The Perforators LLC

Compensated Density Neutron Log

Company Pioneer Natural Resources
Well Gus 13-18 TR
Field Purgatoire River
County Las Animas
State CO

Company	Pioneer Natural Resources
Well	Gus 13-18 TR
Field	Purgatoire River
County	Las Animas
State	CO

Location: API # : 05-071-09779-0000

NW/SW

SEC 18 TWP 32s RGE 65w

Permanent Datum	Ground Level	Elevation	7304
Log Measured From	4 AGL		
Drilling Measured From	4' AGL		

Other Services

IEL

Elevation

K.B. 7308
D.F.
G.L. 7304

Date	29 April 11		
Run Number	one		
Depth Driller	1650		
Depth Logger	1634		
Bottom Logged Interval	1624		
Top Log Interval	500		
Casing Driller	510		
Casing Logger	509		
Bit Size	7 7/8		
Type Fluid in Hole	water @ 1350		
Density / Viscosity	//		
pH / Fluid Loss	//		
Source of Sample	//		
Rm @ Meas. Temp	//		
Rmf @ Meas. Temp	//		
Rmc @ Meas. Temp	//		
Source of Rmf / Rmc	//		
Rm @ BHT	//		
Time Circulation Stopped	3:00 pm		
Time Logger on Bottom	5:00pm		
Maximum Recorded Temperature	//		
Equipment Number	590		
Location	Trinidad		
Recorded By	Patterson		
Witnessed By	D Barry	R Gonzales	

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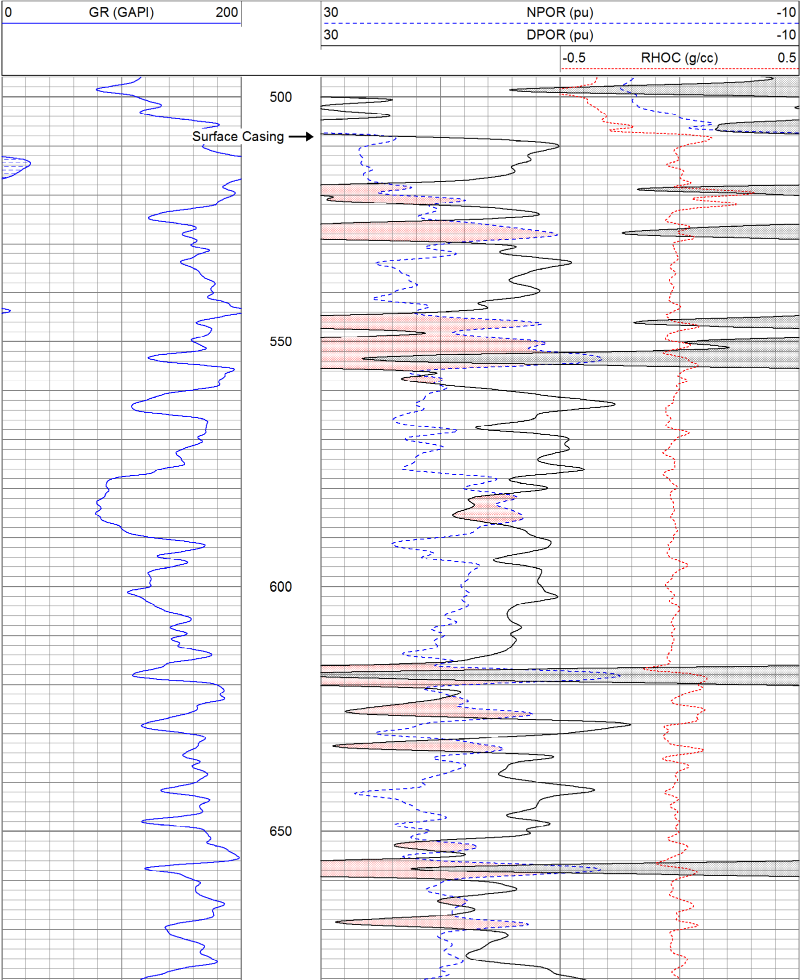
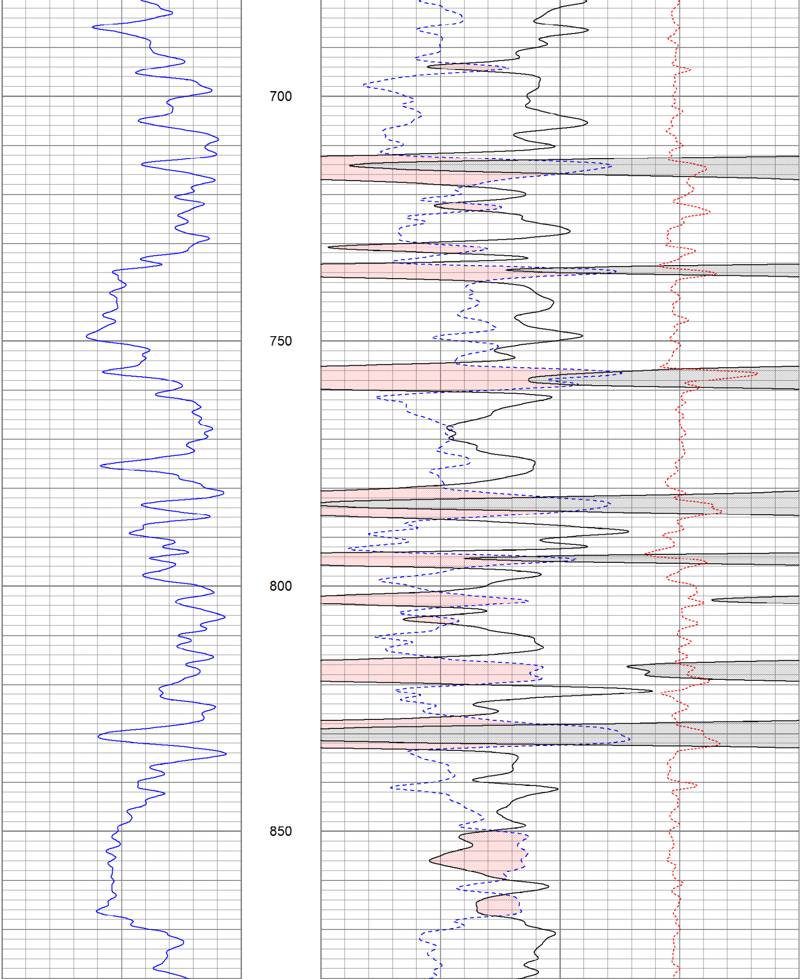
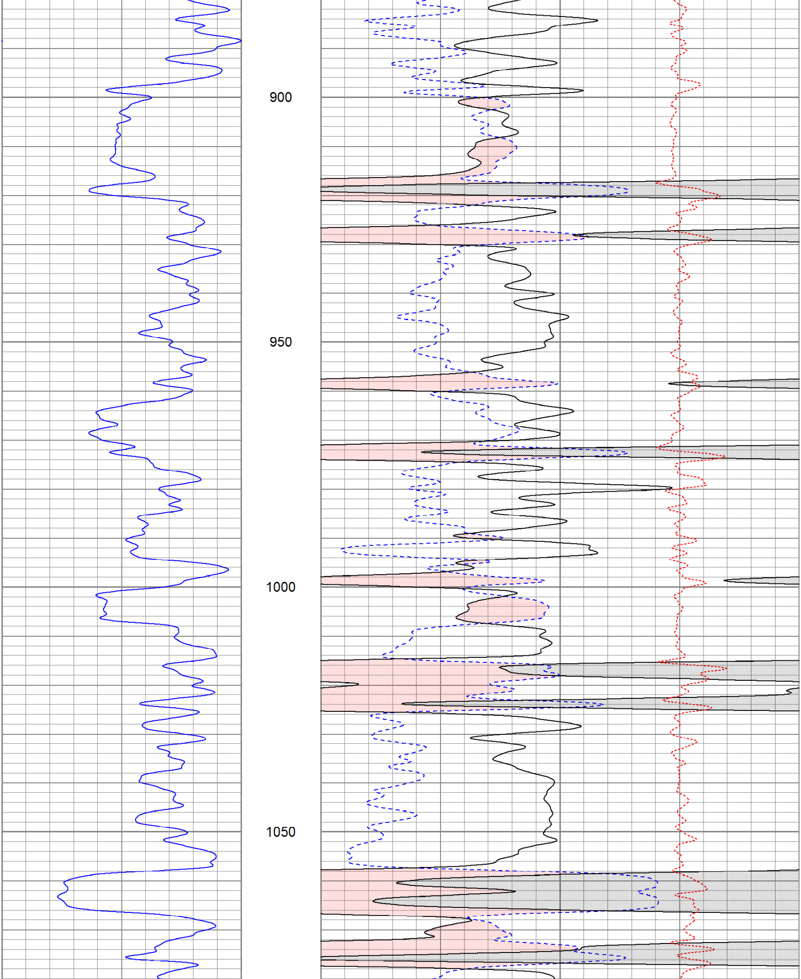
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

