



**INNOVATION IN CANADA'S MINERAL EXPLORATION
AND DEVELOPMENT SECTOR**

JOINT SUBMISSION

**PROSPECTORS AND DEVELOPERS ASSOCIATION
OF CANADA**

AND

**CANADIAN MINING INDUSTRY RESEARCH
ORGANISATION – EXPLORATION DIVISION**

Submission to Industry Canada, 2002

Innovation in Canada's Exploration and Development Sector

Prospectors and Developers Association of Canada

and

Canadian Mining Industry Research Organisation – Exploration Division

EXECUTIVE SUMMARY

The Prospectors and Developers Association of Canada ('PDAC') and the Canadian Mining Research Organisation ('CAMIRO') – Exploration Division, welcome this opportunity to address the Canadian government on how to enhance innovation in the exploration business.

Mineral exploration by its very nature is an innovative activity. The explorer must discover economic deposits of minerals that previous people were unable to locate. Explorers who are not innovating are unlikely to be successful. Strong analogies have been drawn between the risks and thought processes involved in mineral exploration and in development of new pharmaceutical products.

The exploration industry is the foundation of the mining industry just as research for new drugs is the foundation of the pharmaceutical industry. Without successful exploration there would be no mines. The Canadian mining industry is a vital part of the Canadian economy with spin off effects into numerous areas such as significant export earnings potential, development of local industries, transportation, local community infrastructure building, and many others.

The history of the diamonds business in Canada is a clear illustration of two government assistance programs, which were innovative in themselves; 1) flow-through funding for mineral exploration and 2) science research taxation support – assisting an entrepreneur develop a new concept, and discover an important new deposit-type for Canada.

The PDAC and CAMIRO-Exploration Division would like to make the following recommendations for the Canadian government:

- Finance: the government should continue tax based incentive schemes for exploration, innovative applied science and encouraging application of innovative science in the field.
- Finance: the government should seek ways to encourage investment companies to enable small cap companies, especially start-up companies, to obtain initial financing (cf Labour Funds).
- Regulation: The Canadian government should work with the provinces to create a more workable regulatory system for companies, breaking down the barriers that result from the complexity of multiple regulators.
- Employment: the government should enhance opportunities for young geoscientists by funding geological mapping strategies and encouraging cooperative industry-university employment programs.
- Employment: the government should commission studies on the interaction of employment opportunities, development of pools of experienced scientists and entrepreneurial activity.
- Employment: support applied research initiatives by CAMIRO, NSERC and others by matching funds that support student field work and research.
- Geoscience: that the government support cooperative frameworks with the provinces for the bedrock mapping of the country.
- Community based Innovation: the government should seek the aid of industry and industry organisations to foster community based innovation. The mining and exploration industries, given their strong rural base, should be heavily involved in such concept development.

Given a suitable business climate and accessibility to trained personnel, the Canadian exploration industry has already clearly demonstrated that it can create wealth for Canadians by innovative methods, as in the \$27 billion diamond industry. If the Canadian government can continue to remove barriers, industry will deliver the needed jobs and economic benefits for the future. The mining industry will also develop any projects in a responsible manner with respect to environment, health, safety and the community.

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Introduction

The Prospectors and Developers Association of Canada (PDAC) and the Canadian Mining Industry Research Organization – Exploration Division (CAMIRO), have combined in order to write a response to the innovation initiative of the Canadian government. Both organisations are grateful for the opportunity to address this important issue, and congratulate the government on commencing this dialogue with Canadians and industry.

CAMIRO and PDAC are complementary organisations:

- PDAC has strong representation of junior companies, consultants, and service industry members as well as major companies and their employees whereas CAMIRO’s company membership is mainly the largest minerals companies and technical service companies.
- PDAC is an advocacy association that also runs the most important and largest convention on the mineral business in the world, while CAMIRO brokers research.

- PDAC is producing technical information for all companies who wish to purchase it – for example the E3 environmental initiative – whereas CAMIRO's research projects are confidential to those who participate in particular projects.

As a result of these differences, it was felt that a joint submission on the exploration business by both PDAC and CAMIRO would be far more encompassing and balanced.

The Prospectors & Developers Association of Canada is the national organization representing Canada's mineral exploration and development industry. The association, which was established in 1932, has 5,000 individual and 200 corporate members. The association runs the world's largest convention on the topic of exploration and mine development, with over 7000 attendees from over 70 countries. Through the convention the association promotes networking and knowledge exchange within the industry, and reinforces Canada's unique role in the business.

