RELIANCE
OILFIELD SERVICES

Pulsed Neutron Gamma Ray Casing Collar Log

Company	TEP Rocky Mountain LLC
Well	Federal PA 421-26
Field	Parachute
County	Garfield
State	Colorado

Company TEP Rocky Mountain LLC
Well Federal PA 421-26
Field Parachute
County Garfield State Colorado

Location: API #: 05-045-23711
SEC 26 TWP 6S RGE 95W

Other Services
RBL

			Elevation
Permanent Datum	Ground Level	Elevation 5636.9'	K.B. 5660.9'
Log Measured From	Kelly Bushing	24 FT	D.F. 5659.9'
Drilling Measured From	Kelly Bushing		G.L. 5636.9'

Date	02-SEP-2018
Run Number	One
Depth Driller	8990 FT
Depth Logger	8913 FT
Bottom Logged Interval	8907 FT
Top Log Interval	5055 FT
Open Hole Size	8.750"
Type Fluid	Fresh Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	--
Estimated Cement Top	--
Time Well Ready	ROA
Time Logger on Bottom	19:28
Equipment Number	HD-0359
Location	Grand Junction, CO
Recorded By	A. Ellsworth
Witnessed By	J. Skalla

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	1125 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	8931 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 02-SEP-2018
Log ran from 8907 FT to 5055 FT
Pulsed Neutron Data logged with the Hunter RAS Tool

Thank you for choosing Reliance Oilfield Services, LLC!!

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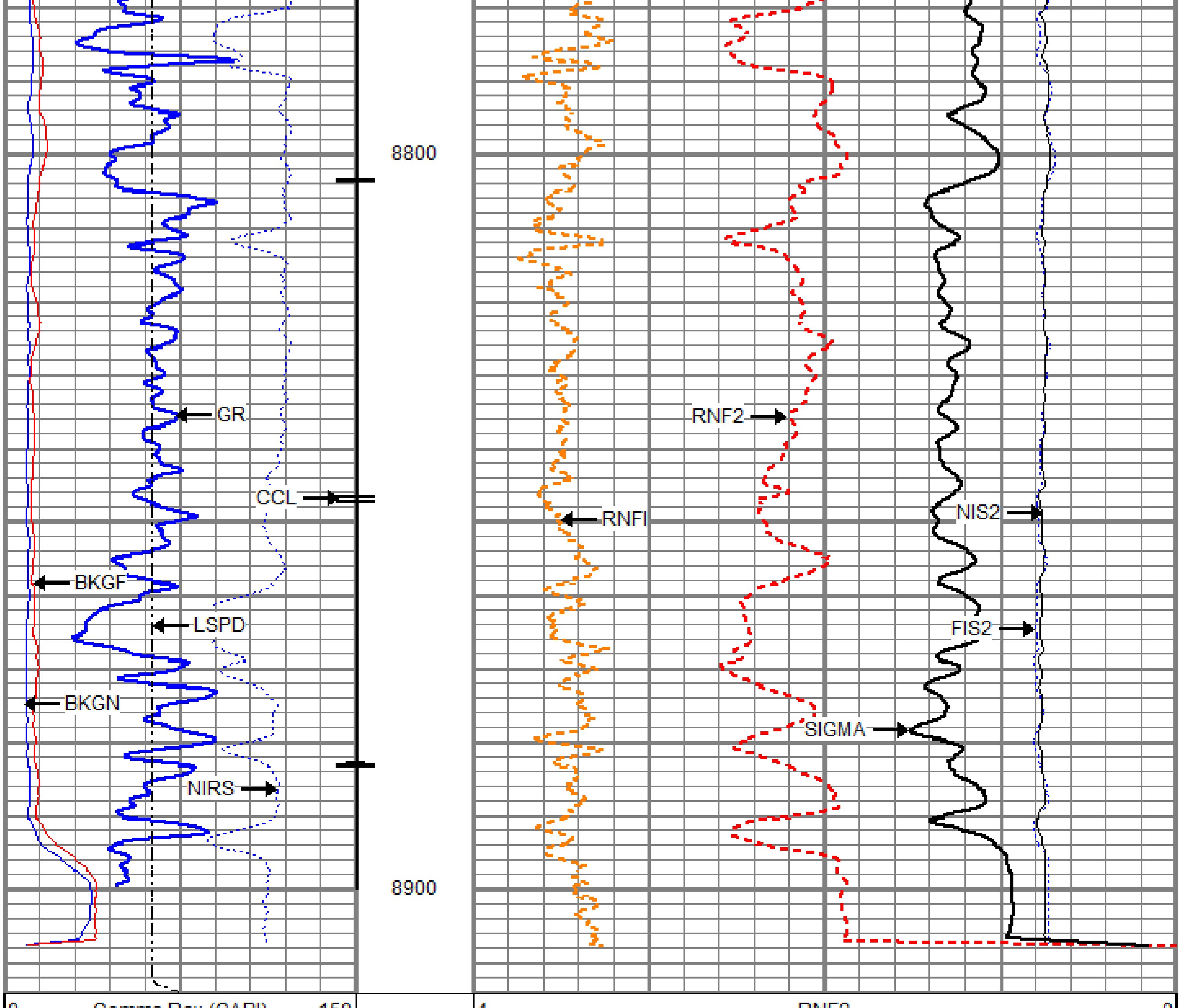
Main Pass

