PIONEER

Pioneer Energy Services

COMPENSATED DENSITY
COMPENSATED NEUTRON
GAMMA RAY

Company	High Plains Energy LLC
Well	State Hone 16-1
Field	Hone
County	Washington
State	Colorado

Company High Plains Energy LLC

Well State Hone 16-1

Field Hone

County Washington **State** Colorado

Location: API # : 05121110190000

2600' FNL & 600' FWL
SWNW

SEC 16 TWP 2S RGE 55W

Other Services
HI. RES.
INDUCTION

Permanent Datum	GL	Elevation	4679
Log Measured From	KB		
Drilling Measured From	KB		

Elevation
K.B. 4689
D.F. 4688
G.L. 4679

Date	February 22, 2014		
Run Number	1		
Depth Driller	5140		
Depth Logger	5135		
Bottom Logged Interval	5115		
Top Log Interval	3800		
Casing Driller	297		
Casing Logger	NOT LOGGED		
Bit Size	7-7/8"		
Type Fluid in Hole	Chem Gel		
Density / Viscosity	9.2 / 73		
pH / Fluid Loss	9.0 / 11.0		
Source of Sample	Flowline		
Rm @ Meas. Temp	2.98 @ 55 F		
Rmf @ Meas. Temp	2.24 @ 55 F		
Rmc @ Meas. Temp	3.73 @ 55 F		
Source of Rmf / Rmc	Measure / Calc		
Rm @ BHT	1.16 @ 141 F		
Time Circulation Stopped	1745 2/22/2014		
Time Logger on Bottom	0000		
Maximum Recorded Temperature	141 F		
Equipment Number	49		
Location	Brighton, CO		
Recorded By	Clint Christensen		
Witnessed By	Randy Wheat	Pete Debenham	

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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wreline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wreline Services, LLC will not 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.

Comments

Annular volume calculated for 5-1/2" casing
Mid Continent Rig 1
Thank you for using Pioneer Energy Services

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Main Pass

Database File:	13474.db
Dataset Pathname:	Final
Presentation Format:	poro
Dataset Creation:	Sun Feb 23 01:31:41 2014
Charted by:	Depth in Feet scaled 1:240

6 Caliper (in) 16

0 Gamma Ray (GAPI) 200

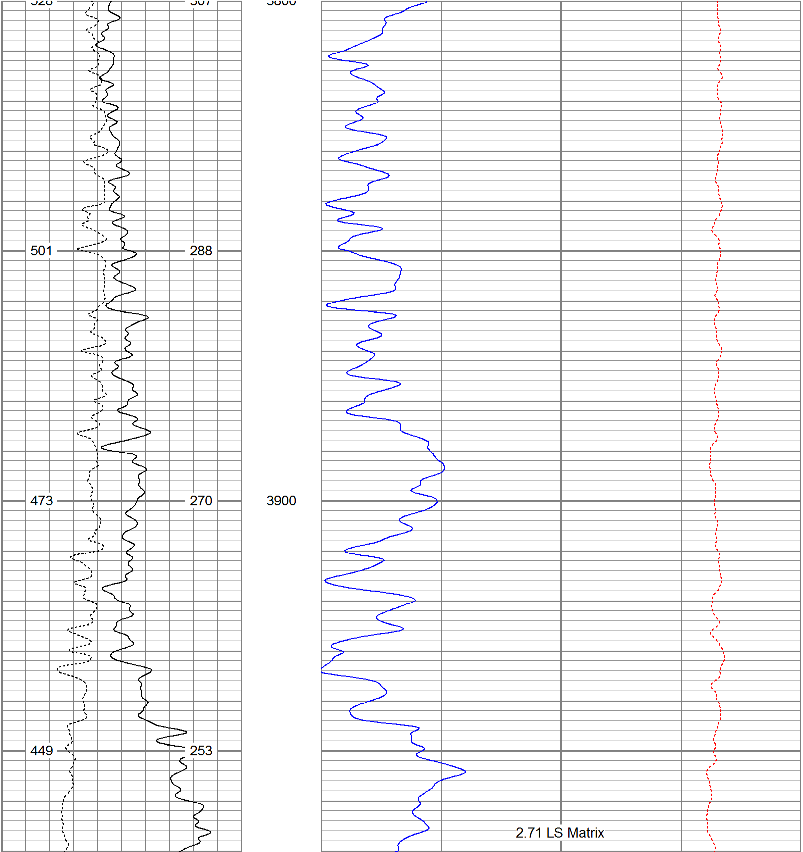
TBHV (ft3)

