

RaG

**TURN-KEY
SOLUTIONS**





**TURNKEY SOLUTIONS FOR OIL & GAS PRODUCTION,
PROCESSING, STORAGE AND TRANSFER FACILITIES.**

ABOUT US

**Optimizing capax, simplifying
installation & streamlining
operations**

RAG is a versatile organization with expertise in turnkey solutions for oil & gas production and processing facilities. We offer both standalone equipment and complete process trains, ensuring expedited delivery to help you monetize resources quickly.



OUR SERVICES



01. ENGINEERING

RAG provides comprehensive Engineering, Procurement, and Construction Management (EPCM) services, seamlessly integrating project lifecycle expertise from feasibility studies and conceptual engineering to detailed design, procurement, construction management, commissioning, start-up, and operations and maintenance support.

02. PROCUREMENT

At RAG we consider procurement to be one of our core strengths. Our expertise lies in managing the complete supply chain for EPC projects, ensuring seamless coordination from various global vendors to the final project site. Our experienced procurement managers, expeditors, and logistics team work diligently to maintain strict control over delivery timelines, ensuring smooth project execution.



03.

CONSTRUCTION

RAG has a highly skilled construction team, specialized in mechanical and electrical works. While we manage civil design and construction, local subcontractors under our supervision typically handle civil work depending upon country of project.

04.

