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**Seasons Greetings**

**BCAFC  
FIRST NATIONS OFFSHORE  
OIL & GAS WORKSHOP**

**December 11-12, 2003  
Nisga'a Hall, Prince Rupert, BC**



# INTRODUCING OFFSHORE PETROLEUM AND NATURAL GAS:

## **Introduction:**

The British Columbia Aboriginal Fisheries Commission has put together this summary of some current facts and issues as an introduction to the subject of offshore oil and gas development for British Columbia First Nations . This workbook is designed to provide an introduction to the terminology and technology of Offshore Oil and Gas production, but it is not expected to be a complete overview of the subject. It contains background notes which may be useful when hearing the speakers attending the First Nations Workshop on Offshore Oil and Gas in Prince Rupert, B.C. December 2003.

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## **WHAT IS PETROLEUM AND NATURAL GAS?**

Petroleum and natural gas deposits are found in sedimentary rock basins where tiny sea plants and animals died millions of years ago. When these plants and animals died sank to the bottom of the oceans, and were buried under thousands of feet of sand and silt. This is why they are called fossil fuels.

If the proper temperature and pressure were present, these plants and animals eventually turned into hydrocarbons. Oil and gas are made up mostly of hydrogen and carbon – hydrocarbons.

The movements of the Earth's crust trapped these organic compounds inside the earth, squeezing and forming them into what we now know as petroleum products.

All organic material does not turn into oil. Certain geological conditions must exist within the oil rich rocks. These hydrocarbons flowed into empty spaces in the surrounding rocks, called traps. Finally an oil-soaked rock...much like a wet sponge...was formed. These traps were covered by layers of solid rock or a seal of salt or clay that kept the oil and gas from escaping to the surface. Even under these conditions, less than 2% of the organic matter is transformed into oil. Petroleum products can be either a volatile gas, or liquids ranging from the colour of light salad oil to heavy tar.

## **WHERE DOES PETROLEUM OCCUR?**

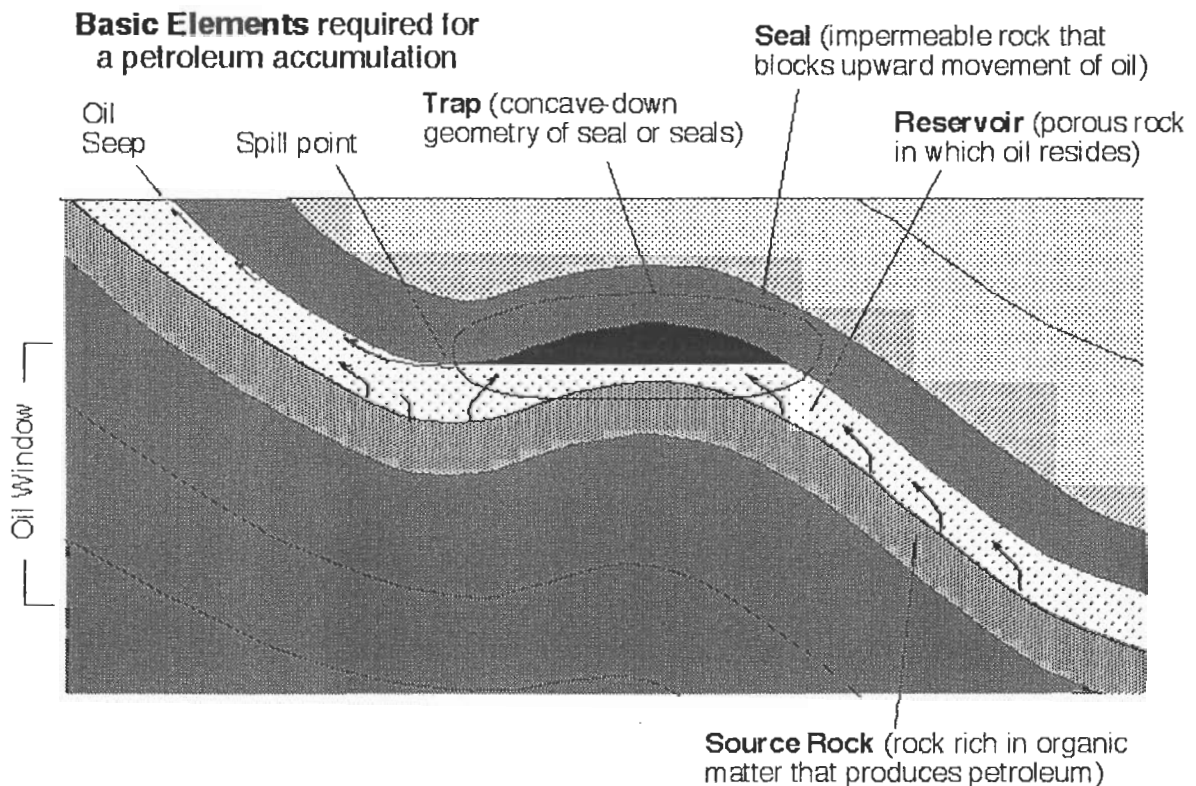
The rock formations which hold petroleum reserves are found everywhere on earth. Ancient oceans and seas collected organic materials from plants and microscopic animals in the sediment at the bottom of the body of water. Later heating, bending and folding these organic materials within the rock formations transformed this organic material into petroleum.

Wherever the right set of circumstances occurs, there is a possibility that petroleum will be produced and trapped underground in fields or pools which can be accessed by drilling.

### **Sedimentary Basins:**

All petroleum resources are found in sedimentary basins. The easy way to access oil and gas is to find a location where petroleum products are leaking to the surface. These areas are called seeps, and petroleum products have been used from these areas for thousands of years. Not all sedimentary basins have petroleum-producing features, but geologists always are looking for new resources.

In the last fifty years, the technology for exploration has increased the success ratio for all petroleum exploration, as well as increasing the costs. Pressures to find new sources of petroleum mean that new areas are investigated and re-investigated every year, and new untapped resources are located in every season. Every location where sedimentary rocks are known to occur could be a new source of oil and gas.



