

Accessing Value for NGLs and Natural Gas in Western Canada

NGL Forum, San Antonio | December 4, 2012

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AUX SABLE

Highlights

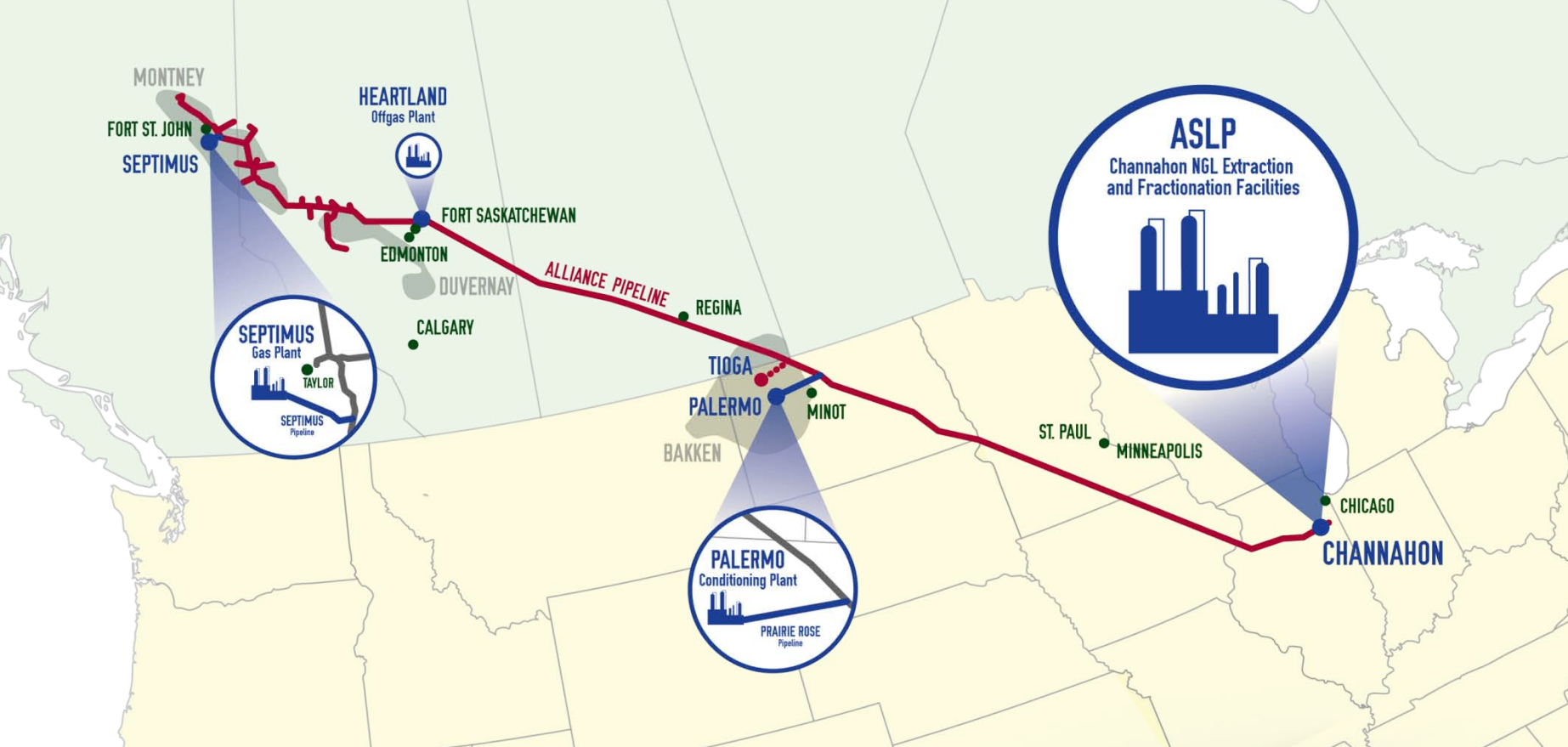
- Frac spread has structurally shifted to a new higher level, but has weakened recently, still spurring on new volumes of NGLs
- New NGL markets will be needed as well as new infrastructure. Scale of infrastructure will be important.
- To capture fracspread, NGLs need to be recovered, processed and transported to market (domestic and export)
- Alternative ways to access fracspread exist for Western Canadian producers

