



GLENCORE

OUR REPORT TO THE COMMUNITY

SPRING 2018

SUDBURY
INTEGRATED NICKEL
OPERATIONS
A GLENCORE COMPANY

H. MATTHEWS
2018

Building our Future



*Peter Xavier, Vice President
Sudbury Integrated Nickel Operations,
A Glencore Company*



Our safety success includes continuous reductions in lost time injuries and accolades such as the John T. Ryan Safety Award for having the safest metal mine in Ontario (Fraser Mine).

As we move deeper into 2018, I invite you to spend a few moments taking stock of what we've achieved and looking ahead at a year that's shaping up to be another significant and positive step towards long-term viability in the Sudbury Basin.

Health and Safety

Business accomplishments can only be celebrated when they go hand in hand with an ongoing commitment to health and safety and, more specifically, our march toward the ultimate goal of Zero Harm to our people, our environment and our communities. This commitment is a reflection of who we are as a company and is demonstrated by continuous improvement and milestones



Sudbury INO's Smelter Process Gas Project (PGP) team received the 2016 CIM Project Development Safety Award.



Fraser Mine



Strathcona Mill

in our safety record year after year. Over the last 10 years, Total Recordable Injuries have decreased steadily – a 79% reduction overall. Since 2013, Glencore Sudbury Integrated Nickel Operations (Sudbury INO) has been the recipient of the prestigious John T. Ryan annual mine safety award an impressive four times at various plants including the recently announced 2017 award for our Nickel Rim South Mine. As well, the Smelter Process Gas Project team received the 2016 Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Project Development Safety Award. I have no doubt Zero Harm will be achieved and our employees will be the ones who lead the way.

Environment

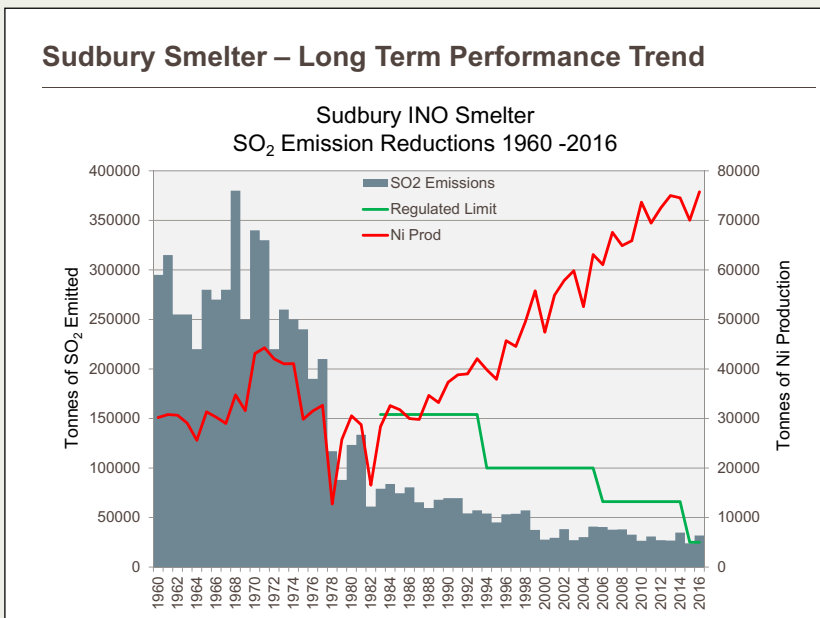
Improved environmental management in the areas where we operate is reflected in the fact that our Sudbury INO properties - mines, mill and smelter - have been ISO 14001 certified since 2004. Nickel Rim South Mine achieved this prestigious ranking in 2014. ISO 14001 is an internationally recognized designation for having the highest standards in environmental regulation and management.

The ongoing reduction of SO₂ emissions is another way we are demonstrating our commitment to the environment. Over the past 30 years, while our production has steadily increased, we have reduced SO₂ emissions by over 90% through investments in technology and process improvements (see graph).

“The Process Gas Project is a US\$272 million investment and demonstrates Glencore’s confidence in Sudbury’s long-term future.”



The Sudbury Smelter has completed several continuous improvement projects over the last several decades, which aim to pursue air emissions reductions to meet ambient air quality standards. The Sudbury Smelter Process Gas Project is a significant undertaking that will further reduce our SO₂ and particulate emissions and improve productivity. Phase two is underway and scheduled for completion by 2020. This combined US\$272 million investment demonstrates Glencore’s confidence in Sudbury’s long-term future, even in the face of ongoing business challenges such as low nickel prices, rising energy cost, changing environmental regulations and other regulatory uncertainties. Above all, these improvements are an expression of the confidence the company has in our 1,300 capable, dedicated and hard working Sudbury INO employees and more than 500 contractors.



