YUKON OIL AND GAS

A Northern Investment Opportunity

2005

Introducing the 2005 Edition of *Yukon Oil and Gas: A Northern Investment Opportunity*

I invite you to look inside, and **See the Opportunity** Yukon has to offer, **Explore the Potential** and **Invest in the Future**.

Blessed with an abundance of oil and gas resources - an estimated potential of 20 trillion cubic feet of gas and 900 million barrels of oil – the Yukon's world-class resources have remained largely untapped due to their remoteness from market. This is all set to change with the planned construction of the $20 billion US Alaska Highway Natural Gas Project, targeted to come on-stream by 2014, and the approximately $10 billion CDN Mackenzie Gas Project, targeted for completion by 2010.

The Yukon is dedicating significant resources to facilitate the development of both northern pipelines. Both projects are pivotal to accessing gas in the Yukon and driving economic development in the north, particularly in the mining sector.

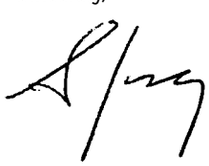
For energy firms seeking to get into the game early, the Yukon offers incredible opportunity and many competitive advantages, including:

- Progressive oil and gas legislation developed with First Nation governments;
- A generous and flexible land tenure structure and competitive royalty rates;
- A well educated and skilled labour force with northern expertise;
- Pipeline access via the Duke pipeline to processing facilities in British Columbia, for natural gas from southeast Yukon; and
- Proposed northern pipeline routes that will provide access to Yukon's oil and gas resources.

Yukon Oil and Gas: A Northern Investment Opportunity has been designed to provide the best information possible to allow you to make the best decision possible – to invest in the Yukon. I encourage you to share a copy with your colleagues.

We hope this publication will provide you with the necessary information to make an informed decision. Please feel free to let our staff know if this document has been helpful to you or if you have any questions. It can also be found online at www.yukonoilandgas.com.

Sincerely,



The Honourable Archie Lang
Minister, Energy, Mines and Resources

Yukon Oil and Gas: A Northern Investment Opportunity

June 2005 Edition

For more information or additional copies of this publication, please contact:

Oil and Gas Management Branch or
Oil and Gas Business Development and Pipeline Branch
Yukon Department of Energy, Mines and Resources

Suite 300, 211 Main Street
Box 2703 Whitehorse, Yukon Y1A 2C6
Tel: (867) 667-3427
Fax: (867) 393-6262

E-mail: oilandgas@gov.yk.ca or pipelines@gov.yk.ca

Website: www.yukonoilandgas.com

Published June 2005
ISSN 1710-6109

Cover page photo: Courtesy Devon Canada Corp.
All other photos: Government of Yukon

How to use this publication

This publication provides a general introduction to oil and gas in Yukon.

While it will be of general interest, it is written to address matters of interest to company officials, landmen, geologists, engineers and others who may want to participate in Yukon's oil and gas sector.

The text is divided into two main parts.

Part 1: Provides information on the oil and gas regime and useful information on Yukon. It has six sections: responsibilities of governments; legislative and regulatory framework; managing oil and gas rights; licensing of activities; fiscal regime; and pipelines and infrastructure.

Part 2: Describes recent activity, provides an overview of the oil and gas resource potential, and contains summaries of resource assessments.

Each section in the first part provides an introduction to a topic, explains the main steps or requirements to obtain your goal, and ends with the name of a contact person and how to reach him/her.

Table of Contents

Why Invest in the Yukon?

The oil and gas industry has the potential to be a major influence in the ongoing development of Yukon's economy.

Significant unexplored and untapped resources, longer tenure terms and a stable political and legal framework make the Yukon a unique and competitive place to do business.

In economic terms, the Yukon has a very attractive climate for oil and gas investment and development. The Yukon has a competitive regime built on the experience and proven practices of other jurisdictions. The Yukon's key advantages include:

- Progressive oil and gas legislation – the *Yukon Oil and Gas Act (YOGA)*
- A unique common regulatory regime jointly developed by Yukon and First Nation governments
- A generous and flexible land tenure structure with the size of dispositions maximized and length of tenure for permits greater than in other Canadian jurisdictions
- Competitive royalty rates
- A well-educated and skilled labour force with northern expertise
- A well developed infrastructure that includes communications, an extensive network of paved roads and recently expanded electrical grid
- Direct access to year-round ocean ports through Skagway and Haines, Alaska
- Pipeline access – natural gas from southeast Yukon is transported via the Duke Energy Gas Transmission Pointed Mountain Pipeline to processing facilities in British Columbia, and
- Renewed interest in northern pipelines which will provide access to gas, and tie in the Yukon's eight sedimentary basins, allowing Yukon gas to be added to a pipeline(s)

This publication provides information on these advantages and other oil and gas matters of interest to investors.

Part 1: Information on Yukon Oil and Gas Regime

1. Roles and Responsibilities of Governments

The Yukon is a territory within the Canadian confederation and has powers similar to those of a province. It has been a separate geographical and political entity within Canada since 1898.

The Yukon obtained administration and control over its land and resources through a process of negotiated devolution. Responsibility for onshore oil and gas resources was transferred to the Yukon government on November 1998. Federal and Yukon legislation implemented the transfer of responsibility for public lands, forests, water and minerals, and gas from coal from the federal government to the Yukon, as provided for in the April 1, 2003 Devolution Transfer Agreement.

With these transfers, the Yukon obtained the resource management powers and responsibilities similar to a province. Nevertheless, the Government of Canada continues to have a regulatory role with respect to international and interprovincial pipelines, and offshore management. In addition, First Nations which have concluded land claims agreements own the resources on the surface of their lands, and on specific parcels, subsurface resources.

Roles and Responsibilities of Governments

	GOVERNMENT OF YUKON	FIRST NATIONS	GOVERNMENT OF CANADA
Primary role/ responsibilities	• Owns oil and gas resources on Yukon public lands and has legislative authority over them • Responsible for surface access and permitting • Responsible for water rights and permitting • Developing a common regime for oil and gas in cooperation with Yukon First Nations	• First Nations with settled land claims own oil and gas resources on their Category A settlement lands • First Nations with settled land claims have jurisdiction and legislative authority over their resources which is implemented when they enact their own laws • First Nations with settled land claims are responsible for authorizing surface access on Category A and B settlement land • Developing a common oil and gas regime in cooperation with the Yukon	• Has jurisdiction over the Beaufort offshore • Has jurisdiction over international and interprovincial pipelines • Has responsibility for authorizations when federal laws apply
Primary Departments/Agencies	Department of Energy, Mines and Resources Executive Council Office	Each First Nation will have its own administration for resources for which it controls	National Energy Board Department of Indian and Northern Affairs Other Federal departments

A. Government of Yukon

The transfer of the administration and control of oil and gas resources to the Yukon, which came into affect on November 19, 1998, has had a number of implications for managing those resources.

First, local resources are now under local control and management. The Yukon's resources can be developed in a way that reflects Yukon's interests and in a manner that is responsive to industry needs. Prior to the transfer, most oil and gas projects required a land use permit from the federal government and an oil and gas licence from the Yukon government. Now, both the land use permit and the licence are issued by the Department of Energy, Mines and Resources.

Second, the Yukon government restructured and changed the mandates of many departments. A new department of Energy, Mines and Resources (EMR) was created to manage the natural resources and regulate development within the territory. It largely replaced the Department of Economic Development under which oil and gas was formerly administered.

Two branches in EMR deal with oil and gas matters: the Oil and Gas Management Branch, and the Oil and Gas Business Development and Pipeline Branch.

Oil and Gas Management Branch

The Oil and Gas Management Branch is responsible for managing oil and gas resources and regulating oil and gas activity. In carrying out its responsibilities, the branch is engaged in:

- Conducting oil and gas rights dispositions
- Managing continuances of oil and gas rights
- Registering transfer of rights and security notices
- Licensing oil and gas activities and operations
- Conducting environmental assessments
- Administering oil and gas royalties and resource revenues
- Monitoring and inspecting operations for regulatory compliance
- Developing and implementing oil and gas legislation
- Working with First Nations to establish a common oil and gas regime, and
- Supporting and coordinating capacity building, education programs and oil and gas training

Contact:

John Masterson – Director
(867) 667-5026
E-mail: john.masterson@gov.yk.ca

Oil and Gas Business Development and Pipeline Branch

The mandate of the Oil and Gas Business Development and Pipeline Branch is to encourage the development of Yukon's resource potential and emerging oil and gas industry. It is responsible for:

- Promoting northern infrastructure development such as pipelines;
- Coordinating employment and training initiatives;
- Supporting the growth of Yukon's service and supply sector;
- Negotiating benefits agreements;
- Marketing Yukon's resource potential and development activities;
- Managing Yukon's interests in offshore Beaufort Sea development;
- Negotiating shared offshore management with the Government of Canada
- Liaising with industry, and
- Representing the Yukon government on intergovernmental committees dealing with oil and gas development and pipeline matters

Contact

Brian Love – Director
(867) 667-3566
E-mail: brian.love@gov.yk.ca

B. Yukon First Nations

Yukon First Nations play a very important role in resource development in three significant ways. First, as a result of land claims settlements, they own surface and/or subsurface rights as follows:

- Category A settlement lands: Yukon First Nations own the surface rights and subsurface minerals rights which includes oil and gas resources. As resource owners, Yukon First Nations are responsible for managing and regulating oil and gas on Category A lands, subject in part to passing their own legislation.
- Category B settlement lands: Yukon First Nations own the surface rights but not the subsurface mineral rights.

Second, as owners of oil and gas resources, Yukon First Nations are working with the Yukon Government in developing a common oil and gas regime. (see common regime section, p 10).

Third, Yukon First Nations are involved in or are consulted through various oil and gas related processes, notably the disposition and licensing process. In addition, they are entitled to be parties to benefits agreements (see page 17) for oil and gas activities planned within their traditional territories.

Land Claims Negotiations

Land claims is the term used to describe the process of negotiating final and self-government agreements respecting aboriginal rights and title to land. Historically, the Government of Canada negotiated treaties with aboriginal peoples to establish aboriginal rights. As treaties were never concluded in the Yukon, the Governments of Canada and Yukon are now completing the negotiation and implementation of modern-day treaties with Yukon First Nations through the land claims process.

Settlement of land claims provides Yukon First Nations with rights and obligations to land and resources, and the ability to govern their own affairs. It also provides certainty with respect to land management and resource development, and charts a stable future for social and political development of the territory.

The Umbrella Final Agreement (UFA) is the framework agreement for all Yukon land claims negotiations and settlement agreements. As outlined in the UFA, settlement lands will collectively total approximately 41,500 square kilometres or about nine per cent of the total land area of the Yukon once all Final Agreements are in place. A portion of these settlement lands include subsurface oil and gas rights which will encompass approximately six per cent of the Yukon.

Yukon First Nations aquire ownership of their own oil and gas lands as each Final Agreement comes into effect.

Status of Land Claims Negotiations

There are a total of 14 Yukon First Nations. The following 10 Yukon First Nations have concluded and are implementing final and self-government agreements. The year in which each agreement came into effect is in brackets.

- Vuntut Gwitchin First Nation (1993)
- First Nation of the Nacho Nyak Dun (1993)
- Champagne and Aishihik First Nations (1993)
- Teslin Tlingit Council (1993)
- Selkirk First Nation (1997)
- Little Salmon/Carmacks First Nation (1997)
- Tr'ondëk Hwëch'in First Nation (formerly Dawson First Nation) (1998)
- Ta'an Kwäch'än Council (2002)
- Kluane First Nation (2004)
- Kwanlin Dun First Nation (2005)

The Carcross Tagish First Nation has concluded negotiations and ratified its land claims agreement. At the time of publication, White River First Nation, Ross River Dena Council and the Liard First Nation had not yet concluded land claims agreements.

Transboundary Agreements

Some Yukon First Nations share traditional use and occupancy of Yukon land with First Nations in both British Columbia and the Northwest Territories. In B.C., those First Nations are within the Kaska Dena Council, the Tahltan Tribal Council and Taku River Tlingit First Nation. In the N.W.T., they are the Tetlit Gwich'in, the Inuvialuit and First Nations of the Dene/Metis. The Tetlit Gwich'in and the Inuvialuit have Transboundary Agreements which are in effect, while discussions with other Transboundary First Nations are still at an early stage.

First Nations Powers to Create and Enforce Laws on Settlement Lands

The self-government agreements of Yukon First Nations provide them with law-making authority over their citizens and lands. Of importance to oil and gas companies interested in investing in Yukon are the following law-making powers of First Nations:

- The authority to enact laws of a local or private nature on settlement land with respect to subjects such as land use and management, licensing and regulation of businesses and the establishment and regulation of local services and facilities
- The authority to enact laws for their citizens in the Yukon in the areas of language, culture and spiritual beliefs; health care and services; social and welfare services; training programs; adoption, guardianship, custody, care and placement of children; education programs and services; estates; resolution of disputes outside the courts; and licenses to raise revenue
- The authority to enact laws in relation to property taxation, personal income taxation, corporate income tax and other forms of direct taxation of residents on settlement land

Contact

Land Claims and Implementation Secretariat, Executive Council Office Telephone: (867) 667-5035 or 1-800-661-0408 local 5035 (toll free within the Yukon) Fax: (867) 667-3599
Location: Second Floor, 204 Main Street, Whitehorse
Mailing Address: Box 2703, Whitehorse, Yukon Y1A 2C6 (A-14)

C. Federal Government

Although the federal government transferred responsibility for onshore oil and gas to Yukon, it continues to have responsibility for oil and gas management and development in the Beaufort Sea, and continues to regulate interprovincial and international pipelines.

Offshore Areas

The federal government retains responsibility and authority in the offshore area where there are significant oil and gas resources. A report by Dixon et al (Petroleum Resources of the Mackenzie Delta and Beaufort Sea-1994) estimates 12 Tcf of discovered conventional natural gas plus 54 Tcf of potential, for an ultimate potential of 66 Tcf for conventional natural gas; and 1.7 billion barrels discovered crude oil and 5.4 billion barrels potential, for an ultimate potential of 7.1 billion barrels of crude oil.

Oil and gas resource management in the Beaufort Sea region is regulated under two federal statutes: the *Canada Petroleum Resources Act (CPRA)*; and the *Canada Oil and Gas Operations Act (COGOA)*. The Department of Indian Affairs and Northern Development governs the allocation of oil and gas rights to the private sector and all related conditions under *CPRA*. The National Energy Board regulates the industrial activities regarding resource conservation, protecting the environment and workers' safety primairly under *COGOA*.

Under the 1993 *Canada Yukon Oil and Gas Accord*, the federal government made a commitment to complete a shared offshore management regime and revenue sharing arrangement in the Beaufort Sea with the Yukon. To ensure Yukon's interests are met and regulatory certainty is provided to the oil and gas industry, concluding shared offshore arrangements is a priority for Yukon. Until such arrangements are finalized, an interim joint Federal/ Territorial Offshore Committee has been established pursuant to the Accord. It ensures Yukon's input into the decision making process of the federal government pursuant to the *CPRA*.

Industry interests in oil and gas exploration and development in the Beaufort Sea - Mackenzie Delta region have increased significantly in the past few years, driven mainly by the proposed Mackenzie Gas Project. A new offshore well is being planned by Devon Canada, which is expected to be drilled during the winter of 2005/2006.

Yukon continues to participate in and monitor a number of national and international initiatives and issues related to the Beaufort Sea region. Some of these include: the Beaufort Sea Integrated Management Planning Initiative; the Oceans Action Plan; the Arctic Council's Arctic Marine Strategic Plan; and the Canada/U.S. boundary dispute.

Contact Information

For more information on Yukon's offshore interests contact:
Perry Diamond – Senior Oil and Gas Analyst
Oil and Gas Business Development and Pipeline Branch
(867) 393-7044
E-mail: perry.diamond@gov.yk.ca

Interprovincial and International Pipelines

Under the Canadian constitution the federal government is responsible for interprovincial and international trade and commerce. As such, the National Energy Board regulates and is responsible for international and interprovincial pipelines. The federal minister of Natural Resources Canada is responsible for the Northern Pipeline Agency. See section on pipelines, pages 20-21.

2. Legislative and Regulatory Framework

A. Common Oil and Gas Legislative Regime

Since 1997 the Yukon government and Yukon First Nations have worked together through a working group to coordinate the development of an oil and gas regime in the Yukon.

The objective of the common oil and gas regime is to provide a consistent regulatory process throughout the Yukon. This cooperative effort has many advantages:

- It clearly defines the rules, thereby creating more certainty for industry
- Common conservation rules make it easier to deal with deposits that straddle boundaries
- Common management of data makes it easier and quicker to learn about the Yukon's oil and gas resources
- Adoption of Yukon legislation and regulations by First Nations is a cost-effective method of developing their respective oil and gas regimes
- Common administration of oil and gas activity is more efficient and less costly, and
- Adoption of a common regime avoids legal disputes

The following outlines the key features of the Yukon oil and gas legislative framework.

The Legislation

The Yukon *Oil and Gas Act (YOGA)*, which consists of five parts, is the nucleus of the regime and addresses:

- Part 1: administration
- Part 2: oil and gas rights
- Part 3: operations
- Part 4: general matters such as audits, offences and penalties, and evidence, and
- Part 5: transitional and commencement matters

YOGA Applies to all Oil and Gas Operations

YOGA was structured and written to apply to all oil and gas operations in the territory. For example, Part 3 of the *Act*, dealing with oil and gas operations, applies throughout Yukon. It is a law of general application under which approved operations can relate to both Yukon First Nation and Yukon oil and gas lands. If the operations relate to Yukon First Nation lands, an agreement may be concluded with the relevant Yukon First Nation respecting the coordinated management and regulation of oil and gas activities, and the recovery of oil or gas from a field or pool.

Adoption of Laws by Reference

To ensure that the same rules apply throughout Yukon, Yukon First Nations have the option of incorporating by reference the Yukon *Oil and Gas Act* or parts of it relating to the disposition and management of oil and gas rights. At this time, Yukon First Nations have not passed any legislation relating to oil and gas.

Integrated Management

The *Act* allows for the possibility that Yukon First Nation oil and gas interests form part of an overall, integrated management approach. Three examples of such provisions are:

- Grouping of Yukon government and Yukon First Nation permits
- Negotiating joint benefits agreements that pertain to both Yukon lands and Yukon First Nation settlement lands between the Yukon government, affected Yukon First Nations and the licensee, and
- Potential for pooling and unitization which could involve both Yukon government and Yukon First Nation settlement lands

B. Regulations

To date the Government of Yukon has enacted five regulations under *YOGA*. In addition, Royalty Regulations are under development. Other regulations being planned deal with pipelines and gas processing.