CAMIRO is an industry founded and run organization for the purpose funding applied innovative research relevant to the mining and mineral exploration industry. The organization has existed over 10 years and consists of three divisions that direct research in mining, mineral processing and exploration. Each division has between 15 and 32 member companies that represent most of the major world-wide companies and some Canadian service firms. CAMIRO, as a whole, and each division, is managed by a board of directors and three full-time employed Research coordinators/facilitators. The industry selects innovative research proposals through multi-company review committees that include representatives of university and government. CAMIRO is effectively networked with the industry, federal and provincial mineral resource ministries and university researchers. To be fully effective CAMIRO needs to expand its management past one employee per division. However, even this level of management is difficult to maintain during these times of a downsized industry. Canada's Innovation Strategy provides an opportunity for CAMIRO to play an increased and important role in fostering and facilitating innovation in Canada's important mineral resource industry.

Canada has a proud and long mining history. No other form of economic activity could have contributed so much to the opening up of a country with large tracts of relatively inaccessible territory. The country that we know today would likely not have existed without mining's contribution. Today this country is one of the world's predominant mining nations, leading the way in environmental stewardship, best practices, geological mapping, technological advances, and mine financing. But it takes work, commitment, resources, and innovation to maintain this enviable position.

The exploration and development sector of the mineral industry has been doing its part in innovation. New methods, techniques and technology in geology, geochemistry, and geophysics have resulted in the discovery of new ore deposits even on ground formerly regarded as non-prospective or worked out. In 1999, for example, a team of explorationists working for Noranda Inc. used innovative methods with third party developed geophysical systems in Matagami, Quebec, to discover the Perseverance orebodies which will significantly extend the life of the Matagami mining camp. This new methodology recognised by Noranda has led to investment worth many millions in exploration in the Abitibi, a geological province which underlies much of northeastern Ontario and northwestern Quebec.

Canada has the infrastructure to lead innovation in the world's mineral resource industry. A strong domestic mining sector is lead by well-organized associations, PDAC, CIM, MAC and regional Chambers of Mines. Canadian junior exploration companies, stock markets and investment firms are among the worlds most innovative and knowledgeable about the mining sector and are well tuned to international mineral resource development. Canadian service firms are leaders in direct technological applications to the industry, including geophysics, analytical geochemistry, indicator minerals and computer technology. Many of these firms are entrepreneurial and develop and promote technology. A number of universities have a long history of research in the mineral resource sector, e.g. University of New Brunswick, McGill University, Queen's University, University of Toronto, Laurentian University, University of British Columbia and University of Alberta. CAMIRO provides the key networking link between all these institutions and the federal and provincial governments. CAMIRO's coordinators and committees, with their knowledge of the world mining sector, provide the means of implementing communication and facilitating effective research

and development. CAMIRO representatives also should represent industry's viewpoint at larger advisory councils on research and development.

A significant amount of innovation was carried out in the recent past by Canadian researchers and implemented by industry. In the mining sector some of these advances included remote mining in Sudbury and Athabaska, efficiency of underground mining methodology, acid mine drainage in temperate climates and reclamation. In the exploration sector new technologies, some developed jointly with public institutions, include:

- downhole electromagnetics of UTEM (University of Toronto Electromagnetic) and Crone,
- advanced airborne surveys of Megatem,
- remote sensing applications of radar, radiometrics and hyperspectral imagery,
- geochronology to date ore deposits (Royal Ontario Museum)
- and computer technology to record field data and produce map images.

We believe that innovation in mineral exploration and development can be fostered by encouraging the innovators and helping them to acquire the resources they need to innovate. This submission covers four main areas:

- venture capital
- the business and regulatory framework;
- human resources;
- and the geological knowledge base.

Innovation Environment – Venture Capital

The nurturing of innovation, particularly the testing of innovative ideas and products, requires financing. Startup companies, be they in mineral exploration or in other sectors, require financial support, especially when investor interest is understandably tentative or focused elsewhere. Federal tax initiatives have been effective in the mineral exploration sector and have resulted in great wealth creation and employment (particularly for aboriginals) in northern regions of this country.

