RELIANCE
OILFIELD SERVICES

Pulsed Neutron Gamma Ray Casing Collar Log

Company	TEP Rocky Mountain LLC
Well	Ware SR 313-12
Field	Rulison
County	Garfield
State	Colorado

Company TEP Rocky Mountain LLC
Well Ware SR 313-12
Field Rulison
County Garfield State Colorado
Location: API # : 05-045-23448
SEC 12 TWP 7S RGE 94W
Other Services
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Permanent Datum	Ground Level	Elevation 7479'	Elevation
Log Measured From	Kelly Bushing	24 FT	K.B. 7503'
Drilling Measured From	Kelly Bushing		D.F. 7502'
			G.L. 7479'

Date	08-JAN-2018
Run Number	One
Depth Driller	9883 FT
Depth Logger	9802 FT
Bottom Logged Interval	9795 FT
Top Log Interval	5748 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	Z. Fisher
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	1132 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	9953 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 7-JAN-2018
Log ran from 9795 FT to 5748 FT
Pulsed Neutron data logged with the Hunter RAS Tool

Thank You for choosing Reliance Oilfield Services, LLC!!

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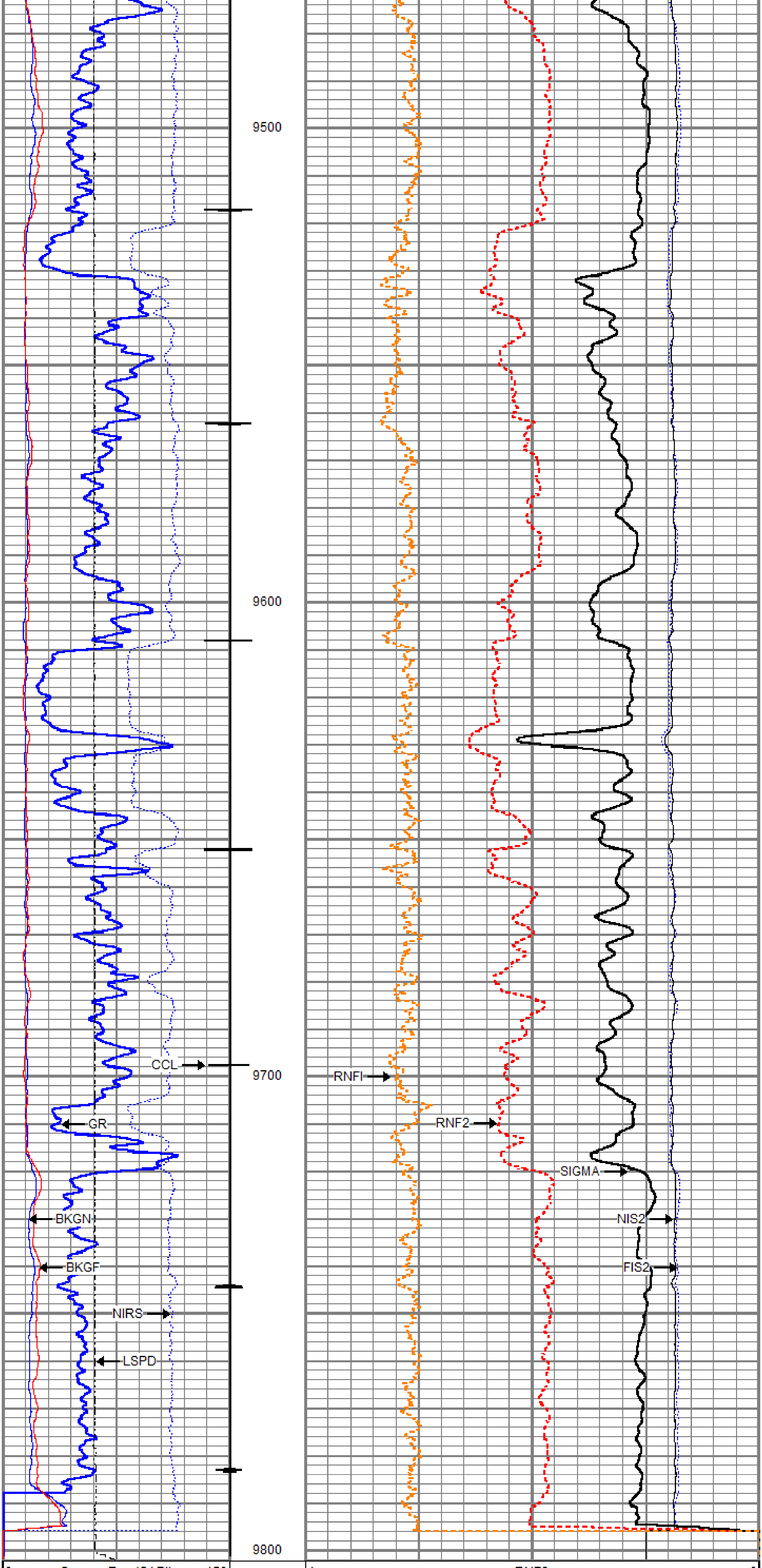
Main Pass

