Radial Cement Bond Gamma Ray Casing Collar Log

RELIANCE OILFIELD SERVICES

Company	TEP Rocky Mountain LLC
Well	Chevron GM 443-19
Field	Grand Valley
County	Garfield
State	Colorado

Company TEP Rocky Mountain LLC
Well Chevron GM 443-19
Field Grand Valley
County Garfield State Colorado
Location: API # : 05-045-24350
Other Services ---
SEC 20 TWP 6S RGE 96W

Permanent Datum	Ground Level	Elevation	5752.1'	Elevation
Log Measured From	Kelly Bushing	24 FT		K.B. 5776.1'
				D.F. ---
Drilling Measured From	Kelly Bushing			G.L. 5752.1'

Date	03-FEB-2021
Run Number	One
Depth Driller	7688 FT
Depth Logger	7582 FT
Bottom Logged Interval	7570 FT
Top Log Interval	Surface
Open Hole Size	8.750"
Type Fluid	Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	226°F
Estimated Cement Top	See Log
Time Well Ready	ROA
Time Logger on Bottom	9:40
Equipment Number	HD-0331
Location	Grand Junction, CO
Recorded By	Z. Fisher
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	36	J-55	Surface	1037 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	7644 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 4521 - 4543 FT
Recorded 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_chevron gm 443-19_rbl_02-03-21\tep_chevron gm 443-19_rbl_02-03-21.db
Dataset Pathname	main.3
Presentation Format	ros_radii_tep
Dataset Creation	Fri Feb 05 08:46:15 2021
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
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				
Differential Temperature				
-2 (degF) 2				
Temperature				
0 (degF) 20				

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

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Repeat Pass

Recorded With 0 PSI Surface Induced Pressure

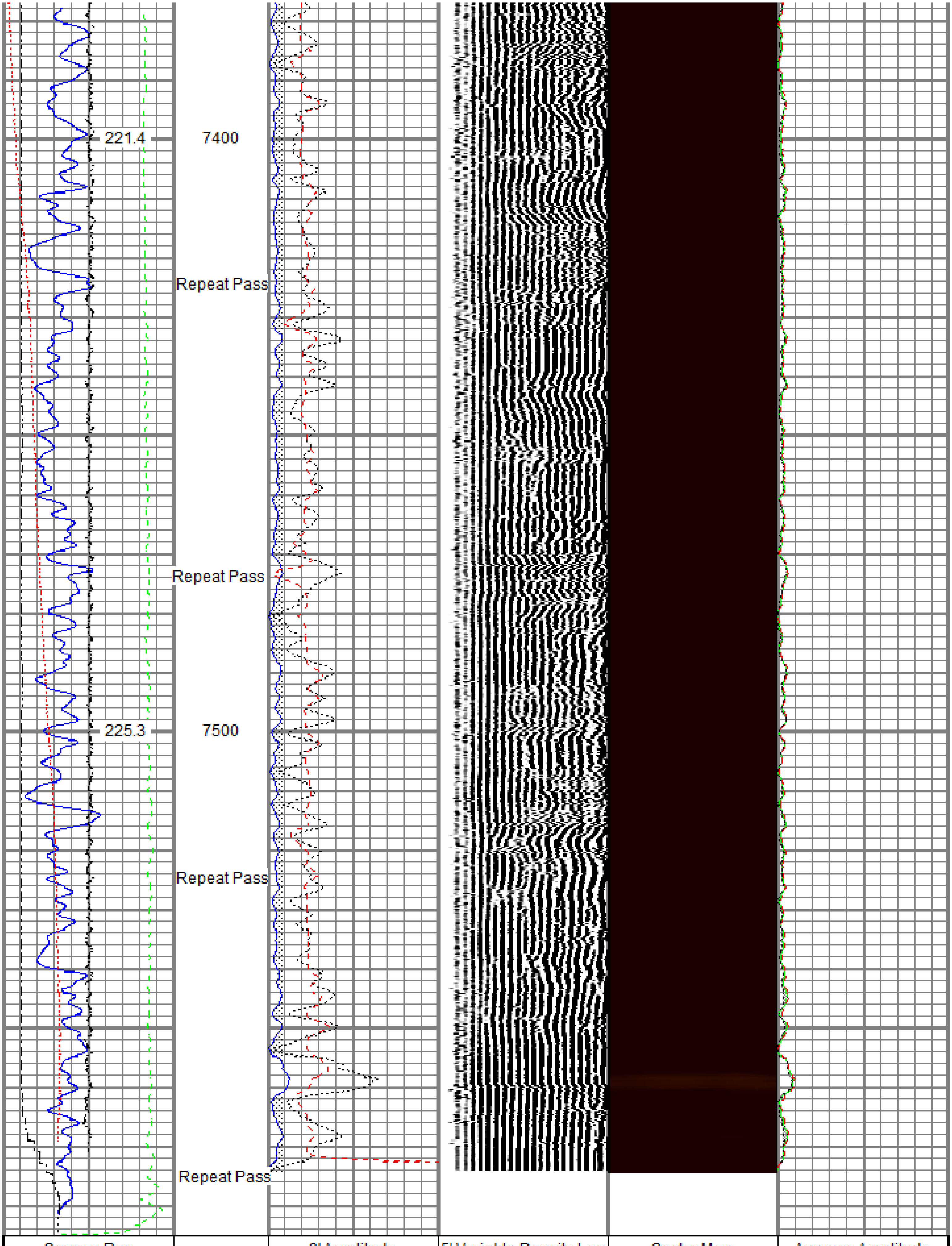
Database File	tep\tep_chevron gm 443-19_rbl_02-03-21\tep_chevron gm 443-19_rbl_02-03-21.db
Dataset Pathname	repeat.2
Presentation Format	ros_radii_tep
Dataset Creation	Fri Feb 05 08:48:17 2021
Charted by	Depth in Feet scaled 1:240

