RELIANCE OILFIELD SERVICES

Radial Cement Bond
Gamma Ray
Casing Collar Log

Company TEP Rocky Mountain LLC
Well Strait Bottom Ranch SG 521-22
Field Grand Valley
County Garfield
State Colorado

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Location: API # : 05-045-24005
SEC 22 TWP 7S RGE 96W
Other Services ---

Permanent Datum Ground Level Elevation 5665'
Log Measured From Kelly Bushing 24 FT
Drilling Measured From Kelly Bushing

Elevation
K.B. 5689'
D.F. 5688'
G.L. 5665'

Date	02-APR-2020
Run Number	One
Depth Driller	6381 FT
Depth Logger	6328 FT
Bottom Logged Interval	6316 FT
Top Log Interval	Surface
Open Hole Size	8.750"
Type Fluid	Fresh Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	192°F
Estimated Cement Top	See Log
Time Well Ready	ROA
Time Logger on Bottom	15:15
Equipment Number	HD-0359
Location	Grand Junction, CO
Recorded By	A. Ellsworth
Witnessed By	---

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	1041 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	6339 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 3800 - 3822 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 521-22_rbl_04-02-20\processed_tep_strait bottom ranch sg 521-22_rbl_04-0
Dataset Pathname	Main.1
Presentation Format	ros_radii_tep
Dataset Creation	Sun Apr 05 09:41:40 2020
Charted by	Depth in Feet scaled 1:240

Gamma Ray 0 (GAPI) 200
Line Speed -150 (ft/min) 150
Line Tension 0 (lb) 2000
Differential Temperature -2 (degF) 2
Temperature 0 (degF) 20
Casing Collar Locator

3' Amplitude 0 (mV) 100
3' Amplitude x 5 0 (mV) 20
3' Travel Time 300 (usec) 200

5' Variable Density Log 200 (usec) 1200

Sector Map

Average Amplitude 0 150
MimimumAmplitude 0 150
MaximumAmplitude 0 150

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				

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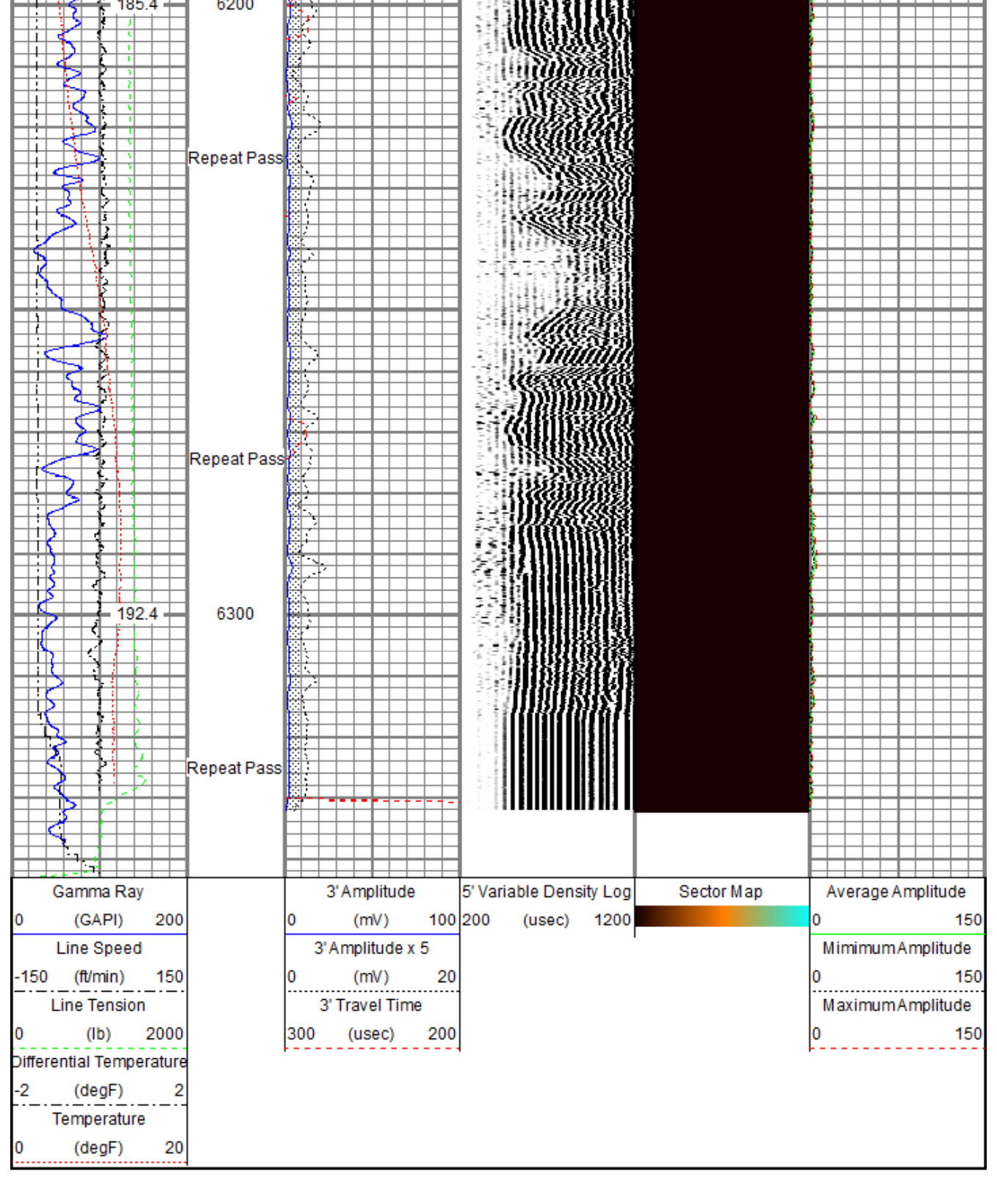
Repeat Pass

