

Canada's Global Mining Presence

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GLOBAL MARKET FOR EXPLORATION

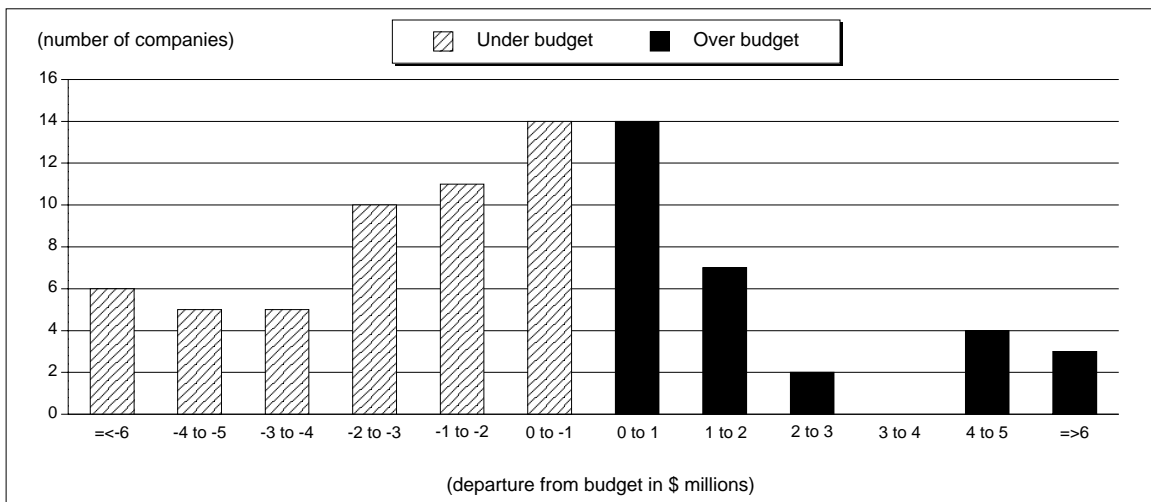
Although it continued to be difficult to raise risk capital during 1998, exploration programs around the world by companies of all sizes for precious metals, base metals and diamonds were, in total, only about 3% below budget. In 1999, global exploration activity by these companies fell to an estimated \$4.0 billion (US\$2.7 billion) from \$5.0 billion (US\$3.5 billion) the previous year, or down by over 20%. Programs were reduced in most countries, but were postponed or abandoned entirely in some developing countries.

Global trends in worldwide mineral exploration are based largely on data for the world's larger companies,¹ defined here as those with annual exploration budgets greater than \$4 million (US\$3 million). In 1999, 132 companies planned to spend more than \$4 million on exploration, down from a record 279 in 1997. During 1999, the world's larger companies were expected to undertake programs with a combined value of \$3.2 billion (US\$2.2 billion), which represents an estimated 80% of the global market for mineral exploration.

LARGER CANADIAN-BASED COMPANIES

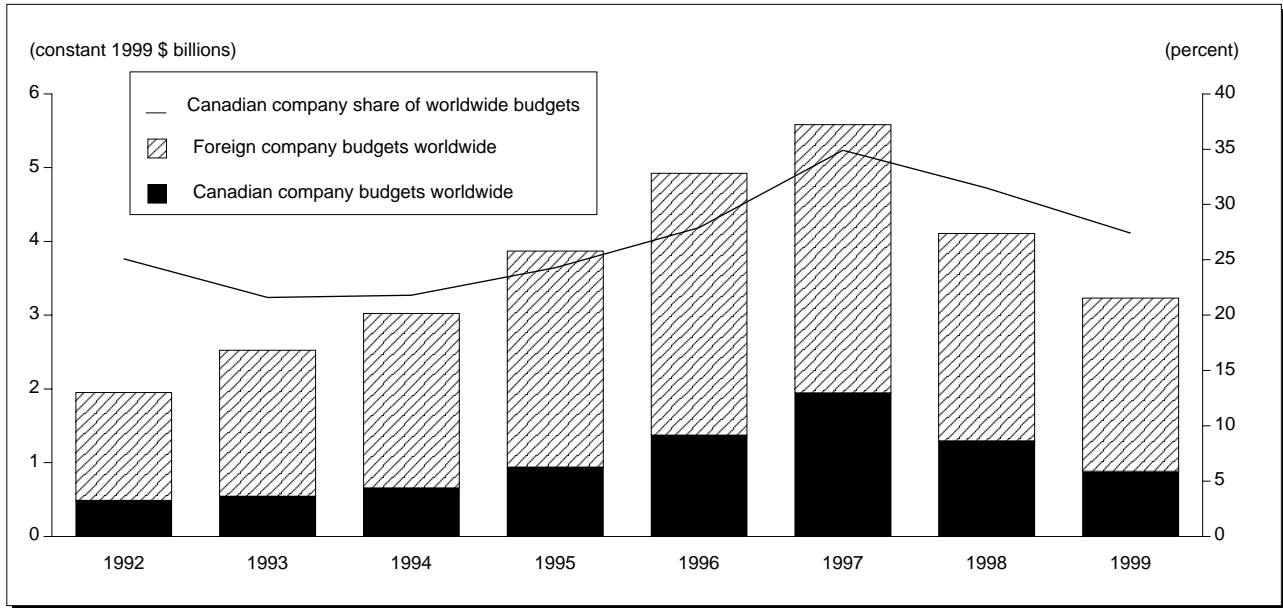
During 1998, the larger Canadian-based companies underspent their exploration budgets, in aggregate, by almost \$86 million, or by about 7% less than they had planned (Figure 1). Two thirds of them (51 companies) spent less than budgeted, while a little more

Figure 1
Departure of Global Exploration Expenditures from Budgets, 1998
Canadian-Based Companies with Budgets of at Least \$4 Million for Precious-Metal, Base-Metal or Diamond Exploration



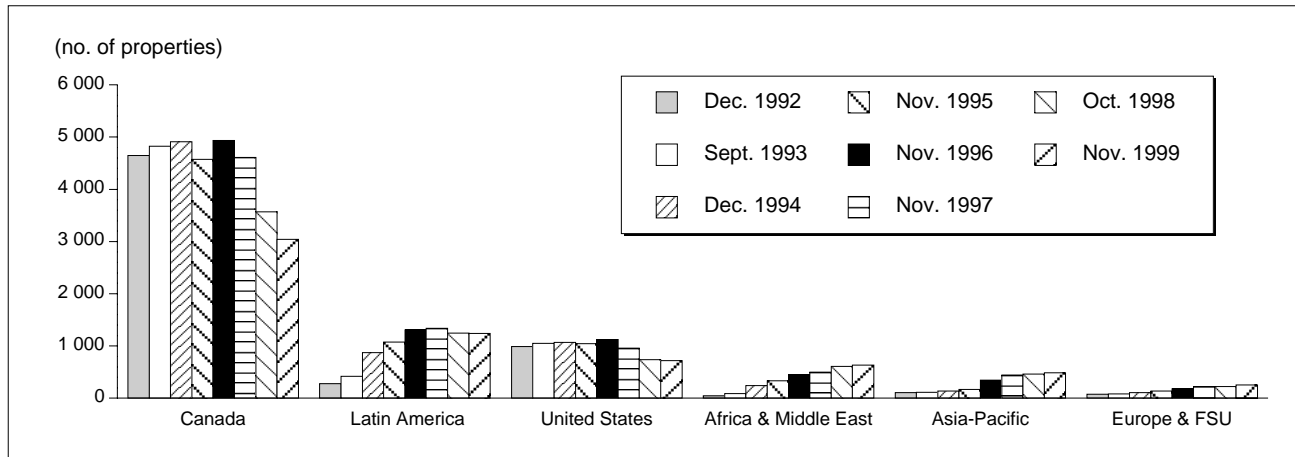
Source: Natural Resources Canada, based on *Corporate Exploration Strategies: A Worldwide Analysis*, Metals Economics Group, Halifax, Nova Scotia.
Note: During 1998, the aggregate expenditures of Canadian-based companies were almost \$86 million, or about 7% lower than previously budgeted.

Figure 2
Exploration Budgets of the World's Larger Companies, by Origin, 1992-99
 Companies with Worldwide Budgets of at Least \$4 Million for Precious-Metal, Base-Metal or Diamond Exploration



Source: Natural Resources Canada, based on *Corporate Exploration Strategies: A Worldwide Analysis*, Metals Economics Group, Halifax, Nova Scotia.
 Notes: The worldwide exploration budgets of companies that intended to spend less than \$4 million (US\$3 million) annually are excluded. The worldwide exploration budgets for other commodities such as uranium or industrial minerals are also excluded.

Figure 3
Canadian Mineral Property Portfolio Worldwide, by Region, 1992-99
 Companies of All Sizes Listed on Canadian Stock Exchanges



Source: Natural Resources Canada, based on *MIN-MET CANADA* for 1992-97 and InfoMine db for 1998 and 1999, Robertson Info-Data Inc., Vancouver, British Columbia, and used under licence.
 Note: The decrease in properties in Canada after 1997 is due mainly to the implementation of database features that make it possible to exclude many inactive properties.

than 30% (25 companies) spent more than budgeted. Individual company departures from 1998 plans ranged from \$10 million under budget to \$17 million over budget. In general, companies that exceeded their program budgets during 1998 did so in response to new discoveries or other opportunities that arose during the year.

Many exploration companies derive little or no substantial revenues from mineral production and, therefore, rely almost entirely on the stock market to finance their exploration programs. In 1996, mining companies listed on Canadian stock exchanges raised a record amount of capital.² As a result, a record 141 Canadian-based companies each planned to spend more than \$4 million on exploration around the world during that year. Their aggregate exploration budgets, adjusted for inflation, stood at a record \$1.9 billion. Because of investor uncertainty since 1997, the number of Canadian-based companies that planned to spend more than \$4 million on exploration in 1999 decreased to 47. The total amount that these companies planned to spend on mineral exploration in both Canada and elsewhere around the world fell to \$884 million in 1999 (Figure 2) from \$1.3 billion the previous year, or down by 32%. Nonetheless, during 1999, Canadian-based companies planned to undertake almost 30% of all the larger-company exploration programs around the world, about the same amount as companies based in Australia. In 1997, Canadian programs accounted for a record 35%, which is the dominant share, by far, of all worldwide mineral exploration activity.

Relatively fewer of the many companies that budgeted only somewhat more than \$4 million in 1998 were able to raise a similar amount for exploration in 1999. As a result, the average company budget for 1999 increased. In the case of the larger Canadian-based companies, the mean budget increased to \$24.5 million and the median to \$10.4 million, up from \$15.4 million and \$7.1 million, respectively, the previous year.

