



ELLIS CONSULTING SERVICES

THE DIAVIK DIAMONDS PROJECT

THE DISTRIBUTION OF THE PROJECT RESOURCE INCOME



DIAVIK
DIAMOND MINES INC.

JANUARY 2000

Table of Contents

INTRODUCTION	1
HIGHLIGHTS	2
PROJECT RESERVES, MINE PLAN AND VALUE OF PRODUCTION	3
PROJECT RESERVES AND MINE PLAN	3
<i>Reserves</i>	3
<i>Mine plan</i>	3
VALUE OF RESOURCE INCOME	4
CAPITAL INVESTMENT AND CLOSURE COSTS	5
CAPITAL COSTS	5
CLOSURE COSTS	7
MINE OPERATING COSTS	7
RESOURCE PROFITS.....	9
GOVERNMENT TAXES AND ROYALTIES	10
DISTRIBUTION OF RESOURCE INCOME BY SECTOR	11
DISTRIBUTION OF RESOURCE INCOME BY SECTOR WITH THE IMPACT OF DIAVIK CORPORATE TAXES AND ROYALTIES	11
DISTRIBUTION OF RESOURCE INCOME BY SECTOR WITH THE IMPACT OF TAXES ON DIRECT PRODUCTION	12
THE IMPACT OF DISCOUNTING ON THE DISTRIBUTION OF RESOURCE INCOME	13
IMPACT OF DISCOUNTING ON PROJECT RESOURCE INCOME WITH DIRECT TAXES	15
IMPACT OF DISCOUNTING ON PROJECT RESOURCE INCOME WITH DIRECT AND SECONDARY TAXES	16
APPENDIX ONE	17
NET IMPACT OF THE DIAVIK PROJECT ON GNWT REVENUES	17
APPENDIX TWO	18
DATA SOURCES	18
THE AUTHOR	20

THE DIAVIK DIAMONDS PROJECT

THE DISTRIBUTION OF THE PROJECT RESOURCE INCOME

INTRODUCTION

The Diavik Diamonds Project is located on East Island at Lac de Gras, 300 kilometres northeast of Yellowknife in the Northwest Territories of Canada and is jointly owned by Diavik Diamond Mines Inc. (60%) and Aber Resources Ltd. (40%). The Project, if it receives final regulatory approval, would be Canada's second diamond mine.¹

It is clear to most observers that the Project would have the potential to provide significant benefits to the investors from profits generated from the mine. It is not so obvious that the mine would also provide benefits to other sectors of the economy including substantial tax revenues to the government sector.

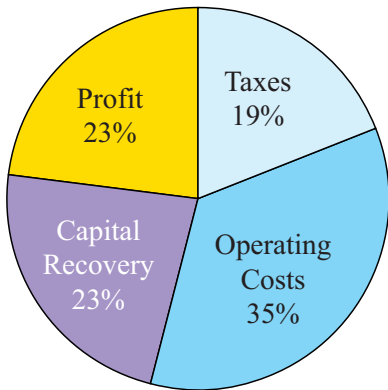
The purpose of this paper is to develop a profile of the proposed Diavik Project and provide an estimate of the total value of resource income generated by the mine and indicate how it will be distributed among the various sectors that will benefit from the project.

All of the information used in this analysis has been gathered from data in the public domain and the methodology and models used are those developed by Ellis Consulting Services (ECS). All amounts in this document relate to 100% of the project. Any errors are the sole responsibility of ECS and any questions regarding this paper should be directed to Roy Ellis at (867) 920-7318 or ellis@internorth.com.

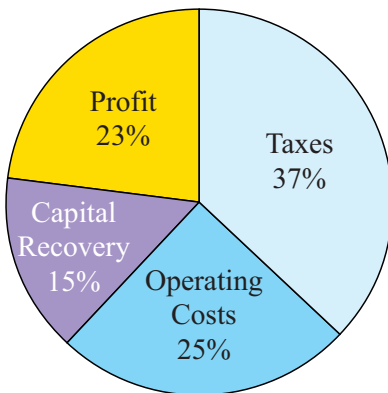
¹ the first was the BHP Ekati Diamond Mine located 35 km northwest of the Diavik Project

HIGHLIGHTS

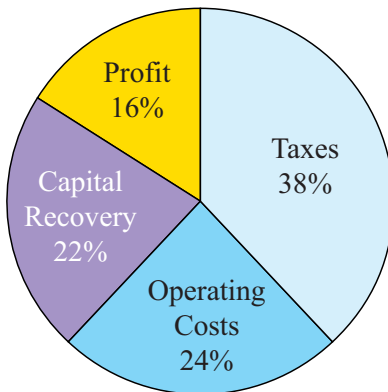
Distribution of Resource Income with Direct Taxes



Distribution of Resource Income with Direct and Secondary Taxes



Distribution of Resource Income with Direct and Secondary Taxes and Discounted at 8%



Reserves

The Diavik Project has an estimated reserve of 25.6 million tonnes of kimberlite rock containing 101.5 million carats.

Capital and Operating Costs

The total life of mine capital costs, including construction, are estimated at \$2.0 billion (1998 constant dollars). Production would take place over 20 years and begin in 2003. Mine operating costs are estimated at \$2.7 billion over the mine life and average \$105 per tonne.

Resource Income

The 101.5 million carats have an estimated value of \$83 per carat which yields a total value of \$8.5 billion (1998 constant dollars). After deducting operating costs, private royalties and closure costs of \$2.9 billion and depreciation of \$2.0 billion, the project would have \$3.6 billion in resource profits.

