APPENDIX 29-D
IMPACTS OF MINING OPERATIONS ON ABORIGINAL COMMUNITIES IN THE NORTHWEST TERRITORIES AND LABRADOR: CASE STUDIES AND LITERATURE REVIEW

Rescan™

Seabridge Gold Inc.

KSM PROJECT
Impacts of Mining Operations on Aboriginal Communities in the Northwest Territories and Labrador: Case Studies and Literature Review

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Executive Summary

This report presents case studies of two mines in the Northwest Territories (Diavik Diamond Mine and EKATI Diamond Mine) and one mine in Labrador (Voisey's Bay Nickel Mine). The case studies examine how these operations have worked with Aboriginal communities to provide benefits to communities and address social, economic, and cultural issues that have arisen because of development.

This report identifies social, economic, and cultural issues that are commonly associated with mining projects located near Aboriginal communities in the Northwest Territories and Labrador. To respond to these issues, mining companies have adopted a corporate approach that includes the following elements:

- community engagement and involvement at early stages of development;
- investment in skills and capacity building, training, and development;
- transparent and easy access to information;
- business outreach and capacity building to support local goods and services contracting;
- company policies and practices that promote cultural identity and sustainability; and
- socio-economic monitoring.

Specific actions being employed by mining companies in the Northwest Territories and Labrador to address social, cultural, and economic issues include:

- developing corporate health, safety, environment, and community mandates and policies;
- preparing local workforce recruitment and development strategies;
- entering into Industry-Aboriginal-Government socio-economic agreements;
- undertaking Sustainability and Corporate Social Responsibility reporting;
- identifying local procurement targets and procurement outreach and training programs;
- identifying employment targets and succession planning;
- promoting and supporting joint business ventures and local business development initiatives;
- developing education, training, and development programs;
- offering scholarship and apprenticeship programs;
- providing employee, spouse, and family support services;
- implementing cross-cultural training programs (for company management and employees);
- negotiating revenue sharing; and
- undertaking community engagement and outreach.

This report considers the strengths and weaknesses of Impact and Benefit Agreements, which are typically used to help define the relationship between mining companies and Aboriginal communities, including employment and business benefits. Much of the available literature examining the experiences of Aboriginal communities with respect to mining in Canada is within the context of Impact and Benefit Agreements. Appendices to this report list known Impact and Benefit Agreements in

Canada (Appendix 1), and provide a resource and reference list relating to Aboriginal communities and mining companies and the opportunities and challenges of Impact and Benefit Agreementss (Appendix 2).

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Acronyms and Abbreviations

BHP	BHP Billiton Diamonds Inc.
Diavik	Diavik Diamond Mines Inc.
GNWT	Government of the Northwest Territories
IBA	Impact and Benefit Agreement
MOU	Memoranda of understanding
NWT	Northwest Territories
PA	Participation Agreement
RDC	Resource Development Council
SEA	Socio-economic Agreement
SEER	Socio-economic Environmental Effects Report
SEMA	Socio-economic Monitoring Agreement

1. Introduction

This report examines case studies of three Canadian mining operations. The case studies focus on the Diavik Diamond Mine in the Northwest Territories (NWT), the EKATI Diamond Mine (EKATI; also in the NWT), and Voisey's Bay Nickel Mine (in Labrador). They examine how these mining operations have worked with Aboriginal communities to address social, economic, and cultural issues.

This report compares predicted and actual social and economic impacts for three projects in the NWT. This report also reviews the academic literature with respect to the experiences of Aboriginal communities with Impact and Benefit Agreements (IBAs) between mining companies and Aboriginal groups, the effectiveness of IBAs, as well as their strengths and weaknesses. This report concludes with a summary of approaches to successfully address social, cultural, and economic issues that arise with mining projects. Appendices to this report include a list of IBAs in Canada (Appendix 1), a list of resources and references relating to mining operations and Aboriginal communities, and the opportunities and challenges of IBAs (Appendix 2).

2. Social, Economic and Cultural Factors, and Mining

There are common social, economic, and cultural characteristics identified in Northern Aboriginal communities where mining operations take place. Virginia Gibson, whose PhD dissertation (Gibson 2008) documents the experience of Aboriginal workers, describes the factors involved in fostering community resilience in the face of cultural change as a result of diamond mining in the NWT. These factors represent both opportunities and challenges, and are reflected in the case studies described in Section 3. The characteristics include:

1. **High wages:** Mining has the highest wages in the resource sector in Canada. Employment at mines in Canada's North creates pockets of wealth in remote places. Many northern Aboriginal people are hired at the mines as per employment targets outlined in private participation IBAs signed between mining companies and affected Aboriginal communities.
2. **Cyclical:** Mining has a rotational nature due to its work shifts and/or fly-in fly-out scheduling, so miners will go from being completely immersed in work and isolated to not working. The miners, their families, and the communities are subject to this cycle.
3. **High mobility:** A study by the Centre for Social Responsibility in Mining in Australia (2004) refers to the role that transience, driven by high employee turnover rates, can play in adversely affecting employee morale and productivity. This also increases recruitment and training costs.
4. **Remote:** Related to transience is the Canadian trend of temporary communities created for mine development. These temporary communities discourage the "ghost town" phenomenon when mines cease operations.
5. **Risk of injury and exposure:** Mining has had a negative legacy of occupational health hazards. However, in more modern and present times sophisticated policies, processes, and technologies have improved health and safety. These safety policies and practices have significantly decreased annual fatality and injury rates, and Canadian mining companies in the North have set records for reductions in work-related injuries and lost time.
6. **Community resilience:** Mining communities require resilience—the ability to cope with external stresses and disturbances as a result of social, political, and environmental change.

Ways in which individuals, communities, and organizations can and have aimed to address the potentially stressful effects of mining and enhance the benefits of mine-related employment, according to G. Gibson and Klick's (2005) and V. Gibson's (2008) review of Canadian diamond mining communities, include, but are not limited to:

- policies, processes, and opportunities to practice traditional activities on the land;
- support for spouses and families;
- community meetings and involvement to identify economic diversification for post-mining (i.e., to minimize or avoid the "bust" portion of the mining boom-bust cycle);
- royalty and revenue sharing, northern Aboriginal hiring, business contracting, and socio-economic agreement monitoring represent ways of management that contribute to community well-being and sustainability;

- integrated resource management systems that incorporate social, economic, and cultural considerations to support community resilience;
- preservation of culture and traditions such as respect and involvement of Elders (support for language and customs positively influence well-being and protect individuals and communities from adverse effects of mining);
- cultural sensitivity and culturally inclusive corporate policies;
- intercultural training (company representatives and managers require cross-cultural relations and communications training to better understand their Aboriginal employees' needs); and
- community outreach and capacity building (mining companies are partnering with local training and education institutions to learn about careers in mining, and be trained in the various positions available during both construction and operations).

3. Mining and Aboriginal Communities: Case Studies

3.1 OVERVIEW

This section of the report presents three case studies involving mining companies and Aboriginal communities who have worked together to address social, economic, cultural, and environmental issues related to mining operations. In each case study, a common approach was taken by the parties to address these issues and to establish agreements outlining terms of engagement and long-term socio-economic commitments to the local community. IBAs were reached between the mining company and Aboriginal communities for BHP Billiton Diamond Inc.'s (BHP's) EKATI (in the NWT), Rio Tinto/Harry Winston's Diavik Diamond Mine (in the NWT), and Vale's Voisey's Bay Nickel Mine (in Labrador).

IBAs are signed between mining companies and Aboriginal communities in Canada in order to "establish formal relationships between them, to reduce the predicted impact of a mine and secure economic benefit for affected communities. IBAs are increasingly used by [Aboriginal communities] in Canada to influence decision making about resource exploitation in their lands" (Sosa and Keenan 2001).

For the purposes of this discussion, no differentiation is made among IBAs, Participation Agreements (PAs) and memoranda of understanding (MOUs), all of which have the objective of articulating, to some extent, the relationship and relative responsibilities and obligations related to a project between mining companies and Aboriginal people. There is no formula for drafting an IBA; however, most or all recent IBAs have focused on employment for members of affected communities (usually including targets or quotas), funding for social and cultural programs, provisions for procurement to and development of aboriginal businesses, education and training initiatives (including apprenticeships and scholarships), and revenue sharing and compensation.

Michael Hitch, in his Ph.D. dissertation (Hitch 2006), reviewed a number of IBAs between various mining companies and Aboriginal communities in Canada, including the three case studies examined in this report. Much of the discussion is drawn from his work.

3.2 CASE STUDY 1: EKATI DIAMOND MINE

3.2.1 Background

EKATI is located about 300 km north of Yellowknife. On October 22, 1996, BHP concluded a Socio-economic Agreement (SEA) with the Government of the Northwest Territories (GNWT). The SEA outlines responsibilities for both the GNWT and BHP. These include targets for hiring (both northern and northern Aboriginal people), and business spending (for northern businesses). BHP concluded IBAs with four different Aboriginal groups—the (now) Tlico Government, Akaitcho Treaty 8, the North Slave Métis Alliance, and the Inuit of Kugluktuk with the Kitikmeot Inuit Association. Each of these IBAs is voluntary and confidential and establishes a mechanism for priority hiring, employee training, and preferential business opportunities. In addition, cash payments and scholarships are provided to the affected Aboriginal groups.

BHP does not independently produce and release public socio-economic monitoring reports for EKATI. The GNWT works in conjunction with BHP, Diavik Diamond Mines Inc. (Diavik), and DeBeers to monitor socio-economic conditions in Yellowknife and the small local communities impacted by EKATI, and the Diavik and Snap Lake mines. A summary of monitoring results are produced in an annual public report.

The last report was produced for the year 2009 (see Section 4.0 on the GNWT's analysis of impacts from these three mines).

3.2.2 Employment

As part of the SEA, BHP set a target of 31% of the total EKATI workforce being northern Aboriginal. In 2006, BHP stated that its level of Aboriginal hire was 34%, and 57% of these positions were in the skilled or professional categories.

In 2008, 800 people were employed at EKATI, with approximately 600 additional contractors providing support services. Of this number, 33% were reported to be Aboriginal.

3.2.3 Northern and Aboriginal Businesses

EKATI's SEA set a 70% spending target during operations with Aboriginal and northern-owned businesses. Aboriginal businesses and joint ventures have secured numerous contracts at the mine, including contracts for mining services, explosives and blasting supply, catering, transportation services, janitorial services, and freight haulage services.

In line with their terms of agreement and socio-economic commitments, BHP established local procurement offices and conducted seminars and workshops to provide information about its procurement guidelines. BHP's purchasing strategy was based on assisting Aboriginal suppliers to attain joint ventures and business partnerships, to tender IBA suppliers first where practical, and to provide opportunities for local suppliers to deliver goods and services that have only been available from the south.

Wherever practicable, contracts were unbundled into smaller work packages. BHP's training programs focused on helping local emerging enterprises to become skilled and competitive. They also compiled a directory of local businesses specifying the types of goods and services they could provide to EKATI.

Through 1999 to 2000, BHP promoted the idea of having all four of its Aboriginal partner groups form a single company to supply services to the operation. This would mean that all business and employment opportunities could be directed through one company rather than to each of the four partners separately, ensuring the interests of all parties were considered. It was also thought that a single company would have a greater possibility of being sustainable into the future.

Table 3.2-1 illustrates BHP's total expenditures at EKATI, with amounts and percentages spent on northern and Aboriginal businesses from 1999 to 2003. More recent data has not been publically reported.

Table 3.2-1. EKATI Expenditures: Northern and Aboriginal Businesses

	1999	2000	2001	2002	2003
Total Spending ($ millions)	271	240	294	316	318
Spent with Northern Businesses ($ millions)	213	198	250	271	272
% Spent with Northern Businesses	78.6	82.5	85	85.7	85.5
Spent with Aboriginal Business ($ millions)	39	51	81	93	94
% Spent with Aboriginal Businesses	14.3	21.2	27.5	29.4	29.5

3.2.4 Education and Training

In EKATI's first year of operation, BHP's training department developed a workplace literacy and training program with the intent of improving reading, writing, and communication skills of Aboriginal employees to help facilitate their advancement and create a safe and productive workforce. The

program focused on teaching essential skills such as reading, writing, math, computer skills, and oral communication. This initiative allowed employees to work toward completing their high school equivalency through the General Educational Development (GED) program. From its start in 2003 until 2007, 48 employees had completed the GED course. Of these, 19 (40%) were northern Aboriginal employees. Along with the literacy and learning program, BHP established an apprenticeship program, aimed at helping the company meet its present and future workforce needs and improving and enlarging its northern and Aboriginal workforce. The program assists employees become apprentices and graduate as journeymen and certified trades people. BHP's goal is to have a continuous flow of apprentices moving through the program, meeting the needs of the mine and creating opportunities for graduates. From its start in 1998 until 2006, 77 employees had registered in the apprenticeship program and 24 had completed and received journeyman status. All were northern residents at the time of their apprenticeships.

