

**Fraser Institute
Annual Survey of
Mining Companies
2001 / 2002**

***Survey Coordinators:
Laura Jones & Liv Fredricksen***



About The Fraser Institute

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 Where competitive markets have been replaced by government control, the interest of the Institute lies in documenting objectively the nature of the improvement or deterioration resulting from government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.

Acknowledgements

We would like to extend a special thank you to the Prospectors and Developers Association of Canada (PDAC), whose generous financial support made this year's survey possible. This year, for the first time, we are including measurable parameters with which to compare Canadian provinces and territories. Including such data and developing an "Objective Index" is a logical extension of the existing opinion survey component of the report, as these data may provide some insight into what is causing some regions to score well and others poorly on the opinion survey. We are grateful to the PDAC for their suggestion to include the Objective Index and for their assistance with the development of the parameters. The Objective Index can be found in Appendix A.

We would also like to thank James Otto, Deputy Director of the Institute for Global Resources Policy and Management at the Colorado School of Mines for helping with the methodology for the new section of this year's report and Sharon Prager for her help redesigning the survey and adding US jurisdictions three years ago.

Finally, we would like to thank all of the companies who took the time to participate in *The Fraser Institute's Annual Survey of Mining Companies 2001/2002*. Your continued encouragement and participa-

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Survey Information

The Fraser Institute Annual Survey of Mining Companies 2001/2002 was sent to 917 senior and junior mining companies. The survey represents responses from 18 percent (162) of those companies, comprising 132 junior and 30 senior companies. The companies participating in the survey account for exploration expenditures totaling US\$782 million (2000). They represent 51 percent (US\$162 million) of the total mineral exploration expenditure in Canada in 2000 (US\$318.6 million) as estimated by the Canadian government's Natural Resources Canada. This survey represents about 33 percent (US\$57 million) of the exploration expenditures (US\$175.8 million) in the United States in 2000 as estimated by Metals Economics Group.

Executive Summary—2001/2002 Mining Survey

Since 1997, The Fraser Institute has been surveying mining companies each year to assess how mineral endowments and public policy factors such as taxation and regulation affect exploration investment. Survey results represent the opinions of exploration managers in mining companies operating around the world. As the popularity of the survey has grown, we have expanded it to include more jurisdictions. We now ask companies to give us their opinions about the investment attractiveness of 45 jurisdictions including the Canadian provinces and territories (except Prince Edward Island), selected US states, Argentina, Australia, Bolivia, Brazil, Columbia, Chile, China, Ecuador, Ghana, Indonesia, Kazakhstan, Mexico, Papua New Guinea, Peru, Philippines, Russia, South Africa, Venezuela, and Zimbabwe. We look forward to further expanding the survey component of this report to include other jurisdictions of interest to respondents in years to come.

Policy Potential Index: A “Report Card” to Governments on the Attractiveness of their Mining Policies

While geological and economic evaluations are always requirements for exploration, a region’s policy climate is also an important factor in attracting investment. The policy potential opinion index serves as a report card to governments on how attractive their policies are from the point of view of an exploration manager.

