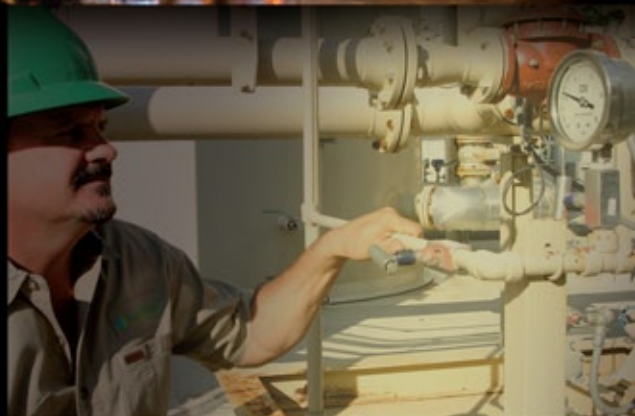




*UNMATCHED SOLUTIONS.  
BUILT FOR TODAY'S MARKET.*



**Amine Treatment  
Glycol Dehydration  
Oil Stabilizer Systems  
Refrigeration & Dewpoint Control  
NGL Recovery & Fractionation  
Custom Engineering  
Custom Fabrication  
Construction & Operation  
Pre-Engineered Stock Plants  
Equipment Supply**



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(432) 563-0447

The conventional midstream gas treating division of  **MORROW**  
ENERGY



"Agile is manifesting a business philosophy that heralds personal character and integrity, putting people first whether customer or employee. This requires a very holistic approach to each individual relationship and/or project. Our relationships, as well as the work we produce and the ways we produce that work, are the "bricks" in our business structure - and they are hardened with an unwavering commitment to excellence and integrity on all levels."



Agile Executive Team



## *The Past, Present & Future of Gas Treatment Process Design and Plant Manufacturing*

Agile Process Solutions, LLC is a new type of oil & gas treatment plant and equipment supplier, focused on service integrity, accuracy and high-end craftsmanship in customized oil & gas treatment solutions. Our years of experience in the business have taught us that quality, integrity, dependability, adaptability and over-the-top client services create LONGEVITY – not only with your finished product, but with our relationship. With Agile, you are so much more than just another project.

Agile is an experienced leader in oil and natural gas processing plant design and manufacturing. In collaboration with Morrow Energy, Inc., we design, construct, sell and lease/operate custom and stock plants for amine treatment, glycol dehydration, oil & condensate stabilization, physical solvent treating, and NGL recovery (dewpoint control) and fractionation. Agile is also capable of producing a variety of specialty processes.

Agile Process Solutions was formed to best meet the diverse needs of today's oil and natural gas producers and midstream operators. We are the culmination of over 100 years' combined experience in engineering and plant design/manufacturing/operation for wellhead and midstream oil and gas treatment, specializing in the fields of mechanical, process and chemical engineering. Our principals have operated several well-known service companies in the industry and have operated treating facilities with greater than 97% average runtime performance over a 5-year period.

Combining our practical knowledge with the latest technologies, Agile occupies the market space between majors and start-ups – financially independent, internationally active, nimble and capable enough to handle a broad variety of oil & gas processing plant projects from concept to operation.



## Natural Gas Processing Products & Services

Natural gas processing involves converting original wellhead gas into a saleable product by removing contaminants and/or excess BTU. Wellhead gas typically contains excess water, CO<sub>2</sub>, H<sub>2</sub>S, or needs to be formed into liquid and vapor products to reduce BTU in the gas phase.

Whether you are an independent oil and gas producer, a midstream operator or major in need of a supplier, or a private interest -- Agile manufactures, sells, leases and even contract operates the plants and units that remove water, CO<sub>2</sub>, H<sub>2</sub>S, and separate (fractionate) liquid and vapor products to meet pipeline specifications.

Many of our new plants are also available in stock and can be modified and delivered upon the client's request and specifications. Our treatment facilities can be located where there is one well, or where multiple gas streams are gathered for proper treatment before reaching the pipeline.

