# **Canadian Mineral Exploration Activity**

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# EXPLORATION EXPENDITURES, 1995-97 OVERVIEW

In 1995, 664 companies (excluding prospectors) operated Canadian non-petroleum mineral exploration projects, up from 647 companies in 1994. Exploration expenditures in 1995, which include both general and mine-site expenditures, totalled \$718 million, up from \$628 million in 1994. General exploration (off-property) is defined as the search for and delineation of mineral deposits on properties where no production is taking place or where there has been no commitment to production. Mine-site exploration (on-property) represents the search for new mineral deposits (not the search for additional ore) at mines that are either in production or committed to production. General exploration expenditures totalled \$631 million in 1995, a 14% increase from \$556 million in 1994. The amount spent on mine-site exploration in 1995 was \$86 million, up by 19% from \$72 million in 1994. Usually, mine-site exploration expenditures represent between 12% and 15% of overall exploration expenditures (the total of general and mine-site exploration).

Exploration expenditures had reached a low of \$403 million in 1992 (the lowest level in constant 1996 dollars since 1967), but activity revived during 1993, 1994 and 1995. Results from the 1996 preliminary estimate and 1997 forecast survey indicated expenditures of \$873 million and \$876 million respectively. As a result, the level of exploration expenditures will have increased by almost 117% over the 1992-97 period.

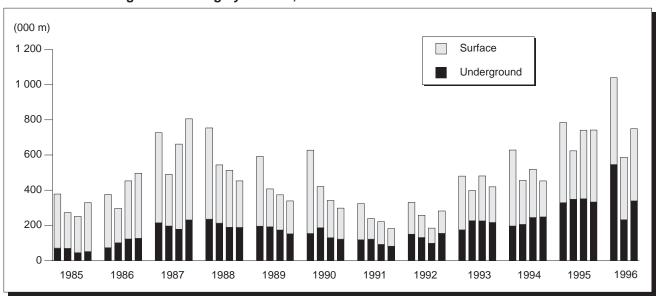
This upward surge in expenditures since 1992 has been driven in part by important discoveries of diamond deposits, leading some companies to invest in advanced exploration or deposit appraisal projects. Expenditures dedicated to diamond exploration from 1993 to 1996 have averaged 18% of total Canadian exploration expenditures; in 1997, they will likely reach 14%. Over this five-year period, a total of \$644 million will have been spent on diamond exploration, including \$147 million in 1995 and estimated totals of \$147 million for 1996 and \$124 million for 1997. At least five diamond deposits at Lac de Gras are being developed with production start-up scheduled for 1998.

Increasing metal prices have also helped boost exploration activity. For example, average prices for nickel, copper and lead increased by more than 60% between 1993 and 1995, silver prices increased by about 30%, and zinc and gold prices each increased by 14%. However, during 1996, only lead prices continued to increase while precious metal prices remained stable; nickel and copper prices dropped by 10% and 22% respectively, and zinc prices were down by only 1%. In late 1994, the nickel-copper-cobalt discovery at Voisey's Bay, Labrador, a result of diamond exploration in that area, attracted the attention of many mining companies. This deposit is possibly the richest find in Canada in decades. The resulting flurry of exploration activity in the area, which had a strong impact on expenditures in 1995, is likely to be sustained for some time.

In 1996, for the fifth year in a row, Canada remained second only to Australia in terms of mineral exploration expenditures, and has been one of the top two countries for the past 17 years (refer to Chapter 5).

In 1995, senior company project operators (104 in total) had exploration expenditures of \$504 million while, in 1994, senior operators (174 in total) expended some \$432 million. Junior company project operators (500 in all) spent \$209 million and prospectors spent \$5 million in 1995, compared to expenditures of \$188 million by 473 junior operators and \$8 million by prospectors in the previous year.

Indications for 1996 are that about \$567 million was spent by senior companies, \$301 million by juniors and \$5 million by prospectors. In 1997, it is expected that \$542 million will have been spent by senior companies, \$331 million by junior companies and \$3 million by prospectors.



#### Figure 1 Surface and Underground Drilling by Quarter, 1985-96

Source: Canadian Drilling Association (CDA).

Notes: CDA data are incomplete because not all member companies report their drilling. The left bar in each group represents the first quarter of the year; the right bar represents the fourth quarter (except for 1996).

In 1995, expenditures by 117 companies (56 juniors and 61 seniors), each reporting \$1 million or more in expenditures, represented 85% of all Canadian exploration expenditures. Of this 85%, 18% was spent by junior companies and 67% by senior companies. In 1994, 108 companies (51 juniors and 57 seniors) each spent \$1 million or more, accounting for 82% of the Canadian exploration total. For each of 1994 and 1995, roughly 17% of the total number of project operators (jointly with any joint-venture partners) contributed more than 80% of total exploration expenditures.

Diamond drilling statistics are gathered monthly and annually by the Canadian Drilling Association (CDA) and then assembled on a quarterly basis. Although drilling data are incomplete, and statistics are not yet totally available for the last quarter of 1996, CDA data (Figure 1) still provide useful information on recent levels of exploration activity in Canada. In 1996, the combined first three quarters indicated an 11% increase over the total metres drilled in the same three quarters in 1995.

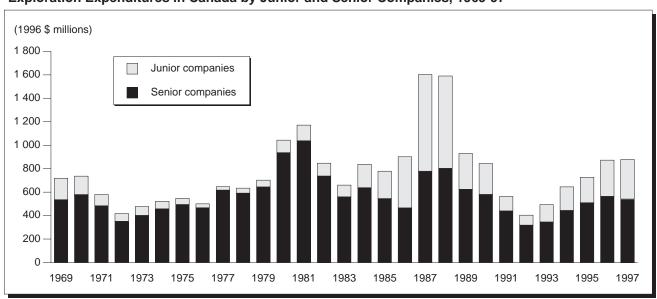
## **HISTORICAL PERSPECTIVE**

Figure 2 depicts Canadian annual exploration expenditures over the 29 years from 1969 to 1997. Higher than normal exploration expenditures in the 1980-82 period came as a result of the high prices for gold, silver and copper over much of that period. Exploration expenditures declined somewhat in 1983, but generally rose from 1984 to 1988 as a result of the introduction, in 1983, of the Mining Exploration Depletion Allowance (MEDA). MEDA was replaced in 1989 and 1990 by the Canadian Exploration Incentive Program (CEIP). By 1987 and 1988, exploration expenditures had reached unprecedented high levels because of MEDA and because of the high gold prices that existed until the end of 1987. However, exploration declined dramatically after 1988.

After the introduction of MEDA, exploration expenditures by junior companies increased each year from 1984 to 1987 to reach a peak of about \$787 million (1996 dollars) in 1987, levelled off in 1988, and subsequently declined in 1989 to reach a low of \$84 million in 1992. Junior company expenditures have risen constantly since 1993, reaching \$216 million in 1995 and an expected \$306 million in 1996 and \$334 million in 1997. As stated above, the change in exploration trends by junior companies is attributable to a variety of factors. For example, the exploration rush for diamonds that began in 1993, and which was sustained in 1994 and 1995, contributed about one third of total junior exploration expenditures. Roughly 10% of all junior exploration expenditures for each of the years 1995, 1996 and 1997 came as a result of the Voisey's Bay nickel-copper-cobalt discovery in late 1994.

### FLOW-THROUGH SHARES AS A SOURCE OF EXPLORATION FINANCING, 1994-96

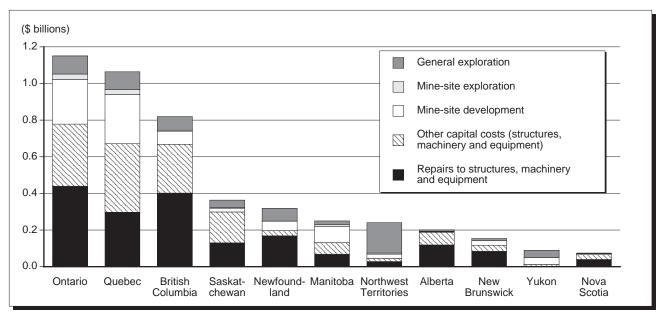
Companies listed on Canadian stock exchanges sold \$123 million in flow-through shares in 1995, an



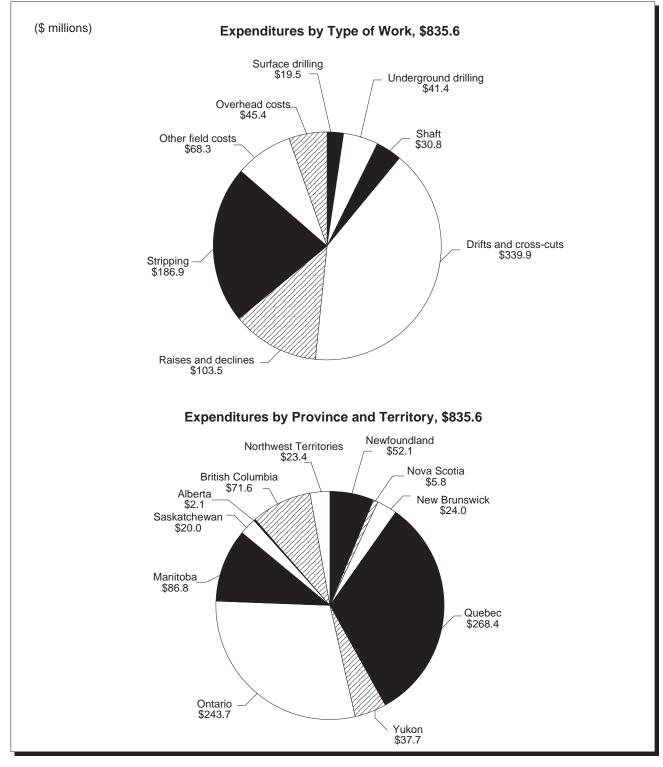
#### Figure 2 Exploration Expenditures in Canada by Junior and Senior Companies, 1969-97

Sources: Natural Resources Canada; Federal-Provincial Survey of Mining and Exploration Companies. Notes: Total exploration expenditures for 1975-81 are overstated by an average of about 17% relative to earlier and later years because of changes to the methodology used by Statistics Canada over the years. Overhead expenditures are included. Data for 1996 are preliminary; data for 1997 are forecast.

