

RESUME

**KIRK HUYSER, P.E.**

**Education** University of Denver, B.S.E.E. 1973, Magna Cum Laude

**Professional** Professional Engineer, Colorado (Reg. No. 14836)  
Life Member of Institute of Electrical and Electronics Engineers (IEEE 06334916)

**Summary** Dedicated electrical and automation engineer with 49 years' experience, seeking assignments in industrial automation, commissioning, and electrical engineering.

**Experience Summary**

1985 to Present | Huyser Engineering Services Inc

- PLC/DCS & HMI programming/development
- Control Systems Integration
- Automation Engineer
- Startup and Commissioning Manager
- Startup and Commissioning Engineer
- Electrical Engineering and Design
- Hazardous Area Classifications
- Owner's Representative

1975 to 1985 | Stearns-Roger Engineering Corporation

- Electrical Design Engineer
- Electrical Startup Engineer
- Project Resident Engineer

1973 to 1975 | Martin Marietta Corporation

- Microwave Antenna Test Engineer

**Skills**

- Rockwell /Allen-Bradley PLCs, FactoryTalk HMI, PlantPAX, and various other PLCs/HMI
- ABB Infi-90 DCS
- Wonderware Systems Integrator
- Control loop tuning
- Motor controls
- Electrical power and distribution
- Electrical engineering, including arc-flash analysis and hazardous area classifications
- Startup and Commissioning

**Startup Manager** experience includes managing and supervising pre-commissioning, commissioning, operator training, and systems turnover for two combined cycle power plants.

**Plant Startup Engineer** experience includes pre-commissioning, commissioning, operator training, and turnover package completion for coal, wood, and gas fired power plants. The work included electrical, I&C, and mechanical systems. Responsible for first-sync of over a dozen generators starting with a 450 MW coal fired plant in 1979.

**Owner's Representative** experience includes overseeing electrical and control systems activities for construction and commissioning of a 1000 MW combined cycle power station.

**Electrical Engineering** experience includes industrial engineering and design of 4160V medium voltage and 480V low voltage distribution systems, motor controls, grounding systems, hazardous area classifications, on-site power generation, arc flash analysis, short circuit current analysis, coordination studies, and equipment specifications.

**Control Systems Integration** included integrating DCS and PLC controls, including Bailey Infi-90, Rockwell/Allen-Bradley PLC-5, ControlLogix, and Wonderware ArchestrA HMI.

**Automation Engineer** includes DCS (Bailey Infi-90, Max 1000, Rockwell PlantPAX) and PLC (ControlLogix, PLC-5, SLC-500, Modicon, Opto22 PAC) programming, HMI (Wonderware, FactoryTalk) screen development, Wonderware Historian development, loop tuning, and variable frequency drive configuration.

**Project Resident Engineer** experience includes field engineering support (all disciplines) and liaison with home office engineering for two shale oil projects, an aluminum mill, sulfur recovery plant, and copper smelter.

