RELIANCE OILFIELD SERVICES

Pulsed Neutron Gamma Ray Casing Collar Log

Company TEP Rocky Mountain LLC
Well Ware SR 24-12
Field Rulison
County Garfield
State Colorado

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Location: API # : 05-045-23445
SEC 12 TWP 7S RGE 94W

Other Services
RBL

Permanent Datum	Ground Level	Elevation 7479'	Elevation
Log Measured From	Kelly Bushing	24 FT	K.B. 7503' D.F. 7502' G.L. 7479'
Drilling Measured From	Kelly Bushing		

Date	18-FEB-2018
Run Number	One
Depth Driller	9542 FT
Depth Logger	9475 FT
Bottom Logged Interval	9475 FT
Top Log Interval	5404 FT
Open Hole Size	8.750"
Type Fluid	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	A. Ellsworth
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	32.3	H-40	Surface	1117 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	9501 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 17-FEB-2018
Log ran from 9475 FT to 5404 FT
Pulsed Neutron Data logged with Hunter RAS Tool

Thank you for choosing Reliance Oilfield Services, LLC!!

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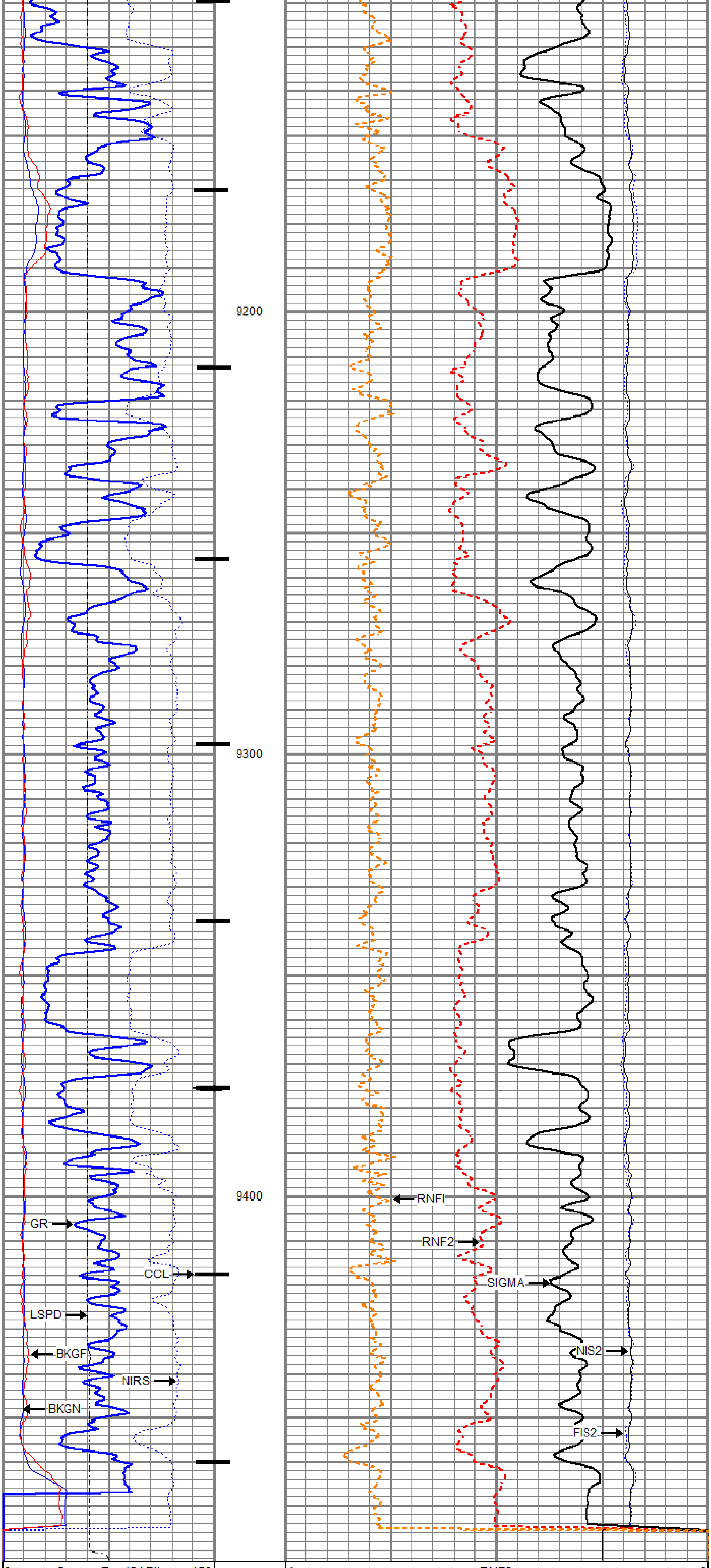
Main Pass

Database File	tep\sr 24-12\pn\tep_ware sr 24-12_pn_02-18-18.db
Dataset Pathname	ware_sr_24-12_pn_main_merge_shift_2_(1)
Presentation Format	ros_pdn_hunt
Dataset Creation	Tue Feb 20 17:28:28 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 (cps100000

