



# ONTARIO'S MINERAL DEVELOPMENT STRATEGY



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# Ontario's Mineral Development Strategy

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## A Foundation for Modern Stewardship

Ontario's Mineral Development Strategy provides the foundation for sustainable management and stewardship of mineral resources for which extraction is governed by provisions under the Mining Act.

The goal of the strategy is to reinforce Ontario's international position as a leading mining jurisdiction and foster responsible mineral development for the benefit of all citizens of Ontario.

The four key strategic objectives are:

1. Promoting long-term sustainability and global competitiveness
2. Supporting modern, safe and environmentally sound exploration and mining
3. Clarifying and modernizing mineral resource stewardship
4. Promoting community development and opportunities for all.

The strategy includes a number of action items under each of these objectives. Over the coming years, the government, led by the Ministry of Northern Development and Mines, will continue to work with the mineral sector, stakeholders and Aboriginal partners to implement this strategy and all of its elements.



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*In 2004, Ontario's 43 producing mines generated new wealth for Ontario from more than \$5 billion in minerals extracted under provisions of the Mining Act.*



Dan Dorne

## Ontario and the Mining Industry

Ontario is an international mining powerhouse. Our competitive advantages include:

- A rich endowment of mineral resources
- Dynamic research and development supporting an advanced infrastructure of knowledge
- Active exploration and development industries
- A top-ranked capital market
- A seasoned production industry
- Globally active mining suppliers
- A strong education and training network
- Committed mining communities.

This province's involvement with mining is both long and productive. Ontarians can be justifiably proud of mining's historic contributions. The industry has helped build a strong and prosperous province, and has shaped world-renowned mining camps – such as Sudbury, Red Lake, Timmins, Hemlo and Kirkland Lake – whose names are recognized around the world. In fact, mining has been a key element in the development of Ontario's infrastructure, communities and economy.

Ontario's mining companies make significant contributions to their local communities and the provincial economy. In an average year, mining companies will pay out:

- Almost \$1 billion in wages and salaries, mostly in Northern Ontario
- \$1 billion in goods and services, with almost 80 per cent of that spent in Ontario
- \$100 million in federal taxes
- \$115 million in provincial taxes
- \$40 million in municipal taxes.

Ontario remains a world leader in mining. The province is one of Canada's top producers of base metals, precious metals and industrial minerals. On the global stage, it ranks fifth in nickel production, fifth in cobalt, fourth in platinum, 11th in gold, 13th in copper, 15th in silver and 17th in zinc.

Minerals mined in Ontario are used in a wide variety of products in all homes, offices and workplaces. Ontario minerals are also used worldwide in diverse applications that include construction, transportation, medicine, defence, aerospace, communications and more.

In fact, the products of Ontario's mines touch everyone's life, virtually every day.

Minerals mined in this province enhance our health and well-being. They provide benefits, solve challenges and make our lives easier:

- In our hospitals, where platinum group metals are used in pharmaceuticals, silver in the production of X-rays and a variety of metals in medical equipment
- In our homes, where alloys of nickel and iron can create stainless steel dream kitchens
- In our gardens, where minerals produce fertilizers that strengthen flowers and vegetables
- In our workplaces, where copper and precious metals in electronic circuitry make computerized record-keeping and communications possible
- In our cars, where zinc in galvanized steel helps body parts resist rust and platinum group metals in catalytic converters help reduce emissions of air pollution.

Over the past two centuries, almost every region has made a contribution to Ontario's rich mining legacy.

Northern Ontario in particular has parlayed its mining success into a dynamic industrial cluster. The "near north" region is home to some of the world's most productive mines. In addition, it boasts hundreds of mining service and supply companies, as well as a wealth of potential for expansion into new value-added activities. Through its universities, colleges and leading companies, Northern Ontario has also developed several interna-

tionally respected research facilities, focusing on such issues as mineral exploration, deep mining, tele-robotics, mine process engineering and mine-site rehabilitation.

