



PAN AMERICAN
— SILVER —

Management's Discussion and Analysis

FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2017

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

November 8, 2017

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, 2016 (the "2016 Financial Statements") and the related notes contained therein, and the unaudited condensed interim consolidated financial statements for three and nine months ended September 30, 2017 and 2016 (the "Q3 2017 Financial Statements"), and the related notes contained therein. All amounts in this MD&A, the 2016 Financial Statements, and the Q3 2017 Financial Statements are expressed in United States dollars ("USD"), unless identified otherwise. The Company reports its financial position, results of operations and cashflows 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 2016 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 Q3 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 "AISCOS" 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 www.sedar.com

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.

Q3 2017 HIGHLIGHTS

Operations & Project Development

- **Silver production of 5.89 million ounces; production year-to-date on track to achieve full year guidance**

Pan American produced 5.89 million ounces of silver in the three months ended September 30, 2017 ("Q3 2017"), 7% less than the 6.36 million ounces produced in the third quarter of 2016 ("Q3 2016"). Silver production for the nine months ended September 30, 2017 ("YTD 2017") totaled 18.4 million ounces, in line with the production rate required to achieve management's full year forecast range of 24.5 to 26.0 million ounces.

- **Cash Costs of \$3.12 per ounce; 2017 annual Cash Costs forecast lowered to \$4.50 to \$5.20 per ounce**

Consolidated cash costs for Q3 2017 were \$3.12 per ounce, which is \$1.77 per ounce or 36% lower than the Q3 2016 cash costs of \$4.89 per ounce. YTD 2017 cash costs of \$5.04 per ounce were \$1.13 per ounce or 18% lower than cash costs for the nine months ended September 30, 2016 ("YTD 2016"), and 8% less than the low end of management's previous annual forecast range of \$5.50 to \$6.50 per ounce. Based on this, and the expected results for the fourth quarter of 2017 ("Q4 2017"), management is reducing its 2017 annual cash cost guidance to between \$4.50 and \$5.20 per ounce.

- **By-product production; 2017 annual lead and copper forecast increased**

Q3 2017 zinc, lead, and copper production was 14.1 thousand tonnes, 5.3 thousand tonnes and 3.7 thousand tonnes, respectively, while YTD 2017 zinc, lead, and copper production totaled 40.6 thousand tonnes, 16.1 thousand tonnes, and 10.4 thousand tonnes, respectively. Based on the year-to-date production and those anticipated for Q4 2017, management is revising its 2017 annual zinc, lead and copper production forecasts to: 54.0 to 56.0 thousand tonnes of zinc (formerly 56.5 to 58.5 thousand tonnes); 20.0 to 21.0 thousand tonnes of lead (formerly 19.0 to 20.0 thousand tonnes); and, 13.0 to 13.5 thousand tonnes of copper (formerly 8.8 to 9.3 thousand tonnes).

Gold production in Q3 2017 was 40.8 thousand ounces, 9.6 thousand ounces less than in Q3 2016, bringing YTD 2017 production to 116.3 thousand ounces, 17% lower than YTD 2016. Given the anticipated production for the remainder of the year at both Dolores and Manantial Espejo, management reaffirms the 2017 annual gold production forecast of 155.0 to 165.0 thousand ounces.

- **Progress on the Dolores expansion project**

During Q3 2017, the Company invested \$14.0 million on the Dolores expansion projects. The new pulp agglomeration plant has commenced processing and production, and the underground mine remains on-track for production to begin before the end of 2017.

- **La Colorada expansion delivers higher production and lower Cash Costs**

Silver production at La Colorada increased 32% and Cash Costs declined 74% in Q3 2017 compared with Q3 2016, as the expanded facility achieved throughput rates of over 1,900 tonnes per day, which is higher than the 1,800 tonne per day design rate.

Financial

- **Revenues, net earnings, and adjusted earnings**

Q3 2017 revenue of \$190.8 million was \$42.9 million lower than Q3 2016, mainly as a result of lower quantities of silver and gold sold and lower realized silver and gold prices, partially offset by higher revenues from the sale of copper, zinc and lead. The realized silver prices per ounce averaged \$16.68 for Q3 2017 compared with \$19.69 during Q3 2016. Net earnings in Q3 2017 were \$17.8 million (\$0.11 basic earnings per share) compared with \$43.4 million (\$0.28 basic earnings per share) in Q3 2016. Q3 2017 adjusted earnings of \$23.3 million (\$0.15 basic earnings per share) were \$23.3 million (or \$0.16 basic earnings per share) lower than Q3 2016 adjusted earnings.

