RELIANCE OILFIELD SERVICES

Radial Cement Bond
Gamma Ray
Casing Collar Log

Company TEP Rocky Mountain LLC
Well Tri State Trucking PA 342-26
Field Parachute
County Garfield
State Colorado

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Field Parachute
County Garfield State Colorado
Location: API # : 05-045-23661
SEC 25 TWP 6S RGE 95W
Other Services
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Permanent Datum	Ground Level	Elevation 5224'	Elevation
Log Measured From	Kelly Bushing	24 FT	K.B. 5248'
Drilling Measured From	Kelly Bushing		D.F. 5247'
			G.L. 5224'

Date	12-DEC-2017
Run Number	One
Depth Driller	8317 FT
Depth Logger	8227 FT
Bottom Logged Interval	8227 FT
Top Log Interval	Surface
Open Hole Size	8.750"
Type Fluid	Fresh Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	242°F
Estimated Cement Top	See Log
Time Well Ready	ROA
Time Logger on Bottom	2:30
Equipment Number	HD-0359
Location	Grand Junction, CO
Recorded By	Z. Fisher
Witnessed By	--

Borehole Record

Run Number	Bit	From	To	Size

Tubing Record

Weight	From	To

Casing Record	Size (in)	Wgt (lbs/Ft)	Grade	Top	Bottom
Surface Casing	9 5/8	32.3	H-40	Surface	1144 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	8274 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 at 4210 FT to 4232 FT
Log ran from 8227 FT to Surface
Recorded with 0 PSI Surface Induced Pressure

Thank you for choosing Reliance Oilfield Services, LLC!!

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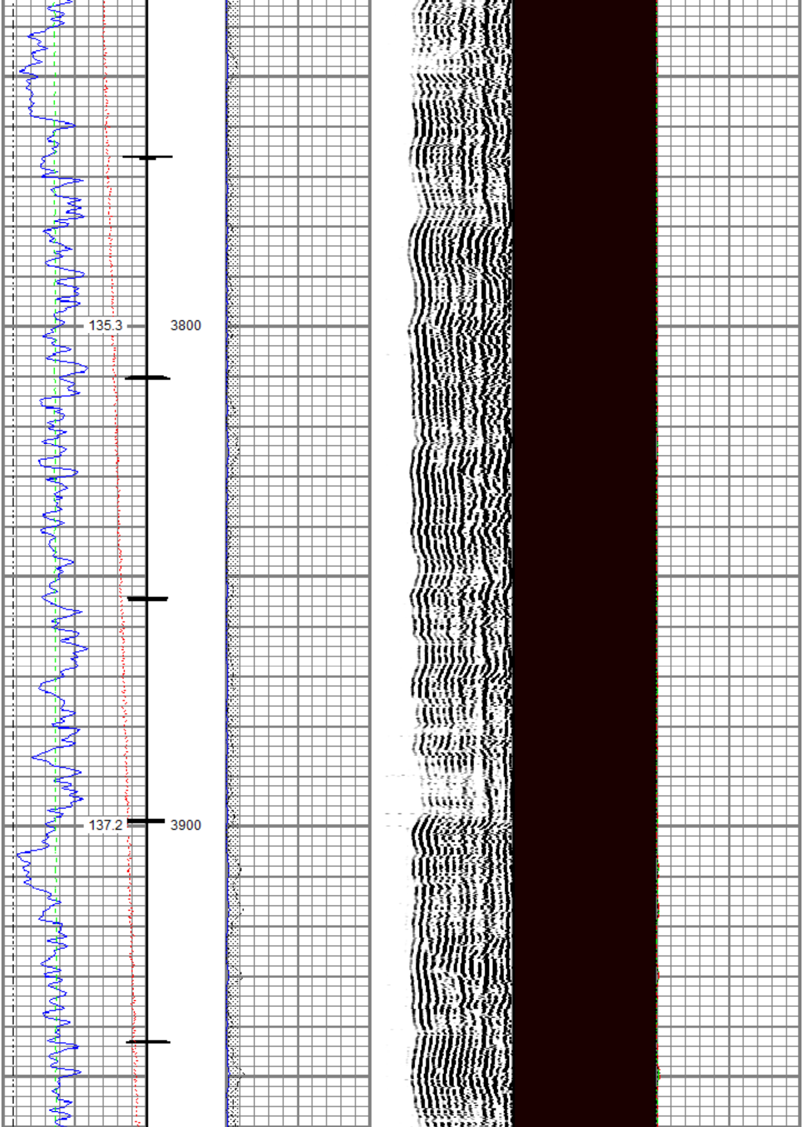
Main Pass

Recorded With 0 PSI Surface Induced Pressure

Database File	tep_tri state trucking pa 342-26_rbl_12-12-17\tep_tri state trucking pa 342-26_rbl_12-12-17.db
Dataset Pathname	Main.2
Presentation Format	ros_rbt004_tep
Dataset Creation	Thu Dec 14 10:31:36 2017
Charted by	Depth in Feet scaled 1:240

