Company TEP Rocky Mountain LLC
Well Ware SR 323-12
Field Rulison
County Garfield
State Colorado

RELIANCE OILFIELD SERVICES

Pulsed Neutron
Gamma Ray
Casing Collar Log

Company	TEP Rocky Mountain LLC		
Well	Ware SR 323-12		
Field	Rulison		
County	Garfield	State	Colorado
Location:	API # : 05-045-23452 1818' FSL & 2284' FWL NESW 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	07-DEC-2017
Run Number	One
Depth Driller	9512 FT
Depth Logger	9446 FT
Bottom Logged Interval	9440 FT
Top Log Interval	5381 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	32.3	H-40	Surface	1128 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	9471 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 08-DEC-2017
Log ran from 9440 FT to 5381 FT
Pulsed Neutron Data logged with the Hunter RAS Tool

Thank you for choosing Reliance Oilfield Services, LLC!!

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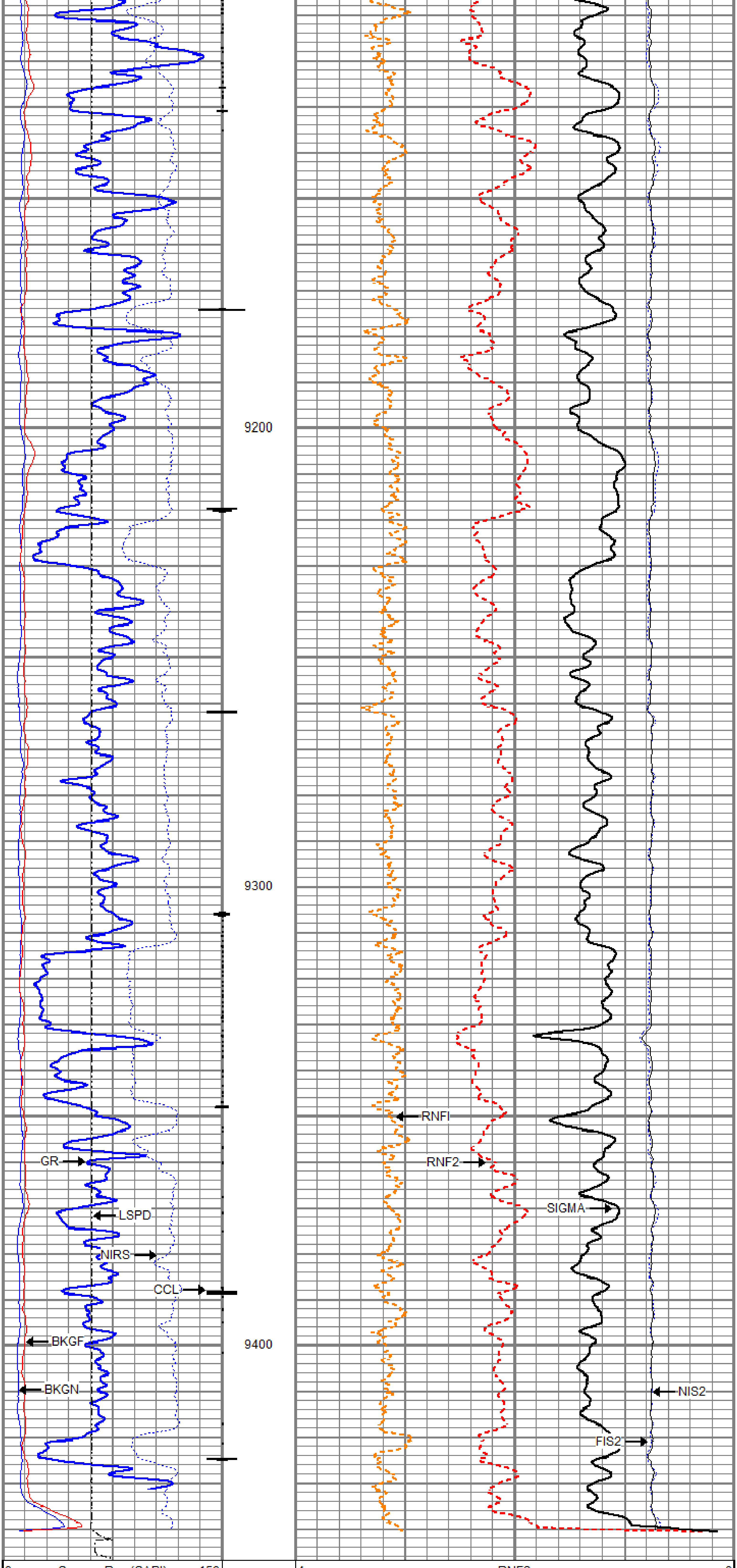
Main Pass

