RELIANCE
OILFIELD SERVICES

Pulsed Neutron
Gamma Ray
Casing Collar Log

Company TEP Rocky Mountain LLC
Well Federal PA 533-24
Field Parachute
County Garfield State Colorado
Location: API # : 05-045-23791
SEC 19 TWP 6S RGE 94W

Other Services
RBL

Permanent Datum	Ground Level	Elevation	5732.2'
Log Measured From	Kelly Bushing	24 FT	
Drilling Measured From	Kelly Bushing		

Elevation
K.B. 5756.2'
D.F. 5755.2'
G.L. 5732.2'

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Date	01-NOV-2018
Run Number	One
Depth Driller	8991 FT
Depth Logger	8902 FT
Bottom Logged Interval	8896 FT
Top Log Interval	4862 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	J-55	Surface	1124 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	8950 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 01-NOV-2018
Log ran from 8896 FT to 4862 FT
Pulsed Neutron Data logged with the Hunter RAS Tool

Thank you for choosing Reliance Oilfield Services, LLC!!

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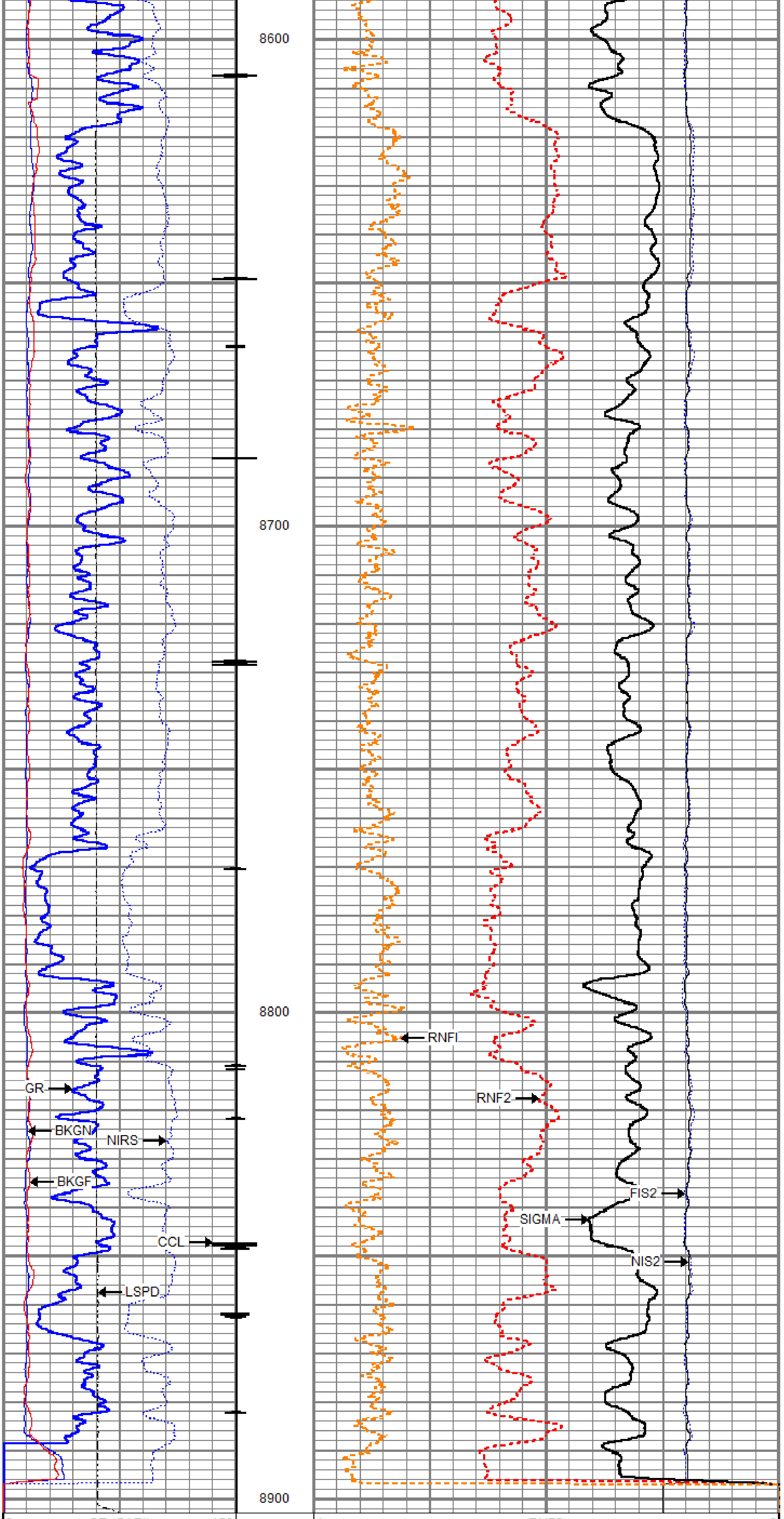
Main Pass