Canadian tax measures have been innovative in revitalizing investor interest and reducing the financial risk for investors prepared to back high stakes ventures. The PDAC and CAMIRO naturally focus on the mineral exploration sector; however, much of what is said here applies to most venture companies and their need for entrepreneurial financing especially companies developing innovative technology.

The PDAC strongly encourages the federal government to retain its current taxation incentive programs that are designed to assist innovative startup ventures, which include many junior mineral exploration companies. The incentive programs that Canada has in place are the envy of explorationists and investors in countries such as Australia, South Africa, Brazil, Chile and Peru. These countries, as well or better endowed than Canada in their prospective rock formations hosting great ore deposits, are our chief mining competitors. The flow-through share and “super” flow-through share programs that the federal government has introduced over the last twenty years to revive investor interest in mineral exploration are much admired by our competitors and stand as a model for other countries trying to emulate Canadian successes. The competitive advantage currently lies with Canada, and the federal government should be praised for instituting this innovative program.

The effect of enhanced flow-through shares can be clearly seen as during the commodity price boom in the mid 1980s, almost \$10 billion was raised and spent in Canada. In contrast, a decade later in a similar commodity price boom, similar amounts of money were raised in Canada but most was spent outside of Canada due to the lack of Canadian incentives.

Canada's new diamond industry can be directly linked to the federal government's tax incentive program. Using funds from the Mineral Exploration Depletion Allowance ("MEDA") program, which was in place from 1983 to 1987, an entrepreneurial geologist, Charles Fipke, spent ten tenacious years exploring a wide swath of British Columbia and the Northwest Territories. Fipke also took advantage of a scientific tax credit program to build a high tech laboratory where he processed his mineral samples. His discovery of the Point Lake diamondiferous kimberlite pipe in the Northwest Territories sparked one of Canada's biggest staking rushes and formed the seed of our diamond industry today. This country now produces a fifth of the world's diamonds. At the same time the spin off benefits include direct development and employment that specifically includes Aboriginal people in the north, plus industries such as diamond cutting, jewelry design, fabrication and marketing. The estimated value of just the diamonds discovered in Canada to date in Ekati, Diavik and Snap Lake is of the order of **\$27 billion**. This is all due to the personal drive of Chuck Fipke and the fostering of innovation through the tax system.

Other examples abound of how tax incentive programs have helped to fund important mineral discoveries. Two base metal mines, the Louvicourt mine, Val d'Or, Quebec, and the Lindsley mine in Sudbury, Ontario, were discovered directly by MEDA-enhanced flow-through share financings. As well as producing copper, zinc and nickel, these mines yield cobalt, platinum, palladium, rhodium, gold, silver and cadmium. Production from the two mines totals US\$2.6 billion.

A third larger multi-mineral deposit in British Columbia was greatly expanded in size by work paid for by flow-through share financing in the 1980s. This deposit, Windy Craggy, was unfortunately expropriated for a wilderness park before delineation was complete. Again in British Columbia, the discovery of Eskay Creek was financed by MEDA-enhanced flow-through. Today this mine is one of the world's lowest cost-per-ounce gold producers net of its by-products, silver, copper and zinc.

It is clear, especially from the diamonds example, that both flow-through and scientific tax credits are beneficial in the long run to society in enabling new technologies and ultimately new industries. PDAC and CAMIRO encourage the government to continue to seek ways to utilize the tax system to efficiently encourage entrepreneurial activity both in exploration and in the development and testing of new technologies.

These examples demonstrate Canada's leadership in nurturing start-up ventures by way of innovative taxation. Congratulations Ottawa! Keep up the good work!

Innovation Environment – Regulatory Environment

A major hurdle to start-up companies and to innovation in this country is the burgeoning layer of securities legislation and regulations in place. Multiple securities commissions in the provinces, each with a different set of regulations and requirements or way of interpreting "harmonized" regulations, are a barrier to small cap or venture companies wishing to raise capital for their operations and future growth. All companies start small, and when they are small every dollar counts. For these companies, having to meet a multiplicity of securities regulations is a huge financial burden. If they are to achieve success, junior mining companies must spend most of the money they have raised on prospecting and drilling - actual exploration – not on the substantial costs of complying with securities regulations.

Some jurisdictions, rather than fostering innovative startup companies, have sought to make money out of them by turning their securities commissions into profit centres, seemingly forgetting that entrepreneurial companies frequently have no income or cash flow. Staffing levels at commissions have jumped; paper burdens and turnaround times have increased in some jurisdictions, all contributing to material cost increases.