Distribution of Resource Income with Direct Diavik Corporate Taxes and Royalties

Operating costs would consume \$2.9 billion (35%) of resource income. Governments would receive \$1.6 billion (19%) in taxes. Diavik would recover its capital costs of \$2.0 billion (23%) and earn profits of \$1.9 billion (23%).

Distribution of Resource Income with the Impact of Direct and Secondary Taxes

Operating cost would account for \$2.2 billion (25%) of resource income. Diavik would recover capital costs of \$1.2 billion (15%) and earn profits of \$1.9 billion (23%). Governments would receive \$3.2 billion (37%) in taxes. In addition, if taxes paid to local governments and taxes on the distribution of Diavik's profit are included, the government's share is estimated to rise an additional \$300 to \$500 million to represent 41% to 44% of resource income. Governments would also receive further tax benefits from the indirect and induced impacts of the mine. If these impacts are included it is estimated that government tax revenues would be in excess of \$3.5 billion.

Distribution of Resource Income with the Impact of Direct and Secondary Taxes Discounted at 8%

Operating cost would account for \$816 million (24%) of the discounted value of resource income of \$3.5 billion. Governments would receive \$1.3 billion (38%) in taxes. Diavik would receive \$770 million (22%) for the recovery of capital costs and earn profits of \$555 million (16%).

PROJECT RESERVES, MINE PLAN AND VALUE OF PRODUCTION

PROJECT RESERVES AND MINE PLAN

RESERVES

Reserves are an estimate of the portion of the resource base that can be economically extracted based on a specific mine plan.

Four kimberlite pipes, A-418, A-154 South, A-154 North and A-21 comprise the Diavik reserves. These pipes contain 25.6 million tonnes of kimberlite rock. They have an average grade of 3.9 carats per tonne and contain an estimated 101.5 million carats. Table 1 below gives the estimates for each pipe based on the mining plan used in this analysis.

Table 1: Estimated Reserves						
Pipe		A-418	A-154S	A-154N	A-21	Total
Open Pit	Tonnes (million)	4.2	9.3	2.7	3.7	19.9
	Grade ct/t	3.79	4.69	2.89	2.89	3.92
	Carats (million)	16.0	43.6	7.8	10.8	78.2
Underground	Tonnes (million)	4.1	1.5	0.0	0.0	5.7
	Grade ct/t	3.97	4.55	0	0	4.12
	Carats (million)	16.4	7.0	0.0	0.0	23.3
Total Reserve	Tonnes (million)	8.3	10.8	2.7	3.7	25.6
	Grade ct/t	3.88	4.67	2.89	2.89	3.96
	Carats (million)	32.4	50.6	7.8	10.8	101.5
Valuation	Value US\$/ct	\$53	\$59	\$33	\$36	\$53
	Value \$US Million	\$1,715	\$2,984	\$256	\$389	\$5,344

A-154S, which has an average grade of 4.67 carats/tonne, a reserve of 10.8 million tonnes of kimberlite rock and 50.6 million carats, is the largest pipe. The second largest pipe is A-418, which has as an average grade of 3.88 carats/tonne, 8.3 million tonnes of kimberlite and 32.4 million carats. A-154N and A-21 both are relatively smaller pipes containing reserves of 7.8 and 10.8 million carats respectively.

MINE PLAN

Table 2 gives the estimated quantity and value of annual mine resource income or production of kimberlite based on a maximum of 1.5 million tonnes per year and the resources given in Table 1.

Diavik's kimberlite pipes are located adjacent to East Island in shallow water under Lac de Gras. The pipes would be open-pit mined after the construction of temporary water retaining dikes. Underground mining would begin later in the mine life.

All pipes would be subject to initial open pit mining starting with A-154S and A-154N in 2003 and ending in 2012. Open pit mining in A-418 is expected to begin in 2010 and end by 2015 followed by A-21 from 2013 to 2017. Underground mining would begin in A-154 and A-418 in 2016 and end in A-154 in 2020 and in A-418 when the mine closes in 2022.

Year	A-154		A-418		A-21		Total	
	Tonnes	Carats	Tonnes	Carats	Tonnes	Carats	Tonnes	Carats
2003	0.5	2.2					0.5	2.2
2004	1.1	4.5					1.1	4.5
2005	1.5	6.4					1.5	6.4
2006	1.5	6.4					1.5	6.4
2007	1.5	6.4					1.5	6.4
2008	1.5	6.4					1.5	6.4
2009	1.5	6.4					1.5	6.4
2010	1.2	5.1	0.3	1.1			1.5	6.3
2011	1.0	4.3	0.5	1.9			1.5	6.2
2012	0.7	3.0	0.8	3.0			1.5	6.0
2013			1.1	4.2	0.4	1.2	1.5	5.3
2014			1.0	3.8	0.5	1.4	1.5	5.2
2015			0.5	2.0	1.0	2.8	1.5	4.8
2016	0.2	0.9	0.2	0.8	1.1	3.2	1.5	4.9
2017	0.2	0.9	0.3	1.3	0.8	2.2	1.3	4.4
2018	0.5	2.3	0.7	2.8			1.2	5.1
2019	0.4	1.8	0.8	3.2			1.2	5.0
2020	0.2	1.0	0.8	3.2			1.0	4.2
2021			0.7	2.8			0.7	2.8
2022			0.6	2.3			0.6	2.3
Total	13.5	58.3	8.3	32.4	3.7	10.8	25.6	101.5

VALUE OF RESOURCE INCOME

Mining production would begin in the last half of 2003 and continue for twenty years. After a ramp-up period of one and one-half years (2003 and 2004) the mine would reach full production and continue at that rate until underground mining begins. The mine would then begin to lower production until closure in 2022.

