RELIANCE
OILFIELD SERVICES

Radial Cement Bond Gamma Ray Casing Collar Log

Company	TEP Rocky Mountain LLC
Well	Chevron TR 523-21-597
Field	Trail Ridge
County	Garfield
State	Colorado

Company TEP Rocky Mountain LLC
Well Chevron TR 523-21-597
Field Trail Ridge
County Garfield State Colorado
Location: API # : 05-045-23352 Other Services
721' FSL & 1886' FWL SESW PDN
SEC 21 TWP 5S RGE 97W

Permanent Datum	Ground Level	Elevation 8292'	Elevation
Log Measured From	Kelly Bushing	24 FT	K.B. 8316' D.F. 8315' G.L. 8292'
Drilling Measured From	Kelly Bushing		

Date	28-MAR-2017
Run Number	One
Depth Driller	9410 FT
Depth Logger	9368 FT
Bottom Logged Interval	9368 FT
Top Log Interval	Surface
Open Hole Size	8.75"
Type Fluid	Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	262 °F
Estimated Cement Top	3672 FT
Time Well Ready	ROA
Time Logger on Bottom	---
Equipment Number	HD 329
Location	Grand Junction
Recorded By	J. Donnelly
Witnessed By	C. Applegate

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size (in)	Weight (lb/ft)	From	To

Casing Record	Size (in)	Wgt (lb/ft)	Grade	Top	Bottom
Surface Casing	9 5/8	36 & 40	J-55	Surface	2582 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	9410 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
Ground level 2 FT below top of cut pipe
Marker joint logged @ 5406 FT - 5428 FT
Log ran from 9368 FT to surface
Recorded with 0 PSI surface induced pressure

Thank you for choosing Reliance Oil Field Services, LLC!!

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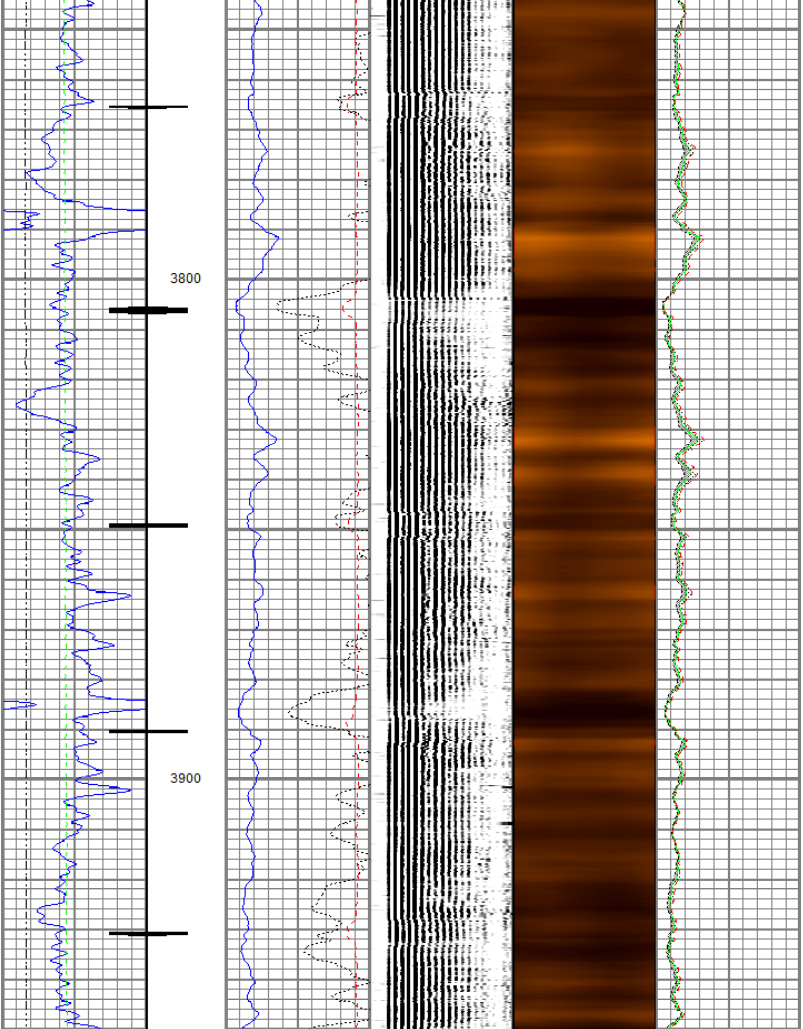
Main Pass

