

**sherritt**

# 2019 Sustainability Report



# SUPPLYING A SUSTAINABLE FUTURE

Sherritt's products contribute directly to global plans for a sustainable future for all. So, where do Sherritt's products end up? What is unique about them? What are the opportunities? Scroll down to learn more.

Sherritt's products have important roles to play in a sustainable future. Each contributes to the development of goods and services which can provide a safe, healthy and secure existence for all. Our products are used widely, in thousands of applications throughout the global marketplace.

More and more, in their efforts to ensure a responsible supply chain, customers want to know how we conduct our business. Sherritt expects this interest to grow and is prepared for the evolution occurring in supply chain relationships.

At Sherritt, we are committed to ensuring that we operate sustainably and that we are not creating environmental, social or economic harm in the areas in which we operate. How is Sherritt responding to the sustainability challenges encountered when mining and refining non-renewable resources?

**ENSURING THE SAFETY AND HEALTH OF OUR EMPLOYEES AND COMMUNITIES**

**FOSTERING A DIVERSE AND INCLUSIVE WORKFORCE**

**INTERACTING WITH A WIDE RANGE OF STAKEHOLDERS**

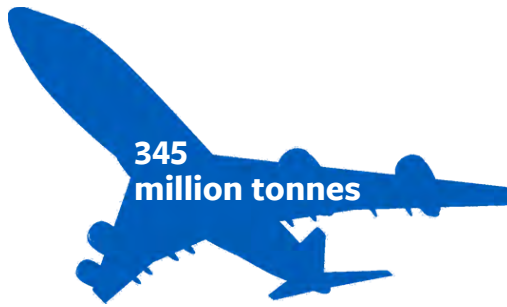
**RESPECTING HUMAN RIGHTS**

**ENSURING THE SURVIVAL OF A VIABLE BUSINESS**

**PROTECTING THE ENVIRONMENT**

**PROVIDING BENEFITS TO LOCAL COMMUNITIES**

**ESTABLISHING RESPECTFUL AND PRODUCTIVE RELATIONSHIPS WITH ALL LEVELS OF GOVERNMENT**



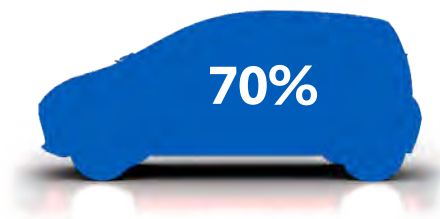
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345 million tonnes of CO<sub>2</sub> emissions could be eliminated due to increased fuel efficiency in aviation as the result of improving aerodynamics and engine design, using nickel-containing parts.



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The average life of nickel-containing products is in the range of 25-35 years, and for some applications such as roofs and cladding this can go up to 100 years. Nickel-containing materials and products are necessary for sustainability.



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More than 70% the world's supply of nickel is unsuitable for battery production; however, 100% of Sherritt's Class 1 nickel briquettes and cobalt is suitable for batteries, including hybrid and electric vehicles.



## **18% OF EMPLOYEES AT SHERRITT'S DIVISIONS AND JOINT VENTURES ARE WOMEN, AND WE ARE COMMITTED TO DOUBLING THIS TOTAL BY 2030**

Diversity is an emerging issue across society, and is particularly relevant to the natural resources sector given the historically low proportion of women and people of differing backgrounds and abilities in our industry. We know that we will become a stronger, more innovative and resilient company as we continue to attract a spectrum of people of different cultural backgrounds, genders, ages and life experience to our company.

We have begun a multi-year effort to increase our understanding of related challenges and opportunities, improve diversity literacy internally, align business processes and structures to be more inclusive, develop and implement a metrics framework, and ultimately improve performance in this area.

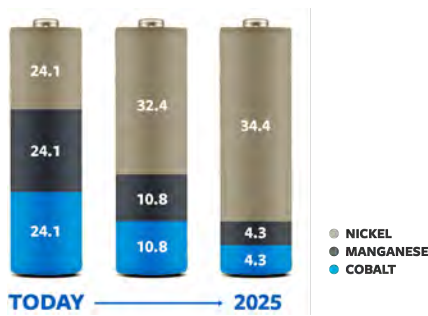
In 2019, Sherritt launched an internal global framework for diversity and inclusion (D&I), which includes site-level plans for the next five years. Although the initial focus of our D&I strategy was gender, the recent events with respect to racism have highlighted the need for us to re-evaluate our strategy to ensure we are acknowledging and addressing any systemic issues that impede our desire to be an inclusive and respectful workplace. In addition, Sherritt announced that we will target doubling the percentage of women in our organization from 18% to 36% over the next 10 years.



## OUR CLASS 1 NICKEL AND HIGH-PURITY COBALT ARE IDEALLY SUITED FOR USE IN ELECTRIC VEHICLE (EV) BATTERIES

It is impossible to meet the demands of a developing world without nickel and cobalt. Batteries, which rely on nickel and cobalt, are becoming increasingly important for storing renewable energy and supporting the global goals of sustainability and action on climate change.

### ELECTRIC VEHICLE BATTERIES WILL INCREASINGLY RELY ON NICKEL.



### CHANGES DRIVEN BY:

- Cobalt supply constraints
- Surging end-product demand

While nickel batteries have been around for more than a century, the last three decades have seen extraordinary changes in how batteries are made and used. New applications – from storing solar energy to powering electric vehicles – have emerged. These applications are pushing the limits of battery capacity and power, resulting in greater demands for higher purity metals. This is where Class 1 nickel comes in.

Unlike nickel pig iron and ferronickel, which are high-iron alloys, Class 1 nickel is highly purified and amenable to battery production – particularly for the fast-growing electric vehicle market. Sherritt is a producer of Class 1 nickel in powder and sintered briquette forms that are easily dissolved, and more suitable than cathode nickel for making battery chemicals. Sherritt also produces high-purity and ethically produced cobalt in briquette form, the most suitable for battery production.

The Moa Joint Venture favorably positions Sherritt to capitalize on the growing demand for electric vehicle batteries as a supplier of high-quality, ethically sourced Class 1 nickel and high-purity cobalt.



**PICTURED HERE IS THE HELIX BRIDGE IN SINGAPORE, MADE FROM NICKEL-CONTAINING STAINLESS STEEL. THE CORROSION-RESISTANT PROPERTIES OF STAINLESS STEEL ARE EXCELLENT FOR THE HUMID CLIMATE.**

## **NICKEL IS USED TO MANUFACTURE STAINLESS STEEL**

Building infrastructure to last is becoming increasingly topical as cities and countries are burdened with the high costs of maintaining things like hospitals and highways, some of which are not particularly old but were built with materials not suited for the intensity of use, the geography or other factors.

For bridges, the use of carbon steel rebar has led to the deterioration of concrete over time, particularly in regions that use road salt or are near salt water. Nickel-containing stainless steel rebar prevents damage to structures caused by rebar corrosion. Stainless steel rebar is used in ever increasing amounts today, both in North America and around the world. While stainless steel is more expensive, its selective use is justified financially when all the costs of maintaining the structure over its life are considered.

In Alberta's capital city of Edmonton (about 30 km southwest of Sherritt's Fort Site), winter is especially hard on the roads, with cold temperatures, lots of snow and the need to apply large amounts of salt to keep them free of ice. In 2011, the city specified Type 2304 (S32304) stainless steel as a trial for one highway interchange on the new ring road that goes around the city. The success of that venture led to the specification of Type 2304 rebar for a major portion of the new section of the ring road, reported to be in the region of 6,000 tonnes.



## **SHERRITT PRODUCES MORE THAN 249,000 TONNES OF FERTILIZER EVERY YEAR**

**DID YOU KNOW? SHERRITT'S FORT SASKATCHEWAN SITE WAS THE FIRST FERTILIZER PRODUCER IN ALBERTA.**

### **DID YOU KNOW?**

According to Fertilizer Canada, by 2050 the world will need to increase food production by 70%. Without fertilizer, global food production would be half of current levels, requiring farmers to grow more food on land that is increasingly under pressure from development. Sherritt's nickel refinery in Fort Saskatchewan, Alberta (the Fort Site), produces ammonium sulphate fertilizer as a by-product, which is then sold to Canadian farmers. A saleable by-product means less waste from the refining process and more food on the table for people around the world.

\* This number fluctuates from year to year, depending on nickel and cobalt production.





**IN THE EVENT OF A NATURAL DISASTER, SUCH AS A HURRICANE, SHERRITT HAS SUPPORTED THE COUNTRY'S RECOVERY BY BRINGING THE POWER SUPPLY BACK ONLINE SAFELY AND AS SOON AS POSSIBLE.**

## **SHERRITT IS THE LARGEST INDEPENDENT POWER PRODUCER IN CUBA**

Sherritt's Cuban power business operates through a one-third interest in Energas S.A. The remaining two-thirds interest is held equally by two Cuban agencies: Union CubaPetroleo (CUPET) and Unión Eléctrica (UNE). Energas' electrical generating capacity is 506 MW.

The processing of raw natural gas produces clean natural gas, used to generate electricity as well as by-products such as condensate and liquefied petroleum gas. The Energas facilities, which comprise the two combined cycle plants at Varadero (three gas turbines and one steam turbine) and Boca de Jaruco (five gas turbines and one steam turbine), produce electricity using steam generated from the waste heat captured from the gas turbines.

In 2007, the combined cycle unit at the Varadero facility was granted Clean Development Mechanism status under the provisions of the Kyoto Protocol by the United Nations Framework Convention on Climate Change. We have since built another combined cycle unit at a different facility in Cuba that is eligible for this designation. Not only does this investment provide the Cuban grid with much-needed energy for the Cuban people, but it has also generated over 630,000 [carbon credits](#) and reduced the carbon footprint of energy generation within Cuba.





## 40+ COMMERCIAL OPERATIONS WORLDWIDE HAVE USED SHERRITT TECHNOLOGIES SINCE 1967

### DID YOU KNOW?

Sherritt is one of the best known companies for technological innovation in the mining industry, and certainly has one of the longest histories in Canada. In the 1940s, we began to experiment with new techniques for nickel-copper ore processing at the University of British Columbia. This effort ultimately led to the commercialization of our hydrometallurgical processes for recovery of metals (including nickel, cobalt, gold, copper, zinc and others). For over [50 years](#), Sherritt has been licensing its technology worldwide. Sherritt continues to invest in technology development, and Sherritt's made-in-Canada technology is currently [licensed](#) to more than 40 different processing facilities around the world.

Our leadership in developing and applying such technologies contributes to the industry's innovation agenda, which helps to improve operating efficiencies and reduce environmental impacts. These efforts help drive down production costs of base metals like nickel, whose anti-corrosive, long-lasting characteristics are essential for developing green infrastructure.

**IN 2019, BUILDING ON OUR UNIQUE EXPERTISE IN METALS PROCESSING, SHERRITT BEGAN WORKING ON THE “NEXT GENERATION LATERITE” (NGL) PROGRAM, WHICH AIMS TO INCREASE RESERVES, DECREASE ENERGY CONSUMPTION AND MINIMIZE TAILINGS PRODUCTION. [READ MORE HERE.](#)**



## **SHERRITT PRODUCED 4,200 BARRELS OF OIL PER DAY (BOPD) IN CUBA IN 2019**

Sherritt explores for and produces oil and gas primarily from fields in Cuba (where we are the largest independent oil producer in the country). During our more than 25-year history in Cuba, we have developed extensive expertise and a proven ability to find, develop and produce oil in Cuba's complex fold-and-thrust belt reservoir. All of our wells are directionally drilled from land and are located along the northern coast between Havana and Cardenas.

**SHERRITT'S CUBA COMMUNITY INVESTMENT PROGRAM HAS COMMITTED MORE THAN C\$6 MILLION SINCE 2006 TO COMMUNITIES SURROUNDING OUR OPERATIONS.**



**SHERRITT IS AN ACTIVE MEMBER OF THE NICKEL INSTITUTE, THE COBALT INSTITUTE, THE MINING ASSOCIATION OF CANADA AND FERTILIZER CANADA – INDUSTRY GROUPS THAT SUPPORT AND PROMOTE THE RESPONSIBLE PRODUCTION AND USE OF THESE RESOURCES.**

## **MINING AND REFINING: PART OF A RESPONSIBLE SUPPLY CHAIN**

Mining and oil and gas companies often represent the very beginning of a supply chain, for everything from cars to medical equipment, to plastics, electronics and everything in between.

Customer expectations for mining companies are growing as they seek to ensure that producers are following high standards for environmental, health and safety, and social performance.

Sherritt and the Moa Joint Venture produce high-purity nickel and cobalt in low-risk jurisdictions. Consumers can feel confident that we do so in accordance with applicable laws, regulations and the highest ethical standards. To support this further, Sherritt became a member of the Responsible Minerals Initiative in 2020 and the Mining Association of Canada in 2017. Sherritt and its joint ventures are implementing the globally recognized Towards Sustainable Mining program, which includes eight environmental and social protocols. Since 2013, Sherritt has been a signatory of the [Voluntary Principles on Security and Human Rights](#), and we publicly report on our performance each year. For a number of years, Sherritt has supported the development of UNICEF's [Child Rights and Security Checklist](#) through participation in the Working Group.

Sherritt's [Five-Year Sustainability Goals](#) include a goal to be recognized as a “preferred supplier” of responsibly produced, high-quality products. We will continue to report on our progress publicly.



## CEO MESSAGE

**“Diversity and inclusion isn’t just the right thing to do. It’s the smart thing.”**

**– David Pathe, President and Chief Executive Officer**

Our corporate purpose is to be a low-cost nickel producer that creates sustainable prosperity for all stakeholders. Fulfilling this promise increasingly requires that we take environmental, social and governance considerations into account when developing and implementing our strategies.

Indeed, in 2019 the trend towards increased scrutiny on mining companies and mining practices continued following a horrific tailings dam incident and a request initiated by the Church of England Pensions Board for increased levels of disclosure from our industry.

Given our liquidity constraints, the ongoing volatility of prices for the commodities we produce and the unique geopolitical challenges we increasingly face, ensuring that we remain committed to sustainable mining, diversity and inclusion, and the environment requires a delicate balance.

Against this backdrop, our efforts in 2019 were encouraging, particularly for a company of our size and breadth of operations. Building on this performance will be key – and critical – to our long-term success.

## 2019 PERFORMANCE

Our commitment to employee health and safety was reflected in a number of key metrics. Most notably, our safety performance continued to be peer-leading over a three-year period. During this time, we reduced our Lost Time Incident Frequency Rate (LTIFR) by 76%.

In 2019, Sherritt’s LTIFR decreased to 0.07, while its Total Recordable Incident Frequency Rate (TRIFR) increased to 0.47 per 200,000 work hours. The rise in TRIFR was due primarily to an increase in hand-related injuries. In response, we implemented new standards, launched safety campaigns and took steps to improve safety systems. Our experience in 2019 reminds us that we cannot rest on the progress we have made in recent years and that promoting employee health and safety is, in fact, a never-ending journey.

Similarly, our commitment to the environment was also reflected in a number of key metrics. Chief among them, we experienced zero high severity environmental incidents in 2019. Additionally, we maintained Scope 1 greenhouse gas emissions at levels comparable to 2018, despite the 8% increase in finished nickel production and 4% increase in finished cobalt production at the Moa Joint Venture.

As a result of our community investments, taxes and royalties, local procurement and wages, we contributed more than \$500 million in economic benefits to host communities and countries in 2019. This support was matched by the more than 9,000 hours that Sherritt and joint venture employees volunteered towards the betterment of the local communities in which we operate.

In 2017, Sherritt announced its commitment to a more diverse and inclusive (D&I) workforce and company culture. In 2019, we formally launched our D&I Framework, which will serve as our roadmap to increase diversity and inclusion over the next five years. This commitment to increased diversity is being backed by our goal to double the number of women employees at Sherritt from 18% of our total workforce to 36% by 2030. Our current workforce and target reflect the challenges that our industry has in attracting women. Overcoming this challenge will be key. In addition, we have recently initiated a review of our D&I strategy to ensure that Sherritt is more broadly diverse and inclusive across the organization.

This year, we have elected to produce a Tailings Report, in response to the disclosure request of the Investor Mining & Tailings Safety Initiative, the Church of England Pensions Board and the Swedish Council on Ethics of the AP Funds, which was sent to 660 mining companies globally.

## **TODAY AND LOOKING AHEAD**

As I write this, Sherritt is focused on two key developments.

The first centres on completing a balance sheet initiative that is aimed at addressing our liquidity constraints, pending debt maturities and the debt levels that are our Ambatovy investment legacy. Completion of this initiative is critical to our future success and our ability to maintain our commitment to sustainability.

The second centres on preventing the spread of the COVID 19 pandemic at our operations. As a result of increased employee health and safety measures that we implemented at our facilities, the impact of COVID 19 on our operations has been minimal to date.

Looking ahead more broadly, the implementation of Towards Sustainable Mining (TSM) at our operations will continue to be a focus in 2020 and beyond, particularly at the Moa Nickel Site.

We will also continue to implement our five year enterprise wide sustainability goals, which include the implementation of our diversity and inclusion plans as already noted.

Our journey to zero harm is also ongoing. The safety of our employees, contractors and communities in which we operate is of the utmost importance. We believe that zero harm can be achieved through our commitment to building a stronger safety culture and implementing best practice standards. We will continue to strive for zero harm and to improve and build upon our 2019 performance and progress.

Understanding the impact of climate change on our operations will also be an area of focus. This will be a longer term initiative, requiring careful consideration, but is critical given how climate change is dramatically affecting our planet.



**David V. Pathe**

President and Chief Executive Officer  
Sherritt International Corporation

For commentary from David Pathe on Sherritt's 2019 financial and operational performance, please read his annual letter to shareholders.

**Our 2019 Sustainability Report – which covers the period between January 1 and December 31, 2019 – describes Sherritt's sustainability approach and performance for the year. This report was prepared in accordance with the Global Reporting Initiative's Standards (Core option). As required by GRI, Sherritt has notified GRI of the use of the standards and made it aware of the publication of this report.**



# Our Approach

Our approach to running a sustainable mining and energy business is grounded in a deep commitment to our guiding principles, as outlined in [Our Purpose and Our Promises](#).



## In This Section

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**OUR COMMITMENT TO SUSTAINABILITY**

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**SUSTAINABILITY FRAMEWORK**

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**SUSTAINABILITY GOALS**

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**GOVERNANCE**

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**MATERIALITY**

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**OUR ORGANIZATIONAL STRUCTURE**



## Our Purpose

To be a low-cost nickel producer that creates sustainable prosperity for employees, investors and communities.

## Our Promises

The principles that we incorporate into our everyday decision-making at both the corporate and operational levels include: integrity, agility, safety and sustainability, continuous learning and innovation, and shared prosperity.

To learn more about our operations and divisions, visit the [About Sherritt](#) section.

# OUR COMMITMENT TO SUSTAINABILITY

Mining and energy companies use a range of terms to describe their approaches to:

- Ensuring the safety and health of their employees and communities
- Protecting the environment
- Interacting with a wide range of stakeholders
- Providing benefits to local communities
- Respecting human rights
- Providing responsible products
- Establishing respectful and productive relationships with all levels of government
- Ensuring the survival of a viable business

At Sherritt, “sustainability” covers these interrelated and increasingly important aspects of our business.

We are committed to providing a safe and rewarding workplace, operating ethically, demonstrating environmental responsibility, engaging stakeholders and benefitting communities. We will meet or exceed the standards where we operate and continuously improve performance.

This commitment underpins our aspiration to be a recognized industry leader in sustainability management and performance.

To access our Human Rights Policy, [click here](#); and for our Environment, Health, Safety and Sustainability (EHS&S) Policy, [click here](#).



# GOVERNANCE

Our Board of Directors has delegated responsibility for sustainability-related matters to its Environment, Health, Safety and Sustainability (EHS&S) Committee. The Committee’s mandate is to oversee, monitor and review sustainability policies, management systems, programs and performance.

This Committee meets at least four times per year, visits our operating sites, and receives information from corporate and divisional management on a quarterly basis, and more often when required. The Committee Chairperson reports to the Board on significant issues. Refer to this [link](#) to review the full mandate of the EHS&S Committee.

EHS&S oversight is included within the respective board and executive mandates of the joint ventures that Sherritt is involved in. There are dedicated environment, health and safety committees at the board level for the Moa Joint Venture. Experienced Sherritt executives serve on these committees. At Energas, EHS&S matters are reviewed by the Board, which includes directors from Sherritt’s senior management team.

Corporate accountability for oversight of the Sustainability Framework is the responsibility of an executive officer, the Chief Operating Officer (COO). Reporting to the COO, the Director, Environment, Health, Safety and Sustainability (EHS&S) implements governance and assurance measures, recommends strategy and standards, and oversees performance and reporting. The COO works closely with the management teams at all divisions and joint venture operations to ensure that business plans are aligned with the corporate strategic plans, to ensure compliance with local laws and conformance with company standards and to ensure that a continually improving approach to EHS&S is in place across our locations. Each division is led by a senior executive who reports to the COO. These individuals are accountable for all operational matters at their respective operating sites, including sustainability. At Sherritt, everyone has some accountability for safety and sustainability.

BOARD GENDER DIVERSITY	
Male	71%
Female	29%*

\* Compared to an [industry average](#) for mining of 13% female directors.

# SUSTAINABILITY FRAMEWORK

We uphold [our commitment to sustainability](#) through our Sustainability Framework, which provides a focused and practical approach to prioritizing sustainability issues, risks and opportunities, and to managing performance. The framework consists of a core commitment and a series of issue-specific commitments, which fall under the four pillars of our framework: Providing a Safe and Rewarding Workplace; Operating Ethically; Demonstrating Environmental Responsibility; and Engaging Stakeholders and Benefitting Communities. Our commitments are supported by an integrated management system that sets company-wide standards for planning, implementation, measurement, reporting and assurance of sustainability efforts.

## PROVIDING A SAFE AND REWARDING WORKPLACE

### HEALTH AND SAFETY

We are committed to providing a safe workplace. Our ultimate goal is zero harm. Zero harm means zero fatalities, no injuries and no work-related illnesses among employees and contractors.

### PUBLIC SAFETY

Maintain public safety around our sites through risk management, active communication and ongoing community engagement.

### SITE SECURITY

Safeguard our people, assets, reputation and the environment while respecting the rights of the public.

### EMPLOYEE RELATIONS

Provide a rewarding and inclusive workplace that engages and develops a diverse workforce, compensates workers competitively, supports talent development, and offers them exposure to world-class operations, projects, processes and people.

## OPERATING ETHICALLY

### RESPONSIBLE PRODUCTION AND SUPPLY

Extract and produce minerals that meet our stakeholders' social, ethical, environmental and human rights expectations.

### HUMAN RIGHTS

Operate our business in a way that respects human rights as set forth in the Universal Declaration of Human Rights.

### BUSINESS CONDUCT

Foster a culture and environment that support and require ethical conduct.

## DEMONSTRATING ENVIRONMENTAL RESPONSIBILITY

### TAILINGS MANAGEMENT

Design and operate tailings management facilities – throughout the mine lifecycle – to meet or exceed applicable regulatory and company standards.

### BIODIVERSITY AND LAND

Achieve no net loss, or preferably a net gain, of biodiversity for greenfield projects and significant expansions of current operations; and practise progressive reclamation as part of normal operations at all mines, working with local jurisdictions.

### WATER

Manage water responsibly by optimizing water use, addressing water-related risks to future operational viability and growth, and engaging communities on the use of, and impacts to, shared water resources.

### WASTE

Monitor and track mining waste and solid waste production at each site. Manage waste responsibly by optimizing and reducing waste production while following proper classification, handling, disposal and storage requirements.

### ENERGY AND CLIMATE CHANGE

Monitor and track energy use and greenhouse gas emissions at each site and identify opportunities to reduce impacts; and understand and mitigate the potential impacts of climate change on our assets.

### ENVIRONMENTAL LIABILITIES, CLOSURE AND RECLAMATION

Provide adequate financial resources and comply with regulatory requirements to address the closure of our properties once operations are complete.

## ENGAGING STAKEHOLDERS AND BENEFITTING COMMUNITIES

### STAKEHOLDER ENGAGEMENT

Engage stakeholders early on and throughout the asset lifecycle; and build relationships based on mutual trust, respect and transparency.

### COMMUNITY DEVELOPMENT

Contribute to a lasting improvement in quality of life in the communities where we operate.

## MANAGEMENT SYSTEMS

Sherritt has taken an enterprise-wide approach to managing sustainability, which includes an integrated system with a series of sustainability standards. These standards are developed collaboratively between the Corporate office and the divisions. Given the differences among the operating environments in Canada and Cuba, the divisions have flexibility in the way they implement these standards at their operating sites.

Specific requirements in the standards reflect our experience, our risk profile and industry best practice. As members of the Mining Association of Canada (MAC), we are implementing the requirements of the [Towards Sustainable Mining \(TSM\) protocols](#). As a member of the [Voluntary Principles on Security and Human Rights \(VPSHRs\)](#) Initiative, we are working to apply the Principles at our operating sites. Our approach to crisis management is further informed by the [Incident Command System \(ICS\)](#).

## TOWARDS SUSTAINABLE MINING (TSM)

Sherritt is a member of the Mining Association of Canada and, as such, is committed to implementing the TSM program – a series of sustainability management protocols – at its Canadian operations. As Sherritt is committed to leadership in sustainability and continuous improvement, the company plans to implement relevant protocols of TSM at all divisions and to target Level A conformance.

Sherritt’s first year of public, facility-level reporting for TSM will be 2020 (with results being reported in 2021).

We are currently carrying out a multi-year plan to develop and implement the following corporate standards for sustainability management:

### Under Implementation

- Anti-Corruption
- Biodiversity and Land Management
- Community Investment
- Crisis Management System
- Energy and GHG Emissions
- Fatality Prevention
- Grievance Management
- Health and Safety
- Mine Closure
- Security and Human Rights
- Significant Potential Incident Reporting
- Stakeholder Engagement
- Tailings Management

### In Development

- Air Management
- Waste Management
- Water Management

**“Towards Sustainable Mining is a key reference for our environmental and social management systems. The TSM protocols are increasingly recognized as industry leading practices around the world and are accepted by various responsible sourcing frameworks. We have much work to do to fully implement and embed our TSM-based management systems, but this effort will position us well to meet or exceed society’s expectations of mineral producers of zero harm that provide a net benefit in the communities in which they operate.”**

**– Steve Wood, EVP and COO**



# MATERIALITY

Our materiality assessment involved identifying the sustainability issues of greatest interest to Sherritt's stakeholders and those that could have the greatest impact on our business. We defined a list of key sustainability topics, conducted surveys and desktop research, and then ranked stakeholder interest and evaluated business impacts on the environment and society. We validated the assessment results with Sherritt's senior management, operational management team, and sustainability personnel.

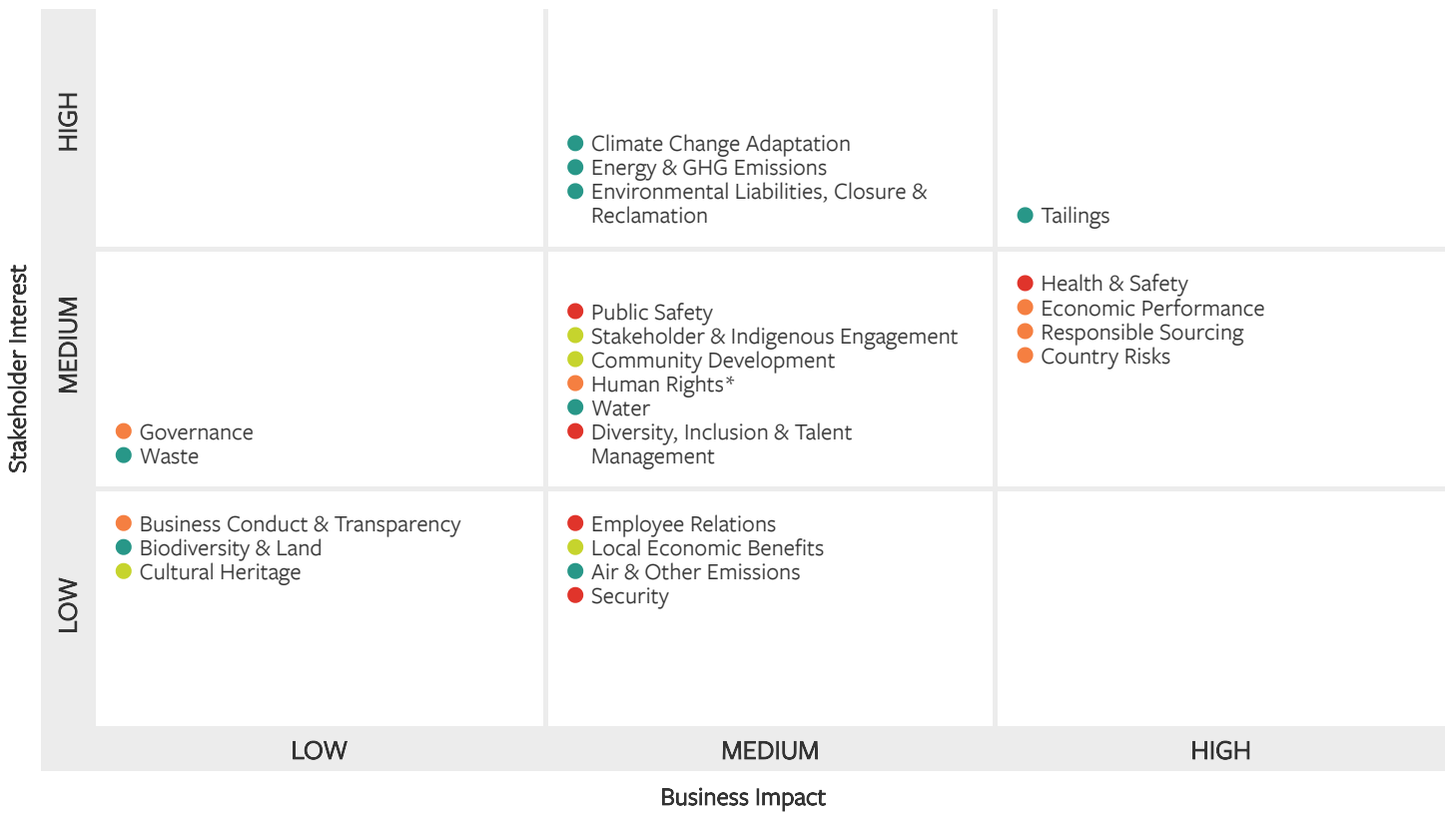
Those aspects with the highest combined rating of stakeholder interest and expected business impacts on the environment and society are considered "material" for Sherritt, and are addressed through our Sustainability Framework and management system.

Sherritt updated its materiality assessment in 2020 to reflect changes in its operations. As a result, some sustainability topics that were heavily influenced by the inclusion of Ambatovy in previous years have shifted.

The following graph maps our material issues against the four pillars of our Sustainability Framework and details the boundary of impact for each material issue.

Commentary on a broader set of material issues and risk factors that affect Sherritt – including U.S. sanctions on Cuba – can be found in our [2019 Annual Information Form](#).

- VIEW ALL
- PROVIDING A SAFE AND REWARDING WORKPLACE
- OPERATING ETHICALLY
- DEMONSTRATING ENVIRONMENTAL RESPONSIBILITY
- ENGAGING STAKEHOLDERS AND BENEFITTING COMMUNITIES



\*The Cuban government and Sherritt both understand and value the protection and respect of human rights, and the inherent importance (i.e., materiality) of this issue. Canada and Cuba are not identified as high-risk jurisdictions for human rights violations pertaining to operating companies.

# SUSTAINABILITY GOALS

## FIVE-YEAR SUSTAINABILITY GOALS

Sherritt established a series of five-year sustainability goals that:

- Align the enterprise by focusing on those sustainability priorities shared across Sherritt’s business;
- Address existing and emerging industry-wide issues and societal concerns;
- Clearly link Our Purpose and Our Promises, strategic priorities and the Sustainability Framework;
- Drive improved performance across the business;
- Demonstrate our commitment to sustainability excellence; and
- Align with the Sustainable Development Goals (SDGs).

Our sustainability goals are as follows:



Achieve Level A requirements in Towards Sustainable Mining (TSM) protocols across all operations.



Strengthen our safety culture, behaviour and performance.



Improve environmental management.



Create community benefit footprints that support local priorities and the SDGs.



Improve diversity at all levels throughout the company.



Be recognized as a “preferred supplier” of responsibly produced products.

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In 2019, we focused on advancing baseline assessments and planning division-level targets that will contribute to the goals. As targets are finalized, we will begin to report on performance in future reports.

## SUSTAINABLE DEVELOPMENT GOALS

The United Nations' Sustainable Development Goals (SDGs) consist of 17 ambitious targets to address global issues and to ensure a sustainable and resilient future for the world by 2030. The success of the SDGs depends on the participation of a range of actors – governments, corporations, communities and non-governmental organizations.

### Our Role to Play

The nature of the work of the natural resources sector has social, economic and environmental impacts on the jurisdictions where projects and operations are located. As a responsible company, Sherritt mitigates and, where possible, avoids negative impacts, and also makes positive contributions to our host communities at both the national and local level. Highlighting how our operations and end products contribute to the SDGs is important, along with taking responsibility for and acknowledging the impacts of our activities on the broader development agenda. (To better understand the sustainability issues and challenges most material to Sherritt, please review our [materiality analysis](#).)

### Our Priorities

We believe that, as a Canadian company operating internationally, we can contribute to and advance relevant Sustainable Development Goals. To understand where Sherritt could have the greatest positive impact, we compared our material sustainability issues with the SDGs, and selected a small number of priority SDGs we felt we could advance. There is a clear linkage between these SDGs and our five-year sustainability goals.

The interactive chart below displays our priorities, what they mean to Sherritt and examples of how our activities align with specific SDG targets.



Healthy, happy communities and employees make for a successful and stable operating environment. Sherritt has a responsibility as a local employer in Canada and Cuba to ensure employees return home from work safely every day.

## GOOD HEALTH AND WELL-BEING

Ensure healthy lives and promote well-being for all, at all ages

### Examples of SDG targets we are advancing

**SDG Target 3.4** – The OGP Division hosted lunch-and-learns on mental health and well-being for employees.

**SDG Target 3.6** – Refer to this [case study](#) for information on Sherritt’s road safety promotion programs delivered in partnership with UNICEF.



Sherritt is committed to advancing stronger gender representation at the board and senior management levels. We are also working to develop, train and promote women from diverse backgrounds throughout the company. In our communities, we will support education and careers for girls and women, as well as safety and economic empowerment.

## GENDER EQUALITY

Achieve gender equality and empower all women and girls

### Examples of SDG targets we are advancing

**SDG Target 5.5** – Sherritt’s divisions established local diversity and inclusion committees to identify plans of action; members of these committees came together to begin work on a global strategy for improving diversity and inclusion metrics across the business, which was launched in 2019.

**SDG Target 5.B** – Partnered with NorQuest College and WinSETT on a research project intended to provide guidance on strategies that promote a more diverse and inclusive workplace culture. Refer to [this section](#) for more information on the partnership.



Water is essential for life, but is also a requirement for natural resource extraction and processing activities. Sherritt works hard at water management and ensuring local communities have a healthy water supply and sanitation. The nickel we produce is used as a key input for sustainable water storage and distribution infrastructure around the world.

## CLEAN WATER AND SANITATION

Ensure access to water and sanitation for all

### Examples of SDG targets we are advancing

**SDG Target 6.1** – The Moa Nickel Site has a water treatment plant that provides safe drinking water for employees at the plant. A program is in place that enables employees to fill containers of potable water to take home to their families.

**SDG Target 6.A** – Sherritt has provided water pumps and pipe cleaning equipment to municipalities in Cuba. The equipment increases the communities’ capacity to provide water and sanitation services to people near Sherritt’s operations.



Sherritt seeks out opportunities not only to produce clean energy that supports its host countries’ needs, but also to lessen the impacts of its energy use.

## AFFORDABLE AND CLEAN ENERGY

Ensure access to affordable, reliable, sustainable and modern energy for all

### Examples of SDG targets we are advancing

**SDG Target 7.1** – In Cuba, Sherritt is the largest independent power producer.

**SDG Target 7.A** – Sherritt has committed support to the Cowater project in Cuba, to install renewable energy solar panels in remote areas that are currently off the grid.



Sharing the economic benefits of our activities with employees, host communities and countries, business partners and investors is not only responsible but essential to our growth strategy. We believe in supporting local employment and procurement in countries in which we operate, and this is evidenced in our results.

## DECENT WORK AND ECONOMIC GROWTH

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

### Examples of SDG targets we are advancing

**SDG Target 8.4** – Sherritt’s economic benefit footprint in the areas where it operates was \$500 million in 2019.

**SDG Target 8.5** – Sherritt committed to pay and promotion equity and conducted an internal pay equity assessment in 2018. We are currently working towards understanding the underlying reasons of the findings.



In all our businesses, healthy, mutually beneficial partnerships are required for us to succeed. We have a history of strong partnerships with employees, communities, host countries, investors and business partners in each of the jurisdictions where we operate. We believe that the SDGs will only be achieved when all stakeholders work together.

## PARTNERSHIPS FOR THE GOALS

Strengthen the means of implementation and revitalize the global partnership for sustainable development

### Examples of SDG targets we are advancing

**SDG Target 17.17** – Sherritt has partnered with Trans Canada Trail to support the construction of a Trail section across the North Saskatchewan River to add connectivity and improve safety for people crossing the river. Read more [here](#).



