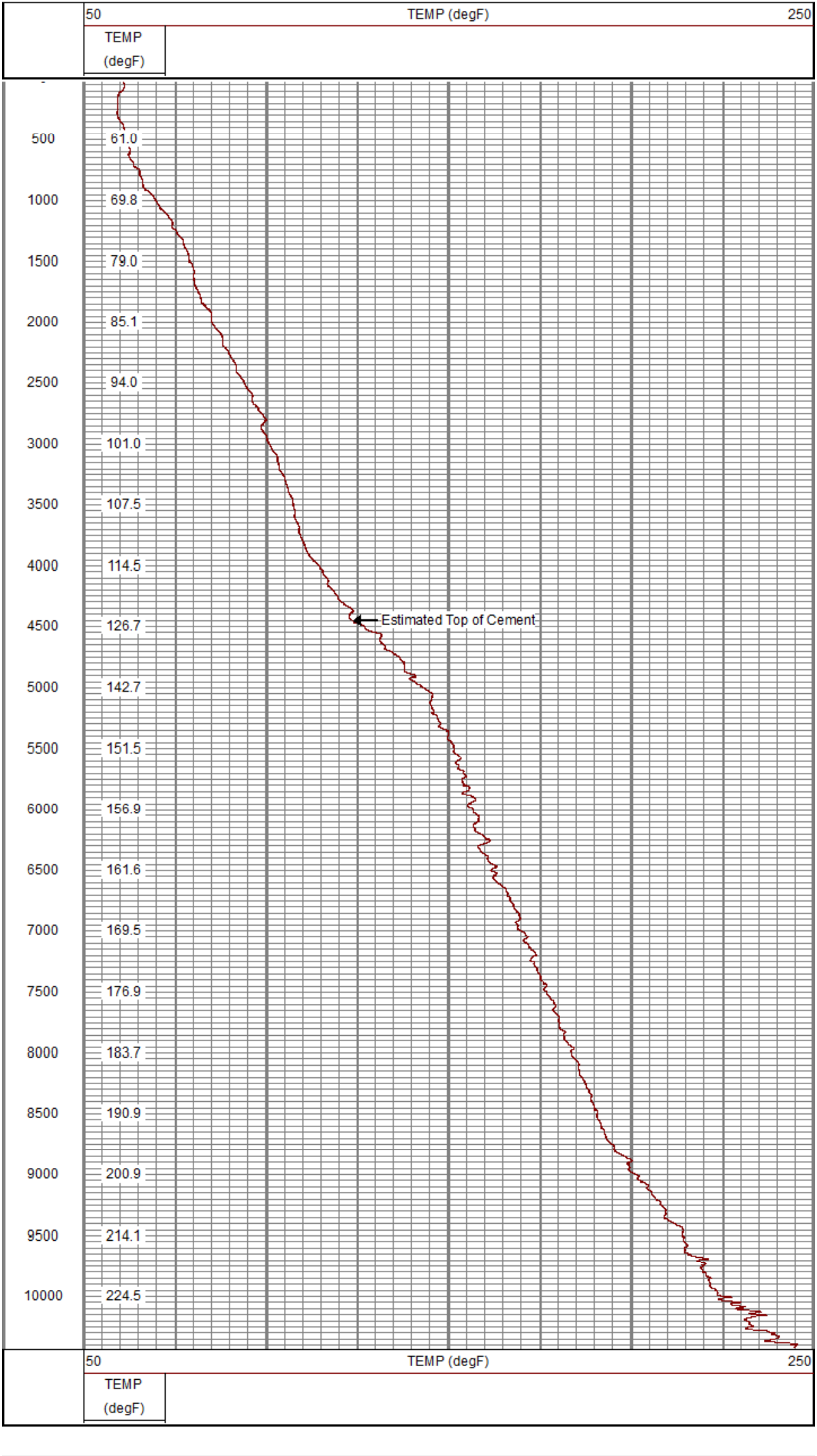
Main Pass (Quick Look)

Recorded with 0 PSI Surface Induced Pressure

Database File	tep_federal ru 424-17_temp\tep_federal ru 424-17_temp_05-26-18.db
Dataset Pathname	main1.1
Presentation Format	ros_temp_ql_tep
Dataset Creation	Sat May 26 11:16:12 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	main1
