RELIANCE OILFIELD SERVICES

Radial Cement Bond
Gamma Ray
Casing Collar Log

Company	TEP Rocky Mountain LLC
Well	Tri State Trucking PA 643-26
Field	Parachute
County	Garfield
State	Colorado

Company TEP Rocky Mountain LLC
Well Tri State Trucking PA 643-26
Field Parachute
County Garfield State Colorado

Location: API # : 05-045-23846
SEC 25 TWP 6S RGE 95W

Other Services
--

Permanent Datum	Ground Level	Elevation 5223.8'	Elevation
Log Measured From	Kelly Bushing	24 FT	K.B. 5247.8'
Drilling Measured From	Kelly Bushing		D.F. 5246.8'
			G.L. 5223.8'

Date	05-MAR-2018
Run Number	One
Depth Driller	8510 FT
Depth Logger	8450 FT
Bottom Logged Interval	8450 FT
Top Log Interval	Surface
Open Hole Size	8.750"
Type Fluid	Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	235°F
Estimated Cement Top	See Log
Time Well Ready	ROA
Time Logger on Bottom	15:07
Equipment Number	HD-0359
Location	Grand Junction, CO
Recorded By	Z. Fisher
Witnessed By	D. Welsh

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	1080 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	8466 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
Marker Joint Logged from 3785-3807 FT
Log ran from 8450 FT to Surface
Recorded with 0 PSI Surface Induced Pressure

Thank you for choosing Reliance Oilfield Services, LLC!!

