



MiningWatch Canada
Mines Alerte

THE BIG HOLE

Environmental Assessment and Mining in Ontario



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Introduction

The history of large-scale industrial mining and refining in Ontario goes back nearly 200 years. Major mining camps have been developed at Sudbury, Timmins and Red Lake, and many small mines exploit more modest local resources. Mining's historic legacy is one of dispossessing Indigenous peoples of their territories, of economic booms and busts and of substantial environmental degradation, perhaps most significantly, the extensive impacts of smelting in the area surrounding Sudbury.

In 2013, Ontario produced \$9.8-billion worth of minerals, with gold, copper and nickel making up 29%, 16% and 15% of the total value respectively.¹ In 2011, 24,000 people worked in the mining sector, which, along with oil and gas, represented 1.4% of provincial GDP for that year.²

Recently there has been renewed interest in the sector from political leaders seeking a way out of the economic doldrums that have followed the 2008 recession and a decline in the manufacturing sector. Chromite, nickel and copper deposits discovered in the so-called Ring of Fire area of northern Ontario have helped fuel this attention.

Industry and the provincial government portray the modern mining industry as a leading-edge actor that responsibly addresses health, safety and environmental challenges inherent in the sector. For example the Ontario Mining Association website states:

With a clear focus on the future, Ontario's dynamic mining industry is continually evolving to meet society's changing needs and expectations. It is not just about what and how much we mine, but about our guiding values. Our members are committed to prioritizing the health and safety of their employees; minimizing the impact of their activities on the environment by adopting innovative technologies and approaches; contributing to the development and enhancement of local economies; and investing in the future by supporting human capital, education, research and development.³

One area where the industry is clearly *not* meeting society's expectations is environmental impact assessment (EA), a widely used planning process the OECD defines as "an analytical process that systematically examines the possible environmental consequences of the implementation of projects, programmes and policies".⁴

There is no system in place to ensure that existing standards of EA practice are applied to all mines in Ontario. This represents a really *big hole* in both the province's environmental safe guards and in the regulatory oversight of the mining sector. This report explores this hole and provides realistic recommendations for addressing it.

Negative Environmental Impacts of Mining

Large-scale mining of metals and other minerals can have a range of profound impacts on surrounding environments, communities and regions. Jobs and revenues to governments can be a positive result of mining but as an inherently unsustainable and volatile industry, mining is challenging, if not impossible,

¹ Natural Resources Canada. Mineral Production Statistics. 2015. <http://sead.nrcan.gc.ca/prod-prod/2013-eng.aspx>

² Ontario Ministry of Agriculture and Rural Affairs. Economic Indicators. 2014. http://www.omafra.gov.on.ca/english/stats/economy/gdp_all.htm

³ Ontario Mining Association. Ontario Mining. 2012. <http://www.oma.on.ca/en/ontariominning/OntarioMining.asp>

⁴ OECD. Glossary of Terms. <http://stats.oecd.org/glossary/detail.asp?ID=828>

to fit into a framework of truly sustainable community development. While regulations and practices have improved the environmental performance of the industry, significant issues remain.

From an economic perspective, governments and communities are receiving fewer and fewer benefits from mining a given amount of material than in past decades.

Examples of negative environmental and social impacts of contemporary mining under a “modern” legislative regime are briefly described below. These mostly refer to smaller mines operated outside the major mining camps of Timmins, Sudbury and Red Lake. That’s not to say that there are not ongoing negative impacts from the mining operations at these three sites but the long-standing presence of mining in these areas makes it difficult to distinguish current impacts from those that occurred during eras of less regulation and from activities related to rehabilitation efforts.

There have also been significant labour and safety issues at mines in Timmins and Sudbury that we do not cover here as these are not typically part of an environmental assessment process – which is the focus of this report.

Case studies summarized later in this report are illustrative of the concerns cited above. For examples of positive social impacts, readers can access a variety of government and industry publications and websites such as: Ontario Mining Association, the Ministry of Northern Development and Mines and Natural Resources Canada.

Tailings spill into Matachewan River

In October 1990, 150,000 m³ of tailings from the closed Matachewan Consolidated mine spilled into the Matachewan River, sending a plume with elevated lead levels into Lake Temiskaming.⁵ The Ontario Government spent at least \$1.75-million responding to the spill and settled with one of the responsible companies, Goldtek, for \$40,000.⁶ While the closed mine had not been rehabilitated to current standards, we know that tailings spills are not a thing of the past – as witnessed by the recent breach at the operating Mount Polley Mine in British.

Pic River

In the same year (1990), a breach of the tailings pipeline at the Golden Giant Mine near Marathon (now part of Barrick Gold’s Hemlo operations) released 600 m³ of tailings with high concentrations of cyanide into the Black River watershed. The resulting concentrations of cyanide likely caused substantial mortality of aquatic life downstream.⁷ Concerns about safety led the Ojibway of Pic River to replace its then relatively new down-stream surface water intake system, and the unplanned for expenditure resulted in a variety of other community priorities being delayed.⁸

McWatters Mine’s Toxic Effluent

While in any given year, a number of operating mines in Ontario may not meet the relatively permissive provincial and federal effluent standards, the McWatters nickel mine in the Timmins area stood out in 2010 and 2011 as having failed a large number of tests.⁹ The mine’s effluent was repeatedly out of compliance due to high levels of nickel and its acute toxicity levels. This meant that at least half the trout

⁵ Ministry of the Environment. Matachewan Mine Tailings Spill Update. 1990.

https://archive.org/stream/matachewanmineta00ontauoft/matachewanmineta00ontauoft_djvu.txt

⁶ The Northern Miner. Goldtek cleared at Matachewan. 1992. <http://www.northernminer.com/news/goldtek-cleared-at-matachewan/1000176622/?&er=NA>

⁷ A. Laine. Water Quality In the Hemlo, Ontario, Gold Mining Region. Prepared for Ministry of the Environment. 1992.

⁸ Sierra Legal Defence Fund/Ecojustice. Waterproof: Canada’s Drinking Water Report Card. 2001.

<http://www.ecojustice.ca/publications/reports/waterproof-canadas-first-national-drinking-water-report-card/attachment>

⁹ Ministry of Environment. Industrial Sewage Compliance Reports 2010 and 2011.

and/or water fleas (*Daphnia*) experimentally put into a sample of the mine's effluent, were dead after 96 hours. Because environmental effects monitoring reports are not made publicly available, we cannot comment on the environmental effects of releasing this effluent. The mine shut down in 2012 due to a drop in the price of nickel.

Unimin Mine Dust and Noise

Unimin mines the industrial mineral nepheline syenite from two open pit operations east of Peterborough. The tailings waste from processing the ore is dry-stacked on each site. Recent increases in production have resulted in a substantial increase in the size of the tailings piles and the amount of activity at the mine. The tailings piles have caused serious air quality concerns for local residents (permanent and seasonal cottagers) with the Peterborough County Health Unit, which has issued public advisories recommending that people stay inside when there is visible dust in the air. Residents have also expressed concern about the level of noise from the mine. People living in the area approached the company and provincial government to pursue a remedy to the situation. Unsatisfied with the response, they filed a petition with the Environment Commissioner of Ontario in March 2013.¹⁰ Since that time, updated management practices have been implemented and air quality in 2014 seems to have improved over the previous summers. Concerns about noise levels persist.

Conflicts over Exploration

Mining does not need to take place for negative social and environmental impacts to occur from the activities of the industry – as the following examples illustrate. Local opposition to mineral exploration saw the incarceration of First Nations leaders from the Oji-Cree community of Kitchenuhmaykoosib Inninuwug (KI) and from the Ardoch Algonquin in 2007. In 2010, tree cutting by KWG on their proposed access route to the much-hyped Ring of Fire mineral deposit created ecological and cultural impacts that could have been avoided with better communication, consultation and consent processes, and environmental review¹¹. Fortunately, improvements to the requirements for consultation with First Nations and Metis people, the withdrawal of crown lands from staking in the south and a drop in mineral prices have all contributed to a decrease in conflicts over exploration activities in the last few years. It remains to be seen whether the “modernized” mining act will hold up under a more aggressive and well-funded industry should another boom take place.