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## WHY IS EXPLORATION SO IMPORTANT?

Petroleum is a limited natural resource. The natural conditions that produce petroleum cannot be duplicated, and the petroleum reserves which are easy to find and extract have already been discovered.

For many years the world's supply of petroleum was provided from a few locations – originally from the continental USA and the Arab Gulf States in the

Middle East. The use of petroleum resources worldwide has increased 1000% since World War Two, and geologists have expanded their understanding of the areas where petroleum products are found.

As the demand increased, the areas where preliminary exploration was undertaken expanded globally. In the past 10 years or so virtually every corner of the world has been visited by exploration teams, looking for the geologic formations where petroleum is known to occur.

Finding the right rock formation is only the first step. Until a few years ago the cost of seismic testing, drilling and the preliminary identification of potential petroleum deposits limited the speed of development. As known petroleum supplies were brought on-line, the need for more petroleum exploded, particularly in continental North America.

The exploration and development stages which may lead to bringing a new well on line are expensive and time consuming. Generally when a new area comes into to exploration, even if reserves are found fairly quickly, it can take five to seven years to bring the field into production, and transport the petroleum product to market.

As demand for petroleum products grows, supplies from everywhere on earth except Antarctica are under development. At the current rate of exploration development and production, the Canadian Petroleum Producers Association (CAPP) anticipates that unless more major fields are discovered, the global demand will outstrip production capacity in 25 years.

### **Why Do We Need More Oil and Gas Production in North America?:**

In North America, petroleum exploration and extraction has been going on as an industrial activity since the mid 1800's. As petroleum products became more important, the ability to find and access petroleum deposits became more important. Since the 1950's, most of the areas in continental north America have had at least preliminary exploration. In all areas the basic geology is known, and the potential areas where further exploration might be successful are generally mapped.

## **WHY EXPLORE UNDER THE SEA?**

The bottom of the ocean is made of rocks and minerals, like the rest of the Earth's Crust. Any natural resources found on land are equally likely to be found folds of the earth's crust under water. Where modern geology has identified particular formations under the surface of the earth as being the most likely to hold oil and gas resources, these rock formations also exist under the ocean.

### **Offshore Exploration for Petroleum Products**

The first Offshore Drilling in recent times was begun in 1897 from a pier in California. Early drilling was limited to areas where the water was less than 300 feet deep. However modern drilling rigs can operate to depths of a mile or more. Some drilling platforms stand on stilt like legs that are embedded in the ocean floor. These huge platforms hold all the drilling equipment as well as housing and storage areas for the work crews. Once the wells have been drilled, the platforms also hold the production equipment.

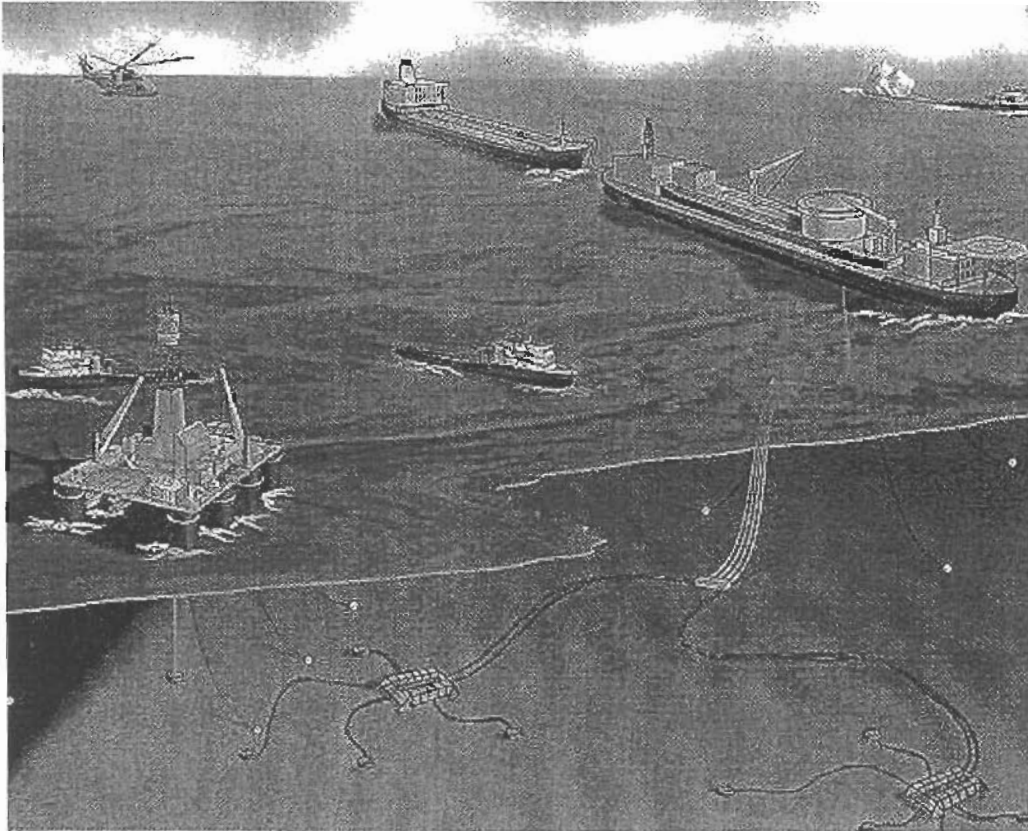
### **Deepwater Exploration:**

Until recently most undersea exploration for offshore petroleum resources was done only in shallow water locations. Even then concerns were raised because of the possibility of spills and leaks which would allow environmental damage to occur. Petroleum production in locations over 1000 feet depth were undertaken only in locations where the weather conditions were relatively stable, and the possibilities of accidents were remote.

Technological change since 1990 has made it possible to utilize new technologies where the bottom of the ocean is relatively flat, and where acute weather conditions are limited. At present some 30% of oil and 25% of the gas produced domestically in the United States is from Offshore production. It is expected that around 60% of the undiscovered petroleum resources available as domestic production in the USA will come from deepwater outer continental shelf locations.

