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Two-step process

Strategic resolution of policy, environmental and socio-economic impacts in Canadian Arctic diamond mining: BHP's NWT diamond project

William J Couch

BHP's Northwest Territories Diamond Project (EKATI™) illustrates how a two-step process consisting of an environmental impact assessment review followed by parallel permitting and negotiated agreements resolved an array of interdependent policy, environmental, social-impact, legal/administrative and economic issues in the remote Canadian Arctic. The process bridged problems of intercultural communications between a multinational corporation, four small Aboriginal groups and officials working in a period of transition within government. The proposal proceeded because of participants' good faith, good science, public consultation, sound process management, mitigable impacts and shrewd ministerial handling.

Keywords: environmental impact assessment; diamond mining; Canadian Arctic; public consultation; Aboriginals

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THE CASE OF Broken Hill Proprietary (BHP) Co's Northwest Territories (NWT) Diamond Project illustrates how a two-step process consisting of an environmental impact assessment (EIA) review followed by permitting and negotiated agreements together resolved an array of interdependent policy, environmental, social, legal/administrative and economic issues in a remote, sparsely populated region. The participants held diverging world views and interests: a multinational corporation, four small Aboriginal groups seeking to defend their local traditional lifestyle from further threats, while benefiting from the development; and officials who were expected to resolve many questions in the face of large resource cuts.

The story's interwoven strands included: the legacy of past Canadian Aboriginal policy; the need for a rigorous EIA to protect the fragile Northern environment and fair public consultation; averting the social havoc of previous Northern boom–bust developments; addressing Aboriginal people's present and long-outstanding concerns; responding to new policy issues; building institutions to manage the sudden arrival of a mega-project; and resolving the plethora of different economic interests.

The dénouement assured that the environment would be prudently managed, Aboriginal people did benefit economically without having their lifestyle overwhelmed, precedents were created for approving subsequent diamond-mining proposals, and new policies and new institutions set in place to manage the rapidly changing Canadian North.

Research was based on primary sources, that is,

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official and semi-official publications and interviews with central players in the process, as well as the author's own sense of events as a former official in the Canadian Federal Government.

Background

Canada has in effect 'two environments': the South with a temperate climate; and the vast North above 60^0N latitude, where the severe climate precludes a large population. The Arctic region is divided into three federal Territories: the Yukon Territory, the Northwest Territories (NWT) and Nunavut.

This very large project is in the NWT, which is on the Canadian Shield, covered by thousands of small lakes, often joined by rivers. Forests cover the land up to the tree line, north of which there is tundra. The NWT has a sparse population of 39,460 inhabiting an area of 1,183,084 km^2. Aboriginal people (48.2%) play an important role in the affairs of the NWT. Most non-Aboriginals from the South live in the capital, Yellowknife (population 17,702).

The Aboriginal people belong to one of three groups.[1] The ancestors of the Indians[2] and their historic rivals, the Inuit (Eskimos),[3] migrated from Asia over the land bridge that once connected Siberia and Alaska, and then fanned out to settle the Western Hemisphere. Some speak only their own language. The Métis are of mixed European–Indian descent. The Indians who live in the vicinity of the Project are called the Dene.

Canada's Federal Government, its ten provinces and its three territories have a Cabinet form of government derived from the Westminster (UK) model. As Canadian provinces have constitutional control over many social policies, natural resources, Crown land and urban affairs, many environmental laws are provincial laws.

Aboriginal affairs fall under federal jurisdiction. Since there is not a sufficient tax base in the North to finance programmes that the provinces deliver in the South, the Federal Government has managed their delivery largely through the Department of Indian Affairs and Northern Development (DIAND).

There was a need to clarify overlapping Northern legal and administrative régimes in order to manage the approval and regulation of this complex mega-project, to create a framework for future activities, and to do justice to Aboriginal people.

Economically viable gem-bearing diamond pipes are very rare. There were only 15 such areas known in Africa, Siberia, Australia and Brazil. In a seemingly impossible search, Canadian geologists Charles (Chuck) E Fipke and Dr Stewart L Blusson criss-crossed the Arctic by foot and light aircraft for a decade looking for diamonds until they found indicator minerals near Lac de Gras in 1989. They began to stake out mineral claims and then reached an agreement with the Australian multinational corporation BHP Ltd to mine the diamonds in 1990.

BHP's NWT Diamond Project, later named EKATI™, became Canada's first diamond mine and was the first major resource development in the NWT for a number of years. This Project and two other diamond mines that have followed it (the Diavik and Snap Lake Projects) were to have a large impact on economies of both the NWT and Canada as a whole.

Canada's aboriginal policy

Terra nullius is a legal principle that invests discoverers of an uninhabited land with sovereignty and all rights and titles to it. As English-speaking people began to settle on faraway shores in the 17th century, they broadened the concept and claimed Aboriginal lands not being used in a 'civilised' way (that is, for agriculture, industry and commerce).

Between the early 19th century and 1945, Canadian policy aimed at 'civilising' and assimilating Aboriginals, that is, treating them as racially inferior wards in need of tight paternalistic control, dispossessing them of their land, relocating them on reserves to facilitate assimilation, and obliterating their languages and sense of identity. Since there was no public interest in Aboriginal policy, the Indian Affairs Branch remained a closed, quasi-colonial government unto itself. The legacy of these events remains the backdrop for all Aboriginal issues in Canada (Royal Commission on Aboriginal People, 1996)

Change began after World War II when Canadians began to perceive their own colonialism at home. In 1960, Aboriginal people received the right to vote in federal elections. However, the big turnaround began after Pierre Trudeau became Prime Minister in 1968. In 1971, the Government created the new Cabinet post of Indian Affairs and Northern Development to manage the changes.

A major vehicle for change has been the comprehensive land claim agreement. This is a modern treaty between an Aboriginal group and the Federal Government. It is a negotiated, legally binding and constitutionally protected accord. Land claims deal with the concerns of Aboriginals, governments and third parties about who has the right to own and use the lands and resources in the area designated by the land claim agreement. Agreements may include procedures for EIA and resource management. Since 1975 there have been ten such agreements in Canada. There was only one in the vicinity of the Project, the *Nunavut Land Claims Agreement* (1993).

There has been a steady devolution of financial and executive powers on to the NWT's Assembly. In 1975, the NWT Council became fully elected with a majority of Aboriginal members. The Council was soon called the Legislative Assembly (1976) and began to choose a Premier (1980). Six of the NWT's eight premiers have been Aboriginals.

Major highly publicised public EIA reviews in the subsequent years have offered yet another podium

from which Aboriginals voiced their concerns and won their national acceptance.

EIA's role in the Canadian Arctic

When considering pipeline construction down the Mackenzie Valley corridor, the Trudeau Government appointed Mr Justice Thomas R Berger (March 1974) to head an inquiry into the regional social, environmental and economic impacts of pipeline construction. The Berger Inquiry set many important precedents for EIA and general governance in the Canadian North and called for a new social contract with Aboriginal people.

