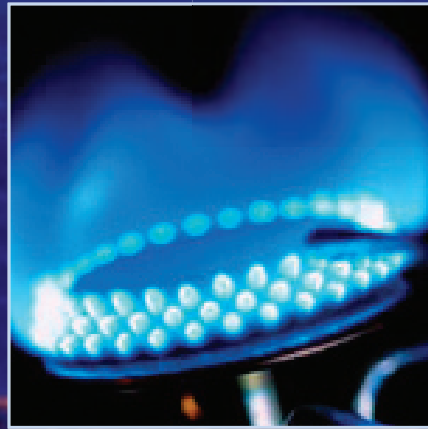


# Coalbed Gas

## Energy for Our Future





# Contents

---

1 Coalbed Gas—responsibly developed for British Columbians	5
Coalbed Gas Production	6
Sustainable Environmental Management	7
Economic Benefits	7
Doing it Right	8
2 Producing Coalbed Gas—a staged approach	9
Securing Tenure to Sub-surface Resources	10
Three Stages of Coalbed Gas Development	10
1. Evaluation to Confirm Technical Feasibility	12
2. Feasibility to Demonstrate Commercial Viability of Production	13
3. Production—Full Commercial Recovery Project	13
Comprehensive Management and Regulation	14
Communication	15
Safety	15
3 Protecting our Shared Environment—through comprehensive regulation and innovative techniques	17
<i>Water Code of Practice</i> Guides Responsible Handling of Produced Water	18
Minimization of Disturbances	19
Well Spacing	19
Air Quality Management	20
Wildlife Protection	20
Environmental Resources	20
4 Coalbed Gas Potential—helping diversify B.C.'s resource based economy	21
Coalbed Gas Resource Potential is Across B.C.	22
Economic Diversification and Opportunity	23
For More Information	23



# Coalbed Gas

–responsibly developed for  
British Columbians



1

Natural gas and the products made from it are vital to our way of life.



Did you know ...?  
Natural gas is used to make a number of products we use:

- paint
- pharmaceuticals
- toys and plastics
- tubing
- sporting equipment
- fertilizer, and
- fleece and nylon

Natural gas is a clean burning fuel that we use:

- to heat our houses, and
- to cook our food

Natural gas can be used in industry:

- to generate electricity,
- for process heating, and
- as a chemical component of other products

COALBED GAS IS AN EMERGING SOURCE OF NATURAL GAS THAT IS FOUND IN COAL SEAMS. It is the same gas we use to heat our homes and cook our food and is a building block in many products we use daily. Coalbed gas could help meet the natural gas needs of British Columbians for generations to come.

British Columbia has developed its rich coal resources for over 150 years. Coal mining provides an economic base for many communities as well as provincial revenues. Now coalbed gas development is providing a new opportunity for these communities and the province.

The Government of B.C. is accountable for developing energy resources for the benefit and security of all British Columbians. We have over 50 years of experience in safe and environmentally responsible management of natural gas development. Coalbed gas is developed and regulated in much the same way.

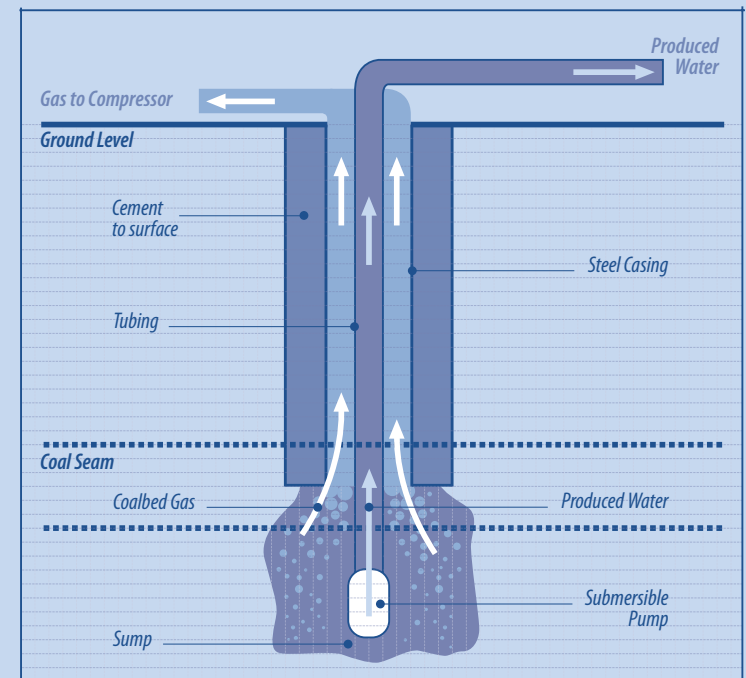
The Ministry of Energy and Mines supports development of a coalbed gas industry that balances environmental protection, economic growth and community interests. B.C.'s regulator of the oil and natural gas industry, the Oil and Gas Commission, has a rigorous process to ensure that coalbed gas exploration and development achieves that balance.