Gamma Ray		3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 200		0 (mV) 100	200 1200	10 110	0 150
Casing Collar Locator		3' Amplitude x 5			Mimimum Amplitude
Line Speed		0 (mV) 20			0 150
-150 (ft/min) 150		3' Travel Time			Maximum Amplitude
Line Tension		300 (usec) 200			0 150
0 (lb) 2000					
Temperature					
0 (degF) 20					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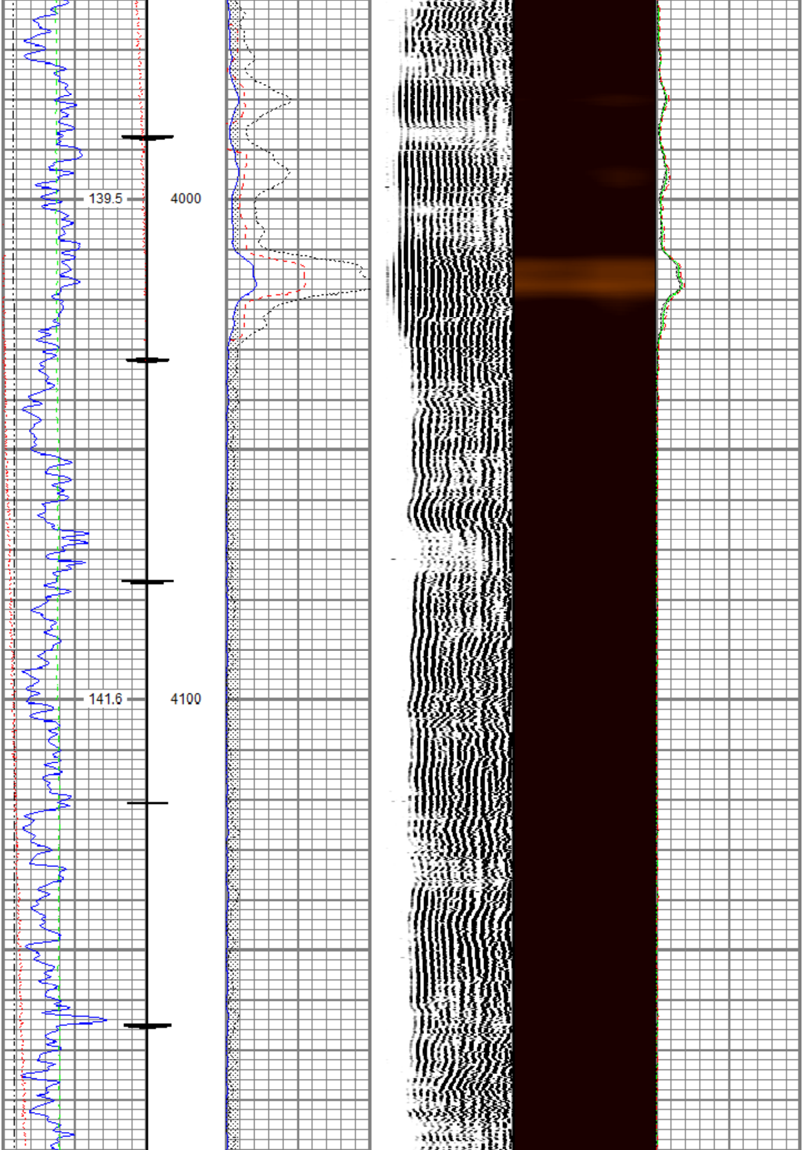
3900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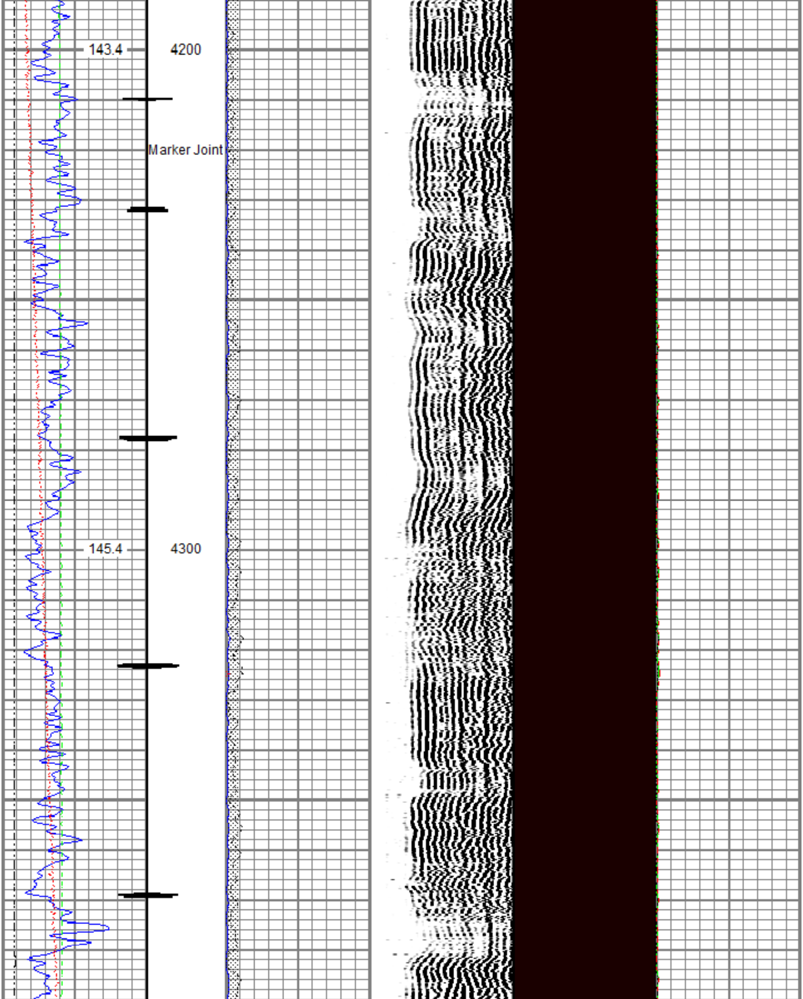
