



A Rockwell Automation Company

Husky Oil Ltd. Remote Internet Access System

The Client:

Husky Oil Ltd is a Canadian-based, privately-held integrated oil and gas company headquartered in Calgary, Alberta. The company's operations include exploration and development of crude oil and natural gas sources as well as refining and marketing of petroleum products. With assets of

approximately \$4 billion and 1500 employees, Husky Oil ranks among Canada's top producers of crude oil, natural gas and recovered sulfur.

The Requirement:

Husky Oil's Moose Mountain facility is a sour oil & gas site located in the Kananaskis mountain area west of Calgary. Initial separation for metering of liquids and gases is carried out on lease for the two producing wells. After metering, product is pumped, via a 26 km pipeline, to Shell Canada's Jumping Pound gas plant for separation and processing. A control system providing full access and control from off lease was required due to the remote nature of the well site and Shell Canada's commitment to operate the facility.

Shell Canada field operators required a system that would allow access to, and control of, all equipment on the lease, without the need for the difficult drive to site. Husky Oil needed a system that would provide remote monitoring of the state of the facility. The ability to expand the system to allow additional access points was also necessary. Restricting options was the lack of a hardwired phone line to the lease.

The Design Solution:

With no phone line available for communications with the lease, remote access options included standard radios, microwave technology, satellite technology, and cellular technology. Because a large amount of data was to be transferred bi-directionally, only a cellular technology called Cellular Digital Packet Data (CDPD) seemed capable of the performance required. CDPD technology has been developed to meet the growing needs of the business sector as a method of transferring large quantities of digital data via local cellular networks.

A CDPD cellular system differs from standard cellular in that data transfer is digital and transmission is based on standard Internet protocols (TCP/IP). With an internet protocol-based system data is passed through the internet via a local Internet Service Provider (ISP). In addition, CDPD provides high levels of network security through the use of data encryption and user authentication.

Until this project, all CDPD systems in Alberta were configured to have the 'host' connected through a phone line to the Internet. Remote users would then connect via a CDPD cellular modem, through the internet, to the 'host'. The Husky Oil-Moose Mountain facility is the first project in Alberta to have the 'host' continuously connected via CDPD cellular modem to the internet. Remote operators then use local phone lines to connect to the internet for access to the system.

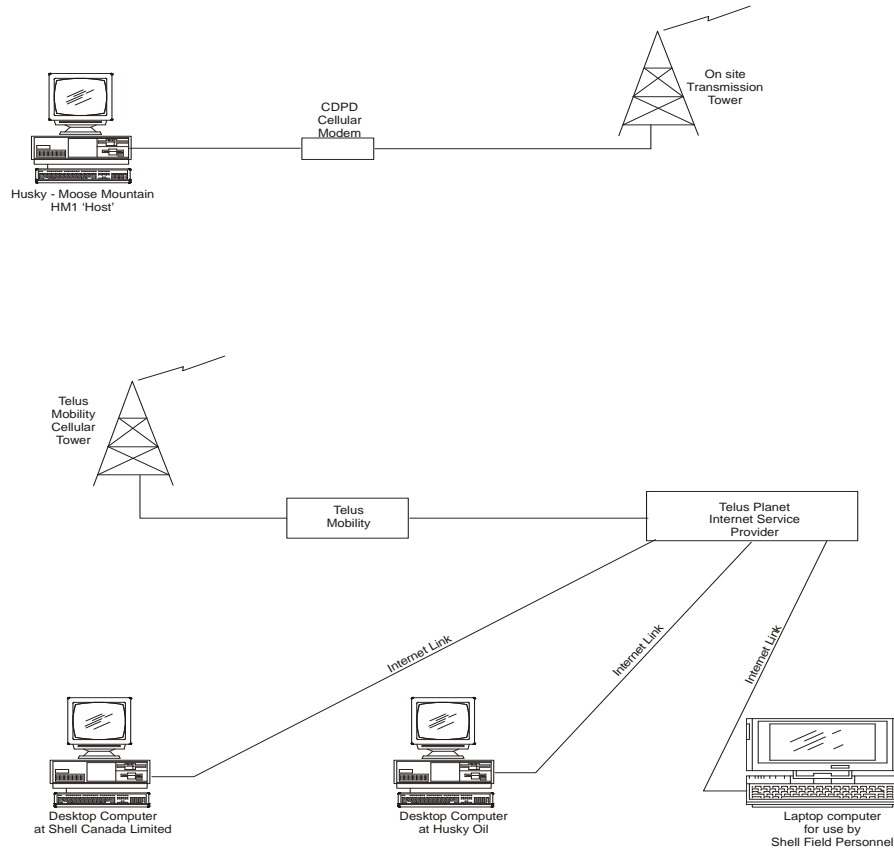
An integrated package utilizing Allen-Bradley PLCs with Rockwell Software's HMI program RSView, formed the base of the onsite control system. Rockwell Software's Active Display Server software is then used to link the RSView HMI to the CDPD cellular system providing real time graphics to remote stations. A CDPD cellular modem, connected to the HMI desktop computer, provides a continuous connection to Telus Mobility's local Calgary cellular network. In addition to the inherent security provided by a CDPD system, additional levels of security are provided through the use of Microsoft WindowsNT on the 'host' computer.

Three remote access stations originally configured include one desktop station at Shell Canada's Junction 'B' compressor station, one desktop station for use by Husky Oil and one laptop computer for use by Shell Canada field personnel. The laptop computer is configured to be used by Shell 'on call' field personnel during off hours. The 'on call' personnel have only to connect the laptop to a phone jack and dial up the Husky Oil site to have full control of the well site systems. Additional access stations can be easily added through minor configuration changes to the 'host' computer on site.



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System Specifications:

- 1 Compaq 'Deskpro' computer as 'Host' HMI
- 128 Meg Ram
- Windows NT Server 4.0
- Rockwell Software – RSView
- Rockwell Software – Active Display Server Host c/w 1 access key
- 2 Compaq 'Deskpro' Remote Access Stations
- 64 Meg Ram
- Internal Modem
- Windows NT Workstation 4.0
- Rockwell Software – Active Display Server Client
- NEC laptop remote Access Station
- 64 Meg Ram
- Internal Modem
- Windows NT Server 4.0
- Rockwell Software – Active Display Server Client
- Sierra Wireless MP-200 CDPD Cellular Modem
- Internet Access via Telus Planet
- CDPD Cellular Network – Telus Mobility

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

www.hinz.com