Industry PROFILE

An integrated approach to nurturing industry development and NWT wealth

Oil and Gas

Oil and gas is the Northwest Territories' (NWT) second largest export. The sector produces export goods and creates direct jobs as well as jobs in the service and construction sectors. Incremental gas development is moving north from Alberta, but full scale development depends on development of a major gas pipeline to southern markets.

The oil and gas industry generates significant wealth for the NWT. It produces export goods and creates direct jobs as well as jobs in the service and small business sectors. The industry's potential remains largely untapped as much of the NWT is yet to be explored.

Petroleum exploration and operations of wells, gathering systems and processing plants provide job and business opportunities to both large and small NWT communities alike.

Petroleum resource development activity in the NWT is characterized by the following:

- Northern employment with relatively high wages, at minimal cost to Government;
- A technologically advanced industry – skills learned and used in the petroleum sector can be applied in other sectors of the NWT economy;
- A capital intensive industry; and
- An industry that occupies and uses as little land as practically possible.

The industry consists of two components: the *upstream* or producing sector and the *downstream* or transmission, refining and marketing sector. Representatives of the upstream sector include oil and natural gas exploration and developing companies and associated service companies, which find, drill for, and produce petroleum. The downstream is composed of pipeline systems, gas distribution utilities, petroleum refineries, oil product wholesalers, petrochemical companies and service stations, which transport, refine and sell these commodities.

But we know from previous studies that exploration activity provides significant direct employment (albeit seasonal), and is a critical growth factor in many service and retail sector businesses (e.g., aircraft charters, catering, accommodations).

Drilling for gas in the NWT. (RWED, GNWT)

As petroleum exploration proceeds, activity becomes increasingly more focused and, if successful, may lead to the establishment of an operating well, gathering lines, processing facilities and transmission lines. The petroleum sector includes producing wells plus the services and support they require. Petroleum activity provides direct and indirect jobs and revenues, such as royalties and taxes.

The two parts of the industry (i.e., exploration and operations) are interdependent. Factors that adversely affect petroleum exploration will lead, in the future, to a reduction in petroleum production. Increased petroleum production attracts investment and increased exploration. Both industries affect other economic sectors such as construction and retail sales.

Oil Rig site in the Deh Cho Region of the NWT (RWED, GNWT)

Brief History of Petroleum Exploration in the NWT

Although the North is thought of as a frontier for petroleum exploration and development, it has actually experienced a number of cycles of interest dating back more than a hundred years.

Petroleum exploration in the NWT predates the arrival of Europeans in the Arctic. For centuries, the aboriginal people of the Mackenzie Valley have known about and used hydrocarbons from oil seeps along the Mackenzie River, likely for sealing the seams of birchbark canoes. Limited trade for this commodity may have taken place.

As European explorers made their way into the NWT, they gained knowledge of the occurrences of oil seeps and their significance to the people of the Mackenzie Valley. Alexander Mackenzie was shown an oil seep near the present-day site of Norman Wells during his travels. Many of the fur traders to the region noted occurrences of seepages or bituminous sands or shales.

T. O. Bosworth, a respected consulting geologist of the time, was influential in spurring practical, economic development of the Norman Wells area. On a trip through the NWT in 1914, he examined many of the known oil seeps and the surrounding rock formations. Imperial Oil geologist T.A. Link selected the first drilling location in 1919 in an area that had been recommended by Bosworth.

Drilling commenced early in the summer of 1920 and an oil-bearing formation was struck at 783 feet. Imperial Oil consolidated their land position in the Norman Wells area by staking many claims the next spring. Development of the Norman Wells field proceeded slowly. Imperial Oil built a small refinery in 1933 to serve local needs for petroleum products.

As World War II intensified, the United States became fearful of an attack on Alaska by the Japanese. To ensure a secure inland supply of oil to support defence operations in Alaska, the American and Canadian governments signed the Canol (Canadian Oil) agreement. The agreement called for an expansion of the Norman Wells field and construction of a 600-mile pipeline to a refinery in Whitehorse, Yukon.

From Whitehorse, oil traveled along a second pipeline to the U.S. army base in Fairbanks, Alaska. Drilling development of the field accelerated rapidly and production was increased. At the height of operations, the Canol pipeline carried 3000 barrels per day.