REGULATION	ENACTED/DRAFTED
Oil and Gas Transfer Regulations	November 1998
Oil and Gas Disposition Regulations	August 1999
Oil and Gas Drilling & Production Regulations	July 2004
Oil and Gas Geoscience Exploration Regulations	July 2004
Oil and Gas Licence Administration Regulations	July 2004
Oil and Gas Royalty Regulations (Draft)	Drafted October 1999

Copies of the regulations can be found on line at www.yukonoilandgas.com. The following is a synopsis of what the regulations contain.

Oil and Gas Transfer Regulations

The *Oil and Gas Transfer Regulations* establish the rules regarding the administration and management of oil and gas rights that were issued by the federal government prior to devolution ("former federal disposition"). They outline:

- The methods and rules for land division and surveying
- How former federal disposition of oil and gas rights in the territory are administered
- The management of those dispositions (grouping, conversion, amendment, cancellation, surrender)
- The requirements for permits and leases, fees and rentals
- The confidentiality reaquirements, and
- The process for registering transfers and security notices of former federal oil and gas dispositions

Oil and Gas Disposition Regulations

The *Oil and Gas Disposition Regulations* establish the rules regarding the issuance and management of oil and gas rights in the Yukon. They outline:

- The methods and rules for land division and surveying
- How oil and gas rights in the territory can be issued
- The management of dispositions (grouping, conversion, amendment, cancellation, surrender)
- The requirements for permits and leases, fees and rentals
- The reporting requirements and confidentiality
- The process for registering transfers and security notices of Yukon oil and gas dispositions, and
- Under what circumstance and to what extent a disposition holder may be compensated when their rights are cancelled

Oil and Gas Licence Administration Regulations

The *Oil and Gas License Administration Regulations* establish the rules for obtaining licences to conduct oil and gas operations in the Yukon. They outline:

- Administrative procedures for the licensing of oil and gas activity in the territory
- The levels of liability and financial responsibility
- Application fees for oil and gas licences
- The rules for hearings before the Chief Operations Officer related to oil and gas conservation
- The rules for appeals to the Minister with respect to oil and gas activity on First Nation Category A Settlement Lands
- The rules for surveying and survey monuments
- The threshold level for benefits agreements, and
- The rules for gas export licences that must be in place before gas can be removed from the territory

Oil and Gas Geoscience Exploration Regulations

The *Oil and Gas Geoscience Exploration Regulations* regulate petroleum exploration activities throughout the territory. Geoscience involves all aspects of preliminary surface and near-surface exploration such as geological field studies, aerial magnetic and gravity surveys, seismic activity and shallow test-hole drilling.

The regulations describe licensing and reporting requirements, penalties, geophysical and geological operations, safety and health as well as environmental safeguards.

Oil and Gas Drilling and Production Regulations

The *Oil and Gas Drilling and Production Regulations* regulate drilling operations, well operations, field facility construction and operations, and production and conservation activities in the Yukon.

They cover well licensing and well operations approval processes, information requirements, safety, environmental protection, inspection and investigations, required tests, samples and surveys, and well evaluation and abandonment requirements.

Draft *Oil and Gas Royalty Regulations*

The draft *Oil and Gas Royalty Regulations* regulate the payment of royalties. Royalty revenues are the principal fiscal means by which the resource owner is compensated for the extraction of its oil and gas resources.

The royalty rate structures will have a significant and a direct impact on the economics driving oil and gas exploration and development in the territory. These regulations will play a pivotal role in creating a competitive fiscal environment necessary to attract new investment and activity. It is important that the royalty regime reflects the high costs and risks associated with exploring and developing oil and gas in a frontier region.

An *ad valorem* royalty is proposed with a base rate of 10 per cent. The royalty regime is intended to be both competitive and administratively simple.

Contact Information

For more information, or to submit comments and suggestions on this section, contact:

John Masterson – Director
(867) 667-5026 E-mail: john.masterson@gov.yk.ca

Anne Marie McColman – Solicitor
(867) 393-7107 E-mail: anne-marie.mccolman@gov.yk.ca

3. Oil and Gas Rights

Companies that undertake drilling and production operations must hold the oil and gas rights to the location being explored and developed. The legal framework for issuing and managing oil and gas rights is provided under the *Oil and Gas Act* and the *Oil and Gas Disposition Regulations*.

A. Acquiring Rights

Rights are issued through a competitive bidding process. The government uses one criterion for issuing rights - either the total cash bid or the total cash value of a work expenditure bid. The cash value of work expenditures has been the criterion in the Yukon's Call for Bids to date. The successful bidder is required to submit a refundable work deposit equal to one quarter the value of the bid. The money deposited will be refunded on a pro-rata basis as work is performed and funds are spent.

The oil and gas disposition process on Crown land takes approximately 10 months to complete and requires a significant amount of consultative work by the Yukon government. Issuing rights in this way ensures that public and community issues and concerns can be identified. The issues and concerns can be appropriately addressed by applying terms and conditions to the disposition before rights are issued to a company.

Oil and gas rights to date have been issued following a five step-step process that concludes with a Call for Bids on a specific parcel. Through participation in this process, companies, First Nations and all Yukoners will be offered greater certainty and stability regarding land tenure.

Information Gathering	Yukon First Nation Consultation	Call for Nomination	Public Review	Call for Bids
60 days	60 days	60 days	60 days	60 days

Of interest to oil and gas companies wanting to obtain rights are the last three steps: Call for Nominations, Public Review and the Call for Bids.

In preparation for the Yukon's Call for Nominations, input is gathered from government, interest groups and Yukon First Nations. Based on this information, the Yukon government prepares a draft Call for Nominations and engages in government to government consultations with affected Yukon First Nations.

Following Yukon First Nations consultations, the Department of Energy, Mines and Resources will prepare and post the final Call for Nominations on the website: www.yukonoilandgas.com. The Call for Nominations is an invitation to companies to identify parcels of land in which they wish to acquire the rights to explore and produce oil and gas.

If a parcel is nominated, a public review of the nominated parcels is conducted. The purpose of the review is to determine environmental, socio-economic, and surface access concerns that could arise as a result of exploration and development operations. First Nations, the public and Yukon government departments are invited to make submissions.

Based on input received during the public review, specific operating terms and conditions may be applied to parcels of land that are posted for bid.

The Call for Bids is an invitation to companies to bid on parcels of land posted for bid. The successful bidder will be awarded the rights to explore and produce oil and gas.

B. Permits and Leases

Oil and gas rights are granted through two instruments: a permit or a lease.

A permit grants the holder the right to:

- Explore, drill and test for oil and gas in a specific location
- Recover and remove the oil or gas produced as a result of the testing, and
- Apply for a lease at the location of a discovery

A lease grants the holder the right to produce oil and gas.

A permit has a maximum duration of 10 years and consists of two terms. At least one well must be drilled during the first term of a permit to extend the permit to a second term. Permits issued to date have had initial terms of six years and second terms of four years. A permit may also be extended to allow completion of drilling already underway.

Since 1999 the Yukon has conducted four rights issuances and received work expenditures bids totalling approximately $24 million. Three permits were issued to Anderson Exploration, now Devon Canada, in the Eagle Plain, and one permit to Hunt Oil Company of Canada in the Peel Plateau. See table on page 14, map on page 15.

A permit holder may apply for a lease on the location of a discovery any time before the permit expires. The lease will be at the same location as the permit, minus any areas that are not believed to contain oil or gas. The lease is a three-dimensional one, granting rights over a certain area and to the bottom of the deepest productive oil or gas zone.

The term of a lease is 10 years, and is renewable for terms of five years each. A lease renewal will only cover spacing areas that contain productive zones.

Registration of Transfers and Security Notices

A company that acquires Yukon oil and gas rights may transfer them to another company. This transfer may be registered with the Division Head. A registered transfer has priority over any unregistered transfer. A transfer is not effective against the Commissioner or Minister until it is registered.

A security notice in respect to a security interest may be registered with the Division Head. A registered security notice will have priority over an unregistered notice or transfer and over a subsequently registered notice or transfer. However, a security notice will not have priority over an operator's lien.

A security notice registered against an oil and gas permit will be extended to an oil and gas lease issued in the permit area.

If the Minister reinstates a cancelled or surrendered disposition, all prior security notices will be applicable.

Rentals

Rentals for oil and gas dispositions are not set in regulation. Rather, rentals are indicated in the Call for Bids and set contractually in the permit. To date, rentals have been set at zero for the initial term of permits. In the second term of the permits rentals are set at $5/hectare.

Grouping

The grouping of permits allows for obligations in adjacent permits to be combined. The permits remain as individual dispositions, but the drilling obligations are shared.

The application for grouping must state that a well will be drilled prior to the expiry date of the earliest expiring permit and must specify in which disposition it will be drilled. It must also be demonstrated that the well will evaluate oil and gas in both permits. Grouped permits can be terminated at any time by the designated representative. Also, a grouping expires at the date of expiry of the first permit, with the exception of extensions for active drilling. No permit can belong to more than one group. Grouping of permits can involve both Yukon government and First Nation permits.

C. Former Federal Oil and Gas Dispositions

Oil and gas dispostions, as defined in *YOGA* and granted by the federal government prior to the transfer of administration and control of oil and gas resources in 1998, remain in effect until they expire, are cancelled, surrendered or until otherwise agreed upon by the holder and the Yukon. These former federal dispositions include Significant Discovery Licences, Explorations Licences and Production Leases. The table on page 14 provides information on these rights.

The rights granted by the federal government have been "grandfathered" under the Yukon *Oil and Gas Act* and the Yukon *Oil and Gas Transfer Regulations* which provide:

- That all Yukon laws of general application apply except that rights under the federal disposition cannot be diminished
- Those dispositions are regulated in a manner similar to the former federal regime. Yukon legislation incorporates by reference provisions of the former federal legislation so as to identify and protect specific rights that were conveyed under the federal system
- In addition, the Yukon may make additional regulations that are substantially similar to provisions of the former applicable federal legislation and make them applicable to federal dispositions.

Contact Information

For more information, or to submit comments and suggestions on this section, contact:

Debra Wortley – Rights Disposition Manager
(867) 667-3512
E-mail: debra.wortley@gov.yk.ca

Yukon Oil and Gas Dispositions

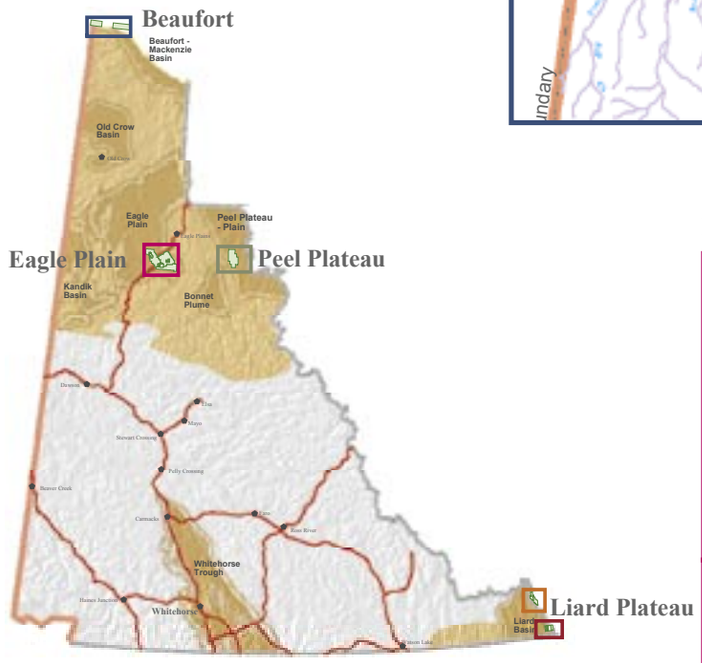
	LOCATION		OWNERSHIP	SIZE	ISSUED	EXPIRY
PERMITS						
Yukon Permit #001	Eagle Plain		Devon ARL 100%	38,289 ha.	November 30, 1999	November 29,2005
Yukon Permit #002	Eagle Plain		Devon ARL 100%	41,862 ha.	November 30, 1999	November 29,2005
Yukon Permit #003	Eagle Plain		Devon ARL 100%	26,130 ha.	March 31, 2001	March 30, 2007
Yukon Permit #004	Peel Plateau		Hunt Oil Canada 100%	40,200 ha.	January 31, 2002	January 30, 2008
SIGNIFICANT DISCOVERY LICENCES						
SDL020 Birch	Eagle Plain	Pattern 1	Northern Cross 80% Chevron Canada Resources 20%	1578 ha.	March 1, 1988	n/a
	Eagle Plain	Pattern 2	Northern Cross (Yukon) 100%	1052 ha.	March 1, 1988	n/a
SDL021 Blackie	Eagle Plain	Pattern 1	Northern Cross (Yukon) 53.7% Chevron Canada Resources 46.3%	4222 ha.	March 1, 1988	n/a
	Eagle Plain	Pattern 2	Northern Cross (Yukon) 100%	1320 ha.	March 1, 1988	n/a
	Eagle Plain	Pattern 3	Northern Cross 71.2% Chevron Canada Resources 28.8%	791 ha.	March 1, 1988	n/a
SDL022 Chance	Eagle Plain	Pattern 1	Northern Cross (Yukon) 100%	3149 ha.	March 1, 1988	n/a
	Eagle Plain	Pattern 2	Northern Cross (Yukon) 87.5% Chevron Canada Resources 12.5%	524 ha.	March 1, 1988	n/a
Y-SDL012 Labiche	Liard Plateau	Pattern 1	EnCana Corporation 42.31% Nexen Inc. 34.61% Devon Energy Canada 23.08%	998 ha.	February 15, 1987	n/a
	Liard Plateau	Pattern 4	EnCana Corporation 42.31% Nexen Inc. 34.61% Devon Energy Canada 23.08%	1053 ha.	February 15, 1987	n/a
EXPLORATION LICENCES						
Y-EL329	Beaufort	Pattern 2	Phillips Petroleum 100%	7209 ha.	September 5, 1987	n/a
	Beaufort	Pattern 7	BP Canada Resources 40.41964% Home Oil 28.40016% Petro-Canada 16.96956% ExxonMobil 8.34148% 147570 Canada (BP) 2.62875% APF Energy 2.62875% Phillips Petroleum 0.53636% Imperial Oil 0.07530%	2771 ha.	September 5, 1987	n/a
PRODUCTION LEASES						
Y-411-68	Liard Plateau	11	Canada Southern 50% BP Canada Resources 25% BP Canada Energy 25%	4832 ha.	May 17, 1989	July 30, 2010
412-68	Liard Plateau	12	Canada Southern 50% BP Canada Resources 25% BP Canada Energy 25%	1613 ha.	May 17, 1989	July 30, 2010
Y-442-R-68	Liard Plateau	13	Canada Southern 50% BP Canada Resources 25% BP Canada Energy 25%	2630 ha.	May 17, 1989	July 30, 2010
443-R-68	Liard Plateau	14	Canada Southern 50% BP Canada Resources 25% BP Canada Energy 25%	1613 ha.	May 17, 1989	July 30, 2010
444-R-68	Liard Plateau	15	Canada Southern 50% BP Canada Resources 25% BP Canada Energy 25%	1613 ha.	May 17, 1989	July 30, 2010

Yukon Oil and Gas Dispositions

Well Status
- producing
- disposal
- abandoned
- suspended

Extent of Sedimentry Basins

- Runway or Seaplane Base
- Road Network
- International
- Provincial

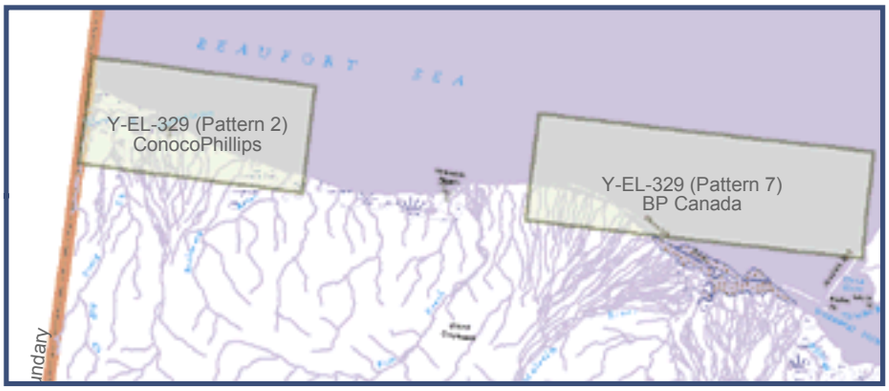


Eagle Plain

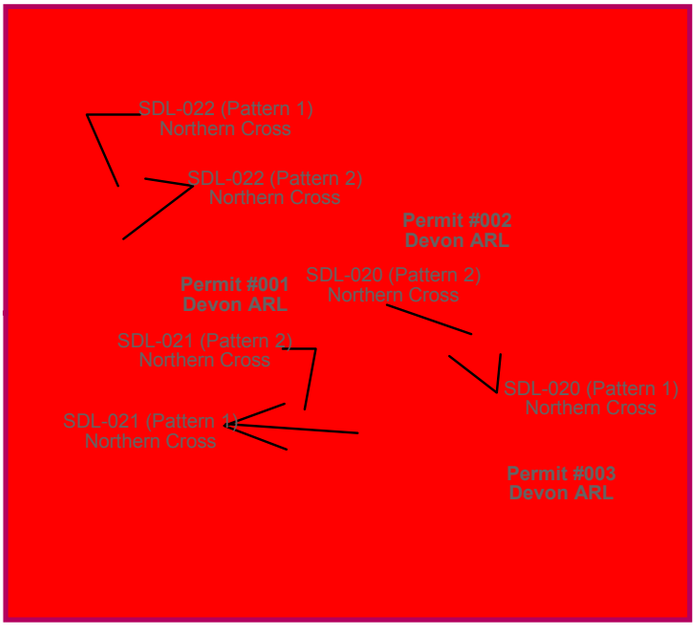
Peel Plateau

Liard Plateau

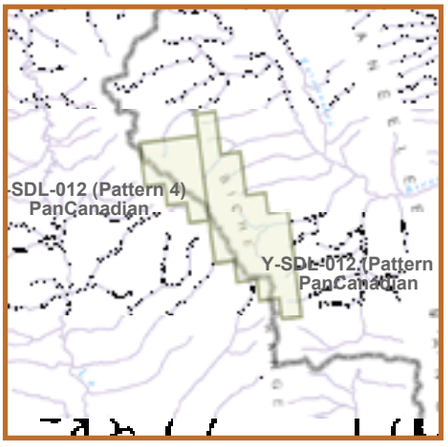
Beaufort 1:600,000

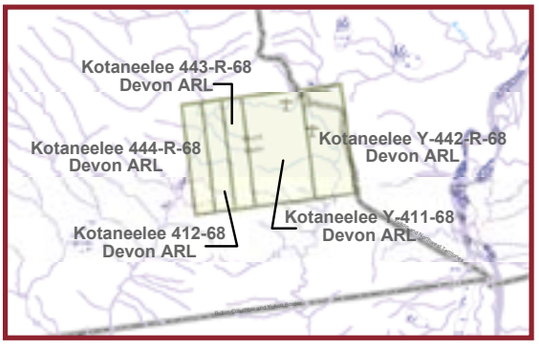


Eagle Plain 1:600,000

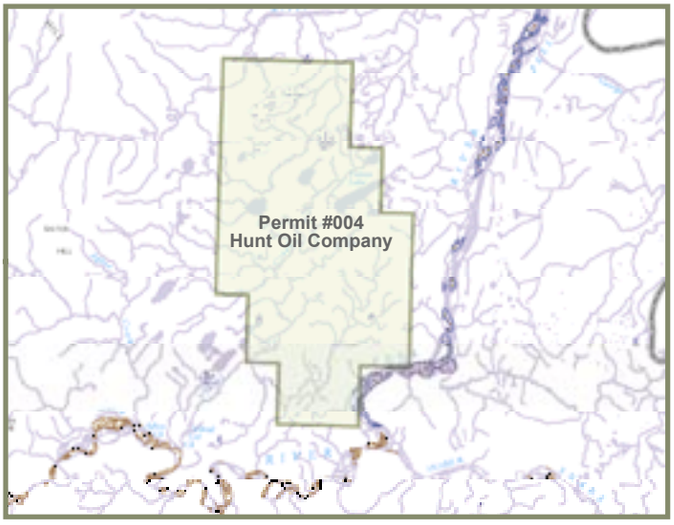


Liard Plateau 1:600,000





Peel Plateau 1:600,000



4. Oil and Gas Activities

Companies proposing to conduct a new oil and gas project in the Yukon are typically required to:

- Obtain a licence pursuant to the *Oil and Gas Act*
- Obtain a Land Use Permit pursuant to the *Territorial (Yukon) Lands Act*, *Territorial Land Use Regulations*
- Obtain a Water Licence, if required, under the *Waters Act*
- Subject the project proposal to an environmental assessment pursuant to the *Yukon Environmental and Socio-Economic Assessment Act*
- Negotiate a benefits agreement pursuant to the *Oil and Gas Act* Yukon regulatory authorities simultaneously conduct operation reviews under their respective legislation, and conduct a joint, coordinated environmental assessment which includes consultation with appropriate Yukon First Nations.

