



OIL AND GAS COMMISSION

BC OIL AND GAS COMMISSION

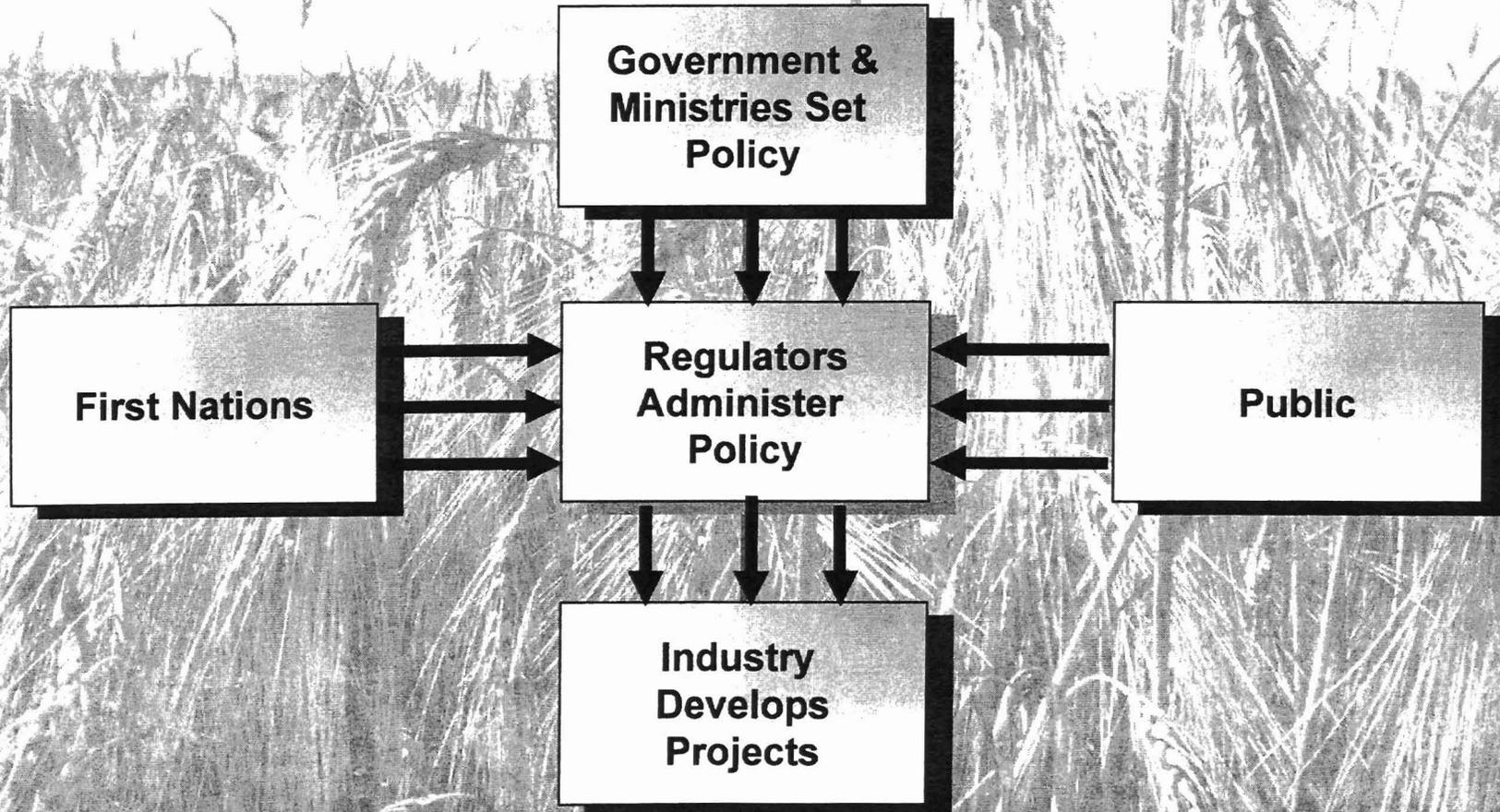
Role of the Regulator

**Presentation to Montana Legislative
Committee
January 15, 2008**

**Ft Nelson
Ft St John
Kamloops
Victoria**

**ENVIRONMENTAL QUALITY
COUNCIL
JANUARY 15, 2008
EXHIBIT 9**

Regulatory Framework





OGC Integrated Regulatory Authority

| Regulator Authority | OGC (BC) | Montana (BOGC) | WOGCC (Wyoming) | COGCC (Colorado) | Oklahoma | SIR (Sask) | AEUB (Alberta) |
|--|----------|----------------|-----------------|------------------|----------|------------|----------------|
| Lease Mineral Rights | | | | | | X | |
| Adjudicate Well Site (Or Well Drilling) Applications | X | X | X | X | X | X | X |
| Adjudicate Pipeline Applications | X | | | | | X | X |
| Adjudicate Facility Applications | X | | | | | X | X |
| Adjudicate Geophysical Applications | X | | X | X | X | X | |
| Perform Onsite Technical Inspections | X | X | X | X | X | X | X |
| Consult With First Nations | X | X | | | X | | |
| Mitigate Environmental Issues | X | X | X | X | X | X | X |
| Issue Authority To Occupy Public Land | X | | | | | | |
| Issue Authority To Cut Timber On Area Of Occupation | X | | | | | | |
| Issue Authority To Build And Use Roads | X | | | | | | |
| Consult With Stakeholders | X | X | X | X | X | X | X |
| Review Archaeology Assessment | X | | | | | | |
| Mitigate Heritage Issues | X | | | | | | |
| Waste Management And Clean Up | X | X | X | X | X | X | X |

Pre-Application Requirements

- **Register With BC Corporate Registry**
- **Drilling Deposit**
- **Obtain a Master Licence to Cut**
- **Comprehensive General Liability Insurance**



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Project Lifecycle

1 Consultation by Industry

2 Industry Application to OGC

**3 OGC First Nations
Consultation**

**4 OGC Application
Review & Assessment**

**5 Decision by OGC with terms
and conditions of approval**

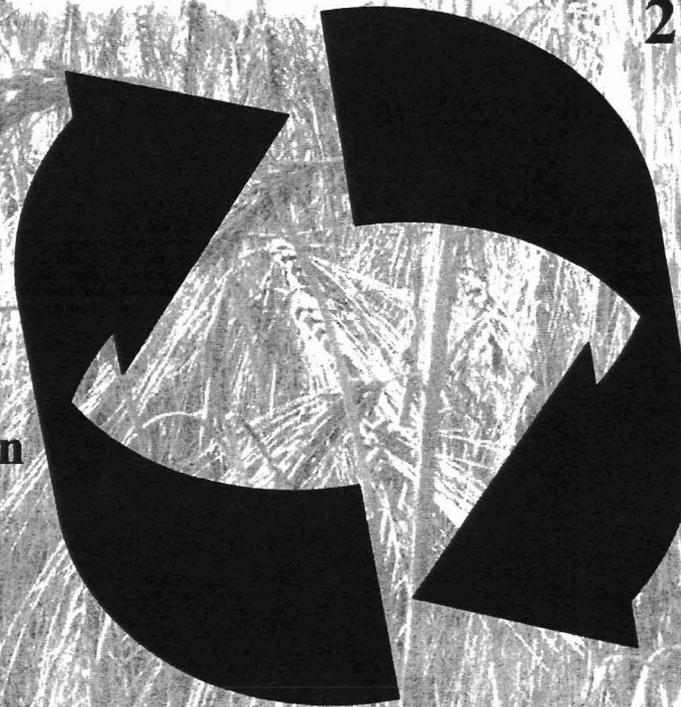
**6 Industry Exploration
Activity Commences**

**7 OGC Compliance
& Inspection**

**8 Application for Production
and Production Activity
Commence**

9 OGC Enforcement

**10 Industry Site Reclamation
& Restoration**



Application Review Requirements

- **Survey Plans**
- **Emergency Planning Zones**
- **Archaeological - Assessment Information Forms (Archaeological Reports)**
- **Crown Land Application**
- **Landowner Agreement or MAB Order**
- **First Nations Consultation/Notification Packages**
- **...many others**

Application Review

- **OGC biologists, foresters, agrologists, archaeologists and decision makers review applications to ensure important habitats and sites are protected**
- **Selecting sites in existing disturbances and low value habitats avoids impacts to forest values**
- **During project reviews, modifications to an application may be requested by the OGC, or conditions placed on project approval**

Our Consultation Role

The OGC consults on behalf of the Crown

The OGC...

