



The Future is Nonconventional

Regulating Alberta's Oil Sands in 2009

Washington, D.C. | October 27 - 29, 2009

Dan McFadyen, Chairman

 **ERCB** Energy Resources
Conservation Board

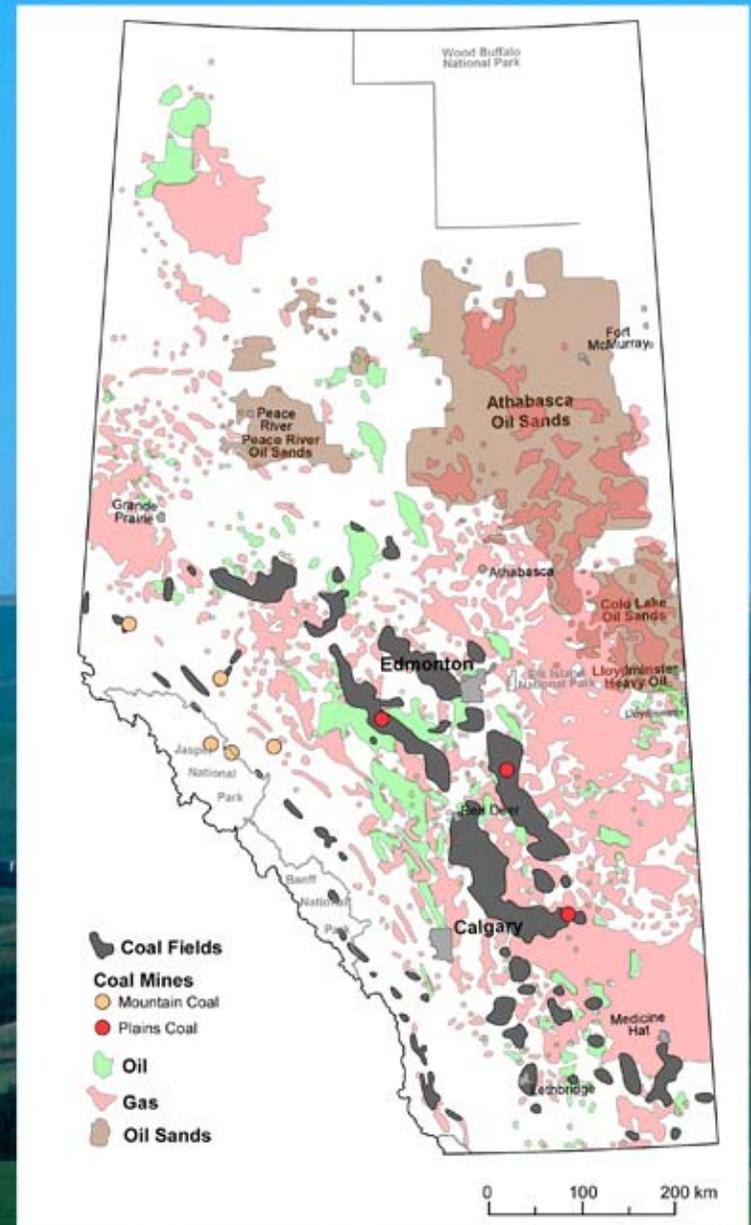
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Overview - Energy Resources

Alberta has large underlying energy resources of oil, natural gas, oil sands and coal as well as wind and hydro

Alberta has a long history and a great deal of experience regulating energy development

Resource owned by Albertans and developed by private sector



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Alberta's Oil Sands

Naturally occurring mixture
of sand, clay, water and
bitumen (a very heavy oil)