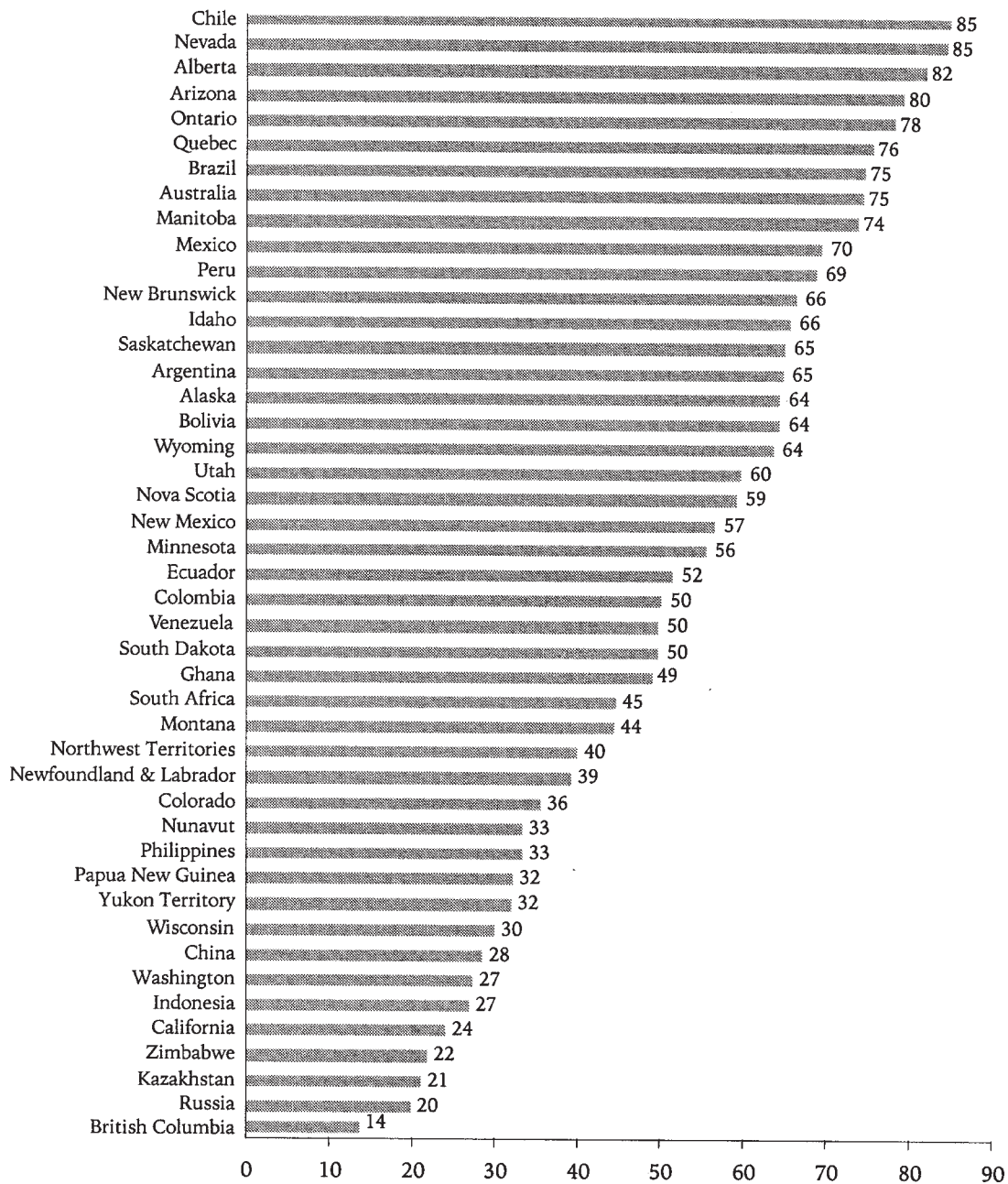
The Policy Potential Index is a composite index that measures the effects on exploration of government policies including taxation, environmental regulations, duplication and administration of regulations, native land claims, protected areas, infrastructure, labour, and socio-economic agreements as well as political stability. The highest possible score on this index is 100. In the 2001/2002 survey, Chile and Nevada tie for top place on the Policy Potential Index with a score of 85. Other top-rated jurisdictions include Alberta (82), Arizona (80), Ontario (78), Quebec (76), Brazil (75), Australia (75), Manitoba (74), and Mexico (70). The worst performing jurisdictions, based on policy, are British Columbia (14), Russia (20), Kazakhstan (21), Zimbabwe (22), California (24), Indonesia (27), Washington (27), China (28), Wisconsin (30), Yukon (32) and Papua New Guinea (32). British Columbia has been the lowest-rated jurisdiction on the policy index for each of the five years that the survey has been conducted.

