RELIANCE OILFIELD SERVICES

Radial Cement Bond
Gamma Ray
Casing Collar Log

Company	TEP Rocky Mountain LLC
Well	Strait Bottom Ranch SG 12-22
Field	Grand Valley
County	Garfield
State	Colorado

Company TEP Rocky Mountain LLC
Well Strait Bottom Ranch SG 12-22
Field Grand Valley
County Garfield State Colorado

Location: API # : 05-045-24011
SEC 22 TWP 7S RGE 96W

Other Services --

			Elevation
Permanent Datum	Ground Level	Elevation 5665'	K.B. 5689'
Log Measured From	Kelly Bushing	24 FT	D.F. 5688'
Drilling Measured From	Kelly Bushing		G.L. 5665'

Date	02-APR-2020
Run Number	One
Depth Driller	6438 FT
Depth Logger	6388 FT
Bottom Logged Interval	6376 FT
Top Log Interval	Surface
Open Hole Size	8.750"
Type Fluid	Fresh Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	193°F
Estimated Cement Top	See Log
Time Well Ready	ROA
Time Logger on Bottom	16:57
Equipment Number	HD-0359
Location	Grand Junction, CO
Recorded By	A. Ellsworth
Witnessed By	--

Borehole Record

Run Number	Bit	From	To

Tubing Record

Size	Weight	From	To

Casing Record	Size (in)	Wgt (lbs/Ft)	Grade	Top	Bottom
Surface Casing	9 5/8	32.3	H-40	Surface	1002 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	6394 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 3846 - 3867 FT
Log ran 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\tep_strait bottom ranch sg 12-22_rbl_04-02-20\processed_tep_strait bottom ranch sg 12-22_rbl_04-02-
Dataset Pathname	Main.5
Presentation Format	ros_radii_tep
Dataset Creation	Sat Apr 04 12:12:20 2020
Charted by	Depth in Feet scaled 1:240

Track 1	Track 2	Track 3	Track 4	Track 5
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				
Casing Collar Locator				

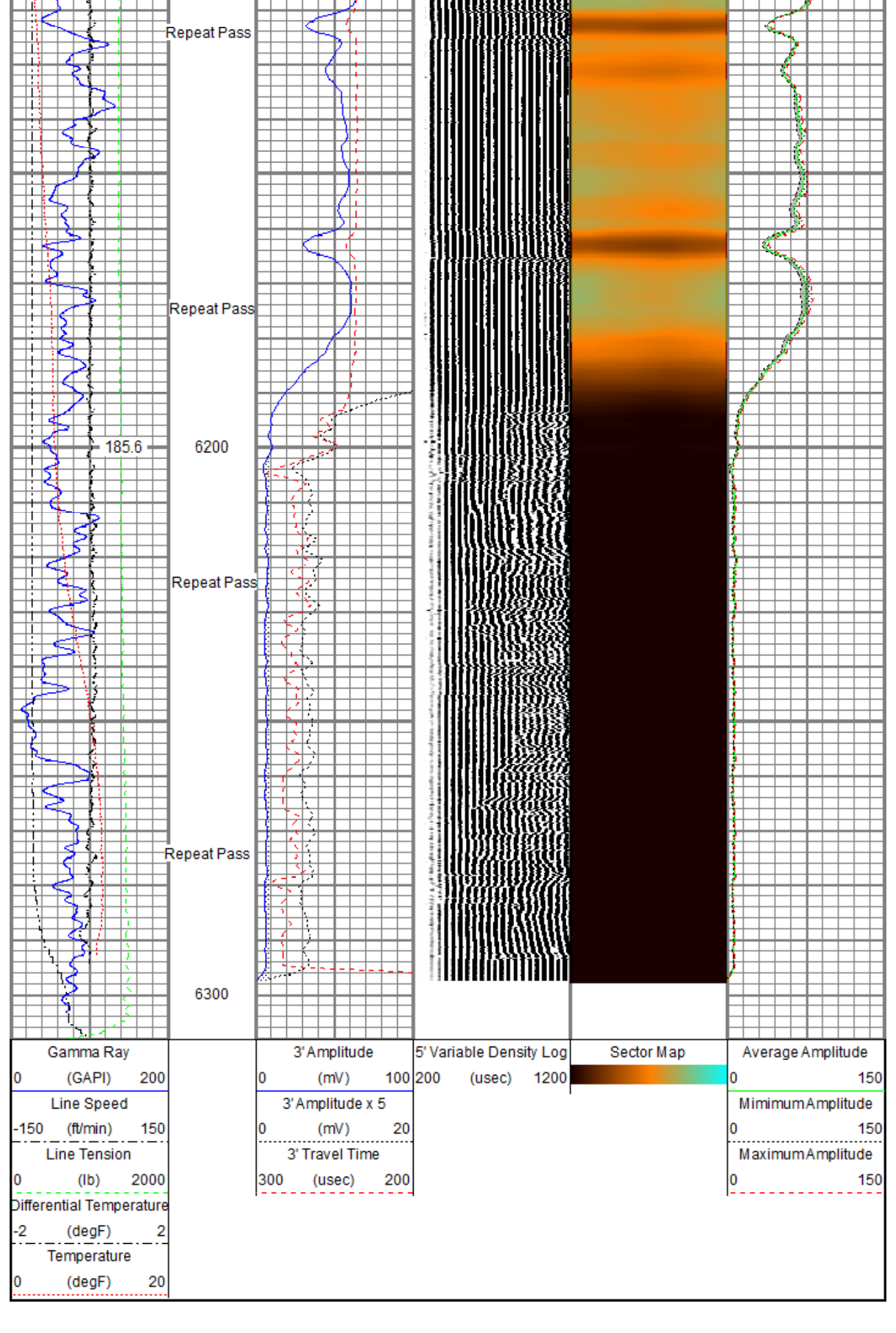
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 200	0 (mV) 100	200 (usec) 1200		0 150
Line Speed	3' Amplitude x 5			Mimimum Amplitude
-150 (ft/min) 150	0 (mV) 20			0 150
Line Tension	3' Travel Time			Maximum Amplitude
0 (lb) 2000	300 (usec) 200			0 150
Differential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

