RELIANCE OILFIELD SERVICES

Pulsed Neutron Gamma Ray Casing Collar Log

Company TEP Rocky Mountain LLC
Well Federal RG 344-7-297
Field Sulphur Creek
County Rio Blanco
State Colorado

Company	TEP Rocky Mountain LLC
Well	Federal RG 344-7-297
Field	Sulphur Creek
County	Rio Blanco
State	Colorado

Location: API # : 05-103-12463

SEC 18 TWP 2S RGE 97W

Other Services

Permanent Datum	Ground Level	Elevation	6621'
Log Measured From	Kelly Bushing	30 FT	
Drilling Measured From	Kelly Bushing		

Elevation
K.B. 6651'
D.F. 6650'
G.L. 6121'

Date	11-AUG-2021		
Run Number	One		
Depth Driller	12199 FT		
Depth Logger	12138 FT		
Bottom Logged Interval	12124 FT		
Top Log Interval	6425 FT		
Open Hole Size	8.75"		
Type Fluid	Water		
Density / Viscosity	8.34 lb/gal		
Max. Recorded Temp.	---		
Estimated Cement Top	---		
Time Well Ready	ROA		
Time Logger on Bottom	8:00		
Equipment Number	HD-0359		
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	13 3/8	54.5	J-55	Surface	1423 FT
Intermediate #1	9 5/8	36	J-55	Surface	3317 FT
Intermediate #2	4 1/2	11.6	P-110	Surface	12157 FT
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 09-AUG-2021

Thank you for choosing Reliance Oilfield Services, LLC!