Socio-Economic Issues

Most environmental impact processes consider social and economic aspects of proposed projects, although the extent to which this is the case varies widely. The social benefits to mining in Ontario are not what they could be, given its low effective tax rates on mining (the lowest in Canada) and a trend toward increasing the shipping of untreated and un-refined minerals out of the province. There are also a great many government subsidies and expenses related to the industry that are typically left out of the industry's accounting of economic benefits. In 2002, MiningWatch and the Pembina Institute determined that Ontario receives less in mining taxes than it spends on subsidies and expenses related to managing the sector.¹²

If done well, socio-economic analysis of proposed mines would grapple with this reality and could guide project-specific and sector-wide improvements in the social return on mining projects.

¹⁰ Ministry of Environment. EBR Application for Review, Dust and Noise Emissions from Unimin Mines, Peterborough, Decision Summary. <http://www.eco.on.ca/uploads/Ministry%20Application%20Decisions/2014/R2012018denied.pdf>

¹¹ R. Garrick. Concerns grow over rail survey. Wawatay News. 2010. http://www.wawataynews.ca/archive/all/2010/4/29/Concerns-grow-over-rail-survey_19763

¹² MiningWatch Canada and Pembina Institute. Looking Beneath the Surface. 2002. <http://www.miningwatch.ca/looking-beneath-surface-report-released-real-costs-mining>

EA and Mining in Ontario

In most of Canada and elsewhere in the world, environmental assessment (EA) is an established process that provides the means to anticipate and identify ways to prevent or at least reduce the likelihood of negative impacts of major projects. They are also a way for affected communities, the public and interested stakeholder groups to influence decision making. There are inherent challenges and contradictions related to mining and sustainability, and a well-run EA process can assess the trade-offs and enhance the selection of the best possible alternative.

Ontario's Environmental Assessment Act came into force in 1976 but in a variety of ways, the vision of EAs' value has been lost in Ontario – as was noted in 2008 by the province's Environmental Commissioner:

...environmental assessment has a crucial role to play in our lives; it should be society's pre-eminent tool to carry out farsighted planning for public infrastructure in the name of the public good. Unfortunately, Ontario has been long burdened with an EA system where the hard questions are not being asked, and the most important decisions aren't being made – or at least are not being made in a transparent, integrated way. The province has increasingly stepped away from some key EA decision-making responsibilities, and the Ministry of the Environment (MOE) is not adequately meeting its vital procedural oversight role. As a result, the EA process retains little credibility with those members of the public who have had to tangle with its complexities.¹³

In late 2013, the Canadian Environmental Law Association (CELA) filed a petition with the Commissioner requesting a review and reform of the Act. Among other criticisms, the CELA lawyers noted that:

...there is an excessive number of environmentally significant undertakings (and proponents) which have been unjustifiably exempted from the EA Act, thereby undermining the scope and effectiveness of the Act.¹⁴

Mining is an excellent case in point for the Commissioner's and CELA's criticisms on Ontario's EA process.

Table 1 (next page) provides a summary of how mining projects relate to various provincial and territorial EA regimes across Canada. Ontario is unique in being the only jurisdiction in Canada to not apply its EA process to the full extent for mining projects. This is not to say that other jurisdictions always undertake rigorous and thoughtful analyses and consultations process for mines – but they at least provide a starting point for this to happen. Not so in Ontario.

The Ontario government explains this puzzling situation this way:

“Ontario's EAA does not usually apply to an entire mine project because the EAA does not apply to private companies unless designated by regulation or the company volunteers to be subject to the requirements of the EAA.”¹⁵

It is well within the bounds of the Environmental Assessment Act (Section 3b) for the government to designate mining as reviewable as was done for landfill projects. Up to now, it has simply chosen not to.

¹³ Environment Commissioner of Ontario. Getting to K(no)w 2007/2008 Annual Report. 2008.

http://www.ecoissues.ca/Environmental_Assessment:_A_Vision_Lost

¹⁴ R. Lindgreen and T. Maclauchlin. Application For Review, Re: Environmental Assessment Act. 2013.

<http://www.cela.ca/sites/cela.ca/files/EBR-App-for-Review-of-EA-Act.pdf>

¹⁵ Ontario Ministry of Northern Development and Mines, Ring of Fire Secretariat. Environmental Assessment. 2012.

<http://www.mndm.gov.on.ca/en/ring-fire-secretariat/environmental-assessment>

Furthermore, there is also a legal argument that even without a designation for mining, the legislation requires an EA process for this activity.

The above statement from the government notes that companies may *volunteer* to have the EAA act apply to them – and in fact, many companies with higher profile mining projects in Ontario have recently done just that. This includes the two initial projects in the Ring of Fire, the Hammond Reef Project, Rainy River Project and Hard Rock Gold Project. There are, however, notable exceptions that include the Goliath Project, the DeBeers new diamond mining project (which they consider an expansion of the operating Victor Mine), and many other exploration, mining and mineral processing projects with the potential for significant negative environmental impacts.

Table 1		
Jurisdiction	EA Applied to Mines	Threshold/Trigger
Federal	Yes	3,000 tpd or 600 tpd for gold and rare earth mines. Some mines are not included (eg. industrial minerals, potash)
Alberta	Yes	All oil sands mines and coal mines over 45,000 tpy
BC	Yes	75,000 tpy
Manitoba	Yes, and to mills, refineries & smelters	All mines enter a screening process where technical review and public comments determine type of review.
New Brunswick	Yes	“all commercial extraction or processing of a mineral as defined in the Mining Act”
Newfoundland and Labrador	Yes	All mines and mineral processing.
Nova Scotia	Yes	All mines and bulk sampling over 100 t.
Nunavut	Yes and exploration activities	A screening phase looks at ecological, harvesting, socio-economic, public concern and technological issues to determine if a full review occurs.
NWT (McKenzie River Watershed)	Yes and exploration activities	Exploration and mining activities require a land use permit that triggers a screening. Full reviews are done for all mines and some exploration projects.
Quebec	Yes	2,000 tpd for metal mines, all rare earth or uranium mines and other mines over 500 tpd.
Saskatchewan	Yes	Development projects with potential impacts must submit to screening.
Yukon	Yes and exploration activities	Smaller exploration projects screened by regional office. Larger projects and mines are screened by executive committee with all mining projects and some exploration projects going to a full review.

Appendix 2 provides a listing of 91 mining operations and projects in Ontario and provides details about whether they have undergone a provincial or federal EA. Of the total, there are eight projects and operating mines that have undergone a provincial EA – all through voluntary agreements. All eight of these were also required to undertake a federal EA, most under the former Canadian Environmental Assessment Act. The Hard Rock Project and Coté Gold Mine are being reviewed under the substantially altered 2012 legislation (see below). Several of the 91 mines went into production decades ago, before EA legislation was in place, but there are relatively few that have been in constant production. The re-starting of a mine should require an environmental assessment if none is on record, or if there have been substantial changes to the operation or the environmental or social context.

Given that much industry commentary on EA is negative, many people are surprised to learn that any companies are volunteering at all. It is important to note that in all cases where projects voluntarily

underwent a provincial EA, they were already required to submit to a federal assessment. Under the previous federal legislation, there were many similarities between the two processes so involvement in a provincial EA would not have added much cost or effort for the company. Volunteering to do an EA also front-ends consultation requirements and reduces these when the company is subsequently applying for various technical permits needed during the later stages of project development.

Some in the industry clearly recognize the value of early identification of issues and consultation processes that an EA process brings. For example, the Ontario Mining Association promotes the Association of Professional Engineers, Geologists and Geophysicists of Alberta's Environmental Guidelines which state:

“Consideration of the full scope of environmental costs at the earliest possible stage of project development will often provide considerable cost savings, as compared with retrofitting or remedial actions. Consequently, the interests of the project proponent, as well as those of society, can best be served by recognition of the environmental effects of a project during the planning stages.”¹⁶

Thus, volunteering is a way for proponents to take control over the timing of the review rather than risking it being designated at a later time by the government. The risk of this occurring may be small, as it has never happened in the history of EA for a mining project. An order was, however, given for a major quarrying project (see the Melancthon case study in Appendix 1).

