



PAN AMERICAN
— SILVER —

2016

SUSTAINABILITY
REPORT

At Pan American Silver, we believe that sustainability is the process of integrating economic, environmental and social considerations into the development of natural resources. Sustainable development is a core value for us and part of our Company's vision statement. In practical terms this means that our corporate strategy includes evaluating all internal and external sustainability aspects of our business in an attempt to maximize environmental, social and economic benefit for stakeholders and society.

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\$6.2 M

invested in CSR programs in 2016

86%

of water used in our Mexican operations was recycled



More than

830

families are benefited through our sustainable development projects

About Pan American Silver

Pan American Silver Corp. is a Canadian public company focused on silver mining in the Americas. We are based in Vancouver, British Columbia, and our common shares are listed on the Toronto Stock Exchange and NASDAQ under the trading symbol PAAS.

Founded in 1994, we have grown over the years from an exploration company with a single operating mine into one of the world's largest primary silver producers. We own and operate seven mines in Mexico, Peru, Bolivia and Argentina, and manage a portfolio of high-quality exploration and development assets.

In recent years, we have focused on expanding, modernizing, and improving the productivity of our mines in order to secure our future as a low-cost producer with strong growth prospects. In 2016 we substantially completed a major expansion of our La Colorada mine and continued an expansion of our Dolores mine, both in Mexico. We also strengthened our commitment to sustainability by developing policies and processes to integrate environmental and social considerations into every aspect of our business.

Sustainability is a dynamic process that helps us create prosperity for shareholders, stakeholders and society. It defines our commitment to operate in an environmentally responsible manner, motivates us to protect the health and safety of our more than 6,600 employees and contractors, and inspires us to be a force for positive social change in the communities and nations where we operate.

Our Product

Silver is our primary product and the focus of our business. Silver is a metal that was prized in ancient times, is essential to modern civilization, and is a key component in technologies with the potential to power the future.

Silver has been used in coinage, jewellery and silverware for millennia and its luminescent beauty continues to attract modern-day artisans, jewellers and collectors. It is the best known reflector of visible light, and has been used for centuries to make mirrors. Silver's traditional role as a storehouse of value and hedge against economic uncertainty also endures to this day.

In modern times, silver became known as "the indispensable metal" because of its unique properties that have made it essential for industrial usage. Silver is

malleable, resists corrosion and oxidation, and is the best thermal and electrical conductor of all metals.

Small quantities of silver are used as contacts in electrical switches to power household appliances, electric lights, and a myriad of electronic devices and consumer products. Silver drives the world's industries and is used in automobiles, aircraft and spacecraft, and power plants. Silver also acts as a catalyst to produce plastics and chemicals, and is used to purify water. Silver's photosensitivity continues to see it used in non-digital photography, film and x-rays.

Silver is even more indispensable today where it is used in renewable energy applications and high-technology products that didn't exist a century ago.

Silver paste is a key component of photovoltaic cells used in solar panels that transform sunlight into power. A report by the International Energy Agency notes that about 500,000 solar panels were installed every day in 2015 around the world. 77.6 million ounces of silver were used in solar panel production in 2015. As well, thin, transparent coatings of silver are used to make windows more energy-efficient.

Silver's antimicrobial and non-toxic qualities have made it beneficial for human health. Bandages and ointments use silver to prevent bacterial growth, promote the growth of new cells and accelerate healing rates. Silver is used in small amounts to coat medical equipment and work surfaces to prevent the spread of antibiotic-resistant bacteria.

Nanotechnology is finding new medical uses for silver. Doctors can direct medications to specific parts of the body by attaching them to tiny pieces of silver and directing them to areas needing treatment. Nano-scale silver particles are used in many appliances to sterilize bacteria.

Our Operations and Projects



Awards and Recognition

- Corporate Knights ranked Pan American Silver 36th on their Future 40 Responsible Corporate Leaders in Canada.
- In July 2016, La Colorada received the “Casco de Plata” award for the safest underground mine with more than 500 employees in Mexico.
- Centro Mexicano para la Filantropia (CEMEFI) awarded all of Pan American’s Mexican mines with the Socially Responsible Company (ESR) designation.
- Morococha won the “Underground Mining” category in the 20th National Peruvian Safety awards.
- Huaron was awarded an honorary plaque in the 20th National Mining Safety awards in the “Underground Mining” category.
- Pan American Silver received the ‘Business of the Year’ award, from the Peruvian-Canadian Chamber of Commerce in Toronto, for the sustainable development work that our Peruvian team does in the local communities, including the ‘Alpaca de los Andes’ and UQLLU project.
- Pan American Silver Peru was awarded third place in the Entrepreneurial Communities Expo, by the International Congress of Community Relations.

About Our Report

At Pan American Silver Corp. (Pan American Silver), we believe that sustainability is the process of integrating economic, environmental and social considerations into the development of natural resources. Sustainable development is a core value for us and part of our Company's vision statement. In practical terms this means that our corporate strategy includes evaluating all internal and external sustainability aspects of our business in an attempt to maximize environmental, social and economic benefit for stakeholders and society.

For the past seven years, we have released annual sustainability reports to share how we address sustainable development in the context of our business. Our reports are intended to communicate our vision of sustainability, disclose how we manage environmental, workplace and social issues, and demonstrate our progress toward sustainability goals and initiatives. They allow us and our stakeholders to benchmark our performance against industry peers.

We consult with stakeholders, including employees, on an annual basis to identify the topics that are most material to them. The responses are then translated into a materiality assessment, which helps us define the key sustainability aspects of our business and respond appropriately. This report describes our management approach to the material topics in the context of our overall sustainability and business strategy.

This report is prepared in accordance with the Core level of the new Global Reporting Initiative (GRI) Standards, which replaces the GRI G4 Guidelines used by thousands of organizations in more than 90 nations. The new GRI Standards include three universal standards that apply to all sustainability reports — GRI 101 (Foundation), GRI 102 (General Disclosures), and GRI 103 (Management Approach) — and 33 optional topic-specific standards. In addition to the three universal standards, our 2016 sustainability report has specific disclosures for economic (GRI 200), environmental (GRI 300) and social (GRI 400) material topics.

In addition to annual sustainability reports, we disclose our operating and financial results on a quarterly and annual audited basis, along with details of exploration and development projects that will sustain our future business. These reports are available on our website or at SEDAR at www.sedar.com.

We obtained External Assurance for our 2016 Audited Annual Financial Statements for the reporting period January 1 through to December 31, 2016, including excerpts used in this report, from our external financial auditors. (Reporting is in US dollars)

Report Scope and Audience

The scope of this report covers our seven producing mines: La Colorada, Dolores and Alamo Dorado in Mexico; Huaron and Morococha in Peru; Manantial Espejo in Argentina; and San Vicente in Bolivia. It should be noted that Alamo Dorado will end its productive life in early 2017 and the project will continue in the reclamation phase.

The report mentions some undeveloped projects, notably the Navidad silver project in Argentina. It also has references to our headquarters in Vancouver, Canada, and discusses the roles of our Board of Directors, senior officers and executives, and other Vancouver-based personnel.

The intended audience of this report is our Communities of Interest, which includes our shareholders, employees and contractors, local communities and governments, suppliers, industry associations and regulatory agencies, non-governmental organizations and civil society.

In addition to standard disclosures relating to our sustainability strategy and performance, this report contains a GRI Content section with Specific Disclosures, Appendices and a Glossary.

We welcome any feedback related to this report. Please direct your comments or questions to Matt Andrews, Vice President of Environment and Sustainability, or Monica Moretto, Director of Sustainability, at csr@panamericansilver.com.

Chairman's Letter

ROSS BEATY, *Chairman*

The year 2016 was another year of progress for Pan American Silver, especially in the sustainable development sphere where we demonstrated our ongoing commitment to community engagement, health, safety and environmental excellence, and fair-minded, transparent and collaborative management practices.

To me, "sustainable mining" means creating safe and clean working practices, minimizing impacts and protecting the natural environment at and around our operations, and partnering with our employees, contractors, communities and governments to strengthen the local economy, infrastructure, education and environment in a way that will persist long after mining ceases. To achieve this requires a strong mission that sets these objectives at its core, a powerful execution team that can make it happen, and a universal acceptance that achieving sustainable development is simply good business for all. In other words, we believe this is a "win-win" situation for all stakeholders – including our shareholders – and have included sustainable development in our company vision statement

Pan American Silver has grown into a world-leading silver mining company. We now work in six countries at fourteen locations (including our administration offices). We employ more than six thousand people including contractors. We provide employment for thousands more who work for our service and material suppliers. Our corporate social responsibility projects help tens of thousands of people in nearby communities who, in some cases, live in impoverished areas with no other regional economic driver.

We "give back" by paying hundreds of millions of dollars in taxes and royalties to local, regional and national governments and this drives investment in health, education and community infrastructure. Our procurement and hiring strategies focus economic benefit on the local and regional areas where we operate. And we invest millions of dollars each year to directly support local education, health and infrastructure development. We do this because we believe it supports our ability to operate profitably over the long term. It also means that when a mine inevitably reaches the end of its life, we will leave



behind a legacy that supports sustainable development: a real improvement in the lives of the people in areas where we work. This manifests itself in better trained people living around our operations, better health facilities, better education, better availability of services, a cleaner environment, and better road and electricity facilities.

A healthy environment, a healthy workplace and a healthy community in the areas where we operate all help build Pan American Silver into a better company. Our success in achieving this will make us a more profitable company too – not just in dollar terms, but in human terms and in reputation, something so easy to lose and so hard to achieve. We know that our actions speak louder than words, and so we continue to work hard to achieve the goals and objectives stated in this report.

The hallmark of a great company is a company that rewards its shareholders because it also looks after its employees, contractors, environment, communities and countries where it works. I am so very proud of our team and our achievements in the spheres of community engagement, sustainable development and worker safety, but we must continually strive to improve. If we succeed at this we will maintain our stellar reputation and continue to be a company that new investors will want to buy, new employees will want to work for, and people in new locations will welcome us to work in.

President's Letter

MICHAEL STEINMANN, *President & CEO*

Pan American had an exceptional year in 2016, which is a reflection of our hard work to make our mines more productive, cost-efficient and sustainable over the long-term. Our decision to invest in our operations in the midst of an industry downturn has helped transform us into a low-cost silver producer and strengthened our ability to create value for shareholders, local communities and other stakeholders.

Strong Sustainability Performance

The health and safety of our teams, environmental stewardship, and corporate social responsibility (CSR) are central to our company vision and we are pleased to report continual improvement on all fronts in 2016. We achieved the best health and safety performance record in the company's history, had no significant environmental incidents, and achieved program goals in CSR across the company.

We became members of the Mining Association of Canada and have committed to implementing its Towards Sustainable Mining framework over the next three years. We strengthened our focus on the material topics identified by our stakeholders and have adopted the new Global Reporting Initiative Standards as the basis for this report.

Supporting Mine Expansions

Sustainability is a team effort that requires people with diverse skills to work together with local communities and other stakeholders to achieve the kind of progress we want to see in our shared future. We believe this collaborative and balanced approach to sustainability has contributed to the success of our mine expansion projects and other important initiatives of 2016.

The expansions at Dolores and La Colorada will help to strengthen our safety record and reduce our carbon footprint through the use of cleaner grid power rather than on-site generation with fossil fuels. We are already seeing benefits from the newly energized power line to Dolores, which is expected to reduce the mine's greenhouse (GHG) emissions from electricity by at least 25% compared to diesel generation. At La Colorada, we are augmenting the



existing power supply to have more stable power and to avoid the need for supplementary diesel power generation. In addition, we have invested \$3 million to replace the mine water treatment plant at La Colorada.

Our expanded mines will help offset the closure of Alamo Dorado, which will continue processing stockpiled material into early 2017. We commenced progressive closure of the mine in 2016 and completed the majority of the profiling and revegetation of the waste rock dumps. In 2017, we plan to continue reclamation of the tailings dry stack, complete surface water management infrastructure, and advance our well-established revegetation program in accordance with the approved closure plan.

Improving Efficiency

During 2016 our operations in Peru were marked by significant cost savings achieved through increased productivity at our Huaron and Morococha mines. The shift to mechanized trackless mining from manually-intensive mining methods will help improve mine safety, in addition to increasing production efficiency.

We view costs savings from productivity improvements as more permanent savings, which help us weather industry downturns and conserve resources so we can build projects at the right time in the metal cycle.

This business approach also allows us to support the long-term investments necessary to get the best results from our CSR programs. Our CSR commitments are backed by our strong financial position so they can be maintained through periods of low metal prices.

We also worked to improve the efficiency of our CSR investments in 2016 and measure the positive impacts of our work in the communities near our operations. This led to the development of improved performance indicators and goals for success of our CSR projects.

Managing Sustainability Challenges

Health and safety is a top priority and we have achieved major improvements on all indicators for more than a decade. Zero fatal accidents is our long standing goal, which we worked very hard to achieve in 2016 through additional safety training and a serious accident prevention program that commenced in 2015. Despite our team's dedication to safety at all operations, we experienced a fatal accident at our San Vicente mine in late 2016. This accident was investigated in detail and collaboration from the local union led to improvements in our miners

adherence to workplace procedures. We continue to invest in actions to fulfill our commitment to the elimination of fatal accidents at our operations.

We aim to continually build on the foundations of sustainable development that we consolidated in 2016. I invite all our stakeholders to read this Sustainability Report and provide any feedback in our annual stakeholder engagement or directly to our team.

Finally, we would not be where we are today without the hard work and best efforts of our employees and contractors, and the support of shareholders, communities and other stakeholders. The economic and social well-being of local communities and stakeholders is an investment in sustainability — and our future. We look forward to continued cooperation and progress from all stakeholders for mutual benefit in the years ahead.

Sustainability Management

Sustainability management is defined as the integration of environmental, social and economic considerations into business practices. Pan American Silver has a more than 20-year history of applying the principles of sustainable development and corporate social responsibility (CSR) using policies and best practices that have evolved over time. Sustainability is no longer a matter of managing environmental, social and economic issues as they arise; it is the process of integrating and balancing these aspects into a comprehensive sustainability management system that is effective, proactive and inclusive.

In recent years, we have focused on developing a structured framework to integrate sustainability principles and practices throughout our business. In addition to applying globally recognized CSR resources, we developed internal policies and CSR tools to manage our business in an environmentally and socially responsible manner. We strengthened our stakeholder engagement process to identify the issues of greatest importance to our stakeholders, including our employees and contractors. The responses are translated into materiality assessments that help us analyze the impacts of our activities and where they occur, so we can respond appropriately and align our

corporate plans and future goals with the priorities and interests of stakeholders.

Our strategy for sustainability management is set by the Board of Directors, which also provides guidance on the policy framework for sustainability. The implementation of sustainable practices is the responsibility of senior officers and managers with specialized mandates, such as mine operations, environment, health and safety or community relations.

In 2016 the Board led our decision to become members of the Mining Association of Canada and participate in its Towards Sustainable Mining (TSM) Program. Over the next three years, we will work to align our existing management frameworks with the TSM guiding principles and protocols to achieve at least A level reporting. The TSM protocols and frameworks cover issues such as community outreach, energy and greenhouse gas emissions, tailings, biodiversity, safety and health, crisis management, mine closure, and water stewardship.

