PIONEER

Pioneer Energy Services

HIGH RESOLUTION INDUCTION
COMPENSATED DENSITY
COMPENSATED NEUTRON

Company Augustus Energy Resources, LLC
Well Franson 42-33 4N47W
Field Buffalo Grass
County Yuma
State Colorado

Company	Augustus Energy Resources, LLC		
Well	Franson 42-33 4N47W		
Field	Buffalo Grass		
County	Yuma	State	Colorado

Location: API # : 05 125 12121

SHL: 2326' FNL & 990' FEL SENE

SEC 33 TWP 4N RGE 47W

Other Services

None

Permanent Datum	GL	Elevation	3995
Log Measured From	KB		
Drilling Measured From	KB		

Elevation
K.B. 4001
D.F. 4000
G.L. 3995

Date	October 13, 2014		
Run Number	1		
Depth Driller	2975		
Depth Logger	2958		
Bottom Logged Interval	2958		
Top Log Interval	Casing		
Casing Driller	406		
Casing Logger	406		
Bit Size	6.25		
Type Fluid in Hole	WBM		
Density / Viscosity	8.6 / 28		
pH / Fluid Loss	NA		
Source of Sample	Mudpit		
Rm @ Meas. Temp	0.35 @ 68 F		
Rmf @ Meas. Temp	0.25 @ 68 F		
Rmc @ Meas. Temp	0.35 @ 68 F		
Source of Rmf / Rmc	Calc / Calc		
Rm @ BHT	0.21 @ 111 F		
Time Circulation Stopped	1130		
Time Logger on Bottom	1530		
Maximum Recorded Temperature	111 F		
Equipment Number	36		
Location	Ft. Morgan, CO		
Recorded By	Shaun Stump		
Witnessed By	Justin Stone		

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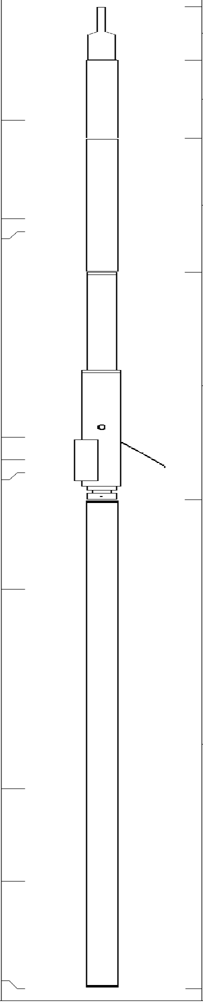
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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# 2-013716

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



Description	Len (ft)	OD (in)	Wt (lb)
CHD (~0)	2.00	3.50	30.00
GR-PSI (43)	2.92	3.50	40.00
CNT-PSI (853)	5.00	3.50	70.00
CDL-PSI (771)	8.50	5.00	285.00
DIL-PSI (1010)	18.25	3.75	175.00

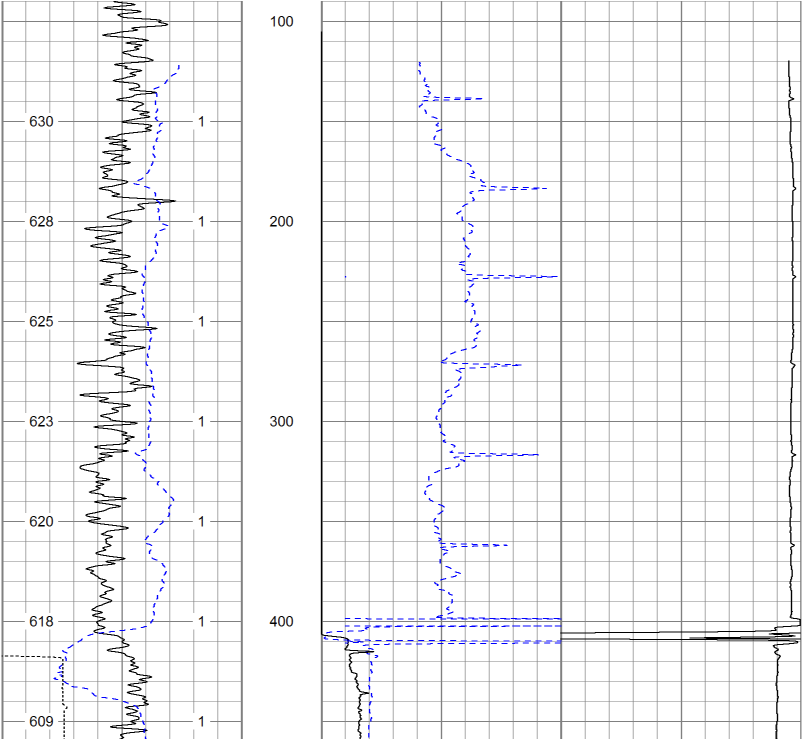
Dataset: 13716.db: field/well/run1/pass4
Total Length: 36.67 ft
Total Weight: 600.00 lb
O.D. 5.00 in

