

VOLATILITY WILL CONTINUE UNTIL MORALE IMPROVES

Natural Gas Liquids Key Takeaways:

Some midstream companies have forged an NGL identity, while others are still grappling with their mission. Enterprise Products (EPD), Energy Transfer (ET) and Targa Resources (TRGP) are the three dominant players linking the growing Permian supply to the only source of demand growth: international markets. Other midstream operators only participate in certain segments of the Permian-to-Gulf-Coast NGL value chain, leaving gaps in coverage. The topics addressed in the 2024 Dirty Little Secrets' NGL Supply & Demand section include:

- **The Fight is on for NGL Barrels:** Midstream is using free cash flow to build pipelines that will transport NGL production growth out of the Permian for the next 5-10 years. Capacity looks ample, driving heavy competition for molecules and leading to downward pressure on T&F rates.
- **A Molecule Lost Means \$0.50 on the Dollar Gone:** Spending capital ahead of demand is necessary to grab as much market share as possible from producers, thus limiting the risk of losing out on the downstream dollar.
- **Downstream Opportunity from Midstream Prematurity:** Enticing producers to commit as shippers on expanded NGL pipelines de-risks capital spend for fractionation and LPG export terminals.
- **Logistical Path Ripe for M&A:** ET, EPD and TRGP have benefited from integrated value-chain economics in NGLs. A 'Fourth Alliance' could be formed if a competitor steps up to link assets from the wellhead to export docks. Otherwise, it could be irrelevance or domination for other companies in the NGL space.