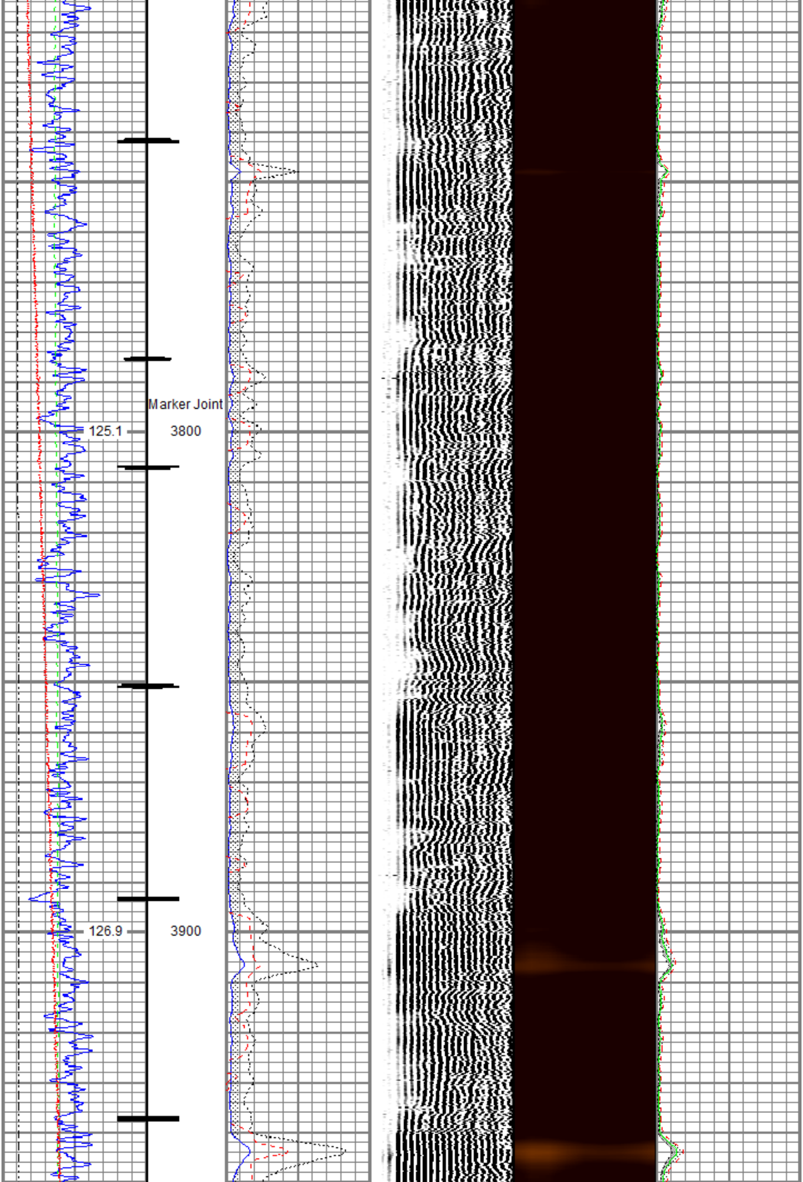
RELIANCE OILFIELD SERVICES

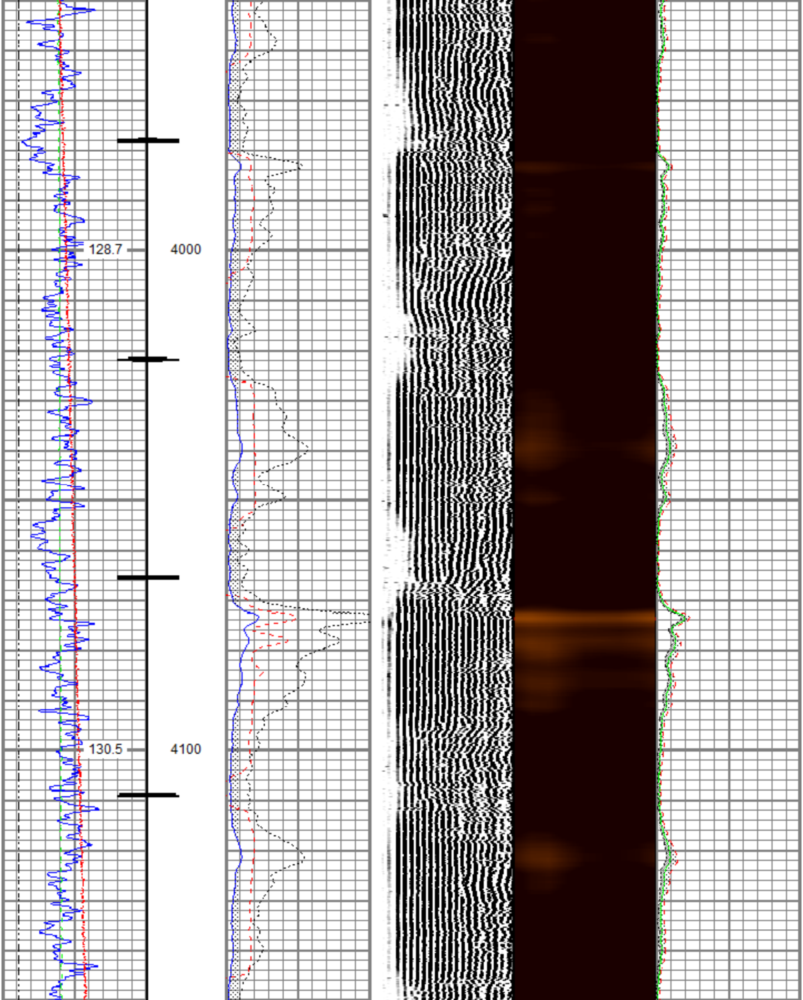
Main Pass

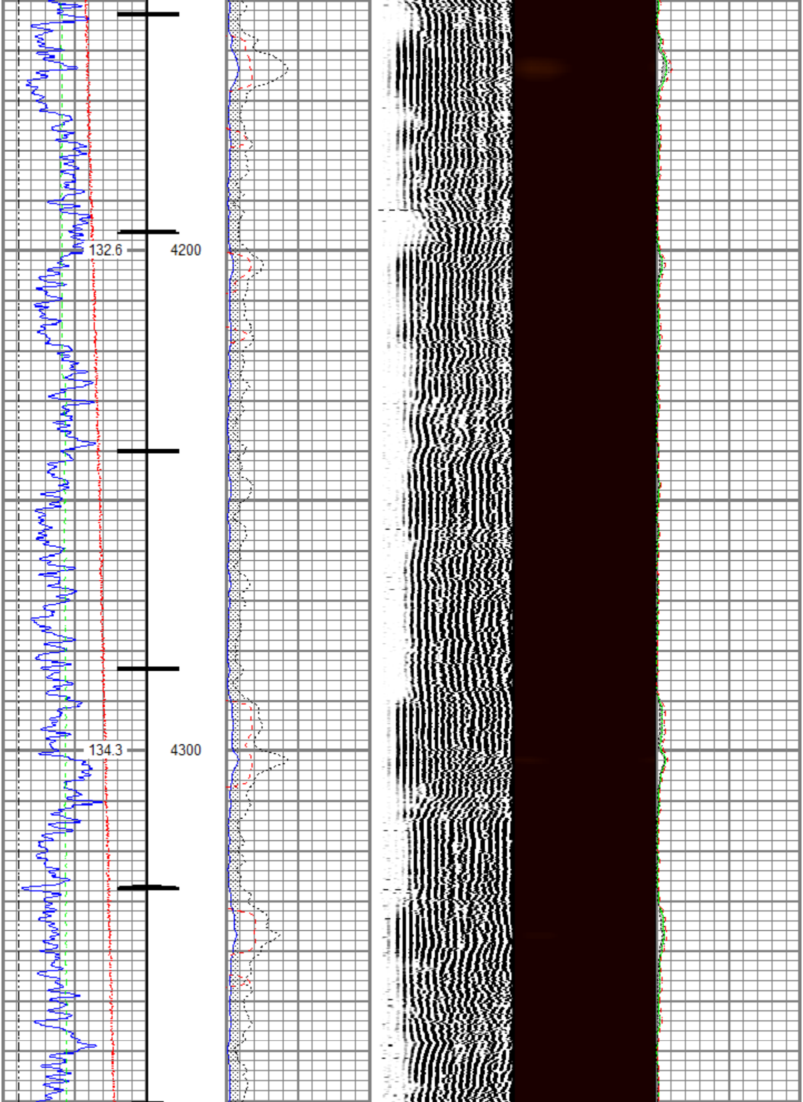
Recorded With 0 PSI Surface Induced Pressure

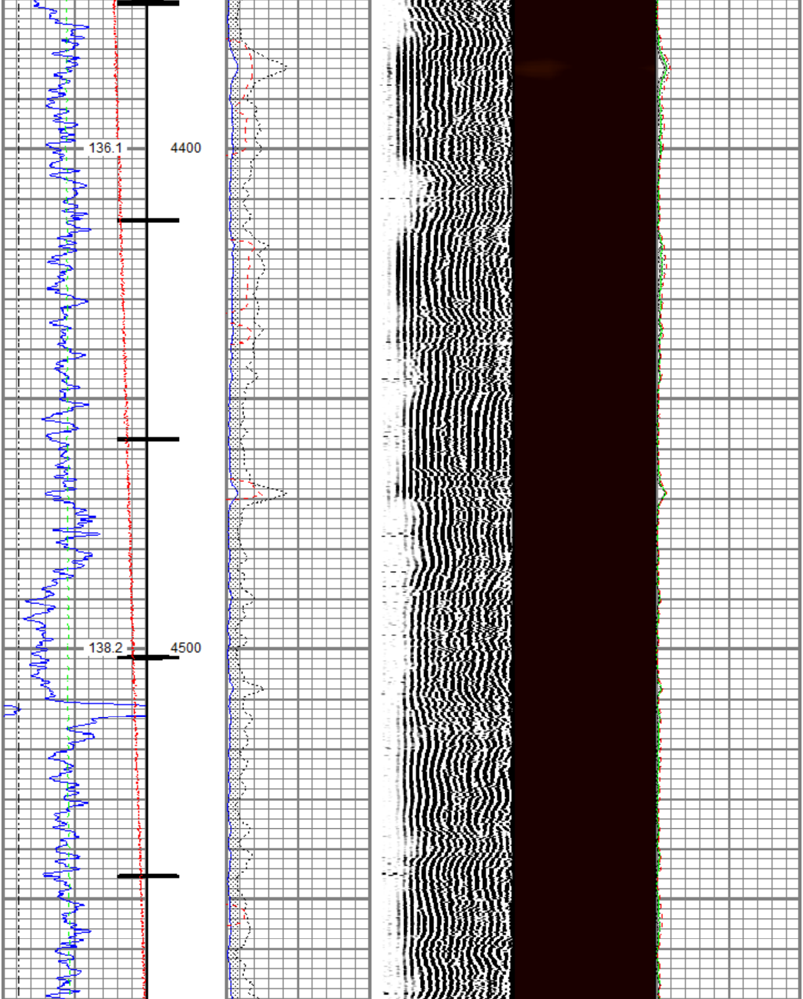
Database File	tep_tri state trucking pa 643-26_rbl_03-05-18\tep_tri state trucking pa 643-26_rbl_03-05-18.db
Dataset Pathname	main.1
Presentation Format	ros_rbt004_tep
