Western Canadian Natural Gas, Crude Oil and NGL Businesses in a Low Price World

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• There is a high probability that I will say politically incorrect things
• Everyone here believes that Canada’s Unconventional Resources are huge!
• The world says, “So what?”
• Supply is not an issue
• Producing it cheaply is important provided you can get it to market
• Without market access, all you have is a very expensive hole in the ground
• Market access is the limiting factor
• GPMi Introduction
• Crude, Gas and NGL Price History
• Canadian Crude, Gas and NGL Exports
• What Will Happen Next?
• Conclusion
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Who We Are

• Based in Calgary and established in 1999, GPMi is independently owned and controlled
• Western Canada roots with growing international portfolio of over 400 clients
• Providing Independent Advisory Services to Producers, Midstreamers, Financial Institutions and Governments

- Gathering, Processing & Extraction
- Active Market Studies
- Acquisitions & Divestitures
- Commercial Facilitation
- NGLs, LNG & Petrochemicals

GPMi, a Consulting Firm Specializing in Energy Infrastructure
A bunch of cranky old guys who have spent their careers in the petroleum and petrochemical industries but don’t want to retire!
• GPMi Introduction
• **Crude, Gas and NGL Price History**
  • Canadian Crude, Gas and NGL Exports
  • What Will Happen Next?
• Conclusion
The late 1990’s witnessed a very large crude oil glut

Nat gas remained relatively strong and the Oil/Gas Price ratio declined

“It’s different this time” and

“We’ll never see $20 crude again as long as we live!”

Source: US EIA
The late 1990’s witnessed a very large crude oil glut
Nat gas remained relatively strong and the Oil/Gas Price ratio declined
“It’s different this time” and
“We’ll never see $20 crude again as long as we live!”

Source: US EIA
• Crude oil and propane prices were highly correlated prior to 2008
• Natural gas followed a similar trend with a few weather driven spikes
• Where did the Oil/Gas Price ratio go next?
• Natural gas and propane prices fell relative to crude oil prices between 2009 and 2015
• Propane became more correlated to gas than crude
• Where will the Oil/Gas Price ratio go in the future?
• Hint: The answer is 15

Source: US EIA
Presentation Outline

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• Western Canadian crude and gas prices remain significantly discounted to US prices
• We are a price taker because our only market is the U.S.
• Crude oil export volumes to the US have plateaued
• Revenues have fallen sharply
• The pain will continue until prices recover
• Canadian crude is cheap!

Source: NEB Data

*2016 estimated
Natural Gas Exports

- Natural gas export volumes to the US are increasing in 2016 but revenues continue to fall
- Canadian gas is cheap!

Source: NEB Data
*2016 estimated
Propane Exports

- Propane export volumes to the US are growing but revenues have fallen sharply due to very low prices.
- Canadian propane is very cheap – if you can get it!

Source: NEB Data

*2016 estimated
Canadian Crude Oil Imports

- Most imports from the U.S. to Eastern Canada are by rail, displacing Middle Eastern and Atlantic basin supplies.

Source: Statistics Canada
The U.S. has gone from being the world's largest importer to the world's largest exporter of LPG.
U.S. Strategy

• The U.S. has aggressively seized the opportunity created by abundance of oil, gas and NGLs
  – They are driving their surplus into world markets

• U.S. Government policy has been supportive of growing U.S. exports & blocking out competitors
  – Crude oil export ban has been lifted
  – Keystone pipeline was rejected
  – Jordan Cove LNG was denied
    • Restricts export of Canadian gas

• Our only market has become our biggest competitor and our largest supplier
  – If we do not develop additional markets, we restrict ourselves to only being a future reserve for North American (primarily U.S.) demand
The “Loonie” is a Petrocurrency

- The Canadian economy is primarily resource based
- The Canadian dollar is highly correlated to the price of oil
- Canada suffers serious economic pain if it cannot sell its resources

Source: EIA and Bank of Canada Data
Correlation Coefficient = 0.88
$r^2 = 0.77$
Canada’s Economy

• On October 19, 2016 the Bank of Canada downgraded its outlook for the Canadian economy
  – The Bank had expected non-energy exports to grow strongly partly as a result of a weaker currency, but
  – “… more of our export shortfall may be structural … rather than cyclical”
  – “… we are examining a range of structural factors, including lost export capacity and competitiveness challenges.”
• Supply is no longer a dominant issue – market access is now the key to success
• World crude oil prices will rise over the next several years
• North American natural gas and NGL prices will remain weak
• Western Canada is at the far end of the North American supply chain
• Canada will continue to receive the lowest prices unless and until we open up new export markets
• The status quo is not an acceptable solution for Canada
• When running away from a grizzly bear, you don’t have to be the fastest, just not the slowest
• Unfortunately, in the North American crude, gas and NGL races, Western Canada is a slow competitor
• We have to run where we can be more competitive, i.e., waterborne exports to the Pacific or Atlantic basins
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What is Happening Now?

- The Canadian petroleum industry is leaving too much on the table
- Numerous LNG and LPG export projects are in development
- But, the NIMBYs and BANANAs are slowing everything down
- The economic downturn will force decisions soon
- New Federal and Provincial Governments are getting an Economics 101 lesson
What Needs to Happen Next?

- Canada is the best in the world at environmentally responsible hydrocarbon production
- Waterborne Crude, LNG and LPG export projects to Pacific and Atlantic basin markets must succeed
- We can deliver at low cost and be competitive
- This solution is difficult but doable
- There is no other plausible alternative
- Attitudes are changing
- The public is getting fed up with interminable delays
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• Canada has a large surplus of environmentally responsible low cost crude oil, natural gas and NGL
• We cannot consume it and the U.S. doesn’t need it
• Canada will develop alternative markets for its petroleum products
• We are at the beginning of the upturn!