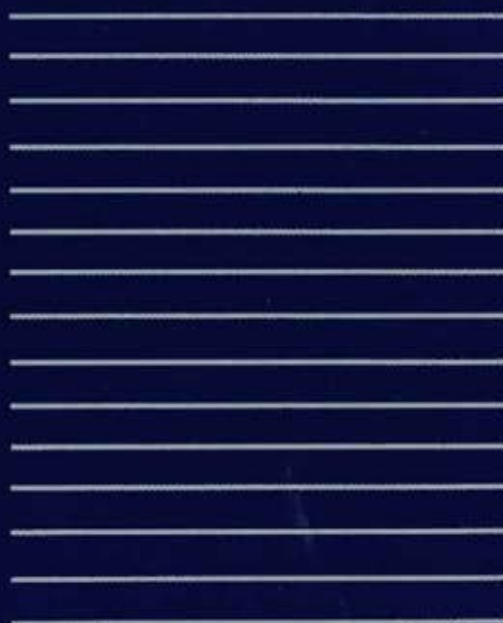
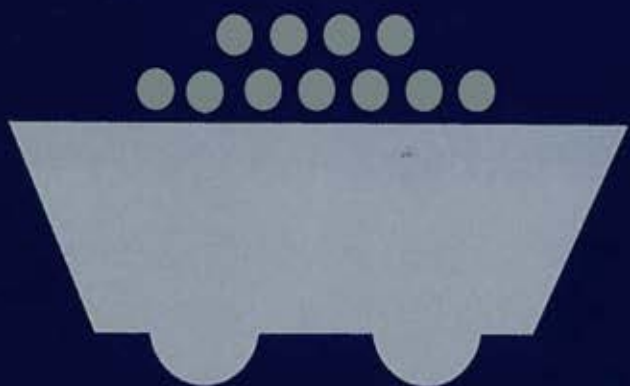


The Fraser Institute Survey of

**Mining  
Companies  
Operating in  
North America**

*1998/1999*



## About The Fraser Institute

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The Fraser Institute is an independent Canadian economic and social research and educational organization. It has as its objective the redirection of public attention to the role of competitive markets in providing for the well-being of Canadians. Where markets work, the Institute's interest lies in trying to discover prospects for improvement. Where markets do not work, its interest lies in finding the reasons. Where competitive markets have been replaced by government control, the interest of the Institute lies in documenting objectively the nature of the improvement or deterioration resulting from government intervention. The Fraser Institute is a national, federally chartered non-profit organization financed by the sale of its publications and the contributions of its members, foundations, and other supporters.

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## **Survey Information**

The 1998 *Fraser Institute Survey of Mining Companies Operating in North America* was sent to 280 senior and junior mining companies. The survey represents responses from 30 percent (85) of those companies, comprised of 61 junior and 24 senior companies. The companies participating in the survey account for exploration expenditures totalling over US\$1 billion (1997). They represent almost 50 percent (US\$309 million) of the total expenditure in Canada for gold, base metals, and diamonds, as estimated by the Canadian government's Natural Resources Canada. Metals Economics Group (MEG) estimates exploration expenditures in the US at US\$365 million, of which 39 percent (US\$142.2 million) is represented by this survey's respondents.

A copy of the survey is included at the end of this document.

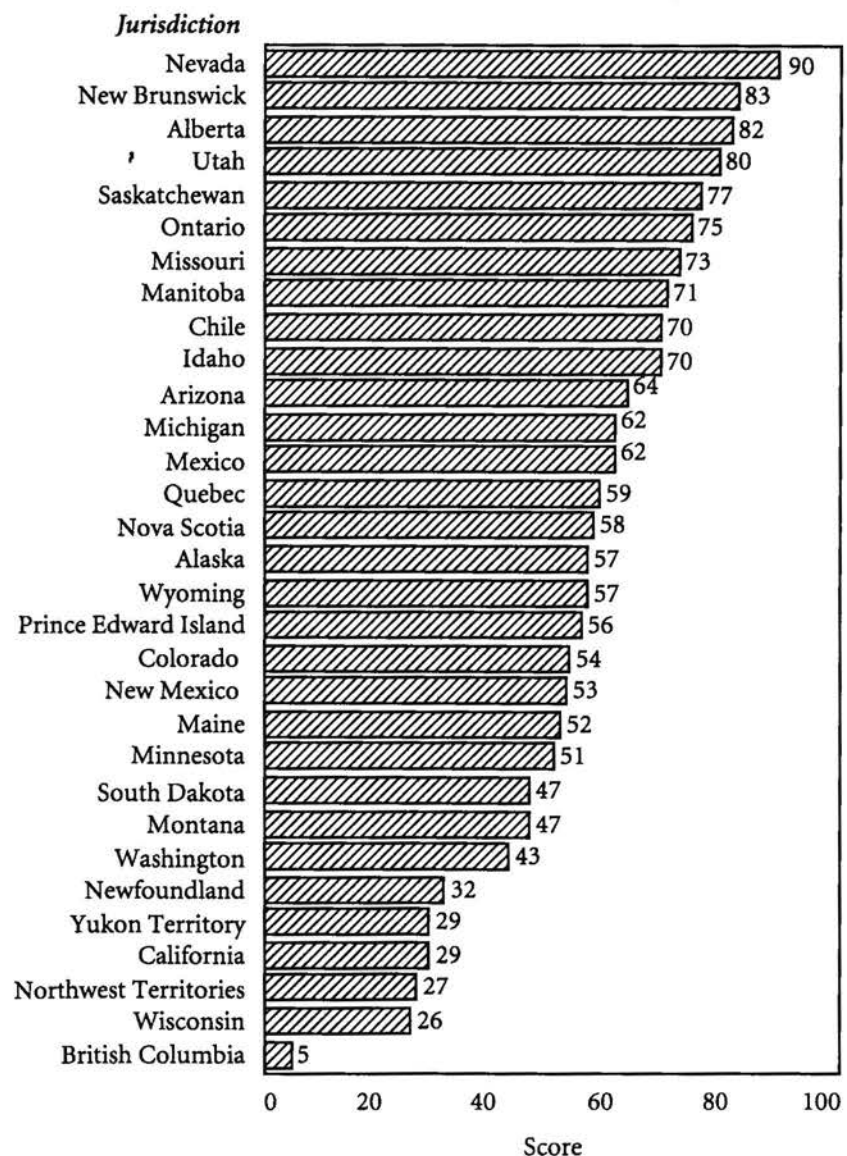
## Executive Summary

In 1997 the Fraser Institute launched its *Survey of Mining Companies Operating in Canada* to assess how mineral potential and various public policy factors such as taxation and regulation affect exploration investment in Canada. The Fraser Institute's *1998 Survey of Mining Companies Operating in Canada* has been expanded to cover mining exploration in North America including seventeen American states (states were selected for their hard rock mining activity and/or exploration potential), Mexico, the Canadian provinces and territories, and, for comparison with North American jurisdictions, Chile.

### Policy Potential Index: A "Report Card" to Governments

While geological and economic evaluations are always requirements for exploration investment, increasingly it is a region's policy climate that drives investment decisions. The Policy Potential Index is a composite index that measures the effects on exploration investment of government policies including taxation, environmental regulations, duplication and administration of regulations, native land claims, protected areas, infrastructure, labour, and socioeconomic agreements. The highest possible score on this index is 100. The five top-rated regions in North America for their policy climates include Nevada (90), New Brunswick (83),

**Figure 1: North American Policy Potential Index**

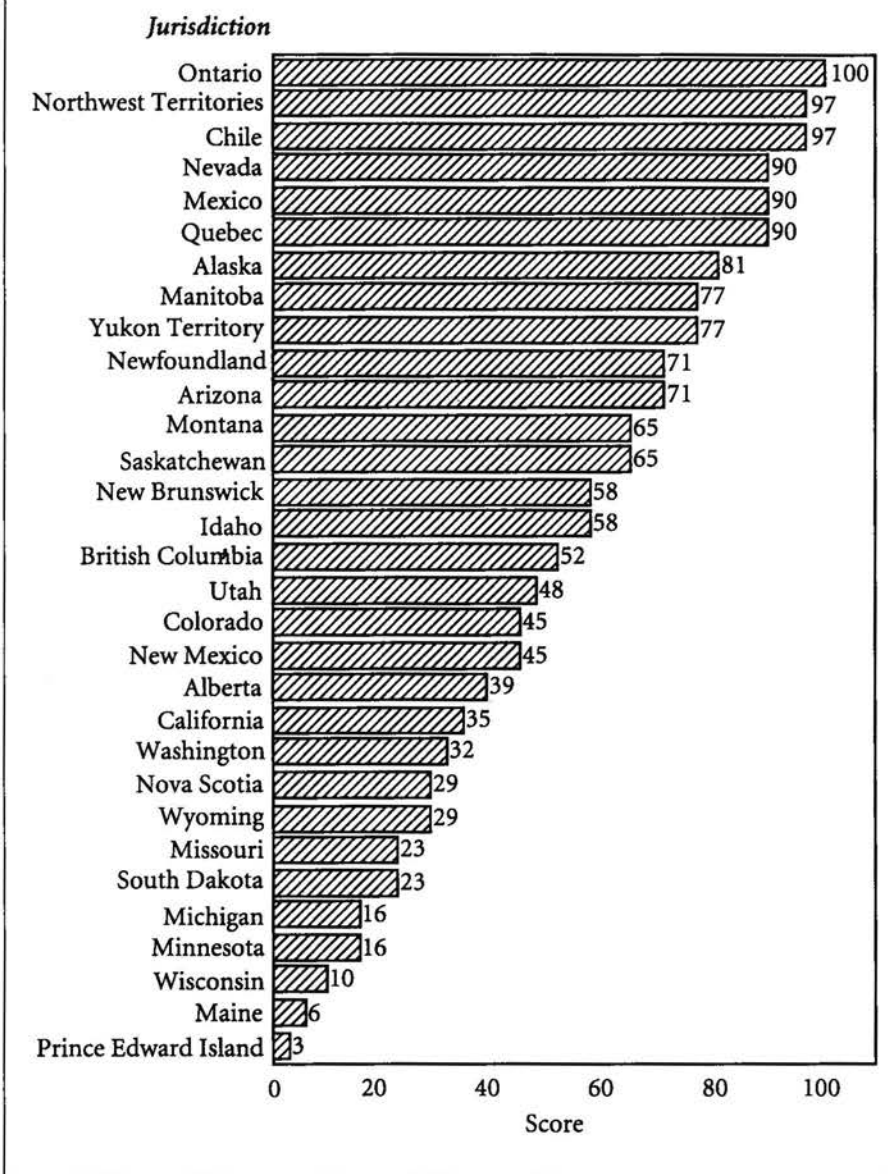


Alberta (82), Utah (80), and Saskatchewan (77). Based on policy, the worst performing jurisdictions in North America are British Columbia (5), Wisconsin (26), the Northwest Territories (27), California (29), and the Yukon Territories (29).

### The Mineral Potential Index

The Mineral Potential Index rates a region's attractiveness based on geology. The five top-rated regions are Ontario, with a perfect score of 100, the Northwest Territories (97), Chile (97), Nevada (90), and Mexico (90). The worst-rated regions on this index include Prince Edward Island (3), Maine (6), Wisconsin (10), Minnesota (16), and Michigan (16).

**Figure 2: North American Mineral Potential Index**



### The Investment Attractiveness Index Shows the Best and Worst Rated Places to Spend Exploration Dollars

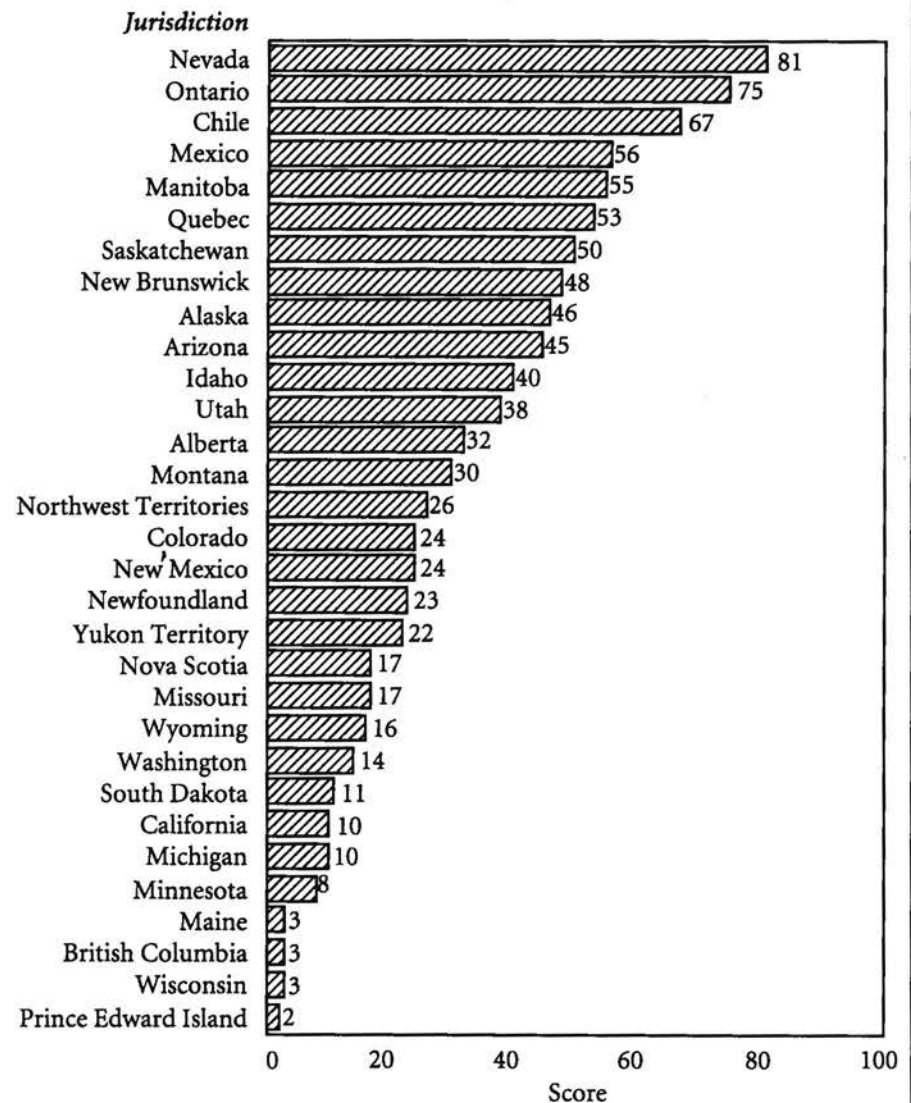
An overall investment attractiveness index for North America is constructed by combining the mineral potential index, which rates regions based on geological attractiveness, and the policy potential index, a composite index that measures the effects of government policies on exploration investment.

The state of Nevada rates highest in North America for overall investment attractiveness with a score of 81 points out of a possible 100. The high rating is a result of the state's high mineral potential rating (90) and its top rating on policy (90). The province of Ontario is the



second most attractive jurisdiction in North America based on its top rating on the mineral potential index (100) and its sixth place on the policy potential index (75). Nevada and Ontario beat third and fourth place contenders Chile (67) and Mexico (56) in terms of investment attractiveness, even though the two latter countries have reputations for attracting high levels of exploration investment based on mineral potential and favourable policy and foreign investment environments. Also placing in the top ten jurisdictions for overall investment attractiveness are Manitoba (55), Quebec (53), Saskatchewan (50), New Brunswick (48), Alaska (46), and Arizona (45).

**Figure 3: North American Investment Attractiveness Index**

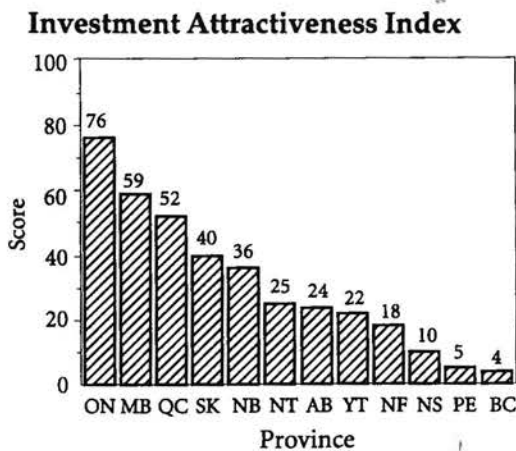
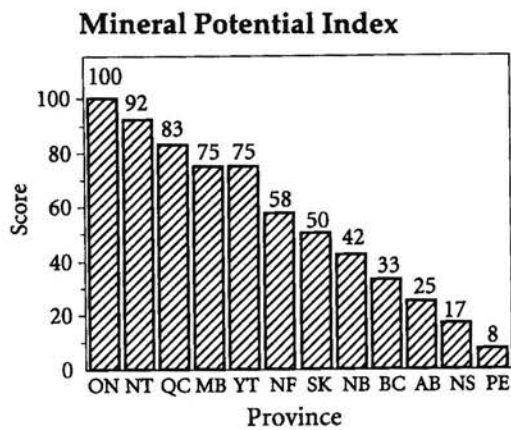
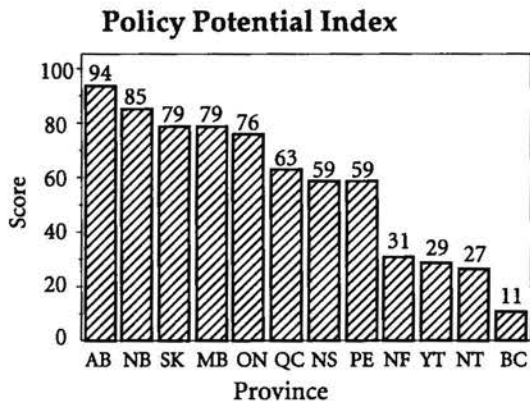


On the other end of the scale, British Columbia, Wisconsin, Maine and Prince Edward Island were rated the least attractive investment areas in North America for new mining investment. Prince Edward Island is effectively excluded because of its lack of mineral potential. British Columbia's low rating on the investment attractiveness index (3) is mainly due to its abysmal performance on the policy potential index, where it received the lowest score of any jurisdiction in North America. Wisconsin's low investment attractiveness score (3) suggest the results of its moratorium on mining and well-publicized anti-mining attitude as well as its low score on mineral potential. Maine did poorly due to its poor performance on the mineral potential index (6) and mediocre performance on policy (52). Other low-scoring jurisdictions include Minnesota (8), Michigan (10), California (10), and South Dakota (11).

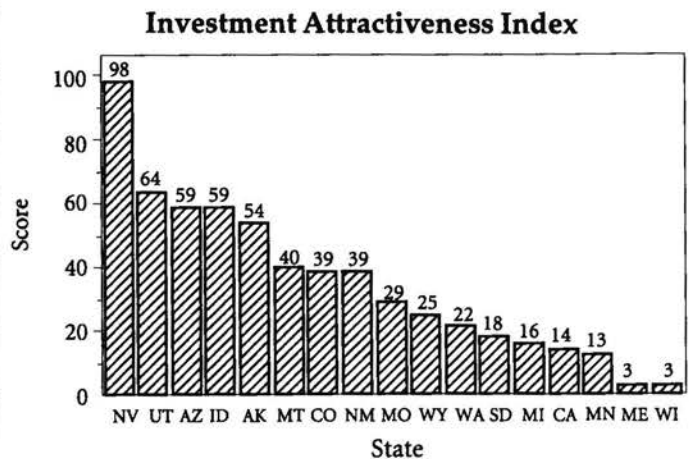
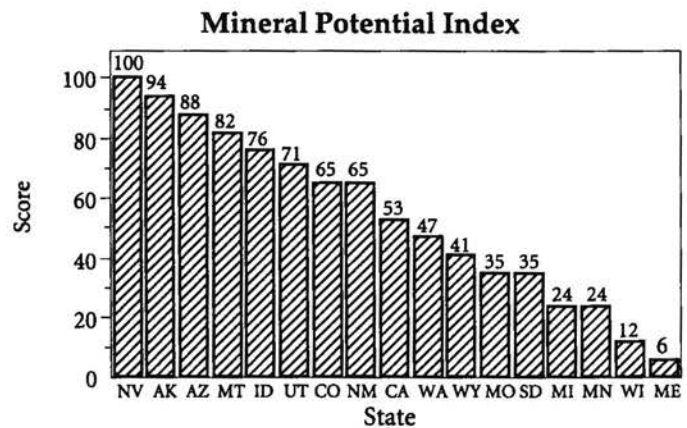
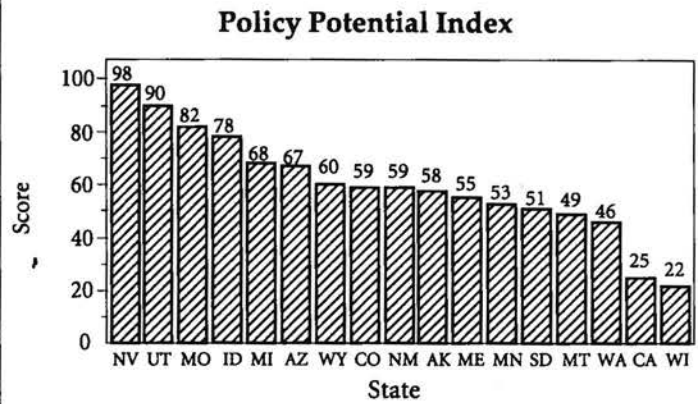
## Country Indices for Canada and the United States

In addition to the North American indices for investment attractiveness, policy potential, and mineral potential, separate indices for Canada and the US are also included in order to make inter-provincial and inter-state comparisons. These indices are illustrated below.