- **\$38.7 million repaid on credit facility and short-term loans**

As a result of the Company's strong operating cash flows and liquidity position management made the decision to repay the full \$36.2 million previously drawn on its \$300.0 million, four-year-term, secured revolving credit facility (the "Credit Facility"), in addition to repaying \$2.5 million of outstanding loans payable. After these repayments the Company's only debt outstanding as of September 30, 2017 was \$7.5 million of finance lease liabilities.

- **Strong operating cash flows, liquidity and working capital position**

The Company generated \$63.8 million of cash from operating activities in Q3 2017, which was sufficient to fund: \$32.0 million in mineral property plant and equipment; \$3.8 million in dividends; \$3.8 million in loan and equipment lease repayments; and the majority of a \$36.2 million Credit Facility repayment, the remainder of which was funded with a \$11.9 million treasury decrease. The Company had cash and short-term investment balances of \$186.3 million and working capital of \$409.7 million as at September 30, 2017. At the end of Q3 2017, the Company had the full \$300.0 million available under its revolving credit facility.

- **Consolidated AISCOS of \$8.69; YTD AISCOS at low-end of 2017 forecast range**

Q3 2017 consolidated AISCOS were \$8.69, which is \$2.35 or 37% higher than the Q3 2016 AISCOS of \$6.34. YTD 2017 AISCOS of \$10.77 were within management's current 2017 annual AISCOS forecast range of \$10.50 to \$11.50.

Q3 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 nine months ended September 30, 2017 and 2016:

	Silver Production (ounces '000s)				Cash Costs ⁽¹⁾ (\$ per ounce)			
	Three months ended September 30,		Nine months ended September 30,		Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016	2017	2016	2017	2016
La Colorada	1,825	1,385	5,186	4,130	1.71	6.58	2.68	6.86
Dolores	974	902	2,976	2,941	(0.57)	(5.26)	(0.69)	0.40
Alamo Dorado	—	369	608	1,463	NA	18.55	17.03	14.16
Huaron	939	971	2,733	2,877	0.31	4.92	1.09	6.19
Morococha ⁽²⁾	634	687	1,912	1,963	(8.16)	4.41	(4.56)	3.83
San Vicente ⁽³⁾	806	1,150	2,507	3,382	12.99	12.40	13.11	12.18
Manantial Espejo	715	896	2,477	2,357	12.73	(1.75)	16.10	0.87
Consolidated Total⁽⁴⁾	5,893	6,360	18,400	19,113	3.12	4.89	5.04	6.17

(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 Q3 2017 Financial Statements.

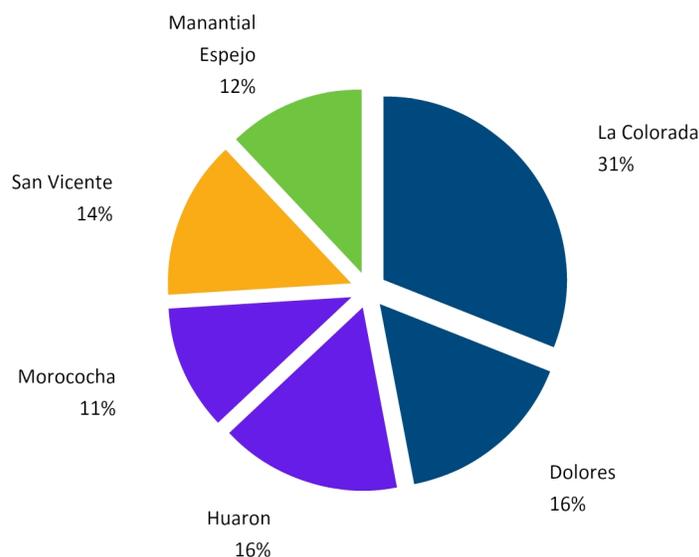
(2) Morococha data represents Pan American's 92.3% interest in the mine's production.

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

(4) Totals may not add due to rounding.

Q3 2017 Silver Production

The chart below presents silver production by mine in Q3 2017:



Consolidated silver production of 5.89 million ounces in Q3 2017 was 7% less than the 6.36 million ounces produced in Q3 2016. The quarter-over-quarter production decline largely reflects discontinued production from Alamo Dorado and decreased production at San Vicente and Manantial Espejo, partially offset by increased production at La Colorada and Dolores, attributable to the expansion projects. Production at Morococha and Huaron was essentially comparable quarter-over-quarter. See the “Individual Mine Performance” section of this MD&A for further information.

