RELIANCE OILFIELD SERVICES

Radial Cement Bond
Gamma Ray
Casing Collar Log

Company TEP Rocky Mountain LLC
Well Chevron GM 32-19
Field Grand Valley
County Garfield
State Colorado

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Location: API # : 05-045-24360
SEC 20 TWP 6S RGE 96W

Other Services

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

Date	02-FEB-2021		
Run Number	One		
Depth Driller	7783 FT		
Depth Logger	7679 FT		
Bottom Logged Interval	7667 FT		
Top Log Interval	Surface		
Open Hole Size	8.750"		
Type Fluid	Water		
Density / Viscosity	8.34 lb/gal		
Max. Recorded Temp.	229°F		
Estimated Cement Top	See Log		
Time Well Ready	ROA		
Time Logger on Bottom	7:30		
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	1028 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	7749 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 4735 - 4757 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 32-19_rbl_02-02-21\tep_chevron gm 32-19_rbl_02-02-21.db
Dataset Pathname	main.4
Presentation Format	ros_radii_tep
Dataset Creation	Wed Feb 03 14:02:48 2021
Charted by	Depth in Feet scaled 1:240

3800
3900
4000
4100
4200
4300
4400
4500
4600
4700
Marker Joint
4800
4900
5000
5100
5200
5300
5400
5500
5600
5700
5800
5900
6000
6100
6200
6300
6400
6500
6600
6700
6800
6900
7000
7100
7200
7300
218.1
7400
223.0
7500
227.5
7600
dt(°F)
t (°F)
GR
CCL
LSPD
LTEN
t (°F)
3' TT
3' Ampx5
3' Amp
Sectors
Gamma Ray
0 (GAPI) 200
Casing Collar Locator
Line Speed
-150 (ft/min) 150
Line Tension
0 (lb) 2000
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

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

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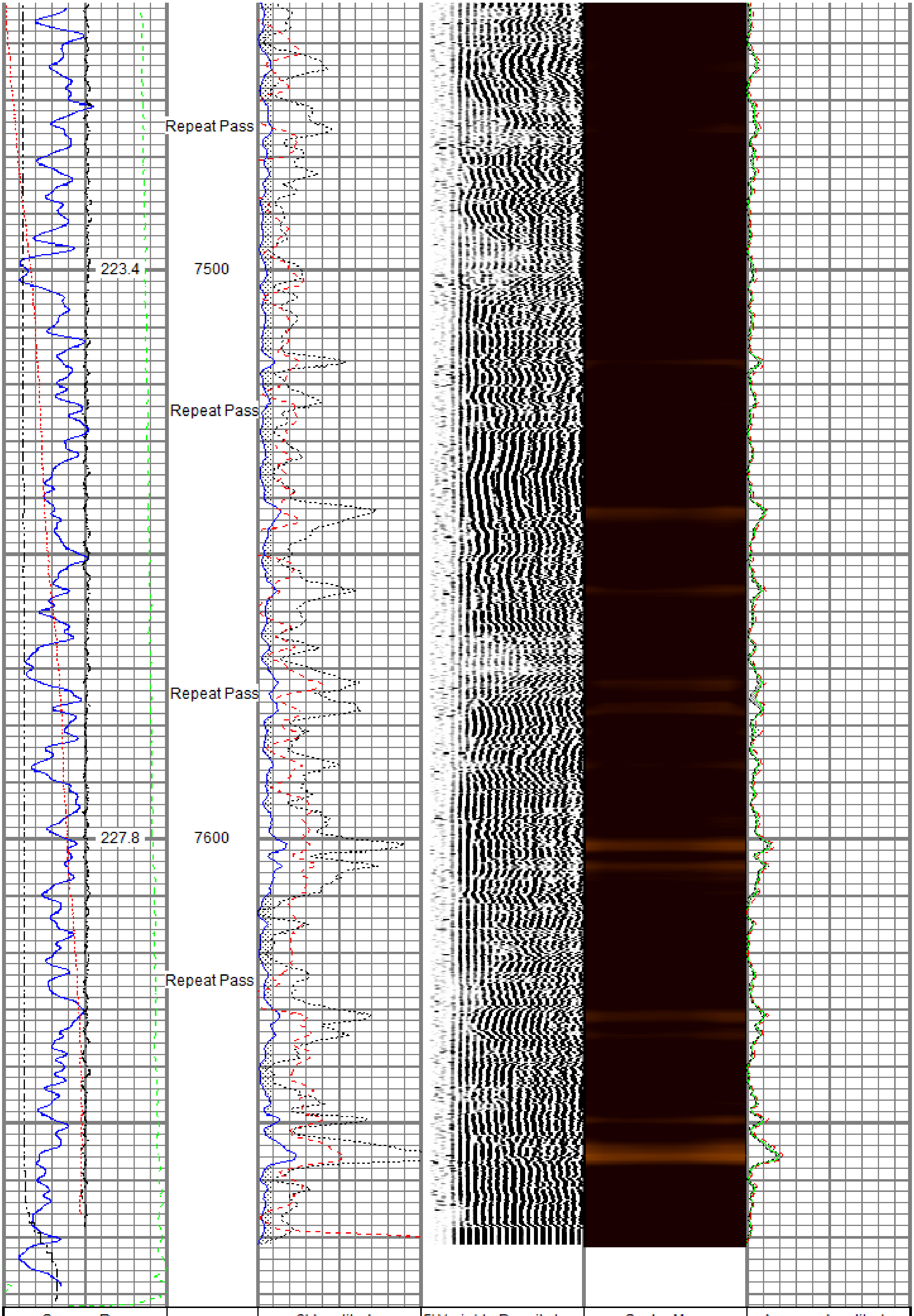
Repeat Pass