In 2003, BHP established a training program for underground miners. The program is aimed at providing opportunities for northern Aboriginal people to participate in the growing number of new jobs associated with underground diamond mining. Training is conducted at EKATI's Koala North underground facility. A comprehensive training curriculum has been established that conforms to company standards and NWT mining regulations.

As of 2005, 33 people had entered the training course and as of 2006, 30 people had successfully completed the program; several of these were employed at EKATI. Trainee candidates are selected from Aboriginal groups who are a party to an IBA. Candidates are guaranteed full-time employment upon successful completion of the training program. To attract candidates, advertisements were placed in local newspapers and presentations were made in local communities to raise awareness of underground mining opportunities. Ongoing communication and recruiting drives are also conducted with various aboriginal community leaders. Trainers continue to monitor all successful trainees for at least one year after graduation to assist in mentoring and follow-up training. They also consult with production supervisors to consider each individual's aptitude for further enhancement and career development.

In 2005, the program was selected for sponsorship by the Government of Canada's Mine Training Society, which has continued to provide funding for the program based on its success and importance to the local communities.

Scholarships are awarded to Aboriginal community members as part of the confidential IBAs. No information was available on the number or monetary value of the scholarships.

Highlights of the BHP training and education program activities include (Hitch 2006):

- scholarships awarded as part of the IBA;
- an on-site Workplace Literacy Training Program;
- summer student employment, with preference given to those who are BHP scholarship recipients;
- career fairs;
- student tours of the mine; and
- participation on the Minister of Education's Mine Training Committee.

3.2.5 Community Wellness

The EKATI Diamond Mine Community Partnership Program provides financial and in-kind support to local communities for projects that promote safety, the environment, youth development, community arts and cultural activities, and social well-being. Employees also receive paid time off to volunteer at

local charities. The company also subsidizes a social club which organizes events at the mine, including a family day where families are flown to the mine for a full day of activities. BHP's involvement in community wellness and training is further detailed by Hitch (2006):

- annual consultations are held with affected communities to explain the previous year's commitments to Northern and Aboriginal employment, training, and business opportunities;
- an Employee Assistance Program provides employees and families with access to counselling services;
- all employees and permanent contractors receive mandatory cross-cultural training, and an on-site Aboriginal Employment Officer is part of the HR team to assist with the recruitment and retention of Northern Aboriginal employees; and
- training and awareness programs are regularly evaluated to ensure each employee's competence is appropriate for their level of responsibility.

In 2000, a survey of BHP employees conducted by the GNWT produced the following results:

1. **Physical health:** The vast majority of EKATI employees reported no change in health as a result of working at EKATI. Of those who did experience a change, most stated they were sick more often.
2. **Alcohol use:** Almost 92% of EKATI employees from Yellowknife, and 71% of employees from Small Local Communities[1], reported consuming alcohol when they were away from the mine. Seventy percent of employees from the Small Local Communities and 50% from Yellowknife reported drinking less often after working at the mine. Seven percent of employees from Yellowknife reported drinking more often. No employees from the Small Local Communities reported drinking more often.
3. **Safety net:** Fifty-two percent of Yellowknife employees and 57% of Small Local Community employees reported support programs as adequate. Regardless of community of residence, only 10% of employees reported support programs to be inadequate. Eighty-four percent of Yellowknife respondents and 91% of local community respondents said their families were supportive when they leave to go to work at EKATI.
4. **Family and relationships:** Between 19 and 21% of employees felt they had grown closer to their spouse. For those employees not living in Yellowknife, 11% felt they and their spouse had grown apart. The proportion of EKATI employees who believed their jobs had a negative impact on their children was significant. The highest level of negative impact was reported by parents with children younger than nine years old. Employees living in the Small Local Communities were more likely to feel their absence from home was negatively affecting their young children.
5. **Optimism:** Despite the generally negative perception of the impact of their jobs on their children, over 80% of employees believe their lives will be better five years from now.

3.3 CASE STUDY 2: VOISEY'S BAY NICKEL MINE

3.3.1 Background

The Voisey's Bay Nickel Mine has changed hands since development began in 2002. The current owner is Vale NL, although the project was formerly owned by Vale Inco, CVRD Inco, and originally, Inco

[1] Small Local Communities refer to Aboriginal communities who have signed IBAs in the NWT.

Limited. Vale will be used to refer to owner actions and policies, although the policy/action may have originated with a different company.

The Voisey's Bay Nickel Mine property is in northern Labrador on a peninsula bordered to the north by Anaktalak Bay and to the south by Voisey's Bay, approximately 35 km southwest of Nain. Labrador is part of the province of Newfoundland and Labrador, located on Canada's Atlantic coast. The mine began operating in 2005.

In July 2002, the Government of Newfoundland and Labrador concluded an MOU with the Innu of Labrador concerning the Voisey's Bay Nickel Mine. Under the MOU, the Innu Government is entitled to 5% of any revenue received by the Province from the Voisey's Bay Nickel Mine. The Innu are also entitled to undertake non-commercial harvesting, trapping, fishing, and gathering activities and may camp in the Voisey's Bay area. The MOU provides that the project area, including subsurface rights, will not become part of Innu settlement lands until after the mine has closed. It also recognizes that an IBA will be signed with the developer, stating that the Innu are entitled to preferences with respect to training, employment and contracting opportunities related to the Voisey's Bay Nickel Mine. The MOU also recognizes that benefit arrangements will provide for capacity-building and sustainable development for the Innu.

Negotiations regarding the Voisey's Bay Nickel Mine between the Government of Newfoundland and Labrador, and the Nunatsiavut Government (formerly the Labrador Inuit Association) were enshrined in the Labrador Inuit Land Claims Agreement signed in 2005.

Vale has successfully negotiated IBAs with the Inuit Nunatsiavut Government and Innu Nation, both of Labrador. While the details of the IBAs are confidential, they reportedly provide specific business, employment, and training opportunities for members of the Innu and Inuit of Labrador. There are no indications, however, that Vale set specific targets for employment, training, or procurement.

Information in the following sections was extracted from Vale's annual Social Responsibility reports.

3.3.2 Employment

Vale is committed to developing its Aboriginal workforce, enabling them to take advantage of the full opportunities for advancement and promotion, particularly to supervisory positions. An aggressive succession plan ensures that Aboriginal workers are promoted to more senior positions within the company.

In the collective agreement reached between Vale and the Resource Development Council (RDC) of Newfoundland and Labrador, the following hiring guidelines for RDC and its member unions were set out:

- first preference would be given to qualified members of the Nunatsiavut Government and Innu Nation, who are members of a union;
- second preference would be given to qualified members of the Nunatsiavut Government and Innu Nation who are not members of a union;
- third preference would be given to qualified residents of Labrador who are union members;
- fourth preference would be given to qualified residents of Labrador who are not union members; and
- fifth preference would be given to qualified union members from Newfoundland.

An extensive process was put in place to identify potential candidates for operations in both Labrador and Argentia. Vale's human resources team worked with Aboriginal Employment coordinators and

representatives of the Nunatsiavut Government and Innu Nation to identify potential employees. When candidates were identified that needed training, training was provided, often in the community to make it accessible to as many people as possible.

Table 3.3-1 shows the number of Innu and Inuit employed at the Voisey's Bay Nickel Mine between 2003 and 2006 (data was not available for 2007). In 2008, Vale changed the way it reported employment, and focused on employment in Labrador and Newfoundland versus other regions (Table 3.3-2).

Table 3.3-1. Voisey's Bay Nickel Mine: Total Innu and Inuit Employees (2003-2007)

	2003	2004	2005	2006	2007
Total Employed	1558	3263	2381	1655	n/a
Innu	117	209	140	107	n/a
% Innu	7.5	6.4	5.8	6.4	n/a
Inuit	253	383	302	283	n/a
% Inuit	16.2	11.7	12.6	17	n/a
Other	1188	2671	1939	1265	n/a
% Other	76.2	81.8	81.4	76.4	n/a

Table 3.3-2. Voisey's Bay Nickel Mine: Total Innu and Inuit Employees (2008-2010)

	2008	2009	2010
Total Employed	1507	1579	2344
Labrador	615	460	455
% Labrador	40.8	29.1	19.4
Newfoundland	501	688	1343
% Newfoundland	33.2	43.5	57.3
Other	391	431	556
% Other	25.9	27.2	23.7

In 2007, Aboriginal participation in the Voisey's Bay Nickel Mine workforce increased from 50% to 53%. In 2008, more than 50% of the Voisey's Bay Nickel Mine workforce in Labrador was Aboriginal. Vale noted in its 2008 Social Responsibility Report that it intended to increase that number as new hiring opportunities emerged. Vale noted in their 2010 report that by the end of 2010, the Aboriginal employment rate at its Labrador operations was 55% (this figure is in reference to Vale's Labrador operations only, and not total employment for the Voisey's Bay Nickel Mine; as Tables 3.3-1 and 3.3-2 show, total employment of Innu and Inuit across all parts of the Voisey's Bay Nickel Mine was much lower).

Vale's Role Model Poster campaign featured 10 posters showcasing some of the successful Aboriginal employees currently working within the company. They were conceived and developed by the Labrador Operations' Aboriginal Affairs Department to promote an interest in mining-related occupations that exist at the Voisey's Bay Nickel Mine site. As a broader message, they focus on the benefits of secondary and post-secondary education as it relates to finding full-time employment, with Vale or any employer. The company has also visited schools in the region to inform students of job opportunities and career paths in the mining industry.

Vale operated an Aboriginal Affairs and Labrador Human Resources Office in Goose Bay, Labrador. Six people, including an Innu Employment Coordinator and an Inuit Employment Coordinator, staffed

the office; they provided access to information about the project to local residents, and facilitated the hiring of Aboriginal peoples.

The success of employing aboriginal people in the Labrador facilities may in part be the result of economic benefits for both the community as well as the company. Sosa and Keenan (2001) state that the Nunatsiavut Government IBA linked employment quotas to revenue. The Nunatsiavut Government win a percentage of the company's profit margin if, in a particular year, the company does not fill the designated quota of Inuit employees. This indicates that employment quotas were written in to these IBAs.

3.3.3 Provincial and Aboriginal Businesses

Vale is committed to developing its Aboriginal workforce, enabling them to take advantage of the full opportunities for advancement and promotion, particularly to supervisory positions. An aggressive succession plan ensures that Aboriginal workers are promoted to more senior positions within the company.

Vale has stated that it is providing full and fair opportunity to qualified provincial suppliers, and remains committed to awarding the supply of goods and services to companies in Newfoundland and Labrador. Vale compiled a database of potential bidders, including local companies with the demonstrated capacity to bid on contracts and deliver the work safely and competitively. Local companies are all required to have a proven track record that demonstrates good standards for quality, safety, and environmental protection.

Table 3.3-3 summarizes the total expenditures by Vale on the Voisey's Bay Nickel Mine from 2003 to 2010.

Table 3.3-3. Voisey's Bay Nickel Mine Operations and Capital Expenditures: Labrador and Newfoundland

	2003	2004	2005	2006	2007	2008	2009	2010
Total Expenditures ($ millions)	215.5	566	496	242.7	408.8	383.8	442.4	1006.7
Spent in Labrador ($ millions)	76.8	315	247	146.7	167.8	223	228.9	226.7
% Spent in Labrador	35.6	55.6	49.7	60.4	41	58.1	51.7	22.5
Spent in Newfoundland ($ millions)	72.3	116	149	58.5	188.1	110.3	180.1	494.1
% Spent in Newfoundland	33.5	20.4	30	24.1	46	28.7	40.7	49.1

In addition to identifying provincial supply capabilities, Vale has encouraged smaller companies to consider joint venture activities that would enable them to pursue larger contracts. They are working with business organizations and governments to encourage and facilitate the development of business capacity in the local area. The company has organized vendor information sessions at locations across the province to ensure that companies are positioned to take advantage of procurement opportunities.

