

Tabular Material

Table 1a: Percentage of Respondents who Indicate Factors Encourage Exploration Investment*

Country/ Region	Jurisdiction	Regula- tory Uncer- tainty	Regula- tory Duplica- tion	Environ- mental Regula- tions	Protected Areas Uncer- tainty	Land Claims Uncer- tainty	Taxation
Canada	Alberta	80%	65%	56%	53%	48%	88%
	British Columbia	11%	12%	12%	5%	1%	31%
	Manitoba	75%	74%	67%	59%	44%	81%
	New Brunswick	77%	68%	51%	57%	38%	71%
	Newfoundland	54%	55%	56%	48%	37%	78%
	Northwest Terri- tories	47%	37%	34%	32%	20%	61%
	Nova Scotia	61%	56%	42%	51%	39%	61%
	Nunavut	43%	42%	34%	35%	39%	65%
	Ontario	82%	64%	62%	35%	40%	75%
	Quebec	91%	73%	70%	59%	58%	88%
	Saskatchewan	66%	55%	50%	45%	43%	74%
Yukon Territory	55%	44%	36%	22%	23%	68%	
USA	Alaska	49%	39%	24%	17%	62%	68%
	Arizona	39%	35%	29%	31%	63%	69%
	California	8%	15%	4%	8%	63%	35%
	Colorado	11%	17%	8%	13%	58%	43%
	Idaho	32%	27%	27%	16%	63%	57%
	Minnesota	16%	7%	6%	18%	59%	38%
	Montana	12%	17%	9%	17%	63%	46%
	Nevada	77%	66%	64%	56%	69%	94%
	New Mexico	28%	38%	22%	23%	53%	71%
	South Dakota	16%	22%	15%	8%	59%	61%
	Utah	36%	36%	35%	23%	66%	65%
	Washington	5%	10%	3%	7%	55%	32%
	Wisconsin	6%	7%	3%	7%	46%	28%
Wyoming	28%	19%	20%	18%	56%	61%	

Table 1a: Percentage of Respondents who Indicate Factors Encourage Exploration Investment*

Country/ Region	Jurisdiction	Regula- tory Uncer- tainty	Regula- tory Duplica- tion	Environ- mental Regula- tions	Protected Areas Uncer- tainty	Land Claims Uncer- tainty	Taxation
Latin America	Argentina	24%	50%	80%	85%	73%	57%
	Bolivia	40%	66%	88%	80%	64%	75%
	Brazil	39%	54%	85%	69%	62%	64%
	Chile	85%	89%	88%	87%	89%	98%
	Colombia	4%	33%	71%	70%	55%	45%
	Ecuador	19%	50%	65%	59%	54%	45%
	Mexico	70%	59%	80%	72%	61%	66%
	Peru	55%	61%	83%	71%	58%	74%
	Venezuela	14%	29%	67%	58%	52%	48%
Inter- national	Australia	86%	78%	61%	44%	6%	72%
	New Zealand	29%	48%	23%	8%	32%	38%
	South Africa	37%	46%	69%	65%	27%	45%
	Ghana	48%	50%	73%	53%	68%	58%
	Zimbabwe	7%	24%	63%	61%	18%	21%
	China	17%	37%	79%	71%	68%	37%
	India	12%	14%	58%	50%	46%	13%
	Indonesia	12%	26%	64%	33%	21%	36%
	Kazakhstan	4%	20%	71%	85%	47%	9%
	Papua New Guinea	26%	36%	53%	60%	14%	31%
	Philippines	12%	24%	43%	42%	15%	18%
	Russia	6%	46%	62%	69%	68%	13%

*This includes both those respondents who claim the factor “encourages exploration investment” and those who indicate the factor is “not a deterrent to exploration investment.”

Table 1b: Percentage of Respondents who Indicate Factors Encourage Exploration Investment*

Country/ Region	Jurisdiction	Infra- structure	Labour Regu- lation	Political Stability	Socio- economic Agree- ments	Mineral Potential Assuming Current Regula- tion	Mineral Potential Assuming No Land Use Re- strictions
Canada	Alberta	97%	78%	99%	84%	48%	49%
	British Columbia	60%	27%	63%	42%	38%	87%
	Manitoba	78%	65%	96%	77%	75%	87%
	New Brunswick	92%	65%	94%	75%	50%	63%
	Newfoundland	59%	67%	84%	49%	52%	78%
	Northwest Territories	15%	57%	80%	36%	72%	96%
	Nova Scotia	87%	64%	90%	67%	31%	32%
	Nunavut	14%	48%	79%	28%	76%	94%
	Ontario	80%	71%	95%	74%	86%	95%
	Quebec	87%	67%	83%	81%	90%	98%
	Saskatchewan	77%	57%	89%	73%	63%	75%
Yukon Territory	22%	58%	76%	45%	61%	87%	
USA	Alaska	26%	47%	81%	60%	71%	97%
	Arizona	92%	65%	88%	76%	50%	77%
	California	88%	44%	72%	60%	14%	82%
	Colorado	84%	57%	81%	65%	28%	85%
	Idaho	84%	61%	91%	68%	41%	68%
	Minnesota	83%	50%	84%	64%	23%	53%
	Montana	78%	60%	78%	65%	31%	84%
	Nevada	97%	82%	95%	83%	86%	96%
	New Mexico	89%	68%	92%	71%	48%	61%
	South Dakota	83%	70%	89%	72%	33%	62%
	Utah	88%	64%	88%	76%	50%	70%
	Washington	73%	45%	78%	55%	16%	49%
	Wisconsin	86%	46%	76%	58%	10%	51%
	Wyoming	80%	57%	88%	69%	31%	55%

Table 1b: Percentage of Respondents who Indicate Factors Encourage Exploration Investment*

Country/ Region	Jurisdiction	Infra- structure	Labour Regu- lation	Political Stability	Socio- economic Agree- ments	Mineral Potential Assuming Current Regula- tion	Mineral Potential Assuming No Land Use Re- strictions
Latin America	Argentina	43%	48%	8%	34%	70%	100%
	Bolivia	29%	50%	24%	34%	64%	86%
	Brazil	33%	54%	38%	52%	77%	98%
	Chile	74%	82%	82%	70%	94%	98%
	Colombia	19%	50%	4%	26%	32%	77%
	Ecuador	31%	52%	11%	38%	51%	77%
	Mexico	57%	58%	59%	50%	76%	91%
	Peru	38%	54%	21%	28%	78%	97%
	Venezuela	36%	46%	6%	32%	41%	82%
Inter- national	Australia	76%	61%	94%	73%	92%	94%
	New Zealand	64%	60%	92%	60%	35%	53%
	South Africa	74%	54%	23%	23%	60%	93%
	Ghana	19%	60%	33%	43%	56%	84%
	Zimbabwe	33%	41%	8%	24%	31%	76%
	China	10%	53%	37%	38%	54%	85%
	India	13%	60%	21%	22%	31%	65%
	Indonesia	5%	35%	4%	20%	33%	89%
	Kazakhstan	4%	43%	7%	11%	41%	90%
	Papua New Guinea	10%	47%	14%	14%	47%	83%
	Philippines	17%	59%	11%	8%	37%	92%
	Russia	6%	40%	15%	9%	37%	96%

*This includes both those respondents who claim the factor “encourages exploration investment” and those who indicate the factor is “not a deterrent to exploration investment.”