Operators are encouraged to carry out activity using best management practices and innovative technologies appropriate to the Yukons unique operating environment

A. Licences

Under the Yukon *Oil and Gas Act*, a licence is required to carry out all oil and gas activity in the territory. Oil and gas activity includes:

- Exploration, such as seismic or geological mapping;
- Drilling of oil and gas wells;
- Construction and operation of
    - A pipeline wholly contained in Yukon
    - A gas processing plant, or
    - An oil and gas facility

A Geoscience Exploration Licence is required for any oil and gas exploration activity. This includes investigations of the subsurface of the earth using direct or indirect methods. A direct method would be to conduct geological mapping over an area of interest. An indirect method would be to complete a seismic survey. A Geoscience Exploration Licence may be obtained in Yukon without holding an oil and gas disposition.

A Well Licence is required to drill an oil or gas well. A company must hold a disposition which grants subsurface oil and gas rights before it can obtain this licence.

A Pipeline Licence is required for the construction and operation of a pipeline that is wholly contained in Yukon Territory. (A transboundary pipeline falls under the jurisdiction of the federal government.)

A Gas Processing Plant Licence is required for any activity related to the construction and operation of a plant that extracts hydrogen sulphide, helium, natural gas liquids and other substances from raw natural gas.

A Field Facility Licence is required for activity related to the construction and operation of an oil and gas facility such as a battery, an oil treater, a pumping station, a waste disposal facility or a compressor station.

Geoscience Exploration Licences

LICENSEE	LICENCE #	YEAR	DESCRIPTION	STATUS
CHEVRON CANADA	1004	1999	Heli 2D seismic	Completed
EXPLOR DATA	1005	1999	Heli 2D seismic	Completed
ANDERSON	1025	1999	Aeromagnetic survey	Completed
NORTHERN CROSS	1026	1999	Geological mapping	Completed
CDN FOREST OIL	1066	2001	Heli 2D seismic	Not initiated
WASCANA	1069	2001	Heli 2D seismic	Not initiated
CHEVRON CANADA	1070	2000	Heli 2D seismic	Completed
DEVON	1071	2000	Geological mapping	Completed
WASCANA	1074	2000	Geological mapping	Completed
EXPLOR DATA	1100	2001	Heli 2D seismic	Not initiated
DEVON	1102	2001	Heli 2D seismic	Completed
CDN FOREST OIL	1103	2001	Geological mapping	Completed
DEVON	1104	2001	2D seismic	Not initiated
CONOCOPHILIPS	1105	2002	Geological mapping	Completed
DEVON	1106	2002	Geological mapping	Completed
NORTHERN CROSS	1107	2002	Geochemical survey	Not initiated
DEVON	1110	2003	Heli 2D seismic	Completed
ENCANA CORP	1111	2003	Gravity survey	Completed
DEVON	1112	2003	Geological mapping	Completed
DEVON	1113	2003	Gravity survey	Completed
NORTHERN CROSS	1114	2003	2D seismic	Not initiated
CONOCOPHILIPS	1116	2004	Geological mapping	Completed
DEVON	1118	2004	Geochemical survey	Completed

The licence applicant's proposed project undergoes an operations review to ensure that it will be conducted safely and to accepted industry standards. The project is examined to ensure that the proposed operations comply with the *Oil and Gas Act* and the appropriate regulations. Adherence to other territorial legislation and standards from the Department of Environment, the Department of Community Services, the Yukon Worker's Compensation Health and Safety Board, the Heritage Branch of the Department of Tourism & Culture and federal acts and regulations from the federal Department of Indian Affairs and Northern Development is also verified.

The operations review is complete when all the required information has been received and examined and the program operations are deemed to be acceptable or unacceptable. Conditions to the licence regarding operations may be stipulated or the licence may be denied.

Since 1998, 23 geoscience exploration licences have been issued by the Yukon Oil and Gas Management Branch. Ten 2D seismic surveys have been completed. See table on page 16.

A total of 73 wells have been drilled in Yukon (see page 25). More than 20 wells had hydrocarbon shows. The Kotaneelee field located in Liard Plateau in the southeast produced approximately 6 Bcf of natural gas in 2004, and is connected to the Duke Energy Gas Transmission Pointed Mountain Pipeline that carries the gas south to Fort Nelson, B.C. for processing. Limited crude oil test production has occurred at Eagle Plain.

B. Land Use Permits

Land use permits are required for most activities on Yukon land. The *Territorial Land Use Regulations* specify project requirements for permits and would apply to such oil and gas projects as clearing seismic lines, constructing an access route, or clearing a well site. Land use permits are typically issued for a period of two years with an option for a one-year extension.

A permit does not provide the holder exclusive rights, interest, or tenure to the land. Permits typically include terms and conditions to ensure that work is conducted in an environmentally safe and responsible manner.

C. Water Licences

A water licence under the *Waters Act* and *Waters Regulation* may be required for certain oil and gas activities depending on the water usage and the need to discharge into a water body:

- During exploration and ice road construction, the proponent may require a water licence if water use is more than 100 m3/day
- Stream crossings greater than five metres in width may require a water licence for culvert installation
- Camps with a capacity of greater than 50 people per day will require a water licence for waste disposal
- Drilling mud and cutting disposal sumps will not require a licence if the Alberta Energy Utility Board Guide 50 is followed
- During well drilling, produced water may be extracted from the formation and re-injected back to the formation or another formation that is not connected to surface or groundwater, without a licence

D. Environmental Assessments

All projects and activities will be subject to an environmental assessment (EA) before a licence is issued.

Currently the assessment is done pursuant to Yukon legislation *(Yukon Environmental Assessment Act* or *EAA)* which mirrors the *Canada Environmental Assessment Act (CEAA)*. An applicant is requested to provide information on the project and the surrounding environment, the potential environmental effects and directly-related socio-economic effects of the project and the mitigation to eliminate or reduce these effects. The branch seeks input from advisory committees and/or the public in conducting the environmental assessment. The branch then determines whether the project may proceed, whether mitigation measures are required, or whether further assessment is required.

Many oil and gas projects require federal and other territorial permits. The branch works with other agencies to coordinate the application submission requirements, the EA process and the development of compatible licence terms and conditions. Coordinating with other agencies streamlines the EA and licensing process and eliminates the potential for agencies to issue conflicting EA decisions or licence terms and conditions.

In the future, assessments will be done under the *Yukon Environmental and Socio-Economic Assessment Act (YESAA)*. *YESAA* was given royal assent on May 8, 2003 and legally came into effect November 2004. Assessments under this new legislation, however, will not be conducted until the accompanying regulations are passed, which is targeted for the fall of 2005. This *Act* replaces existing EA processes and will apply throughout the Yukon and to projects under the authority of federal, territorial and First Nation governments.

YESAA will change the way assessments are done in the Yukon. For example, a *YESAA* board and (regional) designated offices have been established to conduct environmental and socio-economic assessments. The Yukon government will no longer be conducting EAs but will still retain decision-body responsibilities as defined in the legislation.

E. Benefits Agreements

A benefits agreement is required for all projects with estimated expenditures of more than $1 million in the Yukon. A benefits agreement identifies employment and training opportunities for Yukon residents including Yukon First Nations and residents of communities affected by oil and gas activity. It also identifies opportunities for Yukon businesses to supply goods and services to the licensee and the licensee's contractors. The benefits are to be commensurate with the nature, scale, duration and cost of the project, and shall not place an excessive burden on the licensee. The agreement is negotiated by the licensee, the Yukon government and the Yukon First Nation(s) on which traditional territory the oil and gas activity will be conducted.

Contact Information

For more information, or to submit comments and suggestions on this section, contact:

Richard Corbet – Chief Operations Officer
(867) 667-3565
E-mail: richard.corbet@gov.yk.ca

F. Best Management Practices

The Oil and Gas Management Branch is developing a Best Management Practices (BMP) guide for present oil and gas exploration and development activities in Yukon. The guide will focus on best industry practice in areas of geographical, biological and cultural sensitivities unique to Yukon.

In response to interest expressed during previous disposition processes in the North Yukon, the first draft of the guide will look at broad integrated resource management objectives for wetlands, caribou habitat and key wilderness tourism areas. The intent of the guide is to provide operators, managers, planners and field staff with recommended processes and practices for meeting a series of operating practice objectives.

The practices that will be presented are designed to reduce the impacts of oil and gas exploration and development activity on the ecological landscape, providing common sense and cost effective suggestions within targeted social and economic constraints.

While the guide has some limitations, it marks a significant step toward responsible stewardship of all the resources within the identified oil and gas regions. As scientific understanding and social values change over time, the scientific and value-based choices presented in the guide will be revisited.

The BMP guide is also intended to:

- Help streamline regulatory and environmental assessment reviews by providing up-front assistance or "guidance" to industry and reduce time spent on permit by permit reviews
- Improve efficiency, consistency and defensibility of regulatory decisions based on current scientific understanding and public policy objectives
- Allow industry, governments and stakeholders to identify issues, and propose mitigative strategies in a value-free or pre-project setting
- Assist with long-term planning for research and development initiatives and cumulative effects modelling
- Focus information gathering and assessment on the issues of most concern from a scientific and public policy perspective, and
- Ensure the standards of care being applied are at a landscape level that can reflect regional ecological, cultural and economic values

Contact Information

For more information, or to submit comments and suggestions on this section, contact:

Kirstie Simpson – Sustainable Development Coordinator
(867) 393-7424
E-mail: kirstie.simpson@gov.yk.ca

5. Fiscal Regime

The Yukon government is committed to developing a competitive oil and gas fiscal regime. In designing it, the government is mindful that Yukon is a resource-rich frontier with challenging high-cost investment opportunities.

The principal source of revenue will be from royalties. Other sources of revenue will be rental payments, cash bonus bids, forfeited work commitment deposits and administrative and licensing fees. Corporate income tax, and municipal and rural property tax revenue will also be generated.

Royalties

Yukon is developing its royalty regulations and is planning to adopt an *ad valorem* royalty system.

The proposed base oil and gas royalty is 10 per cent, with increases to a maximum rate in accordance with a price sensitive formula. A five per cent royalty rate is proposed for an initial period of production.

Rentals

Rentals for oil and gas dispositions are indicated in the Call for Bids and set contractually in the disposition. To date, rentals have been set at zero for the initial term of permits issued as a result of the sale. In the second term of the permits rentals are $5/hectare.

Fees

The following fees are charged applicants seeking to acquire or transfer Yukon oil and gas activity licenses:

Geophysical Licence	$500
Geochemical Licence	$300
Geological Licence	$300
Test Hole Licence	$500
Well Licence	$500
Pipeline Licence	$500
Transfer of Licence	$200
Gas Processing Plant Licence	$500
Gas Export Licence	$500
Other Licences	$300

Corporate Tax

Yukon collects corporate taxes at the following rates:

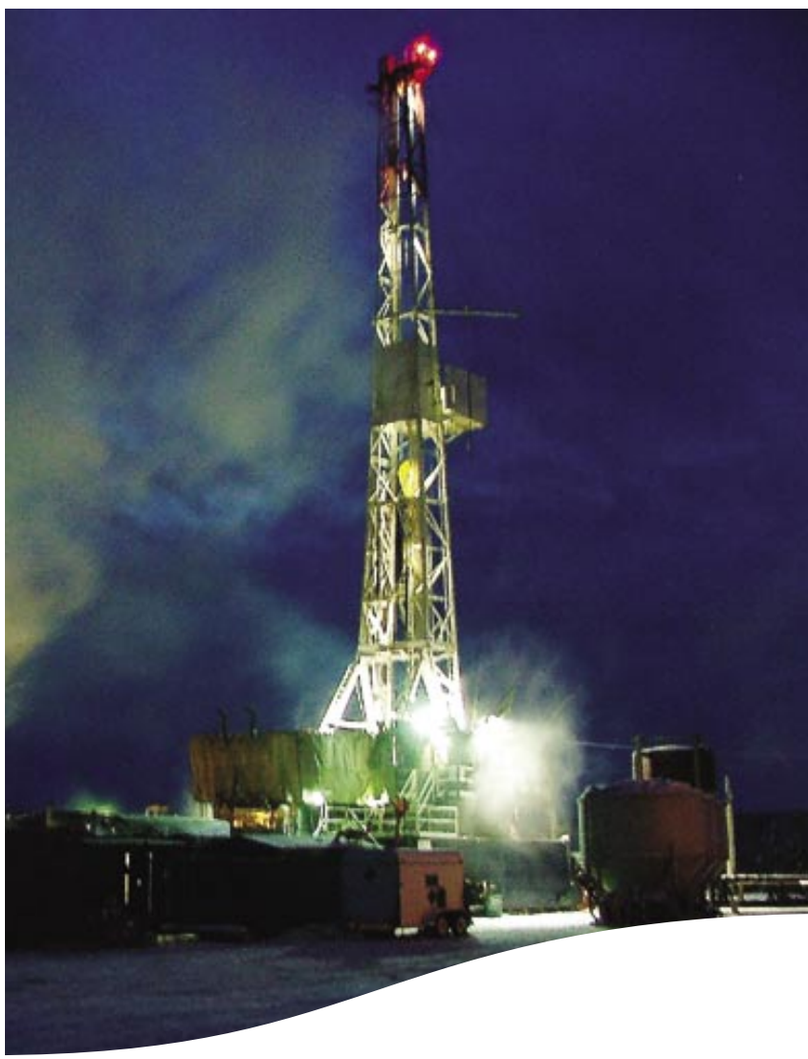
General corporate tax	15%
Small business corporate tax	4%
Capital tax	none
Payroll tax	none
Fuel oil tax*	6.2 cents/litre on gasoline
	7.2 cents/litre on diesel

*tax exemption available if approved for fuel used off-road for commercial purposes

Contact Information

For more information, or to submit comments and suggestions on this section, contact:

John Masterson – Director, Oil and Gas Management Branch
(867) 667-5026
E-mail: john.masterson@gov.yk.ca



6. Pipelines and Transportation Infrastructure

A. Pipelines

There is a great deal of interest in Yukon's oil and gas prospects. However, investment spending to date has been modest. A dramatic increase in oil and gas investment is anticipated once construction is announced of either (or both of) the Mackenzie Gas Project (MGP) or the Alaska Highway Pipeline Project (AHPP).

The Government of Yukon supports the construction of both the Alaska Highway pipeline and the Mackenzie Valley pipeline, and believes northern natural gas will be needed to supply growing demand. Yukon is preparing for the opportunities and benefits of both pipeline developments. In 2003 the Government of Yukon concluded an agreement with the Northwest Territories government to ensure that both territories benefit from oil and gas exploration and pipeline development in the North.

The following summarizes existing and proposed pipelines which will be of interest to oil and gas companies wanting to invest in Yukon.

Existing Pipeline: Pointed Mountain Pipeline

One line, the Duke Energy Gas Transmission Pointed Mountain Pipeline, currently serves the southeast Yukon. It originates in the southwestern Northwest Territories and gathers raw natural gas at the Kotaneelee facility in southeast Yukon for processing in Fort Nelson, B.C.

Proposed Pipelines

Two major pipeline projects (the MGP and the AHPP) are being proposed to transport natural gas from the Mackenzie Delta and Prudhoe Bay to southern markets. While not being actively pursued at this time, the Dempster Lateral, which would move northern Canadian gas into the Alaska Highway pipeline, remains an option to ensure that Yukon gas is not stranded.

The Government of Yukon is preparing a pipeline strategy for both the AHPP and MGP, and has identified six key Yukon interests with an overarching priority to addressing community and First Nation interests:

- Support for both the AHPP and MGP
- Connecting Yukon gas
- Access to gas for energy
- A clear, efficient Canadian regulatory process
- Fiscal and social fairness
- Financial assistance

Northern Natural Gas Pipeline Options

Alaska Highway Pipeline Project

The original Alaska Highway Pipeline Project was awarded Certificates of Public Convenience and Necessity under the *Northern Pipeline Act* in Canada and by the *Alaska Natural Gas Transportation Act* in the United States in the late 1970s. Southern portions of the project, called the pre-build, were constructed in parts of Alberta, British Columbia and Saskatchewan in the 1980s and 1990s. Construction of the northern portion of the pipeline would complete the project.

Current proposals call for the construction of a pipeline from Prudhoe Bay to Fairbanks along the Trans-Alaska Pipeline System right of way, and then from Fairbanks along the Alaska Highway corridor in the Yukon, and then through B.C. into Alberta. The project would deliver between 4.5 Bcf and 5.6 Bcf of gas per day to southern markets and cost approximately $20 billion US to construct. The two current proposals envision using either a *Northern Pipeline Act* regulatory process or the more traditional National Energy Board regulatory process.

