RELIANCE
OILFIELD SERVICES

Pulsed Neutron Gamma Ray Casing Collar Log

Company	TEP Rocky Mountain LLC
Well	Federal RU 314-17
Field	Rulison
County	Garfield
State	Colorado

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Well Federal RU 314-17
Field Rulison
County Garfield State Colorado

Location: API # : 05-045-23744
SEC 17 TWP 7S RGE 93W

Other Services
RBL

			Elevation
Permanent Datum	Ground Level	Elevation 8365.6'	K.B. 8389.6'
Log Measured From	Kelly Bushing	24 FT	D.F. 8388.6
Drilling Measured From	Kelly Bushing		G.L. 8365.6'

Date	07-JUN-2018
Run Number	One
Depth Driller	10738 FT
Depth Logger	10690 FT
Bottom Logged Interval	10684 FT
Top Log Interval	6567 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	10:52
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	32.3	H-40	Surface	1125 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	10698 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 06-JUN-2018
Log ran from 10684 FT to 6567 FT
Pulsed Neutron Data logged with the Hunter RAS Tool

Thank you for choosing Reliance Oilfield Services, LLC!

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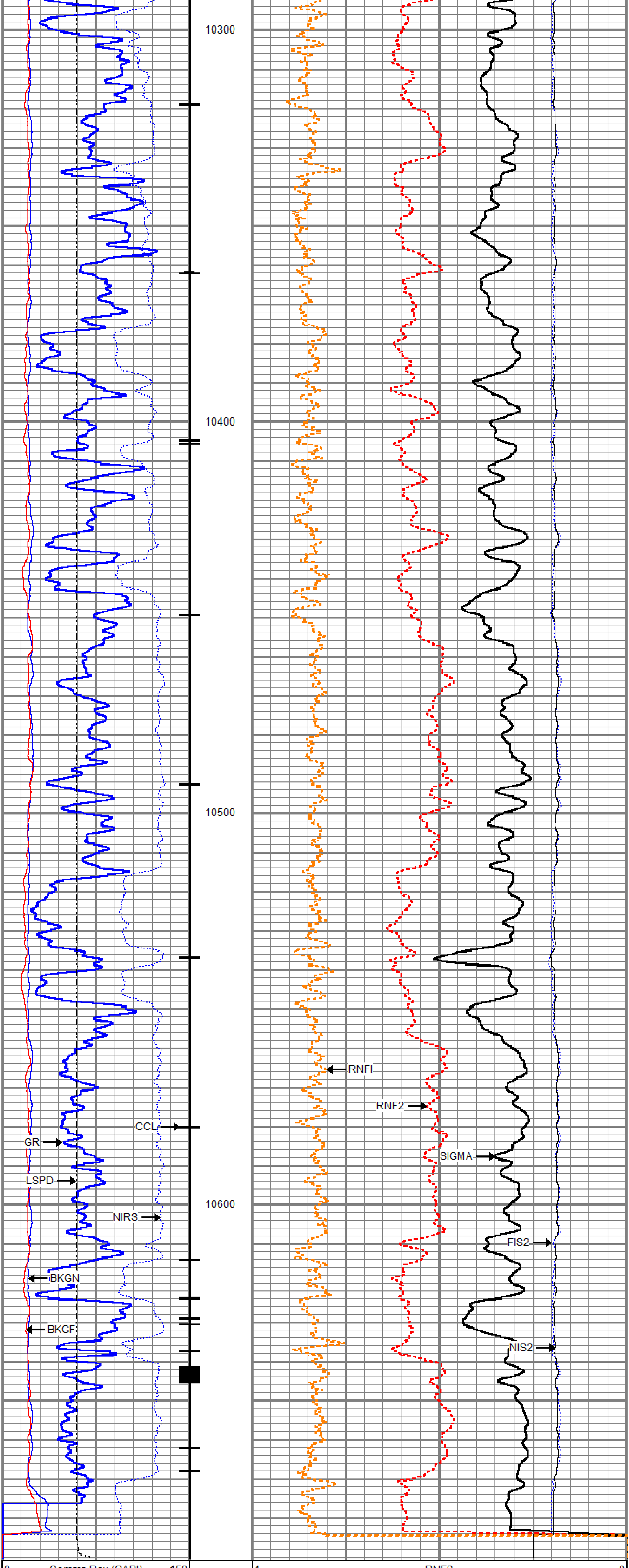
Main Pass

Database File	tep\ru 314-17\pn\tep_federal ru 314-17_pn_06-07-18.db
Dataset Pathname	tep_ru_314-17_june_7,_2018_pn_run1_main
Presentation Format	ros_pdn_hunter
Dataset Creation	Fri Jun 08 11:53:21 2018
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
	Casing Collar Locator	
-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

	FIS2	
0	(cps)	45000
	NIS2	
0	(cps	100000



0	Gamma Ray (GAPI)	150
	Casing Collar Locator	
-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
	FIS2	
0	(cps)	45000
	NIS2	
0	(cps	100000

