# Report on

# FLOW-THROUGH SHARE FINANCING OF EXPLORATION

1988

Canadä<sup>\*</sup>

#### Final Report (Revised)

on

#### FLOW-THROUGH SHARE FINANCING OF EXPLORATION

for

**Mines Ministers' Conference** 

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by

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#### SUMMARY

The May 3 announcements of the extension of the Mining Exploration Depletion Allowance (MEDA) at 33 1/3 per cent to the end of 1988 and the implementation of the Canadian Exploration Incentive Program (CEIP) on January 1, 1989 have been positively received by the exploration industry as well as by the investment community. The incentive rate selected for CEIP was made in the light of recommendations from the industry and the investment community; in fact, the rate of return to investors under CEIP is marginally better than the rate under the former MEDA at 33 1/3 per cent.

Soon after the May 3 announcements, the major limited partnerships launched ambitious plans to raise \$485 million over the course of the summer and fall for spending in 1988. This amount, if completely sold, together with the \$430 million already raised in early 1988, should place flow-through funding near the \$900 million level in 1988. There is also on the back- burner another potential \$180 million for spending before the end of February 1989 that the investment community may bring to market if the \$485 million is successful.

Flow-through shares are, of course, not the only source of funds which companies use to undertake mineral exploration. Large mining companies in Canada fund exploration out of cash flow and other non-flow-through-share sources. A recent informal EMR survey of these large mining companies indicates that they expect their exploration expenditures in 1988 to be close to the level of 1987, that is, about \$430 million. EMR believes, however, that senior companies have drastically reduced, and probably eliminated, their usage of flow-through shares.

However, the overall impression at the time of this writing (August 15) is that exploration in early 1988 gave rise to few complaints; mid-summer 1988 is a time of continued general health in the industry, but some areas (Val-d'Or) have suffered a noticeable slowdown. As to the fall of 1988, there is an optimism in the investment community, but flow-through share issues are meeting with some resistance from investors and few people expect a total of \$900 to be raised in 1988. Nevertheless, 1988 may well turn out to be a satisfactory year -- but less spectacular than 1987. While we expect senior activity to be maintained roughly at the 1987 level, the shrinkage of the flow-through share market will result in a lower level of junior exploration expenditures. The overall effect will probably mean a somewhat less buoyant year in 1988 as compared to 1987.

The general feeling within the investment community is that, with CEIP beginning January 1, 1989, the level of flow-through share funding for 1989 should also be at a healthy level, but probably not at the record level achieved in 1987.

#### INTRODUCTION

At the Mines Ministers' Conference in St. John's, Newfoundland in August 1987, Ministers expressed concern about the future level of flow-through share funding for mineral exploration in Canada. At that time, the focus of attention was on the Tax Reform proposals, particularly on the reduction in the levels of incentive that would be provided through the tax system when MEDA was phased out. Because of the concern, Ministers agreed to closely monitor the levels of flow-through share financing for exploration.

Since the last conference three major factors have influenced the outlook for exploration and flow-through share financing. First, the stock market crash in October 1987 caused potential investors to shy away from new share issues and, to an extent, flow-through shares. Second, the Canadian Exploration Incentive Program (CEIP) and the extension of MEDA were announced in May 1988. Third, there has been a sustained recovery in the prices of many metals.

As a consequence of the stock market crash and concern about its impact on exploration financed by flow-through shares, the federal government undertook an intensive series of consultations with the exploration industry and the investment community. The aim of those meetings was to determine the likely path of flow-through share financing for exploration.

Following those consultations, the Minister of Energy, Mines and Resources and the Minister of State (Forestry and Mines) announced the Canadian Exploration Incentive Program. The selection of the incentive rate for CEIP was made in the light of what the industry and investment community considered necessary to restore the attractiveness of flow-through shares.

CEIP will begin for mining on January 1, 1989. The program provides a 30 per cent incentive on up to \$10 million of grass roots exploration financed by flow-through shares. This rate will be in effect until the end of 1990 but may be changed thereafter, depending on the state of the market. In addition, and as a temporary measure before CEIP becomes effective, the Minister of Finance also announced an extension of the Mining Exploration Depletion Allowance (MEDA) at the rate of 33 1/3 per cent, for individuals only, until December 31, 1988. The prime purpose of these initiatives is to prevent what had been foreseen as a sharp fall-off in the volumes of funding provided for mineral exploration by means of flow-through shares.

In accordance with the Ministers' agreement at the 1987 Mines Ministers' Conference, this paper reports on the current outlook and recent historical trends in both flow-through share financing activity and mineral exploration.

#### CURRENT OUTLOOK FOR EXPLORATION

#### 1.1 Outlook for Flow-Through Share Funding of Mineral Exploration

Since the announcement of CEIP on May 3, EMR has had ongoing contact with the investment community to assess the expected levels of flow-through share financing for 1988. Table 1.1 sets out EMR's 1988 forecast for flow-through share financed exploration. Table 1.1 also includes comparable data for 1987 obtained from the stock exchanges. Because of the strong market for new equity issues over most of 1987, the 1987 experience should not be regarded as typical. Thus the 1987 totals are unlikely to be exceeded in the next few years.

Table 1.1 presents the results of EMR's discussions with investment advisors and major, as well as some minor, limited partnerships and EMR's continued monitoring of the stock exchanges. The results show that about \$430 million of flow- through shares have already been raised for 1988. An additional \$485 million worth of shares are now being offered. In addition (and much depends on the success of issues now being marketed) another \$180 to \$195 million will probably be offered in the latter part of 1988, for spending before the end of February 1989.

It appears that the extension of MEDA at 33 1/3 per cent announced on May 3 should maintain flow-through funding at a satisfactory level for the latter half of 1988. The general feeling within the investment community is that, with CEIP beginning January 1, 1989, the level of flow-through share funding for 1989 should also be at a healthy level.

Investor enthusiasm for stock issues was lacking during the first third of 1988, with total Canadian common equity financing running at approximately 20 per cent of its level a year earlier\*. Despite this, major limited partnerships are bringing more than \$900 million of flow-through shares to the market at a time when investor enthusiasm for general issues is at a very low level.

Consultations with the investment community gave EMR a rather uniform view of the incentive level that was required to make flow-through shares successful. The incentive level of 30 per cent under CEIP has been evaluated by this client group and found to be adequate. On this basis, EMR expects the program to be successful.

<sup>\*</sup> Investment Dealers Association of Canada, Bulletin No. 1572, July 15, 1988.

Table 1.1

FLOW-THROUGH SHARE FUNDS RAISED OR PLANNED TO BE RAISED FOR SPENDING IN 1988 COMPARED TO ESTIMATES (PRELIMINARY)
OF AMOUNTS RAISED IN 1987

		1987		
Name of Issuing Company	Issues Sold	Issues Now Underway	Issues Planned Depending on Success of Issues Now Underway	Revised Preliminar Estimates
		(millions of dollars)		
TAP	33	30		28
CMP	50	150		239
MVP	25		25	57
NEF	8		15	
NIM	125	200		260
FIRST EX.	21		20	47
QPX	6			••
MIDDLEFIELD		75		29
MINTAX		30		15
OTHERS	162	3	120	508
	430	485	180	1,183

#### TOTALS FOR 1988:

issues sold:	430
issues sold plus full sale of issues underway:	915
all expectations realized:	1095

#### 1.2 Outlook for Exploration by Senior Mining Companies

Flow-through share funding is, of course, only one of the sources of funds used by companies to undertake mineral exploration. Flow-through shares in 1988 and later will largely be used by junior mining companies. And it is juniors who make up the bulk of the companies included in the limited partnerships' intentions for 1988 listed in Table 1.1. Senior mining companies are now funding exploration primarily out of cash flow, and other non-flow-through-share sources. Thus, a more complete picture of total exploration activity in 1988 and later can be obtained by determining separately the exploration expectations of senior mining companies in addition to the flow-through financing expectations discussed in Section 1.1.

Accordingly, EMR recently undertook a survey of 18 senior mining companies on their likely exploration expenditures for 1988 and 1989. Data were also obtained for the years 1984-87. Thirteen companies responded to the survey. Based on the estimates for their own companies, the total forecast exploration expenditures by these companies for 1988 is \$180.2 million. These same companies reported expenditures of \$177 million in 1987. Based on this sampling, EMR expects the level of senior company exploration in 1988 to be similar to the \$430 million spent in 1987.