Dataset Creation	Wed Mar 07 13:50:17 2018
Charted by	Depth in Feet scaled 1:240

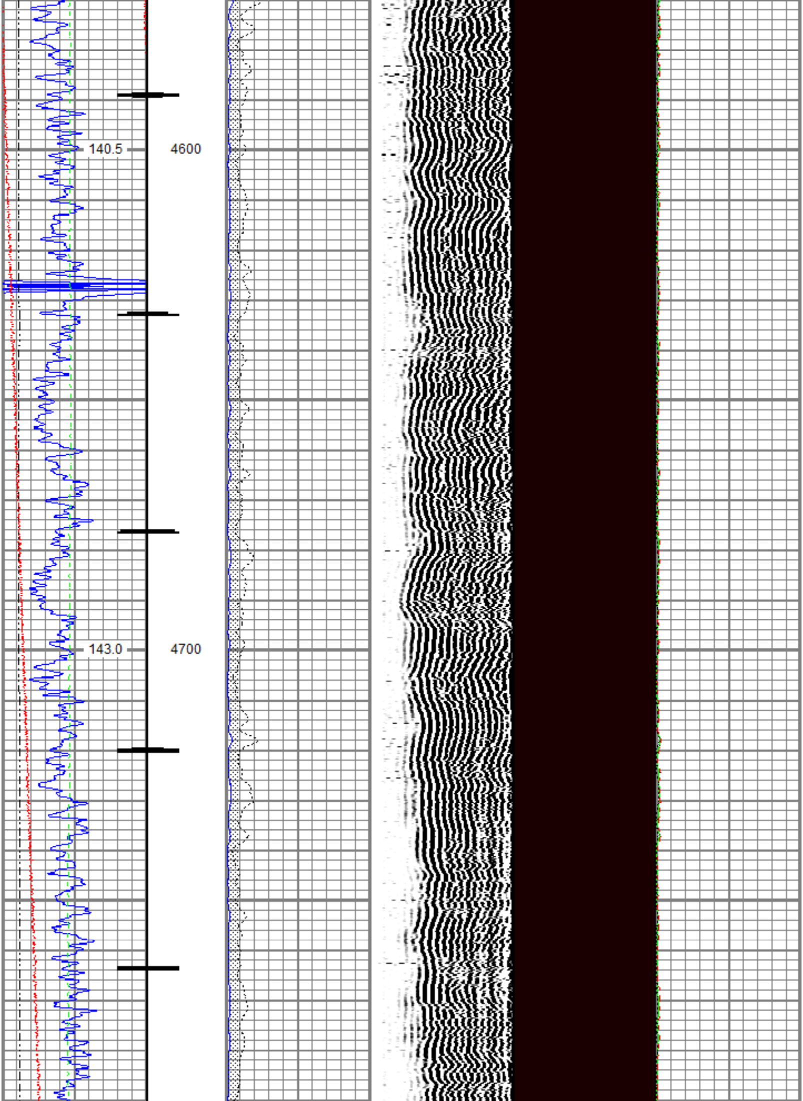
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 200	0 (mV) 100	200 1200	10 110	0 150
Casing Collar Locator	3' Amplitude x 5			MimimumAmplitude
Line Speed	0 (mV) 20			0 150
-150 (ft/min) 150	3' Travel Time			MaximumAmplitude
Line Tension	300 (usec) 200			0 150
0 (lb)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