Formerly SouthTex Treaters, Agile leadership has been innovating in the field of gas processing for over 30 years. The company's extensive operating experience includes ongoing long-term operation of multiple treatment facilities providing compression and treatment 24 hours per day, 7 days per week.

From chemical, electrical and mechanical engineering to plant and process design, equipment supply, fabrication, construction, installation, start-up assistance, tech support and plant operation, Agile Process Solutions has the entire value-chain for natural gas processing and plant construction covered in-house. Agile's licensed engineering staff, top-notch process design, high end automation, quality control and competitive delivery unite with vertically-integrated economies of scale and no-nonsense integrity to create operational efficiencies that are hard to find under one roof.





**AMINE PLANTS**  
**CONDENSATE STABILIZATION**  
**GLYCOL DEHYDRATION**  
**REFRIGERATION/DEWPOINT CONTROL**  
**EQUIPMENT SUPPLY**

Agile Process Solutions counts personal integrity and client satisfaction as its top priorities, maintaining a values-based management system throughout all of its operations. We have:

- A licensed engineering staff utilizing high-end simulators, performing process and instrumentation diagram development, electrical and control design, equipment procurement and manufacture, skid mounting and piping, and site layout
- Gas processing equipment supply (new or reconditioned), with optional ASME modification on all reconditioned ASME code equipment (U1A and drawings available for the majority of reconditioned inventory)
- Capabilities required for plant installation and start up, and contract treating and operation. We offer startup assistance, ongoing technical support and customer service
- Highly skilled, certified and experienced staff capable of operating and maintaining our facilities at maximum output

**AGILE PROCESS SOLUTIONS IS THE  
CONVENTIONAL MIDSTREAM GAS  
TREATING DIVISION OF:**



**OTHER PRODUCTS & SERVICES  
PROVIDED BY MORROW ENERGY:**

- Equipment for removal of trace amounts of H<sub>2</sub>S from natural gas
- Equipment for removal of mercury from natural gas
- Oxygen removal from natural gas
- Purification of landfill gas and biogas to produce pipeline-quality gas
- Contract gas treating & plant operation



Solvent Regenerator

The process used most often for removal of carbon dioxide (CO<sub>2</sub>) and hydrogen sulfide (H<sub>2</sub>S) from natural gas (referred to as acid gas removal or gas sweetening) requires the use of amine gas treating plants. Amine gas treatment utilizes a continuous process wherein acid gas compounds are selectively absorbed from the gas stream under conditions of high pressure and moderate temperature. Conditions in the regenerator area of high temperature and low pressure cause the acid gas compounds to desorb from the amine solution and the cooled solution is returned to the high pressure absorber for removal of additional acid gas compounds.

For gas streams with excess H<sub>2</sub>S and CO<sub>2</sub>, Agile Process Solutions offers custom and pre-engineered amine regeneration skids with available gas train and TEG (glycol) dehydration units for excess water removal. Amine gas treating plants are our specialty and are built from Agile stock designs, or custom built to customer designated specifications.

Stock amine gas treating plants range in size from 60 GPM through 400 GPM and Agile offers design capability for amine treatment plants up to 2000 GPM per train. We work with slab or skid-mounted designs and offer superior site planning and accessibility. Agile Process Solutions has treated as much as 200 million cubic feet per day for clients, and built treating facilities capable of more than a billion cubic feet per day. In its previous incarnation, the company averaged over thirty amine gas treating plants sold per year, along with liquids recovery plants, dehydrators, stabilizers and other related treating and processing equipment.

*For excess CO<sub>2</sub> or H<sub>2</sub>S – Agile offers an amine regeneration skid with gas train, largely skid mounted from Agile stock designs or customer designated design*

*Crude oil stabilization*

*For excess BTU – Agile offers a refrigeration facility largely skid mounted with stabilizer for liquid product*

*For excess water – Agile offers TEG regeneration with gas train*

Agile manufactures hydrocarbon condensate stabilizer units to meet a wide range of output. Many natural gas fields also produce a light hydrocarbon liquid product (condensate) along with the gas. For this liquid to be shipped safely in atmospheric pressure trucks and to avoid high vaporization losses, the liquid is stabilized using heat and a fraction tower to set the liquid vapor pressure within acceptable limits.