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Marker Joint
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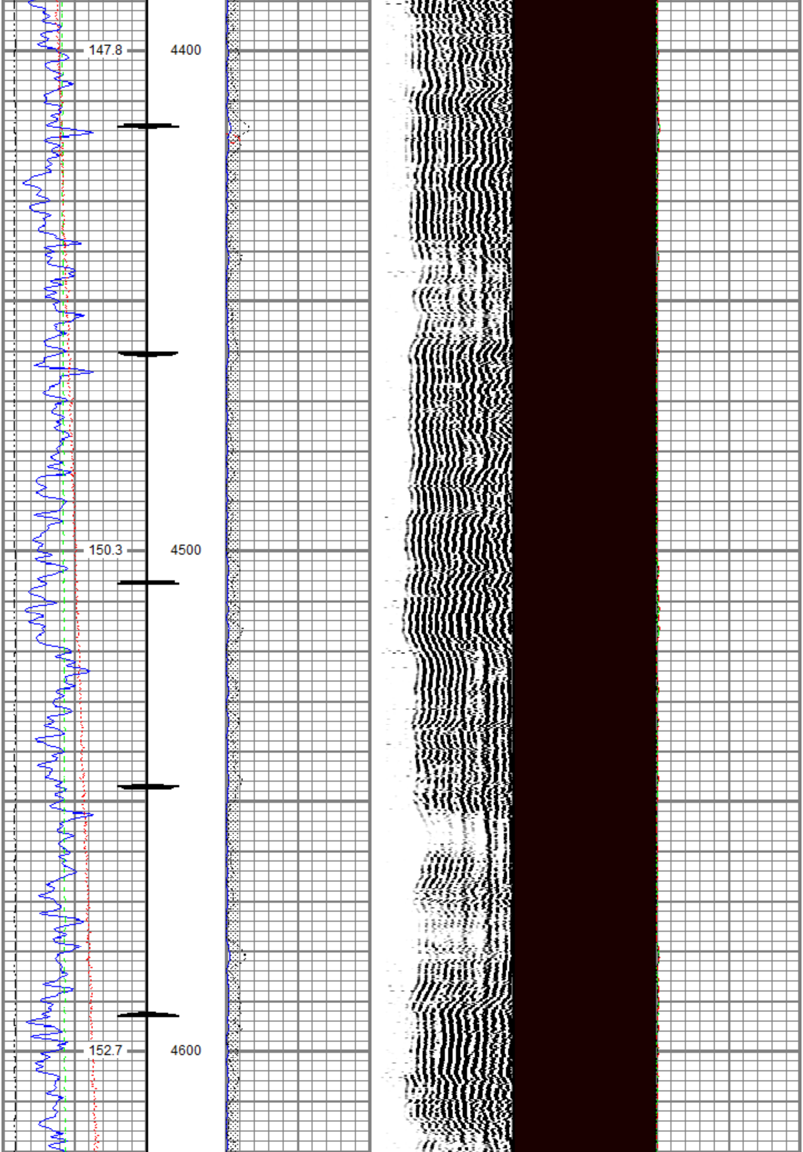
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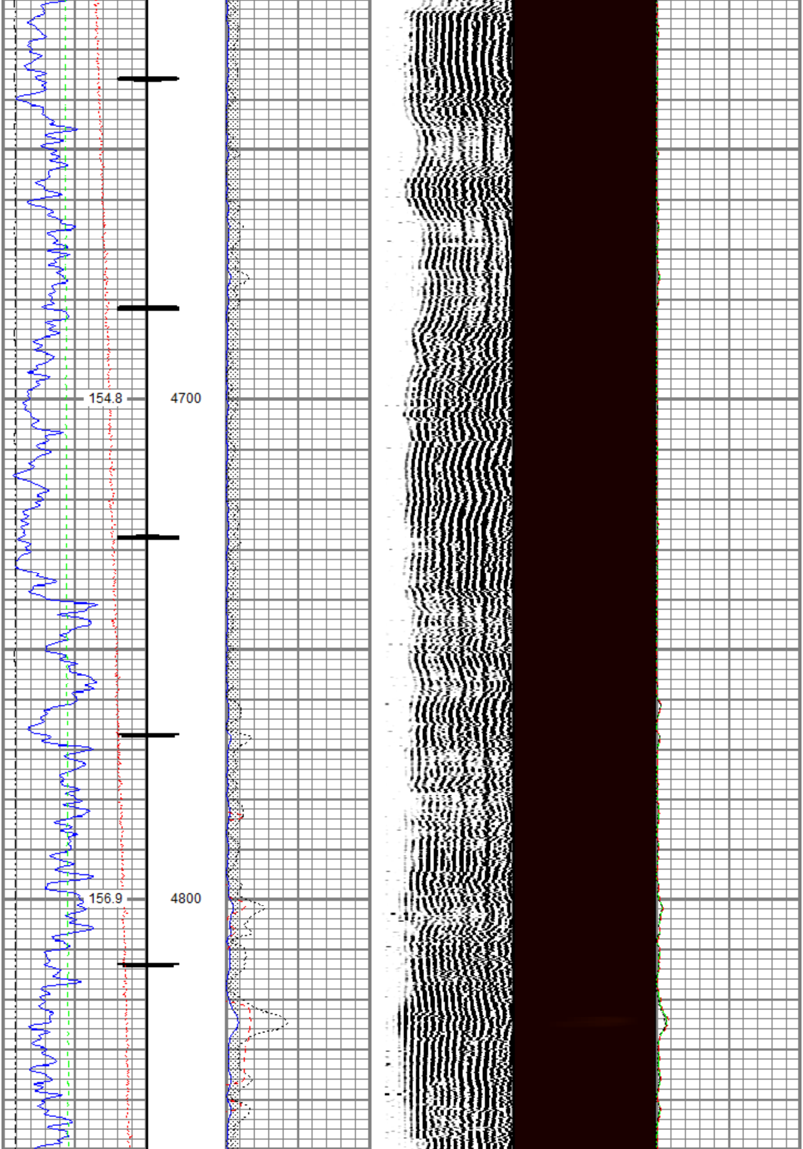
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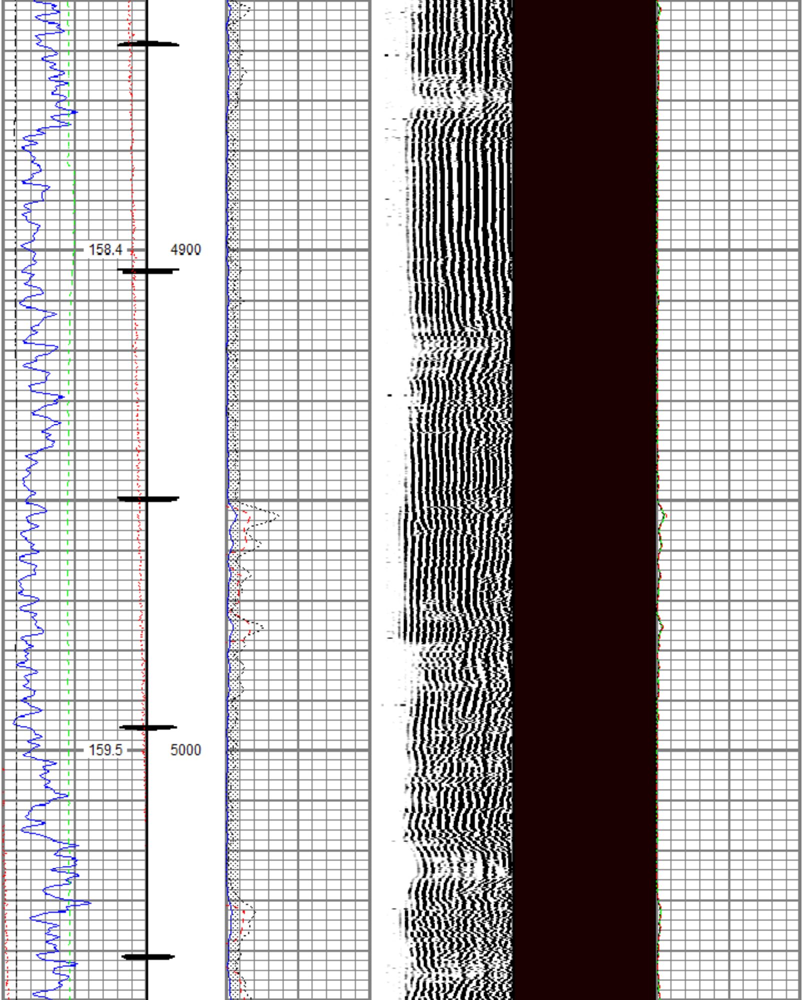
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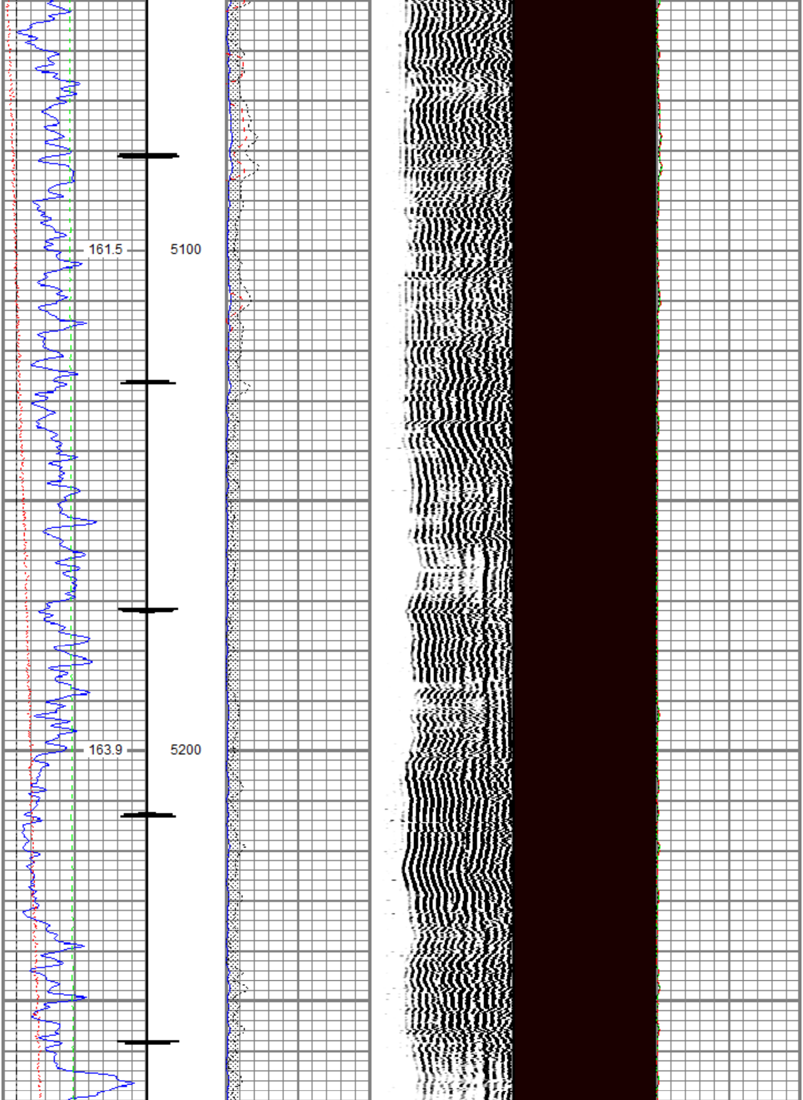
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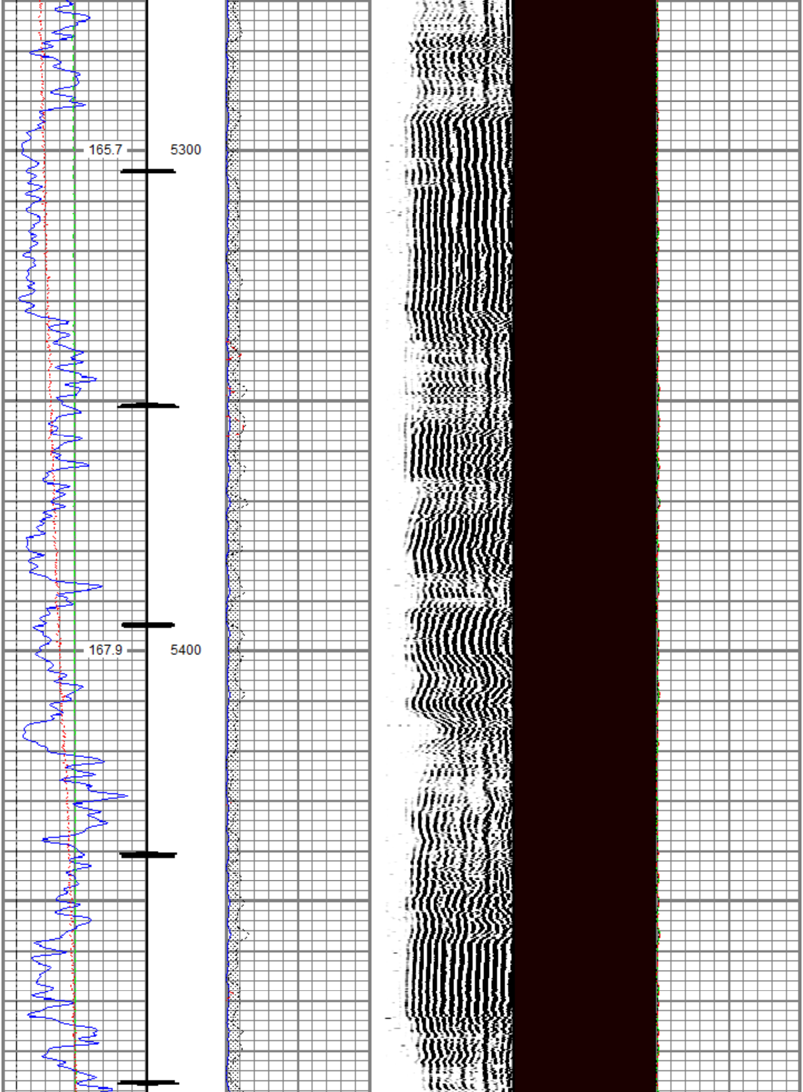