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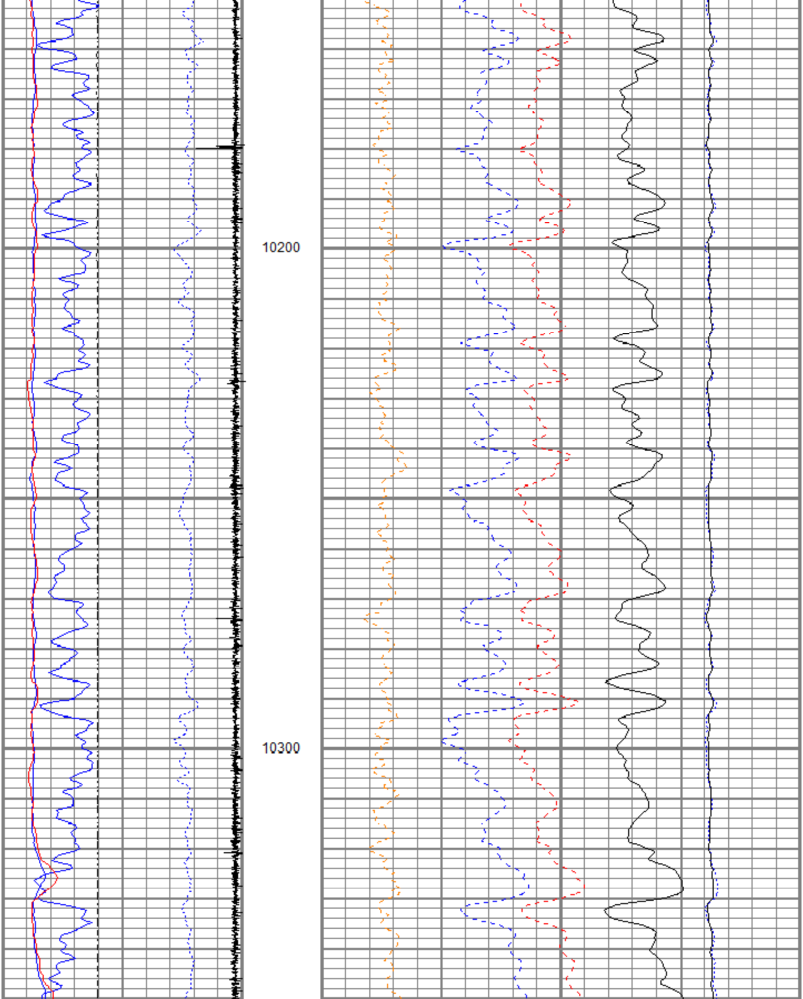
