NWT DIAMONDS

THE ECONOMIC IMPACT OF THE DIAMOND INDUSTRY ON THE ECONOMY OF THE NWT, 1991-2002

A REPORT BY THE NWT & NUNAVUT CHAMBER OF MINES, APRIL 2004

NWT & NUNAVUT
CHAMBER OF MINES

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EXECUTIVE SUMMARY

The impact of the diamond industry started with the announcement of the discovery of diamonds in the Northwest Territories (NWT) in 1991. In 1998 Canada's first diamond mine, the EKATI™ Diamond Mine, began production. In 2000, construction started on the Diavik Diamond Mine and production commenced in January of 2003. The Diavik Mine will likely be followed by De Beer's Snap Lake Diamond Project which could begin operations in 2006. The development of the EKATI™ mine was also accompanied by the establishment of a small cutting and polishing industry located in Yellowknife and N'dilo (an Aboriginal community adjacent to Yellowknife).

All economic indicators demonstrate that the NWT economy has grown significantly as a direct result of the diamond industry. Since 1997, which was the year of the start of construction of the EKATI™ mine and the main impact of the diamond industry, GDP and personal incomes have risen rapidly, new capital investment has grown to record levels, unemployment has fallen to below the national rate and retail and wholesale trade sales have increased dramatically.

The strong growth in business activity and employment fostered by the diamond industry has lead to an increase in revenues and expenditures of both the Federal Government and the Government of the Northwest Territories (GNWT). Most of the indicators appear to demonstrate that the diamond industry has been a positive net contributor to both Federal and GNWT revenues.

Prior to the growth of the diamond industry GNWT own source revenues (those revenues not received directly through grants from the federal government) comprised about 21–24% of total revenues, but climbed to 61% in 2001 before falling to 46% in 2002. As a result of the growth in GNWT own source revenues, total federal government grants to the GNWT have fallen from $10,124 per person in constant 2002 dollars in 1999 to $7,510 in 2002.

Even with the fall in federal grants, the GNWT has enjoyed a growth in real revenues per person. In 1999 the year territories were split, the GNWT had $21,541 in revenue per person and revenues grew by $2,015 per person to $23,556 in 2002.

In total, the two operating diamond mines have contributed $37.6 million in property and fuel taxes directly to the GNWT over the period 1998 to 2003. In addition the diamond companies pay royalties, corporate income taxes, capital taxes and other miscellaneous taxes to both the Federal Government and the GNWT.

While GNWT revenues have increased there has been no net increase in the NWT population and no significant increase in school enrolments as a result of the diamond industry. This is because the employment demand generated by the diamond industry has replaced other economic activities that have declined (gold mining, oil and gas and the government sector).

Over the period 1991 to 2002 it is estimated that diamond mining contributed $2.9 billion or 83.8% of the total impact of the diamond industry on GDP in the NWT. Exploration activities contributed another $549.4 million or 15.8% of the total GDP impact while manufacturing (cutting and polishing) generated $14.3 million or 0.4% of the total impact.

In 2002 the mining industry generated 95.2% of total GDP impacts while exploration and manufacturing contributed 4.0% and 0.8% respectively.

Over the period 1991 to 2002, diamond mining generated 9,640 person-years of employment or 74% of the total impact on NWT employment. Exploration activities contributed another 2,984 person-years, or 13% of the total employment impact, while manufacturing generated 446 person-years, or 3%, of the total impact.

In 2002 the mining industry generated 90% of total employment impacts while exploration and manufacturing contributed 5% and 4% respectively.

Over the period 1996 to 2002 the two diamond mines spent $3.4 billion on goods and services. Of this total, $1.9 billion or 57% has been from northern businesses and 28%, or just under $1.0 billion, has been from Aboriginal businesses in the north.

The development of business capacity has created employment opportunities in Aboriginal enterprises and currently they directly employ hundreds of band members and other northerners.

Employment in Aboriginal businesses along with direct employment at the diamond mines has lead to a reduction in social assistance payments and to a rise in employment income in Aboriginal communities. Over the period of 1996 to 2002, employment income per person in the communities directly impacted by the diamond mining industry rose 41%, from $7,088 to $9,968. In contrast, employment income per person in the NWT rose only 16%.

The rapid rise in income demonstrates the positive impact of both the direct employment in diamond mining and in band owned businesses that serve the diamond and other mining industries.

In addition to increasing employment income, greater employment and falling social assistance payments, the diamond communities have also had a tremendous growth in the number of people enrolled in post-secondary education programs.

INTRODUCTION

The announcement of the discovery of diamonds in the Northwest Territories (NWT) in 1991 led to the greatest staking rush in the history of Canada. In 1998 Canada's first diamond mine, the EKATI™ Diamond Mine, began production. In 2000, construction started on the Diavik Diamond Mine and production commenced in January of 2003. The Diavik Mine will likely be followed by at least one more mine in the NWT, at Snap Lake. This Project is owned by De Beers Canada Corporation and received approval on October 10, 2003 to start the regulatory permitting process and is scheduled to begin operations in 2006.

The development of the EKATI™ mine has been accompanied by the establishment of a small cutting and polishing industry located in Yellowknife and N'dilo (an Aboriginal community adjacent to Yellowknife).

The objective of this report is to provide a view of the impact of the various aspects of the diamond industry on the economy of the NWT. This report will review and provide estimates of the exploration, mine construction, production and cutting and polishing activities related to the diamond industry.

The first part of the report describes the development of the NWT economy over the period 1991 to 2002. It looks at the changes in major economic indicators with particular reference to the periods 1991 to 1996 and 1997 to 2002. The latter period encompasses the construction and operation of the EKATI™ Diamond Mine and the construction of the Diavik Diamond Mine. This is the period when the diamond industry had the largest impact on the NWT economy.

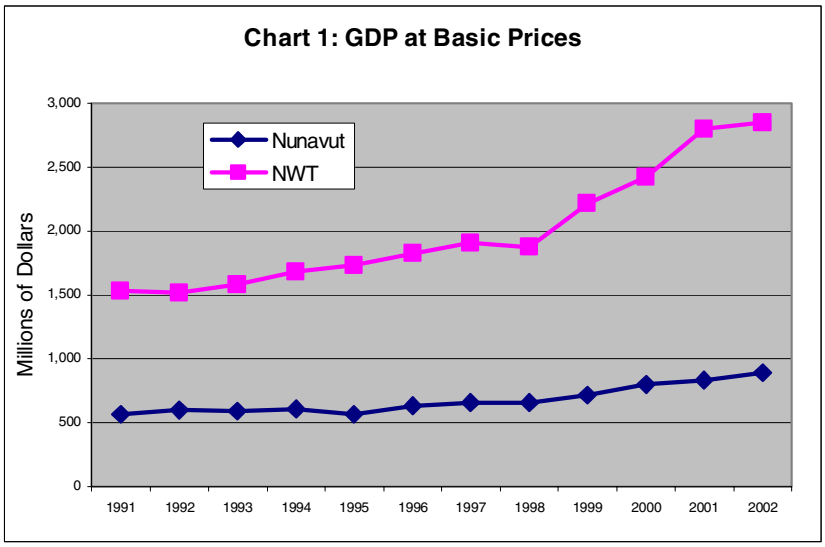
The second portion of the report describes the impact of all parts of the diamond pipeline that are active in the NWT and provides an estimate of their contribution to the NWT economy.

The third portion of the report provides more information of the impact of the diamond industry on Aboriginal communities and specifically on the Rae Band.

The economy of the NWT has gone through a major transition over the last decade. The major negative events were the loss of public sector employment as the Government of the Northwest Territories (GNWT) was downsized with the creation of Nunavut and the loss of the Giant Gold Mine[1]. On the positive side, the construction and operation of the EKATI™ Diamond Mine and the construction of the Diavik Diamond Mine opened up many new employment and business opportunities that provided a boost to the economy.

This section looks at economic change in the NWT by presenting a number of indicators that help measure the changes in the economy. Data for Nunavut has been presented for comparison purposes.

Chart 1 presents an estimate of level and change in Gross Domestic Product (GDP) for the NWT and Nunavut[2] from 1991 to 2002.



GDP at Basic Prices

(Millions of Dollars)

	Nunavut	NWT
1991	564	1,537
1992	601	1,517
1993	596	1,584
1994	611	1,681
1995	568	1,733
1996	635	1,823
1997	661	1,911
1998	658	1,872
1999	718	2,213
2000	796	2,423
2001	836	2,796
2002	888	2,846
Change		
91-96	71	286
97-02	253	1.023

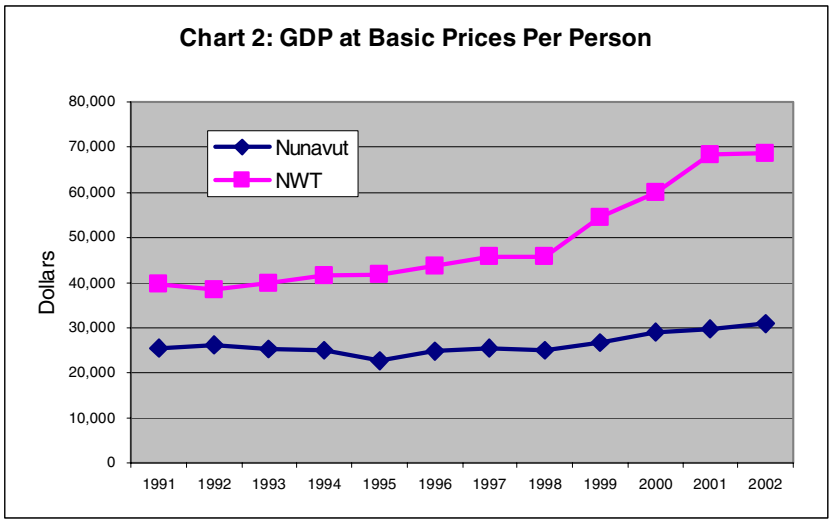
It is estimated that in 1991 GDP in the NWT was $1.5 billion and by 1996 it had grown to $1.8 billion, a rise of $286 million. During the same period it is estimated that Nunavut's GDP increased by $71 million.

[1] Although most of the underground operations were closed and the mill completely shut down, there are still about 70-90 miners working underground at Giant. The ore is trucked to the Con mine for processing.

[2] The value of GDP for the period 1991 to 1998 are Ellis Consulting Services estimates while the period from 1999 to 2002 are from Statistics Canada. Prior to division of the territories in 1999 Statistics Canada published only a single estimate for both territories combined.

In contrast over the period 1997 to 2002, when the impact of the diamond industry was largest, the economy of the NWT grew by over $1.0 billion while Nunavut's economy increased by only $253 million.

Chart 2 presents GDP on a per person basis. It is estimated that in 1991 GDP per person in the NWT was $39,678 and grew to $43,672 by 1996. During the same period it is estimated that Nunavut's GDP per person fell marginally from $25,414 to $24,731.



GDP per Person (Dollars)

	Nunavut	NWT
1991	25,414	39,678
1992	26,222	38,483
1993	25,271	39,776
1994	25,031	41,419
1995	22,721	41,840
1996	24,731	43,672
1997	25,538	45,898
1998	24,958	45,858
1999	26,769	54,435
2000	28,945	59,829
2001	29,729	68,492
2002	30,898	68,688
Change		
91-96	-683	3,994
97-02	6,167	25,016

In contrast over the period 1997 to 2002, when the impact of the diamond industry was largest, GDP per person in the NWT grew by $25,016 to reach $68,688. In Nunavut over the same period GDP per person increased $6,167 to grow to $30,898.