# OUR ORGANIZATIONAL STRUCTURE

## MOA JOINT VENTURE AND FORT SITE

Sherritt has a 50/50 partnership with General Nickel Company S.A. (GNC) of Cuba (the Moa Joint Venture). In addition, Sherritt has a wholly owned fertilizer business, sulphuric acid, utilities and storage, and administrative facilities in Fort Saskatchewan, Alberta, Canada (Fort Site) that provide additional sources of income.

The Moa Joint Venture is a vertically integrated nickel and cobalt mining, processing, refining and marketing joint venture between subsidiaries of Sherritt and GNC, a Cuban company. The operations of the Moa Joint Venture are carried on through three companies:

- Moa Nickel S.A. (Moa Nickel) – owns and operates the Moa, Cuba, mining and processing facility;
- The Cobalt Refinery Company Inc. (CRC or COREFCO) – owns and operates the Fort Saskatchewan, Alberta, metals refinery; and
- International Cobalt Company Inc. (ICCI) – located in Nassau, Bahamas, acquires mixed sulphides from Moa Nickel and other third-party feeds, contracts with CRC for the refining of such purchased materials and then markets finished nickel and cobalt.

The Moa Joint Venture operates in Moa, Cuba, and Fort Saskatchewan, Canada. Within the report, the operations in Moa will be referred to as “Moa Nickel” and the operations in Fort Saskatchewan will be referred to as “COREFCO”. On occasion, information is aggregated for COREFCO and the Fort Site due to co-location; where this is done, the term “Fort Site” will be used although these are distinct legal entities.

The Moa Joint Venture mines, processes and refines nickel and cobalt for sale worldwide (except in the United States).

## OIL & GAS

Sherritt’s Oil & Gas Division (100% ownership) explores for and produces oil and gas primarily from reservoirs located offshore, but in close proximity to the coastline along the north coast of Cuba.

## POWER

Sherritt holds a one-third interest in Energas S.A. (Energas), a Cuban joint venture corporation established to operate facilities for the processing of raw natural gas and the generation of electricity for sale and delivery to the Cuban national electrical grid system. The remaining two-thirds interest in Energas is held equally by two Cuban government agencies: Unión Eléctrica (UNE) and Unión Cubapetróleo (CUPET).

Within the report, the Oil & Gas operations will be referred to as “Oil & Gas” and the Power operations will be referred to as “Energas”. On occasion, information is aggregated for both Oil & Gas and Energas due to a common management structure; where this is done, “OGP” (Oil, Gas & Power) will be used.

## TECHNOLOGIES

Sherritt’s Technologies group (Technologies) provides technical support, process optimization and technology development to Sherritt’s operating divisions, and identifies opportunities for the Corporation as a result of its research and development and international activities.

A more detailed overview of our business and corporate structure can be found in our [2019 Annual Information Form](#).



# Providing a Safe and Rewarding Workplace

Sherritt's operations are built on a zero harm health and safety culture. We work hard to minimize operational risks to our workforce and nearby communities, and engage with these important stakeholders regularly on matters of safety, security and emergency response. Employee engagement and development remain top priorities in ensuring we attract and retain the people critical to our business and its success. We believe that this is best achieved by fostering an inclusive workplace.



## In This Section

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**HEALTH AND SAFETY**

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**SITE SECURITY**

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**PUBLIC SAFETY**

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**EMPLOYEE RELATIONS**

# 2019 Highlights



**Total Recordable Incident Frequency Rate (TRIFR) and Lost Time Incident Frequency Rate (LTIFR) were 0.47 and 0.07 per 200,000 work hours, respectively. Over a three-year period, TRIFR has increased by 42% and LTIFR has decreased by 76%.**



**The OGP Division in Cuba recorded zero lost time incidents (LTIs) for the fourth consecutive year, achieving more than 2.5 million work hours without an incident.**



**The Moa Nickel Site ended 2019 with its lowest number of LTIs in four years.**



**The Fort Site continued developing the “Best Practice for Industrial Sites” in co-operation with local authorities, and presented to Alberta’s Northeast Region Community Awareness Emergency Response Committee.**



**There were no security incidents involving allegations or claims of human rights abuse at any of Sherritt’s operations.**



Marianne Quimper, Senior Environmental Advisor and Diversity and Inclusion Coordinator at the Fort Site

## MARIANNE QUIMPERE

Marianne Quimper has been with Sherritt for 6.5 years. She is a Senior Environmental Advisor and the Fort Site Diversity and Inclusion Coordinator. She is also part of the leadership team of the first Employee Resource Group established to cultivate an inclusive environment that supports and encourages women through opportunity, collaboration and advocacy: the LeadHERS group. Marianne is a registered Environmental Professional and has recently earned a Management Development certificate from the University of Alberta. Here is Marianne in her own words:

### **Why is diversity and inclusion (D&I) important to you?**

It's important to me that not only are we hiring people from diverse backgrounds but that we're positioning those people to succeed by supporting their unique needs. Without a diverse workforce, you're limiting new ideas. I want to know that when I come in to work every day I can feel comfortable being my authentic self, and I want to know that others feel the same way. We are all happier, more creative and more productive when we're able to be ourselves at work. The differences between us, our uniqueness, should be valued and celebrated.

### **What is the importance of leadership support and collaboration for D&I?**

Without leadership support, it's impossible to sustain any of the D&I changes. Our leaders must show their teams the importance of creating an inclusive environment. Many of our leaders and influencers within the organization are engaged in our D&I initiatives. We saw this through the high participation in our International Women's Day events across the company. It is critical for D&I coordinators to collect feedback from leaders, including suggestions on how to implement effective changes, what kind of challenges they're facing, and what kind of improvements and behaviours they are seeing.

I think we have good collaboration and information sharing between the divisions and the global D&I committee. Each division faces its own challenges based on differences in our workforce, location and types of operations. One of the things we've been doing really well is having overarching directives while still allowing each division to identify and address their unique challenges and strengths.

### **What do you think the opportunities are for both the Fort Site and Sherritt in the advancement of D&I?**

I think that over the past few years Sherritt has come a long way, but there is opportunity to go even further. Being an old site, the Fort Site has some unique challenges as our facilities were built for a workforce in the 1950s. Updating our infrastructure will help position Sherritt to achieve the goal of doubling the percentage of our female workforce by 2030.

One of the growth opportunities we have is to better understand the unconscious biases we hold as individuals and as an organization. Becoming conscious of these biases will help us to overcome them and become allies to groups that are currently underrepresented. We need people from different backgrounds and different experiences, who think differently, to come up with new ideas and opportunities for improvement that will keep the company competitive and drive efficiencies.

**“Marianne is passionate about diversity and inclusion. As a Senior Environmental Advisor, she often handles challenging assignments and drives cultural change. She has tackled her diversity and inclusion role in her typical organized and forthright manner, engaging leaders across the site and pushing us to recognize our unconscious bias.”**

– Greg Pohlka, P.Eng., Director, Sustainability

# HEALTH AND SAFETY

## MANAGEMENT APPROACH

Our health and safety management approach had historically been decentralized, with each division/operating site applying its own expertise and experience to identify hazards and risks, implement controls, monitor performance, and assign appropriate accountabilities. Over a number of years, we have worked to establish enterprise-wide standards aligned with international best practice. We update these standards regularly as part of our commitment to continuous improvement, operational excellence and a stronger safety culture.

To clearly articulate our expectations for health and safety performance across the business, we have developed specific fatality prevention standards – such as Light Vehicles, Heavy Mobile Equipment, Working at Heights, and Confined Spaces, among others – which are at various stages of implementation across our operations. This phased approach to implementation is due to the unique challenges of each site. We also have a Significant Potential Incident Standard in place. It requires tracking and specific management actions for any workplace incident that, under slightly different circumstances, could have resulted in a fatality.

In addition to implementing standards, we conduct independent [safety culture assessments](#) at our operating sites and track a series of leading indicators designed to increase safe behaviours, improve performance and strengthen safety culture. These indicators include visible and felt leadership interactions to set the tone from the top for safe behaviours, proactive health and safety communications, workplace inspections and training. At the corporate level, we monitor health and safety performance through regular executive reviews, peer comparisons and independent assessments.

## PERFORMANCE

### Fatalities

In 2019, Sherritt's divisions did not experience any work-related or community fatalities.

We continue to focus on building a strong safety culture, including removing or reducing fatal risks at the sites and eliminating unsafe behaviours. Our target in 2020 continues to be achieving an inter-dependent safety culture for our employees and contractors and zero harm for our community members in the areas in which we operate.

In 2019, we continued implementation of the fatality prevention standards, which will continue during 2020, with actions such as machine safeguarding improvements, working-at-heights facility and equipment upgrades, the installation of driver and trip monitoring technology in light vehicles, and the deployment of fatigue management measures for heavy mobile equipment operators, among other priorities.

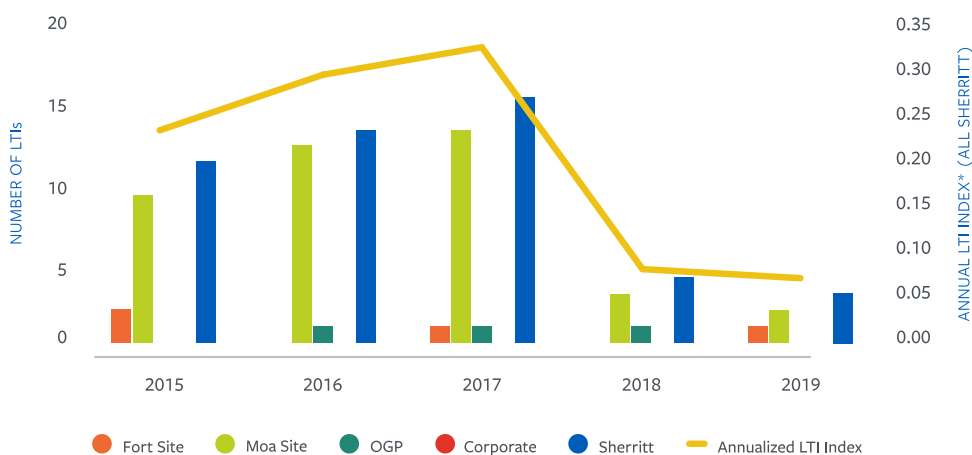
### Lost Time and Recordable Incidents

During the year, we reported three lost time incidents (which are recorded when a worker misses at least one shift following a workplace incident) and 20 recordable incidents (which include incidents resulting in lost time, restricted work, medical treatment beyond first aid, loss of consciousness, or death) across the company. This increase in incidents and statistics marks a decline from our 2018 performance.

Our 2019 performance was impacted by numerous hand injuries caused by a number of factors, including inadequate hazard recognition and control, inadequate concentration on the task at hand, unauthorized work and tool usage, and inadequate supervision. In response, management executed safety stand-downs, issued safety alerts, increased the frequency of safety interactions, focused safety interactions on tools and work methods, delivered training on awareness of the “line of fire”, and refreshed hand safety programs and general safety awareness campaigns. In addition, 2018 was a year of record-low recordable incidents in the Moa Joint Venture and rates appear to have returned to more typical levels in 2019.

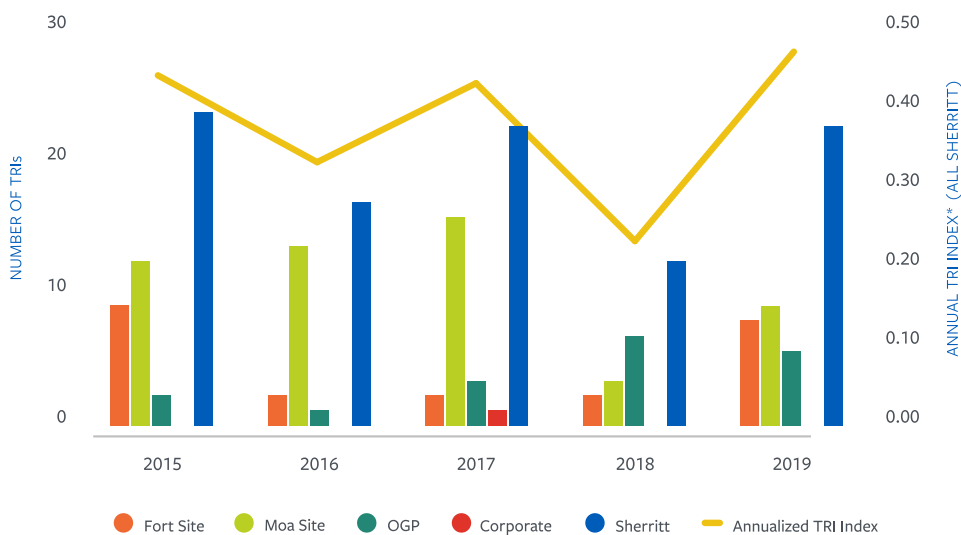
Our overall safety performance in 2019 continued to be peer-leading, with a lost time incident index (total number of lost time incidents per 200,000 work hours) of 0.07 (compared to 0.08 in 2018) and a total recordable incident index (total number of recordable injuries per 200,000 work hours) of 0.47 (compared to 0.23 in 2018). This comparison was made using publicly available data from the small to medium-sized natural resource companies peer set. A small portion of these peers calculate their frequency rates per one million work hours.

### Lost Time Incident (LTI) Index



\* LTI index = # LTI \* 200,000/SUM (exposure hours for the year)

### Total Recordable Incident (TRI) Index



\* TRI rate = # TRI \* 200,000/SUM (exposure hours for the year)



## Significant Potential Incidents

Sherritt records significant potential incidents (SPIs) – defined as actual or near-hit incidents that, under different circumstances, could have reasonably resulted in at least one fatality – in conformance with our standard. There were nine SPIs reported in 2019, which represents a decrease from the 16 SPIs reported in 2018. The SPIs were investigated to identify the cause(s) of each incident, and actions to prevent recurrence were identified and implemented. The most common types of SPIs in 2019 continued to be related to heavy mobile equipment, slip and fall, and working at heights. As a result, we are focusing on efforts to identify and strengthen critical controls in these areas at all of our operating sites.

In previous years, a number of SPIs relating to light vehicles were recorded at OGP. In response, in 2019 all of our light and heavy fleet drivers from OGP were evaluated by a qualified instructor and underwent a defensive driving course. The course will be updated at least every three years and will be required for new fleet drivers. Upgraded driver monitoring equipment was also installed in all vehicles. OGP didn't record any SPIs in 2019. In 2018, OGP recorded six SPIs, four of which were related to light vehicles.



The people who do the work usually know how best to solve the problems they encounter every day. OE simply enables it.

## OPERATIONAL EXCELLENCE

Operational Excellence (OE) is a business improvement process focused on team-based problem-solving and process improvement. OE leads to meaningful business transformations, including safer, more efficient workplaces. The program emphasizes leadership development, coaching and improvement routines designed to sustain progress and create a stronger culture of continuous improvement. Sherritt has improved visual management and the layout of work areas, management routines and displays to support communications, and weekly alignment on priorities and longer-term business plans.

The Moa Joint Venture's OE program in Canada and Cuba has expanded to include a Lean Belt component that complements other OE processes. The Lean Belt program focuses on developing easy-to-use continuous improvement tools and putting those tools in the hands of employees. Examples of such tools include 6S (safety, sort, store, shine, standardize and sustain) techniques and visually managed daily huddle boards.

Employees can be trained and certified at different levels (white belt, yellow belt, green belt and black belt). By the end of 2019, more than 70 leaders at the Fort Site had completed the Green Belt program, and they are now trained to facilitate OE improvement activities. In addition, more than 375 employees completed White Belt training, giving them a strong understanding of how to participate in the continuous improvement culture being developed. The vocabulary on site is starting to change and, along with the use of Info Centres (daily huddle boards) as well as other forms of visual management, we are seeing a change in culture and in the way in which business is conducted.

Through the Green Belt program, each leader developed a process improvement, many of which have shown immediate benefits through improved time management, workflows, safety practices and inventory efficiencies. Two exciting process improvement projects include:

- Maintenance Machine Shop Inventory Efficiencies – The maintenance department has been an early adopter of OE work at Sherritt and realized \$77,000 in inventory returned to stores, improvements to tool time and improved workflows leading to safer work environments.

- Laboratory Layout Improvements – The analytical lab, with its commitment to ISO quality standards and an underlying improvement mindset, reorganized the layout of sample preparation equipment to improve efficiency and safety. The lab applied the proven Kanban framework to reorder critical materials and improve labelling and storage practices, which has significantly enhanced safe chemical handling practices.

OE projects will continue to be advanced as part of the company's objective to create a safer, more efficient workplace.



Work on improving the safety culture of the company never ends.

## SAFETY CULTURE ASSESSMENTS

As a result of four fatalities at Ambatovy in 2015, management introduced a strategic focus on fatality prevention and life safety, and commissioned independent external assessments of the safety culture at each operating site.

The assessments provided valuable insights into factors that contribute to the safety culture at each site: personal commitments to safety, mutual respect among employees, organizational pride and mythology, accountability for safety at the line-management level, constructive leadership interactions in the field, and control of critical risks. A key learning was that leaders are critical to establishing the culture and behavioural expectations for safety.

In 2019, all sites focused on improving their visible and felt leadership programs to move towards an interdependent safety culture at each location. Each site developed an action plan that included the setting of ambitious targets for leaders to be present in work areas more often, to role-model safety behaviours, and to improve the quality of interactions through peer reviews and tiered interactions. The action plans also focused on addressing significant potential incidents, strengthening life safety rules, and improving use of hazard assessment tools.

Safety culture improvements were noticeably observed at the Moa Nickel Site in 2019. Leadership interactions and communications assisted in reinforcing the need for performing safe work and adhering to the life safety rules. The advances in safety culture were demonstrated during a crisis preparedness exercise held with the government in June, with all levels exceeding expectations.



Health and safety management systems will help to sustain progress and continually improve health and safety performance.

## H&S MANAGEMENT SYSTEM

As a complement to our work on safety culture, all sites are working to implement internationally recognized health and safety management systems, such as the Towards Sustainable Mining Safety and Health Protocol and ISO 45001. The management systems will provide a framework to increase safety, reduce workplace risks and enhance health and well-being at work, enabling the organization to proactively improve its H&S performance. They will build on existing ISO 9001 quality management systems at several sites.

In 2019, each site developed a multi-year action plan with gap analyses, training, risk assessments, implementation of policies and objectives, and plans for external verification.

# PUBLIC SAFETY

## MANAGEMENT APPROACH

As good neighbours, it is critical that we ensure our activities and business practices avoid unintended or adverse effects on the public. We follow the regulations of our operating jurisdictions, strive to meet the expectations of nearby communities and regularly engage and collaborate with local stakeholders on health and safety-related risk awareness and emergency preparedness. Through engagement, we work to understand public concerns and safety risks, evaluate steps we can take to reduce risk, help clarify misunderstandings and dispel misinformation, and, where appropriate, collaborate with communities on initiatives that make all of us safer.

To minimize the risks of a catastrophic event impacting a local community, the company embarked on a multi-year program to implement process safety management systems at all sites. These systems ensure that major hazards are identified and controlled, changes are appropriately managed, process and equipment integrity programs are in place, operating procedures are in place, and there is adequate communication and training, among many other elements. Our Cuba joint venture operations are aligning with Cuba's Resolution 148 for major hazard installations, and the Fort Site will align with the new Canadian CSA Z767-17 process safety management standard.

Another important way we mitigate potential impacts to both communities and our business is through effective emergency preparedness and response planning. At our operating sites, we develop plans that are grounded in scenario/risk assessments to protect the public, the environment and infrastructure in the event of a significant incident. We also implement actions to limit the severity of impacts, should an incident occur.

In Canada, Sherritt is responsible for leading emergency response efforts at its sites, while in Cuba we support our joint venture partners and the government authorities who take the lead in responding to operational emergencies. Refer to this [case study](#) for more information on the Cuban approach. Whenever possible, we coordinate closely with emergency responders in both preparedness and response activities, and we regularly conduct joint training exercises.

Sherritt's enterprise-wide Crisis Management Standard is informed by Canadian and international practices, including the [Mining Association of Canada's Towards Sustainable Mining \(TSM\) Crisis Management Planning Protocol](#) and the [Incident Command System's \(ICS\)](#) management approach.

## PERFORMANCE

### Emergency Response Planning and Training

All operating sites have up-to-date emergency response plans in place and conducted some form of crisis/emergency preparedness training in 2019. The sites regularly review emergency response plans and hold training exercises annually (at a minimum) to ensure plans are up to date and response teams are prepared.

The Fort Site subscribes to the Incident Command System (ICS) management framework for emergencies and is carrying out a multi-year plan to train and conduct field exercises for the local response team. Additionally, the Fort Site partners with the [Northeast Region Community Awareness Emergency Response \(NRCAER\)](#), a mutual aid emergency response group) to share best practices, reinforce mutual aid provisions, and engage with the public and local industry partners to raise awareness of community safety risks.

In Cuba, multiple training exercises occurred in 2019 at the Moa Nickel Site, as well as at the OGP facilities. Disaster reduction plans are in effect for all OGP sites in Cuba. In addition, we are currently in the process of introducing the TSM protocol for Crisis Management across all divisions.

## Post-Incident Community Support

Cuba, as an island nation, is prone to seasonal storm activity. Refer to this [case study](#) for more information on how Sherritt has supported local communities in Cuba during past storm events.

In September 2019, Hurricane Dorian, a Category 5 storm, made landfall on the northern Bahamas, becoming one of the most powerful hurricanes recorded in the Atlantic Ocean. Sherritt donated \$5,000 to the Bahamas Red Cross to support relief efforts in the Bahamas, where the company has a marketing office.

## Stakeholder Awareness and Collaboration

Our operating sites continue to engage with local communities on risk awareness and emergency response.

In the town of Moa, we completed the refurbishment of a local community health clinic in 2019, and work progressed on a second one. Refer to this [case study](#) to learn more about Sherritt's Community Investment Program in Cuba.

The Fort Site continued participating in key multi-stakeholder forums related to crisis and emergency preparedness. Sherritt has led the collaborative development of a response program based on potential risks the site could face, along with our NRCAER partners and local law enforcement. Subsequently, the program has been adopted by our surrounding industrial neighbours.



Cuba's National Civil Defense, the institution responsible for disaster-relief planning, has effectively implemented a preparedness system for disasters that was commended by the UN.

## EMERGENCY PREVENTION AND PREPAREDNESS – CUBA'S EXPERIENCE

We have preparedness and response plans at all our sites to protect local communities, the environment and our business in the event of emergencies. In Cuba, we work with state agencies to coordinate response planning.

Cuba is geographically situated in a region where hurricanes can have devastating impacts. Studies indicate that more than two million of the country's 11 million people are vulnerable to disasters. Cuba has internationally recognized expertise in disaster management – from preparation to response to recovery.

Cuba's National Civil Defense, the institution responsible for disaster-relief planning, has effectively implemented a preparedness system for disasters such as hurricanes, earthquakes, fires, floods, storm surges and other possible events. This system includes an early warning mechanism to alert citizens to adopt appropriate behaviours such as staying alert, preparing for evacuation and other important measures essential to preserving lives.

The success of Cuba's disaster preparation and mitigation efforts is confirmed by results. While material losses have been high in the past, the number of casualties has been minimal. This was underscored during 2016's Category 4 Hurricane Matthew, for which the response by the Cuban Civil Defense in the prevention of loss of life was commended by then-UN Secretary-General Ban Ki-moon. The effective response was demonstrated again in 2017 during Hurricane Irma.

The Cuban system of preparation and evacuation is based on a few fundamental principles, namely:

- Citizen engagement – participation of civilians in preparing for natural disasters through training and education
- Coordination – disaster-relief plans are crafted with the participation of government leaders, civilian defence personnel, community organizations and local political leaders
- Maintaining social services – Cuba provides vital resources so that hospitals, schools and other institutions remain open during a natural disaster
- Vulnerability identification – each municipality identifies citizens and infrastructure deemed vulnerable, thus easing the evacuation process
- Protecting/assuring property – the Cuban government helps citizens protect personal items during evacuations and ensures that damaged property will be replaced at no cost



These factors have helped ensure that our mining and energy businesses in Cuba operate in an environment where emergency response capacity is well developed and well integrated into the risks facing the most vulnerable members of the community across the island.

# SITE SECURITY

## MANAGEMENT APPROACH

We are committed to safeguarding our people, assets, reputation and the environment while respecting the rights of the public. We have an enterprise-wide policy that outlines our principles for creating a safe and secure business, including:

- Entering into agreements with private security service providers
- Entering into agreements with public security forces
- Reporting and investigating security-related incidents
- Applying appropriate use of force
- Protecting providers of confidential information
- Apprehending and transferring suspects to public custody

Our operating sites employ full-time and contract security personnel. We believe that competence and training are the most important elements of effective security management, and we evaluate all personnel carefully before selecting them for security detail. To ensure our interactions with the public are respectful, we provide values- and expectations-based training, including security and human rights training, to our security personnel.

Sherritt's Security and Human Rights Standard includes standardized tools for conducting site-level gap analyses. The standard is part of Sherritt's broader Sustainability Framework Implementation Plan for designing and implementing company-wide minimum standards across sustainability-related functions, including security. In 2019, Sherritt reviewed and updated its [Human Rights Policy](#) to reflect industry-wide best practice.

The Fort Site has implemented many of the Voluntary Principles on Security and Human Rights (VPSHRs) requirements. Application in Cuba requires a more nuanced and phased approach, including familiarizing our joint venture partners and the Cuban government with the VPSHRs before determining how best to move forward. MAC member companies that rely upon private or public security forces have committed to implementing a human rights and security approach consistent with the VPSHRs and based on a determination of risk at the mining facilities they control. Furthermore, MAC members with international mining operations report on their implementation annually in MAC's *TSM Progress Report*.

Management is pursuing alignment with the VPSHRs in Cuba with the Empresa de Servicios Especializados de Protección, S.A. (SEPSA). SEPSA is the state-run security service provider that provides security at joint venture operations.

## PERFORMANCE

### Security Incidents and Human Rights

In 2019, there were 27 security incidents, compared to 23 in 2018, with the majority of these incidents relating to thefts at the Moa Nickel Site. Our operations in Cuba and Canada did not record any significant security incidents involving allegations or claims of human rights abuse in 2019.

In 2019, we reviewed relevant indices that assess conflict and security risks and confirmed that Cuba was at low risk of violent conflicts.

At the Fort Site, security officers continued to receive basic human rights training through the provincial licensing process in Alberta. The site also trained 100% of its security personnel on the Voluntary Principles, as well as private security contractors and emergency services personnel. Sherritt reaffirmed contractual agreements between the Fort Site and the security provider to ensure compliance with all corporate requirements. Sherritt's Fort Site continues to maintain a security licence in the province of Alberta.

In 2019, the Fort Site remained compliant with the requirements of the VPSHRs and with UNICEF's Child Rights and Security Checklist. The Fort Site has made significant advancements in implementing the VPSHRs on site since implementation began, achieving a completion score of 89%. While Canada remains a low-risk jurisdiction for human rights infractions, Sherritt believes the Fort Site has demonstrated clear value from application of the VPs in this context. Sherritt security officers continue to work with our third-party security service provider to access online courses such as Active Shooter and Raising Threat Awareness as part of the VPSHR site training requirements. Our 2019 annual report to the Voluntary Principles on Security and Human Rights is available [online](#).

In 2018, the Fort Site was invited to work in partnership with the local Royal Canadian Mounted Police (RCMP) detachment on the development of a security management best practice document for industrial sites in the region, and this work continued in 2019. A mapping system of the site was developed to identify risk hazard areas around the site in the event that local authorities have to travel through the site during law enforcement activities.



The Fort Site has incorporated Voluntary Principles on Security and Human Rights (VPSHR)-related requirements into its security provider agreements.

## IMPLEMENTING THE VOLUNTARY PRINCIPLES INITIATIVE

Sherritt began to implement the Voluntary Principles on Security and Human Rights (the Voluntary Principles, the VPs or the VPSHRs) in 2009 at its Ambatovy operation in Madagascar. In 2013, Sherritt was interested in joining the Voluntary Principles initiative and carried out a series of independent, external risk assessments on security and human rights at Ambatovy, at the OGP operations in Cuba, and at the Moa Joint Venture nickel operations in Fort Saskatchewan, Alberta, and Moa, Cuba. Following these assessments, Sherritt began developing a comprehensive management system to assist its operations in the identification and mitigation of human rights and security-related risks, in alignment with the expectations of the Voluntary Principles. Sherritt formally applied and was accepted to join the Voluntary Principles Association in 2014.

With Ambatovy deemed non-material, Sherritt's focus for Voluntary Principles implementation will continue to be on Canada and Cuba, with the majority of the focus being on potential implementation in Cuba. Sherritt believes that Cuba's state security provider, with which Sherritt's joint ventures have had a relationship for over 25 years, already has good alignment with the requirements of the VPSHRs, and that the standard will provide an opportunity to demonstrate that position.

A Sherritt representative attended the VPs plenary in London in March 2019 and made a verification presentation, as per the member requirements of the Corporate Pillar.

In Canada, Sherritt recognizes that security and human rights-related risks are relatively low and good governance practices are relatively mature; therefore, few additional measures need to be put in place to ensure compliance with the Voluntary Principles. The external audit conducted in 2018 confirms that (details are provided in our [2018 Sustainability Report](#)). We continue to undertake training at the Fort Site and to work in collaboration with the RCMP.

Application of the Voluntary Principles at the Company's operations in Cuba requires a longer-term approach to familiarize Sherritt's joint venture partners – which are state-owned enterprises – and other government stakeholders with the VPSHRs. In 2019, we continued to impress upon our joint venture partners the benefits of adopting the standards.

# EMPLOYEE RELATIONS

## MANAGEMENT APPROACH

Our business cannot operate and thrive without a dedicated, experienced and engaged workforce. We are committed to listening to and understanding the needs and challenges of our employees; taking action to improve the workplace; and supporting employees in reaching their potential. For the purpose of this report, employee relations include employee engagement, talent development, labour rights, and workplace diversity and inclusion.

Effective and regular two-way communication with employees is the foundation of our employee relations programs. Senior managers in the Corporate office and divisions are accountable for implementing plans to address the key needs of our workforce. In previous years, Sherritt conducted an employee survey to evaluate engagement across the business. We continue to explore new approaches for gathering employee feedback on a more frequent basis and will report on our renewed approach in a future Sustainability Report.

Ensuring the right programs are in place to support employee development at all levels is crucial for Sherritt's long-term success and succession planning. In spite of the challenging commodity price environment, we remain committed to employee training and development. We provide a range of technical, management and leadership training in Canada and Cuba. Whenever possible, we leverage opportunities to bring different groups together to build cross-organizational networks and strengthen our shared values and culture.

Our compensation programs are aligned with [Our Purpose and Our Promises](#), fostering a company-wide culture of accountability and pay-for-performance compensation. All salaried employees are eligible for an annual performance-based short-term incentive award expressed as a percentage of their base salary.

Across our company, we have both unionized and non-unionized workforces. We recognize and encourage the right to engage in free association and collective bargaining. As with all of our relationships, we strive for productive and mutually beneficial outcomes in our discussions with employees and organized labour representatives. When labour grievances do occur, we investigate and work to reach an acceptable solution for all parties concerned. In certain cases, we may opt for third-party arbitration. Once grievances have been resolved, the management team evaluates the issues raised and determines if any process improvements should be made.

In 2019, the Fort Site rolled out an Inclusive and Respectful Workplace Training for all employees and leaders as part of Sherritt's Workplace and Violence Prevention Plan.

We have a policy related to workplace discrimination and violence prevention applicable to all Sherritt directors, officers and employees worldwide, including the officers, directors and employees of Sherritt's subsidiaries and affiliated companies. There are also discrete policies on human rights, business ethics and diversity that meet legal requirements and reflect best practices. We are committed to continuous improvement in these areas, with a growing focus on diversity and inclusion.

In Cuba, Sherritt and its joint ventures are required by law to hire all national workers through an employment agency. Incidents of discrimination are handled by this state employment agency. The employment agency involves Sherritt and/or its joint venture partners in discrimination cases, as appropriate. Such involvement has occurred in previous years; however, in 2019 there were no incidents that required the involvement of Sherritt and/or its joint venture partners.

## PERFORMANCE

### Employee Engagement

Sherritt is currently exploring new approaches for gathering employee feedback on a more frequent basis. As such, no employee engagement surveys were conducted in 2019. The next engagement survey and alternative methods of gathering feedback from employees are planned to be deployed in 2020.

A key approach to employee engagement and collecting feedback is through formal leader-once-removed discussions that are regularly held with management across the company. These discussions are intended to find out how people are really doing, get feedback and insights to help managers and their teams improve, and build trust.

For the second year in a row, Sherritt joined a list of 450 companies participating in [Not Myself Today](#), a national mental health awareness campaign. The focus of Sherritt's 2019 campaign was resilience – and included a series of employee workshops delivered by our Employee and Family Assistance Program (EFAP) provider, Morneau Shepell. Additionally, each location held employee engagement activities to further highlight the importance of mental well-being and support.

### Organized Labour, Grievances and Strike Action

At the Fort Site, unionized employees are represented by Unifor Local 530A. Sherritt and Unifor have had an effective partnership for more than 65 years without a labour interruption. In April 2016, a new three-year agreement came into effect. In 2019, the agreement was extended for a one-year period (until March 2020), and in late 2019 the union provided notice to bargain in 2020. In Cuba, all organized labour considerations are mandated by the Cuban state, and many of the systems and tools that are common in other jurisdictions, including collective bargaining, are not employed there. As such, factoring in the Fort Site, Sherritt's employee base is approximately 42% unionized.

The Fort Site received 18 grievances in 2019 relating to labour practices, a decrease from 2018's total of 33. Seven grievances were resolved during the calendar year, and those that were not resolved are being managed in accordance with the procedures set out in the Collective Agreement. The Fort Site follows the process described in the Collective Agreement and the Labour Relations Act of Alberta to resolve all labour relations grievances.

There were no work stoppages as a result of labour unrest in 2019.

### Workplace Diversity and Inclusion

With the goal of improving diversity at all levels of the company, Sherritt spent much of 2019 analyzing the composition of its workforce and assessing its internal policies, including hiring, talent management, and flexible work arrangements. In 2019, Sherritt launched a five-year diversity and inclusion global framework, setting out its multi-year plan to achieve its stated goal. Sherritt wants to make a concerted effort to cultivate and foster an inclusive and diverse workplace to ensure all employees have a positive experience and to effectively support the attraction and retention of talented individuals. Although the initial focus of our D&I strategy was gender, the recent events with respect to racism have highlighted the need for us to re-evaluate our strategy to ensure we are acknowledging and addressing any systemic issues that impede our desire to be an inclusive and respectful workplace.

Sherritt's divisions finalized site-level diversity and inclusion plans in support of the global framework, and established divisional implementation committees in 2019.

Currently, Sherritt's workforce is 18% female, largely unchanged from 2018. In our Canadian locations (Fort Saskatchewan, Calgary and Toronto), our workforce is 20% female. In Cuba, the main workforce is contracted by the state and Sherritt is not involved in hiring decisions. The management team of the Cuban side of the Moa Nickel Site is currently 40% women. Although Sherritt does not have oversight in hiring, we are benefitting from Cuba's strong record in gender diversity.

Although our overall gender diversity percentage aligns with the [average](#) in the mining sector, we remain committed to building a highly inclusive culture in order to attract and retain a diverse workforce.

Sherritt has joined both the [30% Club Canada](#), whose goal is to ensure that at least 30% of board seats in the country are held by women by 2022, and Catalyst Canada. As a signatory of the Catalyst Accord 2022, Sherritt pledges to help increase the average percentage of women on boards and women in executive positions in corporate Canada to 30% or more by 2022. In 2019, Sherritt's President and CEO assumed the co-chair role for the 30% Club Canada Advisory Committee.

	Canada <sup>1</sup>			Cuba <sup>2</sup>			Other <sup>3</sup>			Total		
	Male	Female	Unknown	Male	Female	Unknown	Male	Female	Unknown	Male	Female	Unknown
Permanent	630	157	-	2,312	209	-	4	12	-	2,946	378	-
Full-time	619	148	-	2,312	209	-	4	12	-	2,935	369	-
Part-time	11	9	-	-	-	-	-	-	-	11	9	-
Temporary <sup>4</sup>	5	5	39	-	-	-	1	-	-	6	5	39

<sup>1</sup> Includes employees from the Fort Site, Commercial and Technologies, Calgary OGP and the Corporate office.

<sup>2</sup> Includes employees from the office in Havana, Sherritt and GNC employees at the Moa Nickel Site, as well as employees of the entities that make up the OGP businesses (including Energas).

<sup>3</sup> "Other" includes our Bahamian marketing office, which services the Moa Joint Venture, and OGP Spain.

<sup>4</sup> Temporary employees include consultants and positions currently filled by contractors.

## Employee Diversity

2019	Canada <sup>1</sup>	Cuba <sup>2</sup>
Employee average age	46	51
Women in workforce (%) <sup>3</sup>	20%	8%
Women in management (%)	21%	0%

Note: Sherritt does not currently define or track employee ethnicities and therefore has not included these metrics.

<sup>1</sup> Includes employees from the Fort Site and the Corporate office.

<sup>2</sup> Includes employees from the Moa Nickel and OGP sites.

<sup>3</sup> Includes Sherritt employees, consultants and Cuban local national employees.

