HIGH RESOLUTION INDUCTION GUARD LOG GAMMA RAY

PIONEER — Pioneer Energy Services

Company	Augustus Energy Resources, LLC
Well	Haven Hill 14-15 4N47W
Field	Wildcat
County	Yuma
State	Colorado

Company: Augustus Energy Resources, LLC
Well: Haven Hill 14-15 4N47W
Field: Wildcat
County: Yuma State: Colorado

Location: API #: 05 125 12126
SHL: 600' FSL & 950' FWL SWSW
SEC 15 TWP 4N RGE 47W

Other Services: CNL/CDL

Permanent Datum	GL	Elevation 3960	Elevation
Log Measured From	KB		K.B. 3966
Drilling Measured From	KB		D.F. 3965
			G.L. 3960

Date	October 22, 2014
Run Number	1
Depth Driller	3011
Depth Logger	3005
Bottom Logged Interval	3005
Top Log Interval	Casing
Casing Driller	458
Casing Logger	458
Bit Size	6.25
Type Fluid in Hole	WBM
Density / Viscosity	8.6 / 28
pH / Fluid Loss	7.5 / 6.6
Source of Sample	Mudpit
Rm @ Meas. Temp	0.32 @ 72 F
Rmf @ Meas. Temp	0.30 @ 72 F
Rmc @ Meas. Temp	0.40 @ 72 F
Source of Rmf / Rmc	Calc / Calc
Rm @ BHT	0.19 @ 113 F
Time Circulation Stopped	0400
Time Logger on Bottom	9:30
Maximum Recorded Temperature	113 F
Equipment Number	36
Location	Ft. Morgan, CO
Recorded By	Tracy Crane
Witnessed By	Justin Stone

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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

Annular volume calculated for 4.5 " casing
Excell Drilling Rig 2
Thank you for using Pioneer Energy Services.

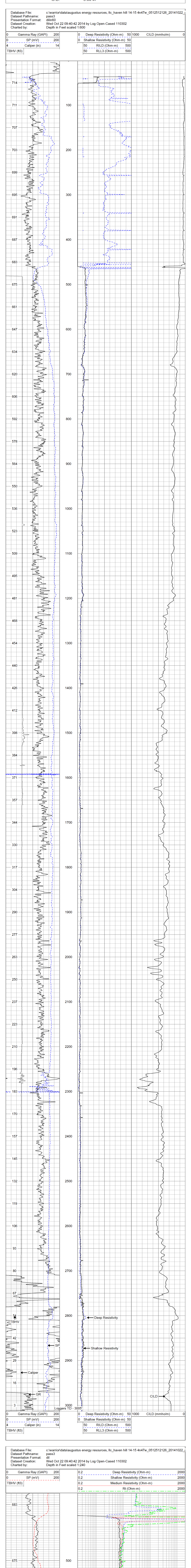
SO# 2-013721

Sensor	Offset (ft)	Description	Len (ft)	OD (in)	Wt (lb)
		CHD (~0)	2.00	3.50	30.00
GR	0.00	GR-PSI (197)	2.92	3.50	40.00
CNLSC	-3.67	CNT-PSI (853)	5.00	3.50	70.00
CNSSC	-4.17				
DCAL	-11.84	CDL-PSI (128)	8.50	5.00	285.00
LSD	-12.67				
SSD	-13.17				
RLL3	-17.52				
CILD	-24.97	DIL-PSI (1010)	18.25	3.75	175.00
CILM	-28.42				
SP	-32.42				

Dataset: 13721.db: field/well/run1/pass3
Total Length: 36.67 ft
Total Weight: 600.00 lb
O.D.: 5.00 in

Database File: c:\warrior\data\augustus energy resources, llc_haven hill 14-15 4n47w_0512512126_20141022_
Dataset Pathname: pass3
Presentation Format: dilin60
Dataset Creation: Wed Oct 22 09:40:42 2014 by Log Open-Cased 110302
Charted by: Depth in Feet scaled 1:600