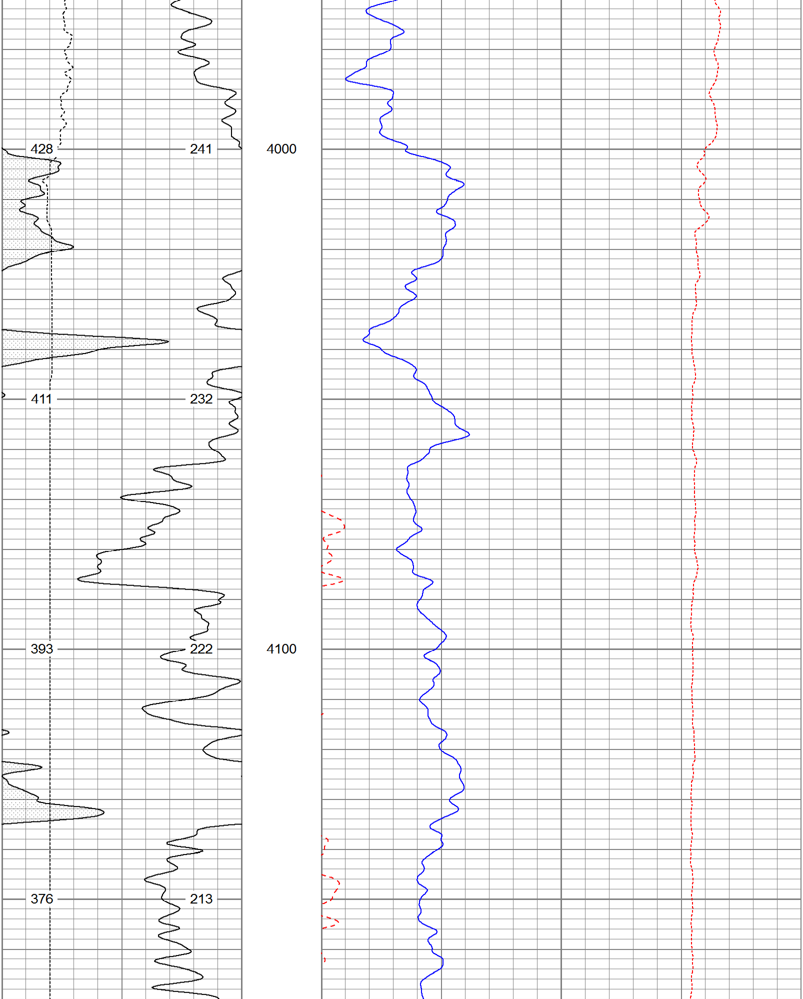
ABHV (ft3)

