Oil & Gas Systems Design Co. Overview – 2017

Midstream Technical Consulting and Operator Training

Started in 1985, OGSDC (OGS) is the dba of Ordes Inc, a Wyoming based Corporation since 1998, now operating out of Nampa, Idaho (since 2014). The owner and president is Donald D. Ordes, a Wyoming resident from 1976 to 2014, & formerly of New Orleans. It is a client & project-oriented technical services & consulting company, offering project technical assistance across the broad spectrum of midstream endeavors. Although the services offered are mainly for the oil and gas production and processing industry, other industrial and technical fields have also been served. From preliminary feasibility drawings and design assistance to P&ID development to nuts-and-bolts field drawings in all disciplines, OGS is a source for any department in any capacity.

OGS is geared for fast response and quick turnaround, providing design and training services that have been rated by the customers as the “the best there is”. The goal is always to provide timely, accurate, professional service. The attached documentation from satisfied customers defines a track record of success.

The strength of OGS results from long experience working with engineers, clients, owners, operators, vendors, specialists, project managers, and then add a natural talent for visualization and for design-draft of the visions. Along with 41 years background in plant and gathering engineering & design in all disciplines, plus project management, shop fabrication, field installation and operations oversight, Don also has a technical illustrator’s hand in presenting information in drawing form. Free-hand 3D design sketches, schematics, and charts are great for initial communication and organization of ideas, and help to keep a project on a fast track.

You are cordially invited to investigate Oil & Gas Systems Design Company for your technical and operations support requirements, whether they be complete projects or partial turnarounds, technical assistance for ongoing engineering, troubleshooting, review, construction, Geo-flows, or operator training. Please contact Don directly if you have any questions.

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Services – 2017:

Oil & Gas Systems Design Company offers a wide range of services covering industrial, gas processing, oilfield and mining applications. With over 41 years’ experience in oil & natural gas production and processing, OGS offers expertise in all areas of engineering, design, shop fabrication, and field installation, along with operations assistance. A resume is available upon request. For projects requiring the services of registered engineers, or for stamped documents, OGS will co-ordinate with registered professional engineering associates (or client’s) who will perform the required services & stamps, thus providing a complete package.

Although OGS specializes in gas plant design and installation, Don also provides project design review services, along with customized operations training seminars uniquely adapted to plant and field operations that offer introductory operator training and advanced operator process training, aimed at increasing safety and overall efficiencies. OGS customized training seminars have been rated by the operators and their management as the highest quality available. Many times these services overlap into customized troubleshooting/training projects, or support documentation such as Geo-flows. These seminars are thus highly customized and focus on process & industry understanding, safety, teamwork, planning, and individual and group advancement. See the operator training section for more information and reference letters from Dwight Schneider - a full-custom seminar client.

Services Available (depending on work load an availability):
- Project design management & coordination, construction supervision, customer liaison
- Midstream Operations troubleshooting- re-design & turnaround assistance.
- Drone-assisted field data-gathering, inspections, visual presentations
- Packaging/Purchasing assistance, quotes & bid preparation
- Design application/evaluations
- Process applications/evaluations
- Skid & equipment package design & inspection services
- Plant and systems as-builts, operations P&IDs, Geo-flows, and Plot Plans & Maps
- Inspection Services Management
- Field & Construction Purchasing, Procurement, Contractor Management
- Turnaround and start-up document assistance
- Project photographic & video records, photo, videos, drone assisted where required
- Design Specification generating

Training Courses: (For midstream operators, supervisors, & support personnel)
- Motivation & Career Advancement (Topic #1 in all schools)
- Fundamentals of Hydrocarbon Processing
- TEG Dehydration
- Straight Refrigeration Gas Plants
- Fractionation Plants
- Amine Plants
- Gas Compression-Plant/Field Reciprocating –process end
- Gas Gathering & Production Facilities
- Plant Design and Data Coordination, Overall Evaluation/training Process Schematics
- Blueprint reading all disciplines, Plant Book training
- Coal Bed Methane Surface Facilities

Major Innovative Design or Patent Credits:
- Sulfa-check 4-stage High-efficiency Contact Vessel
- Coal-car Pre-wet/Topper Spraying Station Prototype
- Dockside Ship Unloading- Initial Gantry Design Prototype
- Casper City Garage- All Mechanical/Civil Design
- Coal-bed Methane Compressors and Pod Production Unit Design- Proj. Mgr./Designer
- Hewlett Packard Valve Distribution Box Manifold Standard Designs for national use.
- Custom Exhaust Support Design for Waukesha Engines
- Custom Exhaust Cooling System for Generator Station/Compressor Station Engines
- Custom application equipment for many customers
- Unique operations-oriented GEO-FLOWS for overall plant/facility/system flows.
Background & Capabilities Summary - 2017

Personal History:
Donald D. Ordes founded Oil & Gas Systems Design Company (OGS) in 1985 and incorporated it in 1998. He has 43 years’ experience overall with 42 years in plant design with 35 years in project management. He has background in all phases of mechanical/civil design, mostly in oil and gas processing. While with Darenco, Mr. Ordes served for over 9 years as Senior Designer, Supervisor of Design (over 8 designers and 2 modelers), Project Design Manager and Assistant Operations Manager (3 gas plants). He started OGS as a continuation of the engineering services of Darenco when, in 1985, Darenco finally closed its doors due to the energy bust of the early 80’s. Since that time, Mr. Ordes has been able to provide services to many different industries due to his diverse background at Darenco and previous positions in the construction trade, such as welding and mechanics. Don has an Associates Degree in Technical Design and was Valedictorian for his class.

