



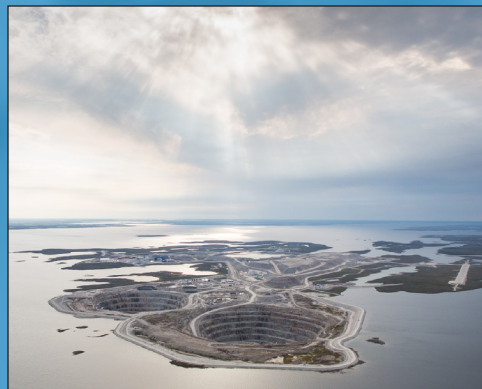
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# Measuring Success

The Positive Impact of Diamond Mining  
in the Northwest Territories | 1998-2012

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A joint briefing paper prepared by BHP Billiton EKATI,  
Rio Tinto Diavik Diamond Mines, and De Beers



# Measuring Success

## The Positive Impact of Diamond Mining in the Northwest Territories - 1998-2012

### Introduction

The Northwest Territories is a land of untold beauty, where Northern Lights shine over the snow and ice of winter and where the summer sun glows over the rocks, trees and tundra. It is a land of unique challenges, created by the distance and the climate, and the very landscape that makes the North so beautiful. The Dene, Inuvialuit, and Métis people who call the NWT home did not tame this land: they adapted to it, their cultures and communities shaped by the environment in which they live.

The companies that mine the NWT diamonds have learned from this example. To mine the beautiful gems that have been locked in the rock for hundreds of millions of years has taken creativity, cooperation, and the will to get things done.

Since diamonds were discovered here some 20 years ago, our companies have helped shape a sustainable future for the Northwest Territories and its residents. We have worked with the Government of the Northwest Territories, Canada, Aboriginal governments and communities, training agencies and local residents, to build a strong and prosperous northern economy that has led the nation in growth.

A look at the numbers:

- Billions of dollars have been spent with Northern and Aboriginal businesses, creating dynamic businesses capable of competing on the world stage;
- Millions of dollars have been generated for governments of all levels, that has gone to infrastructure upgrades, helped fund social programs, supported schools and health care;
- Tens of millions more dollars in social investment from our companies have flowed to local communities. This has helped build recreation facilities, provided education and training opportunities, funded sports teams and supported cultural activities. Significant investments have been made towards increased capacity for poverty-reduction and social wellness initiatives.
- Over 1,400 people have received training for jobs at the diamond mines – training which has provided a base of skilled Northerners; and,

- Hundreds more Northern residents are working at the diamond mines today than any of us ever predicted.

The most important statistic is the number of people who have found well-paying, meaningful employment at the three diamond mines.

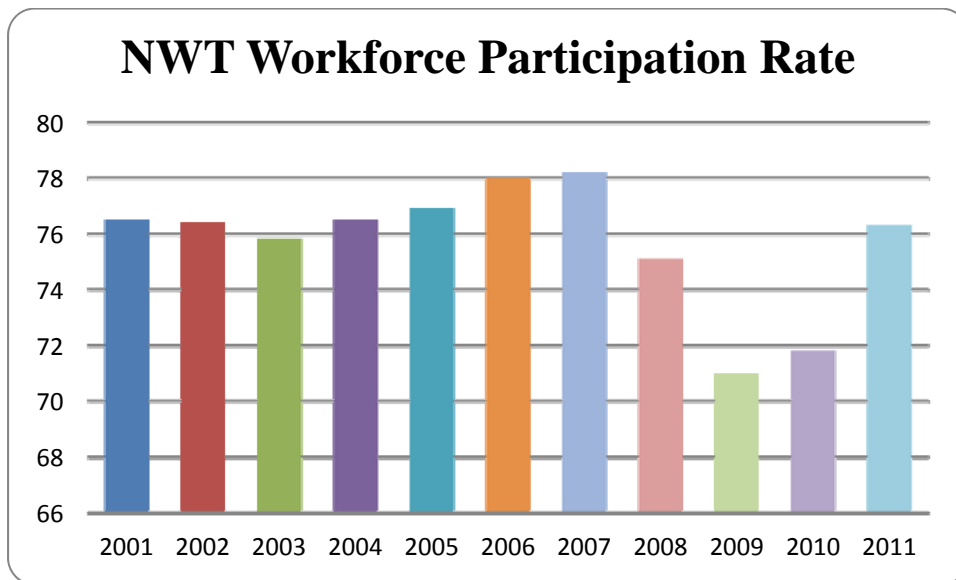
Each company made predictions about the number of northern jobs that would be provided at their mines. Collectively, EKATI, Diavik, and the Snap Lake Mine are employing significantly more northerners than our companies had predicted. In 2011, 1,541 northern FTE jobs were provided, representing 403 jobs more than were predicted during the mines' environmental assessments.