**Project History**

Intermittently Nov 2019- Present	<b>Eagle Valley Clean Energy, Gypsum, CO</b> Automation Engineer on call to perform maintenance, troubleshooting, and upgrades of Wonderware HMI, Rockwell ControlLogix PLC and MicroLogix. Also tasked with IT projects and remote data acquisition, the latter being a Modbus link between Wonderware HMI and SEL3530 Data Concentrator.
June 2022- November 2022	<b>Huysen Engineering Services Inc.</b> Load calculations, electrical engineering, and single line diagrams for two residences and a stone milling shop. Standby power single line diagram for large Pitkin County residence.
April 2022- June 2022	<b>Meadowood Pump Station Standby Power, City of Aspen, Colorado</b> Design and engineering of standby power system for water department pump station.
Dec 2021- April 2022	<b>ProEnergy Services</b> Automation Engineer working remotely on automatic generation control (AGC) for 548 MW Harry L. Oswald generating station in Wrightsville, Arkansas. This was part of a larger project to convert G.E. Mark V/VI and Cimplicity control system to Rockwell Control Logix / FactoryTalk. The original AGC was Cimplicity script which I rewrote in ControlLogix Structured Text.
Oct 2020	<b>eTec Industrial Services, City of Omaha municipal water pump starting resistor.</b> Commissioned Synergy Engineering secondary resistance controller (SRC) connected to wound rotor of 1000 hp, 2300V dewatering pump motor for controlled acceleration.
Feb 2019- May 2020	Electrical engineering and design for following projects: <ul style="list-style-type: none"> <li>• City of Aspen: Engineering and specifications for municipal water pump station backup power system.</li> <li>• Cozy Point Ranch, Snowmass Village, CO: electrical additions to riding arena, stables, and paddocks.</li> <li>• American Gypsum, Gypsum, CO: Electrical engineering for pump house addition</li> <li>• Town of Carbondale Municipal Water: MicroHydro and pump-back engineering.</li> </ul>
Nov 2018- Jan 2019	<b>eTec Industrial Services, Sierra Energy zero-waste FastOx Gasification project, Fort Hunter Liggett Army Base</b> Commissioning support, PLC programming, and HMI screen development on Rockwell PlantPax (ControlLogix, FactoryTalk) distributed control system.
Nov, Dec 2018	<b>eTec Industrial Services, Puget Sound Naval Shipyard dewatering pump starting resistor</b> Commissioned Synergy Engineering secondary resistance controller (SRC) connected to wound rotor of 600 hp, 12kV dewatering pump motor for controlled acceleration.
Oct-Dec 2018	<b>PTW Energy Services, DCP Midstream Anderson Gulch Gas Compressor Station, Colorado</b> Arc Flash analysis
Dec 2018	<b>PTW Energy Services, Laramie Energy gas compressor station</b> Expanded scope of arc flash analysis performed earlier
Aug 2018	<b>eTec Industrial Services, Austin Powder Red Diamond explosives plant, McArthur Ohio</b> Team member to develop safety interlock matrix (cause/effect) for critical plant systems per existing PLC logic (ControlLogix PLC and FactoryTalk HMI using Pax objects), followed by functional testing.
May 2018	<b>eTec Industrial Services, American Municipal Power peaking plants in Ohio</b> Allen-Bradley ControlLogix PLC and Citect HMI control systems development to support addition of new Synergy Engineering 14-step starting motor secondary resistance controllers (SRC) for W301 combustion turbine/generators at three different sites.
Feb-Aug 2018	<b>PTW Energy Services, Grand Junction, CO, Conn Creek Natural Gas Compressor Station</b> Forensics and recommendations for malfunctioned ground fault protection, including revising the grounding system and 51G relay settings. Performed Arc Flash analysis to label switchgear for required NFPA 70E (and OSHA) incident energy hazards. Performed design and breaker coordination study to reduce arc flash incident energy and completed final arc flash analysis after recommended changes were made, including addition of RELT (reduced energy let-through) switches to ABB SACE Emax generator breakers with PR123/P solid state trip units.
Oct-Dec, 2017	<b>SGM Engineers, Glenwood Springs, CO</b> Electrical Engineering and design for 8000 SF house in Aspen, Colorado
Oct 2017	<b>PTW Energy Services, Grand Junction, CO, Koch Exploration and Production White River Dome facility</b> Arc Flash Analysis to label switchgear for required NFPA 70E (and OSHA) incident energy hazards.
May-Sept 2017	<b>American Gypsum, Bernalillo, NM, drywall manufacturing plant mods and restart after 8 yr shut down.</b> Programmed PLC-5 for upgrade of stucco conveying and recirculating system and developed the associated