**Figure 4: Canadian Indices**



**Figure 5: US Indices**





## Survey Background

---

The idea to survey mining companies about how government policies and mineral potential affect new exploration investment came from a Fraser Institute conference on mining held in Vancouver in the fall of 1996. At that conference, many industry representatives who had privately been critical of how government policy was deterring investment in the mineral rich province of British Columbia were reluctant to express those same views publicly. Any public criticism of government policy may have negative effects on projects already under way in a region. As a result, governments remain largely unaccountable for the impact of their actions, which can encourage, discourage, or in some cases virtually eliminate new exploration. To add to this problem, new exploration is an indicator of the *future*, not present health of the mining industry in a region. The effects of increasingly onerous regulations, uncertainty about land use, higher levels of taxation, and other policies will rarely be felt immediately as they are far more likely to deter companies looking for new projects than they are to shut down existing operations. The lack of accountability that stems from 1) the lag time between when policy changes are implemented and when economic activity is impeded and job losses occur and 2) industry's reluctance to be publicly critical of governments is cause of concern for those who would like to see a healthy future for the mining industry in their jurisdictions.

In order to address this problem and assess how various public policy factors influence companies' decisions to invest in different regions, The Fraser Institute began conducting an anonymous survey of senior and junior mining companies in 1997.

# Survey Results

## Section I: Investment Overview

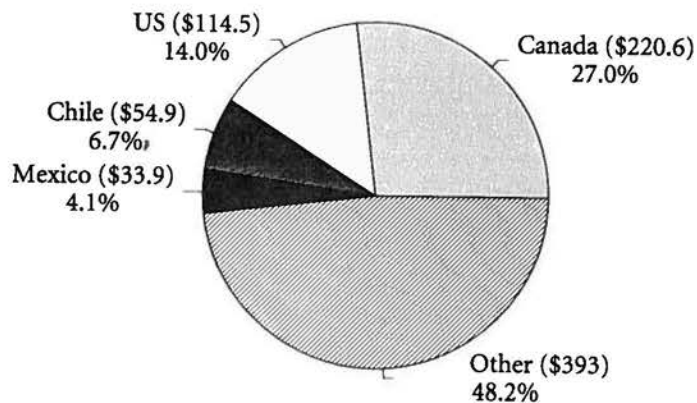
### Senior Mining Companies Spend Most of Their Exploration Budgets Outside of North America

In 1997, senior mining companies representing exploration budgets totalling over US\$817 million spent 55 percent of their budgets outside of North America. Senior companies spent 27 percent of their budgets in Canada, 14 percent of their budgets in the United States, and 4 percent in Mexico.

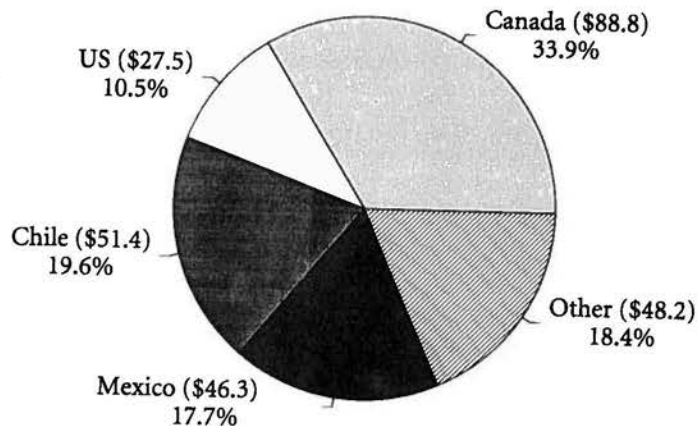
### Junior Companies Still Favour North America

Junior mining companies surveyed represent exploration expenditures of US\$264 million, 62 percent of which was invested in North America, 33.8 percent in Canada, 10.5 percent in the United States, and 17.7 percent in Mexico.

**Figure 6: Senior Mining Company Exploration Expenditures in 1997 (\$US millions)**



**Figure 7: Junior Mining Company Exploration Expenditures in 1997 (\$US millions)**



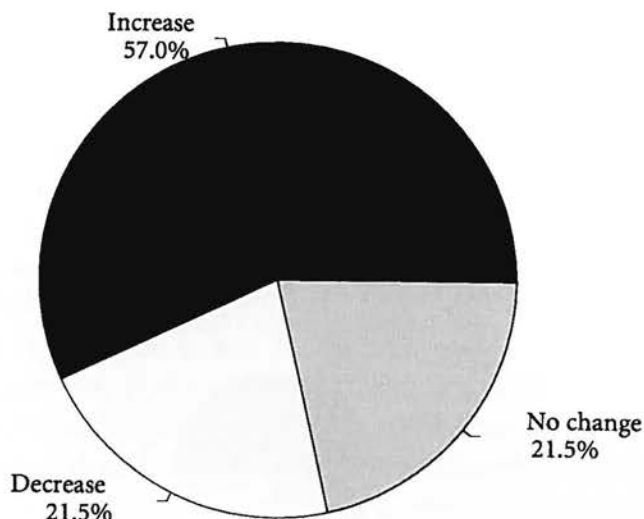
## Section II: Exploration Investment Trends

### More than 50 Percent of Mining Companies Surveyed Indicate an Increase in their Worldwide Exploration Budgets Over the Past 5 years, but Most Indicate a Reduction in the Proportion Spent in Canada and the United States

While the majority of companies surveyed (57 percent), indicate an increase in their total exploration budgets between 1992 and 1997, 54 percent indicate a decrease in the *proportion* of their budgets spent in the US, and 50 percent indicate a decrease in the proportion of budgets spent in Canada. Chile and Mexico, on the other hand, are attracting higher levels of investment. Sixty-eight percent of the companies surveyed indicate an increase in the proportion of their budgets spent in Mexico, and 60 percent indicate an increase in the proportion of their budgets spent in Chile. Countries outside of North America and Chile also appear attractive; 80 percent of participating companies report an increase in the proportion of their budgets going to other countries.

Survey respondents were asked what made Chile so attractive to mining companies. While geological potential was recognized, the government's positive attitude and political and social climate towards mining, the lack of onerous regulations, quicker permitting, and a "healthy exploration environment" were also frequent comments. One CEO from a junior

**Figure 8: Companies Indicating a Change in Their Total (Worldwide) Exploration Budgets Between 1992 and 1997**

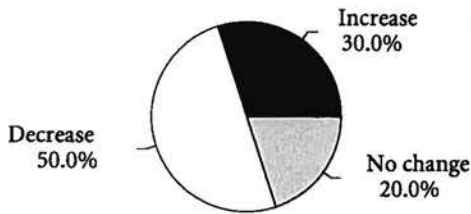


company simply said "Everything" is right in Chile while "Canada is not open for business. Period."

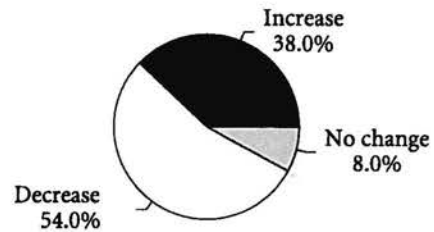
When company representatives were asked to relate positive or negative experiences about mining in Canada and the US, many expressed frustrations. Costly obstacles to developing a mine, including inefficient regulatory processes, permitting uncertainty, delays, negative attitudes towards mining, and an obsessive and extremist approach towards environmental concerns were identified in both Canada and the US.

**Figure 9: Changes in Exploration Investment**

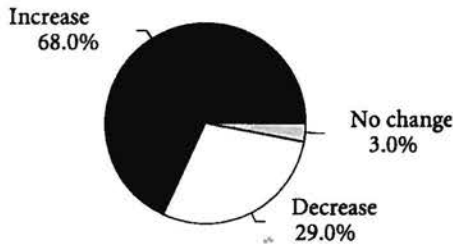
**Figure 9a: Companies Indicating a Change in the Proportion of Their Exploration Budgets Allocated to Canadian Exploration Investment Between 1992 and 1997**



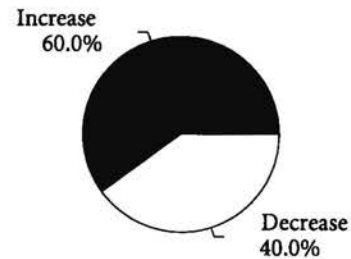
**Figure 9b: Companies Indicating a Change in the Proportion of Their Exploration Budgets Allocated to US Exploration Investment Between 1992 and 1997**



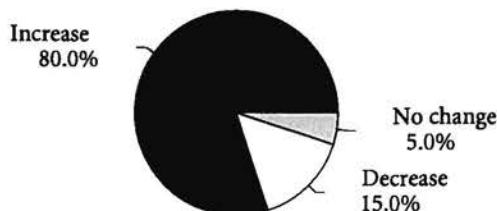
**Figure 9c: Companies Indicating a Change in the Proportion of Their Exploration Budgets Allocated to Exploration Investment in Mexico Between 1992 and 1997**



**Figure 9d: Companies Indicating a Change in the Proportion of Their Exploration Budgets Allocated to Exploration Investment in Chile Between 1992 and 1997**



**Figure 9e: Companies Indicating a Change in the Proportion of Their Exploration Budgets Allocated to Exploration Investment in All Other Jurisdictions Between 1992 and 1997**



### **Section III**

## **Investment Climate: North American Ratings**

### **Methodology**

The following section provides an analysis of ten factors that determine the ability of jurisdictions in North America to attract exploration investment. Companies were asked to rate for each jurisdiction the following ten factors on a scale of 1 to 6.

- mineral potential
- taxation regime
- uncertainty concerning the administration/interpretation/enforcement of existing regulations
- environmental regulations
- regulatory duplication and inconsistencies
- uncertainty concerning native land claims
- uncertainty concerning what areas will be protected as wilderness or parks
- infrastructure
- labour regulation/employment agreements
- socio-economic agreements/community development conditions

### **Scale**

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

Figure 10 shows the percentage of respondents who say that mineral potential either "encourages exploration investment" or is "not a deterrent to exploration investment." Figures 11 to 19 show the percentage of respondents who rate various policy factors as strong deterrents to exploration investment. This includes survey respondents who rate the factor a "strong deterrent to exploration investment" and those who "would not pursue exploration investment in the region due to this factor." Figures 20, 21, and 22 give the composite ratings for mineral potential, policy attractiveness, and combined mineral potential and policy attractiveness in North America. These figures are followed by figures 23 to 28, indices for Canada and the United States, respectively. Tables 1 and 2 summarize the results. Tables 3 and 4 summarize the percentage of respondents who rate the various factors as "encouraging exploration investment" and "not a deterrent to exploration investment."





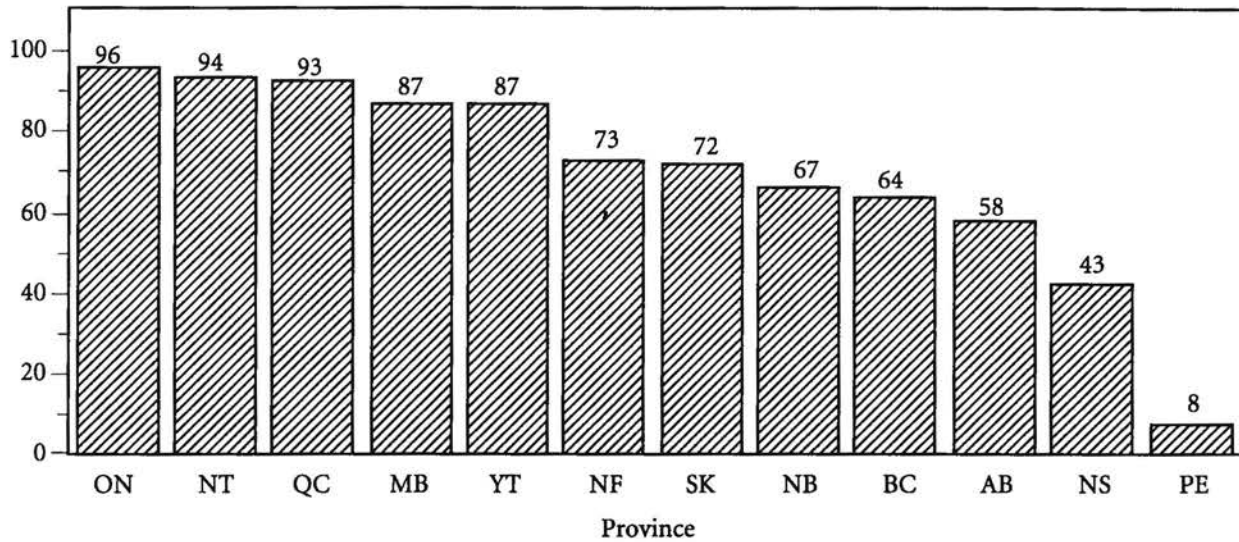
## Graphical Results

## Figure 10: Mineral Potential

In terms of mineral potential, Ontario, the Northwest Territories, Chile, Mexico, Nevada, and Quebec were the top-rated jurisdictions. Prince Edward Island is the worst rated jurisdiction.

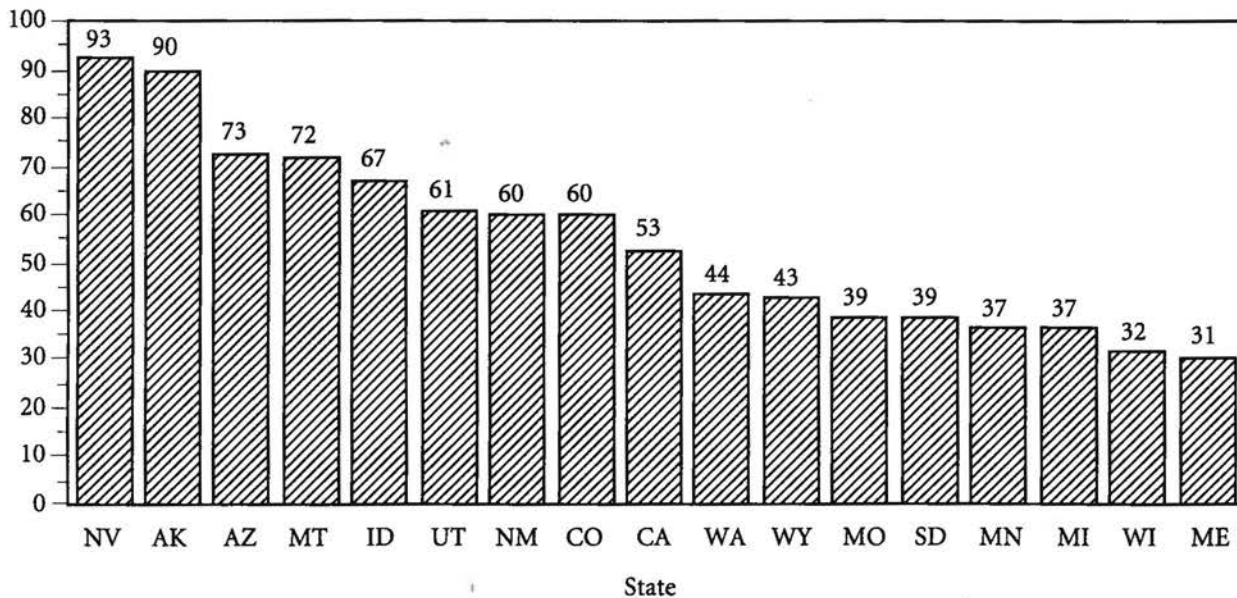
### Figure 10a: Mineral Potential (Canada)

Percent Who Indicate Mineral Potential Encourages or is Not a Deterrent to Exploration

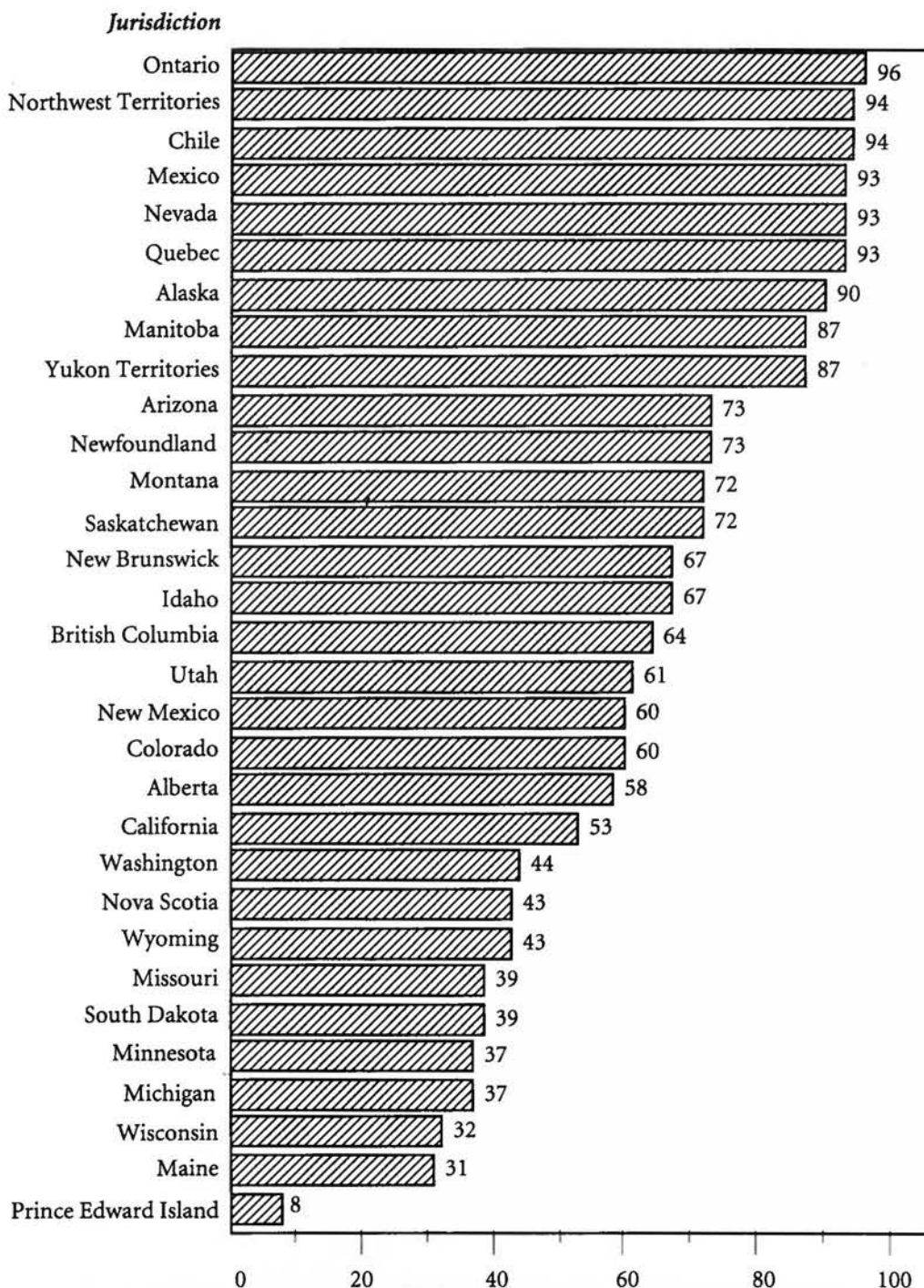


### Figure 10b: Mineral Potential (US)

Percent Who Indicate Mineral Potential Encourages or is Not a Deterrent to Exploration



**Figure 10c: Mineral Potential (North America)**



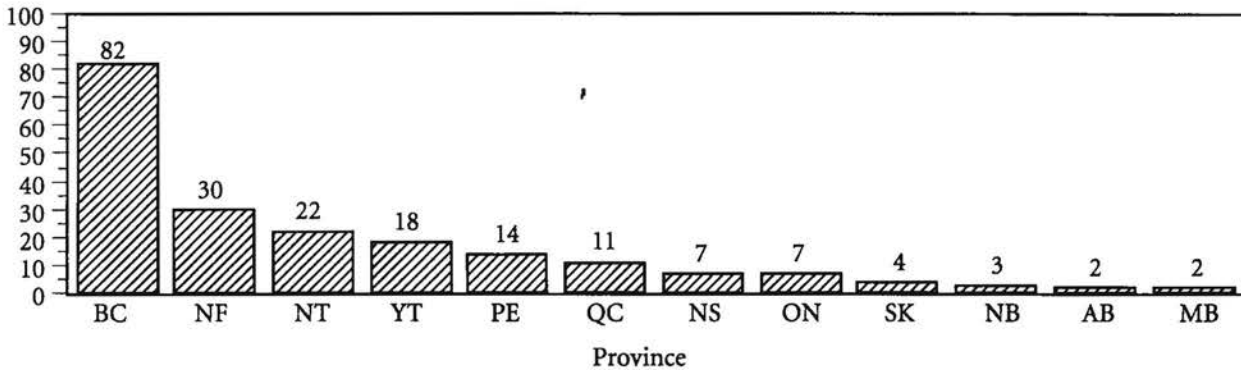
Percent Who Indicate that Mineral Potential Encourages or is Not a Deterrent to Exploration

## Figure 11: Uncertainty Concerning the Administration/Interpretation/Enforcement of Existing Regulations

Uncertainty concerning how existing regulations will be administered, interpreted, and enforced is a strong deterrent to new exploration investment across the country. In the worst scoring jurisdictions, British Columbia and Wisconsin, 82 percent and 78 percent of respondents respectively indicated that this was a strong deterrent to new exploration investment. The best rated areas were the provinces of Alberta and Manitoba, followed closely by New Brunswick, Alaska, Saskatchewan and Nevada.

