PIONEER
Pioneer Energy Services

COMPENSATED DENSITY
COMPENSATED NEUTRON
GAMMA RAY

Company Augustus Energy Resources, LLC
Well Cooper 24-34 54N47W
Field Buffallo Grass
County Yuma
State Colorado

Company	Augustus Energy Resources, LLC
Well	Cooper 24-34 54N47W
Field	Buffallo Grass
County	Yuma
State	Colorado

Location: API # : 05 125 12119

310' FSL & 1997' FWL SESW

SEC 34 TWP 4N RGE 47W

Other Services
DIL

Permanent Datum	GL	Elevation	3986
Log Measured From	KB		
Drilling Measured From	KB		

Elevation
K.B. 3992
D.F. 3991
G.L. 3986

Date	October 19, 2014		
Run Number	1		
Depth Driller	2980		
Depth Logger	2972		
Bottom Logged Interval	2972		
Top Log Interval	2000		
Casing Driller	389		
Casing Logger	389		
Bit Size	6.25"		
Type Fluid in Hole	WBM		
Density / Viscosity	8.8 / 28		
pH / Fluid Loss	7.5 / 8.0		
Source of Sample	Flowline		
Rm @ Meas. Temp	0.3 @ 60 F		
Rmf @ Meas. Temp	0.25 @ 60 F		
Rmc @ Meas. Temp	0.38 @ 60 F		
Source of Rmf / Rmc	Calc / Calc		
Rm @ BHT	0.17 @ 105 F		
Time Circulation Stopped	0600		
Time Logger on Bottom	1000		
Maximum Recorded Temperature	105 F		
Equipment Number	48		
Location	Ft. Morgan, CO		
Recorded By	Shaun Stump		
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

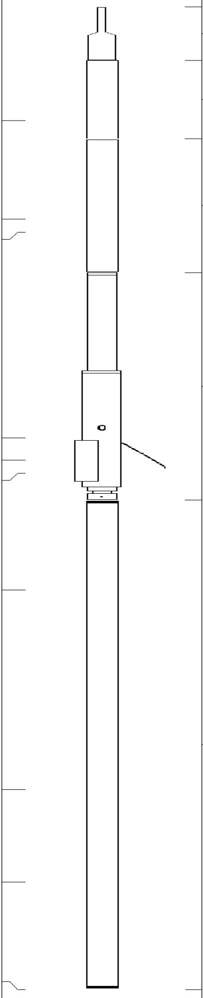
NO REPEAT PREFORMED DUE TO HOLE CONDITIONS

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

SO# 2-013763

Sensor	Offset (ft)
GR	0.00
CNLSC	-3.67
CNSSC	-4.17
DCAL	-11.84
LSD	-12.67
SSD	-13.17
RLL3	-17.52
CILD	-24.97
CILM	-28.42
SP	-32.42