Table 1: New Capital Investment in the NWT

	Mining Oil & Gas	Other Industries	Public Admin	Housing	Total
			($Million)		
1999	263	168	88	47	565
2000	605	126	54	32	817
2001	1,097	155	82	53	1,386
2002	958	174	145	100	1,377
Total	2,923	623	369	231	4,147
			(Percent of Total)		
1999	46.5%	29.7%	15.6%	8.2%	100.0%
2000	74.0%	15.4%	6.7%	3.9%	100.0%
2001	79.1%	11.2%	5.9%	3.8%	100.0%
2002	69.6%	12.6%	10.5%	7.3%	100.0%
Total	70.5%	15.0%	8.9%	5.6%	100.0%

Table 1 and Chart 3 give total capital expenditures in the NWT from 1999 to 2002. Mining and oil & gas investment has always helped drive the NWT economy and over the period 1999 to 2002 mining capital expenditures were $2.9 billion and accounted for 70.5% of total capital expenditures.

During the period 2000 to 2002 the construction of the Diavik Diamond Mine accounted for over $1.2 billion or 43% of the total new capital investment in the NWT.

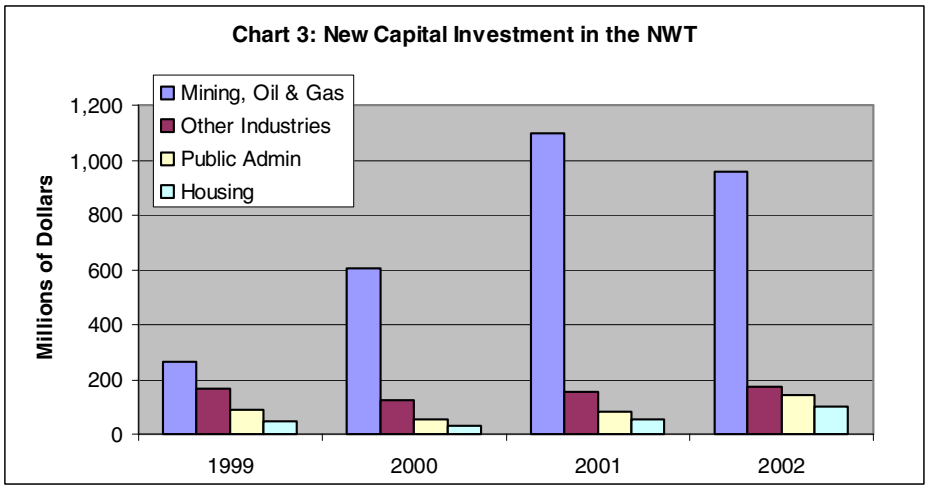
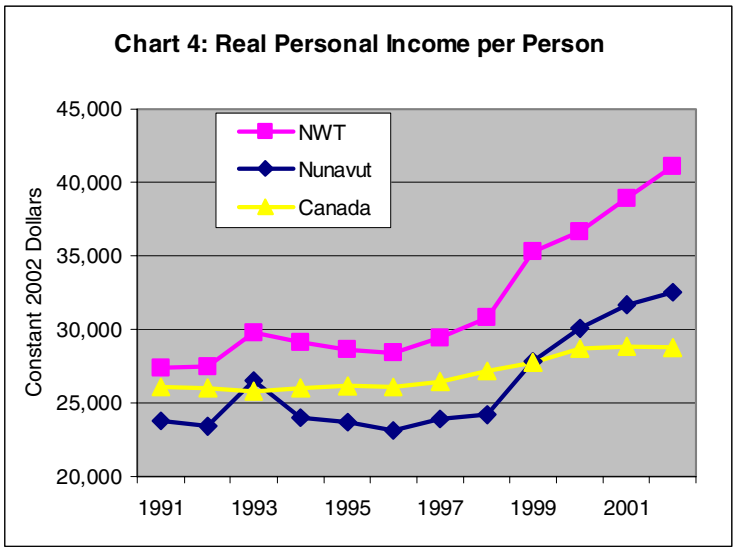


Chart 4 presents total real personal income per person for the NWT, Nunavut and Canada. Personal income[3] includes wages and salaries, income of unincorporated businesses, interest and other investment income and transfer payments to persons from governments. It has been deflated using Statistics Canada's Consumer Price Index (CPI) to express it in "real" dollars which in this case reflects the spending power of persons.

It is estimated that in 1991 real personal income per person in the NWT was $27,376 and it grew to $28,384 by 1996. During the same period it is estimated that Nunavut's personal real income per person fell slightly from $23,733 to $23,096. Canada's personal income per person remained unchanged at just over $26,000.

In contrast over the period 1997 to 2002 real personal income per person in the NWT grew by $12,669 to reach $41,053 while in Nunavut it increased by $9,472 to $32,568. During the same period real personal income per person in Canada rose by $2,723 to reach $28,802.

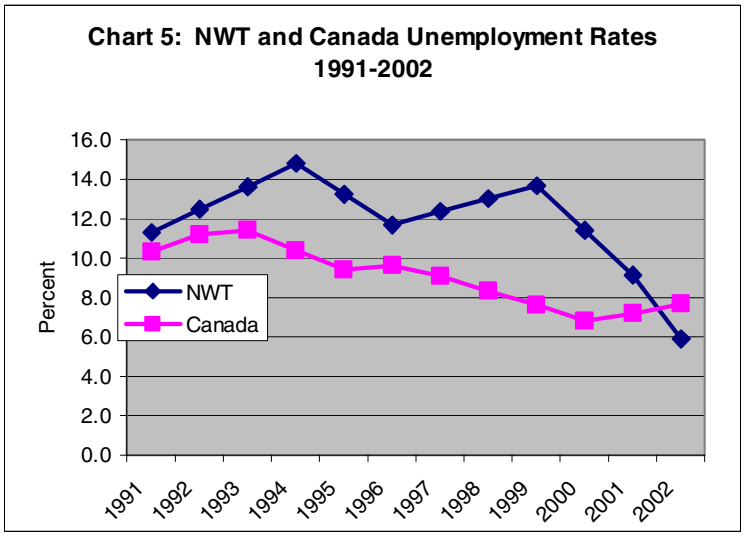
[3] The value of Personal Income the NWT and Nunavut for the period 1991 to 1998 are Ellis Consulting Services estimates while the period from 1999 to 2002 are from Statistics Canada. Prior to division of the territories in 1999 Statistics Canada published only a single estimate for both territories combined.



Real Personal Income per Person
Constant 2002 Dollars

	NWT	Nunavut	Canada
1991	27,376	23,733	26,089
1992	27,495	23,399	26,037
1993	29,766	26,499	25,801
1994	29,126	23,959	26,003
1995	28,617	23,662	26,195
1996	28,384	23,096	26,079
1997	29,400	23,944	26,459
1998	30,806	24,216	27,190
1999	35,308	27,809	27,736
2000	36,671	30,045	28,703
2001	38,902	31,658	28,806
2002	41,053	32,568	28,802
Change			
91-96	1,008	-637	-10
97-02	12,669	9,472	2,723

Chart 5 gives the unemployment rate for the NWT for the period 1991-2002[4]. The unemployment rate in the NWT fell from the 12-14% range that was experienced over the period 1991 to 1999 to below 5.9% by 2002, below the national of 7.7%. The fall from 1999 to 2002 corresponds with the development of the diamond mining business.



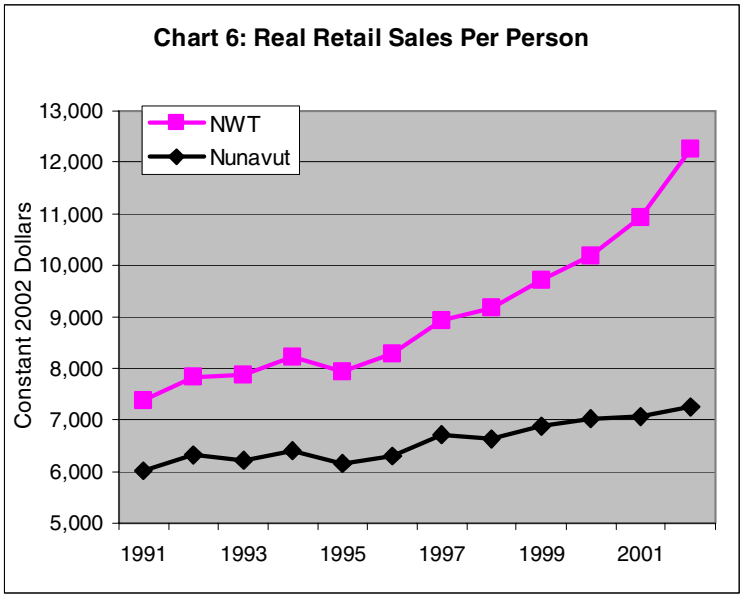
Unemployment Rates
(Percent)

	NWT	Canada
1991	11.3	10.3
1992	12.5	11.2
1993	13.6	11.4
1994	14.8	10.4
1995	13.3	9.4
1996	11.7	9.6
1997	12.4	9.1
1998	13.0	8.3
1999	13.7	7.6
2000	11.4	6.8
2001	9.1	7.2
2002	5.9	7.7

[4] The NWT unemployment rates have been taken from the census for the years 1991 and 1996, from the NWT Bureau of Statistics Labour Force Surveys for the years 1994 and 1999 and from Statistic's Canada monthly labour force survey for 2001 and 2002. Intervening years have been interpolated to provide estimates for the years 1992-1993, 1995, and 1997-1998. Nunavut is not covered in Statistics Canada's monthly labour force survey and therefore data for Nunavut has not been included in this section. The Canada rates are from Statistics Canada.

Retail sales also showed a similar pattern to the other economic indicators. Chart 6 presents real retail sales on a per person basis.

In 1991 real retail sales per person in the NWT were $7,370 and grew $924 to $8,293 by 1996. During the same period Nunavut's retail sales per person rose from $6,022 to $6,309, a rise of $287.

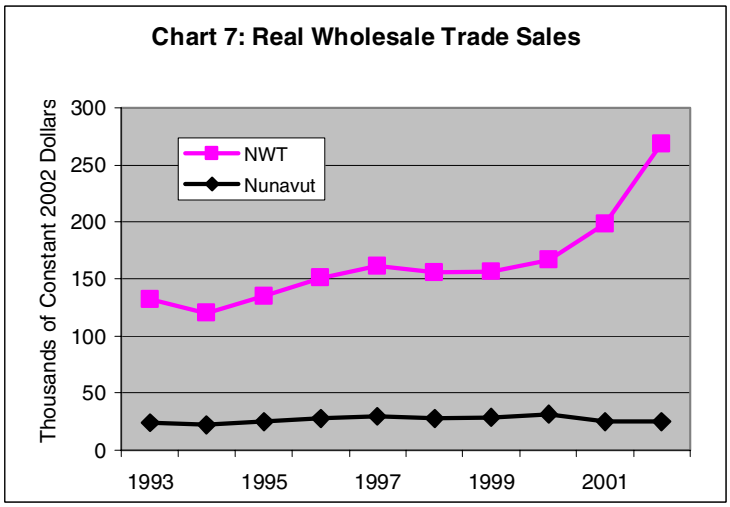


Real Retail Sales Per Person
Constant 2002 Dollars

	NWT	Nunavut
1991	7,370	6,022
1992	7,839	6,313
1993	7,864	6,214
1994	8,232	6,399
1995	7,927	6,148
1996	8,293	6,309
1997	8,919	6,711
1998	9,169	6,637
1999	9,710	6,884
2000	10,197	7,023
2001	10,930	7,066
2002	12,260	7,251
Change		
91-96	924	287
96-02	3,967	942

In contrast over the period 1997 to 2002 when the impact of the diamond industry was largest in the NWT, real retail sales per person grew by $3,967 to reach $12,260. In Nunavut during the same period, sales rose from only $942 to $7,251.

Wholesale trade also showed the same dramatic growth during the period of impact of the diamond industry. Chart 7 presents this information.



