

### **220KV System Upgrade Project - Riverside, CA.**

- Client: City of Riverside, CA.
- Completed: Current (Est. Completion, May, 2008)
- Project Value: \$20+ M (Est.) - Services Value: \$2.4 M
- Project Objective: To obtain Land Rights for the design and construction of a new electric 220kv/66 substation, modifications to several existing substations and construction and re-construction of new 220 and 66kv electric transmission lines.
- Project Services: Project management, route and site studies, public meetings, land ownership, survey and access permissions, special use permits, right of way acquisition, condemnation support, construction storage areas, county, state and local crossing permits.
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### **Right-of Way Services - Anaheim, CA.**

- Client: City of Anaheim, CA.
- Completed: 2005 – 2008 (Current)
- Project Value: Open \$400K max/assignment - Services Value: Unknown
- Project Objective: To provide Land Rights Acquisition and Land Survey services for a variety of base load project work in support of City of Anaheim Engineering and Land Staff. Work will be performed under contract with Phazer Electric, Inc. (SBE).
- Project Services: Project land management, route and site studies, public meetings, land ownership, survey and access permissions, special use permits, right of way acquisition, condemnation support, construction storage areas, county, state and local crossing permits.

### **Valley Rainbow Interconnect - CA.**

- Client: Sempra Energy Utilities, San Diego, CA.
- Completed: 2004
- Project Value: \$20 M - Services Value: \$2 M
- Project Objective: To obtain land rights and permits to construct 62 miles of 230-345kv electric transmission line over private lands and obtain fee ownership of switchyard site.
- Project Services: Project management, route and site studies, public meetings, land ownership, survey and access permissions, special use permits, right of way acquisition, condemnation support, construction storage areas, county, state and local crossing permits

### **12 Mile 245KV Electric Transmission Line - CA.**

- Client: Pacific Gas & Electric, Bakersfield, CA.
- Completed: 2003
- Project Value: \$10 M - Services Value: \$300 K
- Project Objective: Acquisition services for 245 KV electric transmission lines in California.
- Project Services: Verify land ownership and surface management agencies for the acquisition of fee and state easements and road right of way use permits.

### **230 KV Electric Transmission Line – Victorville, CA.**

- Client: Constellation Power Development Company, Inc.
- Completed: 2000
- Project Value: \$10 M - Services Value: \$200 K
- Project Objective: Construct an 8 mile 230kv electric transmission line from a new 744 megawatt power plant to an existing electric switch station.

- Project Services: Project management, engineering design, right of way acquisition, construction monitoring and environmental permitting for the electric transmission line and cooling water lines.

#### **Natural Gas Transmission System – OR., NV., CA.**

- Client: Tuscarora Gas Pipeline Company
- Completed: 2001
- Project Value: \$200 M - Services Value: \$4.5 M
- Project Objective: Construction of 24"-250 mile pipeline through Oregon, Nevada and California
- Project Services: Project management, route feasibility and design, preliminary BLM, state, federal county and local permitting, environmental review and coordination, fee ROW acquisition.

#### **Natural Gas Transmission System – Victorville, CA.**

- Client: Southwest Gas Corporation
- Completed: 1999
- Project Value: \$23 M - Services Value: \$1.4 M
- Project Objective: Construct new natural gas transmission system from three natural gas transmission pipelines to a new grass roots power plant.
- Project Services: Project management, economic evaluation, environmental permitting, ROW and permit acquisition, engineering design for 38 miles of new 30" ad 24" pipeline, three taps, metering, pressure regulation and a compressor station.

#### **Flow Reversal Design, 623 Mile Pipeline – Long Beach, CA. to Red Mesa, UT.**

- Client: Four Corners Pipeline Company
- Completed: 1982
- Project Value: \$12 M - Services Value: \$2.5 M
- Project Objective: To reverse flow in an existing 16 inch pipeline to move surplus Alaskan crude oil to Midwest and Gulf Coast refineries from the West Coast.
- Project Services: Flow reversal and hydrostatic testing of an existing 623 mile, 16 inch pipeline system, including design and construction supervision for six new pump stations and a new supervisory control system for the entire automated pipeline.