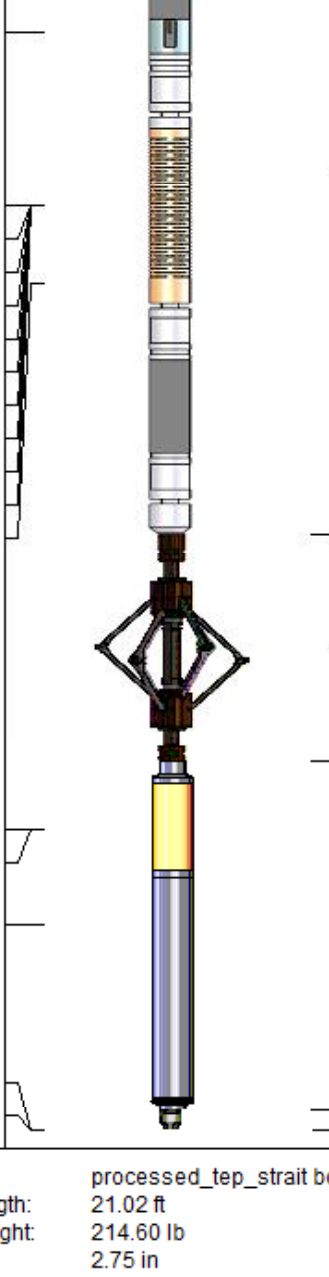
Recorded With 0 PSI Surface Induced Pressure

Database File tep\tep_strait bottom ranch sg 521-22_rbl_04-02-20\processed_tep_strait bottom ranch sg 521-22_rbl_04-0
Dataset Pathname Repeat.2
Presentation Format ros_radii_tep
Dataset Creation Sun Apr 05 09:51:17 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					
WVFS8 WVFS7 WVFS6 WVFS5 WVFS4 WVFS3 WVFS2 WVFS1 WVFCAL WVF3FT WVF5FT	11.93 11.93 11.93 11.93 11.93 11.93 11.93 11.93 11.93 11.93 10.93		Probe Radii-2750 RBT (FW0712-020) Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub	9.39	2.75	105.00
			BTA-MUD BTA 2-3/4" Roller 6 Arm Centralizer with Reversible Ends	2.92	2.72	25.00
CCL$2 CCL$1	3.88 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 UTCTIM	0.00 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 521-22_rbl_04-02-20.db: field/well/run1/Main.1
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 521-22_rbl_04-02-20\processed_tep_strait bottom
Dataset Pathname Main.1
Dataset Creation Sun Apr 05 09:41:40 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	0.824	0.800	81.196	97.294	1.023
CAL	-0.006	0.759				
5'	0.001	0.719	0.800	81.196	111.976	0.655
SUM						
S1	-0.001	0.770	0.000	100.000	129.716	0.097
S2	-0.002	0.803	0.000	100.000	124.279	0.204
S3	-0.002	0.853	0.000	100.000	116.950	0.262
S4	0.001	0.876	0.000	100.000	114.345	-0.120
S5	0.002	0.867	0.000	100.000	115.623	-0.225
S6	0.005	0.849	0.000	100.000	118.385	-0.537
S7	-0.002	0.801	0.000	100.000	124.522	0.223
S8	-0.002	0.778	0.000	100.000	128.220	0.220

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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Field	Grand Valley
County	Garfield
State	Colorado