Real Wholesale Sales
Thousand of 2002
Constant Dollars

	NWT	Nunavut
1993	132	24
1994	121	22
1995	135	25
1996	151	28
1997	161	29
1998	155	28
1999	157	29
2000	167	31
2001	199	25
2002	268	25
Change		
93-96	19	4
97-02	117	-3

In 1993 wholesalers in the NWT had $132 million in sales and they grew by $19 million to $151 million by 1996. During the same period, Nunavut's wholesale trade industry sales rose from $24 to $28 million.

Over the period 1997 to 2002 when the impact of the diamond industry was largest, NWT wholesale industry sales grew from $151 million in 1996 to reach $268 million, an increase of $117 million or 77%. In contrast Nunavut's sales from 1996 to 2002 fell $3 million to a level of $25 million.

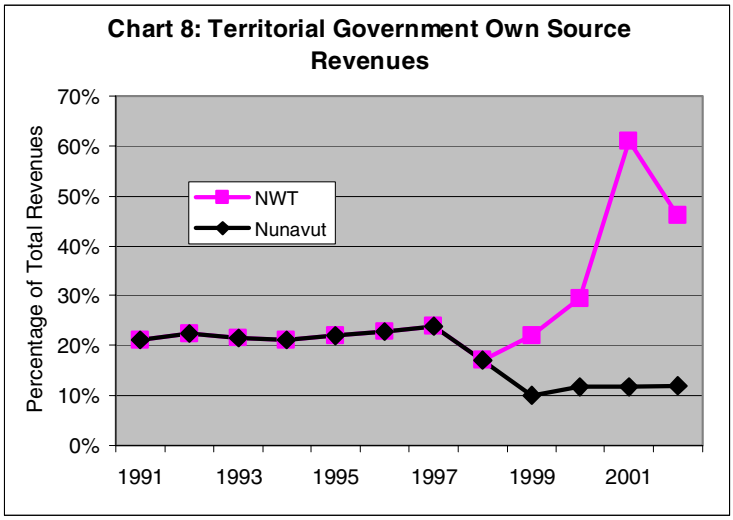
The large growth in the wholesale trade industry from 1997 to 2002 was the result of large contracts with the diamond industry for mine re-supply and the construction of the Diavik Diamond Mine.

In summary all economic indicators demonstrate that the NWT economy has grown significantly since 1997 along with, and as a result of, the diamond mining industry. GDP and personal incomes have risen rapidly, new capital investment has grown to new record levels, unemployment has fallen and retail and wholesale trade sales have increased dramatically.

It has been demonstrated that there has been strong growth in business activity and employment in the NWT during the period of development of the diamond industry. This new economic activity has lead to an increase in both revenues and expenditures for all levels of governments.

The revenue impact on the GNWT of the economic growth fostered by the diamond industry is complicated by the fact that the GNWT's annual federal grant entitlement is impacted by incremental revenues. When the GNWT experiences an increase in revenues it can have the impact of reducing the amount the GNWT receives from the federal government through the Formula Financing Grant (FFG).

The federal government, through provision of the Formula Financing Grant, provides to the GNWT a level of revenue that acts as a "floor" which is intended to enable the territorial government to provide a basic basket of goods to NWT residents that meets the minimum standard of government services that has been established for all Canadians. The FFG is intended to provide the difference between what the GNWT should be able to raise through its own tax structure[5] and the level of expenditure required to provide the required basket of services.



Total Own Source Revenues
(Percent of Total)

	NWT	Nunavut
1991	21%	21%
1992	22%	22%
1993	21%	21%
1994	21%	21%
1995	22%	22%
1996	23%	23%
1997	24%	24%
1998	17%	17%
1999	22%	10%
2000	29%	12%
2001	61%	12%
2002	46%	12%

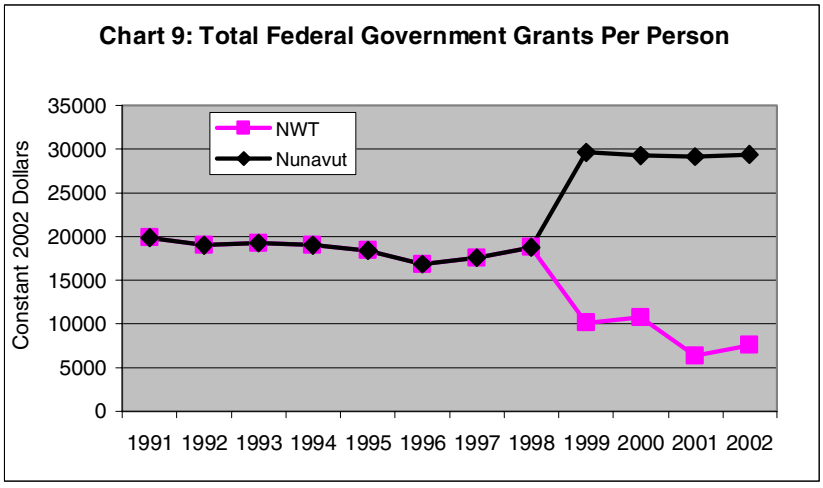
[5] The Formula Financing Grant has a number of provisions that can limit its growth regardless of the level of actual GNWT expenditures. The formula is structured on the basis that the GNWT will meet a certain level of "tax effort" – an average set for all provinces and territories. If the tax effort is less than this average, which is the case in the NWT, the territory is "penalized" or has revenues "clawed back". Hence the GNWT only keeps about 20% of all new revenues due to the grant reduction, because the GNWT "should" have been able to raise more revenues if it taxed at the average rate. The GNWT disputes the basis for the formula and is continuing to negotiate with the Federal Government so that they may retain more revenues.

A strong economy will raise the ability of the territorial governments to garner required tax revenues from their own sources and hence lower the FFG requirement. In essence, the level of the FFG is a good indicator of the level of economic activity in the territory as the smaller the Grant the stronger the economy.

Prior to the split of Nunavut from the NWT in 1999 and the advent of the diamond industry in 1997, grants and transfers from the Government of Canada made up about 80% of all GNWT revenues.

As shown on Chart 8 from the period 1991 to 1998 (prior to the split of the territories), own source revenues comprised about 21–24% of total revenues. Since 1999 own source revenues in the NWT have continued to climb and reached 61% in 2001 before falling to 46% in 2002[6]. In contrast the Government of Nunavut own source revenues have remained at about 12% of total revenues.

Chart 9 presents total federal government grants on a per person basis for both the NWT and Nunavut. Prior to the split of the territories in 1999 the average federal grants per person was about $19,000 in constant 2002 dollars. In 1999 the average grant per person was $10,124 in the NWT and $29,674 in Nunavut.



Federal Grants Per Person (Constant 2002 Dollars)

	NWT	Nunavut
1991	19,880	19,880
1992	18,975	18,975
1993	19,263	19,263
1994	18,981	18,981
1995	18,449	18,449
1996	16,884	16,884
1997	17,606	17,606
1998	18,813	18,813
1999	10,124	29,674
2000	10,766	29,322
2001	6,374	29,096
2002	7,510	29,367
Change		
99-02	-2,614	-307

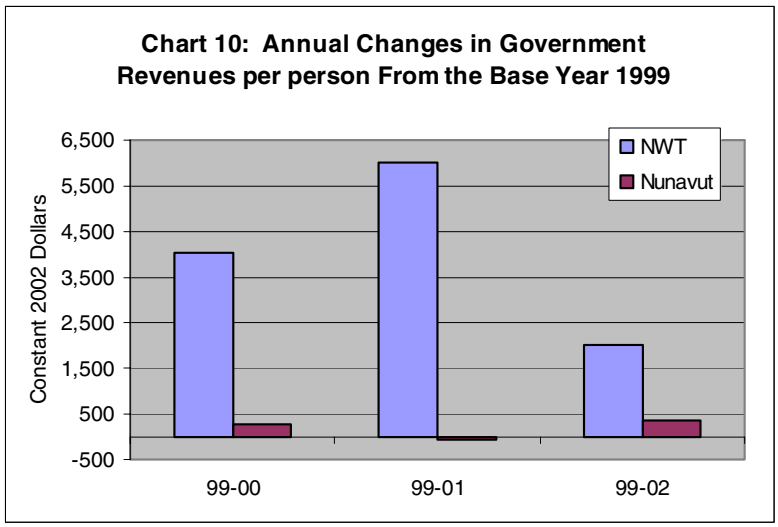
Since 1999 federal grants per person have fallen in the NWT by over $2,614 to a level of $7,510 in 2002. In contrast in Nunavut federal grants per person have declined only $307 to $29,367 in 2002.

[6] Under the FFG, payments to the GNWT are based on preliminary statistical data and are subject to change once final data becomes available. These adjustments are reflected in future FFG payments and can lead to swings in the percentage of total own source revenues. For example, an overpayment in year one can be adjusted through a deduction made in year two. This makes the FFG in year one look much larger than the net amount received in year two while if the amounts received were put on an accrual basis they would look much more equal. But regardless of these swings in payments, the overall trend is that the GNWT is receiving more of it revenues from its own sources and less from the FFG.

The fact GNWT own source revenues have increased and federal grants have decreased raises the question of whether the GNWT has more or less revenue since the start of the diamond industry.

Chart 10 presents total territorial government revenues per person for the NWT and Nunavut. In 1999, the year territories were split, the GNWT had $21,541 in revenue per person while Nunavut had $33,006 (measured in constant 2002 dollars).

If 1999 is used as the base, GNWT revenues per person grew $4,026 by 2000, $6,016 by 2001 and $2,015 by 2002. In contrast, in Nunavut revenues per person grew by only $272 by 2000, fell $67 by 2001 and increased only $362 by 2002.



Total Real Territorial Government Revenues Per Person
(Constant 2002 Dollars)

	NWT	Nunavut
1999	21,541	33,006
2000	25,566	33,277
2001	27,557	32,939
2002	23,556	33,368
Change		
99-00	4,026	272
99-01	6,016	-67
99-02	2,015	362

In conclusion since the territories were split in 1999 the GNWT has $2,015 more in total revenues per person, an increase of 10.6%. This is after the claw back from the FFG is factored in.

Clearly the GNWT revenue base has been growing much faster than Nunavut's and the main reason has been the increased economic activity that has resulted from the diamond industry. The remaining question is whether the new revenue generated by the diamond industry is sufficient to offset incremental costs that result from the industry.

While it is clear that GNWT revenues have grown as the diamond industry has developed it is not as obvious how its expenditures have been impacted. The GNWT has stated that the diamond industry has put new demands on its expenditures and in particular on the need to improve and expand public infrastructure such as roads.

There is little information currently in the public domain that substantiates the argument made repeatedly by the GNWT that the diamond industry has put significant new demands on the need for new public infrastructure expenditures.

One argument advanced by the GNWT is that the diamond industry has led to a serious deterioration in public highways. Currently the major impact generated by the diamond mines on the road system is the re-supply of fuel and goods which is undertaken every winter. During this time the Mackenzie River ice bridge is operating (and hence there is no demand from the mines for a permanent bridge over the river) and travel is made at a time when the roads are frozen and less prone to damage. This is not to say that trucks undertaking the re-supply do not contribute to a deterioration of the roads, but no empirical evidence has been presented to substantiate this. In addition, the diamond mines pay a significant amount in property taxes and fuel to the GNWT which, although are not specifically targeted to road expenditures, have led to increased revenues that could be used to offset new expenditure needs.

Table 2 shows the amount of property taxes paid by diamond companies for mine operations. Since the Diavik Mine is only just starting operations, almost no property taxes have been paid, but it is anticipated that payments by Diavik will reach a level close to that of BHP Billiton in 2004 and subsequent years. It should also be recognized that the mines receive no direct services (although mine employees do use schools in their home communities) for these payments as they provide at their own expense all power, roads, water, waste and other infrastructure services normally provided by local governments with money in part raised from property taxes.