Database File c:\users\shelley.horner\desktop\data\tep\federal pa 533-24\pn\tep_federal pa 533-24_pn_11-01-18.db
Dataset Pathname runSHIFTED/merge1
Presentation Format ros_pdn_hunter
Dataset Creation Fri Nov 02 12:49:58 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



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

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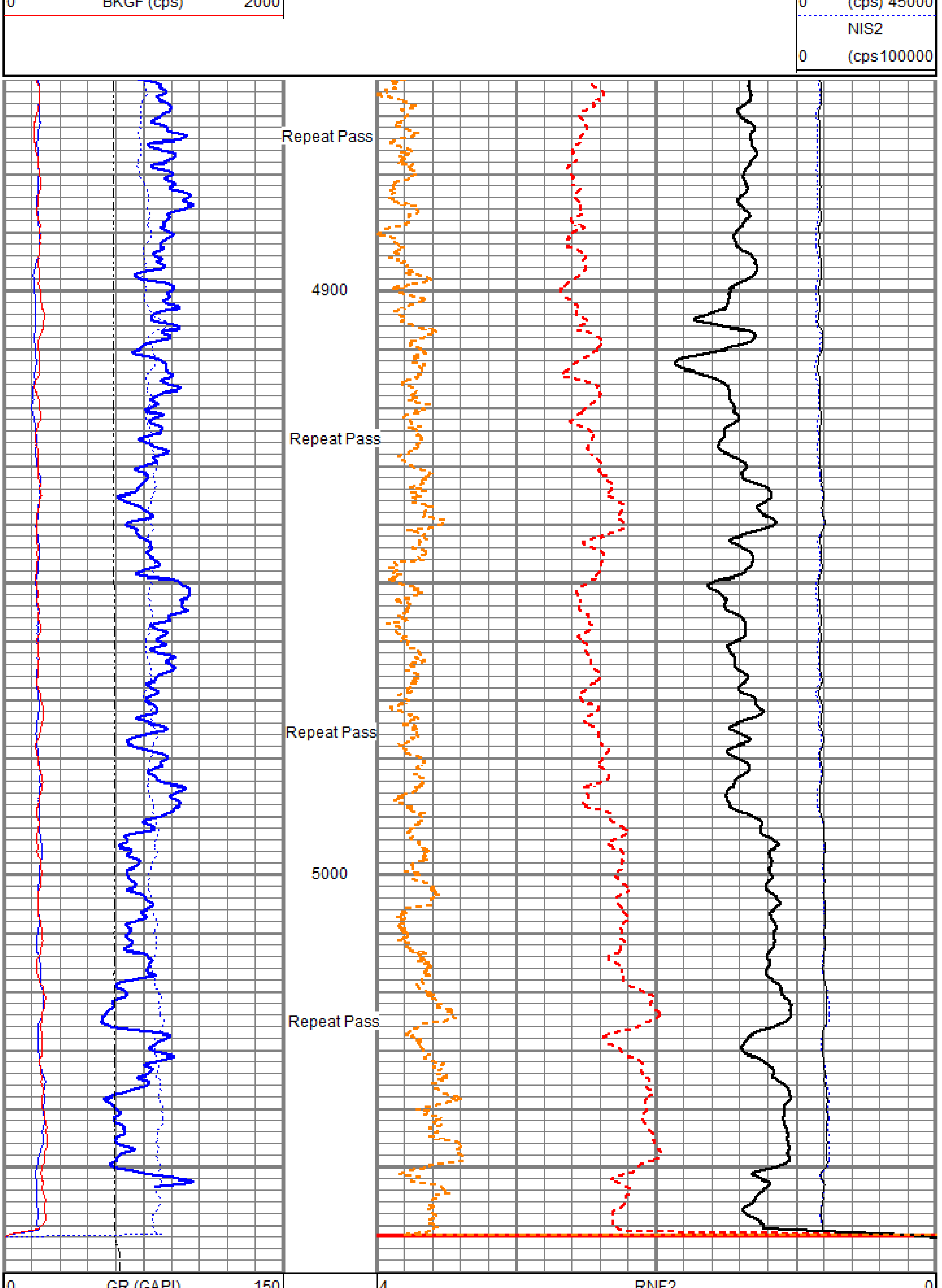
Repeat Pass