The Alaska Highway Aboriginal Pipeline Coalition (AHAPC), initiated in July 2003, serves as a central coordinating organization on pipeline related matters for Yukon First Nations directly impacted along the Alaska Highway Pipeline corridor. The areas of particular focus for the AHAPC include the regulatory issues, environmental issues and socio-economic impacts of the pipeline and benefits agreements. It continues to receive the encouragement and support of the Yukon government.

Mackenzie Gas Project

The Yukon government is actively taking measures to ensure that Yukon natural gas is not stranded and that Yukon will have access to the proposed Mackenzie Valley pipeline. These measures include:

- Working with oil and gas permit holders and explorers to ensure that Yukon's gas potential is identified and placed on the oil and gas industry's "radar screen." In this respect, the government has worked with Devon Canada Corporation, Chevron Canada Resources, Hunt Oil Company of Canada, Northern Cross (Yukon) and others to collectively promote the natural gas potential in northern Yukon.
- Actively promoting Yukon's interests in the Mackenzie Gas Project through intervention in the National Energy Board hearings and the Joint Review Panel hearings. These interests include access to the Mackenzie Gas Project for Yukon gas, and employment and business opportunities flowing from the MGP, amongst others.

Brian Love – Director,
Oil and Gas Business Development and Pipeline Branch
(867) 667-3566
E-mail: brian.love@gov.yk.ca

B. Transportation and Infrastructure

Air Travel

Whitehorse is home to an international airport with the capacity to handle 747 sized airplanes. There are 10 airports throughout the territory, with many smaller airstrips and aerodromes in remote areas.

Whitehorse is served by Air Canada, Air North, and First Air. Flights serve Edmonton, Calgary, Vancouver, Alaska, and the Northwest Territories as follows:

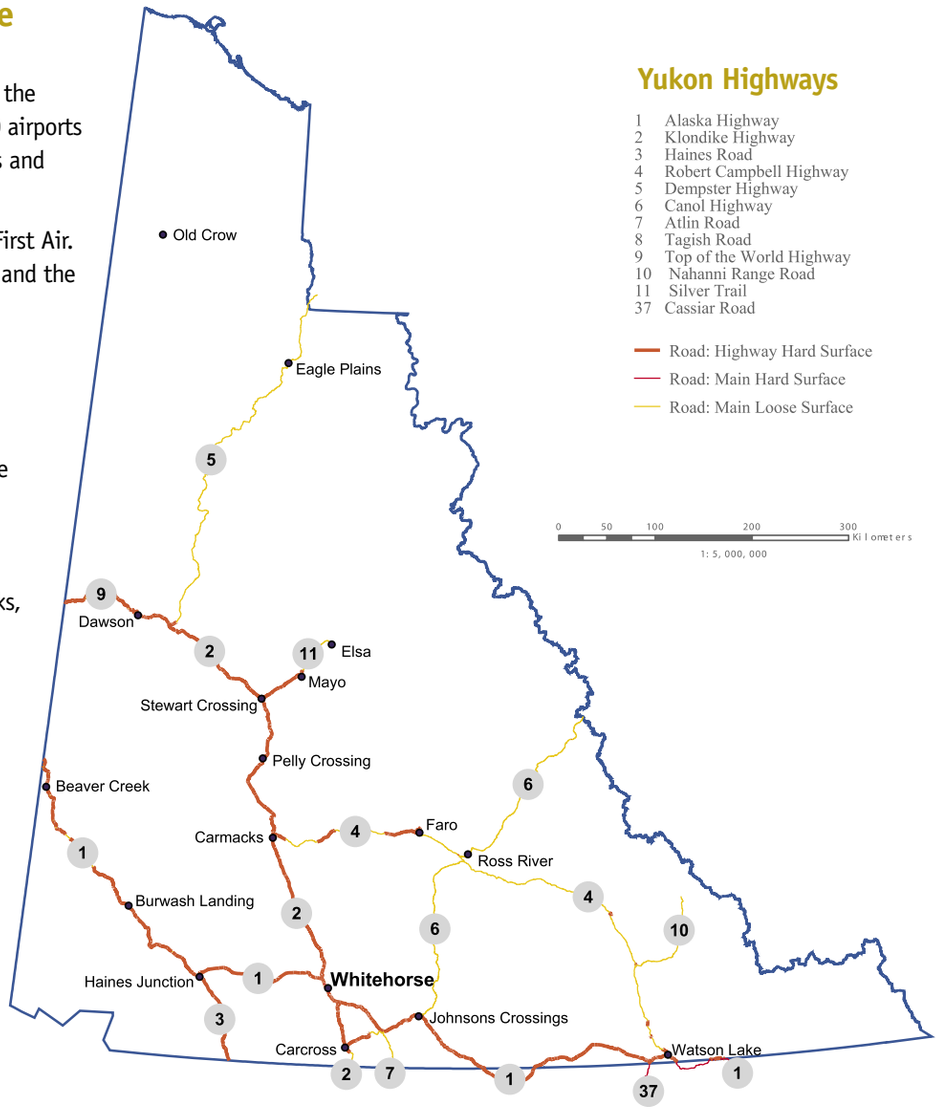
Air Canada to Vancouver:
- three flights daily in summer
- two flights daily in winter

Air North entered market in June 2002. It offers the following service:
- daily to Vancouver
- three days/week to Edmonton/Calgary
- daily route connecting Dawson, Old Crow, Fairbanks, Inuvik
- twice weekly to Juneau, Alaska (summer only)

First Air offers three flights weekly to Yellowknife

Roads and Highways (MAP)

The Yukon has 129 bridges and more than 4,700 kilometres of roads that link to Alaska, the Northwest Territories, southern Canada and the United States. The Yukon highway system consists of approximately 2,250 kilometres of Bituminous Surface Treatments (BST) and paved highway, with the remainder loose surface, or gravel.



The year-round highway system is built and maintained to accommodate loads up to 77,000 kilograms, with weigh stations located throughout the Yukon. BST has been used on Yukon highways since the late 1970s to provide an improved level of service to the traveling public.

Freight and Passenger Service

Freight/Courier Services

Many private trucking companies operate in Yukon - both national and Yukon based. There is daily service from Edmonton and several times per week from Vancouver. There are a few for hire LTL (Less than Truck Load) operators within Yukon, and several private trucking firms (groceries, fuel etc.).

Yukon is served by more than a dozen national and local courier services, including DHL Express, Fedex, Greyhound Canada and Purolator.

Passenger Services

Yukon has one scheduled interprovincial carrier – Greyhound Canada, and numerous charter operators in summer. There are also a few small scheduled carriers on local routes.

Rail System

The White Pass and Yukon Route (WP&YR) railway narrow gauge railroad was completed in 1901. There are 170 kilometres of track between Whitehorse to Skagway, Alaska, however, operations to Whitehorse were halted in 1982 following mine closures. Current WP&YR operations run only from Skagway to the Canada/U.S. border at Fraser, B.C. The passenger load as tourist route in 2002 totaled about 300,000. Service may extend to Carcross in the future, but there are no plans to resume freight operations.

The Yukon government recently committed to contribute $3 million toward a joint feasibility study with Alaska to build a rail link from Alaska through Yukon and into northern British Columbia. Such a railway would provide benefits to Yukon and Canada and would support key industries in the North such as oil and gas, mining and tourism.

Part 2: Oil and Gas Potential

1. Geology in the Yukon

Yukon Geological Survey

The Yukon Geological Survey which was established in April 2003 has the primary responsibility for geoscience work in the territory. Its mandate is to be the authority and provider of choice for the geoscience and related technical information required to enable stewardship and sustainable development of the territory's energy, mineral and land use resources. Under this mandate include:

- Collecting baseline geoscience information
- Conducting geological mapping and regional geophysical and geochemical surveys
- Publishing, printing and distributing geoscience information
- Providing geoscience information over the Internet
- Providing information to a broad range of clients, including the petroleum and mineral industries, Yukon First Nations, schools and the general public
- Completing topical mineral deposit studies, placer deposit studies and surficial deposit mapping
- Reviewing and approving assessment reports
- Conducting mineral and hydrocarbon potential assessments for protected area and land use planning,and
- Maintaining geoscience databases (e.g. Yukon MINFILE)

Geology Initiatives

North Yukon

The Yukon government and the Geological Survey of Canada (GSC) cooperated on two high-resolution aeromagnetic surveys in the Peel Plateau, Bonnet Plume Basin and Eagle Plain areas. More than 62,000 line-km were flown at 800-metre spacing.

Visit http://gdcinfo.agg.nrcan.gc.ca for more information.

Southeast Yukon

The GSC-led Central Foreland NATMAP project in southeast Yukon, southwest N.W.T. and northeast B.C. involved geological mapping and detailed thematic studies (stratigraphy and biostratigraphy, petroleum source-rock potential and mineral deposit studies) carried out in collaboration with the British Columbia Geological Survey, Yukon Geological Survey, Indian and Northern Affairs Canada (INAC), the Government of the Northwest Territories, and 12 universities. Field work concluded in 2002; publication of research is ongoing.

For more information, go to http://nrcan.gc.ca/gsc/calgary/natmap/cf/index_e.html

Whitehorse Trough

The GSC and Yukon Geological Survey are also in the process of updating the resource assessment for the Whitehorse Trough. It includes a 170-kilometre-long seismic survey across the northern end of the Trough, regional bedrock mapping and thematic studies (including stratigraphy, sedimentology, structure, maturation and petroleum source rock potential).

Other

The Yukon government is partnering in two other important GSC initiatives. The first is the Northern Basins Initiative which involves the compilation and geo-referencing of geoscience in the Yukon, N.W.T. and Nunavut. This database will eventually be available on the Internet. The second major project, Mackenzie Corridor: Access to Northern Resources, will provide multi-thematic geoscience and petroleum potential maps. This project also involves the critical component of community outreach, helping northerners access the information they need to deal with development issues.

Contact information:

For more information, or to submit comments and suggestions on this section, contact:

Yukon Geological Survey
Tel: (867) 667-8508 or toll free: 1-800-661-0408 ext. 8508
www.geology.gov.yk.ca

For Yukon geological maps, reports and databases, please contact:

Geoscience Information and Sales
c/o Whitehorse Mining Recorder
102-300 Main Street Mailing Address
P.O. Box 2703 (K-102) Whitehorse, YT Y1A 2C6
Tel: (867) 667-5200 Fax: (867) 667-5150
E-mail: geosales@gov.yk.ca

For access to Yukon well cores and related data at the Geological Survey of Canada (Calgary), please contact:

Allan Scott - Head,
Core and Sample Library Geological Survey of Canada (Calgary)
3303 - 33rd Street N.W.
Calgary, AB T2L 2A7
Tel: (403) 292-7057 Fax: (403) 292-5377
E-mail: ascott@nrcan.gc.ca

For Yukon geoscience publications at the Geological Survey of Canada (Calgary) Bookstore, please contact:

Suzanne Twelker – A/Head, Publications, Sales and Promotions
Geological Survey of Canada (Calgary)
3303-33rd Street N.W.
Calgary, AB T2L 2A7
Tel: (403) 292-7030 Fax: (403) 299-3542
E-mail: gsc_calgary@gsc.nrcan.gc.ca
Web: www.nrcan.gc.ca/gsc/calgary/products/index_e.html
Hours: Monday – Friday 9 a.m. – 12 noon; 1-4 p.m.

2. Oil and Gas Resource Assessments

Yukon Oil and Gas Exploration Regions

Yukon is located in the northern portion of the large geologic province known as the Cordillera, consisting of relatively young mountain belts ranging from Alaska to Mexico. Like most of the Cordillera, Yukon is composed of a diverse array of rock types that record more than a billion years of earth history.

In Yukon two main geologic components are largely separated by the Tintina Fault, a major northwest-trending fault with approximately 420 km of right lateral strike-slip displacement. Northeast of the Tintina Fault is a thick, older sequence of sedimentary rocks deposited upon a stable Precambrian cratonic basement marking the western margin of ancestral North America. These sedimentary rocks preserve an Early Paleozoic east to west transition from platform carbonate (east) to basinal shale (west). Platform carbonate deposition ceased in Middle Devonian and shale deposition extended far to the east. During Carboniferous and Triassic normal, clastic marine, shelf sedimentation resumed. Overlying these earlier sedimentary successions is a structural foreland belt and several intermontane basins developed in response to deformation and uplift of the western margin of North America during the Jurassic-early Tertiary Cordilleran deformation.

Southwest of the Tintina Fault the Yukon is composed of a younger, complex mosaic of suspect terranes that originated elsewhere and were amalgamated and accreted to the stable ancestral North America sedimentary package during the Cordilleran deformation. Eastern suspect terranes are pericratonic, and western terranes are underlain by oceanic crust.

Yukon contains eight structural and sedimentary basins suitable for the formation and preservation of hydrocarbons. Seven of these basins occur within the sedimentary rocks of ancestral North America, and one occurs within the suspect terranes southwest of Tintina Fault. Five of the basins occur in northern Yukon, and two are located in southern Yukon. Geology within the basins northeast of Tintina Fault is essentially the same as that in the Western Canada Sedimentary Basin.

The only hydrocarbon production in Yukon comes from the Kotaneelee Field in the Liard Plateau area, located in the far southeast corner of the territory.

Yukon Oil and Gas Resource Assessments

Oil and gas resource assessments for the different exploration areas of the Yukon have been completed by National Energy Board and Geological Survey of Canada. These assessments have been periodically updated to incorporate new geological field information from Yukon and exploration plays in other areas.

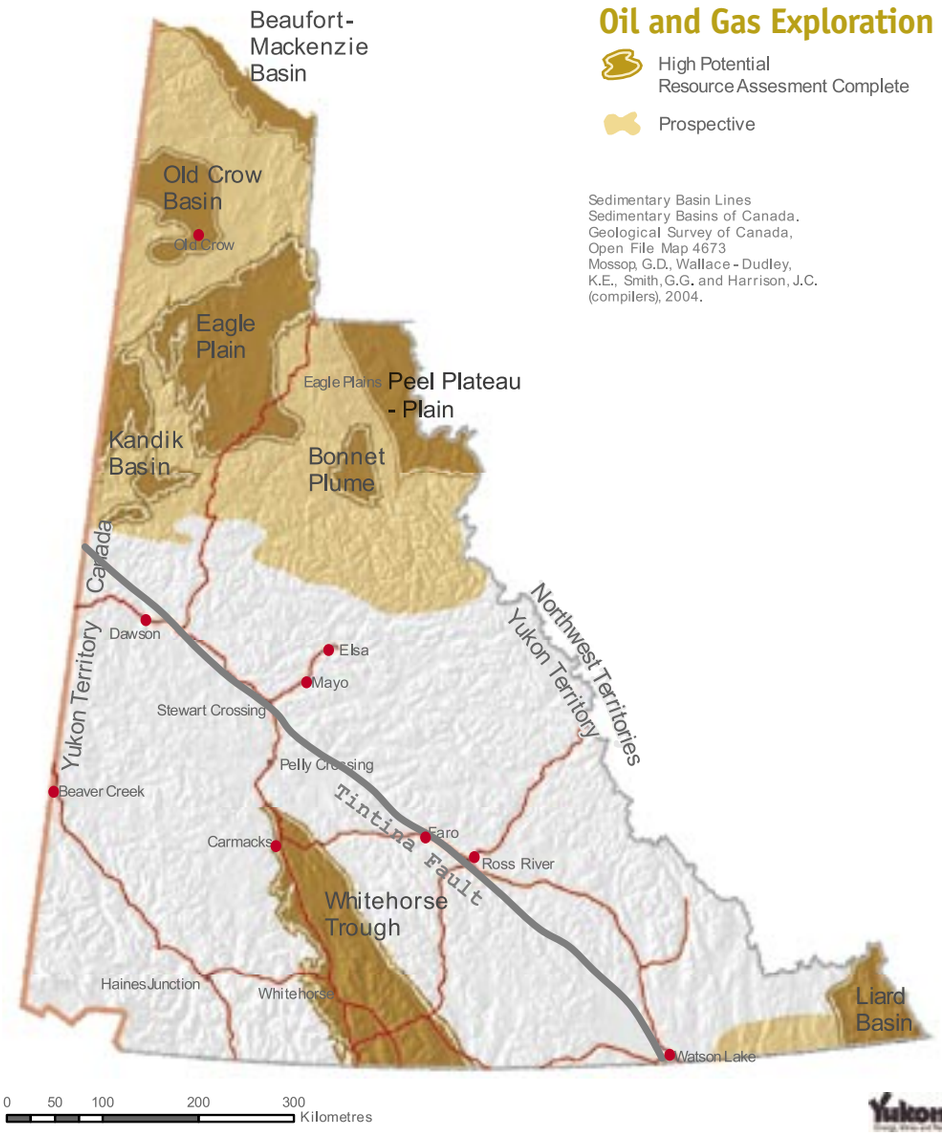
Most of these areas have little or no well information. Basin analysis was routinely undertaken to provide background for developing conceptual hydrocarbon plays. Since conceptual plays have no defined pools or discoveries, probability distributions of reservoir parameters such as prospect area, reservoir thickness, porosity, trap fill, and hydrocarbon fraction are compiled to aid in the assessment.

Hydrocarbon assessments completed by the Geological Survey of Canada are based on probabilistic methods using the PETRIMES software. NEB assessments were completed using the @RISK software extension to Excel spreadsheet software

Due to the nature of conceptual assessment results and since no discovered pool sizes are available to constrain sizes of undiscovered accumulations, the uncertainties in oil and gas play potential and pool size estimates for a given range of probabilities are necessarily greater than the ranges derived by discovery process analysis used for assessing mature plays.

Coal Resources

Yukon has initiated an assessment of its natural gas from coal resources. There are numerous coal occurrences of varying ranks within the territory. The Bonnet Plume Basin in northeast Yukon is likely the most prospective natural gas from coal region.



Oil and Gas Exploration Regions

High Potential
Resource Assesment Complete

Prospective

Sedimentary Basin Lines
Sedimentary Basins of Canada.
Geological Survey of Canada,
Open File Map 4673
Mossop, G.D., Wallace - Dudley,
K.E., Smith, G.G. and Harrison, J.C.
(compilers), 2004.

