

## Chapter 1

### Section 1.11

Ministry of Northern Development and Mines

# Mines and Minerals Program

Follow-Up on VFM Section 3.11, *2015 Annual Report*

RECOMMENDATION STATUS OVERVIEW					
	# of Actions Recommended	Status of Actions Recommended			
		Fully Implemented	In Process of Being Implemented	Little or No Progress	Will Not Be Implemented
Recommendation 1	3	1	1	1	
Recommendation 2	3			3	
Recommendation 3	1	1			
Recommendation 4	2	1		1	
Recommendation 5	4	3	1		
Recommendation 6	3	1		2	
Recommendation 7	1		1		
Recommendation 8	1			1	
Recommendation 9	3	1	1	1	
Recommendation 10	2		1	1	
Recommendation 11	2		2		
Recommendation 12	2	1	1		
Recommendation 13	1		1		
<b>Total</b>	<b>28</b>	<b>9</b>	<b>9</b>	<b>10</b>	<b>0</b>
<b>%</b>	<b>100</b>	<b>32</b>	<b>32</b>	<b>36</b>	<b>0</b>

## Overall Conclusion

According to the information that the Ministry of Northern Development and Mines (Ministry) provided to us, as of July 31, 2017, 32% of the actions we recommended in our *2015 Annual Report* have been fully implemented. The Ministry has also made progress in implementing 32% of the recom-

mended actions. However, there has been little or no progress on the remaining 36% of actions.

Overall, the Ministry has done the following:

- implemented a monitoring and tracking system for all current geosciences projects;
- undertaken steps to improve the transfer payment reporting process for payments to the Indigenous communities in the Ring of Fire region;

- hired a Closure Plan Co-ordinator to review all mine closure plans and ensure appropriate technical reviews have been completed by the relevant technical specialists; and
- improved its process to review a mine's rehabilitation by its private owner before returning a portion of the financial assurance. This improved due diligence ensures that the mine development is in line with the closure plan.

However, some areas that still require work include:

- evaluate its current investment-marketing activities and determine whether new, more appropriate strategies should be implemented;
- establish a detailed plan for the development of the Ring of Fire with measurable outcomes and regularly assess and report on progress in achieving them;
- inspect all high-risk abandoned mines that have not been inspected in the previous five years to determine whether these sites pose risks to public safety; and
- review and update, where necessary, the Province's mining fees, taxes and royalty payments to ensure that Ontarians receive a fair share of the province's mineral resources.

## Background

The Ministry of Northern Development and Mines (Ministry) is responsible for overseeing the province's minerals sector in accordance with the *Mining Act* (Act). Ontario is the largest mineral producer in Canada, accounting for a quarter of the country's mineral production. The Act and its regulations are intended to encourage development of mineral resources in a way that recognizes existing Indigenous and treaty rights and minimizes adverse effects on public health and safety and the environment.

The responsibilities under the Act are carried out by the Ministry's Mines and Minerals Division and its Ring of Fire Secretariat (Secretariat), which is responsible for overseeing the development of the Ring of Fire mineral deposit in Northern Ontario. In the 2016/17 fiscal year, the Mines and Minerals Division had more than 253 full-time employees and spent \$40 million.

Our 2015 audit highlighted that the Ministry had not been effective in encouraging timely mineral development in the province. A 2014 edition of a Fraser Institute annual survey of mining and exploration companies ranked Ontario ninth among Canada's provinces and territories in investment attractiveness in mineral exploration, even though it had one of the lowest mining tax rates in the country. As of September 2015, Ontario's effective tax rate was only 5.6%, considerably lower than the national average of 8.6%. However, exploration spending in Ontario peaked at \$1.1 billion in 2011 and had since dropped by 50% in 2014.

We also noted that the amount of mining taxes and royalties collected from mining companies over the previous 20 years had averaged less than 2% of the value of minerals extracted. Ontario had collected very little in royalties from its only diamond mine. The Ministry also lacked adequate processes to manage mine closure plans and the rehabilitation of abandoned mines.

In 2010, the government established the Ring of Fire Secretariat to work and consult with Indigenous peoples, Northern Ontarians and the mining community to encourage the sustainable development of the Ring of Fire. The Secretariat has 19 full-time staff in Sudbury, Thunder Bay and Toronto. Since it was established, the Secretariat has incurred over \$19.5 million in operating expenses.

The Ring of Fire is in the James Bay lowlands, about 500 kilometres northeast of Thunder Bay. It is approximately 5,000 square kilometres, with most mineral discoveries to date located in a 20-kilometre-long strip. In 2001, significant deposits of nickel, copper, zinc and platinum were identified. However, it was the discovery of North

America's first commercial quantity of chromite in 2008 that attracted more intense interest to the area. Chromite is a mineral used to make ferrochrome, an alloy essential to making stainless steel, and is in demand worldwide. The chromite deposit is estimated to be at least 220 million tonnes, which would make it one of the richest deposits in the world. The chromite and nickel deposits in the region are estimated to have a potential value of \$60 billion. The Ring of Fire discovery is one of the province's greatest mining opportunities. However, at the time of our audit, the area was not close to being ready for production and the Ministry had no detailed plan or timeline for developing the region.

