RELIANCE
OILFIELD SERVICES

Radial Cement Bond
Gamma Ray
Casing Collar Log

Company	TEP Rocky Mountain LLC
Well	Chevron TR 513-21-597
Field	Trail Ridge
County	Garfield
State	Colorado

Company TEP Rocky Mountain LLC
Well Chevron TR 513-21-597
Field Trail Ridge
County Garfield State Colorado
Location: API # : 05-045-23345
SEC 21 TWP 5S RGE 97W

Other Services
PDN

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

Date	01-APR-2017			
Run Number	ONE			
Depth Driller	9569 FT			
Depth Logger	9469 FT			
Bottom Logged Interval	9461 FT			
Top Log Interval	Surface			
Open Hole Size	8.750"			
Type Fluid	Water			
Density / Viscosity	8.34 lb/gal			
Max. Recorded Temp.	249 °F			
Estimated Cement Top	4520 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	Weight	From	To

Casing Record	Size (in)	Wgt (lbs/Ft)	Grade	Top	Bottom
Surface Casing	9 5/8	36 & 40	—	Surface	2586 FT
Intermediate #1	4 1/2	11.6	—	Surface	9306 FT
Intermediate #2					
Liner					

<<< Fold Here >>>

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 @ 6062FT - 6085 FT
Log ran from 9469 FT to Surface
Recorded with 0 PSI surface induced pressure

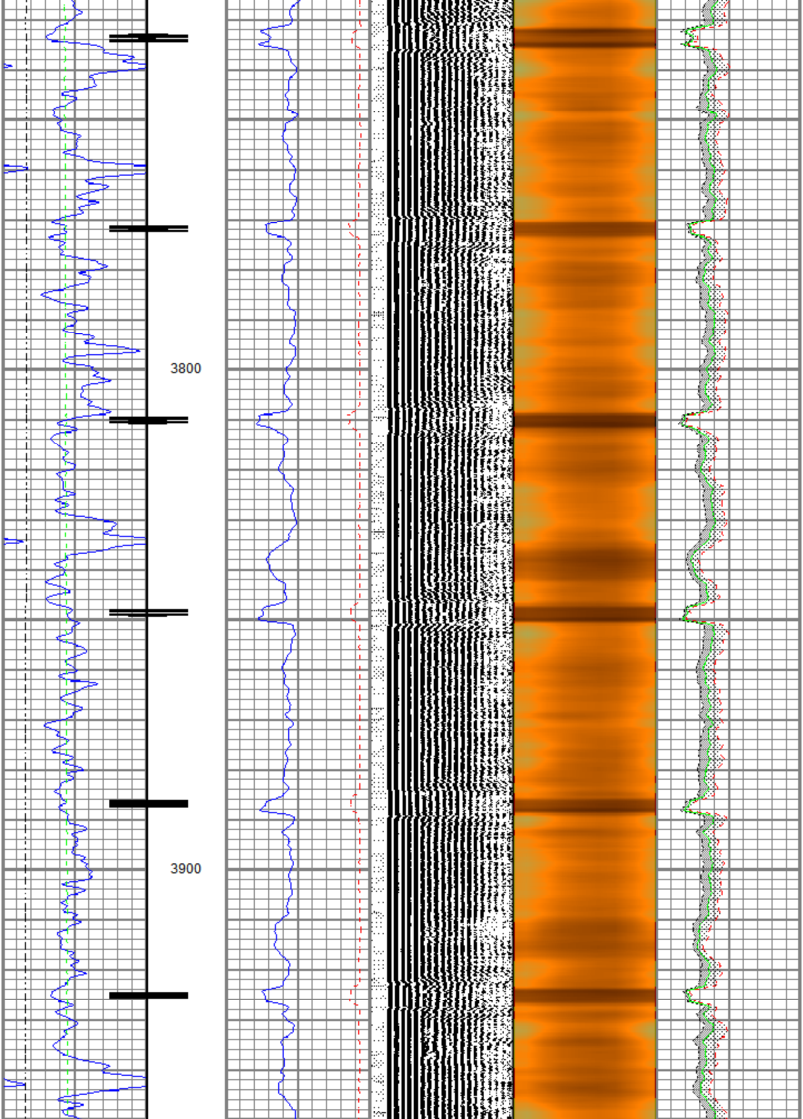
Thank you for choosing Reliance Oilfield Services, LLC!!