After the war, the pipeline was dismantled and re-cycled (for other pipelines) in Alberta. The pipeline right-of-way remains to this day as a pathway used by hikers and mountain-bikers to travel deep into the interior of the NWT and Yukon.

Early Re-Supply in the NWT (RWED, GNWT)

By the mid-fifties, exploration efforts were underway in the Cameron Hills area and directly southwest of Great Slave Lake. Other companies explored on the Liard Plateau and in 1966, Amoco Canada discovered the Pointed Mountain gas field.

Concurrent with the activity in the southern NWT, exploration was ongoing in the Mackenzie Delta, with the first successful onshore oil discovery occurring in 1969 on the Tuktoyaktuk peninsula. This was closely followed by a significant gas discovery at Parson's Lake in 1970.

Exploration activities in the Mackenzie Valley accelerated throughout the 1970s, driven by high prices for crude oil.

Exploration for petroleum resources was set back after the conclusion of the Berger Inquiry, which recommended a 10-year moratorium on the construction of a Mackenzie Valley Pipeline to bring Mackenzie Delta natural gas to southern markets.

Despite the Berger moratorium, activity in the Mackenzie Delta and Beaufort Sea continued into the mid-eighties. This was largely due to the National Energy Program and high energy prices throughout the 1980s.

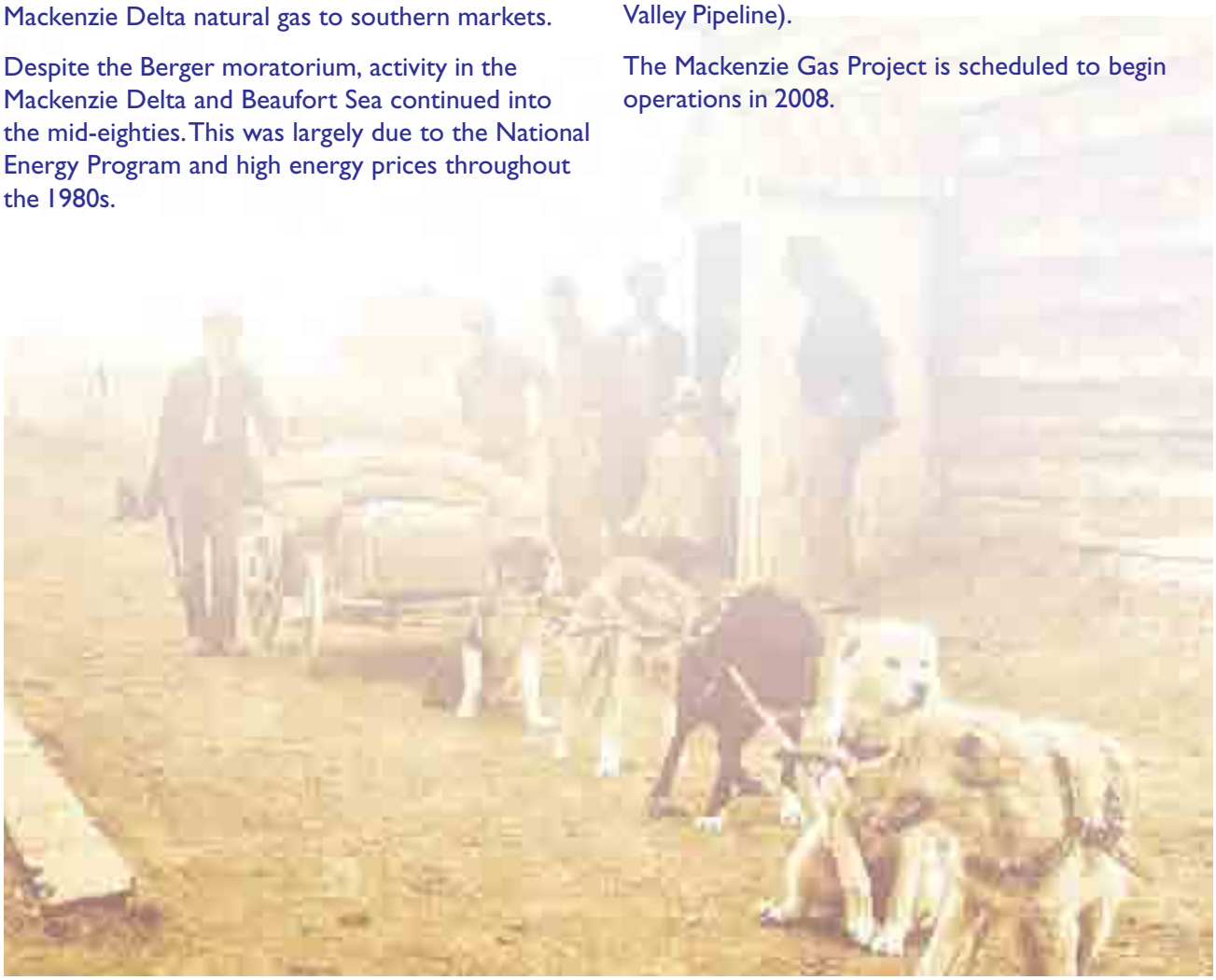
In 1985, oil prices declined dramatically and, as a result, exploration for petroleum resources declined.