Recorded With 0 PSI Surface Induced Pressure

Database File	tep_chevron tr 523-21-597\tep_chevron tr 523-21-597_03-28-17_rbl.db
Dataset Pathname	pass3.5
Presentation Format	ros_rbt004_tep
Dataset Creation	Thu Mar 30 16:26:50 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			MimimumAmplitude
Line Speed		0 (mV) 20			0 150
-150 (ft/min) 150		3' Travel Time			MaximumAmplitude
Line Tension		300 (usec) 200			0 150
0 (lb) 2000					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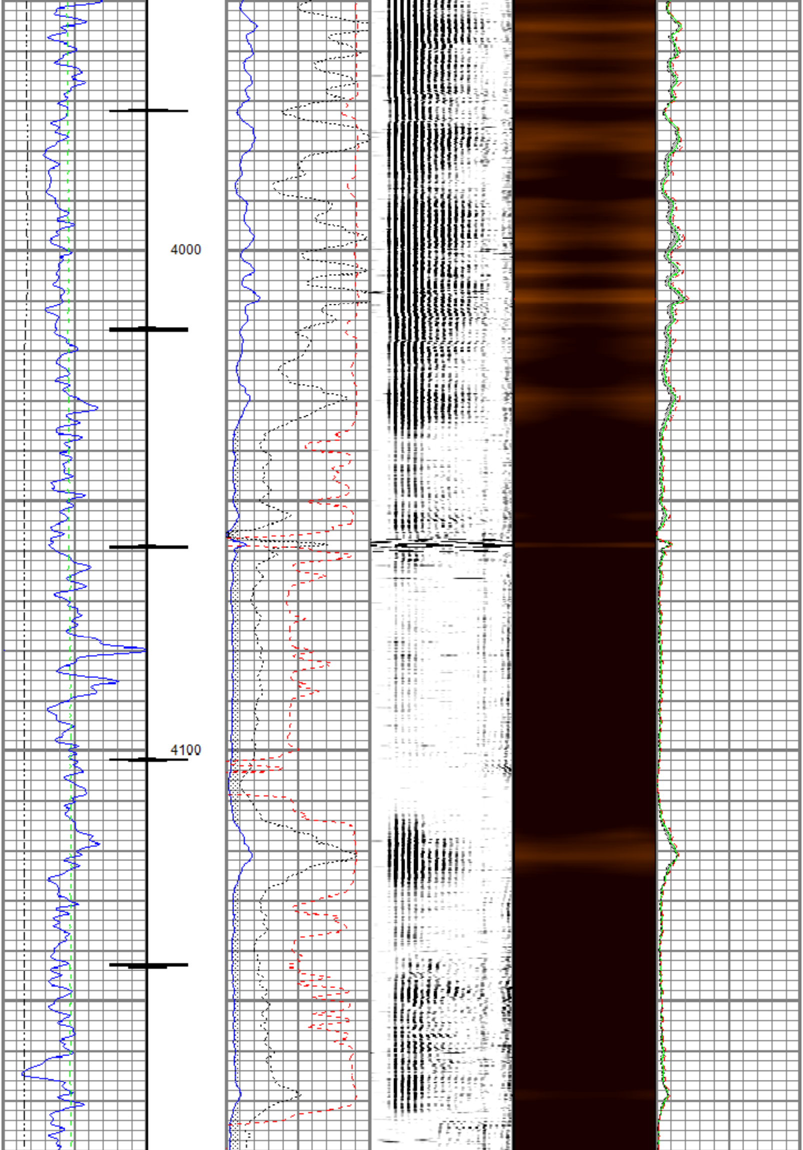
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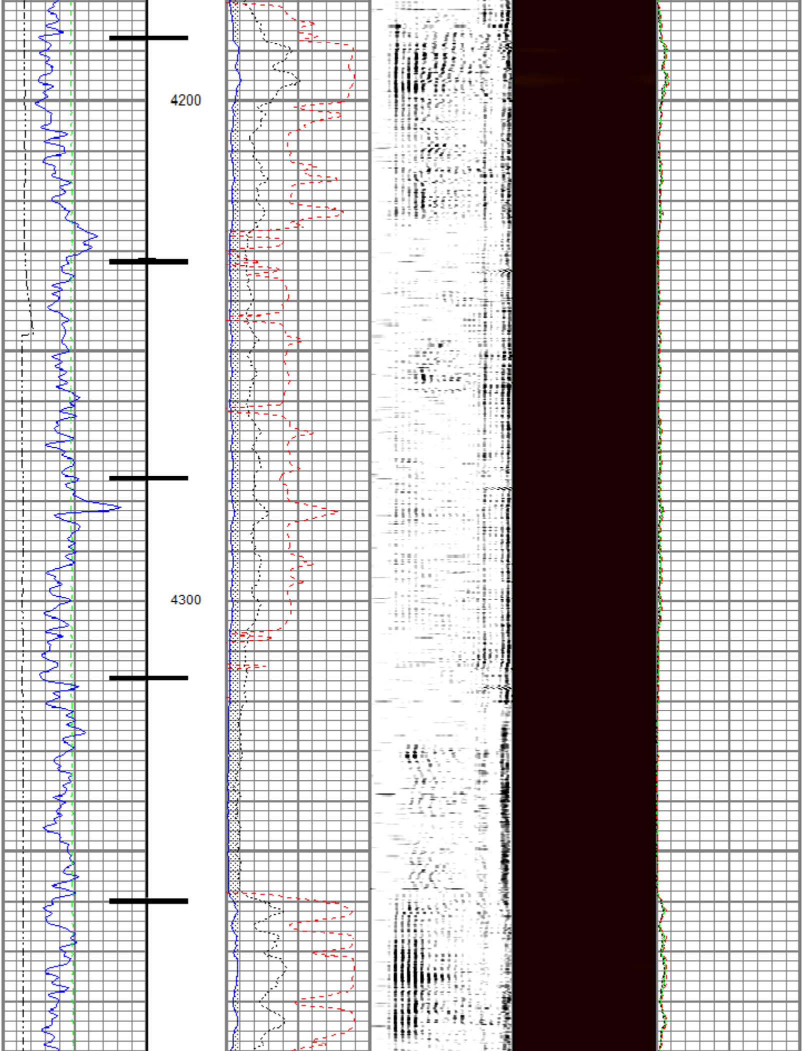