Table 2 shows that the two NWT diamond mines have paid $12.9 in property taxes since 1998 and will likely pay about $8–$9 million per year starting in 2004.

Table 2: Property Taxes Paid to the GNWT on Mine Operations

	1998	1999	2000	2001	2002	2003	Total
				($000's)			
BHP Billiton	977	914	1,992	2,004	2,281	4,493	12,661
Diavik	0	0	0	0	24	182	206
Total	977	914	1,992	2,004	2,305	4,674	12,867

Table 3 shows the amount of fuel taxes paid by diamond companies for mine construction and operation. In total, the diamond mines[7] have contributed $25 million in fuel taxes to the GNWT over the period 1998 to 2003. In 2003 they contributed $7.3 million and it is expected that payments in the future will rise as Diavik reaches full production and Snap Lake begins construction and operation.

In total, the two operating diamond mines have contributed $37.6 million in property and fuel taxes over the period 1998 and 2003. Starting in 2004, it is expected that the two operating diamond mines will pay about $15 million annually in property and fuel

[7] The winter re-supply represents all of the traffic on the winter road. A small portion of the loads represent deliveries to mining operations and exploration activities that are not diamond related.

tax and when De Beer's Snap Lake Mine begins production, this value will likely rise to over $20 million per year.

In addition to fuel and property taxes all diamond companies will pay royalties, corporate income taxes, capital taxes and other taxes to both the Federal Government and the GNWT.

Table 3: Fuel Taxes Paid to the GNWT by the Diamond Industry

	1998	1999	2000	2001	2002	2003	Total
			($000's)				
BHP Billiton[8]	1,255	2,246	2,725	3,589	4,398	4,644	18,857
Diavik	0	0	166	166	944	1,324	2,600
Winter Road[9]	207	152	324	663	647	1,324	3,317
Total	1,463	2,398	3,216	4,418	5,989	7,291	24,775

There has also been no obvious increase in overall demand for school and health services. Even though the diamond industry has led to greater economic prosperity it has not led to a significant net increase in the population of the NWT because, in large part, it has replaced other economic activities, such as gold mining and government services that have declined. Therefore, there has been no significant net in-migration into the NWT and hence no major aggregate change in demand for many public services.

For example Table 4 presents enrolment numbers for NWT schools during the period of diamond industry activity. While over the period 1996-97 to 2002-03 there has been a 3% increase in school enrolment, it has been the result of more students at the senior level. The number of students enrolled in kindergarten and Grades 1–6 has actually declined. The small rise in overall school enrolment has occurred because more students appear to be staying or returning to school rather than from pressures due to population growth.

[8] Taxes paid by BHP Billion and Diavik were provided by the companies and represent actual taxes paid.

[9] The winter road represents an estimate of the amount of tax paid on fuel burned by trucks providing the re-supply to the mines. It is estimated based on the assumption that on average each truck will used 900 litres of fuel during the round trip from Enterprise to the mine site.

Table 4: Student Enrolment in NWT Schools

	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
			(Number of Students)				
Total Enrolment	9,585	9,793	9,767	9,998	9,871	9,766	9,872
Kindergarten	844	862	757	748	781	693	657
Grades 1-6	4,766	4,777	4,851	4,820	4,747	4,791	4,690
Grades 7-9	2,092	2,139	2,056	2,138	2,175	2,217	2,239
Grades 10-12	1,883	2,015	2,103	2,292	2,168	2,065	2,286
			(Index 1996-97 = 100.0))				
Total Enrolment	100.0	102.2	101.9	104.3	103.0	101.9	103.0
Kindergarten	100.0	102.1	89.7	88.6	92.5	82.1	77.8
Grades 1-6	100.0	100.2	101.8	101.1	99.6	100.5	98.4
Grades 7-9	100.0	102.2	98.3	102.2	104.0	106.0	107.0
Grades 10-12	100.0	107.0	111.7	121.7	115.1	109.7	121.4

Population is one of the major driving factors in the cost of providing government services and a rising population can put pressure on the capacity of government services and infrastructure, leading to higher costs. Table 5 presents the change in population since the start of the diamond industry. As shown on Table 5 the population of the NWT has remained almost stable over the period and therefore no major new pressures on the demand for government services have occurred.

Table 5: NWT Population 1997 to 2003

	1997	1998	1999	2001	2002	2003	Total
			(Number of Persons)				
Population	41,635	40,816	40,654	40,499	40,822	41,434	41,872
Index (1997=100.0)	100.0	98.0	97.6	97.3	98.0	99.5	100.6

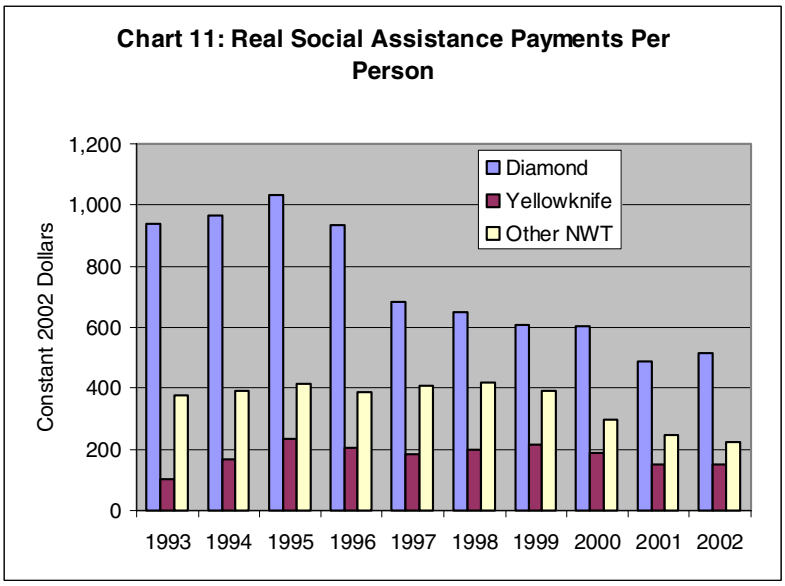
However, there are a number of areas where it can be demonstrated that GNWT expenditures have been decreased as a result of the growth of the diamond industry and the improvement in the economy.

For example, Chart 11 presents the impact on the amount of expenditures by the GNWT on Social Assistance payments since 1993. Social Assistance payments have been converted to a per person basis to permit comparisons between the groups of communities and have been deflated using the CPI to convert them to "real" dollars to allow comparisons over time. Separate numbers have been presented for three "community" groupings. They are: 1) Yellowknife, 2) the "diamond" impact communities[10] (which include Rae Lakes, Wekweti, Detah, Rae-Edzo, Wha Ti, and Lutsel k'e) and 3) all of the rest of the communities in the NWT.

[10] Diamond impact communities are those that have signed an IBA (Impact Benefit Agreement) with the diamond mines. Although it is a diamond impact community, data for N'dilo are not included in this group because the GNWT includes this data with the City of Yellowknife.

In 1993 per capita Social Assistance Payments were $938 in the diamond impact communities, $100 in Yellowknife and $378 in the rest of the communities in the NWT. By 1996 there was little change in the diamond communities where payments had fallen $4 while those in Yellowknife increased by $105 and by $8 in the remainder of the communities in the NWT. In 2002, after the impact of the diamond industry, Social Assistance Payments per person had fallen $419 from 1996 levels in the diamond communities, in Yellowknife by $57 and by $163 in the rest of the communities in the NWT.

Clearly the large fall in the diamond communities can be attributed in major part to the employment opportunities presented by the diamond industry. The fall in social assistance payments has been a benefit to the GNWT in reducing expenditures and along with new revenues can be used as an offset for any new expenditure demands resulting from the diamond mining industry.

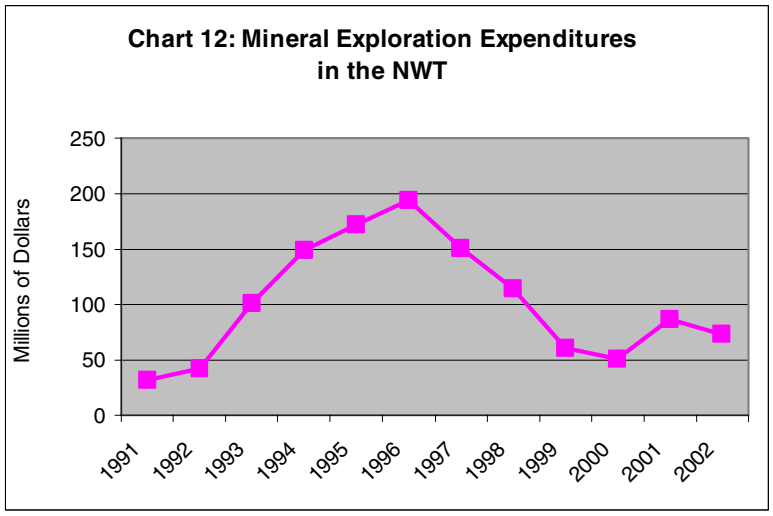


Real Social Assistance Payments Per Person (Constant 2002 Dollars)

	Diamond	Yellow-knife	Other NWT
1993	938	100	378
1994	966	168	391
1995	1,031	233	415
1996	935	205	387
1997	683	183	409
1998	649	199	420
1999	607	216	391
2000	604	187	298
2001	487	150	248
2002	515	149	223
Change			
93-96	-4	105	8
96-02	-419	-57	-163

Most of the indicators appear to demonstrate that the diamond industry has been a net contributor to GNWT revenues, but because of the uncertainty it would be necessary to undertake a thorough benefit-cost analysis before a definitive conclusion can be reached.

The first way the diamond industry impacted the NWT economy was through exploration. Chart 12 presents mineral exploration expenditures in the NWT from 1991 to 2002. The main period of diamond exploration was from 1993 to 1998 and expenditures peaked at just under $200 million in 1996. Exploration for diamonds accounted for about 70–80% of total exploration expenditures during this period.



NWT Exploration Expenditures (Millions of Dollars)	
1991	31.6
1992	42.7
1993	100.7
1994	149.5
1995	172.2
1996	194.5
1997	150.7
1998	114.8
1999	61.0
2000	51.4
2001	86.6
2002	72.7
Total	1,228.4

Table 6 presents the direct and total[11] economic impact of mineral exploration expenditures on the NWT economy.

Exploration expenditures peaked in 1996. During that year it is estimated that mineral exploration increased the NWT GDP directly by $70 million and when indirect and induced impacts are included, by a total of $87 million. In addition, exploration impacts contributed $19 million to labour income and added 472 person-years of employment to the NWT economy.

11 Total impacts are a sum of the direct, indirect and induced effects. An increase in demand for any good or service will produce three effects which are described by economic multipliers. The first is the impact on industries (firms) which expand production to satisfy increased demand – in this case those that produce mineral exploration products. These effects are termed the direct impacts. Secondly, there is a ripple effect as these firms purchase additional required inputs from other firms. These effects are termed the indirect impacts. Lastly, as all firms expand production, they also hire more staff and pay out wages thereby increasing the income received by employees. Households, after withdrawing a certain portion for taxes and savings, spend this income which in turn increases demand for other commodities. These impacts are termed induced effects.

In 1996 diamond exploration accounted for $129.6 million, or just over two thirds, of all mineral expenditures. If only diamond impacts are considered, then during 1996 the diamond industry, through mineral exploration, contributed $58 million to NWT GDP, $13 million in labour income and 315 person-years of employment.