Water vapor must be removed from natural gas to prevent pipeline corrosion and mechanical damage to downstream equipment. The most common method for this procedure involves use of TriEthylene Glycol (TEG) in a continuous process, performed by glycol dehydration units, in which the water vapor is absorbed from the gas under conditions of high pressure and moderate temperature. Agile typically provides a TEG regenerator unit with gas train in conjunction with amine treatment facilities. Standalone large TEG systems (1.0 MMBTU/HR and up) can also be provided.

Agile also offers natural gas refrigeration with customized refrigeration plants according to customer specifications. Common applications for Agile refrigeration units include dewpoint control and NGL recovery and fractionation.



Condensate Stabilizer



Amine Reboiler

# Who We Are

Agile Process Solutions is a natural gas treating supplier privately owned by Morrow Energy and Nader Khaki. The company began as SouthTex Treaters in 1986 for the primary purpose of providing contract gas treating services and equipment. In 2011, David, Paul and Luke Morrow sold SouthTex Treaters to Kinder Morgan and created Morrow Energy, continuing their previous landfill gas treatment operations under the name Morrow Renewables. A new office and fabrication facility was constructed to support operations and fabrication of landfill gas process plants. In 2014, Paul and Luke Morrow, and Nader Khaki (former Director of Engineering at KM SouthTex Treaters) formed Agile Process Solutions utilizing Morrow Energy's manufacturing facility and engineering/office personnel located in Midland, Texas.

As a division of Morrow Energy, Inc., the vertical integration of services and economies of scale that Agile offers saves customers time and money, creates a better service experience, and helps Agile preserve quality and integrity in the chain of midstream gas treatment options customers have to choose from.

The founders of Agile Process Solutions have sold hundreds of plants throughout the Barnett, Haynesville and Eagle Ford shale plays, and across Texas. Agile principals have treated as much as 200 million cubic feet per day for clients, and have built treating facilities capable of more than a billion cubic feet per day. Company leadership has over 100 years' combined experience in plant design and LNG plant manufacturing. The company is a member of the Gas Processing Suppliers Association (GPSA), is an IS Network client, maintains a perfect safety record and is actively working toward ISO9000 certification.

*“Agile’s customers benefit from our seasoned operational expertise, refined over years of continuous business expansion across diverse gas treatment platforms, even in the worst of times. As producers and operators seek, now more than ever, the processes and technologies that optimize output while minimizing infrastructure and overhead, the Agile brand and business model stand poised to redefine the ‘value bring’ in global midstream oil & gas processing.”*

**NADER KHAKI**  
**Agile Vice President**



## Principals

Paul Morrow, P.E. serves as President of Agile Process Solutions. He began his career in the natural gas industry as a teenage worker in facilities construction en route to degrees in both chemical engineering and a Masters in business administration. Paul's duties as president include strategic planning and engineered product management of gas treating equipment. While his experience in gas treatment has been largely "hands-on" and logistics, Paul has managed the design, construction, and operation of numerous gas treating and dehydration systems for not only conventional natural gas but for landfill and digester gasses as well.



Nader Khaki, Vice President and Managing Partner for Agile Process Solutions, received a B.S. and M.S. degree in Control Engineering from UTPB in 1980 & 1988. He has earned a well-known reputation as an electrical and control systems engineer with twenty+ years of design, project management and startup experience in the oil and gas industry. He joined SouthTex Treaters in 2006 and continued his career in electrical and process systems design. He served as Director of Engineering and Sales for SouthTex Treaters (Kinder Morgan) from 2012 through 2014 with high regards from clients and Kinder Morgan Management.



Luke Morrow, Agile Principal with focus on Morrow Renewables, received his B.S. in mechanical engineering from Texas Tech University in 1993, and his MBA from Texas Tech University in 1994. He has over 16 years of experience in gas treating, marketing, and landfill gas gathering. Luke was instrumental in designing the first cow manure-to-pipeline gas plant of its kind in the world in 2006 during his tenure at SouthTex Renewables. Under his leadership, the company acquired a patent on carbon dioxide (CO<sub>2</sub>) stripping of pre-treat solvent, and two patents pending for deeper stripping of solvent to achieve higher methane purity in sales gas.