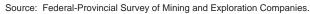
#### Figure 3 Exploration and Mining Investment in Canada, by Province and Territory, 1995 \$4.7 Billion



Sources: Natural Resources Canada; Statistics Canada.



### Figure 4 Mine-Site Development Expenditures for 1995



share financing for 1994 (Table 1). In 1995, flowthrough shares provided about 17% of total Canadian exploration expenditures. First indications are that some \$160 million was raised through the issue of flow-through shares in 1996, an increase of 30% from the amount raised in 1995. Over the period 1985-96, the flow-through share financing of exploration expenditures in Canada varied from 45% in 1985 to more than 90% during 1986-87. The decline was severe during 1991 with only 8% of expenditures being financed but, between 1992 and 1996, the financing percentage varied between 12 and 18%.

## EXPLORATION AND OTHER MINING INVESTMENT IN CANADA, 1995

The combined mining investment total in exploration and other capital costs, including mine-site development, structures, machinery and equipment, and costs for associated repairs, was \$4.7 billion in 1995 compared to \$3.9 billion in 1994. In 1995, general exploration represented 13% (compared with 14% in 1994) of this total; mine-site exploration, 2% (2% in 1994); and mine-site development, 18% (20% in 1994). A provincial and territorial breakdown of exploration and other mining investments is presented in Figure 3.

Compared to 1994, total exploration and mining investment increased in 1995 in all provinces and territories except Nova Scotia. Increases ranged between 14% in Ontario and 59% in Newfoundland, with important increases also reported in Manitoba (46%) and Alberta (31%). In the Yukon, capital expenditures were made during 1995, contrary to the situation in 1994.

Figure 4 depicts mine-site development expenditures (activities carried out to outline, block out and gain access to ore at mines already in production or committed to production) by type of work and by province and territory. Mine-site development expenditures were up by 6% in 1995 compared to 1994. Overall expenditures reached \$836 million in 1995 (\$787 million in 1994). This represents a difference of 27% from the peak years of 1990 and 1991 when those expenditures reached \$1.1 billion. Development expenditures increased in Manitoba by 35%, in Newfoundland by 21%, and in New Brunswick and Ontario by 11% each. In the Yukon, no such expenditures were incurred in 1993 and 1994, but some were recorded in 1995 (\$38 million). However, development expenditures decreased in Alberta by 80%, in Saskatchewan by 45%, in British Columbia by 13%, in Nova Scotia by 11%, and in Quebec by 4%. Altogether, Quebec (\$268 million), Ontario (\$244 million), Manitoba (\$87 million) and British Columbia (\$72 million) represented 80% of Canada's total 1995 development expenditures. In terms of the level of expenditures, Ontario is still in second place behind Quebec for the second time since 1980.

The breakdown of development expenditures by commodity group reveals that 40% was spent on precious metals and 35% on base metals. Most development expenditures for precious metals were incurred in Ontario and Quebec (jointly 81%) and most of those for base metals were incurred in Manitoba, Quebec, Ontario and the Yukon (jointly 85%). The remaining development expenditures are broken down as follows: 11% for iron (in Newfoundland and Quebec), 6% for nonmetals (mainly for asbestos in Quebec), 4% for coal (mainly in British Columbia), 3% for uranium (mainly in Ontario), and 1% for other metals (e.g., titanium in Quebec).

# CLAIM STAKING, 1996

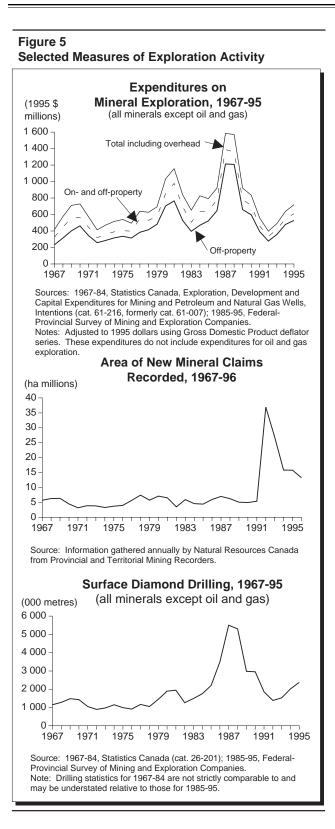
The area of new mineral claims staked in Canada in 1996 (Figure 5, Table 2) was 13 million hectares (ha), 16% less than the area staked in 1995.

Compared to 1995, the area staked in 1996 increased in Alberta (by a factor of 3.2), Nova Scotia (by a factor of 2.3). New Brunswick (by a factor of 1.6), and in Ontario, Saskatchewan, British Columbia and the Yukon (each by a factor of 1.4). Mining recorders have advised that, in Alberta and Saskatchewan, there is renewed interest in staking for diamonds; in Nova Scotia, an interest in staking for kaolin and gold; in New Brunswick, a staking rush for base metals in the Plaster Rock area; in Ontario, increased staking activity in the Temagami area; and in the Yukon, continued staking around the Wolverine deposit in the area of Finlayson Lake. The areas staked in Alberta (40% of the Canadian total), the Northwest Territories (22%) and British Columbia (9%) represent a combined area of 9.4 million ha, or 70% of the total area staked in Canada in 1996.

Areas staked in 1996 were down by 93% in Newfoundland, by 65% in Quebec, by 23% in the Northwest Territories and by 6% in Manitoba. The declines in Newfoundland and Quebec were mainly due to a relative slow-down when compared to the 1995 staking rush following the Voisey's Bay discovery. In the Northwest Territories, most of the areas suitable for diamond exploration have already been staked.

## EXPLORATION ACTIVITY BY TYPE OF WORK, 1995

Canadian field exploration expenditures in 1995 can be broken down by type of activity as follows: for drilling, 45%; for rock work, including trenches, pits and underground workings, 12%; for geology, 14%; for airborne plus ground geophysics, 10%; for geochemistry, 7%; and for unspecified field work, 12%. These percentages (for field work only) do not take into account overhead costs (land costs, field administration, and exploration-related head office costs). When adjusted to include such costs, which represent 15%



of total 1995 exploration expenditures, the above percentages become: drilling, 38%; rock work, 10%; geology, 12%; airborne plus ground geophysics, 9%; geochemistry, 6%; unspecified field work, 10%; and overhead costs, 15%. Figure 6 shows the breakdown of these activities for general exploration and for mine-site exploration separately.

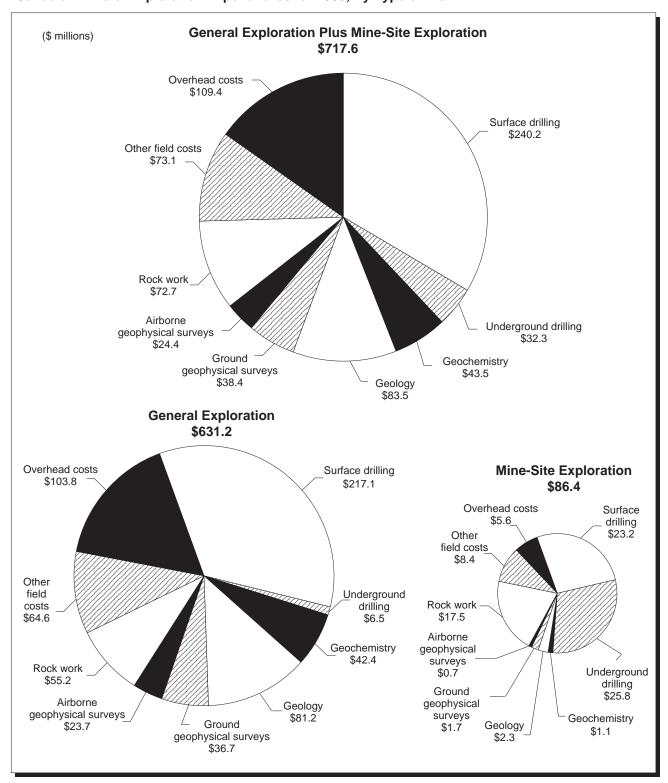
In 1995, for the third year in a row, exploration expenditures for airborne geophysics (\$24 million) were three times the \$8 million spent in 1992. During 1995, almost 30% of this amount (\$7 million) was spent in Newfoundland, considerably exceeding the \$146 000 spent there in 1994. This change reflects the increased use of airborne magnetic and electromagnetic surveys in order to localize other targets for exploration in the Voisey's Bay area. During 1993 and 1994, airborne surveys had increased as the search for kimberlite intrusions expanded and as explorationists were lured by the possibility of new and promising diamond deposits in the Northwest Territories. However, such expenditures dropped by 66% in 1995.

