

Unlocking the Future of Offshore Arctic Oil and Gas Development

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CANADA'S OIL & NATURAL GAS PRODUCERS

Canadian Association of Petroleum Producers

- Represents large and small producer member companies
- Members explore for, develop and produce natural gas, natural gas liquids, crude oil, and oil sands throughout Canada
- Produce about 80 per cent of Canada's natural gas and oil
- Part of a national industry with revenues of about \$101 billion per year
- Associate members provide a wide range of services that support the upstream oil and natural gas industry
- Offices in St. John's, Ottawa, Calgary and Vancouver



Presentation Outline

- Current Status
- Industry's Position
- What is Required to Encourage Exploration
- Current Industry Canadian Arctic R&D Priorities
- Geological & Economic Assessment
- Conclusion



Current Canadian Arctic Status

- No exploration or development planned in near term
- U.S. & Canada Arctic Joint Leaders Statement – December 2016
 - Freeze on new Canadian exploration licences & five year review
- 5 year review to include:
 - Regional Strategic Environmental Assessments in Beaufort and Baffin Bay/Davis Strait
 - Licence holder consultations
 - Arctic policy framework development
 - Arctic legislation modernization
 - Better defined role for Territorial governments and Indigenous communities
- Negotiations underway to reach agreement on Beaufort oil and gas management between Government of Canada, IRC, Governments of Northwest Territories and Yukon

Current Canadian Arctic Status (cont'd)

- Bill C-55 – Amendments to Oceans Act / CPRA – potential for MPA overlap on licences
- Bill C-69 – New environmental assessment legislation – implications for transport of Arctic resources
- Bill C-88 – Amendment to CPRA to freeze offshore licence terms
- FORRI – initiative to modernize offshore regulations delayed

Industry's Position

- Industry needs long-term predictability and certainty
- Oil and gas activity can occur in the Canadian arctic safely, while protecting the environment
- Canada's oil and gas regulatory regime is robust but requires modernizing
- Oil and gas investments in the Canadian arctic need to be more globally competitive with the help of incentives and new infrastructure

Arctic offshore technology advancement

- Marine seismic noise reduction
- Design and construction of new Arctic Class drilling units
- Ice management
- Safe drilling and production operations
- Well control and oil spill prevention and response

What is Required to Encourage Exploration & Development

- Modernize the regulatory regime, including enacting new legislation and amending various Bills
- Review the Same Season Relief Well policy, taking into account advances in well control and technology
- Include in the Arctic Policy Framework a recognition that future oil and gas investment can play a major contribution to northern and Indigenous economic and social goals and well-being

What is Required to Encourage Exploration & Development (cont'd)

- Provide certainty to investors that Canada wants oil and gas development in the arctic, and if so under what conditions
- Complete Regional Strategic Environmental Assessments, including implementing any recommendations
- Industry needs to advance current research & development priorities
- Updated geological and economic assessment
- Successful U.S. Beaufort Sea exploration results will increase attention

Current Industry Canadian Arctic R&D Priorities

- C-CORE:
 - Remote Sensing of the met-ice-ocean environment, provision of ice surveillance services, ice engineering, geotechnical engineering, oil spill response
- LOOKNorth
 - Commercialization of remote sensing (satellite and UAV) technologies and advancing Northern capacity to deliver remote sensing services
 - Advancing resource development and safety & security applications
- Petroleum Research Newfoundland & Labrador
 - Arctic and harsh environment – iceberg detection, threat analysis and drift forecasting, towing/towing automation, ice management/pack ice and station-keeping
- Churchill Marine Observatory (CMO)
 - Focused on detection and mitigation of oil spill in sea ice
- Canada's High Arctic Research Station (CHARS)
 - Advancing arctic knowledge to improve economic opportunities

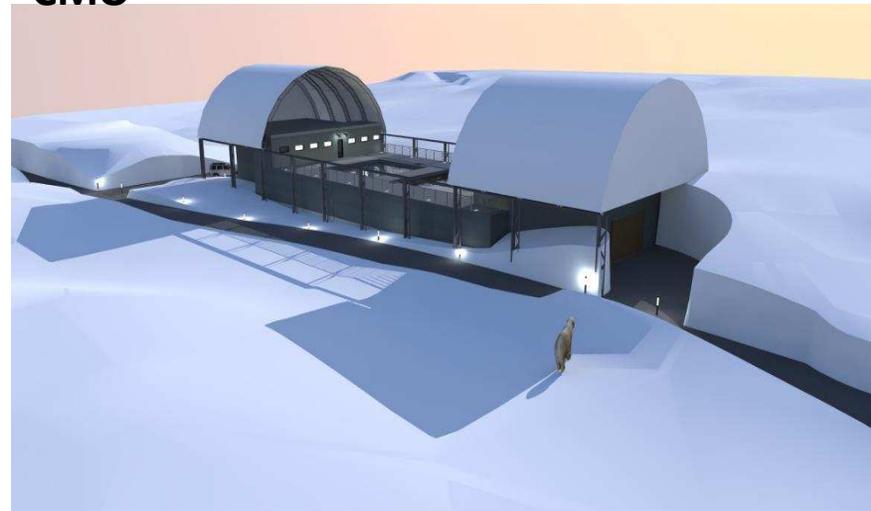
Canada's High Arctic Research Station and Churchill Marine Observatory

CHARS



Polar Knowledge Canada

CMO



University of Manitoba

Geological & Economic Assessment Suggested

- A new independent study is required to assess geological, commercial and economic potential
- 25-30 year time horizon
- Help identify the regulatory and fiscal conditions under which future oil and gas development may be feasible
- This would assist in the five year review
- Provide realistic and credible economic appraisal on the future and timelines of arctic oil and gas potential

Conclusion

- Canadian Arctic has high potential for safe and responsible oil and gas development in the future
- There are significant policy and regulatory challenges that must be overcome to capitalize on that potential
- R&D/Technology continues to advance to help enable future arctic resource development
- New geological and economic assessment suggested

Thank You

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