Database File	tep\tep_federal pa 421-26_pn_09-02-18\processed_tep_federal pa 421-26_pn_09-02-18.db
Dataset Pathname	Main1.2
Presentation Format	ros_pdn_hunter
Dataset Creation	Mon Sep 03 00:40:00 2018
Charted by	Depth in Feet scaled 1:240



0	Gamma Ray (GAPI)	150	4	RNF2	0	
	Casing Collar Locator		60	SIGMA (cu)	0	
-100	Line Speed (ft/min)	100	4.5	RNFI	0	
0	NIRS (cps)	400000				FIS2
0	BKGN (cps)	4000			0	(cps) 45000
0	BKGF (cps)	2000				NIS2
					0	(cps100000

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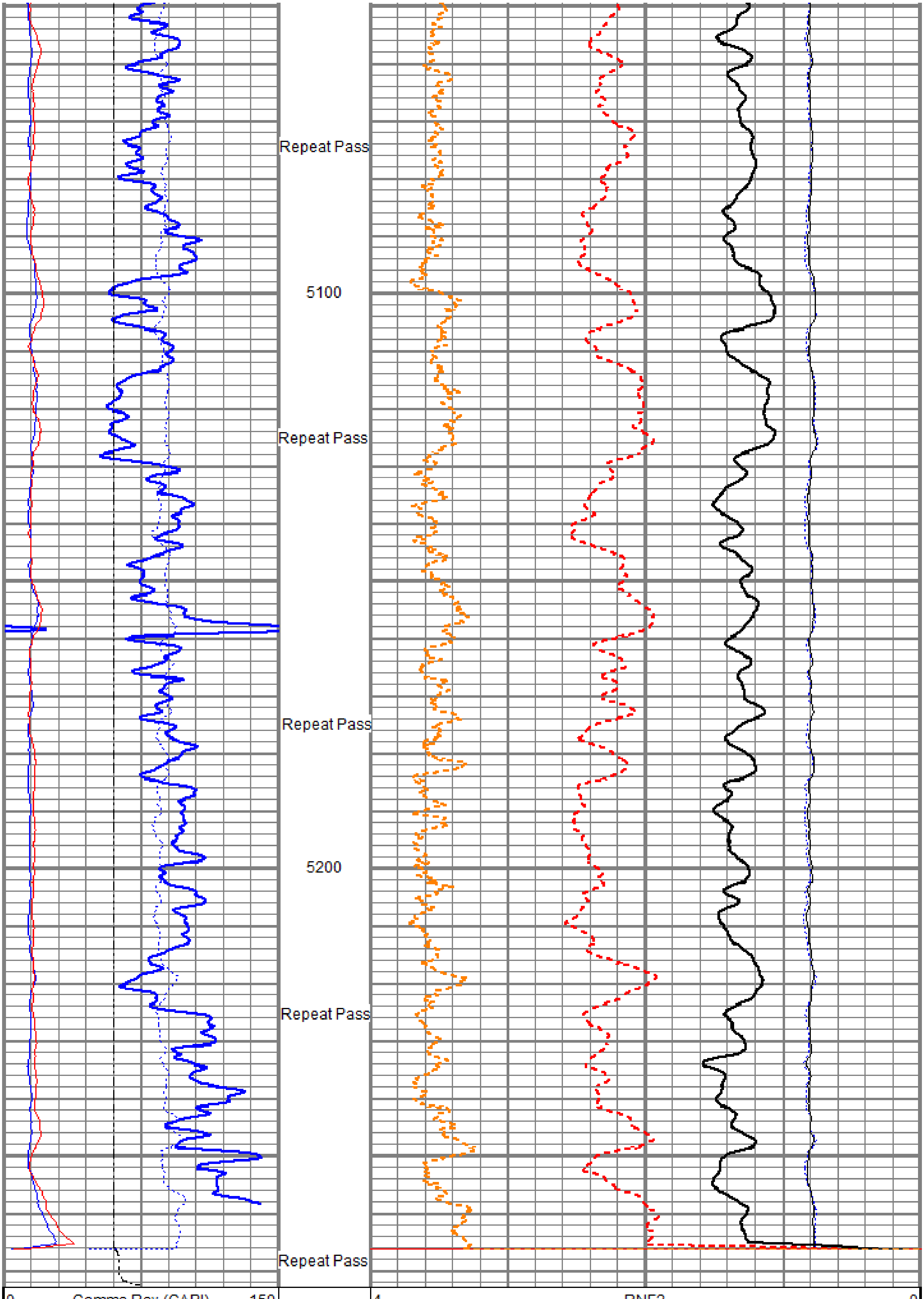
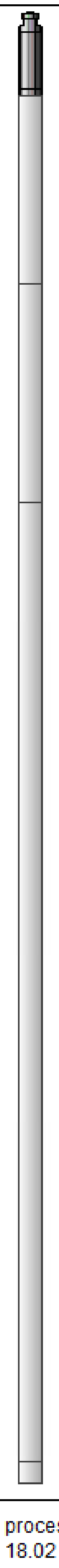
Repeat Pass

Database File	tep\tep_federal pa 421-26_pn_09-02-18\processed_tep_federal pa 421-26_pn_09-02-18.db
Dataset Pathname	repeat.2
Presentation Format	ros_pdn_hunter
Dataset Creation	Mon Sep 03 00:42:49 2018
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150	4	RNF2	0	
-100	Line Speed (ft/min)	100	60	SIGMA (cu)	0	
0	NIRS (cps)	400000	4.5	RNFI	0	
0	BKGN (cps)	4000				FIS2
0	BKGF (cps)	2000			0	(cps) 45000
						NIS2
					0	(cps100000



0	Gamma Ray (GAPI)	150	4	RNF2	0	
-100	Line Speed (ft/min)	100	60	SIGMA (cu)	0	
0	NIRS (cps)	400000	4.5	RNFI	0	
0	BKGN (cps)	4000				FIS2
0	BKGF (cps)	2000			0	(cps) 45000
						NIS2
					0	(cps100000

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 (001724) HWS Terminator Bull Nose (1.6875")	0.25	1.69	0.99

Dataset:	processed_tep_federal pa 421-26_pn_09-02-18.db: field/well/run1/Main1.2
Total length:	18.02 ft
Total weight:	86.48 lb
O.D.:	1.69 in

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Field	Parachute
County	Garfield
State	Colorado