### Coalbed Gas Production

Coalbed gas is produced using the same advanced techniques as conventional natural gas. In both cases, companies sometimes have to handle large quantities of water that is produced as a by-product. Typically, a steel encased hole is drilled into the coal seam. Although some coalbed gas deposits have no associated water, production often requires that naturally occurring water in the coal

seam be partially pumped out to reduce the pressure in the seam. When this “produced water” is withdrawn, gas separates from the coal and flows into the well bore, then on to compressor stations and into natural gas pipelines.

In conventional natural gas production, produced water is re-injected into isolated formations. For coalbed gas however, B.C.'s new *Code Of Practice for the Discharge of Produced Water from Coalbed Gas Operations* provides other options as well. In some cases where produced water can be treated to meet the strict environmental standards set by the Ministry of Water, Land and Air Protection, water may be released to the surface or used beneficially for irrigation, habitat, livestock or recreation.



Coalbed gas is produced using similar techniques to conventional sweet natural gas production.

## Sustainable Environmental Management

We live in a province where we are fortunate to have a wealth of natural capital—clean air, fresh water and abundant land. The Government and citizens of B.C. value our environment and understand its importance to communities that rely on agriculture, tourism and resource development.

We recognize that each region is unique and therefore development at individual coalfields has to be managed to protect local values and environmental considerations. We have learned from coalbed gas development experiences in other jurisdictions and, as a result, our regulations have been carefully designed to protect our air and water quality and to preserve our natural capital.

Government Acts and extensive regulations are in place to protect the environment, minimize impacts during operations and ensure site restoration once development is complete. A number of agencies work together to ensure sustainable environmental management, including:

- **The Ministry of Energy and Mines** creates the policy framework for responsible oil and gas development.
- **The Oil and Gas Commission** is the primary regulator with the authority to direct the industry and enforce regulations.
- **The Ministry of Water, Land and Air Protection** sets regulation and issues permits regarding many environmental aspects of water management, land use and air quality.
- **The Ministry of Sustainable Resource Management** develops land and resource management plans that balance the needs of various land-users.

## Economic Benefits

As part of B.C.'s diverse resource-based economy, coalbed gas production could bring many benefits. Tourism, agriculture and resource industries like forestry, can and do co-exist across the province. Like all of these industries, the coalbed gas industry would provide well-paying jobs and economic benefits to communities.



Responsible coalbed gas development will help provide energy security as well as economic benefits to the people of B.C.

### Doing it Right

Coalbed gas is at the early exploration and development stage in B.C. Natural gas companies are exploring the economic and environmental viability of coalbed gas development. During this exploration stage, the Ministry of Energy and Mines and the Oil and Gas Commission are monitoring activity to ensure responsible management of this resource.

The Ministry is also working to inform communities and First Nations about:

- the role they can play in this development;
- the existing regulations that guide this sector;
- the environmental safeguards companies must put in place; and
- the economic opportunities if development goes ahead.

Responsible development of this valuable resource will result from a partnership of industry's best practices and Government's strong regulatory role, working closely with communities and First Nations at the local level.

Once the drill rig is removed from a gas well-site, the site is reduced by over 50 per cent and the surrounding area can immediately be reclaimed. The entire site will be reclaimed once production has ceased.

### From Drilling a Well to Completion





# Producing Coalbed Gas

–a staged approach

2



Coalbed gas well-site outside of Princeton. Well-sites are typically reduced by more than 50 per cent after drilling.

The Government of B.C. is taking a careful approach to developing coalbed gas resources. Like other kinds of natural resource development, coalbed gas development includes checks and balances to ensure it is developed in the best interests of British Columbians. Our objective is to balance environmental, economic and community interests. We do this by:

- generating geological information to evaluate the resource potential;
- working with regulators to understand and minimize environmental impacts of development;
- providing certainty and clarity around expectations for industry so they can put long-term investment plans in place;
- creating a royalty regime that recognizes risk factors while ensuring British Columbians receive a solid economic return from resource development;
- reviewing and enhancing our regulatory system to ensure we are basing decisions on the best available information; and
- responding to community concerns and working with communities to include important local information in decisions.

#### Securing Tenure to Sub-surface Resources

Typically the person who owns the surface rights to a parcel of land does not own the mineral rights to the sub-surface below it. In B.C., the Province owns most petroleum and natural gas rights.