Internationally deepwater exploration has expanded exponentially, now reaching 60% of the exploration underway. Floating platforms are used for drilling in deeper waters. These self propelled vessels are anchored to the ocean bottom with huge cables. Once the wells have been drilled from these platforms, the production equipment is lowered to the ocean floor and seal to the well, casing to prevent leakage. Wells have been drilled in 10,000 feet of water using these floating rigs. Today there are nearly 5000 platforms operating in the North American offshore, mostly in the Gulf of Mexico. There are others clustered on the Canadian East Coast, and in Alaska's North Slope, and in California.

**SCHEMATIC DRAWING SHOWING ALL THE COMPONENTS OF OFFSHORE PRODUCTION AND TRANSPORTATION:**



**WHITE ROSE, AN EAST COAST CANADIAN OFFSHORE PROJECT**

**Illustration shows:**

**Drill Rig On Floating Platform, With Supply Ships:  
Underwater Network For Collecting Petroleum Products  
Seabed Transfer of gas into Deep Sea Tankers.**

**Helicopters and ancillary ships are also shown.**



## **THE GLOBAL PICTURE TRENDS AND NUMBERS:**

### **Crude Oil Demand and Supply**

In 1990, the world demand for oil was approximately 67.65 Million barrels of oil per day. By 1998, it had increased to 75.35 million barrels per day.

In 1990 production of that oil within the international community not part of the OPEC group met only 34.80 million barrels per day of the demand, leaving some 23.85 million barrels to be supplied by the OPEC countries.

In 1998 the non-OPEC production had increased to 47.80 million barrels per day, with an increasing amount, now 27.55 million barrels per day to be supplied by OPEC.

### **Natural Gas Demand and Supply**

Similar figures exist for Natural Gas, though in this case the top-up to the world supply comes from what used to be the Soviet Union. The figures are similar in that neither continental North America nor Europe are able to supply their own energy needs from within.

### **What is the American Continental Petroleum Strategy, and how does it affect Canada?**

In the 1950's, the American Government recognized that there would be a need for a strategic alliance among the countries of North America, so that the United States and her allies could develop and retain as much locally produced petroleum products as was possible. Both Mexico and Canada participated in this alliance.

More recently the US Congress has negotiated agreements between the three countries which make it easy to build and operate a continent wide system for petroleum distribution. Although there is still production from the locations discovered and developed early, the primary new exploration is in the north, both in Alaska and Canada. Offshore drilling has gone on for many years, and currently production comes into the continental grid from the Gulf of Mexico, Alaska, and the Canadian East Coast.

Primary exploration is ongoing in the American and Canadian north, in the Gulf of Mexico and on the Canadian east coast. Increasingly the continental grid is supplied also by overseas petroleum supplies delivered to ports by tankers from the other side of the world.

Alaska, the Canadian Arctic and the Canadian North, are the only areas on the continent where major exploration has not been fully undertaken. The last

remaining area which has had virtually no exploration is the Pacific Continental shelf in Canadian and British Columbian waters.

### **September 11<sup>th</sup> 2001 and Homeland Security:**

There is a direct relationship between the urgent expansion of interest and investment in petroleum exploration and production in both North and South America, and the events of September 11<sup>th</sup>, 2001. Without the concern felt by the American government and public about the risks which come from not be self-sufficient in energy resources, it is unlikely that the recent American Energy Bill, which could have opened up the Alaskan North Slope, could have passed through the legislative steps in Washington that it did without more significant environmental opposition..

### **The International Picture - Expanding Role For Multinational Corporations**

The Canadian petroleum industry has restructured in response to global economic change and the evolution of North American energy markets. One result is the concentration of assets in large companies. In fact Canada now has few medium-sized active explorers of the kind that used to drive drilling activity. Junior companies and the few remaining medium-sized tend to build up assets and then sell to the royalty trusts. This has been the typical business model for recent years.

Essentially now there are very few "Canadian" companies in the oil and gas business in Canada. Almost all of the petroleum industry is dominated by about eight huge international companies based in America.

### **Canadian Petroleum Production –Quick Overview:**

#### **Where is the Canadian Petroleum Industry Concentrated:**

The majority of Canadian Oil industry players are based in Alberta, which remains the focus for the industry. The main organization in Canada is the Canadian Petroleum Producers (CAPP) but there are many other more specialized organizations representing all of the interests and industry sectors.

The scope of the industry in Canada is expanding. Traditional definitions of the petroleum industry include three sectors: Upstream (exploration and production) Midstream (processing, storage, large- and small diameter pipelines transportation,) and downstream (refining and marketing) Currently direct employment in these sectors stands at 120,040 jobs, while the overall direct and indirect employment is estimated at more than 500,000 jobs.

These jobs and economic benefits are spread across the country. In many instances there are more jobs in the supply line for offshore equipment, transportation and services than there are direct jobs at sea.

### **The Main Areas Currently Producing Petroleum In Canada Are:**

#### **The Western Canadian Sedimentary Basin**

Alberta, northwestern Saskatchewan, northeastern B.C and parts of Manitoba, the Northwest Territories and the Yukon Territory.

#### **The Oil Sands:**

primarily in northeastern Alberta and northwestern Saskatchewan.

#### **The North:**

The Mackenzie Delta, Beaufort Sea Offshore, and onshore areas in northern portions of the NWT

#### **The East Coast**

The offshore areas under the jurisdiction of Nova Scotia, Newfoundland and Labrador.

## **AREAS FOR PETROLEUM EXPLORATION IN NORTH AMERICA**

Although large areas of the Canadian North and Alaska are still being explored, in the past few years some 60% of the emerging natural gas discoveries are coming from the offshore area. Projections suggest that offshore discoveries in deepwater locations in the Gulf of Mexico, the Alaska North Slope, the North Atlantic and the Pacific Offshore areas may produce the next major fields for development. Of these, the Pacific Offshore is the least explored.