#### **Gas Compressor Facilities - Portland, OR.**

- Client: Portland General Electric Co.
- Completed: 2005
- Project Value: \$3 M - Services Value: \$50K
- Project Objective: Provide FERC Certificate filing and Project Management associated with developing the grass roots, 190 MMSCFD, Lexington Gas Compressor Station. This project involves development of detailed engineering, procurement and installation of 5,000 hp of reciprocating electric compression.
- Project Services: Project management, economic evaluation, supervision for detailed engineering design and construction support for the project.

#### **Gas Compression Facilities - CO.**

- Client: EnCana Oil and Gas Company.
- Completed: 2003
- Project Value: \$1.7 M - Services Value: \$220 K

- Project Objective: Provide project management associated with developing the grass roots, 100 MMSCFD, Pumba Gas Compressor Station and dehydration facility. This project involved development of detailed engineering, procurement and installation of a CAT-3608 and three (3) CAT 3616 reciprocating, integral compressors (14,500 hp) along with dehydration equipment near Rifle, CO.
- Project Services: Project management, economic evaluation, supervision of detailed engineering design, and construction support of the project.

#### **Gas Compression Facilities - CO.**

- Client: EnCana oil and Gas Company.
- Completed: 2003
- Project Value: \$1.5 M - Services Value: \$210 K
- Project Objective: Provide project management associated with developing the grass roots, 80 MMSCFD, Hunter Mesa Gas Compressor Station and dehydration facility. This project involved development of detailed engineering, procurement and installation of four (4) CAT-3612 reciprocating, integral compressors (12,600 hp) along with dehydration equipment near Rifle, CO.
- Project Services: Project management, economic evaluation, supervision of detailed engineering design, and construction support of the project.

#### **22 Mile 500 KV Electric Transmission Line - AZ.**

- Client: Harquahala Power, Phoenix, AZ.
- Completed: 2003
- Project Value: \$25 M - Services Value: \$400 K
- Project Objective: Provide land services for the construction of 500 KV electric transmission line.
- Project Services: Review existing land rights for sufficiency, obtain necessary road and railroad crossing permits, update land ownership, compile database, notify land owners, obtain temporary access rights, pull site easements, materials storage and work area leases and obtain corrective easements.

#### **Miles 245 KV Electric Transmission Line - OR.**

- Client: Pacific Gas & Electric, Hermiston, OR.
- Completed: 2003
- Project Value: \$30 M - Services Value: \$275 K
- Project Objective: Provide land acquisition services for the construction of a 245 KV electric transmission line
- Project Services: Review existing land rights for sufficiency, update land ownership, compile database, notify landowners, obtain temporary access rights, pull site easements, material storage and work area leases and obtain corrective easements.

#### **Electric Distribution System Expansion - CO.**

- Client: Public Service Company of Colorado
- Completed: 2001
- Project Value: \$60 M - Services Value: \$150K
- Project Objective: Provide land rights acquisition for numerous overhead and underground electric distribution system expansions to serve residential and commercial customers in mountainous areas of Gilpin, Clear Creek, Garfield, Jefferson and boulder Counties.

- Project Services: Verify land ownership and surface management agencies for the acquisition of fee and state easements, road right of way use permits, and BLM and Forest Service Special Use Permits.

### **230 / 345KV Electric Transmission Line and Switchyard - Weld Co., CO.**

- Client: Public Service Co. of Colorado
- Completed: 1999
- Project Value: \$35 M - Services Value: \$500K
- Project Objective: To obtain land rights and permits to construct 54 miles of 230-345 kv electric transmission lines over private lands and obtain fee ownership of the switchyard site.
- Project Services: Project management, route and site studies, public meetings, land ownership, survey and access permissions, special use permits, right of way acquisition, condemnation support, construction storage areas, county, state and local crossing permits.