In 2018, Sherritt's Fort Site engaged in a research study to "improve workplace culture in Alberta science, engineering, trades and technology companies by decreasing implicit bias and stereotypical threat", facilitated by the Canadian Centre for Women in Science, Engineering, Trades and Technology (WinSETT). This work continued through 2019, with Sherritt's Fort Site being one of three industry partners participating in this research. The program involves the assessment of workplace culture and a review of formal policies with the intention that the results will help Sherritt with its diversity and inclusion strategy and the industry more broadly. The project is funded by the Status of Women Canada - Western Region with in-kind contributions from participating companies and not-for-profit organizations.

**“Sherritt International is a Silver Sponsor in the International Women in Resources Mentoring Programme (IWRMP) for the third year running. Since our pilot in 2018, Sherritt has embraced this initiative by adding a mentee and mentor on to the program every year, always 100% committed to increasing the pipeline of female leaders in the mining sector. The program is also very enriching for mentors. It is great to see the support of the senior leadership of the company for this project and their renewed and increased participation. Our IWRMP sponsors make the program possible. Thank you!”**

**– Barbara Dischinger, Founder and Director, International Women in Mining**





## COMMITTED TO PAY EQUITY AND PROMOTION

Sherritt's leadership feels strongly that we will be a better organization if we become more inclusive and more diverse. Over the last two years, we have reviewed and updated policies and procedures, job descriptions, compensation programs and hiring practices – all through a diversity and inclusion lens. We know that these people practices are the foundation of our longer-term strategy and action plan.

Understanding that studies have found, time and again, that women in the workforce are paid on average less than their male counterparts across much of the world, we conducted an internal assessment of our own pay equity situation for Sherritt employees in 2018. We were pleased to find that, in alignment with our promise to employees, pay for positions of the same value was equitable between women and men. However, what the data showed is that we have disproportionately fewer women in higher-level positions than men. Now that we have this data, our focus has shifted to understanding the underlying reasons.

To achieve our 2022 goal of having a board and an executive team composed of at least 30% women, our challenge is to build and maintain strong female leaders. We are committed to transparently reporting our progress as solutions are implemented and results tracked.

**“Our compensation structure and organization design principles continue to sustain equitable pay among genders. Our efforts are focused on identifying opportunities to have more diverse representation within each level of our organization. This includes developing a diverse pipeline of talent and ensuring we have diverse candidates considered in our recruitment processes to drive representation at senior levels in the organization.”**

**– Chad Ross, Director, HR Analytics & Operations**



Training women to operate heavy machinery is a unique initiative in the mining sector in Cuba.

## **WOMEN-ONLY HEAVY EQUIPMENT TRAINING PROGRAM**

The Moa Nickel Site employs the only female excavator operators in the country's mining industry!

Through its women-only training program, Sherritt's partner, GNC, has trained and hired 12 female excavator operators, and one of them has worked in the plant since 1984.

This is the first such program of its kind in Cuba, and we are extremely proud of those involved with moving this initiative forward. It is programs like this that develop a robust pipeline of qualified female workers for jobs that were traditionally reserved for men, creating diverse employment options for women who earn an in-demand qualification.

The Moa Nickel Site continues to explore opportunities to hire more women for various positions.

# Operating Ethically

As a public company, our overarching responsibility is to operate profitably and take advantage of opportunities to grow our business. This allows us to keep our commitments to our shareholders, employees, contractors, host-country governments and communities. To ensure that we protect our business and reputation, we commit to conducting all activities with integrity and the highest standards of responsible conduct. This includes avoiding actual and perceived conflicts of interest, having zero tolerance for corruption of any form, and respecting the rights of all people with whom we interact. We do this by rigorously implementing our policies and by ensuring we have the systems in place to conduct our business ethically.



## In This Section

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**RESPONSIBLE PRODUCTION AND SUPPLY**

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**BUSINESS CONDUCT**

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**HUMAN RIGHTS**

# 2019 Highlights



**Produced the three billionth pound of finished nickel at the Fort Saskatchewan refinery (COREFCO).**



**Recorded, investigated and closed three of four reportable concerns submitted related to business conduct. One is pending the conclusion of an internal investigation.**



**Updated our Human Rights and Environment, Health, Safety and Sustainability policies to ensure alignment with industry responsible sourcing expectations.**



Tina Litzinger, Vice President, Marketing, Operations/Marketing

## TINA LITZINGER

Tina Litzinger has been with Sherritt for 24 years and is currently Sherritt's VP of Marketing. In this role, she oversees the sale of all of Sherritt's and its joint venture partners' nickel, cobalt and fertilizer by-products. Tina also acts as the Vice Chairperson of the Board for the Cobalt Institute, is a member of the London Metal Exchange's Cobalt Committee, and is Sherritt's member on the Executive Committee of the Nickel Institute. Tina's leadership within Sherritt and these leading industry bodies contributes to global efforts to supply a sustainable future, ethically.

On the topic of responsible sourcing of minerals, Tina shared, "Consumers want to know where and how products are made so they can make informed decisions on how they spend their money. Transparency is expected. It is and will continue to be an advantage to be a clean, responsible, ethical operator."

It's an exciting time to produce responsibly sourced nickel and cobalt. These metals are technology enablers that will help the world decarbonize by enabling electricity storage in vehicles and electrical grids. Over Tina's career at Sherritt, she has seen the pace of change at the company increase to foster innovation, sustainability and continuous improvement – all enabled by the quality of people working at Sherritt. "I consider myself extremely lucky to work with our site-based professionals."

**"Tina's commitment to responsible production of nickel and cobalt is unwavering. She is able to draw on her considerable knowledge of the industry, customers and society's expectations to provide the leadership that is vital in ensuring that we meet our stakeholders' expectations regarding responsible supply of nickel and cobalt, now and in the future."**

– Steve Wood, Executive Vice President and Chief Operating Officer

# RESPONSIBLE PRODUCTION AND SUPPLY

Society and markets are increasingly demanding responsibly and ethically produced goods. Downstream customers are in turn increasingly requesting policies and management systems and supply chain due diligence to ensure responsible mineral production and supply. Sherritt is committed to extracting and producing minerals that meet its stakeholders' social, ethical, environmental and human rights expectations and to advancing that commitment with its joint venture partners and their suppliers and customers.

## MANAGEMENT APPROACH

Sherritt's responsible sourcing strategy considers the production and sourcing of minerals. Our [Environment, Health, Safety and Sustainability Policy](#) and standards framework identify our commitments and expectations. We work collaboratively with our partners, experts, industry consortia, peers and customers to understand fully the properties and potential impacts of our products throughout their supply chains and lifecycles.

Sherritt has a robust management system in place to manage environmental and social risks and meet or exceed performance targets. We continue to progress against plans to ensure we have the appropriate policies and due diligence management systems in place to address the requirements of the OECD Due Diligence Guidance for Responsible Mineral Supply Chains. Sherritt remains engaged with the Mining Association of Canada, the London Metal Exchange, the Nickel Institute and the Cobalt Institute to support the development of and alignment with practical and recognized responsible sourcing initiatives, standards and frameworks. Sherritt advocates for the adoption of all of these requirements by its partners and joint venture organizations.

Sherritt participated with the Nickel Institute in a lifecycle analysis published in early 2020 and is participating in a new lifecycle analysis with the Cobalt Institute to be published in 2021–2022. We participate in these studies, committing significant effort, to help further the understanding of the lifecycle impact of our main products and to educate customers and regulators.

Sherritt continued funding of the Nickel Institute and the Cobalt Institute to advance the ecological and toxicological science associated with its products, which helps develop appropriate regulations that are protective of human and environmental health.

## PERFORMANCE

2019 and recent highlights:

- Updated our **Human Rights Policy** and **Environment, Health, Safety and Sustainability Policy** to ensure that the commitments are aligned with OECD requirements and industry best practice;
- Completed a **Conflict-Affected and High-Risk Areas (CAHRA)** assessment of the Moa Joint Venture feed supplies, which concluded that the Moa Joint Venture does not source from, operate in or transit through any conflict-affected or high-risk areas;
- Developed and implemented a **Third-Party Feed Policy** to establish Moa Joint Venture commitments to responsible feed sourcing that are aligned with OECD requirements and industry best practice;
- Started to develop a **Supplier Code of Conduct** to identify expectations of Moa Joint Venture suppliers to provide responsibly sourced minerals that are aligned with OECD requirements and industry good practice;
- Became an upstream member of the **Responsible Business Alliance/Responsible Minerals Initiative**.

As part of several long-term supply agreements with some key cobalt customers, the Moa Joint Venture participates in regular due diligence assessments against customer responsible sourcing requirements.

**For more information on our responsible sourcing alignment with international standards, plans and performance, please see our [Responsible Production and Supply Report](#).**



Employees at the Fort Saskatchewan refinery (COREFCO) gather together to celebrate three billion pounds of finished nickel production.

# THREE BILLIONTH POUND AT FORT SASKATCHEWAN REFINERY

Early in 2019, Sherritt announced that its refinery in Fort Saskatchewan, Alberta, reached three billion pounds of finished nickel production since operations first began in 1954, without labour disruptions.

“As one of Canada’s oldest mining companies with a history of production over 65 years, we are proud of this important milestone,” said David Pathe, President and CEO of Sherritt International. “It serves as a testament to the refinery’s dependability over the past 65 years, and the ability of our employees to adapt to changes in the industry and introduce innovations that have enabled Sherritt to maintain our leadership position as a producer of low-cost, high-quality nickel.”



The Fort Saskatchewan refinery (COREFCO) was constructed in 1954 and initially processed feed from Sherritt’s Lynn Lake mine in Manitoba. Today, the COREFCO refinery processes mixed sulphides produced through the Moa Nickel Site, which was created in 1994 and in which Sherritt maintains a 50% partnership interest, to produce Class 1 nickel in briquette and powder forms. Class 1 nickel is the purest form of nickel and is particularly suited for applications that require high-purity levels, such as electric vehicle batteries.

In 2019, the COREFCO refinery produced 33,108 tonnes of finished nickel (100% basis) and produced 3,376 tonnes of finished cobalt (100% basis) as a by-product. Finished nickel and cobalt produced at the COREFCO refinery are sold to international customers, primarily in Europe, Japan and China, for use in stainless steel applications, specialty alloys and assorted battery types.





Sherritt has a long history of technological innovation at its operation in Fort Saskatchewan, Alberta, and that innovation continues today.

## FORWARD LOOKING INNOVATION FOR RESPONSIBLE PROCESSING

Recovery of nickel in the future will rely primarily on processing of laterite ore. Laterite process technology follows two distinct routes – hydrometallurgical and pyrometallurgical – each with distinctly different energy and reagent requirements. Of these two routes, only the hydrometallurgical high-pressure acid leach (HPAL) process, in which technology Sherritt is a recognized leader, is able to economically supply nickel and cobalt in forms suitable for the fast-growing battery market.

Sherritt has steadily improved its current HPAL operating practice and technology through leveraging artificial intelligence (AI) in process control. At the same time, we keep an eye on the future and actively develop and evaluate new technology options that could increase ore utilization, decrease our environmental footprint and lower capital and operating costs. This is our “Next Generation Laterite” (NGL) program.

The NGL program is a strategic initiative that aims to improve recoveries, decrease energy consumption and minimize tailings production, leading to reduced costs and increased reserves through overall improved economics. This will result in a more sustainable and greener processing flowsheet for nickel production. From the Technologies Division in Fort Saskatchewan, Sherritt engages with a wide network of experts and service and technology partners to complement its in-house NGL technology development.

# HUMAN RIGHTS

## MANAGEMENT APPROACH

Understanding and expectations related to human rights in the mining and energy sectors began to evolve rapidly 15 to 20 years ago. The [United Nations Guiding Principles on Business and Human Rights](#) outlines the roles for state and business actors in the protection of human rights. It also identifies “access to remedy” for anyone with a human rights complaint as a critical element for business to maintain its social licence.

Although human rights issues do not currently represent a top risk at Sherritt, they are an inherent risk to all mining and energy production sites. To manage this risk, we are aligning with international best practices and expectations regarding human rights. We developed an enterprise-wide policy that commits to uphold the [Universal Declaration of Human Rights](#), along with other international principles.

At Sherritt, remedies for complaints, up to and including potential human rights violations, are provided through the community grievance mechanisms in place at the site level. Grievance mechanisms are processes to receive, acknowledge, investigate and respond to community complaints. These are valuable early-warning systems that can resolve sources of friction between stakeholders and companies, and can, over time, build trust. We have incorporated best-practice guidance from a number of sources into our Grievance Mechanism Standard to ensure it is both practical and credible.

At the Fort Site, we have a long-established informal process for responding to complaints from external parties and are in the process of finalizing the implementation of Sherritt’s Grievance Mechanism Standard. In Cuba, there is a state-run system where citizens can file complaints against an entity, organization or enterprise whose activities they feel are adversely affecting their well-being. Commissions are established to investigate grievances and develop action plans to address them. Sherritt’s management team, or that of our Cuban partners, participates in the process to address any grievances related to our operations.

Our [Human Rights Policy](#) also articulates our commitment to the [Convention on the Rights of the Child](#). Violation of children’s rights is a low risk in Canada and Cuba; however, it is an issue Sherritt takes extremely seriously and a risk that is carefully managed no matter the operating location.

## PERFORMANCE

### Third-party Review

In 2018, the Fort Saskatchewan refinery underwent an external audit on its application of the Voluntary Principles on Security and Human Rights as well as UNICEF’s Child Rights and Security Checklist. Refer to this [case study](#) for more information on the Voluntary Principles. No third-party human rights audits took place at Sherritt’s operations in 2019. The next third-party audit is scheduled for 2020 at the Fort Saskatchewan Refinery.

### Human Rights Grievances

There were no human rights-related grievances reported by external stakeholders at any of our operating sites in 2019. Note that employee and labour grievances are captured under [Employee Relations](#) and [Stakeholder Engagement](#).



We are proud to support the globally successful UNICEF program for road safety.

Credit: UNICEF Cuba

## PROMOTING ROAD SAFETY TO CHILDREN AND YOUTH IN CUBA

Sherritt is committed to the health and safety of its employees and the communities around its operations. That is why we have partnered with UNICEF in support of Principle 4 of the Children’s Rights and Business Principles – ensuring the protection and safety of children in all business activities. As part of the partnership announced in 2018, over three years Sherritt will support UNICEF’s Child Road Traffic Injury Prevention Programme to promote road safety among young people in Cuba.

Road safety is a priority for both the company and the country of Cuba, as unintentional injuries caused by road accidents are the leading cause of mortality among youth and adolescents.

The program builds on UNICEF’s extensive experience with road safety, which is a key component of its Country Programme (2014–2019), and has already shown successful results at the national level and in La Habana and Santiago de Cuba provinces. With Sherritt’s support, and in collaboration with Cuba’s Ministries of Health and Education, the National Road Safety Commission and local governments, the program supports the provinces of Matanzas and Holguin, including Moa and Cárdenas where Sherritt operates.

The intention of this program is to:

- Increase families’ awareness of how to prevent road accidents through communication initiatives aimed at social and behavioural change.
- Strengthen road safety education of children and adolescents, with emphasis on those most vulnerable.
- Strengthen policies to protect children by ensuring that experience and best practices are shared among institutions, mass organizations, professionals on road safety, and child victims of road accidents.
- Support Sherritt’s deep commitment to social responsibility and direct engagement on issues affecting children.

In 2019:

- A Children’s festival, “Painting Under the Sun”, was held in celebration of the 30th Anniversary of the Convention on the Rights of the Child. Five hundred children and adolescents along with 150 adults participated in activities hosted by UNICEF and the National Road Safety Commission. Children increased their knowledge of traffic laws and how to be safe on the road through artistic activities designed to increase their interest in the subject and encourage information sharing.
- In recognition of UN Global Road Safety Week and National Road Safety Day (May 6–12), a variety of events were held in La Havana, Moa, Holguin and Matanzas Province. Over 1,000 children, teachers and families attended events focused on sharing good practices in road safety education and health promotion, including first aid, responsible road culture and positive attitudes towards road safety.
- Another event was held where 750 children and 550 adults participated in a series of road safety awareness activities at primary and secondary schools. These science, sport, recreational and cultural activities promoted road safety awareness and the integration of different sectors of society.
- An academic meeting for road safety in the national education system was held with 100 delegates, 115 children with disabilities from the Amistad Cuba-Vietnam school, 145 teachers and 70 parents. This meeting included education intervention on means and methods of teaching about road education.
- By the end of 2019, the road safety program had educated approximately 8,000 children and adults since our support commenced.

This partnership builds on years of mutually beneficial collaboration between Sherritt and UNICEF in Cuba. Sherritt and UNICEF are proud to partner again to work towards the achievement of SDG 3.6 – to halve the number of global deaths from injuries and road traffic accidents by 2020. For more information about the history of this relationship, [click here](#).

# BUSINESS CONDUCT

## MANAGEMENT APPROACH

[Our Purpose and Our Promises](#) describe our guiding principles and how we expect them to be lived every day as we carry out our business. Our Business Ethics Policy provides clear guidance to our workforce on what it means to act with integrity. It covers conflicts of interest, fraud and corruption, fair dealings, protection and proper use of the company's assets, compliance with regulatory requirements, disclosure, confidentiality, and reporting mechanisms available to employees and contractors.

As a Canadian company, we are subject to the Canadian Corruption of Foreign Public Officials Act (CFPOA), as well as anti-corruption laws in Cuba. The CFPOA prohibits Canadian business interests from making or offering improper payment of any kind to a foreign public official – or anyone acting on his or her behalf – where the ultimate purpose is to obtain or retain a business advantage.

Our Anti-Corruption Policy prohibits violation of the CFPOA and other applicable anti-corruption laws. All divisions, groups and offices must undergo anti-corruption training and log all government meetings and payments. In Canada and Cuba, governmental and commercial corruption does not present a significant risk, based on the latest [Corruption Perceptions Index \(CPI\)](#).

We have also developed a process for meeting the public reporting obligations of Canada's [Extractive Sector Transparency Measures Act \(ESTMA\)](#). Sherritt's [2019 ESTMA – Annual Report](#) is now available online. The report, which is a requirement of the Government of Canada, covers certain payments that Sherritt made to all levels of government in Canada and abroad in 2019. As Canada and Cuba are not signatories of the Extractive Industries Transparency Initiative (EITI), reference to it has been removed from this report.

## PERFORMANCE

### Ethical Conduct

Sherritt has a Whistleblower Policy, which indicates that any person submitting a reportable concern may choose to do so anonymously and confidentially through the Whistleblower Hotline maintained by the Corporation's designated external service provider. Reportable concerns may be submitted by any of the Corporation's stakeholders, including employees, contractors, directors, officers, vendors and others.

In 2019, four reportable concerns were submitted through the Whistleblower system. Of the four reportable concerns, three were internally investigated and one is open pending the conclusion of an internal investigation. The concerns were mainly related to potential conflicts of interest and/or non-compliance with policies and procedures.

Upon commencing employment with Sherritt, all employees are required to review and sign off on their understanding and acceptance of our Business Ethics Policy.

## Anti-Corruption

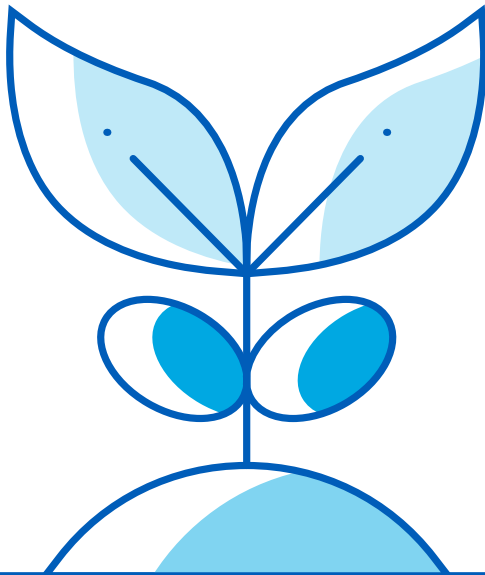
Sherritt's Anti-Corruption Policy was last updated in 2018. In 2019, we rolled out an updated online anti-corruption training module as part of our existing onboarding program. One hundred percent of our eligible workforce was trained on the updated policy by the end of 2019. In Cuba, only expatriate employees and a small number of Cuban nationals who work directly for Sherritt were required to take the training, given the nature of our joint venture relationships and our agreement with the state-run agency that provides our operations with workers. In Canada, all salaried employees across all sites and divisions are required to take the training.

Additional commentary on transparency reporting can be found under [Community Development](#).



# Demonstrating Environmental Responsibility

We understand that mining and energy production disturb the natural environment. Our general approach is to avoid environmental impacts wherever we reasonably can, and minimize, manage and remediate any remaining impacts. In this way, we can limit our impacts while seeking innovative ways to support environmental protection.



## In This Section

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**TAILINGS MANAGEMENT**

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**WATER**

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**ENERGY AND CLIMATE CHANGE**

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**BIODIVERSITY AND LAND**

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**WASTE**

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**ENVIRONMENTAL LIABILITIES,  
CLOSURE AND RECLAMATION**

# 2019 Highlights



**Maintained Scope 1 greenhouse gas emissions comparable to 2018, despite increases in production.**



**Continued improving environmental data reporting, including for air emissions, waste and water.**



**Completed a biodiversity assessment of the Fort Site and initiated development of a biodiversity conservation plan.**



**Reported a decrease of 81% in hazardous waste at the Fort Site compared to 2018, and a 56% reduction at the Moa Nickel Site. Consequently, Sherritt achieved an overall reduction of 68% in hazardous waste compared to the previous year.**





Aysan Molaei, Research Metallurgist,  
Technologies

## AYSAN MOLAEI

Aysan Molaei pushed against boundaries in her homeland of Iran to become a rare female Mining Engineering graduate. She continued her studies in Canada, achieving a doctorate in Mining and Materials Engineering. Aysan is currently a Research Metallurgist with Sherritt and a key part of Sherritt's Next Generation Laterite Program. She regularly collaborates with teams of scientists and engineers to develop more sustainable metal recovery processes.

Aysan's curiosity and sense of adventure led her to pursue mining engineering because there are always challenges that require new and innovative solutions. "Sherritt is known for novelty and innovation. The Next Generation Laterite Program will enhance our reputation as a company that believes in sustainable development and one that cares for the environment as much as it does for nickel production."

With the support of Aysan, the work of Sherritt's Technologies Division, and employees across the company, Sherritt is proud to demonstrate a track record of innovation and environmental responsibility.

**"Aysan is an integral part of Sherritt's Next Generation Laterite Program. This is a strategic initiative for Sherritt, which is aiming to increase reserves, decrease the consumption of energy and minimize the production of tailings. This will result in a more sustainable and greener processing flowsheet for producing nickel. Building on the metallurgical education that she received during her Ph.D. studies at McGill University, Aysan is developing into a valuable research scientist with a solid grasp of commercial processing issues."**

– Nathan M. Stubina, Vice President, Technologies, Operations

# TAILINGS MANAGEMENT

Sherritt strives to operate and maintain its tailings management facilities in accordance with global best practices for safety. We continually review our facilities and procedures and are committed to pursuing the highest standard of safety at our operations.

The Moa Nickel Site is operated by the Moa Joint Venture's management, reporting to the Moa Joint Venture Board of Directors. The Moa Joint Venture is a 50/50 joint venture between Sherritt and a Cuban government agency. Accordingly, while the following reflects Sherritt's approach to tailings management, Sherritt itself cannot control outcomes in relation to Moa Nickel Site tailings management.

## MANAGEMENT APPROACH

### Risk Management

Dam failure is the greatest risk for the tailings management facilities (TMFs) located at the Moa Nickel Site, which are part of the Moa Joint Venture. Our dam safety assurance program assesses our tailings storage in line with international leading practices.

Sherritt's assets are required to assess natural phenomena such as extreme flooding and seismic events, as well as operational criteria, and incorporate these factors into their TMF designs.

There are at least six levels of governance and assurance that Sherritt advocates its assets undertake on TMFs.

1. **Regular surveillance** – Operations are expected to monitor their TMFs on an ongoing basis using piezometers, inclinometers, pressure gauges, remote sensing and other technologies to monitor tailings dams, abutments, natural slopes and water levels. The results are assessed by the management team of the operation.
2. **Annual dam safety inspections (DSI)** – Formal dam safety inspections are conducted annually by an external Engineer of Record for operating assets. A DSI evaluates and observes potential deficiencies in a TMF's current and past condition, performance and operation. DSI findings are overseen by the operation's management team.
3. **Dam safety audits** – Knight Piésold, one of the world's leading TMF experts, audits the integrity and safety of our TMFs. The results of these audits are reported to the Moa Joint Venture management and Board of Directors, Sherritt's senior management and the EHS&S Committee of Sherritt's Board of Directors. Findings are followed up through regular independent verification audits.
4. **Independent tailings review boards** – The Moa Nickel Site has a Tailings Review Board made up of independent experts who conduct annual third-party reviews of design, operation, surveillance and maintenance.
5. **Internal governance reviews** – Sherritt's COO conducts internal management reviews of Sherritt's tailings facilities on a regular basis. Summaries are reported to the EHS&S Committee of Sherritt's Board of Directors.
6. **Staff inspections** – Tailings management facilities are inspected by trained operators and expert technical staff as frequently as several times daily, with formal staff inspections at the Moa Nickel Site at least once per month.

The different levels of assurance are undertaken on the basis of national regulations, as well as, where appropriate, criteria aligned with international guidelines from the Canadian Dam Association and the International Commission on Large Dams.

In addition, where appropriate, the Moa Nickel Site conducts periodic dam safety reviews, which include reviewing maintenance, surveillance and monitoring, failure impact assessments, emergency management procedures, public safety and environmental management. The results are shared with the operation's management and reviewed as part of the dam safety audits.

## TAILINGS MANAGEMENT STANDARD

Sherritt has had an internal tailings management standard in place since 2018. Management at the Moa Nickel Site has adopted this standard and is in the process of implementing it. The standard aligns with the Mining Association of Canada's Towards Sustainable Mining [Tailings Management Protocol](#) and supports Sherritt's goal of designing, constructing, operating, decommissioning and closing tailings facilities in such a manner that all structures are stable, all solids and water are managed within designated areas, and all management practices conform with regulatory requirements, sound engineering principles and good practice. Sherritt continues to review and evaluate monitoring systems and risk assessments to ensure the approach is robust and current.

## ENGAGING WITH COMMUNITIES

Sherritt advocates that its assets undertake proactive stakeholder and community engagement across a broad range of operational topics, including TMFs where appropriate.

We require our assets, and those of our joint ventures and subsidiaries, to develop and maintain emergency preparedness and response plans, and to communicate these plans with relevant stakeholders. Where appropriate, operations may also engage with local and regional emergency response services in scenario planning and practice exercises.

## CONTINUOUS IMPROVEMENT

Sherritt is committed to continually reviewing its joint venture facilities and procedures to maintain the highest standard of safety at its operations. Following the tailings failure at Vale's Feijão mine in Brazil, Sherritt initiated a special review of its tailings facilities and procedures.

Sherritt also works in partnership with local, national and international organizations to support improvements in tailings management across the industry, including the Mining Association of Canada (MAC), a national association that promotes the development of Canada's mining and mineral processing industry. With the assistance of MAC, Sherritt is implementing the Towards Sustainable Mining (TSM) program in wholly owned operations and working with our partners to implement it in joint ventures, which aids in improving industry performance.

**A more detailed disclosure on tailings facilities and management, including disclosures aligned with the Church of England Pensions Board's tailings questionnaire, can be found in our [Tailings Management Report](#).**

## PERFORMANCE

2019	Fort Site	Moa Nickel Site	OGP
Total amount of overburden, rock, tailings and sludge (tonnes)	Not applicable	15,338,449	Not applicable

There are no tailings produced at the Fort Site or the OGP sites.

The tailings management facilities at the Moa Nickel Site are reviewed regularly, both internally and by third parties, for structural integrity and the effectiveness of management systems, and all recommendations are reviewed by Moa Nickel Site management and plans are developed to address them. There have been no incidents at the tailings management facilities. Sherritt management continues to work with its joint venture partners to ensure employees have the skills required to manage the facilities effectively.

In 2019, the annual Independent Tailings Review Board recommended that the consequence classification for two TMFs be changed to extreme, in line with the other TMFs. It also identified some concerns with the foundation of the North Extension TMF. Moa Nickel Site management has started to action the recommendations, all of which are targeted for completion in 2020.

In 2019, the Moa Nickel Site also completed a self-assessment against MAC’s TSM Tailings Management Protocol and assessed itself at level B. This means that some actions are not consistent or documented and that systems/processes are planned and being developed. The self-assessment identified some management system gaps, including the need to update the Operations Maintenance and Surveillance (OMS) manual and the Emergency Preparedness Plan (EPP).

## Long-term Tailings Disposal

Conceptual studies of future tailings disposal sites were completed by Knight Piésold (KP) in the past year. As shown in the figure below, a proposed sequence of tailings developments has been developed that will allow tailings disposal as follows:

- The North Extension – 2019 through 2022
- Area 22, Stage 3 – late 2022 through late 2024
- Reject Valley – mid-2024 through 2029
- Los Lirios – 2029, for up to 12 years

**Figure: Proposed Sequence of Tailings Management Facility Development at the Moa Nickel Site**

Project	2019	2020	2021	2022	2023
Closure of ALTF	Closure Construction			Closure	
The North Extension	Operation				Future Stages
South Extension – Area 22, Stage 3		Construction		Operation	
Los Lirios (Initial Stage)/Reject Valley			Construction		Operation

**The Acid Leach Tailings Facility (ALTF):** Closure and stabilization work continued in 2019. Monitoring activities are ongoing and informing the closure plans.

**The North Extension:** As the ALTF approached capacity, the Moa Nickel Site retained Knight Piésold, an internationally respected engineering firm, to design an extension that would ensure continued capacity to store tailings there until 2022. In 2019, operations and staged construction began in the North Extension.

**Area 22:** Detailed design and permitting of this multi-phased short-term tailings solution are in progress. This project will allow for tailings storage from December 2022 to December 2024. Micro-localization, environmental impact study and permit applications are underway, and the final construction permit is expected in August 2020. Construction execution has started, with completion expected in December 2021.

**Los Lirios/Reject Valley:** A longer-term storage option at Los Lirios and the Reject Valley are currently being designed by Knight Piésold in consultation with the Moa Joint Venture partner. Permitting and studies are underway for both.

**“The EHS&S Committee of Sherritt’s Board of Directors devotes considerable attention to the Moa Nickel Site’s tailings management, with a clear desire to align with international standards and good practice. Standards at the site continue to improve as management works with Knight Piésold and the site team to ensure adequate tailings management facility design, construction and management. The Independent Tailings Review Board (ITRB), which was initiated at the request of the Sherritt EHS&S Committee, provides annual reports to the Committee, and these recommendations help drive ongoing improvements.”**

– Tim Baker, Chair, Environment, Health, Safety and Sustainability Committee of the Board of Directors

## Update on Remediation of Obed Containment Pond Breach

As was reported in previous sustainability reports, on October 31, 2013, a breach occurred, due to a geotechnical slump, in an on-site water containment pond at the Obed Mountain mine, then owned by Sherritt, which resulted in a significant release of mud, clay, coal particles and approximately 670,000 m<sup>3</sup> of water into nearby creeks and the Athabasca River. We quickly mobilized our response team, working with regulatory bodies, and began engaging extensively with First Nations and local stakeholders to keep them informed and to address their concerns. After the sale of our coal operations to Westmoreland Coal Company in April 2014, we retained the environmental remediation and financial obligations associated with the breach, and have continued to work co-operatively with the Alberta regulator to address the impacts of the incident.

In 2018, approval of the final remediation design was received from the Alberta Energy Regulator in April and from the Department of Fisheries and Oceans in July. Remediation of the upper reaches began in mid-July; because of a shorter construction season due to the approval date, the remainder of the remediation work continued in 2019.

In 2019, we continued environmental monitoring of water quality, fish habitat, wildlife and vegetation. The region is showing high levels of natural restoration and dense vegetation growth. The data collected in 2019 continues to demonstrate that the breach and the resulting release of water and sediments had only short-term physical impacts on water quality and fish habitat, and that there are no residual effects on water, aquatic habitat or fish in any of the nearby creeks or in the Athabasca River. The approved remediation design will provide aquatic habitat enhancements and stabilize reaches of the nearby creek that were physically impacted.

Flooding in late June and early July 2019 caused erosion in a wetland and a recently constructed portion of one of the remediation channels, which has since been repaired. Remediation work will continue into 2020, including further natural channel remediation, reseeding, and planting of spruce seedlings and live cuttings where required.

# BIODIVERSITY AND LAND

## MANAGEMENT APPROACH

Sherritt's operations are found in diverse locations, ranging from island environments to industrial zones. Our approach to managing biodiversity is tailored to the context of each operating site.

In Canada and Cuba, Sherritt conducts environmental baseline studies and impact assessments, and implements biodiversity management plans as required by regulation. As a member of the Mining Association of Canada, we are working to implement the [Towards Sustainable Mining Biodiversity Conservation Management Protocol](#) at our operations. In addition, as part of our Sustainability Framework we have developed a standard for biodiversity and land management that aligns with TSM and provides additional guidance to Sherritt's divisions. It provides us with a consistent set of requirements for identifying and managing biodiversity impacts. All sites have completed gap analyses against this standard and are implementing multi-year plans to align systems and performance.

Management has systems in place to detect and report spills to land and water. At Sherritt, these are classified as minor, reportable or high-severity environmental incidents. All identified incidents or spills are investigated and steps are taken to prevent recurrence. There were no significant environmental incidents reported in 2019.

## Land Management

We recognize that the land entrusted to us is a valuable resource. We work with authorities and other organizations to manage and reclaim disturbed land during active mining and post operation. This is demonstrated by our longstanding record of reclamation and remediation activities. The Moa Nickel Site in Cuba progressively rehabilitates land and regularly monitors progress against rehabilitation plans with the regulatory authorities.

The OGP operating sites in Cuba are committed to ongoing environmental protection while routinely mitigating impacts of oil exploration and recovery activities. Drill sites are cleaned, topsoil is replaced and the land is returned to conditions similar to those that existed before drilling commenced. In accordance with the requirements of our operating permits, the land will be returned to the Cuban state after expiry of the term of the contract.

The Fort Site manages land issues within its government-approved operating permit, which includes discrete requirements for soil management.

## PERFORMANCE

### Biodiversity Management at Moa Nickel

Our open pit nickel mine near Moa, Cuba, is located approximately 15 km north of [Alejandro de Humboldt National Park](#), a UNESCO World Heritage Site particularly known for its extensive suite of endemic species of flora. The Moa Nickel Site has long partnered with the Cuban authorities for the restoration and protection of these lands. For more information, refer to this [case study](#).

In 2017, the reforestation program in the park concluded and the Moa Nickel Site received recognition from the environmental regulator, CITMA, for its achievements. In 2019, the Moa Nickel Site supported the government by undertaking ecological monitoring activities of the reforested area. The ecological monitoring carried out in 2019 showed a favourable evolution of rehabilitated areas, including abundant species of flora and fauna.

## Biodiversity Management Elsewhere

In Canada, our refinery's impacts on biodiversity are minimal, given that it is located on previously disturbed land in an industrial zone within the city limits of Fort Saskatchewan. As part of Sherritt's implementation of the TSM biodiversity protocol, the Fort Site completed a biodiversity assessment in late 2019, which established baseline information on landscape integrity, habitat composition, suitability, and species diversity. The assessment also identified potential significant biodiversity aspects to be managed at the Fort Site (including aquatic ecosystems like wetlands and creeks). Based on the results of the assessment, the site is in the process of drafting a biodiversity conservation plan.

Our energy operations in Cuba also have minimal impacts on biodiversity, given the small footprint and the nature of our activities. In 2019, no significant conservation activities were required or undertaken at these sites.

Our Block 10 oil drilling program, which began in 2016, is taking place adjacent to a protected mangrove site. To minimize our impacts, we are drilling from a previously disturbed footprint, while working in close consultation with Cuba's environmental regulator. Sherritt completed drilling on Block 10 in December 2019, reaching the target depth of approximately 5,700 metres, and preliminary testing continues in 2020.

## Land Management

In 2019, the Moa Nickel Site practised progressive reclamation in accordance with its operating permits and commitments. The total amount of newly disturbed land at the Moa Nickel Site in 2019 was 18% higher than in 2018 due to a significant increase in the tailings storage capacity and area required for the TMFs to accommodate production and enhance safety. Rehabilitated land during the year was about 3% higher, mainly due to increased rehabilitation efforts. There were no changes to the operational footprint of the Fort Saskatchewan refinery (COREFCO) or the OGP operations in Cuba.

The table below shows the amount of land (owned or leased, and managed for production activities or extractive use) disturbed and rehabilitated in 2019.

2019	Fort Site	Moa Nickel Site <sup>1,2</sup>	OGP	Total
Total amount of land disturbed and not yet rehabilitated (ha)	131	832	54	1,017
Total amount of land newly disturbed within 2019 (ha)	0	57	0	57
Total amount of land newly rehabilitated within 2019 to the agreed end use (ha)	Not applicable	21	Not applicable	21

<sup>1</sup> Data reported for the Moa Nickel Site represents land disturbance that occurred from 1994 onwards – or the years that the Moa Joint Venture between Sherritt and the Cuban state has been in place. The data do not reflect any mining activity at the site that pre-dates the joint venture.

<sup>2</sup> Data reported for total amount of land disturbed and not yet rehabilitated at the Moa Nickel Site for 2019 were revised to include disturbed and rehabilitated tailings dam areas.





At the Moa Nickel Site, we are committed to reclamation of areas disturbed by our mining activities, as well as the rehabilitation of a nearby park reserve that was historically impacted.