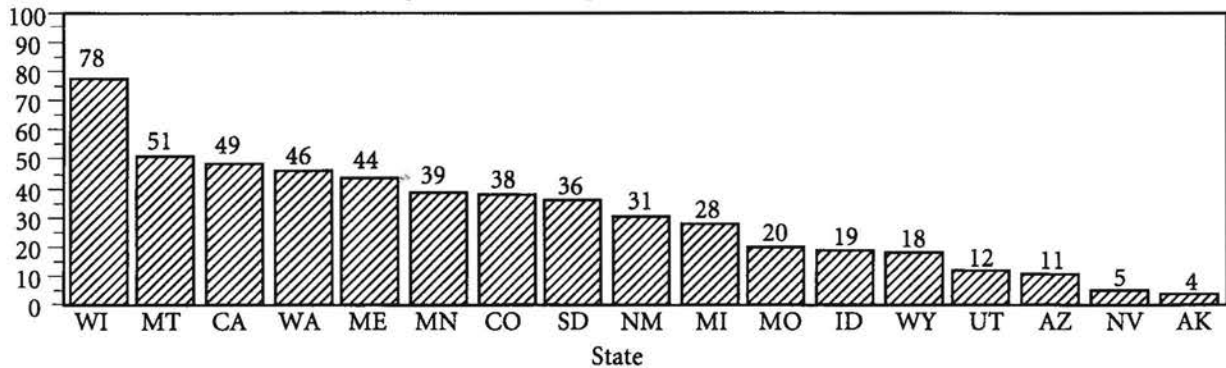
**Figure 11a: Uncertainty Concerning the Administration, Interpretation and Enforcement of Existing Regulations (Canada)**

Percent Who Rate the Factor a Strong Deterrent to Exploration



**Figure 11b: Uncertainty Concerning the Administration, Interpretation and Enforcement of Existing Regulations (US)**

Percent Who Rate the Factor a Strong Deterrent to Exploration

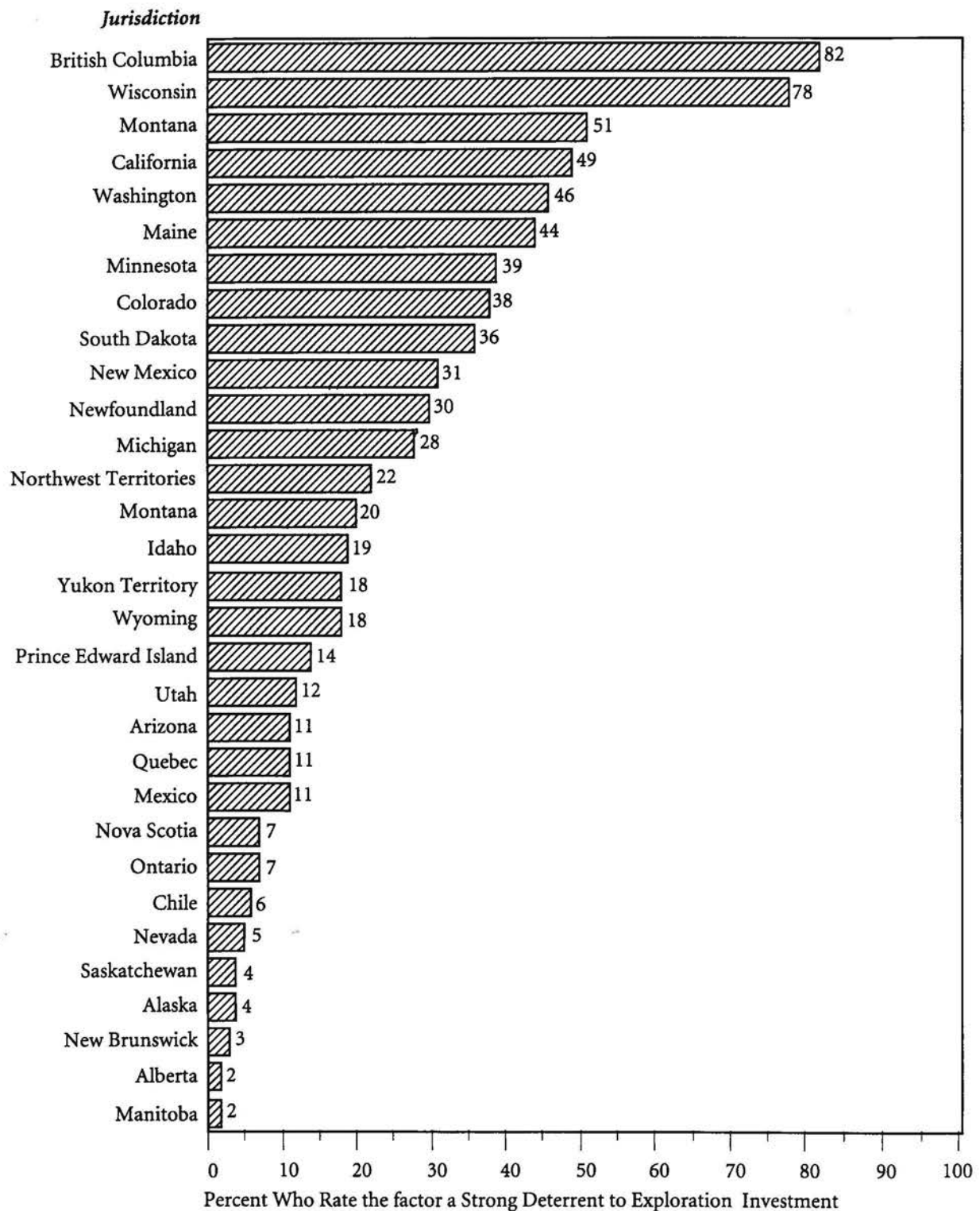


*"A company in order to sit down and play the game must know the rules and they must be stable. The commodity and general market is enough to worry about..."*

—President of a junior mining company



**Figure 11c: Uncertainty Concerning the Administration, Interpretation and Enforcement of Existing Regulations (North America)**

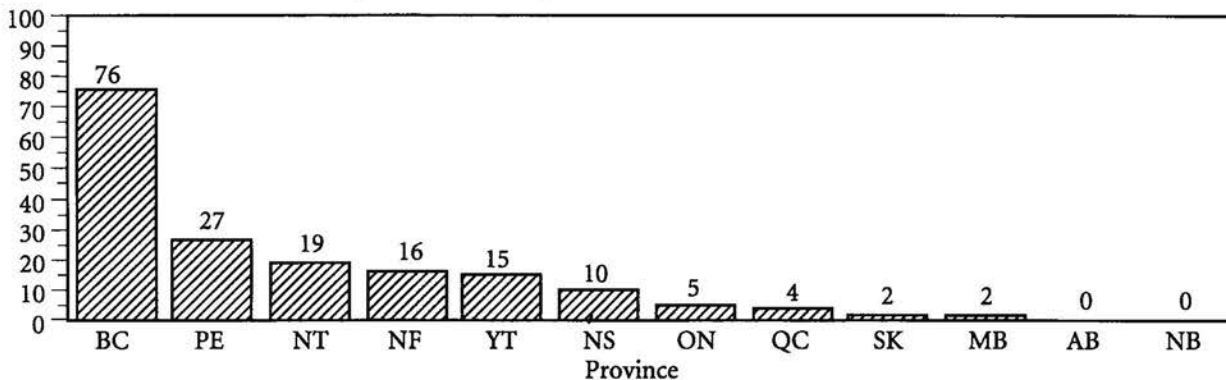


## Figure 12: Environmental Regulations

Seventy-eight percent of respondents indicate that environmental regulations are a strong deterrent to new exploration; 76 percent indicate they are a deterrent in British Columbia. No respondents indicate that environmental regulations are a deterrent in Alberta or New Brunswick.

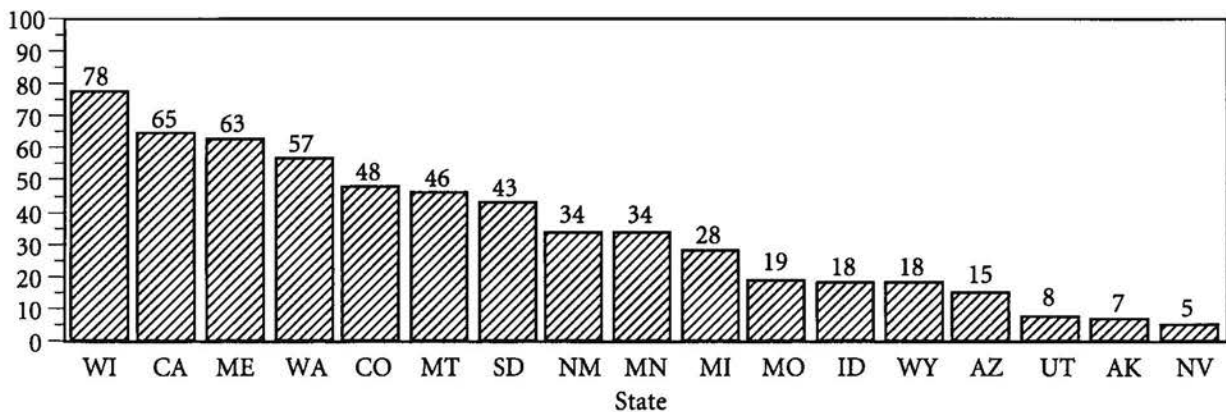
### Figure 12a: Environmental Regulations (Canada)

Percent Who Rate factor a Strong Deterrent to Exploration



### Figure 12b: Environmental Regulations (US)

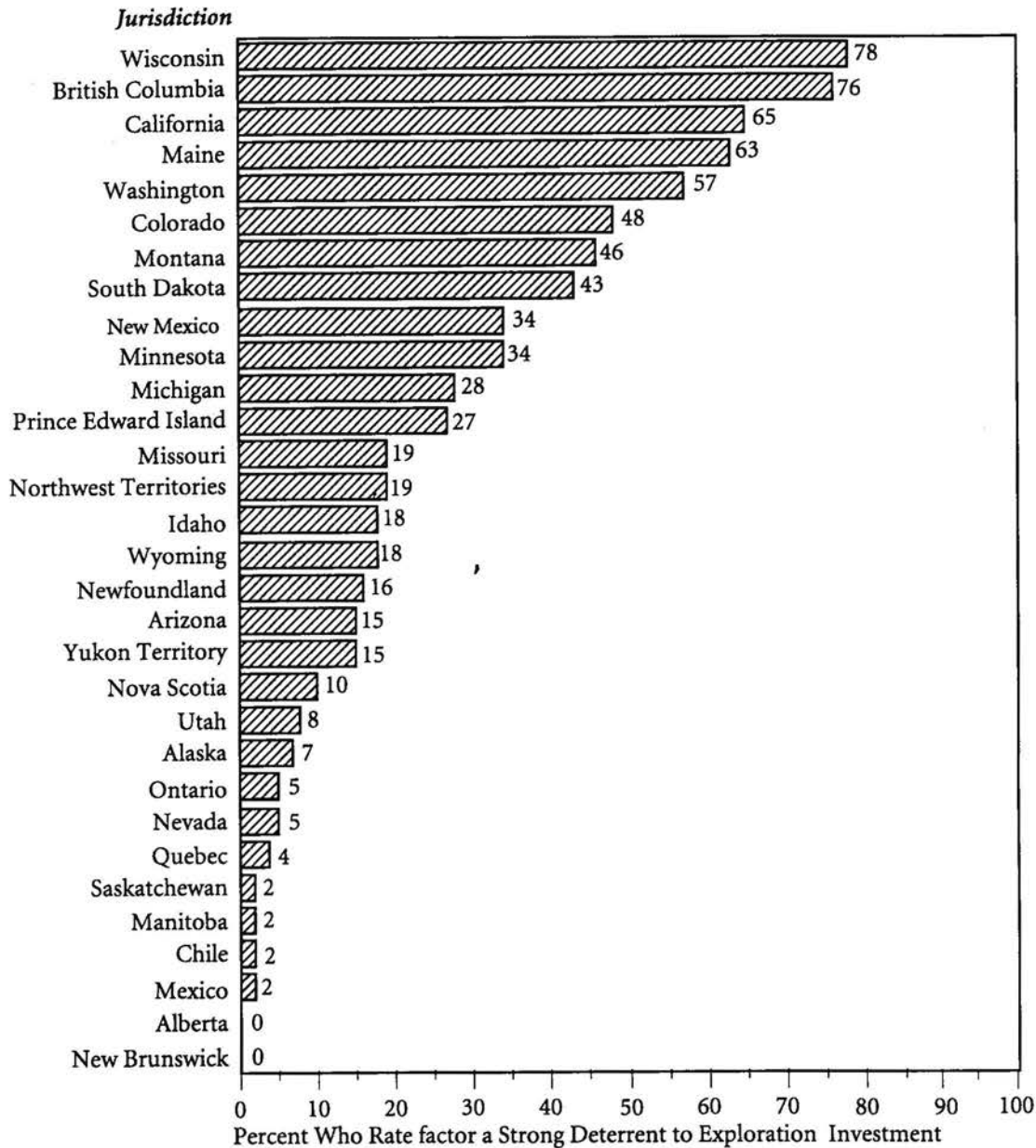
Percent Who Rate factor a Strong Deterrent to Exploration



*“Increasingly onerous environmental regulations and interpretations of regulations are already restricting exploration in some jurisdictions and terrains, even where good science and engineering could likely overcome any threats actual mining might pose. This trend is likely to increase. Public attitudes towards mining, in general, do not recognize the need to supply metals and minerals to the world.”*

—Vice President of Exploration of a Senior Mining Company

**Figure 12c: Environmental Regulations (North America)**



*“Almost all jurisdictions seem to be unable to distinguish between harmful chemical compounds or elements, and benign compounds which pose no threat. The mere presence of an element in any form, even benign compounds, is often regulated stringently, if it contains an element that may be toxic in some other form.*

*Good science is not usually an argument to be applied.”*

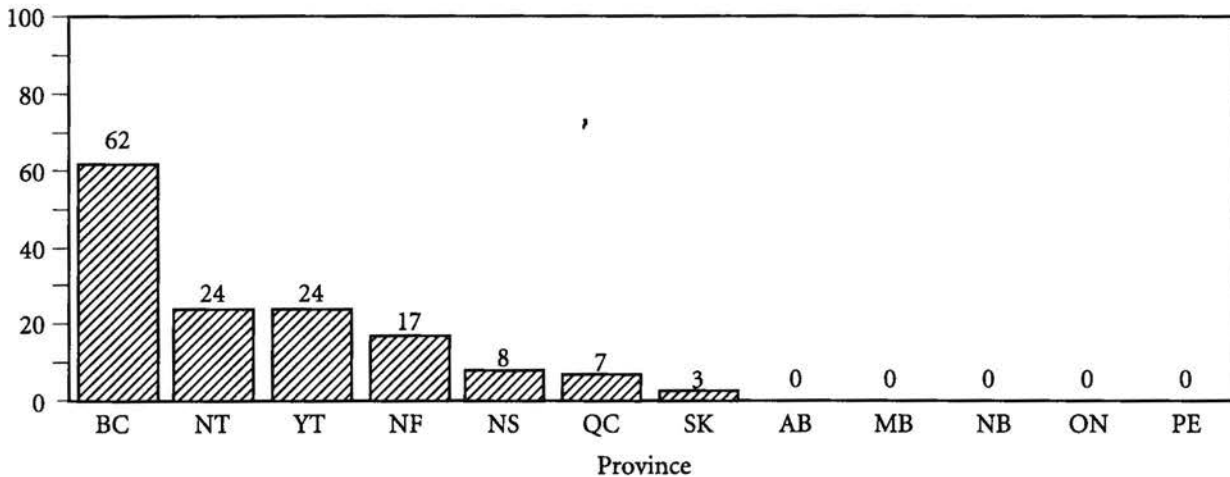
—Vice President of Exploration for a senior mining company

### Figure 13: Regulatory Duplication and Inconsistencies

British Columbia is the worst rated jurisdiction in North America with 62 percent of respondents indicating that regulatory duplication is a strong deterrent to new investment. Wisconsin is the worst rated US jurisdiction with 46 percent of respondents indicating that regulatory duplication is a strong deterrent there. The best rated areas in North America are Prince Edward Island, Ontario, New Brunswick, Manitoba, and Alberta with no respondents indicating that regulatory duplication is a strong deterrent to new investment. The best rated American states are Alaska and Nevada.