### **The Western Half of the Continent:**

Most of the petroleum production in continental North America occurs in the western half of the continent. The only major producing area not in the west is the Gulf of Mexico. North America is then very dependant on production from Alaska and the Canadian North, and would be interested in exploration in any of the areas between the far north and the markets, since the transportation infrastructure is largely in place to move products from the north to the south.

In August and September of 2003, Alaska produced the following which went directly into the continental energy distribution grid

:

Oil:	31.2 Million barrels
Gas:	36.0 Billion cubic feet
Revenue:	\$104.1 Million dollars. US.

This is a huge supply, but Alaska cannot produce sufficient petroleum on its own to ensure a secure supply for the continental U.S.A..

### **Established Alaskan Operations**

Oil and gas have been developed in Alaska for over thirty years.

The presence of crude oil on Alaska's north slope was suspected for more than a century. In 1968, Atlantic Richfield Company and Humble Oil (now Exxon) confirmed the presence of a vast oil field at Prudhoe Bay. Within a year plans were in place for a pipeline to bring Prudhoe Bay crude across Alaska to Valdez in the bight of Alaska, so it could be transported by tanker to the south.

Valdez is the most northerly ice-free port on the Pacific Coast of North America.

In the 1970's strong environmental interests opposed the pipeline. The project was eventually given Presidential Approval three and one half years later. The pipeline runs from Pump Station One at Prudhoe Bay to the Valdez terminal on the Pacific Coast, a distance of about 800 miles.

The Oil and Gas Conservation Commission is the current regulatory agency, but the first Commission to regulate the Alaskan industry was put in place in 1955, well before the Prudhoe Bay field began to produce in 1977.

Prudhoe Bay produces crude oil, which is not refined on the North Slope. Prudhoe Bay crude is pumped through the Trans-Alaska Pipeline, to the terminal at Valdez, where it is put into tankers. These tankers travel down the north Pacific Coast, eventually offloading their crude oil at refineries in the continental United States.



**Fireweed growing on the Trans-Alaskan Pipeline Right-of-way.**

## **Potential North Pacific Petroleum Reserves:**

### **Are the North Pacific Petroleum Reserves Oil or Gas or both?**

Exploration and tenuring that has already taken place prior to the current moratorium in B.C. identified potential gas reserves rather than oil. This does not mean that oil will not be found offshore, but at present the discussions are around production of gas from these areas, not oil.

This is important to consider since the potential impacts from contamination or spill from the two petroleum products are quite different, though the methods of exploration and production are essentially the same.

Both oil and gas are generally transported either by seagoing tankers or through pipelines or both. Clearly the effect of a natural gas release would be different than that of an oil release, such as the Exxon Valdez spill.

### **Moratoria on Offshore Exploration around North America:**

The continental shelf of North America is a fragile zone. It begins at the beaches, leads across the fore and inshore, and into the deep water offshore. These are the richest ecological zones in the ocean.

Offshore exploration interests both the industry and governments. In British Columbia the offshore is a mixed Federal and provincial jurisdiction, so it was difficult to initiate any extensive exploration, though a tenuring system did exist, and tenures had been granted.

In the late 1960's, Alaskan exploration on the Arctic North Slope took off. The Alaskan plan was to bring in new wells in Prudhoe Bay, on the land adjacent to the Beaufort Sea, and transport the crude oil overland by pipeline to Valdez Alaska, on the Pacific Coast. From there the crude oil would be transported by tanker down the Pacific Coast to refineries in the continental USA.

In 1970 BC declared a moratorium on oil and gas exploration in their offshore jurisdiction, Juan de Fuca Strait and Georgia Straits. In 1972 the Federal government banned all tanker traffic from Dixon Entrance, Hecate Strait and Queen Charlotte Sound. Shortly afterwards, all offshore exploration was banned indefinitely in these areas.

In the United States, the first embargo on offshore exploration was put in place in 1974, followed by the Executive excluding all offshore petroleum exploration along the whole the Pacific Coast, the North Atlantic and Alaskan North Aleutian areas. In December 1997 this moratorium was extended another 10 years.

In Canada from 1982 to 1986, after public pressure both to lift the existing restrictions and to impose a permanent moratorium on offshore exploration, the two levels of government held a joint Environmental Assessment, which recommended that a moratorium for the BC Coast be held firmly in place. The Joint Moratorium established in 1986 continues today.

On the Pacific Coast, all of the offshore oil and gas basins with the highest potential for development are included in these Moratoria. At present no exploration or development activity can occur in these areas, and consequently any possible production from these offshore areas could not occur for many, many years.

### **Where are the existing Offshore Tenures in British Columbia?**

Between 11 June 1967 and 5 May 1969 Shell Canada drilled 14 exploration wells off the B.C. Coast, in water depths ranging from 70 feet to 556 feet. Seven of these wells were located off the Tofino coast line, and the remainder were drilled in the marine portion of the Queen Charlotte basin. Most of this effort was in Hecate Strait.

**Currently the Pacific Continental Shelf off B.C. has two kinds of petroleum tenures, Federal and Provincial. The main tenure holders are:**

#### **Tenures from B.C.:**

- Conoco Phillips/Dynamic Oil
- Haida Resources
- Offshore Oil and Gas Corporation

#### **Tenures from Canada:**

- Canadian Forest Oil
- Chevron
- Exxon Mobile
- PetroCanada
- Shell Canada.

### **What is the difference between Development and Production?**

In the Petroleum industry, the development phase includes all of the field geology, identification of potential sedimentary rock formations, initial tenuring, basic seismic work to see if any petroleum traps can be identified, test drilling, and all the activities which might lead up to the discovery of sufficient petroleum products to warrant the investment necessary to extract petroleum products from the rock.

Production is the term used when the petroleum product has been located, and the well is going to produce marketable product. In Offshore Oil and Gas production, this term is first used once a well has come in with an quantifiable reserve, which is to be then extracted, refined and transported to market.

