The Mackenzie Gas Project Environmental Impact Statement Challenges, Opportunities and Lessons Learned

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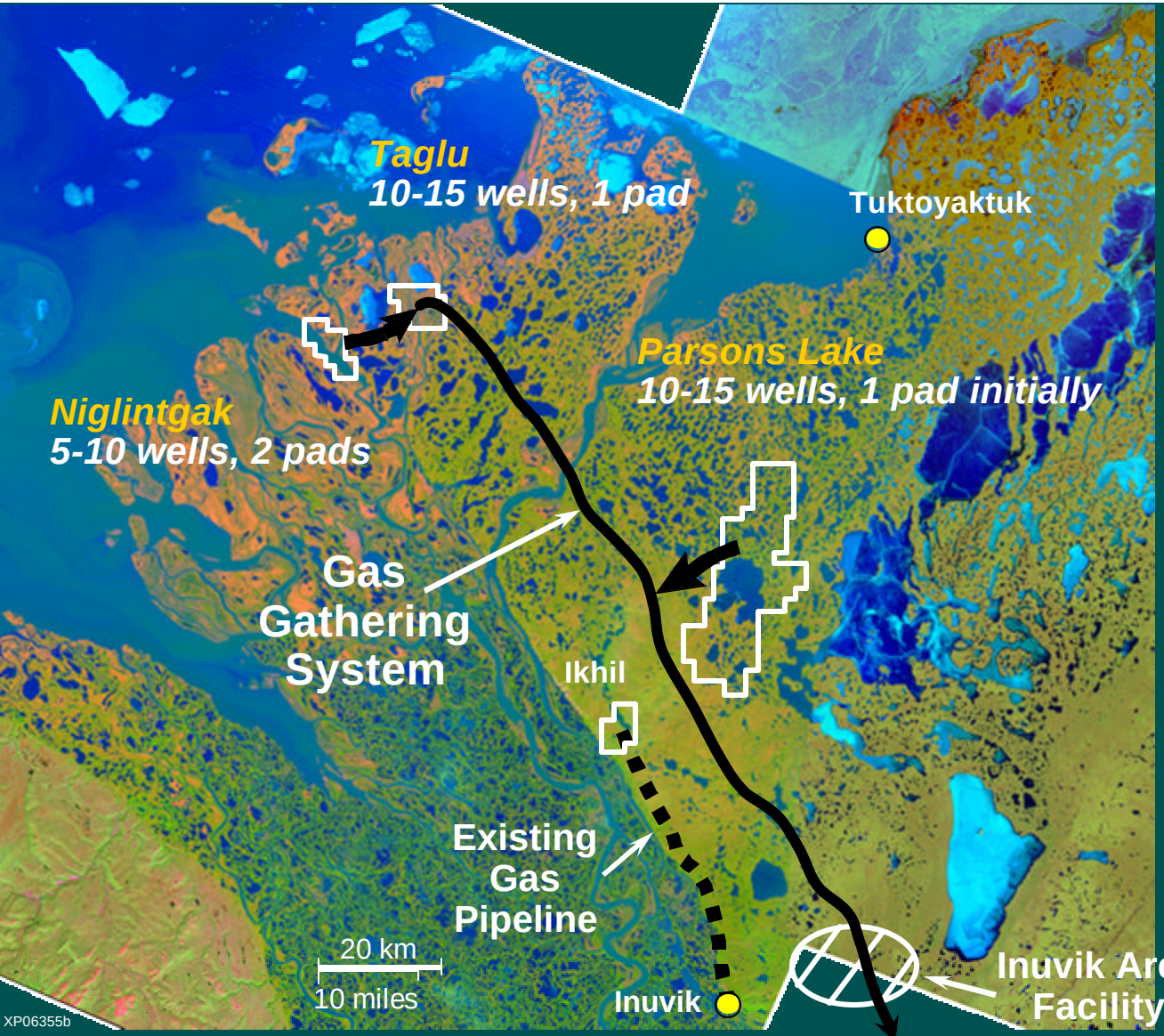
Presentation Topics

Introduction
Mackenzie Gas Project
Regulatory Regime
EIS Approach
Public Consultation
Challenges
Opportunities
Lessons Learned