David Morrow, P.E. currently serves as lead consultant for Agile Process Solutions. He received a B.S. in chemical engineering from Texas Tech University in 1968, and a Masters of Engineering degree from Tech in 1973. After school, David worked for Shell for several years, then for Rexene and Perry Gas. He co-founded Wilson Gas Processing in 1978, and later started SouthTex Treaters with a project for Texaco.





Agile is built around a highly competent and licensed engineering staff offering many years of experience in site layout and plant design. To this end, our staff utilizes 3D modeling software and printers, high-end simulators, process and instrumentation diagram (P&ID) development and rigorous design protocols to create the safest and most efficient solutions available for piping layout, electrical and process control systems design and routine, high-output plant operation.

As operators ourselves for several decades, Agile designs around its own operational knowledge, and our top engineering team objective is always to provide each client with a custom engineered natural gas processing plant solution most appropriate for their production criteria and constraints.

### **The Gas Plant Engineering Process**

The beginning stages of natural gas processing plant engineering consist of meeting with the customer/client and determining their demands/needs for the type of plant that will best suit the type of recovery and refining required. From the early stages, a

preliminary PFD (process flow diagram) and P&ID will be discussed, reviewed, and a rough draft will be composed and submitted to the client for review. After multiple markups and revisions, and a final approval from the client is reached, the early stages of modeling the plant begin. Usually, longer lead items are first considered, so pressure retaining vessels are normally first priority.

Next, calculations are required for reconciling several factors in relation to overall plant design. Temperature, pressure, flow rate, seismic activity and wind velocity are accounted for and need to meet specific requirements to be considered good practice. After the right factors are met, the natural gas processing plant design process begins, utilizing all of our in-house technologies to achieve the most efficient package design possible that meets all given restraints.

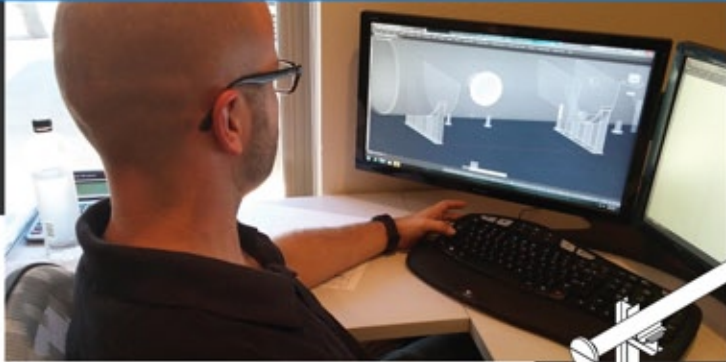
Once Agile and the client are both satisfied with design, the fabrication, construction and testing process begins, all performed on site until the client's plant is disassembled and packaged for transport.