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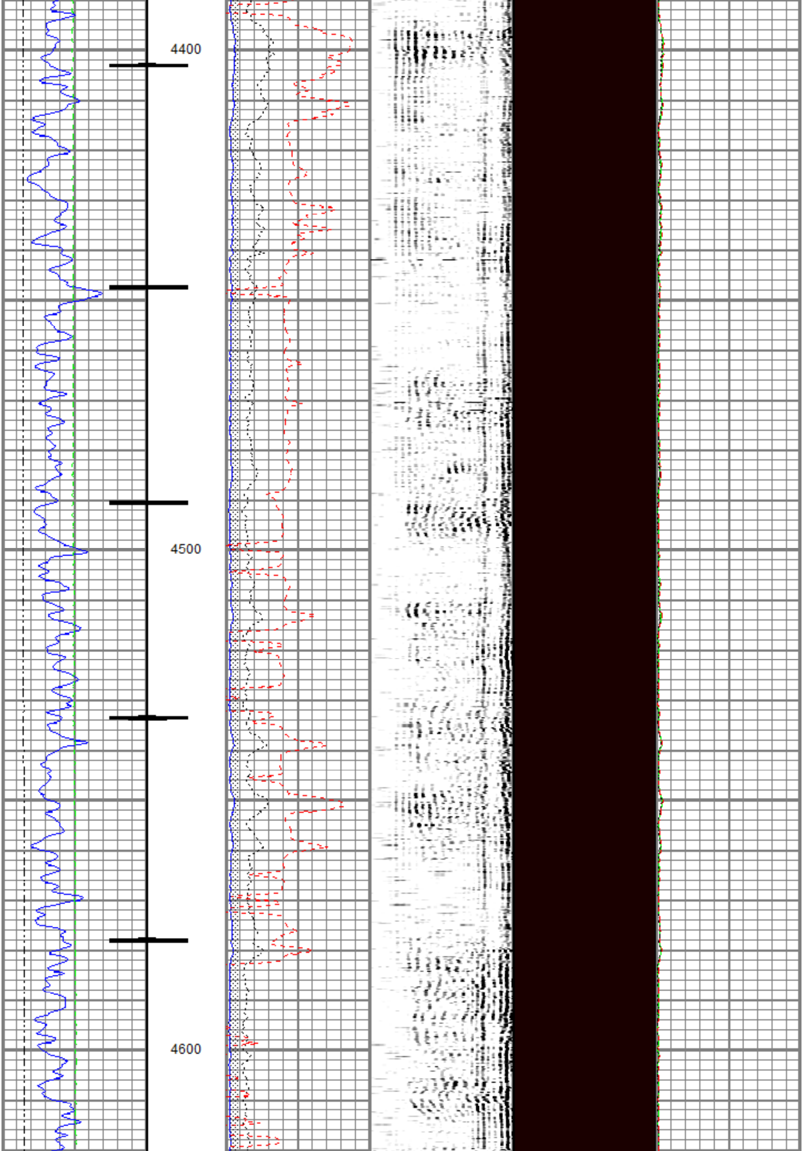
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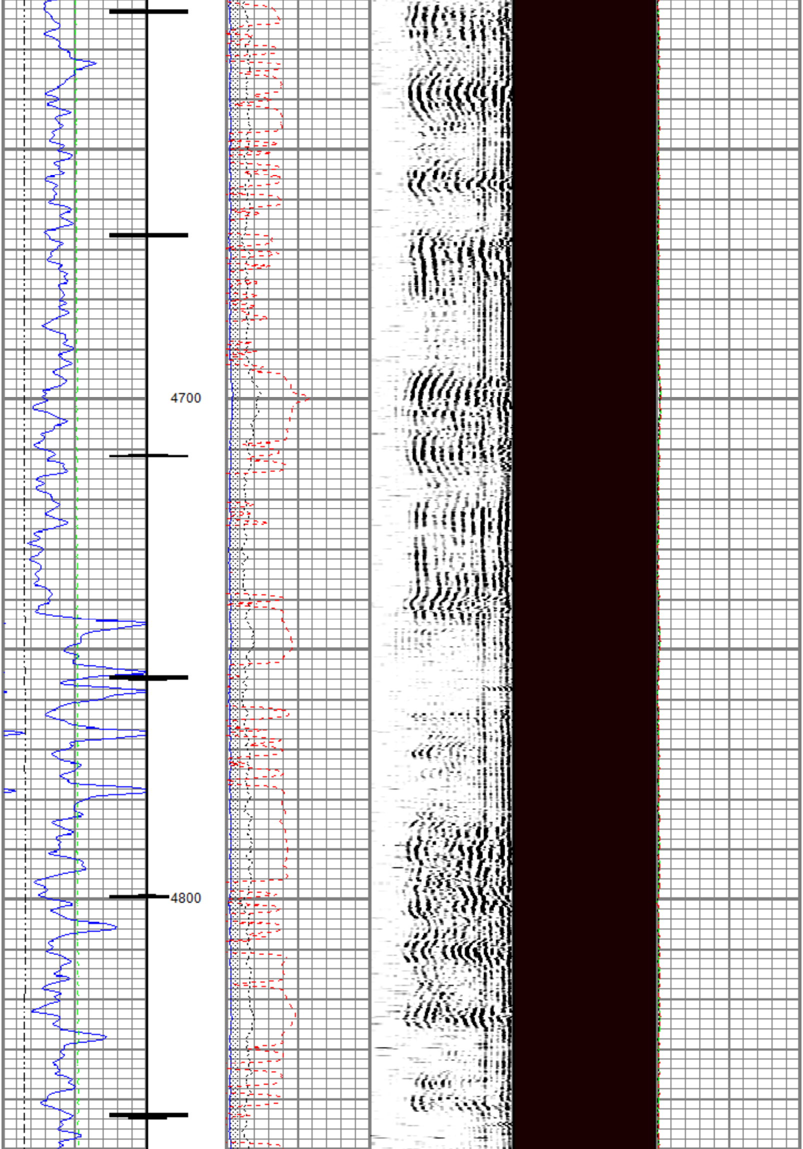
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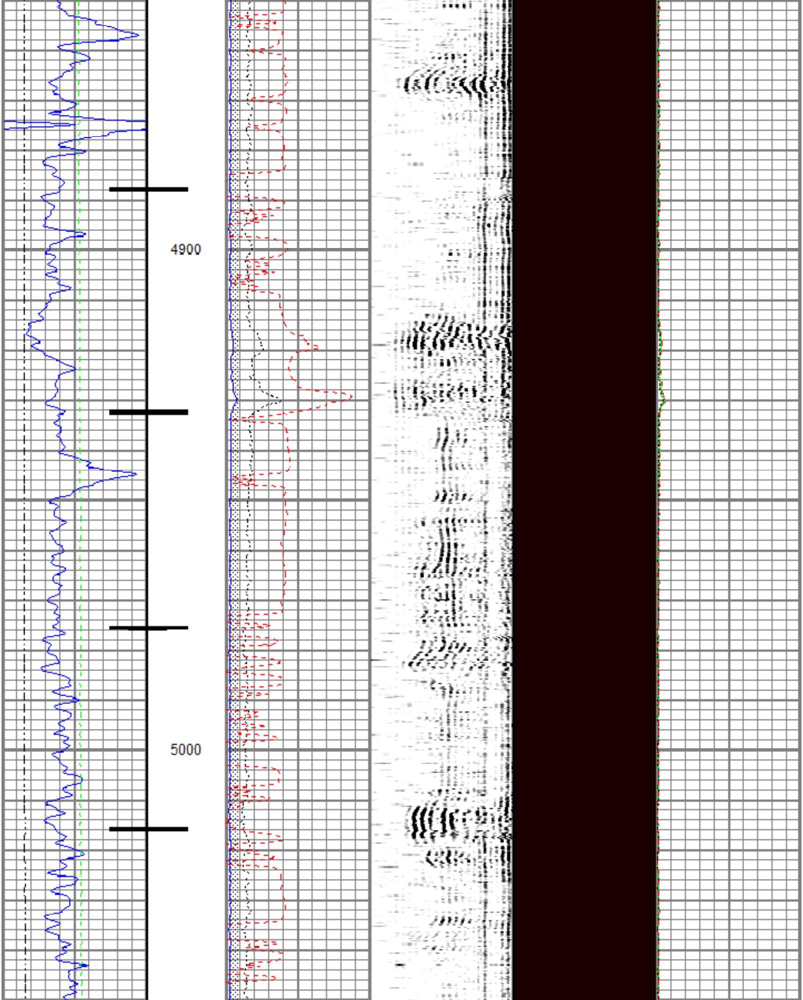
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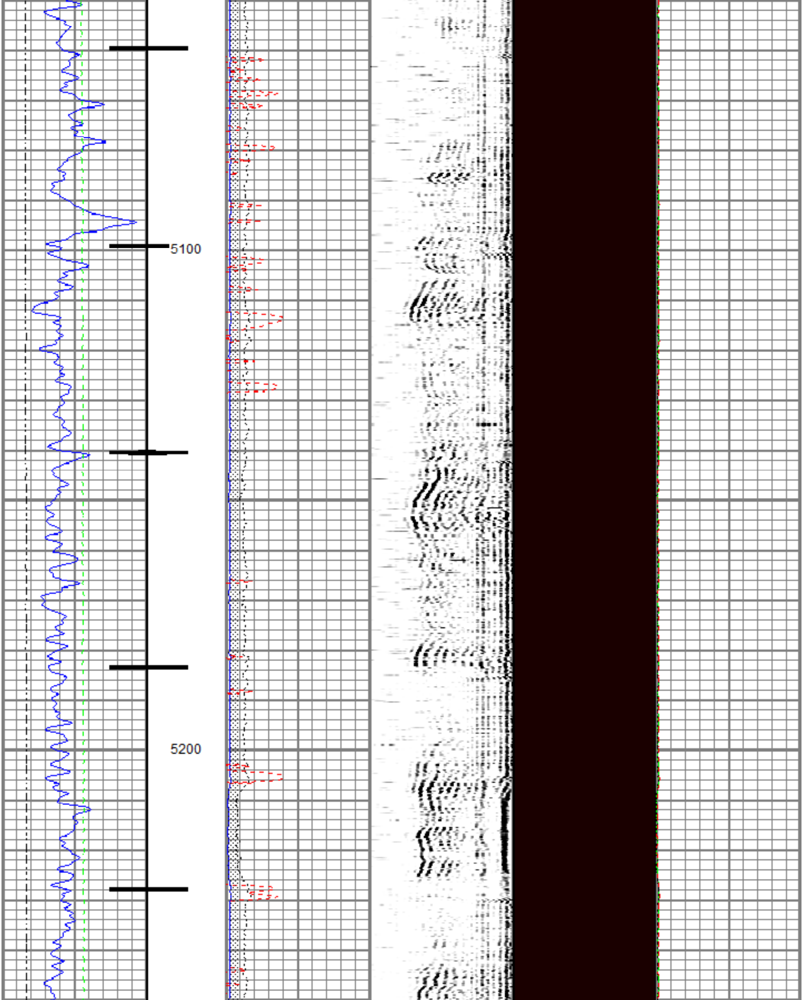
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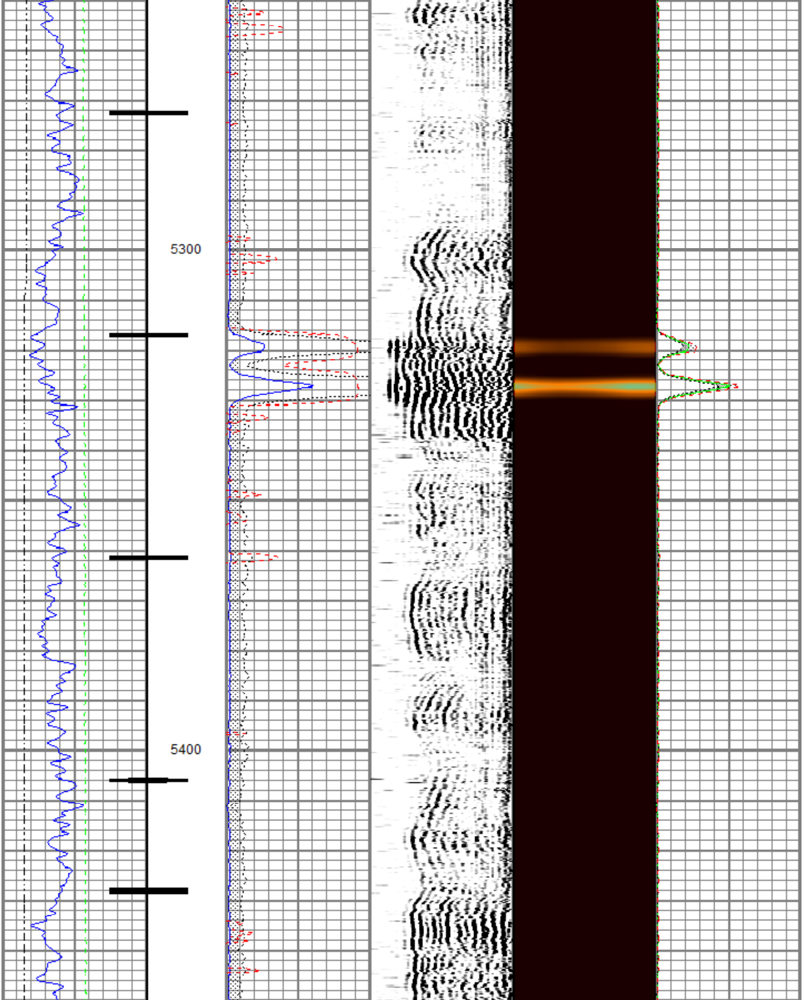
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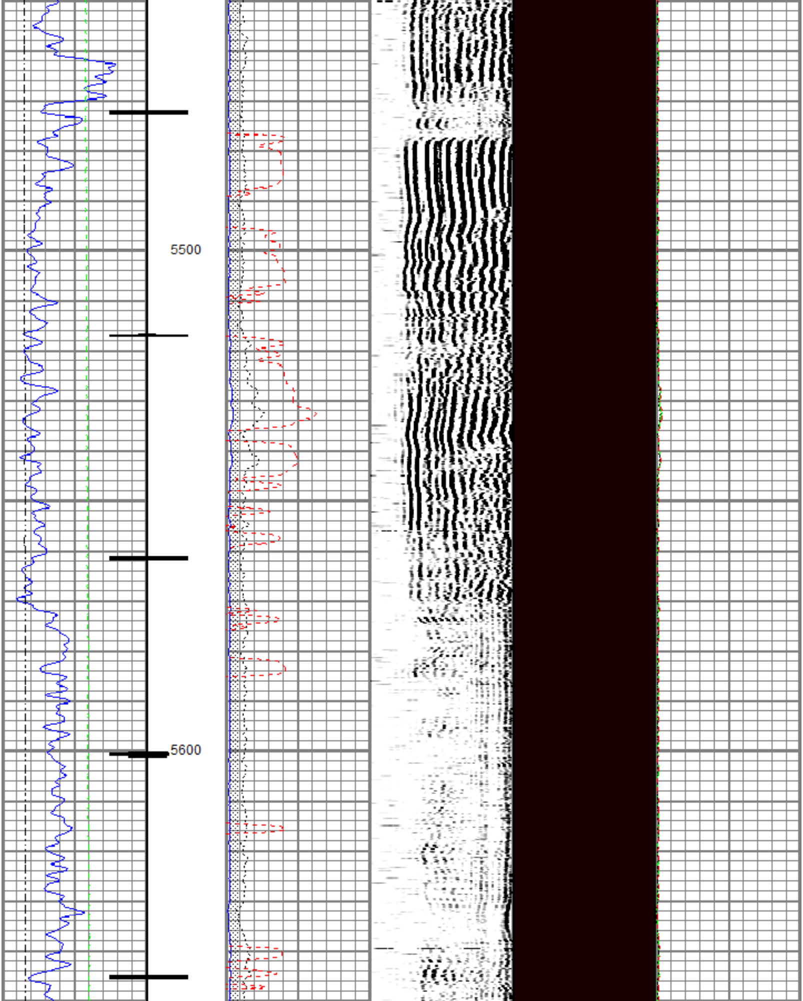