In Labrador, there is emphasis on developing business with majority Aboriginal ownership, through contractual arrangements with companies such as Sikumiut Environmental Management, Shuashim Group Ltd., Innu Mikun, Torangait Services, Innunuk Traders Limited Partnership, Minaskuat Limited Partnership, and others.

There is a Business Development Committee in place, which is a joint effort between the Innu, Inuit, and Vale that works to expand and grow Aboriginal businesses in and beyond Voisey's Bay.

3.3.4 Education and Training

The Joint Voisey's Bay Employment and Training Authority is funded by Human Resources and Skills Development Canada and was established to provide work experience, education, and training programs to develop the Labrador aboriginal workforce. The Board of Directors is composed of members from the Nunatsiavut Government, Innu Nation, Labrador Métis Nation, and Vale. In 2003, community-based training funded by Vale and the Joint Voisey's Bay Employment and Training Authority included 125 participants. Training was in Goose Bay, Natuashish, Sheshsatshui, Nain and Port Hope Simpson. Training also occurred at the mine and concentrator site, including heavy equipment operator training, maintenance, and security. Thirty-four people participated in training at the mine/concentrator site in 2003.

Various training to prepare for operations was also delivered at the mine/concentrator site and in several communities in Newfoundland and Labrador. In total, 148 people participated in training in subjects such as heavy equipment operation simulation, health and safety, drilling operation, driver certification, and industrial instrumentation.

Annual scholarships were awarded to Innu and Inuit high school students. The Inuit scholarship program consisted of six scholarships, one valued at $4,000 and the other five each valued at $1,000. The scholarships were awarded to one student in each of the communities of Nain, Hopedale, Makkovik, Postville, and Rigolet. The annual Innu program consists of one $4,000 scholarship and is available to any Innu Nation high school student in Labrador. In addition, two $1,000 scholarships may be awarded to a student in each of the communities of Natuashish and Sheshatshui.

In March of 2006, the Skills Development Centre was opened at the mine and concentrator site. It is the first and still the only private work site in the province to receive Adult Basic Education designation. Courses at the Skills Development Centre include basic education and literacy as well as computer training, supervisory training, etc. In 2008, the Skills Development Centre was given exam invigilator status, meaning exams can be administered on site for post-secondary institutions located elsewhere. Students can study online or by correspondence, and do not have to leave the work site to take exams.

In addition to health and safety training, other certified training is offered in First Aid, the Workplace Hazardous Materials Information System, Transportation of Dangerous Goods Regulations, fall arrest awareness, confined space training, helicopter training, and man-lift training.

In 2009, Vale re-invested $234,000 in the scholarship program at the College of the North Atlantic, making Vale the largest scholarship donor in the history of the college. The funds will be distributed between 2009 and 2013. The combined scholarship investments from 2004 to 2014 will total more than $344,000.

Vale is also sponsoring a high school scholarship program in the Placentia/Long Harbour Region, offering scholarships of $600 (24 in total) to high school students who enrol in the post-secondary industrial trades and technologies or science and engineering programs. Vale's "stay in school" and lifelong learning initiatives also include career fairs, school visits, student tours of the mine site, and various community-based training initiatives.

3.3.5 Community Legacy Projects

In 2003, Vale contributed $1.2 million to the Building Hope campaign to build two new community recreation centres in Sheshatshui and Natuashish. They also made the fifth and final instalment of $3 million to the Labrador Health Centre in Happy Valley-Goose Bay. Vale's total commitment toward construction of the centre was $15 million.

In 2004, Vale committed to a $500,000 bequest through to 2009 toward the development of a new community centre in Nain, Labrador, to promote aboriginal culture and develop new suicide-prevention programs. The project is called Ulapitsaijet, meaning "talking together" in Inuktitut. They also contributed $350,000 to the town of Placentia to support its efforts to upgrade key components of their municipal infrastructure.

In 2005, Vale provided support in the form of donations to *Them Days* magazine, which was established in 1975 and is dedicated to keeping the history of Labrador alive by documenting and preserving the "old ways and early days" of Labrador. The donation was made to construct an improved archive to preserve and protect their collection of photographs, tape recordings, and other artifacts. In the Argentia area, Vale funded the construction of a new and permanent bandstand for the Placentia Regatta. They also supported Opportunity Argentia, a conference and exhibition focused on strengthening the capacity of local businesses to pursue opportunities flowing from the Voisey's Bay Nickel Mine. Vale provided $150,000 to Opportunity Argentia by 2004.

At the provincial level, Vale provided sponsorship support to Shallaway (the former Newfoundland Symphony Youth Choir) to help commission development of *Ann and Seamus*, an opera about Newfoundland and Labrador.

In 2006, Vale agreed to contribute $1.8 million to assist with the construction of recreational facilities for Laval High School in the Placentia region, of which $200,000 was slated to assist construction of the new fire hall, and $150,000 was to be used for upgrading outdoor lighting at Dunville Ball Park.

In 2007, Vale (Inco at that time) contributed $1 million to the Inco Innovation Centre at Memorial University, on top of the $20 million it donated in 2005 to develop and operate the centre. This contribution was used to fund annual operational expenses at the centre. The centre had its first full year of operations in 2006 and allows Memorial University's scientists, engineers, and senior students to develop leading-edge technologies to support advanced ore body exploration techniques.

In 2009, Vale supported the work of a researcher with the InoKatiget uKausinget INC. Language Revitalization Committee in efforts to preserve the Inuit Language.

In 2010, a fully equipped fire hall was presented to the Town of Long Harbour. This will be followed by training opportunities for town volunteer fire fighters, jointly with the Vale team. The fire hall was built with input from the town.

Vale and the RDC have partnered to support the *Give from the Heart Campaign* to raise funds for cardiac care equipment and technology. The program is a referral centre for all cardiac surgery and invasive diagnostic and interventional procedures in Newfoundland and Labrador. Vale contributed $750,000 to the campaign.

3.3.6 Community Well Being

Vale's Employee and Family Assistance Program is designed to support employees who may require assistance or intervention on a wide range of issues including: alcohol or substance abuse, nutrition, depression, gambling addiction, work stress, financial difficulty, and other issues. The program is also available to employees' family members as well.

Vale also has a Disability Management Program, which provides short-term disability insurance for those who are injured for short periods of time. The program is entirely confidential and uses a third party consulting firm to determine eligibility.

Vale's community investment program is focused on enriching the lives of the people throughout the province. In Labrador, Vale's community investment program has, as an additional priority, the preservation of aboriginal culture wherever possible. This support is expressed by way of scholarships, and supporting community events, sporting events and organizations that support arts and culture.

One particular way this was done was through Vale's Winter Shipping Program, which incorporated traditional knowledge into developing winter shipping routes in and out of Anaktalak Bay, which freezes in the winter. It mitigates the effects of the ship's track through ice, with the creation of ice bridges, supporting signage, and other means of communication.

Table 3.3-4 summarizes Vale's expenditures on social and community projects in Newfoundland and Labrador from 2003 to 2010.

Table 3.3-4. Voisey's Bay Nickel Mine: Social and Community Projects Expenditures

	2003	2004	2005	2006	2007	2008	2009	2010
Education	$10,774	$7,000	$18,000	$15,000	$17,600	$17,950	$35,882	$14,100
Health and Welfare	$9,918	$6,000	$10,000	$13,000	$16,000	$10,482	$96,517	$106,060
Arts and Culture	$3,306	$3,000	$25,000	$26,000	$32,000	$4,500	$38,250	$81,985
Athletics	$6,612	$3,000	$12,000	$11,000	$41,600	$20,849	$82,035	$14,000
Civic and Community	$19,009	$11,000	$35,000	$35,000	$52,800	$35,450	$96,110	$35,900
Sponsorships	$33,060	$20,000	$0	$0	$0	$0	$0	$0

In 2006, Vale played a part in preventing the sale of two extremely rare Innu coats to a private collector in the United States. The coats now have a permanent home in The Rooms Provincial Museum in St. John's, Newfoundland. $38,000 was provided by Vale in funding to make an offer on the coats, along with contributions from federal, provincial, and Innu Nation sources.

3.4 CASE STUDY 3: DIAVIK DIAMOND MINE

3.4.1 Background

The Diavik Diamond Mine, located 300 km northeast of Yellowknife, NWT, is an unincorporated joint venture between Diavik (60%) and Harry Winston Diamond Limited Partnership (Rio Tinto/Harry Winston; 40%). Both companies are headquartered in Yellowknife. Diavik is a wholly owned subsidiary of Rio Tinto plc of London, England. Harry Winston is wholly owned by Harry Winston Diamond Corporation of Toronto.

Diavik first demonstrated their commitment to local community socio-economic well-being through a Socio-economic Monitoring Agreement (SEMA) requirement within the Diavik Diamond Mine's environmental assessment. The SEMA provided a formal mechanism to ensure that socio-economic and cultural mitigation measures and commitments were appropriately implemented and monitored. A key component to the SEMA is a commitment to training, employment, and creating business opportunities for the northern residents surrounding its mining operations.

On October 2, 1999, Diavik entered into a SEMA with the GNWT, later ratified by the Tlicho Government, the Yellowknives Dene First Nation, the Lutsel K'e Dene First Nation, the Kitikmeot Inuit Association, and the North Slave Métis Alliance. Diavik has also successfully negotiated IBAs with these Aboriginal groups. These agreements are confidential and address issues such as employment, procurement of Aboriginal businesses, and education/training.

In 2005, Diavik received the Progressive Aboriginal Relations Gold designation. In 2007, it received the Mining Association of Canada recognition for community outreach, among other initiatives. In 2011, Diavik was re-certified for the Progressive Aboriginal Relations Gold designation.

3.4.2 Employment

Diavik expected to hire local northern residents to fill at least 38% of its construction work force, which was to average approximately 800 workers annually over the two-year Construction phase. The company also expected local community residents to initially fill at least 66% of its mining operations work force and over time, employment of local residents would approach 100%. The operation's work force was expected to average approximately 400 workers. It was also anticipated that at least 40% of the operation's work force would be northern Aboriginal. From an analysis of the northern workforce in their Socio-economic Environmental Effects Report (SEER), Diavik expected 264 employees would be northern Non-Aboriginal and 160 northern Aboriginal.

Table 3.4-1 summarizes employment numbers at the Diavik Diamond Mine during the Construction and Operation phases from 2003 to the mid-point of 2011. These figures are based on results reported in Diavik's socio-economic monitoring reports.

According to Table 3.4-1, the percentage of Aboriginal people employed at the Diavik Diamond Mine during its Operation phase has been consistently below the expected target of 40%. However, it has been consistently above the 160 employees predicted in their earlier studies. One can argue, therefore, that the employment targets were unrealistic. The issue of unrealistic targets is a major concern of IBAs and is discussed more in Section 5.0.

The percentage of northern workers employed at the Diavik Diamond Mine fell below the 66% target in 2009. This was most likely due to the underground mine going into production that year and, as Diavik had anticipated, a shortage of skilled underground labour in the North. As such, labour had to be recruited from the southern regions of the country.

Diavik has a northern Workforce Recruitment and Development Strategy, which has been refined to address the shortage of skilled underground mine workers in the North. A MOU for a northern Mining Workforce Initiative was signed by the GNWT, Diavik, De Beers Canada Inc., and BHP on November 27, 2008. Diavik's strategy includes more apprenticeships, new recruitment campaigns in northern communities, working with the GNWT on the training landscape in the North, and reviewing the feasibility of new northern community pickup points. Providing opportunities for apprenticeships and creating positions for journeypersons are a part of their overall northern employment strategy. As of mid-2011, 30 individuals had obtained journeyperson certifications at the Diavik Diamond Mine.

3.4.3 Northern and Aboriginal Businesses

Diavik committed to purchase at least 38% of total capital expenditures from northern businesses during the mine Construction phase, and 70% of its goods and services were to be supplied by northern companies during the Operation phase each year. Table 3.4-2 summarizes Diavik's spending statistics from the Diavik Diamond Mine, based on results reported in Diavik's Socio-economic Monitoring Reports.