**Table 2a: Percentage of Respondents who Consider Factors
Strong Deterrents to Investment***

Country/ Region	Jurisdiction	Regu- latory Uncer- tainty	Regu- latory Duplication	Environ- mental Regula- tions	Protected Areas Uncer- tainty	Land Claims Uncer- tainty
Canada	Alberta	2%	2%	12%	15%	17%
	British Columbia	55%	54%	63%	70%	78%
	Manitoba	8%	6%	9%	13%	20%
	New Brunswick	0%	5%	17%	17%	24%
	Newfoundland	25%	22%	15%	24%	31%
	Northwest Territories	15%	31%	30%	30%	34%
	Nova Scotia	25%	28%	35%	27%	27%
	Nunavut	22%	22%	28%	31%	28%
	Ontario	3%	6%	10%	24%	23%
	Quebec	3%	3%	10%	12%	16%
	Saskatchewan	6%	7%	16%	14%	15%
	Yukon Territory	17%	27%	30%	42%	31%
USA	Alaska	26%	25%	41%	39%	17%
	Arizona	18%	24%	32%	34%	9%
	California	58%	68%	83%	62%	21%
	Colorado	45%	50%	60%	53%	16%
	Idaho	29%	27%	44%	41%	16%
	Minnesota	38%	41%	65%	43%	14%
	Montana	61%	40%	77%	43%	10%
	Nevada	6%	9%	11%	22%	7%
	New Mexico	24%	13%	47%	35%	7%
	South Dakota	28%	26%	48%	38%	7%
	Utah	25%	28%	39%	35%	10%
	Washington	73%	53%	89%	54%	23%
	Wisconsin	77%	69%	93%	62%	21%
	Wyoming	28%	27%	40%	32%	11%

**Table 2a: Percentage of Respondents who Consider Factors
Strong Deterrents to Investment***

Country/ Region	Jurisdiction	Regu- latory Uncer- tainty	Regu- latory Duplication	Environ- mental Regula- tions	Protected Areas Uncer- tainty	Land Claims Uncer- tainty
Latin America	Argentina	42%	13%	0%	8%	13%
	Bolivia	20%	3%	3%	8%	7%
	Brazil	21%	4%	0%	8%	14%
	Chile	4%	0%	0%	6%	6%
	Colombia	54%	14%	0%	10%	27%
	Ecuador	37%	14%	4%	14%	17%
	Mexico	9%	20%	0%	3%	11%
	Peru	14%	11%	0%	9%	14%
	Venezuela	54%	21%	3%	13%	20%
Inter- national	Australia	0%	7%	6%	13%	29%
	New Zealand	36%	30%	54%	56%	29%
	South Africa	34%	29%	7%	13%	27%
	Ghana	33%	30%	5%	29%	14%
	Zimbabwe	79%	59%	5%	28%	73%
	China	66%	42%	5%	24%	14%
	India	76%	64%	8%	33%	23%
	Indonesia	70%	61%	20%	38%	46%
	Kazakhstan	74%	47%	0%	15%	47%
	Papua New Guinea	53%	43%	18%	60%	52%
	Philippines	62%	41%	14%	42%	60%
	Russia	84%	76%	10%	69%	21%

*This includes both those respondents who claim the factor is a “strong deterrent to exploration investment” and those who “would not pursue exploration investment in this region due to this factor.”

**Table 2b: Percentage of Respondents who Consider Factors
Strong Deterrents to Investment***

Country/ Region	Jurisdiction	Infra- structure	Labour Regu- lation	Political Stability	Socio- economic Agree- ments	Mineral Potential Assuming Current Regulation
Canada	Alberta	0%	3%	0%	0%	15%
	British Columbia	6%	36%	21%	17%	33%
	Manitoba	5%	8%	0%	0%	6%
	New Brunswick	0%	7%	0%	0%	16%
	Newfoundland	7%	12%	6%	13%	11%
	Northwest Territories	50%	6%	7%	18%	08%
	Nova Scotia	4%	12%	2%	2%	31%
	Nunavut	50%	13%	7%	22%	10%
	Ontario	4%	7%	0%	4%	4%
	Quebec	1%	10%	5%	4%	5%
	Saskatchewan	2%	7%	3%	8%	10%
	Yukon Territory	37%	13%	4%	13%	16%
USA	Alaska	36%	12%	3%	5%	9%
	Arizona	0%	6%	4%	0%	20%
	California	4%	28%	14%	8%	51%
	Colorado	2%	10%	4%	3%	34%
	Idaho	0%	10%	2%	3%	22%
	Minnesota	7%	14%	4%	6%	42%
	Montana	2%	7%	13%	10%	47%
	Nevada	0%	2%	2%	0%	8%
	New Mexico	0%	7%	2%	0%	20%
	South Dakota	0%	7%	4%	0%	30%
	Utah	0%	7%	2%	0%	23%
	Washington	7%	14%	12%	18%	59%
	Wisconsin	2%	21%	12%	19%	68%
	Wyoming	2%	14%	2%	7%	23%

**Table 2b: Percentage of Respondents who Consider Factors
Strong Deterrents to Investment***

Country/ Region	Jurisdiction	Infra- structure	Labour Regu- lation	Political Stability	Socio- economic Agree- ments	Mineral Potential Assuming Current Regulation
Latin America	Argentina	19%	16%	63%	31%	9%
	Bolivia	36%	10%	32%	17%	7%
	Brazil	28%	18%	25%	17%	2%
	Chile	6%	5%	9%	9%	2%
	Colombia	39%	14%	75%	35%	24%
	Ecuador	34%	22%	51%	25%	15%
	Mexico	12%	13%	10%	12%	5%
	Peru	15%	13%	40%	19%	4%
	Venezuela	23%	27%	65%	28%	27%
Inter- national	Australia	2%	11%	0%	2%	2%
	New Zealand	8%	12%	2%	10%	26%
	South Africa	8%	12%	38%	26%	13%
	Ghana	31%	25%	38%	33%	11%
	Zimbabwe	26%	47%	82%	60%	58%
	China	40%	18%	35%	38%	22%
	India	35%	27%	37%	39%	28%
	Indonesia	30%	22%	73%	40%	33%
	Kazakhstan	54%	29%	66%	44%	27%
	Papua New Guinea	62%	20%	45%	48%	25%
	Philippines	33%	18%	57%	42%	24%
	Russia	63%	35%	65%	55%	41%

*This includes both those respondents who claim the factor is a “strong deterrent to exploration investment” and those who “would not pursue exploration investment in this region due to this factor.”