Our other significant observations from our *2015 Annual Report* included the following:

- The Ministry's marketing strategies may be ineffective, and it was slow to make geosciences information available to the mining industry. Mapping projects expected to be completed by 2014 were behind an average of 19 months. As well, over 1,250 geological assessments dating back to 2013 had not yet been made publicly available online through a searchable database. As a result, this technical information was not easily accessible to potential developers to help them identify opportunities for mineral exploration and development.
- Investment was slowed because of a lack of clarity on requirements to consult with Indigenous communities.
- Since 1993, the Ministry had not estimated the total cost of rehabilitating the 4,400 abandoned mine sites in Ontario and therefore did not know the current cost for doing so. As well, it did not have a long-term plan for rehabilitating these abandoned mine sites. The Ministry recently determined rehabilitation costs for the 56 highest-risk contaminated sites alone to be \$372 million. However, it had no plans to carry out a detailed cost estimate for the remaining sites, where potential rehabilitation costs could range from \$163 million to \$782 million.
- The Ministry had conducted minimal inspections and follow-ups on abandoned mines and had inspected only 6% (248) of abandoned mines to ensure that they did not pose a risk to public health and the environment. Of 362 mines that were considered high-risk, only 142 had been inspected.
- The remoteness of the Ring of Fire requires significant infrastructure investment to open access to it and to encourage development in the region. In 2014, the provincial government committed \$1 billion to infrastructure in the region, contingent on matching funds from the federal government. However, the federal government did not commit to match the funds because of the lack of detailed plans for development. The Province's commitment alone will not be enough to meet the region's infrastructure needs.
- No minerals had been extracted yet from the Ring of Fire. In 2013, an international mining company that held the rights to develop the chromite deposits pulled out and sold most of those rights to a Canadian junior mining company. The Canadian company had no current plans to develop the chromite holdings. Other potential investors cannot mine most of the chromite in the region unless the Canadian company agrees to sell its rights.

In our report, we recommended, among other things, that the Ministry do the following:

- evaluate its current investment-marketing activities and determine whether new, more appropriate strategies should be implemented;
- ensure that requirements surrounding its Indigenous consultation process are clarified and can be easily understood by potential investors;
- establish a detailed plan for the development of the Ring of Fire with measurable outcomes

and regularly assess and report on progress in achieving them;

- inspect all high-risk abandoned mines that have not been inspected in the previous five years to determine whether these sites pose risks to public safety; and
- review and update, where necessary, the Province's mining fees, taxes and royalty regimes to ensure that Ontarians receive a fair share of the province's mineral resources.

We made 13 recommendations, consisting of 28 actions, to address our audit findings.

We received commitment from the Ministry that it would take action to address our recommendations.

## Status of Actions Taken on Recommendations

We conducted assurance work between April 1, 2017, and July 31, 2017. We obtained written representation from the Ministry of Northern Development and Mines (Ministry) that effective September 1, 2017, it has provided us with a complete update of the status of the recommendations we made in the original audit two years ago.

The status of actions taken on each of our recommendations is described in the following sections.

### Ontario Could Do Better to Attract Mining Investment

#### Recommendation 1

*To attract more investment in the province's mining sector, the Ministry of Northern Development and Mines should:*

- *fully evaluate the cost-effectiveness of its current investment-marketing activities and determine if new, more appropriate strategies should be*

*implemented (we made a similar recommendation in our 2005 Annual Report);*

**Status: Little or no progress.**

#### Details

At the time of our audit in 2015, the Ministry had a 2012 marketing strategy to promote Ontario as the premier destination internationally for mineral exploration, development and investments. Activities identified in the strategy include:

- building relations with the industry and other stakeholders;
- engaging the media to spread the message that Ontario is actively seeking new mineral investments;
- creating a presence at international and domestic events and trade shows; and
- building an online community for the sector to engage target audience(s).

However, we noted that the majority of its marketing efforts were focused on participating in about five selected trade and investment marketing events annually. The Ministry had not assessed the effectiveness of its marketing efforts, nor had it attempted to determine whether it was pursuing the right mix of activities to maximize its exposure to potential investors.

Since our audit, the Ministry has integrated its marketing strategy for the province's mining sector with the Ministry's other Trade and Investment Marketing activities, which target and engage with companies in order to attract and secure new investments in Northern Ontario, including in the mining sector.

In November 2016, the Ministry approved a new Trade and Investment Marketing Strategy to help job creation, investment and trade enhancements across Northern Ontario, including promoting investment opportunities in the province's mining sector. Performance measures identified in the strategy include:

- the amount in dollars of export sales opportunities identified;
- new qualified leads for potential investments;

- number of closed/won investment deals facilitated and resulting in direct jobs; and
- number of closed/won investment deals facilitated and amount invested.

At the time of our follow-up, the Ministry had not begun monitoring these performance measures for the mining sector and evaluating the cost effectiveness of its marketing strategies.

- *complete geological mapping projects and upload the final reports, including geological assessment reports from prospectors, on a timely basis to better facilitate the use of this information by potential prospectors;*

**Status: Fully implemented.**

### Details

Using information collected through geological surveys and field visits, the Ministry produces geological maps and reports that describe the structure, attributes, chemical composition, and physical properties of land in Ontario. The mining industry uses this geosciences information to identify and select areas for mineral exploration.

As such, it is important to provide high-quality and timely information to the industry to attract exploration and development to the province. However, our 2015 audit found that many mapping projects were not being completed on a timely basis, and the Ministry was slow to upload geological assessment reports submitted by prospectors for online access. At the time of our audit, mapping projects were on average 19 months behind schedule and there was a backlog of about 1,250 assessment reports to be uploaded online.