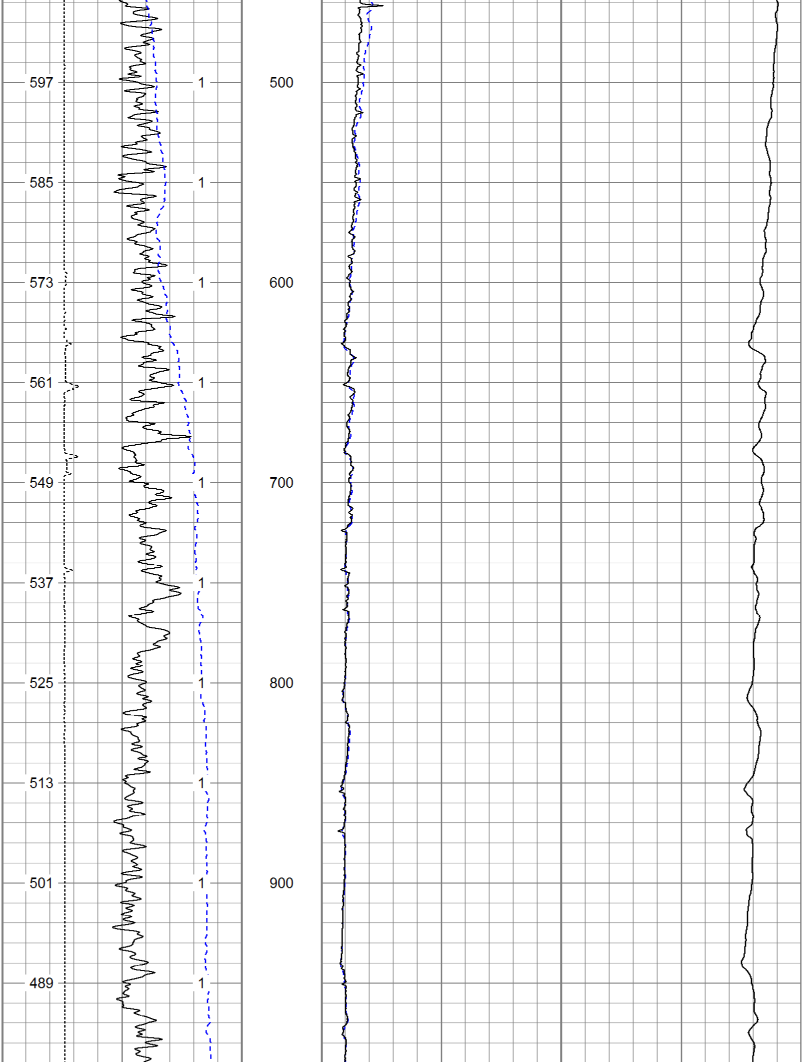
Database File: c:\warrior\data\augustus energy resources,llc_franson 42-33 4n47w_0512512121_20141013_gr-
Dataset Pathname: pass4
Presentation Format: dilin60
Dataset Creation: Mon Oct 13 15:57:59 2014 by Log Open-Cased 110302
Charted by: Depth in Feet scaled 1:600

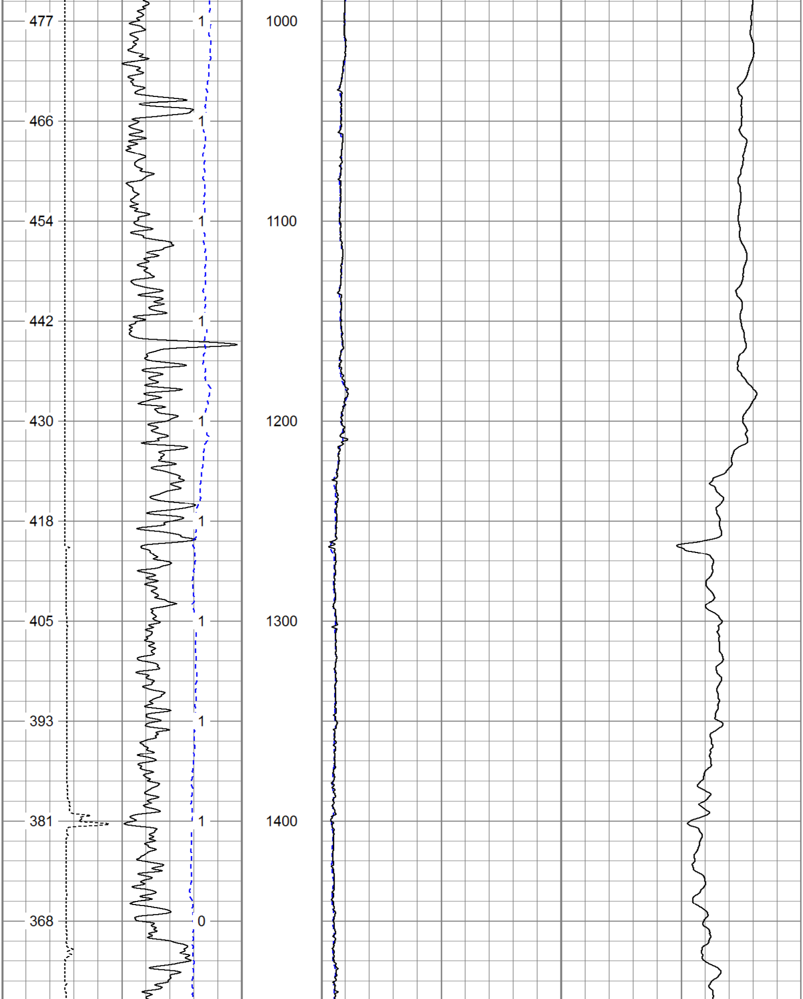
0 Gamma Ray (GAPI) 200
0 SP (mV) 200
4 Caliper (in) 14
TBHV (ft3) ABHV (ft3)

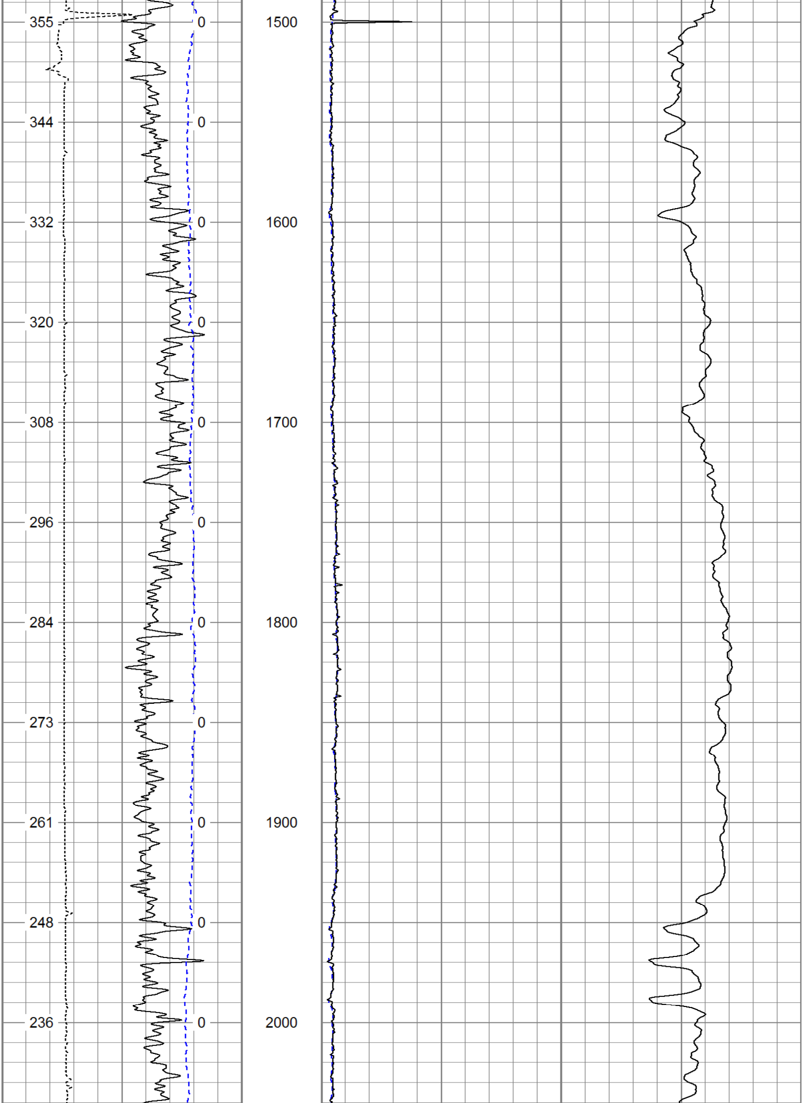
0 Deep Resistivity (Ohm-m) 50
0 Shallow Resistivity (Ohm-m) 50
50 RILD (Ohm-m) 500
50 RLL3 (Ohm-m) 500