Berger interpreted very liberally his terms of reference so as to have an inquiry "without walls". He held two types of hearing: formal, for experts; and informal community hearings for local people to state their concerns directly to him. He gave funds to Northern groups so they could participate on a more equal footing with industry. By arranging extensive media coverage in English and Aboriginal languages in the North and the South, he brought the issues of Northern hydrocarbon development and Aboriginal policy to the attention of all Canadians (Berger, 1977; Gamble, 1978).

The openness of Berger's procedures, the breadth of issues considered and the inclusion of all Northerners created a model that came to be expected thereafter for all future impact assessments of Northern developments, including the BHP NWT Diamond Project.

Berger's approach sprang from Canada's political culture and, in turn, significantly influenced it. Canada has a different planning tradition from Europe. In Europe, an EIA may be only one study among others that the competent authority may use when granting approval to a project. Since EIA in Canada is a planning tool and not a permitting process *per se*, Canadian practice tends to be more flexible. An EIA's content can be expanded when necessary to fill administrative lacunae and deal with a wider range of issues — notably the socio-economic impacts of large projects.

EIA has proven effective in the undeveloped and sparsely populated regions of Canada's North. By default, the EIAs of mega-projects have had characteristics ascribed to strategic environmental assessment (SEA) and social impact assessment (SIA). They have been thrust into the breech to fill gaps for policy and/or regional planning of areas larger than many European countries, and have served as a catalyst for broader government initiatives. As public participation elicits discussion of socio-economic issues and EIA reviews have on occasion been the 'only show in town', the assessment of social impacts is usually central to EIA in the North.

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Although the proposal of BHP Diamond Inc is called a "project", it has these features of SEA and SIA. The EIA identified and responded to key policy and planning issues, and led to the creation of new institutions of governance in the NWT. The NWT's area is very large — comparable to that of France, Germany and Great Britain combined, or three times the size of Japan. Lastly, even though the potential physical environmental effects were important, it was the social impacts that were central to the Project's assessment and approval (Couch, 2000a).

Project area

Geography

The Proponent's holding has an area of 3,400 km^2. It is located 300 km northeast of Yellowknife (Figure 1). Most of the planned developments are in the Koala watershed whose water flows into Lac de Gras and thence northward via the Coppermine River to the Arctic Ocean.

The project area lies in the harsh Low Arctic Ecoclimate region, where the summers are short and cool and the winters are long and extremely cold. The average annual temperature is –11.8^{0}C. In the summer, daily temperatures may reach 25^{0}C. Winter temperatures are often below –30^{0}C. Precipitation is sparse, averaging 300 mm annually and coming mostly as snow (BHP, 1995, page 23).

The EKATI™ claim is located 100 km north of the tree line in the tundra region. One third of its area is covered by 8,000 lakes. The land has continuous permafrost with 250 metre deep permanently frozen subsoil and rock, overlaid by a one metre active layer that thaws during the summer (BHP, 1995, page 23).

Diamonds are crystallised carbon formed more than 150 km below the earth's surface. Kimberlite is a very rare igneous rock, which, during a volcanic eruption, passed through the diamond-forming layer, carried the diamonds to the surface, and then cooled to form carrot-shaped volcanic cones called 'pipes'. In the Canadian North, the surfaces of soft kimberlite pipes were scraped deeper by glaciers, so that, when the glaciers receded, diamond deposits were located under small lakes. There are 136 known pipes on the EKATI™ claim block and 300 in the NWT.

Figure 1. Maps of the EKATI™ and Diavik project areas, NWT and North America
Source: BHP Diamonds Inc

Flora and fauna

The chief form of vegetation is stunted shrubs and grass tussocks. In depressions there are shrubs such as willow and scrub bush. Wetland areas have a complex of water sledges and sledge-willow communities (BHP, 1995, page 24).

The two most important mammals are the Bathurst caribou herd and the grizzly bear. The caribou herd, consisting of about 350,000 animals, lives on a range of about 250,000 km2. They winter below the tree line and in the spring migrate northwards to their calving grounds near Bathurst Inlet on the Arctic Ocean. The caribou play a central role in the physical and cultural life of Aboriginal people. About 60% of Aboriginal households get at least half their meat and fish by hunting and fishing. The caribou's harvest value was calculated to be CAN$11,200,000 annually. Its cultural value cannot be overstated (CEAA, 1996, pages 39–42, 62).

Because of its low density and rate of reproduction, the grizzly bear has been designated as vulnerable. There is extensive movement of bears in the project area (CEAA, 1996, pages 42–43).

Arctic fish have limited species diversity and slow growth rates. The lake trout population for the five impacted lakes varied from about 90 mature fish in Misery Lake, to 260 in Koala Lake, and 2,600 in Long Lake (BHP, 1995, pages 24, 32).

Participants in the EIA review

Governments in transition

A major shift in governance is occurring in the North. In the mid-1990s the Federal Government embraced the neo-liberal paradigm, which postulates that the public good can be better served by allowing market forces and the private sector to deal increasingly with a number of human activities that had hitherto fallen to government. It continues to cut funding for programmes to the public, to reduce government investment, generally to favour deregulation, and to delegate governing downward to territorial governments and Aboriginal groups.

In the North, DIAND has a shared mandate with the Government of the Northwest Territories (GNWT) for land and water management and for regulating mining, and oil and gas rights. The federal Department of the Environment (DOE) administers various environmental laws, and the Department of Fisheries and Oceans (DFO), the important federal *Fisheries Act*. The GNWT is responsible for most local matters, that is, co-management with DIAND of wildlife and forest management and fire control. The Federal Government plans to devolve to the GNWT powers to manage land and natural resources such as mining, and oil and gas.

The delegation of wide responsibilities to the small, impecunious, new entities in the North poses great challenges if they are to carry out all these new roles, even though the Federal Government will continue to provide revenue to the GNWT, and Aboriginal and other Northern bodies.

Proponent

Fipke set up Dia Met Minerals Ltd in 1983 to finance his search for diamonds. When he found indicator minerals, he began to stake out mineral claims and sought out BHP Ltd to be the operator of the project. The Proponent (BHP Diamonds, Inc) was a joint venture (signed 1990) in which BHP Ltd owned 51% of the undertaking and the Blackwater Group, 49%. The Blackwater Group consisted of Dia Met, owning 29% of the undertaking, Fipke 10%, and Blusson 10%.

BHP Diamonds Inc was a Canadian subsidiary of BHP Minerals, a business group of the Australian multinational company BHP Ltd. Prior to 2001, BHP's three principal areas of business were: mineral exploration, production and processing (principally coal, copper and iron ore); hydrocarbon exploration and production; and producing most of Australia's steel. BHP Ltd had over 35,000 employees in 30 countries.

BHP Diamonds Inc extracted the first diamonds in 1991. In 1993 it opened Koala Camp and its office in Yellowknife.

Aborginal people

Aboriginal leaders tend to suspect Southerners who set before them promises of benefits coming from large new projects, because boom–bust developments have destroyed the fabric of their fragile traditional societies, leaving despair and bewilderment, family breakdown, rampant alcoholism and adolescent suicide. Unlike the recently arrived Southerners, Aboriginal people have nowhere to return to if they do not like their lot. Still, they are torn when confronted with the money economy and chronic unemployment among their demographically young population. The younger generation has accepted the new order. Older people know that they can never return completely to their traditional lifestyle based on hunting and fishing, and that a wage economy permits them to buy rifles, boats, trucks, food and clothing to supplement their needs.

