



Opportunities for the NGL Industry in the Oil Sands

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Outline

- Aux Sable: Past, Present and Future
- Oil Sands Industry Environment
- Midstream Opportunities
- Risks/Challenges
- ASC Key Initiatives and Projects
- Conclusions

Who Is Aux Sable/Sable Canada?

- Aux Sable is a private company owned by Enbridge, Fort Chicago and Williams
- Aux Sable Liquid Products (ASLP, US affiliate) owns and operates 2.1 bcf/d world scale extraction/frac plant at terminus of Alliance Pipeline (Chicago area)
- Sable Canada is owned by Enbridge and Fort Chicago
 - ◆ Sable Canada is developing fee-based businesses
 - ◆ Announced offgas alliance with Dow Chemical
- Growth in Canada on Fort Saskatchewan site
 - ◆ First Canadian offgas project for BA Heartland Upgrader under construction (Aux Sable)
 - ◆ Evaluating/developing other Fort Saskatchewan offgas and extraction projects (Sable Canada)

Aux Sable US Facilities



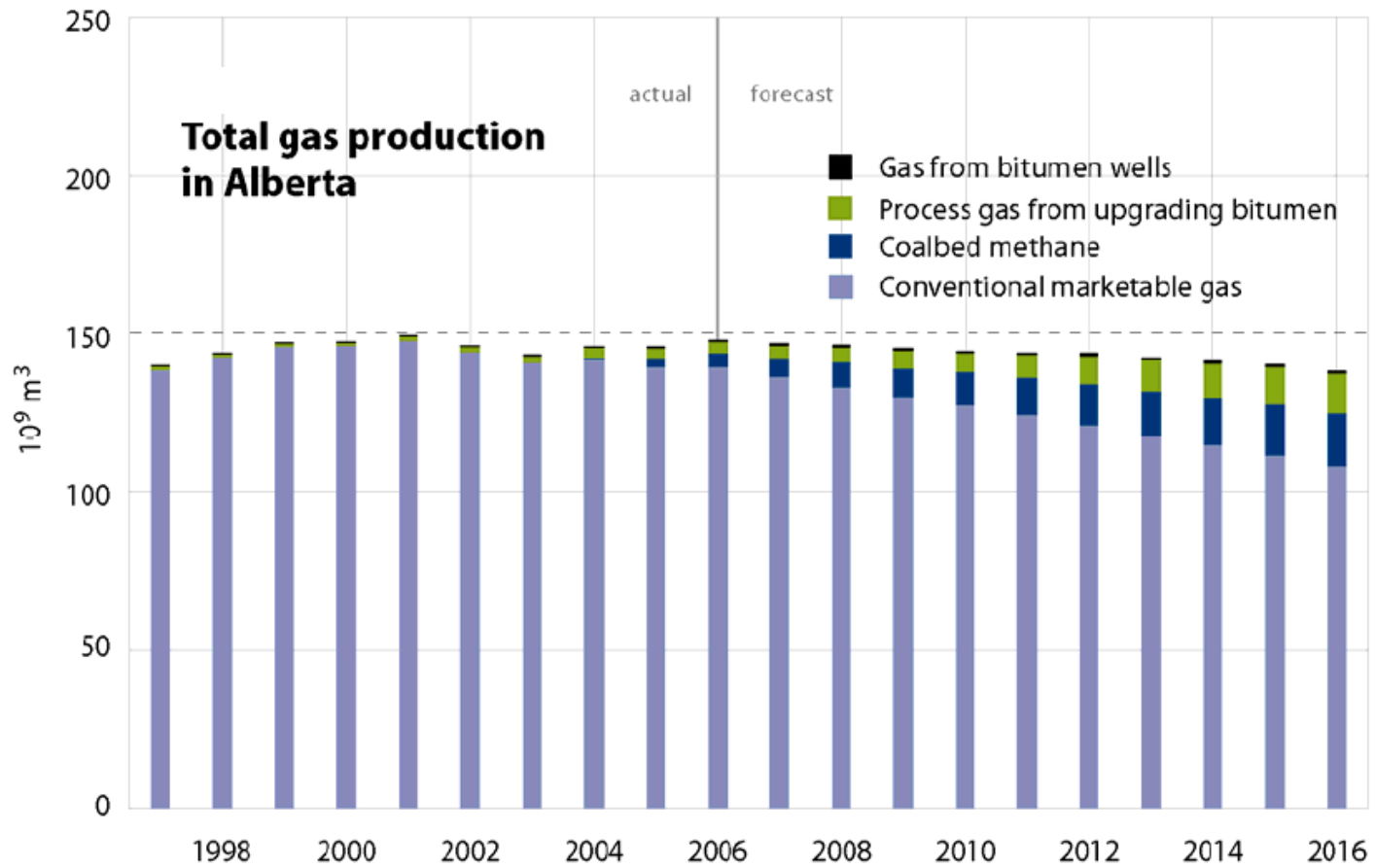
ASLP Channahon Facility

- 2.1 bcf/d capacity plant
- Capable of extracting and fractionating approximately 87,000 bbl/d of spec NGL products (ethane, propane, normal butane, iso-butane, and natural gasoline)
- Isomerization unit – to convert normal butane to iso-butane