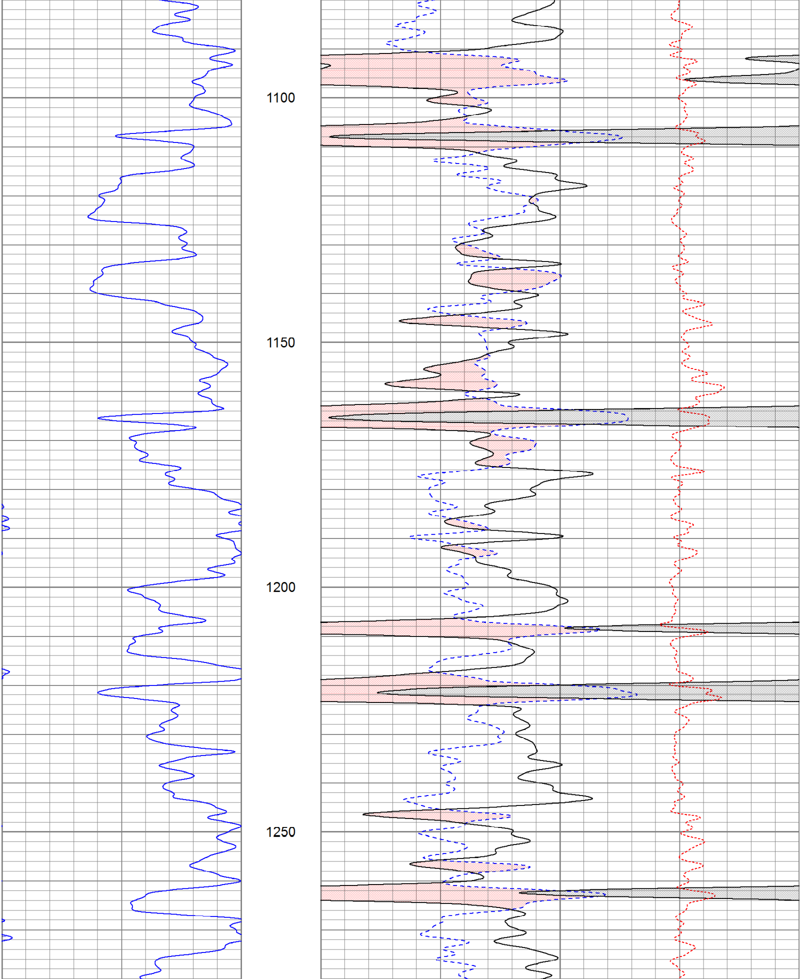
Comments

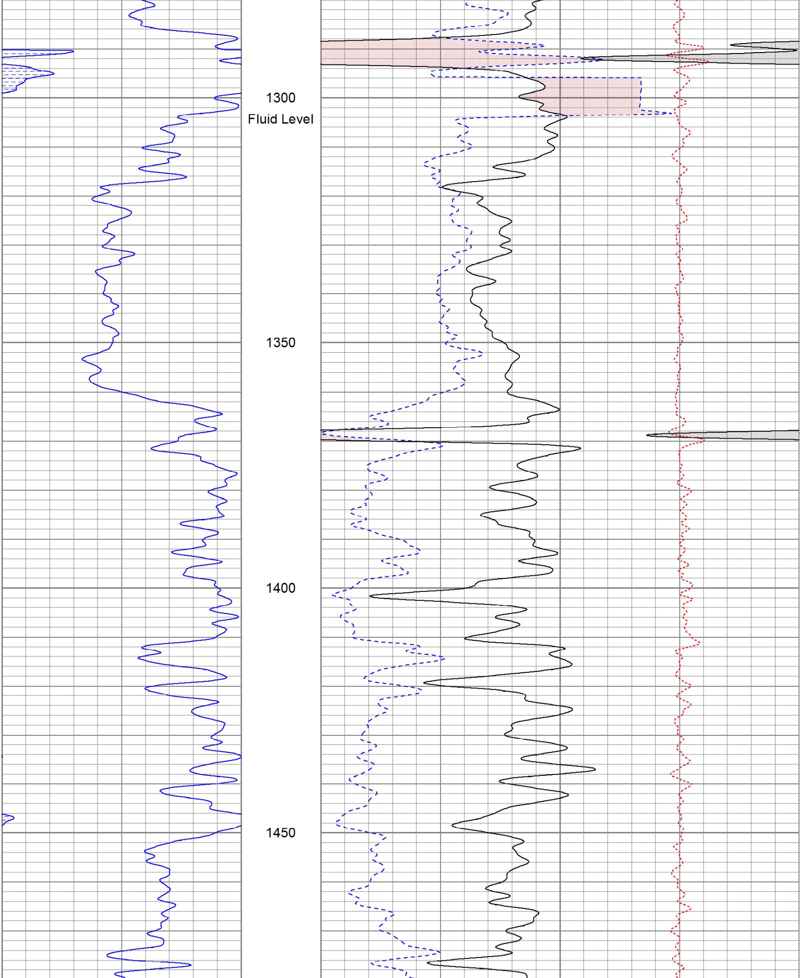
Database File: gus1318tr.db
Dataset Pathname: pass2.6
Presentation Format: cdnl
Dataset Creation: Sat Apr 30 11:08:27 2011 by Calc Open-Cased 110302
Charted by: Depth in Feet scaled 1:240