Ontario's Far North (the area north of the current limits for commercial timber harvesting) is poised to become one of the province's newest and most vibrant mining areas. Currently, the region's only operating mine is Placer Dome's gold mine, the Musselwhite, north of Pickle Lake. The Musselwhite Mine generates benefits in the form of jobs, training, community development and spin-off economic opportunities for neighbouring First Nations.

Toronto, meanwhile, is a leading mining community in its own right. The city hosts scores of corporate headquarters, which in turn rely upon and support hundreds of Greater Toronto Area suppliers of legal, financial, marketing, human resources, information technology and other services. The TSX, Toronto's stock exchange, plays a vital role in the development of Ontario's mineral sector as the leading mining finance exchange in the world. In 1997, the Toronto exchange raised more than one-third of mining capital in the world. By 2005, the TSX exchange listed about 220 major mining companies with capitalization of more than \$163 billion.

*The planned De Beers diamond mine near Attawapiskat is expected to generate 600 construction jobs and 380 full-time production jobs. According to company estimates, the Victor Mine could, over the course of its life, spend more than \$100 million a year and have an estimated cumulative impact on the province's gross domestic product of about \$6.8 billion, conferring significant benefits on neighbouring First Nations, northern communities and the province as a whole. Several other mining companies are busy exploring new mineral discoveries in the Hudson Bay-James Bay Lowlands area.*



Mike Dupont

## A Road Map to Global Competitiveness

*Ontario attracts one-quarter of Canada's mineral exploration investment and about eight per cent of the world's total mineral exploration spending. In 2004, mining exploration companies spent more than \$300 million looking for minerals in Ontario.*



Mike Dupont

The Ontario government values the significant contributions made by the mining community to this province's past and present.

Ontario also recognizes that mining and mineral-related activities are positioned to make even greater contributions in the future, by stimulating economic growth and diversification, enhancing opportunities available in mining communities and by providing more opportunities for Aboriginal communities.

Ontario's Mineral Development Strategy will build on the province's impressive strengths in geology, infrastructure and human resources by addressing realities that face industry now and into the future:

- Lower-cost rivals in emerging mining jurisdictions have raised the competitive stakes in global markets. Prices for most mineral commodities are determined on international markets. In order to maintain its competitiveness through long-term economic cycles, Ontario's industry must increase efficiencies and manage rising input costs, including transportation, energy and utility costs.
- Mining sector workforces are aging and key skills are in danger
- of being lost. New strategies and partnerships for training skilled workers are required urgently so shortages of human resources do not constrain growth.
- Public perception has lagged behind the reality of this innovative and modern industry. A negative perception of mining and misconceptions about the industry could foster unwarranted public concerns and make it more difficult for Ontario to attract much-needed investment in new projects and expansions.
- New partnerships and priority setting will help both government and industry to keep geoscience information current in remote areas.
- Past issues around the industry's impacts on the environment, worker health and safety, and concerns over old mine sites and unstable tailings areas are continuously being addressed.
- As Ontario's environmental policies evolve and new regulations are introduced, companies are required to improve their environmental performance. The province needs clear targets and processes that will facilitate industry's efforts to attain higher standards.



- First Nation communities, Aboriginal groups and governments continue to work towards the development of consultation processes for mineral activities on Crown land. There are challenges in addressing the aspirations and concerns of Aboriginal communities and the mineral sector, particularly in the Far North.
- The strategy presents an opportunity to address issues that have arisen between surface rights holders and persons exploring for minerals, particularly in southern Ontario.

Today, industry, government, Aboriginal communities and environmental interests are moving forward on many fronts.

- Ontario's mining communities are starting to build on past success by promoting the development of value-added businesses, research and development, and commercialization of innovations. Their economic development efforts are pointed toward a more diversified local mineral sector that will provide new jobs and economic stability for the future. Mining communities rely more on tax revenues and jobs from mining operations and related value-added businesses than most communities in order to help maintain their infrastructure and services.