<b>Northern Diamond Mine Employment (2011)</b>					
	Predicted Employment Operations Phase	Actual Employment (December 2011)	Predicted Northern Resident Employment	Actual Northern Resident Workforce	Northern Resident Variance (Actual versus Predictions)
BHP Billiton EKATI Diamond Mine	926	1,213	574	650 (54%)	+76
Diavik Diamond Mine	400	1,137	264	642 (56%)	+378
De Beers Snap Lake Mine	500	678	300	249 (37%)	-51
Predicted Total Workforce Requirements	1,826	3,028	1,138	1,541	<b>+403</b>

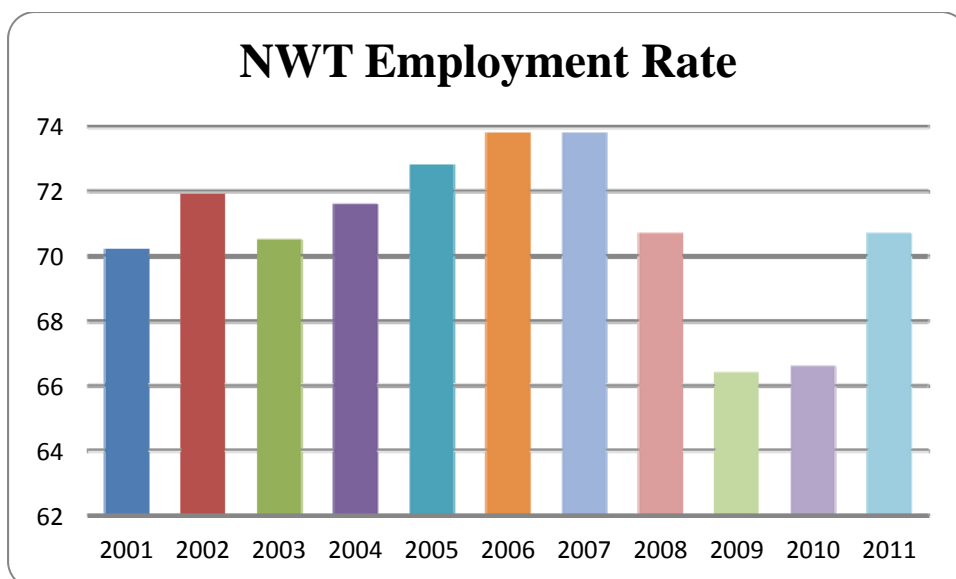
It is essential to understand the impact that diamond mining has had on NWT employment since 2001. The NWT workforce has grown over time but so has the number of Northerners at work, peaking in 2007 when about 94.5% of the workforce was employed. GNWT Bureau of Statistics data shows how the number of Northerners employed in the forestry, fishing, mining, and oil and gas sectors surged by 71 per cent

between 2001 and 2007. There has also been a growth in jobs in related sectors during that time period, like construction, trade, transportation and warehousing.

The arrival of the diamond mining industry brought with it a surge in NWT employment and in the number of people looking for work because of the opportunities offered by the mines. The number of Northerners participating in the workforce – people who are either working or actively looking for work - grew between 2001 and 2011, as did the Territory’s employment rate. In fact, the NWT employment rate over that time is nine points higher than the national average.