3170-30 Oil and Gas Basins
31 January, 2005

Oil and Gas Resource Potential

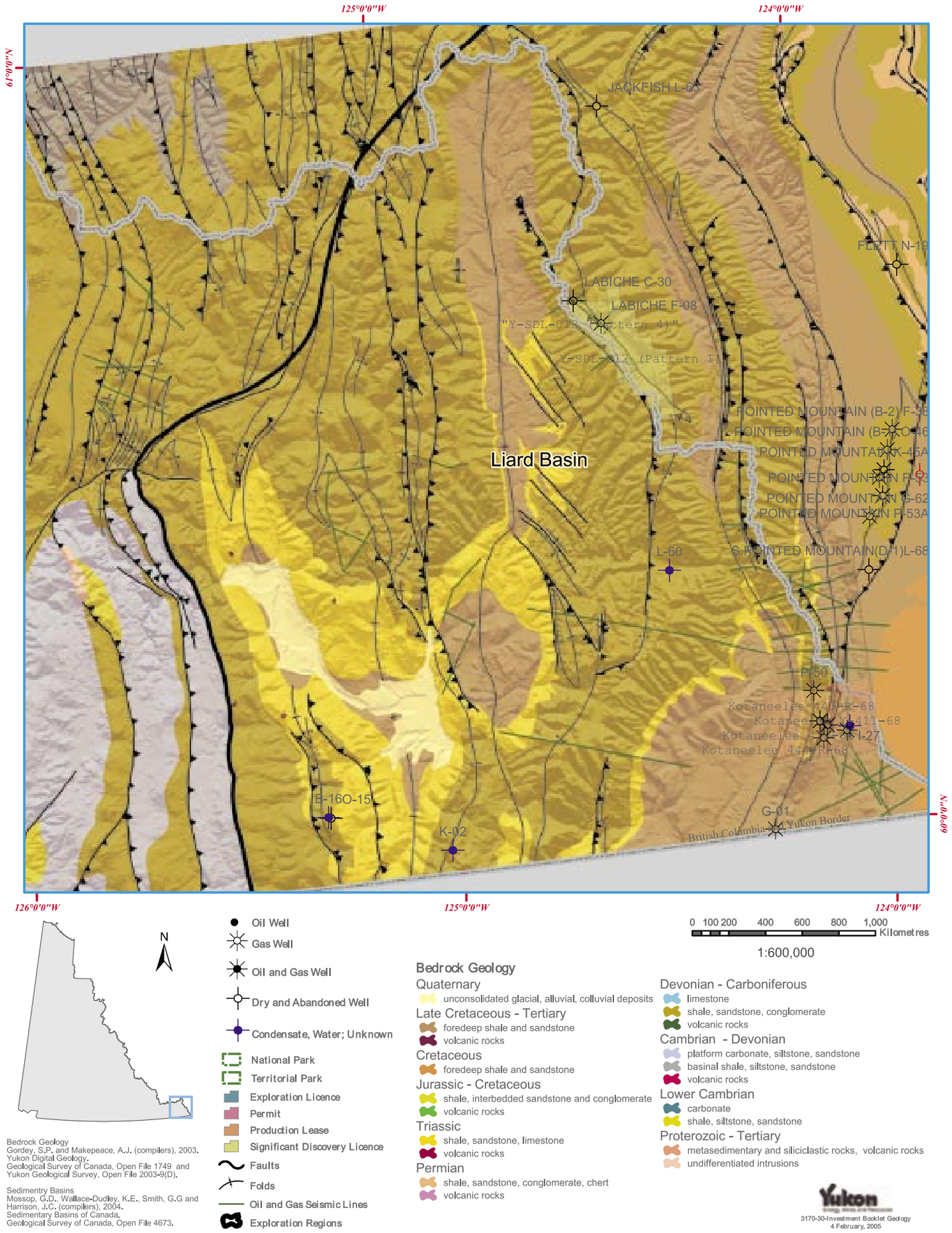
Basin	Mean Gas Play Potential (Bcf)	Mean Oil Play Potential (MMbbls)	Discovered Resource Gas (Bcf)	Discovered Resource Oil (MMbbls)	Wells to date
Kandik *	1,397	365			3
Beaufort-Mackenzie *	1,473	294			3
Bonnet Plume	800	0			0
Eagle Plain **	6,054	436	83.7	11	34
Liard Plateau **	^^4,429	^15	437.0		13
Old Crow	1,149	0			0
Peel Plateau and Plain	2,945	0			19
Whitehorse Trough*	7,325	94			0
Other					1
Total	**25,572**	**1,204**	**520.7**	**11**	**73**

^mean marketable oil
^^mean marketable gas

* a portion of the play potential is outside Yukon
**discovered resource based on NEB resource assessment report

A. Liard Basin Oil and Gas Resource Assessment

Liard Plateau Resource Assessment



Geological Summary

The Liard Basin lies between the Rocky Mountains to the south and the Mackenzie and Franklin Mountains to the north. The area includes the physiographic Liard Plateau and portions of the southern Mackenzie and Franklin Mountains. It constitutes the northernmost extension of the Western Canada Sedimentary Basin.

Cambrian through Middle Devonian sedimentary rocks consist dominantly of miogeoclinal platform limestones and dolostones transitioning westward to marine shales. Within the carbonates is locally a Manetoe facies dolomite consisting of coarsely crystalline, diagenetic, hydrothermal dolomite. This diagenetic facies has cavernous porosity and is the principal reservoir and target for gas in the area.

Unconformably to conformably overlying the carbonates are fissile, grey to black marine shales of the Devonian to Carboniferous Besa River Formation. To the east the Besa River Formation is transitional to carbonates of the Flett and Prophet formations. The Carboniferous deltaic complex of the Mattson Formation overlies the marine shales of the Besa River Formation. The Mattson Formation delta prograded to the west-southwest. It contains friable and porous sandstones interbedded with siltstones and shales. Some coal measures are present. Permian and Triassic strata consist dominantly of shallow water shales and siltstones of the Fantasque and Toad-Grayling formations. Cretaceous marine sandstones and shales unconformably overlie all other units in the map area.

Several small hornblende-bearing Tertiary trachytes intrude the sedimentary rocks in the westernmost part of the basin.

Structures within the Liard Basin are characterized by northwesterly to northeasterly trending box folds and east-verging and west-verging thrust faults. Topographic lows are typically underlain by synclines containing Triassic and Cretaceous siliclastic sedimentary rocks.

Exploration History

The first recorded evidence of active petroleum exploration was in 1955 with reconnaissance field work by California Standard (Chevron). The first well in the Yukon was SOBC Shell Beavercrow YT K-02 completed in 1963. 13 wells have been completed in the Yukon. Approximately 570 line-kilometres of two-dimensional seismic has been completed.

Yukon contains portions of three fields: Beaver River Field, Kotaneelee Field, and La Biche Field. The Beaver River Field in Yukon is a former producer from well PanAm C-1 Beaver River YT G-01. Production from the Kotaneelee gas field is ongoing. Both of these fields consist of pools and prospects hosted in fractured, diagenetic hydrothermal dolomites of the Manetoe facies within carbonates of the Middle Devonian Arnica, Landry and Nahanni formations. Gas is structurally trapped in closures formed by anticlines, normal faults, and reverse faults. Seal and source for the reservoirs is provided by shales of the Besa River Formation. Commonly gas is trapped on top of water.

Plays

Six expected plays were identified in the Liard Basin area. Five are gas with one (Cretaceous Chinkah clastics) being gas with potential oil. One play, the Manetoe facies dolomite play is established with proven discoveries, former production from the Beaver River gas field and current gas production from the Kotaneelee gas field (two wells, Duke Energy gas pipeline). This play is a sour, acid, dry gas play and is considered the most significant one for the region.

Gas Plays	Median Marketable Gas (Bcf)	Mean Marketable Gas (Bcf)
Manetoe Facies[1]	3,856	3,988
Chinkeh Clastics	1	1
Fantasque	1	1
Mattson	148	170
Prophet/Flett	67	767
Besa R/Muskwa	149	192
Total[2]	**4,222**	**4,429**

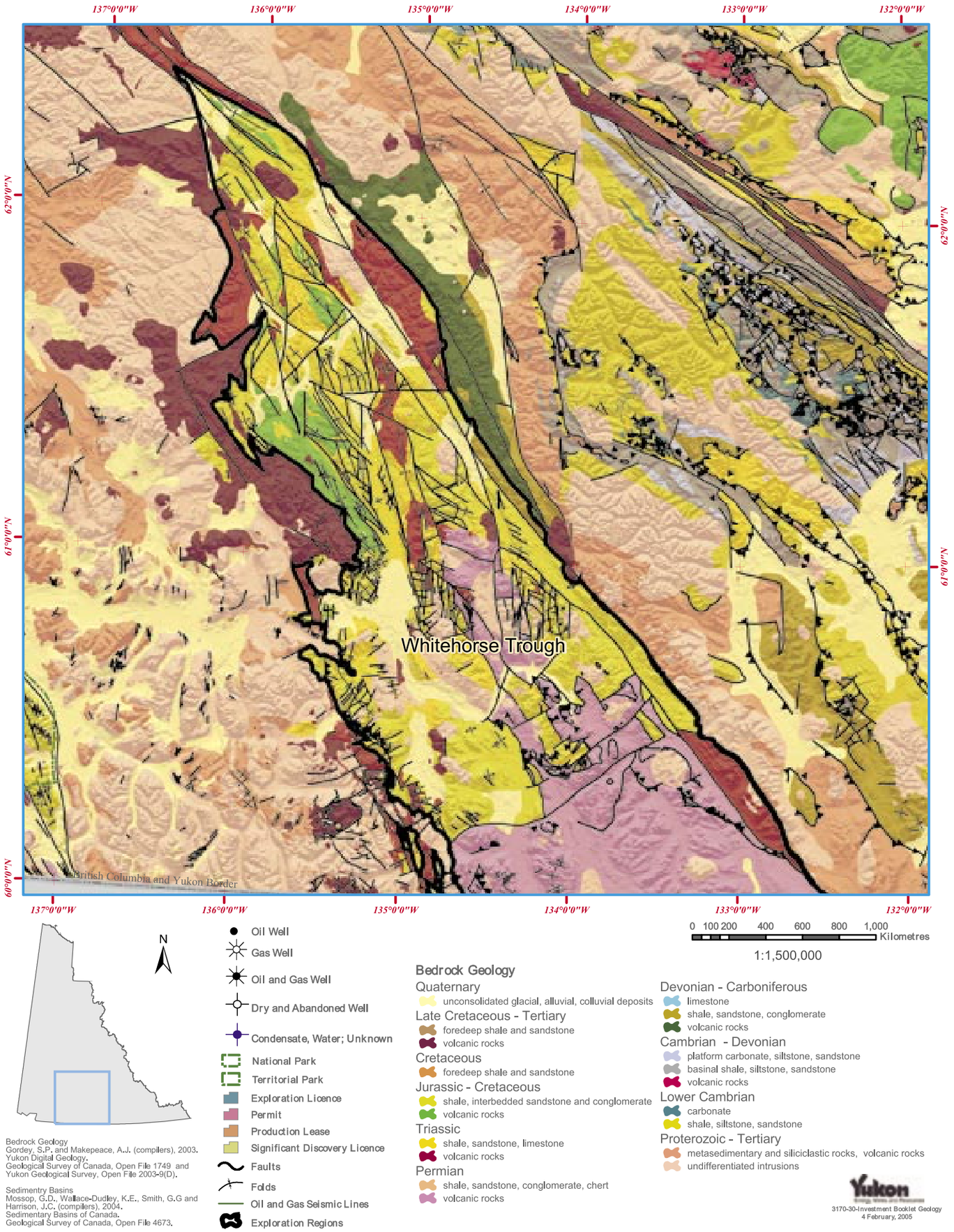
Oil Plays	Median Marketable Oil (MMbbls)	Mean Marketable Oil (MMbbls)
Chinkeh Clastics	13	15

Wells

Well Name	Class	Status	Gr. Elev (m)	Total Depth (m)	Spud	Rig Release
SOBC Shell Beavercrow YT K-02	Expl	D&A	1129.3	3976.1	03/20/62	01/11/63
Pan Am et al A-1 Kotaneelee YT P-50	Expl	AB	446.8	4410.5	03/16/62	08/23/63
Canada S et al N Beaver R YT I-27	Dev	SP GAS	435.6	4418.1	03/24/63	08/29/64
Pan Am Shell Merrill YT L-60	Expl	D&A	590.4	1634.3	01/24/69	03/06/69
Pan Am Beaver YT G-01	Expl	AB GAS	792.5	4499.5	12/06/68	08/20/69
Gulf et al West Beaver Crow YT O-15	Expl	D&A	1144.8	1727.3	02/03/70	06/01/70
Bluemount et al Beavercrow YT B-16	Expl	D&A	1148.2	2288.4	02/03/71	05/09/71
Columbia et al Kotaneelee YT B-38	Dev	GAS	685.8	3898.1	04/06/77	10/21/77
Columbia et al Kotaneelee YT E-37	Dev	AB GAS	613.6	4191.0	01/21/78	12/05/78
Columbia et al Kotaneelee YT M-17	Dev	DISP	11.5	1332.0	01/01/79	02/26/79
Columbia et al Kotaneelee YT I-48	Dev	AB GAS	4430	4415.0	04/18/79	04/11/80
Columbia et al Kotaneelee YT I-48A	Dev	GAS	3915	3915.0	05/19/91	07/18/91
Devon et al Kotaneelee L-38	Dev	RIG RELEASED	805	-	08/22/04	03/27/05

B. Whitehorse Trough Oil and Gas Resource Assessment

Whitehorse Trough Resource Assessment (Osadetz, 2003)*



*Assessment completed using program PETRIMES

Geological Summary

Whitehorse Trough in south-central Yukon is a mainly gas-prone basin containing Mesozoic to Cenozoic strata in an intensely faulted and folded intermontane setting. It is elongate and extends in a northwest-southeast trend from just north of Carmacks to the near Dease Lake, British Columbia.

Whitehorse Trough contrasts with all other hydrocarbon areas in Yukon in that it is underlain by oceanic basement of the allochthonous Stikine and Cache Creek suspect terranes. Basement therefore consists of basalt flows with associated shales, bedded cherts and limestones.

Whitehorse Trough was first initiated in Middle to Late Triassic as a forearc basin located immediately east of an emerging ancestral Lewes River volcanic arc and west of a west-dipping subduction zone. Deposition within the basin continued through Middle Jurassic with more than 7,000 metres of basin fill constituting the Lewes River and Laberge groups. Lithologic facies delineate a general west to east transition in depositional environments from prograding deltas with associated coarse and fine clastic rocks (west) to marine, fine clastic rocks (east). Conglomerate occurs throughout the succession as localized deposits. Limestone reefs are locally present in the lower part of the stratigraphy in linear belts along the west and central portions of the Trough.

Unconformably overlying this sequence is a succession of Jurassic to Lower Cretaceous fluvial conglomerates with associated sandstones and shales constituting the Tantalus Formation. This nonmarine succession marks closure of Whitehorse Trough and deposition of a molasse succession shed from uplift of the former trough and surrounding terranes.

The entire stratigraphic succession is intruded by Cretaceous to early Tertiary granitoids, mainly in the south part of the Trough. These granitoids formed largely in response to an east-dipping subduction zone located west of the Whitehorse Trough.

The dominant structural trend in Whitehorse Trough is northwest-southeast with abundant folds and faults. The core of the Trough is an anticlinorium with younger rocks occurring on both the west and east margins. Deformation occurred in the interval between Middle Jurassic and Middle Cretaceous.

Exploration History

The first recorded active petroleum exploration was in the 1950s. Exploration was ongoing sporadically until 1981, consisting largely of evaluation of the stratigraphic sections for petroleum prospectivity. Since 1981 no permits have been issued for the area.

No private seismic surveys or wells have been completed for the area. During 2004 a two dimensional seismic survey was jointly funded by Yukon Geological Survey and Geological Survey of Canada across the northern part of the Trough. Results from that survey are still pending.

Plays

Five gas plays and two oil plays were identified for Whitehorse Trough. Six of the plays are structural and only one is stratigraphic. The Tantalus plays include all the Mesozoic clastic rocks above the sub-Middle Jurassic unconformity and therefore includes the Tanglefoot Formation in the Laberge Group. The Takwahoni plays include the coarse clastic rocks in the Laberge Group, and the Inklin plays correspond to the fine clastic rocks in the Laberge Group. The Lewes River structural play includes all structural traps in the mainly clastic strata in the Lewes River Group. The Lewes River stratigraphic play is restricted to the Upper Triassic carbonate reefs in the Lewes River Group.

All plays are based on analogies with established plays in other basins. The plays are conceptual in nature and therefore highly risky.

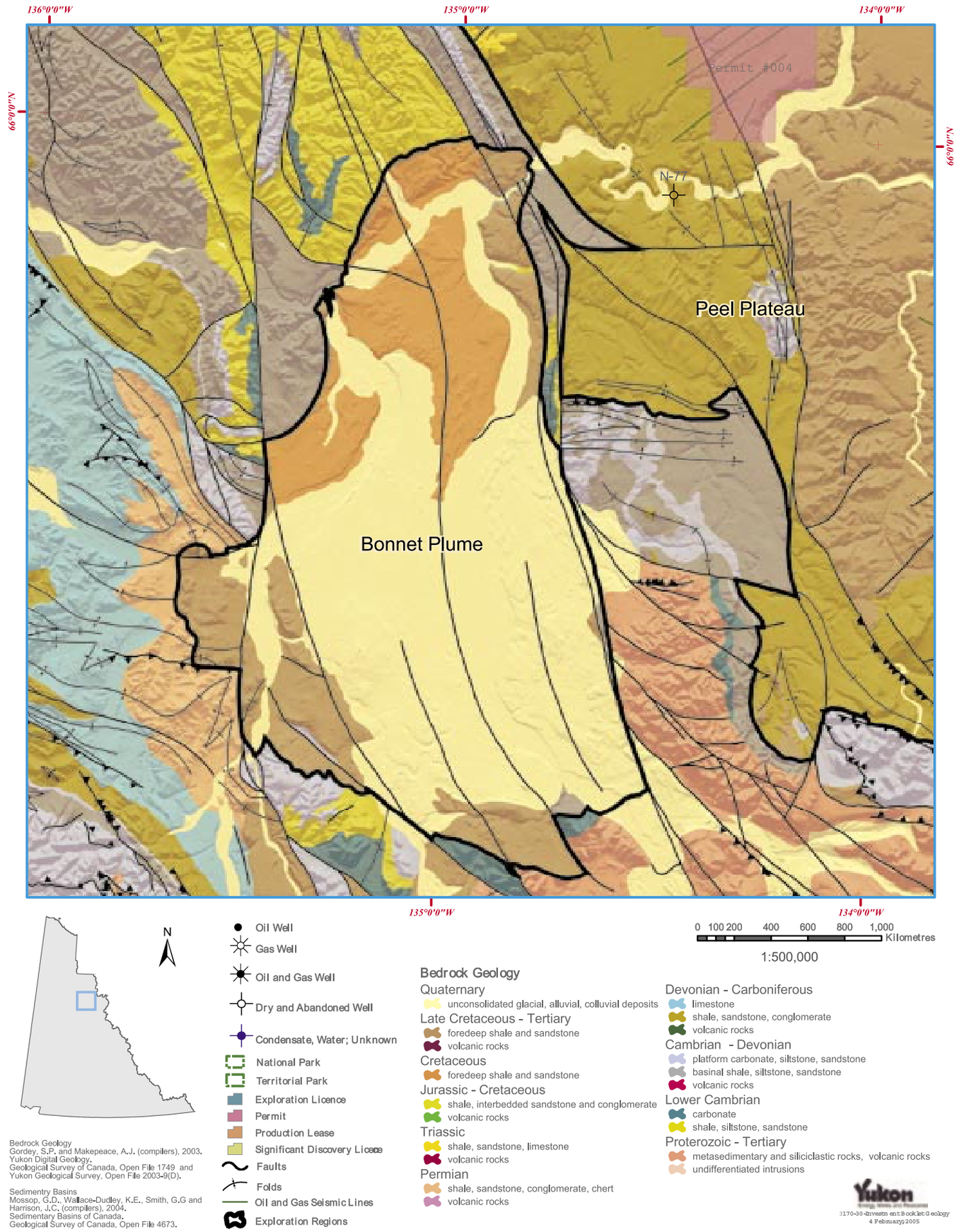
Whitehorse Trough contains abundant bituminous to semi-anthracite grade coal measures in the Jurassic Laberge Group and the Jurassic-Cretaceous Tantalus Formation. Coals have been mined historically in the Carmacks area for local use. Potential for gas from coal methane exists but has not been considered in this assessment.