The Mineral Potential Index

The Mineral Potential Index rates a region’s attractiveness based on companies’ perceptions of geology. Survey respondents were asked to rate the region’s mineral potential assuming no land use restrictions in place, but further assuming that any mine would operate to industry “best practice” standards. In other words, respondents were asked to rate the region’s mineral potential independently from any policy restrictions. This year Quebec is in first place with a score of 100. Ontario, last

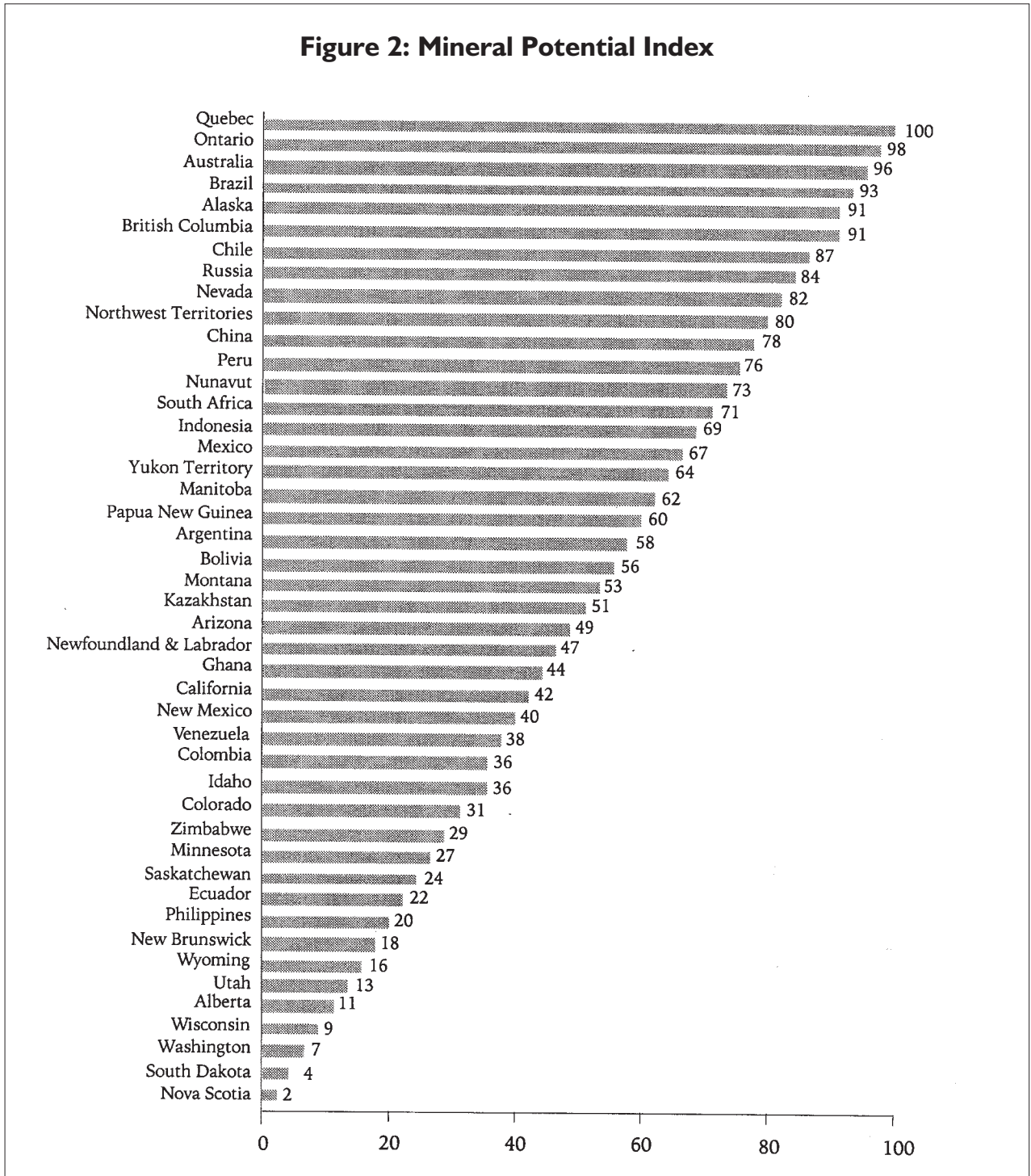
year's first place, rates a close second with a score of 98. Other top jurisdictions include Australia (96), Brazil (93), Alaska (91), British Columbia (91), Chile (87), Russia (84), Nevada (82) and the Northwest Territories (80). The worst-rated regions on this index include Nova Scotia (2), South Dakota (4), Washington (7), Wisconsin (9), and Alberta (11).