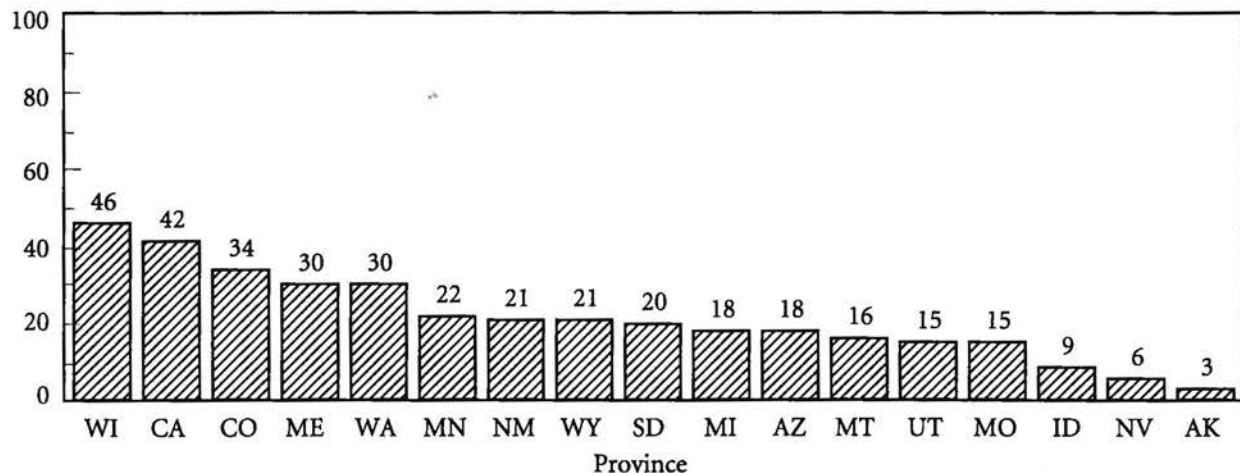
**Figure 13a: Regulatory Duplication and Inconsistencies (Canada)**

Percent Who Rate Factor a Strong Deterrent to Exploration Investment

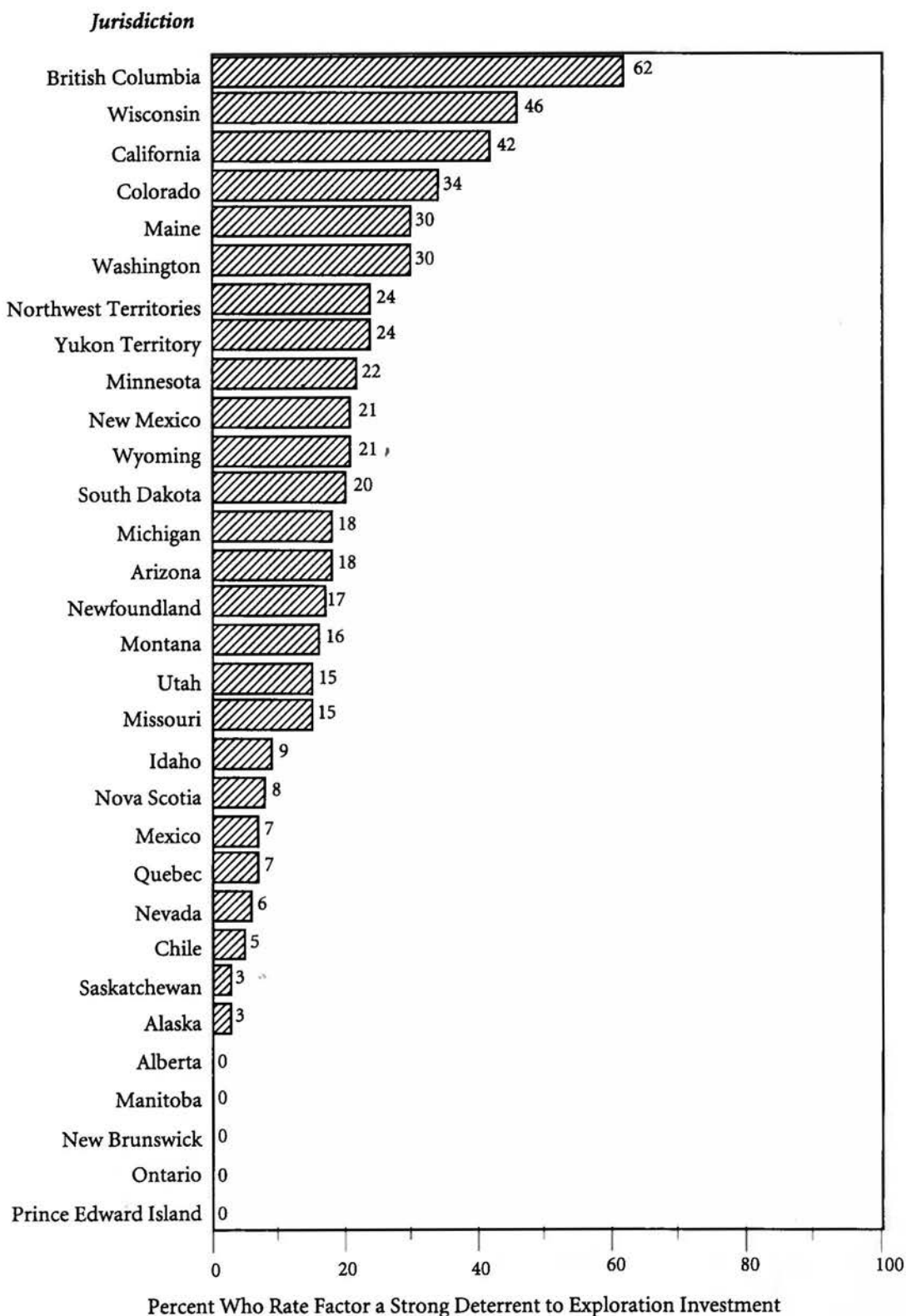


**Figure 13b: Regulatory Duplication and Inconsistencies (US)**

Percent Who Rate Factor a Strong Deterrent to Exploration Investment



**Figure 13c: Regulatory Duplication and Inconsistencies  
(North America)**



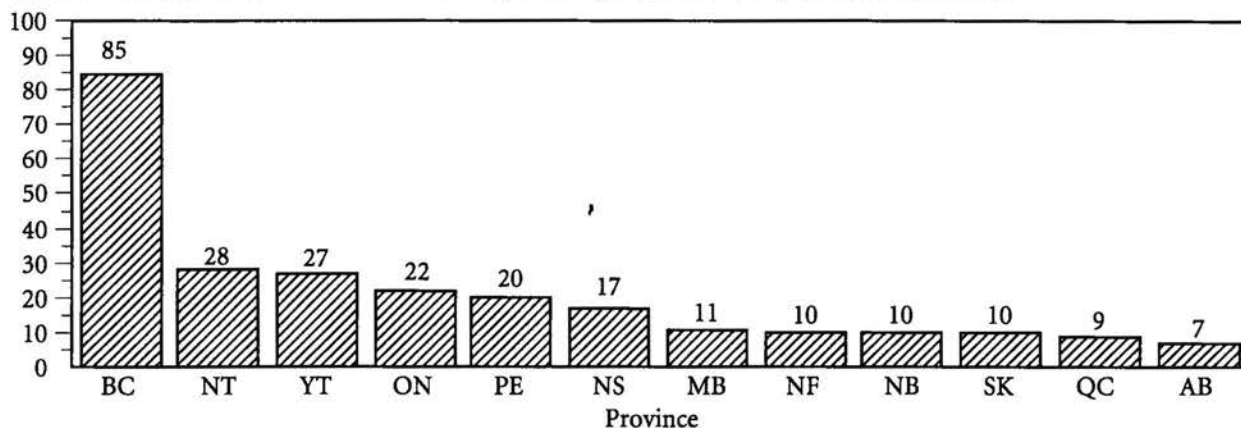


## Figure 14: Uncertainty Concerning What Areas Will be Protected as Wilderness or Parks

Uncertainty concerning protected areas is, to varying degrees, a concern across North America. British Columbia has the worst rating on this factor with 85 percent of respondents indicating it is a strong deterrent. California, the next worst rated area, has 49 percent of companies indicating protected areas uncertainty is a strong deterrent to investment.

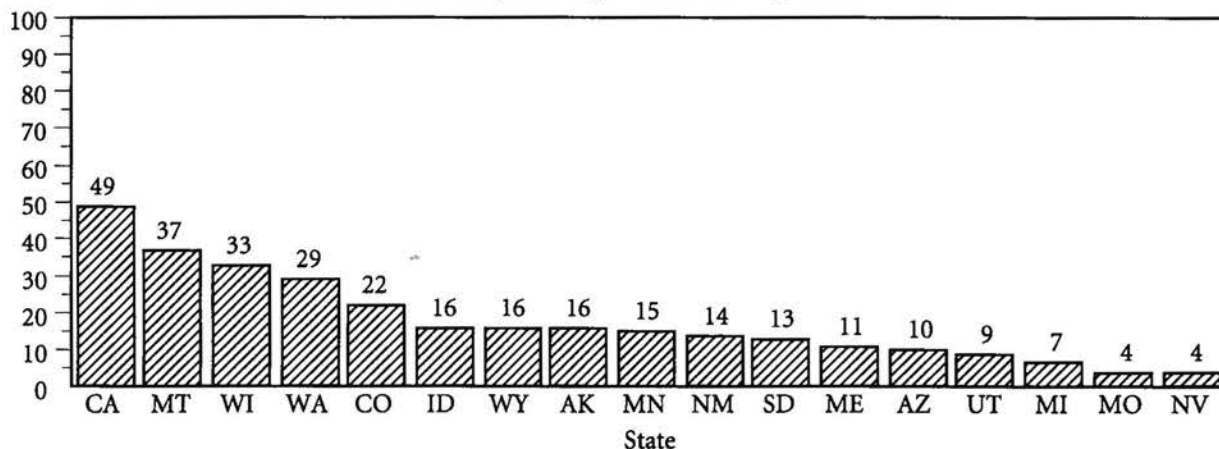
### Figure 14a: Uncertainty Concerning What Areas will be Protected as Wilderness or Parks (Canada)

Percent Who Rate Protected Areas Uncertainty a Strong Deterrent to Exploration Investment



### Figure 14b: Uncertainty Concerning What Areas will be Protected as Wilderness or Parks (US)

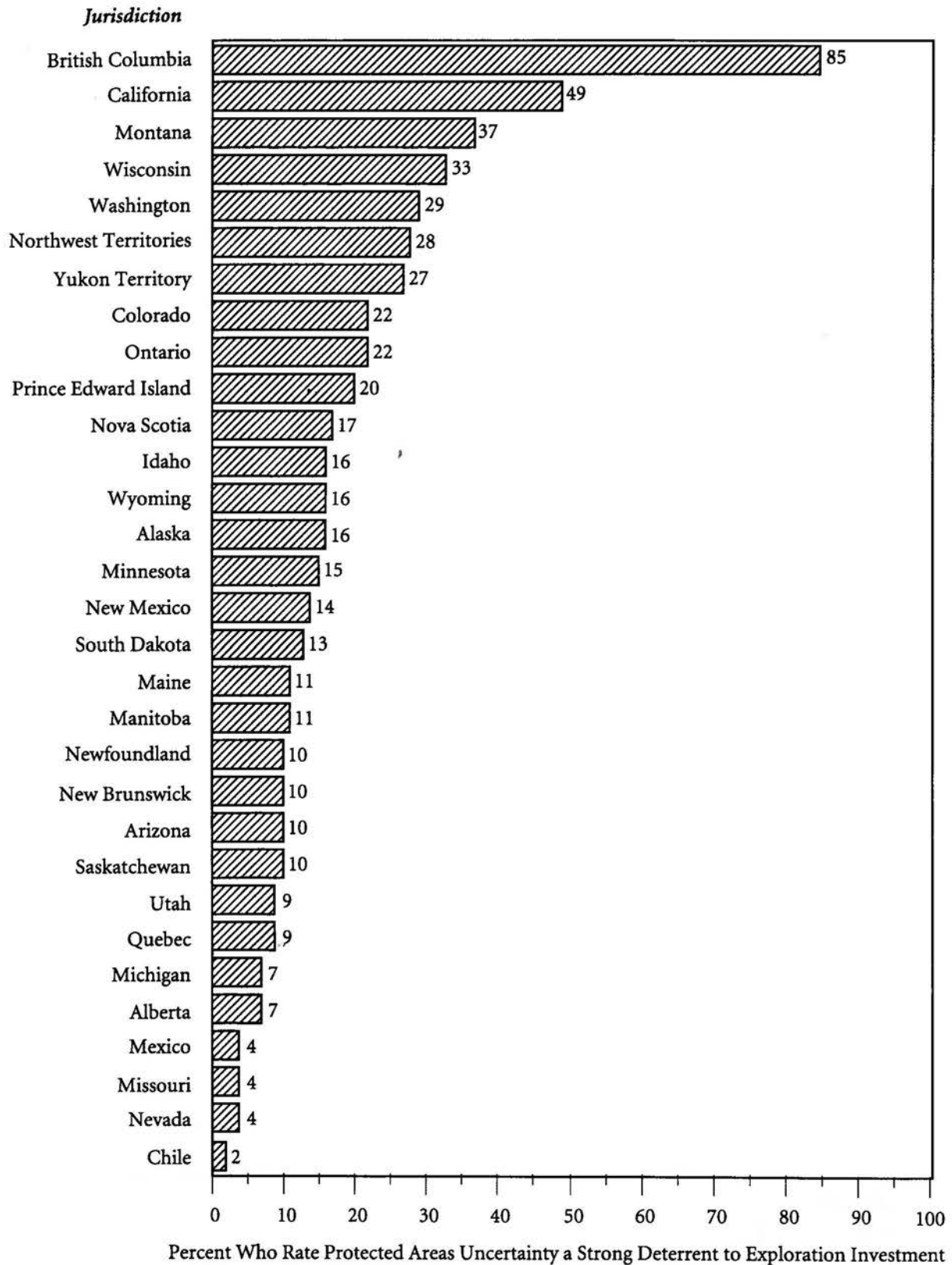
Percent Who Rate Protected Areas Uncertainty a Strong Deterrent to Exploration Investment



*“The insane expropriations of Windy Craggy and Crowne Butte [outside Yellowstone] ... make you wonder why you’re in business.”*

—President & CEO of a junior mining company

**Figure 14c: Uncertainty Concerning What Areas will be Protected as Wilderness or Parks (North America)**

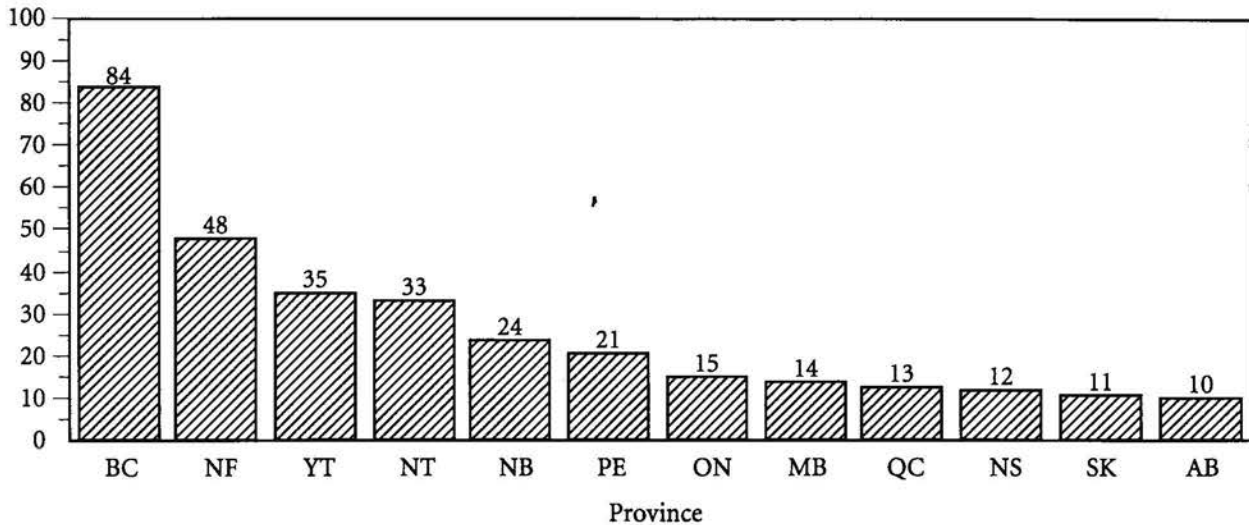


## Figure 15: Uncertainty Concerning Native Land Claims

Uncertainty concerning land claims is primarily a Canadian concern. Areas that are most likely not to attract new investment as a result of land claims are British Columbia, Newfoundland, Yukon Territory, and the Northwest Territories.

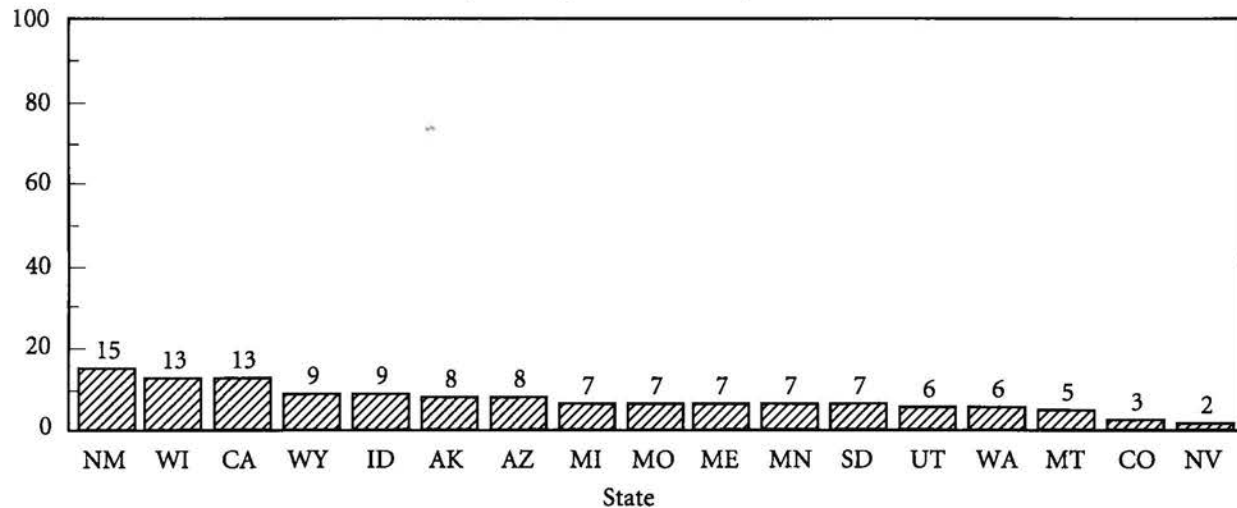
### Figure 15a: Native Land Claims Uncertainty (Canada)

Percent Who Rate Land Claims Uncertainty a Strong Deterrent to Exploration Investment

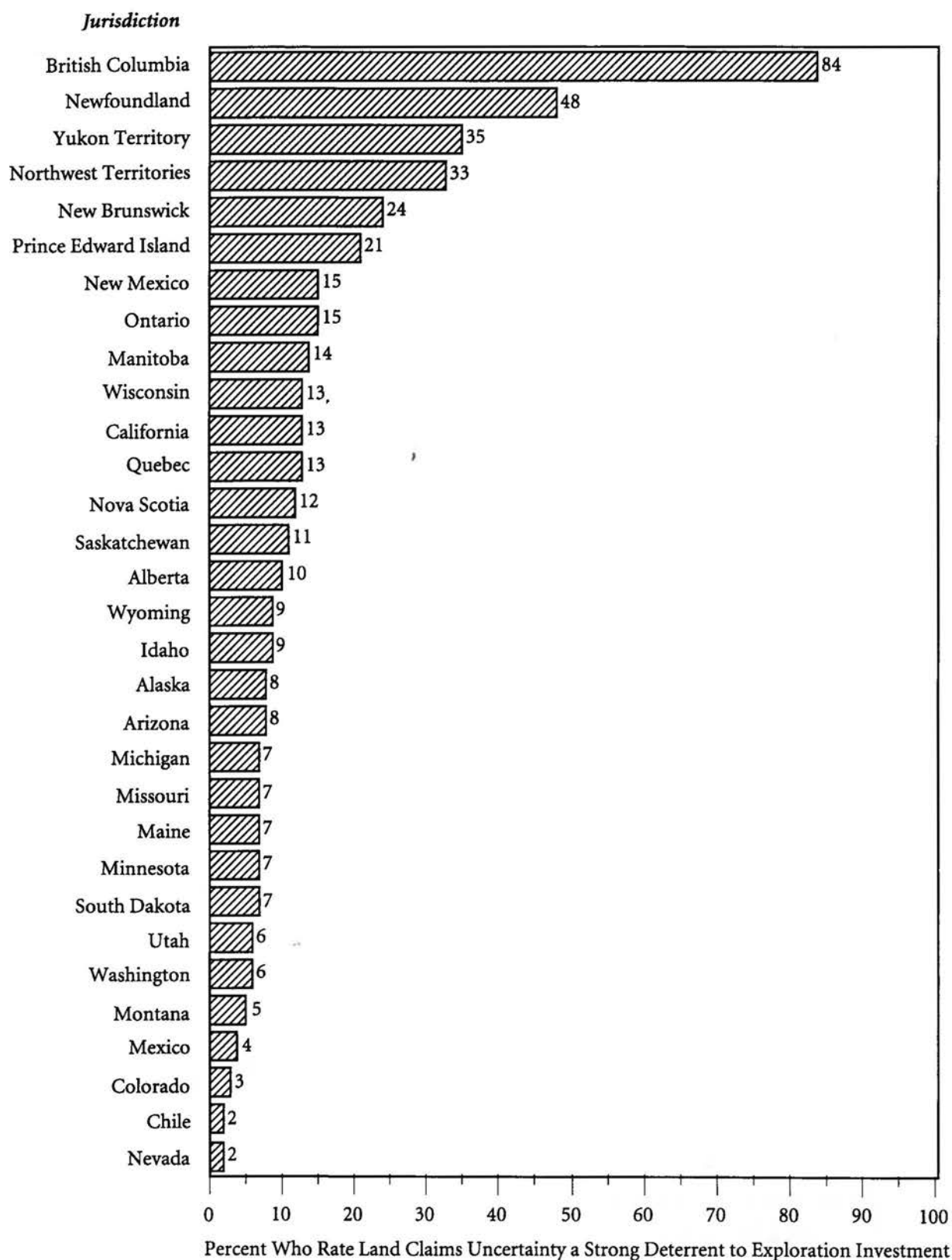


### Figure 15b: Native Land Claims Uncertainty (US)

Percent Who Rate Land Claims Uncertainty a Strong Deterrent to Exploration Investment