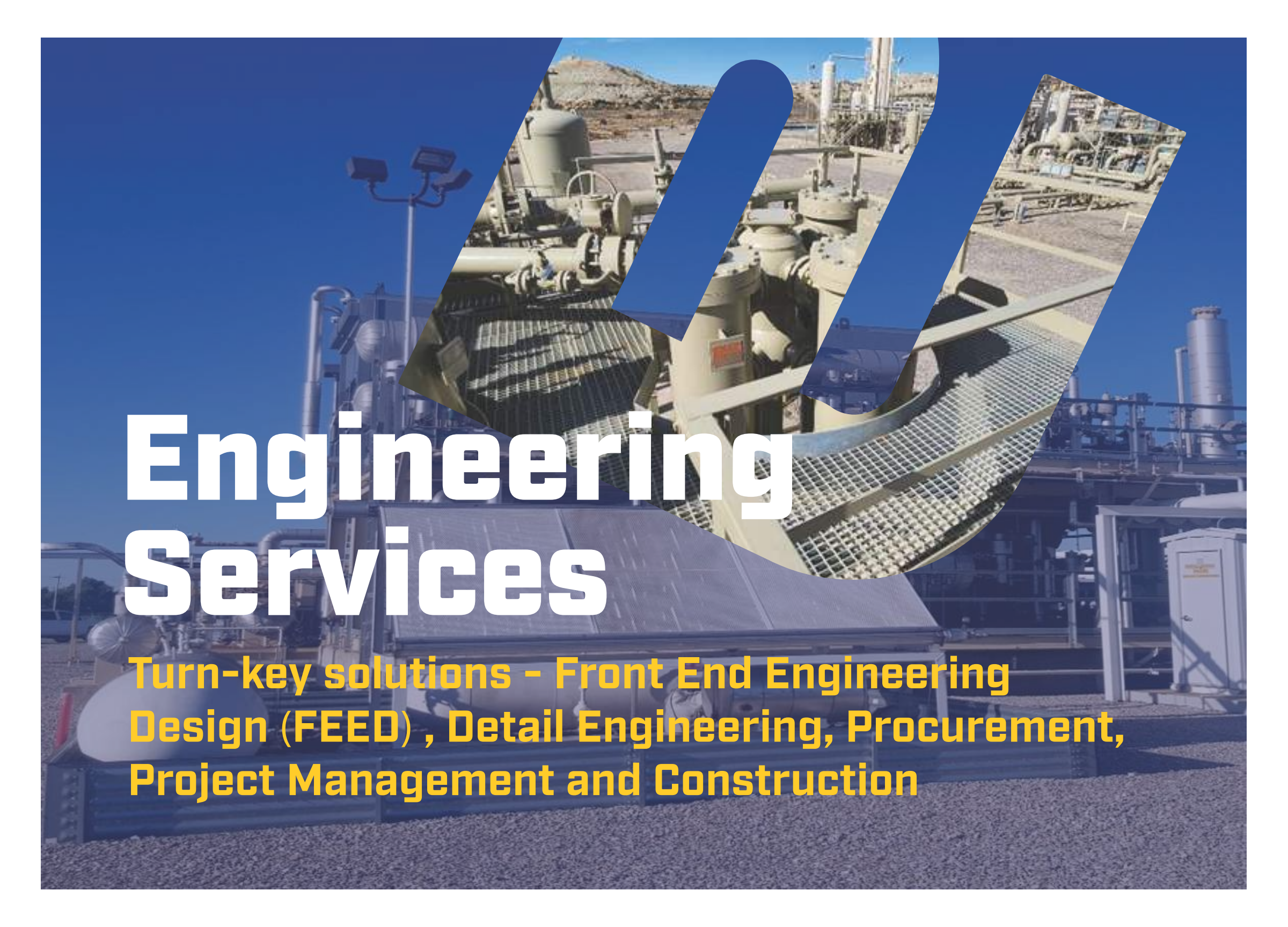
OPERATIONS & MAINTENANCE

We plan for operations early, during the FEED phase, designing plants that require minimal intervention. Our equipment and systems are developed with operational efficiency in mind, reducing long-term maintenance needs.

05.

RELOCATIONS & MODIFICATIONS

RAG Process LLC has extensive experience in relocating large-scale natural gas and LNG plants, including cross-border moves. Our services cover dismantling, tagging mechanical and electrical components, coordinating inland and ocean freight, and reassembling and commissioning at the new site. Additionally, we perform modifications and refurbishments as needed during these relocations.



Engineering Services

**Turn-key solutions - Front End Engineering
Design (FEED) , Detail Engineering, Procurement,
Project Management and Construction**

RAG's project management system enables "ultra-fast track delivery schedules," allowing us to execute projects faster than traditional EPC timelines without compromising on quality or safety.

Our full-service engineering disciplines include the following in-house departments:

Front-End Engineering Design (FEED)

Feasibility Studies

Project Management

Process Design

Mechanical Engineering

Civil / Structural design

Electrical Engineering

Instrumentation / Automation

Design Drafting

Procurement

Construction Management

Quality

Health & Safety

Regulatory Compliance

PROCUREMENT



Over time, we have developed a streamlined procurement system that enables us to procure materials and equipment quickly and efficiently. Our warehousing and consolidation facilities in the USA allow us to optimize logistics, minimizing the need for multiple shipments. This capability has enabled us to successfully ship complete gas processing plants, along with utilities, on-field instruments, pumps, fire and gas systems, start-up spares, and more, as single shipments to end-users.

CONSTRUCTION



RAG Process LLC has a robust construction team specializing in mechanical and electrical works, supported by our expertise in civil design and construction management. While we handle civil design, civil work is typically managed by local subcontractors in the region or directly arranged by the end user.

Our capabilities include:

Fabrication and Installation: Our experienced team, equipped with advanced tools and machinery, efficiently handles the fabrication, installation, and commissioning of facilities, even under challenging timelines.

Specialized Expertise: We have successfully completed numerous construction projects, including gas processing plants, oil loading and storage facilities, compression stations, gas loading and transport systems, and LPG extraction/cryogenic plants.

Commitment to Quality and Safety: Our expert supervisors and technicians deliver projects on schedule without compromising on quality, health, safety, and environmental (HSE) standards.

RAG Process LLC's construction team is dedicated to meeting the demands of each project with precision, ensuring timely completion while maintaining the highest levels of safety and efficiency.

A background image showing industrial workers in a facility. One worker in the foreground wears a white hard hat and a purple shirt, looking towards the right. In the background, another worker in an orange shirt and yellow hard hat is visible near industrial equipment. The image has a yellow-to-blue gradient overlay.

OPERATIONS & MAINTENANCE

RAG designs plants for minimal interaction and efficient operation. For larger facilities, we deploy dedicated operations and maintenance teams to ensure optimal asset care in the field.

At RAG Process LLC, we prioritize efficient plant design to minimize operational requirements.