Bitumen is separated from
sand and upgraded to
refinery-ready crude oil



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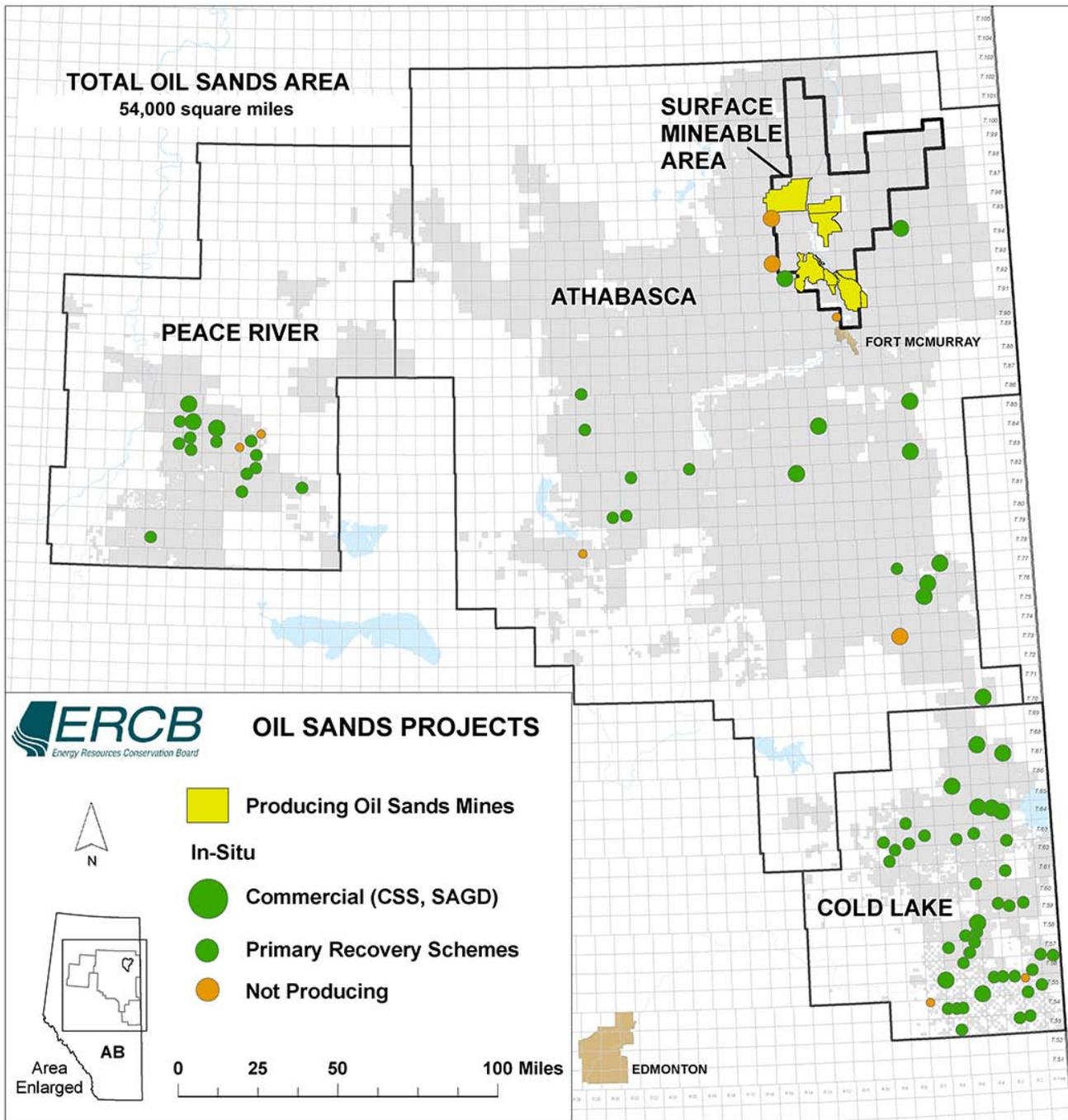
Alberta's Oil Sands:

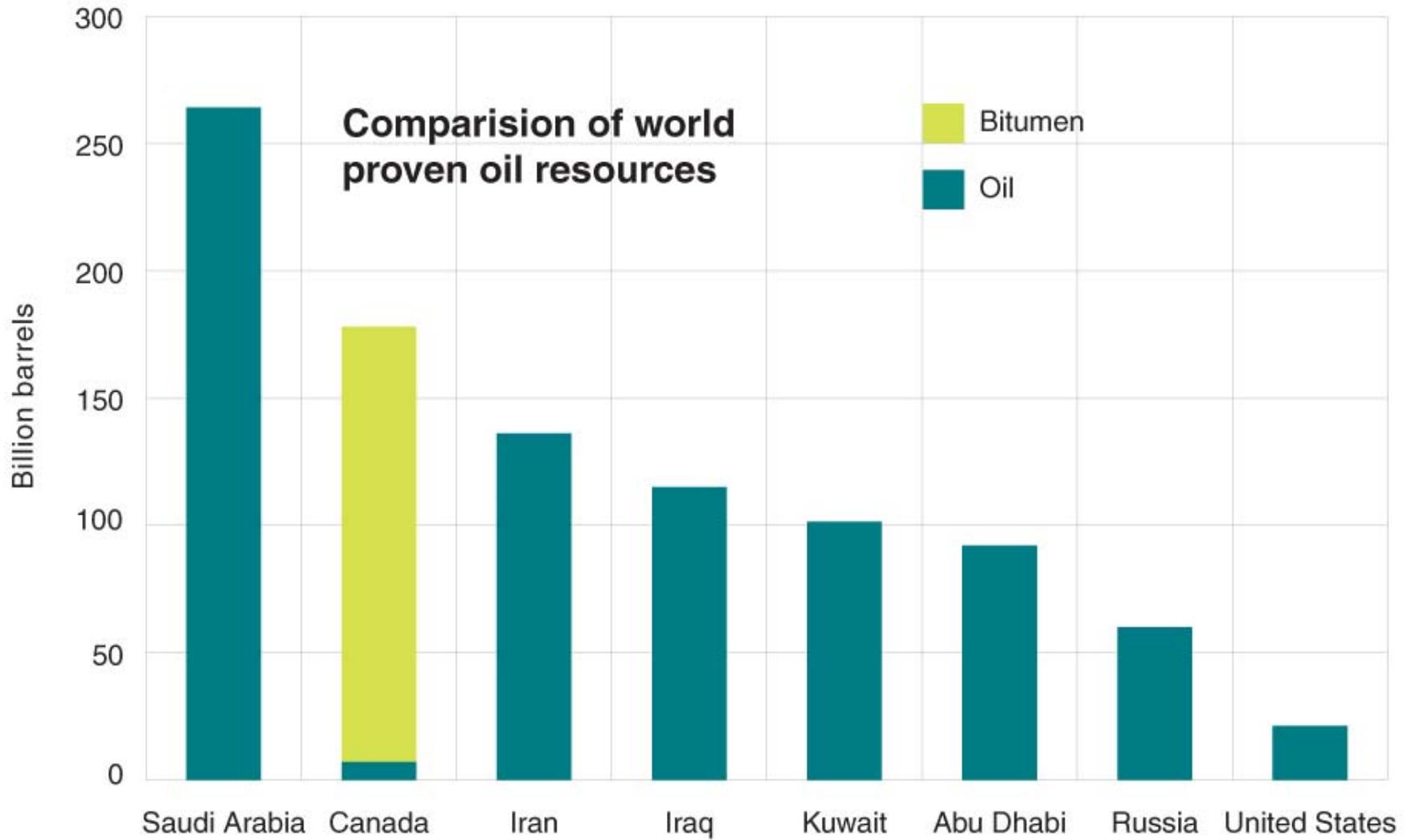
Annual bitumen production:
forecast to increase to more
than one billion barrels
(3.0 million barrels per day)
by 2018