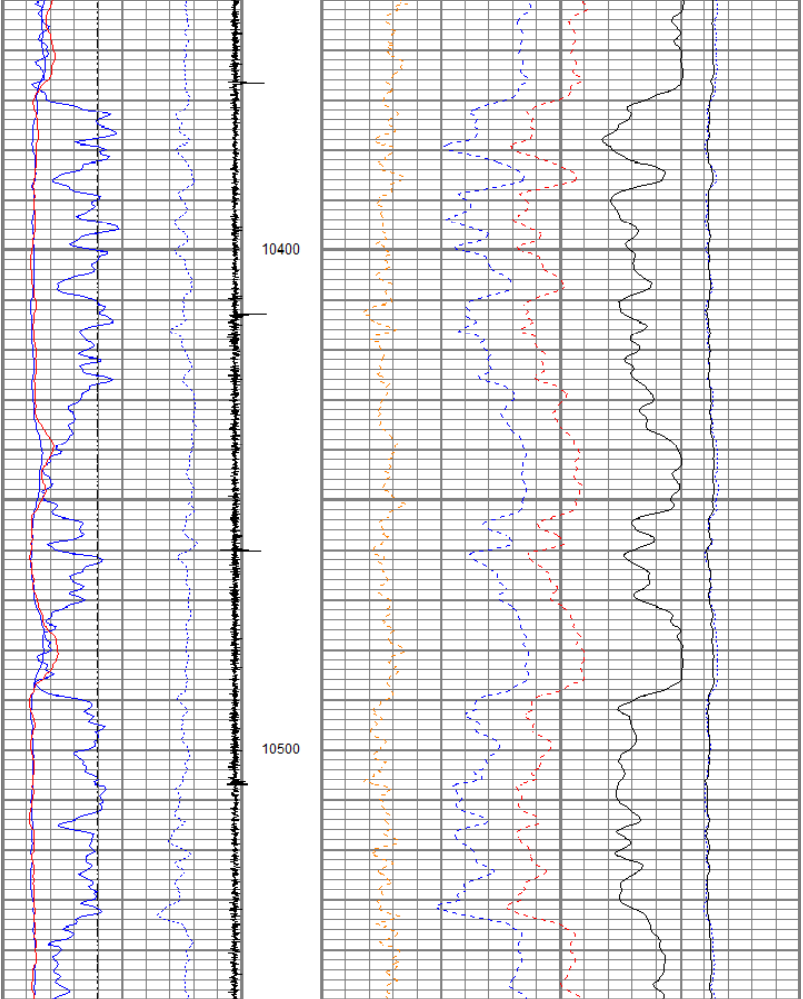
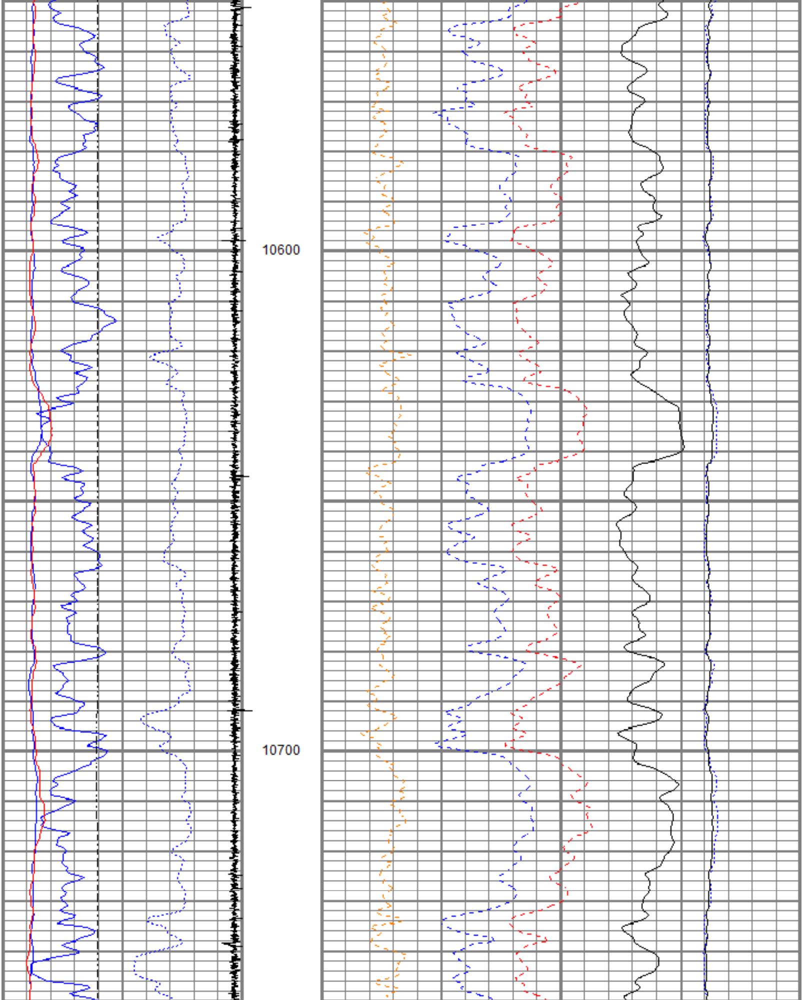
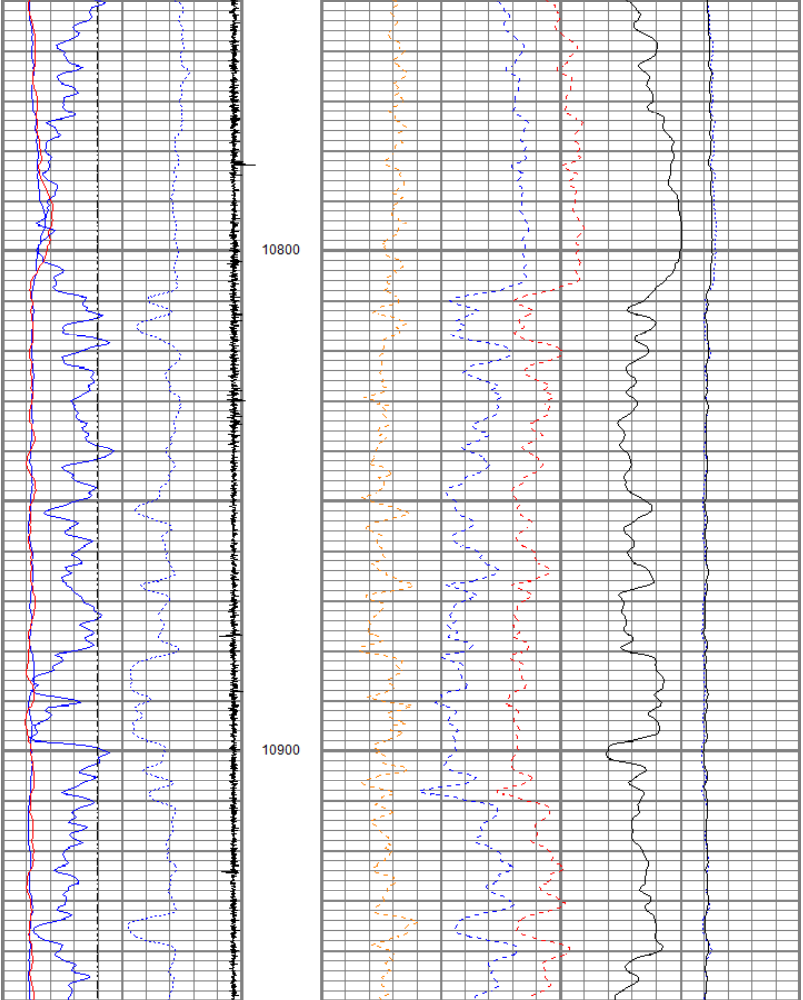
Main Pass