From the Front-End Engineering Design (FEED) stage, we anticipate the needs of plant operations, creating solutions that require minimal interaction and hands-on management. Our focus on simplicity and automation has led to the successful deployment of equipment that operates with minimal intervention in the field.

For larger-scale plants, we offer a dedicated team of operations and maintenance professionals who can be deployed to your sites, ensuring optimal care and management of your assets. Our goal is to enhance plant performance while maximizing uptime and efficiency.



RELOCATIONS & MODIFICATIONS



RAG Process LLC has extensive experience in relocating large-scale natural gas and LNG plants, including cross-border moves. Our services cover dismantling, tagging mechanical and electrical components, coordinating inland and ocean freight, and reassembling and commissioning at the new site. Additionally, we perform modifications and refurbishments as needed during these relocations.



The background of the slide features a photograph of industrial equipment, including large horizontal storage tanks and a skid-mounted processing unit with various pipes and valves. A large, stylized letter 'W' is superimposed over the image, rendered in a yellow-to-blue gradient. The word 'Solutions' is written in a large, white, sans-serif font across the middle of the image.

Solutions

Based in Houston, specialized in design, engineering, procurement and construction(EPC) of production/processing equipment for natural gas, LPG extraction, condensate/oil stabilization, utilities/accessories. We have designed and supplied various process trains like separators, dehydration, CO₂/H₂S removal (Amines & membranes), reciprocating compressors, mechanical refrigeration units, JT skids, Cryo Plants and utilities. We take your gas/oil analysis and take no time to come up with proposal to your final product specifications. Our plant operating experience enables us to put together standard packages of equipment available in stock as surplus/refurbished units and make them workable for your projects. We can assure you optimum project CAPEX and earliest delivery times so you can monetize your production fast.

**PRODUCTION EQUIPMENT, PROCESS EQUIPMENT,
COMPRESSION**



Separators

RAG gas supplied several 2 phase and 3 phase separators for separation of gas/water/oil. We always keep stock of 36", 42", 48", 56" dia. Brand new/Surplus/Used separators available for immediate deployment. Depending upon your project requirements we can dress it as production separators or as test separator. The production separators are shipped on skids as fully integrated plug & play unit or shipped as loose vessel, accessories, meters, gauges, and instruments for packaging at site. Test Separators can be mounted on trailer or a skid. We can ensure shipment in standard shipping containers to avoid break bulk costs during export.

**MAKING IT SIMPLE - GIVE US YOUR GAS/OIL ANALYSIS
AND LEAVE THE REST TO US**

**COMPLETE GAS TRAINS AND STAND-ALONE EQUIPMENT
ON BUY, RENTAL AND LEASING**



GET FASTEST DELIVERY FOR YOUR PROJECTS WITH INVENTORY OF STANDARD AND SURPLUS EQUIPMENT



DEHYDRATION UNITS

We design and supply TEG and EG based gas dehydration units. We keep stock of 125, 500, 750 and 1500 mmbtu/hr reboilers with contactor of various sizes to provide fast track delivery for earliest gas monetization. We have supplied many new manufactured and standard/surplus/used/refurbished dehydration packages along with contactor towers both bubble cap and packing filled.



AMINE SWEETNING PACKAGE

"WE PROVIDE COMPLETE PACKAGES FOR THE REMOVAL OF CO₂ AND H₂S FROM RAW GAS."

We supply these packages from our select vendors for various ranges of purity levels required and flows. Our standard amine plant offering includes the range from 5GPM to 1500GPM plants. The plants are fully packaged to provide plug and play option. The standard packages have been tested various times and come on expedited/ready-in-stock delivery. Our engineering team helps you from selection to the start-up.



MEMBRANE BASED CO₂/H₂S REMOVAL

For higher CO₂ concentration we provide membrane-based CO₂ removal plants, where residue gas (clean) and permeate (High CO₂) is separated. These systems are designed to cater various process conditions. Contact RAG to provide you with the best selection of pretreatment unit and membrane skids based on your pressure, temperature, CO₂ concentration and required CO₂ level.