Table 3: Number of Companies Indicating a Jurisdiction has the Most/Least Favourable Policies Toward Mining

	Best	Worst		Best	Worst
Quebec	29	0	1st World	0	1
Canada	17	9	3rd World	1	0
USA	1	24	Alaska	1	0
Chile	24	0	Alberta	1	0
British Columbia	2	21	Argentina	1	0
Ontario	16	0	Armenia	1	0
Australia	11	0	Bolivia	1	0
Nevada	10	0	Brazil	1	0
Zimbabwe	1	9	Britain	0	1
China	2	7	Colombia	0	1
Wisconsin	0	8	Colorado	0	1
Mexico	6	1	Congo	0	1
Russia	0	7	Costa Rica	0	1
California	1	5	Democratic Republic of Congo	0	1
Newfoundland and Labrador	3	3	Ghana	1	0
Peru	5	1	Honduras	1	0
South Africa	3	3	Idaho	1	0
Montana	0	5	India	0	1
Indonesia	0	4	Maine	0	1
Philippines	0	4	Northwest Territories	0	1
Nova Scotia	0	3	Norway	1	0
South America	3	0	Papua New Guinea	1	0
Ecuador	1	1	Saskatchewan	0	1
Kazakhstan	0	2	Sweden	1	0
Manitoba	2	0	Tanzania	1	0
New Zealand	0	2	Wyoming	0	1
Russia	0	2	Yukon	0	1
Venezuela	0	2			
Washington	0	2			
Zambia	1	1			

Note: Table sorted by total votes received, either positive or negative, then alphabetically.

Section II: Investment Overview

Figures 16 and 17 show where the companies responding to our survey are spending their exploration budgets. Tables 4 and 5 show the changes in investment allocation between 1999 and 2001. Figures 18 through 35 show the changes in proportional exploration investment over the last five years as indicated by the companies investing in the stated jurisdictions.

Senior Mining Companies Go Global

In 2001, senior mining companies (typically larger, producing companies) representing exploration budgets totaling over US\$600 million spent only 34 percent of their budgets in North America—24 percent in Canada, 7 percent in the United States, and 3 percent in Mexico (see figure 16). The remaining 66 percent of the budgets of senior mining companies surveyed was spent exploring in the rest of the world, including 12 percent spent in Brazil, and 9 percent spent in each of Chile and Australia.

Junior Mining Companies Stay Close to Home

The junior mining companies (usually smaller, exploring companies) who responded to this survey, representing exploration expenditures of US\$137 million, invested almost half of their exploration budgets in North America in 2001 (see figure 17). They spent almost 35 percent in Canada, 10 percent in the United States, and 3 percent in Mexico. Future surveys will try to capture in greater detail the 33 percent of their exploration budgets spent in “other” jurisdictions.

Figure 16: Senior Exploration Investment in 2001
(total: \$US600.8 million)

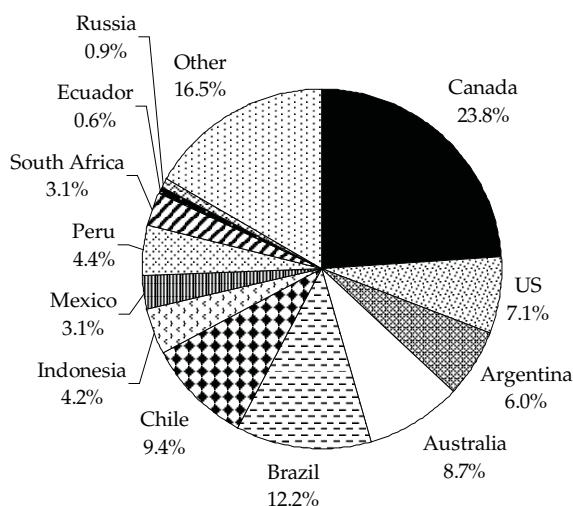
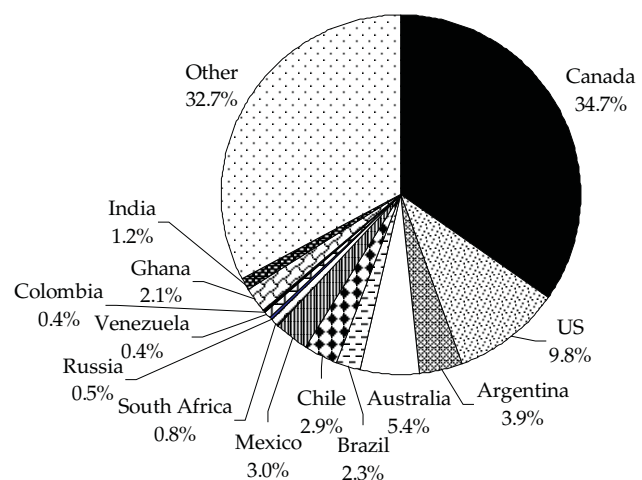


Figure 17: Junior Exploration Investment in 2001
(total: \$US137.1 million)



Exploration Investment Trends

Tables 4 and 5 show in greater detail where the companies responding to our survey are spending their exploration budgets, and are beginning to show trends over time. The results for the senior mining companies show that, by investing 24 percent of their exploration budgets in Canada, they have resumed their 1999 spending levels. Levels of US and Latin American investment represented have remained constant since 2000, but Australia saw proportionately less spending this year, down from 13 percent to less than 9 percent.

In 2001, the junior companies responding to this survey once again invested approximately half of their exploration budgets in North America. When comparing their spending patterns to those reported last year (table 5), the biggest change is the proportion of their budgets spent in “other” jurisdictions, up from 19 percent in 2000 to 30 percent in 2001.

Mining Companies Show an Even Split in Investment Decisions

Overall, while 49 percent of companies surveyed indicated that their worldwide exploration budgets have decreased over the past five years (see figure 18), 51 percent indicated that their budgets had not changed (29 percent), or had increased (22 percent).

Many mining companies are decreasing the proportion of their budgets they spend in Indonesia, Venezuela, Bolivia, and Ghana. They are increasing the proportion of their exploration budgets they spend in the other countries, especially Argentina, Australia, Peru, and New Zealand.

Seventy-four percent of the companies that had invested in Canada during the last five years indicated that their exploration budgets had either remained constant or increased. Only 26 percent indicated a decrease. In the US, on the other hand, 42 percent of the companies surveyed indicated that the proportion of their budgets invested in exploring in the United States had decreased over the last five years. A smaller majority—58 percent—indicated that, as a proportion of their overall spending, their American spending had stayed constant or increased.