Under normal circumstances, some components of a proposed mine (typically related to power supply and transportation) may be required to undergo an EA. These are typically dealt with through “Class EA” processes with extremely limited public consultation and an assumption that impacts will be minimal and only routine mitigation measures may be applied. Nowhere in these reviews is the full scope of the mine's potential impacts assessed or the fundamental question about public interest evaluated.

The Federal EA Process

Appendix 1 shows that an additional 14 projects and mines have undergone or are undergoing only a federal environmental assessment. Unfortunately, the federal process cannot be relied upon to review the full suite of environmental or social issues associated with a mining project, especially since the Canadian Environmental Assessment Act was gutted in 2012.

The act was explicitly modified to narrow the scope of review to areas of narrowly defined federal jurisdiction. Under the new act (Section 5), consideration of “environmental effects” is limited to fish and aquatic species, migratory birds, federal lands; transboundary effects (inter-provincial and international), and Aboriginal peoples and their lands and resources. Cabinet is also given god-like bureaucratic powers to “add or remove a component of the environment”. To date this power has not been exercised.

The current federal review process is also limited in application to mine of certain types and of a certain size – excluding many small gold mines and industrial mineral mines in Ontario.

CEAA 2012 also introduced tight and binding timelines for reviews – a year for standard reviews and two years for panel reviews. While this amount of time may be sufficient in the most cases, Ecojustice notes

¹⁶ APEGGA. Guideline for Environmental Practice. 2004.
<http://www.oma.on.ca/en/ontariomining/resources/APEGGAEnvironmentalPractice.pdf>

that “The construction of a major project or activity is subject to many factors. Imposing a rigid deadline onto a complex environmental assessment process could result in incomplete or sloppy assessments.”¹⁷

Indigenous Peoples and EA Processes

EAs can be an important tool for governments and Indigenous peoples to assess impacts of projects on Aboriginal and treaty rights, and for the government to fulfil its duty of consultation and accommodation.¹⁸ The absence of an EA process for mines in Ontario does not alleviate the need for consultation and accommodation but it does mean there is likely to be much less rigorous collection of baseline data and assessment of impacts to inform the consultation and accommodation process.

Even when projects have been voluntarily subjected to the provincial process and required to do an EA under CEAA or CEAA 2012, Aboriginal groups in Ontario have at times found it very difficult to make the province respect their right to be a partner in the process. This has been the case in the Ring of Fire EA. The First Nations of Matawa Council launched a judicial review of the EA process but were profoundly disappointed with the results, and have since been in negotiations with Ontario and Canada about a different kind of process. To date, there has been no commitment from Ontario or Canada about what this will look like.

Given the limitations with existing EA processes experienced by Aboriginal communities, some First Nations have chosen to develop their own formal mechanisms for project review. Serpent River First Nation was impacted by uranium mining that took place from the 1950s through to the 1990s, and faces new proposals within its traditional territory for uranium and rare earth mining and processing facilities along with other development projects. Rather than rely on the existing provincial or federal EA system, Serpent River has developed its own model for project review based on its own values and customs. A four person Environmental Review Panel has been created that, with the support of technical staff and advisors, will review projects based on an integrated suite of factors in their Turtle Island Matrix.¹⁹

The Serpent River process is new and has yet to be tested in practice. Unfortunately, many other First Nations do not have, or have not prioritized the resources to develop such a system and must therefore rely on the federal – and when they occur, provincial EA processes – to provide the structure for review of proposed mining projects.

Best Practices for EAs of Mining Projects

While applying the existing provincial EA process to mining in Ontario would be an improvement over the status quo, the ECO, CELA, and others have noted that it should be much improved to meet today’s expectations and, ideally, address long-standing concerns. The following are high-level recommendations for a new and improved EA process for mining projects drawn from our own experience and from recent analyses done by the Fair Mining Collaborative of BC’s EA process²⁰, by CELA of Ontario’s EA

¹⁷ Ecojustice. Legal Backgrounder, Canadian Environmental Assessment Act. 2012. http://www.ecojjustice.ca/files/ceaa-backgrounder-1/at_download/file

¹⁸ Chiefs of Ontario. First Nations Environmental Assessment Toolkit for Ontario. <http://www.cooeatoolkit.org> & L. Loutit. Key Considerations for Resource Development in NAN Territory Focusing On Mining. <http://www.nan.on.ca/upload/documents/ecdev-mining-discussion-paper.pdf>

¹⁹ For more about the Serpent Review review process contact the Lands and Resources Coordinator: http://serpentriverfn.ca/?page_id=158

²⁰ Fair Mining Collaborative. Environmental Assessment for Mining Activities. 2013. <http://www.fairmining.ca/guide/environmental-assessment-for-mining-activities/>

process²¹ and from the Nishnawbe Aski Nation's Handbook on Consultation.²² All of these recommendations have precedents in other jurisdictions.

1. Screen major exploration projects and review all new commercial mines and processing facilities and any major expansions of operations;
2. Conduct individual EAs for all new or substantial expansions of mining projects and processing facilities;
3. Aboriginal consultation should treat First Nations as joint decision makers and their involvement should begin at the earliest phases of the EA including establishing the terms of reference;
4. Establish criteria for conducting hearings and use hearings to meet public and Indigenous consultation expectations and requirements;
5. The EA process should have the flexibility to harmonize the process with other jurisdictions including EA processes developed by First Nations;
6. Project proponents should demonstrate the financial feasibility of their preferred alternative as part of their application process;
7. The EA should assess alternatives to and alternative means of carrying out the project and analysis of the various options should reflect the interests and concerns of Indigenous peoples, local communities and stakeholders;
8. The EA process should include a sustainability assessment of projects such that their net benefit and contribution to sustainable development objectives are assessed;
9. Conditions of approval should be legal requirements with the Ministry of Environment given the institutional capacity and mandate to enforce the conditions;
10. Proponents should be required to report on the effectiveness of mitigation measures;
11. Projects must be operational within 5 years of approval or the approval expires;
12. Financial and technical resources should be made available to Aboriginal groups and also to relevant stake holders to ensure effective and meaningful participation in the EA process.

Conclusion

The fact that the large majority of operating and proposed mines in Ontario have not undergone a thorough and complete environmental assessment sets the province apart from other Canadian and international jurisdictions. Serious environmental risks inherent in large-scale mining operations are not being evaluated and there is no systematic assessment of mining's net benefits nor its contribution to or detraction from sustainable development. There are glaring contradictions between the rhetoric from

²¹ R.D. Lindgreen and B. Dunn. Environmental Assessment in Ontario: Rhetoric vs. Reality. 2010. <http://www.cela.ca/publications/environmental-assessment-ontario-rhetoric-vs-reality>

²² NAN. Handbook on Consultation. 2007. <http://www.nan.on.ca/upload/documents/pub---nan-handbook-on-consultation---3rd.pdf>

government and industry about applying the latest standards for environmental protection and the reality of the provincial EA system.

The fact that the higher profile projects are being reviewed under voluntary agreements should convince no one that the hole in Ontario's EA policy is being addressed. As is seen in the studies presented in this report (see appendix 1), proponents that have projects of significant public concern like the Goliath project, are not entering voluntary agreements and other projects, like Bissett Creek, may slide under the radar despite potential for significant negative effects on the environment.

In Ontario, problems with the EA process are not unique to the mining sector, and NGOs and the Environmental Commissioner have called for substantial reforms to the entire process. However, mining is an extreme case of the province's EA failings given that it represents the divestment of publicly held resources with significant environmental risks and the potential for impacts on a range of Aboriginal rights. Arguments for the status quo could be politically damaging given that public concerns about major projects make this a viable campaign issue.

