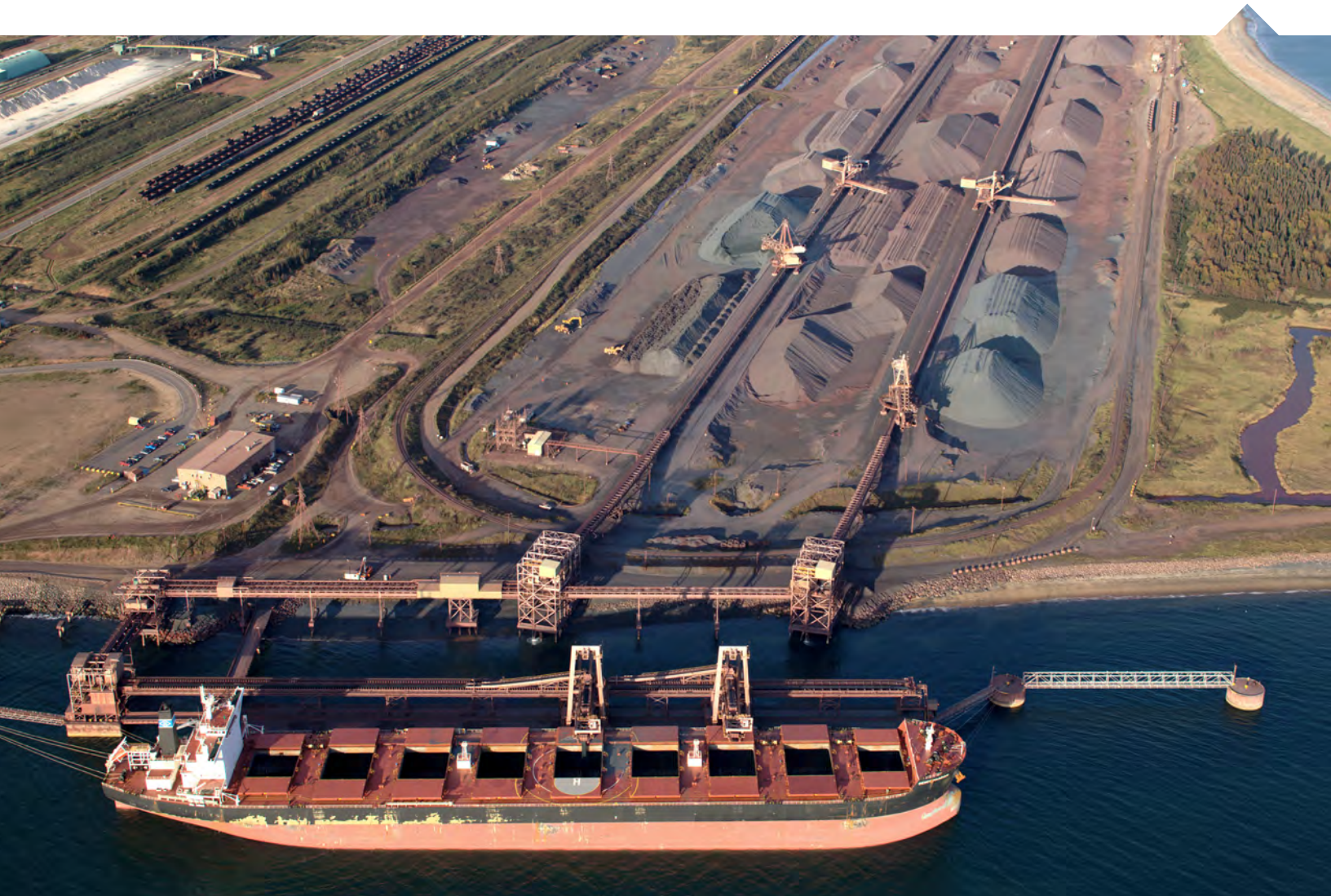


# SUSTAINABLE DEVELOPMENT REPORT 2011





# President and CEO's Message

The sustainable development of IOC's operations has been front of mind in 2011. The re-launch of our three-phased expansion program and the announcement of a study to consider further expansion for 2016, have led many of us to think long and hard to ensure that this growth protects the environment, enhances the wellbeing of our communities and protects the health and safety of our employees.

IOC has been in Labrador West and Sept-Îles for over 50 years. We continue to benefit from abundant reserves of low-pollutant ore. We have a skilled and experienced labour force preparing the future generation of workers. We continue to invest in our equipment and infrastructure to maintain world-class operations capable of meeting current and future demand.

In 2011, production needed to be flexible to adapt to customer demand for more concentrate and less pelletized product. Whilst some of our pelletizing

capacity was idled to respond to this market change, we have taken advantage of this reduced pellet demand to renew infrastructure and equipment that will allow us to maintain options on our products, as requested by our customers.

With the new global pricing for iron ore products, we have converted most of our sales contracts to quarterly rather than annual pricing. While this allows us to take advantage of upswings in the market, it also exposes us to greater volatility in the price of iron ore, highlighting the need for us to constantly look for production efficiencies to remain competitive. This volatility is further amplified by the distance between Canada and the largest growing customer demand centre in China and other parts of Asia, where significant additional and variable freight costs are incurred.

Through all of this, we are unwavering in our commitment to safety, the protection of the environment

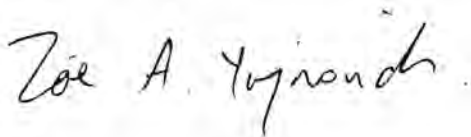


and the wellbeing of the communities touched by our operations. This year we brought onboard two senior executives to help us on our journey to Zero Harm and environmental excellence. Simone Willshire, General Manager for Health, Safety, Emergency and Security, joined us last May, followed by Julie Gelfand last fall, who took on the role of Vice-President of Social Responsibility and Environment. Simone has already brought a renewed focus to our commitment to safety and ensured the full implementation of a management system to meet Rio Tinto's exacting health and safety standards. Julie's experience with Nature Canada and the Towards Sustainable Mining Program, is positioning us to be an industry leader in environmental performance.