**Total remaining
established bitumen reserves:**
170.4 billion barrels

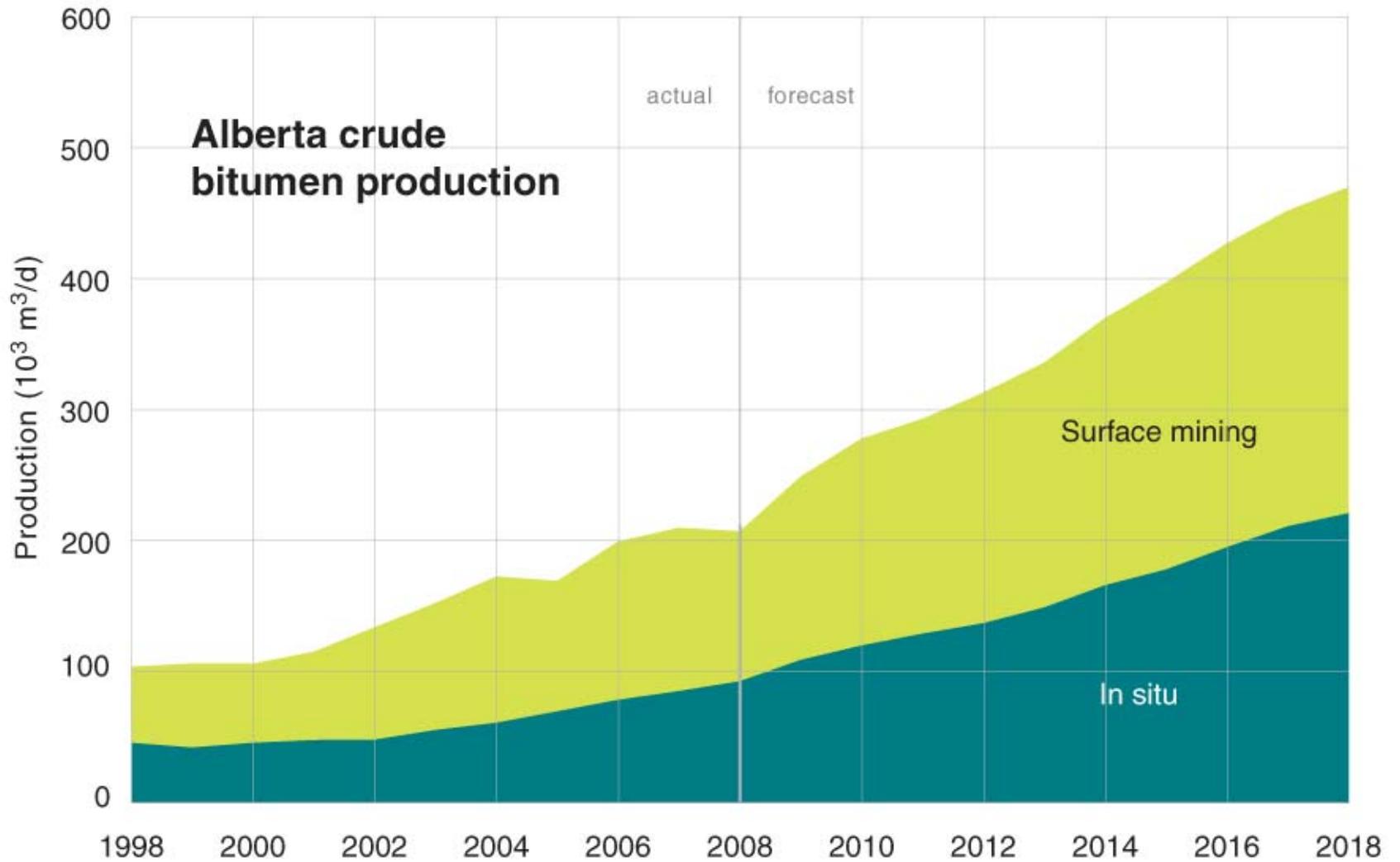
2008: bitumen production of
477 million barrels averaged
1.31 million barrels per day