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Dataset Creation	Sat May 26 09:33:43 2018
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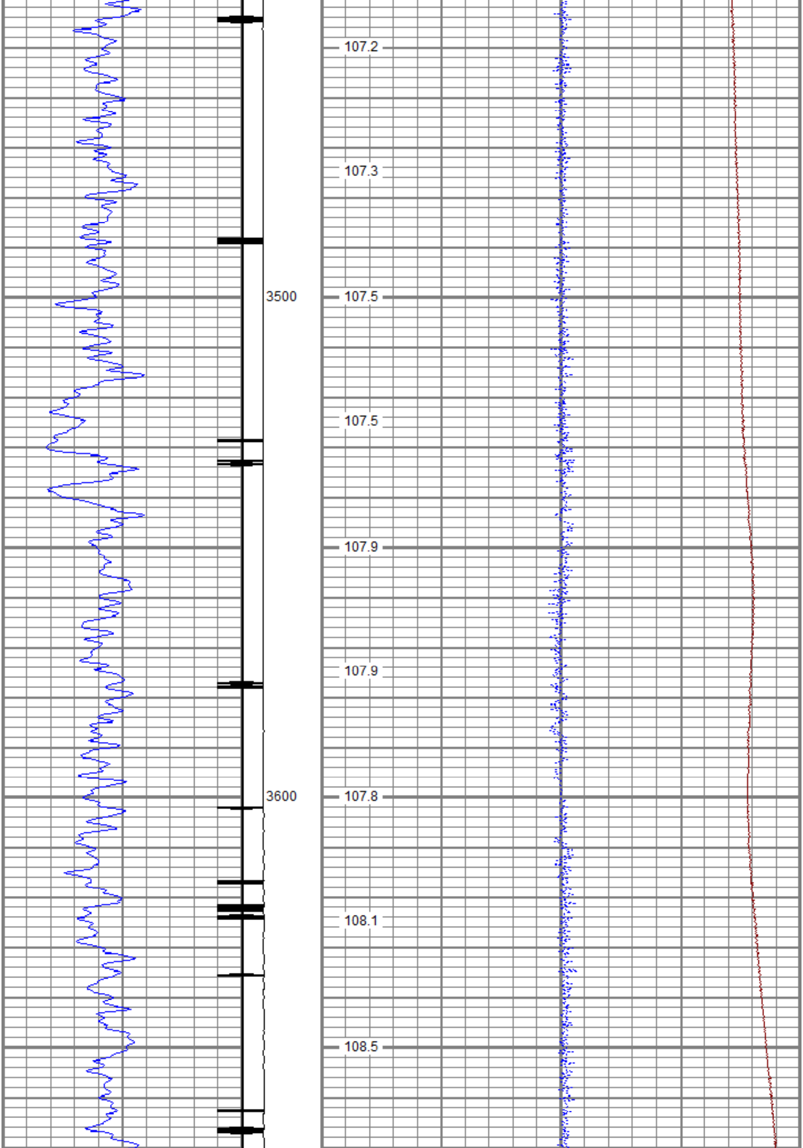
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107.9
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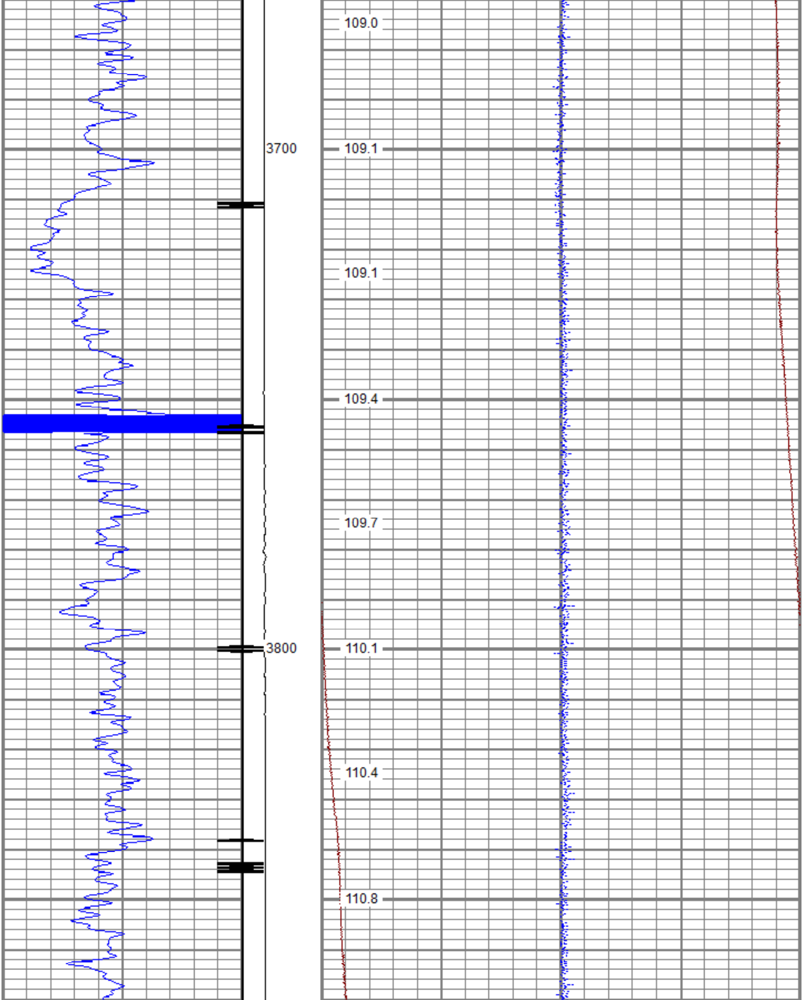
108.5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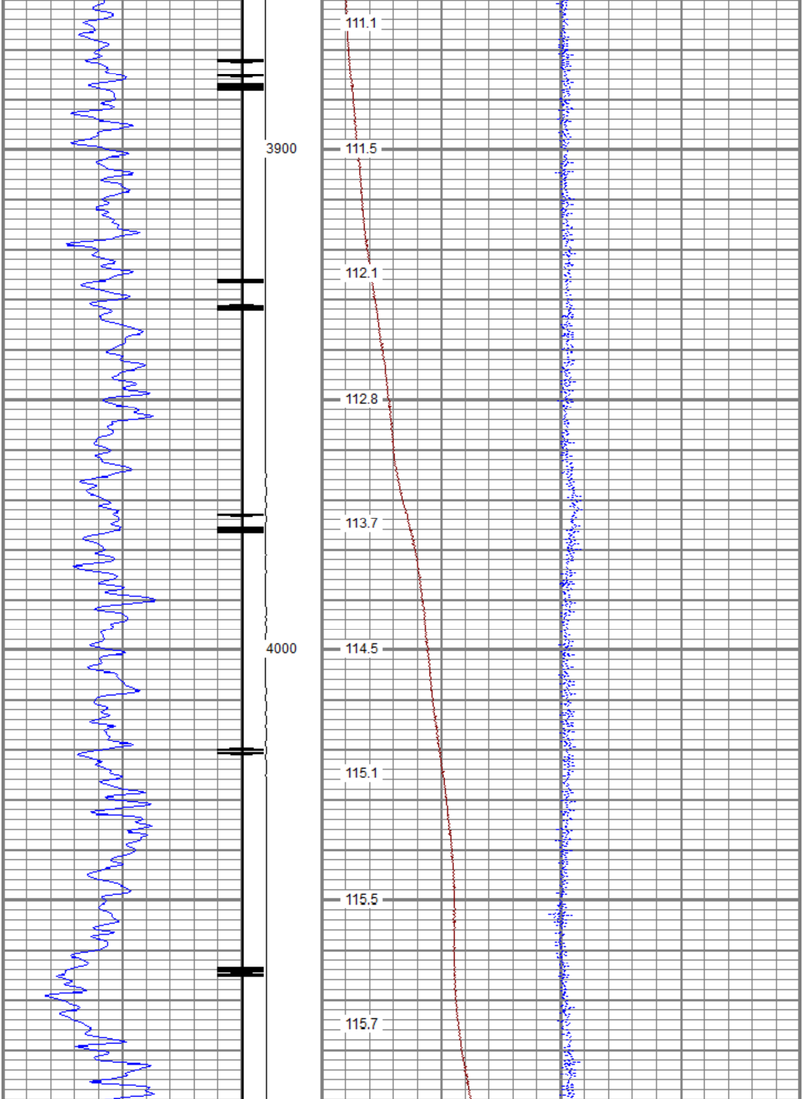