Outline

- Who is Aux Sable
- NGL Supply Fundamentals
- Canadian NGL Infrastructure
- NGL value drivers
 - *Western Canada*
 - *U.S. / Global*
- Alternative NGL market access
- The Alliance and Aux Sable Value Chain
- Conclusion

Aux Sable Operations

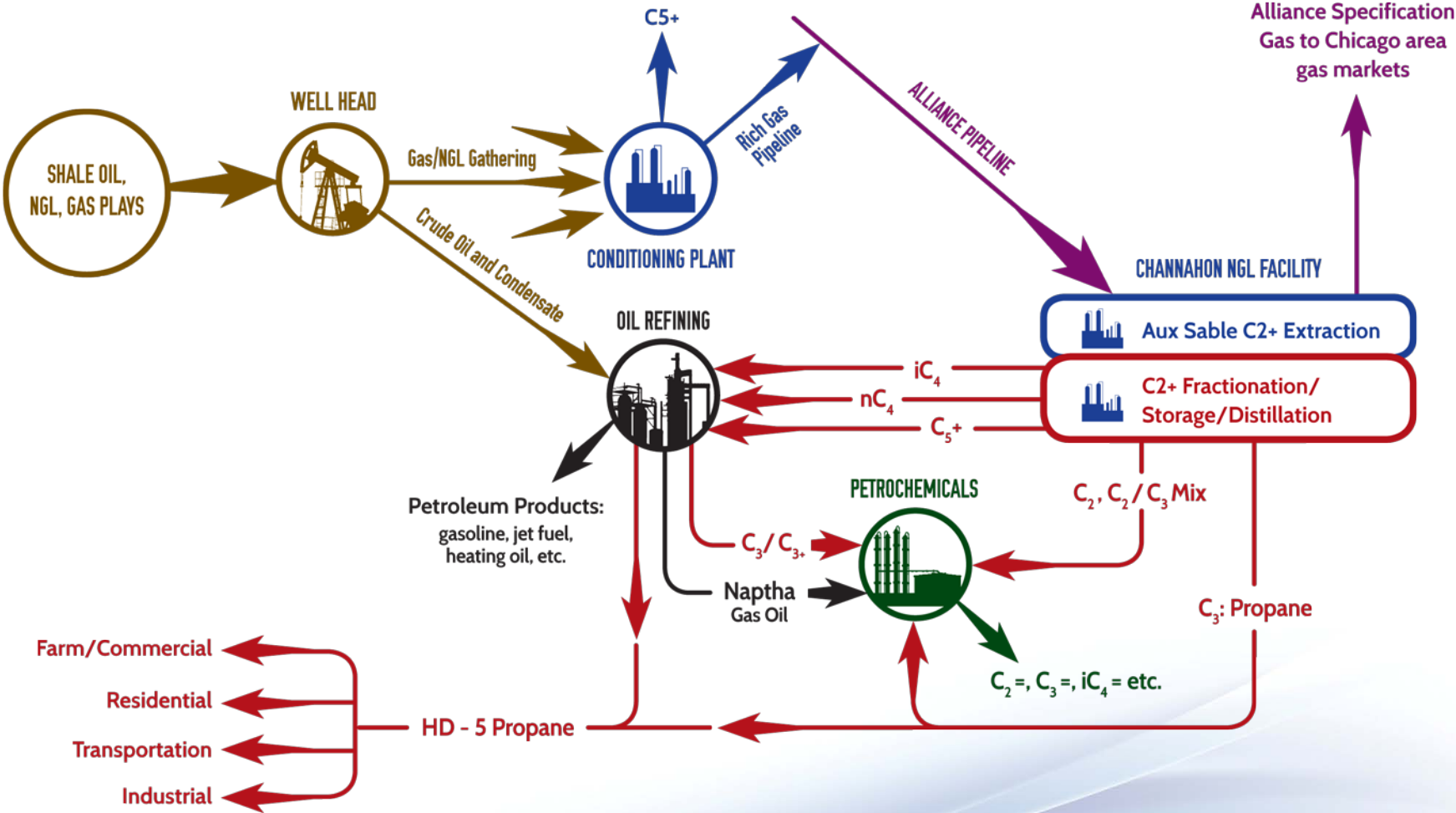
A world-class rich gas gathering and processing system bringing value to producers