Gas Plays (Bcf)	Number of fields	Total mean/ median in entire play	Expected mean/median in Yukon	Median size of largest pool or mean play potential
Takwahoni Structural	29	2,850	1,100 – 1,750	641
Lewes River Structural	10	3,600	1,100 - 2,500	1,400
Inklin Structural	20	779	314 - 487	151
Lewes River Stratigraphic	5	48	48	14.1
Tantalus Structural	5	48	48	14
Total (Mean)	**69**	**7,325***		
Oil Plays (MMbbls)				
Tantalus Structural	1	11	11	11
Takwahoni Structural	3	83.1	83.1	37.5
Total (mean)	**4**	**94.1**		

** Some extend into B.C., the potential for the portions in YT ranges from 2.6 Tcf to 4.8 Tcf.*

C. Bonnet Plume Oil and Gas Resource Assessment

Bonnet Plume Basin Resource Assessment (Hannigan, 2000)*



*Assessment completed using program PETRIMES

Geological Summary

The Bonnet Plume Basin is an intermontane, fault-bounded basin within the Northern Yukon Fold Complex located at the intersection of the north-trending Richardson fault array with the Mackenzie fold front. The basin developed as a depositional site in early Late Cretaceous in response to strike- and dip-slip faulting. It contains extensive non-marine late Cretaceous to Tertiary sandstone, shale, conglomerate and coal which constitute the Bonnet Plume Formation.

Unconformably underlying the Bonnet Plume Formation are Lower Paleozoic marine shales and limestones of the ancestral North America miogeocline. Most of the Bonnet Plume Basin coincides with the Richardson Trough, a north-trending zone of marine deep water shale and chert deposition with shallow water carbonate platform deposition occurring both to the west (Yukon Stable Block) and the east (Mackenzie-Peel shelf). This platform to basin transition is uniformly overlain by euxinic siliceous black shales of the Middle Devonian Canol Formation and shales and siltstones of the Late Devonian Imperial Formation.

Compressional deformation occurred during Late Cretaceous to Early Tertiary as part of the Cordilleran Orogen.

Exploration History

No seismic surveys have been completed, and no wells have been drilled. The nearest well is the Toltec Peel River YT N-77, drilled 20 kilometres to the northwest in the Peel River valley in 1968. An east-west gravity profile was completed across the centre of the basin in 1979 to determine if gravity methods could be used to interpret structure in areas with limited surface control and no subsurface information.

The Bonnet Plume Formation contains some of the thickest and most extensive coal deposits in the Yukon. Drilling by Pan Ocean Oil of 37 shallow holes in 1978-1980 delineated a proven reserve in one deposit of 121 million tonnes. Coal within the basin is considered to have extensive gas from coal potential.

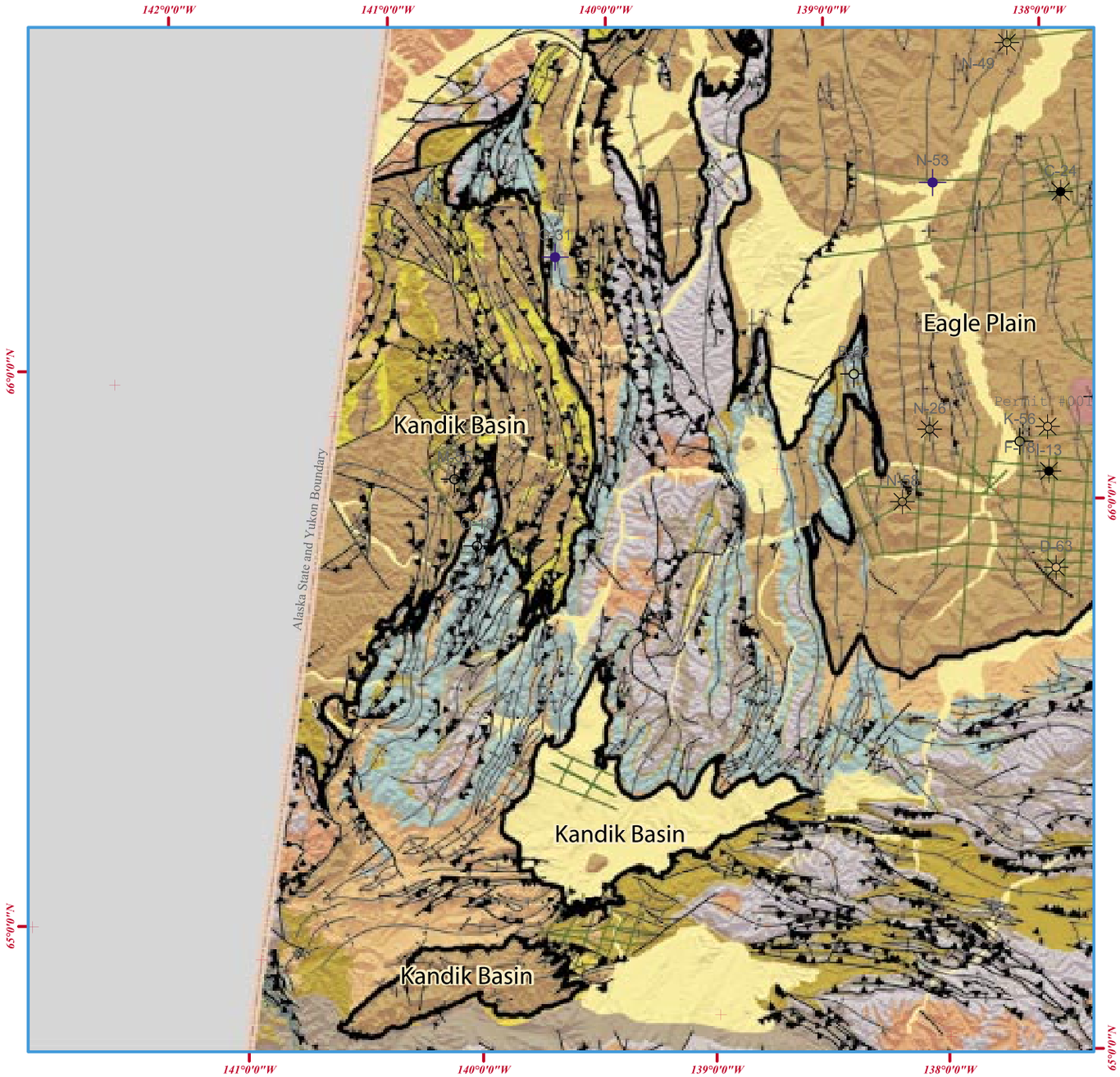
Plays

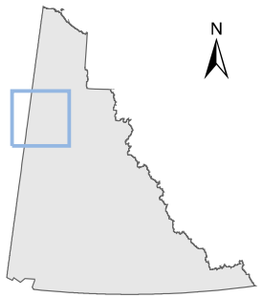
Three conceptual gas plays and three speculative gas plays have been identified within the Bonnet Plume Basin. Statistical analysis has been completed for the conceptual plays. Significant gas potential is predicted for stratigraphic and structural traps within the Lower Paleozoic facies transition from carbonate to shale. Gas potential from stratigraphic and structural traps related to the non-marine Bonnet Plume Formation is much smaller. Geochemical evidence indicates that there is probably not much oil potential in the area

Gas Plays (Bcf)	No. fields (mean)	Mean play potential (in place)	Play potential-80% prob. (in place)	Play potential-20% prob. (in place)
Lower Paleozoic carbonate\ shale facies transition	6	720	291	1,068
Upper Cretaceous-Tertiary clastics	6	61	17	103
Upper Cretaceous clastic subthrust	2	19	5	31
Total Gas (Bcf)	**14**	**800**		

D. Kandik Basin Oil and Gas Resource Assessment

Kandik Basin Resource Assessment (Hannigan, Osadetz, Dixon and Bird, 2000)*





Bedrock Geology
Gordey, S.P. and Makepeace, A.J. (compilers), 2003. Yukon Digital Geology. Geological Survey of Canada, Open File 1749 and Yukon Geological Survey, Open File 2003-9(D).

Sedimentry Basins
Mossop, G.D., Wallace-Dudley, K.E., Smith, G.G and Harrison, J.C. (compilers), 2004. Sedimentary Basins of Canada. Geological Survey of Canada, Open File 4673.

- Oil Well
- Gas Well
- Oil and Gas Well
- Dry and Abandoned Well
- Condensate, Water; Unknown
- National Park
- Territorial Park
- Exploration Licence
- Permit
- Production Lease
- Significant Discovery Licence
- Faults
- Folds
- Oil and Gas Seismic Lines
- Exploration Regions

0 100 200 400 600 800 1,000 Kilometres

1:1,000,000

Bedrock Geology

Quaternary
- unconsolidated glacial, alluvial, colluvial deposits

Late Cretaceous - Tertiary
- foredeep shale and sandstone
- volcanic rocks

Cretaceous
- foredeep shale and sandstone

Jurassic - Cretaceous
- shale, interbedded sandstone and conglomerate
- volcanic rocks

Triassic
- shale, sandstone, limestone
- volcanic rocks

Permian
- shale, sandstone, conglomerate, chert
- volcanic rocks

Devonian - Carboniferous
- limestone
- shale, sandstone, conglomerate
- volcanic rocks

Cambrian - Devonian
- platform carbonate, siltstone, sandstone
- basinal shale, siltstone, sandstone
- volcanic rocks

Lower Cambrian
- carbonate
- shale, siltstone, sandstone

Proterozoic - Tertiary
- metasedimentary and siliciclastic rocks, volcanic rocks
- undifferentiated intrusions

Yukon

3170-30-Investment Booklet Geology
4 February, 2005

*Assessment completed using program PETRIMES

Geological Summary

Kandik Basin is a structural basin containing Paleozoic-Mesozoic sedimentary rocks within the Northern Yukon Fold Complex. It straddles the Yukon-Alaska border 650 kilometres north-northwest of Whitehorse and 907 kilometres southeast of Prudhoe Bay, Alaska. The basin is elongate to the southwest with about 60% of the area located in Alaska. It consists of three separate areas with preserved Mesozoic sedimentary rocks which are surrounded by exposed Precambrian-Paleozoic outcrops. To the south the Basin is bounded by the Tintina Fault with some 420 km of right-lateral strike-slip displacement.

Basin basement consists of marlstones, diamictites, quartzites and siliceous carbonates of the Proterozoic Tindir Group. Unconformably overlying these strata are numerous Lower Paleozoic carbonate-shale cycles with lesser intermittent siliciclastic sedimentation intervals. Recurrent Cretaceous marine clastic wedges separated by unconformities overlie the earlier interbedded carbonate-shale intervals. The uppermost succession consists of nonmarine conglomeratic sandstone and grit which unconformably overlie the Cretaceous marine succession. The area was unglaciated during the Pleistocene; alluvial sediments occur along river valleys.

The basin formed as a structurally controlled depositional site in late Early Cretaceous. Subsequent Cordilleran Orogen compressional tectonics in Late Cretaceous and early Tertiary produced folds and faults within the basin.

Exploration History

Petroleum exploration in Kandik Basin began in 1970 with the drilling of the INC Husky Amoco Black-Fly YT M-55 well. Inexco conducted a reflection and refraction seismic survey in the winter of 1971which acquired approximately 180 line-km of data in three areas along the eastern margin of the basin. Two additional holes were drilled in 1971 (Porcupine YT G-31) and 1972 (Mallard YT O-18). All three holes were drilled on structures. None of the wells encountered hydrocarbons.

In Alaska three wells were drilled in the interval 1976-1977. Two of these wells were spudded north of the area considered to be part of Kandik Basin for assessment purposes.

Plays

There are no discovered reserves in the basin. Oil staining has been observed in outcrop in carbonates and calcareous sandstone in the Alaska portion of the basin. Six conceptual oil and gas plays (three for oil and three for gas) were identified in the Kandik Basin. The Upper Cretaceous/Tertiary nonmarine play has limited extent, occurring dominantly in the southern part of the basin. Reservoirs for Mesozoic marine structural plays are dominantly clastic sedimentary rocks, and reservoirs for Paleozoic structural plays are mainly carbonate rocks. The Mesozoic marine structural oil play occurs entirely within Alaska. All plays are considered to have a high probability of existing. An important risk in each of the plays is the extent of erosion and unroofing which may have increased the chance of breached seal or closure.

Gas Plays (Bcf)	No. fields (mean)	Mean play potential (in place)	Play potential-80% prob. (in place)	Play potential-20% prob. (in place)
Tertiary/Upper Cretaceous nonmarine [$]	30	283	96	494
Mesozoic marine structural [^]	8	420	150	664
Paleozoic marine structural [&]	10	694	239	1,101
Total Gas (Bcf)	**48**	**1,397**		

Oil Plays (MMbbls)	No. fields (mean)	Mean play potential (in place)	Play potential-80% prob. (in place)	Play potential-20% prob. (in place)
Tertiary/Upper Cretaceous nonmarine [$]	30	222	76	388
Paleozoic marine [#]	3	143	20	245
Total Oil (MMbbls)	**33**	**365**		

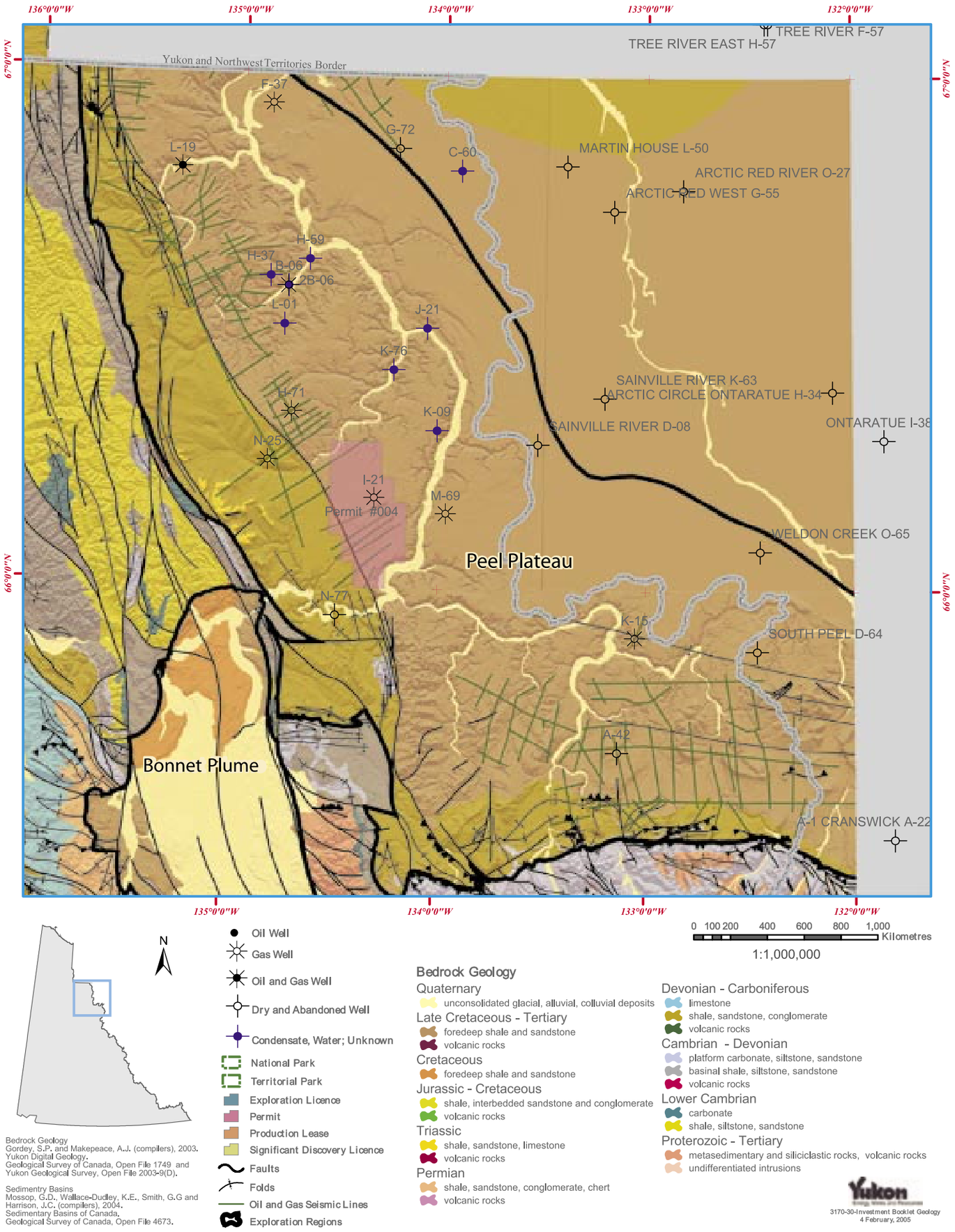
Wells

Well Name	Class	Status	Gr. Elev (m)	Total Depth (m)	Spud	Rig Release
Inc Husky Amoco Black-Fly YT M-55	Expl	D&A	749.8	2069.6	01/13/70	04/01/70
Inexco Husky et al. Porcupine YT G-31	Expl	D&A	917.4	2657.9	12/31/71	03/24/72
Inexco et al. Mallard YT O-18	Expl	D&A	470.6	3200.1	05/02/72	08/19/72

[$]Yukon encompasses 35% of play area
[^]Yukon encompasses 45% of play area
[#]Yukon encompasses 15% of play area
[&]Yukon encompasses 52% of play area

E. Peel Plateau and Plain Oil and Gas Resource Assessment

Peel Plateau Resource Assessment (Osadetz, MacLean, Morrow, Dixon and Hannigan, 2005)*



*Assessment completed using program PETRIMES

Geological Summary

The Peel Plateau and Plain is a prospective hydrocarbon region in the Northern Interior Platform north of the Mackenzie Mountains and east of the Richardson Mountains. It contains a Lower Cambrian to Upper Cretaceous stratigraphic succession with a maximum thickness of approximately 4.5 km. Geologically it is similar in setting to the Western Canada Sedimentary Basin.