The mine would produce, on average, just over 5 million carats per year with maximum production reaching 6.4 million carats. Peak production would be achieved in the third year of operation and continue until 2010 when it would begin to slowly decline until closure in 2022. The value of production or resource income will peak at \$569 million per year.

The average value per carat in US\$ is estimated at \$55. If the current exchange rate of 0.67 is used it yields an average value of \$83 in CAN\$. The total value of the Diavik Diamonds Project is therefore estimated at \$8,456² million in CAN\$.

² All production values in this report are stated in constant 1988 Canada dollars except where stated

Table 3: Estimated Resource Income

Year	Tonnes (million)	Carats (million)	\$US/Carat	\$CAN/Carat	Resource Income (\$million CAN)
2003	0.5	2.2	59.00	88.50	199
2004	1.1	4.5	59.00	88.50	398
2005	1.5	6.4	59.00	88.50	569
2006	1.5	6.4	59.00	88.50	569
2007	1.5	6.4	59.00	88.50	569
2008	1.5	6.4	59.00	88.50	569
2009	1.5	6.4	59.00	88.50	569
2010	1.5	6.3	58.46	87.68	551
2011	1.5	6.2	58.08	87.12	539
2012	1.5	6.0	57.51	86.27	521
2013	1.5	5.3	52.10	78.14	416
2014	1.5	5.2	51.04	76.55	401
2015	1.5	4.8	45.52	68.28	329
2016	1.5	4.9	44.12	66.17	323
2017	1.3	4.4	46.81	70.21	312
2018	1.2	5.1	55.58	83.37	422
2019	1.2	5.0	55.66	83.49	417
2020	1.0	4.2	55.77	83.66	353
2021	0.7	2.8	56.00	84.00	233
2022	0.6	2.3	56.00	84.00	197
Total	25.6	101.5	55.54	83.31	8,456

CAPITAL INVESTMENT AND CLOSURE COSTS

CAPITAL COSTS

It is estimated that during the period 1991-1999, Diavik incurred cumulative costs of \$206 million for development expenditures relating to the project. These expenditures include exploration and development costs, the cost of feasibility studies and the public review process.

The Diavik Diamonds Feasibility Study estimated the cost of mine construction at \$1,280 million, which was an increase of \$405 million from the Pre-Feasibility level of \$875 million. It proposed that the mine would be constructed over a period of three and one-half years starting in 2000 and ending at the end of the first half of 2003.

The \$1,280 million capital cost included an estimate for inflation, design allowance and contingencies of \$163 million. In order to put the capital costs in 1998 constant dollars, the same basis as resource income, it is necessary to “remove” the estimate built into it for inflation. In order to do this it was assumed that the Feasibility Study used an inflation rate of 1.5% per year and an amount equal to this rate was removed from the cost estimate. The result was an estimate for mine capital cost of \$1,229 million in constant 1998 dollars.

The value of construction in 2000 would be limited as that is the year that project infrastructures would be put in place. It is estimated that most of the capital expenditures of the mine will be incurred during 2001 and 2002 when the dikes are constructed. Significant expenditures would also occur in 2003 but the dollar value would be lower as it is only a one-half year of construction.

In addition to the initial mine capital expenditures, there would also be costs of \$115 million for the construction of the A-418 dike and of \$148 million for the construction of the A-21 dike. There would also be \$45 million for underground capital costs.

There will also be an ongoing capital replacement program that has been estimated at \$15 million per year for the period 2006 to 2020. These expenditures would be made to replace capital assets, primarily mining equipment, which will have worn out.

Year	Development	Mine	Additions	Replacement	Total
1995-99	206	0	0	0	206
2000	0	123	0	0	123
2001	0	430	0	0	430
2002	0	430	0	0	430
2003	0	246	0	0	246
2004	0	0	0	0	0
2005	0	0	0	0	0
2006	0	0	58	15	73
2007	0	0	58	15	73
2008	0	0	0	15	15
2009	0	0	0	15	15
2010	0	0	74	15	89
2011	0	0	74	15	89
2012	0	0	0	15	15
2013	0	0	0	15	15
2014	0	0	0	15	15
2015	0	0	45	15	60
2016	0	0	0	15	15
2017	0	0	0	15	15
2018	0	0	0	15	15
2019	0	0	0	15	15
2020	0	0	0	15	15
2021	0	0	0	0	0
2022	0	0	0	0	0
Total	206	1,229	308	226	1,968

CLOSURE COSTS

Diavik will not only have to meet initial and ongoing capital costs but the company will be obligated to return the site back, as closely as feasible, to its initial state. This will involve significant closure costs. Table 5 provides an estimate of these costs.

It is estimated that Diavik will incur expenditures of \$64 million over two years for the dismantling and transportation, off the site, of the buildings and equipment.

In addition it is estimated that Diavik will spend \$3 million per year, for at least ten years, on monitoring the site to ensure compliance with environmental standards.

Year	Removal	Monitoring	Total
2023	32	0	32
2024	32	0	32
2025	0	3	3
2026	0	3	3
2027	0	3	3
2028	0	3	3
2029	0	3	3
2030	0	3	3
2031	0	3	3
2032	0	3	3
2033	0	3	3
2034	0	3	3
Total	64	30	94

MINE OPERATING COSTS

Mine operating costs are shown in Table 6. They include:

- 1) the cost of open-pit and underground mining operations,
- 2) an estimate for off-site costs, including an allowance for joint venture and Yellowknife headquarters costs and a diamond sorting facility in a northern community, and
- 3) an estimate for marketing and headquarters costs.