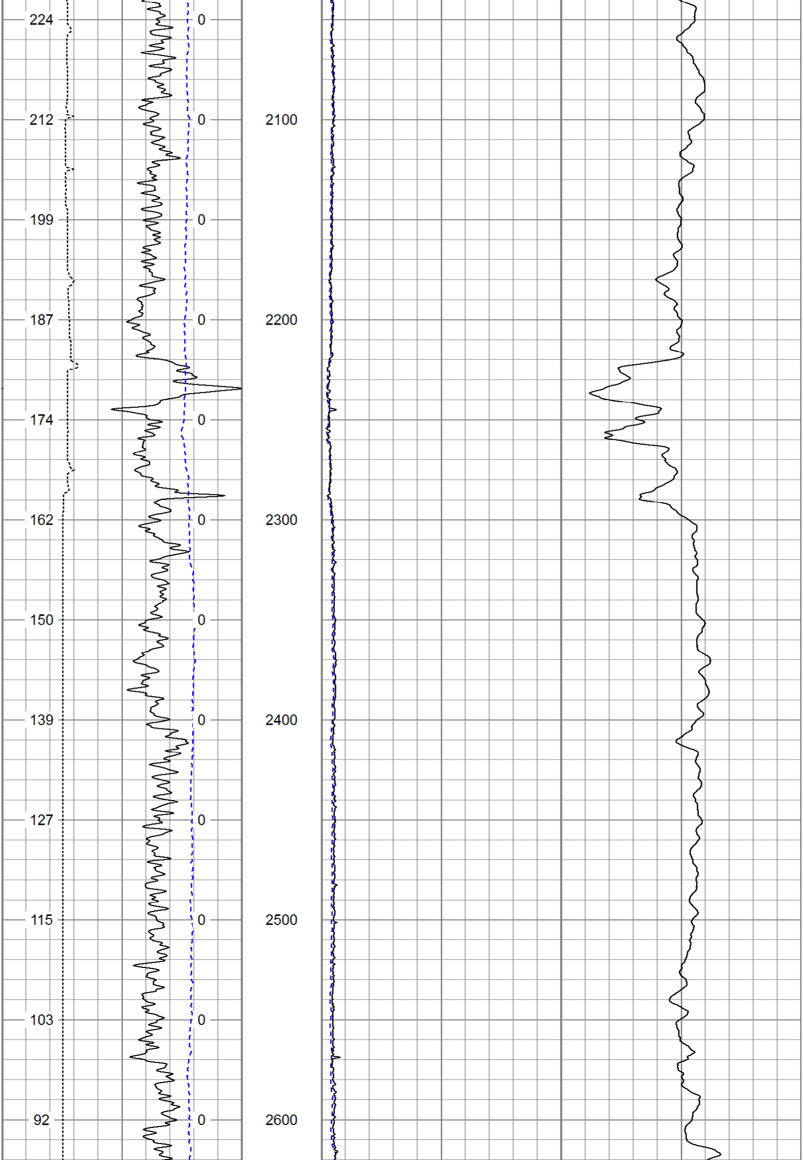
1000 CILD (mmho/m) 0

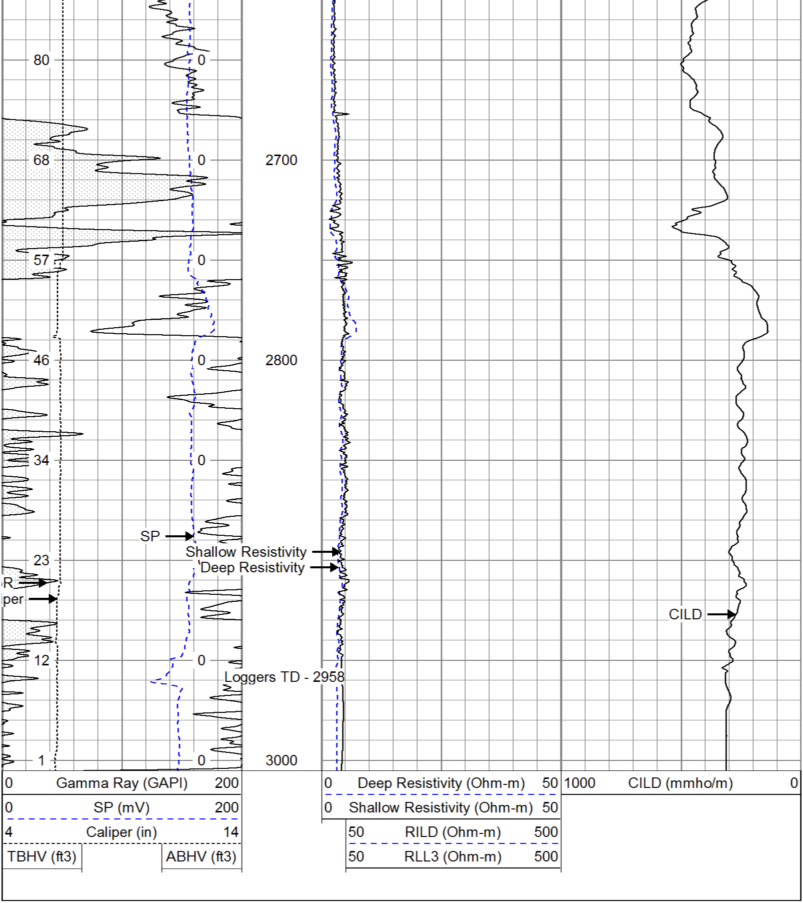












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