Geochemical and rock work exploration expenditures (Table 9) in the Northwest Territories, \$22 million and \$24 million respectively, are the highest of all provinces and territories. Much of the rock work activity was carried out in the Lac de Gras area of the Northwest Territories as the result of bulk sampling programs on diamond properties.

## **EXPLORATION DRILLING, 1995**

In 1995, 2 641 649 m of surface exploration drilling were completed in Canada (Table 3), up by 18% from the 2 231 654 m drilled in 1994. Diamond drilling (2 371 880 m) constituted 90% of the total metres of surface drilling (Figure 5). Ontario, Quebec, the Northwest Territories and British Columbia, in decreasing order of importance, were the busiest provinces and territories jointly accounting for 70% of total surface drilling activity. Underground exploration drilling (both diamond drilling and other types of underground exploration drilling) totalled 631 648 m, up by only 4% from the 608 194 m drilled in 1994. Ontario (213 293 m), Quebec (211 270 m) and Manitoba (121 130 m) together accounted for 86% of total underground exploration drilling.

In the case of surface diamond drilling, 68% of the total metres were drilled by senior companies and 32% by junior companies. Underground diamond drilling was principally undertaken by senior companies who reported 99% of the activity that was conducted. Of the total surface metres drilled (diamond drilling), for example, 52% was undertaken in the search for precious metals, 31% for base metals, 9%



#### Figure 6 Canadian Mineral Exploration Expenditures for 1995, By Type of Work

Source: Federal-Provincial Survey of Mining and Exploration Companies. Note: Numbers may not add to totals due to rounding.

for nonmetals and 6% for uranium. Most of the underground drilling was carried out in the search for precious metals (68%) and base metals (31%).

## EXPLORATION EXPENDITURES BY PROVINCE AND TERRITORY, 1995 AND 1996

The most active exploration provinces or territories in 1995 (Tables 3 and 8, Figure 7) were the Northwest Territories (\$172 million), Ontario (\$130 million), Quebec (\$123 million) and British Columbia (\$79 million). These regions jointly accounted for 70% of total Canadian mineral exploration expenditures in 1995 (76% in 1994).

Exploration expenditures increased in most provinces and territories from 1994 to 1995, except in Manitoba (down by 20%), Saskatchewan (down by 13%), British Columbia (down by 6%) and Quebec (down by 5%). Increases in exploration expenditures occurred in Newfoundland (474%), Nova Scotia (66%), the Yukon (53%), New Brunswick (27%), the Northwest Territories and Ontario (15% each), as well as in Alberta (13%). In Newfoundland, exploration expenditures increased from \$12 million in 1994 to a new all-time record of \$71 million in 1995, ranking the province fifth in the country, close behind British Columbia. Of this record amount, \$61 million, or 86%, occurred in Labrador. In 1995, for the second time in history, the level of exploration expenditures in the Northwest Territories was the highest in Canada. This ranking, a result of continued diamond exploration, is likely to be maintained in 1996.

General exploration accounted for more than 75% of exploration expenditures in all provinces and territories except Nova Scotia and Manitoba where 57% and 35% respectively was spent on mine-site exploration. There was no mine-site exploration in the Yukon in 1993, 1994 or 1995. Ontario ranked first in terms of mine-site exploration expenditures with \$30 million expended, followed by Quebec with \$26 million spent.

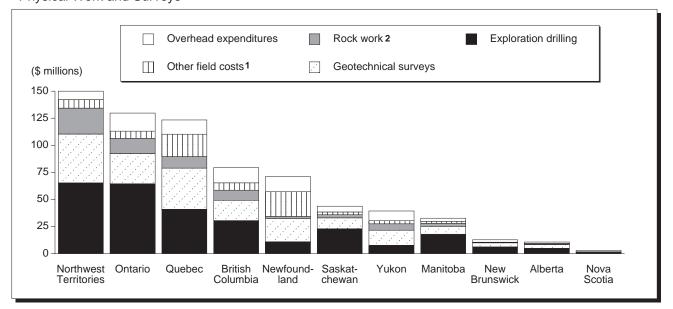
Preliminary results indicate that, between 1995 and 1996, the total increase in the level of exploration expenditures was 22%. During that period, all provinces and territories experienced an increase in exploration expenditures ranging from 3% for Saskatchewan to 102% for Nova Scotia.

## EXPENDITURES BY COMMODITY SOUGHT, 1995

Precious metals and base metals remained the principal targets of Canadian exploration in 1995 (Tables 4 and 6, Figures 8 and 9). Expenditures for base-metal exploration increased by 29% during that year to reach \$218 million, continuing the upward trend that was evident in 1994. From 1990 to 1993, base-metal

Figure 7

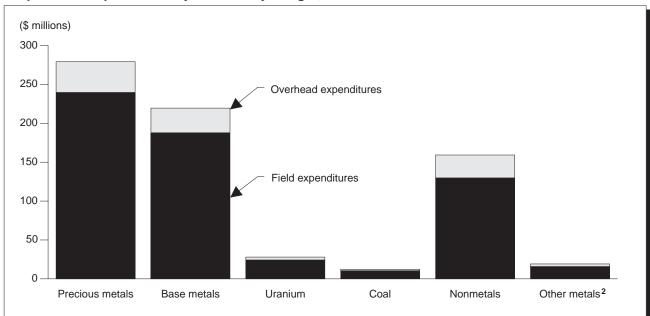
Exploration Expenditures by Province and Territory, 1995 Physical Work and Surveys



Source: Federal-Provincial Survey of Mining and Exploration Companies.

<sup>1</sup> Such as field supervision and line cutting. <sup>2</sup> Such as stripping, trenching, shaft-sinking and underground work.

### Figure 8



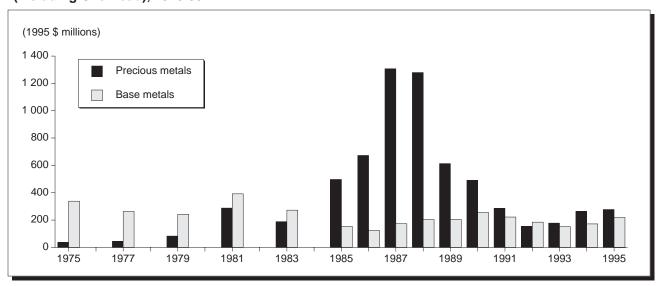
Exploration Expenditures by Commodity Sought, 1995<sup>1</sup>

Source: Federal-Provincial Survey of Mining and Exploration Companies.

<sup>1</sup> Some \$3.8 million of expenditures were for unspecified commodities. This amount has been pro-rated among the six commodity groups shown here.

<sup>2</sup> Includes ferrous metals.

### Figure 9 Exploration Expenditures in Canada for Base Metals and Precious Metals (Including Overhead), 1975-95



Source: Natural Resources Canada.

Note: Data have not been compiled for the years 1976, 1978, 1980, 1982 and 1984.

exploration expenditures had dropped from \$240 million to \$150 million. Exploration for precious metals increased by 7% to \$277 million in 1995 from \$260 million in 1994. In 1992, exploration expenditures for base metals had exceeded those for precious metals for the first time since 1983. However, this trend was reversed in 1993 when exploration expenditures for precious metals again exceeded those for base metals. As stated earlier in this review, the prices of the leading mineral commodities, combined with recent major discoveries, had a profound impact on base-metal and precious-metal exploration activity during 1994 and 1995.

Base-metal exploration accounted for 30% of total Canadian exploration expenditures in 1995 compared to 27% in 1994, while precious-metal exploration accounted for 39% in 1995 compared to 41% in 1994. About 85% of total joint expenditures for base metals and precious metals were spent on general exploration, with the remainder being spent on mine-site exploration.

In 1995, mineral commodities other than base metals and precious metals accounted for \$222 million in exploration expenditures in Canada (31% of total expenditures), up from \$199 million (32%) in 1994. Expenditures for uranium and iron ore were down by 11% and 64% respectively, while expenditures rose for other metals (mainly cobalt), nonmetals and coal. In 1995, exploration for nonmetals accounted for \$159 million (with diamonds accounting for \$147 million of this amount), up from \$150 million in 1994 (at which time diamonds accounted for \$138 million). Exploration expenditures for nonmetals ranked third in 1995 after expenditures for precious metals and base metals.

Major increases in exploration expenditures occurred for wollastonite, mica, platinum group metals and titanium (Table 5).