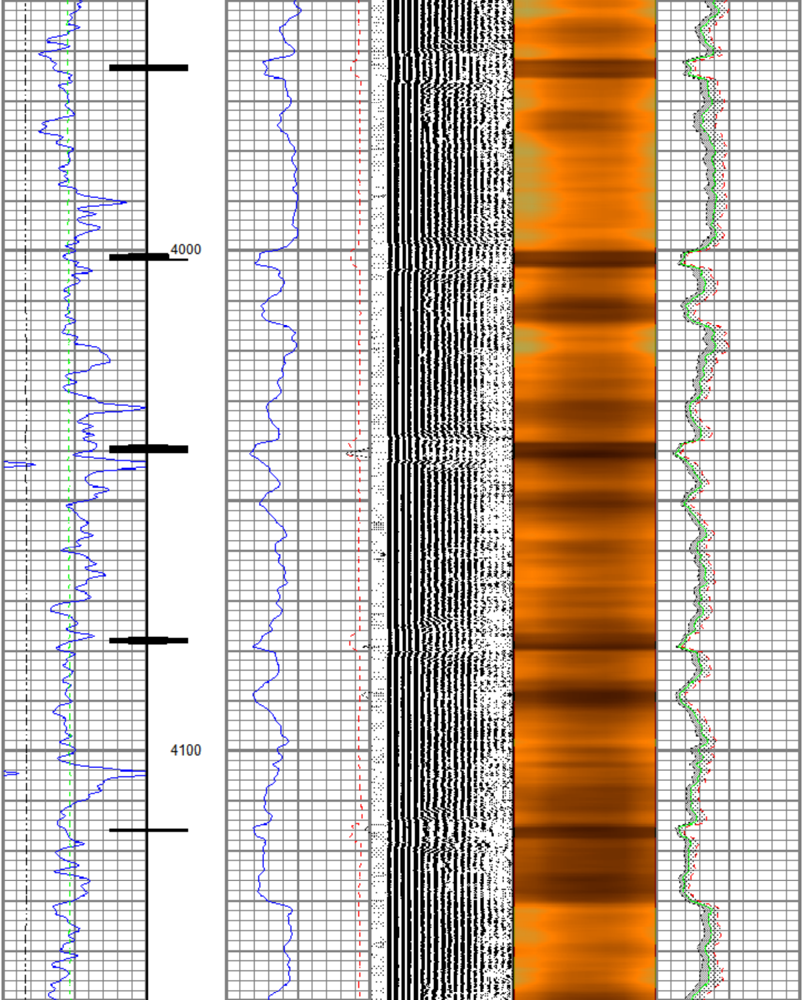
RELIANCE
OILFIELD SERVICES

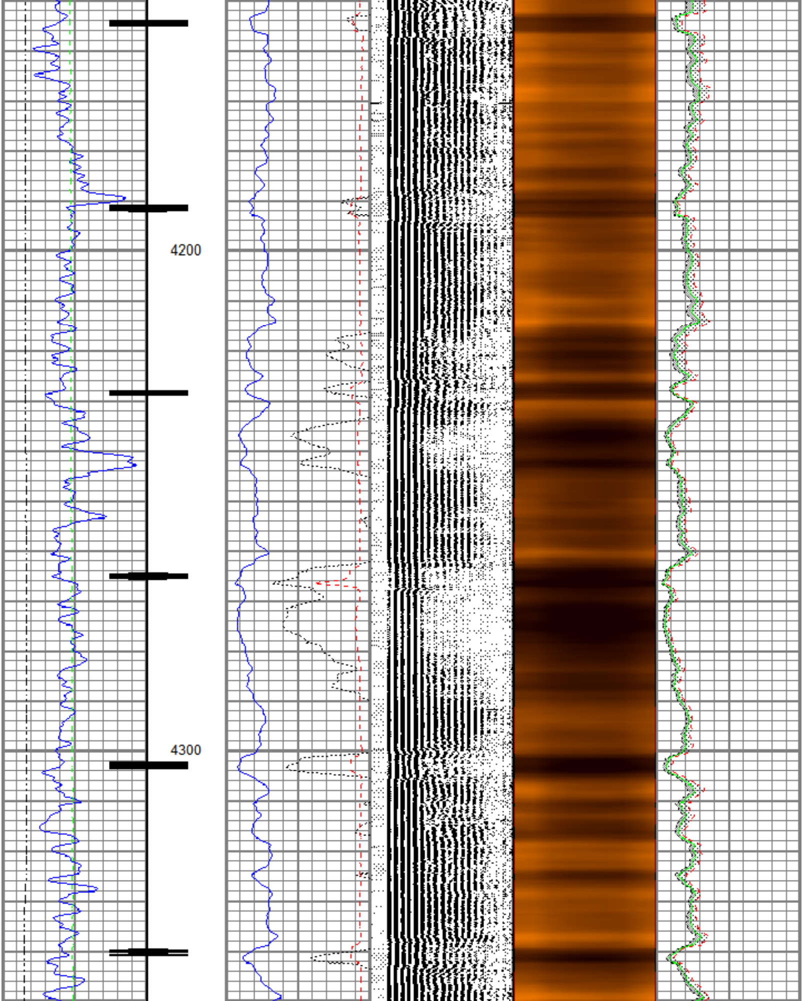
Main Pass

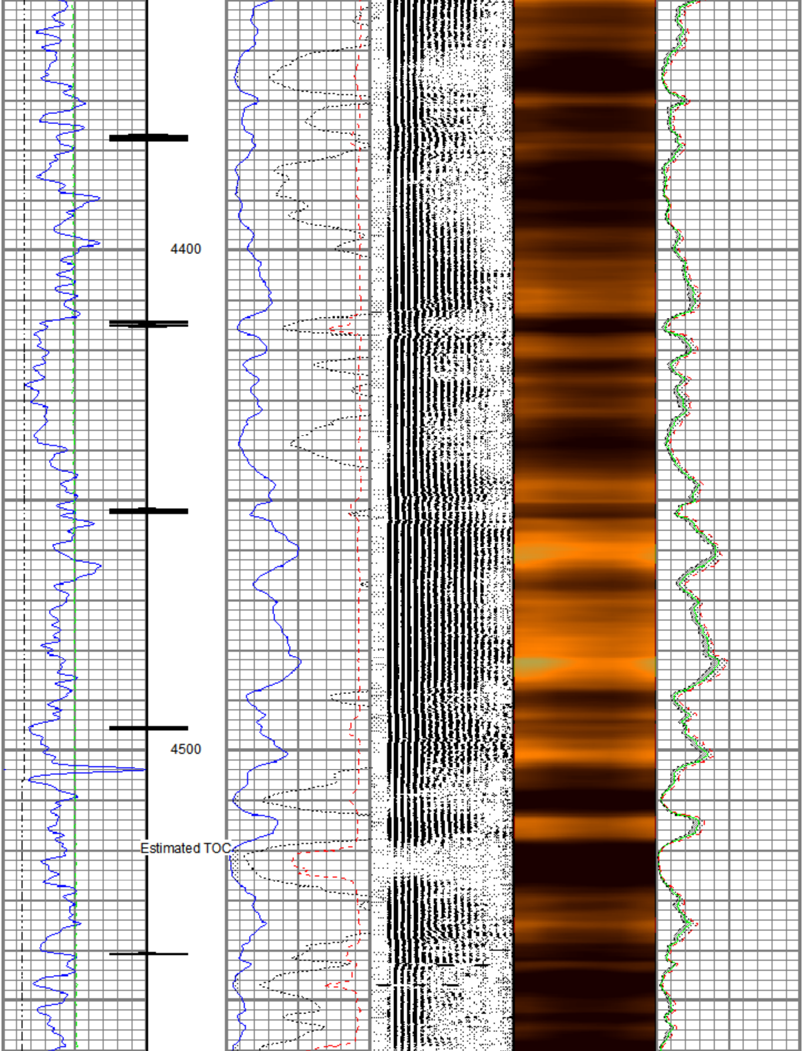
Recorded with 0 PSI Surface Induced Pressure

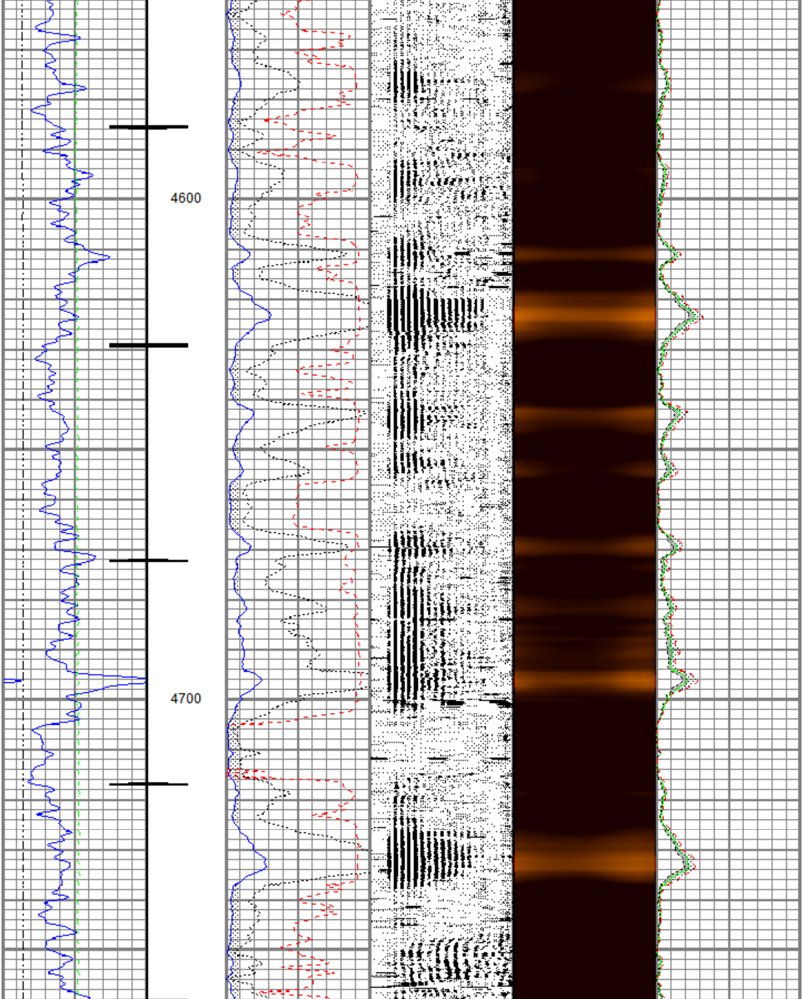
Database File	tep_chevron tr 513-21-597_04-01-17_rbl\processed_tep_chevron tr 513-21-597_04-01-17_rbl.db
Dataset Pathname	merge1.1
Presentation Format	ros_rbt004_tep
Dataset Creation	Sun Apr 02 11:19:42 2017
Charted by	Depth in Feet scaled 1:240