Areas of Project Experience:
- Engineering/Design, Contracts, Procurement. Fabrication, Construction, Management
- Quotation assistance for equipment and services
- Supervision Services, Customer Liaison, QC Services, Operations Management
- Straight refrigeration plants
- Fractionation plants
- Compressor stations- Recip., Screws, Blowers, Refrig. & Gas
- Coal Bed Methane Surface Facilities
- Amine plants
- Sulfur plants
- Sulfacheck units / iron sponges
- Oil refineries
- Gathering systems / pipelines
- Well head / separation equipment / dehys
- Waterflood / injection / disposal / filtration units
- Waste oil treatment
- Generator stations
- Materials Handling and Industrial Design
- Architectural Support

Document Support Capabilities: (con-current & post-engineering functions)
- Design or Drafting (Autocad 2017) performed in support of other functions as required
- Design/Review services in all disciplines other than electrical

- P&ID development and review / flow sheets / charts / GEO-FLOWS
- Plot plan / site design / review, mark-up, assistance / specialty operations plans
- Civil design / concrete / structural design, review, mark-up, assistance
- Mechanical design / review, mark-up, assistance
- Code pressure vessel design / draft. (ASME Section VIII)
- Piping design / review, mark-up, assistance
- Skid packaging / review, mark-up, assistance
- Architectural design / review, mark-up, assistance
- Contract writing assistance (for gas plants) with respect to codes and equipment specifications, limitations, scope, etc. Time-chart assistance
- Specification development / review, mark-up, assistance
- Instrumentation / control logic and automation design
- Scheduling / estimating
- Technical illustrating/ working drawings by hand in field
Clients and Projects - INDEX:

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Field Installation - Plants and Equipment:

OGS has been providing field installation design assistance since its first project. Services vary with the project and needs, but many times services are packaged and multi-faceted. Technical assistance can be combined with QC, chief inspection, client representation, construction oversight, purchasing, and project management services.

Customers and Projects: (does not include all the minor projects for long-term clients)

Alta Mesa Holdings: Consultant Designer/ Operator training (2015)
Mark Jaggers, Phil Negron, Jennifer Kent


Greentown Gas Plant (Delta Petroleum/Arista)- 25mmcsf/d refrig. plant Proj. Eng. assistant, process design review/packaging & purchasing + field design Construction Oversight, Chief Inspector, Manager of Electrical Inspector Field Project Manager/Customer Liaison, Storage & Loading Design/Purch.
c(303)692-9133, o(303)807-1308

Energy Systems: Complete P&ID Package RMOTC Facility

Devon Energy: Water-flood pump building & piping package- Riverton Dome Production Unit Design- Pilot design solution for problem application.

EnCana Oil & Gas: Andy’s Mesa- Consulting Design/Troubleshooting, operator training. Frenchie Draw- Field piping consulting

Berry Petroleum: Provided design package similar to Bear Paw’s Production Unit

Bear Paw Energy: Consulting Design/Project. Mgmt., Purchasing, Packaging:
Project Manager/Designer/Purchaser- 40 Screw compressor packages
Project Manager/Design/Purchaser for 8 Production/Meter Skids (photo)
Beaver Creek compressor package design **
Beaver Creek booster compressor station installation design
Baker gas Plant Inlet Gas Compressor Installation design

Anadarko Pet.: ** - Consult: Project Mgmt., purchasing, engineering, design, procurement for Salt Creek Plant Process Skid Upgrade project- new chiller, sep., piping, controls. Labor Supervision/assist. In-place project. See Before/After Photos.

Howell Petroleum: Operator Training/Consulting Project Design/Fabrication:
- Troubleshoot/fine-tune amine system at Salt Creek Gas Plant. **
- Conduct amine reboiler burner rebuild and refractory repairs
- Assist with fine-tuning the Amine System to work with present conditions.
Double Eagle Pet: **Consulting Project Designer/Purchasing/Field Supervision:
- Coal Bed Methane Facility. Assist Facility Engineer in all endeavors. 
  Oversee engineering, design, bidding, purchasing of 15 coal-seam gas well-head 
  production units. 2 TEG Dehydration Packages, & H2O Injection Plant. 
- Oversee installation of ground-mounted H2O injection plant, piping design. 
- Tech. assistance, design, purchasing, for $6 mil. CBM Facility- Baggs, WY

Hewlett Packard: **Standardized Utilities Design & Valve manifold boxes design/ piping packages for 
ultra-pure wafer mfg. systems at the Harmony Road facility in Ft. Collins. Adopted as HP Std.

Environmental Oil Services, Inc: Total mech. detail design and drafting- prototype waste oil refinery 
installation, Nampa, Idaho. P&ID’s, Plot Plans, skid, fabrication, installation, vessels, civil.

