Newfoundland & Labrador Workshop on Deepwater Exploration and Production
NL Oil and Gas Overview
Who is CAPP?

- **Canadian Association of Petroleum Producers**
  - The voice of Canada’s upstream oil and gas industry

- Represents the companies that explore for, develop and produce natural gas and crude oil throughout Canada

- Member companies produce 85% of Canada’s natural gas and crude oil; associate companies provide a wide ranging variety of products and services that support the industry

- On behalf of its members, CAPP advocates for and enables economic competitiveness and safe, environmentally and socially responsible performance

- Offices in Calgary, Ottawa, St. John’s and Victoria
Basins Offshore Newfoundland & Labrador
Hibernia

- **Operated by Hibernia Management and Development Company Ltd.; Interest Owners:**
  - ExxonMobil Canada (33.125%), Chevron Canada Resources (26.875%), Suncor (20%), Canada Hibernia Holding Corporation (8.5%), Murphy Oil (6.5%) and Statoil Canada Ltd. (5%)

- **Discovered in 1979; First Oil in November, 1997**

- **Total production as of December 21, 2016 is 1 billion barrels of total estimated recoverable resource of 1.6 billion barrels of oil**

- **Ongoing Projects:**
  - Hibernia Southern Extension – hybrid production platform and subsea tiebacks
  - Ben Nevis Avalon Developments – hybrid production platform and subsea tiebacks

(*C-NLOPB Annual Report 2015-16*)
Terra Nova

- Operated by Suncor; Interest Owners:
  - Suncor (37.675%), ExxonMobil (19%), Statoil (15%), Husky Energy (13%), Murphy Oil (10.475%), Mosbacher (3.85%), Chevron (1%)

- Discovered in 1984; first Oil in January 2002

- Total production (2002 - 2016) is 382* million barrels of estimated reserves of 528* million barrels of oil

- Ongoing projects:
  - Long term Terra Nova Life of Field plan progressing
  - Focusing on new growth areas – West Flank and Far East

(*C-NLOPB Annual Report 2015-16)
White Rose Field and Extensions

- Operated by Husky Energy; Interest Owners:
  - Husky Energy (72.5%), Suncor (27.5%)
- Discovered in 1984; first oil in Nov. 2005
- 259* million barrels produced of estimated reserves of 501* million barrels of oil
- Ongoing Projects:
  - Exploration drilling with Henry Goodrich
  - Exploration and delineation wells planned to further field expansion
  - White Rose Extension Project – investment decision anticipated in 2017

(*C-NLOPB Annual Report 2015-16)
Hebron

- Operated by ExxonMobil; Interest Owners:
  - ExxonMobil (36%), Chevron (26.7%), Suncor (22.7%), Statoil (9.7%), Nalcor (4.9%)

- Discovered in 1980

- Estimated 700 million barrels of recoverable oil; 30+ year project life

- Development Plan and Benefits Plan approved in May 2012; Co-venturer project sanction received December 31, 2012

- Timeline for project:
  - May 2017: tow out to the field for hook-up and commissioning
  - 2017: First oil
Companies with interest in exploration licenses in the Flemish Pass Basin:

- Statoil
- Husky Energy
- BP Canada
- Hess Canada
- Noble Energy Canada
- Navitas Petroleum
- DKL Investments
- Nexen Energy
Regulatory Framework
Offshore Installation

C-NLOPB

- Atlantic Accord Act(s)
- Offshore regulations

Class Rules adopted in lieu of inappropriate guidance in offshore regulations (RQF process)

Certifying Authority

- DNV
- Lloyds
- ABS
- Bureau Veritas

Marine/Aviation

Transport Canada

- Marine Flag State
- Canada Shipping Act & Regulations
- IMO Conventions
- Class Rules

Class Rules basic requirement of Canada Shipping Act and IMO Conventions

Other Federal Regulatory Bodies
- Fisheries & Oceans
- Canadian Coast Guard
- Environment Canada
- RCMP
About the C-NLOPB

● Arm’s length regulator with broad mandate:
  ▪ To interpret and apply the provisions of the *Atlantic Accord* and the *Atlantic Accord Implementation Acts* to all activities of operators in the Canada-Newfoundland and Labrador Offshore Area and, to oversee operator compliance with those statutory provisions

● Established in 1985 under the Atlantic Accord to provide regulatory oversight in four areas:
  ▪ Safety
  ▪ Environment
  ▪ Resource Management (includes Exploration)
  ▪ Industrial Benefits

● Board reports to federal and provincial Ministers of Natural Resources, plus Minister of Service NL
About the C-NLOPB

- The role of the C-NLOPB is to facilitate the exploration for and development of petroleum resources offshore NL in a manner consistent with the Board’s mandate. This includes:
  - Health and safety of workers
  - Environmental protection
  - Effective management of land tenure
  - Maximum hydrocarbon recovery and value
  - Canada/Newfoundland and Labrador benefits
Benefits Agreements

- Each project operator negotiates a benefits agreements for developments, which include provisions for employment commitments and targets, and royalties.
- Although government is not a regulatory body in the offshore, the benefits agreement forms part of the Development Application, which eventually is approved and enforced by the C-NLOPB.

Royalties

- Currently, project operators negotiate royalty regimes for individual projects. The province is proposing to change this with a new generic offshore royalty regime, expected to be announced in May 2017. This regime would apply to all projects going forward.

Equity Shares (Nalcor)

- Since the White Rose Extension agreements, government has sought ownership stakes in offshore developments as part of the benefits negotiations. This interest is managed by its provincial energy corporation, Nalcor.
A Challenging Environment – Getting to Work

Production facilities located more than 300 km offshore; Flemish Pass Basin exploration licenses even farther
- Helicopter travel times: two hours (Jeanne d’Arc) to three hours (Flemish Pass)
- For the Flemish Pass, longer distance results in fewer passengers/payload, to have enough fuel to go the distance
- Helicopter travel only permitted when sea states/visibility allows
- Travel by vessel: 14-16 hours (Jeanne d’Arc); ~20 hours (Flemish Pass)

Fog
- 40% Winter
- 84% June/July
A Challenging Environment

- Severe seas in winter
- Waves up to 30 m reported
- Winds exceeding 150 km/h
- 0 – 1000 icebergs per year
  - 300,000 tonnes (avg)
  - 40–50 m wide (avg)
  - 60–70 m long (avg)
Thank You
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AtlanticCanadaOffshore.ca
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