RELIANCE OILFIELD SERVICES

Pulsed Neutron Gamma Ray Casing Collar Log

Company	TEP Rocky Mountain LLC
Well	Youberg SR 312-12
Field	Rulison
County	Garfield
State	Colorado

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Well Youberg SR 312-12
Field Rulison
County Garfield State Colorado
Location: API # : 05-045-23302
1933' FNL & 2114' FEL SWNE
SEC 12 TWP 7S RGE 94W

Other Services
RBL

Permanent Datum	Ground Level	Elevation 7254'	Elevation
Log Measured From	Kelly Bushing	24 FT	K.B. 7278'
Drilling Measured From	Kelly Bushing		D.F. 7277' G.L. 7254'

Date	11-NOV-2017
Run Number	One
Depth Driller	10104 FT
Depth Logger	10039 FT
Bottom Logged Interval	10032 FT
Top Log Interval	5882 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	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	1466 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	10061 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 06-NOV-2017
Log ran from 10032 FT to 5882 FT
PDN data logged with Anteres Pulsed Neutron Tool

Thank you for choosing Reliance Oilfield Services, LLC!!

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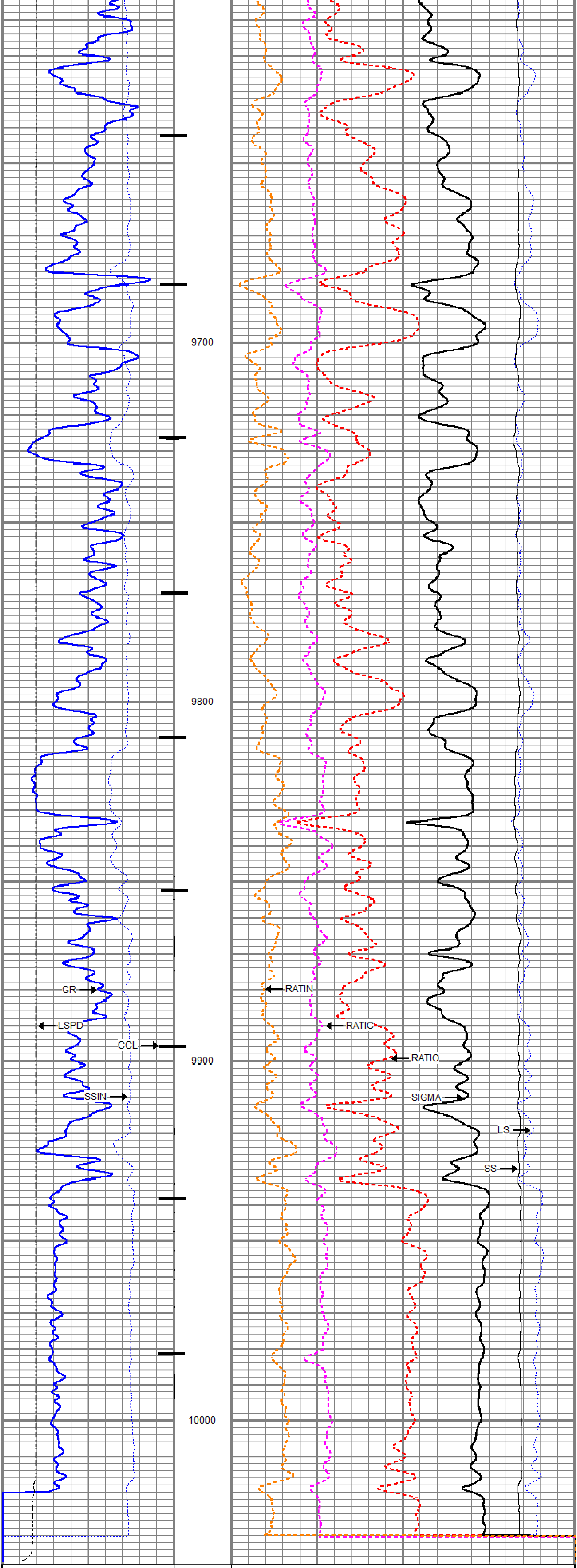
Main Pass

Database File	tep\sr 312-12\pdn\tep_youberg sr 312-12_pdn_11-11-17.db
Dataset Pathname	youberg_sr_312-12_main_pass_las_shift
Presentation Format	ros_pdn
Dataset Creation	Tue Nov 14 23:33:44 2017
Charted by	Depth in Feet scaled 1:240