Table 1.2 sets out another estimate of the level of 1988 senior exploration based upon the Statistics Canada survey of exploration intentions. This forecast predicts a drop of some 10 per cent in senior exploration expenditures from \$431 million in 1987 to \$388 million in 1988.

On the other hand, the historical relationship between metal prices and senior exploration would indicate an increase in senior exploration expenditures to the range of \$480 million. The methodology for this estimate is explained in section 1.5.

On the basis of this range of indicators, it is reasonable to assume that senior exploration may increase slightly during 1988 from the 1987 level of \$430 million.

#### 1.3 Exploration by Region

The regional distribution of total exploration expenditures is somewhat difficult to assess with precision. The results of the Statistics Canada survey of intentions for 1988, conducted between April and July of 1988, are shown in Table 1.3. However, the Statistics Canada data for some provinces are at variance with current estimates from provincial officials for both 1987 and 1988. Statistics Canada estimates \$7.3 million in expenditures for Newfoundland in 1987 and forecasts \$6.3 million plus an unknown amount of on-property exploration for 1988. Newfoundland provincial officials, however, put the estimate at about \$25 million for 1987 and their estimate for 1988 is close to \$30 million. Saskatchewan expects exploration expenditures of close to \$60 million in 1988 (down from \$69 million in

Table 1.2

REGIONAL DISTRIBUTION OF EXPLORATION ACTIVITY
BY SENIOR COMPANIES (INCLUDING OVERHEAD)

1987 (Preliminary Actual) and 1988 (Revised Intentions)

(millions of dollars)

	1987 Preliminary Actual	1988 Revised <u>Intentions</u>
Atlantic Provinces General Exploration On-Property Exploration Total Atlantic Provinces	16.4 9.4 25.8	20.2 5.2 25.4
Quebec General Exploration On-Property Exploration Total Quebec	89.9 38.6 128.5	84.1 33.8 117.9
Ontario General Exploration On-Property Exploration Total Ontario	108.9 16.1 125.1	72.1 14.6 86.7
Prairie Provinces General Exploration On-Property Exploration Total Prairie Provinces	46.5 16.1 62.6	55.4 16.1 71.4
British Columbia General Exploration On-Property Exploration Total British Columbia	51.0 6.2 57.2	48.7 5.0 54.7
Territories General Exploration On-Property Exploration Total Territories	28.9 2.8 31.7	29.1 3.5 32.6
Canada General Exploration On-Property Exploration	341.7 89.3	309.6 78.2
Total Canada	431.0	387.8

Source: Statistics Canada and

Resource Evaluation Division, EMR

Regional Distribution of Total Exploration Activity
1987 (Preliminary Actual) and 1988 (Revised Intentions)
Including Overhead
(millions of dollars)

		1987		·	1988		_
Province	On-Property	General	Total	On-Property	General	Total	
Newfoundland* Prince Edward Island	<b>x</b> -	7.3	7.3+	<b>x</b> -	6.3	6.3+	
Nova Scotia	x	15.2	15.2+	х	20.1	20.1+	
New Brunswick	x	9.0	9.0+	X	17.1	17.1+	
Quebec*	44.8	432.7	477.5	42.3	452.8	495.1	
Ontario	32.9	171.4	204.3	43.9	186.1	230.0	î
Manitoba	10.7	17.3	28.0	11.5	18.0	29.5	œ
Saskatchewan*	4.3	36.7	41.0	x	44.2	44.2	1
Alberta	x	4.0	4.0+	x	5.1	5.1+	•
British Columbia	15.3	105.3	120.6	17.6	131.1	148.7	
Yukon	0.6	16.8	17.4	4.0	8.5	12.5	
Northwest Territories	2.1	33.9	36.0	x	24.3	24.3+	
CANADA	121.5	849.6	971.1	143.9	913.7	1057.6	

Notes: - x indicates confidential information

- Date of survey was April to July 1988.

- \* estimates from provincial officials may differ from amounts shown here; see text.

Source: Statistics Canada

1987), but still considerably above the forecast by Statistics Canada. The current view of Québec government officials is that spending in Québec will probably be lower than that indicated in the Intentions Survey. The concern in Québec is that problems in raising flow-through share funds may cause a shortfall in exploration. The province of British Columbia also reports a slowdown.

The extent of the slowdown in B.C. is expected to be much less severe than in Québec's Abitibi-Témiscamingue region. This area of Québec was the target for about 85 per cent of Québec's mineral exploration expenditures in 1987, and Québec in turn accounted for about 48 per cent of total Canadian expenditures in that year. Unemployment in the region is up, new claims registered are down, but drilling was at a record high for the first six months of 1988.

In New Brunswick and Manitoba, our contacts indicate higher levels of exploration are expected. Nova Scotia officials report that exploration could fall somewhat from the record level of 1987. In the province of Ontario mining is reported to be robust and no complaints of a slowdown in exploration have been forthcoming.

#### 1.4 Recent Diamond Drilling Activity

Statistics from the Diamond Drilling Association of Canada tend to indicate that an adequate level of exploration prevailed over the first 3 months of 1988 (the most up to date data available). Figure 1.1 shows surface and underground drilling in thousands of metres for the years 1985-87. Figure 1.2 illustrates drilling activity for the first three months of 1986, 1987 and 1988. Note the continuing upward trend, with the total number of metres drilled in the first three months of 1988 slightly exceeding that for each of the previous years.

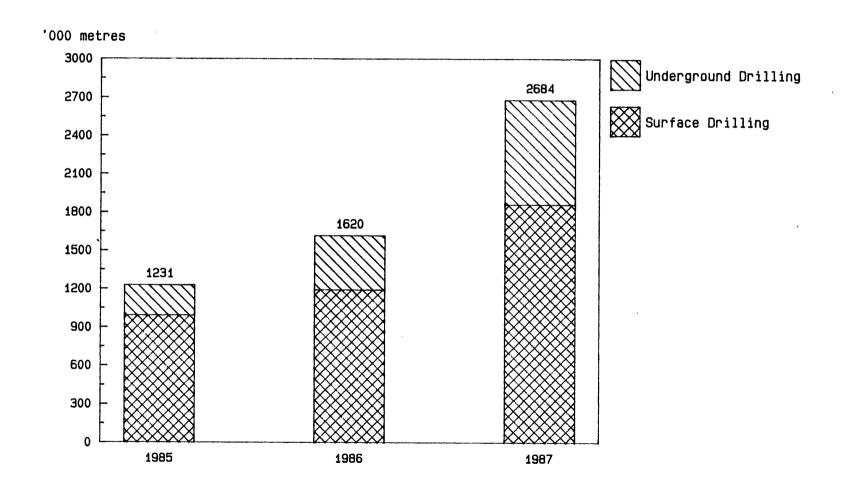
Data for beyond March 1988 are not yet available but it is likely that drilling activity fell during the spring, as it has done historically. As indicated in Figure 1.3, an index of monthly activity, the long-term average (bold line) shows a drop off in spring, increasing in late summer, and dropping off towards the end of the year. In recent years, with the influence of flow-through shares, the drop-off tends to be more pronounced in the summer months, with drilling activity sustained further into the latter part of the year.

#### 1.5 Outlook for Exploration based on Metal Prices

The large increases in metal prices which have prevailed since mid-1987 should themselves give rise to increased confidence within the industry and therefore to robust levels of investment committed to exploration.

