RELIANCE OILFIELD SERVICES

Pulsed Neutron
Gamma Ray
Casing Collar Log

Company	TEP Rocky Mountain LLC
Well	Federal RG 341-18-297
Field	Sulphur Creek
County	Rio Blanco
State	Colorado

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Well Federal RG 341-18-297
Field Sulphur Creek
County Rio Blanco State Colorado
Location: API # : 05-103-12470
SEC 18 TWP 2S RGE 97W
Other Services RBL

			Elevation
Permanent Datum	Ground Level	Elevation 6621'	K.B. 6651'
Log Measured From	Kelly Bushing	30 FT	D.F. 6650'
Drilling Measured From	Kelly Bushing		G.L. 6621'

Date	10-AUG-2021
Run Number	One
Depth Driller	12127 FT
Depth Logger	12058 FT
Bottom Logged Interval	12044 FT
Top Log Interval	6385 FT
Open Hole Size	8.75"
Type Fluid	Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	---
Estimated Cement Top	See Log
Time Well Ready	ROA
Time Logger on Bottom	7:55
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	1440 FT
Intermediate #1	9 5/8	36	J-55	Surface	3276 FT
Intermediate #2	4 1/2	11.6	P-110	Surface	12083 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
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	g:\data\tep\federal rg 341-18-297\tep_federal rg 341-18-297_pn_08-10-21.db
Dataset Pathname	runSHIFTED/merge1
Presentation Format	ros_pdn_hunter
Dataset Creation	Wed Aug 11 10:40:50 2021
Charted by	Depth in Feet scaled 1:240

Min	Curve	Max
0	GR (GAPI)	150
	PN 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	-1
1	PN Porosity (Sandstone)	0
0	FIS2 (cps)	5000
0	NIS2 (cps)	100000