Table 3.4-2 demonstrates that the share of total spending has fluctuated for both northern and Aboriginal businesses over the years. Diavik has only fallen below its northern spending target three out of 12 years. However since 2005, the overall percentage spent with Aboriginal businesses has consistently declined.

Table 3.4-1. Diavik Diamond Mine: Northern and Aboriginal Employment during Construction and Operation Phases

Year	Phase	# Employed	# Northern Residents Employed	% Northern Residents	# Aboriginal Residents Employed	% Aboriginal Residents	% Northern Workers Target	Northern Workers % Above/ Below Target	% Aboriginal Workers Target	Aboriginal Workers % Above/ Below Target	SEER Estimate of # of Aboriginal Workers in Operations Phase	# Aboriginal Works Above/ Below SEER Estimate
2000	Construction	298	165	55%	78	26%	40%	15	n/a	n/a	n/a	n/a
2001	Construction	1,031	427	41%	245	24%	40%	1	n/a	n/a	n/a	n/a
2002	Construction	1,113	482	43%	214	19%	40%	3	n/a	n/a	n/a	n/a
2003	Operation	611	444	73%	221	36%	66%	7	40%	4	160	61
2004	Operation	720	518	72%	259	36%	66%	6	40%	4	160	99
2005	Operation	727	513	71%	256	35%	66%	5	40%	5	160	96
2006	Operation	735	497	68%	245	33%	66%	2	40%	7	160	85
2007	Operation	785	524	67%	257	33%	66%	1	40%	7	160	97
2008	Operation	808	540	67%	273	34%	66%	1	40%	6	160	113
2009	Operation	810	528	65%	269	33%	66%	1	40%	7	160	109
2010	Operation	907	561	62%	269	30%	66%	4	40%	10	160	109
2011 Jan-Jun	Operation	1,110	628	57%	309	28%	66%	9	40%	12	160	149

Table 3.4-2. Diavik Diamond Mine: Operations and Capital Expenditure, Northern and Aboriginal Businesses

Year	Total Spending	Spent with Northern businesses	% Spent on Northern Business	Spent with Aboriginal businesses	% Spent on Aboriginal Business	Northern Spending Target %	Northern Spending % Above/ Below Target
2000-2002	$1,184,000,000	$874,000,000	74%	$604,000,000	51%	38%	36
2003	$252,000,000	$202,000,000	80%	$71,000,000	28%	70%	10
2004	$269,000,000	$183,000,000	68%	$96,000,000	35%	70%	2
2005	$415,000,000	$311,000,000	75%	$203,000,000	49%	70%	5
2006	$492,000,000	$379,000,000	77%	$223,000,000	45%	70%	7
2007	$727,000,000	$521,000,000	72%	$276,000,000	38%	70%	2
2008	$724,752,000	$509,451,000	705	$253,609,000	35%	70%	0
2009	$431,000,000	$288,100,000	67%	$145,300,000	34%	70%	3
2010	$365,200,000	$260,000,000	71%	$112,500,000	31%	70%	1
2011 Jan-Jun	$224,800,000	$155,600,000	69%	$64,000,000	28%	70%	1

In the mid-year report for 2011, Diavik stated that it had entered into operations labour contracts with Aboriginal and northern businesses that supply approximately 40% of Diavik's workforce. The remaining portion of the workforce is employed directly by Diavik. The report also states that Diavik has worked closely with Aboriginal-owned companies to assist them in building capacity to pursue potential future business opportunities. These companies are required to adopt contracting principles that fully embrace Diavik's continuous business improvement process and share its multi-faceted performance accountabilities. These include a safety plan, a business plan (which includes a northern participation execution plan), and contractor-specific key performance indicators. Each of these elements, including reporting requirements/frequencies, is incorporated into renewed/extended contracts, and forms the basis for ongoing monthly performance measurement, quarterly reviews, and business improvement processes.

Northern Aboriginal businesses contracting to Diavik at mid-year 2011 include:

- A&A Techincal Services Ltd.;
- Behchoko Development Corporation;
- Bouwa Whee Catering Ltd.;
- Canadian North;
- Denesoline Western Explosives Ltd.;
- Denesoline - Northern Food Services;
- Det'on Cho Nahanni Construction;
- Det'on Cho Scarlet Security;
- Det'on Cho Stantec;
- Exlogs Taidene - Frontier Medical Services;
- I&D Management Services Ltd.;
- Kitikmeot Cementation;

- Lac De Gras Constructors;
- Metcrete Services, Nishi Khon SNC Lavalin Inc.;
- Northern Industrial Sales;
- Northern Metallic Sales;
- Nuna Logistics Ltd.;
- Tli Cho Landtran Transport Ltd.; and
- Tli Cho Logistics, and Tli Cho Air.

3.4.4 Education and Training

During the Construction phase, Diavik contributed to communities by offering mine construction trades training courses which raised skill levels among northerners and improved community infrastructure. Participants gained hands-on trades experience, and 237 northerners completed training among 16 programs during this three-year period. Many of these graduates went on to work for contractors during the Construction phase.

Most of Diavik's training is focused on site-based programs to train all employees on Diavik-specific equipment and to maintain compliance with Rio Tinto standards. Every new employee is required to complete the online Safety Training System, attend the site induction program, and receive an orientation specific to their work area. Other site-based training areas include:

- fixed plant operations;
- surface operations;
- open pit mining operations and equipment;
- underground mine orientation and equipment training;
- mine maintenance;
- equipment maintenance;
- safety systems including fall arrest, confined space, job hazard analysis, and isolation officer certification;
- industrial standard first aid;
- Workers' Safety and Compensation Commission (WSCC) Level I and II supervisor certification;
- WSCC blaster and shift boss certification;
- mine rescue certification;
- electrical hazard, ARC flash, and radiation training;
- Workplace Hazardous Materials Information System training;
- Delta-V process control; and
- continuous business improvement processes such as 6 Sigma.

Diavik maintains a workplace learning centre at the mine site. The centre is intended to help employees build their skills in tasks related to their every-day work role including computer skills. A training advisor is available to provide learning support to apprentices who are preparing to attend

technical training. In addition, the workplace learning centre is the first point of contact for new employees and contractors.

Diavik employs several northern Aboriginal people in supervisory positions. To help increase the number of qualified Aboriginal people at the supervisory and management level, Diavik commenced an Aboriginal Development Program in association with SAIT Polytechnic. Since 2005, 59 individuals have completed the program. In 2011, the program was transitioned to Aurora College and has expanded to include participants from northern businesses.

Diavik has committed to train between 8 and 18 apprentices annually. Table 3.4-3 summarizes the number of apprentices working at the Diavik Diamond Mine, as taken from Diavik's Socio-economic Monitoring Reports.

Table 3.4-3. Diavik Diamond Mine: Apprentices Working at Mine by Year

Year	# Apprentices Working
2003	15
2004	16
2005	17
2006	20
2007	22
2008	19
2009	18
2010	13
2011 Jan-Jun	25

3.4.5 Community Legacy Projects

In 2000, as part of its trades training courses in local communities, Diavak constructed community infrastructure including a cold storage warehouse for the GNWT Department of Transportation at its Behchoko highway camp, a concrete walkway for the community, a new foundation and skirting at the Behchoko church, a new bridge for the community between the mainland and Bay Island, and completion of the community's airstrip. They were also involved in the upgrade of the Wekweeti Arbour into an all-weather structure, renovating the Wha Ti Community Hall, repairing the Austin Lake Road near Lutsel K'e, installing an artificial ice surface in the Kugluktuk recreation complex, and constructing a house in Kugluktuk. Diavik also assisted the community of Lutsel K'e with project planning for an arena.

In 2002, as part of their mine construction trades program, local youth renovated and expanded the vacant NWT Mine Rescue Service building into what would become the SideDOOR youth centre. The renovation was estimated to cost $500,000. Diavik was directly involved in organizing and executing the first six-week training program. The youth centre is located in Yellowknife.

The Imii Drygeese and David Sangris Elder's independent homes were completed in 2001 and 2002 in the communities of Dettah and N'dilo, respectively. They both include five apartment units, complete with all appliances, as well as a common area. Diavik partnered with other groups to build these homes, and provided funding for the architectural costs.

Diavik provided funding, in-kind assistance, and $2.1 million in no-interest financing to the City of Yellowknife to build the Shorty Brown Arena. It opened in 2004 and, in addition to promoting healthy lifestyles through sport, also serves as a venue for trade shows and other local events.

In December 2008, the Bailey House men's transition centre was opened. It was a joint venture between the Yellowknife Homelessness Coalition, federal and territorial governments, the Salvation Army, local businesses, the City of Yellowknife, and Diavik. The company provided construction management, funding, and in-kind services estimated at over $350,000. Bailey House provides housing for up to 32 men and is situated in Yellowknife.

In February 2010, the Aven Cottages territorial dementia facility was opened. The facility was built to meet the needs of people in the NWT with Alzheimer disease or related dementia. It is a 28-bed facility in Yellowknife. To support the development of Aven Cottages, Diavik shared construction management with the GNWT's Department of Public Works and Services.

Also in 2010, Diavik donated $60,856 to the CIBC Run for Our Lives Committee and the Stanton Territorial Hospital Foundation. Employees of Diavik and participating contractors also played a key role in the successful campaign to raise funds for a new $400,000 digital mammography machine for the Stanton Territorial Hospital. All of Diavik's donations to Stanton Hospital (up to 2010) totalled $150,000.

3.4.6 Community Wellness

During the Construction phase, Diavik initiated a cultural awareness, community well-being, and employee wellness program. In developing these programs, Diavik worked closely with each of the five IBA holders to ensure project-related cultural and employee/community wellness issues would be addressed in a sensitive and meaningful manner. Diavik has continued delivering these programs into the Operations phase of the Diavik Diamond Mine.

Diavik provides cultural awareness and employee family assistance programs to its employees. They also provide community relations programs that ensure Communities and External Relations department representatives attend special events like assemblies, elders' funerals, and significant community and cultural events.

Community update meetings are held annually with all of the communities that signed IBAs with Diavik. Mine tours are conducted for Aboriginal elders, leaders, and IBA committee members. More recently, input was obtained from communities on the existing wildlife programs at the site, and how best to incorporate traditional knowledge into the various monitoring programs at the mine site.

In a 2010 report, Diavik estimated that it had distributed $830,000 in donations and sponsorships. Diavik supports events and organizations such as the Yellowknife Community Foundation gala, the Lutsel K'e spring carnival, the Yellowknives Dene Career Fair and Aboriginal Day celebrations, the Tlicho Assembly, the Cambridge Bay trade show, the Diavik 150 Canadian Championship Dog Derby, the Yellowknife Gymnastics Club, and the Special Olympics Hercules pull.

4. Assessment of Socio-economic Impacts for NWT Mine Projects

It can be argued that an assessment of the socio-economic impacts on communities affected by a mining project based on actual experience can only occur after an adequate period of time has elapsed. In many cases, changes or trends in a community's health, employment, and well-being cannot be measured with any degree of accuracy until several years have passed. In addition, it can be difficult to determine what community-level socio-economic changes can be attributed, either directly or indirectly, to the development.

Historically the GNWT has concluded socio-economic agreements with several mining companies to mitigate socio-economic impacts on local communities. Agreements have been concluded with BHP (1996), Rio Tinto/Harry Winston (1999) and DeBeers (2004).

The GNWT produces an annual report to monitor the actual socio-economic impacts where there are agreements in place. The report analyzes trends in socio-economic indicators in terms of what was predicted by the individual mining companies in their socio-economic impact assessments, and what has actually occurred in Yellowknife, and in the Small Local Communities such as Behchoko, Lutsel K'e, Dettah, N'dilo, Whati, and Wekweeti. Results provided in the GNWT's 2009 annual report "Communities and Diamonds" are presented in Table 4-1. Trends are presented as increasing or increasing in frequency (up), decreasing or decreasing in frequency (down), or showing no noticeable change from trends pre-mine (same).