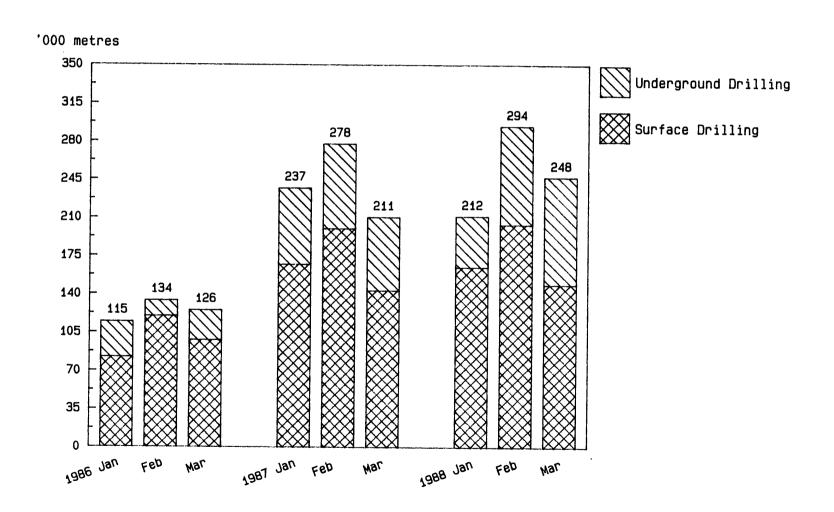
Figure 1.1

### SURFACE AND UNDERGROUND DRILLING



Source: Canadian Diamond Drilling Association

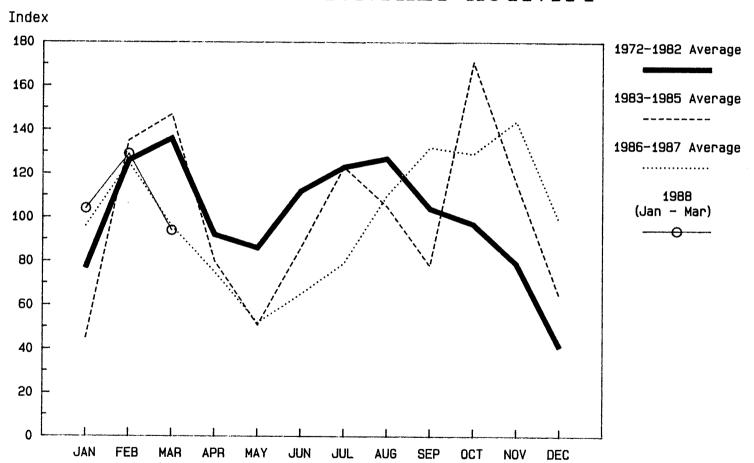
Figure 1.2
SURFACE AND UNDERGROUND DRILLING



Source: Canadian Diamond Drilling Association

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SURFACE DIAMOND DRILLING IN CANADA INDEX OF MONTHLY ACTIVITY



Source: Canadian Diamond Drilling Association

The course of metal prices is shown in two charts: Figure 1.4, Monthly Average Gold Prices over January 1986 to June, 1988 and Figure 1.5, Canadian Metal Price Index (Nominal and Real), 1971-1988. Gold prices are shown separately because of the heavy dominance of gold in current mineral exploration work. The price of gold has remained at healthy levels, relative to average operating costs, for a longer period than has the price of base metals. Figure 1.4 shows the price of gold has increased by about one-third since early 1986 when it was at U.S. \$340/oz. to its second quarter 1988 level of \$450/oz. In recent months the price of gold has trended downward and this appears to be having some impact on gold exploration plans as well as contributing to sluggishness in the flow-through market. However, interest is being rekindled in the exploration for base metals. The trend of the overall metal price index, shown in Figure 1.5, indicates the strength of the price recovery in Canada's major metals.

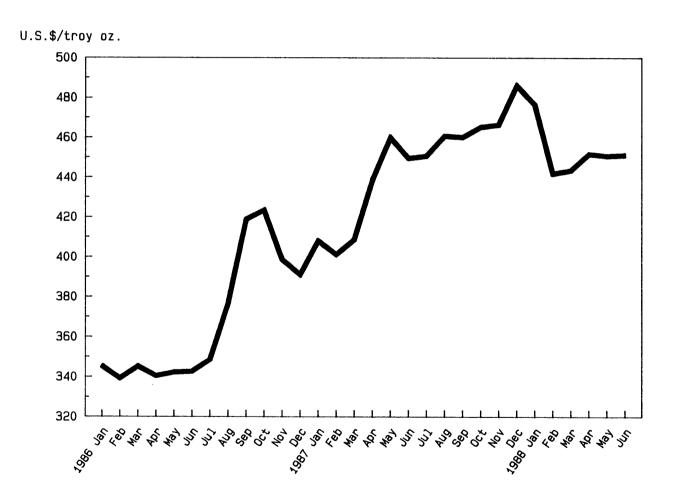
An analysis of historical data indicates that total exploration in a given year can be linked to the previous years' metals prices. Previous years' metals prices are a good indicator because exploration activity depends on exploration budgets and these are generally developed during the immediately preceding year.

The relationship between exploration expenditures and metal prices lagged by one year can be seen in two charts: Figure 1.6, Total Exploration Expenditures and Metal Prices Lagged One Year, and Figure 1.7, Senior Exploration Expenditures and Metal Prices Lagged One Year. There appears to have been a historical relationship between total exploration expenditures and prices up until 1985. However, the introduction of flow-through shares and its significant role after 1985 has tended to obscure this relationship. The relationship between senior exploration expenditures and lagged metal prices though, has held between 1977 and 1987; presumably there is a closer correlation for the seniors because their dependence on flow-through shares for funding exploration is less. Based on this relationship, 1988 senior exploration expenditures could approximate \$480 million.

### 2. <u>HISTORICAL PERSPECTIVE ON MINERAL EXPLORATION ACTIVITY</u>

When one is attempting to forecast, it is usually instructive to have an historical perspective. Section 2 and the following Section 3 provide an historical analysis of mineral exploration and flow-through share funding in Canada.

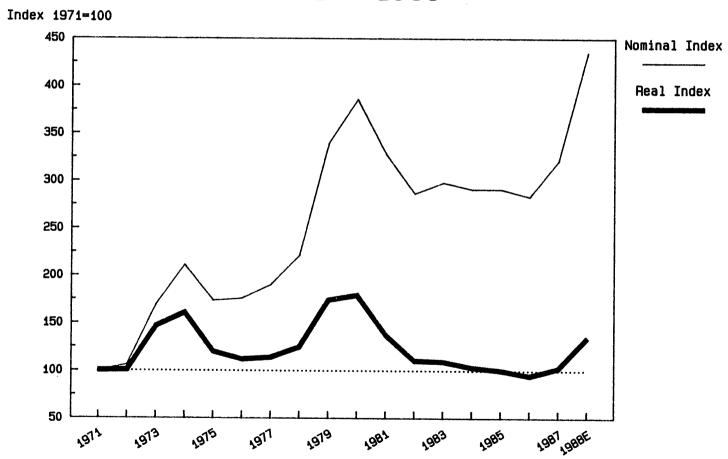
Figure 1.4
MONTHLY AVERAGE GOLD PRICES



Source: Metals Week, Handy & Harman

#### CANADIAN METAL PRICE INDEX

1971 - 1988

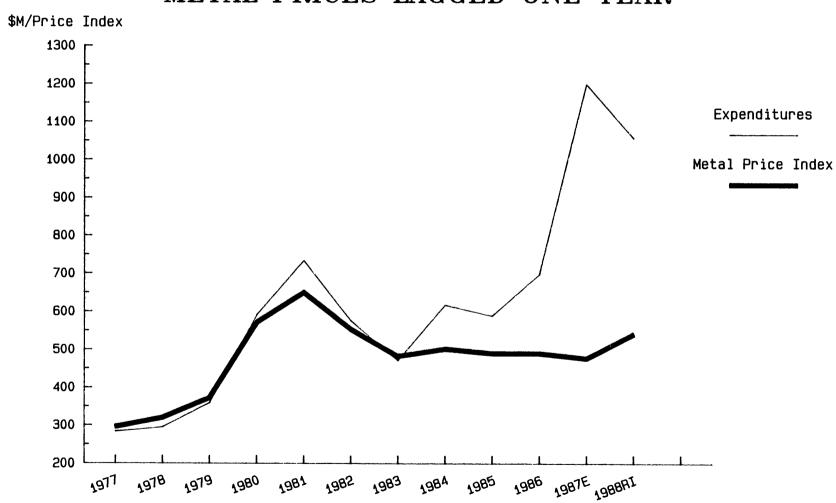


Source: Energy, Mines and Resources Canada Note: Index adjusted using the G.D.P. Deflator. E-Estimate based on average of Jan-Jun prices.

Index is weighted by production including copper, lead, zinc, nickel, silver, gold, uranium, and molybdenum.