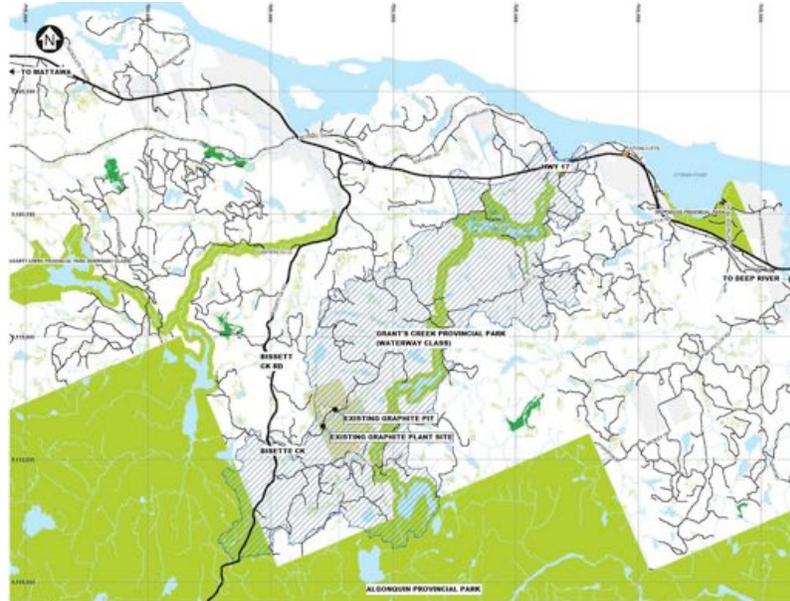
There will have to be strategic decisions about the best tactics to move the issue up on the political agenda, for instance about whether to focus on the need to reform the EA process as it relates to mining or call for broader reforms to the system. The province's refusal to respond to CELA's petition to the Environmental Commissioner, its fixation with the Ring of Fire, and its continued emphasis on cutting so-called "red tape" are indications that gaining traction within the current government will take a concerted effort. That said, the size of this glaring hole in the province's environmental policy and the fact that Ontario stands alone in its exclusion of mining projects from EA, will help move the issue forward.

Appendix 1 – Case Studies

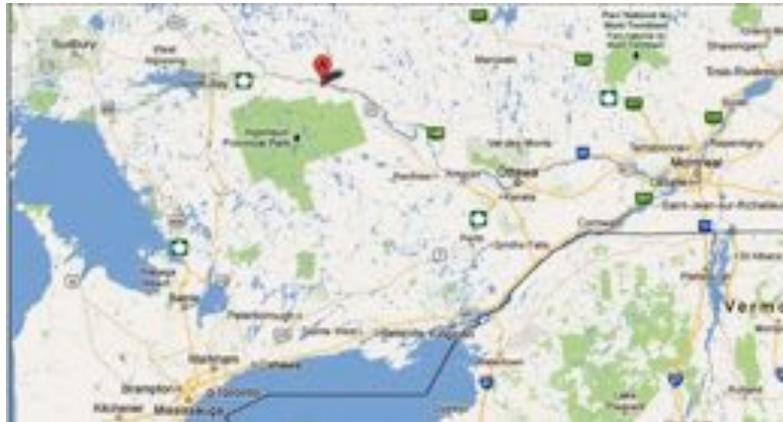
Bissett Creek Graphite Mine

Company: Northern Graphite Corporation

Proposed project: The project is an open pit mine and a 2,900 tpd (tonne per day) processing plant. The company has also prepared a feasibility study for doubling production (5,800 tpd). The current mine plan is for 25 to 30 years of operation, although estimated mine life is as long as 80 years, based on measured and indicated resources (69.8 million tonnes). Another 24 million tonnes of resources have been inferred.²³ Two tailings facilities are planned, one for non-acid generating tailings and one for acid-generating tailings.²⁴



Location: Maria Township, approximately 53 km west of Mattawa, Ontario.



Source: <http://www.northerngraphite.com/wp-content/uploads/2010/01/G-Mining-Bissett-Creek-Feasibility-Study-Final-NS.pdf>

Federal Environmental Assessment required: None

Provincial Environmental Assessment required: None

Project status: The mining lease was granted in August 2013 and construction is estimated to begin before the end of 2015, with production by the end of 2016, subject to financing. Mining leases are valid for 21

²³ <http://northerngraphite.com/bissett-creek-project/>

²⁴ <http://www.northerngraphite.com/wp-content/uploads/2010/01/G-Mining-Bissett-Creek-Feasibility-Study-Final-NS.pdf>

years at which time they may be renewed.²⁵ Now that the lease has been granted, even if environmental or social conditions should change in relation to the project, the company can continue development and operation with very little requirement to involve the public or address new concerns.²⁶

Concerns expressed by citizens: Comments received as part of the 30-day public consultation period following submission of the company's Mine Closure Plan expressed a number of environmental and social concerns.

Environmental Effects: According to the Feasibility Report, there is potential for acid-drainage and natural leaching of aluminium, boron, cobalt, zinc and iron at levels above the Ontario Provincial Water Quality Objectives. High levels of cadmium were also noted in waste rock. Tailings, waste rock and ore will need management to minimize these impacts.

The Feasibility Report identifies but does not provide any substantive details to assess potential impacts on:

- Mitigation measures to prevent groundwater and surface water contamination,
- Changes to local hydrology from pit dewatering,
- Fish habitat in the location of the non-acid generating tailings impoundment (Blimkie Lake and unnamed lake #2),
- A provincially significant wetland complex,
- 10 species at risk found on the property: Snapping Turtle, Blanding's Turtle, Olive-sided Flycatcher, Barn Swallow, Common Nighthawk, Rusty Blackbird, Whip-poor-will, Eastern Wolf and the Canada Warbler,
- The acoustic environment: there is no estimate of what level of noise the mine will produce, nor the locations of the nearest receptors.²

Proximity to Five Provincial Parks/Reserves: The project is situated in several sub-basins of the Bissett, Grant and Mag Creek watersheds and is very close to Algonquin Provincial Park, Grants Creek Waterway Provincial Park, Bissett Creek Waterway Provincial Park, Driftwood Provincial Park and the Dumoine River Aquatic Reserve in Quebec. Northern Graphite's Feasibility Report does not identify any potential impacts on the ecological or recreational values of these protected areas.

Aboriginal Consultation: The project is in the area of the Algonquins of Ontario Land Claim, currently being negotiated between the province and 10 Algonquin communities.²⁷ The Feasibility Study section entitled "Environmental Studies, Permitting and Social or Community Impacts" does not provide sufficient information on whether the company has fulfilled its obligations under the Mining Act Section 141 (1)(c) to consult with Aboriginal groups in the affected area.²⁸

The Mine Closure Plan: The Mine Closure Plan describes "the nature of the operations that will be carried out, current baseline environmental conditions, potential effects on the environment together with appropriate mitigation measures, and the Company's plan for rehabilitating the site to its natural state at the end of operations."

The Mine Closure Plan was only made available in hardcopy at one office location in Sudbury (approximately 250 km away from the project site). Despite multiple requests for a more accessible

²⁵ <http://www.mndm.gov.on.ca/en/mines-and-minerals/mining-sequence/evaluation/advanced-exploration/leases>

²⁶ <http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTE3OTE0&statusId=MTgwMjEz&language=en>