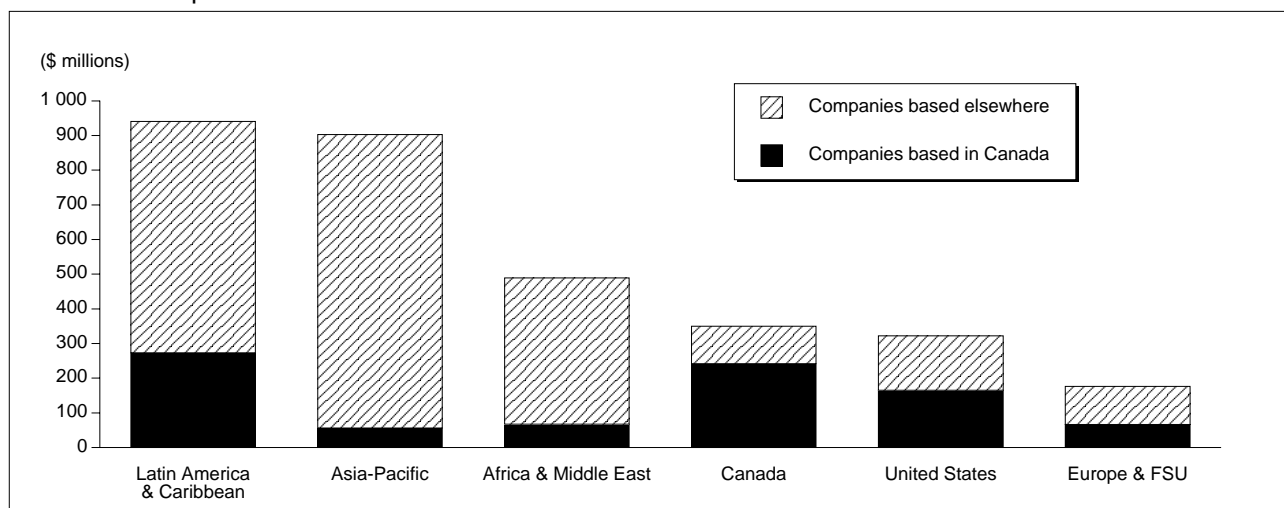
At the end of 1999, companies of all sizes listed on Canadian stock exchanges held interests in a portfolio of more than 6300 properties (Figure 3) located in Canada and in more than 100 countries around the world.³ Most of this portfolio is at the exploration stage.

LARGER-COMPANY EXPLORATION MARKET IN CANADA

In 1999, the larger-company mineral exploration market in Canada was valued at about \$350 million (Figure 4). The balance of the Canadian market is held mainly by smaller companies, the activities of which are not addressed specifically here.

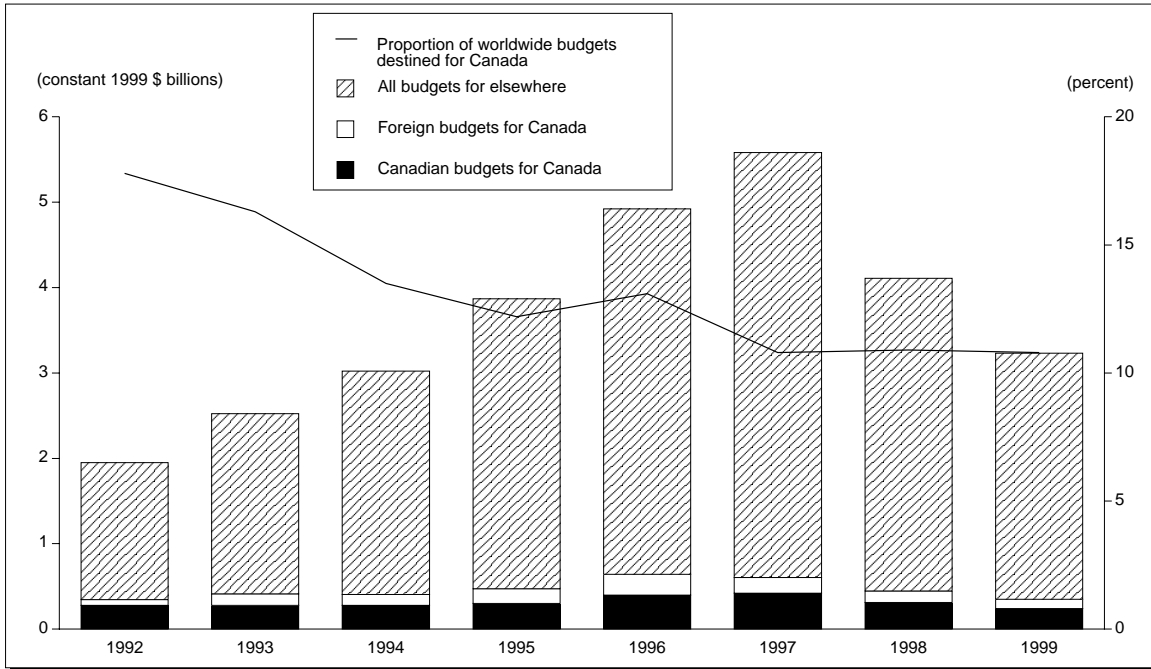
During 1999, 48 of the world's larger domestic-based or foreign-based companies planned to explore for minerals in Canada. Their aggregate budgets were down by almost \$100 million, or by almost 25%, compared with those of the previous year. Nonethe-

Figure 4
Exploration Budgets of the World's Larger Companies for Selected Regions of the World, 1999
Companies with Worldwide Budgets of at Least \$4 Million for Precious-Metal, Base-Metal or Diamond Exploration



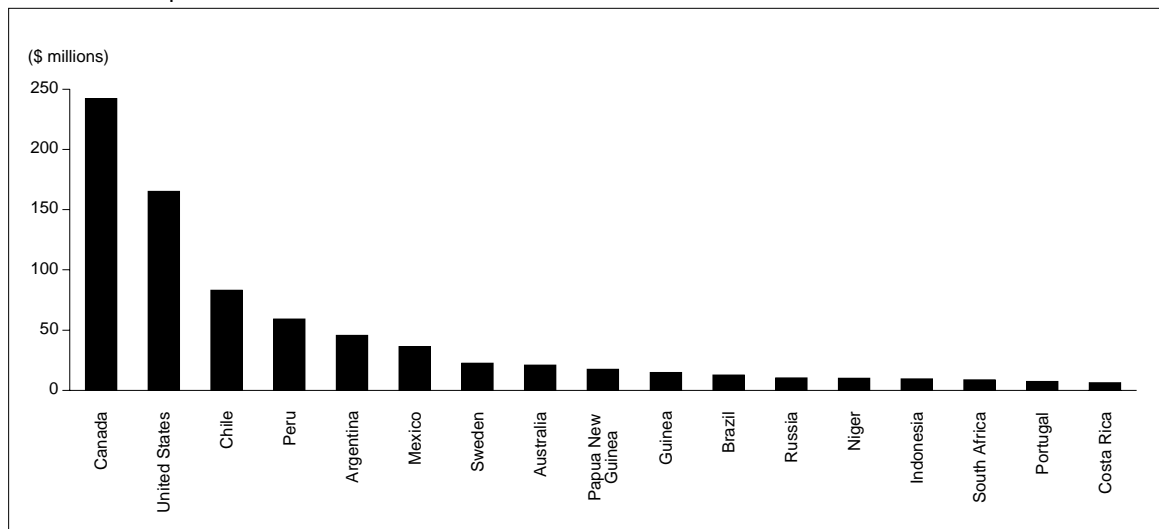
Source: Natural Resources Canada, based on *Corporate Exploration Strategies: A Worldwide Analysis*, Metals Economics Group, Halifax, Nova Scotia.
Notes: The worldwide exploration budgets of companies that intended to spend less than \$4 million (US\$3 million) annually are excluded. The worldwide exploration budgets for other commodities such as uranium or industrial minerals are also excluded.

Figure 5
Exploration Budgets of the World's Larger Companies for Canada and Elsewhere, 1992-99
 Companies with Worldwide Budgets of at Least \$4 Million for Precious-Metal, Base-Metal or Diamond Exploration



Source: Natural Resources Canada, based on *Corporate Exploration Strategies: A Worldwide Analysis*, Metals Economics Group, Halifax, Nova Scotia.
 Notes: The worldwide exploration budgets of companies that intended to spend less than \$4 million (US\$3 million) annually are excluded. The worldwide exploration budgets for other commodities such as uranium or industrial minerals are also excluded.

Figure 6
Exploration Budgets of the Larger Canadian-Based Companies, 1999 – Countries Accounting for 90% of Canadian Budgets
 Companies with Worldwide Budgets of at Least \$4 Million for Precious-Metal, Base-Metal or Diamond Exploration



Source: Natural Resources Canada, based on *Corporate Exploration Strategies: A Worldwide Analysis*, Metals Economics Group, Halifax, Nova Scotia.
 Notes: The worldwide exploration budgets of companies that intended to spend less than \$4 million (US\$3 million) annually are excluded. The worldwide exploration budgets for other commodities such as uranium or industrial minerals are also excluded.

less, almost 11% of the exploration programs of all the world's larger companies were destined for Canada (Figure 5), nearly the same as in 1997 and 1998. However, the proportion of worldwide exploration activity taking place in Canada has fallen gradually each year from about 18% in 1992 because of the large increase in exploration activity that occurred in developing countries starting in the early 1990s. At the end of 1999, there were more than 3000 mineral properties with recent exploration activity in this country (Figure 3).⁴

In 1999, 34 of the larger Canadian-based companies allocated over \$240 million for exploration in Canada. This represents a reduction of almost \$71 million, or 23%, from the more than \$310 million budgeted in 1998. Canadian-based companies control almost 70% of the larger-company market in Canada. Australia is the only other country where domestic companies control more than half of the larger-company market for mineral exploration. In 1992, Canadian-based companies controlled 80% of the larger-company market in Canada but, with increasing globalization, their share has fallen gradually as foreign-based companies have increased their investment in this country. The share of the exploration market controlled by the larger domestic firms has also fallen in the United States, Australia and Latin America. Still, Canada remains the country for which Canadian

companies budget the most, by far, for mineral exploration programs (Figure 6).

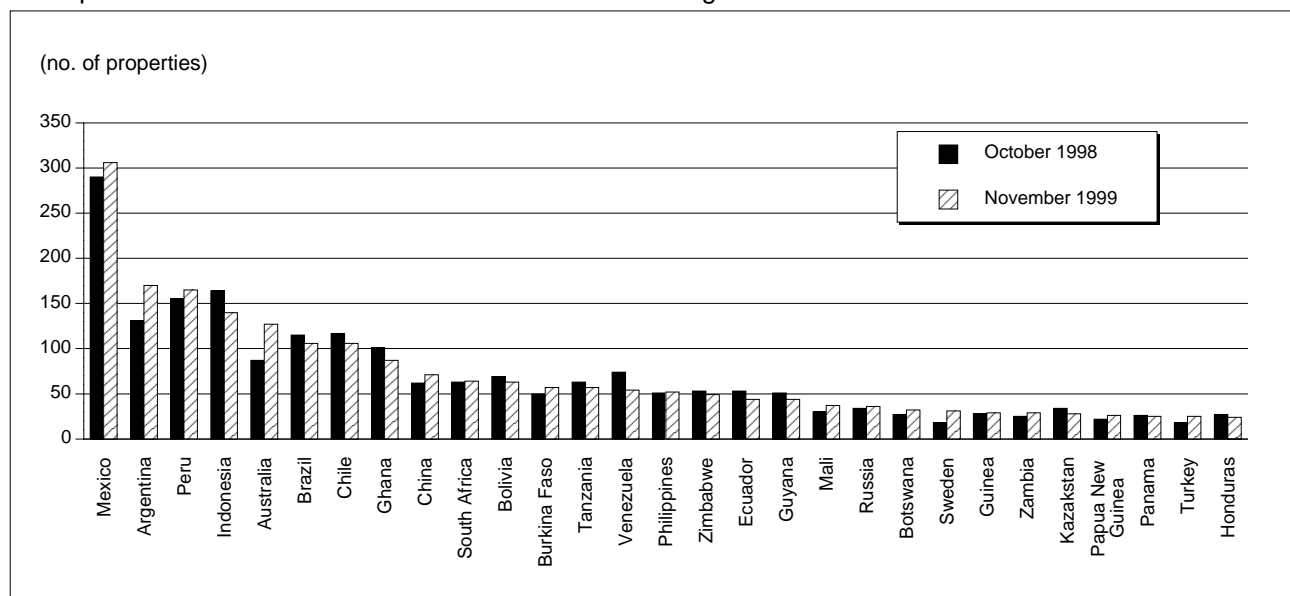
During 1999, the larger foreign-based multinationals planned to spend over \$100 million on mineral exploration in Canada (Figure 5), or more than 30% of all exploration programs planned for this country. Compared with 1998, their budgets decreased by almost \$30 million, or by about one quarter.