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# TOTAL EXPLORATION EXPENDITURES AND METAL PRICES LAGGED ONE YEAR



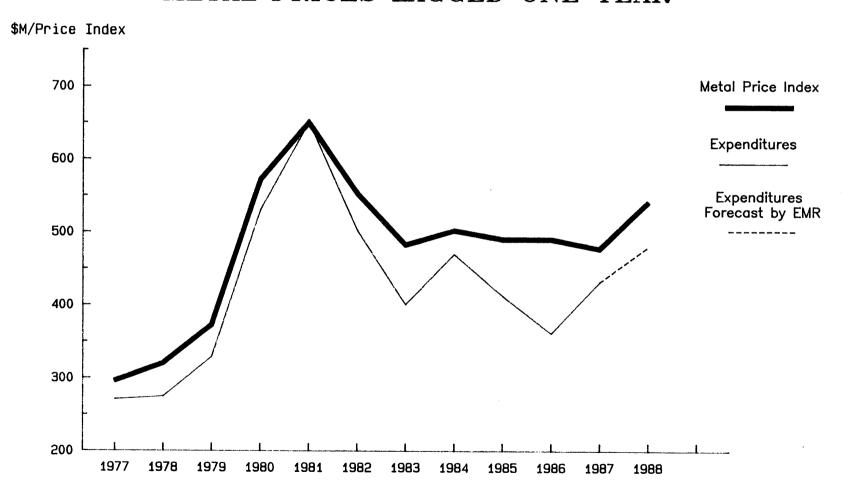
Source: Statistics Canada for exploration data with E=EMA estimate and RI=Statistics Canada Revised Intentions.

Note: EMR Metal Price Index includes gold, excludes iron. Exploration expenditures and Index are in nominal terms. Expenditures include overhead.

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Figure 1.7

# SENIOR EXPLORATION EXPENDITURES AND METAL PRICES LAGGED ONE YEAR



Source: Expenditures estimated by Resource Evaluation Division using survey questionnaires completed for Statistics Canada 61-007 & 61-216.

Note: EMR Metal Price Index includes gold, excludes iron. Exploration expenditures and Index are in nominal terms. Expenditures include overhead.

#### 2.1 Level of Exploration Activity

Figure 2.1 shows annual Canadian mineral exploration expenditures for the years 1969-87. The increases since 1983 reflect the strong emergence of the junior sector. In 1987 junior firms accounted for a full two-thirds of the total exploration in Canada.

Historically, the pattern of exploration spending closely follows real metal price trends in the economy. For example during the metals' price escalation from 1978 to 1980, expenditures increased by 84 per cent, and fell by 22 per cent during 1980-82 when prices declined. However, the most recent escalation in exploration spending, beginning in 1985, did not follow an escalation in metals prices but, instead, was heavily influenced by the growth in flow-through share financing. Total exploration expenditures in 1987, according to Statistics Canada, were about equal to the amount reported for 1981 (in constant dollars), the previous cyclical high.\*

Another measure of exploration activity is the amount of surface and underground diamond drilling undertaken. Figure 2.2 shows drilling activity in thousands of metres as reported by the Diamond Drilling Association of Canada for the years 1973-1987. Drilling activity, like exploration spending, closely follows trends in metals prices, as shown by the major slumps which occurred in 1975 and 1982, which were periods of metals price recession. The dramatic increase in drilling since 1985 again reflects the change in tax rules which made flow-through shares a popular instrument for raising exploration funds.

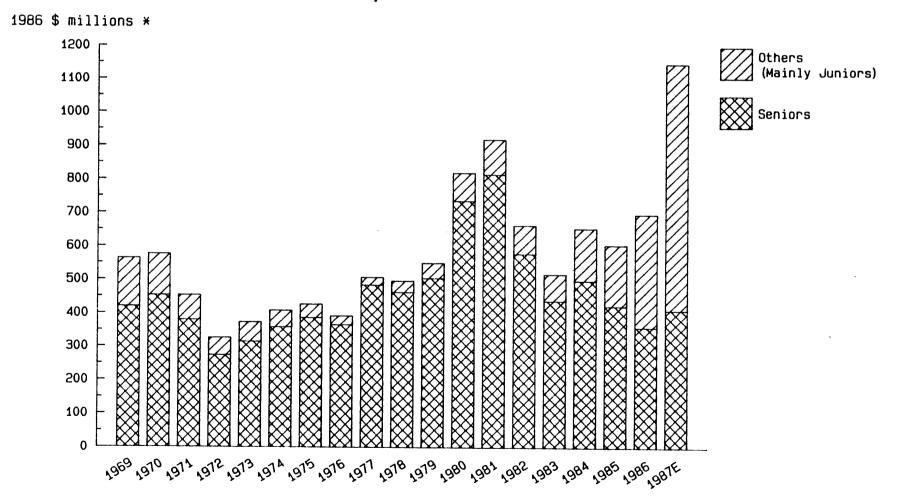
The monthly drilling data shown in Figure 2.3 for the period from 1985 up to and including March 1988 indicates that underground drilling has grown and become an increasingly greater proportion of total drilling. As well, this figure indicates the continuing upward trend of drilling activity in this period.

#### 2.2 Exploration by Region

Mineral exploration takes place in every province/ territory of Canada except Prince Edward Island, with Quebec and Ontario being the most active provinces. The nominal dollar expenditures are shown in Table 2.1 for 1984-87; Table 2.2 shows the relative distribution of mineral exploration expenditures by region for the same period. (These data cannot be compared directly to the data shown in Table 1.3 because of the different sources of information; further, Table 2.1 does not include overhead expenses which are included in Table 1.3.)

<sup>\*</sup> The reader will note that the 1987 value in Figure 2.1 is not the same as the Statistics Canada preliminary actual amount for 1987. EMR has adjusted the 1987 value upward based on the known relationship between flow-through funding and exploration.

# CANADIAN EXPLORATION EXPENDITURES FIELD EXPENDITURES PLUS OVERHEAD JUNIOR/SENIOR SPLIT



Source: Same as Figure 1.7

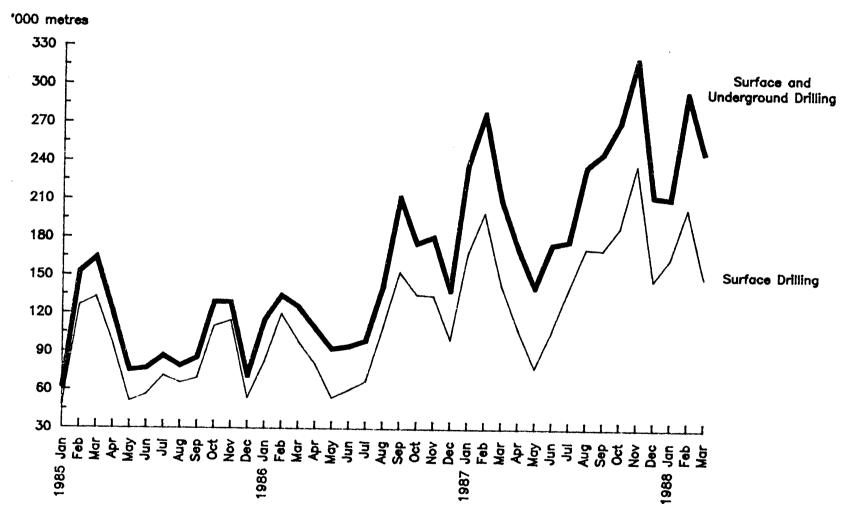
E=EMR estimate of total exploration expenditures
\* Values were adjusted using GDP Deflator rebased to 1986.

Figure 2.2

#### SURFACE AND UNDERGROUND DRILLING BY YEAR - 1973 TO 1987



Source: Canadian Diamond Drilling Association Note: These data include approximately 60% of total drilling activity.



Source: Canadian Diamond Drilling Association

Note: These data include approximately 60% of total drilling activity.