Securing tenure is one of the first steps in the coalbed gas development process. Tenure is time-limited ownership of specific sub-surface rights—granting the exclusive right to apply to access, explore and develop those resources according to regulations.

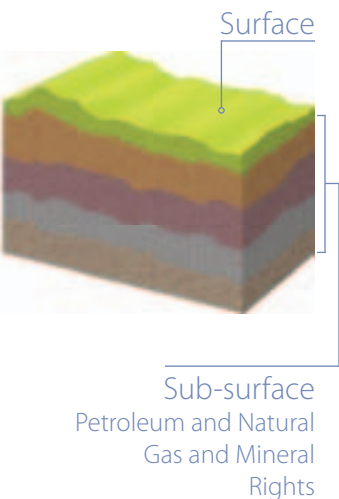
Tenure on petroleum and natural gas resources is sold by auction monthly, after industry has expressed an interest in developing those resources. Prior to a specific parcel being made available for bid, Government invites comments from provincial agencies, local governments and First Nations. Information received during this referral process helps the Ministry of Energy and Mines decide whether special restrictions should be applied to that particular parcel.

Tenure is usually granted for a primary term of three to five years (can be extended to 11 with approval), giving the company time to look at the opportunity. Sometimes industry will drill one or more test holes before acquiring tenure to evaluate the potential for coalbed gas. To do this, industry must make arrangements with the surface landholder if the project is on private land. All applications on crown or private land must receive approval from the Oil and Gas Commission to ensure safe and responsible testing.

#### Three Stages of Coalbed Gas Development

Typically, coalbed gas is developed in a staged process, from one or two initial exploratory wells, to a multi-well pilot, and finally to a commercial sized project if the pilot stage shows enough potential.

At each stage of coalbed gas development, environmental planning, and communication with communities and First Nations are expanded proportionally. This process ensures that environmental data collected are both timely and required—based on the scale of the potential project. Expanding stakeholder communication and consultation as the project matures ensures that all stakeholders are aware of the project and have adequate opportunity to provide feedback.



## Three Stages of Coalbed Gas Development

To manage a full cycle coalbed gas development, the Oil and Gas Commission has established a three-phase approval process for coalbed gas. Each phase is in accordance with the *Petroleum and Natural Gas Act* and all relevant legislation, regulation and land-use plans. At each stage, industry must make an application to the Oil and Gas Commission and receive all necessary approvals. This process enables appropriate conditions for the particular coalbed gas project to be established in the approval.

Prior to approving a coalbed gas application, at each stage the Oil and Gas Commission must be satisfied that stakeholder concerns have been adequately addressed and that environmental protection measures are in place. The Oil and Gas Commission works closely with companies and First Nations to ensure Aboriginal and treaty rights are protected.

**1 EVALUATION**—to confirm technical feasibility. This may include:

- environmental planning including scientific and traditional knowledge
- community involvement and First Nations consultation
- drilling, completion and testing of from one to six well(s)
- evaluation of initial wells

? Decision whether to move on to Feasibility Stage

**2 FEASIBILITY**—to demonstrate the commercial viability of coalbed gas production. This may include:

- expanded environmental planning, encompassing area of project
- expanded community involvement and First Nations consultation
- drilling, completion and testing of approximately 20 to 40 wells
- pipeline and facilities as required

? Decision whether to move on to Production Stage

**3 COALBED GAS PRODUCTION**—full commercial recovery of natural gas. This may include:

- expanded environmental planning, encompassing the tenure area
- comprehensive community involvement and First Nations consultation
- compression facilities and pipelines
- a reclamation plan

Multiple Years



## 1 EVALUATION to Confirm Technical Feasibility

Once a company has Petroleum and Natural Gas tenure, it will begin to consider the opportunity and decide if it will proceed to apply for approval to explore for coalbed gas. Specifically industry will:

- conduct environmental planning to fill gaps in baseline information;
- fulfill public involvement requirements with stakeholders;
- develop a drilling plan that considers environmental, social and safety concerns;
- negotiate access with the surface landowner by means of a surface lease;
- protection of groundwater—including drinking water wells;
- submit an application to the Oil and Gas Commission for authorization to explore for the resource.

### Environmental Planning

Collecting environmental information may be one of the initial steps in any natural gas development project. Where gaps in essential data are found, companies collect site-specific information. Industry considers the unique environmental values of an area—including local traditional knowledge of special sites.

### Public Involvement

Prior to submitting an application to begin a coalbed gas evaluation project, companies follow the Oil and Gas Commission's guideline to involve landowners, First Nations and other people who may be affected by a development. Stakeholder involvement provides an opportunity for public input as well as shared understanding about local concerns and oil and gas processes and safeguards.