The larger foreign-based companies active in Canada include: The Broken Hill Proprietary Company Limited (BHP) and WMC Limited, both based in Australia; Battle Mountain Gold Company, Echo Bay Mines Ltd., Freeport-McMoRan Copper & Gold Inc., Homestake Mining Company, Newmont Mining Corporation and Phelps Dodge Corporation, all based in the United States; Anglo American plc, Billiton plc, Outokumpu Oyj and Rio Tinto plc, all based in Europe; and Anglo American Platinum Corporation Limited and De Beers Consolidated Mines, Limited, both based in South Africa.

LARGER CANADIAN-BASED COMPANIES ABROAD

In 1999, the larger Canadian-based companies planned to spend more than \$640 million on

Figure 7
Canadian Mineral Property Portfolio Abroad, 1998 and 1999 – Countries Accounting for 80% of Canadian Holdings Located Outside the United States in 1999
 Companies of all Sizes Listed on Canadian Stock Exchanges



Source: Natural Resources Canada, based on InfoMine db, Robertson Info-Data Inc., Vancouver, British Columbia, and used under licence.

mineral exploration outside Canada (Figure 4). This represents a 35% decrease from the more than \$980 million they planned to spend in 1998. The proportion of their total budgets allocated to foreign programs was almost 73% in 1999. That proportion peaked at over 78% in 1997; it was only 43% in 1992.

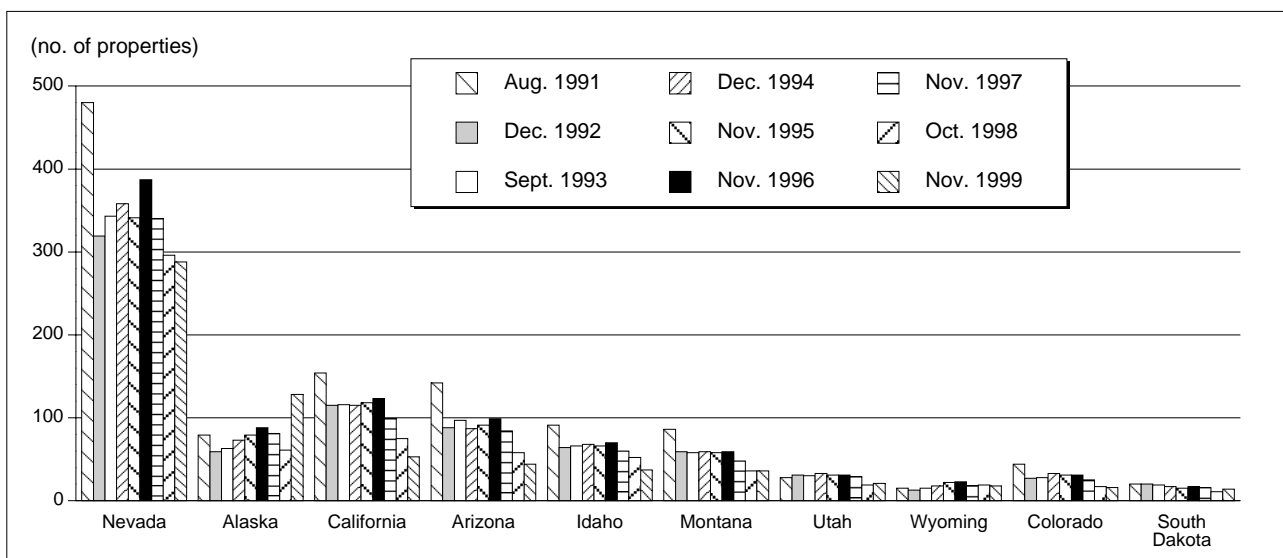
At the end of 1999, companies of all sizes listed on Canadian stock exchanges held interests in a portfolio of over 3300 mineral properties located abroad (Figure 3). Foreign properties now represent more than half of the total mineral property portfolio held by these companies, up from about 25% in 1992.⁵ Between 1992 and 1999, their holdings of foreign mineral properties grew at an average annual compound rate of about 12%. Apart from the United States, where companies of all sizes listed on Canadian stock exchanges have a substantial mining presence, about 30 other nations, spread across the globe, account for 80% of the balance of their mineral property portfolio held abroad (Figure 7). Canadian companies have interests in 150 operating mines, smelters or refineries in over 40 foreign countries (Table 1). Several of their other advanced projects in these countries and elsewhere are either under construction or awaiting the results of a final production feasibility study. Their other projects are at the exploration stage.

United States

In 1999, the larger-company mineral exploration market in the United States was valued at over \$320 million (Figure 4), or about 10% of the \$3.2 billion larger-company market worldwide. In spite of global retrenchment, over 30 of the larger Canadian-based companies planned to spend about \$165 million in total in the United States, slightly more than in 1998. Because companies based in most other countries considerably reduced their exploration programs for the United States during 1999, Canadian-based companies increased their share of the larger-company exploration market in that country to 51%. Canadian-based companies have increased their share of the exploration market in the United States each year since the early 1990s. The exploration budgets of the larger Canadian-based companies for the United States have grown at an average annual compound rate of about 10% since the early 1990s. The United States ranks second after Canada as the country where Canadian companies are the most active (Figure 6).

Canadian companies planned to spend over \$70 million more than U.S. companies in the United States during 1999. American companies have budgeted decreasing amounts for exploration in the United States each year since the early 1990s. Although they accounted for almost 60% of the exploration programs there in 1992, they accounted for only 29% in 1999.

Figure 8
Canadian Mineral Property Portfolio in the United States, 1991-99 –
States Accounting for 90% of Canadian Holdings in 1999
 Companies of all Sizes Listed on Canadian Stock Exchanges



Source: Natural Resources Canada, based on *MIN-MET CANADA* for 1991-97 and InfoMine db for 1998 and 1999, Robertson Info-Data Inc., Vancouver, British Columbia, and used under licence.

In late 1999, companies of all sizes listed on Canadian stock exchanges held over 700 mineral properties in the United States (Figure 3). They had projects in 22 states, but mainly in the western part of the country in Nevada, Alaska, California, Arizona, Idaho, Montana, Utah, Wyoming, Colorado and South Dakota (Figure 8). Nevada alone accounted for almost 300 of their mineral properties, or about 40% of the total Canadian portfolio in the United States.

Although Canadian companies have expanded their activities considerably in Latin America, Africa and Asia since the early 1990s, the United States is likely to remain, for the foreseeable future, the foreign country where they hold their largest portfolio of mineral properties. At the end of 1999, the United States accounted for over 20% of all properties held abroad by these companies.

Of all the Canadian-based companies, Placer Dome Inc., Barrick Gold Corporation, Teck Corporation and Cominco Ltd. planned the largest exploration programs in the United States during 1999. Together they planned to spend more than \$120 million, or over 70% of Canadian budgets for that country. Teck planned to spend much of its \$25 million budget for the United States at the Pogo gold deposit in Alaska. Placer Dome planned to spend about 80% of its \$45 million budget for the United States at the Getchell gold mine in Nevada. Barrick planned to spend over \$30 million, much of it on further exploration in and around its mining operations in Nevada. Cominco planned to spend a good portion of its \$19 million budget for the United States at the Red Dog mine in Alaska.

Latin America and the Caribbean

In 1999, the larger-company mineral exploration market in Latin America and the Caribbean was valued at \$940 million (Figure 4), or almost 29% of the \$3.2 billion larger-company market worldwide. Latin America accounts for the largest concentration of Canadian mineral exploration activity around the world. During 1999, the larger Canadian-based companies planned to spend over \$270 million there. However, this amount represents a decrease of more than \$175 million, or over 39%, compared with 1998.

In spite of significant decreases since 1997, the exploration budgets of the larger Canadian-based companies for Latin America and the Caribbean have grown at an average annual compound rate of 18% between 1992 and 1999. In 1999, these companies held more than 29% of the larger-company market in the region, by far the largest share. In addition, they held the dominant share of the exploration activity in several countries in the region.

At the end of 1999, companies of all sizes listed on Canadian stock exchanges held interests in over

1200 mineral properties in the region. Since 1996, the total number of mineral properties held by Canadian companies in Latin America and the Caribbean has exceeded the number held in the United States (Figure 3).

Mexico

In 1999, the larger-company mineral exploration market in Mexico was valued at almost \$140 million, or more than 4% of the \$3.2 billion larger-company market worldwide. Fourteen of the larger Canadian-based companies planned to spend, in total, more than \$36 million in that country, equivalent to 30% of the market. Mexico ranks fourth in Latin America and sixth in the world as the country where Canadian companies are the most active (Figure 6).

During 1994, there was a significant increase in the average size of the mineral property portfolio held in Mexico by companies of all sizes listed on Canadian stock exchanges. At the end of 1999, these companies held interests in more than 300 properties in 20 of the country's 31 states or district (Figure 9).

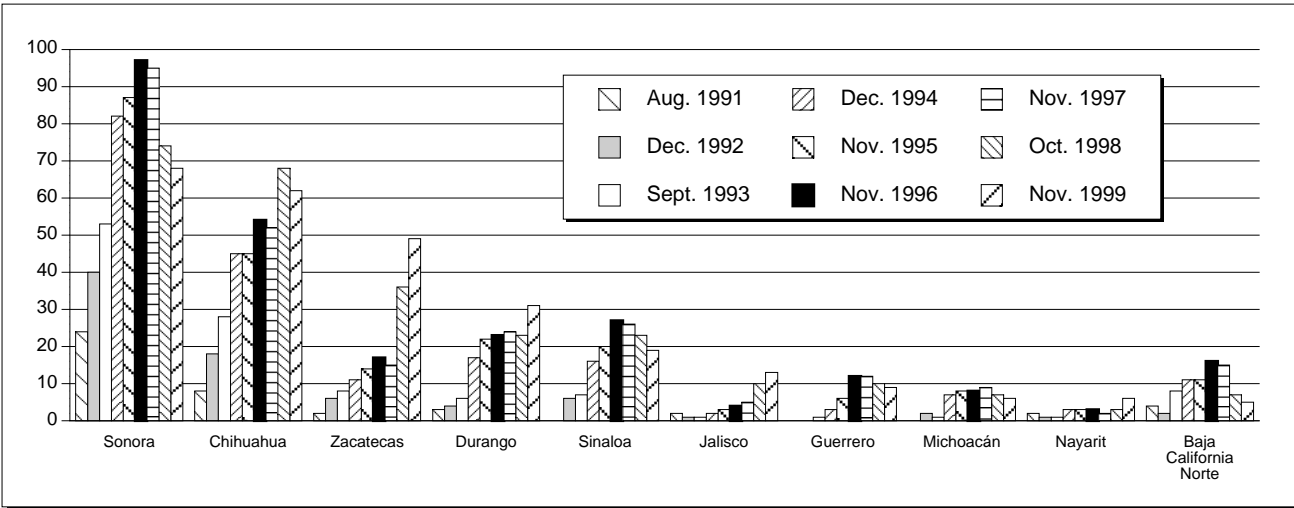
Cambior inc. planned the largest Canadian exploration program in Mexico during 1999. It planned to spend over \$12 million there, 80% of that amount on the Cerro San Pedro gold-silver project.

