PIONEER
Pioneer Energy Services

COMPENSATED DENSITY
COMPENSATED NEUTRON
GAMMA RAY

Company Augustus Energy Resources, LLC
Well Franson 23-33 4N47W
Field Buffalo Grass
County Yuma
State Colorado

Company	Augustus Energy Resources, LLC
Well	Franson 23-33 4N47W
Field	Buffalo Grass
County	Yuma State Colorado

Location: API # : 05 125 12122

SHL: 2230' FSL & 1985' FWL NESW

SEC 33 TWP 4N RGE 47W

Permanent Datum	GL	Elevation	4010
Log Measured From	KB		
Drilling Measured From	KB		

Other Services
Hi. Res.
Induction

Elevation
K.B. 4016
D.F. 4015
G.L. 4010

Date	October 16, 2014		
Run Number	1		
Depth Driller	3006		
Depth Logger	2991		
Bottom Logged Interval	2991		
Top Log Interval	2000		
Casing Driller	406		
Casing Logger	406		
Bit Size	6.25		
Type Fluid in Hole	WBM		
Density / Viscosity	8.8 / 30		
pH / Fluid Loss	NA		
Source of Sample	Mudpit		
Rm @ Meas. Temp	0.3 @ 68 F		
Rmf @ Meas. Temp	0.28 @ 68 F		
Rmc @ Meas. Temp	0.38 @ 68 F		
Source of Rmf / Rmc	Calc / Calc		
Rm @ BHT	0.18 @ 113 F		
Time Circulation Stopped	1415		
Time Logger on Bottom	1730		
Maximum Recorded Temperature	113 F		
Equipment Number	36		
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.

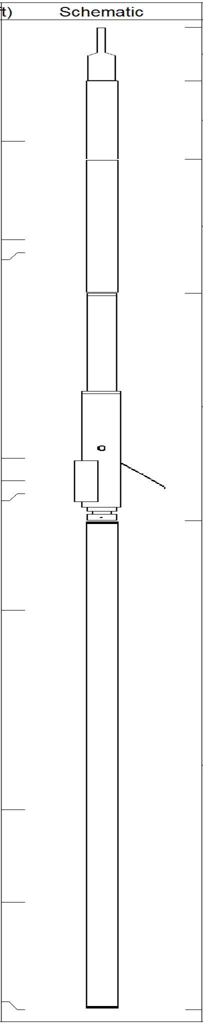
Comments

Annular volume calculated for 7" casing
Excell Drilling Rig 2
Thank you for using Pioneer Energy Services.

SO# 2-013718

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 (197)	2.92	3.50	40.00
CNT-PSI (853)	5.00	3.50	70.00
CDL-PSI (128)	8.50	5.00	285.00
DIL-PSI (1010)	18.25	3.75	175.00

Dataset:	13718.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\augustus energy resources, llc_franson 23-33 4n47w_0512512122_201411016_h
Dataset Pathname:	pass3
Presentation Format:	DEN_NE~1
Dataset Creation:	Thu Oct 16 17:51:10 2014 by Log Open-Cased 110302
Charted by:	Depth in Feet scaled 1:240