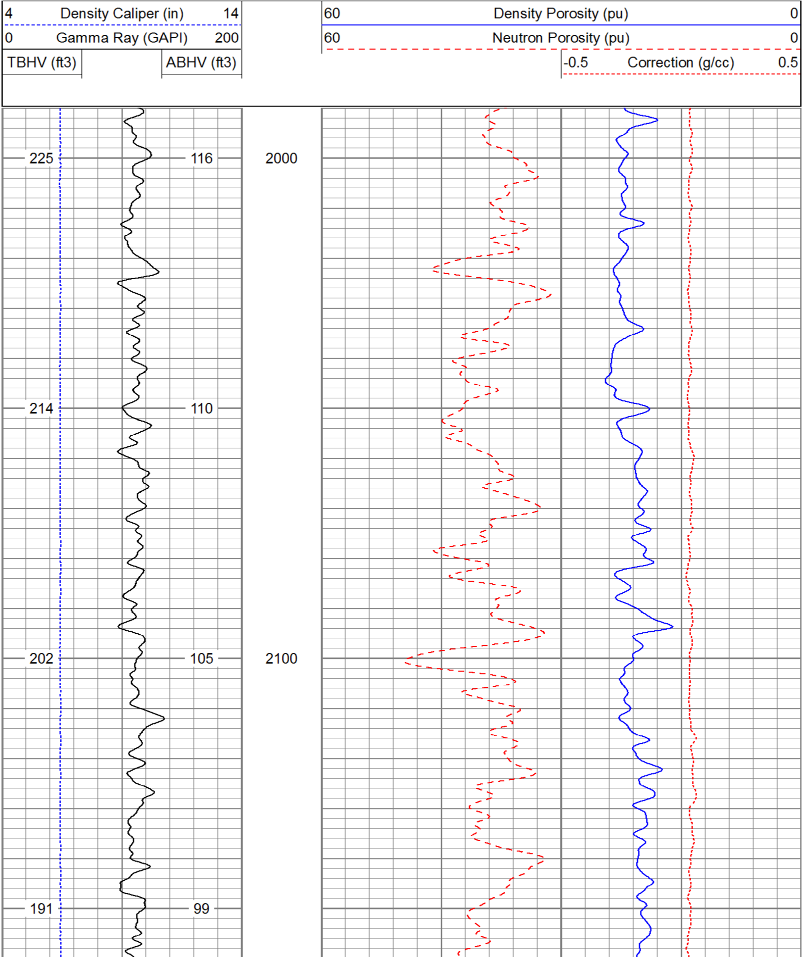
Schematic

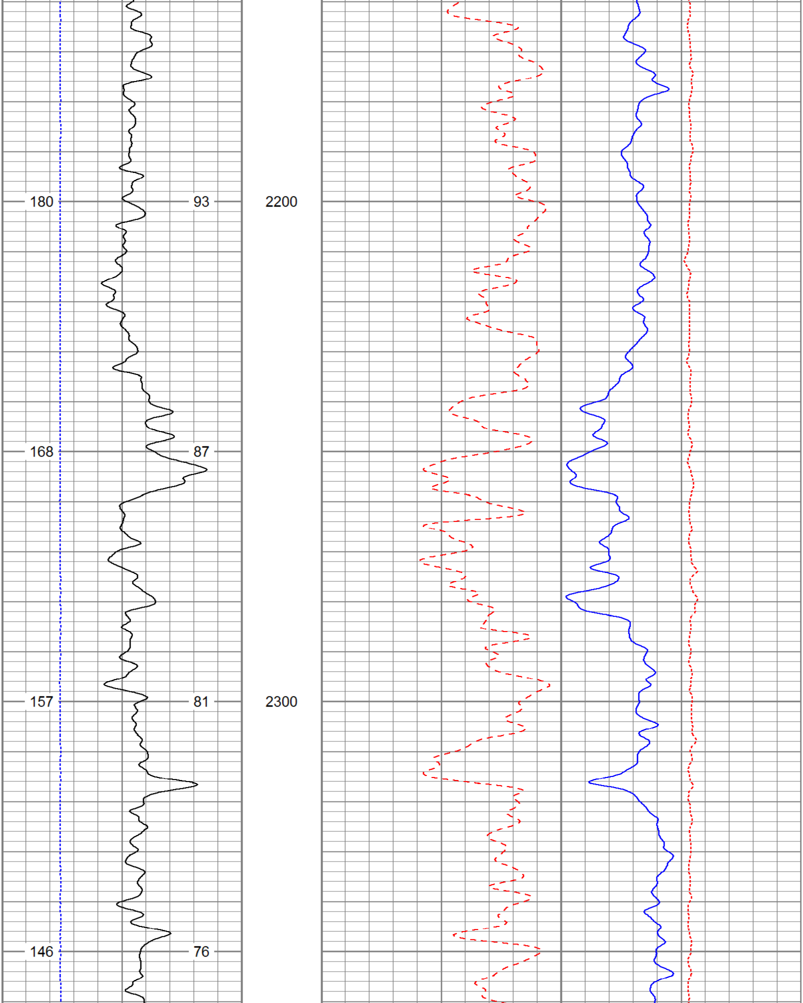


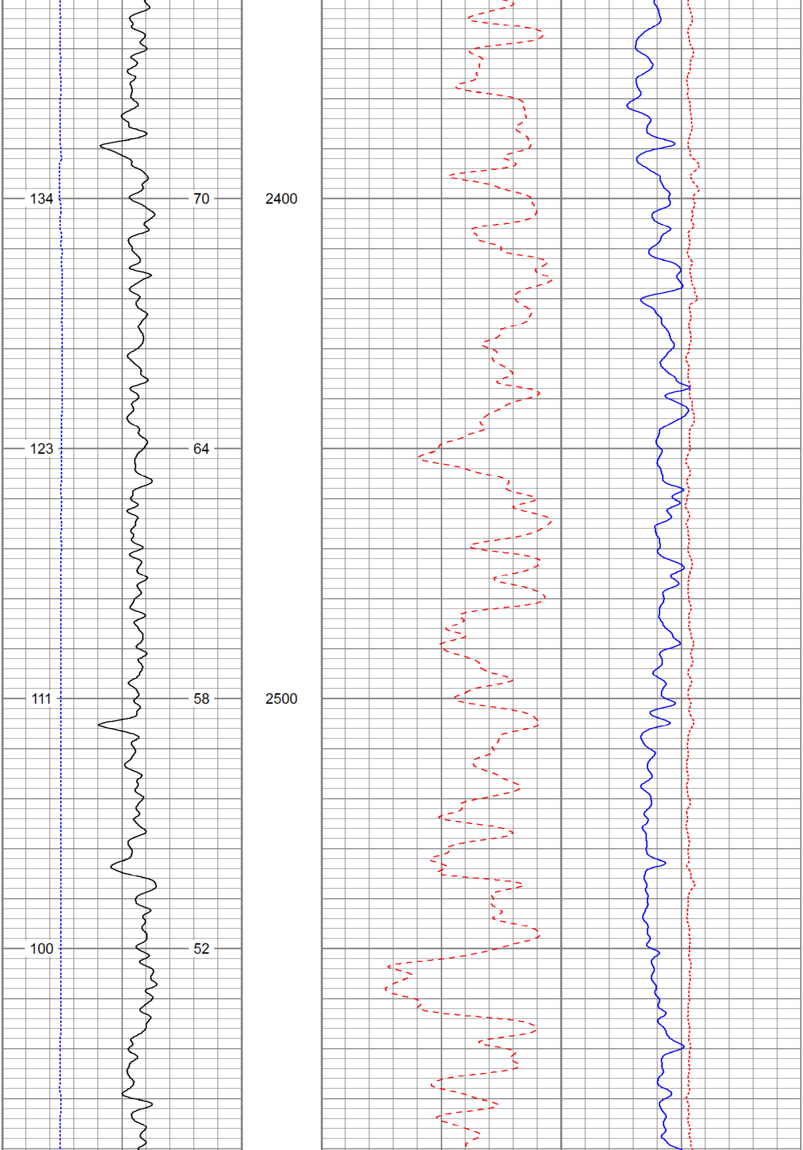
Description	Len (ft)	OD (in)	Wt (lb)
CHD (~0)	2.00	3.50	30.00
GR-PSI (939)	2.92	3.50	40.00
CNT-PSI (826)	5.00	3.50	70.00
CDL-PSI (934)	8.50	5.00	285.00
DIL-PSI (1011)	18.25	3.75	175.00