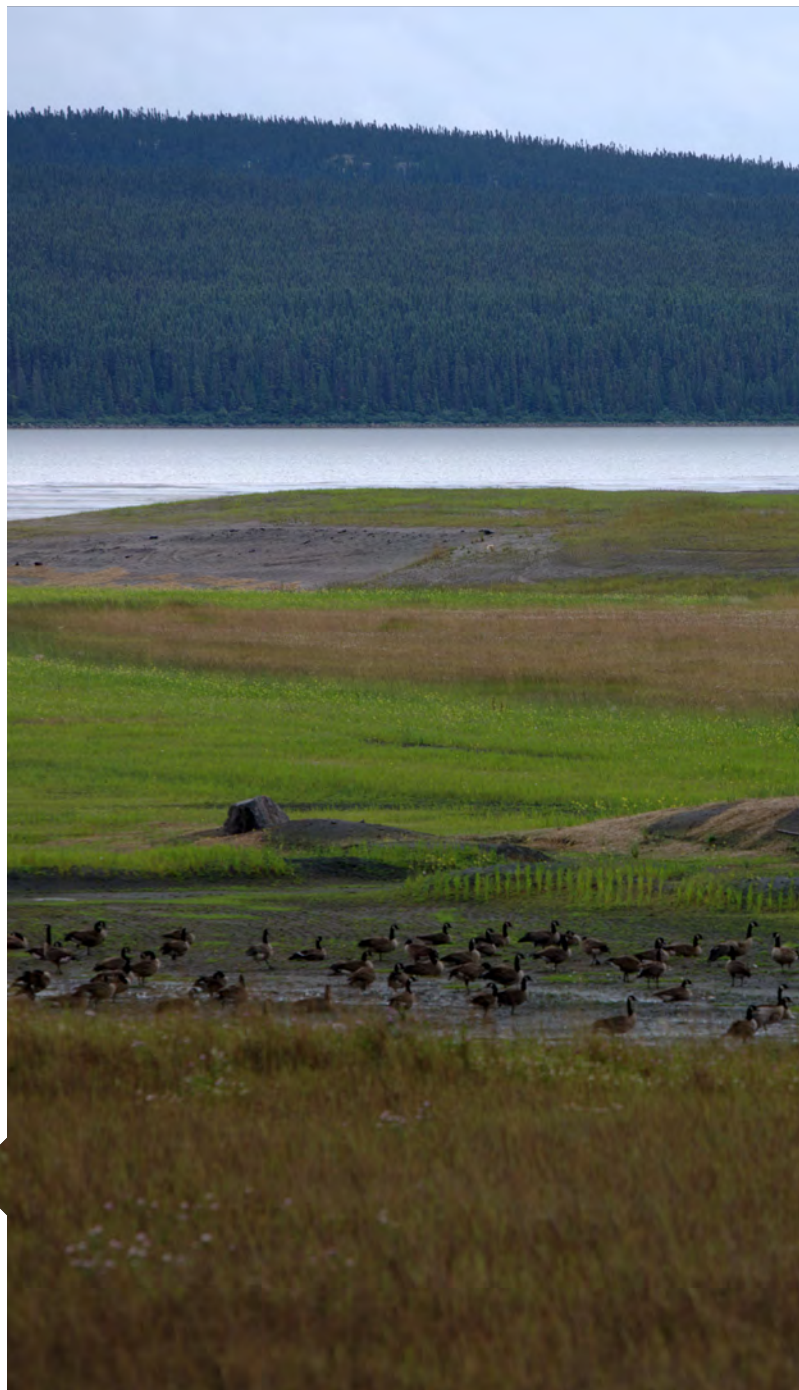
We've also stepped up our engagement in the community with the creation of a new Regional Taskforce composed of senior executives from all area mining companies as well as local and regional governments. While this taskforce is a new initiative, we are optimistic that it will improve regional planning and allow Labrador West and Sept-Îles to adapt faster to our changing realities.

Lastly, I want to talk about the tragic death of a contractor on IOC's premises. I am deeply troubled that this is the second fatality at IOC in the past two years. I remain firm in my belief that every accident is preventable. The death of Jamie Brace in April 2011 left the IOC family profoundly shaken once again. An in-depth investigation of the accident has been concluded and the key lessons have been used to improve our safety systems and further minimize risks. The strengthened commitment to safety and recent implementation of the Health, Safety, Environment and Quality (HSEQ) management system are already building our collective capacity to prevent such incidents in the future.

The following report presents our on-going commitment to protecting the environment, health, safety and wellbeing of our communities. This, along with our focus on maintaining a world-class mining operation, ensures that IOC and the communities of Labrador West and Sept-Îles can look forward to a sustainable and prosperous future together.



**Zoë Yujnovich**  
President and Chief Executive Officer



# Our Business



Figure 1: IOC Locations

IOC is a leading Canadian producer of iron ore concentrate and iron ore pellets serving customers worldwide. The Company operates a mine, concentrator and a pelletizing plant in Labrador City, Newfoundland and Labrador, as well as port facilities located in Sept-Îles, in the province of Quebec. It also operates a 418-kilometre railroad that links the mine to the port.

IOC currently employs 2,360 employees and has the capacity to produce approximately 18 million tonnes of iron ore concentrate per year.

Iron is one of the most common elements on Earth, comprising about 5% of the Earth's crust. We extract iron ore from beneath the surface rock, crush it and concentrate it. We can then either transform it into iron pellets suitable for use in blast furnaces, or transport it directly by rail to our deep-water port facility in Sept-Îles to be shipped to customers around the world. Iron is the key ingredient in the production of steel, one of the most useful and durable products for modern living.

IOC's major shareholder and operator is the international mining group Rio Tinto, which has activities in more than 40 countries throughout the world.