South America

In 1999, the larger-company mineral exploration market in South America was valued at over \$740 million, slightly more than 20% of the \$3.2 billion larger-company market worldwide. Twenty-three of the larger Canadian-based companies planned to spend around \$220 million in total in the region, approximately 30% of the market there. Canadian companies held the dominant share of the market in Argentina, Chile, Colombia and Peru.

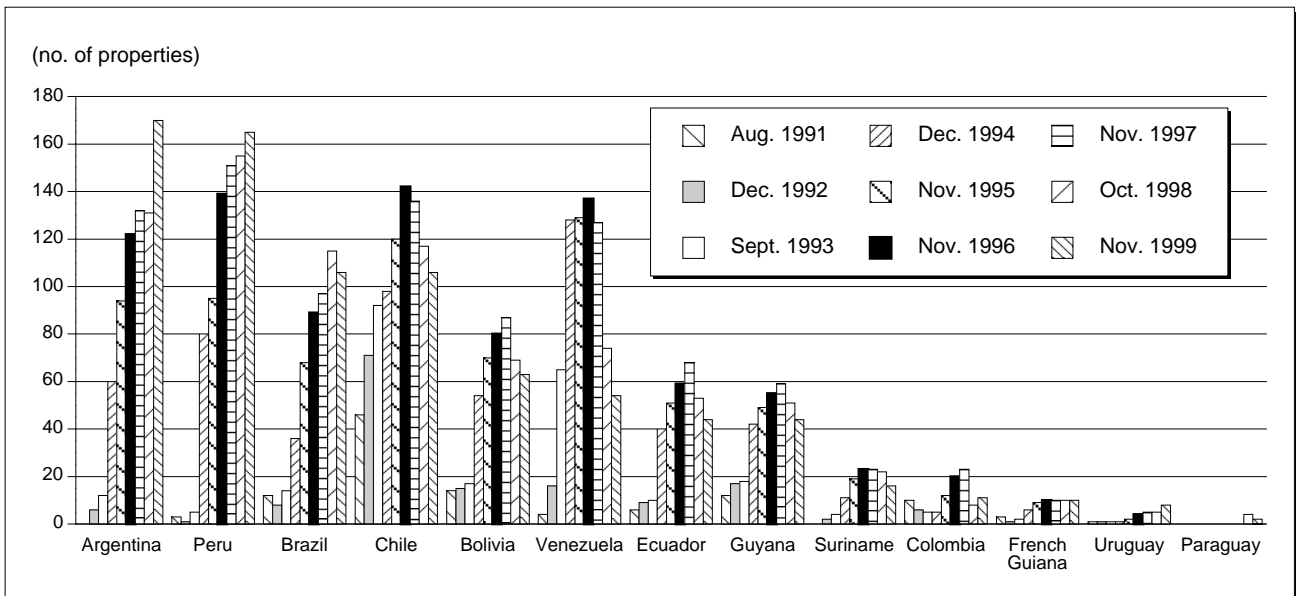
Chile is the country of South America where Canadian-based companies conduct the largest portion of their exploration programs (Figure 6). Chile also ranks third in the world as the country where Canadian companies are the most active. In 1999, Placer Dome and Barrick were expected to conduct about 25% of all the exploration programs planned for Chile. Placer Dome planned to spend most of its almost \$29 million budget for Chile on the Cerro Casale (Aldebaran) gold-copper project. Barrick planned to spend most of its \$25 million budget for Chile exploring the Pascua gold project. Elsewhere in South America, Barrick planned the largest exploration program in Argentina. It planned to spend most of its \$31 million budget for that country on the extension of the Pascua deposit from Chile into Argentina. Greystar Resources Ltd. planned to spend more than \$5 million in Colombia, and Cambior planned to spend over \$2 million in proximity to the

Figure 9
Canadian Mineral Property Portfolio in Mexico, 1991-99 –
States Accounting for 90% of Canadian Holdings in 1999
 Companies of all Sizes Listed on Canadian Stock Exchanges



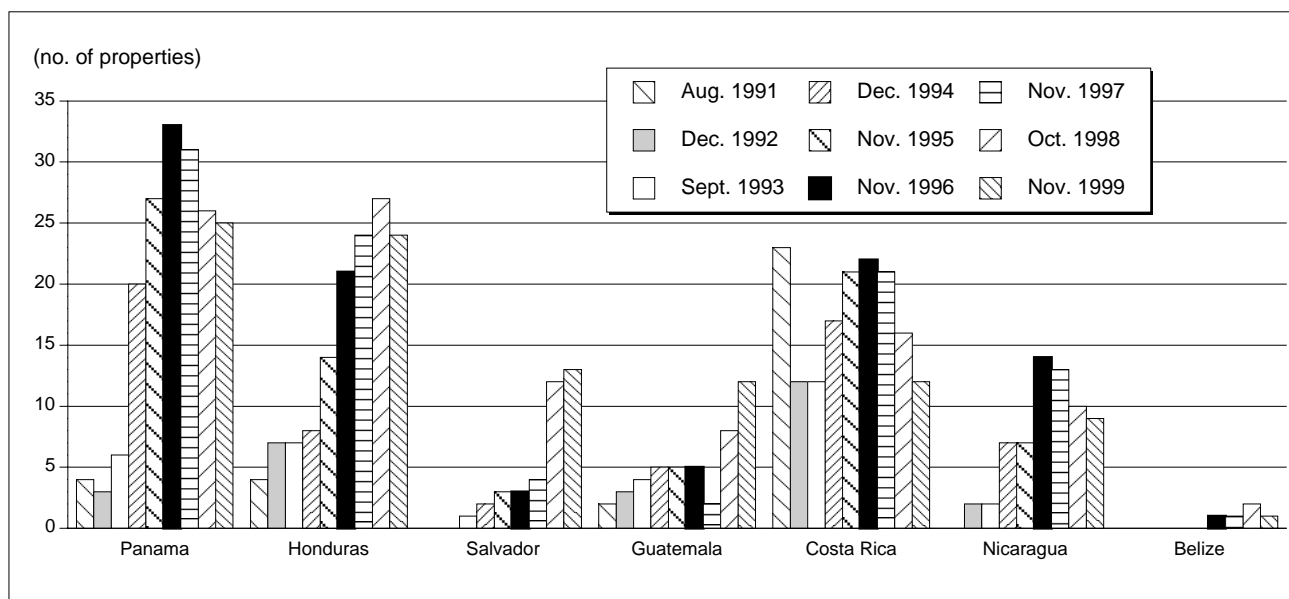
Source: Natural Resources Canada, based on *MIN-MET CANADA* for 1991-97 and InfoMine db for 1998 and 1999, Robertson Info-Data Inc., Vancouver, British Columbia, and used under licence.

Figure 10
Canadian Mineral Property Portfolio in South America, by Country, 1991-99
 Companies of all Sizes Listed on Canadian Stock Exchanges



Source: Natural Resources Canada, based on *MIN-MET CANADA* for 1991-97 and InfoMine db for 1998 and 1999, Robertson Info-Data Inc., Vancouver, British Columbia, and used under licence.

Figure 11
Canadian Mineral Property Portfolio in Central America, by Country, 1991-99
 Companies of all Sizes Listed on Canadian Stock Exchanges



Source: Natural Resources Canada, based on *MIN-MET CANADA* for 1991-97 and InfoMine db for 1998 and 1999, Robertson Info-Data Inc., Vancouver, British Columbia, and used under licence.

Omai gold mine in Guyana. Cambior also planned to spend almost \$16 million in Peru, including over \$9 million on the Huamachuco gold project (Virgen and La Arena properties) and more than \$3 million on the La Granja copper-gold project.

At the end of 1999, companies of all sizes listed on Canadian stock exchanges held 800 mineral properties throughout South America. They held about 170 properties in each of Argentina and Peru, more than 100 in each of Brazil and Chile, and more than 50 in each of Bolivia and Venezuela (Figure 10).

Central America

In 1999, the larger-company mineral exploration market in Central America was valued at about \$10 million, or less than 1% of the \$3.2 billion larger-company market worldwide. Six of the larger Canadian-based companies planned to spend about 70% of that amount.

Canadian-based companies planned to conduct all of the exploration programs in three countries in the region: Lyon Lake Mines Ltd. planned to spend over \$6 million at the Crucitas deposit in Costa Rica, Kinross Gold Corporation planned to spend over \$0.4 million at the El Dorado gold project in Salvador, and Aur Resources Inc. planned to spend over \$0.4 million at the Cerro Colorado copper deposit in Panama.

At the end of 1999, companies of all sizes listed on Canadian stock exchanges held about 100 mineral properties throughout Central America. They held 20 or more in each of Honduras and Panama (Figure 11).

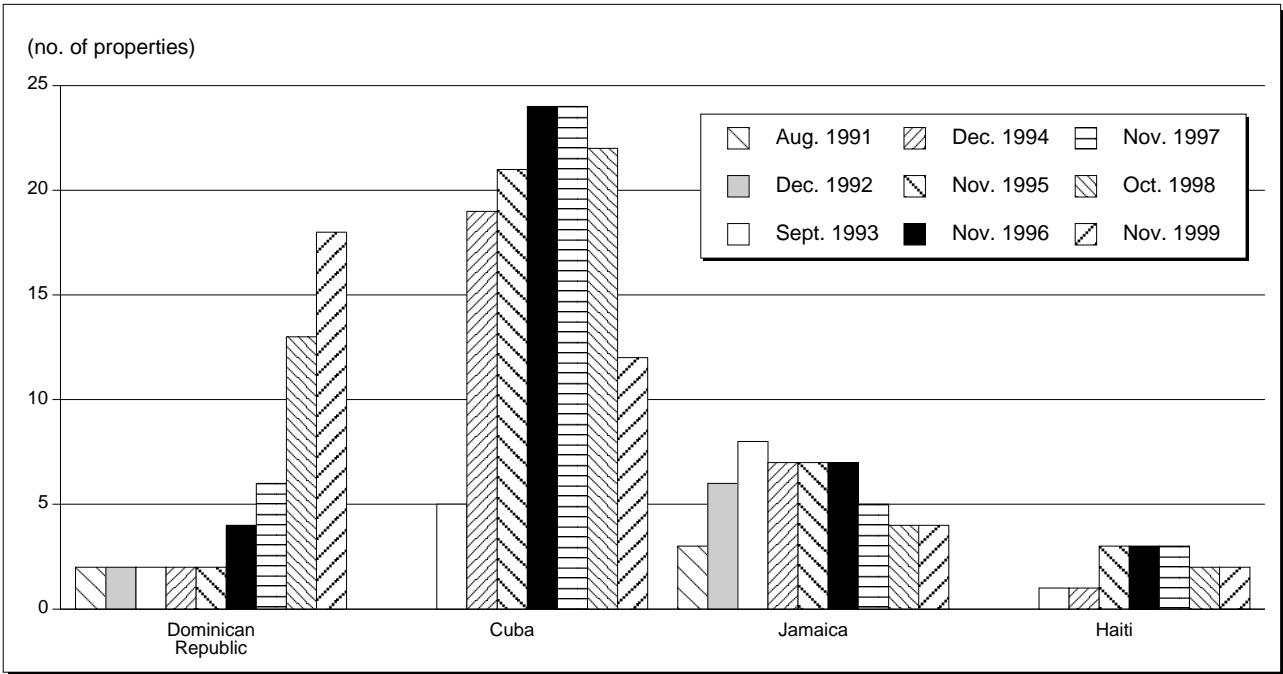
Caribbean

In 1999, the larger-company mineral exploration market in the Caribbean was valued at about \$15 million. The larger Canadian-based companies reported no exploration programs for that region. At the end of 1999, companies of all sizes listed on Canadian stock exchanges held about 40 mineral properties in the Caribbean, most of them in the Dominican Republic and Cuba (Figure 12).