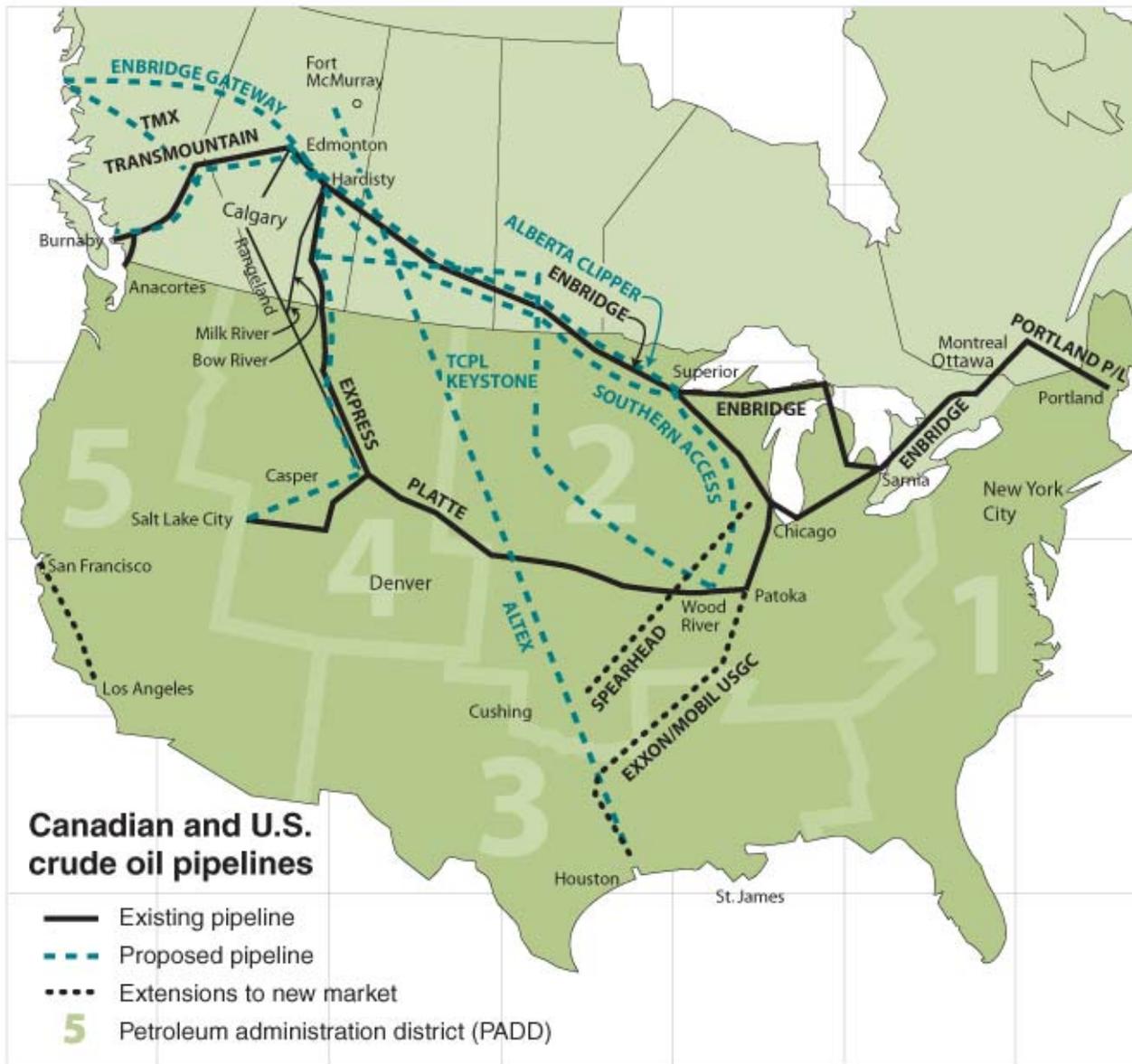




Source: Oil and Gas Journal, December 2008



Source: ST98-2009: Alberta's Energy Reserves and Supply/Demand Outlook



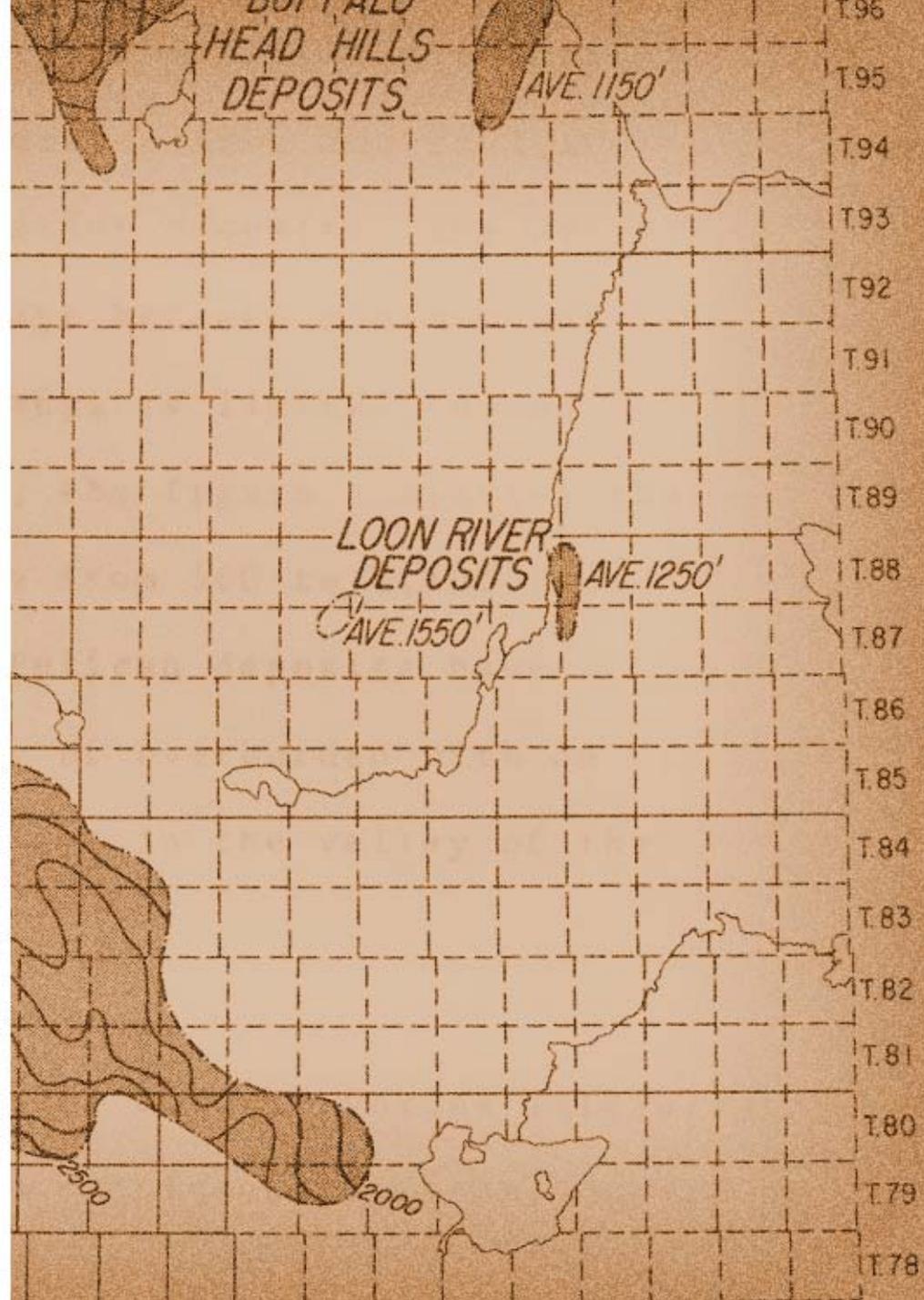
