

SUTTLES LOGGING, INC.



For more information:

**Suttles Logging Inc.
P.O Box 10725
Midland, Tx. 79702**

**1805 Alta Vista Dr.
Midland, Tx 79706**

**Office: 432-687-3148
Fax: 432-687-3157**

**Frank Suttles (President)
Frank@sutlog.com**

**Kenneth Putnam (Operations Manager)
Kputnam@sutlog.com**

**Jay Scarpa (Information Services)
Jscarpa@sutlog.com**

**Harlan Martin (Technology Development)
Harlan@sutlog.com**

Suttles Unmanned Gas Logging Units.



Capabilities

- Display and record [Hotwire](#) (Total Gas)
- Display and record [Chromatograph](#)
- Record ROP
- View the log in [real time](#) from any Windows PC with an internet connection
- View [current logging data](#) using internet capable cell phones or PDA's
- Generate LAS files from the viewer.
- Display hotwire readings on electronic geolograph such as Pason, Totco, Epoch etc.
- Calibrate, monitor, and test the unit remotely.
- If a problem occurs that can't be repaired remotely, we have technicians ready to go to the location to repair it.

The log generated by this software is 100% compatible with our OfficePro viewer. (www.sutlog.com)

Requirements

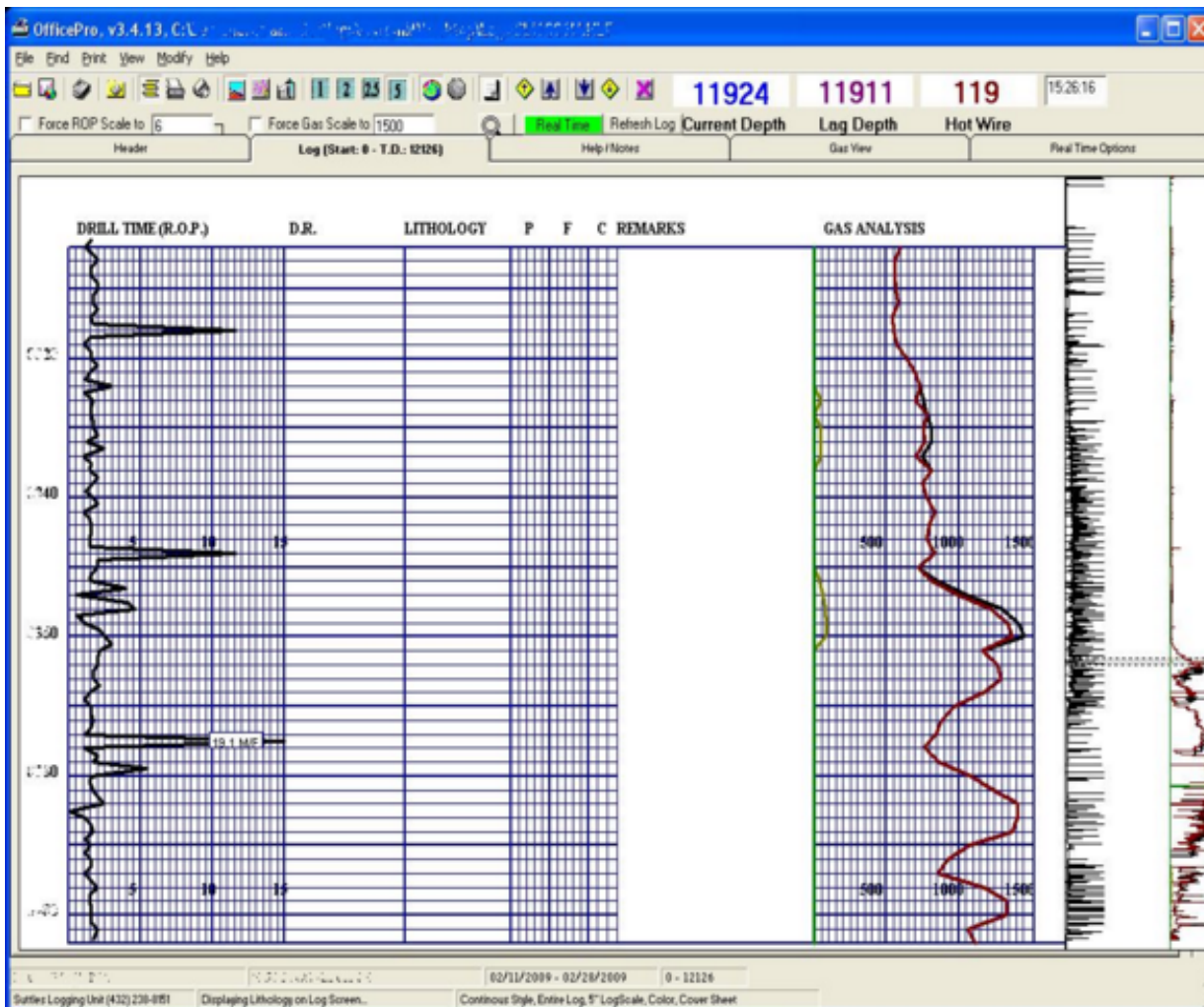
- Electronic geolograph ..Since this equipment is designed to require little human intervention, an electronic geolograph is necessary to keep the footage accurate on the gas logging software. Any depth corrections made on the geolograph will be reflected on the log.
- 110 volt power source