### PROVINCIAL AND TERRITORIAL EXPENDITURES BY COMMODITY SOUGHT, 1995

Diamonds remained the most important exploration target in the Northwest Territories accounting for 77% of total exploration expenditures there in 1995 (84% in 1994). (For more information on this particular subject, refer to the section on exploration for diamonds that follows later in this chapter.) Prior to 1993, precious metals had been the dominant commodity group of interest in the Northwest Territories. In Saskatchewan, uranium is the main exploration target, accounting for 57% of total exploration expenditures, followed by precious metals (19%) and diamonds (7%). Exploration for diamonds in Saskatchewan in 1995 dropped to third place from second position in 1994 when such expenditures accounted for 19% of total provincial exploration expenditures. The high level of uranium expenditures was maintained as the result of an important underground exploration program at the McArthur River uranium deposit. Exploration expenditures for potash remained very low. In Alberta, coal remained the principal exploration target in 1995, followed by precious metals and diamonds, with the Cheviot coal mine project being the most significant in terms of exploration expenditures. Diamonds held second place in Alberta in the 1990-94 period; prior to 1990, uranium was the second most sought commodity behind coal.

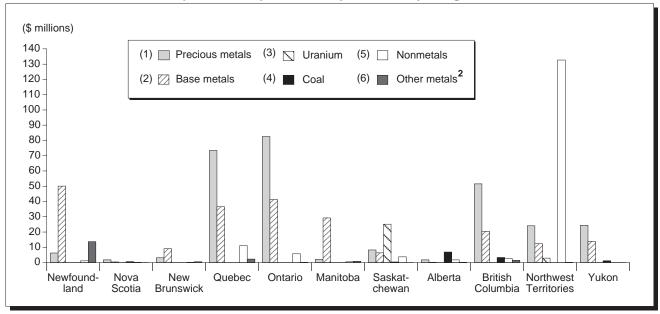
Precious metals (mainly gold) were the main exploration targets in Ontario, Quebec, British Columbia, the Yukon and Nova Scotia. In these provinces and territory, exploration for precious metals accounted for 30%, 27%, 18%, 9% and less than 1%, respectively, of total Canadian exploration expenditures for precious metals (Table 11b, Figure 10). Ontario, Quebec and British Columbia together accounted for 74% of total precious metal expenditures. The principal commodities sought in Newfoundland, Manitoba and New Brunswick were base metals. Collectively, in decreasing order of expenditures, Newfoundland, Ontario, Quebec, Manitoba and British Columbia accounted for 72% of total expenditures for basemetal exploration. A major increase of 676% in the level of expenditures for base metals recorded in Newfoundland constituted 69% of all base-metal increases.

### PROVINCIAL AND TERRITORIAL EXPENDITURES BY TYPE OF COMPANY, 1995

Companies exploring in Canada are classified into six groups, as follows:

- 1) Producers: Companies owning a producing mine or holding part ownership in a producing mine in Canada, and companies that own more than 50% of the shares of a producing mining company. Producers also include oil companies and foreign companies with a producing Canadian mine.
- Affiliates of producing mining companies: Wholly owned or majority-owned incorporated subsidiaries of producers.
- 3) Oil companies: Oil companies, both domestic and foreign, with non-petroleum exploration projects in Canada. Oil companies with producing mines are included with producers.
- 4) Foreign companies: Foreign-owned companies, excluding foreign-owned oil companies and foreign-owned companies with a producing mine in Canada.





Source: Federal-Provincial Survey of Mining and Exploration Companies.

<sup>1</sup> Some \$3.8 million of exploration expenditures were for unspecified commodities. This amount has been pro-rated among the six commodity groups shown here. <sup>2</sup> Includes ferrous metals.

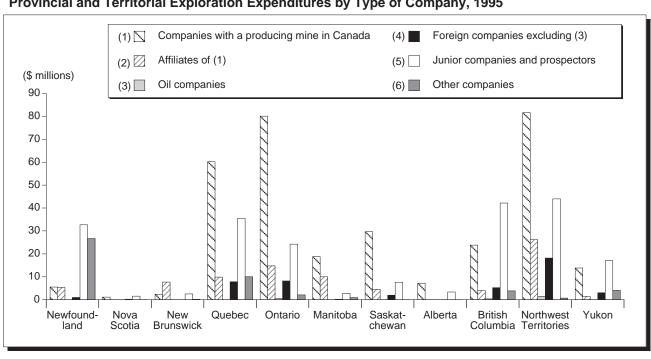
- 5) Junior companies and prospectors: This group excludes all of the other categories.
- 6) Other companies: Canadian-owned companies engaged in mineral exploration, including forestry, construction and consulting firms, and government-owned mining companies that do not own a producing mine. This category also includes Canadian-owned companies with operating mines only in countries other than Canada.

A company is classified into the first of these groups into which it fits. For example, exploration statistics reported by an oil or foreign company with a producing Canadian mine would be included in Category 1 (producers), rather than in Category 3 (oil companies) or Category 4 (foreign companies). Exploration by a foreign-owned oil company would appear in Category 3 (oil companies), and not in Category 4 (foreign companies).

In 1995, producing companies and their affiliated companies were the principal exploration spenders in most provinces and territories except in British Columbia, Nova Scotia, Newfoundland and the Yukon where junior companies accounted for 53%, 53%, 46% and 43%, respectively, of exploration expenditures in 1995 (Table 15b, Figure 11). Junior companies increased their expenditures in most provinces and territories except Saskatchewan, Alberta, the Northwest Territories and British Columbia where the declines were 38%, 34%, 26% and 6% respectively. The increases in junior exploration expenditures varied between 15% for Quebec and 513% for Newfoundland. Together, expenditures (in decreasing order) reported by junior companies in the Northwest Territories, British Columbia, Quebec and Newfoundland accounted for 74% of total junior expenditures. The level of junior expenditures in British Columbia ranked first in the country during the period from 1989 to 1993 when the diamond exploration rush in the Northwest Territories first attracted more junior expenditures.

Foreign companies spent \$46 million in Canada in 1995, up from \$28 million in 1994. They were most active in the Northwest Territories, where foreign companies spent \$18 million in 1995, up from \$12 million in 1994. In 1995, 75% of their total Canadian exploration expenditures were directed at the Northwest Territories, Ontario and Quebec.

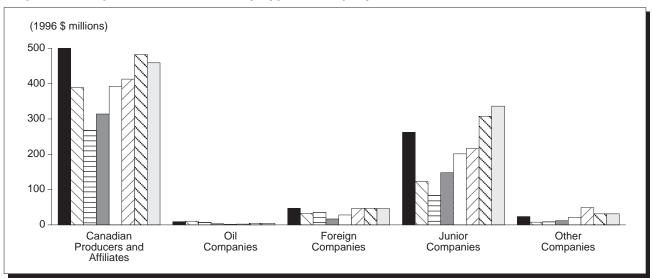
Figure 12 portrays trends in exploration expenditures by type of company over the period 1990-97. The downward trend in exploration expenditures by oil companies is a continuation of the general downward trend that began in the 1970s. In 1977, oil companies accounted for 24% of all non-petroleum mineral exploration expenditures in Canada. This has declined to less than 1% in 1993, 1994 and 1995. Similarly, in 1977, foreign companies accounted for 19% of exploration expenditures in Canada. In 1995 they accounted for only 6%. In dollar terms, however, the amount spent in 1995 (\$46 million) increased by 66% from 1994. Figure 11





Source: Federal-Provincial Survey of Mining and Exploration Companies.

### Figure 12 Exploration Expenditures in Canada by Type of Company, 1990-97



Source: Federal-Provincial Survey of Mining and Exploration Companies. Notes: The left bar for each group represents 1990; the right bar represents 1997. Data for 1996 are preliminary; data for 1997 are forecast.

## EXPENDITURES BY TYPE OF COMPANY AND COMMODITY, 1995

Junior companies directed 44% (\$95 million) of their exploration expenditures at precious metals, 29% (\$62 million) at base metals, and 21% (\$45 million) at nonmetals (mainly diamonds) in 1995. In comparison, junior companies directed 44% (\$86 million) at precious metals, 17% (\$33 million) at base metals, and 36% (\$70 million) at nonmetals in 1994 (Table 12b, Figure 13). Producing companies and their affiliates together directed 36% (\$148 million) of their exploration expenditures at precious metals, 31% (\$126 million) at base metals, 23% (\$94 million) at nonmetals (mainly diamonds), and 8% (\$26 million) at uranium in 1995, compared to 40% (\$153 million) at precious metals, 32% (\$124 million) at base metals, 17% (\$64 million) at nonmetals, and 8% (\$30 million) at uranium in 1994.

In 1995, foreign companies directed 40% (\$19 million) of their exploration expenditures at the search for nonmetallic minerals (chiefly diamonds), 40% (\$18 million) at precious metals, 14% (\$7 million) at base metals, and 4% (\$2 million) at uranium. Relative to 1994, foreign companies increased their exploration expenditures in Canada as a result of increased expenditures for precious metals from \$7 million to \$18 million, for nonmetals (diamonds) from \$13 million to \$19 million, and for base metals from \$6 million to \$7 million. Oil companies directed 71% of their exploration expenditures at precious metals.