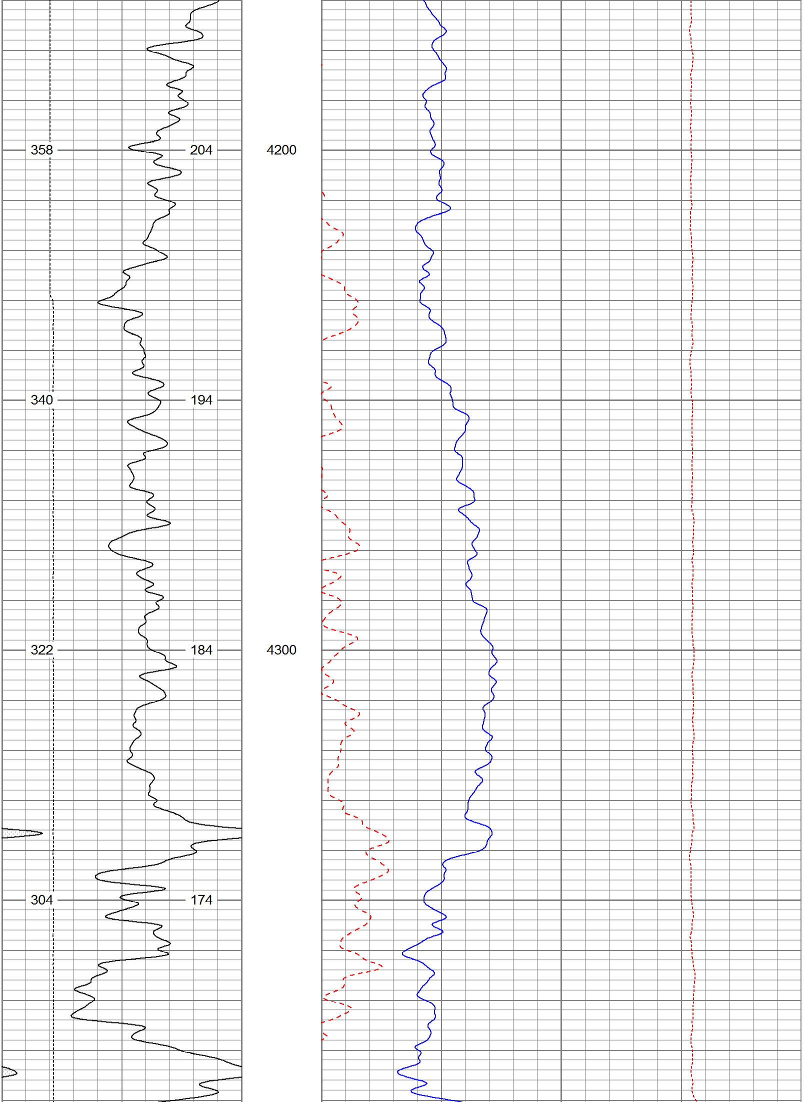
30 Density Porosity (pu) -10

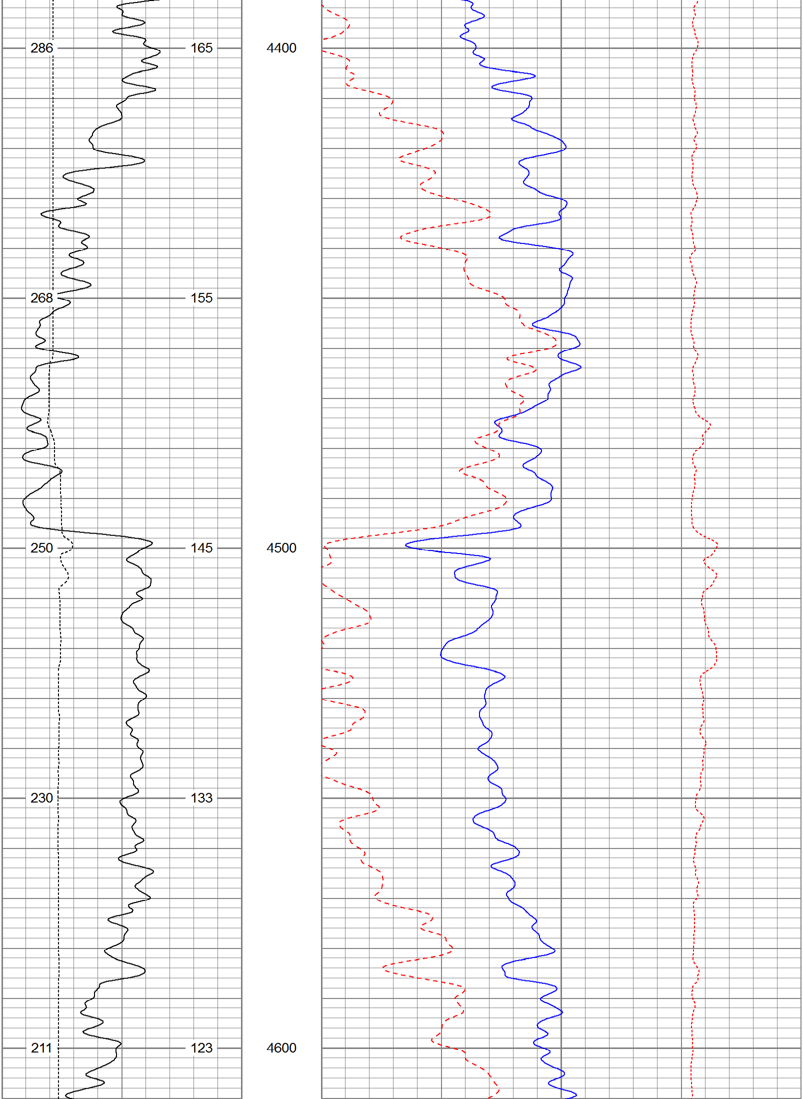
30 Neutron Porosity (pu) -10

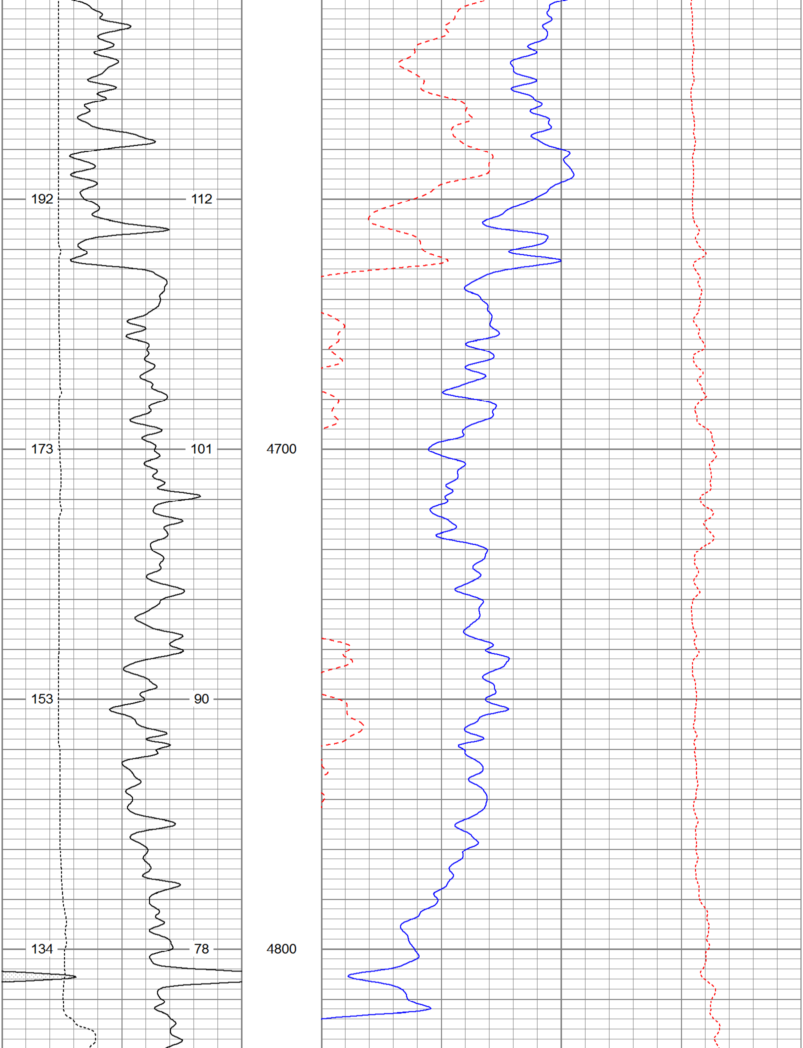
-0.5 Correction (g/cc) 0.5