Stakeholder engagement and materiality assessments are essential cornerstones of sustainability management and help us improve our sustainability planning, performance and reporting.

Stakeholder Engagement

Stakeholder consultation is a deeply entrenched practice at Pan American as our business is in many ways dependent on establishing relationships with governments, local communities and other stakeholders that interact with our operations. We engage stakeholders before starting work programs and continue to consult throughout the mine life cycle.

In recent years we have strengthened our stakeholder process by taking a more structured and strategic approach so that we can sustain constructive relationships with stakeholders. We carried out stakeholder mapping to identify a broad range of stakeholders from governments, academia, civil society and industry associations, in addition to employees, contractors, and

local communities. We developed tools and resources to support more effective engagement processes, measure their effectiveness, and help us understand and manage stakeholder expectations.

Open and honest dialogue with stakeholders, including our employees and contractors, allows us to determine which issues or topics are the most important to them. To facilitate the process, we sent out questionnaires to stakeholders in Canada, Mexico, Peru, Argentina and Bolivia, augmenting the direct feedback obtained from our teams on the ground. A total of 489 people responded to our 2016 survey, with the stakeholder type and country of residence shown in the charts on our 2016 Sustainability Report website.

Materiality

Materiality assessments help us define and analyze the impacts of our business on stakeholders and enable us to set goals and priorities for our sustainability strategy.

The collected responses from our stakeholder engagement were incorporated into a materiality assessment to identify the topics considered most critical for sustainability reporting. The top ten material topics of 2016 are shown here and all topics are included in the graph.

We use a threshold where topics are considered material if their combined score of stakeholder priority and significance is more than 10. The diagonal line on the materiality graph represents this threshold.

The material topics identified in 2016 are within three main categories including economic, social and environment. Relevant sections of this report provide information on how we manage these material topics in the context of our business, as well as other topics that we consider important in areas where we operate, such as the rights of children, women and young people.

To see our full Materiality Assessment, visit our 2016 Sustainability Report website.

Top 10 Material Aspects

1. Health and Safety
2. Employment
3. Local Communities
4. Training and Education
5. Economic Performance
6. Community Development and Infrastructure
7. Emergency Preparedness
8. Competitive Salaries and Local Employment
9. Water Stewardship
10. Investment in Alternative Economic Opportunities & Activities

Goals Scorecard

Sustainability Strategy & Governance

2016 Goal		2016 Performance	2017 Goal/Strategy
Improve sustainability information available to our stakeholders through sustainability reporting	✓	Improved our disclosure on material aspects, the structure of the sustainability report website, and added new disclosure in response to requests from investment community stakeholders.	Continue to enhance accessibility and comprehensibility by adapting the new GRI Standards to our reporting systems.
Improve our engagement with stakeholders on sustainability issues	✓	Doubled the number of people that were consulted in the stakeholder engagement survey compared to the previous year (2015).	Continue to adjust our stakeholder mapping to expand the geographical coverage and increase the number of stakeholders if necessary to ensure we have a representative sample.
			Participate in the Mining Association of Canada's "Towards Sustainable Mining (TSM)" program, implementing the TSM protocols over the next 3 years. Train key environmental and social teams in TSM framework.

Health & Safety

Achieve zero fatalities	✗	We successfully implemented components of a serious accident prevention program, however one fatal accident occurred at our San Vicente mine.	Achieve zero fatalities by continuing the implementation of our serious accident prevention program.
Achieve a lost time injury frequency (LTIF) of 1.60 or less	✓	Reported an LTIF of 0.74, significantly lower than the set target.	Achieve a lost time injury frequency (LTIF) of 1.2 or less
Achieve a lost time injury severity (LTIS) of 750 or less	✓	Reported an LTIS of 373, significantly lower than the set target.	Achieve a lost time injury severity (LTIS) of 400 or less

Labour

Provide training for employees in leadership, safety, and mentoring	✓	Completed our annual Leadership Development Program with 26 participants. Conducted an in-depth supervisor safety training as part of our serious accident prevention program.	Continue to develop future leaders by conducting leadership workshops for employees across all operations, and encourage skills development and education programs within our organization.
Ensure that the lowest paid Pan American employee is above the livable wage in their region	✓	Labour market conditions did not indicate that a detailed update of our livable wage study was necessary in 2016.	Evaluate whether livable wage study should be updated according to overall labour market conditions.

Economic

2016 Goal		2016 Performance	2017 Goal/Strategy
Produce between 24.0 and 25.0 million ounces of silver	✓	Produced 25.4 million ounces of silver	Produce between 24.5 and 26.0 million ounces of silver.
Produce between 175 and 185 thousand ounces of gold	✓	Produced 183.9 thousand ounces of gold	Produce between 155 and 165 thousand ounces of gold.
Target cash costs in the range of \$9.45 to \$10.45	✓	Achieved cash costs of \$6.29 per ounce of silver	Target cash costs in the range of \$6.45 and \$7.45 or better.
Complete La Colorada and Dolores expansions on schedule and budget	✓	<p>Progressed the La Colorada mine expansion, commissioning both the new sulphide processing plant and the new mine shaft.</p> <p>Progressed the Dolores Mine expansion, commencing construction on the pulp agglomeration plant, development of the underground mine, and energizing the new 115kV power line.</p>	<p>Accelerate development rates of the underground mine at La Colorada and achieve ore mining rates of 1,800 tonnes per day by the end of 2017.</p> <p>Complete construction of the pulp agglomeration plant at Dolores, achieve designed processing rate of 5,600 tpd and achieve underground ore mining rates of 1,500 tonnes per day by the end of 2017.</p>
Foster local procurement practices across operations	✓	Implemented findings from our social review processes, and continued to foster working relationships with local companies at all our operations.	Continue to foster local procurement practices across all operations, especially where local procurement was determined to be a material social concern.

Communities

Implement a social grievance mechanism program	✓	Implemented and monitored a social grievance mechanism program across our operations, except in Argentina.	Extend our social grievance mechanism program to our Argentina operations.
Advance the implementation of the Community Development Initiative (CDI) toolkit	✓	Every social project requiring corporate office approval is now being evaluated using the CDI toolkit to determine the potential success and areas still requiring further development.	Review results of CDI toolkit implementation and adjust the toolkit's methodology as necessary.
Conduct social reviews at Dolores and Manantial Espejo mines	✓	Conducted social reviews at Dolores and Manantial Espejo, where no significant negative findings were recorded. Areas of improvement addressed in the social reviews pertained to the contractor camps' living conditions.	Expand the social review process to human rights and security force categories. Conduct social reviews in Peru and Bolivia, and assess the performance of actions taken following previous reviews.
Complete a successful finalization and transition of Project Access in Bolivia to the local communities	✓	Project Access completion was successful and provided benefits to all parties involved.	Continue to work with the local communities on llama breeding, building further on the achievements of Project Access in Bolivia.
Develop systems to measure and track social impact	✓	Created a system that was implemented in Bolivia to develop and track specific social indicators.	Implement the social impact measurement system in our Peruvian and Mexican operations.
Continue looking for opportunities to create meaningful partnerships	✓	Continued relationships with NGO and government stakeholders.	Build on existing relationships and continue working with the Mining Association of Canada.

Environment

2016 Goal		2016 Performance	2017 Goal/Strategy
Achieve zero significant environmental incidents	✓	No significant environmental incidents.	Continue conducting our internal environmental audits and implement our environmental procedures and training methods at all operations.
Maximize opportunities to reduce energy use and improve energy efficiency to reduce costs and greenhouse gas emission intensity	✓	Energized a powerline connection to Dolores that will bring a 25% reduction in greenhouse gas emission intensity from electricity use. Power supply augmentation at La Colorada underway.	Work towards implementation of TSM Energy protocol by preparing a draft internal guideline by the end of 2017.
Identify water conservation opportunities at our operations	✓	Draft internal guideline prepared. Improved water conservation achieved at San Vicente and Morococha.	Work towards implementation of TSM Water Framework by preparing a draft internal guideline by the end of 2017.
Continue to restore and revegetate habitats for biodiversity conservation	✓	Major advances on closure plan implementation at Alamo Dorado with successful results on waste dump areas.	Continue closure plan implementation at Alamo Dorado and impart, "lessons learnt" across other operating sites. Work towards implementation of TSM Biodiversity Conservation Management protocol during the next 3 years.
Improve solid waste management and recycling at our operations	✓	Draft internal guideline prepared. Environmental auditing identified opportunities to improve waste management in Peru and Bolivia.	Develop waste management indicators to facilitate implementation of guidelines at our mines.
Environmental management systems	✓	Environmental management system planning phase completed. Integration of environmental and safety management systems in Peru commenced.	Adapt environmental management systems to align with TSM protocols and frameworks over the next three years.
	✓		Begin implementation of TSM tailings protocol at our mines to be completed over the next 3-years, which includes scheduling independent tailings facility safety reviews.



555,860
hours of safety training



62
teachers are supported through supplemented wages, housing and living expenses

United Nations Sustainable Development Goals

Pan American Silver is committed to the principles of sustainable development and corporate social responsibility (CSR) as a pathway to human progress.

We believe we can contribute to positive change by conducting our activities in an environmentally responsible manner and contributing to the prosperity of the communities and nations where we operate.

Along with thousands of other companies, we are assessing how our activities can help shift the world onto a sustainable path as envisioned by the United Nations' 17 Sustainable Development Goals (SDGs). Launched in 2015, the SDGs collectively create an agenda to transform the world by overcoming barriers to economic, social and environmental progress by 2030.

The 17 SDGs are ambitious and follow a model based on people, planet, prosperity, peace and partnership. Achieving the 17 goals by 2030 will require the cooperation of governments, non-governmental organizations, the private sector, and civil society.

Pan American supports many of the values that are essential to advancing the SDGs and the 2030 agenda. We believe our industry has enormous potential to drive future progress as mines are often situated in remote and under-developed regions where achievement of the SDGs can have large and lasting impacts. Pan American is helping to bring positive change through each of the 17 SDGs.

Goal 1: No Poverty

The economic development generated by our business reduces poverty in remote areas of Latin America. We create thousands of direct and indirect jobs, economic opportunities for remote communities, and pay taxes and royalties to governments that together help elevate the standards of living in regions where we operate. Our CSR programs are designed to help improve the prosperity and well-being of local communities and reduce poverty. We support local hiring and encourage the development of local service and supply businesses.

Goal 2: Zero Hunger

Beyond the economic benefits we generate that improve people's access to food, we support programs to improve ranching and livestock production, grow food in self-built

greenhouses, and improve nutrition in communities near our operations.

Goal 3: Good Health and Well-Being

We conduct extensive safety training to ensure all employees and contractors adhere to our safety pledge and cardinal rules, and we launched a company-wide initiative to achieve zero fatalities and reduce serious injuries. We support the provision of health-care to local communities and programs to help families improve nutrition, hygiene and living conditions.

Goal 4: Quality Education

We supported 43 schools near our mines through infrastructure improvements, materials and scholarships. We also supported 62 local teachers through wage supplementation, which improves continuity of education in remote communities. More than 5,000 students received support for primary through tertiary education in 2016. We support literacy programs for adults and training so people can gain business and other practical skills.

Goal 5: Gender Equality

Women are an important and growing part of our workforce. Diversity, including gender equality, is one of our key corporate values and we continue to work towards increasing diversity in our team. Our CSR programs are also gender inclusive and provide education to minority or underprivileged groups.

Goal 6: Clean Water and Sanitation

We aim to conserve and recycle water, support public potable water and sanitation infrastructure, and are helping to build community-based capacity in this area. We invested over \$3.5 million in 2016 to increase the efficiency of our waste-water treatment systems, and we have reduced water-use intensity from external sources at many of our operations by continually searching out water recycling opportunities.

Goal 7: Affordable and Clean Energy

We reduced energy-use intensity by transitioning to grid power from diesel generators at the Dolores mine. We are also upgrading the power line connection to La Colorada to avoid reliance on diesel generated power. These initiatives help reduce operating costs, improve air quality,

and reduce GHG emission intensity. Our development of electrical infrastructure associated with our operations has provided access to affordable power for many remote communities.

Goal 8: Decent Work and Economic Growth

Our operating mines create thousands of meaningful direct and indirect jobs, and economic growth opportunities for remote communities. Many of our CSR programs are designed to extend sustainable economic development initiatives into non-mining sectors.

Goal 9: Industry, Innovation and Infrastructure

We support and utilize innovation and infrastructure to make our mines safer, more productive and cost-efficient. The mine expansions at La Colorada and Dolores utilize innovation and technology to increase production and improve efficiency.

Goal 10: Reduced Inequalities

We support local hiring and procurement regardless of race, gender, culture, socio-economic background, religious beliefs and sexual orientation. We abide by the laws established around human rights in the countries where we operate and work with local partners to target social investments to marginalized populations.

Goal 11: Sustainable Cities and Communities

We invested \$6.2 million in CSR programs to benefit local communities in 2016, with emphasis on health and education for women and children, and sustainable economic development. Our CSR programs encourage local capacity-building and the development of economic activities other than mining to ensure that communities are sustainable after mining ends.

Goal 12: Responsible Production and Consumption

We have recycling, water management and waste management programs in place at all of our mines to minimize resource use and waste. We aim to reduce the amount of waste produced through recycling, and educate nearby communities in responsible consumption and waste management.

Goal 13: Climate Action

We are reducing GHG emission intensity by moving to cleaner grid power from fossil fuels at the Dolores mine. We continually search out energy efficiency opportunities at our operations to reduce costs and GHG emissions.

Goal 14: Life below Water

We monitor water use and quality during all stages of the mine cycle to identify water-related risks and ensure that our water usage does not compromise other users and ecosystem needs.

Goal 15: Life on Land

We have had no significant environmental incidents at our mines for the last four years. We conduct environmental impact assessments including baseline studies for each mine, so we can minimize and mitigate the impacts of mining and protect ecosystems and biodiversity. We have adopted progressive closure plans for all our mines so lands will be restored to their natural state and we are currently in the closure and reclamation phase of the Alamo Dorado mine.

Goal 16: Peace, Justice and Strong Institutions

We engage and work with governments and NGOs to align our social projects to the realities of the areas where we operate in order to prevent and pre-empt conflict and promote the rule of law. We operate within the guidelines of the Anti-Corruption Policy and the Global Code of Conduct, and we work with suppliers to ensure they work ethically and comply with our high standards.

Goal 17: Partnerships for the Goals

We work with governments, civil society and community partners to share resources and align our sustainability strategy and CSR programs with the UN SDGs. We engage with UNICEF and Engineers without Borders in developing guidelines for our operations. In 2016, we joined the Towards Sustainable Mining program through our membership in the Mining Association of Canada. We worked in partnership with Global Affairs Canada and the Canadian NGO SOCODEVI on Project Access near our San Vicente operation in Bolivia.

Operations: Sustaining our Business

STEVE BUSBY, *Chief Operating Officer*

Looking back over my almost 14 year career with Pan American, 2016 was by far our strongest year in sustainability.

We had our best safety performance with the lowest annual lost-time accident frequency ever achieved by Pan American, although regrettably we did incur one fatality. We also received the greatest level of support from our employees, unions, governments, communities, suppliers and shareholders. This is particularly gratifying as we look back at the many challenges we endured with stakeholders during the “super cycle” years, despite high silver prices and greater profitability.