Table 6: Economic Impacts of Mineral Exploration on the NWT Economy

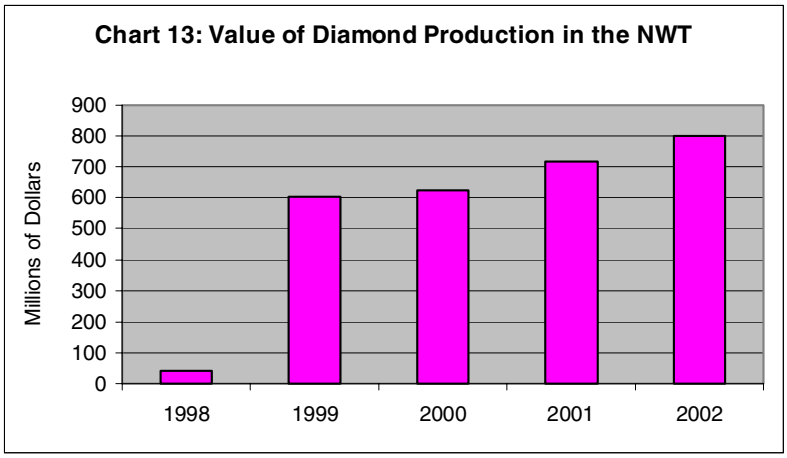
	GDP ($Million)		Labour Income ($Million)		Employment (Person-years)	
	Direct	**Total**	**Direct**	**Total**	**Direct**	**Total**
1991	11.4	14.1	1.6	3.1	49	77
1992	15.4	19.1	2.2	4.2	66	104
1993	36.3	45.0	5.3	10.0	155	245
1994	53.9	66.9	7.8	14.8	230	363
1995	62.1	77.0	9.0	17.1	264	418
1996	70.2	87.0	10.2	19.3	299	472
1997	54.4	67.4	7.9	14.9	231	366
1998	41.4	51.3	6.0	11.4	176	279
1999	22.0	27.3	3.2	6.0	94	148
2000	18.5	23.0	2.7	5.1	79	125
2001	31.3	38.7	4.5	8.6	133	210
2002	26.2	32.5	3.8	7.2	112	177
Total	443.3	549.4	64.1	121.8	1,886	2,983

In total over the 1991 to 2002 period, mineral exploration expenditures in the NWT were more than $1.2 billion. During this period it is estimated that mineral exploration increased the NWT GDP directly by $443 million and by $549 million when indirect and induced impacts are included. In addition, exploration impacts contributed $64 million in direct labour income and $121 million in total labour income. As well, mineral exploration accounted for 1,886 direct person-years of employment to the NWT economy and 2,983 when spin-offs are included.

DIAMOND PRODUCTION IN THE NWT

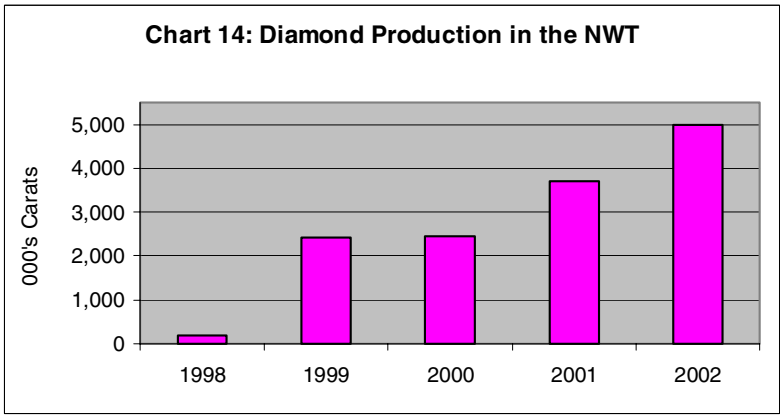
The EKATI™ Diamond Mine was the only diamond mine in production in the NWT at the end of 2002 as Diavik was still under construction (although it began production in early 2003).

Chart 13 present the value of diamond production in the NWT. Production has risen from $74 million in 1998 to $801 million in 2002.



Value of Diamond Production in the NWT $Millions	
1998	41
1999	606
2000	625
2001	718
2002	801

Chart 14 present the number of carats produced in the NWT. Production has risen from 203 thousand in 1998 to just under 5 million in 2002.



Diamond Production in the NWT 000's of Carats	
1998	203
1999	2,429
2000	2,435
2001	3,716
2002	4,984

PRIMARY PRODUCERS IN THE NWT

At the end of 2002, the EKATI™ Diamond Mine was the only producing diamond mine in the NWT. Construction of the EKATI™ Diamond Mine began in 1997 and was completed before the end of 1998 and the mine began full production in early 1999. Diavik, which was constructed from 2000 to 2002, began production in early 2003 and is expected to almost double the NWT's value of diamond output. De Beers Snap Lake Project received approval to enter the regulatory process on October 10, 2003 and could begin operation as early as 2006.

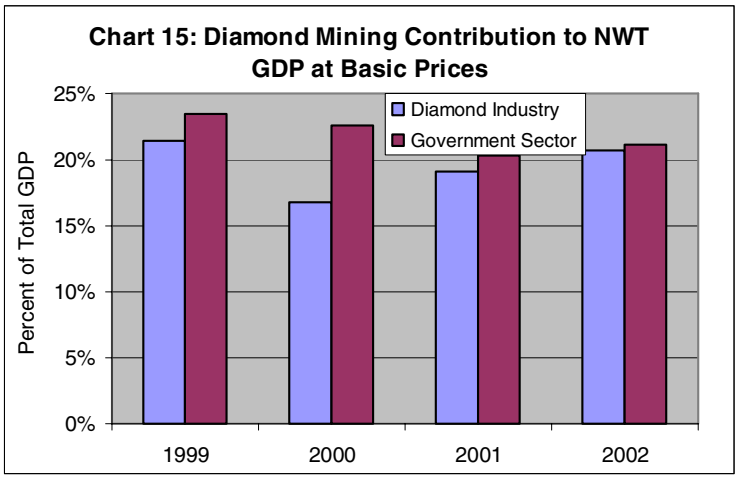
There is also a good chance that there will be at least one other diamond mine developed in the NWT over the next decade. In addition, there could be an expansion of production or extension of existing mine lives, as new economic pipes are identified.

CONTRIBUTION OF PRIMARY PRODUCERS TO THE NWT ECONOMY

DIRECT CONTRIBUTION

The diamond industry, both through the production of diamonds and the construction of mines, has made a very large direct contribution to the NWT economy. Prior to the discovery of diamonds, the mineral industry, while making a substantial contribution to the economy, was smaller than the government sector. Prior to diamonds, the major driver in the NWT was the government sector (although the mineral sector has always been the largest source of wealth creation[12]).

Direct GDP Impacts



Contribution to NWT GDP at Basic Prices

	Diamond Industry	Gov't Sector
	Millions of Dollars	
1999	474	520
2000	405	547
2001	534	569
2002	591	602
	Percent of Total	
1999	21%	23%
2000	17%	23%
2001	19%	20%
2002	21%	21%

[12] Governments (with the exception of commercial government business enterprises) do not create wealth. Governments tax wealth which has been created by the business sector and then redistributes it through the provision of services and direct transfers to persons and other sectors. Since the 1930s in the north, the mining industry has been the largest sources of wealth creation in the market based economy. Wealth has always been, and continues to be, created in the traditional economy.

As shown on Table 15, in 1999 it is estimated that the diamond mining industry (including mine production and construction) accounted for 21% of the NWT economy, while the government sector (including public administration, education, health and social services) contributed 23%.

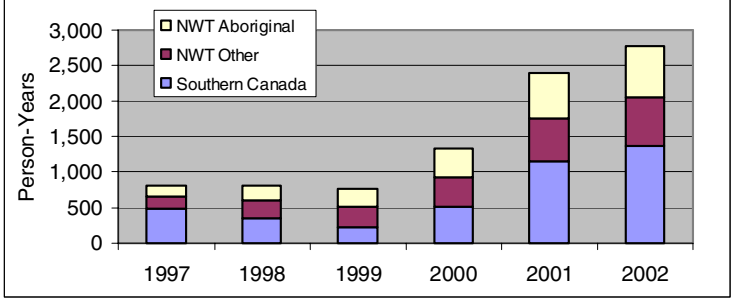
With the construction of the Diavik Diamond Mine and the operation of the EKATI™ Diamond Mine in 2002, it was estimated that the contribution of the diamond industry was almost equal to that of the government sector's contribution (21%).

It is expected that in 2003 when the Diavik mine production is added to the contribution from EKATI™ it will boost diamond mining's direct contribution to NWT GDP to about $1 billion or about one-third of the total GDP of the territory – exceeding that of the government sector.

Direct Employment Impacts

The diamond mining industry has also provided a wide range of direct employment opportunities over the period 1997 to 2002. Chart 16 and Table 7 present employment by residence[13] and ethnicity.

Chart 16: Diamond Mine Direct Operations and Construction Employment



In 1997 there were 806 jobs[14] generated by the construction of the EKATI™ Mine. Of these, 323 jobs, or 40% of the total, were filled by northern residents. Aboriginal northerners filled 181 or 56% of the northern jobs.

[13] Because it was not possible to separate employment from Kugluktuk and the rest of Nunavut from NWT employment, they have been included in the NWT total. In most cases in this report "northern" is used in the place of NWT to reflect this.

[14] In BHP Billiton's Annual Report on Employment they use 1,725 hours per employee per year (7.5 hours per day at five days per week for 46 weeks) for the purposes of estimating person-year equivalents, based on total employee hours worked for both operations and construction. In this report we have used 2,016 hours per year for operations (to reflect a two week in and out schedule at 12 hours per day) and 2,736 hours per year for construction (to reflect a three week in and one out schedule at 12 hours per day). BHP Billiton has presented its person-year data to facilitate comparison to "normal" office or factory jobs – in this report we want to provide an estimate that is closer to the actual number of persons who worked during the year.

In 1998 EKATI™ Diamond Mine construction was finished and production began, northerners accounted for 58% of total direct employment. In 1999, the first year of full production, the percentage of northern employment had risen to 70% including 37% Aboriginal northerners.

Table 7: Total Direct Diamond Employment for Operations and Construction

	Person-Years				
	NWT Aboriginal	NWT Other	Subtotal NWT	Southern Canada	Total
1997	181	142	323	483	806
1998	252	221	473	342	815
1999	281	255	536	232	768
2000	411	415	827	511	1,338
2001	603	645	1,248	1,154	2,402
2002	694	720	1,414	1,365	2,779
Total	2,422	2,399	4,821	4,088	8,909
1997	22%	18%	40%	60%	100%
1998	31%	27%	58%	42%	100%
1999	37%	33%	70%	30%	100%
2000	31%	31%	62%	38%	100%
2001	25%	27%	52%	48%	100%
2002	25%	26%	51%	49%	100%
Total	27%	27%	54%	46%	100%

During the period 2000 to 2002, the EKATI™ Mine was operating at full production and the Diavik Mine was under construction. Generally, northerners fill a lower percentage of construction jobs than operating jobs[15] and the percentage of northern employment fell to 62% in 2000, 52% in 2001 and 51% in 2002. It is expected that in 2003 that northern employment will once again exceed 70% and that Aboriginal employment will reach 30–35%.

In total, over the period 1997-2002 diamond mining generated 4,821 person-years of employment for Northern residents, which represented 54% of the total diamond mine employment. Aboriginal northerners accounted for 2,422 person-years or 27% of total employment (about 50% of the total employment in the north).