- 16 spot rail loading rack
- 200,000 bbl/d of on-site storage (spec products and mix)
- Access to multiple pipelines, products terminals, and refineries

Conventional Midstream Challenges

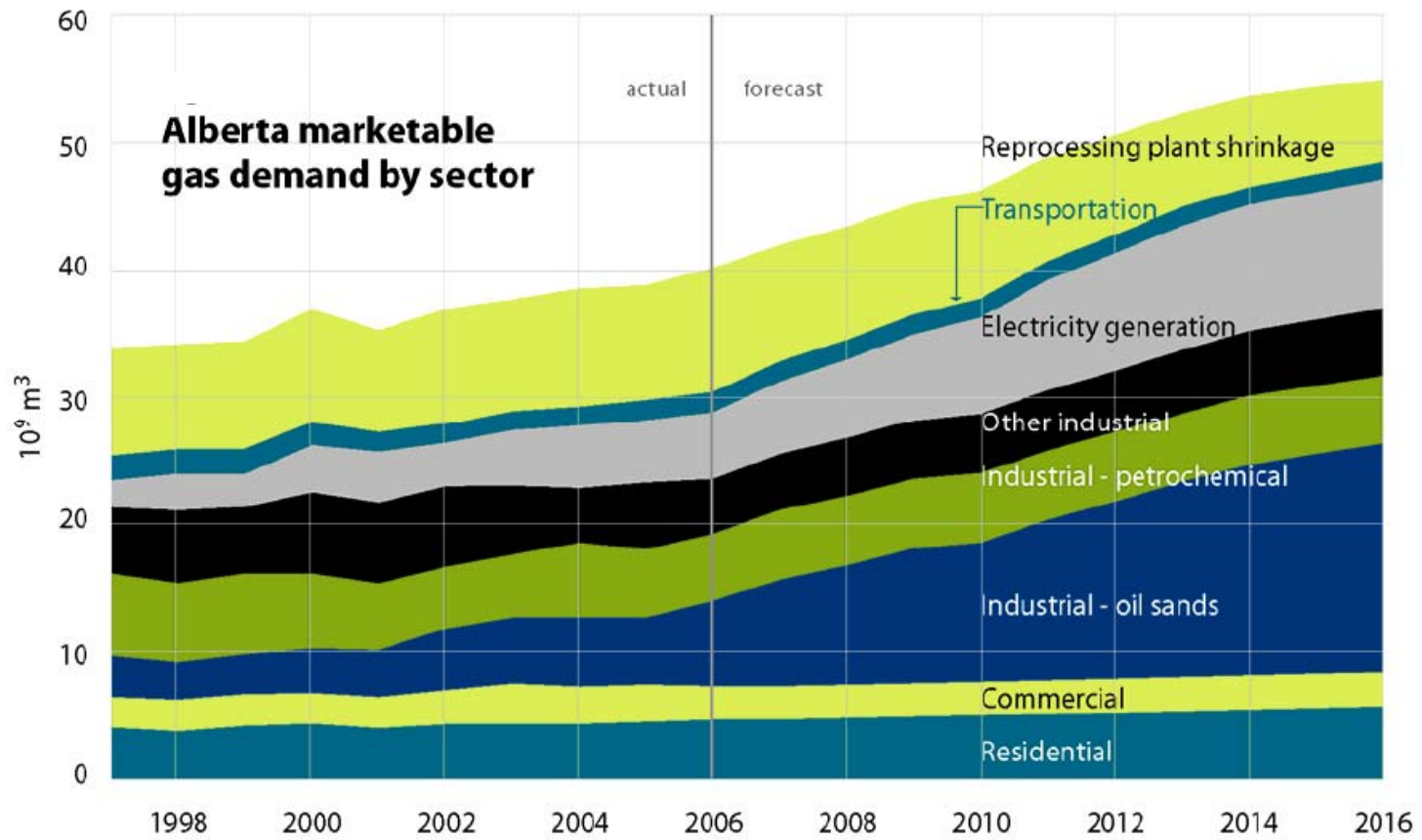
- Conventional natural gas supply on the decline
- Intra-Alberta natural gas consumption increasing
- Reduction in natural gas flows past major export points (primary source of ethane)
 - ◆ Cochrane
 - ◆ Empress
- Natural gas quality, from NGL perspective, eroding
 - ◆ Coal bed methane production increasing (high CO₂)
 - ◆ NGL content of natural gas declining
- Regulatory uncertainty (NGL Inquiry, NCC)