SOURCE: NWT Bureau of Statistics



SOURCE: NWT Bureau of Statistics

This is our shared story of success by employing Northerners and creating a solid foundation upon which to build continued prosperity.

### **Committed to Working Safely**

Our success story includes our shared commitment to mining diamonds safely, securely and profitably, without harm to people or the environment.

Diavik has won four regional John T. Ryan Safety Awards and one national John T. Ryan Safety Award since 2004, and in 2010 recorded 3 million hours without a lost time injury.

Snap Lake Mine achieved one million hours without a lost time injury in October of this year and was John T. Ryan Regional Award winner for 2009.

EKATI won the national John T. Ryan Award in 2007 for the best safety performance in the Select Mine Category in recognition of over 2 million hours without a lost time injury and in 2011 achieved 1.3 million hours without a lost time injury.

Our mine rescue teams compete in friendly competitions hosted by the Workers Safety and Compensation Commission annually. This test of skills and abilities demonstrates our commitments to safety excellence in a public arena. This year, the NWT was proud to be represented by two diamond mines at the 8<sup>th</sup> International Mine Rescue Competition in Donetsk, Ukraine. Diavik's mine rescue team finished third among 26 teams from 13 countries. EKATI's Emergency Response Team finished 6<sup>th</sup> overall and achieved a 1<sup>st</sup> place finish in the Rescue Engineering Problem competition. Our collective approach to working safely has made a significant impact on the safety culture within our organizations but also with many other businesses and organizations involved in our operations. We believe that these safety standards will continue to rise as a result of our presence in the North.