Darnell Engineering:
  Granger 100 M^2CF Gas Plant - Original entire plant installation design **
  Echo Springs Plant 120 M^2CF Cryo Facility - Complete Civil pkg. plus on-site design & 
  drafting - piping / mech. ** Field Construction Assistance

Sinclair/Little America: Ongoing refinery upgrade projects- design/drafting for last 7 years

TIC: Field assistance- spool drawings and weld map spool location iso’s. Minn. Corn Refinery

Gary Energy: Sulfach- check sweetening system- OGS proprietary design.

Western Gas Resources: **
  Teddy Roosevelt Plant: 
  - 4MW Generator package- mechanical design (Brink project), construction assist. 
  - Exhaust package design for above with customized support design and heat control. 
  - Amine unit #3 skid redesign 
  - Plant compressor package design assistance

  Kitty Plant: - General facility upgrades 
  - Y-grade introduction design / implementation assistance 
  - Plant automation design and installation- total pkg. 
  - Plant Process Operations Training Seminar (#1) ***

Compression Specialties:
  Reinstallation of OGS Sulfach system from Wasatch Gas Plant

KEMCO: 20M^2CF refrig. plant installation design, / A/B reprogramming

Woods Petroleum: Waterflood installation design assist. / drafting

Brink Electric: 4 MW Generator installation- mechanical/civil design assist. / drafting 
  Automation design/assist w/ logic diagram (for above)

Dynes, Myrick, & McClain Architects: Provided mechanical, civil, & architectural packages for the 
  Casper City Garage and the Casper City Wave Pool
Beavercreek Booster Compressor
**Skid Packaging Services:**
OGS offers complete skid packaging services, including but not limited to:
- skid layouts
- legends and equipment lists
- structural steel skid details
- piping isometrics w/materials
- vessel orientations
- vendor co-ordination-vessels & equip.
- pump pedestal design
- pump / driver packages
- shop drawings
- sales drawings
- Project Management/Purchasing
- expansion calcs. & piping designs

**Customers and projects- skid packaging:** (for vendors and owners)

**Power Service:** **Over 100 completed projects** consisting mainly of skid package design services for production pumping units: water disposal, polymer, filtration, injection.

**Falcon Pump and Supply:** Over 25 completed projects consisting of complete skid package design services for production pumping units: water disposal, filtration, injection, etc., and many pump pedestal projects.

**High Country Fabrication:** Skid packaging services for Amoco Austin Creek and for the Deopropanizer addition at the Granger Plant- 2 skids.

**Energy Equipment and Supply:** Air compressor skid packages, Instrument Air Comprs.

**National Supply:** Production pump packages: water disposal, filtration, injection

**Maxus Oil:** Customized meter and multi-choke manifold skid design

**Darnell Engineering:** Many skids provided for plant installations- Granger and others **

**Commercial Building Systems:** Pump skids for patented topper and pre-wet systems for coal car spraying system at Gillette coal mine.

**JW Williams:** Process skid designs

**NATCO:** Waste oil plant process skid designs, many heater-treater designs, misc. tanks & vessels

**BEAR PAW Energy:** Screw Compressor packaging oversight as PM, purchasing, materials control, and design. 39 units – Cat drive and electric motor drive designs. **

**Bear Paw Energy:** Production Unit/Slug catcher housed skid design, project management, and purchasing. Oversee fabrication as QC. 15 units fabricated. **

**Huber Energy:** Design/Project Manage Production Unit/Slug catcher design & fabrication QC. Provided design for 2<sup>nd</sup> larger production unit. **

**Double Eagle:** Design/Project Manage 13 Production Units for Compressor installation. Design Dual Quintuplex Water Injection Skid for National Oilwell to fabricate. **
Gas Plant Design & Installation Projects:

With the Darenco background of dozens of gas plants designed and installed, OGS has been able to offer plant design and installation assistance.

Customers and projects:

*Delta Petroleum/Arista Midstream Services/Huzyk Energy Management Services:*
  20mmscf/d refrigeration gas plant + compression installation assistance
  See Field Installation Section and photo below

*Anadarko/Howell Petroleum- Salt Creek Plant*
  Process Skid upgrade
  Reboiler Fire-tube rebuild.

*Double Eagle Exploration*
  12mmscf/d<24mmscf/d coal bed methane compressor station, pipelines, injection pump packages, tank batteries, dehy, manifolds, compressors.
  Assistant to Project Engineer

*Darnell Engineering:*
  Granger Gas Plant: Complete turnkey design for original plant installation.
  Echo Springs Cryo Plant: Complete civil project contract, along with field piping design assistance.

*Knight Equipment Co.*
  Installation design of Darenco built 20mm refrigeration plant.

*Environmental Oil Services, Inc.*
  Equipment and installation design of Waste Oil Refinery (Thermal Cracking Pilot Facility)

*Sinclair/Little America Refinery- Casper.*
  Numerous refinery turnaround projects.

Delta 'Moab' Greentown Gas Plant in Progress - 2008
Many project photos available.
Operations Assistance Pkgs. (Geo-Flows):

An OGS innovation (1987) has been the implementation of the operations assistance packages, consisting of documents drawn up especially for operators. A facility flowsheet is prepared after verifying all P&ID's to existing equipment. This flowsheet matches geographically the plot plan location of all process and support equipment.

