

Volume

1

STELLAR TECH SYSTEMS INC.

WinWellMax Reporting Software

Operation Guide REV1

WINWELLMAX REPORTING SOFTWARE

Operation Guide

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WinWellMax Windows Software

Introduction

Reporting Software used as a “data analysis tool”.

WinWellMax was designed as a data analysis tool. It displays data in graphical and text formats.

Graphs are used as an overall view of the well's history making it easy to view torque and amp trends, which may be a result of pump tightening, sanding, waxing off, pumping off, as well as numerous other well conditions.

The Text report is used as a focused or in depth analysis tool, where specific events are logged and displayed. Such events as High Torque shutdown, Power bump conditions, and Tubing leak detection via a low torque condition can be read.

Summary reports are generated for quick reviews of the average, minimum, and maximum RPM, Torque, and Ampere readings. Number of shutdowns and power ups can also be viewed. These summary reports are displayed on a per month basis and an overall report.

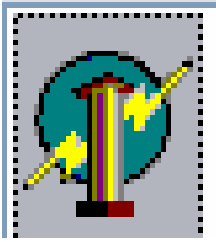
There are four program entry options to choose from.

First, **WellMax Server**, this is chosen to view or download data from WellMax's in the field if equipped with a communication device such as a CDPD modem. By choosing this option you connect directly to Stellar Techs server. Stellar Techs server continuously downloads from all WellMax's in the field therefore resulting in quicker downloads for the ends user and captures all data.

Secondly, **Old Data** which is used to view previously downloaded data.

Thirdly, **RS232 Direct** used to connect directly to the WellMax via RS232 cable (null Modem – pins 2 and 3 are crossed). Functions: Downloading and viewing real time data.

Fourthly, **Internet Direct** used to connect directly with a WellMax via communication device such as a CDPD. Functions: Download data, view real time data, and change WellMax parameters remotely.



Software Installation - Perform the following steps

Step 1

Insert CD-ROM into Drive

Auto insertion should bring up the Installation Wizard

Step 2

Follow the Installation Wizard instructions to install software

Step 3

After installation has completed observe the WinWellMax icon located on your computer desktop

Step 4 (Optional)

If a communication device, such as a CDPD modem, is connected to the WellMax then right click the WinWellMax icon on your desktop and click on the "properties" menu.

In the target section enter the following at the end of the string:

-internetdirect

example:"D:\ProgramFiles\StellarTechSystems\WinWellMax\winwellmax.exe" **-internetdirect**

Click "Apply" then "OK"

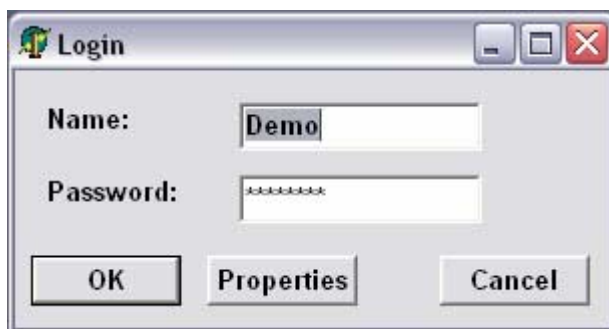
WellMax Server

Double click the WinWellMax icon on your desktop. The following menu will appear. Click on the WellMax Server option button.



Next enter in your user name and password which is case sensitive. Consult Stellar Tech if you have forgotten your username or password. Stellar Tech ph.(403) 279-8367.

Press OK.

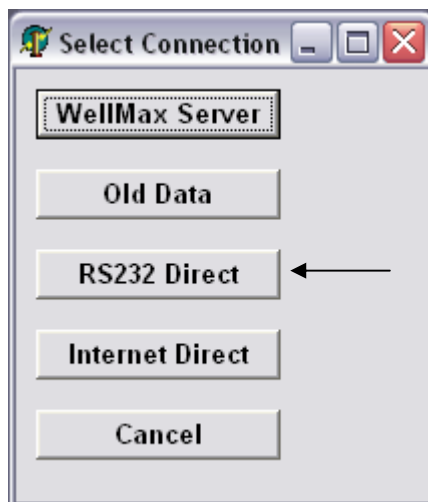


RS232 Direct

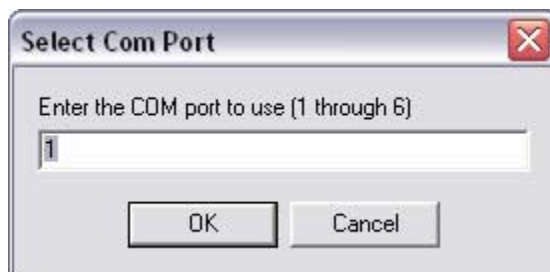
Connect to the WellMax via RS232 null modem cable (pins 2 and 3 crossed) to your computer. Computer serial port to front DB9 port on WellMax.