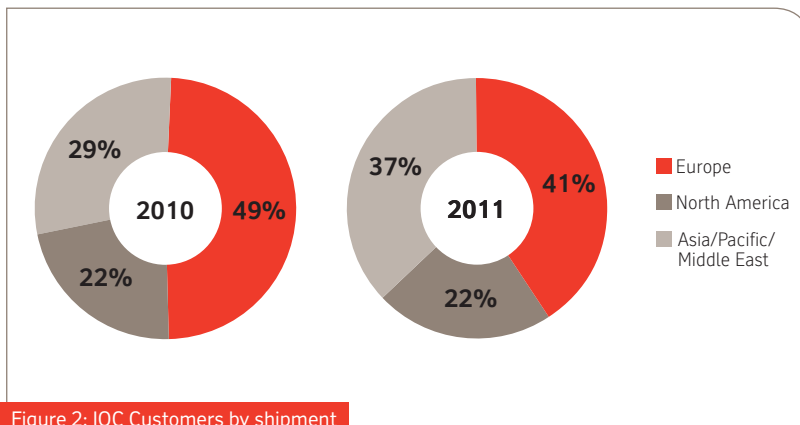


Figure 2: IOC Customers by shipment

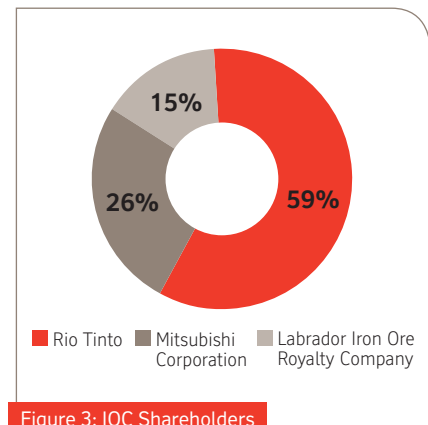


Figure 3: IOC Shareholders



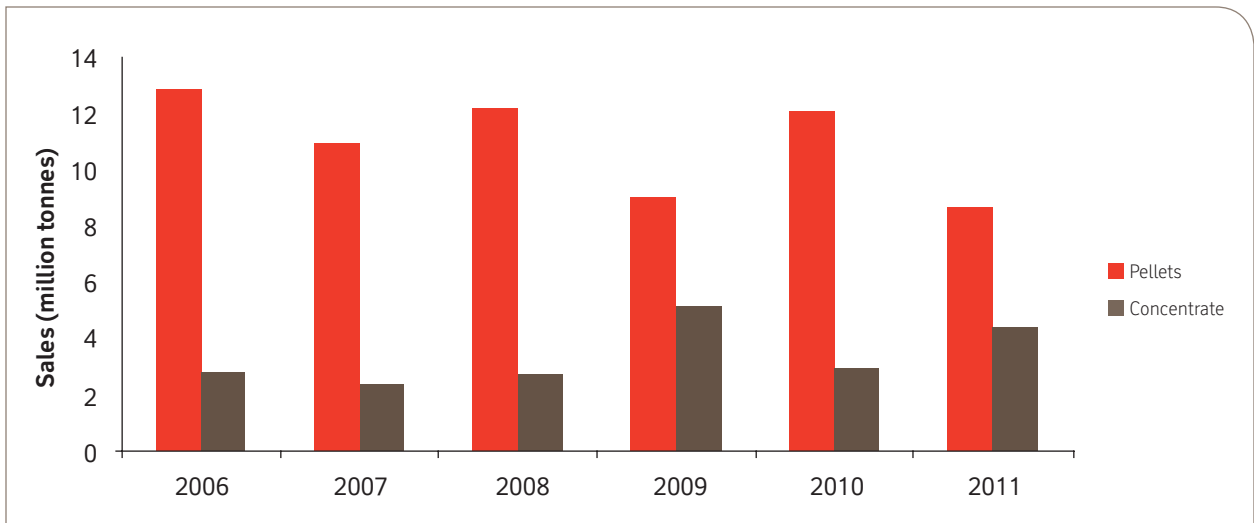


Figure 4: IOC Sales of Pellets and Concentrate

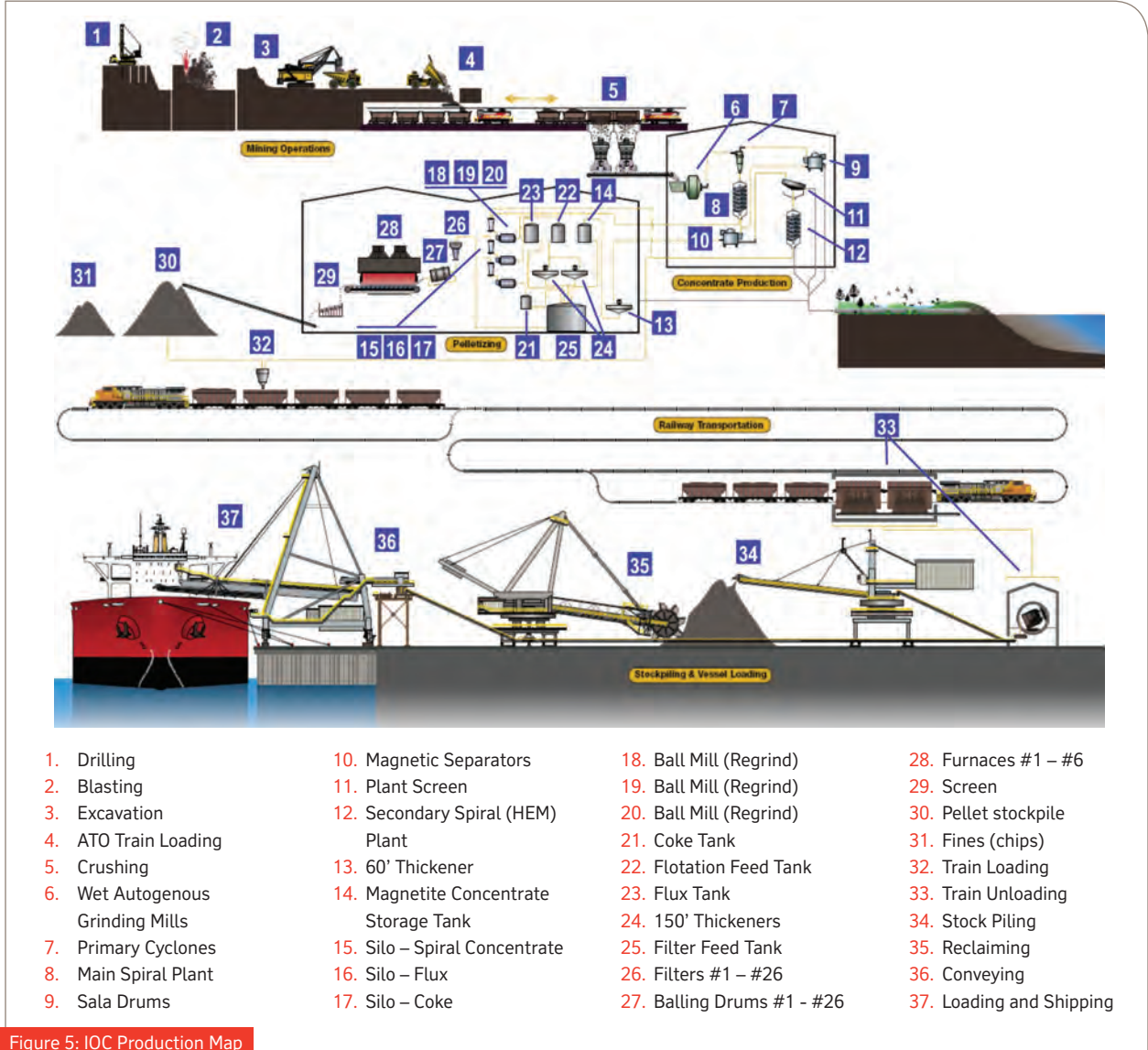


Figure 5: IOC Production Map

# Sustainable Development at IOC

Our approach to sustainable development is guided by Rio Tinto's global code of business conduct – *The Way We Work*, which addresses the many aspects of corporate social responsibility and sustainable development. Our focus on sustainable development – on economic prosperity, social wellbeing, environmental stewardship as well as strong governance and corporate ethics—provides the framework in which our business operates. In order to deliver on our sustainable development commitment, we make

sustainable development considerations an integral part of our business plans and decision-making processes.

In this report, you will find case studies and performance tables that attest to this commitment, presented under three broad headings:

- > Social Wellbeing;
- > Environmental Stewardship; and
- > Economic Prosperity.





# Social Wellbeing

IOC strives to be a great place to work. We recognize that our success is based on an engaged, healthy workforce and a supportive community. Consulting with our stakeholders (employees, community groups, different levels of government, industry associations, to name a few) is key to understanding expectations and adjusting our approach for a sustainable future together.

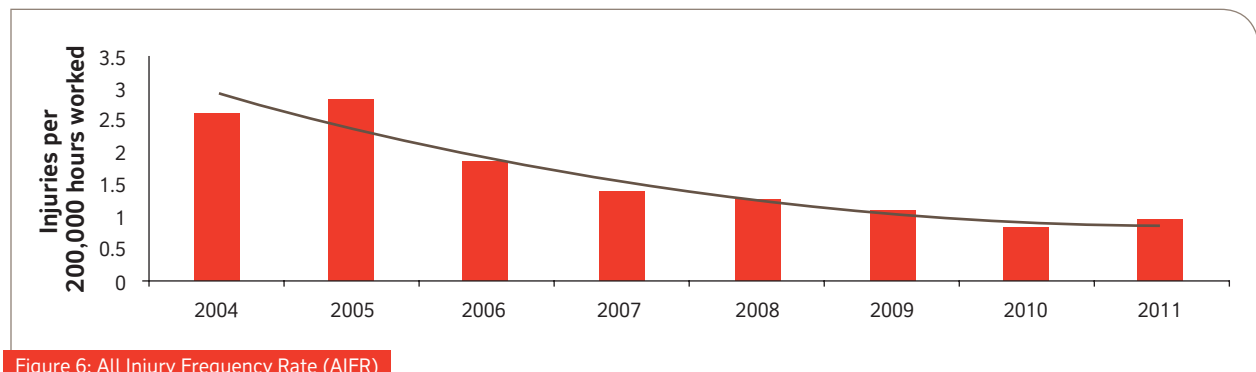
## Health and Safety

The goal of achieving Zero Harm is firmly embedded at IOC. This year, the journey to Zero Harm involved both the allocation of new resources and the reorganization of the Health and Safety team to focus on two key areas: our systems and our behaviours.

