



FIGURE 2. The well pads experience freezing temperatures for half of the year, so many well pad functions are contained in heated sheds (background), with one for each wellhead.

cations for shutdown functions also come preinstalled on the XRC RTU.

Field well pads

About six months out of the year the well pads experience below-freezing temperatures. As a result, the separators, orifice runs, outlet control valves, and liquid metering reside inside enclosed sheds, with one for each wellhead (Figure 2). Infrared gas catalytic heaters fueled by well gas heat the buildings. The water tanks are similarly heated to prevent freezing.

Power for the well pads comes from 12-volt DC batteries charged by a regulator and solar panels. Typically, a

pad runs off six 120-Amp/hr batteries and two to three 125-watt solar panels.

Real-time and trend data from the XRC RTU communicate with the Peyto Cygnet SCADA system via wireless mesh network and 900-MHz spread spectrum radios (Figure 3). Recently Peyto started using ABB Tropos networks for these wireless transmissions.

Well pad information collected by the SCADA system from the XRC RTUs includes gas volume, gas flow rate, dif-

ferential pressure, static pressure, flow time, condensate, and water volumes for the current day as well as high-resolution gas flow rate, tubing, casing, and real-time pipeline pressures and trends. Operators also can view plunger and intermittent operational data from the applications on the RTUs.

Advanced options within the XRC RTU plunger and timer-control application have given Peyto an array of tools to choose from for optimization, offering solutions that were not previously available on all sites. Field operators now can choose from many different opening and closing conditions based on pressure differentials, flow rates, high/low pressure, time, rise, or slopes, to name

a few. These additional options have proved beneficial in optimizing well sites in different situations as well as reducing man hours spent at the site. **E&P**

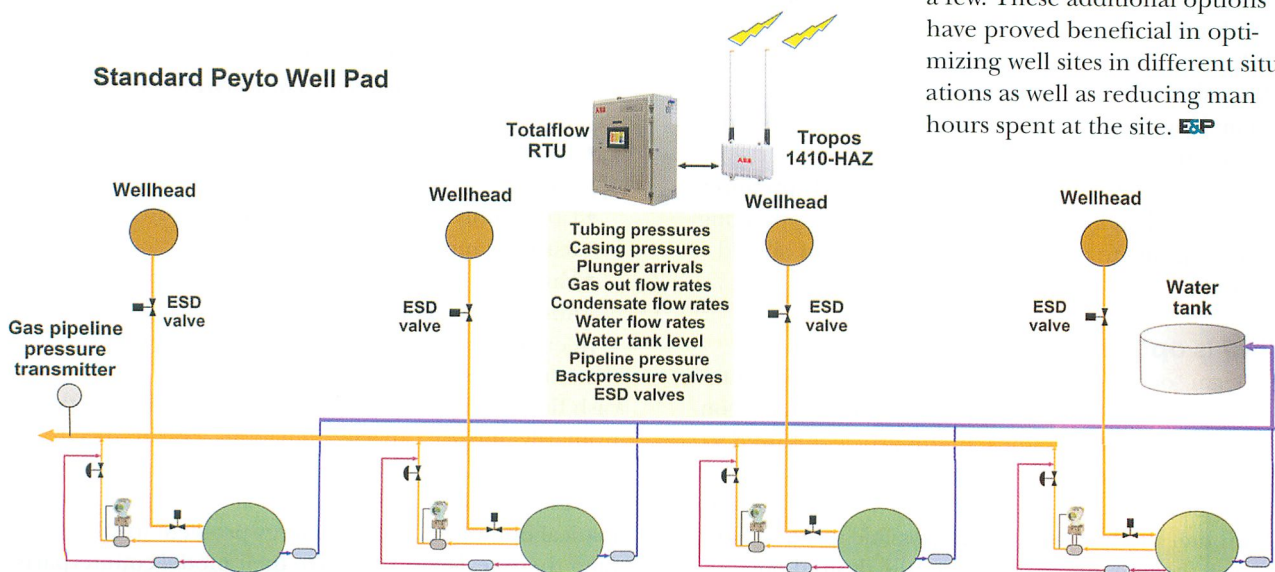


FIGURE 3. The ABB Totalflow XRC RTU monitors and controls all well pad functions and communicates with Peyto's SCADA system through an ABB Tropos network.