Aboriginal people have produced a new generation of educated articulate leaders. They are organised and have learned their political skills in their own national organisations, managing the NWT's machinery of government, and participating prominently in important national discussions such as the constitutional debates leading up to the *Constitution Act, 1982*, and further such debates in the late 1980s and early 1990s. They knew how to operate the levers of power in the Southerners' world by winning popular support in the media, negotiating with senior politicians and corporate executives, and tying up government and corporate plans in the courts. As this review was a good chance to get national attention for their concerns, they were determined that their voice would be heard so as to maximise their benefits.

The Project would affect the members of four Aboriginal bodies whose members speak English, one of several Athapaskan languages, or the Eskimo–Aleut language, Inuinnaqtun.

The four Aboriginal bodies are:

- The Treaty 11 Dogrib Dene live southwest of the project area and north and west of Yellowknife. In 1995, the group was negotiating a comprehensive land claim.
- The Akaitcho Treaty 8 Dene (Chipewyan Dene) live south of the project area and east of Yellowknife. It is a more heterogeneous and less structured group than the Treaty 11 Dogrib Dene. In 1995, it was negotiating a treaty on land entitlement.
- The North Slave Métis Alliance lives in the larger communities.
- The Kitikmeot Inuit Association is better organised. It had also settled its comprehensive land claim with the Federal Government — the *Nunavut*

Land Claims Agreement, which protects water quality flowing from the project area into Nunavut, and Inuit animal harvesting rights outside Nunavut.

All four groups have traditionally used the project area for hunting and fishing. It is a highly contentious region where two separate land claim agreements were under negotiation and another was being considered. BHP Diamonds Inc and government officials often had to meet separately with Aboriginal groups.

An important intercultural communication problem exists between the Aboriginals, whose world view and points of reference in discussions are rooted in traditional knowledge (TK); and Southerners, who try to impose science, and a belief in progress, rational analytical thinking, objectivity, reductionism and the Judeo–Christian ethic of human domination over nature.

TK is derived from life experience and observation by Aboriginal people. Elders and active hunters and trappers pass it on orally from generation to generation. Such knowledge is tested continually in daily living and survival, and only that which has value is handed down. TK is practical common sense based on knowing the land, the environment and the relationships among things. It is holistic and cannot be compartmentalised or separated from the people who hold it because it defines their identity.

Western scientists and decision makers have had a tendency to dismiss TK as anecdotal, non-quantitative, without method, and unscientific. Whereas western science generally excludes the humanistic perspective, holistic TK embraces language, culture, practice, spirituality, mythology, feelings, customs and even the social organisation of local communities. Science is but a small part of indigenous knowledge. Similarly, to suggest that TK is only the equivalent of science is to diminish TK's strength and breadth, which, in turn, often leads to basic misunderstandings and TK's trivialisation because it makes no sense without these contextual elements.

Having always lived off the land, Aboriginal people of the NWT have an intimate unique knowledge of the climate, land, water, and animal behaviour and plant life. During the EIA process, they stressed, "this land is ours" and said they were the "guardians" of the land, and not just "landlords" (CEAA, 1996, page 11; BHP, 1995, page 35).

The project and its impacts

Mine, infrastructure and transportation

BHP Diamonds Inc planned to mine five pipes under existing lakes. The sequence of their development would be: Panda, Misery, Koala, Panda underground, Fox and Koala underground and Leslie (Figure 2). Panda, Koala, Fox and Leslie pipes are near each other. Misery is 29 kms. to the southeast, adjacent to Lac de Gras. Seven lakes with an area of 890 hectares would be lost: five for mining, one for tailings disposal (Long Lake), and Airstrip Lake to be used as an aggregate source for construction. After the open pits were exhausted, an underground mine at Panda would be constructed. It would last 5 years. There would then be a second underground mine at Koala.

The ore would be processed at a processing plant near the Koala pit that would handle 9,000 tonnes daily, and, after ten years, 18,000 tonnes. Ore would be crushed and diamonds separated from the ore by physical rather than chemical means (BHP, 1995, pages 14–15).

BHP Diamonds Inc chose Long Lake to be a basin for tailing impoundment because of its size and its small watershed area. Dams at the outlet and around the perimeter would increase its capacity. The basin would be divided into five cells by rock dikes. As the tailings in each cell consolidate and convert to permafrost, rocks and soil would cover it. The soil would be revegetated and the basin converted into a wetland (BHP, 1995, pages 17–18; CEAA, 1996, pages 24–26).

The work schedule to construct these facilities

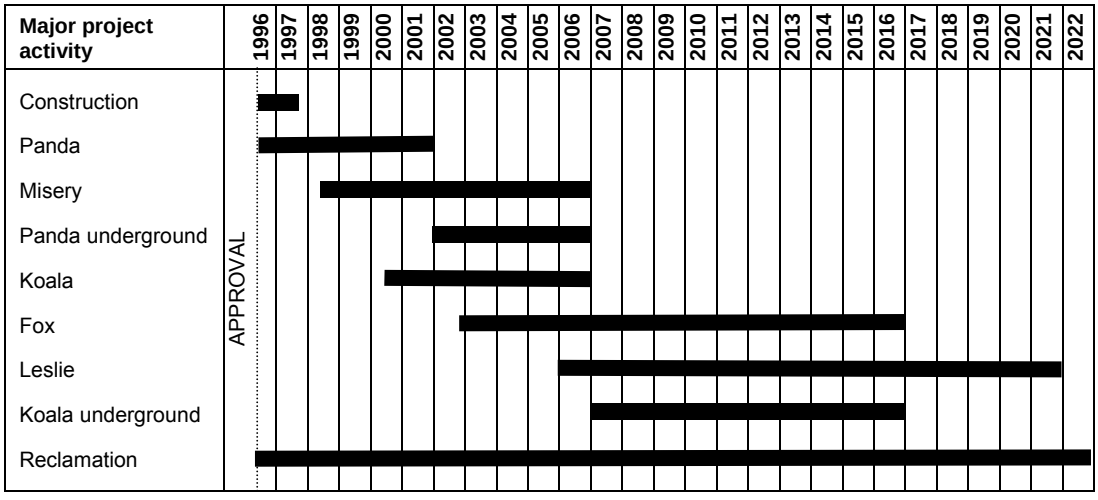

Figure 2. Schedule of major project activities
Source: BHP Diamonds Inc (1995, page 53)

would be based on a two-weeks-in/two-weeks-out, 70 hour/week rotational work schedule. During operation there would be a permanent camp to house the 400-person rotational work force at Koala and a smaller camp for the Misery pipe.

BHP Diamonds Inc did not propose to build an all-weather road. During the winter, it would use 476 km of the winter ice road across frozen lakes and rivers, which Echo Bay Mines Ltd operates between Yellowknife to its gold mine at Lupin north of the Project. During the construction period, 2,250 truckloads of equipment and consumables would pass over the road, and, during operation, 2,000 truckloads of fuel would pass. The Proponent would construct an all-weather road to the Misery pit to haul ore for processing (BHP, 1995, page 12; CEAA, 1996, pages 27–28).