**PROCESS SIMULATION**

**3D PRINTING & MODELING**

**PROCESS & INSTRUMENTATION DIAGRAMS (PFD, P&ID)**

**3D CAD & ISOMETRICS (VESSEL DRAWINGS)**

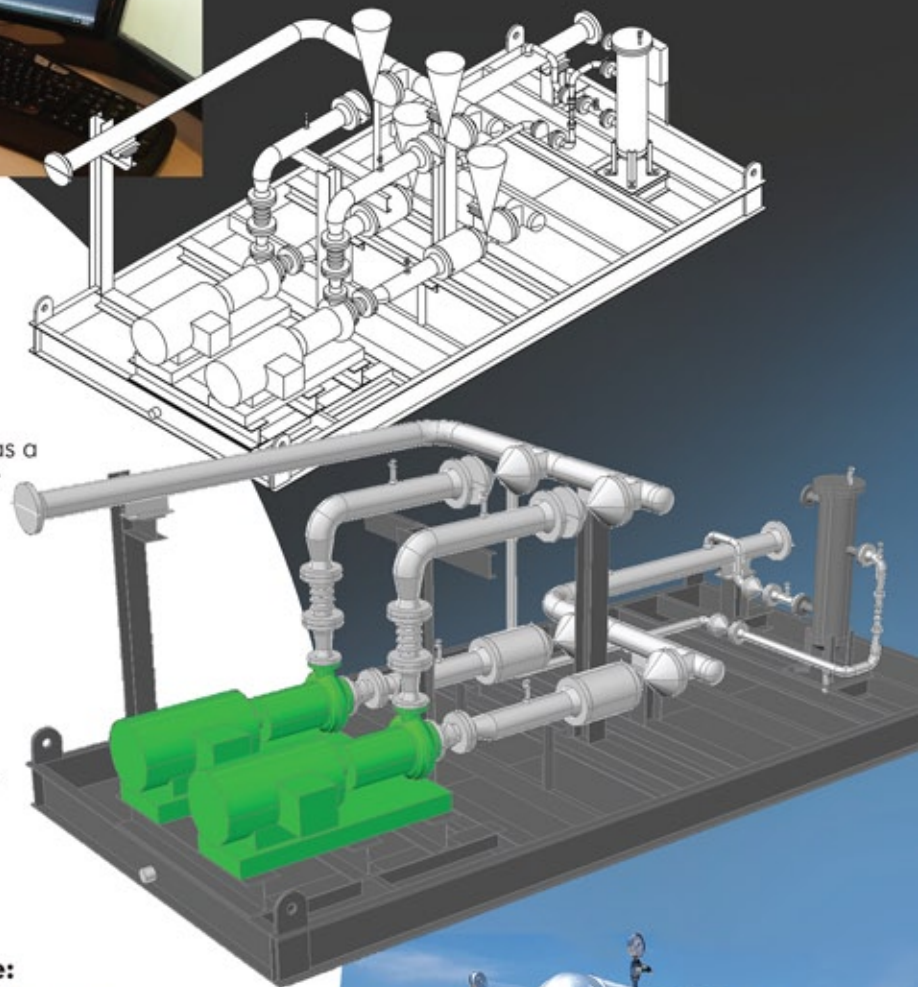


Unlike other natural gas treatment engineering firms, Agile Process Solutions has full in-house manufacturing capability and does not charge a separate "design fee" for these services. It is our sincere belief that, as a natural gas processing plant provider, efficient plant design should be a given. While stock gas processing skids are engineered to exacting standards, some changes are usually required to optimize plants and skid mounted units for each client's unique production variables.

Additional engineering services required to achieve gas treating process refinement for each individual client have been built into our manufacturing process as a routine component of offering the highest value and dependability in natural gas treating and oil & gas separation plants and equipment.

**Pre-engineered plant designs include:**

- NGL Extraction with capacities from 30 to 200MMscfd
- Mechanical Refrigeration options up to 100MMscfd
- Dewpoint Control with flow rates up to 35MMscfd
- CO<sub>2</sub> and H<sub>2</sub>S Treating with operating capacity from 60-2000gpm amine circulation rates that can handle flow rates from 6 to 300MMscfd





As a division of Morrow Energy, Inc., Agile Process Solutions has full manufacturing capabilities for custom fabrication of oil & natural gas processing plants and equipment. While our specialty in gas processing is the design and manufacture of amine treating plant systems up to 2000 GPM, our state-of-the-art production facility and custom fabrication capabilities manufacture a wide range of chemical and processing plant components, and skid packaged equipment including, tanks, HRSG, reboilers, compressors, separators, heat exchangers, filtration systems, dehydration, and dew point control for natural gas processing facilities.

We adhere to a rigorous in-house quality control policy and all of our equipment is inspected routinely to ensure safety and the utmost quality. Our products are manufactured to meet the standards set by the American Society of Mechanical Engineers (ASME) and the National Board of Boiler and Pressure Vessel Inspectors (NBBI).

### **Equipment Supply**

Agile Process Solutions has a large stock yard of natural gas processing equipment and gas treatment vessels, keeping strategic inventory of key components and employ automated schedule tracking of important details that can cut months off your project schedule.