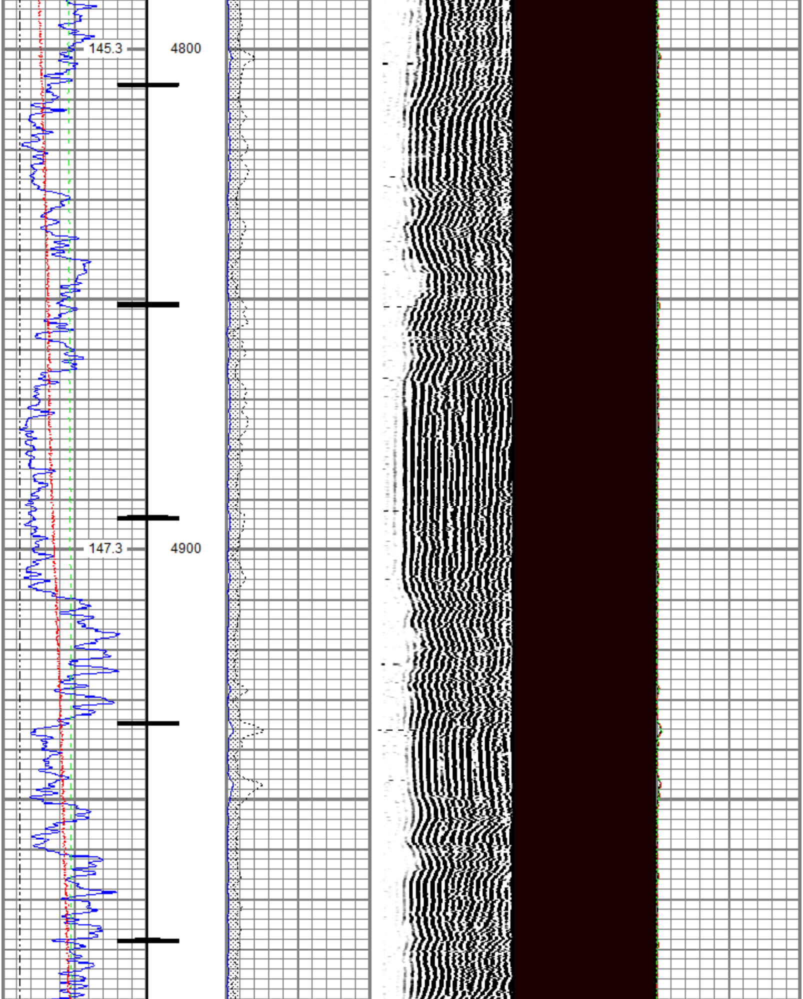

Marker Joint
125.1
3800
126.9
3900

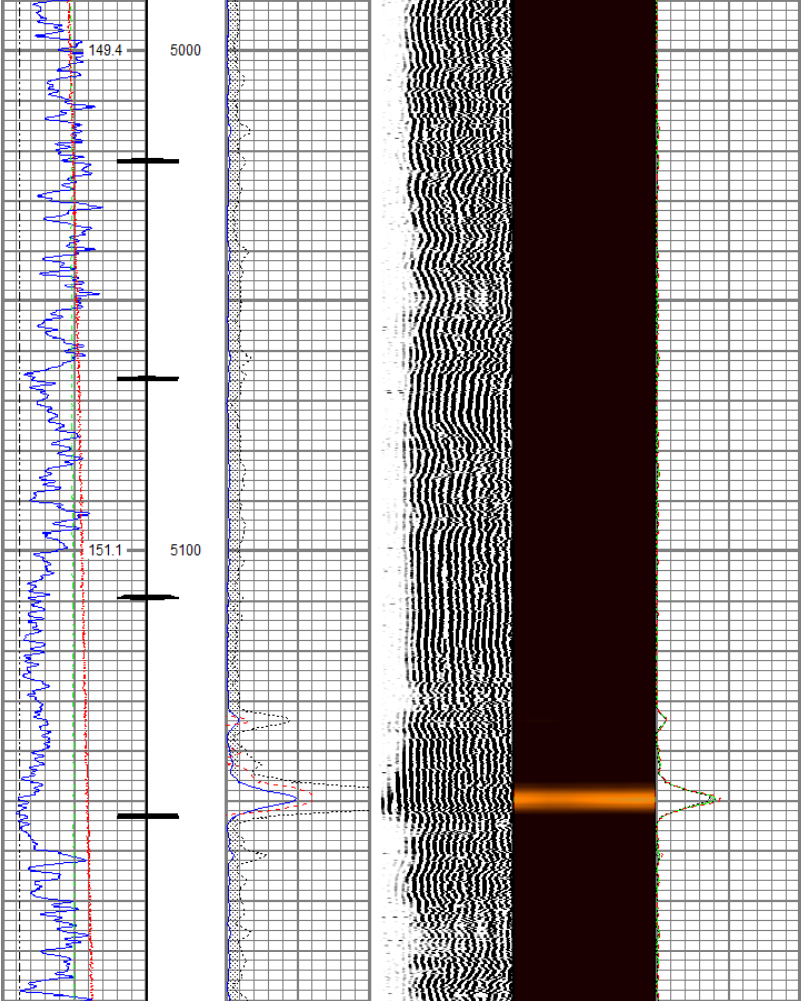

128.7
4000
130.5
4100

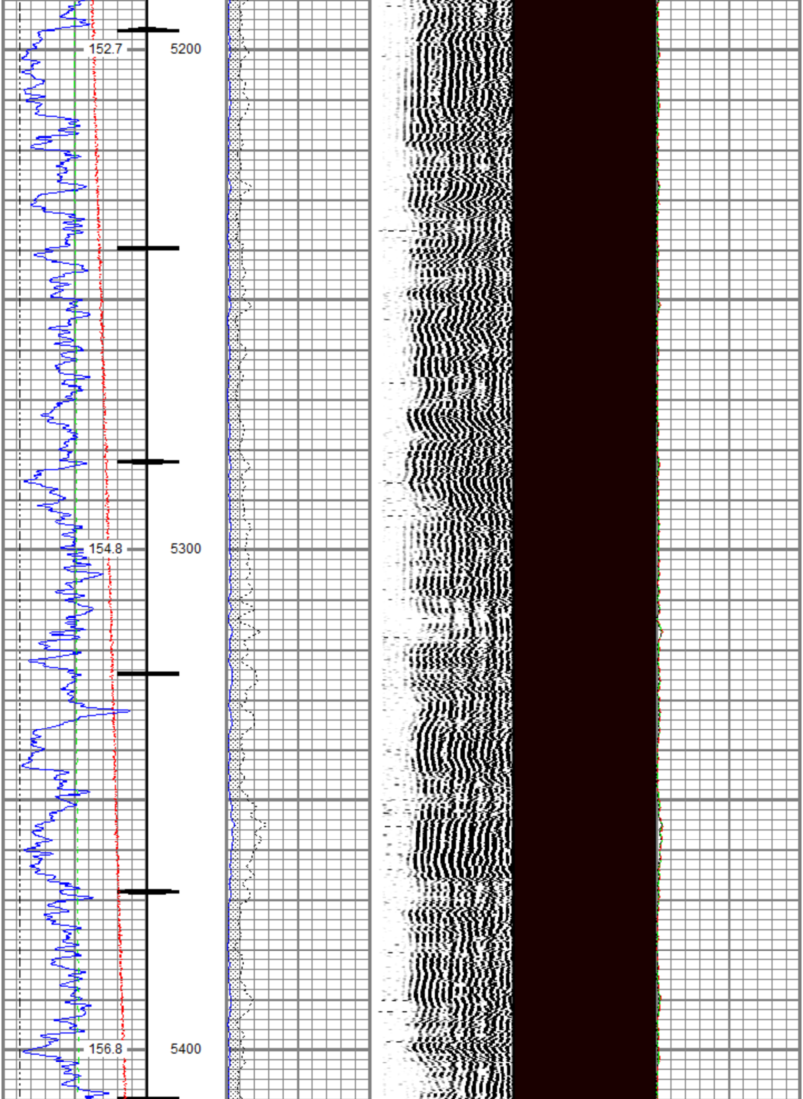

132.6
4200
134.3
4300

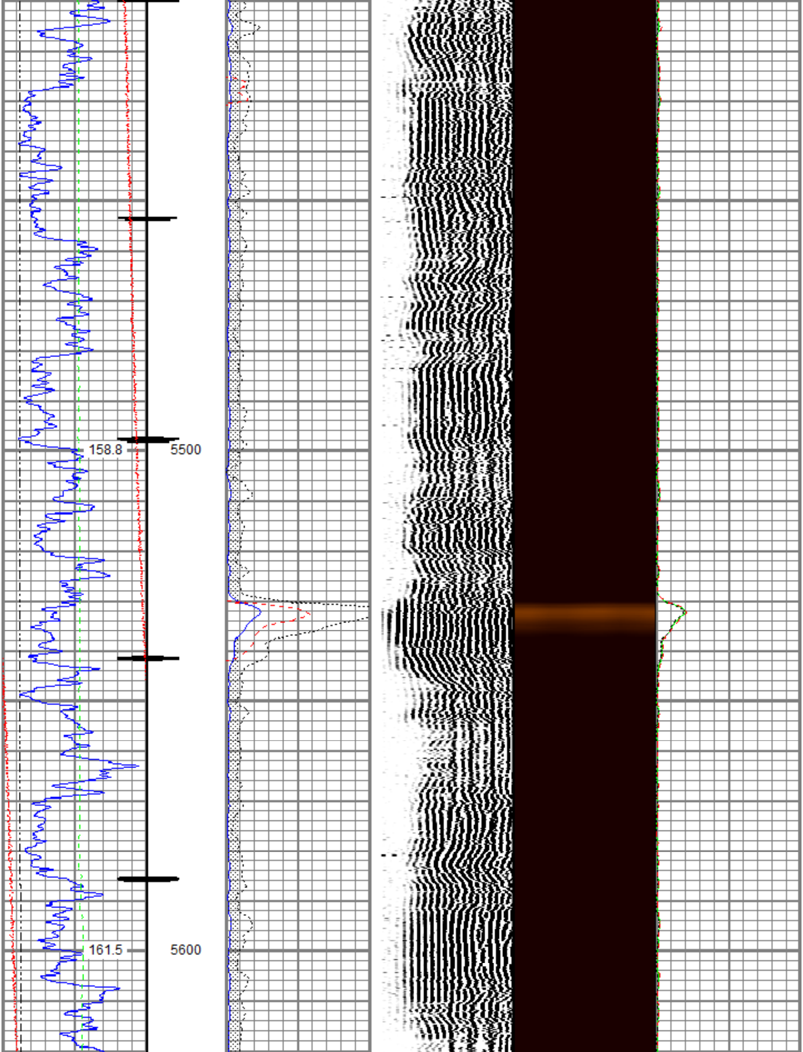

136.1
4400
138.2
4500