In the context of Offshore, when the drill rig has produced a well with sufficient reserves that it is economically reasonable to develop, it is in production.

### **What Does The Land-Based Petroleum Industry Add To The Economy Of British Columbia now?**

Petroleum exploration in the Peace River area in North East B.C has been expanding rapidly ever since WWII. The first wells in BC came into production in 1947, and the area of B.C. and its geological formations which also extend into Alberta and the NWT, are Canada's primary petroleum production area.

The industry has had its ups and downs, but in the past few years the most significant new petroleum reserves on the continent have been brought on stream from this area. The Lady Fern field straddles the BC. Alberta border, and more recently the discovery of several related new fields north and east of Fort Nelson, has put the industry in B.C. into high gear. These discoveries have substantially increased the value of leases offered by public bid by B.C., and overall for the past

Since 2000, the oil and gas industry primarily in the northeast, has been the largest single source of provincial revenue every year, displacing the forest industry, which was for the main driver of the B.C. economy for over one hundred years.

### **ENVIRONMENTAL ISSUES TO BE CONSIDERED:**

#### **Alaska North Slope Proposed Development – The U.S. Energy Bill**

The Arctic Ocean surrounds the North Pole, touching continental North America on its northernmost edge. The Arctic Ocean bounds both Alaska and Canada. Within the Arctic Ocean are a number of smaller local features, the most important of which is the Beaufort Sea. The Mackenzie River which drains northern British Columbia and the Yukon, and the Northwest Territories, flows via the Beaufort Sea into the Arctic Ocean.

The North Slope refers to the land to the north of the central Brooks Range in Alaska. This area gradually slopes from the height of land to the seacoast, and extends all the way east to the Mackenzie Delta in the NWT. The North Slope is an area of proven petroleum reserves, including the first productive area in Alaska, Prudhoe Bay. When Prudhoe Bay was developed, a pipeline was built from the Arctic Ocean across central Alaska to the depot at Valdez, on Prince William Sound on the Pacific Coast to 67

Given the post-9/11 emphasis in the United States with securing a continental energy supply, there are enormous pressures to complete the exploration and begin development in this area.

In the past two years the American Congress has been dealing with approvals for the North Slope. At the same time, Canada has been reviewing the prospects and planning for more development in the Canadian Beaufort Sea.

### **The Porcupine Caribou Herd**

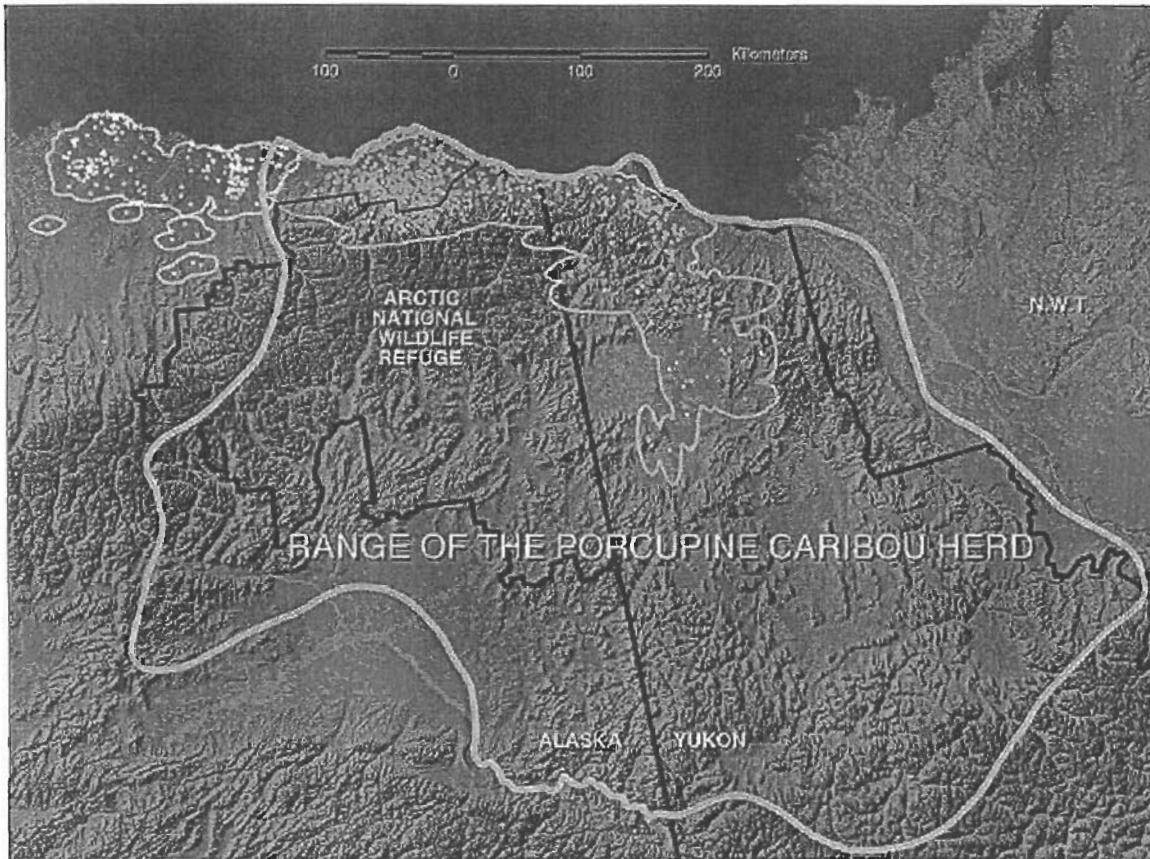
There are known petroleum resources along the coast of the Arctic Ocean, both in Alaska and in Canada. Back in the early days of northern gas and oil exploration both Canada and the United States addressed a key environmental problem by agreeing to a moratorium on any activity which would impact on the international migration of this herd of Caribou. The relevant herd is the Porcupine Caribou Herd, which migrate from the North Slope in Alaska, across the Old Crow Flats in northern Yukon into the NWT. That Canada/U.S. Agreement was signed in 1987.