Database File	tep_ware sr 313-12_pn_01-08-18\tep_ware sr 313-12_pn_01-08-18.db
Dataset Pathname	mainshift/ware_sr_313-12_mainpass_2_shift
Presentation Format	ros_pdn_hunter
Dataset Creation	Wed Jan 10 10:00:47 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	

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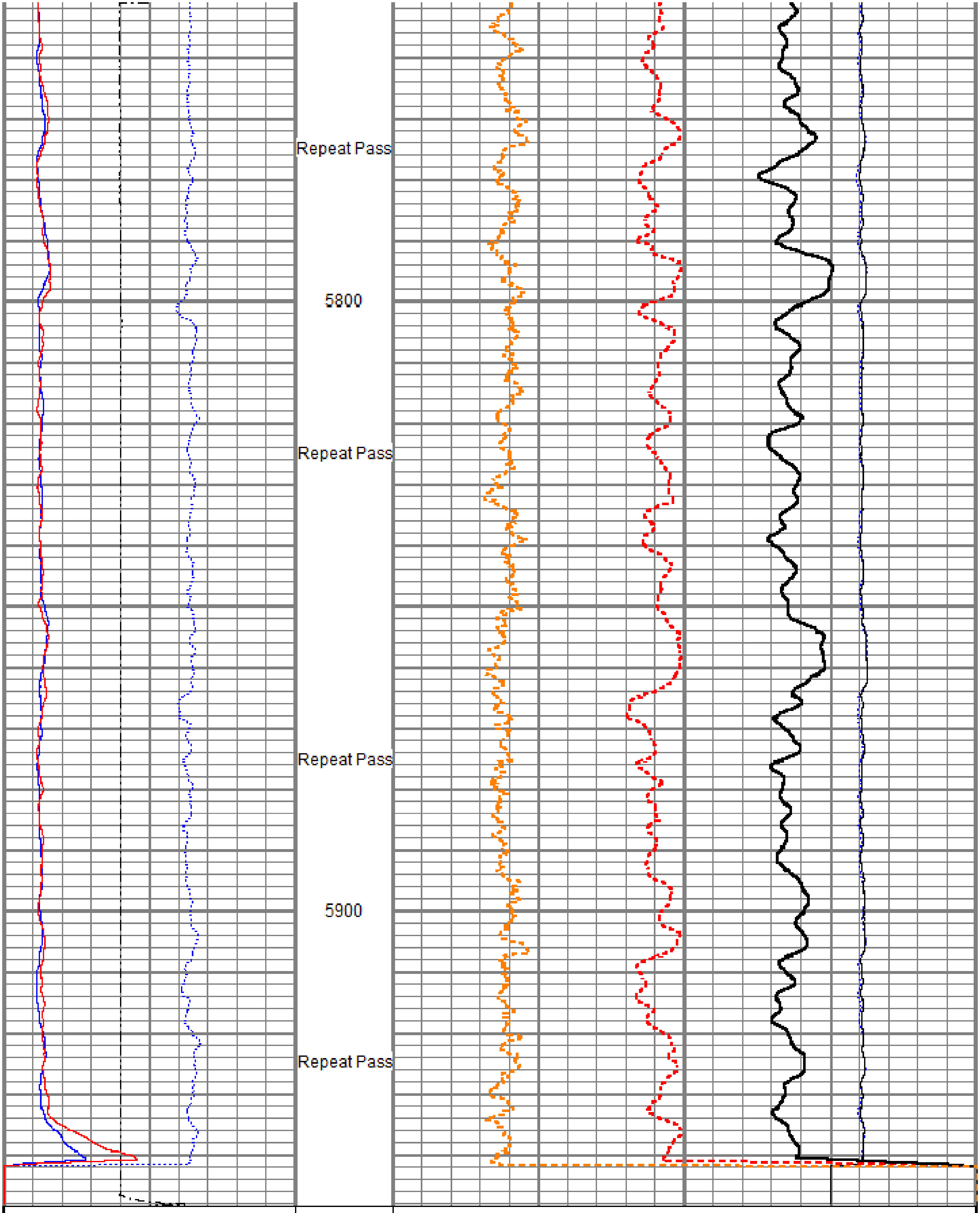
Repeat Pass