SKID MOUNTED JOULE THOMPSON (JT) SKIDS

RAG Process LLC provides skid-mounted Joule Thomson (JT) skids designed to handle gas volumes ranging from 1 to 50 MMcfd. These JT systems, also known as JT skids or JT plants, perform multiple functions: reducing the water dew point of gas, recovering valuable hydrocarbon liquids, and lowering the BTU (British Thermal Unit) of the gas stream to meet sales contract specifications or to levels suitable for high-speed engines.

Process Overview: The gas enters the system and travels through a series of heat exchangers before passing through the JT valve, where it undergoes a pressure drop and cools to as low as -20°F. Liquid fallout is collected in the cold separator and sent to storage tanks, while the cold gas exits the system through the heat exchanger.

Hydrate Prevention: Our standard JT skids come equipped with an on-skid methanol injection system to prevent hydrate formation.

NGL Recovery: The system is specifically designed to recover Natural Gas Liquids (NGLs), which are valuable hydrocarbons that can otherwise cause slugging and corrosion in equipment and pipelines.

Standard Units: We offer JT skids in standard sizes of 2 MMscfd, 5 MMscfd, 15 MMscfd, and 45 MMscfd, providing flexible solutions to suit different operational needs.

RAG Process LLC's Joule Thomson Systems are engineered to maximize the recovery of valuable hydrocarbons, ensuring efficient gas processing and enhanced profitability.



COMPRESSION EQUIPMENT

RAG Process LLC specializes in providing brand new and refurbished compression equipment, offering valuable solutions to enhance your compression projects in terms of budget, time, and execution. We cater to a wide range of needs, including:

Applications: Small wellhead compression, large pipeline gas compression, pipeline pressure boosting, gas gathering, production, gas lift, injection, gas storage, and CNG applications.

Versatility: Whether you require electric or natural gas engine drivers, large or small horsepower units, custom or standardized solutions, we have the expertise to deliver.

Engineering and Fabrication: Our team can engineer, design, fabricate, and assemble compression equipment from our selected facilities in Houston, Texas.

Spare Parts Supply: We also supply a complete range of operating and overhauling spares for engines and compressors to ensure the ongoing reliability of your equipment.

Our fast and efficient solutions can be tailored to meet your specific compressor requirements, ensuring smooth execution and seamless project delivery.



NATURAL GAS LIQUID RECOVERY

RAG Process LLC provides comprehensive solutions for handling Natural Gas Liquids (NGLs), focusing on maximizing the value of these high BTU components. Our offerings include:

NGL Components: We handle heavy hydrocarbons, including ethane, propane, butane, iso-butane, and other higher components that are valuable by-products but unsuitable for natural gas pipelines.

Customized Solutions: We offer tailored solutions for 5-100 MMscfd Joule Thomson (JT) skids, along with additional support equipment like bullet tanks and Mechanical Refrigeration Units (MRUs) to ensure optimal NGL recovery.

Immediate Deployment: Our fleet of JT skids and related equipment is available for immediate deployment to meet urgent project needs, providing flexibility and rapid response.

Turnkey Systems: We ensure that each NGL recovery system is fully integrated and ready for seamless installation, enhancing project efficiency and minimizing operational disruptions.

Our goal is to deliver efficient and cost-effective NGL recovery solutions that maximize your project's productivity and profitability.



H₂S REMOVAL SYSTEM

RAG Process LLC specializes in designing and supplying Iron Oxide Systems (IOS) for the effective sweetening of natural gas. Our systems are engineered to provide efficient removal of H₂S and other mercaptans, ensuring compliance with quality standards. Key features include:

Efficient H₂S Removal: Our IOS utilizes a contact vessel where natural gas reacts with iron oxide media, facilitating the effective extraction of H₂S and converting it into sweet gas.

Versatile Process Conditions: The system is designed to perform efficiently under a variety of process conditions, making it adaptable to different operational requirements.

Cost-Effective Solution: With a low replacement cost for the iron oxide media and straightforward operation, our systems present an economical option for natural gas and biogas sweetening.

Media Bed Design: The contact towers are filled with a media bed of iron oxide pellets that react with H₂S, producing sweet gas and leaving behind water and elemental sulfur as by-products.

Our Iron Oxide Systems are an optimal choice for operators seeking a reliable and efficient solution for natural gas sweetening.