Air transport would be essential. The existing airstrip could accommodate Hercules C130, and Boeing 727 and 737 jets to carry all personnel to and from the site, and to bring food in and ship diamonds out.

Environmental issues

Water quality and the management of tailings water from Long Lake were central issues. DIAND and DOE concluded that the environmental impact statement (EIS) had addressed adequately the most important issues. BHP Diamonds Inc would revisit certain specific issues not definitively resolved in the EIA review during its application for a water licence from the NWT Water Board (CEAA, 1996, pages 34–36).

Threats to the caribou could come from disruption of movements and migration corridors, deaths caused by vehicles and changes to water quality. The risks were small because the project area represents less than 0.01% of the herd's range. It was later found that less than 2% of the herd approached the project area. As for the bears, between 1991 and 1995, 58 were killed in the Coppermine/Slave area, with only six deaths being ascribed to industry (CEAA, 1996, page 43; IEMA, 1998, page 22).

Obstacles to reclamation include the cold environment, limited topsoil, low soil moisture and the short growing season. BHP Diamonds Inc planned on-going reclamation during the life of the Project. A combination of good mining practice and reclamation would minimise vegetation loss. Decommissioning and closure would begin after all the ore has been processed. With prior progressive reclamation, decommissioning would only involve removing all structures, burying foundations and removing culverts to restore water flow patterns.

Financial and occupational issues

The total project capital expenditure of EKATI™ was an estimated CAN$1.2 billion (CAN$1.00=US$0.73 on 1 January 1997). The Project would contribute CAN$6.2 billion to the Canadian GDP (gross domestic product) and would generate CAN$400–500 million annually. The direct, indirect and induced benefits of the Project to the NWT would be CAN$2.5 billion, with 60% coming from wages and benefits. The income from the Project would be considerably greater than government expenditure for the expanded physical and social infrastructure. For every $1 accrued by Canada from the Project, the Federal Government and the GNWT would pay out $0.05 (BHP, 1995, pages 42–43).

The Project would have very wide economic and social effects on Northerners, notably on Aboriginal people. It would employ twice as many people as any other mine at that time in the NWT, that is, 830 over the mine's 25-year-life span. Yellowknife would benefit both from direct employment of residents and the purchase of goods and services. During operation 70 cents of each purchase dollar would be spent in the North, with 60% of that in Yellowknife (BHP, 1995, pages 40–41).

The Proponent's hiring policy would reduce severe northern unemployment. It would hire first NWT Aboriginal people, then non-Aboriginal NWT residents, and then other Canadians. It would base its selection process on personal aptitude, rather than standard employment criteria, such as formal schooling, experience and qualifications. When Aboriginal people lacked skills (for instance, literacy and technical) the Proponent would train them.

It would give preferential treatment to Aboriginal businesses, establish scholarship programmes and on-the-job training for Aboriginal students, cross-cultural training in the work place and bring in Aboriginal elders, youth and organisations to share their traditional skills and customs to solve community problems. There would be a drug- and alcohol-free work environment with offenders being fired without exception (BHP, 1995, pages 10–11, 37, 39–40, 50; CEAA, 1996, pages 47ff, 50, 53; IEMA, 1998, page 22).

Table 1. Aboriginal population of communities and their distance from the project

	Community	Population	Distance from project (km)
Treaty 11 Dogrib Dene	Rae-Edzo	1,600	330
	Wha Ti	415	370
	Rae Lakes	255	310
	Snare Lake	135	180
Akaitcho Treaty 8 Dene (Chipewyan Dene)	Łutselk'e	300	250
	Dettah	190	310
	N'dilo	150	310
North Slave Métis Alliance	Yellowknife	1,200	310
	Rae-Edzo	50	330
Kitikmoet Inuit Association	Kugluktuk (Coppermine)	1,200	400
	Umingmaktok	50	350

Sources: BHP Diamonds Inc (1995, page 9); NWT Bureau of Statistics (1996)

Yellowknife was the designated point of hiring. BHP Diamonds Inc would fly employees from Yellowknife to the mine. It would also bring people in at no cost from tiny outlying communities, that is, Snare Lake, Rae Lake, Wha Ti, Łutselk'e and Kugluktuk (Table 1). The rotational work shifts would permit Aboriginal employees both to participate in a wage economy and to maintain traditional lifestyles and contact with families and communities (CEAA, 1996, page 50).

BHP Diamonds Inc did not plan to do any diamond processing or manufacturing. It would sell 35% of the diamonds to De Beers and the rest at its own sales office in Antwerp (BHP, 1995, page 16).

Traditional knowledge

BHP Diamonds Inc faced difficulties with TK. Since Aboriginals use TK when negotiating claims and view it as their intellectual property, they did not want to make TK public. They insisted that its use and management should remain in their hands. As the Dene and Métis each have their own TK, the data did not always coincide. Furthermore, the information was scattered, and there was no documented baseline of TK, single protocol for standards or research methods (CEAA, 1996, page 17).

In spite of the problems, BHP officials could not simply dismiss TK as being irrelevant because the local people used it as their point of reference when voicing their concerns. Nor could the company risk being accused of tokenism. It did use TK when collecting data for archaeological and wildlife studies. It also used Dene/Métis maps (BHP, 1995, page 34).

Monitoring

BHP Diamonds Inc proposed the creation of an Environmental Advisory Group to assist in monitoring programmes for air, water, land and socio-economic effects. Its tasks were to include (CEAA, 1996, page 18):

- gathering information for regulatory compliance;
- measuring of operational performance and effectiveness of mitigation strategies;
- monitoring both natural change and that caused by the Project;
- assessing the validity of predictions; and
- initiating a response to unexpected adverse impacts.

Public review by EA panel

BHP's pre-hearing consultations

BHP Diamonds Inc followed the policy of its parent firm BHP Ltd that being a 'good neighbour' is good for business. In 1992, it began public consultations in what proved to be a successful corporate public consultation programme in a remote place. The costs of meeting the affected public and acceding to reasonable requests were tiny compared to the potential costs of delays. A one-month delay would effectively impede the Project for up to one year because winter is the only time to transport equipment, fuels and other essentials, and summer the only time for major construction and lake dewatering. In turn, a stoppage would translate into very large sums of money from opportunities lost, interest on investments and credibility among investors. Furthermore, BHP Diamonds Inc would benefit from access to Northerners' unique environmental knowledge (Couch 2000b).

Between 1992 and the beginning of the panel review, BHP Diamonds Inc visited all communities in the project area at least twice. It targeted local and regional residents and organisations, especially Aboriginal people, and government bodies. It used public presentations, field trips, community meetings, open houses, cultural exchanges and joint workshops, and made audio and videotapes. To allow the Aboriginal leaders to observe first hand the quality of its relations elsewhere with Aboriginal people, BHP Diamonds Inc took a group to three mines owned by its parent company in New Mexico where 75% of the work force is Aboriginal.