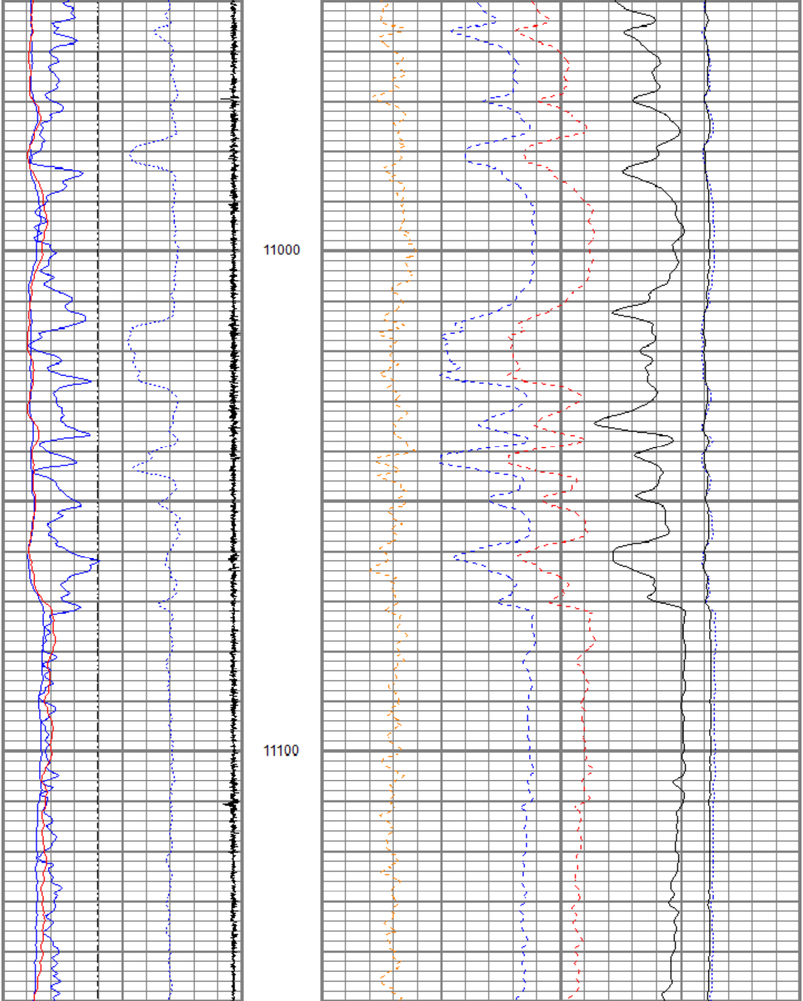
Database File tep\federal rg 344-7-297\tep_federal rg 344-7-297_pn_08-11-21.db
Dataset Pathname runSHIFTED/merge1
Presentation Format ros_pdn_hunter
Dataset Creation Fri Aug 13 12:51:15 2021
Charted by Depth in Feet scaled 1:240

