

# CASE STUDY

## WIRELESS WELL MONITORING



### BACKGROUND

Our client is a major provider of alternative and renewable energy technology based in Nevada. They have built over 150 power plants globally. GTH was contacted to provide system integration assistance to a remote site, miles away from the nearest city.

### CHALLENGE

The client's injection wells had no power or instruments to provide vital information back to the SCADA system. They needed a solar-powered solution that could wirelessly transmit three critical points of data back to their main system. The solar solution needed to be capable of powering their instrumentation as well as the radios, all while withstanding the temperature extremes common to the area. Summer temperatures frequently reach 120°F and winter temperatures can get as low as -30°F.

### SOLUTION

To accommodate the wireless transmission of three analog signals back to the plant PLC, GTH selected the Phoenix Contact Radioline Wireless I/O. These devices use 900MHz trusted wireless 2.0 technology. They are highly flexible and configurable with ranges up to 32km. The GTH engineering team combined this technology with deep cycle extreme duty batteries and a solar power system to meet the customer's specifications. In addition to supplying the radio and solar, GTH also designed and fabricated three custom UL control panels.

### BENEFITS

The return on the investment for this project was immediate. With new data such as temperature, pressure, and flow from the remote site, the plant was immediately able to make decisions on this data that positively impacted their operation. Other benefits included:

- Energy conservation
- Man hour savings
- Better accessibility to key metrics



Diamond Integrator

