

New Automation Record: 11 Wellheads and 14 Tanks Wirelessly Automated in One Day!

THE CHALLENGE

Synergy Resources Corporation, <http://www.syrginfo.com>, an independent producer in the D-J Basin, CO, was in need of an automated wellhead and tank level monitoring solution that was scalable, customizable, and cost-effective that can also interface with an ABB Totalflow Gas Flow computer. Synergy was also seeking a one-stop shop that can provide both hardware and technical solutions. The organization also required an installation that was quick and easy with minimal interruption to its production to avoid income loss and help reduce labor cost.

The wellpad consisted of eleven (11) wellheads. Each wellhead required instrumentation to collect data for casing, tubing, and surface pressures, as well as monitoring the plunger arrival. The pad was outfitted with fourteen (14) storage tanks, with each tank requiring monitoring of product, interface, and temperature.

THE SOLUTION

Five Star Measurement, <http://www.fivestarmeasurement.com>, a service provider in the region was called upon for recommendations to meet these challenges. Choosing a provider that could fulfill all of the producer's requirements, they recommended OleumTech®, for its extensive line of wireless solutions. For the wellhead, eleven (11) IO MAX Transmitters were installed. For the tank battery, a combination of fourteen (14) Liquid Level Sensors and Transmitters were installed.

Wellhead: The IO MAX Transmitter, equipped with four (4) analog inputs (0-10V/4-20mA) was ideal for connecting to third-party pressure transducers, making monitoring casing, tubing, and surface pressure easily manageable. In addition, the Transmitter provides two (2) discrete inputs, in this application, used for accepting plunger arrival inputs. For RF communication, the IO MAX provides a robust range of up to 10 miles using the 900 MHz ISM band. For future expandability, the IO MAX is also equipped with two (2) discrete outputs for valve control and a serial port for Modbus Master functionality. The IO MAX accepts external 9-24 VDC power. OleumTech offers a solar-powered solution specifically designed for the IO MAX that is part of the complete solution required to meet the needs of this application.

Tank Battery: OleumTech manufactures Liquid Level Sensors with high accuracy and reliability. The Sensor monitors product, interface, and temperature, and mates with the Wireless Transmitters using their quick connect adapters, that do not require wiring or tools for installation. This self-contained, internal battery-powered solution is rated for use in Class I, Division 1 hazardous locations, with an RF range up to 7500 ft.