> **Systems:** In 2011, we implemented a more robust management system using the Rio Tinto integrated Health, Safety, Environment and Quality Management System (HSEQ MS). Using the same program for Health, Safety and Environmental issues means there is greater understanding throughout the organization of how the system works which,

in turn, means better identification and control of risks. Many changes and improvements were made and communicated throughout the year, resulting in a successful certification audit last fall. Part of the approach was to systematically analyze and classify risks according to energy type (electrical, thermal, gravitational, human, etc) using industry taxonomy data. This enabled us to better address and mitigate risk areas.

> **Behaviours:** Changing behaviours comes through education and awareness. Among the many initiatives undertaken this year, several workshops were hosted by our senior leadership team, Zoë Yujnovich, Don Hyma and Mark Rogers for union leaders, design engineers and general managers, as well as team-based safety talks and communication campaigns. We also developed a pocket book for employees highlighting the Rio Tinto HSE standards with a personalized message from Zoë Yujnovich giving every person the support needed and authority to stop work believed to be unsafe and find a safe way to do the work.



Our injury frequency rate remains near historic lows. While the number of health, safety and environmental incidents that occurred during the year was slightly higher than in 2010, it should be noted that due to the expansion and engineering work taking place on site, we worked 30% more people hours than in 2010.

Current operations are a combination of mining operations (about 70%) and expansion projects (about 30%), some of which are categorized as construction sites, not mines. The latest government published statistics date back to 2008, but show that IOC injury rates are slightly better than the industry averages for mining, and considerably better for construction. Furthermore, our AIFR includes medical



**Table a: IOC Benchmarks**

	Canadian Injury Rate (lost-time injuries per 1000 employed workers <sup>1</sup> )	Canadian Injury Rate (equivalent per 200,000 hours worked)	IOC All Injury Frequency Rate (injuries per 200,000 hours worked)
Mining and quarrying	9.9	0.99	0.91
Construction	24.5	2.45	0.91

<sup>1</sup>Source: International Labour Organization (ILO), 2008. Rates are calculated using data compiled from Human Resources and Skill Development Canada, Statistics Canada and Association of Workers' Compensation Board of Canada.

treatment cases as well as lost-time incidents, whereas the government figures only include lost-time injuries.

We continuously work to improve our safety performance. We investigate each incident to establish its root cause. Taking this further, we also record and investigate every significant potential incident to see what lessons can be learned. Between 2010 and 2011, IOC's leadership team has increased the focus on the

**Table 2: Incident Statistics – Health, Safety or Environment**

	2010	2011
Lost time incidents	7	16
Medical treatment cases	20	23
Significant incidents	6	30
Significant potential incidents (also known as Near Miss incidents)	25	53

reporting of incidents. Increased reporting of both incidents and potential incidents means more opportunities to investigate and better control of risks. There is a strong belief that the emphasis on the reporting of incidents is driving a cultural shift within the workforce: our employees and contractors feel more confident that they can report concerns and have them addressed.

**Reducing Risk Related to On-site Driving**

One initiative to reduce risks relates to driving on-site in Labrador City. A new site security system was introduced that reduces the number of personal vehicles on site and ensures that all on-site drivers are fully trained to deal with the risks associated with an industrial site. To facilitate this, we set up an on-site shuttle bus to take people from the front gate to their on-site

destination, created additional parking at the gate and added a heated bus shelter.

**On-site Ambulance**

A new advanced-care ambulance unit was purchased for the Labrador City mine site. This investment, along with trained care providers, means a much faster response time in the event of a medical incident. The IOC Ambulance Service is also available to provide assistance to the community should the Labrador City emergency services require additional support.

**Facility Dust Control**

In 2011, we worked to improve the control of dust in our Labrador City facilities. While our employees have protection from dust inhalation through the use of personal protection equipment, it is always safer and more agreeable to reduce the ambient dust levels in the facility. We therefore invested \$3 million in dust control technology, such as containment skirts, covered conveyors and water suppression systems.





## Community Engagement

Working directly with the community is an integral part of IOC's culture. We have been partnering with the communities in Labrador West and Sept-Îles for more than five decades and we hope to be around for that many more. In 2011, IOC opened a new office in St John's to strengthen its relations with the Newfoundland and Labrador government.

### Dialogue Tour

Accompanied by her team of senior executives, Zoë Yujnovich, IOC President and Chief Executive Officer, toured all operations and offices to open both one-on-one and group dialogues with employees to discuss operations, the potential benefits and impacts of the expansion projects and to listen to concerns.



### New Regional Taskforce on Community Growth in Labrador City

In Labrador City, a new taskforce has been set up to complement the Community Advisory Panel (CAP) that has been in place since 2006. The Regional Taskforce is made up of senior executives from IOC and the other mining companies in the area, the mayors of Labrador City and Wabush, as well as officials from the departments of Municipal Affairs and Natural Resources, Intergovernmental and Aboriginal Affairs Secretariat and the Labrador Affairs office. This multi-sector group of senior representatives will work collaboratively to anticipate and address the rapid growth of the Labrador West communities and identify the pressure points so that appropriate actions can be taken.

### Community Advisory Panel in Labrador West

In 2011, the CAP initiated by IOC in 2006, met on six occasions and was co-chaired by IOC and Cliffs Natural Resources. The following areas continue to be the top priorities:

- > **Housing affordability and availability:** Increased activity at the mine has led to an influx of residents to the area, in turn, leading to pressure on available housing in Labrador West. The new Labrador West Housing and Homelessness Coalition was created and has been very active in addressing this most pressing need. IOC constructed 52 housing units next to the Collegiate Residence and aims to build a second apartment building housing 107 units in 2012. IOC also partnered with Habitat for Humanity to build two new homes contributing land, \$100,000 and human resources to the build.
- > **Healthcare service adequacy:** A medical services review was undertaken in Labrador West by Labrador-Grenfell Health. The review group met with CAP participants, as well as representatives from IOC's Health and Safety department. To be published shortly, the report will include recommendations on how to address growing healthcare needs of the community.
- > In 2010, IOC partnered with Labrador-Grenfell Health and the provincial government to bring a computed tomography (CT) scanner to the communities of Labrador West. The equipment was unveiled in Labrador City in August 2011. Currently housed in a temporary structure next to the hospital, the scanner will be moved into the new hospital now under construction in Labrador City for 2014. IOC contributed \$600,000 to this initiative.
- > **Childcare availability:** The community Daycare Steering Committee took on the challenge of opening a sixty-space daycare for residents of Labrador West. A location was identified in 2011 and renovations are due to be completed for a spring inauguration. As well as participating in the project planning, IOC contributed \$100,000 to create an outdoor greenspace. Separately, IOC is undertaking second daycare project that will result in sixty new childcare spaces for IOC employees by the end of 2012.