Mackenzie Delta - Gas Production Area

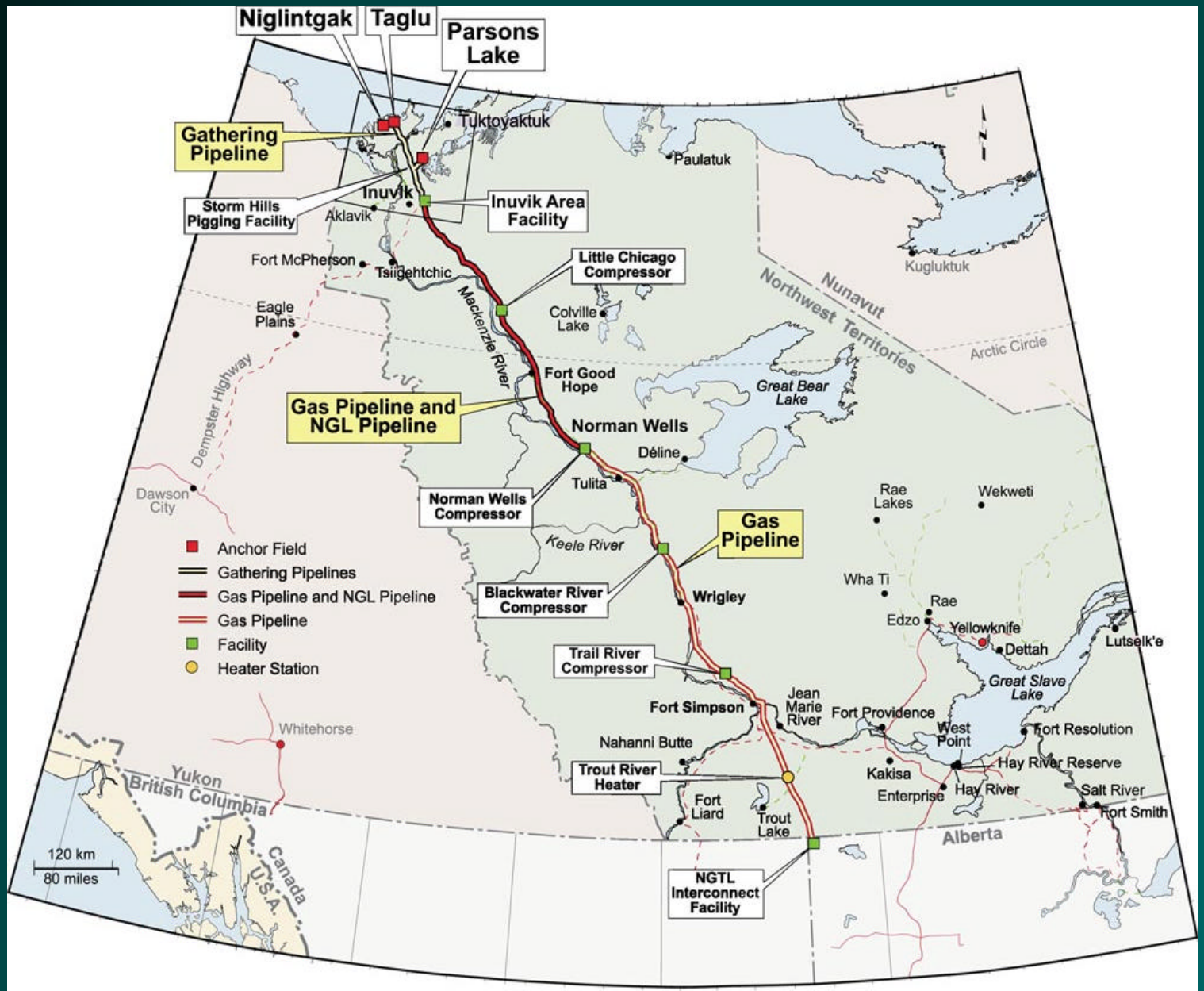


Taglu - 3 TCF
- Discovered 1971
- 100% Imperial Oil

Parsons Lake - 1.8 TCF
- Discovered 1972
- 75% Conoco Canada
- 25% ExxonMobil Canada

