



A Rockwell Automation Company

Sempra Energy SCADA System for Gasoducto Baja Norte

The Client:

Sempra International recently built the Gasoducto Baja Norte pipeline which is a portion of the overall 220 mile pipeline with an 80 mile segment in California and a 140 mile segment in Baja California, Mexico. The 140 mile Sempra segment of 30 inch pipe begins at the Mexico border near Algodones Baja California, Mexico – just south of

Ogilby, CA, and terminates in Rosarito, Baja California at the Presidente Juarez Power Plant. The pipeline is capable of transporting 500 million cubic feet per day of natural gas.

The Requirement:

Sempra, working in partnership with PG&E, required a pipeline SCADA system for their portion of the North Baja pipeline. Since Citect had already been chosen as the corporate SCADA host by

PG&E and was already being used for the PG&E portion, Sempra concluded that they would use the same systems.

The Design Solution:

Hinz supplied engineering services to develop the SCADA system, communications and RTUs for the pipeline. The SCADA network consisted of redundant Citect SCADA systems with computers at the Rosarito compressor station and the GB Mexicali site.

The Citect SCADA network interfaced to the existing FIX32 SCADA system at the Rosarito compressor station using an OPC data transfer. Data is collected from four Fisher ROC RTUs at the measurement sites and from a Sixnet Versatrack at one of the pressure regulating stations.

Communications were designed as an extension to the corporate networks already operating in Mexico. For this project, the WAN was upgraded from a series of point-to-point leased lines to a frame relay network with links to the existing sites and new links to the pipeline sites. The interconnection between the North Baja Pipeline and Gasoducto Baja Norte involved a trans-border network link

back to the GTNC networks and finally to both gas control in Portland, OR, and Sempra's San Diego, CA, headquarters.

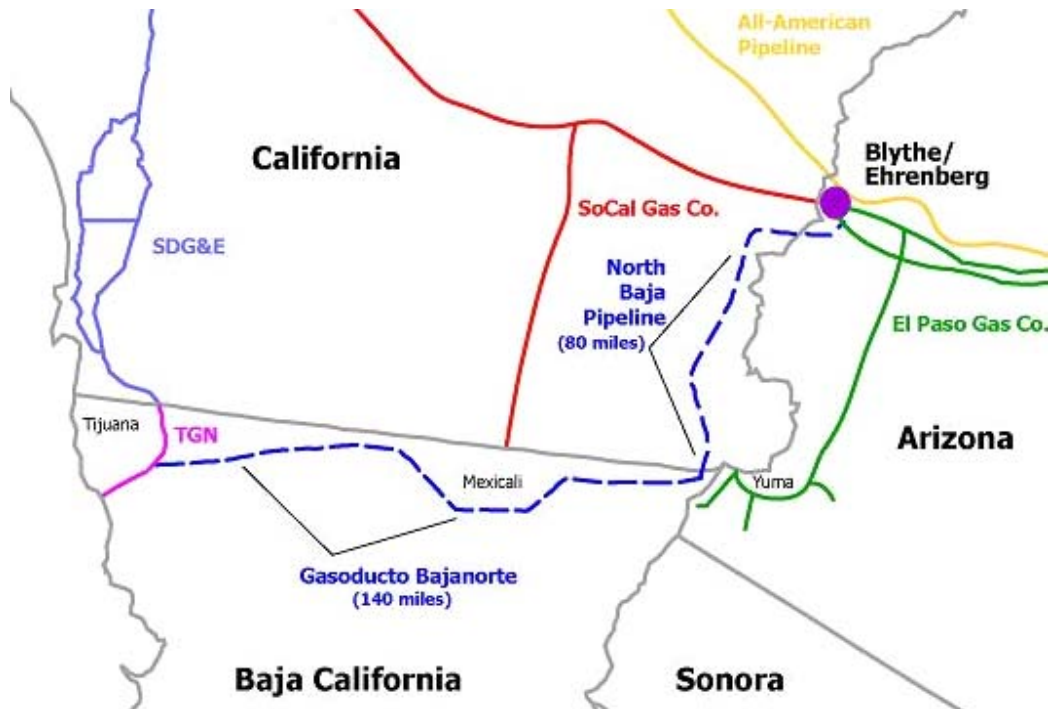
The measurement sites in Mexicali are all within a few kilometers of the GB office and communications between the SCADA and the RTUs is by Fiber optic lines. The SCADA computers use TCP/IP communications to mini terminal servers at the RTU enclosures.

The four custody transfer sites use Fisher ROC RTUs. At two sites the RTUs monitor a single Q-Sonic ultrasonic meter and read either an ABB or Rosemount Gas Chromatograph. At the other two sites, the RTUs monitor three Daniel Senior Sonic Ultrasonic meters with Daniel Gas Chromatographs. These RTUs are also polled by the station DCS for flow data and to control the plant startup.



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System Specifications:

Equipment

- Fisher ROC 364 RTUs
- Sixnet Versatrack RTU
- Sixnet Data Concentrator
- Sixnet EtherTrack Industrial Ethernet Switches
- Lantronix Device Servers

Software

- Citect Version 5.41

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

www.hinz.com