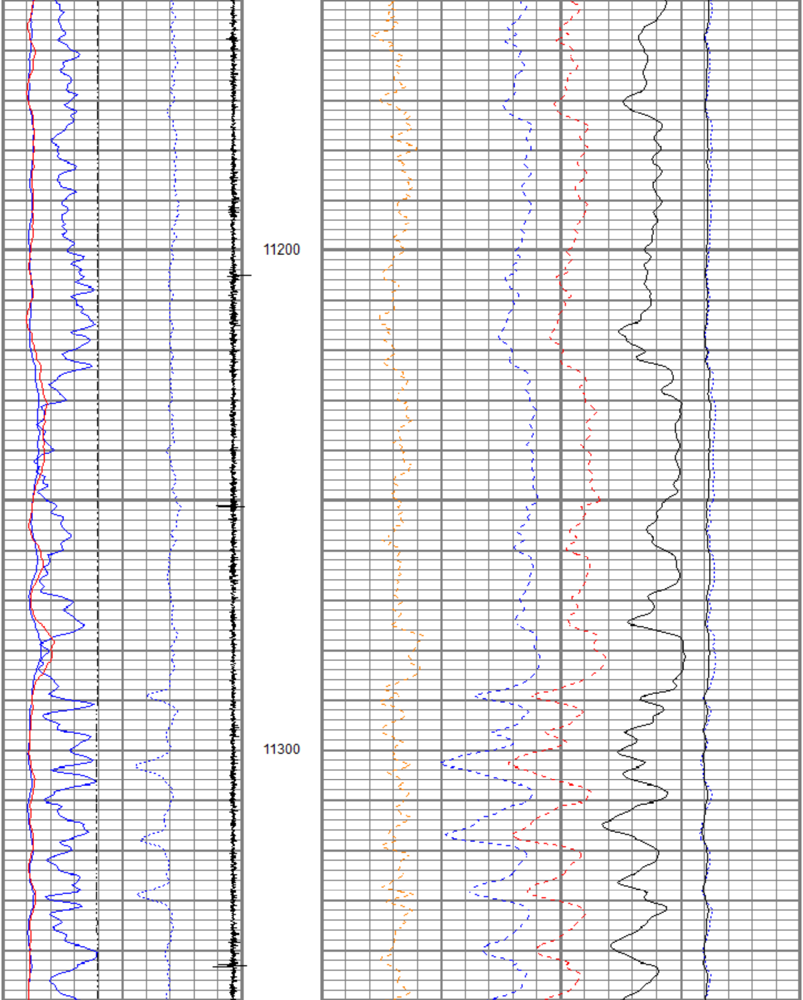


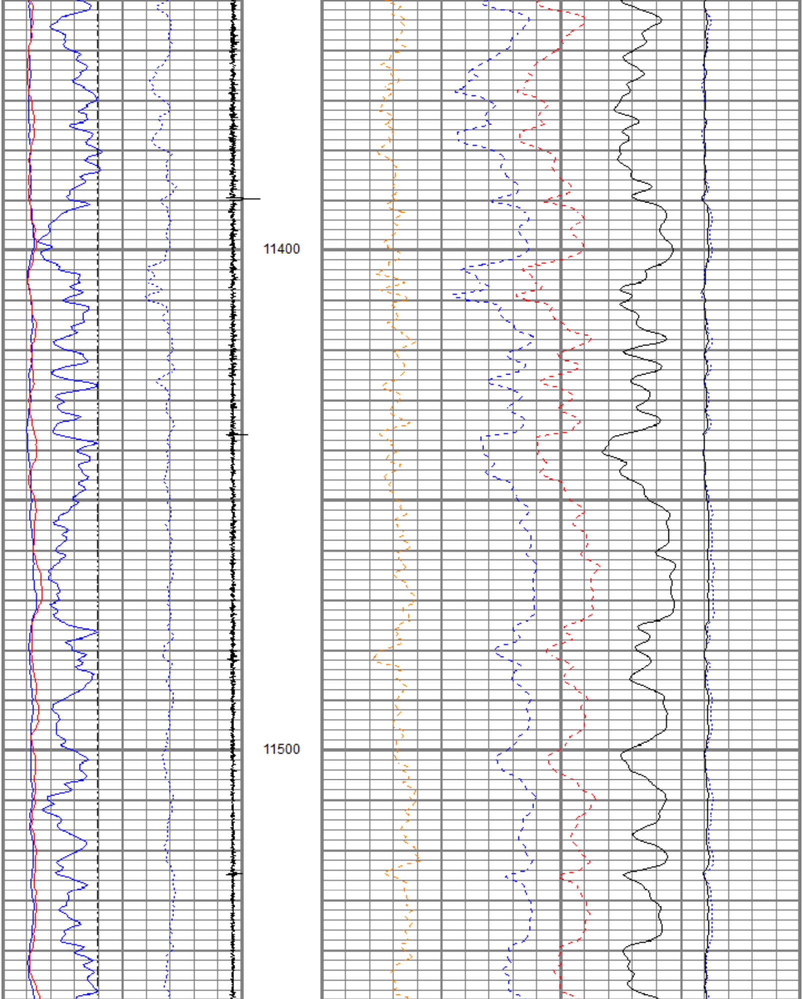


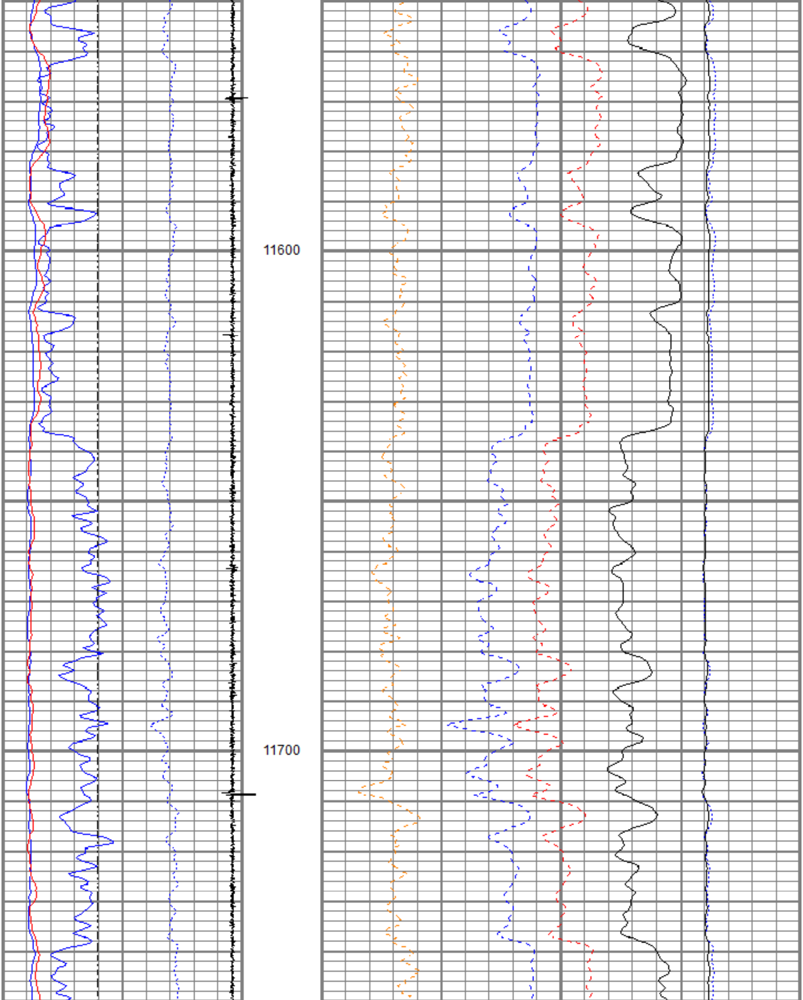