After our audit, in April 2016, a Project and Results Management Co-ordinator position was permanently filled to create a project monitoring and tracking system for all current geosciences projects. All decisions that affect project progress or changes are now required to be documented; we noted that the timeliness of these projects has improved since our audit. In addition, the Ministry no longer has a backlog of geological assessment reports to upload online.

- *ensure that the requirements surrounding its Aboriginal consultation process are clarified and can be easily understood by potential investors and Aboriginal communities with serious consideration of the Province assuming more of a leadership role.*

**Status: In the process of being implemented by March 2018.**

### Details

In cases where exploration or mine development on Crown land has adverse effects on existing Indigenous or treaty rights, the Province has the legal duty to consult with those communities. The level and amount of consultation is determined based on the degree of potential impact on the communities and the nature of the Indigenous and treaty rights in question.

During our 2015 audit, we noted that the Ministry would identify the Indigenous communities that need to be consulted and delegate aspects of the consultation process to the mining and exploration companies, such as providing information to the communities and ensuring the concerns the communities raised were addressed or minimized.

However, mining industry associations raised concerns about the delegation of the consultation process and indicated that the process discouraged private-sector investment. Further, a 2014 Fraser Institute report noted that the lack of clarity and understanding of Indigenous consultation was a factor in Ontario's low ranking among Canadian jurisdictions.

Since our audit, the Ministry has taken steps to improve the Indigenous consultation process by taking a direct and central role for early exploration activities. For example:

- The Ministry now requests that the Indigenous communities provide it with comments on any potential adverse effects on their Indigenous or treaty rights of the proposed activities.
- The Ministry may then direct any comments to the private companies that require further explanation, or to discuss and consider adjustments on the proposed activities in order to

mitigate potential adverse effects identified by the Indigenous communities.

For Indigenous consultation on advanced exploration and mine production, the Ministry will continue to delegate certain aspects of consultation to the private companies. The Ministry says that the companies can explain their projects better and know what alterations or changes can be made to accommodate comments and concerns from the Indigenous communities.

However, the Ministry is piloting a new process to increase the rigor of the consultation process for advanced exploration and mine production. This new process will involve Ministry staff and community members in a joint review process with the industry on large new or existing projects. This process will begin when an applicable mine closure plan is received by the Ministry for advanced exploration or mine production. The Ministry expects to receive the next mine closure plan by March 2018.

## Ring of Fire Development Has Been Slow

### Recommendation 2

*To help ensure the timely development of the Ring of Fire, the Ministry of Northern Development and Mines should:*

- establish a detailed plan with measurable outcomes, and regularly assess and report on progress in achieving them;

**Status: Little or no progress.**

### Details

In 2010, the Ring of Fire Secretariat was established to lead the overall development of the region, including co-ordination of infrastructure needs, economic development, the environmental assessment process, and Indigenous consultation.

However, our 2015 audit found that the government's development initiatives had few timelines for completion, and where target dates did exist,

they were missed. For instance, mine development cannot begin until environmental assessments and land use planning are complete and both were still incomplete at the time of our audit. Further, the Ring of Fire Secretariat had no performance measures to gauge and report on the effectiveness of the activities it had undertaken to help development in the region.

Since our audit, the Ministry has developed a plan with anticipated timelines and is internally reporting on its progress. However, the Ministry noted that the timelines for development continue to be adjusted based on current conditions and any number of external factors beyond the Ministry's control.

For instance, the project plans depend on achieving a number of milestones in partnership with the Indigenous communities, such as identifying a preferred corridor for an all-season road connecting some of the Indigenous communities. A Regional Community Service Corridor Study released in June 2016 was supposed to identify this corridor; however, it did not. Instead, it identified other issues that the Indigenous communities were seeking resolution on, including road ownership, governance, and the impacts of road access on the existing funding formula for remote communities. The Ministry is addressing these issues.

A draft set of performance measures was developed during 2015/16 based on the discussions at that time. However, with the shift to priorities noted in the June 2016 study, the prepared draft measures were no longer appropriate. The Ministry then decided to suspend the identification of Ring of Fire performance measures until clear priorities and direction were agreed to by the Chiefs of the Indigenous communities and senior management in the Ontario Government.

On August 21, 2017, the Province announced that it will support First Nations to plan and construct two all-season access roads connecting three First Nation communities to the existing provincial highway network. The First Nation communities are working to begin environmental assessments

for these projects by January 2018, with construction planned for 2019. With this announcement, the Ministry will now be updating its project plans and performance measures that were previously developed in 2015/16.

- *continue to engage all stakeholders, including the federal government, in the funding and development of the region;*

**Status: Little or no progress.**

#### Details

In the 2014 Budget, the government committed up to \$1 billion to develop strategic all-season industrial and community transportation infrastructure in the Ring of Fire. It also announced a multi-stakeholder development corporation to accelerate infrastructure development in the region.

At the time of our audit, the Ministry had not set any timelines for infrastructure projects in the Ring of Fire that could be funded from the government's \$1-billion commitment. Also, the corporation was intended to bring together both private and public sectors—including key mining companies, Indigenous communities and the federal government—to create partnerships and help with investment decisions in the transportation infrastructure; however, the corporation had no representation on the board of directors from any of these stakeholder groups.

Since our audit, the Ministry has worked with the federal government on projects in the Ring of Fire, including:

- expanding broadband connectivity for the Indigenous communities;
- supporting training in the areas of health and wellness; and
- promoting skills training to ensure the communities are able to participate in discussions on development.