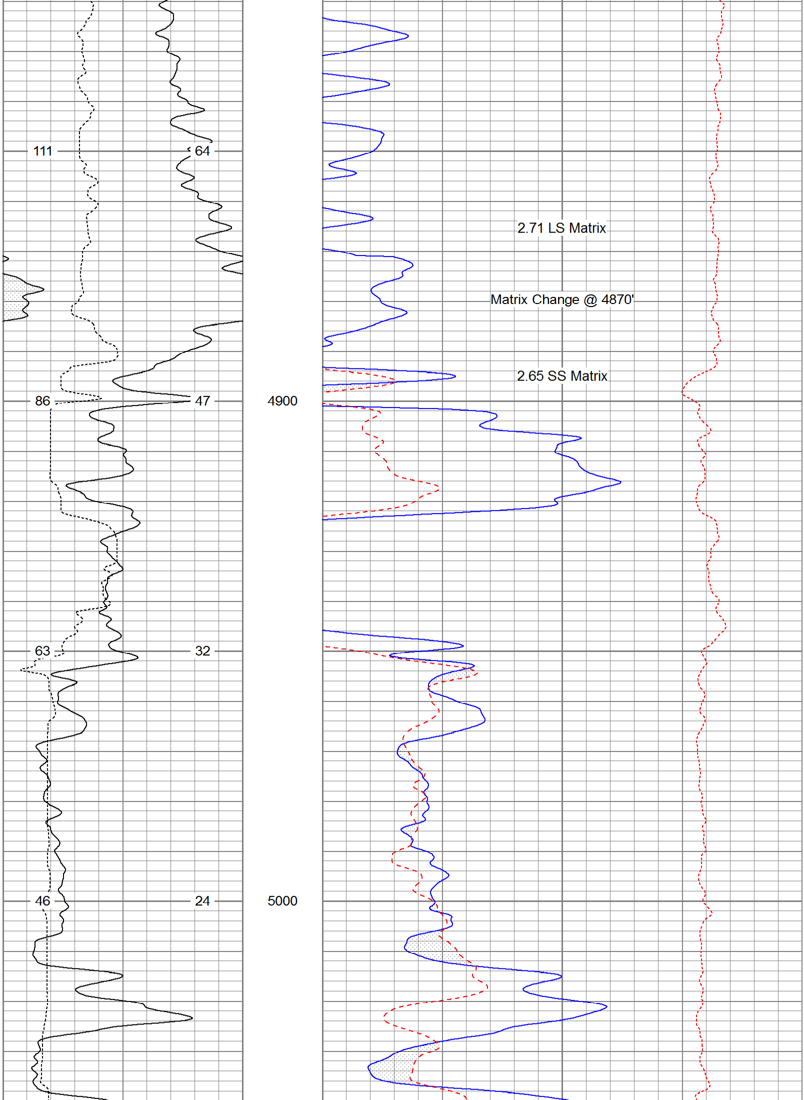


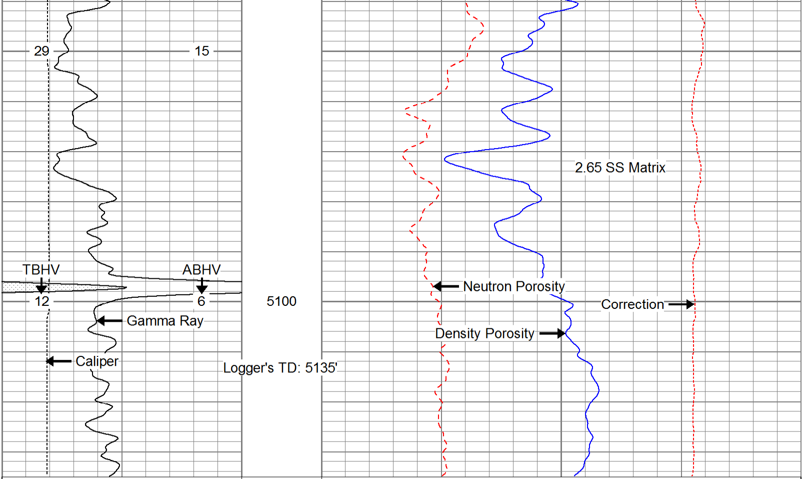












6	Caliper (in)	16	30	Density Porosity (pu)	-10
0	Gamma Ray (GAPI)	200	30	Neutron Porosity (pu)	-10
TBHV (ft3)		ABHV (ft3)	-0.5	Correction (g/cc)	0.5