Investors too are being negatively affected by compliance costs for public offerings, especially IPOs. Smaller companies are often unwilling or unable to list their companies on multiple exchanges due to cost and thus residents of many provinces are denied investment opportunities.

The PDAC supports the increasingly vocal calls across the country for a national approach to securities regulation. The association believes that it behooves the Canadian provinces to work with the federal government to reach a solution to the multiple regulators, as has been achieved in Australia.

The PDAC hopes that the TSX and its new venture exchange (TSX-V) will assist innovative companies seeking greater market profile. To be competitive with the three London stock markets and help feed innovative start-up companies upward to the TSX-V, the PDAC supports the approval of a third tier, really transparent, market for incubatory companies. Two contenders, “CNQ” and “J2” are currently vying to create such a transparent market.

Canada’s five major banks control this country’s largest retail brokerage houses. Small cap stock financings typically occupy the lower half of a range of \$250,000 to \$10 million dollars and go unnoticed by these institutions. Further, employees of the large retail brokerage houses are motivated to sell the secondary distribution of stocks that their employers have underwritten. For these reasons, small cap stocks have little or no profile currently to attract investors in the secondary market.

Banks have been required by the federal government from time to time to carry certain percentages of small business loans. The principle could be extended to brokerage houses which would be required (or encouraged) to create small cap funds to provide innovative companies with higher profiles. The restrictions on labour funds to invest in junior mineral resource stocks might also be revisited.

The recent problems with corporate regulation in the USA may encourage some to think that more regulation, not less, is required. However, in Canada the problem is compounded by the multiple jurisdictions that actually hampers enforcement of regulations against “bad actors”. A more national based system would help police as well as streamline the system.

Skills Challenge – Canadian Geoscientists

The practise of geoscience is the foundation of mineral exploration, as well as many other human activities such as use of water (hydrogeology), soil science, engineering for roads and other infrastructure and oil and gas exploration, among others. In the past Canada has been regarded as one of the foremost countries of the world in geoscience. However, the status of the geoscience professions in Canada has changed dramatically over recent years. Employment prospects in traditional areas have declined and new employment opportunities have opened up. At the same time the image of geosciences – especially as applied to mineral deposits - with governments and students has declined.

Canada has a well-deserved reputation for its leadership in mining, exploration and geoscience. This country’s geoscientists, explorationists, and miners have been active around the world. The discoveries they have made and the subsequent development of mines have helped to boost the economy of the host countries and of Canada. Yet there are other spin-off benefits. Canada has become renowned for its unequalled mining service and supply sector. The development of both – expertise and the service sector – has relied heavily on innovative research and methods. Success of Canadian applied technology is the result of a well-grounded understanding by Canadian scientists of field applications.

A combination of dynamic mineral explorers and innovative financing has put Canada at the forefront of mining nations. Most of these mineral explorers grew up in a country with a healthy mining industry and great potential for mineral discovery. They could take advantage of a good education and on-the-job training which was traditionally available to geoscientists. A key stage in the development of a good geoscientist is field experience during the education process. In the past, most Canadian geoscientists worked in the field in the summers and by the time they graduated had the equivalent of three years practical experience as well as a strong academic background.

Many with solid university qualifications and an apprenticeship in a major mining company subsequently branched out as independent entrepreneurs. They ventured out into parts of the world where few others would go, working under difficult physical conditions to discover and develop mines. The benefits that they have generated for this country are impossible to measure (see financial impact of Chuck Fipke's work on diamonds, above). The interaction between employment opportunities, development of pools of experienced scientists, and entrepreneurial innovative activity is poorly understood. Canada as a society needs to conduct research on this issue to enable governments and universities to undertake long term planning.

However, this picture is changing. Employment prospects for geologists, once so rosy, are now diminishing. Reasons for this decline include the following:

- Decrease in global mineral exploration caused by a number of factors, chief of which are low metal prices. This slowdown in exploration has been even more dramatic for grassroots, or early stage, exploration.
- Major companies have focused on acquiring and developing existing deposits "off the shelf."
- Junior exploration companies have found raising financing for exploration very difficult in recent years.
- Major Canadian companies have moved outside Canada to explore and are increasingly using non-Canadian geoscientists.
- Recent mergers of major companies have resulted in cost-cutting measures, including slashing of exploration budgets.
- Budgets of Canada's provincial and federal geological surveys have been significantly cut.
- Governments have turned their attention to more glamorous endeavours for science funding, focusing on activities such as off-shore drilling rather than on-shore acquisition of geoscientific knowledge. This change of focus has resulted in lowered employment prospects for government geoscientists.