Database File	tep\sr 323-12\20171208\pn\tep_sr-323-12_pdn\tep_ware sr 323-12_pn_12-07-17.db
Dataset Pathname	Main
Presentation Format	ros_pdn_hunter
Dataset Creation	Thu Dec 07 09:02:13 2017
Charted by	Depth in Feet scaled 1:240

Min	Curve	Max
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
0	FIS2 (cps)	45000
0	NIS2 (cps	100000

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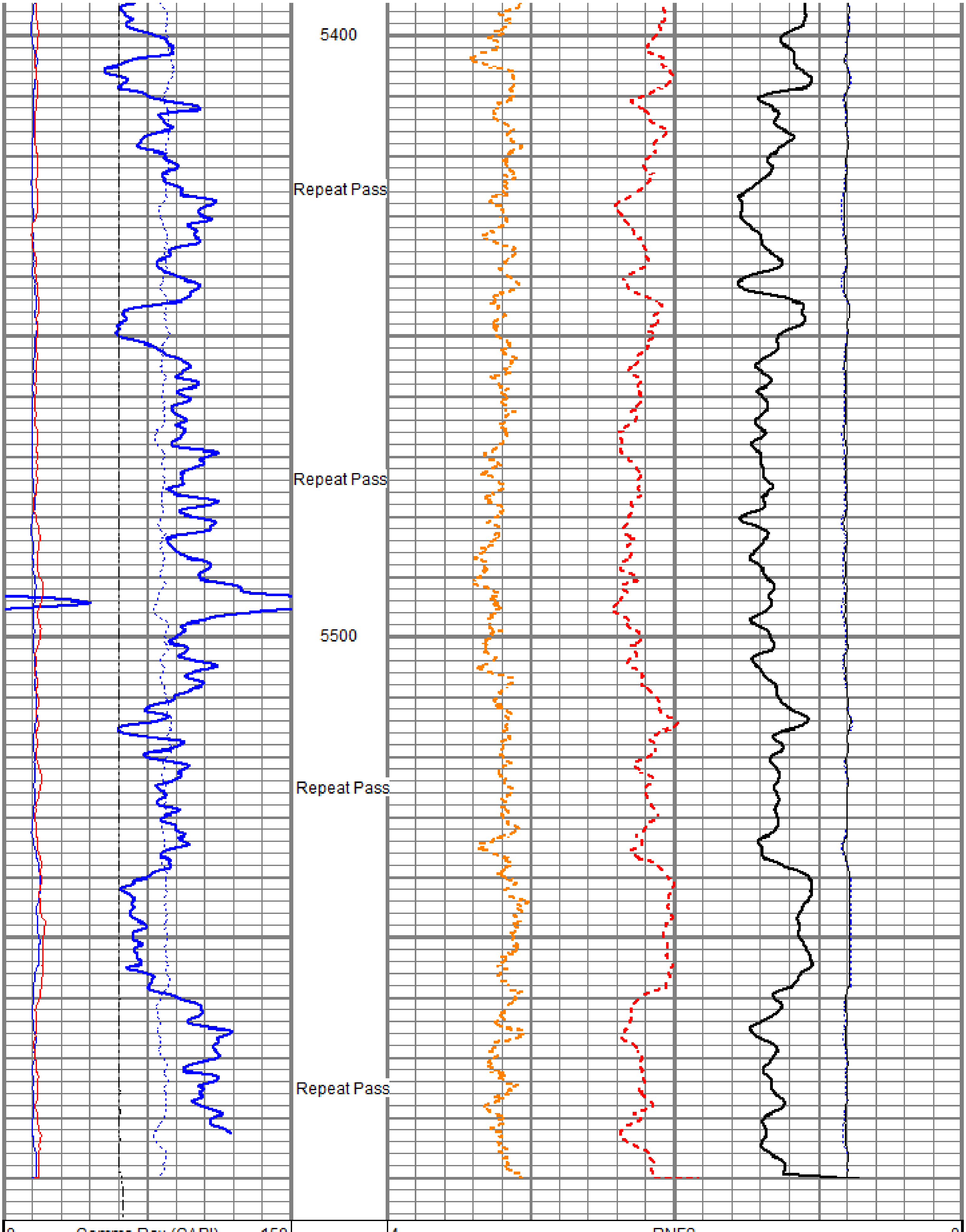
Repeat Pass