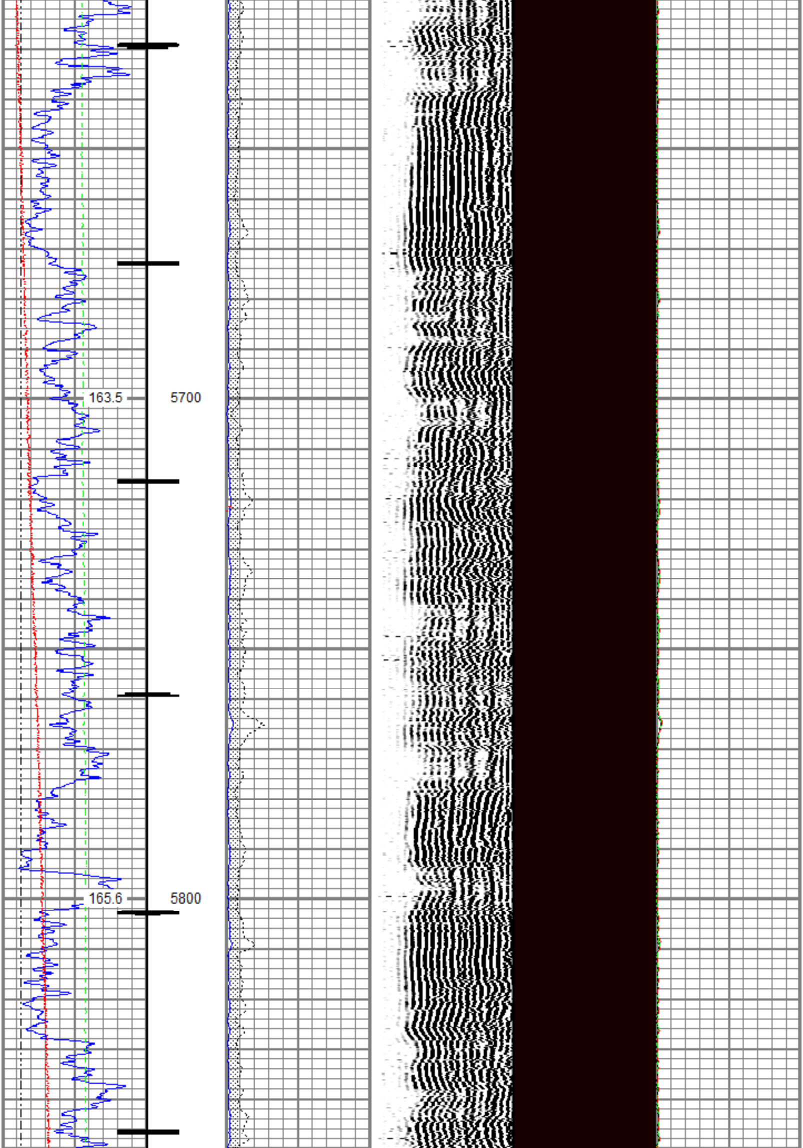

140.5
4600
143.0
4700

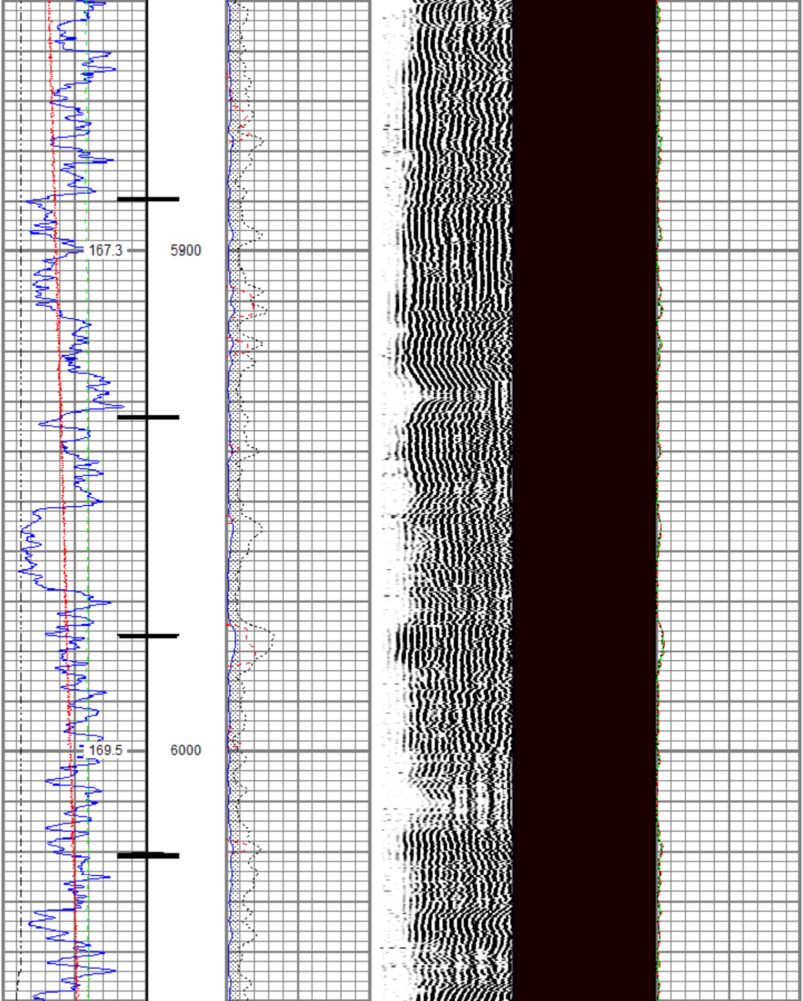

145.3
4800
147.3
4900

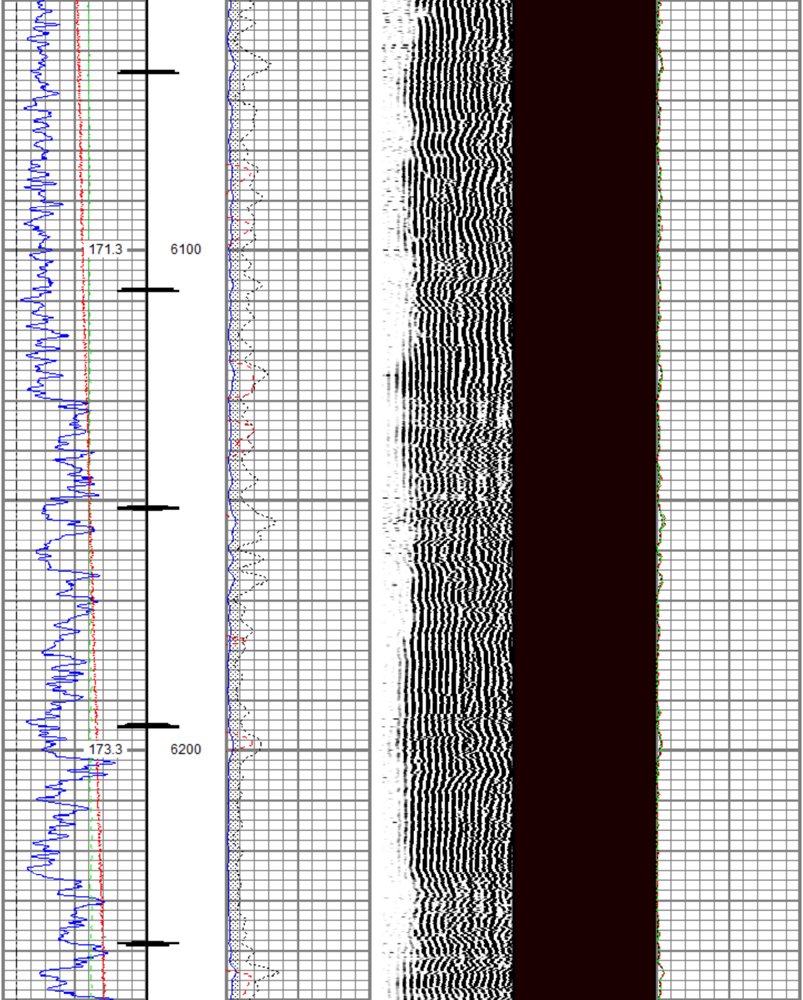

149.4
5000
151.1
5100

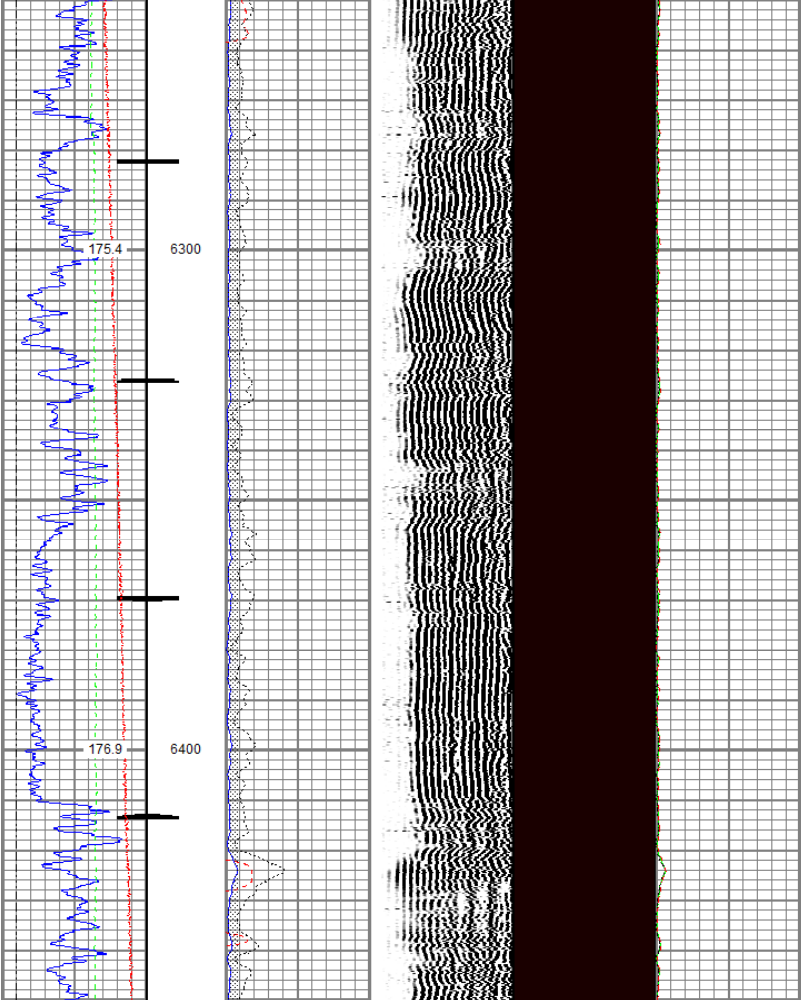

152.7
5200
154.8
5300
156.8
5400

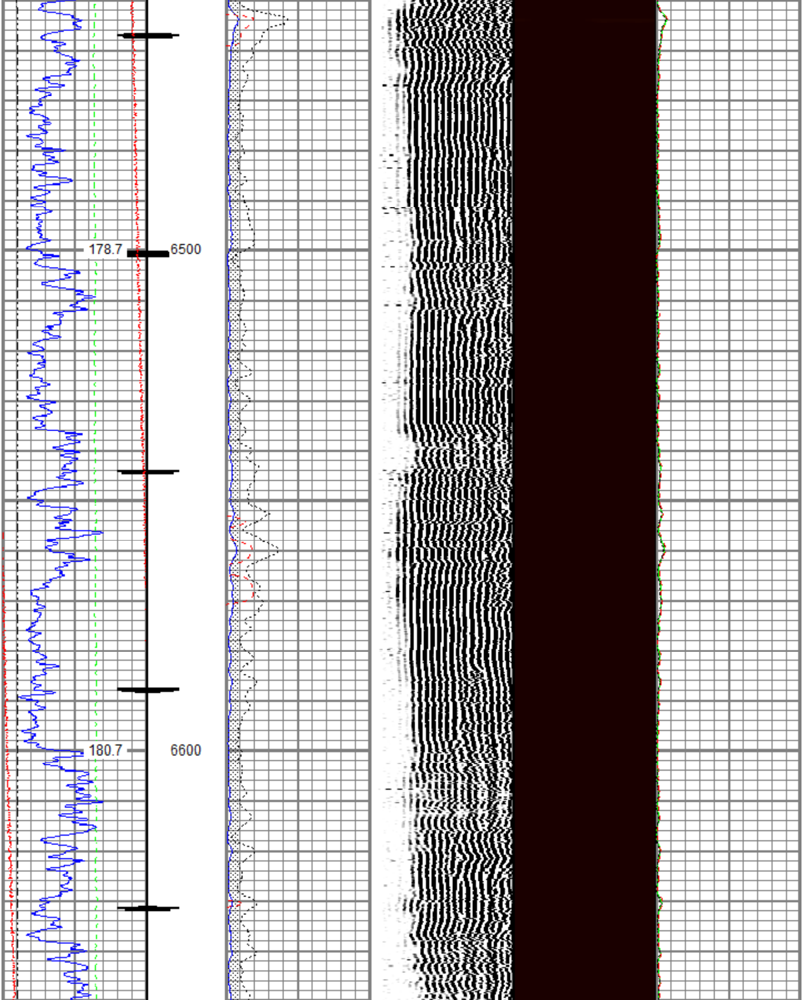