Table 4-1. GNWT Analysis of Socio-economic Indicators

	Company-Predicted Trend			GNWT Observed Trend	
Indicator	BHP	Rio Tinto / Harry Winston	DeBeers	Small Local Communities	Yellowknife
Community, Family, and Individual Well-Being					
Person Years Life Lost	up	up	down	down	same
Injuries	up	up	down	same	down
Suicides	same	same	up	same	same
Communicable Diseases	same	up	up	up	up
Teen Births	same	same	up	down	down
Single-Parent Families	up	same	up	up	same
Children Receiving Services	up	up	same	up	same
Spousal Assault	up	up	up	same	same
Total Police-Reported Crime	up	up	up	up	up
Crowding Living Conditions	down	down	down	down	down
Cultural Well-Being and Traditional Economy					
Trapping Activity	down	down	same	up	same
Hunting and Fishing Activity	down	up	same	up	down
Non-traditional Economy					

(continued)

Table 4-1. GNWT Analysis of Socio-economic Indicators (completed)

	Company-Predicted Trend			GNWT Observed Trend	
Indicator	BHP	Rio Tinto / Harry Winston	DeBeers	Small Local Communities	Yellowknife
Average Income	up	up	up	up	up
Income Assistance Cases	down	down	down	down	down
Employment Rate	up	up	up	up	down
Unemployment Rate	down	down	down	down	same
High School Completion	up	up	up	up	up
Less than Grade 9 Completion	down	down	down	down	down
Business Activity	up	up	up	same	same

The following conclusions were made:

1. The general downward trend of the Potential Years of Life Lost (an indicator of premature mortality) in Small Local Communities could be due to a better standard of living or better access to health services, most likely because of employment in the mines.
2. The long-term downward trend in injuries in Yellowknife may be due to the success of injury prevention efforts through safety training and awareness at the mines.
3. With regard to the suicide rate, it is difficult to ascertain whether mining has had a positive or negative impact.
4. The trend of increasing rates of communicable diseases may be related to a shift in public attitudes towards sexually transmitted infection prevention or it may be due to reduced supervision by parents, as a result of work schedules or mine jobs. Alcohol and drug abuse, as a result of higher incomes from mine jobs, may have also played a role in the increase in sexually transmitted infections.
5. The drop in the number of teen births could be due to more planned parenting, delayed childbirth, or more use of birth control. It could also mean that more teens are pursuing education and are able to join the workforce upon finishing their schooling.
6. It is difficult to determine whether family violence is rising or decreasing as a result of the challenges of measuring family violence. In times of economic uncertainty and job losses, spousal assault may increase due to stress and insecurity. Employment opportunities that bring increased income may bring with them more opportunities for alcohol consumption and time away from family.
7. Increases in offences such as mischief and disturbing the peace are typically linked to abuse of alcohol. This increase may be linked to resource development and higher income. The RCMP believe that drug dealers and other organized crime groups have become more active in the NWT. This may be because people have more money from resource development.
8. The diamond projects have not had the positive impact on housing that was expected. In Yellowknife crowding was expected to drop further. The lack of suitable housing may have made the drop smaller than expected. In-and intra-migration may have added pressure to the limited supply of housing. Rising prices, especially in Yellowknife, may also be a factor.

9. Some of the increase in trapping, hunting, and fishing in the Small Local Communities may be from more income and from the increased time available for these activities as a result of the rotation schedule used at the diamond mines.
10. Average incomes rose noticeably in Yellowknife and the Small Local Communities around the time the diamond mines began to develop.
11. An increase in average income has led to a decrease in the number of income assistance cases. It has also led to a higher standard of living.
12. The job opportunities at the diamond mines are a major factor in the increase in the employment rate and decreased unemployment rates in the Small Local Communities.
13. The mines have provided incentives for northerners to stay in school by offering educational support, such as scholarships and jobs. Stronger training partnerships between government and industry have helped contribute to higher education levels in the NWT.
14. Diamond mine activity may be having an effect on recent increased capital spending on housing, transportation, and warehousing. An increase in capital spending indicates an expanding economy.

One further observation can be made regarding employment and unemployment rates. In the Small Local Communities, the employment rate increased and the unemployment rate decreased. In comparison, the employment rate in Yellowknife decreased and the unemployment rate remained about the same. This trend lies in contrast to what was predicted by McDonagh (2010), who projected that fly-in/fly-out mining projects would lead to an out-migration from the smaller communities into larger urban centres and enable fly-over of adjacent communities by drawing skilled labour from distant urban centres. The reason for the opposite occurring is believed to be because of IBAs setting employment quotas for Aboriginal people and stipulating employee pick-up locations in smaller communities that had airports.

5. Effectiveness Indicators of Impact and Benefit Agreements

One of the objectives of the GNWT annual report (referred to in Section 4) is to measure the effectiveness of the terms and commitments in socio-economic agreements between the GNWT and mining companies. Hitch (2006) analyzed the effectiveness of IBAs for several mine projects including EKATI, Voisey's Bay Nickel Mine, and Diavik Diamond Mine using specific criteria in the context of political ecology. Key findings included:

1. **Holistic corporate policies** are initially indicative of a company's recognition of more than just economic performance, but inclusive of the environmental and social context and all of its components. BHP was proactive in developing an inclusive and holistic corporate policy that engaged and treated members of the affected communities as partners in the operation. INCO (now Vale) had a holistic corporate policy that was inclusive, but on a comparative basis still demonstrated strong industrial power and influence, typical of more conventional business approaches. Diavik corporate policy was assessed as the most sophisticated and inclusive, and represents the most devolution in terms of decision-making power.
2. **Aboriginal partnerships and cooperation** give the local communities and their agents access to forums of decision-making through inclusion. In the relationship between the mining company and Aboriginal community, the ability to work together in a mutually beneficial manner through cooperation creates a more equal share of decision-making power. Each successive IBA through to the Diavik agreement has included more mechanisms to develop not only employment and business partnerships, but also other partnerships intended to enhance the social well-being of the community.
3. **Training and education** allow the affected community to develop its own skill sets and tools to pursue a future beyond the life of the mine. Through training and education, participants gain power as opposed to having it granted to them, which is believed to be more effective in the long-term. All IBAs contained elements of training, education, and opportunities for personal and career development. These components are considered fundamental to IBAs based on the premise that skill development contributes to social and community sustainability.
4. **Employee participation and community well-being** recognizes the local community's cultural needs as well as appropriate labour relations. By recognizing these elements, the industrial actor accommodates the communities to continue the traditional activities they are accustomed to. As with training and education, all IBAs included provisions for the employees and home community to carry out their cultural and traditional ways of living.
5. **Community capacity building and enhancement** has similar attributes to training and education. The development of individual and community capacity building is more effective than donations and one-off hand-outs. These IBAs included provisions to assist and encourage development of affected community capacity. These mechanisms included preferential letting of supply and service contracts, on-site business development initiatives, and off-site institutional development, such as INCO's (Vale's) Innovation Centre at Memorial University of Newfoundland.
6. **Community participation and information disclosure** involves transparently sharing with community leaders and affected groups data on which they can base their decisions. Until recently, the terms and conditions of IBAs have remained confidential, even to members of the affected Aboriginal communities. Each successive IBA has provided more opportunities for Aboriginal input and participation. To some extent this is due to the size of the proposed projects and the regulatory requirement for more extensive public hearings.

6. Strengths and Weaknesses of Impact and Benefit Agreements

This section outlines the strengths and weaknesses of IBAs according to what has been reported in the academic literature and what has been reported from Aboriginal community experiences. This review focuses on the most recent literature and literature dealing specifically with IBAs. A list of references is provided in Appendix 2 for further reading.

Fidler and Hitch (2007) write:

> *A decade ago, nearly all literature on IBAs noted the lack of research carried out in this subject area. Now, and particularly over the last few years, there has been an abundance of publication and research on IBAs from multiple disciplinary vantage points, all of which seek to fill the knowledge gaps and question the instrument's utility and motivation from corporate and aboriginal perspectives. Researchers have examined IBAs from a range of disciplines, including geography, law and political science... Nevertheless, even with the increased prevalence of research and discussion on IBAs, many questions remain.*

The following information highlights common themes based on the review of the literature dealing with IBAs.

6.1 GOVERNANCE AND POLITICAL AUTHORITY

An overarching prerequisite for developing an effective agreement and seeing the terms of that agreement implemented involves an Aborginal group's self-governance processes and political influence. Prno (2007) writes:

> *While impressions of IBA effectiveness on the whole were positive, one main contingency should be noted: perceptions of effectiveness varied for each Aboriginal signatory community, and for each agreement signed. Communities that appeared to benefit most from their IBAs were those that had secured some form of authority over their traditional lands (e.g. had settled a land claim, established self-government measures) and/or had a heightened political influence in the region. A settled land claim, for example, might provide a community with increased capacity to handle issues related to mineral resource development. Differences in 'capacities' among communities (e.g. number of trained employees, availability of financial resources, etc.) were seen to impact not only the effectiveness of IBA negotiations, but the subsequent dispersal of benefits throughout those communities. IBA signatories that lacked authority over their traditional lands also tended to lack political influence in the region, and appeared to gain less from their IBAs. It was recounted to the author on a number of occasions that the less political influence one had in the region, the more difficult IBA negotiations could be with mineral developers.*

Prno (2007) also noted general dissatisfaction among Aboriginal groups regarding the periodic review and/or monitoring of IBAs. Many claimed that it was insufficient or even non-existent. In the author's opinion, this did not seem to be the case with the monitoring of the Voisey's Bay Nickel Mine or Diavik Diamond Mine. Socio-economic monitoring reports were produced annually and, in the case of Diavik, semi-annually as well. The statistical data in those reports were useful in determining whether the proponents were able to meet their targets.

In a similar line of argument, Siebenmorgen (2009) writes:

> *Among the most significant flaws within existing IBAs has been the lack of resources allocated to support the operation of management and monitoring committees, which thereby reduces the ability of such committees to enforce compliance with IBA terms…Additionally, few existing agreements stipulate specific penalties, sanctions, or remedies for failing to deliver on IBA terms.*

6.2 LACK OF GOVERNMENT INVOLVEMENT

With respect to government involvement in IBAs, Sosa and Kennan (2001) write:

> *In the context of government cutbacks to social programs and environmental regulation, the wide scope of these agreements and the reduced government role in their negotiation and execution has led to criticism that IBAs are a form of government downloading that sees companies act as welfare providers and communities as environmental watchdogs.*

Hitch (2006), however, argues that the federal [and by extension provincial/territorial] governments face sensitive issues concerning Aboriginal self-government, and as a result must take a hands-off approach to IBAs.

Fidler and Hitch (2007) write:

> *One principle behind EA devolution - particularly in northern Canada with the employment of co-resource management models - was to move away from paternalistic forms of governance to ensure aboriginal participation is integral to resource development and management. Thus, government involvement and presence in IBA negotiations would be somewhat counter-intuitive to this devolution.*

6.3 DISTRIBUTION OF BENEFITS

With respect to the distribution of development benefits, Hitch (2006) writes:

> *In current IBAs, a prominent feature is the distribution of financial gains from the operation itself. These gains are usually realized in the form of lump sum cash payments, profit sharing plans and surface access fees. These arrangements can have a positive impact on the economic vitality of the Aboriginal community through increased employment levels and incomes. Communities also benefit from the expanded range and level of skills and work experience of the local labour force, and enhanced business capacity and expertise gained through contracting arrangements... It is important to capture the human resource and business capacities that are potentially available for future community development. A particular problem associated with this new found flow of economic wealth is its equitable allocation among different demographic, gender and economic groups.*

Sosa and Keenan (2001) write:

> *…mining often causes significant economic inequalities within a community. Mining can enhance the income opportunity of some (those who are able to secure jobs or contracts at the mine, those who receive compensation), while undermining the sources of income of others (those whose land is expropriated or polluted, those who depend on wildlife that is adversely affected by mining activities, etc.). A mechanism to address these imbalances may be necessary to help affected groups…*

Fidler and Hitch (2007) write:

> *[T]here is also concern that if aboriginal groups do not negotiate and receive a "fair" deal for themselves, then the IBA could have damaging long-term implications. This type of scenario would not advance self-sufficiency or prosperity within the community. Although IBAs symbolize partnership between parties, there is increasing skepticism on how benefits are equitably distributed throughout the communities…Class differences and governance structures in communities may also affect how benefits are distributed, as will the representation and consensus methods that determine IBA provisions.*

Prno (2007) noted from community interviews that opinions regarding the benefits IBAs provided to local communities, in the form of revenue sharing and/or royalties, were mixed:

> *[W]hile these respondents felt that local benefits were being secured, often the benefits received by a community were a "pittance" or "trinkets and beads" in comparison to what the mining company profited. Furthermore, it was noted that the benefits provided did not adequately reflect the current political situation in the North. Comments pertaining to Aboriginal rights, title, and land ownership seemed to reflect this, with one respondent noting: "As landowners, what [the Aboriginal signatories] are getting is not reflective of economic and political realities."*