## REHABILITATION AND RECLAMATION IN MOA, CUBA

Decades before Cuba's Alejandro de Humboldt National Park became a UNESCO World Heritage Site in 2001, the state-owned predecessor of the Moa Joint Venture received a concession to develop a mineral deposit within the park. Preliminary, small-scale exploration work was carried out on this deposit, once in the 1970s and again in the 1990s. In the mid-1990s, the Cuban government declared the park to be a protected area, requiring any type of mining or industrial activities to cease.

Absolutely no exploration work of any kind has been carried out in the park since then. In 2008, the Moa Joint Venture officially relinquished its concession. About three years later, at a meeting with Cuba's National Council of Hydrographic River Basins, the Joint Venture agreed to evaluate the best approach to rehabilitating the previously impacted areas and to include this work in its annual environmental management plans going forward. Around that same time, the Park Authority was commissioned to carry out an impact assessment.

This collaboration ultimately led to the development of a long-term biodiversity management plan to restore the impacted areas in the park. This plan was executed collaboratively by the Moa Joint Venture, Cuban regulatory agencies and the Park Authority. It encompassed soil conservation; the creation of hydro regulation channels to restrain floodwater and prevent erosion; reforestation of endemic species such as the ocuje (*Calophyllum antillanum*), which is prized for producing a very hard, durable wood, and the Cuban oak; as well as other initiatives. In 2017, the rehabilitation work in Alejandro de Humboldt National Park concluded.

In addition to this important conservation work in the park, the reclamation team at the Moa Nickel Site has been working for many years on restoring areas in and around the mine site to meet the requirements outlined in our environmental permit. This restoration work includes testing new methods for erosion control and different plant species for survivability. The soil around Moa is naturally quite acidic, meaning that not all vegetation can flourish there, but our highly educated team is experienced in reforestation and reconstruction for such areas.

In 2019, teams rehabilitated 20 hectares and conducted maintenance on approximately 450 hectares of existing plantations. Activities during the year included removal of invasive plant species and garbage, new planting and pruning. Additionally, to control sedimentation and provide erosion control, 32 sedimentation ponds were constructed and 35 were maintained. The aim is to achieve the conditions required to return these sites to the country's natural forest state, which in turn will allow the company to withdraw the lands successfully rehabilitated from the current mining concessions and return them to government control.





Employees across the company worked together to mark Sherritt's annual Sustainability Month in June.

## MAKING SUSTAINABILITY MONTH AN ANNUAL TRADITION

In 2019, to broadly share Sherritt's commitment to sustainability and engage our employees, we once again celebrated Sustainability Month in June across all of Sherritt's divisions.

Sustainability Month aligned with World Environment Day (WED), celebrated globally on June 5. Last year's theme was "Beat Air Pollution". Our divisions thought of innovative and fun ways to connect employees to the work we do and the communities around our operations.

Examples of the types of initiatives and events that took place include:

- An annual nature walk in the area surrounding the Fort Site to learn about the natural flora and fauna and environmental monitoring activities taking place;
- A reusable coffee cup challenge held by the Corporate office to discourage the use of disposable coffee cups;
- A children's art competition, "Painting the Environment", was held in Moa, Cuba, in celebration of World Environment Day;
- A beach clean-up and waste sorting activity in Cuba, held by OGP;
- The addition of indoor plants for air quality and mental wellness in Havana, Cuba;
- Donations of new and gently used sports equipment for underprivileged youth in Cuba;
- Lunch-and-learn sessions with internal and external experts presenting across the company on topics such as air monitoring at the Fort Site, tailings management in Cuba, and the Trans Canada Trail project, among other topics.

The theme for World Environment Day 2020 is "Time for Nature". To learn about WED, [click here](#).

# WATER

## MANAGEMENT APPROACH

The growing global population is putting pressure on fresh water availability and quality, and these concerns are expected to increase due to climate change. We understand and share these emerging concerns. Water is central to our metallurgical process for producing nickel and to the generation of steam at Energas, and it is managed carefully. Where feasible, process water is recycled or reused within the process itself. Runoff is controlled through diversions and catchments to minimize any release to the environment. At each operating site, baseline studies are conducted, risks are assessed and stakeholders are engaged to involve them in the water management planning.

Pumping water for use in our processes takes a considerable amount of energy, and Sherritt's operations are continually taking steps to identify how to optimize practices and minimize the amount of water and energy we use.

Sherritt's operations also conduct monitoring to help ensure that they are not contaminating surface water or groundwater resources with process discharges. All of the water discharges comply with the appropriate jurisdictional regulatory requirements and are monitored and controlled as necessary to ensure compliance and to protect the receiving environment. The monitoring programs are also designed to help detect any unanticipated problems and manage risk beyond regulatory obligations.

Sherritt's approach to water management varies across its operations, depending on technical requirements, local climate, water bodies and stakeholder interests. Building on the range of water management practices and initiatives in place, Sherritt is developing a corporate Water Standard that will apply across the company.

## PERFORMANCE

### Water Use

2019	Fort Site	Moa Nickel Site	OGP	Total
Total water withdrawal (million m <sup>3</sup> )	2.37	14.88	4.91	22.16

The Fort Site withdraws water from the North Saskatchewan River under provincial licences for process use. Current total industrial use is a small percentage of total flow, and therefore water restrictions are not anticipated. We purchase potable water from the local municipality. The total water withdrawal for the Fort Site in 2019 was slightly lower than in previous years: 2.4 million m<sup>3</sup>, including 2.3 million m<sup>3</sup> taken from the river and 0.1 million m<sup>3</sup> of purchased potable water. We report our water withdrawal monitoring results to the provincial regulator monthly. Process effluent and stormwater (snowmelt/rainwater) collected on our site are treated to meet contractual water quality guidelines. This water is then transferred to the municipal wastewater collection system, where it is treated further and then discharged into the surrounding environment along with wastewater from the municipality.

At the Fort Site, we operate a joint water management system with neighbouring industrial companies, and we are in periodic discussions with our neighbours and local business development authorities on the potential to support other business activities through our water management systems, meeting the environment regulator's objectives of constraining the number of river withdrawal systems.

The Moa Nickel Site in Cuba withdrew approximately 14.9 million m<sup>3</sup> of water for its processes in 2019. This is slightly lower than the previous year and was due to processing requirements. Water is collected in the adjacent reservoir and treated before use.

In 2019, OGP reported total water withdrawal of 4.9 million m<sup>3</sup>, which is slightly higher than 2018. The increase is due to the fresh water flush done on the Varadero Aquifer and hydrotests completed on three new condensate tanks in Varadero. Water is drawn primarily from saltwater sources and some municipal sources. Oil & Gas service rigs use recycled water only, resulting in a net effect of zero on the water supply.

## Water Quality

At the Fort Site, we monitor water quality at several locations within the site's treatment system, and review the results to ensure compliance before the release of water into the municipal collection system. We reported our water quality results to the municipality monthly and to the Alberta regulator on an annual basis. At the Fort Site, there were no water quality non-compliance events sourced to Sherritt in 2019.

In 2019, Sherritt continued its participation in the Capital Region Water Management Framework's Steering Committee through the Northeast Capital Industrial Association (NCIA). The goals of the framework are to maintain or improve the quality of the water in the North Saskatchewan River, manage the impact on water quantity, and implement a science-based and world-class water management framework. In 2019, Sherritt's environmental advisors continued discussions with the Alberta Capital Region Wastewater Commission and the City of Fort Saskatchewan regarding their proposed new water discharge permit. The new permit seeks to replace the current contract, which has been in place since 1999 and which details effluent quantity and quality requirements. Discussions regarding the permit will continue into 2020.

In the 2010s, the Alberta provincial government increased its focus on cumulative effects and started development of the North Saskatchewan Regional Plan (NSRP). This plan included the completion of a detailed chemical characterization study of industrial discharge sources to the river; however, as of December 31, 2019, the study had not been published. We continue to work through the NCIA to increase understanding of the relative impact of industrial operations on the North Saskatchewan River and to ensure that appropriate plans and policies are developed by the Alberta government. Approximately 20 years ago, an operational decision was made to ensure a high level of water treatment of our effluent by contracting the municipality to do the secondary treatment while we continue to do primary treatment on site.

When we invested in the Moa Nickel Site more than 20 years ago, we inherited a legacy water management issue, which has affected water quality in a nearby river. Over the years, we have been working with our Cuban partners and the regulatory agency to address this issue. In 2017, we agreed to a phased approach to developing long-term treatment options for water management. During 2019, the first phase was completed, which involved relocating the effluent discharge to support river rehabilitation and diminish impacts on the local community. The Moa Nickel Site also focused on erosion control in areas around the mine to prevent sediments from reaching the rivers and the Moa Bay.

In 2019, Sherritt had one reportable water-related incident at the Moa Nickel Site. The tailings management facility return water pond overflowed due to lower return water consumption in the plant. The incident was reported to the Ministry of Science, Technology and Environment (CICA). It was a low-severity incident with no lasting impacts and no environmental damage. No employees or community members were harmed during the incident or while it was being addressed.

There were no significant water quality issues recorded at OGP in 2019. OGP is currently investigating a program to reduce its use of potable water.

# WASTE

## MANAGEMENT APPROACH

Sherritt produces two broad types of waste: mining waste and solid waste. Mining waste generally includes waste rock and tailings, which are produced as by-products. Solid waste consists of hazardous waste and non-hazardous waste. Hazardous wastes are identified by their chemical and physical properties, and regulations prescribe their classification, handling, disposal and storage requirements. Non-hazardous solid waste consists of materials that we use and produce that can be disposed of in municipal landfills, and is not considered material for the purposes of this report.

Regulations around waste management vary across jurisdictions and are dependent on the supporting infrastructure in the region or country. Sherritt is currently developing a management standard to set minimum expectations for all operations regarding waste management, including disposal and recycling.

## PERFORMANCE

### Waste Production

2019	Fort Site	Moa Nickel Site	OGP
Total waste (tonnes)	2,744	16,837	8,964
Waste recycled – includes recyclables sent off site (batteries, plastics, electronics, etc.)	99	692	225
Waste sent to landfill	2,682	13,746	3,408
Hazardous waste	1,049	2,444	73

In 2018, waste was included for the first time in Sherritt's Demonstrating Environmental Responsibility pillar for the purposes of reporting. It is expected the quality of disclosure on this topic will improve over time with the implementation of the forthcoming Waste Management Standard.

At the Fort Site, a significant decrease from 2018 in both hazardous and total waste was observed in 2019. Hazardous and total waste decreased by 81% and 68%, respectively, at the Fort Site. The decrease in hazardous and total waste was largely due to lower capital spending and austerity measures at the Fort Site compared to the previous year, resulting in significantly reduced construction activities. Waste quantities are expected to fluctuate, primarily based on facility demolition and construction activities.

At the Moa Nickel Site, there was a decrease in both hazardous waste (56% reduction) and total waste (16% reduction) in 2019 compared to 2018. This decrease is largely attributable to an anomalous generation of sulphur-contaminated soil in 2018. Although waste sorting improved, the total amount of recyclable waste collected decreased due to a decrease in ferrous scrap. The overall quantity of waste sent to landfill stayed relatively constant.

At OGP, there was a significant increase in total waste generated due to the replacement of three large condensate tanks, and decommissioning of some sections of the Varadero facility.

Total waste remained relatively consistent year over year, with a significant reduction in hazardous waste (68% decrease).



Engineering innovative solutions for the Energas Joint Venture while cleaning up ocean debris.

## CLEANING THE OCEAN AS WE GO IN CUBA

Sherritt's Energas Joint Venture combined cycle power facility at Boca de Jaruco in Cuba takes in sea water for the purpose of cooling. In recent years, the seawater intake inlet has been inundated with a brown seaweed known as Sargassum. Sargassum is a nuisance in the Caribbean due to larger than historically recorded blooms that impact sea-life and tourism. Unfortunately, seaweed is not the only debris impacting the coastline. Man-made objects, including plastic pollution, can also be prevalent depending on tides and weather conditions.

For Energas, the Sargassum creates problems during water intake, fouling up integral equipment in the power facility that provides necessary power to the city of Havana. For operations to continue, a solution had to be engineered. A seaweed intake channel barrier was installed to prevent the buoyant weeds from gaining access to the channel near the circulation pumps. Along with this intake channel barrier, a floating seawater basket has been implemented at one end of the barrier to allow the buoyant weeds to funnel into this basket. Additional barriers, as well as a trash rake and screens, provide added protection from any debris making it past the initial barriers.

The seaweed and debris is then collected and hauled by truck to the local landfill and disposed of by the municipality in a regulated facility. In 2019, approximately 30 truckloads, or 800 m<sup>3</sup>, of Sargassum and ocean debris were removed from the inlet canal area. While access to debris-free water is an important operational consideration, we are proud to also positively impact the coastline adjacent to where we work.

# ENERGY AND CLIMATE CHANGE

## MANAGEMENT APPROACH

Sherritt operates an energy-intensive business. Energy consumption is a major input to our processes across the company, and energy-related costs constitute one of our largest unit operating costs. These realities mean that we are motivated to reduce energy consumption and maximize efficiencies at every stage of our production cycle, from mining and oil recovery through to processing, refining and shipping finished products, and generating electricity. Concerns about the impacts of climate change on the planet increase the urgency of this issue for us, and affirm our role in contributing to global efforts to reduce greenhouse gas (GHG) emissions.

We are implementing the [Mining Association of Canada's Towards Sustainable Mining Energy and Greenhouse Gas Emissions Management Protocol](#) across our operations, and in 2019 Sherritt started working on a corporate standard in alignment with TSM.

The Fort Site operates under a provincial GHG regulatory system. In 2019, the Fort Site created an Energy and Greenhouse Gas Improvement Plan. This plan evaluated several energy reduction projects to assess feasibility and value to the company.

In 2019, Sherritt joined a Strategic Energy Management Program in partnership with CLEAResult, a leader in energy efficiency. The program is sponsored by Natural Resources Canada and supported by Energy Efficiency Alberta. The goal of the program is to develop and apply an energy management system to identify and implement energy improvement opportunities. CLEAResult provided technical expertise to develop an energy model for Sherritt and conduct an on-site energy scan.

## Air Quality

Managing air quality around our operations is an important element of our environmental programs company-wide. We are conscious of the potential impacts of our operations and take great care to ensure that all applicable air quality regulations are properly followed.

Air emissions generally comprise two types of sources. The first type includes specific discharges of gases from our process stacks and vents – such as sulphur oxides (SO<sub>x</sub>), hydrogen sulphide (H<sub>2</sub>S) and nitrogen oxides (NO<sub>x</sub>). When emitted into the air, these compounds can pose risks to human health and lead to environmental degradation. The second type of air emission includes small airborne particles generated from activities in the open environment, called particulate matter (PM). PM is predominantly produced from traffic on unpaved roads at our facilities, excavation activities at our mines, and fertilizer production at our refineries. We have strict safeguards in place at all sites to minimize the risk of air releases, and we regularly review and revise processes to minimize the release of PM through our activities.

The Fort Site is a member of the Fort Air Partnership (FAP), which collects, records and manages air quality data within the Fort Saskatchewan air shed. Sherritt works alongside other industrial representatives in FAP to collect and report reliable, independent and transparent air quality data 24 hours a day, seven days a week. In December 2019, Sherritt finalized its Air Emission Reduction Plan. This plan identifies sources and opportunities for improvement of TPM, SO<sub>2</sub>, NH<sub>3</sub> and VOC emissions; a separate plan that addresses NO<sub>x</sub> was finalized in 2018. It includes a strategy for prioritizing reductions as well as a timeline. Two NO<sub>x</sub> reduction projects are also included in the Long-Range Plan. Air and other emissions are a topic of interest to regulators in Alberta and the company.

In recent years, Sherritt has made continuous improvements to air emissions management. We have been investing in updates to aging infrastructure, working to identify and mitigate point sources, and putting initiatives in place to reduce emissions exceedances. Continuous and discrete emissions monitoring occurs at the Fort Site, and emissions reporting continues to improve in Cuba. Efforts are underway to implement ISO 14001 at the Moa Nickel and Fort Sites and process safety management systems at the Fort Site and OGP, to ensure that significant emissions risks are identified and controlled, and air quality management continues to improve. In 2020, Sherritt will develop an Air Standard as part of its Sustainability Framework.

## PERFORMANCE

### GHG Emissions and Energy Consumption

2019	Fort Site	Moa Nickel Site	OGP	Total
Scope 1 GHG emissions (kt CO <sub>2</sub> e)	335	556	1,402	2,293
Scope 2 GHG emissions (kt CO <sub>2</sub> e)	59	60	–	119

At the Fort Site, GHG emissions remain regulated under the Alberta Carbon Competitiveness Incentive Regulation (CCIR), a carbon pricing mechanism for industrial operations. In 2019, Sherritt complied with CCIR by purchasing offset credits and technology fund credits paid to the province, supporting further reductions in Alberta. CCIR will be replaced by the Technology Innovation and Emissions Reduction (TIER) Regulation, which came into effect on January 1, 2020 and will apply to 2020 emissions.

In 2019, the Fort Site reported GHG emissions of 335 kilotonnes (kt) of CO<sub>2</sub> equivalent, which is slightly higher than 2018 emissions. Additionally, the Fort Site purchased 17 kt of credits (>5% of total emissions) for its 2019 emissions to comply with provincial regulations. The Fort Site recorded a total energy consumption (including purchased electricity, fossil fuel and waste fuel consumption) of 5,100 terajoules (TJ) in 2019, which is a slight increase over the previous year.

For the 2019 reporting year, credits were accredited by the Alberta Carbon Registry and sourced as follows:

- Cap-Op Energy Emission Reductions from Pneumatic Devices (783 tonnes)
- Carbon Credit Solutions Inc. Tillage Project #24 (10,000 tonnes)
- Soderglen Windfarm Project (6,217 tonnes)

The Moa Nickel Site produced 556 kt of CO<sub>2</sub> equivalent during 2019; this amount is comparable to the previous year. We consumed a total of 6,100 TJ of energy in 2019, including generated and purchased electricity as well as fossil fuel consumption (crude oil, diesel and natural gas). This represents a 3% increase over the previous year. In 2019, more power was consumed from the national grid at the Moa Nickel Site due to a turbogenerator (generates electricity from the steam) failure.

OGP reported the production of 1,402 kt of CO<sub>2</sub> equivalent during 2019 from its Boca de Jaruco, Puerto Escondido and Varadero facilities. This is consistent with previous years. The OGP operations reported an increase in energy usage of 15% compared to 2018 (in 2018, OGP reported an 18% decrease in energy usage), totalling 30,000 TJ; this increase is attributable to the switching of wells and an increase in gas production. OGP also flared 91 million m<sup>3</sup> of hydrocarbons associated with its oil production processes during the year, representing an increase of 61% from 2018. The volume of flared hydrocarbons increased because of the sulphur unit outage in Varadero.



OGP's preventive maintenance program ensures optimal operation of our equipment, and we conduct quarterly monitoring of emissions from our key sources to verify proper combustion. Our Oil & Gas operations have additional reporting metrics under the Global Reporting Initiative; please refer to the [Performance](#) section for this information. Over the course of the year, Energas transitioned plant lighting to more energy-efficient bulbs.

Since 2007, Energas has generated well over one million [Clean Development Mechanism \(CDM\)](#) credits at the Varadero combined cycle power generation facility in recognition of its low GHG emissions relative to other sources of electricity in Cuba. While there are many benefits to the program, the relative administrative costs are significant and, due to Sherritt's financial constraints, our participation has diminished in recent years. Read this [case study](#) for more information on our efforts to obtain CDM credits over the last few years.

Scope 2 emissions refer to indirect emissions generated from the purchase of electricity. Sherritt's Scope 2 emissions are relatively low due to the significant generation of electricity at host sites in Cuba. Therefore, Scope 2 emissions are of a lower order than our Scope 1 emissions.

## Air Quality

In 2019, Sherritt had one reportable air quality-related incident at the Fort Site. It involved a continuous emissions monitoring uptime failure on the sulphuric acid plant gas stack. It was a technical non-compliance with our licence where no exceedance of the emissions limit took place.

The Moa Nickel Site continued to focus on reducing fugitive H<sub>2</sub>S emissions, and the following actions were taken in 2019: gas ducting was fabricated and installed for fugitive gas collection, hermetic seals were improved to reduce ambient gas emissions, and operations were optimized to reduce total emissions. There are allocations in the Long-Range Plan and capital budget for further projects to mitigate the H<sub>2</sub>S emissions in the Sulfuros complex.

2019	Fort Site	Moa Nickel Site	OGP
Air emissions – NO <sub>x</sub> (tonnes)	1,264	1,722	6,065
Air emissions – SO <sub>x</sub> (tonnes)	87	12,211	26,208
Air emissions – TPM (tonnes)	80	Not reported	Not reported

Our air emissions are regulated under requirements in the jurisdictions where we operate.

The 2019 emissions at the Fort Site are consistent with historical levels. Most of the NO<sub>x</sub> and SO<sub>x</sub> emissions are from our utility generation (natural gas combustion) and fertilizer production (ammonia and sulphuric acid production). Ammonia is released primarily from ammonia scrubbers in the Fort Saskatchewan refinery, which uses an ammonia-based leaching process. PM is primarily generated from the production of ammonium sulphate fertilizer and from traffic on unpaved roads. Additional information on air quality in Fort Saskatchewan can be found on the [Fort Air Partnership website](#).

In Cuba, the Moa Nickel Site emits NO<sub>x</sub> and SO<sub>x</sub> from the powerhouse and the sulphuric acid plant. The 2019 volume of NO<sub>x</sub> represented an increase from 2018 due to an increase in the amount of fuel used, while SO<sub>x</sub> emissions decreased. The new operating standard approved in 2018 by the Environment Ministry for the Moa Nickel Site included a reduction in emissions for various effluent or gas streams (such as acid trains and neutralization stack) and liquid discharge limits (waste liquor). OGP's NO<sub>x</sub> emissions also increased from the previous year, which is partially attributable to the gas turbine at Puerto Escondido, which ran for a greater number of hours compared to 2018.





Energas Varadero's generating facility produces lower GHG emissions for each gigawatt hour (GWh) of electricity due to the conversion to combined cycle technology, contributing to the reduction of GHG emissions in Cuba.

## CLEAN DEVELOPMENT MECHANISM CREDITS IN CUBA

Energas S.A., the electricity generating joint venture enterprise operated by Sherritt in Cuba, installed a system that uses waste exhaust heat to generate steam and produce electricity (called a combined cycle generating unit) at its Varadero facility in 2003. In 2007, this unit was granted [Clean Development Mechanism \(CDM\)](#) status under the provisions of the Kyoto Protocol by the United Nations Framework Convention on Climate Change (UNFCCC). While the international framework containing the rules governing the CDM expired in 2012, the continuance of the CDM post-2012 has been supported through a commitment by certain regional and domestic emission-trading markets to allow entities to use certified emission reductions to meet their compliance obligations under these systems.

The Energas facilities comprise two combined cycle plants, one at Varadero with three gas turbines and one steam turbine, and the other at Boca de Jaruco with five gas turbines and one steam turbine, to produce electricity using steam generated from the waste heat captured from the gas turbines.

The Energas Varadero facility produces lower GHG emissions for each gigawatt hour (GWh) of electricity due to the conversion from open cycle to combined cycle technology, contributing to the reduction of GHG emissions in Cuba. This project involved the conversion of the existing open cycle thermal generation facility into a combined cycle facility by retrofitting the three existing gas turbines (GTs) with a heat recovery steam generator (HRSG) for generation of high pressure steam to run a steam turbine with generation of 75 megawatt (MW) electric capacity. Apart from being environmentally friendly through the use of waste heat for power generation, this project also contributes to resource conservation.

By the end of 2014, 1,533 kt of CO<sub>2</sub> emission reductions had been documented for the Kyoto credits. Of these, only 343 kt worth of credits were issued, mainly due to delays in verification and approvals. An additional 638 kt were approved and are ready for issuance, with 185 in the approval process for future issuance. At the end of that same year, a further 367 kt, covering the reporting periods of 2012 (172 kt), 2013 (127 kt) and 2014 (67 kt), were documented on a preliminary basis.

The first Energas CDM project at Varadero was approved to receive credits over a seven-year monitoring period. To continue receiving CDM credits, Energas must apply to the UNFCCC for renewal of the Varadero facility. We will make a decision on whether to proceed with this renewal on the basis of current economics, revised processes and any benefits or drawbacks associated with the registration of our second facility that would qualify – the recently built Boca de Jaruco combined cycle power generation site.

As of 2019, OGP has 638,000 verified Certified Emission Reduction credits banked with the United Nations.



The state plan “Tarea Vida” has supported the implementation of various resilience projects to reduce our resource consumption.

## TAREA VIDA – TACKLING CLIMATE CHANGE

“Tarea Vida” (Project Life) is a Cuban state plan to increase the resilience of vulnerable communities. This plan was adopted by the Cuban government in April 2017 to address climate change in the Cuban national territory through adaptation and mitigation measures.

This plan has been adopted by the Moa Nickel Site and OGP and was monitored throughout 2019. The joint ventures are pursuing various resilience projects, including rehabilitation, renewable energy use, decreasing water consumption, reducing emissions and effluents, and education and environmental awareness. A detailed work plan for 2020 was approved by the Moa Joint Venture Board of Directors and will be implemented throughout the year.

The Moa Nickel Site is focused on four strategic domains: availability and efficient water consumption, reforestation, climate change mitigation and control measures, and improving risk perception and knowledge on climate change. Some of the activities that have taken place at the Moa Nickel Site as part of Tarea Vida include:

- Rehabilitating over 20 hectares of mined areas;
- Maintaining over 450 hectares of previously reforested areas;
- Replacing over 1,200 light bulbs with energy-efficient LED lights and installing six outdoor lamps with photovoltaic cells; and
- Improving air quality in surrounding communities by reducing H<sub>2</sub>S emissions.

Additionally, the Moa Nickel Site is focusing on training and raising awareness. The internal television system regularly presents information on climate change and on Tarea Vida. As part of the training program, over 160 new hires were trained on the program. Members of the Board of Directors also received training on the program as part of their emergency response plan training. A new training program for plant operators includes content on Tarea Vida.

OGP is also taking action to support Tarea Vida. Some of OGP's actions include:

- Installing water meters to measure consumption and identify where to focus reduction efforts;
- Implementing a continuous improvement and efficiency plan to improve our process, which involves using gas to generate electricity;
- Reducing emissions by conducting preventive and systematic maintenance; and
- Implementing a training plan on climate change and danger, vulnerability and risk issues and efficiently using waste gas from oil production to generate electricity.

# ENVIRONMENTAL LIABILITIES, CLOSURE AND RECLAMATION

## MANAGEMENT APPROACH

We take seriously our responsibility to provide adequate financial resources to address the closure of our properties once reserves have been depleted.

As part of the permitting process in Canada, mining and energy companies are required to prepare closure plans with associated cost estimates, and to provide host governments with financial assurance to cover the costs of environmental remediation in case the company is no longer able to complete the work. In addition to these regulatory requirements, international accounting and securities exchange rules require public companies to account for the reasonably expected liabilities associated with the closure of mining and energy properties. These estimates, like those provided to host governments, are based on the closure plans and assumptions contained therein.

We comply with regulatory requirements regarding closure planning and related environmental rehabilitation obligations, cost estimates and financial assurance in each of the jurisdictions where we operate. We also meet the requirements of the Ontario Securities Commission, which obliges publicly listed companies in Ontario to estimate and disclose their environmental rehabilitation provisions. We review these provisions on a quarterly basis. Whenever possible, we engage in the progressive reclamation of our properties over the life of the operation, rather than initiate such activities at the time of closure.

## PERFORMANCE

The current estimate of Sherritt's share of total anticipated future closure and reclamation costs to be incurred over the life of the company's various assets and investments is approximately \$140 million (excluding operating expenses). The decrease in anticipated costs compared to 2018 is mainly a result of changes in estimates rather than the completion of rehabilitation obligations.

In 2019, we continued to carry out our environmental liability obligations related to the containment pond breach at the Obed Mountain mine, a non-operational coal mine in Alberta that we owned at the time of the incident in 2013. Our remediation work is described under [Tailings Management](#).

## Closed Properties

As part of our acquisition of the Dynatec Corporation in 2007, we inherited three closed assets from Highwood Resources Ltd.:

1. **Mineral King**, a former lead-zinc and barite mine and processing facility near Invermere, British Columbia. In 2014, Sherritt completed the reclamation work plan as required by the provincial regulator. Portals for accessing the mine were covered and secured, coverage of the tailings pond with topsoil was completed, access roads were pulled back, and designated areas were seeded and fertilized. A 2015 inspection by British Columbia's regulator required additional work on the portals and closure of the glory hole. The work was originally planned for 2017, but it was delayed due to weather and was completed in 2018. An inspection in 2019 resulted in additional requirements for risk assessment, invasive plant management and closure of subsidence openings. Once the completion of all closure plan requirements is verified by the government, Sherritt intends to sell the property.

2. **Parsons**, a former barite mine and processing facility near Parson, British Columbia. In 2014, Sherritt completed the regulator's reclamation work plan, which involved a general clean-up, monitoring, seeding and the removal of an invasive species. An inspection in 2019 resulted in additional requirements for risk assessment, soil characterization and invasive plant management.
3. **Canada Talc**, a former talc mine in Madoc, Ontario, and processing facility near Marmora, Ontario, and associated claims areas. In 2012, remediation of the mine was completed and the processing facility was sold. The Ontario regulator retained a security deposit for further surface and groundwater sampling and geotechnical monitoring, which occurred in 2017; however, in early 2019 further sampling and monitoring was requested, so the planned request to release security will be delayed until completion and approval by the regulator.

## Current Operations

Our mining assets that are currently operational have a minimum 15-year mine life of resources and production capacity in their lifecycles. Our mine has an up-to-date closure plan that meets host jurisdiction regulations and cost estimates that we believe reasonably and appropriately address the liabilities at the site.

In 2019, the Moa Nickel Site finalized a closure plan for a section of the tailings facility called the West Area and completed 25% of the closure and remediation actions. Work will continue in 2020.

At the Fort Site, the closure plan incorporates a set of robust considerations accounting for both likely and unlikely obligations that we may need to address, and our current cost estimates cover the reasonable obligations.

For the OGP operating sites, all assets will revert back to the Cuban state for closure, as outlined in our permits and related agreements.

For information on our reclamation activities in 2019, please refer to [Performance](#) in Biodiversity and Land.



# Engaging Stakeholders and Benefitting Communities



Effective stakeholder engagement enables us to strengthen our social licence. We work to establish and maintain productive relationships with our stakeholders and to maximize the shared benefits of our activities. Through our work, we aim to contribute to long-term mutual prosperity.

We take a respectful approach to engaging with our stakeholders and catalyzing the development of sustainable communities. We recognize that a significant part of our role is to help build human and institutional capacity wherever we operate so that local communities can achieve their development goals.

## In This Section

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**STAKEHOLDER ENGAGEMENT**

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**COMMUNITY DEVELOPMENT**

# 2019 Highlights



**Participated in more than 40 community meetings and 80 government meetings across Sherritt.**



**Recorded one community grievance, consistent with 2018.**



**Generated more than \$500 million in economic benefits for host communities and countries.**



**Continued to support a road safety program by UNICEF for children in Cuba.**



**Partnered with the Trans Canada Trail on the completion of a key part of the Great Trail in Fort Saskatchewan.**





Rogelio Garcia Sanchez, Environment Department Supervisor at the Moa Nickel Site

## ROGELIO GARCIA SANCHEZ

Rogelio Garcia Sanchez has been working at the Moa Nickel Site since 1975, starting as a development chemist then shifting roles to the Technologies Department when the Moa Joint Venture was created. Since 2000, Rogelio has served as Moa Nickel Site's Environment Department Supervisor. His relationships within the Moa Joint Venture and its surrounding communities, along with his environmental expertise, enable him to understand and address community concerns related to the environment.

In Rogelio's words, "Supporting the surrounding communities and maintaining a good relationship with them is capital. These communities support the company. Also, most of the company's employees and their families are part of these communities. This support demonstrates the responsibility of the company in respecting both the people and the environment that surrounds us."

Rogelio and his team focus on preventing and addressing environmental issues and grievances that affect the Moa Nickel Site's surrounding communities. Over the years, the Moa Nickel Site has substantially improved its engagement with communities and built strong relationships through several community initiatives.

Rogelio is proud of the ongoing work the Moa Nickel Site has done with elementary schools in Moa, including "Painting the Environment" art displays and other environment-themed educational activities. The Moa Nickel Site supports the communities through regular donations related to health and education and through an employee volunteer program that provides maintenance and construction support for community infrastructure.

**"Rogelio has been an important contributor to the success of the Moa Joint Venture. He was instrumental in setting up and obtaining approval in 2004 for the original environmental operating standards which regulate the maximum emissions and discharges from the Moa Nickel plant. Rogelio's work on process effluent control towards achieving zero discharge, together with his contribution on a number of air quality improvement projects, has had a very positive result on the environment. Additionally, throughout Rogelio's career his excellent communication skills have allowed superior stakeholder engagement to occur."**

**– Lyle Bernard, Chief Operating Officer and Deputy Chief Executive Officer, Moa Joint Venture**

# STAKEHOLDER ENGAGEMENT

## MANAGEMENT APPROACH

Stakeholder engagement is critical for establishing a mutual understanding of one another's needs, interests, aspirations and concerns. That perspective is a key input for making decisions to support business objectives related to growth, risk management and operational excellence, and for collaborating to address local stakeholder priorities. Simply put, constructive stakeholder relationships are essential to securing and maintaining our social licence to operate and creating mutually beneficial outcomes.

Sherritt's approach to stakeholder engagement is to systematically identify its stakeholders and engage with them through ongoing dialogue, sharing information about the company's business, responding to questions, listening to their observations and acting to address their concerns, as appropriate.

In general, we prioritize our level of engagement with different stakeholder groups based on their proximity to – and interest in – our activities and their ability to influence our business. At the operational level, the practical outcome of this prioritization is that our workforce, business partners, local communities and host governments tend to be our most important stakeholder groups. The diagram below shows our key stakeholder groups at both the corporate and operational levels.



Our engagement tactics vary based on the nature of the interaction and the stakeholder groups involved. For instance:

- We engage regularly with local communities and employees through formal meetings and town halls, small group and one-on-one interactions, surveys and grievance mechanisms.
- We work closely with our business partners through governance bodies and ongoing discussions to address material issues and opportunities.
- Our procurement and marketing teams are in constant communication with our suppliers and customers to ensure smooth operations and customer satisfaction.

- Our investor relations department manages proactive and reactive interactions with investors, analysts and media, always in accordance with securities requirements.
- We meet with government officials in our home country and operating jurisdictions to build relationships, manage regulatory affairs and advocate on policy issues of importance.
- We manage partnerships with developmental NGOs and respond to advocacy groups, as needed.
- We take an active role in various industry associations to advance sector-wide concerns and sound science, align with broader expectations, gain a broader perspective on the industry and contribute to innovation.

## Corporate Standards to Support Stakeholder Engagement

We have specific requirements for engaging investors, media, government and employees; however, to ensure there is a consistent approach to stakeholder engagement across the company, our Stakeholder Engagement Standard applies enterprise-wide. The standard describes our expectations for stakeholder identification and mapping, annual engagement planning, engagement processes and practices, how to record dialogue, and how to respond to feedback and views received from stakeholders.

An important aspect of engaging with our stakeholders and building social licence is listening and responding to community concerns and incidents. Our ongoing community relations activities are designed to capture and resolve most of these issues before they escalate. But for those issues that do, it is important to have a credible community grievance mechanism in place. As described under [Human Rights](#), all sites have a mechanism in place. We have a company-wide Grievance Management Standard to provide clear expectations on how we collect, classify, investigate, respond to and close out operational-level community grievances.

## Diverse Operating Environments

Although we see the value in taking a structured and consistent approach to stakeholder engagement at all of our sites, the breadth and depth of engagement activities varies, given the disparate nature of our operating environments. The Fort Saskatchewan refinery (COREFCO) has been in operation since 1954 and is located within the city limits of a well-developed urban area near Alberta's capital. It is situated within an industrial zone with several other heavy-industry businesses. Local residents are familiar with the nature of industrial activities, including their benefits and potential risks. Because of this level of awareness and understanding, and our mature relationships in the community, we can take a very targeted approach to our engagement activities with the community, government and industry. Watch this [video](#) to learn more about life in Fort Saskatchewan.

In Cuba, we have two longstanding joint ventures with state-owned entities, and have an economic association with the government to operate our Oil & Gas business. As such, our engagement is focused on our partners and the central government. For community investment initiatives, we work closely with provincial and municipal governments and with donors and non-governmental organizations that have a presence on the island. We see opportunities to build on our good relations with the government to ensure that our evolving approach to engagement aligns with the Cuban operating environment, which itself is becoming more accessible to foreign investors.

## PERFORMANCE

### Community Relations

We continue to engage regularly with the communities near our operating sites in all of our jurisdictions. We took part in 43 community meetings in 2019, and are pleased to report that there were no significant community incidents or disruptions during the year.

Moa is an industrial town, much like Fort Saskatchewan, and most of the local population works in the mining industry in some way. Throughout the year, the Moa Nickel Site supports – and participates in – cultural, sporting and other community events in Moa. A weekly newsletter produced by workers at the Moa Nickel Site has been in circulation since 1979 and is very well read by the local community.

In Cuba, we participated in 21 meetings involving municipal and provincial authorities in Moa and the communities near the OGP facilities. Meetings primarily related to the planning, execution and review of community development projects.