 Aux Sable Plant	 Alliance Pipeline	 Aux Sable Pipeline
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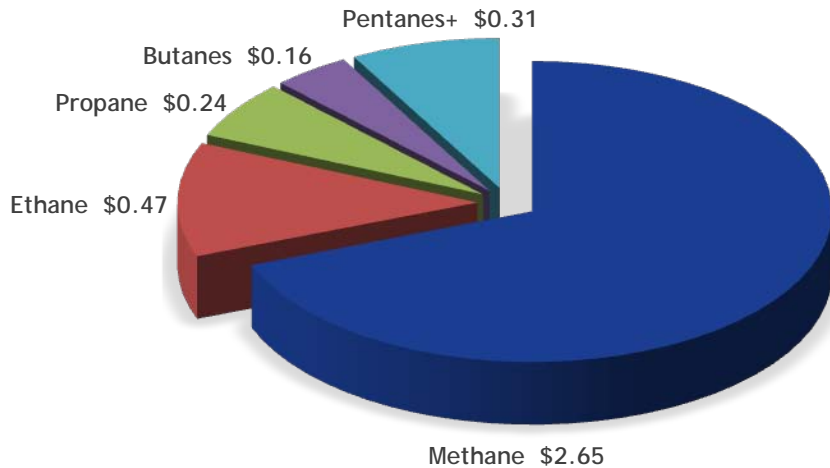
Alliance Pipeline and Aux Sable

Provide a value added option to field processing to minimize investment/
maximize value

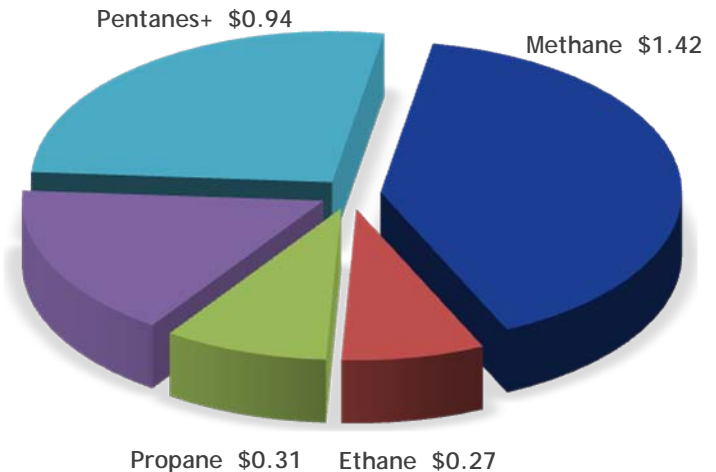


NGLs Critical to Drilling Decisions in Western Canada

March 2002
Raw Gas (C\$3.84/mcf)
NGLs = C\$1.18/mcf (31%)



March 2012
Raw Gas (C\$3.53/mcf)
NGLs = C\$2.10/mcf (60%)



Note: Based on March 2012 gas and Edmonton NGL reference prices, netted back to the plantgate, assuming recoveries of 80% C2, 97% C3, and 100% C4+, from 1100 btu/cf raw gas. Netbacks prices only, no deduction for field plant extraction and capital costs.

NGL Markets in Western Canada

Ethane (C2)

- Supply from straddle plants (via AEGS) and Fort Saskatchewan de-ethanizers (supplied by field deepcut plants connected to the Pembina gathering system)
- Only two ethane buyers (Alberta ethylene producers NOVA & Dow), who can crack up to 265 kb/d of ethane (nameplate capacity)
- Specification ethane (i.e. spec barrels in Fort Saskatchewan) typically trades at a gas value plus premium (i.e. AECO NIT price plus \$5 to \$7/bbl)
- No export capacity (i.e. if disruption at crackers, C2 must be flared or reinjected into gas stream/storage)