6.4 SOCIAL AND CULTURAL IMPACTS

With respect to social and cultural impacts, Sosa and Keenan (2001) write:

> *Mining projects can have huge social and cultural impacts on local communities…Mine construction and operation usually brings outsiders and with them, new traditions and at times, work schedules (such as the "fly-in-fly-out schedule"), which often results in less time for traditional activities like hunting and time spent with family. These changes can cause a great deal of tension within [Aboriginal] communities, can negatively impact on traditional cultural practices and can result in increases in alcoholism, child neglect and domestic violence.*

Hitch (2006), quoting a community member from the Hamlet of Cambridge Bay, provides interesting insight into the way mining operations impact the social fabric of a community:

> *We know whenever there is a fly-in, fly-out operation such as the DEW Line clean-up, the Lupin Mine, or an exploration camp, the Wellness Centre can track increases in family violence, alcohol and drug abuse, and spousal abuse that completely mirrors the shift rotation schedule. What you tend to see is that the people come back into the community with large sums of money sitting in their pocket with really nothing to spend it on. In addition when these people return with all this money, all family members and everybody they know in the community, want the money spent on them to buy them gifts and alcohol. This type of salary with lots of time off tends to result in increases in those types of incidents. Because of the tightness of the family unit, here, there tends to be increased allegations of infidelity. Because one spouse is left alone to care for the extended family, tensions mount and there is a marked increase in elder abuse.*

On the other hand, according to the analysis of trends in 2009 by the GNWT, employment in the mines has seen an increase in traditional activities in the Small Local Communities. The fly-in/fly-out schedule of working intermittently allows Aboriginal employees to partake in traditional subsistence

activities while they are at home, and the increased income from working at the mines gives them the resources to pursue these activities.

Time spent with family is a key factor to mitigating adverse social and cultural impacts. As discussed earlier in the BHP survey of employees, time spent away from young children caused the most stress on employees. However, it was found that spouses were generally accepting of employees being away from home. Also in that study, it was found that alcoholism decreased in the local communities. The GNWT analysis found no effect of mine employment on spousal assault. Crime, however, had increased across the board.

6.5 EMPLOYMENT TARGETS AND COMMUNITY SKILL BASE

With respect to the achievement of employment targets and the development of a community skill base, Sosa and Keenan (2001) write:

> *The economic development goals of IBAs have not always been met. There is often a poor match between the mine's needs and the skills and interests of [Aboriginal] people. Employment quotas are rendered meaningless if there aren't enough Aboriginal people who are qualified to fill needed jobs. It is necessary to have a long lead-up time (i.e. pre-operation phase) for skill development and education, allowing [Aboriginal groups] to have meaningful participation in the mining sector. The alternative is for [Aboriginal groups] to fill positions that require little or no training. This curbs sustainable economic development and breeds dependency.*

Diges (2008) adds that IBA terms, such as employment targets, are seldom reflective of local capacity to take advantage of such provisions and may lead to unrealistic commitments within the IBA. This is problematic as it may lead to unattainable local expectations, resulting in increased community-project tension.

Hitch (2006), in reviewing a number of different IBAs, stated that provisions guaranteed in an IBA must be realistic. For example, where employment targets are set, the community must have the capacity to meet them. However, he singled out the EKATI and Diavik IBAs "which provide for employment targets…as well as concrete, realistic strategies for training and development of necessary skills in order to take advantage of priority of contract or employment provisions."

Diges (2008) similarly writes:

> *The IBA can provide for all of the employment targets desirable, but if the community does not have the capacity - for whatever reason - to fill them, the impact on the project as well as the community will be negative, and the potential for serious problems to occur is present due to an unrealistic commitment in the IBA.*

6.6 ABORIGINAL RIGHTS AND TITLE

Prno (2007) highlights what may have been previously overlooked in academic literature, which was the importance of IBAs as a way of asserting Aboriginal rights and title:

> *[T]he vast majority of those who responded stated, both in explicit and implicit terms, that the assertion of Aboriginal rights and title to land and resources was an objective of IBAs. In many cases, this was the "primary" or "first and foremost" objective for IBAs. This was mentioned in a number of instances: "IBAs are a tool to recognize ownership of land"; "a means for Aboriginal communities to establish political clout"; "stems from the Crown's duty*

to consult"; and that IBAs are "a means for First Nations to try and assert authority on their lands".

One industry representative candidly noted the signing of an IBA "is an acknowledgement that [Aboriginals] are a force to be dealt with". Furthermore, IBAs were often seen as an intermediate step towards the settlement of Aboriginal land claims: "IBAs ensure benefits for Aboriginal communities while land claims are ongoing". Another respondent simply stated "we were pre-implementing a land claim, if you will." In all these cases, the assertion of Aboriginal rights and title to land appeared to be a predominant objective for Aboriginal groups entering into IBA negotiations.

Fidler and Hitch (2007) write:

Clearly, IBAs are no panacea for addressing outstanding aboriginal rights and titles grievances between aboriginal peoples and the Crown. However, as literature and experiences indicate, IBAs can be beneficial as a stand-in agreement to acknowledge certain aboriginal claims in the interim.

6.7 COMMUNITY INVOLVEMENT AND INPUT

Fidler (2008) identified a potential downside of IBAs, using the case study of the Tahltan Nation IBA with NovaGold for the Galore Creek Project. In interviews with Tahltan community members, she observed:

The [IBA] process began with the TNT [Tahltan Negotiating Team] developing a comprehensive agreement to be taken to the community for a ratification vote. Since the majority of the agreement had already been confidentially established, a lot of criticism was directed at the TNT, and subsequently the TCC [Tahltan Central Council], for not having greater community involvement from the beginning.

Aside from [the result of the ratification vote], several respondents stated that by the time the ratification process took place the community felt alienated as they were not privy to the entire agreement. One Tahltan respondent claimed that many people did not vote because they did not know what they were voting on. Others, according to this proponent, are "people who did not agree, did not vote - they did not vote out of principle". In the end "some provisions in the [IBA], we just have the capacity to address" (Tahltan Respondent) - which she argues, goes back to the manner in which it was negotiated, "nobody asked the community what they wanted and so collectively 3-4 people made decisions on behalf of the Tahltan Nation".

[It] reveals the complex nature of [IBA]s - and political ideas of democratic participation at individual and community levels. Similarly the proponent provides insight on the same matter, "like dealing with any community, you try to engage all points of view, but in the end, you need to deal with the governing body that speaks [for] and represents the Tahltan Nation".

6.8 CONSULTATION ISSUES AND THE ENVIRONMENTAL ASSESSMENT PROCESS

Fidler (2008) examines the relationship between IBAs and the EA process. "Theoretically, two separate processes exist; however in practice, the interplay between each is creating an increasingly ambiguous climate on issues around consultation, and identifying, mitigating, and monitoring impacts."

First Nations may be concerned that the government is admittedly not involved in the IBA process, but somehow still view the agreement as a component of consultation even though the duty to consult is

judicially confined to the Crown: "One Tahltan respondent said that by signing the [IBA] the Nation effectively signed off on the EA before it even happened, adding that it is not a clear process and is like 'putting the cart before the horse.'" On the other hand, the IBA gives Aboriginal groups a measure of authority (via Law of Contract) similar to governments through legislation; it provides aboriginal groups with an extra layer of protection on socio-economic and environmental issues (Fidler 2008).

6.9 ABORIGINAL COMMUNITY-BASED PLANNING

O'Faircheallaigh (2009) refers to the need for community-based planning, encouraging Aboriginal communities to align IBA provisions with local development objectives. Siebenmorgen (2009) writes:

> *[M]ost Aboriginal signatories hold a number of implicit expectations related to mining and their community that are seldom captured in the explicit terms of an IBA. These expectations range from assumptions about how a specific IBA provision may be implemented to broader expectations related to the relationship between the mining company and their community.*

Siebenmorgen (2009) outlines what, through his interviews with Aboriginals community members affected by mining projects, Aboriginal communities expect the following components in the development, content, and implementation of IBAs:

Process

1. Affirmation of Aboriginal Title and Treaty Rights.
2. Recognition of unique local identities and interests.
3. Respectful consultation.
4. Relationship building and growing trust.
5. Trouble-free communication.

Content

1. Protection from negative environmental, socio-economic, cultural, and political impacts associated with mineral development.
2. Means to receive and equitably distribute economic benefits of mining.
3. Provisions to meet a range of local community development interests (employment, business development, education, etc.) and secure long-term investment in local social and institutional capacity.
4. Protection and strengthening of traditional lifestyles and cultural practices.
5. Mechanisms for enforcing terms of the agreement.
6. Long-term commitment to project remediation and environmental restoration.

Implementation

1. Development of local capacity to enable compounding benefits.
2. Effective implementation of IBA provisions.
3. Commitment to achieving project goals in good faith.

IBAs provide a mechanism for both the mining company and the Aboriginal groups implicated in a mining development to collaboratively identify ways that potential beneficial effects may be increased

and potential negative effects be avoided, minimized, or compensated for in contractual terms. Hitch (2006) states:

> *IBAs are tools that, if designed well and implemented effectively, can be used to promote resource development in a manner that contributes to the sustainability of the local environment and economy, and the social and cultural fabric of affected communities.*

Siebenmorgen (2009) writes:

> *Despite the expected challenge of negotiating individual agreements, many informants expressed a cautious optimism about the frequency and relative richness of recent IBAs. The value of an IBA, from an Aboriginal perspective, lies within its potential as a contractual agreement to not only address local impacts of mining operations, but to affirm local identities and deliver a range of benefits that have rarely been shared with impacted communities. Moreover, IBAs have the potential to function in a manner that many community leaders and practitioners have yet to fully recognize – to thoughtfully meet local community development needs. The ability to negotiate for a range of locally significant provisions (e.g. better health care facilities, support for traditional harvesting, job training, funding for traditional education programs etc.) cannot be understated, as these may equip local communities to make the most of standard IBA terms such as transfer payments and preferential local hiring.*

7. Conclusion

Based on the case studies of NWT and Labrador mine projects and the literature review of IBAs, mining companies have adopted a corporate approach to respond to social, cultural, and economic impacts. Key elements include:

- community engagement and involvement at early stages of development;
- investment in skills and capacity building, training, and development;
- transparent and easy access to information;
- business outreach and capacity building to support local goods and services contracting;
- company policies and practices that promote cultural identity and sustainability; and
- socio-economic monitoring commitments.

Specific actions being employed by mining companies in the NWT and Labrador to address social, cultural, and economic issues include:

- developing corporate health, safety, environment, and community (HSEC) mandates and policies;
- preparing local workforce recruitment and development strategies;
- entering into Industry-Aboriginal-Government socio-economic agreements;
- undertaking Sustainability and Corporate Social Responsibility reporting;
- identifying local procurement targets and procurement outreach and training programs;
- identifying employment targets and succession planning;
- promoting and supporting joint business ventures and local business development initiatives;
- developing education, training and development programs;
- offering scholarship and apprenticeship programs;
- providing employee, spouse, and family support services;
- implementing cross-cultural training programs (for company management and employees);
- negotiating revenue sharing; and
- undertaking community engagement and outreach.

References

Centre for Social Responsibility in Mining in Australia. 2004. *Aboriginal Employment at Century Mine*. Queensland, Australia: Prepared for Pasminco Century Mine and the Queensland Department of State Development and Innovation. Research Paper No. 3.

Diges, C. 2008. *Sticks and Bones: Is your* IBA *Working? Amending and Enforcing Impact Benefit Agreements*. McMillan Binch Mendelsoh LLP.

Fidler, C. 2008. Aboriginal Participation in Mineral Development: Environmental Assessment and Impact and Benefit Agreements. MASc Thesis, The University of British Columbia.

Fidler, C., M. Hitch. 2007. Impact and benefit agreements: A contentious issue for environmental and aboriginal justice. *Environments Journal 35* (2): 45-69.

Gibson, G., J. Klick. 2005. Canada's Resilient North: The Impact of Mining on Aboriginal Communities. Unpublished Report. *Pimatisiwin: A Journal of Aboriginal and Indigenous Community Health* 3 (1).