In 1984, the Inuvialuit finalized their land claim, followed by the Gwich'in and the Sahtu in the early 1990s. This meant that large areas of prospective lands in the NWT were now open for exploration.

Steadily rising gas prices since the late nineties have created renewed interest in the NWT, particularly since most NWT gas fields are gas-prone. This has set the stage for renewed interest in a Mackenzie Valley Pipeline.

In June, 2003 the Producers Group, representing the interests of the 3 onshore gas fields in the Mackenzie Delta, filed a Preliminary Information Package with the National Energy Board, starting the regulatory process for approval of development of the 3 gas fields, associated gathering lines, process plant and a transmission line (i.e., the Mackenzie Valley Pipeline).

The Mackenzie Gas Project is scheduled to begin operations in 2008.



NWT PETROLEUM INDUSTRY

Total natural gas production from the NWT was 980.4 x 10^6 m^3 in 2003, 18 percent lower than the previous year. Total oil production was 1283.1 x 10^3 m^3 (8.1 million barrels). Ninety-eight percent of this production was from the prolific Norman Wells oil field and the remainder from production brought on-stream in the Cameron Hills area.

The value of oil and gas revenues from NWT producing wells in 2003 was $501 million.

At the end of 2003, there were six producing oil and natural gas fields, namely:

- The Pointed Mountain Gas field near Fort Liard in the Deh Cho;
- The Cameron Hills oil and gas fields on the NWT-AB border in the Deh Cho;
- The Ikhil gas field near Inuvik; and
- The Norman Wells oil and natural gas fields near Norman Wells in the Sahtu.

There were 40 exploration licences active in the NWT at the end of 2003. This includes those exploration licences for which significant discovery licences have been applied pending the National Energy Board's (NEB) decision on the application for significant discovery declaration(s) based on the exploratory work conducted.

Checking the Bit, (Community Mobilization)

Map of Minerals and Highways in the NWT (DOT, GNWT)

Central Mackenzie Valley (Norman Wells)

Norman Wells is the fourth-largest producing oil field in Canada with estimated remaining reserves of 150 million barrels. Commercial production at Norman Wells began in the 1920s, but production then was small and for local use only.

In the 1940s, Norman Wells was viewed as a strategic petroleum reserve as a source of supply for the Pacific war effort. For a short period, the oil was shipped through the Canol pipeline to Whitehorse and then onto Skagway, Alaska. Following the war, the demand for Norman Wells oil diminished and the Canol pipeline was abandoned.

In the early 1980s, Imperial Oil decided to develop the Norman Wells field to full capacity. Interprovincial Pipeline Ltd., which became Enbridge Pipelines in 1998, agreed to build and operate the pipeline from Norman Wells to Zama, Alberta. In 1985, the first barrel of oil was shipped down the Norman Wells pipeline and into the major oil transmission lines of southern Canada.

Since that time, Imperial has shipped about 197 million barrels of sweet, high-grade crude to southern markets. Today, Norman Wells produces approximately 23,200 barrels per day[1] from 180 producing wells and 170 water injection wells, with production expected to continue, on a declining basis, until 2020.

In 2003, petroleum exploration activities were conducted as follows:

- Two exploratory wells were drilled in the Colville Hills area by Canadian Natural Resources;
- Paramount and Apache drilled two exploratory wells on Sahtu private lands east of Colville Hills; and
- Apache conducted two extensive seismic programs.