Q3 2017 Cash Costs

Consolidated cash costs per ounce of silver for Q3 2017 and YTD 2017 were \$3.12 and \$5.04, respectively, representing a 36% and 18% reduction from cash costs in Q3 2016 and YTD 2016. The decline in cash costs reflects higher quarter-over-quarter by-product credits, which increased by \$2.64 per ounce, primarily as a result of improved base metal prices, increased zinc and lead production at La Colorada attributable to the recently completed expansion project, and increased copper production at Morococha and Huaron, along with lower payable silver ounces produced. Discontinued production at Alamo Dorado also contributed to lower cash costs. YTD 2017 and YTD 2016 cash costs variances were driven by similar factors, with by-product credits per ounce increasing by \$1.60, due mainly to increased base metal production and prices.

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.

See the “Individual Mine Performance” section of this MD&A for further information.

Q3 2017 By-Product Production

The following table provides the Company's by-product production for the respective three and nine months ended September 30, 2017 and 2016:

	By-Product Production			
	Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
Gold – koz	40.8	50.4	116.3	140.0
Zinc – kt	14.1	13.1	40.6	38.7
Lead – kt	5.3	5.0	16.1	14.9
Copper – kt	3.7	3.2	10.4	11.4

Gold production during Q3 2017 was 40.8 thousand ounces, 19% lower than in Q3 2016, primarily due to the completion of open-pit mining at Manantial Espejo, where we are supplementing underground production with lower grade stockpile material, as expected.

Zinc production in Q3 2017 was 7% higher than in Q3 2016, driven by higher ore grades and throughput at La Colorada, partially offset by lower grades at San Vicente. Quarter-over-quarter lead production increased 6%, driven mainly by higher throughput and grades at La Colorada, partially offset by lower grades at Huaron. Q3 2017 copper production was 16% higher than in Q3 2016, primarily the result of higher copper grades at Morococha and Huaron. See the "Individual Mine Performance" section of this MD&A for further information.

2017 Average Market Metal Prices

The following tables set out the average market price for each metal produced for the respective three and nine months ended September 30, 2017 and 2016:

	Average Market Metal Prices			
	Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
Silver \$/ounce	16.84	19.61	17.16	17.12
Gold \$/ounce	1,278	1,335	1,251	1,260
Zinc \$/tonne	2,963	2,255	2,783	1,955
Lead \$/tonne	2,334	1,873	2,259	1,780
Copper \$/tonne	6,349	4,772	5,952	4,725

Q3 2017 AISCOS

The following table reflects the quantities of payable silver sold and AISCOS at each of Pan American's operations for the three and nine month periods ended September 30, 2017, compared with the same periods in 2016:

	Payable Silver Sold (ounces '000s)				AISCOS ⁽¹⁾ (\$ per ounce)			
	Three months ended September 30,		Nine months ended September 30,		Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016	2017	2016	2017	2016
La Colorada	1,642	1,296	5,006	3,925	3.48	6.94	5.04	8.31
Dolores	933	936	2,864	2,944	8.03	(4.70)	8.45	9.89
Alamo Dorado	91	410	734	1,681	6.38	17.13	17.73	12.54
Huaron	818	821	2,368	2,475	2.94	9.94	4.65	10.66
Morococha	576	627	1,791	1,851	(0.46)	9.29	2.23	7.69
San Vicente	632	1,476	2,384	2,932	18.62	14.20	15.47	15.14
Manantial Espejo	562	936	2,405	2,254	19.25	(14.67)	21.76	(4.10)
Consolidated Total ⁽²⁾	5,255	6,502	17,552	18,061	8.69	6.34	10.77	10.10

(1) AISCOS 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 AISCOS calculation and a reconciliation of this measure to the Q3 2017 Financial Statements. G&A costs are included in the consolidated AISCOS, but not allocated in calculating AISCOS for each operation.

(2) Totals may not add due to rounding.

Consolidated AISCOS for Q3 2017 and YTD 2017, were \$8.69 and \$10.77, respectively, representing a 37% and 7% increase, respectively, from Q3 2016 and YTD 2016.

The quarter-over-quarter increase of \$2.35 primarily reflects a \$3.98 increase in production costs due to the effect of net realizable value ("NRV") inventory adjustments, and a 19% decrease in silver ounces sold due to decreased grades mined at both San Vicente and Manantial Espejo, partially offset by lower direct operating costs. The lower operating costs were driven mainly from the completion of open-pit mining activities at Manantial Espejo, the buildup in high-grade inventory stockpiles at Dolores in preparation for the pulp agglomeration plant, and processing activities ceasing at Alamo Dorado.