²⁷ <https://www.ontario.ca/aboriginal/algonquin-land-claim>

²⁸ http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90m14_e.htm#BK177

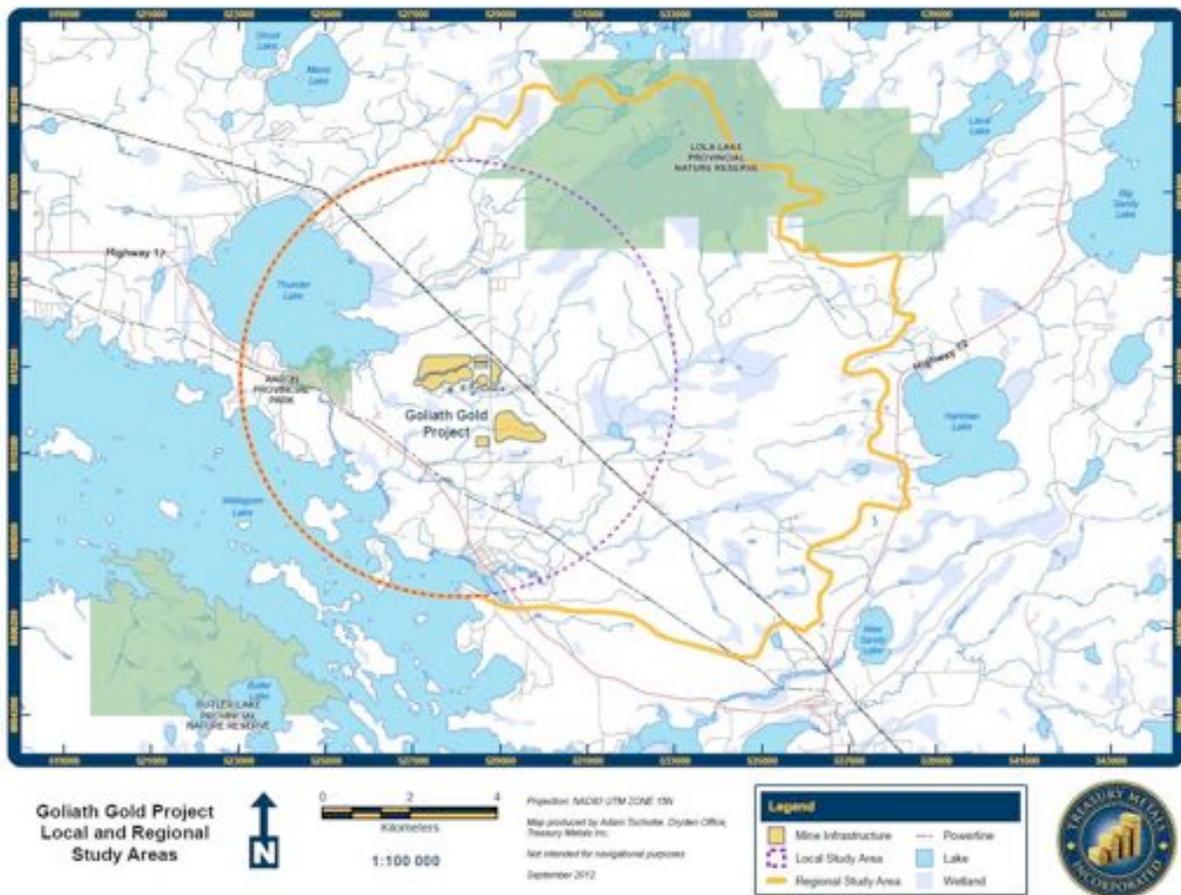
document, the company refused to make it public online, as it is not legally obligated to do so under the Mining Act.

No Voluntary Environmental Assessment: Although several recent mining projects in Ontario have voluntarily submitted to the provincial Environmental Assessment process, Northern Graphite's Bissett Creek Project has not. Further, as stated in the Ontario Environmental Register, "The comments received [from the public in response to the mine closure plan as detailed above] resulted in no impact on the decision whether or not to proceed with this proposal."²⁶ In August 2013, the Mine Closure Plan was approved and the Mining Lease granted by the Ministry of Northern Development and Mines.

Goliath Gold Mine

Company: Treasury Metals Incorporated

Proposed project: Goliath Gold Mine is a proposed open pit gold mine and a 2,500 tpd (tonne per day) processing facility planned for construction in 2016.²⁹ The development of underground operations is proposed for the future, and mine lifespan is estimated to be 10-12 years.³⁰



Source: Treasury Metals Project Description, Goliath Gold Project, November 26, 2012

Location: 8 km west of Wabigoon, 20km east of Dryden, Ontario

²⁹ http://www.kenoraonline.com/index.php?option=com_content&task=view&id=10019&Itemid=160

³⁰ http://www.treasuremetals.com/s/goliath_gold_project.asp?ReportID=612360

Federal Environmental Assessment required: Commenced January 18th, 2013, currently in progress.³¹
Provincial Environmental Assessment required: None.

Project status: The project proposal has been accepted by the federal government. The company completed and submitted the Environmental Impact Statement (EIS) on October 20, 2014. However, the federal government is requiring more information from the company in order to properly meet EIS requirements.³² Once the EIS is reviewed and deemed complete, a public and Aboriginal group commentary period will be held. The Mine Closure Plan and Financial Assurance have not yet been completed.³³

Concerns Expressed by Citizens: On July 8, 2014, a Facebook group called Goliath Mine Stakeholders was created for citizens to track the project and discuss their concerns. As of November 25, 2014, the group has 141 members.³⁴ Issues discussed relate to the potential environmental, health and property impacts of the mine, especially on nearby Thunder Lake, Blackwater Creek, Wabigoon Lake, Aaron Provincial Park and Lola Lake Provincial Nature Reserve. Recent changes to the Canadian Environmental Assessment Act and the Fisheries Act have contributed to a lack of trust that the federal assessment process will adequately protect the environment.³⁵

The Ontario Coalition of Aboriginal People (OCAP) has sent a formal request to the Minister of Natural Resources and Forestry that an Ontario Environmental Assessment to be conducted for the Goliath Project.³⁶ OCAP opposes the company's plans to discharge mine effluent into Blackwater Creek or Wabigoon Lake. Blackwater Creek drains into Wabigoon Lake which is valued for cultural, recreational and economic reasons. It is an important site for boaters and anglers in the area.³⁷

OCAP has also requested that a provincial assessment allow meaningful participation of off-reserve Status and non-Status Indians and Métis, as the federal Environmental Assessment Agency is not supporting their involvement in the current assessment process.³⁶

Haley Magnesium Mine

Company: Timminco Limited

Mining project: The Haley Mine produced high purity magnesium via two open pit mines and processing facilities on a property of 678 acres.^{38 39} The first was worked between 1942 and 1990, and the second between 1960 and 2008.⁴⁰

Location: Haley, Ontario near Arnprior

Federal Environmental Assessment required: None
Provincial Environmental Assessment required: None

³¹ <http://www.ceaa-acee.gc.ca/050/details-eng.cfm?evaluation=80019>

³² <http://www2.mpmo-bggp.gc.ca/MPTracker/project-projet-03.aspx?pid=229&psid=3>

³³ http://www.treasuremetals.com/s/environment_assessment.asp

³⁴ <https://www.facebook.com/groups/169327909880834/>

³⁵ <http://thedrydenobserver.ca/2014/07/water-worries-new-stakeholder-group-expresses-concerns-over-gold-mine-project/>

³⁶ www.facebook.com/groups/169327909880834/193180630828895

³⁷ www.facebook.com/groups/169327909880834/172906246189667

³⁸ <http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTE5MDY0&statusId=MTc4MTE0>

³⁹ <http://cfcanafticonsulting.com/timminco/docs/Nineteenth%20Report%20of%20FTI%20re%20Timminco.pdf>

⁴⁰ <http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=Mjc0NjQ=&statusId=NTc0NjQ=>

Mine status: The mine and plant were closed in 2008 for economic reasons. In January 2012, Timminco Limited filed for bankruptcy.⁴¹ The Haley Mine property was put up for sale along with other company assets but no buyers were found, not surprising given the environmental liabilities on the property. In 2013, the company asked the courts to allow them to restructure – selling the mine to a subsidiary which could then legally abandon the mine property by also declaring bankruptcy. Despite objections by the Ministry of Development and Mines (MNDM, detailed below), the restructuring was approved and remediation of the Haley Mine property became the responsibility of the province of Ontario.^{39,42}



Source: staff photo

Environmental remediation: Issues that now fall to the government of Ontario to remediate include:⁴³

- Ongoing operation of the groundwater containment and treatment system,
- Complete capping of the tailings,
- Removal/disposal of thorium and asbestos contaminated building materials,
- Remediation of hydrocarbon contamination,
- Ground and surface water assessment and monitoring,
- Building demolition.