Oil Rig Worker in the Sahtu (RWED, GNWT)

Fort Liard Gas Fields

The Pointed Mountain gas field in the Deh Cho region of the NWT has been a steady source of natural gas since 1972. By year-end 2003 cumulative production reached 8.6 billion cubic metres.

Pointed Mountain is a natural gas discovery made by Amoco Canada in 1972, northwest of Fort Liard. There are a number of companies with interests in the Pointed Mountain gas fields including: Canadian Forest Oil, Anadarko, Paramount, Canadian Natural Resources and Chevron. The gas is transported to market through Westcoast Energy's pipeline system. In 2003, a significant discovery licence was issued to Paramount in the Fort Liard area from lands formerly held under an exploration licence.

The Fort Liard area saw a major increase in exploratory drilling with 11 exploratory and two development wells drilled in 2003.

The Fort Liard area saw a major decrease in seismic acquisition programs in 2003.

Ikhil Gas Field (Inuvik)

The Ikhil gas field is operated by AltaGas. The field is located 50 kilometres north of Inuvik. It was discovered in 1983 and remained undeveloped until 1999 when two wells were developed to generate electricity and use as fuel for the town of Inuvik. Gas is shipped to Inuvik through a buried 120mm pipeline. Production in 2002 was 15.2 x 10^6 m^3 (0.54 billion cubic feet (bcf)).

Cameron Hills Pipeline(RWED, GNWT)

Cameron Hills

Oil and gas discoveries in this area resulted from a phase of exploratory drilling in the late 1980s and early 1990s. This field has been the object of ongoing exploratory and development drilling programs by Paramount. In 2003, six new wells were drilled and two new production licences were issued, bringing to 6 the number of production licences issued in the Cameron Hills area in the last two years.

Gas production from the field commenced in March 2002. By the end of 2003, four wells were producing gas, although one well was shut-in in November 2003. Annual gas production was 98.8 x 10^6 m^3 (3.49 bcf).

Sustained oil production from the field commenced in March 2003, from 4 wells. This new oil was mingled with gas in a pipeline running from Cameron Hills to a processing plant just south of the NWT/ Alberta border.

Mackenzie Delta/Beaufort Sea

There are currently no producing wells in the Beaufort Delta area.

Three new exploratory wells were drilled in the Mackenzie Delta in 2003 and Chevron Canada announced a gas discovery at its North Langley K-30 well. The well encountered commercial quantities of natural gas flowing 510 x 10^3 m^3 on a restricted choke. Petro-Canada and Devon drilled the Nuna I-30 well just north of the Parsons Lake field and Devon drilled Itinginkpak F-29.

After an intensive effort to acquire seismic data in 2002, geophysical operations in the Delta were cut back dramatically in 2003. Only two programs were run compared with 15 the previous year. Encana undertook one two-dimensional program on its exploration licence.

Exploring in the Artic for Gas (RWED, GNWT)

REVENUES

Exploration expenditures provide some indication of the revenues generated by the exploration industry. Fees associated with the Rights Issuance process under the federal Canadian Petroleum Resources Act generate revenues for the federal government. The revenues may be under-estimated, as they do not include all transactions.

The federal Canadian Petroleum Resources Act sets royalties for petroleum production. The royalties are profit-based and therefore sensitive to operating costs and commodity prices.

The legislation and regulations under which the petroleum industry operates in the NWT are set by and controlled by the federal government. Many of the issues that the petroleum industry in the NWT faces are under the jurisdiction of the federal government. The GNWT continues to work with the federal government, representing the northern petroleum industry to DIAND to ensure the federal government recognizes and addresses the issues and concerns that affect our economy.

Oil and gas revenues collected from 1998 to 2003 are shown in the table below:

	Royalty	Rentals	Insurance/ Registration Fees	Work Deposit Forfeitures	Total
1998	$ 6,967,456	$ 7,818	$ 2,052	$ -	**$ 6,977,326**
1999	$ 7,138,169	$ 3	$ 16,766	$ 289,874	**$ 7,448,054**
2000	$ 13,433,264	$ 2,800	$ 51,589	$ 1,342,385	**$ 14,830,038**
2001	$ 24,656,709	$ 993	$ 12,733	$ -	**$ 24,670,435**
2002	$ 21,751,369	$ 2,621	$ 17,800	$ 2,392,150	**$ 24,163,940**
2003	$ 24,492,180	$ 978	$ 5,471	$ 954,812	**$ 25,453,441**

Furthermore, the NWT is currently moving towards devolution, which will eventually lead to the Government of the Northwest Territories assuming the role of landlord in respect of non-renewable resource development in the NWT.