Database File	tep\sr 323-12\20171208\pn\tep_sr-323-12_pdn\tep_ware sr 323-12_pn_12-07-17.db
Dataset Pathname	repeat
Presentation Format	ros_pdn_hunter
Dataset Creation	Thu Dec 07 12:36:05 2017
Charted by	Depth in Feet scaled 1:240

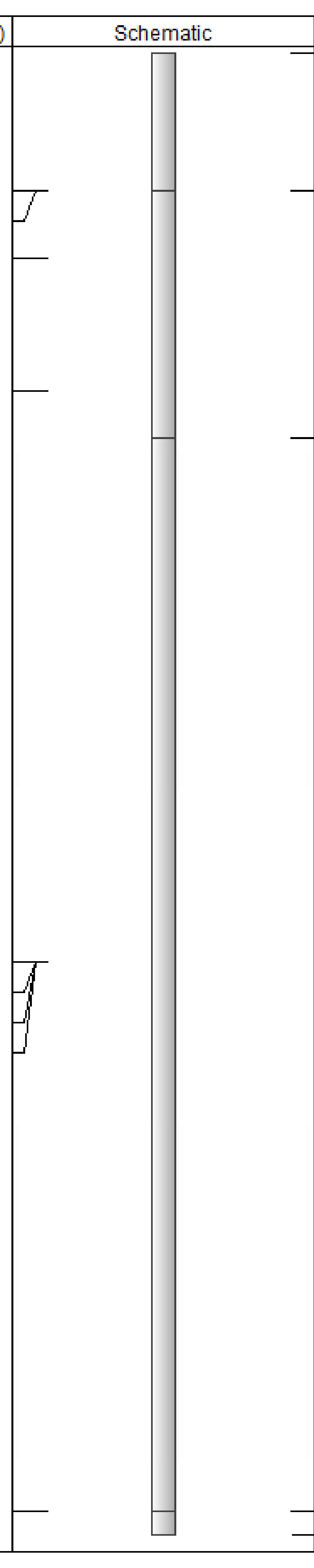
0	Gamma Ray (GAPI)	150
-100	Line Speed (ft/min)	100
0	NIRS (cps)	400000
0	BKGN (cps)	4000
0	BKGF (cps)	2000

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



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
0	FIS2 (cps)	45000
0	NIS2 (cps	100000



Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
			HWS_TCU-001 (001704) HWS Telemetry Control Unit	1.52	1.69	7.80
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					
Long	6.25		HWS_RAS-RAS001 (003040) Hunter Well Science Pulsed Neutron Tool	11.75	1.69	55.82
Far	6.25					
Near	6.25					
Anci	6.25					
GCL_GR	0.25		HWS_TBN-001 (000001) HWS Terminator Bull Nose (1.6875")	0.25	1.69	0.99

Dataset:	tep_ware sr 323-12_pn_12-07-17.db: field/well/run1/Main
Total length:	16.21 ft
Total weight:	78.01 lb
O.D.:	1.69 in

Calibration Report

Database File	c:\programdata\warrior\data\tep\sr 323-12\20171208\pn\tep_sr-323-12_pdn\tep_ware sr 323-12_pn_12-07-1
Dataset Pathname	Main
Dataset Creation	Thu Dec 07 09:02:13 2017

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/

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