Panel review

During the quarter century following the Berger Inquiry, officials carried out a list of EIAs for large

Table 2. Chronology of events in BHP's NWT Diamond Project

Year	Event
1983	Fipke set up Dia Met
1989	Fipke and Blusson found indicator minerals at Lac de Gras
1990	August – BHP Ltd. and Dia Met formed a joint venture
1991	September – Fipke and Blusson found first diamonds
1992	BHP Diamonds Ltd. began public consultations
1993	October – BHP Diamonds Ltd. opened the Koala camp
1994	26 July – Minister of DIAND referred Project for a Panel review
1995	July - BHP Diamonds Ltd. submitted its EIS to the Panel
1996	22 January – 23 February – Panel held public hearings
	21 June – Panel submitted its Report to the Ministers
	8 August – Minister of DIAND replied to Report
1997	February – Final approval obtained
	May – Construction began
	28–30 May – Inaugural meeting of IEMA's Board of Directors
1998	June – IEMA's first Annual Report
	15 October – Official opening of the ETAKI™ mine
1999	January – First diamonds sold in Antwerp
2001	June – BHP Billiton bought Dia Met

Northern proposals using procedures bearing Berger's clear influence. The review of the BHP NWT Diamond Mining Project is an example in this line of reviews.

Since the Project could have potentially significant adverse environmental impacts, the federal Minister of DIAND, as the minister responsible for the Project's proceeding, referred it to the federal Minister of the Environment for a public review by an independent Environmental Assessment Panel (26 July 1994), as required under the federal *Environmental Assessment and Review Process Guideline Order, 1984* (see Table 2).

The Minister of the Environment appointed the Panel to review the Project (9 December 1994). Its members needed the appropriate professional expertise and credibility among all review participants, and to be free from any economic conflict of interest or membership of a political party. They came from outside government service and were paid on a *per diem* basis during the review, whereupon their connection with the Project ended. It had four members (CEAA, 1994):

- the chair was a lawyer based in Calgary (Alberta) with 24 years' experience in dealing with NWT Aboriginal people, governments, small businesses and environmental groups;
- a retired professor of geology who had spent most of his career working on Northern issues;
- a Dene who was a communications specialist with Aboriginal people; and
- an economic consultant based in Yellowknife and specializing in NWT resource and environmental issues.

The Canadian Environmental Assessment Agency (CEAA) is the Canadian federal agency responsible for overseeing EIA. CEAA recommended to the Minister the names of people who could serve on the Panel and provided the Panel's Secretariat. It worked out of CEAA's Vancouver Regional Office, but set up a communications office in Yellowknife. The Secretariat had close ongoing dealings with DIAND, the GNWT, the Proponent and Aboriginal groups (CEAA, 1996).

To ensure fairness, the Federal Government provided participate funding to help the affected public take part in the public review in a meaningful way, by assessing the EIS for adequacy, and attending and preparing presentations at the public hearings

To ensure fairness, CEAA announced (14 December 1994) that the Federal Government would provide participate funding to help the affected public take part in the public review in a meaningful way, that is, to review the EIS for its adequacy, and to attend and prepare presentations at the public hearings. Recipients had to have a firm plan on how they would spend the money in ways related to the review, and show that they could later account for its proper use (CEAA, 1995e).

The Panel issued Operational Procedures (23 January 1995). The Panel would accept no information unless it was also available to the public. All documents would be placed in a public file in Yellowknife. People wishing to participate were to inform the Secretariat's Executive Secretary for inclusion on the mailing list for important announcements. Like Berger over 20 years earlier, it had formal procedures for the presentation of scientific information and social concerns, and informal procedures for community meetings. Information received at both types of gathering would be treated equally (CEAA, 1995a).

The Panel issued to BHP Diamonds Inc the *Draft Guidelines for the Preparation of the EIS* and announced a 70-day review period (31 January 1995). In February 1995, CEAA awarded CAN$105,000 to 14 groups to participate in the scoping exercise. Between 14 March and 8 April 1995, the Panel visited eight NWT communities and held scoping meetings to define the content and scope of the final guidelines. The Panel heard from 125 people (CEAA, 1995b).

The Panel issued to BHP Diamonds Inc its 19-page *Final Guidelines for the Preparation of the EIS* (23 May 1995). It provided that (CEAA, 1995c):

> "For many issues that are raised in the Guidelines, traditional knowledge will have as important a contribution to make as scientific and engineering knowledge. The Proponent should fully consider local traditional knowledge and expertise when preparing the EIS."

The Guidelines appeared in English, the Indian languages Dogrib, Chipewyan and North Slavey, and Inuinnaqtun.

CEAA announced a second award of CAN$150,000 to 12 groups to help them take part in the public review (7 July 1995) Recipients included five Aboriginal groups, the NWT Chamber of Mines, the Yellowknife Chamber of Commerce, the NWT Federation of Labour, and the NWT Construction Association (CEAA, 1995e).

BHP Diamonds Inc submitted its EIS to the Panel (25 July 1995). It had four volumes: *Project Description*; *Environmental Setting*; *Environmental Impacts and Mitigation*; and *Summary of the EIS*. In December 1995 and January 1996, BHP submitted two information responses to the Panel (*Tailings Management Plan* and *Preliminary Design of Retention Structures*) and 12 baseline study updates.

The summary, which was for general distribution, appeared in English, Inuinnaqtun, Dogrib, Chipewyan and North Slavey. BHP Diamonds Inc prepared audiocassettes based on the summary in Dogrib, Chipewyan and North Slavey. In all, BHP Diamonds Inc presented to the Panel documents that placed side by side would be one metre in extent.

The Panel held 18 days of public hearings in nine NWT communities (22 January–23 February 1996). There were ten days of technical sessions in Yellowknife to review issues pertaining to TK, environmental management plans, water, wildlife and vegetation and socio-economic effects. The Panel received 75 written submissions and heard about 260 presentations (CEAA, 1995d).

The sequence for oral presentations was: the Proponent explained its position on the session's designated topic; Government agencies presented their comments and technical reviews; then anyone else could speak who had signed up in advance. All participants could pose issues of BHP Diamonds Inc and each other. There was no cross-examination. When an intervener gave a written text to the Secretariat in time, it made copies for distribution at the hearings.

During the community meetings the Panel made special efforts to accommodate Northerners who were unfamiliar with, or felt uncomfortable participating in, public meetings. These meetings were in fact discussions ordered along the lines of other Aboriginal meetings. Translation services were available in all remote communities. The Panel showed deference to the customs of local communities by inviting an Aboriginal elder to begin each meeting with a traditional prayer.

At the end of the hearings, the Panel retired to write its report behind closed doors.

Panel's report

The Panel presented its report to the federal Ministers of the Environment and DIAND on 21 June 1996. Although it concluded that the environmental impacts were mitigable and the Project could proceed, it made 29 recommendations. They dealt with:

- water quality and management;
- the speedy settlement of outstanding land claims;
- the need for new policies, and monitoring and management plans to deal with the loss of fish habitat, air quality, the risk of trucks' spilling fuel, caribou, birds, protection of the interests of Northern business, and the exploration of archaeological and historical sites;
- Aboriginals' hunting and fishing rights on the Proponent's claim area; and
- the Federal Government's developing a capacity for diamond valuation in Canada prior to their export and sale.