Table 4: Senior Mining Company Exploration Expenditures, 1999-2001

Jurisdiction	1999		2000		2001	
	US\$ (millions)	Percent of total reported	US\$ (millions)	Percent of total reported	US\$ (millions)	Percent of total reported
Canada	93.0	26.2%	107.8	16.6%	143.2	23.8%
US	52.2	14.7%	45.7	7.0%	42.5	7.1%
Argentina	4.6	1.3%	34.7	5.3%	36.1	6.0%
Australia	46.4	13.1%	87.2	13.4%	52.2	8.7%
Brazil	31.0	8.7%	69.8	10.7%	73.2	12.2%
Chile	19.1	5.4%	73.3	11.3%	56.5	9.4%
Indonesia	5.7	1.6%	5.6	0.9%	25.2	4.2%
Mexico	19.7	5.6%	14.1	2.2%	18.7	3.1%
Papua New Guinea	1.0	0.3%	0	0.0%	0.0	0.0%
Peru	11.6	3.3%	28.6	4.4%	26.2	4.4%
South Africa	7.4	2.1%	15.3	2.4%	18.8	3.1%
Ecuador	*	*	6.3	1.0%	3.5	0.6%
Russia	*	*	3.4	0.5%	5.3	0.9%
China	*	*	*	*	1.0	0.2%
Colombia	*	*	*	*	0.2	0.0%
Ghana	*	*	*	*	1.6	0.3%
India	*	*	*	*	2.5	0.4%
Kazakhstan	*	*	*	*	0.5	0.1%
New Zealand	*	*	*	*	3.0	0.5%
Philippines	*	*	*	*	0.2	0.0%
Venezuela	*	*	*	*	2.9	0.5%
Zimbabwe	*	*	*	*	1.0	0.2%
Other	62.8	17.7%	157.7	24.3%	86.5	14.4%
TOTAL	354.5	100.0%	649.7	100.0%	600.8	100.0%

*Data were not collected for this jurisdiction in this year.

Table 5: Junior Mining Company Exploration Expenditures, 1999-2001

Jurisdiction	1999		2000		2001	
	US\$ (millions)	Percent of total reported	US\$ (millions)	Percent of total reported	US\$ (millions)	Percent of total reported
Canada	74.3	20.0%	54.2	40.9%	47.7	34.8%
US	56.7	15.3%	11.5	8.7%	13.5	9.8%
Argentina	17.4	4.7%	1.2	0.9%	5.3	3.9%
Australia	44.3	11.9%	4.5	3.4%	7.4	5.4%
Brazil	66.2	17.8%	4.0	3.0%	3.1	2.3%
Chile	10.7	2.9%	0.1	0.1%	4.0	2.9%
Indonesia	3.7	1.0%	2.2	1.7%	0.5	0.4%
Mexico	12.6	3.4%	7.6	5.7%	4.2	3.0%
Papua New Guinea	5.8	1.6%	0.1	0.1%	0.2	0.1%
Peru	8.7	2.3%	8.3	6.3%	1.2	0.9%
South Africa	3.6	1.0%	2.1	1.6%	1.0	0.8%
Bolivia	*	*	2.1	1.6%	0.2	0.1%
Ecuador	*	*	2.6	2.0%	0.0	0.0%
Philippines	*	*	3.7	2.8%	0.1	0.1%
Russia	*	*	2.1	1.6%	0.7	0.5%
Venezuela	*	*	1.0	0.8%	0.6	0.5%
China	*	*	*	*	0.1	0.1%
Colombia	*	*	*	*	0.6	0.4%
Ghana	*	*	*	*	3.0	2.2%
India	*	*	*	*	1.6	1.2%
New Zealand	*	*	*	*	0.4	0.3%
Other	67.4	18.1%	25.1	18.9%	41.7	30.4%
TOTAL	371.4	100.0%	132.5	100.0%	137.1	100.0%

*Data were not collected for this jurisdiction in this year.

Change in Exploration Budgets Between 1996 and 2001

Figure 18: Worldwide

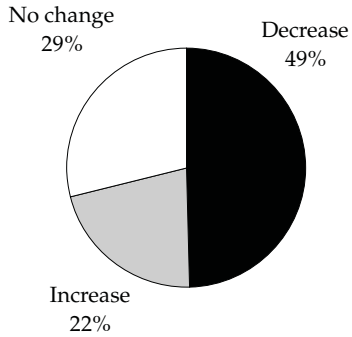


Figure 19: In Canada

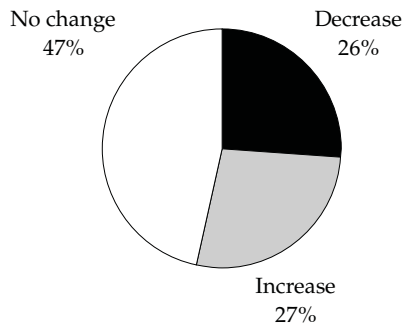


Figure 20: In USA

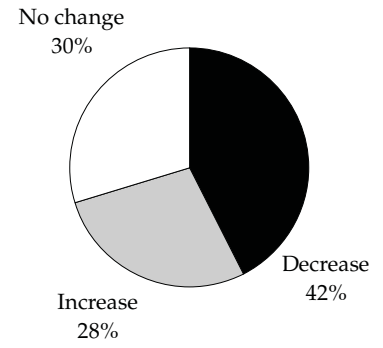


Figure 21: In Argentina

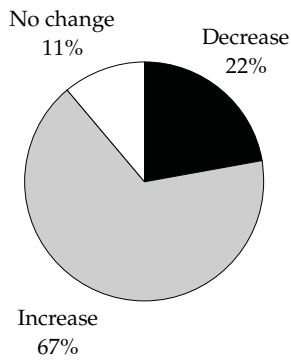


Figure 22: In Bolivia

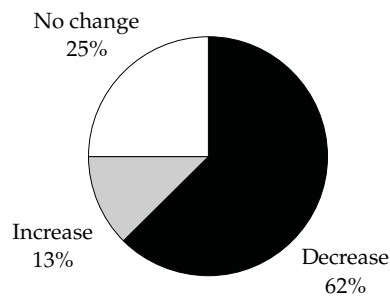


Figure 23: In Brazil

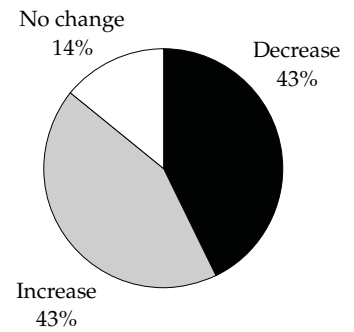


Figure 24: In Chile

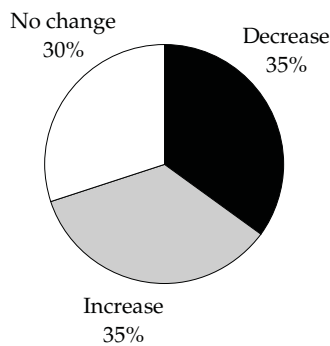


Figure 25: In Mexico

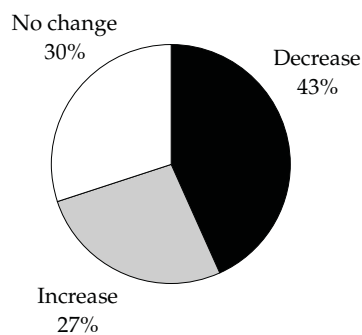
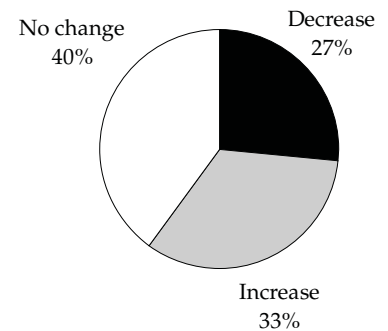