In Canada there are now two parks within this region, permanently protecting the range of the Porcupine Caribou herd. In Alaska the fragile habitat is included in the Alaska Natural Wildlife Refuge, (ANWR) which is neither a park nor permanently protected. This allows the area to continue to factor into various U.S. plans for development of North Slope oil and gas, including the possibility that the pipeline that may be needed to carry North Slope oil and gas south to the continental United States could cross this area.

This moratorium has restricted possible expansion of petroleum exploration along the Arctic seacoast. At present, unless the Moratorium is lifted or changed, it is not possible to build a pipeline to transport petroleum products south to continental North America from any possible Beaufort Offshore development..

Recent Canadian exploration in the Beaufort Sea, north of the Mackenzie delta, has led to proposals for a new Mackenzie valley pipeline. These proposals are supported by the First Nations of the Mackenzie Valley, and they are active participants in the negotiations and planning for this event.





**Map of the range of the Porcupine Caribou, showing the Alaska, Yukon and NWT boundaries crossed each year by the migrating herd.**

**Environmental Protection during Development and Production:**

During every phase of development and production, precautions are taken to prevent pollution, spills and significant changes in the ocean environment. All aspects of the operation, from waste disposal to hurricane safety measures are regulated.

There continues to be much public concern about developments of offshore areas right now, though they offer great potential for the future. In the United States, the Gulf of Mexico, a relatively flat and shallow area, has been extensively developed and produces a significant percentage of the oil and gas used in the continental United States.

Much of the new deepwater technology has been developed in the Gulf of Mexico, and transported overseas to the North Sea, Hibernia on Canada's Atlantic Coast, and to emerging areas in Indonesia and Asia. In those areas,

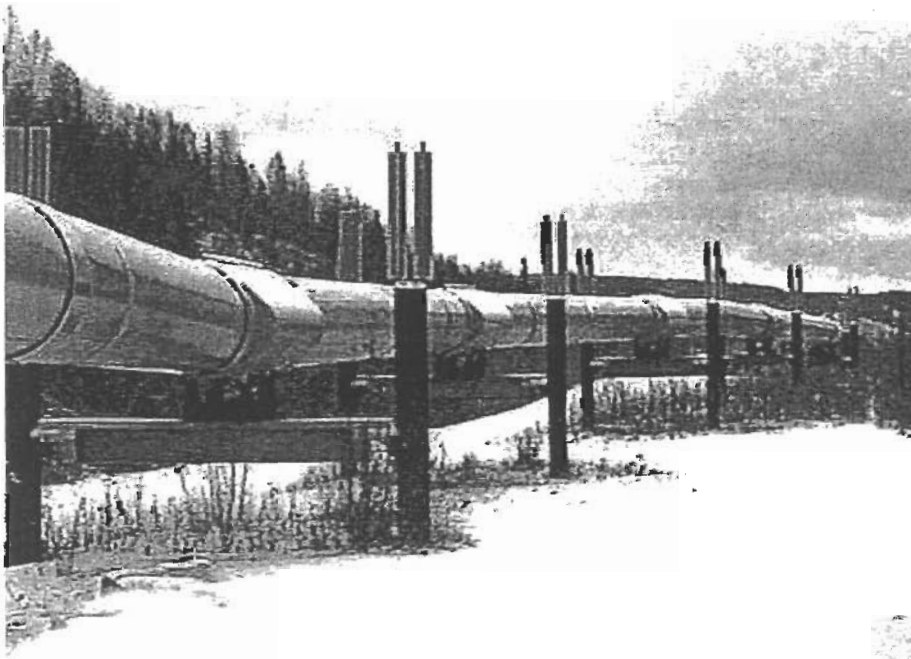
when the proper methods are used, the petroleum development ,and production has a very good environmental track record.

### **Environmental Issues during Transportation:**

Almost all of the public problems around petroleum and oceans have occurred during the transportation of heavy oil at sea in tankers. Everyone has visions of the Exxon Valdez spill, or the more recent wrecking of a tanker carrying heavy crude oil on the Spanish Coast. In most of these cases, human error is involved, rather than equipment failure or insufficient regulation.

At present there is extensive regular tanker traffic along the B.C. Coast transporting oil from the Alaskan port of Valdez to other ports throughout the world. This traffic is heavily regulated and inspected both by the State of Alaska and the American Government. International regulations also apply. At present this traffic does not regularly come into Canadian waters. If it did so, Canadian regulations would also apply.

In British Columbia there are also issues around land based transportation through pipelines, especially where these corridors cross riparian and other sensitive zones. However many of the pipeline corridors already exist, and much of the required baseline engineering was done during the initial establishment of those distribution networks.



**Trans Alaska Pipeline in Winter**

## **B.C. FIRST NATIONS AND THE MORATORIUM:**

### **How First Nations Responded in 1984-85**

First Nations in British Columbia formed an organization known as OSAAN (Off Shore Alliance of Aboriginal Nations) which included all First Nations up and down the coast, and interested inland groups. They worked together, received funding, and assisted in preparing effective reports and in providing background to their communities. Significant analysis of the possible impacts and benefits from Offshore Oil and Gas development was presented to the Joint Canada BC Environmental Assessment panel, and contributed to the maintenance of the moratorium.

### **How First Nations are Responding in 2003.**

Several B.C. First Nations have already begun intensive studies on their communities *current and past use of marine resources, cultural heritage, traditional scientific knowledge, and other terms.* These studies are being undertaken so that each First Nation knows exactly what its members want to protect, should the governments decide to open up the Pacific Coast for Offshore Petroleum Production.

## **B.C. FIRST NATIONS INTERESTS IN SEA ENVIRONMENT AND ECONOMY:**

### **Coastal:**

Coastal First Nations are very concerned that there be a healthy marine economy so that their communities can grow and develop, using resources and access that has sustained them for thousands of years. They express direct concern about the possible effect environmental impacts could have on both their access to the resources of the sea, and to their ability to make a living from the ocean.