158.8
5500
161.5
5600

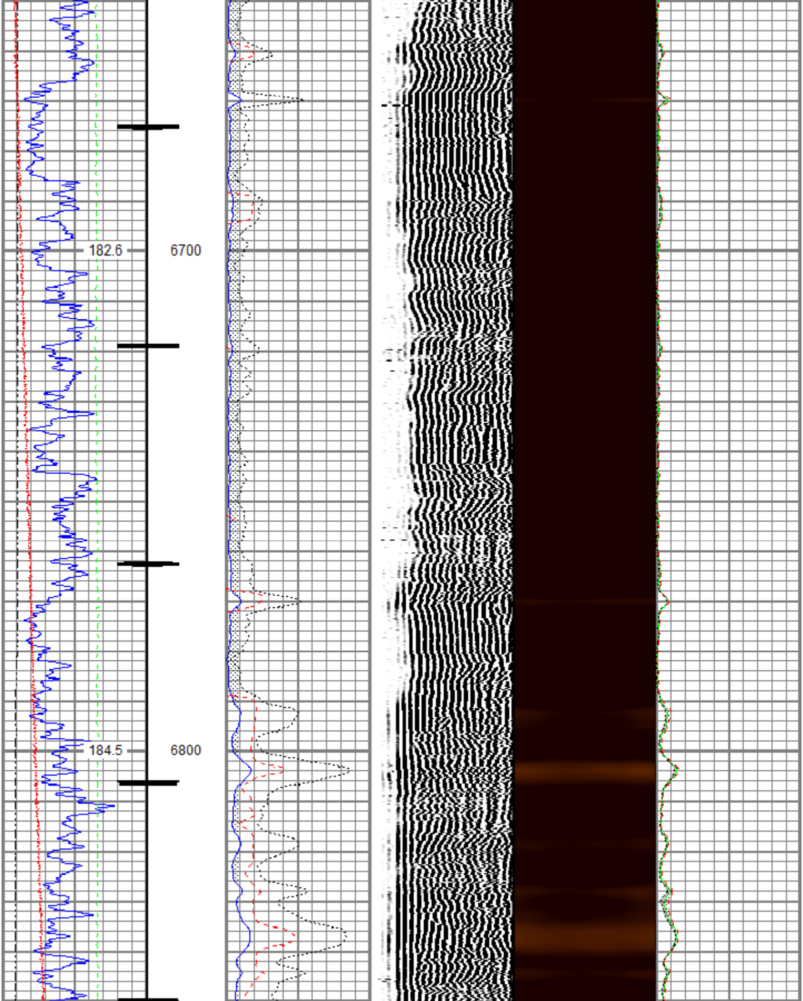

163.5
5700
165.6
5800

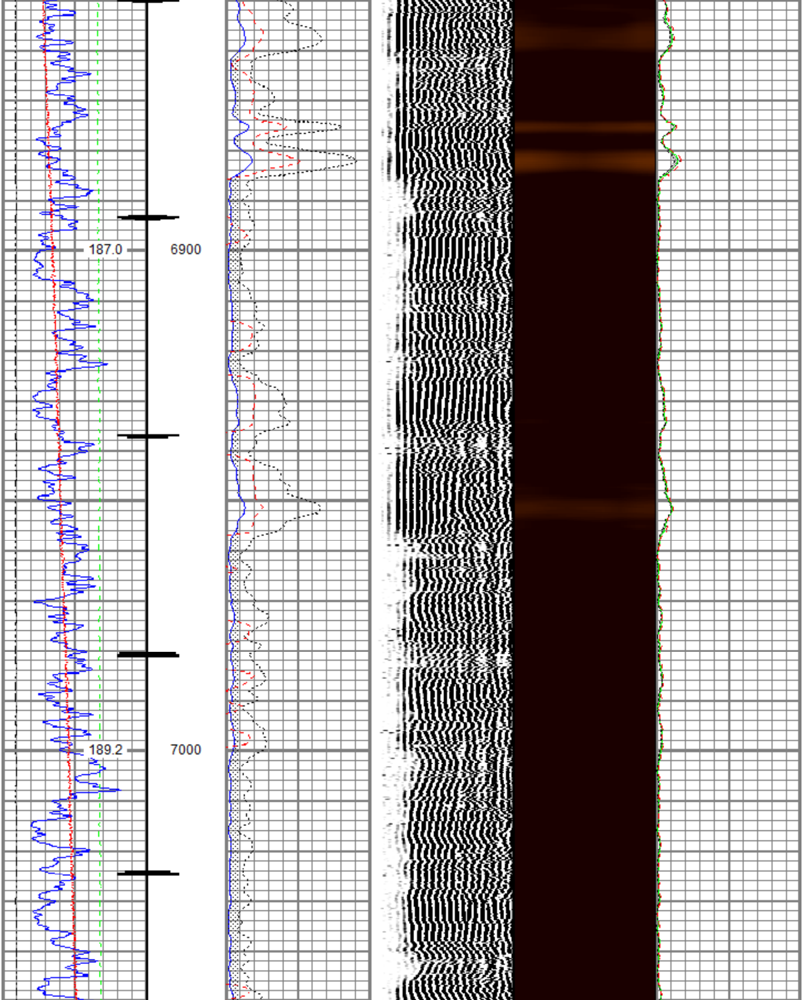

167.3
5900
169.5
6000

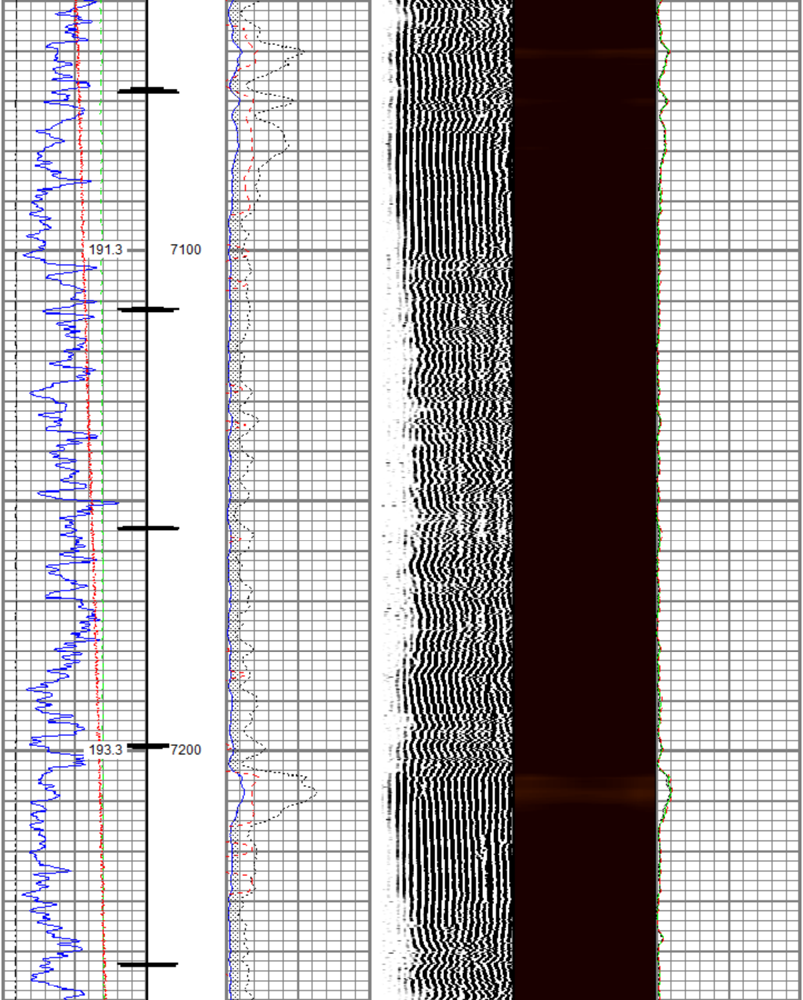

171.3
6100
173.3
6200

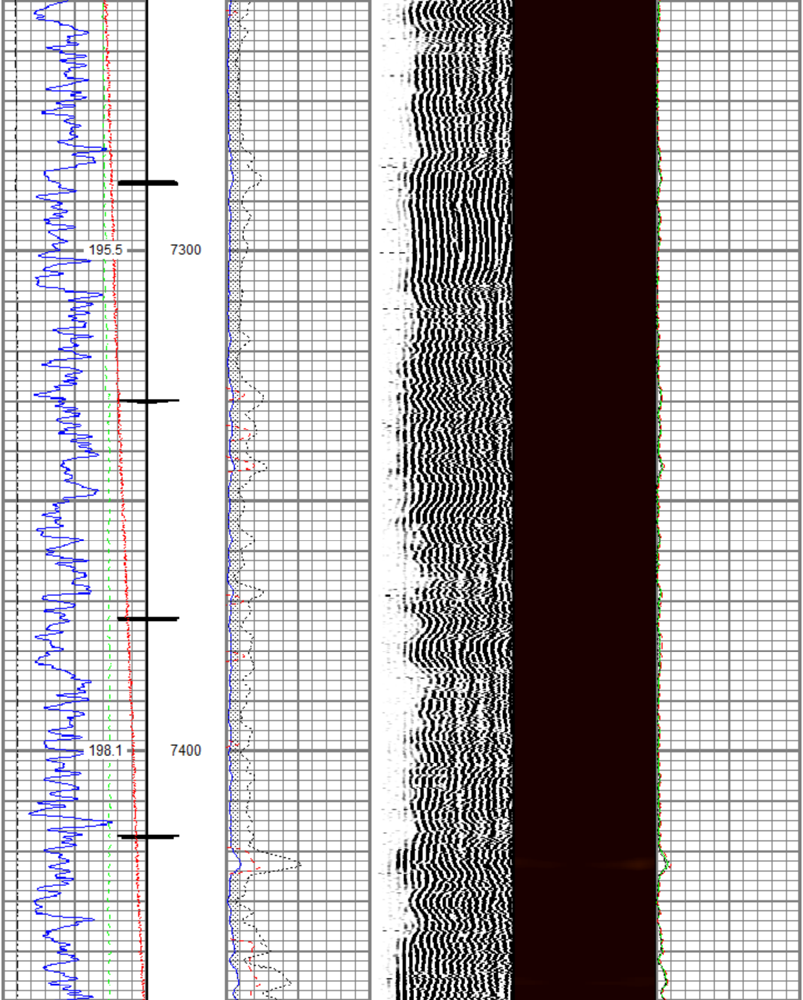

175.4
6300
176.9