Double Click the WinWellMax icon

Click **RS232 Direct** option button



Select the com port you are using, default is usually com port 1

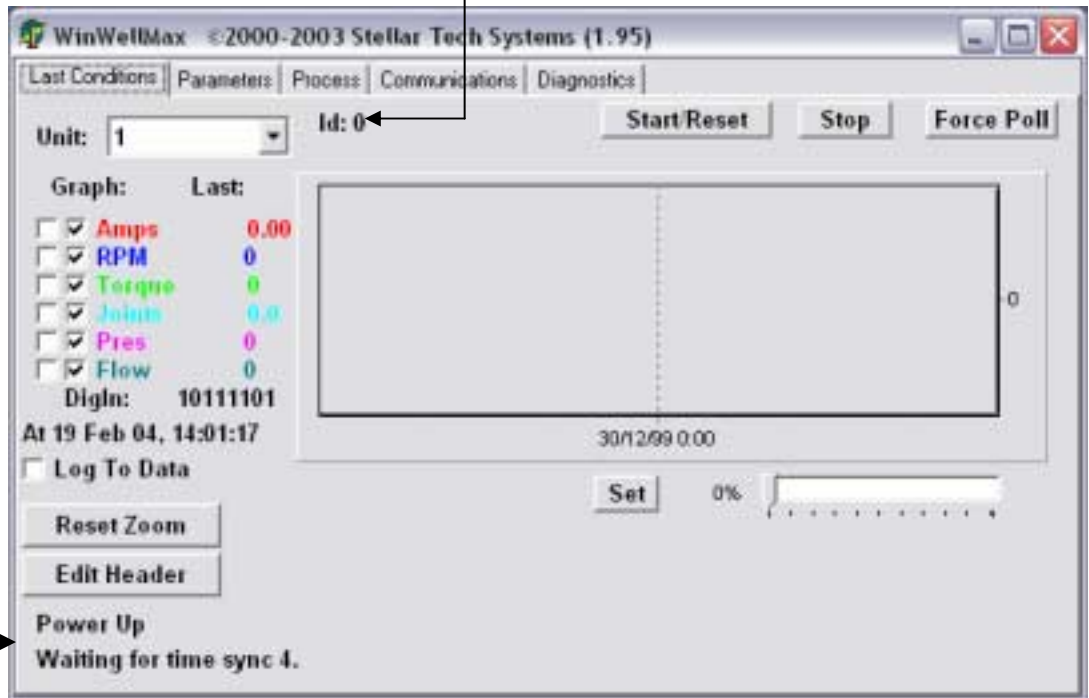


Then Click "OK"

WinWellMax will sync to the WellMax during this time a message will be displayed...

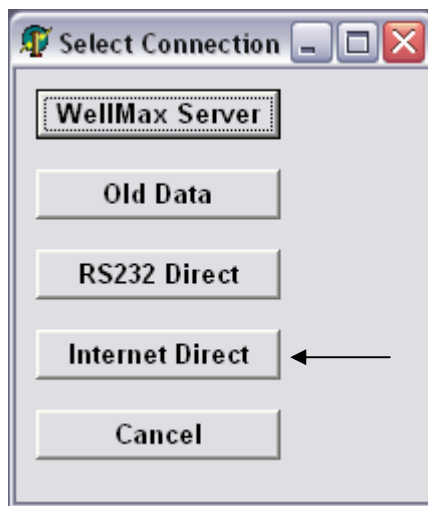
Waiting for time sync 1...5

The WellMax ID will be displayed (This number can be found at WellMax parameter 20b)



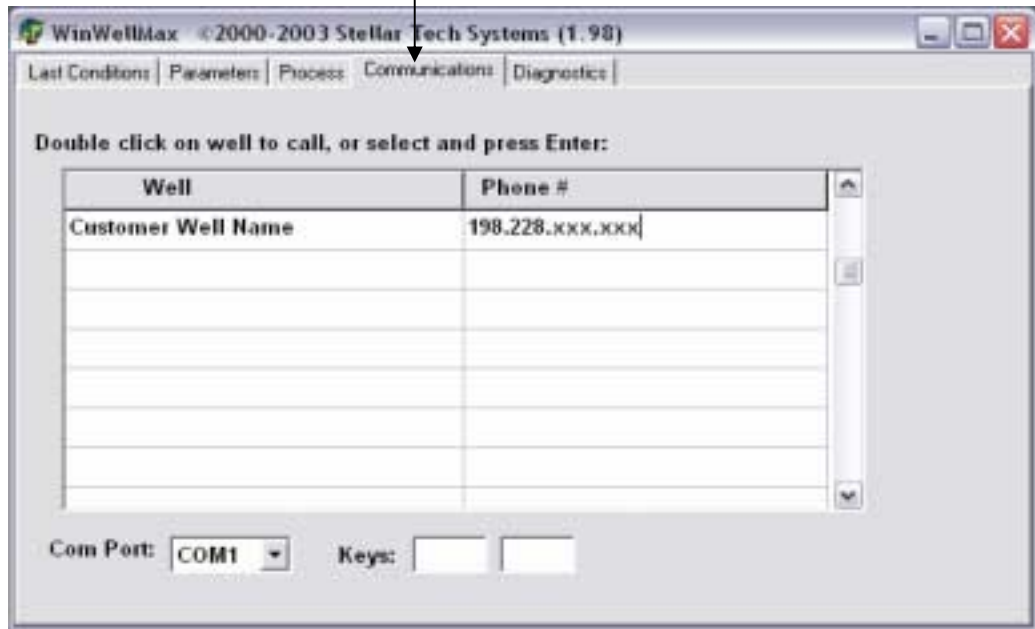
Internet Direct

Double click the WinWellMax icon on your desktop. The following menu will appear. Click on Internet Direct option button. If this button does not appear then perform step 4 in the Software installation section.

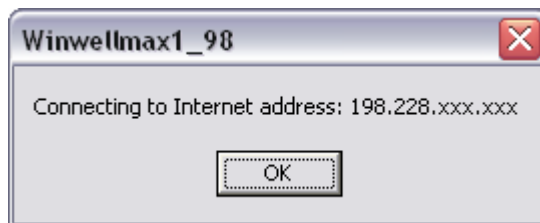


Next, Click on the **Communications** Tab.