Source: ST98-2009: Alberta's Energy Reserves and Supply/Demand Outlook

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Oil Sands/Policy Regulation

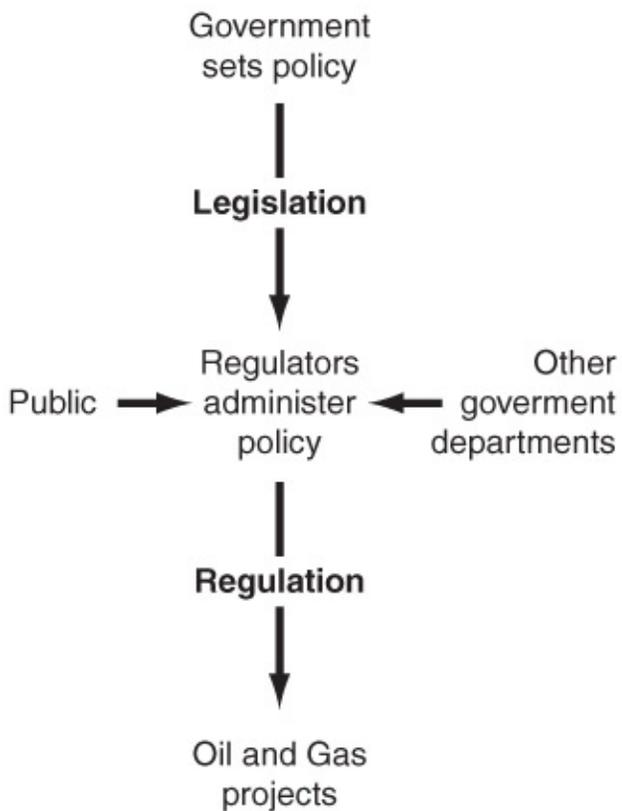
Comprehensive policy and regulatory regimes for development and operations

