RELIANCE
OILFIELD SERVICES

Pulsed Neutron
Gamma Ray
Casing Collar Log

Company TEP Rocky Mountain LLC
Well Federal PA 12-26
Field Parachute
County Garfield
State Colorado

Company TEP Rocky Mountain LLC
Well Federal PA 12-26
Field Parachute
County Garfield State Colorado
API # : 05-045-23703
Location:
SEC 26 TWP 6S RGE 95W
Other Services
RBL

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

Date	02-SEP-2018
Run Number	One
Depth Driller	8875 FT
Depth Logger	8802 FT
Bottom Logged Interval	8796 FT
Top Log Interval	4896 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	--
Time Logger on Bottom	--
Equipment Number	--
Location	Grand Junction, CO
Recorded By	J.Donnelly
Witnessed By	--

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	1110 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	8835 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 8796 FT to 4896 FT
Pulsed Neutron Data logged with Hunter RAS Tool

Thank you for choosing Reliance Oilfield Services, LLC!!

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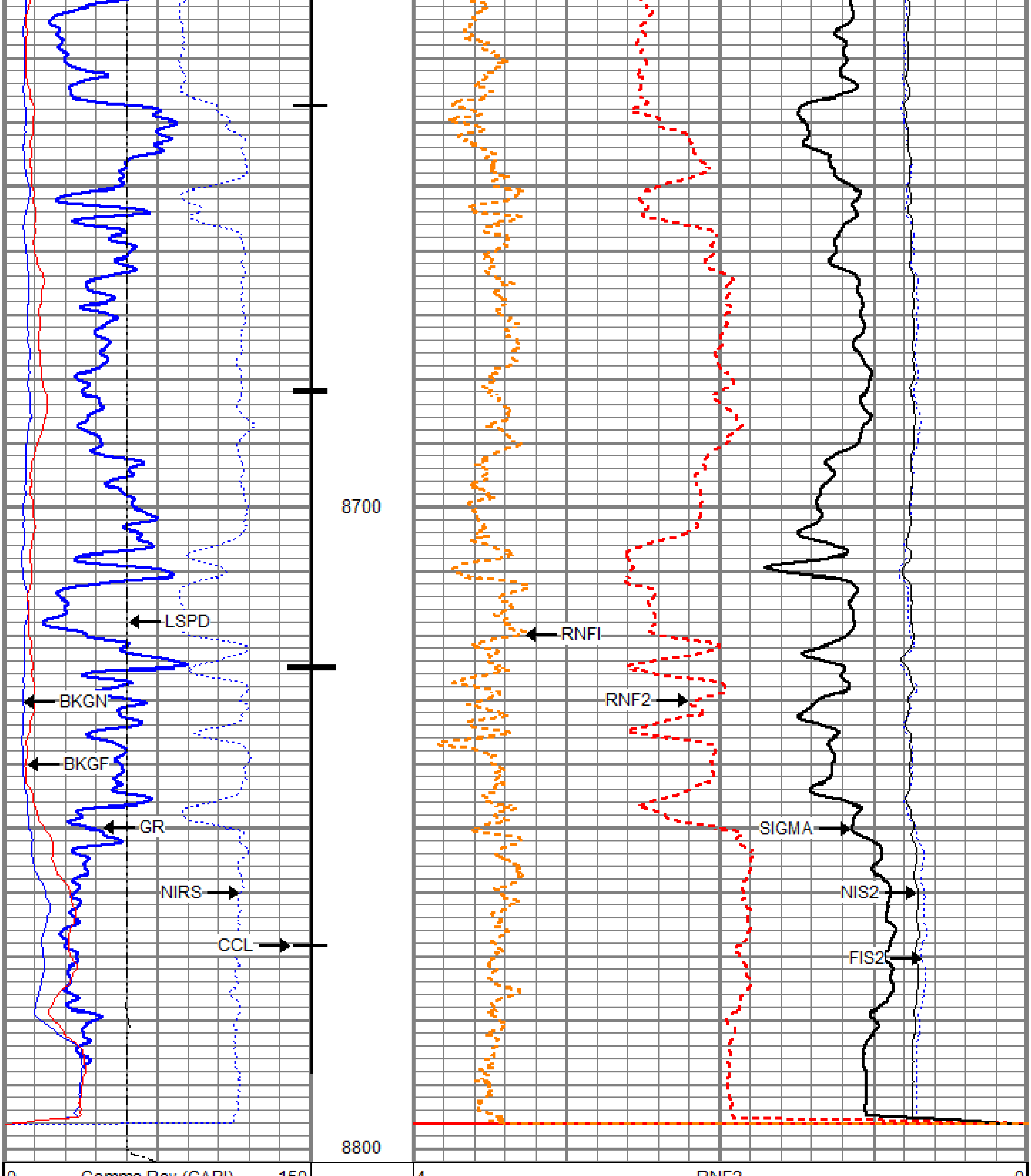
Main Pass