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Main Pass

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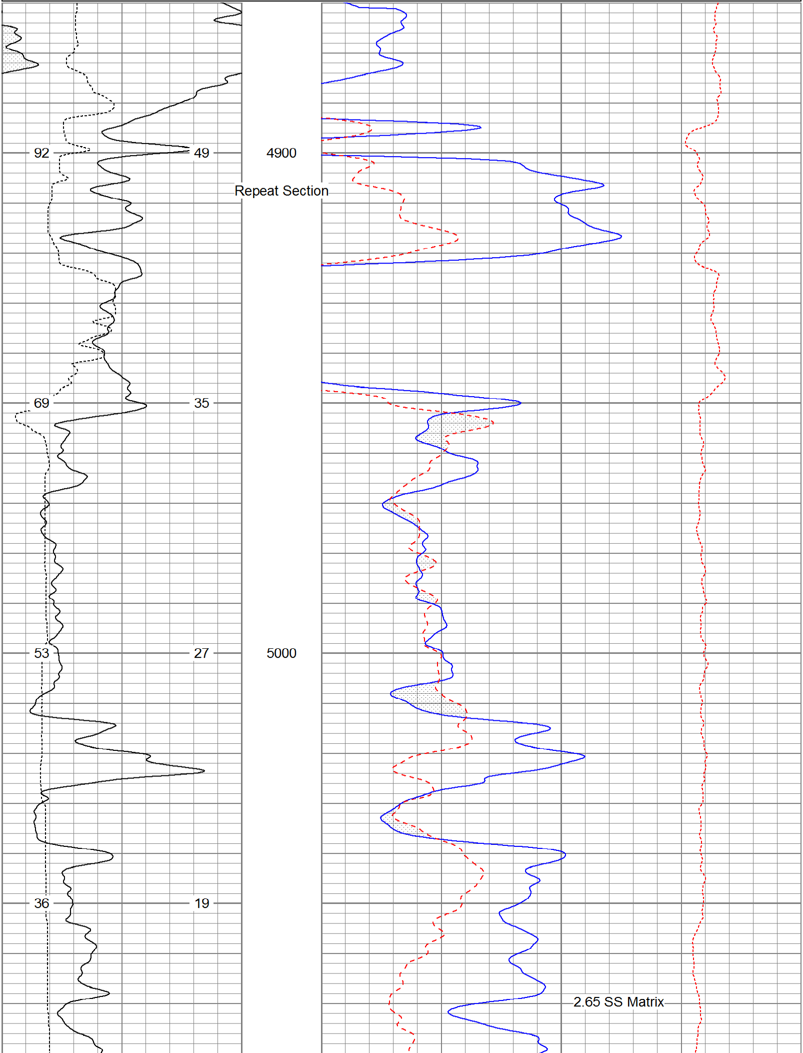
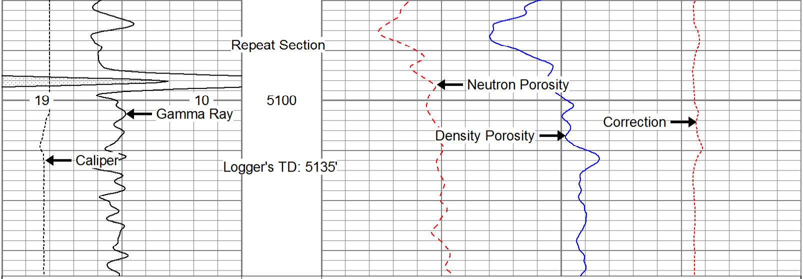
Repeat Pass

Database File:	13474.db
Dataset Pathname:	pass2.1
Presentation Format:	poro
Dataset Creation:	Sun Feb 23 00:37:08 2014 by Calc 0
Charted by:	Depth in Feet scaled 1:240

6	Caliper (in)	16	30	Density Porosity (pu)	-10
0	Gamma Ray (GAPI)	200	30	Neutron Porosity (pu)	-10
TBHV (ft3)		ABHV (ft3)	-0.5	Correction (g/cc)	0.5





6	Caliper (in)	16	30	Density Porosity (pu)	-10
0	Gamma Ray (GAPI)	200	30	Neutron Porosity (pu)	-10
TBHV (ft3)		ABHV (ft3)	-0.5	Correction (g/cc)	0.5

