RELIANCE OILFIELD SERVICES

Radial Cement Bond Gamma Ray Casing Collar Log

Company	TEP Rocky Mountain LLC
Well	Chevron GM 331-19
Field	Grand Valley
County	Garfield
State	Colorado

Company TEP Rocky Mountain LLC

Well Chevron GM 331-19

Field Grand Valley

County Garfield State Colorado

Location: API # : 05-045-24354

SEC 20 TWP 6S RGE 96W

Other Services: ---

Permanent Datum	Ground Level	Elevation	5752.1'
Log Measured From	Kelly Bushing	24 FT	
Drilling Measured From	Kelly Bushing		

Elevation
K.B. 5776.1'
D.F. ---
G.L. 5752.1'

Date	02-FEB-2021
Run Number	One
Depth Driller	7785 FT
Depth Logger	7715 FT
Bottom Logged Interval	7703 FT
Top Log Interval	Surface
Open Hole Size	8.750"
Type Fluid	Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	226°F
Estimated Cement Top	See Log
Time Well Ready	ROA
Time Logger on Bottom	12:15
Equipment Number	HD-0331
Location	Grand Junction, CO
Recorded By	Z. Fisher
Witnessed By	---

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	36	J-55	Surface	1027 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	7742 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 4564 - 4586 FT
Recorded with 0 PSI Surface Induced Pressure

Thank you for choosing Reliance Oilfield Services, LLC!

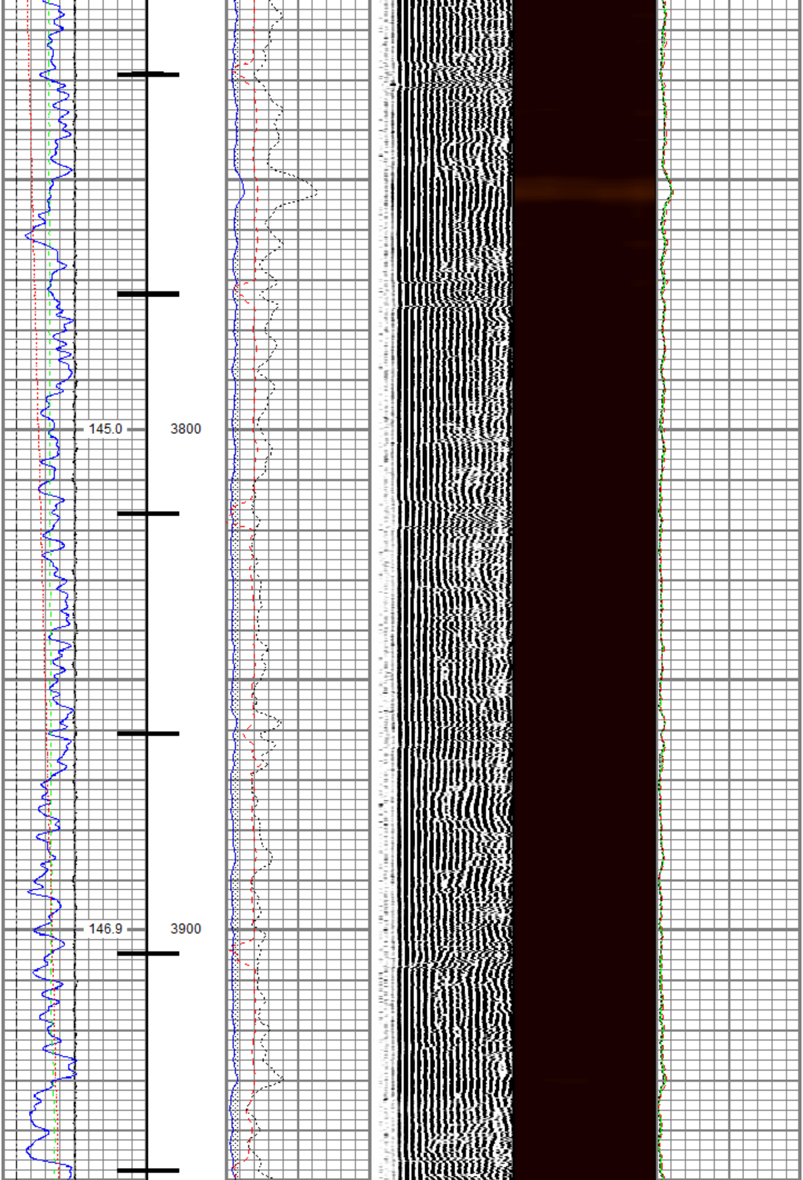
RELIANCE OILFIELD SERVICES

Main Pass

Recorded With 0 PSI Surface Induced Pressure

Database File	tep\tep_chevron gm 331-19_rbl_02-01-21\tep_chevron gm 331-19_rbl_02-01-21.db
Dataset Pathname	main.1
Presentation Format	ros_radii_tep
Dataset Creation	Wed Feb 03 10:29:10 2021
Charted by	Depth in Feet scaled 1:240