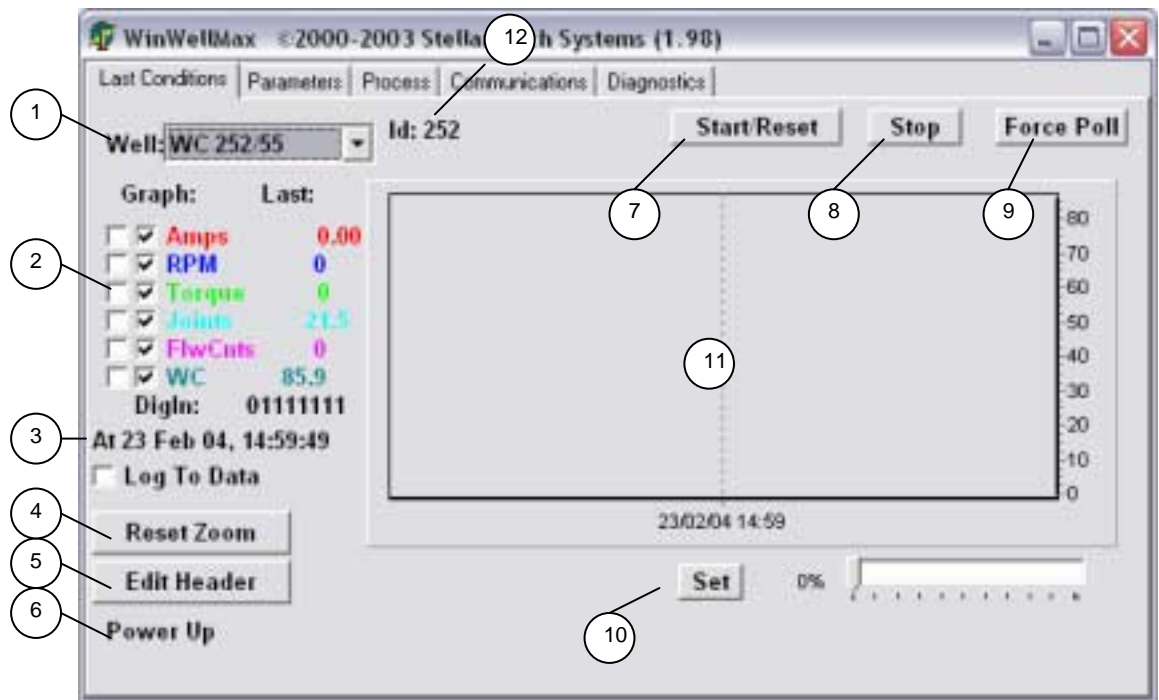
First time users will have to enter in a Well name, Customer Well Name, in the **WELL** column and IP address, 198.228.xxx.xxx, of the CDPD modem, in the **Phone #** column. (The Well name can be anything as long as it identifies to the user what well it is; the IP address is usually found on the CDPD modem. Please consult Stellar Tech if assistance is required for this information.)



Next, Double Click the IP address and Click OK to connect



Wait for Sync time will appear, refer to RS232 for complete details.



Last Conditions Tab

Chose the WellMax you wish to view with the pull down menu labelled **Well**:

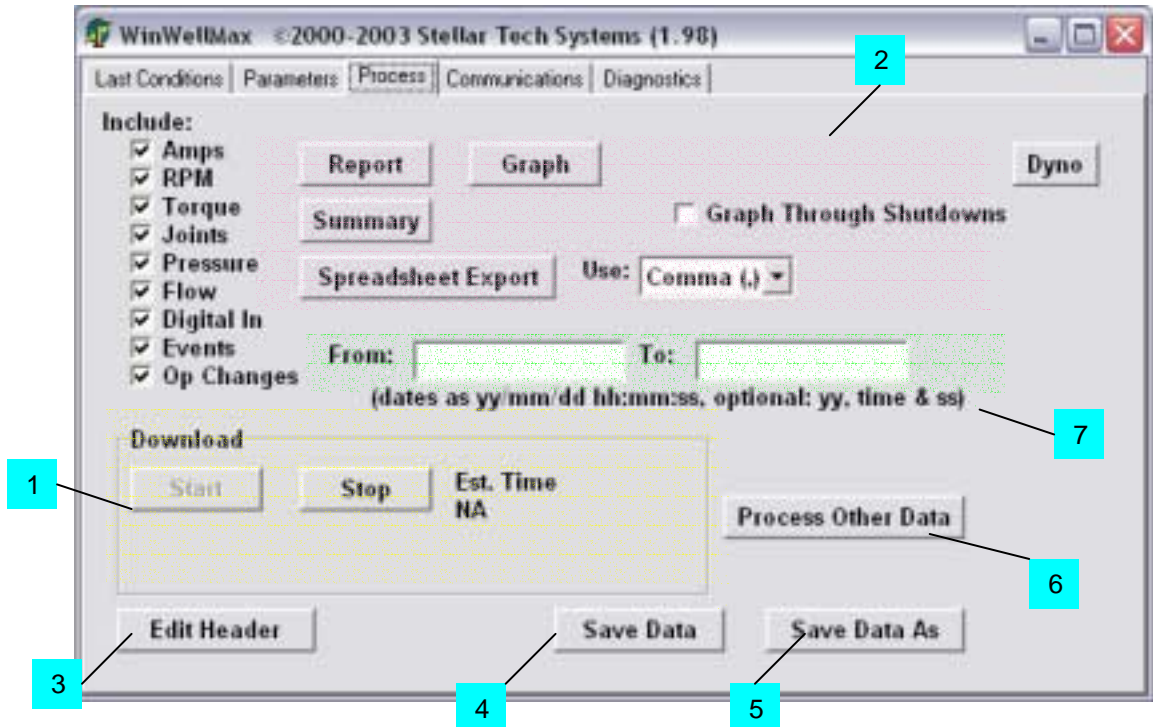
- 1) Well: Well identification.
- 2) Click in the boxes you wish to view on the graph.
- 3) This is date and time in which the WellMax last acquired a reading.
- 4) Zoom In by clicking the left mouse button and dragging the cursor from top left to the bottom right, releasing the button will zoom in that portion. Press the Reset Zoom button to view the full graph screen.
- 5) Edit Header, fill in detailed well information. To save this information you must click on the SAVE DATA button on the Process Tab.
- 6) Current Status on WellMax based on the last acquired data and time.