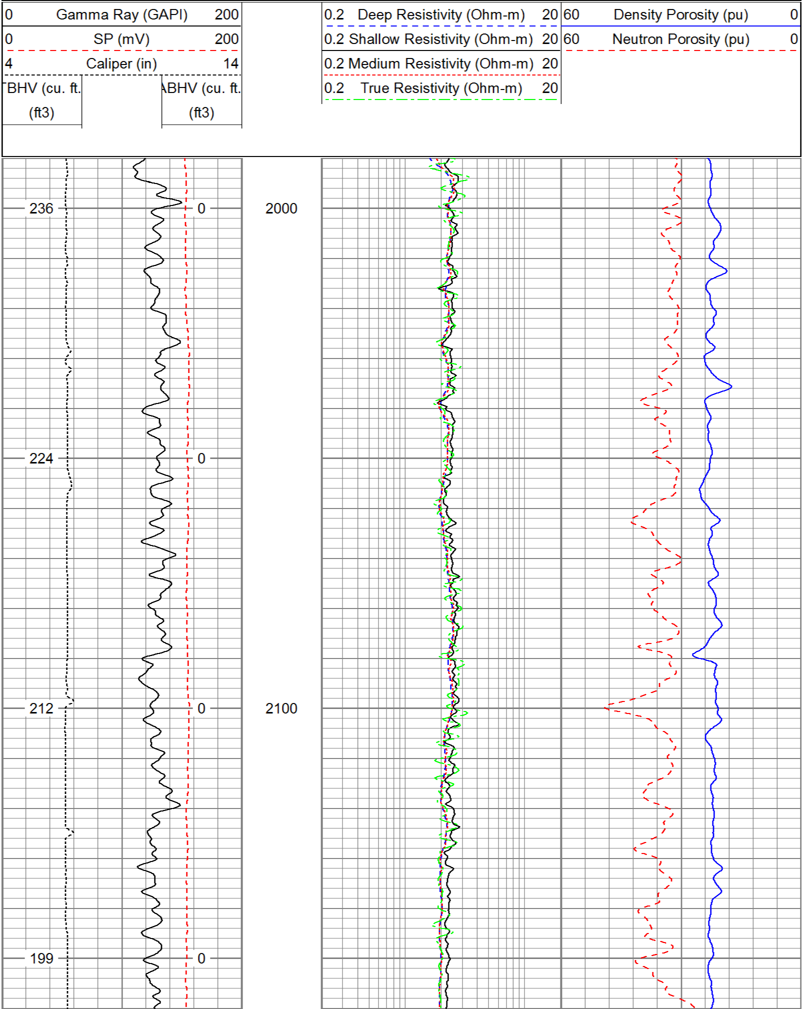
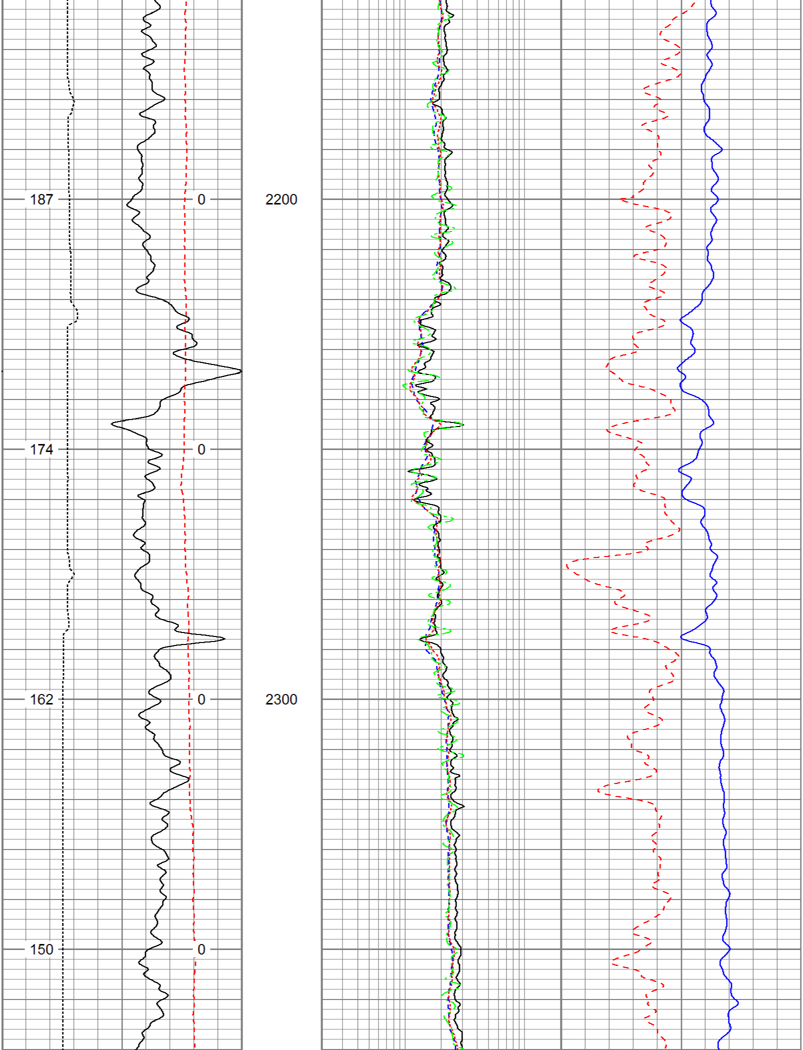
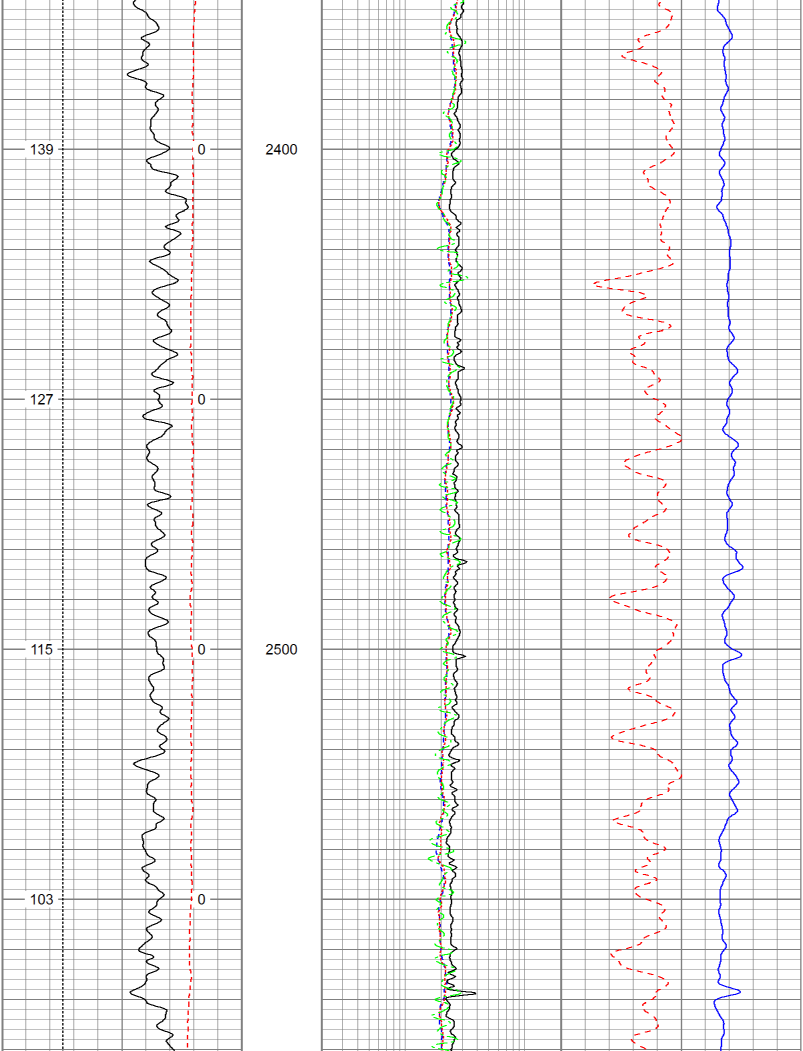
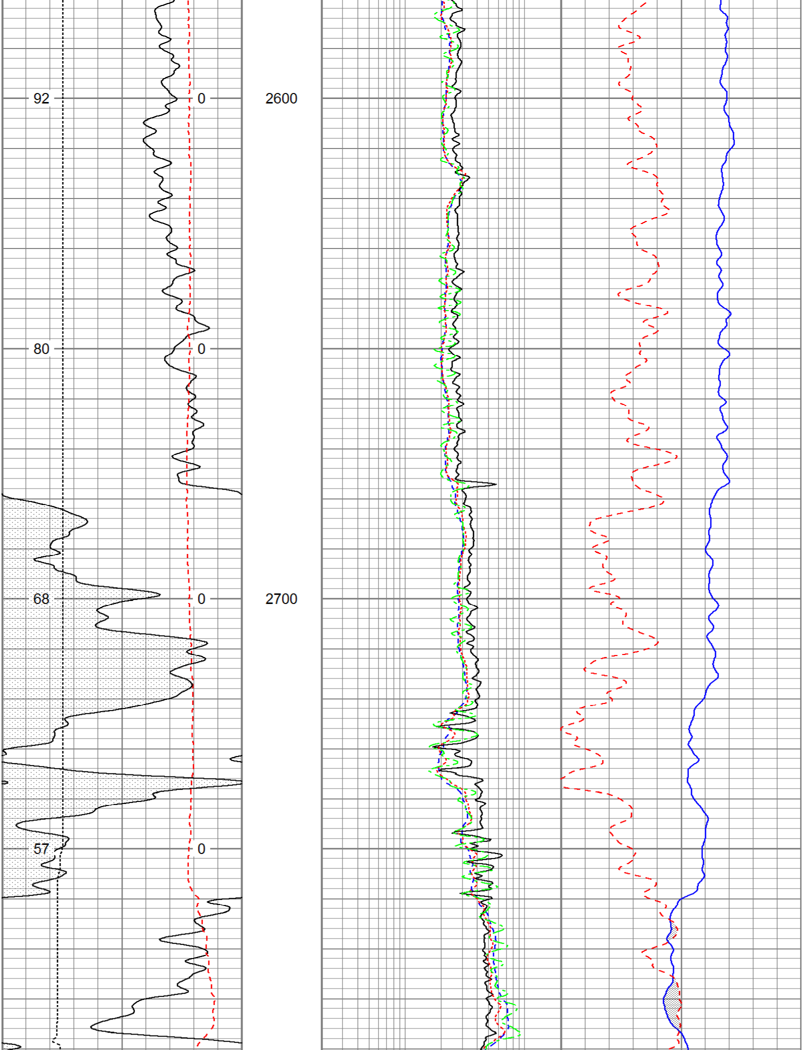
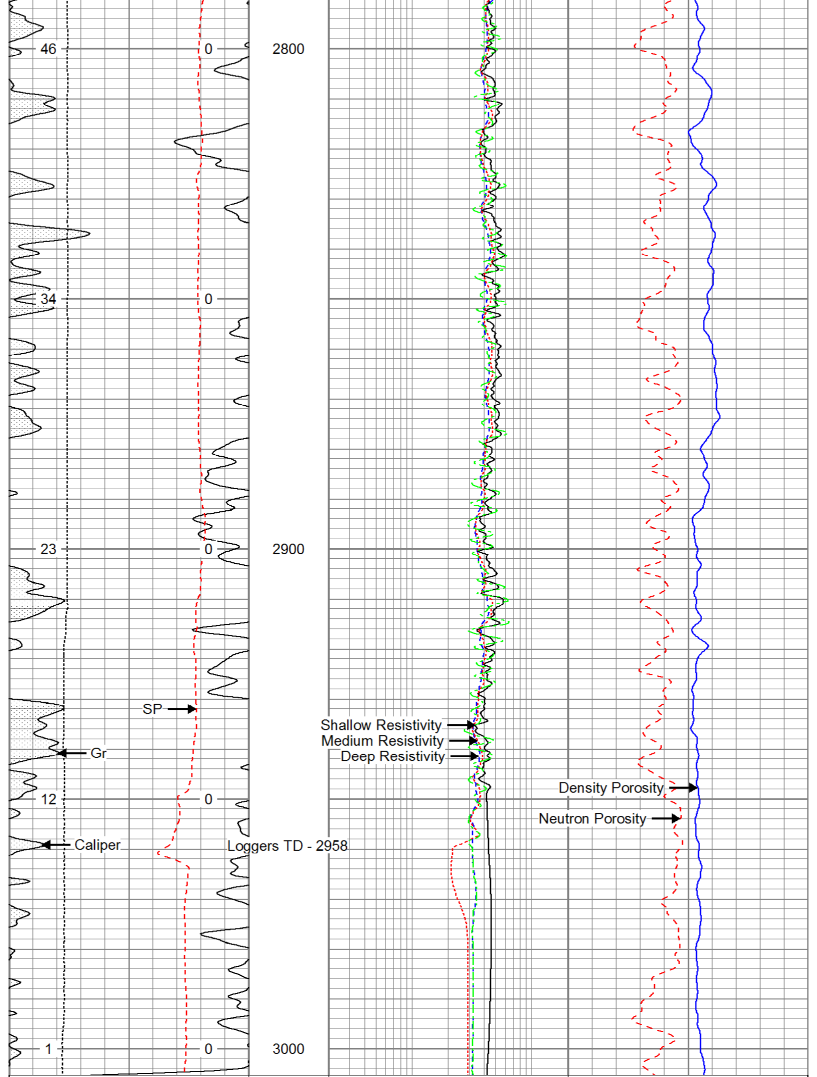
Dataset Pathname:	pass4
Presentation Format:	pdce
Dataset Creation:	Mon Oct 13 15:57:59 2014 by Log Open-Cased 110302
Charted by:	Depth in Feet scaled 1:240