MECHANICAL REFRIGERATION UNITS AND LPG PLANTS

RAG Process LLC offers Mechanical Refrigeration Units (MRUs) designed to effectively control dewpoint and maximize liquid recovery in natural gas processing. These units are used to cool natural gas to meet pipeline specifications and enhance the recovery of Natural Gas Liquids (NGLs).

Capacity Range: We have supplied MRUs with capacities ranging from 2.5 MMscfd to 45 MMscfd, operating at a design pressure of 1440 psi.

System Components: Each MRU typically includes glycol dehydration systems, refrigeration chillers, cold separators, heat exchangers, coolers, and condensate stabilizers.

Skid-Mounted Design: For smaller units (2.5-5 MMscfd), all components are mounted on a single skid to facilitate easy connection in the field. Larger units consist of multiple skids that are designed for straightforward hook-up and integration.

RAG Process LLC's MRUs are engineered for optimal dewpoint control and higher liquid recovery, ensuring efficient performance in natural gas processing operations.



CONDENSATE STABILIZER PACKAGE

RAG Process LLC specializes in providing comprehensive Condensate Stabilizer Packages designed to ensure the efficient stabilization of condensate and the maximization of hydrocarbon recovery. Our Condensate Stabilizer Packages include:

Purpose and Functionality:

Stabilization Process: Our packages are engineered to stabilize liquid hydrocarbons by removing lighter components (such as methane and ethane) to meet pipeline specifications and enhance product quality.

Maximized Recovery: By effectively stabilizing condensate, we help clients optimize their hydrocarbon recovery and ensure compliance with industry standards.

Key Features:

Integrated Design: Each Condensate Stabilizer Package is designed as a fully integrated unit, ensuring seamless operation and efficient processing.

Custom Solutions: We offer customizable designs tailored to meet specific operational requirements, including varying capacities and process conditions.

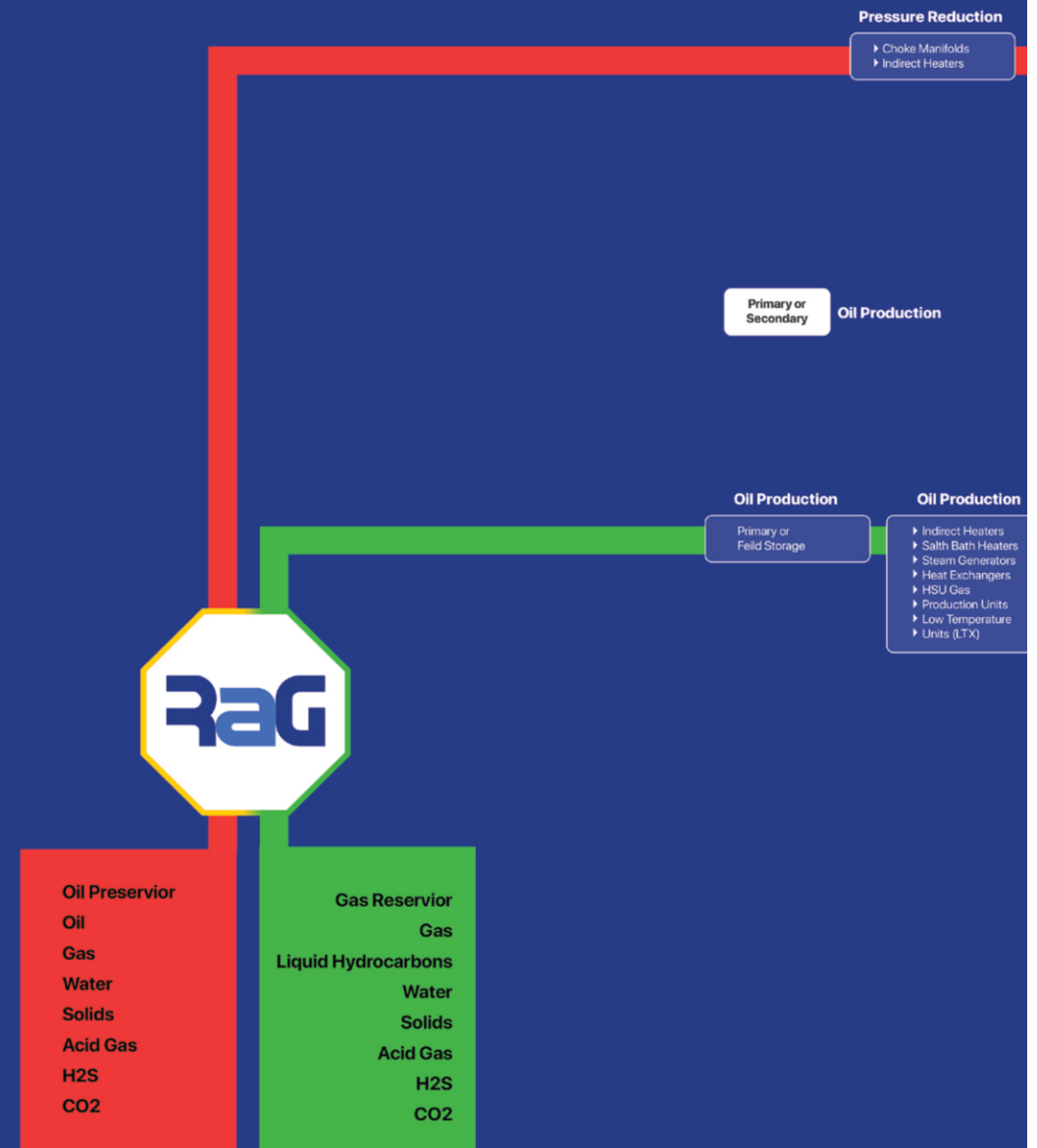
Engineering and Fabrication Expertise:

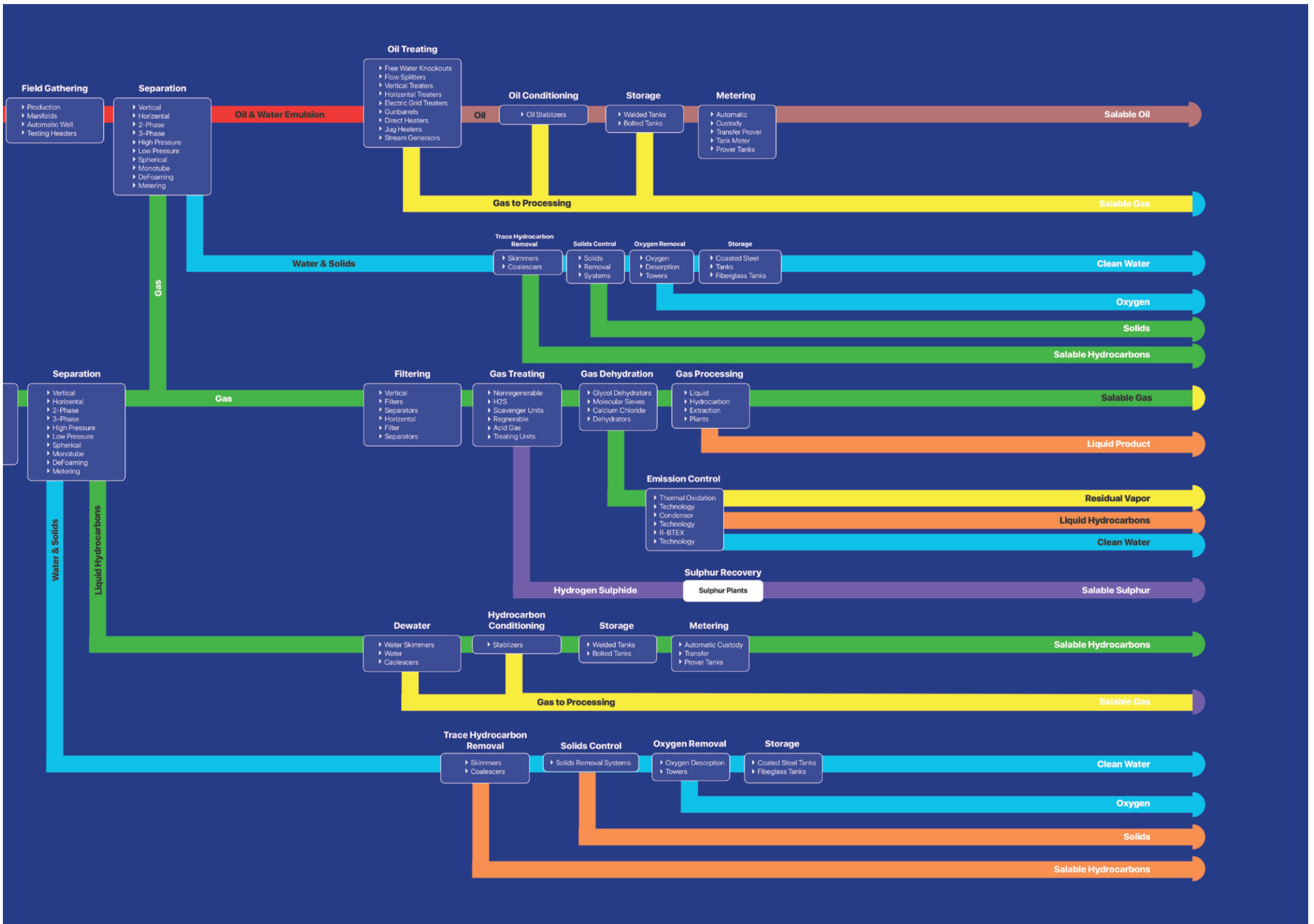
Quality Assurance: Our engineering team utilizes advanced techniques and tools to design and fabricate stabilizer packages that ensure reliability and high performance. **Local Support :** All engineering and fabrication are conducted from our selected facilities in Houston, Texas, allowing for quick response times and local support.