Gibson, V. 2008. Negotiated spaces : work, home and relationships in the Dene diamond economy. Ph.D. Dissertation, The University of British Columbia.

Hitch, M. 2006. Impact and Benefit Agreements and the Political Ecology of Mineral Development in Nunavut. Ph.D. Dissertation, University of Waterloo.

McDonagh, Matthew Braedan. 2010. The End of Boom Towns: The Rise of Fly-In/Fly-Out Mining Camps and Implications for Community and Regional Development in the Canadian North. M.A. Thesis, University of British Columbia.

O'Faircheallaigh, C. 2009. *Understanding Corporate-Indigenous Agreements on Mineral Development: A Conceptual Framework*. Paper presented at Rethinking Extractive Industry, York University, Toronto. March 5-7, 2009.

Prno, J. 2007. Have IBAs worked? *Canadian* Diamonds Fall 2007: 32-40.

Siebenmorgen, P. 2009. Developing An Ideal Mining Agenda: Impact and Benefit Agreements as Instruments of Community Development in Northern Ontario. MA Thesis, Department of Geography. Guelph University.

Sosa, I., and K. Keenan. 2001. *Impact Benefit Agreements between Aboriginal Communities and Mining Companies: their use in* Canada.

Appendix 1

Impact and Benefit Agreements in Canada

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Appendix 1. Impact and Benefit Agreements in Canada

Project	Province or Territory	Status in 2009	Agreement Title	Year Signed	Aboriginal Signatory/ Signatories	Industry Signatory/ Signatories
Syncrude Oil Sands	Alberta	Producing	Unspecified	1993-1998	Athabasca Native Development Corp.	Syncrude Canada Ltd.
Apple Bay Quarry	British Columbia	Producing	Mining Participation and Royalty Agreement	2003	Quatsino First Nation	Electra Gold Ltd.
Eskay Creek Mine	British Columbia	Closed	Collaborative Agreement	2004	Tahltan Central Council (Tahltan Nation)	Barrick Gold Corp.
Galore Creek Project	British Columbia	Construction Suspended	Participation Agreement	2006	Tahltan Central Council (Tahltan Nation)	NovaGold Canada Inc.
Golden Bear Mine	British Columbia	Closed	Socio-economic Agreement	1988	Tahltan Central Council (Tahltan Nation)	Barrick Gold (previous owner Homestake Canada Inc.)
Greenwood Gold Project	British Columbia	Processing	IBA	2010	Osoyoos Indian Band	Merit Mining
Morrison Project	British Columbia	Advanced Exploration	Capacity Funding Agreement	2008	Lake Babine Nation	Pacific Booker Minerals Inc.
Mount Klappan	British Columbia	Advanced Exploration	Unspecified Negotiation Agreement	2009	Tahltan Central Council (Tahltan Nation)	Fortune Minerals Limited
Schaft Creek Project	British Columbia	Exploration	Various Agreements	2007	Tahltan Central Council (Tahltan Nation)	Copper Fox Metals Inc.
LabMag Iron Ore Project	Newfoundland and Labrador	Advanced exploration	Participation and/or Socio-Economic Agreement	2004	Naskapi Nation of Kawawachikamach	New Millennium Capital Corporation
Labrador Iron Project	Newfoundland and Labrador	Advanced Exploration	IBA	2008	Innu Nation	Labrador Iron Mines Holdings Limited
Voisey's Bay Project	Newfoundland and Labrador	Producing	IBA	2002	Innu Nation	Vale Inco
Voisey's Bay Project	Newfoundland and Labrador	Producing	IBA	2002	Labrador Inuit	Vale Inco

Project	Province or Territory	Status in 2009	Agreement Title	Year Signed	Aboriginal Signatory/ Signatories	Industry Signatory/ Signatories
Doris North Project	Nunavut	Advanced Exploration	Inuit IBA	2006	Kitikmeot Inuit Association	Miramar Hope Bay Ltd (Miramar Mining Corporation subsidiary)
Jericho Diamond Project	Nunavut	Suspended	Inuit IBA	2004	Kitikmeot Inuit Association	Tahera Diamond Corp.
Meadowbank Project	Nunavut	Advanced exploration	IBA	2006	Kitikmeot Inuit Association	Agnico-Eagle Mines Ltd
Ulu Project	Nunavut	Closed	Inuit IBA	1996 (never implemented)	Kitikmeot Inuit Association	Echo Bay Mines Ltd. (Kinross Gold Corp.)
Colomac Gold Mine	Northwest Territories	Closed	Socio-economic Agreement	1989	Dogrib Treaty 11 Council (now Tlicho First Nation)	Neptune Resources Corp. (Royal Oak Mines Inc.)
Darnley Bay Project	Northwest Territories	Exploration	Exploration Agreement	1995	Inuvialuit Land Corp.	Darnley Bay Resources Ltd.
Diavik Diamonds Project	Northwest Territories	Producing	Participation Agreement	2000	Yellowknives Dene First Nation	Diavik Diamond Mines (Rio Tinto)
Diavik Diamonds Project	Northwest Territories	Producing	Participation Agreement	2000	Tlicho First Nation (Dogrib Treaty 11 Council)	Diavik Diamond Mines (Rio Tinto)
Diavik Diamonds Project	Northwest Territories	Producing	Participation Agreement	2000	North Slave Métis Alliance	Diavik Diamond Mines (Rio Tinto)
Diavik Diamonds Project	Northwest Territories	Producing	Participation Agreement	2001	Łutsel K'e Dene First Nation	Diavik Diamond Mines (Rio Tinto)
Diavik Diamonds Project	Northwest Territories	Producing	Participation Agreement	2001	Kitikmeot Inuit Association	Diavik Diamond Mines (Rio Tinto)
EKATI Diamond Mine	Northwest Territories	Producing	IBA	1996	Łutsel K'e Dene First Nation	BHP Billiton
EKATI Diamond Mine	Northwest Territories	Producing	IBA	1996	Yellowknives Dene First Nation	BHP Billiton
EKATI Diamond Mine	Northwest Territories	Producing	IBA	1996	Tlicho First Nation (Dogrib Treaty 11 Council)	BHP Billiton
EKATI Diamond Mine	Northwest Territories	Producing	IBA	1996	Akaitcho Treaty 8	BHP Billiton
EKATI Diamond Mine	Northwest Territories	Producing	IBA	1998	Hamlet of Kugluktuk, Kitikmeot Inuit Association	BHP Billiton

Project	Province or Territory	Status in 2009	Agreement Title	Year Signed	Aboriginal Signatory/ Signatories	Industry Signatory/ Signatories
EKATI Diamond Mine	Northwest Territories	Producing	IBA	1998	North Slave Métis Alliance	BHP Billiton
Snap Lake Project	Northwest Territories	Producing	IBA	2005	Yellowknives Dene First Nation	De Beers Canada
Snap Lake Project	Northwest Territories	Producing	IBA	2006	North Slave Métis Alliance	De Beers Canada
Snap Lake Project	Northwest Territories	Producing	IBA	2006	Tlicho First Nation (Dogrib Treaty 11 Council)	De Beers Canada
Snap Lake Project	Northwest Territories	Producing	IBA	2007	Łutsel K'e Dene First Nation	De Beers Canada
Dona Lake	Ontario	Closed	Socio-economic Agreement	1987	Osnaburg Indian Band, Windigo Tribal Council, Governments of Canada and Ontario	Dome Exploration (Canada) Ltd.
Golden Patricia	Ontario	Closed	Socio-economic Agreement	1988	Cat Lake Indian Band, Osnaburgh Indian Band, Slate Falls Indian Band, Windigo Tribal Council	St. Joe Canada Inc. (Lac North America Ltd. at closure)
Golden Patricia	Ontario	Closed	Renewal of 1988 Socio-economic Agreement	1993	Cat Lake Indian Band, Osnaburgh Indian Band, Slate Falls Indian Band, Windigo Tribal Council	Lac North America Ltd.
Musselwhite	Ontario	Closed	Socio-economic Agreement	1991	Cat Lake First Nation, Windigo Tribal Council, Shibogama First Nations Council	Placer Dome Inc.
Musselwhite	Ontario	Closed	Renewal of 1991 Socio-Economic Agreement	2001	North Caribou Lake FN, Cat Lake First Nation, Windigo First Nations Council, Kingfisher Lake First Nation, Wunnumin Lake First Nation, Shibogama FN	Barrick Gold Corp. (previous owner Placer Dome Inc.)
Podolsky Mine	Ontario	Producing	IBA	2008	Wahnapitae First Nation	FNX Mining Company
Victor Project	Ontario	Construction	IBA	2005	Attawapiskat First Nation	De Beers Canada Inc
Victor Project	Ontario	Construction	IBA	2007	Moose Cree First Nation	De Beers Canada Inc

Project	Province or Territory	Status in 2009	Agreement Title	Year Signed	Aboriginal Signatory/ Signatories	Industry Signatory/ Signatories
Victor Project	Ontario	Construction	IBA	2009	Fort Albany First Nation & Kashechewan First Nation	De Beers Canada Inc
Raglan Mine	Quebec	Producing	IBA	1995	Makivik Corp., Qarqalik Landholding Corp. of Salluit, Northern Village Corp. of Salluit, Nunaturlik Landholding Corp. of Kangiqsujuaq, Northern Village Corp. of Kangiqsujuaq	Xstrata (previous owner Falconbridge and Makivik Corporation)
Troilus Gold Mine	Quebec	Producing	IBA	1995	Mistissini Band	Inmet Mining Corporation
Cluff Lake	Saskatchewan	Reclamation	Impact Management Agreement	1999	Athabasca communities of Black Lake, Fond du Lac and Hatchet Lake Denesuline Nations along with Camsell Portage, Wollaston Lake, Uranium City and Stony Rapids	Areva Resources Canada (Cameco Corp. and Cogema)
McClean Lake	Saskatchewan	Producing	Unspecified	1999	Athabasca communities of Black Lake, Fond du Lac and Hatchet Lake Denesuline Nations along with Camsell Portage, Wollaston Lake, Uranium City and Stony Rapids	Areva Resources Canada (Cameco Corp. and Cogema)
Black Lake	Saskatchewan	Exploration	Exploration Agreement	2006	Black Lake Denesuline First Nation	CanAlaske Uranium Ltd.
Fond du Lac	Saskatchewan	Exploration	Exploration Agreement	2006	Fond du Lac Denesuline First Nation	CanAlaske Uranium Ltd.
McArthur River	Saskatchewan	Producing	Joint venture Agreement	1998	Mudjatik Enterprises Inc. on behalf of multiple local aboriginal groups.	Thyssen Mining (Operator)
Rabbit Lake/Eagle Point	Saskatchewan	Producing	Joint Venture Agreement	1999	Mudjatik Enterprises Inc. on behalf of multiple local aboriginal groups.	Cameco Corp
Faro Mine	Yukon	Remediation	Socio-economic Agreement	1994	Ross River Dena (Kaska Nation)	Anvil Range Mining Corp.

Project	Province or Territory	Status in 2009	Agreement Title	Year Signed	Aboriginal Signatory/ Signatories	Industry Signatory/ Signatories
Kudz Ze Kayah	Yukon	Exploration	Agreement	1994	Ross River Dena (Kaska Nation)	Cominco Ltd. (Yukon Zinc Corporation)
Minto	Yukon	Producing	Surface Lease Agreement	1997	Selkirk First Nation	Sherwood Mining Corp
Mt. Hundere Mine	Yukon	Closed	Socio-economic Agreement	1991	Kaska Dena First Nation	Mt. Hundere Joint Venture
Mt. Nansen Mine	Yukon	Closed	Socio-economic Agreement	1996	Little Salmon Carmacks First Nation	B.Y.G. Natural Resources Inc.
Wolverine	Yukon	Advanced Exploration	Socio-Economic Participation Agreement	2005	Ross River Dena (Kaska Nation)	Yukon Zinc Corporation

Source: http://www.impactandbenefit.com/IBA_Database_List/

Appendix 2

Resources and References to Relevant Works

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Appendix 2. Resources and References to Relevant Works

JOURNAL ARTICLES AND PUBLISHED MATERIAL

Caine, K.J., N. Krogman. 2010. Powerful of just plain Power-full? A Powerful analysis of Impact Benefit Agreements in Canada's North. *Organization & Environment* 23(1): 76-98.

