RELIANCE
OILFIELD SERVICES

Pulsed Neutron Gamma Ray Casing Collar Log

Company	TEP Rocky Mountain LLC
Well	Federal PA 33-26
Field	Parachute
County	Garfield
State	Colorado

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Well Federal PA 33-26
Field Parachute
County Garfield State Colorado

Location: API # : 05-045-23720
2120' FSL & 2476' FWL NESW
SEC 26 TWP 6S RGE 95W

Other Services
RBL

Permanent Datum	Ground Level	Elevation	5637'
Log Measured From	Kelly Bushing	24 FT	
Drilling Measured From	Kelly Bushing		

Elevation
K.B. 5661'
D.F. 5660'
G.L. 5637'

Date	23-MAY-2018
Run Number	One
Depth Driller	8517 FT
Depth Logger	8398 FT
Bottom Logged Interval	8392 FT
Top Log Interval	4516 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	18:52
Equipment Number	HD-0359
Location	Grand Junction, CO
Recorded By	A. Ellsworth
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	1124 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	8475 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 22-MAY-2018
Log ran from 8392 FT to 4516 FT
Pulsed Neutron Data logged with the Hunter RAS Tool

Thank you for choosing Reliance Oilfield Services, LLC!!

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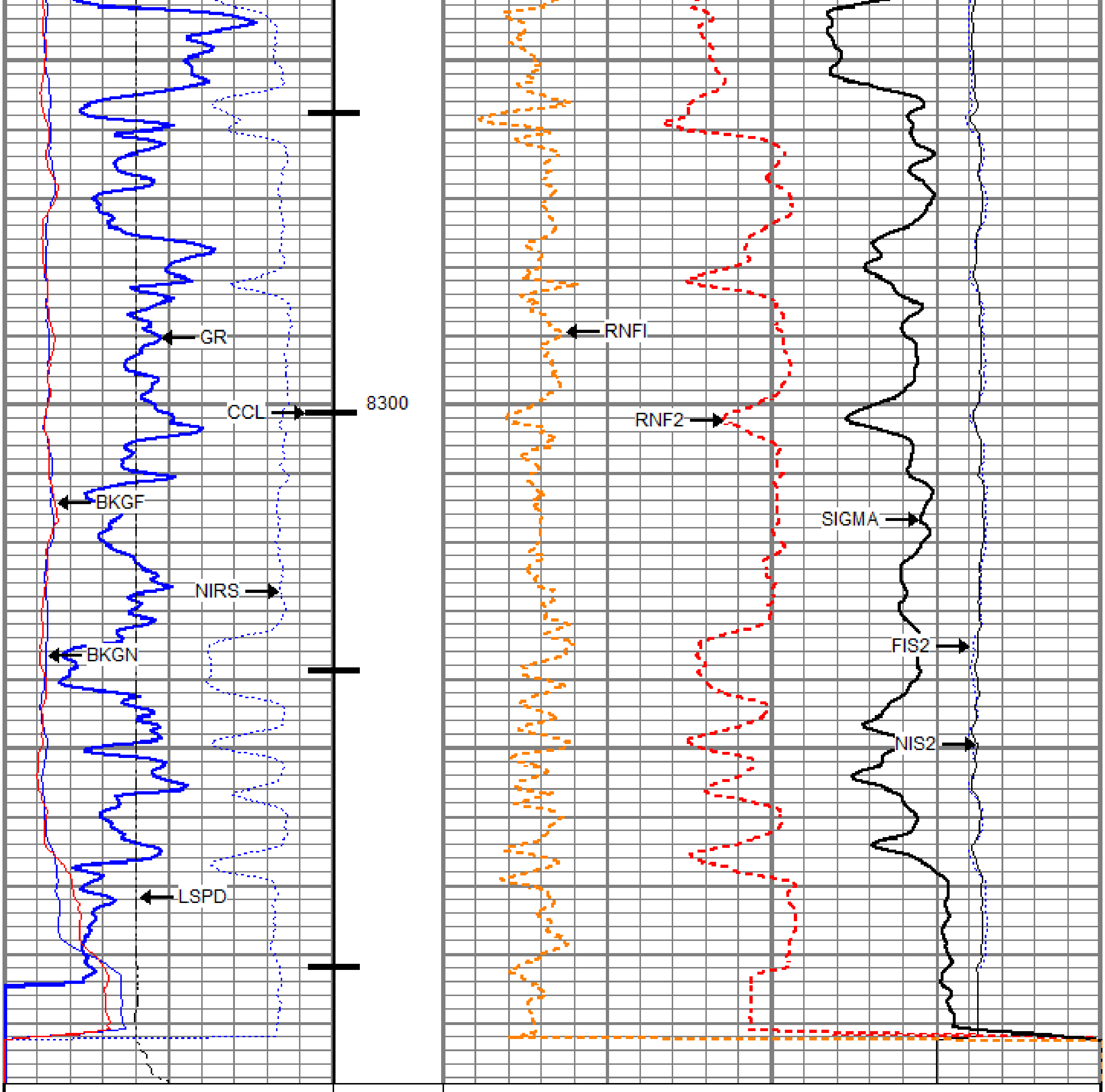
Main Pass

Database File	tep\pa 33-26\pn\tep_fedral pa 33-26_pn_05-23-18.db
Dataset Pathname	tep_federal_pa_33-26_rbl_05-22-18_shift
Presentation Format	ros_pdn_hunter
Dataset Creation	Fri May 25 09:32:16 2018
Charted by	Depth in Feet scaled 1:240