Ease of Operation: Our Condensate Stabilizer Packages are designed for straightforward operation, minimizing downtime and maintenance needs.

Monitoring and Control: We incorporate advanced monitoring systems to optimize performance and enhance process control.

RANGE OF TURN-KEY SOLUTION







UNCONVENTIONAL SOLUTIONS

SMALL VOLUME, LOW BTU,
PERMEATE OR FLARE GAS
WE HAVE THE SOLUTION

We provide turnkey solution for development of production/processing facilities along with Compressed Natural Gas Systems from design to start-up and onward operations

Monetise Every BTU

We have delivered several projects for use of raw natural gas from wellheads which were previously considered as nonviable due to two main reasons:

LACK OF PIPELINE INFRASTRUCTURE:

Building pipeline, getting land permits and cost of pipeline per kilometer

PROCESSING CHALLENGES:

Pressure, temperatures, and varying composition of wellhead raw gas mostly requires extensive gas conditioning and processing hence requiring high capital cost

RAG design and develop complete infrastructure from source of natural gas to consumers. The raw gas is first treated to make it useful and then compressed and transported to the consumers in high-pressure gaseous form. The CNG is safer to transport as compared to gasoline and diesel as it is non-toxic and disperse quickly. CNG used as fuel is 50% cheaper than using gasoline and diesel.



GAS CONDITIONING AND TREATMENT

RAG takes your wellhead gas and design & supply equipment needed to meet the pipeline /tubes specifications. Our extensive process design capabilities enable us to mix match available equipment and deploy on your wellhead sites on fast-track basis. Our equipment removes water/liquids, dry gas, remove CO₂/H₂S to deliver pipeline specifications. We understand your challenges faced on standard wells, low-btu gas specially for lower flows (0.2 to 5MMscfd) to suffice that we have designed single units/package that can achieve pipeline gas in most economical manner.



GAS LOADING AND DISCHARGE COMPRESSION

Pipeline quality gas is then compressed for loading on Natural Gas Tube Trailers at high pressures. We have successfully delivered project for 10psi suction pressure gas and compressing it to 3600psi for loading on Tube Trailers. Depending upon conditions, medium or high-pressure compressors is used for compression. Compression applications include:

- CNG Recovery**
- Fill Tube Trailers**
- Pipeline injection**
- Gas vent recovery**

MANAGING SUPPLY CHAIN WITH VIRTUAL PIPELINE

VIRTUAL PIPELINE CONNECTS CONSUMER WITH SEVERAL GAS SOURCES WITHOUT NEED OF CONVENTIONAL PIPELINE

Based on your conditions we design the most efficient supply chain of virtual pipeline (tube trailers) for loading and transport of natural gas to end consumers. The source of natural gas could be well head, gas plant or biogas. We develop continuous metered supply and complete supply chain is automated to ensure seamless, sustainable supply.