4 Density Caliper (in) 14

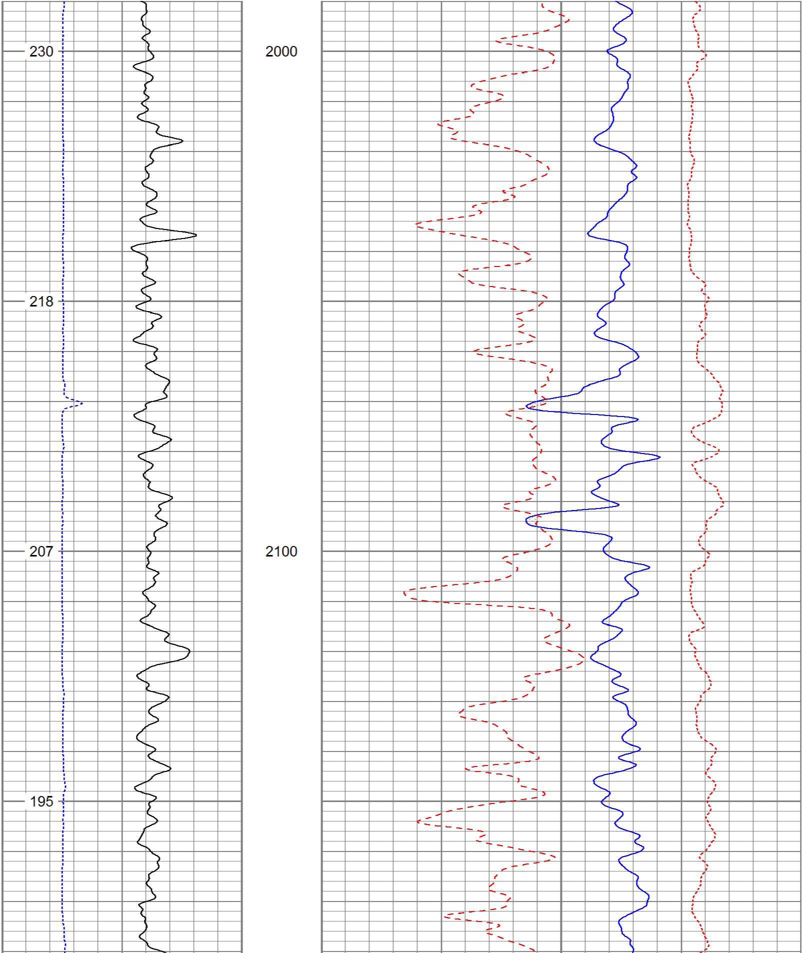
0 Gamma Ray (GAPI) 200

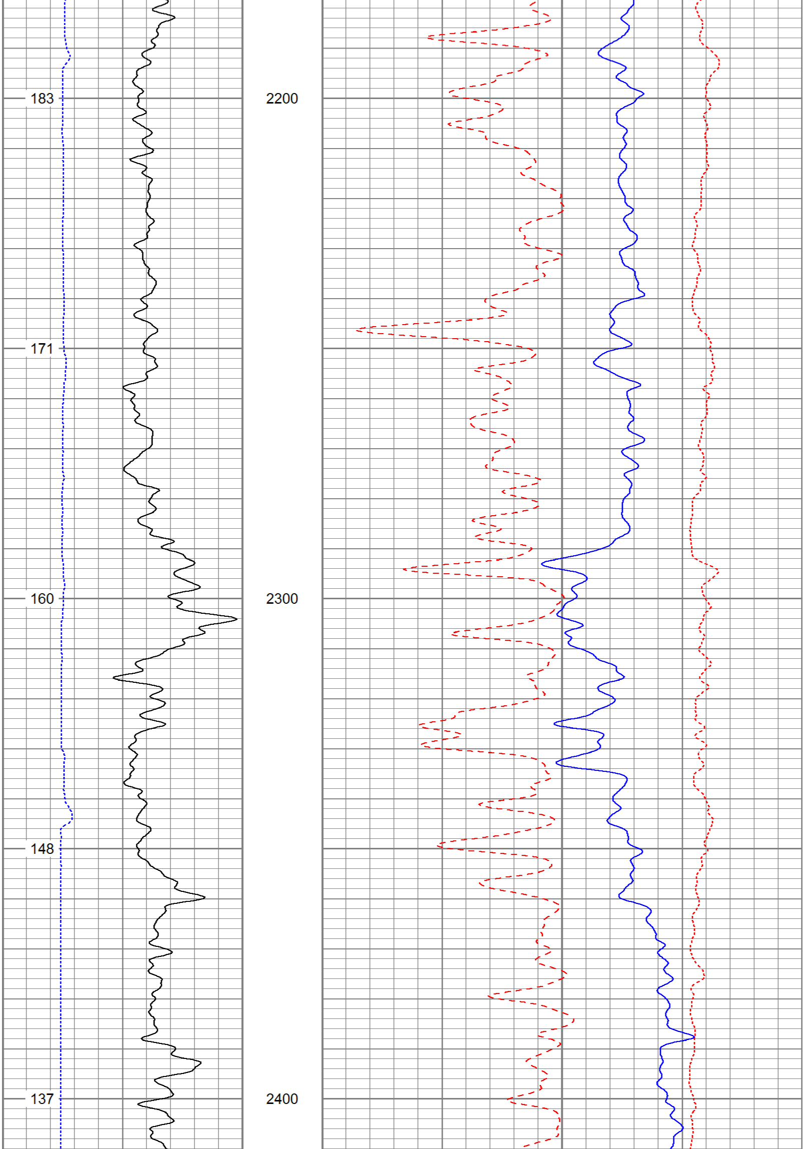
TBHV (ft3)