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Repeat Pass

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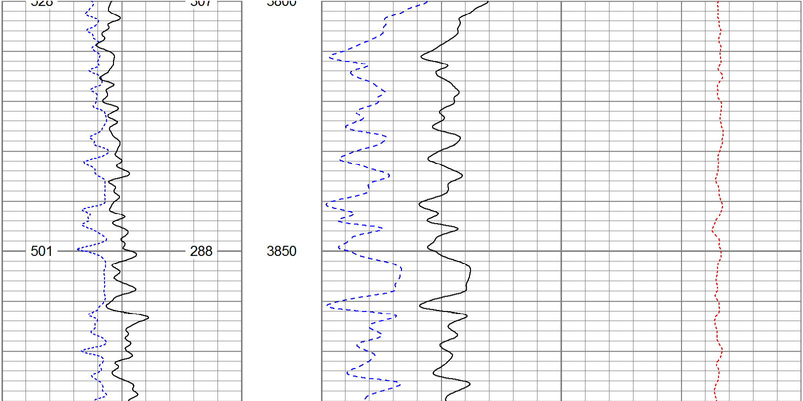
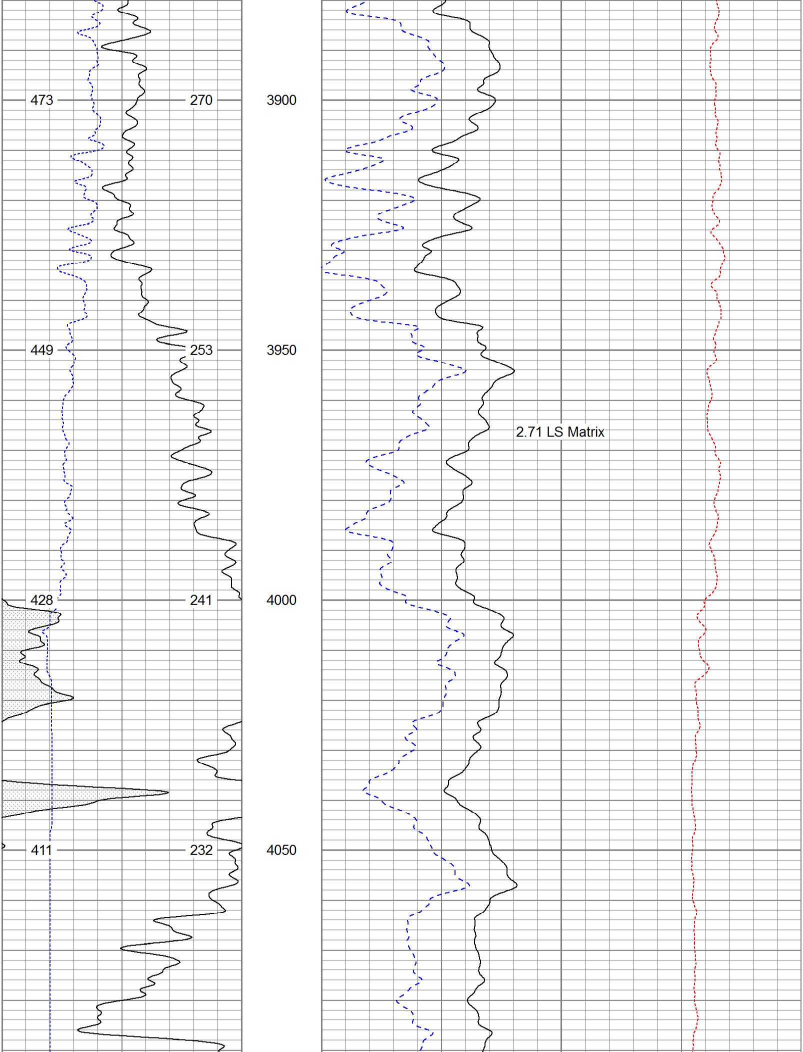
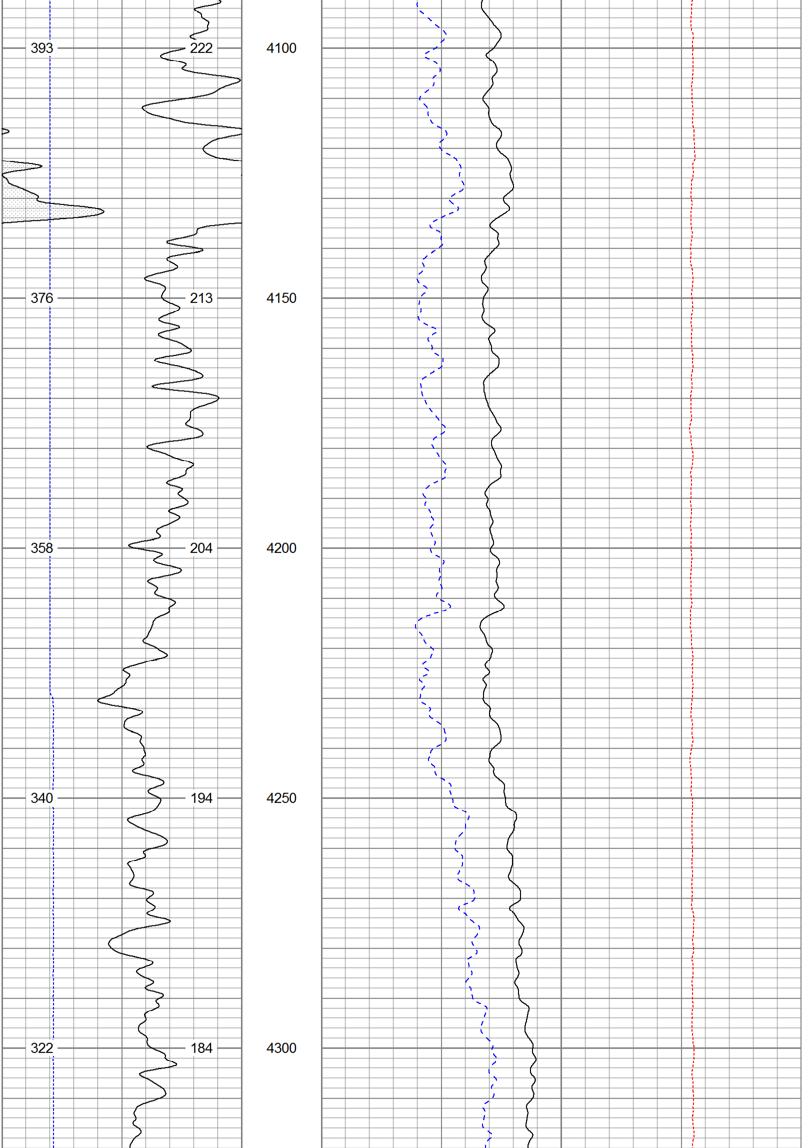
Main Pass