Environmental information and input from public involvement and First Nations consultation is integrated into the planning process—taking into consideration a number of factors including: the timing of the project; proposed location; noise and dust reduction plans; as well as techniques to minimize environmental and social impacts.

### Developing a Plan for an Estimated One to Six Wells

Plans include details about the location of the well-site with respect to residences, other facilities and sources of water as well as other elements such as seismic lines, roads and pipelines. Plans also take into consideration wildlife habitat, vegetation, First Nations' rights and traditional uses, guide and outfitter areas, and recreational uses.

### Emergency Response Plan

All oil and gas facilities must have an Emergency Response Plan in place—which will vary depending on a number of factors including the resource, location and population. Coalbed gas is a “sweet” natural gas so does not pose a significant health or safety risk—however, as with any flammable substance, precautions are put in place to protect workers and the public.



### Obtaining Surface Lease

Legislation is in place to ensure the rights of both the surface and subsurface owners are respected. A company must negotiate appropriate compensation with the surface landowner and obtain a surface lease. This lease allows the company to access the land to drill, as well as construct and store any above ground equipment.

In the event that an agreement cannot be reached, either party may apply to the Province's Mediation and Arbitration Board to resolve outstanding issues. It is in a company's best interest to negotiate a fair and beneficial surface lease with landowners. Communities generally welcome companies that are responsible stewards of the environment.

## 2 FEASIBILITY to Demonstrate Commercial Viability of Production

If the evaluation indicates that there is adequate resource to pursue, companies will consider making an application for a small-scale project to test the feasibility of the development. Following the process outlined, companies must discuss their expanded program with stakeholders and develop environmental management plans to suit the expanded scale of activity. They address concerns such as:

- wildlife and fish habitats—outlining plans to address impacts;
- protection of groundwater—including drinking water wells;
- impact on land users—indicating efforts to accommodate conflicting interests; and
- remediation of the site after development.

## 3 PRODUCTION Full Commercial Recovery Project

If the potential for commercial production is proven through the previous stage, a company can make application for full-scale commercial production. The company would now involve the public for the entire project area to ensure stakeholder and environmental values are included in decisions about the nature and scope of the program.

The Oil and Gas Commission ensures there are adequate measures to protect the environment and to manage potential impacts.

### Reclamation

Once a project is complete, regulation requires companies to remove all structures and equipment and to use cement and a plug to seal well bores when closing down a well-site. Reclamation includes contouring the site and replanting vegetation to establish environmental values.

**Conditions  
On Drilling  
Applications**  
The Oil and Gas  
Commission  
places appropriate  
binding terms and  
conditions on gas  
projects to ensure  
protection of the  
environment and  
of local values and  
interests.

## Comprehensive Management and Regulation

Our regulatory system demands high standards and is based on 50 years of experience and current scientific knowledge. As well, people in the oil and gas industry constantly reassess and improve practices to take advantage of new information and technological changes that allow industry to operate more safely and with less impact. Provincial acts, regulations, codes and practices govern industry's activities from initial testing, through exploration and drilling, to production and eventual reclamation of the well-site.

### *OIL AND GAS COMMISSION ACT*

- This Act gives an independent commission the responsibility and authority to regulate all oil and gas exploration, production and transportation in B.C.
- The Commission approves, monitors and enforces regulations for wells, pipelines and other oil and gas facilities, ensuring that industry understands, respects and meets or exceeds regulations and standards.

### *COALBED GAS ACT*

- This Act clarifies that coalbed gas is natural gas and is owned by the party who holds the petroleum and natural gas rights.

### *PETROLEUM AND NATURAL GAS ACT*

- This Act governs all aspects of exploration, development and production, providing for the entry, occupation, or use of publicly held land for these purposes.

### *ENVIRONMENTAL MANAGEMENT ACT (EMA)*

- This Act provides enabling provisions for modern environmental management tools.
- The EMA guides waste management and site remediation—including how water produced from coalbed gas wells is handled. The Oil and Gas Commission enforces the Act in cooperation with the Ministry of Water, Land and Air Protection.

### *PIPELINE ACT*

- This Act ensures the safety and integrity of pipelines and transmission facilities for people and the environment. The design, construction, operation, maintenance and the permanent closing off of gas gathering systems, pipelines and compressor stations must meet the requirements of the Act as well as various codes and practices.

Other Acts have regulations that companies must abide by during coalbed gas exploration and development: the *Forest Act*, the *Heritage Conservation Act*, the *Land Act*, *Forest Practices Code of British Columbia Act*, and the *Water Act*.