What made 2016 so different? One important reason is that we have matured as an organization into a strong cohesive team that can execute our business extremely well. We run a decentralized organization, yet people in different functions have found ways to work together effectively as a team without the bureaucratic barriers often seen in large companies. Our decentralized approach to decision-making has enhanced our ability to overcome challenges and achieve goals while building positive relationships with local communities, suppliers and other stakeholders. The delegation of authority, responsibility and accountability enables our company to be more efficient, and I believe, fosters a deeper commitment to achieving our goals.

Our Board and senior executives set the direction for our operating strategy based on the core values and guiding principles of sustainability. They also provide appropriate oversight to ensure that we comply with industry standards and the laws and regulations of our host nations.

To maintain a sustainable business we must continue to do things right and manage our assets to create long-term value for shareholders and other stakeholders. In 2016, we continued our focus on modernizing and expanding some of our mines to offset production declines at others that are nearing closure. This approach has helped Pan American become a low-cost producer with future potential for strong production growth and further cost reductions.

Operating Performance

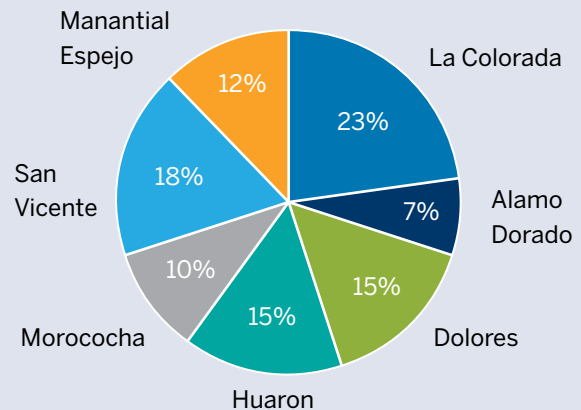
Our economic performance was among the top material topics identified by stakeholders in 2016. This likely reflects the weak metal prices in recent years, which has resulted

in mine closures, workforce reductions and curtailed spending on expansions and new mine development.

Over 2016, prices for silver, gold and most base metals strengthened, leading to improved investor sentiment for precious metals. It was a positive year for Pan American as well, as we began to see the benefits from our multiple-year capital investments to expand and modernize our producing mines.

Our operations collectively produced 25.4 million ounces of silver in 2016, along with record gold production of 183,900 ounces. Cash costs⁽¹⁾ of \$6.29 per ounce of silver were below original guidance, reflecting savings from lower prices for energy, consumables, mining equipment and engineering services, as well as the benefits of higher by-product metals prices, productivity enhancements, and favourable currency exchange rates, tax and royalty adjustments.

2016 Silver Production by Mine



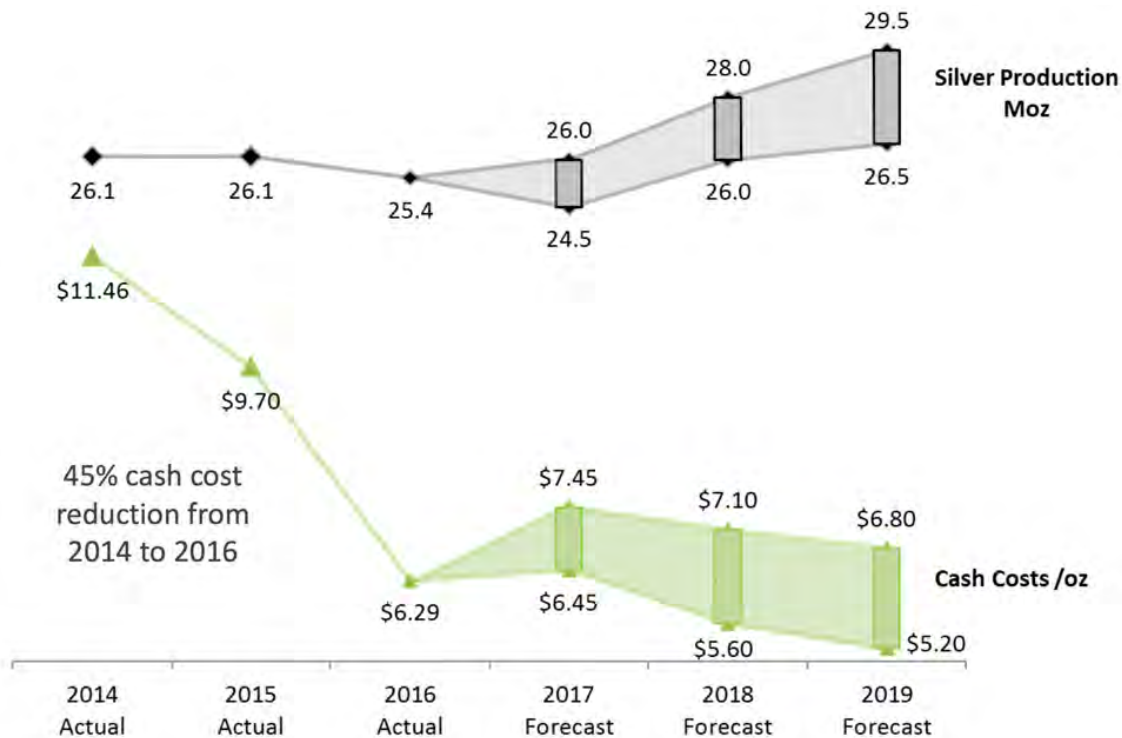
25.4 MOZ

TOTAL SILVER PRODUCTION IN 2016

2017 Guidance

Pan American has again provided a three-year outlook for its operations, reflecting the completion of the La Colorada and Dolores expansions, along with the closure of Alamo Dorado and pending wind-down of Manantial Espejo.

Three-Year Guidance



(1) Cash costs is a non-GAAP measure. Please refer to the Company's final Managements' Discussion & Analysis for 2016, under the heading "Alternative Performance (non-GAAP)" for a detailed discussion of this measure.

With the substantial completion of the expansion project, La Colorada is now our largest silver producer, our largest silver reserve, and is expected to be our largest source of cash flow. Dolores will become a close second in overall value as the expanded project delivers benefits by year-end 2017 and into 2018.

The expansions of La Colorada and Dolores generated economic benefits for many of our stakeholders in terms of employment and the spin-off activity of our investment in the area.

The expansions also have positive environmental impacts, such as new power line infrastructure, which reduces our reliance on fossil fuels and lower greenhouse gas emission intensity from electricity. The new power line at Dolores was completed and energized in 2016, and the new power line at La Colorada should be completed in early 2017. Projected annual cost savings at Dolores of \$7 to \$9 million, given current oil prices and currency exchange rates.

The modernization of our Huaron and Morococha mines in Peru will generate positive economic, environmental and social impacts. Both mines are now fully mechanized,

which enhances safety and operating efficiencies and helps ensure that their productive lives will continue for decades. Both underground mines achieved their lowest annual cash costs in more than seven years, with Morococha transitioning from our highest cost operation to our lowest cost producer in 2016.

San Vicente was a solid performer in 2016 despite cost escalations related to inflation in Bolivia. Our activities in Bolivia provide social and economic benefits for both local communities and the nation, as we are now the largest revenue source for COMIBOL, the state-owned mining entity.

Improved economic conditions and exploration success have extended the timeframe for the closure of the open pit at Manantial Espejo until mid-2017, with underground mining and stockpile processing expected to continue throughout 2019. Exploration programs aimed at extending underground mining will continue in 2017, as well as site reclamation work on the open-pit mine.

Creating Value

Pan American has a multi-faceted strategy to create value and sustain our business into the future, including targeted exploration at or near our producing mines to replace mined reserves.

We believe that our track record of reserve replacement is one of the best in the business. Our reserves at year-end 2016 are estimated to contain 286 million ounces of silver and 2.0 million ounces of gold. In addition to mine-site programs to replace reserves, we plan to explore recently optioned silver properties in the Promontorio mineral belt near Alamo Dorado in Mexico, and test promising satellite targets like the Joaquin project near Manantial Espejo in Argentina.

We are encouraged by recent changes in the operating environment in Argentina, which has improved the investment climate and made it easier for us to bring

in equipment and spare parts to improve productivity. The national government has expressed support for our undeveloped Navidad project, which could bring many jobs and economic benefits to the region should the Provincial laws be reformed to allow development.

The excellent results and goals achieved in the past year have positioned Pan American on a path of sustainable growth and operational excellence, thanks to the teamwork of our employees and the positive support of shareholders and all other stakeholders. We are a stronger and more sustainable business than ever before, well positioned to create value for stakeholders for many years to come.

Governance

Governance is more than a set of policies and procedures that companies use to direct and manage their affairs and comply with applicable laws, regulations and standards in the jurisdictions where they operate. Good governance requires strong leadership to ensure that the values and vision of the corporation are integrated into business decisions and strategies. This is particularly true in the mining industry, which has high exposure to risk and operates in a complex and demanding legal and regulatory environment under cyclical market conditions.

Governance in the mining industry is a dynamic process that has evolved since the times when the emphasis was placed solely on the financial well-being of the company and protecting the interests of shareholders. Directors are now expected to consider the social and environmental aspects of mining activities and encourage proactive engagement with a wider stakeholder community.

Pan American Silver has strong leadership with a mix of experience and expertise to provide good governance, oversight and direction of strategic objectives; including sustainability goals. We have a governance structure that defines the roles and responsibilities of our Board of Directors, executives and senior managers, while promoting accountability and ethical business practices throughout the Company.

Roles and Responsibilities: The Board and its Committees

The Board of Directors has overall responsibility for the stewardship of Pan American Silver and provides direction with respect to its values, vision and overall corporate

strategy. As the top-level body in the Company, the Board provides oversight of our business activities and ensures that governance structures and systems protect the interests of investors and our communities of interest. The responsibilities of the Board are broad in scope and challenging, which is why we value the industry experience, good judgement and exceptional competencies of our directors.

In 2016, the Board was comprised of eight individuals, including the Chair of the Board. The majority of directors are independent to ensure impartiality and accountability.

Independence is not determined solely on legal or regulatory definitions. We also determine independence based on a director's ability to act objectively, free from material relationships to the Company. We believe that having a majority of independent directors improves our corporate governance and helps prevent conflicts of interest and other potential risks.

Board members are elected each year at the Company's annual meeting of its shareholders. As a Canadian-based public company, we have adopted the majority voting policy introduced by the Toronto Stock Exchange in 2012.

Along with evaluating the management and performance of the Company on a regular basis, the Board plays a significant role in developing governance and sustainability policies and guidelines. Directors also must consider and monitor a broad range of potential risks, including market uncertainties, and ensure that appropriate systems are in place to manage these risks.

To help fulfil these diverse responsibilities, the Board has established five committees that have important roles in the Company's business and in sustainability and governance matters.

- The Audit Committee provides oversight of financial accounting, reporting and disclosure practices, and risk management and internal controls related to such matters. All Audit Committee members are independent.
- The Health, Safety, Environment and Communities Committee provides policy direction and oversight of safety, environmental, and corporate social responsibility (CSR) matters. The Committee also receives management reports and audits conducted to assess compliance with internal policies and industry best practices. Currently, three of its four directors are independent.
- The primary role of the Nominating and Governance Committee is to oversee the effective functioning of the Board and the implementation of governance best practices. This Committee consists of two independent directors who work closely with our General Counsel and Corporate Secretary to monitor developments in corporate governance and provide guidance on governance-related matters, including our code of conduct. The Committee is involved in Board succession planning and proposes Board and committee nominees on the basis of the qualifications and experiences necessary for these positions.
- The Human Resources and Compensation Committee assists the Board in fulfilling its responsibilities related to human resources and compensation matters. In addition to making recommendations to the Board in respect of the overall compensation strategy, this Committee, comprised of three independent directors, also conducts annual assessments to evaluate potential risks associated with compensation programs.
- The Finance Committee assists the Board in monitoring and reviewing the Company's financial structure, investment policies and financial risk management program. It also makes recommendations related to these matters as appropriate. Currently, three of its four members are independent.

These committees act on issues directly related to their specific charters, but at times issues may overlap and ultimately involve the Board as a whole. We have developed a system of governance with the flexibility to respond to complex issues as they arise. By having a team-based

governance system rather than a rigid organizational structure, we are better positioned to proactively respond to industry change and the aspirations of our communities of interest.

For a more detailed discussion of the roles and responsibilities of our Board of Directors and our Board Committees, or for further information on how our Directors are elected, please refer to the Company's most recent Information Circular available on the Company's website and at www.sedar.com.

Roles and Responsibilities: Executive and Senior Management

The Board has top-level responsibility for governance and sustainability and part of this mandate is to ensure that the Company has qualified executives and senior managers to lead day-to-day operations and implement corporate objectives and policies. In this respect, management provides the leadership and the momentum to instil good governance procedures and ethical practices throughout the Company.

Our executive and senior managers have diverse expertise and experience that enables us to responsibly operate mines in four countries, effectively manage our financial resources, and ensure compliance with laws and regulations in multiple jurisdictions. They are role models for our employees and contractors; every manager is expected to be aligned with our values and culture in order to encourage Company-wide honest and ethical practices.

While leadership in day-to-day governance and sustainability matters is a shared effort amongst the executive management team, it is a direct function of our General Counsel, our Vice-President of Environment and Sustainability and our Corporate Secretary. These individuals liaise with and make recommendations to the Board on these matters, help develop, implement and monitor related policies, and generally provide oversight and direction with respect to the Company's activities.

The Vice President of Environment and Sustainability actively directs and oversees programs related to this mandate at all levels, from the front lines of the mines to boardroom presentations, and reports to the Company's Chief Operating Officer. Of particular importance is the Sustainable Development Management Committee, comprised of the Vice President of Environment and Sustainability and management representatives from each of the countries in which we operate, as well as various other related disciplines. We believe that the combined

expertise and experience of this management committee helps us effectively manage sustainability issues and challenges in each of the jurisdictions where we operate.

Our executive and senior managers have many specialized roles and responsibilities that are explained in detail in other sections of this report, including the Community Relations, Environmental Management, Health and Safety, and Human Resources sections.

Diversity

As a geographically diverse organization, we enjoy a multi-faceted and multi-cultural work force that brings a wide array of experience, knowledge, background, culture and heritage to our business. In an ever-changing global environment, we believe that the benefits of a diverse work force support our long-term success. Diversity encourages varied perspectives and an enhanced appreciation of how we operate and interact with our stakeholders. Awareness and promotion of diversity also fosters an inclusive work environment where individuals are treated fairly and with respect.

Like our business as a whole, we also consider it important to have diversity amongst our senior management team and our board of directors (the “Board”). In early 2015, we adopted a Board and Senior Management Diversity Policy (the “Diversity Policy”) which recognizes the importance of diversity amongst our Board and senior management team, and emphasizes our commitment to diversity. Diversity, as provided in the Diversity Policy, refers to the varied characteristics that make individuals unique from one another, whether that is gender, ethnicity, age, race, religion, disability, cultural or socio-economic background, nationality, sexual orientation, language, educational background, or expertise.