However, there has been no progress on development of infrastructure projects. Discussions on development in the area depend on identifying a preferred corridor for an all-season access road; the Province just recently announced that it will sup-

port First Nations to plan and build two all-season access roads connecting three First Nation communities to the existing provincial highway network as noted in discussion of the first bullet point of **Recommendation 2**. Further, the Ministry has not applied to the federal New Building Canada Fund, which offers funds to assist with infrastructure projects that could lead to economic growth. Also, there has been no stakeholder involvement in the corporation, which has spent \$1.4 million, primarily on infrastructure studies, since its inception.

- *work to expedite negotiations with Aboriginal communities.*

**Status: Little or no progress.**

#### Details

In March 2013, the Chiefs of the Matawa Tribal Council, representing the nine First Nation communities in the region, requested a community-based regional process for negotiating with the government. A Regional Framework Agreement was signed in March 2014, with the purpose of establishing a protocol for negotiations between the communities and the Province. This was Phase 1 of the negotiations with the Chiefs of the Matawa Tribal Council.

Phase 2 of negotiations then began to plan for the shared priorities identified in this framework agreement, such as resource-revenue sharing, and regional and community infrastructure planning. However, there was no completion date for this phase. As of June 2017, Phase 2 was still in progress without a target completion date.

There is no commitment on specific targets for negotiations under the Regional Framework Agreement. However, as noted in discussion of the first bullet point of **Recommendation 2**, the Ministry is working with the Indigenous communities on resolving issues identified in the study released in June 2016 for a preferred corridor for an all-season road. As well, the Province has recently announced that it will support First Nations to plan and construct two all-season access roads connecting three

First Nation communities to the existing provincial highway network.

### Recommendation 3

*The Ring of Fire Secretariat should ensure that transfer payments made to Aboriginal communities in the Ring of Fire are used in accordance with the transfer payment agreements by obtaining the requisite reporting (progress reports, expense reports and audited financial statements) on a timely basis. The reports submitted should be detailed enough to show how the funds are spent.*

**Status: Fully implemented.**

#### Details

Since its inception in 2010, the Secretariat has transferred about \$32 million to the nine Indigenous communities in the region to help build knowledge within the communities to prepare for, and respond to, mining development within the region. The communities are required to provide reports for the payments they receive. However, at the time of our audit in 2015, we noted that these reports were not submitted on a timely basis, and the reports that were submitted contained little supporting documentation to show whether the funds were spent according to the transfer-payment agreements.

Since our audit, the Secretariat has undertaken several activities to improve the transfer payment reporting process. These include:

- developed a suite of tools and templates that can be used by key community staff in meeting reporting requirements. They were created from a review of previously provided reporting materials;
- provided the Indigenous communities with additional funds and hands-on coaching and support to help meet reporting requirements;
- created a joint Ontario-tribal council team (Joint Regional Framework Agreement Team) that meets regularly to discuss concerns, review material and respond to questions and requests from the com-

munities related to the requirements of transfer-payment agreements;

- aligned the quarterly reviews of program financials and milestones with the quarterly reporting requirements in the agreements. This ensures that work is proceeding as expected and that reporting material is provided on a timely basis; and
- updated its reporting templates so that the work done to validate reported expenses is clearly stated, including more explicitly identifying and tracking changes in activities and budget.

The Secretariat is also making efforts to obtain outstanding reports and track missed timelines. In our review of a sample of reports and the Secretariat's tracking sheets for 2016, we observed that the reports and supporting documents were submitted on a timelier basis to the Secretariat.

## Staking and Claims System Needs Improvement to Ensure Exploration Work Continues Responsibly

### Recommendation 4

*To ensure continual exploration on claimed land, and proper rehabilitation of sites where exploration has taken place, the Ministry of Northern Development and Mines should:*

- *disallow forfeited claims from being re-staked by the same owners until an appropriate period has passed (we made a similar recommendation in our 2005 Annual Report);*

**Status: Little or no progress.**

#### Details

The first step in exploration is for licensed prospectors to stake a mining claim, which gives them exclusive right to explore for minerals. As of April 2017, there were about 31,913 registered claims covering 3.5 million hectares of Crown land. To maintain a claim in good standing, the holder must perform



a minimum of \$400 worth of eligible exploration work annually for each claim unit (one claim unit is 16 hectares of land) and report these activities to the Ministry for approval.

Our 2015 audit noted that when claimholders forfeit mining claims because they have not performed the minimum exploration work, the Ministry allows them to re-stake the claims. This allows prospectors to maintain claims indefinitely without performing the required exploration work, which could negatively impact the discovery of mineral resources.

While the Ministry is working to identify some suspect claims and follow up with the owners, we noted there is still no plan to disallow the re-staking of claims forfeited by the same owners.

- *develop a risk-based plan to inspect sites undergoing exploration work with the potential to have a negative impact on the environment.*

**Status: Fully implemented.**

#### Details

The *Mining Act* requires rehabilitation of sites where exploration work has impacted the environment. Prospectors who perform moderate-impact assessment work, for example mechanized surface stripping greater than 100 square metres, are required to apply for an exploration permit and must perform rehabilitation work prior to the permit's expiration date.

In our 2015 audit, we noted that the Ministry's inspections of sites to ensure that sufficient rehabilitation has been completed were limited. Only a total of 41 inspections were completed in 2013 and 2014, representing only 6% of the sites with an active plan or permit as of December 2014.