Ontario wants to ensure that the conditions are in place that will allow and encourage the industry to advance its environmental, operational and safety initiatives, while it continues to flourish as a valued contributor to the province's economic well-being.

To provide a framework to address these and other realities and to maintain its competitive position as a leading mining jurisdiction, Ontario needs a forward-looking mineral development strategy.

*Ontario's mining sector directly employs 15,000 people in one of the best-paid industrial careers available. At more than \$1,000 a week, average mining sector earnings are 50 per cent higher than the average for all Ontario industries.*



Gregory Coby



Gisela Coby

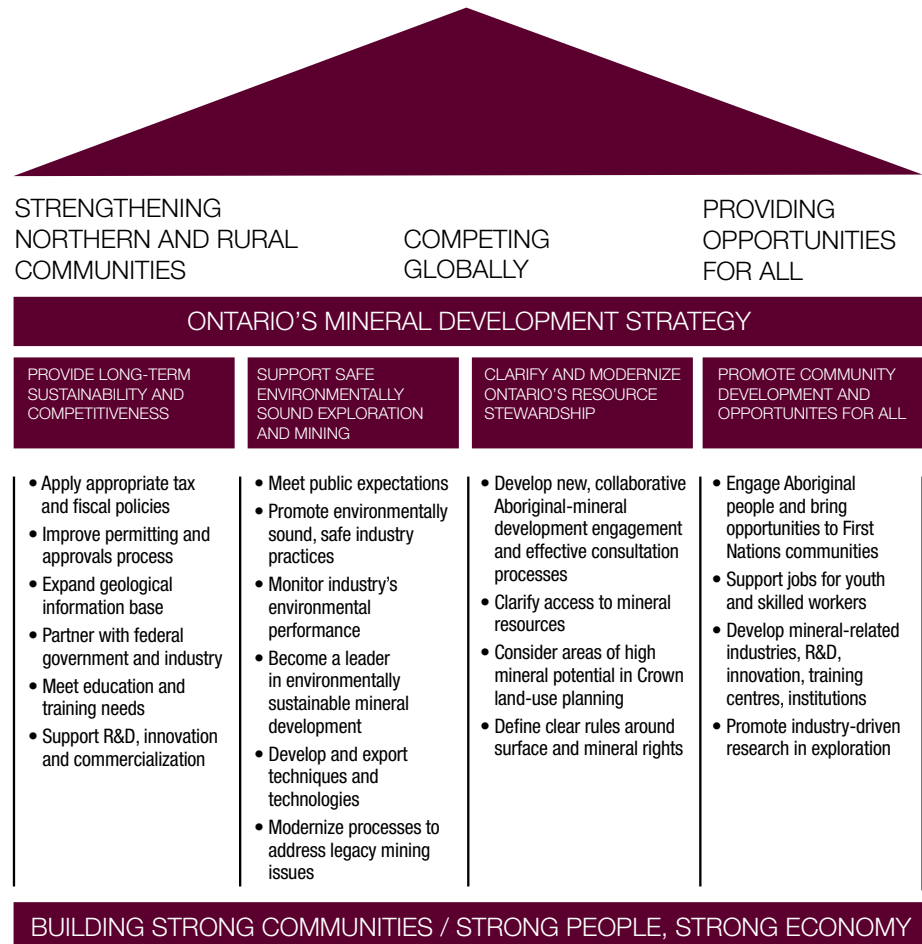
## Objectives of Ontario's Mineral Development Strategy

The Mineral Development Strategy will help Ontario remain one of the world's leading mining jurisdictions while, at the same time, supporting responsible and sustainable mineral development that benefits communities and all Ontarians.

The strategy's four objectives and their action items are linked. Together they form the foundation for effective management and stewardship of Ontario's mineral resources.

The four key strategic objectives are:

1. Promoting long-term sustainability and global competitiveness
2. Supporting modern, safe and environmentally sound exploration and mining
3. Clarifying and modernizing mineral resource stewardship
4. Promoting community development and opportunities for all.



