

OPEN LETTER
to the
COMMITTEE OF PROVINCIAL GEOLOGISTS

Anthony J. Andrews

**JUNIOR MINING COMPANIES AND PROSPECTORS:
MINERAL INDUSTRY RESEARCHERS**

Prospectors and junior mining companies concentrate their efforts and activities on the finding and development of new prospects and, in doing so, serve to replenish the inventory of Canadian mineral resources. The junior companies and prospectors can be counted among the key players of the exploration process and, as such, are the main *researchers* of our industry.

Strong Performance Yields Results

In recent years, the performance of our researchers has been exemplary, thanks largely to flow-through shares. The benefits to the Canadian economy—especially the economies of the smaller communities—have been tremendous.

The total exploration expenditures over the six-year period between 1983 and 1988 amount to about \$4.8 billion, approximately \$3 billion of which can be attributed to flow-through share financing and the resulting activity of junior mining companies. This wave of investment in the search for Canadian mineral deposits has led to the discovery of many new prospects and to the creation of a significant number of new mines. Based on information supplied by the provincial and territorial governments, Statistics Canadian, and Energy, Mines and Resources Canada, our tally as of December, 1988, is:

- over 200 new discoveries (a figure which should increase substantially with time);
- 115 projects in the advanced stage of exploration, i.e., proceeded to underground or open pit exploration;
- 58 projects in the developmental stage, i.e., projects which have announced production, and
- over 60 new producing mines (counting from 1986).

1989 – A Time of Transition

Unfortunately, the flow-through success story has not continued into 1989. Today, the flow-through share market is weak, with the result that many junior exploration and mining companies are experiencing a significant degree of difficulty in raising the funds which are desperately needed to maintain a minimum level of exploration. The sad state of flow-through can be attributed to a number of factors, including:

- a. a low gold price
- b. a lack of investor confidence in the stock market
- c. confusion over new flow-through rules, and
- d. the detrimental effect of certain tax rules pertaining to flow-through shares.

We cannot do anything to affect the price of gold, but we can address the investors' confusion and uncertainty, and we certainly intend to persist in our efforts to obtain fair and equitable tax rules. Towards fulfilling these two goals, the PDAC has resolved to implement an education and publicity campaign for the purpose of educating the investing public about the merits of mining and flow-through shares, clearing

away any confusion surrounding new flow-through rules, and boosting investor confidence in mineral exploration.

The PDAC will persist in its representations to the Federal Department of Finance to obtain more favourable income tax rules for flow-through shares, with emphasis placed on the problems associated with adjusted cost base and cumulative net investment loss.

We cannot emphasize strongly enough the need to maintain adequate levels of exploration, particularly in light of Canada's seriously depleting base metal reserves. As concluded by A. Lemieux of the Federal Department of Energy, Mines and Resources, "To meet the challenge and find enough deposits to take over from those nearing exhaustion, it will be necessary to keep annual exploration spending in Canada at least at the 1987 level, i.e. \$1.3 billion, for the foreseeable future ...".

LAND: THE MINERAL INDUSTRY RESEARCH FACILITIES

The land that is available for exploration is our research laboratory. Limiting or restricting access to the laboratory significantly diminishes the probability of succeeding in the exploration effort. We are currently restricted in our access to large tracts of prospective lands because of unresolved Native land claims and a considerable variety of single use designations, primarily in the form of parks.

Native Land Claims

Progress is Appreciated

We appreciate the complexities involved in the resolution of Native land claims. In this regard, we would like to congratulate the representatives of the federal government and Native groups who were involved in the successful negotiation of Agreements-in-Principle for both the Yukon and the Northwest Territories.

We realize that this dialogue must continue because there is much work yet to be done and complex negotiations still to take place before a final agreement is reached. We must all ensure that the negotiators on both sides give consideration to the basic requirements of a healthy and viable exploration and mining industry, an industry that has the potential to play a vital role in moving the territories towards greater economic independence in the future.