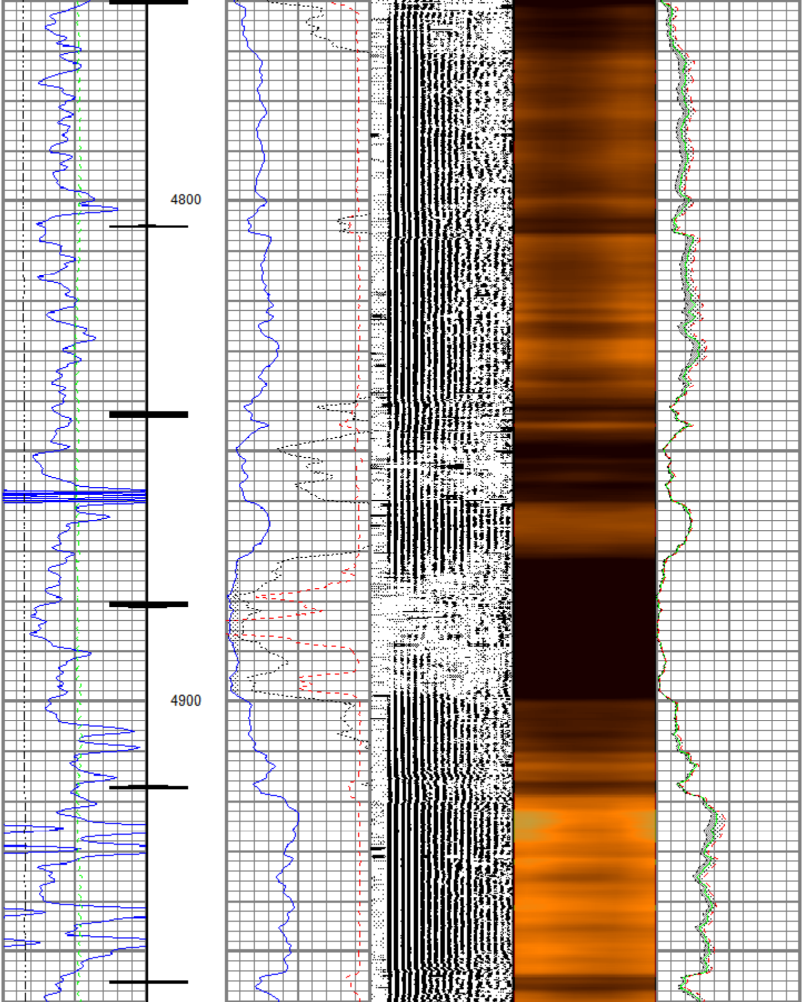

3800
3900

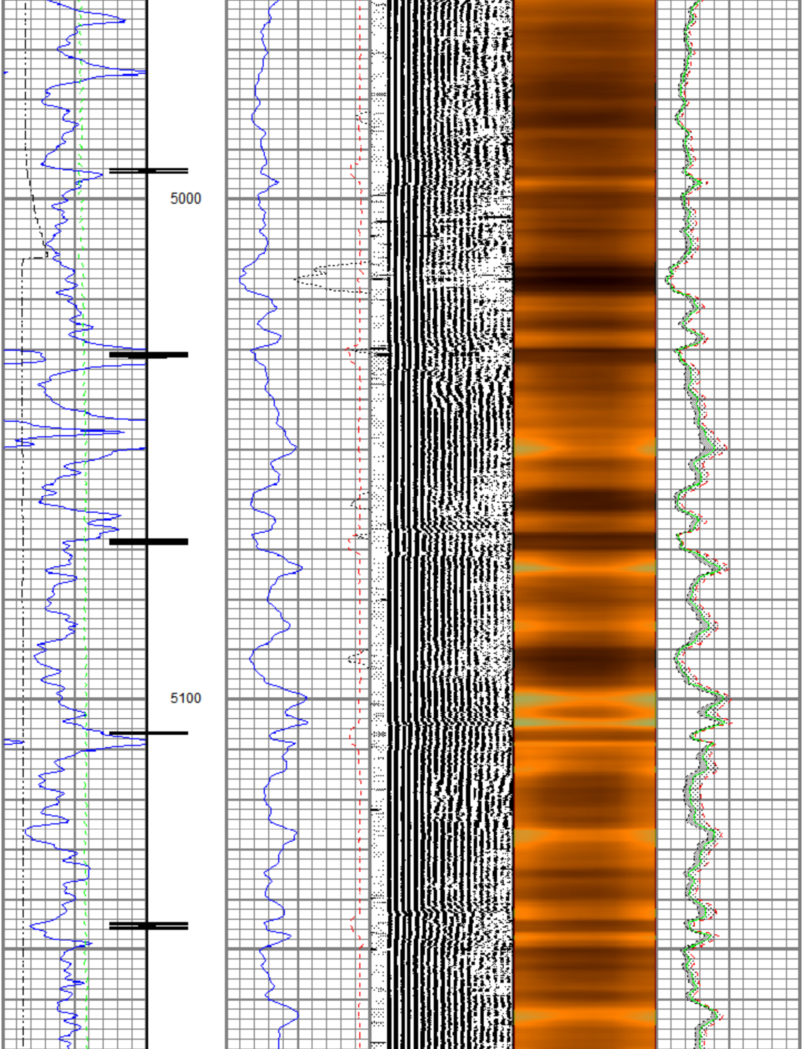

4000
4100

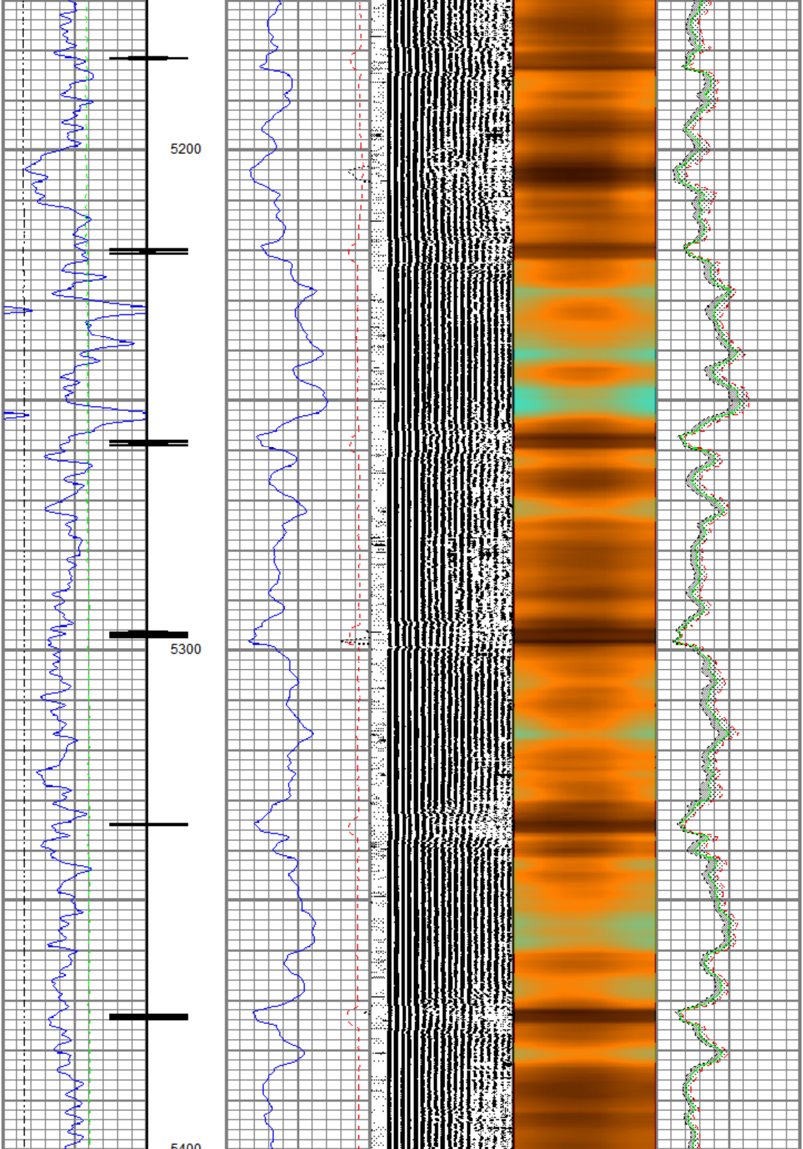

4200
4300

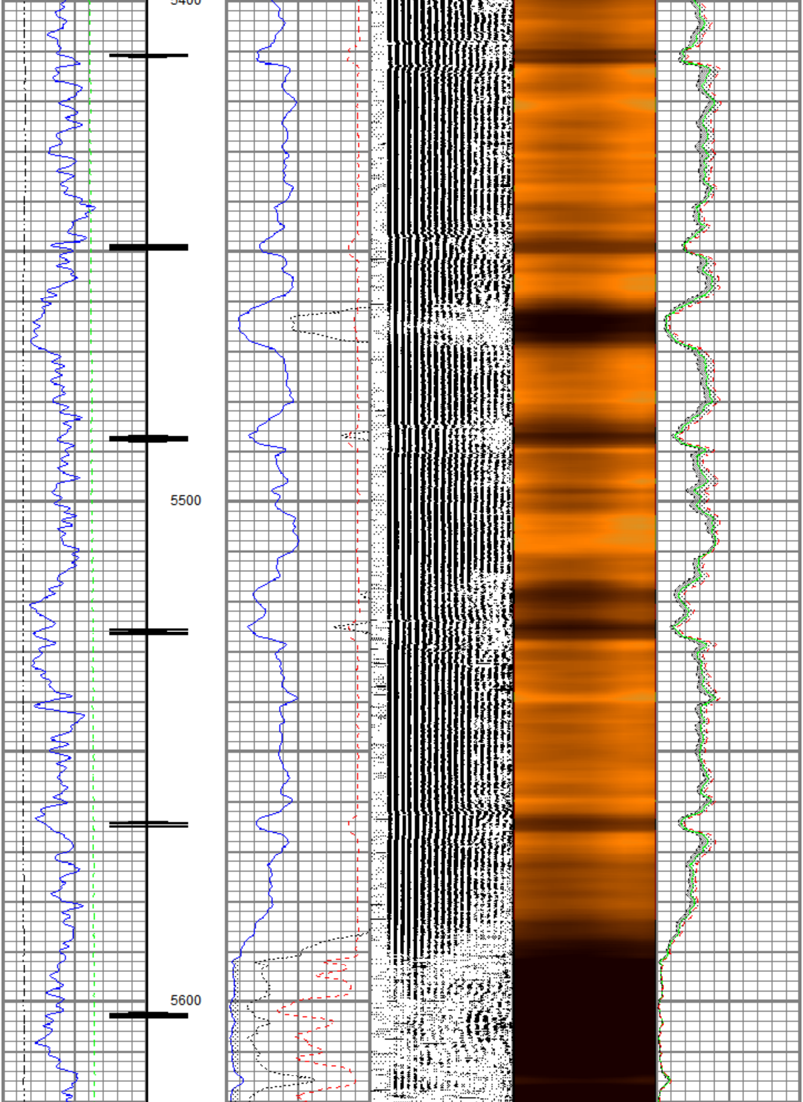

4400
4500
Estimated TOC

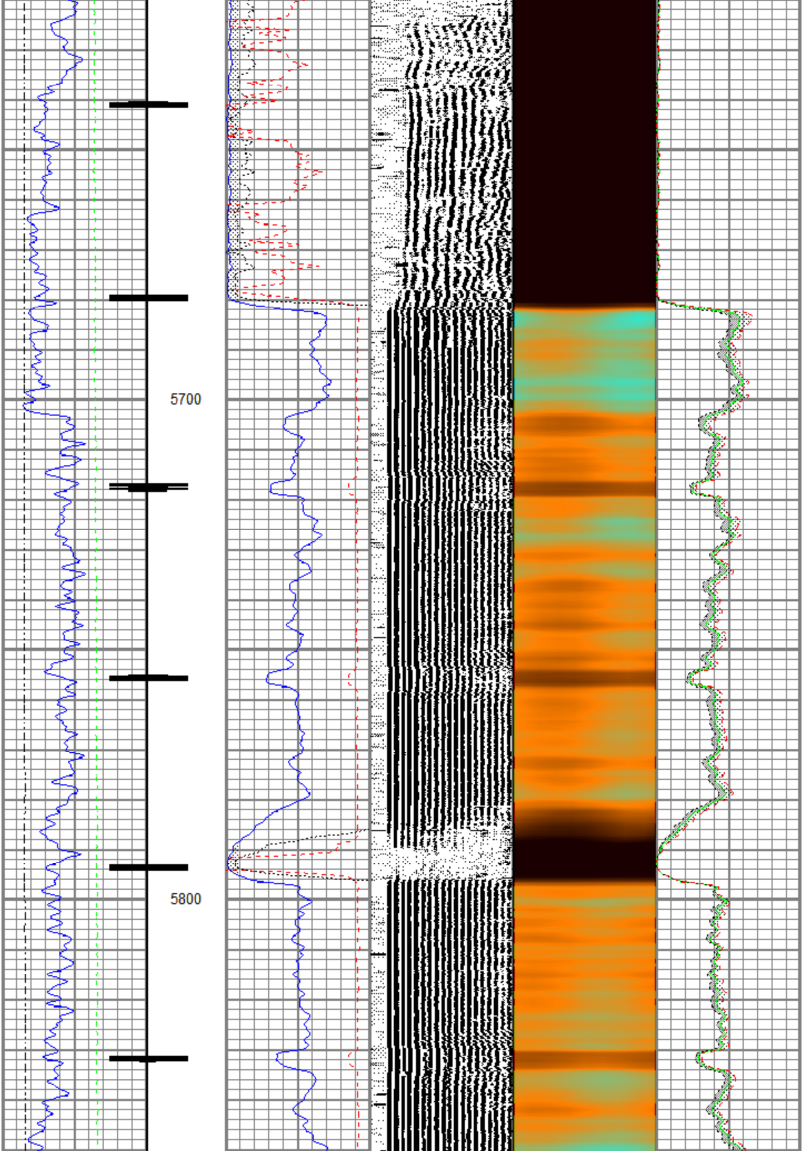

4600
4700

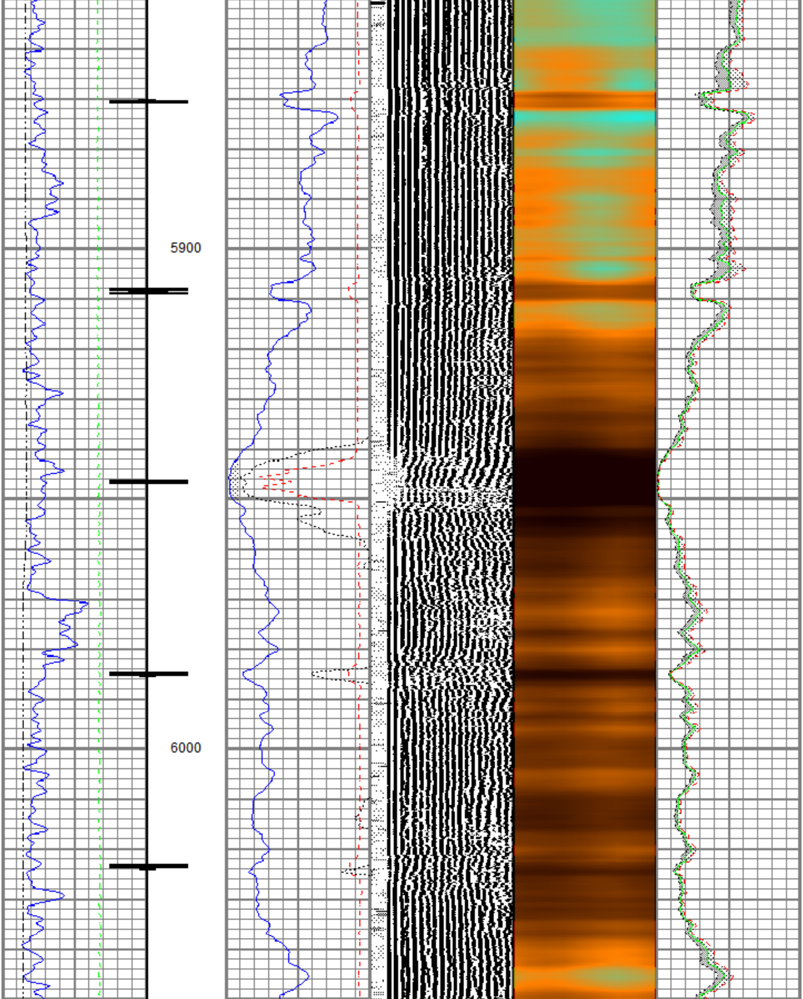

4800
4900

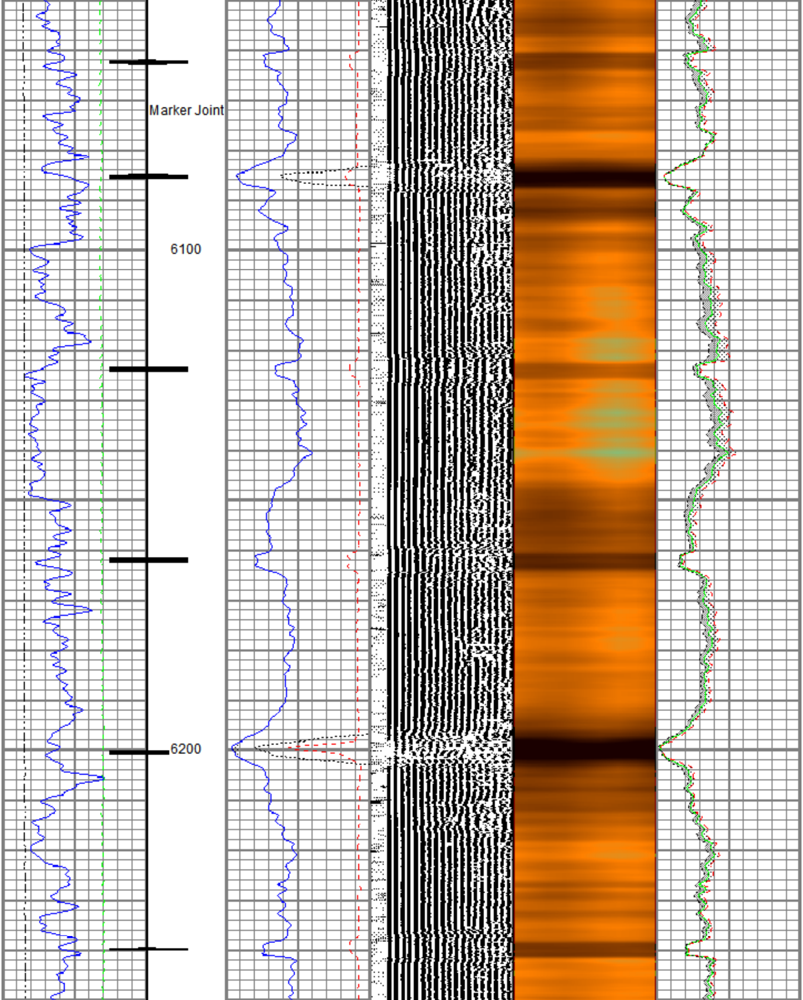

5000
5100

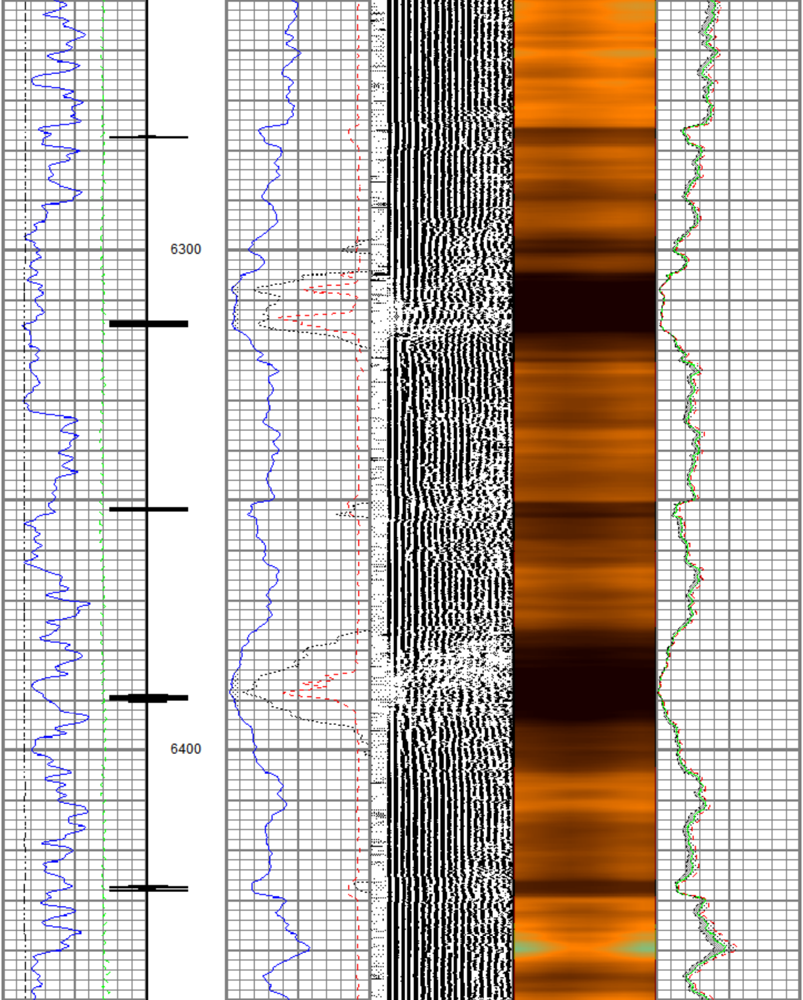

5200
5300
5400

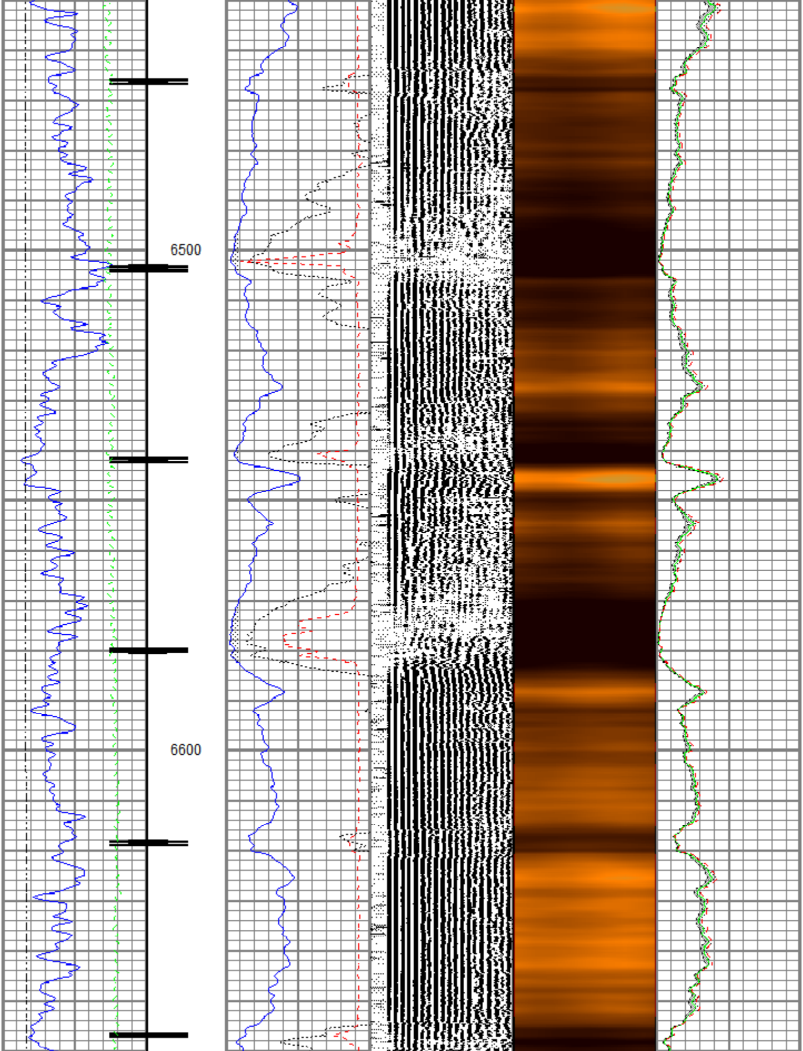

5400
5500
5600

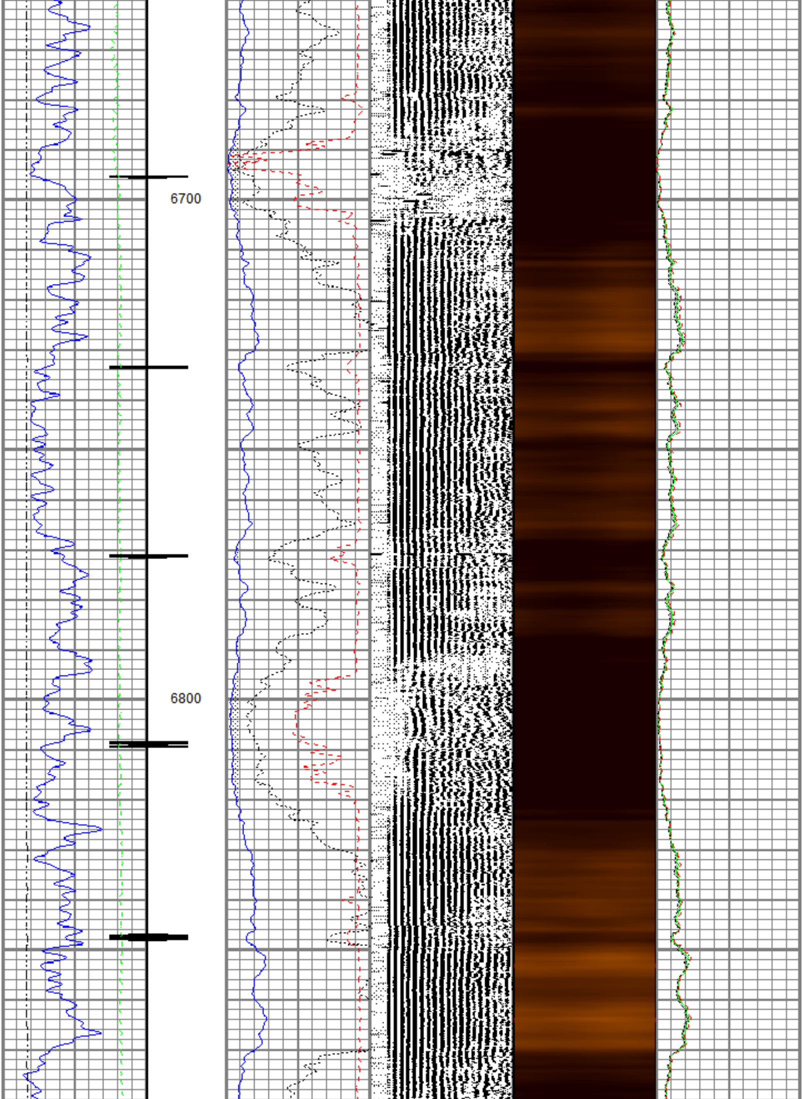

5700
5800

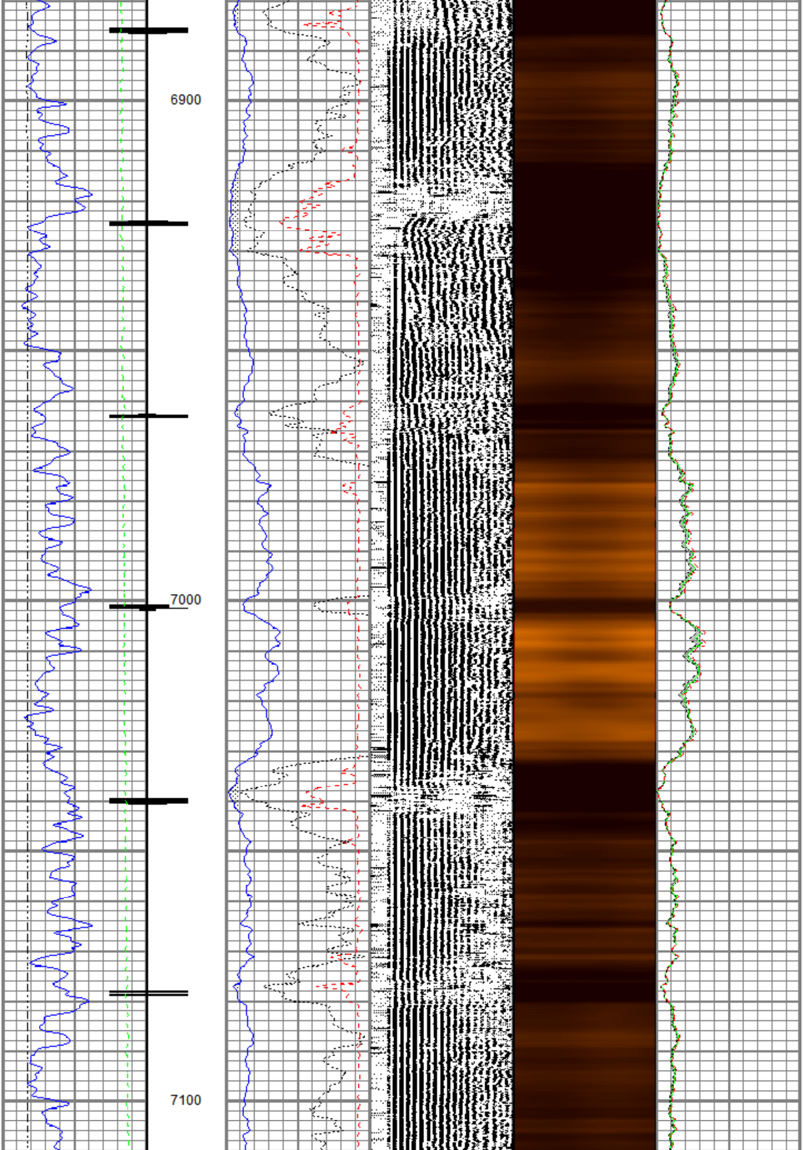

5900
6000

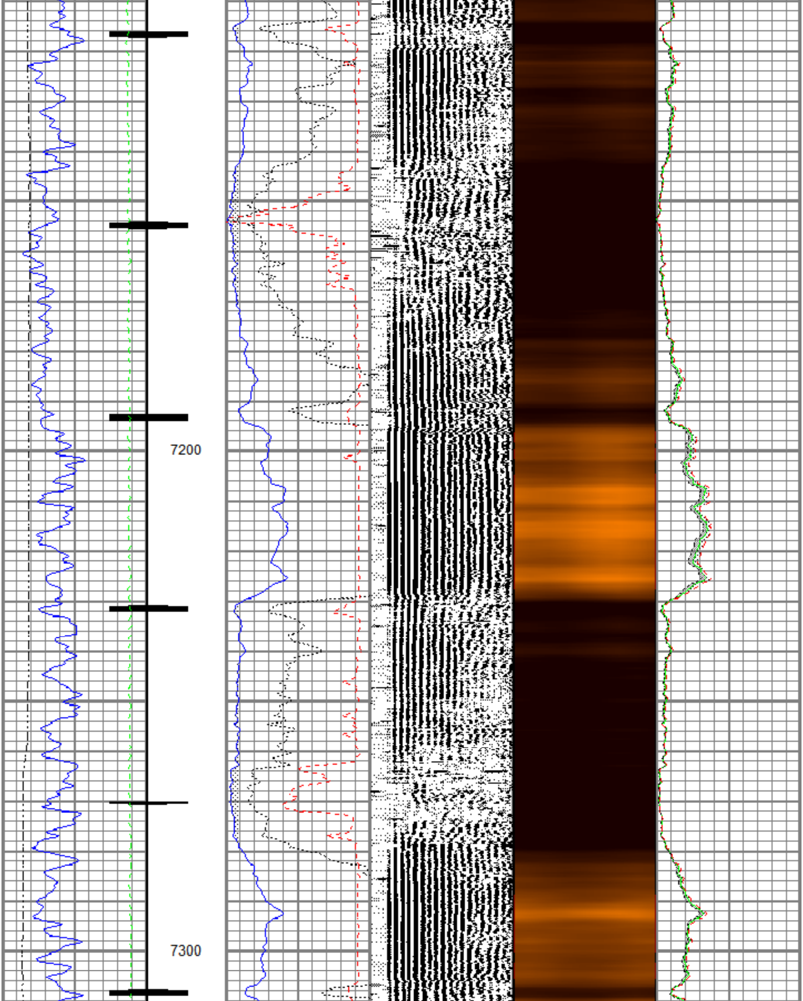