**Figure 15c: Native Land Claims Uncertainty (North America)**

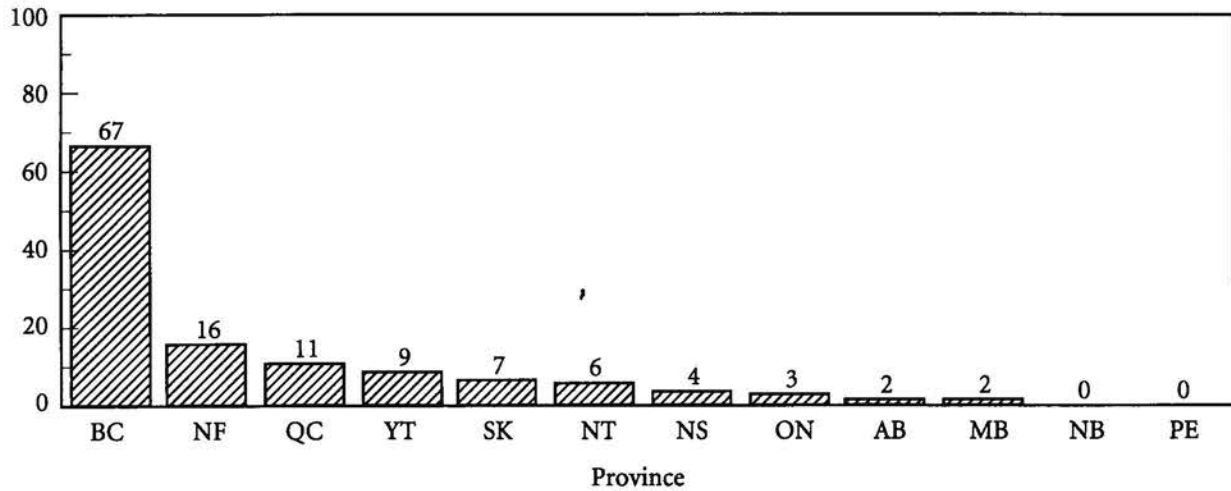


## Figure 16: Taxation Regime

On the basis of taxation, British Columbia is considered the worst jurisdiction to undertake new exploration, with 67 percent of survey respondents indicating the tax regime is a strong deterrent to exploration investment.

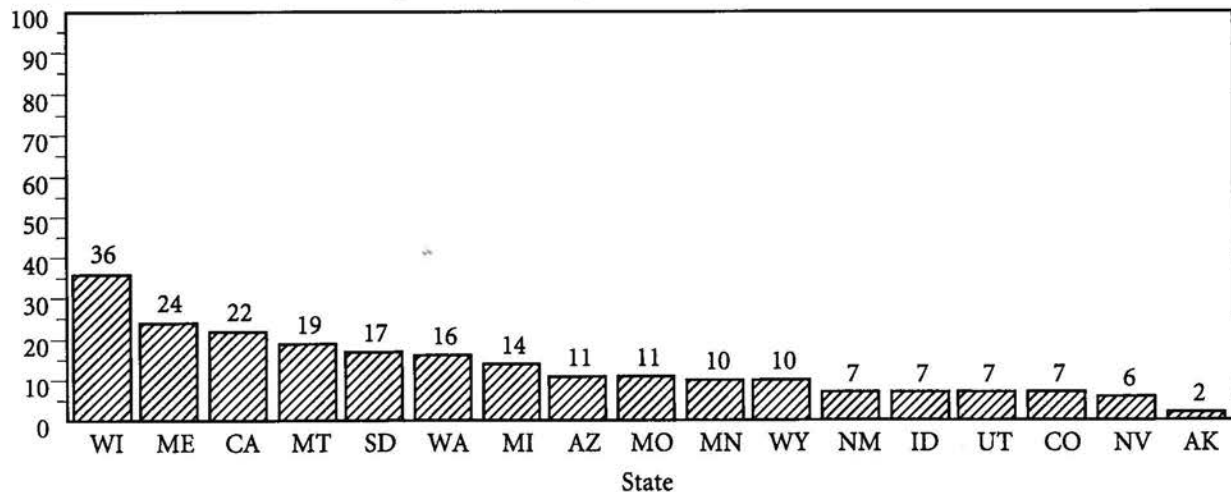
### Figure 16a: Taxation (Canada)

Percent Who Rate Taxation a Strong Deterrent to Exploration



### Figure 16b: Taxation (US)

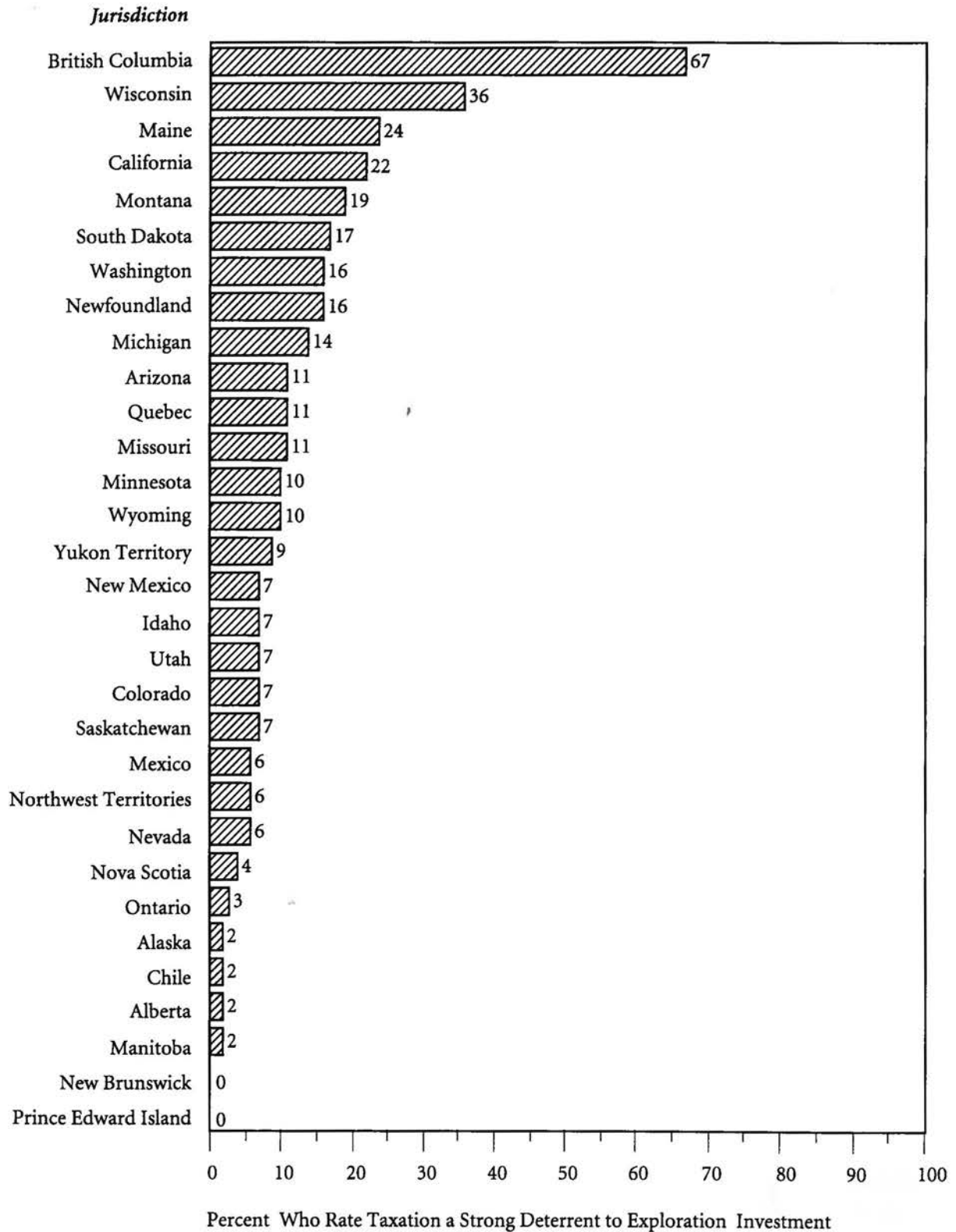
Percent Who Rate Taxation a Strong Deterrent to Exploration



***"Taxation CAN change the economic potential of a discovery!"***

**—Vice President of Exploration for a senior mining company**

**Figure 16c: Taxation (North America)**



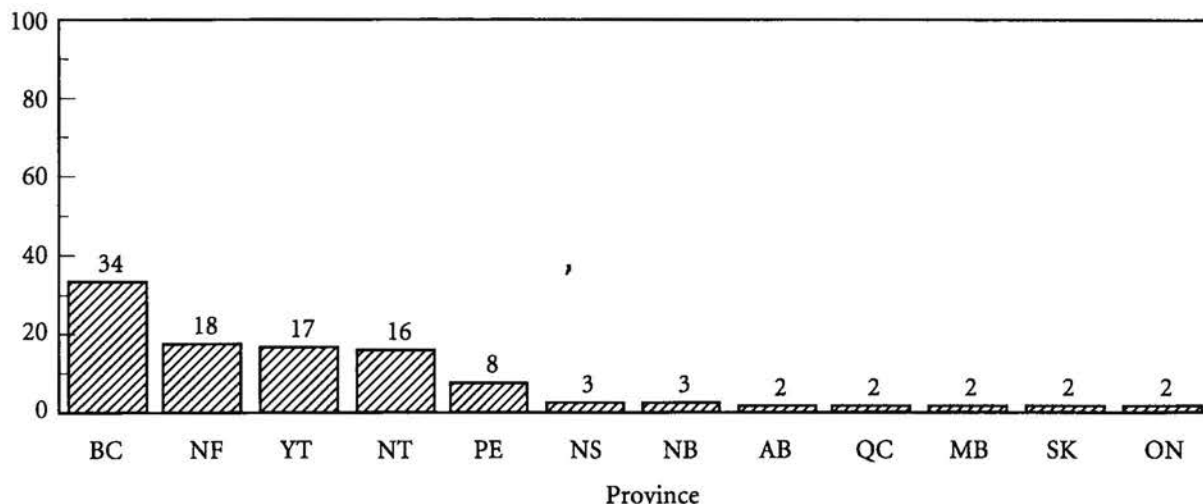


## Figure 17: Socio-economic Agreements

Thirty-four percent of respondents believe that socio-economic agreements, including community development agreements, are a strong deterrent to exploration investment in British Columbia. Such agreements are not an issue in Idaho, Michigan, Minnesota, Missouri, Nevada, or Utah.

### Figure 17a: Socio-economic Agreements (Canada)

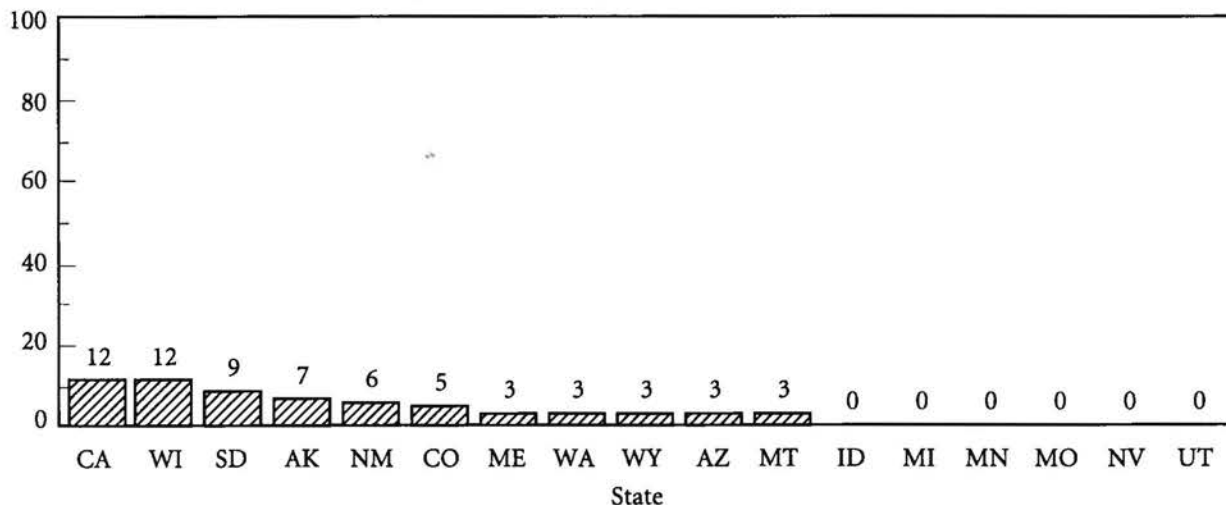
Percent Who Rate Socio-economic Agreements a Strong Deterrent to Exploration Investment



Note: Socio-economic agreements include employment agreements and community development.

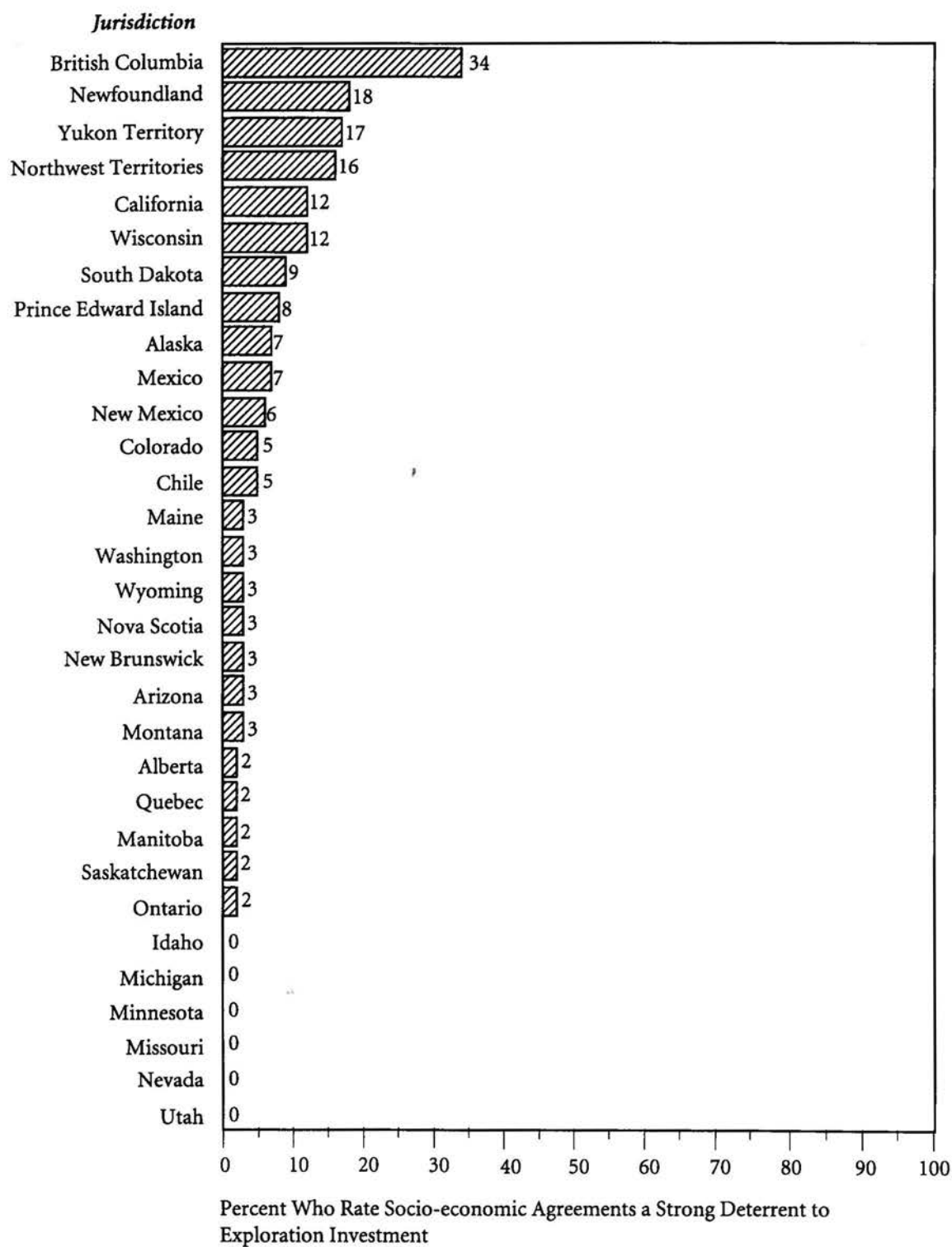
### Figure 17b: Socio-economic Agreements (US)

Percent Who Rate Socio-economic Agreements a Strong Deterrent to Exploration Investment



Note: Socio-economic agreements include employment agreements and community development.

**Figure 17c: Socio-economic Agreements (North America)**



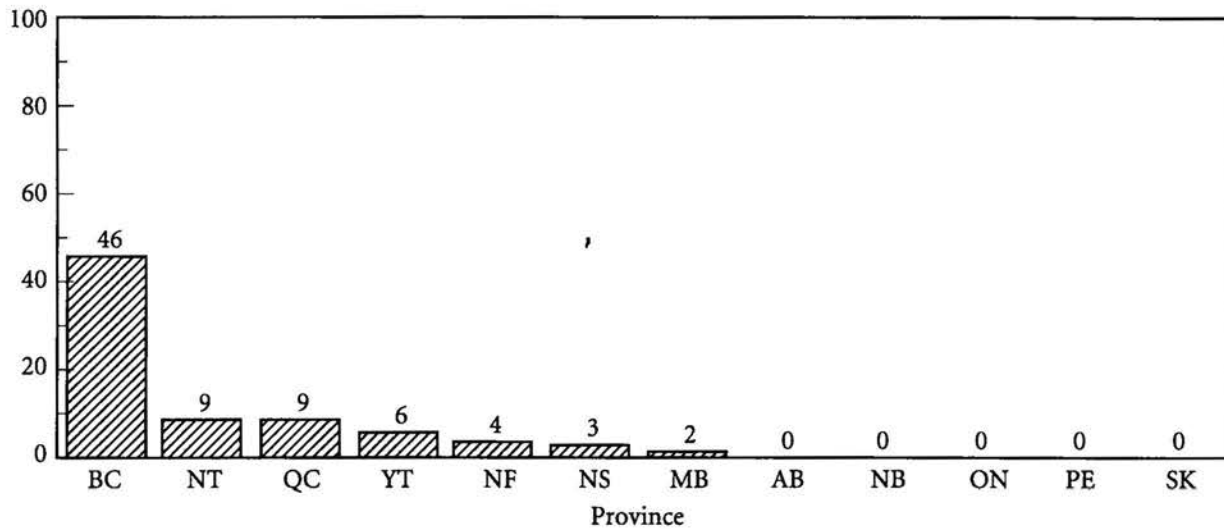
Note: Socio-economic agreements include employment agreements and community development.

## Figure 18: Labour Regulation/Employment Agreements

In most areas, labour regulation and employment are not considered serious issues. The exception is British Columbia where 46 percent of respondents indicate it is a strong deterrent to exploration investment.