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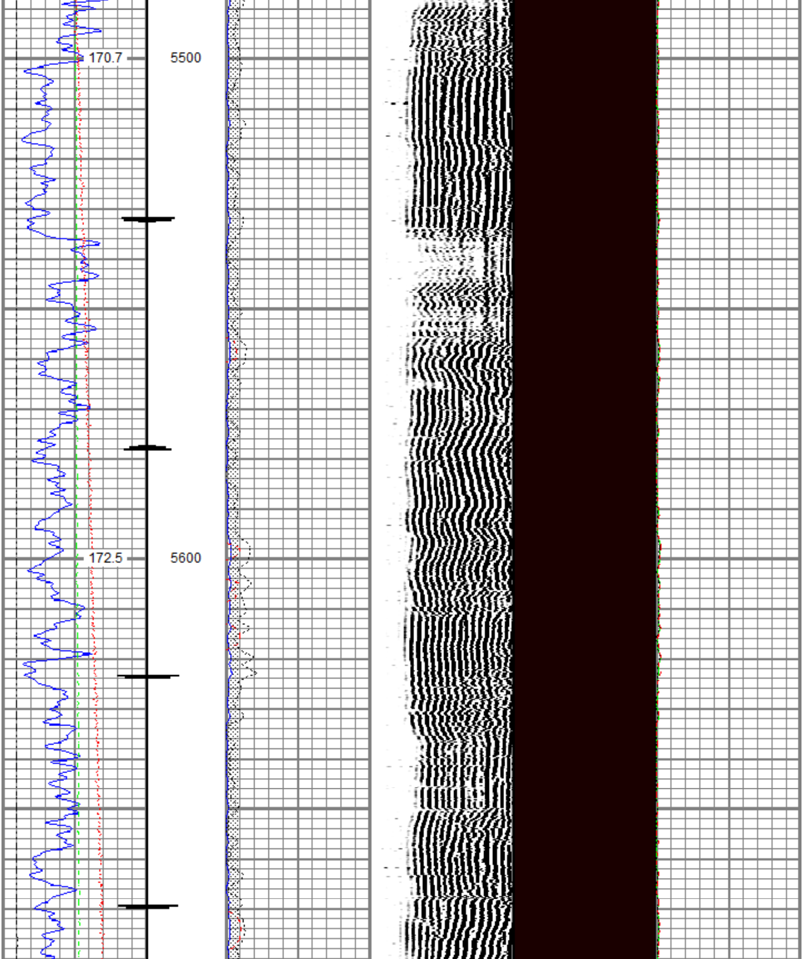
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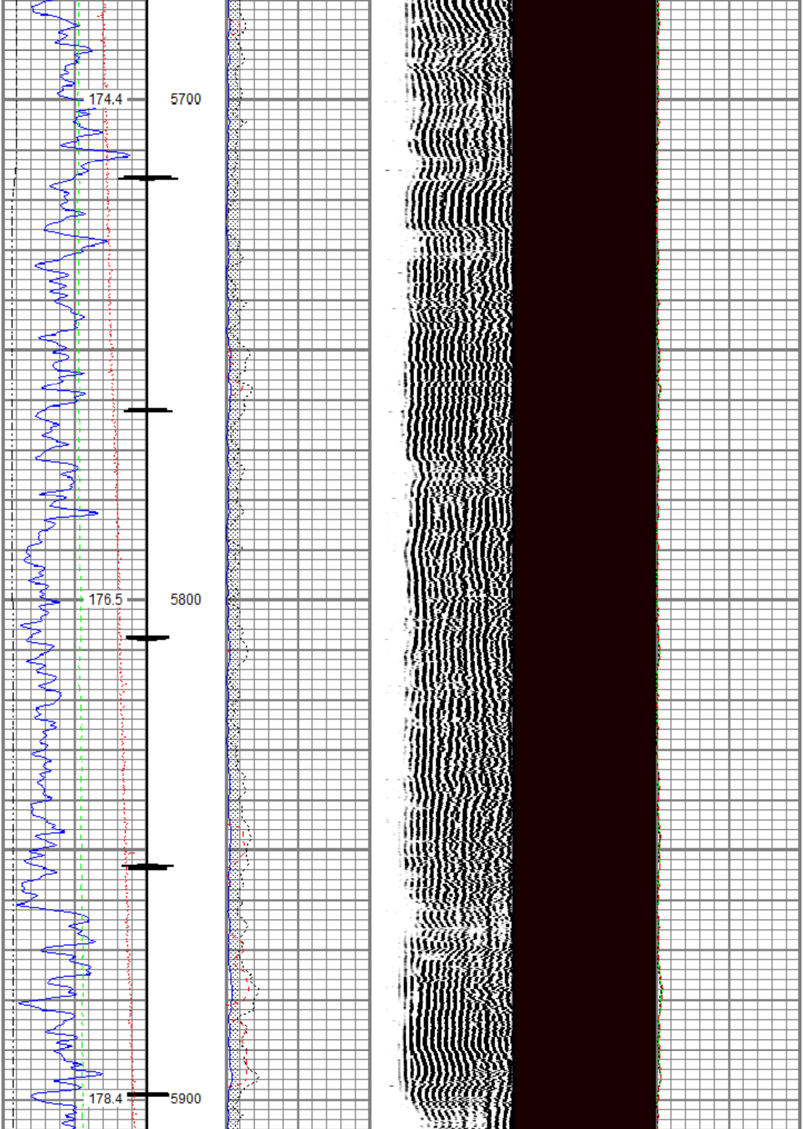
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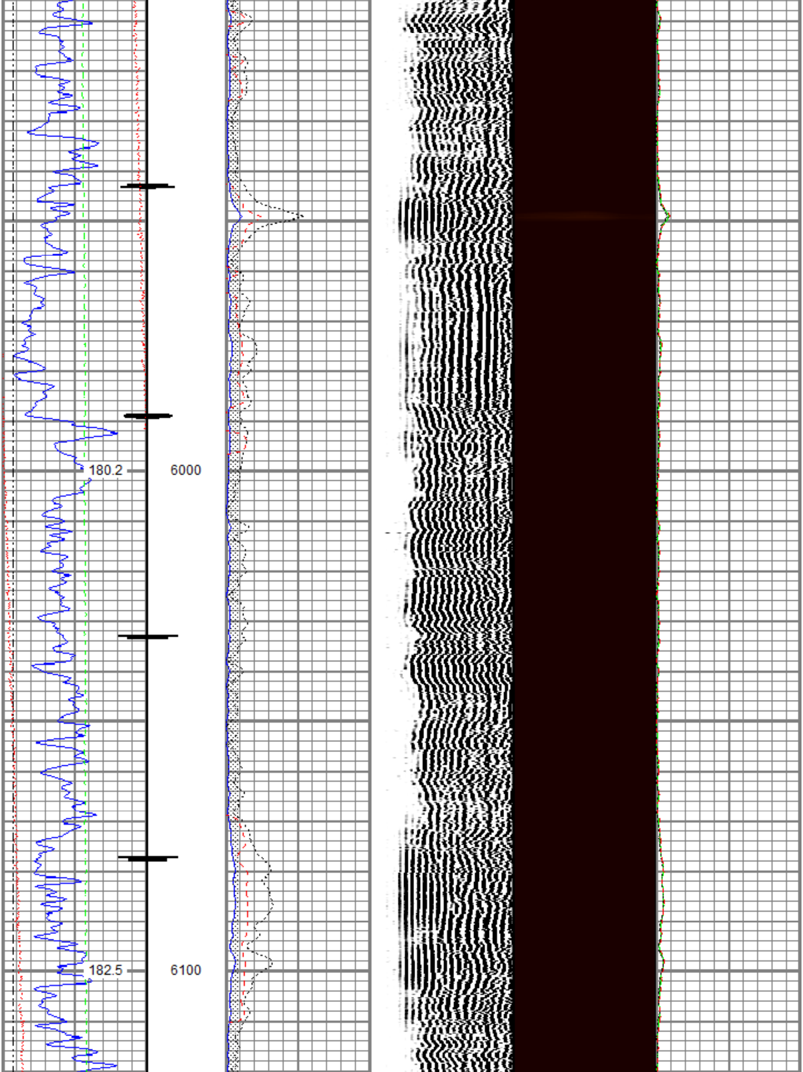
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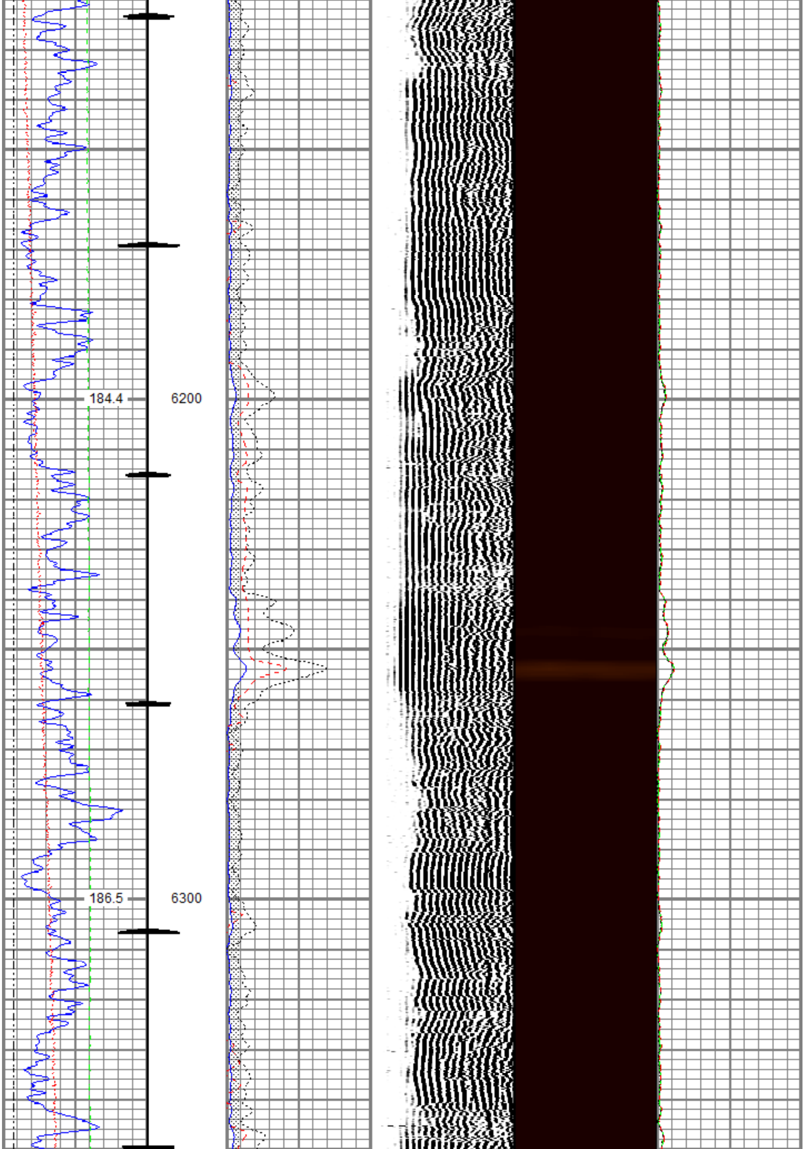
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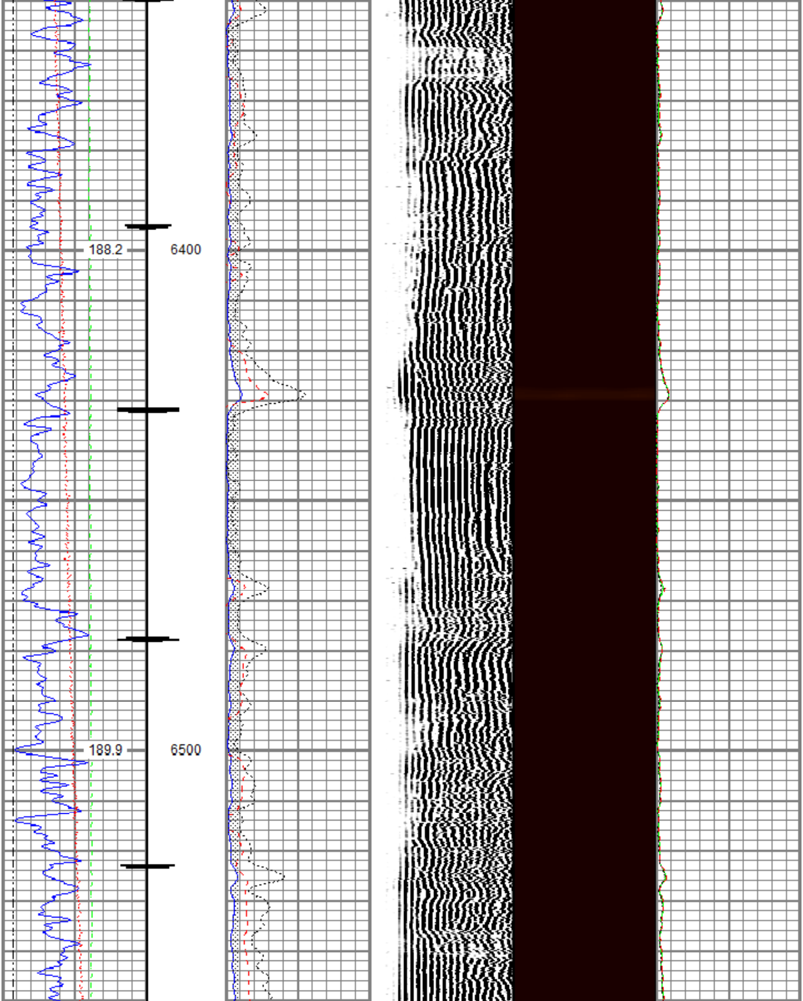
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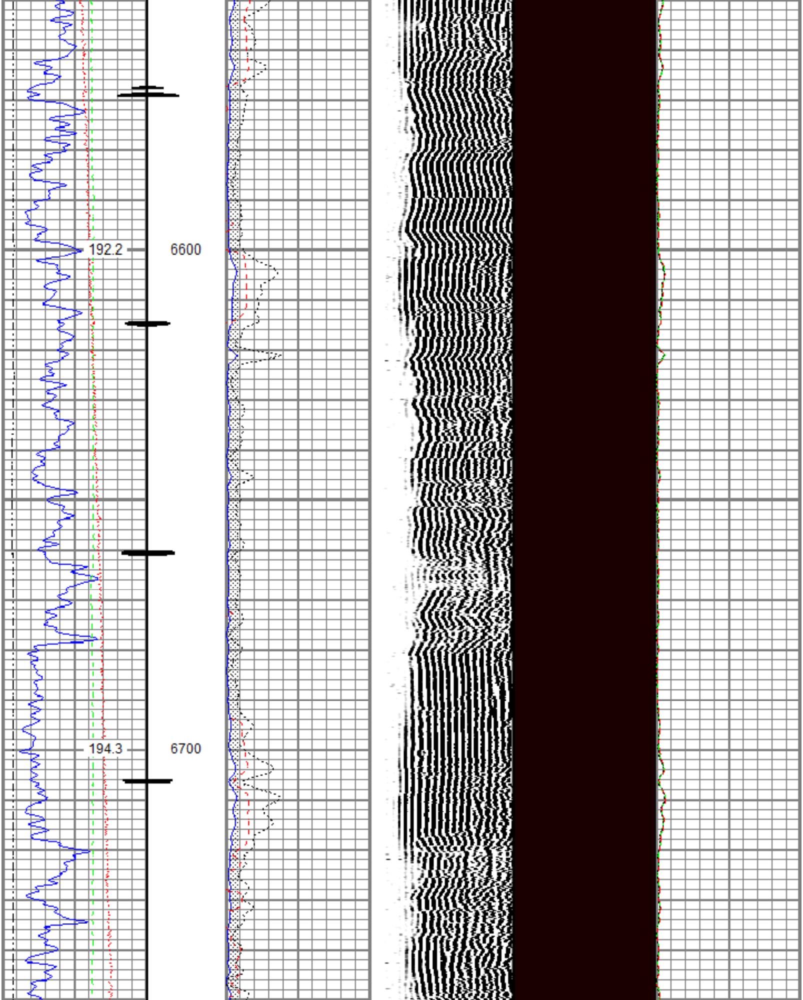