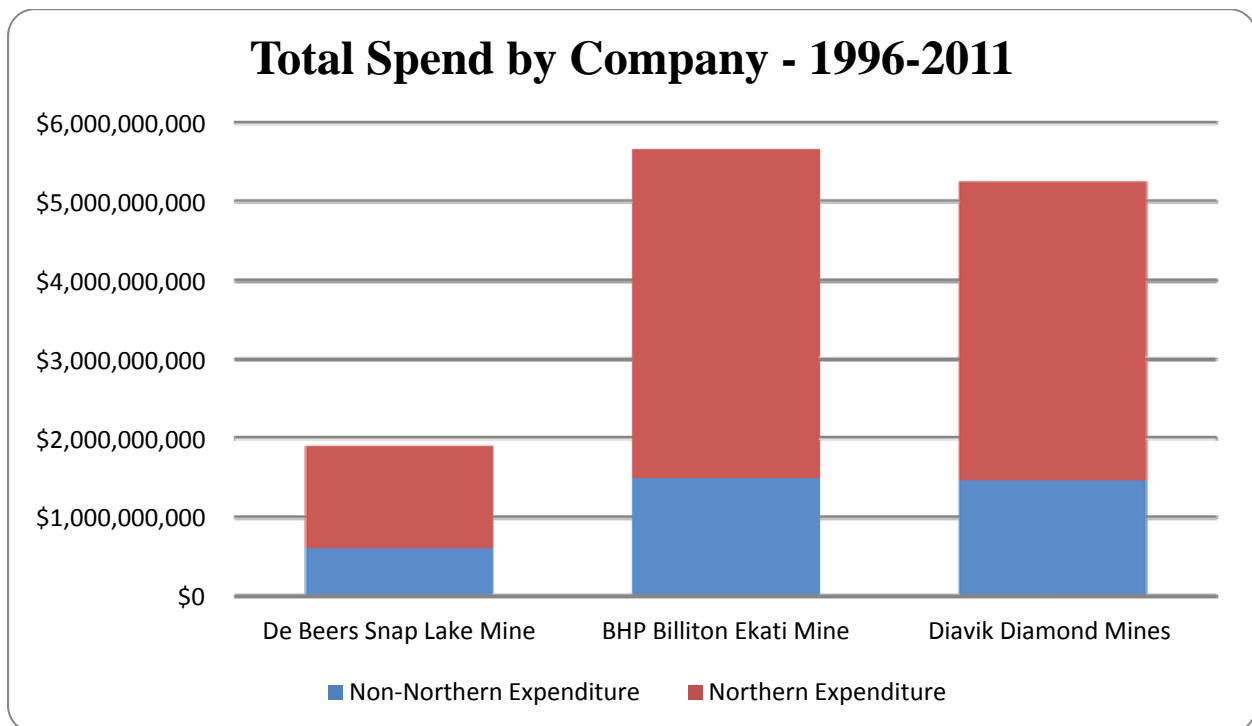
### **Northern Procurement**

Our story of success also includes the beneficial impact of northern procurement by all three companies. From 1996-2011, the three companies spent a total of \$12.8 billion to build and operate the mines. Of this, \$9.25 billion or 72% was spent with northern companies and joint ventures, including \$4.2 billion or 33% of the northern spend with Aboriginal companies.

Whether it is catering, transportation, site support services, mining supplies or logistics support, Northern businesses are important business partners for the diamond mining industry.

A sample of the range of services provided by northern Aboriginal businesses:

- Det'on Cho Corporation (Yellowknives Dene First Nation) – Bouwa Whee Catering, Det'on Cho Logistics, Det'on Cho Mining Supplies, Det'on Cho Scarlet Security; Det'on Cho Medic North, Kete Whii/Procon, I&D Management
- Métcor (North Slave Métis Alliance) – Sodhexo (catering), Metcrete Services, North Slave Freighters
- Tlicho Investment Corporation (Tlicho Government) – Tli Cho Logistics, Tli Cho LandTran, Tli Cho/Orica Mining Services, I&D Management, Tlicho Domco, Air Tindi/Tlicho Air
- Denesoline Corporation (Lutsel K'e First Nation) – Denesoline Western Explosives, Ventures West, I&D Management
- Nuna Logistics (Kitikmeot Inuit Association, Kitikmeot Cementation Mining Development)



Companies are also investing in energy efficiency and green initiatives. Using heat recovery systems, we reduce the amount of fuel we need to haul.

Diavik has invested \$33 million on a 9.2 megawatt four turbine wind farm that will reduce fuel consumption on the mine by at least 10 per cent and lower its carbon footprint by six per cent and cut the number of fuel trucks driving NWT highways by 100 loads. The groundbreaking project sets the stage for future alternative energy projects in the NWT.

EKATI recently enhanced its recycling program and in October recycled 54,000 lbs at the mine, a significant accomplishment towards the goal of zero waste. Upgrades were also completed to provide electronic fuel injection for two of the seven generators in EKATI's Power House. Waste heat from the Power House at EKATI is used to heat the accommodations building and the underground operations. In 2006 BHP Billiton was recognized by the Green House Gas Registries as a Silver Champion Level Reporter in the Canadian Green House Gas Challenge Registry. EKATI continues to be acknowledged as a leader through the Mining Association of Canada's Towards Sustainable Mining (TSM) initiative for its Energy Use and Greenhouse Gas Emissions Management plans. This year, EKATI received two TSM Awards for Tailings Management and for Aboriginal and Community Outreach.

At Snap Lake, De Beers has invested in improved generator efficiency and underground electrical controls over the past couple of years, work that is estimated to save up to 1.8 million litres of diesel annually.

All the diamond mines proudly maintain ISO14001 certified Environmental Management Systems with a focus on continued improvement. In addition since 2006, EKATI's Sorting and Valuation Facility has BSI ISO 9001 certification for operating a Quality Management System in the preparation of diamonds for marketing, including rough diamond cleaning, sorting, valuation, Kimberly Process certification and shipping services. Diavik's Product Splitting Facility has ISO 9001. All three mines' Occupational Health and Safety systems have received ISO 18001 certification.