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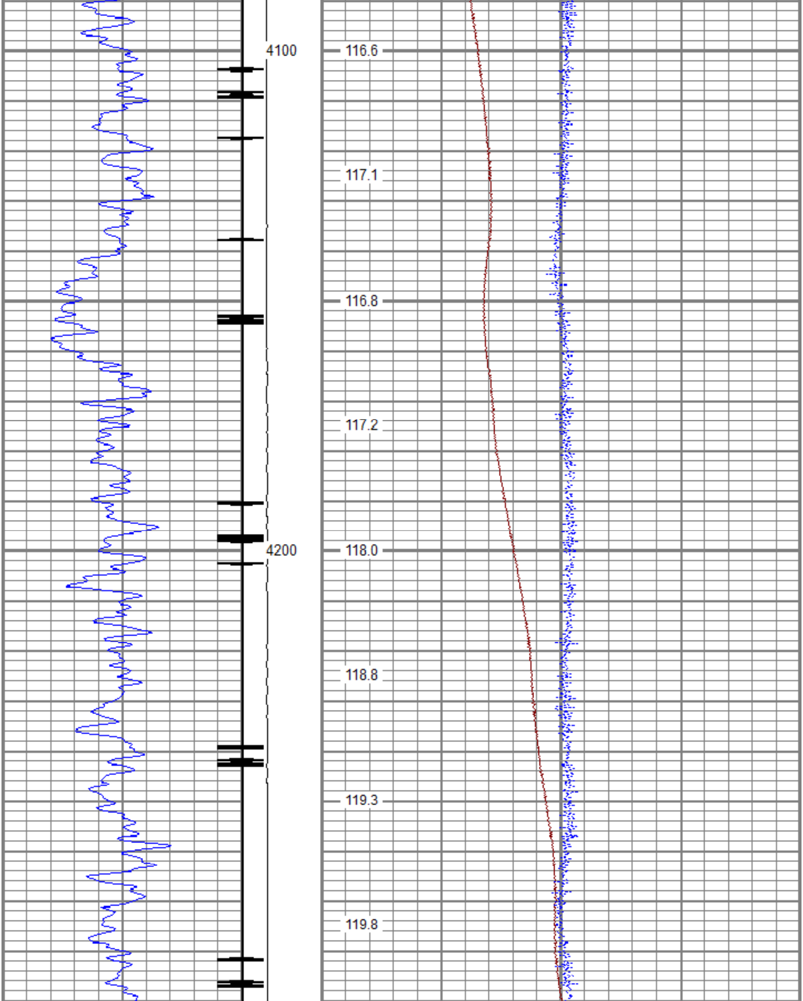
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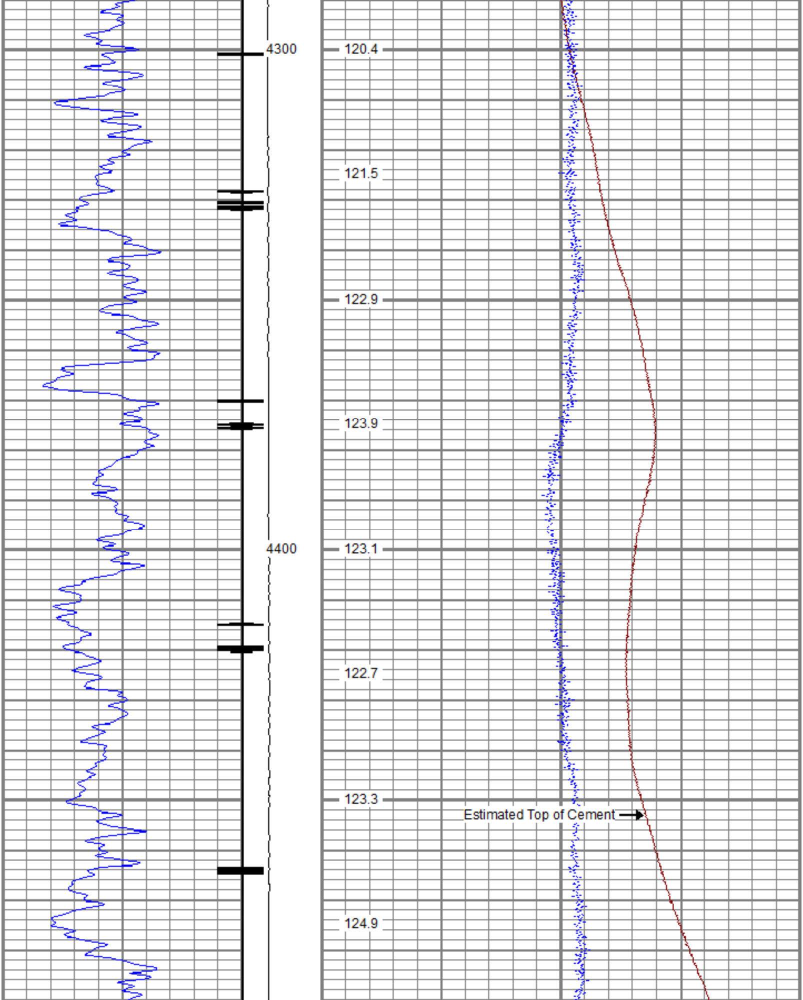
119.8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122.7
123.3
Estimated Top of Cement
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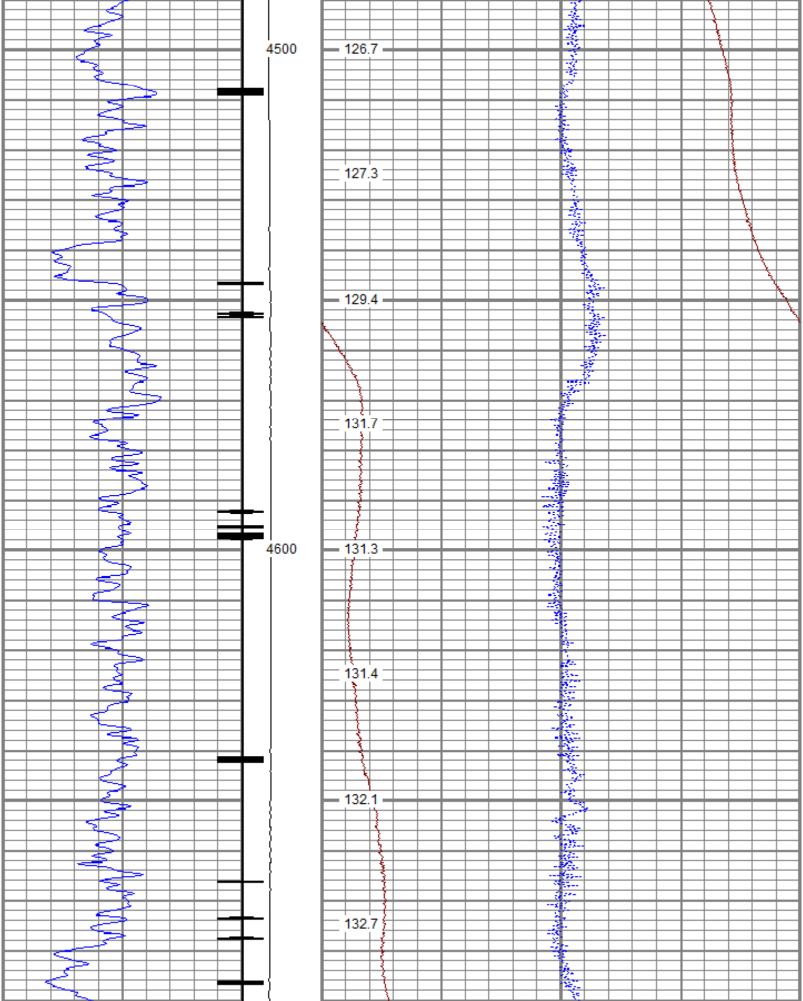