How To View a Log in Real Time

- Uninstall any previous versions of OfficePro
- Go to www.sutlog.com/officeprofull.msi to download and run the setup file. (If you receive any errors during the install, just click the Continue button to continue the installation. These errors are caused by other applications that protect the files that OfficePro is trying to install. OfficePro can use any version of these files and will run without any problems.)
- Right click on a Suttles mud log that has been saved to your computer and choose View Real Time.
- Click the Real Time button. (The Current Depth, Lag Depth, and Hotwire should begin refreshing within 15 seconds)

Features

- View and navigate through the log easily.
- Print the log.
- Change the scale in the ROP and Gas columns
- View or print the log in 1", 2", 2.5" and 5" scales.
- Generate LAS files so that the data can be imported into other software
- The Log is updated every 2 foot when the real time mode is activated
- View current Depth, Lag Depth, and Hotwire readings (updated every 15 seconds)



[This page is designed to give current data quickly without the need for a special viewer.](#)

(The large font makes it easy to read on small portable displays such as cell phones with web access)

Contact Suttles Logging for a link to the real time data for your well.

Logging Computer

Depth	Lag Depth	Total Gas	Updated	Status
7122	7122	59	12:15:41 PM Friday, March 20, 2009	Connected
On/Off Bottom	Mins. This Foot	-	EFM1	EFM2
OffBottom	362.5	-	11.8	0.0

Drilling Data

Hole Depth	Bit Depth	ROP FPH	WOB	RPM
7122	1949	15	0	0

The Upper display gives data from the logging computer:

- Depth
- Lag Depth
- Total Gas
- Time of last update
- Connection status between the logging computer and the server.
- On/Off bottom
- Minutes since last foot was drilled.
- EFM1 and EFM2 are optional sample flow meters used on our unmanned gas monitoring units.

The Lower display shows information that is receive through WITS:

- Hole depth
- Bit Depth
- ROP (Rate of Penetration in feet/hour)
- WOB (Weight on bit)
- RPM (Rotary table)

This data is dependant upon information that is sent to our computer. (Information not sent to our computer will show up as zeros)

Hotwire Readings

- The hotwire is updated 50 times / second. The maximum hotwire reading is recorded each foot.
- A real time file containing timed data is stored on the logging computer.
- The Hotwire is calibrated to 1% methane = 50 units (This calibration can be set to 100 units or higher if requested by the client)
- Calibration and testing of the equipment can be done remotely from the Suttles Office.

Chromatograph Readings

- The chromatograph typically cycles every 5 minutes. This allows enough time for the lighter hydrocarbons C1 - nC4 to elute from the column. If heavier hydrocarbons are present, the chromatograph cycle time will need to be increased.
- The chromatograph readings are automatically recorded and associated with the corresponding hotwire readings on the log.

(NOTE: C4 readings recorded on the log are a total of iC4 and nC4)

(NOTE: C5 readings recorded on the log are a total of iC5 and nC5)

C1=Methane C2=Ethane C3=Propane iC4=Iso Butane nC4 Normal Butane iC5= Iso Pentane C5= Normal Pentane :

Screen shot from the integrator on the logging software. This is 5 part test gas C1,C2,C3,iC4,NC4