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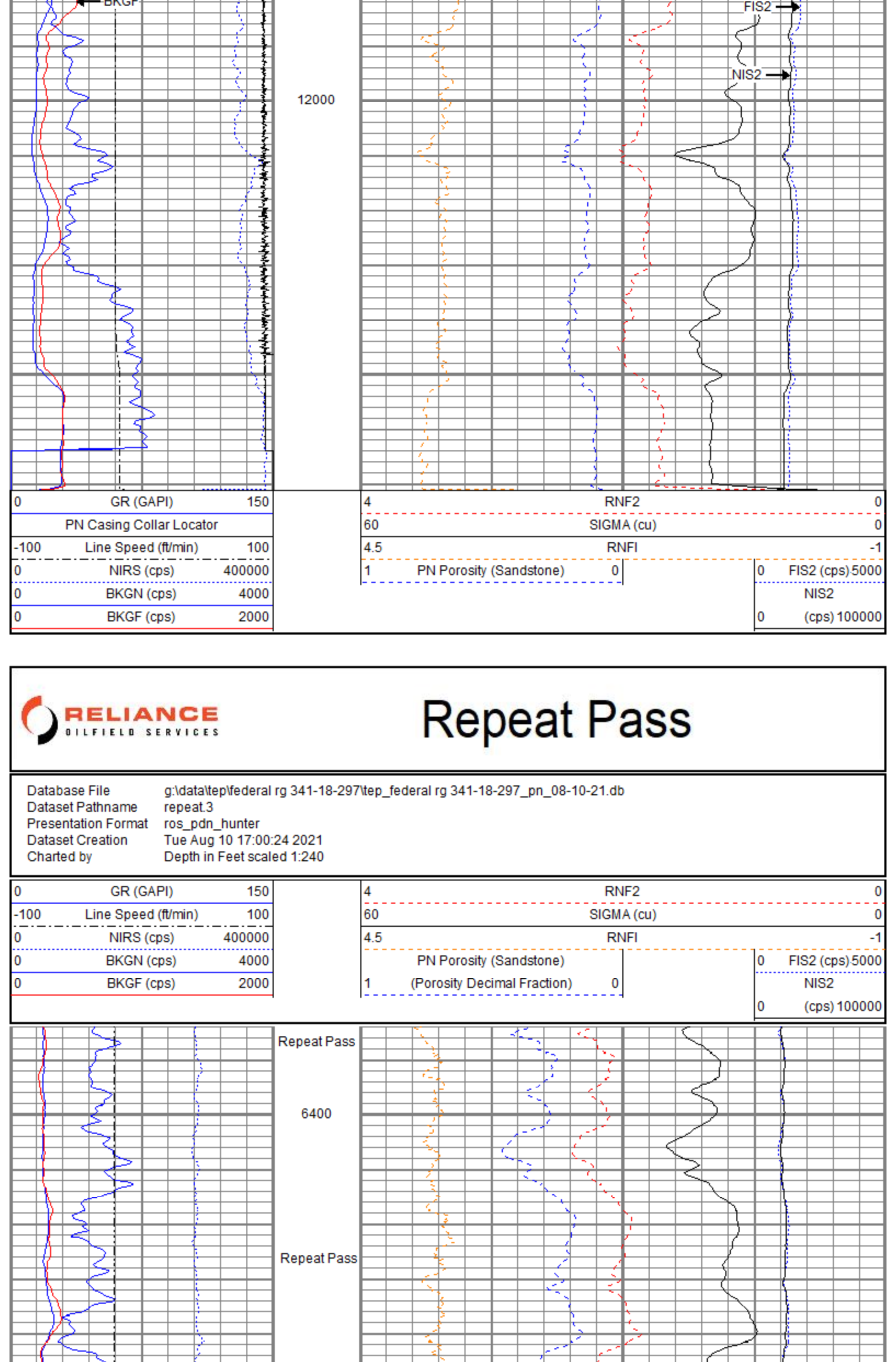
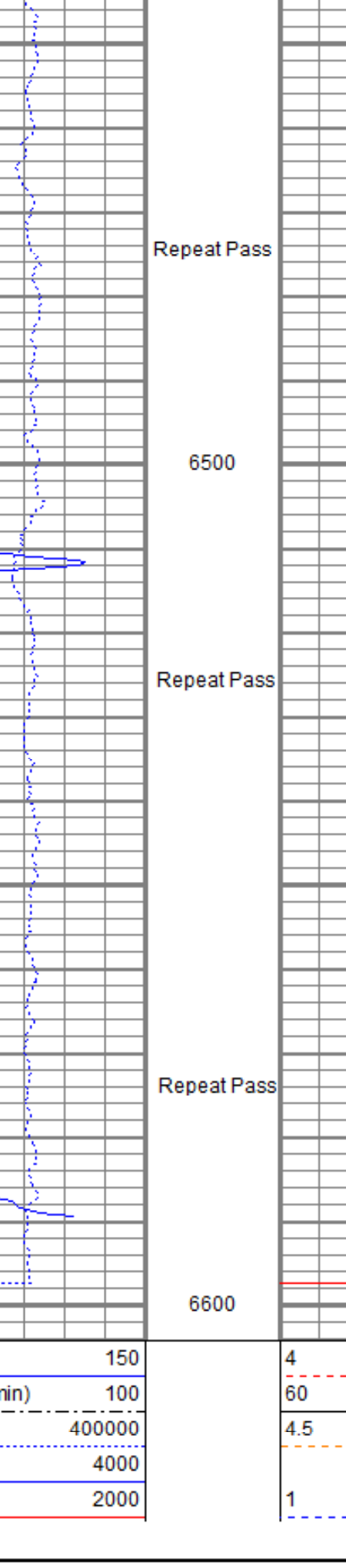
Repeat Pass

Database File	g:\data\tep\federal rg 341-18-297\tep_federal rg 341-18-297_pn_08-10-21.db
Dataset Pathname	repeat.3
Presentation Format	ros_pdn_hunter
Dataset Creation	Tue Aug 10 17:00:24 2021
Charted by	Depth in Feet scaled 1:240





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
			HWS_TCU-002 (001705) HWS Telemetry Control Unit (TCU002)	2.30	1.69	10.87
TCUTEMP	14.69					
TCUVOLT	14.69					
GCL_CCL	13.97					
			HWS_GCL-001 (000265) HWS Gamma Ray Collar Locator (1.6875")	2.69	1.69	13.40
GCL_GR	12.50					
Long	6.25		HWS_RAS-RAS002 (003041) Hunter Well Science Pulsed Neutron Tool	11.75	1.69	55.82
Far	6.25					
Near	6.25					
Anci	6.25					
LOCTIM	0.00					
UTCTIM	0.00		HWS_TBN-001 (001724) HWS Terminator Bull Nose (1.6875")	0.25	1.69	0.99

Dataset: tep_federal rg 341-18-297_pn_08-10-21.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	g:\data\tep\federal rg 341-18-297\tep_federal rg 341-18-297_pn_08-10-21.db
Dataset Pathname	main.2
Dataset Creation	Tue Aug 10 16:57:22 2021

RAS Calibration Report

Calibration Date: Tue 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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