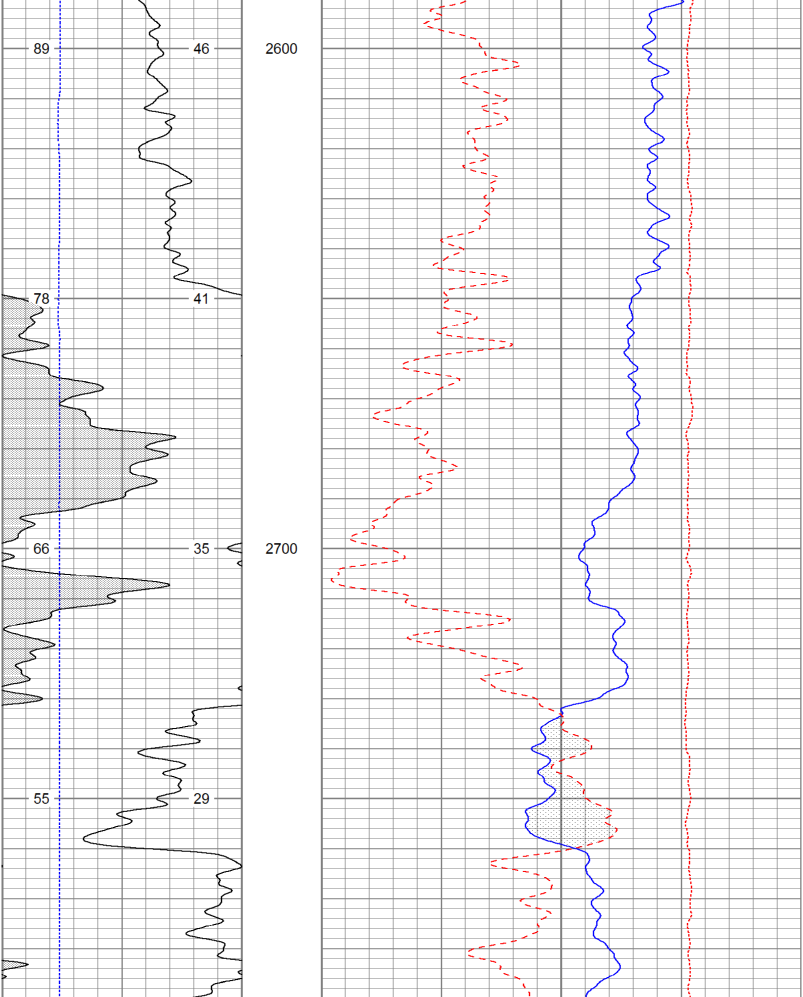
Dataset:	13763.db: field/well/run1/pass2
Total Length:	36.67 ft
Total Weight:	600.00 lb
O.D.	5.00 in

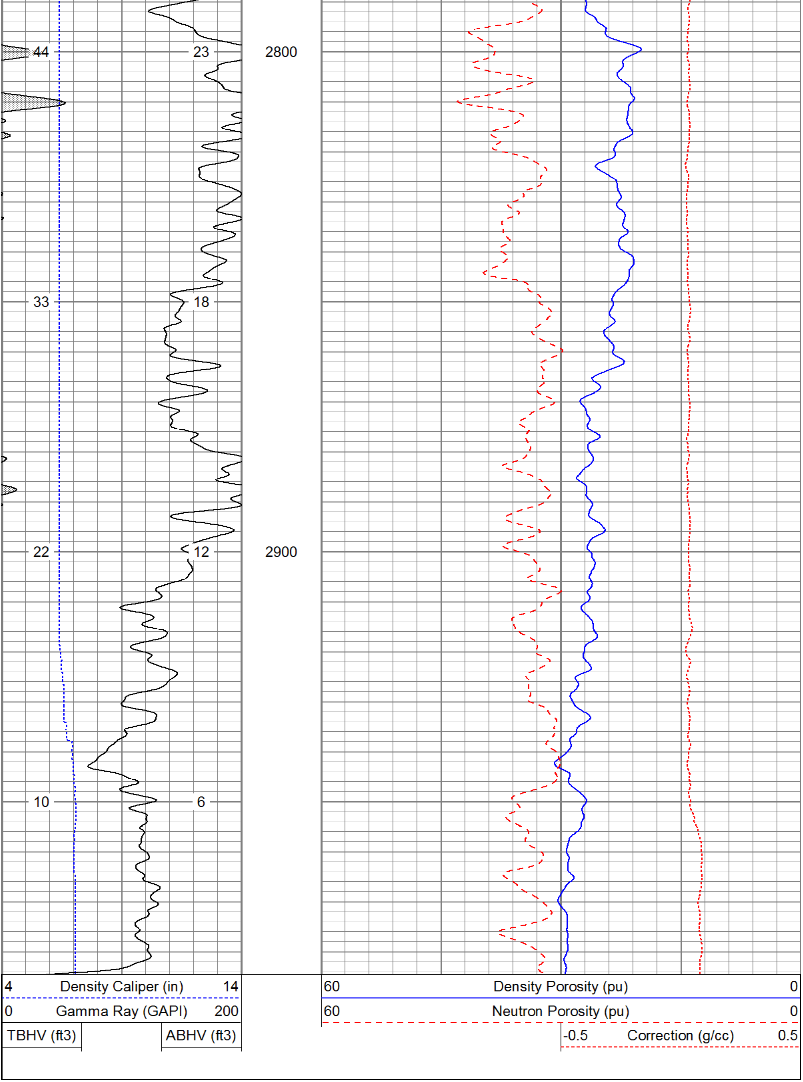
Database File: c:\warrior\data\agustus energy resources, llc_ cooper 24-34 54n47w_0512512119_20141019_gr-
Dataset Pathname: pass2
Presentation Format: DEN_NE~1
Dataset Creation: Sun Oct 19 09:55:38 2014 by Log 0
Charted by: Depth in Feet scaled 1:240











