# 2017 ANNUAL REPORT



## Pan American Silver

Pan American Silver is the world's second largest primary silver producer, providing enhanced exposure to silver through a diversified portfolio of assets, large silver reserves and growing production.

We own and operate six mines in Mexico, Peru, Argentina and Bolivia. Pan American Silver maintains a strong balance sheet, has an established management team with proven project development and operating expertise, and is committed to sustainable development. Founded in 1994, the Company is headquartered in Vancouver, B.C.

#### PAAS: NASDAQ AND TSX WWW.PANAMERICANSILVER.COM

Certain of the statements and information in this annual report constitute "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. Please refer to the inside back cover of this annual report for an important note to readers regarding forwardlooking statements and information.

All financial data in this report is stated in US dollars ("USD") unless otherwise noted.

SILVER PRODUCTION AND CASH COSTS<sup>(1)</sup>



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#### OPERATING CASH FLOW AND SILVER PRICE

#### **FINANCIAL HIGHLIGHTS**

FOR THE YEAR ENDED DECEMBER 31

(In millions USD, except per share amounts)	2017	2016
Revenue	816.8	774.8
Net Cash Generated from Operating Activities	224.6	214.8
Net Earnings	123.5	101.8
Per share (Basic)	0.79	0.66
Adjusted Earnings <sup>(2)</sup>	77.7	86.6
Per share (Basic) <sup>(2)</sup>	0.51	0.57
Cash and Short-Term Investments	227.5	217.6
Total Debt <sup>(3)</sup>	10.6	43.3
Working Capital <sup>(4)</sup>	410.8	428.6
Dividends	15.3	7.6
Per share	0.10	0.05

#### **OPERATIONAL HIGHLIGHTS**

Performance Measure	2017 Guidance <sup>(6)</sup>	2017 Actual	2018 Guidance <sup>(7)</sup>
Silver production (million ounces)	24.5 – 26.0	25.0	25.0 – 26.5
Gold production (thousand ounces)	155 – 165	160	175 – 185
Base metal production (thousand tonnes)			
Zinc	56.5 - 58.5	55.3	60.0 - 62.0
Lead	19.0 - 20.0	21.5	21.0 - 22.0
Copper	8.8 – 9.3	13.4	12.0 - 12.5
Cash costs per ounce <sup>(1)</sup>	\$6.45 - \$7.45	\$4.55	\$3.60 - \$4.60
All-in sustaining costs per silver ounce sold (AISCSOS) <sup>(5)</sup>	\$11.50 - \$12.90	\$10.79	\$9.30 - \$10.80

#### **CAPITAL EXPENDITURES**

\$ millions	2017 Actual	2018 Guidance
Sustaining capital <sup>(8)</sup>	84.4	100 - 105
Project capital <sup>(8)</sup>	61.4	50
Total	145.8	150 - 155

#### **AVERAGE MARKET METAL PRICES**

2017	2016
17.05	17.14
1,257	1,251
2,896	2,095
2,317	1,872
6,166	4,860
	17.05 1,257 2,896 2,317

(1) Non-GAAP measure. Cash Costs is calculated as the net cost of producing an ounce of silver, our primary payable metal, after deducting revenues gained from incidental by-product metals production.

(2) Non-GAAP measure. The Company considers adjusting earnings to better reflect normalized earnings, as it eliminates items that may be volatile from period to period, or relate to positions that will settle in future periods.

(3) Non-GAAP measure. Total debt is calculated as the total current and non-current portions of long-term debt, finance lease liabilities, and loans payable.

(4) Non-GAAP measure. Working capital is calculated as current assets less current liabilities.

(5) Non-GAAP measure. All-in sustaining costs per silver ounce sold, net of by-products, reflects the full cost of operating our consolidated business given it includes the cost of replacing silver 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 cash flow.

These non-GAAP measures do not have any standardized meaning prescribed by GAAP and are therefore unlikely to be comparable to similar measures presented by other companies. Please refer to

the Alternative Performance (Non-GAAP Measures) section in the Management's Discussion & Analysis for the period ended December 31, 2017 (the MD&A) for further information on these measures.

(6) Original targets provided in the Company's news release dated January 12, 2017.

(7) Targets provided in the Company's news release dated January 11, 2018. Cash costs and AISCSOS guidance for 2018 are based on the following metal price and exchange rate assumptions: \$16.50 per ounce of silver, \$1,250 per ounce of gold, \$3,100 per tonne of zinc, \$2,350 per tonne of lead, and \$6,500 per tonne of copper, 18.50 Mexican pesos per USD, 3.23 Peruvian soles per USD, 19.59 Argentine pesos per USD, 7.0 Bolivian bolivianos per USD.

(8) The sustaining capital total amounts capitalized in 2017 were \$0.2 million more than the \$84.2 million of 2017 sustaining capital cash outflows; project capital amounts capitalized in 2017 were \$1.2 million less than the \$62.6 million of 2017 project capital cash outflows. The capital cash outflows are included in the 2017 AISCSOS calculation shown in the Alternative Performance (Non-GAAP) Measures section of the MD&A, and are different from the capital amounts in the tables included in the Individual Mine Operation Highlights section of the MD&A; this is due to the timing difference between the cash payment of capital expenditures compared with the period in which investments are capitalized.

## **Our Vision**

To be the world's pre-eminent silver producer, with a reputation for excellence in discovery, engineering, innovation and sustainable development.

To achieve our vision, we have identified the following strategic objectives. Annually, we set specific goals and measure our performance against these goals. The following table summarizes our 2017 results and the goals we have set for 2018. **30.5-33.0 Moz** Targeted silver production by 2020

#### 2017 RESULT

#### **2018 GOALS**

GROW OUR SILVER PORTFOLIO THROUGH ACQUISITIONS OF LATE STAGE EXPLORATION PROJECTS, DEVELOPMENT PROJECTS OR OPERATING MINES

Acquired the Cap-Oeste Sur Este ("COSE") property in Argentina and approved a \$23.9 million investment to construct an underground mine.

Acquired the Joaquin property in Argentina; completed a preliminary feasibility study on the property's La Morocha deposit and approved a \$37.8 million investment to construct an underground mine.

Acquired an approximately 12% interest in New Pacific Metals Corp. (approximately 16% fully diluted), providing exposure to the Silver Sand project in Bolivia.

Construct an underground decline and encounter first stoping area.

Begin development of the underground decline at La Morocha.

#### GENERATE STRONG CASH FLOWS AND SUSTAINABLE PROFITS THROUGH THE EFFICIENT OPERATION OF OUR PORTFOLIO OF MINING ASSETS

#### LA COLORADA MINE

Achieved expanded design processing capacity rates of 1,800 tonnes per day in mid-2017, approximately six months ahead of schedule.

Sustain throughput rates of 1,800 tonnes per day or greater while implementing further productivity enhancements, particularly in additional mine mechanization and infrastructure upgrades.

Complete upgrades to the mine backfill plant to allow for optimal mine scheduling.

Execute an innovative tailings storage facility expansion for substantial savings in future tailings management costs.





#### **2017 RESULT**

#### **2018 GOALS**

#### GENERATE STRONG CASH FLOWS AND SUSTAINABLE PROFITS THROUGH THE EFFICIENT OPERATION OF OUR PORTFOLIO OF MINING ASSETS (CONTINUED)



#### DOLORES MINE

Completed construction and commenced operation of the pulp agglomeration plant.

Commenced initial production from the new underground mine.

Achieved targeted stacking rates on the heap leach pad of 20,000 tonnes per day.

#### HUARON MINE

Completed upgrades to the flotation circuit, resulting in improved mill recoveries.

Increase pulp agglomeration plant production to the design rate of 5,600 tonnes per day.

Achieve underground mining rates of 1,500 tonnes per day.

Sustain overall throughput rates to the heap leach pad of 20,000 tonnes per day.

Expand the tailings storage facility to provide adequate storage capacity for increased throughput rates.

Evaluate a project to develop a new production level 80 metres below the current deepest level.

#### MOROCOCHA MINE

Investigate further opportunities to enhance productivities and efficiencies while designing for the eventual mill relocation.

#### SAN VICENTE MINE

Continue to mechanize operations, enhance mine dilution controls, and improve site infrastructure and ancillary facilities.

### REPLACE MINED SILVER MINERAL RESERVES AND RESOURCES THROUGH SUCCESSFUL MINE-SITE EXPLORATION PROGRAMS

Added 33 million ounces of new silver mineral reserves, more than replacing the ounces depleted through mining. Invested \$18 million on near-mine exploration Invest \$19 million in 89 kilometres of near-mine drilling and completed eight kilometres of regional exploration drilling and 26 kilometres of regional exploration drilling. exploration drilling. DEVELOP LEADING SUSTAINABILITY PROGRAMS Transitioned Alamo Dorado mine to the reclamation Substantially complete all physical reclamation phase, and completed processing of residual ore work at Alamo Dorado and transition to post-closure and circuit cleanout. monitoring and maintenance phase. Began implementation of the Towards Sustainable Continue implementation of TSM and complete self-Mining ("TSM") protocols and guidelines. evaluations at all operations. Continued implementation of the Serious Injury Deploy a behavior-based safety pilot program at one of Prevention program. our operating mines.

## **Operating Mines**

Pan American Silver has a diversified portfolio of mining and exploration assets located in the key silver producing jurisdictions.

25.0 Moz

**TOTAL SILVER PRODUCTION IN 2017** 

160 koz

**TOTAL GOLD PRODUCTION IN 2017** 

\$10.79

ALL-IN SUSTAINING **COSTS IN 2017<sup>(1)</sup>** 

2017 SILVER

**PRODUCTION BY MINE** 

La Colorada

Dolores

17%

28%

Manantial

San

Vicente 14% Espejo

12%

We own and operate six mines located in Mexico, Peru, Argentina and Bolivia, and have interests in several development and advanced stage exploration projects.

To achieve our vision and provide investors with enhanced exposure to unhedged, low-cost silver production, we leverage our competitive advantages, which include:

- 20 plus years of operating experience in major silver producing jurisdictions
- A portfolio of long-life producing mines providing continuous cash flow
- Large silver reserve base
- Strong financial capacity

11% Gold Huaron Alamo 23% 15% Dorado 3%

(1) All-in sustaining costs per silver ounce sold, net of by-products, is a non-GAAP measure. See the Alternative Performance (Non-GAAP) Measures section in the Management's Discussion & Analysis for the period ended December 31, 2017, for further information on this measure.



**2017 REVENUE** 

#### 4



(Contained Moz)<sup>(2)</sup>: 52.4; Proven 30.8; Probable 21.7 Silver Reserves, Proven + Probable (Contained Moz)<sup>(2)</sup>: 33.7; Proven 25.6; Probable 8.1

(1) All figures reflect Pan American Silver's ownership in the projects.

(2) For complete mineral reserve and resource information, refer to the Mineral Reserves and Resources and Technical Information section in the Management's Discussion & Analysis for the period ended December 31, 2017. Totals may not add due to rounding.

### **Operations Expanded in Mexico**

Production is ramping up from Pan American Silver's La Colorada and Dolores operations in Mexico following completion of the expansions in 2017.

The expansion of the La Colorada mine was approved in 2013 at an estimated capital cost of \$137 million. Construction of the 618-metre deep mine shaft and a new 1,400 tonne per day sulphide processing plant was completed in late 2016.

In 2017, we energized a new power line and opened new production areas in the underground mine. By mid-2017, we had achieved the targeted design capacity of 1,800 tonnes per day, comprised of 1,400 tonnes per day of sulphide ore and 400 tonnes per day of oxide ore. Silver production is expected to rise 62% to 69% in 2018 over 2013 levels, along with significant increases in zinc and lead production. At Dolores, a \$132 million investment was approved in 2015 to develop a new underground mine to supplement the open pit operations, construct a new 5,600 tonne per day pulp agglomeration plant, and build a new power line.

Following the startup of the new pulp agglomeration plant in 2017, leach pad stacking rates reached the targeted expansion level of 20,000 tonnes per day. Over the next three years, average silver production is expected to increase by approximately 27% and gold by 69% compared with 2015 production levels.

#### DOLORES

Location: Chihuahua, Mexico

Ownership: 100%

Mine Type: Open Pit/Underground

Average Daily Plant Throughput: ~20,000 tonnes

2017 Silver Production (Moz): 4.2

By-Products: Gold

Silver Reserves, Proven + Probable (Contained Moz)<sup>(1)</sup>: 46.1; Proven 33.0; Probable 13.1

#### LA COLORADA

Location: Zacatecas, Mexico

Ownership: 100%

Mine Type: Underground

Average Daily Plant Throughput: ~1,800 tonnes

2017 Silver Production (Moz): 7.1

By-Products: Zinc, lead, gold

Silver Reserves, Proven + Probable (Contained Moz)<sup>(1)</sup>: 98.2; Proven 48.9; Probable 49.3

### **Growing Production in Argentina**

In 2017, Pan American Silver added two new, high-grade silver projects to its portfolio: Joaquin and COSE.

#### MANANTIAL ESPEJO, JOAQUIN, AND COSE

Location: Santa Cruz, Argentina

Ownership: 100%

Mine Type: Underground

Average Daily Plant Throughput: ~2,150 tonnes

2017 Silver Production (Moz): 3.1

By-Products: Gold

Silver Reserves, Proven + Probable Total (Contained Moz)<sup>(1)</sup>: 23.2

Manantial Espejo, Proven 4.4; Probable 5.6; Joaquin, Probable 11.0; COSE, Probable 2.2 The Joaquin and COSE properties are located in the same region as our Manantial Espejo mine in the Santa Cruz province of Argentina. In 2018, we plan to construct underground mines at COSE and at La Morocha, a deposit on the Joaquin property. Ore mining is expected to commence at both properties in 2019.

Ore mined from COSE and La Morocha will be trucked to our Manantial Espejo plant for processing, in addition to the ore from Manantial Espejo's underground mine

and stockpiles. It's a smart strategy that enables us to generate further value from our Manantial Espejo mine facilities. The combined production from the Joaquin, COSE and Manantial Espejo mines is expected to add 21 million ounces to the Company's silver production over the 2018 to 2021 period. Extending the life of the Manantial Espejo processing plant allows us to continue exploring across our large mineral concessions in the area and pursue opportunities to potentially add other highgrade deposits.

(1) For complete mineral reserve and resource information, refer to the Mineral Reserves and Resources and Technical Information section in the Management's Discussion & Analysis for the period ended December 31, 2017.

## Chairman's Message

MISSION, GROWTH, BOARD OF DIRECTORS, CLEAN ENERGY AND OUR FUTURE

Pan American Silver had another good year in 2017, characterized by completion of our large expansion projects in Mexico, stable production, lower costs, new project acquisitions and robust cash generation.

This strong performance enabled the Company to double its dividend in 2017 and deliver modest share price appreciation, despite generally soft prices for precious metal commodities and equities.

Our mission is simple: to be the world's pre-eminent silver mining company. We continue to fulfill this mission, and are now the second largest primary silver producer in the world. Our six mines are operating well and we have growth projects in-house that will increase our annual silver production from today's 25 million ounces to more than 30 million ounces by 2020. Significant silver production growth will also happen if our world class Navidad project is advanced to production in the coming years. This growth should enable Pan American Silver to continue creating shareholder value, regardless of whether or not the silver price increases. And if the silver price does increase, as I expect it will, Pan American Silver should outperform other silver companies and broader equity markets.

We strive to create value through excellence in discovery, engineering, innovation and sustainable development. I believe we delivered on all of these goals in 2017. We continue to discover new silver ounces and replace reserves. Our success at completing the new mine shaft at La Colorada and the pulp agglomeration plant at Dolores attests to the skills of our engineering and project teams. We innovate at all of our operations; I think this effort will gather momentum in the coming years, as we take advantage of the technological revolution underway with big data



### \$402 M

TOTAL CUMULATIVE CASH RETURN TO SHAREHOLDERS (DIVIDENDS AND SHARE BUYBACKS) SINCE 2010

### \$227.5 M

IN CASH AND SHORT-TERM INVESTMENTS AT DECEMBER 31, 2017

### SIX

CONSECUTIVE YEARS OF MEETING SILVER PRODUCTION AND CASH COSTS GUIDANCE and artificial intelligence. Finally, we work very hard to be a good corporate citizen through our sustainable development programs. Keeping our workers healthy and satisfied in their jobs, maintaining labour peace, working closely with our communities and host countries to return to them a fair share of the wealth from our mining operations, and mitigating our impact on the environment are core to how we do business.

Our Board of Directors has done well to keep the Company focused on its mission. Our Board members have deep expertise in mining, capital markets, sustainable development and finance. We focus on shareholder returns in the large sense. For example, our Board recognizes that financial and operating performance is inextricably linked to corporate social responsibility. The health and safety of our workers is discussed at each meeting. Our discussions of capital allocation include community sustainability projects and environmental impacts.

Our focus is on long-term growth, and this is only possible by being a good corporate citizen with a well-earned social license to operate. We have achieved this at all of our operations in Mexico, Peru, Bolivia and Argentina. We have not yet achieved it at our biggest development project - Navidad in Argentina, which remains stalled due to a ban on open pit mining in the province of Chubut. There are many good reasons why Navidad could be a successful operation, generating positive returns for our shareholders and for the citizens and governments of Chubut and Argentina. We are committed to responsible mining, mitigating our environmental impacts and restoring the land once mining has been completed. Our operation and closure of our

Alamo Dorado mine in Mexico attest to that commitment. I am hopeful that our efforts to engage local residents and government representatives around the project, as well as other citizens of Chubut and Argentina, will succeed during 2018 to allow the project to proceed.

Silver is a wonderful metal with thousands of monetary and industrial uses. I am pleased, as a strong believer in our need to confront global warming with a dramatic reduction in carbon emissions, that silver has become a vital part of today's energy revolution in clean energy. For example, the fastest growing use for silver is now in photovoltaic panels for solar power generation, accounting for close to 100 million ounces a year, or about 10% of the annual demand for silver<sup>(1)</sup>.

Our Board recognizes that financial and operating performance is inextricably linked to corporate social responsibility.

Pan American Silver ended 2017 in very strong shape. We have a pristine balance sheet, growing silver production, potential for increasing net revenue and free cash flow<sup>(2)</sup>, and a sterling reputation for fair dealing and quality management. Our future is promising, and I am blessed to Chair such a fine company. I thank all of our stakeholders - shareholders, management, Board members, employees and contractors, and communities - for their support of our enterprise.

Ross J. Beaty, Chairman March 22, 2018

(1) The Silver Institute, January 18, 2018 news release.

(2) Free cash flow is a non-GAAP measure; see the alternative Performance (Non-GAAP Measures) section in the Management's Discussion & Analysis for the period ended December 31, 2017. Free cash flow is calculated as Net Cash from Operating Activities less sustaining and project capital expenditures.

## President's Message

#### Dear Shareholders,

Pan American Silver made significant strides in 2017 advancing our strategy to grow low-cost silver production. We completed two mine expansions in Mexico, acquired two new properties in Argentina and invested in a promising new project in Bolivia.

We are now seeing production ramp up from our expansions at La Colorada and Dolores in Mexico, while improved productivity is contributing to reduced costs. The resulting increase in free cash flow<sup>(1)</sup> is bolstered by the completion of our approximately \$300 million investment in these high-return projects.

Production from our current Argentine operations is expected to total 21 million ounces of silver over 2018 to 2021 when our Joaquin and COSE projects come on line. Both Joaquin and COSE are located close to our mill at Manantial Espejo, enabling us to leverage the mill's excess capacity to process the high-grade ore from Joaquin and COSE. As well, our mineral concessions around Manantial Espejo and Joaquin offer further exploration potential.

The development of our Navidad project in Argentina, one of the world's largest undeveloped silver deposits, remains on hold pending the province of Chubut allowing open pit mining. We continue to engage government and community representatives in Argentina to demonstrate our commitment to sustainable development of the country's mineral resources.

While the potential of Navidad offers attractive optionality for our shareholders, Pan American Silver's diversified portfolio of high-quality assets provides opportunities to grow our low-cost silver production.

We have been successful in developing new mining projects by recognizing that our success depends on the support of the communities in which we work. We are committed to respectful dialogue, fostering sustainable growth and generating economic benefits



\$224.6 M

OPERATING CASH FLOW IN 2017

28%

DECREASE IN CASH COSTS<sup>(1)</sup> IN 2017 FROM 2016

FOUR

OF OUR SIX MINES HAD RECORD ANNUAL OPERATING FREE CASH FLOW<sup>(1)</sup> IN 2017 for local stakeholders while minimizing and mitigating our environmental footprint.

On a consolidated basis, we achieved our 2017 guidance for silver production and beat our cost guidance, producing 25 million ounces of silver at an average cash  $cost^{(1)}$  of \$4.55 per ounce – our lowest costs in a decade. We also beat our original guidance for all-in sustaining  $costs^{(1)}$ , which were \$10.79 compared with original guidance of \$11.50 to \$12.90.

Pan American Silver generated strong operating margins in 2017 at silver prices averaging \$17.05 per ounce. Net cash generated from operating activities of \$224.6 million fully funded sustaining and project capital, our acquisitions of COSE and Joaquin, and the dividend. We also reduced debt by about \$33 million and increased our cash and short term investment balance.

We ended 2017 debt free and with cash and short-term investments totaling \$227.5 million. Our strong balance sheet reduces risk for our shareholders, while providing Pan American Silver with the capacity to pursue new growth opportunities.

We continue to be selective and disciplined in evaluating opportunities. Our objective is to grow our silver portfolio through acquisitions of late stage exploration projects, development projects or operating mines. In addition to our acquisitions of Joaquin and COSE, we acquired about 12% (about 16% fully diluted) of New Pacific Metals Corp in 2017. This interest provides us with exposure to the Silver Sand Project in Bolivia. We have been operating our San Vicente mine in Bolivia since 1999, and we look forward to applying this experience to help advance a new, attractive mineral deposit.

We believe that new acquisition opportunities may surface through 2018, and our aim is to execute transactions that can deliver attractive returns to our shareholders. We will remain focused on silver assets. We believe silver is the metal of the future because of its growing applications in renewable energy production, the wide use in electronics and its many applications within the medical field. Demand for industrial applications represents about 60% of the total supply of silver<sup>(2)</sup>. Most of that silver is consumed in electrical and industrial electronic applications, given silver is the most electrically conductive element. This area is seeing significant demand growth because of the dramatic global rise in photovoltaic installations. Medical applications for silver are also growing due to the metal's antimicrobial properties.

Investment demand for silver, however, has been relatively soft over the past year, likely reflecting buoyant equity markets and increases in interest rates.

On the supply side, world mine production of silver has been flat at around 870 million ounces annually for the past five years<sup>(2)</sup>. Discovering new silver resources has become increasingly challenging.

In closing, I would like to express my gratitude and appreciation to our

employees; their efforts delivered the solid operating performance achieved in 2017. I am also grateful to our experienced Board of Directors for their invaluable guidance.

I would like to congratulate our Board Chair, Mr. Ross Beaty, who in 2017 was appointed to The Order of Canada and inducted to the Business Laureates of British Columbia Hall of Fame. In early 2018, Mr. Beaty was also inducted into Canada's Mining Hall of Fame.

Within the next three years, we expect our annual silver production will rise to 30.5 to 33.0 million ounces and our operating costs to remain very competitive, positioning the Company for attractive profit margins and higher shareholder returns.

Michael Steinmann, President and CEO March 22, 2018

(1) Free cash flow, operating free cash flow, cash costs, and all-in sustaining costs are non-GAAP measures; see the alternative Performance (Non-GAAP Measures) section in the Management's Discussion & Analysis for the period ended December 31, 2017. Free cash flow is calculated as Net Cash from Operating Activities less sustaining and project capital expenditures, while operating free cash is calculated as Net Cash from Operating Activities less sustaining capital expenditures.

(2) The Silver Instutute. November 15, 2017, Thomson Reuters Interim Silver Market Review.

Our strong balance sheet reduces risk for our shareholders, while providing Pan American Silver with the capacity to pursue new growth opportunities.

## **Investor Highlights**

## Why Pan American Silver is the leading investment opportunity in silver:

#### A STRONG AND DIVERSIFIED PORTFOLIO OF ASSETS

comprised of six operating mines across four countries. We have an established presence in the world's key silver producing jurisdictions as a responsible, profitable developer of silver resources. Our high-quality silver assets provide a foundation for growth and potential upside for investors.

#### A SEASONED MANAGEMENT TEAM AND DEDICATED

**WORKFORCE.** We have a decentralized organizational structure, which fosters an empowered workforce and efficient decision-making. Many of our employees have a long tenure with us; this experience combined with their technical expertise reduces development and operating risk, while enabling us to capitalize on new opportunities.

A DISCIPLINED APPROACH TO CAPITAL MANAGEMENT that focuses on maintaining a strong balance sheet, investing in profitable opportunities for growth, and generating attractive returns for shareholders.

A PROVEN TRACK RECORD. In 2017, we achieved our guidance for cash costs and silver production for the 6th consecutive year. Over the last 14 years, we have replaced 103% of our proven and probable silver mineral reserves.



## Management's Discussion and Analysis

FOR THE YEAR ENDED DECEMBER 31, 2017

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#### MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

March 22, 2018

#### **INTRODUCTION**

This Management's Discussion and Analysis ("MD&A") is intended to help the reader understand the significant factors that influence the performance of Pan American Silver Corp. and its subsidiaries (collectively "Pan American", "we", "us", "our" or the "Company") and such factors that may affect its future performance. This MD&A should be read in conjunction with the Company's audited consolidated financial statements for the year ended December 31, 2017 (the "2017 Financial Statements") and the related notes contained therein. All amounts in this MD&A and the 2017 Financial Statements are expressed in United States dollars ("USD"), unless identified otherwise. The Company reports its financial position, results of operations and cash flows in accordance with International Financial Reporting Standards ("IFRS"), as issued by the International Accounting Standards Board. Pan American's significant accounting policies are set out in Note 2 of the 2017 Financial Statements.

This MD&A refers to various non-Generally Accepted Accounting Principles ("non-GAAP") measures, such as "all-in sustaining cost per silver ounce sold", "cash costs per ounce of silver", "total debt", "working capital", "general and administrative cost per silver ounce produced", "adjusted earnings" and "basic adjusted earnings per share", which are used by the Company to manage and evaluate operating performance at each of the Company's mines and are widely reported in the mining industry as benchmarks for performance, but do not have standardized meaning under IFRS. To facilitate a better understanding of these non-GAAP measures as calculated by the Company, additional information has been provided in this MD&A. Please refer to the section of this MD&A entitled "Alternative Performance (Non-GAAP) Measures" for a detailed description of "all-in sustaining cost per silver ounce sold", "cash costs per ounce of silver", "working capital", "general and administrative cost per silver ounce produced", "adjusted earnings" and "basic adjusted earnings per share", as well as details of the Company's by-product credits and a reconciliation of these measures to the 2017 Financial Statements.

Any reference to "cash costs" or "cash costs per ounce of silver" in this MD&A should be understood to mean cash costs per ounce of silver, net of by-product credits. Any reference to "AISCSOS" in this MD&A should be understood to mean all-in sustaining costs per silver ounce sold, net of by-product credits.

Except for historical information contained in this MD&A, the following disclosures are forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995 and forward-looking information within the meaning of applicable Canadian provincial securities laws or are future oriented financial information and as such are based on an assumed set of economic conditions and courses of action. Please refer to the cautionary note regarding forward-looking statements and information at the back of this MD&A and the "Risks Related to Pan American's Business" contained in the Company's most recent Annual Information Form on file with the Canadian provincial securities regulatory authorities and Form 40-F on file with the U.S. Securities and Exchange Commission (the "SEC"). Additional information about Pan American and its business activities, including its Annual Information Form, is available on SEDAR at <u>www.sedar.com</u>

#### **CORE BUSINESS AND STRATEGY**

Pan American engages in silver mining and related activities, including exploration, mine development, extraction, processing, refining and reclamation. The Company owns and operates silver mines located in Peru, Mexico, Argentina, and Bolivia. In addition, the Company is exploring for new silver deposits and opportunities throughout North and South America. The Company is listed on the Toronto Stock Exchange (Symbol: PAAS) and on the Nasdaq Global Select Market ("NASDAQ") in New York (Symbol: PAAS).

Pan American's vision is to be the world's pre-eminent silver producer, with a reputation for excellence in discovery, engineering, innovation and sustainable development. To achieve this vision, we base our business on the following strategy:

- Generate sustainable profits and superior returns on investments through the safe, efficient and environmentally sound development and operation of silver assets
- Constantly replace and grow our mineable silver reserves and resources through targeted near-mine exploration and global business development
- Foster positive long-term relationships with our employees, our shareholders, our communities and our local governments through open and honest communication and ethical and sustainable business practices
- Continually search for opportunities to upgrade and improve the quality of our silver assets both internally and through acquisition
- Encourage our employees to be innovative, responsive and entrepreneurial throughout our entire organization

To execute this strategy, Pan American has assembled a sector-leading team of mining professionals with a depth of knowledge and experience in all aspects of our business, which enables the Company to confidently advance early stage projects through construction and into operation.

Pan American is determined to conduct its business in a responsible and sustainable manner. Caring for the environment in which we operate, contributing to the long-term development of our host communities and ensuring that our employees can work in a safe and secure manner are core values at Pan American. We are committed to maintaining positive relations with our employees, the local communities and the government agencies, all of whom we view as partners in our enterprise.

#### **Operations & Project Development**

#### • Silver production of 25.0 million ounces

Consolidated silver production of 25.0 million ounces was similar to the 25.4 million produced in 2016. Increases at La Colorada and Dolores offset the expected decline from the conclusion of Alamo Dorado operations in 2017. Silver production was within the guidance range of 24.5 million to 26.0 million ounces, as provided in the 2016 annual MD&A dated March 22, 2017 (the "Original Guidance").

#### • Gold production of 160.0 thousand ounces

Consolidated gold production of 160.0 thousand ounces compared to 183.9 thousand ounces produced in 2016. The decrease was due to lower ore grades at Manantial Espejo and the conclusion of Alamo Dorado operations. 2017 gold production was within the Original Guidance range of 155.0 thousand to 165.0 thousand ounces.

#### • Record annual base metal production

**Zinc production** was a record 55.3 thousand tonnes in 2017, 7% higher than in 2016, primarily reflecting the expansion of La Colorada. 2017 consolidated zinc production was slightly below the Original Guidance range of 56.5 thousand tonnes to 58.5 thousand tonnes, and was within the revised range provided on November 8, 2017 (the "Revised Guidance").

**Lead production** was a record 21.5 thousand tonnes, up 6% from 2016, driven by La Colorada. Annual lead production was higher than the Original Guidance range of 19.0 thousand to 20.0 thousand tonnes, and slightly higher than the Revised Guidance range of 20.0 thousand tonnes to 21.0 thousand tonnes.

**Copper production** of 13.4 thousand tonnes was 7% lower than in 2016, largely due to mine sequencing at Morococha. 2017 annual copper production was higher than the Original Guidance range of 8.8 thousand to 9.3 thousand tonnes, and was within the Revised Guidance range.

#### • Decade-low cash costs of \$4.55 per ounce

Consolidated cash costs of \$4.55 per ounce were \$1.74 per ounce or 28% lower than in 2016, largely due to improved productivity at our mines in Peru and Mexico, higher by-product credits, and lower treatment and refining charges. The decade-low cash costs were 35% below the midpoint of the Original Guidance of \$6.45 to \$7.45, and at the low end of the Revised Guidance. Annual cash costs records were set at La Colorada, Huaron, Morococha, and Dolores.

#### • Expansion projects completed

The **La Colorada mine expansion** was completed in 2017. Full design processing rates of 1,800 tonnes per day ("tpd") were achieved in mid-2017, about six months ahead of schedule. Average throughput exceeded design rates by about 5% during the last six months of 2017.

At the **Dolores expansion**, we completed construction of the pulp agglomeration plant with commissioning activities fully underway at year-end. We also advanced the underground mine development and reached the planned daily stacking rate of 20,000 tonnes.

#### • New mine developments initiated

**COSE and Joaquin projects.** We obtained authorizations to initiate construction on the two mining projects located within ore trucking distance from our Manantial Espejo mine. At the Cap-Oeste Sur Este project ("COSE"), we put a team in place, purchased mining equipment, prepared the necessary project infrastructure, and started underground development. By year end, we had advanced 148 metres on the COSE underground decline.

#### **Financial**

#### Increased revenue, net earnings, and operating cash flows.

Annual **revenue** in 2017 of \$816.8 million was up 5% from 2016, mainly due to higher base metal prices and lower treatment and refining charges.

**Net earnings** were \$123.5 million (\$0.79 basic earnings per share) compared with \$101.8 million (\$0.66 basic earnings per share) in 2016, net earnings in 2017 included impairment reversals of \$61.6 million (\$53.4 million, net of tax expense), primarily related to the reversal of the 2015 Morococha mine impairment.

**Operating cash flows** of \$224.6 million were 5% higher than the \$214.8 million generated in 2016, driven primarily by increased revenue and positive working capital changes, partially offset by higher cash taxes.

Adjusted earnings in 2017 were \$77.7 million (\$0.51 basic adjusted earnings per share) compared with \$86.6 million (\$0.57 basic adjusted earnings per share) in 2016. Higher revenue in 2017 was offset by increases in production costs, largely driven by increased non-cash net realizable value ("NRV") inventory adjustments, as well as higher depreciation and income tax expense.

#### • Strong liquidity and working capital position

As at December 31, 2017, the Company had cash and short-term investment balances of \$227.5 million, working capital of \$410.8 million, and \$300.0 million available under its undrawn revolving credit facility. During 2017, debt reduced by \$32.7 million (including financial lease liabilities), resulting in year-end debt of \$10.6 million, mostly related to finance lease liabilities.

#### • All-In Sustaining Costs per Silver Ounce Sold ("AISCSOS") lower than Original Guidance

2017 AISCSOS of \$10.79 was \$0.71 below the low end of the Original Guidance range of \$11.50 to \$12.90 and within the Revised Guidance range of \$10.50 to \$11.50.

#### • Dividend increased

The quarterly dividend was increased to \$0.025 per common share in 2017, double the quarterly dividend of \$0.0125 per common share paid in 2016. On February 20, 2018, a quarterly dividend of \$0.035 per common share was declared, representing an additional 40% increase from the quarterly dividend paid in 2017.

These estimates are forward-looking statements and information that are subject to the cautionary note associated with forward-looking statements and information at the end of this MD&A.

	Silver Production (million ounces)	Cash Costs (\$ per ounce) <sup>(1)</sup>	AISCSOS (\$ per ounce) <sup>(1)</sup>
La Colorada	7.40 - 7.70	1.35 - 1.70	3.80 - 4.30
Dolores	4.50 - 4.90	(1.25) - 0.45	9.00 - 12.00
Huaron	3.60 -3.80	0.75 - 1.50	6.50 - 7.75
Morococha (92.3%) <sup>(2)</sup>	2.50 -2.70	(5.80) - (4.30)	1.05 - 3.50
San Vicente (95.0%) <sup>(2)</sup>	3.90 -4.10	10.00 -10.50	11.60 - 12.50
Manantial Espejo	3.20 - 3.30	17.60 -19.00	18.45 - 20.20
Consolidated Total	25.00 -26.50	3.60 - 4.60	9.30 - 10.80

#### 2018 Silver Production, Cash Costs and AISCSOS Forecasts:

(1) Cash costs per ounce and AISCSOS are non-GAAP measurements. Please refer to section "Alternative Performance (Non-GAAP) Measures" for a detailed reconciliation of how these measures are calculated. The cash cost and AISCSOS forecasts assume: metal prices of \$16.50/oz for silver, \$3,100/tonne (\$1.41/lb) for zinc, \$2,350/tonne (\$1.07/lb) for lead, \$6,500/tonne (\$2.95/lb) for copper, and \$1,250/oz for gold; and, average annual exchange rates relative to 1 USD of 18.50 for the Mexican peso ("MXN"), 3.23 of the Peruvian sol ("PEN"), 19.59 for the Argentine peso ("ARS"), and 7.00 for the Bolivian boliviano ("BOL").

(2) Reflects Pan American's ownership in the operation.

The Company expects to produce between 25.00 million and 26.50 million ounces of silver in 2018, slightly more than the 2017 consolidated production of 24.98 million ounces, with production increases expected at La Colorada, Dolores and San Vicente more than offsetting the conclusion of production from Alamo Dorado in 2017. Production at Morococha, Huaron, and Manantial Espejo is expected to be broadly consistent with 2017.

The increase in silver production at Dolores is expected to be driven by successful commissioning and ramping-up throughput from the new pulp agglomeration plant to 5,600 tpd, ramping-up underground mining rates to 1,500 tpd, and sustaining total heap leach pad loading rates of 20,000 tpd, partially offset by lower grades from open pit sequencing. The increase at La Colorada is expected to be achieved through sustaining the expanded throughput rates while implementing further productivity enhancements with additional mine mechanizations and upgrading the mine backfill plant to enable mine sequencing that reduces grade variability. At San Vicente, the increase reflects a reduction in unplanned downtime, gradual productivity enhancements anticipated from additional mechanization efforts, enhanced mine dilution controls and improvements in site infrastructure and ancillary facilities.

Consolidated cash costs for 2018 are forecast to be between \$3.60 and \$4.60 per payable ounce of silver, net of byproduct credits, compared with 2017 cash costs of \$4.55 per ounce. The Company expects consolidated cash costs to slightly decrease as a result of lower cash costs at La Colorada and San Vicente, driven primarily by increased silver production. 2018 cash costs at the remaining operations are anticipated to be relatively steady compared to 2017.

Consolidated AISCSOS in 2018 is forecast to be between \$9.30 and \$10.80, similar to the \$10.79 recorded in 2017 (which included NRV inventory adjustments that increased AISCSOS by \$0.51 per ounce), as anticipated increases in by-product credits and lower direct selling costs are expected to be largely offset by higher sustaining capital and higher production costs, particularly at Dolores with the additions of full-year pulp agglomeration plant and underground mining costs.

#### 2018 By-product Production Forecasts:

	Gold (koz)	Zinc (kt)	Lead (kt)	Copper (kt)
La Colorada	4.2 - 4.3	17.0 - 18.0	9.2 - 9.4	_
Dolores	138.9 - 147.7	_	_	_
Huaron	1.0	18.5 - 18.7	7.3 - 7.6	6.0 - 6.2
Morococha <sup>(1)</sup>	2.2 - 2.3	18.0 - 18.6	4.3 - 4.7	5.1 - 5.3
San Vicente <sup>(2)</sup>	0.2	6.5 - 6.7	0.2	0.9
Manantial Espejo	28.5 - 29.5	_		
Consolidated Total	175.0 -185.0	60.0 - 62.0	21.0 - 22.0	12.0 - 12.5

(1) Morococha data represents Pan American's 92.3% interest in the mine's production.

(2) San Vicente data represents Pan American's 95.0% interest in the mine's production.

2018 gold production is expected to be between 175.0 and 185.0 thousand ounces, up from the 160.0 thousand ounces produced in 2017. The increase reflects anticipated higher throughputs, recoveries and grades at Dolores, driven by a full year of additional production attributable to pulp agglomeration and the underground mine, more than offsetting a decline in production at Manantial Espejo.

Production of zinc and lead are expected to increase from 2017 levels, resulting from enhanced productivities and sustained expanded throughput rates in the sulphide flotation plant at La Colorada, as well as from improving grades and throughput rates at San Vicente. A decline in annual copper production is expected, primarily as a result of mine sequencing at Morococha, where higher throughput from zinc and lead zones is expected.

#### 2018 Capital Expenditure Forecasts

In 2018, Pan American expects sustaining capital investments of between \$100.0 million and \$105.0 million, an increase from the \$84.4 million invested in 2017. In addition, Pan American expects to invest approximately \$50.0 million of project capital to complete the expansion at Dolores, and advance the Joaquin and COSE projects. The following table details the forecast capital investments at the Company's operations and projects in 2018:

	2018 Forecast Capital Investment (\$ millions)
La Colorada	16.5 - 17.0
Dolores	47.5 - 49.0
Huaron	17.0 - 17.5
Morococha	12.0 - 12.5
San Vicente	6.0 - 7.0
Manantial Espejo	1.0 - 2.0
Sustaining Capital Total	100.0 - 105.0
Morococha projects	2.0
Mexico projects	13.0
Joaquin & COSE projects	35.0
Project Capital Total	50.0
Consolidated Total	150.0 - 155.0

#### Major components of forecast 2018 sustaining capital:

- La Colorada primarily related to approximately \$12.0 million in equipment additions, replacements and overhauls; \$2.0 million for the backfill project; and \$2.0 million for exploration.
- Dolores primarily related to: approximately \$26.0 million for pre-stripping activities; \$15.0 million in leach pad and pumping system expansions; \$4.0 million for equipment additions, replacements and overhauls; and \$2.0 million for exploration.

- Huaron primarily related to approximately \$4.0 million in equipment additions, replacements and overhauls; \$5.0 million on a tailings facility expansion; \$3.0 million on mine deepening; and \$4.0 million for exploration.
- Morococha approximately \$7.0 million in equipment additions, replacements and overhauls; \$2 million in infrastructure and ancillary upgrades; and \$3 million in exploration.
- San Vicente approximately \$2.0 million in mine equipment additions, replacements and overhauls; \$2.0 million in infrastructure and ancillary upgrades; and \$2.0 million for exploration.
- Manantial Espejo approximately \$1.0 million to \$2.0 million mostly for exploration programs.

See the "2018 Mine Operations Forecasts" section of this MD&A for further details.

#### Forecast 2018 project capital consists of:

- Approximately \$15.0 million and \$20.0 million on the development of the COSE and Joaquin mine projects, respectively.
- Approximately \$8.0 million to complete and commission the pulp agglomeration plant and complete the underground mine development at Dolores.
- Approximately \$5.0 million to complete a tailings facility expansion project at La Colorada that will lead to savings in future tailings facility expansions.
- Approximately \$2.0 million to advance engineering and plant design for a plant relocation at Morococha.

#### **2018 General and Administrative Cost Forecast**

Our 2018 general and administrative ("G&A") costs are expected to be approximately \$25.6 million, an increase from 2017 G&A of \$21.4 million. The increase is primarily due to higher costs anticipated particularly for insurance, travel, legal and information technology costs. This figure is subject to fluctuations in the Canadian dollar ("CAD") to USD exchange rate, the Company's share price performance, which impacts share based compensation expense, and the Company's ability to allocate certain costs incurred at head office that are directly attributable to operating subsidiaries.

#### 2018 Exploration and Project Development Expense Forecast

Exploration expenses, excluding near-mine exploration included in sustaining capital, in 2018 are expected to total approximately \$13.3 million, a decrease from the 2017 exploration expense of \$19.8 million. The decrease is driven by lower spending at the Joaquin project, and a 2017 project development write-down at La Colorada not expected to occur in 2018. Non-mine-site exploration will continue to advance on targets defined at certain Mexican and Peruvian properties. The exploration expenses also include holding costs for various exploration properties, including Navidad.

#### **2018 Mine Operation Forecasts**

Expectations of management of the Company ("Management") for each mine's operating performance in 2018 are set out below, including a discussion on expected production, cash costs, capital expenditures and AISCSOS.

#### La Colorada mine

La Colorada 2018 forecast silver production of 7.4 million to 7.7 million ounces is 4% to 8% more than the 7.1 million produced in 2017, driven by a full year of expanded throughput rates, additional mine mechanizations and the implementation of a hydraulic backfill system. The 2018 mine plan contemplates the mining and milling rate to increase from 1,800 tpd in January 2018 to 1,950 tpd by year-end 2018.

Forecast 2018 cash costs per ounce of between \$1.35 and \$1.70 represent reductions of 35% to 18%, respectively, from the \$2.08 per ounce recorded in 2017. The reduction in expected cash costs reflects the benefits from increased silver production combined with higher by-product credits per ounce due to higher zinc and lead production and

higher base metal price expectations, partially offset by higher backfill, underground development and energy costs as well as modest wage and supply cost escalations.

AISCSOS for 2018 is expected to be between \$3.80 and \$4.30, lower than the \$4.44 AISCSOS reported in 2017. The expected benefits of the increased production described above, along with higher by-product production and prices, offset the increased production costs and sustaining capital leading to the net decrease.

A \$5.0 million investment in a tailings storage facility expansion is included in 2018 project capital, which is expected to reduce life-of-mine tailings related construction costs by approximately \$15.0 million. Please see the "2018 Capital Expenditure Forecast" section for a summary of project capital expenditures.

#### **Dolores mine**

Forecast silver production for 2018 of 4.5 to 4.9 million ounces is expected to be 0.3 million to 0.7 million ounces higher than the 4.2 million ounces produced in 2017. The forecast increase is driven mainly by the successful commissioning and ramp-up of the pulp agglomeration plant; increased underground mining rates; and sustained heap leach pad loading rates of 20,000 tpd, partially offset by lower expected silver grades from the mine sequencing into favorable gold zones.

Cash costs in 2018 are expected to be between negative \$1.25 and positive \$0.45 per ounce, slightly higher than the 2017 cash costs of negative \$1.65 per ounce, due to increased costs largely associated with the commissioning of the pulp agglomeration and underground mine, offset by increased silver and gold production.

AISCSOS for 2018 is expected to be between \$9.00 and \$12.00, compared to 2017 AISCSOS of \$10.00 (which included NRV inventory adjustments that increased AISCSOS by \$1.67 per ounce). Excluding the effect of 2017 NRV adjustments, AISCSOS is expected to increase from those in 2017 primarily due to increased sustaining capital investments described above, partially offset by increased silver and gold production.

Expansion project capital in 2018 is expected to total \$8.0 million and relates to completing the commissioning of the pulp agglomeration circuit and underground mine project. Please see the "2018 Capital Expenditure Forecast" section for a summary of project capital expenditures.

#### Huaron mine

In 2018, silver production is expected to be between 3.6 million to 3.8 million ounces, comparable to 3.7 million ounces produced in 2017. The consistent production levels reflect slightly increased throughput rates offset by slightly lower grades. Despite the higher throughput, base metal production is expected to decrease due to anticipated grade and recovery declines. When compared to the mid-point guidance, lead and zinc production rates are expected to reduce by approximately 15% and 4%, respectively, from 2017 production levels as a result of the planned mine sequencing. 2018 copper production rates are expected to be comparable to 2017 levels.

2018 cash costs per ounce are forecast to be between \$0.75 and \$1.50, relatively consistent with 2017 cash costs of \$1.35 per ounce, which reflects higher base metal price assumptions being largely offset by expected increases in production costs and lower by-product metal production.

AISCSOS for 2018 is expected to be between \$6.50 and \$7.75, representing a 24% to 48% increase from the \$5.25 reported in 2017, primarily due to the previously discussed higher sustaining capital expenditures.

#### Morococha mine

Throughput rates in 2018 are expected to be consistent with those in 2017, as are silver grades and recoveries. As such the forecast 2018 silver production of 2.5 million to 2.7 million ounces is consistent with the 2.6 million ounces produced in 2017. However, planned changes in mine sequencing are expected to change the plant feed composition towards zinc and lead-rich ore that contains less copper than previously mined zones. When compared to the midpoint of 2018 guidance, lead and zinc production rates are expected to increase by approximately 30% and 13%, respectively, from 2017 production levels as a result of the planned mine sequencing, while copper production rates are expected to decrease by 22% relative to 2017 levels.

Forecast 2018 cash costs of between negative \$5.80 and negative \$4.30 per ounce compare to 2017 cash costs of negative \$5.34 per ounce. The consistent year-over-year cash costs reflect the anticipated higher by-product credits, from increased zinc and lead production and metal prices, largely offsetting an expected production cost increase from increased underground advances and modest wage and supply cost escalations.

AISCSOS for 2018 is expected to be between \$1.05 and \$3.50, roughly consistent with the \$1.22 reported in 2017, primarily due to the expected increase in by-product credits, being offset by higher operating costs.

#### San Vicente mine

Silver production for 2018 is forecast to be between 3.9 million and 4.1 million ounces, compared to 3.6 million ounces in 2017. The increase is based on anticipated higher throughput rates, silver grades and recoveries driven by reductions in unplanned downtime, additional mechanization efforts, and enhanced mine dilution controls. Similarly, forecast zinc production in 2018 is anticipated to be between 49% to 54% higher as a result of the anticipated increased throughput and higher expected zinc grades. Higher copper and lower lead grades in 2018 are expected to increase copper production by 42% and decrease lead production by 58%, compared to 2017.

Cash costs in 2018 are expected to decline by up to \$1.85 per ounce to be between \$10.00 and \$10.50 per ounce compared with 2017 due to larger by-product credits from higher base metal price assumptions and increased zinc and silver production, which more than offsets expected cost escalations, primarily from higher labor costs.

AISCSOS for 2018 is expected to be between \$11.60 and \$12.50, a significant decrease from the \$14.40 reported in 2017, due to the expectation that increased silver production, lower sustaining capital investments, and increased by-product credits will more than offset an anticipated escalation in production costs.

#### **Manantial Espejo mine**

Forecast 2018 silver production of 3.2 to 3.3 million ounces is roughly the same as the 3.1 million ounces produced in 2017, reflecting consistent throughput and slightly increased grades offset by a decrease in recoveries. Forecast 2018 gold production of 28.5 thousand to 29.5 thousand ounces, however, is significantly less than the 45.3 thousand ounces produced in 2017 due to planned processing of lower gold grade stockpiles.