The Diversity Policy provides a basic framework within which the Company will consider the principle of diversity when recruiting, developing and appointing its senior management team and its Board members, with the goal of having talented, knowledgeable persons with diverse experiences, backgrounds and perspectives guiding the Company. While recruitment, development and appointments for our senior management team and the Board will be primarily merit-based in order to ensure that the composition of our senior management team and the Board will ultimately reflect the particular skills, knowledge and experience that are required to effectively run our business, due consideration will also be given to the present level of diversity within the leadership of the Company, including gender diversity, and the positive

impact further diversity might have on the Company and its business. With respect to gender diversity, we currently have one Board member and one senior management team member that are women.

The Nominating and Governance Committee, the Chief Executive Officer and the Human Resources and Compensation Committee are in unique positions to encourage diversity by recognizing diversity as a factor for consideration when fulfilling their responsibilities with respect to nominating, recruiting, hiring and promoting persons for the Board and senior management. With the adoption of the Diversity Policy and the explicit recognition of the benefits of diversity, including gender diversity, we believe that the goal of having talented, knowledgeable persons with diverse experiences, backgrounds and perspectives guiding the Company is a positive and achievable objective.

Policy and Program Framework

Pan American Silver has adopted a number of policies and guidelines that provide a framework for ethical business practices and the ethical conduct of directors, officers and employees. They promote integrity, accountability and transparency throughout the Company, and help ensure that we are compliant with legal and regulatory requirements and industry best practices.

- The Global Code of Ethical Conduct (the “Code”) is the foundation of our policy and program framework and reflects our commitment to high standards of governance and corporate ethics. As such, all of our directors, officers and employees are expected to comply with Code, assist and cooperate with audits and investigations in connection with the Code and related policies, and promptly report any violations of the Code.
- The Global Anti-Corruption Policy articulates our position against using tactics of bribery or corruption or other means of obtaining an improper business advantage. This is an important safeguard for any mining company with diverse geopolitical exposure.

The Code and the Global Anti-Corruption Policy together provide the fundamental tenets to ensure that we consistently operate in an ethical and responsible manner in compliance with applicable laws, rules and regulations.

Every employee — from the head office to the mine sites — and all of our directors, senior managers and service providers are expected to conduct themselves in an honest and ethical manner consistent with the Code and Anti-Corruption Policy and take responsibility for their actions.

To enforce these high standards, we analyzed all of our business units for risks relating to potential corruption and ethics violations and have established compliance mechanisms to support the Code and Policy. We have distributed these documents internally, and to many third parties with whom we do business, to ensure that our governance expectations are understood and respected.

We have, at various times, conducted training sessions with management and administrative personnel in Argentina, Bolivia, Mexico and Peru, along with training sessions with senior management in Vancouver, to reinforce the importance of good governance and ethical business practices. We plan to continue with, and improve, our ethics and compliance training.

Another important element of our governance framework is the process for reporting complaints of an ethical, accounting or audit nature, which can be done on a confidential basis without fear of reprisals, discrimination, harassment or retaliation. Directors, officers and all employees are responsible for reporting any actual or potential unethical or illegal activity, including on a confidential or anonymous basis if desired. Persons who are not employees can also submit complaints by delivering a written report by mail or courier to the General Counsel, marked private and confidential.

Pan American has adopted other policies to support our sustainability strategy including Health and Safety, Environment, and Corporate Social Responsibility which are discussed elsewhere in this report.

External Oversight and Guidance

As a Canadian company listed on the TSX and NASDAQ, Pan American Silver must comply with securities

regulations and exchange rules and requirements designed to protect investors and the integrity of financial markets. These rules and regulations include elements of good governance, such as having a majority of independent directors, and ensuring the protection of shareholders' rights. They also include rigorous requirements for the disclosure of financial information, changes in insider share ownership, and material transactions or changes such as mergers or acquisitions.

We also must disclose our technical information, including production results and mineral reserves and mineral resources, using standardized terms and definitions approved by securities regulators and mining associations. Our technical reports must be signed off by a qualified expert.

The external oversight of publicly-listed mining companies is not confined to stock exchanges and securities regulators. We also must adhere to government legislation and regulations that apply in the various jurisdictions where we operate. The legal and legislative framework may vary depending on the jurisdiction, but as a Canadian company we are expected to conduct our activities to the highest possible standards and apply industry best practices at home and abroad.

Our governance policy and program framework, while internally developed, is designed to take into account the external factors that affect our industry, including market uncertainties and increasingly complex economic, environmental and social issues. We can't expect to control these external factors, but we can develop effective response strategies to navigate them.



Our People

People are Pan American's most important asset. We consider our employees and contractors as partners in sustainability as they play a central role in the value creation process for stakeholders.

They provide the intelligence, the ideas and the energy that drive our operating and financial performance and inspire our continued progress in corporate social responsibility (CSR).

From a corporate perspective, 2016 was an exceptional year with strong earnings and operating results that reflect the work done in the past several years to cut costs and provide stability going forward. It was a year of change as well, with some mines at or near closure and others being modernized or expanded. The changes were necessary for us to remain competitive, but they impacted some employees and community partners. We see some of these shifts reflected in our stakeholder consultation and materiality assessments.

Four of the top ten material topics this year are directly related to human resources (HR): education and training; occupational health and safety; employment; and economic performance. The others are indirectly related and involve how we manage social and environmental issues.

Pan American has developed an organizational structure to manage HR-related material topics. The Board of Directors sets the overall policy direction and delegates certain powers and duties to the Human Resources and Compensation Committee. The HR departments throughout our company are responsible for recruiting, training, motivating and enabling our teams to achieve corporate goals and objectives in compliance with applicable rules, regulations and employment standards. The HR teams also act as a liaison between the various departments, and respond to employee and union issues and concerns.

Our HR and CSR teams were involved in closure planning for Alamo Dorado years in advance in order to avoid negative impacts and ensure an orderly transition for employees and local communities. Some employees re-located to our other operations, others found employment elsewhere, and we still have a significant number of employees and contractors on-site engaged in ongoing reclamation activities.

The timeline for the closure at Manantial Espejo has been extended due to exploration success and favourable government policies that have led to productivity improvements and lower costs; however, we continue to develop our social closure plan to better prepare our staff and the local community.

Safety is always priority for our Company, and will remain a priority again this year. During 2016, we expanded our extensive training programs to integrate a culture of safety throughout all levels of our organization. One key goal is to entrench our "Safety Pledge" and "Cardinal Rules" and ensure that all employees value and comply with these fundamental safety practices. The other key goal is to strengthen our front-line supervisory capacity so they have the technical and leadership skills to change behaviour and train others to always put safety first. We have deployed and launched our "train the trainers" program at each of our operating mines and this initiative is progressing very well.



"The courses are very good because they focus on safety across the different processes that occur in the company, from mining to legal, management, administrative, and even community relations." – Lagones Cárdenas Iván (Occupational Health and Safety Manager, Morococha, Peru)

"We learn techniques of how to manage safety, to implement safety devices and tools that help us control processes in a safe way." – Luis Ontiveros (Safety and Environmental Manager, Mexico)

An important part of our sustainability strategy is leadership and management training. We have identified

250 leaders and managers from diverse backgrounds within our organization who we believe will drive the Company's future success. In 2016, we completed our leadership development program with 25 managers from throughout the company, and will continue this program in 2017.

As part of our CSR strategy, we are committed to providing competitive wages to all employees. The mining sector is among the highest-paying in each of the countries where we operate. We recognize that we must develop competitive compensations and benefits programs to attract skilled and motivated employees. We are also continuing to improve working and living conditions at our mines, particularly those where employees live in on-site camps or with their families in remote areas with limited government infrastructure and social services. The investments we make in these areas are based on needs identified in our social review process.

We are committed to fair treatment in the workplace. One of our core values is to conduct our business affairs free from favouritism, fear, coercion, discrimination and harassment.

In addition to internal guidelines and policies governing HR issues, we adhere to the laws and regulations of our host nations and apply industry standards and best practices. In late 2016, we became a member of the Mining Association of Canada, and committed to participate in Towards Sustainable Mining (TSM). Along with overarching guiding principles, TSM has a suite of protocols that we will use to measure and publicly report our performance, including Aboriginal and community outreach, health and safety, and crisis management and communications.

Diversity, Inclusion, and Human Rights

Pan American abides by the laws established around human rights in the countries where we operate. We respect the Universal Declaration of Human Rights and the Convention on the Rights of the Child. We also respect workers' rights, including rights of association and collective bargaining. We have union agreements at all our mines and we work with union leaders to improve safety standards and working conditions at our operations.

Cultural diversity is important to us, as we have mines in four different countries and local management teams. We embrace the diversity of our workforce and the communities where we operate. For Pan American Silver, diversity includes but is not limited to race, age, gender, culture, socio-economic background, religious beliefs, and sexual orientation.

We strive to achieve an inclusive work environment where everyone is treated fairly and respectfully, has equal access to resources and opportunities, and can contribute to the success of the organization. Through our policies and practices, we focus on promoting participation of diverse groups in our consultation processes, providing opportunities to work with our Company as employees, contractors or suppliers, or participate in our numerous social programs.



6,659
employees and
contractors across
our seven operations
in four countries



99%
of our mine
employees are from
local communities
and regions

Health and Safety

Pan American is deeply committed to protecting the health, safety and well-being of our employees, contractors, suppliers and community partners everywhere we operate.

We believe that operating safe mines and building a culture of safety are directly related to our operational success and ability to create long-term value for stakeholders and society.

Occupational health and safety was the top material topic identified in 2016, followed closely by education and training. Safety is a material topic for our industry because mining by its nature has potential hazards that must be carefully managed. On a daily basis, our employees and contractors are engaged in safely supporting freshly blasted rock, operating heavy machinery, using explosives and chemicals, working with high voltage electricity, ventilating gases, working at heights, working with high temperature materials as well as a many other complex and potentially dangerous tasks. We are committed to providing our employees and contractors with the training and tools that they need to work safely and have developed policies, procedures and a strong management system to help us achieve and maintain this goal.

Our Board of Directors provides leadership and oversight on our overall safety strategy and performance. We have adopted a comprehensive Health and Safety Policy, which sets out the specific actions required to meet our health and safety goals and objectives. Senior management is responsible for implementing the policy and regularly reports to the Board's Health, Safety, Environment and Communities Committee on compliance matters. The Board sets our annual safety targets, which are intended to reflect results from all operating mines and active projects.

Statistically, our safety performance for 2016 was excellent, in fact it was the best in company history with the lowest lost time injury frequency and lowest total number of lost time injuries that we have recorded. Unfortunately this performance was overshadowed by a fatality that occurred late in the year, reminding us that safety requires constant vigilance. We continually provide training programs at all of our mines so everyone understands that safety is a shared responsibility.

As part of our Serious Incident Reduction Initiative, we have implemented our "Silver Safety Pledge" and "Silver Cardinal Rules" throughout the organization and incorporated them into our induction training and safety talks. The first three pledges set the tone for this initiative. Employees pledge to be responsible for their own safety and the safety of those around them, to remember that accidents are preventable, and to follow Company rules, regulations, policies and procedures, among other commitments.

We also made significant progress with a training program that is designed to provide our front line supervisors with essential safety and people management tools. Trainers have been trained at each operation who will be tasked with making the program sustainable and keeping the supervisory training current. We have also improved our mine rescue and preparedness program, and increased the frequency of mine auditing to make it more responsive to issues of concern.

Late in the year we joined the Mining Association of Canada and its Towards Sustainable Mining program, which outlines specific commitments to help identify hazards and reduce risk to as low a level as reasonably possible with zero harm being the primary goal.

Together, these health and safety tools, policies, procedures and initiatives will help us to continually improve our safety performance. They will also help stakeholders measure our performance against set targets and goals, as detailed in the next section of this report.

Safety Performance

Our safety performance across all operations is measured in three ways: Lost Time Injury Frequency (LTIF); Lost Time Injury Severity (LTIS), and number of fatalities.

LTIF and LTIS are calculated as follows:

$$LTIS = \frac{(\# \text{ of lost work days}) * (1,000,000)}{\text{Total hours worked}}$$

$$LTIF = \frac{(\# \text{ of accidents}) * (1,000,000)}{\text{Total hours worked}}$$

The 2016 targets set by the Board for were zero fatalities, a LTIF goal of 1.60 or lower, and a LTIS goal of 750 or lower.

Average hours of training per year per employee

	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo	Total
General Safety	28,054	97,453	4,840	152,129	15,585	3,654	4,156	314,703
Mining Induction	17,074	39,673	2,296	43,687	23,222	2,280	473	128,704
Geotechnical	1,737	1,427	-	1,859	1,998	-	-	7,021
Formal Safety								
Meetings	6,110	2,709	412	720	68,689	154	836	79,629
Mine Rescue	2,446	12,568	1,290	3,455	2,847	916	2,281	25,802
Total	55,421	153,830	8,838	201,848	112,340	7,004	7,746	555,860

We reported 13 lost-time injuries, for an LTIF of 0.74 and an LTIS of 373. Our LTIF and LTIS targets for 2017 are 1.20 and 400, respectively.

While our safety performance was much improved in 2016, we did not achieve our goal of zero fatalities as reflected in the LTIS performance. A fatality occurred late in the year when a miner was trapped in a rock pile while working in an underground stope at San Vicente. The incident was investigated and preventative action was taken to eliminate similar accidents in the future.

Our three Mexican mines continued to operate without a lost-time injury in 2016, even as expansion programs progressed at La Colorada and Dolores.

The expansion at La Colorada involved sinking a 618-metre deep shaft, developing an expansion to the underground mine, building a new sulphide processing plant, and replacing a power line. The entire project was completed without a lost-time injury and La Colorada received the Silver Hard Hat Award from the mining industry association in Mexico in recognition of its safety performance. The expansion at Dolores will continue until late 2017, with excellent safety performance to date.

We saw significant safety improvements at our newly mechanized Huaron mine in Peru, with only one lost-time injury. The Morococha mine is also fully mechanized and was the recipient of the Chairman's Safety Award for excellence in safety during 2015. Huaron will be awarded the same award for its performance in 2016. We continue to see significant safety and productivity benefits from the mechanization of our mines in Peru.

Last year we expanded safety training programs, including supervisory training, at all of our operations. Our training investments in 2016 were significant and clearly signal that we are responding in a responsible manner to the concerns of our employees, contractors and stakeholders. The following chart shows the total number of training hours

for 2016, with a breakdown of hours by operation, and for each specific element of safety training.

An important focus of our ongoing safety efforts is the Serious Incident Reduction Initiative, which is aimed at preventing serious injuries and fatalities. The mining industry has significantly reduced overall accidents rates, but when accidents do occur, they tend to be severe. We are continually striving to prevent workplaces injuries through training, technology and innovation.

One aspect of training is to reinforce the importance of our safety pledges and cardinal rules so people understand what our expectations are. The other essential aspect is strengthening our front-line supervisory capacity. These aspects were the focus of our 2016 training programs.

We will continue training in 2017 with a target of again completing more than 500,000 hours of training with a focus on more specific and detailed matters, such as ventilation, geotechnical, ground support and other potential issues that affect the safety of our operations. The industry is continually evolving through research and innovation, and during the year we invited more than 50 of our technical leaders to a mine conference in the United States to see new equipment and technology to evaluate how that may help improve mine safety.

We updated our mine safety auditing program so that when issues of immediate concern are identified, the issue is elevated to the Chief Operating Officer for immediate action. We also increased the frequency of safety auditing so every mine is audited every year. We use a system whereby each mine is audited by a team led by the corporate safety department with assistance from personnel from other mines on a continually rotating schedule.