Europe and the Former Soviet Union

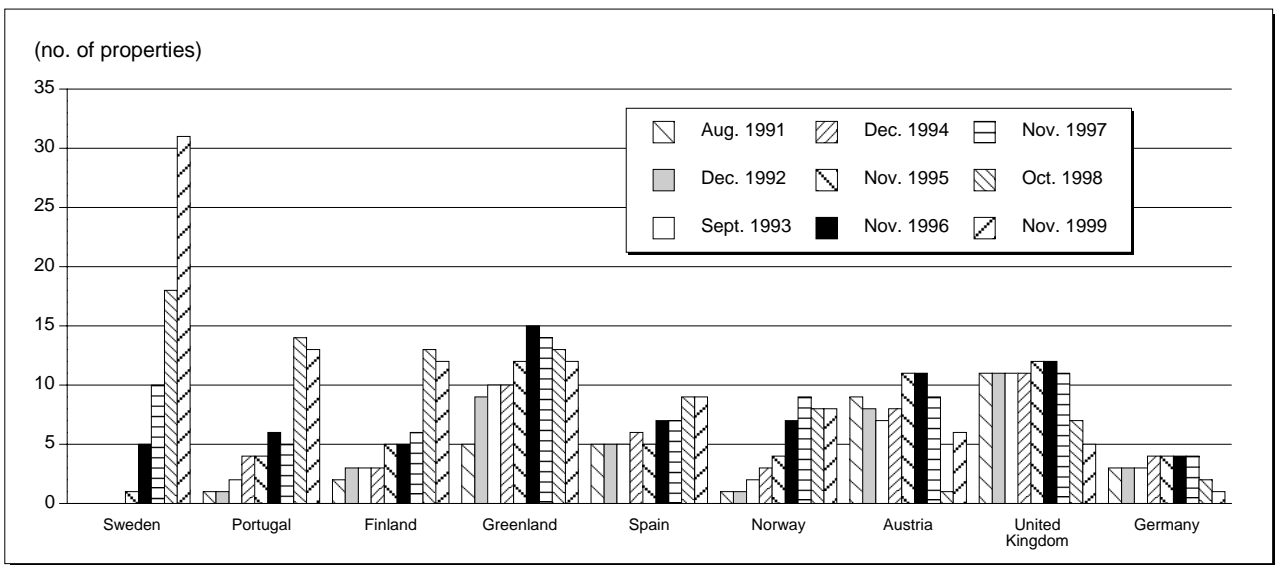
In 1999, the larger-company mineral exploration market in Europe and the Former Soviet Union (FSU) was valued at over \$175 million (Figure 4), or roughly 5% of the \$3.2 billion larger-company market worldwide. The larger Canadian-based companies planned to spend almost \$70 million there, equivalent to 40% of the market. At the end of 1999, companies of all sizes listed on Canadian stock exchanges held about 250 mineral properties in the region (Figure 3).

Figure 12
Canadian Mineral Property Portfolio in the Caribbean, by Country, 1991-99
 Countries With Canadian Holdings in 1999
 Companies of all Sizes Listed on Canadian Stock Exchanges



Source: Natural Resources Canada, based on *MIN-MET CANADA* for 1991-97 and InfoMine db for 1998 and 1999, Robertson Info-Data Inc., Vancouver, British Columbia, and used under licence.

Figure 13
Canadian Mineral Property Portfolio in Western Europe, 1991-99 –
Countries Accounting for 95% of Canadian Holdings in 1999
 Companies of all Sizes Listed on Canadian Stock Exchanges



Source: Natural Resources Canada, based on *MIN-MET CANADA* for 1991-97 and InfoMine db for 1998 and 1999, Robertson Info-Data Inc., Vancouver, British Columbia, and used under licence.

Western Europe

In 1999, the larger-company mineral exploration market in western Europe was valued at over \$75 million, or roughly 2% of the \$3.2 billion larger-company market worldwide. The larger Canadian-based companies planned to spend \$40 million there, equivalent to more than half of the market. They held the dominant share in Greenland, Portugal and Sweden.

During 1999, Canadian-based companies planned the largest programs in three countries of western Europe: Dia Met Minerals Ltd. planned to spend over \$3 million on exploration for diamonds in Greenland, EuroZinc Mining Corporation planned to spend over \$7 million on the Aljustrel zinc-lead-silver deposit in Portugal, and Boliden Limited planned to spend 80% of its more than \$22 million budget for Europe mainly at the Renström, Petiknäs and Kristineberg mines in Sweden.

At the end of 1999, companies of all sizes listed on Canadian stock exchanges held more than 100 mineral properties in western Europe. They held more than 30 in Sweden and more than 10 in each of Portugal, Finland and Greenland (Figure 13).

Eastern Europe

In 1999, the larger-company mineral exploration market in eastern Europe was valued at about

\$20 million, or roughly 1% of the \$3.2 billion larger-company market worldwide. The larger Canadian-based companies planned to spend about \$9 million there, equivalent to almost half of the market.

Canadian-based companies held the dominant share of the market in two countries of eastern Europe. In Romania, Gabriel Resources Limited planned to spend over \$5 million on the Rosia Montana gold-silver deposit; in Turkey, Cominco and Inco Limited each planned to spend over \$0.75 million on grassroots exploration for base metals and Inmet Mining Corporation planned to spend about \$0.5 million on mine-site exploration for gold.

At the end of 1999, companies of all sizes listed on Canadian stock exchanges held 75 mineral properties in eastern Europe. They held 20 or more in each of Turkey and Slovakia (Figure 14).

Former Soviet Union

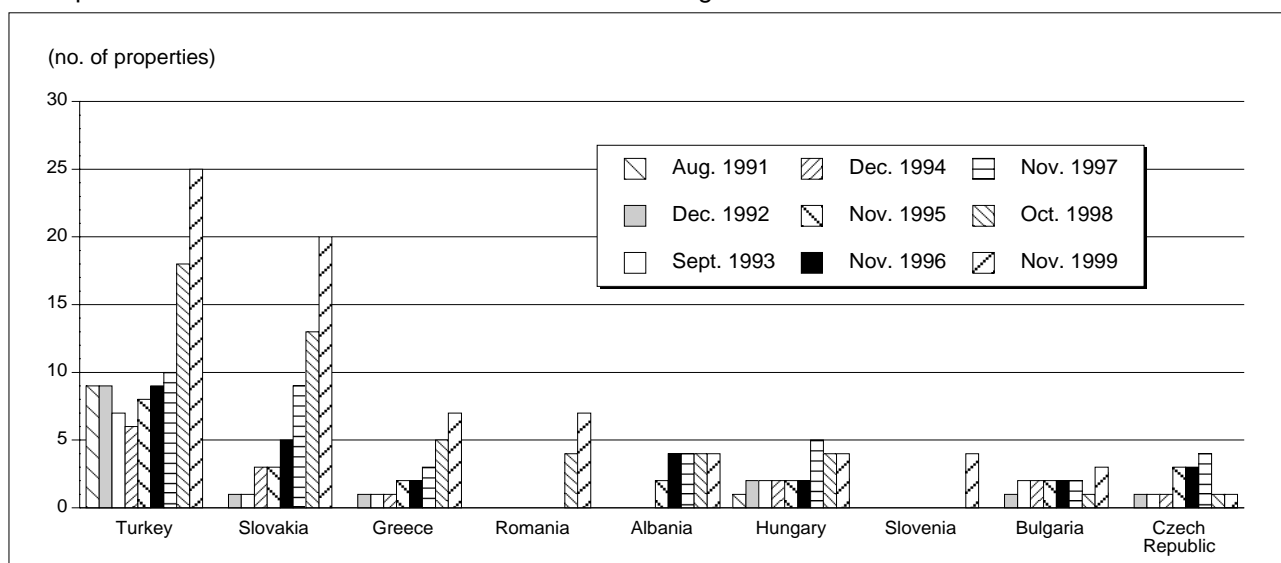
In 1999, the larger-company mineral exploration market in the countries of the FSU was valued at about \$70 million, or roughly 2% of the \$3.2 billion larger-company market worldwide. The larger Canadian-based companies planned to spend about \$15 million in these countries. At the end of 1999, companies of all sizes listed on Canadian stock exchanges held interests in almost 80 mineral properties in seven countries of the FSU (Figure 15).

Figure 14

Canadian Mineral Property Portfolio in Eastern Europe, 1991-99

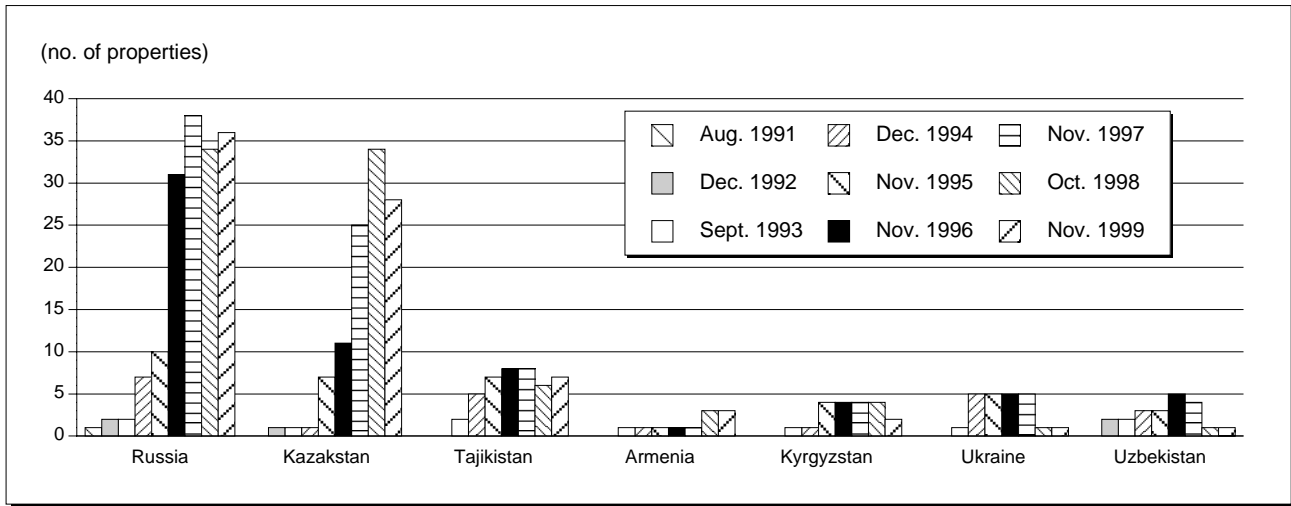
Countries With Canadian Holdings in 1999

