

CASE STUDY
Custom Air Cooled
Packaged Chiller
Solution

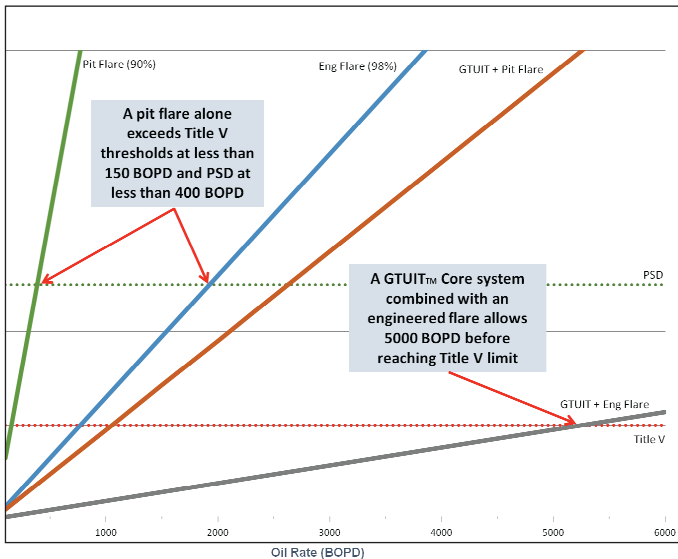
Oil Producers Turn Wellhead Flare Gas Headaches into Benefits.



Flaring is both one of the biggest challenges and opportunities in the Bakken shale today. As in most oil shale plays, oil production includes wellhead gas that is rich in hydrocarbons but often not able to be moved to market due to the high rates and rapid pace of development. 1,000 cubic feet of raw gas can contain 8 to 12 gallons of natural gas liquids (NGLs), which include ethane, propane, butane or even natural gasoline. Producers that flare unprocessed gas are literally burning money. Flaring it



also emits large quantities of volatile organic compounds (VOCs) into the environment and pumps out carbon monoxide, carbon dioxide and particulate. Most important, the quantity of VOCs sent to atmosphere from flare gas is strictly controlled by the US EPA by Title V and Prevention of Significant Deterioration (PSD) threshold regulations. Adhering to these regulations is costly and burdensome to producers, particularly in the early stages of a well’s production life cycle. They often have to throttle oil production to stay within the VOC thresholds at the expense of cash flow when they need it most.



GTUIT™ Core Recovery System Provides Substantial Economic and Environmental Benefits

GTUIT and Berg Chilling Systems Inc. have teamed up to launch GTUIT Core Recovery System, a game changing solution to the wellhead gas challenge. GTUIT Core Recovery System, trailer-mounted portable wellhead gas processing system that includes patent pending technology that strips out natural gas liquids (NGLs) and drastically reduces VOCs by liquefying and storing them. These valuable NGLs and purified wellhead natural gas streams are diverted away from flare stacks, resulting in significantly improved environmental performance and the opportunity to reduce production costs and increase revenue.

Component	Typical GTUIT™ recoveries
Ethane (w/ ethane rejection)	1-5%
Ethane (no ethane rejection)	15-25%
Propane	65-75%
Iso-Butane	82%
Normal Butane	88%
Pentanes	97%
Hexanes +	99.5%