### **230 KV Electric Transmission Line Reconstruction - Morgan Co., CO.**

- Client: Public Service Co. of Colorado
- Completed: 1998
- Project Value: \$5 M - Services Value: \$40 K
- Project Objective: Provide land services for the reconstruction of a 230 kv electric transmission line
- Project Services: Review existing land rights for sufficiency, obtain necessary railroad crossing permits, update land ownership, compile database, notify landowners, obtain temporary access rights, pull site easements, materials storage and work area leases and obtain corrective easements.

### **Alturas 345 KV Power Line – Reno, Nevada**

- Client: Sierra Pacific Power Company, Reno, Nevada
- Completed: 1997
- Project Value: \$60 M - Services Value: \$3 M
- Project Objective: Acquisition services for 345kv, 180 mile electric transmission line in California and Nevada
- Project Services: Verify land ownership and surface management agencies for the acquisition of fee and state easements, road rights of way, use permits and BLM and Forest Service Special Use Permits.

### **Gas Gathering System Design - Raton Basin, CO.**

- Client; El Paso Energy
- Completed: 2002
- Project Value: \$52 K – Services Value: \$52 K
- Project Objective: 250 miles of 3” through 16” diameter gas gathering system design, layout and modeling
- Project Services: Project: Pipeline layout, design and modeling

### **24” Gas Distribution Pipeline System - Portland, OR.**

- Client: Northwest Natural, Portland, OR.
- Completed: Current
- Project Value: \$105 M - Services Value: \$6.5 M

- Project Objective: NW Natural, the gas distribution company serving the City of Portland installing a 64 mile 24" natural gas distribution pipeline on the west and south sides of Portland. The route covers environmentally sensitive areas, expensive croplands, nurseries and vineyards. Over 600 individual landowner tracts of property are affected
- Project Services: Managed the environmental contractor in the development of all field surveys and reports for submittal to the governing entities. Managed three civil survey firms in the staking of the pipeline and to develop property owner plats and construction alignment drawings. Opened field office and supplies over 10 ROW professionals for environmental support, title research, ROW negotiations, acquisition and condemnation and damage settlement claims. Provided construction drawings including alignment and HDD bore design drawings.

#### **Natural Gas Gathering System & compressor Addition – Ranglely, CO.**

- Client: El Paso Field Services
- Completed: 2000
- Project Value: \$1.25 M - Services Value: \$180 K
- Project Objective: Increase capacity of an existing field gathering system by adding pipeline loops and connecting new well flow lines. Additionally, project included addition of a 3,000 hp compressor to an existing compressor facility with all associated connections and tie-ins and evaluation of the power generating system.
- Project Services: Project management, engineering and design, material requisitions, equipment and field design assistance.

#### **Natural Gas Liquids Pipeline System, Prairie Mountain Pipeline - CO. to KS**

- Client: Mid-American Pipeline Company & Amoco Pipeline Company
- Completed: 1998
- Project Value: \$110 M - Services Value: \$1.75 M
- Project Objective: Construct a 385 miles 10" pipeline to loop to an existing 6" pipeline to transport 60,000 bpd LNG from north central Colorado to eastern Kansas.
- Project Services: Engineering design, permitting, and ROW acquisition for the construction of a 385 mile LNG pipeline. System design, including four 1200 hp pump stations and two metering facilities. Project Management - Economic Studies - Engineering & Design - Field Surveying - Permitting & Mapping - Material and Construction Specs

#### **Crude Oil Pipeline System, Antelope Valley - WY. To CO.**

- Client: Chevron Pipeline Company
- Completed: 1998
- Project Value: \$85 M - Services Value: \$1.6M
- Project Objective: Construct new 310 mile, 12" pipeline from east central Wyoming to northwestern Colorado and to modify an existing 185 mile pipeline system from northwest Colorado to northeast Utah to move 85,000 bpd of crude oil.
- Project Services: Project management, engineering design, environmental planning, ROW acquisition and construction management services for the construction of 310 miles of 12 inch pipeline, four new pump stations, metering facilities and modifications to four existing pump stations on an existing pipeline.