With this goal in mind, the PDAC, cooperating with the Mining Association of Canada, the NWT Chamber of Mines and the Federal Department of Indian and Northern Affairs, was involved in the joint organization of a workshop on June 12, 1989, to initiate direct contact between the Federal negotiating team, the Denis and Metis representatives of the mining industry. The workshop resulted in a communication to the Hon. Pierre Cadieux, in the form of a brief outlining industry recommendations and concerns. A similar workshop will be organized to discuss the Yukon Agreement in Principle.

We urge the federal and provincial governments to move expeditiously to resolve all Native land claims to the satisfaction of all involved. Native grievances should be taken seriously and dealt with objectively for the benefit of all Canadians. Whether, in the final analysis, we do business with governments or with Native Indian groups is not a concern in itself to the members of our industry, as long as the right to access and security of title are guaranteed for all Canadians and the industry is not burdened by having to pay double duty to both the Indians and to the Crown.

Parks

The PDAC supports the existence of parks. Indeed, we would suggest that the people of the exploration and mining industry constitute a major proportion of those Canadians who make use of the recreational resources and facilities of our northern wilderness parks. The land is characterized by numerous and varied types of potential resource values and has, as a consequence, numerous potential users. Only policies of multiple land-use management can serve to bring it to its full potential for the benefit of all Canadians.

We at the PDAC are deeply concerned with the growing competition for crown land, particularly with respect to the increasing trend towards single land-use designations.

We identify three main problem areas which deal with:

- a. the restrictive policies regulating use of and access to parks;
- b. the steadily accumulating inventory of parks; and
- c. the process involved in their planning and designation.

Policies on Use and Access

There are currently no federal parks and very few provincial parks in Canada which operate on the basis of multiple land-use management policies, a situation which causes our members serious and continuous frustration. To illustrate the point, we draw attention to what appears to be a new manifestation of park creation, in the form of river parks (also referred to as waterway parks and recreational corridors). Typically, a river park consists of a long, narrow corridor which contains a stretch of river and a buffer zone, the latter normally a few hundred meters wide on either side, but, in some cases, expanded to include the whole watershed in the immediately surrounding area.

Recent examples of provincial initiatives in this regard include the Lower Stikine River in British Columbia, the Clearwater River in Saskatchewan, and the French, Albany and Spanish Rivers in northern Ontario. The Canadian Heritage Rivers Board, comprising federal and provincial government representatives, has been set up to consider the creation of river parks in every province and territory of Canada.

We do not oppose the formation of river parks. However, many of them have been designated specifically for recreational purposes, to the exclusion of all other activities. In addition, access is restricted to recreational users and, in many cases, the construction of bridges is prohibited. As such, river parks are of particular concern to the exploration industry as they effectively truncate or isolate significant areas on either side of their banks. This is especially significant in the case of the Canadian Shield which covers most of central Canada. Here, north-south flowing rivers crosscut east-west trending, highly-prospective greenstone belts.

The Increasing Inventory

The problems generated by the implementation of single or exclusive land-use policies are compounded by the fact that additions to the inventory of alienated and restricted lands occur on an almost continuous basis and under a wide variety of designations, such as (in addition to parks) recreation areas, wilderness reserves, habitat reserves and sanctuaries, to name but a few.

The PDAC estimates that exploration is currently prohibited or unreasonably restricted on over ten percent of Canada's total land mass, equivalent to approximately the area of Manitoba and Saskatchewan combined. This situation is even more advanced in the U.S.A., and the precedent we observe there is cause for the most serious concern.

The Process of Park Creation

The industry needs to be involved in the decision-making process of park planning, creation and management. Rather than being excluded, as we have been in the past, we ask that our voice be heard *alongside* other interests. In this respect, we rely on the federal and provincial Ministries of Mines to monitor proposals for the creation of new parks and other designations, to advocate strongly on our behalf, and to relay appropriate information to us in order that we may contribute constructively to the decision-making process. Of fundamental importance is the support of Ministries of Mines in helping to establish multiple land-use as the management policy applied to all public lands, including federal and provincial parks.