Mine operating costs for open pit operations are estimated at \$95 per tonne with higher costs being experienced during the ramp-up period in 2003 and 2004. Underground mining costs are estimated at \$127 per tonne with higher costs experienced during the first year of underground operation.

Operating costs are estimated to reach \$143 million at peak production for open pit operations and \$152 million per year for peak production for underground mining. In total, mine production costs are estimated to average \$105 per tonne for a total of \$2.7 billion for the twenty-year life of the mine.

Labour costs are estimated to be \$23 per tonne during full operation and higher during ramp-up and initial underground mining. Labour costs are estimated to peak at \$34 million per year and it is expected that \$605 million will be spent on labour during the life of the mine.

In addition to labour costs, the mine will make significant purchases of goods and services from businesses to provide inputs for mine production. During the years of peak open-pit production these expenses are estimated at \$108 million per year and they are expected to rise to \$125 million per year during peak underground production. In total, it is estimated that the mine will spend \$2.1 billion on purchased inputs over the life of the mine.

	Tonnes		Total Cost	Direct Labour	Other Inputs
Year	million	\$/Tonne	\$million	\$million	\$million
2003	0.53	143	75	20	55
2004	1.05	119	125	34	91
2005	1.50	95	143	34	108
2006	1.50	95	143	34	108
2007	1.50	95	143	34	108
2008	1.50	95	143	34	108
2009	1.50	95	143	34	108
2010	1.50	95	143	34	108
2011	1.50	95	143	34	108
2012	1.50	95	143	34	108
2013	1.50	95	143	34	108
2014	1.50	95	143	34	108
2015	1.50	95	143	34	108
2016	1.50	112	168	34	134
2017	1.30	108	140	30	111
2018	1.20	127	152	28	125
2019	1.20	127	152	28	125
2020	1.03	127	131	24	107
2021	0.70	127	89	16	73
2022	0.59	127	75	14	61
Total	25.60	105	2,675	605	2,070

RESOURCE PROFITS

The level of resource profits in Table 7 is computed by deducting operating costs and capital cost allowances from resource income. Resource profits provide the basis for taxation and royalty payments to government.

The following costs have been deducted from the resource income (as presented in Table 3) to estimate resource profits:

- 1) A private royalty of 2% that is applied to total revenue before expenses. This royalty is applicable to all Diavik core claims.
- 2) Total operating costs as given in Table 6.
- 3) A provision for the estimated costs of closure as given in Table 5.
- 4) An estimate for accelerated capital consumption allowances (ACCA). Revenue Canada, subject to certain rules, allows for an accelerated capital cost that can provide for a level of depreciation allowance of up to 100% of asset costs in any single year. Since it is to Diavik's advantage to delay paying taxes until all capital is recovered, it is assumed that the company will "write off" capital costs so that they will reduce the level of resource profits as close to zero as possible.

It is estimated that Diavik will not have positive resource profits until 2007 but that, on average, it will earn almost \$180 million per year over the life of the mine. In total, it is estimated that the Diavik Diamonds Project will earn \$3.6 billion in resource profits.

Year	Resource Income	Private Royalties	Operating Costs	Provision for Closure	ACCA	Resource Profits
2003	199	4	75	0	120	0
2004	398	8	125	0	266	0
2005	569	11	143	0	415	0
2006	569	11	143	0	415	0
2007	569	11	143	0	363	52
2008	569	11	143	0	15	400
2009	569	11	143	0	15	400
2010	551	11	143	0	89	308
2011	539	11	143	0	89	296
2012	521	10	143	0	15	353
2013	416	8	143	9	15	241
2014	401	8	143	9	15	226
2015	329	7	143	9	60	110
2016	323	6	168	9	15	124
2017	312	6	140	9	15	141
2018	422	8	152	9	15	236
2019	417	8	152	9	15	232
2020	353	7	131	9	15	191
2021	233	5	89	9	0	130
2022	197	4	75	9	0	108
Total	8,456	169	2,675	94	1,968	3,550

GOVERNMENT TAXES AND ROYALTIES

The Diavik Project will pay almost half of its resource profits to the federal and territorial governments in the form of direct corporate taxes and royalties.

It is estimated that the Diavik Diamonds Project will generate \$497 million in royalties over the project life.³ In addition it is estimated that the project will pay a \$775 million in federal corporate taxes and \$373 million in territorial corporate tax⁴. In total, Diavik will pay out \$1.6 billion (46%) of its total resource profits of \$3.6 billion in taxes.

Corporate taxes were estimated using the applicable tax rates and applying them to taxable income. Taxable income is calculated by subtracting the resource allowance from resource profits. The resource allowance is a corporate income tax provision that is given in lieu of the deductibility of provincial/territorial mining taxes. They permit the mining operation to deduct, as a resource allowance, 25% of resource profits.