- 7) Start/Reset, Start or Reset a fault condition on the WellMax. WellMax must contain Remote Software capabilities.
- 8) Stop, clicking this will stop the WellMax. WellMax must contain Remote Software capabilities.
- 9) Force Poll, This will update the date and time to the current time with the last sample stored in the WellMax.
- 10) Set, move the slider to the desired rpm setting the click on the SET button. This will change the polish rod RPM in the VFD. WellMax must contain Remote Software capabilities.
- 11) This is the graphing display area.
- 12) ID number, this is the serial number programmed in the WellMax Parameters 20b. This is also the name of the file which will be created after completing a download, ie 252.wmx

Parameters Tab

WellMax **must** contain Remote Software capabilities. Viewing and changing WellMax parameters can be processed by entering a number in the NEW Value section then clicking the SET NEW VALUE button.

Process Tab

**1) Download Data**

Click on the “process” tab at the top to enter the download section.

Click the **Start** button to start downloading data from the WellMax.

The message **Download Completed** will be displayed when the data is finished downloading.

2) Analyze Data

Click on the boxes on the left side under the heading **Include** to display the desired data in the Report and Graph.

Click on **Report** button for a text view of the data, including events and operator changes made to the WellMax.

Click on the **Graph** button for a graphical view of the data. You can then focus on specific areas by zooming in to get a larger view.

Click on the **Summary** button view an overall performance on the well.

Click on the **Spreadsheet Export** button to create a spreadsheet file so it can be read in a spreadsheet program such as Excel. Files can be exported in three ways comma delimited, tab delimited, or space delimited.

3) Edit Header

Enter detailed information on the well.

Header Information

Company: Customer

Well Name: LSD:

Notes: Jan'00 Rig job
Jan'00 Flushby
Feb'00 WellMax Installed

Production

M³ Volume/Day at RPM

Water cut %

\$/bbl

4) Save Data

Click the **Save Data** button to save the information entered in Edit Header section.

5) Save Data As

To save the data as a recognized file name then click this button. To keep all the data in one file DO NOT use this button. When the information is downloaded it is automatically updated and stored to a file derived of the “id number.wmx” found in the Stellar Tech directory “Wells”.

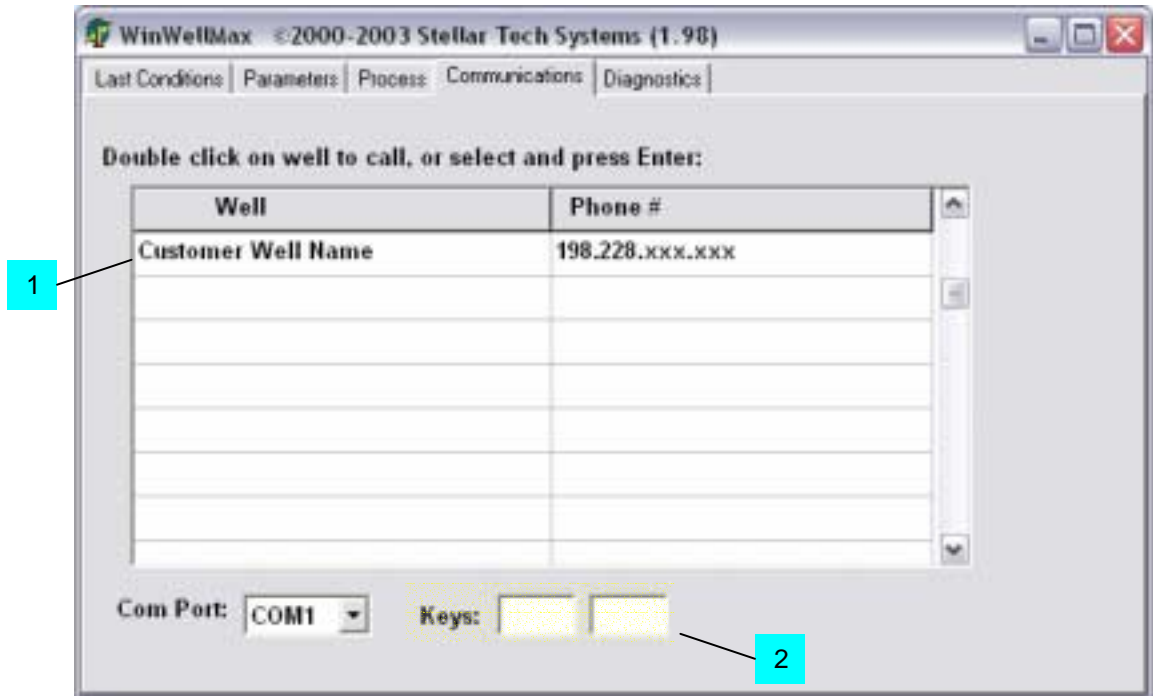
6) Process Other Data

Click this button to view previously downloaded data. Your desired file will be in the format : id number.wmx unless you have previously saved it as a different file name such as filename.wmx.

7) From and To Entries

To view a specific time period enter in a date and time into the **From** and **To** boxes. If you want to view data from a specific date and time up to the date and time of the last download then leave the **To** box empty.

Communications Tab



This tab is **ONLY** used while connected via INTERNET DIRECT.