Following is a list of drawings included in a typical OA package:
- **Facility geographic flow schematic** - as described above
- **Update plot plan** - verify survey w/wheel, adding legal descriptions from property surveys.
- **New safety map** based on plot plan showing the following as required:
  - fire extinguishers - quantity and type
  - eye wash stations
  - breathing apparatus locations - mobile and stationary
  - hearing protector stations
  - hazardous area classifications
  - emergency start/stop stations
  - emergency evacuation routes
  - plant monitors
  - other items as required
- **Underground piping plan** - based on plot plan, shows existing underground piping
- **Underground conduit plan** - based on plot plan, shows existing conduit routing
- **Other systems-specific flow diagrams and charts** as required.

Customers and projects for field document packages: (*Geo-Flows)

**Alta Mesa/Northwest Gas Processing**
- Hwy 30 Gas Plant*
- Little Willow Production Facility*

**Western Gas – North Dakota:**
- Teddy Roosevelt Plant*
- South Richland Station*
- Alexander Compressor Station*
- Stenehjem Compressor Station*
- Dolphin Compressor Station*
- Mystery Creek Station*
- TR Station
- Bakken Station
- Temple Gas Plant*
- San Juan River Gas Plant*
- Dimmick Lake Plant
- Richland Station
- Fryberg Booster Station

**Western Gas – Montana:**
- Baker Gas Plant*
- Fairview Plant*

**Western Gas – Wyoming:**
- Kitty Gas Plant*
- Granger Gas Plant*
- Red Desert Compressor Station
- Blue Forest Station
- Fontinelle Station

**Interenergy:**
- Lignite Plant P&ID package consolidation/re-draft

**Amoco:**
- Ryckman Creek Facility As-builds from scratch
ASME Code Vessels:
OGS provides post-engineering code vessel design/drafting/review services, on your code format or ours. OGS will take all engineering and application information to finalize a code vessel or sketch for submitting to fabricator. OGS can also handle the bidding/selection/purchase/inspection/shipping functions.

Customers and projects:
Delta: Pressure vessel design (4) and purchase, quote management
Anadarko: Provide pressure vessel/chiller designs for process skid upgrade
HICO: Provide pressure vessel and tank designs on an ongoing basis
Double Eagle: Code vessel and tank designs- coal bed methane proj.
Hettinger Welding: assist with getting ASME Code Stamp.
TIC- Assist with getting ASME Code Vessel Stamp
NATCO: Provide pressure vessel and tank designs on an ongoing basis
JL&Sons Welding: Pressure vessel designs.
Bear Paw Energy: Code vessel designs
Huber Energy: Code vessel designs
Stewart Stevenson: Pulsation bottle designs/gas compressor
Wyoming Fabrication: Code vessel and tank designs
Gagon Bros.: Pressure vessel and tank designs.
               Coal Bed Methane manifold and receiver- phase 1
Automation Projects:
OGS has provided automation design services, along with suggestions for optimizing plant control. OGS specializes in bridle design for multi-point instrumentation controls and shut-downs.

Customers and projects:

Western Gas:
Kitty Plant re-control and automation- provided total project assistance for automating and controlling the fractionation process. Provided specifications and AFE’s to operations department, obtaining quotations on all equipment and services to purchase and install computer, software, end devices, and connections. Provided AFE to purchase and install a gas chromatograph for product sampling.

KEMCO:
Allen/Bradley reprogramming for 20mm refrigeration plant.

Environmental Oil:
P&ID Instrumentation and logic development
Shutdown logic diagrams
Interface with automation contractor

Mountain Fuel Sulfur Plant – 1980 Claus Beds
Documentation Projects - OSHA 1910:

OGS has provided review and as-built document redrafting and upgrading services to fulfill the requirements of OSHA 1910.

Customers and projects:

Western Gas:
  Green River Compressor Stations:
    Blue Forest
    Fontenelle
    Lincoln Road
    Storm Shelter
    Fabian Ditch
  Williston Basin Region:
    All plants and stations in Williston basin
    Fairview Plant
    Baker Plant

Amoco Production Co:
  Ryckman Creek Facility- Site Drawings, operations assistance package, field sketch from visual verification all P&ID's and then draft up in Autocad (Advantage).
  Field surveyed plot plan, sketched, then Autocad drafted.

Intrenergy Corp.:
  Lignite Gas Plant- All new P&ID's drafted in Autocad, verified with operators, plot plan and operations assistance package.
**Compression Projects:**
With the Darenco background and dozens of compressors packaged and installed, OGS has the experience to provide design, re-design, review, and co-ordination services, either of single packages or entire stations.

**Customers and projects:**

**Double Eagle Petroleum:**
Project Management, purchasing, field assistance of 3mm recip gas compressor replacement with installation.

**Bear Paw energy:**
Project Management, design, purchasing, fabrication oversight of 39 coal seam gas screw compressors, with Cat. and electric motor drives.