**Table 8: Mine Operating Resource Profits, Corporate Taxes and Royalties
(Millions of 1998 Dollars)**

Year	Resource Profits	Resource Allowance	Taxable Income	Federal Corp. Tax	Territorial Corp. Tax	Federal Royalties	Total Taxes	Income After Tax
2003	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0
2007	52	13	39	11	5	7	24	28
2008	400	100	300	87	42	56	185	215
2009	400	100	300	87	42	56	185	215
2010	308	77	231	67	32	43	143	165
2011	296	74	222	65	31	41	137	159
2012	353	88	265	77	37	49	164	189
2013	241	60	181	53	25	34	112	129
2014	226	56	169	49	24	32	105	121
2015	110	28	83	24	12	15	51	59
2016	124	31	93	27	13	17	58	67
2017	141	35	106	31	15	20	65	76
2018	236	59	177	52	25	33	110	127
2019	232	58	174	51	24	33	108	125
2020	191	48	143	42	20	27	89	103
2021	130	33	98	28	14	18	60	70
2022	108	27	81	24	11	15	50	58
Total	3,550	887	2,662	775	373	497	1,645	1,905
	100%	25%	75%	22%	11%	14%	46%	54%

³ A mining royalty rate of 14% was applied to resource income.

⁴ Estimates of corporate taxes were computed using a rate of 29.12% for the federal government and a rate of 14% for the GNWT.

DISTRIBUTION OF RESOURCE INCOME BY SECTOR

DISTRIBUTION OF RESOURCE INCOME BY SECTOR WITH THE IMPACT OF DIAVIK CORPORATE TAXES AND ROYALTIES

The Diavik Project will generate an estimated \$8.5 billion in resource income over the life of the mine. This income will be distributed across a number of groups or sectors in the economy.

It is estimated that operating expenditures, which will accrue to the business & labour sector, will account for \$2.9 billion or 35% of the total resource income. Of this, labour (the employees at the mine) will earn \$605 million (7%) and businesses supplying goods and services to the project will receive \$2.3 billion (28%).

In total, Diavik is estimated to receive \$3.9 billion or 46% of the resource income. Of this \$2.0 billion (23%) will be for recovery of capital expenditures (ACCC) and \$1.9 billion (23%) will be in the form of resource profits.

Table 9: Distribution of Resource Income by Sector with Diavik Corporate Taxes and Royalties (Millions of 1998 Dollars)

Year	Operating Costs			Diavik				Government			Grand Total
	Bus.	Labour	Total	Capital	Profit	Total	Fed.	GNWT	Other	Total	
2003	59	20	79	120	0	120	0	0	0	0	199
2004	99	34	133	266	0	266	0	0	0	0	398
2005	119	34	154	415	0	415	0	0	0	0	569
2006	119	34	154	415	0	415	0	0	0	0	569
2007	119	34	154	363	28	391	19	5	0	24	569
2008	119	34	154	15	215	230	143	42	0	185	569
2009	119	34	154	15	215	230	143	42	0	185	569
2010	119	34	154	89	165	254	110	32	0	143	551
2011	119	34	153	89	159	248	106	31	0	137	539
2012	118	34	153	15	189	204	127	37	0	164	521
2013	126	34	160	15	129	144	86	25	0	112	416
2014	125	34	160	15	121	136	81	24	0	105	401
2015	124	34	158	60	59	119	39	12	0	51	329
2016	149	34	184	15	67	82	45	13	0	58	323
2017	126	30	156	15	76	91	51	15	0	65	312
2018	143	28	170	15	127	142	85	25	0	110	422
2019	143	28	170	15	125	140	83	24	0	108	417
2020	124	24	147	15	103	118	68	20	0	89	353
2021	87	16	103	0	70	70	47	14	0	60	233
2022	75	14	88	0	58	58	39	11	0	50	197
Total	2,333	605	2,938	1,968	1,905	3,873	1,272	373	0	1,645	8,456
	28%	7%	35%	23%	23%	46%	15%	4%	0%	19%	100%

The government sector⁵ is estimated to receive \$1.6 billion or 19% of the total resource income in the form of direct taxes (corporate taxes and royalties levied on Diavik as shown in Table 8). The federal government's share is estimated at \$1.3 billion (15%) and the GNWT's share is estimated at \$376 million (4%)⁶.

DISTRIBUTION OF RESOURCE INCOME BY SECTOR WITH THE IMPACT OF TAXES ON DIRECT PRODUCTION

The previous section gave an estimate of the distribution of resource income with the impact of Diavik corporate taxes and royalties only. The government sector would also receive taxes when employees working at the mine and the business (and their employees) that supply the goods and services directly to the mine (for capital and operating inputs) pay both direct and indirect taxes on income earned from the project. These taxes are referred to as “taxes on direct production” or “secondary taxes” and they have been estimated using an input-output model and a tax model that have been developed by Ellis Consulting Services (ECS).

Year	Operating Costs			Diavik			Government				Grand Total
	Bus.	Labour	Total	Capital	Profit	Total	Fed.	GNWT	Other	Total	
2003	44	13	57	76	0	76	47	9	10	66	199
2004	75	22	97	167	0	167	95	19	21	135	398
2005	91	22	113	261	0	261	138	27	30	195	569
2006	91	22	113	261	0	261	138	27	30	195	569
2007	91	22	113	228	28	256	143	30	27	200	569
2008	91	22	113	9	215	224	177	48	7	232	569
2009	91	22	113	9	215	224	177	48	7	232	569
2010	91	22	113	56	165	221	163	42	11	217	551
2011	90	22	113	56	159	215	159	41	11	211	539
2012	90	22	112	9	189	199	160	43	7	210	521
2013	95	22	117	9	129	139	122	31	8	160	416
2014	95	22	117	9	121	131	116	30	8	153	401
2015	93	22	115	38	59	97	86	20	10	116	329
2016	112	22	134	9	67	76	85	20	9	113	323
2017	95	19	114	9	76	85	85	21	8	113	312
2018	107	18	125	9	127	136	121	31	8	160	422
2019	107	18	125	9	125	134	120	30	8	158	417
2020	93	15	108	9	103	112	101	23	9	133	353
2021	65	10	76	0	70	70	67	15	6	88	233
2022	56	9	65	0	58	58	56	13	5	74	197
Total	1,764	389	2,153	1,237	1,905	3,142	2,354	568	239	3,161	8,456
	21%	5%	25%	15%	23%	37%	28%	7%	3%	37%	100%

⁵ This analysis excludes the local government portion of the government sector.