The Panel recommended that there should be a policy for TK's inclusion in EIA developed by the GNWT, Aboriginal people and industry, with the most immediate need being TK guidelines and standards for developers preparing an EIA (CEAA, 1996).

During BHP's application for a water licence, the NWT Water Board would consider outstanding issues such as: the risk from tailings and other sources (such as the contamination of waste-rock drainage by nitrates or nitrites from ammonium nitrate-based explosives) and potential impacts on Inuit rights under the *Nunavut Land Claims Agreement*.

The report appeared in English and French, and its executive summary in Inuinnaqtun, Dogrib and Chipewyan.

EIA's cost

Preparing an EIA in the North is more expensive than in the South. The cost of living is higher because there is no inexpensive surface transport for bulk goods. Most products from the South must be flown in. Travel outside Yellowknife must be done by airplane or on foot. The dearth of 'off-the-shelf' baseline information, the larger areas to be studied and the extreme climate impose a heavier burden on proponents.

The Panel review cost CEAA about CAN$1,000,000 plus CAN$255,000 for participant funding. This sum does not include the costs of DIAND, DOE, DFO, the GNWT and other government agencies. The environmental studies cost BHP Diamonds Inc more than CAN$10,000,000.

Yet, in comparison to the Project's capital cost, the anticipated profits to BHP Diamonds Inc and the tax revenue to governments, this outlay was very small. Furthermore, much of the data in the Proponent's environmental studies would be used to address other technical and engineering matters.

Agreements to manage Project's impacts

Minister's announcement of 8 August 1996

The Hon Ronald Irwin, the Minister of DIAND, began the second phase of the process on 8 August 1996 when he announced his acceptance of the Panel's report and the next steps in the approval process and negotiations, which led to the creation of new institutions, practices and interjurisdictional relationships to deal with environmental and social issues.

As some of the Panel's recommendations fell outside the scope of existing laws, and there were no agreements with the Aboriginal people, there was a risk that the Project could be tied up by endless wrangling. The Minister surprised everyone by giving participants 60 days to achieve "satisfactory progress" in the negotiation of agreements (DIAND, 1996).

The chief components of the new régime were: an

environmental agreement, which included the creation of the Independent Environmental Monitoring Agency (IEMA); a socio-economic agreement; obtaining a licence from the Water Board; authorisation for the loss of fish habitat under the *Fisheries Act*; land leases; and impact and benefits agreements between BHP and the Aboriginal groups.

The need for the Minister's conditional approval, the tight time frame, the specificity of some of his goals and the ministerial discretion he allowed himself, together put pressure on everyone. Yet it was in the vital interest of each to bargain in good faith and to reach an accord. For the Proponent, a delay could mean the loss of time and money. The Aboriginal groups saw they had a defined window of opportunity to get what they wanted from BHP Diamonds Inc. The Minister did send a special envoy to Yellowknife who helped facilitate negotiations and served as a conduit for information and directions to and from his office in Ottawa.

Participants recall the intense activities up and down the corridors of Yellowknife's Explorer Hotel, as parallel negotiations were taking place on the separate, but closely interrelated agreements.

Environmental Agreement

The *Environmental Agreement* is a legally binding accord that consolidates the numerous environmental issues contained in the Panel's recommendations. It aimed at harmonising the activities of many government bodies, serving notice of the Federal Government's commitment to sound environmental management, and assuring on-going Aboriginal participation in the monitoring process. The Federal Government, the GNWT and BHP Diamonds Inc negotiated the Agreement with the active participation of the four Aboriginal groups. The final signing took place on 6 January 1997 (DIAND, 1996; Kennett *et al*, 1997, pages 19–25; IEMA, 1997; IEMA, 1998)

The Agreement required BHP Diamonds Inc to:

- prepare a plan for environmental management during the Project's construction and operation for IEMA's review and the Minister's approval;
- submit annual reports on its environmental management plan to DIAND, the GNWT, the IEMA and Aboriginal groups;
- prepare an impact report every three years on the Project's environmental impacts;
- set up a monitoring programme for air and water quality, and wildlife;
- submit its reclamation plan for the Minister's approval;
- establish a security deposit (CAN$11,075,000) for potential land impacts and give a guarantee of CAN$20,000,000 for potential water impacts: the Minister could draw down on deposits to enforce compliance;
- incorporate TK into all environmental plans and programmes where it would receive full consideration with scientific knowledge. The Proponent would complete its study of TK to identify where it could be incorporated into its activities. Aboriginal people would play a major role in its design and implementation. TK would remain the property of Aboriginal people with the Proponent's staff being forbidden to disclose proprietary information to outsiders.

The *Environmental Agreement* was to harmonise the activities of many government bodies, serve notice of the Federal Government's commitment to sound environmental management, and assure on-going Aboriginal participation in monitoring

The Agreement created the IEMA to be the independent public watchdog for monitoring — the most neglected aspect of EIA. The IEMA's advent came as a surprise because the Panel had not recommended the creation of such a body. The IEMA's tasks would be to:

- integrate the various aspects of the *Environmental Agreement*;
- prepare annual reports on the Project's environmental implications;
- review impact reports;
- participate as an intervener in legal and regulatory processes on environmental issues;
- provide a public document repository in its Yellowknife office; and
- inform BHP Diamonds Inc, governments, Aboriginal people and the general public about the Project, its monitoring and its regulation.

The IEMA's Board of Directors has seven members: four appointed by Aboriginal groups and the rest jointly by Federal Government, the GNWT and BHP Diamonds Inc from outside their own ranks. The Federal Government and the GNWT would help the Proponent with funding during the first two years, but thereafter, the IEMA would negotiate its annual budget with BHP Diamonds Inc.

Socio-economic Agreement

The GNWT and BHP Diamonds Inc negotiated the *Socio-economic Agreement*. It dealt with economic benefits and social impacts on all NWT residents and established contractual commitments for activities outside existing laws. Unlike the *Environmental*

Agreement, this Agreement did not have non-compliance penalties. It was signed on 22 October 1996 (Kennett *et al*, 1997, pages 25–26).

The Agreement provided for preferential hiring, recruitment criteria, specific employment targets, employment of contractors, training programmes, and employment support (i.e. orientation, cross-cultural training, counseling, safety). It set targets for giving contracts to, and purchases from Northern businesses and employment of Northerners and Aboriginals; and reporting indicators on community health.

Licence from NWT Water Board

The NWT Water Board had nine members appointed by the Minister of DIAND from federal agencies and Aboriginal groups (Kennett *et al*, 1997, pages 28–33; IEMA, 1998, pages 14–18; DIAND, 1997).

BHP Diamonds Inc applied for a Type A water licence for water use and waste disposal. The Board held public hearings (9–10 September 1996). Since BHP Diamonds Inc had considered the Panel's recommendations to be an agreement-in-principle, it did not anticipate that the Board would request the amount of detailed information that it did.

Because of the complexity of some issues, the unpreparedness of BHP Diamonds Inc and government officials, and the heavy scrutiny by some Aboriginal interveners and their advisors, the Board convened a second phase of hearings (21–22 October 1996). These meetings were more conciliatory because of the progress made in parallel negotiations, the use of interrogatories and informal meetings between interested parties. The Minister approved the licence on 5 February 1997.