Figure 26: In Peru



Change in Exploration Budgets Between 1996 and 2001

Figure 27: In Venezuela

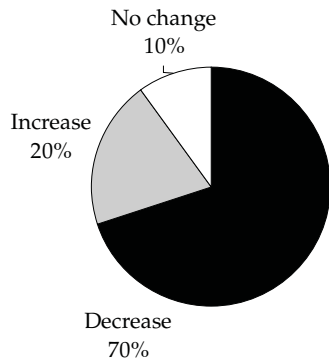


Figure 28: In Australia

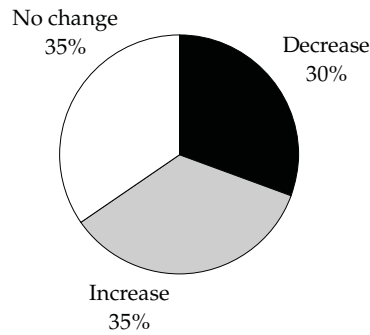


Figure 29: In China

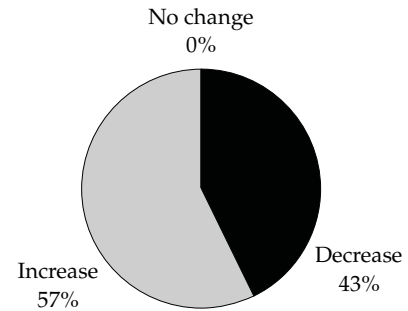


Figure 30: In Ghana

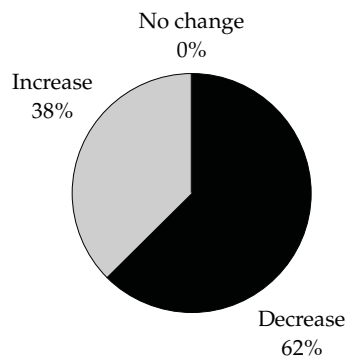


Figure 31: In Indonesia

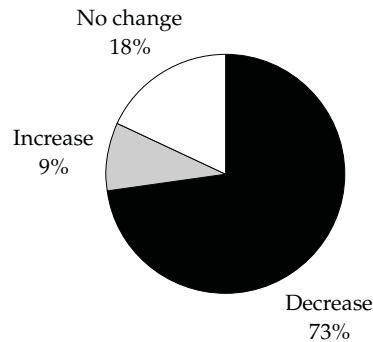


Figure 32: In New Zealand

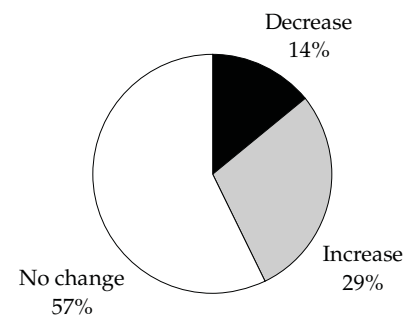


Figure 33: In Russia

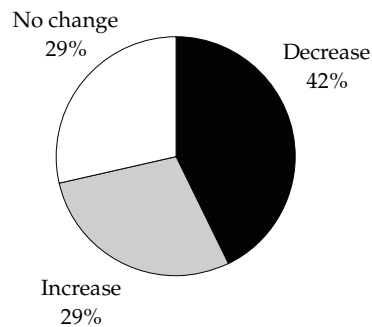


Figure 34: In South Africa

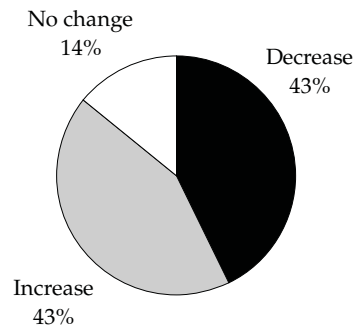
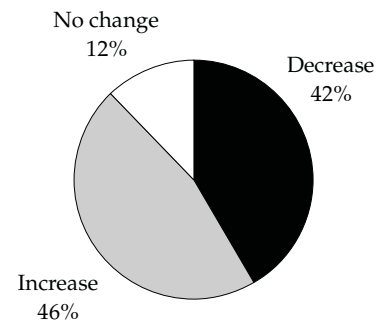


Figure 35: In All Other Jurisdictions*



*Includes jurisdictions that were not specifically mentioned in the questionnaire, and jurisdictions that received fewer total responses (Colombia, Ecuador, India, Kazakhstan, Papua New Guinea, Philippines, and Zimbabwe).

Appendix A: Comparing Canadian Jurisdictions Using Data— Preliminary Findings

As a complement to the survey opinions presented in the first section of the report, this appendix has been added to include data on factors such as taxation and labour with which to compare the attractiveness to the mining industry of the business climates of the Canadian provinces and territories. Including such data is a logical extension of the more subjective survey component of the report as they may provide some insight into what is causing some regions to score well and others poorly on the opinion survey. We began to develop an “objective index” to compare with the first section of the report at the suggestion of the Prospectors and Developers Association of Canada (PDAC) last year. The authors would like to thank the PDAC for their continued support and invaluable input and suggestions for improvement of this report.

Finding measurable indicators to compare with the subjective questions asked in the opinion section of the report has not been easy. In some cases, data were unavailable. In other cases, available data were limited. For example, in the taxation category we considered the tax burden on a hypothetical mine, for which only one model was available. In other cases, such as regulatory delays, good measures continue to prove elusive. In still other cases, measures such as government subsidies may make jurisdictions more attractive to mining companies, but they may also create problems elsewhere in the economy that affect their apparent benefit to mining companies. Finally, factors that survey respondents say are important, such as “the attitude of the regulators,” are virtually impossible to measure. The data presented in this section should, therefore, be seen as a complement rather than a substitute for the opinion data presented in the first part of the report. Over the next several years, we hope to continue to expand this section of the report to include more jurisdictions, more variables, and additional categories. We hope that this survey and companion index will encourage policy makers to create fair, stable, and consistent regulatory frameworks in which mining companies, as a proxy for other industries, can operate without experiencing what appears to be institutionalized bias. Your suggestions have been most helpful in the past and continue to be welcome.