## Objective 1: Promoting Long-Term Sustainability and Global Competitiveness.

Mineral exploration and mining are key industrial sectors. They provide high-quality jobs to Ontario residents. They make significant contributions to the province's economic and social well-being. To retain these benefits, Ontario needs to attract new mining investment that will bring prosperity and opportunities to communities and the province.

The government recognizes that its role is to provide a legislative and policy framework for responsible management of mineral resources, and to maintain an environment that allows for the sustainable development of those resources for present and future generations.

Within that role, the following actions will support Ontario's position as the investor's mining jurisdiction of choice.

- Maintain a strategic tax system and business climate that attracts long-term investment in mineral exploration and mining by:
  - monitoring the impact of the cumulative taxes and government mandated costs from all levels of government, and taking that impact into consideration in the formulation of provincial policies and programs
  - seeking and maintaining advantages, such as Ontario's focused flow-through tax credit and Toronto's status as the mine financing capital of the world, that have produced a high level of mineral exploration investment
  - recognizing the evolving costs of operating in a modern, highly technological industry, and proposing the modernization of some regulatory/legislative provisions in response.
- Work toward more efficient and effective permitting processes and approval requirements for mine development, while ensuring environmental protection and worker health and safety, by:
  - increasing certainty for investors by reducing time and costs where possible
  - developing opportunities for efficiency and co-ordination between processes
  - seeking more transparent systems that establish expectations around timelines and accountabilities.

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*In late 2005, the Ontario government launched an Internet gateway that will improve service to prospectors, mineral developers and mining companies.*

*This mining gateway is a one-stop electronic window to a wealth of information specifically for the mineral industry, giving clients and stakeholders faster access to more up-to-date information on regulatory requirements and other matters.*

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*In November, 2004, the governments of Canada and Ontario signed an agreement on environmental assessment cooperation, promoting coordination, timeliness and certainty and reducing duplication and overlap - while maintaining environmental protection.*

*Northern College, Cambrian College, Confederation College, College Boreal, Canadore College and Laurentian University have developed a Federated School of Mines to respond to the training needs of the minerals/mining industry.*



Graciana Ochoy

- Provide updated and expanded geological mapping and information to improve land-use planning and promote sustainable mineral development by:
  - continuing to invest in public geoscience
  - continuing to develop partnerships with the federal government, industry organizations and First Nations in order to undertake joint ventures that will expand Ontario's geoscience knowledge base in areas of high mineral potential.
- Develop strategic partnerships with the federal government, educational institutions and the private sector to address mineral sector training and research and development requirements by:
  - assisting the mineral sector in its efforts to find experienced and skilled workers and to attract students to geology and mining engineering
  - providing more education, apprenticeship training and pilot projects for residents of Aboriginal communities in order to allow them to take advantage of emerging mineral sector employment
  - working with federal government and industry partners to coordinate and fund research and development through the establishment of an international centre for world-class, industry-driven research in exploration and mining.

## Objective 2: Supporting Modern, Safe, Environmentally Sound Exploration and Mining

Governments, industry and the public increasingly look for reductions in environmental impacts and improvements in worker health and safety in all industrial sectors, including mining. Ontario's mining industry has made notable progress in meeting those expectations.

Over the past two decades, the Ontario mining industry has significantly improved its environmental performance by reducing emissions, effluents and impacts to lands disturbed by mining activities.

In addition to federal environmental programs, provincial initiatives such as the Countdown Acid Rain Program, the Anti Smog Action Plan, and most recently, the Five Point Plan for Cleaner Air, have guided the continual reduction in emissions from mining smelters and refineries. The Municipal Industrial Strategy for Abatement (MISA) regulations serve a similar role in reducing pollutants in effluents from mining and mineral processing facilities. In 1991, government adopted new legislative provisions under the Mining Act to address the rehabilitation of mining lands for all operating mines.