INDIRECT AND INDUCED CONTRIBUTION

In addition to the direct contribution, diamond mines generate "spin-off" employment and business opportunities as a result of expenditure on goods and services to re-supply the mines. These expenditures produce GDP (value added) and employment opportunities for the north. Impacts on Southern Canada have not been

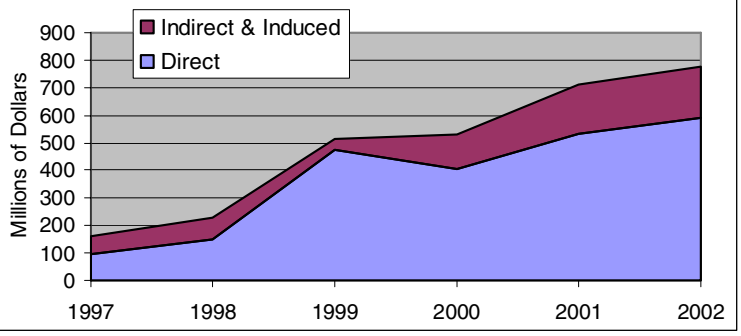
[15] This is because construction generally requires a higher proportion of skilled trade positions required for only short periods than does operations and there are very few unemployed trades people in the north.

included but they are significant because, while most of the goods and services are purchased in the NWT, most of the production takes place in Southern Canada.

Chart 17 shows that it is estimated that the diamond mine operation and construction contributed $2.3 billion in direct GDP and another $0.7 billion in indirect and induced GDP in the NWT over the period 1996-2002.

Diamond mining and mine construction have been making a growing contribution to the NWT economy. Total GDP related to diamond mining has risen from $161 million in 1996 to $776 million in 2002. It is expected that in 2003 when the Diavik mine production is added it will boost diamond mining's total contribution to NWT GDP to well over $1 billion.

Chart 17: Total Impact of Diamond Mining on NWT GDP at Basic Prices



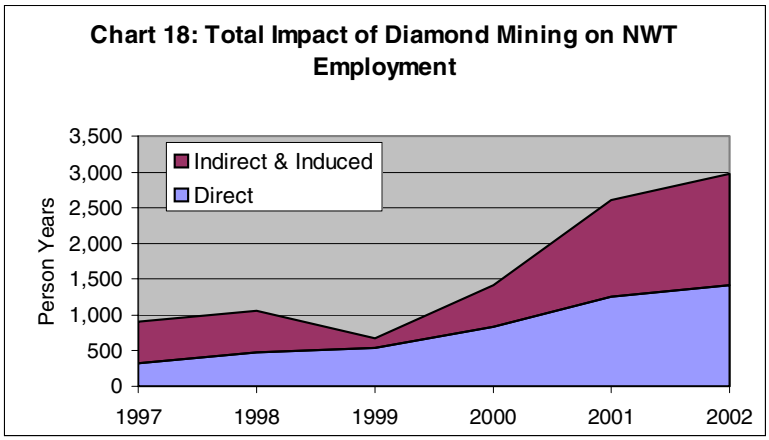
Diamond Industry Contribution to NWT GDP at Basic Prices ($Millions)

	Direct	Indirect &Induced	Total
1997	98	63	161
1998	151	76	227
1999	474	39	513
2000	405	122	528
2001	534	175	709
2002	591	185	776
Total	2,254	660	2,914

Diamond mines have also generated large indirect and induced employment impacts in the NWT. Chart 18 shows that it is estimated that the mines have contributed 9.6 thousand person-years of employment in the NWT over the period 1997-2002. On average, over the period 1997 to 2002 the diamond industry contributed an average of 1,607 person-years of employment annually.

Total NWT diamond mine related employment rose in 1998 and dropped in 1999 as the construction of EKATI™ was completed. Total employment rose again in 2000 with the start of construction of the Diavik Mine. In 2002 it is estimated that diamond mine operation and construction contributed a total of 2,975 person-years of employment in the NWT. This represented approximately 15% of total employment in the NWT which means that more than one out of every seven NWT residents[16] was working as a result of the diamond mining industry.

[16] Over the period 1997 to 2002 the number of employed persons in the NWT averaged close to 20,000.



Diamond Industry Contribution to NWT Employment (Person-Years)

	Direct	Indirect & Induced	Total
1997	323	587	910
1998	473	585	1,058
1999	536	139	675
2000	827	586	1,413
2001	1,248	1,361	2,609
2002	1,414	1,560	2,975
Total	4,821	4,819	9,640
Average	804	803	1,607

IMPACTS OF SORTING FOR ROYALTY VALUATION

The Canada Mining Regulations require that all rough diamonds be valued by the Government Diamond Valuator prior to sale or export, and in addition so that the federal government can be confident that the sale price as reported by the company is reasonable. The government of Canada policy is that all diamonds are to be valued in the NWT for this purpose.

Sorting for government valuation is a highly skilled occupation and offers only a handful of employment opportunities. The Government Diamond Valuator employs two Northern Aboriginals who join a team of an additional 3 to 4 expert rough diamond sorters who undertake the valuation of the two producing company's diamonds 10 times a year for a period of five days each time.

Both BHP Billiton and Diavik have facilities in Yellowknife to undertake this initial sort. In the case of Diavik, the sort is also required to split the rough into shares for the two partners (Rio Tinto and Aber Diamond Corporation). In the case of both mines, after this initial sort is completed the rough is transported out of the NWT for the final sort for marketing purposes.

Currently the Diavik facility has about 10 employees while the BHP Billiton facility employs 13. When the Snap Lake Mine opens employment should reach about 35. This activity has an important but small impact on the NWT economy.

The GNWT has stated that the establishment of secondary diamond industry is a high government priority and has introduced a number of substantial governmental incentives, both in the form of grants for the purposes of training and acquisition of equipment, and loan guarantees to facilitate purchase of the raw material[17].

PRODUCER SUPPORT TO LOCAL INDUSTRY

BHP Billiton, after negotiations with the GNWT, agreed to supply rough diamonds to qualified diamond manufacturers in the Northwest Territories. In total BHP Billiton agreed to allocate 2,500 carats per factory (three factories); which can represent up to ten percent of the value of the Ekati Mine output. The rough is sold at market prices and there is no difference between the price for rough diamonds in Antwerp or in Yellowknife. The factories in Yellowknife do have an advantage: the quality and size of the rough diamonds is constant, predetermined and there is no competition for supply compared to the open market in Antwerp. Also contrary to normal diamond marketing practice, they are not forced to buy the entire allotment; they can buy only what they need. Without this agreement the factories would be forced to buy rough diamonds much further down the pipeline and incur higher costs due to dealer mark-ups and other marketing costs.

Diavik Diamond Mines Inc. signed an agreement with the GNWT in 1999 to supply diamonds to the local NWT cutting and polishing industry. Diavik rough diamonds began flowing to NWT plants in July of 2003. The terms have not been made public but it is likely that they are similar to the BHP Billiton agreement.

Currently, the GNWT is attempting to finalize a Socio-Economic Agreement with De Beers that covers the Snap Lake Project. The GNWT is seeking guarantees that De Beers will supply the local NWT cutting and polishing industry with rough from the Snap Lake mine.

THE LOCAL CUTTING AND POLISHING INDUSTRY

At the end of 2002 there were three local cutting and polishing operations in the NWT[18]. All three were staffed almost entirely with skilled foreign workers.

[17] The GNWT makes training funds (subject to budget restrictions) available for any company coming into the Northwest Territories. The GNWT does offer loan guarantees to the diamond industry that are not normally made available to other industries.

[18] In 2003 Laurelton Diamonds, a wholly-owned subsidiary of Tiffany and Co. opened a 12,000 sq. ft. cutting and polishing facility that can accommodate about 75 workers. It is not part of this study because the study covers 1991 to 2002.

Sirius Diamonds NWT Ltd,

Sirius Diamonds was the NWT's first cutting and polishing operation began production in June of 1999 at its location at the Yellowknife airport. The investment in plant and equipment cost was about $2.0 million. The facility employs about 25 cutters and another 5 people in administration and management. Currently about five of these employees are Aboriginal. Sirius processes mid-grade to higher quality stones and markets its output primarily in Canada and the United States under the Polar Bear brand.

Deton' Cho Diamonds

Deton'Cho Diamonds Inc. (DDI) was formed in 2000 and is located in N'dilo (an Aboriginal community adjacent to Yellowknife). The plant encountered organizational and financial difficulties and in the fall of 2002 closed, laying off approximately 35 workers.

The plant reopened in June of 2003 under the name "Canada Dene Diamonds" and is now owned by Deton'Cho Corporation, in partnership with Schachter & Namdar Polishing Works. The plant currently employs about 15 workers who are all foreign nationals.

Arslanian Cutting Works (NWT) Ltd.

The NWT factory is jointly owned by the Arslanian family and Rosy Blue. Arslanian Cutting Works is a family-owned and operated business with major operations in Armenia and offices over the world. Headquartered in Antwerp, Belgium, Rosy Blue is one of the largest diamond manufacturing companies in the world.

The Arslanian Cutting Works (NWT) factory began production in 2000 and is located at the Yellowknife airport. Arslanian produces triple A EKATI^{TM} cut diamonds (a high end product) and markets them in Canada. Currently there are about 45 persons employed at the factory and almost all are skilled foreign nationals that were brought in to work.

In December of 2003, Rosy Blue announced its intention to sell its interest in the plant, citing the challenges in operating a factory in such a remote location.[19]

ESTIMATED ECONOMIC IMPACT THE NWT CUTTING AND POLISHING INDUSTRY

Chart 19 presents the estimated value of manufacturing shipments for the cutting and polishing (diamond) industry and other manufacturing in the NWT from 1992 to 2002.

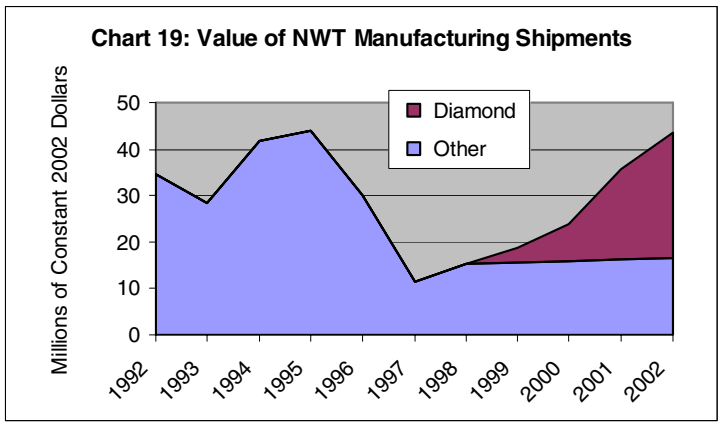
The large decline in the value of manufacturing shipments from 1995 to 1997 was the result of the closure of the oil refinery in Norman Wells. Manufacturing shipments

[19] From an article in Rapaport News Weekly, January 14, 2004

rose with the opening of the Sirius Diamonds facility in 1999 and continued to grow as the other two diamond cutting facilities came on stream in 2000.

It is estimated (Ellis Consulting Services estimate) that the value of shipments from the NWT cutting and polishing industry rose from $3.2 million in 1999 to $27.0 million in 2002.

The value of shipments shows the gross contribution to the economy while GDP or value-added gives its net impact.

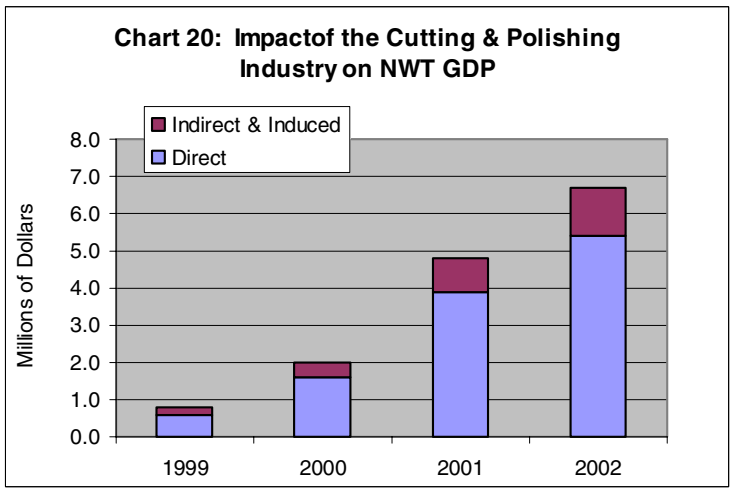


Value of NWT Manufacturing Shipments ($Millions)

	Other	Diamond	Total
1992	35	0	35
1993	28	0	28
1994	42	0	42
1995	44	0	44
1996	30	0	30
1997	12	0	12
1998	15	0	15
1999	16	3	19
2000	16	8	24
2001	16	20	36
2002	17	27	44

Chart 20 gives the estimated contribution of the cutting and polishing industry to GDP at basic prices in NWT.