Gamma Ray 0 (GAPI) 200	3' Amplitude 0 (mV) 100	5' Variable Density Log 200 (usec) 1200	Sector Map	Average Amplitude 0 150
Casing Collar Locator	3' Amplitude x 5 0 (mV) 20			Mimimum Amplitude 0 150
Line Speed -150 (ft/min) 150	3' Travel Time 300 (usec) 200			Maximum Amplitude 0 150
Line Tension 0 (lb) 2000				
Differential Temperature -2 (degF) 2				
Temperature 0 (degF) 20				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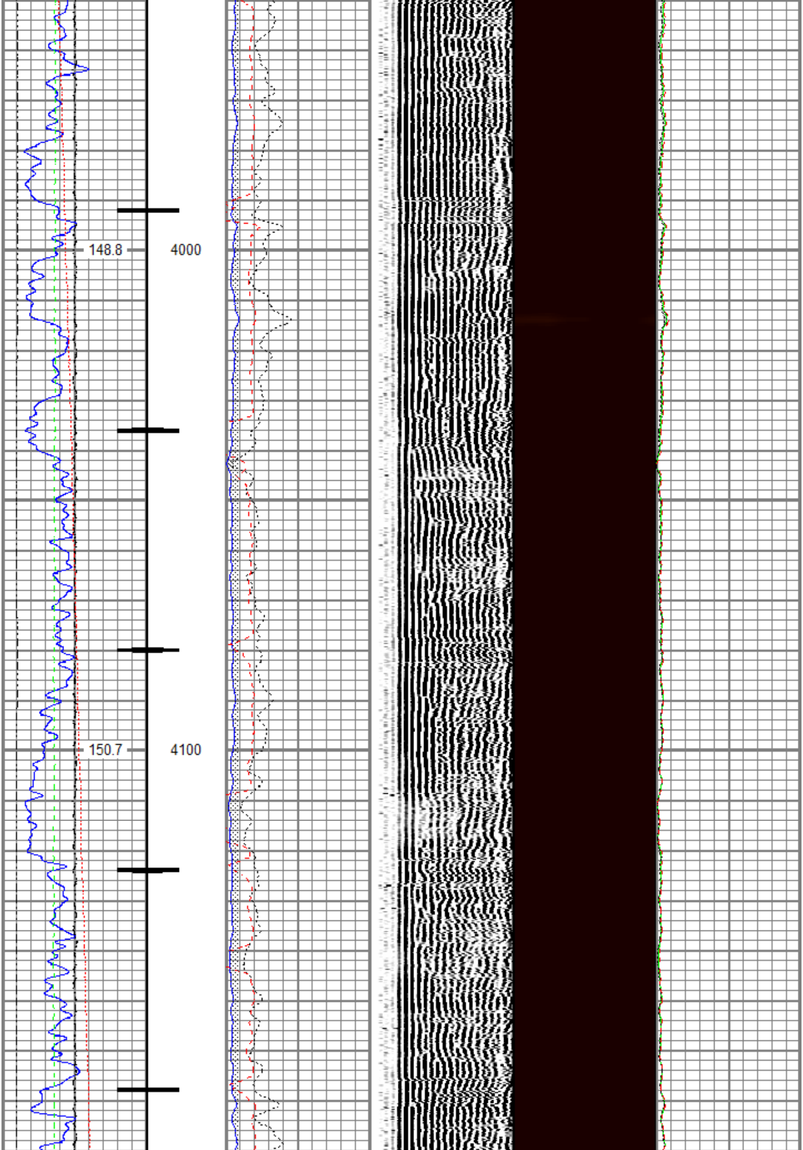
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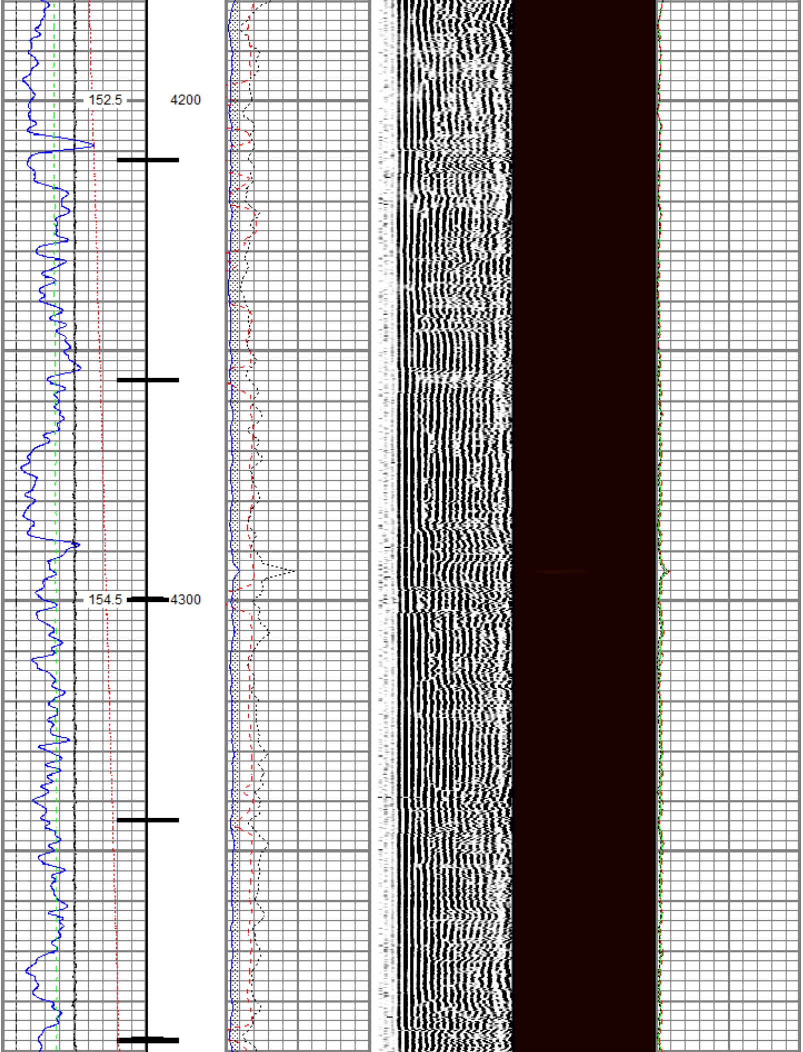