Forecast 2018 cash costs of \$17.60 to \$19.00 per ounce are largely consistent with 2017 cash costs of \$18.25 per ounce, as a result of significantly lower by-product credits due to the reduction in gold grades, offset by the expected decrease in production costs with the completion of open pit mining in 2017.

AISCSOS for 2018 is expected to be between \$18.45 and \$20.20, a decrease from the \$23.42 reported in 2017 (which included NRV inventory adjustments that increased AISCSOS by \$2.54 per ounce) due mainly to lower production costs and sustaining capital, partially offset by lower by-product credits from the decline in gold production.

#### **MID-TERM OUTLOOK**

The following table provides the Company's estimates for metal production, gold production, cash costs, sustaining capital expenditures, and AISCSOS for fiscal 2018 to 2020. The increase in production primarily reflects the impact of the expanded operations at La Colorada and Dolores, and the additional production expected from the COSE and Joaquin projects in Argentina.

These estimates are forward-looking and are subject to the cautionary note associated with forward-looking statements and information at the end of this MD&A.

	2018 Guidance	2019 Outlook	2020 Outlook
Production			
Silver (million ounces)	25.0 - 26.5	27.7 - 29.7	30.5 - 33.0
Gold (thousand ounces)	175 - 185	183 - 193	165 - 179
Zinc (thousand tonnes)	60.0 - 62.0	55.5 - 59.5	60.5 - 64.5
Lead (thousand tonnes)	21.0 - 22.0	21.0 - 23.0	23.0 - 26.0
Copper (thousand tonnes)	12.0 - 12.5	10.5 - 12.5	11.5 - 13.5
Cash Costs <sup>(1)</sup> (\$/ounce)	3.60 - 4.60	4.50 - 6.00	4.75 - 6.75
Sustaining capital (\$ millions)	100 - 105	100 - 110	75 - 90
AISCSOS <sup>(1)</sup> (\$/ounce)	9.30 - 10.80	9.50 - 11.50	8.50 - 11.00

(1) Cash costs per ounce and AISCSOS are non-GAAP measurements. Please refer to section "Alternative Performance (Non-GAAP) Measures" for a detailed reconciliation of how these measures are calculated. The cash cost and AISCSOS forecasts assume: by-product credit prices of \$3,100/tonne (\$1.41/lb) for zinc, \$2,350/tonne (\$1.07/lb.) for lead, \$6,500/tonne (\$2.95/lb.) for copper, and \$1,250/oz. for gold; and, average annual exchange rates relative to 1 USD of 18.50 for the MXN, 3.23 of the PEN, 19.59 for the ARS, and 7.00 for the BOL.

#### **2017 OPERATING PERFORMANCE**

The following table provides silver production and cash costs, net of by-product credits, at each of Pan American's operations for the respective three and twelve month periods ended December 31, 2017 and 2016:

		Silver Pro (ounces				Cash Co (\$ per o		
	Three mon Deceml		Year e Decemb		Three mont Decemb		Year ei Decemb	
	2017	2016	2017	2016	2017	2016	2017	2016
La Colorada	1,870	1,665	7,056	5,795	0.43	4.38	2.08	6.15
Dolores	1,256	897	4,232	3,838	(3.93)	(5.93)	(1.65)	(1.08)
Alamo Dorado	33	401	641	1,864	2.09	22.80	16.49	16.02
Huaron	951	935	3,684	3,812	2.08	4.54	1.35	5.79
Morococha <sup>(2)</sup>	721	578	2,634	2,541	(7.42)	5.52	(5.34)	4.21
San Vicente <sup>(3)</sup>	1,102	1,050	3,610	4,433	9.04	11.22	11.85	11.95
Manantial Espejo	646	779	3,123	3,136	26.52	14.61	18.25	4.28
Total <sup>(4)</sup>	6,579	6,306	24,979	25,419	3.18	6.66	4.55	6.29

(1) Cash costs is a non-GAAP measure. Please refer to the section "Alternative Performance (Non-GAAP) Measures" of this MD&A for a detailed description of the cash cost calculation, details of the Company's by-product credits and a reconciliation of this measure to the 2017 Financial Statements.

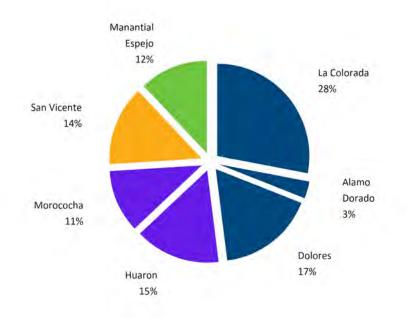
(2) Morococha data represents Pan American's 92.3% interest in the mine's production.

(3) San Vicente data represents Pan American's 95.0% interest in the mine's production.

(4) Totals may not add due to rounding.

#### **2017 Silver Production**

The chart below presents silver production by mine in 2017:



Consolidated silver production in the fourth quarter of 2017 ("Q4 2017") of 6.58 million ounces was 4% more than the 6.31 million ounces produced in Q4 2016. The quarterly increase resulted from record quarterly production at Dolores and La Colorada, as well as increased production at Morococha, all with higher throughput rates, which more than offset the anticipated production decline from the conclusion of mining at Alamo Dorado along with lower silver grades following the conclusion of open pit mining at Manantial Espejo.

Consolidated annual silver production of 25.0 million ounces was similar to the 25.4 million produced in 2016, as record annual production at La Colorada and Dolores offset the expected decline at Alamo Dorado and shortfalls at San Vicente. Each operation's silver production variances are further discussed in the "Individual Mine Performance" section of this MD&A.

#### 2017 Cash Costs

Consolidated cash costs per ounce of silver for Q4 2017 and full year 2017 were \$3.18 and a decade low \$4.55, respectively, representing a 52% and 28% reduction from Q4 2016 and 2016 cash costs, respectively. Record low annual cash costs per ounce were achieved at La Colorada, Dolores, Huaron and Morococha during 2017.

The quarter-over-quarter reduction was the result of higher by-product credits, which increased by \$2.52 per ounce from higher metal prices for all by-products, increased silver sales volumes, mainly from increased production at Dolores, La Colorada and Morococha and decreased direct selling costs from improved contract terms for concentrate treatment and refining.

The year-over-year cash costs variances were driven by similar factors, with the exception of silver production, which was slightly lower due to the higher production at La Colorada and Dolores, being offset by the declines at Alamo Dorado and San Vicente.

Each operation's cash costs variances are discussed in the "Individual Mine Performance" section of this MD&A.

		By-Product Production			
		Three months ended December 31,20172016		Year ended December 31,	
	2017			2016	
Gold – koz	43.7	43.9	160.0	183.9	
Zinc – kt	14.7	13.2	55.3	51.9	
Lead – kt	5.4	5.5	21.5	20.2	
Copper – kt	3.0	3.1	13.4	14.4	

Gold production during Q4 2017 was 43.7 thousand ounces, roughly consistent with the 43.9 thousand ounces produced in Q4 2016. The comparable production reflects record quarterly production at Dolores offsetting the anticipated decline in gold grades at Manantial Espejo.

2017 gold production of 160.0 thousand ounces was 13% lower than 2016 production on account of the anticipated lower grades at Manantial Espejo, attributable to the completion of open pit mine production, and the conclusion of mining at Alamo Dorado. These production declines were partially offset with the record annual gold production achieved at Dolores.

Record quarterly zinc production in Q4 2017 was 11% higher than Q4 2016, driven by higher ore grades and throughput at La Colorada, partially offset by lower grades at Huaron . Q4 2017 lead production was comparable with prior period production. Q4 2017 copper production was 3% lower than in Q4 2016, primarily the result of anticipated lower copper grades at Morococha.

Record annual zinc production of 55.3 thousand tonnes in 2017 was 7% more than in 2016, primarily reflecting the expansion of La Colorada. 2017 consolidated lead production was a record 21.5 thousand tonnes, up 6% from 2016, also driven primarily by La Colorada. 2017 copper production of 13.4 thousand tonnes was 7% lower than in 2016, due largely to Morococha mine sequencing.

Each operation's by-product production is discussed in the "Individual Mine Performance" section of this MD&A.

#### 2017 Average Market Metal Prices

The following tables set out the average market price for each metal produced for 2017 and 2016:

	A	Average Market Metal Prices <sup>(1)</sup>			
		Three months ended December 31,20172016		nded ber 31,	
	2017			2016	
Silver \$/ounce	16.73	<b>3</b> 17.19	17.05	17.14	
Gold \$/ounce	1,275	5 1,222	1,257	1,251	
Zinc \$/tonne	3,230	5 2,517	2,896	2,095	
Lead \$/tonne	2,492	2 2,149	2,317	1,872	
Copper \$/tonne	6,808	<b>3</b> 5,277	6,166	4,860	

(1) Average market prices are for zinc, lead and copper are the London Metal Exchange cash prices for the three and twelve month periods ended December 31, 2017 and 2016, silver and gold prices are the London Bullion Metal Association prices for the same periods.

#### 2017 AISCSOS

The following table reflects the quantities of payable silver sold and AISCSOS at each of Pan American's operations for the three and twelve months ended December 31, 2017, as compared to the same period in 2016:

	Payable Silver Sold (ounces '000s)				AISCSOS <sup>(1)</sup> (\$ per ounce)			
	Three months ended December 31,				Three months ended December 31,		Year ended December 31,	
	2017	2016	2017	2016	2017	2016	2017	2016
La Colorada	1,847	1,561	6,853	5,486	2.81	5.52	4.44	7.49
Dolores	1,225	895	4,089	3,839	13.62	2.96	10.00	8.29
Alamo Dorado	133	286	867	1,967	17.45	28.44	17.69	14.85
Huaron	813	759	3,181	3,233	7.00	12.62	5.25	11.11
Morococha	658	526	2,448	2,377	(1.54)	15.02	1.22	9.32
San Vicente	1,218	1,332	3,603	4,264	12.31	12.43	14.40	14.30
Manantial Espejo	766	779	3,171	3,033	28.63	3.77	23.42	(2.08)
Total <sup>(2)</sup>	6,659	6,138	24,212	24,200	10.86	10.38	10.79	10.17

(1) AISCSOS is a non-GAAP measure. Please refer to the section "Alternative Performance (Non-GAAP) Measures" of this MD&A for a detailed description of the AISCSOS calculation and a reconciliation of this measure to the 2017 Financial Statements. G&A costs are included in the consolidated AISCSOS, but not allocated in calculating AISCSOS for each operation.

(2) Totals may not add due to rounding.

Consolidated AISCSOS for Q4 2017 and annual 2017, were \$10.86 and \$10.79, respectively, representing increases of 5% and 6%, from the comparable AISCSOS amounts in 2016.

The quarter-over-quarter increase largely reflects increased production costs, primarily from NRV inventory adjustments that added \$0.83 to AISCSOS in Q4 2017 (reduced Q4 2016 AISCSOS by \$1.75), and higher operating costs at Manantial Espejo. These AISCSOS increases were partially offset by: increased by-product credits from higher metal prices for all by-products; increased silver sales volumes, mainly from increased production at Dolores, La Colorada and Morococha; and decreased direct selling costs from improved contract terms for concentrate treatment and refining.

The increase in annual AISCSOS was similarly driven by increased production costs, mainly from increased negative NRV inventory adjustments, which added \$0.51 to AISCSOS in 2017 (reduced 2016 AISCSOS by \$1.77). The increased production costs were partially offset by: higher by-product credits, mostly from stronger base metal prices partially offset by lower quantities of gold and copper sold in the year; decreased direct selling costs; lower royalties, driven by lower sales volumes at San Vicente; and lower sustaining capital expenditures, mainly due to the timing of sustaining capital payments at Dolores.

#### **Individual Mine Performance**

The following tables summarize the 2017 metal production, cash costs and AISCSOS achieved for each individual operation compared to the Original Guidance. Reported metal figures included in tables in this section are volumes of metal produced.

For the purposes of these comparisons, the symbols have the following meanings:

- ✓✓ Actual results were better than 2017 Original Guidance range
- Actual results met 2017 Original Guidance range
- Actual results fell short of 2017 Original Guidance range

	2017 Silver Production (million ounces)		2017 Cash (\$ per o		2017 AISCSOS <sup>(1)</sup> (\$ per ounce)		
	Forecast <sup>(2)</sup>	Actua	al	Forecast <sup>(2)</sup>	Actual	Forecast <sup>(2)</sup>	Actual
La Colorada	6.40 - 6.90	7.06	$\checkmark\checkmark$	3.35 - 3.95	\$2.08 🗸 🗸	5.00 - 5.90	\$4.44 🗸
Dolores	4.00 - 4.50	4.23	$\checkmark$	1.25 -2.25	(1.65) 🗸 🗸	11.00 - 12.50	\$10.00 🗸
Alamo Dorado	0.25 - 0.30	0.64	$\checkmark\checkmark$	18.00 -20.00	16.49 🗸	18.40 - 19.40	\$17.69 🗸
Huaron	3.65 -3.80	3.68	$\checkmark$	5.95 -6.95	1.35 🗸 🗸	9.25 - 10.50	\$5.25 🗸 🗸
Morococha <sup>(3)</sup>	2.50 -2.60	2.63	$\checkmark\checkmark$	3.15 -4.15	(5.34) 🗸	8.25 - 9.75	\$1.22 🗸 🗸
San Vicente <sup>(3)</sup>	4.40 -4.50	3.61	×	10.90 -11.90	11.85 🗸	13.80 - 14.80	\$14.40 🗸
Manantial Espejo	3.30 - 3.40	3.12	×	15.35 -16.25	18.25 ×	16.90 - 18.10	\$23.42 🗴
Total <sup>(4)</sup>	24.50 -26.00	24.98	$\checkmark$	6.45 -7.45	\$4.55 🗸 🗸	11.50 - 12.90	\$10.79 🗸

(1) Cash Costs and AISCSOS are non-GAAP measures. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed description of the AISCSOS calculation and a reconciliation of this measure to the 2017 Financial Statements.

(2) Forecast amount per guidance included in the annual MD&A for fiscal 2016 dated March 22, 2017.

(3) Production figures are only for Pan American's ownership share of Morococha (92.3%), and San Vicente (95.0%).

(4) Totals may not add due to rounding.

	2017 Gold Production (koz)			2017 Zinc Production (kt)		
	Forecast <sup>(1)</sup>	Actual		Forecast <sup>(1)</sup>	Actual	
La Colorada	3.3 – 3.5	4.3	$\checkmark\checkmark$	14.0 - 14.5	15.4	$\checkmark\checkmark$
Dolores	109.1 – 115.0	103.0	×	_	_	
Alamo Dorado	1.4 – 1.5	2.1	$\checkmark\checkmark$	_	_	
Huaron	0.3 - 0.4	1.1	$\checkmark\checkmark$	16.0 - 16.5	19.4	<b>~ ~</b>
Morococha <sup>(2)</sup>	2.9 - 3.1	3.5	$\checkmark\checkmark$	20.2 - 21.0	16.1	×
San Vicente <sup>(2)</sup>	0.5 – 0.55	0.5	$\checkmark$	6.3 – 6.5	4.4	×
Manantial Espejo	37.5 - 41.0	45.3	$\checkmark\checkmark$	_	_	
Total <sup>(3)</sup>	155.0 – 165.0	160.0	$\checkmark$	56.5 - 58.5	55.3	×

(1) Forecast amount per guidance included in the annual MD&A for fiscal 2016 dated March 22, 2017.

(2) Production figures are only for Pan American's ownership share of Morococha (92.3%), and San Vicente (95.0%).

(3) Totals may not add due to rounding.

	2017 Lead Production (kt)			2017 Copper P (kt)		
	Forecast <sup>(1)</sup>	Actual		Forecast <sup>(1)</sup>	Actual	
La Colorada	7.5 – 7.8	8.8	$\checkmark\checkmark$	_	_	
Alamo Dorado	_	_		0.01	0.01	$\checkmark$
Huaron	7.2 – 7.4	8.8	$\checkmark\checkmark$	6.0 - 6.2	6.1	$\checkmark$
Morococha <sup>(2)</sup>	4.0 - 4.5	3.5	×	2.1 - 2.4	6.6	$\checkmark\checkmark$
San Vicente <sup>(2)</sup>	0.3	0.5	$\checkmark\checkmark$	0.7	0.6	×
Total <sup>(3)</sup>	19.0 - 20.0	21.5	$\checkmark\checkmark$	8.8 - 9.3	13.4	$\checkmark\checkmark$

(1) Forecast amount per guidance included in the annual MD&A for fiscal 2016 dated March 22, 2017.

(2) Production figures are only for Pan American's ownership share of Morococha (92.3%), and San Vicente (95.0%).

(3) Totals may not add due to rounding.

	2017 Capital Invest	ment (\$ millions)
	Forecast <sup>(1)</sup>	Actual <sup>(2)</sup>
La Colorada	10.5 – 11.5	13.3
Dolores	39.0 - 40.0	38.4
Huaron	8.0 - 9.0	8.8
Morococha	9.0 - 10.0	12.5
San Vicente	12.0 - 13.0	8.1
Manantial Espejo	3.5 – 4.5	3.3
Sustaining Capital Sub-total <sup>(2)</sup>	82.0 - 88.0	84.4
La Colorada Expansion Project	6.5 – 7.5	6.9
Dolores Expansion Projects	51.5 – 54.5	49.9
Joaquin and COSE projects <sup>(3)</sup>	11.0 - 12.5	4.7
Project Capital Sub-total <sup>(2)</sup>	69.0 - 74.5	61.4
Total Capital	151.0 – 162.5	145.8

(1) Forecast amount per guidance included in the annual MD&A for fiscal 2016 dated March 22, 2017, except for Joaquin and COSE projects, which were initially forecast in the MD&A for the second quarter of 2017.

(2) Total sustaining capital investments capitalized in 2017 2343 \$0.2 million more than the \$84.2 million of sustaining capital cash outflows referenced in the individual mine tables and included in the 2017 AISCOS calculations, shown in the "Alternative Performance (Non-GAAP) Measures" section of this MD&A. In addition, project capital investments in 2017 were \$1.2 million less than the \$62.6 million of 2017 project capital cash outflows. These differences are due to the timing difference between the cash payment of capital investments compared with the period in which investments are capitalized.

(3) Total expenditures of \$9.7 million were incurred in 2017 for the Joaquin and COSE projects, of which \$5.0 million was expensed as part of 2017 exploration and project development expenses, and the remaining \$4.7 million was capitalized.

An analysis of each operation for the year ended December 31, 2017, as compared to the operating performance for the year ended December 31, 2016, as well as an analysis of the 2017 operating performance compared to the 2017 Original Guidance follows. The project capital amounts invested in 2017 are further discussed in the 2017 Project Development Update section of this MD&A.

#### La Colorada mine

		Year ended December 31,				
	201	7	2016			
Tonnes milled - kt	655.	3	528.8			
Average silver grade – grams per tonne	36	3	377			
Average zinc grade - %	2.8	1	2.63			
Average lead grade - %	1.5	1	1.31			
Average silver recovery - %	91.	1	90.3			
Average zinc recovery - %	83.	7	82.2			
Average lead recovery - %	86.	Ð	86.5			
Production:						
Silver – koz	7,05	5	5,795			
Gold – koz	4.2	Ð	2.93			
Zinc – kt	15.4	1	11.40			
Lead – kt	8.8	)	6.00			
Cash cost per ounce net of by-products <sup>(1)</sup>	\$ 2.0	<b>3</b> \$	6.15			
AISCSOS <sup>(2)</sup>	\$ 4.4	<b>1</b> \$	7.49			
Payable silver sold - koz	6,85	3	5,486			
Sustaining capital - ('000s) <sup>(3)</sup>	\$ 13,97	<b>)</b> \$	10,545			

(1) Cash costs is a non-GAAP measure. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed reconciliation of this measure to cost of sales.

(2) AISCSOS is a non-GAAP measure. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed description of the AISCSOS calculation and a reconciliation of this measure to the 2017 Financial Statements.

(3) Sustaining capital expenditures exclude \$8.0 million of investing activity cash outflow for 2017 (2016: \$54.0 million) related to investment capital incurred on the La Colorada expansion project as disclosed in the "Project Development Update" section of this MD&A.

#### 2017 versus 2016

The La Colorada mine produced a record 7.1 million ounces of silver in 2017, 22% more than in 2016 due to a 24% increase in throughput rates, partially offset by a 2% decline in silver grades. The improved throughput reflects the benefits of the expansion project, which was largely completed in Q4 2016 and fully commissioned by mid-2017. During 2017, the mine also produced a record 15.4 thousand tonnes of zinc and a record 8.8 thousand tonnes of lead, 35% and 47% more than in 2016, respectively, due to increased throughput of sulphide ore, as well as improved sulphide ore grades.

2017 cash costs of \$2.08 per ounce of silver were a mine record and \$4.07 lower than the \$6.15 per ounce in 2016. The 66% decrease was primarily the result of improved by-product credits from increased quantities of by-products produced and higher by-product metal prices, as well as increased silver production, all partially offset by higher operating costs due to the higher throughput.

2017 AISCSOS of \$4.44 decreased 41% from \$7.49 in 2016, as a result of improved production rates following the completion of the expansion project and higher base metal prices.

Sustaining capital cash outflows totaled \$14.0 million in 2017, an increase of \$3.4 million from the \$10.5 million in 2016. Sustaining capital in 2017 primarily related to a tailings storage facility expansion, exploration, underground equipment, and underground development. Sustaining capital excludes \$8.0 million spent on the La Colorada expansion project during the year (2016 - \$54.0 million), which is further described in the Project Development Update section of this MD&A.

#### 2017 versus Guidance

2017 silver production at La Colorada of 7.06 million ounces was 2% more than the high end of management's Original Guidance range of 6.40 million to 6.90 million ounces, resulting primarily from the higher than expected record throughput rates achieved by reaching the expanded 1,800 tpd rate in mid-2017, six months ahead of schedule. Base metal production also benefited from the higher throughput, resulting in zinc and lead production that exceeded the high end of the Original Guidance by 6% and 13%, respectively. Gold production also exceeded the high end of the 2017 Original Guidance.

The record 2017 cash costs of \$2.08 per ounce were under the low end of management's Original Guidance range of between \$3.35 and \$3.95 per ounce. 2017 cash costs were positively influenced by higher than expected by-product credits driven by higher zinc and lead prices and production, and the higher than originally expected silver production.

2017 AISCSOS of \$4.44 was also less than the low end of management's Original Guidance range of between \$5.00 and \$5.90, due mainly to higher than expected zinc and lead by-product credits and greater quantities of silver sold.

Sustaining capital investments in 2017 totaled \$13.3 million, which was \$1.8 million more than the high-end of management's Original Guidance range of \$10.5 million to \$11.5 million as a result of additional investments in nearmine exploration, and expanded investments in a tailings facility to generate capacity greater than that initially planned. Sustaining capital cash outflows in 2017 of \$14.0 million were higher than amounts capitalized in the year due to the timing of cash payments for capital investments.

#### **Dolores mine**

	Year e Decemb	
	2017	2016
Tonnes placed - kt	6,604.9	6,306.5
Average silver grade – grams per tonne	38	37
Average gold grade – grams per tonne	0.66	0.75
Average silver produced to placed ratio - %	51.7	50.8
Average gold produced to placed ratio - %	70.7	67.7
Production:		
Silver – koz	4,232	3,838
Gold – koz	103.0	102.8
Cash cost per ounce net of by-products <sup>(1)</sup>	(1.65)	(1.08)
AISCSOS <sup>(2)</sup>	10.00	8.29
Payable silver sold - koz	4,089	3,839
Sustaining capital - ('000s) <sup>(3)</sup>	\$ 36,071	\$ 48,079

(1) Cash costs is a non-GAAP measure. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed reconciliation of this measure to cost of sales.

(2) AISCSOS is a non-GAAP measure. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed description of the AISCSOS calculation and a reconciliation of this measure to the 2017 Financial Statements.

(3) Sustaining capital expenditures excludes \$49.3 million of investing activity cash outflow for 2017 (2016: \$65.1 million) related to investment capital incurred on Dolores expansion projects, as disclosed in the "Project Development Update" section of this MD&A.

#### 2017 versus 2016

In 2017, Dolores produced a record 4.23 million ounces of silver, which was 10% higher than the 3.84 million ounces produced in 2016. The increase was primarily the result of higher stacking rates, which increased by 5% and to a new annual record, and 3% higher silver grades due to mine sequencing. Gold production of 103.0 thousand ounces in 2017 was consistent with the 102.8 thousand ounces produced in 2016, due to lower gold grades from mine sequencing, offset by higher stacking rates and recoveries.

2017 cash costs were a record negative \$1.65 per ounce of silver, a \$0.57 per ounce decrease relative to 2016. The lower cash costs were mainly the result of lower unit production costs per tonne benefiting from higher throughputs.

2017 AISCSOS of \$10.00 was \$1.71 higher than the \$8.29 in 2016. The increase was primarily the result of a \$29.3 million increase in production costs due to NRV adjustments, partially offset by \$5.0 million lower direct operating costs from increased ore stockpile and heap inventories, \$12.0 million lower sustaining capital, and a \$4.5 million increase in by-product credits from higher gold prices and quantities sold.

Sustaining capital cash outflows of \$36.1 million in 2017 were lower than the \$48.1 million in 2016, primarily due to the timing of payments and lower investments in leach pad expansions and equipment rehabilitations in 2017. Capital expenditures primarily consisted of open pit pre-stripping, leach pad expansions, new mobile mining equipment purchases, and exploration. 2017 sustaining capital excluded \$49.3 million of cash outflows relating to Dolores expansion projects (2016 - \$65.1 million), which is further discussed in the "Project Development Update" section of this MD&A.

#### 2017 versus Guidance

2017 silver production of 4.23 million ounces was within management's Original Guidance range of 4.00 million to 4.50 million ounces as higher silver grades from mine sequencing offset the slower than expected start-up of the pulp agglomeration plant. Gold production of 103.0 thousand ounces was below the low end of the Original Guidance range of 109.1 thousand to 115.0 thousand ounces, as a result of lower gold grades from mine sequencing and the slower than expected start-up of the pulp agglomeration plant.

Record low negative cash costs of \$1.65 per ounce of silver were significantly less than the low end of the Original Guidance range of \$1.25 to \$2.25 per ounce. The better than expected cash costs were mainly the result of the record throughput rates, as well as favorable Mexican government diesel credit incentives that were not forecast.

2017 AISCSOS of \$10.00 was below the low end of management's guidance range of between \$11.00 and \$12.50, primarily due to the higher throughput rates and diesel credits.

Sustaining capital investments in 2017 totaled \$38.4 million, which was slightly lower than the low end of the Original Guidance range of \$39.0 million to \$40.0 million. Sustaining capital cash outflows of \$36.1 million were \$2.3 million lower than the amounts capitalized in 2017 due to the timing of capital investment cash payments.

#### Alamo Dorado mine

		Year ended December 31,		
	20	17	2016	
Tonnes milled - kt	451	.8	1,833.1	
Average silver grade – grams per tonne		43	45	
Average gold grade – grams per tonne	0.	17	0.18	
Average silver recovery - %	67	.6	68.8	
Production:				
Silver – koz	640	.7	1,864.0	
Gold – koz	2	.1	8.4	
Copper – tonnes		13	30	
Cash cost per ounce net of by-products <sup>(1)</sup>	16.	49	16.02	
AISCSOS <sup>(2)</sup>	17.	59	14.85	
Payable silver sold - koz	8	67	1,967	
Sustaining capital - ('000s)	\$	<b>—</b> \$		

(1) Cash costs is a non-GAAP measure. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed reconciliation of this measure to cost of sales.

(2) AISCSOS is a non-GAAP measure. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed description of the AISCSOS calculation and a reconciliation of this measure to the 2017 Financial Statements.

#### 2017 versus 2016

2017 silver and gold production reflects the processing of the last ore stockpiles and the clean out of the processing facility.

2017 cash costs were \$16.49 per ounce of silver, consistent with 2016 cash costs. 2017 AISCSOS of \$17.69 were \$2.84 higher than 2016 AISCSOS of \$14.85. The increase was largely attributable to the timing of final inventory processing.

No sustaining capital expenditures were incurred at Alamo Dorado during 2017 or 2016, as mining activities were completed and the reclamation phase of the mine was underway.

#### 2017 versus Guidance

Alamo Dorado's silver production of 0.64 million ounces in 2017 was 113% more than the high end of management's Original Guidance range of 0.25 million to 0.30 million ounces due to the higher than expected quantity of silver recovered during the clean out of the process plant.

Actual cash costs of \$16.49 per ounce were lower than the low end of management's Original Guidance range of \$18.00 to \$20.00, due largely to the higher than expected gold and silver production.

2017 AISCSOS of \$17.69 was lower than management's Original Guidance range of \$18.40 to \$19.40 per ounce, also benefiting from the higher than expected production.

As forecast, there were no sustaining capital expenditures at Alamo Dorado during 2017.

#### **Huaron mine**

	 Year ended December 31,			
	2017		2016	
Tonnes milled - kt	928.1		904.4	
Average silver grade – grams per tonne	146		157	
Average zinc grade - %	2.70		3.01	
Average lead grade - %	1.23		1.51	
Average copper grade - %	0.84		0.90	
Average silver recovery - %	85.2		84.1	
Average zinc recovery - %	77.6		74.3	
Average lead recovery - %	77.7		79.4	
Average copper recovery - %	78.5		75.5	
Production:				
Silver – koz	3,684		3,812	
Gold – koz	1.15		0.81	
Zinc – kt	19.37		19.94	
Lead – kt	8.77		10.72	
Copper – kt	6.09		6.07	
Cash cost per ounce net of by-products <sup>(1)</sup>	\$ 1.35	\$	5.79	
AISCSOS <sup>(2)</sup>	\$ 5.25	\$	11.11	
Payable silver sold – koz	3,181		3,233	
Sustaining capital - ('000s)	\$ 10,267	\$	11,994	

(1) Cash costs is a non-GAAP measure. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed reconciliation of this measure to cost of sales.

(2) AISCSOS is a non-GAAP measure. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed description of the AISCSOS calculation and a reconciliation of this measure to the 2017 Financial Statements.

#### 2017 versus 2016

2017 silver production was 3% lower than 2016 due to 7% lower grades from mine sequencing, partially offset by higher throughput rates and mill recoveries. By-product metal production was also lower due to mine sequencing. 2017 zinc and lead production decreased 3% and 18%, respectively, relative to 2016. Copper production in 2017 was comparable to that in 2016. Mill recoveries improved for all metals, except lead, due to flotation circuit upgrades completed in the year.

2017 cash costs of \$1.35 per ounce declined 77% relative to 2016. The decrease resulted from higher by-product credits from higher base metal prices, and favorable concentrate treatment and refining charges, which more than offset the slightly lower base metal and silver production.

2017 AISCSOS of \$5.25 were 53% lower than the \$11.11 for 2016, primarily due to significantly higher by-product credits realized from higher base metal prices, along with the improved concentrate refining terms.

Sustaining capital cash outflows during 2017 totaled \$10.3 million, a decrease from the \$12.0 million spent in 2016, and related primarily to equipment replacements and refurbishments, plant and infrastructure upgrades and exploration drilling.

#### 2017 versus Guidance

2017 record throughput rates and record recoveries were better than expected, while silver grades were lower than expected, resulting in production of 3.68 million ounces, within management's Original Guidance of 3.65 million ounces to 3.80 million ounces.

Zinc and lead production were 17% and 19% above the high end of management's Original Guidance ranges of between 16.00 and 16.50 thousand tonnes, and 7.20 and 7.40 thousand tonnes, respectively. Copper production of

6.09 thousand tonnes was within management's Original Guidance range of between 6.00 and 6.20 thousand tonnes. Zinc and lead production exceeded management's original forecast amounts due to better than expected grades and recoveries.

2017 cash costs of \$1.35 per ounce were 77% under the low end of the Original Guidance range of \$5.95 to \$6.95 per ounce, primarily the result of higher than anticipated by-product credits due to both higher prices and production.

2017 AISCSOS of \$5.25 were 43% lower than the low end of the Original Guidance range of \$9.25 to \$10.50, also a result of the higher than anticipated by-product credits.

Sustaining capital investments in 2017 totaled \$8.8 million, which was within the Original Guidance range of \$8.0 million to \$9.0 million.

#### Morococha mine<sup>(1)</sup>

	Year e Decem	ended ber 31,	
	2017		2016
Tonnes milled – kt	676.9		672.8
Average silver grade – grams per tonne	137		135
Average zinc grade - %	3.01		3.15
Average lead grade - %	0.78		0.75
Average copper grade - %	1.20		1.44
Average silver recovery - %	89.2		88.4
Average zinc recovery - %	79.6		73.2
Average lead recovery - %	66.6		60.0
Average copper recovery - %	83.9		82.6
Production:			
Silver – koz	2,634		2,541
Gold – koz	3.53		2.14
Zinc – kt	16.13		15.46
Lead – kt	3.46		2.94
Copper – kt	6.64		7.74
Cash cost per ounce net of by-products <sup>(2)</sup>	\$ (5.34)	\$	4.21
AISCSOS <sup>(3)</sup>	\$ 1.22	\$	9.32
Payable silver sold (100%) - koz	2,448		2,377
Sustaining capital (100%) - ('000s)	\$ 12,428	\$	10,945

(1) Production figures are for Pan American's 92.3% share only, unless otherwise noted.

(2) Cash costs is a non-GAAP measure. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed reconciliation of this measure to our cost of sales.

(3) AISCSOS is a non-GAAP measure. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed description of the AISCSOS calculation and a reconciliation of this measure to the 2017 Financial Statements.

#### 2017 versus 2016

2017 silver production at Morococha was 4% higher than in 2016 primarily due to higher throughput rates, grades and record recoveries. As a result of mine sequencing, 2017 zinc and lead production was 4% and 18% higher, respectively, while copper production decreased by 14% relative to 2016.

Cash costs of negative \$5.34 per ounce in 2017 were \$9.55 per ounce lower than 2016 cash costs of \$4.21 per ounce. The reduction was primarily the result of higher by-product prices and higher silver, lead, and zinc production, which more than offset the lower copper production.

2017 AISCSOS of \$1.22 were 87% lower than 2016 AISCSOS of \$9.32. The decrease was primarily attributable to significantly higher by-product credits from improved base metal prices, along with improved concentrate refining terms, partially offset by higher exploration costs.

Sustaining capital cash outflows during 2017 totaled \$12.4 million, an increase from \$10.9 million in 2016, primarily related to exploration and mine deepening projects.

#### 2017 versus Guidance

2017 silver production was slightly above the high end of management's Original Guidance range of 2.50 million to 2.60 million ounces as a result of better than expected throughputs and recoveries.

By-product metal production relative to Original Guidance was mixed, driven by mine sequencing decisions which shifted production towards higher copper grade zones. Zinc and lead were below the Original Guidance ranges of 20.2 to 21.0 thousand tonnes and 4.0 to 4.5 thousand tonnes, by 20% and 14%, respectively. Copper production exceeded the high end of the Original Guidance range of 2.1 to 2.4 thousand tonnes by 177%.

2017 cash costs of negative \$5.34 per ounce were below the low end of our guidance range of \$3.15 to \$4.15 per ounce due to higher by-product credits and lower than expected concentrate treatment and refining charges.

2017 AISCSOS of \$1.22 was 85% under the low end of the Original Guidance range of \$8.25 to \$9.75. This was largely the result of higher than anticipated by-product credits from higher metal prices and copper production, partially offset by lower than forecast zinc and lead production.

Sustaining capital investments in 2017 totaled \$12.5 million, which were higher than the Original Guidance range of \$9.0 million to \$10.0 million, due to increased near mine exploration, additional mine equipment acquisitions and maintenance, and better than expected advancements in the Manuelita mine deepening at Morococha.

#### San Vicente mine<sup>(1)</sup>

	 Year e Decem	ended ber 31,	
	2017		2016
Tonnes milled – kt	328.1		338.9
Average silver grade – grams per tonne	374		443
Average zinc grade - %	1.94		2.05
Average lead grade - %	0.29		0.32
Average silver recovery - %	92.6		93.2
Average zinc recovery - %	68.7		73.0
Average lead recovery - %	80.1		84.2
Production:			
Silver – koz	3,610		4,433
Gold – koz	0.51		
Zinc – kt	4.36		5.08
Lead – kt	0.47		0.59
Copper – kt	0.63		0.55
Cash cost per ounce net of by-products (2)	\$ 11.85	\$	11.95
AISCSOS <sup>(3)</sup>	\$ 14.40	\$	14.30
Payable silver sold (100%) - koz	3,603		4,264
Sustaining capital (100%) - ('000s)	\$ 8,146	\$	4,963

(1) Production figures are for Pan American's 95.0% share only, unless otherwise noted.

(2) Cash costs is a non-GAAP measure. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed reconciliation of this measure to cost of sales.

(3) AISCSOS is a non-GAAP measure. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed description of the AISCSOS calculation and a reconciliation of this measure to the 2017 Financial Statements.

#### 2017 versus 2016

2017 silver production decreased 19% relative to 2016, primarily due to unscheduled downtime and a 16% reduction in head grades primarily due to higher than anticipated mining dilution. The downtime was required to address a

combination of plant maintenance, employee work stoppages, and safety matters. The decline in ore grades was attributable to preparation delays of higher-grade stopes, as well as additional mining dilution experienced with the transitioning of certain conventional mine areas into more mechanized mining methods. Zinc and lead production decreased by 14% and 20%, respectively, which was partially offset by a 15% increase in copper production. The variations in base metal production were also due to mine sequencing and mine development shortfalls.

The 2017 cash costs of \$11.85 per ounce were consistent with 2016 cash costs of \$11.95 per ounce, as a result of decreased silver, lead and zinc production, offset by better base metal prices, lower royalties, and better concentrate treatment and refining terms.

2017 AISCSOS of \$14.40 were \$0.10 higher than 2016 AISCSOS of \$14.30, primarily the result of a \$3.2 million increase in capital expenditures and a 16% reduction in quantities of silver sold offsetting a decrease in royalties and concentrate treatment and refining charges.

2017 sustaining capital cash outflows totaled \$8.1 million, an increase from \$5.0 million in 2016. The increase was primarily related to additional investments in mining equipment to aid with the mechanization efforts.

#### 2017 versus Guidance

Attributable silver production in 2017 of 3.61 million ounces was 18% below the low end of the Original Guidance range of 4.40 million to 4.50 million ounces, primarily due to unscheduled downtime and delays in accessing higher grade stopes. Similarly, zinc and copper production was 31% and 10% below the Original Guidance of between 6.3 to 6.5 thousand tonnes, and 0.7 thousand tonnes, respectively. Lead production was 57% more than the Original Guidance of 0.3 thousand tonnes.

2017 cash costs of \$11.85 per ounce of silver were within the Original Guidance range of between \$10.90 to \$11.90 per ounce, as a result of lower silver, zinc and copper production, offset by better by-product metal prices, lower royalty costs, and favorable treatment and refining charges.

Similarly, 2017 AISCSOS of \$14.40 were within the Original Guidance range of between \$13.80 and \$14.80.

Sustaining capital investments in 2017 totaled \$8.1 million, which is lower than the Original Guidance range of \$12.0 million to \$13.0 million, primarily due to management's decision to defer a tailings storage facility expansion into 2018.

#### Manantial Espejo mine

	 Year ended December 31,					
	2017		2016			
Tonnes milled - kt	793.5		753.6			
Average silver grade – grams per tonne	134		143			
Average gold grade – grams per tonne	1.88		2.94			
Average silver recovery - %	90.6		90.2			
Average gold recovery - %	93.8		93.8			
Production:						
Silver – koz	3,123		3,136			
Gold – koz	45.34		66.89			
Cash cost per ounce net of by-products <sup>(1)</sup>	\$ 18.25	\$	4.28			
AISCSOS <sup>(2)</sup>	\$ 23.42	\$	(2.08)			
Payable silver sold - koz	3,171		3,033			
Sustaining capital - ('000s)	\$ 3,333	\$	2,868			

(1) Cash costs is a non-GAAP measure. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed reconciliation of this measure to cost of sales.

(2) AISCSOS is a non-GAAP measure. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed description of the AISCSOS calculation and a reconciliation of this measure to the 2017 Financial Statements.

#### 2017 versus 2016

2017 silver production of 3.12 million ounces was consistent with 2016, as a result of the higher throughput being offset by lower grades from the completion of open pit mining in mid-2017. Gold production decreased by 32% due to an expected 36% decrease in head grades from processing lower grade stockpiles.

2017 cash costs of \$18.25 per ounce were a \$13.97 increase from the \$4.28 per ounce in 2016. The main factors driving the increase were a 32% decrease in by-product credits, and a 17% increase in direct unit operating costs. The increase in direct unit operating costs reflects severance payments associated with the culmination of open pit mining activities in 2017, increased inflation, and the elimination of the Patagonian Port export credit in Q4 2016.

2017 AISCSOS of \$23.42 were \$25.50 higher than 2016 AISCSOS of negative \$2.08. The increase was driven by higher direct unit operating costs, a \$29.6 million year-over-year variance in cost increasing NRV inventory adjustments, a decline in gold production and sales volumes, and an increase in direct selling costs with the elimination of the Patagonian Port export credit.

2017 sustaining capital cash outflows totaled \$3.3 million, comparable with \$2.9 million in 2016. The increase was primarily the result of increased investments in underground mining equipment.

#### 2017 versus Guidance

2017 silver production was 5% less than the low end of the Original Guidance range of 3.30 million to 3.40 million ounces, due to lower than expected grades. Gold production of 45.34 thousand ounces in 2017 was 11% more than the high end of the Original Guidance range of 37.5 thousand to 41.0 thousand ounces, as a result of higher than anticipated gold grades.

2017 cash costs of \$18.25 per silver ounce were 12% higher than the high end of the Original Guidance range of \$15.35 to \$16.25 per ounce; the main drivers were higher than expected direct operating costs caused by inflation, and the inclusion of severance costs in operating costs.

2017 AISCSOS of \$23.42 were above the high end of the Original Guidance range of between \$16.90 and \$18.10. This was due to unforeseen \$8.1 million negative NRV adjustments that increased 2017 AISCSOS by \$2.54 per ounce, in addition to the previously described higher than expected production costs.

Sustaining capital investments in 2017 totaled \$3.3 million, slightly below with the low end of the Original Guidance range of \$3.5 million to \$4.5 million.

# **PROJECT DEVELOPMENT UPDATE**

The following table reflects the amounts spent at each of Pan American's major projects in 2017 as compared to 2016.

Project Development Investment (thousands of USD)	Year ended December 31,				
	2017	2016			
Dolores Projects <sup>(1)</sup>	49,886	66,116			
La Colorada Expansion <sup>(2)</sup>	6,869	52,854			
Joaquin & COSE Projects <sup>(3)</sup>	4,674	_			
Total	61,429	118,970			

(1) As a result of periodic changes in accounts payable balances, the amounts capitalized for the projects during 2017 were \$0.6 million less than the project cash outflows (2016: \$1.0 million more).

(2) As a result of periodic changes in accounts payable balances, the amounts capitalized for the project during 2017 were \$1.1 million more than the project cash outflows (2016: \$1.1 million less).

(3) Total expenditures of \$9.7 million were incurred in 2017 for the Joaquin and COSE projects, of which \$5.0 million was expensed as part of 2017 exploration and project development expenses, and the remaining \$4.7 million was capitalized.

#### **Dolores Projects**

During 2017, the Company invested \$49.9 million on the Dolores expansion projects, with efforts directed at:

- Completing construction and commencing commissioning of the new pulp agglomeration plant.
- Continuing development of the Dolores underground mine including completion of 4,720 metres of underground advances and extensive in-fill diamond drilling of the central and south zones, and mining 54 thousand tonnes from the mineralized development headings.
- Expansion of the mine ventilation and electrical systems.

During 2018, the Company expects to invest an additional \$8.0 million in project capital to complete several equipment purchases for the underground mine and to complete commissioning of the pulp agglomeration plant. In early 2018, initial production from the underground mine will focus predominantly on the central zone to allow the completion of definition and mine planning in the south zone. Production from the mine is expected to ramp up throughout 2018, and reach the design rate of 1,500 tpd by 2019. Commissioning of the pulp agglomeration plant is focused on resolving issues with the performance of the filter presses, and increasing production to the design rate of 5,600 tpd.

The Dolores expansion project is expected to increase silver and gold production through a combination of greater throughput and higher recoveries.

#### La Colorada Expansion Project

During 2017, the Company invested \$6.9 million in the final stages of the La Colorada expansion project, with efforts primarily relating to underground mine development and completing the construction of the 115 kilovolt power line. Full design processing rates of 1,800 tpd were achieved in mid-2017, about six months ahead of schedule. Average throughput exceeded design rates by about 5% during the last six months of 2017.

#### Joaquin and COSE Project Developments

During 2017, the Company invested \$9.7 million on the Joaquin and COSE projects, \$5.0 million of which was expensed and \$4.7 million of which was capitalized. At Joaquin, the Company focused its efforts on an exploration drill program and engineering analysis to determine the quantity of potentially economic material that could be trucked to the Manantial Espejo processing plant for treatment. In December 2017, the Company approved a \$37.8 million investment to construct an underground mine to exploit the La Morocha deposit at the Joaquin property.

At COSE, the Company is proceeding with a \$23.9 million capital investment (excluding the final \$7.5 million project acquisition payment due on the earlier of May 31, 2018 or the commencement of commercial production). Underground development began during Q4 2017, and most of the COSE infrastructure is now on site.

# **OVERVIEW OF 2017 FINANCIAL RESULTS**

#### • Selected Annual and Quarterly Information

The following tables set out selected quarterly results for the past twelve quarters as well as selected annual results for the past three years. The dominant factors affecting results in the quarters and years presented below are volatility of realized metal prices, and the timing of the sales of production, which varies with the timing of shipments. The fourth quarter of 2017 included an impairment reversal to Morococha and Calcatreu. The fourth quarter of 2015 included impairment charges to Morococha, Dolores, and Alamo Dorado, while the third quarter of 2015 included impairment charges to Manantial Espejo.

2017	Quarter Ended						Year Ended	
(In thousands of USD, other than per share amounts)	IV	larch 31		June 30		Sept 30	Dec 31	Dec 31
Revenue	\$	198,687	\$	201,319	\$	190,791	\$ 226,031	\$ 816,828
Mine operating earnings	\$	32,875	\$	44,782	\$	47,818	\$ 43,285	\$ 168,760
Earnings for the period attributable to equity holders	\$	19,371	\$	35,472	\$	17,256	\$ 48,892	\$ 120,991
Basic earnings per share	\$	0.13	\$	0.23	\$	0.11	\$ 0.32	\$ 0.79
Diluted earnings per share	\$	0.13	\$	0.23	\$	0.11	\$ 0.32	\$ 0.79
Cash flow from operating activities	\$	38,569	\$	42,906	\$	63,793	\$ 79,291	\$ 224,559
Cash dividends paid per share	\$	0.025	\$	0.025	\$	0.025	\$ 0.025	\$ 0.100
Other financial information								
Total assets								\$ 1,993,332
Total long-term financial liabilities <sup>(1)</sup>								\$ 90,027
Total attributable shareholders' equity								\$ 1,516,850

(1) Total long-term financial liabilities are comprised of non-current liabilities excluding deferred tax liabilities, deferred revenue, and share purchase warrant liabilities.

2016	Quarter Ended						Year Ended	
(In thousands of USD, other than per share amounts)	Ν	/larch 31		June 30		Sept 30	Dec 31	Dec 31
Revenue	\$	158,275	\$	192,258	\$	233,646	\$ 190,596	\$ 774,775
Mine operating earnings	\$	16,698	\$	44,730	\$	88,495	\$ 48,956	\$ 198,879
Earnings for the period attributable to equity holders	\$	1,738	\$	33,804	\$	42,766	\$ 21,777	\$ 100,085
Basic earnings per share	\$	0.01	\$	0.22	\$	0.28	\$ 0.14	\$ 0.66
Diluted earnings per share	\$	0.01	\$	0.22	\$	0.28	\$ 0.14	\$ 0.66
Cash flow from operating activities	\$	771	\$	66,019	\$	102,346	\$ 45,668	\$ 214,804
Cash dividends paid per share	\$	0.0125	\$	0.0125	\$	0.0125	\$ 0.0125	\$ 0.0500
Other financial information								
Total assets								\$ 1,898,141
Total long-term financial liabilities <sup>(1)</sup>								\$ 118,594
Total attributable shareholders' equity								\$ 1,396,298

(1) Total long-term financial liabilities are comprised of non-current liabilities excluding deferred tax liabilities, deferred revenue, and share purchase warrant liabilities.

015 Quarter Ended						Year Ended	
(In thousands of USD, other than per share amounts)	N	larch 31		June 30	Sept 30	Dec 31	Dec 31
Revenue	\$	178,125	\$	174,189	\$ 159,414	\$ 162,960	\$ 674,688
Mine operating earnings (loss)	\$	2,630	\$	(952) 3	\$ (25,996)	\$ (7,771)	\$ (32,089)
Loss for the period attributable to equity holders	\$	(19,371)	\$	(7,322) :	\$ (67,048)	\$ (132,909)	\$ (226,650)
Basic loss per share	\$	(0.13)	\$	(0.05) 3	\$ (0.44)	\$ (0.88)	\$ (1.49)
Diluted loss per share	\$	(0.13)	\$	(0.05) 3	\$ (0.44)	\$ (0.88)	\$ (1.49)
Cash flow from operating activities	\$	11,848	\$	20,577	\$ 32,866	\$ 23,401	\$ 88,692
Cash dividends paid per share	\$	0.1250	\$	0.0500	\$ 0.0500	\$ 0.0500	\$ 0.2750
Other financial information							
Total assets							\$ 1,715,037
Total long-term financial liabilities <sup>(1)</sup>							\$ 114,354
Total attributable shareholders' equity							\$ 1,297,222

(1) Total long-term financial liabilities are comprised of non-current liabilities excluding deferred tax liabilities, deferred revenue, and share purchase warrant liabilities.