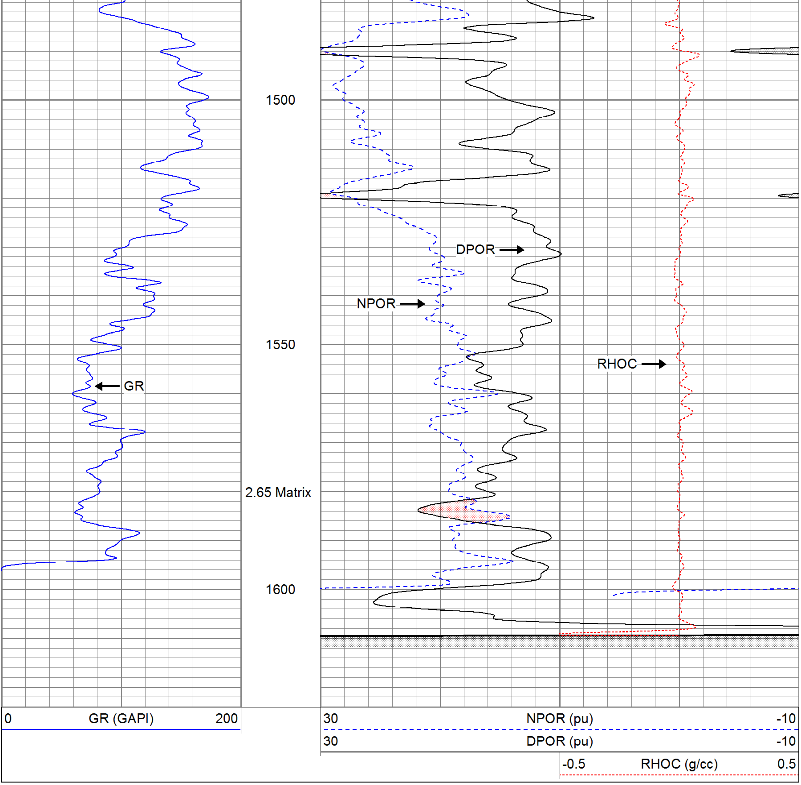






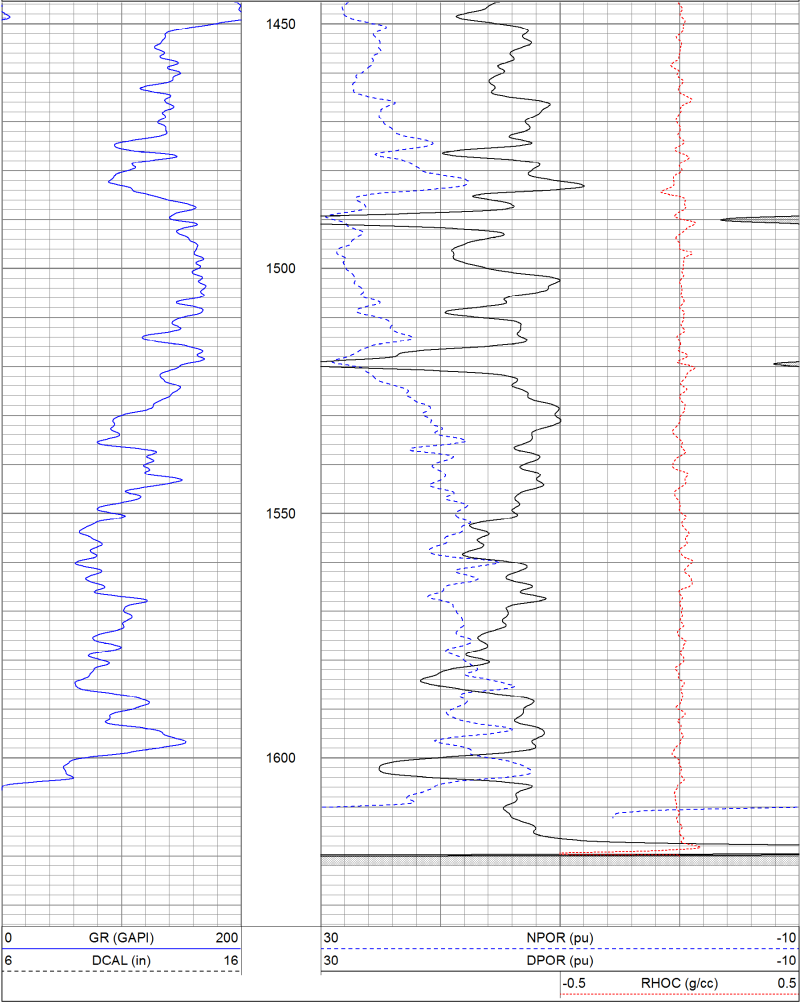




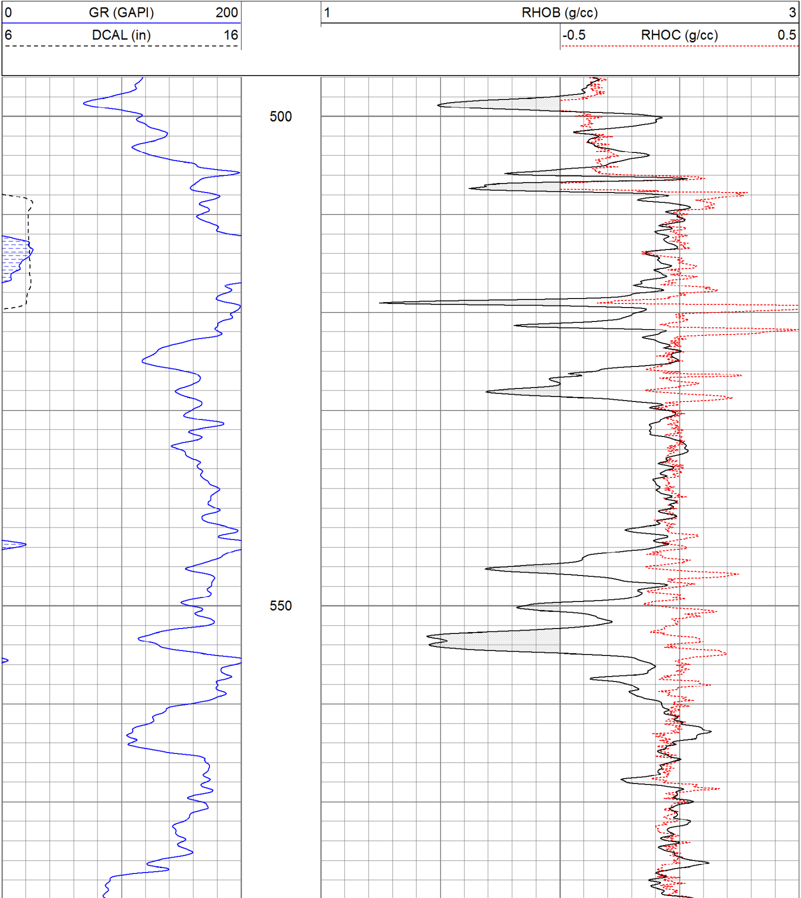


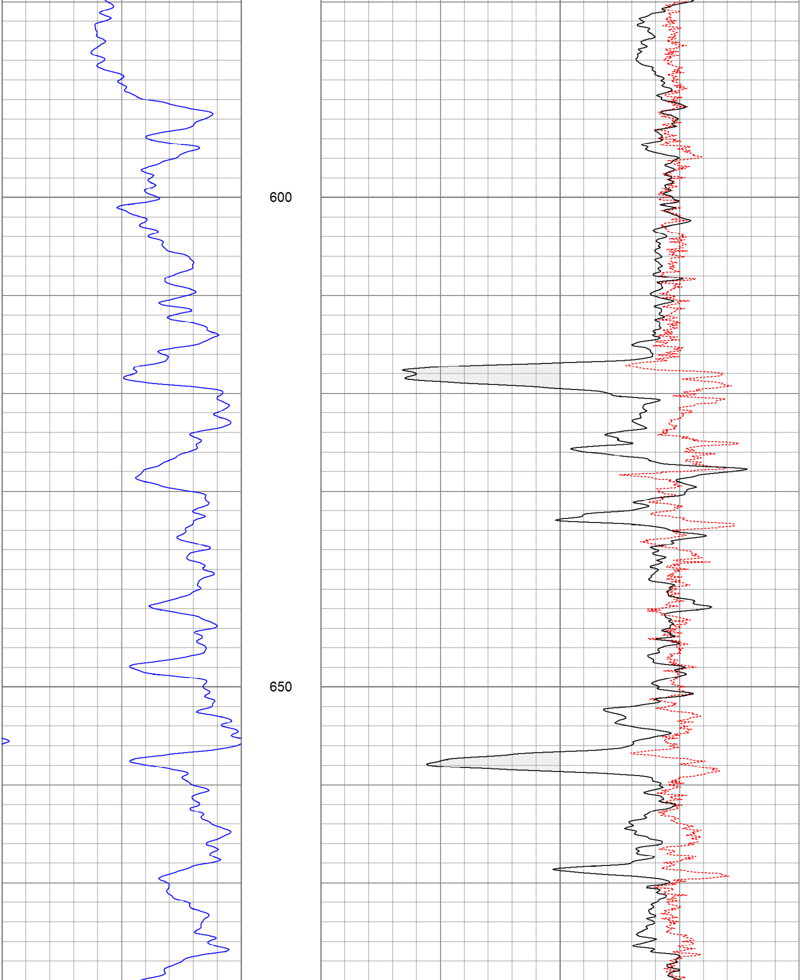
Database File:	gus1318tr.db
Dataset Pathname:	pass1.1
Presentation Format:	cdnl