Regulatory approvals by Alberta and federal government regulators

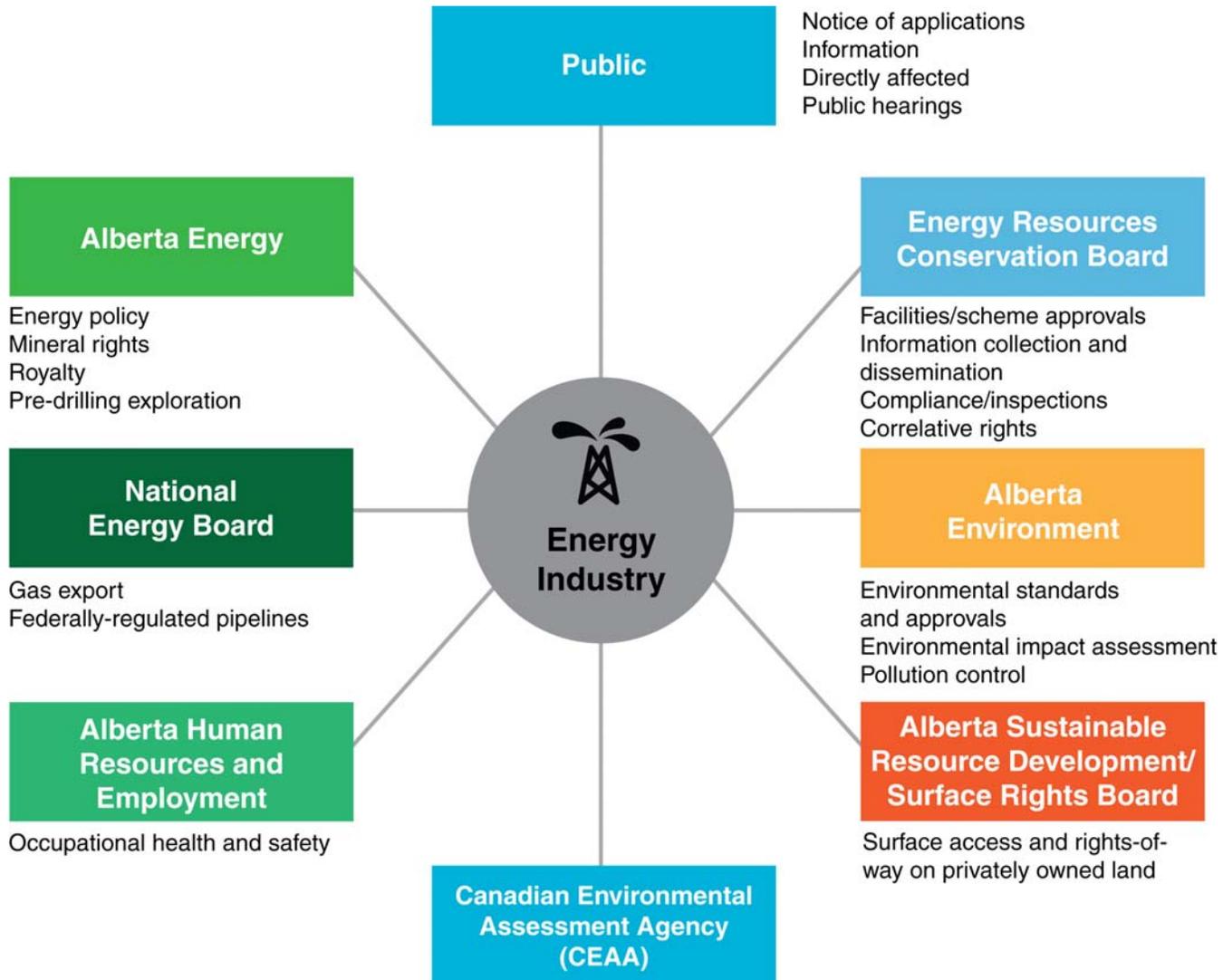


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Regulatory Framework



Primary Energy Industry Regulatory Interfaces



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Oil Sands Facilities in Alberta

June 2009

58 approved commercial
projects (47 in situ and
11 surface mines)

139 primary recovery
projects (in situ)

13 experimental projects



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“Responsible Actions: A Plan For Alberta’s Oil Sands”