Agile utilizes only brand new product in its plants, but is also capable of providing reduced-cost refurbishments from its stock yard inventory, all reconditioned equipment ASME code compliant and x-rayed for integrity (UIA and drawings are available). Every component of used gas treating equipment in our inventory can be modified to a customer's preference or plant specifications by our ASME code manufacturing facilities.

### **ASME Coded Vessels**

We are experienced with a wide range of international mechanical, piping, and structural codes and standards used in the gas processing industry including:



- ASME Section I
- ASME Section VIII Div. I
- API 1104 Piping Code
- ANSI B31.1, B31.3, and B31.8 Piping Codes

### **Welding Methods**

- GMAW
- SMAW
- SAW
- FCAW

Agile handles in-house fabrication to service your gas plant production project on any level needed, with top-notch engineering capabilities for seamless integration. Whether in support of a complete natural gas sweetening plant project, oil & gas separation equipment like condensate stabilizer systems, part of a client's turn-key gas production plan, or as a stand-alone service where our contribution is complete with F.O.B., Agile combines process control, quality control, craftsmanship and highly qualified and certified personnel to create the high-end vessels and skid units that bring our engineering concepts to life.



**EQUIPMENT SUPPLY**  
**ASME CODED VESSELS**  
**PRE-ENGINEERED SKID UNITS**  
**PACKAGED OIL & GAS PROCESING EQUIPMENT**  
**CUSTOM FABRICATION FOR COMPLETE PLANTS**



## Construction, Start Up & Contract Treating



Agile Process Solutions, LLC offers gas processing plant construction, startup assistance, ongoing technical support and industry leading time to delivery.

In virtually every case, the system engineers who designed your plant are the very ones to oversee installation of your plant, significantly reducing your time to start up. Leveraging one capable provider for your project from beginning to end can get you running certain processing operations in as little as 90 days.

Agile's parent company, Morrow Energy, Inc., offers midstream gas treating plant operation on contract. Contract gas treating plant operation services involve partnering with a customer in the natural gas treatment process. The client does not have any of the expense associated with building or owning a gas treating plant... they simply opt for a monthly processing fee. Less operating capital is needed since Morrow Energy takes full responsibility for the permitting and construction; maintenance and operations; as well as decommissioning of the plant. Monthly performance reports are generated for clients' convenience, and are utilized to maintain excellence.



### CONTRACT TREATING

- No capital outlay for plant procurement and construction. Producers can drill additional wells rather than invest in a treating plant.
- Ability to expense 100% of contract treating fees versus depreciation of gas processing plant equipment over a long period.
- Guaranteed run-time with financial penalties for lack of performance.
- Employees of treating plant are from Morrow Energy, Inc., trained in amine plant operation.



**EQUIPMENT SUPPLY**  
**CUSTOM ENGINEERING**  
**CUSTOM FABRICATION**  
**PLANT CONSTRUCTION**  
**STARTUP ASSISTANCE**  
**ONGOING TECHNICAL SUPPORT**  
**SPEEDY DELIVERY**  
**LEASE OPTIONS**  
**CONTRACT TREATING**  
**“VALUES-BASED” MANAGEMENT**  
**OVER 100 YEARS’ COMBINED  
LEADERSHIP & EXPERIENCE**

*Let's talk about your next oil & gas  
treating project or supply needs.  
Call Agile today.*



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### Advanced engineering.

Raw talent combines with industry experience across several generations, providing continuous excellence and innovation in chemical, electrical and mechanical engineering. The combined 100+ years' experience of senior leadership increases project efficiency in all phases of project design, shipment and commissioning.

### In-house supply chain.

Agile offers all capabilities required for design, project management, material procurement, fabrication, shipment, installation, start-up, quality assurance and commissioning services for oil and gas process equipment. High safety protocols and operational expertise help to achieve maximum plant performance.

### Carefree gas treatment.

Having operated well-known gas processing companies for over thirty years, Agile leadership has finely-honed the relationship between skilled staff, refined process and client relations to produce some of the highest performing and most dependable processing facilities on the planet. Our objective on every project is making you look good.



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