Figure I: Policy Potential Index



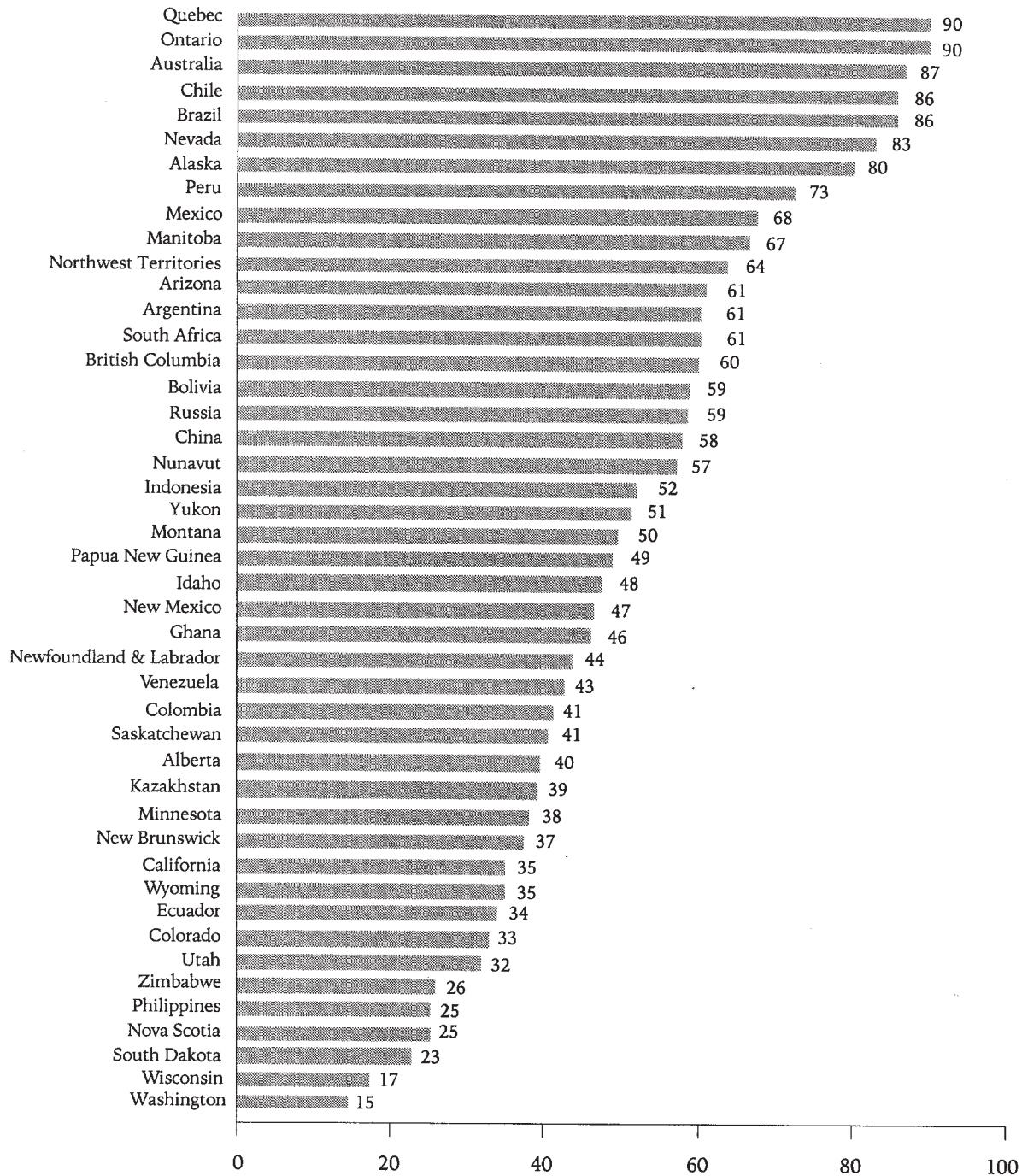
The Investment Attractiveness Index takes both Mineral and Policy Potential into Consideration