## Communication

Prior to any natural gas resource development there are a number of avenues for informing and involving directly affected members of the public, including other levels of Government and First Nations. Community members or interested parties have opportunities to express their opinions and get questions answered in the pre-tenure phase and in the project approval stage as specific projects move from evaluation to feasibility to production.

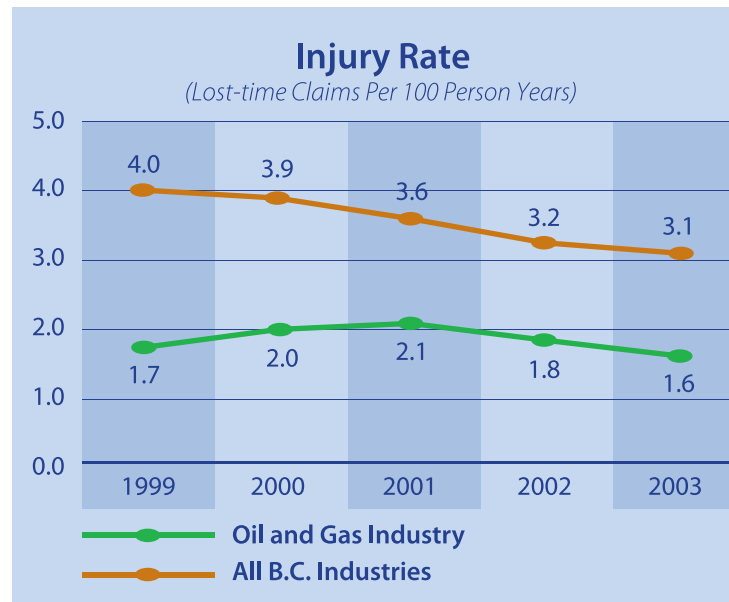
One of the Oil and Gas Commission's functions is to ensure that development is in the public interest and that companies consider environmental, economic and social effects. As part of the application process, gas companies inform the public, including local landowners and residents. The Oil and Gas Commission requires companies to work with communities and to draw upon local knowledge about environmental and cultural issues. The Commission is responsible for conducting consultation with First Nations concerning Aboriginal or treaty rights. Based on community input and First Nations consultation, the Commission can establish terms and conditions as a result of public concerns.

The Ministry of Energy and Mines informs stakeholders about the development, operation, issues and opportunities of coalbed gas in communities near coalfields. In 2003 and 2004, the Ministry held more than 30 open houses and meetings in communities where coalbed gas development potential exists.

## Safety

Through all stages of development, the health and safety of both employees and the public are top priorities of the Provincial Government as well as for the companies and individuals working in the oil and gas industry. Coalbed gas companies operate under the same stringent regulations as the rest of the industry. In fact, the oil and gas industry is one of the safest resource-based industries in Canada (see below).

Many regulations exist to ensure worker health and safety and the Workers' Compensation Board sets and enforces standards to ensure compliance. The Oil and Gas Commission also requires that companies have an emergency preparedness and response plan for quick, effective and appropriate response to emergencies to protect employees and the public.



Source: Workers' Compensation Board







Protecting  
Our Shared  
Environment  
–through comprehensive  
regulation and innovative  
techniques

## Protecting drinking water wells

The Oil and Gas Commission requires notification and water well testing before and after drilling if a residential well is within one kilometre of a well-site. If water quantity is affected, a company must re-establish water supply.

The minerals most commonly found in produced water are sodium, bicarbonate and chloride, essentially solutions of baking soda and table salt.

B.C.'s regulation of coalbed gas protects our environment. Each coalfield is unique and activity is managed to protect local environmental values. We have studied the impacts of coalbed gas development in other jurisdictions. We have learned to develop the resource safely and responsibly—to construct wells, pipelines and compressors in a way that limits the impacts. We have learned to anticipate and avoid problems of visual impact, noise and air quality. And we have learned how to handle produced water in a way that ensures the protection of the environment, habitat and watersheds.

The responsible management of a drilling site and related infrastructure requires an assessment and plan for mitigating environmental impacts. When a company applies to develop a site, it submits this information to the Oil and Gas Commission for review and to assist in establishing the conditions for authorizing work. As the regulator, the Oil and Gas Commission works cooperatively with other Government agencies such as the Ministry of Water, Land and Air Protection, the Ministry of Forests and the Ministry of Sustainable Resource Management. The Oil and Gas Commission generally requires companies to collect environmental baseline information at a scale and level of detail in proportion with the project scope.