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Dataset Pathname: pass2
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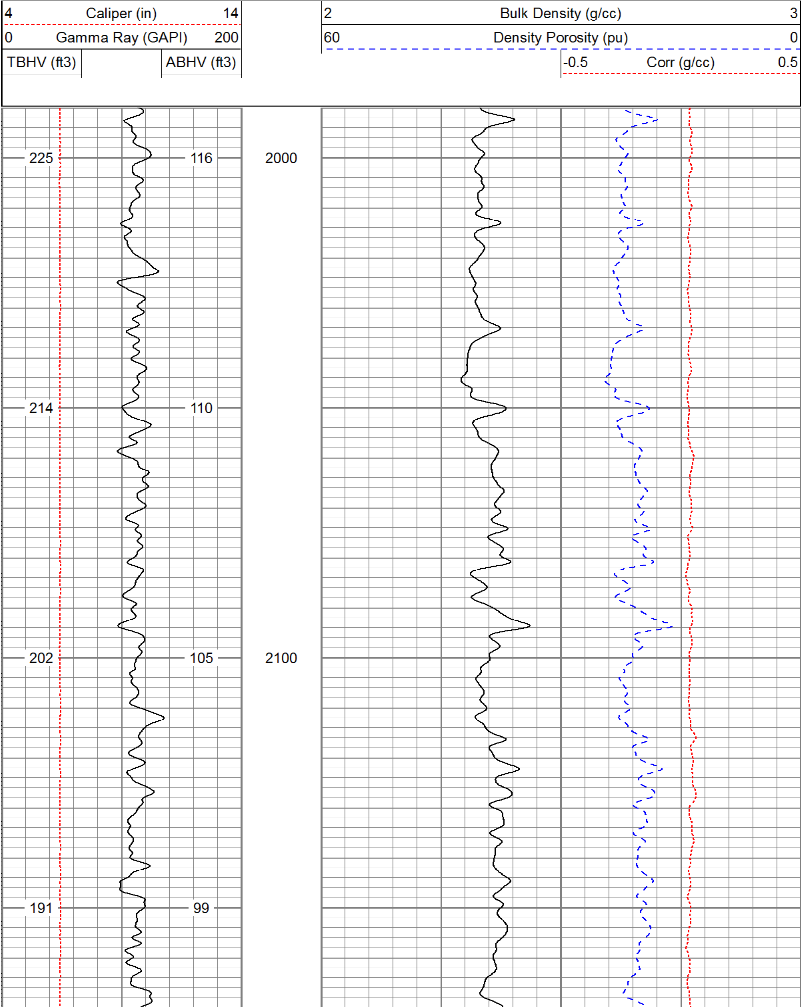
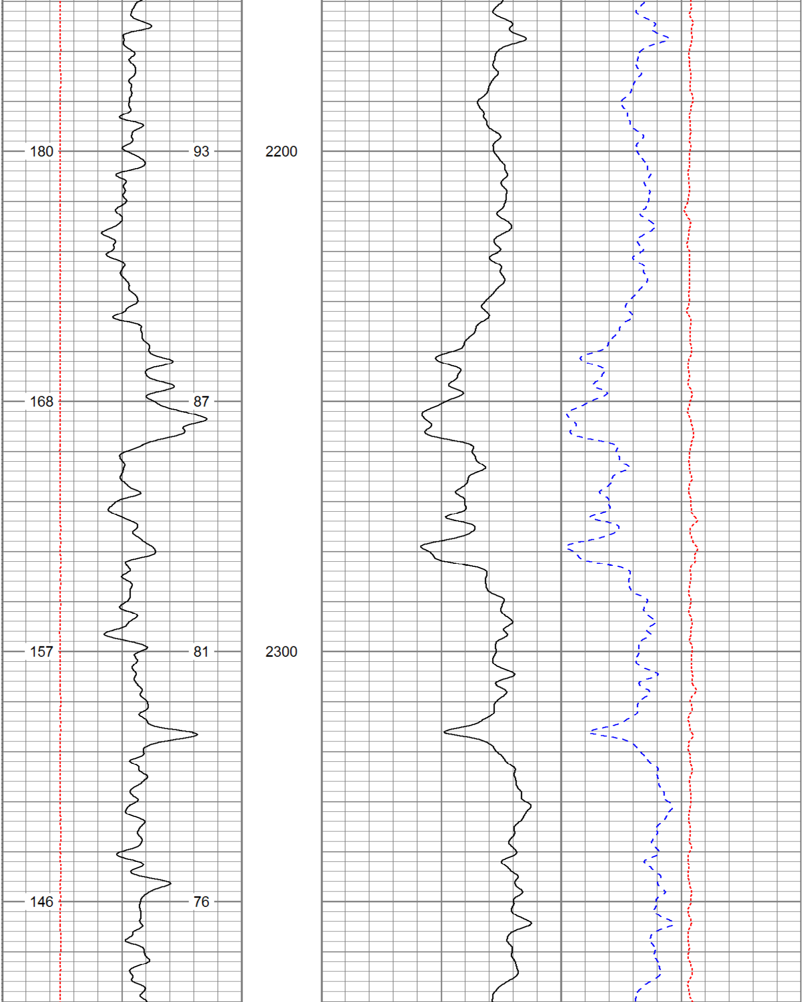
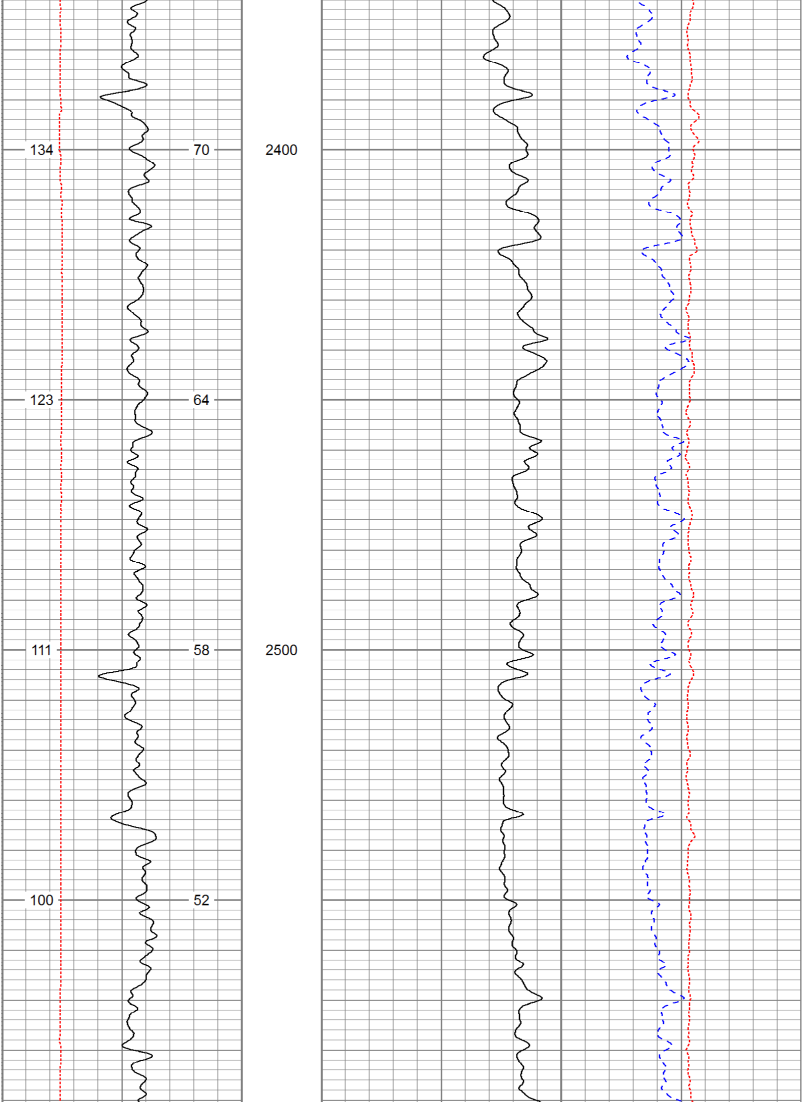