The \$0.67 increase in YTD 2017 AISCOS from YTD 2016 was primarily driven by higher operating costs, mainly from NRV inventory adjustments, partially offset by increased by-product credits from increased base metal prices.

Individual Mine Performance

An analysis of each operation for Q3 2017, compared to Q3 2016 follows. The Project Capital amounts invested in Q3 2017 are further discussed in the "Project Development Update" section of this MD&A.

La Colorado mine

	Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
Tonnes milled - kt	175.3	128.2	484.6	374.2
Average silver grade – grams per tonne	355	374	366	380
Average zinc grade - %	2.70	2.55	2.79	2.56
Average lead grade - %	1.56	1.19	1.55	1.31
Average silver recovery - %	91.2	89.9	91.1	90.3
Average zinc recovery - %	83.1	80.2	83.6	81.1
Average lead recovery - %	86.7	85.6	87.1	86.4
Production:				
Silver – koz	1,825	1,385	5,186	4,130
Gold – koz	1.21	0.72	3.03	2.07
Zinc – kt	3.93	2.62	11.30	7.76
Lead – kt	2.37	1.31	6.53	4.24
Cash cost per ounce net of by-products⁽¹⁾	\$ 1.71	\$ 6.58	\$ 2.68	\$ 6.86
AISCSOS⁽²⁾	\$ 3.48	\$ 6.94	\$ 5.04	\$ 8.31
Payable silver sold - koz	1,642	1,296	5,006	3,925
Sustaining capital - ('000s)⁽³⁾	\$ 3,680	\$ 1,190	\$ 11,394	\$ 8,316

(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 Q3 2017 Financial Statements.

(3) Sustaining capital expenditures excludes \$2.0 million and \$7.4 million of investing activity cash outflow for Q3 2017 and 2017 YTD, respectively (Q3 2016 and 2016 YTD: \$13.8 million and \$44.7 million, respectively) related to investment capital incurred on the La Colorado expansion project as disclosed in the “Project Development Update” section of this MD&A.

The La Colorado mine produced 32% more silver in Q3 2017 than Q3 2016 due to a 37% increase in throughput rates partially offset by a 5% decline in silver grades. The improved throughput reflects the benefits of the expansion project, which achieved the targeted 1,800 tonnes per day mining and processing rates by the end of Q2 2017. During Q3 2017, the mine also produced 3.9 thousand tonnes of zinc and 2.4 thousand tonnes of lead, 50% and 81% more than in Q3 2016, respectively, due to 52% increased throughput of sulphide ore.

Q3 2017 cash costs of \$1.71 per ounce of silver were \$4.87 lower than the \$6.58 per ounce reported in Q3 2016. The 74% decrease was primarily the result of improved by-product credits due to increased quantities of base metals produced and higher base metal prices, as well as increased silver production, partially offset by increased production costs due largely to increased underground development rates and employment cost escalations.

Q3 2017 AISCSOS of \$3.48 decreased by \$3.46 from the \$6.94 recorded in Q3 2016. The decrease was the result of improved production rates following the completion of the new mine shaft and sulphide plant in 2016, as well as increased base metal prices, partially offset by the previously discussed increase in development rates and employment cost escalations.

Sustaining capital totaled \$3.7 million in Q3 2017, an increase from \$1.2 million in Q3 2016. Sustaining capital in Q3 2017 related primarily to a tailings storage facility expansion, exploration, and underground infrastructure. An additional \$2.0 million was spent on the La Colorado expansion project during the quarter (Q3 2016 - \$7.4 million), which is further described in the Project Development Update section of this MD&A.

Dolores mine

	Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
Tonnes placed - kt	1,629.7	1,582.5	4,820.5	4,655.9
Average silver grade – grams per tonne	35	38	38	35
Average gold grade – grams per tonne	0.67	0.80	0.64	0.73
Average silver produced to placed ratio - %	53.5	46.8	50.3	55.9
Average gold produced to placed ratio - %	70.8	66.7	72.4	67.2
Production:				
Silver – koz	974	902	2,976	2,941
Gold – koz	25.0	27.1	71.8	73.9
Cash cost per ounce net of by-products ⁽¹⁾	(0.57)	(5.26)	(0.69)	0.40
AISCSOS ⁽²⁾	8.03	(4.70)	8.45	9.89
Payable silver sold - koz	933	936	2,864	2,944
Sustaining capital - ('000s) ⁽³⁾	\$ 3,812	\$ 7,342	\$ 22,768	\$ 37,307

(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 Q3 2017 Financial Statements.