Database File	tep_ware sr 313-12_pn_01-08-18\tep_ware sr 313-12_pn_01-08-18.db
Dataset Pathname	repeatshift/ware_sr_313-12_repeat_2_shift
Presentation Format	ros_pdn_hunter
Dataset Creation	Wed Jan 10 10:07:37 2018
Charted by	Depth in Feet scaled 1:240

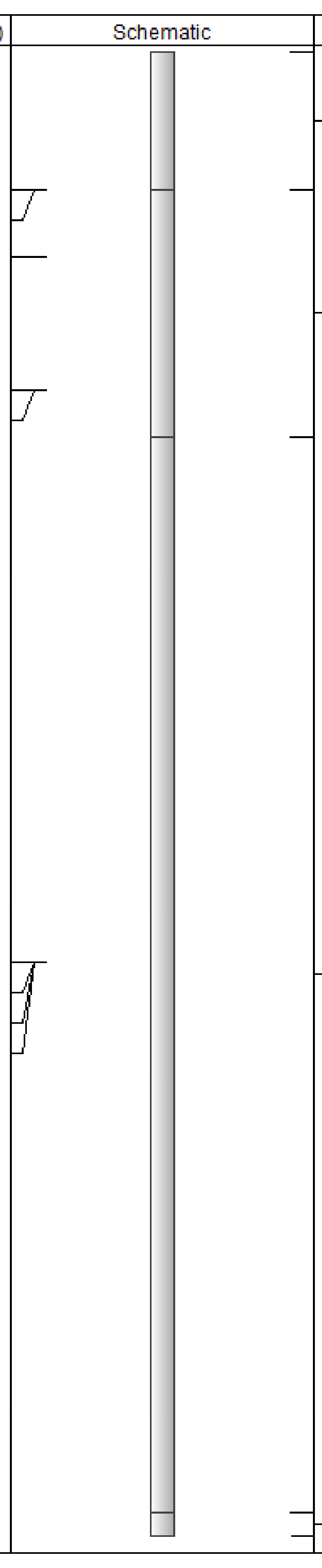
-100	Line Speed (ft/min)	100	
0	NIRS (cps)	400000	
0	BKGN (cps)	4000	
0	BKGF (cps)	2000	

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



-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)	Description	Length (ft)	O.D. (in)	Weight (lb
		HWS_TCU-001 (001705) HWS Telemetry Control Unit	1.52	1.69	7.80
TCUTEMP	14.69				
TCUVOLT	14.69				
GCL_CCL	13.97				
		HWS_GCL-001 (001681) HWS Gamma Ray Collar Locator (1.6875")	2.69	1.69	13.40
GCL_GR	12.50				
GCL_GR	12.50				
Long	6.25	HWS_RAS-RAS001 (003041) Hunter Well Science Pulsed Neutron Tool	11.75	1.69	55.82
Far	6.25				
Near	6.25				
Anci	6.25				
		HWS_TBN-001 (000001) HWS Terminator Bull Nose (1.6875")	0.25	1.69	0.99

Dataset:	tep_ware sr 313-12_pn_01-08-18.db: field/well/run1/repeat.2
Total length:	16.21 ft
Total weight:	78.01 lb
O.D.:	1.69 in

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