Repeat Pass

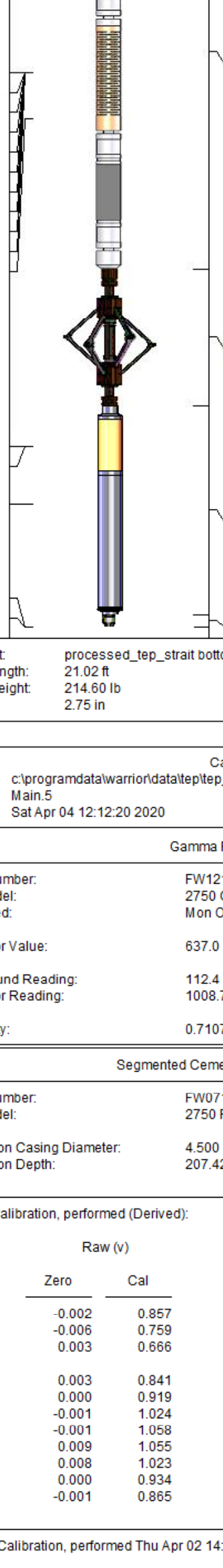
Recorded With 0 PSI Surface Induced Pressure

Database File tep\tep_strait bottom ranch sg 12-22_rbl_04-02-20\processed_tep_strait bottom ranch sg 12-22_rbl_04-02-
Dataset Pathname repeat.2
Presentation Format ros_radii_tep
Dataset Creation Sat Apr 04 12:21:51 2020
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 (usec) 1200		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
Differential Temperature				
-2 (degF) 2				
Temperature				
0 (degF) 20				



Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 200	0 (mV) 100	200 (usec) 1200		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
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	14.16					
			Probe Radii-2750 RBT (FW0712-020) Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub	9.39	2.75	105.00
WVFS8	11.93					
WVFS7	11.93					
WVFS6	11.93					
WVFS5	11.93					
WVFS4	11.93					
WVFS3	11.93					
WVFS2	11.93					
WVFS1	11.93					
WVFCAL	11.93					
WVF3FT	11.93					
WVF5FT	10.93					
			BTA-MUD BTA 2-3/4" Roller 6 Arm Centralizer with Reversible Ends	2.92	2.72	25.00
CCL$2	3.88					
CCL$1	3.88					
GR	2.63		Probe GR-CCL-2750 GOB (FW1211-081) Probe 2-3/4" rev.2 Digital Scintillation Gamma Ray/CCL Combined with GO Bottom	4.51	2.75	55.00
LOCTIM	0.00					
UTCTIM	0.00		GO BN-14375 GO 1-7/16" Bull Nose with Go Box Top	0.25	1.44	1.00

Dataset: processed_tep_strait bottom ranch sg 12-22_rbl_04-02-20.db: field/well/run1/Main.5
Total length: 21.02 ft
Total weight: 214.60 lb
O.D.: 2.75 in

Calibration Report

Database File c:\programdata\warrior\data\tep\tep_strait bottom ranch sg 12-22_rbl_04-02-20\processed_tep_strait bottom
Dataset Pathname Main.5
Dataset Creation Sat Apr 04 12:12:20 2020

Gamma Ray Calibration Report

Serial Number:	FW1211-081	
Tool Model:	2750 GOB	
Performed:	Mon Oct 01 11:32:39 2018	
Calibrator Value:	637.0	GAPI
Background Reading:	112.4	cps
Calibrator Reading:	1008.7	cps
Sensitivity:	0.7107	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	FW0712-020	
Tool Model:	2750 RBT	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	207.426	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.002	0.857	0.800	81.196	93.560	1.031
CAL	-0.006	0.759				
5'	0.003	0.666	0.800	81.196	121.254	0.386
SUM						
S1	0.003	0.841	0.000	100.000	119.262	-0.320
S2	0.000	0.919	0.000	100.000	108.876	-0.047
S3	-0.001	1.024	0.000	100.000	97.479	0.143
S4	-0.001	1.058	0.000	100.000	94.447	0.076
S5	0.009	1.055	0.000	100.000	95.551	-0.834
S6	0.008	1.023	0.000	100.000	98.579	-0.837
S7	0.000	0.934	0.000	100.000	107.134	-0.035
S8	-0.001	0.865	0.000	100.000	115.425	0.108

Air Zero Calibration, performed Thu Apr 02 14:23:24 2020:

	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:	FW0712-020	
Tool Model:	2750 RBT	
Performed:	Mon Oct 01 11:32:14 2018	
	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	

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County	Garfield
State	Colorado