RELIANCE
OILFIELD SERVICES

Pulsed Neutron Gamma Ray Casing Collar Log

Company	TEP Rocky Mountain LLC
Well	Clough NR 11-3
Field	Rulison
County	Garfield
State	Colorado

Company TEP Rocky Mountain LLC
Well Clough NR 11-3
Field Rulison
County Garfield State Colorado
Location: API # : 05-045-23923
SEC 3 TWP 6S RGE 94W
Other Services
RBL

Permanent Datum	Ground Level	Elevation 6719.1'	Elevation
Log Measured From	Kelly Bushing	24 FT	K.B. 6743.1' D.F. 6742.1' G.L. 6719.1'
Drilling Measured From	Kelly Bushing		

Date	27-AUG-2018
Run Number	One
Depth Driller	11176 FT
Depth Logger	11071 FT
Bottom Logged Interval	11065 FT
Top Log Interval	6695 FT
Open Hole Size	8.750"
Type Fluid	Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	---
Estimated Cement Top	---
Time Well Ready	ROA
Time Logger on Bottom	12:35
Equipment Number	HD-0359
Location	Grand Junction, CO
Recorded By	Z.Fisher
Witnessed By	D.Welsh

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	H-40	Surface	1128 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	11134 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 Reliance Bond Log dated 27-AUG-2018
Log ran from 11065 FT to 6695 FT
Pulsed Neutron Data logged with the Hunter RAS Tool

Thank you for choosing Reliance Oilfield Services, LLC!

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Main Pass

Database File	tep_clough_nr_11-3_pn_8-27-2018\tep_clough_nr_11-3_pn_8-27-2018.db
Dataset Pathname	merge1
Presentation Format	ros_pdn_hunter
Dataset Creation	Thu Aug 30 17:02:32 2018
Charted by	Depth in Feet scaled 1:240

0	GR (GAPI)	150
	Casing Collar Locator	
-100	Line Speed (ft/min)	100
0	NIRS	400000
0	BKGN (cps)	4000
0	BKGF (cps)	2000

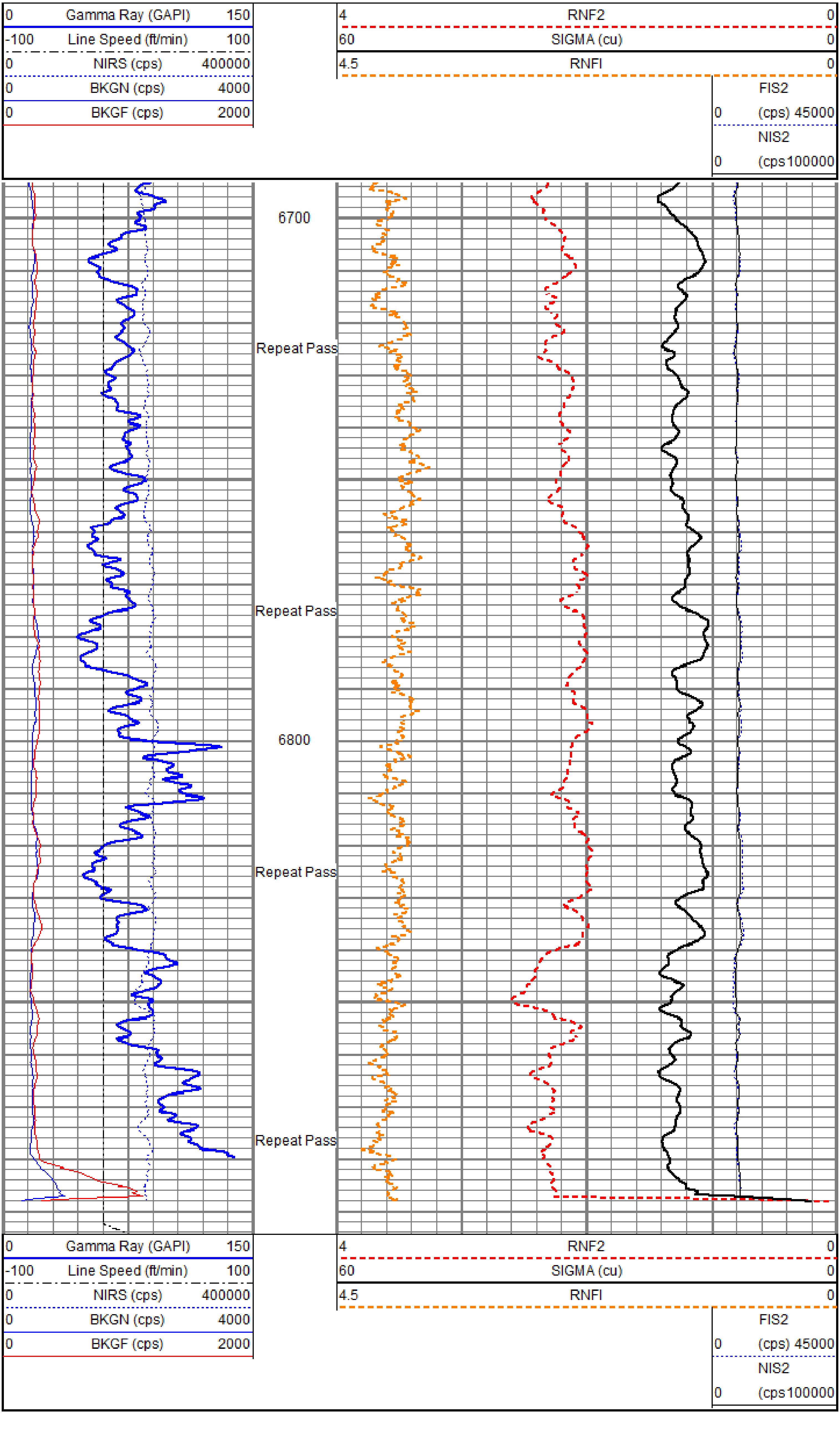
4	RNF2	0
60	SIGMA (cu)	0
4.5	RNFI	0
0	FIS2	45000
0	NIS2	100000