Our mine rescue and emergency preparedness teams continue to stand ready and we will continue to strive to provide them with the training and equipment that they need.

Communities and Social Development

Management Approach

Community engagement and social development programs are deeply entrenched elements of Pan American's sustainability strategy. In the early years we focused on building in-house capacity and processes to ensure that our mines contribute to the economic and social well-being of local communities. We have since strengthened our management framework by adopting formal policies, procedures and industry best practices to address the impacts of our activities in the wider context of sustainability.

Our approach to social development is defined by our corporate social responsibility policy (CSR Policy) and its overarching commitment to operate mines and develop projects in harmony with local communities.

A central tenet of our CSR Policy is to engage local communities in a timely, inclusive, honest, transparent and culturally appropriate way throughout the mine life cycle. We conduct annual stakeholder surveys and hold face-to-face meetings in communities near our mines to facilitate this process. Their feedback allows us to identify and manage the positive and negative impacts of our activities and also understand the needs and expectations of local communities.

We train our local teams on new procedures to manage potential impacts and ensure that our social development programs are aligned with community needs and aspirations. Our goal is to have a consistent methodology to measure and track social impact and our CSR performance between mines, yet still have the flexibility to tailor our approach to the different circumstances of each operation.

We also conduct workshops to educate employees and community-based service providers about the high ethical, safety, environmental, and CSR standards we expect across the company. In late 2016, we joined the Mining Association of Canada (MAC) and are working toward meeting the requirements of its Towards Sustainable Mining (TSM) program. The TSM reporting framework is composed of various protocols, one of which being aboriginal and community outreach. We are participating directly in MAC's International Social Responsibility Committee.

Another important resource is our Community Development Initiative (CDI) toolkit, which serves as a benchmark to determine when and what type of social development programs are a good fit for us and local communities. We also conduct social reviews of all mines — each mine is audited every other year — to identify areas of improvement in our community work.



Social Performance

We conduct annual stakeholder consultation in order to identify and manage material topics for this report. Stakeholder mapping in 2016 identified 489 people from different stakeholder groups who all responded to our survey, which is more than double those consulted in 2015 and a highly representative sample of our stakeholders.

Local communities and related issues, such as consultation and sustainable development programs, were among the top ten material topics identified by our communities of interest in 2016. This was expected, as some mines transitioned toward closure and others were expanded, resulting in a range of different social interactions with local communities. As in past years, stakeholder mapping has identified women, children and the elder population as the most vulnerable groups in many of the regions where we operate.

We conducted two social reviews in 2016: at Dolores in Mexico, and Manantial Espejo in Argentina. These reviews did not identify any high significance findings and the low and medium significance findings, which are depicted in the graph, were corrected within the timelines agreed with each operating team. Many positive findings were also identified that are useful examples for our other operations.

In 2017, we will conduct social reviews of our mines in Peru. We are also continually improving the review process and in 2017 will incorporate additional human rights considerations in line with our commitments to MAC.

We have grievance mechanisms on site at each of our operations, which allow both social and environmental grievances to be reported as well as other community concerns. No significant community or environmental matters were registered in 2016.



5,040

students attended primary to tertiary school through our support

We continued to support education and health, with particular emphasis on vulnerable women and children, as these needs are evident in the communities where we operate.

A total of 11,918 people received medical attention through local health facilities and campaigns in 2016. We also support nutrition programs that benefit children and women's health.

On the education front, students and schools received support through infrastructure, materials and scholarships. We also helped supplement teachers' wages in 2016, and continue to provide support for literacy and adult education in some local communities.

The following section outlines how we address the impacts of our activities at specific mines and projects, as well as impacts that may occur beyond our operating boundaries in each host nation.

Mexico

In Mexico, our community programs focus on health, education, local procurement and business management. We have provided training to local companies on health and safety, financial and business management, and anti-corruption practices, and we facilitated the growth of 15 local companies, many of which now operate beyond the local area of our mines.

We also provide funds for doctors and health-care practitioners in several communities near our mines, with particular emphasis on services to young children and women.

We supplemented tuition for a portion of the students and provided support for teachers' accommodation. Through partnerships with local technical schools, we helped 111 people become certified as furniture-makers, sewers and industrial garment makers, hair and beauty stylists, and hydroponic farmers. Another of our ongoing goals is to improve literacy and in 2016, we helped 11 adults finish primary school and 24 adults complete secondary school.

An important objective in 2016 was to manage the closure of Alamo Dorado in a progressive manner to minimize potential impacts to local communities, employees, and supply and service companies. Our closure plans were announced well in advance so local residents and other stakeholders could prepare accordingly. We understand that closure is not an easy process for the local communities, but we have made efforts to create an open communication path in order to acknowledge the concerns of the people in the area. Most people in the area are



engaged in ranching or charcoal production and are self-sufficient, supported also by the assistance we provided through housing improvements, training, education, and health campaigns over many years.

We continued to monitor the positive effects of our expansion projects at La Colorada and Dolores, while addressing infrastructure needs such as schools and housing where appropriate. At Dolores we supported the upgrading of the local church, community centre, teacher housing, and baseball field with new facilities for players and public seating. Economic growth is the primary local concern and we have responded with a strategy to help local companies diversify into other industries and expand regionally if possible. The growth in population in the nearby town of Arroyo Amplio created the need to improve infrastructure and living conditions. The CSR team focused part of their strategy, to assist that process, and they continue to monitor developments in order to improve quality of life in the area. We are also helping local ranchers access regional funding for their ranching programs. At La Colorada we made major improvements to housing for employees and their families and supported upgrades to the local church and school facilities.

Peru

Our social programs in Peru focused on health, education and sustainable economic development in communities near our Huaron and Morococha mines.

Our education programs include scholarships for university students, supplementing wages and training for teachers,

summer camps for children, and career counselling for secondary students. Our health programs are broad in scope and include workshops on family behaviour, nutrition and breastfeeding programs in line with UNICEF standards and a broader array of gender and children's issues.

We support community-based programs to help combat family violence and provide women with training to improve hygiene, nutrition and household skills. We address these issues not because they are related to our operations, but in order to improve general living conditions in the communities nearby. Women have responded favourably and are reporting positive lifestyle changes from these programs, such as having their spouses spend more time at home with their families and better performance of their children in school.

We worked with local teams to support the continuation of the Uqllu weaving project in which many artisans are no longer requiring our direct support. This development program was designed to promote artisan weaving in communities near our Peruvian mines. It has operated successfully for a decade, with weavers becoming self-sufficient over time. Business and marketing skills are important to establish a niche for their artisanal products in a global market of industrially produced alpaca fibre products. We provide assistance on these topics and continue training workshops for 50 new artisans who will be certified and recognized as national artisans, and they will likely form new independent workshops to market their products.

The Huayllay Project in the region surrounding Huaron is designed to help 700 community members in a program that aims to improve the health and vitality of their alpacas and sheep. The program continued in 2016, with animal registration to help avoid inbreeding, parasite control and vaccinations, and training community members in animal health care and breeding practices. Some community members have been certified in animal care at a regional level.

Bolivia

The region around our San Vicente mine is among the poorest in South America and our main CSR programs are focused on sustainable development to address the lack of formal infrastructure and provision of basic needs. We provide health checkups for children, an annual dental campaign, and provide medical care as needed to patients in the 11 communities near San Vicente that have limited or no access to health care. We are also helping women develop hygiene, nutrition and household skills based on the successful model established in Peru.

Project Access, our joint project with the Canadian Government and the NGO SOCODEVI, which was aimed at raising and breeding healthier llamas, was formally concluded in 2016 with positive results and many of the original project objectives achieved. The program generated direct improvements to the lives of 371 families in the communities surrounding San Vicente and Pan American continues to work with participants on many of the ongoing initiatives that were created over the last three years.

Many challenges were faced over the life of the project including unwillingness of some communities to participate, the onset of a regional drought, and lack of time needed to generate the long-term cultural shifts necessary for sustainable development. The benefits included improvements in animal health, increased fodder production, the construction of maternity sheds and fodder barns, and upgrades to water sources, all of which contributed to a better quality of life for the participants.

The relationships established through Project Access helped open the door for our new Healthy Living nutrition program, which rapidly gained community acceptance in 2016, especially among women. The program aims to help 100 families build 22 communal greenhouses in 11 communities, which enabled them to grow vegetables that are not typically available.

During the first year of the program, the majority of the participant communities decided to change from

communal greenhouses to family ones. A total of 120 families contributed by building the infrastructure while we provided the seeds, building materials, and training. A dedicated agronomist was able to manage these changes and address diversity by engaging women, children and elders. A total of 42 families successfully built 5 communal greenhouses yielding first crops of cucumbers, tomatoes, peppers and lettuce.

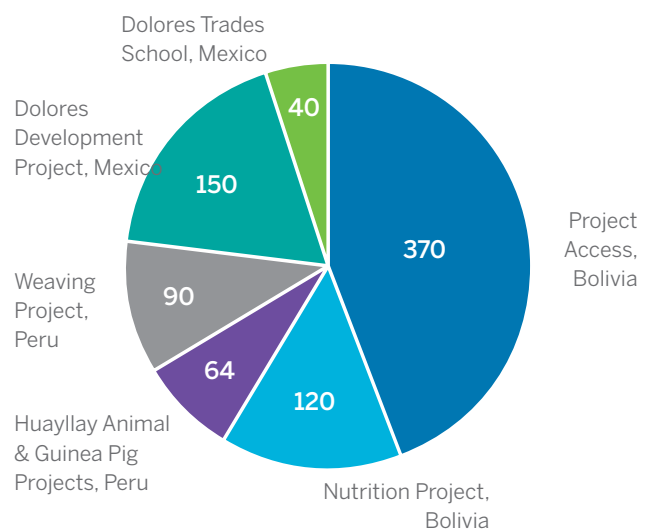
The project also included the use of organic gardening practices and seed production, sustainable building techniques and the use of natural fertilizers and pesticides that came from ancient farming methods forgotten in the area.

While Project Access set the foundation for our management of sustainable development programs, the nutrition program has demonstrated rapid success with clearly attainable future goals.

Argentina

Our 2016 CSR program at Manantial Espejo focused on updating the social baseline in order to develop a detailed social closure plan, providing training to existing local businesses, and establishing a social closure fund which will be financed through payments over the remaining life of the mine. Exploration success and changes to the national mining framework in Argentina have extended the life of Manantial Espejo, and satellite deposits, like the recently acquired Joaquin project, may extend processing even further. We are reviewing the social closure plan and strategy to adapt to changing production schedules.

Families Benefited by our Sustainable Development Projects



Corporate Giving Committee

Most of Pan American's social development programs and investments are directed to the communities and regions surrounding our operating mines. We also contribute to registered charities in Vancouver as a way of giving back to the community where our head office is situated.

Our giving priorities are focused on supporting organizations that provide health care, shelter and education to children, the disadvantaged, or underserved communities.

We encourage and support employees who champion the organizations that we choose to support every year. By doing so, our employees become ambassadors of the cause, motivating others within their sphere of influence to volunteer and participate. We tend to partner with smaller, locally-managed organizations that have a large impact on the communities they serve. We provide support either through direct financial assistance or through employee collection drives for organizations such as food banks and shelters.

We've found that programs for children have the biggest impact, as they help improve the quality of their lives and benefit their families as well. Our contributions to children are also rewarding in terms of the feedback we receive from hundreds of heartfelt and uplifting thank-you letters.

Last year we sponsored 650 children to attend a concert by the Vancouver Symphony Orchestra, which for many was their first cultural event. We also sponsored four classrooms of students to attend the Vancouver International Children's Festival, an annual event that features theatre, music, dance, puppetry and story-telling for young audiences.

In 2016, our corporate giving campaign budget was \$75,000 with the main beneficiaries listed below.

Covenant House provides food, shelter, clothing and counselling to an estimated 700 street youth living in Vancouver. Most of the young people have fled abuse at home or have addiction or mental health issues. In 2016, more than 1,300 young people accessed its services.

The Downtown Eastside Women's Centre provides a safe space and practical support to an estimated 500

vulnerable women, children and seniors, every day. In addition to refuge and shelter, the centre provides necessities such as hot meals, free clothing, first aid, functioning toilets and showers, secure mailing addresses, and phone and computer services.

Project Limelight is a children's theatre program managed by professional artists who aspire to give back to the East Hastings community where they were raised. Young performers are provided snacks and encouraged to explore their acting, singing and dancing talents. They also put on a performance at least once a year. The free after-school program helps kids to express themselves and develop the self-confidence to pursue their educational goals.

Growing Chefs teaches children how to grow, harvest and cook food and share what they learn with their families. Volunteer chefs are paired with students (grades one through six) who gain hands-on gardening and cooking experience and the skills to maintain healthy lifestyles.

Paws for Hope provides basic veterinary care for the animal companions of vulnerable populations. It partners with social services agencies in Greater Vancouver to provide homeless and disadvantaged pet guardians with pet food, bedding, and free animal health-care clinics.

Hockey Helps the Homeless raises funds for homeless support agencies through fantasy hockey tournaments. Funds raised in each community provide help through local shelters and survival kits for the homeless, and also supports transitional housing and return-to-work training programs.

The Aboriginal Mother Centre Society offers housing suites, daycare, a commercial kitchen and other programming spaces to provide shelter, support, and programs for Aboriginal women and children.

We contributed to and held a collection drive for the Greater Vancouver Food Bank and also made donations to the Canadian Red Cross to help Fort McMurray residents recover from devastating forest fires.

Our budget for 2017 will be US\$150,000. In addition to ongoing commitments, we will broaden our investments to include support for teen counselling, suicide prevention, mental health organizations, and senior's organizations.

Environmental Management

Management Approach

Responsible environmental management is a cornerstone of Pan American's sustainability strategy and vision to be the world's pre-eminent silver producer. As part of our commitment to sustainability, we have developed policies, procedures and practices to guide environmental planning and performance throughout the entire mine life cycle. Our goal is to maximize the positive economic and social benefits of our activities and avoid, minimize and mitigate potential impacts to the environment and society.

Our Environmental Policy expresses specific commitments to address environmental issues, including: compliance with environmental standards, laws and regulations; efficient use of water, energy and other natural resources; and utilizing effective and proven practices that minimize environmental impacts.

An important element of the Environmental Policy is a commitment to train our employees on the importance of environmental matters and promote their participation in environmental management. Knowledge sharing is enhanced by our corporate environmental audit system, whereby each mine is audited by a team from our other mines on a continually rotating schedule. This fosters integration between mines and ensures that procedures and guidelines are consistent with our corporate guidelines everywhere we operate.

We also benefit from open and transparent communication with our communities of interest on environmental matters, as mandated by our Environmental Policy. Their input has allowed us to define material topics and develop corporate guidelines on each topic in order to ensure best-practice environmental management.

Our corporate guidelines policies, combined with internal guidelines, provide a framework for a strong management system that supports innovation and continual improvement in environmental planning, performance and reporting. Our policies are reviewed by the Board and senior management on a regular basis to ensure they remain appropriate to meet the challenges of a dynamic and complex industry.