Lower and Middle Paleozoic sedimentary rocks were deposited in a continental margin setting and contain the platform carbonate to basinal shale transition. Upper Paleozoic interbedded shales, siltstones and shales overlie this carbonate to shale transition. Locally isolated carbonate mounds may be present within this Upper Paleozoic clastic succession. The Paleozoic successions are unconformably overlain by a Mesozoic clastic succession of sandstone, siltstone and shale deposited within a developing foreland basin east of the Cordilleran Orogen.

The Peel Plateau encompasses all sedimentary rocks which exhibit folding and thrusting related to the Cordilleran Orogen. It has been subdivided into two structural domains with the surface trace of the Trevor fault being the boundary between the two domains. The Plateau domain west of the Trevor fault is underlain largely by Lower Paleozoic basinal shales of Richardson Trough. The Lower Paleozoic stratigraphy in the Peel Plateau domain east of the Trevor fault consists dominantly of platform carbonate. The Peel Plain is east of the Peel Plateau and corresponds to all the undisturbed, relatively flat-lying sedimentary rocks east of the Cordilleran Orogen deformation front.

Exploration History

Surface exploration began in the mid 1950s. The first well (Shell Peel River YT-J21 was completed in 1965. Eighteen additional wells were drilled between 1965 and 1977 for a total of 42,319 metres. Drilling resulted in several gas shows but no established economic reserves or production.

Over 3,000 line-kilometers of seismic surveys were completed in the 1960s and 1970s. 500 line-kilometers of this data, ranging from fair to good quality, is available to the public in the information files of the National Energy Board.

Plays

Peel Plateau and Plain was divided into three structural domains (two within Peel Plateau and one constituting Peel Plain) for assessment purposes. Eight gas plays have been identified within these three structural domains. The plays consist of different structural and stratigraphic traps in the Paleozoic sedimentary rocks and the overlying Mesozoic sedimentary rocks. Gas prospectivity increases in an overall easterly direction with the greatest prospectivity being for the Peel Plain. There is significant potential for natural gas with a summed mean play potential of approximately 2.9 Tcf in 88 pools. The largest pool is expected to occur in Mesozoic clastic rocks of the Peel Plain.

No crude oil potential was estimated due to the lack of suitable maturation and source.

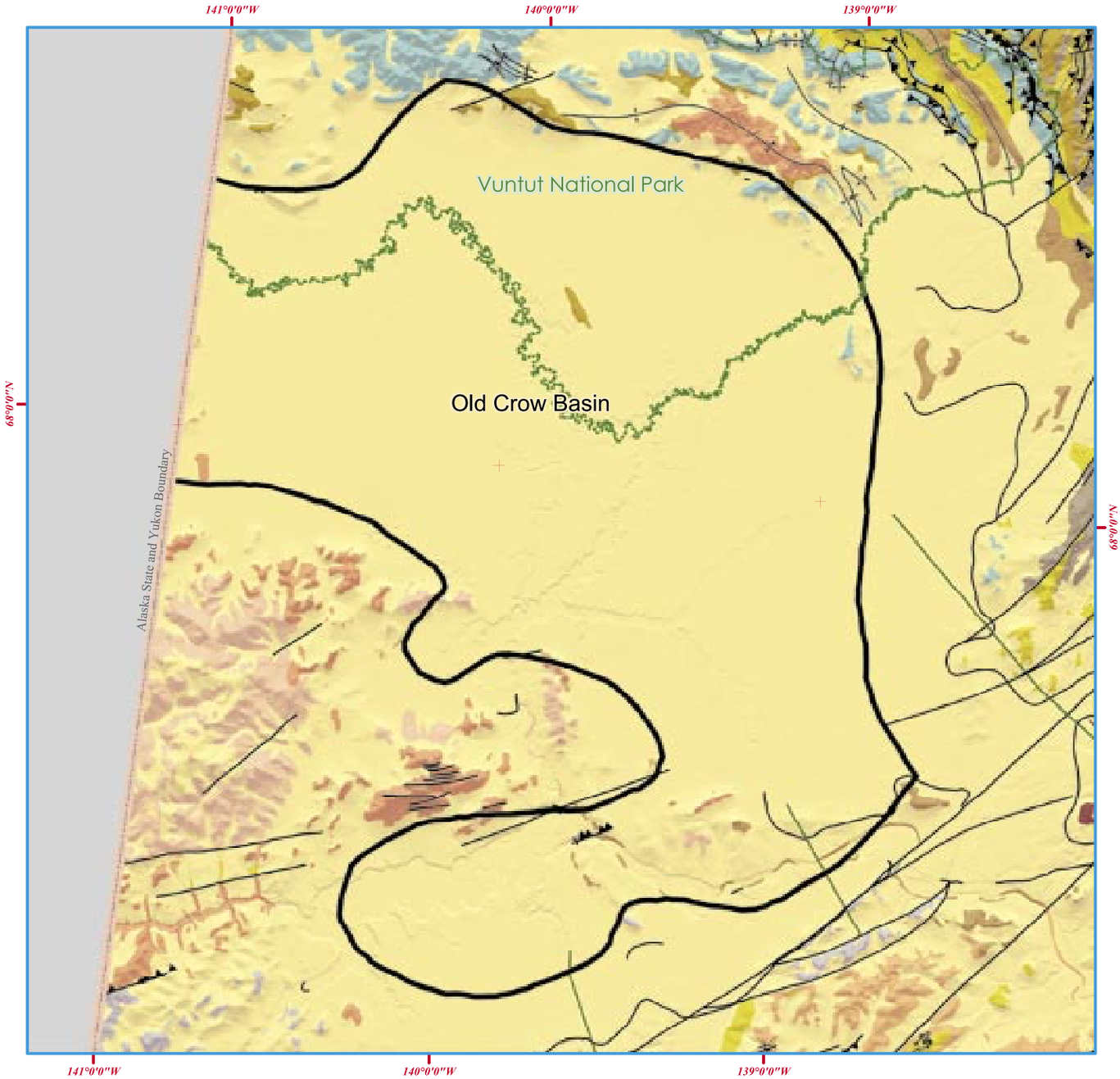
Gas Plays (Bcf)	No. fields (mean)	Mean play potential (in place)	Play potential-80% prob. (in place)	Play potential-20% prob. (in place)
Peel Plateau west of Trevor fault				
Upper Paleozoic clastics	1	3.7	< 9.1 (10%)	< 9.1 (10%)
Peel Plateau west of limit of deformation				
Paleozoic carbonate margin	7	157	45	257
Upper Paleozoic clastics	2	275	< 71 (70%)	488
Mesozoic clastics	12	465	259	656
Peel Plain east of limit of deformation				
Paleozoic carbonate platform	1	9.6	< 1.4	17.2
Horn Plateau reef	1	31	< 80 (8%)	< 80 (8%)
Upper Paleozoic clastics	9	256	112	389
Mesozoic clastics	55	1,748	853	2,636
Total Gas (Bcf)	**88**	**2,945**		

Wells

Well Name	Class	Status	Gr. Elev (m)	Total Depth (m)	Spud	Rig Release
Gulf Mobil Caribou YT N-25	Expl	D&A	487.7	3600.3	05/01/74	08/31/74
IOE Satah River YT G-72	Expl	D&A	86	2286.0	01/13/67	03/09/67
McD GCO Northup Taylor Lake YT K-15	Expl	D&A	464.8	2378.7	02/05/69	03/29/69
Mobil Gulf Peel YT H-71	Expl	D&A	506	3392.1	02/03/77	06/12/77
Pacific et al Peel YT F-37	Expl	D&A	48.8	3368.0	02/13/72	04/20/72
Shell Peel R YT 2B-06	Expl	D&A	62.5	1066.8	01/03/67	01/25/67
Shell Peel R YT B-06	Expl	D&A	61.6	430.4	12/14/66	12/31/66
Shell Peel R YT H-59	Expl	D&A	29.6	763.2	03/13/67	04/01/67
Shell Peel R YT I-21	Expl	D&A	377.3	2072.6	02/20/66	03/30/66
Shell Peel R YT J-21	Expl	D&A	41.8	1219.2	07/31/65	09/01/65
Shell Peel R YT K-09	Expl	D&A	345.4	1554.5	02/06/67	03/07/67
Shell Peel R YT K-76	Expl	D&A	72.5	1386.8	10/07/65	11/25/65
Shell Peel R YT L-01	Expl	D&A	390.8	1834.9	12/12/65	02/07/66
Shell Peel R YT L-19	Expl	D&A	91.4	1981.2	04/11/66	06/02/66
Shell Peel River YT M-69	Expl	D&A	282.5	3272.6	10/06/74	12/04/74
Shell Trail River YT H-37	Expl	D&A	385.3	3721.6	11/27/73	03/26/74
Skelly Getty Mobil Arctic Red YT C-60	Expl	D&A	86.9	2599.9	01/15/72	03/26/72
Toltec Peel River YT N-77	Expl	D&A	146.3	1122.6	10/07/68	06/23/70
Amoco PCB B-1 Cranswick YT A-42	Expl	D&A	613.3	4267.2	04/14/72	03/23/73

F. Old Crow Basin Oil and Gas Resource Assessment

Old Crow Basin Resource Assessment (Hannigan, 2001)*



Bedrock Geology
Gordey, S.P. and Makepeace, A.J. (compilers), 2003. Yukon Digital Geology. Geological Survey of Canada, Open File 1749 and Yukon Geological Survey, Open File 2003-9(D).

Sedimentry Basins
Mossop, G.D., Wallace-Dudley, K.E., Smith, G.G and Harrison, J.C. (compilers), 2004. Sedimentary Basins of Canada. Geological Survey of Canada, Open File 4673.

*Assessment completed using program PETRIMES

Geological Summary

In northwestern Yukon, the Old Crow Basin is a Tertiary intermontane basin within the Northern Yukon Fold Complex. It is flanked by intensely deformed and uplifted Proterozoic to Mesozoic sedimentary rocks of the British Mountains, Richardson Mountains, Old Crow Range and Keele Range. The Old Crow Basin consists of essentially flat-lying Tertiary to Recent, nonmarine sediments with coals unconformably overlying a Proterozoic to Mesozoic basement with a suggested relief of up to 800 m. This basement relief is caused by either east-west trending marginal faults or syncline-anticline fold structures. Mesozoic strata are thought to be imperfectly preserved beneath this Eocene unconformity with their erosion occurring over the structural highs.

Rocks in the region have been deformed by two major orogenic episodes: an Early Devonian Ellesmerian compressional orogeny, and the latest Cretaceous to Tertiary Cordilleran compressional orogeny.

Exploration History

Petroleum exploration in the Old Crow Basin has been quite limited. Approximately 2000 line-km of reconnaissance seismic was shot in the basin between 1969 and 1972. An extensive gravity survey was completed by Gulf Oil Canada Ltd. in 1973. No wells have been drilled. The nearest well is the Socony Mobil-W.M. Molar P-34 well drilled in northern Eagle Plain, 50 kilometres to the southeast.

Plays

Tertiary sediments are likely too immature and sparingly structured to have significant hydrocarbon potential, although there is some potential for biogenic gas. There is little, if any, oil potential in the area.

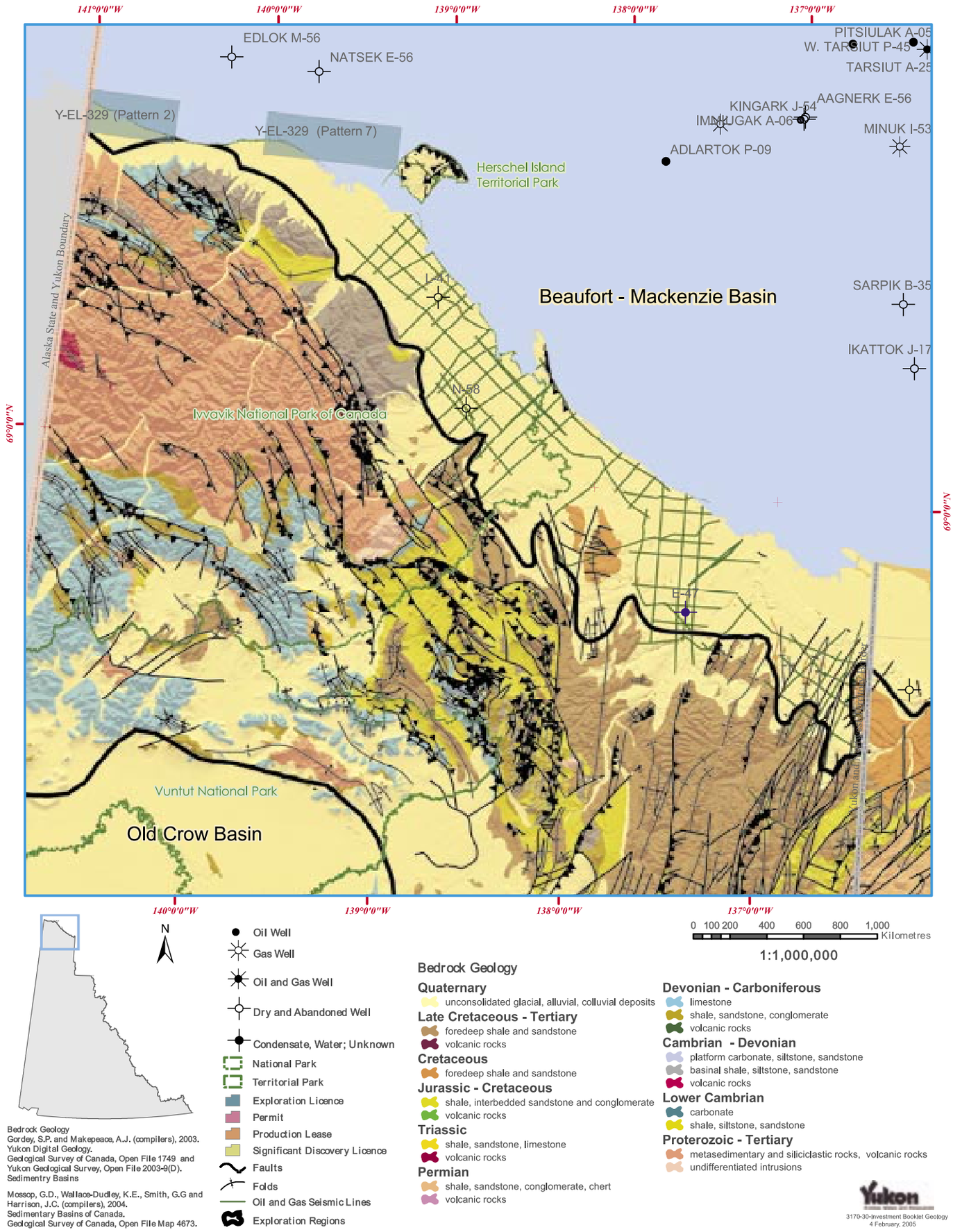
Three conceptual gas plays and three speculative gas plays were defined in the Old Crow Basin area on the basis of petroleum geology considerations such as structural style, dominant reservoir lithology and thermal matural. Conceptual gas plays for the Old Crow Basin consist of conglomerates of the Carboniferous Kekiktuk Formation, carbonates of the Carboniferous Lisburne Group and Mesozoic sandstones preserved beneath the Tertiary cover. The greatest gas potential or volume occurs in the Upper Paleozoic carbonate play.

Gas Plays (Bcf)	No. fields (mean)	Mean play potential (in place)	Play potential-80% prob. (in place)	Play potential-20% prob. (in place)
Kekiktuk conglomerate^	5	422	100	689
Upper Paleozoic carbonate^	5	686	123	1,107
Mesozoic clastic^	0.6	41	0	66
Total Gas (Bcf)	**10.6**	**1,149**		

^ no allowance is made for portion of play within Vuntut National Park

G. Beaufort-Mackenzie Basin Oil and Gas Resource Assessment

2001 Geological Survey of Canada (Calgary) P. Hannigan*



Bedrock Geology
Gordey, S.P. and Makepeace, A.J. (compilers), 2003.
Yukon Digital Geology.
Geological Survey of Canada, Open File 1749 and
Yukon Geological Survey, Open File 2003-9(D).
Sedimentry Basins

Mossop, G.D., Wallace-Dudley, K.E., Smith, G.G and
Harrison, J.C. (compilers), 2004.
Sedimentary Basins of Canada.
Geological Survey of Canada, Open File Map 4673.

*Assessment completed using program PETRIMES

Geological Summary

The Beaufort-Mackenzie basin of northern Yukon is an Arctic margin basin underlain by complexly faulted and folded Proterozoic through Tertiary sediments. The area is flanked to the south by exposed Proterozoic and Lower Paleozoic sediments of the British Mountains and Richardson Mountains. It contains four tectono-stratigraphic assemblages separated by major regional unconformities: a lowermost Proterozoic clastic assemblage forming the economic basement, Lower Paleozoic sedimentary rocks delineating a carbonate platform to marine basin transition with dominantly basinal shales in the area of interest, Carboniferous to Lower Cretaceous nonmarine clastic sedimentary rocks transitioning to shallow marine and intertidal deposits, and Lower Cretaceous to Tertiary northward prograding delta deposits. Upper Cretaceous sedimentary rocks include foreland flysch deposits from extensively eroding uplands of the Cordilleran Orogen.

The dominant structural fabric is related to Cretaceous-Tertiary contractional deformation of the Cordilleran Fold Belt during the Cordilleran Orogeny. Structures form an arcuate trend with east to southeast strikes in the northwestern Yukon rotating to a north-south trend in the eastern Yukon. Tight folds, thrust faults, strike-slip faults, and extensional faults all formed as part of this deformation. Earlier deformation features related to the Ellesmerian Orogeny and Jurassic-Cretaceous extension are locally discernable through the later overprinting.

Exploration History

Seismic surveys in the Mackenzie Delta area in the early 1960's delineated large structures in favourable stratigraphic successions. These early surveys led to the drilling of two dry wells in 1962. Further exploration led to the discovery of oil in Cretaceous sandstones in 1969. In 1970 a major gas find was made in Lower Cretaceous sands. In 1977 the focus of exploration switched offshore to Tertiary targets. In the Beaufort-Mackenzie region, 53 oil and gas discoveries, both onshore and offshore, have been made. Forty-four of these discoveries occur in the Tertiary basin. 247 wells have been completed to date. Drilling on the Yukon portion of the basin to the west has been very limited. Three wells were completed showing no hydrocarbons and limited reservoir potential.