NGL Markets in Western Canada

Propane (C3)

- Western Canada is a significant net exporter of C3 into mainly space heating and crop drying markets
- Pricing typically driven off Conway, KS postings less a discount of 5 to 15 cents per gallon
- Expect market to become oversupplied with recent announcement by Kinder Morgan of reversal of Cochin pipeline and conversion to C5+ service

Butane (fC4)

- Field butane is used as a feedstock in the production of iso-octane and as a heavy oil diluent
- Pricing is typically based on a volatile discount or premium to Mont Belvieu, ranging from a discount of 2 cents per gallon to a premium of as high as 20 cents per gallon

Condensate (C5+)

- Used almost exclusively as a heavy oil diluent
- Pricing based on a differential to WTI that trades daily on NGX

Ethane in Western Canada : The Good News and the Challenges

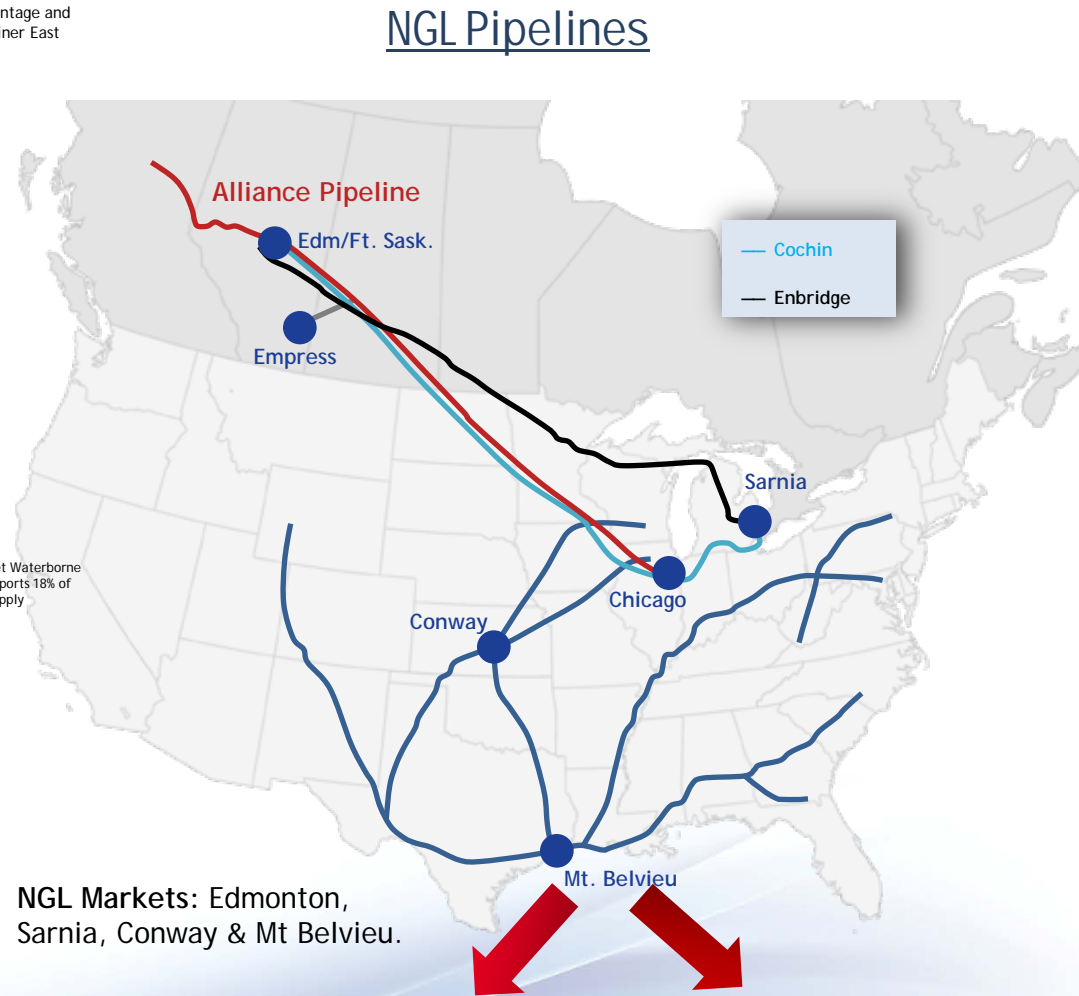
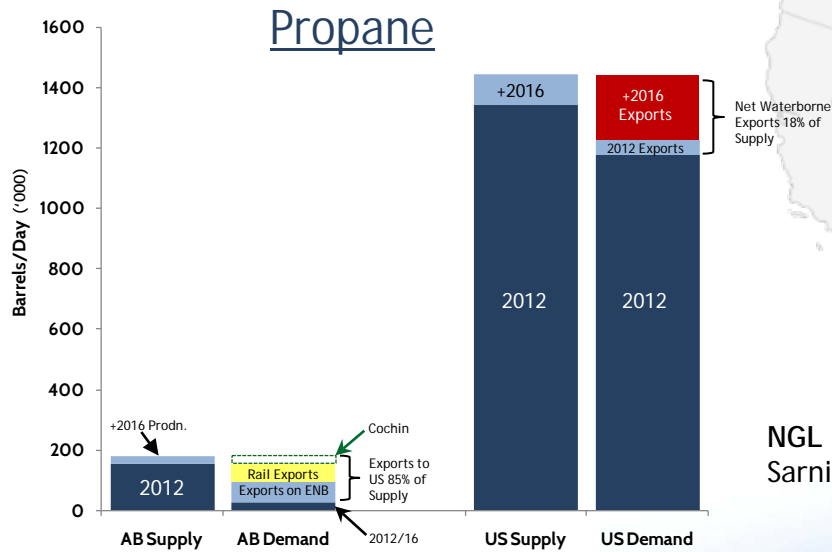
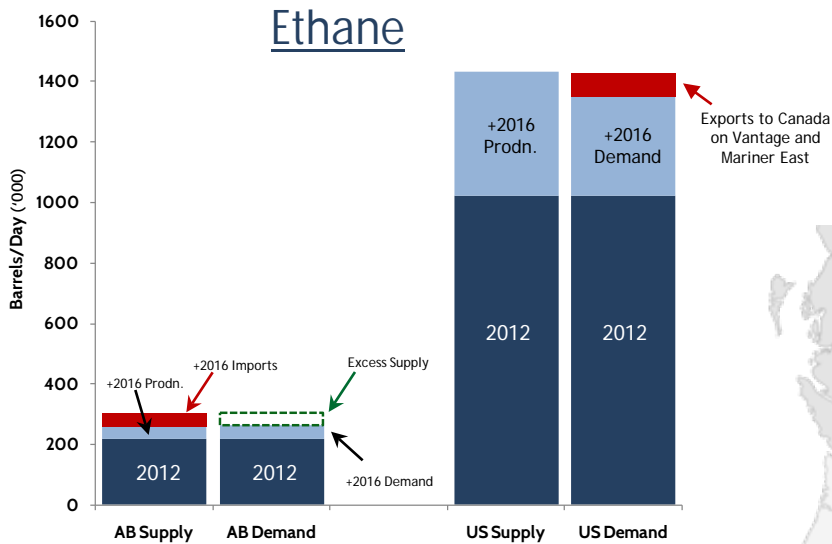
The good news