The above investments all support the mines' operations but northern spending numbers are not complete without also considering the funding provided by the three companies through corporate social investment (CSI). Consider just some of the community organizations that have benefited from our investment over the years:

- Aven Cottages Territorial Dementia Centre
- Bailey House
- BETTY House
- Chekoa Program

- Day Shelter for the Homeless
- Folk on the Rocks Festival
- Food Rescue
- Habitat for Humanity NWT
- Hay River Hospital Foundation
- Jobmatics Youth Career Focusing
- Kimberlite Career and Technical Centre
- Long John Jamboree
- Mine Training Society
- NWT Breakfast for Learning Program
- NWT SPCA Shelter
- Northern Students Education Initiative
- Shorty Brown Arena
- Side Door Youth Centre
- Skills Canada NWT
- Stanton Territorial Hospital Foundation
- Hay River Hospital Foundation
- Wekweeti Arbour
- YWCA Programs

CSI also includes spending on scholarships, cultural and social events like hand games tournaments, enhanced programming options in IBA community schools such as technology upgrades, on-the-land enrichment programs and cultural facilities, literacy development, Inspired Ice – NWT Ice Carving Championship, and support for hockey and golf tournaments, raffles and so much more.

Combined, the three companies have contributed \$102.8 million to communities close by over the past 15 years.

## **Training Success**

The long term success of the diamond mining industry on the north is the impact of training initiatives. At EKATI there have been 145 Apprentice Employees since 1998, more than half of whom are known to have achieved journeyman certification. Each year approximately 10 new apprenticeships begin their training with either BHP Billiton or one of its many contractor companies. Diavik's commitment is to have between eight and 18 apprentices on site employed by DDMI or its contractors. Currently, Diavik supports 36 apprentices, of whom all are northern and 21 are northern Aboriginal. Since 2003, some 32 northerners have completed apprenticeships to achieve journeyman designations. Over its mine life, Diavik's goal is to produce over 100 trained



journeypersons. De Beers committed to 40 training positions during the first three years of operations, and by the end of 2011, had exceeded that commitment with 66 total trainees hired since 2008. Snap Lake Mine has only been in operation for four years, and during that time six apprentices have received journeyperson certification.

Combined, we and our training partners have provided training to 1,400 northern residents, supporting a new generation of millwrights, electricians, mechanics, underground miners, process plant operators and much more. Of these trainees, the vast majority are Aboriginal.

<b>Diamond Mine Trainees through the end of 2011</b>				
	<b>Trades Trainees</b>	<b>Apprentices</b>	<b>Underground Miners</b>	<b>Total</b>
BHP Billiton EKATI	12	145	43	200
Diavik Diamond Mine	33	34	34	101
De Beers Snap Lake Mine	20	16	29	66
			<b>Total Trainees</b>	<b>367</b>

This investment in training is not without risk. Not all trainees complete their programs, dropping out for a variety of reasons predominantly personal, including drug and alcohol abuse. Some go on to work productively for other companies, both within the North and in the rest of Canada.

All of us have focused much of their attention internally on training northern employees, with fully equipped learning centres, award winning Workplace Learning Programs and dedicated training staff supporting apprentices and trainee positions. For many years all three mines have individually been recognized for their specific contributions towards training and development. For example in 2003, the Government of Canada awarded BHP Billiton the Canada Export Award for Job Creation Achievement and again in 2005, for Community Impact. These prestigious awards recognized EKATI's contribution to the communities in which it operates. Diavik has been named one of Canada's top employers three times, in 2009, 2010 and 2012. De Beers received an NWT Ministerial Literacy Award in 2009 for its Books in Homes program, which delivers books to students in aboriginal communities close to its operations as a way to boost literacy levels.

Additionally we have active recruitment departments and participate in northern career fairs, target recruitment efforts in fly-point communities, and work closely with community-based Career Development Officers to attract job-ready candidates to hire.

Much has been accomplished in cooperation with various training agencies, especially the Mine Training Society (MTS) of the NWT.