Table 2.1

MINERAL EXPLORATION EXPENDITURES IN CANADA (\*)
BY REGION AND BY PROVINCE

(Millions of Nominal Dollars)

	19 	84	19	85	19	86	19	87P	
	Within Canada	Within Regions	Within Canada	Within Regions	Within Canada	Within Regions	Within Canada	Within Regions	
BRITISH COLUMBIA	89.3		73.0		63.1		96.8		
ONTARIO	80.5		93.2		136.8		163.2		
QUEBEC	127.6		135.2		241.4		373.6		
Alberta Saskatchewan Manitoba		5.9 32.7 26.2		14.7 39.4 33.7		3.0 36.8 26.3		4.0 33.6 22.4	- 22
TOTAL PRAIRIES	64.8	64.8	87.8	87.8	66.1	66.1	60.0	60.0	1
New Brunswick Nova Scotia Newfoundland		10.9 6.8 8.2		12.1 7.8 11.9		10.8 17.2 12.3		8.0 16.8 20.0	
TOTAL ATLANTIC	25.9	25.9	31.8	31.8	40.3	40.3	44.8	44.8	
Yukon Territory Northwest Territoria	es	18.5		22.7 46.8		27.9 35.8		13.6 28.8	
TOTAL TERRITORIES	49.7	49.7	69.5	69.5	63.7	63.7	42.4	42.4	
TOTAL CANADA	437.8		490.5		611.4		780.8		

Sources: 1984-1986 Federal/Provincial Field Expenditures Survey 1987 calculated from Statistics Canada survey data by the Resource Evaluation Division, MPS, EMR

P=PRELIMINARY

<sup>(\*)</sup> Expenditures do not include overhead.

Table 2.2

DISTRIBUTION OF MINERAL EXPLORATION EXPENDITURES (\*)
WITHIN CANADA AND WITHIN REGIONS OF CANADA

	1	984  -	1:	985  -	1	986	19	987P	
	Within Canada	Within Regions	Within Canada	Within Regions	Within Canada	Within Regions	Within Canada	Within Regions	
BRITISH COLUMBIA	20.4%		14.9%	<u> </u>	10.3%		12.4%		
ONTARIO	18.4%		19.0%		22.4%		20.9%		
QUEBEC	29.2%		27.6%		39.5%		47.9%		
Alberta Saskatchewan Manitoba		9.1% 50.4% 40.5%		16.8% 44.8% 38.4%		4.5% 55.7% 39.9%		6.7% 56.0% 37.3%	l Na W
TOTAL PRAIRIES	14.8%	100.0%	17.9%	100.0%	10.8%	100.08	7.7%	100.0%	)
New Brunswick Nova Scotia Newfoundland		42.1% 26.3% 31.6%		38.0% 24.6% 37.4%		26.78 42.78 30.68		17.9% 37.5% 44.6%	
TOTAL ATLANTIC	5.9%	100.0%	6.5%	100.0%	6.6%	100.0%	5.7%	100.0%	
Yukon Territory Northwest Territories		37.2%		32.7% 67.3%		43.8%		32.1% 67.9%	
TOTAL TERRITORIES	11.3%	100.0%	14.2%	100.0%	10.4%	100.0%	5.4%	100.0%	
TOTAL CANADA	100.0%		100.0%		100.0%		100.0%		

Source: Based on Data Cited in Table 2.1

(\*) Expenditures do not include overhead.

P=PRELIMINARY

Exploration expenditures since 1984 have increased in all regions, although some provinces such as Alberta, Manitoba and New Brunswick have remained relatively constant. Quebec has shown the largest rate of increase, some 200 per cent since 1984. Ontario has shown the second highest rate of increase since 1984, some 110 per cent.

The distribution of exploration spending by region has shifted dramatically since 1984. In 1987, Quebec accounted for almost 48 per cent of total Canadian spending, up from 29 per cent in 1984. While Ontario and the Atlantic region have roughly maintained their share of total spending during that period, all other regions have experienced a decrease in the proportion of total spending. For example, British Columbia's share has fallen from approximately 20 per cent in 1984 to about 12 per cent in 1987, while exploration expenditures in the province increased over the same period from about \$90 million to \$97 million.

#### 2.3 Exploration Expenditures by Type of Company

Figure 2.4 illustrates exploration by type of company from 1983 to 1986 based on the federal-provincial exploration survey conducted by EMR, Québec, Ontario, Newfoundland, Nova Scotia, Manitoba, and British Columbia. These data do not include overhead costs. Data for 1987 on this basis are unavailable as yet.

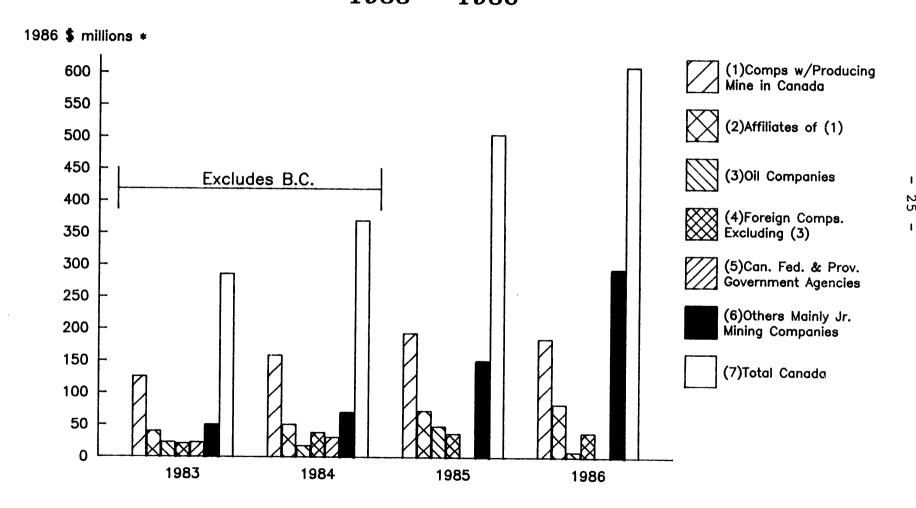
The data indicate that since 1983 exploration expenditures have increased for all companies with the exception of oil companies. This latter group's mineral exploration (excluding oil and gas) has declined by more than 60 per cent.

Juniors, which in 1983 constituted about 15 per cent of total exploration, have increased in importance and by 1987 their share of the total expenditure is estimated to be about 66 per cent. This represents more than a four-fold increase in their relative share of the total exploration picture. Over this period, expenditures by juniors increased from about \$71 million in 1983 to an estimated \$770 million in 1987. Over the same time, of course, seniors have seen their relative share fall from about 85 per cent of the total to about 34 per cent of the total.

#### 2.4 Exploration Expenditures by Type of Commodity Sought

Figure 2.5 gives an indication of the changing emphasis of total exploration expenditures by commodity sought over the period from 1983 to 1986. In 1986 precious metals (mainly gold) accounted for 75 per cent of total exploration expenditures in Canada, base metals 14 per cent, uranium 5 per cent and other metals and minerals including coal, 6 per cent.

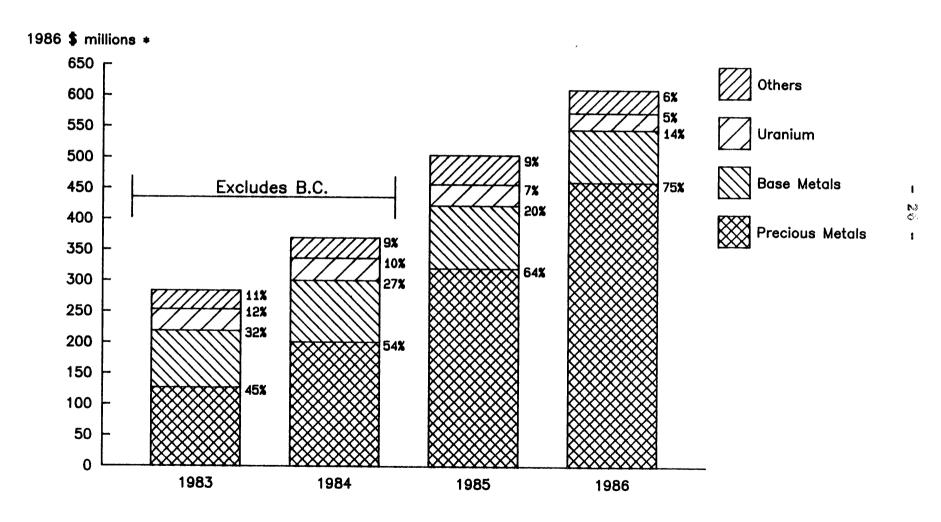
# TOTAL CANADIAN EXPLORATION EXPENDITURES BY TYPE OF COMPANIES 1983 - 1986



Source: Federal—Provincial Field Expenditures Survey
Note: As B.C. did not join the survey until 1985, data for
1983 and 1984 do not include this province.
Expenditures do not include overhead.