The Fort Site staff participated in a total of 22 community meetings in 2019. This participation included direct engagements with municipal authorities, educational institutions, charitable organizations and industry; open houses; and multi-stakeholder meetings such as those led by the Northeast Capital Industrial Association. These interactions provide us with insights into the cultural, social, political and industrial fabric of the community, as its aspirations and concerns evolve.

We also make special efforts to stay connected with former employees. As the refinery has been operating for more than 60 years, there are many multi-generational families of workers – as well as “alumni” – living in the area who remain interested in the company and who serve as our informal ambassadors. For many years, we have been contributing to the Sherritt Seniors’ Club, whose membership consists of Sherritt retirees based in Fort Saskatchewan. They take tremendous pride in their years at Sherritt and are among the company’s greatest ambassadors. As a token of appreciation, Sherritt supports an annual Club dinner, where senior management has the opportunity to interact informally with this important stakeholder group and provide an update on the company.

## Community Grievances

In 2019, the Fort Site received one community grievance related to an odour complaint from a neighbouring facility which was investigated and closed.

No other community-related grievances were reported to Sherritt or its joint venture partners through the state-run community grievance mechanism in Cuba.

## Government Relations

In 2019, government relations activities focused on building key relationships and addressing regulatory and political risks and opportunities in the jurisdictions where we operate. Throughout the year, we met regularly with representatives of national, provincial, regional and local governments, state-owned enterprises, diplomatic missions and multilateral organizations.

Priorities included:

- Engaging with newly appointed officials within the Cuban government and maintaining relationships to advance mutually beneficial projects, secure approvals for regulatory matters, and support development priorities.
- Advocating for climate change regulations in Alberta that are science-based and fair to trade-exposed industries.
- Continuing discussions with the regulator on the Fort Site’s operating permit renewal, which received a second extension in 2019 until January 2021 due to resourcing constraints of the provincial regulator.
- Advocating for approvals of community development projects and funding for Cuba.
- Building and maintaining relationships with the Alberta and Canadian governments.
- Encouraging stronger Canada–Cuba relations.

During 2019, we participated in approximately 80 government meetings across Sherritt. Additional information on our political and regulatory risks can be found in our [Annual Information Form](#), including an overview of how we are affected by the U.S.'s Cuba embargo and the Helms–Burton Act, which, among other things, prohibit us from doing business in the U.S. or with American entities.

## Partnerships

Partnerships with non-governmental organizations (NGOs) and other civil society organizations continue to play a key role in our approach to addressing stakeholder issues and opportunities. Over the years, we have enjoyed mutually beneficial relationships with NGOs in Canada and Cuba.

Sherritt partnered with UNICEF Canada to deliver a road safety program in Cuba, where the leading cause of death among young people is traffic accidents. The partnership, announced publicly in early 2018, provides three years of funding for the initiative. Read more about it [here](#).

In 2018, Sherritt's Fort Site partnered with the Canadian Centre for Women in Science, Engineering, Trades and Technology (WinSETT) on a research study to improve diversity and inclusion. Read more about our work on workplace inclusion in 2019 [here](#).

## Multi-Stakeholder Initiatives and Associations

In 2019, we participated in several multi-stakeholder initiatives and industry associations to engage in constructive dialogue and/or strategic activities with stakeholders who share a common interest in the issues that matter to our business. Below is a list of the groups in which we participated last year. Significant topics they pursued included application of voluntary standards, understanding and influencing regulatory developments in various jurisdictions, sharing and developing best practices, improving governance in the sector, identifying emerging trends, opportunities and risks, and broadening networks and perspectives.

- [Cobalt Institute](#) (G, C, S)
- [Devonshire Initiative](#) (C, S)
- [Diadem Group](#)
- [Fertilizer Canada](#) (C, S)
- [Fort Air Partnership](#) (G, C, S)
- [Fort Saskatchewan Chamber of Commerce](#) (S)
- [Mining Association of Canada](#) (G, C, S)
- [Nickel Institute](#) (G, C, S)
- [Northeast Capital Industrial Association](#) (G, C, S)
- [Northeast Region Community Awareness and Emergency Response](#) (G, C, S)
- [Prospectors & Developers Association of Canada](#) (C, S)
- [Voluntary Principles Initiative](#) (C, S)
- [The Canadian Centre for Women in Science, Engineering, Trades and Technology \(WinSETT\)](#) (C, \$)

G – Held a position on the governance body in 2019

C – Participated in projects or committees in 2019

\$ – Provided substantive funding beyond routine membership dues in 2019

S – Views membership as strategic



Sherritt Nickel Jumpers at the Fort Site raised over \$10,000 and rappelled off the Coast Edmonton Plaza Hotel in support of Make-a-Wish Northern Alberta's annual #ropeforhope campaign.

## SPIRIT OF SHERRITT PROGRAM

In 2019, Sherritt's Fort Site continued to roll out the Spirit of Sherritt program, launched in 2017. This program is composed of two initiatives: the Giving Program and the Volunteer Program.

The Giving Program allows employees to apply for a \$250 donation to a charity for which they have volunteered a minimum of 20 hours of their personal time. The Volunteer Program allows eligible employees to use one work day per year to volunteer for eligible non-profit organizations during work hours.

In 2019, over the course of the year, Sherritt's Fort Site donated \$2,800 in recognition of employees who collectively volunteered 500 hours of their own time to non-profit and charitable causes in their local communities (outside of work hours), and 200 hours of company time. Examples of places employees volunteered or donated to include local food banks, children's health organizations, the arts, and community children's sporting associations.

In 2019, Sherritt Nickel Jumpers at the Fort Site raised over \$10,000 and rappelled off the Coast Edmonton Plaza Hotel in support of Make-a-Wish Northern Alberta's annual #ropeforhope campaign. The Fort Site's United Way campaign raised over \$50,000 for the Capital Region in 2019, totalling more than \$285,000 in the last five years.

Additionally, every December the Fort Site and the Technologies Division support the local Fort Saskatchewan Food Gatherers Society. Our employees assist in collecting food, toys and monetary donations for those in need. One tradition includes our annual ugly holiday sweater challenge, where for every "ugly" holiday sweater worn to work, the leadership team makes a contribution to the Fort Saskatchewan Food Gatherers Society. In 2019, Sherritt and its employees proudly donated \$5,000 and a truckload of food and toys.

In 2019, Sherritt's Corporate office employees continued to support Make-a-Wish Canada. With support from our employees, Sherritt raised \$10,000 and funded the wish of a sweet and kind five-year-old girl who wished to visit an Ontario resort with her family.



Supporting The Great Trail reflects Sherritt's values and fosters partnership between the company and the community.

Credit: TCT

## THE GREAT TRAIL – CONNECTING PEOPLE WHILE IMPROVING SAFETY

One of Sherritt's recent initiatives is a multi-year commitment to the Trans Canada Trail (TCT) to optimize safety for pedestrians and cyclists along a key section of [The Great Trail](#) in Fort Saskatchewan. The work is being carried out by the River Valley Alliance, which works to increase access to the river valley across the Edmonton metropolitan area.

Sherritt's gift will help with construction and installation of a new underslung pedestrian walkway and Trail section across the North Saskatchewan River. This hanging walkway will be suspended below a new bridge across the River. Currently, the only option for Trail users to cross is via a busy commuter route used by thousands of vehicles every day.

Our employees live and work in the community, and we feel we are an integral part of it. We are an urban refinery and we strive to be a good neighbour to the people of Fort Saskatchewan, as they have always been good neighbours to us. Many people also use the Trail to commute to and from work. The pedestrian bridge will add connectivity and improve safety for people crossing the river.

We believe strongly in providing benefits that align with community priorities, which include recreational opportunities for all and a safe community that supports physical and mental wellness. Fort Saskatchewan is fortunate to be located in a beautiful area where people of all ages and cultural backgrounds embrace outdoor activities.

**“The River Valley Alliance, in collaboration with the Trans Canada Trail (TCT), now called The Great Trail, is all about connecting people to nature, their communities and each other. We have all experienced the physical and mental health benefits of being on a trail enjoying the sights and sounds of nature. Donations from organizations like Sherritt ensure that TCT and other organizations can keep this legacy of one connected trail ongoing for many generations to come.”**

– Brent Collingwood, Executive Director, River Valley Alliance



# COMMUNITY DEVELOPMENT

## MANAGEMENT APPROACH

Now more than ever, stakeholders – from local communities to host-country governments and civil society organizations – expect to experience tangible benefits and improvements to their standard of living from natural resource extraction and processing. This is particularly true in jurisdictions where economic development has been lagging, infrastructure is lacking and human development indices are low.

Managing the expectations of local stakeholders, particularly in less-developed jurisdictions, is paramount. When a large business enters an undeveloped jurisdiction, there are often expectations that it will solve many, if not all, of the area's inherent socio-economic challenges. We are committed to helping improve the lives of people near our operations, while relying on host-country governments to discharge their obligations regarding basic services, particularly in the areas of health, education and infrastructure.

Because of the diverse operating contexts of our sites, local community development priorities vary significantly. As such, we have adopted a flexible approach to community development, while at the same time establishing company-wide guidance that ensures our values and expectations are preserved. In each jurisdiction, our investment decisions strive to support:

- Socio-economic development
- Public health and safety
- Natural and cultural heritage

In addition, our Community Investment Standard aligns with evolving good practice to maximize the value of our contributions, both to the recipients and to our business. (The standard was assessed by [London Benchmarking Group \(LBG\) Canada](#) as part of the design process.) The Standard enables employee-led community investment review committees (CIRCs) at divisional/site and corporate levels to provide governance and oversight of decision-making. We take great care to avoid real or perceived conflicts of interest and to ensure spending complies with our business ethics and anti-corruption policies.

## PERFORMANCE

### Economic Benefit Footprint

When evaluating the overall financial impact that our presence delivers at local and national levels, we measure our economic benefit footprint, which includes payment of taxes, royalties and regulated fees to governments; the procurement of goods and services at the local and national levels; payment of local salaries, wages and employment benefits; and community investment spending. In 2019, our operations generated more than \$500 million in economic benefits to local communities and host governments in Canada and Cuba. The following table presents a breakdown of our economic benefit footprint for the year.

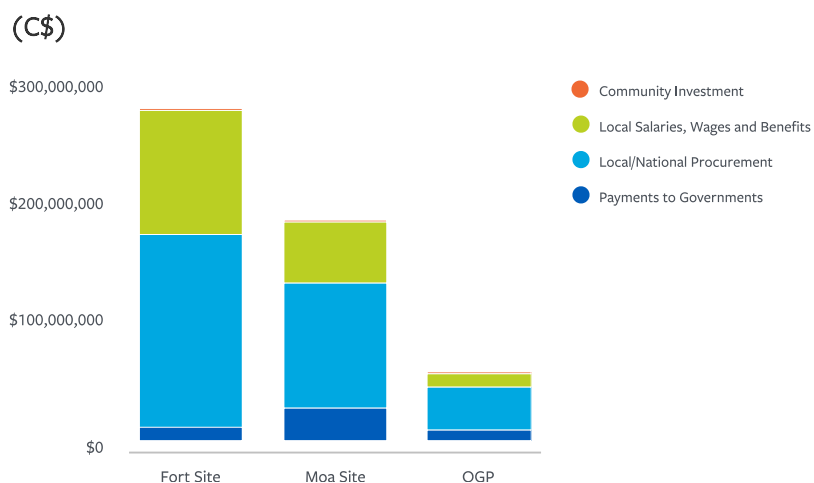
Indicator Components (C\$ millions)	Fort Site	Moa Nickel Site <sup>1</sup>	OGP	Total Sherritt
Payments to governments	10.14	27.62	8.50	46.26
Local/national procurement <sup>2</sup>	167.17	107.91	37.22	312.29
Local salaries, wages and benefits	108.47	53.39	12.73	174.58
Community investment <sup>3</sup>	0.05	0.32	0.31	0.68
Economic benefit footprint <sup>4</sup>	285.82	189.24	58.76	533.82

<sup>1</sup> Reported in USD; converted using Bank of Canada's 2019 average exchange rate of 1.3269.

<sup>2</sup> For the Cuba operations, procurement is calculated at the national level. For the Fort Site operations, procurement is calculated at the provincial level (Alberta).

<sup>3</sup> Includes in-kind valuations.

<sup>4</sup> This calculation includes the sum of the value of spending on local suppliers, local salaries and wages, payments to governments, and community investment. All are reported on a 100% ownership basis.



Approximately 59% of our benefit footprint results from the purchase of goods and services from local- and national-level suppliers serving our operations.

Local salaries and wages account for our second most significant contribution, reflecting the importance of our sector in raising the standard of living and creating wealth in communities adjacent to our operating sites through well-paying jobs.

Our payments to governments represent a significant contribution to host countries and communities. We strive to ensure that these payments are openly and transparently reported, so that our contributions to national, regional and local governments are recognized, and to encourage accountability for the spending of those funds, which should go towards building essential infrastructure and increasing access to education and healthcare, especially for populations near our operations. Sherritt's [2019 ESTMA – Annual Report](#) is available online.

## Community Investment

Community investment expenditures represent a small percentage of our total economic benefit footprint, but we endeavour to achieve maximum local impact with these dollars spent or donated. The majority of Sherritt's community investment continues to go towards socio-economic development in jurisdictions where we operate. Where possible and in alignment with the priority indicated in [Canada's Feminist International Assistance Policy](#), as well as our own strategic priority focus on diversity, Sherritt also donates to initiatives that incorporate a gender lens to both the analysis of the issue and preferred outcomes.

Overall, Sherritt's total amount allocated towards community investment continued to decrease in 2019. Austerity measures were in place for OGP, Moa Nickel Site, Fort Site and Corporate in 2019 and will continue into 2020. As such, community investments remained low; however, all sites made efforts to better align their community investments strategically.

In Cuba, for several years we have been providing about half a million dollars in annual funding for important projects relating to public health and safety, transportation, sanitation, education and culture in communities adjacent to our operations. As part of the Community Investment Program (CIP), Sherritt assists with yearly donations, demonstrating its longstanding commitment to sharing prosperity with the Cuban people. Every project we fund is directly linked to Cuba's national, provincial and/or local development priorities. We believe that Cuba provides a model in development planning for other jurisdictions, and we are proud to support the country's efforts. Refer to this [case study](#) for additional information on our contributions to Cuba in 2019.

At the Fort Site and in Calgary and Toronto, where we have administrative offices, community investment is less significant and is used to support employee engagement, philanthropy and meeting the needs of the less fortunate. Refer to this [case study](#) for more information on our Spirit of Sherritt program.

Sherritt once again sponsored the [International Women in Resources Mentoring Programme \(IWRMP\)](#), with the aim of providing female mentees in industry with a productive mentoring relationship, the purpose of which is to retain future leaders and create a more diverse pool of internal candidates. Sherritt sponsored employee participation in the program for the third year in a row.

In 2017, Sherritt signed a three-year partnership with UNICEF Canada to support the Child Road Traffic Injury Prevention Programme in promoting road safety among young people. Read more [here](#), including a 2019 program update.

In 2019, Sherritt signed a four-year partnership with the Trans Canada Trail to support the construction and installation of a new underslung pedestrian walkway and Trail section across the North Saskatchewan River. Read more about this partnership [here](#).

## Employee Volunteerism and Giving

Sherritt employees have long been active participants in the communities where we operate, both during and outside of work hours. Sherritt's Community Investment Standard further encourages and better organizes employee volunteerism through a variety of delivery options. The result has been a significant increase in both the amount of volunteer hours and the recording of hours already occurring on a regular basis. Sherritt's Community Investment Standard will be updated in 2020.

In 2019, the Moa Nickel Site recorded over 8,000 hours of employee volunteer time during work hours and over 6,000 hours of volunteer time during off hours. Employees at the Moa Nickel Site contributed to saving lives through the employee blood donation program, and gave back to the local community, for example, through maintenance of roads, clean-ups and community gardening. Read more about the volunteering program at the Moa Nickel Site [here](#).

In 2019, the Fort Site continued to roll out the Spirit of Sherritt program. Fort employees donated 198 hours of company time to non-profit and charitable causes that were meaningful to them in the Greater Edmonton Area. As a result, Sherritt donated to causes supported by employees who volunteered their own time in charities supporting local food banks, children's health, the arts and community children's sports associations. To learn more about this and other employee-led initiatives, refer to this [case study](#).

Through an annual employee giving initiative at the Fort Site, employees elected to donate a portion of their pay to the United Way, supporting various local charities. As of 2019, Sherritt's employees had donated more than \$285,000 over five years to the United Way.

In celebration of the refinery's three billion pounds of nickel, employees chose to donate \$10,000 to the Fort Saskatchewan Food Gatherers Society. Additionally, Sherritt supported the Young Scientist Conference with a \$10,000 donation to support the 2018, 2019 and 2020 conferences. The Young Scientist Conference hosts over 250 students, allowing them the opportunity to participate in a variety of hands-on science activities.

Sherritt's head office for OGP is located in Calgary, Alberta. For over 10 years, OGP has partnered with Alberta Children's Hospital to host a golf tournament fundraiser. In 2019, nearly \$75,000 was raised, bringing the multi-year total to over \$975,000. This year, the funds raised were destined to purchase a 3D scanner for prosthetics and orthotics. In addition, employees raised over \$18,000 for Alberta's annual Ride to Conquer Cancer.



Employees from the Moa Nickel Site work together to support community development and advancement of surrounding communities.

## VOLUNTEERING PROGRAM IN MOA – SERVING THE COMMUNITIES AROUND US

At the Moa Nickel Site, a volunteering program in support of community development and advancement has been in place since we began operating in Cuba over 20 years ago. The focus of the volunteering program is to improve hygienic and sanitary conditions of the surrounding communities where we operate. The Moa Nickel Site has been recognized multiple times for the support provided in the surrounding communities.

The Moa Nickel Site has an agreement with the municipal government to manage donations and worker volunteer efforts. Workers at the Moa Nickel Site have participated in various activities to support the surrounding communities. Some of the activities held during 2019 include cleaning, water and sanitation services, campaigns in surrounding communities to eliminate the *Aedes aegypti* mosquito (a common disease-spreading mosquito), housing fumigation, community water infrastructure maintenance, and agricultural harvesting support, among others. Additionally, Moa Nickel employees donate blood on a regular basis. In 2019, the Moa Nickel Site recorded over 8,000 hours of employee volunteer time during work hours and over 6,000 hours of volunteer time during off hours.

The volunteering program at the Moa Nickel Site has supported the surrounding communities through the reduction of mosquito outbreaks, the promotion of community culture, improvements to communal facilities and roads, the planting and harvesting of vegetables for the population, among other benefits.



Since 2006, we have invested over \$6 million in community projects across Cuba, including supporting the recovery efforts after various hurricanes since the project started.

## COMMUNITY INVESTMENT IN CUBA

Since we began operating in Cuba more than 20 years ago, we have always invested in the development of communities near our sites. In the mid-2000s, this effort, referred to as the Cuba Community Investment Program (CIP), took on a more formal structure and approach. Sherritt began working with local and provincial governments in Cuba to develop an annual community investment plan for purchasing equipment and goods that meets local development needs and also aligns with national development priorities and needs. The Cuban authorities arrange for the installation or use of these items by local state-run agencies and organizations. This approach serves as a great example of effective community development planning – with highly capable local leaders setting clear development goals for their communities – that a company like ours supports. To the best of our knowledge, Sherritt is the only foreign investor in Cuba that has such a program in place.

Since 2006, when the CIP was created, we have invested more than \$6 million in support of a range of community development initiatives in Cuba, including projects to provide public lighting, transportation, education, maintenance and repair of public infrastructure, improvement of public health infrastructure and sewage systems.

In 2019, we invested more than \$450,000 in community projects across Cuba. The funds supported community development projects in Moa, the municipality adjacent to our nickel mining joint venture, and Matanzas and Santa Cruz del Norte, communities near our OGP facilities. Investments included procurement of lighting and air conditioning units for public institutions including Moa's hospital, road repair and community gardening equipment, and spare parts and maintenance for equipment donated in previous years. These investments contribute to the quality of life of the people in communities around our operations.

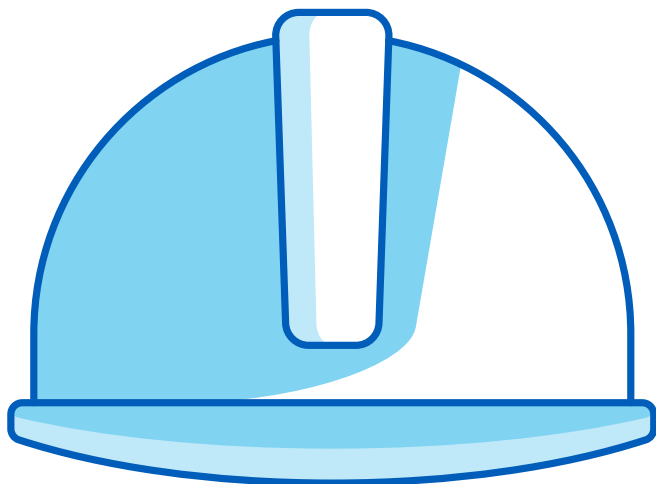
Some of the investments made by OGP, in support of initiatives in Matanzas and Santa Cruz del Norte, provided road repair equipment, submersible pumps and equipment for the maintenance of green areas and for pipe cleaning. These projects support government efforts to supply potable water to communities and to mitigate the effects of extreme weather events and potential sources of disease.

In addition, two local health clinics in Moa were refurbished into usable buildings that can service the broader community for any medical needs not requiring hospital care.



# Performance

This report was prepared in accordance with the GRI Standards (Core option) and showcases how we support international principles relating to sustainable development. All data is based on the calendar year, and all references to currency are in Canadian dollars, unless otherwise noted.



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## In This Section

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**FIVE-YEAR SUSTAINABILITY GOALS**

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**UNGC**

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**GRI INDEX**

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**OECD**

# FIVE-YEAR SUSTAINABILITY GOALS

In 2018, Sherritt launched a suite of five-year sustainability goals. These strategic goals incorporate our external commitments and focus on areas that advance and protect our interests and support [Operational Excellence](#). They are intended to complement and supplement – not duplicate – priority efforts already underway. These goals help to shape priorities, long-range planning, and investments in sustainable development across all of Sherritt’s operations. During 2019, we focused on site-level planning and identification of areas where we might establish performance targets. Implementation and target-setting will continue in 2020.

SUSTAINABILITY GOALS	STATUS IN 2019
<p><b>1.</b> Achieve Level A requirements in TSM protocols across all operations.</p> 	<p>In 2019, self-assessments against <a href="#">the protocols</a> were completed to understand where each Division scores from C to AAA. Systems were implemented at most sites to improve scores from baseline levels.</p>
<p><b>2.</b> Strengthen safety culture, behaviour and performance.</p> 	<p><a href="#">Health and safety performance</a> continued to improve in 2019 across the company. Divisions conducted more visible felt leadership interactions in the field and also focused on improving the quality of interactions.</p>
<p><b>3.</b> Improve environmental management.</p> 	<p>Each of our operating sites developed business plans to improve <a href="#">environmental performance</a>, including measures to reduce fugitive emissions.</p>



## SUSTAINABILITY GOALS

## STATUS IN 2019

4. Create community benefit footprints that support local priorities and the SDGs.



In 2019, the Divisions aligned their [community investments](#) with the Community Investment Standard, Sherritt's priority SDGs and the priorities of the regions in which we operate. In 2019, community benefit activities were broadened beyond investment to create a more thorough approach to benefit footprints.

5. Improve diversity at all levels throughout the company.



In 2019, Sherritt launched an internal global framework for [diversity and inclusion](#) (D&I), which includes site-level plans for the next five years. D&I committees were established at each of the sites.

6. Be recognized as a “preferred supplier” of responsibly produced products.






In 2019, we [updated](#) our Human Rights Policy and Environment, Health, Safety and Sustainability Policy, completed a Conflict-Affected and High-Risk Areas (CAHRA) assessment of the Moa Joint Venture feed supplies, and developed and implemented a Third-Party Feed Policy.

# GRI INDEX

We have aligned our report with the Global Reporting Initiative’s GRI Standards Guide. See [www.globalreporting.org](http://www.globalreporting.org) for more information.

## GENERAL STANDARD DISCLOSURES

GRI Indicator	Description	Location	SDG
<b>Organizational Profile</b>			
102-1	Name of the organization	<a href="#">About Sherritt</a>	
102-2	Activities, brands, products and services	<a href="#">About Sherritt</a> <a href="#">Supplying a Sustainable Future</a>	
102-3	Location of headquarters	<a href="#">About Sherritt</a>	
102-4	Location of operations	<a href="#">About Sherritt – Map and Description</a>	
102-5	Ownership and legal form	<a href="#">About Sherritt</a>	
102-6	Markets served	<a href="#">About Sherritt – Map and Description</a> <a href="#">About Sherritt – Divisions and Products</a>	
102-7	Scale of the organization	<a href="#">About Sherritt – Key Indicators</a> <a href="#">2019 Financial Results</a>	
102-8	Information on employees and other workers	<a href="#">About Sherritt – Key Indicators</a> <a href="#">View Data Table</a> 	 

## INFORMATION ON EMPLOYEES AND OTHER WORKERS

Disclosure Components	Canada	Cuba <sup>2</sup>	Other <sup>3</sup>	Total Sherritt
<b>Full-time</b>				
Men	619	2,312	4	2,935
Women	148	209	12	369
Unknown	-	-	-	-
<b>Part-time</b>				
Men	11	-	-	11
Women	9	-	-	9
Unknown	-	-	-	-
<b>Permanent</b>				
Men	630	2,312	4	2,946
Women	157	209	12	378
Unknown	-	-	-	-
<b>Temporary<sup>1</sup></b>				
Men	5	-	1	6
Women	5	-	-	5
Unknown	39	-	-	39

<sup>1</sup> Temporary employees included consultants or positions currently filled by contractors.

<sup>2</sup> Includes the office in Havana, Sherritt and GNC employees at the Moa Nickel Site, as well as employees of the entities which make up the OGP businesses (including Energas).

<sup>3</sup> "Other" includes our Bahamian marketing office, which services the Moa Joint Venture and OGP Spain.

102-9

Supply chain

[About Sherritt – Our Supply Chain](#)



102-10

Significant changes to the organization and its supply chain

[About Sherritt – Divisions and Products](#)

102-11

Precautionary Principle or approach

[Demonstrating Environmental Responsibility](#)



102-12

External initiatives

Our Approach – Sustainability Framework

Our Approach – Sustainability Goals

Providing a Safe and Rewarding Workplace – Public Safety

Providing a Safe and Rewarding Workplace – Site Security – Case Study

Providing a Safe and Rewarding Workplace – Employee Relations

Operating Ethically – Responsible Production and Supply

Operating Ethically – Human Rights

Operating Ethically – Business Conduct

Demonstrating Environmental Responsibility – Tailings Management

Demonstrating Environmental Responsibility – Biodiversity and Land

Demonstrating Environmental Responsibility – Energy and Climate Change

Engaging Stakeholders and Benefitting Communities – Stakeholder Engagement

Engaging Stakeholders and Benefitting Communities – Community Development

Our Approach – Sustainability Framework



Our Approach – Sustainability Goals

Providing a Safe and Rewarding Workplace – Public Safety

Providing a Safe and Rewarding Workplace – Site Security – Case Study

Providing a Safe and Rewarding Workplace – Employee Relations

Operating Ethically – Responsible Production and Supply

Operating Ethically – Human Rights

Operating Ethically – Business Conduct

Demonstrating Environmental Responsibility – Tailings Management

Demonstrating Environmental Responsibility – Biodiversity and Land

Demonstrating Environmental Responsibility – Energy and Climate Change

Engaging Stakeholders and Benefitting Communities – Stakeholder Engagement

Engaging Stakeholders and Benefitting Communities – Community Development

## Strategy



102-15	Key impacts, risks and opportunities	<a href="#">CEO Message</a> <a href="#">2019 Financial Results – Management’s Discussion and Analysis</a>
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### Ethics and Integrity

102-16	Values, principles, standards and norms of behaviour	<a href="#">Our Approach</a> <a href="#">Our Approach – Sustainability Framework</a> <a href="#">Operating Ethically</a>
102-17	Mechanisms for advice and concerns about ethics	<a href="#">Operating Ethically – Business Conduct</a> <a href="#">Management Information Circular – Governance</a>

### Governance

102-18	Governance structure	<a href="#">Our Approach – Governance</a> <a href="#">Management Information Circular – Governance</a>
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### Stakeholder Engagement

102-40	List of stakeholder groups	<a href="#">Engaging Stakeholders and Benefitting Communities – Stakeholder Engagement</a>
102-41	Collective bargaining agreements	<a href="#">Providing a Safe and Rewarding Workplace – Employee Relations</a> <a href="#">View Data Table</a> 



PERCENTAGE OF TOTAL EMPLOYEES COVERED BY COLLECTIVE BARGAINING AGREEMENTS

Disclosure Components	Fort Site <sup>1</sup>	Moa Nickel Site	OGP	Corporate	Total Sherritt <sup>2</sup>
Percentage of total employees covered by collective bargaining agreements	54.3%	In Cuba, all organized labour considerations are mandated by the Cuban state, and many systems and tools common in other jurisdictions are not employed there.		Not applicable	42.2%

<sup>1</sup> Hourly employees as a percentage of total employees at the Fort Site only.

<sup>2</sup> Calculated as a percentage of headcount (permanent employees), excluding Cuban local nationals.

102-42 Identifying and selecting stakeholders [Engaging Stakeholders and Benefitting Communities – Stakeholder Engagement](#)

102-43 Approach to stakeholder engagement [Engaging Stakeholders and Benefitting Communities – Stakeholder Engagement](#)

102-44 Key topics and concerns raised [Engaging Stakeholders and Benefitting Communities – Stakeholder Engagement](#)

Reporting Practice

102-45 Entities included in the consolidated financial statements [2019 Financial Results – Management’s Discussion and Analysis](#)

102-46 Defining report content and topic Boundaries [Our Approach – Materiality](#)  
[About This Report](#)


102-47 List of material topics [Our Approach – Materiality](#)

102-48 Restatements of information [2019 Annual Information Form – Overview of the Business](#)  
[About This Report](#)

102-49	Changes in reporting	<a href="#">About This Report</a>
102-50	Reporting period	<a href="#">About This Report</a>
102-51	Date of most recent report	<a href="#">About This Report</a>
102-52	Reporting cycle	<a href="#">About This Report</a>
102-53	Contact point for questions regarding the report	<a href="#">About This Report</a>
102-54	Claims of reporting in accordance with the GRI Standards	<a href="#">About This Report</a>
102-55	GRI content index	This table, the GRI Content Index
102-56	External assurance	<a href="#">About This Report</a>



**MANAGEMENT APPROACH DISCLOSURES**

<b>GRI Indicator</b>	<b>Description</b>	<b>Location</b>	<b>SDG</b>
103-1	Explanation of the material topic and its Boundary	<a href="#">Our Approach – Materiality</a> <a href="#">View Data Table</a> 	

**EXPLANATION OF THE MATERIAL TOPIC AND ITS BOUNDARY**

The following table describes medium and high-priority material issues:

<b>Material Issue</b>	<b>Characterization</b>
Country Risks	Shifting U.S./Cuba relations Uncertainties associated with changes in leadership Project delays from lengthy decision-making processes in Cuba Economic situation in Cuba
Tailings	Tailings management, risks and capacity Waste rock Stakeholder topics
Economic Performance	Financial performance Long-term sustainability/viability Debt management R&D/innovation
Responsible Sourcing	Supply chain traceability and ethical sourcing Lifecycle impacts
Health and Safety	Safety leadership and culture Workplace occupational health and safety Fatality prevention
Climate Change Adaptation	Adaptation to and mitigation of climate change
Public Safety	Emergency and crisis preparedness Community awareness and preparedness around safety and industrial risks Community health issues
Security	Human rights in private and public security
Employee Relations	Employee engagement Labour rights Discrimination and harassment
Diversity, Inclusion and Talent Management	Recruitment and retention Diversity and inclusion Training and development
Water	Quantity and access Effluent quality and quantity (excluding tailings) Unplanned releases

Energy and GHG Emissions	GHG emissions Energy efficiency Renewable energy sources
Environmental Liabilities, Closure and Reclamation	Progressive reclamation Legacy issues and liabilities Long-term management and decommissioning Financial assurance
Human Rights	Respecting human rights Resettlement Child and forced labour Security and human rights
Stakeholder and Indigenous Engagement	Community relations Community response mechanisms/grievance mechanisms Partnerships Social licence
Community Development	Infrastructure and regional development Community investment Capacity building
Local Economic Benefits	Local procurement Local hiring Economic diversification
Air and Other Emissions	Dust and odours Heavy metals Noise Releases (e.g., H <sub>2</sub> S, SO <sub>x</sub> , NO <sub>x</sub> )

103-2

Number of grievances filed,  
addressed and resolved

Providing a Safe and Rewarding  
Workplace – Employee Relations






[View Data Table](#) 

NUMBER OF GRIEVANCES FILED, ADDRESSED AND RESOLVED

Disclosure Components	Fort Site	Moa Nickel Site	OGP	Corporate	Total Sherritt
<b>Labour practices</b>					
Total number of grievances about labour practices filed through formal grievance mechanisms during the reporting period	18	In Cuba, all organized labour considerations are mandated by the Cuban state, and many systems and tools common in other jurisdictions are not employed there. There were no grievances reported by expatriates or Canada-based employees.		-	18
Of the identified grievances about labour practices, how many were addressed during the reporting period?	18			-	18
Of the identified grievances about labour practices, how many were resolved during the reporting period?	7			-	7
Total number of grievances about labour practices filed prior to the reporting period that were resolved during the reporting period	11			-	11
<b>Internal</b>					
Labour grievances filed through formal grievance mechanisms during the reporting period	18	In Cuba, all organized labour considerations are mandated by the Cuban state, and many systems and tools common in other jurisdictions are not employed there. There were no grievances reported by expatriates or Canada-based employees.		-	18
Discrimination	-			-	-
Other	-			-	-
<b>External</b>					
Environment	1			-	1
Livelihood/land access	-			-	-
Human rights	-			-	-
Social or community	-			-	-
Other	-			-	-

**ECONOMIC PERFORMANCE**

<b>GRI Indicator</b>	<b>Description</b>	<b>Location</b>	<b>SDG</b>
<b>Material Topic: Economic Performance</b>			
103	Management approach disclosures	<p>Our Approach – Materiality</p> <p>Demonstrating Environmental Responsibility – Energy and Climate Change</p> <p>About Sherritt – Economic Performance</p> <p>2019 Annual Information Form – Description of the Business</p>	
201-1	Direct economic value generated and distributed	<p>Engaging Stakeholders and Benefitting Communities – Community Development</p> <p>About Sherritt – Economic Performance</p> <p>2019 Financial Results – Management’s Discussion and Analysis</p> <p><a href="#">View Data Table</a> </p>	 

## DIRECT ECONOMIC VALUE GENERATED AND DISTRIBUTED<sup>1</sup>

(C\$ millions, for the year ended December 31, 2019)

Disclosure Components	Moa Nickel and Fort Site	OGP	Corporate and Other	Total Sherritt
Revenues	461.00	75.00	10.20	546.20
<b>Costs</b>				
Operating costs (costs of sales), excluding depreciation, employee costs and community investments disclosed below	282.67	39.19	7.70	330.30
Employee wages and benefits	105.20	23.30	28.10	156.60
Spending on capital	33.60	30.10	0.10	63.80
Payments to governments <sup>2</sup>	23.95	3.39	0	27.34
Community investment <sup>3,4</sup>	0.43 <sup>4</sup>	0.31 <sup>4</sup>	0.20 <sup>5</sup>	0.95
Total economic value distributed	445.85	96.29	35.90	578.04
Economic value retained or invested (pre-calculated as “Direct economic value generated” less “Economic value distributed”)	15.15	(21.29)	(25.70)	(31.84)

<sup>1</sup> These figures reflect Sherritt’s ownership share in 2019, and reporting for the Moa Joint Venture and Fort Saskatchewan facility are combined to align with other financial disclosures.

<sup>2</sup> Includes fines and penalties, where appropriate.

<sup>3</sup> Includes cash investments, employee time during working hours, and in-kind valuations.

<sup>4</sup> The OGP and Moa Nickel Site valuations for community investment are allocated on a 100% basis to Sherritt.

<sup>5</sup> Includes program management costs of the community investment program for direct Sherritt employees only.

Note: There may be some discrepancies between Sherritt’s economic disclosures and the ESTMA filing, due to differences in reporting scope and definitions.

201-2 Financial implications and other risks and opportunities due to climate change

[Demonstrating Environmental Responsibility – Energy and Climate Change](#)



[2019 Annual Information Form – Description of the Business](#)

201-4 Financial assistance received from government

[2019 Financial Results – Overview of the Business](#)

[View Data Table](#)

## FINANCIAL ASSISTANCE RECEIVED FROM GOVERNMENT<sup>1</sup>

Disclosure Components	Fort Site	Moa Nickel Site	OGP
Total monetary value of financial assistance received by the organization from governments, by country <sup>2</sup>	\$227,878 (Canada–Alberta Job Grant program)	–	–

<sup>1</sup> See “Overview of the Business” section in our Annual Report for information on whether, and the extent to which, governments are present in the shareholding structure.

<sup>2</sup> These figures are based on a 100% ownership structure.