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	<p>Wonderware Archestra HMI screens. Designed wiring and Yaskawa VFD interfaces for this upgrade. Programmed PID controllers and associated logic in ControlLogix (RSLogix-5000) for chilled water system. Assisted with Yaskawa VFD drives configuration plant-wide. Performed PLC-5 and ControlLogix troubleshooting for dry-additives and wet-additives systems; boardline conveying, stackers, etc.</p>
Intermittently 2016-2017	<p><b>Engineering of electrical services for large homes in Pitkin County (Aspen, etc.), Colorado</b> Pitkin County has a special requirement that services over 400 A be engineered and stamped by a licensed P.E. I performed several of these, mainly for electrical contractors and SGM Engineers as my clients. One of the most interesting projects was a horse ranch that had a large barn requiring fire pumps. My task was to revise the original design (by others) to make it comply with National Electric Code as well as pertinent fire codes.</p>
2016	<p><b>Sub to MPA Consulting Engineers, Tri-State Generating Station, Craig, Colorado</b> Electrical engineering, specifications, and design for vertical turbine pump installation. Also performed engineering services for Colowyo, a Tri-State company, to meter and remotely report, raw water flows to their coal mine.</p>
2015-2016	<p><b>Iron Mountain Hot Springs</b> Design, installation, and programming small control system and HMI using Opto 22 PAC and Groov HMI.</p>
2015	<p><b>Pyramid Corporation</b> Arc Flash Hazard analysis for Kobe Water Storage facility in De Beque, Colorado; Single line diagrams, fault current analysis, and hazardous area classifications for two natural gas production facilities.</p>
Intermittently 2011-2015	<p><b>MPA Consulting Engineers, Glenwood Springs, CO</b> Electrical engineering, specifications, and design for natural gas production wastewater processing facilities and sodium bicarbonate materials handling systems.</p>
Intermittently 2013-2015	<p><b>SGM Engineers</b> Wastewater electrical review and Fire Station design review; Electrical engineering and design for various commercial and residential projects.</p>
Intermittently 2011-2013	<p><b>SHALE TECH INTERNATIONAL</b> Hazardous area classifications and electrical design</p>
Intermittently 2011-2013	<p><b>AMERICAN SHALE OIL CORP</b> Hazardous area classifications and Down-Hole Heater failure analysis</p>
Intermittently 2012-2015	<p><b>Solvay Chemicals, Parachute, CO</b> Electrical Engineering and Design for various plant upgrade projects (sodium bicarbonate plant)</p>
Intermittently 2009-2014	<p><b>Pitkin County Jail, Emergency Power System upgrade, Aspen, Colorado</b> Electrical engineering and design for replacement and capacity upgrade of emergency power generator and electrical distribution. Follow-up engineering and design to interconnect the new Data Center and Courthouse server room to Emergency Power System. Periodically handle other small engineering projects for Pitkin County.</p>
July 1998 thru Mar 2015	<p><b>AMERICAN GYPSUM, Eagle Gypsum Wallboard Manufacturing Plant, Gypsum, CO</b> <u>Systems Integrator:</u> Wonderware HMI and Industrial SQL (Wonderware Historian) installation and development, as well as Allen-Bradley PLC-5 logic modifications. Programmed SQL interface in Excel to query Wonderware Historian for gas consumption reports and alarm history reports. Performed upgrade in 2014-2015 to Wonderware Archestra HMI and Historian as well as converting from standalone HMI PCs to Thin Clients and redundant terminal servers.</p>
Aug 2012	<p><b>City of Glenwood Springs</b> New parking structure lighting review and recommendation</p>
2012	<p><b>Berthod Motors, Glenwood Springs, CO</b> New Chrysler dealership parking lot lighting design.</p>
June 2000 To 2015	<p><b>DOYLE 1, LLC, Doyle Energy Facility, Monroe, GA</b> <u>Systems Integration and Remote Support</u> for control systems. This is a 348 MW simple cycle peaking plant with 5 gas turbine-generators. I maintained and upgraded the Allen-Bradley PLC-5 and Wonderware HMI/Historian systems. I also upgraded to thin clients to replace PCs for the HMI stations, installed redundant terminal servers, and incorporated APC ThinManager to manage the thin clients and redundancy.</p>
Aug 1998 To May 2009	<p><b>SITHE ENERGIES, Greeley Energy Facility, Greeley, CO</b> <u>Control Systems Engineering:</u> Modifications and systems integration for plant enhancements, upgrades, and problem resolution. Developed and installed new Wonderware HMI stations to replace the old Bailey "OIU" stations, Developed and installed Wonderware Industrial SQL Real-Time Database Server. Also performed maintenance and modifications to Bailey Net 90 DCS. Integrated Wonderware HMI with GE Atlas Gas Turbine Control System.</p>
April 2011	<p><b>Ennovate Corporation, City of Carbondale Public Works Building, Carbondale, CO</b> Electrical design: upgrade of power distribution</p>