Of the \$26.4 million provided to MTS by various levels of government since 2004, \$23 million went to support training for diamond mine positions. We have also supported MTS programs, with \$11.4 million in cash and in-kind investments between 2004 and 2012.

That investment has resulted in 737 northern residents, of whom 732 are Aboriginal residents, gaining employment. In total, 1,902 people have been assessed for training by the MTS between 2004 and March 31, 2012, of whom 1,357 have received training.

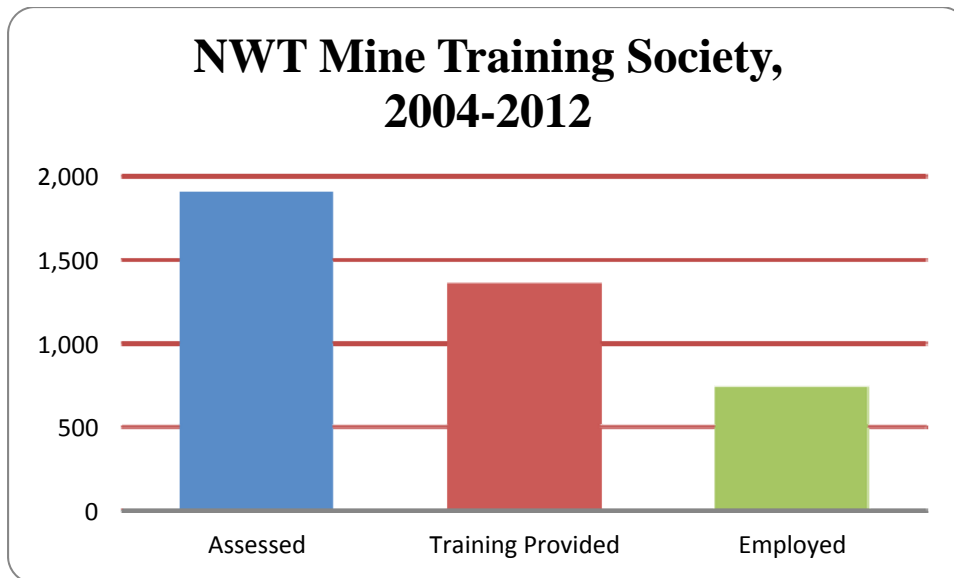
Because the partnership with MTS has been so successful, we have committed to combined monetary and in-kind support valued at over \$6.6 million for the MTS's *Mining the Future* proposal that is expected to run from 2013-2015.

Through ***Mining the Future***, the MTS has targeted training in a number of areas: Mineral Process Operating Technician; Camp Cook; Cook Apprenticeship; Heavy Equipment Operator; Geoscience Field Assistant; Introduction to Underground Mining; Underground Mining; and General Construction.

In addition to specific job skills, each program will include life skills training to help participants settle into employment and be able to balance home and work life.

The training plan estimates that ***Mining the Future*** will assess the suitability for training of 400 Aboriginal persons, assist 250 Aboriginal applicants with removing barriers to employment (criminal records, lack of skills, low literacy), train 260 people and assist 220 participants in obtaining employment with mining and mine services companies in the NWT.

We have also been generous in our support of bridge financing for 2012 and 2013 to sustain the Mine Training Society programs until the Government of Canada makes its decision on the ***Mining the Future*** proposal and ***Pan Territorial Northern Minerals Workforce Development Strategy***. These partnerships are essential for the continued training and development of Northerners.



SOURCE: Mine Training Society of the NWT

We are doing much more than supporting trades. Annually, the diamond mining companies provide scholarships to IBA beneficiaries and NWT residents which in 2012 totaled \$303,000.

The mines consistently support educational initiatives in partnership with many others including annual participation in Skills Canada NWT to promote trades as career options.

### **Tax Revenue for the GNWT**

While the bulk of mining-related royalties go to the federal government, the Government of the Northwest Territories receives substantial financial benefits from the diamond mines through property and fuel taxes, and will draw added revenue from the toll on the Deh Cho Bridge.