Repeat Pass

Database File tep_clough_nr_11-3_pn_8-27-2018\tep_clough_nr_11-3_pn_8-27-2018.db
Dataset Pathname repeat.2
Presentation Format ros_pdn_hunter
Dataset Creation Mon Aug 27 16:34:38 2018
Charted by Depth in Feet scaled 1:240

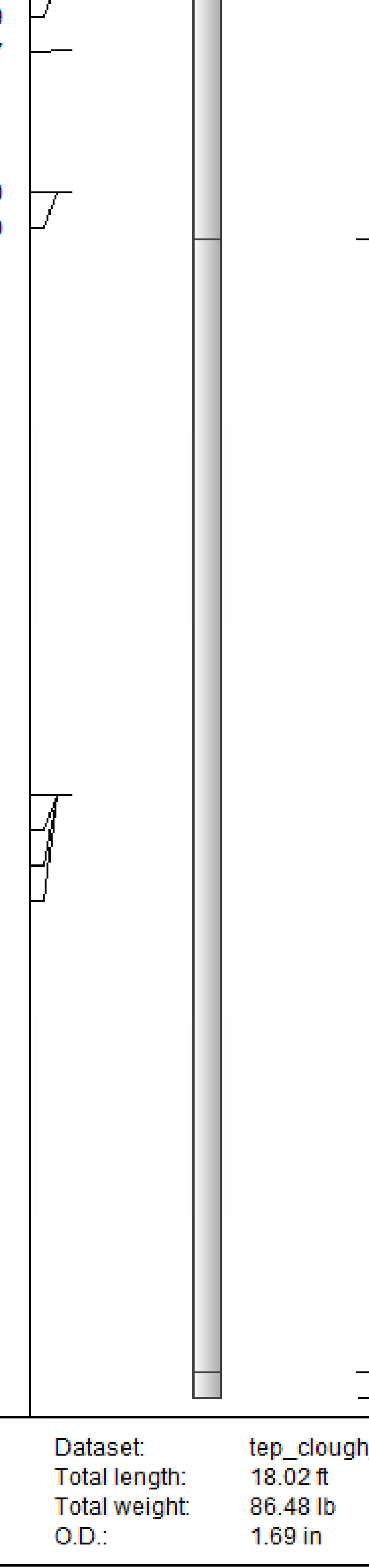
0	Gamma Ray (GAPI)	150
-100	Line Speed (ft/min)	100
0	NIRS (cps)	400000
0	BKGN (cps)	4000
0	BKGF (cps)	2000

4	RNF2	0
60	SIGMA (cu)	0
4.5	RNFI	0
0	FIS2 (cps)	45000
0	NIS2 (cps	100000



0	Gamma Ray (GAPI)	150
-100	Line Speed (ft/min)	100
0	NIRS (cps)	400000
0	BKGN (cps)	4000
0	BKGF (cps)	2000

4	RNF2	0
60	SIGMA (cu)	0
4.5	RNFI	0
0	FIS2 (cps)	45000
0	NIS2 (cps	100000

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Titan CHD-16875 GO Titan 1-11/16" Assembled Electric Cable Head w/ 1" Fishing Neck	1.03	1.69	5.40
TCUTEMP TCUVOLT GCL_CCL	14.69 14.69 13.97		HWS_TCU-002 (001704) HWS Telemetry Control Unit (TCU002)	2.30	1.69	10.87
GCL_GR GCL_GR	12.50 12.50		HWS_GCL-001 (001475) HWS Gamma Ray Collar Locator (1.6875")	2.69	1.69	13.40
Long Far Near Anci	6.25 6.25 6.25 6.25		HWS_RAS-RAS002 (003040) Hunter Well Science Pulsed Neutron Tool	11.75	1.69	55.82
			HWS_TBN-001 (001725) HWS Terminator Bull Nose (1.6875")	0.25	1.69	0.99

Dataset: tep_clough_nr_11-3_pn_8-27-2018.db: field/well/run1/main.2
Total length: 18.02 ft
Total weight: 86.48 lb
O.D.: 1.69 in

Calibration Report

Database File c:\programdata\warrior\data\tep_clough_nr_11-3_pn_8-27-2018\tep_clough_nr_11-3_pn_8-27-2018.db
Dataset Pathname repeat.2
Dataset Creation Mon Aug 27 16:34:38 2018

Gamma Ray Calibration Report

Serial Number: 001475
Tool Model: 001
Performed: (Not Performed)

Calibrator Value: 1.0 GAPI

Background Reading: 0.0
Calibrator Reading: 1.0

Sensitivity: 1.0000 GAPI/

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