### Material Topic: Market Presence

103 Management approach disclosures [Engaging Stakeholders and Benefitting Communities – Community Development](#)

202-2 Proportion of senior management hired from the local community

[View Data Table](#) 



### PROPORTION OF SENIOR MANAGEMENT HIRED FROM THE LOCAL COMMUNITY AT SIGNIFICANT LOCATIONS OF OPERATION

Disclosure Components	Fort Site	Moa Nickel Site	OGP	Corporate
Percentage of senior management <sup>1</sup> at significant locations of operation that are hired from the local <sup>2</sup> community	79%	90%	71%	100%

<sup>1</sup> Definition: Manager (of a group), Director, Controller, Senior Counsel, VP, SVP, CFO, COO, President or CEO.

<sup>2</sup> “Local community” refers to national-level hiring at Cuban sites, with special consideration for communities adjacent to our operations. In Fort Saskatchewan, a local is from the province of Alberta, with special consideration for workers who live in the Edmonton Census Metropolitan Area. At Corporate, local refers to the Greater Toronto Area.

### Material Topic: Indirect Economic Impacts

103 Management approach disclosures [Engaging Stakeholders and Benefitting Communities – Community Development](#)

203-1 Infrastructure investments and services supported [Engaging Stakeholders and Benefitting Communities – Community Development](#)

[View Data Table](#) 



## INFRASTRUCTURE INVESTMENTS AND SERVICES SUPPORTED

Disclosure Components	Fort Site	Cuba
<p>Extent of development of significant infrastructure investments and services supported</p> <p>Current or expected positive or negative impacts on communities and local economies</p>	<p>There were no significant investments in infrastructure in 2019.</p>	<p>In Cuba, Sherritt has invested in public infrastructure through its Community Investment Program, including, among other things, street lighting; sanitation and construction equipment; roads; transportation services; and equipment for hospitals, schools and retirement homes.</p> <p><b>OGP:</b> Investments provided road repair equipment, submersible water pumps with the control panels and accessories for supporting the potable water distribution, and equipment for the maintenance of green areas and for pipe cleaning. These projects will support government efforts to supply potable water to communities.</p>

203-2

Significant indirect economic impacts

Engaging Stakeholders and Benefitting Communities – Community Development



SI-1

Economic benefit footprint

Engaging Stakeholders and Benefitting Communities – Community Development



[View Data Table](#)

## ECONOMIC BENEFIT FOOTPRINT

(C\$ millions)

Disclosure Components	Fort Site	Moa Nickel Site <sup>1</sup>	OGP <sup>1</sup>	Total Sherritt
Payments to governments	10.14	27.62	8.50	46.26
Local/national procurement <sup>2</sup>	167.17	107.91	37.22	312.29
Local salaries, wages and benefits	108.47	53.39	12.73	174.58
Community investment <sup>3</sup>	0.05	0.32	0.31	0.68
Economic benefit footprint <sup>4</sup>	285.82	189.24	58.76	533.82

<sup>1</sup> Data collected in USD; converted using Bank of Canada's 2019 average exchange rate of 1.3269.

<sup>2</sup> For the Cuba operations, procurement is calculated at the national level. For the Fort Site operations, procurement is calculated at the provincial level (Alberta).

<sup>3</sup> Includes cash investments, employee volunteer time during working hours, and in-kind valuations.

<sup>4</sup> This calculation includes the sum of the value on local and national suppliers, local salaries and wages, payments to government, and community investment. All reported on a 100% ownership basis.

### Material Topic: Procurement Practices

103 Management approach disclosures

Engaging Stakeholders and Benefitting Communities – Community Development



[About Sherritt – Our Supply Chain](#)

[2019 Annual Information Form – Description of the Business](#)

204-1 Proportion of spending on local suppliers

Engaging Stakeholders and Benefitting Communities – Community Development



[View Data Table](#)

### PROPORTION OF SPENDING ON LOCAL SUPPLIERS<sup>1</sup>

Disclosure Components	Fort Site	Moa Nickel Site	OGP
Percentage of the procurement budget used for significant locations of operation spent on suppliers local <sup>1</sup> to that operation	81%	44%	34%

<sup>1</sup> “Local suppliers” refers to the national level for Cuba and to Alberta for the Fort Site.



Material Topic: Anti-Corruption

103 Management approach disclosures Operating Ethically – Business Conduct

2019 Annual Information Form – Description of the Business

205-2 Communication and training about anti-corruption policies and procedures

Operating Ethically – Business Conduct



[View Data Table](#)

COMMUNICATION AND TRAINING ABOUT ANTI-CORRUPTION POLICIES AND PROCEDURES




Disclosure Components	Fort Site	Moa Nickel Site	OGP	Corporate
Total percentage of employees to whom the organization’s anti-corruption policies and procedures have been communicated and who have been trained on these policies and procedures, broken down by employee category and region <sup>1</sup>	100% <sup>3</sup>	100% <sup>3</sup> All contracts that empower suppliers to represent Sherritt are to include appropriate contractual safeguards to ensure compliance with our Anti-Corruption Policy. Contractors are not required to do training at this time.		100% <sup>3</sup>
The total percentage of governance body members who have received training on anti-corruption, broken down by region (training includes being communicated to) <sup>2</sup>	100%	100%	100%	85.7%

<sup>1</sup> Only Sherritt workers in Canada, as well as expatriates, are currently eligible for training. Training for other joint venture partners and workers is not within scope of Sherritt’s policy. We are, however, exploring opportunities to provide a high-level presentation on anti-corruption to Cuban nationals, so they have greater awareness of Canadian and international standards in this evolving area.

<sup>2</sup> Those eligible for this training include Sherritt’s Board of Directors and Sherritt employees who sit on boards of subsidiary companies or joint ventures. Non-Sherritt representatives are not within scope of the policy’s training requirements.

<sup>3</sup> Sherritt has revised its onboard procedure to include anti-corruption training and certification on the anti-corruption policy for all new salaried employees. This change was put into effect concurrently with the rollout of the updated anti-corruption training module in 2019.

**ENVIRONMENTAL PERFORMANCE**

GRI Indicator	Description	Location	SDG
<b>Material Topic: Energy</b>			
103	Management approach disclosures	Demonstrating Environmental Responsibility – Energy and Climate Change  2019 Annual Information Form – Description of the Business	
302-1	Energy consumption within the organization	Demonstrating Environmental Responsibility – Energy and Climate Change  <a href="#">View Data Table</a> 	 


**ENERGY CONSUMPTION WITHIN THE ORGANIZATION**

Disclosure Components	Fort Site	Moa Nickel Site	OGP
Total fossil fuel consumption (TJ)	4,362	5,873	28,714
Total electricity consumption (TJ)	573	239	815
Total waste fuel consumption (TJ)	196	-	-
Total coal consumption (GJ)	-	-	-
Total fuel consumption from renewable fuel sources (solar, wind, etc.)	-	-	-
Heating consumption	-	-	-
Cooling consumption	-	-	-
Steam consumption (tonnes)	-	4,383,666 <sup>1</sup>	-
Electricity sold (TJ)	-	-	8,166
Heating sold	-	-	-
Cooling sold	-	-	-
Steam sold (TJ)	76	-	-

<sup>1</sup> The steam at the Moa Nickel Site is generated by burning fossil fuels and sulphur on site. The steam is consumed internally on site in the process and to generate electricity.

Material Topic: Water

103 Management approach disclosures Demonstrating Environmental Responsibility – Water  
2019 Annual Information Form – Description of the Business


303-1 Water withdrawal by source Demonstrating Environmental Responsibility – Water  
View Data Table 



WATER WITHDRAWAL BY SOURCE<sup>1</sup>

Disclosure Components	Fort Site	Moa Nickel Site	OGP
Total water withdrawal (m <sup>3</sup> )	2,370,000	14,882,947	4,906,977
Surface water, including water from wetlands, rivers and lakes (m <sup>3</sup> )	2,270,000	13,319,368	–
Saltwater (m <sup>3</sup> )	Not applicable	–	4,452,956
Groundwater (m <sup>3</sup> )	–	–	62,008
Rainwater collected directly and stored by the organization (m <sup>3</sup> )	–	–	–
Waste water from another organization (m <sup>3</sup> )	–	–	923
Municipal water supplies or other water utilities (m <sup>3</sup> )	100,000	1,563,579	195,983

<sup>1</sup> Data are collected from meters and some estimates; collection methodologies differ between sites.

303-3 Water recycled and reused Demonstrating Environmental Responsibility – Water  
View Data Table 






## WATER RECYCLED AND REUSED


Disclosure Components	Fort Site	Moa Nickel Site	OGP
Total volume of water recycled (m <sup>3</sup> )	–	4,873,787	Data not available
Total volume of water recycled and reused as a percentage of total water withdrawal	–	33.00%	80.56% <sup>2</sup>
Reclaimed water use (m <sup>3</sup> )	–	–	–
Process water use (m <sup>3</sup> )	2,370,000	13,954,936	196,030
Cooling water inflow (m <sup>3</sup> )	690,000 <sup>1</sup>	966,596	4,006,698

<sup>1</sup> The reduction in cooling water diverted in 2019 at the Fort Site may have been partially due to a rental compressor that used less water than the Sherritt-owned compressor that was inoperative for much of 2019.

<sup>2</sup> At OGP, total volume of water recycled and reused increased significantly in 2019 because cooling water was not included in the calculation in 2018.

## Material Topic: Biodiversity

103	Management approach disclosures	Demonstrating Environmental Responsibility – Biodiversity and Land  2019 Annual Information Form – Description of the Business	
304-1	Operational sites owned, leased, managed in or adjacent to protected areas and areas of high biodiversity value outside protected areas	Demonstrating Environmental Responsibility – Biodiversity and Land	
304-2	Significant impacts of activities, products and services on biodiversity	Demonstrating Environmental Responsibility – Biodiversity and Land	
304-3	Habitats protected or restored	Demonstrating Environmental Responsibility – Biodiversity and Land	

[View Data Table](#) 

## HABITATS PROTECTED OR RESTORED

Disclosure Components	Fort Site	Moa Nickel Site	OGP
Total size of protected areas (ha)	Not applicable. There are no regulatory, licence or other requirements to protect or restore habitats.		
Total size of restored areas (ha)	Rehabilitated land data is provided in table MM1 below.		

MM1 Amount of land disturbed or rehabilitated

Demonstrating Environmental Responsibility – Biodiversity and Land



[View Data Table](#)

## AMOUNT OF LAND (OWNED OR LEASED, AND MANAGED FOR PRODUCTION ACTIVITIES OR EXTRACTIVE USE) DISTURBED OR REHABILITATED

Disclosure Components	Fort Site <sup>1</sup>	Moa Nickel Site <sup>2</sup>	OGP	Total Sherritt
Total amount of land disturbed and not yet rehabilitated (ha)	131	832.44 <sup>3</sup>	53.97	1,017.41
Total amount of land newly disturbed within the reporting period (ha)	–	56.70	–	56.70
Total amount of land newly rehabilitated within the reporting period to the agreed end use (ha)	–	20.54	Not applicable	20.54
Total land rehabilitated since start of project – estimate (ha)	Not applicable	750.04 <sup>2</sup>	Not applicable	750.04

<sup>1</sup> 2019 data of the total amount of land disturbed was sourced from a biodiversity assessment that calculated the “Principal Disturbance Area” (PDA) of the Fort Site. Land disturbance at the Fort Site has remained relatively unchanged since 1954, but this area now includes agricultural land owned by Sherritt.

<sup>2</sup> Data reported for the Moa Nickel Site represents land disturbance that occurred from 1994 onwards – or the years that the Moa Joint Venture between Sherritt and the Cuban state has been in place. The data do not reflect any mining activity at the site that pre-dates the joint venture.

<sup>3</sup> Data reported for the Moa Nickel Site for 2019 were revised to include disturbed and rehabilitated tailings dam areas.

MM2 Sites requiring biodiversity management plans

Demonstrating Environmental Responsibility – Biodiversity and Land



[View Data Table](#)

## SITES REQUIRING BIODIVERSITY MANAGEMENT PLANS

Disclosure Components	Fort Site <sup>1</sup>	Moa Nickel Site <sup>2</sup>	OGP <sup>1</sup>
Total number of operations requiring biodiversity management plans (BMP)	1	Not applicable	Not applicable/under development
Number of total operations that have been assessed under the criteria as in need of a BMP	1	Not applicable	Not applicable
Percentage of total operations that have been assessed under the criteria as in need of a BMP	100%	Not applicable	Not applicable
Of the number of operations in need of a BMP, the number that have a BMP in place and operational	-	Not applicable	Not applicable
Of the number of operations in need of a BMP, the percentage that have a BMP in place and operational	-	Not applicable	Not applicable

<sup>1</sup> No regulatory obligations requiring a BMP; however, since Sherritt is implementing TSM, these sites are developing site-level BMPs.

<sup>2</sup> The previous BMP reported at the Moa Nickel Site was linked to Humboldt Park requirements, which were completed in 2017. Sherritt management is advocating to the Moa Joint Venture management for the development of a new BMP that aligns with Sherritt's Biodiversity Management Standard and with TSM.

### Material Topic: Emissions

103 Management approach disclosures

[Demonstrating Environmental Responsibility – Energy and Climate Change](#)

[2019 Annual Information Form – Description of the Business](#)

305-1 Direct (Scope 1) GHG emissions

[Demonstrating Environmental Responsibility – Energy and Climate Change](#)



[View Data Table](#)

## DIRECT (SCOPE 1) GHG EMISSIONS

Disclosure Components	Fort Site	Moa Nickel Site	OGP	Total Sherritt
Scope 1 emissions (kt CO <sub>2</sub> e)	335	556 <sup>2</sup>	1,402	2,293
Sources included in the GHG emissions calculation	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O	CO <sub>2</sub> , CH <sub>4</sub>	CO <sub>2</sub>	-
Other site-specific indicators	17 kt of credits purchased (> 5% of total emissions) <sup>1</sup>	-	-	-

<sup>1</sup> All of the credits are accredited by the Alberta Carbon Registry.

<sup>2</sup> In 2018, the Scope 1 value of 606 kt included the Scope 2 component; therefore, the real value should have been 554 kt.

305-2 Energy indirect (Scope 2) GHG emissions

Demonstrating Environmental Responsibility – Energy and Climate Change



[View Data Table](#)

## ENERGY INDIRECT (SCOPE 2) GHG EMISSIONS

Disclosure Components	Fort Site <sup>1</sup>	Moa Nickel Site <sup>1</sup>	OGP	Total Sherritt
Scope 2 emissions (kt CO <sub>2</sub> e)	59	60	-	119

<sup>1</sup> Purchased grid electricity.

305-7 Nitrogen oxides (NO<sub>x</sub>), sulphur oxides (SO<sub>x</sub>) and other significant air emissions

Demonstrating Environmental Responsibility – Energy and Climate Change



[View Data Table](#)

## NITROGEN OXIDES, SULPHUR OXIDES AND OTHER SIGNIFICANT AIR EMISSIONS

Disclosure Components	Fort Site	Moa Nickel Site	OGP
Air emissions – NO <sub>x</sub> (tonnes)	1,264	1,722 <sup>1</sup>	6,065
Air emissions – SO <sub>x</sub> (tonnes)	87	12,211	26,208
Air emissions – TPM (tonnes)	80	Not reported	Not applicable
Air emissions – Persistent organic pollutants (tonnes)	-	Not applicable	Not applicable
Air emissions – Volatile organic compounds (tonnes)	10	Not applicable	Not reported
Air emissions – Hazardous air pollutants (tonnes)	11.1	Not applicable	Not reported
Source or emission factors	US EPA Air Emissions Factors	US EPA Air Emissions Factors	Measured by Gamma <sup>2</sup>

<sup>1</sup> NO<sub>x</sub> increased at the Moa Nickel Site due to an increase in the amount of fuel used.

<sup>2</sup> OGP works with Gamma, operating on behalf of the Cuban environmental regulator CITMA, on matters of environmental monitoring.

### Material Topic: Effluents and Waste

103	Management approach disclosures	<p><a href="#">Demonstrating Environmental Responsibility – Tailings Management</a></p> <p><a href="#">Demonstrating Environmental Responsibility – Biodiversity and Land</a></p> <p><a href="#">Demonstrating Environmental Responsibility – Waste</a></p> <p><a href="#">2019 Annual Information Form – Description of the Business</a></p>
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306-2 Waste by type and disposal method

[Demonstrating Environmental Responsibility – Waste](#)



[View Data Table](#)



## WASTE BY TYPE AND DISPOSAL METHOD

Disclosure Components	Fort Site <sup>1</sup>	Moa Nickel Site	OGP
Total waste (tonnes)	2,744	16,837	8,964 <sup>2</sup>
Waste recycled – includes recyclables sent off site (batteries, plastics, electronics, etc.) <sup>1</sup> (tonnes)	99	692	225
Waste sent to landfills (tonnes)	2,682	13,746	3,408 m <sup>3</sup>
Hazardous waste (tonnes)	1,049	2,444 <sup>3</sup>	73

<sup>1</sup> Decrease in waste generated in 2019 was due largely to lower capital spending and austerity measures.

<sup>2</sup> Waste increase at OGP was due to the replacement of three large condensate tanks, and to the decommissioning of some sections of the Varadero facility and removal of equipment.

<sup>3</sup> In 2018, an increase took place in the Moa Nickel Site due to work in the Sulphur Storage Area, which was necessary to extract all the contaminated soil. In 2019, this work did not take place and consequently hazardous waste decreased.

### Recycled Waste Breakdown<sup>1</sup>

Disclosure Components	Fort Site	Moa Nickel Site	OGP
Batteries (tonnes)	–	–	107.02
Plastics (tonnes)	–	–	0.17
Paper	38.00 tonnes	–	180.00 kg
Electronics (tonnes)	–	–	0.42
Used oil (tonnes)	49.00	44.67	144.79 <sup>2</sup>
Tires (units)	–	–	328.00
Fluorescent bulbs	–	–	0.05 tonnes + 54 units

<sup>1</sup> Waste recycled – same units of items collected were added up. Methodology and reporting expected constant improvement.

<sup>2</sup> Litres of used oil were converted to tonnes using a conversion factor of 1,100 L/t.

306-3

Significant spills

Demonstrating Environmental Responsibility – Biodiversity and Land



[View Data Table](#)

## SIGNIFICANT SPILLS

Disclosure Components	Fort Site	Moa Nickel Site	OGP	Total Sherritt
Total number of recorded significant spills <sup>1</sup> (#)	-	-	-	-
Total volume of recorded significant spills (m <sup>3</sup> )	-	-	-	-

<sup>1</sup> Significant spill – spill that is included in the organization’s financial statements, for example due to resulting liabilities, or is recorded as a spill by the organization.

MM3 Total amounts of overburden, rock, tailings and sludge and their associated risks

Demonstrating Environmental Responsibility – Tailings Management



[View Data Table](#)

## TOTAL AMOUNTS OF OVERBURDEN, ROCK, TAILINGS AND SLUDGE AND THEIR ASSOCIATED RISKS

Disclosure Components	Fort Site	Moa Nickel Site	OGP	Total Sherritt
Total amounts of waste rock (tonnes)	Not applicable	253,449	Not applicable	253,449
Total amounts of overburden (tonnes)	Not applicable	2,432,948	Not applicable	2,432,948
Total amounts of liquid tailings and sludge (tonnes)	Not applicable	12,652,052	Not applicable	12,652,052

## Material Topic: Environmental Compliance

103 Management approach disclosures

Demonstrating Environmental Responsibility – Environmental Liabilities, Closure and Reclamation

2019 Annual Information Form – Description of the Business

307-1 Non-compliance with environmental laws and regulations

Demonstrating Environmental Responsibility – Tailings Management



Demonstrating Environmental Responsibility – Water

Demonstrating Environmental Responsibility – Environmental Liabilities, Closure and Reclamation

[View Data Table](#)

## NON-COMPLIANCE WITH ENVIRONMENTAL LAWS AND REGULATIONS

Disclosure Components	Fort Site	Moa Nickel Site	OGP	Corporate
<b>Significant fines and non-monetary sanctions in terms of:</b>				
Total monetary value of significant fines (millions)	-	-	-	-
Total number of non-monetary sanctions (#)	-	-	-	-
Cases brought through dispute resolution mechanisms – fines (millions)	-	-	-	-
Cases brought through dispute resolution mechanisms – non-monetary sanctions (#)	-	-	-	-

SI-2 High-severity environmental incidents

[View Data Table](#) 

## HIGH-SEVERITY ENVIRONMENTAL INCIDENTS

Disclosure Components	Fort Site	Moa Nickel Site	OGP	Corporate
Number of high-severity environmental incidents <sup>1</sup> (#)	-	-	-	-
Comments	-	-	-	-

<sup>1</sup> A “high-severity environmental incident” is an incident that results in a significant or lasting effect to the environment as follows:

- Unlicensed release of >10,000 litres of hydrocarbons or toxic solution to water or ground.
- Unlicensed air emission that causes a significant off-site impact, including evacuation, damage, use impairment, illness, or other impact to neighbouring facilities or the public.
- The upset or shutdown of a community wastewater treatment facility or contamination of a drinking water supply.
- Significant wildlife fatalities (such as a fish or amphibian kill).
- Unplanned closure or restriction of public transportation routes.
- Any act triggering a subsequent investigation and/or order by a regulatory agency, other than routine follow-up.

SI-3 Reportable environmental incidents

[View Data Table](#) 

## REPORTABLE ENVIRONMENTAL INCIDENTS

Disclosure Components	Fort Site	Moa Nickel Site	OGP	Total Sherritt
Number of reportable environmental incidents <sup>1</sup> (#)	1	1	–	2
Comments	Air quality-related incident. Technical non-compliance with our licence with no lasting impacts.	Water quality-related incident of low severity with no lasting impacts.	–	No employees or community members were harmed while these incidents occurred or while they were addressed.

<sup>1</sup> A “reportable environmental incident” is a permit or licence exceedance or non-compliance for air, water or ground that requires reporting to a regulatory agency. This includes administrative non-compliance incidents.

## SOCIAL PERFORMANCE: LABOUR PRACTICES

GRI Indicator	Description	Location	SDG
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### Material Topic: Employment

103	Management approach disclosures	Providing a Safe and Rewarding Workplace – Employee Relations
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401-1	New employee hires and employee turnover	Providing a Safe and Rewarding Workplace – Employee Relations
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[View Data Table](#)

### NEW EMPLOYEE HIRES AND EMPLOYEE TURNOVER

Disclosure Components	Canada (Fort Site and Corporate offices)		Cuba (Moa Nickel and OGP) <sup>2</sup>		Other <sup>3</sup>	
	Male	Female	Male	Female	Male	Female
Employee new hires (%)	77.90%	22.10%	100%	0%	78.70%	21.30%
Ratio: entry-level wage compared to local minimum wage <sup>1</sup>	241%	181%	Not available	Not available	Not available	Not available
<b>Workforce by employment level (total number as at year-end):</b>						
Hourly employees	338	13	Not available	Not available	Not available	Not available
Support (grade 12) <sup>4</sup>	47	73	Not available	Not available	Not available	Not available

Professional/management	233	69	Not available	Not available	Not available	Not available
Executive	12	2	Not available	Not available	Not available	Not available

<sup>1</sup> This ratio is for hourly employees (in Alberta), who make up approximately 42.2% of our workforce. This does not include contractors. The Alberta minimum wage of \$15 was used.

<sup>2</sup> In Cuba, employment is managed by a state-owned agency; Sherritt does not have these data.

<sup>3</sup> “Other” includes our Bahamian marketing office, which services the Moa Joint Venture, and OGP Spain.

<sup>4</sup> Grade 12 represents administrative and support workers who are overtime eligible at Sherritt.

Disclosure Components	Canada	Cuba	Other <sup>2</sup>	Total Sherritt
<b>Employee turnover (%)</b>				
Men	16.35%	22.73%	25.00%	17.11%
Women	22.93%	–	–	21.30%
<b>Voluntary turnover (%)<sup>1</sup></b>				
Men	13.17%	6.82%	25.00%	13.13%
Women	17.83%	–	–	16.57%
<b>Involuntary turnover (%)</b>				
Men	3.17%	15.91%	–	3.98%
Women	5.10%	–	–	4.73%

<sup>1</sup> Voluntary turnover includes short-term employment contracts.

<sup>2</sup> “Other” includes our Bahamian marketing office, which services the Moa Joint Venture, and OGP Spain.

401-3

Parental leave

[View Data Table](#) 



## PARENTAL LEAVE

Disclosure Components	Canada	Cuba	Other <sup>2</sup>	Total Sherritt
<b>Number of employees who took parental leave<sup>1</sup></b>				
Men	5	–	–	5
Women	5	–	–	5
<b>Number of employees who returned to work after parental leave ended</b>				
Men	5	–	–	5
Women	5	–	–	5
<b>Return-to-work and retention rate of employees who took parental leave (%)</b>				
Men	100%	–	–	100%
Women	100%	–	–	100%
<sup>1</sup> Parental leave includes maternity leave and parental leave. Does not include paid new parental leave (employees who are not otherwise eligible for maternity leave, including employees who are fathers or partners who become parents).				
<sup>2</sup> “Other” includes our Bahamian marketing office, which services the Moa Joint Venture, and OGP Spain.				

### Material Topic: Labour/Management Relations

103 Management approach disclosures [Providing a Safe and Rewarding Workplace – Employee Relations](#)

402-1 Minimum notice periods regarding operational changes [Providing a Safe and Rewarding Workplace – Employee Relations](#)



[View Data Table](#)

#### MINIMUM NOTICE PERIODS REGARDING OPERATIONAL CHANGES

Disclosure Components	Fort Site	Moa Nickel Site	OGP
Minimum number of weeks' notice typically provided to employees and their elected representatives prior to the implementation of significant operational changes that could substantially affect them	2 weeks (not specified in collective agreement)	2 months (standard requirement of state-run employment agency) and additional guidance provided by Cuba's Ministry of Labour and Social Security	2 months (standard requirement of state-run employment agency) and additional guidance provided by Cuba's Ministry of Labour and Social Security

MM4 Number of strikes and lock-outs exceeding one week's duration, by country [Providing a Safe and Rewarding Workplace – Employee Relations](#)



[View Data Table](#)

## NUMBER OF STRIKES AND LOCK-OUTS EXCEEDING ONE WEEK'S DURATION, BY COUNTRY

Disclosure Components	Fort Site	Moa Nickel Site	OGP	Corporate
Total number of strikes and lock-outs that exceeded one week's duration during the reporting period, by country	-	-	-	-

### Material Topic: Occupational Health and Safety

103 Management approach disclosures [Providing a Safe and Rewarding Workplace – Health and Safety](#)

[Providing a Safe and Rewarding Workplace – Public Safety](#)

403-2 Types of injury and rates of injury, occupational diseases, lost days and absenteeism, and total number of work-related fatalities

[Providing a Safe and Rewarding Workplace – Health and Safety](#)



[View Data Table](#)

### TYPES OF INJURY AND RATES OF INJURY, OCCUPATIONAL DISEASES, LOST DAYS AND ABSENTEEISM, AND TOTAL NUMBER OF WORK-RELATED FATALITIES<sup>1</sup>

Disclosure Components	Fort Site	Moa Nickel Site	OGP		Corporate	Total Sherritt
			O&G	Power		
<b>Number of work-related fatalities</b>						
Employees	-	-	-	-	-	-
Contractors and other workers	-	-	-	-	-	-
Total	-	-	-	-	-	-
<b>Number of lost time incidents</b>						
Employees	1	2	-	-	-	3
Contractors and other workers	-	-	-	-	-	-
Total	1	2	-	-	-	3
<b>Lost time incident (LTI) index<sup>2</sup></b>						
Employees	0.14	0.1	-	-	-	0.09
Contractors and other workers	-	-	-	-	-	-
Total	0.12	0.08	-	-	-	0.07

Number of total recordable incidents						
Employees	7	7	-	2	-	16
Contractors and other workers	-	1	2	1	-	4
Total	7	8	2	3	-	20
Total recordable incident (TRI) index <sup>3</sup>						
Employees	1.01	0.34	-	0.60	-	0.47
Contractors and other workers	-	0.23	1.66	1.47	-	0.50
Total	0.87	0.32	0.47	0.74	-	0.47

<sup>1</sup> All sites are applying the U.S. Occupational Safety & Health Administration (OSHA) general recording criteria. Reference Standard 29 CFR section 1904.7. The Sherritt standard is aligned with this system of rules. We did not track occupational disease rates in 2019, and we currently do not track these data by gender.

<sup>2</sup> LTI index = # LTI \* 200,000/SUM (exposure hours for the year).

<sup>3</sup> Minor (first-aid level) injuries are not included in the TRI index.

“Employees” include: Sherritt and GNC employees seconded to the Moa Joint Venture (100% basis) and employees of the entities through which the Corporation carries on its Oil & Gas business, and employees of Energas.

“Contractors and other workers” include: contractors and other workers not included in the “Employees” category.

SI-4

Emergency preparedness

Providing a Safe and Rewarding Workplace – Public Safety



[View Data Table](#)

## EMERGENCY PREPAREDNESS

Disclosure Components	Fort Site	Moa Nickel Site	OGP	Corporate
Sites with crisis communication plans	Y	Y	Y	Y
Sites with crisis/emergency preparedness and response plans	Y	Y	Y	Y

## Material Topic: Diversity and Equal Opportunity

103

Management approach disclosures

Providing a Safe and Rewarding Workplace – Employee Relations

405-1

Diversity of governance bodies and employees

Providing a Safe and Rewarding Workplace – Employee Relations



[View Data Table](#)



## DIVERSITY OF GOVERNANCE BODIES AND EMPLOYEES

Disclosure Components	Total Sherritt
<b>Percentage of individuals within the organization's governance bodies (board members)</b>	
Male	71%
Female	29%
Under 30 years old	-
30-50 years old	14.3%
Over 50 years old	85.7%
Minority groups <sup>1</sup>	Not reported
<sup>1</sup> Board members that self-identify as Aboriginal, as persons with a disability, or as a visible minority as defined in Canada's Employment Equity Act.	

Disclosure Components <sup>1</sup>	Canada <sup>2</sup>	Cuba
<b>Percentage of employees</b>		
Male	80%	92%
Female	20%	8%
<sup>1</sup> Includes Sherritt employees and Cuban local national employees.		
<sup>2</sup> Includes permanent employees for the Fort Site, OGP Calgary and the Corporate office.		

Disclosure Components <sup>1,2</sup>	Metals (Fort Site only) <sup>3</sup>	OGP <sup>4</sup>	Corporate <sup>5</sup>	Commercial and Technologies
<b>Percentage of employees</b>				
Under 30 years old	14%	3%	6%	7%
30-50 years old	46%	47%	61%	55%
Over 50 years old	40%	50%	33%	38%
<sup>1</sup> Includes Sherritt employees and Cuban local national employees.				
<sup>2</sup> Sherritt does not currently track percentage of minority groups for its divisions; however, local employment is the majority at all of Sherritt's sites globally.				
<sup>3</sup> Excludes the Moa Nickel Site.				
<sup>4</sup> Does not include Spain, consultants or local nationals.				
<sup>5</sup> Does not include consultants or local nationals.				

## RATIO OF BASIC SALARY AND REMUNERATION OF WOMEN TO MEN

Disclosure Components	Canada (Fort Site and Corporate offices)		Cuba (Moa Nickel and OGP) <sup>2</sup>		Other <sup>3</sup>	
	Average Basic Salary	Average Total Direct Compensation	Average Basic Salary	Average Total Direct Compensation	Average Basic Salary	Average Total Direct Compensation
	Male : Female	Male : Female	Male : Female	Male : Female	Male : Female	Male : Female
<b>Ratio of basic salary and total direct compensation by employment level<sup>1</sup>:</b>						
Hourly employees	1:0.9	1:0.9	Not available	Not available	Not available	Not available
Support (grade 12) <sup>4</sup>	1:1	1:1	Not available	Not available	Not available	Not available
Professional/management	1:0.9	1:0.9	Not available	Not available	Not available	Not available
Executive	1:1	1:1	Not available	Not available	Not available	Not available
<p><sup>1</sup> For each group of salaried employees, the weighted average job grade in that category was analyzed to determine the Total Direct Compensation ratio.</p> <p><sup>2</sup> In Cuba, employment is managed by a state-owned agency; Sherritt does not have these data.</p> <p><sup>3</sup> “Other” includes our Bahamian marketing office, which services the Moa Joint Venture, and OGP Spain.</p> <p><sup>4</sup> Grade 12 represents administrative and support workers who are overtime eligible at Sherritt.</p>						

**SOCIAL PERFORMANCE: HUMAN RIGHTS**

GRI Indicator	Description	Location	SDG
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**Material Topic: Non-Discrimination**

103 Management approach disclosures Providing a Safe and Rewarding Workplace – Employee Relations

406-1 Incidents of discrimination and corrective actions taken Providing a Safe and Rewarding Workplace – Employee Relations



[View Data Table](#)

**INCIDENTS OF DISCRIMINATION AND CORRECTIVE ACTIONS TAKEN**

Disclosure Components	Fort Site	Moa Nickel Site	OGP
Number of incidents of discrimination on grounds of race, colour, sex, religion, political opinion, national extraction, or social origin as defined by the ILO, or other	-	Incidents of discrimination in Cuba are handled by the state employment agency that provides Sherritt's businesses and joint ventures on the island-nation with workers. The employment agency will require the involvement of Sherritt and/or its joint venture partners in discrimination cases, as appropriate. Such involvement has occurred in previous years.	

**Material Topic: Freedom of Association and Collective Bargaining**

103 Management approach disclosures Providing a Safe and Rewarding Workplace – Employee Relations

407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk Providing a Safe and Rewarding Workplace – Employee Relations



[View Data Table](#)

OPERATIONS AND SUPPLIERS IN WHICH THE RIGHT TO FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING MAY BE AT RISK

Disclosure Components	Fort Site	Moa Nickel Site	OGP
Measures taken by the organization in the reporting period intended to support rights to exercise freedom of association and collective bargaining	Unionized employees are represented by Unifor Local 530A. In April 2016, a three-year agreement came into effect. In 2019, the agreement was extended for a one-year period (until March 2020), and in late 2019 the union provided notice to bargain in 2020.		All Cuban employees hired through national agency.

Material Topic: Child Labour

103 Management approach disclosures [Operating Ethically – Human Rights](#)

408-1 Operations and suppliers at significant risk for incidents of child labour [Operating Ethically – Human Rights](#)



[View Data Table](#)

OPERATIONS AND SUPPLIERS AT SIGNIFICANT RISK FOR INCIDENTS OF CHILD LABOUR


Disclosure Components	Fort Site	Moa Nickel Site	OGP
Measures taken by the organization in the reporting period intended to contribute to the effective abolition of child labour	In Canada, the use of child labour is controlled under labour laws.		In 2015, Cuba ratified the ILO’s Worst Forms of Child Labour Convention, which calls for the prohibition and elimination of the worst forms of child labour, including slavery, trafficking, the use of children in armed conflict, the use of a child for prostitution, pornography and illicit activities (such as drug trafficking) as well as in hazardous work. Cuban legislation prohibits child labour and establishes 17 years old as the minimum age of employment.

Material Topic: Security Practices

103 Management approach disclosures [Providing a Safe and Rewarding Workplace – Site Security](#)

410-1 Security personnel trained in human rights policies or procedures

Providing a Safe and Rewarding Workplace – Site Security

[View Data Table](#) 



SECURITY PERSONNEL TRAINED IN HUMAN RIGHTS POLICIES OR PROCEDURES

Disclosure Components	Fort Site	Moa Nickel Site	OGP
Percentage of security personnel who have received formal training in the organization’s human rights policies or specific procedures and their application to security	100%	Security is provided by the Cuban state and Sherritt has no authority over their training.	


Material Topic: Human Rights Assessment

103 Management approach disclosures

Operating Ethically – Human Rights

412-1 Operations that have been subject to human rights reviews or impact assessments

Operating Ethically – Human Rights




[View Data Table](#) 



OPERATIONS THAT HAVE BEEN SUBJECT TO HUMAN RIGHTS REVIEWS OR IMPACT ASSESSMENTS

Disclosure Components	Fort Site	Moa Nickel Site	OGP
Total number of operations that have been subject to human rights reviews or human rights impact assessments in country	1	–	–
Percentage of operations that have been subject to human rights reviews or human rights impact assessments in country	100%	–	–

**SOCIAL PERFORMANCE: SOCIETY**

GRI Indicator	Description	Location	SDG
<b>Material Topic: Local Communities</b>			
103	Management approach disclosures	<p>Engaging Stakeholders and Benefitting Communities – Stakeholder Engagement</p> <p>Engaging Stakeholders and Benefitting Communities – Community Development</p>	
413-1	Operations with local community engagement, impact assessments and development programs	<p>Engaging Stakeholders and Benefitting Communities – Stakeholder Engagement</p> <p><a href="#">View Data Table</a> </p>	 

OPERATIONS WITH LOCAL COMMUNITY ENGAGEMENT, IMPACT ASSESSMENTS AND DEVELOPMENT PROGRAMS

Disclosure Components	Fort Site	Moa Nickel Site	OGP
<b>Percentage of operations with</b>			
Implemented local community engagement, impact assessments and development programs	✓	✓	✓
Social impact assessments, including gender impact assessments, based on participatory processes	-	-	-
Environmental impact assessments and ongoing monitoring	✓	-	✓
Public disclosure of results of environmental and social impact assessments	-	-	-
Local community development programs based on local communities' needs	✓	✓	✓
Stakeholder engagement plans based on stakeholder mapping	✓	-	✓
Broad-based local community consultation committees and processes that include vulnerable groups	-	-	-
Works councils, occupational health and safety committees and other employee representation bodies to deal with impacts	✓	-	-
Formal local community grievance processes	✓	In Cuba, there is a state-run system where citizens can file complaints against an entity, organization or enterprise whose activities they feel are adversely affecting their well-being.	
Implemented local community engagement impact assessments and development programs	✓	-	-

SI-5 Number of community meetings

[Engaging Stakeholders and Benefitting Communities – Stakeholder Engagement](#)

[View Data Table](#) 

NUMBER OF COMMUNITY MEETINGS

Disclosure Components	Fort Site	Moa Nickel Site	OGP
Number of community meetings	22	7	14

## Material Topic: Artisanal and Small-Scale Mining

MM8 Number and percentage of company operating sites where artisanal and small-scale mining takes place on, or adjacent to, the site; the associated risks and the action taken to manage and mitigate these risks

[View Data Table](#) 



### NUMBER AND PERCENTAGE OF COMPANY OPERATING SITES WHERE ARTISANAL AND SMALL-SCALE MINING TAKES PLACE ON, OR ADJACENT TO, THE SITE; THE ASSOCIATED RISKS AND THE ACTION TAKEN TO MANAGE AND MITIGATE THESE RISKS

Disclosure Components	Cuba
Where ASM takes place on or adjacent to company sites, or presents risks to the company's operations	To the best of management's knowledge, artisanal and small-scale mining does not exist in Cuba.