⁶ The amount the GNWT receives has an impact on the “formula financing grant” and does not reflect the net impact of their revenues. Please refer to Appendix 2 for further discussion.

After the impact of all taxes on direct production, the share earned by the business & labour sector from operating expenditures will fall from \$2.9 billion (34%) to \$2.2 billion (25%) of the total resource income. Of this, labour's (the employees at the mine) share will fall from \$605 million (7%) to \$389 million (5%). The share of businesses that supply goods and services to the project will fall from \$2.3 billion (27%) to \$1.8 billion (21%).

Diavik's share of resource income is impacted only by taxes paid during the construction activity. Overall, Diavik's share falls from \$3.9 billion (46%) to \$3.2 billion (37%) of the resource income. The level of resource profits remains unchanged at \$1.9 billion (23%) of resource income.

The government sector's share, after the impact of all taxes on direct production, is estimated to rise from \$1.6 billion (19%) to \$3.2 billion (37%) of the total resource income. The federal governments share will grow from \$1.3 billion (15%) to \$2.4 billion (28%). The GNWT's share⁷ is estimated to increase from \$373 million (4%) to \$568 million (7%). Other provincial governments in Canada will earn \$239 million (3%) of Diavik's resource income.

In addition any portion of Diavik's resource profits that leave the country will be subject to a 5% withholding tax and any amounts paid out in the form of dividends to Canadian residents would be subject to further personal income taxes. As well any profits reinvested in the form of capital assets or exploration expenses would provide further avenues for government tax revenues. Project related expenditures would also lead to tax revenues to local governments. In total, if these tax impacts are included it is estimated that the portion accruing to governments would generate a further \$300 to \$500 million resulting in total Government receipts of 41% to 44% of the total project resource income.

Governments would also receive more tax revenues from the indirect and induced impacts of the mine. The indirect tax revenues would be paid by businesses that supply goods and services to the firms that supply the direct mine capital and operating inputs. The induced tax revenues would accrue as households spend the income earned by the employees working for businesses involved in the direct and indirect activity. It is estimated that if these impacts were included that the government would receive over \$4 billion in total tax revenues from the Diavik Diamonds Project⁸.

THE IMPACT OF DISCOUNTING ON THE DISTRIBUTION OF RESOURCE INCOME

In this analysis all values have been presented in "constant" dollars. Values expressed in these terms have had the impact of price change or inflation removed, and this makes it possible to compare expenditures over time in a meaningful way. The values in this analysis however were not discounted to bring them to present value.

Normally when expenditures are made over time the values are "discounted" to bring them to "present value". Discounting accounts for the fact that there is always risk associated with income and expenditure streams over time and, quite simply stated, it is always better to have money earlier than later.

⁷ The amount the GNWT receives has an impact on the "formula financing grant" and does not reflect the net impact of their revenues. Please refer to Appendix 2 for further discussion.

⁸ This estimate is derived from simulations using Statistics Canada's Interprovincial Input-Output Model and an additional tax model developed by Ellis Consulting Services. For further information contact the author.

Therefore money that is to be received at a future date should be valued at a lower rate than money that is to be received earlier.

Table 11 shows the timing of expenditures and revenues over the life of the project. Diavik will have accumulated a negative profit (cash flow) in excess of \$1.3 billion by the time the first Project revenues are received when production begins in the second half of 2003. Governments over the same period would have already received \$554 in tax benefits from the project.

Year	Resource Income	After Tax Costs		Direct & Secondary Taxes ⁹	Profit/ Cash Flow
		Capital	Operating		
1995	0	26	0	15	-41
1996	0	26	0	15	-41
1997	0	26	0	15	-41
1998	0	26	0	15	-41
1999	0	26	0	15	-41
2000	0	77	0	46	-123
2001	0	270	0	160	-430
2002	0	270	0	160	-430
2003	199	154	57	113	-125
2004	398	0	97	36	266
2005	569	0	113	41	415
2006	569	46	113	68	342
2007	569	46	113	92	319
2008	569	9	113	232	215
2009	569	9	113	232	215
2010	551	56	113	217	165
2011	539	56	113	211	159
2012	521	9	112	210	189
2013	416	9	108	160	139
2014	401	9	107	153	131
2015	329	38	106	116	68
2016	323	9	125	113	76
2017	312	9	104	113	85
2018	422	9	116	160	136
2019	417	9	116	158	134
2020	353	9	99	133	112
2021	233	0	66	88	79
2022	197	0	55	74	68
2023	0	0	32	0	-32
2024	0	0	32	0	-32
2025-34	0	0	30	0	-30
Total	8,456	1,237	2,153	3,161	1,905

⁹ The secondary taxes on closure expenditures for the period 2023-2034 have been allocated to the period 2013-2022.

IMPACT OF DISCOUNTING ON PROJECT RESOURCE INCOME WITH DIRECT TAXES

In choosing a discount rate one must take into account the expected return including the risk associated with the project. For the purposes of this analysis a rate of 8% was chosen. This rate reflects a reasonable rate of return with a small premium for risk.

