



A Rockwell Automation Company

Amoco Canada Petroleum Company Ltd. Beaver Hill Lake SCADA System

The Client:

Amoco Canada Petroleum Company Ltd. is a major Canadian oil and gas producer. Amoco Canada produces sour gas in two fields known as Beaver Hill Lake 1 and 2 (BHL1 and BHL2). This gas is gathered and sent to the Kaybob Gas Plant.

Amoco Canada is committed to a long term goal of production automation using SCADA.

The Requirement:

The BHL1 and BHL2 fields had existing Unicon RTUs with very limited functionality. It was decided to replace these RTUs with Bristol Babcock 3330 RTUs.

One of the main economic drivers behind this project was the injection of corrosion inhibitor at each wellhead. This substance is a substantial cost of production. With the old RTUs, the corrosion inhibitor pumps were not controlled; they were simply set to a high enough level to ensure sufficient corrosion inhibitor was present in the pipeline. The new Bristol RTUs will be able to control the amount of inhibitor based on the flow rate of the well. The wells in these fields tend to surge due to the presence of NGLs so this

flow rate is not constant.

Another key design limitation was the RTU communications. Problems with the radio reception at some sites, plus the presence of existing land lines to other sites, meant that direct communication with every well was not possible.

The existing radios were 1200 baud analog. It was necessary to upgrade them to 9600 baud digital "smart" radios to increase bandwidth and decrease maintenance costs.

The Design Solution:

Hinz planned and implemented the design and implementation of the new database and displays, programmed the Bristol RTUs, designed and implemented the corrosion inhibitor control, and installed and commissioned the entire system.

The operators view displays, issue commands, and generate reports on their existing PCs. The operators have full control over the wells, including emergency shutdown.

The Bristol RTU calculates the volume produced by each well, using orifice plates, and performs compensation to AGA-3 and AGA-8. The Bristol RTU also keeps the 35-day daily history and 7-day

hourly history of the flow records.

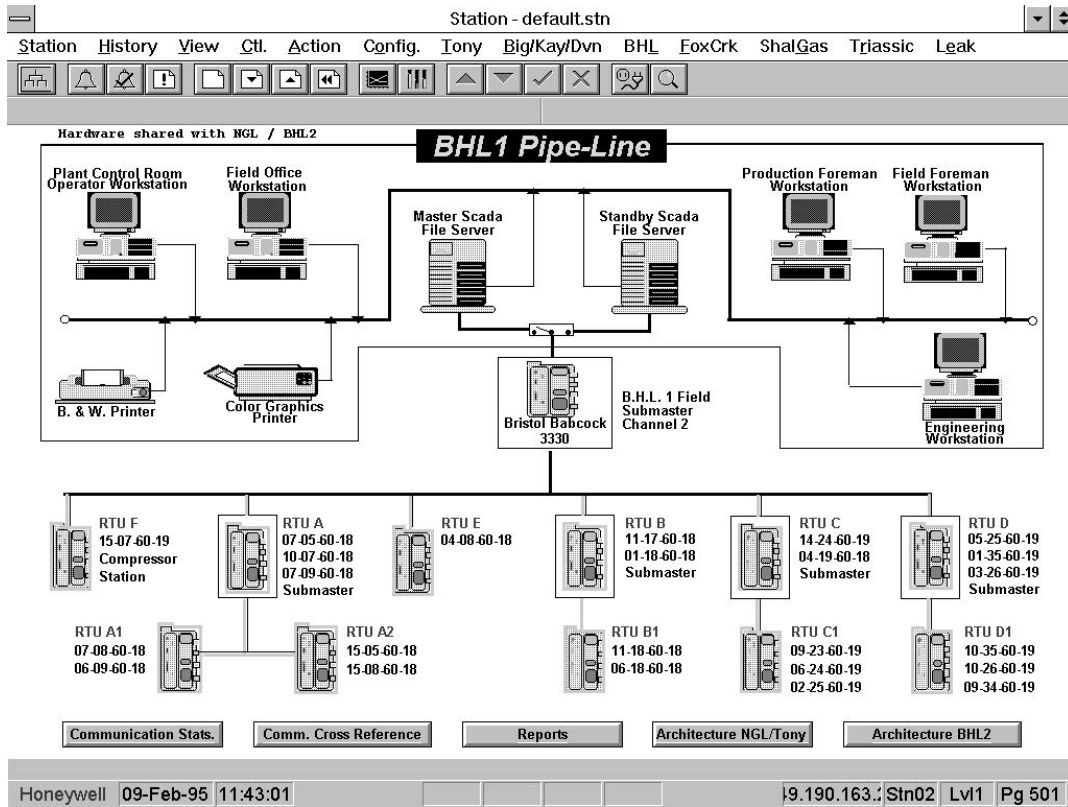
The BHL1 and BHL2 fields are each polled through a Bristol RTU configured as a submaster. This was done to provide separation of the various operational requirements on the host system.

Hinz worked with the customer to design the new radio system, supervised the installation, and performed the end-to-end commissioning in order to put the entire system in operation. The entire project was done while the production field was in full operation.



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System Specifications:

- Honeywell SCAN3000 SCADA Software
- Hewlett-Packard Pentium File Server
- Redundant Configuration
- SCO UNIX Operating System
- TCP/IP Local Area Network
- Windows 3.1 Operator Stations
- Bristol Babcock 3330 RTU
- MDS9600 Baud Digital Radio
- Bristols Babcock BSAP Protocol
- Total System Database - 10,000 Tags
- 7,500 Analogs
- 2,500 Digital
- 350 Custom Displays
- 100 Custom Reports
- 16,000 Stored Alarm Events
- 50 RTUs
- 3 Communication Channels
- Historical Trending
- 7,500 Points
- 35 Days On-Line
- 35 Additional Days Archived on Disk
- 1 Year Back-up on DAT Tape

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

www.hinz.com