It is estimated that over the period 1999 to 2002, the cutting and polishing industry directly contributed $11.6 million in GDP and a total of $14.3 million when indirect and induced impacts are included.



Total Impact on NWT GDP at Basic Prices from the Cutting & Polishing Industry ($Million)

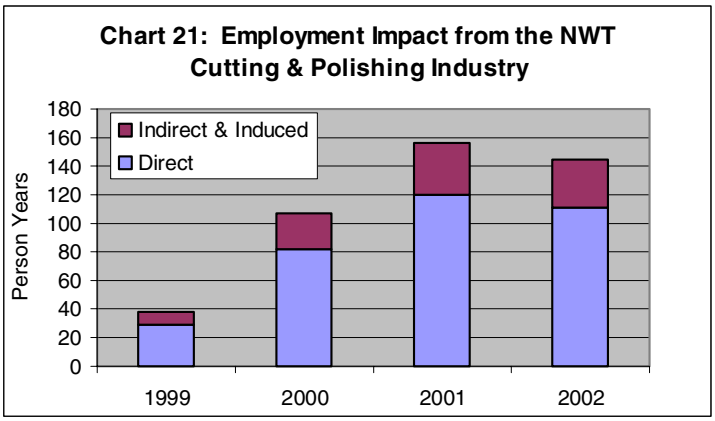
	Direct	Indirect & Induced	Total
1999	0.6	0.2	0.8
2000	1.6	0.4	2.0
2001	3.9	0.9	4.8
2002	5.4	1.3	6.7
Total	11.6	2.7	14.3

In 2002 it is estimated that the cutting and polishing industry contributed $6.7 million to GDP in the NWT. This was comprised of $5.4 million in direct and another $1.3 million in indirect and induced impacts.

Chart 21 gives the estimated contribution of the cutting and polishing industry to employment in the NWT.

It is estimated that over the period 1999 to 2002, the cutting and polishing industry directly contributed 343 person-years of employment and contributed another 103 person-years when the indirect and induced impacts are included.

In 2002, it is estimated that the cutting and polishing industry contributed directly 111 person-years of employment and another 33 person-years in indirect and induced impacts.



Total Impact on NWT Employment from the Cutting & Polishing Industry (Person-years)

	Direct	Indirect & Induced	Total
1999	29	9	38
2000	82	25	107
2001	120	36	156
2002	111	33	145
Total	343	103	445

SUMMARY OF THE ESTIMATED ECONOMIC IMPACT
THE NWT DIAMOND INDUSTRY BY ACTIVITY

Table 8 presents a summary of the estimated economic impact of the diamond industry on GDP in the NWT from 1991 to 2002.

Over the period 1991 to 2002 diamond mining contributed $2.9 billion or 83.8% of the total impact on NWT GDP. Exploration activities contributed another $549.4 million or 15.8% of the total GDP impact while manufacturing (cutting and polishing) generated $14.3 million or 0.4% of the total impact.

In 2002 the mining industry generated 95.2% of total GDP impacts while exploration and manufacturing contributed 4.0% and 0.8% respectively.

Table 9 presents a summary of the economic impact of the diamond industry on employment in the NWT from 1991 to 2002.

Over the period 1991 to 2002, diamond mining generated 9,640 person-years of employment, or 74% of the total impact on NWT employment. Exploration activities contributed another 2,983 person-years, or 23% of the total employment impact, while manufacturing generated 446 person-years, or 3% of the total impact.

Table 8: Diamond Industry Contribution to the NWT GDP by Activity

	Exploration		Mining		Manufacturing		Total	
	$Millions	Percent	$Millions	Percent	$Millions	Percent	$Millions	Percent
1991	14.1	100.0%	0.0	0.0%	0.0	0.0%	14.1	100.0%
1992	19.1	100.0%	0.0	0.0%	0.0	0.0%	19.1	100.0%
1993	45.0	100.0%	0.0	0.0%	0.0	0.0%	45.0	100.0%
1994	66.9	100.0%	0.0	0.0%	0.0	0.0%	66.9	100.0%
1995	77.0	100.0%	0.0	0.0%	0.0	0.0%	77.0	100.0%
1996	87.0	100.0%	0.0	0.0%	0.0	0.0%	87.0	100.0%
1997	67.4	29.5%	161.0	70.5%	0.0	0.0%	228.4	100.0%
1998	51.3	18.4%	227.0	81.6%	0.0	0.0%	278.3	100.0%
1999	27.3	5.0%	513.0	94.8%	0.8	0.1%	541.1	100.0%
2000	23.0	4.2%	528.0	95.5%	2.0	0.4%	553.0	100.0%
2001	38.7	5.1%	709.0	94.2%	4.8	0.6%	752.5	100.0%
2002	32.5	4.0%	776.0	95.2%	6.7	0.8%	815.2	100.0%
Total	549.4	15.8%	2,914.0	83.8%	14.3	0.4%	3,477.6	100.0%

Over the period 1991 to 2002, diamond mining generated 9,640 person-years of employment, or 74% of the total impact on NWT employment. Exploration activities contributed another 2,983 person-years, or 23% of the total employment impact, while manufacturing generated 446 person-years, or 3% of the total impact.

In 2002, the mining industry generated 90% of total employment impacts while exploration and manufacturing contributed 5% and 4% respectively.

Table 9: Diamond Industry Contribution to Employment GDP by Activity

	Exploration		Mining		Manufacturing		Total	
	PY's	Percent	PY's	Percent	PY's	Percent	PY's	Percent
1991	77	100%	0	0%	0	0%	77	100%
1992	104	100%	0	0%	0	0%	104	100%
1993	245	100%	0	0%	0	0%	245	100%
1994	363	100%	0	0%	0	0%	363	100%
1995	418	100%	0	0%	0	0%	418	100%
1996	472	100%	0	0%	0	0%	472	100%
1997	366	29%	910	71%	0	0%	1,276	100%
1998	279	21%	1,058	79%	0	0%	1,337	100%
1999	148	17%	675	78%	38	4%	861	100%
2000	125	8%	1,413	86%	107	7%	1,645	100%
2001	210	7%	2,609	88%	156	5%	2,975	100%
2002	177	5%	2,975	90%	145	4%	3,297	100%
Total	2,983	23%	9,640	74%	446	3%	13,070	100%

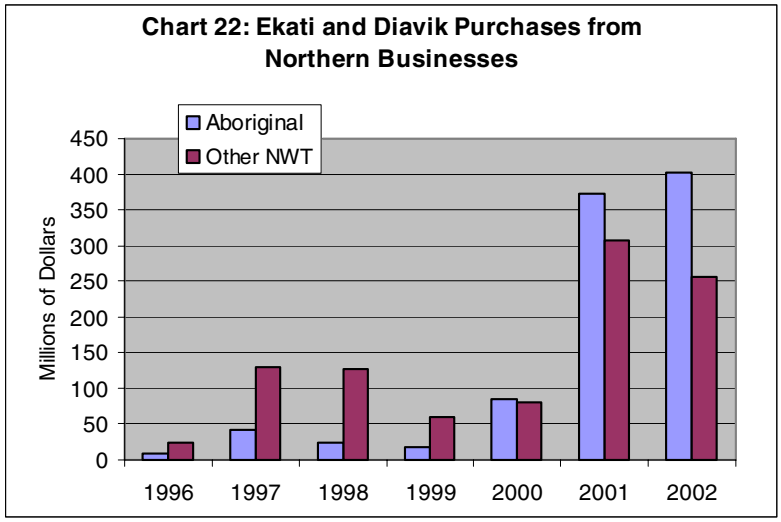
BHP-Billiton entered into individual "Impact and Benefit Agreements" with the Dogrib Treaty 11 Council (Rae-Edzo, Wha Ti, Rae Lakes and Wekweti), Akaitcho Treaty 8 (Dettah, N'dilo, Lutsel K'e and Fort Resolution), the North Slave Metis Alliance and the Inuit of Kugluktuk.

Diavik Diamond Mines Inc. signed "Participation Agreements" with the Dogrib Treaty 11 Council, the Yellowknives Dene First Nation (Dettah and N'dilo), the Lutsel K'e Dene Band, the Kitikmeot Inuit Association (Kugluktuk), and the North Slave Métis Association.

These are confidential agreements that contain provisions for annual financial payments, employment and business opportunities, as well as training initiatives and scholarships. In addition, both BHP Billiton and Diavik have entered into Socio-Economic Agreements with the GNWT and in the case of Diavik, with other directly impacted Aboriginal partners (Dogrib, Lutsel K'e, North Slave Métis, Yellowknives Dene and KIA) as well.

All seven NWT communities and Kugluktuk provide employment services to the diamond mines and all have established business enterprises that provide goods and services to the mines, both for construction and operation.

Chart 22 and Table 10 shows the extent of diamond mine purchases from both Aboriginal and other northern businesses.



Over the period 1996 to 2002, the two diamond mines spent $3.4 billion on goods and services. Of this total, $1.9 billion or 57% has been from northern businesses and 28%, or just under $1.0 billion, has been from Aboriginal businesses in the north.

As capacity has been developed, Aboriginal businesses have more than doubled their share of total expenditures.

In 1997 (the first full year of construction of the EKATI™ mine), purchases from Aboriginal businesses amount to $41.2 million, or 12% of total expenditures. By 2002 diamond mine purchases from Aboriginal businesses reached $953 million and represented 42% of all expenditures.

Table 10: Purchases of Goods and Services by Ekati and the Diavik Mines

	Aboriginal	Other NWT	Subtotal NWT	South	Total
			(Millions of Dollars)		
1996	8.8	23.8	32.6	17.6	50.2
1997	41.2	130.3	171.5	159.6	331.1
1998	24.1	126.3	150.4	207.2	357.6
1999	18.5	60.2	78.7	277.4	356.1
2000	85.3	80.8	166.0	264.4	430.4
2001	372.4	306.7	679.1	229.4	908.5
2002	402.6	257.0	659.6	303.4	963.0
Total	952.8	985.2	1,938.0	1,459.0	3,396.9
			(Percent of Total)		
1996	18%	47%	65%	35%	100%
1997	12%	39%	52%	48%	100%
1998	7%	35%	42%	58%	100%
1999	5%	17%	22%	78%	100%
2000	20%	19%	39%	61%	100%
2001	41%	34%	75%	25%	100%
2002	42%	27%	68%	32%	100%
Total	28%	29%	57%	43%	100%

The development of business capacity has created employment opportunities in Aboriginal enterprises and currently they directly employ hundreds of band and other First Nation members.