- Ethane prices provide a steady premium over gas value alternative
- Ethane buyers can consume more ethane than they do today (~60 kb/d more) with some new capital expenditure (derivative plants only)
- Government royalty credits available (IEEP) but only to “incremental ethane in Alberta”

The challenges

- Ethane deepcuts are expensive to build, and complex and expensive to operate, ethane investments are not always cash positive
- With multiple ethane sellers and only two ethane buyers the market is not a level playing field
- Ethane transportation and fractionation infrastructure is costly and close to or at capacity
- Significant new flood of supplies are imminent
 - Vantage pipeline 40 kb/d
 - Williams Suncor 11 kb/d
 - New field deepcuts 20 kb/d (Musreau, Resthaven, Saturn, Gordondale, Minnehik Buck Lake)
 - Many more field deepcuts announced

For Western Canada, Access to U.S./International NGL Markets is Critical



Source: Petral, En*Vantage, Aux Sable.

U.S. Ethane Market Expansion

New capacity on the U.S. Gulf Coast

- Exxon 3.3 billion lbs per year, 90 kb/d ethane feedstock, 2016
- Dow 3.3 billion lbs per year, 90 kb/d ethane feedstock, 2017
- CP (Chevron Phillips) Chem 3.3 billion lbs / yr, 90 kb/d C2, 2017
- Shell 3.3 billion lbs per year, 90 kb/d ethane feedstock, 2017

Conversion projects

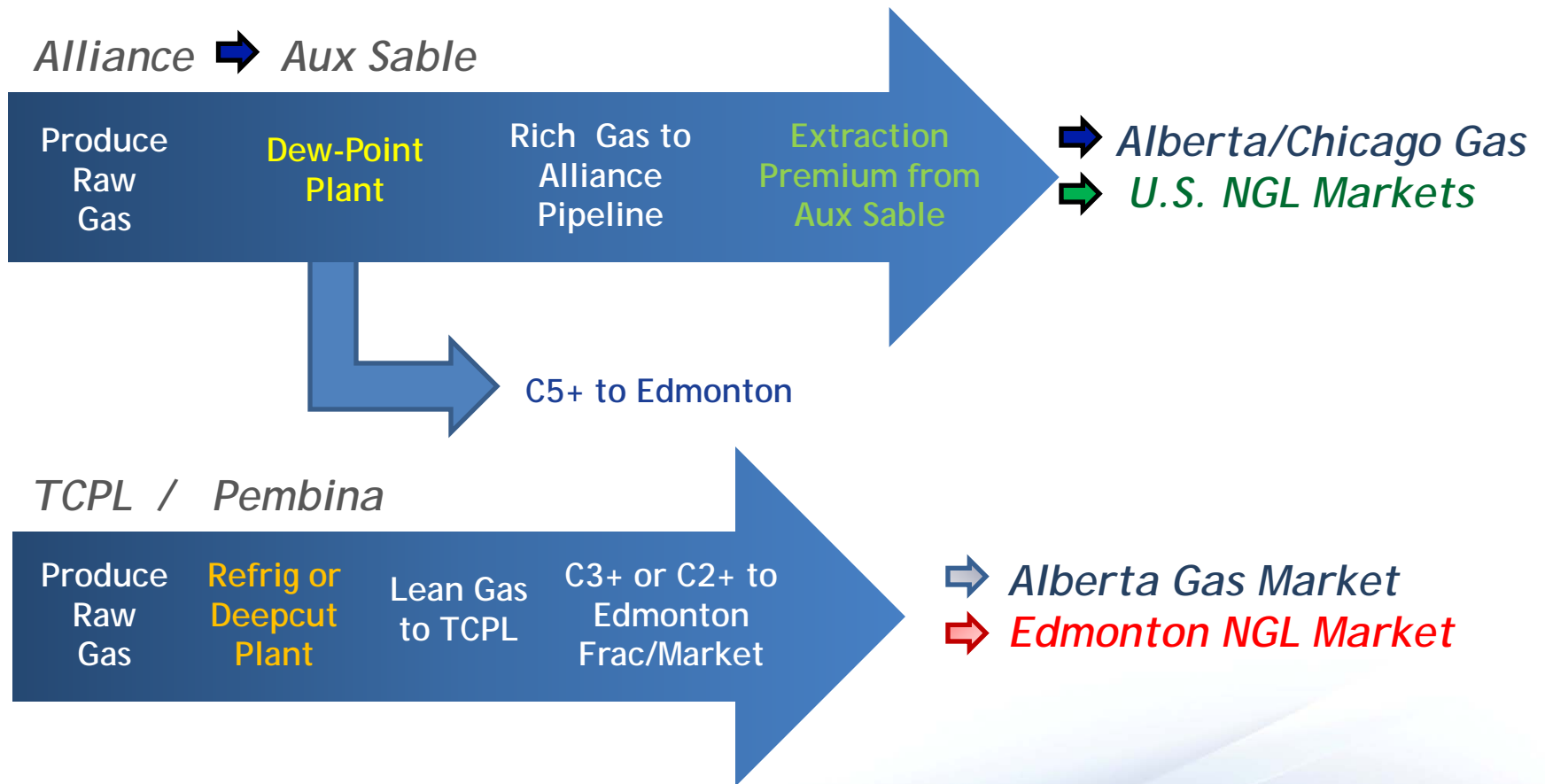
- Lyondell Basell
- Westlake Chemical
- BASF-Total