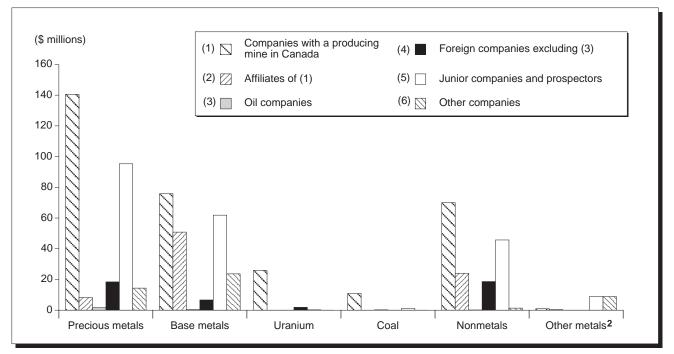
## **EXPLORATION FOR DIAMONDS**

In 1995, 61 companies (51 juniors and 10 seniors) were operators of diamond exploration projects, down from the 102 operators reported in 1994. Even though the number was lower, project operators spent a total of \$147 million in 1995, up from the \$138 million spent in the previous year (Table 5, Figure 14). In 1995, companies spent \$133 million on diamond exploration in the Northwest Territories, which amounts to 90% of the total \$147 million spent on this commodity in all of Canada. Some \$6 million (4%) of this total was spent in Ontario and \$3 million (5%) in each of Quebec and Saskatchewan. The remaining \$2 million was spent in Alberta, British Columbia, Manitoba and Newfoundland (Labrador). Junior companies accounted for 27% of total Canadian diamond exploration expenditures in 1995 (45% in 1994), while producers accounted for 44% (37% in 1994), their affiliates for 16% (8% in 1994), and foreign-based companies for 13% (9% in 1994).

During 1995, as in 1994, four major project operators, active principally in the Northwest Territories, contributed about 82% of total Canadian diamond explo-

### Figure 13

Exploration Expenditures by Type of Company and Commodity, 1995<sup>1</sup>

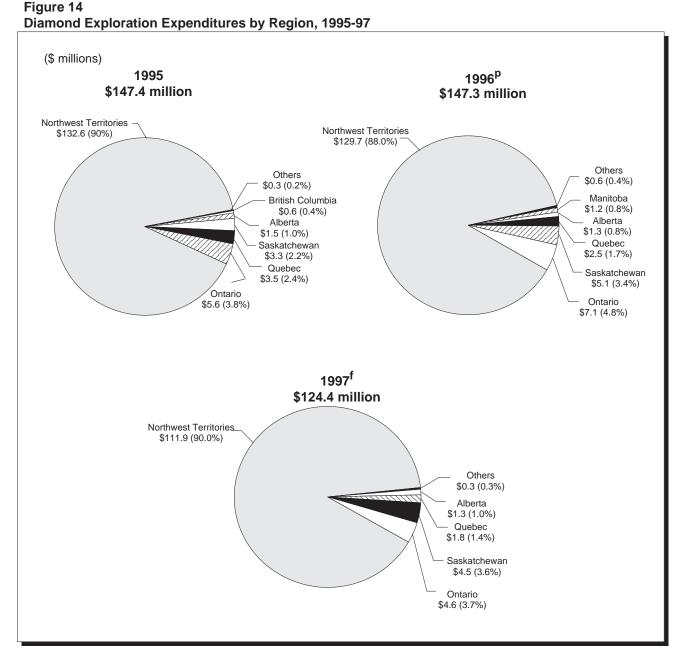


Source: Federal-Provincial Survey of Mining and Exploration Companies.

<sup>1</sup> Some \$3.8 million of exploration expenditures were for unspecified commodities. This amount has been pro-rated among the six commodity groups shown here. <sup>2</sup> Includes ferrous metals.

ration expenditures. Advanced exploration work, managed by BHP Minerals Canada Ltd., took place in the Lac de Gras area of the Northwest Territories on ten pipes. Five of the pipes, these being Koala, Panda, Fox, Misery and Sable, are expected to start producing diamonds in 1998. Intense work was performed on the pipes of the Diavik project operated by Kennecott Canada Inc. Lytton Minerals Limited also did important exploration work on the Jericho North and South pipes. Most of the diamond exploration expenditures were spent in the Slave geological province.

The exploration expenditure estimates of \$147 million for 1996 and \$124 million for 1997 show continued interest in diamond exploration. It is estimated that five major project operators will have spent about 75% of all diamond exploration expenditures,



Source: Federal-Provincial Survey of Mining and Exploration Companies.

<sup>f</sup> Forecast; <sup>p</sup> Preliminary estimate.

four of them on advanced exploration projects in the Northwest Territories in 1996 and 1997. Between 45 and 50 companies were project operators; most of them, 73%, were juniors. Overall, for each of those years, 65% of the expenditures were reported by senior project operators compared to a 73% contribution in 1995. For 1996 and 1997, close to 50% of mine-site development expenditures in the Northwest Territories has been committed to develop the first diamond mine in Canada.

### BACKGROUND INFORMATION ON AVAILABLE STATISTICS

Natural Resources Canada (NRCan) coordinates the collection of all statistics for expenditures on general exploration (off-property), while Statistics Canada coordinates the collection of statistics for mine-site exploration (on-property). These federal agencies cooperate with the provinces and territories to assemble and publish the comprehensive national exploration statistics presented in this review. To protect confidentiality, only aggregate statistics are released. However, this review contains specific project information when such information has already entered the public domain.

In order to improve the quality of the survey, a review of the definitions used to collect information on Canadian exploration activity has been undertaken by the organizations conducting the surveys. It is expected that future statistics will include detailed information on feasibility studies and other more technically related costs that are presently excluded. A clearer distinction between primary exploration and deposit appraisal phases, as well as additional information on associated environmental costs, will improve the monitoring of the mineral development cycle.

*Note: Information in this review was current as of March 31, 1997.* 

#### TABLE 1. FUNDS RAISED BY COMPANIES LISTED ON CANADIAN STOCK EXCHANGES THROUGH THE ISSUE OF FLOW-THROUGH SHARES, 1983-96

Year	Value of Funds Raised						
	(current \$ millions)	(1996 \$ millions)					
1983	34	48					
1984	139	188					
1985	274	362					
1986	703	908					
1987	1 183	1 459					
1988	850	1 001					
1989	350	393					
1990	250	272					
1991	40	42					
1992	45	47					
1993	70	72					
1994	96	99					
1995	123	125					
1996 <b>p</b>	160	160					

Source: Natural Resources Canada, from Montréal, Toronto and Vancouver Stock Exchange records. P Preliminary.

#### TABLE 2. AREA<sup>1</sup> OF NEW MINERAL CLAIMS STAKED IN CANADA, 1990-96

	199	0	1991	991 1992			1993		1994	1994		1995		6
	(hectares)	(%)	(hectares)	(%)	(hectares)	(%)	(hectares)	(%)	(hectares)	(%)	(hectares)	(%)	(hectares)	(%)
Newfoundland	163 568	3.3	127 748	2.4	96 423	0.3	127 282	0.5	513 903	3.2	6 106 617	38.7	417 575	3.1
Nova Scotia	176 609	3.5	126 833	2.3	205 941	0.6	87 350	0.3	154 123	1.0	183 893	1.2	424 815	3.2
New Brunswick	69 776	1.4	73 136	1.4	55 104	0.2	37 616	0.1	63 680	0.4	60 464	0.4	93 760	0.7
Quebec	483 289	9.7	456 810	9.2	555 323	1.5	691 915	2.3	840 922	5.3	1 474 196	9.4	954 967	7.1
Ontario	419 259	8.4	317 568	5.9	497 800	1.4	426 416	1.6	734 400	4.6	668 832	4.2	903 488	6.7
Manitoba	127 342	2.5	127 935	2.4	140 379	3.8	486 148	1.8	998 435	6.3	210 460	1.3	196 900	1.5
Saskatchewan	184 939	3.7	274 242	5.1	897 315	2.4	2 257 219	8.4	1 815 997	11.5	340 881	2.2	469 040	3.5
Alberta	807 910	16.2	4 400	0.1	22 300 000	71.1	10 260 000	38.1	6 750 000	42.6	1 665 000	10.6	5 328 000	39.7
British Columbia	2 014 250	40.3	1 510 850 <b>a</b>	28.0	824 200 <b>a</b>	2.2	702 250 <b>a</b>	2.6	774 340	4.9	845 550	5.4	1 149 190	8.6
Yukon Northwest	195 202	3.9	128 081	2.4	135 854	0.4	114 817	0.4	280 171	1.8	376 844	2.4	514 483	3.8
Territories	355 346	7.1	2 213 337	41.0	7 178 000	19.6	11 812 417	43.9	2 929 482	18.5	3 839 299	24.3	2 956 017	22.0
Total	4 997 490	100.0	5 398 340	100.0	32 886 339	100.0	27 003 430	100.0	15 855 453	100.0	15 772 036	100.0	13 408 235	100.0

Source: Provincial and territorial mining recorders. a Not strictly comparable to 1990 and earlier years because the total is the area of claims recorded and not the area of claims staked.