In order to identify policy differences between Canadian jurisdictions, we looked at 24 variables in 5 different categories: taxation, regulation, labour, land access, and infrastructure. Available data in each category are described below. While recognizing that available data do not completely describe the important characteristics of operating in different jurisdictions, and realizing that the objective structure of existing policies cannot capture the often more subjective implementation of those policies, this section does provide a starting place for comparing the policies in regions across Canada.

Taxation

The taxation category contains four variables (see table 1). The first is the total taxes paid over the 13-year lifetime of a hypothetical gold mine. These numbers come from the October update to the PricewaterhouseCoopers report, *Canadian Mining Taxation*, 2002 edition. The tax burden includes

federal taxes, provincial income and capital taxes, and provincial mining taxes. The second taxation indicator is the existence of capital taxes. All else being equal, those jurisdictions with capital taxes are considered less attractive than those without capital taxes. The third taxation indicator is a standardized page count on provincial mining tax acts and their supporting regulation. This provides some information on the complexity of the tax system. Jurisdictions with lengthier legislation are considered to have more onerous tax systems. The final variable is whether or not the jurisdiction imposes a gross royalty or net smelter royalty tax, which, like capital taxes, renders a jurisdiction less attractive, all else being equal.

Regulation

The regulation category includes 10 variables (see table 2). The first two indicators measure the complexity and costs of environmental regulation in a jurisdiction, first by measuring the percentage of exploration and deposit appraisal expenditures (averaged over the five years 1997 to 2001) spent on environmental compliance, and second, through a page count of the environmental acts and regulations that affect mining, including provincial and territorial parks acts, endangered species legislation, and water and fish protection acts. The next 8 variables apply to regulations and permitting procedures specific to the mining industry. The first is a page count of mining acts and regulations. Both this and the previous variable assume that a higher page count (standardized for page size and bilingual publishing) indicates more onerous policies. The next two variables measure the initial term granted for a mineral claim (exploration phase) and mining lease (mining phase) with the assumption that longer terms are more attractive. We also looked at the maximum area granted for a mineral claim and mining lease assuming that a larger area was more attractive. We also looked at the way reclamation bond requirements are administered in each jurisdiction. Although there appears to be some variability within jurisdictions, some tend to allow bonding requirements to be met over

Appendix Table I: Taxation

	AB	BC	MB	NB	NL	NS	ON	QC	SK	NT	NU	YT
Tax burden on a hypothetical mine (%)	35.2	44.0	42.5	45.7	34.8	43.1*	36.3	39.1	43.5	36.3	37.6	35.7
Capital tax	No	No	Yes	Yes	No	Yes*	Yes	Yes	Yes	No	No	No
Page count for mining taxation acts and regulations (standardized)	31	85	40	32	37	7	48	56	77	15	15	8
Gross royalty or net smelter royalty tax	No	No	No	Yes	Yes	No	No	No	No	No	No	No

*Nova Scotia's capital tax was not included in the calculation of its tax burden because it is scheduled for repeal effective April 1, 2004.

time, while in others the bond must be posted up front. The assumption is that meeting the requirement over time is preferable. Finally, we looked at the annual expenditure obligation per hectare, first at just the initial year's expenditure, and finally averaging it over the first 10-year period. For these indicators, a lower financial obligation was deemed to be preferable.

We have not yet determined a satisfactory indicator for a critical regulation variable: delays in regulatory permits, which almost certainly played a role in the subjective evaluation of the jurisdictions. Another important regulatory indicator, the attitude of the regulators, is virtually impossible to measure and therefore is not captured in these data.

Appendix Table 2: Regulation

	AB	BC	MB	NB	NL	NS	ON	QC	SK	NT	NU	YT
Percent of exploration and deposit appraisal expenditures (averaged over 1997-2001) spent on environmental compliance (%)	13.6	7.7	0.6	1.1	9.7	8.3	1.1	1.1	3.3	6.2	n/a	8.0
Page count of environmental acts and regulations (standardized)	464	354	186	312	128	146	471	417	612	539	459	722
Page count of mining acts and regulations (standardized)	182	178	293	67	211	109	243	141	95	92	92	94
Initial term granted for mineral claim (years)	10	1	2	1	5	1	1	2	2	2	2	1
Initial term granted for mining lease (years)	15	30	21	20	25	20	21	20	10	21	21	21
Maximum area granted for mineral claim (ha)	9216	500	256	16	25	16.19	256	Variable	6000	1045	1045	20.9
Maximum area granted for mining lease (ha)	2304	No max	800	No max	No max	No max	No max	100	6000	1045	1045	20.9
Reclamation bond requirements	Cumulative	Cumulative	Cumulative	Up front	Cumulative	Up front	Cumulative	Cumulative	Up front	Cumulative	Cumulative	Cumulative
First year expenditure obligation (\$/hectare)	2.50	4.00	0.00	6.250	8.00	12.35	0.00	15.62	0.00	0.00	0.00	4.78
Annual expenditure obligation (average \$/ha over ten years)	5.50	6.80	11.25	15.63	18.00	12.35	22.5	18.75	10.80	4.45	4.45	4.78

Labour

The labour category (see table 3) contains two indicators: the extent of unionization of the general labour force, and, to get a rough indication of the volatility of the labour situation in each region, the number of labour disputes that have occurred in the mining sector in the past decade (1992 to 2001). To put this number into perspective, we have also included the number of mines that were operating in that region on January 1, 2002. The data for strikes and lockouts come from the Human Resources Development Canada Workplace Information Directorate. The number of mines operating in each jurisdiction comes from Natural Resources Canada, while the unionization data comes from Statistics Canada.

Appendix Table 3: Labour

	AB	BC	MB	NB	NL	NS	ON	QC	SK	NT	NU	YT
Unionization (%)	24.6	35.1	36.7	28.8	40.0	29.3	27.8	40.4	36.2	n/a	n/a	n/a
Number of mines in operation January 1, 2002	19	28	11	5	6	16	39	38	30	3	3	1
Number of labour disputes in last ten years (1992-2001)	0	4	2	1	1	4	13	24	2	2	0	0

Land Access

Three variables form the land access category (see table 4). First, the index uses data from Indian and Northern Affairs Canada to determine the percentage of land claims that remain unsettled in each province. A better indicator might be the percentage of the land base that is covered by land claims, but the data is unavailable in that format. The second variable is the percentage of the land base in a jurisdiction that is off limits to exploration because it is protected. The final variable, which is used to assess uncertainty concerning new land to be set aside, looks at how much growth there has been in protected areas in the last year. Data on protected areas come from the Canadian Conservation Areas Database, which, at the time of publication, had not yet been updated for Quebec.