**Bear Paw Energy:**
Beaver Creek Booster Station: Compressor package redesign and installation design.

**Bear Paw Energy:** Baker Plant New Inlet Gas Compressor- Installation design/piping tie-ins.

**Double Eagle Petroleum:** Field assistance of 6mm recip gas compressor installation.

**Western Gas:**
Plant compressor at Teddy Roosevelt Plant
Stenehjem Compressor Station Assistance
Several compressor station upgrades

**Darnell Engineering:**
Two Ingersol-Rand HHE Propane compressors at the Green River Plant
One I/R HSE booster compressor at the Green River Plant

**Compression Specialties:**
Joy 2-stage package design
Various packages for Air Drilling
Package for BM&G Drilling

Methane gas plant inlet compressor
Electrical and Power Generation:

OGS has provided Autocad electrical drafting services in the past. Currently, electrical review and electrical inspection services are handled by OGS through an associate Master Electrician & Inspector.

Customers and projects:

Brink Electrical Construction Co.
Mule Creek Plant electrical drawing package
Midkiff Plant general electrical drawing package
Teddy Roosevelt Generator Station mechanical design & electrical drawings
Misc. electrical drawing packages

Power Service
Misc. production skid electrical drawings

Concrete Unloading Vacuum System - Seattle - Designed layout and structural applications, plus all ladders and platforms, Q.C. design/fabrication/installation.
See letter from Cyclonaire, Steve Wiley STILL THERE & OPERATING - Check Google Earth
Mining and Industrial:

OGS has provided top-notch mechanical design/review/co-ordination services to many industries unrelated to the oil patch.

Customers and projects:

Minnesota Corn:
- Project Assistance for Piping Installation at Corn Refinery:
  - Drafted a 3D weld-map for pipe routing and P&ID component placement, plus
  - Establishing work locations for welding and pipe assembly efficiency.

Commercial Building Systems:
- Coal car spraying station design assistance and drafting service
  - Designed patented articulated spray boom for topper and pre-wet systems.
  - Designed site layout, building layout, and skid layouts

Cyclonaire:
- Consultant designer throughout Lonestar Seattle / Docksider gantry mounted ship unloading system for bulk loose concrete:
  - Designed initial gantry layout
  - Designed all initial skid layouts
  - Consulted on code hopper vessels and piping
  - Consulted on structural steel to eliminate loading arm shear moments
  - Designed all ladders and platforms

M&M Welding / Wyoming Fabricators:
- Provided mechanical design / drafting services: (retired)
  - Bridge steel shop drawings
  - Design calcs. for DOT tanker truck trailers

Dienes, Myrick, and McLain, Architects:
- Mechanical consultant for the following projects:
  - Casper City Garage Facility: architectural and mechanical design consulting
  - All heavy and light vehicle lift and hydraulics design
  - All service lube facilities: pump room design, piping, reel banks
  - All underground bulk liquid storage tanks
  - Fuel dispensing station
  - Vehicle exhaust ducting system
  - Overhead crane design and all jib crane designs
  - Mechanics’ bay layouts
  - Structural steel details
  - Concrete details
  - Casper City- Paradise Valley Wave Pool- Initial design (downsized later for lack of city funding)
    - Pump room mechanical design
    - Graphics design / front sign design
    - Misc. architectural, structural, civil, and mechanical drawings
Civic and Misc.:

OGS has provided design and drafting services for Casper projects as follows:

Customers and projects:

Dienes, Myrick, and McLain, Architects:
Mechanical consultant for the following projects: (see industrial section for details)
- Casper City Garage Facility: architectural and mechanical design consulting
- Casper City Wave Pool: civil and mechanical

Watchtower Bible and Tract Society (Jehovah's Witnesses):
Provided complete architectural packages for the building of two Kingdom Halls - including site, floor plan, foundation, electrical/lighting plan, utilities, systems floor plans, HVAC, elevations, renderings.
- Casper Kingdom Hall
- Cheyenne Kingdom Hall
Provided all site preparation and civil design for Lander, Wyoming Kingdom Hall
(all were constructed in only 4 days on pre-cured slabs)
Architectural stamp was provided by Arthur C. Volk, PE
Photos taken after complete skid overhaul w/75% equip./piping replacement

SALT CREEK GAS PLANT
PROCESS SKID UPGRADE
2004 OIL & GAS SYSTEMS DESIGN CO.
Photos taken before overhaul @ 20% efficiency

SALT CREEK GAS PLANT
PROCESS SKID UPGRADE
BEFORE PICTURES
CBM SLUG-CATCHER AND METERING SKID (PRODUCTION UNIT) (WITHOUT BUILDING)

CBM SLUG-CATCHER AND METERING SKID (WITH BUILDING)- Bear Paw Energy- Chris Conley **
OGS Training Seminars:

A well-received extension of the field operations consulting services offered by OGS has been the Operator’s Process Training Seminars. (See client letters and class evaluations) This was not intentional but an outgrowth of services rendered. Constant improvements over 18 years have made this a first-rate seminar, with levels of customization not offered by other training companies. These schools are not engineering schools, but basic applied design taught on a non-engineering level.