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1996 to 2011      **DYNEGY**, Sithe Independence Power Station, Oswego, NY  
Consulting Engineer: Control system upgrades, system integration, and plant tuning for 1000 MW CC plant. Built/programmed/installed Allen-Bradley ControlLogix PLC to replace old L&N water analysis controller. Replaced old water analysis, water treatment, and aux boilers operator stations with Wonderware InTouch stations and developed the screens. Installed SCADA system with fiber optic interface to the remote substation. Installed/configured Wonderware InSQL historian to collect data and generate reports. Made modifications to Max 1000 DCS loops and logic.

Jul 2010 to  
Sep 2010      **Northway Construction**, Pitkin County Jail Data Center, Aspen, Colorado  
Electrical design for underground power and grounding

Jul 2010 to  
Sep 2010      **Ennovate Corporation**, Pitkin County Jail Data Center, Aspen, Colorado  
Electrical design for data center cooling system power.

Sep 2010      **EnCana**, Parachute, Colorado  
Designed hazardous area classification plan and grounding plan for Logan Wash produced water loadout, storage and injection site.

Aug 2010      **EnCana**, Parachute, Colorado (through MPA Consulting Engineers)  
PE review and signoff of power distribution system for C17 OU2 produced water injection site. Electrical design for hazardous area classification and grounding plan.

July 2009 to  
Mar 2010      **MPA Consulting Engineers**, EnCana Gas Exploration and Development projects, Parachute, CO  
Electrical engineering, design, and hazardous area classification for natural gas production waste water processing facilities.

Sep 2008 to  
May 2009      **MPA Consulting Engineers**, Climax Decant Structure, Climax Molybdenum, Leadville, CO  
Electrical design

Sep 2008 to  
Jan 2009      **ConocoPhillips**, Diesel Fuel Storage and Transfer, Piceance Basin, Colorado  
Electrical engineering and design for diesel generator fuel storage and transfer.

Sep 2008      **HB Rental**, Mobile Electrical Power Skid  
Electrical engineering and design for portable power distribution skid.

Aug 2008      **Dogwood Energy**, 655 MW Combined Cycle Generating Station, Cass County, Missouri  
Consulting for implementing Automatic Generation Control (AGC)

June-Oct 2008      **Balkan Energy**, Osagyefo 160 MW Barge Mounted Electrical Generating Station, Ghana, Africa  
Consulting engineer for control systems upgrade and commissioning.

Mar-Sep 2008      **ConocoPhillips TLQ**, Temporary Living Quarters, Piceance Basin, Colorado  
Electrical Engineering for stand-alone diesel generator power system and power distribution.

Jan-Mar 2008      **Climax Molybdenum**, Water Decant Structure, Leadville, Colorado  
Electrical engineering and design for power distribution and lighting.

Apr-May 2007      **24-7 Electric**, Vail, Colorado  
Engineering for electrical under-pavement snow-melt

Jun-Sep 2007      **Henderson Mill**, Parshall, CO  
Electrical engineering for mine portal heating system upgrade.

Aug 2006 to  
April 2007      **Redbud Energy**, 1080 MW Combined Cycle Generating Station, Luther, OK  
Control Systems Engineer responsible for tuning and ABB Infi-90 DCS configuration changes to incorporate automatic generation control (AGC) and remote setpoint control for two separate energy markets. I also provide consulting services for NERC CIP compliance. Much of the work was done remotely through secure virtual private network, until the plant removed all remote access due to FERC regulations.