We strengthened our sustainability strategy in 2016 by becoming a member of the Mining Association of Canada (MAC) and its globally respected Toward Sustainable Mining (TSM) program. TSM provides guidance for

companies to meet society's need for minerals and metals in the most socially, economically and environmentally responsible way. Participating in TSM is an important step toward external verification of our management approach. In addition to adhering to its guiding principles, we plan to spend the next three years building internal systems to report our annual performance against the 23 specific indicators under TSM.

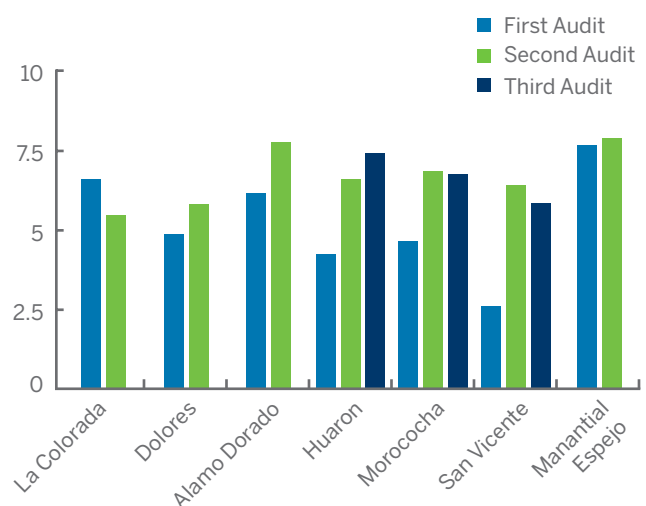
Environmental Compliance

We are pleased to report that no Significant Environmental Incidents occurred at our mines in 2016, allowing us to maintain this important internal metric for four years in a row. This achievement is commendable as the past year was full of activity, with major expansions at our Dolores and La Colorada mines and our Alamo Dorado mine nearing closure, all of them situated in Mexico.

We have not identified any non-compliance with environmental laws and/or regulations that resulted in fines, non-monetary sanctions or cases brought through dispute resolution mechanisms. Our Mexican operations are certified, or in the recertification process, through Mexico's Clean Industry Program.

All of our operations have internal measures in place to prevent environmental incidents so they do not escalate into crises and increase social and reputational risks.

Environmental Audit Performance*



*Audit Performance is shown as a weighted score scaled out of 10, where 10 is a perfect score of zero non-conformances.

Our cross-audit system examines each mine’s facilities, operating procedures and control systems to identify potential risks. Every mine is required to be audited at least every two years.

We held several workshops on crisis management and communications in 2016, as we recognized the need to update our crisis plans across the company and align them with TSM guidelines. We will continue training in 2017 and also increase the frequency of crisis simulations.

Most importantly, we strengthened our focus on the material environmental topics identified by our communities of interest, with emphasis on our corporate goals and vision. We advanced the preparation of internal guidelines for six key topics: water use and management; air emissions; waste management and recycling; hazardous chemicals; mine closure; and infrastructure design and management. Once complete, we plan to develop metrics that are comparable between mines to measure our detailed performance against set goals and targets.

Water Use and Management

The use, extraction and recycling of water was one of the top 10 material topics identified in 2016. We recognize that water is a resource of high environmental and social value to stakeholders, as our mines and projects are situated in predominantly arid areas. A comprehensive approach to water stewardship is essential to protect shared resources and avoid impacts that may occur within and beyond our operating boundaries. The baseline studies we conduct frequently help identify previously unknown water resources or infrastructure opportunities that improve water availability for all stakeholders.

An initial review confirmed that we are in compliance with TSM’s Water Stewardship Framework, which requires members to adhere to specific commitments, including: effective management of water resources through responsible policies and practices; collaboration with communities of interest to achieve resource sustainability and secure future access; and managing water in a transparent and accountable manner based on sound science.

In 2016, we achieved reductions in water use intensity at Morococha through increased recycling in the process plant and at Manantial Espejo and Dolores through increased surface water capture at our tailings facility and leach pads. The positive climatic water balance at our Peruvian mines gives grounds for higher water use intensity which also reduces energy consumption for

pumping and provides a net benefit by neutralizing historic acid drainage. La Colorada experienced a temporary increase in water use intensity due to a drier year in 2016 and less surface water capture, combined with additional water required for startup of the new plant, first fills, cleaning the old plant, and mine development. The investments made in 2016 will help to reduce water use intensity in the coming years.

Water Use Intensity

(m³/tonne ore processed)

	2016	2015
La Colorada	0.29	0.13
Dolores	0.01	0.02
Alamo Dorado	0.28	0.23
Huaron	3.83	3.58
Morococha	3.46	3.92
San Vicente	0.60	0.49
Manantial Espejo	0.33	0.35

We monitor water quality downstream of our mines in accordance with our commitment to identify water-related risks and opportunities and ensure that our water use and discharge decisions do not compromise other users and ecosystem needs.

We have invested \$3.5 million to upgrade our water treatment plants in the last two years, which includes a \$3-million investment at the newly expanded La Colorada mine. We completely replaced the mine water treatment plant as part of the expansion to ensure continued compliance with rising production and dewatering needs over time.

We completed a major upgrade of the water treatment plant at San Vicente by installing new reagent dosing systems and plant automation, which provided immediate benefits through reduced reagent use. Water discharge

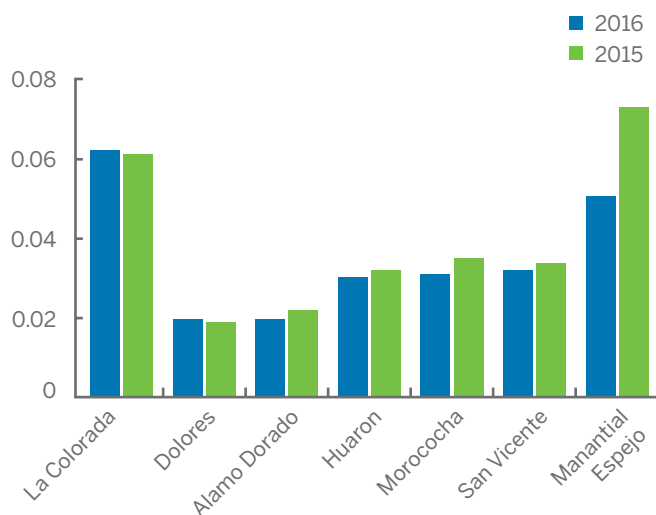
ZERO

Significant Environmental Incidents occurred at our operations



GHG Intensity

(tonne CO₂/tonne ore processed)



quality also improved to the point where it can be used in the process plant, eliminating a water discharge to the environment and reducing water use from other sources.

The water treatment plant at Huaron was also upgraded with an automated control system that led to reductions in reagent consumption while ensuring discharge limits are in total compliance. We are continuing trials to optimize reagent consumption and further improve water quality at Huaron.

Air Emissions and Energy

Reducing greenhouse gas (GHG) emissions and energy-use intensity are priorities for Pan American, as they provide cost savings and environmental benefits within and beyond our operating boundaries. We made substantial progress in this area in 2016 by moving to cleaner grid power from onsite power generation as part of our Mexican mine expansions.

The Dolores expansion includes a new power line to facilitate the transition to grid power from diesel generators, thereby improving air quality and reducing GHG emissions. The new line connecting the mine to the national grid was completed and energized in 2016. We estimate that the new powerline will reduce the mine's annual electricity GHG emission intensity by at least 25% compared to diesel generated power.

A new 115 kV power line at La Colorada will supplement the existing power supply and avoid GHG-intensive on-site power generation.

In 2016, we experienced a reduction in GHG emission intensity at all our mines except Dolores and La Colorada. The increases at Dolores and La Colorada were due to deepening of the mines and increased energy demands from the expansion projects over the year. The benefits of the powerline connection at Dolores were realized later in the year and were not sufficient to offset increases from construction activities, the underground mine development, and the deepening of the pit.

Reductions in GHG emission intensity at Alamo Dorado are due to the cessation of open pit mining, and at Manantial Espejo the open pit mining fleet was reduced and the Melissa underground mine was suspended. Reductions at our mines in Peru and Bolivia are related to increased efficiency in mine operations, changes in mine sequencing affecting waste rock transport, and the timing of tailings facility dam raises.

Waste Management and Recycling

Our operations work to reduce the amount of waste produced through addressing generation at the source, reuse, and recycling. In 2016 La Colorada and Dolores waste generation was affected by the expansion projects but our remaining operations were successful in reducing overall generation of hazardous waste by 25% compared to 2015. We completed a draft internal waste management guideline and will work to further reduce our waste generation in 2017.

Mine Closure

Mines have finite lives and our goal is to make the transition from operations to closure as efficient as possible by starting the planning process early. An essential part of this process is consultation with local communities and other stakeholders to ensure that their closure and post-closure views, concerns and aspirations are considered.

We have developed conceptual closure plans for all our mines, which include measures to protect biodiversity by using native plant species identified during baseline studies for re-vegetation work. This may require relocating plants from areas to be mined to greenhouses so they can be transplanted in the closure phase, and protecting natural areas from overgrazing.

In 2016, we began implementing the largest mine closure program in our history as the Alamo Dorado mine reached the end of the open pit mining phase. The mine will fully transition to reclamation in 2017, as processing of stockpiled inventory is completed.

More than 80% of waste rock dumps were reclaimed by year-end. Reclamation, hydro-seeding and other closure activities will continue into 2018, with up to 50 people employed on site.

We have completed detailed technical studies, including hydrological and geochemical modelling, which confirm that potential impacts to the local environment are in line with those originally predicted in the mine permitting phase and in compliance with relevant environmental and water quality standards.

We advanced on progressive closure of the waste rock dumps at Manantial Espejo as mining concluded at the Maria Pit. We submitted an updated closure plan to the provincial government in 2016 as part of the regular updates of our Environmental Impact Statement. Progressive closure activities are planned for 2017 at the Maria and Concepcion waste rock dumps.

Tailings Facility Management

The design and management of mine infrastructure, particularly tailings management facilities, is a priority for stakeholders, the general public, and the global mining industry. Since 2014, we have reviewed our tailings management facilities to ensure they are safe and compliant with globally accepted standards. From 2014 to 2016, our review work focused on Huaron, which is our highest consequence facility by virtue of its size and location. Our internal review found the Huaron tailings facility to be safe and compliant with international best-practice guidelines. This conclusion was confirmed by independent experts after certain recommendations were implemented.

Participation in TSM will strengthen our approach through the Tailings Management Protocol, which builds on technical standards and contains five performance indicators. The protocol calls for facilities to implement a formal policy and tailings management system, assign accountability to a senior company officer, and have operational, maintenance and surveillance manuals for all tailings impoundments. We plan to assess our current management system against the TSM protocol and implement any improvements over the next three years.

Alamo Dorado Reclamation



Financial Management

ROB DOYLE, *Chief Financial Officer*

From a financial perspective, 2016 was an incredibly strong year for Pan American. After several challenging years of declining metal prices, which resulted in financial losses in 2013, 2014 and 2015, we generated the third highest earnings in our 22-year history with net earnings of \$104.7 million on revenue of \$774.8 million.

Our silver production totalled 25.4 million ounces at an all-in sustaining cost per silver ounce sold ("AISCOS") of \$10.10 per ounce, net of by-product credits.⁽¹⁾

Our strong financial performance was achieved across our entire operating portfolio. Of particular note was the turnaround in the cost structure of our Argentine and Peruvian mines, and the positive impact of our mine expansion at La Colorada in Mexico. While higher precious and base metal prices benefited the bottom line, a great deal of credit for our improved financial performance belongs to the mine site management and technical teams for executing on productivity and cost initiatives.

The Huaron and Morococha mines in Peru are now substantially mechanized and achieved their lowest AISCOS in more than seven years, at \$11.11 and \$9.32 per ounce, respectively.⁽¹⁾

La Colorada is now our largest silver producer and silver asset, and will be the backbone of our Company for years to come. In total, we committed capital expenditures of \$132 million to build a new sulphide plant, a new 618-metre deep shaft, the development of the underground mine, and a new power line. The project was substantially completed in the fall of 2016 - safely, under budget and ahead of schedule.

The \$112.4-million Dolores expansion, which made good progress during 2016, is designed to boost silver and gold production by 39% and 47%, respectively. The new pulp agglomeration plant is expected to be commissioned and the new underground mine should reach full production in 2017. Another significant achievement in 2016 was the completion of construction of a power line connecting Dolores to the national energy grid, which replaced the need for diesel-generated power. This is a high return, quick payback project, which will help to further drive down operating costs at the mine.

In 2016, AISCOS at La Colorada and Dolores were \$7.49 and \$8.29 per ounce, respectively, and enhance our status as a low-cost producer.⁽¹⁾

We were also pleased by the financial performance of our Manantial Espejo mine in Argentina in 2016. A combination of higher precious metal prices, regulatory changes, local currency devaluation and disciplined operational performance helped our cost structure, productivity and ultimately, our margins and cash flows. This strong performance allowed us to repay all of our local loans in Argentina and return some capital to Canada. Manantial Espejo achieved outstanding AISCOS in 2016 of negative \$2.08 per ounce, net of by-product credits, which represented an improvement of \$20.89 per ounce improvement from 2015.⁽¹⁾

The San Vicente mine in Bolivia continued to add stability to our portfolio with reliable operating performance and excellent cash flows, which are shared with our joint venture partner, Comibol. Despite the persistent cost inflation in Bolivia without any local currency devaluation to offset, our experienced operations team have done a wonderful job of maintaining the significant contribution that this relatively small operation makes to our portfolio. Our AISCOS at San Vicente in 2016 was \$14.26 per ounce.⁽¹⁾

Our expansion and modernization programs are a tribute to the effectiveness of our decentralized management structure, which encourages all employees to participate in decision-making. This approach helps people from different disciplines and functions to work together as a team, and it also helps us put corporate social responsibility (CSR) front and centre of our thinking.

Our Board and senior management strongly support CSR programs and budgets as part of our broader sustainability strategy. For all of us at Pan American, there is a very clear acceptance and understanding that this aspect of our business is intertwined with everything we do.

Sustainability means we must manage our financial resources prudently so we can continue to provide employment and benefits for local communities and stakeholders. In 2016, we expected our treasury balance to decline significantly through capital spending to modernize and expand our mines, but our operating results exceeded expectations and benefited our bottom line. We ended the year with \$217.6 million in the treasury (only a \$9 million reduction from the end of 2015), after paying \$119 million in project capital, a further \$89 million in sustaining

capital, reducing debt by a net \$16.5 million and paying shareholders a dividend of \$8 million.

Shareholders understood our decision to conserve cash for timely investments in capital projects, but we hope to increase the dividend in time. Shareholders also support our decision not to hedge silver and gold production.

A major benefit of our improved financial position is that we are better prepared to pursue new opportunities and transactions that will add long-term value to the Company. As an example of this capability, the option agreement we entered into in early 2016 with Kootenay Silver gives us exposure to a highly prospective silver belt in Mexico, and we are optimistic that exploration of known deposits will lead to potential new mines.

Another part of our strategy in 2016 was to monetize non-core assets. In May, we sold a majority interest in a zinc property in Peru, but retained a 25% interest to preserve upside exposure. In mid-2016, we entered into a transaction to create Maverix Metals Inc. ("MMX") by depositing 13 of our royalties, precious metals streams and payment agreements into MMX in exchange for a 54% interest (63% fully diluted) at the time of the deal. This transaction exposed assets that were largely ignored by the market in exchange for a more liquid ownership interest in a company with growth momentum. As a majority shareholder of MMX, Pan American benefits from a dedicated management group who have executed subsequent royalty transactions, thereby providing us with another aspect to our business.