### Community Meetings in Sept-Îles

The CAP in Sept-Îles has evolved to become the new Sustainable Development Committee for the town led by the mayor, involving more players and covering additional topics. IOC looks forward to participating in 2012.

### Aboriginal Engagement

IOC is a strong believer in good relations with local aboriginal groups. Over the past year, we have been in active discussions with various groups to conclude agreements regarding training and employment, business opportunities, social involvement and other benefits.



## Community Donations

IOC actively supports a wide range of activities that benefit the communities in which we operate, such as health, social and cultural initiatives. Donations this year amounted to a total of \$2,087,000, significantly more than ordinary levels due to some strategic long-term projects that address the critical needs of Labrador West, notably:

- > the CT scanner (\$600,000);
- > three community greenspace play areas (\$100,000 each);
- > the Ronald MacDonald House (\$100,000);
- > the Habitat for Humanity project (\$100,000); and
- > the Town of Labrador City's 50<sup>th</sup> Anniversary including a children's splash pad (\$155,000).

## Employee Contributions

We also want to highlight the significant contributions that IOC employees make to the community. For example, while IOC donated \$100,000 to the Ronald MacDonald House in St John's, IOC employees collected an additional \$350,000. This combined donation will contribute to the construction of 14 comfortably furnished family suites, as well as common family areas including a kitchen, a large dining room, a TV room, a playroom, a teen room, an educational centre and a home office, for the families of children being treated for cancer at the Janeway Children's Health and Rehabilitation Centre in St. John's, NFL. Similarly, IOC matched the \$37,600 raised by employees for Centraide in Sept-Îles.



# Community Donations

## Health – \$680,000

- > Canadian Cancer Society: Relay for Life Program
- > Canadian National Institute for the Blind Industrial Eye Safety Program
- > Canadian Association for Community Living – Ken Gage Memorial Bowling Tournament
- > Multiple Sclerosis Society Fundraiser
- > Palliative Care Centre: Élyme des Sables
- > La Fondation Centre Hospitalier Régional de Sept-Îles
- > Emergency Preparedness Study in Labrador West
- > Computed Tomography (CT) Scan Labrador West

## Sports and Recreation – \$239,000

- > Cain's Quest (Canada's Longest Snowmobile Endurance Race)
- > Ushu Youth Camp: summer 2011
- > White Wolf Snowmobile Club
- > Tamarack Golf Club
- > Polaris Figure Skating Club Annual Ice Show
- > Menihek Ski Club 2011 Season
- > Gallixtrême Ski Competition
- > Judo Canadian Championship (Sept-Îles)
- > Student sports Côte-Nord - Partnership for school sports
- > Sponsorship for Audrey Vaillancourt (figure skater)
- > Smokey Mountain Ski Club Donation
- > Iron Ore Cup: soccer game between IOC and Cliffs Natural Resources
- > Labrador West Recreation Needs Assessment

## Social and Welfare – \$468,000

- > Centraide Duplessis / United Way
- > Habitat for Humanity Cabot Labrador West Project
- > Town of Labrador City 50<sup>th</sup> Anniversary
- > Recovering Addicts Fellowship Team (RAFT)
- > Ronald McDonald House
- > Centre Alpha-Lira Literacy Centre
- > Sous le Bon Toit Child Day Care Centre
- > Vieux Quai en Fête Amasi
- > Les Productions Innu Nikamu
- > Labrador West Housing and Homelessness Coalition Housing Project
- > Menihek Soup Kitchen
- > MADD Awareness Campaign

## Environment – \$538,000

- > Labrador West greenspaces (play areas) (AP Lowe School, Harrie Lake and JRS School)
- > Corporation Protection Environnement de Sept-Îles
- > MRC des Sept-Rivières – Environmental programs
- > Moisie River Protection Association
- > Compost Study (Labrador City)
- > Municipal Infrastructure Projects (Labrador City)

## Culture – \$69,000

- > East West North Summer Expo – Regional showcase for art, music and heritage
- > Labrador West Music Festival
- > Arts & Culture Centre – Musical theatre workshop for children
- > Côte-Nord Book Fair
- > Corporation de la Salle de Spectacle Sept-Îles

## Education – \$77,000

- > Eldon Perry Memorial Scholarship for a College of North Atlantic student
- > Fondation du CÉGEP de Sept-Îles
- > Tshakapesh Institute – Aboriginal Education
- > Fondation Sept-Îles Teaching Institute
- > Scholarships at École Polyvalente Manikoutai
- > College of the North Atlantic – (Equipment and instruction)

## Rail and Maritime – \$16,000

- > Port of Sept-Îles annual celebration
- > Canadian Port Authority of Sept-Îles
- > Quebec Mariner's Fondation
- > Sponsorship of the Industrial Maintenance Forum

# Environmental Stewardship

Mining cannot take place without environmental impacts. The key for IOC is to minimize those impacts during the active life of the mine and ensure that as pits are closed, the land is returned with viable eco-systems for the future.

## Closure Plan for Mine Site

In 2011, we reviewed our mine closure plan for the three-phased concentrate expansion programs. The closure plan was updated to take into account the first two phases that are currently underway. Associated closure costs were updated with appropriate financial assurance put aside. It is IOC's commitment to have a comprehensive and up-to-date closure plan for all its mine sites.

## Land Rehabilitation Project

An area used as a tailings deposit for more than 30 years was rehabilitated as a wetland this past summer. Now known as the Coffey Grounds after an employee who

worked in the area for many years, the six hectare area was landscaped with slopes and a small pond, fertilized with chicken manure and seeded with oats and other hardy plants. In the autumn, the fallen plant stalks made great insect habitat and initiated the formation of a soil layer. Different seeds and more fertilizer will be used over the next few seasons until a viable soil is established. Already this year, there was an increase in sightings of geese, and various species of hawks and ducks.

## Dismantling of the pellet plant and the concentrator in Sept-Îles

The decommissioning plan for the old pellet plant and concentrator has been approved by the Quebec *Ministère du Développement durable, de l'Environnement et des Parcs*. Work is underway, starting with the auxiliary equipment such as the conveyors and pipe racks. All residual hazardous liquids and materials such as tank bottoms have already been removed.





## Soil and Groundwater Clean up from Historical Contamination

Diesel contamination was confirmed at the old locomotive inspection pit in Sept-Îles. In 2009, IOC set up a five-year program to decontaminate the soil and local area groundwater. Progress is monitored with regular sampling and a final sampling program will confirm the success of the program, expected for 2013. Contamination around the old fuel tank farm is also being treated.