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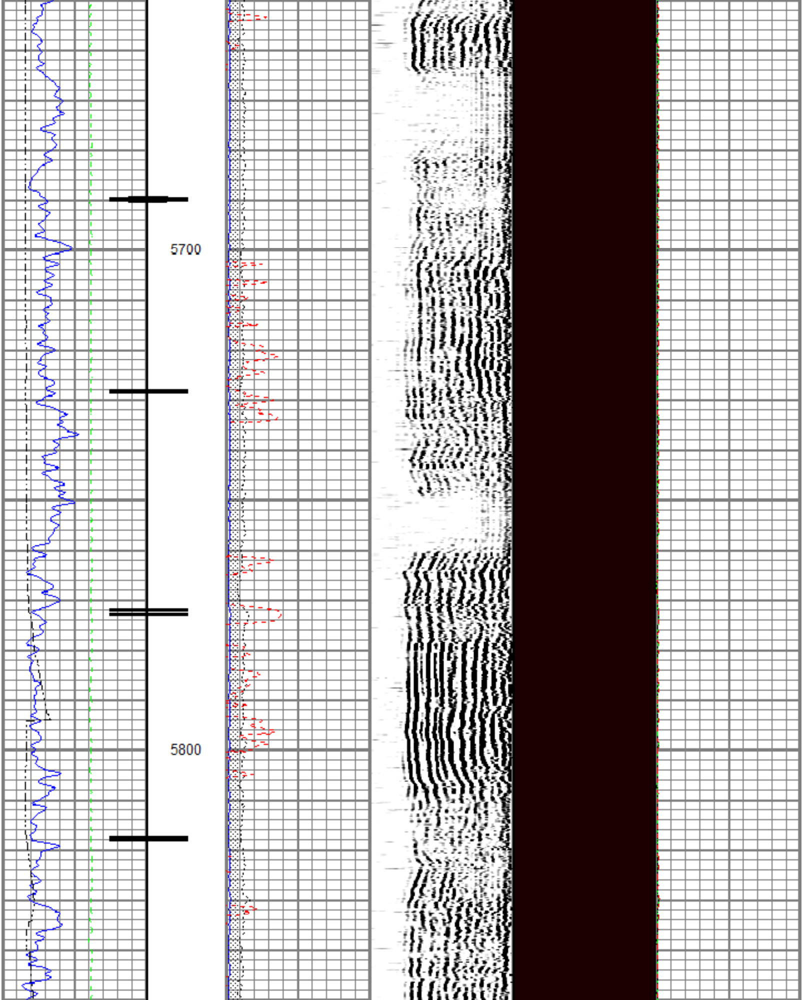
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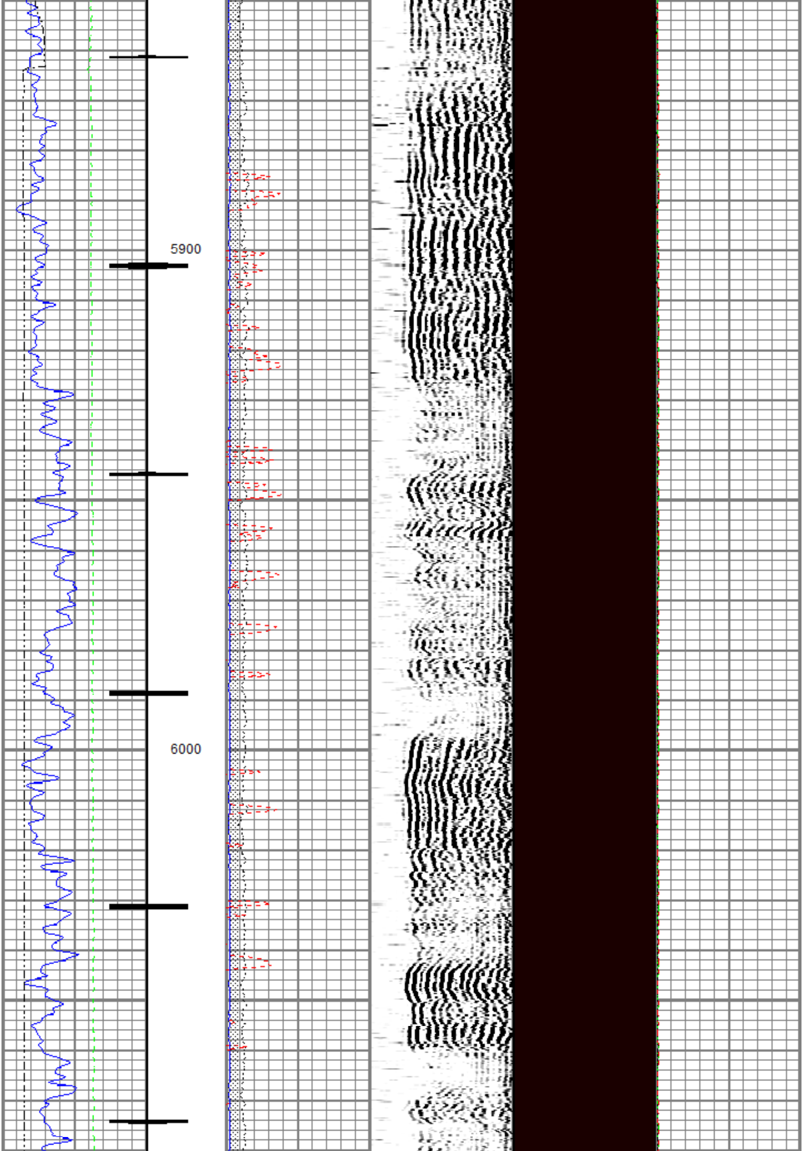
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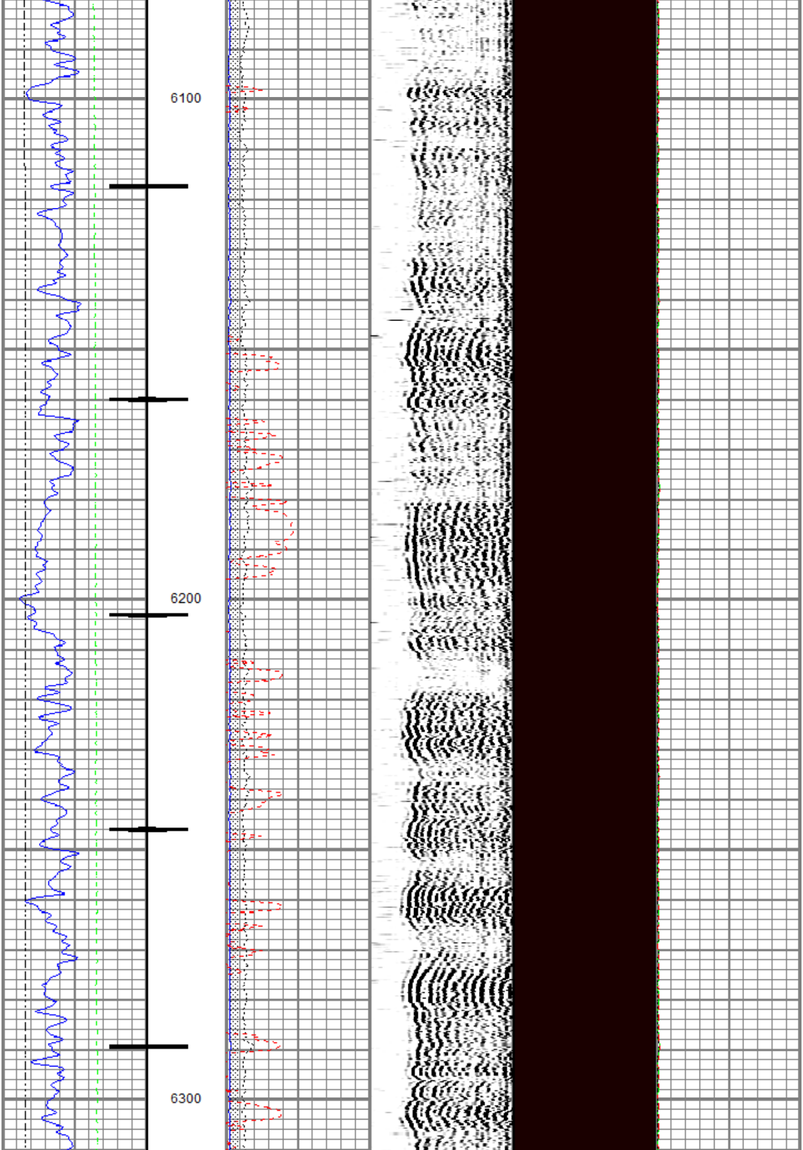
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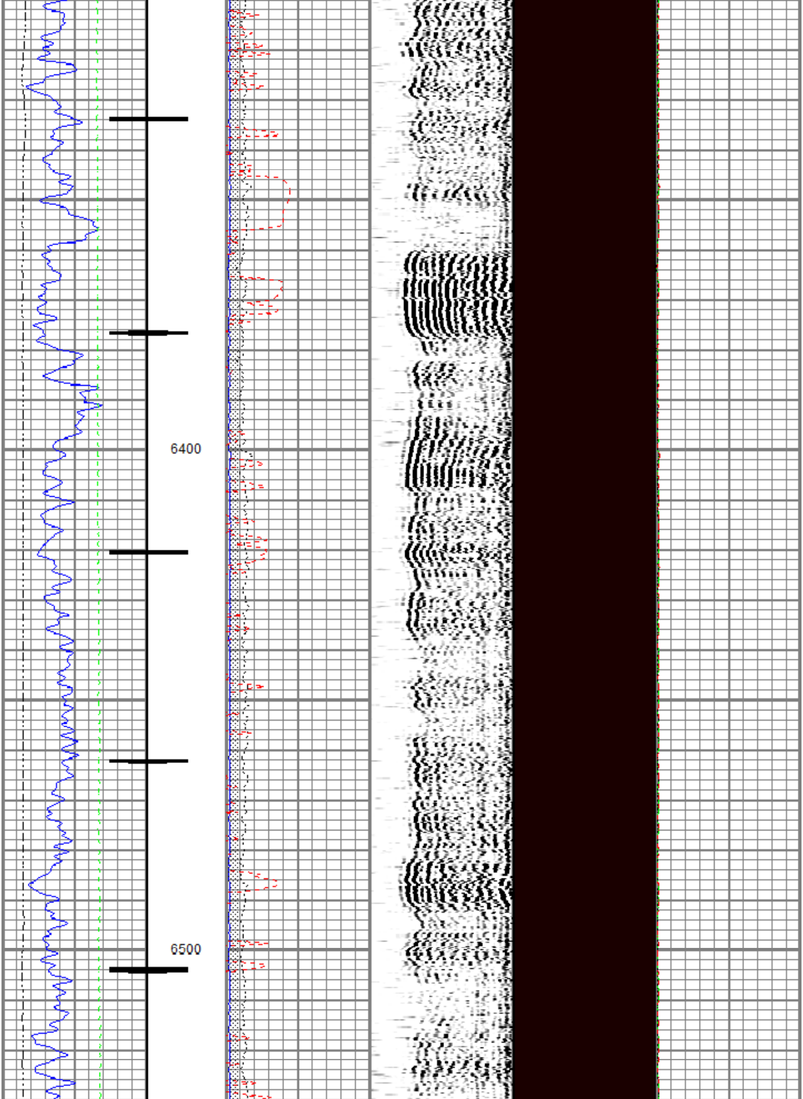
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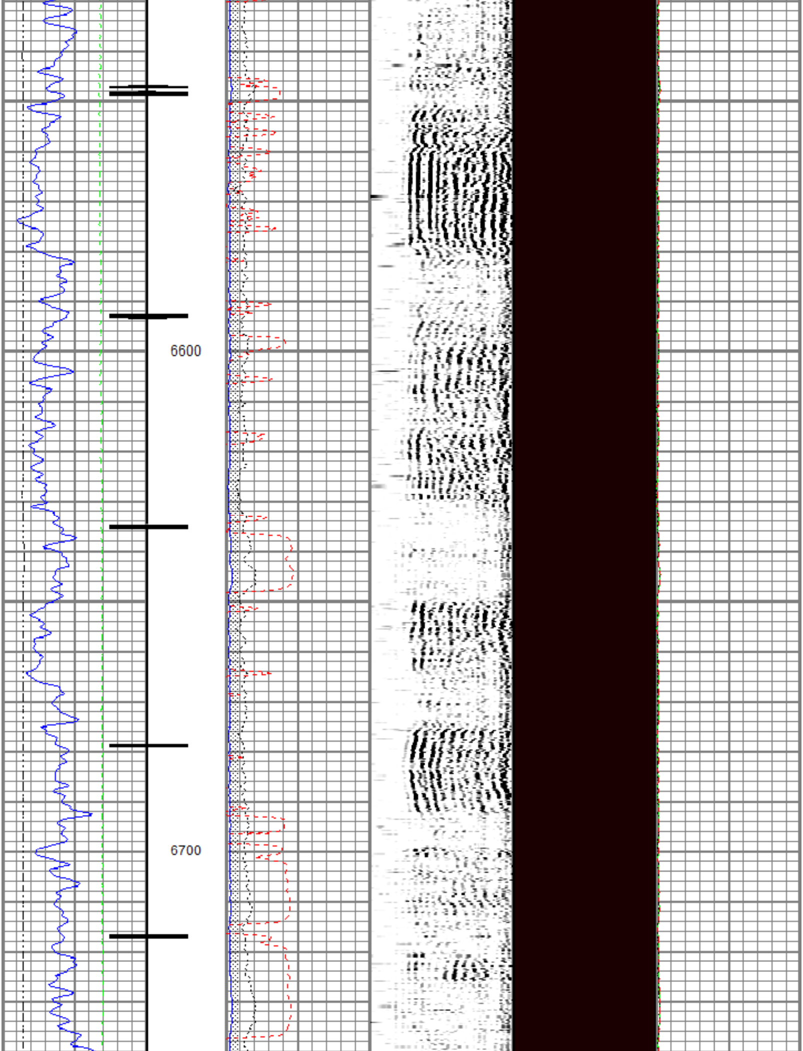
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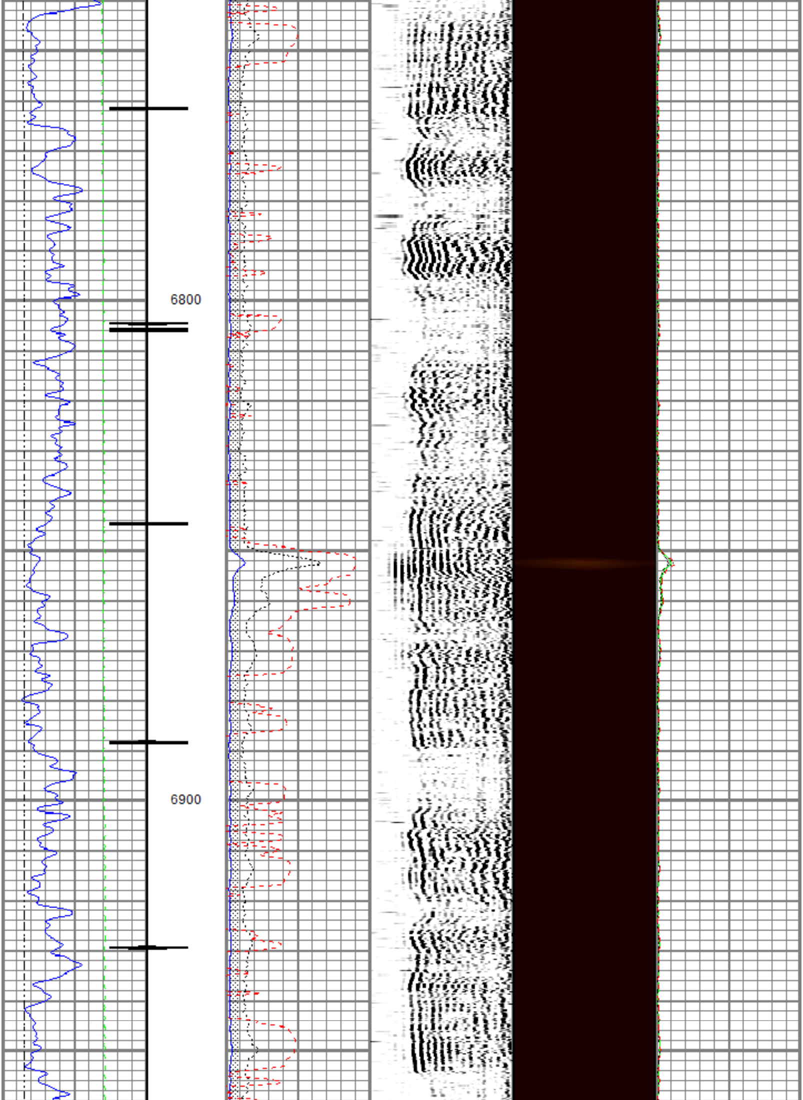
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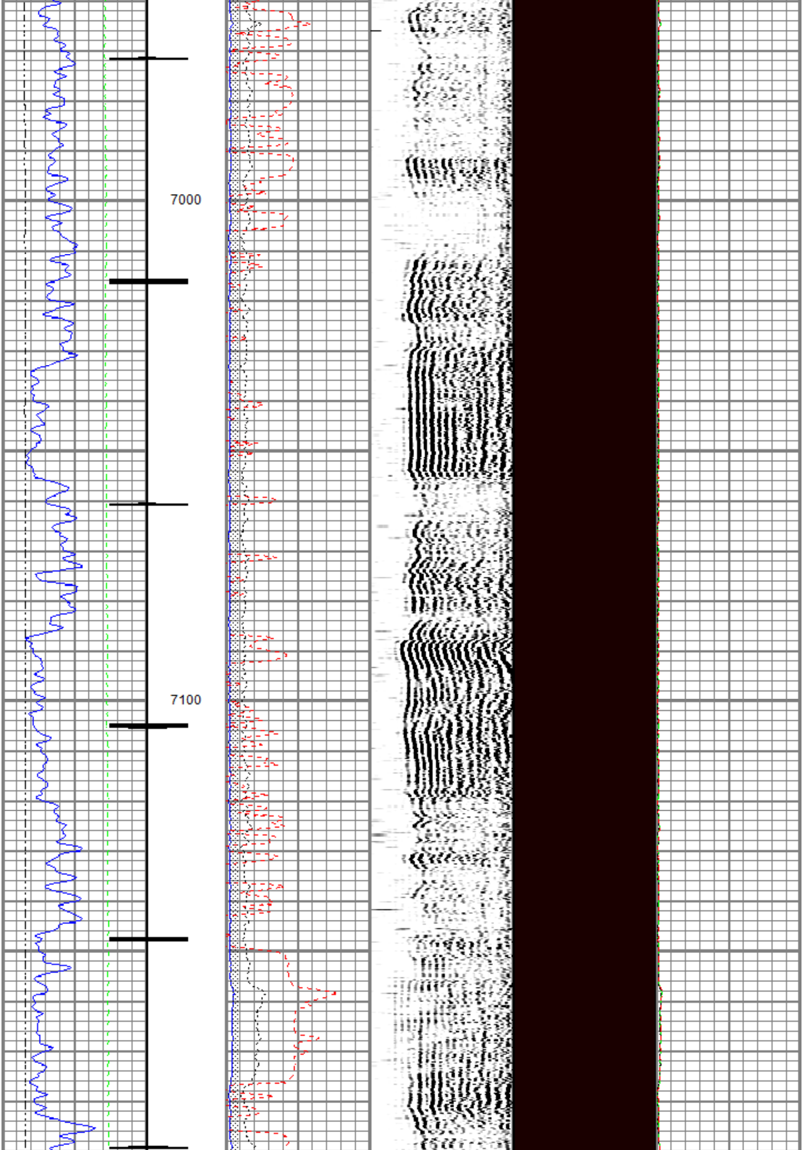