Nov 2005 to  
July 2008      **CEMEX**  
Consultant performing technical forensics and evaluation of emissions monitoring for 11 U.S. cement plants.

July 2005      **Caravan Inn**, Glenwood Springs, Colorado  
Lighting design and photometrics plan for parking lot.

Aug 2003 to  
June 2004      **EGE Itabo**, Santo Domingo, Dominican Republic coal fired power plant  
Consulting Engineer providing tuning and modifications to the Bailey Infi 90 DCS. Most of the work was done remotely via broadband Internet VPN (Virtual Private Network) connection.

Dec 1998 to  
Jan 2000      **SITHE ENERGIES**, New York City, NY  
Project Manager for Y2K Project team. The team provided oversight for 4 phases of Y2K Readiness and developing contingency planning guidelines.

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Sep-Oct 1998	<b>TOMAHAWK TRUCK STOP</b> , Laundromat Electrical engineering and design for laundromat addition
Jan-Jun 1998	<b>SITHE ENERGIES</b> , Samutprakarn Cogeneration Co., Ltd, Thailand <u>Consulting Engineer</u> : Instrumentation and controls design review for the 120 MW Bangpoo Energy Facility
April 1997 to Aug 1998	<b>OPERATIONAL ENERGY CORPORATION</b> , Vermont Wood Gasification Project, Burlington, VT <u>Controls Engineering</u> : Configuration changes and additions, systems integration, loop checks, HMI modifications, logic and controls verification, tuning, CAD drawing changes, and tag database for Bailey Infi 90 DCS with LAN-90 PCView HMI and Allen-Bradley SLC 5/03 and 5/04 programmable controllers. Installation and development work on Wonderware InTouch HMI and Industrial SQL Real-Time Database Server and Client Tools.
Feb 1996 to Mar 1997	<b>TRANS ALTA ENERGY CORPORATION</b> , 115 MW Combined Cycle Cogeneration, Auckland, NZ <u>Senior Engineer and Startup Manager</u> assisting project management in coordinating engineering and construction activities. Performed electrical engineering review. Represented owner in factory acceptance testing of substation equipment. Managed the plant startup and personally commissioned several mechanical systems and DCS controls. Worked two months following commercial operation to tune and enhance the Bailey Infi 90 DCS controls.
Jan 1996	<b>SITHE ENERGIES, INC.</b> , 77 MW Combined Cycle Cogeneration Plant, Greeley, CO <u>Consulting Engineer</u> contracted to complete report to Public Service Company of Colorado for use in system stability analysis, update electrical distribution drawings, and modify Bailey Net 90 DCS controls.
May 1994 to Jan 1996	<b>SITHE ENERGIES, INC.</b> , Independence Station 1000 MW Combined Cycle Cogeneration, Oswego, NY <u>Owner's Representative</u> performing design review of plant electrical and controls systems, interpret and enforce compliance to specifications, write specifications and administer work for installation of data acquisition systems and network interfaces, identify deficiencies and application problems, review electrical 1-lines, 3-lines, and electrical system protection, and provide liaison between owner and contractor for startup activities.