Since our audit, the Ministry has been developing a risk-based approach to inspect sites that are undergoing exploration work. The factors that will be considered in identifying high-risk sites for inspections include:

- the scope of early exploration activities;

- the scale of the proposed activities on the site; and
- the compliance history for the site.

The Ministry completed the development of the risk-based approach in July 2017. The Ministry indicated that it will review existing exploration sites on an annual basis and use the risk-based approach to decide which sites to inspect.

## Financial Assurance May Be Insufficient to Cover Mine Close-Out Costs

### Recommendation 5

*To ensure submitted closure plans are adequately reviewed and reflect activities that are taking place on a mine site, the Ministry of Northern Development and Mines should:*

- *segregate the responsibility for the promotion of mineral exploration and development in Ontario from those responsible for the oversight of mine-closure plans;*

**Status: Fully implemented.**

#### Details

The *Mining Act* requires a mining company to submit a closure plan and financial assurance for the estimated cost to rehabilitate a site before it commences advanced exploration activities or mining operations. In 2015, the Ministry had 13 in-house Mineral Exploration and Development Consultants. They were responsible for overseeing and reviewing the industry's mine-closure plans. This included assessing whether the amount of the financial assurance provided by mining companies will be sufficient to rehabilitate sites when advanced exploration or mineral development activities cease.

Our 2015 audit found that the consultants had a conflicting role. As well as overseeing mine-closure plans, they also promoted mineral exploration and development in Ontario by helping the industry through the regulatory process to develop mining

projects. This resulted in instances in which the consultants did not recommend the more stringent rehabilitation requirements on the industry as advised by Ministry specialists or inspectors because they felt the requirements created hardship for mining companies.

Since our 2015 audit, the Ministry has taken steps to ensure that the consultants have a better understanding of their roles and responsibilities for the oversight of mine-closure plans. These steps include reviews of staff roles and responsibilities during staff meetings held twice a year and clarification of expectations of the consultants' roles in their employee performance development and learning plans.

In addition, the Ministry has also hired a Closure Plan Co-ordinator to work directly with the consultants to ensure that technical specialist(s) review closure plans. The role of the Closure Plan Co-ordinator is discussed further under the second bullet point of **Recommendation 5**.

- *develop specific guidelines on when high-risk components of closure plans should be subjected to expert review;*  
**Status: Fully implemented.**

#### Details

The Mineral Exploration and Development Consultants can choose to pass along high-risk components of mine-closure plans for technical review by the Ministry's three rehabilitation specialists, who have technical expertise in different mine hazards such as tailings, and acid and metal leaching into the environment. However, in our 2015 audit, we noted there were no guidelines regarding when certain components of closure plans should be subject to technical review. In our review of a sample of closure plans, we found only 30% of files had any evidence that specialists' input had been sought. We also found plans that were not reviewed by a specialist but had risk factors that may have warranted a specialist's review.

During our 2015 audit, the Ministry hired a Closure Plan Co-ordinator, who is a professional engineer, to start addressing this recommendation. The role of this new position is to ensure a more thorough and consistent review of the rehabilitation requirements and financial assurances in the closure plans. The Co-ordinator works directly with the consultants to review all closure plans and ensure appropriate technical reviews have been completed by the relevant technical specialist(s) for high-risk components of the closure plans.

All reports and correspondence regarding the closure plans are now centrally stored on a shared drive and form the technical and administrative recommendation to the Director of Mine Rehabilitation for approval.

- *inspect sites that have a closure plan in place on a regular basis to ensure the plan accurately reflects current mining activities on the sites;*  
**Status: In the process of being implemented by December 2017.**

#### Details

At the time of our 2015 audit, the Ministry was not regularly conducting site inspections to ensure that the closure plans for mines accurately reflected the mining activities that were taking place. Of the 162 closure plans on file as of August 2015, 16 had not been inspected within the Ministry target of five years, and 10 had never been inspected.

As of August 2017, the Ministry has identified 176 closure plans, of which 72 are high risk because they are for active sites. We noted that the Ministry has inspected all but five of the 72 high-risk active sites within the last five years and has committed to completing these inspections by December 2017. For the remaining sites that are inactive or closed-out, the Ministry has established a risk-based approach to inspect these sites and this is documented on its annual master work plan schedule.

- *enforce the rehabilitation requirements recommended by ministry specialists and inspectors*

*and take proactive measures to ensure that the financial assurance is adjusted accordingly on a timely basis.*

**Status: Fully implemented.**

#### Details

As discussed in the first bullet point of **Recommendation 5**, our 2015 audit noted that the Mineral Exploration and Development Consultants were not always enforcing the rehabilitation requirements recommended by Ministry specialists and inspectors. For example, in one case, we noted the consultant had accepted financial assurance for land re-vegetation at a cost that was 10 times lower than the recommended cost.

Since our audit, the Ministry has started a process to track the rehabilitation requirements recommended by the Ministry specialists and inspectors and the responses from the mining companies. This new tracking document will help ensure that requirements identified by the specialists and the inspectors are addressed.

The Closure Plan Co-ordinator, whose role is to ensure the closure plans have received the appropriate technical reviews, reviews this tracking document prior to filing the closure plans. The tracking document is also included in the briefing to the Director of Mine Rehabilitation for approval.

Any amendments to closure plans, and any increases in financial assurance as a result of the technical review of the plans, are also stored in a shared directory at the Mineral Development and Lands Branch of the Ministry.