#### • Income Statement: 2017 vs. 2016

*Net earnings* of \$123.5 million were recorded in 2017 compared to \$101.8 million in 2016, which corresponds to basic earnings per share of \$0.79 and \$0.66, respectively.

The following table highlights the key items driving the difference between the net earnings in 2017 and 2016:

Net earnings, year ended December 31, 2016 (in thousands of USD)		\$ 101,825
Increased revenue:		
Increased realized metal prices	\$ 56,662	
Lower quantities of metal sold	(26,166)	
Decreased direct selling costs	10,975	
Increased positive settlement adjustments	582	
Total increase in revenue		\$ 42,053
Increased cost of sales:		
Increased production costs and decreased royalty charges	\$ (65,239)	
Increased depreciation and amortization	(6,933)	
Total increase in cost of sales		\$ (72,172)
Increased recovery on impairment reversal		61,554
Decreased income tax expense		15,412
Increased foreign exchange gain		10,877
Decreased interest and finance expense		2,366
Decreased general and administrative expense		2,266
Decreased net gain on asset sales, commodity contracts and derivatives		(19,295)
Increased exploration and project development expense		(8,421)
Decreased investment income and other expense		(7,120)
Decreased dilution gain, net of share of loss from associate		(5,894)
Net earnings, year ended December 31, 2017		\$ 123,451

**Revenue** for 2017 was \$816.8 million, a \$42.1 million increase from the \$774.8 million of revenue recognized in 2016. The major factor driving the increase was a \$56.7 million price variance from higher realized prices for all by-product metals sold, partially offset by an estimated \$26.2 million negative variance from lower quantities of metal sold, driven by 23.4 thousand fewer ounces of gold sold in 2017 compared to 2016. Revenue in 2017 was also impacted by an \$11.0 million positive variance from decreased selling costs, mainly from favorable changes in contract terms relating to concentrate treatment and refining charges.

The following table reflects the metal prices realized by the Company and the quantities of metal sold during each year:

		Realized M	etal Prices	Quantities of Metal Sold					
			ended ber 31,	Year e Deceml					
	2017		2016	2017	2016				
Silver <sup>(1)</sup> – koz	\$	16.99	17.35	24,212	24,200				
Gold <sup>(1)</sup> – koz	\$	1,257	1,251	156.6	180.0				
Zinc <sup>(1)</sup> – kt	\$	2,929	2,133	47.3	45.8				
Lead <sup>(1)</sup> – kt	\$	2,351	1,892	20.7	18.8				
Copper <sup>(1)</sup> – kt	\$	6,174	\$ 4,816	12.7	13.5				

(1) Metal price stated as dollars per ounce for silver and gold, and dollars per tonne for zinc, lead and copper, inclusive of final settlement adjustments on concentrate sales.

Realized prices for zinc, copper and lead increased by 37% and 28%, and 24%, respectively, in 2017 compared to 2016. The realized silver price decreased by 2%, while gold prices remained relatively consistent.

Gold and copper quantities sold in 2017 decreased by 13% and 6%, respectively, compared to 2016, while zinc and lead quantities sold increased by 3% and 10%, respectively. Silver sales quantities were consistent year-over-year.

*Mine operating earnings* of \$168.8 million in 2017 were \$30.1 million lower than the \$198.9 million recorded in 2016. The 15% decrease was the result of a \$72.2 million increase in cost of sales partially offset by the previously discussed \$42.1 million increase in revenue.

The production cost variance was primarily driven by a net negative \$55.1 million period-over-period change in NRV inventory adjustments (at Manantial Espejo, Dolores and Alamo Dorado) which increased 2017 costs by \$12.3 million and decreased 2016 costs by \$42.8 million. The remainder of the increased production costs were largely driven by increased operating costs at Manantial Espejo, which were impacted by Argentina's inflation as well as severance costs related to the conclusion of open pit mining, higher sales volumes at Dolores, La Colorada and Morococha, partially offset by decreased production costs at Alamo Dorado.

Depreciation and amortization ("D&A") expense of \$122.9 million in 2017 was \$6.9 million more than the \$116.0 million in 2016. The increase was mainly driven by higher D&A at La Colorada and Dolores, partially offset by lower D&A at the other operations, most notably at Manantial Espejo, Alamo and San Vicente. The increased D&A at Dolores and La Colorada were attributable to higher depreciable asset-bases from the recent expansions, and from increased sales volumes. The lower D&A at Manantial Espejo, San Vicente and Alamo Dorado reflect lower sales volumes and the closing of Alamo Dorado.

**G&A** expense was \$21.4 million in 2017 compared to \$23.7 million in 2016. The \$2.3 million decrease was primarily related to lower accrued bonuses for restricted share unit cash compensation that reference the Company's share price. The Share-based compensation of \$3.1 million in 2017 was comparable to the \$3.8 million in 2016.

**Exploration and project development** expenses were \$19.8 million in 2017 compared to \$11.3 million incurred in 2016. The year-over-year increase was primarily from exploration activities related to the COSE and Joaquin projects in 2017, which amounted to \$5.0 million. Other than the COSE and Joaquin exploration activities, the expenses recorded in each year relate to exploration and project development activities near the Company's existing mines, at select greenfield projects, and on the holding and maintenance costs associated with the Navidad project, where approximately \$2.9 million was spent in 2017 compared to approximately \$3.4 million in 2016.

**Foreign exchange ("FX") gains** in 2017 were \$1.8 million compared to FX losses of \$9.1 million incurred in 2016. The 2017 gains were largely attributable to the appreciation of the Mexican Peso ("MXN"), where 2016 losses arose mainly from the devaluation of the MXN and ARS on the Company's monetary assets denominated in those currencies.

*Impairment charge reversals* of \$61.6 million (\$53.4 million, net of tax expense) were recorded in 2017, with no impairment charges or reversals recorded in 2016. Non-current assets are tested for impairment, or reversal of previous impairment charges, when events or changes in circumstance indicate that the carrying amount may not be recoverable, or previous impairment charges against assets are recoverable. The Company performs an impairment test for goodwill at each financial year-end and when events or changes in circumstances indicate that the related carrying value may not be recoverable. The Company considers its internal discounted cash flow economic models as a proxy for the calculation of fair value less cost to sell, given a willing market participant would use such models in establishing a value for the properties. The Company considers impairment, or if previous impairment charges should be reversed, at the cash generating unit ("CGU") level, which is considered to be an individual mine or a development property. The CGU carrying amount for purposes of this test includes the carrying value of the mineral properties plant and equipment less deferred tax liabilities and closure and decommissioning liabilities related to each CGU.

The Company's key assumptions for determining the recoverable amounts of its various CGUs, for the purpose of testing for impairment or impairment reversals, include the most current operating and capital costs information and risk adjusted project specific discount rates. The Company uses an average of analysts' consensus prices for the first four years of its economic modeling, and long-term reserve prices for the remainder of each asset's life. The prices used can be found in the key assumptions and sensitivity section below.

Based on the Company's assessment with respect to possible indicators of either impairment or reversal of previous impairments to its mineral properties, the Company concluded that as of December 31, 2017, based on certain indicators, reversals of impairment were required on the following CGUs:

	2017	2016
Morococha	\$ 60,23	7 \$ —
Calcatreu	1,31	7 —
	\$ 61,55	1 \$ —

During the years ended December 2017 and 2016, Morococha generated significantly higher cash flows from operations than the amount assumed in the recoverable value estimation at December 31, 2015, primarily the result of continued costs performance and base metal prices being superior to prior expectations. Further, as of December 31, 2017, Morococha's estimated silver mineral reserve increased by 2.8 million ounces. As a result of this CGU's continued strong performance, increased silver reserves and higher long-term metal prices, the Company recognized a reversal of the remaining unamortized impairment of \$60.2 million (\$52.1 million, net of tax) related to its investment in Morococha at December 31, 2017.

On January 31, 2018, the Company completed the sale of 100% of the shares of Minera Aquiline Argentina SA, which owns the Calcatreu project ("Calcatreu"), for total consideration of \$15.0 million in cash (the "Aquiline Acquisition"). Immediately prior to the classification to assets and liabilities held for sale, the carrying amount of Calcatreu was remeasured to its recoverable amount, being its fair value less costs of disposal, based on the expected proceeds from the sale. As a result, the Company recorded an impairment reversal of \$1.3 million.

The Company used an average of analysts' consensus pricing for the first four years of its economic modeling for the purposes of the impairment and impairment reversal analysis, and the Company's reserve prices for the long-term price assumptions for the remainder of each asset's life. The net increase in base metal prices over 2017 led to the Company increasing the price assumptions used to estimate mineral reserves at year-end. The prices used can be found in the key assumptions section below.

Other than the previously discussed impairment reversals, and on the 2017 fourth quarter and year-end analysis Management concluded that there were no indications of impairment, nor impairment reversals, at any of the Company's other mineral property plant and equipment assets. As of December 31, 2016 management determined that fourth quarter changes in operating assumptions for the Dolores and Manantial Espejo mines, including but not limited to changes in year-end mineral reserves and resources and mine-life estimates, when considered together with increases to the Company's reserve prices and to consensus prices, could be indicative of changes in the assets' recoverable amounts significant enough to warrant either reversals of previous impairment charges, or additional impairment charges. As a result, management estimated the recoverable amounts of these mines as at December 31, 2016, determined on a fair value less costs to sell basis, and concluded that the carrying values were supportable and that no impairment charges or reversals were required.

# Key assumptions:

The metal prices used to calculate the recoverable amounts at December 31, 2017 and December 31, 2016 are based on analyst consensus prices and the Company's long-term mineral reserve prices, and are summarized in the following tables:

Metal prices used at December 31, 2017:

Metal Prices	2018-2021 average	Long term
Silver - \$/oz	\$18.57	\$18.50
Gold - \$/oz	\$1,307	\$1,300
Zinc - \$/tonne	\$2,818	\$2,600
Lead - \$/tonne	\$2,251	\$2,200
Copper - \$/tonne	\$6,742	\$5,500

Metal prices used at December 31, 2016:

Metal Prices	2017-2020 average	Long term
Silver - \$/oz	\$19.93	\$18.50
Gold - \$/oz	\$1,327	\$1,300
Zinc - \$/tonne	\$2,567	\$2,200
Lead - \$/tonne	\$2,142	\$2,000
Copper - \$/tonne	\$5,725	\$5,000

In 2017, the discount rates used to present value the Company's life of mine cash flows were derived from the Company's weighted average cost of capital, which was calculated as 5.2% (2016 – 6.4%), with rates ranging from 4.0% to 9.0% (2016 - 5.0% to 9.0%) applied to the various mines and projects, depending on the Company's assessment of country risk, project risk, and other potential risks specific to each CGU.

The key assumptions in determining the recoverable value of the Company's mineral properties are metal prices, operating and capital costs, foreign exchange rates and discount rates. At December 31, 2017, the Company performed a sensitivity analysis on all key assumptions that assumed a 10% adverse change to each assumption while holding the other assumptions constant.

At December 31, 2017, an adverse 10% movement in any of the major assumptions in isolation did not cause the recoverable amount to be below the CGU carrying value for any of the La Colorada, San Vicente, Huaron, or Morococha mines. For the Dolores mine, Manantial Espejo mine and Navidad project, which previously had their carrying values adjusted to fair value less cost to sell through impairment charges, a 10% adverse change in any one key assumption would reduce the recoverable amount below the carrying amount.

At December 31, 2016, an adverse 10% movement in any of the major assumptions in isolation did not cause the recoverable amount to be below the CGU carrying value for any of La Colorada, Alamo Dorado, San Vicente, Huaron, Morococha, or the Navidad project. For the Manantial Espejo mine, which in 2015 had its carrying values adjusted to fair value less cost to sell through impairment charges, a modest increase in operating costs would reduce the recoverable amount below the carrying amount. In the case of the Dolores mine, which in 2015 had its carrying values adjusted to fair value less cost to sell through impairment charges, a modest adverse change in any one key assumption would reduce the recoverable amount below the carrying amount below the carrying amount.

*Gain on sale of mineral properties, plant and equipment* in 2017 was \$0.2 million compared to \$25.1 million in 2016. The decrease is attributable to no significant asset sales and related gains or losses occurring in 2017 compared to the 2016 gains, which were primarily comprised of an \$18.3 million gain recognized on the sale of a portion of the Company's interest in Compania Minera Shalipayco S.A.C. to Votorantim Metais - Cajamarquilla S.A., and a \$6.6 million gain recognized in relation to the Maverix Metals Inc. ("Maverix") transaction. In July 2016, the Company closed its plan of arrangement with Maverix, whereby the Company transferred certain royalties and precious metals streams and payment agreements to Maverix in exchange for an approximately sixty-three percent (63%) interest in Maverix on a fully diluted basis.

*Share of loss from associate and dilution gain* for 2017 was \$2.1 million, compared to \$7.9 million in 2016 and related largely to the Company's Maverix investment. During 2017, a \$0.2 million loss was recognized for the Company's portion of Maverix's estimated losses, compared to a loss of \$3.0 million in 2016. Further, as a result of Maverix

issuing common shares to acquire certain assets, dilution gains totaling \$2.3 million were recognized in 2017, compared to gains of \$11.0 million recorded in 2016.

*Interest and finance expense* for 2017 was \$7.2 million compared to \$9.6 million in 2016. 2017 included a \$2.8 million reversal of a prior years' interest expense accrual. The remaining portion of interest and finance expense consisted of accretion of the Company's closure liabilities and interest expense associated with the revolving Credit Facility, short-term loans and leases.

*Income tax expense* for the year ended December 31, 2017 decreased to \$59.0 million compared to \$74.4 million in 2016. The 2017 and 2016 income tax expense were comprised of current and deferred income taxes as follows:

	Year o Decem	
(In thousands of USD, except as noted)	2017	2016
Current tax expense (recovery)		
Recognized in profit or loss in current year	\$ 66,345	\$ 44,751
Adjustments recognized in the current year with respect to prior years	(3,468)	(720)
	62,877	44,031
Deferred tax expense (recovery)		
Deferred tax (recovery) expense recognized in the current year	(898)	27,942
Adjustments recognized in the current year with respect to prior years	(1,539)	1,124
Adjustments to deferred tax attributable to changes in tax rates and laws	_	1,302
Increase in deferred tax liabilities due to tax impact of impairment charge reversals of mineral properties, plant, and equipment	17,770	_
Recognition of previously unrecognized deferred tax assets	(10,275)	_
Benefit from previously unrecognized losses, and other temporary differences	(6,487)	(7,861)
Increase in deferred tax liabilities due to tax impact of net realizable value (charge) reversal to inventory	(2,414)	7,908
	(3,843)	30,415
Income tax expense	\$ 59,034	\$ 74,446

The \$15.4 million year-over-year decrease in income tax expense was mainly due to the tax impact of foreign exchange fluctuations. In 2016, tax expense was increased by approximately \$14.3 million primarily due to the devaluation of the MXN. In 2017, the tax impact of foreign exchange rate fluctuations was minimal, therefore, the 2017 income tax expense was significantly lower than in 2016. In addition to the impact of foreign exchange fluctuations, other factors resulted in an effective tax rate that varies considerably from the comparable period, and from the amount that would result from applying the Canadian federal and provisional statutory income tax rates to earnings before tax expense and non-controlling interests, as shown in the following table:

	Year e Deceml	
(In thousands of USD)	2017	2016
Earnings before taxes and non-controlling interest	\$ 182,485	\$ 176,271
Statutory Canadian income tax rate	26.00%	26.00%
Income tax expense based on above rates	\$ 47,446	\$ 45,830
Increase (decrease) due to:		
Non-deductible expenditures	4,618	5,082
Foreign tax rate differences	3,644	9,729
Change in net deferred tax assets not recognized:		
- Argentina exploration expenditures	2,051	1,794
- Other deferred tax assets	(10,752)	(14,406)
Non-taxable portion of net earnings of affiliates	(4,055)	(4,852)
Tax on sale of royalty	1,400	_
Changes to temporary differences	_	1,429
Effect of other taxes paid (mining and withholding)	20,065	13,678
Effect of foreign exchange on tax expense	(3,928)	10,462
Non-taxable impact of foreign exchange	2,937	3,861
Change in current tax expense estimated for prior years	(3,503)	_
Other	(889)	1,839
Income tax expense	\$ 59,034	\$ 74,446
Effective income tax rate	32.35%	42.23%

# • Statement of Cash Flows: 2017 vs. 2016

**Cash flow from operations** in 2017 totaled \$224.6 million, \$9.8 million more than the \$214.8 million generated in 2016. The increase was largely the result of increased cash mine operating earnings and a \$17.3 million increase in operating cash flows from working capital changes; partially offset by a \$33.0 million increase in taxes paid.

The period-over-period increase in mine operating earnings, excluding non-cash D&A and inventory adjustments of approximately \$31.9 million, was driven by increased revenues and decreased royalty costs, partially offset by increased production costs (excluding non-cash NRV inventory adjustments). Working capital changes in 2017 resulted in an \$11.7 million source of cash, comprised mainly of receivables and inventory draw downs, partially offset by decreased provisions. This source of cash compared to a use of working capital of \$5.5 million in 2016, and was driven primarily by a build-up in receivables in the period.

*Investing activities* utilized \$177.8 million in 2017, inclusive of \$14.3 million used on the net purchase of short-term investments. The balance of 2017 investing activities consisted primarily of spending \$142.2 million on mineral property, plant and equipment at the Company's mines and projects, and \$20.2 million used for the acquisition of the COSE and Joaquin projects. In 2016, investing activities utilized \$139.9 million inclusive of \$56.9 million generated on the net sale of short-term investments, \$202.7 million spent on mineral property, plant and equipment additions at the Company's various operations and projects, and \$15.0 million generated on the sale of Shalipayco.

**Financing activities** in 2017 used \$51.5 million compared to \$28.2 million in 2016. Cash used in 2017 consisted of a \$36.2 million repayment of the Company's revolving Credit Facility, \$15.3 million paid as dividends to shareholders, \$3.0 million in short-term loan proceeds, \$2.6 million in proceeds on share issuances from the exercise of stock

options, and \$4.5 million of lease repayments. In 2016, \$7.6 million of dividends were paid, \$19.5 million was used for short-term debt repayment (net of proceeds), \$3.0 million of lease payments were made, and \$2.4 million in proceeds were generated on share issuances from the exercises of stock options.

## • Adjusted Earnings: 2017 vs 2016

Adjusted earnings and basic adjusted earnings per share are non-GAAP measures that the Company considers to better reflect normalized earnings as it eliminates items that in management's judgment are subject to volatility as a result of factors which are unrelated to operations in the period, and/or relate to items that will settle in future periods. Neither adjusted earnings nor basic adjusted earnings per share have any standardized meaning prescribed by GAAP and are therefore unlikely to be comparable to similar measures presented by other companies.

Please refer to the section of this MD&A entitled "Alternative Performance (Non-GAAP) Measures" for a detailed description, and a reconciliation of these measures to the 2017 Financial Statements.

*Adjusted Earnings* in 2017 were \$77.7 million, representing a basic adjusted earnings per share of \$0.51, which was \$8.9 million, or \$0.06 per share, lower than 2016 adjusted earnings of \$86.6 million, and basic adjusted earnings per share of \$0.57, respectively.



The following chart illustrates the key factors leading to the change in adjusted earnings from 2016 to 2017:

#### • Income Statement: Q4 2017 vs. Q4 2016

*Net earnings* of \$49.7 million were recorded in Q4 2017 compared to \$22.3 million in Q4 2016, which corresponds to basic earnings per share of \$0.32 and \$0.14, respectively.

The following table highlights the key items driving the difference between the net earnings in Q4 2017 as compared to those recorded in Q4 2016:

Net earnings, three months ended December 31, 2016 (in thousands of USD)		\$	22,284
Increased revenue:			
Increased realized metal prices	\$ 11,010		
Higher quantities of metal sold	13,450		
Decreased direct selling costs	1,248		
Increased positive settlement adjustments	9,727		
Total increase in revenue		\$	35,435
Increased cost of sales:			
Increased production costs and increased royalty charges	\$ (29,898)		
Increased depreciation and amortization	(11,208)		
Total increase in cost of sales		\$	(41,106)
Increased recovery on impairment reversal			61,554
Increased foreign exchange gain			5,493
Decreased general and administrative expense			860
Decreased interest and finance expense			377
Increased income tax expense			(18,349)
Decreased net gain on asset sales, commodity contracts and derivatives			(7,656)
Decreased investment income and other expense			(6,978)
Increased exploration and project development expense			(1,201)
Decreased dilution gain, net of share of loss from associate			(1,049)
Net earnings, three months ended December 31, 2017		Ś	49,664

**Revenue** for Q4 2017 was \$226.0 million, a \$35.4 million increase from \$190.6 million in Q4 2016. The major factors for the increase were: a \$13.5 million variance from higher quantities of metal sold, primarily from silver sales; an \$11.0 million price variance from higher realized metal prices for all metals except silver; a \$9.7 million increase in positive settlement adjustments on concentrate shipments; and a \$1.2 million decrease in direct selling costs, primarily from favorable changes in contract terms relating to concentrate treatment and refining charges.

The following table reflects the metal prices realized by the Company and the quantities of metal sold during each quarter:

	Realized M	etal Prices	Quantities of Metal Sold			
	 	nths ended ber 31,	Three months ended December 31,			
	2017	2016	2017	2016		
Silver <sup>(1)</sup> – koz	\$ 16.65	\$ 17.65	6,659	6,138		
Gold <sup>(1)</sup> – koz	\$ 1,276	\$ 1,212	44.7	43.8		
Zinc <sup>(1)</sup> – kt	\$ 3,282	\$ 2,587	12.6	11.5		
$Lead^{(1)} - kt$	\$ 2,472	\$ 2,178	5.2	5.0		
Copper <sup>(1)</sup> – kt	\$ 6,811	\$ 5,282	3.0	3.0		

(1) Metal price stated as dollars per ounce for silver and gold, and dollars per tonne for zinc, lead and copper, inclusive of final settlement adjustments on concentrate sales.

Increased quarter-over-quarter realized zinc and copper prices of 27% and 29%, respectively, had the most significant impact on revenues. Gold and lead price increases of 5% and 13%, respectively, also benefited Q4 2017 revenue, while the quarter over quarter silver price declined by 6%.

Sales volumes increased for all metals except copper. The quantity of silver sold in Q4 2017 was 8% higher than in Q4 2016, largely from both increased production and the drawdown of inventories. Quarter-over-quarter zinc, gold and lead sales volumes increased by 10%, 2%, and 4% respectively, while copper sales were consistent.

*Mine operating earnings* of \$43.3 million in Q4 2017 were comparable to the \$49.0 million recorded in Q4 2016. The slightly lower Q4 2017 earnings were the result of the previously discussed \$35.4 million increase in revenue being more than offset by a net \$41.1 million increase in the cost of sales.

Q4 2017 production costs of \$139.7 million were \$29.2 million higher than in Q4 2016. The quarter-over-quarter variance included a negative \$16.2 million NRV inventory movement, mainly from Manantial Espejo, which added \$5.5 million to production costs in Q4 2017, compared to reducing costs by \$10.7 million in Q4 2016. The remaining increase to production costs was driven by increased sales volumes at Dolores, La Colorada, Morococha, and Huaron and increased operating costs at Manantial Espejo, partially offset by decreased production costs at Alamo Dorado.

D&A expense of \$34.2 million in Q4 2017 was \$11.2 million higher than in Q4 2016, largely the result of increased D&A at La Colorada on account of the newly commissioned plant and mine shaft, as well as from increased sales volumes. Royalty costs in Q4 2017 were \$8.8 million, \$0.7 million higher than in Q4 2016, which was largely attributable to higher sales volumes from the San Vicente mine.

**G&A** expense was \$4.7 million in Q4 2017 compared to \$5.6 million in Q4 2016. The \$0.9 million decrease was mainly driven by lower accrued bonuses in the current quarter, principally in relation to restricted share unit cash compensation that references the Company's share price. Share-based compensation was \$0.7 million in Q4 2017 compared to \$0.6 million in Q4 2016.

**Exploration and project development** expenses were \$4.3 million in Q4 2017 compared to \$3.1 million in Q4 2016. The increase was due to increased exploration activities as well as new Joaquin related exploration costs of \$1.2 million incurred in Q4 2017. The expenses recorded in each quarter primarily related to exploration and project development activities near the Company's existing mines, at select greenfield projects, and on the holding and maintenance costs associated with the Navidad project, where approximately \$0.5 million was spent in Q4 2017 compared to approximately \$0.4 million in Q4 2016.

**Foreign exchange ("FX") gains** in Q4 2017 were \$1.1 million compared to FX losses of \$4.4 million in Q4 2016. Gains in Q4 2017 resulted primarily from the favorable timing of cash flows amid volatility in MXN and ARS along with the appreciation of the CAD on CAD denominated treasury balances. Losses in Q4 2016 were driven primarily by the effect of a 6% devaluation of the MXN and 2% devaluation of ARS on local currency denominated treasury and MXN and VAT receivables balances.

*Impairments reversals* of \$61.6 million (\$53.4 million, net of tax expense) were recorded in Q4 2017, with no impairment charges or reversals recorded in Q4 2016. The Q4 2017 impairment reversals related to the previously discussed reversals at Morococha and Calcatreu.

*Loss on sale of mineral properties, plant and equipment* in Q4 2017 was \$0.8 million compared to a gain of \$6.8 million in Q4 2016. No significant asset sales and related gains or losses occurred in Q4 2017 compared to the Q4 2016 presentation of gains related to the Maverix transaction.

*Share of income from associate and dilution gain* for Q4 2017 was \$0.3 million, compared to \$1.3 million in Q4 2016, and related largely to the Company's investment in Maverix, accounted for using the equity method whereby the Company records its portion of Maverix's income or loss based on Pan American's fully diluted ownership interest.

*Interest and finance expense* for Q4 2017 of \$2.4 million, was comparable to the \$2.7 million expense in Q4 2016 and consisted of accretion of the Company's closure liabilities and interest expense associated with the revolving Credit Facility, short-term loans and leases.

*Income tax expense* in Q4 2017 was \$39.2 million compared to \$20.9 million in Q4 2016. The \$18.3 million increase was mainly due to an increase in earnings before tax and non-controlling interest of \$45.8 million. In addition, FX rate fluctuations, most notably the devaluation of the MXN, and withholdings tax on distributions from foreign

subsidiaries also contributed to the increased tax expense. These factors resulted in an effective tax rate that varied from the comparable period, as shown in the following table:

	Three mon Deceml			
(In thousands of USD)	2017		2016	
Earnings before taxes and non-controlling interest	\$ 88,872	\$	43,143	
Statutory Canadian income tax rate	26.00%		26.00%	
Income tax expense based on above rates	\$ 23,107	\$	11,217	
Increase (decrease) due to:				
Non-deductible expenditures	1,465		1,099	
Foreign tax rate differences	4,610		2,248	
Change in net deferred tax assets not recognized:				
- Argentina exploration expenditures	490		450	
- Other deferred tax assets	(8,454)		(7,933)	
Non-taxable portion of net earnings of affiliates	(303)		(1,166)	
Changes to temporary differences	_		668	
Effect of other taxes paid (mining and withholding)	9,648		7,863	
Effect of foreign exchange on tax expense	12,589		4,764	
Non-taxable impact of foreign exchange	(4,625)		1,293	
Other	681		356	
Income tax expense	\$ 39,208	\$	20,859	
Effective income tax rate	44.12%		48.35%	

#### • Statement of Cash Flows: Q4 2017 vs. Q4 2016

*Cash flow from operations* in Q4 2017 totaled \$79.3 million, \$33.6 million more than the \$45.7 million generated in Q4 2016. The increase was largely the result of approximately \$17.0 million higher cash mine operating earnings, a \$12.9 million increase in operating cash flows from working capital changes, and a \$2.4 million decrease in taxes paid.

The period-over-period increase in mine operating earnings excluding non-cash D&A and inventory adjustments was driven by increased revenues, partially offset by increased production costs (excluding non-cash NRV inventory adjustments). Working capital changes in Q4 2017 resulted in a \$15.2 million source of cash comprised mainly of receivables and inventory draw-downs. Comparatively, working capital changes added \$2.3 million to Q4 2016 operating cash flows.

*Investing activities* utilized \$36.8 million in Q4 2017, inclusive of \$0.7 million used on the net purchase of short-term investments. The balance of Q4 2017 investing activities related primarily to \$36.5 million on mineral property, plant and equipment at the Company's mines and projects, as previously described in the "Operating Performance" section of this MD&A. In Q4 2016, investing activities utilized \$66.5 million inclusive of \$3.2 million used on the net purchase of short-term investments. The majority of Q4 2016 investing activity cash flow reflected \$56.5 million spent on mineral property, plant and equipment additions at the Company's various operations and projects.

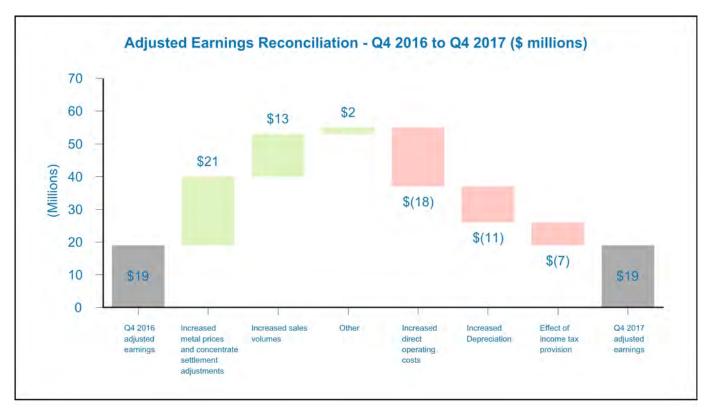
**Financing activities** in Q4 2017 used \$2.5 million compared to \$7.8 million in Q4 2016. Cash used in Q4 2017 consisted of \$3.8 million paid as dividends to shareholders, \$1.3 million of lease repayments net of \$3.0 million obtained from short-term loan proceeds. In Q4 2016 cash used in financing activities consisted of \$1.9 million in dividends to shareholders, \$5.2 million for short-term debt repayments, and \$0.7 million of lease repayments.

#### • Adjusted Earnings: Q4 2017 vs Q4 2016

Please refer to the section of this MD&A entitled "Alternative Performance (Non-GAAP) Measures" for a detailed description of "adjusted earnings", and a reconciliation of these measures to the 2017 Financial Statements.

**Adjusted Earnings** in Q4 2017 were \$19.2 million, representing a basic adjusted earnings per share of \$0.13, which was \$0.2 million, or \$0.01 per share, higher than Q4 2016 adjusted earnings of \$19.0 million, and basic adjusted earnings per share of \$0.12, respectively.

The following chart illustrates the key factors leading to the change in adjusted earnings from Q4 2016 to Q4 2017:



# LIQUIDITY POSITION

The Company's cash and cash equivalents balance at December 31, 2017 was \$176.0 million, which was a decrease of \$4.9 million from December 31, 2016, and an increase of \$40.0 million from the balance at September 30, 2017. The Company's short-term investments balance at December 31, 2017 was \$51.6 million, which was a \$14.9 million increase from the balance at December 31, 2016 and a \$1.3 million increase from September 30, 2017.

The net \$9.9 million increase in the Company's liquidity position in 2017 was primarily generated from residual operating cash flows after funding: mineral property, plant and equipment additions of \$142.2 million, relating to the Company's project and sustaining capital; \$36.2 million of credit facility repayments; \$20.2 million towards the acquisition of the COSE and Joaquin projects; and \$15.3 million in dividend payments.

Pan American's investment objectives for its cash balances are to preserve capital, to provide liquidity and to maximize returns. The Company's strategy to achieve these objectives is to invest excess cash balances in a portfolio of primarily fixed income instruments with specified credit rating targets established by the Board of Directors of the Company (the "Board of Directors" or "Board"), and by diversifying the currencies in which it maintains its cash balances. The Company does not own any asset-backed commercial paper or other similar, known, at-risk investments in its investment portfolio.

Working capital at December 31, 2017 was \$410.8 million, a decrease of \$17.8 million from the December 31, 2016 working capital of \$428.6 million. The decrease in working capital was mainly attributable to decreases in trade and other receivables and inventories, partially offset by the previously increased cash and short-term investments.

On April 15, 2015, the Company entered into a \$300.0 million secured revolving credit facility with a 4-year term (the "Credit Facility") and upfront costs of \$3.0 million. On May 31, 2016, the Company amended its Credit Facility by extending the term by one year, with additional upfront costs of \$0.4 million. As part of the amendment, the financial covenants were amended to require the Company to maintain a tangible net worth (exclusive of any prospective write-downs of certain assets) of greater than \$1,036.4 million plus 50% of the positive net earnings for each subsequent fiscal quarter. In addition, the financial covenants continue to include the requirement for the Company to maintain a leverage ratio less than or equal to 3.5:1 and an interest coverage ratio more than or equal to 3.0:1. As of December 31, 2017, the Company was in compliance with all covenants required by the Credit Facility.

The terms of the Credit Facility provide the Company with the flexibility of various borrowing and letter of credit options. With respect to loans drawn based on the average annual rate of interest at which major banks in the London interbank market are offering deposits in US dollars ("LIBOR"), the interest margin on such loans is between 2.125% and 3.125% over LIBOR, depending on the Company's leverage ratio at the time of a specified reporting period. On December 29, 2015, the Company made a \$36.2 million drawdown on the Credit Facility by way of LIBOR loan at an annual rate of 2.55%. The \$36.2 million was repaid on September 29, 2017 and as of December 31, 2017, and at the date of this MD&A, the Credit Facility remained undrawn.

The Company's financial position at December 31, 2017, and the operating cash flows that are expected over the next twelve months, lead management to believe that the Company's liquid assets are sufficient to satisfy our 2018 working capital requirements, fund currently planned capital expenditures, and to discharge liabilities as they come due. The Company remains well positioned to take advantage of further strategic opportunities as they become available. Liquidity risks are discussed further in the "Risks and Uncertainties" section of this MD&A.

The impact of inflation on the Company's financial position, operational performance, or cash flows over the next twelve months cannot be determined with any degree of certainty.

#### **CAPITAL RESOURCES**

Total attributable shareholders' equity at December 31, 2017, was \$1,516.9 million, an increase of \$120.6 million from December 31, 2016, primarily because of the \$121.0 million of net earnings attributable to shareholders for 2017, together with \$8.7 million of equity value issued for the acquisition of mineral interests, offset by \$15.3 million in dividends paid. As of December 31, 2017, the Company had approximately 153.3 million common shares

outstanding for a share capital balance of \$2,318.3 million (December 31, 2016, 152.3 million and \$2,304.0 million, respectively). The basic weighted average number of common shares outstanding were 153.1 million and 152.1 million for the years ended December 31, 2017, and 2016, respectively.

As at December 31, 2017, the Company had approximately 0.94 million stock options outstanding (each exercisable for one common share of the Company), with exercise prices in the range of CAD \$9.76 to CAD \$24.90 and a weighted average life of 44 months. Approximately 0.8 million of the stock options were vested and exercisable at December 31, 2017, with an average weighted exercise price of CAD \$16.13 per share.

The following table sets out the common shares and options outstanding as at the date of this MD&A:

	Outstanding as at March 22, 2018
Common shares	153,311,792
Options	927,307
Total	154,239,099

# **FINANCIAL INSTRUMENTS**

A part of the Company's operating and capital expenditures is denominated in local currencies other than USD. These expenditures are exposed to fluctuations in USD exchange rates relative to the local currencies. From time to time, the Company mitigates part of this currency exposure by accumulating local currencies, entering into contracts designed to fix or limit the Company's exposure to changes in the value of local currencies relative to the USD, or assuming liability positions to offset financial assets subject to currency risk. The Company held cash and short-term investments of \$25.1 million in CAD, \$5.2 million in MXN, \$2.3 million in PEN, \$4.2 million in ARS, and \$4.7 million in BOB at December 31, 2017. Risks relating to FX rates are discussed in the "Risks and Uncertainties" section of this MD&A.

At December 31, 2017, the Company had no outstanding positions on its foreign currency exposure of MXN purchases. The Company recorded losses of \$0.8 million and gains of \$3.8 million on MXN derivative contracts for Q4 2017 and 2017, respectively (Q4 2016 and 2016 losses of \$0.8 million and \$1.5 million, respectively).

From time to time, Pan American mitigates the price risk associated with its base metal production by committing some of its future production under forward sales or option contracts. Risks relating to metal prices and hedging activities undertaken in relation to metal prices are discussed in the "Risks and Uncertainties" section of this MD&A.

At December 31, 2017, the Company had outstanding collars made up of put and call contracts on its zinc exposure for 11,100 tonnes with settlement dates between January 2018 and December 2018. The outstanding contracts have a weighted average floor and cap of \$2,609 and \$3,555, respectively. The Company recorded losses of \$0.3 million and 1.9 million in Q4 2017 and 2017, respectively (Q4 2016 and 2016 losses of \$1.1 million and \$4.3 million, respectively).

At December 31, 2017, the Company had outstanding collars made up of put and call contracts on its lead exposure for 6,450 tonnes with settlement dates between January 2018 and December 2018. The outstanding positions have a weighted average floor of \$2,200 and an average cap of \$2,679. The Company recorded gains of \$0.1 million and losses of \$0.4 million in Q4 2017 and 2017, respectively (Q4 2016 and 2016 gains of \$0.1 million and losses of \$0.2 million, respectively).

During the year ended December 31, 2017, in order to limit its exposure to lower copper prices on a portion of its copper production, the Company entered into copper put and call contracts. The Company had contracts for 3,030 tonnes of copper outstanding, with a weighted average minimum price of \$6,222 and a maximum price of \$7,277 per tonne, at December 31, 2017. These remaining contracts have settlement dates between January 2018 and December 2018. The Company recorded losses of \$0.8 million and \$0.9 million on the copper positions during the three months and year ended December 31, 2017, respectively.

During the year ended December 31, 2015, the Company entered into diesel swap contracts designated to fix or limit the Company's exposure to higher fuel prices (the "Diesel fuel swaps"). The Company settled all Diesel fuel swaps by December 31, 2016. The Company did not enter into any Diesel fuel swaps in 2017. In the three and twelve months ended December 31, 2016, the Company recorded \$nil and gains of \$1.0 million on the Diesel Swaps, respectively.

Other than the contracts described above, there were no other material gains or losses on any commodity or foreign currency contracts in either the three months or years ended December 31, 2017 and 2016.

Derivative financial assets and liabilities are measured at fair value. Cash and cash equivalents, short-term investments, accounts receivable, accounts payable and accrued liabilities approximate their fair value due to the relatively short periods to maturity of these financial instruments.

Fair value estimates are made at a specific point in time, based on relevant market information and information about the financial instrument. These estimates are subjective in nature and involve uncertainties and matters of significant judgment and, therefore, cannot be determined with precision. Changes in assumptions could significantly affect the estimates. The classification of financial instruments and the significant assumptions made in determining the fair value of financial instruments are described in Note 7 of the 2017 Financial Statements.

# **CLOSURE AND DECOMMISSIONING COST PROVISION**

The estimated future closure and decommissioning costs are based principally on the requirements of relevant authorities and the Company's environmental policies. The provision is measured using management's assumptions and estimates for future cash outflows. The Company accrues these costs, which are determined by discounting costs using rates specific to the underlying obligation. Upon recognition of a liability for the closure and decommissioning costs, the Company capitalizes these costs to the related mine and amortizes such amounts over the life of each mine on a unit-of-production basis except in the case of exploration projects for which the offset to the liability is expensed. The accretion of the discount due to the passage of time is recognized as an increase in the liability and a finance expense.

The total inflated and undiscounted amount of estimated cash flows required to settle the Company's estimated future closure and decommissioning costs as of December 31, 2017 was \$142.2 million (December 31, 2016 - \$122.1 million) using inflation rates of between 2% and 25% (2016 - between 1% and 23%). The inflated and discounted provision on the statement of financial position as at December 31, 2017, using discount rates between 2% and 24% (December 31, 2016 - between 1% and 30%), was \$65.4 million (December 31, 2016 - \$55.6 million). Spending with respect to decommissioning obligations at the Alamo Dorado and Manantial Espejo mines began in 2016, while the remainder of the obligations are expected to be paid through 2040 or later if mine life is extended. Revisions made to the reclamation obligations in Q4 2017 were primarily a result of increased site disturbance from the ordinary course of operations at the mines, reclamation activities at the Alamo Dorado mine, as well as revisions to the estimates based on periodic reviews of closure plans and related costs, actual expenditures incurred, and closure activities completed. These obligations will be funded from operating cash flows, reclamation deposits, and cash on hand.

The accretion of the discount charged in Q4 2017 and 2017 earnings as finance expense were \$1.5 million and \$6.0 million, respectively (Q4 2016 and 2016 - \$1.1 million and \$4.4 million, respectively). Reclamation expenditures incurred during Q4 2017 and 2017 were \$4.7 million and \$8.7 million, respectively (Q4 2016 and 2016 - \$2.7 million and \$6.1 million, respectively).

# **CONTRACTUAL COMMITMENTS AND CONTINGENCIES**

The Company does not have any off-balance sheet arrangements or commitments that have a current or future effect on its financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that are material. The Company had the following contractual obligations at December 31, 2017:

	Pa	yments due	by I	period					
(In thousands of USD, except as noted)	Total			Within 1 year <sup>(1)</sup>		2 - 3 years		5 years	After 5 years
Current liabilities	\$	136,506	\$	136,506	\$	_	\$	_	\$ _
Credit facility		2,750		1,200		1,550		_	_
Loan obligation		3,000		3,000		_		_	_
Finance lease obligations <sup>(2)</sup>		7,724		5,879		1,845		_	_
Severance accrual		5,176		1,092		2,273		760	1,051
Employee compensation <sup>(3)</sup>		6,709		3,815		2,894		_	_
Loss on commodity contracts		1,906		1,906		_		_	_
Provisions <sup>(4)</sup>		4,098		2,681		546		627	243
Income taxes payable		26,131		26,131		_		_	_
Total contractual obligations <sup>(4)</sup>	\$	193,999	\$	182,210	\$	9,108	\$	1,387	\$ 1,294

(1) Includes all current liabilities in the statement of financial position at December 31, 2017 and December 31, 2016 plus items presented separately in this table that are expected to be paid but not accrued. A reconciliation of the current liabilities balance in the statement of financial position to the total contractual obligations within one year, per the contractual maturities schedule is shown in the table below.

December 31, 2017		F	Future interest component	Within 1 year	
Current portion of:					
Accounts payable and other liabilities	\$ 136,506	\$	_	\$	136,506
Credit facility	_		1,200		1,200
Loan obligation	3,000		_		3,000
Current portion of finance lease	5,734		145		5,879
Current severance liability	1,092		_		1,092
Employee Compensation & RSU's	2,100		1,715		3,815
Unrealized loss on commodity contracts	1,906		_		1,906
Provisions <sup>(4)</sup>	2,681		_		2,681
Income tax payable	26,131		_		26,131
Total contractual obligations within one year <sup>(4)</sup>	\$ 179,150	\$	3,060	\$	182,210

(2) Includes lease obligations in the amount of \$7.7 million (December 31, 2016 - \$7.3 million) with a net present value of \$7.6 million (December 31, 2016 - \$7.1 million) discussed further in Note 17 of the 2017 Financial Statements.

(3) Includes RSU obligation in the amount of \$4.1 million (December 31, 2016 – \$4.8 million) that will be settled in cash. The RSUs vest in two installments, 50% in December 2016 and 50% in December 2017.

(4) Amounts above do not include payments related to the Company's anticipated closure and decommissioning obligation (current \$5.6 million, long-term \$59.8 million) discussed in Note 16 of the 2017 Financial Statements (December 31, 2016 - current \$5.2 million , long-term \$50.4 million), the deferred credit arising from the Aquiline Acquisition (\$20.8 million) (December 31, 2016 - \$20.8 million) discussed in Note 19 of the 2017 Financial Statements, and deferred tax liabilities of \$171.2 million (December 31, 2016 - \$170.9 million).

# **RELATED PARTY TRANSACTIONS**

The Company's related parties include its subsidiaries, associates over which it exercises significant influence, and key management personnel. During its normal course of operation, the Company enters into transactions with its related parties for goods and services. A company owned by a former director of the Company was paid \$0.1 million for consulting services in the year ended December 31, 2016, there were no such payments in 2017. Related party transactions with Maverix have been disclosed in Note 12 of the 2017 Financial Statements.

These transactions are in the normal course of operations and are measured at the exchange amount, which is the amount of consideration established and agreed to by the parties.

#### AISCSOS

AISCSOS is a non-GAAP financial measure. AISCSOS does not have any standardized meaning prescribed by IFRS and is therefore unlikely to be comparable to similar measures presented by other companies. We believe that AISCSOS reflects a comprehensive measure of the full cost of operating our consolidated business given it includes the cost of replacing silver 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 cash flow. To facilitate a better understanding of this measure as calculated by the Company, the following table provides the detailed reconciliation of this measure to the applicable cost items, as reported in the consolidated income statements for the respective periods:

		Three months ended December 31,					Year ended December 31,				
(In thousands of USD, except as noted)			2017		2016		2017		2016		
Direct operating costs		\$	134,202	\$	120,496	\$	488,363	\$	472,806		
Inventory NRV adjustments	Α		5,495		(10,715)		12,307		(42,815)		
Production costs <sup>(1)</sup>		\$	139,697	\$	109,781	\$	500,670	\$	429,991		
Royalties			8,809		8,142		24,510		31,608		
Direct selling costs (2)			19,408		20,656		69,344		80,319		
Less by-product credits <sup>(2)</sup>			(131,679)		(109,571)		(462,663)		(424,442)		
Cash cost of sales net of by-products <sup>(3)</sup>		\$	36,235	\$	29,009	\$	131,862	\$	117,476		
Sustaining capital <sup>(4)</sup>		\$	25,573	\$	24,976	\$	84,215	\$	89,394		
Exploration and project development <sup>(5)</sup>			4,269		3,068		17,858		11,334		
Reclamation cost accretion			1,493		1,090		5,973		4,363		
General and administrative expense			4,732		5,592		21,397		23,663		
All-in sustaining costs <sup>(3)</sup>	В	\$	72,303	\$	63,735	\$	261,304	\$	246,230		
Payable ounces sold (in thousands)	С		6,659		6,138		24,212		24,200		
All-in sustaining cost per silver ounce sold, net of by-products	B/C	\$	10.86	\$	10.38	\$	10.79	\$	10.17		
All-in sustaining cost per silver ounce sold, net of by-products (excludes NRV inventory adjustments)	(B-A)/C	\$	10.03	\$	12.13	\$	10.28	\$	11.94		

(1) For the purposes of AISCSOS, Alamo Dorado production costs for the three and twelve month periods ended December 31, 2016 have been decreased by \$0.6 million and increased by \$1.7 million, respectively, to exclude non-cash adjustments to the closure and decommissioning liabilities that are included in production costs as presented in the consolidated income statements.

(2) Included in the revenue line of the consolidated income statements, and for by-product credits are reflective of realized metal prices for the applicable periods.

(3) Totals may not add due to rounding.

(4) Please refer to the table below. Further, 2017 annual sustaining capital cash outflows included in this table were \$0.2 million less than the \$84.4 million capitalized in 2017. The difference is due to the timing difference between the cash payment of capital investments compared with the period in which investments are capitalized.

(5) The amounts for 2017 year-to-date exclude \$1.9 million from non-cash project development write-downs.

As part of the AISCSOS measure, sustaining capital is included while expansionary or acquisition capital (referred to by the Company as non-sustaining capital) is not. Inclusion of sustaining capital only is a measure of capital costs associated with current ounces sold as opposed to investment capital, which is expected to increase future production. For the periods under review, the items noted below are associated with the La Colorada expansion project, the Dolores leach pad and other expansionary expenditures considered to be investment capital projects.

Reconciliation of payments for mineral properties, plant and equipment and sustaining capital	Three months ended December 31,				Year ended December 31,				
(in thousands of USD)		2017		2016		2017		2016	
Payments for mineral properties, plant and equipment <sup>(1)</sup>	\$	36,473	\$	56,477	\$	142,232	\$	202,661	
Add/(Subtract)									
Advances received for leases		1,385		2,213		5,000		6,151	
Non-Sustaining capital		(12,284)		(33,714)		(63,017)		(119,418)	
Sustaining Capital <sup>(2)</sup>	\$	25,573	\$	24,976	\$	84,215	\$	89,394	

As presented on the consolidated statements of cash flows.
 Totals may not add due to rounding

		Three mo	nths ended	December	31, 2017				
(In thousands of USD, except as noted)	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo	PASCORP	Consolidated
Direct operating costs	16,580	35,739	3,957	19,551	16,931	10,484	30,960		134,202
NRV inventory adjustments	-	4,098	(1,916)	_	-	-	3,313		5,495
Production costs	16,580	39,838	2,041	19,551	16,931	10,484	34,273		139,697
Royalties	106	1,966	—	-	-	6,105	633		8,809
Direct selling costs	4,066	31	248	6,659	5,014	3,383	8		19,408
Less by-product credits	(18,316)	(39,317)	(61)	(24,653)	(26,767)	(6,969)	(15,595)		(131,679)
Cash cost of sales net of by-products <sup>(1)</sup>	2,435	2,518	2,227	1,557	(4,823)	13,002	19,319		36,235
Sustaining capital	2,576	13,303	—	3,548	3,162	1,939	1,045		25,573
Exploration and project development	73	564	-	428	543	-	936	1,726	4,269
Reclamation cost accretion	112	296	89	162	105	56	619	54	1,493
General & administrative expense	-	_	_	-	-	-	_	4,732	4,732
All-in sustaining costs <sup>(1)</sup>	5,196	16,682	2,317	5,695	(1,013)	14,998	21,918	6,511	72,303
Payable ounces sold (thousand)	1,847	1,225	133	813	658	1,218	766		6,659
All-in sustaining cost per silver ounce sold, net of by-products	\$ 2.81	\$ 13.62	\$ 17.45	\$ 7.00	\$ (1.54)	\$ 12.31	\$ 28.63		\$ 10.86
All-in sustaining cost per silver ounce sold, net of by-products (excludes NRV inventory adjustments)	2.81	10.27	31.89	7.00	(1.54)	12.31	24.30		10.03

(1) Totals may not add due to rounding.