- **Strives to foster mutually beneficial working relationships with First Nation communities.**
- **Avoids, minimizes, and mitigates impacts to Treaty and Aboriginal rights.**
- **Acts as facilitators between First Nations and industry.**
- **Accesses community knowledge.**
- **Integrates community knowledge with scientific knowledge.**

The ADR Process - Overview

- **OGC encourages the use of consensual Alternative Dispute Resolution methods for the purpose of resolving disputes relating to the OGC's mandate (section 8 of OGC Act)**
- **OGC encourages industry and landowners to work together to address concerns**

Emergency Planning

An emergency preparedness plan may include:

- A process showing steps involved in responding to a potential emergency;
- Maps showing dwellings, public structures, roads and railways in proximity to oil and gas activity;
- Instructions for evacuation, sheltering, air monitoring and safe fuel burning during an incident;
- Company contact information, identifying roles and responsibilities;
- A communication plan to inform affected parties and necessary authorities in a timely manner;
- Methods of ensuring the safety of those responding to a possible event; and
- Employee emergency response team procedures.



Compliance and Enforcement

- **Ensure the oil and gas industry in British Columbia meets regulatory requirements**
 - **Site inspections**
 - **Event and complaint investigation**
- **Support safe oil and gas activity in British Columbia**



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Remediation and Reclamation

- **Certificate of Restoration Process**
- **Orphan Well Fund**
- **Identification of Historical Sites**



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WWW.OGC.GOV.BC.CA





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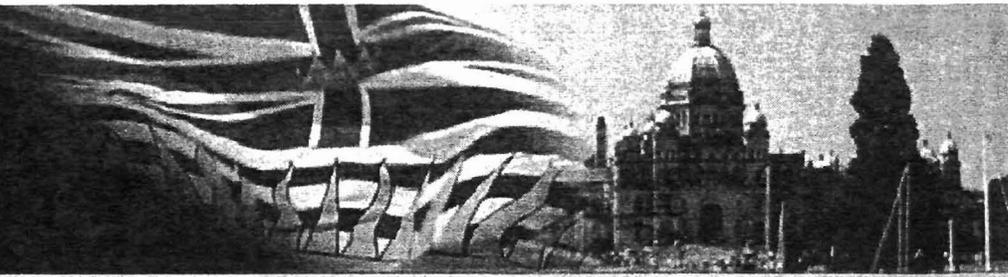
The Best Place on Earth

– Overview –

Province of British Columbia Regulatory Processes

Presentation to Montana Environmental
Quality Council

January 15, 2008



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Pre-Application Stage

Project Confirmed as Reviewable Under BCEAA

EAO issues Procedural Requirements*

Information Requirements developed for Certificate Application

Information Requirements (TOR) Receive Formal First Nation, Public & Agency Comment

Information Requirement Approved*

Application Document Prepared

Application Review Stage

Application Submitted and Screened for Consistency with Requirements*

30
DAYS

Application Receives Formal Public, Agency & First Nations Review & Comment*

180
DAYS

EAO Prepares Draft Assessment Report for Technical Review*

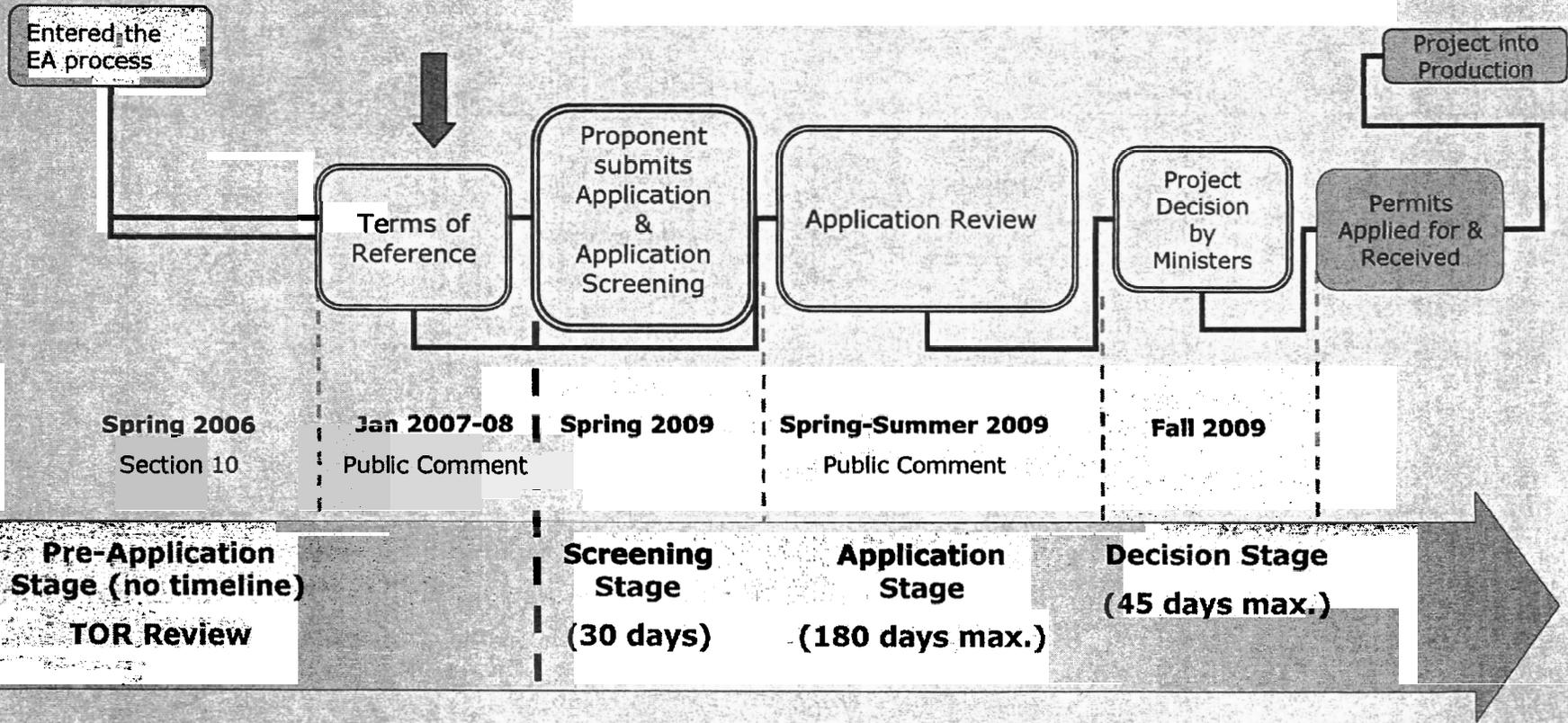
Submission of Assessment Report & Recommendations to Ministers

Ministers Decision on EA Certificate

45
DAYS

* Process harmonized with federal EA where applicable

Lodgepole Coal Mine Proposal Environmental Assessment Review Timeline



BC Requirements to Develop Coalbed Gas

- **Tenure (legal right) to the resource**
- **Environmental assessment by the Oil and Gas Commission and, if triggered by the thresholds in regulation, the Environmental Assessment Office (EAO)**
- **The EAO thresholds for Coalbed Gas Projects are:**
 - **Groundwater extraction greater than 75 litres per second;**
 - **New gas pipelines that exceed diameter/length criteria; or**
 - **Minister of Environment can designate a review**
- **Permits and authorizations for drilling, road building and other activities from the Oil and Gas Commission**
 - **No surface discharge of produced water**
 - **Best practices by proponents**

B.C. Process for Issuing Oil and Gas Rights by Order-In-Council: BP Example

1. Pre-Tenure Referral

Call for Proposals for Crowsnest Coalfield closes. Ministry identifies BP as sole proponent to commence community consultations

BP submits pre-tenure report to Ministry to demonstrate compliance with consultation commitments in the BC Energy Plan

Pre-tenure referral distributed to:

Provincial Ministries

First Nations

Sub-provincial Governments

Referral comments received by Ministry for analysis

2. Tenure Decision

Ministry negotiates tenure agreement with Proponent

Ministry submits Order-in-Council to Cabinet for decision on authorizing proposed tenure agreement

If tenure is awarded...