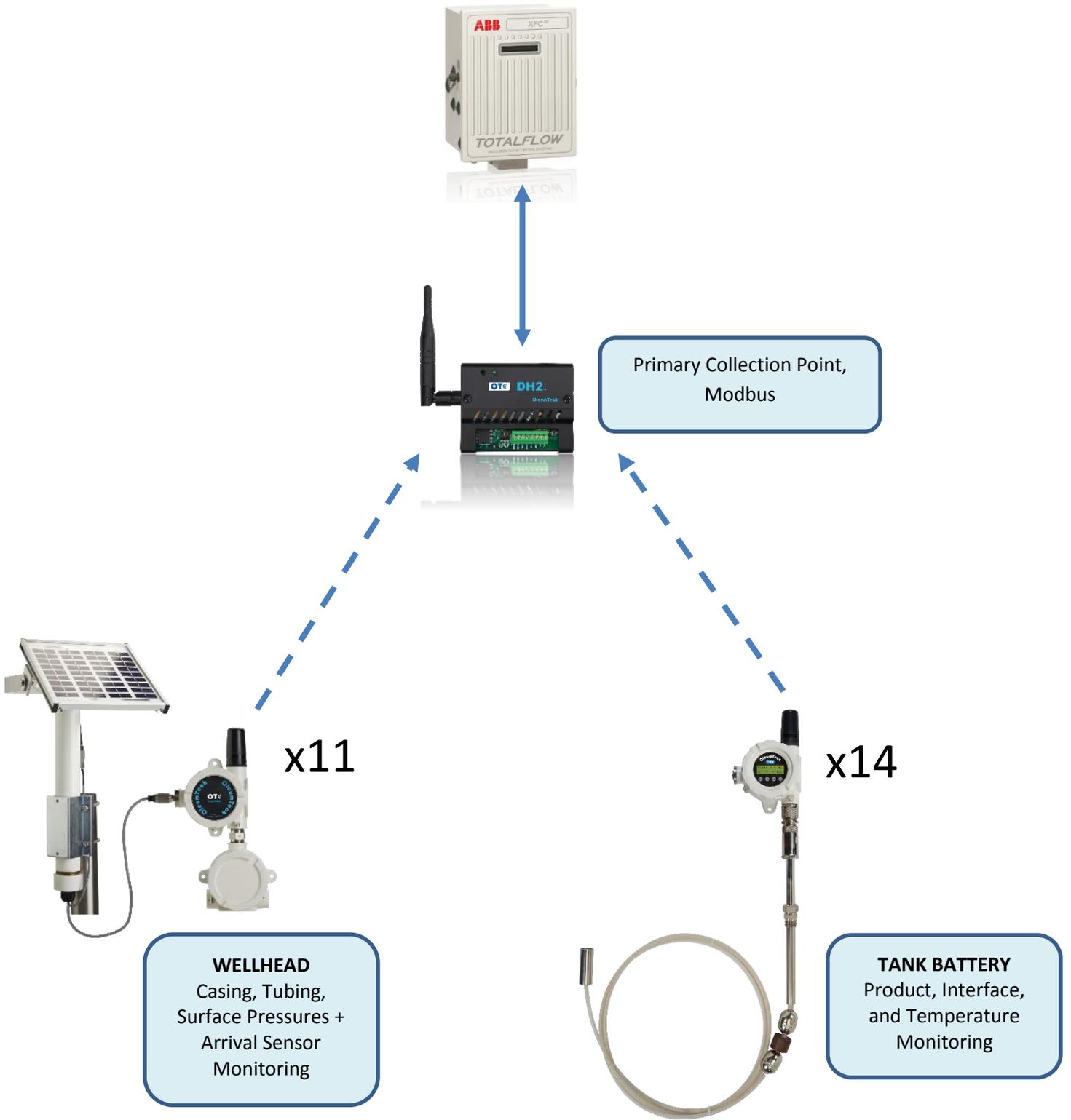
ABB Interface: The communication between wireless end nodes and the ABB Totalflow are being managed using an OleumTech Wireless Gateway. For this application, only one Gateway was required to collect data from 25 field instruments. Modbus RS485 Serial connection was used to communicate between the two devices. The Gateway is designed with scalability in mind allowing easy deployment of additional end points such as wireless temperature or flow sensors at a later date.

THE RESULT

Synergy Resources accepted the solution offered by Five Star and OleumTech. The deployment was collaborated between one OleumTech application engineer and a crew of four technicians from Five Star. The entire field installation took just one day. More importantly during the installation, there was absolutely no interruption to the production operation. Utilizing wireless instrumentation that does not require trenching or running conduit ensured a quick and easy turnaround. By the end of day, monitoring of tank levels, wellheads for plunger lift optimization, and integration with an ABB Totalflow were fully functional. Moreover, OleumTech wireless instruments can be easily taken off and put back on the process to accommodate work over crews saving significant amount of labor costs as opposed to a hardwired system.

OleumTech wireless solution not only met Synergy's requirements, but also helped the operator save at least \$30,000 by not having to deploy a hardwired system. Furthermore, there was no loss of income during the installation since the wells were up and operating during the entire installation process.

NETWORKING DIAGRAM



FIELD PHOTOGRAPHS

Full deployment in a single day. No production interruption. No loss of income. Avoided costly trenching and running conduit.



11x IO MAX Transmitters +
14x Level Sensors + 1x
Wireless Gateway installed
in one day without
interrupting production.



For additional information visit us at www.OleumTech.com
Contact us at 1-866-508-8586 or Sales@OleumTech.com