1 Excludes coal.

Note: Numbers may not add to totals due to rounding.

		1995		1994	1995 as % of	19	95 Surface Dril	ling
Province/Territory	Field Expenditures	Overhead <sup>2</sup> Expenditures	Total Expenditures	Total Expenditures	1994 Total Expenditures	Diamond Drilling	Other Drilling	Total
		(\$ n	nillions)		(%)		(metres)	
Newfoundland	57.2	13.9	71.1	12.4	573.7	101 409	_	101 409
Nova Scotia	1.8	1.0	2.8	1.7	165.9	8 087	2 010	10 097
New Brunswick	10.5	2.2	12.7	10.0	126.9	75 312	-	75 312
Quebec	110.2	13.2	123.4	130.7	94.7	529 307	60	529 367
Ontario	113.1	16.6	129.7	113.0	114.8	725 054	4 352	729 406
Manitoba	29.7	2.9	32.6	40.5	80.5	91 080	1 381	92 461
Saskatchewan	38.4	5.4	43.8	50.6	86.6	201 202	64 243	265 445
Alberta	9.3	1.3	10.6	9.4	112.6	2 063	140 752	142 815
British Columbia	65.3	14.1	79.4	85.0	93.5	253 418	37 880	291 298
Northwest Territories	142.2	30.0	172.2	149.5	115.2	309 374	2 507	311 881
Yukon Territory	30.4	8.9	39.3	25.7	152.8	75 574	16 584	92 158
Total	608.1	109.5	717.6	628.5	114.2	2 371 880	269 769	2 641 649

# TABLE 3. GENERAL EXPLORATION PLUS MINE-SITE EXPLORATION<sup>1</sup> EXPENDITURES, 1994 AND 1995, AND DRILLING ACTIVITIES BY PROVINCE AND TERRITORY, 1995

Source: Federal-Provincial Survey of Mining and Exploration Companies.

– Nil.

1 Exploration activity includes only the search for new mines; it does not include exploration for extensions to deposits already being mined or committed to production.
2 Overhead expenditures include land costs, field administration costs and exploration-related head office expenses. Note: Numbers may not add to totals due to rounding.

# TABLE 4. GENERAL EXPLORATION PLUS MINE-SITE EXPLORATION<sup>1</sup> EXPENDITURES, INCLUDING OVERHEAD,<sup>2</sup> BY COMMODITY SOUGHT, 1995

Commodity Groups	Expenditures	Percentage of Canadian Total	1995 as % of 1994 Expenditures
<u>.</u>	(\$ millions)	(%)	(%)
Base metals <sup>3</sup>	218.4	30.4	129.0
Precious metals <sup>4</sup>	277.1	38.6	106.7
Iron ore	1.1	0.2	35.5
Uranium	27.8	3.9	88.8
Other metals	18.1	2.5	354.9
Nonmetals	159.1	22.2	105.9
Coal	12.2	1.7	143.5
Unspecified commodities	3.8	0.5	422.2
Total	717.6	100.0	_

Source: Natural Resources Canada, from the Federal-Provincial Survey of Mining and Exploration Companies. Exploration activity includes only the search for new mines; it does not include exploration for extensions to deposits already being mined or committed to production.
 Overhead expenditures include land costs, field administration costs and exploration-related head office expenses.
 Includes copper, nickel, lead and zinc.
 Includes silver, gold and platinum group metals.

Note: Numbers may not add to totals due to rounding.

#### TABLE 5. EXPLORATION EXPENDITURE SERIES FOR SOME MINERAL COMMODITIES OF INTEREST, 1988-95

	1988	1989	1990	1991	1992	1993	1994	1995
				(\$0	000)			
Diamonds Stone1 Platinum group elements Asbestos Wollastonite Titanium Mica Potash	2 958 	5 135 4 458 8 363 503 203 876 139 2 497	7 566 3 066 5 214 686 503 1 383 - 3 633	7 048 1 079 7 739 322 143 351 23 4 655	18 550 2 424 3 349 571 1 332 362 4 882	86 709 1 426 2 766 3 144 479 591 72 3 491	138 390 2 693 2 127 2 100 207 871 370 582	147 338 3 032 3 875 2 948 1 636 1 537 1 097 458

Source: Federal-Provincial Survey of Mining and Exploration Companies.

Nil.
1 Includes quartz, dolomite, granite, gabbro, limestone, marble, sandstone, slate and travertine.

Year	Base Metals <sup>2</sup>	Precious Metals <sup>3</sup>	Total
		(%)4	
1975	63	7	70
1977	42	7	49
1979	35	12	47
1981	34	25	59
1983	42	29	71
1985	20	65	85
1986	14	76	90
1987	11	83	94
1988	13	82	95
1989	23	68	91
1990	31	60	91
1991	40	52	92
1992	47	39	86
1993	32	37	69
1994	27	41	68
1995	31	39	70

#### TABLE 6. PERCENTAGE OF GENERAL EXPLORATION PLUS MINE-SITE EXPLORATION<sup>1</sup> EXPENDITURES DIRECTED AT THE SEARCH FOR BASE METALS AND PRECIOUS METALS, 1975-95<sup>a</sup>

Sources: 1975-83 compiled by Natural Resources Canada (NRCan) from individual company responses to Statistics Canada exploration questionnaires; 1985-94 compiled by NRCan from the Survey of Federal-Provincial Mining and Exploration Companies. <sup>a</sup> Data for the years 1976, 1978, 1980, 1982 and 1984 are not available. 1 Exploration activity includes only the search for new mines; it does not include

exploration for extensions to deposits already being mined or committed to production. 2 Includes nickel, copper, zinc and lead. 3 Includes gold, silver and platinum group metals. In recent years, gold exploration has accounted for 95% of exploration expenditures on precious metals. 4 Includes a pro-rated portion of expenditures for unspecified commodities.

# TABLE 7. GENERAL EXPLORATION PLUS MINE-SITE EXPLORATION EXPENDITURES,<sup>1</sup> INCLUDING OVERHEAD,<sup>2</sup> BY TYPE OF COMPANY, 1993-95

Type of Company	1	1993		1994	1995		
	(\$ millions)	(% of Canadian total)	(\$ millions)	(% of Canadian total)	(\$ millions)	(% of Canadian total)	
<ol> <li>Producing companies (those with a producing mine in Canada and their affiliates)</li> </ol>	303.2	63.5	381.9	60.8	407.8	56.8	
2. Oil companies (excluding group 1 above)	3.4	0.7	2.0	0.3	2.3	0.3	
3. Foreign companies (excluding groups 1 and 2 above)	16.6	3.5	27.6	4.4	45.7	6.4	
4. Junior companies and prospectors	142.7	29.9	195.8	31.2	213.4	29.7	
5. Other companies	11.4	2.4	20.9	3.3	48.4	6.8	
Total	477.3	100.0	628.1	100.0	717.6	100.0	

Sources: Natural Resources Canada and Statistics Canada, from Federal-Provincial Survey of Mining and Exploration Companies.

<sup>1</sup> Exploration activity includes only the search for new mines; it does not include exploration for extensions to deposits already being mined or committed to production. <sup>2</sup> Overhead expenditures include land costs, field administration costs and exploration-related head office expenses.

Note: Numbers may not add to totals due to rounding.

Province/Territory	199	93	199	1994		1995		6 <b>P</b>	199	)7f
	(\$ millions)	(%)	(\$ millions)	(%)						
Newfoundland	8.9	1.9	12.4	2.0	71.1	9.9	91.2	10.5	73.3	8.4
Nova Scotia	1.8	0.4	1.7	0.3	3.0	0.4	5.7	0.7	6.6	0.8
New Brunswick	11.1	2.3	10.0	1.6	12.7	1.8	16.1	1.8	15.9	1.8
Quebec	106.1	22.2	130.3	20.7	123.3	17.2	128.3	14.7	115.8	13.2
Ontario	75.6	15.8	113.0	18.0	129.7	18.1	177.9	20.4	189.6	21.6
Manitoba	27.4	5.7	40.5	6.5	32.6	4.5	40.1	4.6	41.7	4.8
Saskatchewan	53.1	11.1	50.6	8.1	43.8	6.1	45.0	5.2	58.7	6.7
Alberta	7.3	1.5	9.4	1.5	10.6	1.5	13.6	1.6	11.3	1.3
British Columbia	66.0	13.8	85.0	13.5	79.4	11.1	116.5	13.4	126.2	14.4
Northwest Territories	100.7	21.1	149.5	23.8	172.1	24.0	183.2	21.0	178.8	20.4
Yukon Territory	19.2	4.0	25.7	4.1	39.3	5.5	54.9	6.3	57.9	6.6
Total	477.2	100.0	628.1	100.0	717.6	100.0	872.6	100.0	876.0	100.0
General exploration	413.2	86.6	555.8	88.5	631.2	88.0	774.2	88.7	771.3	88.0
Mine-site exploration	64.0	13.4	72.3	11.5	86.4	12.0	98.3	11.3	104.8	12.0

# TABLE 8. GENERAL EXPLORATION PLUS MINE-SITE EXPLORATION<sup>1</sup> EXPENDITURES, INCLUDING OVERHEAD,<sup>2</sup> BY PROVINCE AND TERRITORY, 1993-97

Sources: Natural Resources Canada and Statistics Canada, from the Federal-Provincial Survey of Mining and Exploration Companies.

f Forecast; P Preliminary.