## Greenhouse Gas Quantification by Product

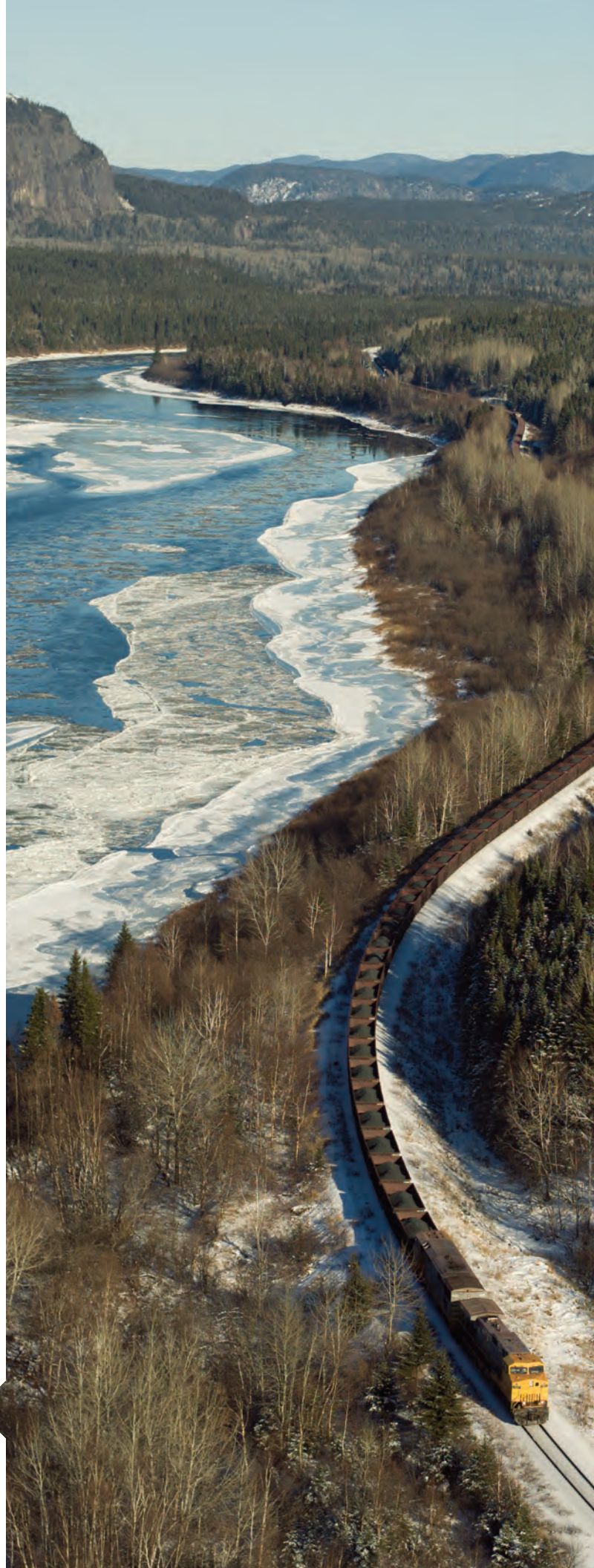
The first step in controlling greenhouse gas (GHG) emissions is being able to measure them accurately. While IOC has been measuring its global GHG emissions for many years, in 2011, we developed a system and key performance indicators that enable us to measure and report on the GHG emissions of our different products according to their exact composition and processing. This new approach means we can, in effect, carbon label our products as well as build a corporate inventory of all our emissions from the ground up. For example, pellets are by nature more carbon intensive to produce since they are the product of mixing iron ore concentrate with carbon-containing binding agents and are baked using fossil fuels. However, a smelting facility using pellets produces fewer emissions than one using concentrate. Overall, to produce a useful metal, using iron ore pellets is the less carbon intensive route.

## Green Marine Certification for the Port of Sept-Îles

In Sept-Îles, we committed to becoming a partner in Green Marine. Established in 2008, the Green Marine voluntary environmental program aims to improve the industry's environmental performance beyond regulatory compliance by encouraging participants to apply additional best practices, set reduction targets and/or introduce new technologies to improve their performance, addressing seven major environmental issues:

- > Aquatic invasive species;
- > Air emissions: SO<sub>x</sub> and NO<sub>x</sub>;
- > Greenhouse gases;
- > Cargo residues;
- > Oily waters; and
- > Conflicts of use for ports and terminals (noise, dust, odours and light pollution).

The program requires participants to conduct a self-assessment against a specific set of performance indicators, with an external verification every two years. The Port Authority of Sept-Îles is the first port to obtain commitments to the program from all terminal operators in its port.





# Air Quality Improvement Program for Labrador City

IOC has been working on an Air Quality Improvement Plan for many years to address community concerns, to plan for new government standards for iron ore facilities in Canada, and to meet our own commitment to reducing our environmental impact and improve social wellbeing.

In 2011, we addressed the problem of possible health risks in the community. Ambient air monitoring stations in Labrador City, which had been set up over the past decade in consultation with the provincial government, were upgraded in 2011 to measure more factors. We also hired engineering firms to conduct extensive emission testing on site and use predictive modeling to understand the dispersion of those emissions under various wind conditions and estimate their levels when they reach both IOC site limits as well as the community.

Intrinsic Environmental Sciences was then hired to review the data collected from the stations, as well as the modelled emissions, from a health perspective. The peer-reviewed studies concluded that:

- > While there have been large dust particle exceedances over the years that represent a soiling and nuisance issue of importance to both the community and IOC, they do not represent a health issue;
- > Long term exposures to air emissions within the community are unlikely to affect people's health. There have been some brief, infrequent, elevated concentrations of sulphur dioxide and nitrogen dioxide at the monitoring stations. The science team considers associated health risks to be low, even for those with respiratory sensitivities, such as asthma;
- > Typically, the concentrations of fine dust particles, sulphur dioxide and nitrogen dioxide in the air in Labrador City are similar to those present in many communities in the Atlantic region, such as St. John's, Corner Brook, Moncton and Fredericton.



Figure 7: Air Monitoring Stations in the Community



2008-2009



2011

Various engineering firms have also been retained to study mitigation measures for our site emissions. Some fugitive emissions have already been addressed. For example, the stacking of newly made pellets ready to be loaded into railway cars generated a significant amount of dust. Over the past three years, we have been working on a way to reduce this dust. With a final piece of the equipment being added in 2010 and many hours of adjustments, the spray system was fully functional this past year. The system sprays a mixture of water and a biodegradable reagent on the pellets as they leave the plant that results in the dust sticking to the pellets as they are discharged.



# Economic Prosperity

Being a sustainable business is all about the long-term view. Is there demand for our product into the future? Are there adequate resources to keep producing? Can we produce efficiently, competitively and profitably while maintaining a healthy workforce and vibrant community and minimizing our environmental impact? In other words, does the business case make sense?

## Market Outlook

Growth in China and other developing nations continues to drive world steel consumption and long-term demand for iron ore. Despite various new projects being announced, the seaborne iron ore industry has found it increasingly difficult to respond to demand, with high cost domestic Chinese producers emerging to fill the void. As such, iron ore prices remain high compared to historical levels. Shorter term, iron ore price volatility is expected to continue as concerns over global financial stability persist.

## Concentrate Expansion Program (CEP)

In response to the improved global economy and increased demand for iron ore from traditional and new markets, IOC re-launched its three-phased Concentrate Expansion Program (CEP) that will increase capacity from 18 million tonnes of iron ore concentrate per year to 26 million by 2013.

The first stage of IOC's Concentrate Expansion Program (CEP1) comprised an overland conveyor to remove bottlenecks in the current ore delivery system, a fourth

autogenous grinding mill to increase primary grinding capacity, and associated mine and rail equipment. This phase was nearing completion by the end of 2011, increasing our capacity to 22 million tonnes per year.