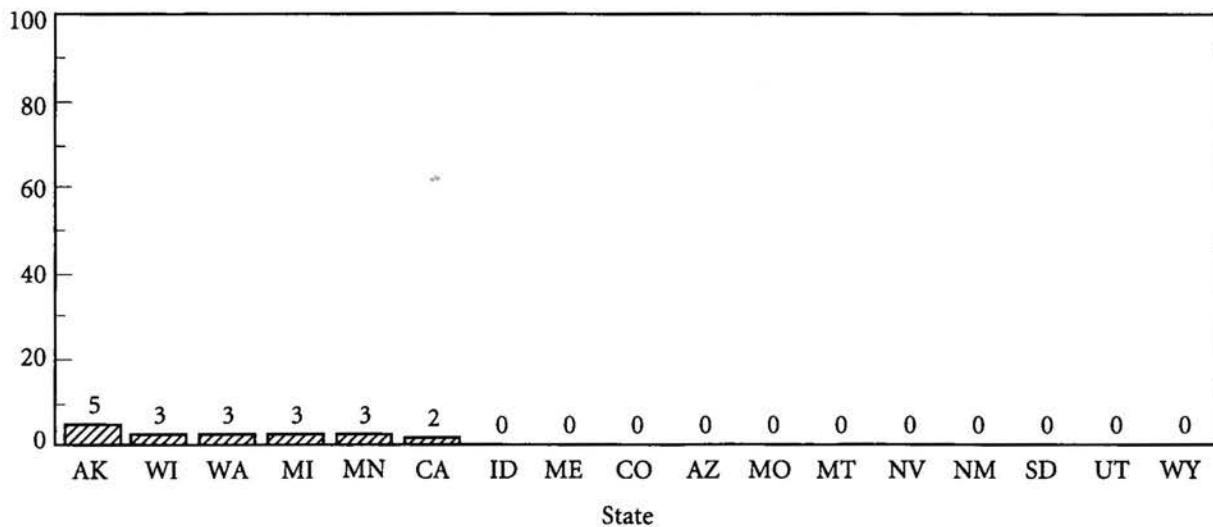
### Figure 18a: Labour Regulation (Canada)

Percent Who Rate Labour Regulation a Strong Deterrent to Exploration Investment

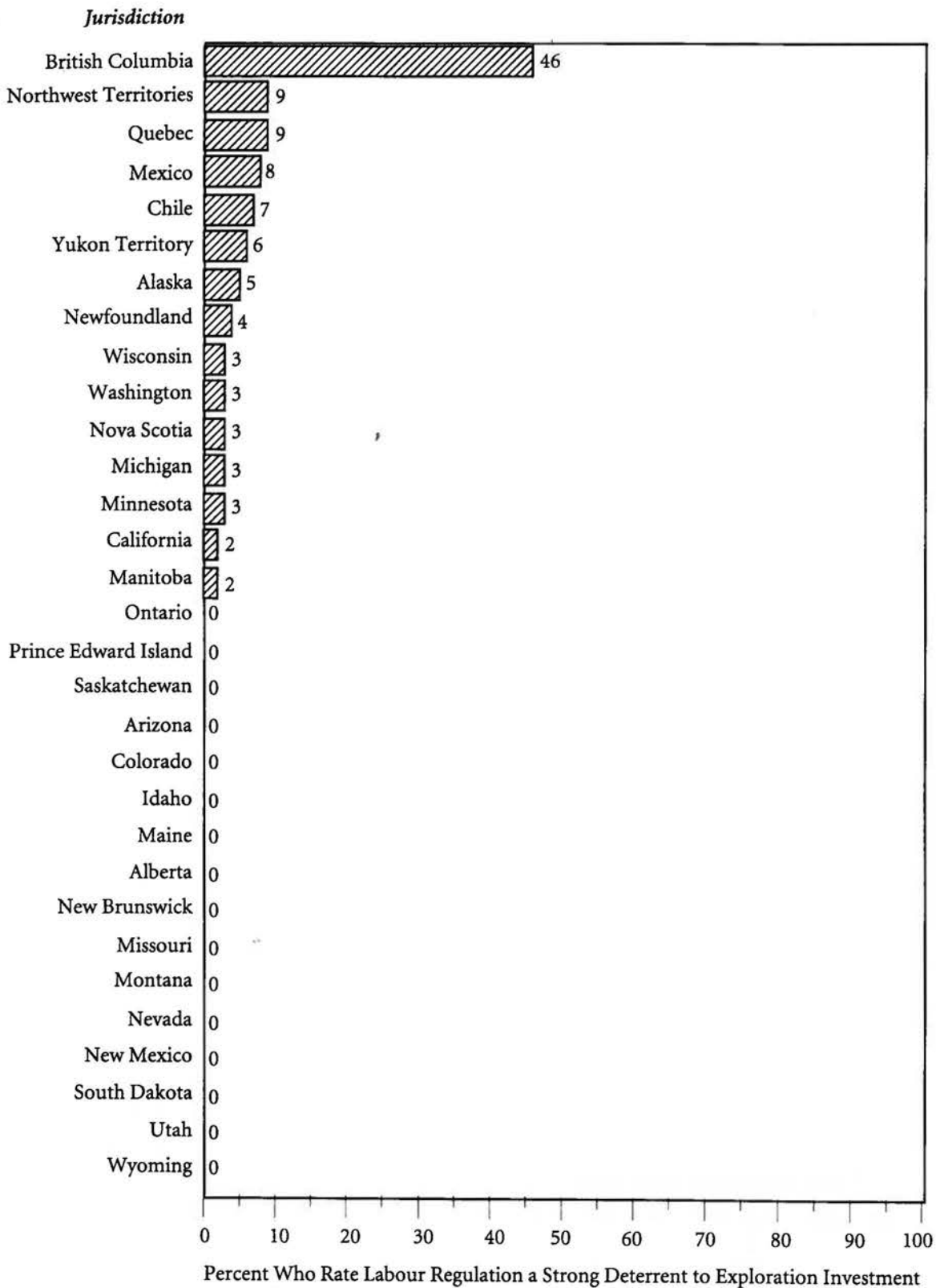


### Figure 18b: Labour Regulation (US)

Percent Who Rate Labour Regulation a Strong Deterrent to Exploration Investment



**Figure 18c: Labour Regulation (North America)**

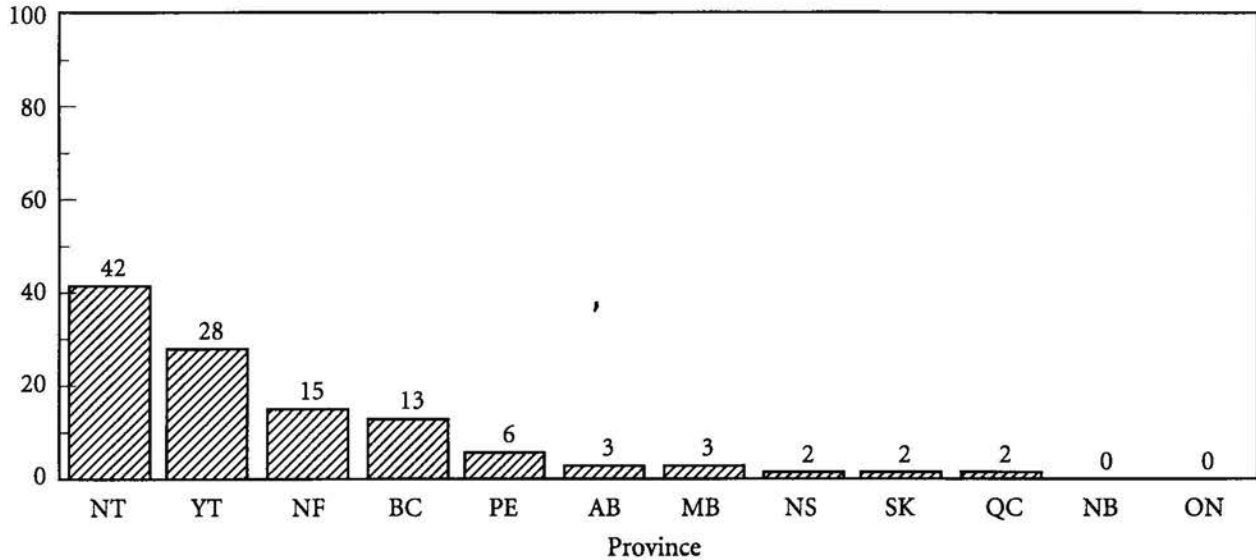


## Figure 19: Infrastructure

Lack of infrastructure is worst in the Northwest Territories, the Yukon Territory, and Alaska with 42 percent, 28 percent and 21 percent respectively indicating it is a strong deterrent to exploration investment.

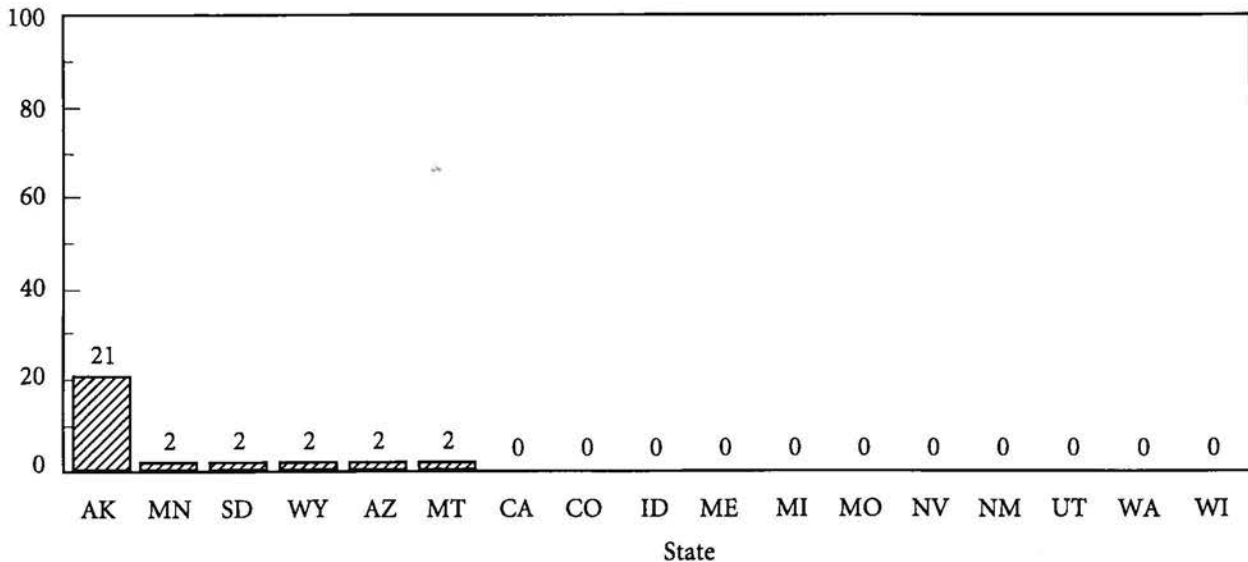
### Figure 19a: Infrastructure (Canada)

Percent Who Rate Infrastructure a Strong Deterrent to Exploration Investment

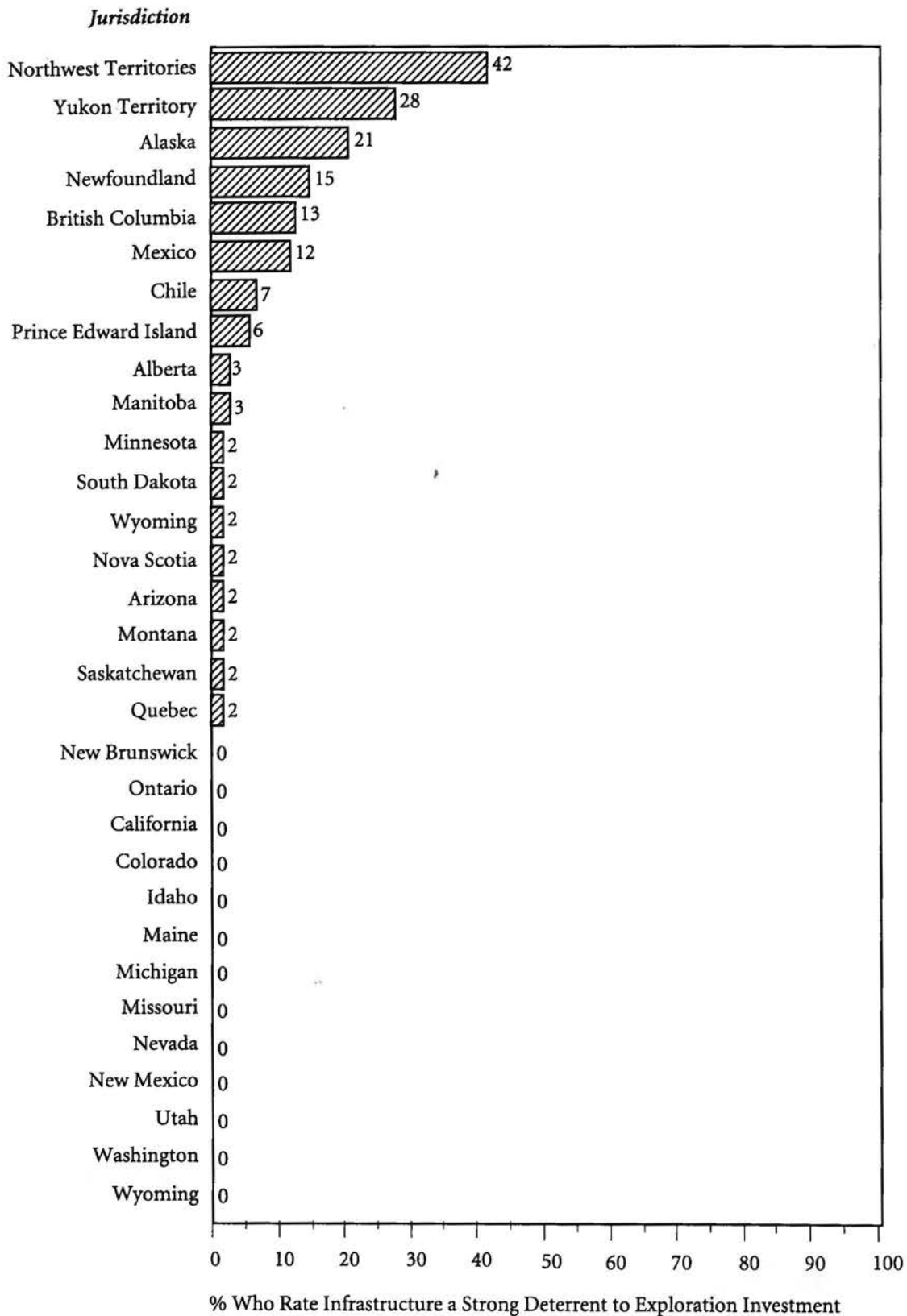


### Figure 19b: Infrastructure (US)

Percent Who Rate Infrastructure a Strong Deterrent to Exploration Investment



**Figure 19c: Infrastructure (North America)**







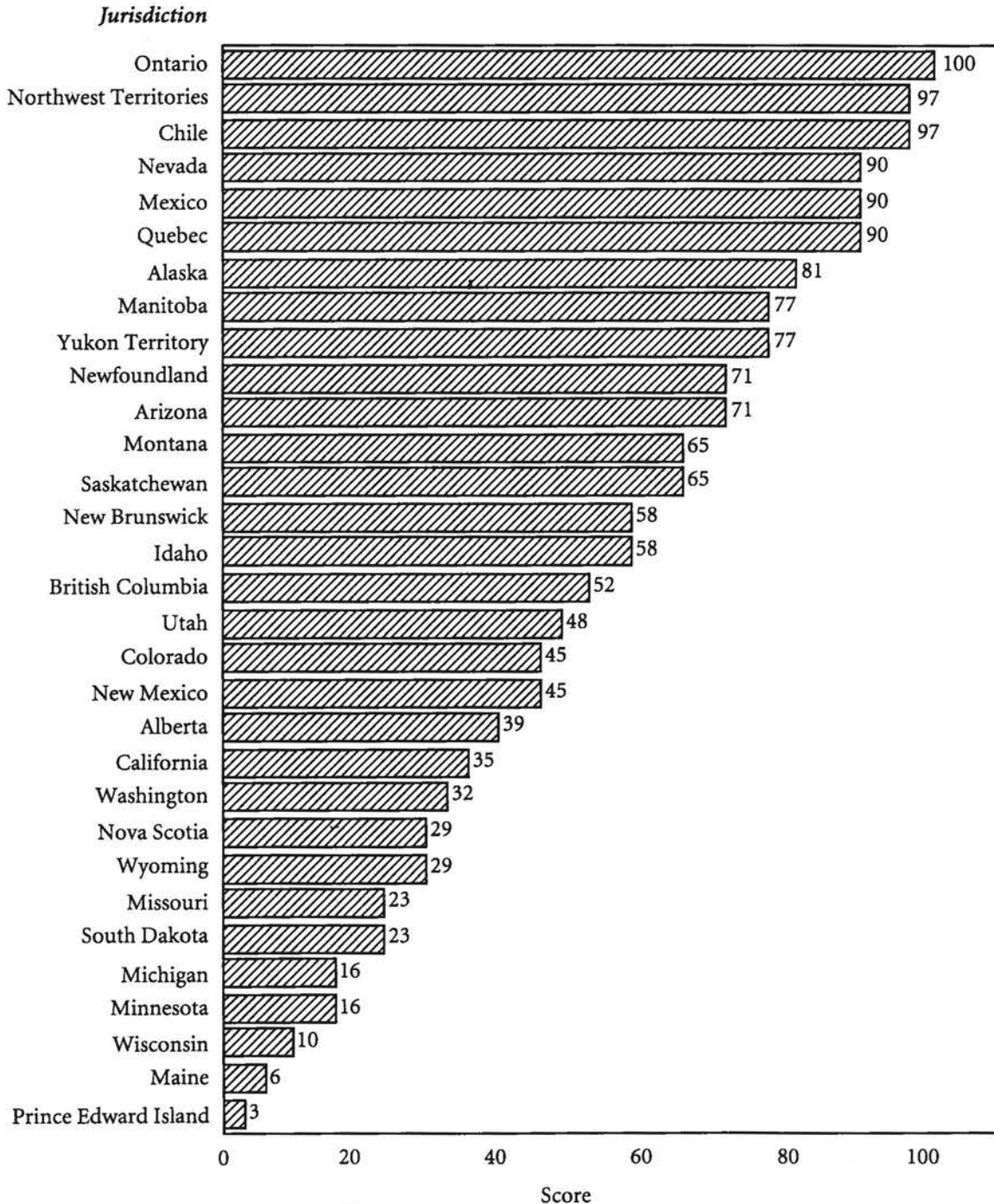
## Composite Indices

,

# North America

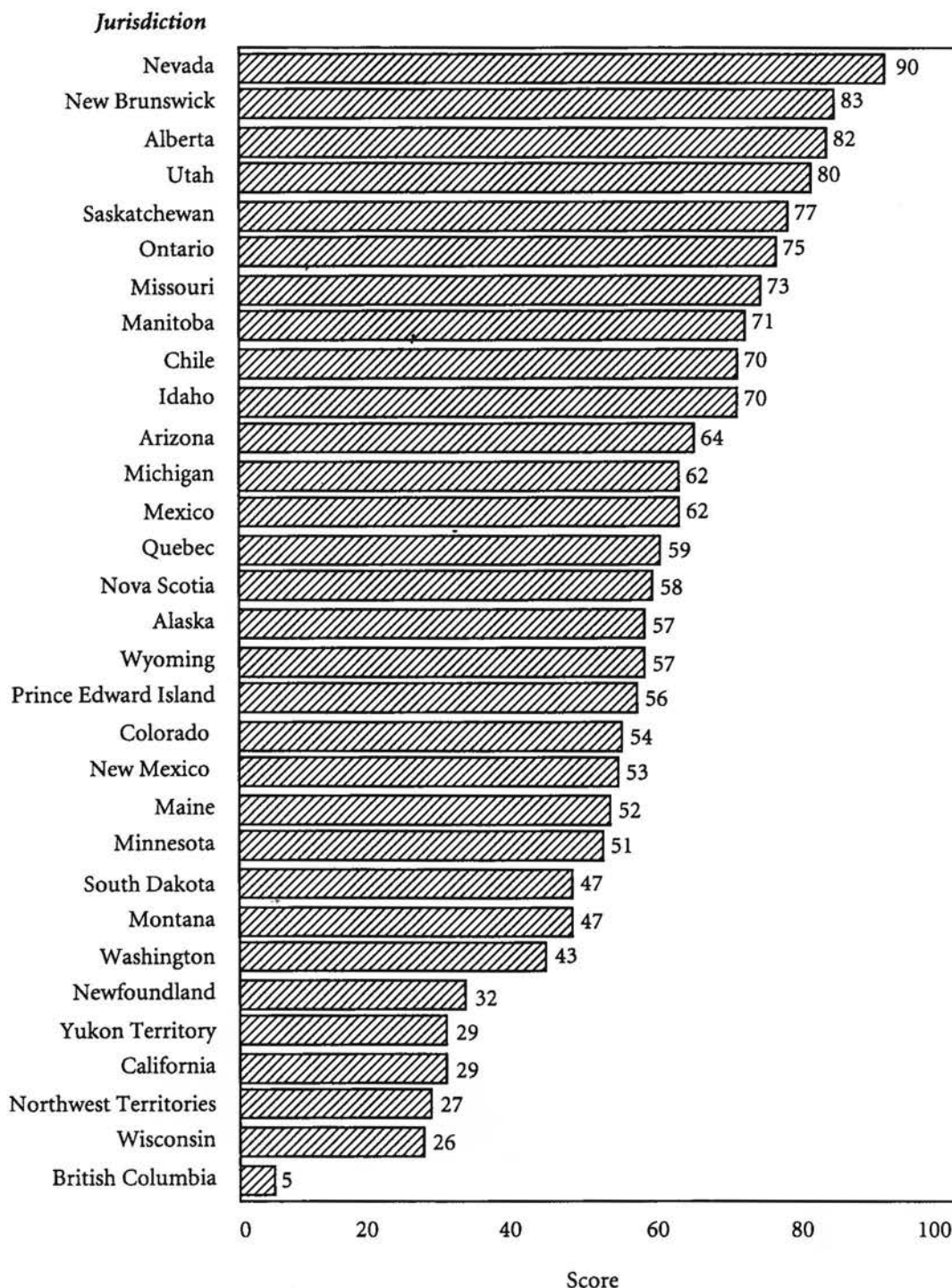
**Figure 20: Mineral Potential Index**

The mineral potential index isolates a region's attractiveness for new investment based on its geology. Ontario, the Northwest Territories, Chile, Nevada, Mexico, and Quebec rate highest on this index. Prince Edward Island rates lowest.