Environmental baseline information is also available to the public and oil and gas companies from Government agencies, scientific and community initiatives. The Environmental Resource Information Project of the Ministry of Energy and Mines, and the Science and Community Environmental Knowledge fund from the Oil and Gas Commission are two resources focused on the oil and gas sector.

In B.C., environmental protection is a deciding factor for potential projects and both the Government and industry take this responsibility seriously. Industry is actively involved in efforts to minimize impacts caused by industrial activity. Special caveats or conditions can be placed on development to ensure special places are protected and industry follows the best practices as required by the location.

## Water Code of Practice Guides Responsible Handling of Produced Water

The Ministry of Water Land and Air Protection's new *Code of Practice for the Discharge of Produced Water from Coalbed Gas Operations* sets clear and concise standards to ensure water produced from coalbed gas will be handled responsibly.

Typically, water produced from natural gas development is re-injected into a disposal well. To protect drinking water and shallow aquifers from possible cross-contamination, steel casings line all oil and gas wells from the surface to far below ground, and cement seals the casings in place. This is still an option for the disposal of produced water. However, this water is often only mildly saline and can be treated economically and used beneficially or, providing code standards are met, disposed of safely into streams or allowed to percolate into the environment.

Beneficial uses for produced water that may be appropriate include: irrigation; watering of livestock and range animals; support for recreation; and fishing or wildlife habitats. Produced water that will be used or disposed of on the surface may require treatment to ensure it meets all safety and environmental standards and will not harm the receiving environment.

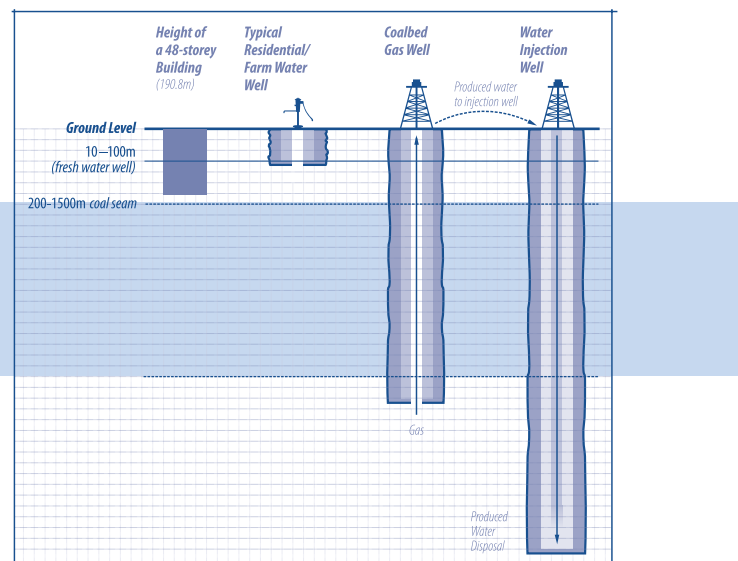


Initially, wells may produce a large amount of water, which declines over time. Through test and exploration drilling, companies will determine the produced water quality and quantity before commercial production begins. The Oil and Gas Commission evaluates both water quality and disposal plans as part of the application process.

There are many factors that a company will consider when evaluating how to handle produced water, including: water quality and quantity, cost of water treatment, landscape of receiving environment, potential for beneficial uses (i.e. livestock in vicinity) and existing infrastructure. The Code of Practice guides the choice and ensures that wildlife and fish habitat, the environment and water sources are protected.

The maximum fine for not following the Code is the same as any other violation under the *Environmental Management Act*—up to \$1 million or six months in jail.

### Protecting Water Wells



### Minimization of Disturbances

B.C. has specific regulations guiding the construction and location of drill sites. Gas companies design drill sites to minimize the effects of development on the land around the site. They might drill multiple wells from a single surface location and align roads or pipelines along natural field breaks. To minimize noise to local residents, they can build structures to enclose pumps or install buffers to reduce compressor noise.

Some new roads will be needed for moving and maintaining drill rigs, pipelines and other equipment. However, existing roads and trails are used whenever possible to minimize new road construction. New roads and trails, when no longer in use, will be reclaimed, or adapted for other local, recreational or resource needs.

In order to minimize surface disturbance, industry is encouraged to build new projects around existing infrastructure such as previously logged areas and existing roads and trails. This is the case when coalbed gas development occurs in already disturbed areas.

### Well Spacing

The Oil and Gas Commission approves the spacing of wells. For the evaluation and feasibility stages the Commission will approve spacing that best allows companies to test the quantity and quality of the gas resources as well as the nature of the water in the coal seam. For commercial production, the Commission is guided by the *Petroleum and Natural Gas Act* which allows flexibility in the spacing of wells. Typically, coalbed gas production requires four to eight wells per section, however the Ministry made a commitment to one well per quarter section for production wells on private agricultural and leased agricultural land. A company would naturally try to reduce the number of wells needed to extract the coalbed gas in order to control costs. Most disturbance occurs during

A quarter-section is equal to 160 acres—roughly equivalent to 25 average sized city blocks.