Marker Joint
6100
6200

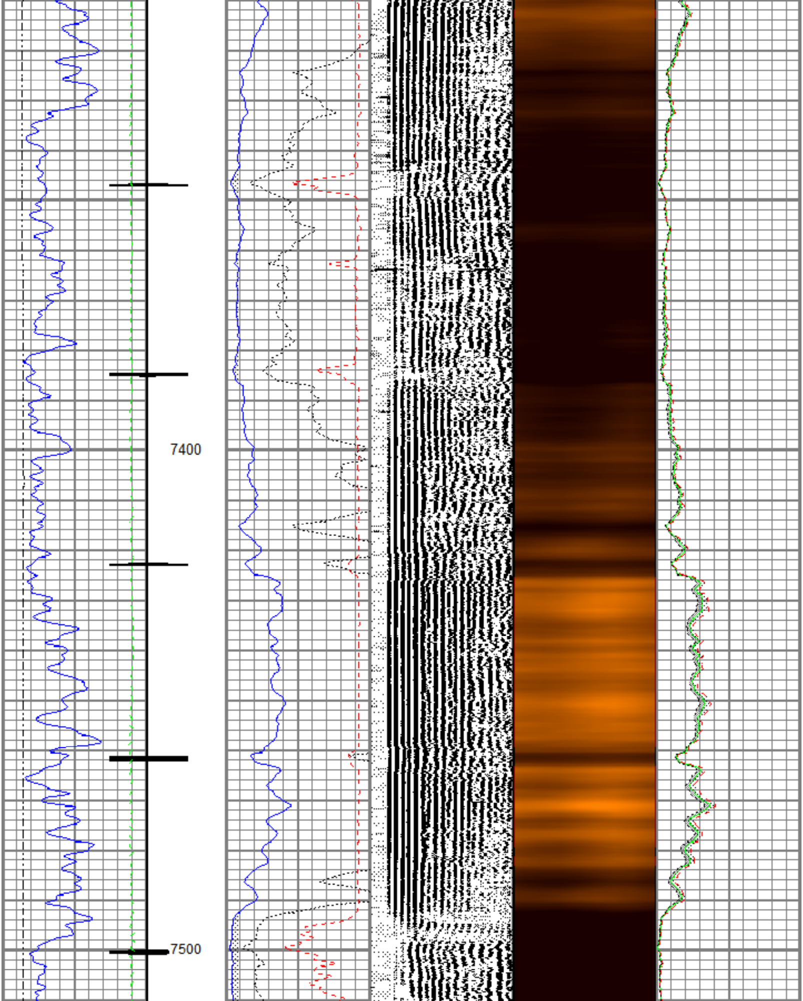

6300
6400

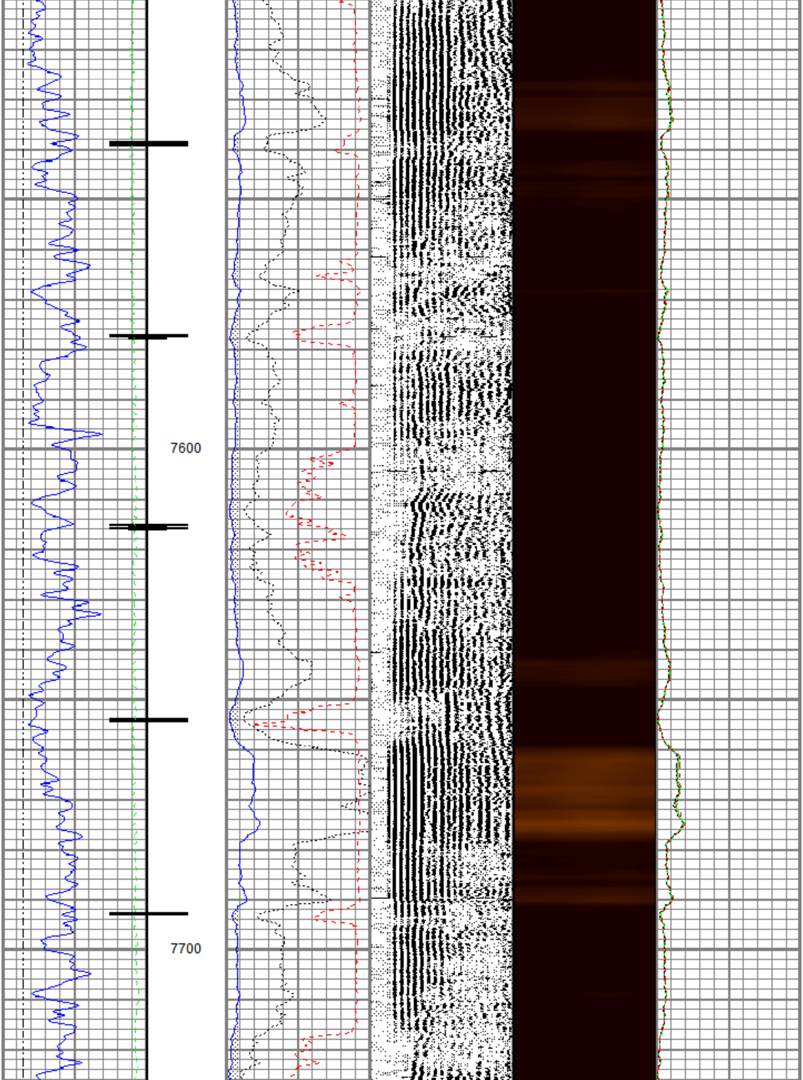

6500
6600


6700
6800


6900
7000
7100


7200
7300


7400
7500


7600
7700

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					

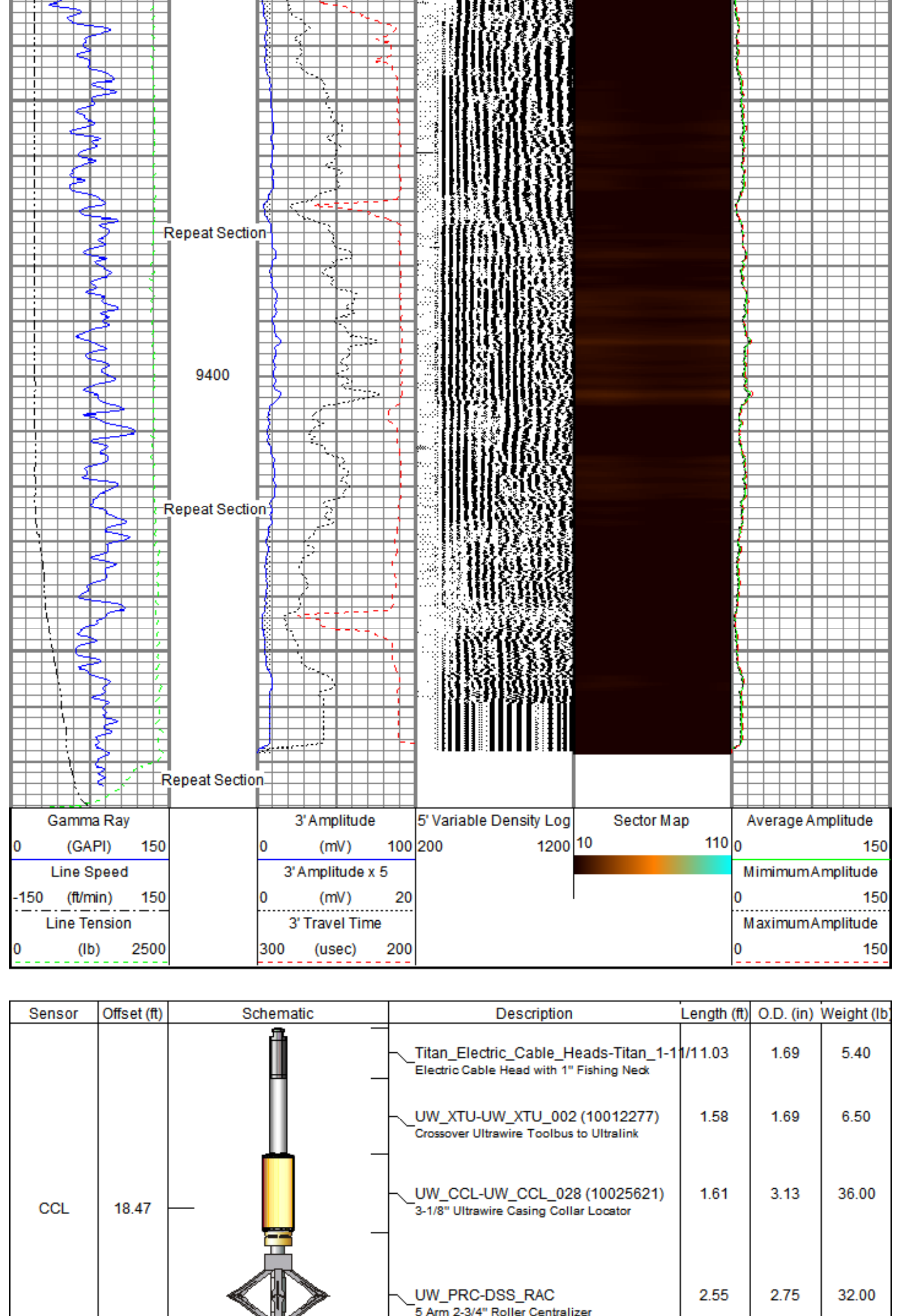
RELIANCE OILFIELD SERVICES

Repeat Pass

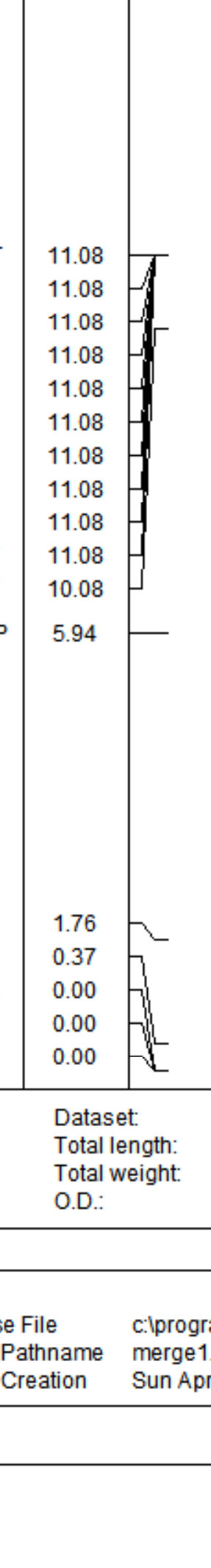
Recorded with 0 PSI Surface Induced Pressure

Database File	tep_chevron tr 513-21-597_04-01-17_rbl\processed_tep_chevron tr 513-21-597_04-01-17_rbl.db
Dataset Pathname	pass1.1
Presentation Format	ros_rbt004_tep
Dataset Creation	Sun Apr 02 11:39:14 2017
Charted by	Depth in Feet scaled 1:240