0 Gamma Ray (GAPI) 200
0 SP (mV) 200
4 Caliper (in) 14
TBHV (cu. ft. (ft3)
ABHV (cu. ft. (ft3)

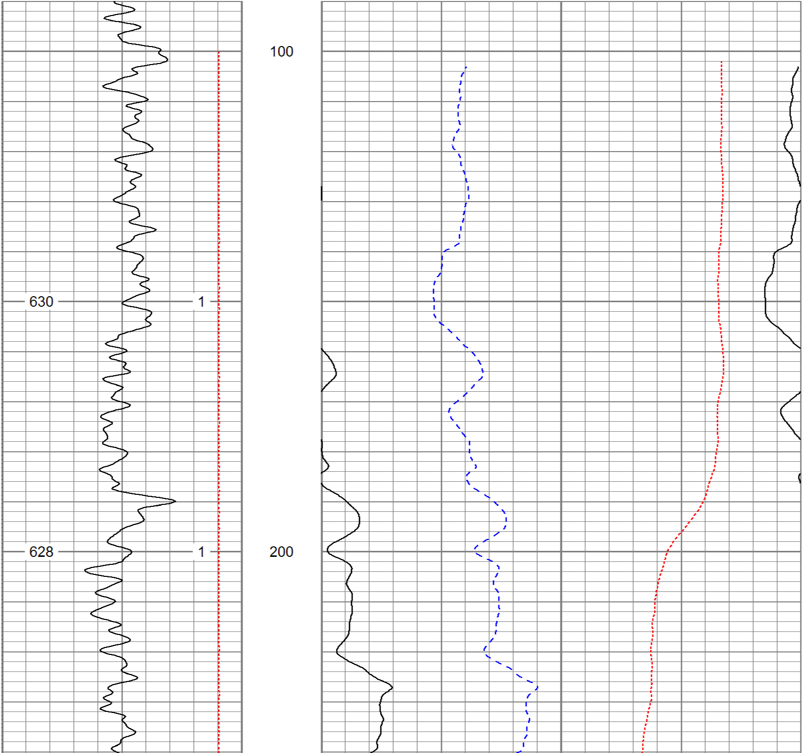
0.2 Deep Resistivity (Ohm-m) 20
0.2 Shallow Resistivity (Ohm-m) 20
0.2 Medium Resistivity (Ohm-m) 20
0.2 True Resistivity (Ohm-m) 20

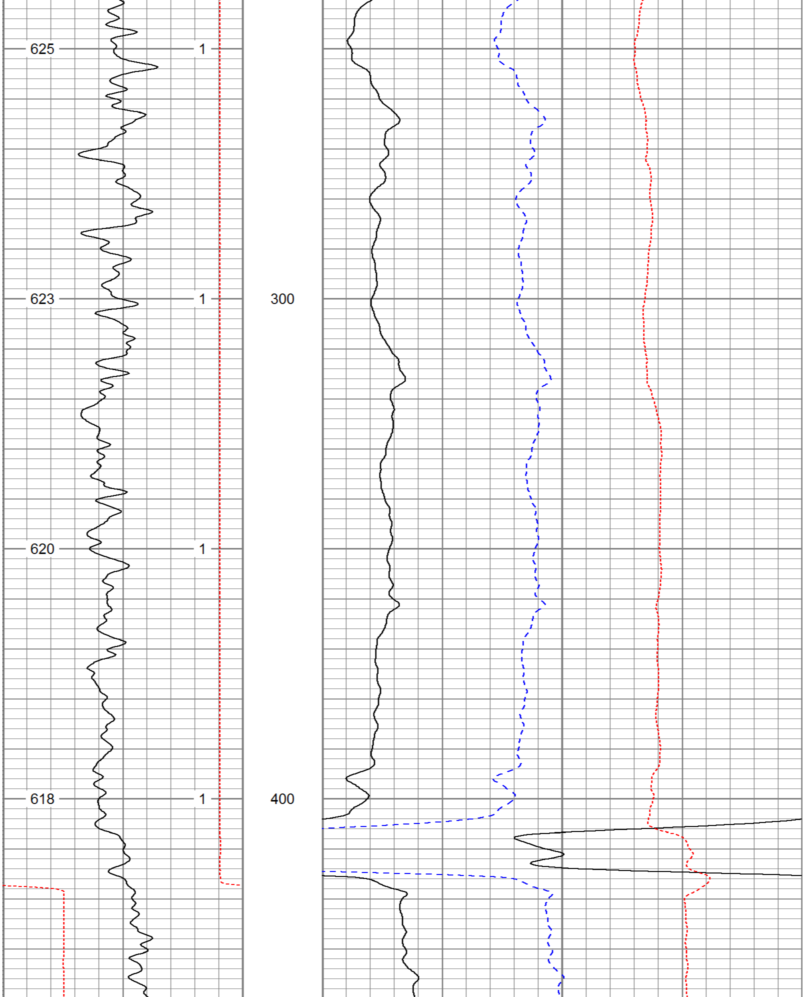
60 Density Porosity (pu) 0
60 Neutron Porosity (pu) 0