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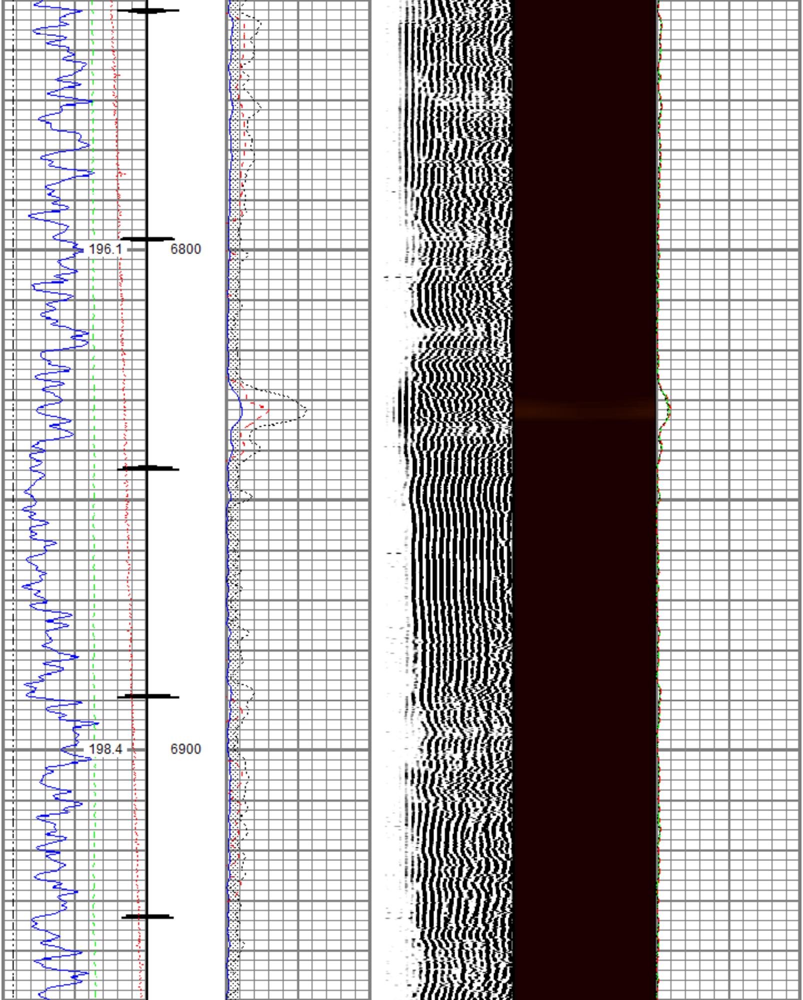
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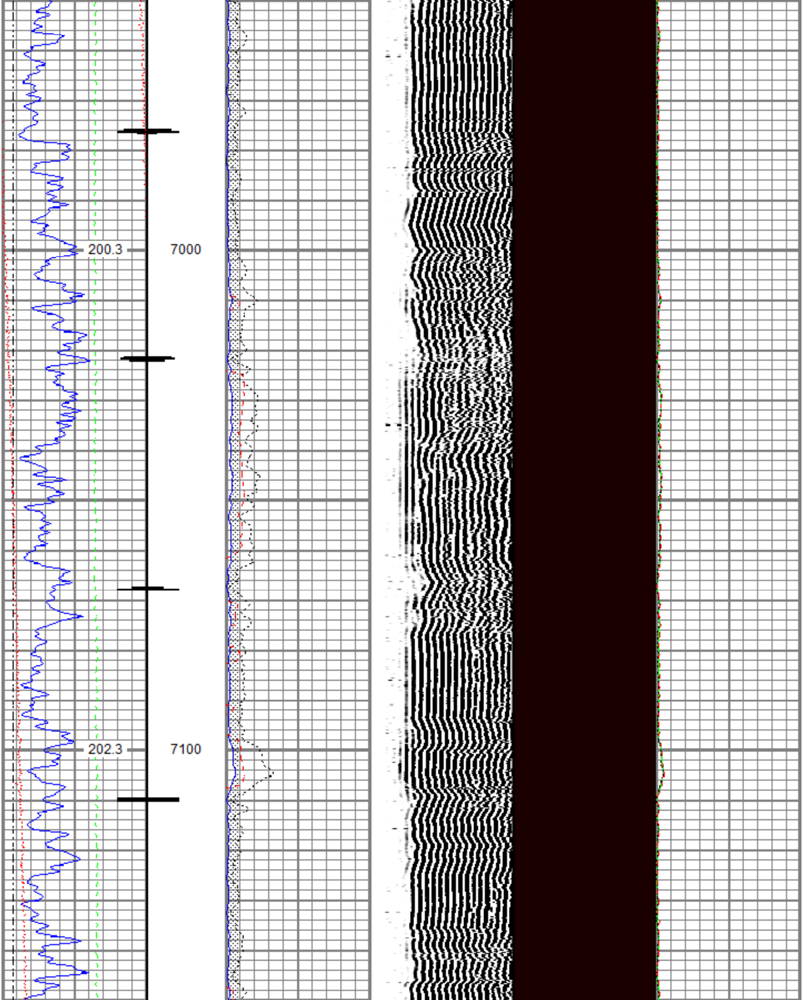
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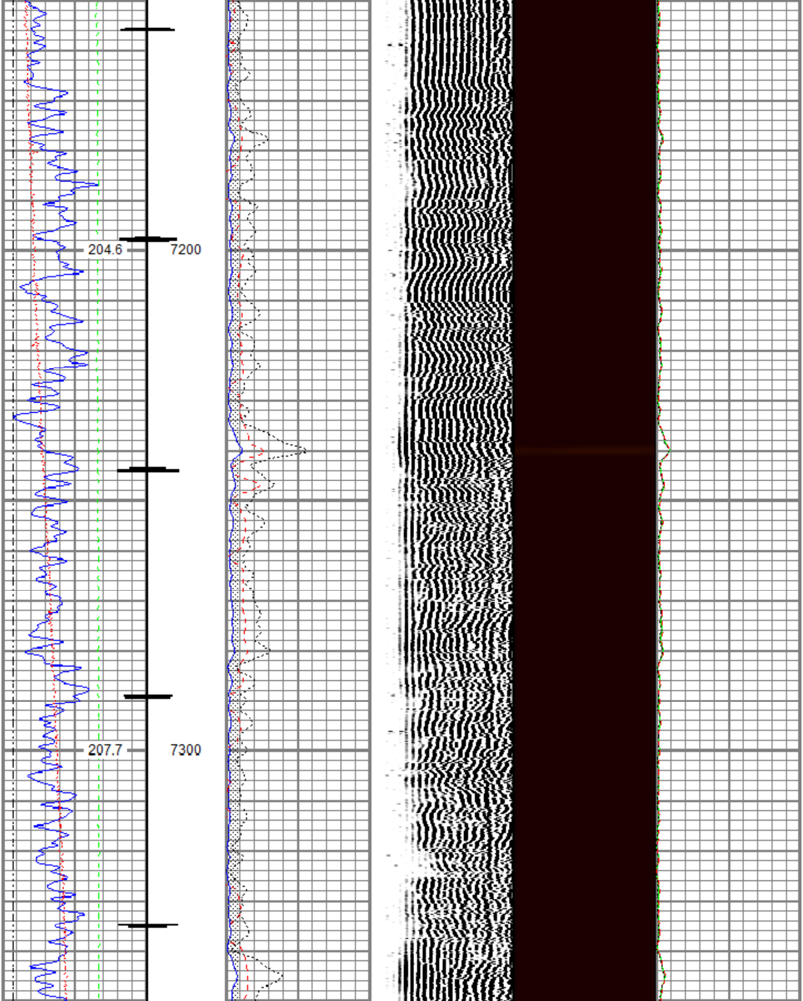
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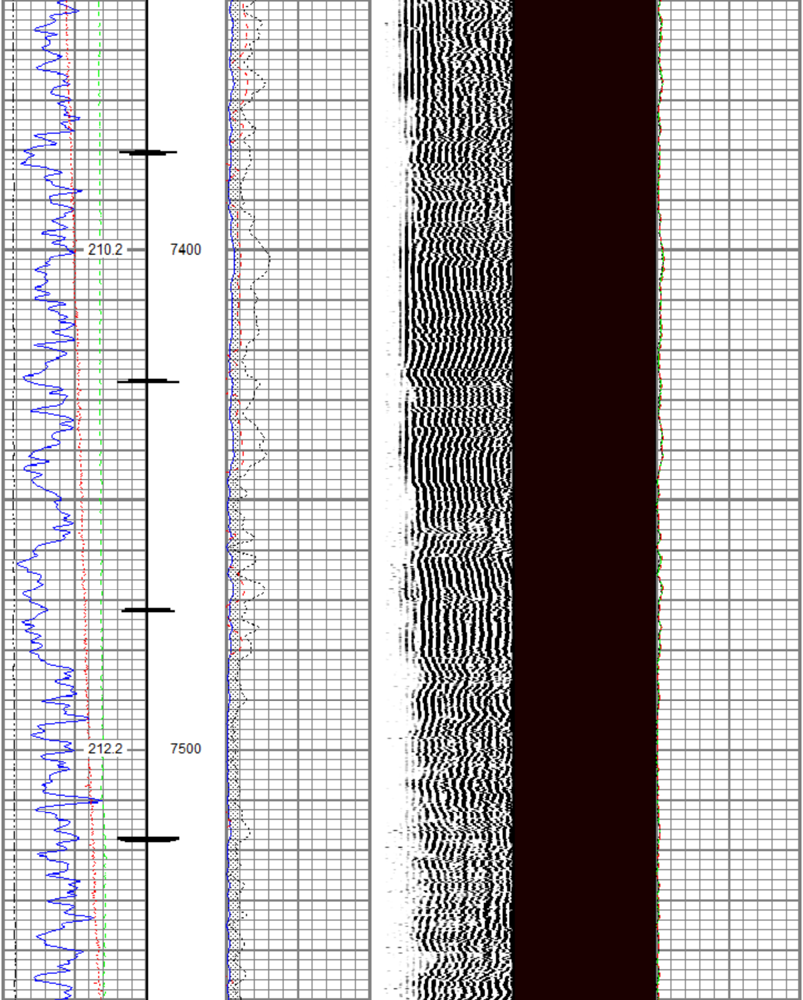
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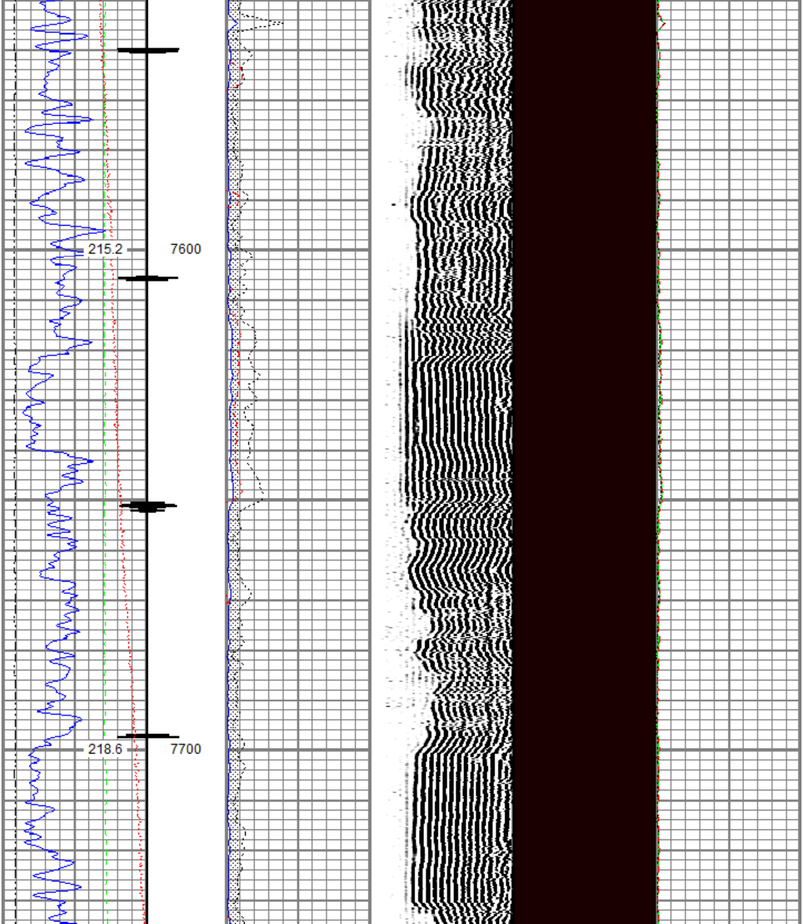
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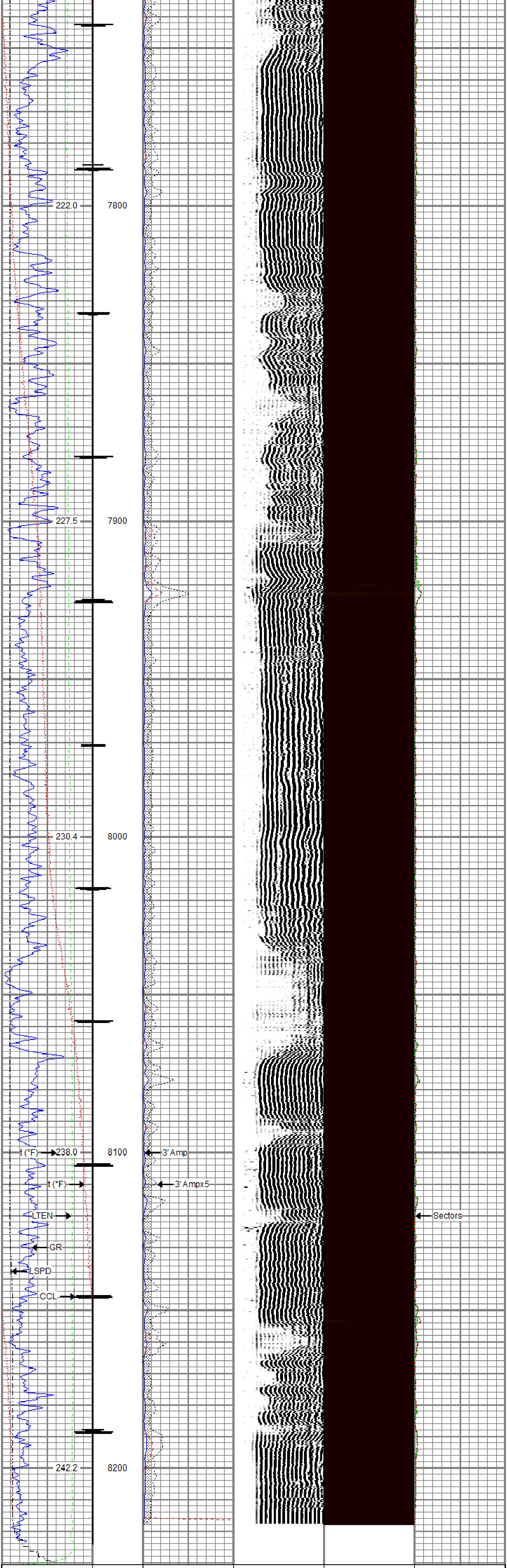