Gamma Ray		3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 150		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) 2500		300 (usec) 200			0 150



Gamma Ray		3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 150		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) 2500		300 (usec) 200			0 150



Sensor	Offset (ft)	Description	Length (ft)	O.D. (in)	Weight (lb)
		Titan_Electric_Cable_Heads-Titan_1-11/11 Electric Cable Head with 1" Fishing Neck	1.03	1.69	5.40
		UW_XTU-UW_XTU_002 (10012277) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
CCL	18.47	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	11.08 11.08 11.08 11.08 11.08 11.08 11.08 11.08 11.08 11.08 10.08	UW_RBT-UW_RBT_004 (10012639) Sondex Ultrawire 3-1/8" Radial Bond Tool	9.48	3.13	140.00
CBLTEMP	5.94	UW_AGS-UW_AGS_001 (219135) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00
		UW_PRC-DSS_RAC 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
GR	1.76	UW_PGR-UW_PGR_020 (10019371) Production Gamma Ray	1.92	1.69	9.50
TEMP	0.37	UW_PRT-PRT_016 (10025095) Platinum Resistance Thermometer	1.04	1.69	5.20
HVOLTX ITEMPX TSTAMP	0.00 0.00 0.00	UW_BUL-UW_BUL_006 (10019730) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20

Dataset: processed_tep_chevron tr 513-21-597_04-01-17_rbl.db: field/well/run1/merge1.1