Table 12 gives the impact of using no discount rate (0%) and an 8% discount rate on distribution of resource income with direct taxes and royalties. When using the 8% discount rate only income and expenditures from 2000 forward were used. Figures one and two give a graphical representation of this data.

	Capital Recovery	Operating Costs	Taxes	Profit	Total Income
NPV 0%	1,968	2,938	1,645	1,905	8,456
NPV 8%	1,225	1,118	571	555	3,468
NPV 0%	23%	35%	19%	23%	100%
NPV 8%	35%	32%	16%	16%	100%

For example, if no discount rate (0%) is used Diavik would earn \$1.9 billion (23%) of the resource income of \$8.5 billion in profits and the government would receive \$1.6 billion (19%) in taxes. Operating costs would consume \$2.9 billion (35%) and Diavik would recover capital costs of \$2.0 billion (23%).

If an 8% discount rate is used Diavik’s would earn \$555 million (16%) of the discounted value of resource income of \$3.5 billion in profits. The government would receive \$571 million (16%) in taxes. Operating costs would consume \$1.1 billion (32%) and Diavik would recover capital costs of \$1.2 billion (42%).

Figure 1: Distribution of Resource Income with Direct Taxes

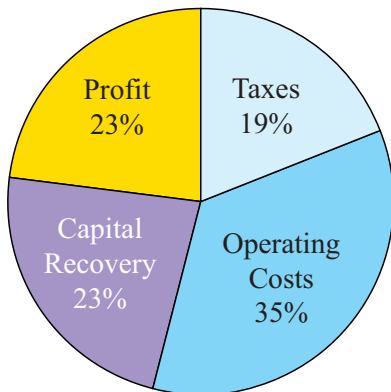
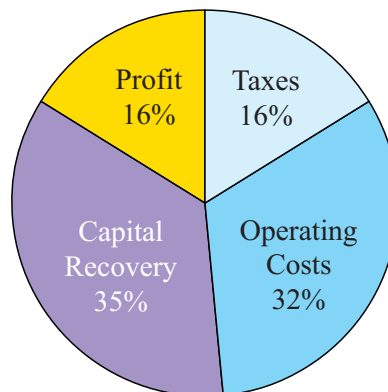


Figure 2: Distribution of Resource Income with Direct Taxes Discounted



IMPACT OF DISCOUNTING ON PROJECT RESOURCE INCOME WITH DIRECT AND SECONDARY TAXES

Table 13 gives the impact of using a 0% and 8% discount rate on distribution of resource income with direct and secondary taxes on direct production. Figures three and four give a graphical representation of this data.

	Capital Recovery	Operating Costs	Taxes	Profit	Total Income
NPV 0%	1,237	2,153	3,161	1,905	8,456
NPV 8%	770	816	1,327	555	3,468
NPV 0%	15%	25%	37%	23%	100%
NPV 8%	22%	24%	38%	16%	100%

For example, if no discount rate (0%) is used Diavik would earn \$1.9 billion (23%) of the resource income of \$8.5 billion in profits and the government would receive \$3.2 billion (37%) in taxes. Operating costs would consume \$2.2 billion (25%) and Diavik would recover capital costs of \$1.2 billion (15%).

If an 8% discount rate is used Diavik's would earn \$555 million (16%) of the discounted value of resource income of \$3.5 billion in profits. The government would receive \$1.3 billion (38%) in taxes. Operating costs would consume \$816 million (24%) and Diavik would recover capital costs of \$770 million (22%).

Figure 3: Distribution of Resource Income with Direct Taxes

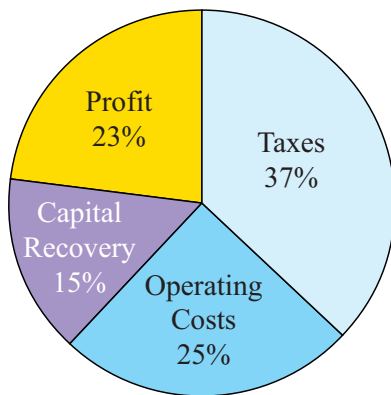
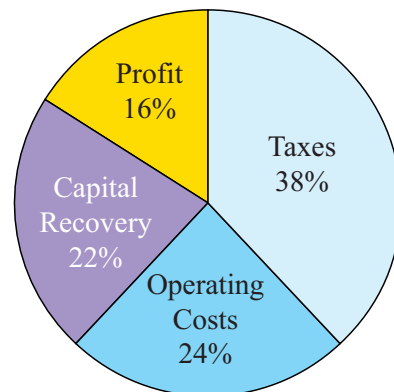


Figure 1: Distribution of Resource Income with Direct Taxes Discounted at 8%



APPENDIX ONE

NET IMPACT OF THE DIAVIK PROJECT ON GNWT REVENUES

Grants and transfers from the Government of Canada make up about 80% of all GNWT 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 Diavik Project will generate significant tax revenues for both the federal government and the GNWT. The GNWT will retain only a portion of these “gross” revenues because a portion of the tax revenues received will reduce the FFG. This has the effect of raising the federal government’s share at the expense of the GNWT’s share.

The following table gives an estimate of the net impact of GNWT revenues. The retention rates are those supplied by the Fiscal Policy Division of the GNWT Department of Finance¹⁰.