### **Interior:**

Interior First Nations are also concerned that the marine environment that contributes to the health of the fish stocks, which also sustain their communities, is maintained. Interior First Nations are also concerned that the various modes of transportation which move petroleum products from the ocean inland to the consumer, do not affect local fisheries habitat, or impact on any cultural heritage sites.

## **COMMON INTERESTS ABORIGINAL AND NON-ABORIGINAL COMMUNITIES**

When Offshore Oil and Gas development and production is being considered, the local communities have a strong interest in the potential benefits to their community economies.

In other jurisdictions, where major offshore fields have been developed there have been some benefits and some problems for adjacent communities. Generally however there have been increased economic activity, but often limited new jobs for local residents. Offshore Oil and Gas work is highly technical, and the workforce is skilled and mobile. Consequently most benefits accrue to those involved in providing supplies, transportation and lodging to this group of skilled workers. This is true of the Oil and Gas industry generally, not just Offshore.

### **Opportunities for First Nations:**

Although much work in the Petroleum Industry is highly skilled, there are First Nations individuals and businesses directly involved and benefiting financially. There are few workers on site in on Offshore production, yet a wide range of indirect jobs are created by the industry. The industry requires suppliers of all kinds, housing, transportation, compressor station operators, boat operators, plant staff, maintenance workers and many kinds of office, accounting and administrative workers.

## **PERMITS, AGREEMENTS AND RELATED PROCESSES**

### **Oceans Act - Permits and Planning.**

The Federal Oceans Act (1997) provides a legislative framework for all activities which may be undertaken in Canada's Oceans. The legislation has a number of provisions which come into play when consideration is given to lifting the moratorium, since it specifically covers a number of areas which were not regulated or managed specifically when the 1984-86 review was underway.

In addition, there are plans for Oceans Act Marine Planning and Marine Protected Area activities in the North Coast and Queen Charlotte Islands, and on the west coast of Vancouver Island, all areas with established offshore petroleum tenures.

The Oceans Act specifically refers to the continued protection of First Nations constitutionally protected rights in Section: 2.1(2)

## **Provincial Land Use Planning and Permitting**

The Provincial government regulates and permits land use activities in the marine fore and near shore environment. Many of these activities, such as shellfish aquaculture tenures, also involved federal permits. It is not clear how these existing interlaced regimes might also influence permitting for Offshore Petroleum activities, but there is a need to define how First Nations interests are identified and accommodated in these processes.

## **Canadian Permitting Processes for Offshore Oil and Gas:**

In Canada there are three main permitting processes which must be followed before any kind of petroleum exploration can be undertaken in the B.C. offshore. Environment

The Canadian Environmental Assessment Act and the BC Environmental Assessment Act would both apply. There is a "harmonization agreement" in place between British Columbia and Canada which could be used to create a system for review which would meet both legislative requirements.

The National Energy Board Permitting Process applies to all Energy Projects which cross boundaries in Canada. A recent example of this would be the Public Review process under the National Energy Board (NEB) which is just completed for the Gulf of Georgia Pipeline Crossing. (GSX)

## **Federal/ Provincial Agreements:**

Since both British Columbia and Canada have jurisdiction in this area, generally a Federal/Provincial Agreement is put in place to ensure that there is only "one window" for industry to go through.

On the East Coast, such an agreement was negotiated by Premier Brian Peckford of Newfoundland in order to explore and develop the Hibernia field.

At present since the Pacific Accord was not completed, there are no similar agreements between British Columbia and Canada..

## **First Nations Interests and Permitting Processes:**

Both the Federal Canadian Environmental Assessment Act and the British Columbia Environmental Assessment Act require First Nations interests to be addressed in the permitting process. However there is no requirement that First Nations interests and issues be resolved to the satisfaction of First Nation before the permits are issued. There is no First Nations veto for projects in either of these permitting processes.

The National Energy Board rules are different. The National Energy Board role is to provide a point of public review of all the other permits that are required, and when the Review Panel is satisfied that all the permitting requirements have been met, to issue its own order allowing the work to go ahead.

Although this is not sufficient for many First Nations, in the Georgia Strait Crossing NEB hearing more opportunity was given for First Nations issues to be addressed. This is a change in the NEB approach which has allowed more First Nations input and direct negotiations around addressing their concerns.

## **What Answers are Needed Now?**

### **First Nations Issues:**

Aboriginal Rights and Title in British Columbia have not yet been addressed in the context of potential discussions between Canada and British Columbia around the raising of the Moratoria. Each First Nation group will address this situation as they chose, but at present this has not been addressed..

### **Environmental Issues:**

Numerous studies have been undertaken identifying environmental issues that must be addressed before Offshore Oil explorations could begin in BC Coastal Waters. The three main areas of concern remain:

Effect of underwater seismic testing on marine organisms including fish, sea mammals and plant populations

Effect on marine organisms and water quality of release of drilling muds and contaminants into the deep water marine environment.

Existing Deepwater Offshore Oil and Gas technology has not been tried in areas where the marine weather conditions are as extreme as they can be in the North Pacific. More research needs to be done particularly in relation to the stability and security of deepwater drilling and production technology that would be used in the North Pacific.



**North Sea Platform at Work**

## **First Nations Experiences with Related Negotiations:**

### **Treaty Eight in Northeastern B.C.**

In British Columbia existing oil and gas developments occur in the northeast corner of the province. In this part of B.C. Treaty Eight First Nations have made agreements with the Province through the Oil and Gas Commission in Fort St John, and have been involved with various industry-oriented economic activities.

In BC and Alberta Treaty Eight was signed between First Nations and the Federal Government between 1898 and 1910 covers much the same area as the petroleum deposits in both Alberta and B.C. In Alberta the First Nations in Treaty Eight have lost some of their rights through the application of the Natural Resources Transfer Act which was put in place before the Constitution protected Treaty Rights in 1982.