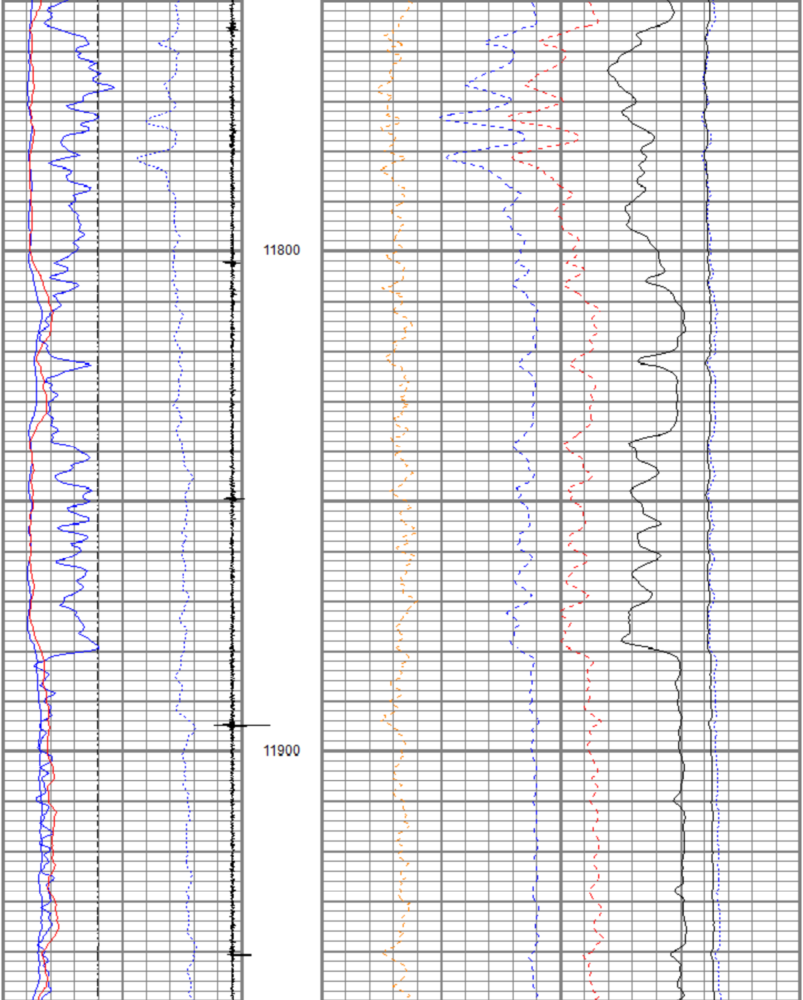


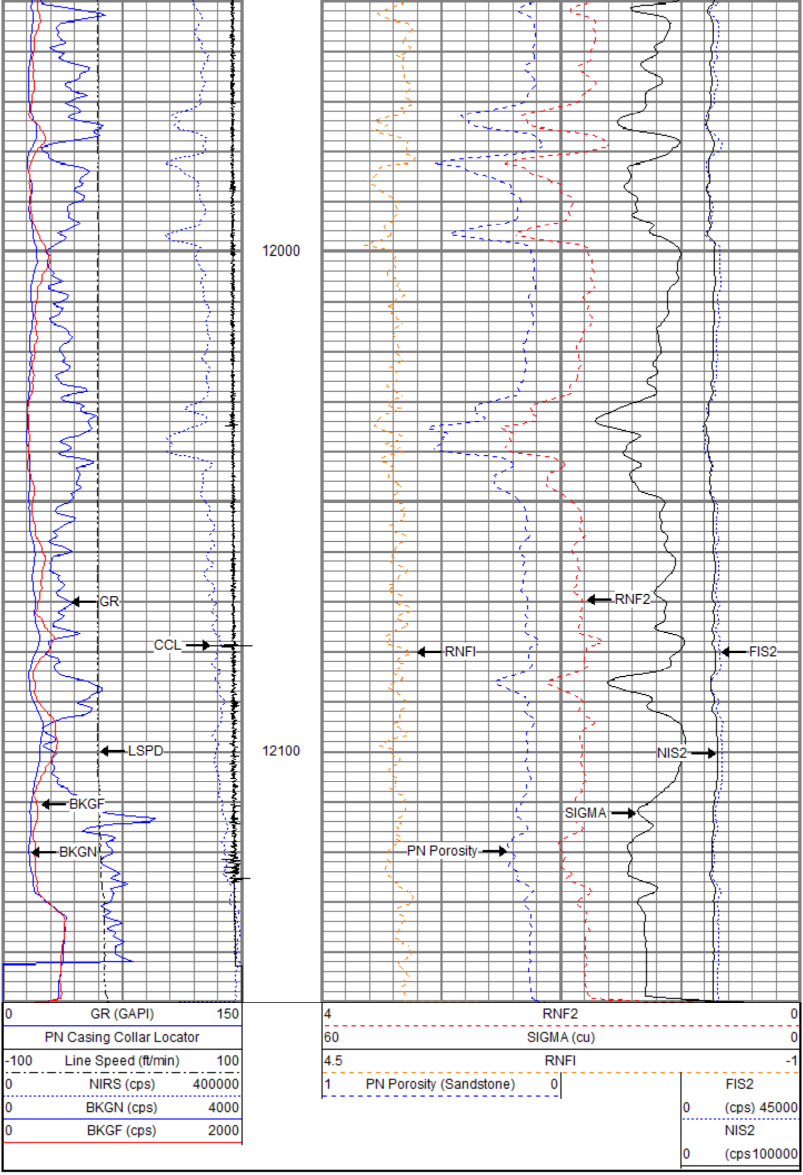