Alberta Natural Gas Supply



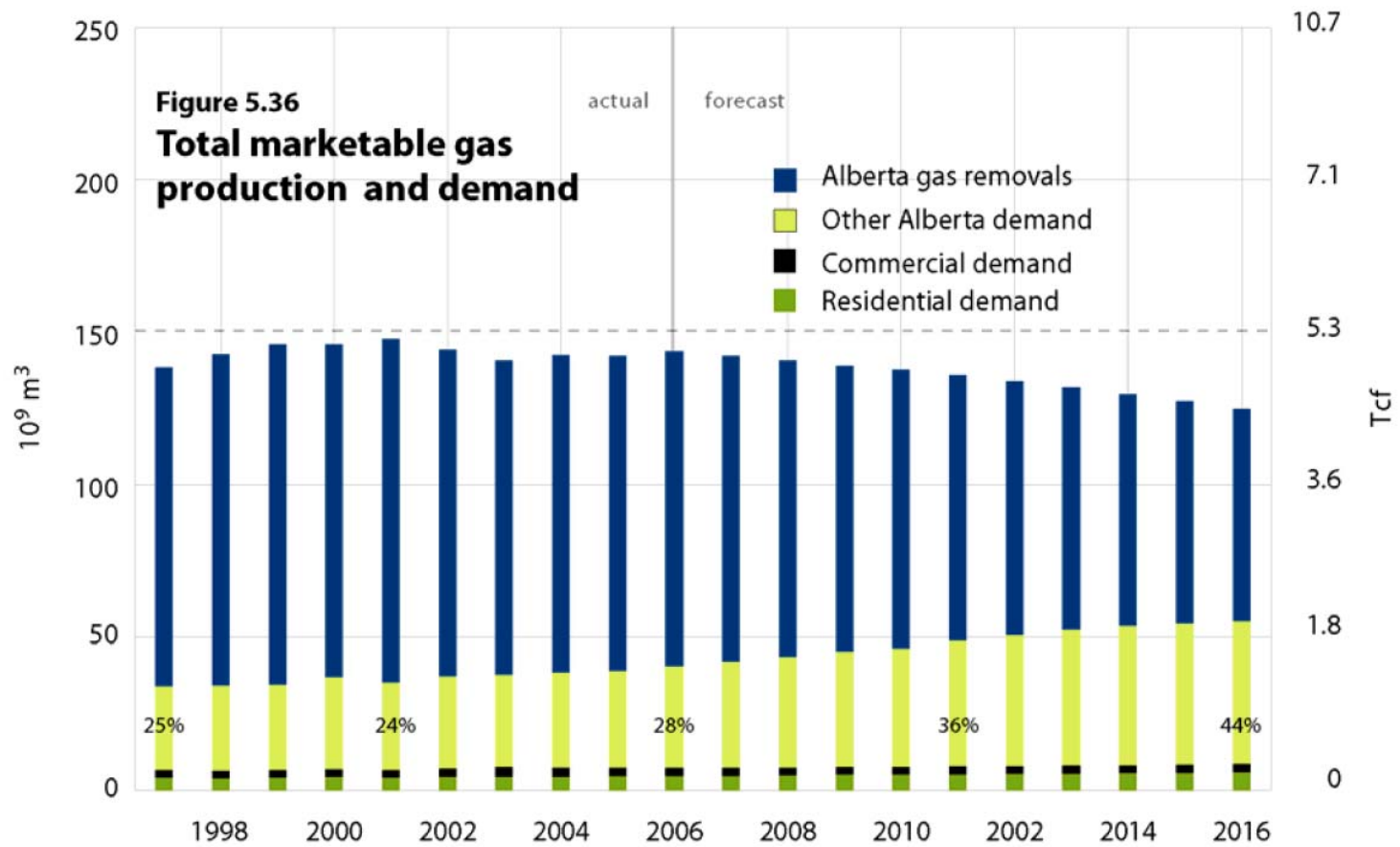
Source: ERCB

Alberta Natural Gas Demand



Source: ERCB

Alberta Natural Gas Supply/Demand



Source: ERCB

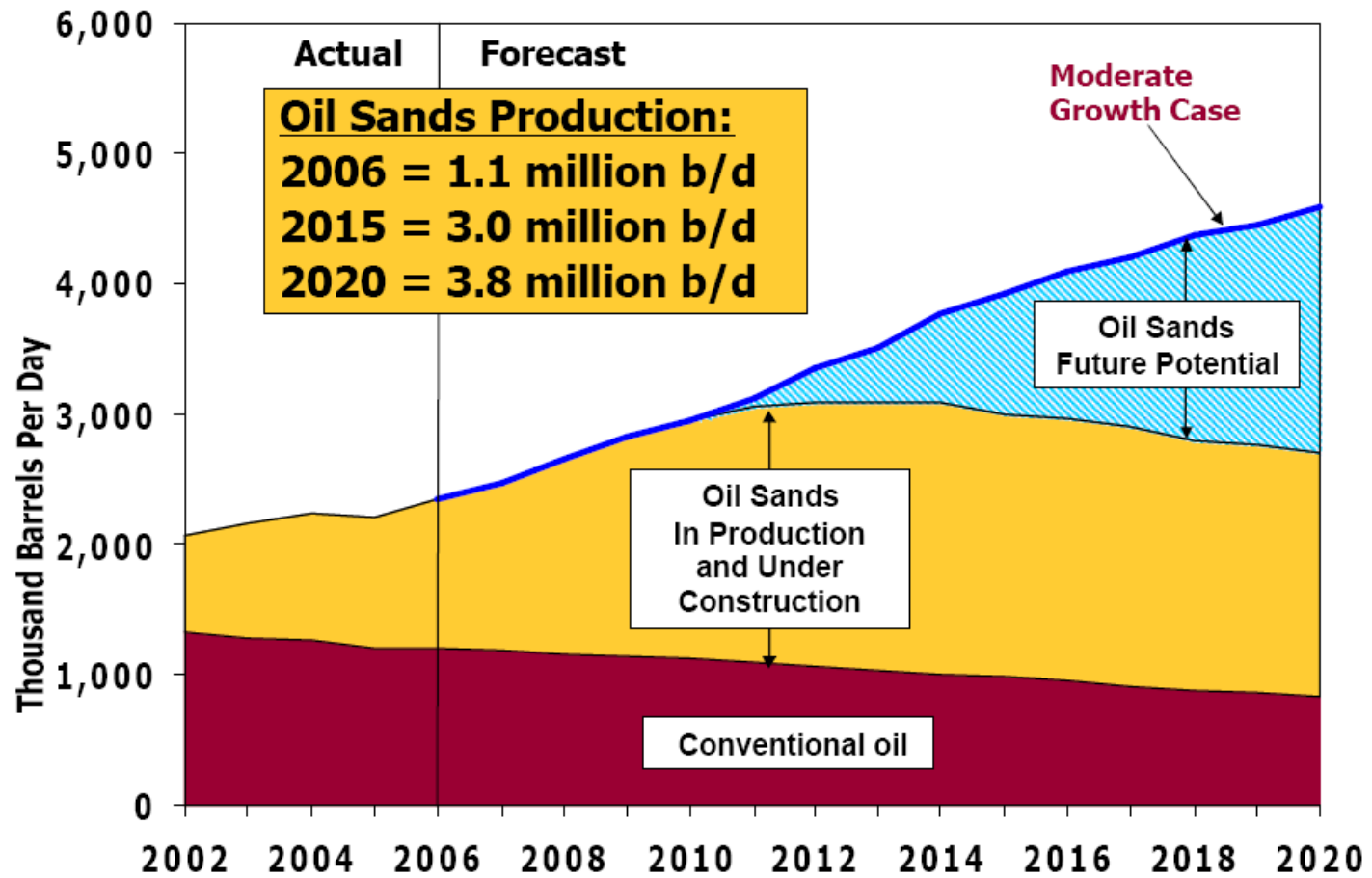
Oil Sands Opportunity

- Significant oil sands production growth expected
- Upgrading of oil sands produces “off gas” streams
- Off gas is typically higher NGL content than conventional gas
- Alberta Government bitumen upgrading policy
 - ◆ Upgrader credit, bitumen “in kind” royalties, other?
- Environmental benefits (CO₂ credits) from using processed vs raw offgas as fuel
- IEEP credits for petrochemical C₂/C₂= consumers