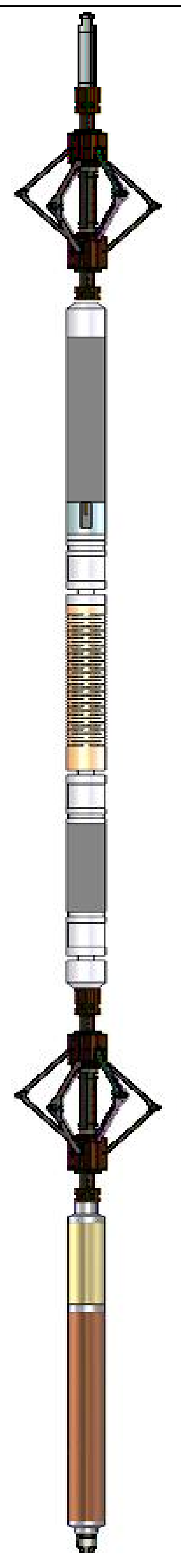
Recorded With 0 PSI Surface Induced Pressure

Database File	tep\tep_chevron gm 32-19_rbl_02-02-21\tep_chevron gm 32-19_rbl_02-02-21.db
Dataset Pathname	repeat.2
Presentation Format	ros_radii_tep
Dataset Creation	Wed Feb 03 14:08:32 2021
Charted by	Depth in Feet scaled 1:240

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				



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)	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	14.19					
			Probe Radii-2750 RBT (ROFS-RBT-0002) Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub	9.39	2.75	105.00
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					
			BTA-MUD BTA 2-3/4" Roller 6 Arm Centralizer with Reversible Ends	2.92	2.72	25.00
CCL	3.88					
			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
GR	1.14					
			GO BN-14375 GO 1-7/16" Bull Nose with Go Box Top	0.25	1.44	1.00

Dataset:	tep_chevron gm 32-19_rbl_02-02-21.db: field/well/run1/main.4
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 32-19_rbl_02-02-21\tep_chevron gm 32-19_rbl_02-02-21.d
Dataset Pathname	main.4
Dataset Creation	Wed Feb 03 14:02:48 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:	ROFS-RBT-0002	
Tool Model:	2750 RBT	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	31.479	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.004	0.642	0.800	81.196	125.994	0.341
CAL	0.003	0.764				
5'	0.007	0.674	0.800	81.196	120.488	0.005
SUM						
S1	0.003	0.581	0.000	100.000	173.049	-0.525
S2	0.010	0.618	0.000	100.000	164.350	-1.601
S3	0.008	0.656	0.000	100.000	154.266	-1.266
S4	0.006	0.692	0.000	100.000	145.735	-0.905
S5	0.006	0.683	0.000	100.000	147.612	-0.892
S6	0.005	0.654	0.000	100.000	154.020	-0.737
S7	0.004	0.612	0.000	100.000	164.629	-0.740
S8	0.007	0.606	0.000	100.000	166.820	-1.170

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.003	0.764	1.000	0.000

Air Zero Calibration, performed Mon Feb 1 11:12:18 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:	ROFS-RBT-0002	
Tool Model:	2750 RBT	
Performed:	Wed Oct 14 10:20:48 2020	
	Reference	Reading
Low Reference:	100.00 degF	109.31 degF
High Reference:	235.00 degF	267.00 degF
Gain:	0.86	
Offset:	6.43	
Delta Spacing	1	

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Well	Chevron GM 32-19
Field	Grand Valley
County	Garfield
State	Colorado