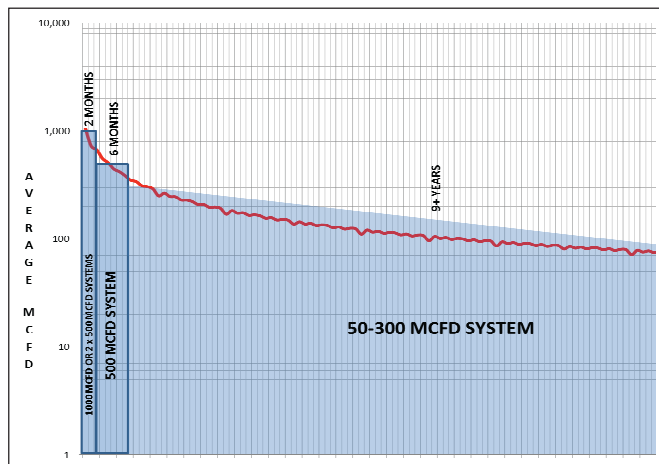
GTUIT currently has 14 MMCFD of treatment capacity under contract with 7 MMCFD already in service in the field. The processed gas and liquid products can be used on site to fuel power generation equipment, be recycled back into the production process, or stored and sold on the market, all of which increase financial performance and benefit the environment. Pipeline take-away capacity, particularly in those developed regions with higher gas production, is improved by physically reducing the volume of gas in the pipeline and reduce costly pipeline maintenance by removing the NGLs that drop out and cause flow restrictions. The processed gas is a quality, dehydrated natural gas product with

reduced BTU and increased methane rating that is delivered at a steady flow and pressure. It can feed onsite power generation equipment or heat frac water, reducing the reliance on expensive diesel fuel, or be further processed and sold as liquefied natural gas or compressed natural gas products. The gas can also be compressed and injected back into the well to run artificial lifts, increasing productivity and reducing the need for extra water to sustain the production process. The recovered Y-Grade NGLs can be used as a process fuel to heat frac water, as field use propane to supply power generation equipment or stored and sold.

Flexible and Scalable System

Key Features

Two Key features to the GTUIT Core Recovery System are the system's unique ability to scale capacity to synchronize with a well's production decline. 1000 MCFD, 500 MCFD or 300 MCFD capacity modules can be deployed in the optimal combination to match the incoming volume of wellhead gas during any stage of the well's production lifecycle. As wellhead gas rates fall and stabilize over time, GTUIT Core Recovery System modules are easily removed with no disruption to production.



This system flexibility maximizes return on investment and environmental performance by ensuring optimal system capacity and minimizing scenarios where wellhead gas must bypass it throughout the full lifecycle of the well.

Berg Chilling Systems Inc. and GTUIT LLC Save Bakken Oil Producers Money and Improve Environmental Performance.

A single 1000 MCFD GTUIT™ operating for 1 year in the Bakken Oil Field:

- Produces more than 1.3 million gallons or 31 thousand barrels of Y-grade NGL's
- Prevents 3,856 tons of VOC's from being flared
- Prevents 11,500 tons of CO₂ emissions
- Captures enough BTU to provide the heat for 6,087 US homes
- Captures enough BTU to provide all the energy needs for 1,826 US homes





Don Berggren: "Through our experience in global oil and gas sector, our engineering team was able to develop a solution that met GTUIT's needs, ensuring system wide flexibility to handle the wide variety of inlet variations and environmental conditions seen in the Bakken oil fields."

Brian Cebull: "GTUIT has leveraged our extensive oil and gas experience and combined it with Berg's decades of refrigeration experience to create a superior product that maximizes NGL recoveries right on the wellsite, creating a valuable stream of NGLs and conditioned residue gas. Coupled with GTUIT's comprehensive service model, GTUIT and Berg literally *take care of the flare*!"



About Berg Chilling Systems Inc.

From their Toronto-based manufacturing facility, Berg's product range is as diverse as the industries global markets they serve. Products include: Portable, Packaged and Central skid mounted cooling solutions; Pumping Packages and Systems; Cooling Towers; Industrial Icemakers; Environmental Test Chambers; and Marine Refrigeration, all of which are available in various sizes and configurations to meet specific application requirements including classified (Explosion Proof) and unclassified environments.

www.berg-group.com



About GTUIT™

GTUIT™ Billings, Montana-based flare solutions provider created in 2011 is using a small-scale technology to create massive results. GTUIT™ provides creative solutions to oil producers by creating value and reducing emissions from natural gas flares, coupling innovative and leading edge technology with a no-hassle service model and delivers these products safely and with the utmost professionalism. GTUIT™ is at the forefront of addressing the flaring challenge and, with a passion to innovate and strong commitment to safety, continue to expand product and service offerings and value for its clients. www.GTUIT.com