Each of our companies pays property tax and fuel tax directly to the GNWT. While we depend on existing highways, bridges, airports and other infrastructure, the diamond mining companies provide the bulk of our own infrastructure, from the winter road, to providing our own power, airstrips and more.

Combined, our companies have provided almost \$213 million in property and fuel tax to the GNWT through the end of 2011.

<b>Fuel Tax and Property Tax Paid through 2011</b>				
	BHP Billiton EKATI Mine	Diavik Diamond Mine	De Beers Snap Lake Mine	Total of All Three Mines
Fuel Tax	\$40,063,657	\$32,987,340	\$6,064,992	<b>\$79,115,989</b>
Property Tax	\$67,662,994	\$43,916,022	\$22,275,231	<b>\$133,854,247</b>

Completion of the Deh Cho Bridge will add another revenue stream to the GNWT from the diamond mines. Operations at the Snap Lake Mine are forecast to continue through to 2030, EKATI until 2019 and Diavik until 2023.

Combined, our operations account for approximately 5,300 truckloads during the winter road season alone, which will generate an estimated \$1.6 million for the Territorial Government in 2013, and about \$23 million between 2013 and 2030 (including the proposed Gahcho Kué Project). For De Beers, that's a \$7.4 million cost for the life of Snap Lake Mine alone and another \$5.35 million for the proposed Gahcho Kué Project during its two years of construction and 11 years of operations. The total bridge toll impact for EKATI is estimated at \$3.99 million over its remaining life of mine, while Diavik has estimated the toll will generate \$7.75 million for the GNWT through to 2023.

<b>Deh Cho Bridge Toll</b>					
	BHP Billiton EKATI Diamond Mine	Diavik Diamond Mine	De Beers Snap Lake Mine	De Beers Gahcho Kué Project	Total of all Four Mines
2012-2013	\$443,300	\$775,000	\$412,000	N/A	<b>\$1,630,300</b>
LOM Years Remaining	8 years	10 years	18 years	13 years	
Total	\$3,546,400	\$7,750,000	\$7,416,000	\$4,532,000	<b>\$23,244,400</b>

## Barriers to Future Success

Every success story has its challenges which we understand and recognize. We have worked very hard to overcome them, but not all the challenges can be addressed by private industry alone. We are not responsible for social programs. We support our employees in addressing their personal challenges, but it is the government's role to provide quality education, address community-based social issues like alcohol and drug dependency, and keep the costs of living in the North affordable. Through addressing these fundamentals, the Government will assist in attracting people to help industry grow the north and its economy.

To quote the Mining the Future funding application: *“While lack of formal education is a primary barrier for Aboriginal people to attaching to the workforce, there are several other challenges to be overcome. Social problems, unaddressed disabilities and difficulties presented by existing criminal records often cause clients to be reluctant to participate in training and applying for employment.”*

It is important to recognize that many of these problems existed prior to the opening of the diamond mines and continue to this day:

- Lack of available skilled northern workers due to low literacy. This creates difficulties in training and advancing a greater number of northern employees into senior positions. Literacy and lack of education is most clearly demonstrated by high school students who are unable to pass trades entrance exams, a pre-requisite for apprenticeships. Nearly 50% of Aboriginal residents of the NWT have less than a Grade 12 education;
- When we invest in training workers, some are lured away to work in the oil sands or to work for other employers;
- Health and wellness issues like addictions, money management and the family pressures that come with adapting to a new work-life balance, all affect family life;
- Outmigration due to cost of living remains an issue. Additionally, high cost of living creates a significant barrier to enticing skilled southern workers to live and work in the North;
- Regulatory uncertainty remains due to unsettled land claims, the possible impact of devolution, and regulatory changes being implemented by Canada. In response to these issues, Aboriginal groups are pressing for increased engagement, more consultation, and more traditional knowledge to be incorporated into many aspects of operations. The new proposed Aboriginal community engagement guidelines issued early this year by the Mackenzie Valley Land and Water Board (MVLWB), which are now becoming the reference point for the Board, are setting unreasonable demands on industry to consult on every management plan – of which each mine has 7 to 10 plans that are updated annually. There are capacity challenges for this level of engagement both in the communities and among companies and the scope of the guidelines is outside the mandate of the MVLWB.);
- Infrastructure is also a challenge. Current warmer weather has impacted the ice road season and as mines close, remaining operations will bear a larger share of the cost of building and maintaining the ice road each year. Alternatives to the winter road, such as barging material across Great Slave Lake to the East Arm and then hauling up a shorter all-season road, could be