Purvin & Gertz Survey of U.S. LPG Export Terminal Expansions

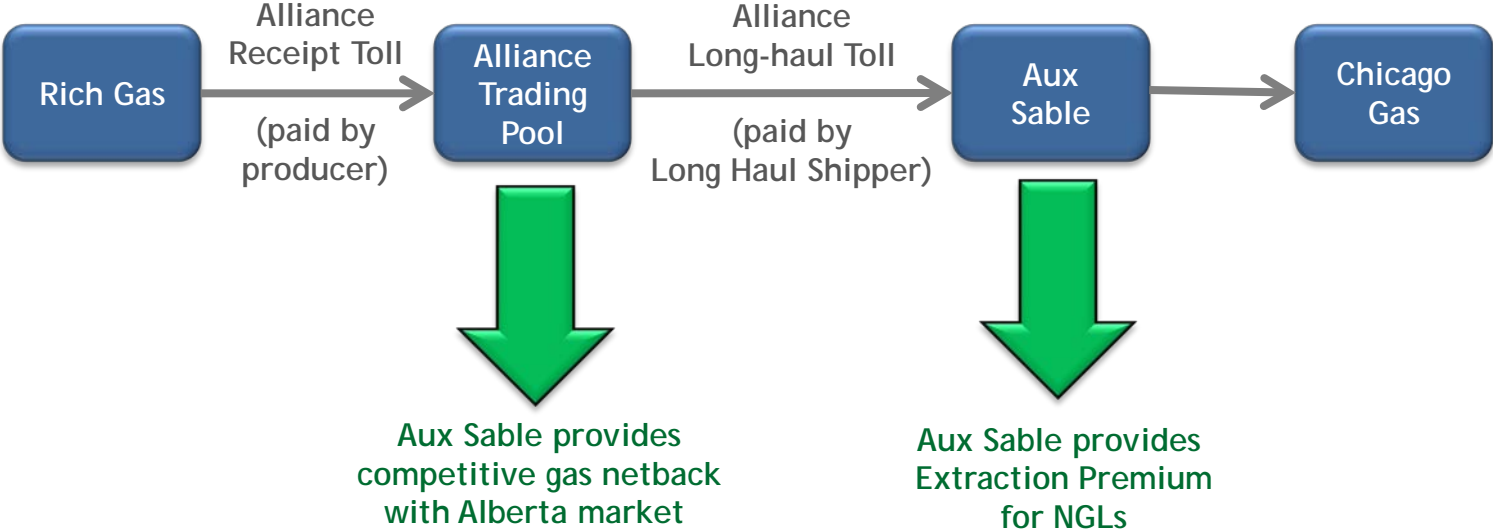
Terminal	LPG Capacity* (bbl/d)	Notes
Enterprise	156,000 to 312,000 bbl/d	<ul style="list-style-type: none"> ➤ Enterprise is expanding its LPG terminal on the Houston Ship Channel by 4Q12 ➤ Load rates for international grade propane will be able to load 3 vessels at one time
Targa	52,200 to 70,000 bbl/d	<ul style="list-style-type: none"> ➤ Expanding at Galena Park ➤ Expects to be able to load 3 to 4 VLGCs per month of international grade propane by 3Q13
Conoco / Occidental / TransMontaigne	240,000 to 480,000 bbl/d	<ul style="list-style-type: none"> ➤ LPG import / export terminal on the Houston Ship Channel operational in 2014 ➤ Connections to Mont Belvieu (CP has a fractionator, Oxy has a pipeline corridor and TransMontaigne has the land)
Vitol	100,000 to 200,000 bbl/d	<ul style="list-style-type: none"> ➤ Propane export terminal at Coastal Caverns near Beaumont to start up in 1Q 2013 ➤ Will include a 100 kb/d processing facility and salt dome storage at Spindletop