Infrastructure

There are five indicators in the infrastructure category this year (see table 5): railway density, road density, and ports (provided by Transport Canada), geoscience availability (provided by the respec-

Appendix Table 4: Land Access

	AB	BC	MB	NB	NL	NS	ON	QC	SK	NT	NU	YT
Percent of native land claims that remain unsettled (%)	41	68	41	55	n/a	43	54	54	36	22	22	22
Percent of land protected (%)	16.2	15.9	12.9	5.8	4.6	11.5	9.5	8.5	10.3	17.4	15.7	13.8
Protected area growth (%)	0.1	0.2	0.0	0.0	0.02	0.04	0.02	n/a	0.0	0.02	0.0	0.0

tive branches of the Geological Survey), and the percent of exploration and deposit appraisal expenditures (averaged over five years, 1997 to 2001) spent on land access. There are a number of other indicators that could be added to this category in the future, including the availability and cost of power, and further information about geologic data. Another possible indicator is the ease of access of geologic and infrastructure data. For example, how readily available are area maps, and how much information is available on-line?

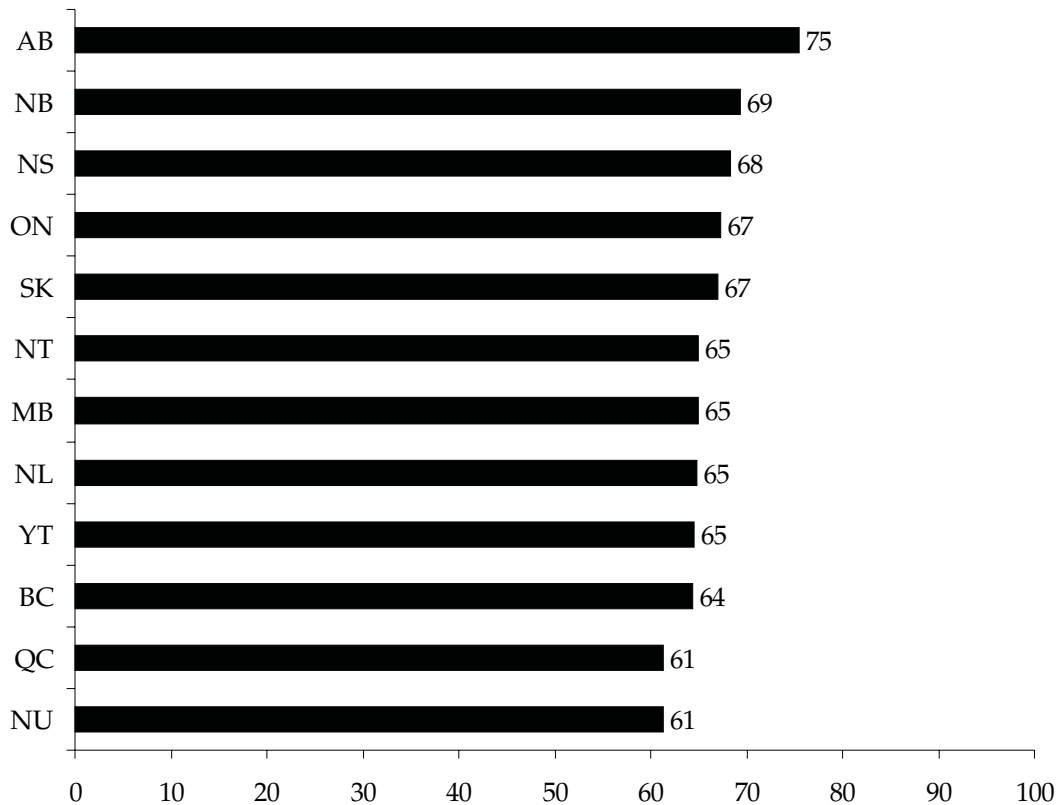
Appendix Table 5: Infrastructure

	AB	BC	MB	NB	NL	NS	ON	QC	SK	NT	NU	YT
Railway density (rail km/area km ²) (%)	0.011	0.008	0.008	0.014	0.001	0.021	0.011	0.003	0.015	n/a	n/a	n/a
Road density (road km/area km ²) (%)	0.334	0.213	0.163	1.051	0.067	0.881	0.213	0.148	0.384	.008	0.000	0.033
Ports	3	103	2	45	58	128	54	72	4	46	n/a	n/a
Geoscience availability—percent of province mapped to 1:50,000 scale	5	15	30	85	27		33	65	7	15	5	18
Percent of exploration and deposit appraisal expenditures (averaged over 1997-2001) spent on land access	0.83	1.30	0.22	0.21	2.72	1.18	0.68	0.17	0.50	1.35	n/a	0.64

Index Results

An “objective index” comparing the policy attractiveness of Canadian jurisdictions was constructed using the available data described in this appendix. The greatest weight was placed on regulatory and taxation variables, these being the most directly influenced by policy makers in each jurisdiction. The results are shown in Appendix Figure 1 below. Although there is a positive correlation between the survey results and the objective index results, it is a fairly weak correlation. In some cases, such as Alberta, the results are consistent with the opinion index in the first section of the report. In other cases, most noticeably Quebec, the results are inconsistent. There are many possible explanations for this. The objective data used cannot capture the attitudes of the regulators in each jurisdiction, or the ease with which permits can be obtained. Further, it could be that the data used to create the index do not adequately capture the concerns of exploration managers, or it could be that the opinions about operating in some jurisdictions differ from the reality of operating there. We will continue to investigate these concerns in future editions of this report. Improvements to the index might include adding additional variables, as we did this year, or even additional categories. It is also possible that the key data are not yet being gathered, but will become available in future years. The results presented below should, therefore, be considered a “gem in the rough,” still in need of polishing.

Appendix A Figure 1: Objective Index



Appendix B: Survey Questions

A. EXPLORATION INVESTMENT

Note: For the purposes of this survey, **exploration investment** includes both basic and advanced exploration. This includes all exploration expenditures (financing costs, option payments, finders fees, etc.) incurred in searching for and delineating mineral deposits on properties where no production is taking place.

1. What percentage of your **annual exploration budget in 2001** was spent within:

LATIN AMERICA	NORTH AMERICA	Kazakhstan _____
Argentina _____	Canada _____	New Zealand _____
Bolivia _____	USA _____	Papua New Guinea _____
Brazil _____	WORLD	Philippines _____
Chile _____	Australia _____	Russia _____
Colombia _____	China _____	Ghana _____
Mexico _____	Ghana _____	South Africa _____
Peru _____	India _____	Zimbabwe _____
Venezuela _____	Indonesia _____	Other (not listed) _____

Should total 100 percent

2. Has that percentage changed over the 5 years from 1996-2001? If so, please indicate whether there was a positive (+), or negative (-) change, or no change (0).

LATIN AMERICA		NORTH AMERICA	Kazakhstan _____
Argentina _____		Canada _____	New Zealand _____
Bolivia _____		USA _____	Papua New Guinea _____
Brazil _____		WORLD	Philippines _____
Chile _____		Australia _____	Russia _____
Colombia _____		China _____	Ghana _____
Mexico _____		Ghana _____	South Africa _____
Peru _____		India _____	Zimbabwe _____
Venezuela _____		Indonesia _____	Other (not listed) _____

3. Has your total (worldwide) exploration expenditure increased, decreased, or remained the same over the five years from 1996-2001?