Niglintgak - 1 TCF
- Discovered 1973
- 100% Shell Canada

Gas Gathering and Transmission Pipeline



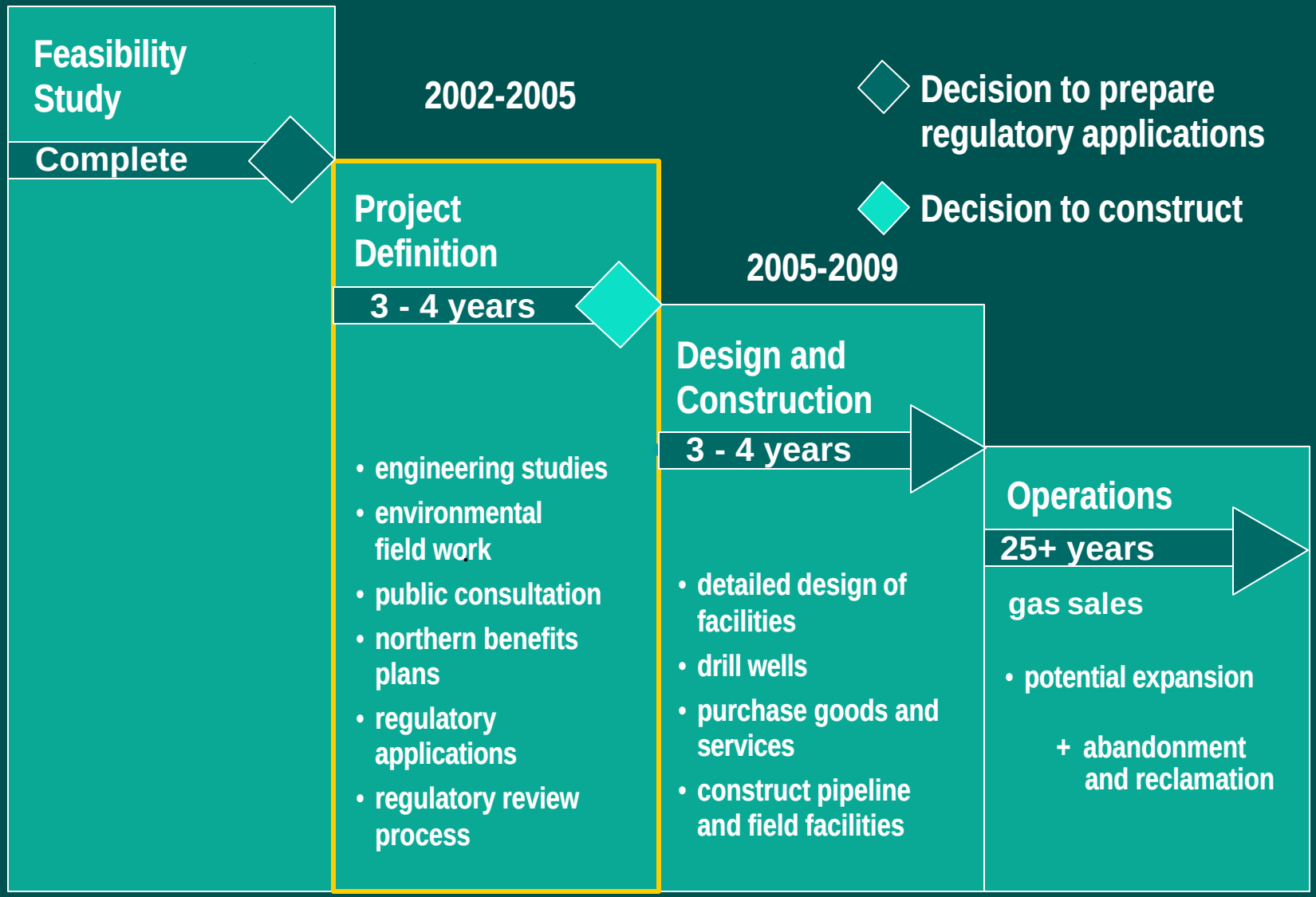
Infrastructure Sites

- During construction, the project will require:
  - Construction Camps
  - Barge landings, stockpiles, camps
  - Granular materials (gravel, fill)
  - Temporary winter access
  - Permanent roads
- During operations, will require:
  - Access to compressor stations, block valves, etc.