Data were adjusted using the GDP Deflator (1981=100) and rebased to 1986.

# TOTAL CANADIAN EXPLORATION EXPENDITURES DISTRIBUTION BY COMMODITIES SOUGHT



Source: Federal—Provincial Field Expenditures Survey
Note: As B.C. did not join the survey until 1985, data for
1983 and 1984 do not include this province.
Expenditures do not include overhead.

<sup>\*</sup> Data were adjusted using the GDP Deflator (1981=100) and rebased to 1986.

By contrast, base metals expenditures in 1983 had accounted for as much as 32 per cent, and gold and precious metals had accounted for 45 per cent of total exploration expenditures.

Base metals exploration has changed by only a small amount in absolute value between 1983 - 1986; what has changed the commodity distribution of expenditures markedly is the interest in gold and precious metals. Most of the increased gold expenditures have been confined to Québec and northern Ontario.

The data for 1987 are not yet available. However, industry representatives claim that there has been a revived interest in base metals exploration and that the 1987 and 1988 data will reflect this.

### 3. <u>HISTORICAL PERSPECTIVE ON FLOW-THROUGH SHARE</u> FINANCING ACTIVITY

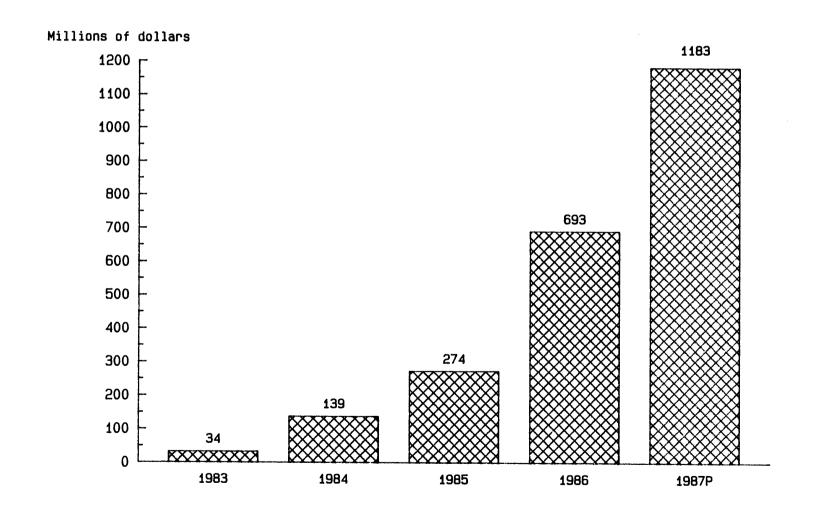
The changes in the tax system relating to the Mining Exploration Depletion Allowance (MEDA) in 1983 significantly increased the popularity of flow-through shares as a source of funds for exploration. The extent of the growth in flow-through financing is illustrated in Figure 3.1. Funds raised by flow-through shares have dramatically increased to an estimated \$1,183 million in 1987 from \$34 million in 1983.

The proportion of exploration expenditure accounted for by flow-through share financing increased from about 9 per cent in 1983 to something around 90 per cent in 1987. While this increase in the proportion of exploration funded by flow-through shares is evident from Figures 3.1 and 3.2, these two figures cannot be directly compared. Exploration data are compiled on a calendar year basis, whereas the amount of flow-through share funds raised is compiled on a taxation year basis. From 1986 this has included money raised for spending in the so-called "look-back period" - January and February of the following year. Thus, a certain amount of the money raised for 1986 would actually have been spent in the first two months of 1987. Similarly, a certain amount of 1987 money would have been spent in early 1988. For both of these calendar years, the exploration financed by flow-through shares was less than the amount of flow-through funds raised.

Concurrent with this rise in flow-through share funding has been the increase in the proportion of total exploration undertaken by junior mining companies. It is the juniors who made the most use of the flow-through mechanism in 1987, accounting for approximately two-thirds of the total amount raised by flow-through shares in 1987.

Figure 3.1
FLOW-THROUGH SHARE FINANCING TRENDS

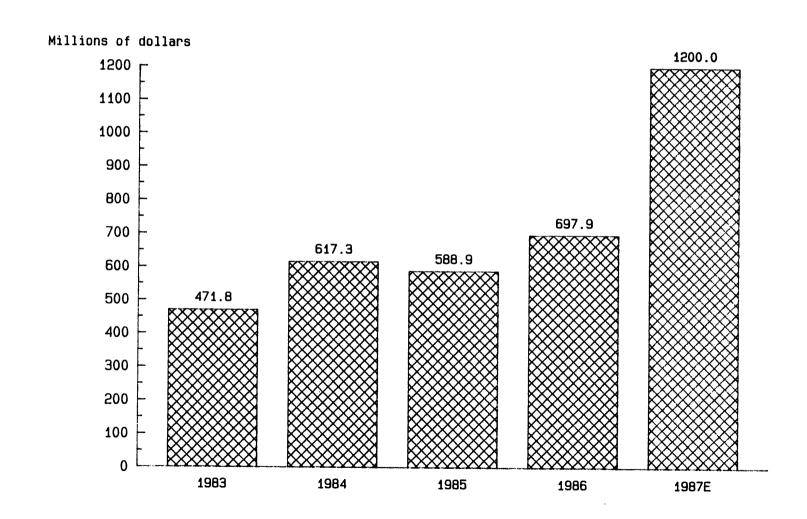
(1983-1987)



Source: Energy, Mines and Resources Canada P-Preliminary

Figure 3.2

# TOTAL EXPLORATION EXPENDITURES (1983-1987)



Source: Statistics Canada Catalogue 61-216 for 1983 to 1986; E=EMR estimate for 1987.

Note: Expenditures include overhead.

Summary statistics for flow-through share financing for 1987 are presented in Tables 3.1 to 3.7. These statistics are derived from data collected by EMR from the Montreal, Toronto, Alberta and Vancouver Stock Exchanges.

Tables 3.2, 3.3 and 3.4 show that in 1987: approximately 70 per cent of the flow-through financings were for \$10 million or less; for the senior companies almost 75 per cent of financings were in the \$10 to \$50 million range; and, most of the established junior and all of the new junior company\* financings were for less than \$10 million.

The bulk of senior company issues is sold on the Toronto and Montreal stock exchanges, as shown in Table 3.6, but the new junior companies raised most of their funds on the Vancouver Stock Exchange.

Fourteen major partnerships raised almost 70 per cent of the total dollar volume of flow-through funds as illustrated in Table 3.7. Over 40 per cent of the \$1,183 million raised in 1987, or more than \$500 million, was raised by two major partnerships - NIM and CMP.

<sup>\*</sup> The description "new junior" refers to exploration companies which have no significant real assets such as mineral deposits and does not necessarily mean a newly incorporated company.

#### FLOW-THROUGH SHARE FINANCING DISTRIBUTION BY CATEGORY OF COMPANY TAXATION YEAR 1987

## FINANCEMENT PAR ACTIONS ACCRÉDITIVES RÉPARTITION PAR CATÉGORIE DE SOCIÉTÉ MINIÈRE ANNÉE D'IMPOSITION 1987

#### VALUE OF FLOW-THROUGH SHARES / VALEUR DES ACTIONS ACCRÉDITIVES

I	DOLLARS / DOLLARS	PERCENT / POURCENTAGE
Senior / Grandes	356,852,157	30.15
Established junior / Petites, établies	316,974,219	26.78
(*) New junior / Petites, nouvellement constituées	509,717,215	43.07
TOTAL / TOTAL	1,183,543,591	100.00

#### NUMBER OF COMPANIES / NOMBRE DE SOCIÉTÉS

	NUMBER / NOMBRE	PERCENT / POURCENTAGE
Senior / Grandes	42	6.13
Established junior / Petites, établies	97	14.16
(*) New junior / Petites, nouvellement constituées	546	79.71
TOTAL / TOTAL	685	100.00

NOTE: Preliminary data NOTA: Données préliminaires

SOURCE: Economic and Financial Policy Analysis Branch, EMR

<sup>(\*) -</sup> The category "new junior" includes newly incorporated companies as well as exploration companies which have no significant real assets such as mineral deposits.