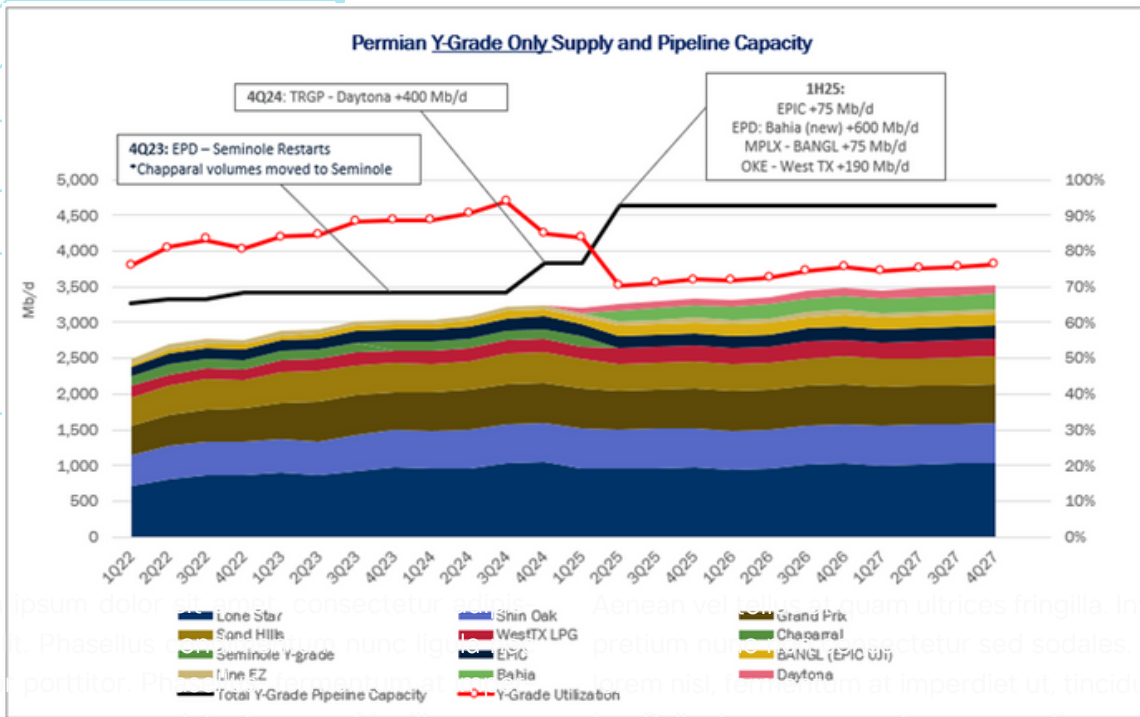
Executive Summary

The Fight is on for NGL Barrels

The NGL sector is attracting significant midstream investments. Companies are spending \$15B+ in growth capital from 2023-25 on projects that touch the NGL value chain from the Permian Basin to the Mont Belvieu and Houston NGL demand markets (see table below). These investments include Gathering & Processing (G&P) expansions, NGL pipelines from the Permian Basin to the Texas Gulf Coast, fractionators and export docks. Midstream companies are fighting for NGL barrels and investing the lion's share of growth capital linking Permian NGL supply to international demand. Total midstream growth capital in the Lower 48 is almost \$30B, so the corridor is driving \$0.55 out of every dollar spent.

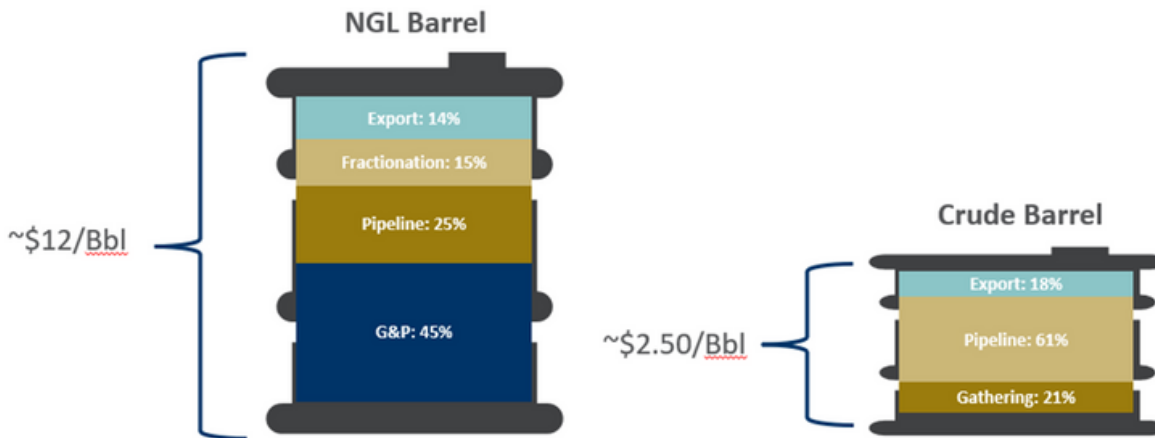
Permian Growth Capital 2023-2025 (\$MM)	G&P	LH Pipe	Frac	Export	Total
ET	\$1,165	\$0	\$337	\$1,271	\$2,773
EPD	1,750	1,600	1,000	2,025	6,375
TRGP	2,468	578	550	150	3,746
OKE	0	520	550	0	1,070
MPLX	375	280	0	0	655
EPIC	0	100	0	0	100
Total	\$5,758	\$3,078	\$2,437	\$3,446	\$14,719

Midstream companies are taking pre-emptive action by spending on NGL pipeline expansions before the capacity is needed by shippers. The idiom "the best defense is a good offense" rings true in this case, as the fight for NGL barrels starts years before the capacity is needed. East Daley expects NGL production to grow in line with natural gas production at a CAGR of 11% from 2023 to 2025. We forecast a combined 1.3 MMb/d of new Y-grade capacity will be online by 1H25, leading to aggregate pipeline utilization rates in the low-70% range (see red line graph, utilization on right-hand axis on chart).



A Molecule Lost means \$0.50 on the Dollar Gone

Midstream behemoths are protecting the highly economic NGL value chain. Energy Transfer (ET), Enterprise Products (EPD) and Targa Resources (TRGP) earn almost \$5.50 on a per-barrel-equivalent basis at their Permian gas processing plants. These companies then more than double their NGL earnings by sending Y-grade through NGL pipelines (~\$3/bbl), fractionation plants (almost \$2/bbl), and LPG export facilities on the Gulf Coast (~\$1.75/bbl). Additionally, companies make money by storing and marketing NGLs. By comparison, midstream makes less money in the crude oil value chain, missing the refining component.