BP can apply to Oil and Gas Commission for activity permits

May 2007
 Current Stage
 Day 1
 Usually 30-60 Days

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Project Lifecycle

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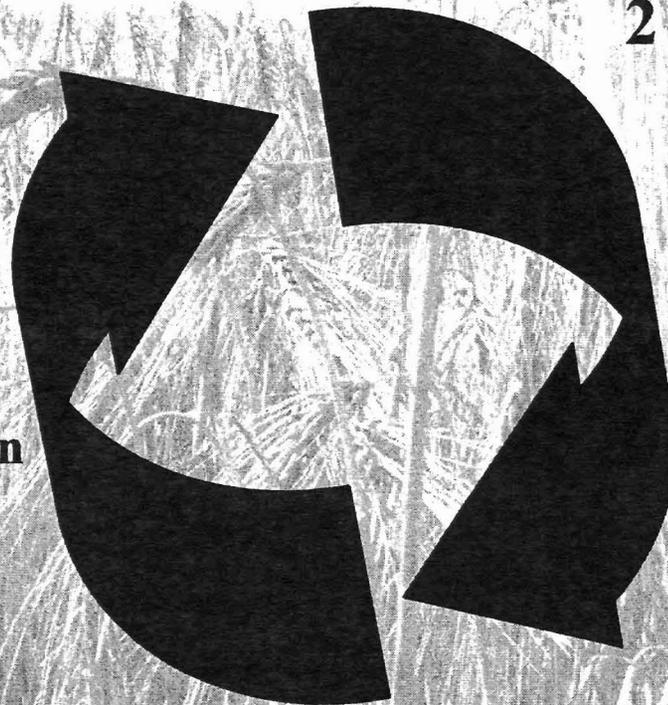
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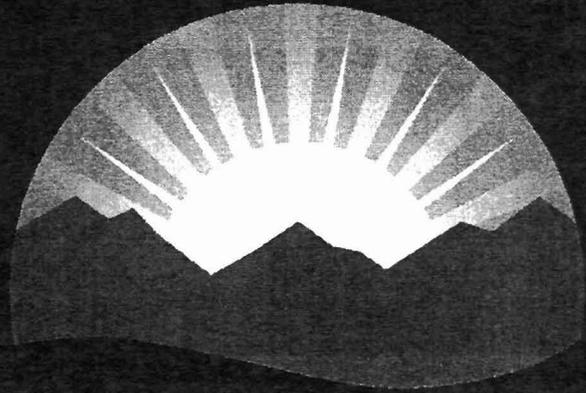
**4 OGC Application
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& Inspection**

**5 Decision by OGC with terms
and conditions of approval**

**6 Industry Exploration
Activity Commences**





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**Environmental
Assessment Office**



**Environmental Assessment in
British Columbia and the Lodgepole
Coal Mine Proposal**

**British Columbia
Environmental Assessment Office
January 15, 2008**





Environmental Assessment in BC

- The *BC Environmental Assessment Act* address a project's potential environmental, health, social, heritage & economic effects
- Identify ways to prevent, minimize or avoid adverse effects from a project
- Ensure appropriate terms and conditions in an Environmental Assessment Certificate



Environmental Assessment Office (EAO)

- Manages the BC environmental assessment (EA) process
- Establishes process, scope and requirements
- Makes recommendations to ministers on the Environmental Assessment Certificate





Environmental Assessment Office

Environmental Assessment (EA) Process

Describe



First Nations
Aboriginal Rights & Title

The Environment
Air & Water Quality
Fish, Wildlife, Plants
Archaeology

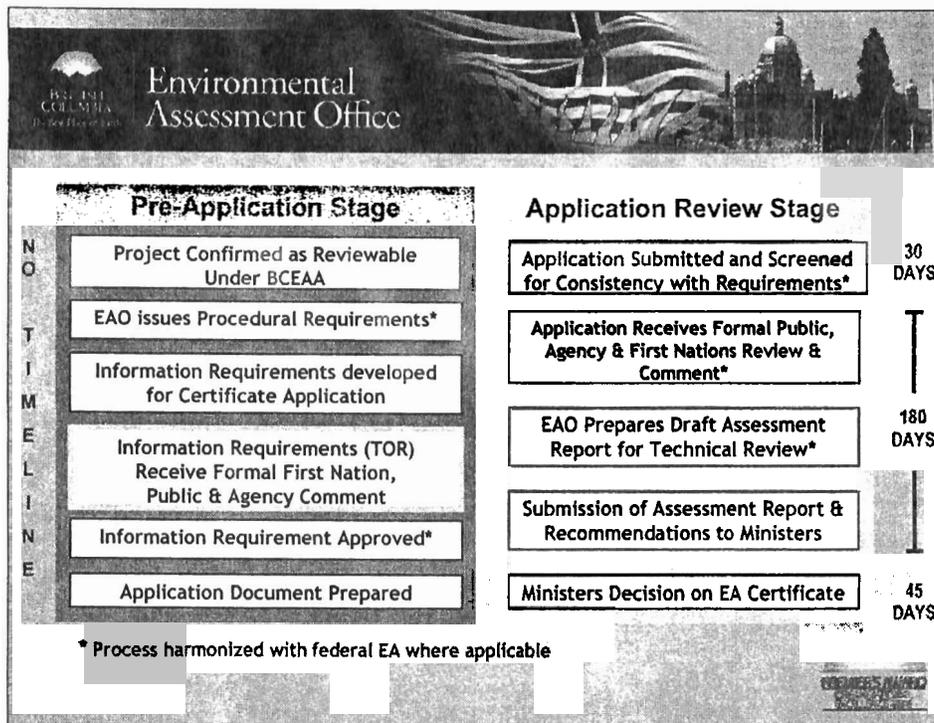
Avoid Potential Significant Effects



Communities
Economy, Health,
Services, Safety
Recreation

Identify Potential Significant Effects





There are **two stages** in an Environmental Assessment in BC

Pre-Application refers to period of time after a project enters the process, but before an Application has been submitted.

The object of the Pre-Application phase is to develop the Terms of Reference (TOR) for the Application that is to be submitted at the Application Stage.

TOR determines the information requirements for the Application document.

It is important to understand that the TOR does not define or limit the scope of the environmental assessment at the Application Stage.

Under our process scope remains open: **A proposed project's impacts are assessed as far a field as they are predicted to occur during the review process**

No legislated timelines apply to the Pre-Application.

During the **Application Review** stage, **legislated timelines apply** as on the right hand side of the figure.

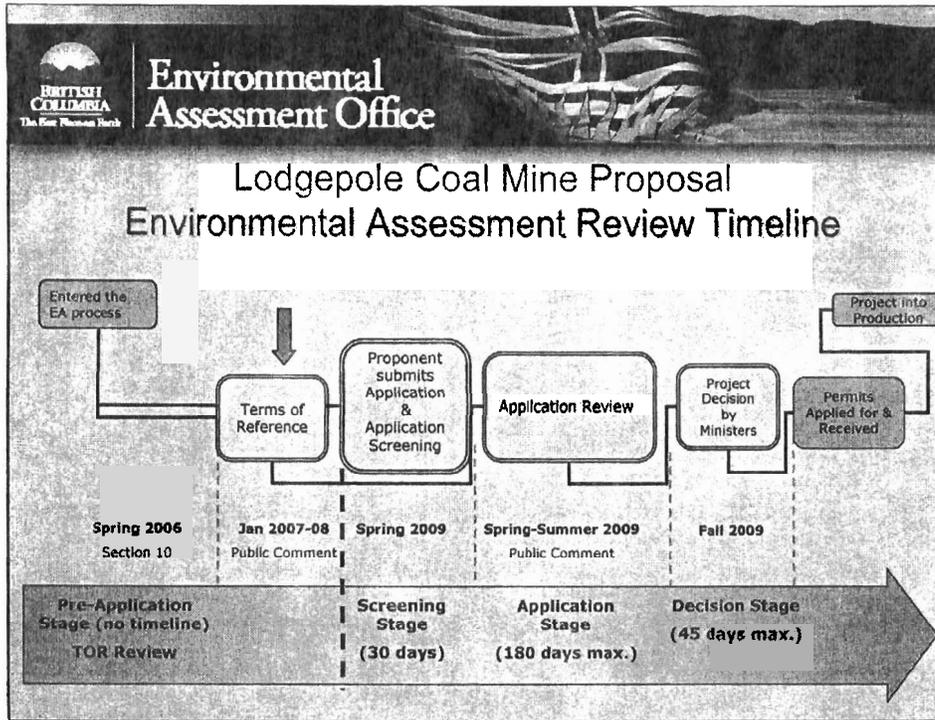
However these timelines can be suspended if new facts and potential impacts come to light in the course of the review that must be assessed.