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4200
154.5
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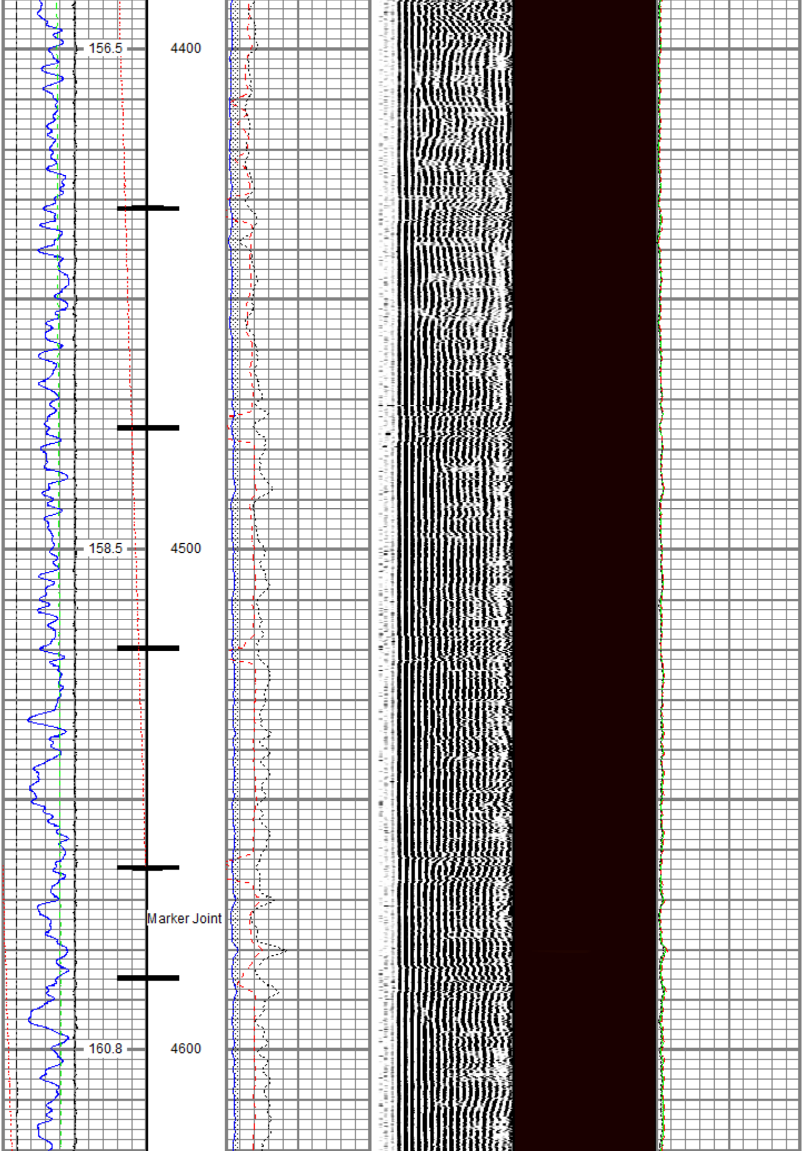
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4500
158.5
Marker Joint
160.8
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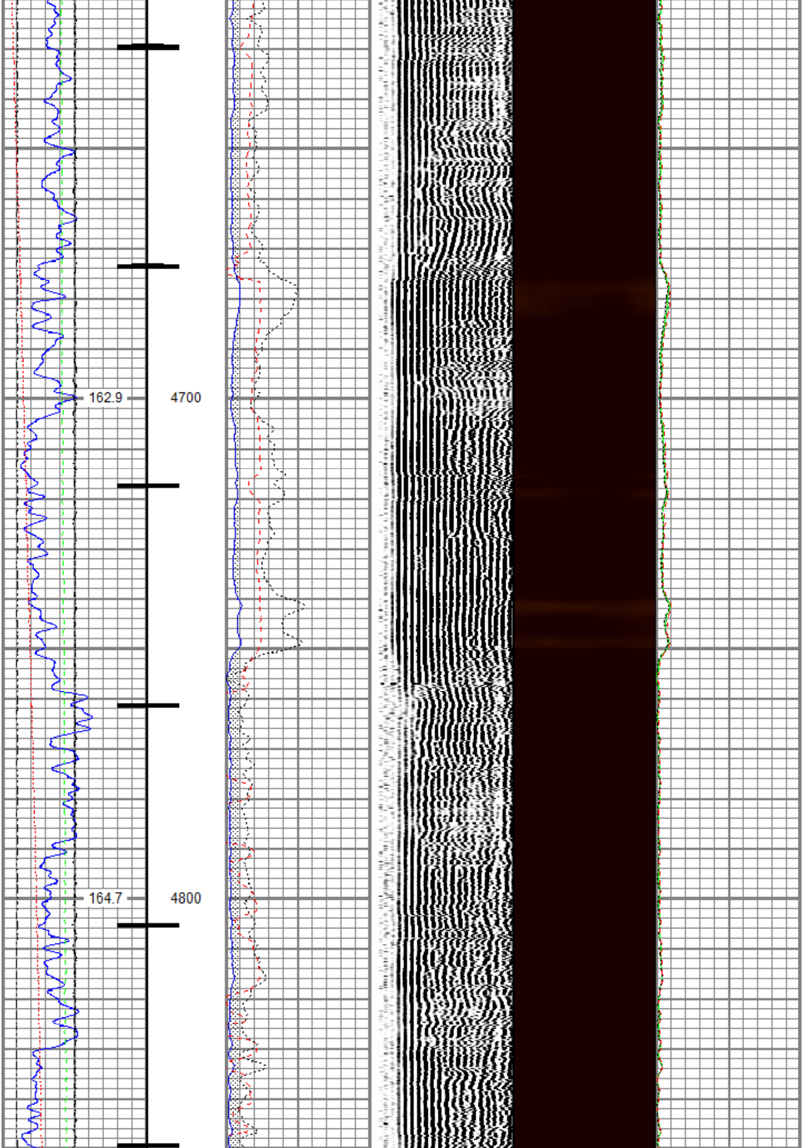
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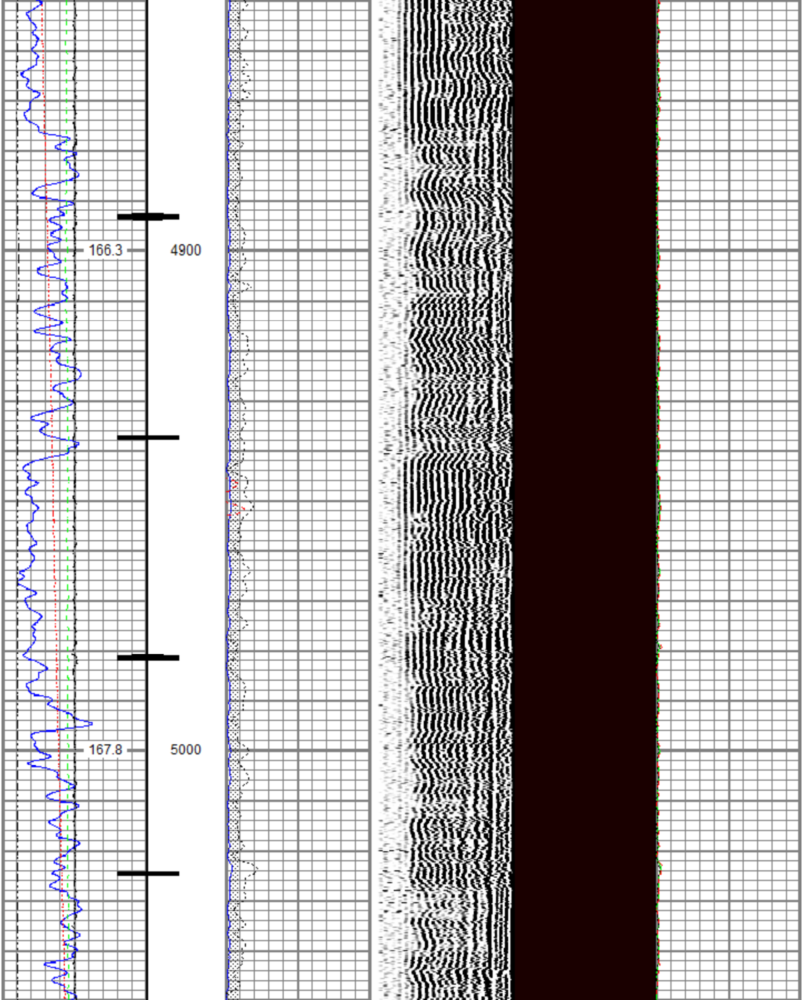
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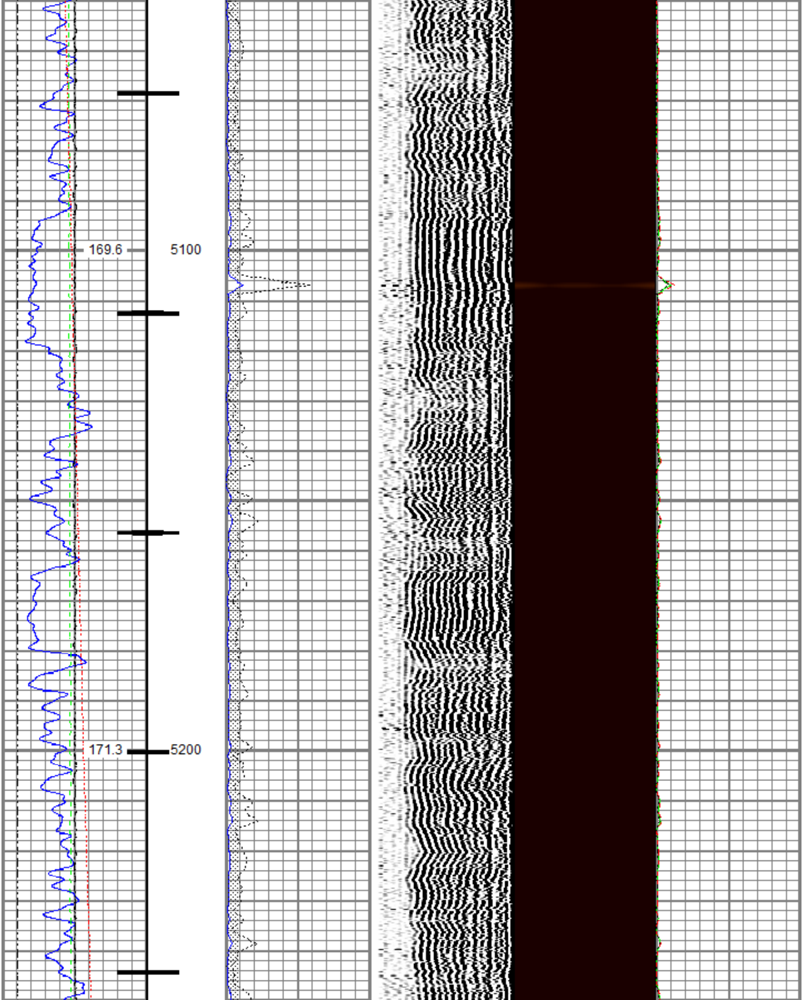
5000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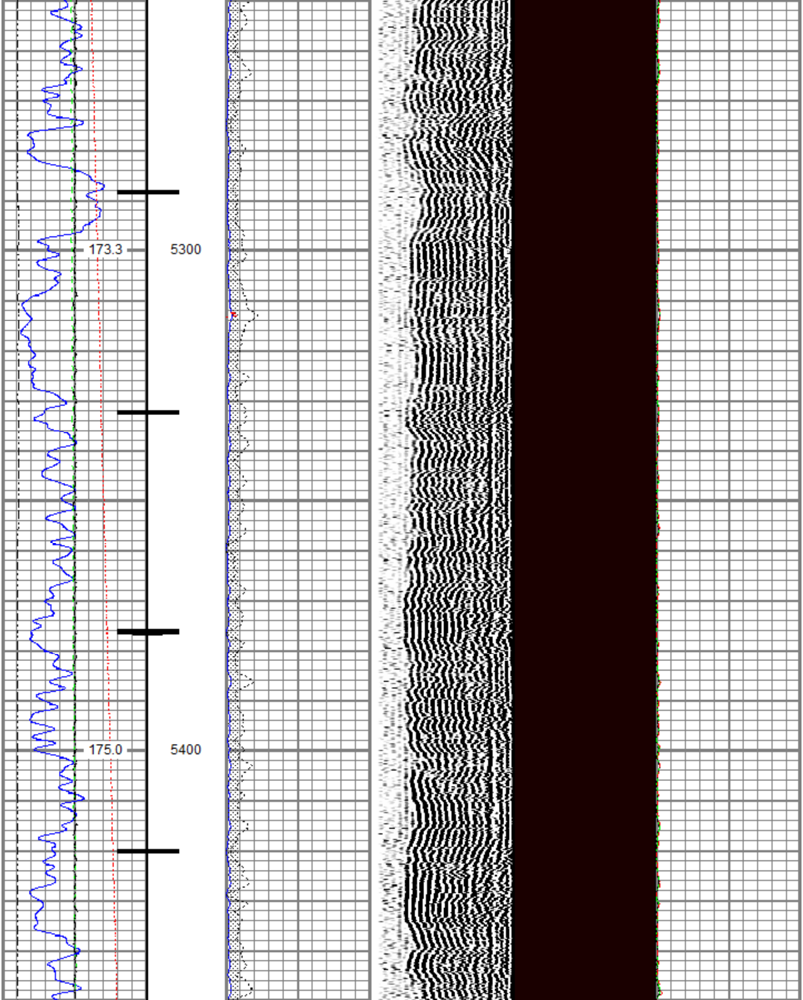