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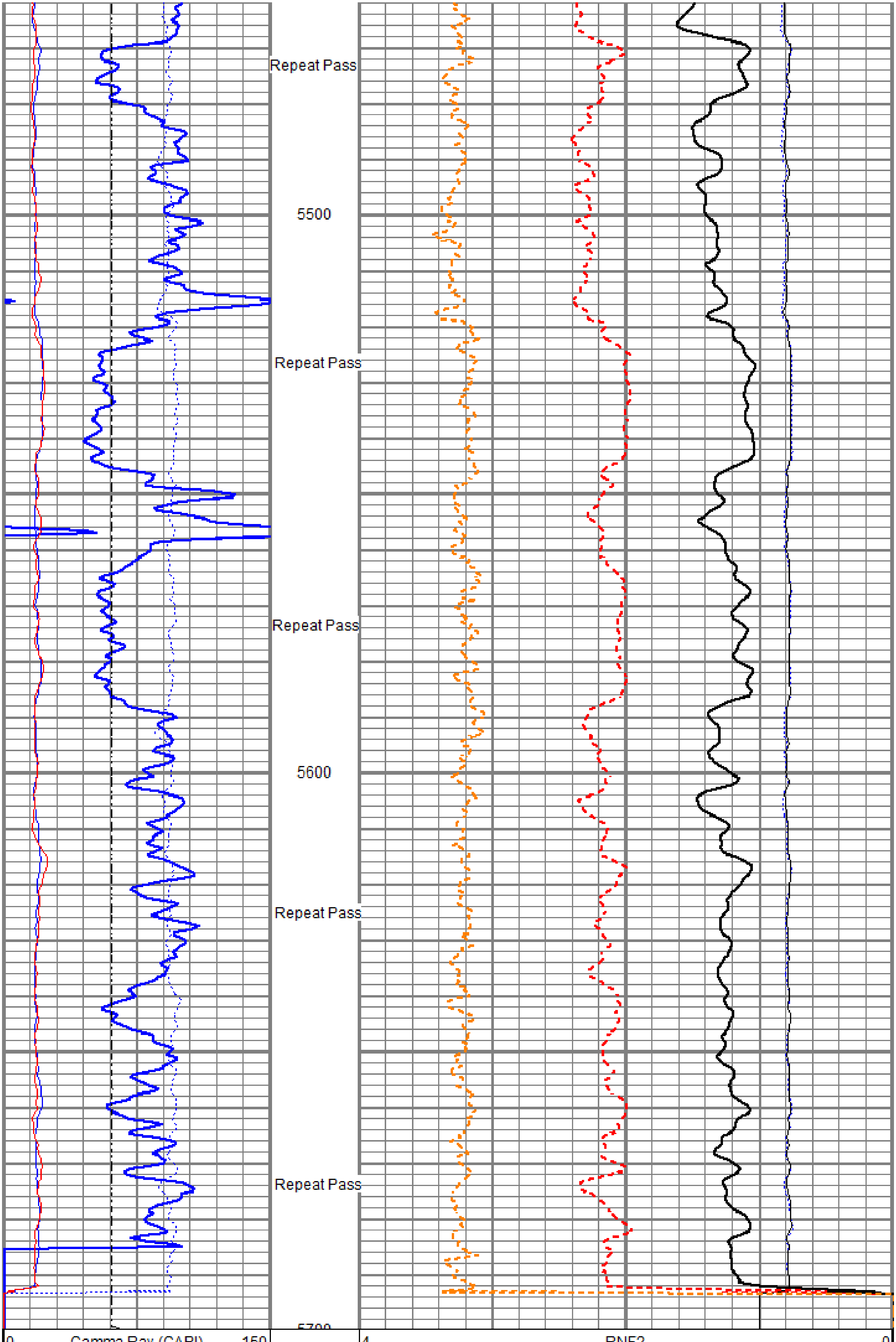
Repeat Pass

Database File	tep\sr 24-12\pn\tep_ware sr 24-12_pn_02-18-18.db
Dataset Pathname	repeat/ware_sr_24-12_pn_repeat_shift
Presentation Format	ros_pdn_hunter
Dataset Creation	Wed Feb 21 10:55:39 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

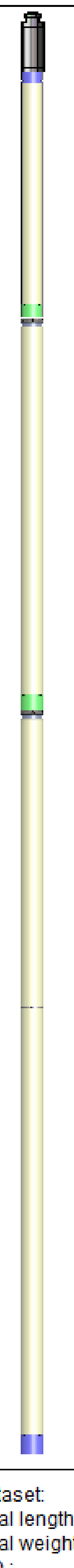
FIS2
0 (cps) 45000
NIS2
0 (cps100000



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_Electric_Cable_Heads-Titan_1-11/1 Electric Cable Head with 1" Fishing Neck	1.03	1.69	5.40
			Telemetry-Antares Antares Telemetry / Gamma / CCL	4.07	1.70	17.60
			Generator-Antares Antares Neutron Generator	19.03	1.70	85.80

Dataset: pdn tool.db: field/well/run1/PDN_Tool_Diagram
Total length: 24.13 ft
Total weight: 108.80 lb
O.D.: 1.70 in

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Field	Rulison
County	Garfield
State	Colorado