6400

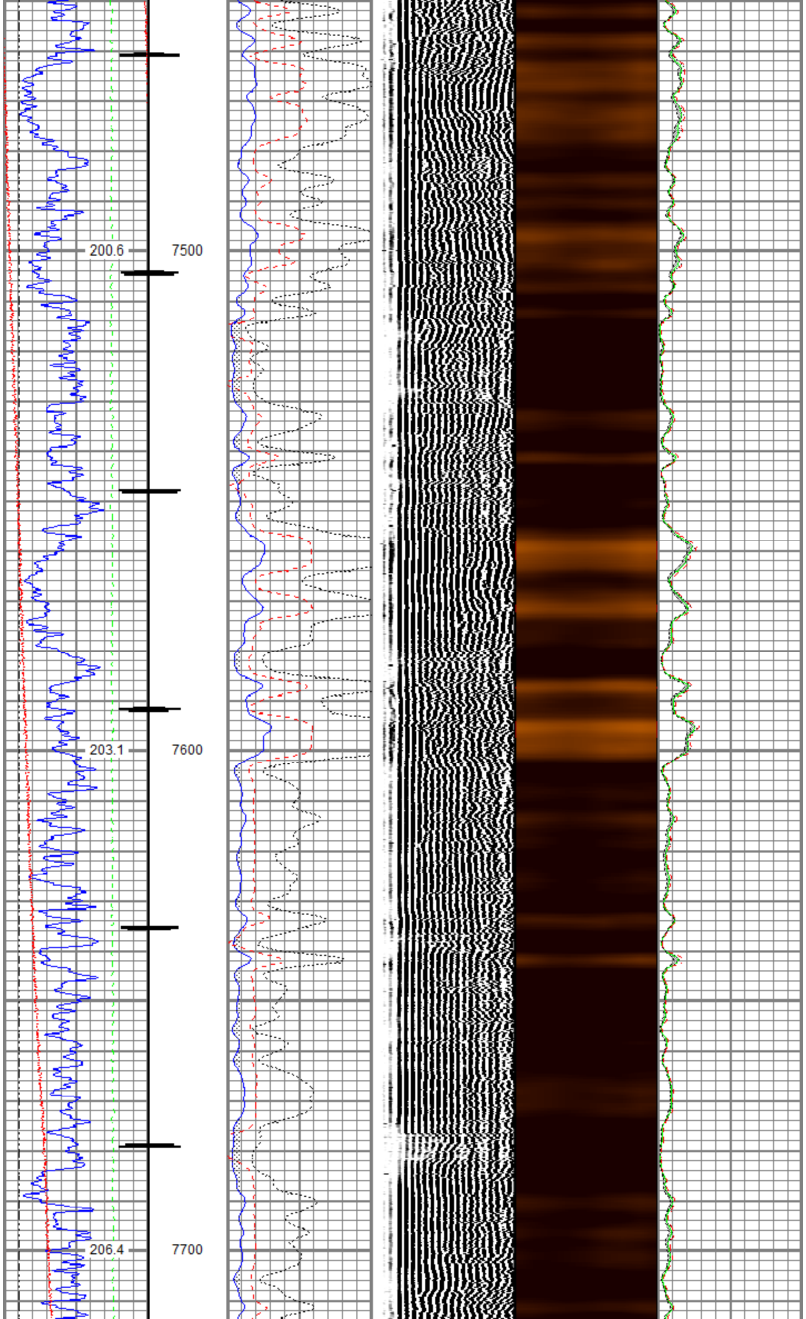

178.7
6500
180.7
6600


182.6
6700
184.5
6800


187.0
6900
189.2
7000


191.3
7100
193.3
7200


195.5
7300
198.1
7400


200.6
7500
203.1
7600
206.4
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				
Temperature				
0 (degF) 20				