		Twelve m	onths ende	d Decembe	r 31, 2017						
(In thousands of USD, except as noted)	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo	PASCORP	Consolidated		
Direct operating costs	67,170	116,104	20,477	75,551	63,967	34,731	110,362		488,363		
NRV inventory adjustments		6,847	(2,598)				8,058		12,307		
Production costs	67,170	122,951	17,879	75,551	63,967	34,731	118,420		500,670		
Royalties	475	6,501	79	-	-	14,321	3,134		24,510		
Direct selling costs	12,235	93	479	26,238	18,770	10,740	789		69,344		
Less by-product credits	(64,133)	(128,351)	(3,467)	(97,715)	(94,233)	(16,278)	(58,485)		(462,663)		
Cash cost of sales net of by-products <sup>(1)</sup>	15,748	1,194	14,970	4,074	(11,496)	43,513	63,858		131,862		
Sustaining capital	13,970	36,071	—	10,267	12,428	8,146	3,333		84,215		
Exploration and project development	251	2,444	_	1,713	1,629	-	4,588	7,232	17,858		
Reclamation cost accretion	448	1,186	357	646	420	225	2,474	216	5,973		
General & administrative expense	_	-	-	-	-	-	-	21,397	21,397		
All-in sustaining costs <sup>(1)</sup>	30,417	40,894	15,327	16,701	2,981	51,884	74,254	28,845	261,304		
Payable ounces sold (thousand)	6,853	4,089	867	3,181	2,448	3,603	3,171		24,212		
All-in sustaining cost per silver ounce sold, net of by-products	\$ 4.44	\$ 10.00	\$ 17.69	\$ 5.25	\$ 1.22	\$ 14.40	\$ 23.42		\$ 10.79		
All-in sustaining cost per silver ounce sold, net of by-products (excludes NRV adjustments)	\$ 4.44	\$ 8.33	\$ 20.68	\$ 5.25	\$ 1.22	\$ 14.40	\$ 20.88		\$ 10.28		
(1) Totals may not add due to rounding	Totals may not add due to rounding.										

		Three mo	nths ended	December	31, 2016				
(In thousands of USD, except as noted)	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo	PASCORP	Consolidated
Direct operating costs	14,674	28,664	7,266	17,991	15,547	10,016	26,336		120,496
NRV inventory adjustments	—	(6,350)	2,224	-	-	-	(6,589)		(10,715)
Production costs	14,674	22,314	9,490	17,991	15,547	10,016	19,747		109,781
Royalties	135	1,604	33	—	-	5,598	772		8,142
Direct selling costs	3,712	23	125	7,735	5,643	4,634	(1,215)		20,656
Less by-product credits	(12,238)	(32,868)	(1,609)	(21,206)	(18,379)	(5,372)	(17,898)		(109,571)
Cash cost of sales net of by-products <sup>(1)</sup>	6,283	(8,927)	8,039	4,520	2,812	14,876	1,406		29,009
Sustaining capital	2,229	10,772	-	4,355	4,892	1,631	1,097		24,976
Exploration and project development	31	628	_	576	109	-	-	1,723	3,068
Reclamation cost accretion	72	179	104	126	86	54	433	37	1,090
General & administrative expense	_	—	_	—	-	-	-	5,592	5,592
All-in sustaining costs <sup>(1)</sup>	8,615	2,652	8,144	9,576	7,899	16,561	2,935	7,352	63,735
Payable ounces sold (thousand)	1,561	895	286	759	526	1,332	779		6,138
All-in sustaining cost per silver ounce sold, net of by-products	\$ 5.52	\$ 2.96	\$ 28.44	\$ 12.62	\$ 15.02	\$ 12.43	\$ 3.77		\$ 10.38
All-in sustaining cost per silver ounce sold, net of by-products (excludes NRV adjustments)	\$ 5.52	\$ 10.06	\$ 20.68	\$ 12.62	\$ 15.02	\$ 12.43	\$ 12.22		\$ 12.13

(1) Totals may not add due to rounding.

Twelve months ended December 31, 2016												
(In thousands of USD, except as noted)	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo	PASCORP	Consolidated			
Direct operating costs	50,879	121,162	40,172	67,911	58,868	34,959	98,856		472,806			
NRV inventory adjustments		(22,434)	1,173				(21,554)		(42,815)			
Production costs	50,879	98,728	41,345	67,911	58,868	34,959	77,302		429,991			
Royalties	401	6,224	235	-	_	20,929	3,818		31,608			
Direct selling costs	13,554	107	376	32,443	25,702	15,697	(7,562)		80,319			
Less by-product credits	(34,737)	(123,811)	(13,156)	(77,754)	(74,754)	(15,774)	(84,456)		(424,442)			
Cash cost of sales net of by-products <sup>(1)</sup>	30,098	(18,751)	28,800	22,600	9,817	55,811	(10,898)		117,476			
Sustaining capital	10,545	48,079	_	11,994	10,945	4,963	2,868		89,394			
Exploration and project development	186	1,792	-	837	1,053	-	-	7,465	11,334			
Reclamation cost accretion	287	714	416	505	345	218	1,731	148	4,363			
General & administrative expense	_	_	—	—	_	-	—	23,663	23,663			
All-in sustaining costs <sup>(1)</sup>	41,116	31,834	29,216	35,935	22,159	60,991	(6,299)	31,276	246,230			
Payable ounces sold (thousand)	5,486	3,839	1,967	3,233	2,377	4,264	3,033		24,200			
All-in sustaining cost per silver ounce sold, net of by-products	\$ 7.49	\$ 8.29	\$ 14.85	\$ 11.11	\$ 9.32	\$ 14.30	\$ (2.08)		\$ 10.17			
All-in sustaining cost per silver ounce sold, net of by-products (excludes NRV adjustments)	\$ 7.49	\$ 14.14	\$ 14.26	\$ 11.11	\$ 9.32	\$ 14.30	\$ 5.03		\$ 11.94			

(1) Totals may not add due to rounding.

#### • Cash Costs per Ounce of Silver, net of by-product credits

Pan American produces by-product metals incidentally to our silver mining activities. We have adopted the practice of calculating the net cost of producing an ounce of silver, our primary payable metal, after deducting revenues gained from incidental by-product production, as a performance measure. This performance measurement has been commonly used in the mining industry for many years and was developed as a relatively simple way of comparing the net production costs of the primary metal for a specific period against the prevailing market price of that metal.

Cash costs per ounce metrics, net of by-product credits, is used extensively in our internal decision making processes. We believe the metric is also useful to investors because it facilitates comparison, on a mine-by-mine basis, notwithstanding the unique mix of incidental by-product production at each mine, of our operations' relative performance on a period-by-period basis, and against the operations of our peers in the silver industry on a consistent basis. Cash costs per ounce is conceptually understood and widely reported in the silver mining industry. However, cash cost per ounce of silver is a non-GAAP measure and does not have a standardized meaning prescribed by GAAP and the Company's method of calculating cash costs may differ from the methods used by other entities.

To facilitate a better understanding of these measures as calculated by the Company, the following table provides the detailed reconciliation of these measures to the production costs, as reported in the consolidated income statements for the respective periods:

Total Cash Costs per ounce of Payable Silver, net of by-product credits		Т	hree mon Decem	iths ended ber 31,	Year e Decem	ended ber 31,
(in thousands of U.S. dollars except as noted)			2017	2016	2017	2016
Production costs		\$	139,697	\$ 110,466	\$ 500,670	\$ 428,333
Add/(Subtract)						
Royalties			8,809	8,142	24,510	31,608
Smelting, refining, and transportation charges			18,469	22,204	73,222	91,371
Worker's participation and voluntary payments			(1,374)	(876)	(5,067)	(3,397)
Change in inventories			(12,776)	(3,473)	(16,011)	(11,937)
Other			555	358	1,559	(5,660)
Non-controlling interests (1)			(64)	(811)	(1,126)	(3,358)
Inventory NRV adjustments			(5,495)	10,715	(12,307)	42,815
Cash Operating Costs before by-product credits <sup>(2)</sup>			147,820	146,725	565,450	569,775
Less gold credit			(54,648)	(52,888)	(196,649)	(227,196)
Less zinc credit			(40,826)	(28,486)	(137,826)	(93,428)
Less lead credit			(12,687)	(11,226)	(46,948)	(35,890)
Less copper credit			(20,026)	(14,667)	(77,348)	(63,404)
Cash Operating Costs net of by-product credits (2)	А		19,633	39,457	106,678	149,857
Payable Silver Production (koz)	В		6,172	5,925	23,444	23,818
Cash Costs per ounce net of by-product credits	A/B	\$	3.18	\$ 6.66	\$ 4.55	\$ 6.29

(1) Figures presented in the reconciliation table above are on a 100% basis as presented in the consolidated financial statements with an adjustment line item to account for the portion of the Morococha and San Vicente mines owned by non-controlling interests, an expense item not included in operating cash costs. The associated tables below are for the Company's share of ownership only.

(2) Figures in this table and in the associated tables below may not add due to rounding.

Three months ended December 31, 2017 <sup>(1)</sup> (in thousands of USD except as noted)												
		La Colorad	а	Dolores	Alamo Dorado	ł	Huaron	Morococha	,	San Vicente	Manantial Espejo	Consolidat Total
Cash Costs before by-product credits	Α	\$ 18,7	8	\$ 34,778	\$ 136	\$	26,440	\$ 20,276	\$	15,300	\$ 29,800	\$ 145,4
Less gold credit	b1	(1,3	7)	(39,708)	(90)	)	(9)	(625	)	(79)	(12,704)	(54,5
Less zinc credit	b2	(11,33	37)	_	_	Γ	(12,296)	(12,205	)	(3,767)	_	(39,6
Less lead credit	b3	(5,23	32)	_	_	Γ	(4,758)	(2,361	)	(131)	_	(12,4
Less copper credit	b4		_	_	_	Γ	(7,671)	(9,585	)	(1,868)	_	(19,1
Sub-total by-product credits	B=( b1+ b2+ b3+ b4)	\$ (17,94	17)	\$ (39,708)	\$ (90)	)\$	(24,733)	\$ (24,776	)\$	(5,845)	\$ (12,704)	\$ (125,8
Cash Costs net of by-product credits	C=(A+B)	\$ 76	51	\$ (4,930)	\$ 46	\$	1,706	\$ (4,500	)\$	9,455	\$ 17,095	\$ 19,6
Payable ounces of silver (thousand)	D	1,7	77	1,254	22		821	607		1,046	645	6,1
Cash cost per ounce net of by-products	C/D	\$ 0.4	3	\$ (3.93)	\$ 2.09	\$	2.08	\$ (7.42	)\$	9.04	\$ 26.52	\$3

(1) Totals may not add due to rounding.

Twelve months ended December 31, 2017 <sup>(1)</sup> (in thousands of USD except as noted)															
		С	La olorada	D		Alamo Dorado	ł	luaron	М	orococha	,	San Vicente	lanantial Espejo	Co	nsolidated Total
Cash Costs before by-product credits	Α	\$	75,407	\$1	.22,532 \$	12,666	\$	101,588	\$	76,085	\$	55,286	\$ 113,726	\$	557,291
Less gold credit	b1		(4,477)	(1	29,503)	(2,498)		(148)		(2,639)		(305)	(56,842)		(196,411)
Less zinc credit	b2		(37,967)		_	_		(46,080)		(39,402)		(10,522)	_		(133,972)
Less lead credit	b3		(18,994)		_	_	Γ	(19,039)		(7,573)		(672)	_		(46,278)
Less copper credit	b4		_		_	(46)		(32,059)		(38,315)		(3,533)	_		(73,952)
Sub-total by-product credits	B=( b1+ b2+ b3+ b4)	\$	(61,438)	<b>Ş</b> (1	.29,503) \$	(2,544)	\$	(97,327)	\$	(87,929)	\$	(15,032)	\$ (56,842)	\$	(450,614)
Cash Costs net of by-product credits	C=(A+B)	\$	13,970	\$	(6,971) \$	10,123	\$	4,261	\$	(11,844)	\$	40,254	\$ 56,884	\$	106,677
Payable ounces of silver (thousand)	D		6,709		4,225	614		3,164		2,219		3,396	3,117		23,444
Cash cost per ounce net of by-products	C/D	\$	2.08	\$	(1.65) \$	16.49	\$	1.35	\$	(5.34)	\$	11.85	\$ 18.25	\$	4.55

(1) Totals may not add due to rounding.

			onths endeo usands of L							
		La Colorada	Dolores	Alar Dora		Huaron	Morococha	San Vicente	Manantial Espejo	Consolidated Total
Cash Costs before by-product credits	Α	\$ 19,11	8 29,87	5 \$ 10	,704	\$ 25,766	\$ 19,496	\$ 14,034	\$ 26,259	\$ 145,251
Less gold credit	b1	(84	1) (35,18	3) (1	,690)	—	(165)	(86	) (14,905)	(52,870
Less zinc credit	b2	(7,80	1) –	-	-	(11,056)	(7,361)	(1,568	) —	(27,787
Less lead credit	b3	(3,51	3) —	-	-	(6,005)	(1,444)	(136	) —	(11,098)
Less copper credit	b4	-		-	31	(5,122)	(7,849)	(1,095	) —	(14,035
Sub-total by-product credits	B=( b1+ b2+ b3+ b4)	\$ (12,15	5) \$ (35,18	3)\$ (1	,659)	\$ (22,183)	\$ (16,819)	\$ (2,885	)\$ (14,905)	\$ (105,790)
Cash Costs net of by-product credits	C=(A+B)	\$ 6,96	2 \$ (5,30	3)\$9	,046	\$ 3,583	\$ 2,676	\$ 11,149	\$ 11,354	\$ 39,462
Payable ounces of silver (thousand)	D	1,58	8 89	5	397	789	485	994	777	5,925
Cash cost per ounce net of by-products	C/D	\$ 4.3	8 \$ (5.9	8)\$2	2.80	\$ 4.54	\$ 5.52	\$ 11.22	\$ 14.61	\$ 6.66

(1) Totals may not add due to rounding.

						ecember except a									
		Co	La blorada	Do	olores	Alamo Dorado	I	Huaron	Мо	orococha	1	San Vicente	lanantial Espejo	Со	nsolidated Total
Cash Costs before by-product credits	Α	\$	68,057	12	24,570 \$	39,891	\$	96,284	\$	75,586	\$	61,779	\$ 97,388	\$	563,555
Less gold credit	b1		(2,929)	(12	28,696)	(10,251	)	(2)		(897)		(335)	(83,992)		(227,103
Less zinc credit	b2		(20,636)		_	_		(34,638)		(26,841)		(8,611)	—		(90,726
Less lead credit	b3		(10,487)		_	—	Γ	(18,967)		(5,166)		(795)	—		(35,415
Less copper credit	b4		_		_	(100	)	(24,113)		(33,701)		(2,534)	_		(60,448
Sub-total by-product credits	B=( b1+ b2+ b3+ b4)	\$	(34,052)	\$(12	28,696) \$	6 (10,351)	)\$	(77,720)	\$	(66,605)	\$	(12,275)	\$ (83,992)	\$	(413,692
Cash Costs net of by-product credits	C=(A+B)	\$	34,004	\$	(4,126) \$	29,539	\$	18,565	\$	8,981	\$	49,504	\$ 13,396	\$	149,862
Payable ounces of silver (thousand)	D		5,531		3,831	1,844		3,208		2,132		4,143	3,130		23,818
Cash cost per ounce net of by-products	C/D	\$	6.15	\$	(1.08) \$	16.02	\$	5.79	\$	4.21	\$	11.95	\$ 4.28	\$	6.29

(1) Totals may not add due to rounding.

## • Adjusted Earnings and Basic Adjusted Earnings Per Share

Adjusted earnings and basic adjusted earnings per share are non-GAAP measures that the Company considers to better reflect normalized earnings as it eliminates items that in management's judgment are subject to volatility as a result of factors which are unrelated to operations in the period, and/or relate to items that will settle in future periods. Certain items that become applicable in a period may be adjusted for, with the Company retroactively presenting comparable periods with an adjustment for such items and conversely, items no longer applicable may be removed from the calculation. The Company adjusts certain items in the periods that they occurred, but does not reverse or otherwise unwind the effect of such items in future periods. Neither adjusted earnings nor basic adjusted earnings per share have any standardized meaning prescribed by GAAP and are therefore unlikely to be comparable to similar measures presented by other companies.

The following table shows a reconciliation of adjusted earnings for the three and twelve months ended December 31, 2017 and 2016, to the net earnings for each period.

	Three Mo Decem		Year e Decem	
(In thousands of USD, except as noted)	2017	2016	2017	2016
Net earnings for the period	\$ 49,664	\$ 22,284	\$ 123,451	\$ 101,825
Adjust for:				
Derivative gains	(64)	_	(64)	_
Impairment reversals	(61,554)	_	(61,554)	_
Write-down of project development costs	—	_	1,898	_
Unrealized foreign exchange losses (gains)	362	4,139	(383)	5,759
Net realizable value adjustments to heap inventory	4,936	(6,619)	10,060	(14,110
Unrealized losses (gains) on commodity contracts	2,190	(435)	(909)	(21
Share of loss from associate and dilution gain	(259)	(8,484)	(2,052)	(7,946
Mine operation severance costs	_	_	3,509	_
Reversal of previously accrued tax liabilities	_	_	(2,793)	
Gain (loss) on sale of assets	794	(157)	(191)	(25,100
Closure and decommissioning liability adjustment	4,515	_	8,388	_
Adjust for effect of taxes relating to the above <sup>(1)</sup>	\$ 6,046	\$ 2,180	\$ 2,273	\$ 11,870
Adjust for effect of foreign exchange on taxes <sup>(1)</sup>	\$ 12,589	\$ 6,057	\$ (3,928)	\$ 14,323
Adjusted earnings for the period	\$ 19,219	\$ 18,965	\$ 77,705	\$ 86,600
Weighted average shares for the period	153,207	152,263	153,070	152,118
Adjusted earnings per share for the period	\$ 0.13	\$ 0.12	\$ 0.51	\$ 0.57

#### Total Debt

Total debt is a non-GAAP measure calculated as the total current and non-current portions of: long-term debt, finance lease liabilities, and loans payable. Total debt does not have any standardized meaning prescribed by GAAP and is therefore unlikely to be comparable to similar measures presented by other companies. The Company and certain investors use this information to evaluate the financial debt leverage of the Company.

#### • Working Capital

Working capital is a non-GAAP measure calculated as current assets less current liabilities. Working capital does not have any standardized meaning prescribed by GAAP and is therefore unlikely to be comparable to similar measures presented by other companies. The Company and certain investors use this information to evaluate whether the Company is able to meet its current obligations using its current assets.

#### • General and Administrative Costs per Silver Ounce Produced

General and administrative costs per silver ounce produced ("G&A per ounce") is a non-GAAP measure that is calculated by dividing G&A expense recorded in a period by the number of silver ounces produced in the same period.

G&A per ounce does not have any standardized meaning prescribed by GAAP and is therefore unlikely to be comparable to similar measures presented by other companies. The Company and certain investors use this information to evaluate corporate expenses incurred in a period relative to the amount of consolidated silver produced during the same period.

# **RISKS AND UNCERTAINTIES**

The Company is exposed to many risks in conducting its business, including but not limited to: metal price risk as the Company derives its revenue from the sale of silver, zinc, lead, copper, and gold; credit risk in the normal course of dealing with other companies; foreign exchange risk as the Company reports its financial statements in USD whereas the Company operates in jurisdictions that utilize other currencies; the inherent risk of uncertainties in estimating mineral reserves and mineral resources; political risks; environmental risks; and risks related to its relations with employees. These and other risks are described below and in Pan American's Annual Information Form (available on SEDAR at www.sedar.com), Form 40-F filed with the SEC, and the 2017 Financial Statements. Readers are encouraged to refer to these documents for a more detailed description of some of the risks and uncertainties inherent to Pan American's business.

#### • Foreign Jurisdiction Risk

Pan American currently conducts operations in Peru, Mexico, Argentina and Bolivia. All of these jurisdictions are potentially subject to a number of political and economic risks, including those described in the following section. The Company is unable to determine the impact of these risks on its future financial position or results of operations and the Company's exploration, development and production activities may be substantially affected by factors outside of Pan American's control. These potential factors include, but are not limited to: royalty and tax increases or claims by governmental bodies, expropriation or nationalization, lack of an independent judiciary, foreign exchange controls, import and export regulations, cancellation or renegotiation of contracts and environmental and permitting regulations. The Company currently has no political risk insurance coverage against these risks.

All of Pan American's current production and revenue is derived from its operations in Peru, Mexico, Argentina and Bolivia. As Pan American's business is carried on in a number of developing countries, it is exposed to a number of risks and uncertainties, including the following: expropriation or nationalization without adequate compensation, particularly in jurisdictions such as Argentina and Bolivia who have a history of expropriation; changing political and fiscal regimes, and economic and regulatory instability; unanticipated changes to royalty and tax regulations; unreliable or undeveloped infrastructure; labour unrest and labour scarcity; difficulty obtaining key equipment and components for equipment; regulations and restrictions with respect to imports and exports; high rates of inflation; extreme fluctuations in currency exchange rates and the imposition of currency controls; the possible unilateral cancellation or forced renegotiation of contracts, and uncertainty regarding enforceability of contractual rights; inability to obtain fair dispute resolution or judicial determinations because of bias, corruption or abuse of power; difficulties enforcing judgments generally, including judgments obtained in Canadian or United States courts against assets and entities located outside of those jurisdictions; difficulty understanding and complying with the regulatory and legal framework respecting the ownership and maintenance of mineral properties, mines and mining operations, and with respect to permitting; local opposition to mine development projects, which include the potential for violence, property damage and frivolous or vexatious claims; violence and more prevalent or stronger organized crime groups; terrorism and hostage taking; military repression and increased likelihood of international conflicts or aggression; increased public health concerns; and potential practical restrictions on the ability of Pan American's subsidiaries to transfer funds to Pan American. Certain of these risks and uncertainties are illustrated well by circumstances in Bolivia and Argentina.

The Company's Mexican operations, Alamo Dorado and La Colorada, have suffered from armed robberies of doré in the past. The Company has instituted a number of additional security measures and a more frequent shipping schedule in response to these incidents. The Company has subsequently renewed its insurance policy to mitigate some of the financial loss that would result from such criminal activities in the future, however a substantial deductible amount would apply to any such losses in Mexico.

Local opposition to mine development projects has arisen periodically in some of the jurisdictions in which we operate, and such opposition has at times been violent. There can be no assurance that similar local opposition will not arise in the future with respect to Pan American's foreign operations. If Pan American were to experience resistance or unrest in connection with its foreign operations, it could have a material adverse effect on Pan American's operations or profitability.

In early 2009, a new constitution was enacted in Bolivia that further entrenched the government's ability to amend or enact laws, including those that may affect mining, and which enshrined the concept that all natural resources belong to the Bolivian people and that the state was entrusted with its administration.

On May 28, 2014, the Bolivian government enacted Mining Law No. 535 (the "New Mining Law"). Among other things, the New Mining Law established a new Bolivian mining authority to provide principal mining oversight (varying the role of COMIBOL) and set out a number of new economic and operational requirements relating to state participation in mining projects. Further, the New Mining Law provided that all pre-existing contracts were to migrate to one of several new forms of agreement within a prescribed period of time. As a result, we anticipate that our current joint venture agreement with COMIBOL relating to the San Vicente mine will be subject to migration to a new form of agreement and may require renegotiation of some terms in order to conform to the New Mining Law requirements. We are assessing the potential impacts of the New Mining Law on our business and are awaiting further regulatory developments, but the primary effects on the San Vicente operation and our interest therein will not be known until such time as we have, if required to do so, renegotiated the existing contract, and the full impact may only be realized over time. In the meantime, we understand that pre-existing agreements will be respected during the period of migration and we will take appropriate steps to protect and, if necessary, enforce our rights under our existing agreement with COMIBOL. There is, however, no guarantee that governmental actions, including possible expropriation or additional changes in the law, and the migration of our contract will not impact our involvement in the San Vicente operation in an adverse way and such actions could have a material adverse effect on us and our business.

On June 25, 2015, the Bolivian government enacted the new Conciliation and Arbitration Law No. 708 (the "New Conciliation and Arbitration Law"), which endeavors to set out newly prescribed arbitral norms and procedures, including for foreign investors. However, whether the New Conciliation and Arbitration Law applies specifically to pre-existing agreements between foreign investors and COMIBOL, and how this new legislation interacts with the New Mining Law, remains somewhat unclear. As a result, we await clarification by regulatory authorities and will continue to assess the potential impacts of the New Conciliation and Arbitration Law on our business.

Under the previous political regime in Argentina, the government intensified the use of price, foreign exchange, and import controls in response to unfavourable domestic economic trends. Among other things, the Argentine government imposed restrictions on the importation of goods and services and increased administrative procedures required to import equipment, materials and services required for operations at Manantial Espejo. In support of this policy, in May 2012, the government mandated that mining companies establish an internal function to be responsible for substituting Argentinian-produced goods and materials for imported goods and materials and required advance government review of plans to import goods and materials. In addition, the government of Argentina also tightened control over capital flows and foreign exchange in an attempt to curtail the outflow of hard currencies and protect its foreign currency reserves, including mandatory repatriation and conversion of foreign currency funds in certain circumstances, informal restrictions on dividend, interest, and service payments abroad and limitations on the ability of individuals and businesses to convert ARS into USD or other hard currencies, exposing us to additional risks of ARS devaluation and high domestic inflation. While a new federal government was elected in Argentina in late 2015 and has since taken steps to ease some of the previously instituted controls and restrictions, particularly relaxing certain rules relating to the inflow and outflow of foreign currencies, some of the policies of the previous government continue to adversely affect the Company's Argentine operations. It is unknown whether these more recent changes will be lasting, what, if any, additional steps will be taken by the current administration or what financial and operational impacts these and any future changes might have on the Company. As such, the Company continues to monitor and assess the situation in Argentina.

In most cases, the effect of these risks and uncertainties cannot be accurately predicted and, in many cases, their occurrence is outside of our control. Although we are unable to determine the impact of these risks on our future

financial position or results of operations, many of these risks and uncertainties have the potential to substantially affect our exploration, development and production activities and could therefore have a material adverse impact on our operations and profitability. Management and the Board of Directors continuously assess risks that the Company is exposed to, and attempt to mitigate these risks where practical through a range of risk management strategies, including employing qualified and experienced personnel.

## Metal Price Risk

Pan American derives its revenue from the sale of silver, zinc, lead, copper, and gold. The Company's sales are directly dependent on metal prices, and metal prices have historically shown significant volatility and are beyond the Company's control. The table below illustrates the effect of changes in silver and gold prices on anticipated revenues for 2017, expressed in percentage terms. This analysis assumes that quantities of silver and gold produced and sold remain constant under all price scenarios presented.

					Gold Price			
		\$950	\$1,050	\$1,150	\$1,250	\$1,350	\$1,450	\$1,550
	\$13.50	85%	87%	89%	91%	94%	96%	98%
	\$14.50	88%	90%	92%	94%	96%	98%	101%
	\$15.50	91%	93%	95%	97%	99%	101%	103%
Silver	\$16.50	94%	96%	98%	100%	102%	104%	106%
Price	\$17.50	97%	99%	101%	103%	105%	107%	109%
	\$18.50	99%	102%	104%	106%	108%	110%	112%
	\$19.50	102%	104%	106%	109%	111%	113%	115%
	\$20.50	105%	107%	109%	111%	113%	116%	118%

#### 2018 Revenue Metal Price Sensitivity

The Company takes the view that its precious metals production should not be hedged, thereby, allowing the Company to maintain maximum exposure to precious metal prices. From time to time, Pan American mitigates the price risk associated with its base metal production by committing some of its forecast base metal production under forward sales and option contracts, as described under the "Financial Instruments" section of this MD&A. Decisions relating to hedging may have material adverse effects upon our financial performance, financial position, and results of operations. Since base metal and gold revenue are treated as a by-product credit for purposes of calculating cash costs per ounce of silver and AISCSOS, these non-GAAP measures are highly sensitive to base metal and gold prices. The table below illustrates this point by plotting the expected cash cost per ounce according to our 2017 forecast against various price assumptions for the Company's two main by-product credits, zinc and gold expressed in percentage terms:

#### 2018 Cash Cost Metal Price Sensitivity

					Gold Price			
[		\$950	\$1,050	\$1,150	\$1,250	\$1,350	\$1,450	\$1,550
	\$2,600	183%	164%	144%	125%	106%	86%	67%
	\$2,700	178%	159%	139%	120%	101%	81%	62%
	\$2,800	173%	153%	134%	115%	96%	76%	57%
Zinc	\$2,900	168%	148%	129%	110%	90%	71%	52%
Price	\$3,000	163%	143%	124%	105%	85%	66%	47%
	\$3,100	158%	139%	119%	100%	81%	61%	42%
	\$3,200	154%	135%	115%	96%	77%	58%	38%
	\$3,300	150%	131%	112%	92%	73%	54%	34%

The Board of Directors continually assesses the Company's strategy towards its base metal exposure, depending on market conditions. If metal prices decline significantly below levels used in the Company's most recent impairment tests, for an extended period of time, the Company may need to reassess its price assumptions, and a significant decrease in the price assumptions could be an indicator of potential impairment. A description of the impact of metal price changes on certain Company assets is included in the "Key Assumption and Sensitivity" sections included in the 2017 Financial Statements (included in Note 11).

# • Trading and Credit Risk

The zinc, lead, and copper concentrates produced by Pan American are sold through long-term supply arrangements to metal traders or integrated mining and smelting companies. The terms of the concentrate contracts may require us to deliver concentrate that has a value greater than the payment received at the time of delivery, thereby introducing us to credit risk of the buyers of our concentrates. Should any of these counterparties not honour supply arrangements, or should any of them become insolvent, we may incur losses for products already shipped and be forced to sell our concentrates in the spot market or we may not have a market for our concentrates and therefore our future operating results may be materially adversely impacted. For example, the Doe Run Peru smelter, a significant buyer of our production in Peru, experienced financial difficulties in the first quarter of 2009 and closed. The Doe Run Peru smelter remains closed and we are owed approximately \$7.6 million under the terms of our contract with Doe Run Peru. We continue to pursue all legal and commercial avenues to collect the amount outstanding.

As at December 31, 2017, we had receivable balances associated with buyers of our concentrates of \$52.0 million (December 31, 2016 - \$45.0 million). The vast majority of the receivable balance is owed by five well-known concentrate buyers.

Silver doré production is refined under long-term agreements with fixed refining terms at three separate refineries worldwide. We generally retain the risk and title to the precious metals throughout the process of refining and therefore are exposed to the risk that the refineries will not be able to perform in accordance with the refining contract and that we may not be able to fully recover our precious metals in such circumstances. As at December 31, 2017, we had approximately \$21.9 million contained in precious metal inventory at refineries (December 31, 2016 - \$28.5 million). We maintain insurance coverage against the loss of precious metals at our mine sites, in-transit to refineries, and while at the refineries.

Refined silver and gold is sold in the spot market to various bullion traders and banks. Credit risk may arise from these activities if we are not paid for metal at the time it is delivered, as required by spot sale contracts.

We maintain trading facilities with several banks and bullion dealers for the purposes of transacting our trading activities. None of these facilities are subject to margin arrangements. Our trading activities can expose us to the credit risk of our counterparties to the extent that our trading positions have a positive mark-to-market value.

Supplier advances for products and services yet to be provided are a common practice in some jurisdictions in which the Company operates. These advances represent a credit risk to the Company to the extent that suppliers do not deliver products or perform services as expected. As at December 31, 2017, the Company had made \$14.3 million of supplier advances (December 31, 2016 - \$28.8 million), which are reflected in "Trade and other receivables" on the Company's balance sheet.

Management constantly monitors and assesses the credit risk resulting from our concentrate sales, refining arrangements, and commodity contracts. Furthermore, management carefully considers credit risk when allocating prospective sales and refining business to counterparties. In making allocation decisions, management attempts to avoid unacceptable concentration of credit risk to any single counterparty.

From time to time, we may invest in equity securities of other companies. Just as investing in Pan American is inherent with risks such as those set out in this MD&A, by investing in other companies we will be exposed to the risks associated with owning equity securities and those risks inherent in the investee companies.

## • Liquidity Risk

Liquidity risk is the risk that we will not be able to meet our financial obligations as they come due. The volatility of the metals markets can impact our ability to forecast cash flow from operations.

We must maintain sufficient liquidity to meet our short-term business requirements, taking into account our anticipated cash flows from operations, our holdings of cash and cash equivalents, and committed loan facilities.

We manage our liquidity risk by continuously monitoring forecasted and actual cash flows. We have in place a rigorous reporting, planning and budgeting process to help determine the funds required to support our normal operating requirements on an ongoing basis and our expansion plans. We continually evaluate and review capital and operating expenditures in order to identify, decrease, and limit all non-essential expenditures.

## • Exchange Rate Risk

Pan American reports its financial statements in USD; however, the Company operates in jurisdictions that utilize other currencies. As a consequence, the financial results of the Company's operations, as reported in USD, are subject to changes in the value of the USD relative to local currencies. Since the Company's revenues are denominated in USD and a portion of the Company's operating costs and capital spending are in local currencies, the Company is negatively impacted by strengthening local currencies relative to the USD and positively impacted by the inverse. The local currencies that the Company has the most exposure to are the PEN, MXN and ARS. In order to mitigate this exposure, the Company maintains a portion of its cash balances in PEN, MXN, ARS, BOB and CAD and, from time to time, enters into forward currency positions to match anticipated spending, as discussed in this MD&A in the "Financial Instruments" section. The following table illustrates the effect of changes in the exchange rate of PEN and MXN against the USD on anticipated cost of sales for 2017, expressed in percentage terms:

					MXN/USD			
		\$17.00	\$17.50	\$18.00	\$18.50	\$19.00	\$19.50	\$20.00
	\$3.08	102%	102%	101%	101%	100%	100%	100%
	\$3.13	102%	101%	101%	101%	100%	100%	100%
	\$3.18	101%	101%	101%	100%	100%	100%	99%
PEN/	\$3.23	101%	101%	100%	100%	100%	99%	99%
USD	\$3.28	101%	100%	100%	100%	99%	99%	99%
	\$3.33	101%	100%	100%	100%	99%	99%	99%
	\$3.38	100%	100%	100%	99%	99%	99%	98%
	\$3.43	100%	100%	99%	99%	99%	98%	98%

## 2018 Cost of Sales Exchange Rate Sensitivity

The Company's balance sheet contains various monetary assets and liabilities, some of which are denominated in foreign currencies. Accounting convention dictates that these balances are translated at the end of each period, with resulting adjustments being reflected as foreign exchange gains or losses on the Company's income statement.

In addition to the foregoing, governmental restrictions and controls relating to exchange rates also impact our operations. In Argentina, for example, the government has at times established official exchanges rates that were significantly different from the unofficial exchange rates more readily utilized in the local economy to determine prices and value. Maintaining monetary assets in ARS also exposes us to the risks of ARS devaluation and high domestic inflation.

# • Taxation Risks

Pan American is exposed to tax related risks. In assessing the probability of realizing income tax assets recognized, the Company makes estimates related to expectations of future taxable income, applicable tax planning opportunities, expected timing of reversals of existing temporary differences and the likelihood that tax positions taken will be sustained upon examination by applicable tax authorities. In making its assessments, we give additional weight to positive and negative evidence that can be objectively verified. Estimates of future taxable income are based on

forecasted cash flows from operations and the application of existing tax laws in each jurisdiction. We consider relevant tax planning opportunities that are within the Company's control, are feasible and within management's ability to implement. Examination by applicable tax authorities is supported based on individual facts and circumstances of the relevant tax position examined in light of all available evidence. Where applicable tax laws and regulations are either unclear or subject to ongoing varying interpretations, it is reasonably possible that changes in these estimates can occur that materially affect the amounts of income tax assets recognized. Also, future changes in tax laws could limit the Company from realizing the tax benefits from the deferred tax assets. We reassess unrecognized income tax assets at each reporting period.

## • Claims and Legal Proceedings

Pan American is subject to various claims and legal proceedings covering a wide range of matters that arise in the ordinary course of business activities. Many of these claims relate to current or ex-employees, some of which involve claims of significant value, for matters ranging from workplace illnesses such as silicosis to claims for additional profit-sharing and bonuses in prior years. Furthermore, we are in some cases the subject of claims by local communities, indigenous groups or private land owners relating to land and mineral rights and such claimants may seek sizable monetary damages against us and/or the return of surface or mineral rights that are valuable to us and which may significantly impact our operations and profitability if lost. Each of these matters is subject to various uncertainties and it is possible that some of these matters may be resolved unfavourably to us. We establish provisions for matters that are probable and can be reasonably estimated. We also carry liability insurance coverage, however such insurance does not cover all risks to which we might be exposed and in other cases, may only partially cover losses incurred by the Company. In addition, we may be involved in disputes with other parties in the future that may result in litigation, which may result in a material adverse effect on our financial position, cash flow and results of operations.

# SIGNIFICANT JUDGMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY IN THE APPLICATION OF ACCOUNTING POLICIES

In preparing financial statements in accordance with IFRS, management is required to make estimates and assumptions that affect the amounts reported in the consolidated financial statements. These critical accounting estimates represent management estimates and judgments that are uncertain and any changes in these could materially impact the Company's financial statements. Management continuously reviews its estimates, judgments, and assumptions using the most current information available. The significant judgments and key sources of estimation uncertainty in the application of accounting policies are described in Note 4 and Note 5 of the 2017 Financial Statements, respectively.

Readers should also refer to Note 2 of the 2017 Financial Statements, for the Company's summary of significant accounting policies.

## **CHANGES IN ACCOUNTING STANDARDS**

The Company has adopted the narrow scope amendments to IFRS 12 - *Disclosure of Interests in Other Entities*, IAS 12 - *Income Taxes*, and IAS 7 - *Statement of Cash Flows*, which were effective for annual periods beginning on or after January 1, 2017. The amendments did not have an impact on the Company's consolidated financial statements.

#### Changes in accounting standards not yet effective

The Company has not early adopted any amendment, standard or interpretation that has been issued by the IASB but is not yet effective.

**IFRS 9** *Financial Instruments* ("**IFRS 9**") was issued by the IASB on July 24, 2014 and will replace IAS 39 Financial Instruments: Recognition and Measurement. IFRS 9 utilizes a single approach to determine whether a financial asset is measured at amortized cost or fair value and a new mixed measurement model for debt instruments having only two categories: amortized cost and fair value. The approach in IFRS 9 is based on how an entity manages its financial instruments in the context of its business model and the contractual cash flow characteristics of the financial assets. Final amendments released on July 24, 2014 also introduce a new expected loss impairment model and limited changes to the classification and measurement requirements for financial assets. IFRS 9 is effective for annual periods beginning on or after January 1, 2018, with early adoption permitted. The Company will apply IFRS 9 at the date it becomes effective. Retrospective application is required, except for hedge accounting, which is not applied by the Company and which requires prospective application.

IFRS 9 will result in the following significant changes compared to the current standards: The classification of financial assets and liabilities are expected to remain consistent under IFRS except for equity securities. The Company will designate its equity securities as financial assets at fair value through profit or loss, where they will be recorded initially at fair value. Changes in fair value will be recorded in earnings (loss). Prior to adoption of this new standard changes in fair value were recorded in other comprehensive income and subsequently transferred into earnings (loss) upon disposition.

The introduction of the new "expected credit loss" impairment model under IFRS 9, as opposed to an incurred credit loss model under IAS 39, does not have a significant impact on the Company's accounts receivable given the Company sells its products exclusively to large international financial institutions and other organizations with strong credit ratings, the negligible historical level of customer default, and the short term nature of the Company's receivables.

**IFRS 15,** *Revenue from Contracts with Customers* ("**IFRS 15**") In May 2014, the IASB issued IFRS 15 Revenue from Contracts with Customers, which covers principles that an entity shall apply to report useful information to users of financial statements about the nature, amount, timing, and uncertainty of revenue and cash flows arising from a contract with a customer. IFRS 15 introduces a revenue recognition model under which an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The standard is effective for annual reporting periods beginning on or after January 1, 2018, and requires either a modified retrospective application or full retrospective application. The Company will adopt IFRS 15 using the modified retrospective transition approach, whereby the cumulative impact of adoption is recognized in retained earnings as of January 1, 2018 and comparative period balances are not restated.

Further, IFRS 15 introduces the concept of performance obligations that are defined as 'distinct' promised goods or services, and requires entities to apportion revenue earned to the distinct performance obligations on a relative standalone selling price basis. The Company may on time to time enter into concentrate contracts where the Company is responsible for shipping and insurance costs necessary to bring the goods to a named destination after the date on which control of the goods transferred to the customer. Accordingly, under IFRS 15, where material, a portion of the revenue earned under such contracts, representing the obligation to fulfill the shipping and insurance services, will be deferred and recognized over the time the obligations are fulfilled. As the amounts associated with any such services are insignificant compared to the total value of contract, and the fact that many contracts would be completed within a financial reporting period, the Company does not expect the impact of treating these services as separate performance obligations to have a material impact on the Company's consolidated financial statements.

The Company's concentrate sales are subject to provisional pricing provisions, the Company has determined that the recognition of revenue related to these sales will not be significantly affected by IFRS 15. However, separate presentation of the provisional pricing adjustments will be required in the revenue note disclosure.

**IFRS 16**, *Leases* ("**IFRS 16**") In January 2016, the IASB issued IFRS 16 - *Leases* which replaces IAS 17 - *Leases* and its associated interpretative guidance, including IFRIC 4 and SIC 15. IFRS 16 applies a control model to the identification of leases, distinguishing between a lease and a non-lease component on the basis of whether the customer controls the specific asset. For those contracts that are or contain a lease, IFRS 16 introduces significant changes to the accounting for contracts that are or contain a lease, introducing a single, on-balance sheet accounting model that is similar to current finance lease accounting, with limited exceptions for short-term leases or leases of low value assets. Lessor accounting remains similar to current accounting practice. The standard is effective for annual periods beginning on or after January 1, 2019, with early application permitted for entities that apply IFRS 15.

The Company anticipates that the adoption of IFRS 16 will result in an increase in the recognition of right of use assets and lease liabilities related to leases with terms greater than 12 months in our Statement of Financial Position at January 1, 2019. IFRS 16 will further result in increased depreciation and amortization on these right of use assets and increased interest on these additional lease liabilities. These lease payments will be recorded as financing outflows in our Consolidated Statements of Cash Flows.

The Company expects to identify and collect data relating to existing lease agreements during 2018.

**IFRIC Interpretation 22 Foreign Currency Transactions and Advance Consideration ("IFRIC 22")** On December 8, 2016, the IASB issued IFRIC 22, which addresses the exchange rate to use in transactions that involve advance consideration paid or received in a foreign currency. The standard provides guidance on how to determine the date of the transaction for the purpose of determining the spot exchange rate used to translate the asset, expense or income on initial recognition that relates to, and is recognized on the de-recognition of, a non-monetary prepayment asset or a non-monetary deferred income liability. It is effective January 1, 2018. The Company is currently assessing the impact on the adoption of this interpretation.

# CORPORATE GOVERNANCE, SOCIAL RESPONSIBILITY, AND ENVIRONMENTAL STEWARDSHIP

#### Governance

Pan American adheres to high standards of corporate governance and closely follows the requirements established by both the Canadian Securities Administrators and the SEC. We believe that our current corporate governance systems meet or exceed these requirements.

Our Board of Directors oversees the direction and strategy of the business and the affairs of the Company. The Board is comprised of eight directors, six of whom are independent. The Board's wealth of experience allows it to effectively oversee the development of corporate strategies, provide management with long-term direction, consider and approve major decisions, oversee the business generally and evaluate corporate performance. The Nominating and Governance Committee, appointed by the Board of Directors, oversees the effective functioning of the Board and the implementation of governance best practices.

We believe that good corporate governance is important to the effective performance of the Company and plays a significant role in protecting the interests of all stakeholders while helping to maximize value.

# **Corporate Social Responsibility**

The Health, Safety, Environment, and Communities Committee, appointed by the Board of Directors, provides oversight for the corporate social initiatives of the Company and reports directly to the Board. We are committed to creating sustainable value in the communities where our people work and live. Guided by research conducted by our local offices, we participate in, and contribute to numerous community programs. They typically center on education and health, nutrition, environmental awareness, local infrastructure and alternative economic activities. Some of our key initiatives are:

• Strengthening the production chain of livestock breeding.

- Value adding through the development of alpaca textiles weaving workshops with product commercialization in North America.
- Improving nutrition, focusing on children and women.
- Promoting community health with emphasis on immunizations, optometry, and oral health.
- Promoting tourism and local areas of interest such as the Stone Forest in Huayllay in Peru.
- Encouraging education for children and adults by contributing to teacher's salaries, and providing continuous support through different scholarships at a local and national level.

#### **Environmental Stewardship**

We are committed to operating our mines and developing our new projects in an environmentally responsible manner. Guided by our Corporate Environmental Policy, we take every practical measure to minimize the environmental impacts of our operations in each phase of the mining cycle, from early exploration through development, construction and operation, up to and after the mine's closure.

We build and operate mines in varied environments across the Americas. From the Patagonian plateau to the Sierra Madre in Mexico, our mines are generally located in isolated places where information about environmental and cultural values is often limited. Our mines in Peru and Bolivia are situated in historic mining districts where previous operations have left significant environmental liabilities that have potential to impact surrounding habitats and communities.

We manage these challenges using best practice methods in environmental impact assessment and teams of leading local and international professionals who clearly determine pre-existing environmental values at each location. These extensive baseline studies often take years of work and cover issues such as biodiversity and ecosystems, surface and groundwater resources, air quality, soils, landscape, archeology and paleontology, and the potential for acid rock drainage in the natural rocks of each new mineral deposit or historic waste facilities. The data collected often significantly advances scientific knowledge about the environments and regions where we work.

The baseline information is then used interactively in the design of each new mine or to develop management and closure plans for historic environmental liabilities, in open consultation with local communities and government authorities. We conduct detailed modeling and simulation of the environmental effects of each alternative design in order to determine the optimum solution, always aiming for a net benefit.

Once construction and operations begin, we conduct regular monitoring of all relevant environmental variables in order to measure real impacts against baseline data and report to the government and communities on our progress. Community participation in environmental monitoring is encouraged across all our mines. We implement management systems, work procedures and regular staff training to ensure optimum day-to-day management of issues like waste separation and disposal, water conservation, spill prevention, and incident investigation and analysis.

We conduct corporate environmental audits of our operations to ensure optimum environmental performance. Environmental staff from all mines participate in the audits, which improves integration and consolidation of companywide standards across our operations. In 2017, audits were conducted on the Dolores, La Colorada and Manantial Espejo mines. In 2016, audits were conducted on the Huaron, Morococha, and San Vicente mines. No material issues were identified in either the 2017 or 2016 environmental audits.

# DISCLOSURE CONTROLS AND PROCEDURES

Pan American's management considers the meaning of internal control to be the processes established by management to provide reasonable assurance about the achievement of the Company's objectives regarding operations, reporting and compliance. Internal control is designed to address identified risks that threaten any of these objectives.

As of December 31, 2017, the Company carried out an evaluation, under the supervision and with the participation of the Company's management, including the Company's Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of the Company's disclosure controls and procedures. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that, as of December 31, 2017, the Company's disclosure controls and procedures were effective.

### Management's Report on Internal Control over Financial Reporting

Management of Pan American is responsible for establishing and maintaining an adequate system of internal control, including internal controls over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the President and Chief Executive Officer and the Chief Financial Officer and effected by the Board of Directors, management and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board. It includes those policies and procedures that:

- a) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of Pan American,
- b) are designed to provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with International Financial Reporting Standards, and that receipts and expenditures of Pan American are being made only in accordance with authorizations of management and Pan American's directors, and
- c) are designed to provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of Pan American's assets that could have a material effect on the annual financial statements or interim financial reports.

The Company's management, including its President and Chief Executive Officer and Chief Financial Officer, believe that due to its inherent limitations, internal control over financial reporting may not prevent or detect misstatements on a timely basis. Also, projections of any evaluation of the effectiveness of internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of Pan American's internal control over financial reporting as of December 31, 2017, based on the criteria set forth in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment, management concluded that, as of December 31, 2017, Pan American's internal control over financial reporting was effective.