GLOBAL AND NATIONAL TRENDS

The NWT is competing for exploration and investment dollars with jurisdictions in Canada and countries around the world.

In 2001, Canada was the fifth-largest energy producer in the world, behind the United States, Russia, China and Saudi Arabia. In this year, about 31% of Canadian energy production was exported, mostly to the United States. Besides being an important employer in Canada, the oil industry provides Canada with an abundance of energy reserves that allow Canada to be a significant net exporter of oil and gas, mostly to the United States.

Drilling at night (RWED, GNWT)

Oil

The oil industry is the most globally integrated industry in the world. Oil production from the NWT must compete with production from around the world.

On a global basis, the Middle East is the largest producer of oil with 28% of total world production in 2002. In this same year, North America accounted for 20%, with the remaining 52% coming from other nations around the world. OPEC member countries together accounted for about 38% of world production in 2002.

In 2003, Canada's total oil production averaged an estimated 3.1 million barrels per day (bpd), an increase of 7% over 2002. The country's oil production has been increasing since 1999, as new oil sands projects and production off the coast of Newfoundland have come on-stream.

Overall, oil sands production is expected to increase significantly and to offset the decline in conventional crude oil production, becoming Canada's major source of oil supply.

The U.S. Energy Information Administration has increased its projected demand for crude oil internationally by 220,000 barrels per day to 79.9 million bpd, while the Independent Energy Agency calls for 2.0 percent gains in demand for both 2004 and 2005—a total 3.5 million bpd growth rate against 2003. The agencies linked the increased demand to developing countries highlighted by a surging Chinese economic expansion, and an improving economic outlook.

Considering this, Canadian oil companies will seek out conventional light crude oil reserves. To do so, as in the past, companies will begin to look beyond the mature plays of Alberta and into the untapped potential of the NWT. With the international oil price remaining strong and exploration once again taking off, the NWT may be on the verge of another upswing in petroleum activity.

Natural Gas

With significant increases in the price of natural gas over the last several years, Canada's natural gas industry has experienced a resurgence in activity and renewed interest in the Mackenzie Gas Project. As of January 2004, Canada's proven natural gas reserves were estimated to be 59.1 trillion cubic feet (tcf). Canada produced about 6.6 tcf of natural gas in 2002, making it the world's third largest natural gas producer, after the United States and Russia and the second largest natural gas exporter after Russia. Canada's natural gas exports go almost exclusively to the United States. Canadian natural gas consumption, 2.9 tcf. in 2002, is projected to grow in coming decades, largely for use in electricity generation and in production of oil sands.

The NWT is well positioned, with quality oil and natural gas assets, to realize opportunities from Canada's rapidly expanding oil and natural gas sectors.

Pipelines

Pipelines are necessary to transport Northwest Territories gas and oil to western Canada and then on to eastern Canada and U.S. markets. There are two major oil pipeline operators in Canada, both of which own and operate pipelines in the NWT. The first is Enbridge Pipelines Incorporated, which operates a 9,000-mile network of piping and terminals, delivering oil from Edmonton, Alberta to points in Eastern Canada. The other major Canadian pipeline operator is TransCanada Pipelines (TCPL), which delivers oil mainly from Alberta west to refineries and terminals in Vancouver.

INGREDIENTS FOR SUCCESS

The petroleum industry has been, and will continue to be, one of the driving forces behind the NWT economy. It provides direct jobs both in exploration and at operating mines. Petroleum and exploration activity affects the regions in the Mackenzie Valley. Petroleum exploration and development will be a source of growth in the next ten years in the small business and service sectors and will likely provide numerous direct and indirect business and employment opportunities.

There is excellent potential for increased small business development in association with the petroleum industry as the Mackenzie Gas Project is brought on-stream and exploration activity continues.

Oil Rig Workers in the Deh Cho Region(RWED, GNWT)

NATURAL RESOURCES

There are known gas and oil reserves within the Western Canada Sedimentary Basin (WCSB), which extends into the Mackenzie Valley of the NWT. The geology of the WCSB is poorly known and the prospectivity of the territory is extremely high.