#### Recommendation 6

*To ensure that the amount of the financial assurance collected by the Ministry of Northern Development and Mines (Ministry) provides sufficient security against potential liabilities related to mine close-out costs, the Ministry should:*

- *require mining companies to regularly update their estimated mine close-out costs and the related financial assurance to reflect changing*

*market conditions and changes to rehabilitation standards (we made a similar recommendation in our 2005 Annual Report);*

**Status: Little or no progress.**

#### Details

Mining companies are required to submit closure plans with cost estimates for rehabilitation of the mining site prior to starting advanced exploration activities or mining operations. These cost estimates are based on the market rates at the time of submission and are used in calculating the amount of financial assurance to be held as a security if the mining company fails to perform adequate rehabilitation work. Mining companies are not required to regularly update the estimated costs to reflect changing market conditions and rehabilitation standards.

Our 2015 audit found that one-third of closure plans were filed or last amended in the 1990s and early 2000s. Applying a simple rate of inflation adjustment resulted in a potential \$63-million shortfall between the financial assurances the Ministry originally collected and the potential costs of closing and rehabilitating the mining sites. Further, the Ministry took no action to ensure closure plans and related costs were compliant with current standards. Over 20% of closure plans predated the rehabilitation standards implemented in 2000, and two-thirds of these plans were submitted during a period when the Ministry had no technical experts.

Since our 2015 audit, the Ministry has researched practices in other jurisdictions and developed policies that support the regular updating of mine closure costs. However, the Ministry has not demonstrated that it is implementing these practices.

- *verify when it inspects progressive rehabilitation prior to returning a portion of the financial assurance whether mine development is still in line with the existing closure plan, and that no other hazards exist on site which the Ministry was not previously aware of;*

**Status: Fully implemented.**

### Details

Over the life of a mine or exploration activities, companies can request the return of portions of the financial assurance after they have undertaken progressive rehabilitation work. This portion is returned following a Ministry inspection of the site and acceptance of the work. In our 2015 audit, we noted concerns over the limitations of these inspections and an instance of the Ministry returning financial assurance of \$500,000 and subsequently becoming liable for clean-up of contamination on the same site at an estimated cost of \$2 million.

Since our audit, the Ministry is documenting discussions with the mining companies on changes to the site that have occurred since the most recently amended closure plan. The Ministry also takes into account the amount of financial assurance required to conduct the remaining rehabilitation on the site. This is done when mine owners request the return of financial assurance. We noted on several occasions, the Ministry returned lower amounts than were requested after it identified other hazards on sites that increased estimated costs for rehabilitation.

- *reassess its practice of allowing certain companies to self-assure mine close-out costs (we made a similar recommendation in our 2005 Annual Report).*

**Status: Little or no progress.**

### Details

If a mining company's credit rating meets or exceeds two of the following credit rating thresholds, the company is allowed to self-assure the mine close-out costs for the entire life of the mine and is not required to provide any other form of security to the Ministry:

- A (low) from the Dominion Bond Rating Service Limited;
- A3 from Moody's Investors Services Inc.; and
- A- from Standard and Poor's Inc.

The company is allowed to self-assure for the first half of the life of a mine if that first half is at

least four years and the company meets or exceeds BBB (low), Baa3, and BBB- rating from the same three credit rating agencies.

We noted that although this is allowed under the *Mining Act*, it exposes the government to some financial risk. If the companies are unable to meet their obligations, the rehabilitation costs become the Province's responsibility. The Ministry has yet to perform any work specifically assessing this practice.

The Ministry stated that it is currently supporting the "Red Tape Challenge" for the mining sector. The Red Tape Challenge is a government-wide initiative in which external stakeholders, such as businesses and industry, submit concerns relating to 'red tape' (barriers) that limit the private sector's work in increasing economic growth. The feedback and participation from the mining sector is expected to be completed by March 2018. The Ministry is awaiting these results to assess the next steps on the issue of self assurance.

### Recommendation 7

*To inform the public on the potential liabilities related to mine close-out costs, the Ministry of Northern Development and Mines (Ministry) should annually publish the approved mine closure plans (for rehabilitation and restoration), including the estimated closure cost and associated financial assurance held by the Ministry.*

**Status: In the process of being implemented by October 2017.**

### Details

Although the mine-closure plans may be viewed by the public at any time by directly contacting the Ministry, at the time of our 2015 audit, the information on the amount of financial-assurance associated with the closure plans was not made available.

Since our 2015 audit, the Ministry has advised mining companies that the financial assurance component of their mine-closure plan will be publicly available. The Ministry has compiled a list of all companies with filed closure plans and the

corresponding financial assurance. The Ministry has confirmed that this information will be made available on its website by October 2017.

### Recommendation 8

*The Ministry of Northern Development and Mines should work with the Ministry of Environment and Climate Change to assess the benefits of larger mining projects in Ontario undergoing a provincial environmental assessment similar to the environmental assessments conducted in other Canadian provinces.*

**Status: Little or no progress.**

#### Details

An environmental assessment is a process undertaken to identify, predict and mitigate any effects that a proposed project may have on the environment before the project begins. Ontario is the only province in Canada that does not require a provincial environmental assessment to be performed for mining projects.

The Ministry has identified that little to no progress has been made on this recommendation. The Ministry will continue to work with the Ministry of the Environment and Climate Change as it looks at ways it can further improve the existing program as committed to in the Environmental Assessments audit in our *2016 Annual Report*.