(3) Sustaining capital expenditures exclude \$12.5 million and \$40.3 million of investing activity cash outflow for in Q3 2017 and YTD 2017, respectively (Q3 2016 and YTD 2016: \$19.3 million and \$40.8 million, respectively) related to investment capital incurred on Dolores expansion projects, as disclosed in the "Project Development Update" section of this MD&A.

Silver production in Q3 2017 increased by 8% compared to Q3 2016, largely driven by increased throughput and improved recovery kinetics as the new pulp agglomeration plant began commissioning in mid-August. Gold production of 25.0 thousand ounces in Q3 2017 was 8% lower than the 27.1 thousand ounces produced in Q3 2016, due to lower gold grades from mine sequencing partially offset by the addition of the pulp agglomeration plant.

Q3 2017 cash costs were negative \$0.57 per ounce, a \$4.69 per ounce increase relative to the negative \$5.26 per ounce achieved in Q3 2016. The increase was primarily the result of less gold by-product credits, due to lower gold grades and prices, as well as higher production costs from increased throughput and the commissioning of the new pulp agglomeration circuit.

Q3 2017 AISCSOS of \$8.03 increased \$12.73 from negative \$4.70 in Q3 2016. The increase was primarily the result of a \$6.5 million increase in production costs due to a \$10.5 million increase in NRV adjustments, and a \$9.2 million decrease in by-product credits from lower quantities of gold sold. The increase in production costs was partially offset by a \$4.0 million reduction in direct operating costs, as a result of increased ore stockpile and heap inventories with the pulp agglomeration plant start-up, and a \$3.5 million decrease in sustaining capital due to the timing of leach pad expansion works and mining equipment purchases.

Sustaining capital expenditures in Q3 2017 were \$3.8 million compared to \$7.3 million in Q3 2016, and consisted primarily of expenditures for open pit pre-stripping, processing equipment, and leach pad expansion. Q3 2017 sustaining capital excludes \$12.5 million of cash outflows relating to Dolores expansion projects (Q3 2016 - \$19.3 million), which is further discussed in the "Project Development Update" section of this MD&A.

Alamo Dorado mine

	Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
Tonnes milled - kt	—	425.1	451.8	1,384.5
Average silver grade – grams per tonne	NA	42	43	47
Average gold grade – grams per tonne	NA	0.15	0.17	0.19
Average silver recovery - %	NA	61.9	67.6	69.8
Production:				
Silver – koz	—	369	608.0	1,463.0
Gold – koz	—	1.4	2.0	7.0
Copper – tonnes	—	10	13	40
Cash cost per ounce net of by-products ⁽¹⁾	NA	18.55	17.03	14.16
AISCOS ⁽²⁾	6.38	17.13	17.73	12.54
Payable silver sold - koz	91	410	734	1,681
Sustaining capital - ('000s)	\$ —	\$ —	\$ —	\$ —

(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) AISCOS 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 AISCOS calculation and a reconciliation of this measure to the Q3 2017 Financial Statements.

Production at Alamo Dorado ceased in the second quarter of 2017 and decommissioning activities continued in Q3 2017 with \$3.4 million spent during the quarter, which is further discussed in the "Closure and Decommissioning Cost Provision" section of this MD&A.

The payable silver ounces sold in Q3 2017 related to Q2 2017 production, which resulted in the final AISCOS for Alamo Dorado being reported in the current quarter. Q3 2017 AISCOS of \$6.38 per ounce was \$10.75 lower than Q3 2016 of \$17.13, reflecting the end of production activities in Q2 2017.

As production, cash costs and AISCOS for Alamo Dorado have come to an end, subsequent Management Discussion and Analysis will not include discussion of Alamo Dorado in the "Operating Performance" section.

Huaron mine

	Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
Tonnes milled - kt	241.5	223.5	696.6	674.5
Average silver grade – grams per tonne	142	160	145	159
Average zinc grade - %	2.65	2.97	2.74	2.97
Average lead grade - %	1.11	1.52	1.26	1.48
Average copper grade - %	0.90	0.88	0.89	0.94
Average silver recovery - %	85.6	84.8	85.6	83.8
Average zinc recovery - %	77.7	75.4	77.5	74.2
Average lead recovery - %	76.8	80.2	78.1	78.6
Average copper recovery - %	80.9	75.4	79.5	76.4
Production:				
Silver – koz	939	971	2,733	2,877
Gold – koz	0.27	0.20	0.96	0.61
Zinc – kt	4.97	4.87	14.73	14.63
Lead – kt	2.03	2.68	6.74	7.75
Copper – kt	1.74	1.46	4.89	4.80
Cash cost per ounce net of by-products ⁽¹⁾	\$ 0.31	\$ 4.92	\$ 1.09	\$ 6.19
AISCOS ⁽²⁾	\$ 2.94	\$ 9.94	\$ 4.65	\$ 10.66
Payable silver sold – koz	818	821	2,368	2,475
Sustaining capital - ('000s)	\$ 1,512	\$ 3,252	\$ 6,719	\$ 7,640