Mining and exploration organizations and associations have committed their members to good environmental practices. The sector has adopted

new technologies to meet increasingly stringent environmental standards and regulatory demands, and is continuously improving its energy efficiency.

In the process, Ontario's mining industry has become a world leader in environmental research and development and technologies, especially in mineral processing, mine reclamation and mine site rehabilitation.

The ongoing performance of the mining industry on worker health and safety issues is reported by the Mining and Aggregates Safety and Health Association. Within Canada, Ontario's mining industry has the best safety record of all mining jurisdictions.

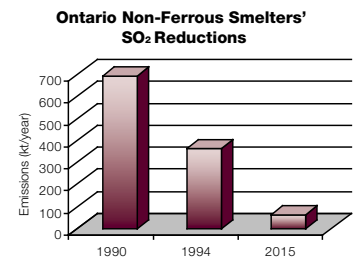
Within the province, the mining sector has achieved a lower frequency of medical injury than many other major sectors, including forestry, construction, transportation, general industries and the municipal sectors.

In support of the mineral sector's efforts to further enhance its performance as a modern, safe, high-tech and environmentally sound industry, the strategy recommends:

- Continued government-sponsored programs for the rehabilitation of mine hazards, as well as involvement in research in mine reclamation with industry, government and other stakeholder partners

*Through regulatory and voluntary initiatives, Ontario non-ferrous smelters have reduced their sulphur dioxide (SO<sub>2</sub>) emissions, a major contributor to acid rain, by over 50 per cent since 1990.*

*By 2015, Ontario's Plan for Cleaner Air will have achieved a total SO<sub>2</sub> reduction from the non-ferrous smelting sector of 85 per cent from 1990 levels.*





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- Working with industry associations to monitor the industry's adherence to its environmental policies and best practices, which include:
  - Prospectors and Developers Association of Canada (PDAC) Environmental Excellence in Exploration
  - Mining Association of Canada (MAC) strategy, Toward Sustainable Mining
  - Ontario Mining Association (OMA) environmental policy.
- Establishing an ongoing process with all partners to continually strive to be on the leading edge of environmental policies and best practices
- Developing proposals to remove legal barriers to voluntary rehabilitation of abandoned mine hazards by industry, and thus benefit Ontario residents by reducing health, safety and environmental risks and reducing the need for public spending
- Refining government processes relating to mine rehabilitation and developing a long-term strategy to evaluate and rank abandoned mines hazard sites for future rehabilitation.

### Objective 3: Clarifying and Modernizing Mineral Resource Stewardship

Ontario’s Mining Act provides the framework for the exploration and development of the province’s mining lands, in a manner that will provide maximum benefits to the people of Ontario.

Access to lands that are open to claim staking and prospecting, along with certainty of mining land tenure provided under the Mining Act, remains an important consideration in attracting and securing high-risk investment in mineral exploration and development.

At the same time, concerns have been expressed about the industry’s impacts on traditional Aboriginal activities, the exercise of the government’s role in meeting the Crown’s Constitutional obligations concerning Aboriginal and treaty rights, and the ability of Aboriginal people to participate fully in the benefits of mineral development activities near their communities.

Ontario’s Mineral Development Strategy will promote a climate of collaboration and involvement and will optimize resource benefit opportunities for all and minimize unnecessary conflicts.

#### Aboriginal Relationships

##### Consultation Protocols

The government is committed to ensuring that mineral sector activities occur in a manner consistent with Ontario’s consultation obligations related to Aboriginal and treaty rights. Accordingly, effective consultation processes for the mining sector will continue to be developed and implemented with input from Aboriginal peoples, mineral sector and other stakeholders consistent with government-wide guidelines.