Gamma Ray 0 (GAPI) 200 Casing Collar Locator Line Speed -150 (ft/min) 150 Line Tension 0 (lb) 2000 Temperature 0 (degF) 20	3' Amplitude 0 (mV) 100 3' Amplitude x 5 0 (mV) 20 3' Travel Time 300 (usec) 200	5' Variable Density Log 200 1200	Sector Map 10 110	Average Amplitude 0 150 Mimimum Amplitude 0 150 Maximum Amplitude 0 150

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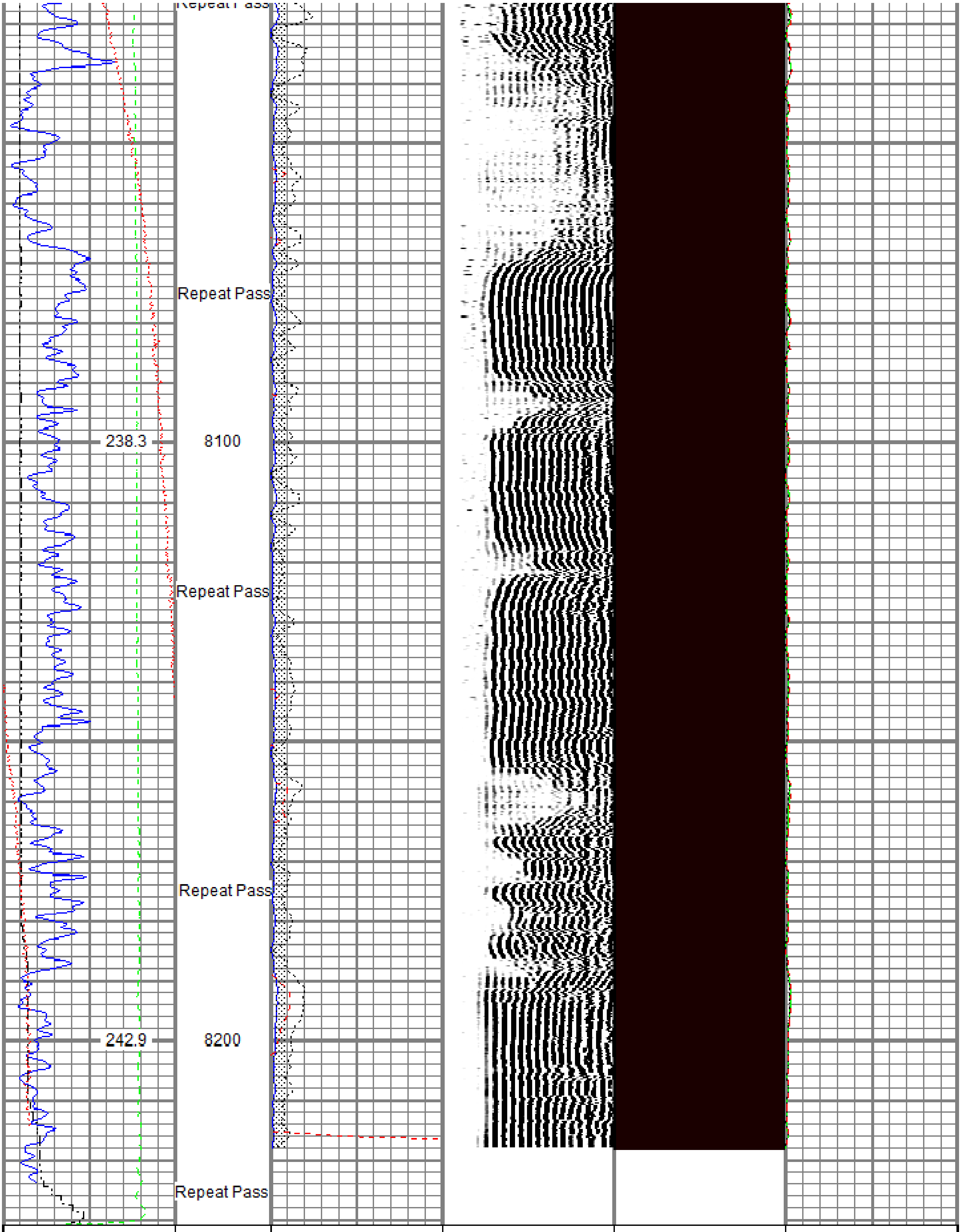
Repeat Pass