Logistics

- **Logistical support during construction:**
  - **Barge transport along Mackenzie River (summer)**
  - **Highway transport during winter and summer**
  - **Aircraft traffic to main centres and to camps, stockpile areas, work areas, etc.**
  - **Winter roads to pipeline**

Mackenzie Gas Project Schedule



EIS Regulatory Review

- Cooperative review process involving the Canadian government, Inuvialuit Environmental Review Board and the Mackenzie Valley Environmental Review Board
- Will need to meet the requirements of
  - Canadian Environmental Assessment Act
  - Inuvialuit Final Agreement
  - Mackenzie Valley Resource Management Act
- Regulatory Agreements
  - Inuvialuit & Minister of Environment
  - MVEIRB, Inuvialuit & Minister of Environment
  - Agreement between Regulatory Authorities

EIS Regulatory Review

- EIS Terms of Reference being developed by government agencies with community input
- The MGP will submit a single EIS for the production areas, the gas gathering system, main pipeline and associated infrastructure
- Environmental public hearings and technical regulatory hearings will be held in parallel
- Joint Review Panel will produce report with EIS recommendations for the Project

Environmental Assessment Approach

- Assessment will be focused on those issues of greatest concern to stakeholders
- Cumulative effects of past, present and future activities will be assessed
- Open and transparent process with communities
- Assessment will use both traditional knowledge and scientific studies to:
  - Identify issues
  - Assess potential effects
  - Develop measures for impact management

Photos courtesy of GNWT

Public Consultation

Key Principles

- Public consultation is a regulatory need
- Community focused approach provides:
  - Full and fair consideration of views and input
  - Communication will be open, timely, respectful and two-way
  - Obtain early input to improve EIS decisions
  - EIS Regional Workshops develop mitigation plans

Photos courtesy of GNWT

Community-Oriented Process

Environmental Baseline Studies

- Baseline studies began in 2002 and continued through 2004
- Studies have been undertaken on:
  - Socio-economic
  - Traditional resource use
  - Land use
  - Heritage resources
  - Air quality
  - Noise
  - Geology, permafrost, terrain & soils
  - Fish and aquatic systems
  - Vegetation and wildlife
- Local communities have been involved in all studies

Photos courtesy of GNWT

Environmental Assessment

- Key biophysical effects include:
  - Air quality and emissions associated with Project
    - climate change
  - Permafrost changes and terrain stability
  - Subsidence and storm surges on the Delta
  - River bank modifications and erosion
  - Effects on fish and fish habitat at river crossings
  - Disturbance of vegetation & revegetation
  - Increased access and noise wildlife mortality
  - Habitat loss and effects on wildlife harvesting
  - Protected areas and land uses

Photos courtesy of GNWT

Socio-Economic Assessment

- **Important socio-economic effects include:**
  - **Access to benefits such as training, employment, and service contracts**
  - **Shortages in infrastructure and supplies**
  - **Increased demand for public services**
  - **Changes in quality of life & community wellness**
  - **Construction camps and community interaction**
  - **Disturbance of traditional resource uses**

Photos courtesy of GNWT

Shared Responsibility for Social Economic Effects Management

Environmental Management Plans

Environmental Management

- Water
- Waste
- Hazardous materials
- Wildlife
- Reclamation

Monitoring

- Compliance
- Effects
- Social & Economic

Social-economic

- Northern Business Opportunities
- Education & Training
- Heritage Resources
- Harvester Compensation

Challenges

- Socio-economic and cultural effects management
- Consultation and involvement of communities
- Integration of traditional knowledge
- Cumulative environmental effects
- Project multi-faceted: production-gathering-pipeline, infrastructure
- Broad geographic scale - large, costly baseline studies required

Opportunities

- Participate in social benefit discussions and plans
- Contribute to economic growth and planning
- Increase knowledge of land and resource use
- Engage in community-industry dialogue

Lessons Learned

- Large, multi-faceted EIS requires major resources to prepare
- Canadian northern regulatory arena is complex, evolving and to a large extent untested
- Socio-economic and cultural issues require shared responsibility solutions
- Biophysical issues revolve around resource management planning