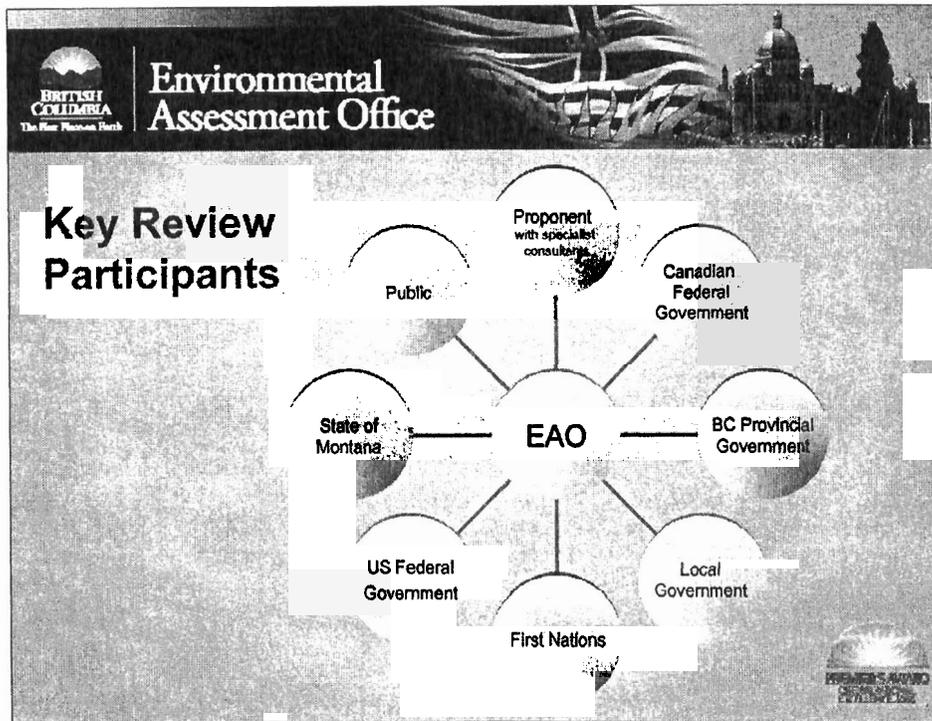
Environmental Assessment Office

The Lodgepole Coal Mine Proposal triggers the British Columbia *Environmental Assessment Act* since the proposal is a new coal mine with a production capacity greater or equal to 250,000 tonnes per year of clean or raw coal.





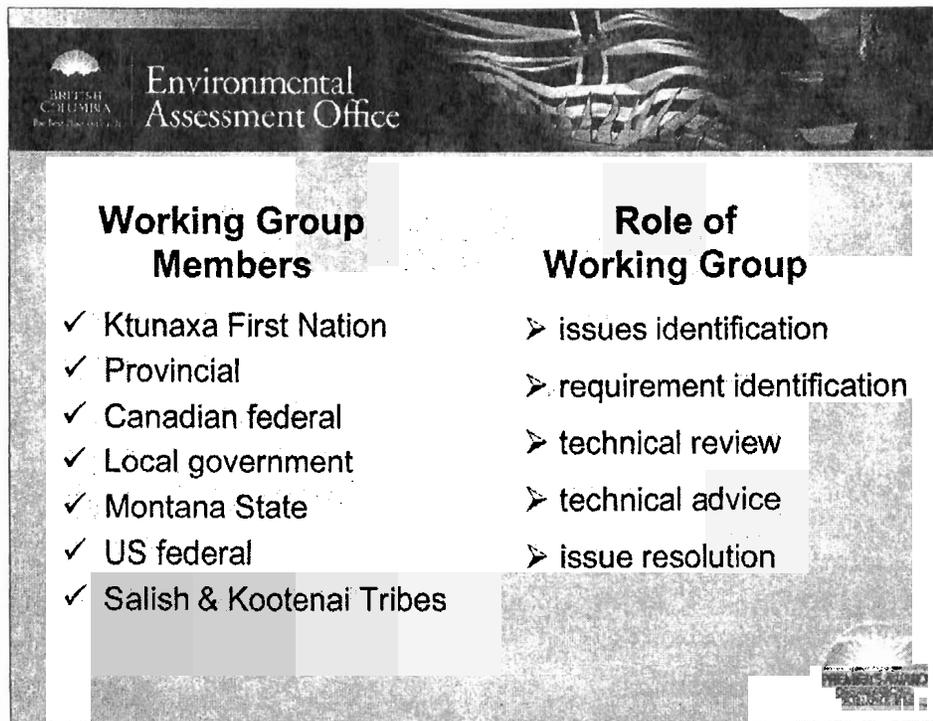
The Lodgepole proposal is and remains at Pre-Application Stage



EAO leads the EA process, and coordinates the involvement of the key review participants.

Federal and Provincial review participants as well as the Proponent, as well as BC local governments, First Nations and Public are **always invited to participate**

Because of the **Lodgepole proposal's proximity** to the border with the US, the State of Montana as well as the US Federal Government have also been invited to participate, and are participating.

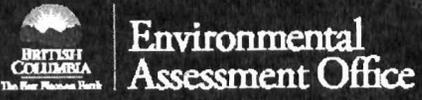


Working group established at the beginning of the pre-application stage is used to facilitate input, and Montana, US federal and Montana based Tribe representatives are participating.

WG identifies issues and **information requirements** throughout the EA process

Provides the proponent with technical **review and advice**

Works with the Proponent to **resolve issues**



Public Involvement in the Lodgepole Coal Mine Project

- **Pre-Application Stage**
Public were invited to comment on the draft Terms of Reference over 30 day comment period
- **Application Review Stage**
Public will be invited to comment on the Proponent's Application for Environmental Certification ("the Application") over 60 day period



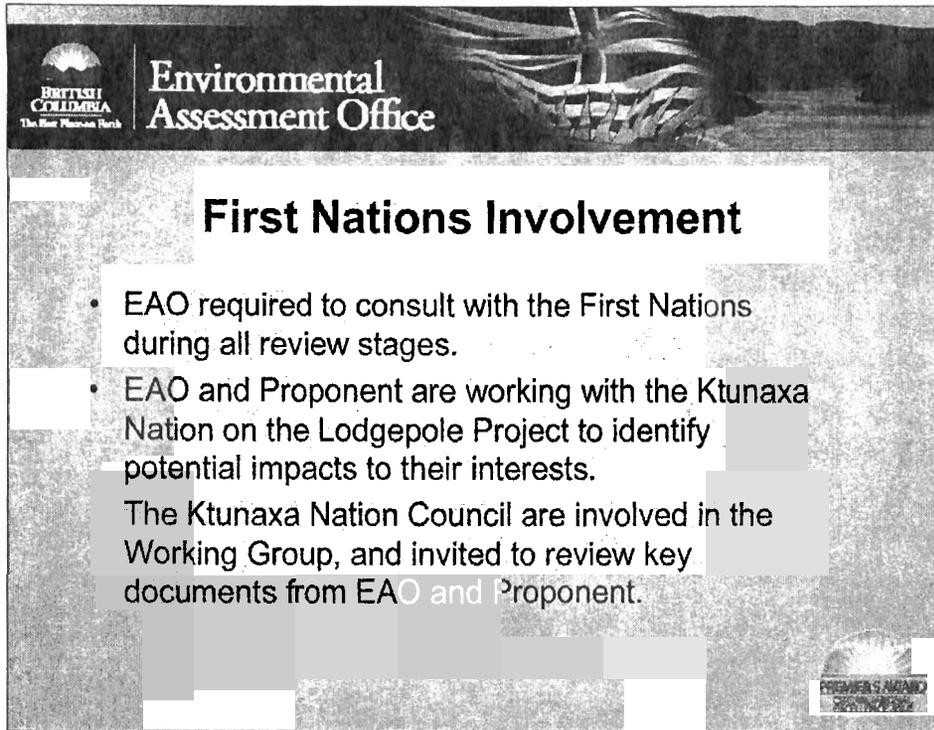
The public – including the Montana public -- is also invited to comment on the EA documentation both during pre-application and during the Application review stages (if the proponent submits an application that is acceptable to the EAO)

The Lodgepole project underwent a 30 day public period in January 2007; the period for receiving comments from the Working Group was extended 30 days for US federal agencies to provide additional comments.