Canadians Support Multiple Land-Use

The PDAC is most encouraged to have recently obtained statistical information indicating that the majority of our citizens would support exploration and mining in the wilderness parks and recreation areas of Canada. This information was obtained as part of an Angus Reid national poll, commissioned by The Mining Association of Canada, the PDAC, and provincial associations, and conducted in April and May of this year. The report describing the results of the poll is entitled, "Canadians' Perceptions and Attitudes Towards the Mining Industry and Related Policy Issues", and we quote from it as follows:

"Fully 70 percent of Canadians stated that they would allow prospectors to search for mineral deposits in parks and wilderness areas so long as they do not disrupt the environment, and 59 percent would allow such activity in recreation areas under the same conditions. A majority of the members of all three attitudinal groups would be prepared to support exploration in both wilderness and recreation areas. While support for this type of activity was highest within the Pro-Industry segment, it is important to note that even a majority of the Antagonists are prepared to support exploration.

Should a sizeable deposit of minerals be located, then 64 percent of Canadians would support widespread (10%) or limited (54%) mining in a wilderness area. Given a similar scenario in a recreation area, 55 percent of Canadians would support mining on a widespread (7%) or limited (48%) basis. As is the case for exploration, a majority of the members of each of the three attitudinal groups would support some mining activity in each of these areas. Again, support for mining activities in wilderness and recreation areas was highest within the Pro-Industry segment; however, a majority of the antagonists would also support mining in these areas".

The PDAC is particularly encouraged by the fact that the majority of Canadians would support "limited mining" in wilderness parks and recreation areas. In the vast majority of cases, mining operations affect only an insignificant portion of the land surface and, therefore, only "limited" mining activity is required in any given area. Indeed, the total area occupied by *all* mining operations represents a very limited and insignificant portion of the total Canadian land mass, not much larger in area than the occupied metropolitan Toronto.

Mining Industry Land Use Strategy

Aware that facts are needed to support our claim of land alienation and that action must be taken to counter the threat that it represents to our industry, the PDAC, in conjunction with The Mining Association of Canada and provincial and territorial mining associations, adopted a Mining Industry Land Use Strategy (MILUS) in the spring of 1989. A statement of principles was subsequently endorsed by the associations and a five-point program of action adopted. The following are the principles that will be used under MILUS:

- acceptance and support of the concept of sustainable development;
- acceptance of the legitimate public interest in the conservation or preservation of certain areas;
- support for the principle of integrated resource management;
- cooperation with other resource users;
- advancement of public knowledge;
- support for fair and open processes of land use regulation and planning;
- challenging unreasonable land use or access restrictions on the basis of fact and science.

The five-point action plan consists of the following:

1. Establish a data base of lands currently withdrawn from or restricted to exploration and mining;
2. Work in cooperation with other resource users;
3. Advance public knowledge;
4. Advocate fair and open processes;
5. Challenge unreasonable land use or access restrictions.

MILUS is an important strategy that will need the assistance and cooperation of everybody in and connected with exploration and mining. We are asking you, as supporters and advocates of our industry, to support this initiative and to help us in what will be undoubtedly a challenging task.

THE RESEARCH TOOLS: GEOSCIENCE INFORMATION

The services and products of the federal and provincial geological surveys are the primary research tools for mineral exploration. The geological maps and reports, the geophysical and geochemical data, assessment files, mineral statistics and inventories that comprise the geoscientific data base of our country, constitute our research library.

We face the major challenge of replacing Canada's seriously depleting base metal reserves. This, considered together with the fact that most of the ore bodies of tomorrow are situated at depths below the surface of the land, means that our dependence on geoscientific technology and information is ever increasing in importance. A commitment to maintain adequate support to geological surveys, enabling them to provide the required quality of product and services, is, therefore, vital in our efforts to meet the challenge successfully.

Mineral Development Agreements

The industry is most concerned about the immediate future of the Mineral Development Agreements (MDA's), particularly in the context of the recent federal budget which contained a strong emphasis on fiscal restraint.