Nickel Rim South Mine



Glencore's Sudbury Smelter in the Town of Falconbridge



Craig Mine - Onaping Depth: *a break from tradition*

The future of Sudbury INO is deep mining and our ability to adapt to it. Faced with the reality that existing ore bodies are nearing their end, we have been working on the development of two mine projects - Onaping Depth and Nickel Rim Depth, with the Onaping Depth Project now fully approved for further development.

This US\$700 million project is located below Craig Mine. In 2018 we will see the start of an internal shaft followed by underground infrastructure in the years to follow. The internal shaft will extend from 1200L to 2630L - or 1430m in length.

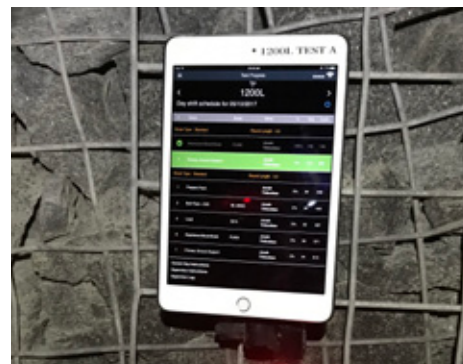
“The good news is that (Onaping Depth) will provide us with a new source of high-grade nickel ore to the year 2035.”

While challenges still exist with mining and operating costs at depth, the application of new clean technologies hold the promise of it becoming one of the most advanced and safest underground mines in the world. Once operational, it will provide us with a new source of high-grade nickel ore to the year 2035.

So, what will this mine of the future look like? In a word - innovative. Onaping Depth represents a complete break from the traditional idea of underground mining.

Top right: One of our new Applications in use at Onaping Depth Project.

Right: Crew at Onaping Depth underground training room. As we focus our priorities to our people, we make every attempt to ensure that we understand the skills and role requirements that will be needed in the future, implement a plan to attract or develop our team with those skills and ensure that our operations and project teams experience a successful transition to our future mines.



Craig Mine - Onaping Depth Project

1994-1999

An extensive exploration program identified and defined the Onaping Depth deposit including the Main and South East zones.

1999-2012

Onaping Depth was studied in detail, from Scoping Study to Feasibility Study and back to Scoping. Geotechnical risks at depth, heat at depth and global economics prevented full approval of the project.

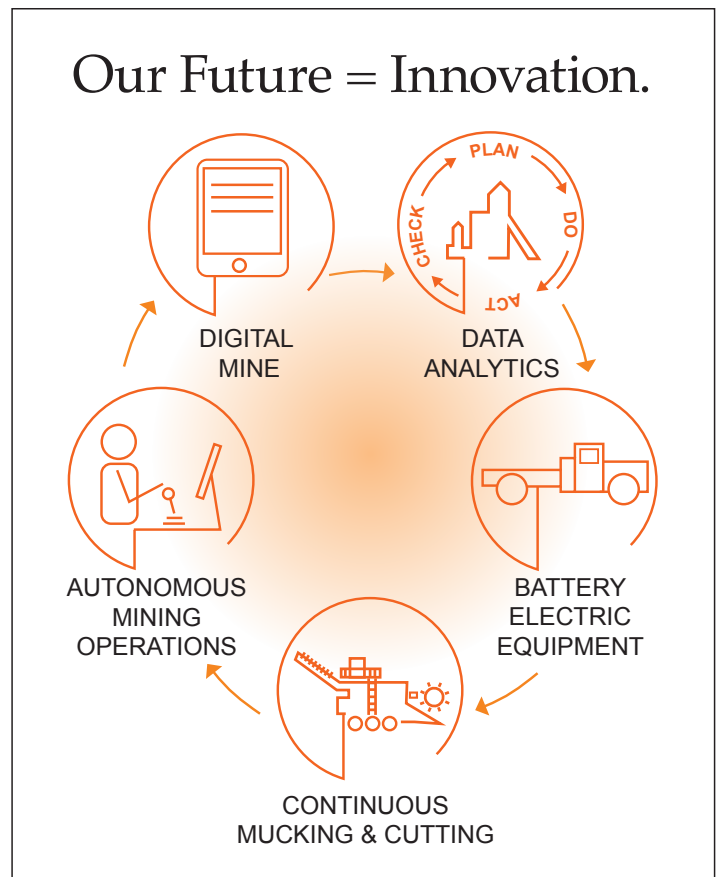
2012-2016

A revised Scoping study proceeding to Feasibility Study was completed incorporating a new mine design, findings gathered from recently developed deep mines (Kidd Creek, Laronde, Creighton) and included a cooling plant.