* Assumes loading capacity online from 12 to 24 hrs per day

Efficient, Lower Cost Access to Liquid Markets

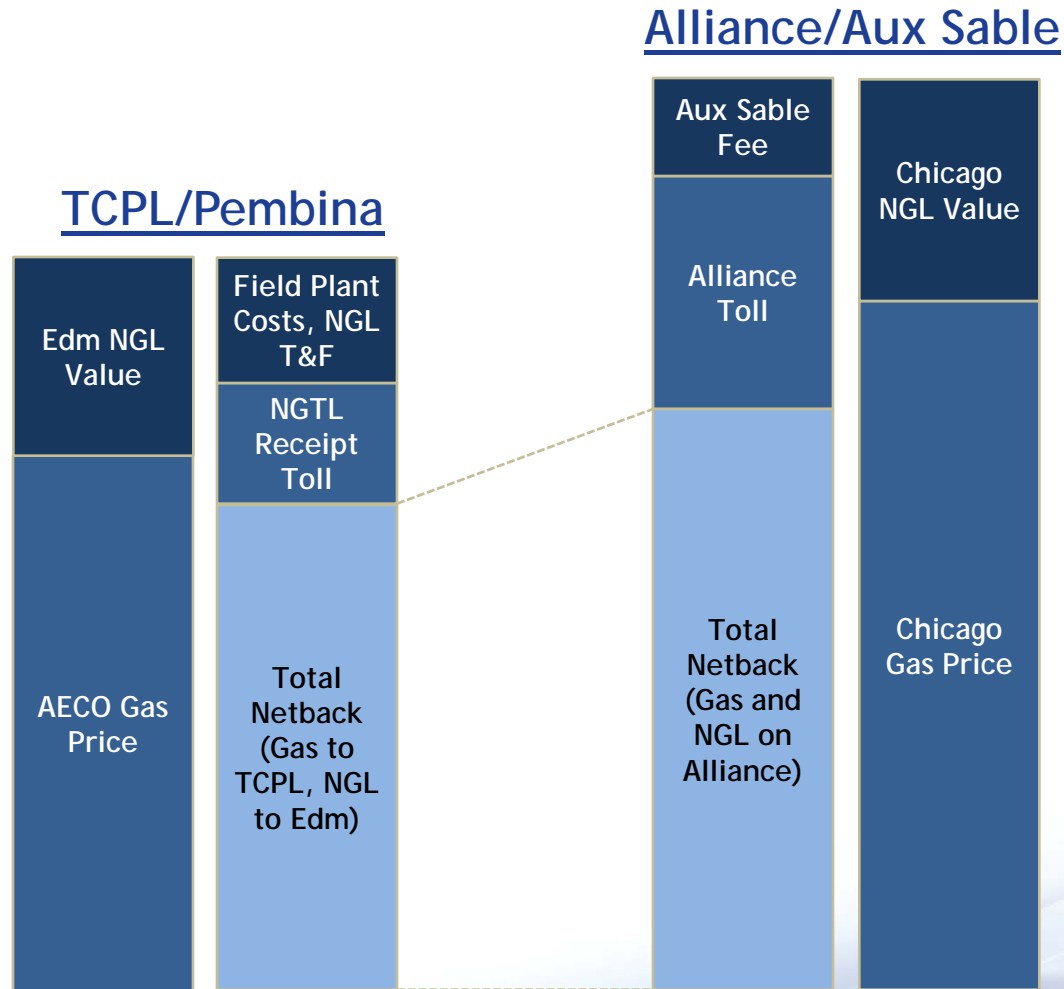


Alliance Aux Sable Value Proposition



Producer Value

How Do the Netbacks Compare in Western Canada?



Conclusion

For Western Canadian Producers,

- **Aux Sable and Alliance provide valuable access to the largest NGL and natural gas markets in North America**
- **Aux Sable and Alliance provide access to competitive and transparent market pricing**
- **Access to multiple markets ensures highest netbacks**

Aux Sable is currently securing commitments from existing and new shippers on Alliance

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