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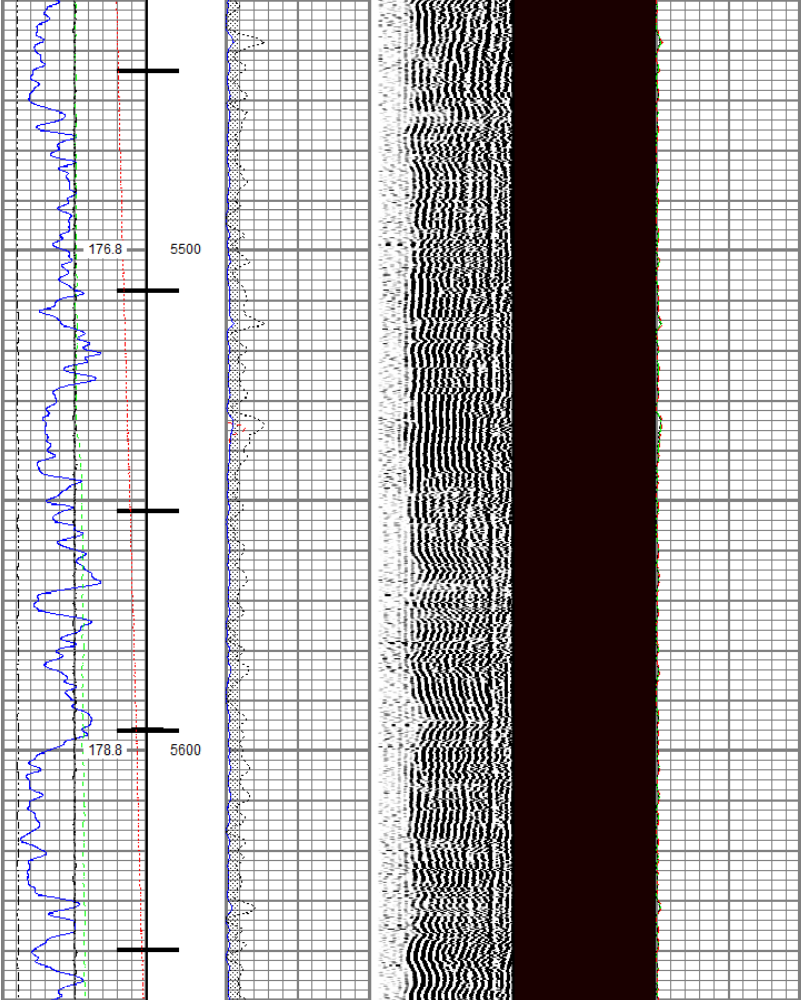
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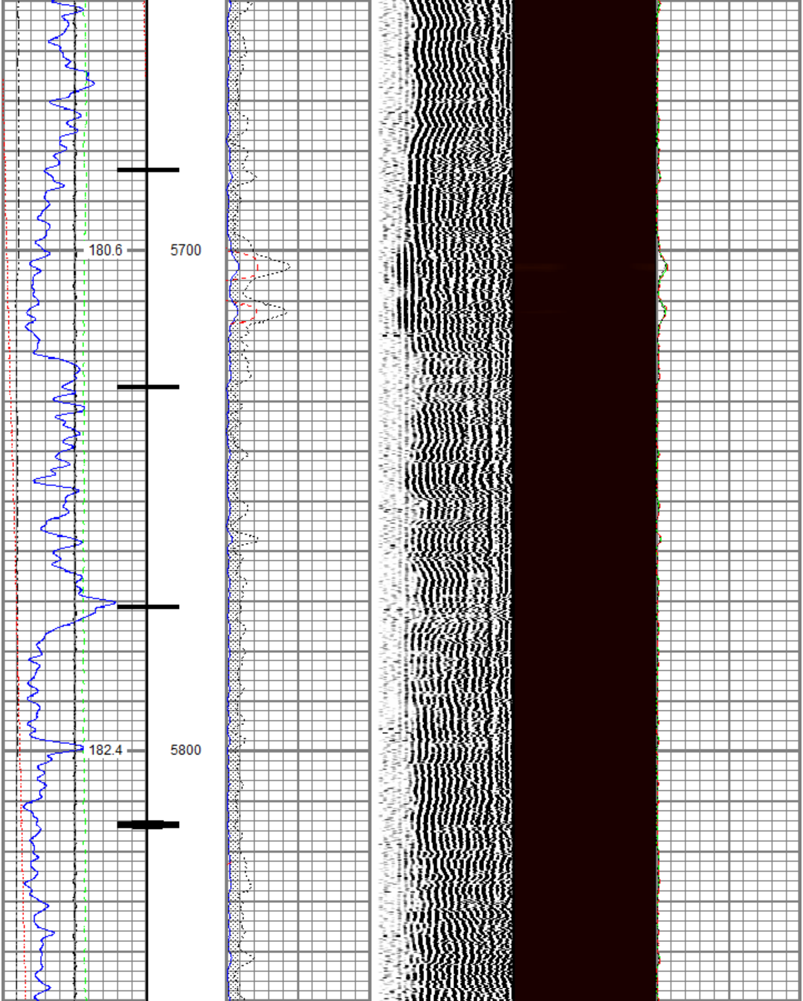
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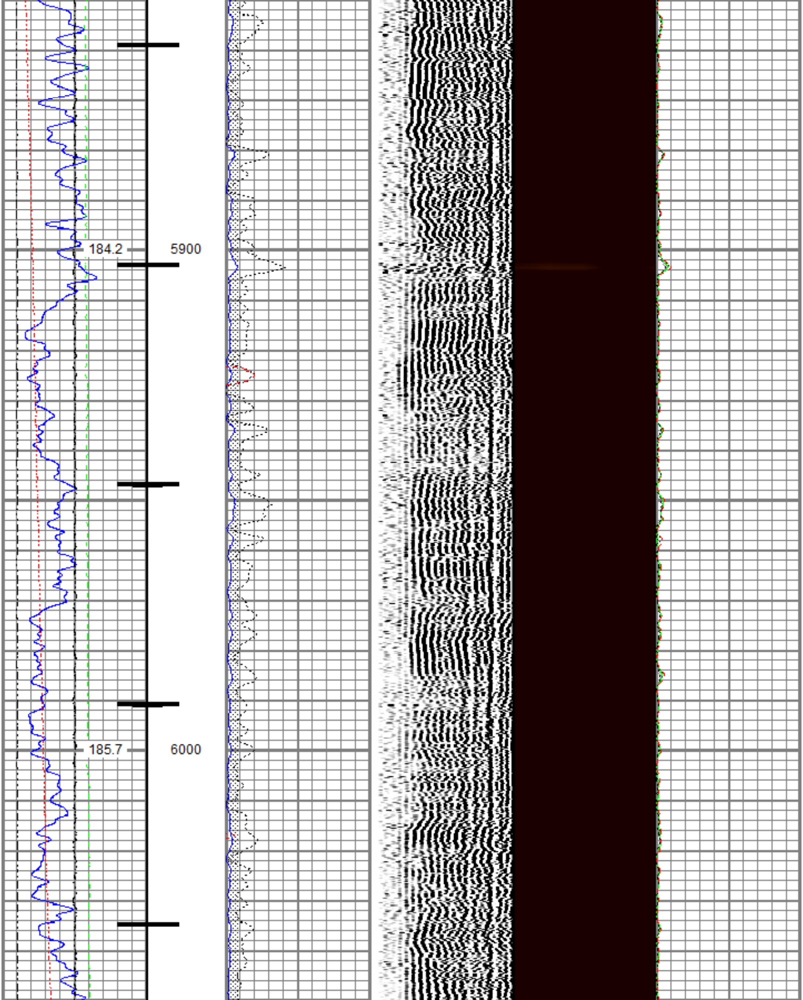
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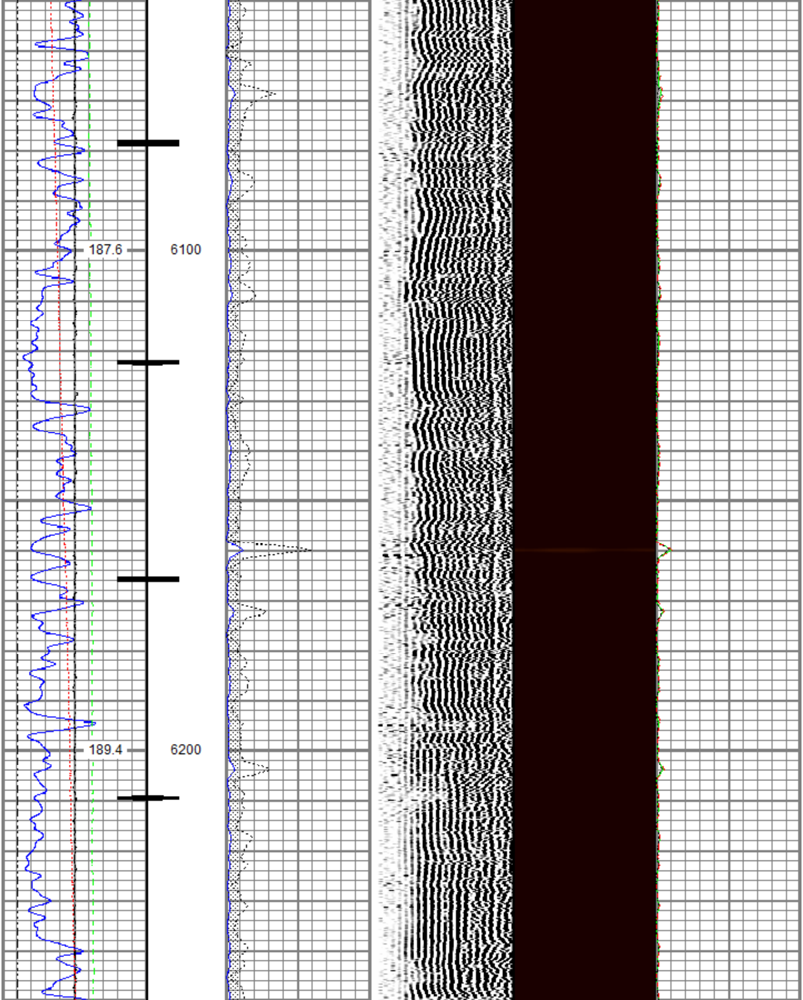
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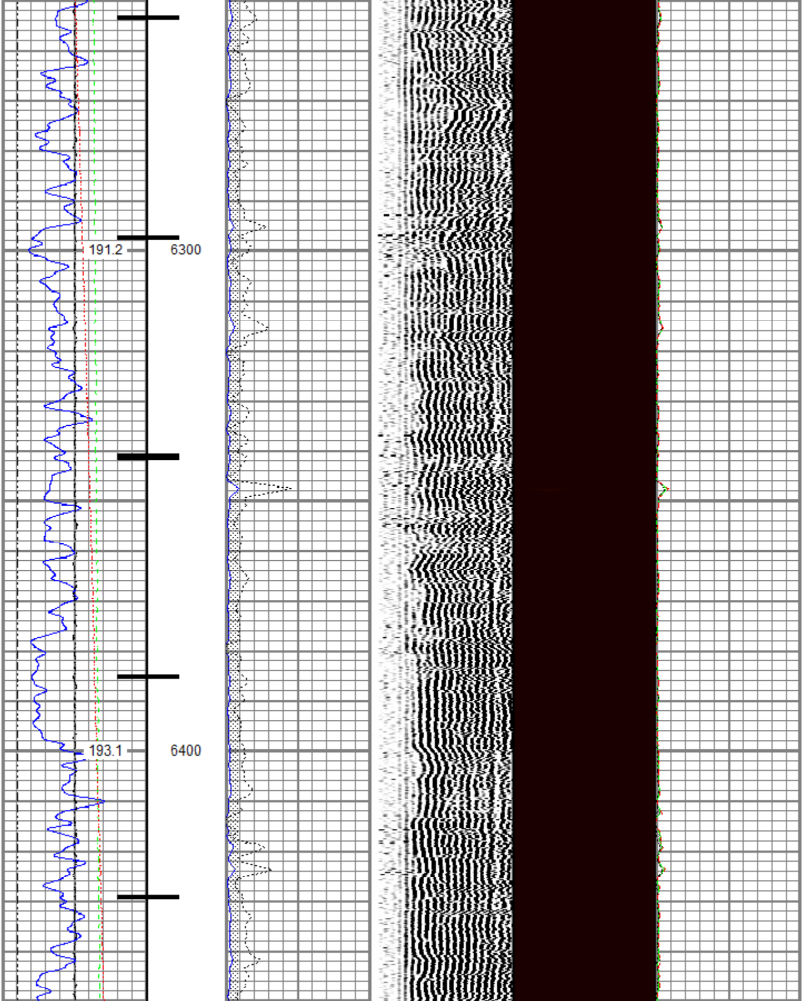
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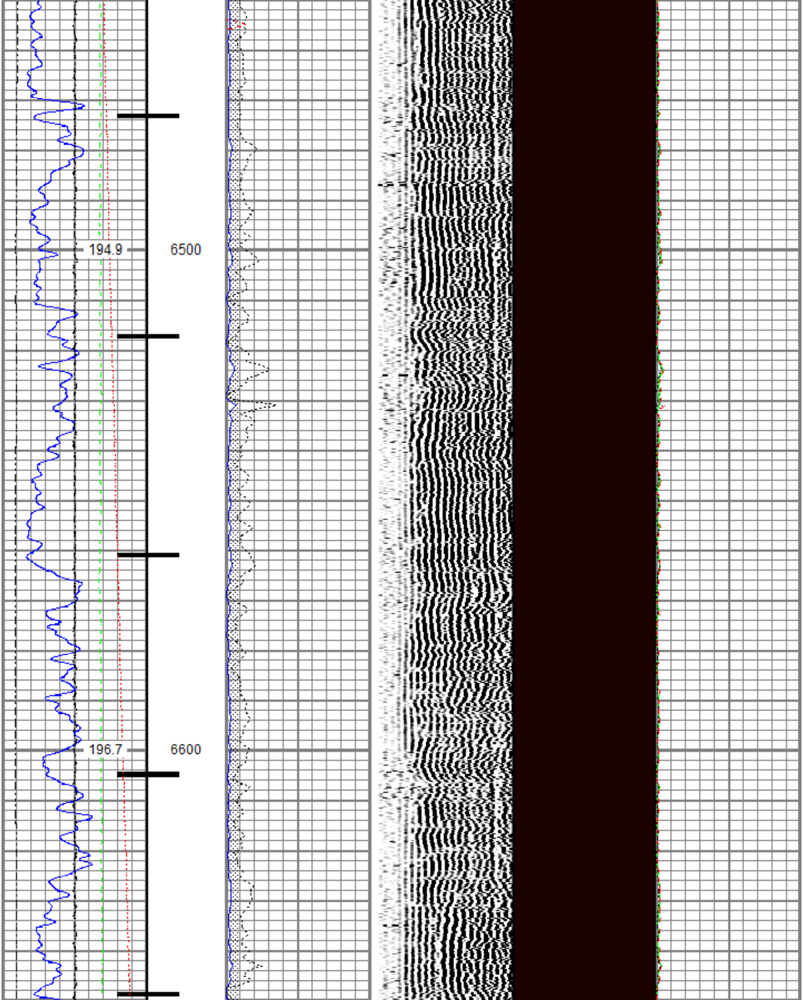