## Material Topic: Resettlement

MM9 Sites where resettlements took place, the number of households resettled in each, and how their livelihoods were affected in the process

[View Data Table](#) 



### SITES WHERE RESETTLEMENTS TOOK PLACE, THE NUMBER OF HOUSEHOLDS RESETTLED IN EACH, AND HOW THEIR LIVELIHOODS WERE AFFECTED IN THE PROCESS

Disclosure Components	Moa Nickel Site
Sites where resettlement of a community occurred	-
Number of households involved in any resettlement program	-
Number of individuals involved in any resettlement program	-
Consultation processes and measures put in place to re-establish the affected community and mitigate any impacts of relocation, and the outcomes in terms of livelihoods, including sustainable land use	No resettlement occurred in 2019.
Significant disputes related to resettlement and the processes employed to resolve outstanding issues	-



## Material Topic: Closure Planning

103 Management approach disclosures [Demonstrating Environmental Responsibility – Environmental Liabilities, Closure and Reclamation](#)  
[2019 Annual Information Form – Description of the Business](#)

MM10 Number and percentage of operations with closure plans [Demonstrating Environmental Responsibility – Environmental Liabilities, Closure and Reclamation](#)



[View Data Table](#)

### NUMBER AND PERCENTAGE OF OPERATIONS WITH CLOSURE PLANS

Disclosure Components	Units	Fort Site <sup>1</sup>	Moa Nickel Site	OGP
Operations within the division that have closure plans	%	100	100	OGP sites revert to the Cuban state upon closure.
	#	1	1	OGP sites revert to the Cuban state upon closure.

<sup>1</sup> As part of the provincial operating approval, a closure plan outlining approaches on reclamation and/or remediation is required. In 2017, the Fort Site developed an appropriate plan for the site. This plan was included in the Operating Approval renewal application submitted in 2018.

## Material Topic: Oil & Gas

OG1 Volume and type of estimated proven reserves and production [2019 Annual Information Form – Description of the Business](#)

OG4 Number and percentage of significant operating sites in which biodiversity risk has been assessed and monitored

[View Data Table](#)



NUMBER AND PERCENTAGE OF SIGNIFICANT OPERATING SITES IN WHICH BIODIVERSITY RISK HAS BEEN ASSESSED AND MONITORED

Disclosure Components	Oil & Gas
Criteria used to define priority sites for biodiversity conservation and where significant biodiversity risk requires Biodiversity Action Plans to be in place	As regulated
Biodiversity Action Plan methodology (e.g., definitions, baseline assessments, management plans, protected areas, endemic species' habitats, endangered species)	As regulated
Number and percentage of significant operating sites where biodiversity risk has been assessed	5 sites currently 100%
Number and percentage of significant operating sites exposed to significant biodiversity risk	-
Number and percentage of significant operating sites exposed to significant biodiversity risk in which Biodiversity Action Plans have been implemented and monitored	-

OG5 Volume and disposal of formation or produced water

[View Data Table](#) 



VOLUME AND DISPOSAL OF FORMATION OR PRODUCED WATER

Disclosure Components	Oil & Gas
Total volume of produced water	446,258 m <sup>3</sup>
Volume and percentage of produced water by disposal method (including reused, recycled, re-injected)	435,007 m <sup>3</sup> injected – 2,340 m <sup>3</sup> evaporation pit
Strategies and criteria for disposal and treatment, and standards used for quality of produced water discharged, including hydrocarbon and salinity	Produced water is metered and injected back into formation zones. Slight variance between produced and disposal water volumes as the disposal meters are +/-5% accurate.
Note: Volume of hydrocarbon discharged within produced water is not measured at this time.	

OG6 Volume of flared and vented hydrocarbon

[View Data Table](#) 



## VOLUME OF FLARED AND VENTED HYDROCARBON

Disclosure Components	Oil & Gas
Volume of flared hydrocarbon (Mm <sup>3</sup> )	66 <sup>1</sup>
Volume of continuously flared hydrocarbon broken down by country (Mm <sup>3</sup> )	31 <sup>2</sup>
Volume of vented hydrocarbon	-
Volume of continuously vented hydrocarbon broken down by country	-

<sup>1</sup> The volume of flared hydrocarbon increased because of the sulphur unit outage in Varadero. When H<sub>2</sub>S is flared, additional gas has to be mixed with it to maintain ground-level dispersion.

<sup>2</sup> The reported volume of continuously flared hydrocarbon decreased because of changes in production.

OG7 Amount of drilling waste and strategies for treatment and disposal

[View Data Table](#) 



### AMOUNT OF DRILLING WASTE (DRILL MUD AND CUTTINGS) AND STRATEGIES FOR TREATMENT AND DISPOSAL

Disclosure Components	Oil & Gas
Total amount of drill mud and cuttings (in tonnes) produced using non-aqueous drilling fluid	Cupet - 1,228 m <sup>3</sup> OG - 260 m <sup>3</sup>
Total amount of drill mud and cuttings produced (in tonnes) using aqueous drilling fluid, by disposal method	1,488 m <sup>3</sup>
Treatment, disposal and minimization strategies	Evaporation pond for liquids. Solids are reclaimed, treated and land farmed.

OG11 Number of sites that have been decommissioned and sites that are in the process of being decommissioned

[View Data Table](#) 



NUMBER OF SITES THAT HAVE BEEN DECOMMISSIONED AND SITES THAT ARE IN THE PROCESS OF BEING DECOMMISSIONED

Disclosure Components	Oil & Gas
Number of sites (broken down into offshore and onshore) and total land area of sites (onshore only) for both active and inactive sites	No sites were decommissioned in 2019.
Criteria for defining inactive sites	End of contract
Percentage of active sites that have decommissioning plans in place	Assets are transferred to state partner at end of contract.
Decommissioning approach (e.g., plans for land owners, labour transition, finance, community infrastructure, environment remediation and government sign-off, post-decommissioning monitoring and aftercare)	Assets are transferred to state partner at end of contract.
Complaints on outstanding local community issues or government notices on decommissioning	Not applicable

OG13 Number of process safety events, by business activity

[View Data Table](#) 



NUMBER OF PROCESS SAFETY EVENTS, BY BUSINESS ACTIVITY

Disclosure Components	Oil & Gas
Number of Tier 1 process safety events with narrative per API RP 754 definitions and reported per business activity (refining, upstream, etc.)	None
Number of Tier 2 process safety events with narrative per API RP 754 definitions and reported per business activity (refining, upstream, etc.)	None
Report on asset integrity monitoring and maintenance program, including progress against actions identified	Energas – 100% of PM program completed. OG – Yearly UT program in place to test wall thickness.

# UNITED NATIONS GLOBAL COMPACT (UNGC) COMMUNICATION OF PROGRESS

Please see [www.unglobalcompact.org](http://www.unglobalcompact.org) for more information on the UNGC.

UN Global Compact Principles Reference	Location/Description
<p><b>PRINCIPLE 1: HUMAN RIGHTS</b></p> <p>Businesses should support and respect the protection of internationally proclaimed human rights.</p>	<p>Operating Ethically – Human Rights</p> <p>102-41</p> <p>406-1</p> <p>410-1</p> <p>412-1</p> <p>413-1</p>
<p><b>PRINCIPLE 2: HUMAN RIGHTS</b></p> <p>Businesses should make sure that they are not complicit in human rights abuses.</p>	<p>Operating Ethically – Human Rights</p> <p>Providing a Safe and Rewarding Workplace – Site Security</p> <p>Case Study – Implementing the Voluntary Principles Initiative</p>
<p><b>PRINCIPLE 3: LABOUR</b></p> <p>Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.</p>	<p>Providing a Safe and Rewarding Workplace – Employee Relations</p> <p>102-41</p> <p>402-1</p> <p>407-1</p> <p>MM4</p>
<p><b>PRINCIPLE 4: LABOUR</b></p> <p>Businesses should uphold the elimination of all forms of forced and compulsory labour.</p>	<p>Operating Ethically – Business Conduct</p> <p>Providing a Safe and Rewarding Workplace – Employee Relations</p>

UN Global Compact Principles Reference	Location/Description
<p><b>PRINCIPLE 5: LABOUR</b></p> <p>Businesses should uphold the effective abolition of child labour.</p>	<p>Our Approach – Sustainability Framework – Management Systems</p> <p>Operating Ethically – Human Rights</p> <p>408-1</p>
<p><b>PRINCIPLE 6: LABOUR</b></p> <p>Businesses should uphold the elimination of discrimination in respect of employment and occupation.</p>	<p>Providing a Safe and Rewarding Workplace – Employee Relations</p> <p>102-8</p> <p>202-2</p> <p>405-1</p> <p>406-1</p> <p>Case Study – Committed to Pay Equity and Promotion</p>
<p><b>PRINCIPLE 7: ENVIRONMENT</b></p> <p>Businesses should support a precautionary approach to environmental challenges.</p>	<p>Demonstrating Environmental Responsibility</p> <p>201-2</p> <p>302-1</p> <p>303-1</p> <p>305-1</p> <p>305-2</p> <p>305-7</p> <p>MM2</p> <p>MM10</p> <p>Case Study – Rehabilitation and Reclamation in Moa, Cuba</p> <p>Case Study – Tarea Vida – Tackling Climate Change</p>

UN Global Compact Principles Reference	Location/Description
<b>PRINCIPLE 8: ENVIRONMENT</b>	Demonstrating Environmental Responsibility
Businesses should undertake initiatives to promote greater environmental responsibility.	302-1
	303-1
	304-1
	304-2
	304-3
	305-1
	305-2
	305-7
	306-3
	307-1
	MM1
	MM2
	Case Study – Cleaning the Ocean as We Go in Cuba
	Case Study – Tarea Vida – Tackling Climate Change
	Case Study – Rehabilitation and Reclamation in Moa, Cuba
	Case Study – Making Sustainability Month an Annual Tradition
	Case Study – Volunteering Program in Moa – Serving the Communities Around Us
	Case Study – Forward Looking Innovation for Responsible Processing
<b>PRINCIPLE 9: ENVIRONMENT</b>	Case Study – Clean Development Mechanism Credits in Cuba
Businesses should encourage the development and diffusion of environmentally friendly technologies.	Case Study – Forward Looking Innovation for Responsible Processing
	Case Study – Cleaning the Ocean as We Go in Cuba
	Case Study – Tarea Vida – Tackling Climate Change

UN Global Compact Principles Reference	Location/Description
<b>PRINCIPLE 10: ANTI-CORRUPTION</b>	Operating Ethically – Business Conduct
Businesses should work against corruption in all its forms, including extortion and bribery.	102-16
	205-2



# THE ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD)

Please see [www.oecd.org](http://www.oecd.org) for more information on the OECD.

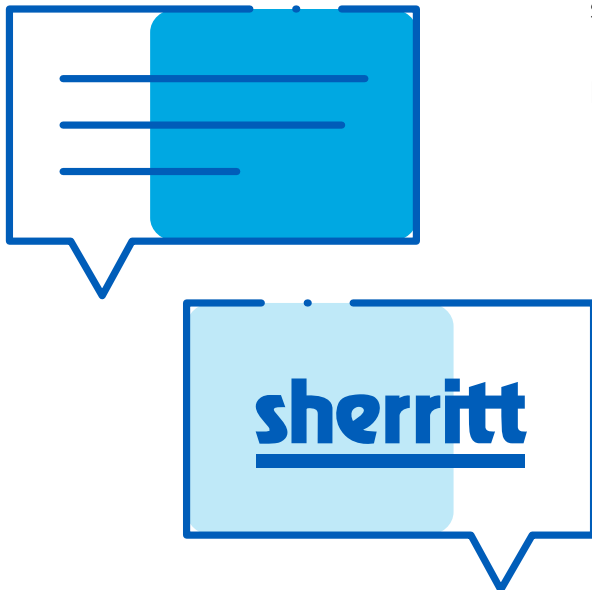
OECD	Location
OECD IV. Human Rights	Operating Ethically – Human Rights
	102-41
	406-1
	410-1
OECD V. Employment and Industrial Relations	412-1
	Providing a Safe and Rewarding Workplace – Employee Relations
	102-8
	202-2
OECD VI. Environment	405-1
	Demonstrating Environmental Responsibility
	303-1
	304-3
	305-1
	305-7
	306-3
	307-1
MM1	
MM2	

OECD	Location
OECD VII. Combatting Bribery, Bribe Solicitation and Extortion	<a href="#">Operating Ethically – Business Conduct</a> <a href="#">205-2</a>
OECD VIII. Consumer Interest	<a href="#">2019 Annual Information Form</a> <a href="#">2019 Financial Results</a>
OECD IX. Science and Technology	<a href="#">About Sherritt – Divisions and Products</a> <a href="#">2019 Annual Information Form – Section 3.4</a>
OECD X. Competition	<a href="#">Operating Ethically – Business Conduct</a> <a href="#">2019 Annual Information Form – Section 3.8</a>
OECD XI. Taxation	<a href="#">Engaging Stakeholders and Benefitting Communities</a> <a href="#">201-1</a> <a href="#">2019 Annual Information Form – Section 3.8</a>



# About Sherritt

Sherritt International Corporation, based in Toronto, Canada, is a world leader in the mining and refining of nickel from lateritic ores with operations in Canada and Cuba. The company is the largest independent energy producer in Cuba, with extensive oil and power operations on the island. Sherritt licenses its proprietary technologies and provides metallurgical services to commercial metals operations worldwide. The common shares of the Corporation are listed on the Toronto Stock Exchange, trading under the symbol “S”, and are widely held by both institutional and retail investors.



## In This Section

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**MAP AND DESCRIPTION**

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**DIVISIONS AND PRODUCTS**

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**2019 KEY INDICATORS**

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**OUR HISTORY**

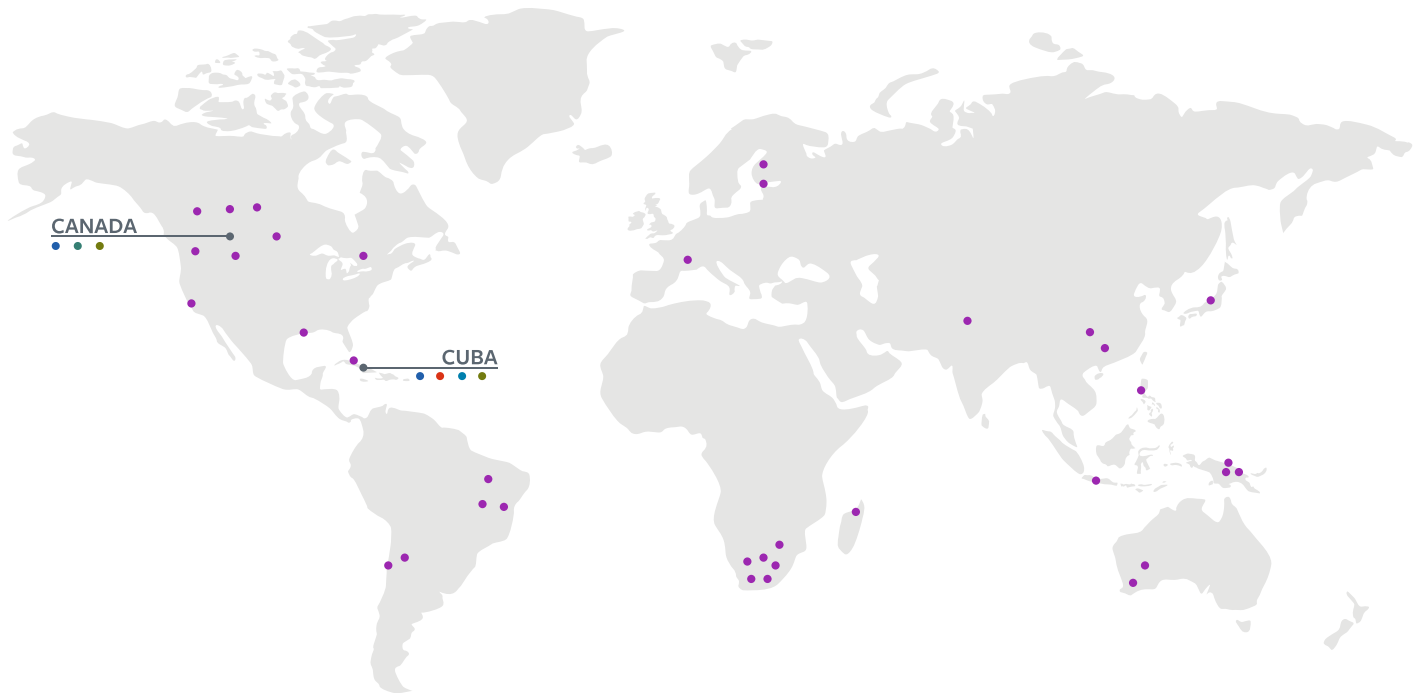
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**ECONOMIC PERFORMANCE**

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**OUR SUPPLY CHAIN**

# MAP AND DESCRIPTION



<b>METALS</b>	<b>OIL &amp; GAS</b>
<b>POWER</b>	<b>TECHNOLOGIES</b>
<b>OFFICES</b>	<p>● <b>COMMERCIAL OPERATIONS DEVELOPED WITH SHERRITT TECHNOLOGIES</b></p>

Incorporated in 1927 as Sherritt Gordon Mines Limited, Sherritt has deep Canadian roots; it is one of the oldest Canadian-owned metals producers still in operation. Sherritt International was established in 1995 as the commodity metals and technologies successor to the original Sherritt Gordon Mines Limited. Refer to “Sherritt’s History”, below, for more information.

# SHERRITT'S HISTORY – KEY DATES AND EVENTS

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**1927**



Sherritt Gordon Mines Limited is incorporated to develop resources, principally base metals.

**1930**

Sherridon Development Company is formed to provide services and build the Town of Sherridon, Manitoba.

**1931**

Sherridon mine production begins, shipping copper concentrate to the new nearby Hudson Bay copper smelter.

**1941**



First significant discovery of nickel at Lynn Lake, Manitoba.

**1946**

Sherridon mining and milling equipment is transferred to a new nickel mine site at Lynn Lake.

## 1947

Sherritt begins to fund the University of British Columbia (UBC) to experiment with hydrometallurgical techniques for ore processing.

## 1948

UBC discovers a direct ammonia leach method that has the potential to simplify the processing of nickel concentrates.

## 1949

Sherritt builds a pilot plant in Ottawa to further develop the ammonia leach process.

## 1950

Sherritt builds a second pilot plant, incorporating the hydrogen-reduction process pioneered by Chemical Construction Corp.

## 1951

Sherritt provides partial funding for the Canadian National Railway (CNR) to construct a railway line from Sherridon to Lynn Lake. Sherritt builds a third pilot plant in Ottawa to finalize the design for a commercial refinery. Closure of the Sherridon mine takes place.

## 1952

Construction begins on the refinery at Fort Saskatchewan, Alberta. The site was chosen for its abundant supplies of water and natural gas (required to make the ammonia for the refinery), its location on the CNR line and availability of skilled labour.

## 1953

Ore production from the Lynn Lake mine begins and concentrate is shipped by rail from Manitoba to Alberta.

## 1954

Construction and start-up of the nickel refinery, including production facilities for by-product fertilizer, are completed at the Fort Site.

## 1955

Sherritt's research division is transferred from Ottawa to Fort Saskatchewan; pilot plant equipment is transferred to form the basis of a cobalt refinery. Inland Chemicals builds a 100 tonnes/day sulphuric acid plant to supply the Fort Saskatchewan refinery.

## 1957

Sherritt buys hydrometallurgical technology patents from Chemical Construction, including those used in the Moa Nickel Site, then under construction.

## 1961

Sherritt develops a coinage business, starting with shipments of nickel blanks from Fort Saskatchewan's rolling mill to the Royal Canadian Mint. Within a decade, the rolling mill is producing coin blanks for multiple countries as well as commemorative medallions. Sherritt conducts its first external technologies project, developing a nickel process for Marinduque Iron Mines in the Philippines.

## 1962–65

Sherritt expands its ammonia plant, constructs two urea production trains (120 and 150 tonnes/day), and expands into the phosphate fertilizer business with a new phosphate plant at the Fort Site, using phosphate rock imported from Florida.

## 1967

Sherritt licenses its process for acid pressure leaching of nickel-cobalt sulphides to Outokumpo in Finland.

## 1968–69

Sherritt starts construction on the Fox copper mine and the Ruttan copper-zinc mine in Manitoba.

## 1969

Sherritt licenses its ammonia pressure leach process for nickel concentrates and mattes to Western Mining Corp. in Australia, and its acid pressure leaching process for PGM-bearing nickel-copper mattes to Impala Platinum in South Africa. Sherritt starts pilot testing its laterite leach process for the Marinduque project.

## 1970–73

Shipment of concentrates from the Fox mine and the Ruttan mine begins.

## 1974

Production begins of refined nickel from the Surigao nickel laterite project in the Philippines (the mine was on Dinagat Island and the refinery on Nonoc Island), under licence from Sherritt. This is the first commercial production of refined nickel directly from laterite ore.

## 1976

Closure of the Lynn Lake mine takes place. Sherritt's nickel refinery becomes a toll processor. Sherritt purchases Thio-Pet Chemicals, a producer of hydrogen sulphide used in the Fort Saskatchewan refinery. Sherritt begins producing nickel-bonded steel coinage products and ultrafine cobalt powder.

## 1978

Sherritt produces medals and commemorative medallions for the Commonwealth Games.

## 1979

Sherritt presents the City of Fort Saskatchewan with a clock tower to celebrate 25 years of operation. Sherritt begins production of cobalt-samarium powder for rare-earth magnets.

## 1980

Sherritt debottlenecks the sulphuric acid plant to achieve a production rate of 600 tonnes/day. (Subsequent work through the 1990s/2000s results in an 800 tonnes/day operation.)

## 1981

The first zinc pressure leach plant, at Cominco in Trail, British Columbia, is commissioned. Other facilities follow over the next 12 years at Kidd Creek in Ontario, Ruhr-Zink in Germany and Hudson's Bay Mining and Smelting in Manitoba. New NBS coinage plant opens, increasing capacity by a factor of five. TuffStuds enters commercial production.

## 1982

Commissioning of Rustenburg matte leach refinery takes place in South Africa, under licence from Sherritt.

## 1983

Sherritt commissions a new world-scale (1,000 tonnes/day ammonia, 900 tonnes/day urea) nitrogen fertilizer plant in Alberta. Impala Platinum cobalt refinery in South Africa and Kidd Creek zinc pressure leach facility in Canada are commissioned, under licence from Sherritt.

## 1985

Fox mine closes. Sherritt creates and floats SherrGold, retaining a 60% interest. Start-up of Western Platinum matte leach refinery in South Africa occurs, under licence from Sherritt.

## 1986

The Fort Saskatchewan refinery celebrates one billion pounds of cumulative nickel production. Start-up of SherrGold's MacLellan gold mine occurs. The Surigao nickel refinery is officially closed.

## 1987

The aureate-bonded nickel coinage plant opens, contracted to supply Canadian "loonie" dollar coin blanks. Sherritt acquires United Chemical Company. Ruttan mine is sold to Hudson's Bay Mining and Smelting.

## 1988

The company sells its interest in SherrGold and is renamed Sherritt Gordon Limited. Ultrafine copper pilot plant is commissioned.

## 1989

Sherritt and the governments of Alberta and Canada create Westaim, a co-operative venture designed to develop new advanced-materials technologies. NBS coinage plant capacity is doubled. Ultrafine copper commercial plant is commissioned.

## 1990

Major investor Ian Delaney leads a successful proxy contest for control of Sherritt.



## 1991

Sherritt acquires Canada Northwest Energy Limited, a Calgary-based producer of oil and natural gas. The company begins acquiring feed from a nickel mine in Moa, Cuba, for the Fort Saskatchewan refinery.

## 1993

Sherritt Gordon Limited is renamed Sherritt Inc. Sherritt completes an extensive refurbishment and expansion of its Fort Saskatchewan nickel and cobalt refinery to allow for efficient processing of mixed sulphides from the Moa Nickel Site, Cuba.

## 1994

Sherritt acquires fertilizer assets from Imperial Oil Limited and becomes the largest producer of nitrogen and phosphate fertilizers in Canada and one of the largest fertilizer producers in the world. Sherritt extends its nickel and cobalt refining business into a vertically integrated mining/refining business in a joint venture with the General Nickel Company of Cuba.

## 1995

Sherritt Inc. creates Sherritt International Corporation, an independent Canadian public company. Sherritt Inc. retains the fertilizer business, Canadian oil and gas properties and the specialty metals and technology businesses.

## 1996

Sherritt Inc. changes its name to Viridian Inc., which merges with a wholly owned subsidiary of Agrium Inc. Sherritt International acquires certain utilities, fertilizer and other assets in Fort Saskatchewan, from which it produces and sells fertilizer, and supplies inputs and utilities to the nickel and cobalt refinery.

## 1997

Sherritt acquires Dynatec International Ltd. and merges it with Sherritt's metallurgical consulting business, creating Dynatec Corporation, which is spun out as a separate public company.

## 1998

Sherritt creates Sherritt Power Corporation, which constructs and operates power generating facilities in Cuba through a one-third ownership in Energas S.A.

## 2000

The Fort Site stops effluent discharge to the river; effluent flows to the Alberta Capital Region Wastewater Treatment Facility via the City of Fort Saskatchewan's collection system.

## 2001

Sherritt and a partner acquire Canada's largest coal producer, Luscar Ltd., creating the Luscar Energy Partnership.

## 2003

The Luscar Energy Partnership acquires the Canadian thermal coal assets of Fording Inc. The Fort Site's ammonium phosphate plant is converted to produce granular ammonium sulphate.

## 2004

Sherritt celebrates 50 years of operation at the Fort Saskatchewan refinery (now COREFCO). Through its minority interest in Energas, Sherritt begins construction on an 85 MW expansion in Cuba.

## 2005

The Fort Saskatchewan refinery (now COREFCO) celebrates two billion pounds of cumulative nickel production. A two million tonne expansion of the Coal Valley mine is announced; construction is completed the next year.

## 2006

The metals expansion project is initiated at the Moa Nickel Site, Cuba. At Energas, an 85 MW power expansion is completed and a new 65 MW expansion begins.

## 2007

Sherritt acquires Dynatec Corporation, including its 40% ownership in the Ambatovy Nickel Project. Sherritt Technologies is formed, including the former Dynatec Metallurgical Technologies operations, to utilize and license the Corporation's 50-plus years of hydrometallurgical research, development and commercial process implementation. The 65 MW power expansion is completed in Cuba.

## 2008

The 150 MW power expansion at Boca de Jaruco in Cuba commences.

## 2011

Construction at Ambatovy is completed.

## 2012

Production of finished nickel and cobalt commences at Ambatovy.

## 2014

Sherritt achieves commercial production at Ambatovy. Sherritt sells its coal business.

## 2015

Sherritt achieves a production test milestone and financial completion at Ambatovy.

## 2017

Sherritt celebrates 90 years in business in Canada.

## 2019

Sherritt reaches three billion pounds of nickel production at its refinery in Fort Saskatchewan. Sherritt and General Nickel Company S.A. celebrate the 25 year anniversary of the formation of the Moa Joint Venture on December 1, 2019. Ambatovy is deemed non material for Sherritt's sustainability disclosures, including the 2019 Sustainability Report.

# DIVISIONS AND PRODUCTS

Sherritt has three operating divisions, as well as a corporate office and a commercial and technologies group. These operations are accounted for in our financial and sustainability reporting.

Entity	Operations, Products and Markets
Metals	<ul style="list-style-type: none"> <li>• <b>Moa Joint Venture</b> (50% ownership)               <ul style="list-style-type: none"> <li>◦ Moa, Cuba – nickel and cobalt mining and processing (Moa Nickel Site).</li> <li>◦ Fort Saskatchewan, Alberta, Canada – nickel and cobalt refining for international markets (COREFCO).</li> </ul> </li> <li>• <b>Fort Saskatchewan</b> (100% ownership) – ammonia, sulphuric acid and utilities for the Moa Joint Venture’s nickel and cobalt production, and ammonium sulphate fertilizer (a by-product of nickel and cobalt production) for the western Canadian market. Watch this <a href="#">video</a> to learn more about the Fort Saskatchewan operation (Fort Site).</li> </ul>
Oil & Gas	<ul style="list-style-type: none"> <li>• <b>Oil &amp; Gas</b> in Cuba (100% ownership) – exploration and production for Cuba’s energy needs.</li> </ul>
Power	<ul style="list-style-type: none"> <li>• <b>Energas, S.A.</b> in Cuba (33.3% ownership) – electricity production from natural gas for Cuba’s electricity needs.</li> </ul>
Corporate and Technologies	<ul style="list-style-type: none"> <li>• <b>Corporate Office</b> in Toronto – corporate administration and management.</li> <li>• <b>Technologies</b> – provides technical support, marketing and bulk commodity procurement services to Sherritt’s operating divisions and identifies opportunities for the Corporation as a result of its international activities and research and development activities.</li> </ul>

A more detailed overview of our business and corporate structure can be found in our [2019 Annual Information Form](#).

In this report, references to “our” or “Sherritt” are to Sherritt International Corporation, together with its subsidiaries and joint ventures, and the activities referenced herein may be conducted directly by Sherritt International Corporation, or indirectly by such subsidiaries and joint ventures. Our management approaches and performance are subject to and in accordance with the terms of our joint venture and operating agreements, and include approaches taken by Sherritt International Corporation and the boards, executive committees and management of our subsidiaries and joint ventures.

# ECONOMIC PERFORMANCE

The emergence of the electric vehicle market has created optimism about the nickel and cobalt markets as both metals are key components in battery technologies. As a low-cost, high-purity producer of Class 1 nickel primarily in briquette form, our product is ideally suited to battery production, positioning Sherritt to meet this growing demand.

Sherritt ended 2019 with more debt than the previous year and with cash, cash equivalents and short-term investments equal to \$166.1 million (a decline from 2018). Despite the positive effects that operational excellence initiatives had on driving increased production in FY2019, net direct cash cost for 2019 rose in the year, reflecting the dramatic 61% year-over-year decline in cobalt prices.

Sherritt's efforts to preserve liquidity were reflected in a number of austerity measures implemented throughout 2019, including the elimination of discretionary expenditures, the deferral of non-critical projects and limiting the number of new hires in response to volatile commodity prices and increased U.S. sanctions against Cuba.

Building on our progress in recent years, Sherritt's 2020 focus will be on the following strategic priorities:

- Preserve liquidity and build balance sheet strength
- Optimize opportunities in the Cuban energy business
- Uphold global operational leadership in finished nickel production from laterites
- Improve organizational effectiveness, including a focus on Operational Excellence and a commitment to strive for leadership in diversity and inclusion

Please refer to our [2019 Financial Results](#) for detailed information on our economic performance and an overview of how we plan to execute our 2020 strategy.

# 2019 KEY INDICATORS

## Financial

(C\$ millions, except per share data, as at December 31)	2019	Change
Combined revenue <sup>1</sup>	\$546.2	(9)%
Adjusted EBITDA <sup>1</sup>	\$47.3	(63)%
Combined free cash flow <sup>1</sup>	\$(24.2)	467%
Net earnings (loss) from the period	\$(367.7)	(473)%
Net loss from continuing operations per share	\$(0.92)	(338)%
Cash, cash equivalents and short-term investments	\$166.1	(20)%

<sup>1</sup> For additional information, please see the Non-GAAP Measures section of the Management's Discussion and Analysis in our [2019 Financial Results](#).

## 2019 Production

- Nickel: 33,108 tonnes (100% basis)
- Cobalt: 3,376 tonnes (100% basis)
- Oil: 4,175 barrels of oil equivalent per day
- Electricity: 736 gigawatt hours (33 1/3% basis)

## People

- Full- and part-time employees and permanent contractors: 3,344 (including the Cuban workforce at the Moa Nickel Site)
- Temporary workforce: 50

# OUR SUPPLY CHAIN

Sherritt is thinking more and more about what it means to “[supply a sustainable future](#)” and the role commodities play in manufacturing and consumer products. Like most commodity producers, we play the role of a value-adding producer in a long supply chain. We require significant goods and services as inputs (the upstream supply chain) to develop bulk products, which we sell to customers that produce finished products for consumers (the downstream supply chain).

As the table below demonstrates, many of our products contribute materially to global sustainable development. For instance, we provide energy to the Cuban people, we produce fertilizer for agricultural development, and our high-quality metals are used in clean-technology infrastructure and products such as alloys for renewable power applications, batteries for electric and hybrid electric vehicles and grid power storage systems, buildings, airplanes, household goods and appliances, medical devices and much more. For more information on how nickel is used in society, visit the [Nickel Institute’s website](#).

Business	Key Inputs	Sherritt’s Contribution	Key Customers
Metals	Energy products, sulphuric acid, sulphur, limestone	Mining, processing and refining to produce finished nickel and cobalt and a fertilizer by-product	<ul style="list-style-type: none"> <li>• Car-component manufacturers</li> <li>• Steel producers</li> <li>• Battery producers</li> <li>• Agricultural producers</li> </ul>
Oil & Gas	Current technological drilling practices	Drilling and extraction of oil	<ul style="list-style-type: none"> <li>• CUPET, Cuba’s national oil company, for national energy needs</li> </ul>
Power	Raw natural gas	Processing of gas to produce electricity and by-products, such as condensate and liquefied petroleum gas	<ul style="list-style-type: none"> <li>• UNE, Cuba’s electricity utility, for the national grid</li> <li>• CUPET, for industrial processes and domestic needs</li> </ul>

Refer to [Operating Ethically](#) for a description of how Sherritt applies anti-corruption and human rights requirements to its supply chain.

# ABOUT THIS REPORT

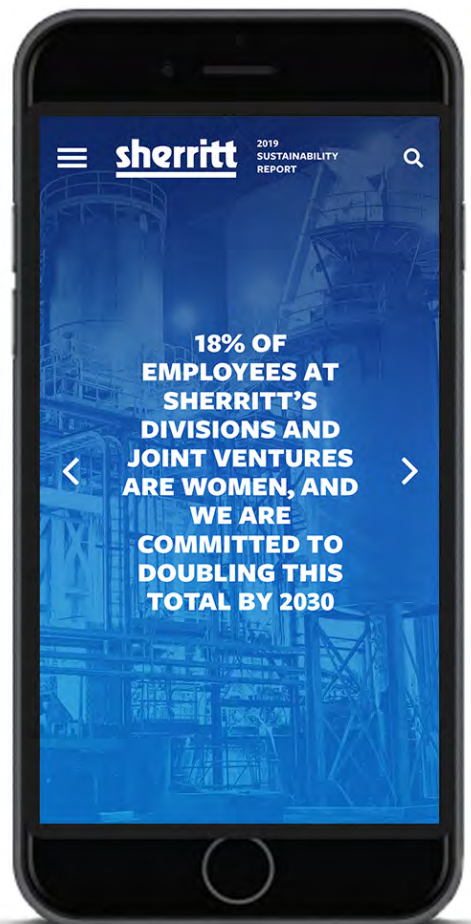
This report describes our sustainability performance for the calendar year January 1, 2019 through December 31, 2019. We report on an annual basis, with any material sustainability information included in our quarterly disclosures through the course of the year.

In 2019, due to Sherritt's reduced ownership status and limited operational influence, the Ambatovy Joint Venture was deemed non-material for Sherritt's sustainability disclosures. This includes the current 2019 Sustainability Report and all subsequent public disclosures. This will align Sherritt's Sustainability Report with financial and other reporting. To facilitate comparisons over time, the Ambatovy Joint Venture's results have been excluded from comparative periods within this report.

We have structured this report to align with our Sustainability Framework. For each pillar, we disclose our management approach and performance in relation to our material issues. This report was prepared in accordance with the Global Reporting Initiative's Standards (Core option). A full Global Reporting Initiative index and performance table can be found [here](#).

The 2019 Sustainability Report has not been externally assured.

To contact Sherritt regarding our sustainability performance, please email [sustainability@sherritt.com](mailto:sustainability@sherritt.com).