On March 15, 1999 the Department of Resources, Wildlife and Economic Development (RWED) of the GNWT, the Geological Survey of Canada (GSC) and the Department of Indian Affairs and Northern Development (DIAND) signed a Memorandum of Agreement on Government Geoscience Program Coordination in the NWT. Under this agreement, a number of areas of cooperation were defined, including the support of a common geoscience office. This office is known as the C.S. Lord Northern Geoscience Centre. Through the Centre, RWED, DIAND and the GSC conduct geoscience in the NWT.

The Centre has 18 staff, seven of which are RWED employees. The Centre runs programs related to both mining and petroleum geoscience, and provides public access to DIAND's assessment report, diamond drill core and sample collections.

Scientific programs at the C.S. Lord Centre for 2004 include:

- A web-enabled compilation of subsurface well picks for the NWT;
- An evaluation of oil and gas potential for the Deh Cho Land Use Planning Committee; and
- Development of an atlas-like and basin-by-basin compilation of the known status of the NWT's petroleum geology for industry and northern clients.

Financial support to the C.S. Lord Centre in 2003/2004 was split approximately 20/80 between RWED and DIAND.

HUMAN RESOURCE DEVELOPMENT

Wide spectrums of direct and indirect jobs are associated with the oil and gas industry. The level of training ranges from none or minimal for rig hands, to apprenticeships and trades certificates, to advanced university degrees. Petroleum and pipeline operations require skilled personnel from various disciplines, including rig operators, heavy equipment operators, technicians, engineers, welders, clerks and cooks. Petroleum exploration activity also requires similarly diverse personnel but is heavily reliant on skilled professional geologists and geophysicists.

The percentage of Northerners employed at northern oil and gas operations has historically been very low.

Courses are currently being developed in association with the northern colleges and industry to provide the necessary training for Northerners to take advantage of opportunities associated with the Mackenzie Gas Project.

Benefits agreements required under the Canadian Oil and Gas Operations Act provide a means to improve both training and employment by focusing on addressing training needs and ensuring the company is aware of the available labour force and is committed to hiring locally.

Advancing current exploration projects to production is necessary to ensure the number of jobs available in NWT oil and gas operations remains steady or increases in the coming decades. Petroleum and petroleum exploration activity require the services of other sectors, which produces additional spin-off jobs. Transportation services such as trucking and airline companies benefit, as do construction firms and catering business.

Exploration activity contributes to the GDP by employing Northerners and supporting the service sector.

Exploration work requires a variety of skills. (RWED, GNWT)

CAPITAL AND INVESTMENT

Neither exploration nor production in this sector requires direct government investment. The source of investment capital for much of the exploration is private investors through the stock markets and other financial instruments.

Oil Rig at Cameron Hills(RWED, GNWT)

The main factors that will stimulate continued interest from stock markets investors are:

- Competitive tax and royalty regimes;
- Regulatory environment;
- Stable political environment;
- Knowledge of the region, in terms of geological information; and
- General operating environment.

Generally, once resources have been identified, capital is required to develop the infrastructure (e.g., gathering lines, transmission lines, etc.) that is required to extract the resource and ship it to market. Capital is attracted to businesses servicing exploration and production activities.

The growth of the service sector and the jobs directly in exploration will only continue as long as the industry's exploration efforts are rewarded. When a resource is proven economic, the company must be able to proceed to development along a structured permitting process, free from time delays and interference. If successful exploration does not lead to development, exploration investment will shift from the NWT to other jurisdictions in Canada and around the world. Petroleum investment funding leaves a jurisdiction very quickly but often takes a long time to return.

PUBLIC INFRASTRUCTURE

There are numerous oil and gas pools in the NWT that, with the appropriate infrastructure (i.e., pipelines, roads) could become economic and eventually become producing wells. In addition, lack of infrastructure increases the cost of exploration programs in the NWT. As evidenced by the cost of drilling in the Beaufort Delta, oil and gas operations in the NWT face substantial costs in terms of mobilizing drilling equipment.

This means that for oil and gas pools in the NWT to be considered economic they must contain much larger volumes of material than pools that might be considered economic elsewhere. This increases the exploration risk in the NWT.

MARKET AND SALES

The sale of products produced in the NWT is based solely on world commodity markets. World economic conditions and the amounts of those commodities produced in other countries affect final prices, which can fluctuate widely.