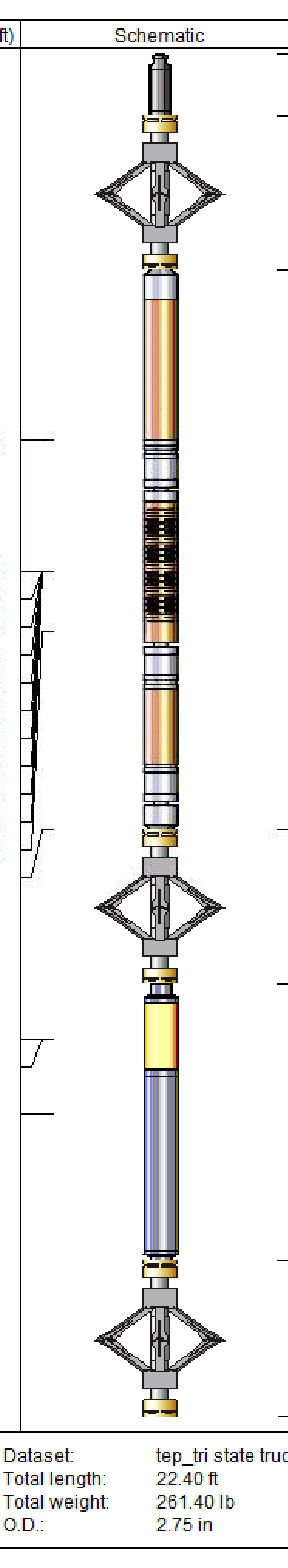
Recorded With 0 PSI Surface Induced Pressure