CEP2 sees IOC invest \$289 million to expand its magnetite processing facility and add new spiral lines to its gravity separation circuit by the end of 2012. It will also include purchase of additional mining equipment, railway cars and a locomotive as well as upgrades at the Wabush terminal sub-station, at which time our annual concentrate capacity will be 23.3 million tonnes. The third phase of the project, CEP3, is in the final phase of study.

## Iron Ore Reserves for the Future

Reserves<sup>1</sup> of crude iron ore located on IOC land are approximately 1.4 billion tonnes, which will produce approximately 0.6 billion tonnes of saleable product (pellets and concentrate). At a production rate of 22 million tonnes per year, the estimated reserves of crude iron ore are equivalent to approximately 27 years of production. In addition, there are also estimated Resources of 2.5 billion tonnes.

## Further Expansion

IOC also announced in August 2011 a new study to pursue the expansion of its mining and infrastructure assets in Labrador City and Sept-Îles. The study will evaluate options for growth to eventually increase production to 50 million tonnes.

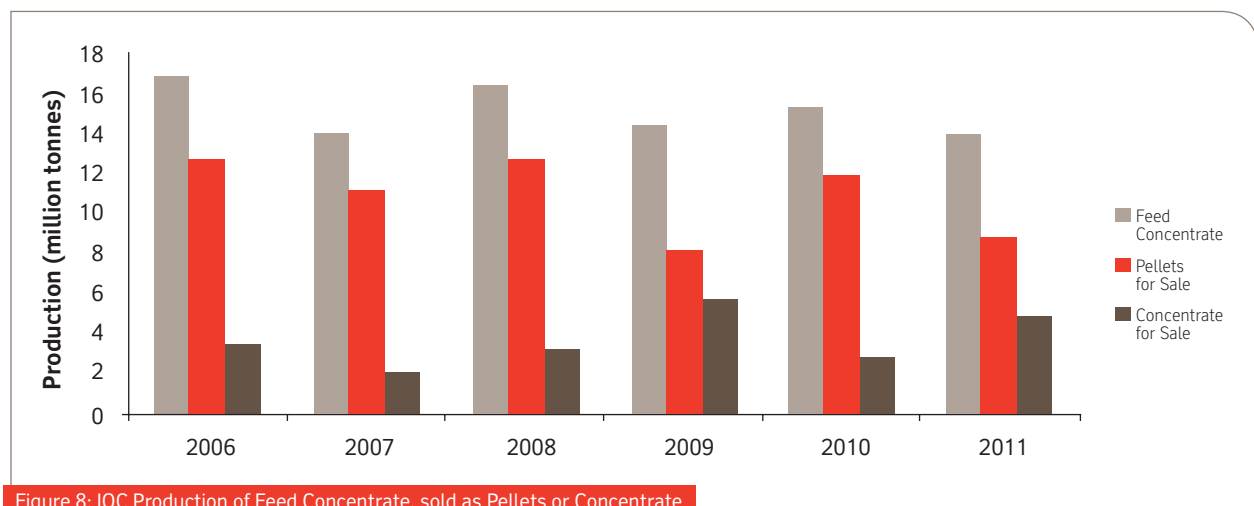


Figure 8: IOC Production of Feed Concentrate, sold as Pellets or Concentrate

<sup>1</sup>Proven and Probable Reserves – these terms, as well as Resources, have specific meanings in the mining industry.

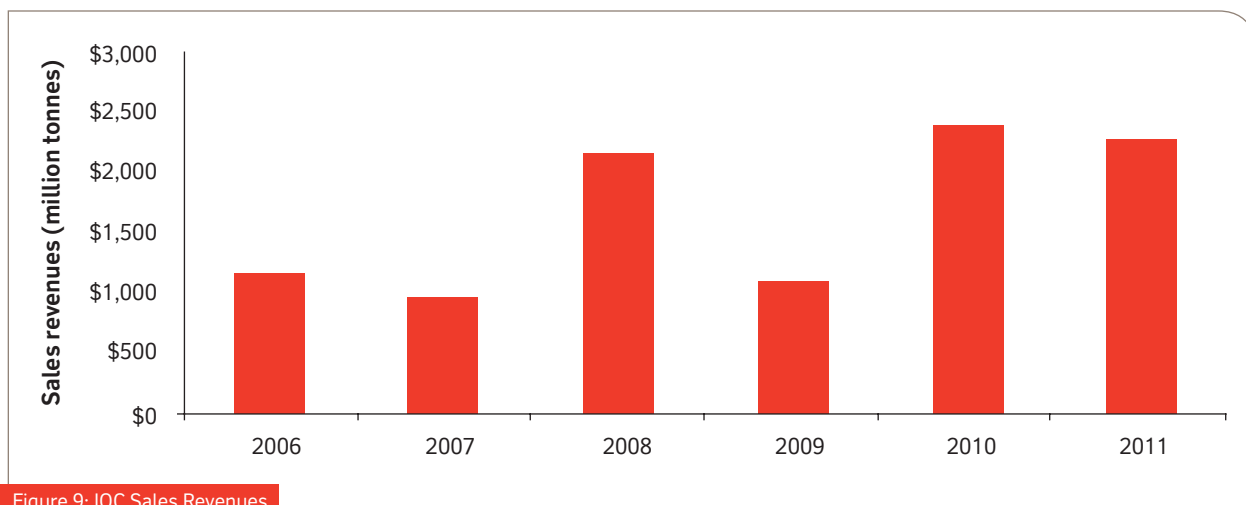


Figure 9: IOC Sales Revenues

### The Quebec North Shore and Labrador Railway

IOC also generates revenue through its wholly owned rail company which hauls not only IOC's iron ore production to our port facility in Sept-Îles Junction but also carries iron ore production from other mines in the Labrador Trough to the Sept-Îles Junction. Use of the railway is set to double in the next few years as a result of our own expansion projects, junior mining start-ups in the area, and increased haulage for current QNS&L clients.

### Iron Yield Improvements

With the pellet plant not being used at full capacity, IOC's flotation equipment for removing silica from concentrate was under-used. Since the flotation plant is more efficient at removing silica than the concentrator, and less iron ore is lost in the process, we switched some of our production to flow through the flotation plant. So while our pellet product still meets the silica concentrate limits required by our customers, we are able to produce these products with improved weight recovery.

### Investing in our Plant Equipment

While pellet production was at a lower level, we used the opportunity to improve the structural integrity of our

assets, some of which date back to our 1961 start-up. According to a priority schedule, we were able to remove equipment from service, restore its integrity and place it back into production, ready for another fifty years of service.

### Tire Awareness Reduces Waste

A tire failure results in immediate down time, lost production and costly replacement, not to mention the potential for an employee to be injured. In 2010, we approached the problem from two sides. First, we formed a specialized tire maintenance crew with expert training to allow our employees to change tires safely and efficiently. Secondly, we formed a dedicated road crew to better maintain the condition of our roads and keep them clear of debris. The philosophy was simple – improved awareness and a better road means better tire life. These combined efforts, along with the excellent cooperation of vehicle operators communicating and avoiding all spilled rock, have led to a 23% improvement in average tire life across the fleet. The time associated with tire maintenance has also decreased dramatically. Considering the potential for tire shortages in the coming years, the overall decrease in tire failures is important for IOC from both a waste and business point of view.