The contamination may spread off property and threatens a nearby creek and the Ottawa River.⁴²

Mine Closure Plan: This must be filed and approved by the MNDM prior to a mine commencing or recommencing advanced exploration or operations. In addition, the company must provide funds to cover the cost of remediation of the site, monies which are termed “financial assurance.”⁴⁴ Any time new information about remediation needs and costs comes to light, the Mine Closure Plan must be amended and the financial assurance increased as necessary.⁴⁵

According to court documents filed in June 2013, Timminco Limited knew hydrocarbon contamination was present at the Haley Mine site as early as February 2011, almost a year before filing for bankruptcy (January 2012). However, they did not disclose this information to the MNDM until July 2012, 6 months after filing for bankruptcy. Due to the company’s non-disclosure, the Mine Closure Plan was not amended and the financial assurance was not increased to take into account the hydrocarbon contamination.⁴⁵

⁴¹ <http://www.theglobeandmail.com/report-on-business/timminco-files-for-bankruptcy-protection/article546683/>

⁴² <http://envirolaw.com/wp-content/uploads/timminco-notice-of-motion.pdf>

⁴³ <http://gnssn.iaea.org/RTWS/rsls-public/Shared%20Documents/Forms/AllItems.aspx?RootFolder=%2FRTWS%2Frsls-public%2FShared%20Documents%2FMeetings%2FInternational%20Workshop%20on%20the%20Remediation%20of%20Uranium%20Legacy%20Sites%2C%20A%20Canadian%20Experience%2C%2028%20April-2%20May%202014&FolderCTID=0x01200058722990CB4A9F4BBD9EC0699E514A81&View=%7B817FAC47-8B34-48B6-ADD6-E53F2C666A2F%7D>

⁴⁴ <http://www.mndm.gov.on.ca/en/mines-and-minerals/mining-sequence/development/minedevlopment/closure-plan>

As of March 2013, the financial assurance given to MNDM from Timminco was \$1,000,241.27.⁴⁵ In a letter opposing the restructuring, the MNDM stated that “the amount [of financial assurance] is wholly inadequate to cover the cost of outstanding rehabilitation required for the Haley Mine Property, including recently discovered hydrocarbon associated with former buildings and potential off-site ground water contamination from mine tailings.”⁴⁹

Expenses for monitoring the site, pumping the quarries, water treatment and testing totalled \$320,000 in 2012 alone.⁴² After being assigned responsibility for remediation and reviewing site information, the MNDM estimated the following minimum costs for clean-up:

- groundwater contamination at \$1.16 million;
- hydrocarbon contamination at \$1.86 million;
- demolition of buildings containing asbestos and thorium at \$300,000;
- electrical costs for pumping and water treatment alone at \$48,000 per year (a far cry from the \$9,000 estimated by the company for total site electricity costs!).

The government estimates the total cost of remediation will be \$3.47 million, which puts taxpayers on the hook for \$2.47 million after the company’s financial assurance runs out.⁴⁵

Had an Environmental Assessment been conducted for the site, it would have been a useful tool for understanding potential environmental liabilities ahead of time and ensuring proper planning for remediation that included more accurate cost estimates and a higher financial assurance – to guarantee that the citizens of Ontario would not be paying to clean up the environmental mess left by a private company.

Melancthon Mega Quarry

Company: The Highland Companies (3191574 Nova Scotia Company Limited)⁴⁶

Proposed project: Melancthon Limestone Mega Quarry would have been the largest quarry in Canada and the second largest in North America, spanning 937 hectares and operating for 50 to 100 years.⁴⁷ The quarry proposed to pump 600 million litres of water from the site every day and blast 1 billion tonnes of rock.^{48 49}



Location: Melancthon Township, 75km northwest of Toronto

Federal Environmental Assessment required: None. The company’s project description claimed that fish habitat would not be affected by the quarry development although this was brought into question by a scientist at the David Suzuki Foundation. Affecting fish habitat would have triggered a federal environmental assessment under the previous legislation^{50 51} and possibly under CEAA 2012, but many of

⁴⁵ <http://cfcanada.fticonsulting.com/timminco/docs/DOC007.pdf>

⁴⁶ [http://www.ebr.gov.on.ca/ERS-WEB-](http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTE0MzIx&statusId=MTcxMjU4&language=en)

[External/displaynoticecontent.do?noticeId=MTE0MzIx&statusId=MTcxMjU4&language=en](http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTE0MzIx&statusId=MTcxMjU4&language=en)

⁴⁷ http://www.canadiangeographic.ca/magazine/dec11/ontario_mega_quarry.asp

⁴⁸ <http://www.davidsuzuki.org/blogs/pantherlounge/2011/05/billiontonnemegaquarrytoimprovethecalenvironment/>

⁴⁹ <http://www.theglobeandmail.com/news/national/critics-celebrate-surprise-end-of-mega-quarry-north-of-toronto/article5520026/>

⁵⁰ <http://www.davidsuzuki.org/blogs/pantherlounge/2011/09/moremelancthonmegaquarrymysteries/>

the issues of concern would not have been covered by the limited scope of “environmental effects as defined in the act”.

Provincial Environmental Assessment required: Private sector projects such as quarries are not routinely subject to assessment under the province’s Environmental Assessment Act (EAA). However, the quarry proposal was highly problematic: there were concerns related to impacts on water use, pollution and its potential effect on fish habitat and endangered species, and the destruction of prime farmland. It is remarkable that despite the scale and potential impacts of the project, it did not trigger either a federal or provincial environmental assessment! It was only after a huge public backlash, that the province’s Lieutenant Governor in Council eventually directed that the project undergo an individual environmental assessment.⁵²

Project status: On November 21, 2012, while in the early stages of the environmental assessment, The Highland Companies withdrew their application for a licence, citing as reasons the lack of government and community support for the project, and the belated requirement of a provincial environmental assessment.^{49,53}

Concerns Expressed by Citizens: The quarry was opposed by First Nations, local residents, farmers, ranchers, town councils, politicians, artists, not-for-profit groups and other concerned citizens. Over 5,000 letters of concern and over 700 requests that an environmental assessment be conducted were sent to the province.^{46,50} A petition to stop the quarry on Avaaz.org generated more than 134,000 signatures.⁵⁴



Source: <http://gangoffour.ca/tag/stop-the-mega-quarry>

While the Highland Companies claimed that the project would have no negative effects on fish habitat and would actually improve the environment, their environmental impact statement and technical report were called “rudimentary at best” and “incomplete” by John Werring, a scientist with the David Suzuki Foundation. In a letter to the Ontario Ministry of Natural Resources, Werring detailed major discrepancies in the reports and concluded that contrary to the company’s claims, approximately 1,500 linear metres of fish habitat would be lost due to quarry development, which should have led to a federal environmental assessment.⁵¹

The letter from the Suzuki Foundation went on to question the lack of investigation, and conclusions about whether the quarry presented a threat to two bird species at risk in the area: the Bobolink, listed as “threatened” in Ontario and Henslow’s sparrow, which is listed as “endangered” both federally and provincially.⁵⁰

Many opponents were concerned that the project would destroy Class 1 farmland that should be preserved for agricultural use. Many who had sold their land to the company did so under the impression that it

⁵¹ http://www.davidsuzuki.org/blogs/panther-lounge/letter-HighlandsCompaniesAggregateProposal-lettertoOMNR-April25_2011.pdf

⁵² <http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTE0MzIx&statusId=MTcxMjU4&language=en>

⁵³ <http://www.cbc.ca/news/canada/toronto/mega-quarry-in-southern-ontario-won-t-be-built-1.1187522>

⁵⁴ http://www.avaaz.org/en/stop_the_quarry/

would be used for potato farming. The project had the potential to impact the headwaters of five major rivers and the drinking water for millions of people in the Greater Toronto Area.⁴⁷

Additionally, residents highlighted the potential impacts of a 24/7 operation, with blasting going on six days a week and the passing of 150 aggregate hauling trucks every hour, resulting in, for instance, a changed landscape, noise, dust and blasting residue pollution.^{47,55}

The case highlights the importance of an organized and persistent response by the public and concerned stakeholders. If it had been left to government processes to run their course, a mega-quarry project would likely have proceeded to destroy prime farmland and cause environmental harm to watersheds, fish, endangered bird populations and the drinking water of millions of Canadians.