Database File	tep_tri state trucking pa 342-26_rbl_12-12-17\tep_tri state trucking pa 342-26_rbl_12-12-17.db
Dataset Pathname	repeat.1
Presentation Format	ros_rbt004_tep
Dataset Creation	Thu Dec 14 10:52:35 2017
Charted by	Depth in Feet scaled 1:240

Gamma Ray 0 (GAPI) 200 Line Speed -150 (ft/min) 150 Line Tension 0 (lb) 2000 Temperature 0 (degF) 20	3' Amplitude 0 (mV) 100 3' Amplitude x 5 0 (mV) 20 3' Travel Time 300 (usec) 200	5' Variable Density Log 200 1200	Sector Map 10 110	Average Amplitude 0 150 Mimimum Amplitude 0 150 Maximum Amplitude 0 150



Gamma Ray 0 (GAPI) 200 Line Speed -150 (ft/min) 150 Line Tension 0 (lb) 2000 Temperature 0 (degF) 20	3' Amplitude 0 (mV) 100 3' Amplitude x 5 0 (mV) 20 3' Travel Time 300 (usec) 200	5' Variable Density Log 200 1200	Sector Map 10 110	Average Amplitude 0 150 Mimimum Amplitude 0 150 Maximum Amplitude 0 150



Sensor	Offset (ft)
Temp	16.05
WVFS8	13.88
WVFS7	13.88
WVFS6	13.88
WVFS5	13.88
WVFS4	13.88
WVFS3	13.88
WVFS2	13.88
WVFS1	13.88
WVFCAL	13.88
WVF3FT	13.88
WVF5FT	12.88
HeadVolt	9.63
DCCL	6.18
CCL	6.18
GR	4.96

Description	Length (ft)	O.D. (in)	Weight (lb
Titan_Electric_Cable_Heads-Titan_1-1 Electric Cable Head with 1" Fishing Neck	1/11.03	1.69	5.40
DSS_RAC-RAC_5-Arm 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
Probe_RADII-C-P_RBT_2750 (101013) Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	9.19	2.75	105.00
DSS_RAC-RAC_5-Arm 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
Probe_GR_CCL-P_CGR_2750_S (FW1 Probe 2-3/4" Digital CCL / Gamma Ray Combined	304.548)	2.75	55.00
DSS_RAC-RAC_5-Arm 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00

Dataset:	tep_tri state trucking pa 342-26_rbl_12-12-17.db: field/well/run1/Main.2
Total length:	22.40 ft
Total weight:	261.40 lb
O.D.:	2.75 in

Calibration Report

Database File	c:\programdata\warrior\data\tep_tri state trucking pa 342-26_rbl_12-12-17\tep_tri state trucking pa 342-26_rb
Dataset Pathname	Main.2
Dataset Creation	Thu Dec 14 10:31:36 2017

Gamma Ray Calibration Report

Serial Number:	FW1307-038	
Tool Model:	P_CGR_2750_S	
Performed:	Sat Feb 06 11:43:09 2016	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.6	cps
Sensitivity:	0.6061	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	101013	
Tool Model:	P_RBT_2750	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	32.658	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.005	0.608	0.000	81.196	132.604	0.618
CAL	-0.006	0.767				
5'	-0.000	0.541	0.000	81.196	149.907	0.044
SUM						
S1	-0.003	0.636	0.000	100.000	156.519	0.452
S2	-0.004	0.618	0.000	100.000	160.801	0.629
S3	-0.004	0.578	0.000	100.000	171.703	0.751
S4	-0.003	0.574	0.000	100.000	173.312	0.525
S5	-0.003	0.575	0.000	100.000	173.125	0.485
S6	-0.004	0.586	0.000	100.000	169.499	0.683
S7	-0.005	0.594	0.000	100.000	166.871	0.906
S8	-0.004	0.629	0.000	100.000	158.072	0.554

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.006	0.767	1.000	0.000

Air Zero Calibration, performed Mon Dec 11 22:37:01 2017:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	-0.005	0.000	0.001
5'	-0.001	0.000	0.000
SUM			
S1	-0.003	0.000	-0.000
S2	-0.004	0.000	0.000
S3	-0.005	0.000	0.000
S4	-0.003	0.000	-0.000
S5	-0.003	0.000	0.000
S6	-0.004	0.000	0.000
S7	-0.005	0.000	-0.000
S8	-0.003	0.000	0.000

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Company	TEP Rocky Mountain LLC
Well	Tri State Trucking PA 342-26
Field	Parachute
County	Garfield
State	Colorado