##### Relationship Building

To help promote positive mineral sector relations with Aboriginal communities, the government, led by MNDM, will continue to work with Aboriginal representatives to develop an Aboriginal-mining engagement process to involve Aboriginal communities and organizations and industry in the development of acceptable approaches to address matters such as:

- Improving communications and relationships between industry and the Aboriginal community, and government and the Aboriginal community

*The Ontario government has joined with the federal government and the Ontario Mining Association (OMA) to produce an educational video, Mining New Opportunities, that will help First Nations communities build a greater understanding of modern mining and its impacts.*



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*It is estimated that each public dollar invested in geological survey activities attracts between \$3 to \$5 of private sector investment in mineral exploration.*

*Geoscience data and knowledge supports Ontario's public interests by documenting groundwater aquifers and geological hazards, and allowing informed decision-making for infrastructure, land-use and environmental planning.*

- Clarifying appropriate practices for mineral sector exploration, development and engagement in areas considered by Aboriginal communities as their traditional territories
- Exploring possible approaches to reduce the impact of mineral sector activities on protected rights and traditional activities (e.g., ways to provide for the withdrawal from staking of cultural and spiritual sites).

Other Ontario ministries, the federal government and other stakeholders would participate in the process as appropriate.

## **Management of Crown Mineral Resources**

The strategy provides for a balanced planning, policy and regulatory approach that will protect investment and clarify responsibilities.

- Ontario's Mineral Development Strategy will strengthen and confirm the status of mining lands and mineral resources in Crown land-use planning and decision-making, by:
  - Providing for the use of Provincial Significant Mineral Potential (PSMP) methodology to identify areas of high mineral potential, based on economic and geological factors
  - Considering the results of the PSMP analysis in concert with other land-use information in all Crown land-use planning processes, and giving additional consideration to areas with the highest mineral potential before finalizing any land-use decisions that could prohibit exploration or mining on these lands
  - Providing for reasonable access to existing mining lands surrounded by parks and conservation reserves
  - Developing a review and approvals process for mineral sector participants requesting access to mineral resources that require crossing a linear provincial park or conservation reserves.



- The Ministry of Natural Resources, in conjunction with MNRM and other key ministries, is exploring potential approaches for land-use planning in Ontario's Far North.
- The strategy will address concerns of surface rights holders about mining rights by proposing amendments to the Mining Act and regulations to:
  - Clarify restrictions to staking and exploration work on lands with privately held surface rights
  - Provide written notice of claim staking to private surface rights holders
  - Provide written notice to private surface rights holders in advance of mineral exploration activities on a staked claim
  - Allow less intrusive staking methods, including map staking in southern Ontario.
- The strategy will also enhance government administration of mining lands by improving the system for evaluating and collecting taxes and fees.



Gregory Coby

## Objective 4: Promoting Community Development and Opportunities for All

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*Under the sponsorship of the Canadian Space Agency, the Northern Centre for Advanced Technology Inc. (NORCAT) at Cambrian College and the firm Electric Vehicle Controllers Ltd. of Sudbury are collaborating to develop a lightweight robotic drill that would operate in harsh, low-gravity conditions. Developers hope their drill will be chosen for a future space probe to Mars.*

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*Mining service and supply industries in Ontario pay out an estimated \$1 billion a year in wages and salaries, nearly matching the payrolls of traditional mineral extraction, smelting and refining operations.*

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*Laurentian University has announced the creation of a Centre of Excellence in Mining Innovation (CEMI) on its Sudbury campus. CEMI will capitalize on the region's mining assets and strengths, and further enhance the community's stature as an international centre for world-class, mining industry-driven research.*

The mineral sector is a major source of jobs and economic prosperity throughout the province, particularly in northern and rural communities. By enhancing the long-term competitiveness of the industry, Ontario's Mineral Development Strategy will help northern and rural communities maintain important jobs and build a strong foundation for the future, while at the same time enhancing Ontario's overall economic prosperity.

The industry's diversity provides great potential for new export opportunities, not only in minerals and metals, but also in:

- Services and expertise
- Technology and processes
- Value-added products
- Health, safety and environmental innovations and
- Mining supplies and equipment.

An expansion of mining-related value-added activities would open exciting new career opportunities for northern, rural and Aboriginal youth. Studies suggest many high-quality jobs could be created from these and spin-off activities.