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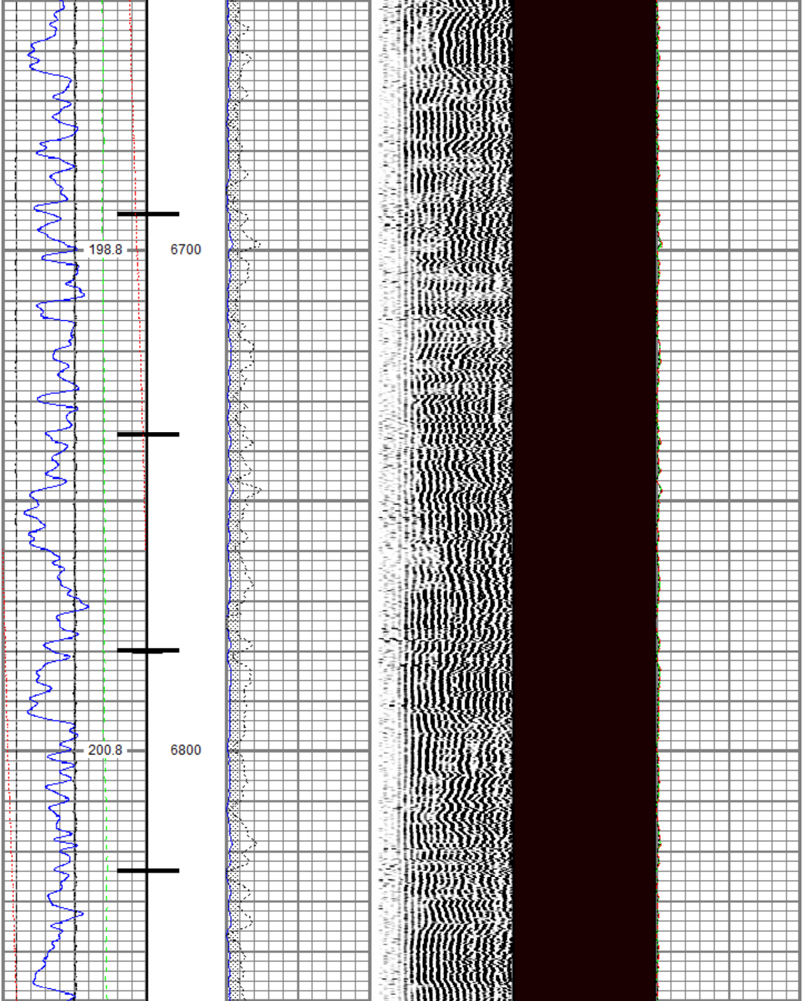
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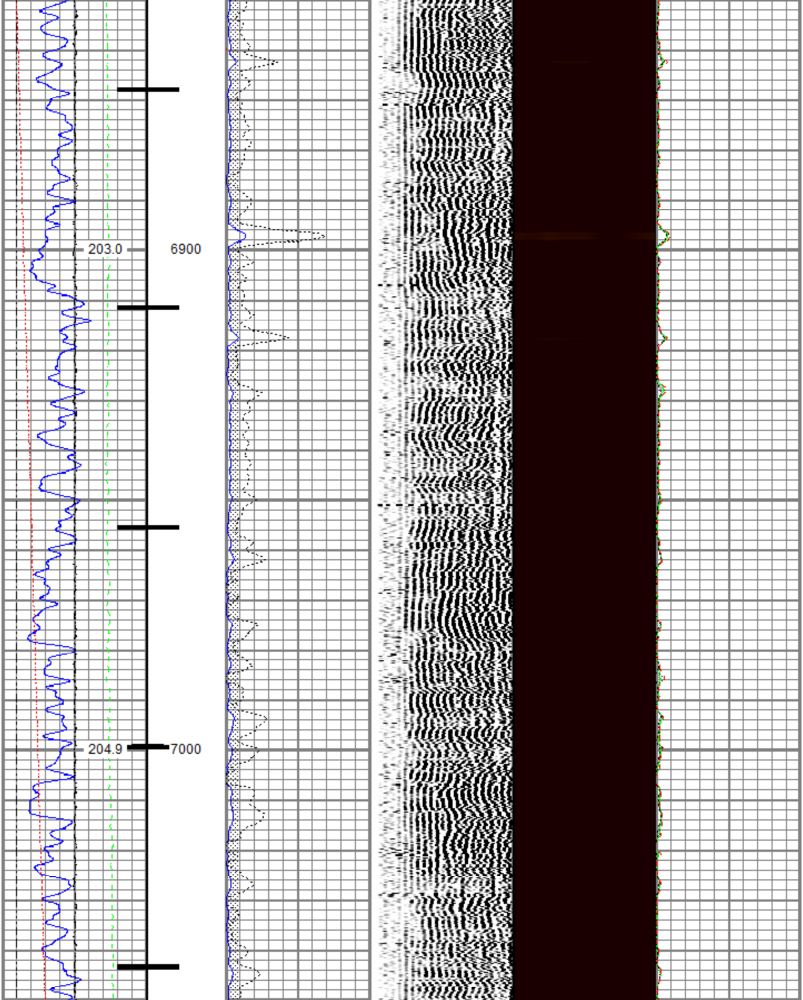
200.8
6800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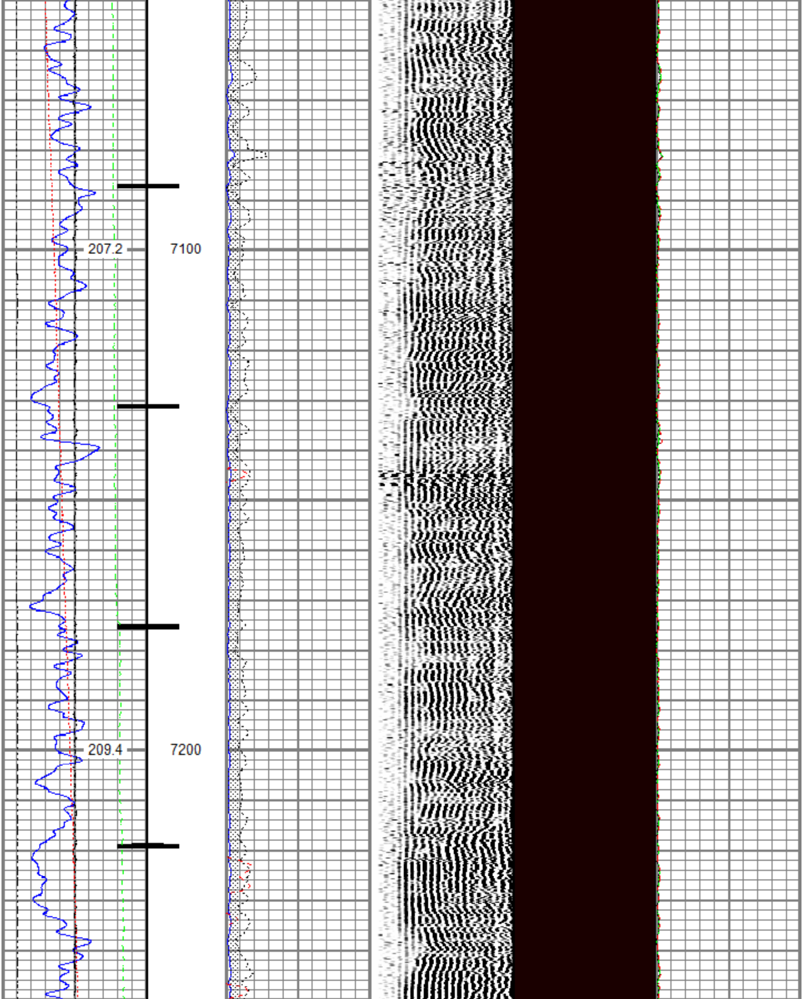
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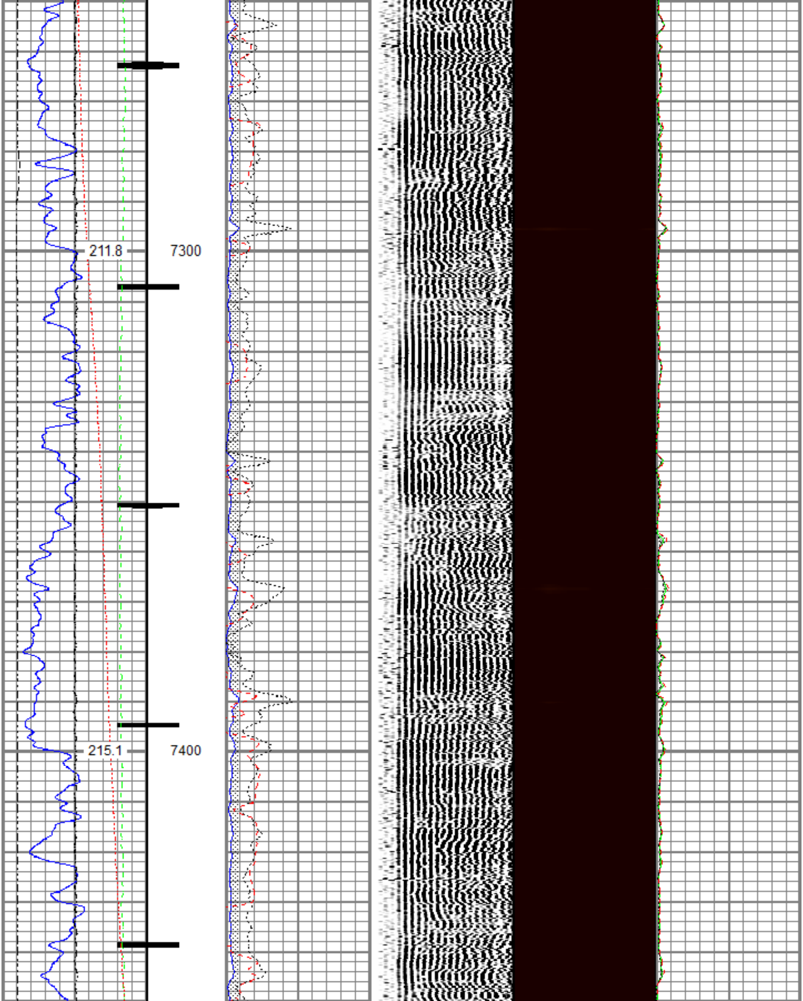
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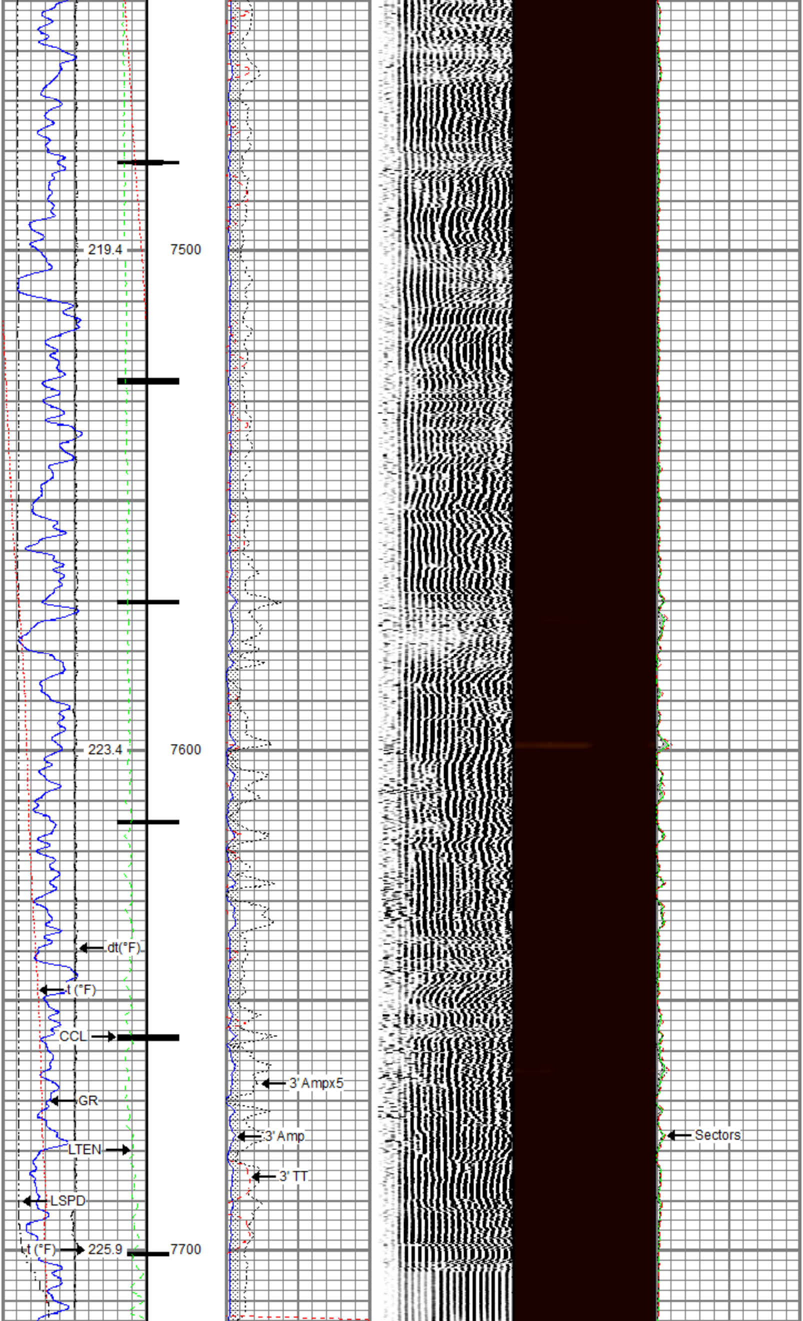
219.4
7500
223.4
7600
dt(°F)
t (°F)
CCL
GR
LTEN
LSPD
t (°F)
225.9
7700
3' Ampx5
3' Amp
3' TT
Sectors