Dataset Creation:	Sat Apr 30 11:22:19 2011 by Calc Open-Cased 110302
Charted by:	Depth in Feet scaled 1:240

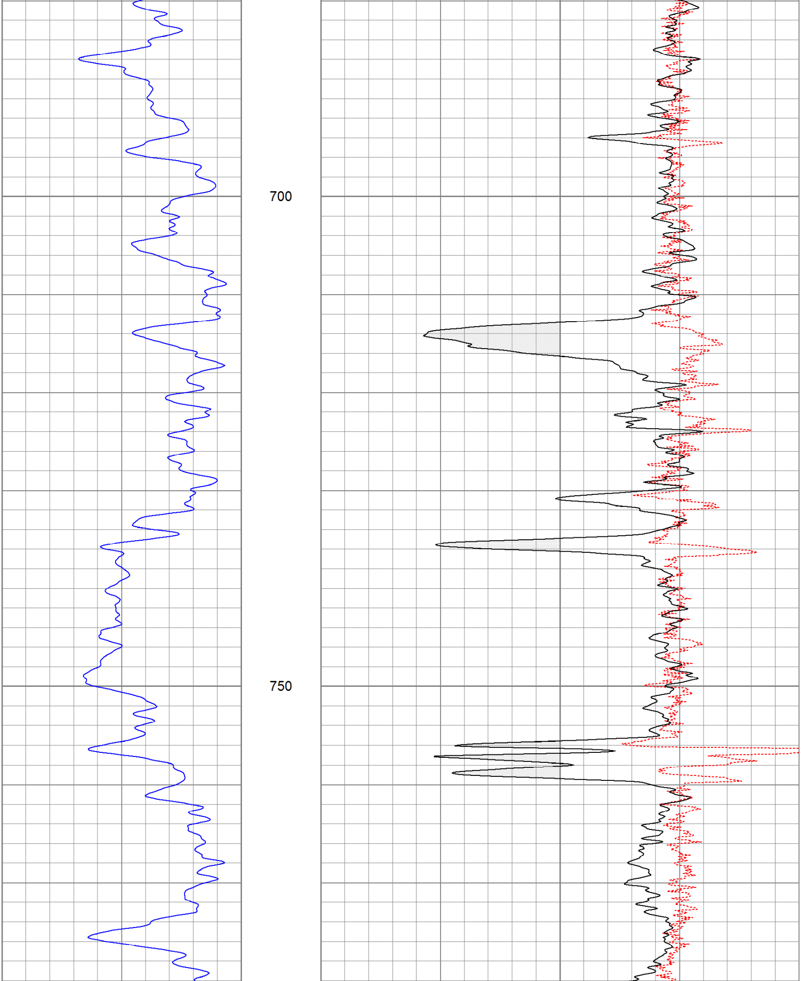
0	GR (GAPI)	200		30	NPOR (pu)	-10		
6	DCAL (in)	16		30	DPOR (pu)	-10		
						-0.5	RHOC (g/cc)	0.5