Government, industry, communities and other key stakeholder groups have joined together to form the Ontario Mineral Industry Cluster Council (OMICC). OMICC's mandate

is to strengthen and foster Ontario's existing mineral cluster and to identify opportunities to enhance competitiveness, innovation and investment in Ontario's mineral cluster.

Aboriginal communities are also seeking opportunities to benefit from mineral sector activity. In the province's Far North, communities are working, or will be involved, in developments such as the Musselwhite gold mine north of Pickle Lake, the province's first diamond mine near Attawapiskat and in emerging regional mineral exploration.

The strategy will:

- Promote and support the development of a diversified mineral sector in Ontario to attract investment and create new job opportunities, with an emphasis on supporting economic development in northern and rural communities, by:
  - Promoting industry-driven research in exploration and mining
  - Continuing to work with mining cluster representatives and the federal government to maximize opportunities for bringing innovations to market and the development of value-added opportunities to strengthen and promote a prosperous Ontario mining cluster.

- The proposed Aboriginal engagement process (referenced in Objective 3 above) could also provide input on how to promote Aboriginal opportunities associated with mineral development activities and to support future government initiatives to enable Aboriginal people to share fairly in the benefits of natural resource development.

Examples of issues that could be addressed include:

- Possible approaches to increase Aboriginal communities' share of jobs, business opportunities

and other benefits associated with mining related activities, consistent with government's commitment to develop proposals to enable Aboriginal people to share fairly in the benefits of natural resource development

- Possible Aboriginal-specific approaches to training and mentoring programs
- Promotion of the development of best practices for Impact Benefit Agreements between industry and Aboriginal communities.

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*With a wave of retirements expected over the next 10 years, mining companies across Canada are gearing up to recruit about 80,000 new people to meet current and future needs, according to comprehensive research conducted by the Mining Industry Training and Adjustment Council – Canada.*

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*Mining Innovation, Rehabilitation and Applied Research Corporation was founded in 1998 as a joint venture of academics, government and industry. The Sudbury-based organization now offers the world's only Virtual Reality facility specializing in mining and mineral exploration applications.*



INCO Ltd.



Graeme Coby

## Next Steps

The Ministry of Northern Development and Mines and other government ministries will work with mineral sector, stakeholder and Aboriginal partners to effectively implement the strategy through its four strategic objectives

and action items. The ministry will ensure the appropriate levels of consultation occur throughout the implementation of the strategy, particularly with respect to Aboriginal groups and First Nations.

## How the Strategy was Developed

Ontario's Mineral Development Strategy is based on a vision for Ontario's mineral sector that encompasses:

- Reaffirmation of Ontario's position as one of the world's leading mining jurisdictions
- A commitment to sound management, effective stewardship and responsible development of the province's mineral resources.

To build the best possible strategy, the Ministry of Northern Development and Mines asked mineral sector stakeholders, First Nation communities and Aboriginal groups, mining municipalities, academic institutions, Crown land users and others with an interest in the future of this vital industrial sector, to provide their views and input on a discussion paper. Ontario's Mineral Development Strategy mirrors principles within the discussion paper. It reflects the views and ideas of interested groups, communities, individuals, Aboriginal representatives and key organizations, as well as the Northern Development Councils. Industry, stakeholder and Aboriginal

input will continue to receive further consideration by MNDM and other ministries during implementation of the strategy.

Ontario's Mineral Development Strategy delivers on a government commitment to work with resource industries to ensure they achieve their potential, while supporting the key government priorities of:

- Building Strong Communities
- Strong People and a Strong Economy.

It is an integral component of the Ontario government's Northern Prosperity Plan, which lays out fundamental pillars upon which the province will pursue economic and community renewal in Northern Ontario:

- Enhancing Ontario's ability to compete globally
- Strengthening the North and its communities
- Providing opportunities for all
- Listening to and serving northerners better.



Northern College