Database File	c:\users\shelley.horner\desktop\data\tep\federal pa 533-24\pn\tep_federal pa 533-24_pn_11-01-18.db
Dataset Pathname	Repeat.2
Presentation Format	ros_pdn_hunter
Dataset Creation	Thu Nov 01 23:40:33 2018
Charted by	Depth in Feet scaled 1:240

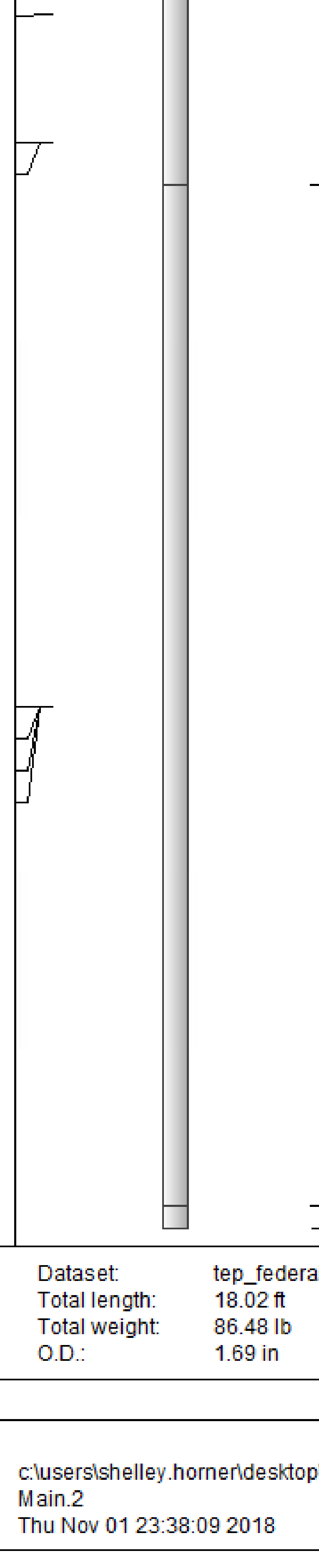
0 GR (GAPI) 150
-100 Line Speed (ft/min) 100
0 NIRS (cps) 400000
0 BKGN (cps) 4000
0 BKGF (cps) 2000

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



0 GR (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 (001475) HWS Gamma Ray Collar Locator (1.6875")	2.69	1.69	13.40
Long Far Near Anci	6.00 6.00 6.00 6.00		HWS_RAS-RAS002_Invt (003040_Invt) Hunter Well Science Pulsed Neutron Tool (Inverted)	11.75	1.69	55.82
			HWS_TBN-001 (001724) HWS Terminator Bull Nose (1.6875")	0.25	1.69	0.99

Dataset:	tep_federal pa 533-24_pn_11-01-18.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:\users\shelley.horner\desktop\data\tep\federal pa 533-24\pn\tep_federal pa 533-24_pn_11-01-18.db
Dataset Pathname	Main.2
Dataset Creation	Thu Nov 01 23:38:09 2018

Gamma Ray Calibration Report

Serial Number:	001475	
Tool Model:	001	
Performed:	Fri Oct 19 14:55:00 2018	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	
Calibrator Reading:	1.0	
Sensitivity:	1.0000	GAPI/

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Well	Federal PA 533-24
Field	Parachute
County	Garfield
State	Colorado