HADLEY SUBSTATION & COMPRESSOR FACILITIES

CONTINENTAL RESOURCES, INC.
BAKER, MONTANA
MR. RON MILLER, MANAGER

PROJECT COST: $12,000,000
COMPLETION DATE: 2003
PHONE: (405) 548-5197

PROJECT DESCRIPTION

To increase oil production of an aging reserve Continental Resources, Inc. (CRI) has implemented fire flooding techniques using compressed air. The Hadley Substation & Compressor Facilities provides air at over 4000 pso to a 80 square mile oil field. ECI's responsibility for the Hadley site included design and complete electrical checkout and commissioning of the substation and switchgear. Major components of the substation include three Mitsubishi 115 kV SF_6 gas circuit breakers and two 115-7.2Y/4.16 kV 30/40/50 MVA transformers. The 15 kV switchgear consists of two main breakers, one tie breaker and ten feeder breakers.

115 kV SF_6 gas circuit breaker testing included:

- Motion analysis and timing
- Tank loss
- Contact resistance & insulation
- CT ratio, polarity & insulation
- Alarm & control functionals

115 kV 7.2Y/4.16 kV 30/40/50 MVA Transformer testing included:

- Power factor
- Winding insulation
- Turns ratio
- CT ratio, polarity & insulation
- Alarm functionals

Project Experience Resume

"Engineering with Distinction"

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15 kV Switchgear testing included:

- Bus insulation
- Breaker contact resistance & insulation
- CT ratio, polarity & insulation
- Alarm & control functionals

In addition to equipment testing, ECI was also responsible for developing settings, programming and testing twenty-two GE Universal Relays. All relay tests were performed using Doble Pro Test test routines developed by ECI.

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