Commodity prices are a risk factor which must be taken into consideration with other risk factors, and potential benefits, of developing oil and gas projects in the NWT or anywhere else in the world.

Oil Rigs in the NWT(Microsoft)

REGULATION AND TAXATION

It is critical to the future of the petroleum industry in the NWT that the NWT be seen, by the global petroleum industry, as a jurisdiction that is open to petroleum exploration and project development. The cost of regulatory and permitting processes in the NWT can be substantial and currently influence petroleum investment in the territory, as some companies perceive the exploration risk in the NWT to be greater than elsewhere in Canada.

Currently, the petroleum industry perceives the political climate in the north to be hostile toward petroleum development.

Top of an Oil Rig. Photo (RWED, GNWT)

The petroleum industry is also concerned with the increased time required for permitting and approval of mineral projects. It is critical for the petroleum industry to have decisions about exploration and development made as expeditiously as possible due to the following:

- The cost of capital – the opportunity cost of capital being tied up in one project;
- No return on investment in exploration until a well is brought into production and the natural gas or oil is shipped to market;
- The fleeting interest of investors; and
- The cyclical nature of commodity prices.

Land use policies and regulatory initiatives that effectively preclude industrial activity are adversely affecting the land base that the petroleum industry has available to explore.

Maintaining a large land base for exploration maximizes the chance for exploration success, although the land eventually required for natural gas or oil production is very small. Decisions to protect lands are often made without any information about mineral potential. Even where mineral resource assessments are carried out (e.g., in making decisions about national park boundaries), these appraisals are only pertinent within prevailing market conditions and the level of geoscience technology expertise that existed at the time of the assessment.

Land access policies that permit multiple uses of the land in order to maximize options and opportunities for NWT communities and regions in the future should be pursued. This will assist in creating an attractive business climate. The process must involve northern communities, thus ensuring that they become more involved and more responsible.

The GNWT, in partnership with DIAND, is leading and implemented a Protected Areas Strategy (PAS) for the NWT. The petroleum industry is concerned with the impact of the Strategy on its ability to explore in the NWT. It is important that the application of the NWT PAS is clear to the petroleum industry in terms of exploration and mine development. Petroleum resource potential should be one of the criteria used to identify and select Protected Areas. Expropriation of petroleum rights should only be considered as a last resort. If expropriation is required, it is essential that adequate and full compensation be provided to stakeholders.

The petroleum industry is concerned with the investment climate in the NWT. It is concerned with the political stability (division, devolution) and unsettled land claims. A poor investment climate discourages industry activity. The industry requires positive indications that investment in the NWT is welcome and will be protected in the future.

Despite a changing political structure in the NWT, petroleum exploration and operating companies are assured services here that are often not adequate in other parts of the world. These include legal stability, a sound banking system, an eager service sector and an excellent education and health system for workers and their families.

Oil and Gas exploration crew at work in the NWT(RWED, GNWT)

CONCLUSION

Unlike other sectors of the economy, little or no government incentives or financial support is required for most petroleum operations. However, the industry does require consistency in the application of regulations, stability in land access and tenure processes, a modern geological database and a positive investment climate.

Successful exploration projects must be allowed to develop into producing wells and fields. This will not only provide the substantial economic benefit of more producing fields, but also encourage additional exploration, thereby helping to promote the sustainability of the mineral sector.

The following aspects of the NWT petroleum industry are positive factors and will bring about future growth for the residents of the NWT:

- Excellent geological potential;
- Job creation, both direct and indirect in both large and small communities;
- The industry can offer a wide range of employment types (i.e., unskilled to highly skilled and technologically advanced) to those people wanting to seek training and enter the petroleum industry;
- Creation of social and physical infrastructure for future development and long term use;
- Generation of wealth (exports, revenues, income, etc.);
- Growth potential for northern businesses and services which support the petroleum industry; and
- Occupation of a small area of land for limited time; and requirement of little government financial support or investment.

While there is every reason to be optimistic about the prospects for oil and gas exploration and development, there are a number of constraints that currently limit the full realization of our potential:

- Poorly developed resource/geoscience database;
- Complex regulatory environment;
- Lack of infrastructure;
- Uncertainty of land access and tenure; and
- Low education and skill levels in the NWT work force.

(Footnotes)

[1] http://www.eia.doe.gov/emeu/cabs/nonopec.html

Drilling on an artifical island in the NWT (RWED, GNWT)