Management reviewed the results of management's assessment with the Audit Committee of the Board of Directors. Deloitte LLP, an independent registered public accounting firm, was engaged, as approved by a vote of the Company's shareholders, to audit and provide independent opinions on the Company's consolidated financial statements and the effectiveness of the Company's internal control over financial reporting as of December 31, 2017. Deloitte LLP has provided such opinions.

#### **Changes in Internal Controls over Financial Reporting**

There has been no change in the Company's internal control over financial reporting during the period ended December 31, 2017 that has materially affected or is reasonably likely to materially affect, its internal control over financial reporting.

#### **MINERAL RESERVES AND RESOURCES**

Property	Location	Classification	Tonnes (Mt)	Ag (g/t)	Contained Ag (Moz)	Au (g/t)	Contained Au (koz)	Cu (%)	Contained Cu (kt)	Pb (%)	Contained Pb (kt)	Zn (%)	Contained Zn (kt)
Huaron	Peru	Proven	5.7	167	30.8	N/A	N/A	0.47	27.1	1.43	81.8	2.95	169.0
		Probable	4.0	169	21.7	N/A	N/A	0.47	19.0	1.55	62.0	2.91	116.5
Morococha(92.3%) <sup>(3)</sup>	Peru	Proven	3.0	160	15.3	N/A	N/A	0.53	15.8	1.06	31.7	3.59	107.3
		Probable	2.9	159	14.9	N/A	N/A	0.36	10.6	1.53	44.7	3.64	106.6
La Colorada	Mexico	Proven	3.7	413	48.9	0.33	38.8	N/A		1.65	60.8	2.97	109.6
		Probable	4.1	378	49.3	0.31	39.8	N/A		1.23	50.1	2.14	86.7
Dolores	Mexico	Proven	34.7	30	33.0	0.93	1,040.8	N/A		N/A		N/A	
		Probable	16.3	25	13.1	0.69	360.3	N/A		N/A		N/A	
La Bolsa	Mexico	Proven	9.5	10	3.1	0.67	202.9	N/A		N/A		N/A	
		Probable	6.2	7	1.4	0.57	113.1	N/A		N/A		N/A	
Manantial Espejo	Argentina	Proven	1.5	91	4.4	0.77	37.5	N/A		N/A		N/A	
		Probable	0.6	305	5.6	3.37	61.6	N/A		N/A		N/A	
San Vicente (95%) <sup>(3)</sup>	Bolivia	Proven	1.9	416	25.6	N/A	N/A	0.43	8.3	0.36	6.8	3.00	57.3
		Probable	0.6	449	8.1	N/A	N/A	0.50	2.8	0.46	2.6	2.92	16.3
Joaquin	Argentina	Probable	0.5	721	11.0	0.41	6.2	N/A		N/A		N/A	
COSE	Argentina	Probable	0.1	918	2.2	17.7	43.3	N/A		N/A		N/A	
Totals <sup>(4)</sup>		Proven + Probable	95.1	94	288.4	0.79	1,944.4	0.46	83.4	1.32	340.5	2.98	769.3

Prices used to estimate mineral reserves for 2017 were \$18.50 per ounce of silver, \$1,300 per ounce of gold, \$2,600 per tonne of zinc, \$2,200 per tonne of lead, and \$5,500 per tonne of copper, except at Manantial Espejo where \$16.50 per ounce of silver and \$1,250 per ounce of gold were used for planned 2018 production, reverting to \$18.50 per ounce of silver and \$1,300 per ounce of gold thereafter. Metal prices used for La Bolsa were \$14.00 per ounce of silver and \$25 per ounce of gold. Mineral reserve estimates were prepared under the supervision of, or were reviewed by, Christopher Emerson, FAusIMM, Vice President Business Development and Geology and Martin G. Wafforn, P.Eng., Senior Vice President Technical Services and Process Optimization, each of whom are Qualified Persons as that term is defined in National Instrument 43-101 ("NI 43-101"). This information represents the portion of mineral reserves attributable to Pan American based on its ownership interest in the operating entity as indicated (1)

(2)

(3) as indicated.

(4) Totals may not add up due to rounding.

Property	Location	Classification	Tonnes (Mt)	Ag (g/t)	Contained Ag (Moz)	Au (g/t)	Contained Au (koz)	Cu (%)	Pb (%)	Zn (%)
Huaron	Peru	Measured	2.2	162	11.3	N/A	N/A	0.22	1.58	3.00
		Indicated	1.5	167	7.9	N/A	N/A	0.28	1.66	3.20
Morococha (92.3%) <sup>(3)</sup>	Peru	Measured	0.3	153	1.4	N/A	N/A	0.20	0.72	1.66
		Indicated	0.5	152	2.3	N/A	N/A	0.42	1.01	2.32
La Colorada	Mexico	Measured	0.5	220	3.4	0.22	3.5	N/A	0.74	1.04
		Indicated	1.8	221	12.9	0.19	11.0	N/A	0.39	0.66
Dolores	Mexico	Measured	4.8	18	2.8	0.28	43.1	N/A	N/A	N/A
		Indicated	3.5	21	2.3	0.50	56.2	N/A	N/A	N/A
La Bolsa	Mexico	Measured	1.4	11	0.5	0.90	39.9	N/A	N/A	N/A
		Indicated	4.5	9	1.3	0.50	71.2	N/A	N/A	N/A
Manantial Espejo	Argentina	Measured	0.1	145	0.4	1.89	4.7	N/A	N/A	N/A
		Indicated	0.4	192	2.4	1.91	24.2	N/A	N/A	N/A
San Vicente (95%) <sup>(3)</sup>	Bolivia	Measured	0.8	148	3.8	N/A	N/A	0.20	0.17	2.31
		Indicated	0.1	177	0.4	N/A	N/A	0.23	0.19	1.43
Navidad	Argentina	Measured	15.4	137	67.8	N/A	N/A	0.10	1.44	N/A
		Indicated	139.8	126	564.5	N/A	N/A	0.04	0.79	N/A
Pico Machay	Peru	Measured	4.7	N/A	N/A	0.91	137.5	N/A	N/A	N/A
		Indicated	5.9	N/A	N/A	0.67	127.1	N/A	N/A	N/A
Joaquin	Argentina	Indicated	0.1	385	0.7	0.58	1.1	N/A	N/A	N/A
Totals <sup>(4)</sup>		Measured +Indicated	188.0	120	686.2	0.59	519.6	0.05	0.86	2.17

(1) Prices used to estimate mineral resources for 2017 were \$18.50 per ounce of silver, \$1,300 per ounce of gold, \$2,600 per tonne of zinc, \$2,200 per tonne of lead, and \$5,500 per tonne of copper, except at Dolores, Manantial Espejo, and Joaquin, where \$25.00 per ounce of silver and \$1,400 per ounce of gold were used. Metal prices used for La Bolsa were \$14.00 per ounce of silver and \$825 per ounce of gold. Metal prices for Navidad were \$12.52 per ounce of silver and \$1,100 per tonne of lead.

(2) Mineral resource estimates were prepared under the supervision of, or were reviewed by, Christopher Emerson, FAusIMM, Vice President Business Development and Geology and Martin G. Wafforn, P.Eng., Senior Vice President Technical Services and Process Optimization, each of whom are Qualified Persons as that term is defined in NI 43-101.

(3) This information represents the portion of mineral resources attributable to Pan American based on its ownership interest in the operating entity as indicated.

(4) Totals may not add up due to rounding.

Pan American Silver Corpo	ration Mineral	Resources as of	December 3	1, 2017 <sup>(1,2</sup>	2)					
Property	Location	Classification	Tonnes (Mt)	Ag (g/t)	Contained Ag (Moz)	Au (g/t)	Contained Au (koz)	Cu (%)	Pb (%)	Zn (%)
Huaron	Peru	Inferred	6.6	163	34.5	N/A	N/A	0.41	1.51	2.76
Morococha (92.3%) <sup>(3)</sup>	Peru	Inferred	4.4	148	21.0	N/A	N/A	0.62	1.12	3.31
La Colorada	Mexico	Inferred	3.7	247	29.4	0.25	30.3	N/A	2.11	3.39
Dolores	Mexico	Inferred	1.7	60	3.3	1.44	79.6	N/A	N/A	N/A
La Bolsa	Mexico	Inferred	13.7	8	3.3	0.51	224.6	N/A	N/A	N/A
Manantial Espejo	Argentina	Inferred	0.4	187	2.3	2.69	33.4	N/A	N/A	N/A
San Vicente (95%) <sup>(3)</sup>	Bolivia	Inferred	3.3	295	31.6	N/A	N/A	0.27	0.35	2.92
Navidad	Argentina	Inferred	45.9	81	119.4	N/A	N/A	0.02	0.57	N/A
Pico Machay	Peru	Inferred	23.9	N/A	N/A	0.58	445.7	N/A	N/A	N/A
Joaquin	Argentina	Inferred	0.01	389	0.1	1.29	0.2	N/A	N/A	N/A
COSE	Argentina	Inferred	0.03	382	0.3	7.10	6.3	N/A	N/A	N/A
Totals <sup>(4)</sup>		Inferred	103.7	96	245.3	0.59	820.2	0.12	0.78	2.79

(1) Prices used to estimate mineral resources for 2017 were \$18.50 per ounce of silver, \$1,300 per ounce of gold, \$2,600 per tonne of zinc, \$2,200 per tonne of lead, and \$5,500 per tonne of copper, except at Dolores, Manantial Espejo, and Joaquin, where \$25.00 per ounce of silver and \$1,400 per ounce of gold were used. Metal prices used for La Bolsa were \$14.00 per ounce of silver and \$825 per ounce of gold. Metal prices for Navidad were \$12.52 per ounce of silver and \$1,100 per tonne of lead.

(2) Mineral resource estimates were prepared under the supervision of, or were reviewed by, Christopher Emerson, FAusIMM, Vice President Business Development and Geology and Martin G. Wafforn, P.Eng., Senior Vice President Technical Services and Process Optimization, each of whom are Qualified Persons as that term is defined in NI 43-101.

(3) This information represents the portion of mineral resources attributable to Pan American based on its ownership interest in the operating entity as indicated.

(4) Totals may not add up due to rounding.

#### Dolores, Mexico, as of December 31, 2017:

Location	Classification	Tonnes (Mt)	Ag ppm	Ag contained metal (Moz)	Au ppm	Au contained metal (koz)
	Proven	27.7	28	24.6	0.98	875.0
	Probable	14.7	21	10.0	0.55	260.6
Open pit	Proven + Probable	42.5	25	34.7	0.83	1,135.6
	Proven	2.4	71	5.5	1.53	119.9
	Probable	1.6	59	3.0	1.93	99.7
Underground	Proven + Probable	4.0	66	8.6	1.69	219.6
	Proven	4.5	20	2.8	0.32	45.9
	Probable	0	0	0	0	0
Stockpiles	Proven + Probable	4.5	20	2.8	0.32	45.9
	Proven	34.7	30	33.0	0.93	1,040.8
	Probable	16.3	25	13.1	0.69	360.3
All	Proven + Probable	51.0	28	46.1	0.85	1,401.1

Notes: Totals may not add up due to rounding. Mineral reserve estimates were prepared under the supervision of or were reviewed by Martin Wafforn, I Eng., Senior Vice President, Technical Services and Process Optimization of Pan American. Mineral reserves have been estimated using metal prices of \$18.50 per ounce of silver and \$1,300 per ounce of gold.

#### **General Notes Applicable to the Foregoing Tables:**

Mineral reserves and resources are as defined by the Canadian Institute of Mining, Metallurgy and Petroleum.

Pan American reports mineral resources and mineral reserves separately. Reported mineral resources do not include amounts identified as mineral reserves. Mineral resources that are not mineral reserves have no demonstrated economic viability.

Pan American does not expect these mineral reserve and resource estimates to be materially affected by metallurgical, environmental, permitting, legal, taxation, socio-economic, political, and marketing or other relevant issues.

See the Company's Annual Information Form dated March 22, 2018, available at www.sedar.com for further information on the Company's material mineral properties, including information concerning associated QA/QC and data verification matters, the key assumptions, parameters and methods used by the Company to estimate mineral reserves and mineral resources, and for a detailed description of known legal, political, environmental, and other risks that could materially affect the Company's business and the potential development of the Company's mineral reserves and resources.

Grades are shown as contained metal before mill recoveries are applied.

#### **TECHNICAL INFORMATION**

Scientific and technical information contained in this MD&A has been reviewed and approved by Martin Wafforn, P.Eng., Senior Vice President Technical Services and Processing Optimization, and Christopher Emerson, FAusIMM, Vice President Business Development and Geology, each of whom are Qualified Persons, as the term is defined in NI Canadian National Instrument 43-101 - *Standards of Disclosure of Mineral Projects*.

For more detailed information regarding the Company's material mineral properties and technical information related thereto, including a complete list of current technical reports applicable to such properties, please refer to the Company's Annual Information Form dated March 22, 2018, filed at <u>www.sedar.com</u> or the Company's most recent Form 40-F filed with the SEC.

#### Cautionary Note Regarding Forward-Looking Statements and Information

Certain of the statements and information in this MD&A constitute "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 relating to the Company and its operations. All statements, other than statements of historical fact, are forward-looking statements. When used in this MD&A, the words, "will", "believes", "expects", "intents", "plans", "forecast", "objective", "guidance", "outlook", "potential", "anticipated", "budget", and other similar words and expressions, identify forward-looking statements or information. These forward-looking statements or information relate to, among other things: future financial and operational performance; future production of silver, gold and other metals produced by the Company; future cash costs per ounce of silver and all-in sustaining costs per silver ounce sold; the sufficiency of the Company's current working capital, anticipated operating cash flow or its ability to raise necessary funds; timing of production and the cash costs of production at each of the Company's properties; the estimated cost of and availability of funding necessary for sustaining capital; the successful implementation and effects of ongoing or future development and expansion plans, including the development of the Joaquin and COSE projects, and the anticipated financial and operational results of such projects; forecast capital and non-operating spending; the timing and method of payment of compensation; anticipated volatility in effective tax rates and contributing factors; and the Company's plans and expectations for its properties and operations.

These forward-looking statements and information reflect the Company's current views with respect to future events and are necessarily based upon a number of assumptions and estimates that, while considered reasonable by the Company, are inherently subject to significant operational, business, economic, competitive, political, regulatory, and social uncertainties and contingencies. These assumptions include: tonnage of ore to be mined and processed; ore grades and recoveries; prices for silver, gold and base metals remaining as estimated; currency exchange rates remaining as estimated; capital, decommissioning and reclamation estimates; our mineral reserve and resource estimates and the assumptions upon which they are based; prices for energy inputs, labour, materials, supplies and services (including transportation); no labour-related disruptions at any of our operations; no unplanned delays or interruptions in scheduled production; all necessary permits, licenses and regulatory approvals for our operations are received in a timely manner; and our ability to comply with environmental, health and safety laws. The foregoing list of assumptions is not exhaustive.

The Company cautions the reader that forward-looking statements and information involve known and unknown risks, uncertainties and other factors that may cause actual results and developments to differ materially from those expressed or implied by such forward-looking statements or information contained in this MD&A and the Company has made assumptions and estimates based on or related to many of these factors. Such factors include, without limitation: fluctuations in silver, gold, and base metal prices; fluctuations in prices for energy inputs; fluctuations in currency markets (such as the PEN, MXN, ARS, BOL and CAD versus the USD); risks related to the technological and operational nature of the Company's business; changes in national and local government, legislation, taxation, controls or regulations and political, legal or economic developments in Canada, the United States, Mexico, Peru, Argentina, Bolivia or other countries where the Company may carry on business, including the risk of expropriation relative to certain of our operations, particularly in Argentina and Bolivia; risks and hazards associated with the business of mineral exploration, development and mining (including environmental hazards, industrial accidents, unusual or unexpected geological or structural formations, pressures, cave-ins and flooding); risks relating to the credit worthiness or financial condition of suppliers, refiners and other parties with whom the Company does business; inadequate insurance, or inability to obtain insurance, to cover these risks and hazards; employee relations; relationships with and claims by the local communities and indigenous populations; availability and increasing costs associated with mining inputs and labour; the speculative nature of mineral exploration and development, including the risk of obtaining necessary licenses and permits and the presence of laws and regulations that may impose restrictions on mining, including those currently in the province of Chubut, Argentina; diminishing quantities or grades of mineral reserves as properties are mined; global financial conditions; the Company's ability to complete and successfully integrate acquisitions and to mitigate other business combination risks; challenges to, or difficulty in maintaining, the Company's title to properties and continued ownership thereof; the actual results of current exploration activities, conclusions of economic evaluations, and changes in project parameters to deal with unanticipated economic or other factors; increased competition in the mining industry for properties, equipment, qualified personnel, and their costs; having sufficient cash to pay obligations as they come due; and those factors identified under the caption "Risks Related to Pan American's Business" in the Company's most recent Form 40-F and Annual Information Form filed with the United States Securities and Exchange Commission and Canadian provincial securities regulatory authorities, respectively. Although the Company has attempted to identify important factors that could cause actual results to differ materially, there may be other factors that cause results not to be as anticipated, estimated, described, or intended. Investors are cautioned against attributing undue certainty or reliance on forward-looking statements or information. Forward-looking statements and information are designed to help readers understand management's current views of our near and longer term prospects and may not be appropriate for other purposes. The Company does not intend, and does not assume any obligation, to update these forward-looking statements or information to reflect changes in assumptions or in circumstances or any other events affecting such statements or information, other than as required by applicable law.

#### Cautionary Note to U.S. Investors Concerning Estimates of Mineral Reserves and Resources

This MD&A has been prepared in accordance with the requirements of Canadian securities laws, which differ from the requirements of U.S. securities laws. Unless otherwise indicated, all mineral reserve and resource estimates included in the MD&A have been disclosed in accordance with NI 43-101 and the Canadian Institute of Mining, Metallurgy, and Petroleum Definition Standards. NI 43-101 is a rule developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. Canadian standards, including NI 43-101, differ significantly from the requirements of the SEC, and information concerning mineralization, deposits, mineral reserve and resource information contained or referred to herein may not be comparable to similar information disclosed by U.S. companies. In particular, and without limiting the generality of the foregoing, this MD&A uses the terms "measured resource", "indicated resources" and "inferred resources". U.S. investors are advised that, while such terms are recognized and required by Canadian Securities laws, the SEC does not recognize them. The requirements of NI 43-101 for identification of "reserves" are not the same as those of the SEC, and reserves reported by Pan American Silver Corp., in compliance with NI 43-101, may not qualify as "reserves" under SEC standards. Under U.S. standards, mineralization may not be classified as a "reserve" unless the determination has been made that the mineralization could be economically and legally produced for extracted at the time the reserve determination is made. U.S. investors are cautioned not to assume that any part of a "measured resource" or "indicated resource" will ever be converted in to a "reserve". U.S. investors should also understand that "inferred resources" have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of the "inferred resources" exist, are economically or legally mineable or will ever be upgraded to a higher category. Under Canadian Securities laws, estimated "inferred resources" may not form the basis of feasibility or pre-feasibility studies, except in rare cases. Disclosure of "contained ounces" in a mineral resource is permitted disclosure under Canadian Securities laws. However, the SEC normally only permits issuers to report mineralization that does not constitute "reserves" by SEC standards as in place tonnage and grade, without reference to unit measures. Accordingly, information concerning mineral deposits set forth may not be comparable with information made public companies that report in accordance with U.S. standards.



# **Consolidated Financial Statements and Notes**

FOR THE YEARS ENDED DECEMBER 31, 2017 AND DECEMBER 31, 2016



#### Management's Responsibility For Financial Reporting

The accompanying Consolidated Financial Statements of Pan American Silver Corp. were prepared by management, which is responsible for the integrity and fairness of the information presented, including the many amounts that must of necessity be based on estimates and judgments. These Consolidated Financial Statements were prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB"). Financial information appearing throughout our management's discussion and analysis is consistent with these Consolidated Financial Statements.

In discharging our responsibility for the integrity and fairness of the consolidated financial statements and for the accounting systems from which they are derived, we maintain the necessary system of internal controls designed to ensure that transactions are authorized, assets are safeguarded and proper records are maintained. These controls include quality standards in hiring employees, policies and procedure manuals, a corporate code of conduct and accountability for performance within appropriate and well-defined areas of responsibility.

The Board of Directors oversees management's responsibilities for financial reporting through an Audit Committee, which is composed entirely of directors who are neither officers nor employees of Pan American Silver Corp. This Committee reviews our consolidated financial statements and recommends them to the Board for approval. Other key responsibilities of the Audit Committee include reviewing our existing internal control procedures and planned revisions to those procedures, and advising the directors on auditing matters and financial reporting issues.

Deloitte LLP, Independent Registered Public Accounting Firm appointed by the shareholders of Pan American Silver Corp. upon the recommendation of the Audit Committee and Board, have performed an independent audit of the Consolidated Financial Statements and their report follows. The auditors have full and unrestricted access to the Audit Committee to discuss their audit and related findings.

"signed"

Michael Steinmann Chief Executive Officer

March 22, 2018

"signed"

A. Robert Doyle Chief Financial Officer

# Deloitte.

# **REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Shareholders and the Board of Directors of Pan American Silver Corp.

#### **Opinion on the Consolidated Financial Statements**

We have audited the accompanying consolidated financial statements of Pan American Silver Corp. and subsidiaries (the "Company"), which comprise the consolidated statements of financial position as at December 31, 2017 and December 31, 2016, the consolidated income statements, consolidated statements of comprehensive income, consolidated statements of cash flows and consolidated statements of changes in equity for the years then ended, and the related notes, including a summary of significant accounting policies and other explanatory information (collectively referred to as the "financial statements").

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as at December 31, 2017 and December 31, 2016, and its financial performance and its cash flows for the years then ended in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board.

#### **Report on Internal Control over Financial Reporting**

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 22, 2018 expressed an unqualified opinion on the Company's internal control over financial reporting.

#### **Basis for Opinion**

# Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

## Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards and the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement, whether due to fraud or error. Those standards also require that we comply with ethical requirements. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB. Further, we are required to be independent of the Company in accordance with the ethical requirements that are relevant to our

audit of the financial statements in Canada and to fulfill our other ethical responsibilities in accordance with these requirements.

An audit includes performing procedures to assess the risks of material misstatement of the financial statements, whether due to fraud or error, and performing procedures that respond to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Company's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies and principles used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a reasonable basis for our audit opinion.

/s/ Deloitte LLP

Chartered Professional Accountants Vancouver, Canada

March 22, 2018

We have served as the Company's auditor since 1993.

# Deloitte.

# **REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Shareholders and the Board of Directors of Pan American Silver Corp.

#### **Opinion on Internal Control over Financial Reporting**

We have audited the internal control over financial reporting of Pan American Silver Corp. and subsidiaries (the "Company") as of December 31, 2017, based on criteria established in *Internal Control-Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB) and Canadian generally accepted auditing standards, the consolidated financial statements as at and for the year ended December 31, 2017, of the Company and our report dated March 22, 2018, expressed an unmodified/unqualified opinion on those financial statements.

#### **Basis for Opinion**

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

#### Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as

necessary to permit preparation of financial statements in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Deloitte LLP

Chartered Professional Accountants Vancouver, Canada

March 22, 2018



	December 31,	De	ecember 31,
	2017	De	2016
Assets			
Current assets			
Cash and cash equivalents (Note 25)	\$ 175,953	\$	180,881
Short-term investments (Note 8)	51,590		36,729
Trade and other receivables (Note 7)	109,746		130,117
Income taxes receivable	16,991		17,460
Inventories (Note 9)	218,715		237,329
Derivative financial instruments (Note 7)	1,092		_
Assets held for sale (Note 10)	7,949		_
Prepaid expenses and other current assets	13,434		10,337
	595,470		612,853
Non-current assets			
Mineral properties, plant and equipment (Note 10)	1,336,683		1,222,727
Long-term refundable tax	80		7,664
Deferred tax assets (Note 28)	2,679		1,727
Investment in associates (Note 12)	55,017		49,734
Other assets (Note 13)	346		379
Goodwill (Note 11)	3,057		3,057
Total Assets	\$ 1,993,332	\$	1,898,141
Liabilities			
Current liabilities			
Accounts payable and accrued liabilities (Note 14)	\$ 139,698	\$	143,502
Loans payable (Note 15)	3,000		-
Derivative financial instruments (Note 7)	1,906		2,815
Current portion of provisions (Note 16)	8,245		8,499
Current portion of finance lease (Note 17)	5,734		3,559
Income tax payable	26,131		25,913
	184,714		184,286
Non-current liabilities			
Long-term portion of provisions (Note 16)	61,248		51,444
Deferred tax liabilities (Note 28)	171,228		170,863
Long-term portion of finance lease (Note 17)	1,825		3,542
Long-term debt (Note 18)	-		36,200
Deferred revenue (Note 12)	12,017		11,563
Other long-term liabilities (Note 19)	26,954		27,408
Share purchase warrants (Note 12)	14,295		13,833
Total Liabilities	472,281		499,137
Equity			
Capital and reserves (Note 20)			
Issued capital	2,318,252		2,303,978
Share option reserve	22,463		22,946
Investment revaluation reserve	1,605		434
Deficit	(825,470)		(931,060
Total Equity attributable to equity holders of the Company	1,516,850		1,396,298
Non-controlling interests	4,201		2,706
Total Equity	1,521,051		1,399,004
Total Liabilities and Equity	\$ 1,993,332	\$	1,898,141

Commitments and Contingencies (Notes 7, 29); subsequent events (Note 10) See accompanying notes to the consolidated financial statements APPROVED BY THE BOARD ON MARCH 22, 2018

"signed" Ross Beaty, Director

"signed" Michael Steinmann, Director



	2017		2016
Revenue (Note 26)	\$ 816,828	\$	774,775
Cost of sales			
Production costs (Note 21)	(500,670)		(428,333)
Depreciation and amortization (Note 10)	(122,888)		(115,955)
Royalties	(24,510)		(31,608)
	(648,068)		(575,896)
Mine operating earnings	168,760		198,879
General and administrative	(21,397)		(23,663)
Exploration and project development	(19,755)		(11,334)
Foreign exchange gains (losses)	1,823		(9,054)
Impairment reversals (Note 11)	61,554		_
Gains (losses) on commodity, diesel fuel swaps, and foreign currency contracts (Note 7)	606		(4,944)
Gain on sale of mineral properties, plant and equipment (Note 10)	191		25,100
Share of loss from associate and dilution gain (Note 12)	2,052		7,946
Other (expense) income (Note 27)	(5 <i>,</i> 505)		1,542
Earnings from operations	188,329		184,472
Gain on derivatives (Note 7)	64		_
Investment income	1,277		1,350
Interest and finance expense (Note 23)	(7,185)		(9,551)
Earnings before income taxes	182,485		176,271
Income tax expense (Note 28)	(59 <i>,</i> 034)		(74,446)
Net earnings for the year	\$ 123,451	\$	101,825
Attributable to:			
Equity holders of the Company	\$ 120,991	\$	100,085
Non-controlling interests	2,460	•	1,740
	\$ 123,451	\$	101,825
Earnings per share attributable to common shareholders (Note 24)			
Basic earnings per share	\$ 0.79	\$	0.66
Diluted earnings per share	\$ 0.79	\$	0.66
Weighted average shares outstanding (in 000's) Basic	153,070		152,118
Weighted average shares outstanding (in 000's) Diluted	153,353		152,504

See accompanying notes to the consolidated financial statements.



	2017	2016
Net earnings for the year	\$ 123,451	\$ 101,825
Items that may be reclassified subsequently to net earnings:		
Unrealized net gains on available for sale securities (net of \$nil tax in 2017 and 2016)	810	912
Reclassification adjustment for realized losses (gains) on equity securities to earnings (net of \$nil tax in 2017 and 2016)	361	(20)
Total comprehensive earnings for the year	\$ 124,622	\$ 102,717
Total comprehensive earnings attributable to:		
Equity holders of the Company	\$ 122,162	\$ 100,977
Non-controlling interests	2,460	1,740
	\$ 124,622	\$ 102,717

See accompanying notes to the consolidated financial statements.



**Consolidated Statements of Cash Flows** (in thousands of U.S. dollars)

		2017		2016
Cash flow from operating activities				
Net earnings for the year	\$	123,451	\$	101,825
Current income tax expense (Note 28)		62,877		44,031
Deferred income tax (recovery) expense (Note 28)		(3,843)		30,415
Interest (recovery) expense (Note 23)		(1,179)		2,115
Depreciation and amortization (Note 10)		122,888		115,955
Impairment reversals (Note 11)		(61,554)		_
Accretion on closure and decommissioning provision (Note 16)		5,973		4,363
Unrealized (gains) losses on foreign exchange		(383)		5,759
(Gains) losses on commodity, diesel fuel swaps, and foreign currency contracts (Note 7)		(606)		4,944
Gain on sale of mineral properties, plant and equipment		(191)		(25,100)
Project development write-down		1,898		_
Other operating activities (Note 25)		13,269		(46,935)
Changes in non-cash operating working capital (Note 25)		11,709		(5,545)
Operating cash flows before interest and income taxes	\$	274,309	\$	231,827
Interest paid		(2,367)		(2,553)
Interest received		1,462		1,382
Income taxes paid		(48,845)		(15,852)
Net cash generated from operating activities	\$	224,559	\$	214,804
Cash flow from investing activities				
Payments for mineral properties, plant and equipment	\$	(142,232)	Ś	(202,661)
Acquisition of mineral interests		(20,219)	Ŧ	(, 
Net (purchase) proceeds from sales of short-term investments		(14,267)		56,870
Proceeds from sale of mineral properties, plant and equipment		1,674		16,319
Purchase of shares in associate (Note 12)		(2,473)		
Net payments from commodity, diesel fuel swaps, and foreign currency contracts		(304)		(4,965)
Exercise of warrants and other payments		_		(5,460)
Net cash used in investing activities	\$	(177,821)	\$	(139,897)
		. , ,		
Cash flow from financing activities Proceeds from issue of equity shares	\$	2,606	\$	2,399
Distributions to non-controlling interests	Ļ	(1,052)	Ļ	(428)
Dividends paid		(15,314)		(428)
Repayment of credit facility		(36,200)		(7,000)
Proceeds from (payment of) short-term loans (Note 15)		3,000		(19,536)
Payment of equipment leases		(4,542)		(19,550) (3,047)
Net cash used in financing activities	\$	(4,542)	\$	(3,047)
Effects of exchange rate changes on cash and cash equivalents	Ş	(51,502) (164)	ې	(28,218)
Net (decrease) increase in cash and cash equivalents		(4,928)		46,918
Cash and cash equivalents at the beginning of the year		(4,928) 180,881		133,963
Cash and cash equivalents at the end of the year	\$	175,953	\$	180,881
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Supplemental cash flow information (Note 25). See accompanying notes to the consolidated financial statements.



		Attributa	able t	o equity h	olders of the C	ompany			
	Issued shares	Issued capital	c	Share option eserve	Investment revaluation reserve	Deficit	Total	Non- controlling interests	Total equity
Balance, December 31, 2015	151,883,734	\$ 2,298,390	\$	22,829	\$ (458)	\$(1,023,539)	\$ 1,297,222	\$ 1,394	\$ 1,298,616
Total comprehensive earnings									
Net earnings for the year	_	_		_	_	100,085	100,085	1,740	101,825
Other comprehensive income	_	-		_	892	-	892	-	892
	_	_		_	892	100,085	100,977	1,740	102,717
Shares issued on the exercise of stock options	254,146	3,223		(824)	_	_	2,399	_	2,399
Shares issued as compensation (Note 25)	196,772	2,365		_	_	_	2,365	_	2,365
Share-based compensation on option grants	_	_		941	_	_	941	_	941
Distributions by subsidiaries to non-controlling interests	_	_		_	_	_	_	(428)	(428)
Dividends paid	_	-		_	-	(7,606)	(7,606)	-	(7,606)
Balance, December 31, 2016	152,334,652	\$ 2,303,978	\$	22,946	\$ 434	\$ (931,060)	\$ 1,396,298	\$ 2,706	\$ 1,399,004
Total comprehensive earnings									
Net earnings for the year	_	-		-	-	120,991	120,991	2,460	123,451
Other comprehensive income	_	_		-	1,171	_	1,171	-	1,171
	_	-		-	1,171	120,991	122,162	2,460	124,622
Shares issued on the exercise of stock options	307,266	3,604		(998)	_	_	2,606	-	2,606
Shares issued as compensation (Note 25)	135,404	2,020		_	_	_	2,020	_	2,020
Share-based compensation on option grants	_	_		515	_	_	515	_	515
Acquisition of mineral interests	525,654	8,650		_	-	_	8,650	-	8,650
Distributions by subsidiaries to non-controlling interests	_	_		_	-	(87)	(87)	(965)	(1,052)
Dividends paid	-	-		_	_	(15,314)	(15,314)	-	(15,314)
Balance, December 31, 2017	153,302,976	\$ 2,318,252	\$	22,463	\$ 1,605	\$ (825,470)	\$ 1,516,850	\$ 4,201	\$ 1,521,051

See accompanying notes to the consolidated financial statements.



## **1. NATURE OF OPERATIONS**

Pan American Silver Corp. is the ultimate parent company of its subsidiary group (collectively, the "Company", or "Pan American"). Pan American Silver Corp. is incorporated and domiciled in Canada, and its office is at Suite 1500 – 625 Howe Street, Vancouver, British Columbia, V6C 2T6.

The Company is engaged in the production and sale of silver, gold and base metals including copper, lead and zinc as well as other related activities, including exploration, extraction, processing, refining and reclamation. The Company's primary product (silver) is produced in Peru, Mexico, Argentina and Bolivia. Additionally, the Company has project development activities in Peru, Mexico and Argentina, and exploration activities throughout South America, and Mexico.

At December 31, 2017, the Company's principal producing properties comprised of the Huaron and Morococha mines located in Peru, the La Colorada and Dolores mines located in Mexico, the San Vicente mine located in Bolivia and the Manantial Espejo mine located in Argentina.

The Company's significant development projects at December 31, 2017 were the Cap-Oeste Sur Este ("COSE"), Joaquin, and Navidad projects in Argentina.

## 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### a. Statement of Compliance

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB"). IFRS comprises IFRSs, International Accounting Standards ("IAS"), and interpretations issued by the IFRS Interpretations Committee ("IFRICs") and the former Standing Interpretations Committee ("SIC").

These consolidated financial statements were approved for issuance by the Board of Directors on March 22, 2018.

#### b. Basis of Preparation

The Company's accounting policies have been applied consistently in preparing these consolidated annual financial statements for the year ended December 31, 2017, and the comparative statements as at December 31, 2016.

#### c. Significant Accounting Policies

<u>Principles of Consolidation</u>: The financial statements consolidate the financial statements of Pan American and its subsidiaries. All intercompany balances, transactions, unrealized profits and losses arising from intra-company transactions have been eliminated in full. The results of subsidiaries acquired or sold are consolidated for the periods from or to the date on which control passes. Control is achieved where the Company is exposed, or has rights, to variable returns from its involvement with an investee and has the ability to affect those returns through its power over the investee. This occurs when the Company has existing rights that give it the current ability to direct the relevant activities, is exposed, or has rights, to variable returns from its involvement have the potential to vary as a result of the investee's performance and the ability to use its power over the investee to affect the amount of the investor's returns. Where there is a loss of control of a subsidiary, the consolidated financial statements include the results for the part of the reporting period during which the Company has control. Subsidiaries use the same reporting period and same accounting policies as the Company.

For partly owned subsidiaries, the net assets attributable to non-controlling shareholders are presented as "noncontrolling interests" in the consolidated statements of financial position and the net earnings attributable to noncontrolling shareholders are presented as "net earnings attributable to non-controlling interests" in the consolidated income statements. Total comprehensive income is attributable to the owners of the Company and to the noncontrolling interests even if this results in the non-controlling interest having a deficit balance.



The consolidated financial statements include the wholly-owned and partially-owned subsidiaries of the Company; the most significant at December 31, 2017 and 2016 are presented in the following table:

Subsidiary	Location	Ownership Interest	Accounting	Operations and Development Projects Owned
Pan American Silver Huaron S.A.	Peru	100%	Consolidated	Huaron mine
Compañía Minera Argentum S.A.	Peru	92%	Consolidated	Morococha mine
Minera Corner Bay S.A. de C.V.	Mexico	100%	Consolidated	Alamo Dorado mine
Plata Panamericana S.A. de C.V.	Mexico	100%	Consolidated	La Colorada mine
Compañía Minera Dolores S.A. de C.V.	Mexico	100%	Consolidated	Dolores mine
Minera Tritón Argentina S.A.	Argentina	100%	Consolidated	Manantial Espejo mine & COSE project
Minera Joaquin S.R.L.	Argentina	100%	Consolidated	Joaquin project
Pan American Silver (Bolivia) S.A.	Bolivia	95%	Consolidated	San Vicente mine
Minera Argenta S.A.	Argentina	100%	Consolidated	Navidad Project

<u>Investments in associates</u>: An associate is an entity over which the investor has significant influence but not control and that is neither a subsidiary nor an interest in a joint venture. Significant influence is presumed to exist where the Company has between 20% and 50% of the voting rights, but can also arise where the Company has less than 20%, if the Company has the power to participate in the financial and operating policy decisions affecting the entity. The Company's share of the net assets and net earnings or loss is accounted for in the consolidated financial statements using the equity method of accounting.

<u>Basis of measurement</u>: These consolidated financial statements have been prepared on a historical cost basis except for derivative financial instruments, share purchase warrants and assets classified as at fair value through profit or loss or available-for-sale, which are measured at fair value. Additionally, these consolidated financial statements have been prepared using the accrual basis of accounting, except for cash flow information.

<u>Currency of presentation</u>: The consolidated financial statements are presented in United States dollars ("USD"), which is the Company's and each of the subsidiaries' functional and presentation currency, and all values are rounded to the nearest thousand except where otherwise indicated.

<u>Business combinations</u>: Upon the acquisition of a business, the acquisition method of accounting is used, whereby the purchase consideration is allocated to the identifiable assets, liabilities and contingent liabilities (identifiable net assets) acquired on the basis of fair value at the date of acquisition. When the cost of the acquisition exceeds the fair value attributable to the Company's share of the identifiable net assets, the difference is treated as goodwill, which is not amortized and is reviewed for impairment annually or more frequently when there is an indication of impairment. If the fair value attributable to the Company's share of the identifiable net assets exceeds the cost of acquisition, the difference is immediately recognized in the consolidated income statement. Acquisition related costs, other than costs to issue debt or equity securities of the acquirer, including investment banking fees, legal fees, accounting fees, valuation fees, and other professional or consulting fees are expensed as incurred. The costs to issue equity securities of the acquisition are reduced from share capital as share issuance costs. The costs to issue debt securities are capitalized and amortized using the effective interest method.

Non-controlling interests are measured either at fair value or at the non-controlling interests' proportionate share of the recognized amounts of the acquirers' identifiable net assets as at the date of acquisition. The choice of measurement basis is made on a transaction by transaction basis.

Control of a business may be achieved in stages. Upon the acquisition of control, any previously held interest is remeasured to fair value at the date control is obtained resulting in a gain or loss upon the acquisition of control.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Company reports provisional amounts for the items for which the accounting is incomplete. These provisional amounts are adjusted during the measurement period, or additional assets or liabilities are



recognized, to reflect new information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognized at that date.

<u>Revenue recognition:</u> Revenue associated with the sale of commodities is recognized when all significant risks and rewards of ownership of the asset sold are transferred to the customer, usually when insurance risk and title has passed to the customer and the commodity has been delivered to the shipping agent. At this point the Company retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the commodities and the costs incurred, or to be incurred, in respect of the sale, can be reliably measured. Revenue is recognized at the fair value of the consideration receivable, to the extent that it is probable that economic benefits will flow to the Company and the revenue can be reliably measured. Sales revenue is recognized at the fair value of the sales is based on invoiced amounts.

The Company's concentrate sales contracts with third-party smelters, in general, provide for a provisional payment based upon provisional assays and quoted metal prices. Final settlement is based on applicable commodity prices set on specified quotational periods, typically ranging from one month prior to shipment, and can extend to three months after the shipment arrives at the smelter and is based on average market metal prices. For this purpose, the selling price can be measured reliably for those products, such as silver, gold, zinc, lead and copper, for which there exists an active and freely traded commodity market such as the London Metals Exchange and the value of product sold by the Company is directly linked to the form in which it is traded on that market.

Sales revenue is commonly subject to adjustments based on an inspection of the product by the customer. In such cases, sales revenue is initially recognized on a provisional basis using the Company's best estimate of contained metal, and adjusted subsequently. Revenues are recorded under these contracts at the time title passes to the buyer based on the expected settlement period. Revenue on provisionally priced sales is recognized based on estimates of the fair value of the consideration receivable based on forward market prices. At each reporting date provisionally priced metal is marked to market based on the forward selling price for the quotational period stipulated in the contract. Variations between the price recorded at the shipment date and the actual final price set under the smelting contracts are caused by changes in metal prices and result in an embedded derivative in the accounts receivable. The embedded derivative is recorded at fair value each period until final settlement occurs, with the fair value adjustments recognized in revenue.

Refining and treatment charges under the sales contract with third-party smelters are netted against revenue for sales of metal concentrate.

The Company recognizes deferred revenue in the event it receives payments from customers in consideration for future commitments to deliver metals and before such sale meets the criteria for revenue recognition. The Company recognizes amounts in revenue as the metals are delivered to the customer. Specifically, for the metal agreements entered into with Maverix Metals Inc. ("Maverix"), the Company determines the amortization of deferred revenue to the Consolidated Income Statement on a per unit basis using the estimated total quantity of metal expected to be delivered to Maverix over the terms of the contract. The Company estimates the current portion of deferred revenue based on quantities anticipated to be delivered over the next twelve months

<u>Financial instruments</u>: A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

#### (i) Financial assets

The Company classifies its financial assets in the following categories: at fair value through profit or loss, loans and receivables, available-for-sale and held-to-maturity investments. The classification depends on the purpose for which the financial assets were acquired. Management determines the classification of financial assets at initial recognition.

(a) Financial assets at fair value through profit or loss

Financial assets are classified as at fair value through profit or loss when the financial asset is either held for trading or it is designated as at fair value through profit and loss. Derivatives are included in this category and are classified as current assets or non-current assets based on their maturity date. The Company does not acquire financial assets



for the purpose of selling in the short term. Financial assets carried at fair value through profit or loss are initially recognized at fair value. The directly attributable transaction costs are expensed in the income statement in the period in which they are incurred. Subsequent changes in fair value are recognized in net earnings.

#### (b) Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Loans and receivables comprise 'trade and other receivables', 'other assets' and 'cash and cash equivalents' in the statement of financial position. Loans and receivables are carried at amortized cost less any impairment.

#### (c) Available-for-sale financial assets

Available-for-sale financial assets are non-derivatives that are either specifically designated as available-for- sale or not classified in any of the other categories. They are included in current assets. Changes in the fair value of availablefor-sale financial assets denominated in a currency other than the functional currency of the holder, other than equity investments, are analyzed between translation differences and other changes in the carrying amount of the securities. The translation differences are recognized in the consolidated income statement. Any impairment charges are also recognized in the consolidated income statement, while other changes in fair value are recognized in the investment revaluation reserve. When financial assets classified as available-for-sale are sold, the accumulated fair value adjustments previously recognized in the investment revaluation reserve are reclassified to the consolidated income statement. Dividends on available-for-sale equity instruments are also recognized in the consolidated income statement within investment income when the Company's right to receive payments is established.

#### (d) Held-to-maturity investments

Non-derivative financial assets with fixed or determinable payments and fixed maturity are classified as held-tomaturity when the Company has the positive intention and ability to hold to maturity. Other long-term investments that are intended to be held-to-maturity, such as bonds, are measured at amortized cost. This cost is computed as the amount initially recognized minus principal repayments, plus or minus the cumulative amortization using the effective interest method of any difference between the initially recognized amount and the maturity amount. This calculation includes all fees paid or received between parties to the contract that are an integral part of the effective interest rate, transaction costs and all other premiums and discounts. For investments carried at amortized cost, gains and losses are recognized in income when the investments are derecognized or impaired, as well as through the amortization process.

#### (ii) Financial liabilities

Borrowings and other financial liabilities are classified as other financial liabilities and are recognized initially at fair value, net of transaction costs incurred and are subsequently stated at amortized cost. Any difference between the amounts originally received (net of transaction costs) and the redemption value is recognized in the income statement over the period to maturity using the effective interest method.

Borrowings and other financial liabilities are classified as current liabilities unless the Company has an unconditional right to defer settlement of the liability for at least 12 months after the statement of financial position date.

#### (iii) Derivative financial instruments

When the Company enters into derivative contracts, these transactions are designed to reduce exposures related to assets and liabilities, firm commitments or anticipated transactions. All derivatives are initially recognized at their fair value on the date the derivative contract is entered into and are subsequently re-measured at their fair value at each statement of financial position date.

*Embedded derivatives:* Derivatives embedded in other financial instruments or other host contracts are treated as separate derivatives when their risks and characteristics are not closely related to their host contracts.



#### (iv) Fair value

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Where quoted market prices are available, these are used to determine fair values. In other cases, fair values are calculated using quotations from independent financial institutions, or by using valuation techniques consistent with general market practice applicable to the instrument.

- The fair values of cash and short term borrowings approximate their carrying values as a result of their short maturity or because they carry floating rates of interest.
- Derivative financial assets and liabilities are measured at fair value.
- (v) Impairment of financial assets

#### Available-for-sale financial assets

The Company assesses at each statement of financial position date whether there is objective evidence that a financial asset or a group of financial assets is impaired. In the case of equity securities classified as available for sale, an evaluation is made as to whether a decline in fair value is 'significant' or 'prolonged' based on an analysis of indicators such as significant adverse changes in the technological, market, economic or legal environment in which the investee operates.

If an available-for-sale financial asset is impaired, an amount comprising the difference between its cost (net of any principal payment and amortization) and its current fair value, less any impairment loss previously recognized in the consolidated income statement is transferred from the investment revaluation reserve to the consolidated income statement. Reversals in respect of equity instruments classified as available-for-sale are not recognized in the consolidated income statement. Reversals of impairment losses on debt instruments are reversed through the consolidated income statement if the increase in fair value of the instrument can be objectively related to an event occurring after the impairment loss was recognized.

#### (vi) Derecognition of financial assets and liabilities

#### Financial assets

A financial asset is derecognized when its contractual rights to the cash flows that comprise the financial asset expire or substantially all the risks and rewards of the asset are transferred.

#### Financial liabilities

Gains and losses on discharge, cancellation or expiry of a financial liability are recognized within finance income and finance costs, respectively.

Where an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a settlement of the original liability and the recognition of a new liability, and any difference in the respective carrying amounts is recognized in the income statement.

#### (vii) Trade receivables

Trade receivables are recognized initially at fair value and are subsequently measured at amortized cost reduced by any provision for impairment. A provision for impairment of trade receivables is established when there is objective evidence that the Company will not be able to collect all amounts due. Indicators of impairment would include financial difficulties of the debtor, likelihood of the debtor's insolvency, default in payment or a significant deterioration in credit worthiness. Any impairment is recognized in the income statement within 'doubtful accounts provision'. When a trade receivable is uncollectable, it is written off against the provision for impairment. Subsequent recoveries of amounts previously written off are credited against 'doubtful accounts provision' in the income statement.



#### (viii) Accounts payable and accrued liabilities

Accounts payable and accrued liabilities are recognized initially at fair value and subsequently measured at amortized cost using the effective interest method.

#### (ix) Share purchase warrant liabilities

Share purchase warrant liabilities are recognized initially at fair value and subsequently measured at amortized cost using the effective interest rate method.

Derivative Financial Instruments: The Company utilizes metals and currency contracts, including forward contracts to manage exposure to fluctuations in metal prices and foreign currency exchange rates. For metals production, these contracts are intended to reduce the risk of falling prices on the Company's future sales. Foreign currency derivative financial instruments, such as forward contracts are used to manage the effects of exchange rate changes on foreign currency cost exposures. Such derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently re-measured at fair value. Derivatives are carried as assets when the fair value is positive and as liabilities when the fair value is negative and any gains or losses arising from changes in fair value on derivatives are taken directly to earnings for the year. The fair value of forward currency and commodity contracts is calculated by reference to current forward exchange rates and prices for contracts with similar maturity profiles.

Derivatives, including certain conversion options and warrants with exercise prices in a currency other than the functional currency, are recognized at fair value with changes in fair value recognized in profit or loss.

<u>Normal purchase or sale exemption</u>: Contracts that were entered into and continue to be held for the purpose of the receipt or delivery of a nonfinancial item in accordance with the Company's expected purchase, sale or usage requirements fall under the exemption from IAS 32 and IAS 39, which is known as the "normal purchase or sale exemption" (with the exception of those with quotational period clauses, which result in the recognition of an embedded derivative. Refer to note 7b for more information). For these contracts and the host part of the contracts containing embedded derivatives, they are accounted for as executory contracts. The Company recognizes such contracts in its statement of financial position only when one of the parties meets its obligation under the contract to deliver either cash or a non-financial asset.

<u>Convertible Notes</u>: The Company settled all of its outstanding convertible notes during the year ended December 31, 2016. Previously, the Company had the right to pay all or part of the liability associated with the Company's convertible notes in cash on the conversion date. Accordingly, the Company previously classified the convertible notes as a financial liability with an embedded derivative. The financial liability and embedded derivative was recognized initially at their respective fair values. The embedded derivative was subsequently recognized at fair value with changes in fair value reflected in profit or loss and the debt liability component was recognized at amortized cost using the effective interest method. Interest gains and losses related to the debt liability component or embedded derivatives was recognized in profit or loss. On conversion, the equity instrument would have been measured at the carrying value of the liability component on the conversion date.