1 Exploration activity includes only the search for new mines; it does not include exploration for extensions of deposits already being mined or committed to production. 2 Overhead expenditures include land costs, field administration costs and exploration-related head office expenses. Statistics Canada totals for mine-site exploration have been revised to take into account additional or revised data obtained by Natural Resources Canada.

Note: Numbers may not add to totals due to rounding.

	Di	illing (Surface	and Undergro	ound)			Total	Total,				
	Dia	amond	Č	ther		· · · ·	Geop	hysical		Other Field	Field	Including
Province/Territory	Metres	Cost	Metres	Cost	Geochemical	Geology	Ground	Airborne	Rock Work	Costs	Expenditures	Overhead <sup>2</sup>
	(000)	(\$000)	(000)	(\$000)	<u>.</u>				(\$000)			
Newfoundland	101	10 935	-	-	1 944	9 504	2 469	7 432	2 077	22 821	57 182	71 113
Nova Scotia	8	581	2	97	110	410	73	2	308	229	1 810	2 843
New Brunswick	88	6 192	_	-	652	1 702	675	655	188	430	10 494	12717
Quebec	741	40 994	-	3	6 722	21 035	7 652	2 545	10 581	20 709	110 241	123 352
Ontario	938	64 250	4	362	2 940	14 252	8 635	1 924	14 101	6 643	113 107	129 729
Manitoba	210	17 626	4	242	287	1 396	2 889	2 660	2 770	1 846	29 716	32 607
Saskatchewan	231	19 204	71	3 764	1 123	3 941	3 186	1 741	2 994	2 479	38 432	43 814
Alberta	2	221	141	4 680	522	1 670	477	725	537	438	9 271	10 591
British Columbia	272	28 763	38	1 650	4 333	9 987	3 241	1 287	9 264	6 772	65 296	79 388
Northwest Territories	322	65 170	3	154	22 334	10 801	8 033	3 916	23 957	7 775	142 142	172 158
Yukon Territory	80	6 608	18	1 006	2 546	8 779	1 076	1 535	5 945	2 939	30 436	39 283
Total Canada	2 993	260 543	280	11 960	43 513	83 478	38 407	24 422	72 723	73 082	608 128	717 595

#### TABLE 9. GENERAL EXPLORATION PLUS MINE-SITE EXPLORATION<sup>1</sup> ACTIVITIES BY PROVINCE AND TERRITORY, BY TYPE OF WORK, 1995

Source: Natural Resources Canada, from the Federal-Provincial Survey of Mining and Exploration Companies.

– Nil.

1 Exploration activity includes only the search for new mines; it does not include exploration for extensions of deposits already being mined or committed to production. 2 Overhead expenditures include land costs, field administration costs and exploration-related head office expenses.

Note: Numbers may not add to totals due to rounding.

			and Undergro	/			Surveys - Other		ork		Total	Total,
Type of Company	Dia Metres	amond Cost	Metres	Other Cost	Geochemical	Geology	Geopl Ground	hysical Airborne	Rock Work	Other Field Costs	Field Expenditures	Including Overhead <sup>2</sup>
	(000)	(\$000)	(000)	(\$000)					(\$000)			
<ol> <li>Companies with a producing mine in Canada</li> </ol>	1 672	135 914	266	11 068	11 700	26 055	15 626	3 520	43 913	22 843	270 639	324 178
2. Affiliates of group 1	306	28 539	1	3	2 646	14 370	5 756	4 556	11 745	5 033	72 648	83 642
3. Oil companies	13	1 266	-	-	80	192	294	-	-	25	1 858	2 276
<ol> <li>Foreign companies (excluding group 3)</li> </ol>	108	11 012	1	118	9 572	7 915	2 216	1 892	866	3 442	37 032	45 736
5. Junior companies and prospectors	759	70 821	9	583	19015	29 927	13 206	11 535	14 900	24 645	184 634	213 396
6. Other companies	135	12 991	3	186	501	5 019	1 309	2 918	1 299	17 094	41 316	48 366
Total all classes	2 993	260 543	280	11 960	43 513	83 478	38 407	24 422	72 723	73 082	608 128	717 595

#### TABLE 10. GENERAL EXPLORATION PLUS MINE-SITE EXPLORATION<sup>1</sup> ACTIVITIES BY TYPE OF COMPANY, 1995

Source: Natural Resources Canada, from the Federal-Provincial Survey of Mining and Exploration Companies.

– Nil.

1 Exploration activity includes only the search for new mines; it does not include exploration for extensions of deposits already being mined or committed to production. 2 Overhead expenditures include land costs, field administration costs and exploration-related head office expenses. Note: Numbers may not add to totals due to rounding.

			Metals				Commodity	Total Field	
Province/Territory	Base	Precious	Iron	Uranium	Other	Nonmetals	Coal	Not Specified	Expenditures
					(\$000)	)			
Newfoundland	40 810	4 580	172	_	11 030	589	_	_	57 182
Nova Scotia	254	947	-	-	7	81	380	140	1 810
New Brunswick	7 378	2 549	-	-	404	89	-	72	10 494
Quebec	33 045	65 366	643	-	1 533	9 629	-	25	110 241
Ontario	36 155	71 473	_	-	73	4 876	_	531	113 107
Manitoba	26 617	1 798	-	-	629	446	-	226	29716
Saskatchewan	5 641	7 066	_	21 895	-	3 140	324	366	38 432
Alberta	156	1 638	30	-	-	1 632	5 815	-	9 271
British Columbia	16 325	41 446	_	-	1 219	2 125	2 795	1 386	65 296
Northwest Territories	10 805	21 889	_	2 179	150	107 118	-	-	142 142
Yukon Territory	9 778	19 232	-	_	-	-	1 098	329	30 436
Total Canada	186 965	237 985	845	24 074	15 045	129 726	10 412	3 076	608 128

# TABLE 11a. GENERAL EXPLORATION PLUS MINE-SITE EXPLORATION<sup>1</sup> EXPENDITURES, NOT INCLUDING OVERHEAD,<sup>2</sup> BY PROVINCE AND TERRITORY, BY COMMODITY SOUGHT, 1995

Source: Natural Resources Canada, from the Federal-Provincial Survey of Mining and Exploration Companies.

– Nil.

<sup>1</sup> Exploration activity includes only the search for new mines; it does not include exploration for extensions to deposits already being mined or committed to production. <sup>2</sup> Overhead expenditures include land costs, field administration costs and exploration-related head office expenses. Note: Numbers may not add to totals due to rounding.

			Metals				Commodity	Total, Including	
Province/Territory	Base	Precious	Iron	Uranium	Other	Nonmetals	Coal	Not Specified	Overhead
					(\$00	0)			
Newfoundland	50 079	6 276	213	_	13 473	1 071	_	_	71 113
Nova Scotia	364	1 625	_	-	11	81	537	225	2 843
New Brunswick	8 944	3 059	_	-	484	102	-	129	12 717
Quebec	36 505	73 452	699	-	1 611	11 060	-	25	123 352
Ontario	41 075	82 047	106	5	78	5 659	-	760	129 729
Manitoba	28 998	2 057	_	-	824	498	-	230	32 607
Saskatchewan	6 314	8 126	_	24 868	_	3 700	397	410	43 814
Alberta	156	1 743	30	14	-	1 749	6 900	-	10 591
British Columbia	20 029	50 538	_	_	1 427	2 527	3 277	1 590	79 388
Northwest Territories	12 296	24 094	7	2 946	177	132 622	_	16	172 158
Yukon Territory	13 667	24 132	-	-	-	-	1 098	386	39 283
Total Canada	218 426	277 150	1 055	27 832	18 085	159 069	12 208	3 771	717 995

# TABLE 11b. GENERAL EXPLORATION PLUS MINE-SITE EXPLORATION<sup>1</sup> EXPENDITURES, INCLUDING OVERHEAD,<sup>2</sup> BY PROVINCE AND TERRITORY, BY COMMODITY SOUGHT, 1995

Source: Natural Resources Canada, from the Federal-Provincial Survey of Mining and Exploration Companies.

– Nil.

<sup>1</sup> Exploration activity includes only the search for new mines; it does not include exploration for extensions to deposits already being mined or committed to production. <sup>2</sup> Overhead expenditures include land costs, field administration costs and exploration-related head office expenses. Note: Numbers may not add to totals due to rounding.