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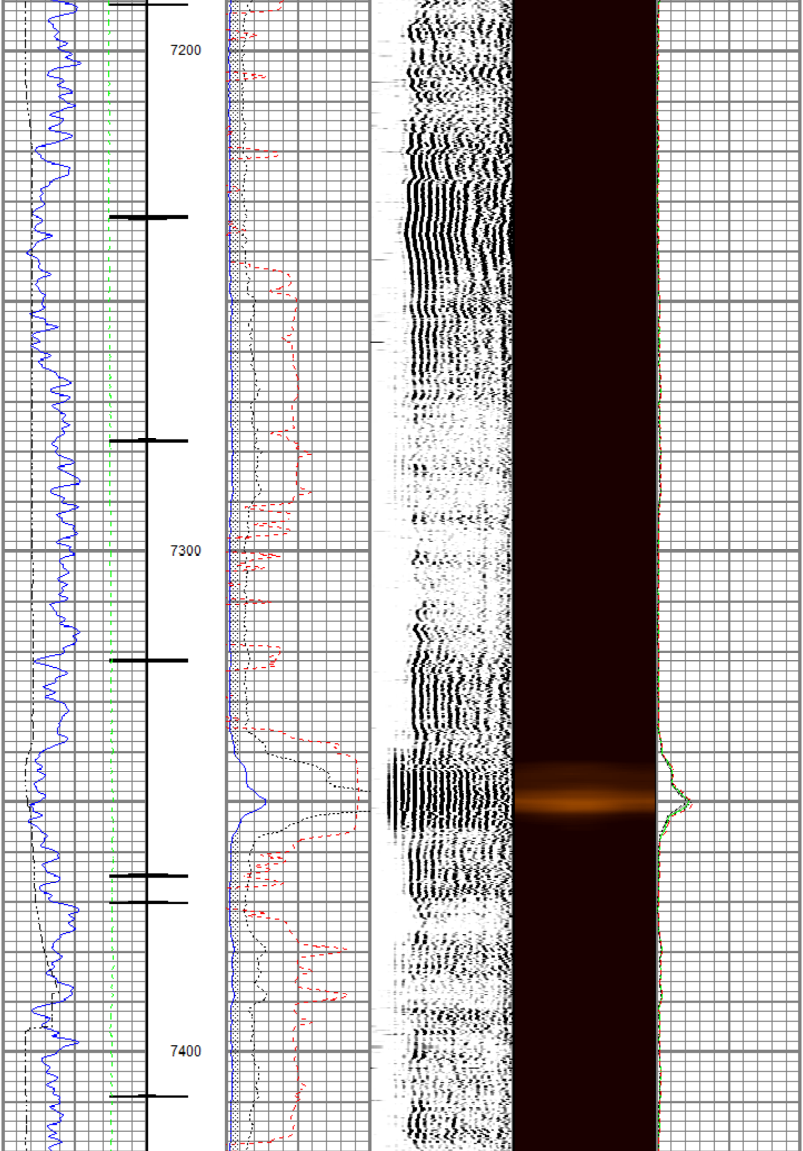
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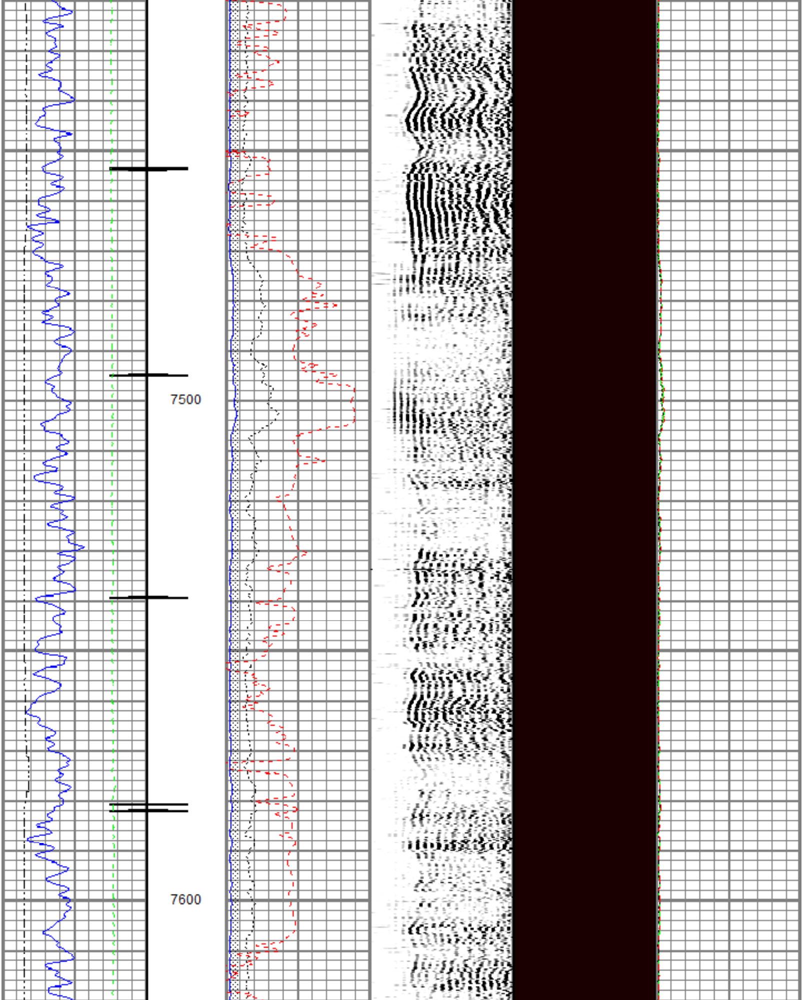
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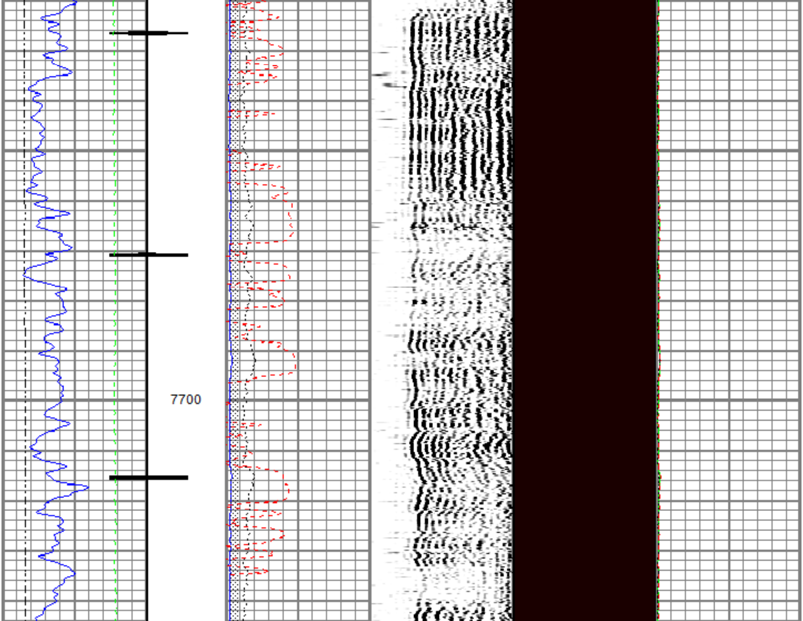
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Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 200	0 (mV) 100	200 1200	10 110	0 150
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Line Speed	0 (mV) 20			0 150
-150 (ft/min) 150	3' Travel Time			Maximum Amplitude
Line Tension	300 (usec) 200			0 150
0 (lb) 2000				