<u>Cash and cash equivalents</u>: Cash and cash equivalents include cash on hand and cash in banks. It also includes shortterm money market investments that are readily convertible to cash with original terms of three months or less. Cash and cash equivalents are classified as loans and receivables and therefore are stated at amortized cost, less any impairment.

<u>Short-term investments</u>: Short-term investments are classified as "available-for-sale", and consist of highly-liquid debt securities with original maturities in excess of three months and equity securities. These debt and equity securities are initially recorded at fair value, which upon their initial measurement is equal to their cost. Subsequent measurements and changes in the market value of these debt and equity securities are recorded as changes to other comprehensive income. Investments are assessed quarterly for potential impairment.

<u>Inventories</u>: Inventories include work in progress, concentrate ore, doré, processed silver and gold, heap leach inventory, and operating materials and supplies. Work in progress inventory includes ore stockpiles and other partly



processed material. Stockpiles represent ore that has been extracted and is available for further processing. The classification of inventory is determined by the stage at which the ore is in the production process. Inventories of ore are sampled for metal content and are valued based on the lower of cost or estimated net realizable value based upon the period ending prices of contained metal. Cost is determined on a weighted average basis or using a first-in-first-out basis and includes all costs incurred in the normal course of business including direct material and direct labour costs and an allocation of production overheads, depreciation and amortization, and other costs, based on normal production capacity, incurred in bringing each product to its present location and condition. Material that does not contain a minimum quantity of metal to cover estimated processing expenses to recover the contained metal is not classified as inventory and is assigned no value. The work in progress inventory is considered part of the operating cycle which the Company classifies as current inventory and hence heap leach and stockpiles are included in current inventory. Quantities are assessed primarily through surveys and assays.

The costs incurred in the construction of the heap leach pad are capitalized. Heap leach inventory represents silver and gold contained in ore that has been placed on the leach pad for cyanide irrigation. The heap leach process is a process of extracting silver and gold by placing ore on an impermeable pad and applying a diluted cyanide solution that dissolves a portion of the contained silver and gold, which is then recovered during the metallurgical process. When the ore is placed on the pad, an estimate of the recoverable ounces is made based on tonnage, ore grade and estimated recoveries of the ore type placed on the pad. The estimated recoverable ounces on the pad are used to compile the inventory cost.

The Company uses several integrated steps to scientifically measure the metal content of the ore placed on the leach pads. The tonnage, grade, and ore type to be mined in a period was first estimated using the Mineral Reserve model. As the ore body is drilled in preparation for the blasting process, samples are taken of the drill residue which is assayed to determine their metal content and quantities of contained metal. The estimated recoverable ounces carried in the leach pad inventory are adjusted based on actual recoveries being experienced. Actual and estimated recoveries achieved are measured to the extent possible using various indicators including, but not limited to, individual cell recoveries, the use of leach curve recovery and trends in the levels of carried ounces depending on the circumstances or cumulative pad recoveries.

The Company then processes the ore through the crushing facility where the output is again weighed and sampled for assaying. A metallurgical reconciliation with the data collected from the mining operation is completed with appropriate adjustments made to previous estimates. The crushed ore is then transported to the leach pad for application of the leaching solution. The samples from the automated sampler are assayed each shift and used for process control. The quantity of leach solution is measured by flow meters throughout the leaching and precipitation process. The pregnant solution from the heap leach is collected and passed through the processing circuit to produce precipitate which is retorted and then smelted to produce doré bars.

The Company allocates direct and indirect production costs to by-products on a systematic and rational basis. With respect to concentrate and doré inventory, production costs are allocated based on the silver equivalent ounces contained within the respective concentrate and doré.

The inventory is stated at lower of cost or net realizable value, with cost being determined using a weighted average cost method. The ending inventory value of ounces associated with the leach pad is equal to opening recoverable ounces plus recoverable ounces placed less ounces produced plus or minus ounce adjustments.

The estimate of both the ultimate recovery expected over time and the quantity of metal that may be extracted relative to the time the leach process occurs requires the use of estimates which rely upon laboratory test work and estimated models of the leaching kinetics in the heap leach pads. Test work consists of leach columns of up to 400 days duration with 150 days being the average, from which the Company projects metal recoveries up to three years in the future. The quantities of metal contained in the ore are based upon actual weights and assay analysis. The rate at which the leach process extracts gold and silver from the crushed ore is based upon laboratory column tests and actual experience. The assumptions used by the Company to measure metal content during each stage of the inventory conversion process include estimated recovery rates based on laboratory testing and assaying. The Company



periodically reviews its estimates compared to actual experience and revises its estimates when appropriate. The ultimate recovery will not be known until the leaching operations cease.

Supplies inventories are valued at the lower of average cost and net realizable value using replacement cost plus cost to dispose, net of obsolescence. Concentrate and doré inventory includes product at the mine site, the port warehouse and product held by refineries. At times, the Company has a limited amount of finished silver at a minting operation where coins depicting Pan American's emblem are stamped.

<u>Mineral Properties</u>, Plant, and Equipment: On initial acquisition, mineral properties, plant and equipment are valued at cost, being the purchase price and the directly attributable costs of acquisition or construction required to bring the asset to the location and condition necessary for the asset to be capable of operating in the manner intended by management. When provisions for closure and decommissioning are recognized, the corresponding cost is capitalized as part of the cost of the related assets, representing part of the cost of acquiring the future economic benefits of the operation. The capitalized cost of closure and decommissioning activities is recognized in mineral property, plant and equipment and depreciated accordingly.

In subsequent periods, buildings, plant and equipment are stated at cost less accumulated depreciation and any impairment in value, whilst land is stated at cost less any impairment in value and is not depreciated.

Each asset's or part's estimated useful life has due regard to both its own physical life limitations and the present assessment of economically recoverable reserves of the mine property at which the item is located, and to possible future variations in those assessments. Estimates of remaining useful lives and residual values are reviewed annually. Changes in estimates are accounted for prospectively.

The expected useful lives are included below in the accounting policy for depreciation of property, plant, and equipment. The net carrying amounts of mineral property, land, buildings, plant and equipment are reviewed for impairment either individually or at the cash-generating unit level when events and changes in circumstances indicate that the carrying amounts may not be recoverable. To the extent that these values exceed their recoverable amounts, that excess is recorded as an impairment provision in the financial year in which this is determined.

In countries where the Company paid Value Added Tax ("VAT") and where there is uncertainty of its recoverability, the VAT payments have either been deferred with mineral property costs relating to the property or expensed if it relates to mineral exploration. If the Company ultimately recovers previously deferred amounts, the amount received will be applied to reduce mineral property costs or taken as a credit against current expenses depending on the prior treatment.

Expenditure on major maintenance or repairs includes the cost of the replacement of parts of assets and overhaul costs. Where an asset or part of an asset is replaced and it is probable that future economic benefits associated with the item will be available to the Company, the expenditure is capitalized and the carrying amount of the item replaced derecognized. Similarly, overhaul costs associated with major maintenance are capitalized and depreciated over their useful lives where it is probable that future economic benefits will be available and any remaining carrying amounts of the cost of previous overhauls are derecognized. All other costs are expensed as incurred.

Where an item of mineral property, plant and equipment is disposed of, it is derecognized and the difference between its carrying value and net sales proceeds is disclosed as earnings or loss on disposal in the income statement. Any items of mineral property, plant or equipment that cease to have future economic benefits are derecognized with any gain or loss included in the financial year in which the item is derecognized.

<u>Operational Mining Properties and Mine Development:</u> When it has been determined that a mineral property can be economically developed as a result of establishing proven and probable reserves (which occurs upon completion of a positive economic analysis of the mineral deposit), the costs incurred to develop such property including costs to further delineate the ore body and remove overburden to initially expose the ore body prior to the start of mining operations, are also capitalized. Such costs are amortized using the units-of-production method over the estimated life of the ore body based on proven and probable reserves.



Costs associated with commissioning activities on constructed plants are deferred from the date of mechanical completion of the facilities until the date the Company is ready to commence commercial production. Any revenues earned during this period are recorded as a reduction in deferred commissioning costs. These costs are amortized using the units-of-production method (described below) over the life of the mine, commencing on the date of commercial production.

Acquisition costs related to the acquisition of land and mineral rights are capitalized as incurred. Prior to acquiring such land or mineral rights, the Company makes a preliminary evaluation to determine that the property has significant potential to economically develop the deposit. The time between initial acquisition and full evaluation of a property's potential is dependent on many factors including: location relative to existing infrastructure, the property's stage of development, geological controls and metal prices. If a mineable deposit is discovered, such costs are amortized when production begins. If no mineable deposit is discovered, such costs are expensed in the period in which it is determined the property has no future economic value. In countries where the Company has paid VAT and where there is uncertainty of its recoverability, the VAT payments have either been deferred with mineral property costs relating to the property or expensed if it relates to mineral exploration. If the Company ultimately makes recoveries of the VAT, the amount received will be applied to reduce mineral property costs or taken as a credit against current expenses depending on the prior treatment.

Major development expenditures on producing properties incurred to increase production or extend the life of the mine are capitalized while ongoing mining expenditures on producing properties are charged against earnings as incurred. Gains or losses from sales or retirements of assets are included in gain or loss on sale of assets.

<u>Depreciation of Mineral Property</u>, <u>Plant and Equipment</u>: The carrying amounts of mineral property, plant and equipment (including initial and any subsequent capital expenditure) are depreciated to their estimated residual value over the estimated useful lives of the specific assets concerned, or the estimated life of the associated mine or mineral lease, if shorter. Estimates of residual values and useful lives are reviewed annually and any change in estimate is taken into account in the determination of remaining depreciation charges, and adjusted if appropriate, at each statement of financial position date. Changes to the estimated residual values or useful lives are accounted for prospectively. Depreciation commences on the date when the asset is available for use as intended by management.

#### Units of production basis

For mining properties and leases and certain mining equipment, the economic benefits from the asset are consumed in a pattern which is linked to the production level. Except as noted below, such assets are depreciated on a units of production basis.

In applying the units of production method, depreciation is normally calculated using the quantity of material extracted from the mine in the period as a percentage of the total quantity of material to be extracted in current and future periods based on proven and probable reserves.

#### Straight line basis

Assets within operations for which production is not expected to fluctuate significantly from one year to another or which have a physical life shorter than the related mine are depreciated on a straight line basis.

Mineral properties, plant and equipment are depreciated over their useful life, or over the remaining life of the mine if shorter. The major categories of property, plant and equipment are depreciated on a unit of production and/or straight-line basis as follows:

- Land not depreciated
- Mobile equipment 3 to 7 years
- Buildings and plant facilities 25 to 50 years
- Mining properties and leases based on reserves on a unit of production basis. Capitalized evaluation and development expenditure based on applicable reserves on a unit of production basis
- Exploration and evaluation not depreciated until mine goes into production



• Assets under construction – not depreciated until assets are ready for their intended use

<u>Exploration and Evaluation Expenditure:</u> relates to costs incurred on the exploration and evaluation of potential mineral reserves and resources and includes costs such as exploratory drilling and sample testing and the costs of pre-feasibility studies. Exploration expenditures relates to the initial search for deposits with economic potential. Evaluation expenditures arise from a detailed assessment of deposits or other projects that have been identified as having economic potential.

Expenditures on exploration activity are not capitalized.

Capitalization of evaluation expenditures commences when there is a high degree of confidence in the project's viability and hence it is probable that future economic benefits will flow to the Company.

Evaluation expenditures, other than that acquired from the purchase of another mining company, is carried forward as an asset provided that such costs are expected to be recovered in full through successful development and exploration of the area of interest or alternatively, by its sale.

Purchased exploration and evaluation assets are recognized as assets at their cost of acquisition or at fair value if purchased as part of a business combination.

In the case of undeveloped projects there may be only inferred resources to form a basis for the impairment review. The review is based on a status report regarding the Company's intentions for the development of the undeveloped project. In some cases, the undeveloped projects are regarded as successors to ore bodies, smelters or refineries currently in production. Where this is the case, it is intended that these will be developed and go into production when the current source of ore is exhausted or to replace the reduced output, which results where existing smelters and/or refineries are closed. It is often the case that technological and other improvements will allow successor smelters and/or refineries to more than replace the capacity of their predecessors. Subsequent recovery of the resulting carrying value depends on successful development or sale of the undeveloped project. If a project does not prove viable, all unrecoverable costs associated with the project, net of any related impairment provisions, are written off.

An impairment review is performed, either individually or at the cash generating unit level, when there are indicators that the carrying amount of the assets may exceed their recoverable amounts. A reversal of impairment test is performed whenever there is an indication that impairment may have reversed. When an impairment loss reverses in a subsequent period, the revised carrying amount shall not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset previously, less subsequent depreciation and depletion. Impairments and reversals of impairment are recognized in net earnings in the period in which they occur. Capitalized exploration and evaluation assets are reassessed on a regular basis and these costs are carried forward provided that the conditions discussed above for expenditure on exploration activity and evaluation expenditures are met.

Expenditures are transferred to mining properties and leases or assets under construction once the technical feasibility and commercial viability of extracting a mineral resource are demonstrable and the work completed to date supports the future development of the property. In order to demonstrate technical feasibility and commercial viability, the Company evaluates the individual project and its established mineral reserves, assesses the relevant findings and conclusions from the Company's activities and in applicable technical or other studies relating to the project, and considers whether and how any additional factors and circumstances might impact the project, particularly in light of the Company's capabilities, risk tolerance and desired economic returns. The Company conducts its managerial evaluation for commercial viability by assessing the factors it considers relevant to the commercial development of the project, taking into consideration the exploration and technical evaluation activities and work undertaken in relation to the project. If the asset demonstrates technical feasibility and commercial viability, the asset is reclassified to mineral properties, plant and equipment. Assessment for impairment is conducted before reclassification.

<u>Deferred Stripping Costs</u>: In open pit mining operations, it is necessary to remove overburden and other waste in order to access the ore body. During the preproduction phase, these costs are capitalized as part of the cost of the mine property and subsequently amortized over the life of the mine (or pit) on a units of production basis.



The costs of removal of the waste material during a mine's production phase are deferred where they give rise to future benefits. These capitalized costs are subsequently amortized on a unit of production basis over the reserves that directly benefit from the specific stripping activity.

<u>Asset Impairment:</u> Management reviews and evaluates its assets for impairment, or reversals of impairment, when events or changes in circumstances indicate that the related carrying amounts may not be recoverable or when there is an indication that impairment may have reversed. Impairment is normally assessed at the level of cash-generating units which are identified as the smallest identifiable group of assets that generate cash inflows that are largely independent of the cash inflows from other assets. In addition, an impairment loss is recognized for any excess of carrying amount over the fair value less costs to sell ("FVLCTS") of a non-current asset or disposal group held for sale. When an impairment review is undertaken, recoverable amount is assessed by reference to the higher of value in use (being the net present value of expected future cash flows of the relevant cash generating unit) and FVLCTS. The best evidence of FVLCTS is the value obtained from an active market or binding sale agreement. Where neither exists, FVLCTS is based on the best information available to reflect the amount the Company could receive for the cash generating unit in an arm's length transaction. This is often estimated using discounted cash flow techniques.

Where the recoverable amount is assessed using discounted cash flow techniques, the resulting estimates are based on detailed mine and/or production plans. For value in use, recent cost levels are considered, together with expected changes in costs that are compatible with the current condition of the business and which meet the requirements of IAS 36 "Impairment of Assets." The cash flow forecasts are based on best estimates of expected future revenues and costs, including the future cash costs of production, capital expenditure, close down, restoration and environmental clean-up. These may include net cash flows expected to be realized from extraction, processing and sale of mineral resources that do not currently qualify for inclusion in proven or probable ore reserves. Such non-reserve material is included where there is a high degree of confidence in its economic extraction. This expectation is usually based on preliminary drilling and sampling of areas of mineralization that are contiguous with existing reserves. Typically, the additional evaluation to achieve reserve status for such material has not yet been done because this would involve incurring costs earlier than is required for the efficient planning and operation of the mine.

Where the recoverable amount of a cash generating unit is dependent on the life of its associated ore, expected future cash flows reflect long term mine plans, which are based on detailed research, analysis and iterative modeling to optimize the level of return from investment, output and sequence of extraction. The mine plan takes account of all relevant characteristics of the ore, including waste to ore ratios, ore grades, haul distances, chemical and metallurgical properties of the ore affecting process recoveries and capacities of processing equipment that can be used. The mine plan is therefore the basis for forecasting production output in each future year and for forecasting production costs.

The Company's cash flow forecasts are based on estimates of future commodity prices, which assume market prices will revert to the Company's assessment of the long-term average price, generally over a period of three to five years. These assessments often differ from current price levels and are updated periodically.

The discount rates applied to the future cash flow forecasts represent an estimate of the rate the market would apply having regard to the time value of money and the risks specific to the asset for which the future cash flow estimates have not been adjusted, including appropriate adjustments for the risk profile of the countries in which the individual cash generating units operate. The great majority of the Company's sales are based on prices denominated in USD. To the extent that the currencies of countries in which the Company produces commodities strengthen against the USD without commodity price offset, cash flows and, therefore, net present values are reduced. Non-financial assets other than goodwill that have suffered impairment are tested for possible reversal of the impairment whenever events or changes in circumstances indicate that the impairment may have reversed.

<u>Closure and Decommissioning Costs</u>: The mining, extraction and processing activities of the Company normally give rise to obligations for site closure or rehabilitation. Closure and decommissioning works can include facility decommissioning and dismantling; removal or treatment of waste materials; site and land rehabilitation. The extent of work required and the associated costs are dependent on the requirements of relevant authorities and the Company's environmental policies. Provisions for the cost of each closure and rehabilitation program are recognized at the time that environmental disturbance occurs. When the extent of disturbance increases over the life of an

operation, the provision is increased accordingly. Costs included in the provision encompass all closure and decommissioning activity expected to occur progressively over the life of the operation and at the time of closure in connection with disturbances at the reporting date. Routine operating costs that may impact the ultimate closure and decommissioning activities, such as waste material handling conducted as an integral part of a mining or production process, are not included in the provision. Costs arising from unforeseen circumstances, such as the contamination caused by unplanned discharges, are recognized as an expense and liability when the event gives rise to an obligation which is probable and capable of reliable estimation. The timing of the actual closure and decommissioning expenditure is dependent upon a number of factors such as the life and nature of the asset, the operating license conditions, and the environment in which the mine operates. Expenditures may occur before and after closure and can continue for an extended period of time dependent on closure and decommissioning requirements. Closure and decommissioning provisions are measured at the expected value of future cash flows, discounted to their present value and determined according to the probability of alternative estimates of cash flows occurring for each operation. Discount rates used are specific to the underlying obligation. Significant judgements and estimates are involved in forming expectations of future activities and the amount and timing of the associated cash flows. Those expectations are formed based on existing environmental and regulatory requirements which give rise to a constructive or legal obligation.

When provisions for closure and decommissioning are initially recognized, the corresponding cost is capitalized as a component of the cost of the related asset, representing part of the cost of acquiring the future economic benefits of the operation. The capitalized cost of closure and decommissioning activities is recognized in Property, plant and equipment and depreciated accordingly. The value of the provision is progressively increased over time as the effect of discounting unwinds, creating an expense recognized in finance expenses. Closure and decommissioning provisions are also adjusted for changes in estimates. Those adjustments are accounted for as a change in the corresponding capitalized cost, except where a reduction in the provision is greater than the un-depreciated capitalized cost of the related assets, in which case the capitalized cost is reduced to nil and the remaining adjustment is recognized in the income statement. In the case of closed sites, changes to estimated costs are recognized immediately in the income statement. Changes to the capitalized cost result in an adjustment to future depreciation and finance charges. Adjustments to the estimated amount and timing of future closure and decommissioning cash flows are a normal occurrence in light of the significant judgements and estimates involved.

The provision is reviewed at the end of each reporting period for changes to obligations, legislation or discount rates that impact estimated costs or lives of operations and adjusted to reflect current best estimate. The cost of the related asset is adjusted for changes in the provision resulting from changes in the estimated cash flows or discount rate and the adjusted cost of the asset is depreciated prospectively.

<u>Foreign Currency Translation</u>: The Company's functional currency and that of its subsidiaries is the USD as this is the principal currency of the economic environments in which they operate. Transaction amounts denominated in foreign currencies (currencies other than USD) are translated into USD at exchange rates prevailing at the transaction dates. Carrying values of foreign currency monetary assets and liabilities are re-translated at each statement of financial position date to reflect the U.S. exchange rate prevailing at that date.

Gains and losses arising from translation of foreign currency monetary assets and liabilities at each period end are included in earnings except for differences arising on decommissioning provisions which are capitalized for operating mines.

<u>Share-based Payments:</u> The Company makes share-based awards, including restricted share units ("RSUs), performance share units ("PSUs"), shares and options, to certain employees.

For equity-settled awards, the fair value is charged to the income statement and credited to equity, on a straight-line basis over the vesting period, after adjusting for the estimated number of awards that are expected to vest. The fair value of the equity-settled awards is determined at the date of grant. Non-vesting conditions and market conditions, such as target share price upon which vesting is conditioned, are factored into the determination of fair value at the date of grant. All other vesting conditions are excluded from the determination of fair value and included in management's estimate of the number of awards ultimately expected to vest.



The fair value is determined by using option pricing models. At each statement of financial position date prior to vesting, the cumulative expense representing the extent to which the vesting period has expired and management's best estimate of the awards that are ultimately expected to vest is computed (after adjusting for non-market performance conditions). The movement in cumulative expense is recognized in the income statement with a corresponding entry within equity. No expense is recognized for awards that do not ultimately vest, except for awards where vesting is conditional upon a market condition, which are treated as vested irrespective of whether or not the market condition is satisfied, provided that all other performance conditions are satisfied.

Where the terms of an equity-settled award are modified, as a minimum an expense is recognized as if the terms had not been modified over the original vesting period. In addition, an expense is recognized for any modification, which increases the total fair value of the share-based payment arrangement, or is otherwise beneficial to the employee as measured at the date of modification, over the remainder of the new vesting period.

Where an equity-settled award is cancelled, it is treated as if it had vested on the date of cancellation, and any expense not yet recognized for the award is recognized immediately. Any compensation paid up to the fair value of the awards at the cancellation or settlement date is deducted from equity, with any excess over fair value being treated as an expense in the income statement. However, if a new award is substituted for the cancelled award, and designated as a replacement award on the date that it is granted, the new awards are treated as if they are a modification of the original award, as described in the previous paragraph.

<u>Leases</u>: The determination of whether an arrangement is, or contains a lease is based in the substance of the arrangement at the inception date, including whether the fulfillment of the arrangement is dependent on the use of a specific asset or assets or whether the arrangement conveys a right to use the asset. A reassessment after inception is only made in specific circumstances.

Assets held under finance leases, where substantially all the risks and rewards of ownership of the asset have passed to the Company, are capitalized in the statement of financial position at the lower of the fair value of the leased property or the present value of the minimum lease payments during the lease term calculated using the interest rate implicit in the lease agreement. These amounts are determined at the inception of the lease and are depreciated over the shorter of their estimated useful lives or the lease term. The capital elements of future obligations under leases and hire purchase contracts are included as liabilities in the statement of financial position. The interest elements of the lease or hire purchase obligations are charged to the income statement over the periods of the leases and hire purchase contracts and represent a constant proportion of the balance of capital repayments outstanding.

Leases where substantially all the risks and rewards of ownership have not passed to the Company are classified as operating leases. Rentals payable under operating leases are charged to the income statement on a straight-line basis over the lease term.

<u>Income Taxes:</u> Taxation on the earnings or loss for the year comprises current and deferred tax. Taxation is recognized in the income statement except to the extent that it relates to items recognized in other comprehensive income or directly in equity, in which case the tax is recognized in other comprehensive income or equity.

Current tax is the expected tax payable on the taxable income for the year using rates enacted or substantively enacted at the year end, and includes any adjustment to tax payable in respect of previous years.

Deferred tax is provided using the statement of financial position liability method, providing for the tax effect of temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for tax assessment or deduction purposes. Where an asset has no deductible or depreciable amount for income tax purposes, but has a deductible amount on sale or abandonment for capital gains tax purposes, that amount is included in the determination of temporary differences.

The tax effect of certain temporary differences is not recognized, principally with respect to goodwill; temporary differences arising on the initial recognition of assets or liabilities (other than those arising in a business combination or in a manner that initially impacted accounting or taxable earnings); and temporary differences relating to investments in subsidiaries, jointly controlled entities and associates to the extent that the Company is able to control the reversal of the temporary difference and the temporary difference is not expected to reverse in the foreseeable



future. The amount of deferred tax recognized is based on the expected manner and timing of realization or settlement of the carrying amount of assets and liabilities, with the exception of items that have a tax base solely derived under capital gains tax legislation, using tax rates enacted or substantively enacted at period end. To the extent that an item's tax base is solely derived from the amount deductible under capital gains tax legislation, deferred tax is determined as if such amounts are deductible in determining future assessable income.

The carrying amount of deferred income tax assets is reviewed at each statement of financial position date and reduced to the extent that it is no longer probable that sufficient taxable earnings will be available to allow all or part of the deferred income tax asset to be utilized. To the extent that an asset not previously recognized fulfils the criteria for recognition, a deferred income tax asset is recorded.

Deferred tax is measured on an undiscounted basis at the tax rates that are expected to apply in the periods in which the asset is realized or the liability is settled, based on tax rates and tax laws enacted or substantively enacted at the statement of financial position date.

Current and deferred taxes relating to items recognized in other comprehensive income or directly in equity are recognized in other comprehensive income or equity and not in the income statement. Mining taxes and royalties are treated and disclosed as current and deferred taxes if they have the characteristics of an income tax. Judgements are required about the application of income tax legislation. These judgements and assumptions are subject to risk and uncertainty, hence there is a possibility that changes in circumstances will alter expectations, which may impact the amount of deferred tax assets and deferred tax liabilities recognized on the statement of financial position and the amount of other tax losses and temporary differences not yet recognized. In such circumstances, some or the entire carrying amount of recognized deferred tax assets and liabilities may require adjustment, resulting in a corresponding credit or charge to the income statement.

Deferred tax assets, including those arising from tax losses, capital losses and temporary differences, are recognized only where it is probable that taxable earnings will be available against which the losses or deductible temporary differences can be utilized. Assumptions about the generation of future taxable earnings and repatriation of retained earnings depend on management's estimates of future cash flows. These depend on estimates of future production and sales volumes, commodity prices, reserves, operating costs, closure and decommissioning costs, capital expenditures, dividends and other capital management transactions.

<u>Earnings (loss) Per Share:</u> Basic earnings (loss) per share is calculated by dividing earnings attributable to ordinary equity holders of the parent entity by the weighted average number of ordinary shares outstanding during the period.

The diluted earnings per share calculation is based on the earnings attributable to ordinary equity holders and the weighted average number of shares outstanding after adjusting for the effects of all potential ordinary shares. This method requires that the number of shares used in the calculation be the weighted average number of shares that would be issued on the conversion of all the dilutive potential ordinary shares into ordinary shares. This method assumes that the potential ordinary shares converted into ordinary shares at the beginning of the period (or at the time of issuance, if not in existence at beginning of the period). The number of dilutive potential ordinary shares is determined independently for each period presented.

For convertible securities that may be settled in cash or shares at the holder's option, returns to preference shareholders and income charges are added back to net earnings used for basic EPS and the maximum number of ordinary shares that could be issued on conversion is used in computing diluted earnings per share.

<u>Borrowing Costs and Upfront Costs</u>: Borrowing costs that are directly attributable to the acquisition, construction or production of qualifying assets are capitalized. Qualifying assets are assets that require a substantial amount of time to prepare for their intended use, including mineral properties in the evaluation stage where there is a high likelihood of commercial exploitation. Qualifying assets also include significant expansion projects at the operating mines. Borrowing costs are considered an element of the historical cost of the qualifying asset. Capitalization ceases when the asset is substantially complete or if construction is interrupted for an extended period. Where the funds used to finance a qualifying asset form part of general borrowings, the amount capitalized is calculated using a weighted average of rates applicable to the relevant borrowings during the period. Where funds borrowed are directly



attributable to a qualifying asset, the amount capitalized represents the borrowing costs specific to those borrowings. Where surplus funds available out of money borrowed specifically to finance a project are temporarily invested, the total borrowing cost is reduced by income generated from short-term investments of such funds.

Upfront costs incurred in connection with entering new credit facilities are recorded as Other assets and are amortized over the life of the respective credit facilities.

## **3. CHANGES IN ACCOUNTING STANDARDS**

#### Application of new and revised accounting standards

The Company has adopted the narrow scope amendments to IFRS 12 - *Disclosure of Interests in Other Entities*, IAS 12 - *Income Taxes*, and IAS 7 - *Statement of Cash Flows*, which were effective for annual periods beginning on or after January 1, 2017. The amendments did not have an impact on the Company's consolidated financial statements.

#### Changes in accounting standards not yet effective

The Company has not early adopted any amendment, standard or interpretation that has been issued by the IASB but is not yet effective.

**IFRS 9** *Financial Instruments* ("**IFRS 9**") was issued by the IASB on July 24, 2014 and will replace IAS 39 Financial Instruments: Recognition and Measurement. IFRS 9 provides a revised model for recognition and measurement of financial instruments and a single, forward-looking 'expected loss' impairment model. The approach in IFRS 9 is based on how an entity manages its financial instruments in the context of its business model and the contractual cash flow characteristics of the financial assets. IFRS 9 is effective for annual periods beginning on or after January 1, 2018, with early adoption permitted. The Company will apply IFRS 9 at the date it becomes effective. Retrospective application is required, except for hedge accounting, which is not applied by the Company and which requires prospective application.

IFRS 9 will result in the following significant changes compared to the current standards: The classification of financial assets and liabilities are expected to remain consistent under IFRS except for equity securities. The Company will designate its equity securities as financial assets at fair value through profit or loss ("FVTPL"), where they will be recorded initially at fair value. Changes in fair value will be recorded in earnings (loss). Prior to adoption of this new standard changes in fair value were recorded in other comprehensive income and subsequently transferred into earnings (loss) upon disposition.

The introduction of the new "expected credit loss" impairment model under IFRS 9, as opposed to an incurred credit loss model under IAS 39, does not have a significant impact on the Company's accounts receivable given the Company sells its products exclusively to large international financial institutions and other organizations with strong credit ratings, the negligible historical level of customer default, and the short term nature of the Company's receivables

**IFRS 15,** *Revenue from Contracts with Customers* ("**IFRS 15**") In May 2014, the IASB issued IFRS 15 Revenue from Contracts with Customers, which covers principles that an entity shall apply to report useful information to users of financial statements about the nature, amount, timing, and uncertainty of revenue and cash flows arising from a contract with a customer. IFRS 15 introduces a revenue recognition model under which an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The standard is effective for annual reporting periods beginning on or after January 1, 2018, and requires either a modified retrospective application or full retrospective application. The Company will adopt IFRS 15 using the modified retrospective transition approach, whereby the cumulative impact of adoption is recognized in retained earnings as of January 1, 2018 and comparative period balances are not restated.



Further, IFRS 15 introduces the concept of performance obligations that are defined as 'distinct' promised goods or services, and requires entities to apportion revenue earned to the distinct performance obligations on a relative stand alone selling price basis. The Company may from time to time enter into concentrate contracts where the Company is responsible for shipping and insurance costs necessary to bring the goods to a named destination after the date on which control of the goods is transferred to the customer. Accordingly, under IFRS 15, where material, a portion of the revenue earned under such contracts, representing the obligation to fulfill the shipping and insurance services, will be deferred and recognized over the time the obligations are fulfilled. As the amounts associated with any such services are insignificant compared to the total value of contract, and the fact that many contracts would be completed within a financial reporting period, the Company does not expect the impact of treating these services as separate performance obligations to have a material impact on the Company's consolidated financial statements.

The Company's concentrate sales are subject to provisional pricing provisions, and the Company has determined that the recognition of revenue related to these sales will not be significantly affected by IFRS 15. However, separate presentation of the provisional pricing adjustments will be required in the revenue note disclosure.

**IFRS 16**, *Leases* ("**IFRS 16**") In January 2016, the IASB issued IFRS 16 - *Leases* which replaces IAS 17 - *Leases* and its associated interpretative guidance, including IFRIC 4 and SIC 15. IFRS 16 applies a control model to the identification of leases, distinguishing between a lease and a non-lease component on the basis of whether the customer controls the specific asset. For those contracts that are or contain a lease, IFRS 16 introduces significant changes to the accounting for contracts that are or contain a lease, introducing a single, on-balance sheet accounting model that is similar to current finance lease accounting, with limited exceptions for short-term leases or leases of low value assets. Lessor accounting remains similar to current accounting practice. The standard is effective for annual periods beginning on or after January 1, 2019, with early application permitted for entities that apply IFRS 15.

The Company anticipates that the adoption of IFRS 16 will result in an increase in the recognition of right of use assets and lease liabilities related to leases with terms greater than 12 months in our Statement of Financial Position at January 1, 2019. IFRS 16 will further result in increased depreciation and amortization on these right of use assets and increased interest on these additional lease liabilities. These lease payments will be recorded as financing outflows in our Consolidated Statements of Cash Flows.

The Company expects to identify and collect data relating to existing lease agreements during 2018.

**IFRIC Interpretation 22 Foreign Currency Transactions and Advance Consideration ("IFRIC 22")** On December 8, 2016, the IASB issued IFRIC 22, which addresses the exchange rate to use in transactions that involve advance consideration paid or received in a foreign currency. The standard provides guidance on how to determine the date of the transaction for the purpose of determining the spot exchange rate used to translate the asset, expense or income on initial recognition that relates to, and is recognized on the de-recognition of, a non-monetary prepayment asset or a non-monetary deferred income liability. It is effective January 1, 2018. The Company is currently assessing the impact on the adoption of this interpretation.

# 4. SIGNIFICANT JUDGEMENTS IN APPLYING ACCOUNTING POLICIES

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Judgements that have the most significant effect on the amounts recognized in the Company's consolidated financial statements are as follows:

- Capitalization of evaluation costs: The Company has determined that evaluation costs capitalized during the year relating to the operating mines and certain other exploration interests have potential future economic benefits and are potentially economically recoverable, subject to the impairment analysis as discussed in Note 11. In making this judgement, the Company has assessed various sources of information including but not limited to the geologic and metallurgic information, history of conversion of mineral deposits to proven and probable mineral reserves, scoping and feasibility studies, proximity to existing ore bodies, operating management expertise and required environmental, operating and other permits.
- Commencement of commercial production: During the determination of whether a mine has reached an operating
  level that is consistent with the use intended by management, costs incurred are capitalized as mineral property,
  plant and equipment and any consideration from commissioning sales are offset against costs capitalized. The
  Company defines commencement of commercial production as the date that a mine has achieved a sustainable
  level of production based on a percentage of design capacity along with various qualitative factors including but
  not limited to the achievement of mechanical completion, continuous nominated level of production, the working
  effectiveness of the plant and equipment at or near expected levels and whether there is a sustainable level of
  production input available including power, water and diesel.
- Assets' carrying values and impairment charges: In determining carrying values and impairment charges the Company looks at recoverable amounts, defined as the higher of value in use or FVLCTS in the case of non-financial assets, and at objective evidence that identifies significant or prolonged decline of fair value on financial assets classified as available-for-sale indicating impairment. These determinations and their individual assumptions require that management make a decision based on the best available information at each reporting period.
- *Functional currency:* The functional currency for the Company and its subsidiaries is the currency of the primary economic environment in which each operates. The Company has determined that its functional currency and that of its subsidiaries is the USD. The determination of functional currency may require certain judgements to determine the primary economic environment. The Company reconsiders the functional currency used when there is a change in events and conditions which determined the primary economic environment.
- Business combinations: Determination of whether a set of assets acquired and liabilities assumed constitute a business may require the Company to make certain judgments, taking into account all facts and circumstances. A business consists of inputs, including non-current assets and processes, including operational processes, that when applied to those inputs have the ability to create outputs that provide a return to the Company and its shareholders.
- Determination of control of subsidiaries and joint arrangements: Determination of whether the Company has control of subsidiaries or joint control of joint arrangements requires an assessment of the activities of the investee that significantly affect the investee's returns, including strategic, operational and financing decision-making, appointment, remuneration and termination of the key management personnel and when decisions related to those activities are under the control of the Company or require unanimous consent from the investors. Based on assessment of the relevant facts and circumstances, primarily, the Company's limited board representation and restricted influence over operating, strategic and financing decisions, the Company concluded that it does not control Maverix and as a result classified it as an investment in associate subject to significant influence (Note 12).
- Deferral of stripping costs: In determining whether stripping costs incurred during the production phase of a mining property relate to mineral reserves that will be mined in a future period and therefore should be capitalized, the Company treats the costs of removal of the waste material during a mine's production phase as deferred,



where it gives rise to future benefits. These capitalized costs are subsequently amortized on a unit of production basis over the reserves that directly benefit from the specific stripping activity. As at December 31, 2017, the carrying amount of stripping costs capitalized was \$47.7 million comprised entirely of Dolores (December 31, 2016 - \$40.3 million was capitalized comprised entirely of Dolores).

• Replacement convertible debenture: As part of the 2009 Aquiline transaction, the Company issued a replacement convertible debenture that allowed the holder to convert the debenture into either 363,854 Pan American shares or a silver stream contract with Aquiline Resources Inc., a wholly owned subsidiary of the Company. The holder subsequently selected the silver stream contract related to certain production from the Navidad project. The silver stream contract is classified and accounted for as a deferred credit. In determining the appropriate classification of the silver stream contract as a deferred credit, the Company evaluated the economics underlying the contract as of the date the Company assumed the obligation. As at December 31, 2017, the carrying amount of the deferred credit arising from the Aquiline acquisition was \$20.8 million (2016 - \$20.8 million).

# 5. KEY SOURCES OF ESTIMATION UNCERTAINTY IN THE APPLICATION OF ACCOUNTING POLICIES

Key sources of estimation uncertainty that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities are:

- *Revenue recognition:* Revenue from the sale of concentrate to independent smelters is recorded at the time the risks and rewards of ownership pass to the buyer using forward market prices on the expected date that final sales prices will be fixed. Variations between the prices set under the smelting contracts may be caused by changes in market prices and result in an embedded derivative in the accounts receivable. The embedded derivative is recorded at fair value each period until final settlement occurs, with changes in the fair value classified in revenue. In a period of high price volatility, as experienced under current economic conditions, the effect of mark-to-market price adjustments related to the quantity of metal which remains to be settled with independent smelters could be significant. For changes in metal quantities upon receipt of new information and assay, the provisional sales quantities are adjusted.
- *Estimated recoverable ounces:* The carrying amounts of the Company's mining properties are depleted based on recoverable ounces. Changes to estimates of recoverable ounces and depletable costs including changes resulting from revisions to the Company's mine plans and changes in metal price forecasts can result in a change to future depletion rates.
- Mineral reserve estimates: The figures for mineral reserves and mineral resources are disclosed in accordance with National Instrument 43-101, "Standards of Disclosure for Mineral Projects", issued by the Canadian Securities Administrators and in accordance with "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines adopted November 23, 2003", prepared by the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Standing Committee on Reserve Definitions. There are numerous uncertainties inherent in estimating mineral reserves and mineral resources, including many factors beyond the Company's control. Such estimation is a subjective process, and the accuracy of any mineral reserve or mineral resource estimate is a function of the quantity and quality of available data and of the assumptions made and judgments used in engineering and geological interpretation. Differences between management's assumptions including economic assumptions such as metal prices and market conditions could have a material effect in the future on the Company's financial position and results of operation.
- Valuation of Inventory: In determining mine production costs recognized in the consolidated income statement, the Company makes estimates of quantities of ore stacked in stockpiles, placed on the heap leach pad and in process and the recoverable silver in this material to determine the average costs of finished goods sold during the period. Changes in these estimates can result in a change in mine operating costs of future periods and carrying amounts of inventories. Refer to Note 9 for details.



- Depreciation and amortization rates for mineral properties, plant and equipment and mineral interests: Depreciation and amortization expenses are allocated based on assumed asset lives and depreciation and amortization rates. Should the asset life or depreciation rate differ from the initial estimate, an adjustment would be made in the consolidated income statement prospectively. A change in the mineral reserve estimate for assets depreciated using the units of production method would impact depreciation expense prospectively.
- Impairment, or impairment reversal, of mining interests: While assessing whether any indications of impairment, or impairment reversal, exist for mining interests, consideration is given to both external and internal sources of information. Information the Company considers include changes in the market, economic and legal environment in which the Company operates that are not within its control that affect the recoverable amount of mining interests. Internal sources of information include the manner in which mineral property, plant and equipment are being used or are expected to be used and indications of the economic performance of the assets. Estimates include but are not limited to estimates of the discounted future after-tax cash flows expected to be derived from the Company's mining properties, costs to sell the mining properties and the appropriate discount rate. Changes in metal price forecasts, increases or decreases in estimated future costs of production, increases or decreases in estimated future costs of production, increases or decreases in estimated future costs of production, or write-up of the carrying amounts of the Company's mining interests. Impairments and impairment reversals of mining interests are discussed in Note 11.
- Estimation of decommissioning and reclamation costs and the timing of expenditures: The cost estimates are updated annually during the life of a mine to reflect known developments, (e.g. revisions to cost estimates and to the estimated lives of operations), and are subject to review at regular intervals. Decommissioning, restoration and similar liabilities are estimated based on the Company's interpretation of current regulatory requirements, constructive obligations and are measured at the best estimate of expenditures required to settle the present obligation of decommissioning, restoration or similar liabilities that may occur upon decommissioning of the mine at the end of its productive life. The carrying amount is determined based on the net present value of estimated future cash expenditures for the settlement of decommissioning, restoration or similar liabilities that may occur upon decommissioning of the mine. Such estimates are subject to change based on changes in laws and regulations and negotiations with regulatory authorities. Refer to Note 16 for details on decommissioning and restoration costs.
- Income taxes and recoverability of deferred tax assets: In assessing the probability of realizing income tax assets recognized, the Company makes estimates related to expectations of future taxable income, applicable tax planning opportunities, expected timing of reversals of existing temporary differences and the likelihood that tax positions taken will be sustained upon examination by applicable tax authorities. In making its assessments, the Company gives additional weight to positive and negative evidence that can be objectively verified. Estimates of future taxable income are based on forecasted cash flows from operations and the application of existing tax laws in each jurisdiction. The Company considers relevant tax planning opportunities that are within the Company's control, are feasible and within management's ability to implement. Examination by applicable tax authorities is supported based on individual facts and circumstances of the relevant tax position examined in light of all available evidence. Where applicable tax laws and regulations are either unclear or subject to ongoing varying interpretations, it is reasonably possible that changes in these estimates can occur that materially affect the amounts of income tax assets recognized. Also, future changes in tax laws could limit the Company from realizing the tax benefits from the deferred tax assets. The Company reassesses unrecognized income tax assets at each reporting period.
- Accounting for acquisitions: The provisional fair value of assets acquired and liabilities assumed and the resulting
  goodwill, if any, requires that management make certain judgments and estimates taking into account information
  available at the time of acquisition about future events, including, but not restricted to, estimates of mineral
  reserves and resources acquired, exploration potential, future operating costs and capital expenditures, future
  metal prices, long-term foreign exchange rates and discount rates. Changes to the provisional values of assets



acquired and liabilities assumed, deferred income taxes and resulting goodwill, if any, are retrospectively adjusted when the final measurements are determined if related to conditions existing at the date of acquisition (within one year of the acquisition date).

• Provisions and contingencies: Due to the size, complexity and nature of the Company's operations, various legal and tax matters are outstanding from time to time. In the event the Company's estimates of the future resolution of these matters change, the Company will recognize the effects of the changes in its consolidated financial statements on the date such changes occur. Refer to Note 29 for further discussion on contingencies.

#### 6. MANAGEMENT OF CAPITAL

The Company's objective when managing its capital is to maintain its ability to continue as a going concern while at the same time maximizing the growth of its business and providing returns to its shareholders. The Company's capital structure consists of shareholders' equity (comprising issued capital plus share option reserve plus deficit, plus investment revaluation reserve) with a balance of \$1.5 billion as at December 31, 2017 (December 31, 2016 - \$1.4 billion). The Company manages its capital structure and makes adjustments based on changes to its economic environment and the risk characteristics of the Company's assets. The Company's capital requirements are effectively managed based on the Company having a thorough reporting, planning and forecasting process to help identify the funds required to ensure the Company is able to meet its operating and growth objectives.

The Company is not subject to externally imposed capital requirements and the Company's overall strategy with respect to capital risk management remains unchanged from the year ended December 31, 2016. Refer to Note 18 for details of the Company's revolving credit facility and related covenants.

#### **7. FINANCIAL INSTRUMENTS**

#### a) Financial assets and liabilities classified as at FVTPL

The Company's financial assets and liabilities classified as at FVTPL are as follows:

	December 31 2017		ecember 31, 2016
Current derivative assets:			
Warrants	\$ 1,092	\$	_
	\$ 1,092	\$	_
	December 31		December 31,
	201	′	2016
Current derivative liabilities:			
Zinc contracts	\$ 710	5\$	1,769
Lead Contracts	24	\$	54
Copper contracts	89	L	_
Foreign currency contracts	50	;	992
	\$ 1,90	5\$	2,815



In addition, trade and other receivables include accounts receivable arising from sales of metal concentrates and have been designated and classified as at FVTPL. The total trade and other receivables are as follows:

	Dec	ember 31, 2017	Dec	cember 31, 2016
Trade receivables from provisional concentrates sales	\$	51,952	\$	44,960
Advances to suppliers <sup>(1)</sup>		14,327		28,762
Not arising from sale of metal concentrates <sup>(2)</sup>		43,467		56,395
Trade and other receivables	\$	109,746	\$	130,117

(1) Advances to suppliers are not classified as financial instruments.

(2) Accounted for at amortized cost.

The net gains (losses) on derivatives for the year ended December 31, 2017 and 2016 were comprised of the following:

	Year ended December 31,				
	2017		2016		
Gains (losses) on commodity and diesel fuel swap and foreign currency contracts:					
Realized losses on foreign currency, diesel fuel swap and commodity contracts	\$ (304)	\$	(4,965)		
Unrealized gains on foreign currency, diesel fuel swap and commodity contracts	910		21		
	\$ 606	\$	(4,944)		
Gain on derivatives:					
Gain on warrants	\$ 64	\$	_		
	\$ 64	\$	_		

## b. Normal purchase or sale exemption

Contracts that were entered into and continue to be held for the purpose of the receipt or delivery of a nonfinancial item in accordance with the Company's expected purchase, sale or usage requirements fall in the exemption from IAS 32 and IAS 39, which is known as the "normal purchase or sale exemption". These contracts and the host part of the contracts containing embedded derivatives are accounted for as executory contracts. The Company recognizes such contracts in its statement of financial position only when one of the parties meets its obligation under the contract to deliver a non-financial asset.

## c. Financial assets designated as available-for-sale

The Company's short-term investments are designated as available-for-sale. The unrealized net gains on available-for-sale investments recognized in other comprehensive income for the year ended December 31, were as follows:

		ended Iber 31,	
	2017		2016
Unrealized net gains on available for sale securities	\$ 810	\$	912
Reclassification adjustment for realized losses (gains) on equity securities to earnings	361		(20)
	\$ 1,171	\$	892

## d. Risk

The Company has exposure to risks of varying degrees of significance which could affect its ability to achieve its strategic objectives for growth and shareholder returns. The principle financial risks to which the Company is exposed are metal price risk, credit risk, interest rate risk, foreign exchange rate risk, and liquidity risk. The Company's Board of Directors has overall responsibility for the establishment and oversight of the Company's risk management framework and reviews the Company's policies on an ongoing basis.



## **Metal Price Risk**

Metal price risk is the risk that changes in metal prices will affect the Company's income or the value of its related financial instruments. The Company derives its revenue from the sale of silver, gold, lead, copper, and zinc. The Company's sales are directly dependent on metal prices that have shown significant volatility and are beyond the Company's control. Consistent with the Company's mission to provide equity investors with exposure to changes in silver prices, the Company's current policy is to not hedge the price of silver.

A 10% increase in all metal prices as at December 31, 2017, would result in an increase of approximately \$83.9 million (2016 – \$82.7 million) in the Company's revenues. A 10% decrease in all metal prices as at the same period would result in a decrease of approximately \$85.3 million (2016 - \$85.0 million) in the Company's revenues. The Company also enters into provisional concentrate contracts to sell the zinc, lead and copper concentrates produced by the Huaron, Morococha, San Vicente and La Colorada mines. A 10% increase in metals prices (zinc, lead, copper and silver) on open positions for provisional concentrate contracts for the year ended December 31, 2017 would result in an increase of approximately \$7.4 million (2016 - \$4.7 million) in the Company's before tax earnings which would be reflected in 2017 results. A 10% decrease in metal prices for the same period would result in a decrease of approximately \$7.4 million (2016 - \$4.7 million) in the Company's before tax earnings.

The Company mitigates the price risk associated with its base metal production by committing some of its forecasted base metal production from time to time under forward sales and option contracts. The Board of Directors continually assesses the Company's strategy towards its base metal exposure, depending on market conditions. At December 31, 2017, the Company had outstanding contracts to sell some of its base metals production.