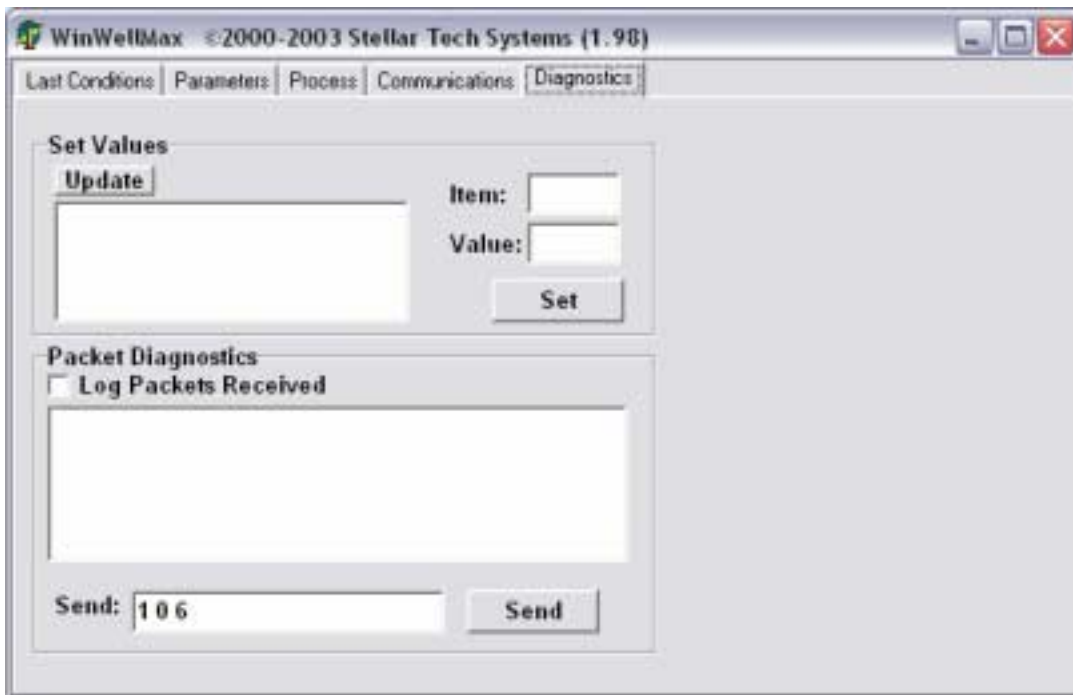
1) First time users will have to enter in a Well name, **Customer Well Name**, in the **WELL** column and IP address, 198.228.xxx.xxx, of the CDPD modem, in the **Phone #** column. (The Well name can be anything as long as it identifies to the user what well it is; the IP address is usually found on the CDPD modem. Please consult Stellar Tech if assistance is required for this information.)

Double click the well you wish to connect to then click **OK**.

Click on the **Last Conditions** Tab to observe the connection has been established. After the sync time has reached 5 then you can now proceed to downloading the data.

2) Keys, there are two boxes that must have encryption numbers entered in them if the WellMax has the Remote encryption software installed.

Diagnostics Tab



DO NOT USE this tab. This is for Stellar Tech Technologists.

View Data

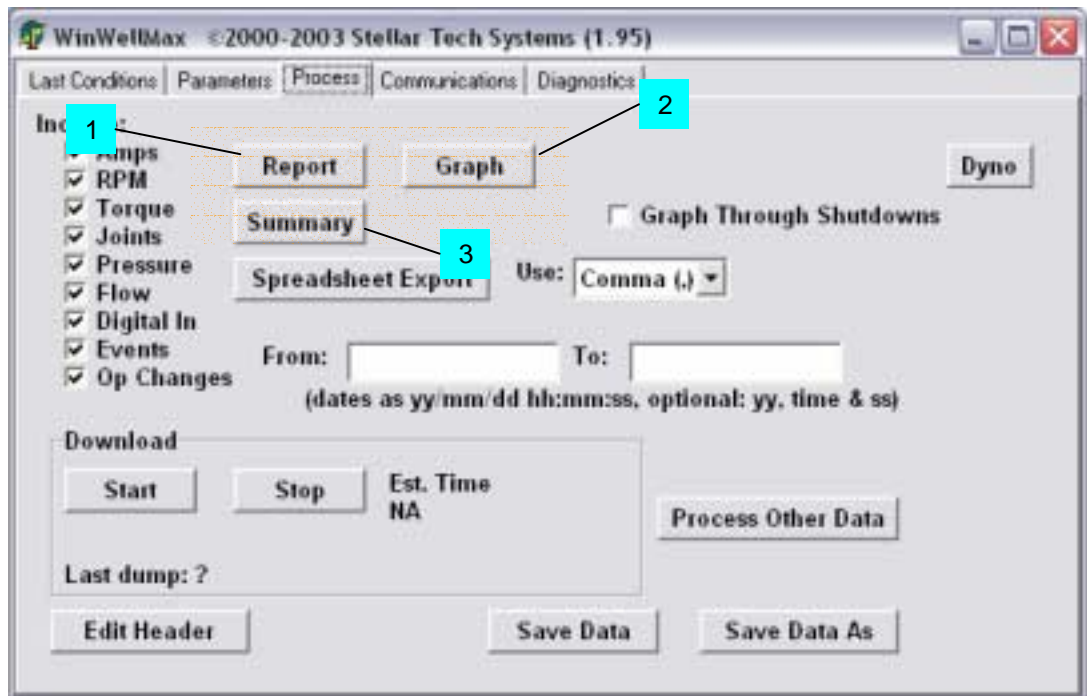
Click on the **Process** Tab.

Click on the left side the data you would like to include in your reports.

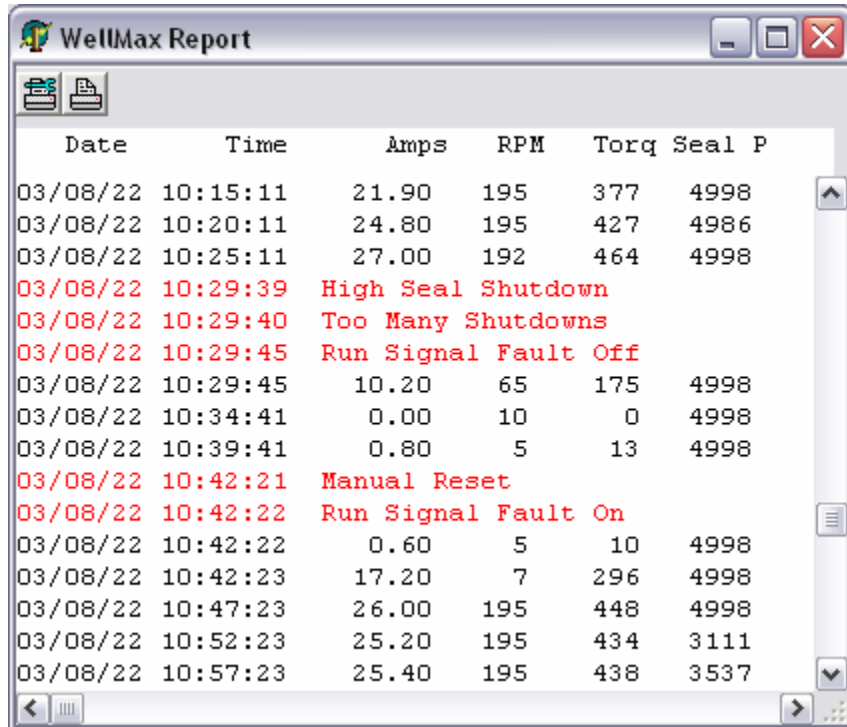
- Digital In – These include VFD FAULT, RUN SIGNAL FAULT, etc.
- Events – These include High Torque Shutdwn, Preset SD, etc.
- Op Changes – These include operator adjustments to WellMax.

