RELIANCE OILFIELD SERVICES

Temperature (Quick Look)
Gamma Ray
Casing Collar Log

Company TEP Rocky Mountain LLC
Well Federal RU 313-17
Field Rulison
County Garfield
State Colorado

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Location: SEC. 17 TWP. 7S RGE. 93W
API #: 05-045-23743
Permanent Datum: Ground Level — Elevation 8365 ft
Log Measured From: Kelly Bushing — 24 Ft
Drilling Measured From: Kelly Bushing
Other Services: CBL 8389.6' GR 8389.6' CCL 8389.6'
Elevation: K.B. 8389.6' G.L. 8365.6'

	Run 1	Run 2	Run 3
Date	06-APR-2018		
Depth Order	10777 FT		
Depth Logged	10662 FT		
Bottom Logged Interval	10662 FT		
Top Log Interval	Surface		
Type Fluid	Fresh Water		
Salinity	8,342 ppm		
Density	8.34 ppg		
Max Rec. Temp.	230 °F		
Estimated Cement Top	6,130 FT		
Time Logger on Bottom	19:45		
Equipment Number	3 Donnelly		
Location	Grand Junction, CO		
Recorded By	Warner Berry		
Witnessed By	Brandon Bisgrove		

Tool	Serial Number	Size	Weight	Length	Tare	Tare Date
Titan CHD-14375 GO	10019371	1.44	3.60	1.03		
UW AGS-001 (211461)	9-5/8	1.69	1.00	0.21		
UW XTU-002 (10017430)	4-1/2	1.69	6.50	1.58		
UW PGR-020 (10019371)	4-1/2	1.69	9.50	1.92		
UW CCL-028 (10018437)	4-1/2	3.13	36.00	1.61		
UW PRT-016 (10025093)	4-1/2	1.69	5.20	1.04		
UW BUL-006 (10019616)	4-1/2	1.69	1.20	0.22		

	Size	Weight	Grade	Top	Bottom
Casing Strings	9-5/8	40	K-55	Surface	2,000 FT
Surface Casing	4-1/2	11.6	P-110	Surface	10667 FT
Intermediate #1					
Liner					

	Size	Type	Density	Viscosity	Ph	Fluid Loss	Source	Rm @ Meas Temp	Rmf @ Meas Temp	Rmc @ Meas Temp	Source Rmf	Source Rmc	Rm @ BHT	Time Since Circ	Max Rec Temp	Equip. Location	Recorded By	Witnessed By
Primary Survey	8																	
Stage 1																		
Stage 2																		

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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
Log ran from 10662 FT to Surface
Log ran with 0 PSI Surface Induced Pressure

Thank you for choosing Reliance Oilfield Services, LLC!!

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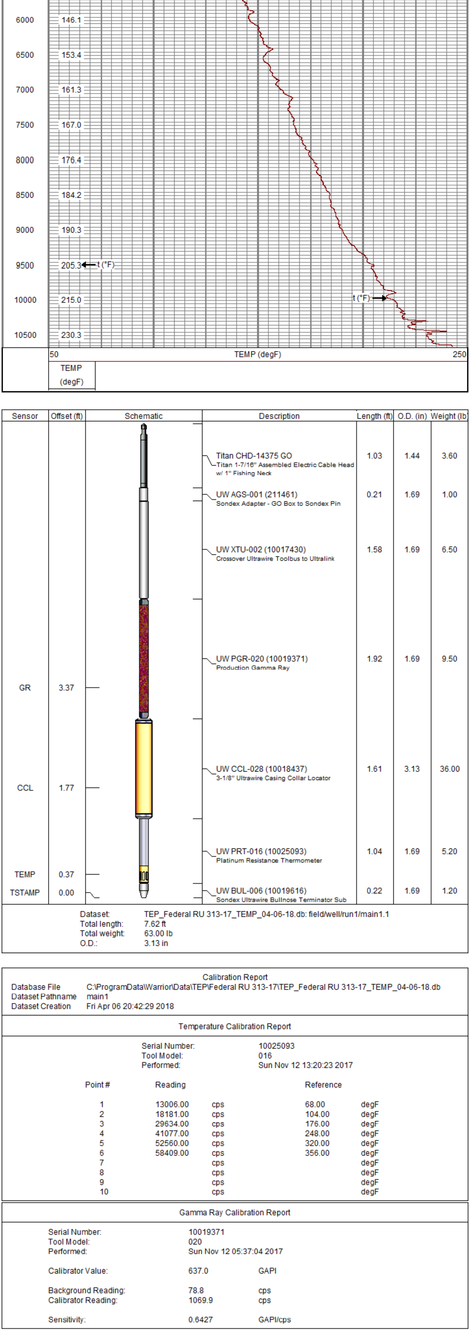
Main Pass (Quick Look)

Recorded with 0 PSI Surface Induced Pressure

Database File tep/federal ru 313-17/tep_federal ru 313-17_temp_04-06-18.db
Dataset Pathname main1.1
Presentation Format ros_temp_ql_tep
Dataset Creation Fri Apr 06 22:47:50 2018
Charted by Depth in Feet scaled 1:10000



Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Titan CHD-14375 GO Titan 1-7/16" Assembled Electric Cable Head w/ 1" Fishing Neck	1.03	1.44	3.60
			UW AGS-001 (211461) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00
			UW XTU-002 (10017430) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
GR	3.37		UW PGR-020 (10019371) Production Gamma Ray	1.92	1.69	9.50
CCL	1.77		UW CCL-028 (10018437) 3-1/8" Ultrawire Casing Collar Locator	1.61	3.13	36.00
TEMP	0.37		UW PRT-016 (10025093) Platinum Resistance Thermometer	1.04	1.69	5.20
TSTAMP	0.00		UW BUL-006 (10019616) Sondex Ultrawire Bullnose Terminator Sub	0.22	1.69	1.20

Dataset: TEP_Federal RU 313-17_TEMP_04-06-18.db: field/well/run1/main1.1
Total length: 7.62 ft
Total weight: 63.00 lb
O.D.: 3.13 in

Calibration Report

Database File C:\ProgramData\Warrior\Data\TEP\Federal RU 313-17\TEP_Federal RU 313-17_TEMP_04-06-18.db
Dataset Pathname main1
Dataset Creation Fri Apr 06 20:42:29 2018

Temperature Calibration Report

Serial Number: 10025093
Tool Model: 016
Performed: Sun Nov 12 13:20:23 2017

Point #	Reading		Reference	
1	13006.00	cps	68.00	degF
2	18181.00	cps	104.00	degF
3	29634.00	cps	176.00	degF
4	41077.00	cps	248.00	degF
5	52560.00	cps	320.00	degF
6	58409.00	cps	356.00	degF
7		cps		degF
8		cps		degF
9		cps		degF
10		cps		degF

Gamma Ray Calibration Report

Serial Number: 10019371
Tool Model: 020
Performed: Sun Nov 12 05:37:04 2017

Calibrator Value: 637.0 GAPI

Background Reading: 78.8 cps
Calibrator Reading: 1069.9 cps

Sensitivity: 0.6427 GAPI/cps

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