These schools have enabled operators to relate to the processes involved at their facilities and so have specific goals in mind for trouble-shooting, diagnosing, correcting, and optimizing. Plant documents are incorporated into the format, with additional simplified documents drafted as necessary for presentation during class. All seminars are taught at the level of the operators in a comprehensible, ‘low-tech’ manner. Given the nature of these seminars, they have all paid for themselves with the subsequent corrections of problems due to the troubleshooting nature of the school. Also included is an introduction with a motivational discourse. Although this was an unintended area of service for OGS, the excellent results are based on many years of plant design, working with engineers, & instruction and supervision of non-degreed draftsmen and operators. Please contact OGS if you would like more details on the seminars. Students receive certificates upon completion, and get to keep their class binders.

Seminar Methods and Goals:

- Tailor each seminar to suit the specific needs of the operators, plant or field.
- Custom design each seminar based on the particular equipment being operated.
- Teach seminar at a comprehensible level for the operators, both beginners and veteran.
- Incorporate existing facility documentation into seminar outline, instructing in document research, reading, and interpretation.
- Draft new documents as required as visual aids suitable for operators.
- Incorporate special OGS visual aid techniques into documents to aid operators’ comprehension and retention, and later review.
- Teach Hydrocarbon Processing, not at engineering level, but at practical applications level for understanding principles.
- Organize operators to be systematic, goal oriented, and coordinated in approaching troubleshooting and daily operations.
- Teach operators to operate as a team in rectifying problems or optimizing.
- Establish a foundation of knowledge that daily operations builds upon.
- Leave school visual aid handouts with operators for refreshing and assisting others.
- Teach trouble-shooting based on operator’s equipment, at the same time establishing solutions to many daily problems.
- To instruct in a motivational format, establishing operator job responsibilities and his role during entire seminar.
- Involve operators in discussions at all times. Allow open discussion & Q&A sessions.

Cont’d.
-Submit questionnaire to operators to establish levels of knowledge in particular areas to be submitted anonymously to the conductor only. Tailor the seminar to these. Tests can be based on these and the outline.

-Have evaluation questionnaires filled out by each operator- for company files.

**Operations Training Seminars to Date:** (By date)

**Alta Mesa Holdings:** Hwy 30 Gas Plant- Process and Dehydration- 2015, Plant, Dehy, Compression, Process Basics 15 beginner operators, 3 engineers, project & plant managers

**Power Engineers:** General Midstream Presentation all areas- 2014, Midstream Industry Overview- Plant, Dehy, Compression, process basics -16 engineers & designers,

**Anadarko Petroleum:**
- Green River/Vernal dehy Operations – Process Fundamentals & Dehydration- 2010
  Two 2-day advanced - 44 (experienced) field/plant operators

**Anadarko Petroleum:**
  Six 2-day beginner and advanced schools  70 field operators

**Anadarko Petroleum:**
  Two 2-day advanced - 33 (mostly veteran) field/plant operators

**Delta Petroleum:**
  Two-day/two-group semi-customized seminar.  17 field operators

**EnCana Oil & Gas:**
- Lisbon Gas Plant – Process, Dehydration, Amine Sweetening- 2005
  One-day comprehensive seminar, minimal customization.  8 plant operators

**EnCana Oil & Gas:**
- Andy’s Mesa Gas Plant- Process & Dehydration- 2005
  One-day seminar, minimal customization.  5 plant operators

**Western Gas:**
- Green River Field Operations and TEG Dehydration/BTEX/ Hydrates- 2005
  Two two-day advanced customized seminars. 22 operators (See Dwight’s letter)

**Western Gas:**
- Green River Field Operations and TEG Dehydration/BTEX/Vapor Recovery-2003
  One day advanced seminar. Attendees from Double Eagle and Energy Equipment.

**Western Gas:**
- Gillette Area Field Operations Dehydration Training Seminars-2001-
  Two advanced customized 1-day schools.

**Western Gas:**
- Green River Field Operations and TEG Dehydration/BTEX/Vapor Recovery/Controls-2000
  Advanced Refresher Course with additional on emissions, JW Williams BETEX unit, and controllers.

Cont’d.
Howell Petroleum:
Salt Creek Plant operations Refrig. Fractionation, P&ID Interpretation-1999-
Beginner/intermediate/advanced customized 3 day school.

Western Gas:
Oklahoma Area Field Operations Dehydration Training Seminars-1999-
Beginner/intermediate/advanced non-custom 2 day school.
Gillette Area Field Operations Dehydration Training Seminars-1999-
Beginner 2 day school.
Intermediate 2 day school.
Advanced One-Day School.

Amoco Production Co.:
Salt Creek Training Seminar-1992-12 plant and field operators plus designers, engineers, and area manager, beginner to 30 years experience. Customized with troubleshooting.

Western Gas:
Green River Area Field & Plant Operators Training Seminar-1995-Two 3-day seminars - 22 operators from beginner to 40 years experience - plant operators from Granger, Red Desert, and Lincoln Road, plus field operators, mechanics, supervisors, and others.
Gillette Area Plant and Field Operations Training Seminar-1991-15 operators from beginner to 20 years experience - mechanics, operators, and supervisors. (Kitty)
COMMENTS FROM CUSTOMERS- OPERATORS & SUPERVISORS:
Some samplings of operators’ comments taken from course evaluations filled out at end of course:
(These are mixed courses, process, refrigeration, fractionation, dehy.)

“His answers made a lot of sense and were put in such a way that they were real informative.”

“Out of all the schools & seminars that I have been able to attend so far, this has been by far the best format and informative of all.”