There are three options to choose from to view the data

- Exact events can be displayed when the **Report** button is pressed
- or a visual graph can be viewed when pressing the **Graph** button.
- or a general **Summary** report can be viewed.



1) Report



The screenshot shows a window titled "WellMax Report" with a table of data. The table has six columns: Date, Time, Amps, RPM, Torq, and Seal P. The data is as follows:

Date	Time	Amps	RPM	Torq	Seal P
03/08/22	10:15:11	21.90	195	377	4998
03/08/22	10:20:11	24.80	195	427	4986
03/08/22	10:25:11	27.00	192	464	4998
03/08/22	10:29:39	High Seal Shutdown			
03/08/22	10:29:40	Too Many Shutdowns			
03/08/22	10:29:45	Run Signal Fault Off			
03/08/22	10:29:45	10.20	65	175	4998
03/08/22	10:34:41	0.00	10	0	4998
03/08/22	10:39:41	0.80	5	13	4998
03/08/22	10:42:21	Manual Reset			
03/08/22	10:42:22	Run Signal Fault On			
03/08/22	10:42:22	0.60	5	10	4998
03/08/22	10:42:23	17.20	7	296	4998
03/08/22	10:47:23	26.00	195	448	4998
03/08/22	10:52:23	25.20	195	434	3111
03/08/22	10:57:23	25.40	195	438	3537

Click the **Report** button for a text view of the data.

Text written in RED are events.

Text written in BLUE are WellMax Parameter settings.

Text written in GREEN are Parameters adjusted by the operator.

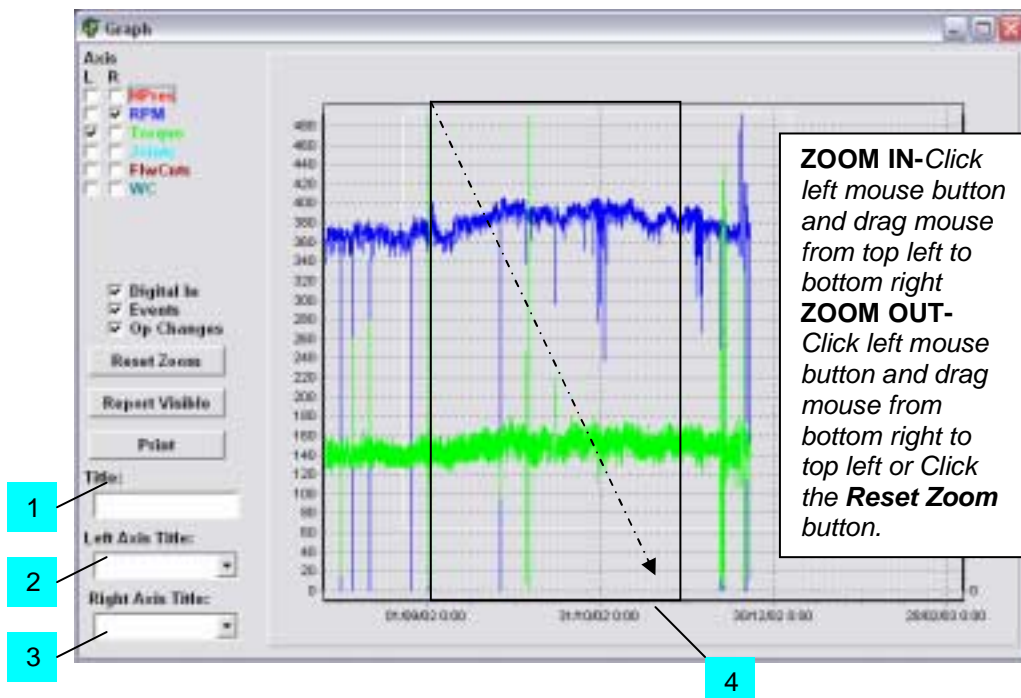
As seen above each sample is stamped with the date and time. Time is down to the seconds.

These reports can be printed to paper by clicking the Printer icon on the top left.

2) Graph

Click the **Graph** button for a graphical view of the data.

If a graph is created you can then zoom in on specific areas by left clicking and drawing a box from top left corner to bottom right corner, then release the mouse button (This is with the advanced software version) or zooming can be accomplished by choosing a “from” and “to” date for a specific time period to view the data or leave these areas blank to view the entire data.