A typical well-site is approximately 120 x 120 meters when it is being drilled. However, after drilling is complete the well-site will be reduced to by more than 50 per cent.

drilling; after the well is producing, very little equipment is needed on site and the area can be replanted or re-contoured.

#### Air Quality Management

Natural gas is a clean burning fuel of choice for heating our homes and cooking our food. Coalbed gas contains little or no hydrogen-sulphide and is so pure it can often be fed into the pipeline and delivered directly into our homes without processing, other than adding an odour for safety reasons.

As companies work to determine commercial viability, short-term flaring may occur. Flaring of natural gas is safe—it is the same as burning it in your furnace, however companies will notify nearby property owners and residents when to expect flaring. This practice is also highly regulated by the Oil and Gas Commission, and all flaring activities require authorization.

#### Wildlife Protection

The Oil and Gas Commission requires that potential impacts on wildlife and fish habitats be managed to mitigate impacts to habitat and populations. For example, operations may be restricted to certain times of the year to minimize impacts on migrating or breeding wildlife populations. Wells can also be situated to avoid disturbing habitat and well-sites that are no longer in use will be closed off and made harmless to wildlife.



Environmental testing is an integral part of resources development.

#### Environmental Resources

The Environmental Resource Information Project contributes to responsible coalbed gas development. It is funded by the Ministry of Energy and Mines—its purpose is to:

- Enhance public access to available environmental baseline information in coalfields with coalbed gas potential;
- Undertake biophysical inventories, such as water quality and related hydrological studies; and
- Collaborate with communities, First Nations and industry to collect and use data to inform decisions

The Science Community and Environmental Knowledge Fund is coordinated through the Oil and Gas Commission—its purpose is to:

- Support scientific and knowledge-based research useful to Government and industry in the areas of: health and safety, ecosystem management, engineering and technology, education, community and environmental knowledge;
- Improve scientific and community environmental knowledge relevant to oil and gas activities in B.C.; and
- Communicate research findings to industry, regulators, First Nations, stakeholders and the general public.



An aerial photograph of a residential town, likely Sparwood, nestled in a valley. The town features a mix of single-family homes and larger apartment-style buildings. The surrounding landscape is lush with green trees and rolling hills, with a range of mountains visible in the distance under a clear sky. A dotted white line runs horizontally across the top of the image, separating the title area from the rest of the page.

# Coalbed Gas Potential

—helping diversify B.C.'s  
resource-based economy

4

Resource-based communities like Sparwood benefit from an expanded economic base.

Spin-offs from a coalbed gas industry:

- Environmental and engineering services;
- Catering and restaurants;
- Road maintenance;
- Construction;
- Transportation;
- Steel fabrication;
- Supplies; and
- Local employment for B.C. residents.