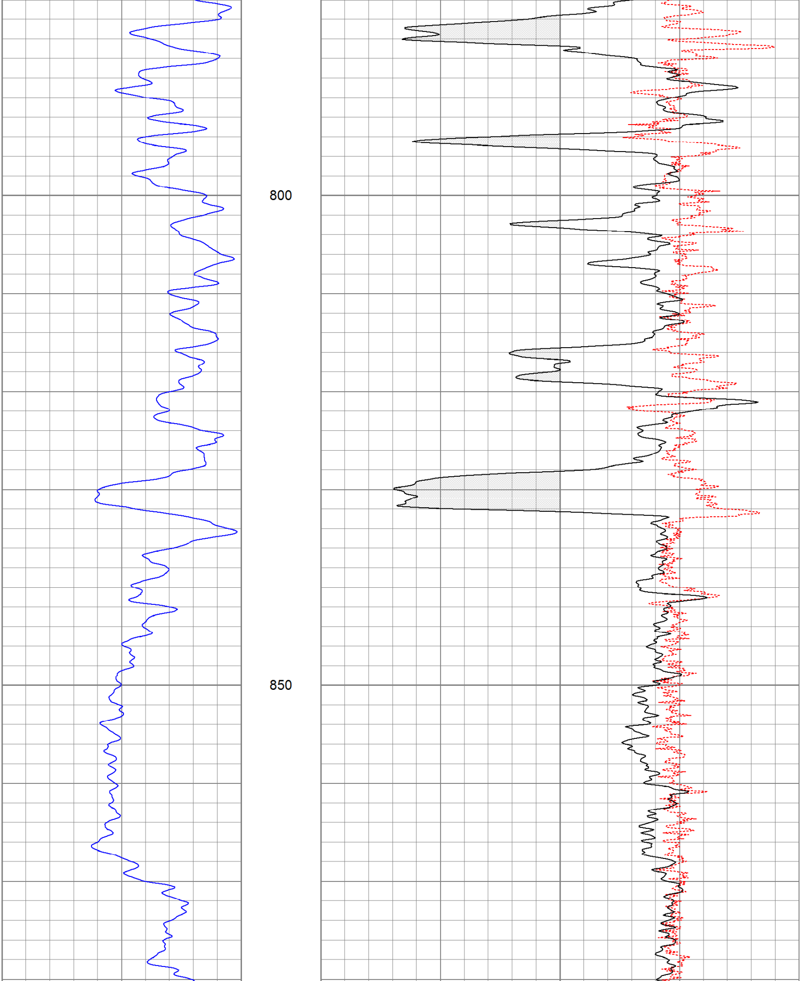


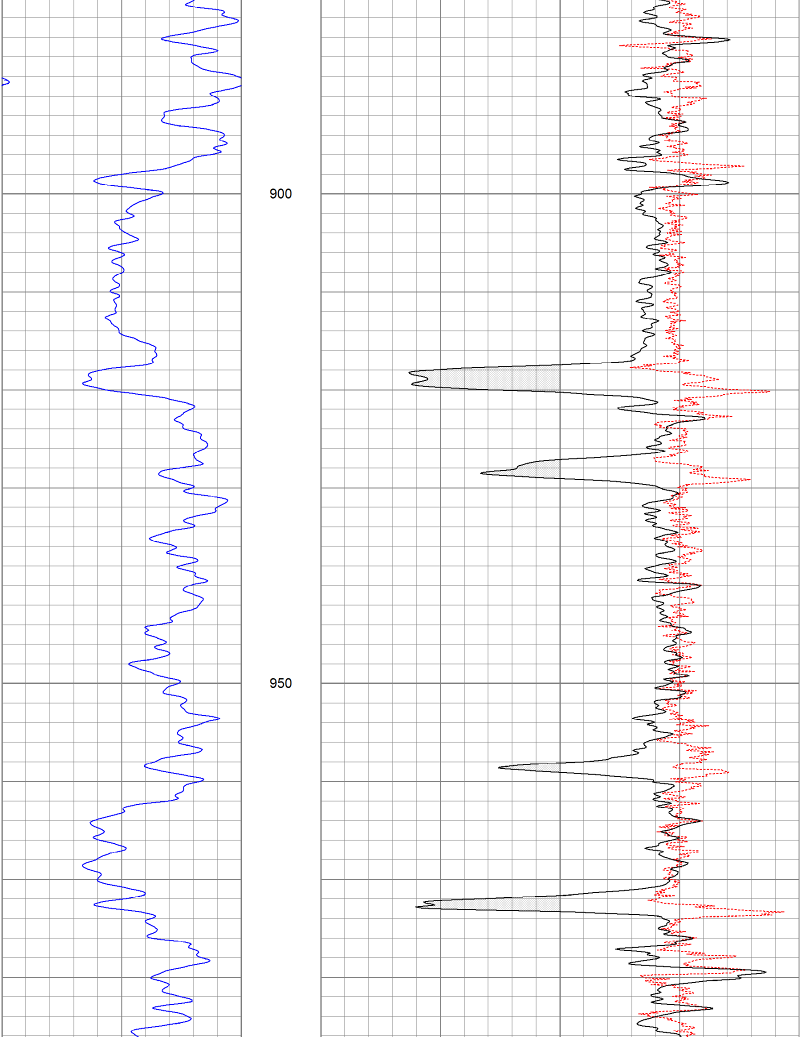
Database File: gus1318tr.db
Dataset Pathname: pass2.4
Presentation Format: cdlhr
Dataset Creation: Sat Apr 30 11:01:13 2011 by Calc Open-Cased 110302
Charted by: Depth in Feet scaled 1:120