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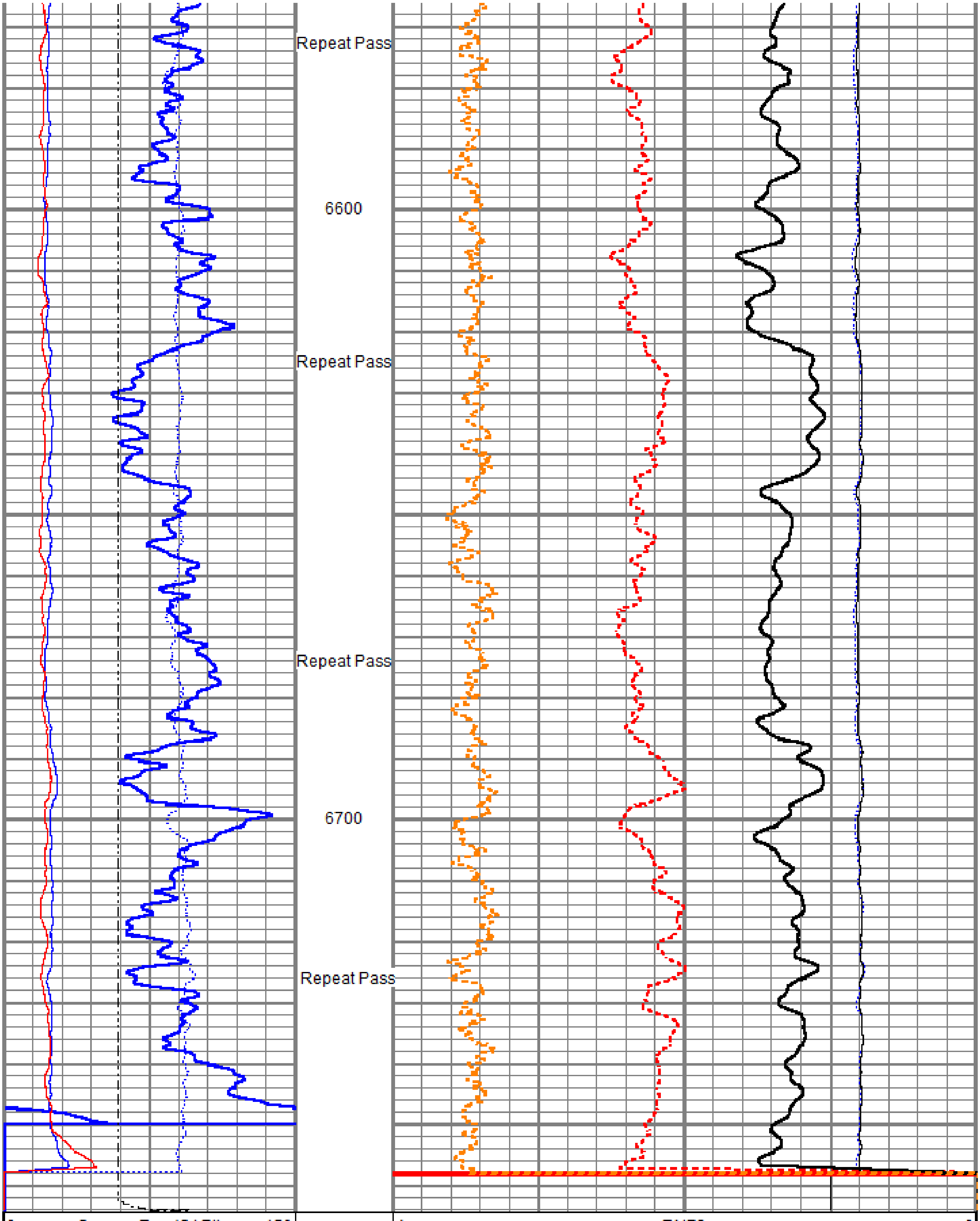
Repeat Pass

Database File	tep\ru 314-17\pn\tep_federal ru 314-17_pn_06-07-18.db
Dataset Pathname	repeat/tep_ru_314-17_june_7,_2018_pn_run1_repe
Presentation Format	ros_pdn_hunter
Dataset Creation	Fri Jun 08 12:06:21 2018
Charted by	Depth in Feet scaled 1:240

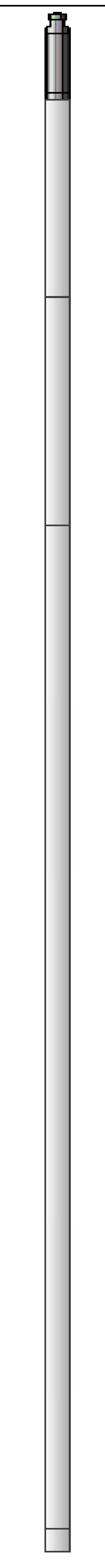
0	Gamma Ray (GAPI)	150
-100	Line Speed (ft/min)	100
0	NIRS (cps)	400000
0	BKGN (cps)	4000
0	BKGF (cps)	2000

4	RNF2	0
60	SIGMA (cu)	0
4.5	RNFI	0
	FIS2	
0	(cps)	45000
	NIS2	
0	(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
	FIS2	
0	(cps)	45000
	NIS2	
0	(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	14.69 14.69		HWS_TCU-002 (001705) HWS Telemetry Control Unit (TCU002)	2.30	1.69	10.87
GCL_CCL GCL_GR GCL_GR	13.97 12.50 12.50		HWS_GCL-001 (001681) 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 (003041) 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_ru 314-17_june 7, 2018_pn.db: field/well/run1/main.4
Total length:	18.02 ft
Total weight:	86.48 lb
O.D.:	1.69 in

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