



A Rockwell Automation Company

Amoco Canada Petroleum Company Ltd. Bigstone/Kaybob NGL Pipeline

The Client:

Amoco Canada Petroleum Company Ltd. is a major Canadian oil and gas producer.

Amoco Canada operates an NGL Pipeline that runs from the Bigstone Plant to the Petromet Plant and then

to the Amoco Kaybob Plant where the NGLs are processed. There are injections of product at both the Bigstone and Petromet locations.

The Requirement:

The Bigstone/Kaybob NGL Pipeline was built to eliminate the trucking of NGL product from the Bigstone and Petromet Plants to the Kaybob Plant. The technical challenges involved integrating the Micromotion flow computers with the Bristol RTUs and integrating the NGL Pipeline SCADA requirements into the existing Tony Creek SCADA

system. The Tony Creek system was an existing SCAN3000 system. To accommodate the NGL Pipeline requirements, it was necessary to upgrade the host hardware, host operating system, and the SCAN3000 software. This had to be done without disrupting operations.

The Design Solution:

Hinz planned and implemented the upgrade of the host system, the design and implementation of the new database and displays, the programming of the Bristol RTUs, the integration of the Micromotion flow computers, the design and implementation of the leak detection requirements, and the installation and commissioning of the entire system.

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

The Bristol RTUs are used to integrate with the Micromotion mass flow meters. This was the first project integrating the Micromotion with a Bristol RTU. The Micromotion measures density, mass, and volume and the Bristol reads these values and performs compensation to AGA-3 and AGA-8. The Bristol also keeps the 35-day daily history and 7-day hourly history of the flow records.

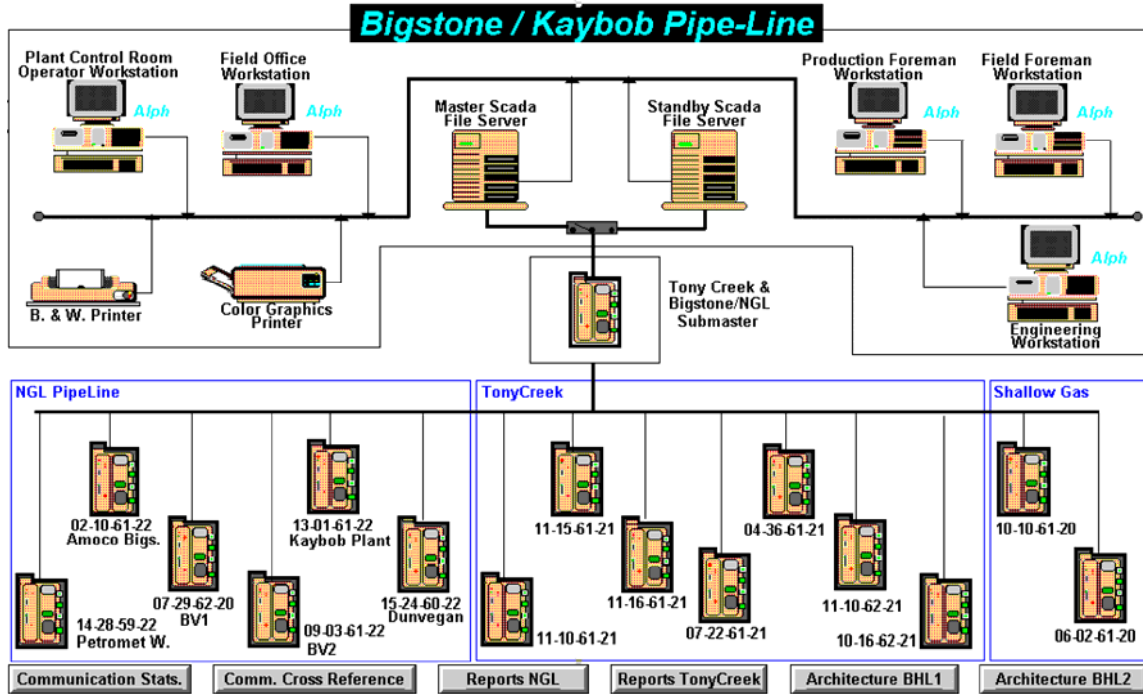
The Bristol RTUs are polled through a Bristol RTU configured as a submaster. This was done to provide separation of the various operational requirements on the host system. The submaster will perform a global ESD if one of the block valves are tripped by a local ESD.

The leak detection meets the requirements of the Canadian Petroleum Association (December 1991). It is implemented in part in the Bristol RTUs and in part on the host system. Full daily, weekly, and monthly reports are generated by the system to provide a full audit trail.



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System Specifications:

- Honeywell SCAN3000 SCADA Software
- Hewlett-Packard Pentium File Server
- SCO UNIX Operating System
- TCP/IP Local Area Network
- Windows 3.1 Operating Stations
- Bristol Babcock 3310 RTUs
- Micromotion Mass Flow Meters
- (At all injection and delivery points.)
- Bristol Babcock 3-in-1 Transmitters
- MDS 9600 Baud Digital Radios
- Bristol 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