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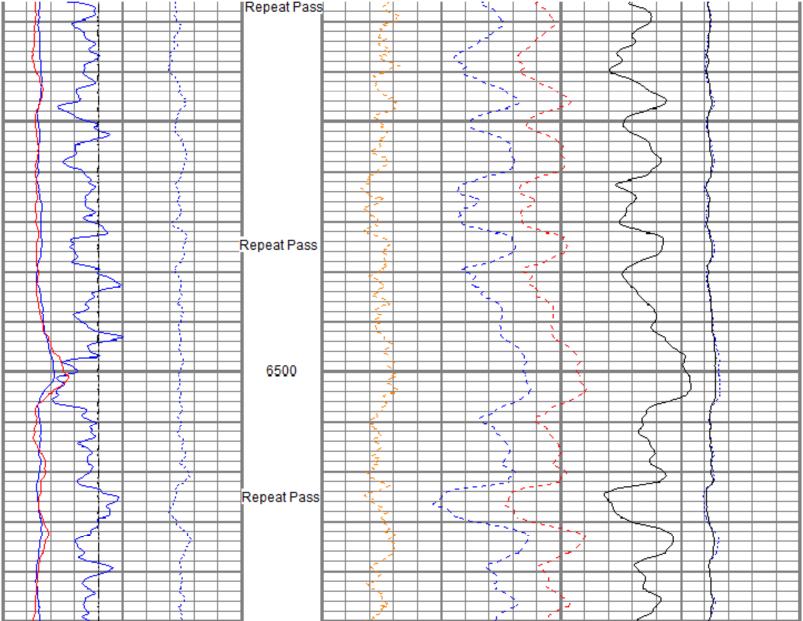
Repeat Pass