The Proponent is currently reviewing the comments received during this period and developing responses.

Comments are posted to the EAO website; responses will be posted once they are completed.

The public– including the Montana public -- will once again be invited to comment on the Lodgepole **Application** over a period of **60 days**, should the proponent submit an application meeting the necessary requirements of the EAO.



Environmental Assessment Office

First Nations Involvement

- EAO required to consult with the First Nations during all review stages.
- EAO and Proponent are working with the Ktunaxa Nation on the Lodgepole Project to identify potential impacts to their interests.

The Ktunaxa Nation Council are involved in the Working Group, and invited to review key documents from EAO and Proponent.



Ktunaxa First Nation are the BC First Nation who may be impacted by the Cline Mine proposal.

EAO and the Proponent work with the Ktunaxa Nation Council part of the working group / outside of the working group To seek their views and share information.

Objective of this work is to identify any potential impacts to their interests or aboriginal rights and ensure that those impacts are avoided or mitigated.



Federal Review of the Lodgepole Project

- Lodgepole proposal has also triggered a Federal Environmental Assessment
- Federal scoping of the project has been completed:
 - Notice of Commencement for a Comprehensive Study for the proposed Lodgepole Coal Mine issued on December 13, 2007
- Next Step: release of Scoping Document for public comment
- Further information available from Canadian Environmental Assessment Agency



Canada-BC Agreement

Establishes cooperative Environmental Assessment process

- One project, one Environmental Assessment
- Cooperative process satisfies requirements of both federal and provincial legislation but both jurisdictions make their own respective decisions



 **Environmental
Assessment Office**

Contact Information

Further information on the EAO process and this project is available at: www.eao.gov.bc.ca

Comments & questions can be forwarded to
Garry Alexander (Garry.Alexander@gov.bc.ca) or
Sara Wilson (Sara.Wilson@gov.bc.ca)

 **Fax: 250-356-7440**

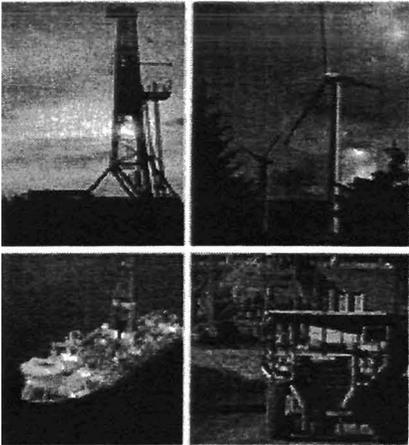


EAO Website – great source of information on process and Project



Environmental Assessment Office



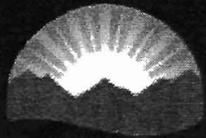


Ministry of Energy, Mines and Petroleum Resources

Coalbed Gas Policy, Resource Ownership and Regulation in BC

Karen Koncohrada, Executive Director
Marketing, Aboriginal and Community Relations Division



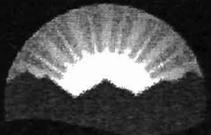


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Contents

- 1. BC Energy Plan - Coalbed Gas Policy**
- 2. Petroleum and Natural Gas Rights in British Columbia**
- 3. Coalbed Gas Activity in Southeast BC**
- 4. BC Regulation of Oil and Gas Exploration and Production**



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1. Water Disposal

- Companies will not be allowed to surface discharge water produced from coalbed gas wells
- Any re-injected produced water must be injected well below any domestic water aquifer

2. First Nations and Community Engagement

- Required of companies as part of the application and approval process in all stages of development
- Can address concerns about potential impacts on the environment or other land uses



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Energy and Carbon

Regulation

3. Companies are required to:

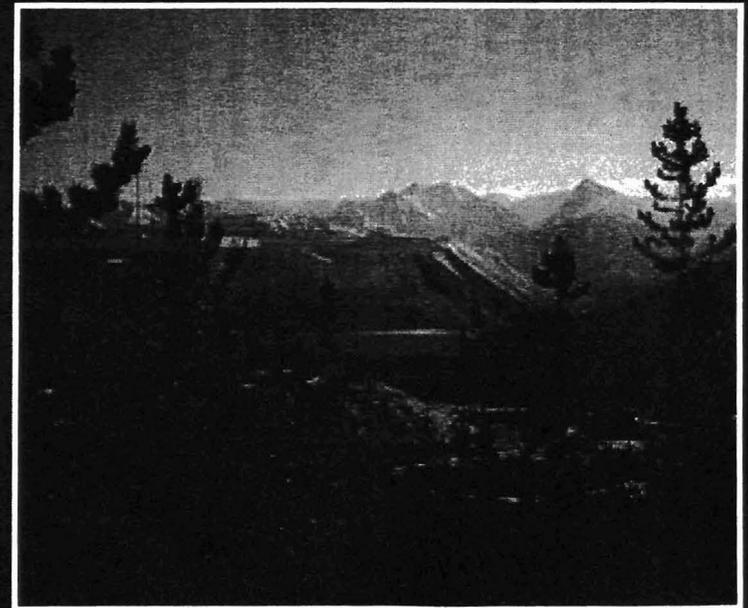
- Use the most advanced technologies and practices that are commercially viable to minimize land and aesthetic disturbances
- Demonstrate previous experience with coalbed gas development
- Make information publicly available



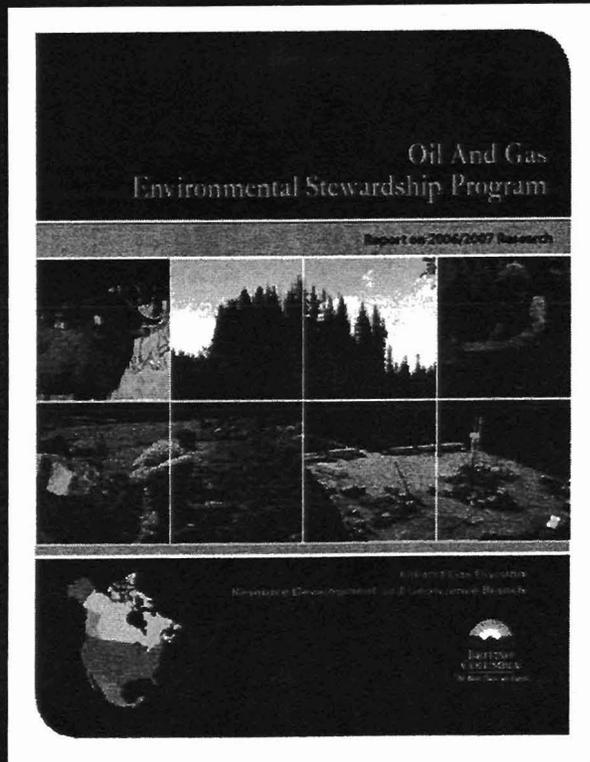
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- BC Energy Plan commits to enhancing the Oil and Gas Environmental Stewardship Program to ensure sound environmental, land and resource management
 - Environmental Policy Program
 - Environmental Resource Information Project (ERIP)
 1. Water Quality Monitoring
 2. Environmental database



Environmental Policy Program (EPP)