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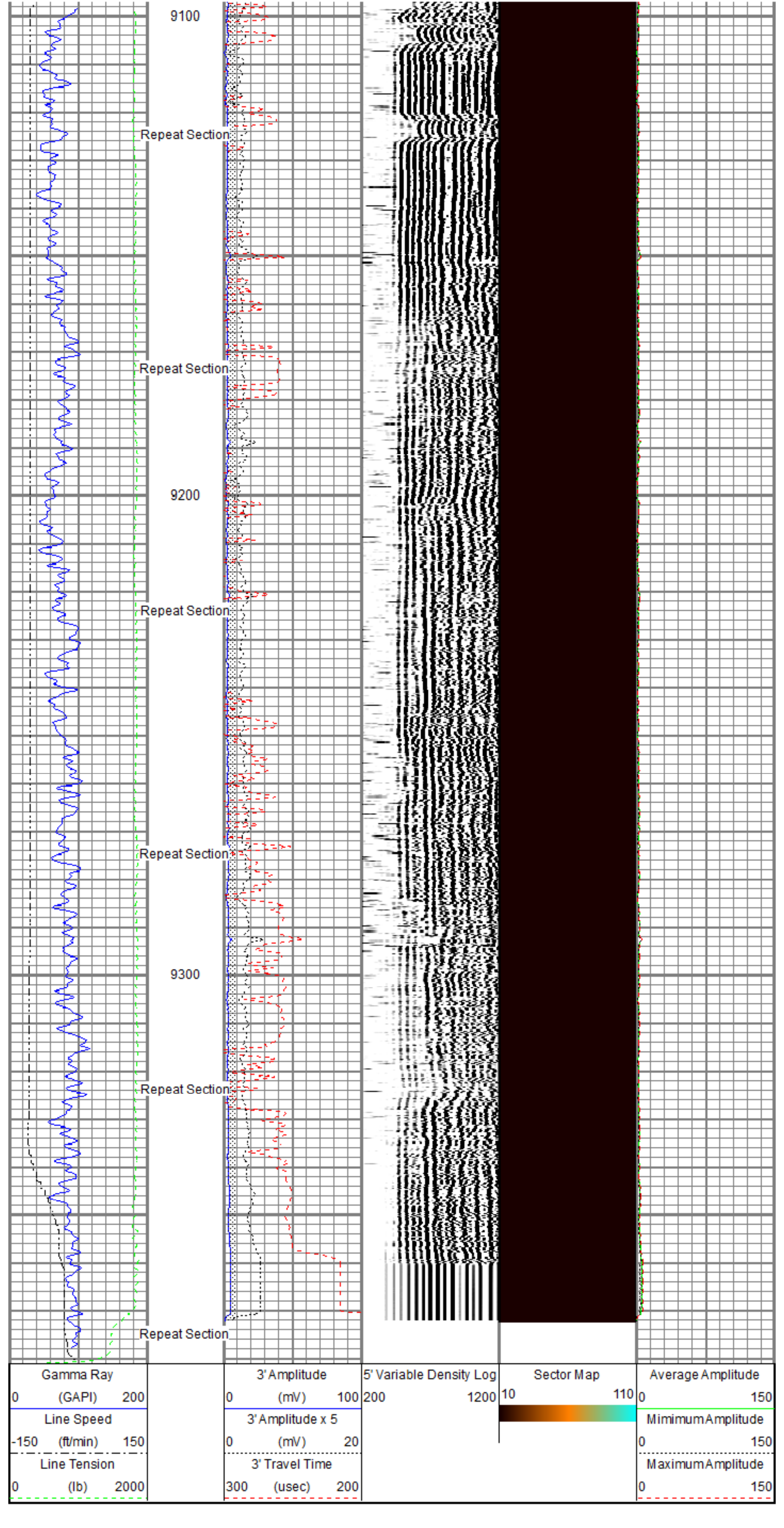
Repeat Pass