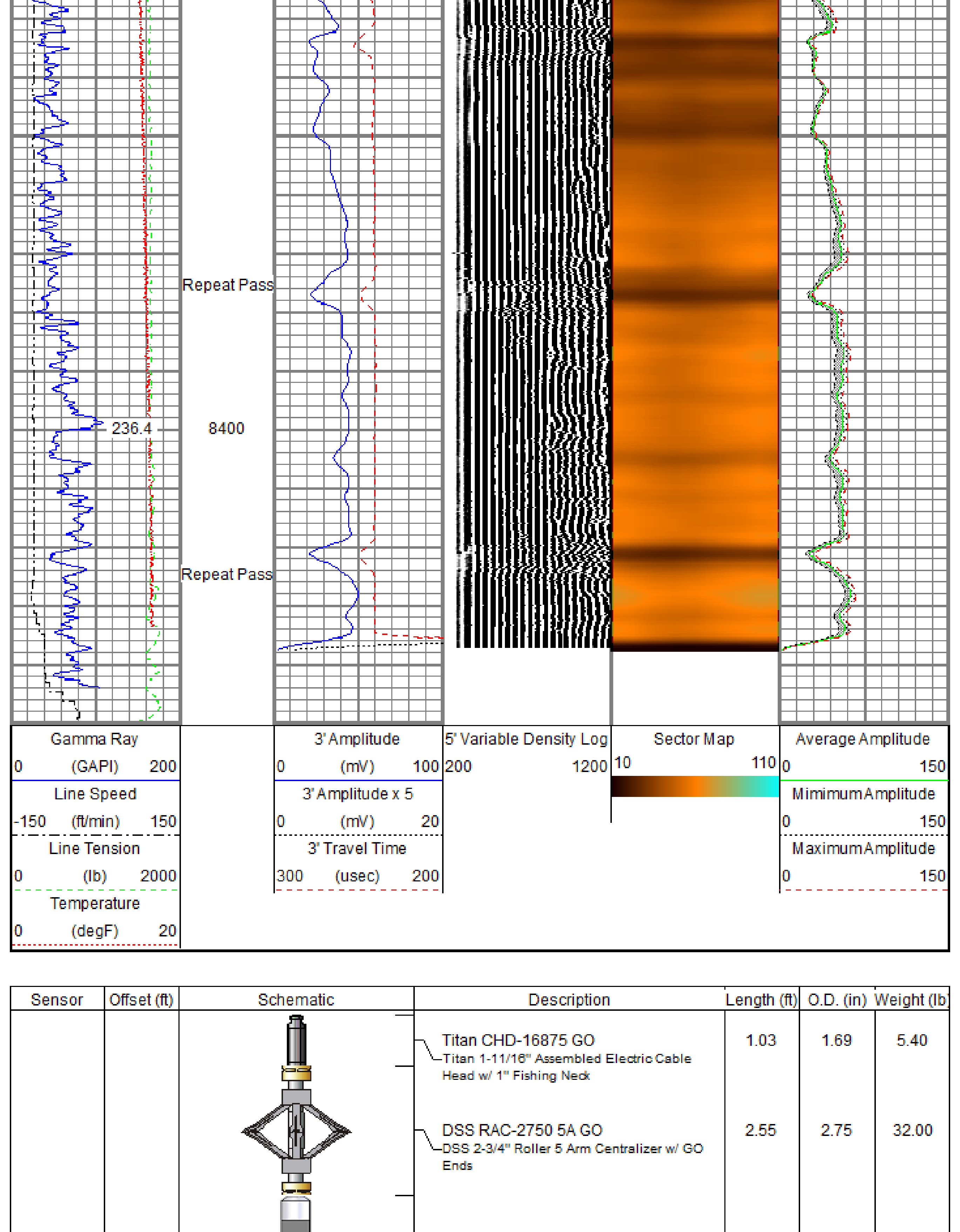
RELIANCE
OILFIELD SERVICES

Repeat Pass

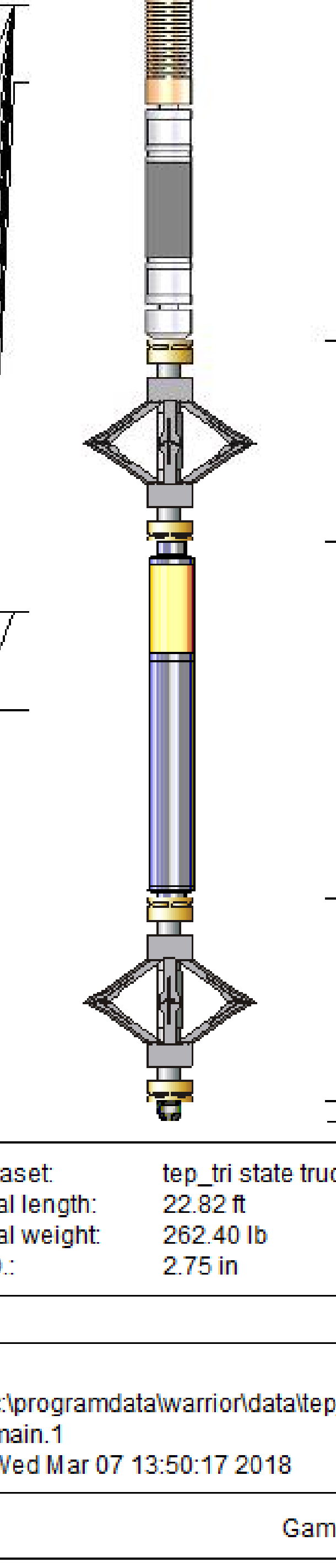
Recorded With 0 PSI Surface Induced Pressure

Database File	tep_tri state trucking pa 643-26_rbl_03-05-18\tep_tri state trucking pa 643-26_rbl_03-05-18.db
Dataset Pathname	repeat.1
Presentation Format	ros_rbt004_tep
Dataset Creation	Wed Mar 07 14:01:01 2018
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
Temperature				
0 (degF) 20				



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
Temperature				
0 (degF) 20				



Sensor	Offset (ft)	Description	Length (ft)	O.D. (in)	Weight (lb
		Titan CHD-16875 GO Titan 1-11/16" Assembled Electric Cable Head w/ 1" Fishing Neck	1.03	1.69	5.40
		DSS RAC-2750 5A GO DSS 2-3/4" Roller 5 Arm Centralizer w/ GO Ends	2.55	2.75	32.00
TEMP	16.33				
		Probe Radii-2750 RBT (FW1305-098) Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub	9.39	2.75	105.00
WVFS8	14.10				
WVFS7	14.10				
WVFS6	14.10				
WVFS5	14.10				
WVFS4	14.10				
WVFS3	14.10				
WVFS2	14.10				
WVFS1	14.10				
WVFCAL	14.10				
WVF3FT	14.10				
WVF5FT	13.10				
		DSS RAC-2750 5A GO DSS 2-3/4" Roller 5 Arm Centralizer w/ GO Ends	2.55	2.75	32.00
CCLS2	6.42				
CCLS1	6.42				
GR	5.18				
		Probe GR-CCL-2750 GOB (FW1307-038) Probe 2-3/4" rev.2 Digital Scintillation Gamma Ray/CCL Combined	4.51	2.75	55.00
		DSS RAC-2750 5A GO DSS 2-3/4" Roller 5 Arm Centralizer w/ GO Ends	2.55	2.75	32.00
		GO BN-14375 GO 1-7/16" Bull Nose with Go Box Top	0.25	1.44	1.00

Dataset:	tep_tri state trucking pa 643-26_rbl_03-05-18.db: field/well/run1/main.1
Total length:	22.82 ft
Total weight:	262.40 lb
O.D.:	2.75 in

Calibration Report

Database File	c:\programdata\warrior\data\tep_tri state trucking pa 643-26_rbl_03-05-18\tep_tri state trucking pa 643-26_rb
Dataset Pathname	main.1
Dataset Creation	Wed Mar 07 13:50:17 2018

Gamma Ray Calibration Report

Serial Number:	FW1307-038	
Tool Model:	2750 GOB	
Performed:	Sun Nov 12 12:44:12 2017	
Calibrator Value:	637.0	GAPI
Background Reading:	113.2	cps
Calibrator Reading:	1022.4	cps
Sensitivity:	0.7007	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	FW1305-098	
Tool Model:	2750 RBT	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	113.296	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.003	0.686	0.800	81.196	116.609	1.149
CAL	0.756	0.727				
5'	0.000	0.540	0.800	81.196	148.868	0.741
SUM						
S1	-0.007	0.591	0.000	100.000	167.337	1.130
S2	-0.006	0.635	0.000	100.000	155.996	0.917
S3	-0.005	0.718	0.000	100.000	138.374	0.634
S4	-0.002	0.824	0.000	100.000	121.118	0.226
S5	-0.001	0.840	0.000	100.000	118.848	0.115
S6	-0.004	0.763	0.000	100.000	130.361	0.536
S7	-0.001	0.670	0.000	100.000	149.045	0.163
S8	-0.006	0.605	0.000	100.000	163.680	0.938

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.756	0.727	1.000	0.000

Air Zero Calibration, performed Sat Feb 17 06:03:26 2018:

	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:	FW1305-098	
Tool Model:	2750 RBT	
Performed:	Sun Nov 12 13:43:57 2017	
	Reference	Reading
Low Reference:	100.00 degF	109.43 degF
High Reference:	350.00 degF	405.87 degF
Gain:	0.84	
Offset:	7.72	
Delta Spacing:	1	

RELIANCE
OILFIELD SERVICES

Company	TEP Rocky Mountain LLC
Well	Tri State Trucking PA 643-26
Field	Parachute
County	Garfield
State	Colorado