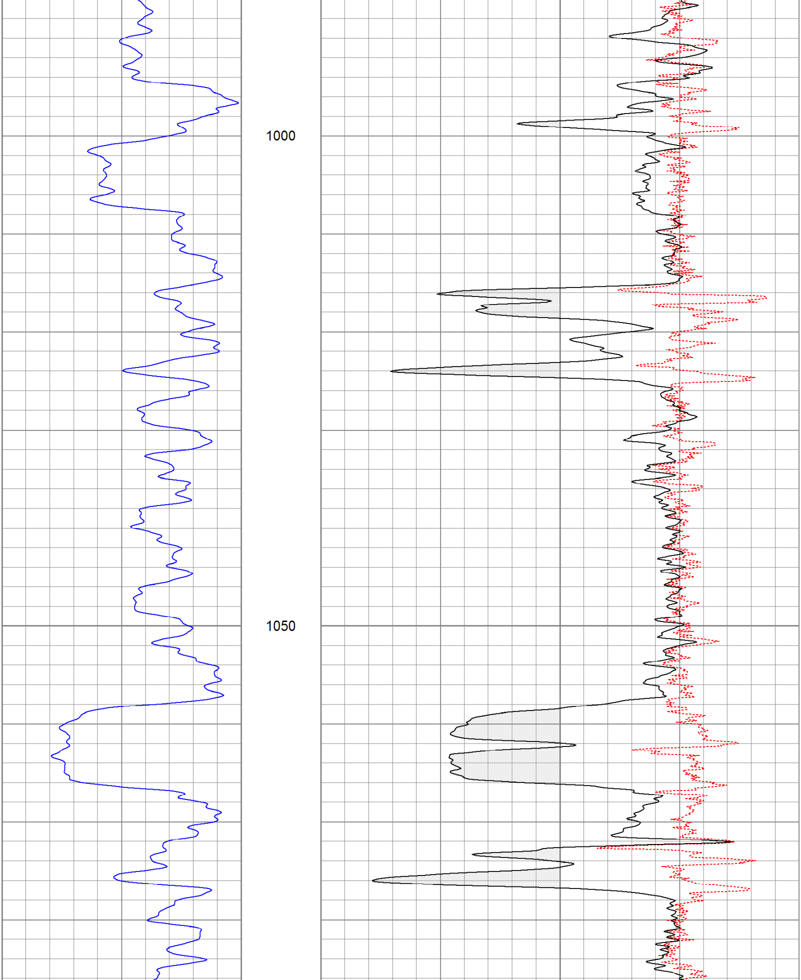


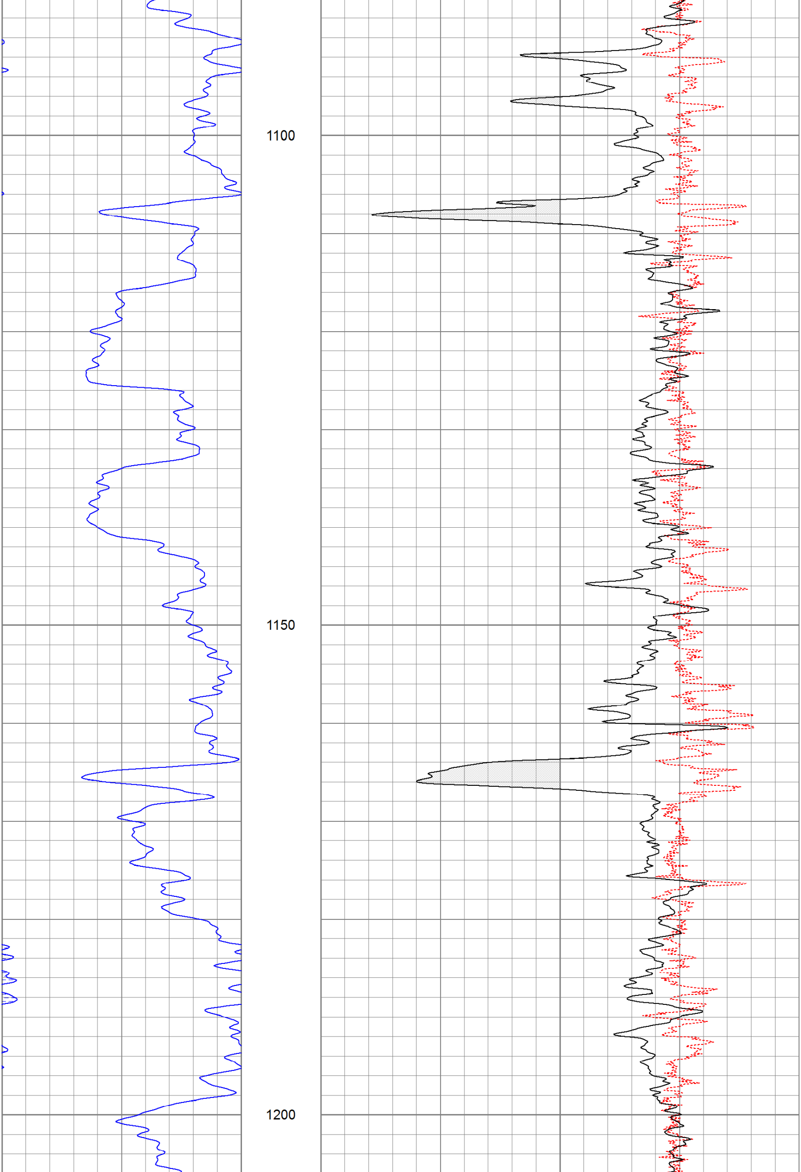


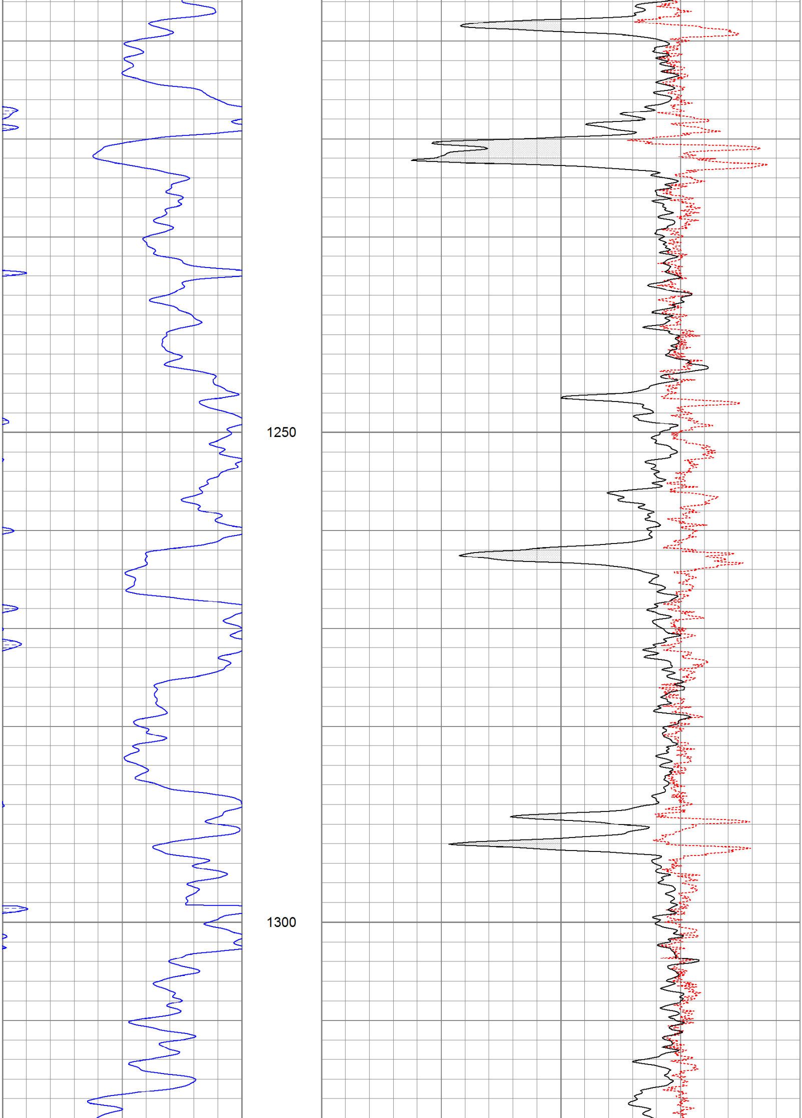


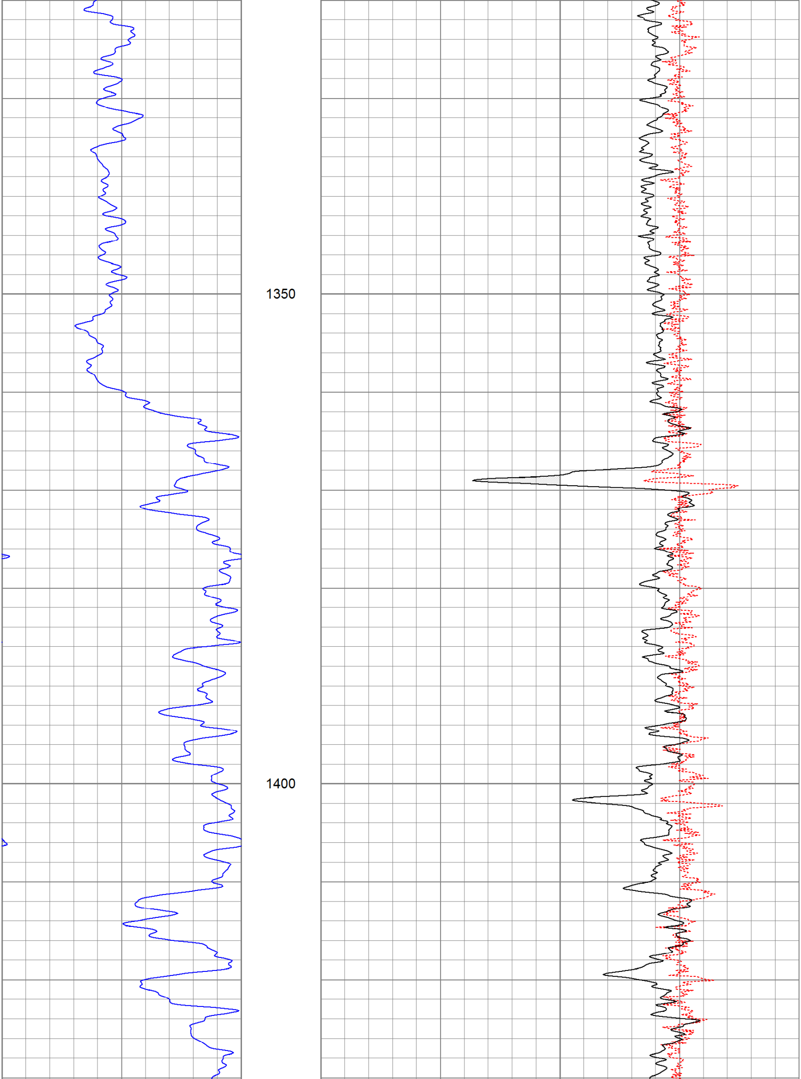


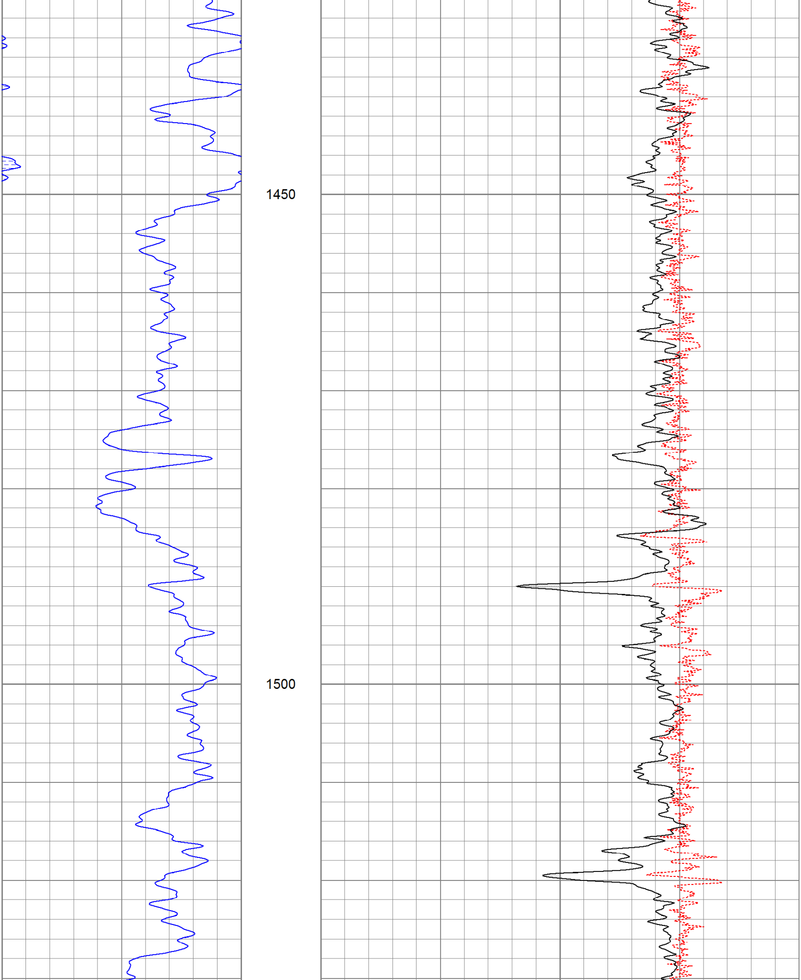


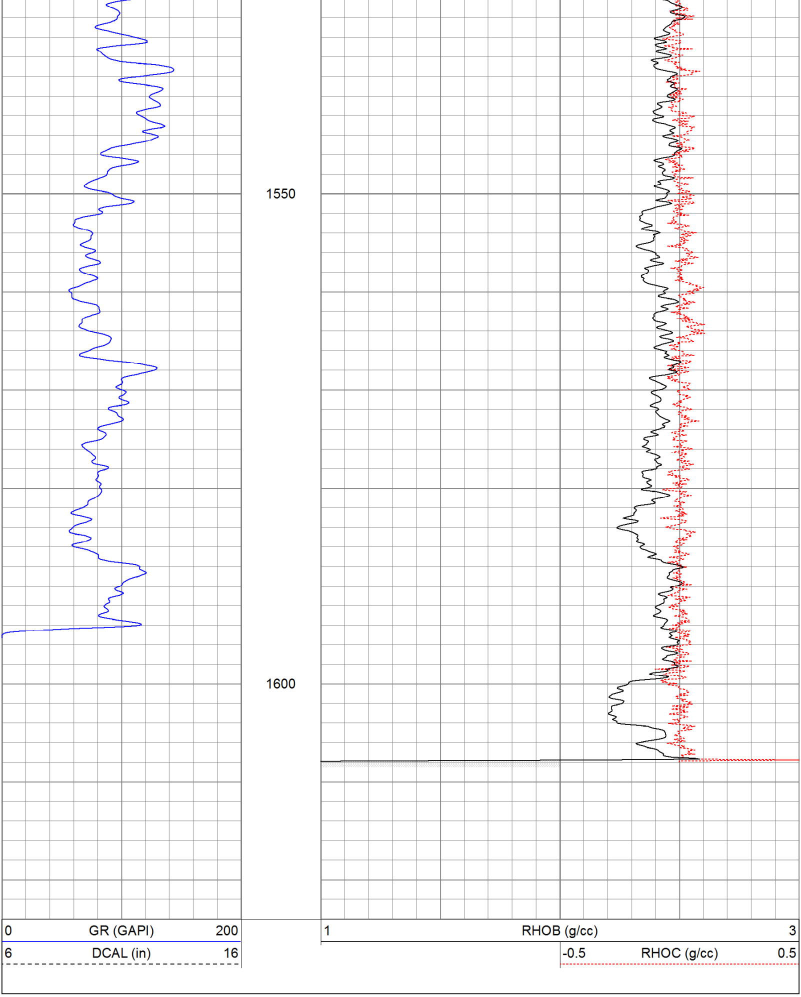












Calibration Report

Database File:	gus1318tr.db
Dataset Pathname:	pass2.6
Dataset Creation:	Sat Apr 30 11:08:27 2011 by Calc Open-Cased 110302

Induction Tool Calibration Report

Serial Number:	701
Tool Model:	Probe
Downhole Cal Performed:	Wed Apr 28 16:26:40 2010
Surface Cal Performed:	Mon Jan 17 12:52:28 2011
After Survey Verification Performed:	

Surface Calibration:	Air	Loop	
Conductivity Reference:	0.000	500.000	mmho
Conductivity Reading:	0.006	0.644	V
Internal Reference:	Zero	Cal	

	Conductivity Reference:	0.000	500.000	mmho
	Conductivity Reading:	0.007	0.643	V
Downhole Calibration:		Internal Zero	Internal Cal	
	Conductivity Reference:	0.703	499.163	mmho
	Conductivity Reading:	0.000	0.000	V