## Abandoned Mines Pose Significant Financial Risks to Ontario

### Recommendation 9

*To protect public health and safety and the environment from the risks posed by abandoned mines, the Ministry of Northern Development and Mines should:*

- as soon as possible inspect all high-risk abandoned mines that have not been inspected in the last five years to determine if these sites pose risks to public safety;

**Status: In the process of being implemented by March 2019.**

#### Details

The Ministry currently knows of about 4,400 abandoned mines in Ontario containing over 15,000 mine hazards. The hazards include shafts, open pits, structures on the land, rock piles and tailings waste. The Crown holds about 2,400 of these abandoned mines and the other 2,000 are privately held. The Province is responsible for the clean-up of any hazards in abandoned mines held by the Crown and for monitoring and enforcing the rehabilitation of privately held mines.

At the time of our 2015 audit, we noted that the Ministry conducted minimal inspections and follow-up activities on abandoned mine sites to ensure that these mines do not pose a threat to human health or the environment. In the five years preceding our audit, the Ministry had only inspected about 6% (248) of the approximately 4,400 abandoned mines on both Crown and privately held sites. Of the 362 high-risk sites, only 142 (39%) had been inspected at least once in the previous five years by the Ministry.

Since our audit, the Ministry has developed a schedule for the inspections of 44 high-risk mine sites with tailings (tailings are fine-grain material left over from the processing of mineral ores; tailings are held in place by earth-filled dams). The Ministry is developing an inspection schedule for the remaining high-risk abandoned mine sites. The inspection programs and plans for these sites were approved in August 2017. The inspection schedule will depend on the assessment of the sites using the prioritization ranking system, as discussed in the second bullet point of **Recommendation 9**, along with the date of the sites' last inspection. The Ministry expects to complete these inspections by March 2019.

- *adopt a risk-based process to regularly monitor and inspect previously inspected abandoned mines to ensure that the conditions at the sites are not posing a risk to human health or the environment (we made a similar recommendation in our 2005 Annual Report);*

**Status: Fully implemented.**

### Details

Since our 2015 audit, the Ministry has developed a prioritization ranking system to identify the abandoned mines requiring monitoring and inspections. The results of the ranking, the Ministry's internal knowledge and expertise, and concerns from the public or Indigenous communities determine whether the sites are selected for inspection.

For example, highest priority abandoned mines that have tailings and are estimated to cost more than \$10 million to rehabilitate will rank higher on the list than sites that have only physical hazards. Common mine features on these high-risk sites include deep unprotected surface openings, waste rock piles with acid rock drainage, and dilapidated buildings.

- *develop an operational and financial short- and long-term plan to clean up mine sites posing a threat to human health and safety or the environment (we made a similar recommendation in our 2005 Annual Report).*

**Status: Little or no progress.**

### Details

At the time of our 2015 audit, the Ministry did not have a current estimate of the total costs of, or a long-term plan for, rehabilitating physical hazards and contamination on all abandoned mine sites in Ontario.

Since our audit, the Ministry has created a short-term plan of work on only 44 abandoned mine sites. The Ministry plans to perform site assessments over the next three to four years to obtain the scientific data to develop a long-term plan to clean up sites that are posing a threat to human health and safety or the environment. The plan will be dependent on its annual budget allocations.

### Recommendation 10

*To ensure that the owners of privately held abandoned mines take all reasonable steps to reduce potential health and environmental risks, the Ministry of Northern Development and Mines (Ministry) should:*

- *take timely follow-up actions to ensure that private owners are complying with Ministry inspection results;*

**Status: In the process of being implemented by September 2018.**

### Details

In our 2015 audit, we noted that the Ministry has rarely exercised its authority to issue orders to private owners to enforce compliance; instead, it relies on voluntary compliance by the private owners. In the five years preceding our audit, only three such orders were issued by the Ministry to force private owners to undertake rehabilitation work or to submit a closure plan, and only one charge was laid, resulting in a fine of about \$10,000. As of May 2015, none of the issues identified in 17 inspection reports had been resolved. In fact, the Ministry had not followed up with 10 of the 17 private owners after the inspection reports were mailed to them.

Since our 2015 audit, the Ministry has improved its tracking system for inspection reports because now each follow-up action has a set compliance target date. This tracking system identified unrectified actions dating back as far as 2012. The Ministry is also in the process of acquiring software that will track and monitor actions to ensure that timely follow-up is occurring. The Ministry expects to start using this software by September 2018.

- *develop a strategy to make private owners aware of the requirement to rehabilitate abandoned mines on their land.*

**Status: Little or no progress.**

### Details

During our 2015 audit, the Ministry informed us that private mine owners are not always aware of the responsibility to rehabilitate their sites and submit rehabilitation reports. Although it was aware of this, the Ministry had not done everything to build awareness of the requirement to rehabilitate abandoned mines.

We noted that British Columbia promoted compliance with its rehabilitation requirements by performing outreach activities, conducting media campaigns, and developing guidelines and education materials to increase awareness, educate, and motivate voluntary compliance.

Since our 2015 audit, the only effort the Ministry has made to improve private owners' awareness of their responsibilities was to propose changes in the wording of letters sent to the private owners. The Ministry has just in July 2017 started to explore other communication strategies to promote private mine owner compliance.