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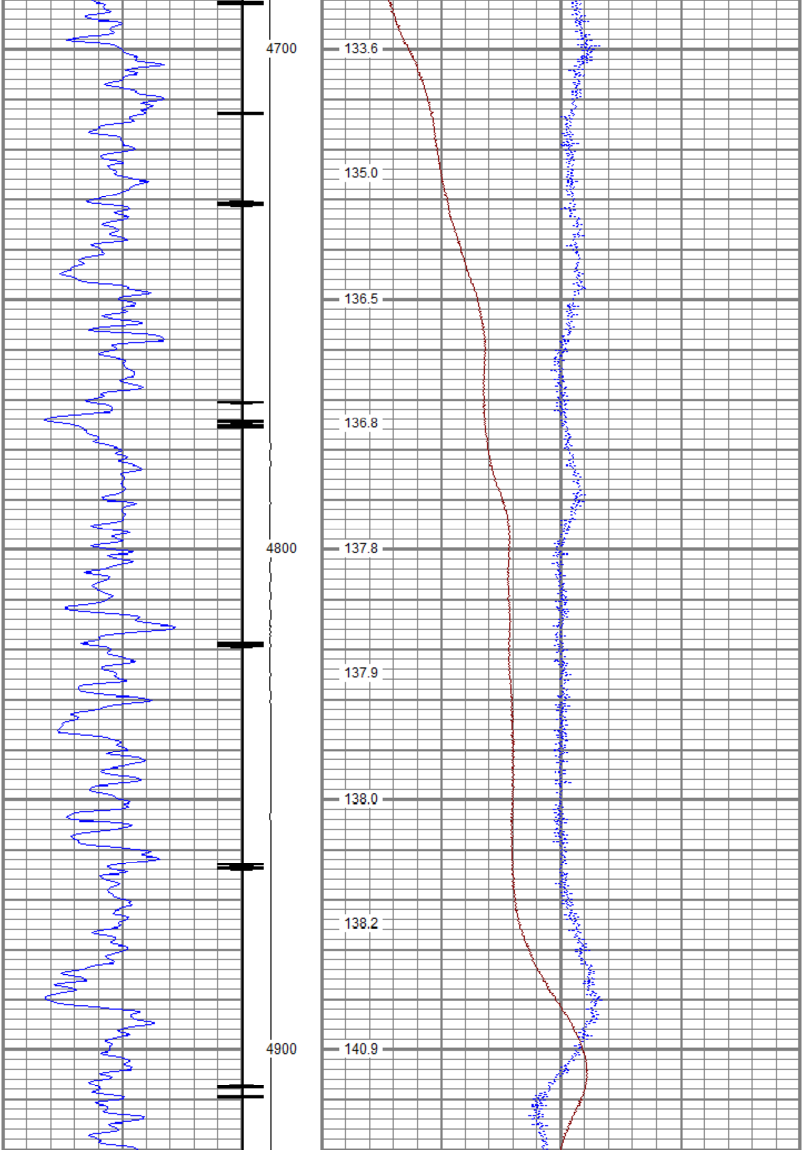
132.7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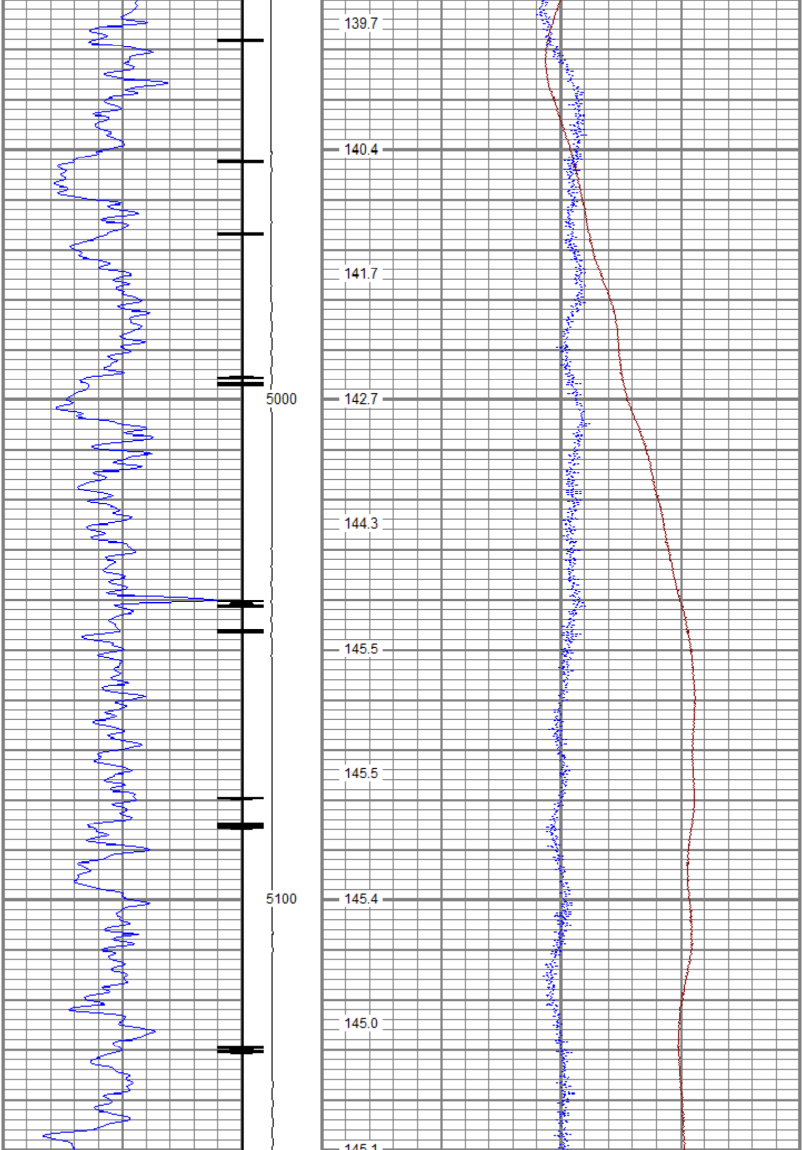
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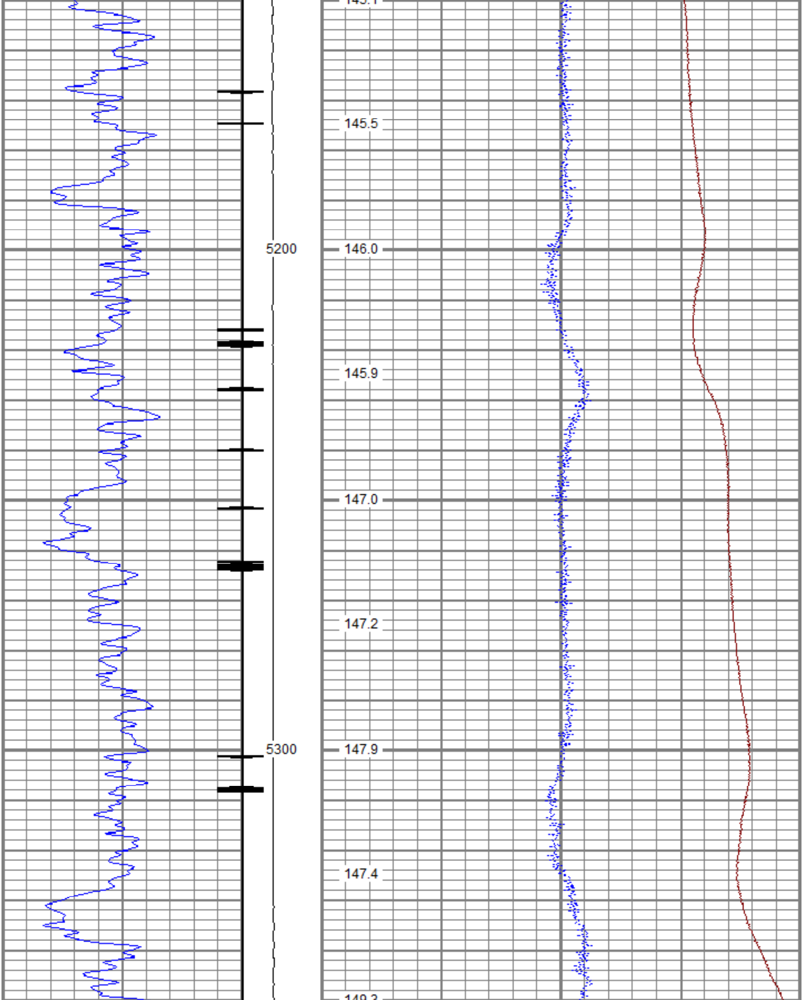
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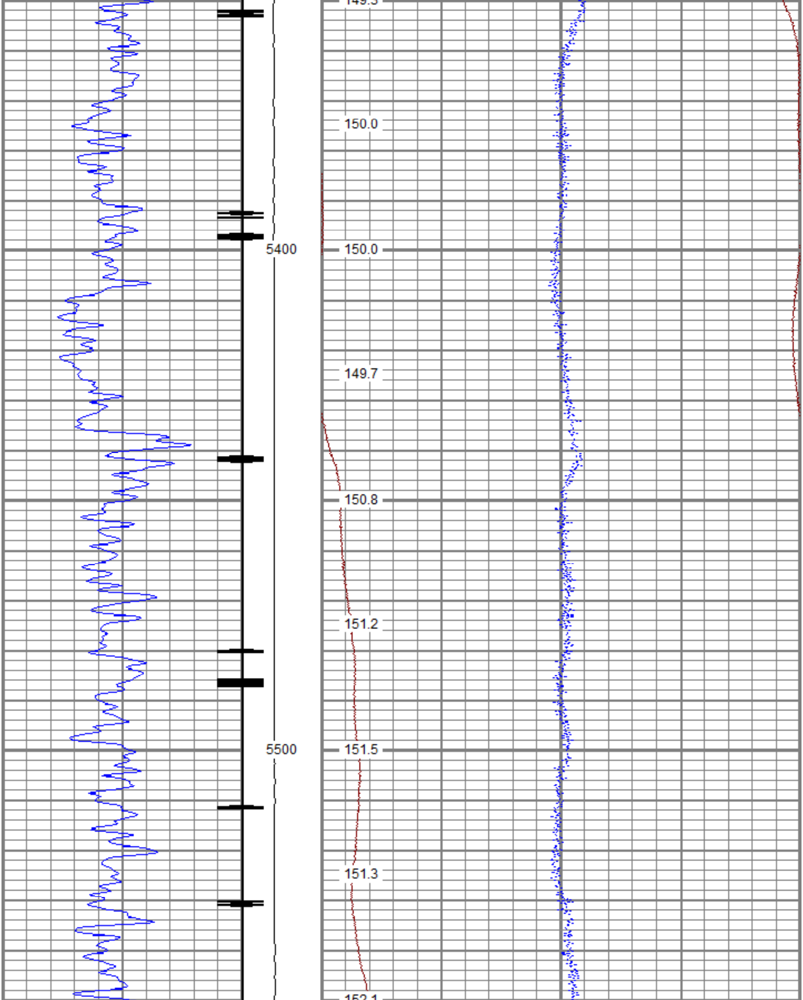