<sup>(\*) -</sup> La catégorie "petites, nouvellement constituées" comprend les sociétés nouvellement constituées de même que les sociétés d'exploration qui ne possèdent pas d'actif réel important tel qu'un gisement minier.

#### ALL COMPANIES / TOUTES LES SOCIÉTÉS

FLOW-THROUGH SHARE FINANCING LEVELS / NIVEAUX DE FINANCEMENT PAR SOCIÉTÉ

BY COMPANY / AU MOYEN DE L'ÉMISSION D'ACTIONS ACCRÉDITIVES
IN TAXATION YEAR 1987 / DURANT L'ANNÉE D'IMPOSITION 1987

#### BREAKDOWN BY FUNDING LEVEL / RÉPARTITION PAR NIVEAU DE FINANCEMENT

LEVEL / NIVEAU DOLLARS / DOLLARS	Funds / Ponds raised / levés \$millions / millions de \$	Percent / Pourcentage of funds / des fonds raised (%) / levés (%)	Number / Nombre of / de companies / sociétés	Percent of / Pourcentage total number of / du nombre total companies (%) / de sociétés (%)	
1 - 50 000 50 001 - 100 000 100 001 - 250 000 250 001 - 500 000 500 001 - 1 000 000 1 000 001 - 3 000 000 3 000 001 - 5 000 000 5 000 001 - 7 000 000 7 000 001 - 10 000 000 10 000 001 - 50 000 000	0.94 4.22 20.35 50.19 84.61 229.57 212.99 135.13 82.62 362.94	0.08 0.36 1.72 4.24 7.15 19.40 18.00 11.42 6.98 30.67	29 50 115 138 114 128 54 23 10 24	4.23 7.30 16.79 20.15 16.64 18.69 7.88 3.36 1.46 3.50	- 32 -

#### CUMULATIVE TOTAL BY FUNDING LEVEL / TOTAL CUMULATIF PAR NIVEAU DE FINANCEMENT

LEVEL / NIVEAU DOLLARS / DOLLARS	Funds / Fonds raised / levés \$millions / millions de \$	Percent / Pourcentage of funds / des fonds raised (%) / levés (%)	Number / Nombre of / de companies / sociétés	Percent of / Pourcentage total number of / du nombre total companies (%) / de sociétés (%)		
** ***	0.94	0.08	29			
	5.15	0.44		4.23		
1 - 250 000	25.50	2.15	79	11.53		
1 - 500 000	75.69	6.39	194	28.32		
1 - 1 000 000	160.29		332	48.47		
1 - 3 000 000	389.87	13.54	446	65.11		
1 - 5 000 000		32.94	574	83.80		
1 - 7 000 000	602.85	50.94	628			
	737.98	62.35	651	91.68		
1 - 10 000 000	820.60	69.33		95.04		
1 - 50 000 000	1183.54	100.00	661	96.50		
NOTE: Preliminary data		100.00	685	100.00		
more. Free Imminary Oats	1					

NOTE: Preliminary data NOTA: Données préliminaires

SOURCE: Economic and Financial Policy Analysis Branch, EMR

#### SENIOR COMPANIES / GRANDES SOCIÉTÉS

FLOW-THROUGH SHARE FINANCING LEVELS / NIVEAUX DE FINANCEMENT PAR SOCIÉTÉ
BY COMPANY / AU MOYEN DE L'ÉMISSION D'ACTIONS ACCRÉDITIVES
IN TAXATION YEAR 1987 / DURANT L'ANNÉE D'IMPOSITION 1987

#### BREAKDOWN BY FUNDING LEVEL / RÉPARTITION PAR NIVEAU DE FINANCEMENT

LEVEL / NIVEAU DOLLARS / DOLLARS	Funds / Fonds raised / levés \$millions / millions de \$	Percent / Pourcentage of funds / des fonds raised (%) / levés (%)	Number / Nombre of / de companies / sociétés	Percent of / Pourcentage total number of / du nombre total companies (%) / de sociétés (%)	
1 - 50 000 50 001 - 100 000 100 001 - 250 000 250 001 - 500 000 500 001 - 1 000 000 1 000 001 - 3 000 000 3 000 001 - 5 000 000 5 000 001 - 7 000 000 7 000 001 - 10 000 000 10 000 001 - 50 000 000	0.00 0.00 0.00 0.87 4.57 10.43 28.62 19.30 25.01 268.06	0.00 0.00 0.00 0.24 1.28 2.92 8.02 5.41 7.01 75.12	0 0 0 2 6 5 7 3 3 16		ı wa ı

#### CUMULATIVE TOTAL BY FUNDING LEVEL / TOTAL CUMULATIF PAR NIVEAU DE FINANCEMENT

LEVEL / NIVEAU DOLLARS / DOLLARS	Funds / Fonds raised / levés \$millions / millions de \$	Percent / Pourcentage of funds / des fonds raised (%) / levés (%)	Number / Nombre of / de companies / sociétés	Percent of / Pourcentage total number of / du nombre total companies (%) / de sociétés (%)
1 - 50 000	0.00	0.00		
1 - 100 000	0.00	* * *	0	0.00
1 - 250 000	0.00	0.00	0	0.00
1 - 500 000	0.87	0.00	0	0.00
1 - 1 000 000		0.24	2	
1 - 3 000 000	5.44	1.52	8	4.76
	15.86	4.44	13	19.05
1 - 5 000 000	44.49	12.47		30.95
1 - 7 000 000	63.78	17.87	20	47.62
1 - 10 000 000	88.80		23	54.76
1 - 50 000 000	356.85	24.88	26	61.90
NOTE: Dealleles		100.00	42 .	100.00

NOTE: Preliminary data NOTA: Données préliminaires

SOURCE: Economic and Financial Policy Analysis Branch, EMR

#### ESTABLISHED JUNIOR COMPANIES / PETITES SOCIÉTÉS ÉTABLIES

FLOW-THROUGH SHARE FINANCING LEVELS / NIVEAUX DE FINANCEMENT PAR SOCIÉTÉ

BY COMPANY / AU MOYEN DE L'ÉMISSION D'ACTIONS ACCRÉDITIVES
IN TAXATION YEAR 1987 / DURANT L'ANNÉE D'IMPOSITION 1987

#### BREAKDOWN BY FUNDING LEVEL / RÉPARTITION PAR NIVEAU DE FINANCEMENT

LEVEL / NIVEAU DOLLARS / DOLLARS	Funds / Fonds raised / levés \$millions / millions de \$	Percent / Pourcentage of funds / des fonds raised (%) / levés (%)	Number / Nombre of / de companies / sociétés	Percent of / Pourcentage total number of / du nombre total companies (%) / de sociétés (%)	
1 - 50 000 50 001 - 100 000 100 001 - 250 000 250 001 - 500 000 500 001 - 1 000 000 1 000 001 - 3 000 000 3 000 001 - 5 000 000 5 000 001 - 7 000 000 7 000 001 - 10 000 000 10 000 001 - 50 000 000	0.10 0.24 0.88 4.02 5.37 56.69 76.03 46.71 32.04 94.89	0.03 0.08 0.28 1.27 1.70 17.89 23.99 14.74 10.11 29.93	3 3 4 11 7 30 19 8 4 8 ———	3.09 3.09 4.12 11.34 7.22 30.93 19.59 8.25 4.12 8.25	- 34 -