We reiterate our position that the MDA's represent one of the most effective geoscientific information programs to have been implemented. With few exceptions, they have provided the resources for provincial and territorial geological surveys to carry out basic, essential work programs.

On the one hand, a firm commitment is needed from some of the provincial governments to establish more satisfactory levels of support in their own constituencies. On the other hand, the abrupt withdrawal of MDA support at this time will result in a serious disruption in the continuity and progress of geological survey programs in many of the provinces and territories. We strongly recommend the renewal of MDA's for at least one more term, in order to give the provincial governments time to re-establish their own commitments.

While the MDA programs appear to have survived the trimming of the Federal budget, at the time of writing (November, 1989), there has been no specific reference as to how new programs will be allocated. The industry continues to wait for an announcement on this most important matter and we urge the Federal Government to make decisions as quickly as possible.

The Geological Survey of Canada

The Geological Survey of Canada (GSC) has contributed very significantly to establishing and maintaining the Canadian geoscientific data base through geological, geophysical and geochemical research and

surveys and the production of maps—a contribution which has earned the GSC a well-deserved, international reputation for quality and relevance.

The exploration and mining fraternity is concerned that this legacy is already beginning to suffer under the combined pressure of long-term staff reductions, increasing intensity of fiscal restraint, and a broadening mandate. In addition to the recent loss of approximately 80 individuals employed under the MDA program, the human resource pool of the GSC is being gradually eroded through the long-term civil service reduction policy of the federal government. The high average age of the permanent staff (about 47) raises concerns with respect to whether or not the organization can maintain effective field mapping programs as a top priority and reflects a dangerous lack of attention to young, new talent. We recommend that appropriate numbers of term staff positions be maintained not only for the purpose of providing much needed support, but also for identifying and streaming in new talent to permanent positions.

The deteriorating condition of the environment and an increasing frequency of natural hazards have grown to be major national concerns, and the GSC's mandate to address both of these concerns has grown proportionally. While, in principle, we must commend this development, in practical terms there is a concern that, under the combined pressures of staff reduction and fiscal restraint, such increases in responsibility will only be accomplished at the expense of the GSC's traditional role of supporting and contributing to the Canadian geoscientific data base.

Obtaining data relevant to environmental concerns and to natural hazards will involve geochemical, geophysical and geological measurements of a specialized nature and probably from a specific approach. However, much of the same data can be applied to mineral deposits studies and research on exploration.

In this context, we strongly recommend an integrated, complementary approach to the expanding mandate of the GSC, as opposed to one which would result in competition for a limited and finite source of funds.

The Geoscientific Database of the Territories

Developing the great mineral potential north of the 60th parallel must be an integral part of any long-term economic strategy for the Yukon and the Northwest Territories.

However, mapping programs in the Yukon and the Northwest Territories have fallen far behind those of most other areas in Canada and, indeed, the development of the geoscientific data base in recent years has all but stagnated. This will do little to support the needed development.

We stress the need for retaining the traditional support and contribution of the GSC in the development of the geoscientific data base in the Territories and, in particular, the 1:250 000 scale mapping programs. There is a concern that support for current and future work of the GSC in the territories is shifting from A-base budgets to MDA's. We agree with the position of the Yukon and Northwest Territories Chambers of Mines that a firm commitment of support should be made on the level of A-base budgets, with MDA's being used in a supporting role.

We commend the Government of the Northwest Territories for its recent initiatives to consolidate and strengthen its geological survey programs and strongly urge the Yukon government to follow suit. We encourage both governments to develop the local expertise, services and facilities which are badly needed to foster exploration and development north of the 60th parallel.

Computerization of the Geoscientific Data Base

In our presentation to you last year, we expressed concern about the fact that, while provinces were moving towards various levels of computerization of the geoscientific data base, there was apparently little attention being paid to standardization and compatibility among these developing systems.

In this regard, we welcome the recent formation of the National Geological Surveys Committee (NGSC), a group representing the provinces, territories and the Geological Survey of Canada, and charged with the task of identifying compatibility standards which might be adopted by the various jurisdictions.

