



A Rockwell Automation Company

Penn West Petroleum Ltd. Redwater Field Remote ESD

The Client:

Penn West Petroleum Ltd. explores, develops and produces oil and natural gas in Western Canada. The company produces 16 500 barrels of oil and liquids per

day and 200 million cubic feet of natural gas per day. Penn West has a field office in Redwater that monitors the condition of the wells in the surrounding area.

The Requirement:

In Alberta, industrial rather than residential customers are the largest consumers of electricity. Many of these plants require reliable, consistent power or they suffer large financial losses. TransAlta Utilities must provide this power and in the event of a problem, TransAlta requires the ability to shed certain loads to ensure that power is provided to those who need it most. Penn West Petroleum Ltd. has entered into an agreement with TransAlta whereby Penn West receives lower electricity rates and TransAlta is able to call Penn West to get them to instantly shut down their sites (reduce their electricity demand). To facilitate this agreement at Redwater, where the field office is not continually manned, a method of dialing in and shutting down the entire station by telephone from Buck Lake (a continually manned site) was required. The system had to be reliable, easy to implement and had to

operate without interfering with an alarm information system in place at Redwater. The alarm information system in the Redwater field office allows the operators to call in at any time and the computer will tell them if any of the well sites or batteries are in alarm.

In addition, the Wonderware InTouch HMI that displays information on the Redwater well sites has become inaccurate over the years. RTUs were transferred to various well sites or transferred from pump jacks to submersible pumps without changing the HMI screens. As a result, the well site information on the display no longer reflects what is actually in the field. An update of the screens was required to make the information displayed by the HMI more accurately reflect what exists in the field.

The Design Solution:

Hinz was chosen to specify the required hardware and software; provide system design and testing; install and commission the system and provide the required documentation. Hinz specified that a new Dialogic hardware card, TeleDAC configuration software and the Win 411/Win 911 software should be installed and configured to allow the Redwater well sites to be shut down by a phone call from the Buck Lake site.

The software and hardware was installed in a Hinz computer and changes were made to a copy of the Redwater HMI program in house. This was done to ensure that the system could work as desired and to iron out any installation trouble spots before going to site. System configuration and creation of the messages that the user would be prompted with when dialing into the site was also completed and saved to disk for on site installation.

Remote shutdown hardware and software is initialized

at boot up. A dedicated analog phone line is connected to the card at all times to allow dial-in. An operator at Buck Lake receives a request from TransAlta to cut their power usage dramatically. Buck Lake cuts its consumption and then has to cause Redwater to cut its power consumption as well. The operator dials the number for the shutdown system. The operator then follows the prompts and passes through various levels of security by entering the correct password on his telephone key pad, eventually prompting a shut down. The operator's actions toggle a bit in Wonderware that activates an emergency shut down of the sites controlled by Redwater.

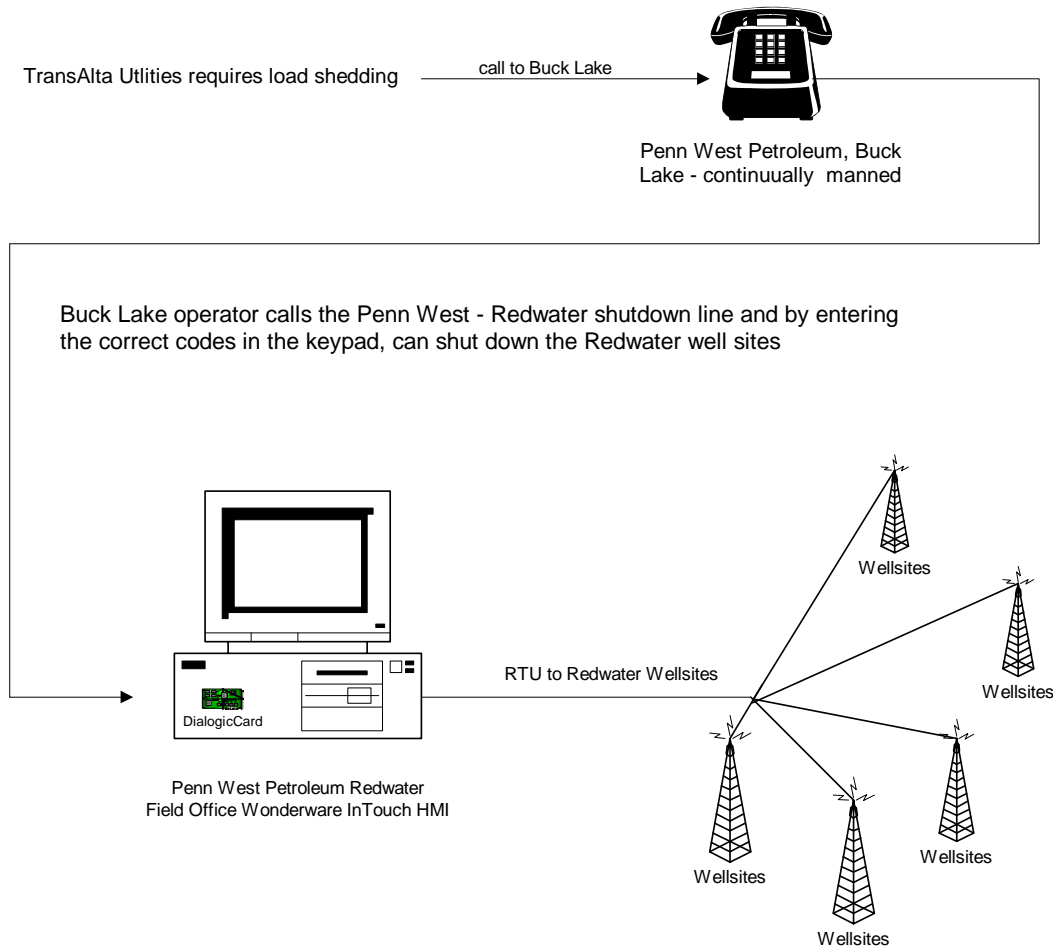
Wonderware changes were also made during the course of this project to make the well site status screen and downtime reports display the actual wells as they are in the field.



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System Overview



System Specifications:

- PC with 20 Mbyte free disk space
- Windows 95/98/NT
- Dialogic Proline 2V computer voice card
- TeleDAC configuration software ver 5.11
- Computer software key
- Win 911/411 software
- Wonderware InTouch ver 7.0
- Dedicated Analog phone line

For further information or to contact a Hinz office near you, please check our website at:

www.hinz.com