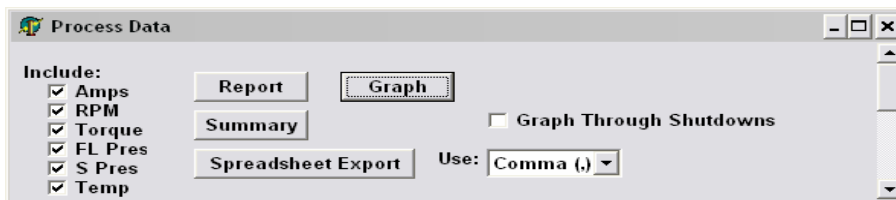


- 1) Enter a graph title
- 2) Enter a Left Axis Title
- 3) Enter a Right Axis Title
- 4) Bottom Axis is defaulted as Time

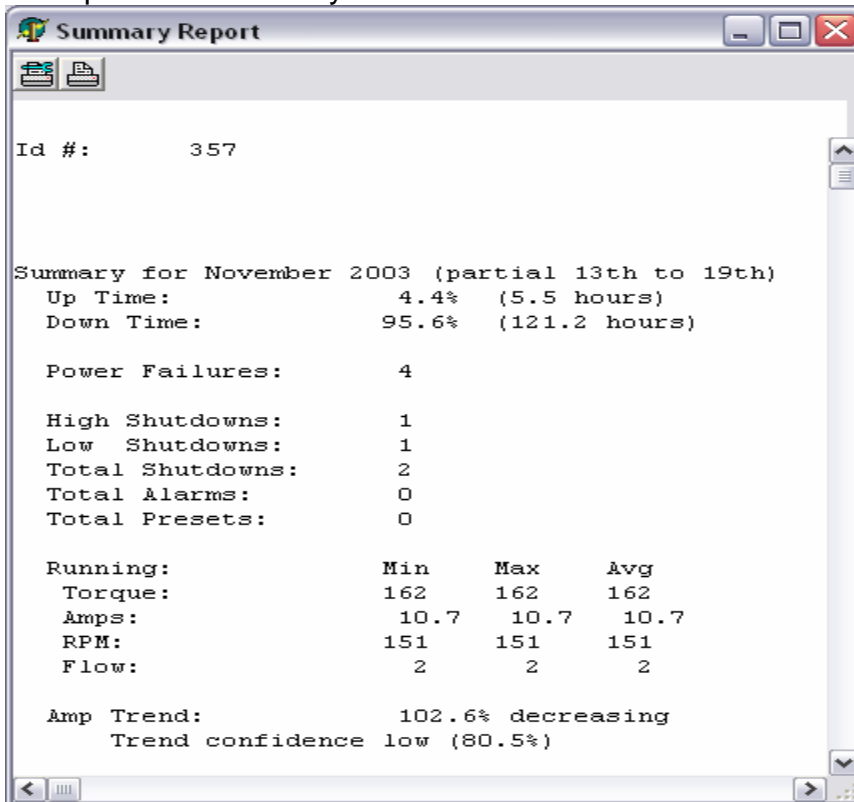
This Titles are included when printed.

3) Summary

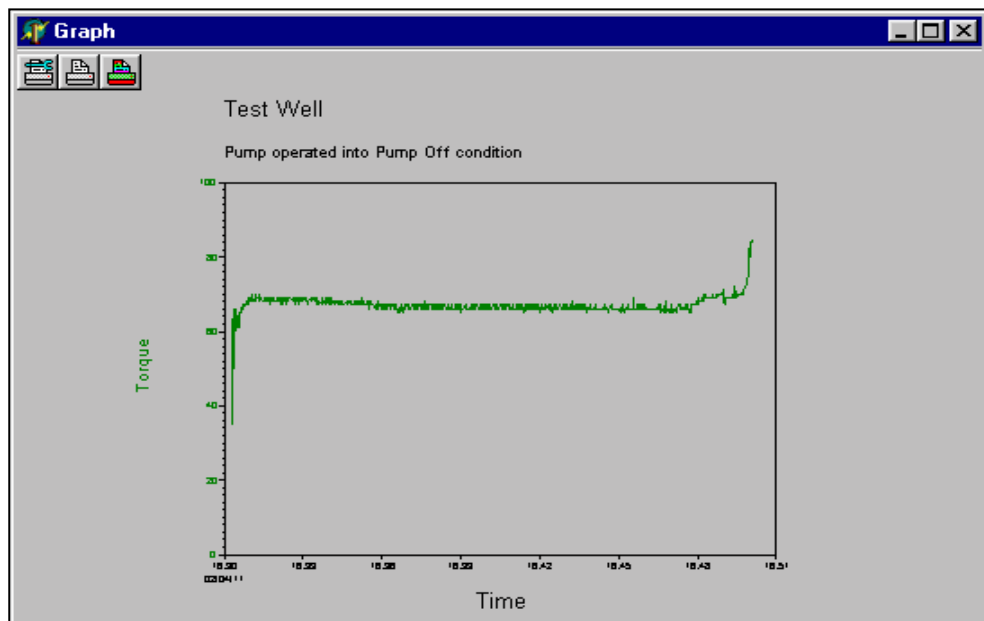
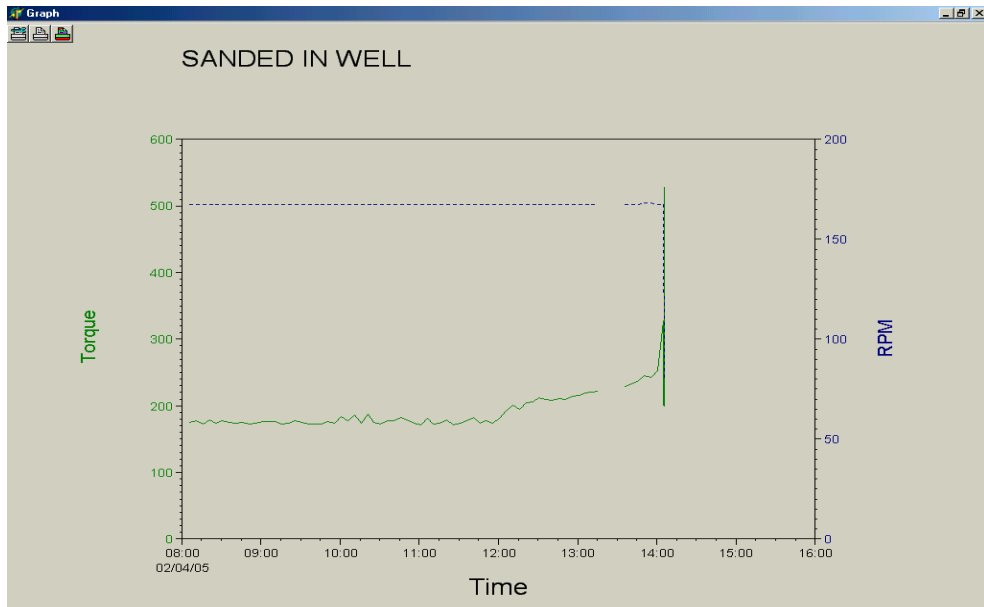
The **Summary** button gives a monthly ad overall view of the wells behaviour, for example the high, low, and average torque, rpm, and amps. Amp trend displays whether the torque is gradually increasing or decreasing, which may help to determine nearing pump off or pump tightening.

