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# The BAKKEN

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## Flare Tech Trends

Service, Equipment Offerings  
For Increased Utilization

Page 34





# TARGETING Flare Utilization

As mandated reduction efforts continue, new approaches and technology aimed at flare capture are succeeding

By Emily Aasand

Bakken producers may have met the first of several North Dakota-issued flare-reduction targets, but the challenges of continued crude production in the midst of impending new state-imposed, flare-reduction targets remain. Failure to comply with the state-issued flare regulations will result in restricted production volumes of 200 barrels per day. To remain in compliance with current goals while working to meet future restrictions, exploration and production firms, midstream gas gatherers, and flare-capture technology providers continue to deploy unique and innovative solutions, well development timelines and gathering methods.

Torrent Energy Services is well-versed on the Bakken gas capture opportunity and challenges. The company offers modular gas processing equipment and services that allow oil and gas producers along with midstream companies to recover valuable natural gas liquids (NGLs) while reducing overall flare volumes, intensity and emissions.

Torrent Energy Services has found success in a short time span. After forming in 2012, it became fully operational in 2013.

The core management team came from a company called Zephyr Gas Services—a gas treating company that specialized in amine plants focused on removing carbon dioxide from natural gas streams.

While in development stages, the Torrent team realized that the oil and gas liquids market was underserved. Mike Chiste, executive vice president of Torrent, says the underserved market became Torrent's initial focus, and it began to focus on ways to provide gas processing solutions to oil companies. To do this, Torrent established a gas-processing rental fleet that would not only have low-maintenance operations, but have increased run times to maximize profitability.

Torrent's primary piece of equipment is a mechanical refrigeration unit (MRU). Natural gas is gathered and sent from the well head through a compressor into the MRU, where the gas is chilled to roughly 20 degrees Fahrenheit below zero. The NGLs are recovered or captured from the gas stream. The NGLs are then taken out of the plant and stored in NGL storage tanks until trucks come to remove the NGLs from the well site.

**VALUABLE SERVICE:** Torrent offers modular gas processing equipment that allows companies to recover and remove valuable natural gas liquids that would otherwise be flared.

PHOTO: TORRENT ENERGY SERVICES LLC



**HARVEST SEASON:** Torrent specializes in harvesting NGLs which can save oil producers between \$5 and \$10, which is an incremental value amid declining oil prices.

PHOTO: TORRENT ENERGY SERVICES LLC

“The stripping of the liquids greatly reduces the volatile organic compounds,” Chiste says. Doing so helps to reduce the total volume of flared gas and the amount of harmful components released.

In addition to its MRU, Torrent has natural gas-powered generators that utilizes the processed residue gas stream that comes off the back of the MRU to power various pieces of production equipment needed at well pads.

### Hot Business

With North Dakota’s flaring regulations now in place, the Torrent team says it has more than doubled the size of its business in the past two months. By the end of February, Torrent expects to have 23 units deployed.

“We’ve recently raised private equity

## Flare-Tech Integrator

While some companies are focusing on harvesting natural gas liquids (NGLs) at the well head and flaring the remaining methane, U.S. Flare Management, a Houston-based startup with an office in North Dakota, has taken a new approach to reduction efforts, calling itself a technology integrator focused on finding the best solution to capture the methane stream present in all Bakken flares for use as feedstock for liquefied natural gas (LNG).

To do that, U.S. Flare Management has begun marketing Dresser-Rand’s LNGo portable natural gas liquefaction plant, a system that cools the methane from the well site, filters it through a Joules-Thompson valve all in combination with a heat exchanger that turns the methane into LNG form.

The specialized approach has drawn interest from several prospec-

tive clients, according to Mark Bragg, CEO and founder, even in the midst of low oil prices and reduced CAPEX budgets. In fact, the U.S. Flare Management team says it has seen a huge increase in interest to potentially implement these units into the field.

The reduced price of oil means that revenue coming from an otherwise wasted product could be very useful to the producer—no matter how small the revenue stream—but it can be significant in terms of converting something that was once wasted into something profitable, Bragg adds.

“The ability to make the conversion and pay for the methane should be very attractive for oil companies who have suffered dramatic declines in the value of their product,” Bragg says.

The company says its target clients are those with well pads with

absolutely no access to pipelines. It has to come up with a mobile system that goes to the well head, captures the methane, and turns it into LNG, the team says.

Although competition for those focused on methane capture for LNG production is small, Bragg believes the market is large enough for multiple service providers. “We have a really huge job to do in terms of reducing and eventually eliminating flares. We need as many people as possible to figure out how to do this profitably,” Bragg says.

By April, the company will deploy its first Dresser-Rand LNGo unit, offering the client the opportunity to reduce flare volumes, utilize the methane portion of the flare and create an LNG end-product suitable for power supply. “I think we will easily deploy 15 units this year,” Bragg believes.

capital to accelerate our manufacturing program because we had more demand than we did inventory,” Chiste says. “We have embarked on a fairly ambitious program to build two to four units every month for the foreseeable future so we can meet current demands.”

Torrent rents its equipment to oil companies, which helps decrease overall capital expenditures incurred by the operator. Provision of operations and maintenance services also eliminates the operator having to operate additional equipment.

“We’ll put a unit on the well pad, rent it out for a year and then as the gas volumes decrease, we’ll rent them a smaller unit and move the larger unit to a different location for them or rent it to a new customer altogether. This saves them from having to go out and buy equipment that, over time, will be oversized for their location,” Chiste says.

## Flaring Niche

The Dallas-based company is focused on the higher-flowing well pads, according to Chris Czuppon, CFO of Torrent. The company’s units can handle 4 to 6 times more gas than its competitors, Torrent believes. Competing companies tend to be more focused on serving the under-500,000 cubic feet of natural gas per-day customer, whereas Torrent’s single unit can process up to roughly 3 million cubic feet of gas per day. Torrent has the ability to process significantly higher volumes into the 10.0 to 20.0MM million cubic feet of gas per day range by stacking multiple units.

“Our competitors are focused on a very different market than we are,” says Czuppon. “So, while we address similar issues at the well sites they just don’t have the ability to take the larger gas streams that are



**AT THE SOURCE:** Torrent’s well site units are monitored and serviced by the company within 2-hours of any issue.  
PHOTO: TORRENT ENERGY SERVICES

more prominent in the Bakken and other resource plays across the country.

With more than 1 million barrels of oil per day produced from the Bakken shale play, Torrent has found prime business opportunities in western North Dakota.

Torrent has been in the Bakken for two years, and understands that having people, service and viable operations is critical. The company has staff on call 24 hours, seven days a week and has a less than two hour on-site report time. “We’ve battled through the winters and we have folks on the ground and at our plants every single day,” Chiste says.

“Having a strong operations team and providing them the service for our equipment has been very well-received by our customers, especially when it’s in a resource constrained environment like North Dakota,” Chiste adds.

“Our equipment does greatly differentiate us from our competition, but really our experienced personnel and responsive 24 hour, seven days a week service is what sets us apart and keeps our customers happy,” Czuppon says.

In this low crude price environment, Torrent believes its services aren’t just about flare reduction targets. Its technology package also offers a valuable, cost-saving product. Operators are able to market and sell liquids similar to how they market and sell oil. If oil prices are at \$50 per barrel, there are liquids that Torrent can recover and then sell for another \$5 to \$10 per barrel, which is an incremental revenue stream. “People are not only looking at cutting costs, but they’re looking at optimizing revenue and our plants help them do that,” Chiste says.

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