Identify and mitigate environmental issues related to oil and gas development

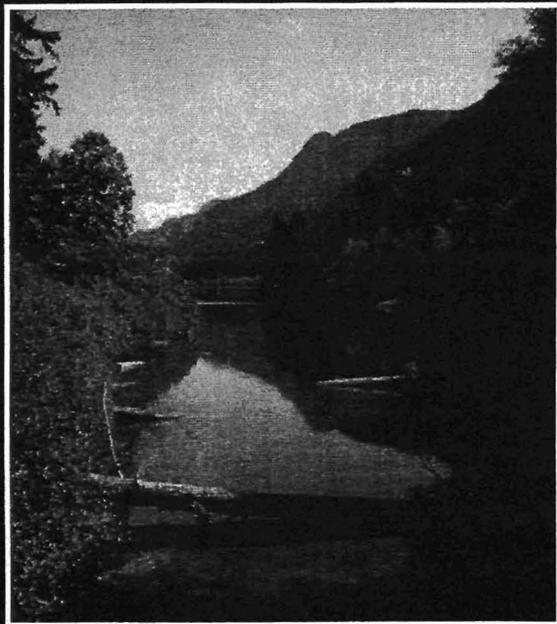
Science-based development of environmental guidelines and best management practices to ensure responsible oil and gas development

Annual report provides detailed summaries of the project work:

- Horn River Moose Study
- Flaring Reduction Strategy
- Land Base Flexibility Mapping
- Soil and Water Erosion
- Barite-Barium Soil Quality Guidelines for British Columbia
- First Nations Special Sites Identification

Environmental Resource Information Project (ERIP)

- Multi-year environmental baseline initiative to increase knowledge of local environment prior to project proposals



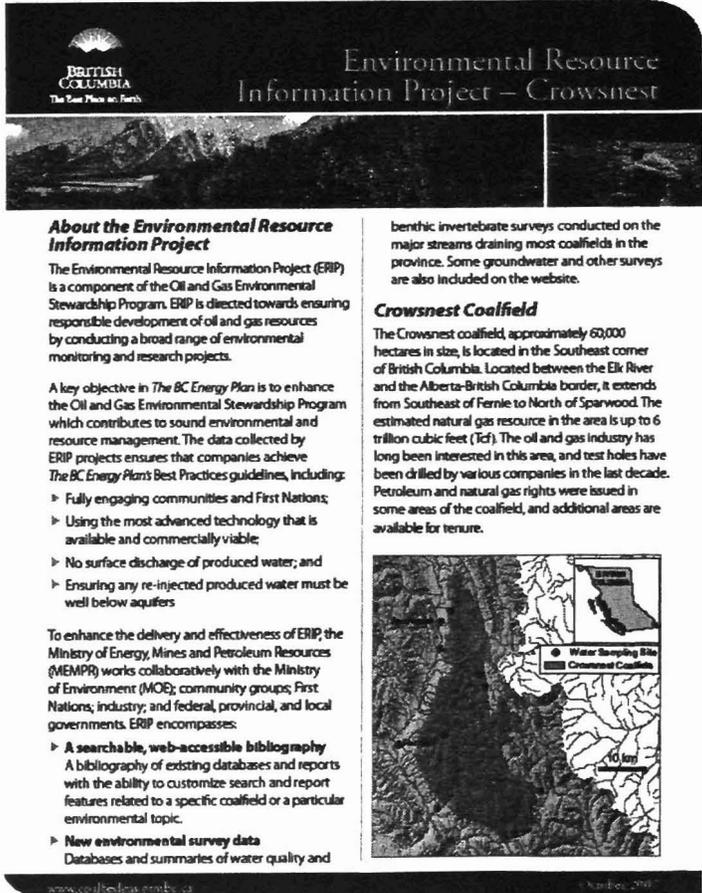
1. Water Quality Monitoring

- April 2004 – 2007 baseline surface water quality sampling of seven streams draining from the Crowsnest Coalfield
- Baseline Stream Benthic Invertebrate in-Stream Survey
- Fish population and Habitat Survey Review

Environmental Resource Information Project (ERIP)

2. ERIP Database

- Is a searchable, web-based database of existing reports and environmental studies for six coalfields in BC, including the Crowsnest Coalfield
- Includes studies of aquatic ecosystems, hydrology, water quality, environmental impact assessment, air quality, land use and regional planning
- ERIP database for the Crowsnest Coalfield contains 375 records and continues to grow as new studies are added



Environmental Resource Information Project – Crowsnest

About the Environmental Resource Information Project
The Environmental Resource Information Project (ERIP) is a component of the Oil and Gas Environmental Stewardship Program. ERIP is directed towards ensuring responsible development of oil and gas resources by conducting a broad range of environmental monitoring and research projects.

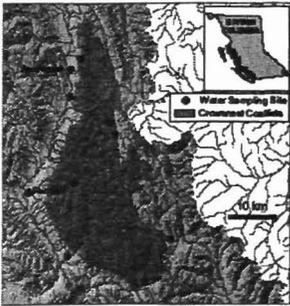
A key objective in *The BC Energy Plan* is to enhance the Oil and Gas Environmental Stewardship Program which contributes to sound environmental and resource management. The data collected by ERIP projects ensures that companies achieve *The BC Energy Plan's* Best Practices guidelines, including:

- ▶ Fully engaging communities and First Nations;
- ▶ Using the most advanced technology that is available and commercially viable;
- ▶ No surface discharge of produced water; and
- ▶ Ensuring any re-injected produced water must be well below aquifers

To enhance the delivery and effectiveness of ERIP, the Ministry of Energy, Mines and Petroleum Resources (MEMPR) works collaboratively with the Ministry of Environment (MOE), community groups, First Nations, industry, and federal, provincial, and local governments. ERIP encompasses:

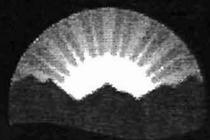
- ▶ **A searchable, web-accessible bibliography**
A bibliography of existing databases and reports with the ability to customize search and report features related to a specific coalfield or a particular environmental topic.
- ▶ **New environmental survey data**
Databases and summaries of water quality and benthic invertebrate surveys conducted on the major streams draining most coalfields in the province. Some groundwater and other surveys are also included on the website.

Crowsnest Coalfield
The Crowsnest coalfield, approximately 60,000 hectares in size, is located in the Southeast corner of British Columbia. Located between the Elk River and the Alberta-British Columbia border, it extends from Southeast of Fernie to North of Sparwood. The estimated natural gas resource in the area is up to 6 trillion cubic feet (Tcf). The oil and gas industry has long been interested in this area, and test holes have been drilled by various companies in the last decade. Petroleum and natural gas rights were issued in some areas of the coalfield, and additional areas are available for tenure.



www.crowsnestgas.com.bc.ca

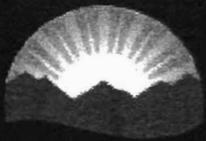
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Subsurface Ownership

- More than 90% of subsurface resources are owned by the Province of BC or “Crown”
- BC Ministry of Energy, Mines and Petroleum Resources:
 - Issues tenures to subsurface resources – legal right to explore for and/or produce resources
 - Refers proposed tenure to First Nations, other provincial agencies and local governments prior to issuance



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Types of Crown Petroleum and Natural Gas Tenure

- **PERMIT**

Term of one year (renewable)

Holder has exclusive right to explore for, but not produce, oil and gas. A work requirement must be met each year.

- **DRILLING LICENCE**

Term of 5 years in the Crowsnest

Holder has exclusive right to drill wells within the licence area. Production from wells allowed subject to Minister's approval.

- **LEASE**

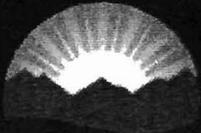
Term of 10 years in the Crowsnest

Allows production in addition to providing exclusive drilling rights.

- **AGREEMENT**

Term and conditions set by
Order-In-Council

Cross between a permit and a drilling license that carries a work obligation to encourage exploration.