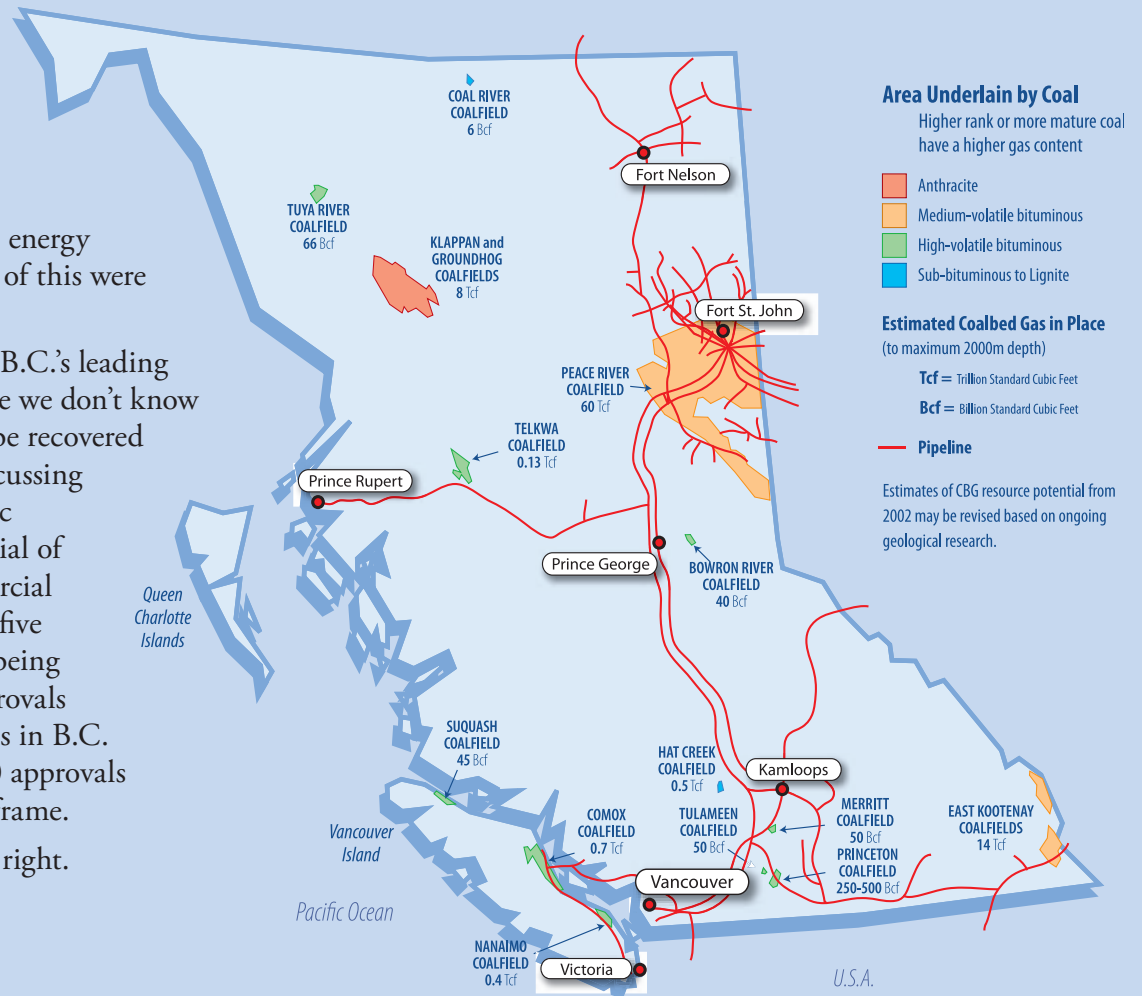
Coalbed gas potential exists where there are coal deposits. Although these deposits cover roughly three per cent of our province—coalbed gas development could occur in only a small fraction of that area. This means that the potential footprint of future coalbed gas development will be limited.

Experts estimate that B.C.'s coalbed gas potential is approximately 90 trillion cubic feet. To put this in perspective, we currently produce about 1.1 trillion cubic feet of natural gas each year. Coalbed gas would be an important part of our future energy security if even a small fraction of this were produced.

This sector is a growing part of B.C.'s leading edge oil and gas industry. While we don't know how much of the resource can be recovered economically, developers are focussing extensive technical and scientific resources to evaluate the potential of this resource. Although commercial production could begin within five years, the B.C. Government is being thorough. Compare the 18 approvals for coalbed gas exploratory wells in B.C. in 2004 to the more than 7,500 approvals in Wyoming in the same time frame. We are taking the time to do it right.

### Coalbed Gas Resource Potential is Across B.C.

Coalbed gas potential exists where there are coal deposits. These deposits cover roughly three per cent of our province; coalbed gas development will occur in only a small fraction of that area.



### Economic Diversification and Opportunity

The natural gas industry provides significant revenues that support essential government programs and services.

A typical coalbed gas project would provide:

- well-paying jobs—oil and gas industry employees are amongst the highest paid—the average salary is over \$95,000;
- a typical commercial project could create about 150 jobs for two to five years of development and about 25 jobs in ongoing production; and
- new opportunities for local contractors and business owners who could expect increased business because of the industry.

In turn, this business activity would:

- create new service sector jobs;
- diversify the provincial economy through activity in areas where coalfields exist; and
- provide direct and indirect jobs and spin-off opportunities for First Nations, helping them build business capacity and stable communities.

Ultimately, the successful development of a coalbed gas industry here in B.C. would mean that we would have access to one of the cleanest burning fuels. Once operating commercially, this new resource sector will add an important new revenue generator to our provincial economy while at the same time responding to our growing energy needs.

### For More Information on Coalbed Gas Development and Regulation:

- Oil and Gas Commission [www.ogc.gov.bc.ca](http://www.ogc.gov.bc.ca)
- Ministry of Energy and Mines coalbed gas website at [www.coalbedgas.gov.bc.ca](http://www.coalbedgas.gov.bc.ca)
- [CBGInfo@gems9.gov.bc.ca](mailto:CBGInfo@gems9.gov.bc.ca)



BRITISH  
COLUMBIA

Ministry of Energy and Mines