#### CUMULATIVE TOTAL BY FUNDING LEVEL / TOTAL CUMULATIF PAR NIVEAU DE FINANCEMENT

LEVEL / NIVEAU DOLLARS / DOLLARS	Funds / Fonds raised / levés \$millions / millions de \$	Percent / Pourcentage of funds / des fonds raised (%) / levés (%)	Number / Nombre of / de companies / sociétés	Percent of / Pourcentage total number of / du nombre total companies (%) / de sociétés (%)
1 - 50 000	0.10	0.03	2	
1 - 100 000	0.34	0.11	6	3.09
1 - 250 000	1.22	0.39	10	6.19
1 - 500 000	5.24	1.65		10.31
1 - 1 000 000	10.61	3.35	21	21.65
1 - 3 000 000	67.31	21.23	28	28.87
1 - 5 000 000	143.34	45.22	58	59.79
1 - 7 000 000	190.05		77	79.38
1 - 10 000 000	222.09	59.96	85	87.63
1 - 50 000 000	316.97	70.07	89	91.75
NOMP - 1		100.00	97	100.00

NOTE: Preliminary data NOTA: Données préliminaires

SOURCE: Economic and Financial Policy Analysis Branch, EMR

#### NEW JUNIOR COMPANIES / PETITES SOCIÉTÉS NOUVELLEMENT CONSTITUÉES

FLOW-THROUGH SHARE FINANCING LEVELS / NIVEAUX DE FINANCEMENT PAR SOCIÉTÉ

BY COMPANY / AU MOYEN DE L'ÉMISSION D'ACTIONS ACCRÉDITIVES
IN TAXATION YEAR 1987 / DURANT L'ANNÉE D'IMPOSITION 1987

#### BREAKDOWN BY FUNDING LEVEL / RÉPARTITION PAR NIVEAU DE FINANCEMENT

LEVEL / NIVEAU DOLLARS / DOLLARS	Funds / Fonds raised / levés \$millions / millions de \$	Percent / Pourcentage of funds / des fonds raised (%) / levés (%)	Number / Nombre of / de companies / sociétés	Percent of / Pourcentage total number of / du nombre total companies (%) / de sociétés (%)	
1 - 50 000 50 001 - 100 000 100 001 - 250 000 250 001 - 500 000 500 001 - 1 000 000 1 000 001 - 3 000 000 3 000 001 - 5 000 000 5 000 001 - 7 000 000 7 000 001 - 10 000 000 10 000 001 - 50 000 000	0.84 3.98 19.46 45.30 74.67 162.45 108.33 69.12 25.57 0.00	0.16 0.78 3.82 8.89 14.65 31.87 21.25 13.56 5.02 0.00	26 47 111 125 101 93 28 12 3 0		- 35 -

#### CUMULATIVE TOTAL BY FUNDING LEVEL / TOTAL CUMULATIF PAR NIVEAU DE FINANCEMENT

LEVEL / NIVEAU DOLLARS / DOLLARS	Funds / Fonds raised / levés \$millions / millions de \$	Percent / Pourcentage of funds / des fonds raised (%) / levés (%)	Number / Nombre of / de companies / sociétés	Percent of / Pourcentage total number of / du nombre total companies (%) / de sociétés (%)
1 - 50 000	0.84	0.16	26	
1 - 100 000 1 - 250 000	4.81	0.94	73	4.76
1 - 250 000 1 - 500 000	24.28	4.76	184	13.37
1 - 1 000 000	69.58	13.65	309	33.70 56.59
1 - 3 000 000	144.25	28.30	410	75.09
1 - 5 000 000	306.70 415.03	60.17	503	92.12
1 - 7 000 000	484.15	81.42	531	97.25
1 - 10 000 000	509.72	94.98	543	99.45
1 - 50 000 000	509.72	100.00	546	100.00
NOTE: Proliminary data		100.00	546	100.00

NOTE: Preliminary data NOTA: Données préliminaires

SOURCE: Economic and Financial Policy Analysis Branch, EMR

## FLOW-THROUGH SHARE FINANCING DISTRIBUTION BY STOCK EXCHANGE AND CATEGORY OF COMPANY TAXATION YEAR 1987

#### FINANCEMENT PAR ACTIONS ACCRÉDITIVES RÉPARTITION ENTRE BOURSES, PAR CATÉGORIE DE SOCIÉTÉ MINIÈRE ANNÉE D'IMPOSITION 1987

COMPANIES / SOCIÉTÉS	DOLLARS / DOLLARS	PERCENT / POURCENTAGE
ALBERTA STOCK EXCHANGE / BOURSE DE L'ALBERTA		
Senior / Grandes	8,090,000	5.63
Established junior / Petites, établies	41,900,740	29,17
New junior / Petites, nouvellement constituées	93,642,520	65.20
SUBTOTAL / TOTAL PARTIEL	143,633,260	100.00
MONTREAL EXCHANGE / BOURSE DE MONTRÉAL		-
Senior / Grandes	213,244,029	48.14
Established junior / Petites, établies	119,333,954	26.94
New junior / Petites, nouvellement constituées	110,371,514	24.92
SUBTOTAL / TOTAL PARTIEL	442,949,497	100.00
TORONTO STOCK EXCHANGE / BOURSE DE TORONTO		
Senior / Grandes	263,152,960	52.04
Established junior / Petites, établies	152,494,176	30.15
New junior / Petites, nouvellement constituées	90,068,553	17.81
SUBTOTAL / TOTAL PARTIEL	505,715,689	100.00
VANCOUVER STOCK EXCHANGE / BOURSE DE VANCOUVER	······································	
Senior / Grandes	86,664,200	20.13
Established junior / Petites, établies	96,544,288	22.42
New junior / Petites, nouvellement constituées	247,348,187	57.45
SUBTOTAL / TOTAL PARTIEL	430,556,675	100.00
ALL EXCHANGES / TOUTES LES BOURSES (*)		
Senior / Grandes	356,852,157	30.15
Established junior / Petites, établies	316,974,220	26.78
New junior / Petites, nouvellement constituées	509,717,214	43.07
TOTAL / TOTAL	1,183,543,591	100.00

<sup>(\*) -</sup> Interlisted placements are only counted once in the ALL EXCHANGES total, explaining a difference of \$339,311,530 between such total and the sum of the four exchanges totals.

NOTE: Preliminary data

NOTA: Données préliminaires

SOURCE: Economic and Financial Policy Analysis Branch, EMR

<sup>(\*) -</sup> Les placements inscrits sur plus d'une bourse n'apparaissent qu'une fois dans le total TOUTES LES BOURSES, ce qui explique l'écart de 339,311,530\$ entre celui-ci et la somme des quatre bourses prises individuellement.

### FLOW-THROUGH SHARE FINANCING DISTRIBUTION BY MAJOR PARTNERSHIPS TAXATION YEAR 1987 (\*)

FONDS PROVENANT DE L'ÉMISSION D'ACTIONS ACCRÉDITIVES RÉPARTITION ENTRE LES PRINCIPALES SOCIÉTÉS EN COMMANDITE ANNÉE D'IMPOSITION 1987 (\*)

	. \$
NIM Group of Limited Partnerships -1987	258,923,087
CMP Group of Limited Partnerships -1987	253,692,517
MVP Expl.(1987) and Co. L.P.	56,659,519
First Exploration Fund 1987	47,015,600
Golden Day Expl. and Co. L.P.	34,064,998
Middlefield Group of Limited Partnerships -1987	29,067,938
TAP Group of Limited Partnerships -1987	27,607,998
QME (1987)Min.Expl.and Co.L.P.	21,067,000
Imex 1987 Min.Expl.and Co.L.P.	18,675,000
Somicom 1987 and Co. L.P.	16,985,900
Soc.en C. Sofimines 1987	16,781,920
Q-Vest 1987 Mining and Co. L.	15,316,021
Mintax Min. Group of Limited Partnerships -1987	15,220,244
Knight's Min.Expl.and Co.L.P.	10,460,000
SUBTOTAL / TOTAL PARTIEL	821,537,742
Individual Placees / Placements Individuels	138,072,731
Public Offerings / Offres Publiques	33,340,510
Others / Autres	190,592,604
SUBTOTAL / TOTAL PARTIEL	362,005,845
	302,003,845
TOTAL / TOTAL	1,183,543,587

NOTE: Preliminary data NOTA: Données préliminaires

SOURCE: Economic and Financial Policy Analysis Branch, EMR

<sup>(\*) -</sup> as collected at the Montreal, Toronto, Vancouver and Alberta Stock Exchanges between January 1987 and June 1988

<sup>(\*) -</sup> données recueillies aux bourses de Montréal, de Toronto, de Vancouver et de l'Alberta entre janvier 1987 et juin 1988