Increased _____ Decreased _____ Remained the Same _____

B. INVESTMENT FACTORS

The following pages list factors such as mineral potential, taxation, and regulations that influence investment decisions. Please use the scale provided to rate each jurisdiction with respect to the factor listed in bold at the top of each page. You need only rate those regions with which you are familiar. If you are unfamiliar with a jurisdiction, leave the question blank or circle "6," the 'do not know' option.

Scale:

- 1 = encourages exploration investment
- 2 = not a deterrent to exploration investment
- 3 = mild deterrent to exploration investment
- 4 = strong deterrent to exploration investment
- 5 = would not pursue exploration in this region due to this factor
- 6 = do not know

I. TAXATION REGIME*

Please circle the appropriate rating, according to the scale in the box below, for the following regions' **TAXATION REGIME** (personal, corporate, payroll, capital taxes and the complexity of tax compliance).

(See above for key to scale)

CANADA						
Alberta	1	2	3	4	5	6
British Columbia	1	2	3	4	5	6
Manitoba	1	2	3	4	5	6
New Brunswick	1	2	3	4	5	6
Newfoundland	1	2	3	4	5	6
Northwest Territories	1	2	3	4	5	6
Nova Scotia	1	2	3	4	5	6
Nunavut	1	2	3	4	5	6
Ontario	1	2	3	4	5	6
Quebec	1	2	3	4	5	6
Saskatchewan	1	2	3	4	5	6
Yukon	1	2	3	4	5	6
UNITED STATES						
Alaska	1	2	3	4	5	6
Arizona	1	2	3	4	5	6
California	1	2	3	4	5	6
Colorado	1	2	3	4	5	6
Idaho	1	2	3	4	5	6
Minnesota	1	2	3	4	5	6
Montana	1	2	3	4	5	6
Nevada	1	2	3	4	5	6
New Mexico	1	2	3	4	5	6
South Dakota	1	2	3	4	5	6
Utah	1	2	3	4	5	6
Washington	1	2	3	4	5	6
Wisconsin	1	2	3	4	5	6
Wyoming	1	2	3	4	5	6

LATIN AMERICA						
Argentina	1	2	3	4	5	6
Bolivia	1	2	3	4	5	6
Brazil	1	2	3	4	5	6
Chile	1	2	3	4	5	6
Colombia	1	2	3	4	5	6
Ecuador	1	2	3	4	5	6
Mexico	1	2	3	4	5	6
Peru	1	2	3	4	5	6
Venezuela	1	2	3	4	5	6
OTHER COUNTRIES						
Australia	1	2	3	4	5	6
China	1	2	3	4	5	6
Ghana	1	2	3	4	5	6
India	1	2	3	4	5	6
Indonesia	1	2	3	4	5	6
Kazakhstan	1	2	3	4	5	6
New Zealand	1	2	3	4	5	6
Papua New Guinea	1	2	3	4	5	6
Philippines	1	2	3	4	5	6
Russia	1	2	3	4	5	6
South Africa	1	2	3	4	5	6
Zimbabwe	1	2	3	4	5	6

**Repeated for all other factors.*

C. INVESTMENT CLIMATE

1. How would you weight the importance of mineral potential versus policy factors when considering a new exploration project (assuming some basic mineral potential exists)?

Mineral _____ % Policy _____ % (Total 100%)

2. What country or jurisdiction do you think has the **most favourable** policies towards mining?

Why? _____

3. What country or jurisdiction do you think has the **least favourable** policies towards mining?

Why? _____

4. If there could be one policy change in this jurisdiction, what should it be?

5. If you have an example of either a regulatory “horror story” related to operating in a particular jurisdiction or an example of what you would consider an exemplary policy climate, please describe in the space below. Please attach another sheet if you need more room.

D. BACKGROUND INFORMATION

1. Are you a **Junior** or **Senior** mining company?

Junior _____ **Senior** _____

2. What is your position with the company? _____

3. What commodity is currently assigned the greatest percentage of your exploration budget?

4. What jurisdictions, if any, would you like to see added to the survey next year?

5. What was the value of your **2001 annual exploration expenditures*** (please specify **\$US** or **\$Canadian**) within:

LATIN AMERICA		NORTH AMERICA		Kazakhstan	_____
Argentina	_____	Canada	_____	New Zealand	_____
Bolivia	_____	USA	_____	Papua New Guinea	_____
Brazil	_____	WORLD		Philippines	_____
Chile	_____	Australia	_____	Russia	_____
Colombia	_____	China	_____	Ghana	_____
Mexico	_____	Ghana	_____	South Africa	_____
Peru	_____	India	_____	Zimbabwe	_____
Venezuela	_____	Indonesia	_____	Other (not listed)	_____

**Please note that individual surveys are strictly confidential.*

The information from this question is used to determine the total exploration budgets of all of the companies participating in the survey. If you are uncomfortable giving a specific amount, please give a range.

Thank you for participating in *The Fraser Institute's Annual Survey of Mining Companies*. To ensure that your opinions are included with the results, and to be entered into the thank you draw for Cdn\$1,000, please return your questionnaire with the response card or your business card promptly.

The Fraser Institute's Annual Survey of Mining Companies

Copies of *The Fraser Institute's Annual Survey of Mining Companies 2002/2003* are available for order. If you would like to receive a copy of this report, or of previous editions, please photocopy, complete, and return the following form:

Copies

___ <i>Fraser Institute Annual Survey of Mining Companies 2002/2003</i>	\$40.00
___ <i>Fraser Institute Annual Survey of Mining Companies 2001/2002</i>	\$40.00
___ <i>Fraser Institute Annual Survey of Mining Companies 2000/2001</i>	\$20.00
___ <i>Fraser Institute Annual Survey of Mining Companies 1999/2000</i>	\$20.00
___ <i>The Fraser Institute Survey of Mining Companies Operating in North America 1998/1999</i>	\$20.00

To cover shipping and handling costs, please include \$2.00 for 1 book, \$.50 for each additional book. Canadian residents add 7% GST to the total. GST#R119233823.

Name _____
Title _____
Organization _____
Address _____
City _____
Province/State Postal/Zip Code _____

I have enclosed a cheque for \$ _____ payable to The Fraser Institute, or please charge my credit card: Visa Mastercard American Express

Card # _____ Exp. Date _____ / _____

Signature /Date _____

If you would like to participate in *The Fraser Institute's Annual Survey of Mining Companies 2003/2004*, please respond before August 1, 2003, and indicate here:

Yes, my opinion counts! Please include me in next year's survey.

Send completed forms to:

Publications Coordinator, The Fraser Institute
4th Floor, 1770 Burrard St., Vancouver, BC, Canada V6J 3G7
or fax: (604) 688-8539

**We'd like to thank the all the sponsors of the
Annual Survey of Mining Companies 2002/2003. We would especially like to
thank the PDAC for their support and encouragement.**