The licence was the most comprehensive and detailed ever issued by the Water Board. It contained special provisions that had never before been put in a Class A licence. These included: the need for the monitoring of aquatic effects, kimberlite's toxicity, waste rock and mill tailings; and reclamation needs. BHP Diamonds Inc gave a deposit as security to cover the full costs of reclamation. The term of the licence was from 1 January 1997 to 31 December 2004.

Authorisation of fish habitat destruction

The *Fisheries Act* is an important federal environmental law. As noted, in the South, many environmental laws are provincial laws. A key federal power comes from this Act's provision for the protection of fisheries habitat management. Since fish live almost everywhere in Canada, the Act permits the Federal Government to become involved in fisheries and environmental issues anywhere in the country. It has special significance in the North because fish are so important in the residents' diet (Kennett *et al*, 1997, page 33).

Although DFO has a policy of no net loss for fish habitat, the Project Area's harsh climate made it unrealistic to compensate for the loss of habitats by creating new habitats as in the South. In a compromise, BHP Diamonds Inc gave CAN$1.5 million to DFO to create the Fisheries Rehabilitation Fund for creating new fisheries habitat and habitat enhancement, with those used by Aboriginal people receiving priority. The authorisation was signed on 7 January 1997.

Land leases

Crown land for mining in the NWT cannot be bought, but can be leased for a specified period. The Lands Advisory Committee and the Regional Environment Review Committee reviewed applications and made recommendations to DIAND for its decision. The Committees consisted of federal and GNWT officials, and representatives of Aboriginal and public organisations (DIAND, 1997; Kennett *et al*, 1997, pages 9–10, 34).

The Minister issued six leases to BHP Diamonds Inc for 30 years that authorise it to occupy and use the lands for the open pits, the mine mill, the airstrip, an on-site road and the camps at the Koala and Misery sites. The *Environmental Agreement* and the water licence set out the conditions. Should the Minister decide BHP Diamonds Inc is causing damage to the environment, he may retain a portion of the security deposited under the *Environmental Agreement,* or in exceptional cases, suspend operations or even terminate the lease.

Impact and benefit agreements

The impact and benefit agreements (IBAs) are private, bilateral, confidential agreements between BHP Diamonds Inc and each of the four Aboriginal groups. Since there was no settled land claim agreement and BHP Diamonds Inc wanted good relations, it took the initiative to begin negotiations (1994). They reflect the general view that Aboriginal people would benefit from Northern development. (Kennett *et al*, 1997, pages 26–28, 89–97)

IBAs included employment practices and targets, business opportunities, training, scholarships, and transportation to and from the communities, as well as cash payments to the Aboriginal groups during the life of the mine.

Conclusions

BHP Diamonds Inc began the construction of its plant facilities in May 1997. It started production in October 1998 and began selling diamonds in January 1999. Canada is already the world's sixth largest producer of diamonds both in terms of value and weight. When all NWT diamond producers come on line, Canada will mine about 12% of the world's diamond output by value.[4]

The Project contained the seeds of disagreement.

The huge amount of money could have led to clashes over its distribution among any combination of players. There was a potential discord arising from the cultural world views of a multinational corporation and of local Aboriginal people. Also the Aboriginal groups had conflicting interests among themselves.

Yet in the end, all the players reached an agreement and there has been no contention that the agreement was basically unfair. There were various reasons for this success.

- BHP Diamonds Inc followed the corporate policy of avoiding a confrontation that could ignite conflict and lead to significant financial losses. It began consulting Aboriginal groups and government officials early. It cooperated with the Panel and permitting agencies when directed to prepare complex and costly studies. BHP Diamonds Inc got what it wanted as the Project proceeded as planned.
- The Aboriginal groups recognised that the moment was ripe to maximise their benefits. With adequate resources and legal representation, they too approached the bargaining tables with confidence and in good faith. As provided for in the Panel's report and the environmental, socio-economic and impact and benefit agreements, they too got what they wanted — economic benefits, defence of and respect for their needs and values (for instance, TK's acceptance), and an important role in future decision-making. By 2000, 78% of EKATI™ employees were Northerners, of whom 40% were Aboriginals.
- The success of the review process was critical. The public review was properly managed. Panel members had no economic interest in the Project and when the review ended so did their connection with the Project. It was in the interest of each member's professional career to act, and to be seen to act, fairly. The Panel Secretariat faced the same challenge. Everyone came to accept the Panel and its Secretariat.
- The Federal Government's funding of small local participants ensured there would be a more level playing field and acceptance of the EIA process.
- The Panel's report synthesised in a short, easy-to-read document, an enormous amount of complexly interwoven printed scientific and social information, along with the views given orally by experts, Aboriginals and the general public. It focused governments' responses by making concrete recommendations for action that were sufficiently flexible to give participants room to manoeuvre during their implementation. These included policy/planning, social impact and site-specific matters and the forming of new inter-jurisdictional relationships. The review process and the report helped to depoliticise the final decision by placing in the hands of the Federal Cabinet — the ultimate decision-makers — a document that defanged anyone who may have wanted to use the Project's approval for partisan political reasons.
- There was also the potential for endless differences over details during the permitting and negotiation phase. By setting of a very tight time frame and the targeting of discussion on specific solutions, the Minister of DIAND forced all parties to reach a quick accord on the specifics in a list of thorny policy, regional and site-specific matters, or risk losing the very large benefits that the Project held for all.
- The two-step process set a precedent for the review and approval of diamond-mining proposals that shortly followed.
- Creating the IEMA assured independent, ongoing, and rigorous and adequately resourced monitoring. The Proponent rather than the Canadian taxpayer is now paying for it.
- The IEMA's Board of Directors held their inaugural meeting on 28–30 May 1999. Its first Annual Report (1997–1998) made 18 recommendations to BHP Diamonds Inc and regulatory bodies to give coherence to the various regulatory requirements. These included:
  - determining TK's role;
  - assessing the wildlife-monitoring plan, DFO's management of the fish habitat compensation fund, and the management of tailing and kimberlite wastes; and
  - a monitoring programme for new cumulative effects in the Coppermine River's watershed. (IEMA, 1998).
- Subsequent Annual Reports have reported on and updated these initiatives, as well as other emerging issues.

The sum of money spent was a bargain for both the taxpayer and BHP Diamonds Inc when it is compared with the enormity of the capital costs and the anticipated profits, the size of the area studied, the fragility of the Arctic environment, and the need for real and enduring justice towards Aboriginal people who had been the victims of 'progress' over the generations.

There has been a major change in the ownership of EKATI™, as the control of diamond mining in the NWT in general passed from regional Canadian firms into the hands of multinational corporations.

In June 2001, the parent firm BHP Ltd merged with another multinational, Billiton, to become a world industry leader in the extraction and production of many natural resources.

In early 2000, Charles Fipke agreed to transfer his shares in Dia Met to his estranged wife as part of their divorce settlement. In November 2000, she and another major shareholder made known their desire to sell their controlling interests. BHP Billiton bought Dia Met in June 2001. It now owns 80% of EKATI™, with Fipke still holding 10% and Blusson 10%.