Gamma Ray 0 (GAPI) 200		3' Amplitude 0 (mV) 100	5' Variable Density Log 200 (usec) 1200	Sector Map	Average Amplitude 0 150
Casing Collar Locator		3' Amplitude x 5 0 (mV) 20			Mimimum Amplitude 0 150
Line Speed -150 (ft/min) 150		3' Travel Time 300 (usec) 200			Maximum Amplitude 0 150
Line Tension 0 (lb) 2000					
Differential Temperature -2 (degF) 2					
Temperature 0 (degF) 20					

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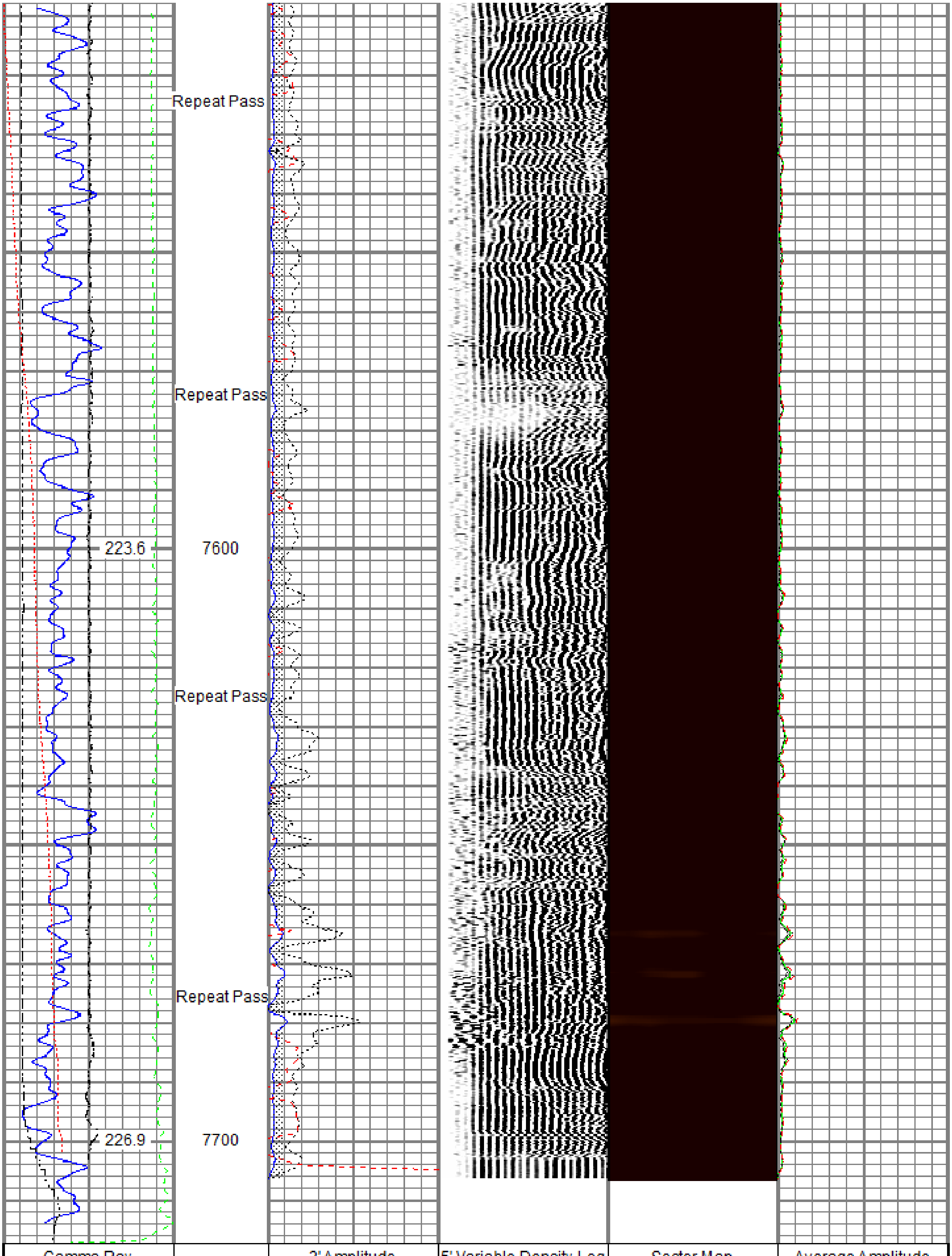
Repeat Pass

