

THE FLARECATCHER

Flare Gas Recovery System



The Mobile Gas Processing Plant Solution

Why the *Flarecatcher* is Superior

The **Pioneer Energy Flarecatcher** is a mobile natural gas processing system that is placed at remote well sites prior to any established gas capture infrastructure. The Flarecatcher has superior performance to conventional technology due to its advanced refrigeration and stripping system. Our modular solution, capable of processing from 200 to 6000+ MCF/day of raw wet gas at the well site, produces an extremely dry natural gas stream (Cummins methane number 70 or higher) that can be used for onsite power generation, conversion to CNG or LNG, or injection into a utility sales gas line. Additionally, it captures more than 87% of the propane and higher hydrocarbons from the raw wellhead gas as natural gas liquids. Both deliverable streams have low ethane content to maximize value, with rejected ethane used onboard as part of the process.

Flarecatcher - Become Compliant While Being Profitable

- **Prevent loss** of income by selling otherwise flared NGLs.
- **Reduce costs** by using the separated methane gas to generate electrical power in place of diesel.
- **Avoid penalties and fees** from state and federal regulators by reducing or even eliminating flaring.

Flarecatcher Benefits

- **Increase Revenue** - Monetize associated gas before gathering system reaches the wellhead.
- **Cost Efficiency** - Replace costly diesel fuel with clean burning natural gas.
- **Mobility** - Mobile design allows for minimal site modifications, rapid redeployment, and paralleling of multiple units to handle higher flows.
- **Flexibility** - Suitable for a diverse set of field conditions, gas compositions and well variability.
- **Economical** - Self-sufficient system utilizing low value residue gas in the process.
- **Reliability** - Uses SCADA industrial control system for remote monitoring and continuous operation.



Flarecatcher deployed in North Dakota



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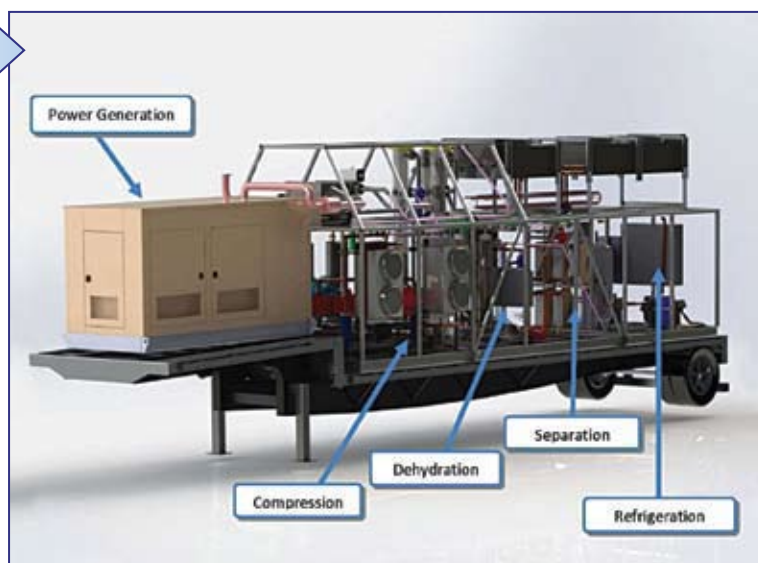
How Does the Flarecatcher System Work?

The **Flarecatcher** is comprised of four unit operations integrated on a single trailer.



Raw natural gas is first compressed and then dehydrated. The dry compressed gas is then refrigerated down to as cold as -80°C , causing the high molecular weight components, to liquefy. A sophisticated separation system dissociates the gas into three value streams.

- **Lean Methane** - Suitable for fully rated power generation, equipment operation, or conversion to CNG or LNG.
- **Y-Grade NGLs** - Easily stored on site and transported to market.
- **Rejected Ethane** - Used within the system, leaving the product streams of higher value.



Flarecatcher 1000 Performance

Raw Gas Input		1,350	1,500	1,650	1,800	Btu/ft ³
COMPOSITION	Flow Rate	1000	800	700	600	Mcf/day
	Cummins fuel quality MN	54.8	48.8	44.7	41.3	
	Methane	74%	64%	54%	44%	vol%
	Ethane	11%	15%	19%	24%	
	Propane	7%	10%	13%	16%	
	Butane+	7%	9%	12%	15%	
Lean Methane Output		1,069	1,091	1,123	1,176	Btu/ft ³
Diesel fuel replacement		5,378	3,689	2,764	2,030	gal/day
Dry Methane flow rate		790	560	430	320	Mcf/day
Cummins fuel quality MN		79.2	75.8	71.9	66.8	
Power generation est.		3.0	2.0	1.4	1.0	MWe
Y-grade NGL Output (0% methane, ethane rejected to 2% by volume)						
COMPOSITION	Daily capture rate	3,243	3,676	4,198	4,428	gal/day
	Methane	0%	0%	0%	0%	
	Ethane	2%	2%	2%	2%	
	Propane	40%	40%	40%	41%	
	Butane+	58%	58%	58%	57%	



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Pioneer Energy is a service provider and original equipment manufacturer that solves gas processing challenges on the oilfield through development and deployment of new technology.

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