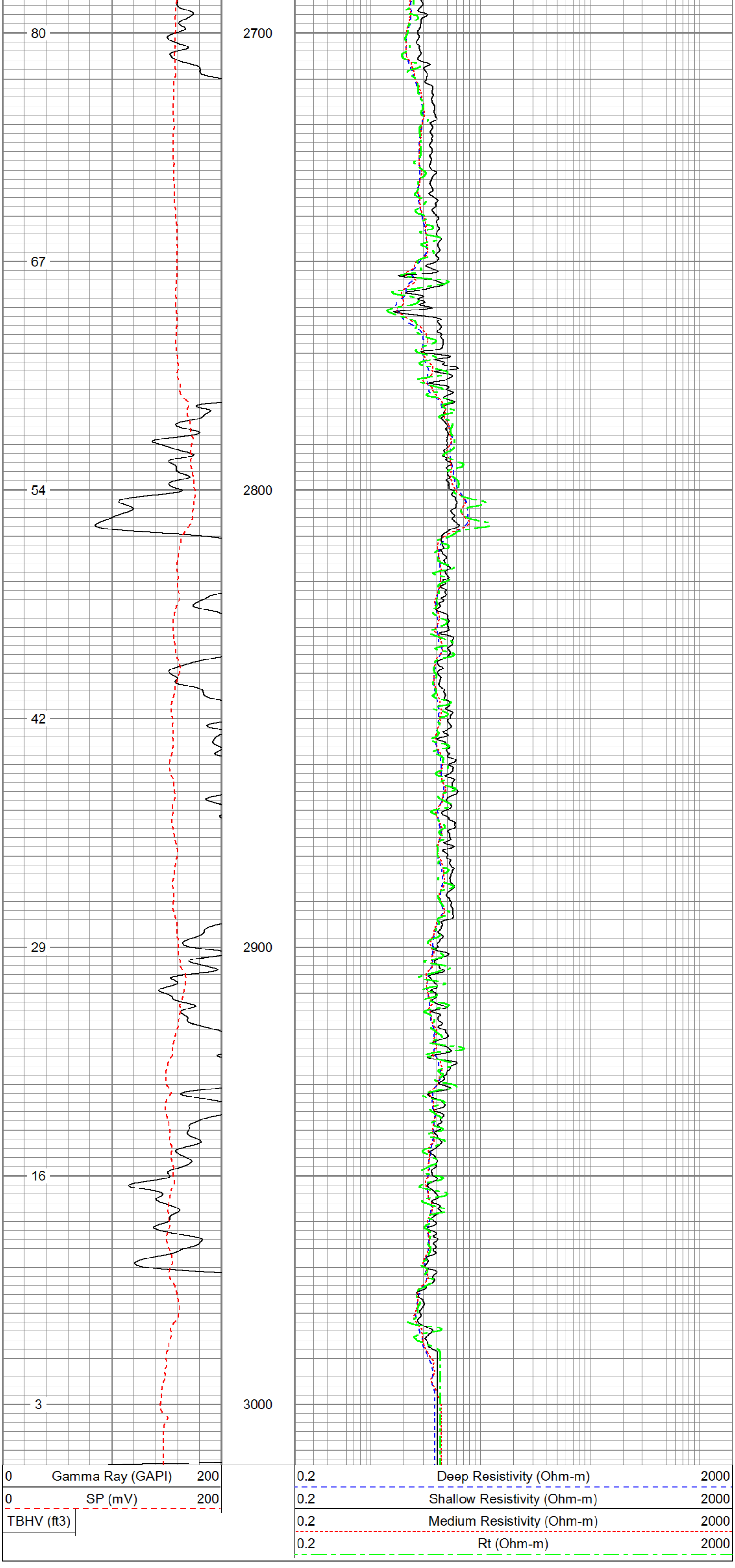
0 Gamma Ray (GAPI) 200	0 Deep Resistivity (Ohm-m) 50	1000 CILD (mmho/m) 0	
0 SP (mV) 200	0 Shallow Resistivity (Ohm-m) 50		
4 Caliper (in) 14	50 RILD (Ohm-m) 500		
TBHV (ft3)	50 RLL3 (Ohm-m) 500		



0 Gamma Ray (GAPI) 200	0 Deep Resistivity (Ohm-m) 50	1000 CILD (mmho/m) 0	
0 SP (mV) 200	0 Shallow Resistivity (Ohm-m) 50		
4 Caliper (in) 14	50 RILD (Ohm-m) 500		
TBHV (ft3)	50 RLL3 (Ohm-m) 500		

Database File: c:\warrior\data\augustus energy resources, llc_haven hill 14-15 4n47w_0512512126_20141022_
Dataset Pathname: pass3
Presentation Format: dil
Dataset Creation: Wed Oct 22 09:40:42 2014 by Log Open-Cased 110302
Charted by: Depth in Feet scaled 1:240

0 Gamma Ray (GAPI) 200	0.2 Deep Resistivity (Ohm-m) 2000
0 SP (mV) 200	0.2 Shallow Resistivity (Ohm-m) 2000
TBHV (ft3)	0.2 Medium Resistivity (Ohm-m) 2000
	0.2 Rt (Ohm-m) 2000



Calibration Report

Database File: C:\Warrior\Data\Augustus Energy Resources, LLC_Haven Hill 14-15 4N47W_0512512126_20141(
Dataset Pathname: pass3
Dataset Creation: Wed Oct 22 09:40:42 2014 by Log Open-Cased 110302

Dual Induction Calibration Report

Serial-Model: 1010-PSI
Surface Cal Performed:

Loop:	Readings Air	Readings Loop	References Air	References Loop		Results m	Results b
Deep	0.000	1.000	0.000	1.000	mmho/m	0.550	-33.000
Medium	0.000	1.000	0.000	1.000	mmho/m	0.480	-27.000

Compensated Density Calibration Report

Serial-Model: 128-PSI
Master Calibration Performed: Sat May 24 17:51:40 2014

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.750	g/cc	5900.80	3069.93	cps
Aluminum	2.690	g/cc	1074.43	1919.88	cps

	Size		Reading
Small Ring		in	
Medium Ring		in	
Large Ring		in	

Compensated Neutron Calibration Report

Serial Number: 853
Tool Model: PSI

CALIBRATION

Detector	Readings		Target		Normalization
Short Space	1.00	cps	1.00	cps	1.9000
Long Space	1.00	cps	1.00	cps	1.9200

PRE-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space	cps		
	Long Space	cps	pu	pu
2)	Short Space	cps		
	Long Space	cps	pu	
3)	Short Space	cps		
	Long Space	cps	pu	

POST-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space	cps		
	Long Space	cps	pu	pu
2)	Short Space	cps		
	Long Space	cps	pu	pu
3)	Short Space	cps		
	Long Space	cps	pu	pu

Gamma Ray Calibration Report

Serial Number: 197
Tool Model: PSI
Performed: Tue Oct 18 17:42:20 2011

Calibrator Value: 275.0 GAPI

Background Reading: 32.0 cps
Calibrator Reading: 340.0 cps

Sensitivity: 0.6000 GAPI/cps

Log Variables

Database:C:\Warrior\Data\Augustus Energy Resources, LLC_Haven Hill 14-15 4N47W
Dataset: field/well/run1/pass3

Top - Bottom

SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m	SNDERR mmho/m
On	Limestone	1	2.71	0	0	0

CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
4.5	0	0	147	6.25