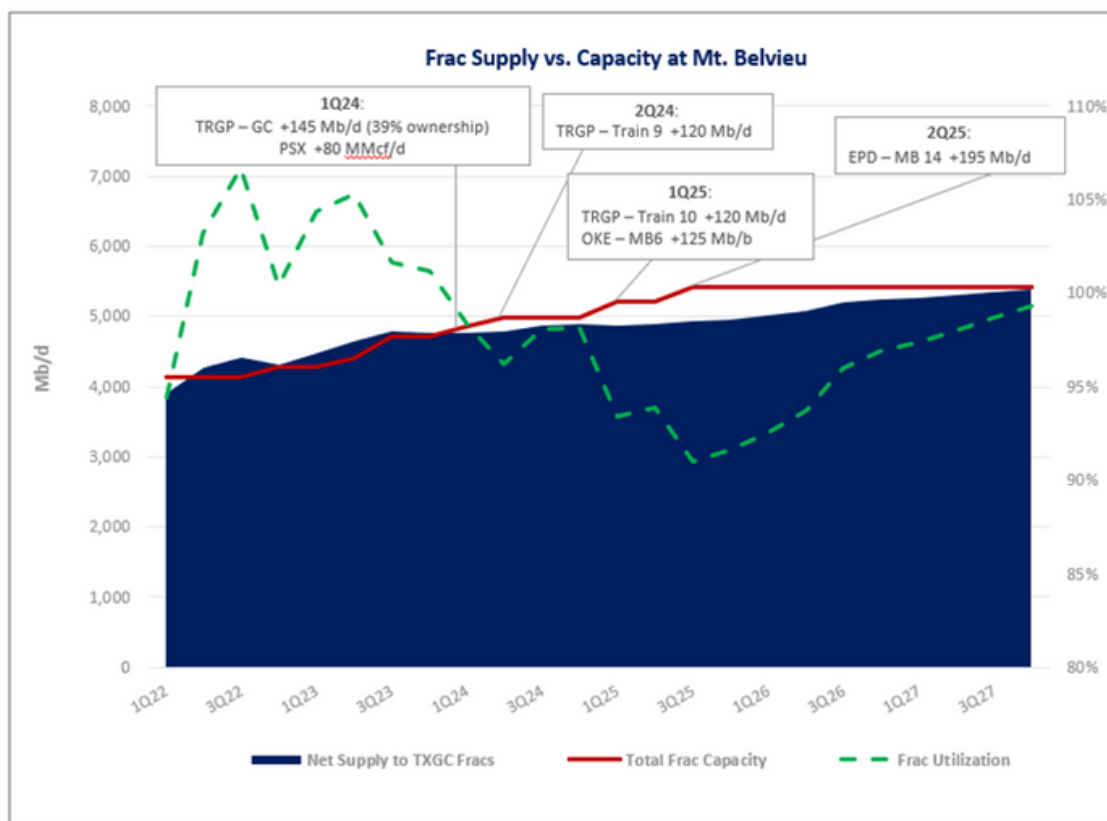


Defending NGL margins is profitable, even if capital spending precedes high pipeline utilization. EDA views the rush to build new NGL pipelines as rational since these assets are the fulcrum to capture value-chain economics that link growing supply (Permian) to growing demand (exports). We expect excess pipeline capacity beginning in 2025 to drive transmission and fractionation (T&F) market rates lower than legacy tariffs. Even so, it remains a smart strategy to preemptively secure barrels.