Gas Fields sources could be any of the following:

- Orphan Wells
- Wellhead
- Gathering
- Natural Gas Process Plant
- Gas Lift
- Flare Reduction
- Biogas from Sewage, landfills, effluent and waste from brewing and dairy

Support

- Complete Engineering from source to consumer
- Qualified service technicians available 24 hours a day, 7 days a week
- On site startup and maintenance assistance
- Fully staffed engineering team
- Service contracts available

The gas consumers can be any of the following:

- Upstream operations
- Power Generation
- Distant communities not connected to pipeline
- Injection into pipeline grid
- Industries
- Mining
- Tourist Resorts
- Fueling Stations



RENEWABLE NATURAL GAS (RNG)





Reducing CO₂ emissions with RNG made from organic source material. Renewable compressed natural gas (RNG) is produced from feed stocks including animal waste, crops and crops residue and food waste.

Gas Fields sources could be any of the following:

- 01.** Biogas is made from feed stock (animal and vegetable waste etc.) using a process of anaerobic digestion.
- 02.** The produced biogas is treated to remove impurities.
- 03.** The compressed RNG is sold by pipeline.

We have designed and constructed from small to 2450 scfm of biogas projects. We have done work on both membrane-based treatment and water-based scrubbing and can advise what will be the best structure for you depending upon feedstock.

RELOCATIONS AND MODIFICATIONS

We have executed several relocation projects for large scale natural gas and NGL plants. We have done cross border movement of large plants where our scope included dismantling, tagging for all mechanical and electrical items, arrangement of inland and ocean freight and reassembly and commissioning of plants at final sites. We have performed many modifications and refurbishment jobs as part of relocation and modifications.

A photograph of three industrial workers in a facility. Two workers in the foreground wear orange jumpsuits and yellow hard hats, looking at a document. A third worker in a red jumpsuit and white hard hat is partially visible on the right. The background shows industrial equipment and pipes. A large yellow semi-transparent rectangle covers the left side of the image, serving as a background for the text.

Our Commitment to Quality, Health, Safety & Environment

QUALITY COMMITMENT

RAG Process LLC is dedicated to designing and delivering safe, effective, and reliable products and services. To achieve our quality goals, we will:

Meet or exceed the needs of both internal and external customers.

Meet or exceed applicable worldwide quality standards and regulatory requirements

Continually motivate and develop our employees to improve our processes and quality systems.

NO COMPROMISE HEALTH AND SAFETY

RAG Process LLC aims to be recognized as a company that responsibly manages risks to the health and safety of its employees, clients, contractors, and the communities in which it operates.

Conduct all business activities safely, aiming to eliminate all incidents within the company.

Identify and reduce risks to health and safety across all areas of our operations.

Promote a culture where all employees share the commitment to health and safety and take personal responsibility.

Create an environment where workers are empowered to intervene if they believe a work activity is unsafe.

Continuously improve our health and safety performance and management systems.

Comply with all applicable health and safety laws and regulations.

ENVIRONMENTAL RESPONSIBILITY

At RAG Process LLC, we are fully committed to achieving environmental excellence. To fulfill this commitment, we focus on the following principles:

Conduct all business activities in a way that aims to eliminate incidents affecting the environment.

Promote a strong leadership culture that emphasizes the importance of environmental responsibility.

Encourage all employees to share our environmental commitments and take personal responsibility for protecting the environment.

Comply with all applicable environmental laws, regulations, relevant standards, and compliance obligations.

Reduce our impact on the environment through pollution prevention, minimizing waste and emissions, and using energy and other resources efficiently.



EXPORT DESTINATIONS



- Mexico
- Angola
- Moscow
- Egypt
- Iraq
- Australia
- Nigeria
- Tanzania
- Pakistan
- Uae
- Kazakhstan
- Bangladesh



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