	Short Normal Reference:	0.000	20.000	Ohm-m
	Short Normal Reading:	0.005	0.214	V
Results:		Gain	Offset	
	Loop Conductivity:	783.886	-4.674	
	Downhole Correction:	1.000	0.000	
	Short Normal Resistivity:	95.281	-0.432	
After Survey Verification		Internal Zero	Internal Cal	
	Conductivity Reading:	0.000	0.000	V
	Conductivity Result:	0.000	0.000	mmho
	Short Normal Reading:	0.000	0.000	V
	Short Normal Result:	0.000	0.000	Ohm-m

Compensated Density Calibration Report

Serial-Model:	901-2.75POH
Source / Verifier:	/
Master Calibration Performed:	Mon Apr 11 08:32:53 2011
Before Survey Verification Performed:	
After Survey Verification Performed:	

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	946.97	539.23	cps
Aluminum	2.590	g/cc	172.50	282.94	cps

Spine Angle = 69.26

Density/Spine Ratio = 0.483

	Size		Reading	
Small Ring	8.00	in	2.47	V
Large Ring	17.00	in	4.50	V

Before Survey Verification

Target		Measured	
	g/cc		g/cc
	g/cc		g/cc
	g/cc		g/cc

After Survey Verification

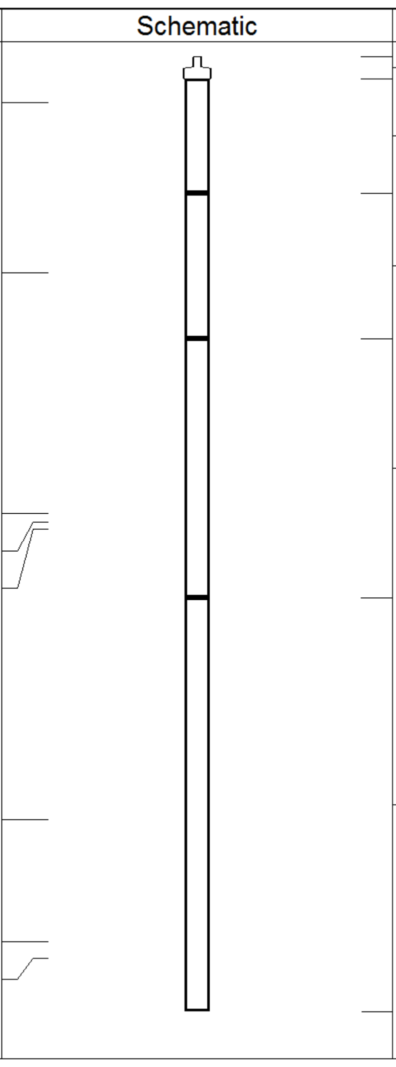
Target		Measured	
	g/cc		g/cc
	g/cc		g/cc
	g/cc		g/cc

Neutron Calibration Report

Serial Number:	802	
Tool Model:	2.75POH	
Performed:	Mon Apr 11 11:07:23 2011	
Calibrator Value:	700	NAPI
Calibrator Reading:	1000	cps
Sensitivity:	0.7	NAPI/cps

Gamma Ray Calibration Report

Serial Number:	801	
Tool Model:	2.75POH	
Performed:	Mon Apr 11 11:07:52 2011	
Calibrator Value:	200.0	GAPI
Background Reading:	8.0	cps
Calibrator Reading:	264.7	cps
Sensitivity:	0.5500	GAPI/cps

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			None	0.75	1.50	5.00
GR	29.58					
			GR-2.75POH (801) Probe 2.75" Probe Open Hole Gamma Ray	3.73	2.75	43.00
NEU	24.04		NEU-2.75POH (802) Probe Epithermal	4.75	2.75	58.00
			CDL-2.75POH (901) Probe	8.43	2.75	106.00
LSD	16.21					
DCAL	15.94					
SSD	15.69					
DIC	6.24		IEL-Probe (701)	13.46	2.75	93.00
SP	2.25					
SN	1.71					

Dataset: gus1318tr.db: field/well/run1/pass2
Total Length: 31.11 ft
Total Weight: 305.00 lb
O.D. 2.75 in