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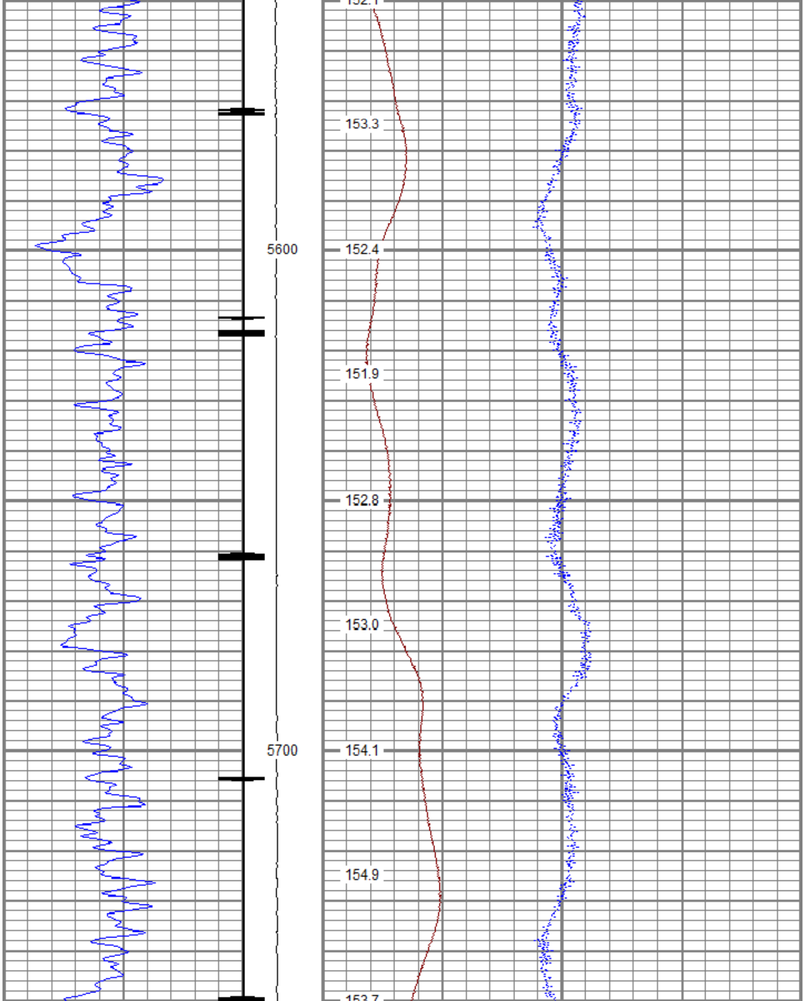
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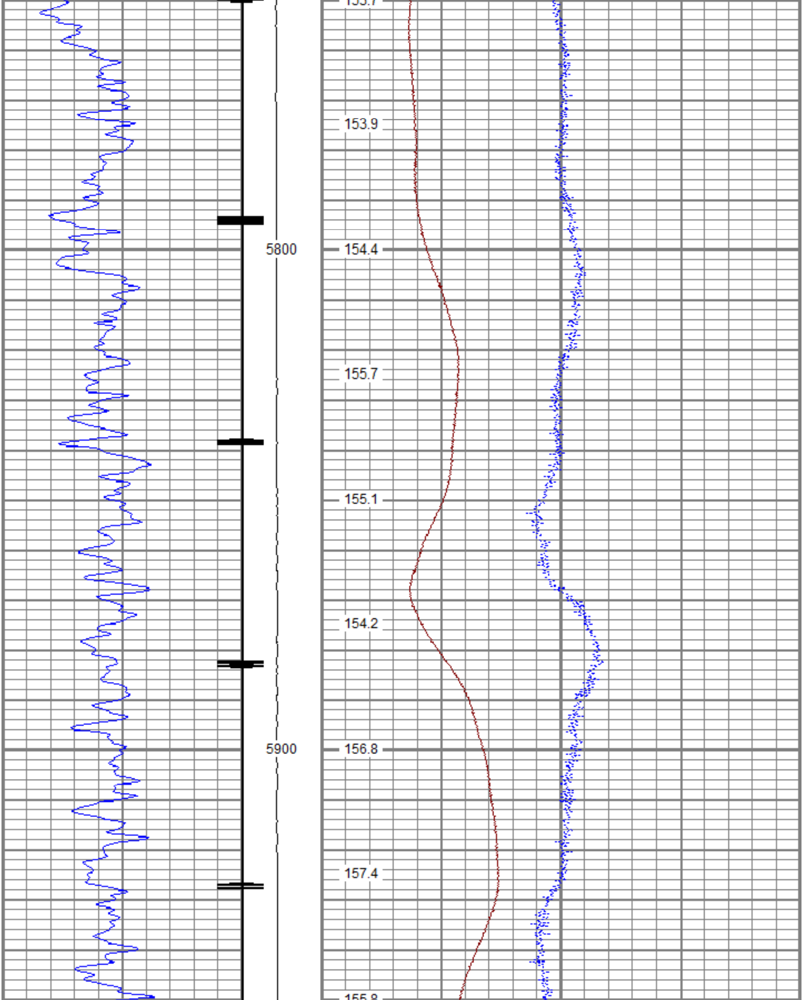
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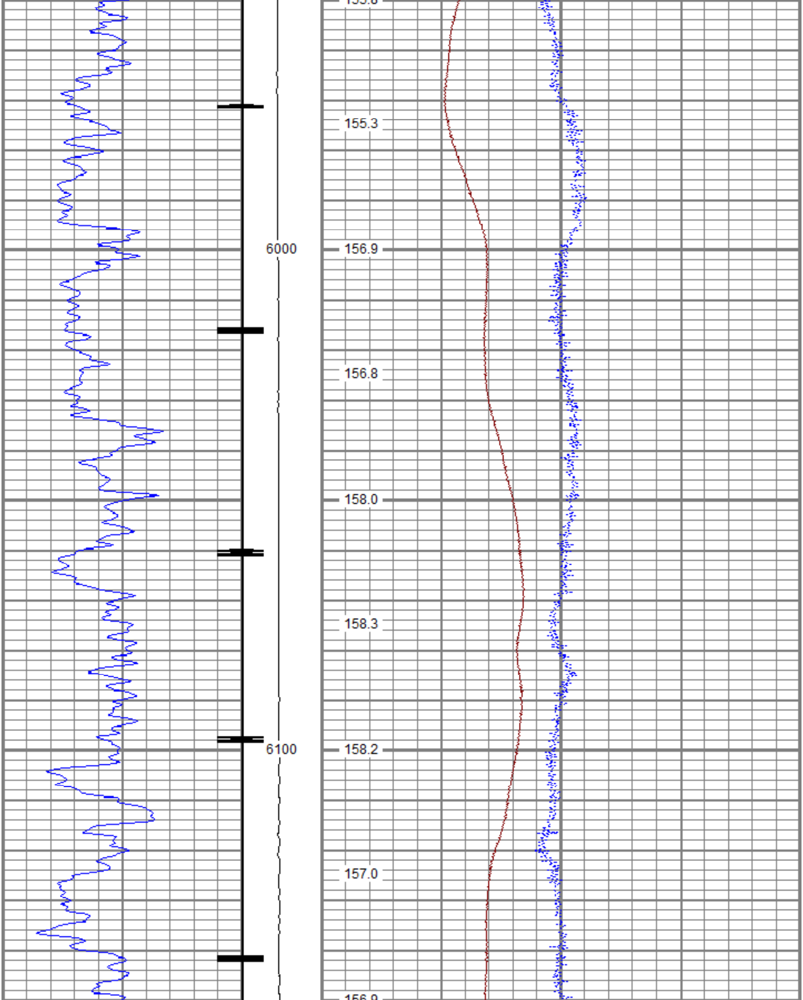
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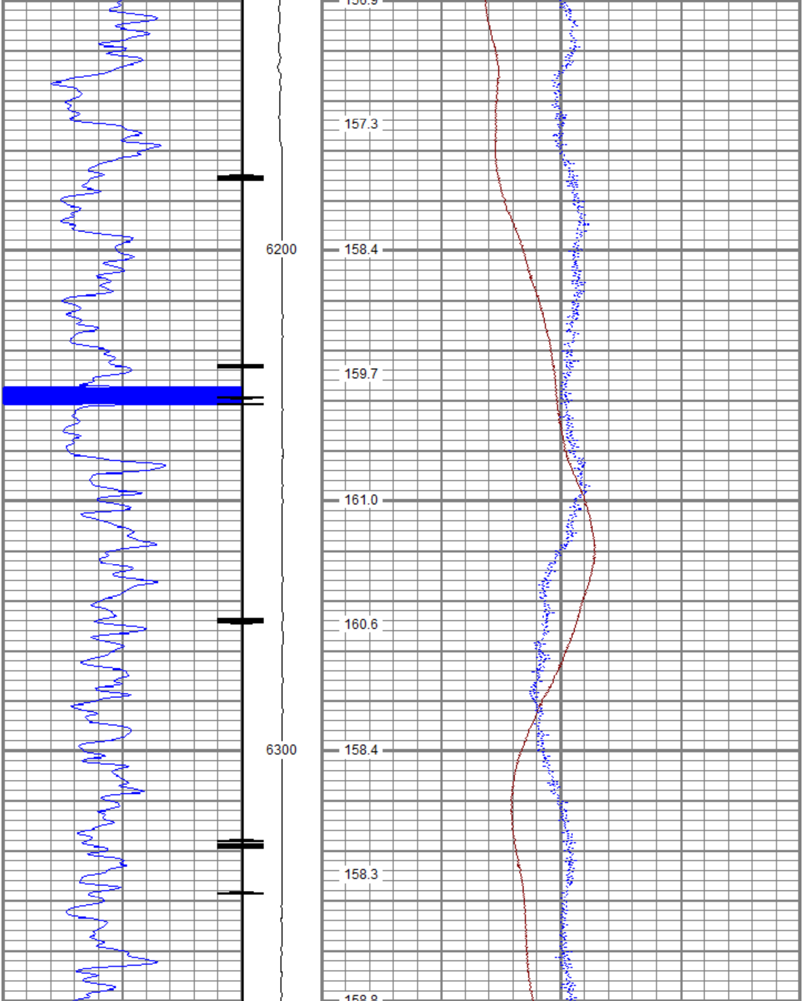