impacted by the proposed Thaidene Nene National Park near Lutsel K'e, the boundaries of which could seal up future port access on the north shore of Great Slave Lake; and,

- Additional taxation adds to the mines' overall costs. We already pay millions of dollars annually in property and fuel tax to the GNWT, and will start paying another \$1.6 million a year in Deh Cho Bridge tolls starting in 2013.

## What We are Doing

All of us recognize that we must continue to do our part in acting to address challenges to recruitment and training to continue to build the northern workforce.

- Approximately \$6.6 million in financial and in-kind support committed over three years to the Mine Training Society as part of its Mining the Future proposal, which includes 32 training positions at the Snap Lake Mine and proposed Gahcho Kué Project, 12 training positions at EKATI Diamond Mine and 40 for Diavik Diamond Mine;
- Combined, we've provided \$303,000 in scholarships to support students in 2012 alone;
- Our companies' strong sense of corporate responsibility to give back to communities, supporting social and cultural events and providing financial support for community development. Our combined investment in communities since 1998 totals approximately \$102 million;
- Northern recruitment initiatives include advertising all positions in northern newspapers and distributing postings to employment officers in several communities;
- We are doing all we can to encourage our employees to live in the north. Companies are working to reinvigorate northern and Aboriginal recruitment strategies;
- Each of us offers financial incentives to employees to encourage the choice of living in the north, including northern living allowances, fuel purchase plans and other competitive incentives;
- We all provide financial relocation packages for the recruitment of southern employees who choose to relocate to the NWT;
- Pick-up points in 13 NWT communities combined with travel allowances mean living outside the North Slave Region of the NWT is not a barrier to employment at any of the mines. (Yellowknife, Fort Smith, Fort Resolution, Hay River, Deline, Lutsel K'e, Fort Simpson, Norman Wells, Inuvik, Whati, Wekweeti, Gameti, Behchoko). Kugluktuk and Cambridge Bay are also

serviced as committed within the respective mines' Socio-Economic Agreements. All mines offer a variety of Health and Wellness Programs/Initiatives, like Employee Family Assistance programs that support employees and their families through counseling services, financial management training, work life balance, and substance abuse and addiction. At EKATI, the value of the Employee and Family Assistance Program since operations began in 1998 is over \$2.7 Million.

## Conclusion

The history of the diamond industry in the Northwest Territories has been a positive one. In less than a generation, we have trained thousands of NWT residents in skills that will carry them through long and productive careers in mining or other industries. We have spent billions of dollars with NWT companies which has enabled them to build a strong foundation to compete on a national and international level. Our companies have contributed substantial amounts to support the social and cultural well-being of people living in communities close by, from literacy and training, to recreation and health facilities, and social initiatives like Bailey House and Betty House.

We are encouraged by recent statements from the GNWT in the last sitting of the Legislative Assembly that highlight the serious issues of wellness, addictions and lack of productivity prevalent across NWT communities that create barriers to the many opportunities that the mines and other resource development companies have to offer Northerners. Until these issues are addressed and the challenges minimized, the most beneficial impact from the diamond mining sector will never be fully realized.

The dialogue we have established over the years must continue and we look forward to hearing about government plans for:

- Training & Education Programs;
- Health and Wellness Strategy;
- Economic Development Strategy;
- Devolution; and,
- Update on pan-territorial training strategy and GNWT engagement with Ottawa to provide strong support for this program.