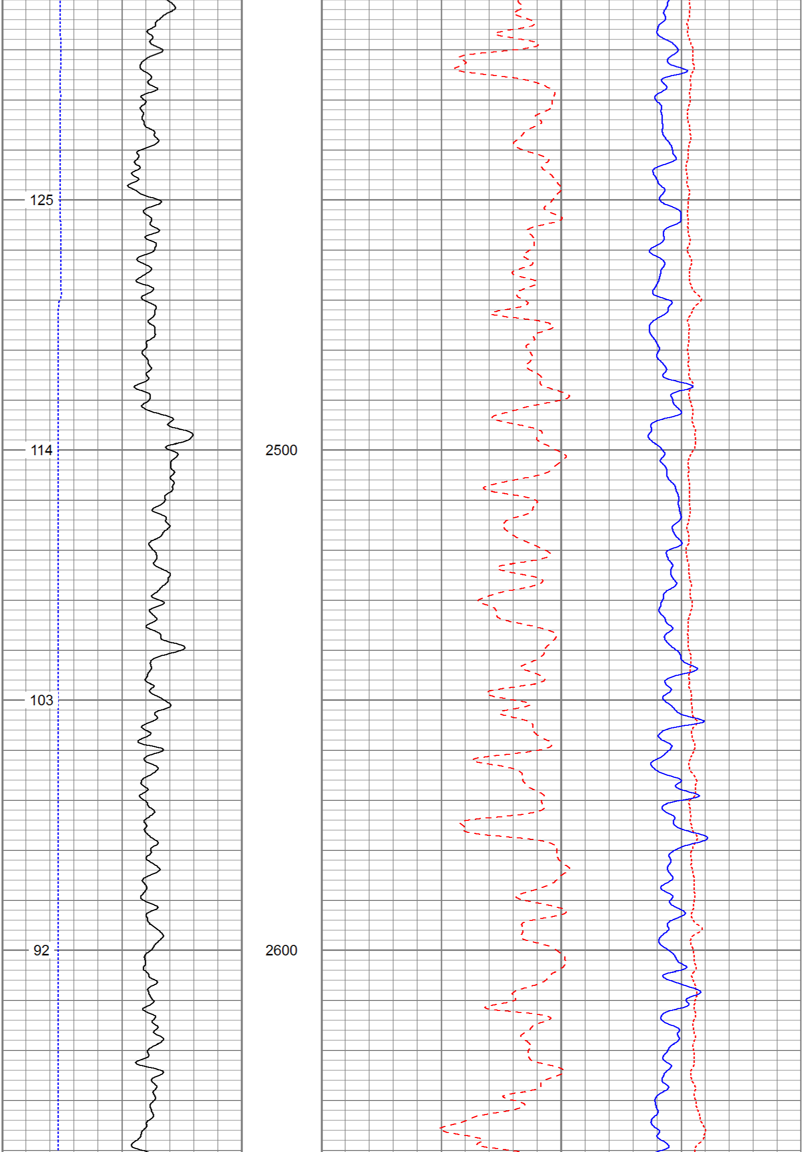
60 Density Porosity (pu) 0

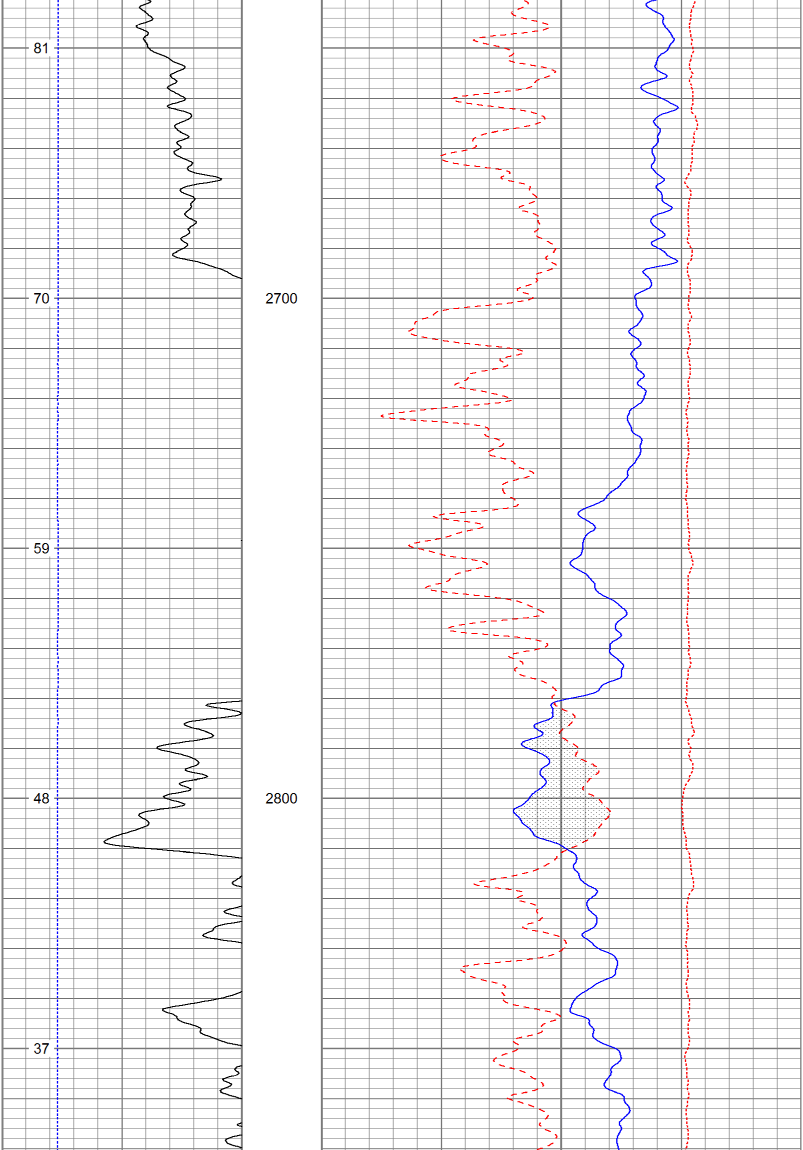
60 Neutron Porosity (pu) 0

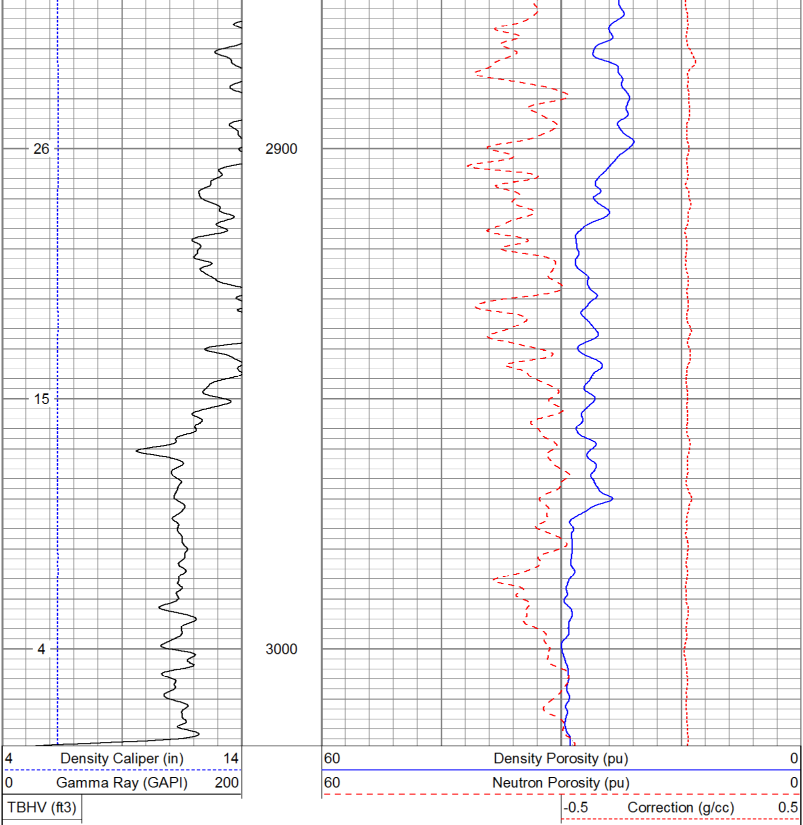
-0.5 Correction (g/cc) 0.5