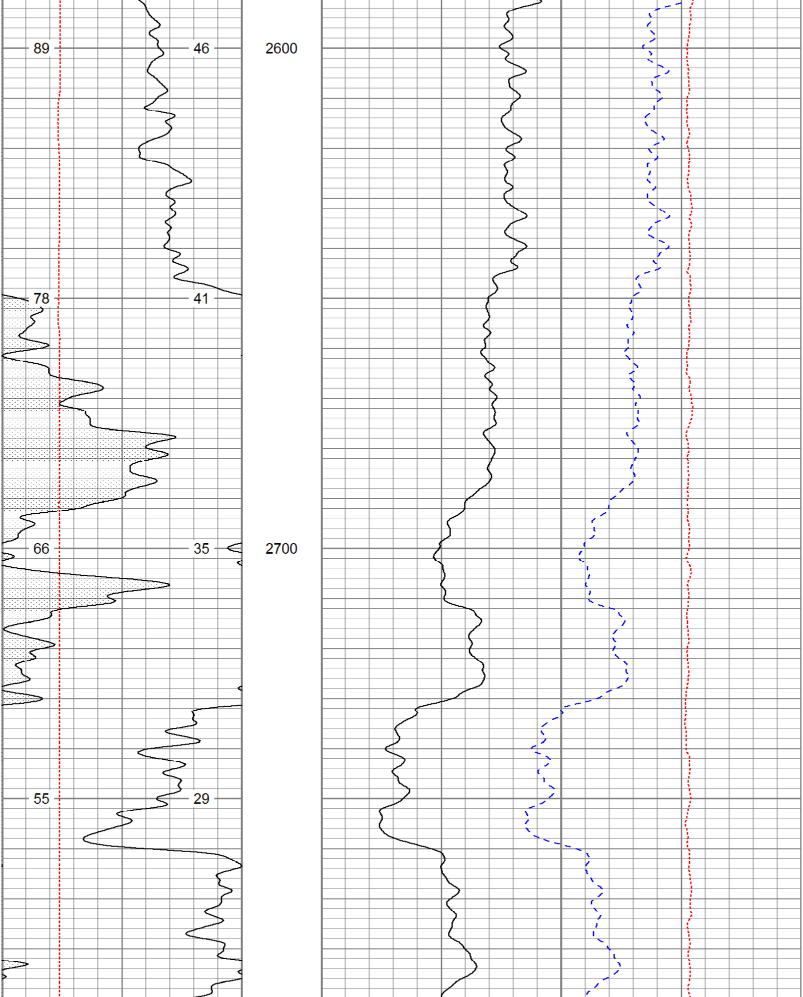
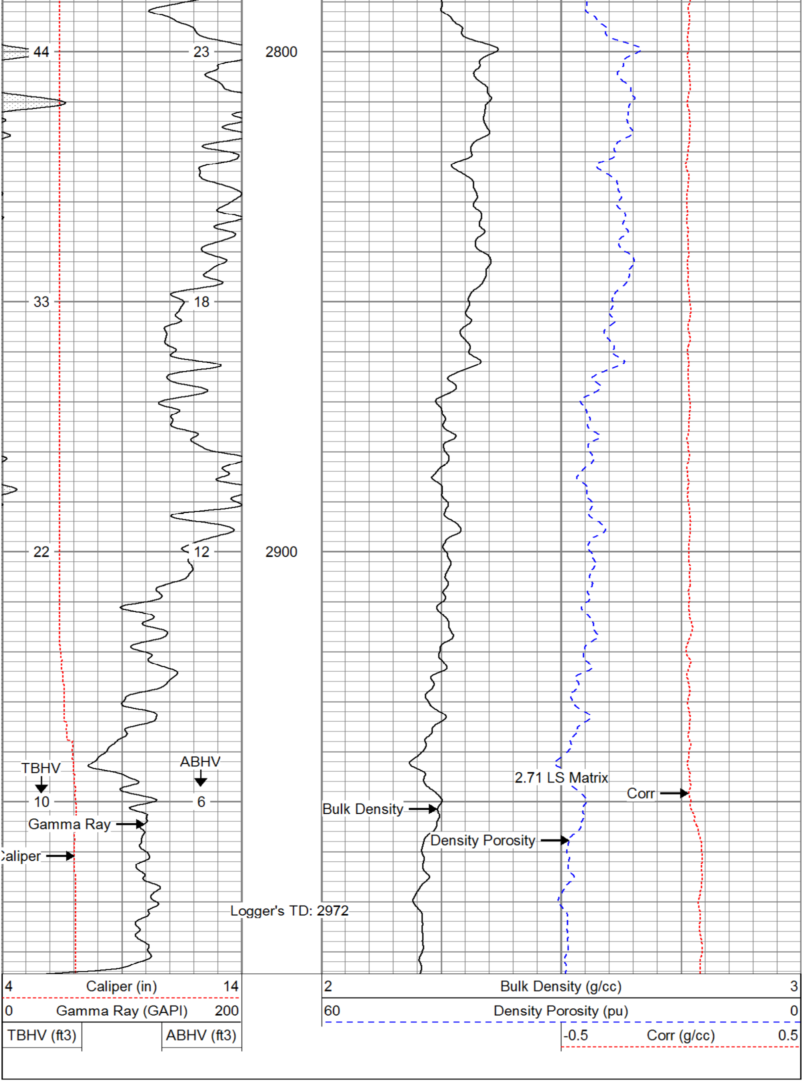
Charted by: Depth in Feet scaled 1:240