Database File tep\federal pa 12-26\pn\tep_federal pa 12-26_pn_09-02-2018.db
Dataset Pathname Main.2
Presentation Format ros_pdn_hunter
Dataset Creation Sun Sep 02 23:22:30 2018
Charted by Depth in Feet scaled 1:240

Scale left	Curve	Scale right
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
0	FIS2 (cps)	45000
0	NIS2 (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 (cps100000

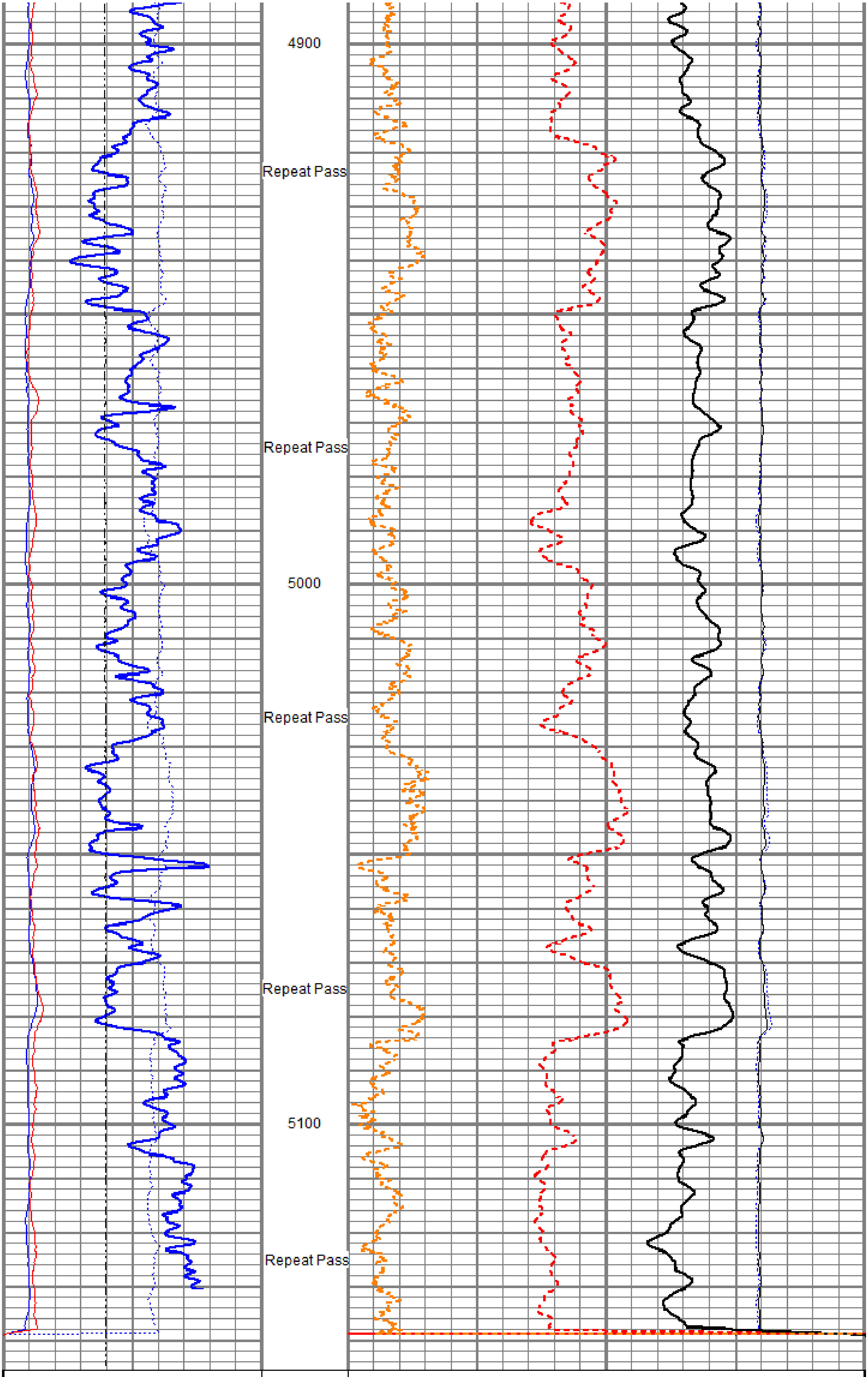
Repeat Pass

Database File	tep\federal pa 12-26\pn\tep_federal pa 12-26_pn_09-02-2018.db
Dataset Pathname	Repeat.2
Presentation Format	ros_pdn_hunter
Dataset Creation	Sun Sep 02 23:07:00 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

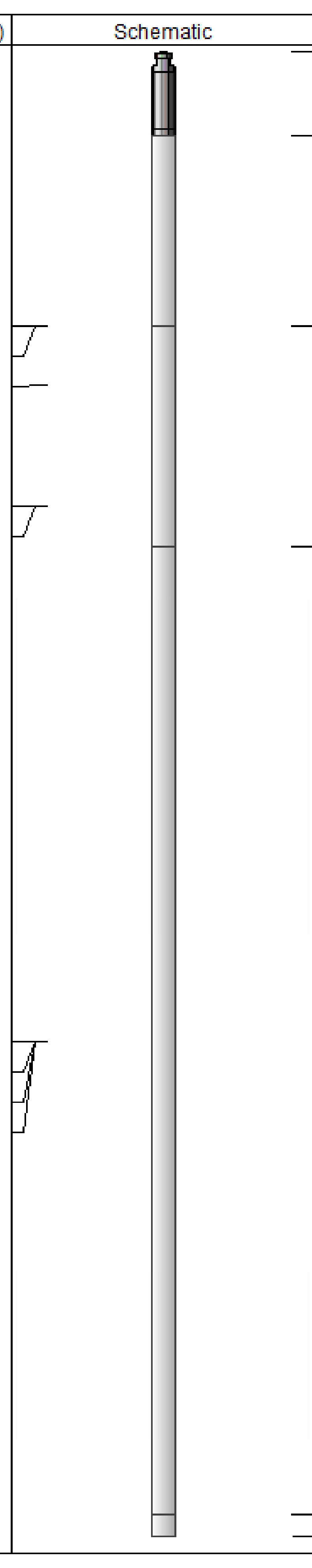
FIS2
0 (cps) 45000
NIS2
0 (cps100000



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 (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
			HWS_TCU-002 (001704) HWS Telemetry Control Unit (TCU002)	2.30	1.69	10.87
TCUTEMP	14.69					
TCUVOLT	14.69					
GCL_CCL	13.97					
			HWS_GCL-001 (001475) HWS Gamma Ray Collar Locator (1.6875")	2.69	1.69	13.40
GCL_GR	12.50					
GCL_GR	12.50					
Long	6.00		HWS_RAS-RAS002_Invt (003040_Invt) Hunter Well Science Pulsed Neutron Tool (Inverted)	11.75	1.69	55.82
Far	6.00					
Near	6.00					
Anci	6.00					
			HWS_TBN-001 (001724) HWS Terminator Bull Nose (1.6875")	0.25	1.69	0.99

Dataset:	tep_federal pa 12-26_pn_09-02-2018.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\federal pa 12-26\pn\tep_federal pa 12-26_pn_09-02-2018.db
Dataset Pathname	Main.2
Dataset Creation	Sun Sep 02 23:22:30 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/

Company	TEP Rocky Mountain LLC
Well	Federal PA 12-26
Field	Parachute
County	Garfield
State	Colorado