Companies of all Sizes Listed on Canadian Stock Exchanges



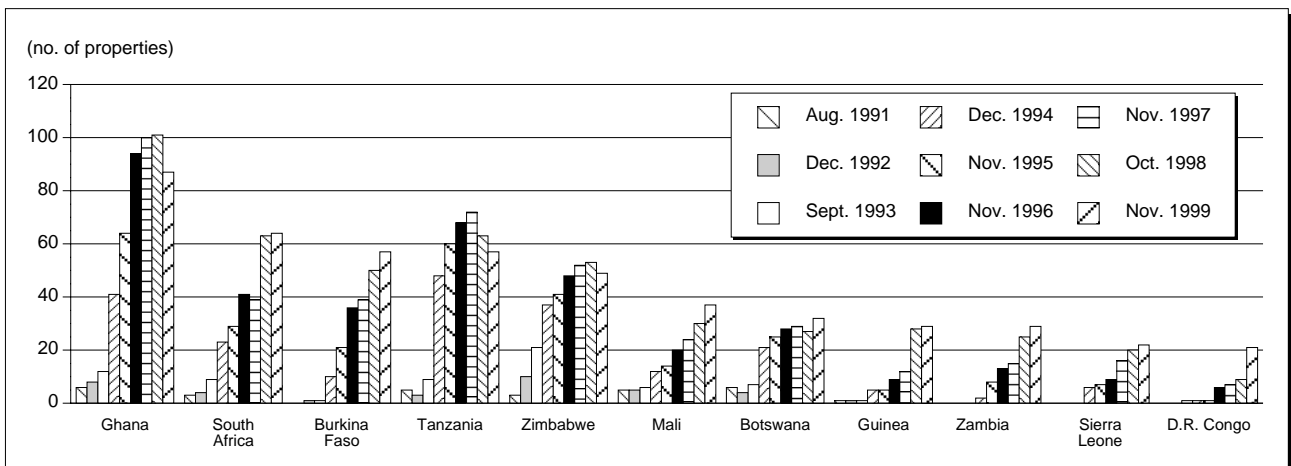
Source: Natural Resources Canada, based on *MIN-MET CANADA* for 1991-97 and InfoMine db for 1998 and 1999, Robertson Info-Data Inc., Vancouver, British Columbia, and used under licence.

Figure 15
Canadian Mineral Property Portfolio in the Former Soviet Union, by Country, 1991-99
 Companies of all Sizes Listed on Canadian Stock Exchanges



Source: Natural Resources Canada, based on *MIN-MET CANADA* for 1991-97 and InfoMine db for 1998 and 1999, Robertson Info-Data Inc., Vancouver, British Columbia, and used under licence.

Figure 16
Canadian Mineral Property Portfolio in Africa, 1991-99 –
Countries Accounting for 75% of Holdings in 1999
 Companies of all Sizes Listed on Canadian Stock Exchanges



Source: Natural Resources Canada, based on *MIN-MET CANADA* for 1991-97 and InfoMine db for 1998 and 1999, Robertson Info-Data Inc., Vancouver, British Columbia, and used under licence.

Russia is by far the country of the FSU where Canadian companies are the most active. In 1999, seven of these companies planned to spend over \$10 million in total on exploration there, equivalent to about half of the market. Kinross planned to spend more than \$4 million, mainly at the Kubaka gold mine. Bema Gold Corporation planned to spend almost \$4 million at the Julietta gold-silver deposit. The number of properties held in Russia by companies of all sizes listed on Canadian stock exchanges has increased significantly starting in 1996 and now stands at well over 30.

Kazakhstan also is of considerable interest to Canadian companies. At the end of 1999, the portfolio of mineral properties held in that country by companies of all sizes listed on Canadian stock exchanges stood at almost 30.

Africa and the Middle East

In 1999, the larger-company mineral exploration market in Africa and the Middle East was valued at almost \$490 million (Figure 4), or more than 15% of the \$3.2 billion larger-company market worldwide. The larger Canadian-based companies planned to spend almost \$70 million in Africa, equivalent to 14% of the market on that continent.^{6,7} They reported no exploration programs for the Middle East.

During 1999, Canadian-based companies planned the largest mineral exploration programs in five countries of Africa: SouthernEra Resources Limited planned to spend \$4 million on the Camafuca-Camazambo diamond deposit in Angola; Trivalence Mining Corporation planned to spend \$14 million on the Aredor Concession, which surrounds its alluvial diamond operation in Guinea; Dia Met Minerals Ltd. planned to spend \$3 million exploring for diamonds in the Reguibat Archean Shield in Mauritania; Diamond Fields International Ltd. planned to spend more than \$5 million on the Luderitz marine diamond concession in Namibia; and Etruscan Resources Inc. planned to spend \$10 million on the Tiawa permit, which hosts the Samira Hill deposit and the adjacent Saoura gold permit.

Between 1992 and 1999, the number of mineral properties held in Africa by companies of all sizes listed on Canadian stock exchanges grew at an average annual compound rate of over 40%. As a result, at the end of 1999, these companies held interests in almost 630 mineral properties in 39 countries on that continent. They held interests in almost 90 properties in Ghana, in over 60 in South Africa, and in 50 or more in each of Burkina Faso, Tanzania and Zimbabwe (Figure 16).

Asia-Pacific

In 1999, the larger-company mineral exploration market in Asia-Pacific was valued at over \$900 million (Figure 4), or almost 28% of the \$3.2 billion larger-company market worldwide. The exploration market in Asia-Pacific is almost as large as the one in Latin America. The larger Canadian-based companies planned to spend over \$55 million in the region, equivalent to roughly 6% of the market there. At the end of 1999, companies of all sizes listed on Canadian stock exchanges held interests in almost 490 mineral properties in the region (Figure 3).

Southeast Asia

In 1999, the larger-company mineral exploration market in Southeast Asia was valued at over \$235 million, or 7% of the \$3.2 billion larger-company market worldwide. The larger Canadian-based companies planned to spend over \$30 million in Southeast Asia, equivalent to about 7% of the market there. They held the dominant share of the market in four countries: Ivanhoe Mines Ltd. planned to spend \$0.6 million on exploration for gold near its Monywa copper mine in Myanmar, Madison Enterprises Corp. planned to spend \$14 million at the Mt. Kare gold-silver deposit in Papua New Guinea, Ivanhoe planned to spend more than \$1 million on gold exploration in Thailand, and Falconbridge Limited planned to spend \$0.9 million at the Ban Phuc nickel-copper deposit in Vietnam.

In Indonesia, six of the larger Canadian-based companies planned to spend \$10 million in total, equivalent to about 7% of the more than \$140 million exploration market in that country. Placer Dome planned to spend more than \$4 million evaluating the Awak Mas gold property, the largest Canadian program reported there in 1999.

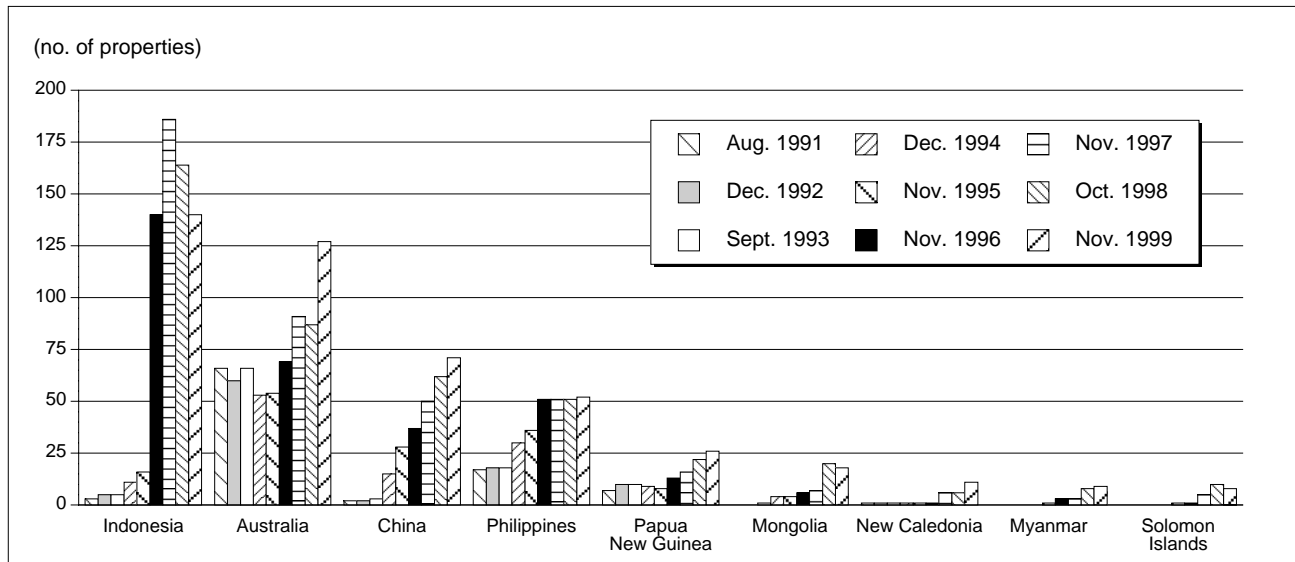
At the end of 1999, companies of all sizes listed on Canadian stock exchanges held over 240 mineral properties in Southeast Asia. They held 140 in Indonesia and more than 50 in the Philippines (Figure 17).

East Asia

In 1999, the larger-company mineral exploration market in east Asia, which includes China, Japan, Mongolia, Taiwan and South Korea, was valued at about \$40 million, or 1% of the \$3.2 billion larger-company market worldwide. The larger Canadian-based companies planned to spend about \$3 million there, equivalent to almost 15% of the market.

Since 1993, there has been considerable Canadian interest in the mineral potential of China. In 1999,

Figure 17
Canadian Mineral Property Portfolio in Asia-Pacific, 1991-99 –
Countries Accounting for 95% of Canadian Holdings in 1999
 Companies of all Sizes Listed on Canadian Stock Exchanges



Source: Natural Resources Canada, based on *MIN-MET CANADA* for 1991-97 and InfoMine db for 1998 and 1999, Robertson Info-Data Inc., Vancouver, British Columbia, and used under licence.

Southwestern Gold Corporation planned to spend \$0.4 million in China, the largest Canadian exploration project reported for that country. In late 1999, companies of all sizes listed on Canadian stock exchanges held interests in over 70 mineral properties in that country (Figure 17).

South Pacific

In 1999, the larger-company mineral exploration market in the South Pacific was valued at almost \$615 million, or 19% of the \$3.2 billion larger-company market worldwide. Australia accounted for almost all of that market.

The larger Canadian-based companies planned to spend over \$20 million in the region, all of it in Australia. These companies hold about 3-4% of the market in that country. Noranda Inc. planned to spend a good portion of its more than \$7 million budget for Australia on the Lady Loretta zinc-lead-silver deposit. Placer Dome planned to spend most of its almost \$7 million budget for that country looking for copper at the Osborne mine site and for gold at the Kidston mine site.

At the end of 1999, companies of all sizes listed on Canadian stock exchanges held over 150 properties in the South Pacific, of which over 80% were in Australia (Figure 17).