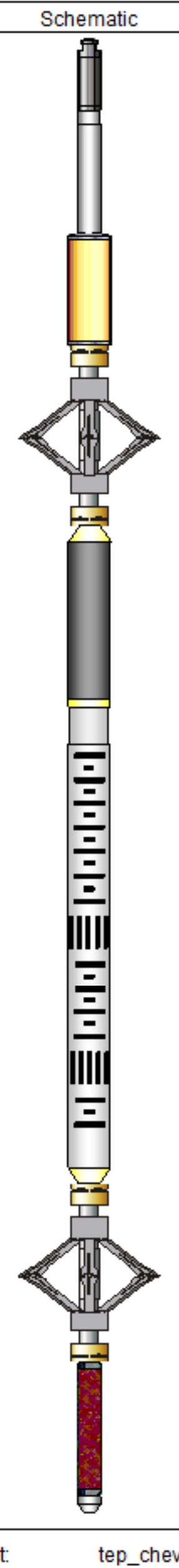
Recorded With 0 PSI Surface Induced Pressure

Database File	tep_chevron tr 523-21-597\tep_chevron tr 523-21-597_03-28-17_rbl.db
Dataset Pathname	pass2.2
Presentation Format	ros_rbt004_tep
Dataset Creation	Fri Mar 31 08:05:17 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
Line Speed	3' Amplitude x 5			Mimimum Amplitude
-150 (ft/min) 150	0 (mV) 20			0 150
Line Tension	3' Travel Time			Maximum Amplitude
0 (lb) 2000	300 (usec) 200			0 150