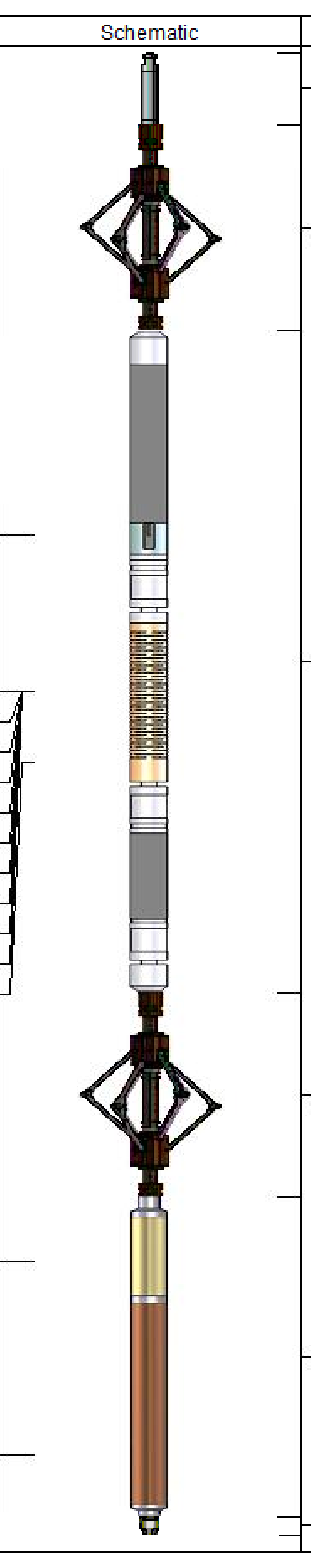
Recorded With 0 PSI Surface Induced Pressure