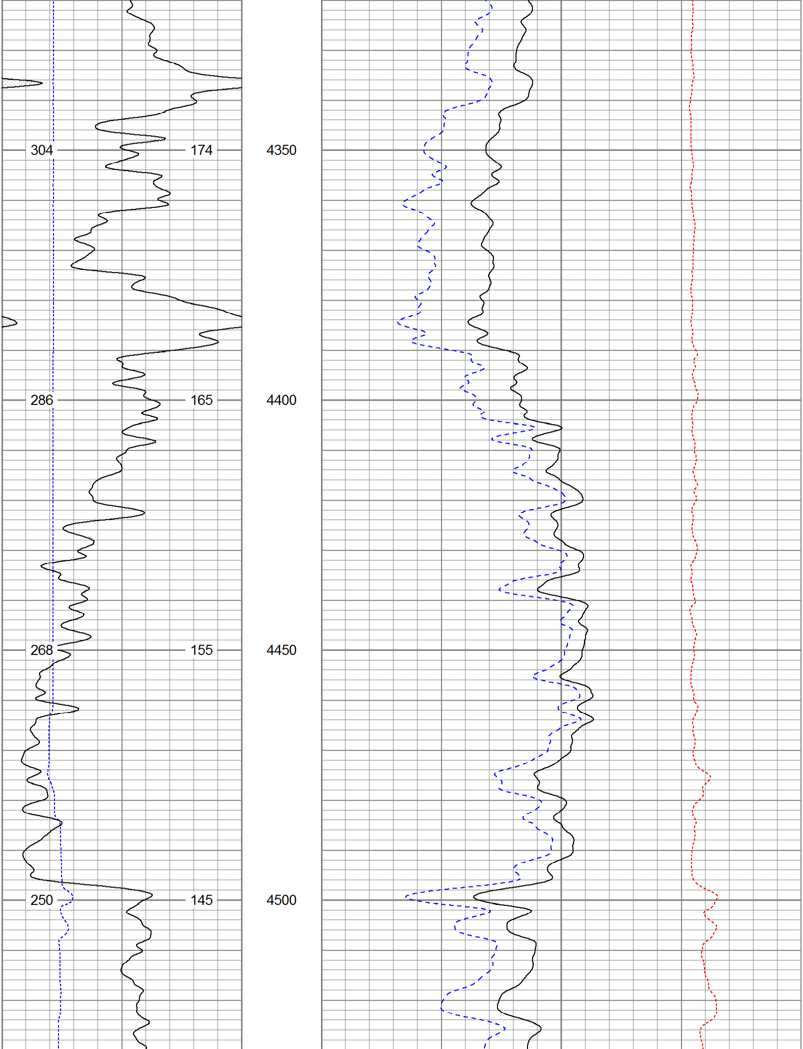
Database File:	13474.db
Dataset Pathname:	Final
Presentation Format:	cdl
Dataset Creation:	Sun Feb 23 01:31:41 2014
Charted by:	Depth in Feet scaled 1:240

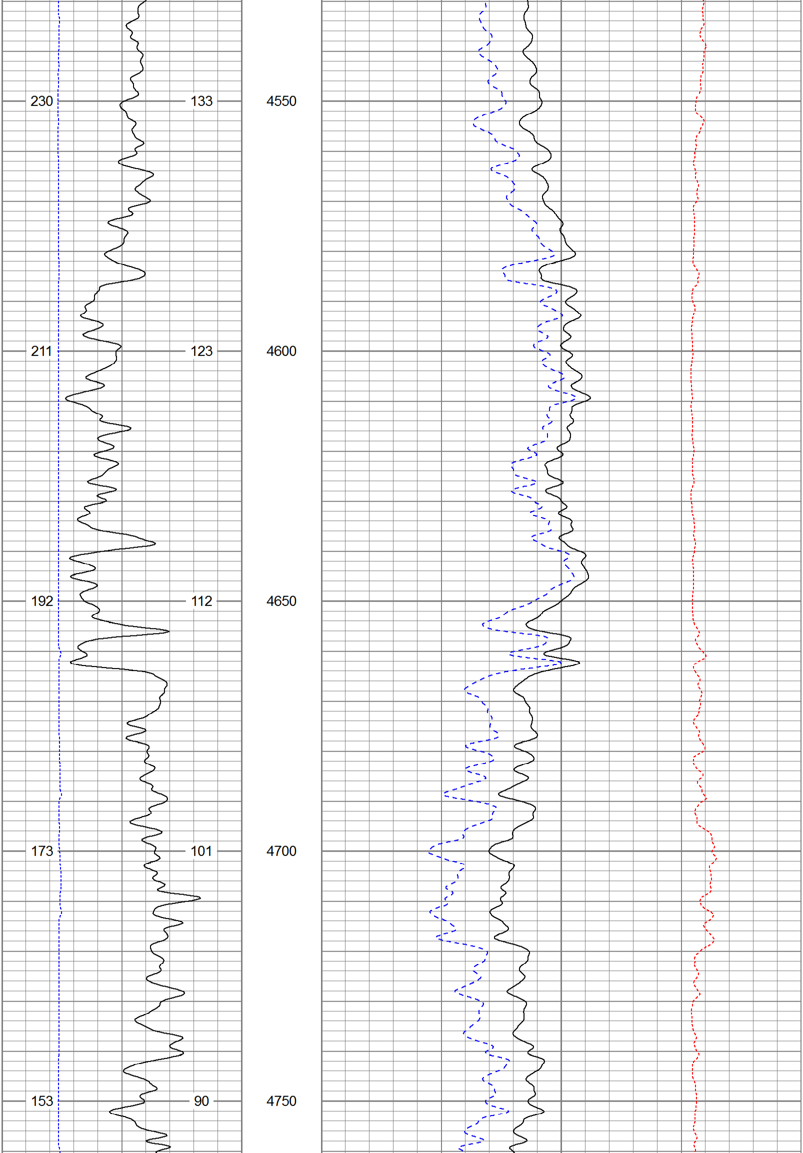
6	Caliper (in)	16	2	Bulk Density (g/cc)	3
0	Gamma Ray (GAPI)	200	30	Density Porosity (pu)	-10
			-0.5	Correction (g/cc)	0.5