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



Sensor	Offset (ft)	Description	Length (ft)	O.D. (in)	Weight (lb)
		Titan_Electric_Cable_Heads-Titan_1-11 Electric Cable Head with 1" Fishing Neck	1.03	1.69	5.40
		UW_AGS-UW_AGS_001 (219135) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00
		UW_XTU-UW_XTU_002 (10012277) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
CCL	17.22	UW_CCL-UW_CCL_028 (10025621) 3-1/8" Ultrawire Casing Collar Locator	1.61	3.13	36.00
		UW_PRC-DSS_RAC 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
CBLROT WVFS8 WVFS7 WVFS6 WVFS5 WVFS4 WVFS3 WVFS2 WVFS1 WVF3FT WVF5FT	9.83 9.83 9.83 9.83 9.83 9.83 9.83 9.83 9.83 9.83 8.83	UW_RBT-UW_RBT_004 (10012639) Sondex Ultrawire 3-1/8" Radial Bond Tool	9.48	3.13	140.00
CBLTEMP	4.69				
		UW_PRC-DSS_RAC 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
GR	0.72	UW_PGR-UW_PGR_020 (10019371) Production Gamma Ray	1.92	1.69	9.50
TSTAMP	0.00	UW_BUL-UW_BUL_006 (031422) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20

Dataset:	tep_chevron tr 523-21-597_03-28-17_rbl.db: field/well/run1/pass3.5
Total length:	21.14 ft
Total weight:	263.60 lb
O.D.:	3.13 in

Calibration Report

Database File	d:\warrior\data\tep_chevron tr 523-21-597\tep_chevron tr 523-21-597_03-28-17_rbl.db
Dataset Pathname	pass3.5
Dataset Creation	Thu Mar 30 16:26:50 2017

Gamma Ray Calibration Report

Serial Number:	10019371	
Tool Model:	UW_PGR_020	
Performed:	(Not Performed)	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	10012639	
Tool Model:	UW_RBT_004	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	463.694	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.009	1.305	0.800	81.196	61.159	1.366
5FT	0.002	1.008	0.800	81.196	79.904	0.641
S1	-0.011	1.279	0.000	100.000	77.560	0.839
S2	-0.012	1.173	0.000	100.000	84.413	0.987
S3	-0.008	1.160	0.000	100.000	85.591	0.711
S4	-0.007	1.200	0.000	100.000	82.829	0.616
S5	-0.005	1.287	0.000	100.000	77.411	0.360
S6	-0.006	1.410	0.000	100.000	70.602	0.452
S7	-0.007	1.453	0.000	100.000	68.495	0.490
S8	-0.009	1.384	0.000	100.000	71.797	0.623

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