### Recommendation 11

*The Ministry of Northern Development and Mines should:*

- *update the information on abandoned mines in Ontario and their associated mine hazards in its Abandoned Mines Information System (AMIS);*  
**Status: In the process of being implemented by December 2017.**

#### Details

The Ministry developed and implemented the Abandoned Mines Information System (AMIS) in 1988/89 to create a centralized way to track all abandoned mines in Ontario. The purpose was to capture data about all known abandoned mines and their associated hazards so that the Ministry can prioritize these sites for rehabilitation.

Our 2015 audit noted that the information contained in AMIS was outdated because the information came primarily from site assessments completed in 1993 and 2000. The remaining information came from the limited inspections conducted by the Ministry.

Since our 2015 audit, the Ministry continued to update the AMIS system with additional information on 918 sites. With this update, the Ministry asserts that this brings them to an 80% completion level of information on known abandoned mines as of August 2016. The Ministry plans to complete

updating the system with information on all known sites by December 2017.

- *improve the functionality in AMIS to identify sites for rehabilitation that pose the greatest risk to public health and safety, and to the environment.*

**Status: In the process of being implemented by December 2017.**

#### Details

Another AMIS limitation our 2015 audit noted was that a key system function was not producing accurate information. The capability to rank sites according to a public safety and environment score did not function properly and was not being used.

Since our 2015 audit, the Ministry has been addressing this issue through the development of a standalone priority-scoring tool that will use AMIS data. This new tool will include enhancements to the screening criteria, including 15 prioritization questions to identify and rank the sites based on their potential risk to public health and safety and to the environment. The results of the new tool will feed into the Ministry's overall priority-ranking system. The Ministry said that the new priority-ranking tool will be in use as of December 2017.

## Provincial Revenue from Mining Low in Relation to Significant Value of Mineral Resources Extracted

### Recommendation 12

*To ensure that Ontarians receive a fair share of the province's mineral resources while remaining competitive to attract mining investments to the province, the Ministry of Northern Development and Mines should:*

- *review and update where necessary the province's current mining lease rate, mining profit tax, and diamond royalty regimes (we made a similar recommendation in our 2005 Annual Report);*  
**Status: In the process of being implemented by March 2019.**

### Details

Our 2015 audit noted that, over the previous 20 years, the Province had collected less than 2% of the value of minerals extracted by mining companies. The tax system that had been in place since 2004 was one of the lowest in Canada. According to a 2013 University of Calgary research paper and its addendum, updated to 2015, Ontario's marginal effective mining tax rate was only 5.6%, considerably lower than the national average of 8.6%, as of September 2015.

The Ministry is performing a review of the Province's current mining lease rate and mining lands tax as part of the overall Mining Act Modernization. The Treasury Board Secretariat approved the review in 2016/17, and, as part of the review, the Ministry is researching fee structures in other provinces and consulting with other stakeholders. The Mining Act Modernization is expected to be completed by February 2018, with updated fees ready for announcement by fiscal year end 2017/18. The Ministry anticipates that the new fees could start as early as the 2018/19 fiscal year. Mining profit tax is not governed under the *Mining Act*.

Our 2015 audit also raised questions about the revenues collected through Ontario's only diamond mine. The Province had not undertaken a formal assessment of its diamond royalty regime since it was introduced in 2007. At the time of our audit, the mining company had extracted \$2.5 billion worth of diamonds but paid less than 1% of the value of the diamonds extracted. The Ministry indicated that with the closure of the only diamond mine targeted for early 2019, it was not considering a change to the diamond royalty structure in the near future.

- *take timely collection actions for amounts owing that are in arrears (we made a similar recommendation in our 2005 Annual Report).*

**Status: Fully implemented.**

### Details

If payments of rents or taxes are not made, the Ministry has the right under the *Mining Act* to declare the privately owned land forfeited and to terminate the mining leases and licences. However, our 2015 audit noted that the Ministry had not taken timely action on collecting outstanding payments.

As of March 31, 2015, accounts receivable related to rent and taxes totalling \$1.7 million had been in arrears for more than two years. The Ministry informed us that some of those properties had not been forfeited because of liabilities associated with mine hazards on the land.

Since our 2015 audit, the Ministry has updated its policies on invoicing and collections and, as of June 2017, amounts in arrears for more than two years were \$2.3 million, of which \$1.4 million is to be collected through a payment plan with the mining company, starting in October 2017.

## Performance Measures Do Not Address Ministry Goals and Responsibilities

### Recommendation 13

*The Ministry of Northern Development and Mines should develop more comprehensive measures to assess its effectiveness in meeting its goals of developing the province's mining sector, while minimizing the impact of development on public health and safety, and on the environment, and regularly report to the public its progress in meeting its goals (we made a similar recommendation in our 2005 Annual Report).*

**Status: In the process of being implemented by March 2018.**

### Details

Our 2015 audit identified that the Ministry lacked performance indicators to assess its effectiveness in achieving the overarching goals and objectives in the *Mining Act*. In December 2016, the Ministry submitted performance measures to Treasury Board that are to be implemented in the 2017/18



fiscal year. These measures will collect and report data including:

- Ontario's percentage of all mining exploration spending in Canada;
- the percentage of decision makers who used the Ministry's geosciences products and services to support their mineral investment decisions;
- the percentage of participants in mineral development and/or exploration who state that Ministry services increased their understanding and compliance with their obligations under the *Mining Act*; and

- the percentage of Aboriginal Participation Funding recipients that show growth in their organizations and activities as a result of the funding.

The Ministry also is working on developing performance measures for all of its other programs required as part of the annual budget submission from all provincial ministries to Treasury Board. The Ministry expects to have its first set of performance measures completed by March 2018.