An overall Investment Attractiveness Index 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 policy on attitudes towards exploration investment.



In past years, we have given equal weight to the policy and mineral scores. This year we asked respondents what weights they would put on policy and mineral potential. We used the median result, which puts a 60 percent weight on mineral potential and a 40 percent weight on policy.

Figure 3: Investment Attractiveness Index



For overall investment attractiveness, Quebec and Ontario tie for first place with a score of 90 out of a possible 100 points. The next highest-rated jurisdiction is Australia (87), followed closely by Chile (86) and Brazil (86). Also in the top ten are Nevada (83), Alaska (80), Peru (73), Mexico (68) and Manitoba (67). The worst-rated jurisdictions include Washington (15), Wisconsin (17), South Dakota (23), Nova Scotia (25), Philippines (25), Zimbabwe (26), Utah (32), Colorado (33), Ecuador (34), Wyoming (35), and California (35).

New in This Year's Report: Objective Data Assesses Investment Attractiveness

A new section that compares Canadian provinces and territories using data rather than opinions has been added to this year's survey in order to provide readers with more information about the differences between policies in different regions. These data may provide some insight into what is causing some regions to score well and others poorly on the opinion survey. Some readers have suggested that poor policy ratings for certain jurisdictions may be a result of misperceptions on the part of survey participants about the realities of operating in a jurisdiction. Assessing the differences in policy by looking at the data in this report's new section may help determine whether this is the case, although in many instances available data are limited. Over the next several years we hope to expand this part of the report to include more jurisdictions and to improve it by adding more variables. This section can be found in Appendix A.

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. Further, since many regions around the world have attractive geology *and* competitive policies, it is easier to spend your exploration budget in friendlier jurisdictions than it is to fight for better policies. Clearly the result is that politicians can 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, seemingly capricious 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. We felt that 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 politicians and civil servants, needed to be addressed.

In order to address this problem and assess how various public policy factors influence companies' decisions to invest in different regions, The Fraser Institute decided to begin conducting an anonymous survey of senior and junior mining companies in 1997. The first survey included all Canadian provinces and territories. The second survey, conducted in 1998, added 17 US states, Mexico, and, for comparison with North American jurisdictions, Chile. The third survey, conducted in 1999, was further expanded to include Argentina, Australia, Peru, and Nunavut. The fourth survey looked at the Canadian provinces and territories (except for Prince Edward Island, which was removed due to its lack of mineral potential), 14 US states, Australia, Argentina, Chile, Mexico, and Peru, as well as Brazil, Indonesia, Papua New Guinea, and South Africa. This year we have added Kazakstan, Russia, Bolivia, China, Ghana, Zimbabwe, and Venezuela to last year's list of countries. We add countries to the list based on the interest in the countries expressed by survey respondents. In order to promote the accountability that we felt was missing in 1996, we think it is important to continue publishing and publicizing the results of the survey annually.