(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) AISCOS 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 AISCOS calculation and a reconciliation of this measure to the Q3 2017 Financial Statements.

In Q3 2017, silver production was 3% lower than Q3 2016, reflecting 11% lower grades, partially offset by increased throughput of 8%. Q3 2017 copper and zinc production increased 19% and 2% relative to Q3 2016, respectively, while lead production decreased 24%, all as a result of mine sequencing. During 2017, mill recoveries have improved for all metals, except lead, due to flotation circuit upgrades completed in the past year.

Q3 2017 cash costs of \$0.31 per ounce declined \$4.61 relative to Q3 2016. The decrease resulted largely from higher by-product credits due to higher prices for base metals and increased zinc and copper production, which offset the decrease in lead production and increases in direct operating costs.

Q3 2017 AISCOS of \$2.94 were \$7.00 lower than the \$9.94 for Q3 2016. The decrease was primarily attributable to significantly higher by-product credits due to improved base metal prices, and improved concentrate terms.

Sustaining capital expenditures during Q3 2017 totaled \$1.5 million, a decrease from \$3.3 million spent in Q3 2016. Sustaining capital investments in each quarter related primarily to exploration drilling, plant and infrastructure upgrades and equipment replacements and refurbishments.

Morococha mine⁽¹⁾

	Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
Tonnes milled – kt	171.7	172.3	506.3	508.6
Average silver grade – grams per tonne	132	143	135	138
Average zinc grade - %	3.09	3.20	2.93	3.27
Average lead grade - %	0.70	0.77	0.76	0.76
Average copper grade - %	1.28	1.17	1.25	1.50
Average silver recovery - %	89.0	89.8	88.6	88.4
Average zinc recovery - %	79.6	75.5	79.0	72.4
Average lead recovery - %	64.0	63.0	65.0	59.1
Average copper recovery - %	84.8	78.3	84.0	82.6
Production:				
Silver – koz	634	687	1,912	1,963
Gold – koz	1.08	0.41	2.71	1.70
Zinc – kt	4.19	4.14	11.65	11.97
Lead – kt	0.75	0.80	2.46	2.23
Copper – kt	1.80	1.48	5.15	6.14
Cash cost per ounce net of by-products ⁽²⁾	\$ (8.16)	\$ 4.41	\$ (4.56)	\$ 3.83
AISCOS ⁽³⁾	\$ (0.46)	\$ 9.29	\$ 2.23	\$ 7.69
Payable silver sold (100%) - koz	576	627	1,791	1,851
Sustaining capital (100%) - ('000s)	\$ 2,995	\$ 2,363	\$ 9,266	\$ 6,052

(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) AISCOS 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 AISCOS calculation and a reconciliation of this measure to the Q3 2017 Financial Statements.

Q3 2017 silver production was 8% lower than Q3 2016, primarily due to an 8% decrease in silver head grades. Q3 2017 copper and zinc production increased 22% and 1%, respectively, while lead production decreased by 6% relative to Q3 2016, all as a result of mine sequencing.

Cash costs of negative \$8.16 per ounce in Q3 2017 were \$12.57 per ounce lower than Q3 2016 cash costs of \$4.41 per ounce. The reduction was primarily the result of higher base metal by-product prices and higher copper production, which more than offset cost escalations.

Q3 2017 AISCOS of negative \$0.46 were \$9.75 lower than \$9.29 recorded in Q3 2016. The decrease was primarily attributable to significantly higher by-product credits due to improved base metal prices, and improved concentrate terms, partially offset by cost escalations.

Sustaining capital expenditures during Q3 2017 totaled \$3.0 million compared to \$2.4 million in Q3 2016. Sustaining capital in both periods related to exploration.