SUMMARY AND OUTLOOK

During 1996, a record amount of equity capital was raised in Canada for mining companies listed on Canadian stock exchanges. As a result, these companies, many of which have no other source of funds because they have no income from production, had the financial resources to conduct, during 1997, more mineral exploration programs worldwide than those of any other nation. Since then, it has been difficult for many companies that only conduct exploration to raise capital. As a result, exploration programs worldwide were cut back significantly in 1998 and again in 1999. In spite of continuing uncertainty, especially for those companies that have no cashflow from production, almost 11% of the world's exploration programs were conducted in Canada in 1999, about the same as in the previous two years. In addition, Canadian-based companies conducted roughly 30% of all of the world's mineral exploration programs.

In 1999, Canadian companies increased their share of the exploration market in the United States to over 50%. Furthermore, they continued to conduct the largest share of exploration programs, not only in Canada, but also in South America, Central America and Europe. Although Canadian companies have diversified their portfolio of mineral projects to well over 100 countries, Canada remains the country where they are, by far, the most active.

Exploration finance markets remain depressed, and a return to the record levels of financing raised in Canada in 1996 for exploration worldwide is not in sight. Many of the smaller companies are inactive because of a lack of funds, and mergers and acquisitions appear to be on the rise. For the foreseeable future, Canadian companies with cash flow from mineral production are likely to continue to dominate mineral exploration, especially in the Americas.

REFERENCES

¹ Most of the information on the larger-company mineral exploration market worldwide is based on *Corporate Exploration Strategies: A Worldwide Analysis*, published annually by the Metals Economics Group, Halifax, Nova Scotia (tel. (902) 429-2880).

² Keith Brewer and André Lemieux, *Canada's Global Position in Mining - Canadian Financing of the International Mining Industry*, Metals Finance 4th International Conference, Toronto, May 7-9, 1997, Natural Resources Canada, Ottawa, 53 pp. (tel. (613) 995-4577).

³ Most of the information for 1991 through 1997 on the mineral property portfolio of companies of all sizes listed on Canadian stock exchanges is derived from MIN-MET CANADA; for 1998 and 1999, it is derived from InfoMine db. These databases are produced by Robertson Info-Data Inc., Vancouver, British Columbia (tel. (604) 683-2037).

⁴ For trends in mineral deposit appraisal activity in Canada over the interval 1982-97, and for a list of projects at the deposit appraisal stage in early 1997, see André Lemieux, "Canada's Global Mining Presence," in the 1996 edition of the *Canadian Minerals Yearbook*, Natural Resources Canada, Ottawa, pp. 8.9 and 8.11-8.22.

⁵ For a discussion of social issues related to Canadian investment in the mineral industry of developing countries, see Moira Hutchinson, "Beyond Best Practice - The Mining Sector," Chapter 4 of *The Canadian Development Report 1998 - Canadian Corporations and Social Responsibility*, The North-South Institute, 1998, Ottawa, pp. 74-90.

⁶ For details on Canadian mineral exploration activity in Africa, see "La Ruée vers l'Afrique" and "Les grands projets miniers" in *Stratégies - Le magazine des gens d'affaires du Canada, de l'Afrique et de la francophonie*, mai-juin 1998, Les Publications du Scorpion, Montréal, pp. 16-23.

⁷ For a review of certain economic, political and social aspects of mineral investment in Africa, see Bonnie Campbell, "Liberalisation, deregulation, state promoted investment - Canadian mining interests in Africa," *Journal of Mineral Policy, Business and Environment, Raw Materials Report*, Vol. 13, No. 4, 1998, pp. 14-34.

Notes: (1) Information in this review was current as at early June 2000. (2) This and other reviews, including previous editions, are available on the Internet at http://www.nrcan.gc.ca/mms/cmy/index_e.html.

NOTE TO READERS

The intent of this document is to provide general information and to elicit discussion. It is not intended as a reference, guide or suggestion to be used in trading, investment, or other commercial activities. The author and Natural Resources Canada make no warranty of any kind with respect to the content and accept no liability, either incidental, consequential, financial or otherwise, arising from the use of this document.

TABLE 1. SELECTED PRODUCTION AND ADVANCED MINERAL DEVELOPMENT PROJECTS ABROAD IN WHICH COMPANIES BASED IN CANADA HAVE AN INTEREST

Country	Project	Canadian Participants	Products	Status	
Angola	Camafuca	SouthernEra Resources Limited	Diamonds	Feasibility	
	Luo	DiamondWorks Ltd.	Diamonds	Production	
	Yetwene	DiamondWorks Ltd.	Diamonds	Suspended	
Argentina	Alumbreira, Bajo de la	Rio Algom Limited	Copper, gold	Production	
	El Pachón	Cambior Inc.	Copper	Feasibility	
Armenia	Veladero	Barrick Gold Corporation	Gold, silver	Feasibility	
	Ararat	First Dynasty Mines Ltd.	Gold	Production	
	Meghradzor	First Dynasty Mines Ltd.	Gold	Suspended	
Australia	Zod	First Dynasty Mines Ltd.	Gold	Suspended	
	Bounty	Viceroy Resource Corporation	Gold	Production	
	Ely	Alcan Aluminium Limited	Aluminum	Feasibility	
	Emily Ann	LionOre Mining International Ltd.	Nickel	Feasibility	
	Gladstone (refinery)	Alcan Aluminium Limited	Aluminum	Production	
	Granny Smith	Placer Dome Inc.	Gold	Production	
	Kidston	Placer Dome Inc.	Gold, silver	Production	
	Osborne	Placer Dome Inc.	Gold, copper	Production	
	Rustler's Roost	William Resources Inc.	Gold	Suspended	
	Tarmoola	Teck Corporation	Gold	Production	
	Bolivia	Amayapampa	Vista Gold Corp.	Gold	Feasibility
	Botswana	Phoenix (Tati)	LionOre Mining International Ltd.	Nickel, copper	Production
Selkirk (Tati)		LionOre Mining International Ltd.	Nickel, copper	Production	
Brazil	Alumar (refinery)	Alcan Aluminium Limited	Aluminum	Production	
	Aratu (smelter)	Alcan Aluminium Limited	Aluminum	Production	
	Brasília	TVX Gold Inc.	Gold	Production	
	Crixás	TVX Gold Inc.	Gold	Production	
	Jacobina	William Resources Inc.	Gold	Suspended	
	Ouro Preto (refinery)	Alcan Aluminium Limited	Aluminum	Production	
	Ouro Preto (smelter)	Alcan Aluminium Limited	Aluminum	Production	
	São Bento	Eldorado Gold Corporation	Gold	Production	
	Trombetas	Alcan Aluminium Limited	Aluminum	Production	
	Chile	Altonorte (smelter)	Noranda Inc.	Copper	Production
Andacollo Copper		Aur Resources Inc.	Copper, gold	Production	
Andacollo Gold		Dayton Mining Corporation	Gold	Production	
Cerro Casale (Aldebaran)		Placer Dome Inc., Bema Gold Corporation, Arizona Star Resource Corp.	Gold, copper, silver	Feasibility	
Cerro Colorado		Rio Algom Limited	Copper	Production	
Collahuasi		Falconbridge Limited	Copper	Production	
El Indio		Barrick Gold Corporation	Copper, gold, silver	Production	
El Toqui		Breakwater Resources Ltd.	Zinc, gold, silver	Production	
Guanaco		Kinross Gold Corporation	Gold, silver	Production	
La Coipa		TVX Gold Inc., Placer Dome Inc.	Gold, silver	Production	
Lobo-Marte		Teck Corporation	Gold	Feasibility	
Lomas Bayas		Boliden Limited	Copper	Production	
Pascua-Lama		Barrick Gold Corporation	Gold, silver	Feasibility	
Quebrada Blanca		Cominco Ltd., Teck Corporation	Copper	Production	
Refugio		Bema Gold Corporation, Kinross Gold Corporation	Gold, silver	Production	
China	Spence	Rio Algom Limited	Copper	Feasibility	
	Zaldívar	Placer Dome Inc.	Copper	Production	
	Crimson Hills	Goldpark China Limited	Gold	Production	
	Fortune Mountain	Goldpark China Limited	Gold	Production	
	Hucun	Global-Pacific Minerals Inc.	Copper, gold	Production	
	Kunshun (refinery)	Inco Limited	Nickel	Production	
	Magushan	Copper Mountain Mines Ltd.	Copper	Production	
	Qian Chang	Global-Pacific Minerals Inc.	Gold, copper, iron	Production	
	Xuanzhou	Copper Mountain Mines Ltd.	Copper	Production	
	Costa Rica	Bellavista	Wheaton River Minerals Ltd.	Gold	Feasibility
El Recio (Palo Negro)		Ariel Resources Ltd.	Gold	Production	
Tres Hermanos		Ariel Resources Ltd.	Gold	Suspended	
Cuba	Mantua	Northern Orion Explorations Ltd.	Copper	Feasibility	
	Moa Bay	Sherritt International Corporation	Nickel, cobalt	Production	
Democratic Republic of the Congo	Tenke Fungurume	Tenke Mining Corp.	Copper, cobalt	Feasibility	
Dominican Republic	Cerro de Maimon	Falconbridge Limited	Copper	Exploration	
	Falcondo	Falconbridge Limited	Nickel	Production	
Ghana	Bonte	Akrokeri-Ashanti Gold Mines Inc.	Gold	Production	
	GBC	Alcan Aluminium Limited	Aluminum	Production	
	Tarkwa	Repadre Capital Corporation	Gold	Production	

TABLE 1 (cont'd)