## **Credit Risk**

Credit risk is the risk of financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations and arises principally from the Company's trade receivables. The carrying value of trade receivables represents the maximum credit exposure.

The Company has long-term concentrate contracts to sell the zinc, lead and copper concentrates produced by the Huaron, Morococha, San Vicente and La Colorada mines. Concentrate contracts are common business practice in the mining industry. The terms of the concentrate contracts may require the Company to deliver concentrate that has a value greater than the payment received at the time of delivery, thereby introducing the Company to credit risk of the buyers of concentrates. Should any of these counterparties not honour supply arrangements, or should any of them become insolvent, the Company may incur losses for products already shipped and be forced to sell its concentrates on the spot market or it may not have a market for its concentrates and therefore its future operating results may be materially adversely impacted. At December 31, 2017, the Company had receivable balances associated with buyers of its concentrates of \$52.0 million (2016 - \$45.0 million). The vast majority of the Company's concentrate is sold to five well-known concentrate buyers.

Silver doré production from La Colorada, Dolores and Manantial Espejo is refined under long term agreements with fixed refining terms at three separate refineries worldwide. The Company generally retains the risk and title to the precious metals throughout the process of refining and therefore is exposed to the risk that the refineries will not be able to perform in accordance with the refining contract and that the Company may not be able to fully recover precious metals in such circumstances. At December 31, 2017, the Company had approximately \$21.9 million (2016 - \$28.5 million) of value contained in precious metal inventory at refineries. The Company maintains insurance coverage against the loss of precious metals at the Company's mine sites, in-transit to refineries and whilst at the refineries.

The Company maintains trading facilities with several banks and bullion dealers for the purposes of transacting the Company's trading activities. None of these facilities are subject to margin arrangements. The Company's trading activities can expose the Company to the credit risk of its counterparties to the extent that the trading positions have a positive mark-to-market value. However, the Company minimizes this risk by ensuring there is no excessive concentration of credit risk with any single counterparty, by active credit management and monitoring.

Refined silver and gold is sold in the spot market to various bullion traders and banks. Credit risk may arise from these activities if the Company is not paid for metal at the time it is delivered, as required by spot sale contracts.

Supplier advances for products and services yet to be provided are a common practice in some jurisdictions in which the Company operates. These advances represent a credit risk to the Company to the extent that suppliers do not deliver products or perform services as expected. As at December 31, 2017, the Company had made \$14.3 million (2016 - \$28.8 million) of supplier advances, which are reflected in "Trade and other receivables" on the Company's balance sheet.

Management constantly monitors and assesses the credit risk resulting from its refining arrangements, concentrate sales and commodity contracts with its refiners, trading counterparties and customers. Furthermore, management carefully considers credit risk when allocating prospective sales and refining business to counterparties. In making allocation decisions, management attempts to avoid unacceptable concentration of credit risk to any single counterparty.

At December 31, 2017, the Company has recorded an allowance for doubtful accounts provision in the amount of \$7.6 million (2016 – \$7.6 million). The \$7.6 million relates to amounts owing from Doe Run Peru ("DRP"), one of the buyers of concentrates from the Company's Peruvian operations, for deliveries of concentrates that occurred in early 2009. The Company will continue to pursue every possible avenue to recover the amounts owed by DRP. At December 31, 2017, no additional provisions for doubtful accounts were recorded.

Cash and cash equivalents, trade accounts receivable and other receivables that represent the maximum credit risk to the Company consist of the following:

	Dec	ember 31, 2017	De	cember 31, 2016
Cash and cash equivalents	\$	175,953	\$	180,881
Short-term investments		51,590		36,729
Trade accounts receivable <sup>(1)</sup>		51,952		44,960
Royalty receivable <sup>(1)</sup>		60		20
Employee loans <sup>(1)</sup>		491		1,048

(1) Included in Trade and other receivables.

The Company invests its cash and cash equivalents, which also has credit risk, with the objective of maintaining safety of principal and providing adequate liquidity to meet all current payment obligations.

## **Interest Rate Risk**

Interest rate risk is the risk that the fair values and future cash flows of the Company will fluctuate because of changes in market interest rates. At December 31, 2017, the Company has \$7.6 million in lease obligations (2016 - \$7.1 million), that are subject to an annualized interest rate of 2.2% and an amount drawn on the credit facility of \$nil (2016 - \$36.2 million) at an annual interest rate of 2.125% to 3.125% over LIBOR. The interest paid by the Company for the year ended December 31, 2017 on its lease obligations was \$0.2 million (2016 - \$0.1 million). At December 31, 2017, the Company has short-term loans in Argentina of \$3.0 million (2016 - \$nil), that are subject to an annualized interest rate of 1.8%. The interest paid by the Company for the year ended December 31, 2017 on the credit facility was \$0.9 million (2016 - \$1.0 million).

The average interest rate earned by the Company during the year ended December 31, 2017 on its cash and short-term investments was 0.77% (2016 - 0.30%). A 10% increase or decrease in the interest earned from financial institutions on cash and short-term investments would result in a \$0.2 million increase or decrease in the Company's before tax earnings (2016 – \$0.1 million).

## Foreign Exchange Rate Risk

The Company reports its financial statements in USD; however, the Company operates in jurisdictions that utilize other currencies. As a consequence, the financial results of the Company's operations as reported in USD are subject



to changes in the value of the USD relative to local currencies. Since the Company's sales are denominated in USD and a portion of the Company's operating costs and capital spending are in local currencies, the Company is negatively impacted by strengthening local currencies relative to the USD and positively impacted by the inverse.

At December 31, 2017, the Company had no outstanding positions on its foreign currency exposure of MXN purchases. The Company recorded gains of \$3.8 million on MXN derivative contracts for the year ended December 31, 2017 (2016 - losses of \$1.5 million).

The Company's net earnings are affected by the revaluation of its monetary assets and monetary liabilities at each balance sheet date. The Company has reviewed its monetary assets and monetary liabilities and is exposed to foreign exchange risk through financial assets and liabilities and deferred income tax liabilities denominated in currencies other than USD as shown in the table below. The Company estimates that a 10% change in the exchange rate of the foreign currencies in which its December 31, 2017 non-USD net monetary liabilities were denominated would result in an income before taxes change of about \$17.4 million (2016 - \$19.2 million).

The Company is exposed to currency risk through the following financial assets and liabilities, and deferred income tax assets and liabilities denominated in foreign currencies:

At December 31, 2017	s	Cash and hort-term vestments	Other current and non-current assets	Income taxes receivable (payable), current and non- current	a lia	Accounts payable nd accrued abilities and non- current liabilities	а	eferred tax ssets and iabilities
Canadian Dollar	\$	25,062	\$ 529	\$ (713)	\$	(348)	\$	_
Mexican Peso		5,188	22,809	(242)		(26,013)		(141,870)
Argentinian Peso		4,239	19,720	837		(28,685)		_
Bolivian Boliviano		4,659	495	(3,840)		(13,954)		(10,076)
European Euro		24	_	(780)		_		_
Peruvian Nuevo Sol		2,274	1,026	(4,402)		(13,478)		(16,603)
	\$	41,446	\$ 44,579	\$ (9,140)	\$	(82,478)	\$	(168,549)

At December 31, 2016	Cash and short-term nvestments	ther current and on-current assets	ncome taxes receivable (payable), current and non- current	 Accounts payable and accrued abilities and non- current liabilities	а	eferred tax ssets and liabilities
Canadian Dollar	\$ 6,513	\$ 338	\$ (45)	\$ (142)	\$	(356)
Mexican Peso	9,416	29,079	5,884	(45 <i>,</i> 388)		(150,394)
Argentinian Peso	3,485	24,062	367	(27,245)		_
Bolivian Boliviano	4,329	184	(3 <i>,</i> 365)	(13,476)		(8,464)
European Euro	37	-	(262)	—		(53)
Peruvian Nuevo Sol	817	2,158	(11,031)	(8,913)		(9 <i>,</i> 867)
	\$ 24,597	\$ 55,821	\$ (8,452)	\$ (95,164)	\$	(169,134)

## Liquidity Risk

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they come due. The Company manages its liquidity risk by continuously monitoring forecasted and actual cash flows. The Company has in place a rigorous planning and budgeting process to help determine the funds required to support the Company's normal operating requirements on an ongoing basis and its expansion plans. The Company strives to maintain sufficient liquidity to meet its short-term business requirements, taking into account its anticipated cash flows from operations, its holdings of cash and short-term investments, and its committed loan facilities.



## e. Contractual Maturities

In the normal course of business, the Company enters into contracts that give rise to commitments for future minimum payments. The following table summarizes the remaining contractual maturities of the Company's financial and non-financial liabilities, shown in contractual undiscounted cash flow:

	Pa	ayments due	by p	eriod 2017				
		Total	Wit	thin 1 year <sup>(1)</sup>	2 - 3 years	4	I- 5 years	After 5 years
Current liabilities	\$	136,506	\$	136,506	\$ —	\$	_	\$ _
Credit Facility		2,750		1,200	1,550		_	_
Loan obligation		3,000		3,000	-		-	_
Finance lease obligations <sup>(2)</sup>		7,724		5,879	1,845		-	_
Severance accrual		5,176		1,092	2,273		760	1,051
Employee compensation <sup>(3)</sup>		6,709		3,815	2,894		_	_
Loss on commodity contracts		1,906		1,906	-		_	_
Provisions <sup>(4)</sup>		4,097		2,681	546		627	243
Income taxes payable		26,131		26,131	-		_	_
Total contractual obligations <sup>(4)</sup>	\$	193,999	\$	182,210	\$ 9,108	\$	1,387	\$ 1,294

	Pa	yments due	by po	eriod 2016			
		Total	Wit	hin 1 year <sup>(1)</sup>	2 - 3 years	4-5 years	After 5 years
Current liabilities	\$	141,002	\$	141,002	\$ —	\$ _	\$ _
Credit Facility		38,440		960	1,280	36,200	_
Finance lease obligations <sup>(2)</sup>		7,321		3,720	3,601	_	_
Severance accrual		3,986		689	658	365	2,274
Employee compensation <sup>(3)</sup>		6,918		3,996	2,922	_	_
Loss on commodity contracts		2,815		2,815	_	_	_
Provisions <sup>(4)</sup>		4,719		3,262	562	629	266
Income taxes payable		25,911		25,911	_	_	_
Total contractual obligations <sup>(4)</sup>	\$	231,112	\$	182,355	\$ 9,023	\$ 37,194	\$ 2,540

(1) Includes all current liabilities in the consolidated statement of financial position at December 31, 2017 and December 31, 2016 plus items presented separately in this table that are expected to be paid but not accrued in the books of the Company. A reconciliation of the current liabilities balance in the statement of financial position to the total contractual obligations within one year, per the contractual maturities schedule is shown in the table below.

December 31, 2017					Future interest component		Vithin 1 year
Current portion of:							
Accounts payable and other liabilities		\$	136,506	\$	-	\$	136,506
Credit facility			_		1,200		1,200
Loan obligation			3,000		-		3,000
Current portion of finance lease			5,734		145		5,879
Current severance liability			1,092		_		1,092
Employee Compensation & RSU's			2,100		1,715		3,815
Unrealized loss on commodity contracts			1,906		_		1,906
Provisions <sup>(4)</sup>			2,681		_		2,681
Income tax payable			26,131		-		26,131
Total contractual obligations within one year <sup>(4)</sup>		\$	179,150	\$	3,060	\$	182,210



December 31, 2016		Future interest component		Within 1 year	
Current portion of:		-		-	
Accounts payable and other liabilities	\$ 141,002	\$ -	- ;	\$ 141,002	
Credit facility	_	96	0	960	
Current portion of finance lease	3,559	16	1	3,720	
Current severance liability	689		_	689	
Employee Compensation & RSU's	1,812	2,18	4	3,996	
Unrealized loss on commodity contracts	2,815		_	2,815	
Provisions <sup>(4)</sup>	3,262		_	3,262	
Income tax payable	25,911		-	25,911	
Total contractual obligations within one year <sup>(4)</sup>	\$ 179,050	\$ 3,30	5	\$ 182,355	

Includes lease obligations in the amount of \$7.7 million (2016 - \$7.3 million) with a net present value of \$7.6 million (2016 - \$7.1 million) discussed further in Note 17.
 Includes RSU obligation in the amount of \$4.1 million (2016 - \$4.8 million) that will be settled in cash. The RSUs vest in two instalments, 50% in December 2017 and 50% in December 2018.

(4) Amounts above do not include payments related to the Company's anticipated closure and decommissioning obligation (current \$5.6 million, long-term \$59.8 million) discussed in Note 16 (2016 - current \$5.2 million, long-term \$50.4 million), the deferred credit arising from the Aquiline acquisition (\$20.8 million) (2016 - \$20.8 million) discussed in Note 19, and deferred tax liabilities of \$171.2 million (2016 - \$170.9 million).

## **Fair Value of Financial Instruments**

The carrying value of cash and cash equivalents, short-term investments, trade and other receivables, accounts payable and accrued liabilities approximate their fair value due to the relatively short periods to maturity of these financial instruments.

Fair value estimates are made at a specific point in time, based on relevant market information and information about the financial instrument. These estimates are subjective in nature and involve uncertainties and matters of significant judgement and, therefore, cannot be determined with precision. Changes in assumptions could significantly affect the estimates.

The following table sets forth the Company's financial assets and liabilities measured at fair value, grouped into Levels 1 to 3 based on the degree to which the fair value is observable. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurement) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described as follows:

**Level 1:** Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;

**Level 2:** Quoted prices in markets that are not active, or inputs that are observable, either directly or indirectly, for substantially the full term of the asset or liability; and

**Level 3:** Prices or valuation techniques that require inputs that are both significant to the fair value measurement and unobservable (supported by little or no observable market data).



At December 31, 2017 and 2016, the levels in the fair value hierarchy into which the Company's financial assets and liabilities are measured and recognized on the Consolidated Statements of Financial Position at fair value are categorized as follows:

		Fai	r Value at De	cem	ber 31, 2017	
	Total		Level 1		Level 2	Level 3
Assets and Liabilities:						
Short-term investments	\$ 51,590	\$	51,590	\$	_	\$ _
Trade receivables from provisional concentrate sales	51,952		_		51,952	_
Warrants	1,092		_		1,092	_
Zinc contracts	(716)		_		(716)	_
Lead contracts	(243)		_		(243)	-
Copper contracts	(891)		_		(891)	_
Foreign currency contracts	(56)		_		(56)	-
	\$ 102,728	\$	51,590	\$	51,138	\$ _

		Fair	Value at De	cemt	ber 31, 2016	
	Total		Level 1		Level 2	Level 3
Assets and Liabilities:						
Short-term investments	\$ 36,729	\$	36,729	\$	— \$	-
Trade receivables from provisional concentrate sales	44,960		_		44,960	_
Zinc contracts	(1,769)		_		(1,769)	-
Lead contracts	(54)				(54)	
Foreign currency contracts	(992)		_		(992)	_
	\$ 78,874	\$	36,729	\$	42,145 \$	_

The methodology and assessment of inputs for determining the fair value of financial assets and liabilities as well as the levels of hierarchy for the Company's financial assets and liabilities measured at fair value remains unchanged from that at December 31, 2016.

## Valuation Techniques

## Short-term investments and other investments

The Company's short-term investments and other investments are valued using quoted market prices in active markets and as such are classified within Level 1 of the fair value hierarchy and are primarily money market securities and U.S. Treasury securities. The fair value of the investment securities is calculated as the quoted market price of the investment and in the case of equity securities, the quoted market price multiplied by the quantity of shares held by the Company.

## **Derivative Financial Instruments**

The Company's commodity swaps, diesel fuel swaps and foreign currency contracts are valued using observable market prices and as such are classified as Level 2 of the fair value hierarchy. As of December 31, 2017, the unrealized losses on foreign currency, diesel fuel swap and commodity contracts were \$1.9 million (2016- losses of \$2.8 million).

During the year ended December 31, 2016, the Company entered into collared positions for its foreign currency exposure of MXN purchases with puts and call contracts (Note 7d, Foreign Exchange Rate Risk).

During the year ended December 31, 2015, the Company entered into diesel swap contracts designated to fix or limit the Company's exposure to higher fuel prices (the "Diesel fuel swaps"). The Company settled all Diesel fuel swaps by December 31, 2016. The Company did not enter into any Diesel fuel swaps in 2017. The Company recorded gains of \$1.0 million on the Diesel fuel swaps in the year ended December 31, 2016.



During the years ended December 31, 2016 and 2017, in order to limit its exposure to lower zinc prices on a portion of its zinc production, the Company entered into zinc put and call contracts. The Company had contracts for 11,100 tonnes of zinc outstanding, with a weighted average minimum price of \$2,609 and a maximum price of \$3,555 per tonne, at December 31, 2017. The remaining contracts have settlement dates between January 2018 and December 2018. The Company recorded losses of \$1.9 million on zinc positions during the year ended December 31, 2017 (2016 - losses of \$4.3 million).

Further, during the years ended December 31, 2016 and 2017, in order to limit its exposure to lower lead prices on a portion of its lead production, the Company entered into lead put and call contracts. The Company had contracts for 6,450 tonnes of lead outstanding, with a weighted average minimum price of \$2,200 and a maximum price of \$2,679 per tonne, at December 31, 2017. These remaining contracts have settlement dates between January 2018 and December 2018. The Company recorded losses of \$0.4 million on the lead positions during the year ended December 31, 2017 (2016 - losses of \$0.2 million).

During the year ended December 31, 2017, in order to limit its exposure to lower copper prices on a portion of its copper production, the Company entered into copper put and call contracts. The Company had contracts for 3,030 tonnes of copper outstanding, with a weighted average minimum price of \$6,222 and a maximum price of \$7,277 per tonne, at December 31, 2017. These remaining contracts have settlement dates between January 2018 and December 2018. The Company recorded losses of \$0.9 million on the copper positions during the year ended December 31, 2017.

## **Receivables from Provisional Concentrate Sales**

A portion of the Company's trade receivables arose from provisional concentrate sales and are valued using quoted market prices based on the forward London Metal Exchange ("LME") for copper, zinc and lead and the London Bullion Market Association P.M. fix for gold and silver.

## **8. SHORT-TERM INVESTMENTS**

	December 31, 2017 December 31						mber 31, 201	1, 2016			
Available for Sale	Fair Value		Cost	un	umulated realized ling gains	F	air Value		Cost	unr	mulated ealized ing gains
Short-term investments	\$ 51,590	\$	49,985	\$	1,605	\$	36,729	\$	36,295	\$	434

## 9. INVENTORIES

Inventories consist of:

	Dec	ember 31, 2017	Dec	ember 31, 2016
Concentrate inventory	\$	11,582	\$	12,891
Stockpile ore <sup>(1)</sup>		16,209		31,964
Heap leach inventory and in process <sup>(2)</sup>		108,509		109,705
Doré and finished inventory <sup>(3)</sup>		35,054		36,864
Materials and supplies		47,361		45,905
	\$	218,715	\$	237,329

(1) Includes an impairment charge of \$10.0 million to reduce the cost basis of inventory to NRV at Manantial Espejo mine (December 31, 2016 – \$6.0 million at Manantial Espejo and Dolores mines).

(2) Includes an impairment charge of \$10.3 million to reduce the cost basis of inventory to NRV at Manantial Espejo and Dolores mines (December 31, 2016 - \$1.5 million at Manantial Espejo mine).

(3) Includes an impairment charge of \$2.9 million to reduce the cost basis of inventory to NRV at Manantial Espejo mine at December 31, 2017. (December 31, 2016 - \$3.4 million at Manantial Espejo and Alamo Dorado mines).



Production costs, including depreciation and amortization, and royalties for the year ended December 31, 2017 were \$648.1 million (2016 - \$575.9 million). Production costs represent cost of inventories sold during the year. During 2017 a \$12.3 million (2016 - \$42.8 million net realizable value recovery) net realizable value loss was recognized, primarily driven by decreased metal prices, and included in production costs (Note 21). Inventories held at net realizable value amounted to \$125.5 million (2016 - \$48.2 million).

A portion of the Stockpile ore amounting to \$9.5 million (2016 - \$18.4 million) and a portion of the heap leach inventory amounting to \$74.3 million (2016 - \$65.2 million) are expected to be recovered or settled after more than twelve months.

## **10. MINERAL PROPERTIES, PLANT AND EQUIPMENT**

Acquisition costs of investment and non-producing properties together with costs directly related to mine development expenditures are capitalized. Exploration expenditures on investment and non-producing properties are charged to expense in the period they are incurred.

Capitalization of evaluation expenditures commences when there is a high degree of confidence in the project's viability and hence it is probable that future economic benefits will flow to the Company. Evaluation expenditures, other than that acquired from the purchase of another mining company, are carried forward as an asset provided that such costs are expected to be recovered in full through successful development and exploration of the area of interest or alternatively, by its sale. Evaluation expenditures include delineation drilling, metallurgical evaluations, and geotechnical evaluations amongst others.

Mineral properties, plant and equipment consist of:

			Mi	ining Propertie	s			
	C	epletable		Non-de	plet	able		
		Reserves d Resources	а	Reserves nd Resources		Exploration and Evaluation	Plant and quipment	Total
Carrying value								
As at January 1, 2017								
Net of accumulated depreciation	\$	694,501	\$	58,578	\$	259,953	\$ 209,695	\$ 1,222,727
Additions		120,098		4,066		_	23,938	148,102
Acquisition of Argentine projects <sup>(1) (2)</sup>		_		40,315		_	30	40,345
Disposals		_		_		(195)	(2,710)	(2,905)
Depreciation and amortization		(53,124)		_		_	(69,764)	(122,888)
Depreciation charge captured in inventory		(4,104)		_		_	_	(4,104)
Impairment reversal		27,531		6,892		1,317	25,814	61,554
Transferred to assets held for sale		_		_		(7,947)	(2)	(7,949)
Transfers		(22,400)		(38,042)		_	57,862	(2,580)
Closure and decommissioning – changes in estimate		4,381		—		_	_	4,381
As at December 31, 2017	\$	766,883	\$	71,809	\$	253,128	\$ 244,863	\$ 1,336,683
Cost as at December 31, 2017		2,018,937		77,242		653,216	889,655	3,639,050
Accumulated depreciation and impairments		(1,252,054)		(5,433)		(400,088)	(644,792)	(2,302,367)
Carrying value – December 31, 2017	\$	766,883	\$	71,809	\$	253,128	\$ 244,863	\$ 1,336,683



Notes to the Consolidated Financial Statements As at December 31, 2017 and 2016 and for the years ended December 31, 2017 and 2016 (Tabular amounts are in thousands of U.S. dollars except number of shares, options, warrants, and per share amounts, unless otherwise noted)

			Mir	ning Propertie	S			
		Depletable		Non-de	plet	able		
	an	Reserves d Resources	an	Reserves ad Resources		Exploration and Evaluation	Plant and quipment	Total
Carrying value								
As at January 1, 2016								
Net of accumulated depreciation	\$	620,035	\$	120,351	\$	276,307	\$ 128,528	\$ 1,145,221
Additions		88,331		-		-	112,506	200,837
Disposals		_		_		_	(1,208)	(1,208)
Depreciation and amortization		(34,803)		_		_	(81,152)	(115,955)
Depreciation charge captured in inventory		(9,675)		-		-	_	(9,675)
Transfers		21,976		(61,773)		(16,354)	51,021	(5,130)
Closure and decommissioning – changes in estimate		8,637		_		_	_	8,637
As at December 31, 2016	\$	694,501	\$	58,578	\$	259,953	\$ 209,695	\$ 1,222,727
Cost as at December 31, 2016		1,916,954		70,675		661,357	820,687	3,469,673
Accumulated depreciation and impairments		(1,222,453)		(12,097)		(401,404)	(610,992)	(2,246,946)
Carrying value – December 31, 2016	\$	694,501	\$	58,578	\$	259,953	\$ 209,695	\$ 1,222,727

	D	ece	mber 31, 201	7		C	ece	mber 31, 201	6	
	Cost	D	ccumulated epreciation and mpairment		Carrying Value	Cost	D	ccumulated epreciation and mpairment		Carrying Value
Huaron mine, Peru	\$ 196,111	\$	(107,970)	\$	88,141	\$ 185,850	\$	(95,195)	\$	90,655
Morococha mine, Peru	230,932		(135,868)		95,064	222,517		(183,289)		39,228
Alamo Dorado mine, Mexico	194,023		(194,023)		—	197,199		(197,199)		_
La Colorada mine, Mexico	279,541		(100,970)		178,571	262,516		(81,888)		180,628
Dolores mine, Mexico	1,485,200		(908,651)		576,549	1,358,923		(837,478)		521,445
Manantial Espejo mine, Argentina	367,573		(353,322)		14,251	361,553		(347,855)		13,698
San Vicente mine, Bolivia	131,038		(79,595)		51,443	124,618		(74,251)		50,367
Other	24,174		(16,447)		7,727	24,465		(16,290)		8,175
Total	\$ 2,908,592	\$	(1,896,846)	\$	1,011,746	\$ 2,737,641	\$	(1,833,445)	\$	904,196
Land and Non-Producing Properties:										
Land	\$ 4,990	\$	(1,234)	\$	3,756	\$ 4,900	\$	(1,462)	\$	3,438
Navidad project, Argentina	566,577		(376,101)		190,476	566,572		(376,101)		190,471
Minefinders projects, Mexico	73,956		(16,929)		57,027	112,029		(16,929)		95,100
Morococha, Peru	9,674		_		9,674	9,674		(6,436)		3,238
Argentine projects <sup>(1) (2)</sup>	44,376		-		44,376	_		_		_
Other	30,885		(11,257)		19,628	38,857		(12,573)		26,284
Total non-producing properties	\$ 730,458	\$	(405,521)	\$	324,937	\$ 732,032	\$	(413,501)	\$	318,531
Total mineral properties, plant and equipment	\$ 3,639,050	\$	(2,302,367)	\$	1,336,683	\$ 3,469,673	\$	(2,246,946)	\$	1,222,727



(1) On February 10, 2017, the Company completed the acquisition of 100% of Coeur Joaquin S.R.L., subsequently renamed Minera Joaquin S.R.L. ("Joaquin"). Joaquin's principal asset is the Joaquin project, located in the Santa Cruz province of southern Argentina. During the year ended December 31, 2017, The Company completed technical studies to define the scope of economically recoverable mineralized material. The consideration for the acquisition was \$25.0 million, comprised of \$15.0 million in cash and \$10.0 million of the Company's common shares valued as of January 13, 2017 (555,654 total common shares), plus a 2.0% net smelter returns royalty on the Joaquin project. Transaction costs were \$0.3 million.

(2) On May 31, 2017, the Company acquired 100% of Patagonia Gold Plc's ("Patagonia") COSE project in the Santa Cruz province of southern Argentina from Patagonia. Consideration payable to Patagonia included \$15 million, of which \$7.5 million is deferred, plus a 1.5% net smelter returns ("NSR") royalty on the COSE project. On May 31, 2017, the Company made a payment of \$7.5 million and granted a 1.5% NSR on production from COSE, and the title to COSE transferred to the Company. The remaining \$7.5 million payment is due on the earlier of 12 months from the closing date, or the commencement of commercial production.

The assets acquired and liabilities assumed from both projects have been included in the table above under "Argentine projects", and in the "Manantial Espejo" reportable operating segment of the segment note (Note 26). The Company concluded that the acquired assets and assumed liabilities did not constitute a business and accordingly the transactions were accounted for as asset acquisitions. The Joaquin purchase price was allocated to the assets acquired and liabilities assumed on a relative fair value basis with \$25.4 million allocated to mineral properties, plant and equipment and the remaining allocated to working capital items (\$0.04 million). The COSE purchase price of \$15.0 million was allocated to mineral properties, plant and equipment.

## Project Development

## **Dolores Mine, Mexico**

During the year ended December 31, 2017, the Company capitalized \$88.5 million of mineral properties, plant and equipment (2016 - \$106.6 million) which included deferred stripping costs of \$19.7 million, pulp agglomeration construction costs of \$20.5 million, underground development costs of \$28.4 million, and pad 3 construction additions of \$1.0 million (2016 - deferred stripping costs of \$18.5 million, pulp agglomeration construction costs of \$40.5 million, underground development costs of \$6.8 million and pad 3 construction additions of \$1.6 million).

During the year ended December 31, 2017, the Company transferred non-depletable mineral resources to depletable mineral reserves as a result of a new mine plan at Dolores mine. The additional mineral reserves contemplated in the new mine plan required the transfer of \$38.1 million (2016 - \$78.3 million) in carrying value from mineral resources to mineral reserves.

## La Colorada, Mexico

During the year ended December 31, 2017, the Company capitalized \$20.3 million of mineral properties, plant and equipment (2016 - \$52.9 million) which included underground development costs of \$1.8 million, and powerline construction costs of \$3.4 million (2016 - shaft construction costs of \$19.3 million, sulfide plant construction costs of \$12.8 million, underground development of \$2.9 million, and powerline construction costs of \$6.1 million).

## Disposals

On May 8, 2016, the Company recorded a gain on sale of assets of \$18.3 million on the sale of a 75% interest in the shares of Shalipayco S.A.C. ("Shalipayco") for consideration of \$15.0 million in cash and a one percent (1%) Net Smelter Returns Royalty (the "NSR") on the property, which was subsequently disposed, on July 11, 2016 (Note 12) for proceeds of \$3.3 million. Shalipayco is the owner of the Shalipayco zinc development project located in the provinces of Pasco and Junin, Peru.

On July 11, 2016, the Company recorded a gain on sale of assets in the amount of \$6.6 million (\$0.6 million gain after taxes) as a result of the disposition of certain royalties, precious metals streams, and payment arrangements (Note 12).

## Held for Sale Assets

On January 31, 2018, the Company completed the sale of 100% of the shares of Minera Aquiline Argentina SA, which owns the Calcatreu project ("Calcatreu"), to Patagonia for total consideration of \$15 million in cash. The Company received \$5 million at the date of sale with the remaining \$10 million due on May 18, 2018.

On December 31, 2017, all of the assets and liabilities of Minera Aquiline Argentina SA were classified as held for sale. Immediately prior to the classification to assets and liabilities held for sale, the carrying amount of Calcatreu was remeasured to its recoverable amount, being its fair value less costs of disposal, based on the expected proceeds from



the sale. As a result, the Company recorded an impairment reversal during the year ended December 31, 2017 of \$1.3 million (Note 11).

## **11. REVERSAL OF IMPAIRMENT AND GOODWILL**

Non-current assets are tested for impairment, or reversal of previous impairment charges, when events or changes in circumstance indicate that the carrying amount may not be recoverable, or previous impairment charges against assets are recoverable. The Company performs an impairment test for goodwill at each financial year end and when events or changes in circumstances indicate that the related carrying value may not be recoverable. The Company considers its internal discounted cash flow economic models as a proxy for the calculation of FVLCTS, given a willing market participant would use such models in establishing a value for the properties. The Company considers impairment, or if previous impairment charges should be reversed, at the cash generating unit ("CGU") level, which is considered to be an individual mine or a development property. The CGU carrying amount for purposes of this test includes the carrying value of the mineral properties plant and equipment and goodwill less deferred tax liabilities and closure and decommissioning liabilities related to each CGU.

The Company's key assumptions for determining the recoverable amounts of its various CGUs, for the purpose of testing for impairment or impairment reversals, include the most current operating and capital costs information and risk adjusted project specific discount rates. The Company uses an average of analysts' consensus prices for the first four years of its economic modeling, and long-term reserve prices for the remainder of each asset's life. The prices used can be found in the key assumptions and sensitivity section below.

## 2017 Reversals of Impairment

Based on the Company's assessment with respect to possible indicators of either impairment or reversal of previous impairments to its mineral properties, the Company concluded that as of December 31, 2017 reversals of impairment totaling \$61.6 million (\$53.4 million, net of tax expense) were required on the following CGUs:

	2017	2016
Morococha	\$ 60,237	\$ _
Calcatreu <sup>(1)</sup>	1,317	_
	\$ 61,554	\$ -

(1) Impairment reversal recognized on Calcatreu held for sale assets for the year ended December 31, 2017 (Note 10).

## Morococha

During the years ended December 2017 and 2016, Morococha generated significantly higher cash flows from operations than the amount assumed in the recoverable value estimation at December 31, 2015, primarily the results of continued costs performance and base-metal prices being superior to prior expectations. Further, as of December 31, 2017, Morococha's estimated silver mineral reserve increased by 2.8 million ounces. As a result of the CGU's continued strong performance, increased silver mineral reserves and higher long-term metal prices, the Company recognized a reversal of the remaining unamortized impairment of \$60.2 million (\$52.1 million, net of tax) related to its investment in Morococha at December 31, 2017.



## Key assumptions and sensitivity

The metal prices used to calculate the recoverable amounts at December 31, 2017, and December 31, 2016 are based on analyst consensus prices and the Company's long term reserve prices, and are summarized in the following tables:

Metal prices used at December 31, 2017:

Commodity Prices	2018-2021 average	Long term
Silver price - \$/oz.	\$18.57	\$18.50
Gold price - \$/oz.	\$1,307	\$1,300
Zinc price - \$/tonne	\$2,818	\$2,600
Lead price - \$/tonne	\$2,251	\$2,200
Copper price - \$/tonne	\$6,742	\$5,500

Metal prices used at December 31, 2016:

Commodity Prices	2017-2020 average	Long term
Silver price - \$/oz.	\$19.93	\$18.50
Gold price - \$/oz.	\$1,327	\$1,300
Zinc price - \$/tonne	\$2,567	\$2,200
Lead price - \$/tonne	\$2,142	\$2,000
Copper price - \$/tonne	\$5,725	\$5,000

In 2017, the discount rates used to present value the Company's life of mine cash flows were derived from the Company's weighted average cost of capital which was calculated as 5.2% (2016 - 6.4%), with rates applied to the various mines and projects ranging from 4.0% to 9.0% (2016 - 5.0% to 9.0%), depending on the Company's assessment of country risk, project risk, and other potential risks specific to each CGU.

The key assumptions in determining the recoverable value of the Company's mineral properties are individual metal prices, operating and capital costs, foreign exchange rates and discount rates. At December 31, 2017, the Company performed a sensitivity analysis on all key assumptions that assumed a modest (10%) adverse change to each individual assumption while holding the other assumptions constant.

At December 31, 2017, an adverse 10% movement in any of the major assumptions in isolation did not cause the recoverable amount to be below the CGU carrying value for any of the La Colorada, San Vicente, Huaron, or Morococha mines. For the Dolores mine, Manantial Espejo mine and Navidad project, which previously had their carrying values adjusted to FVLCTS through impairment charges, a modest adverse change in any one key assumption would reduce the recoverable amount below the carrying amount.

At December 31, 2016, an adverse 10% movement in any of the major assumptions in isolation did not cause the recoverable amount to be below the CGU carrying value for any of La Colorada, Alamo Dorado, San Vicente, Huaron, Morococha, or the Navidad project. For the Manantial Espejo mine, which in 2015 had its carrying values adjusted to FVLCTS through impairment charges, a modest increase in operating costs would reduce the recoverable amount below the carrying amount. In the case of the Dolores mine, which in 2015 had its carrying values adjusted to FVLCTS through impairment charges, a modest adverse change in any one key assumption would reduce the recoverable amount below the carrying amount.

## Goodwill

Goodwill arose when the Company acquired Minefinders in 2012 and consists of:

	December 31, 2017	December 3 201
Goodwill	\$ 3,057	\$ 3,05



## **12. INVESTMENT IN ASSOCIATES**

#### Investment in associates consist of:

	De	December 31, 2017		ember 31, 2016
Investment in Maverix	\$	53,567	\$	48,284
Investment in other		1,450		1,450
	\$	55,017	\$	49,734

The following table shows a continuity of the Company's investment in Maverix:

	2017	2016
Balance of investment in Maverix, December 31,	\$ 48,284	\$ 29,371
Investment in associate	2,473	_
Dilution gain	2,273	10,979
Adjustment for change in ownership interest	758	10,967
Loss in associate	(221)	(3,033)
Balance of investment in Maverix, December 31,	\$ 53 <i>,</i> 567	\$ 48,284

#### Investment in Maverix:

The Company's warrant liability representing in substance ownership interest in Maverix was \$14.3 million as at December 31, 2017 (December 31, 2016 - \$13.8 million). The Company's share of Maverix income or loss was recorded, from January 1, 2017 to February 21, 2017 based on its 43% interest, and 41% for the period February 22, 2017 to April 20, 2017, and 40% for the period April 21, 2017 to December 31, 2017 representing the Company's fully diluted ownership.

On August 17, 2017, Maverix closed a transaction with CEF Limited ("CEF") where CEF provided Maverix with a \$20.0 million senior secured loan facility and Maverix issued 5.9 million common shares to CEF for gross proceeds of \$5.3 million. The Company exercised its anti-dilution rights in connection with the CEF transaction where Maverix issued 2.3 million common shares to the Company for gross proceeds of \$2.5 million.

On April 20, 2017, Maverix closed a transaction with a wholly owned subsidiary of Silvercorp Metals Inc. (Silvercorp"), where Maverix acquired a net smelter return royalty on the Silvertip mine located in British Columbia Canada; and Maverix issued to Silvercorp a total of 3.8 million common shares (the "Silvertip Transaction").

On February 21, 2017, Maverix closed a transaction with Auramet Trading LLC and certain of its affiliates (collectively "Auramet"), where Maverix acquired a portfolio of two (2) royalties from Auramet; and Maverix issued to Auramet a total of 8.5 million common shares and made a cash payment of \$5 million (collectively, the "Auramet Transaction").

## Deferred Revenue:

Deferred revenue relates to precious metal streams whereby the Company will sell 100% of the future gold production from La Colorada and 5% of the future gold production from La Bolsa, which is in the exploration stage, to Maverix for \$650 and \$450 per ounce, respectively (the "Streams"). The deferred revenue liability recognized by the Company is the portion of the deferred revenue to be paid to Maverix owners other than Pan American through its ownership in Maverix.

The deferred revenue related to the Streams will be recognized as revenue by Pan American as the gold ounces are delivered to Maverix. On February 21, 2017, April 20, 2017 and July 12, 2017, the Company recorded an additional \$0.4 million, \$0.2 million, and \$0.1 million of deferred revenue, respectively, as a result of the diluted ownership in Maverix that arose on the Auramet, Silvertip and CEF Transactions, respectively. As at December 31, 2017, the deferred revenue liability was \$12.0 million (December 31, 2016 - \$11.6 million).



During the year ended December 31, 2017, \$0.3 million (2016 - \$0.2 million) was recognized for the delivery of 2,347 ounces of gold (2016 - 604 ounces) from La Colorada to Maverix. All transactions with Maverix were in the normal course and measured at exchange amounts, which were the amounts of consideration established and agreed to by the Company and Maverix.

Income Statement Impacts:

The Auramet, Silvertip, and CEF Transactions resulted in dilution gains of \$2.3 million for the year ended December 31, 2017 (2016 - \$11.0 million), respectively, recorded in share of loss from associate and dilution gain.

For the year ended December 31, 2017 the Company also recognized its share of loss from associate of \$0.2 million (2016 - \$3.0 million loss) which represents the Company's proportionate share of Maverix's income (loss) during the year.

## **13. OTHER ASSETS**

Other assets consist of:

	Dece	mber 31, 2017	Dece	ember 31, 2016
Reclamation bonds	\$	199	\$	199
Lease receivable		81		91
Other assets		66		89
	\$	346	\$	379

## **14. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES**

Accounts payable and accrued liabilities consist of:

	December 31, 2017	De	ecember 31, 2016
Trade accounts payable <sup>(1)</sup>	\$ 47,138	\$	45,344
Royalties payable	4,896		4,612
Other accounts payable and trade related accruals	29,690		48,767
Payroll and related benefits	29,329		24,971
Severance accruals	1,092		688
Other taxes payable	3,439		1,791
Advances on concentrate inventory	-		33
Other	24,114		17,296
	\$ 139,698	\$	143,502

(1) No interest is charged on the trade accounts payable ranging from 30 to 60 days from the invoice date. The Company has policies in place to ensure that all payables are paid within the credit terms.

## **15. LOANS PAYABLE**

	December 31, 2017	December 31, 2016
Loans Payable <sup>(1)</sup>	\$ 3,000	\$ —

(1) This \$US loan bears interest at 1.8% per annum.



## **16. PROVISIONS**

		Closure and Decommissioning	Litigation	Total
December 31, 2015	2	\$ 50,453	\$ 4,418	\$ 54,871
Revisions in estimates and obligations incurred		6,875	_	 6,875
Charged (credited) to earnings:				
-new provisions		_	347	347
-change in estimate		_	(104)	(104)
-exchange gains on provisions		_	(32)	(32)
Charged in the year		_	(297)	(297)
Reclamation expenditures		(6,080)	_	(6,080)
Accretion expense (Note 23)		4,363	_	4,363
December 31, 2016		\$ 55,611	\$ 4,332	\$ 59,943
Revisions in estimates and obligations incurred		12,561	_	12,561
Charged (credited) to earnings:				
-new provisions		-	767	767
-change in estimate		-	(228)	(228)
-exchange gains on provisions		-	93	93
Charged in the year		-	(867)	(867)
Reclamation expenditures		(8,749)	_	(8,749)
Accretion expense (Note 23)		5,973	_	5,973
December 31, 2017		\$ 65,396	\$ 4,097	\$ 69,493

Maturity analysis of total provisions:	Dec	ember 31, 2017	Dece	ember 31, 2016
Current	\$	8,245	\$	8,499
Non-Current		61,248		51,444
	\$	69,493	\$	59,943

## **Closure and Decommissioning Cost Provision**

The total inflated and undiscounted amount of estimated cash flows required to settle the Company's estimated future closure and decommissioning costs is \$142.2 million (December 31, 2016 - \$122.1 million) which has been inflated using inflation rates of between 2% and 25% (2016 – between 1% and 23%). The total provision for closure and decommissioning cost is calculated using discount rates of between 2% and 24% (2016 - between 1% and 30%). Revisions made to the reclamation obligations in 2017 were primarily a result of increased site disturbance at the mines as well as revisions to the estimate based on periodic reviews of closure plans, actual expenditures incurred and concurrent closure activities completed. These obligations will be funded from operating cash flows, reclamation deposits and cash on hand.

The accretion expense charged to 2017 earnings as finance expense was \$6.0 million (2016 - \$4.4 million). Reclamation expenditures paid during the current year were \$8.7 million (2016 - \$6.1 million).

## **Litigation Provision**

The litigation provision consists of amounts accrued for labour claims at several of the Company's mine operations. The balance of \$4.1 million at December 31, 2017 (2016 - \$4.3 million) represents the Company's best estimate for all known and anticipated future obligations related to the above claims. The amount and timing of any expected payments are uncertain as their determination is outside the control of the Company.



## **17. FINANCE LEASE OBLIGATIONS**

	December 31 201		
Lease obligations <sup>(1)</sup>	\$ 7,55	)\$	7,101
	December 31		cember 31,
	2017		2016
Maturity analysis of finance leases:			
Current	\$ 5,734	\$	3,559
Non-Current	1,825		3,542
	\$ 7,559	\$	7,101

 Represents equipment lease obligations at several of the Company's subsidiaries. A reconciliation of the total future minimum lease payments at December 31, 2017 and December 31, 2016 to their present value is presented in the table below.

	December 31, 2017	De	cember 31, 2016
Less than a year	\$ 5,879	\$	3,720
2 years	1,845		3,242
3 years	-		359
4 years	-		_
5 years	-		_
	7,724		7,321
Less future finance charges	(165	)	(220)
Present value of minimum lease payments	\$ 7,559	\$	7,101

## **18. LONG TERM DEBT**

Long term debt consists of:

	December 31, 2017	December 31, 2016
Credit Facility	\$ —	\$ 36,200
Total long-term debt	\$ —	\$ 36,200

Maturity analysis of Long Term debt:

	December 31, 2017	December 31, 2016
Non-Current <sup>(1)</sup>	\$ —	\$ 36,200

(1) The Company repaid the outstanding balance of \$36.2 million on September 28, 2017.

On April 15, 2015, the Company entered into a \$300.0 million secured revolving credit facility with a 4-year term (the "Credit Facility") and upfront costs of \$3.0 million. On May 31, 2016, the Company amended its Credit Facility by extending the term by 1 year, with additional upfront costs of \$0.4 million. As part of the amendment, the financial covenants were amended to require the Company to maintain a tangible net worth (exclusive of any prospective write-downs of certain assets) of greater than \$1,036.4 million plus 50% of the positive net income from and including the fiscal quarter ended March 31, 2016. In addition, the financial covenants continue to include the requirement for the Company to maintain: (i) a leverage ratio less than or equal to 3.5:1; and (ii) an interest coverage ratio more than or equal to 3.0:1. As of December 31, 2017, the Company was in compliance with all covenants required by the Credit Facility.



The upfront costs have been recorded as an asset under the classification Prepaid expenses and other current assets and are being amortized over the life of the Credit Facility. The Credit Facility can be drawn down at any time to finance the Company's working capital requirements, acquisitions, investments and for general corporate purposes.

At the option of the Company, amounts can be drawn under the Credit Facility and will incur interest based on the Company's leverage ratio at either (i) LIBOR plus 2.125% to 3.125% or; (ii) the Bank of Nova Scotia's Base Rate plus 1.125% to 2.125%. Undrawn amounts under the Credit Facility are subject to a stand-by fee of 0.478% to 0.703% per annum, dependent on the Company's leverage ratio.

As at December 31, 2017 and December 31, 2016, \$nil and \$36.2 million, respectively, was drawn on the Credit Facility under LIBOR loans at an average annual rate of 2.55%. During the year ended December 31, 2017, the Company has incurred \$1.3 million (2016 - \$1.2 million) in standby charges on undrawn amounts and \$0.9 million (2016 - \$1.0 million) in interest on drawn amounts under this Facility.

## **19. OTHER LONG TERM LIABILITIES**

Other long term liabilities consist of:

	Dece	ember 31, 2017	Dec	ember 31, 2016
Deferred credit <sup>(1)</sup>	\$	20,788	\$	20,788
Other income tax payable		2,082		3,321
Severance accruals		4,084		3,299
	\$	26,954	\$	27,408

(1) As part of the 2009 Aquiline transaction the Company issued a replacement convertible debenture that allowed the holder to convert the debenture into either 363,854 Pan American Shares or a Silver Stream contract related to certain production from the Navidad project. Regarding the replacement convertible debenture, it was concluded that the deferred credit presentation was the most appropriate and best representation of the economics underlying the contract as of the date the Company assumed the obligation as part of the Aquiline acquisition. Subsequent to the acquisition, the counterparty to the replacement debenture selected the Silver Stream alternative. The final contract for the alternative is being discussed and pending the final resolution of this discussion, the Company continues to classify the fair value calculated at the acquisition of this alternative, as a deferred credit.

## **20. SHARE CAPITAL AND EMPLOYEE COMPENSATION PLANS**

The Company has a comprehensive stock option and compensation share plan for its employees, directors and officers (the "Compensation Plan"). The Compensation Plan provides for the issuance of common shares and stock options, as incentives. The maximum number of shares which may be issued pursuant to options granted or bonus shares issued under the Compensation Plan may be equal to, but will not exceed 6,461,470 shares. The exercise price of each option shall be the weighted average trading price of the Company's stock for the five trading days prior to the award date. The options can be granted for a maximum term of 10 years with vesting provisions determined by the Company's Board of Directors. Subject to certain exceptions, any modifications to the Compensation Plan require shareholders' approval.

The Board has developed long-term incentive plan ("LTIP") guidelines, which provide annual compensation to the senior managers of the Company based on the long-term performance of both the Company and the individuals that participate in the plan. The LTIP consists of an annual grant of options to buy shares of the Company and a grant of the Company's common shares with a two year no trading legend. The options are seven year options which vest evenly in two annual instalments. Options and common shares granted under the LTIP are based on employee salary levels, individual performance and their future potential. In addition, the restricted share units ("RSUs") plan described below is part of the LTIP. In early 2014, the Board approved the adding of performance share units ("PSUs") to the Company's LTIP, as described below.

The Compensation Committee oversees the LTIP on behalf of the Board of Directors. The LTIP guidelines can be modified or suspended, at the discretion of the Board of Directors. Additionally, from time to time, the Company issues replacement awards and warrants related to acquisitions.



Transactions concerning stock options are summarized as follows in CAD:

	Stock C	Options		
	Shares	A E	eighted verage xercise ce CAD\$	
As at December 31, 2015	1,552,923	\$	15.98	
Granted	45,705	\$	23.61	
Exercised	(254,146)	\$	12.30	
Expired	(9,352)	\$	24.70	
Forfeited	(24,266)	\$	21.07	
As at December 31, 2016	1,310,864	\$	16.81	
Granted	91,945		18.64	
Exercised	(307,266)	\$	11.24	
Expired	(61,891)		40.22	
Forfeited	(97,529)	\$	23.60	
As at December 31, 2017	936,123	\$	16.56	

## Long Term Incentive Plan

During the year ended December 31, 2017, the Company awarded 123,113 (2016 - 82,338) common shares with a two year holding period and granted 91,945 (2016 - 45,705) options under this plan. The Company used as its assumptions for calculating the fair value, a risk free interest rate of 2.0% - 2.4% (2016 - 1.2% - 1.3%), weighted average volatility of 42% using a historical volatility (2016 - 54%), expected lives ranging from 3.5 to 4.5 (2016 - 3.5 to 4.5) years, expected dividend yield of 2.4% - 2.8% (2016 - 1.4% - 1.7%), and an exercise price of CAD \$18.64 (2016 - CAD \$23.61) per share. The weighted average fair value of each option was determined to be CAD \$5.30 (2016 - CAD \$8.94).