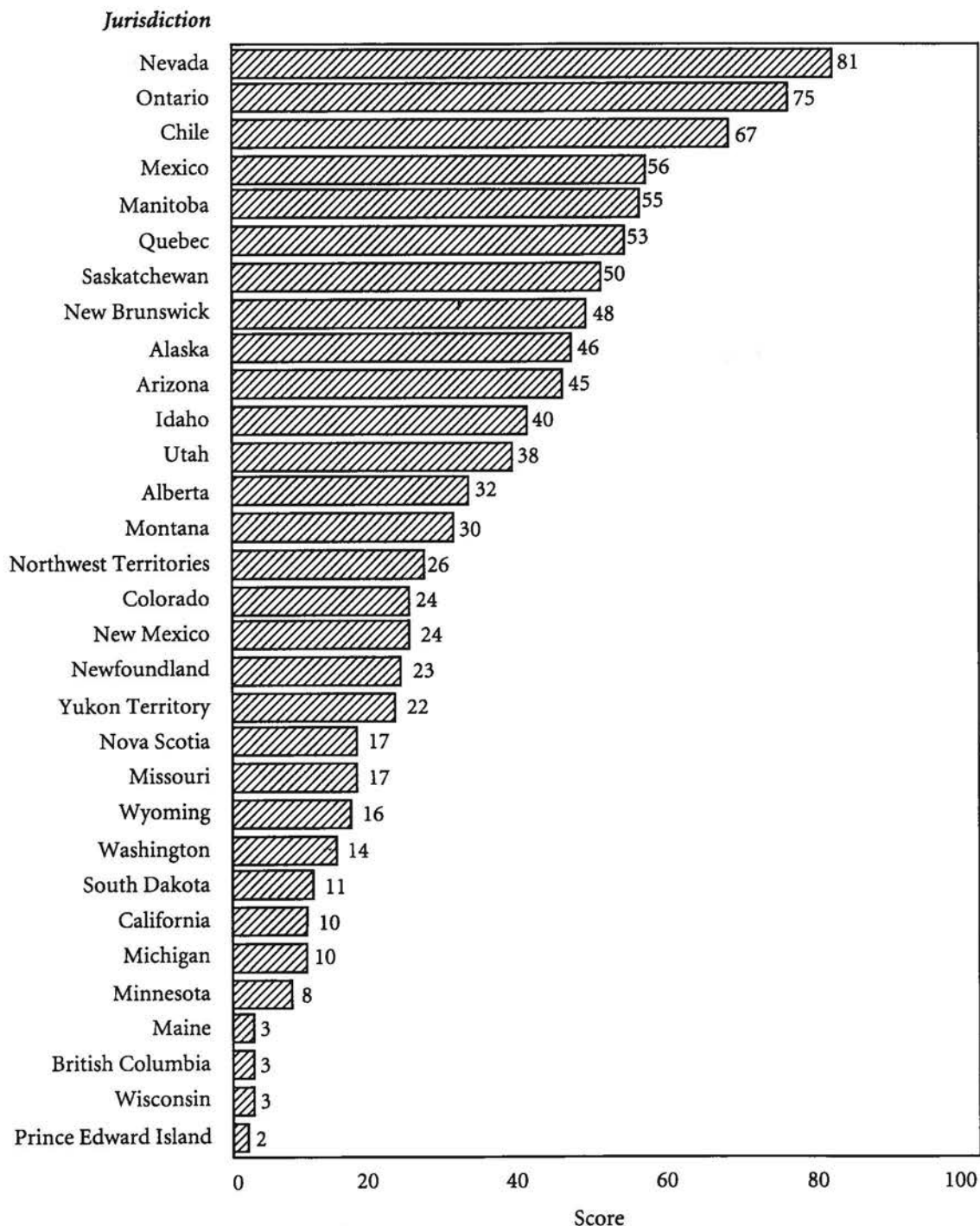
## Figure 21: Policy Potential Index

The policy potential index considers the effect of government policies including taxation, regulation and land use on attracting new exploration investment. Nevada is the most attractive jurisdiction for new investment based on policy while British Columbia is the worst.



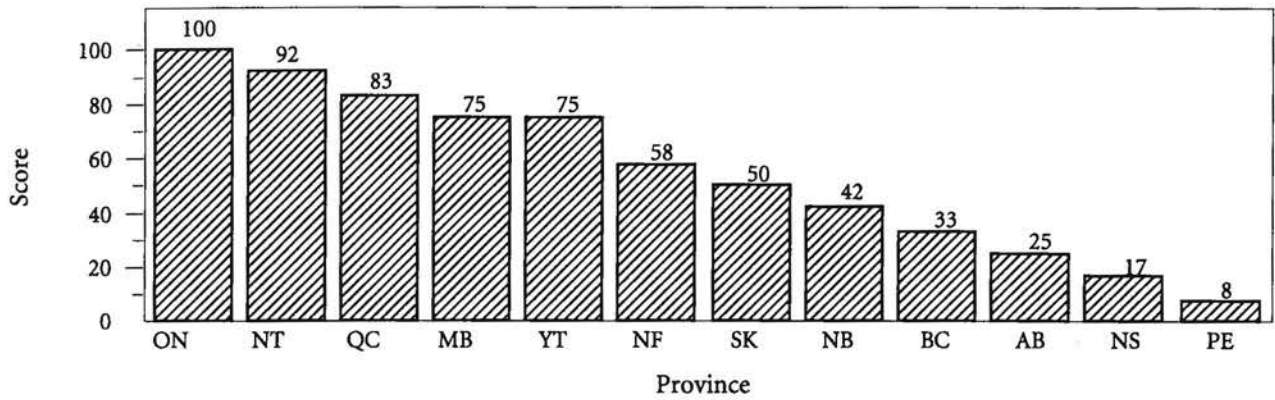
## Figure 22: Investment Attractiveness Index

The investment attractiveness index combines the information on mineral potential and policy to create a ranking of the ability of the provinces to attract new investment. The highest score on this index is 100. The jurisdiction considered most attractive is Nevada with a score of 81 out of 100. Price Edward Island, Wisconsin, British Columbia, and Maine receive the lowest scores.

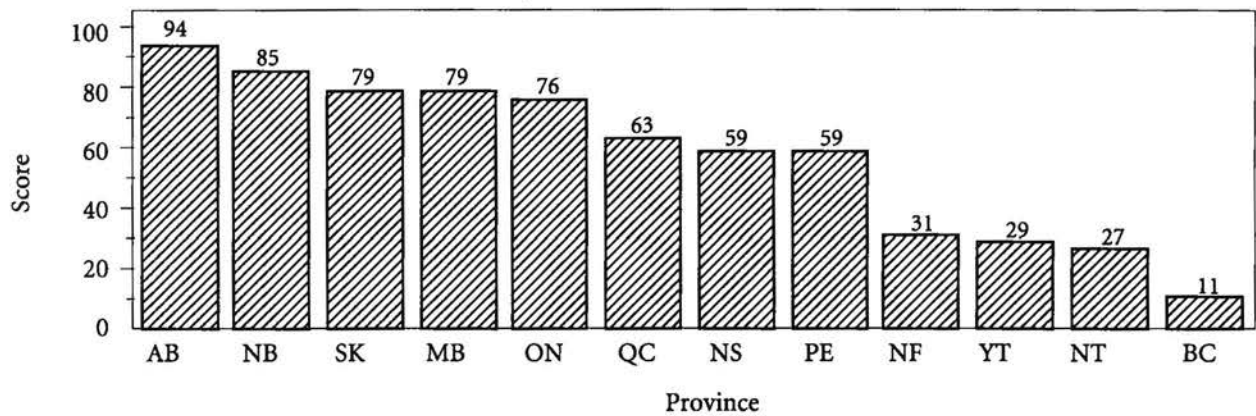


# Canada: Inter-Provincial Comparisons

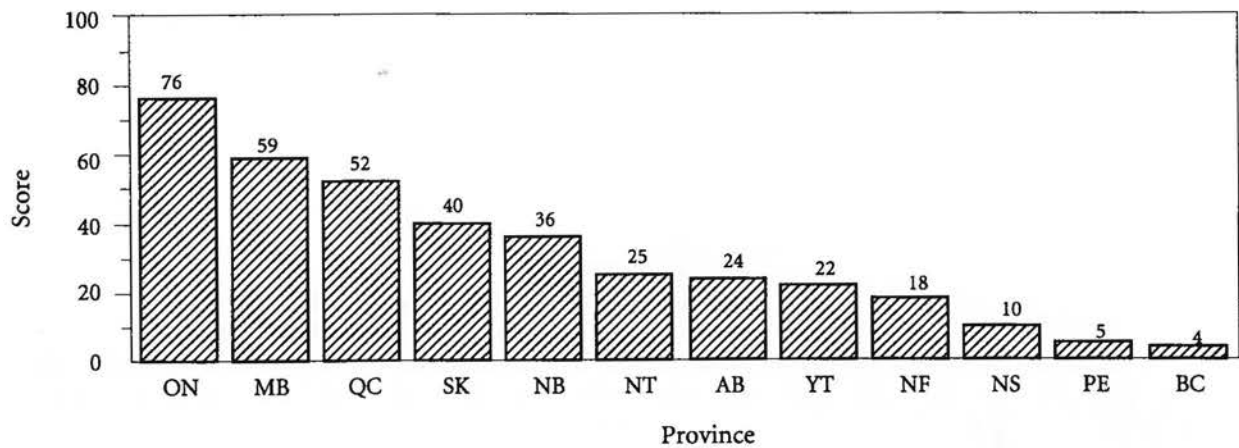
**Figure 23: Provincial Mineral Potential Index**



**Figure 24: Provincial Policy Potential Index**



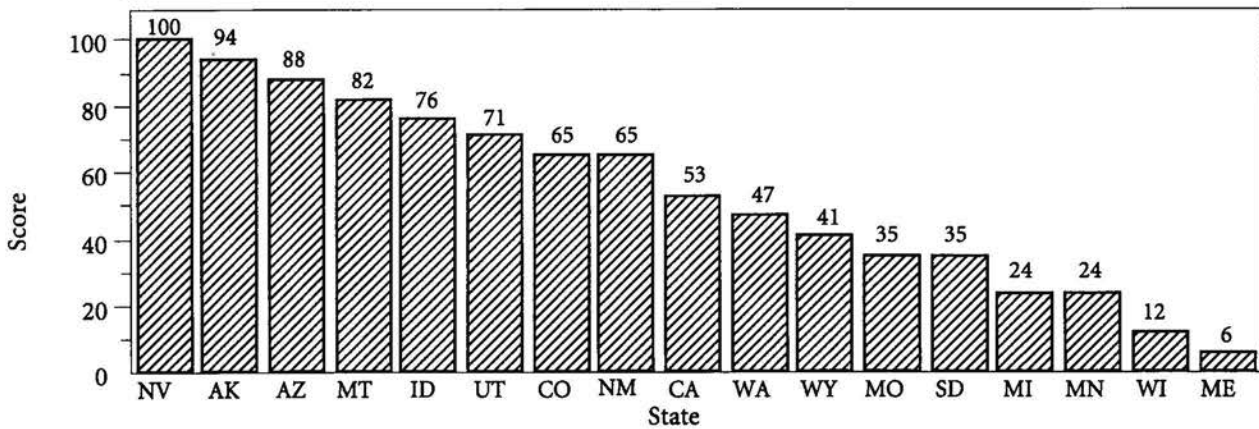
**Figure 25: Provincial Investment Attractiveness Index**



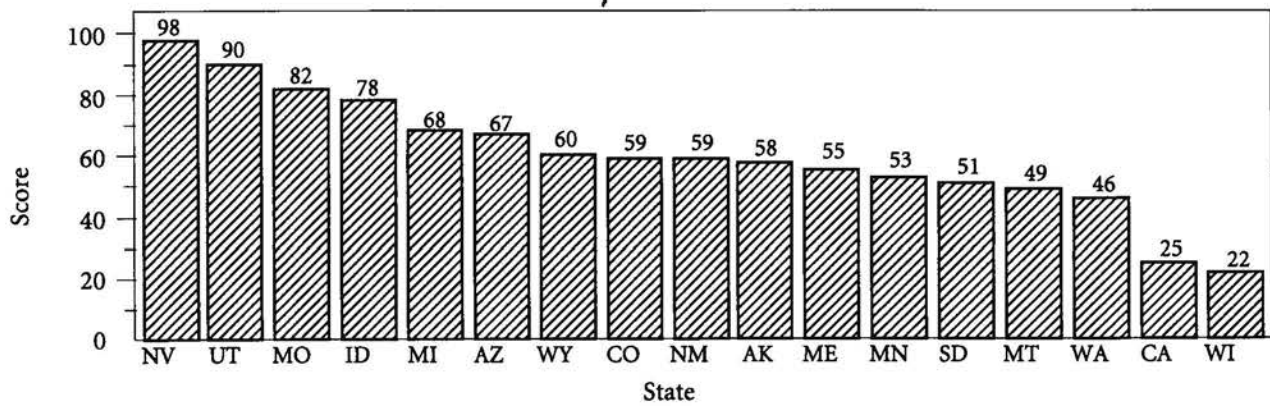


# United States: Inter-State Comparisons

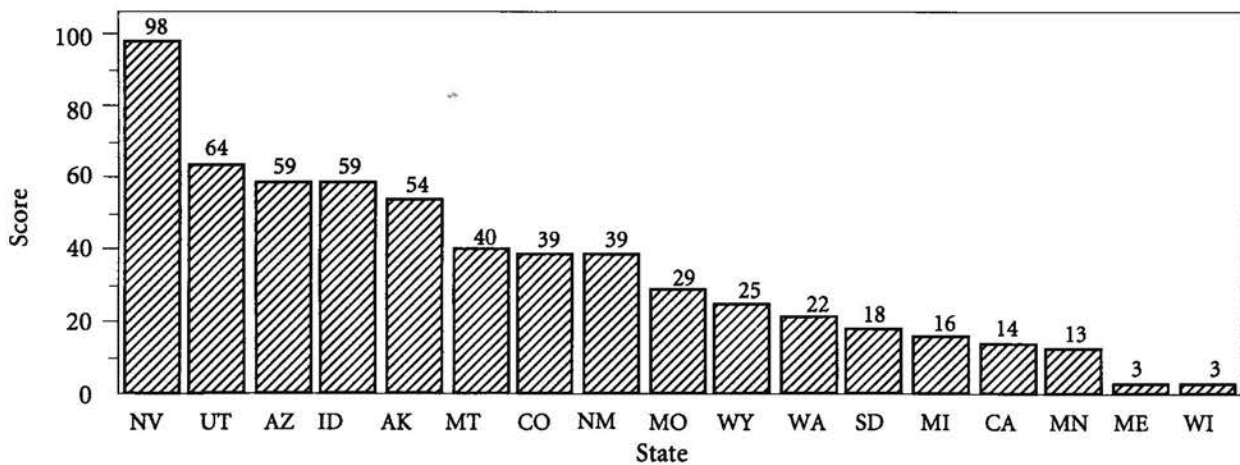
**Figure 26: State Mineral Potential Index**



**Figure 27: State Policy Potential Index**



**Figure 28: State Investment Attractiveness Index**



## **Tabular Material**

**Table 1: Canada, Chile, and Mexico  
Percentage of Respondents Who Consider Factors a Strong Deterrent to Exploration Investment\***

Province/Factor	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF	NT	YT	Chile	Mex- ico
Taxation	67%	2%	7%	2%	3%	11%	0%	4%	0%	16%	6%	9%	2%	6%
Environmental Regulation	76%	0%	2%	2%	5%	4%	0%	10%	27%	16%	19%	15%	2%	2%
Regulatory Duplication and Inconsistencies	62%	0%	3%	0%	0%	7%	0%	8%	0%	17%	24%	24%	5%	7%
Land Claims Uncertainty	84%	10%	11%	14%	15%	13%	24%	12%	21%	48%	33%	35%	2%	4%
Protected Areas Uncertainty	85%	7%	10%	11%	22%	9%	10%	17%	20%	10%	28%	27%	2%	4%
Mineral Potential	28%	27%	6%	3%	1%	3%	13%	38%	78%	6%	3%	4%	5%	4%
Labour Regulation	46%	0%	0%	2%	0%	9%	0%	3%	0%	4%	9%	6%	7%	8%
Uncertainty Concerning the Administration, Interpretation, and Enforcement of Regulations	82%	2%	4%	2%	7%	11%	3%	7%	14%	30%	22%	18%	6%	11%
Infrastructure	13%	3%	2%	3%	0%	2%	0%	2%	6%	15%	42%	28%	7%	12%
Socio-economic Agreements	34%	2%	2%	2%	2%	2%	3%	3%	8%	18%	16%	17%	5%	7%

\*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 2: USA  
Percentage of Respondents Who Consider Factors a Strong Deterrent to Exploration Investment\***

State/Factor	AK	AZ	CA	CO	ID	ME	MI	MN	MO	MT	NV	NM	SD	UT	WA	WI	WY
Taxation	2%	11%	22%	7%	7%	24%	14%	10%	11%	19%	6%	7%	17%	7%	16%	36%	10%
Environmental Regulation	7%	15%	65%	48%	18%	63%	28%	34%	19%	46%	5%	34%	43%	8%	57%	78%	18%
Regulatory Duplication and Inconsistencies	3%	18%	42%	34%	9%	30%	18%	22%	15%	16%	6%	21%	20%	15%	30%	46%	21%
Land Claims Uncertainty	8%	8%	13%	3%	9%	7%	7%	7%	7%	5%	2%	15%	7%	6%	6%	13%	9%
Protected Areas Uncertainty	16%	10%	49%	22%	16%	11%	7%	15%	4%	37%	4%	14%	13%	9%	29%	33%	16%
Mineral Potential	3%	3%	23%	14%	4%	38%	29%	26%	29%	10%	1%	11%	17%	6%	17%	34%	13%
Labour Regulation	5%	0%	2%	0%	0%	0%	3%	3%	0%	0%	0%	0%	0%	0%	3%	3%	0%
Uncertainty Concerning the Administration, Interpretation, and Enforcement of Regulations	4%	11%	49%	38%	19%	44%	28%	39%	20%	51%	5%	31%	36%	12%	46%	78%	18%
Infrastructure	21%	2%	0%	0%	0%	0%	0%	2%	0%	2%	0%	0%	2%	0%	0%	0%	2%
Socio-economic Agreements	7%	3%	12%	5%	0%	3%	0%	0%	0%	3%	0%	6%	9%	0%	3%	12%	3%