**sherritt**

**2019  
Responsible  
Production  
and Supply**





**Sherritt is committed to extracting and producing minerals that meet our stakeholders' social, ethical, environmental and human rights expectations, and to advancing that commitment with its joint venture partners and their suppliers and customers. In particular, Sherritt is committed to understanding and addressing social, ethical, environmental and human rights risks in our mineral supply chain.**

## 1. Management Approach

Sherritt's responsible sourcing strategy considers the production and sourcing of minerals. Our [Environment, Health, Safety and Sustainability Policy](#) and standards framework identify our commitments and expectations. We work collaboratively with our partners, experts, industry consortia, peers and customers to understand fully the properties and potential impacts of our products throughout their supply chains and lifecycles.

Sherritt has a robust management system in place to manage environmental and social risks and meet or exceed performance targets. We continue to progress against plans to ensure we have the appropriate policies and due diligence management systems in place to address the requirements of the OECD Due Diligence Guidance for Responsible Mineral Supply Chains. Sherritt remains engaged with the Mining Association of Canada, the London Metal Exchange, the Nickel Institute and the Cobalt Institute to support the development of and alignment with practical and recognized responsible sourcing initiatives, standards and frameworks. Sherritt advocates for the adoption of all of these requirements by its partners and joint venture organizations.

Sherritt participated with the Nickel Institute in a lifecycle analysis published in early 2020 and is participating in a new lifecycle analysis with the Cobalt Institute to be published in 2021–2022. We participate in these studies, committing significant effort, to help further the understanding of the lifecycle impact of our main products and to educate customers and regulators.

Sherritt continued funding of the Nickel Institute and the Cobalt Institute to advance the ecological and toxicological science associated with our products, which helps develop appropriate regulations that are protective of human and environmental health.

## 2. Performance

2019 and recent highlights:

- Updated our [Human Rights Policy](#) and [Environment, Health, Safety and Sustainability Policy](#) to ensure that the commitments are aligned with OECD requirements and industry best practice;
- Completed a **Conflict-Affected and High-Risk Areas (CAHRA)** assessment of the Moa Joint Venture (JV) feed supplies, which concluded that the JV does not source from, operate in or transit through any conflict-affected or high-risk areas;
- Developed and implemented a **Third-Party Feed Policy** to establish Moa Joint Venture commitments to responsible feed sourcing that are aligned with OECD requirements and industry best practice;
- Started to develop a **Supplier Code of Conduct** to identify expectations of Moa Joint Venture suppliers to provide responsibly sourced minerals that are aligned with OECD requirements and industry good practice;
- Became an upstream member of the **Responsible Business Alliance/Responsible Minerals Initiative**.

As part of several long-term supply agreements with some key cobalt customers, the Moa Joint Venture participates in regular due diligence assessments against customer responsible sourcing requirements.

### **Supply Chain Due Diligence**

While Sherritt sources the majority of its cobalt from our own Moa Joint Venture operations, the Fort Saskatchewan refinery (COREFCO) also purchases cobalt from a select group of third-party suppliers. Recognizing the heightened human rights risks for cobalt, Sherritt prioritized completing a CAHRA assessment and implementing policies and risk-based management systems at COREFCO. We are pleased to report that the assessment concluded that Sherritt and the Moa Joint Venture do not source from conflict-affected or high-risk areas and that no other significant problem areas were identified.

The Moa Joint Venture is developing a supply chain due diligence process and a Supplier Code of Conduct that will be designed to ensure that ethical, environmental and human rights risks in our supply chain are identified and mitigated.

The process will align with the recommendations of the OECD Due Diligence Guidance. We plan to use internationally and industry recognized tools for ethical and responsible businesses to help us evaluate the business practices of critical suppliers. Our approach will support the identification, prevention and mitigation of potentially adverse impacts that could negatively impact people, the environment or the company's reputation.

Going forward, Sherritt will be commencing the due diligence process with an independent assessment based on OECD Due Diligence Guidance at COREFCO in 2020. We plan to utilize the learnings from this assessment to further develop our risk-based approach and to collaborate with our key suppliers in addressing and managing the potential issues identified.

### **Alignment with OECD Due Diligence Guidance for Minerals – 5-Step Framework for Upstream and Downstream Supply Chains**

Sherritt and the Moa Joint Venture are broadly aligned with the OECD 5-step framework, the recognized cobalt industry standard for responsible supply chains. Sherritt and the Moa Joint Venture conform with 9 of the 16 sub-requirements, and we expect the Joint Venture to be fully conformant by 2022. Table 1 on the next page indicates the details of Sherritt's and the Moa Joint Venture's conformance with the sub-requirements of the OECD 5-step framework.

**Table 1. Sherritt and Moa Joint Venture Conformance with OECD 5-Step Framework**

Step	Requirements	Sherritt/Moa JV Conformance	Comments
1. Establish strong company management systems	Adopt a policy for responsible mineral supply chains	No	In progress. To be completed in 2020.
	Communicate policy to suppliers and incorporate due diligence expectations into contracts	No	In progress. To be completed in 2020.
	Establish traceability or chain of custody system over mineral supply chain	Yes	
2. Identify risks in the supply chain	Identify and verify traceability or chain of custody information (e.g., mine of origin, trade routes, suppliers)	Yes	
	For red flag locations, suppliers or circumstances, undertake on-the-ground assessments to identify risks of contributing to conflict or serious abuses	N/A	CAHRA assessment completed. No red flags were identified.
3. Manage risks	Report identified risks to senior management and fix internal systems	Yes	
	Disengage from suppliers associated with the most serious impacts	N/A	The CAHRA assessment did not identify any suppliers with serious risks
	Mitigate risk, monitor and track progress	Yes	
4. Audit of smelter/refiner due diligence practices	Smelters/refiners should participate in industry programs to have their due diligence practices audited against an auditing standard aligned with OECD Guidance	Yes	
	Prepare all documentation for audit (e.g., chain of custody or traceability documentation, risk assessment and management documentation for red-flagged sources)	Yes	
	Allow auditors to access company documentation and records	No	Audit to be completed in 2020
	Facilitate auditor access to sample of suppliers as appropriate	No	Audit to be completed in 2020
	Publish summary audit report with audit conclusions	No	Summary report with audit conclusions to be published as part of Sherritt's 2020 Sustainability Report
5. Publicly report on due diligence	Annually describe all due diligence efforts (steps 1 to 4 – e.g., risk assessment and mitigation) with due regard for business confidentiality and other competitive or security concerns	Yes	
	Smelters should publish a summary of their independent audit report	No	Summary report with audit conclusions to be published as part of Sherritt's 2020 Sustainability Report
	Make report publicly available, in offices and/or on company website	No	Summary report to be made available to the public in 2020

### Alignment with the Cobalt Institute and the Cobalt Industry Responsible Assessment Framework

Sherritt is committed to the Cobalt Industry Responsible Assessment Framework (CIRAF). From its initiation in 2018, Sherritt worked with the Cobalt Institute on the development of CIRAF. This framework strengthens the ability of cobalt producers to assess, mitigate and report on responsible production and sourcing risks in their operations and supply chain. The CIRAF enables a more coherent and consistent approach to cobalt due diligence and reporting by the cobalt industry. It is also a management tool which allows participants to demonstrate that they are aligned with global good practice in responsible production and sourcing.

The following table indicates Sherritt's and the Moa Joint Venture's conformance with the core elements of the CIRAF.

**Table 2. Sherritt/Moa Joint Venture Conformance with CIRAF**

Level	Step	Requirements	Sherritt/Moa JV Conformance	Comments
Level 1 – General Requirements and Human Rights	Step 1 – General Requirements	Agreement with the CIRAF Statement of Commitment, signed by senior management	No	Agreement to be signed in 2020
		Provide a Statement of Legal Compliance (or equivalent document, such as a business or mining licence) in country of operation	No	To be provided in 2020
		Materiality assessment of the risk categories; review through a credible mechanism is only required if material risks are different from the material risks listed in the CIRAF decision tree	Yes	
		Public disclosure of the material risks is required	Yes	
	Step 2 – Human Rights	Evidence of risk-specific policy	Yes	
		Evidence of risk-specific management system aligned with OECD Due Diligence Guidance and third-party assurance of the management system	No	In progress. Independent assurance scheduled for 2020.
		Evidence of public reporting	Yes	

Sherritt management attests that, to the best of its knowledge, all wholly owned subsidiaries and the Moa Joint Venture are in material legal compliance with all applicable local laws and regulations. Sherritt and the Moa Joint Venture possess all appropriate business, mining, environmental and other licences in Canada and Cuba.

CIRAF participants are expected to demonstrate within one year of their statement of commitment to CIRAF that they follow the recommendations of level one requirements of CIRAF. For the cobalt supply chain, Sherritt's and the Moa Joint Venture's internal policies and due diligence practices comply with most requirements of level one of CIRAF. However, neither Sherritt nor the Moa Joint Venture has formally provided statements of commitment or compliance or completed third-party assurance of the management system; these are planned for 2020.

Sherritt has identified material risks in the Moa Joint Venture’s cobalt supply chain. Sherritt has a policy and due diligence management system to address human rights risks and at least three other material risks in the cobalt supply chain. Since neither Sherritt nor the Moa Joint Venture sources cobalt from conflict-affected or high-risk areas, the following risk areas have been identified as material according to the CIRAF decision tree:

1. Environmental Impacts	Tailings Energy and greenhouse gas emissions Climate change
2. Occupational Health and Safety (OHS)	OHS and working conditions (including diversity and inclusion) Public safety
3. Community	Livelihoods Stakeholder engagement

Sherritt has implemented internal policies and due diligence management systems for each of these risk areas through its Sustainability Framework, which is aligned with the Mining Association of Canada’s Towards Sustainable Mining (TSM) framework and other internationally recognized frameworks. Sherritt is working with its partners to implement these in the Moa Joint Venture. Work has commenced to establish cobalt supplier expectations and due diligence management systems for the Moa Joint Venture.

### Alignment with London Metal Exchange Framework

In 2019, the London Metal Exchange (LME) announced its responsible sourcing requirements, which align with the OECD Due Diligence Guidance. The LME expects producers of registered brands to establish frameworks that comply with this requirement by 2022. The LME requires registered brands to undergo a number of assessments, including red flag assessments, and independent third-party audits of supply chain due diligence. It also requires ISO 14001 and ISO 45001 certifications, or equivalent, by the end of 2023.

Sherritt and the Moa Joint Venture are aligning their due diligence management systems with the LME requirements. We are pursuing an OECD-aligned plan that will provide independent audit assurance and OECD Step 5 transparency. Plans are in place to supplement TSM-based management systems with ISO 14001 (environmental management systems) and ISO 45001 (occupational health and safety management systems) implementation at COREFCO and the Moa Nickel Site.

### 3. Next Steps for 2020

- Continue to implement Sherritt and Moa Joint Venture policies and management systems, such as Sherritt’s Sustainability Framework, that mitigate identified risks and align with OECD requirements;
- Complete an OECD-aligned independent due diligence audit at COREFCO;
- Incorporate learnings and prepare for an OECD-aligned independent due diligence audit at the Moa Joint Venture mine (the Moa Nickel Site);
- Develop and implement a Supplier Code of Conduct for the Moa Joint Venture.

**sherritt**

**2019  
Tailings  
Management  
Report**



Sherritt strives to operate and maintain its tailings management facilities in accordance with global best practices for safety. We continually review our facilities and procedures and are committed to pursuing the highest standard of safety at our operations.

The Moa Nickel Site is operated by the Moa Joint Venture's management, reporting to the Moa Joint Venture Board of Directors. The Moa Joint Venture is a 50/50 joint venture between Sherritt and a Cuban government agency. Accordingly, while the following reflects Sherritt's approach to tailings management, Sherritt itself cannot control outcomes in relation to Moa Nickel Site tailings management.

## 1. Management Approach

### Risk Management

Dam failure is the greatest risk for our tailings management facilities (TMFs), located at the Moa Nickel Site and part of our Moa Joint Venture. Sherritt's dam safety assurance program assesses the Moa Joint Venture's tailings in line with international leading practice.

Sherritt's assets are required to assess natural phenomena such as extreme flooding and seismic events, as well as operational criteria, and incorporate these factors into their TMF designs.

There are at least six levels of governance and assurance that Sherritt advocates its assets undertake on TMFs:

1. **Regular surveillance** – Operations are expected to monitor their TMFs on an ongoing basis using piezometers, inclinometers, pressure gauges, remote sensing and other technologies to monitor tailings dams, abutments, natural slopes and water levels. The results are assessed by the management team of the operation.
2. **Annual dam safety inspections (DSI)** – Formal dam safety inspections are conducted annually by an external Engineer of Record for operating assets. A DSI evaluates and observes potential deficiencies in a TMF's current and past condition, performance and operation. DSI findings are overseen by the operation's management team.
3. **Dam safety audits** – Knight Piésold, one of the world's leading experts, audits the integrity and safety of our TMFs. The results of these audits are reported to the Moa Joint Venture management and Board of Directors, Sherritt's senior management and the EHS&S Committee of Sherritt's Board of Directors. Findings are followed up through regular independent verification audits.
4. **Independent tailings review boards** – The Moa Nickel Site has a Tailings Review Board made up of independent experts who conduct annual third-party reviews of design, operation, surveillance and maintenance.
5. **Internal governance reviews** – Sherritt's COO conducts internal management reviews of Sherritt's tailings facilities on a regular basis. Summaries are reported to the EHS&S Committee of Sherritt's Board of Directors.
6. **Staff inspections** – Tailings storage facilities are inspected by trained operators and expert technical staff as frequently as several times daily, with formal staff inspections occurring at the Moa Nickel Site at least once a month.

The different levels of assurance are undertaken on the basis of national regulations, as well as, where appropriate, criteria aligned with international guidelines from the Canadian Dam Association and the International Commission on Large Dams.

In addition, where appropriate, the Moa Nickel Site conducts periodic dam safety reviews, which include reviewing maintenance, surveillance and monitoring, failure impact assessments, emergency management procedures, public safety and environmental management. The results are shared with the operation's management and reviewed as part of the dam safety audits.

### Tailings Management Standard

Sherritt has had an internal tailings management standard in place since 2018. Management at the Moa Nickel Site has adopted this standard and is in the process of implementing it. The standard aligns with the Mining Association of Canada's [Towards Sustainable Mining Tailings Management Protocol](#), and supports Sherritt's goal of designing, constructing, operating, decommissioning and closing tailings



facilities in such a manner that all structures are stable, all solids and water are managed within designated areas, and all management practices conform with regulatory requirements, sound engineering principles and good practice. Sherritt continues to review and evaluate monitoring systems and risk assessments to ensure the approach is robust and current.

**Engaging with Communities**

Sherritt advocates that its assets undertake proactive stakeholder and community engagement across a broad range of operational topics, including TMFs where appropriate.

We require our assets, and those of our joint ventures and subsidiaries, to develop and maintain emergency preparedness and response plans, and to communicate these plans with relevant stakeholders. Where appropriate, operations may also engage with local and regional emergency response services in scenario planning and practice exercises.

**Continuous Improvement**

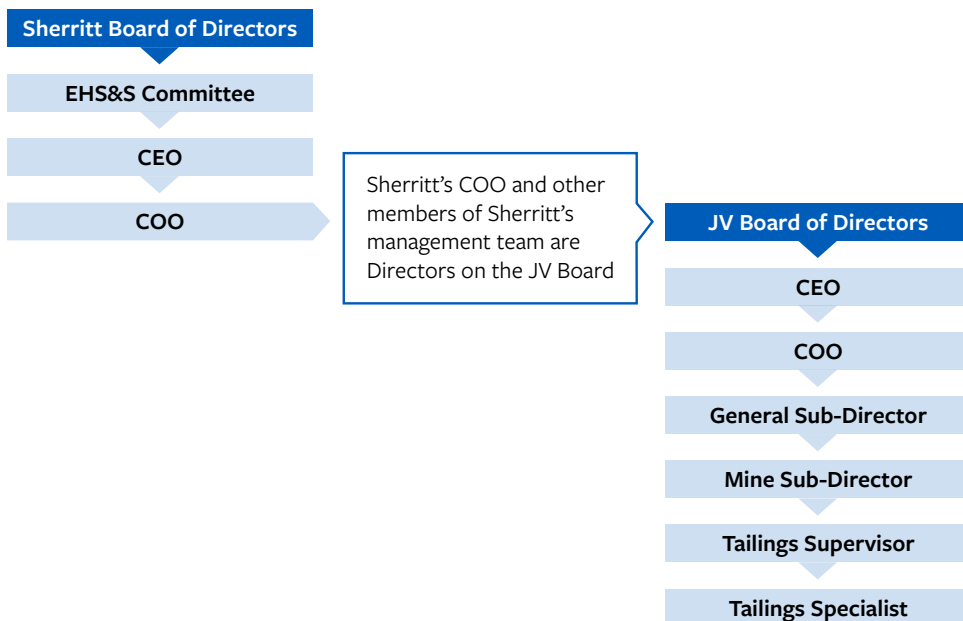
Sherritt is committed to continually reviewing its joint venture facilities and procedures to maintain the highest standard of safety at its operations. Following the tailings failure at Vale’s Feijão Mine in Brazil, Sherritt initiated a special review of its tailings facilities and procedures.

Sherritt also works in partnership with local, national and international organizations to support improvements in tailings management across the industry, including the Mining Association of Canada (MAC), a national association that promotes the development of Canada’s mining and mineral processing industry. With the assistance of MAC, Sherritt is implementing the Towards Sustainable Mining (TSM) program in wholly owned operations and working with our partners to implement it in joint ventures, which aids in improving industry performance.

**2. Tailings Management Facilities**

There are several TMFs at Sherritt’s Joint Venture operation in Cuba – the Moa Nickel Site. The facility is operated by the Joint Venture’s management, reporting to the Joint Venture Board of Directors. A geotechnical engineer is employed to provide oversight of design, construction and operation of the tailings facilities. Third-party engineering firms are utilized in the design and monitoring of tailings facilities. The design and operation of existing facilities meet or exceed all applicable regulatory requirements.

**Tailings Management Structure**





The mandate of Sherritt's EHS&S Committee, which can be found [here](#), includes the following:

- (k) ensure adequate and effective tailings management systems are in place and utilized and compliance is monitored, (including through external verification on such periodic basis as the Committee considers to be appropriate), and offer advice and/or recommendations to the Board in connection herewith.

At the Moa Nickel Site in Cuba, upstream and downstream designs have been used throughout the mine life. Stability is monitored as per the operating practices manual. Based on internal and third-party reviews of structural integrity and management systems, the facilities are operating to design specifications and are stable.

Sherritt works with its Cuban partner, the General Nickel Company S.A. of Cuba (GNC), to continually improve tailings management and achieve alignment with international best practices, including the Mining Association of Canada's Tailings Management Protocol. As a member of the Mining Association of Canada, Sherritt has influenced its partner to begin implementing Sherritt's Tailings Management Standard, which is aligned with MAC's Tailings Management Protocol, at the Moa Nickel Site in Cuba.

As well, a rehabilitation plan has been developed at the Moa Nickel Site and is underway in a section that is no longer active.

Sherritt and its Joint Venture partner also began investigating options for tailings management so that we can continue to support mining operations in Moa in 2022 and beyond. Throughout this process, Sherritt will strive to minimize environmental impacts and meet international good-practice standards in tailings management.

There are no tailings produced at the Fort Site or Oil & Gas and Power (OGP) sites.

### 3. Performance

The tailings management facilities at the Moa Nickel Site are reviewed regularly, both internally and by third parties, for structural integrity and the effectiveness of management systems, and all recommendations are reviewed by Moa Nickel Site management and plans are developed to address them. There have been no incidents at the tailings management facilities. Sherritt management continues to work with its joint venture partners to ensure employees have the skills required to manage the facilities effectively.

In 2019, the annual Independent Tailings Review Board recommended that the consequence classification for two TMFs be changed to extreme, in line with the other TMFs. It also identified some concerns with the foundation of the North Extension TMF. Moa Nickel Site management has started to action the recommendations, all of which are targeted for completion in 2020.

In 2019, the Moa Nickel Site also completed a self-assessment against MAC's Towards Sustainable Mining Tailings Management Protocol and assessed itself at level B. This means that some actions are not consistent or documented and also that systems/processes are planned and being developed. The self-assessment identified some management system gaps, including the need to update the Operations Maintenance and Surveillance (OMS) manual and Emergency Preparedness Plan (EPP).

### Long-Term Tailings Disposal

Conceptual studies of future tailings disposal sites were completed by Knight Piésold (KP) in the past year. As shown in Figure 1 below, a proposed sequence of tailings projects has been developed that will allow tailings disposal as follows:

- The North Extension – 2019 through 2022
- Area 22, Stage 3 – late 2022 through late 2024
- Reject Valley – mid-2024 through 2029
- Los Lirios – 2029, for up to 12 years

**Figure 1: Proposed Sequence of Tailings Management Facility Development at the Moa Nickel Site**

Project	2019	2020	2021	2022	2023
Closure of ALTF		Closure Construction		Closure	
The North Extension		Operation			Future Stages
South Extension – Area 22, Stage 3		Construction		Operation	
Los Lirios (Initial Stage)/Reject Valley		Construction			Operation

**The Acid Leach Tailings Facility (ALTF):** Closure and stabilization work continued in 2019. Monitoring activities are ongoing and informing the closure plans.

**The North Extension:** As the ALTF approached capacity, the Moa Joint Venture retained Knight Piésold, an internationally respected engineering firm, to design an extension that would ensure continued capacity to store tailings there until 2022. In 2019, operations and staged construction began in the North Extension.

**Area 22:** Detailed design and permitting of this multi-phased short-term tailings solution are in progress. This project will allow for tailings storage from December 2022 to December 2024. Micro-localization, environmental impact study and permit applications are underway and the final construction permit is expected in August 2020. Construction has begun, with a completion expected in December 2021.

**Los Lirios/Reject Valley:** A longer-term storage option at Los Lirios and the Reject Valley are currently being designed by Knight Piésold in consultation with the JV partner. Permitting and studies are underway for both.

#### 4. Church of England Disclosure

Sherritt is committed to being open and transparent with communities and other stakeholders regarding the construction and management of the tailings management facilities operated by the Moa Joint Venture in Cuba. Although Sherritt did not receive a letter from the Church of England requesting greater disclosure on its tailings management facilities, Sherritt understands that this is good management practice.

Below are tables that contain disclosure information requested by the Church of England, as applied to Sherritt's Joint Venture's tailings management facilities.

**Table 1. Facility #1: Acid Leach Tailings Facility**

Disclosure	Instructions	Response 2019	Response 2018	Comments
1. "Tailings Dam" identifier	Please identify every tailings storage facility and identify if there are multiple dams (saddle or secondary dams) within that facility. Please provide details of these within question 20	Acid Leach Tailings Facility North Extension: Extension of ALTF Area 22, Stage 3: South Extension of ALTF	Acid Leach Tailings Facility	
2. Location	Please provide longitude/latitude coordinates	700,000 E 221,000 N	700,000 E 221,000 N	
3. Ownership	Please specify: Owned and Operated, Subsidiary, JV, NOJV, as of March 2019	Moa Joint Venture	Moa Joint Venture	
4. Status	Please specify: Active, Inactive/Care and Maintenance, Closed, etc.  We take "Closed" to mean: a closure plan was developed and approved by the relevant local government agency, and key stakeholders were involved in its development; a closed facility means the noted approved closure plan was fully implemented or the closure plan is in the process of being implemented. A facility that is inactive or under C&M is not considered closed until such time as a closure plan has been implemented	Acid Leach Tailings Facility: Inactive/Care and Maintenance  North Extension: Operational Area 22, Stage 3: Construction Project (ongoing)	Inactive/Care and Maintenance	Final updated closure plans being completed. Closure began in 2019 and will continue to be closed in four phases for a period totalling five years
5. Date of initial operation		1979	1979	
6. Is the dam currently operated or closed, as per currently approved design?	Yes/No. If "No", more information can be provided in the answer to Q20	No	Yes	The ALTF was operated as per the design and will be closed according to the designs
7. Raising method	Note: Upstream, Centreline, Modified Centreline, Downstream, Landform, Other	Upstream	Upstream	
8. Current maximum height	Note: Please disclose in metres	40 m	40 m	
9. Current tailings storage impoundment volume	Note: (m <sup>3</sup> as of March 2019)	53,700,000 m <sup>3</sup>	53,700,000 m <sup>3</sup>	
10. Current tailings storage impoundment volume in five years' time	(m <sup>3</sup> as planned for January 2024)	0	0	

Disclosure	Instructions	Response 2019	Response 2018	Comments
11. Most recent independent expert review	(date) For this question, we take “independent” to mean a suitably qualified individual or team, external to the Operation, that does not direct the design or construction work for that facility	December 2019	September 2018	Annual independent review
12. Do you have full and complete relevant engineering records, including design, construction, operation, maintenance and/or closure?	(Yes or No) We take the word “relevant” here to mean that you have all necessary documents to make an informed and substantiated decision on the safety of the dam, be it an old facility, or an acquisition, or legacy site. More information can be provided in your answer to Q20	Yes	Yes	All documents are stored on site
13. What is your hazard categorization of this facility, based on consequence of failure?		Extreme	Significant	Change in consequence categorization recommended by the ITRB in 2019
14. What guidelines do you follow for the classification system?		CDA Hazard Potential Classification	CDA Hazard Potential Classification	
15. Has the facility, at any point in its history, failed to be confirmed or certified as stable, or experienced notable stability concerns, as identified by an Independent Engineer (even if later certified as stable by the same or a different firm)?	(Yes or No) We note that this will depend on factors, including local legislation, that are not necessarily tied to best practice. As such, and because remedial action may have been taken, a “Yes” answer may not indicate heightened risk  Stability concerns might include toe seepage, dam movement, overtopping, spillway failure, piping, etc. If “Yes”, have appropriately designed and reviewed mitigation actions been implemented?  We also note that this question does not bear upon the appropriateness of the criteria, but rather the stewardship levels of the facility or the dam. Additional comments/information may be supplied in your answer to Q20	Yes. The facility experienced a slump along one of its embankments in January 2014. No impact to population or to the environment was incurred as a consequence of the slump. Corrective actions were put in place, and additional buttressing and drains were installed. Engineers of record provided the remediation designs and were on site for the duration of the work. There have been no other incidents on record before or since	Yes. The facility experienced a slump along one of its embankments in January 2014. No impact to population or to the environment was incurred as a consequence of the slump. Corrective actions were put in place, and additional buttressing and drains were installed. Engineers of record provided the remediation designs and were on site for the duration of the work. There have been no other incidents on record before or since	
16. Do you have internal/in-house engineering specialist oversight of this facility? Or do you have external engineering support for this purpose?	Note: Answers may be “Both”	Both	Both	The Moa Nickel Site has a tailings specialist engineer expat on site full-time and also contracts the Engineer of Record (Knight Piésold) to complete a full review of the facility every six weeks

Disclosure	Instructions	Response 2019	Response 2018	Comments
17. Has a formal analysis of the downstream impact on communities, ecosystems and critical infrastructure in the event of a catastrophic failure been undertaken, and to reflect final conditions? If so, when did the assessment take place?	Note: Please answer “Yes” or “No”, and if “Yes”, provide a date	Yes. The Hazard, Vulnerability and Risks Study was reviewed and updated in 2019	Yes. An existing Hazard, Vulnerability and Risks Study was internally reviewed in 2018	
18. Is there: a) A closure plan in place for this dam? b) Does it include long-term monitoring?	Please answer both parts of this question (e.g., “Yes” and “Yes”)	a) Yes b) Yes	No. Final and updated closure plans are being completed. Closure began in 2019 and will continue in four phases for a period totalling five years. The plan, once final, will include long-term monitoring	
19. Have you assessed, or do you plan to assess, your tailings facilities against the impact of more regular extreme weather events as a result of climate change (e.g., over the next two years)?		Yes. These considerations were included in the review and update of the Hazard, Vulnerability and Risks Study in 2019	Yes. These considerations were included in the review of the existing Hazard, Vulnerability and Risks Study in 2018	
20. Any other relevant information and supporting documentation. Please state if you have omitted any other exposure to tailings facilities through any joint ventures you may have.	Note: This may include links to annual report disclosures, further information in the public domain, guidelines or reports, etc.	No	No	

**Table 2. Facility #2: North Extension**

Disclosure	Instructions	Response 2019	Response 2018	Comments
1. "Tailings Dam" identifier	Please identify every tailings storage facility and identify if there are multiple dams (saddle or secondary dams) within that facility. Please provide details of these within question 20	North Extension	North Extension	
2. Location	Please provide longitude/latitude coordinates	701,000 E 222,000 N	701,000 E 222,000 N	
3. Ownership	Please specify: Owned and Operated, Subsidiary, JV, NOJV, as of March 2019	Moa Joint Venture	Moa Joint Venture	
4. Status	Please specify: Active, Inactive/Care and Maintenance, Closed, etc.  We take "Closed" to mean: a closure plan was developed and approved by the relevant local government agency, and key stakeholders were involved in its development; a closed facility means the noted approved closure plan was fully implemented or the closure plan is in the process of being implemented. A facility that is inactive or under C&M is not considered closed until such time as a closure plan has been implemented	Active	Active	Will be active until end of 2022
5. Date of initial operation		2017	2017	
6. Is the dam currently operated or closed, as per currently approved design?	Yes/No. If "No", more information can be provided in the answer to Q20	Yes	Yes	The North Extension is being operated as per the design and specifications
7. Raising method	Note: Upstream, Centreline, Modified Centreline, Downstream, Landform, Other	Upstream	Upstream	
8. Current maximum height	Note: Please disclose in metres	11 m	7 m in height	
9. Current tailings storage impoundment volume	Note: (m <sup>3</sup> as of March 2019)	4,230,000 m <sup>3</sup>	2,808,000 m <sup>3</sup>	
10. Current tailings storage impoundment volume in five years' time	(m <sup>3</sup> as planned for January 2024)	10,580,000 m <sup>3</sup>	6,552,000 m <sup>3</sup>	Operations to cease at end of 2022
11. Most recent independent expert review	(date) For this question, we take "independent" to mean a suitably qualified individual or team, external to the Operation, that does not direct the design or construction work for that facility	December 2019	September 2018	Annual independent review
12. Do you have full and complete relevant engineering records, including design, construction, operation, maintenance and/or closure?	(Yes or No) We take the word "relevant" here to mean that you have all necessary documents to make an informed and substantiated decision on the safety of the dam, be it an old facility, or an acquisition, or legacy site. More information can be provided in your answer to Q20	Yes	Yes	All documents are stored on site

Disclosure	Instructions	Response 2019	Response 2018	Comments
13. What is your hazard categorization of this facility, based on consequence of failure?		Extreme	Significant	Change in consequence categorization recommended by the ITRB in 2019
14. What guidelines do you follow for the classification system?		CDA Hazard Potential Classification	CDA Hazard Potential Classification	
15. Has the facility, at any point in its history, failed to be confirmed or certified as stable, or experienced notable stability concerns, as identified by an Independent Engineer (even if later certified as stable by the same or a different firm)?	<p>(Yes or No) We note that this will depend on factors, including local legislation, that are not necessarily tied to best practice. As such, and because remedial action may have been taken, a “Yes” answer may not indicate heightened risk</p> <p>Stability concerns might include toe seepage, dam movement, overtopping, spillway failure, piping, etc. If “Yes”, have appropriately designed and reviewed mitigation actions been implemented?</p> <p>We also note that this question does not bear upon the appropriateness of the criteria, but rather the stewardship levels of the facility or the dam. Additional comments/information may be supplied in your answer to Q20</p>	No	No	
16. Do you have internal/in-house engineering specialist oversight of this facility? Or do you have external engineering support for this purpose?	Note: Answers may be “Both”	Both	Both	The Moa Nickel Site has a tailings specialist engineer expat on site full-time and also contracts the Engineer of Record (EIPH Camaguey) to complete a full review of the facility every 15 days
17. Has a formal analysis of the downstream impact on communities, ecosystems and critical infrastructure in the event of a catastrophic failure been undertaken, and to reflect final conditions? If so, when did the assessment take place?	Note: Please answer “Yes” or “No”, and if “Yes”, provide a date	No	No	The EIPH will complete this by the end of 2020. No communities or infrastructure have been identified downstream of the facility
18. Is there: a) A closure plan in place for this dam? b) Does it include long-term monitoring?	Please answer both parts of this question (e.g, “Yes” and “Yes”)	No	No	Closure plan will be completed in 2020

Disclosure	Instructions	Response 2019	Response 2018	Comments
19. Have you assessed, or do you plan to assess, your tailings facilities against the impact of more regular extreme weather events as a result of climate change (e.g., over the next two years)?		Yes	Yes	
20. Any other relevant information and supporting documentation. Please state if you have omitted any other exposure to tailings facilities through any joint ventures you may have.	Note: this may include links to annual report disclosures, further information in the public domain, guidelines or reports, etc.	No	No	



**Table 3. Facility #3: Area 22**

Disclosure	Instructions	Response 2019	Response 2018	Comments
1. "Tailings Dam" identifier	Please identify every tailings storage facility and identify if there are multiple dams (saddle or secondary dams) within that facility. Please provide details of these within question 20	Area 22	Area 22	
2. Location	Please provide longitude/latitude coordinates	700,500 E 220,500 N	700,500 E 220,500 N	
3. Ownership	Please specify: Owned and Operated, Subsidiary, JV, NOJV, as of March 2019	Moa Joint Venture	Moa Joint Venture	
4. Status	Please specify: Active, Inactive/Care and Maintenance, Closed, etc.  We take "Closed" to mean: a closure plan was developed and approved by the relevant local government agency, and key stakeholders were involved in its development; a closed facility means the noted approved closure plan was fully implemented or the closure plan is in the process of being implemented. A facility that is inactive or under C&M is not considered closed until such time as a closure plan has been implemented	Inactive/Care and Maintenance	Inactive/Care and Maintenance	Inactive while third raise is designed and constructed
5. Date of initial operation		2016	2016	
6. Is the dam currently operated or closed, as per currently approved design?	Yes/No. If "No", more information can be provided in the answer to Q20	No	Yes	Area 22, Stage 2, is inactive and we are preparing construction of Final Stage (3)
7. Raising method	Note: Upstream, Centreline, Modified Centreline, Downstream, Landform, Other	Centreline	Centreline	
8. Current maximum height	Note: Please disclose in metres	15 m	15 m	
9. Current tailings storage impoundment volume	Note: (m <sup>3</sup> as of March 2019)	4,680,000 m <sup>3</sup>	4,680,000 m <sup>3</sup>	
10. Current tailings storage impoundment volume in five years' time	(m <sup>3</sup> as planned for January 2024)	4.8M m <sup>3</sup> total for two years of tailings storage	3.6M m <sup>3</sup> total for two years of tailings storage	Designs are ongoing. Final capacity will be updated
11. Most recent independent expert review	(date) For this question, we take "independent" to mean a suitably qualified individual or team, external to the Operation, that does not direct the design or construction work for that facility	December 2019	September 2018	Annual independent review
12. Do you have full and complete relevant engineering records, including design, construction, operation, maintenance and/or closure?	(Yes or No) We take the word "relevant" here to mean that you have all necessary documents to make an informed and substantiated decision on the safety of the dam, be it an old facility, or an acquisition, or legacy site. More information can be provided in your answer to Q20	Yes	Yes	All documents are stored on site

Disclosure	Instructions	Response 2019	Response 2018	Comments
13. What is your hazard categorization of this facility, based on consequence of failure?		Extreme	Significant	Change in consequence categorization recommended by the ITRB in 2019 Construction activities are underway to address this
14. What guidelines do you follow for the classification system?		CDA Hazard Potential Classification	CDA Hazard Potential Classification	
15. Has the facility, at any point in its history, failed to be confirmed or certified as stable, or experienced notable stability concerns, as identified by an Independent Engineer (even if later certified as stable by the same or a different firm)?	(Yes or No) We note that this will depend on factors, including local legislation, that are not necessarily tied to best practice. As such, and because remedial action may have been taken, a “Yes” answer may not indicate heightened risk  Stability concerns might include toe seepage, dam movement, overtopping, spillway failure, piping, etc. If “Yes”, have appropriately designed and reviewed mitigation actions been implemented?  We also note that this question does not bear upon the appropriateness of the criteria, but rather the stewardship levels of the facility or the dam. Additional comments/information may be supplied in your answer to Q20	No	No	
16. Do you have internal/ in-house engineering specialist oversight of this facility? Or do you have external engineering support for this purpose?	Note: Answers may be “Both”	Both	Both	The Moa Nickel Site has a tailings specialist engineer expat on site full-time and also contracts the Engineer of Record (EIPH Camaguey) to complete a full review of the facility every 15 days
17. Has a formal analysis of the downstream impact on communities, ecosystems and critical infrastructure in the event of a catastrophic failure been undertaken, and to reflect final conditions? If so, when did the assessment take place?	Note: Please answer “Yes” or “No”, and if “Yes”, provide a date	Yes. A Hazard, Vulnerability and Risks Study was commenced in 2019 and finalized and approved in 2020	No	
18. Is there: a) A closure plan in place for this dam? b) Does it include long-term monitoring?	Please answer both parts of this question (e.g., “Yes” and “Yes”)	No	No	

Disclosure	Instructions	Response 2019	Response 2018	Comments
19. Have you assessed, or do you plan to assess, your tailings facilities against the impact of more regular extreme weather events as a result of climate change (e.g., over the next two years)?		Yes. The current Hazard, Vulnerability and Risks Study was commenced in 2019 and finalized and approved in 2020	No	The Study includes designs considering extreme weather events (such as rainfall and seismic failures)
20. Any other relevant information and supporting documentation. Please state if you have omitted any other exposure to tailings facilities through any joint ventures you may have.	Note: This may include links to annual report disclosures, further information in the public domain, guidelines or reports, etc.			