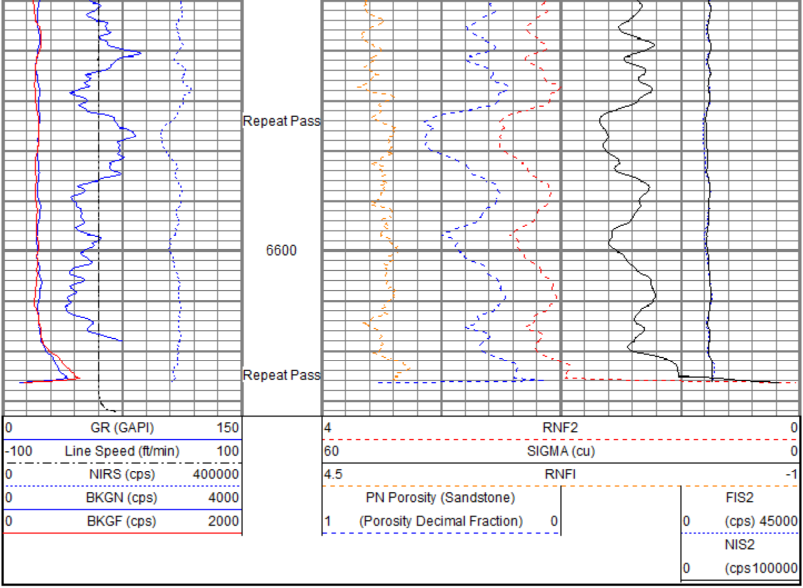
Database File	tep\federal rg 344-7-297\tep_federal rg 344-7-297_pn_08-11-21.db
Dataset Pathname	repeat.2
Presentation Format	ros_pdn_hunter
Dataset Creation	Wed Aug 11 16:06:30 2021
Charted by	Depth in Feet scaled 1:240

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	-1
	PN Porosity (Sandstone)	
1	(Porosity Decimal Fraction)	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	13.97 12.50		HWS_GCL-001 (000265) HWS Gamma Ray Collar Locator (1.6875")	2.69	1.69	13.40

Long Far Near Anci	6.25 6.25 6.25 6.25		HWS_RAS-RAS002 (003041) Hunter Well Science Pulsed Neutron Tool	11.75	1.69	55.82
LOCTIM UTCTIM	0.00 0.00		HWS_TBN-001 (001724) HWS Terminator Bull Nose (1.6875")	0.25	1.69	0.99

Dataset:	tep_federal rg 344-7-297_pn_08-11-21.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:\programdata\warrior\data\tep\federal rg 344-7-297\tep_federal rg 344-7-297_pn_08-11-21.db
Dataset Pathname	main.2
Dataset Creation	Wed Aug 11 16:04:21 2021

RAS Calibration Report

Calibration Date: Wed Jun 11 14:55 2020

Meas #: 003041

Water Tank

Description	Curve	Standard	Mean	Dev
Sigma Near	SIGN	23.1	24.1	0.23
Sigma Far	SIGF	22.8	23.5	0.27
Ratio Near-Long Capture	RNL2	5.79	6.45	0.04
Ratio Near-Long Burst	RNLB	6.49	6.87	0.04
Ratio Near-Far Capture	RNF2	1.85	2.00	0.01
Ratio Near-Far Burst	RNFB	2.03	2.16	0.01
Spectral Hydrogen Index	HIS2	12.84	12.61	0.16
Carbon-Oxygen Ratio	CORS	1.34	1.30	0.05
Ratio Burst-Capture Near	RNBC	1.46	1.73	0.01
Ratio Burst-Capture Far	RFBC	1.50	1.67	0.01

Hydrocarbon Tank

Description	Curve	Standard	Mean	Dev
Sigma Near	SIGN	25.7	26.8	0.26
Sigma Far	SIGF	25.1	25.5	0.45
Ratio Near-Long Capture	RNL2	1.78	2.98	0.02
Ratio Near-Long Burst	RNLB	2.57	4.38	0.02
Ratio Near-Far Capture	RNF2	0.98	1.30	0.01
Ratio Near-Far Burst	RNFB	1.30	1.64	0.01
Spectral Hydrogen Index	HIS2	16.68	17.41	0.28
Carbon-Oxygen Ratio	CORS	1.51	1.54	0.04
Ratio Burst-Capture Near	RNBC	2.23	2.46	0.02
Ratio Burst-Capture Far	RFBC	2.09	2.18	0.02

Gamma Ray Calibration Report

Serial Number:	000265	
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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