Calibration Report

Database File: C:\Warrior\Data\Agustus Energy Resources, LLC_ Cooper 24-34 54N47W_0512512119_2014101
Dataset Pathname: pass1
Dataset Creation: Sun Oct 19 09:32:11 2014 by Log 0

Dual Induction Calibration Report

Serial-Model: 1011-PSI
Surface Cal Performed:

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		m	b
Deep	0.000	1.000	0.000	1.000	mmho/m	0.520	-28.000
Medium	0.000	1.000	0.000	1.000	mmho/m	0.450	-29.000

Compensated Density Calibration Report

Serial-Model: 934-PSI
Master Calibration Performed: Wed Jun 04 12:14:34 2014

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.750	g/cc	4883.27	3645.80	cps
Aluminum	2.690	g/cc	915.83	2377.06	cps

	Size		Reading
Small Ring		in	
Medium Ring		in	
Large Ring		in	

Compensated Neutron Calibration Report

Serial Number: 826
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	2.0900

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:	939	
Tool Model:	PSI	
Performed:	Mon Oct 13 20:59:05 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6300	GAPI/cps

Log Variables

Database:C:\Warrior\Data\Agustus Energy Resources, LLC_ Cooper 24-34 54N47W_
Dataset: field/well/run1/pass2

Top - Bottom

SZCOR Off	NPORSEL Limestone	FLUIDDEN g/cc 1	MATRXDEN g/cc 2.71	SPSHIFT mV 0	SNDERRM mmho/m 0	SNDERR mmho/m 0
SRFTEMP degF 0	CASEOD in 4.5	PERFS 0	TDEPTH ft 0	BOTTEMP degF 105	BOREID in 6.25	