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

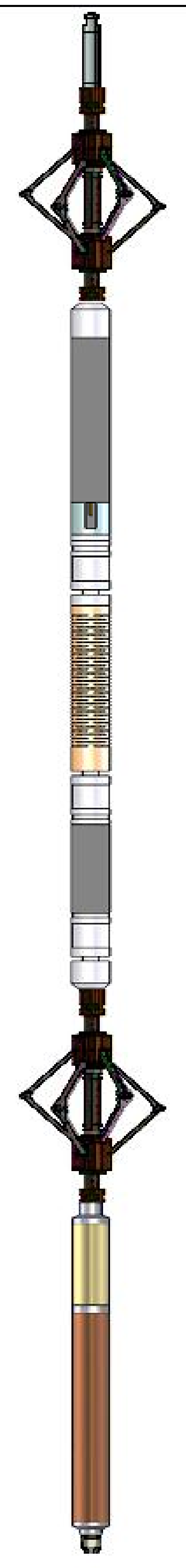
0 (lb) 2000
Differential Temperature
-2 (degF) 2
Temperature
0 (degF) 20

300 (usec) 200

0 150



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				



Sensor	Offset (ft)
TEMP	14.19
WVFS8	11.96
WVFS7	11.96
WVFS6	11.96
WVFS5	11.96
WVFS4	11.96
WVFS3	11.96
WVFS2	11.96
WVFS1	11.96
WVFCAL	11.96
WVF3FT	11.96
WVF5FT	10.96
CCL	3.88
GR	1.14

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
Probe Radii-2750 RBT (FW1305-098) 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
Probe GR-CCL ANL-2750 A (FW1305-083) Probe 2.75" Analog 4 Channel Pulse Gamma Ray/CCL Combined	4.54	2.75	55.00
GO BN-14375 GO 1-7/16" Bull Nose with Go Box Top	0.25	1.44	1.00

Dataset: tep_chevron gm 443-19_rbl_02-03-21.db: field/well/run1/main.3
Total length: 21.05 ft
Total weight: 214.60 lb
O.D.: 2.75 in

Calibration Report

Database File c:\programdata\warrior\data\tep\tep_chevron gm 443-19_rbl_02-03-21\tep_chevron gm 443-19_rbl_02-03-2
Dataset Pathname main.3
Dataset Creation Fri Feb 05 08:46:15 2021

Gamma Ray Calibration Report

Serial Number: FW1305-083
Tool Model: 2750 A
Performed: Sun Nov 12 05:37:57 2017

Calibrator Value: 637.0 GAPI

Background Reading: 95.7 cps
Calibrator Reading: 982.0 cps

Sensitivity: 0.7188 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: FW1305-098
Tool Model: 2750 RBT

Calibration Casing Diameter: 4.500 in
Calibration Depth: 30.128 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.010	0.813	0.800	81.196	100.151	-0.182
CAL	0.004	0.760				
5'	0.013	0.737	0.800	81.196	111.078	-0.689
SUM						
S1	0.016	0.728	0.000	100.000	140.448	-2.210
S2	0.015	0.786	0.000	100.000	129.656	-1.944
S3	0.011	0.859	0.000	100.000	118.009	-1.351
S4	0.012	0.889	0.000	100.000	114.027	-1.388
S5	0.016	0.871	0.000	100.000	116.997	-1.864
S6	0.016	0.836	0.000	100.000	122.038	-1.992
S7	0.012	0.770	0.000	100.000	131.945	-1.559
S8	0.011	0.732	0.000	100.000	138.690	-1.572

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.004	0.760	1.000	0.000

Air Zero Calibration, performed Wed Feb 3 09:23:21 2021:

	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: Mon Oct 1 11:32:17 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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