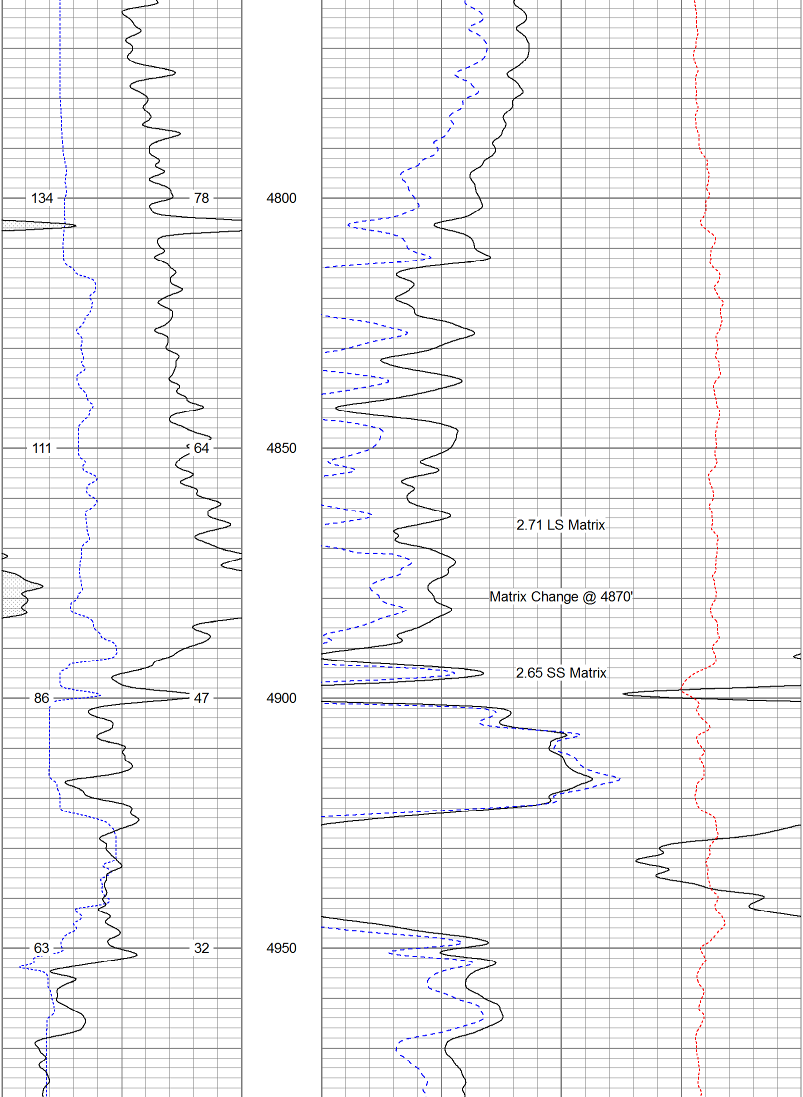


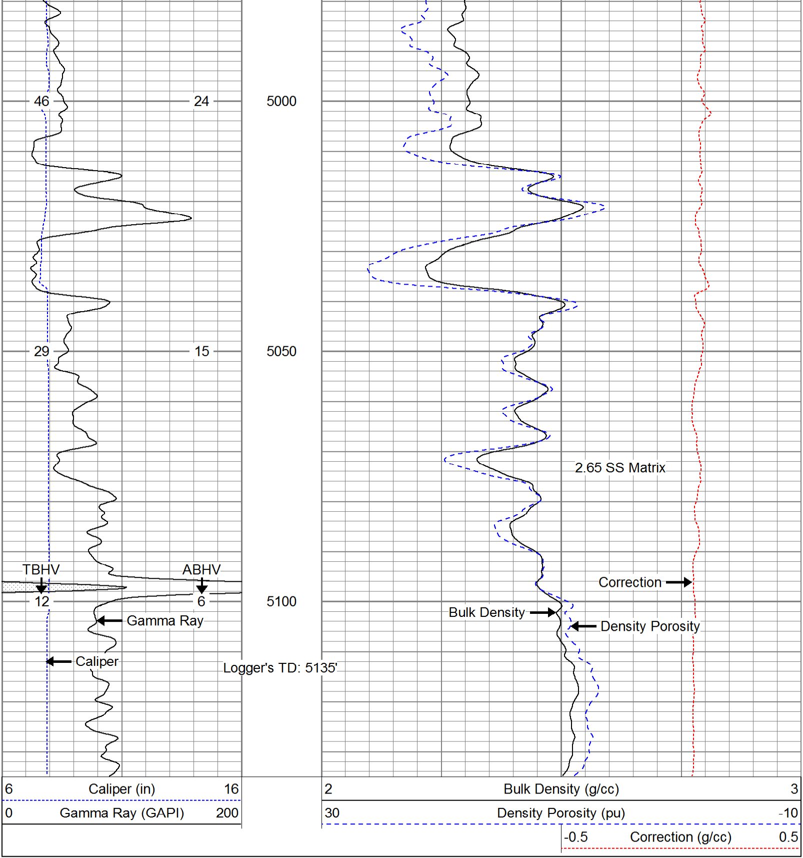












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Main Pass

Calibration Report

Database File: 13474.db
Dataset Pathname: pass1
Dataset Creation: Sat Feb 22 23:48:06 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	0.510	-28.000
Medium	0.000	1.000	0.000	1.000	mmho/m	0.440	-28.000

Compensated Density Calibration Report

Serial-Model: 998-PSI
Master Calibration Performed: Sat Feb 22 21:47:06 2014

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.750	g/cc	7210.00	9816.00	cps
Aluminum	2.690	g/cc	1326.00	6231.00	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

Gamma Ray Calibration Report

Serial Number: 939
Tool Model: PSI
Performed: Sat Feb 22 21:47:24 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.6200 GAPI/cps