Downstream Opportunity from Midstream Prematurity

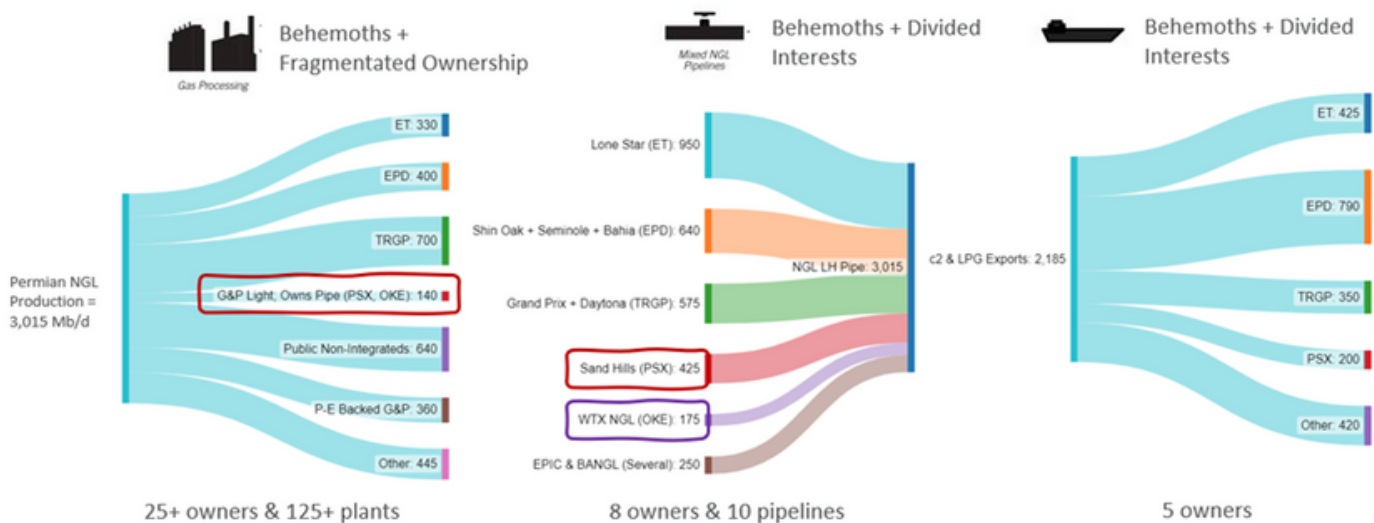
While NGL pipelines might be light on utilization in 2025, downstream assets like fractionation trains are running fuller. As a result, these same operators are expanding the tail-end of the value chain along the Gulf Coast.

Targa, ONEOK and Enterprise have all announced fractionation expansions (see graph below). Targa just expanded its Galena Park LPG facility, Enterprise and Energy Transfer are expanding their LPG docks, and EPD is expanding its ethane export facilities. Accommodating producers and other shippers near the wellhead and NGL pipelines de-risks capital expansions further downstream at fractionators and export terminals. Owning G&P assets also secures future growth volumes for downstream asset investment.



Logistical Path Ripe for M&A

When it comes to the integrated NGL business, three companies rule the roost: Energy Transfer (ET), Enterprise Products (EPD) and Targa Resources (TRGP). Most midstream companies own just the G&P component of the business. The G&P business has attracted the most investors relative to other segments of the value chain (see chart below). Some NGL players, like Phillips 66 (PSX), own significant pipeline and export capacity but have limited exposure to G&P growth (highlighted in red). Other players have smaller NGL pipeline capacity and no Permian G&P presence, like OKE (highlighted in purple).



Other assets have fractured ownership. EPIC and BANGL, for example, are owned by a combined seven owners. Ares, Chevron (CVX) and FS all have equity interests in EPIC, while Whitewater Midstream, MPLX, West Texas Gas (WTG), and Diamondback have equity interests in BANGL (which leases part of EPIC). Of these seven owners, MPLX and WTG have substantial G&P asset systems that produce more than 250 Mb/d of Y-grade from their plants.

Without an integrated NGL strategy, it will be increasingly difficult to sell a growth story. M&A consolidation along the value chain could create a 'Fourth Alliance' to compete with the NGL behemoths. Some players are isolated in the Permian at the G&P segment (e.g. Western Midstream (WES), EnLink Midstream (ENLC) and Kinetik (KNTK). Others have downstream assets with little or no G&P exposure (e.g. PSX and OKE). Finally, MPLX and private West Texas Gas have G&P and long-haul pipe, but no fractionation or export capacity on the Gulf Coast. Savvy competitors could combine complementary assets to drive greater value.