Strategies: environment, infrastructure, economic benefits, aboriginal consultation, research and development, and performance measurement

Key Success Factors:

- Regulatory structures
 - Investment
 - Collaboration
 - Research and technology
-

Strategy released
Feb 12, 2009



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Cumulative Environment Management Association (CEMA)

Non-government organization
June 2000

45 participating member
organizations

Mandate: Study cumulative
effects of industrial development
in the region and produce
guideline and management
frameworks

- produced 6 management
frameworks
- published numerous studies



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ERCB: 70 Years of Heritage

One of the most highly
evolved regulatory systems
in North America

43,800 total applications
in 2008

20,000 applications received
by July 31, 2009



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Today's ERCB

\$177 million budget

Funding: 58% industry,
42% government

900+ staff in 13 locations



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Today's ERCB

Structure/Organization

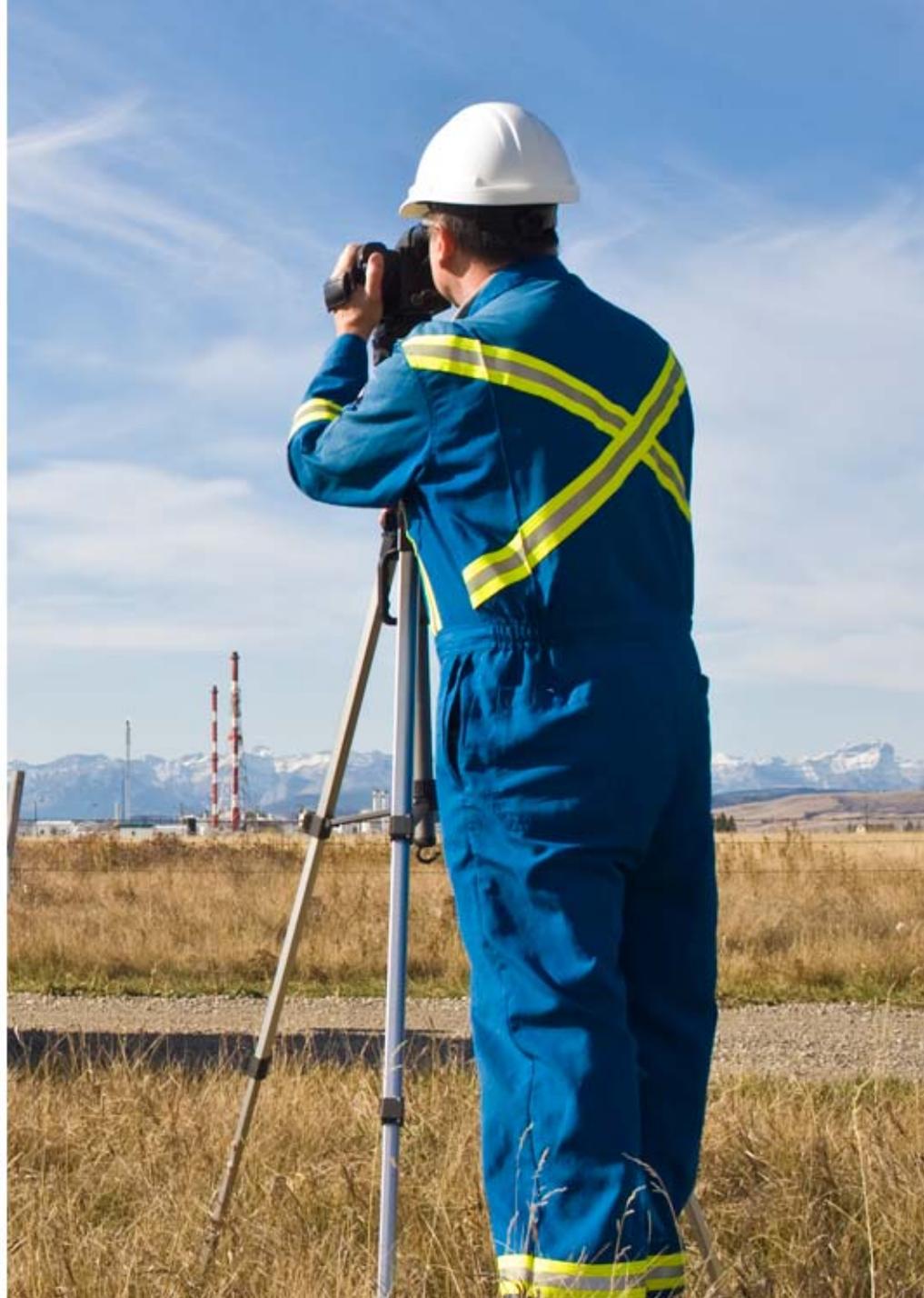
Board: 8 independent members

Operations: 4 branches

- Oil sands
 - Applications
 - Field Surveillance and Operations
 - Geology, Environment and Economics
-

Corporate Support: 4 branches

- Law
- Finance
- Information Systems
- Corporate Services



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Oil Sands Branch

In Situ Oil Sands Group (Calgary)