⁵⁵ http://66.212.167.146/MelancthonMegaQuarry/PDFs/Hunter_CofA_29-July-2011.pdf

Appendix 2

Mine projects and operations in Ontario and their environmental assessment, if any

EA = Environmental Assessment, VA = Voluntary Assessment

Name	Location	Mine Type	History	Project Status	Federal EA	Status	Provincial EA	Status
Federal and Provincial Environmental Assessment								
Cliffs Chromite Project	McFaulds Lake	Chromite	proposed June 2011; suspended Nov. 2013	indefinitely suspended Nov. 2013	Transitional Comprehensive Study Sept. 2011	cancelled	VA Aug. 2011	cancelled
Côté Gold Mine Project	Gogama	Gold		awaiting response to Environmental Impact Statement	Yes; EA by responsible authority May 2013	in progress	VA May 2013	in progress
Eagle's Nest Mine and Mill	McFaulds Lake	Nickel, Copper, Platinum	proposed Aug. 2011	construction planned by end of 2015	Yes; Transitional Comprehensive Study; Nov. 2011	in progress	VA Sept. 2011	in progress
Hammond Reef Gold Mine	Atikokan	Gold		awaiting environmental permit	Yes; Comprehensive Study July 2011	in progress	VA Aug. 2011	in progress
Hardrock Deposit Project	Geraldton	Gold		awaiting environmental permit	Yes, EA by responsible authority, June 2014	in progress	VA Aug. 2014	in progress
Josephine Cone Mine Project (previously Bending Lake Iron Mine)	Ignace	Iron ore	proposed Feb. 2012	awaiting environmental permit	Yes, Transitional Comprehensive Study May 2012	in progress	VA Nov. 2011	in progress
Marathon Platinum Group Metals and Copper Mine	Marathon	Gold, Platinum, Palladium, Copper	project proposed 2010	project on hold in 2014 by company for economic reasons, awaiting	Yes, EA by review, May 2010	cancelled	VA, joint with federal	cancelled

Name	Location	Mine Type	History	Project Status	Federal EA	Status	Provincial EA	Status
				feasibility study				
Rainy River Project	Chapple	Gold		awaiting Environmental permit	Yes, EA by responsible authority, Oct. 2012	in progress	VA, joint with federal	in progress
Federal Environmental Assessment Only								
Aquarius Gold Mine	Timmins	Gold	proposal submitted 1996	project suspended 1999 by company	Yes; Comprehensive Study	Approved June 2000	None	N/A
Detour Lake Gold Mine	Cochrane	Gold	production 1983-1999; new proposal 2007; production 2013	operating	Yes; Comprehensive Study; Assessment 10-03-52262	Approved January 2012	None	N/A
Dyno Idle Mine Tailings Dam Improvement	Farrell Lake	Uranium		closed	Yes; Screening Assessment 06-01-22280	Approved 2006	None	N/A
Fort William First Nation Squaw Bay Gravel Quarry	Fort William Indian Reserve 52	Gravel			Yes; Screening Assessment 09-01-51541	Approved July 2010	None	N/A
Goliath Gold Project	Dryden	Gold		awaiting environmental permit	Yes; EA by responsible authority January 2013	in progress	None	N/A
Griffith Iron Ore Redevelopment Project	Ear Falls	Iron ore	1968-1986	awaiting environmental permit	Yes; EA by responsible authority April 2013	in progress	None	N/A
Hammond Reef Gold Mine Project	Mitta Lake	Gold		awaiting environmental permit	Yes, Transitional Comprehensive Study July 2011	in progress	None	N/A
Kapuskasing Phosphate - Cargill Lake Pit Expansion	Kapuskasing	Phosphate	production from late 1990s to 2003		Yes, Screening Assessment 04-01-3673	Approved Dec. 2004	None	N/A
Magino Gold Project (redevelopment)	Wawa	Gold	proposed July 2013	proposed re-development	Yes; EA by responsible authority, Sept.	in progress	none	N/A

Name	Location	Mine Type	History	Project Status	Federal EA	Status	Provincial EA	Status
					2013			
Musselwhite Mine	Opapimiskan Lake	Gold	production since 1997	operating	Yes, Comprehensive Study	Approved Mar. 1996	None	N/A
Pamour Mine Extension Project	Timmins	Gold	proposed June 2003	no active pit mining, processing stockpile since 2009	Yes, Comprehensive Study	Approved Aug. 2005	None	N/A
Stanley Mine decommissioning	Elliott Lake	Uranium		closed	Yes, Comprehensive Study	Approved Aug. 1997	None	N/A
Totten Mine	Worthington	Nickel	production prior to 1972; re-opened Sept. 2014	operating	Yes, Assessment 06-01-17028	approved April 2006	None	N/A
Victor Diamond Mine	Attawapiskat	Diamond	production since 2008	operating	Comprehensive Study	Approved Aug. 2005	None	N/A
Victor Diamond Mine Extension Project (2nd pit)	Attawapiskat	Diamond		awaiting environmental permit	Yes, EA by responsible authority June 2013	in progress	None	N/A
No Environmental Assessment								
Bell Creek Mine and Mill	Timmins	Gold	Operation 1987-1994; operational 2012 - present	operating and expanding; 50% mill expansion begun in 2011	None	N/A	None	N/A
Bissett Creek Mine	Maria Township, west of Mattawa	Graphite	proposed March 2012	approved, construction estimated by end of 2015; operation estimated by end of 2016	None	N/A	None	N/A

Name	Location	Mine Type	History	Project Status	Federal EA	Status	Provincial EA	Status
Black Fox Mine and Mill (previously Glimmer Mine)	Timmins	Gold	production began 1998; current open pit production 2009 - present; underground 2011 - present	operating	None	N/A	None	N/A
Blue Mountain Operations	Harcourt	Nepheline syenite	quarry production since 1950s	operating; potential expansion	None	N/A	None	N/A
Broken Hammer	Sudbury	Silver, Gold, Copper, Nickel, Palladium, Platinum	production since April 2014	operating	None	N/A	None	N/A
Canada Talc Mine (Henderson and Conley Mines)	Madoc	Talc	production at Conley 1912-1935; Henderson 1896; merged in 1937; closed 2010	closed	None	N/A	None	N/A
Clavos Mine	Timmins	Gold	Mine closure plan accepted 2004; some production 2005-2007	exploration; currently not operating; existing mine permit until 2019	None	N/A	None	N/A
Copper Cliff North Mine	Sudbury	Copper, Nickel	production since 1886; still in operation today	operating	None	N/A	None	N/A
Copper Cliff South Mine	Sudbury	Copper, Nickel	closed since 2008; plans to expand and merge with Copper Cliff North "Copper Cliff Deep" project	closed since 2008; planning expansion	None	N/A	None	N/A

Name	Location	Mine Type	History	Project Status	Federal EA	Status	Provincial EA	Status
Craig Mine (Morrison Deposit, Levack Mine)	Sudbury	Copper, Nickel, Platinum, Palladium, Gold	Levack production 1915-1997; 2007-2009; Morrison deposit discovered 2005	operating	None	N/A	None	N/A
Crean Hill Mine	Sudbury	Copper, Nickel, cobalt, platinum	Intermittent production 1902-2002	closed	None	N/A	None	N/A
Creighton Mine	Sudbury	Nickel	Production 1901-present	operating	None	N/A	None	N/A
David Bell Mine (Hemlo)	Marathon	Gold		operating	None	N/A	None	N/A
Dome Mine	Timmins	Gold	operated 1910- 2004; operational again in 2006	operating	None	N/A	None	N/A
Eagle River Mine and Mill	Wawa	Gold	operating since 1996	operating	None	N/A	None	N/A
Ellen Mine	Sudbury	Copper, Nickel		operating	None	N/A	None	N/A
Falconbridge Mine and East Mine	Falconbridge	Gold	Production 1929-1990	Closed	None	N/A	None	N/A
Fecunis Mine	Sudbury	Nickel		Closed	None	N/A	None	N/A
Fraser Mine	Sudbury	Copper, Nickel		operating	None	N/A	None	N/A
Frood- Stobie Mine (Copper Cliff Complex)	Sudbury	Copper, Nickel	production since 1920	operating	None	N/A	None	N/A
Garson Mine	Sudbury	Nickel, Copper, Cobalt, Platinum	production since 1907	operating	None	N/A	None	N/A
Gertrude Mine (Copper Cliff Complex)	Sudbury	Copper, Nickel		closed	None	N/A	None	N/A
Goderich Brine Field	Goderich	Salt	production since 1981	operating	None	N/A	None	N/A
Goderich Mine	Goderich	salt	production since 1959	operating	None	N/A	None	N/A

