RELIANCE
OILFIELD SERVICES

Pulsed Neutron Gamma Ray Casing Collar Log

Company	TEP Rocky Mountain LLC
Well	Federal GM 41-10
Field	Grand Valley
County	Garfield
State	Colorado

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Field Grand Valley
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Location: API # : 05-045-22698
2102' FNL & 1936' FWL SENW
SEC 10 TWP 7S RGE 96W

Other Services
RBL

Permanent Datum	Ground Level	Elevation	6148'	Elevation
Log Measured From	Kelly Bushing	24 FT		K.B. 6172' D.F. 6171' G.L. 6148'
Drilling Measured From	Kelly Bushing			

Date	11-OCT-2017		
Run Number	One		
Depth Driller	7902 FT		
Depth Logger	7873 FT		
Bottom Logged Interval	7866 FT		
Top Log Interval	4265 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	1088 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	7866 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 09-OCT-2017
Log ran from 7866 FT to 4265 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\gm 41-10\pdn\20171011\tep_federal gm 41-10_pdn_10-11-17.db
Dataset Pathname	tep_federal_gm_41-10_pdn_10-11-17_main_
Presentation Format	ros_pdn
Dataset Creation	Mon Oct 16 08:45:36 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
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

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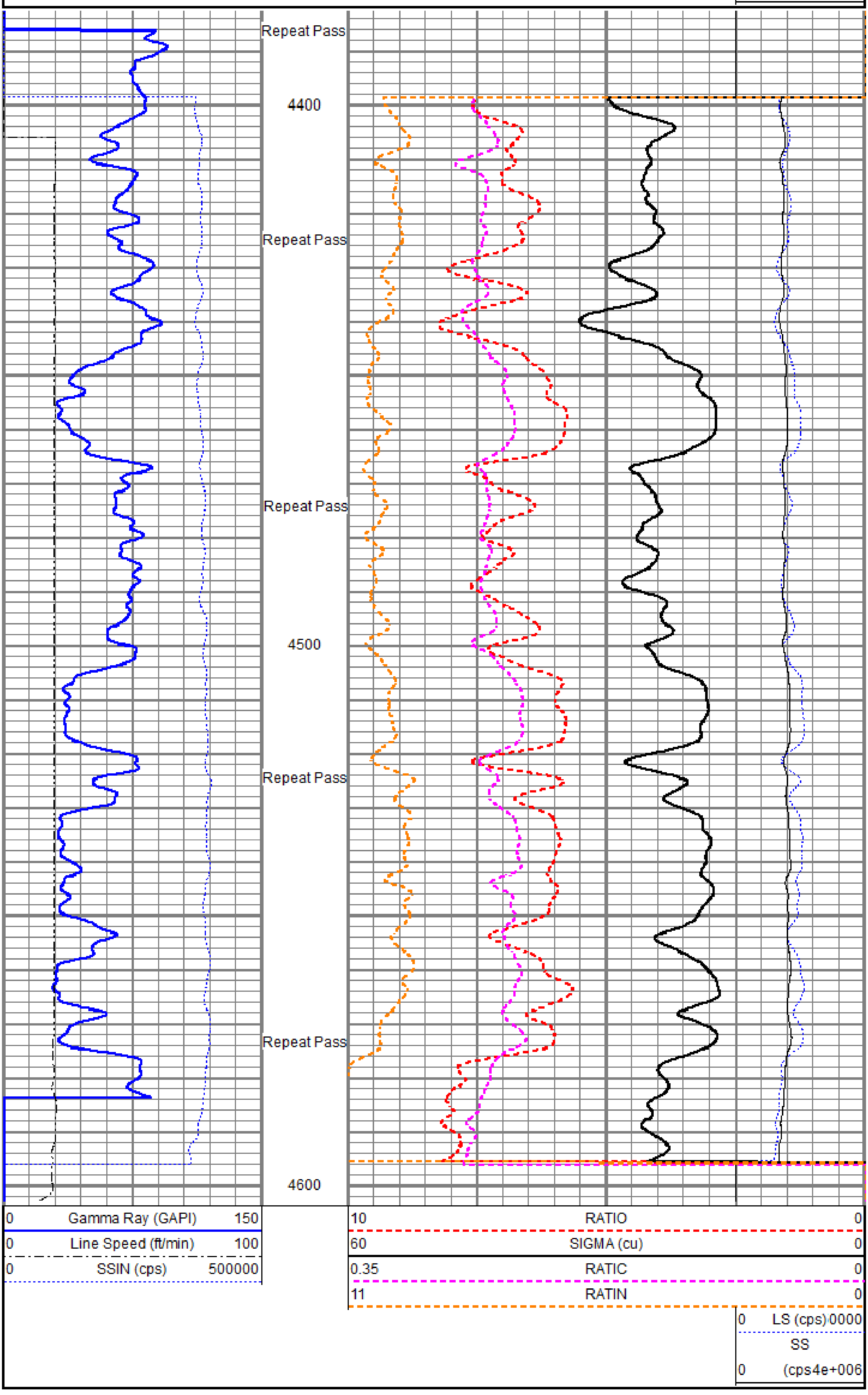
Repeat Pass

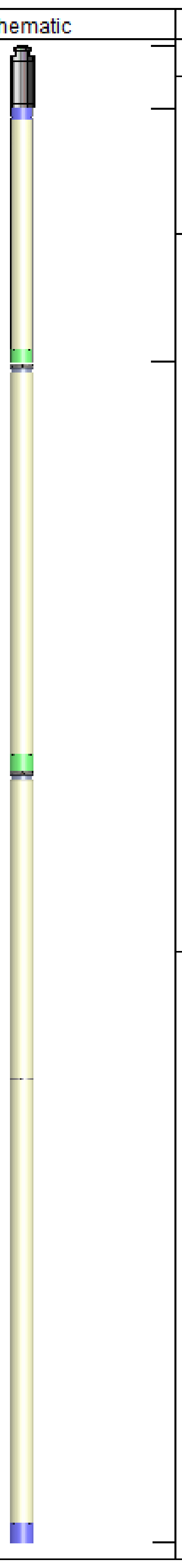
Database File	tep\gm 41-10\pdn\20171011\tep_federal gm 41-10_pdn_10-11-17.db
Dataset Pathname	repeaet/tep_federal_gm_41-10_pdn_10-11-17repeat
Presentation Format	ros_pdn
Dataset Creation	Mon Oct 16 09:37:53 2017
Charted by	Depth in Feet scaled 1:240

0 Gamma Ray (GAPI) 150
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



Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Titan_Electric_Cable_Heads-Titan_1-11/1 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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