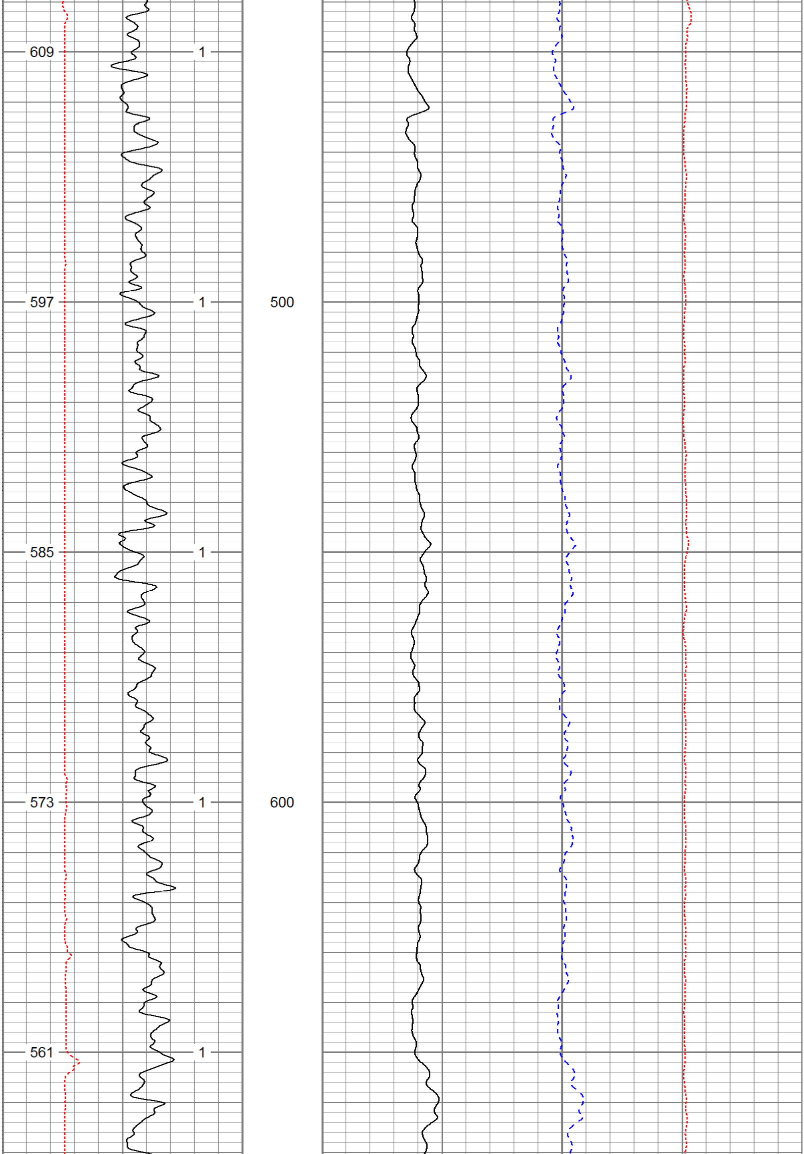
Database File:	c:\warrior\data\augustus energy resources,llc_franson 42-33 4n47w_0512512121_20141013_gr-
Dataset Pathname:	pass4
Presentation Format:	cdl60
Dataset Creation:	Mon Oct 13 15:57:59 2014 by Log Open-Cased 110302
Charted by:	Depth in Feet scaled 1:240

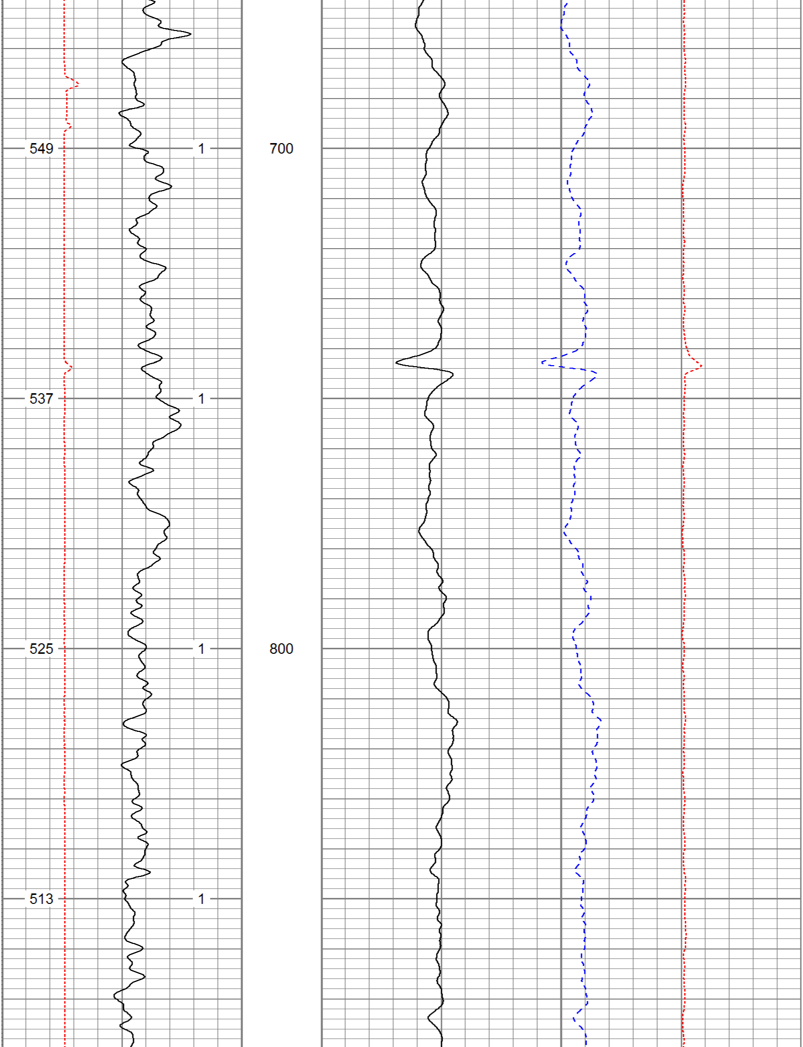
4 Caliper (in) 14
0 Gamma Ray (GAPI) 200
TBHV (ft3)
ABHV (ft3)