San Vicente mine ⁽¹⁾

	Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
Tonnes milled – kt	86.6	90.1	238.6	257.4
Average silver grade – grams per tonne	330	438	362	446
Average zinc grade - %	1.79	2.18	1.91	2.25
Average lead grade - %	0.29	0.33	0.30	0.33
Average silver recovery - %	90.8	92.8	92.1	93.0
Average zinc recovery - %	65.8	77.1	65.1	74.7
Average lead recovery - %	75.5	86.5	80.4	83.2
Production:				
Silver – koz	806	1,150	2,507	3,382
Gold – koz	0.13	—	0.38	—
Zinc – kt	1.02	1.52	2.96	4.33
Lead – kt	0.15	0.25	0.36	0.68
Copper – kt	0.11	0.24	0.31	0.48
Cash cost per ounce net of by-products ⁽²⁾	\$ 12.99	\$ 12.40	\$ 13.11	\$ 12.18
AISCOS ⁽³⁾	\$ 18.62	\$ 14.20	\$ 15.47	\$ 15.14
Payable silver sold (100%) - koz	632	1,476	2,384	2,932
Sustaining capital (100%) - ('000s)	\$ 2,400	\$ 1,576	\$ 6,207	\$ 3,332

(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) AISCOS 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 AISCOS calculation and a reconciliation of this measure to the Q3 2017 Financial Statements.

Q3 2017 silver production decreased 30% relative to Q3 2016, primarily due to a 25% reduction in head grades. The decline in ore grades was largely attributable to a delay in preparing access to higher-grade stopes, as well as mining dilution being experienced with the transitioning of certain conventional mine areas into more mechanized mining methods. Quarter-over-quarter zinc, lead and copper production decreased by 33%, 40% and 54%, respectively. The decreases in base metal production were also due to the delays in mine sequencing and dilution issues.

Cash costs of \$12.99 per ounce in Q3 2017 were 5% higher than the \$12.40 per ounce in Q3 2016, reflecting the lower metal production during the quarter.

Q3 2017 AISCOS of \$18.62 were \$4.42 higher than Q3 2016 of \$14.20, primarily due to the decrease in payable silver production and by-product credits.

Q3 2017 sustaining capital expenditures totaled \$2.4 million, an increase from \$1.6 million in Q3 2016. The expenditures were primarily related to exploration, certain infrastructure improvements, and mine equipment purchases and refurbishments.

Manantial Espejo mine

	Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
Tonnes milled - kt	206.1	201.1	588.3	548.6
Average silver grade – grams per tonne	119	154	143	148
Average gold grade – grams per tonne	2.05	3.43	1.97	3.29
Average silver recovery - %	89.4	88.5	90.8	90.0
Average gold recovery - %	93.9	93.4	93.9	94.0
Production:				
Silver – koz	715	896	2,477	2,357
Gold – koz	13.18	20.59	35.36	54.68
Cash cost per ounce net of by-products ⁽¹⁾	\$ 12.73	\$ (1.75)	\$ 16.10	\$ 0.87
AISCOS ⁽²⁾	\$ 19.25	\$ (14.67)	\$ 21.76	\$ (4.10)
Payable silver sold - koz	562	936	2,405	2,254
Sustaining capital - ('000s)	\$ 1,025	\$ 331	\$ 2,288	\$ 1,771

(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) AISCOS 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 AISCOS calculation and a reconciliation of this measure to the Q3 2017 Financial Statements.

(3) Sustaining capital expenditures exclude \$2.6 million of investing activity cash outflow for Q3 2017 and YTD 2017 (Q3 2016 and YTD 2016: \$nil) related to investment capital incurred on the COSE and Joaquin expansion projects, as disclosed in the "Project Development Update" section of this MD&A.

Silver production in Q3 2017 was 20% lower than in Q3 2016, mainly as a result of lower silver head grades related to mine sequencing and the completion of open-pit mining. Similarly, gold production decreased by 36% due to the anticipated decrease in gold head grades.

Q3 2017 cash costs of \$12.73 per ounce increased \$14.48 from negative \$1.75 per ounce in Q3 2016. The main factors driving the increase were a 24% decrease in by-product credits due to lower gold grades and prices, and a 20% decrease in silver production.

Q3 2017 AISCOS of \$19.25 were \$33.92 higher than Q3 2016 AISCOS of negative \$14.67. The increase was primarily driven by a \$15.8 million decrease in gold by-product credits due to lower volumes sold and prices, an \$11.8 million negative variance in NRV inventory adjustments, and an increase in direct selling costs of \$3.3 million due to the elimination of the Patagonian Port export credit in the fourth quarter of 2016 ("Q4 2016"). The factors increasing AISCOS were partially offset by a decrease in direct operating costs due to the end of open-pit mining activities.