“We get used to looking at certain areas when troubleshooting. This course helped get me to thinking about some areas I wasn’t considering.”

“Anyone involved with dehys should attend. When a question was asked, it was thoroughly answered. ...a relaxed atmosphere.”

“Don is easy to learn from…easy to understand…easy to retain information.”

Q: What helped the most?

“It was the troubleshooting list.” “I found the instructor easy to understand and informative.”

“Talked on my level.” “Explained in simple enough terms to understand.”

“The instructor was very good in explaining questions. Very good drawings and color-coded sheets which were very helpful.”

Q: Did this course meet your expectations?

“Yes! Don Ordes did a thorough job of explaining, through the use of visual aids as well as a simplified method of lecture.”

“I believe the seminar was invaluable and would like to see more of the type.”

“The instructor always asked if there were any questions and if subject was clear to them. Course was not boring. Instructor kept students’ attention. ...Excellent.”

“Yes- the color-coded prints were excellent and explanations given helped me to visualize the process.”

“On a scale of 1 to 10, I would definitely give it a 10+ rating.”

“All questions were evaluated and answered in a quick manner. Instructor was very knowledgeable and cooperative.”

“I would highly recommend this course to anybody who would want to learn more about gas processing at the field level. This course was designed for field people.”
**Q: Would you recommend this course to other employees?**

“Yes. And I would like to see a course on our plant (Highlight).”

“The entire class was well planned and carried out.”

“It was great. I also learned a lot from employee discussions during the class.”

Field Foreman: “Yes- Tailored to the specific facility they work in.” “Excellent. Course was taught at the level of the field employees. Covered basics and site specific to the Salt Creek Facility.”

“Great! It was worth every penny…”

Plant Manager: “Because of your process school, Frank began to learn and think and question everything we did to the extent of uncovering most of our processing problems. It is my opinion that this is what can happen when operators are ‘turned on’ by a well-designed process school such as the one you provided for the Salt Creek Gas Plant operators. The operators that used the information you provided made a significant change in the plant operations and eventual upgrade.”

**Area Operations Manager- 10-year training overview:**
(brief selected comments from long letters)

1996: “Considering how everything has turned out, it is my belief that Don offers some of the best training available in the industry today for operations personnel.”

2000: “Within days after the seminar we saw positive results at the Granger Gas Plant...the online dew point dropped 25 degrees, and since then we have seen the lowest dew points we have ever seen at the inlet of the plant. I attribute these results directly to Don’s dehydration seminar.”

2006- 10-year assessment:
“After Don’s first school our water dew points from the field went from an average of 12 pounds to a manageable 6 to 8 pounds (even more after his refresher course). Our hydrate issues of course decreased dramatically. This in turn helped out in decreasing gas losses for the systems. Although it wasn’t part of the training I asked Don to do, the best thing he added was teaching these operators how to work with each other. Don emphasized that team work was critical, and in such a fashion that a number of these employees started working better with our producers and more importantly with each other.”

(Complete evaluation letters available)(27 seminars to date)
EXCERPTS from CLIENT LETTERS of RECOMMENDATION:
(Complete letters are available in .pdf format)

“Delta Petroleum and Arista Midstream were partners in the 25MMscf/d Greentown plant outside of Moab. They were my clients. I designed and built it for them. I was project manager and project engineer. Don Ordes was the piping designer and field engineer*. If you need help I can’t think of anyone better to work with. He has a wide range of knowledge and worked seamlessly with me, the civil and electrical engineers, the construction company and the client’s field people. You just can’t do any better than Don.”GPS Sponsorship Memo, Sandra Huzyk, PE

*I have a complete list of job duties that I performed for Sandra for this project. Please request if interested.

“Don’s ability to coordinate engineering information from professional engineering disciplines into details design drawings has contributed to successfully completed projects too numerous to list. Don is one of the most knowledgeable, competent, conscientious and honest individuals that I have met in the industry.” Frank Kettlewell, Construction Consultant

“It is indeed rare to find an individual who can complete an engagement with such flawless performance- from working with our internal staff to cooperating and coordinating with other subcontractors (such as the structural engineer), to execute a top notch work product. Not only was the quality and timeliness of your work technically excellent, but your desire to understand and accommodate our needs was also outstanding.” Steve Wiley, Project Manager, Cyclonaire

“Don’s background in contracts, project management, design, engineering, and drafting, combined with shop fabrication, field installation, and operations co-ordination allows him to provide excellent technical services to the construction portion of a contract. I would highly recommend Mr. Ordes to anyone seeking cost effective technical support.” Stan Reeves, Construction Manager, Darenco Inc.

“Don’s background in process and plant design, shop fabrication and field installation is very helpful on projects like this, as he can lend an experienced hand in many areas of the contract.” Bob Brady, P.E. (Project document/photo summary is available for this project.)