During the year ended December 31, 2017, 307,266 common shares were issued in connection with the exercise of options under the plan (2016 – 254,146 common shares), 61,891 options expired (2016 - 9,352) and 97,529 options were forfeited (2016 – 24,266).

100,000 common shares were issued to a former employee of the Company during the year ended December 31, 2016, there were no such issuances in 2017.

During the year ended December 31, 2017, 12,291 common shares were issued to Directors in lieu of Directors fees of \$0.2 million (2016 - 14,434 common shares in lieu of fees of \$0.2 million).

## Share Option Plan

The following table summarizes information concerning stock options outstanding and options exercisable as at December 31, 2017. The underlying option agreements are specified in Canadian dollar amounts.

	O	<b>Options Outstanding</b>				<b>Options Exercisable</b>			
Range of Exercise Prices CAD\$	Number Outstanding as at December 31, 2017	Weighted Average Remaining Contractual Life (months)	E	Weighted Average xercise Price CAD\$	Number Exercisable as at December 31, 2017		Weighted Average Exercise Price CAD\$		
\$9.76 - \$11.57	340,305	55.63	\$	10.03	340,305	\$	10.03		
\$11.58 - \$17.01	99,742	50.99	\$	11.81	99,742	\$	11.81		
\$17.02 - \$18.53	124,188	26.42	\$	18.38	124,188	\$	18.38		
\$18.54 - \$24.90	371,888	36.44	\$	23.19	257,093	\$	24.79		
	936,123	43.64	\$	16.56	821,328	\$	16.13		



For the year ended December 31, 2017 the total employee share-based compensation expense recognized in the income statement was \$3.1 million (2016 - \$3.8 million).

## **Performance Share Units**

In early 2014, the Board approved the adding of PSUs to the Company's LTIP. PSUs are notional share units that mirror the market value of the Company's common shares (the "Shares"). Each vested PSU entitles the participant to a cash payment equal to the value of an underlying share, less applicable taxes, at the end of the term, plus the cash equivalent of any dividends distributed by the Company during the three-year performance period. PSU grants will vest on the date that is three years from the date of grant subject to certain exceptions. Performance results at the end of the performance period relative to predetermined performance criteria and the application of the corresponding performance multiplier determine how many PSUs vest for each participant. The Board approved the issuance of 54,962 PSUs for 2017 with a share price of CAD \$19.04 (2016 - 38,119 PSUs approved at a share price of CAD \$22.22). Compensation expense for PSUs was \$1.0 million for the year ended December 31, 2017 (2016 - \$0.6 million) and is presented as a component of general and administrative expense.

At December 31, 2017, the following PSU's were outstanding:

PSU		Fair Value		
As at December 31, 2015	103,671	\$	683	
Granted	38,119		638	
Paid out	-		_	
Forfeited	-		_	
Change in value	-		831	
As at December 31, 2016	141,790	\$	2,152	
Granted	54,962		823	
Paid out	(30,408)		(875)	
Forfeited	-		_	
Change in value	-		511	
As at December 31, 2017	166,344	\$	2,611	

## **Restricted Share Units**

Under the Company's RSU plan, selected employees are granted RSUs where each RSU has a value equivalent to one Pan American common share. The RSUs are settled in cash or Common Shares at the discretion of the Board and vest in two installments, the first 50% vest on the first anniversary date of the grant and a further 50% vest on the second anniversary date of the grant. Additionally, RSU value is adjusted to reflect dividends paid on Pan American common share over the vesting period.

Compensation expense for RSU's was \$2.0 million for the year ended December 31, 2017 (2016 – \$3.5 million) and is presented as a component of general and administrative expense.



At December 31, 2017, the following RSU's were outstanding:

RSU	Number Outstanding	F	air Value
As at December 31, 2015	380,144	\$	2,495
Granted	164,132		2,919
Paid out	(224,805)		(3,769)
Forfeited	(4,048)		(61)
Change in value	-		3,180
As at December 31, 2016	315,423	\$	4,764
Granted	184,187		2,698
Paid out	(222,006)		(3,257)
Forfeited	(15,591)		(243)
Change in value	-		136
As at December 31, 2017	262,013	\$	4,098

## **Issued share capital**

The Company is authorized to issue 200,000,000 common shares of no par value.

#### Dividends

The Company declared the following dividends for the period starting January 1, 2016 until March 22, 2018:

Declaration Date	Ex-dividend date	Dividend pe common sha
February 20, 2018 <sup>(1)</sup>	March 5, 2018	\$ 0.03
November 8, 2017	November 20, 2017	\$ 0.02
August 9, 2017	August 21, 2017	\$ 0.02
May 9, 2017	May 23, 2017	\$ 0.02
February 14, 2017	February 27, 2017	\$ 0.02
November 14, 2016	November 25, 2016	\$ 0.01
August 11, 2016	August 23, 2016	\$ 0.01
May 11, 2016	May 24, 2016	\$ 0.01
February 17, 2016	February 29, 2016	\$ 0.01

(1) These dividends were declared subsequent to the year end and have not been recognized as distributions to owners during the period presented.

## **21. PRODUCTION COSTS**

Production costs are comprised of the following:

	2017	2016
Consumption of raw materials and consumables	\$ 160,224	\$ 163,675
Employee compensation and benefits expense (Note 22)	169,109	148,256
Contractors and outside services	83,012	81,241
Utilities	24,764	20,335
Severance costs related to mine operations	3,509	_
Other expenses <sup>(1)</sup>	34,339	43,400
Changes in inventories <sup>(2)</sup>	25,713	(28,574)
	\$ 500,670	\$ 428,333

(1) Includes closure and decommissioning liability adjustments to reduce production costs by \$1.2 million (2016 - reduce by \$1.7 million).

(2) Includes NRV adjustments to inventory to increase production costs by \$12.3 million for the year ended December 31, 2017 (2016 - reduce by \$42.8 million).



## 22. EMPLOYEE COMPENSATION AND BENEFITS EXPENSE

	2017	2016
Wages, salaries and bonuses	\$ 184,225	\$ 166,595
Share-based compensation	3,077	3,826
Total employee compensation and benefit expenses	187,302	170,421
Less: Expensed within General and Administrative expenses	(14,023)	(18,243)
Less: Expensed within Exploration expenses	(4,170)	(3,922)
Employee compensation and benefits expenses included in production costs (Note 21)	\$ 169,109	\$ 148,256

## **23. INTEREST AND FINANCE EXPENSE**

	2017	2016
Interest (recovery) expense	\$ (1,179)	\$ 2,115
Finance fees	2,391	3,073
Accretion expense (Note 16)	5,973	4,363
	\$ 7,185	\$ 9,551

## 24. EARNINGS PER SHARE (BASIC AND DILUTED)

For the year ended December		<b>20</b> 1	L7		2016						
31,	Earnings umerator)	Shares (000's) Per-Sha (Denominator) Amour			Earnings umerator)	Shares (000's) (Denominator)		er-Share Amount			
Net earnings <sup>(1)</sup>	\$ 120,991				\$ 100,085						
Basic EPS	\$ 120,991	153,070	\$	0.79	\$ 100,085	152,118	\$	0.66			
Effect of Dilutive Securities:											
Stock Options	_	283			_	386					
Diluted EPS	\$ 120,991	153,353 \$ 0.79		\$ 100,085	152,504	\$	0.66				

(1) Net earnings attributable to equity holders of the Company.

Potentially dilutive securities excluded in the diluted earnings per share calculation for the year ended December 31, 2017 were 279,943 out-of-the-money options (2016 – 418,151).



## **25. SUPPLEMENTAL CASH FLOW INFORMATION**

The following tables summarize other adjustments for non-cash income statement items, changes in operating working capital items and significant non-cash items:

Other operating activities		2017		2016
Adjustments for non-cash income statement items:				
Share-based compensation expense	\$	3,077	\$	3,826
Gain on derivatives (Note 7)		(64)		_
Share of loss from associate and dilution gain (Note 12)		(2,052)		(7,946)
Net realizable value adjustment for inventories (Note 21)		12,308		(42,815)
	\$	13,269	\$	(46,935)
Changes in non-cash operating working capital items:		2017		2016
Trade and other receivables	\$	9,852	\$	(29,125
Inventories		10,898		19,527
Prepaid expenses		(3,096)		(3,675
Accounts payable and accrued liabilities		2,569		13,722
Provisions		(8,514)		(5,994)
	\$	11,709	\$	(5,545
Significant non-cash items:		2017		2016
Assets acquired by finance lease	\$	5,000	\$	6,151
Share-based compensation issued to employees and directors	\$	2,020	\$	2,365
Shares issued as consideration for Joaquin (Note 10)	\$	8,650	\$	_
	De	cember 31,	De	cember 31,
Cash and Cash Equivalents		2017		2016
Cash in banks	\$	160,001	\$	157,778

# 26. SEGMENTED INFORMATION

Short-term money markets investments

Cash and cash equivalents

All of the Company's operations are within the mining sector, conducted through operations in four countries. Due to geographic and political diversity, the Company's mining operations are decentralized in nature whereby Mine General Managers are responsible for achieving specified business results within a framework of global policies and standards. We have determined that each producing mine and significant development property represents an operating segment. Country corporate offices provide support infrastructure to the mines in addressing local and country issues including financial, human resources, and exploration support. The Company has a separate budgeting process and measures the results of operations and exploration activities independently. Operating results of operating segments are reviewed by the Company's chief operating decision maker to make decisions about resources to be allocated to the segments and to assess their performance. The Corporate office provides support to the mining and exploration activities with respect to financial, human resources and technical support. Major products are silver, gold, zinc, lead and copper produced from mines located in Mexico, Peru, Argentina and Bolivia.

15,952

175,953

\$

\$

23,103

180,881



## Significant information relating to the Company's reportable operating segments is summarized in the table below:

	Γ									Year ende	d, I	December	31,	2017								
		Р	eru				Ν	Лехісо			Argentina Bolivia						C	Canada				
		Huaron	N	lorococha	C	Dolores		Alamo Jorado	С	La olorada		anantial Espejo	N	avidad	\	San /icente	Pi	as Corp		Other		Total
Revenue	\$	129,085	\$	120,244	\$	197,748	\$	17,958	\$	171,654	\$	111,642	\$	—	\$	68,497	\$	_	\$	_	\$	816,828
Depreciation and amortization	\$	(13,464)	\$	(9,693)	\$	(67,515)	\$	(23)	\$	(19,381)	\$	(5,236)	\$	(88)	\$	(7,181)	\$	(108)	\$	(199)	\$	(122,888)
Exploration and project development	\$	(1,713)	\$	(1,629)	\$	(2,316)	\$	_	\$	(2,149)	\$	(4,588)	\$	(2,894)	\$	_	\$	(2,659)	\$	(1,807)	\$	(19,755)
Interest income	\$	63	\$	58	\$	-	\$	4	\$	-	\$	525	\$	-	\$	-	\$	472	\$	340	\$	1,462
Interest and financing expenses	\$	(855)	\$	(578)	\$	1,613	\$	(359)	\$	(467)	\$	(2,969)	\$	(99)	\$	(232)	\$	(3,101)	\$	(138)	\$	(7,185)
(Loss) gain on disposition of assets	\$	(154)	\$	(117)	\$	(291)	\$	540	\$	(319)	\$	_	\$	_	\$	(455)	\$	361	\$	626	\$	191
Share of loss from associate and dilution gain	\$	_	\$	_	\$	_	\$	_	\$	_	\$	_	\$	_	\$	_	\$	2,052	\$	_	\$	2,052
Gain on derivatives	\$	-	\$	-	\$	-	\$	_	\$	-	\$	-	\$	-	\$	-	\$	64	\$	-	\$	64
Foreign exchange (losses) gains	\$	(92)	\$	(38)	\$	642	\$	(29)	\$	(143)	\$	(1,373)	\$	(644)	\$	1,045	\$	1,493	\$	962	\$	1,823
Gain on commodity, fuel swaps and foreign currency contracts	\$	_	Ś	_	Ś	_	Ś	_	Ś	_	Ś	_	Ś	_	Ś	_	Ś	606	\$	_	Ś	606
Impairment reversals	\$	_	\$	42,112	;	_	\$	_	\$	_	;	_	\$	_	\$	_	\$	_	;	19,442	;	61,554
Earnings (loss) before income taxes	\$	36,650	\$	86,476	\$	(503)	\$	(8,474)	\$	79,307	\$	(24,404)	\$	(3,570)	\$	14,592	\$	(22,567)	\$	24,978	\$	182,485
Income tax (expense) recovery	\$	(12,818)	\$	(16,663)	\$	11,719	\$	1,033	\$	(20,843)	\$	(1,108)	\$	(85)	\$	(5,305)	\$	(6,360)	\$	(8,604)	\$	(59,034)
Net earnings (loss) for the period	\$	23,832	\$	69,813	\$	11,216	\$	(7,441)	\$	58,464	\$	(25,512)	\$	(3,655)	\$	9,287	\$	(28,927)	\$	16,374	\$	123,451
Capital expenditures	\$	8,412	\$	9,283	\$	85,379	\$	-	\$	21,963	\$	8,590	\$	27	\$	8,146	\$	2	\$	430	\$	142,232

		As at December 31, 2017											
	Huaron	Morococha	Dolores	Alamo Dorado	La Colorada	Manantial Espejo	Navidad	San Vicente	Pas Corp	Other	Total		
Total assets	\$ 116,138	\$ 131,180	\$ 833,397	\$ 17,125	\$ 231,205	\$ 125,088	\$ 194,225	\$ 85,869	\$ 210,286	\$ 48,819	\$1,993,332		
Total liabilities	\$ 46,184	\$ 36,058	\$ 176,464	\$ 8,163	\$ 65,145	\$ 43,408	\$ 1,296	\$ 30,819	\$ 28,939	\$ 35,805	\$ 472,281		

	Γ	Year ended, December 31, 2016																	
	Γ	Pe	eru				Ν	Aexico				Arger	tina	3	Bolivia				
	ŀ	Huaron	м	orococha		Dolores		Alamo Dorado	La Colorada			anantial Espejo	Navidad		v	San /icente	Other		Total
Revenue	\$	105,707	\$	92,889	\$	189,288	\$	45,843	\$	118,292	\$	144,048	\$	-	\$	78,708	\$ -	\$	774,775
Depreciation and amortization	\$	(12,668)	\$	(11,225)	\$	(60,414)	\$	(2,336)	\$	(9,999)	\$	(9,190)	\$	(120)	\$	(9,474)	\$ (529)	\$	(115,955)
Exploration and project development	\$	(837)	\$	(1,053)	\$	(1,685)	\$	_	\$	(186)	\$	_	\$	(3,377)	\$	_	\$ (4,196)	\$	(11,334)
Interest income	\$	27	\$	67	\$	_	\$	_	\$	_	\$	389	\$	19	\$	1	\$ 879	\$	1,382
Interest and financing expenses	\$	(673)	\$	(436)	\$	(630)	\$	(420)	\$	(307)	\$	(3,069)	\$	(66)	\$	(218)	\$ (3,732)	\$	(9,551)
Gain (loss) on disposition of assets	\$	5	\$	144	\$	(22)	\$	136	\$	16,525	\$	(8)	\$	_	\$	23	\$ 8,297	\$	25,100
Share of loss from associate and	\$	_	\$	_	\$	_	\$	_	\$	_	\$	_	\$	_	\$	_	\$ 7,946	\$	7,946
dilution gain Foreign exchange (loss) gain	\$	(64)	\$	(57)	\$	1,539	\$	(393)	\$	13,887	\$	(2,780)	\$	208	\$	1,511	\$ (22,905)	\$	(9,054)
Loss on commodity, fuel swaps and foreign currency contracts	\$	_	\$	_	\$	_	\$	_	\$	_	\$	_	\$	_	\$	_	\$ (4,944)	\$	(4,944)
Earnings (loss) before income taxes	\$	24,062	\$	21,497	\$	8,222	\$	3,269	\$	61,178	\$	42,097	\$	(4,536)	\$	17,687	\$ 2,795	\$	176,271
Income tax (expense) recovery	\$	(10,021)	\$	(4,351)	\$	(10,697)	\$	(3,495)	\$	(21,860)	\$	(431)	\$	(33)	\$	(8,379)	\$ (15,179)	\$	(74,446)
Net earnings (loss) for the period	\$	14,041	\$	17,146	\$	(2,475)	\$	(226)	\$	39,318	\$	41,666	\$	(4,569)	\$	9,308	\$ (12,384)	\$	101,825
Capital expenditures	\$	8,854	\$	8,034	\$	113,227	\$	-	\$	64,519	\$	2,868	\$	5	\$	4,864	\$ 290	\$	202,661



		As at December 31, 2016											
	Huaron	Morococha	Dolores	Alamo Dorado	La Colorada	Manantial Espejo	Navidad	San Vicente	Other	Total			
Total assets	\$ 134,579	\$ 65,386	\$ 827,858	\$ 35,853	\$ 227,923	\$ 111,260	\$ 193,195	\$ 91,893	\$ 210,194	\$ 1,898,141			
Total liabilities	\$ 45,986	\$ 23,171	\$ 199,127	\$ 8,880	\$ 52,636	\$ 40,788	\$ 1,112	\$ 27,161	\$ 100,276	\$ 499,137			

Product Revenue	2017	2016
Refined silver and gold	345,756	399,339
Zinc concentrate	140,315	93,237
Lead concentrate	161,981	125,123
Copper concentrate	114,564	95,123
Silver concentrate	54,212	61,953
Total	816,828	774,775

The Company has 16 customers that account for 100% of the concentrate and silver and gold sales revenue. The Company has 7 customers that accounted for 23%, 16%, 15%, 14%, 8%, 6%, and 5% of total sales in 2017, and 7 customers that accounted for 18%, 16%, 14%, 10%, 10%, 9%, and 7% of total sales in 2016. The loss of certain of these customers or curtailment of purchases by such customers could have a material adverse effect on the Company's results of operations, financial condition, and cash flows.

## **27. OTHER INCOME AND (EXPENSES)**

	2017	2016
Change in closure and decommissioning estimates	\$ (8,388)	\$ -
Royalties income	\$ 574	\$ 204
Other income	2,309	1,338
Total	\$ (5 <i>,</i> 505)	\$ 1,542

## **28. INCOME TAXES**

## **Components of Income Tax Expense**

	2017	2016
Current tax expense (recovery)		
Recognized in profit or loss in current year	\$ 66,345	\$ 44,751
Adjustments recognized in the current year with respect to prior years	(3,468)	(720)
	62,877	44,031
Deferred tax expense (recovery)		
Deferred tax (recovery) expense recognized in the current year	(898)	27,942
Adjustments recognized in the current year with respect to prior years	(1,539)	1,124
Adjustments to deferred tax attributable to changes in tax rates and laws	_	1,302
Increase in deferred tax liabilities due to tax impact of reversals of mineral properties, plant, and equipment impairments (Note 10,11)	17,770	_
Recognition of previously unrecognized deferred tax assets	(10,275)	_
Benefit from previously unrecognized losses, and other temporary differences	(6,487)	(7,861)
Increase in deferred tax liabilities due to tax impact of net realizable value (charge) reversal to inventory (Note 21)	(2,414)	7,908
	(3,843)	30,415
Income tax expense	\$ 59,034	\$ 74,446



Income tax expense differs from the amount that would result from applying the Canadian federal and provincial income tax rates to earnings before income taxes. These differences result from the items shown on the following table which results in an effective tax rate that varies considerably from the comparable period. The main factors that affected the effective tax rate for the year ended December 31, 2017 and the comparable period of 2016 were foreign exchange fluctuations, changes in the non-recognition of certain deferred tax assets, mining taxes paid, and withholding taxes on payments from foreign subsidiaries. The Company continues to expect that these and other factors will continue to cause volatility in effective tax rates in the future.

## **Reconciliation of Effective Income Tax Rate**

	2017	2016
Earnings before taxes and non-controlling interest	\$ 182,485	\$ 176,271
Statutory Canadian income tax rate	26.00%	26.00%
Income tax expense based on above rates	\$ 47,446	\$ 45,830
Increase (decrease) due to:		
Non-deductible expenditures	4,618	5,082
Foreign tax rate differences	3,644	9,729
Change in net deferred tax assets not recognized:		
- Argentina exploration expenditures	2,051	1,794
- Other deferred tax assets	(10,752)	(14,406)
Non-taxable portion of net earnings of affiliates	(4,055)	(4,852)
Changes to temporary differences	-	1,429
Tax on sale of royalty	1,400	_
Effect of other taxes paid (mining and withholding)	20,065	13,678
Effect of foreign exchange on tax expense	(3,928)	10,462
Non-taxable impact of foreign exchange	2,937	3,861
Change in current tax expense estimated for prior years	(3 <i>,</i> 503)	_
Other	(889)	1,839
Income tax expense	\$ 59,034	\$ 74,446
Effective income tax rate	32.35%	42.23%

## Deferred tax assets and liabilities

The following is the analysis of the deferred tax assets (liabilities) presented in the consolidated financial statements:

	2017	2016
Net deferred tax liability, beginning of year	\$ (169,136)	\$ (138,397)
Recognized in net earnings for the year	3,843	(30,415)
Reduction due to Mexican de-consolidation payments applied to current tax	(3,231)	(383)
Other	(25)	59
Net deferred liability, end of year	\$ (168,549)	\$ (169,136)
Deferred tax assets	2,679	1,727
Deferred tax liabilities	(171,228)	(170,863)
Net deferred tax liability	\$ (168,549)	\$ (169,136)



## Components of deferred tax assets and liabilities

The deferred tax assets (liabilities) are comprised of the various temporary differences as detailed below:

	2017	2016
Deferred tax assets (liabilities) arising from:		
Closure and decommissioning costs	\$ 7,019	\$ 7,133
Tax losses and mining tax credits	24,014	26,646
Deductible Mexican mining taxes	2,792	2,344
Tax credit resulting from Mexican de-consolidation	1,385	4,790
Accounts payable and accrued liabilities	3,047	2,373
Trade and other receivables	21,527	10,526
Provision for doubtful debts and inventory adjustments	(14,517)	(16,261)
Mineral properties, plant, and equipment	(186,641)	(192,046)
Estimated sales provisions	(28,726)	(14,907)
Other temporary differences and provisions	1,551	266
Net deferred tax liability	\$ (168,549)	\$ (169,136)

At December 31, 2017, the net deferred tax liability above included the deferred tax benefit of \$24.0 million related to tax losses of approximately \$80.6 million. These losses will begin to expire after the 2024 year end, if unused.

At December 31, 2016, the net deferred tax liability above included the deferred tax benefit of \$26.6 million related to tax losses of approximately \$89.0 million. These losses will begin to expire after the 2024 year end, if unused.

#### Unrecognized deductible temporary differences, unused tax losses and unused tax credits

Deductible temporary differences, unused tax losses and unused tax credits for which no deferred tax assets have been recognized are attributable to the following:

	2017	2016
Tax loss (revenue in nature)	\$ 165,180	\$ 171,077
Net tax loss (capital in nature)	15,423	18,759
Resource pools and other tax credits	18,609	20,116
Financing fees	1,464	1,803
Mineral properties, plant, and equipment	20,441	34,268
Closure and decommissioning costs	42,484	34,809
Exploration and other expenses not currently deductible	54,672	62,503
Intercompany debt	8,061	34,769
Doubtful debt and inventory	16,602	13,997
Deferred income and estimated sales	-	924
Deductible Mexican mining taxes	77	335
Payroll and vacation accruals	2,015	3,174
Other temporary differences	2,601	2,532
	\$ 347,629	\$ 399,066



## Included in the above amounts are operating losses, which if not utilized will expire as follows:

#### At December 31, 2017,

	Canada	US	Peru	Mexico	Barbados	Argentina	Total
2018	_	120	_	-	6	50	176
2019	-	86	_	-	4	90	180
2020 – and after	122,853	13,289	_	20,925	93	7,664	164,824
Total tax losses	\$ 122,853	\$ 13,495	\$ —	\$ 20,925	\$ 103	\$ 7,804	165,180

#### At December 31, 2016,

	Ca	anada	US		Peru	Mexico		Barbados	Argentina	Total
2017		_		—	-		-	5	_	5
2018		_		120	-		-	6	7	133
2019 – and after		116,009	13,	642	39,057	2,2	60	47	24	170,939
Total tax losses	\$	116,009	\$ 13,	762	\$ 39,057	\$ 2,:	.60 \$	58	\$ 31	\$ 171,077

#### Taxable temporary differences associated with investment in subsidiaries

As at December 31, 2017, taxable temporary differences of 88.3 million (2016 – 60.4 million) associated with the investments in subsidiaries have not been recognized as the Company is able to control the timing of the reversal of these differences and does not expect them to reverse in the foreseeable future.

## **29. COMMITMENTS AND CONTINGENCIES**

## a. General

The Company is subject to various investigations, claims and legal and tax proceedings covering matters that arise in the ordinary course of business activities. Each of these matters is subject to various uncertainties and it is possible that some of these matters may be resolved unfavorably to the Company. Certain conditions may exist as of the date the financial statements are issued, which may result in a loss to the Company. In the opinion of management none of these matters are expected to have a material effect on the results of operations or financial conditions of the Company.

## b. Environmental Matters

The Company's mining and exploration activities are subject to various laws and regulations governing the protection of the environment. These laws and regulations are continually changing and are generally becoming more restrictive. The Company conducts its operations so as to protect the public health and environment and believes its operations are in compliance with applicable laws and regulations in all material respects. The Company has made, and expects to make in the future, expenditures to comply with such laws and regulations, but cannot predict the full amount of such future expenditures.

Estimated future reclamation costs are based on the extent of work required and the associated costs are dependent on the requirements of relevant authorities and the Company's environmental policies. As of December 31, 2017, \$65.4 million (December 31, 2016 - \$55.6 million) was accrued for reclamation costs relating to mineral properties. See also Note 16.

## c. Credit Facility

On April 15, 2015 the Company entered into a \$300.0 million secured revolving credit facility with a 4-year term (Note 18).



## d. Income Taxes

The Company operates in numerous countries around the world and accordingly it is subject to, and pays annual income taxes under the various income tax regimes in the countries in which it operates. Some of these tax regimes are defined by contractual agreements with the local government, and others are defined by the general corporate income tax laws of the country. The Company has historically filed, and continues to file, all required income tax returns and to pay the taxes reasonably determined to be due. The tax rules and regulations in many countries are highly complex and subject to interpretation. From time to time, the Company is subject to a review of its historic income tax filings and in connection with such reviews, disputes can arise with the taxing authorities over the interpretation of certain rules to the Company's business conducted within the country involved.

In December 2013, the Mexican President passed a bill that increased the effective tax rate applicable to the Company's Mexican operations. The law was effective January 1, 2014 and increased the future corporate income tax rate to 30%, creating a 10% withholding tax on dividends paid to non-resident shareholders (subject to any reduction by an Income Tax Treaty) and created a new Extraordinary Mining Duty equal to 0.5% of gross revenues from the sale of gold, silver, and platinum. In addition, the law requires taxpayers with mining concessions to pay a new 7.5% Special Mining Duty. The Extraordinary Mining Duty and Special Mining Duty is tax deductible for income tax purposes. The Special Mining Duty is generally applicable to earnings before income tax, depreciation, depletion, amortization, and interest. In calculating the Special Mining Duty there are no deductions related to development type costs but exploration and prospecting costs are deductible when incurred.

## e. Finance Leases

The present value of future minimum lease payments classified as finance leases at December 31, 2017 is \$7.6 million (December 31, 2016 - \$7.1 million) and the schedule of timing of payments for this obligation is found in Note 17.

## f. Law changes in Argentina

Under the previous political regime in Argentina, the government intensified the use of price, foreign exchange, and import controls in response to unfavourable domestic economic trends. Historically, the Argentine government also imposed restrictions on the importation of goods and services and increased administrative procedures required to import equipment, materials and services required for operations at Manantial Espejo. In support of this policy, in May 2012, the government mandated that mining companies establish an internal function to be responsible for substituting Argentinian-produced goods and materials for imported goods and materials and required advance government review of plans to import goods and materials. In addition, the government of Argentina also tightened control over capital flows and foreign exchange in an attempt to curtail the outflow of hard currencies and protect its foreign currency reserves, including mandatory repatriation and conversion of foreign currency funds in certain circumstances, informal restrictions on dividend, interest, and service payments abroad and limitations on the ability of individuals and businesses to convert Argentine pesos into USD or other hard currencies, exposing us to additional risks of Peso devaluation and high domestic inflation.

While a new federal government was elected in Argentina in late 2015 and has since taken steps to ease some of the previously instituted controls and restrictions, particularly relaxing certain rules relating to the inflow and outflow of foreign currencies, many of the policies of the previous government continue to adversely affect the Company's Argentine operations. It is unknown whether these recent changes will be lasting, what, if any, additional steps will be taken by the new administration or what financial and operational impacts these and any future changes might have on the Company. As such, the Company continues to monitor and assess the situation in Argentina.



## g. Political changes in Bolivia

On May 28, 2014, the Bolivian government enacted Mining Law No. 535 (the "New Mining Law"). Among other things, the New Mining Law has established a new Bolivian mining authority to provide principal mining oversight (varying the role of COMIBOL) and sets out a number of new economic and operational requirements relating to state participation in mining projects. Further, the New Mining Law provides that all pre-existing contracts are to migrate to one of several new forms of agreement within a prescribed period of time. As a result, we anticipate that our current joint venture agreement with COMIBOL relating to the San Vicente mine will be subject to migration to a new form of agreement and may require renegotiation of some terms in order to conform to the New Mining Law requirements. We are assessing the potential impacts of the New Mining Law on our business and are awaiting further regulatory developments, but the primary effects on the San Vicente operation and our interest therein will not be known until such time as we have, if required to do so, renegotiated the existing contract, and the full impact may only be realized over time. In the meantime, we understand that pre-existing agreements will be respected during the period of migration and we will take appropriate steps to protect and, if necessary, enforce our rights under our existing agreement with COMIBOL. There is, however, no guarantee that governmental actions, including possible expropriation or additional changes in the law, and the migration of our contract will not impact our involvement in the San Vicente operation in an adverse way and such actions could have a material adverse effect on us and our business.

## h. Other Legal Matters

The Company is subject to various claims and legal proceedings covering a wide range of matters that arise in the ordinary course of business activities, many of them relating to ex-employees. Each of these matters is subject to various uncertainties and it is possible that some of these matters may be resolved unfavorably to the Company. The Company establishes provisions for matters that are probable and can be reasonably estimated, included within current liabilities, and amounts are not considered material.

In assessing loss contingencies related to legal proceedings that are pending against the Company or un-asserted claims that may result in such proceedings, the Company and its legal counsel evaluate the perceived merits of any legal proceedings or un-asserted claims as well as the perceived merits of the amount of relief sought or expected to be sought. In the opinion of management there are no claims expected to have a material effect on the results of operations or financial condition of the Company.

## i. Title Risk

Although the Company has taken steps to verify title to properties in which it has an interest, these procedures do not guarantee the Company's title. Property title may be subject to, among other things, unregistered prior agreements or transfers and may be affected by undetected defects.

## j. Royalty Agreements and Participation Agreements

The Company has various royalty agreements on certain mineral properties entitling the counterparties to the agreements to receive payments per terms as summarized below. Royalty liabilities incurred on acquisitions of properties are netted against the mineral property while royalties that become payable upon production are expensed at the time of sale of the production.

As part of the arrangement closed with Maverix on July 11, 2016 (Note 12), Maverix acquired from the Company a portfolio of royalties, precious metals streams and payment agreements, in exchange for a 54% interest in Maverix (40% fully diluted as at December 31, 2017). The key portfolio assets included the economic equivalent of one hundred percent (100%) of the gold produced from Pan American's operating La Colorada silver mine, less a fixed price of US \$650 per ounce for the life of the mine, as well as an agreement to purchase five percent (5%) of future gold production at a fixed price of US\$450 per ounce from the feasibility stage La Bolsa project. The portfolio also included, among others, the equivalent of a net smelter returns royalty of one and one-quarter percent (1¼%) on all metals produced from the Calcatreu project (Note 10) and a net smelter returns royalty of one percent (1%) on the Pico Machay project that is currently owned by Pan American.



On September 22, 2011, Peru's Parliament approved a law that increased mining taxes to fund anti-poverty infrastructure projects in the country, effective October 1, 2011. The law changed the scheme for royalty payments, so that mining companies that had not signed legal stability agreements with the government had to pay royalties of 1% to 12% on operating profit; royalties under the previous rules were 1% to 3% on net sales. In addition to these royalties, such companies were subject to a "special tax" at a rate ranging from 2% to 8.4% of operating profit. Companies that had concluded legal stability agreements (under the General Mining Law) will be required to pay a "special contribution" of between 4% and 13.12% of operating profits. The change in the royalty and the new tax had no material impact on the results of the Company's Peruvian operations.

In the province of Chubut, Argentina which is the location of the Company's Navidad property, there is a provincial royalty of 3% of the "Operating Income". Operating income is defined as revenue minus production costs (not including mining costs), treatment and transportation charges. Refer below to the Navidad project section below for further details.

As part of the 2009 Aquiline transaction, the Company issued a replacement convertible debenture that allowed the holder to convert the debenture into either 363,854 Pan American shares or a silver stream contract with Aquiline Resources Inc., a wholly owned subsidiary of the Company. The holder subsequently selected the silver stream contract related to certain production from the Navidad project. The final contract for the alternative is being discussed and pending the final resolution to this alternative, the Company continues to classify the fair value calculated at the acquisition of this alternative, as a deferred credit as disclosed in Note 19.

## Huaron and Morococha mines

In June 2004, Peru's Congress approved a bill that allows royalties to be charged on mining projects. These royalties are payable on Peruvian mine production at the following progressive rates: (i) 1.0% for companies with sales up to \$60.0 million; (ii) 2.0% for companies with sales between \$60.0 million and \$120.0 million; and (iii) 3.0% for companies with sales greater than \$120.0 million. This royalty is a net smelter returns royalty, the cost of which is deductible for income tax purposes.

## Manantial Espejo mine

Production from the Manantial Espejo property is subject to royalties to be paid to Barrick Gold Corp. according to the following: (i) \$0.60 per metric tonne of ore mined from the property and fed to process at a mill or leaching facility to a maximum of 1 million tonnes; and (ii) one-half of one percent (0.5%) of net smelter returns derived from the production of minerals from the property. In addition, the Company has negotiated a royalty equal to 3.0% of operating cash flow payable to the Province of Santa Cruz.

## San Vicente mine

Pursuant to an option agreement entered into with COMIBOL, a Bolivian state mining company, with respect to the development of the San Vicente property, the Company is obligated to pay COMIBOL a participation fee of 37.5% (the "Participation Fee") of the operation's cash flow. Once full commercial production of San Vicente began, the Participation Fee was reduced by 75% until the Company recovered its investment in the property. The Participation Fee has now reverted back to the original percentage. For the year ended December 31, 2017, the Company incurred approximately \$8.5 million in COMIBOL royalties (2016 - incurred \$14.3 million).

A royalty is also payable to EMUSA, a former partner of the Company on the project. The royalty is a 2% net smelter return royalty (as per the Agreement) payable only after the Company has recovered its capital investment in the project and only when the average price of silver in a given financial quarter is \$9.00 per ounce or greater. For the year ended December 31, 2017 the royalties paid to EMUSA amounted to approximately \$0.9 million (2016 - \$1.0 million).

In December 2007, the Bolivian government introduced a new mining royalty that affects the San Vicente project. The royalty is applied to gross metal value of sales (before smelting and refining deductions) and the royalty percentage is a sliding scale depending on metal prices. At current metal prices, the royalty is 6% for silver metal value and 5%



for zinc and copper metal value of sales. The royalty is income tax deductible. For the year ended December 31, 2017 the royalty amounted to \$5.0 million (2016 - \$5.6 million).

## **Dolores mine**

Production from the Dolores mine is subject to underlying net smelter return royalties comprised of 2% on silver production and 3.25% on gold production. These royalties are payable to Royal Gold Inc. and were effective in full as of May 1, 2009, on the commencement of commercial production at the Dolores mine. The royalties to Royal Gold amounted to approximately \$5.5 million for the year ended December 31, 2017 (2016 – \$5.3 million).

## Navidad project

As a result of uncertainty over the zoning, regulatory and tax laws which will ultimately apply, the Company has temporarily suspended project development activities at Navidad. The Company remains committed to the development of Navidad and to contributing to the positive economic and social development of the province of Chubut upon the adoption of a favorable legislative framework.

## **30. RELATED PARTY TRANSACTIONS**

The Company's related parties include its subsidiaries, associates over which it exercises significant influence, and key management personnel. During its normal course of operation, the Company enters into transactions with its related parties for goods and services. A company owned by a former director of the Company was paid \$0.1 million for consulting services in the year ended December 31, 2016, there were no such payments in 2017. Related party transactions with Maverix have been disclosed in Note 12 of these consolidated financial statements.

These transactions are in the normal course of operations and are measured at the exchange amount, which is the amount of consideration established and agreed to by the parties.

## Compensation of key management personnel

The remuneration of directors and other members of key management personnel during the year were as follows:

	2017	2016
Short-term benefits	\$ 10,175	\$ 10,052
Share-based payments	2,235	2,172
	\$ 12,410	\$ 12,224

#### GLOSSARY

All-in sustaining costs per silver ounce sold, net of by-products (AISCSOS) – The Company believes that AISCSOS reflects a comprehensive measure of the full cost of operating its consolidated business given it includes the cost of replacing silver 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 cash flow.

**Backfill** – Waste material used to fill the void created by mining.

**By-products** – A secondary metal or mineral product recovered in the milling process. Pan American Silver considers its by-product metals to be gold, zinc, lead and copper.

Cash Costs per Ounce of Silver, net of by-product credits

 Pan American produces by-product metals incidentally to our silver mining activities. We have adopted the practice of calculating the net cost of producing an ounce of silver, our primary payable metal, after deducting revenues gained from incidental by-product production, as a performance measure.

**Decline** – A sloping underground opening for access from level to level or from surface.

*Flotation circuit* – A milling process in which valuable mineral particles are induced to become attached to bubbles and float as others sink.

*Heap Leach* - Low-cost method of processing ore whereby crushed ore is heaped onto a liner (thick polyethylene sheet) and then dilute cyanide solution is sprinkled on top of the heap. As the solution trickles through the ore, valuable minerals are dissolved and ultimately recovered.

*Mill* – A plant in which ore is treated and metals are recovered or prepared for smelting; also a revolving drum used for the grinding of ores in preparation for treatment.

**Stoping area** – An underground excavation in a mine from which ore is, or has been, extracted.

*Tailings* – Material rejected from a mill after most of the recoverable valuable minerals have been extracted.

#### **RESERVE AND RESOURCE DEFINITIONS**

*Mineral resource* – A mineral resource is a concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a mineral resource are known, estimated or interpreted from specific geological evidence and knowledge.

**Inferred mineral resource** – That part of a mineral resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

*Indicated mineral resource* – That part of a mineral resource for which quantity, grade or quality, densities, shape, and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

**Measured mineral resource** – That part of a mineral resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.

*Mineral reserve* – A mineral reserve is the economically mineable part of a measured or indicated mineral resource demonstrated by at least a preliminary feasibility study. This study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A mineral reserve includes diluting materials and allowances for losses that may occur when the material is mined.

**Probable mineral reserve** – The economically mineable part of an indicated, and in some circumstances, a measured mineral resource demonstrated by at least a preliminary feasibility study. This study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified.

**Proven mineral reserve** – The economically mineable part of a measured mineral resource demonstrated by at least a preliminary feasibility study. This study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction is justified.

#### ABBREVIATIONS

koz – thousand ounces kt – thousand tonnes Tpd – tonnes per day M – millions Moz – million ounces ARS – Argentine peso BOB – Bolivian boliviano CAD – Canadian dollar MXN – Mexican peso PEN – Peruvian neuvo sol USD – United States dollar

#### **Non-GAAP Measures**

This annual report of Pan American Silver Corp. and its subsidiaries (collectively, "Pan American Silver", the "Company", "we" or "our") refers to various non-GAAP measures, such as: cash costs per payable ounce of silver, net of by-product credits ("cash costs"); all-in sustaining cost per silver ounce sold ("AISCSOS"); total debt; adjusted earnings; and adjusted earnings per share. These measures do not have a standardized meaning prescribed by IFRS as an indicator of performance, and may differ from methods used by other companies. Readers should refer to the Alternative Performance (non-GAAP) Measures section of Pan American's Management's Discussion and Analysis for the period ended December 31, 2017, available at www.sedar.com.

#### **Reporting Currency and Financial Information**

Unless we have specified otherwise, all references to dollar amounts or \$ are to United States dollars.

#### **Cautionary Note Regarding Forward-Looking Statements and Information**

Certain of the statements and information in this annual report constitute "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 information. Forward-looking statements or information in this annual report relate to, among other things: future financial or operational performance, including our estimated production of silver, gold and other metals in 2018 and with respect to future production, including anticipated production from the Cap-Oeste Sur Este ("COSE") and Joaquin projects; our expectations with respect to future free cash flow: our estimated cash costs and AISCSOS in future years: our estimated capital investments, including with respect to the Joaquin and the COSE projects, and sustaining capital in future years; the ability of the Company to successfully complete any capital investment programs and projects, and the impacts of any such programs and projects on the Company; timing of production and the cash costs of production at the Company's properties, including the anticipated timing of production and results of developments and operations; the ability of the Company to realize value from transactions, including with respect to its Joaquin and the COSE projects, or its investment in New Pacific Metals Corp.; the Company's plans and expectations for its properties and operations, our expectations with respect to future prices of silver or other precious metals, world-wide silver production, or global demand on silver, or other similar metrics relating to silver, and exchange rates; and any anticipated level of financial and operational success in 2018.

These forward-looking statements and information reflect the Company's current views with respect to future events and are necessarily based upon a number of assumptions that, while considered reasonable by the Company, are inherently subject to significant operational, business, economic and regulatory uncertainties and contingencies. These assumptions include: tonnage of ore to be mined and processed; ore grades and recoveries; prices for silver, gold and base metals remaining as estimated; currency exchange rates remaining as estimated; capital, decommissioning and reclamation estimates; our mineral reserve and resource estimates and the assumptions upon which they are based; prices for energy inputs, labour, materials, supplies and services (including transportation); no labour-related disruptions at any of our operations; no unplanned delays or interruptions in scheduled production; all necessary permits, licenses and regulatory approvals for our operations are received in a timely manner; and our ability to comply with environmental, health and safety laws. The foregoing list of assumptions is not exhaustive.

The Company cautions the reader that forward-looking statements and information involve known and unknown risks, uncertainties and other factors that may cause actual results and developments to differ materially from those expressed or implied by such forward-looking statements or information contained in this annual report and the Company has made assumptions and estimates based on or related to many of these factors. Such factors include, without limitation: fluctuations in silver, gold and base metal prices; fluctuations in prices for energy inputs, labour, materials, supplies and services (including transportation); fluctuations in currency markets (such as the Canadian dollar, Peruvian sol, Mexican peso, Argentine peso and Bolivian boliviano versus the U.S. dollar); operational risks of the Company's business and hazards inherent with the business of mining (including environmental accidents and hazards, industrial accidents, equipment breakdown, unusual or unexpected geological or structural formations, cave-ins, flooding and severe weather); risks relating to the credit worthiness or financial condition of suppliers, refiners and other parties with whom the Company does business; inadequate insurance, or inability to obtain insurance, to cover these risks and hazards; employee relations, including relationships with unions; relationships with, and claims by, local communities and indigenous populations; availability and increasing costs associated with mining inputs and labour; our ability to obtain all necessary permits, licenses and regulatory approvals in a timely manner; changes in laws, regulations and government practices in

the jurisdictions where we operate, including environmental, export and import laws and regulations; legal restrictions on mining; risks relating to expropriation; diminishing quantities or grades of mineral reserves as properties are mined; actual results of current exploration activities. conclusions of economic evaluations, and changes in project parameters to deal with unanticipated economic and other factors; increased competition in the mining industry for equipment and qualified personnel; and those factors identified under the caption "Risks Related to Our Business" in the Company's most recent form 40-F and Annual Information Form filed with the United States Securities and Exchange Commission (the "SEC") and Canadian provincial securities regulatory authorities, respectively. Although the Company has attempted to identify important factors that could cause actual results to differ materially, there may be other factors that cause results not to be as anticipated, estimated, described or intended. Investors are cautioned against undue reliance on forward-looking statements or information. Forward-looking statements and information are designed to help readers understand management's current views of our near and longer term prospects and may not be appropriate for other purposes. The Company does not intend, nor does it assume any obligation to update or revise forward-looking statements or information, whether as a result of new information, changes in assumptions, future events or otherwise, except to the extent required by applicable law.

#### **Technical Information**

Technical information contained in this annual report with respect to Pan American Silver Corp. has been reviewed and approved by Martin Wafforn, P.Eng., SVP Technical Services and Process Optimization, and Chris Emerson, FAusIMM, VP Business Development and Geology, who are the Company's qualified persons for the purposes of Canadian National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101"). Mineral reserves and mineral resources in this annual report were prepared under the supervision of, or were reviewed by, Martin Wafforn and Chris Emerson.

Technical disclosure in this annual report for the Company's material mineral properties is based on technical reports prepared for those properties, which are filed at www.sedar.com. For additional information about the Company's material mineral properties, other than the Joaquin property, please refer to the Company's Annual Information Form dated March 22, 2018, and technical reports with respect to material mineral properties and the Joaquin property, each filed at www.sedar.com.

# Cautionary Note to U.S. Investors Regarding References to Mineral Reserves and Resources

This annual report has been prepared in accordance with the requirements of Canadian securities laws, which differ from the requirements of U.S. securities laws. Unless otherwise indicated, all mineral reserve and mineral resource estimates included in this annual report have been disclosed in accordance with Canadian NI 43-101) and the Canadian Institute of Mining, Metallurgy and Petroleum Definition Standards. NI 43-101 is a rule developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects.

Canadian public disclosure standards, including NI 43-101, differ significantly from the requirements of the SEC, and information concerning mineralization, deposits, mineral reserve and resource information contained or referred to herein may not be comparable to similar information disclosed by U.S. companies. In particular, and without limiting the generality of the foregoing, this annual report uses the terms "measured resources", "indicated resources" and "inferred resources". U.S. investors are advised that, while such terms are recognized and required by Canadian securities laws, the SEC does not recognize them. The requirements of NI 43-101 for identification of "reserves" are not the same as those of the SEC, and reserves reported by Pan American Silver in compliance with NI 43-101 may not qualify as "reserves" under SEC standards. Under U.S. standards, mineralization may not be classified as a "reserve" unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve determination is made. U.S. investors are cautioned not to assume that any part of a "measured resource" or "indicated resource" will ever be converted into a "reserve". U.S. investors should also understand that "inferred resources" have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of "inferred resources" exist, are economically or legally mineable or will ever be upgraded to a higher category. Under Canadian securities laws, estimated "inferred resources" may not form the basis of feasibility or prefeasibility studies except in rare cases. Disclosure of "contained ounces" in a mineral resource is permitted disclosure under Canadian securities laws. However, the SEC normally only permits issuers to report mineralization that does not constitute "reserves" by SEC standards as in place tonnage and grade, without reference to unit measures. Accordingly, information concerning mineral deposits set forth herein may not be comparable with information made public by companies that report in accordance with U.S. standards.

# **Corporate Information**

## **CORPORATE OFFICE**

1440 - 625 Howe Street Vancouver, British Columbia Canada V6C 2T6 604-684-1175 info@panamericansilver.com

#### **BOARD OF DIRECTORS**

Ross J. Beaty – Chairman Michael Carroll Neil de Gelder Noel Dunn David Press Walter Segsworth Michael Steinmann Gillian Winckler

## **EXECUTIVE TEAM**

Michael Steinmann – President & Chief Executive Officer Steve Busby – Chief Operating Officer Robert Doyle – Chief Financial Officer Andres Dasso – Senior Vice President, Mining Operations George Greer – Senior Vice President, Project Development Martin Wafform – Senior Vice President, Technical Services & Process Optimization Christopher Emerson – Vice President, Business Development & Geology Christopher Lemon – General Counsel Sean McAleer – Vice President, Human Resources & Security

For biographies of Pan American Silver's Directors and Management, please visit www.panamericansilver.com.

## **AUDITORS**

Deloitte LLP, Chartered Professional Accountants 2800 – 1055 Dunsmuir Street Vancouver, British Columbia Canada V7X 1P4

## REGISTRAR AND TRANSFER AGENT

Computershare Investor Services Inc. 100 University Ave. 9th Floor Toronto, Ontario Canada M5J 2Y1 1-800-564-6253 service@computershare.com

#### **EXTERNAL LEGAL COUNSEL**

Borden Ladner Gervais LLP 1200 – 200 Burrard Street Vancouver, British Columbia Canada V7X 1T2

## SHARE INFORMATION

NASDAQ: PAAS TSX: PAAS Common shares outstanding at Dec. 31, 2017: 153.3 million

#### **INVESTOR CONTACT**

Siren Fisekci Vice President, Investor Relations and Corporate Communications T: (604) 684-1175 E: ir@panamericansilver.com

#### **ANNUAL MEETING**

Wednesday, May 9<sup>th</sup>, 2018 – 3:00pm (PST) Fairmont Waterfront Hotel, Malaspina Room 900 Canada Place Way Vancouver, British Columbia Canada V6C 3L5