For practical reasons, however, it now appears inevitable that the Provincial Surveys will need to develop systems that are, to varying degrees, tailored and specific to their own special needs and those of their constituencies. In the light of this reality, devising an efficient mechanism for accessing all of the wide-ranging data contained in provincial data bases becomes a matter of critical importance.

We see a solution to this situation in the development of a standard Canadian language that all the Provincial Survey systems are able to communicate in. This would provide the means by which any industry user, at any given location and with a computer at his disposal, could access data from any province using either modem or diskettes.

Developing a system of this type will require significant levels of funding and strong direction. We recommend that the Geological Survey of Canada be provided with the resources and directives necessary to assume a leading role in this long-term and most important endeavour.

Long-Term Planning and Project Selection Criteria of the Provincial Surveys

In general terms, we believe that the Provincial Geological Surveys should take a pro-active rather than a reactive approach to the generation of basic geoscientific data and research into the mineral potential of the provinces. In other words, the Surveys should lead rather than follow. By this, we do not mean that the Surveys should be unresponsive to industry. Rather, we would suggest that a certain proportion of resources be readily available to address immediate problems in specific areas as they arise.

Given this approach, programme selection should be addressed in terms of long range planning, say 5 to 10 years, with annual stewardship and budget allocation reviews rather than annual project selection reviews. We recognize that this approach is probably being followed to some degree at the present time and that many of the projects selected on an annual basis are in fact subsets of longer range programmes.

In terms of priorities, we believe there are four:

- a) Basic geological mapping;
- b) Acquisition of raw geochemical and geophysical data;
- c) Basic research into ore deposit models; and
- d) Timely dissemination of the results of this research to the public in a readily usable form.

Basic research into ore deposit models is important if the Surveys are to take a pro-active rather than a reactive role. The results of this type of research will be of great benefit in the selection of high priority areas for other survey work. The objective of this research would be to find geological environments in Ontario which have the potential to host world class deposits. While we believe that the Provincial Surveys should take a lead in this type of research, we also believe that this is an area where close contact should be maintained with industry and universities to ensure coordination and to avoid duplication of effort.

With regard to geological mapping, we would suggest that areas be selected on the basis of the following criteria, in descending order of priority:

- i) High mineral deposit potential;
- ii) Good infrastructure leading to a high potential for development; and
- iii) The absence of recent mapping at a suitable scale.

A well-designed programme would include projects in all three categories.

The same criteria should be applied to the acquisition of raw geochemical and geophysical data, and areas which have already been covered should be reviewed in light of recent technology development to see if benefits could be derived from additional survey methods. In the case of airborne geophysical surveys, great care should be taken not to duplicate available, effective, prior coverage by industry.

We believe that projects should be so designed that the basic information and raw data can be made public as quickly as possible. A growing number of companies and individuals in the industry now have access to various types of computer software and hardware and could handle the basic data in digital form.

Canadian Exploration Statistics

The PDAC Exploration Statistics Committee has taken on the task of developing a set of *'leading indicators'* which will serve to monitor, on a continuous basis, the activity and health of the exploration industry across Canada.

Our goal is to gather, on a quarterly basis, a select group of statistics which, taken together, will reflect all stages of exploration activity, from grassroots to the advanced stages. The emphasis will be on *relative* rather than *absolute* values and the examination of trends.

Initially, the statistics will include Provincial and Territorial totals of:

- a) Frequency of visits to local resident geologist offices;
- b) Information on claims;
- c) Number of work permits approved for exploration;
- d) Number of assessment reports submitted;
- e) Footage of diamond drilling; and
- f) Line/kms of airborne geophysical surveys flown.

All the data will be tabulated and plotted at the PDAC Toronto office and made available as a quarterly report to all participating organizations and Association members. For the PDAC, the information will provide us with a continuously updated set of indicators reflecting the trends and activities of exploration across Canada. This will be a vast improvement to the current situation, whereby we have to depend on government statistics, which in most cases are not readily available and are only published once a year.