(1) All-in sustaining costs per silver ounce sold, net of by-product credits ("AISCOS") are non-GAAP measures. AISCOS does not have a standardized meaning and Pan American Silver's method of calculating them may differ from the methods used by other entities. Readers should refer to the "Alternative Performance (non-GAAP) Measures" section of Pan American Silver's most recently filed Management's Discussion & Analysis, for a more detailed discussion of these measures and their calculation.

Financial Oversight

The economics of our business, which are relevant to all of our stakeholders, are subject to a broad range of variables, including cyclical metal prices, the state of the global economy and capital markets, political and regulatory changes in relevant jurisdictions interest rates, and local foreign exchange rates. Our Board of Directors and senior management have the appropriate experience, skills and expertise to provide effective stewardship for our Company in navigating such uncertainty. All three directors on our Audit Committee are financially literate and provide oversight on matters such as accounting and tax, risk management, corporate finance and international commercial contracts.

Our Finance Committee consists of four directors who are responsible for reviewing policies underlying our financial plans, including our debt and equity structure, corporate financings and dividends, assessing investment policies and procedures, and reviewing our financing risk management program, including commodity, currency or interest rate hedging programs.

We are required to publicly release quarterly and annual financial statements and other reports that meet rigorous standards set by stock exchanges and securities regulators, and which are audited on a yearly basis by independent experts. Our quarterly and annual financial reports are available on our website and on www.sedar.com. They provide snapshots in time of how we manage our revenue, cash flow and expenditures in the context of our overall business strategy and goals and objectives.

41

communities in
five countries
benefit from our
CSR programs



\$148 M

paid in wages
in Latin America



Local Expenditures

Our direct economic value generated and distributed (EVG&D) provides an indication of how we create wealth for stakeholders at the international, national, regional and community levels.

In 2016, our direct economic value generated totalled \$799.0 million, primarily from mine operating revenues of \$774.8 million, and also asset sales and gains on equity investments.

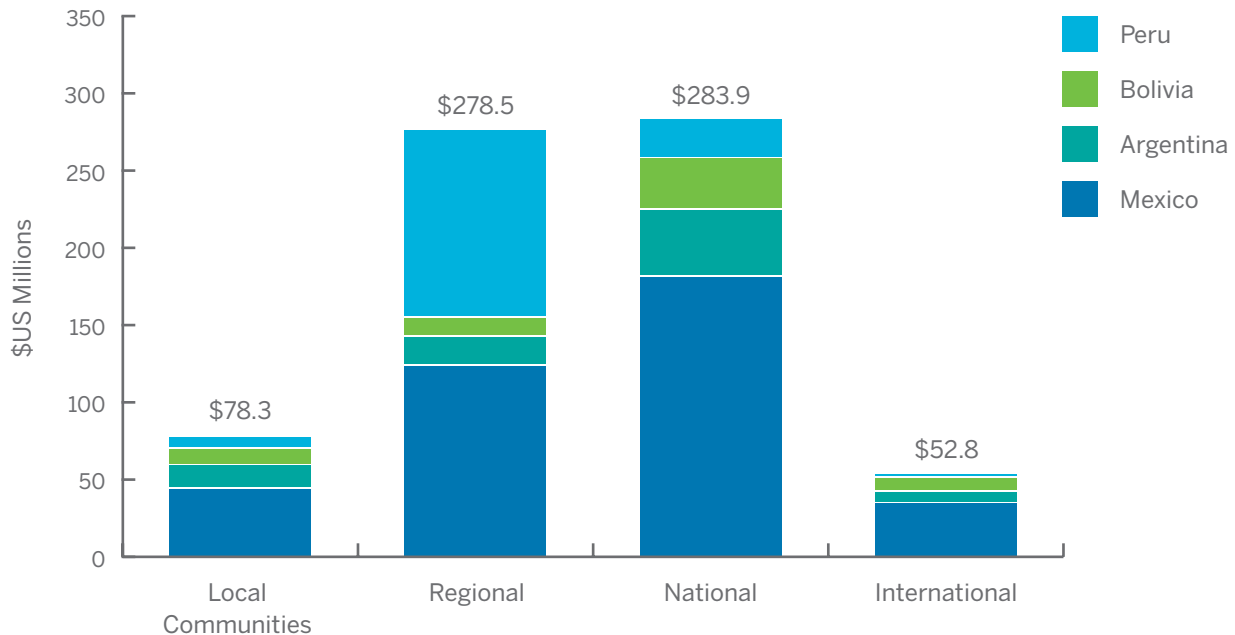
In 2016, the total economic value distributed was \$719.6 million, compared with \$750.0 million in 2015. This includes operating costs, employee wages and benefits, payments to capital providers, payments to governments, and community investments. Importantly, 89% of the total economic value distributed was allocated to the countries where our mines are located.

Our economic value retained was \$79.4 million in 2016, and was calculated by subtracting the “economic value distributed” from the total “direct economic value generated.”

We report our spending broken down into four geographical categories; “local”, “regional”, “national”, and “international”. The “regional” category is intended to reflect expenditures that are outside of the local communities surrounding the mines but within larger geographical areas which include entire provinces or states and where there is significant economic and social influence from our mines. The national category includes all other areas within each of the countries that are excluded from either local or regional. Our reporting focuses on four main cost items: wages, supplies and services, taxes, and royalties. These cost items are comprised of the following income and cash flow statement line items: production costs, royalties, general and administrative, exploration and project development, income taxes paid and payments for mineral properties, plant and equipment.

The following chart shows the total EVG&D for the nations where we operate as well as the economic value distributed in each of these jurisdictions.

Spending by Region



2016 SUSTAINABILITY REPORT

GRI Index & Data Tables

GENERAL DISCLOSURES

Organizational Profile

102-1 **Name of the organization**

[Website: 2016 At A Glance/About Pan American Silver](#)

102-2 **Activities, brands, products, and services**

[Website: 2016 At A Glance/About Pan American Silver](#)

102-3 **Location of headquarters**

[Website: 2016 At A Glance/Operations Map](#)

102-4 **Location of operations**

[Website: 2016 At A Glance/Operations Map](#)

102-5 **Ownership and legal form**

[Website: 2016 At A Glance/About Pan American Silver](#)

[Website: Strategy & Governance/Governance](#)

102-6 **Markets served**

[Website: 2016 At A Glance/About Pan American Silver](#)

102-7 **Scale of the organization**

[Website: 2016 At A Glance/About Pan American Silver](#)

102-8

Information on employees and other workers

	Admin	Geology	Engineering	Labour	Total Employees	Contractors	Total Employees and Contractors
Canada - Vancouver Corporate	28	6	6	0	40	1	41
Peru							
Offices (off Mine Site)	41	0	0	0	41	0	41
Exploration	0	7	0	0	7	0	7
Huaron	80	9	27	729	845	588	1433
Morococha	86	10	21	617	734	567	1,301
Pico Machay	3	0	0	3	3	13	16
Total-Peru	207	26	48	1,349	1,630	1,168	2,798
Mexico							
Office Durango	35	1	4	5	45	0	45
Office Chihuahua	1	0	2	1	4	0	4
Exploration	2	4	1	8	15	0	15
Alamo Dorado	9	0	17	46	72	39	111
La Colorada	26	6	80	570	682	128	810
Dolores	47	4	97	334	482	387	869
PASC Projects	21	0	6	1	28	627	655
Total - Mexico	141	15	207	965	1,328	1,181	2,509
Bolivia							
Offices (off Mine Site)	26	0	0	0	26	1	27
Exploration	0	1	0	0	1	0	1
San Vicente	29	12	84	278	403	157	560
Total - Bolivia	55	13	84	278	430	158	588
Argentina							
Offices (off Mine Site)	20	0	0	0	20	1	21
Exploration	0	1	0	2	3	0	3
Manantial Espejo	60	4	77	391	532	120	652
Navidad	11	1	0	27	39	3	42
Calcatreu	2	0	0	3	5	0	5
Total - Argentina	93	6	77	423	599	124	723
Total	524	66	422	3,015	4,027	2,632	6,659

102-9

Supply chain

Mining in remote locations across Latin America requires a reliable supply chain and transport logistics for both supply materials and our products. We use locally based and certified suppliers for most of the chemical and fuel inputs to our operations and only in limited cases purchase directly from international suppliers who hold relevant certifications. Service providers are usually locally based companies or local subsidiaries of international service or consulting groups. We continually strive to instill our core values of sustainable development in all our supply chain partners.

102-10

Significant changes to the organization and its supply chain

[Website: Strategy & Governance/Operations: Sustaining Our Business](#)

102-11 **Precautionary principle or approach**

[Website: Environment/Environmental Management](#)

102-12 **External initiatives**

Canada and USA

- Mining Association of Canada
- Women in Mining
- The Silver Institute
- Prospectors and Developers Association of Canada (PDAC)
- Northwest Mining Association
- Engineers Without Borders

Peru

- Patronato Plata del Peru
- Senati
- Sociedad de Minería, Petróleo y Energía
- EITI Peru

Mexico

- Cámara Minera de México (CAMIMEX)

Argentina

- Camara Argentina de Empresas Mineras (CAEM)
- Caritas Argentina
- Grameen Bank
- Fundación Agencia de Desarrollo de Gobernador Gregores
- University of San Martin
- Green Cross

Bolivia

- Society for Cooperation in International Development (SOCODEVI)
- Department of Foreign Affairs, Trade and Development Canada (formerly CIDA)
- Association of Camelid Producers in San Vicente

102-13 **Membership or associations**

See above list.

Strategy

102-14 **Statement from the most senior decision maker**

[Website: 2016 At A Glance/Chairman's Letter](#)

[Website: 2016 At A Glance/President's Letter](#)

102-15 **Key impacts, risks, and opportunities**

[Website: 2016 At A Glance/About This Report](#)

[Website: Strategy & Governance/Operations: Sustaining Our Business](#)

Ethics and Integrity

102-16 **Values, principles, standards, and norms of behaviour**

[Website: Strategy & Governance/Governance](#)

Governance

102-18 **Governance structure**

[Website: Strategy & Governance/Governance](#)

Stakeholder Engagement

102-40 List of stakeholder groups

[Website: Strategy & Governance/Stakeholder Engagement](#)

102-41 Collective bargaining agreements

	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo
Employees that belong to a union or association	570	331	46	338	360	318	383
% of total employees	83%	68%	64%	40%	49%	74%	72%

102-42 Identifying and selecting stakeholders

[Website: Strategy & Governance/Stakeholder Engagement](#)

102-43 Approach to stakeholder engagement

[Website: Strategy & Governance/Stakeholder Engagement](#)

102-44 Key topics and concerns raised

[Website: Strategy & Governance/Materiality](#)

Reporting Practice

102-45 Entities included in the consolidated financial statements

[Website: Economic/Financial Management](#)

102-46 Defining report content and topic Boundaries

[Website: 2016 At A Glance/About This Report](#)

[Website: Strategy & Governance/Stakeholder Engagement](#)

[Website: Strategy & Governance/Materiality](#)

102-47 List of material topics

[Website: Strategy & Governance/Materiality](#)

102-48 Restatement of information

There were no material restatements of financial or other data in 2016.

102-49 Changes in reporting

[Website: Strategy & Governance/Operations: Sustaining Our Business](#)

102-50	Reporting period
	January 1, 2016 to December 31, 2016
102-51	Date of most recent report
	Pan American Silver's 2015 Sustainability Report was published in May of 2016.
102-52	Reporting cycle
	Pan American Silver publishes annual Sustainability Reports.
102-53	Contact point for questions regarding the report
	Please do not hesitate to contact us; we welcome any and all feedback. Please direct any questions regarding this report to Matt Andrews, Vice President of Environment and Sustainability, or Monica Moretto, Director of Sustainability: csr@panamericansilver.com
102-54	Claims of reporting in accordance with the GRI Standards
	Website: 2016 At A Glance/About This Report This report is prepared in accordance with the Core level of the Global Reporting Initiative Standards.
102-55	GRI content index
	Website: Header/Global Reporting Initiative
102-56	External Assurance
	In 2016, we received external assurance for the economic data in our sustainability report.

TOPIC SPECIFIC GRI STANDARDS

Economic

Economic Performance

201-1 Direct economic value generated and distributed

PRODUCTION	2016	2015
Silver (million ounces)	25.4	26.12
Gold (thousand ounces)	183.9	183.7
Zinc (thousand tonnes)	51.9	40.6
Lead (thousand tonnes)	20.2	14.6
Copper (thousand tonnes)	14.4	15
Cash cost per silver ounce ⁽¹⁾	\$6.29	\$9.70
AISCOS, net of by-product credits ⁽²⁾	\$10.17	\$14.92
Average price per silver ounce (\$US London fix)	\$17.14	\$15.68
FINANCIAL (all amounts in million US\$) ⁽³⁾	2016	2015
Revenue	\$774.8	\$674.7
Net (loss)/earnings	\$101.8	\$(231.6)
Adjusted (loss)/earnings ⁽⁴⁾	\$86.6	\$(41.3)
Net cash generated from operating activities	\$214.8	\$88.7
Dividends paid	\$7.6	\$41.7
Cash and short term investments at December 31	\$217.6	\$226.6
Working capital ⁽⁴⁾ at December 31	\$428.6	\$392.2
STAKEHOLDERS	2016	2015
Common shares outstanding at December 31 (million)	152.3	151.9
Number of Employees and Contractors	6,659	6,494

Note: Financial information prepared in accordance with International Financial Reporting Standards "IFRS".

(1) Cash costs per payable ounce of silver, net of by-product credits, is a non-GAAP measure. The Company believes that in addition to production costs, depreciation and amortization, and royalties, cash costs per ounce is a useful and complementary benchmark that investors use to evaluate the Company's performance and ability to generate cash flow and is well understood and widely reported in the silver mining industry. However, cash costs per ounce does not have a standardized meaning prescribed by IFRS as an indicator of performance. Investors are cautioned that cash costs per ounce should not be construed as an alternative to production costs, depreciation and amortization, and royalties determined in accordance with IFRS as an indicator of performance. The Company's method of calculating cash costs per ounce may differ from the methods used by other entities and, accordingly, the Company's cash costs per ounce may not be comparable to similarly titled measures used by other entities. See "Alternative Performance (Non-GAAP) Measures" in the Company's MD&A for the year-ended December 31, 2016 for a reconciliation of this measure to the Company's production costs, depreciation and amortization, and royalties.

(2) All-in sustaining costs per silver ounce sold ("AISCOS") is a non-GAAP measure. The Company has adopted the reporting of AISCOS as a measure of a silver mining company's consolidated operating performance and the ability to generate cash flow from all operations collectively. We believe it is a more comprehensive measure of the cost of operating our consolidated business than traditional cash and total costs per ounce as it includes the cost of replacing ounces through exploration, the cost of ongoing capital investments (sustaining capital), general and administrative expenses, as well as other items that affect the Company's consolidated earnings and cash flow. This measure including its subcomponent Sustaining Capital are non-GAAP measures. Please see "Alternative Performance (Non-GAAP) Measures" in the Company's MD&A for the year ended December 31, 2016.