Because of the lack of employment prospects within the industry, young people are being deterred from entering the industry. Students are very knowledgeable about employment trends in industry and react fast to changes in opportunity. Students are tending to enroll in fields where employment prospects are perceived as superior, such as environmental geology. In fact, the number of geology graduates appears to mirror the changes in exploration funding in the country, but lagged a few years. The total ranges from about 600 to nearly 1000 over the past twenty years. In addition, the cutbacks mentioned also have affected the summer employment for geology students, meaning that they no longer can easily obtain that vital field experience. This is a critical loss to the country and the students.

As a consequence of presently declining employment opportunities, the geoscientist population in the exploration industry is aging faster than the population in general. For example, the demographics of PDAC membership show that over 45% will pass the age of 65 over the next 15 years. This is about 50% higher rate than the Canadian population in general. Trends given by the Canadian Geoscience Council are similar though not as dramatic. If the government feels that Canada faces serious shortages of technically trained people in the future, mineral exploration is likely to face even greater shortages of geoscientists who are presently aged 25 to 40 and will form industry managers and leaders 15 years from now.

Discussion of the effects of changing employment opportunities and trained scientists is not a simple matter. If students can react fast to downturns in the job market, they can also react fast to upturns. Given the numbers of geoscientists in minerals in the country, and estimates of numbers retiring, it would only require some 10 to 20% of the 600 new graduates each year to choose minerals as their career path to replace those retiring.

Any recommendations that the PDAC makes to improve the employment prospects in the geosciences will inevitably emphasize the need to improve the situation of mineral exploration in general. Without the prospect of employment, raising student enrollment in the geosciences would be inappropriate. However, the declining rates of student enrollment and decreasing job opportunities will have a long-term impact. Without a new generation of creative and energetic geoscientists to produce innovative thinking and

methods, this country's exploration industry faces an uncertain future. In addition, the cornerstone of exploration, the junior companies that spend over half the money invested in exploration annually in Canada, will surely not exist without trained entrepreneurial innovative geoscientists like Chuck Fipke.

We, therefore, recommend the following actions:

1. Continue to support acquisition of basic geoscientific information on Canada's land base so that it may reinvigorate new discoveries and provide a training base for young scientists
2. Take actions that demonstrate to this country's citizens why it is important to understand the geology of Canada for cultural, scientific and industrial reasons. This may include assistance to making the Mining Matters educational initiative of the PDAC, that teaches young school children about the earth, its rocks and minerals, a national program, not solely in Ontario. In addition, important breakthroughs in geoscience should be showcased and celebrated.
3. If young Canadians are encouraged by the prospects of employment, they will turn to geosciences. The PDAC is confident that this would lead to an environment where innovation will flourish and lead to economic benefits for all Canadians. The federal government might consider partial funding for co-operative programs targeting geoscience employment for students both in industry and geological surveys.
4. Support applied research initiatives by CAMIRO, NSERC and others by matching funds that support student field work and research.
5. Promote and support cooperative programs that provide field and laboratory experience for students.

Knowledge Performance - Geoscience Knowledge Base

Geological maps are a high priority for this country's mineral industry. The NATMAP program, which integrated the provincial and federal surveys, universities and high technology, worked very well indeed. The PDAC recommends that this cooperative formula be preserved. Geological mapping of the country is basically a research activity that provides one of the raw materials (the geological maps) that enables companies through conceptual work of their geoscientists to identify new areas, new deposit types and new commodities for exploration.

Mapping in northern Canada presents a wide range of challenges. High costs prohibit comprehensive mapping, and we are, therefore, recommending an integrated approach using airborne technologies and ground mapping to map the land.

Programs such as Extech have potential for immediate impact on the industry. Any NATMAP or Extech mapping style program should have sufficient funding and the mandate to test new technologies in the field such as GIS and physical properties measurements.

Education is important, and we recommend that centres such as MDRU and MERC be provided with financial support. However, this support should not preclude providing financial assistance to other excellent institutions in Canada. If Canada is to maintain and enhance its geological mapping capabilities, students should be given as many opportunities as possible to obtain field and mapping experience. Organized cooperative programs, such as OGS Mapping School and Ecole Polytechnique are needed to create field training opportunities.