Couch, W. J. 2002. Strategic resolution of policy, environmental and socio-economic impacts in Canadian Arctic diamond mining: BHP's NWT diamond project. *Impact Assessment and Project Appraisal* 20 (4): 265-278.

Fidler, C. 2009. Increasing the sustainability of a resource development: Aboriginal engagement and negotiated agreements. *Environment, Development and Sustainability* 12 (2): 233-244.

Fidler, C., M. Hitch. 2007. Impact and benefit agreements: A contentious issue for environmental and aboriginal justice. *Environments Journal* 35 (2): 45-69.

Galbraith, L., B.Bradshaw, and M.B. Rutherford. 2007. Towards a new supraregulatory approach to environmental assessment in Northern Canada. *Impact Assessment and Project Appraisal* 25(1): 27-41.

Gibson, G., J. Klick. 2005. Canada's Resilient North: The Impact of Mining on Aboriginal Communities. Unpublished Report. *Pimatisiwin: A Journal of Aboriginal and Indigenous Community Health* 3 (1).

Gibson, G., C. O'Faircheallaigh. 2010. *IBA Community Toolkit: Negotiation and Implementation of Impact and Benefit Agreements*. Toronto, ON. Commissioned by the Walter and Duncan Gordon Foundation.

Gibson, R. 2006. Sustainability assessment and conflict resolution: Reaching agreement to proceed with the Voisey's Bay nickel mine, *Journal of Cleaner Production* 14 (3-4): 334-48.

Illsley, B. M. 2002. Good Neighbour Agreements: the first step to environmental justice? *Local Environment* 7(1): 69-79.

Isaac, T., A. Knox. 2004. *Canadian Aboriginal Law: Creating Certainty in Resource Development*, *University of New Brunswick Law Journal* 53(3).

Justus, R., J. Simonetta. 1982. Oil Sands, Indians and SIA in Northern Alberta. In *Indian SIA: the social impact assessment of rapid resource development on Native Peoples*. 238-257. Ed. C. C. Geisler, D. Usner, R. Green, and P. West. Ann Arbor: University of Michigan Press.

Keeping, J. 1997. Local Benefits and Mineral Rights Disposition in the Northwest Territories: Law and Policy. In *Disposition of Natural Resources: Options and Issues for Northern Lands*. 180-210. Ed. M. M. Ross and J. O. Saunders. Yellowknife: Canadian Institute of Resource Law.

Keeping, J. 1997. *Assurance of benefits to local communities: the law applicable in the Northwest Territories*. Calgary: Canadian Institute of Resources Law.

Keeping, J. 1999. *Local Benefits from Mineral Development: The Law Applicable in the Northwest Territories*. Calgary: Canadian Institute of Resource Law.

Keeping, J. 1999-2000. The Legal and Constitutional Basis for Benefits Agreements: A Summary. *Northern Perspectives* 25(4).

Kennett, S. 1999. *A Guide to Impact and Benefits Agreements*. Calgary: Canadian Institute of Resource Law.

Kennett, S. 1999. *Issues and Options for a Policy on Impact and Benefit Agreements for the Northern Territories*. Calgary: Canadian Institute of Resource Law.

Natural Resources Canada. 2008. *Agreements between Mining Companies and Aboriginal Communities and Governments*. (MAP)

North-South Institute. 2006. *"Dealing Full Force": Lutsel K'e Dene First Nation's Experience Negotiating with Mining Companies*.

O'Faircheallaigh, C. 1999. Making Social Impact Assessment Count: A Negotiation-Based Approach for Indigenous Peoples. *Society and Natural Resources* 12 (1), 63-80.

O'Faircheallaigh, C. 1999-2000. An Australian Perspective on Impact and Benefit Agreements. *Northern Perspectives* 25(1).

O'Faircheallaigh, C. 2004. Evaluating agreements between indigenous peoples and resource developers. In *Honour Among Nations? Treaties and Agreements with Indigenous Peoples*. 303-328. Ed. M. Langton, M. Tehan, L. Palmer, and K. Shain. Melbourne, Australia: Melbourne University Press.

O'Faircheallaigh, C., T. Corbett. 2005. Indigenous Participation in Environmental Management of Mining Projects: The Role of Negotiated Agreements. *Environmental Politics* 14 (5).

O'Reilly, K. 1999-2000. Aboriginal Peoples and Impact and Benefit Agreement: Summary of the Report of a National Workshop. *Northern Perspectives* 25 (1): 1-6.

Prno, J. 2007. Have IBAs worked? *Canadian Diamonds* Fall 2007: 32-40.

Prno, J., B. Bradshaw. 2008. Program evaluation in a northern, Aboriginal setting: Assessing Impact and Benefit Agreements. *Journal of Aboriginal Economic Development* 6(1) 59-75.

Ross, B. 2004. The Independent Environmental Watchdog: A Canadian Experiment in EIA Follow-up. In *Assessing Impact: Handbook of EIA and SEA Follow-up*. 178-192. Ed. J. Arts. Sterling, VA: Earthscan.

Tollefson, C., K. Wipond. 1998. Cumulative Environmental Impacts and Aboriginal Rights. *Environmental Impact Assessment Review* 18(4), 371-390.

Trebeck, K. 2007. Tools for the Dissempowered? Indigenous Leverage Over Mining Companies. *Australian Journal of Political Science* 42(4), 541-562.

THESES AND DISSERTATIONS

Birk, J. 2009. The Relationship between Environmental Agreements and Environmental Impact Assessment Follow-up in Saskatchewan's Uranium Industry. MSc Thesis, University of Saskatchewan.

Chouinard, R. 2009. Investigating complex-value-based community mine education strategies : a case study with the Tlicho community in the Wek'eezhii region Northwest Territories, Canada. MASc Thesis, The University of British Columbia.

Dreyer, D. 2004. *Impact and Benefits Agreements : Do the Ross River Dena benefit from Mineral Projects?* University of Northern British Columbia.

Fidler, C. 2008. Aboriginal Participation in Mineral Development: Environmental Assessment and Impact and Benefit Agreements. MASc Thesis, The University of British Columbia.

Galbraith, L. 2005. Understanding the Need for Supraregulatory Agreements in Environmental Assessment: An Evaluation from the Northwest Territories, Canada. MA Thesis, Simon Fraser University.

Gibson, V. 2008. Negotiated spaces : work, home and relationships in the Dene diamond economy. Ph.D. Dissertation, The University of British Columbia.

Hitch, M. 2006. Impact and Benefit Agreements and the Political Ecology of Mineral Development in Nunavut. Ph.D. Dissertation, University of Waterloo.

Lukas-Amulung, S. 2009. The Rules of Engagement? Negotiated Agreements and Environmental Assessment in the Northwest Territories, Canada. MA Thesis, Royal Roads University.

Prno, J. 2007. Assessing the effectiveness of Impact and Benefit Agreements from the perspective of their Aboriginal signatories. MA Thesis, Department of Geography, University of Guelph.

Qureshy, S. 2006. How Mineral Exploration Companies Seek Access to First Nation Territory. Norman Paterson School of International Affairs. MA Thesis, Carleton University.

Siebenmorgen, P. 2009. Developing An Ideal Mining Agenda: Impact and Benefit Agreements as Instruments of Community Development in Northern Ontario. MA Thesis, Department of Geography. Guelph University.

TECHNICAL REPORTS, CONFERENCE PRESENTATIONS, AND WORKING PAPERS

Brubacher & Associates. 2002. *The Nanisivik Legacy in Arctic Bay: A Socio-Economic Impact Study*. Prepared for the Department of Sustainable Development, Government of Nunavut.

Canadian Institute of Resource Law. 1997. Independent Review of the BHP Diamond Mine Process. Calgary: CIRL.

Diges, C. 2008. *The Aboriginal Tool-kit: what every mining principal needs to know when dealing with Aboriginal Peoples in Canada*. McMillan Binch Mendelsoh LLP.

Diges, C. 2008. *Sticks and Bones: Is your IBA Working? Amending and Enforcing Impact Benefit Agreements*. McMillan Binch Mendelsoh LLP.

Dreyer, D., and H. Myers. 2004. *Impact and Benefits Agreements: Do the Ross River Dena benefit from Mineral Projects?* Submitted to North Land Use Institute and the University of Northern British Columbia.

Fidler, C., and M. Hitch. 2009. *Used and Abused: Negotiated Agreements*. Paper presented at Rethinking Extractive Industry, York University, Toronto: March 5-7, 2009.

Gross, J. 2005. *Community Benefits Agreements: Making Development Projects Accountable*.

Irlbacher-Fox, S., and S.J. Mills. 2008. *Devolution and Resource Revenue Sharing in the Canadian North: Achieving Fairness Across Generation*

Jacobs, D. 2006. *Consulting and Accommodating First Nations in Canada: A Duty That Reaps Benefits*. Paper presented to the National Claims Research Workshop, October 7, 2002.

Keeping, J. 1998. *Thinking about benefits agreements: an analytical framework*. Northern Minerals Program Working Paper No. 4. Yellowknife: Canadian Arctic Resources Committee.

Kennett, S. 2001. *Project-Specific Environmental Agreements in the NWT: Review of Issues and Options*. Draft report prepared for DIAND, NWT Region.

Kishchuk, P. 2001. *Yukon Benefits Agreements: Policy Options*. Prepared for Department of Economic Development, Government of Yukon. Whitehorse.

Kishchuk, P. 2006. *Socio-economic Effects Handbook for Yukon Mining, Oil and Gas Projects*. Prepared for Department of Energy, Mines and Resources, Government of Yukon. Whitehorse.

Klein, H., J. Donihee, and G. Stewart. 2004. *Environmental Impact Assessment and Impact and Benefit Agreements: Creative Tension or Conflict?* Paper presented at the 24th Annual Conference for the International Association for Impact Assessment, Vancouver.

Mackenzie Valley Environmental Impact Review Board. 2003. *Report of Environmental Assessment and Reasons for Decision on the De Beers Canada Mining Inc. Snap Lake Diamond Project*. Yellowknife: MVEIRB.

Nikiforuk, A. 1997. *The Nasty Game: The Failure of Environmental Assessment in Canada*.

O'Faircheallaigh, C. 2009. *Understanding Corporate-Indigenous Agreements on Mineral Development: A Conceptual Framework*. Paper presented at Rethinking Extractive Industry, York University, Toronto. March 5-7, 2009.

Prno, J. 2007. *Assessing the effectiveness of Impact and Benefit Agreements from the perspective of their Aboriginal signatories*. Presentation to research partners, June 8, Yellowknife, NWT.

Prno, J., B. Bradshaw, and D. Lapierre 2010. *Impact and Benefit Agreements: Are they working?* Paper presented at the Canadian Institute of Mining, Metallurgy and Petroleum Annual Conference, Vancouver, British Columbia, May 11, 2010.

Public Policy Forum. 2005. *Sharing in the Benefits of Resource Developments: A Study of First Nations-Industry Impact Benefits Agreements*. Ottawa: Public Policy Forum.

Sosa, I., and K. Keenan. 2001. *Impact Benefit Agreements between Aboriginal Communities and Mining Companies: their use in Canada*.

Sub-committee of the Intergovernmental Working Group on the Mineral Industry. 1994. *Report on Aboriginal Participation in Mining*: Fifth Annual Report.

Telewiak, R. 2001. The Raglan Nickel Mine: What comes after an Impact/Benefits Agreement (IBA)? In *Aboriginal Engagement and Sustainability*.

Wismer, S. 1996. *The nasty game: how environmental assessment is failing aboriginal communities in Canada's north*.

Wolfe, W.J. 2001. *Socio-Economic Impact Agreements in Canada 1990-2001: Aboriginal Expectations Meet Conventional Legal, Financial, and Business Practices*. Practitioners and Developers Association of Canada, Toronto.

LAND CLAIMS WITH REFERENCE TO SIMILAR AGREEMENTS

1975. *The James Bay and Northern Quebec Native Claims Settlement Act,* S.C. C. 32.

1984. *Western Arctic (Inuvialuit) Claims Settlement Act*, S.C. C. 24.

1992. *Gwich'in Land Claim Settlement Act,* S.C. C. 53.

1993. *Nunavut Land Claims Agreement Act,* S.C. C. 29.

1994. *Sahtu Dene and Métis Land Claim Settlement Act,* S.C. C. 27.

2003. *Tlicho Land Claims and Self-Government Act,* S.C. C. 14.