

Oil Producers Turn Wellhead Flare Gas from Headaches to Profit



Flaring is both one of the biggest challenges and opportunities in the Bakken shale today. Oil production includes wellhead gas that is rich in hydrocarbons but often not considered part of the marketable product. 1,000 cubic feet of raw gas contains 8 to 12 gallons of natural gas liquids (NGLs), which may 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 soot. 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™ Provides Substantial Economic and Environmental Benefits

GTUIT and Berg Chilling Systems Inc. have teamed up to launch GTUIT Core™, a game changing solution to the wellhead gas challenge. GTUIT Core™ is a patented, trailer-mounted portable wellhead gas processing system 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. GTUIT CORE™ systems in successful operation in the Bakken oil fields today.

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 capacity, particularly in regions that are developed, is improved by reducing the volume of gas required for transport, and the need for pipeline maintenance is reduced by transporting the cleaner NGL-reduced gas.

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

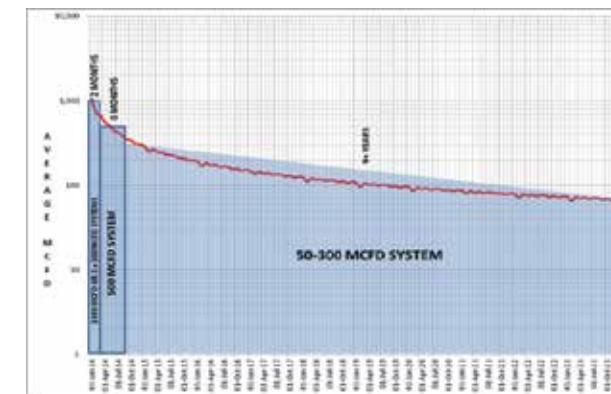
The processed gas is a quality, dehydrated natural gas product with reduced BTU and increased methane rating at steady flow and pressure. It can feed onsite power generation equipment, heat frac water, reducing the reliance on expensive diesel fuel, or be further processed and sold as liquefied natural 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 and chemicals 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

Two Key features to the GTUIT Core™ are the system's unique ability to scale capacity to synchronize with a well's stage in production lifecycle, and a flexible design that enables it to effectively manage the variable nature of wellhead gas compositions and flows coming from wells during oil production. 1,000 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™ modules are easily removed with minimal disruption to production. This system flexibility maximises 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.

Inlet BTU	Inlet Methane #	GTUIT™ Conditioned Methane #
1780	0.8	57.6
1467	4.7	62.2
1399	22.4	62.3
1387	31.4	60.9
1300	44.5	61.3
1223	52.9	64.7

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



GTUIT: "It is with confidence that we offer our customers our industry-leading recovery technology knowing it comes integrated with the expertise of Berg, a partner with 40 years of experience in thermal management solutions in the global energy market."

Berg: "Through our experience in the global oil and gas sector, our

engineering team was able to develop a solution that met GUIT's needs, ensuring system wide flexibility to handle the wide variety of inlet variations and environmental conditions seen in the Bakken oil fields."

Berg: "Portable, high-quality and hassle-free gas conditioning and refrigeration solutions are our specialty, so we quickly recognized the benefits of GTUIT's technology has to offer and how to build a refrigeration system to support it."

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, Mont.-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

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Berg Chilling Systems Inc., founded in 1972, has the industrial manufacturing resources and experience you can depend on to take full advantage of your growing business opportunities. Our collaborative/consultative approach produces engineered innovations that have positioned us as both a leader in solving application challenges, and has consistently resulted in improved operational competitiveness for our customers.

Our direct approach to doing business

A long term, collaboration focused on achieving high quality solutions and cost efficiency.

Highest standards and innovative solutions

Our operations management system is ISO 9001:2008 compliant and has been audited and registered by Intertek Group – Global testing, inspection and certification services. We design and manufacture our system solutions in accordance with CSA B51 and B52 and ASME B31.1, B31.3 & B31.5 and have been audited and certified by TSSA, Technical Safety and Standards Authority.

Berg custom manufactures, designs, installs and services a wide range of industrial process chillers and cooling systems to exacting specifications and the highest industry standards.

A proven and trusted resource

We have supplied solutions to a wide range of global and/or energy based companies.

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