Aug 1993 to April 1994	<b>LG&amp;E POWER SYSTEMS</b> , 80 MW Rensselaer Combined Cycle Cogeneration Facility, Rensselaer, NY <u>Startup Manager</u> contracted for management, control, and technical direction for startup of the plant consisting of a Westinghouse 251 Gas Turbine, Mitsubishi Steam Turbine, Zurn HRSG, Westinghouse WDPF Distributed Control System, and Allen-Bradley PLC5 burner control system.
Feb-Aug 1993	<b>SITHE ENERGIES, INC.</b> , 1000 MW Gas Fired Combined Cycle Cogeneration Facility, Oswego, NY <u>Consulting Engineer</u> for design review of Piping and Instrument Diagrams, control systems, and electrical distribution systems.
Nov 1992 to Feb 1993	<b>UNIVERSITY OF COLORADO</b> , 35 MW Combined Cycle Cogeneration, Boulder, CO: <u>Control Systems Consultant</u> contracted to identify deficiencies, program, and configure changes for Bailey Infi 90 Distributed Control System. Developed data acquisition and reporting program for monthly billing on gas turbine maintenance contract, which is temperature and load dependent.
April 1992 to Oct 1992	<b>OEC DIVISION OF ZURN/NEPCO</b> , 55 MW Combined Cycle Cogeneration, Batavia, NY <u>Control Systems Startup Engineer</u> contracted for loop checks, configuration and logic verification, debugging, tuning, and commissioning of the L&N Max I Distributed Control System and various changes to Allen-Bradley PLC5.
Jan 1992 to April 1992	<b>HYDRA-CO OPERATIONS INC.</b> , Imperial, CA: <u>Consulting Engineer</u> contracted for systems integration and programming of a remote data acquisition and remote troubleshooting system interfacing with a Bailey Net 90 Distributed Control System.
Aug 1991 to Nov 1991	<b>DUKE/FLOUR-DANIELS</b> , Solvay, NY: <u>Startup Consultant</u> , Debugged, configured, and tuned a Bailey Infi 90 Distributed Control System on an 80 MW Pulverized Coal Fired power plant and resolved deficiencies in the protective relaying for the plant electrical systems.
Nov 1989 through March 1993	<b>SITHE ENERGIES</b> , 50 MW Coal-fired CFB Cogeneration, Port of Stockton, CA: <u>Controls Engineer</u> contracted to correct control systems deficiencies for lime feed, coal feed, ammonia, ash handling, loop tuning, and enhancements on an L&N Max 1 Distributed Control System and Allen-Bradley PLC2. Provided electrical and controls design for plant modifications, including installation and programming of Programmable Logic Controllers for ash handling additions and coal conveying, and programming for a custom emissions data acquisition and reporting system. Provided consulting on as-needed basis for protective relay problems, electrical distribution problems, and remote data acquisition.
July 1990 Sep 1990	<b>ULTRASYSTEMS ENGINEERS AND CONSTRUCTORS</b> , Jasmin, Poso, and Rocklin, CA: <u>Electrical Startup Engineer</u> for checkout of generator and synchronizing systems. Synchronized three 25 MW cogen plants.. Coordinated with the utility for interconnection requirements.
June 1989 to Nov 1989	<b>GENERAL ELECTRIC</b> , 25 MW Wood-Fired Generating Plant, Burney, CA <u>Control Systems Startup Engineer</u> contracted for checkout, commissioning, tuning, and configuration changes on a Bailey Net 90 Distributed Control System for a 25 MW wood burning plant startup.