The digital age will be on full display at Onaping Depth with real-time remote management, monitoring and control from surface. Innovative safety systems will be integrated into the operation. The mine will feature mine-wide Wifi communication between employees and from underground to surface. In some areas, miners will be removed from the working face utilizing autonomous mining equipment. The entire fleet of mining equipment below the internal shaft will feature battery-powered electric vehicles, eliminating diesel emissions and reducing noise pollution. New technology will also be applied to critical ventilation and cooling systems where the ambient rock temperature can reach 40°C at depth.

Creative design and engineering, and the application of new and existing technology at Onaping Depth are defining the future of underground mining. More importantly, they help ensure many more years of high-grade nickel ore in a safe and cost-effective environment.

Our need to mine deeper ore bodies also made it necessary for us to work with our Original Equipment Manufacturer partners and develop battery electric technology that was practical, powerful and cost effective. As it turns out, battery power for underground mining equipment may prove so effective, that it will eventually be integrated into most mining operations.



The Battery: *powering our future*

The benefits of battery electric power in an underground mining operation are numerous. Zero diesel emissions result in a smaller environmental footprint and fewer health concerns for employees. There will also be greater energy efficiency in operating our fleet of mobile equipment.



Source: Nickel Institute

When it comes to ventilation and cooling, normally one of the biggest portions of a mine's overall energy cost, the savings will be substantial.

Sudbury INO is working with a few major Original Equipment Manufacturers to advance battery technology and a number of vehicles are already being tested. While lead-acid batteries have been used in underground operations for decades, advances in chemical and associated technologies have led to a few different battery types, including lithium and nickel-chloride variations. Each has its own strengths, and engineering and testing are ongoing. It is estimated that within a few years, most new mobile equipment purchased for underground will be battery electric, with zero emissions.

2017

Partial project funding was obtained and initial development began on the two primary headings required to access and develop the internal shaft.

Late 2017 - present

Full project approval was received with development continuing to the internal shaft access. Major components such as the hoist were ordered. Detailed engineering was initiated for all aspects of the project.

2018

Will see the excavation of the hoisting plant and start of the internal shaft sinking, along with completion of detailed engineering and continued procurement of required materials for the safe execution of work.

The Onaping Depth Project, once completed, will extend the mine life until 2035, and provide feed for the Sudbury Mill and Smelter over this same period. It will also be an enabler for additional exploration and development of new mines such as Nickel Rim Depth.



The Glencore Sudbury INO team interact with youth at the annual Wahnapiatae First Nations Open House and Career Fair.

Nurturing Indigenous Partnerships

Successful partnerships are built on mutual respect, integrity and transparency. These values are found in abundance in the proven partnerships that have developed between Glencore Sudbury INO and Indigenous communities.

Over the past ten years, Glencore Sudbury INO has signed a total of four partnership agreements with local Indigenous communities.

The first, in 2008, was a Participation Agreement with Wahnapiatae First Nation. Under the recently renewed agreement, Sudbury INO and WFN work together on environmental stewardship, education and training for youth and community development.

In 2011, a Memorandum of Understanding was signed with Sagamok Anishnawbek First Nation. It serves as a foundation for a working relationship between the two partners, primarily with respect to the company's exploration activities within Sagamok's traditional territory west of Sudbury.

In December 2015, Sudbury INO signed a Memorandum of Understanding (MoU) with the Métis Nation of Ontario. This MoU deals with areas of common interests such as information sharing and supporting Métis cultural, heritage, research and educational activities.



Peter Xavier, Sudbury INO Vice President and Chief Steven Miller (Atikameksheng Anishnawbek) concluded the signing of the MoU on December 20, 2017.

Just recently, a Memorandum of Understanding was signed with Atikameksheng Anishnawbek (Whitefish Lake First Nation). The MoU outlines a relationship that will be built between the two parties through regular meetings of a working group. It will further guide the two parties with respect to information sharing and consultation and will provide support to the Atikameksheng Anishnawbek cultural events, education and training initiatives, as well as contribute to environmental and/or infrastructure projects.



Water sampling activity at Massey Creek with the Wahnapiatae First Nation Environmental team.