Plays

The potential for significant hydrocarbon accumulations in the region is derived from the combined presence of numerous and diverse trapping configurations, good to excellent petroleum source rocks in favourable stratigraphic positions and reservoir-quality strata in the sedimentary succession. However, significant risks associated with lack of porosity development in Paleozoic and Mesozoic strata and thermal maturity considerations reduce overall hydrocarbon potential. The complex geology and anticipated high exploration risks associated with all defined exploration plays in the region suggest that considerable seismic survey work and exploration drilling are required to properly evaluate the North Coast hydrocarbon potential.

There are no discovered reserves in the Yukon portion of the Beaufort-Mackenzie basin. Hydrocarbon resource assessment for the area encompasses portions of Yukon and GNWT. The assessment analyzed six conceptual and immature plays. The mean estimates for total oil and gas potential for all coastal plain plays are 294 MMbbls of oil and 1,473 Bcf of gas. The results indicate that four gas fields greater than 100 Bcf are expected in the region. Even though geological risk factors are substantial, significant gas potential is predicted.

Gas Plays (Bcf)	No. fields (mean)	Mean play potential (in-place)	Play potential-80% prob. (in-place)	Play potential-20% prob. (in place)
South Delta-Mesozoic*	8	86	38	124
South Delta-Paleozoic*	15	257	110	384
Herschel^	5	691	226	1,072
Yukon Coastal Plain	2.5	439	63	724
Total Gas (Bcf)	**30.5**	**1,473**		

Oil Plays (MMbbls)	No. fields (mean)	Mean play potential (in-place)	Play potential-80% prob. (in-place)	Play potential-20% prob. (in place)
South Delta-Mesozoic*	4	27	5	39
Herschel^	5	267	86	414
Total Oil (MMbbls)	**9**	**294**		

Wells

Well Name	Class	Status	Gr. Elev (m)	Total Depth (m)	Spud	Rig Release
IOE Blow River YT E-47	Expl	D&A	112.2	4269.9	05/08/70	11/15/70
IOE Spring River YTN-58	Expl	D&A	92.7	2136.3	01/19/71	03/18/71
Pacific Imp et al Roland Bay YT L-41	Expl	D&A	12.5	2752.3	12/22/72	04/20/73

* Yukon encompasses 2.5% of play area

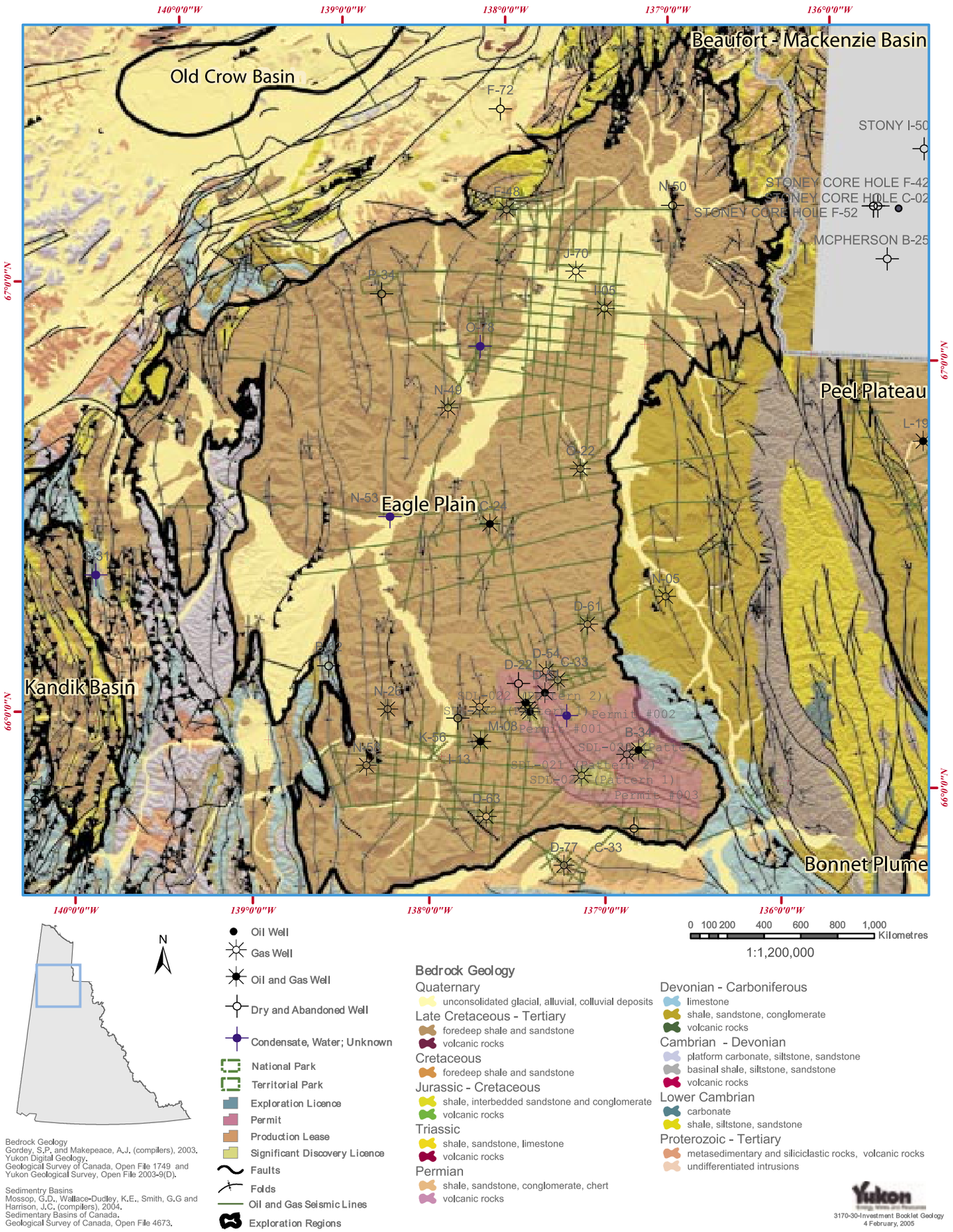
^Yukon encompasses 81% of play area

Yukon Coastal Plain play is 100% within Yukon

no allowance is made for portion of play within Ivvavik National Park and Herschel Island Territorial Park

H. Eagle Plain Oil and Gas Resource Assessment

Eagle Plain Resource Assessment (Bird, Chen, Osadetz, 2005)*



Bedrock Geology
Gordey, S.P. and Makepeace, A.J. (compilers), 2003.
Yukon Digital Geology.
Geological Survey of Canada, Open File 1749 and
Yukon Geological Survey, Open File 2003-9(D).

Sedimentry Basins
Mossop, G.D., Wallace-Dudley, K.E., Smith, G.G and
Harrison, J.C. (compilers), 2004.
Sedimentary Basins of Canada.
Geological Survey of Canada, Open File 4673.

- Oil Well
- Gas Well
- Oil and Gas Well
- Dry and Abandoned Well
- Condensate, Water; Unknown
- National Park
- Territorial Park
- Exploration Licence
- Permit
- Production Lease
- Significant Discovery Licence
- Faults
- Folds
- Oil and Gas Seismic Lines
- Exploration Regions

Bedrock Geology

Quaternary
- unconsolidated glacial, alluvial, colluvial deposits

Late Cretaceous - Tertiary
- foredeep shale and sandstone
- volcanic rocks

Cretaceous
- foredeep shale and sandstone

Jurassic - Cretaceous
- shale, interbedded sandstone and conglomerate
- volcanic rocks

Triassic
- shale, sandstone, limestone
- volcanic rocks

Permian
- shale, sandstone, conglomerate, chert
- volcanic rocks

Devonian - Carboniferous
- limestone
- shale, sandstone, conglomerate
- volcanic rocks

Cambrian - Devonian
- platform carbonate, siltstone, sandstone
- basinal shale, siltstone, sandstone
- volcanic rocks

Lower Cambrian
- carbonate
- shale, siltstone, sandstone

Proterozoic - Tertiary
- metasedimentary and siliciclastic rocks, volcanic rocks
- undifferentiated intrusions

Yukon
Energy, Mines and Resources
3170-30-Investment Booklet Geology
4 February, 2005

*Assessment completed using program PETRIMES

Geological Summary

Eagle Plain, in northcentral Yukon, is an underexplored structural basin with proven Cretaceous, Carboniferous, and Devonian gas and oil measures within the Northern Yukon Fold Complex. It has a maximum sediment thickness of 5,800 m. During Cambrian through Carboniferous time it was the site of continuous subsidence and deposition as part of the western continental margin miogeocline. Lower Paleozoic platform carbonates of the Bouvette and Ogilvie formations are bounded and interfinger with carbonaceous basinal shales of Richardson Trough on the east. During Late Paleozoic sedimentation is dominated by clastic sediments with lesser carbonate. Paleozic sedimentary rocks are in turn unconformably overlain by Cretaceous marine siltstone, shale and sandstone deposited as a foreland succession in response to Cordilleran deformation.

North-trending anticlines, synclines and thrust faults related to Cordilleran deformation occur throughout the basin. The basin is divided into the northern Bell sub-basin and the South Eagle sub-basin, the sub-basins being separated by the east-west trending Eagle Arch.

Exploration History

Surface exploration began in the mid 1950's. The first well (Peel Plateau Eagle Plain YT No. 1 N-49) was completed in 1958. The first discovery well (Chance YT No. 1 M-08 was completed in 1960. The most recent wells were drilled in 1985. A total of 33 wells have been drilled; several of these contained hydrocarbons in one or more zones.

A total of 9,952 line kilometers of two-dimensional seismic survey lines have been completed in Eagle Plain with only 8% of that being shot since 1975. Seismic coverage is largely in the southern end of the basin. In most cases gravity and magnetic surveys were conducted concurrently with the seismic. Discovered resources contain 83.7 Bcf gas and 11.1 MMbbls oil. All of the currently discovered hydrocarbons are found in the South Eagle sub-basin.

Plays

Fifteen different petroleum plays were identified in the Eagle Plain area (nine gas and six oil). These encompass a variety of structural and stratigraphic traps. Several plays are considered established as they have yielded proven discoveries. The others have petroleum shows in this basin or other basins and are therefore considered immature. Most of the wells drilled to date have stopped in Devonian and younger rocks; only six wells have tested the Lower Paleozoic stratigraphy

Gas Plays (Bcf)	No. fields (mean)	Mean play potential (in place)	Play potential-75% (in place)	Play potential-25% (in place)
Cretaceous stratigraphic gas	16	118	81	145
Cretaceous structural gas	16	231	165	279
Permian stratigraphic gas	16	2,160	1,333	2,701
Permian structural gas	5	72	34	95
Carboniferous stratigraphic gas	11	1,705	1,178	2,099
Carboniferous structural gas	6	118	68	150
L. Carboniferous stratigraphic gas	18	323	237	388
L. Paleozoic stratigraphic gas	20	879	607	1,061
L. Paleozoic structural gas	6	448	153	564
Total Gas (Bcf)	**114**	**6,054**		
Oil Plays (MMbbls)				
Cretaceous stratigraphic oil	7	40	25	51
Cretaceous structural oil	6	67	40	86
Permian structural oil	4	105	50	140
Carboniferous stratigraphic oil	5	78	45	101
Carboniferous structural oil	5	77	47	98
L. Carboniferous stratigraphic oil	5	69	43	88
Total Oil (MMbls)	**32**	**436**		

Wells

Well Name	Class	Status	Gr. Elev (m)	Total Depth (m)	Spud	Rig Release
Peel Plateau Eagle Plains YT No 1 N-49	Strat	D&A	457.2	2895.6	04/17/57	07/16/58
Western Minerals Chance YT No 1 M-08	Strat	SP O&G	534	2635.9	05/30/59	05/25/60
Amerada et al Crown YT-A No 1 N-50	Expl	D&A	313	2439.6	02/29/60	09/08/60
SOBC Blackstone YT D-77	Expl	D&A	640.1	4028.5	03/10/62	01/08/63
Socony Mobil WM E Porcupine R YT K-56	Expl	D&A	494.1	2590.8	03/26/63	07/23/63
Socony Mobil WM Blackie #1 YT M-59	Expl	SP GAS	557.5	1931.8	12/11/63	03/27/64
Socony Mobil WM Whitestone YT N-26	Expl	D&A	691.3	2464.3	04/07/64	08/06/64
Socony Mobil WM Molar YT P-34	Expl	D&A	799.2	2653.0	03/29/64	08/13/64
Socony Mobil WM Chance YT G-08	Expl	SP O&G	518.8	1579.8	12/04/64	02/18/65
Socony Mobil WM Ellen YT C-24	Expl	D&A	410	2174.4	12/25/64	04/03/65
Socony Mobil WM W Parkin YT D-51	Expl	D&A	470.6	1508.8	02/24/65	04/03/65
Socony Mobil WM Birch YT B-34	Expl	D&A	663.5	1649.9	04/08/65	06/08/65
Socony Mobil WM N Cath YT B-62	Expl	OBS	534.9	2138.5	04/16/65	06/26/65
Socony Mobil WM S Tuttle YT N-05	Expl	D&A	500.5	3513.4	02/18/65	07/08/65
Canoe River Chance YT J-19	Dev	SP O&G	514.2	1446.3	12/17/67	02/17/68
Canoe River East Chance YT C-18	Expl	D&A	531.3	1540.8	02/29/68	04/06/68
Western Minerals N Hope YT N-53	Expl	D&A	346.3	4280.3	04/18/70	08/13/70
SOBC WM E Porcupine YT I-13	Expl	D&A	501.4	2439.6	02/10/71	05/02/71
SOBC WM Shaeffer Ck YT O-22	Expl	D&A	347.2	3161.7	01/12/71	05/09/71
Chevron SOBC WM W Parkin YT C-33	Expl	D&A	514.5	1256.7	11/29/71	01/15/71
Chevron SOBC WM E Pine Creek YT O-78	Expl	D&A	384.4	947.6	12/25/71	01/26/72
Chevron SOBC WM Birch YT E-53	Expl	D&A	617.2	684.3	01/20/72	02/21/72
Chevron SOBC WM Whitefish YT I-05	Expl	D&A	342.3	1498.4	02/23/72	03/30/72
Chev SOBC Imp S Chance YT D-63	Expl	D&A	701	2020.8	02/21/72	05/01/72
Chevron SOBC WM E Porcupine YT F-18	Expl	D&A	518.5	2050.7	03/06/72	05/01/72
Chevron SOBC WM N Parkin YT D-61	Expl	D&A	483.1	3352.8	01/04/72	05/06/72
Chevron SOBC Gulf Ridge YT F-48	Expl	D&A	315.2	1868.7	01/03/73	04/02/73
Chevron SOBC WM Whitefish YT J-70	Expl	D&A	326.1	2127.5	01/17/73	04/10/73
Murphy Mesa PB S Whitestone YT N-58	Expl	D&A	886.1	2131.5	02/10/73	04/17/73
Mountain et al Porcupine YT F-72	Expl	D&A	344.1	2251.9	01/17/73	04/06/74
Aquit Alder YT C-33	Expl	D&A	523.6	3714.0	03/08/78	03/04/79
Exco West Parkin YT D-54	Expl	D&A	502.5	1811.0	12/20/84	02/19/85
Exco et al N Chance YT D-22	Expl	D&A	531.5	1830.0	03/01/85	04/09/85
Devon Eagle Plains K-58	Expl	D&A	599.3	1300.0	02/22/05	04/03/05

Yukon Department of Energy, Mines and Resources Contacts

Minister and Senior Officials

Minister
Honourable Archie Lang
(867) 667-8643

Deputy Minister
Angus Robertson
(867) 667-5417

Assistant Deputy Minister, Oil and Gas and Mineral Resources
Lois Craig
(867) 667-5888

Branches Responsible for Oil and Gas
Two branches deal with oil and gas: the Oil and Gas Management Branch and the Oil and Gas Business Development and Pipeline Branch

Location of Branches:
Suite 300, 211 Main Street
Whitehorse, YT

Mailing address:
PO Box 2703 (K-12)
Whitehorse, YT Y1A 2C6
website: www.yukonoilandgas.com

Oil and Gas Management Branch

Contact information:
General inquiries: (867) 667-3427
Toll free (inside Yukon): 1-800-661-0408 ext. 3427
Fax: (867) 393-6262
Email: oilandgas@gov.yk.ca

John Masterson - Director
(867) 667-5026 E-mail: john.masterson@gov.yk.ca

Sharon Legoffe - Administrative Assistant
(867) 667-3427 E-mail: sharon.legoffe@gov.yk.ca

Richard Corbet - Chief Operations Officer
(867) 667-3565 E-mail: richard.corbet@gov.yk.ca

Rick Smith - Solicitor
(867) 393-7045 E-mail: rick.smith@gov.yk.ca

Anne-Marie McColman - Solicitor
(867) 393-7107 E-mail: anne-marie.mccolman@gov.yk.ca

Dave Laxton - GIS Database/Administrator
(867) 667-5012 E-mail: dave.laxton@gov.yk.ca

Debra Wortley - Rights Disposition Manager
(867) 667-3512 E-mail: debra.wortley@gov.yk.ca

Jenna Dhillon - Administrative Assistant
(867) 667-5087 E-mail: jenna.dhillon@gov.yk.ca

Oil and Gas Business Development and Pipeline Branch

Contact information:
General inquiries: (867) 393-7042
Toll free (inside Yukon): 1-800-661-0408 ext. 7042
Fax: (867) 393-7046
E-mail: pipelines@gov.yk.ca

Brian Love - Director
(867) 667-3566 E-mail: brian.love@gov.yk.ca

Don Dempster - Senior Engineering Advisor
(867) 667-8814 E-mail: don.dempster@gov.yk.ca

Pat Hayden - Administrative Assistant
(867) 393-7042 E-mail: pat.hayden@gov.yk.ca

Ron Sumanik - Manager, Benefits and Socio-Economic Affairs
(867) 393-7043 E-mail: ron.sumanik@gov.yk.ca

Perry Diamond - Senior Oil and Gas Analyst
(867) 393-7044 E-mail: perry.diamond@gov.yk.ca

Chuck Hubert - Senior Oil and Gas Analyst
(867) 393-7044 E-mail: chuck.hubert@gov.yk.ca

Bernie Adilman - Marketing and Events Coordinator
(867) 667-5664 E-mail: bernie.adilman@gov.yk.ca

Yukon Geological Survey

Contact information:

Grant Abbot - Chief Geologist
(867) 667-3200 E-mail: grant.abbot@gov.yk.ca

Contacts in Other Departments

Department of Environment

Minister
Honourable Peter Jenkins
(867) 667-5806

Deputy Minister
Ed Huebert
(867) 667-5460

Department of Finance

Minister
Honourable Dennis Fentie
(867) 393-7053

Deputy Minister
Bruce McLennan
(867) 667-3571