Name	Location	Mine Type	History	Project Status	Federal EA	Status	Provincial EA	Status
Golden Giant Mine	East of Marathon	Gold	production 1985-2006	closed	None	N/A	None	N/A
Hagersville Mine	Hagersville	Gypsum	production since 1930s	operating	None	N/A	None	N/A
Haley Plant	Arnprior	Magnesium, Calcium, Strontium	1942-2008	closed, abandoned to the province	None	N/A	None	N/A
Hislop Mine	Timmins	Gold	intermittently since 1939; open pit 1999-2000; 2010-present	operating	None	N/A	None	N/A
Holloway Mine	Timmins	Gold	production began in 1996; current production began in 2009	operating	None	N/A	None	N/A
Holt Mine (formerly Hold McDermott)	Timmins	Gold	production 1988-2004; 2013	operating	None	N/A	None	N/A
Hoyle Pond Mine	Timmins	Gold	production since 1985	operating	None	N/A	None	N/A
Island Gold Mine	Wawa	Gold	production since 2007	operating	None	N/A	None	N/A
Kapuskasing Phosphate Operations	Kapuskasing	Phosphate	production late 1990s - 2013	closed	None	N/A	None	N/A
Kearney Mine	Kearney	Graphite	production 1989-1994	proposed recommencing production 2015	None	N/A	None	N/A
Kidd Creek Mine	Timmins	Zinc, Copper, Cadmium, Indium, Cobalt, Selenium, Silver, Palladium, Platinum	production since 1966	operating	None	N/A	None	N/A
Lac des Iles Mine	Thunder Bay	Platinum group metal	production 1993-present	operating	None	N/A	None	N/A

Name	Location	Mine Type	History	Project Status	Federal EA	Status	Provincial EA	Status
Levack Mine	Sudbury	Copper, Nickel, Platinum, Palladium, Gold	production 1915-1997; 2007-2009	closed	None	N/A	None	N/A
Lockerby Mine	Sudbury	Nickel, Copper	production 1974-2004; intermittently between 2006 - present	operating	None	N/A	None	N/A
Macassa and South Mine Complex	Kirkland Lake	Gold	recommended 2005	operating	None	N/A	None	N/A
Madsen Mine	Madsen	Gold	production 1938-1976	proposed recommencing production	None	N/A	None	N/A
Magnacon Mine	Wawa	Gold	production 1989-1990	closed	None	N/A	None	N/A
Marhill Mine (Bell Creek Complex)	Timmins	Gold	some production 1978-2004; current exploration since 2009	expansion exploration	None	N/A	None	N/A
McAlpine Mill (former Penn Mill)	Cobalt	Precious metals	re-opened 1998	operating	None	N/A	None	N/A
McCreedy East / Coleman Mine	Sudbury	Nickel, Copper		operating	None	N/A	None	N/A
McCreedy West Mine	Sudbury	Nickel, Copper, Platinum, Palladium, Gold	production 1970-1998; 2003-present	operating	None	N/A	None	N/A
McWatters Mine	Timmins	Nickel	production 2010 - 2012	closed	None	N/A	None	N/A
Mishi Gold Mine	Wawa	Gold	intermittently since 2002	operating	None	N/A	None	N/A
Mohawk Garnet Mine	Sudbury	Garnet abrasive		operating	None	N/A	None	N/A
Montcalm	Timmins	Nickel,	production	closed	None	N/A	None	N/A

Name	Location	Mine Type	History	Project Status	Federal EA	Status	Provincial EA	Status
		Copper, Cobalt	2004-2009					
Nickel Rim South Mine	Sudbury	Nickel, Copper	discovered in 2001	operating	None	N/A	None	N/A
North Williams Mine	Kirkland Lake	Barite		operating	None	N/A	None	N/A
Ojibway Mine	Windsor	Salt	production since 1981	operating	None	N/A	None	N/A
Pamour Mine	Timmins	Gold	production since 1910	no active pit mining, processing stockpile since 2009	None	N/A	None	N/A
Penhorwood Mine	Timmins	Talc	production since 1987	operating	None	N/A	None	N/A
Podolsky Mine	Sudbury	Gold, Cobalt, Copper, Nickel, Palladium, Platinum	closed since 2013	closed	None	N/A	None	N/A
Red Lake Gold Complex (Campbell Mine and Mill, Red Lake Gold Mine and Mill)	Red Lake	Gold	producing since 1949, mines combined operations in 2007	operating	None	N/A	None	N/A
Redstone Mill	Timmins	Copper concentrator	construction 2006/2007	operating on custom basis 2014	None	N/A	None	N/A
Redstone Mine	Timmins	Copper, Nickel	production 1989-1996; 2006-2011	exploration for re-opening	None	N/A	None	N/A
Ross Mine	Matheson	Gold	production 1934-1988; Mine Closure Plan for reprocessing tailings accepted 2013	unsure if reprocessing has begun	None	N/A	None	N/A

Name	Location	Mine Type	History	Project Status	Federal EA	Status	Provincial EA	Status
Shakespeare Mine	Sudbury	Nickel, Copper	Mine Closure Plan accepted in 2007	operating Feb. 2010	None	N/A	None	N/A
Shebandowan Mine	Thunder Bay	Nickel, copper	production 1967-1998	closed	None	N/A	None	N/A
Stock Mine and Mill (renamed Grey Fox)	Timmins	Gold	intermittent production 1988 - 2000	closed; now in exploration as part of Grey Fox project	None	N/A	None	N/A
Tatlock Quarry	Perth	Calcium carbonate	production since at least early 1990s	operating	None	N/A	None	N/A
Timmins West Mine	Timmins	Gold	production 2012 - present	operating	None	N/A	None	N/A
Tomclid Iron Mine		magnetite	acquired in 2005	operating	None	N/A	None	N/A
Whistle Mine		Nickel	production 1988 - 1991; 1994 - 1998	closed	None	N/A	None	N/A
Williams Mine (Hemlo)	east of Marathon	Gold, Silver		operating	None	N/A	None	N/A
Young – Davidson Mine	Matachewan	Gold	site of two mines producing in 1930s-50s; construction commenced 2010	operating	None	N/A	None	N/A
Yukon Refinery	Cobalt	high Arsenic ore processing	re-opened for current use 2012	operating	None	N/A	None	N/A

Mining Related Environmental Assessment (EA) and Class Environmental Assessments in Ontario

Name	Company	Location	Mine Type	Provincial EA	Status
Detour Lake Contingency Power Project	Detour Gold Corp.	Cochrane	Gold	Yes	Approved, March 2012
Detour Lake Power Project	Detour Gold Corp.	Cochrane	Gold	Yes	Approved, December 2010
East Block McAuslan Township Project		McAuslan Township, Nipissing		Class EA permission for testing	complete
Granite Black Project		Merrick Township		Class EA permission to test mineral content	complete
Granite Project		Stewart Township		Class EA permission to test mineral content	complete
Moneta Mine rehabilitation				Class EA of rehabilitation project, ongoing	ongoing
Onion Lake Project (mineral testing)	Benton Resources	Onion Lake, near Thunder Bay	Talc	Class EA permission to test mineral content	complete
U2 Project	Metalex Ventures	James Bay Lowlands	Diamond	Class EA permission to test mineral content	complete
Victor Diamond Mine Power Supply Project	De Beers Canada Inc.	Attawapiskat	Diamond	Class EA for new power lines	unknown
Wesdome Project (expansion)(Eagle River Mine and Mishi Pit)	Wesdome	Wawa	Gold	Class EA Application for Surface Rights Disposition	complete