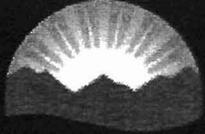


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Land Use Planning

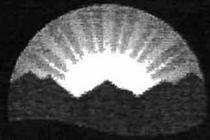
- BC has undertaken extensive Crown land use planning
 - Result: more than 15% of BC is in parks or protected areas
- Southern Rocky Mountain Management Plan (2003)
 - Flathead designated as integrated resource management lands available for coal and coalbed gas development
 - Southern Rocky Mountain Advisory Committee monitors ongoing activity and provides management direction
- Coal land reserve
 - As of June 2004, 46% of BC's 6% of the Flathead Valley is reserved from coal tenures or activities



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Coalbed Gas in the East Kootenays

- Coalbed gas exploration in the area since 1990's
 - EnCana, Storm Cat Energy, Chevron, Shell/Elk Valley Coal
 - No commercial production yet anywhere in BC
- 2003 – Call for Proposals to develop coalbed gas in the Crowsnest Coalfield
- 2004 - two large parcels of petroleum and natural gas rights near Fernie offered but not purchased in BC's monthly auction of petroleum and natural gas rights
- 2007 – Call for Proposals identified a new proponent: BP



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BP Proposed Coalbed Gas Project

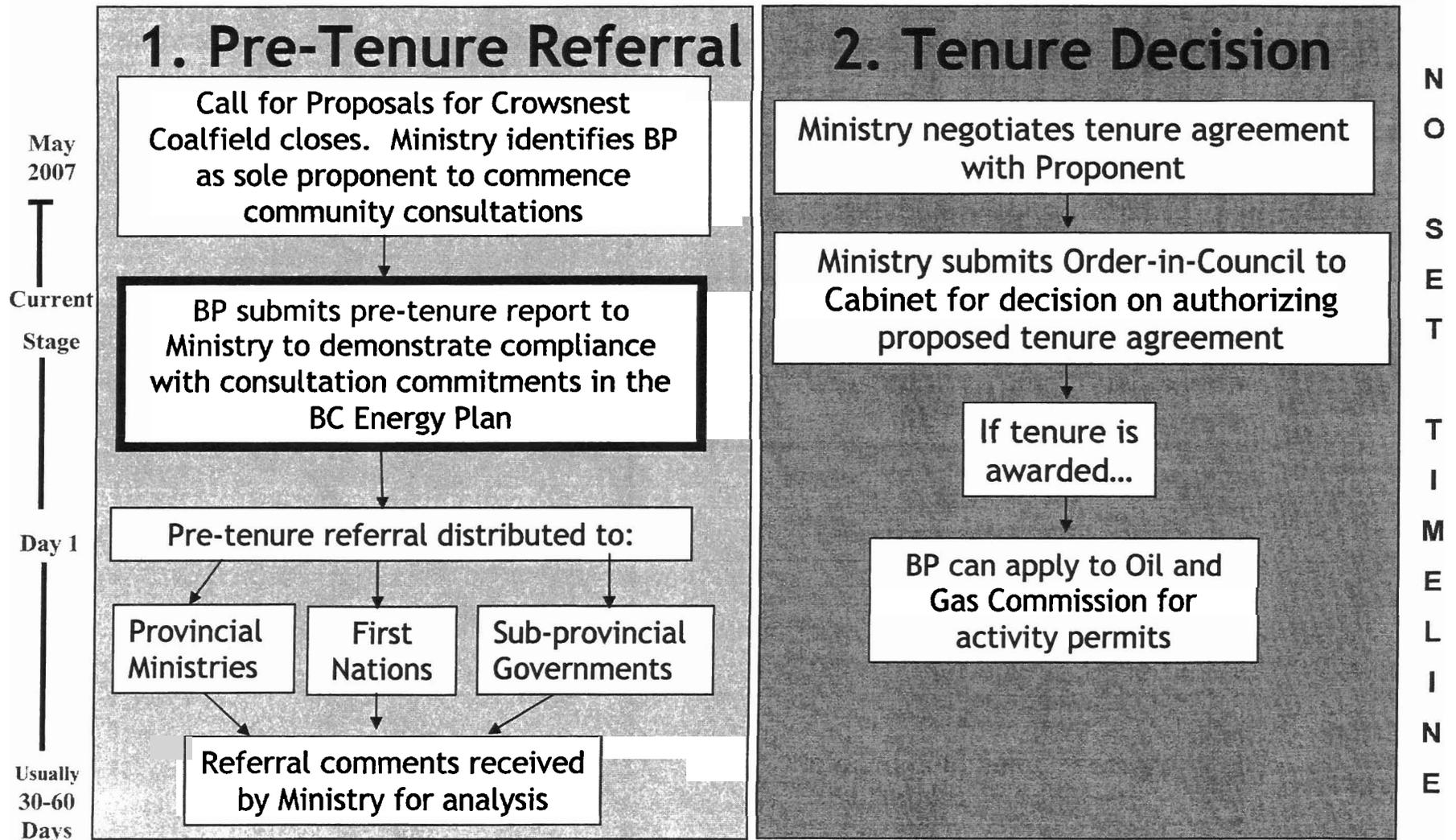
1. Appraisal and design stage (3 – 5 years):

- **BP-mandated Environmental and Social Impact Assessment**
- **Comprehensive environmental baseline data collection program**
- **Conduct aerial seismic and methane seep detection**
- **Conduct geophysical programs**
- **Drill test wells and production pilots (+/- 25 wells)**

• 2. Conceptual development plan:

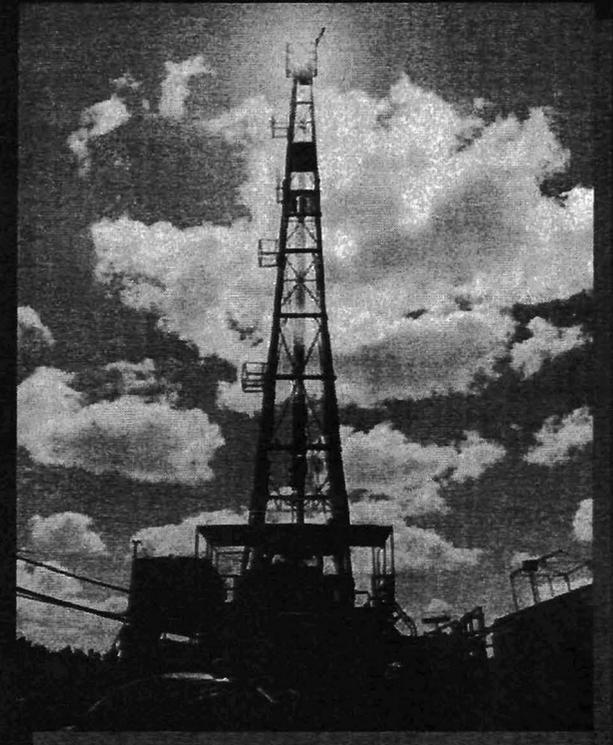
- **50-year natural gas field**
- **Between 100 and 150 multiple-well pads**
- **Up to 10 wells per pad to reduce physical footprint**

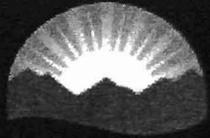
B.C. Process for Issuing Oil and Gas Rights by Order-In-Council: BP Example



Regulation of Exploration and Development of Oil and Gas Resources

- The Oil and Gas Commission (OGC) regulates all oil and gas activity in BC
- Private sector companies
 - Explore for, produce and market oil and gas
 - Must have tenure (legal right) to the resource
 - Also, must have permits and authorizations for drilling, road building and other activities from the OGC





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Environmental Assessment of Coalbed Gas Projects in BC

- All coalbed gas projects are subject to an environmental assessment by the OGC, and if triggered by the thresholds in regulation, the Environmental Assessment Office (EAO)
- The EAO thresholds for CBG are:
 - Groundwater extraction greater than 75 litres per second;
 - New gas pipelines that exceed diameter/length criteria.
- In addition, the Minister of Environment can designate a project for EAO review if “satisfied that the project may have significant adverse environmental, economic, social, heritage or health effect, and that the designation is in the public interest”.