Geosciences are likely to be integrated more and more with other sciences. Already we are seeing a number of institutions that are offering students the chance to integrate a science program with high technology. Recent CFI grants have enabled such integration by equipping many universities with "state of the art"

analytical equipment. Policy and funding is now needed for scientists to make effective use of these capabilities by linkage with practical problems in industry.

The Canadian government should:

1. Continue to support acquisition of basic geoscientific information on Canada's land base. This would focus on bedrock geology which is still poorly known in many areas, but also include geochemical and geophysical data of a basic nature ("pre-competitive"). This data collection will reinvigorate new discoveries and provide a training base for young scientists.
2. Avoid blindly supporting high-cost, 'glamorous' projects that do not lead to economic sustainability for the country. Although off shore drilling studies are important for the study of ore deposits and in some cases for petroleum exploration, they should be examined carefully prior to taking precedence over studies of the land base of Canada.

Knowledge Performance - Research Support

The Canadian government should be proactive in supporting mineral exploration research through NRC industrial assistance grants, venture capital funds and support of organisations such as CAMIRO. Support of CAMIRO as an industry run collaborative network/directorship of R&D conducted by university, industry and governments, is a very cost effective way of encouraging innovative research. CAMIRO projects provide a vehicle to promote the commercialization of public-funded research.

There should be incentives for exploration companies to use new innovative technologies in the field. There should be incentives for start up companies to field test new technologies similar to the diamond hunt of Chuck Fipke.

At present, financial constraints limit R&D to about 10% of the budget of most entrepreneurial companies. However, it is these companies that will take new concepts and develop them into new products for the marketplace. A key example of this is GOCAD computer visualization software for the mining industry. This was spun out of major companies to be marketing and promoted by a small company

Knowledge Performance - Environmental Activities

The exploration industry in itself has little impact on the scenery or nature of an area. It does require, however, access to large land areas to be effective. Land access is of prime concern to the industry.

At present many of Canada's natural resource industries are perceived as in conflict with preservation of the environment, particularly biodiversity. On the other hand, some industry (The Alberta Chamber of Resources) and academic researchers (University of Alberta) are seeking new paradigms of development that will enable both cumulative industrial development, but also preservation of biodiversity and other natural values. These approaches have been called Integrated Landscape Management, or Total Landscape Integration, or similar phrases. Although the various methodologies are not identical they can be considered here under one heading. The government should actively encourage through funding such innovative ways to approach the issue of sustainable development for the benefit of future generations of Canadians. We need a new way, without the present confrontational manner between industry, NGOs and government of addressing development alongside biodiversity and natural preservation. Research in this area will benefit not only the mining industry, but all resource based industries such as oil and gas and forestry and Canadian society as a whole.

Community-Based Innovation

Specific areas of Canada have existing innovative firms in mining and technology. Communities with "technology clusters" include suburban Toronto, Ottawa, Montreal, Vancouver, Sudbury, North Bay, Peterborough, Kingston, Saskatoon, Calgary and Yellowknife. In Sudbury, a long-lived mining industry, combined with the Ontario Geological Survey and mining and exploration technology at Laurentian University, create a synergy in applied earth sciences. In Saskatoon the uranium and potash industries support high-end technology groups at the University of Saskatchewan, Saskatchewan Research Council and the Canadian Light Source Centre. In these settings opportunities for research, training and innovation need to be supported. Other mining and exploration centres, e.g. Thunder Bay, Ontario, Val d'Or -Rouyn, Quebec, St. John's, Newfoundland and Labrador, Iqaluit, Nunavut need similar support. Service firms or university-based research groups may require incentives to set up regional offices and to contribute to "community-centres of innovation".

The approach to developing "community-based" innovation requires close consultation with the industry through PDAC, CAMIRO and local prospector organizations. A legitimate technical framework established under firms and institutions need to exist and lead the research. Funds can not just be given to non-technical regional or municipal organizations. Funding initiatives need to be well-publicized and transparent with significant advice and input of technical experts.

Sincerely,

- signed -

Thomas E. Lane, Ph.D. P.Geo
Director, Research Development
CAMIRO - Exploration Division



- signed -

Bill Mercer
President, PDAC

