RELIANCE
OILFIELD SERVICES

Pulsed Neutron
Gamma Ray
Casing Collar Log

Company TEP Rocky Mountain LLC
Well Federal GM 11-10
Field Grand Valley
County Garfield
State Colorado

Company TEP Rocky Mountain LLC
Well Federal GM 11-10
Field Grand Valley
County Garfield State Colorado
Location: API #: 05-045-22694 Other Services
2112' FNL & 1908' FWL SENW --
SEC 10 TWP 7S RGE 96W

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

Date	01-SEP-2017
Run Number	One
Depth Driller	7541 FT
Depth Logger	7484 FT
Bottom Logged Interval	7478 FT
Top Log Interval	3825 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	A. Ellsworth
Witnessed By	J. Skalla

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	1040 FT
Intermediate #1	4 1/2	11.6	P-110	Surface	7501 FT
Intermediate #2					
Liner					

<<< Fold Here >>>

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 30-AUG-2017
Log ran from 7478 to 3825 FT
PDN data logged with Anteres Pulsed Neutron Tool

Thank you for choosing Reliance Oilfield Services, LLC!!

RELIANCE
OILFIELD SERVICES

Main Pass

Database File	tep_federal gm 11-10\processed_tep_federal gm 11-10_pdn_09-01-17.db
Dataset Pathname	main/federal_gm_11-10_d2_main_shift
Presentation Format	ros_pdn
Dataset Creation	Sat Sep 02 21:27:55 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

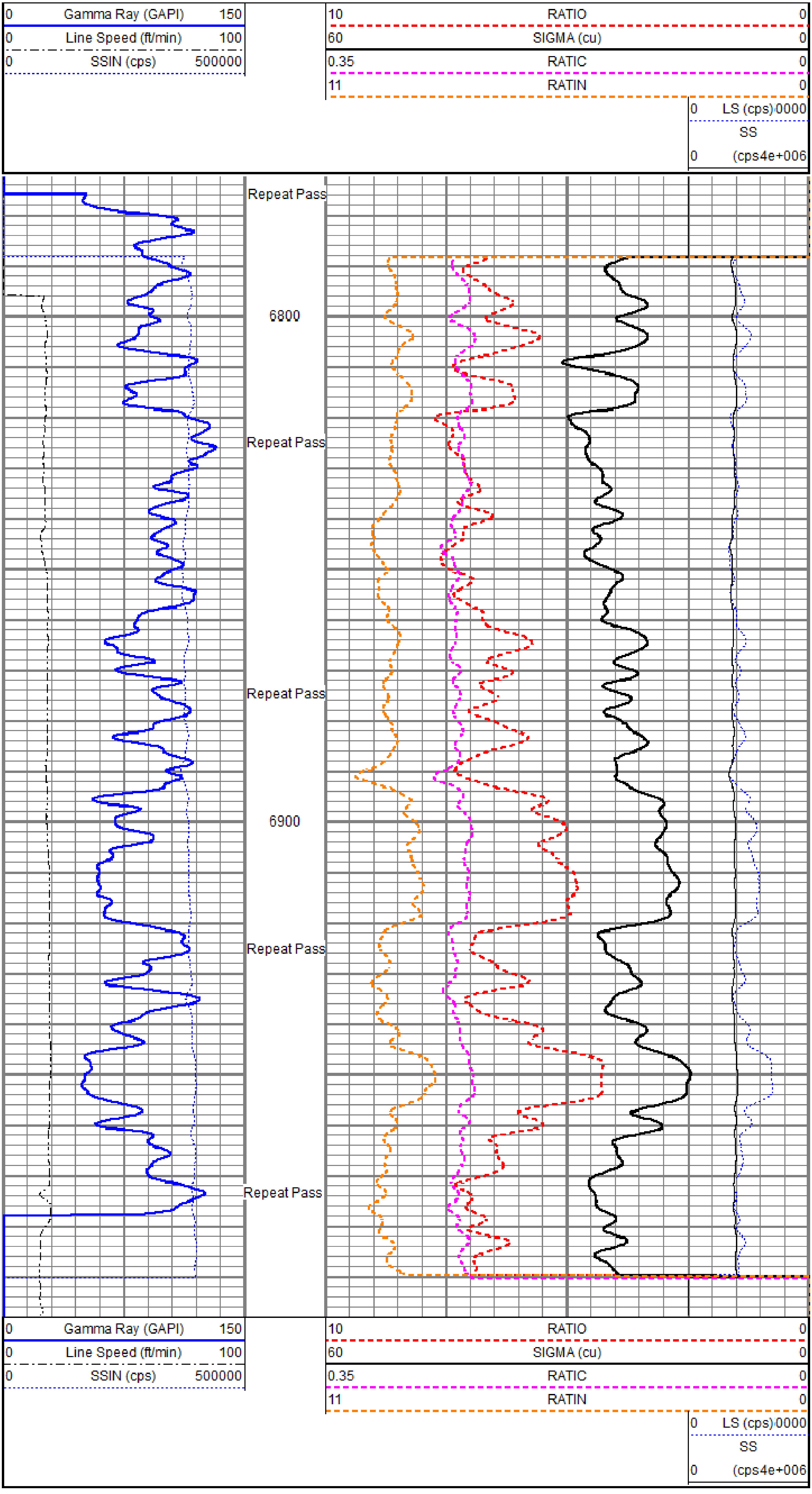
0 Gamma Ray (GAPI) 150
Casing Collar Locator
0 Line Speed (ft/min) 100
0 SSIN (cps) 500000

10 RATIO 0
60 SIGMA (cu) 0
0.35 RATIC 0
11 RATIN 0
0 LS (cps) 0000
SS
0 (cps4e+006

RELIANCE
OILFIELD SERVICES

Repeat Pass

Database File	tep_federal gm 11-10\processed_tep_federal gm 11-10_pdn_09-01-17.db
Dataset Pathname	repeat/federal_gm_11-10_d1_repeat_shift
Presentation Format	ros_pdn
Dataset Creation	Sat Sep 02 21:28:40 2017
Charted by	Depth in Feet scaled 1:240



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

RELIANCE
OILFIELD SERVICES

Company	TEP Rocky Mountain LLC
Well	Federal GM 11-10
Field	Grand Valley
County	Garfield
State	Colorado