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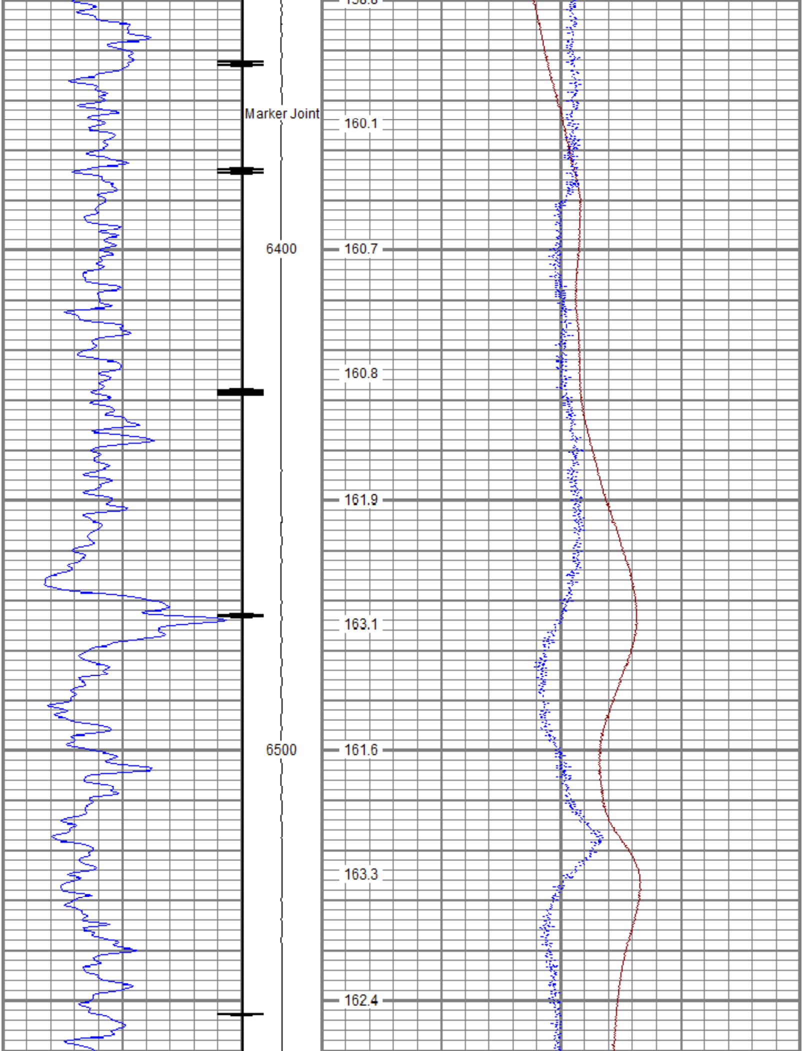
Marker Joint
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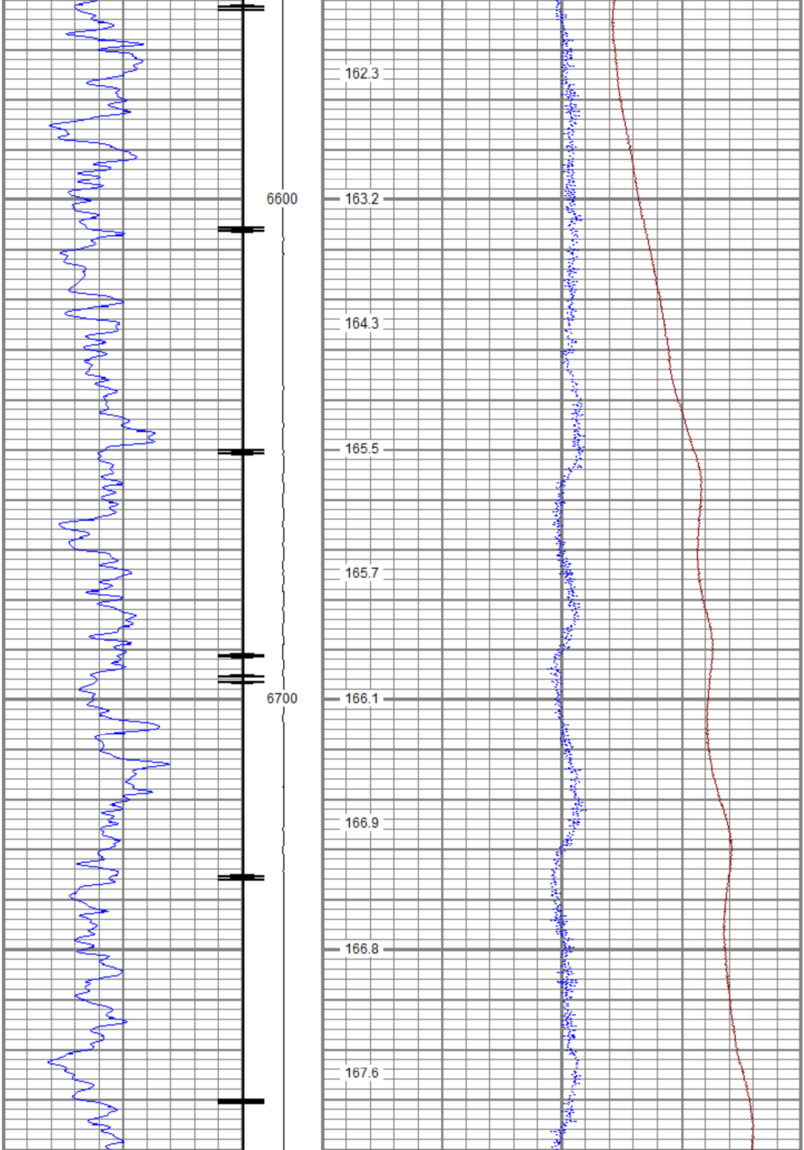
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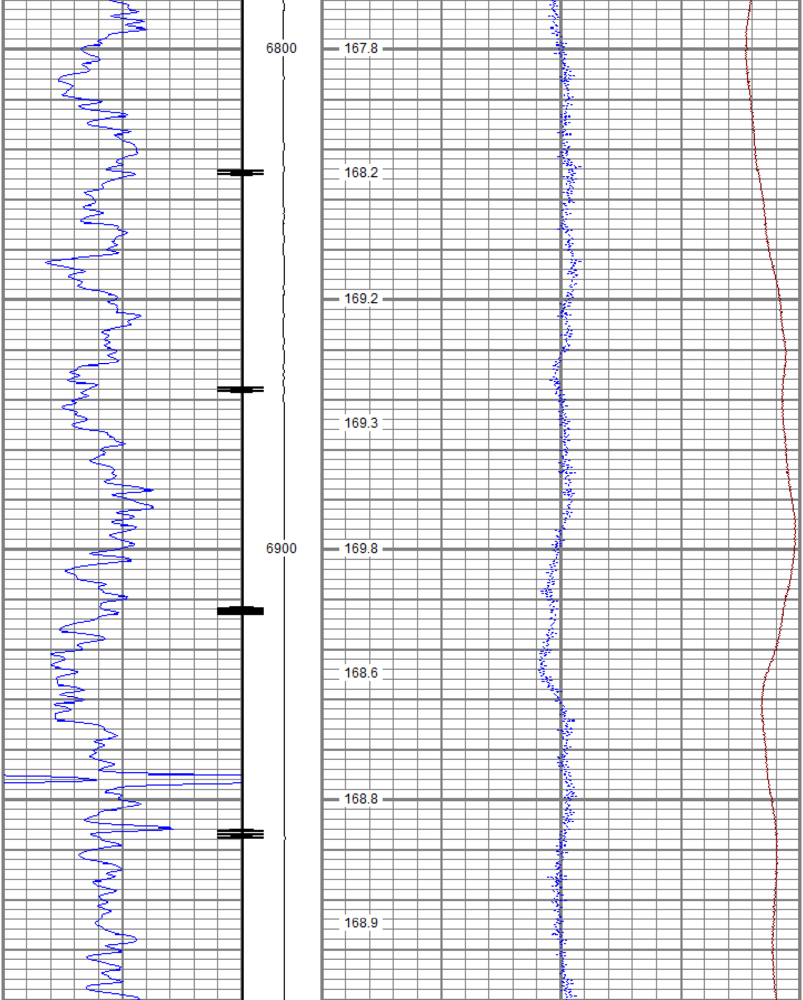
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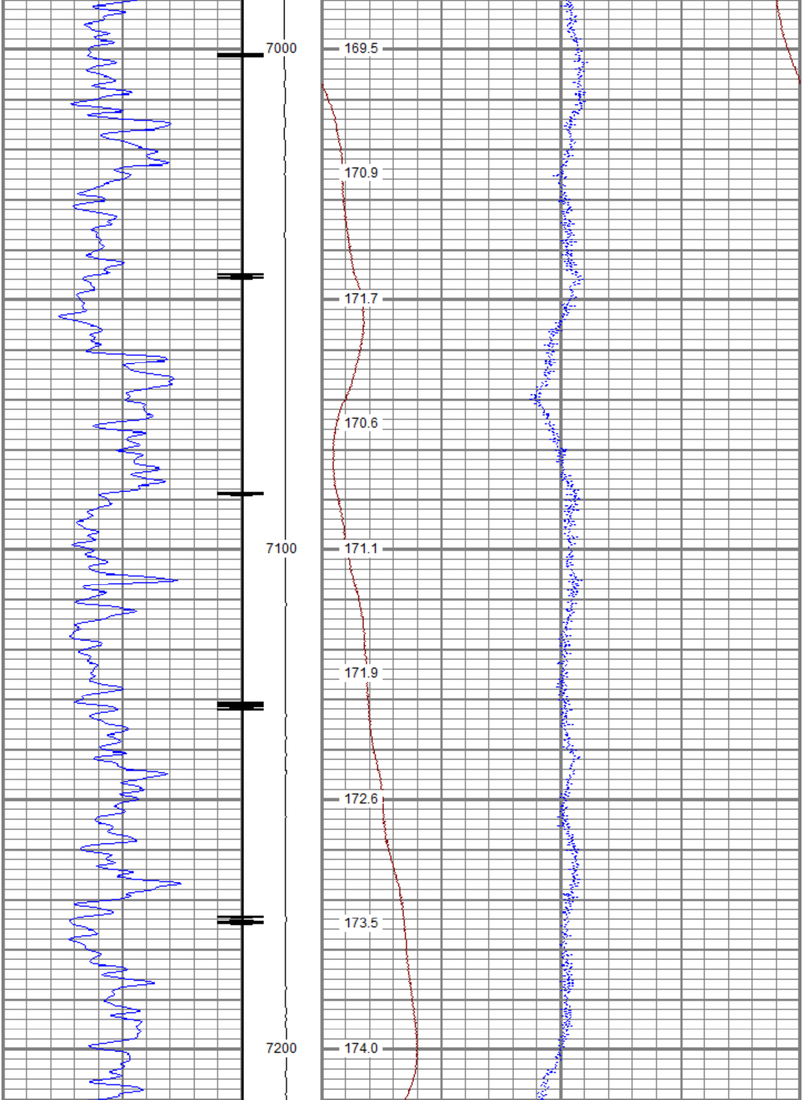