BHP Diamonds Inc abandoned the Leslie pipe as unviable, but proposed three others on their claim area (the Sable, Pigeon and Beartooth pipes).

Matters of concern were similar to those discussed during the first review. The newly created Mackenzie Valley Environmental Impact Review Board reviewed the proposal and agreed that these plans could proceed (BHP, 2000; MVEIRB, 2001).

Two other players followed BHP Diamonds Inc into NWT diamond mining through their own EIAs and permitting. The multinational Rio Tinton plc owns 60% of the NWT's second diamond mine, Diavik Diamond Mines Inc and a Canadian company, Aber Resources Ltd, owns the rest. Diavik located four economic pipes 10 km southwest of EKATI™'s Misery Pit, carried out extensive public consultations and environmental studies and received the perquisite permissions (1999). It should begin production in 2003.

Two Canadian companies discovered the third economically viable diamond deposit at Snap Lake, 230 km northeast of Yellowknife and 100 km south of EKATI™. In 2000, De Beers acquired the Snap Lake development. Production should begin in 2005.

Diamonds from EKATI™ are from a high to very high quality. One kilogram of rough stones has an average value of US$500,000 and in a retail jewelry store would fetch US$4 million. The GNWT is trying to get a share of the large value-added profits by fostering local diamond processing and related manufacturing activities. BHP Diamonds Inc and Diavik will sell some of their diamonds locally. Three Canadian firms have opened cutting and polishing facilities in Yellowknife. They are either owned by, and/or work closely with, Aboriginal groups.

Notes

1. Canada has 779,790 Aboriginal inhabitants, or 2.7% of its total population. They consist of: 529,035 North American Indians (1.9%) who are spread across the country; 40,225 Inuit (Eskimos) (0.1%) who live North of the tree line, along the sea coast in the Northwest Territories, Nunavut, northern Québec and Labrador; and 204,115 Métis (0.7%) who are of mixed European–Indian descent and who live in the Western Provinces of Manitoba, Saskatchewan and Alberta, and in the Northwest Territories (NWT Bureau of Statistics, 1996). There are 53 indigenous languages spoken in Canada. About 17,000 people speak one of the 15 languages in the Athapaskan family, that is, those Indian languages most frequently used in the vicinity of EKATI™.
2. There are 633 legally constituted autonomous, independently minded Indian bands ranging in size from 80 members to 16,000.
3. The Inuit are a separate people and not an Indian group that developed separately in the far North. The term 'Inuit' is now used instead of 'Eskimo', which is a pejorative expression derived from the Cree Indian language meaning 'raw-meat eater'. Inuit means 'the people' or 'real people' and comes from the Inuit–Inupiaq language. The singular of 'Inuit' is 'Inuk' and means 'a person'.
4. Forecast of diamond production by value for 2005: Botswana, 27%; Russia, 22%, Canada, 12%; South Africa, 12%; Angola, 8%; Democratic Republic of the Congo, 6%; Australia, 5%; and Others, 8% (NWT, DRWED, 2001, page 8).

References

Berger, Thomas R (1977), *Northern Frontier, Northern Homeland: the Report of the Mackenzie Valley Pipeline Inquiry* (Minister of Supply and Services, Ottawa).

BHP Diamonds Inc (1995),. *NWT Diamonds Project, Environmental Impact Assessment: Summary* (BHP Diamonds Inc, Vancouver).

BHP Diamond Inc (2000), *Environmental Assessment Executive Summary: Sable, Pigeon and Beartooth Kimberlite Pipes* (BHP Diamonds Inc, Yellowknife, April).

CEAA, Canadian Environmental Assessment Agency (1994), BHP Diamond Mine Environmental Assessment Panel, Newsletter, No. 1, 12 December.

CEAA, Canadian Environmental Assessment Agency (1995a), "Environmental Assessment Panel reviewing BHP Diamond Mine: operational procedures", BHP Diamond Mine Environmental Assessment Panel, Newsletter, No. 2, 23 January.

CEAA, Canadian Environmental Assessment Agency (1995b), BHP Diamond Mine Environmental Assessment Panel, Newsletter, No. 4, 8 March.

CEAA, Canadian Environmental Assessment Agency (1995c), "Environmental Assessment Panel Reviewing BHP Diamond Mine: final guidelines for the preparation of an environmental impact statement", BHP Diamond Mine Environmental Assessment Panel, Newsletter No. 6, May.

CEAA, Canadian Environmental Assessment Agency (1995d), BHP Diamond Mine Environmental Assessment Panel, News release, "Funding for public participation in the review of the BHP Proposal", 7 July.

CEAA, Canadian Environmental Assessment Agency (1995e), BHP Diamond Mine Environmental Assessment Panel, Newsletter, No. 11, 13 December.

CEAA, Canadian Environmental Assessment Agency (1996), *NWT Diamonds Project, Report of the Environmental Assessment Panel*, June.

Couch, William J (2000a), "Oceny Oddziaływania na środowisko po obydwu stronach Atlantyku Ocena", in Jan Żelazo (editor), *Oceny oddziaływania na środowisko: Praktyka polska i procedury w krajach Unii Europejskiej* (Wydawnictwo Szkoła Główna Gospodarstwa Wiejskiego, Warsaw) pages 4–20.

Couch, William J (2000b), "The role of public participation in environmental impact assessment", *Aplinkos Inžinerija*, VIII(1), pages 41—53.

DIAND, Department of Indian Affairs and Northern Development (1996), "Backgrounders for Canada's Diamond Mine Project", News release, 8 August.

DIAND, Department of Indian Affairs and Northern Development (1997), "BHP Diamond Mine going through final regulatory steps", News Communiqué, 7 January.

Gamble, Donald J (1978), "The Berger Inquiry: an impact assessment process", *Science*, 199, 3 March, pages 946–952.

IEMA, Independent Environmental Monitoring Agency (1997), Environmental agreement, available at <http://www.monitoringagency.net/environmental_agreement.htm>, last accessed 1 March 2003.

IEMA, Independent Environmental Monitoring Agency (1998), *Annual Report, 1997–1998* (IMEA, Yellowknife, NWT).

Kennett, Steven, Monique Ross and Owen Saunders (1997), *Independent Review of the BHP Diamond Mine Process* (Canadian Institute of Resources Law, University of Calgary, Ottawa and Department of Indian Affairs and Northern Development).

MVEIRB, Mackenzie Valley Environmental Impact Review Board (2001), *Report on the Environmental Assessment of the Sable, Pigeon and Beartooth Kimberlite Pipes* (MVEIRB, Yellowknife).

NWT Bureau of Statistics (1996), <http://www.stats.gov.nt.ca/Statinfo/Census/census96/_1996census.html>, last accessed 1 March 2003.

NWT DRWED, Department of Resources, Wildlife and Economic Development (2001), *Diamond Facts, 2000/01: NWT Diamond Report* (NWT, Yellowknife).

Royal Commission on Aboriginal People (1996). *Report of the Royal Commission on Aboriginal People*. Vol 1 (Department of Supply and Services, Ottawa).