\*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: Canada, Chile and Mexico  
Percentage of Respondents Who Indicate Factors Encourage/Are Neutral to Exploration Investment\***

Province/Factor	BC	AB	SK	MB	ON	QC	NB	NS	PE	NF	NT	YT	Chile	Mex- ico
Taxation	19%	88%	45%	75%	76%	72%	63%	59%	50%	51%	62%	66%	90%	78%
Environmental Regulation	8%	67%	56%	66%	48%	67%	61%	53%	40%	56%	52%	55%	87%	91%
Regulatory Duplication and Inconsistencies	17%	67%	50%	54%	62%	63%	48%	44%	42%	33%	39%	45%	82%	67%
Land Claims Uncertainty	3%	63%	52%	46%	59%	54%	38%	53%	63%	25%	31%	33%	96%	73%
Protected Areas Uncertainty	3%	65%	48%	53%	32%	57%	40%	41%	33%	49%	32%	31%	91%	92%
Mineral Potential	64%	58%	72%	87%	96%	93%	67%	43%	8%	73%	94%	87%	94%	93%
Labour Regulation	19%	81%	63%	70%	71%	54%	74%	70%	70%	71%	57%	62%	76%	73%
Uncertainty Concerning the Administration, Interpretation, and Enforcement of Regulations	10%	91%	76%	87%	74%	77%	76%	70%	64%	42%	53%	57%	85%	62%
Infrastructure	56%	88%	70%	75%	81%	77%	96%	86%	86%	45%	16%	23%	44%	39%
Socio-economic Agreements	42%	84%	76%	78%	81%	80%	86%	85%	85%	57%	49%	54%	72%	55%
*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 4: USA**  
**Percentage of Respondents Who Indicate Factors Encourage or Are Neutral to Exploration Investment\***

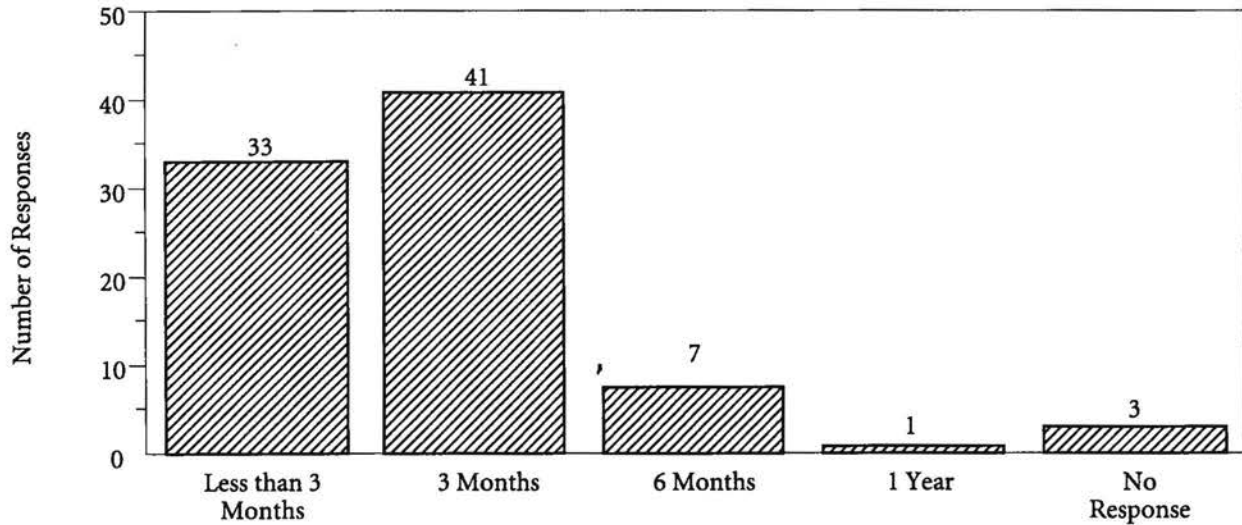
State/Factor	AK	AZ	CA	CO	ID	ME	MI	MN	MO	MT	NV	NM	SD	UT	WA	WI	WY
Taxation	86%	75%	39%	50%	61%	59%	67%	55%	74%	41%	91%	63%	48%	75%	40%	39%	70%
Environmental Regulation	46%	40%	7%	11%	22%	3%	18%	16%	26%	12%	77%	24%	8%	30%	9%	3%	29%
Regulatory Duplication and Inconsistencies	58%	50%	25%	31%	30%	30%	36%	39%	50%	34%	73%	29%	40%	44%	30%	21%	38%
Land Claims Uncertainty	69%	78%	71%	74%	74%	70%	76%	77%	76%	66%	83%	59%	63%	71%	60%	70%	72%
Protected Areas Uncertainty	48%	51%	23%	22%	32%	37%	48%	48%	38%	24%	73%	42%	38%	36%	21%	21%	28%
Mineral Potential	90%	73%	53%	60%	67%	31%	37%	37%	39%	72%	93%	60%	39%	61%	44%	32%	43%
Labour Regulation	80%	77%	59%	79%	80%	79%	77%	77%	76%	76%	87%	78%	80%	84%	78%	77%	81%
Uncertainty Concerning the Administration, Interpretation, and Enforcement of Regulations	75%	59%	14%	15%	42%	12%	16%	17%	35%	17%	83%	36%	18%	50%	20%	6%	32%
Infrastructure	28%	95%	88%	88%	80%	86%	94%	87%	87%	79%	95%	88%	86%	87%	84%	87%	82%
Socio-economic Agreements	76%	87%	71%	76%	84%	90%	90%	90%	90%	77%	93%	83%	76%	89%	79%	82%	88%

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

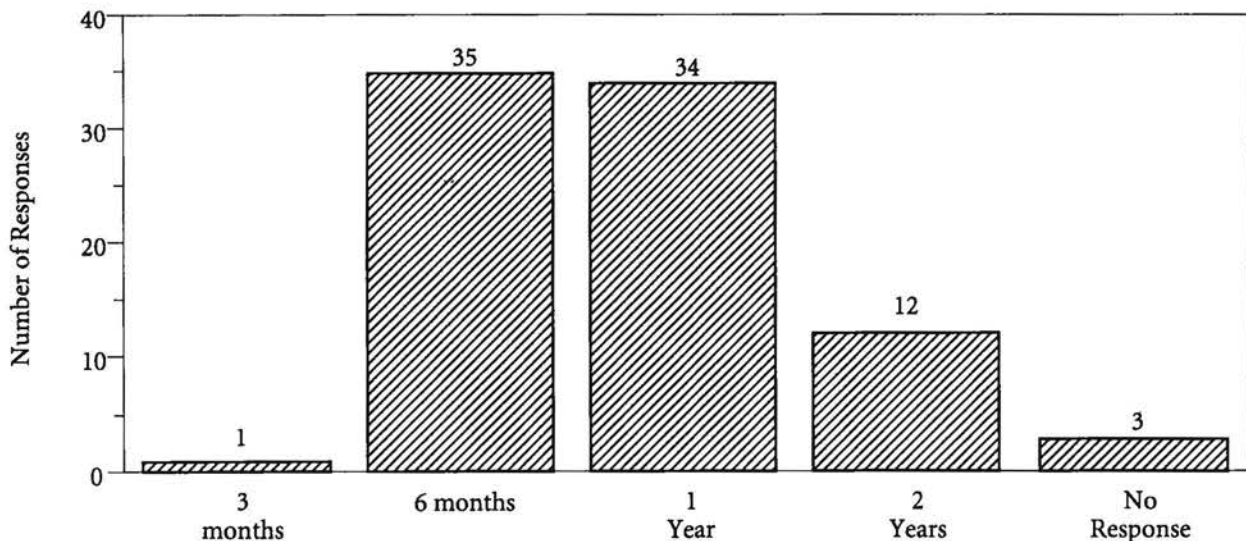


## Section IV: Regulation

**Figure 29: What do you think would be an acceptable amount of time to receive an exploration permit to drill, trench, and build access roads?**

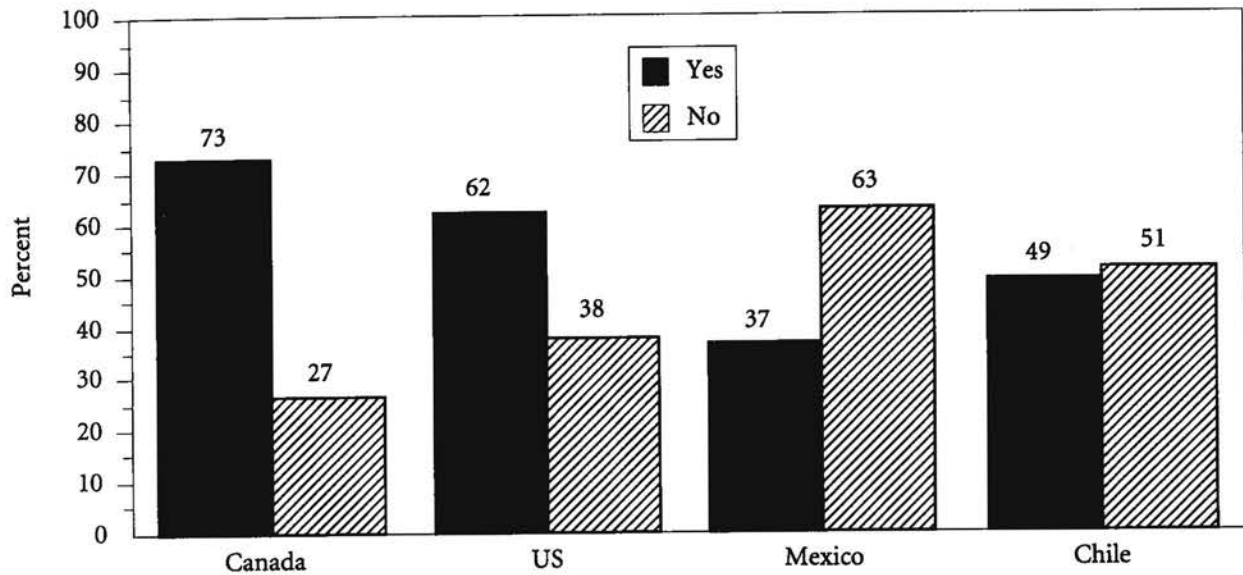


**Figure 30: What do you think would be an acceptable amount of time for approval of an environmental impact/assessment study (in order to start mining)?**

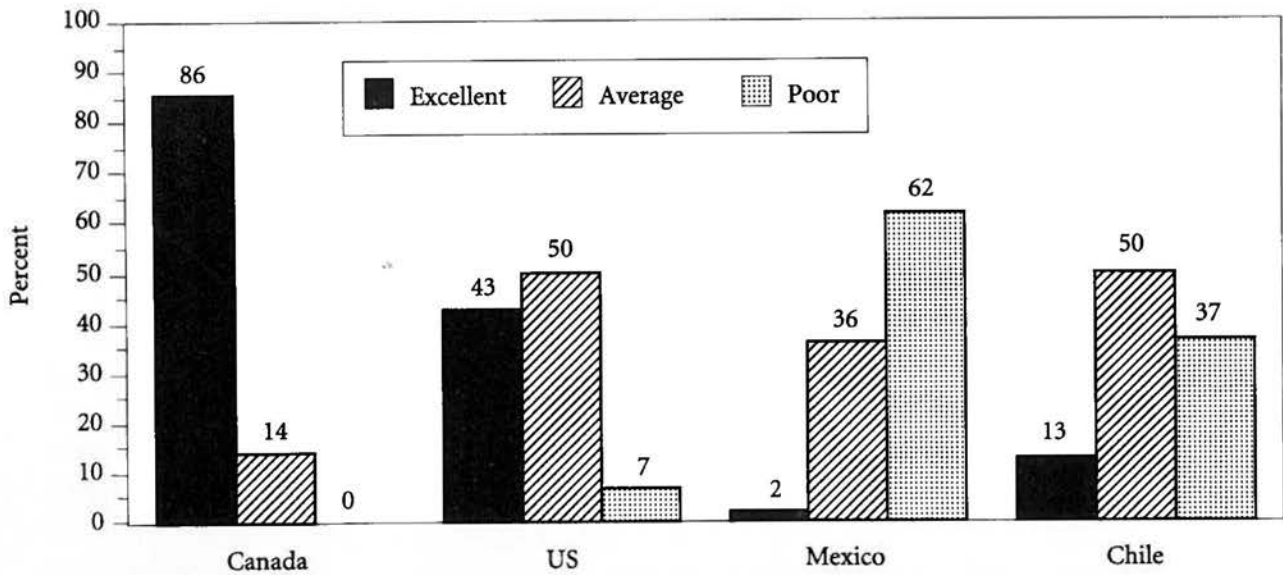


## Section V: General Questions

**Figure 31: Do you have access to up-to-date high quality government data sets on investment decisions?**



**Figure 32: Quality of Government Geoscience Databases**



## Survey Questions

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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 1997 was spent

inside Canada \_\_\_\_\_  
inside USA \_\_\_\_\_  
inside Mexico \_\_\_\_\_  
inside Chile \_\_\_\_\_  
all other jurisdictions \_\_\_\_\_  
(total should add to 100%)

Has that percentage changed over the 5 years from 1992-1997? If so, please provide the positive or negative percentage changes (for example, +5% or -5%).

inside Canada \_\_\_\_\_                      inside USA \_\_\_\_\_  
inside Mexico \_\_\_\_\_                      inside Chile \_\_\_\_\_  
all other jurisdictions \_\_\_\_\_

Has your total (worldwide) exploration expenditure increased, decreased, or remained the same over the five years from 1992-1997?

\_\_\_\_\_ Increased                      \_\_\_\_\_ Decreased                      \_\_\_\_\_ Remained the Same

### **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.

#### **1. Factor: Mineral Potential**

Please circle the appropriate rating, according to the scale in the box below, for the following regions' **Mineral Potential**.

## Scale

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

## 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
Ontario	1	2	3	4	5	6
Prince Edward Island	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
Maine	1	2	3	4	5	6
Michigan	1	2	3	4	5	6
Minnesota	1	2	3	4	5	6
Missouri	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

**OTHER COUNTRIES**

Chile	1	2	3	4	5	6
Mexico	1	2	3	4	5	6

*(Repeated for all other factors)*

**REGULATION**

1. What do you think would be an acceptable amount of time to receive an exploration permit to drill, trench and build access roads?

3 months \_\_\_\_ 6 months \_\_\_\_ 1 year \_\_\_\_ Other (specify) \_\_\_\_\_

2. Please check the jurisdictions where you believe the permitting process is *unlikely* to proceed in a reasonable amount of time and indicate how long it is likely to take.

- |   |  |
|---|--|
| <input type="checkbox"/> Alberta _____              | <input type="checkbox"/> British Columbia _____      |
| <input type="checkbox"/> Newfoundland _____         | <input type="checkbox"/> Northwest Territories _____ |
| <input type="checkbox"/> Prince Edward Island _____ | <input type="checkbox"/> Quebec _____                |
| <input type="checkbox"/> Manitoba _____             | <input type="checkbox"/> New Brunswick _____         |
| <input type="checkbox"/> Nova Scotia _____          | <input type="checkbox"/> Ontario _____               |
| <input type="checkbox"/> Saskatchewan _____         | <input type="checkbox"/> Yukon _____                 |
| <br>  |  |
| <input type="checkbox"/> Missouri _____             | <input type="checkbox"/> Montana _____               |
| <input type="checkbox"/> South Dakota _____         | <input type="checkbox"/> Wyoming _____               |
| <input type="checkbox"/> Colorado _____             | <input type="checkbox"/> California _____            |
| <input type="checkbox"/> Minnesota _____            | <input type="checkbox"/> Michigan _____              |
| <input type="checkbox"/> New Mexico _____           | <input type="checkbox"/> Nevada _____                |
| <input type="checkbox"/> Washington _____           | <input type="checkbox"/> Utah _____                  |
| <input type="checkbox"/> Wyoming _____              |  |
| <br>  |  |
| <input type="checkbox"/> Mexico _____               |  |
| <br>  |  |
| <input type="checkbox"/> Chile _____                |  |

3. What do you feel would be an acceptable amount of time for approval of an environmental impact/assessment study (in order to be allowed to start mining)?

6 months \_\_\_\_ 1 year \_\_\_\_ 2 years \_\_\_\_ Other (specify) \_\_\_\_\_

4. Please check the jurisdictions where you believe the permitting process is *unlikely* to proceed in a reasonable amount of time and indicate how long it is likely to take.

- |   |  |
|---|--|
| <input type="checkbox"/> Alberta _____              | <input type="checkbox"/> British Columbia _____      |
| <input type="checkbox"/> Newfoundland _____         | <input type="checkbox"/> Northwest Territories _____ |
| <input type="checkbox"/> Prince Edward Island _____ | <input type="checkbox"/> Quebec _____                |
| <input type="checkbox"/> Manitoba _____             | <input type="checkbox"/> New Brunswick _____         |
| <input type="checkbox"/> Nova Scotia _____          | <input type="checkbox"/> Ontario _____               |
| <input type="checkbox"/> Saskatchewan _____         | <input type="checkbox"/> Yukon _____                 |
|   |  |
| <input type="checkbox"/> Missouri _____             | <input type="checkbox"/> Montana _____               |
| <input type="checkbox"/> South Dakota _____         | <input type="checkbox"/> Wyoming _____               |
| <input type="checkbox"/> Colorado _____             | <input type="checkbox"/> California _____            |
| <input type="checkbox"/> Minnesota _____            | <input type="checkbox"/> Michigan _____              |
| <input type="checkbox"/> New Mexico _____           | <input type="checkbox"/> Nevada _____                |
| <input type="checkbox"/> Washington _____           | <input type="checkbox"/> Utah _____                  |
| <input type="checkbox"/> Wyoming _____              |  |
|   |  |
| <input type="checkbox"/> Mexico _____               |  |
|   |  |
| <input type="checkbox"/> Chile _____                |  |

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 use the back of this page or attach another sheet if you need more room.

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**CHILE**

Many mining companies have flocked to Chile. Mineral prospects being equal in Canada, US, and Chile, what is it about Chile that makes it more attractive for exploration, investment, or to do mining business? \_\_\_\_\_

## GENERAL

Do you have access to up-to-date high quality government data sets on investment conditions to allow you to make strategic decisions on exploration investment?

Canada	Yes _____	No _____
US	Yes _____	No _____
Mexico	Yes _____	No _____
Chile	Yes _____	No _____

2. Please rate the quality of *government geoscience information data bases*:

Canada	Excellent	Average	Poor
US	Excellent	Average	Poor
Mexico	Excellent	Average	Poor
Chile	Excellent	Average	Poor

## BACKGROUND INFORMATION

1. What was the value of your 1997 annual exploration expenditures\* (*please specify \$US or \$Canadian*)

inside Canada \_\_\_\_\_ inside the US \_\_\_\_\_  
inside Mexico \_\_\_\_\_ inside Chile \_\_\_\_\_

Total spent outside Canada, the US, Mexico, and Chile \_\_\_\_\_

*\*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.*

2. Are you a Junior or Senior Mining Company?

Junior \_\_\_\_\_ Senior \_\_\_\_\_

3. What is your position with the company? \_\_\_\_\_

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

Comments: \_\_\_\_\_

*Thank you for taking the time to complete this survey. Please return the completed survey in the envelope provided or fax it to (604) 688-8539. If you wish to receive a copy of the survey results, please fill in the response card or attach a business card. Individual surveys are strictly confidential.*