Off Gas Risks/Challenges

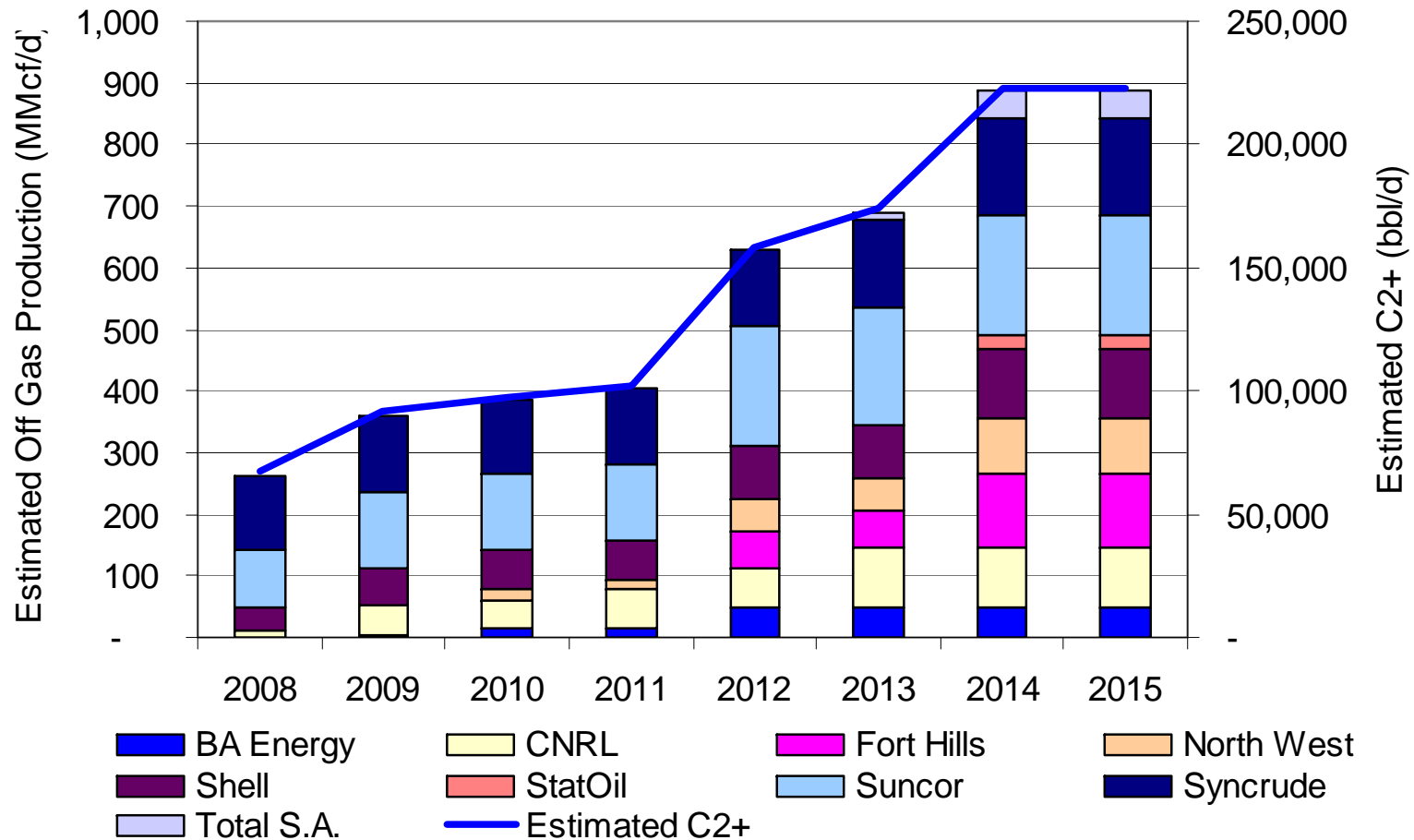
- Olefinic content / composition of off gas
- Markets for “unique” products (olefin/paraffin mix)
- Small scale of operation vs straddle plants
- Isolated locations / distance from NGL infrastructure
- Use of existing/new natural gas/NGL infrastructure
- Fuel gas energy balance for upgrader
- Reliability of off gas operations critical to upgrader