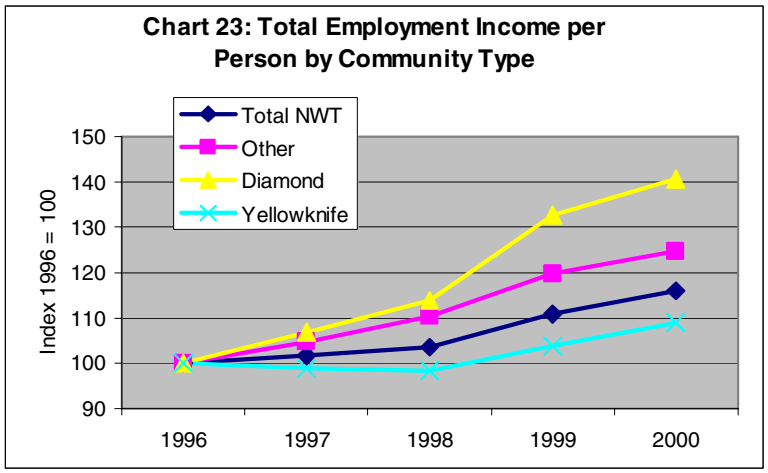
Employment in Aboriginal businesses, along with direct employment at the diamond mines, has not only lead to a reduction in social assistance payments (see Chart 10 on page 15) but has also lead to more employment income in Aboriginal communities.

Chart 23 and Table 11 show the impact on employment income per person[20] in the NWT over the period 1996 to 2002 for four different categories of communities. The first is the "diamond" impacted communities which includes Rae Lakes (Gameti),

[20] Employment Income per Person is estimated by dividing total employment income (from income tax records) by the population estimate for each community. The source for employment income is Statistics Canada income tax records (as reported in the 2002 "Communities and Diamonds" Report prepared by the GNWT) and the source for the population estimates is Ellis Consulting Services. The index is calculated by dividing all annual values by the 1996 value and multiplying by 100.

Wekweti (Snare Lake), Wha Ti, Rae-Edzo, Detah, N'dilo, and Lutsel K'e. The second category is "Yellowknife" which is the territorial capital and the third "Other" represents all other communities in the NWT. Lastly the fourth "Total NWT" represents the NWT average.

Over the period of 1996 to 2002, employment income per person in the communities directly impacted by the diamond mining industry rose from $7,088 to $9,968. This represented an increase in the index from 100 to 141. Over the same period, employment income per person rose to 109 in Yellowknife, 125 in other communities and the NWT average rose to 116.



The largest increase in the diamond impacted communities occurred from 1998 to 2000, which corresponds to the period of diamond mine construction and operation and with it the growth in Aboriginal businesses.

Table 11: Total Employment Income per Person by Community Type

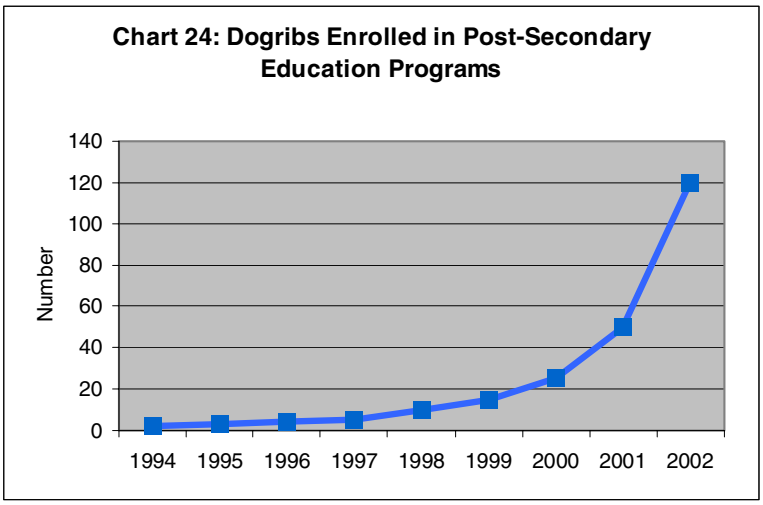
	NWT	Other	Diamond	Yellowknife
		(Dollars)		
1996	17,070	12,528	7,088	23,812
1997	17,355	13,137	7,575	23,533
1998	17,694	13,821	8,066	23,443
1999	18,941	15,018	9,402	24,707
2000	19,820	15,607	9,968	25,928
		(Index 1996=100)		
1996	100	100	100	100
1997	102	105	107	99
1998	104	110	114	98
1999	111	120	133	104
2000	116	125	141	109

In addition to more employment, rising employment income, and falling social assistance payments, the diamond communities have also had a tremendous growth in the number of people enrolled in post-secondary education programs. The growth in

school enrolment would of course not be possible without the work and support provided by the local educational community, but two other major factors have helped contribute to this success.

The first is that the diamond mining companies have provided funding for a large number of scholarships. The second is the result of the employment opportunities presented by the diamond mines and Aboriginal businesses enterprises. Quite simply, people are more likely to seek education in an environment where real opportunities exist to achieve employment.

Chart 24 gives the number of Dogribs[21] enrolled in post-secondary programs since1994. There were only two students in 1994 and by 1998 there were ten. Starting in 1999, the number rose dramatically and reached 120 by the end of 2002. The major rise in the number of students from 1998 to 2002 coincides with the beginning of operation of the EKATI™ Diamond Mine and the construction of the Diavik Mine.



	Number
1994	2
1995	3
1996	4
1997	5
1998	10
1999	15
2000	25
2001	50
2002	120

In summary, in general the Aboriginal communities impacted by the diamond industry have been building business capacity and have had rising revenues, lower unemployment, and with it, rising employment income and a dramatic rise in the number of students in post-secondary educational institutions.

[21] This does not include the members of Lutsel K'e Dene Band, North Slave Métis Alliance or the Kitikmeot Inuit Association. The source is the Dogrib Rae Band but in some cases Ellis Consulting Services estimates have been used.

THE RAE BAND GROWTH IN BUSINESS CAPACITY

Another method of assessing the impact of the diamond mining industry on Aboriginal communities can be seen by examining the growth of the business activities and employment of the individual parties to the Impact and Benefit and Participation agreements. The Yellowknife Dene First Nation (N'dilo and Detah), the Kitikmeot Inuit Association (Nunavut) and the Dogrib Treaty 11 Council have been very successful growing businesses related to the diamond industry. A particularly good example is the success of the Rae Band, the largest of the four Dogrib Treaty 11 communities.

THE RAE BAND BUSINESS DEVELOPMENT

Since 1994, the Dogrib Rae Band has been actively building a business base that has enabled it to take advantage of many of the opportunities flowing from resource development on its traditional lands. Key to the creation of this business base was the establishment of joint ventures with established companies operating in specific industry sectors. The Rae band has established the following companies that have been specifically targeting the diamond mining and other resource based industries.

Tli Cho Landtran Transport Ltd.

Tli Cho Landtran Transport Ltd. was established in 1999 and is 51% owned by the Dogrib Rae Band and 49% by Landtran Systems (previously known as Byers Transport, which is based in Edmonton). It is primarily a general freight operator and its operations include the trucking re-supply of bulk fuel to the mining sector. Tli Cho Landtran specializes in moving project cargo and bulk materials over seasonal ice roads to the diamond mines.

Tli Cho Logistics Ltd.

Tli Cho Logistics Ltd. was established in 1999 and is 51% owned by the Dogrib Rae Band and 49% by Atco Frontec. It supplies services to the mining sector including facility management, operational contracts, airport operations, bulk fuel supply and small airport operation and management.

Tli Cho Explosives Ltd.

Tli Cho Explosives Ltd. is 51% owned by the Dogrib Rae Band, and 49% by Bulk Explosives. It supplies explosive management systems, products and related services.

Rae Band Construction

Rae Band Construction is 100% owned by Dogrib Rae Band. It began by building residential housing units in Rae during the summer construction season but has now moved to serve resource industry construction projects and, among other activities, is currently providing construction services to the Diavik Mine.

North Slave Region Employment Solutions (NSR)

North Slave Region Employment Solutions (NSR) is 100% owned by Dogrib Rae Band and provides recruitment, screening and placement services, individual career planning, translation services, education upgrading, income support services, apprentice development, training program delivery and counselling services aimed at resource companies.

The revenue growth of the Rae Band resource related businesses has been substantial. Chart 25 presents the growth in these revenues from 1999 to 2002.

In 1999 the Rae Band had just over $2 million in revenues. The growth in revenues from 2000 to 2002 has been steady and significant. Revenues rose to over $10 million in 2000, to just under $20 million in 2001 and reached almost $30 million by 2002.

The growth in business revenues and employment has been accompanied by an increase in the number of jobs and with it a rise in employment income received by the Dogrib in Rae-Edzo. In 2002, Rae Band businesses employed close to 200 band members.

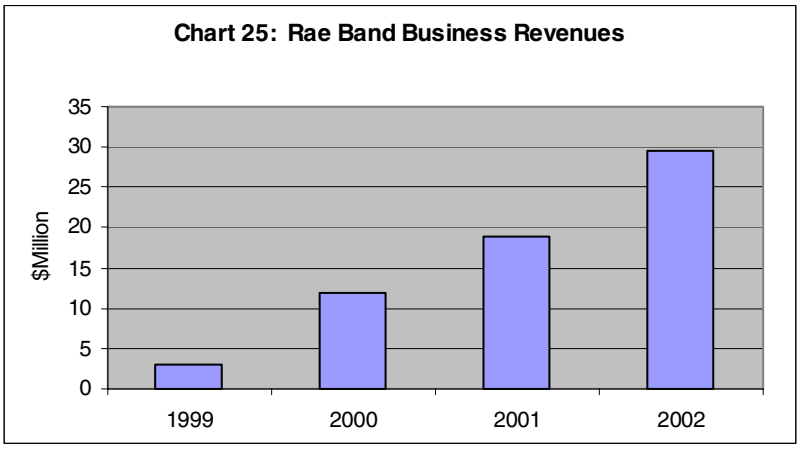
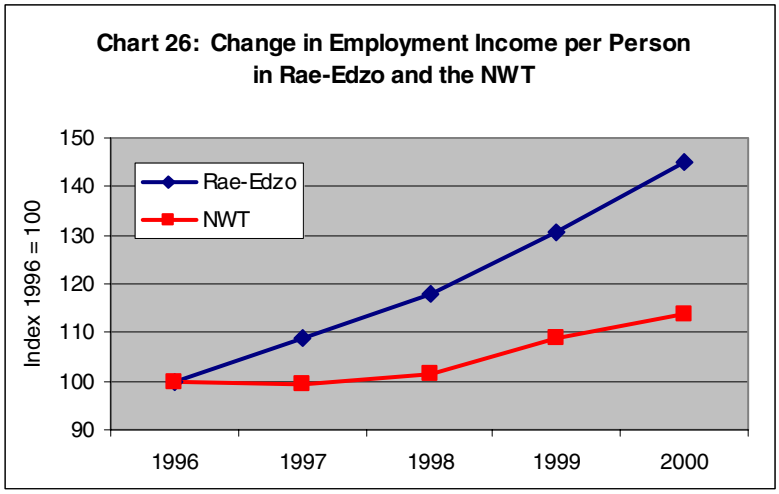


Chart 26 shows the impact of job growth on employment income in Rae-Edzo.

In 1996 before the full impact of the diamond mining industry and Rae Band business development, employment income per person in Rae-Edzo was $7,353 while the average for the NWT was $17,349. By 2002, with the impact of diamond mining industry, average employment per person had risen 45% (index 145) to $10,666 while in contrast the average in the NWT rose only 14% to $19,743.



Total Employment Income per Person

	Rae-Edzo	NWT
	($000's)	
1996	7,353	17,349
1997	8,005	17,288
1998	8,662	17,625
1999	9,620	18,867
2000	10,666	19,743
	(Index 1996=100)	
1996	100	100
1997	109	100
1998	118	102
1999	131	109
2000	145	114

The rapid rise in income demonstrates the positive impact of both the direct employment in diamond mining and in band owned businesses that served the diamond and other mining industries.

The Rae Band is an excellent example of an Aboriginal community that is actively working to take advantage of the opportunities presented by the diamond industry and, based on the indicators, is having a great deal of success.