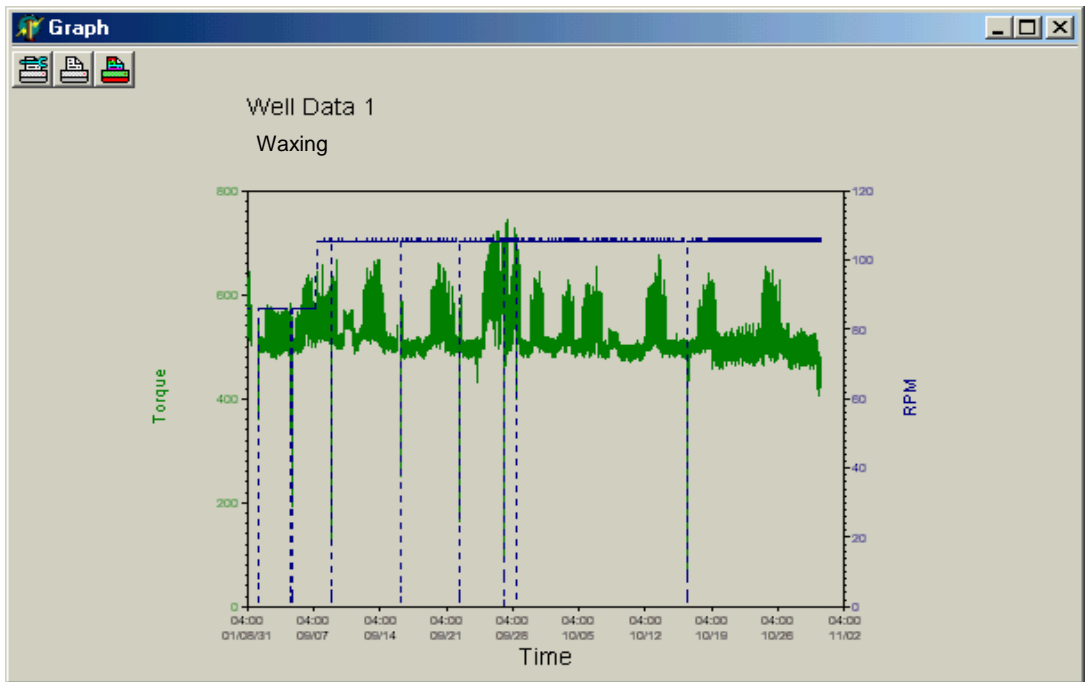
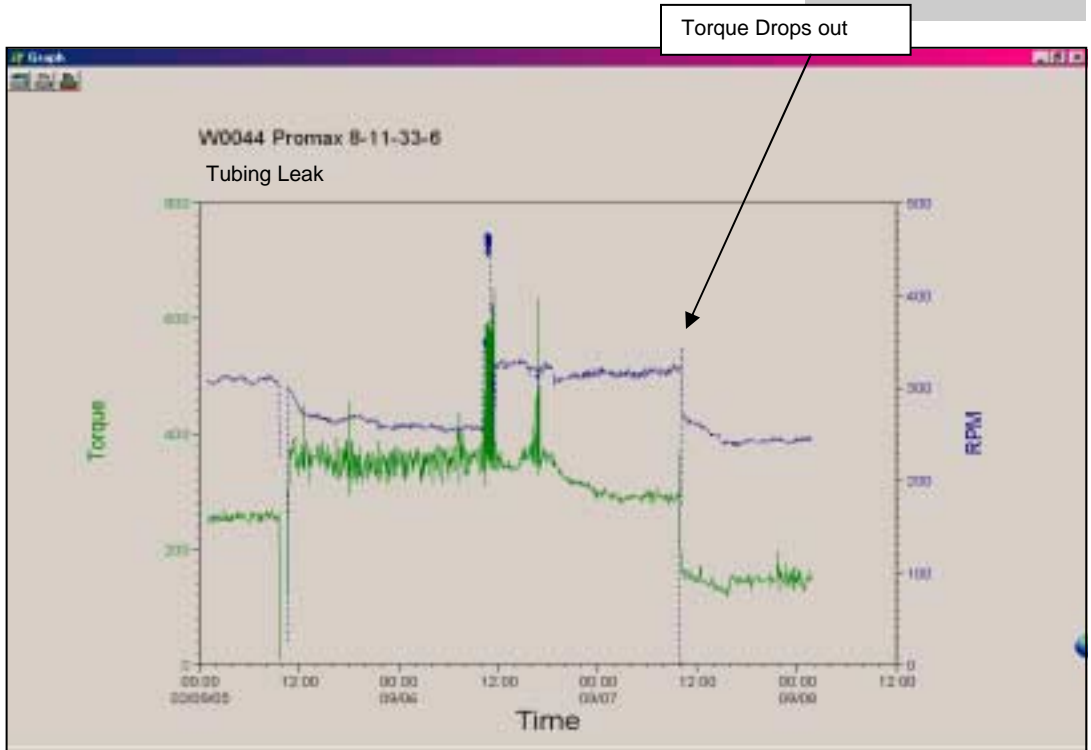


Example of the summary information.



Well Condition Examples





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NOTES

History

Revision	1	Feb 24, 2004	First issue
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