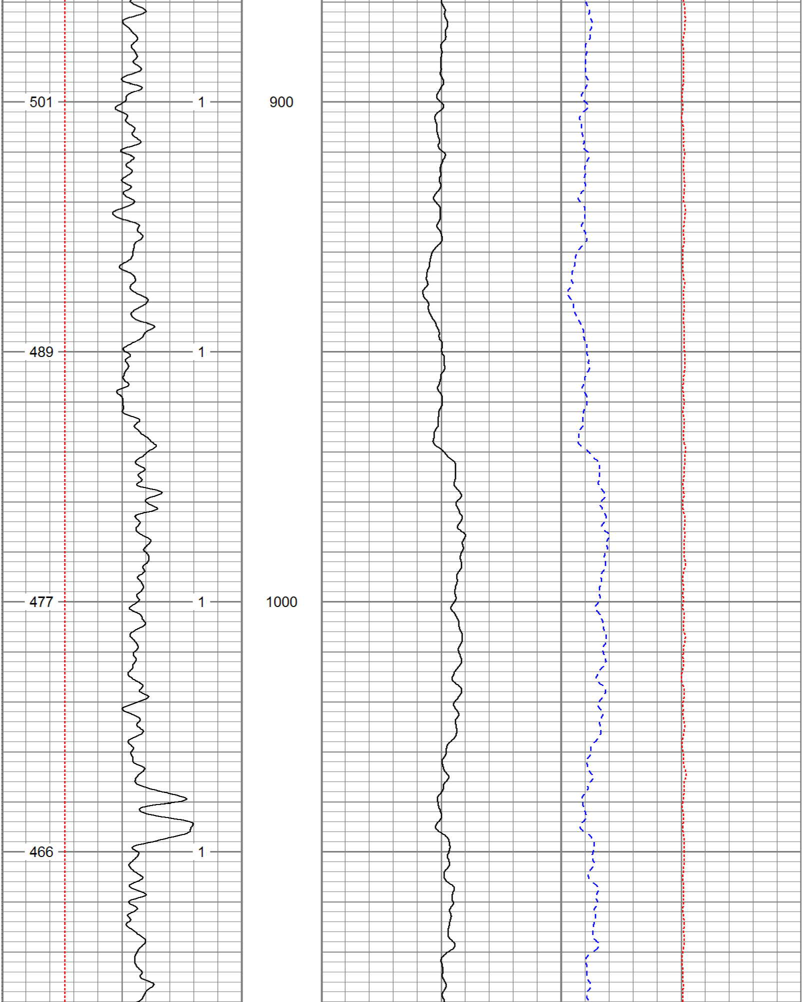
2 Bulk Density (g/cc) 3
60 Density Porosity (pu) 0
-0.5 Corr (g/cc) 0.5

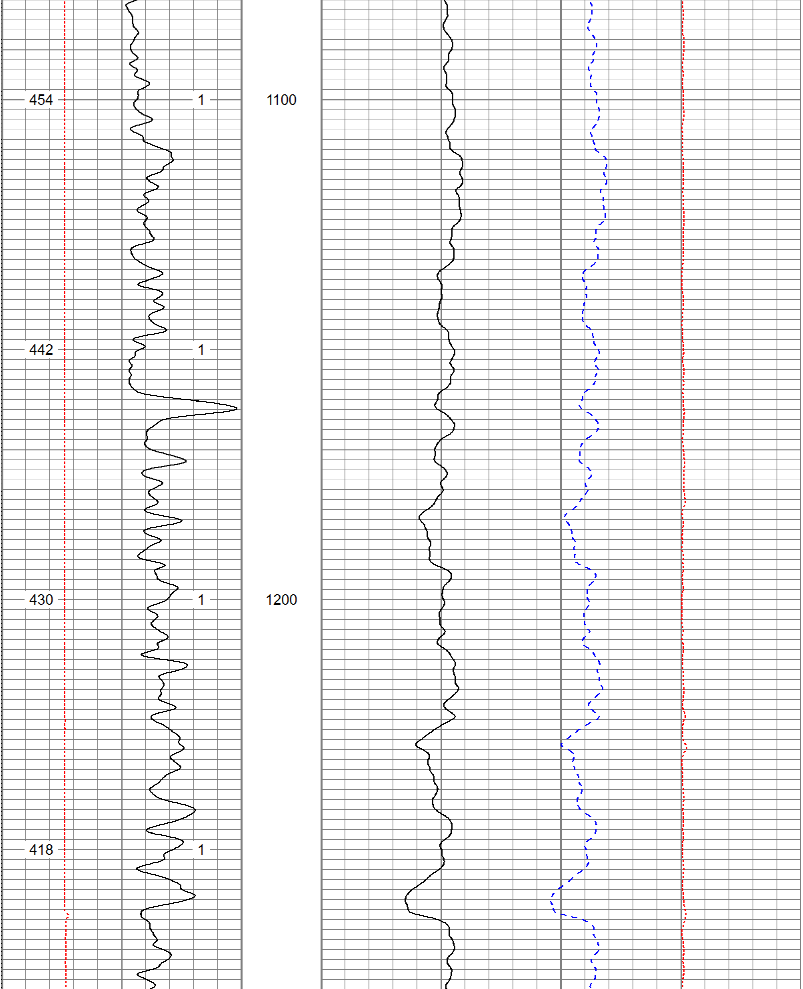












Calibration Report

Database File: C:\Warrior\Data\Augustus Energy Resources,LLC_Franson 42-33 4N47W_0512512121_2014101

Dataset Pathname: pass2

Dataset Creation: Mon Oct 13 15:33:50 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: 771-PSI

Master Calibration Performed: Wed Aug 20 14:19:31 2014

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.750	g/cc	6323.60	8557.33	cps
Aluminum	2.690	g/cc	1148.13	5455.46	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: 43

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 42-33 4N47W_

Dataset: field/well/run1/pass2

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
7	0	0	111	7.875