- 40 staff
 - Applications, surveillance
and geology sections
-

Mineable Oil Sands Group (Fort McMurray)

- 45 staff
- Application, Surveillance
and Geology Functions
- Mining, tailings, processing
and environment sections



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Two New ERCB Directives

***Directive 073: Requirements for
Inspection and Compliance
of Oil Sands Mining and
Processing Plant Operations
in the Oil Sands Mining Area***

***Directive 074:
Tailings Performance Criteria
and Requirements for Oil Sands
Mining Schemes***

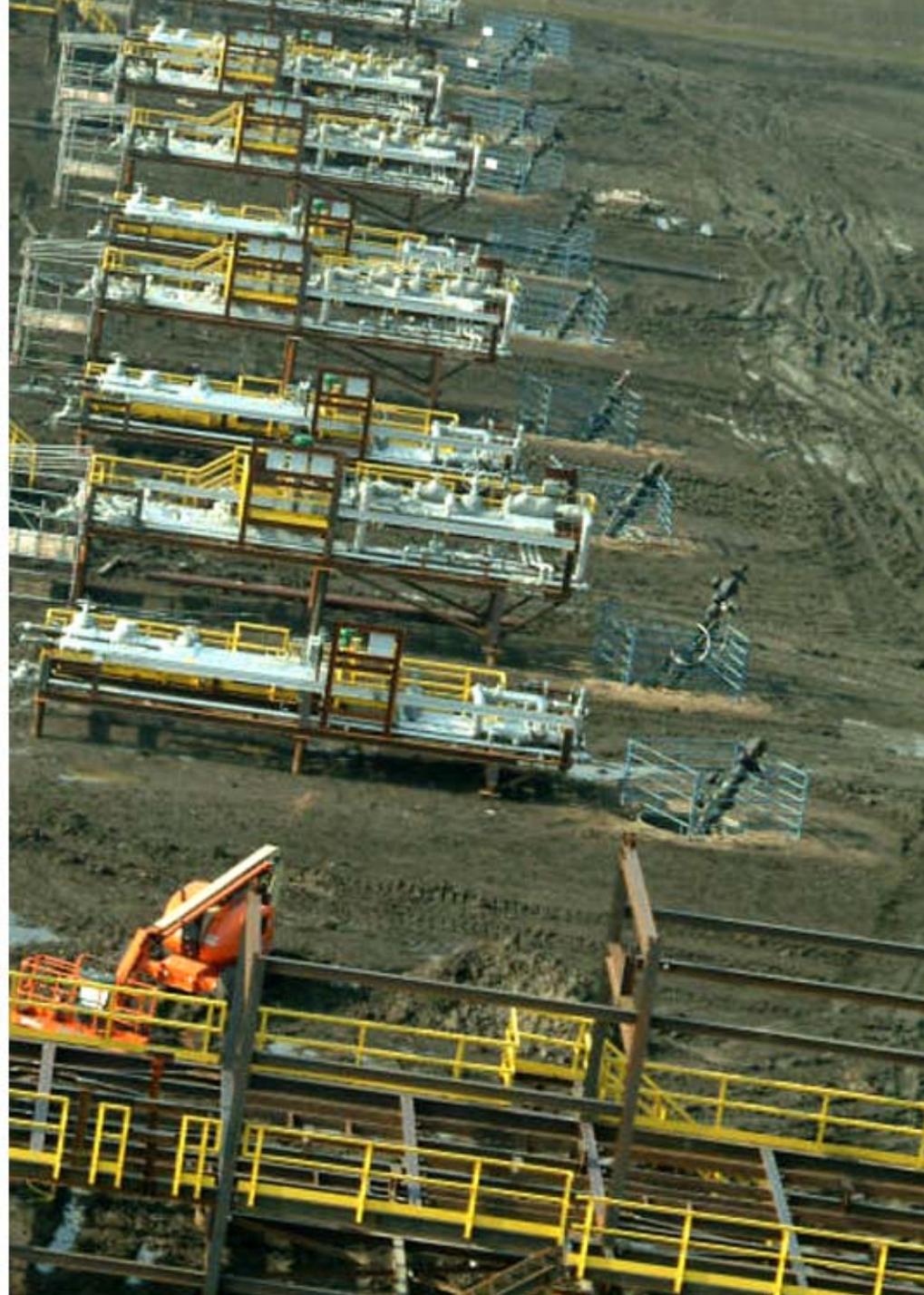


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Directive 073

Requirements for Inspection and Compliance of Oil Sands Mining and Processing Plant Operations in the Oil Sands Mining Area

Enhances and more clearly defines inspection activities and compliance criteria



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Directive 074

*Tailings Performance Criteria
and Requirements for Oil Sands
Mining Schemes*

Develops performance criteria
for managing oil sands tailings,
with specific enforcement actions



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The ERCB Vision

To be the best
nonconventional
regulator in the
world by 2013