Estimated Net Impact of Diavik Project Revenues on GNWT Revenues				
	Federal	GNWT	Other	Total
Diavik Taxes & Royalties				
Gross Impact				
\$1998 million	1,272	373	0	1,645
Percent	77%	23%	0%	100%
Net Impact				
\$1998 million	1,578	67	0	1,645
Percent	96%	4%	0%	100%
All Taxes on Direct Production				
Gross Impact				
\$1998 million	2,354	568	239	3,161
Percent	74%	18%	8%	100%
Net Impact				
\$1998 million	2,820	101	239	3,161
Percent	89%	3%	8%	100%

If only the impact of direct corporate taxes and royalties on Diavik is considered the GNWT, on a gross basis, would receive \$373 million (23%) while the federal government would receive \$1,272 million (77%). After the impact on the Formula Financing Agreement is taken into account the GNWT’s net revenues would fall to \$67 million (4%) and federal government net revenues would rise to \$1,578 million (96%).

If the impact of all direct and secondary taxes on direct production were considered, the GNWT would receive \$568 million (18%) while the federal government would receive \$2,354 million (74%). After the impact on the Formula Financing Agreement is taken into account, the GNWT’s net revenues would fall to \$101 million (3%) and federal government net revenues would rise to \$2,820 million (89%).

¹⁰ The retention rates for the taxes related to the project were taken from a letter from Kathleen LeClair, Director, Fiscal Policy Division to Ellis Consulting Services.

APPENDIX TWO

DATA SOURCES

Table 1: Estimated Reserves

The number of carats and tonnes were taken from the August 20, 1999 Aber Resources Ltd. press release. These values were allocated using the distribution of estimated reserves by pipe and type of mining presented in the March 6, 1998 Aber Resources Ltd. press release.

Table 2: Annual Mine Production

The starting period for each pipe, and the 1.5 million tonnes per year mine, were taken from the August 20, 1999 Aber Resources Ltd. press release. A mine production model developed by Ellis Consulting Services (ECS) was used to allocate the annual production by pipe.

Table 3: Estimated Resource Income

The \$US value per pipe was taken from the 1998 Aber Resources Ltd. Annual Report (page 12). An exchange rate of .67 was used to convert to Canadian dollars.

Table 4: Estimated Value of Capital Investment

The estimate for development expenditures for the period 1991-1990 were taken from the May 20, 1999 Aber Resources Ltd. press release. The release gave a figure of \$82.2 million as Aber's share of cumulative costs for Diavik as of January 31, 1999. The amount was grossed-up to include the 60% Diavik share.

The mine capital expenditures were taken from the August 20, 1999 Aber Resources Ltd. press release. The estimate for mine construction was deflated using an estimated rate of inflation of 1.5% to bring it to 1998 constant dollars. Construction costs were spread over the four-year period using 10% for 2000, 35% for 2001 and 2002, and 20% for 2004.

The capital costs of additions, dikes at A-418 and A-21 and underground operations, were taken from the August 20, 1999 Aber Resources Ltd. press release.

The estimate for replacement capital was done by taking 3.5% of the estimated value of equipment in the initial mine construction. The equipment portion was estimated using a mine production model developed by ECS.

Table 5: Mine Closure Costs

The estimate for removal was done using 15% of the costs of buildings and equipment. This amount was spread over two years. The buildings and equipment portion was estimated using a mine production model developed by ECS.

The estimate for monitoring was made by ECS.

Table 6: Mine Operating Costs

In an Aber press release of March 6, 1998 open pit costs were estimated at \$59 per tonne and overall mine costs (including underground) were estimated at \$66. If the weighting scheme developed for mine production is applied to these numbers it results in an estimate of \$91 per tonne for underground mining.

The August 20, 1999 Aber Resources Ltd. press release gave a revised cost of \$85 per tonne for open pit operations. The \$26 increase was due to the addition of off-site activities that weren't in the original estimate.

The \$85 per tonne estimate for open pit was used and \$26 was added to the previously derived \$91 estimate for underground mining to arrive at the new underground estimate of \$117 per tonne. A further \$10.00 was added to each to reflect marketing and headquarters costs. The final costs for open pit and underground mining were \$95 and \$127 per tonne respectively.

Higher costs per tonne were assumed for the ramp-up period of one and one-half years and for the first year of underground operation.

The portion of direct labour and other input costs were estimated using a mine production model developed by ECS and information contained in the Environmental Effects Report, Socio-Economics (September 1998).

Table 7: Estimated Mine Resource Income

The rate for private royalties was taken from the 1998 Aber Resources Ltd. Annual Report (note on page 29).

The accelerated capital cost allowance (ACCA) was estimated using a mine production model developed by ECS.

Tables 8 & 9: Tax Impacts

The estimates of direct and indirect taxes were done using an input-output and tax model that was developed by ECS.

THE AUTHOR

Mr. Roy Ellis is an economist and statistician currently based in Yellowknife in the Northwest Territories and is the principal at Ellis Consulting Services (ECS).

Prior to the establishment of ECS, Mr. Ellis had over twenty years of experience in statistical and economic research and analysis including seventeen years of direct experience working for three different provincial statistical agencies.

ECS specializes in the production of various economic production and tax models and economic impact analysis. The input-output model designed by Mr. Ellis is currently being used by four provincial statistical agencies. Mr. Ellis has also had extensive experience in undertaking hundreds of economic impact and cost-benefit studies that have spanned a wide range of subject areas and project sizes.

ECS has provided services to a wide range of private and public sector clients in the North and across Canada. These clients have included the Conference Board of Canada, Nova Corporation of Alberta, a number of federal government departments and five different provincial government statistical agencies ranging from Prince Edward Island to Alberta.

Diavik Diamond Mines Inc.
P.O. Box 2498, Suite 205, 5007-50th Avenue,
Yellowknife, NT X1A 2P8
Office: (867) 669-6500 Fax: (867) 669-9058