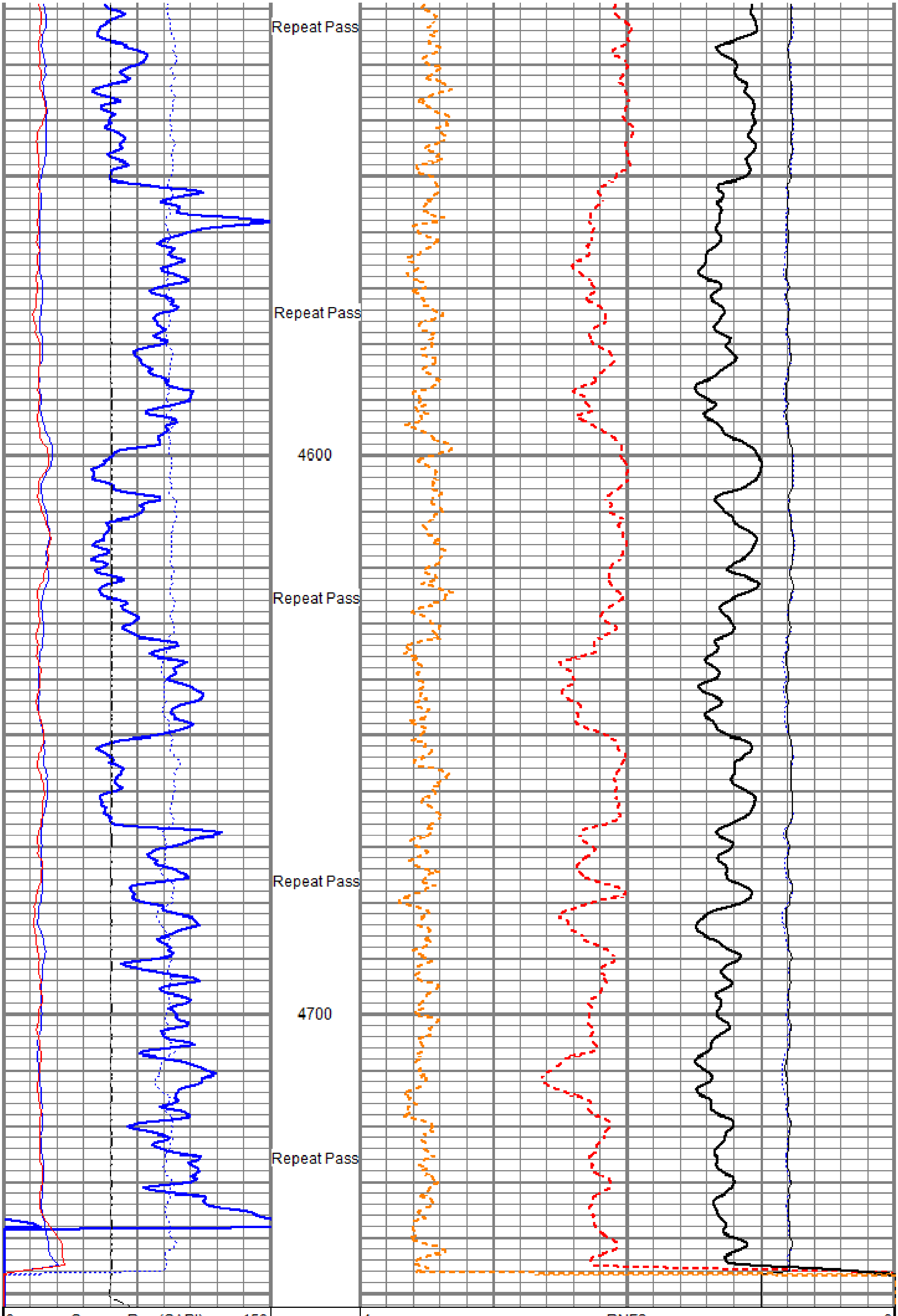


0	Gamma Ray (GAPI)	150	4	RNF2	0
	Casing Collar Locator		60	SIGMA (cu)	0
-100	Line Speed (ft/min)	100	4.5	RNFI	0
0	NIRS (cps)	400000		FIS2	
0	BKGN (cps)	4000	0	(cps)	45000
0	BKGF (cps)	2000		NIS2	
			0	(cps	100000

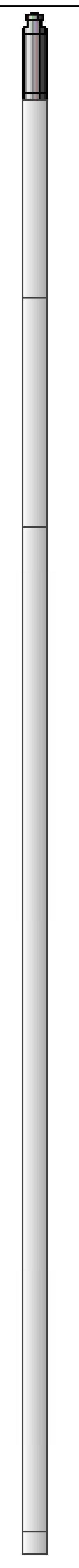
Repeat Pass

Database File	tep\pa 33-26\pn\tep_fedral pa 33-26_pn_05-23-18.db
Dataset Pathname	repeat/tep_fedral_pa_33-26_pn_05-23-2018_run1_
Presentation Format	ros_pdn_hunter
Dataset Creation	Fri May 25 10:35:03 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	(cps	100000



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	(cps	100000



Sensor	Offset (ft)
TCUTEMP	14.69
TCUVOLT	14.69
GCL_CCL	13.97
GCL_GR	12.50
GCL_GR	12.50
Long	6.25
Far	6.25
Near	6.25
Anci	6.25

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
HWS_TCU-002 (001705) HWS Telemetry Control Unit (TCU002)	2.30	1.69	10.87
HWS_GCL-001 (001681) HWS Gamma Ray Collar Locator (1.6875")	2.69	1.69	13.40
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:	tep_fedral pa 33-26_pn_05-23-2018.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