Massey Creek: a model for future collaboration

One example of close collaboration with Indigenous partners is the Environmental Working Group and its Massey Creek Watershed Biodiversity Enhancement Program. The Working Group, comprised of Sudbury INO employees and Wahnapiatae First Nation representatives, was able to monitor and assess previous actions taken in the Massey Creek watershed in an attempt to reduce the company's environmental footprint.

Then, best practices from another local watershed were applied to the Massey Creek. Within two years, the creek showed a dramatic improvement in the population of brook trout, an indicator of improvement in the overall health of the waterway. Since this success, the Environmental Working Group has become a model for future collaboration between Indigenous communities and industry partners.



Laurentian University's Indigenous Sharing and Learning Centre (ISLC) was officially opened in June 2017. It brings together students, faculty, staff and the community to enhance Indigenous education, advance understanding, and supports the needs and aspirations of Indigenous communities. Sudbury INO is proud to be part of this achievement as the major donor for the Centre.



Wahnapiatae Centre of Excellence opened up its door in September 2012. The construction of this multi-purpose Centre was realized through partnerships with Glencore Sudbury INO, the Northern Ontario Heritage Fund Corporation, and other mining companies.

Community Engagement



Since Sudbury INO became part of the Glencore family in 2013, there has been a renewed commitment to the communities in which we operate. At Sudbury INO, our approach to sustainability has always been rooted in sound business principles and in the genuine partnerships we nurture with employees and their families, customers and our communities. They are the stakeholders that matter and we constantly strive to strengthen these relationships through respect, cooperation and transparency.

Glencore investments create lasting economic and social benefits in the Sudbury area. In local communities, we have supported community projects totaling \$15 million over the past 10 years, along with donating significant time and expertise as required. Our five key spending priorities are: health, education and training, environment, locally relevant projects and livelihoods/entrepreneurship.

Our relationship with community partners such as the Falconbridge Citizens Committee (FCC) is critical to ensuring dollars are spent on the most relevant community initiatives. This committee began more than 17 years ago when volunteers from the community and Sudbury INO got together to see how they could ensure that our neighbourhoods continued to thrive.

Open Houses and Family Day

One of the best ways for Sudbury INO to interact with the community is by inviting residents to Open Houses where they can learn firsthand about our operations. Several Open Houses and Family Days have been held over the past year. Hundreds of citizens including employees and their families have participated in interactive displays, tours and other fun informative activities.

Sudbury INO has committed itself to its partnerships with local organizations and each year dozens of projects, both large and small, are funded. By doing so, we can all take pride in having created a better place to live, work and play.

Falconbridge Community Garden

This past year, the FCC supported by Sudbury INO completed a community garden project. Ten garden boxes were established in Falconbridge in time for spring planting and this past summer, the raised garden beds flourished with fresh produce and flowers. Studies have shown that community gardeners and their families eat healthier diets, and the green space in a community centre provides a sense of wellness and belonging. The FCC hopes the popularity of the garden boxes will continue to grow and create a seasonal gathering place for residents.

Above: Sudbury INO employee volunteers and our partners from Atlas Copco, Science North, VETAC (partner in re-greening efforts in the City of Greater Sudbury), and Day Transport help us put together informative displays year after year for our Open Houses.

Falconbridge Community Garden





Left: The Glencore Sudbury INO dragon boat team was crowned the winner of the 2017 Sudbury Dragon Boat Festival's Division 2, and also the winner of the Mining Cup.

Below: The Northern Water Sports Centre (NWSC), funded partially by a million dollar donation from Glencore. Since opening its door in 2016, NWSC has been providing various aquatic programs to promote a healthy lifestyle to the community. The centre also has the potential to provide economic benefit to the City of Greater Sudbury through new opportunities created for hosting major aquatic events and competitions up to the international level.

Employee Engagement

At Sudbury INO, supporting communities and local organizations is more than simply writing cheques. We take great pride in the way our employees have enthusiastically jumped in to volunteer their time and talents for the many community charity events and projects we support. Without strong employee engagement, we simply wouldn't have achieved such amazing results for so many community endeavors. From our business leaders taking an active role in local boards and committees to our hardworking Dragon Boat paddlers who raised funds for local charities such as the Maison McCulloch Hospice, or the Glencore Big Bike Team who peddled to help raise funds for the Heart and Stroke Foundation, Sudbury INO and its employees have made their presence felt in many local community-building and charitable fundraising activities. Perhaps our greatest success story is our employees' annual involvement in the United Way Centraide Campaign. With the company matching all employee donations, the 2017 contribution exceeded \$372,000. In the last five years alone, our employees and the company have donated more than \$2 million to this important, local charitable organization.