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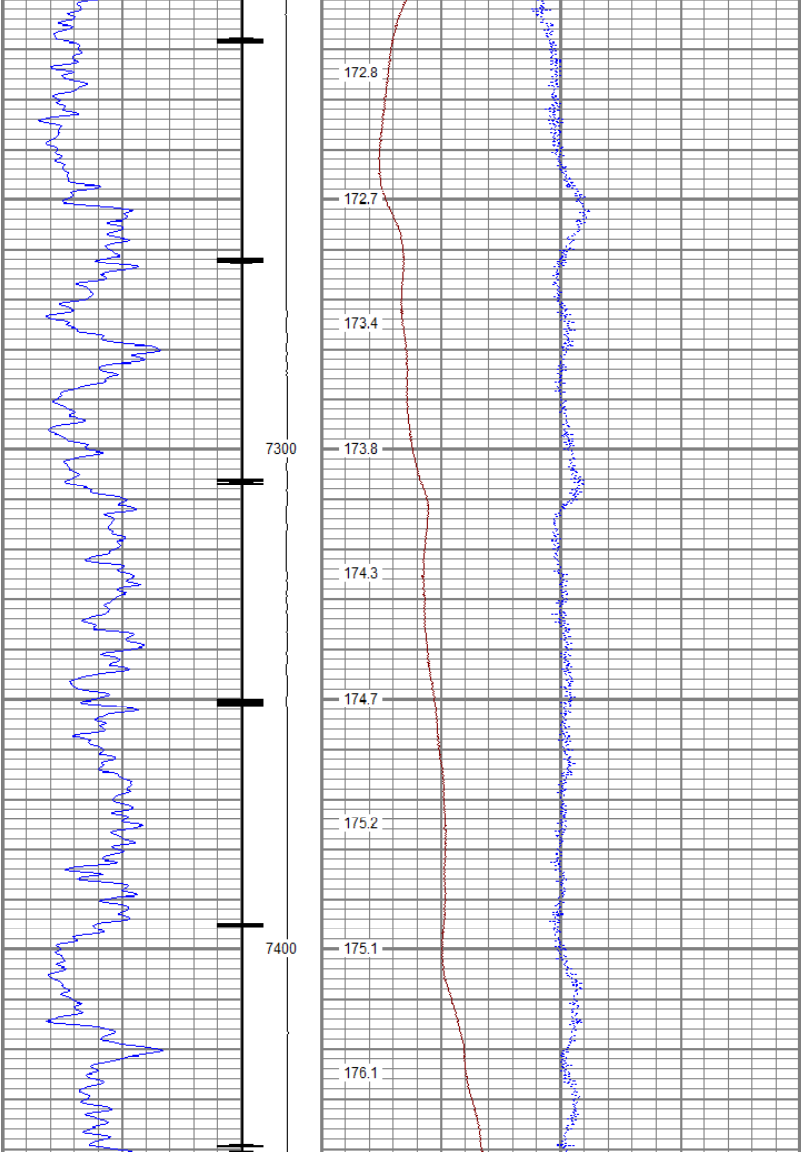
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172.7
173.4
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174.3
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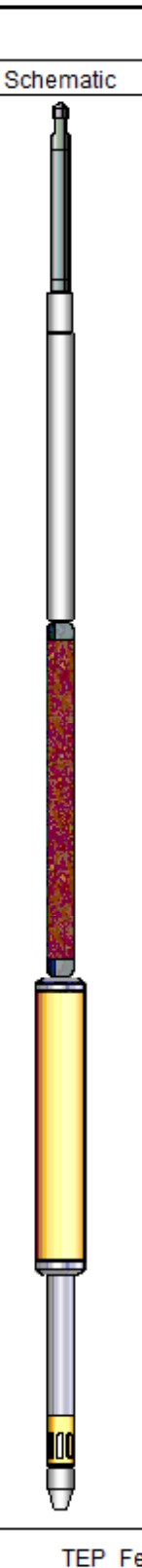
175.2
7400
175.1
176.1

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: TEP_Federal RU 424-17_Temp_05-26-18.db: field/well/run1/main1.1
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 424-17_Temp\TEP_Federal RU 424-17_Temp_05-26-18.db
Dataset Pathname main1.1
Dataset Creation Sat May 26 11:16:12 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

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