Database File	tep\tep_chevron gm 331-19_rbl_02-01-21\tep_chevron gm 331-19_rbl_02-01-21.db
Dataset Pathname	repeat.2
Presentation Format	ros_radii_tep
Dataset Creation	Wed Feb 03 10:46:31 2021
Charted by	Depth in Feet scaled 1:240

Gamma Ray 0 (GAPI) 200		3' Amplitude 0 (mV) 100	5' Variable Density Log 200 (usec) 1200	Sector Map	Average Amplitude 0 150
Line Speed -150 (ft/min) 150		3' Amplitude x 5 0 (mV) 20			Mimimum Amplitude 0 150
Line Tension 0 (lb) 2000		3' Travel Time 300 (usec) 200			Maximum Amplitude 0 150
Differential Temperature -2 (degF) 2					
Temperature 0 (degF) 20					



Gamma Ray 0 (GAPI) 200		3' Amplitude 0 (mV) 100	5' Variable Density Log 200 (usec) 1200	Sector Map	Average Amplitude 0 150
Line Speed -150 (ft/min) 150		3' Amplitude x 5 0 (mV) 20			Mimimum Amplitude 0 150
Line Tension 0 (lb) 2000		3' Travel Time 300 (usec) 200			Maximum Amplitude 0 150
Differential Temperature -2 (degF) 2					
Temperature 0 (degF) 20					

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Titan CHD-14375 GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	3.60
			BTA-MUD BTA 2-3/4" Roller 6 Arm Centralizer with Reversible Ends	2.92	2.72	25.00
TEMP	14.19					
			Probe Radii-2750 RBT (ROFS-RBT-0001) Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub	9.39	2.75	105.00
WVFS6	11.96					
WVFS5	11.96					
WVFS8	11.96					
WVFS7	11.96					
WVFS4	11.96					
WVFS3	11.96					
WVFS2	11.96					
WVFS1	11.96					
WVFCAL	11.96					
WVF3FT	11.96					
WVF5FT	10.96					
			BTA-MUD BTA 2-3/4" Roller 6 Arm Centralizer with Reversible Ends	2.92	2.72	25.00
CCL	3.88					
			Probe GR-CCL ANL-2750 A (FW1305-083) Probe 2.75" Analog 4 Channel Pulse Gamma Ray/CCL Combined	4.54	2.75	55.00
GR	1.14					
			GO BN-14375 GO 1-7/16" Bull Nose with Go Box Top	0.25	1.44	1.00

Dataset:	tep_chevron gm 331-19_rbl_02-01-21.db: field/well/run1/main.1
Total length:	21.05 ft
Total weight:	214.60 lb
O.D.:	2.75 in

Calibration Report

Database File	c:\programdata\warrior\data\tep\tep_chevron gm 331-19_rbl_02-01-21\tep_chevron gm 331-19_rbl_02-01-2
Dataset Pathname	main.1
Dataset Creation	Wed Feb 03 10:29:10 2021

Gamma Ray Calibration Report

Serial Number:	FW1305-083	
Tool Model:	2750 A	
Performed:	Sun Nov 12 05:37:57 2017	
Calibrator Value:	637.0	GAPI
Background Reading:	95.7	cps
Calibrator Reading:	982.0	cps
Sensitivity:	0.7188	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	ROFS-RBT-0001	
Tool Model:	2750 RBT	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	30.987	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.005	0.656	0.800	81.196	123.481	0.175
CAL	0.003	0.767				
5'	0.006	0.644	0.800	81.196	126.133	0.019
SUM						
S1	0.006	0.737	0.000	100.000	136.772	-0.793
S2	0.006	0.714	0.000	100.000	141.162	-0.810
S3	0.006	0.737	0.000	100.000	136.768	-0.775
S4	0.006	0.696	0.000	100.000	144.805	-0.819
S5	0.006	0.696	0.000	100.000	144.805	-0.819
S6	0.005	0.695	0.000	100.000	145.040	-0.770
S7	0.005	0.695	0.000	100.000	145.040	-0.770
S8	0.006	0.713	0.000	100.000	141.331	-0.779

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.003	0.767	1.000	0.000

Air Zero Calibration, performed Tue Feb 2 10:16:50 2021:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

Temperature Calibration Report

Serial Number:	ROFS-RBT-0001	
Tool Model:	2750 RBT	
Performed:	Mon Oct 1 11:32:12 2018	
	Reference	Reading
Low Reference:	100.00 degF	112.12 degF
High Reference:	350.00 degF	415.62 degF
Gain:	0.82	
Offset:	7.65	
Delta Spacing	1	

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County	Garfield
State	Colorado