# TABLE 12a. GENERAL EXPLORATION PLUS MINE-SITE EXPLORATION<sup>1</sup> EXPENDITURES, NOT INCLUDING OVERHEAD,<sup>2</sup> BY TYPE OF COMPANY AND BY COMMODITY SOUGHT, 1995

Type of Compa	nv Base	Preciou	Meta s Iron	ls Uranium	Other	Nonmeta	ls Coal	Commodity Not Specified	Total Field Expenditures
- i jpe er eempe		1100104		eraman				not op comea	Expondituroo
					(\$	6000)			
<ol> <li>Companies w producing mir Canada</li> </ol>		8 121 748	171	22 318	479	47 171	9 236	1 799	270 639
2. Affiliates of gr	oup 1 41 88	5 6 348	-	-	333	24 083	-	-	72 648
3. Oil companies	35	51 1 473		-	-	34	-	-	1 858
<ol> <li>Foreign comp (excluding growth)</li> </ol>		<b>'</b> 9 15 921	-	1 588	-	13 840	_	303	37 032
<ol><li>Junior compa and prospector</li></ol>		5 80 775	674	168	6 712	43 203	1 176	800	184 634
6. Other compar	ies 20 50	11 719	-	-	7 521	1 395	-	173	41 316
Total all classes	186 96	237 985	845	24 074	15 045	129 726	10 412	3 076	608 128

Source: Natural Resources Canada, from the Federal-Provincial Survey of Mining and Exploration Companies.

– Nil.

1 Exploration activity includes only the search for new mines; it does not include exploration for extensions to deposits already being mined or committed to production.
 2 Overhead expenditures include land costs, field administration costs and exploration-related head office expenses.

Note: Numbers may not add to totals due to rounding.

				Metals					Commodity	Total, Including
	Type of Company	Base	Precious	Iron	Uranium	Other	Nonmetals	Coal	Not Specified	Overhead
						(\$000	)			
1.	Companies with a producing mine in Canada	75 403	139 739	314	25 731	605	69 560	10 793	2 034	324 178
2.	Affiliates of group 1	50 889	8 245	-	5	410	24 093	-	-	83 642
3.	Oil companies	376	1 608	4	-	-	55	233	-	2 276
4.	Foreign companies (excluding group 3)	6 565	18 299	_	1 896	-	18 503	-	472	45 736
5.	Junior companies and prospectors	61 619	94 895	737	200	8 208	45 463	1 183	1 092	213 396
6.	Other companies	23 573	14 364	-	-	8 861	1 395	-	173	48 366
Тс	tal all classes	218 426	277 150	1 055	27 832	18 085	159 069	12 208	3 771	717 595

# TABLE 12b. GENERAL EXPLORATION PLUS MINE-SITE EXPLORATION<sup>1</sup> EXPENDITURES, INCLUDING OVERHEAD,<sup>2</sup> BY TYPE OF COMPANY AND BY COMMODITY SOUGHT, 1995

Source: Natural Resources Canada, from the Federal-Provincial Survey of Mining and Exploration Companies.

– Nil.

Exploration activity includes only the search for new mines; it does not include exploration for extensions to deposits already being mined or committed to production.
 Overhead expenditures include land costs, field administration costs and exploration-related head office expenses.

Note: Numbers may not add to totals due to rounding.

TABLE 13. GENERAL EXPLORATION PLUS MINE-SITE EXPLORATION, <sup>1</sup> SURFACE AND UNDERGROUND DRILLING,
BY PROVINCE AND TERRITORY, BY COMMODITY SOUGHT, 1995

			Metals					
Province/Territory	Base	Precious	Iron	Uranium	Other	Nonmetals	Coal	Total
				(0	00 metres)			
Newfoundland	65	21	_	-	15	-	_	101
Nova Scotia	1	7	-	-	-	-	2	10
New Brunswick	64	19	_	-	4	1	-	88
Quebec	211	498	1	-	7	24	_	741
Ontario	244	685	-	-	-	14	-	943
Manitoba	193	16	-	-	3	1	-	214
Saskatchewan	27	70	-	186	-	7	12	302
Alberta	-	-	-	-	-	1	141	143
British Columbia	89	184	-	-	6	1	31	310
Northwest Territories	29	110	-	7	-	177	-	324
Yukon Territory	21	75	-	-	-	-	2	98
Total Canada	944	1 686	1	193	35	226	188	3 273

Source: Natural Resources Canada, from the Federal-Provincial Survey of Mining and Exploration Companies.

– Nil.

<sup>1</sup> Exploration activity includes only the search for new mines; it does not include exploration for extensions to deposits already being mined or committed to production.

Note: Numbers may not add to totals due to rounding.

			Metals					
Type of Company	Base	Precious	Iron	Uranium	Other	Nonmetals	Coal	Total
				(00	0 metres)			
<ol> <li>Companies with a producing mine in Canada</li> </ol>	466	1 053	_	182	3	49	185	1 938
2. Affiliates of group 1	221	32	-	-	1	53	-	307
3. Oil companies	1	12	-	-	-	-	-	13
<ol> <li>Foreign companies (excluding group 3)</li> </ol>	27	71	_	10	_	2	_	109
5. Junior companies and prospectors	173	456	1	1	16	118	3	767
6. Other companies	56	63	-	-	15	4	-	138
Total all classes	944	1 686	1	193	35	227	188	3 273

# TABLE 14. GENERAL EXPLORATION PLUS MINE-SITE EXPLORATION,<sup>1</sup> SURFACE AND UNDERGROUND DRILLING, BY TYPE OF COMPANY AND BY COMMODITY SOUGHT, 1995

Source: Natural Resources Canada, from the Federal-Provincial Survey of Mining and Exploration Companies.

– Nil.

<sup>1</sup> Exploration activity includes only the search for new mines; it does not include exploration for extensions to deposits already being mined or committed to production.

Note: Numbers may not add to totals due to rounding.

# TABLE 15a. GENERAL EXPLORATION PLUS MINE-SITE EXPLORATION<sup>1</sup> EXPENDITURES, NOT INCLUDING OVERHEAD,<sup>2</sup> BY PROVINCE AND TERRITORY, BY TYPE OF COMPANY, 1995

	(1) Companies With a	(2)	(3)	(4) Foreign	(5) Junior	(6)	
Province/Territory	Producing Mine in Canada	Affiliates of (1)	Oil Companies	Companies Excluding (3)	Companies and Prospectors	Other Companies	Total Field Expenditures
				(\$000)			
Newfoundland	3 807	4 774	_	718	25 235	22 649	57 182
Nova Scotia	646	-	-	124	1 028	11	1 810
New Brunswick	2 043	6 225	-	15	2 086	124	10 494
Quebec	52 219	8 712	-	7 329	31 979	10 002	110 241
Ontario	73 576	10 545	398	6 743	19 898	1 948	113 107
Manitoba	17 996	8 455	_	95	2 309	862	29716
Saskatchewan	25 245	4 308	_	1 602	7 277	_	38 432
Alberta	6 053	-	_	10	3 208	_	9 271
British Columbia	20 853	2 848	_	4 056	35 522	2 018	65 296
Northwest Territories	58 435	25 758	1 460	13 393	42 488	608	142 142
Yukon Territory	9 768	1 023	-	2 947	13 603	3 094	30 436
Total Canada	270 639	72 648	1 858	37 032	184 634	41 316	608 128

Source: Natural Resources Canada, from the Federal-Provincial Survey of Mining and Exploration Companies.

– Nil.

<sup>1</sup> Exploration activity includes only the search for new mines; it does not include exploration for extensions to deposits already being mined or committed to production. <sup>2</sup> Overhead expenditures include land costs, field administration costs and exploration-related head office expenses. Note: Numbers may not add to totals due to rounding.

	(1) Companies With a	(2)	(3)	(4) Foreign	(5) Junior	(6)	Total,
Province/Territory	Producing Mine in Canada	Affiliates of (1)	Oil Companies	Companies Excluding (3)	Companies and Prospectors	Other Companies	Including Overhead
				(\$000)			
Newfoundland	5 490	5 279	_	1 002	32 665	26 677	71 113
Nova Scotia	1 130	-	-	188	1 514	11	2 843
New Brunswick	2 355	7 666	-	20	2 537	139	12 717
Quebec	60 194	9 873	-	7 819	35 465	10 002	123 352
Ontario	80 075	14 743	442	8 167	24 219	2 084	129 729
Manitoba	18 788	9 951	-	167	2 813	887	32 607
Saskatchewan	29 689	4 544	28	1 934	7 618	-	43 814
Alberta	7 219	-	6	10	3 356	-	10 591
British Columbia	23 792	3 987	340	5 229	42 210	3 830	79 388
Northwest Territories	81 653	26 185	1 460	18 191	43 986	682	172 158
Yukon Territory	13 792	1 415	-	3 009	17 013	4 053	39 283
Total Canada	324 178	83 642	2 276	45 736	213 396	48 366	717 595

## TABLE 15b. GENERAL EXPLORATION PLUS MINE-SITE EXPLORATION<sup>1</sup> EXPENDITURES, INCLUDING OVERHEAD,<sup>2</sup> BY PROVINCE AND TERRITORY, BY TYPE OF COMPANY, 1995

Source: Natural Resources Canada, from the Federal-Provincial Survey of Mining and Exploration Companies.

– Nil.

<sup>1</sup> Exploration activity includes only the search for new mines; it does not include exploration for extensions to deposits already being mined or committed to production. <sup>2</sup> Overhead expenditures include land costs, field administration costs and exploration-related head office expenses. Note: Numbers may not add to totals due to rounding.