Canadian Crude Oil Supply



Source: CAPP

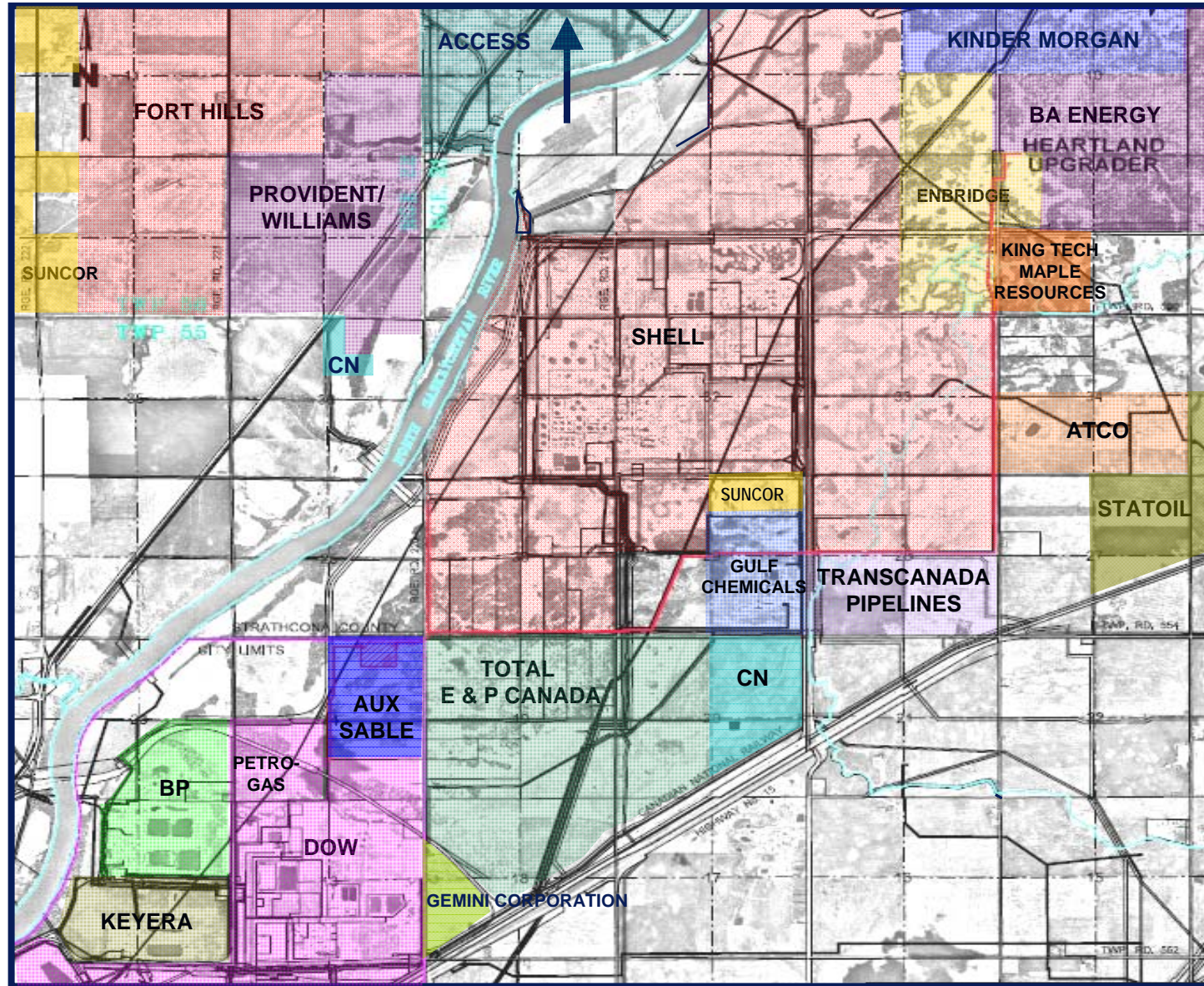
Potential Off Gas and C₂⁺ Supply from Alberta Upgraders



Source: ERCB applications and public data

Fort Saskatchewan Upgrader Activity

NORTHWEST UPGRADING & SYNENCO (< 2 KM)



Aux Sable Heartland Facility



Heartland Offgas Project

- Heartland Phase 1 upgrader offgas 15 mmcf/d
 - ◆ 2,200 bbl/d of C₂ (40% ethylene)
 - ◆ 2,000 bbl/d of C₃⁺
- Startup matched with Heartland Upgrader (Q3/4 2009)
- C₂/C₂⁼ to Dow Chemical
- C₃⁺ to local/export markets
- Residue gas returned to upgrader
- All regulatory approvals received
- Construction commenced in August 2007

Conclusions

- Alberta conventional midstream business in decline
- Dramatic growth in oil sands production
- Addition of significant bitumen upgrading capacity in Fort McMurray and Fort Saskatchewan areas
- Increasing availability of off gas for C₂⁺ extraction
- Processing of off gas presents unique challenges
- Aux Sable companies poised to expand off gas processing business, leverage on land position, off gas experience, extraction assets