0 Gamma Ray (GAPI) 150
Casing Collar Locator
0 Line Speed (ft/min) 100
0 SSIN (cps) 500000

10 RATIO 0
60 SIGMA (cu) 0
0.35 RATIC 0
11 RATIN 0

0 LS (cps) 0000
SS
0 (cps4e+006

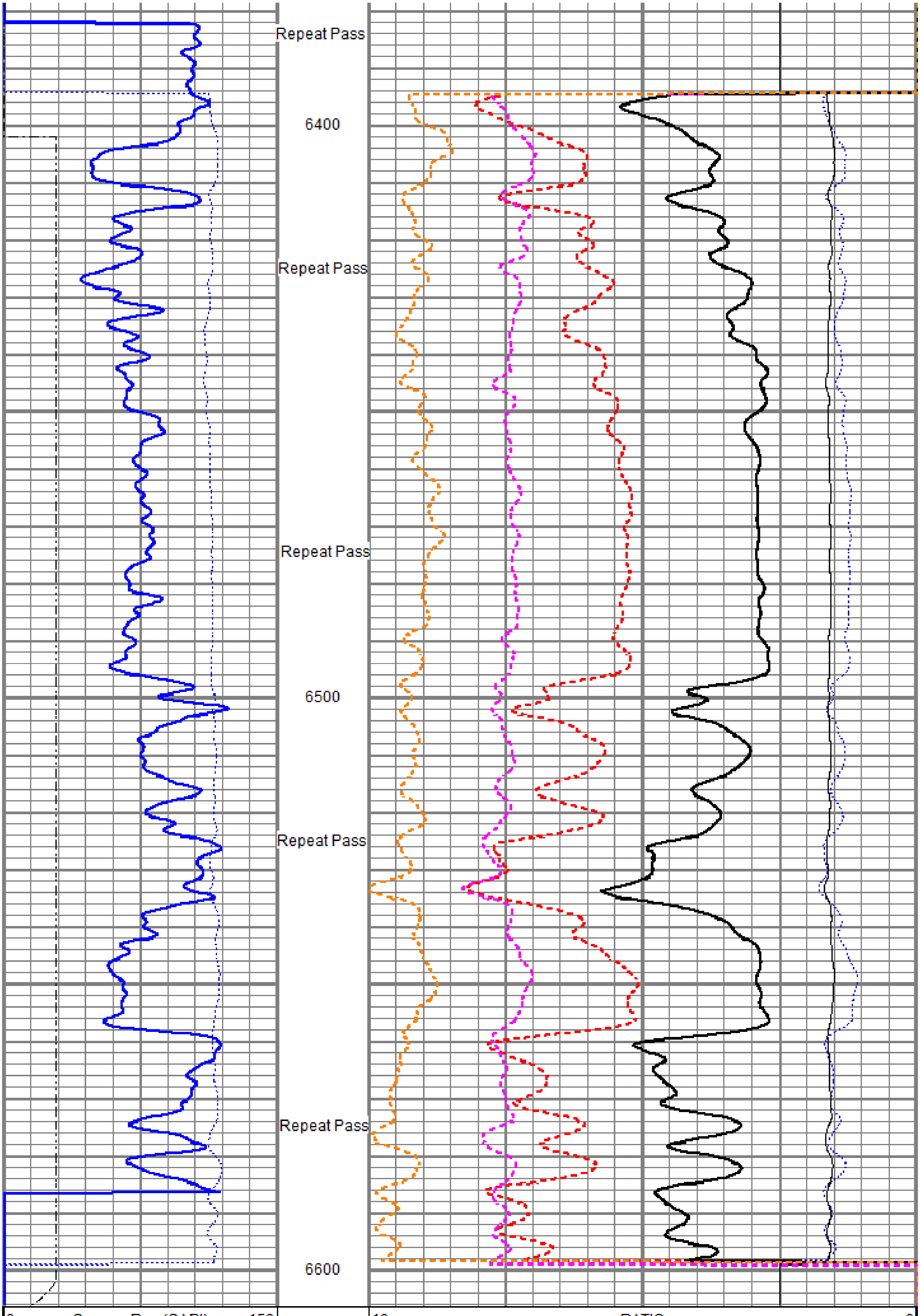


0	Gamma Ray (GAPI)	150	10	RATIO	0
	Casing Collar Locator		60	SIGMA (cu)	0
0	Line Speed (ft/min)	100	0.35	RATIC	0
0	SSIN (cps)	500000	11	RATIN	0
			0	LS (cps)	0000
				SS	
			0	(cps4e+006	

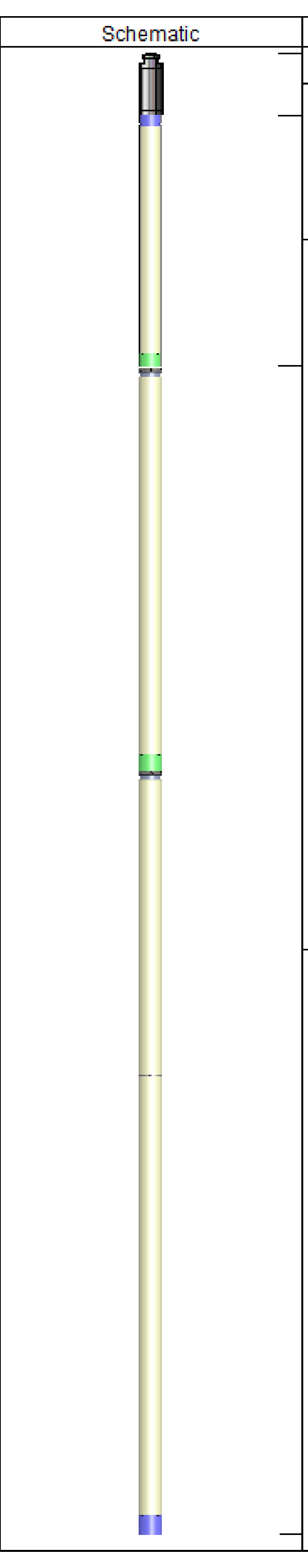
Repeat Pass

Database File	tep\sr 312-12\pdn\tep_youberg sr 312-12_pdn_11-11-17.db
Dataset Pathname	repeat/youberg_sr_312-12_repeat_pass_las_shift
Presentation Format	ros_pdn
Dataset Creation	Wed Nov 15 14:01:37 2017
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150	10	RATIO	0
0	Line Speed (ft/min)	100	60	SIGMA (cu)	0
0	SSIN (cps)	500000	0.35	RATIC	0
			11	RATIN	0
			0	LS (cps)	0000
				SS	
			0	(cps4e+006	



0	Gamma Ray (GAPI)	150	10	RATIO	0
0	Line Speed (ft/min)	100	60	SIGMA (cu)	0
0	SSIN (cps)	500000	0.35	RATIC	0
			11	RATIN	0
			0	LS (cps)	0000
				SS	
			0	(cps4e+006	

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
			Titan_Electric_Cable_Heads-Titan_1-11/ 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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State	Colorado