Economic Contributions

Glencore in Canada – 2017 highlights

(US\$ unless otherwise specified)

JOBS
7,500

Direct employment across Canada

CAPITAL INVESTMENT
\$425 m

On sustaining and expansionary investment

TAXES & ROYALTIES
\$212 m

Paid to governments

OPERATION SPEND
\$5.8 b

On goods and suppliers

WAGES
\$658 m

Annual wages and salaries payments

COMMUNITIES
\$2.4 m

Regional community investment initiatives

Sudbury Impact in 2017

JOBS
1,300

Permanent employees, and more than 500 contractors

CAPITAL INVESTMENT*
\$150 m

On sustaining and expansionary investment

*In Canadian dollars

INDIRECT JOBS
8,000

TOTAL WAGES & OPERATION SPEND*
\$514 m

*In Canadian dollars

Education and Training



Sudbury INO Summer students going on an underground tour at our Nickel Rim South Mine.

Identifying opportunities to support quality and diversity in education and training has become an important goal for Sudbury INO. Over the years, the company has hosted hundreds of tours for visiting groups including government, First Nations, international dignitaries, and academics - all eager to see firsthand our advanced mining technology. Tours are also used to give local students and teachers an educational look at our mining, milling and smelting operations or to support a wide range of programs at our university, colleges and schools.

Sudbury INO also offers summer employment to college and university students. It's a program that has been ongoing for many years, as well as our annual Glencore Scholarships Program for the sons and daughters of employees.



The Teachers Tour participants at the Strathcona Mill and Tailings reclamation area.



Our Sudbury operation has worked with Cambrian College for many years. Several of our current technicians and graduates studied at the college and we have previously supported the development of their Centre for Innovation.

Enhancing our Environment



This year, the City of Greater Sudbury's Re-greening Program celebrates 40 years of land reclamation. During this time, approximately 3,500 hectares of land has been treated with fertilizer, lime and a grass seed mixture, and nearly 10 million trees have been planted. A once barren landscape has been returned to its natural, green state as evidenced by the sighting of some 75 bird species. This award-winning ecological recovery was made possible through a long-term commitment of support from multiple partners including Glencore Sudbury

INO. We have been a long-time partner in this program for over two decades. In addition to significant technical expertise, our contribution in the last four years alone totals \$2 million.

A more grassroots example of Sudbury INO's support is the popular Ugliest Schoolyard Contest. Since 2007, annual cash donations to winning schools have transformed 40 schoolyards into greener and healthier environments. There is still much to be done for re-greening and Sudbury INO is committed to making it happen.

Students planting perennials around a tree in a stone planter at Princess Anne Public School, one of the winners from the 2017 Ugliest Schoolyard Contest, sponsored by Sudbury INO.

REGREENING COMPONENT	2017	TO DATE (since 1978)
Tree Seedlings Planted	79,709	9,723,172
Shrub/Understory Tree Seedlings Planted	46,018	360,539
Area Limed	6.7 ha	3,471 ha
Area Fertilized	5.6 ha	3,246 ha
Area Seeded	5.6 ha	3,173 ha
Forest Floor Transplants	0.148 ha	1.83 ha
Program Cost	\$843,143	\$31,837,747
Temporary Employment Opportunities	31	4,746
Awards	—	14
Number of Schoolyards Regreened	2	43
Volunteer Tree Planters	24	11,662
Trees Planted by Volunteers	282	375,046
Trees Provided for Residential Plantings	1,772	429,023

Source - VETAC 2017 Annual report.



About Glencore's Sudbury Integrated Nickel Operations (Sudbury INO)

Sudbury, Ontario, Canada is one of the most geologically rich areas of the world. This northern city in the Canadian Shield boasts a 60-kilometre-long formation called the Sudbury basin, which is brimming with nickel, copper, cobalt, gold, silver, platinum and palladium deposits. It's also been home to Sudbury Integrated Nickel Operations since 1928.

Our Sudbury operations include exploration, underground mines, a mill and a smelter, all located in this basin. We currently employ more than 1,300 permanent employees.

Our Report to the Community contains information from around our operations in Sudbury. If you have a suggestion for topics you'd like to read about in the next edition or a comment on this issue, email us at sudburycommunity@glencore.ca or contact Iyo Grenon at 705 693 2761, ext. 3120.

Front cover painting of Glencore's Sudbury Smelter, located in the town of Falconbridge, Ontario and back cover painting of Fraser Mine in Onaping, were painted by Hans Matthews, a local Aboriginal Anishinabek Nation artist and geologist from the Wahnapiitae First Nation, Ontario, Canada.

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H. MATTHEWS 2014