Table 3: Improved Tire Life

	2010	2011	Improvement
Average tire life			
57" tires	4,131 hours	5,065 hours	23%
63" tires	4,360 hours	5,251 hours	20%
Tire failures	214	101	53%
Early tire failures (less than 3,000 hours of service)	58	10	83%
Tire maintenance time	11 hours	4 hours	64%



# Performance Data

Table 4: Performance Data

		2007	2008	2009	2010	2011
Environmental Stewardship	Energy Use	4,720,000 MWh	5,457,000 MWh	4,694,000 MWh	4,884,000 MWh	4,394,000 MWh
	Greenhouse gas emissions (Scope 1 and 2)	1,056,000 tonnes CO <sub>2</sub> e	1,173,000 tonnes CO <sub>2</sub> e	1,018,000 tonnes CO <sub>2</sub> e	1,201,000 tonnes CO <sub>2</sub> e	1,028,000 tonnes CO <sub>2</sub> e
	Land rehabilitated	34 hectares	35.5 hectares	26 hectares	78.5 hectares	36 hectares
Social Wellbeing	All Injury Frequency Rate (per 200,000 hours worked)	1.39	1.25	1.06	0.88	0.91
	Lost time injuries	8	17	9	7	16
	Medical treatment cases	25	20	16	20	23
	New cases of occupational illness	8	12	36	16	9
	Number of employees exposed to an 8-hour noise dose above 85 dB(A)	248	272	322	347	573
	Community Advisory Panel or similar community meetings	2	6	4	Labrador West: 4 Sept-Îles: 3	Labrador West: 6 Sept-Îles: 0
Prosperity	Number of employees	1,964	2,094	2,027	2,206	2,361
	Community Investments <sup>2</sup>	\$3.4M	\$3.6M	\$3.2M	\$3.8M	\$5.7M
	Municipal, provincial and federal taxes	\$141M	\$115M	\$379M	\$448M	\$492M
	Sales	\$973M	\$2,156M	\$1,095M	\$2,421M	\$2,335M
	Sales including QNS&L Railway	\$1,015M	\$2,200M	\$1,144M	\$2,521M	\$2,483M
	Salaries and benefits	\$202M	\$237M	\$229M	\$258M	\$296M

<sup>2</sup>Includes health and post secondary education taxes (NL)

# Towards Sustainable Mining

Towards Sustainable Mining (TSM) is a program developed by the Mining Association of Canada (MAC) to improve the industry's social and environmental performance. As a member of MAC, IOC adheres to

its guiding principles and is committed to the implementation of extensive management processes in the MAC TSM performance areas.

**Table 5: TSM Performance Indicators**

	IOC Labrador West			IOC Sept-Îles		
	2009 √	2010 √	2011 √	2009 √	2010 √	2011 √
<b>Crisis Management</b>						
Preparedness	Yes	Yes	Yes	Yes	Yes	Yes
Review	Yes	Yes	Yes	Yes	Yes	Yes
Training	No	Yes	Yes	Yes	Yes	Yes
<b>Energy &amp; Greenhouse Gas Emissions Management</b>						
Energy use management system	AA	AA	AA	AA	AA	AA
Energy use reporting system	AAA	AAA	AAA	AAA	AAA	AAA
Energy intensity performance targets	AAA	AAA	AAA	AAA	AAA	AAA
GHG use management system	AA	AA	AA	AA	AA	AA
GHG use reporting system	AAA	AAA	AAA	AAA	AAA	AAA
GHG intensity performance targets	AAA	AAA	AAA	AAA	AAA	AAA
<b>Tailings Management</b>						
Tailings management policy and commitment	C	B	AAA	N/A	N/A	N/A
Tailings management system	B	B	A	N/A	N/A	N/A
Assigned accountability and responsibility	B	A	AAA	N/A	N/A	N/A
Annual tailings management review	C	B	AAA	N/A	N/A	N/A
Operation, maintenance and surveillance manual	B	B	AAA	N/A	N/A	N/A
<b>Aboriginal Relations and Community Outreach</b>						
Community of interest (COI) identification	AAA	AAA	AAA	AAA	AA	B
Effective COI engagement and dialogue	AAA	AAA	AAA	AAA	AA	AAA
COI response mechanism	AA	AA	AAA	AA	AA	AAA
Reporting	AA	AA	AAA	AA	AA	AAA
Training, behaviour and culture	–	–	AAA	–	–	AAA
Monitoring and reporting	–	–	AAA	–	–	AAA
Performance	–	–	AA	–	–	AAA

√ Self-assessed  
 √ Externally verified  
 AAA Excellence and leadership.  
 AA Integration into management decisions and business functions.

A Systems/processes are developed and implemented.  
 B Procedures exist but are not fully consistent or documented; systems/processes planned and being developed.

C No systems in place; activities tend to be reactive; procedures may exist but they are not integrated into policies and management systems.

Tailings management is high on the agenda of most MAC members but IOC is fortunate to be mining rock with negligible sulfur content and therefore very low acid rock drainage potential. Tailings were, of course, being managed responsibly in the past, but this did not

meet the rigorous standards of TSM which were written for more polluting tailings. In 2011, IOC implemented a comprehensive new approach to tailings management and scored significantly higher than in previous years.



# Awards and Recognition

- > In November 2011, IOC was recognized for its leadership in Corporate Social Responsibility by the Mining Association of Canada. IOC was presented with four Towards Sustainable Mining Performance Awards and three Achievements of Excellence. Each year the Mining Association of Canada recognizes member companies and their facilities for their responsible approach to social, economic and environmental performance. IOC was among the recipients who have met or exceeded best practices benchmarks. Both IOC Sept-Îles and Labrador City facilities received Level AA Towards Sustainable Mining Performance Awards for their Energy Use and Greenhouse Gas Emissions Management and for their External Stakeholders Relations. The company and its two facilities also received an Achievement of Excellence for their Corporate Crisis Management Planning.
- > IOC's Labrador operations were recognized by the Newfoundland and Labrador Employers' Council for their contribution to the community, their commitment to growing talent within their organization and their willingness to make tough decisions to protect the health and safety of their employees.



## Tell Us What You think

**Julie Gelfand, VP Environment and Corporate Social Responsibility**



Following senior leadership roles at the Mining Association of Canada and Nature Canada, Julie Gelfand arrived at IOC in October to fill her new position as VP Environment and Corporate Social Responsibility with a wealth of experience and enthusiasm for the challenges ahead. This position is a new one at IOC, signaling the company's commitment to the environment and social responsibility.

Julie is proud of her advocacy work at Nature Canada, where she spearheaded efforts to shape public policy, write laws protecting endangered species, identify important bird areas in Canada and create several new national parks. Nature Canada is a partner in Birdlife International, which has had a partnership with Rio Tinto for the past ten years.

Julie got to know IOC through working on TSM at MAC where she helped develop new performance indicators on biodiversity conservation and safety and health for the mining industry.

Julie understands sustainable development as the on-going consideration of economic returns and benefits to society in balance with the protection of employee health and wellness, the maintenance of a vibrant community and good environmental stewardship.

She looks forward to hearing from you!

Email: [Julie.gelfand@ironore.ca](mailto:Julie.gelfand@ironore.ca)