“There are a number of reasons why I would recommend Mr. Ordes and some of the main reasons are as follows:
1. I have found him to be completely honest and conscientious in the work he performs.
2. He has an excellent understanding of the design characteristics involved in the oil & gas equipment business, particularly related to the gas processing industry.
3. When you consider quantity and quality of actual performance, I have found Mr. Ordes to be far ahead of what is available on the market place on a contract basis.” Quinton Darnell, Sr. Owner, President (*Project photo summary is available for this project - 100 MMscf/d Granger Gas Plant- WY)

“Don was hired by Bear Paw to head up the manufacture of 200hp screw compressors for Bear Paw’s Powder River gathering systems. Don managed the entire operation from design to procurement to manufacturing and kept costs within the estimates.” Chris Conley, P.E.

“We are very happy with the finished project (process skid re-build – see photos), as it was completed in a very reasonable amount of time (11 days total down-time) and started up without incident. The process continues to run the best it ever has and stays on line.” Bruce Roberson, Craig Straughan - Salt Creek Gas Plant Supervisors

“Williams Field Services has had the opportunity to use the services of OGS as a sub-contractor to our general contractor (Darnell Eng.) for civil/concrete drawings for the Echo Springs Plant. We are pleased with the
“Over the years of my industrial experience I have never encountered an individual engaged in the work of technical drafting who was as fast and efficient as Don Ordes. Combining his skill with a wealth of knowledge in the areas of process technology, fabrication codes and procedures, engineering design, and maintenance requirements allows Mr. Ordes to provide a broad-based package of services.”  Ted Abrams, Area Manager, Western Gas Processors

“Don has the speed, accuracy, knowledge, and motivation to accomplish the design and installation of any piece of gas processing equipment and he has established a very respectable track record...”  Floyd Hawley, Darenco, Inc. Operations Manager

“Beyond his drafting and technical skills, which are outstanding, I have been impressed with Don’s organizational and management ability. During the time he was responsible for the design/drafting department, the productivity of that department was exceedingly greater than I have seen in any industry.”  Dick Lauritsen, Darenco Inc. Chief Engineer and Supervisor @ Darenco Inc.

**Operator Training Reviews: Gas Plant, Dehydration, Compression, Amine Unit +**

“I was immediately impressed with the commitment, integrity, honesty and genuine desire Don had to put on the school. Today the rewards are showing up in the results of what he taught the operators. The fieldmen all felt that although last year’s class was good (a major competitor’s), Don’s class far surpassed anything they had been to in the past.”

“The reviews from the operators on this class were excellent. Not only were their written reviews very high, the operators themselves kept mentioning for weeks to follow how much the course had helped them. They have taken what they learned in the classroom and used it in their day-to-day operations.”

“This was probably the best training success I have experienced in 30 years in the business! I attribute it to Don’s unique teaching style- making it simple and fun for the students to learn. If you are seeking results-based training- Don’s customized course will deliver.”  Dwight Schneider

“I had one operator that took literally everything you taught to heart. Because of your process school he began to learn and question everything we did to the extent of uncovering most of our problems. It is my opinion that this evidences what can happen when people are ‘turned on’ by a well-designed process school such as you provided...”  Jim Trantham

If you would like to see the complete record, please ask.
Customer Contacts: (Starting Most Recent)

* Denotes you are welcome to call this reference
** Denotes that a reference letter is in the letters section
  *** Denotes that there is information in the training references section and a reference letter from this client.

Jesse Lafferty- Prev. Client 30 years, Casper fabrication co. owner, Toromont, Enerflex, retired.

Sandra Huzyk P.E. Huzyk Energy Management:
* Contact and project engineer for the Delta Petroleum/Arista Midstream Services Greentown Gas Plant, 20mmscf/day refrig., Green River, Utah
Phone #: Off. Denver, CO: (303) 692-9113

Tim Pimmel- Meritage Midstream

Troy Person- 3Bear, Denver Prev. Training Seminar, Ft. Lupton - Anadarko/Kerr McGee

Chris Conant- Anadarko Inventory & Assets Manager

Dwight Schneider:
* *** Operations Manager- Encana Gathering Ser., Rifle, CO Office. Contact for training Seminars. (See letter(s) if attached.)
Phone #: Off (970)250-8114

More upon request.
Sample Drawings- Autocad and Hand Sketches:

Don learned drafting old school at college (1972) and applied his life-long art talent to drafting and became an accomplished technical illustrator/draftsman, graduating 1st in his class. Over the years, he had used this talent in many and various ways to assist in design and project communications at every level, from concepts to field equipment layouts and piping spools. Don progressed from lead to ink to finally Autocad in 1990. He was determined to be as fast in Autocad as he was in hand drafting, and accomplished just that. An ink-on-mylar pump-skid package consisting of a P&ID, layout & piping, structural steel skid, and piping spools, took Don 3 days to complete the For Construction issue. After getting grounded in Autocad, the same package drawn electronically took the same amount of time. Don accomplished this with uncompromising accuracy at 100%.

Every part of Don’s work in Projects, Management, and Equipment Sales is benefitted by being able to communicate words and ideas in quickly hand-drawn visual formats, most times in a 3D format.

Please request from the list below what drawing samples you would be interested in seeing, and OGS will send new attachments to this addendum.

- **P&IDs and Flowsheets, ‘GeoFlows’**
- **Plot Plans, Fire & Safety Maps**
- **Piping and Skid Layouts, Piping Spools**
- **Pressure Vessels, Heater Treaters**
- **Concrete & Steel**
- **Technical Illustrating**