Country	Project	Canadian Participants	Products	Status
Greece	Olympias	TVX Gold Inc.	Gold, zinc, lead, silver	Construction
	Skouries	TVX Gold Inc.	Gold, copper	Feasibility
	Stratoni	TVX Gold Inc.	Lead, zinc, silver	Production
Guinea	Aredor	Trivalence Mining Corporation	Diamonds	Production
	Halco	Alcan Aluminium Limited	Aluminum	Production
Guyana	Omai	Cambior Inc.	Gold	Production
Honduras	El Mochito	Breakwater Resources Ltd.	Zinc, lead, silver	Production
	Vueltas del Rio	Geomaque Explorations Ltd.	Gold	Construction
India	Alupuram (smelter)	Alcan Aluminium Limited	Aluminum	Production
	Belgaum (refinery)	Alcan Aluminium Limited	Aluminum	Production
	Chandgad	Alcan Aluminium Limited	Aluminum	Production
	Hirakud (smelter)	Alcan Aluminium Limited	Aluminum	Production
	Lohardaga	Alcan Aluminium Limited	Aluminum	Production
	Muri (refinery)	Alcan Aluminium Limited	Aluminum	Production
	Uktal	Alcan Aluminium Limited	Aluminum	Feasibility
Indonesia	Uktal (refinery)	Alcan Aluminium Limited	Aluminum	Feasibility
	Cikidang	International Antam Resources Ltd.	Gold, silver	Production
	Halmahera	Weda Bay Minerals Inc.	Nickel, cobalt	Feasibility
	Soroako	Inco Limited	Nickel	Production
Jamaica	Ewarton (refinery)	Alcan Aluminium Limited	Aluminum	Production
	Jamaica	Alcan Aluminium Limited	Aluminum	Production
	Kirkvine (refinery)	Alcan Aluminium Limited	Aluminum	Production
Japan	Tokyo (refinery)	Inco Limited	Nickel	Production
Kazakstan	Central Mukur	Eurasia Gold Corp.	Gold	Production
	Inkai	Cameco Corporation	Uranium	Feasibility
	Myaly	Eurasia Gold Corp.	Gold	Production
Kenya	Kwale	Tiomin Resources Inc.	Titanium sands	Feasibility
Kyrgyzstan	Kumtor	Cameco Corporation	Gold	Production
Mali	Sadiola	IAMGOLD Corporation	Gold	Production
	Yatela	IAMGOLD Corporation	Gold	Feasibility
Mexico	Avino	Avino Silver & Gold Mines Ltd.	Silver, gold, copper	Production
	Cerro San Pedro	Metallica Resources Inc., Cambior Inc.	Gold, silver	Feasibility
	La Colorada	Eldorado Gold Corporation	Gold	Production
	La Colorada	Pan American Silver Corp.	Silver	Feasibility
	Magistral	Queenstake Resources Ltd.	Gold	Feasibility
	Morris	Manhattan Minerals Corp.	Gold	Suspended
	Mulatos	Placer Dome Inc.	Gold	Feasibility
	NYCO	Canadian Pacific Limited	Wollastonite	Production
	Paredones Amarillos	Viceroy Resource Corporation	Gold	Feasibility
	Piedras Verdes	Azco Mining Inc.	Copper	Feasibility
	San Francisco	Geomaque Explorations Ltd.	Gold	Production
	Santa Gertrudis	Campbell Resources Inc.	Gold	Production
	San Martin	First Silver Reserve Inc.	Silver	Production
	San Nicholas	Teck Corporation, Western Copper Holdings Ltd.	Zinc, copper, gold, silver	Feasibility
Myanmar	Letpadaung	Ivanhoe Mines Ltd.	Copper	Feasibility
	Monywa (S&K)	Ivanhoe Mines Ltd.	Copper	Production
New Caledonia	Goro	Inco Limited	Nickel, cobalt	Feasibility
Nicaragua	El Limon	Black Hawk Mining Inc.	Gold	Production
Norway	Nikkelverk (refinery)	Falconbridge Limited	Copper, nickel	Production
	Norzinc (smelter and refinery)	Boliden Limited	Zinc, aluminum	Production
Panama	Cerro Colorado	Tiomin Resources Inc.	Copper, gold	Feasibility
	Cerro Quema	Campbell Resources Inc.	Gold	Construction
	Petaquilla	Inmet Mining Corporation, Teck Corporation, Adrian Resources Ltd.	Copper, gold	Feasibility
Papua New Guinea	Misima	Placer Dome Inc.	Gold, silver	Production
	Ok Tedi	Inmet Mining Corporation	Copper, gold	Production
	Porgera	Placer Dome Inc.	Gold, silver	Production
Peru	Acari	Dynacor Mines Inc.	Gold	Production
	Antamina	Noranda Inc., Rio Algom Limited, Teck Corporation	Copper, zinc, silver, molybdenum	Construction
	Cajamarquilla (refinery)	Cominco Ltd.	Zinc, sulphuric acid	Production
	El Brocal	Cominco Ltd.	Zinc, lead, silver	Production
	Nueva Condor	Oroperu Resources Inc.	Gold	Suspended
	Pierina	Barrick Gold Corporation	Gold, silver	Production
	Quiruvilca	Pan American Silver Corp.	Silver, zinc, lead, copper	Production

TABLE 1 (cont'd)

Country	Project	Canadian Participants	Products	Status
Philippines	Bulawan	Philex Gold Inc.	Gold	Production
	Sibutad	Philex Gold Inc.	Gold	Suspended
Portugal	Aljustrel	EuroZinc Mining Corporation	Zinc, lead, copper, silver	Feasibility
Russia	Dukat	Pan American Silver Corp.	Silver, gold	Feasibility
	Julietta	Bema Gold Corporation	Gold, silver	Construction
	Kubaka	Kinross Gold Corporation	Gold, silver	Production
South Africa	Klipspringer	SouthernEra Resources Limited	Diamonds	Feasibility
	Maranda	Crew Development Corporation	Zinc, copper	Production
	Marsfontein	SouthernEra Resources Limited	Diamonds	Production
	Messina	SouthernEra Resources Limited	Platinum group metals, copper, nickel	Feasibility
	Murchison	Crew Development Corporation	Gold, antimony	Production
	Nabakeep (smelter)	Crew Development Corporation	Copper	Production
	Nigramoep	Crew Development Corporation	Copper	Production
	Palmietgat	Trivalence Mining Corporation	Diamonds	Construction
	Ryedale	Crew Development Corporation	Manganese	Production
	South Deep	Placer Dome Inc.	Gold	Production
	Vergenoeg	Crew Development Corporation	Fluorite	Production
	Wakefield	Crew Development Corporation	Coal	Production
South Korea	Onsan (refinery)	Inco Limited	Nickel	Production
Spain	Carles	Rio Narcea Gold Mines Ltd.	Gold	Construction
	El Valle	Rio Narcea Gold Mines Ltd.	Gold	Production
	Los Frailes (Apirsa)	Boliden Limited	Zinc, copper, lead, silver	Production
Suriname	Gross Rosebel	Cambior Inc.	Gold	Feasibility
Sweden	Aitik	Boliden Limited	Copper, gold, silver	Production
	Åkerberg	Boliden Limited	Zinc, copper, lead, gold, silver	Production
	Garpenberg	Boliden Limited	Zinc, copper, lead, gold, silver	Production
	Kedträsk	Boliden Limited	Zinc, copper, lead, gold, silver	Production
	Kristineberg	Boliden Limited	Zinc, copper, lead, gold, silver	Production
	Laisvall	Boliden Limited	Lead, zinc, silver	Production
	Petiknäs	Boliden Limited	Zinc, copper, lead, gold, silver	Production
	Renström	Boliden Limited	Zinc, copper, lead, gold, silver	Production
	Rönnskär (smelter and refinery)	Boliden Limited	Copper, lead, zinc, gold, silver, platinum group metals, sulphuric acid	Production
Taiwan	Kaohsiung (refinery)	Inco Limited	Nickel	Production
Tajikistan	Aprelevka	Gulf International Minerals Ltd.	Gold	Construction
Tanzania	Bulyanhulu	Barrick Gold Corporation	Gold	Construction
	Kabanga/Kagera	Barrick Gold Corporation	Nickel, cobalt	Feasibility
Thailand	Somboon	Asia Pacific Resources Ltd.	Potash	Feasibility
Tunisia	Bougrine	Breakwater Resources Ltd.	Zinc, lead	Production
Turkey	Agi Dagi	Cominco Ltd.	Gold	Exploration
	Çayeli	Inmet Mining Corporation	Copper, zinc, gold, silver	Production
	Cerattepe	Cominco Ltd.	Copper, gold, silver	Feasibility
	Kaymaz	Eldorado Gold Corporation	Gold	Feasibility
	Kücükdere	Eldorado Gold Corporation	Gold	Feasibility
United Kingdom	Acton (refinery)	Inco Limited	Platinum group metals	Production
	Burntisland (refinery)	Alcan Aluminium Limited	Aluminum	Production
	Clydach (refinery)	Inco Limited	Nickel, cobalt	Production
	Kinlochleven (smelter)	Alcan Aluminium Limited	Aluminum	Production
	Lochaber (smelter)	Alcan Aluminium Limited	Aluminum	Production
	Lynemouth (smelter)	Alcan Aluminium Limited	Aluminum	Production
United States	Bald Mountain	Placer Dome Inc.	Gold	Production
	Betze-Post (Goldstrike)	Barrick Gold Corporation	Gold	Production
	Carlota	Cambior Inc.	Copper	Construction
	Castle Mountain	Viceroy Resource Corporation	Gold	Production
	Copper Creek	AMT International Mining Corporation	Copper, molybdenum	Feasibility
	Cortez (Pipeline)	Placer Dome Inc.	Gold, silver	Production
	Crow Butte	Cominco Corporation	Uranium	Production
	DeLamar	Kinross Gold Corporation	Gold, silver	Suspended

TABLE 1 (cont'd)

Country	Project	Canadian Participants	Products	Status
	Denton-Rawhide	Kinross Gold Corporation, Dayton Mining Corporation	Gold, silver	Production
	Donlin Creek	Placer Dome Inc.	Gold	Exploration
	Eveleth	Stelco Inc.	Iron	Production
	Fort Knox	Kinross Gold Corporation	Gold	Production
	Gas Hills	Cameco Corporation	Uranium	Feasibility
	Getchell and Turquoise Ridge	Placer Dome Inc.	Gold	Feasibility
	Golden Sunlight	Placer Dome Inc.	Gold	Production
	Hayden Hill	Kinross Gold Corporation	Gold, silver	Production
	Hibbing	Stelco Inc.	Iron	Production
	Highland	Cameco Corporation	Uranium	Production
	Hycroft	Vista Gold Corp.	Gold, silver	Suspended
	Jamboree	Stelco Inc.	Coal	Production
	Ken Snyder	Franco-Nevada Mining Corporation Limited	Gold	Production
	Lisbon Valley	Summo Minerals Corporation	Copper	Feasibility
	Meikle (Goldstrike)	Barrick Gold Corporation	Gold	Production
	Montanore	Noranda Inc.	Copper, silver	Feasibility
	New Madrid (smelter)	Noranda Inc.	Aluminum	Production
	Nicolet (Crandon)	Rio Algom Limited	Zinc, copper	Permitting
	Pend Oreille	Cominco Ltd.	Zinc, lead	Feasibility
	Rasmussen Ridge	Agrium Inc.	Phosphate	Production
	Red Dog	Cominco Ltd.	Zinc, lead, silver	Production
	Rodeo (Goldstrike)	Barrick Gold Corporation	Gold	Construction
	Sebree (smelter)	Alcan Aluminium Limited	Aluminum	Production
	Smith Ranch	Rio Algom Limited	Uranium	Production
	Soledad Mountain	Golden Queen Mining Co. Ltd.	Gold, silver	Feasibility
	Tilden	Algoma Steel Inc., Stelco Inc.	Iron	Production
	Wharf	Goldcorp Inc.	Gold	Production
Uruguay	San Gregorio	Crystallex International Corporation	Gold	Production
Venezuela	Albino	Crystallex International Corporation	Gold	Suspended
	Las Cristinas	Placer Dome Inc.	Gold, copper	Construction
	Loma de Niquel	iTech Capital Corp.	Nickel	Construction
	Tomi	Bolivar Goldfields Ltd.	Gold	Production
Zambia	Bwana Mkubwa	First Quantum Minerals Ltd.	Copper, sulphuric acid	Production
	Chibuluma West	Crew Development Corporation	Copper	Production
	Mufulira	First Quantum Minerals Ltd.	Copper	Production
	Nkana	First Quantum Minerals Ltd.	Copper, cobalt	Production
Zimbabwe	Blanket	Kinross Gold Corporation	Gold	Production
	Blue Rock	Conquest Resources Limited	Gold	Production
	Connemara	First Quantum Minerals Ltd.	Gold	Production
	Jena	Consolidated Trillion Resources Ltd.	Gold	Production
	Shamrock	Conquest Resources Limited	Gold	Production

Source: Natural Resources Canada, based on company reports available in early June 2000.

Note: Canadian companies have interests in hundreds of other projects around the globe, mainly at the exploration stage of the mineral development process.