HINZ
A Rockwell Automation Company

PG&E National Energy Group
SCADA System for North Baja Pipeline

The Client:

Transmission Northwest Corporation, a division of PG&E, recently built the North Baja 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 PG&E segment of 30 and 36 inch pipe begins at the interconnection with the El Paso Pipeline near Ehrenberg, AZ, and runs south to cross the Mexico border near Ogilby, CA. The pipeline is capable of transporting 500 million cubic feet per day of natural gas.

The Requirement:

PG&E required a pipeline SCADA system for the North Baja pipeline which was to become part of the overall corporate SCADA system being developed for the GTNC Portland, OR, gas control site. Citect had already been chosen as the corporate SCADA host and preliminary design and development had already begun.

The Design Solution:

Hinz supplied engineering services to develop the SCADA system, communications, and RTUs for the pipeline. The SCADA network consists of redundant Citect SCADA systems with computers at the Ehrenberg compressor station and the Ogilby measurement site. The Citect SCADA network interfaces to A-B ControlLogix PLCs at the compressor station, Sixnet PLCs at the mainline valves, and a Willowglen RTU at the Ogilby measurement site.

Communications were designed as an extension to the existing frame relay corporate networks already in operation. The terrestrial WAN included links to the Portland, OR, gas control from the primary pipeline sites. The pipeline sites communicate with the valve sites using satellite links that are designed to work with “report by exception” technology to limit the amount of air time used by the equipment.

The mainline valves use small Sixnet RTUs that are programmed to look for loss of pipeline integrity using both decline curves and absolute low pressure. The valve RTUs are programmed to operate with the supervision of the gas controllers and, should communications be lost, act autonomously in an emergency.

Custody Transfer Measurement between the North Baja Pipeline and the Mexico pipeline is performed at the Ogilby meter station using a Willowglen RTU monitoring a single Q-Sonic ultrasonic meter and a Daniel Gas Chromatograph. The Willowglen RTU operates a flow control valve at the site with the input of a set point from Portland, OR, gas control.

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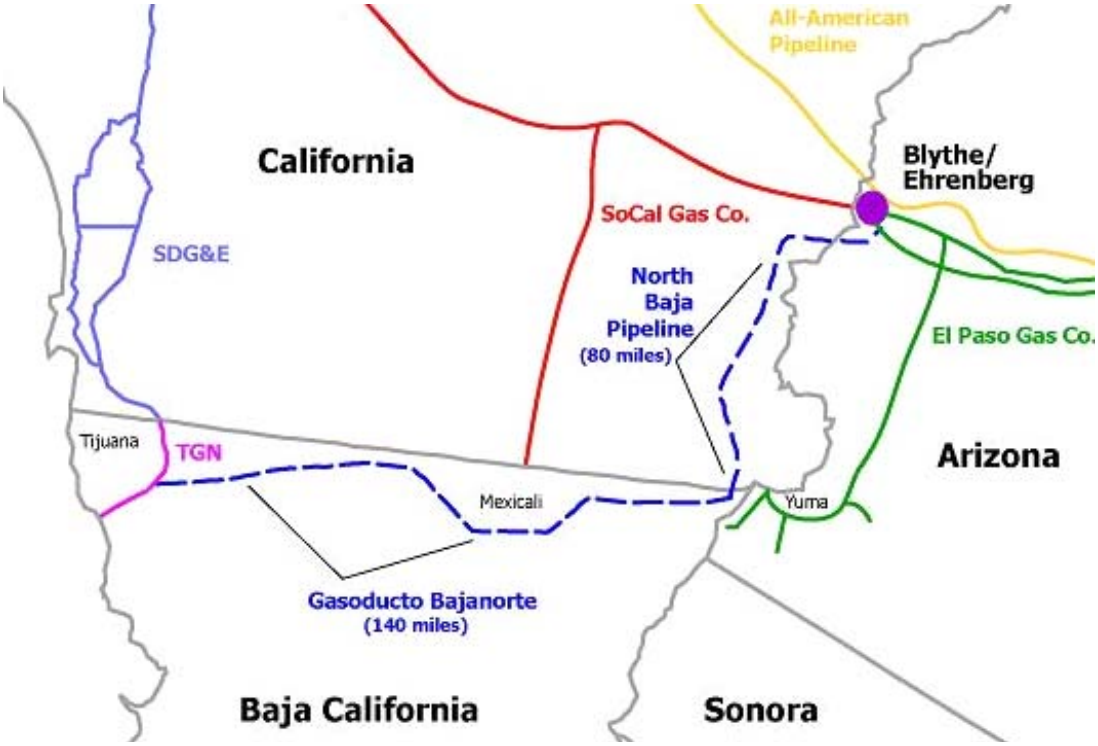

System Specifications:

Equipment:

- Sixnet Versatrack RTUs
- Willowglen RTU

Software:

- Citect, Version 5.41

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

www.hinz.com