(3) Adjusted (loss)/earnings are non-GAAP measures. Adjusted earnings is calculated as net (loss)/earnings for the period adjusting for the gains or losses recorded on fair market value adjustments on the Company's outstanding derivative instruments, impairment of mineral property, unrealized foreign exchange gains or losses, unrealized gain or loss on commodity contracts, realized and unrealized losses on silver and gold forward contracts, severance expense, the transaction costs arising from the Minfinders transaction, gain or loss on sale of assets, and the effect for taxes on the above items. The Company considers this measure to better reflect normalized earnings as it does not include items which may be volatile from period to period. Please see "Alternative Performance (Non-GAAP) Measures" in the Company's MD&A for the year ended December 31, 2016.

(4) Mine operating earnings is a non-GAAP measure used by the Company to assess the performance of its silver mining operations. Mine operating earnings is calculated as revenue less production costs, depreciation and amortization and royalties. The Company and certain investors use this information to evaluate the Company's performance. Please see "Alternative Performance (Non-GAAP) Measures" in the Company's MD&A for the year ended December 31, 2016.

201-4 Financial assistance received from government

In 2016 we did not receive financial assistance from any government organization.

Market Presence

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

	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo
Senior Management	100%	100%	100%	100%	100%	100%	79%

Local is defined as the country of the operation, individuals either born or who have the legal right to reside indefinitely in the same geographic market as the operation.

Indirect Economic Impacts

203-1 Infrastructure investments and services supported

[Website: Communities/CSR Programs & Projects](#)

	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo
CSR and Community Infrastructure Investment	\$59,067	\$2,826,737	\$1,286,523	\$727,704	\$164,930	\$813,695	\$277,780

203-2 Significant indirect economic impacts

[Website: Economic/Local Expenditures](#)

Procurement Practices

204-1 Proportion of spending on local suppliers

[Website: Economic/Local Expenditures](#)

Anti-Corruption

205-1 Operations assessed for risks related to corruption

[Website: Strategy & Governance/Governance](#)

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

[Website: Strategy & Governance/Governance](#)

Environment

Materials

301-1 Materials used by weight or volume

	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo
Ore processed	528,817	6,306,500	1,833,137	904,394	672,800	338,900	753,576

Energy

302-1 Energy consumption within the organization

	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo
Diesel (m3)	2,475	41,848	1,983	2,822	1,258	936	14,567
Gasoline (m3)	217	1,266	235	-	-	98	-
Carbon (tonnes)	-	-	-	6	-	3	-
Liquified Petroleum Gas, LPG (m3)	101	88	2,323	109	139	-	-
Ammonium Nitrate, ANFO (tonnes)	523	7,518	-	326	768	597	1,049
Emulsion (tonnes)	295	920	-	513	315	36	24
Electricity (MWh)	57,110	17,942	57,953	68,468	65,947	20,746	-

(GJ)	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo
Diesel	95,727	1,618,681	76,699	109,162	48,659	36,204	563,447
Gasoline	7,520	43,880	8,153	-	-	3,397	-
Carbon	-	-	-	170	-	89	-
Liquified Petroleum Gas, LPG	2,581	2,247	59,315	2,770	3,554	-	-
Ammonium Nitrate, ANFO	1,203	17,291	-	749	1,767	1,373	2,414
Emulsion	678	2,116	-	1,180	725	83	54
Electricity	205,596	64,591	208,631	246,487	237,409	74,685	-
Total	313,306	1,748,805	352,799	360,518	292,115	115,832	565,915

Water

303-1 Water withdrawal by source

	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo
Mine dewatering (groundwater)	4,881,001	701,869	-	-	40,778	204,765	1,104,705
Other groundwater	-	-	512,659	-	-	102,330	-
Surface water	-	635,969	-	3,476,908	2,609,257	118,114	-

	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo
Processing Plant (make-up water)	151,103	39,132	512,659	3,462,689	2,524,991	215,644	247,574

303-3 Water recycled and reused

	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo
Recycle of process water	337,863	8,880,995	4,093,820	306,945	800,664	556,019	2,770,117
% water recycle processing	69.1%	99.6%	88.9%	8.1%	24.1%	72.1%	91.8%

Biodiversity

304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas

None of our operations or projects are located within or adjacent to protected areas or areas of recognized high biodiversity value.

304-2 Significant impacts of activities, products, and services on biodiversity

Website: [Environment/Environment Management](#)

304-3 Habitats protected or restored

	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo
Disturbed hectares	180	602	122	302	63	55	336
Reclaimed hectares	7.9	43.7	88	-	0.6	-	21

G4 MM1 Amount of land (owned or leased, and managed for productive activities of extractive use) disturbed or rehabilitated

See table above.

G4 MM2 Total sites requiring biodiversity management plans

All our sites have voluntary biodiversity management plans in place.

Emissions

305-1 Direct Greenhouse Gas (GHG) emissions (tonnes CO2 eq)

	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo
Diesel	6,713	113,518	5,379	7,656	3,412	2,539	39,515
Gasoline	521	3,041	565	-	-	235	-
Carbon	-	-	-	15	-	8	-
Liquified Petroleum Gas, LPG	154	134	3,531	165	212	-	-
Ammonium Nitrate, ANFO	99	1,421	-	62	145	113	198
Emulsion (tonnes)	56	174	-	97	60	7	4
Electricity (MWh)	25,896	8,136	26,278	19,552	18,832	8,843	-
Total	33,439	126,424	35,753	27,545	22,661	11,745	39,717

Effluents & Waste

306-1 Water discharge by quality and destination

(m ³)	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo
To surface water	-	701,869	-	-	5,504,930	-	-
To groundwater	-	-	-	-	-	-	-
To treatment plants or ponds	4,626,040	48,418	-	26,200,417	-	31,390	608,884

306-2 Waste by type and disposal method

(tonnes)	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo
Hazardous or dangerous waste	179	605	40	17	74	9	497
Non-hazardous inert waste	-	77	-	908	28	-	347
Domestic waste to landfill	156	210	36	294	221	180	115
Incineration	-	-	-	-	-	-	-
Reuse	220	281	56	2	1	-	-
Recycling	450	313	15	498	111	2	347

306-3 Significant spills

	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo
Number of significant spills	-	-	-	1	1	-	-
Volume of liquid or pulp (m ³)	-	-	-	10	2	-	-

306-4 Transport of hazardous waste

	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo
Hazardous or dangerous waste (tonnes)	179	605	40	17	74	9	497
% of hazardous waste transported internationally	0%	0%	0%	0%	0%	0%	0%

G4 MM3 Total amounts of over burden, rock, tailings, and sludges

	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo
Tailings not used as hydraulic backfill (dry tonnes)	494,803	0	1,833,137	584,956	624,985	336,742	753,576
Waste rock not used as backfill	48,000	35,972,748	0	171,089	434,532	24,755	5,133,685
Water treatment sludge	576	0	1	37,306	20	3,000	30

Labour Practices and Decent Work

Employment

401-1 New employee hires and employee turnover

	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo
Employees	669	485	72	845	733	403	532
Turnover Employees	57	46	0*	92	222	36	52
Rate	8%	10%	0%*	11%	30%	9%	10%
<30 Men	251	97	2	99	73	68	104
Between 30 and 50 Men	312	296	53	587	583	300	350
>50 Men	64	55	6	117	66	19	38
>60 Men	8	8	1	25	2	1	3
<30 Women	14	11	1	5	4	2	9
Between 30 and 50 Women	20	17	9	10	5	11	25
>50 Women	0	1	0	2	0	2	3

*Alamo Dorado mine is in the closure phase.

Labour/Management Relations

G4 MM4 Number of strikes or lockouts exceeding one week's duration

We had one strike at Manantial Espejo of more than 7 days. The dispute with the union was resolved through direct negotiation.

Occupational Health and Safety

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

[Website: Our People/Heath & Safety](#)

	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo
Lost time injury frequency	0	0	0	0.56	1.60	1.53	2.24
Lost time injury severity	0	0	0	6	73	4,634	154

403-3 Workers with high incidence or high risk of diseases related to their occupation

[Website: Our People/Heath & Safety](#)

Training and Education

404-1 Average hours of training per year per employee

	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo	Total
General Safety	28,054	97,453	4,840	152,129	15,585	3,654	4,156	314,703
Mining Induction	17,074	39,673	2,296	43,687	23,222	2,280	473	128,704
Geotechnical	1,737	1,427	-	1,859	1,998	-	-	7,021
Formal Safety Meetings	6,110	2,709	412	720	68,689	154	836	79,629
Mine Rescue	2,446	12,568	1,290	3,455	2,847	916	2,281	25,802
Total	55,421	153,830	8,838	201,848	112,340	7,004	7,746	555,860

Diversity and Equal Opportunity

405-1 Diversity of governance bodies and employees

	Management					Senior Supervisors					Front-Line Supervisors				
	Gender		Age Group			Gender		Age Group			Gender		Age Group		
	M	F	<30	30-50	>50	M	F	<30	30-50	>50	M	F	<30	30-50	>50
Corporate Office	13	1	-	7	8	4	2	-	5	1	3	3	-	6	-
Peru															
Offices (off Mine Site)	10	-	-	3	7	4	1	-	3	2	-	-	-	-	-
Exploration	1	-	-	1	-	1	-	-	1	-	-	-	-	-	-
Huaron	1	-	-	-	1	9	-	-	5	4	106	2	11	75	21
Morococha	1	-	-	1	-	11	-	-	5	6	88	2	1	74	15
Pico Machay	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-
Total-Peru	13	-	-	5	8	25	1	-	14	12	195	4	12	150	36
Mexico															
Office Durango	7	2	-	6	3	2	4	-	6	-	2	2	1	3	-
Office Chihuahua	1	-	-	-	1	1	-	-	1	-	-	-	-	-	-
Exploration	1	-	-	-	1	-	-	-	-	-	4	-	-	4	-
Alamo Dorado	2	-	-	1	1	5	3	1	7	-	9	1	8	10	-
La Colorada	7	1	-	4	4	2	-	-	1	1	43	1	10	30	4
Dolores	8	1	-	6	3	8	-	-	5	3	45	-	1	34	10
Total - Mexico	26	4	-	17	13	18	7	1	20	4	103	4	20	81	14
Bolivia															
Offices (off Mine Site)	2	-	-	-	2	3	-	-	3	-	4	-	-	5	-
Exploration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
San Vicente	1	-	-	-	1	7	-	1	5	1	8	1	-	7	1
Total - Bolivia	3	-	-	-	3	10	-	1	8	1	12	1	-	11	1
Argentina															
Offices (off Mine Site)	5	-	-	2	3	1	1	-	2	-	-	-	-	-	-
Exploration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manantial Espejo	1	-	-	1	-	6	1	-	4	3	38	-	1	33	4
Navidad	2	-	-	-	2	-	-	-	-	-	-	-	-	-	-
Calcatreu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total - Argentina	8	-	-	3	5	7	2	-	6	3	38	-	1	33	4
Total	89	8	0	46	51	115	19	4	92	38	696	18	66	551	110

Human Rights

Freedom of Association and Collective Bargaining

407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk
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As at December 31, 2016, the right to exercise freedom of association and collective bargaining was not at a significant risk at any of our operations.

Child Labour

408-1	Operations and suppliers at significant risk for incidents of child labour risk
--------------	--

As at December 31, 2016, none of our operations were at significant risk for incidents of child labour.

Forced or Compulsory Labour

409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labour
--------------	--

As at December 31, 2016, none of our operations were at significant risk for incidents of forced or compulsory labour.

Security Practices

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

Pan American updated its CSR policy in 2015 to include a clause on Human Rights, and the need for specific training of security forces is under evaluation.

Indigenous Rights

G4 MM5	Total numbers of operations taking place in or adjacent to indigenous people's territories and formal agreements made
---------------	--

As at December 31, 2016, none of our operations were taking place in or adjacent to indigenous people's territories.

Society

Local Communities

413-1	Operations with local community engagement, impact assessments, and development programs
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[Website: Communities/Communities and Social Responsibility](#)

[Website: Communities/CSR Programs & Projects](#)

G4 MM6	Numbers and description of significant disputes relating to land use, customary rights of local communities, and indigenous people
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Two Ejido communities appealed a decision by the Mexican Agrarian Court related to certain land use agreements in connection with our Alamo Dorado mine. A small group of individuals filed a claim to the Agrarian court in connection with our La Colorada mine. Pan American will abide by the court process and continues to foster positive relationships with the communities around all our mines through our successful CSR programs.

G4 MM7	Grievance mechanisms used to resolve disputes relating to land use, customary rights of local communities, and indigenous people
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[Website: Strategy & Governance/Governance](#)

Mining and Metals

Artisanal and Small-Scale Mining

G4 MM8 **Number and percentage of company operating sites where artisanal and small-scale mining takes place on, or adjacent to, the site**

We had no artisanal or small-scale mining by third parties occurring at any of our operations in 2016.

Relocation

G4 MM9 **Sites where resettlement took place, the number of households resettled in each, and how their livelihoods were affected in the process**

Pan American Silver did not undertake any community resettlements in 2016.

Closure Planning

G4 MM10 **Number and percentage of operations with closure plans**

[Website: Environmental/Mine Closure](#)

Please visit our 2016 Sustainability Report website at:

www.panamericansilver.com/sustainabilityreport2016

Please do not hesitate to contact us; we welcome any and all feedback. Please direct any questions regarding this report to Matt Andrews, Vice President of Environment and Sustainability, or Monica Moretto, Director of Sustainability: csr@panamericansilver.com

Forward-Looking Statements and Information

This document contains “forward-looking statements” within the meaning of the United States Private Securities Litigation Reform Act of 1995, and “forward-looking information” within the meaning of applicable Canadian provincial securities laws. All statements, other than statements of historical fact, are forward-looking statements or forward-looking information, including, but not limited to, those relating to future goals for production, environmental management, including with respect to tailings facility management, successful completion and benefits of expansion projects, and safety. These statements reflect the current views of Pan American Silver Corp. (the “Company”) with respect to future events and are necessarily based upon a number of assumptions (among other things for example, prices for materials and labour, and that there are no unplanned delays to the production schedule) that, while considered reasonable by the Company, are inherently subject to significant operational, business, economic and regulatory uncertainties and contingencies. Forward-looking statements and information involve many known and unknown risks, uncertainties and other factors that could cause actual results or performance to be materially different from the results or performance that are or may be expressed or implied by such forward-looking statements or information, including, but not limited to, factors such as: metal price fluctuations, fluctuation in the costs of energy, labour, materials and other inputs, fluctuations in currency markets and exchange rates, operational risks and hazards inherent with the business of mining (including, for example, environmental accidents, safety hazards, equipment breakdown, and natural disasters), changes in laws, and those factors identified under the heading “Risks Related to Pan American’s Business” in the Company’s most recent Form 40-F and Annual Information Form filed with the U.S. Securities and Exchange Commission and with Canadian provincial securities regulatory authorities, respectively. The Company has attempted to identify important factors, but there may be other factors that cause results not to be as anticipated, estimated, intended or described. Investors are cautioned against attributing undue certainty or reliance on forward-looking statements and information. The Company does not intend, nor assume, any obligation to update or revise forward-looking statements and information except to the extent required by applicable law.