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FOR MORE INFORMATION

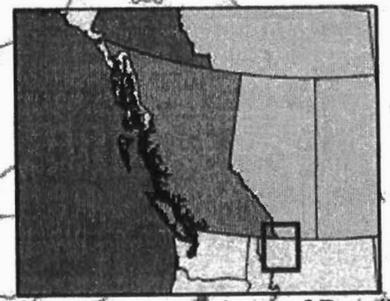
www.gov.bc.ca/empr

The Flathead Valley in British Columbia and Montana

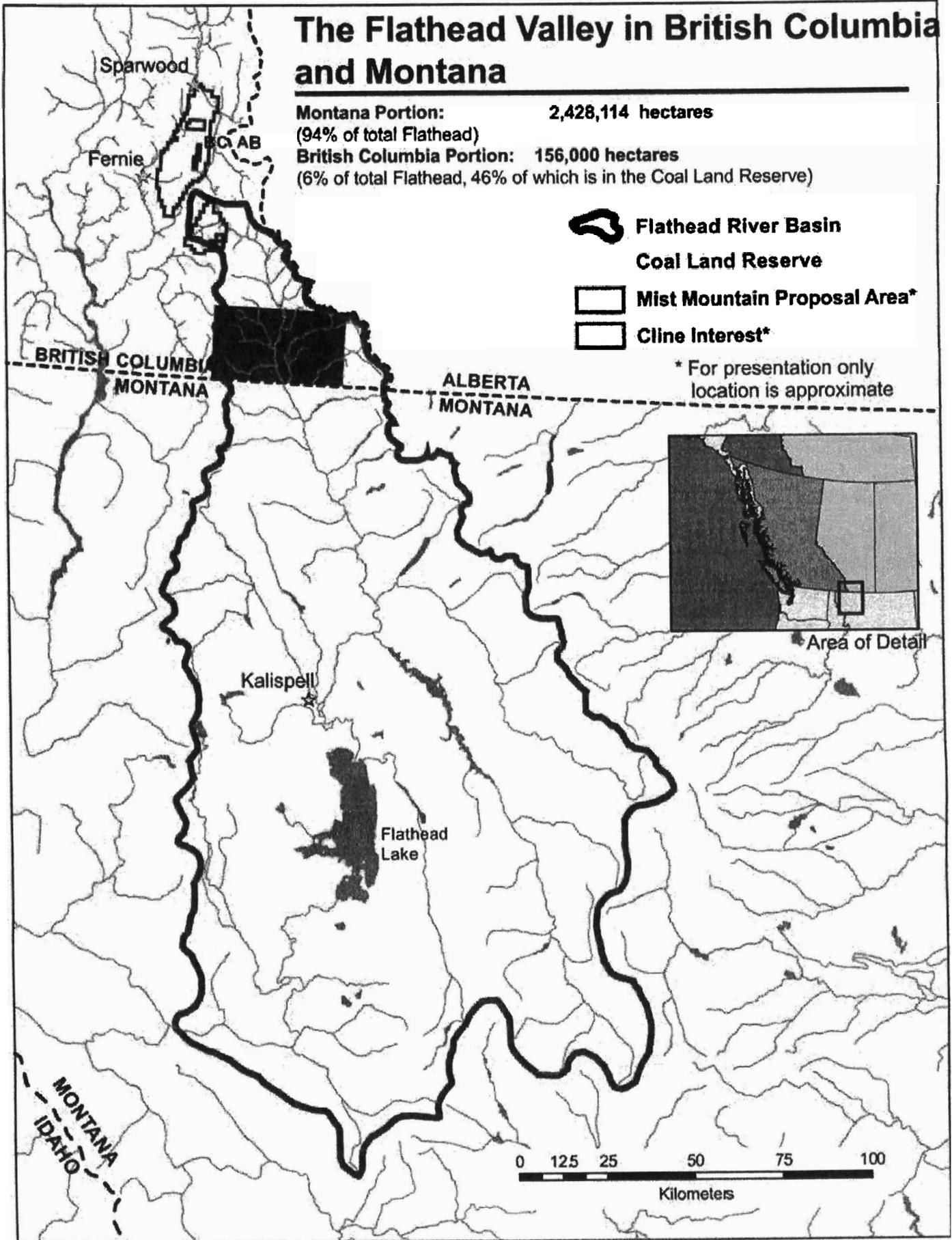
Montana Portion: 2,428,114 hectares
(94% of total Flathead)
British Columbia Portion: 156,000 hectares
(6% of total Flathead, 46% of which is in the Coal Land Reserve)

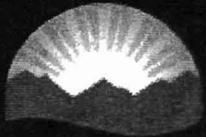
-  Flathead River Basin
-  Coal Land Reserve
-  Mist Mountain Proposal Area*
-  Cline Interest*

* For presentation only
location is approximate



Area of Detail





BRITISH
COLUMBIA

Canada's Pacific Gateway

A Vision for Clean Energy Leadership

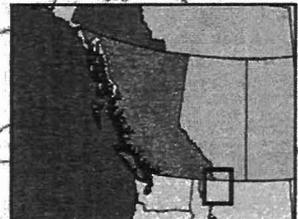
- BC Energy Plan released in February 2007 will make BC energy self-sufficient while taking responsibility for our natural environment and climate
- It emphasizes energy conservation and efficiency, and the environmental and socially responsible management of the Province's energy resources
- It fosters the development of unconventional gas resources, e.g. tight gas, shale gas and coalbed gas
- It improves and clarifies BC's coalbed gas policies

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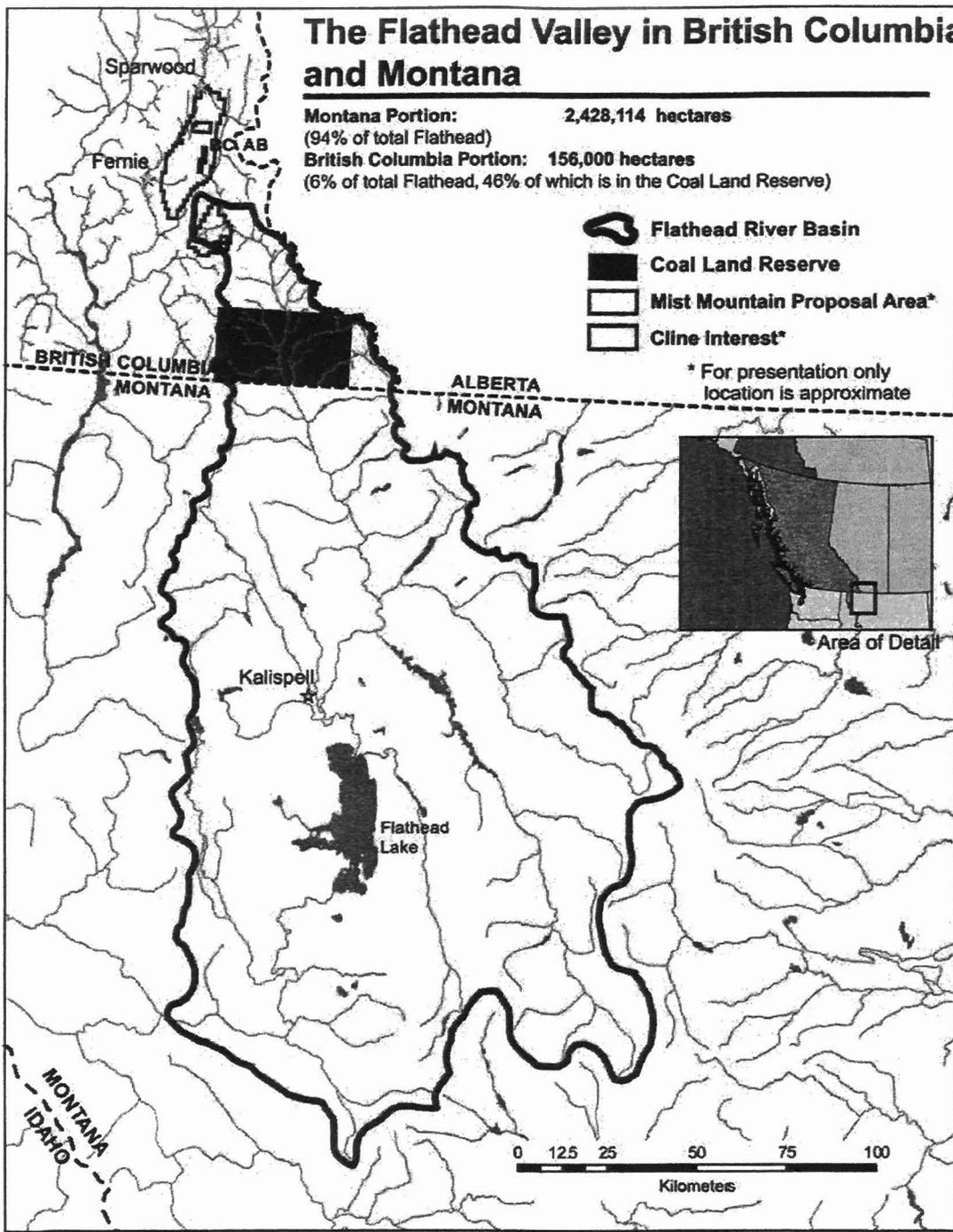
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Map of Flathead