Total length: 22.19 ft
Total weight: 268.80 lb
O.D.: 3.13 in

Calibration Report

Database File	c:\programdata\warrior\data\tep_chevron tr 513-21-597_04-01-17_rbl\processed_tep_chevron tr 513-21-597
Dataset Pathname	merge1.1
Dataset Creation	Sun Apr 02 11:19:42 2017

Temperature Calibration Report

Serial Number: 10025095
Tool Model: PRT_016
Performed: Sun Oct 11 12:33:12 2015

Point #	Reading		Reference	
1	12798.00	cps	68.00	degF
2	18136.00	cps	104.00	degF
3	29513.00	cps	176.00	degF
4	40905.00	cps	248.00	degF
5	52487.00	cps	320.00	degF
6	58362.00	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:	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:	262.575	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.003	1.242	0.800	81.196	64.900	0.609
5FT	-0.002	0.949	0.800	81.196	84.533	0.942
S1	0.005	1.172	0.000	100.000	85.718	-0.429
S2	0.003	1.205	0.000	100.000	83.213	-0.243
S3	0.001	1.269	0.000	100.000	78.899	-0.103
S4	0.001	1.314	0.000	100.000	76.200	-0.100
S5	0.004	1.280	0.000	100.000	78.369	-0.281
S6	0.004	1.250	0.000	100.000	80.221	-0.286
S7	0.004	1.187	0.000	100.000	84.498	-0.328
S8	0.004	1.150	0.000	100.000	87.272	-0.325

RELIANCE OILFIELD SERVICES

Company	TEP Rocky Mountain LLC
Well	Chevron TR 513-21-597
Field	Trail Ridge
County	Garfield
State	Colorado