Currently there is some dissatisfaction within Treaty Eight First Nations both in Alberta and BC around the protection of the "continued vocation on the land" which can be more difficult while exhaustive industry activity is going on in the bush.

## **First Nations in the Canadian North – Negotiating with Canada.**

North of the 60<sup>th</sup> parallel, the three Territories – Yukon, Nunavut and the Northwest Territories did not have the same status as provinces. Until recent negotiations, all three areas had elected Territorial Governments but the land and subsurface resources was owned and managed by the Federal Government. The Northern Program of the Department of Indian and Northern Affairs is the responsible Federal Department.

As Land Claims negotiations progress in the north the question around subsurface rights of all kinds, not just petroleum resources, have been a thorny issue. There have been a number of different approaches to this problem. As First Nations and Territorial Governments worked to develop agreements and legislation to transfer various aspects of the Federal jurisdiction into local northern control, several different models have emerged.

The terminology used in these northern agreements is slightly different that that used in B.C. Treaty Negotiations, and these differences can be important when these documents are compared with the current B.C. parameters for negotiation..

### **Yukon Territory**

In the Yukon, the First Nations initiated Land Claims negotiations over twenty years ago. The Yukon Umbrella Agreement was signed by all Yukon First Nations in 1973. The Umbrella Final Agreement covers a number of key elements in Treaty, but it also leaves each individual First Nation to develop and negotiate other elements directly with the Federal and Territorial government.

As each First Nation ratifies its Memorandum of Understanding (MOU) with the governments, that agreement functions as an annex to the Umbrella Final Agreement. Essentially the two together, the Umbrella Final Agreement and the First Nations MOU's, form a single unified Land Claims Agreement for each First Nation. These Land Claims Agreements provide the same "certainty" to governments as do modern "Treaties" negotiated in British Columbia.

As the First Nations were engaged in Land Claims negotiations, the Yukon Territorial Government was also in negotiations to transfer ownership, jurisdiction and control over its land base from Ottawa to Whitehorse. These negotiations culminated in the passing of the Yukon Act through Parliament and the Senate in January 2002. Several Yukon First Nations, who had not concluded their MOU's tried to block the passing of this legislation, on the grounds that it would transfer jurisdiction from Canada to the Yukon Territorial Government prior to their negotiations being completed.



Yukon First Nations retain sub-surface rights only under Settlement Lands which are confirmed under the Land Claims agreements. These are small parcels, similar to Indian Reserve lands in B.C.

### **Northwest Territories and Nunavit**

The eastern and western Arctic are very different places. They are the home of many different peoples, with different languages and culture. Although the Federal Government has been engaged in Land Claims or Treaty Negotiations with these First Nations since the time of the Berger Report on the Mackenzie Valley Pipeline in 1972, there are major differences between the agreement reached with the Inuit (Inuvialuit Final Agreement) and those reached with other aboriginal groups, such as the G'wichin, and Sahtu.

A key area for these all these Aboriginal communities has been discussions both on subsurface rights including diamond and petroleum resources, and on the impacts which any part of petroleum exploration, development, processing and transportation could have on the land, their aboriginal interests, and their way of life.

There have been several approaches taken, including economic development arrangements like the Inuvialuit Corporation, an outgrowth of the Inuvialuit Final Agreement, or the most recent Self Government arrangements made with the Dogrib earlier this year.

### **First Nations on the East Coast...why their situation is different**

There are two distinct groups of aboriginal people on the east coast of Canada the Inuit in the north, and the M'iKmaq and Maliseet people. Their cultures and history are distinctly different. Their historic relations with incoming governments have also been different.

#### **Inuit of the Eastern Arctic:**

Live in Northern Quebec and Labrador as they always have.

#### **Non-Inuit Maritime People: Beothuk**

These were the original indigenous inhabitants of what is now Newfoundland. The last Beothuk person died in St. John's Newfoundland in 1841.

#### **M'iKmaq and Maliseet:**

M'iKmaq and Maliseet live in their traditional areas, in what is now New Brunswick, Nova Scotia, Prince Edward Island and Maine, in the United States.

The M'iKmaq also spent time on the islands in the Gulf of St Lawrence, and seasonally in what is now Newfoundland. Once the Beothuk were gone, more and more M'iKmaq established themselves permanently in Newfoundland. Conne River First Nation in Newfoundland are their descendants.

### **Old Treaties on the East Coast:**

From the 1720's until 1761, both Britain and France signed agreements with the local aboriginal people living in what are now Nova Scotia, New Brunswick, Prince Edward Island and Maine. The Treaties of Peace and Amity entered into by the British Crown established that the British would respect the rights of the aboriginal people to continue living as they were, making a moderate livelihood, and that the aboriginal people would not attack the settlers or the government.

These Treaties did not surrender any land or resources to the Crown, and these provisions have been withheld by the Courts, most recently in the Marshal fishing case, and Bernard, a forestry case heard in the lower court.

Marine and foreshore resources were considered when these Treaties were signed, but the question of the extent of the aboriginal title into the water has not been successfully brought forward. When the Sable Island offshore tenures were to be developed, a case was launched, but was unsuccessful.

Given the detailed wrangling that went on both in negotiations and in the courts over the ownership of the offshore areas around Newfoundland, there is a significant set of jurisprudence which would have to be overturned in order for the M'iKmaq cases to be successful.

The Federal Crown always has the option of arguing that since much of the actions which declared the Atlantic seabed to be in Federal jurisdiction occurred before the Constitutional protection for aboriginal and treaty rights was proclaimed in 1982, that those actions, undertaken by Canada with the clear intention of extinguishing all seabed rights other than their own, had the effect of removing any residual aboriginal interest the M'iKmaq or Maliseet might have held.

### **A Modern Treaty - The Labrador Inuit Treaty Settlement Agreement**

The Labrador Inuit signed their Final Land Claims Agreement this year. This agreement is not significantly different than other negotiated agreements with Canada, except for Chapter 6 which relates specifically to the development of Offshore Petroleum projects. Chapter 6 is included as an appendix to this document.