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June 1989	<b>GENERAL ELECTRIC</b> , Stanford University, 50 MW Combined Cycle Cogeneration <u>Electrical Engineer</u> Corrected instrumentation installation problems for 50 MW combined cycle plant.
Oct 1988 to April 1989	<b>GENERAL ELECTRIC</b> , 2 13 MW Biomass-Fired Fluidized Bed Generating Units, Merced, CA <u>Control Systems Startup Engineer</u> contracted for testing, commissioning, tuning, and debugging for two Bailey Net 90 systems and various PLCs at the El Nido and Chowchilla biomass cogeneration plants with fluidized bed boilers.
April 1988 to Sep 1988	<b>GENERAL ELECTRIC</b> , 25 MW Wood-Fired Generating Plant, Redding, CA <u>Control Systems Startup Engineer</u> contracted to test, commission, and tune the Bailey Net 90 DCS and other plant equipment and controls.
Sep 1987 to March 1988	<b>GENERAL ELECTRIC</b> , 25 MWe, 450 KPPH Steam Cogeneration Plant, Scotia, CA <u>Control Systems Startup Engineer</u> contracted for Bailey Net 90 DCS checkout, configuration, controls tuning for 3 wood-fired boilers and 2 turbine-generators owned by Pacific Lumber Company.
March 1987 to Aug 1987	<b>BABCOCK AND WILCOX</b> , 2 27.5 MW Wood-Fired CFB Generating Plants, Maine <u>Control Systems Engineer</u> contracted for startup testing, tuning, troubleshooting, and modifications for the Bailey Net 90 controls for twin plants in West Enfield and Jonesboro, Maine.
June 1987	<b>ULTRASYSTEMS</b> , 25 MW Wood-Fired Generating Plant, Fresno, CA <u>Electrical Startup Engineer</u> . Performed checkout and utility coordination to synchronize the generator.
July 1986 to Feb 1987	<b>ULTRASYSTEMS ENGINEERS AND CONSTRUCTORS</b> , West Enfield and Jonesboro, Maine <u>Lead</u> <u>Electrical Startup Engineer</u> . Supervised startup engineers and performed systems checkout for turbine-generator, Bailey Net 90 controls, PLCs, and other systems and equipment for two 27.5 MW wood-fired, CFB boiler power plants. Calibrated/tested protective relays. Coordinated with utility for interconnection requirements.
Mar-Jul 1986	<b>ULTRASYSTEMS ENGINEERS AND CONSTRUCTORS</b> , Chinese Station, CA <u>Lead Electrical Startup Engineer</u> for Chinese Station 25 MW wood-fired fluidized bed plant. Supervised startup engineers and performed checkout and 1 <sup>st</sup> sync of the generator.
Nov 85 – Feb 86	<b>MIDCONTINENT COAL AND COKE</b> , Glenwood Springs, CO <u>Consulting Engineer</u> : Economic study for electrical upgrades, Mid-Continent Resources, Inc., Redstone, CO.
April 85 to Sep 85	<b>ULTRASYSTEMS ENGINEERS AND CONSTRUCTORS</b> , Blue Lake, CA <u>Lead Electrical Startup Engineer</u> . Performed checkout, testing, and commissioning of 60 KV substation, 15 KV and 480 V switchgear, 4160 V starters and motors, protective relays, boiler, turbine-generator, and controls for an 11 MW wood-fired power plant, on contract for Ultrasystems, Blue Lake, California.
March 75 to April 85	<b>STEARNS-ROGER CORPORATION</b> , Denver, Colorado, working assignments as follows: <u>Lead Electrical Startup Engineer</u> Supervised electrical plant start-up and performed checkout and testing on turbine-generator, switchgear, motors, and boiler control systems for the following plants: PUBLIC SERVICE CO. OF COLORADO 450 MW coal fired Pawnee Power Plant, Brush, CO UTAH POWER AND LIGHT 450 MW Hunter Power Plant and Scrubber, Castledale, Utah. <u>Startup Engineer</u> : Tested and commissioned turbine-generator controls and protection, 24 KV generator breaker, protective relays, digital control system, generator synchronizing, and mechanical systems. COLORADO UTE ELECTRIC ASSOCIATION 450 MW coal fired Yampa Power Plant, Craig, CO. <u>Electrical Startup Engineer</u> : Tested and commissioned motors and controls, precipitator, ash system, extraction steam controls, annunciator, and logic system. UTAH POWER AND LIGHT 410 MW coal fired Huntington Power Plant, Huntington, Utah. <u>Resident Engineer</u> in charge of quality control, field engineering, and procurement review for following: KENNECOTT Copper Smelter, Hurley, NM CHEVRON Carter Creek Gas Plant, Sulfur Recovery Plant modification, Evanston, Wyoming COORS Aluminum Mill, Ft. Lupton, Colorado UNION OIL COMPANY Shale Oil Project, Parachute, Colorado EXXON Shale Oil Project, Parachute, Colorado <u>Electrical Design Engineer</u> , power and controls design and engineering for several projects
July 73 to March 75	<b>MARTIN MARIETTA CORPORATION</b> <u>Microwave Antenna Test Engineer</u> : tested antennas for Mars Viking Mission and defense projects.