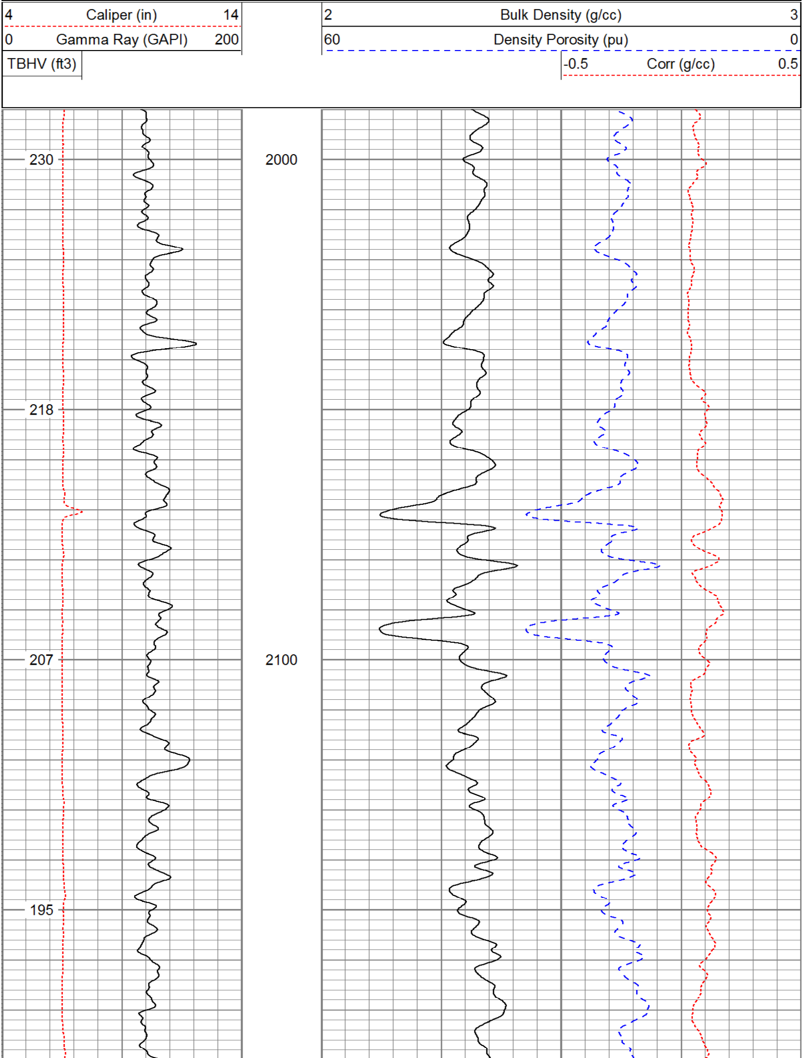


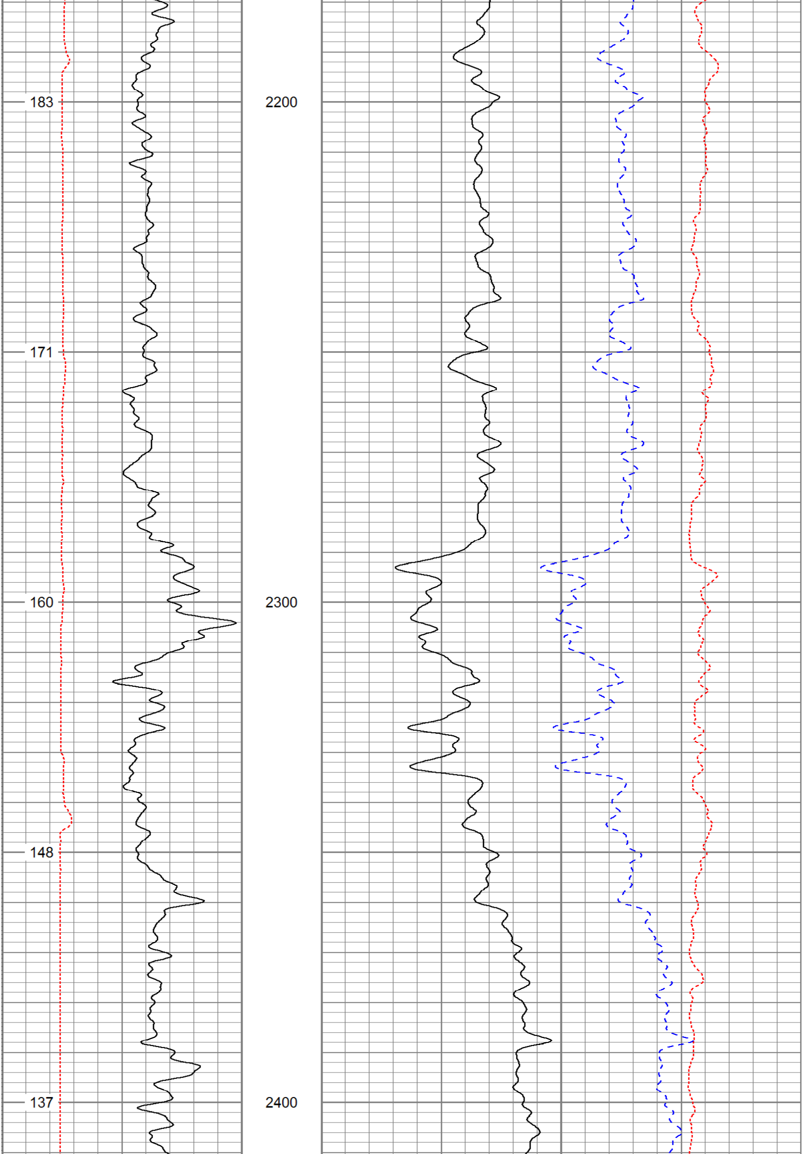


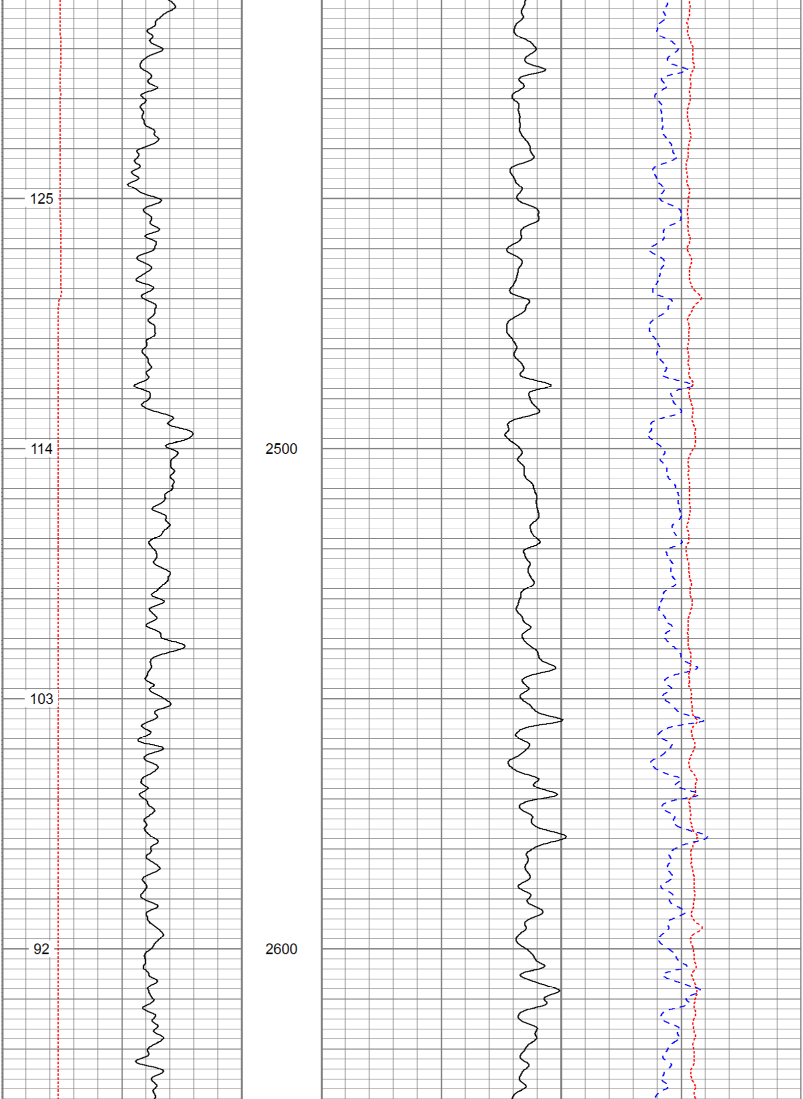


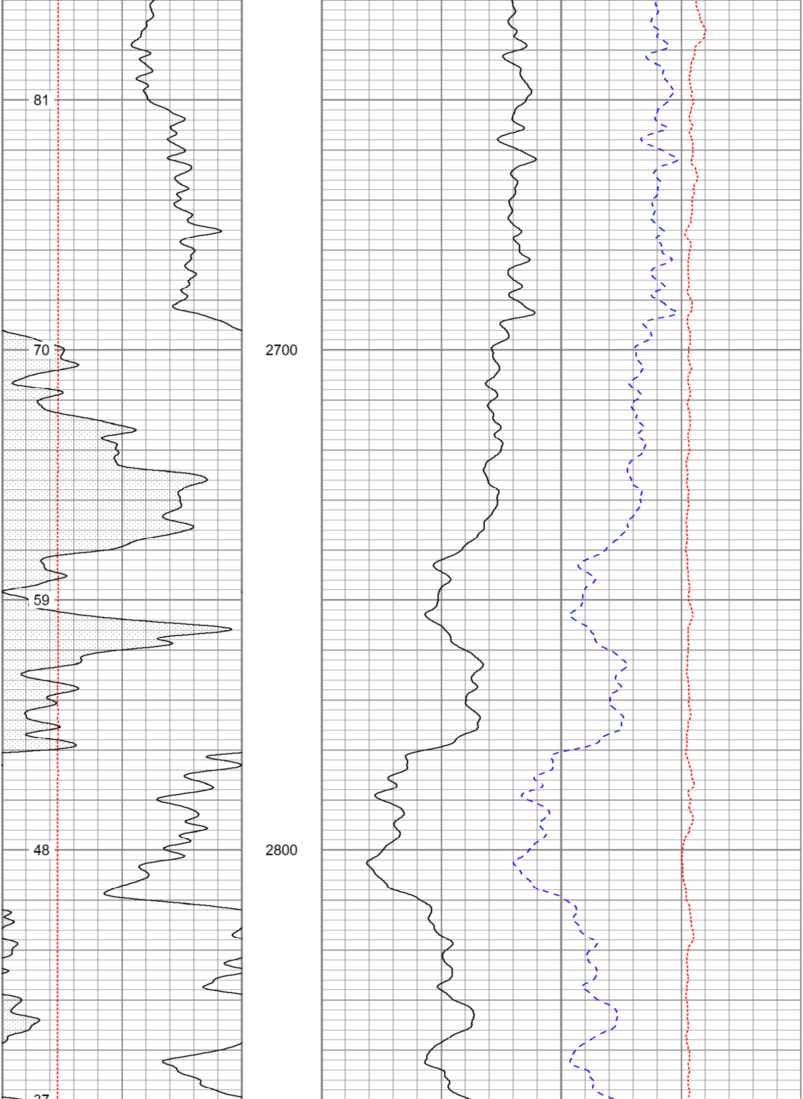


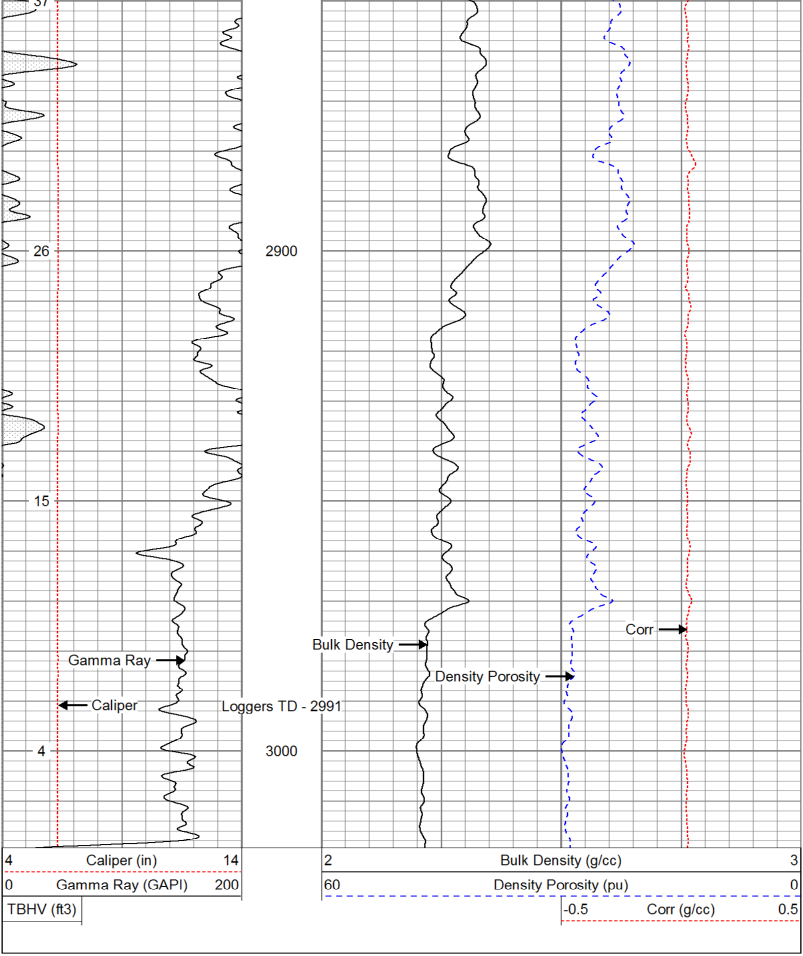
Database File:	c:\warrior\data\augustus energy resources, llc_franson 23-33 4n47w_0512512122_201411016_h
Dataset Pathname:	pass3
Presentation Format:	cdl60
Dataset Creation:	Thu Oct 16 17:51:10 2014 by Log Open-Cased 110302
Charted by:	Depth in Feet scaled 1:240











Calibration Report

Database File: C:\Warrior\Data\Augustus Energy Resources, LLC_Franson 23-33 4N47W_0512512122_2014110
Dataset Pathname: pass2
Dataset Creation: Thu Oct 16 17:39:09 2014 by Log Open-Cased 110302

Dual Induction Calibration Report

Serial-Model: 1010-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	0.550	-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_Franson 23-33 4N47W_
Dataset: field/well/run1/pass2

Top - Bottom

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

CASEOD	PERFS	TDEPTH	BOTTEMP	BOREID
in		ft	degF	in
7	0	0	113	6.25