In Q3 2017, sustaining capital expenditures totaled \$1.0 million compared to \$0.3 million in Q3 2016. The quarter-over-quarter increase was primarily attributable to purchases of underground mining equipment required to develop a new underground ramp to access ore beneath the Concepcion open pit. Q3 2017 sustaining capital excluded \$2.6 million of cash outflows relating to the Cap-Oeste Sur Este ("COSE") and Joaquin projects (Q3 2016 - \$nil million), which is further discussed in the "Project Development Update" section of this MD&A.

OPERATING OUTLOOK FOR 2017

Production

Q3 2017 consolidated silver production was 5.89 million ounces, bringing YTD 2017 production to 18.4 million ounces. Based on year-to-date production results, the continued ramp-up of Dolores production, the anticipated improvement in silver grades at San Vicente, and the expected production for Q4 2017, management reaffirms the 2017 annual silver production forecast of 24.5 to 26.0 million silver ounces, as indicated in the 2016 annual MD&A dated March 22, 2017.

Gold production in Q3 2017 was 40.8 thousand ounces, bringing YTD 2017 production to 116.3 thousand ounces. Given the anticipated production for the remainder of 2017, management reaffirms the 2017 annual gold production forecast of 155.0 to 165.0 thousand ounces.

Q3 2017 zinc, lead, and copper production of 14.1 thousand tonnes, 5.3 thousand tonnes and 3.7 thousand tonnes, respectively. With YTD 2017 zinc, lead, and copper production of 40.6 thousand tonnes, 16.1 thousand tonnes, and 10.4 thousand tonnes, respectively, management is revising its 2017 full-year zinc, lead, and copper production forecasts to 54.0 to 56.0 thousand tonnes (formerly 56.5 to 58.5 thousand tonnes), 20.0 to 21.0 thousand tonnes (formerly 19.0 to 20.0 thousand tonnes), and 13.0 to 13.5 thousand tonnes (formerly 8.8 to 9.3 thousand tonnes), respectively.

Cash Costs and AISCOS

The following tables summarize the YTD 2017 cash costs and AISCOS for each operation compared to the revised 2017 forecast provided in the Q2 2017 MD&A dated August 9, 2017. For the purposes of these comparisons, the check marks have the following meanings:

- ✓✓ Actual results were better than the most recent 2017 annual guidance range
- ✓ Actual results met the most recent 2017 annual guidance range
- ✗ Actual results fell short of the most recent 2017 annual guidance range

	2017 Cash Costs ⁽¹⁾ (\$ per ounce)			2017 AISCOS ⁽²⁾ (\$ per ounce)		
	Forecast ⁽³⁾	2017 YTD		Forecast ⁽³⁾	2017 YTD	
La Colorada	3.00 – 3.50	2.68	✓✓	4.75 – 5.50	5.04	✓
Dolores	(1.60) – 0.00	(0.69)	✓	7.25 – 8.50	8.45	✓
Alamo Dorado	17.03	17.03	✓	17.25	17.73	✗
Huaron	3.35 – 4.50	1.09	✓✓	6.75 – 7.75	4.65	✓✓
Morococha	1.00 – 2.00	(4.56)	✓✓	6.50 – 7.50	2.23	✓✓
San Vicente	11.50 – 13.00	13.11	✗	13.50 – 14.75	15.47	✗
Manantial Espejo	16.90 – 17.50	16.10	✓✓	19.00 – 19.75	21.76	✗
Consolidated Total	5.50 – 6.50	5.04	✓✓	10.50 – 11.50	10.77	✓

(1) Cash costs per ounce 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 cash cost calculation, details of the Company's by-product credits and a reconciliation of this measure to the Q3 2017 Financial Statements.

(2) AISCOS 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 AISCOS calculation and a reconciliation of this measure to the Q3 2017 Financial Statements.

(3) Forecast amount per Q2 2017 annual MD&A dated August 9, 2017. The forecasts assume metal prices for the remainder of 2017 of: \$16.50/ounce for silver; \$1,200/ounce for gold; \$2,700/tonne for zinc; \$2,200/tonne for lead; and \$5,700/tonne for copper. The assumed foreign currency exchange rates, relative to \$1.00 USD, were: 20.00 for the Mexican peso, 3.30 for the Peruvian sol; 17.05 for the Argentine peso, and 7.00 of the Bolivian boliviano.

YTD 2017 consolidated cash costs of \$5.04 were \$0.46 per ounce, or 8%, less than the low end of management's current 2017 annual forecast range of \$5.50 to \$6.50. Based on this performance, and the expected results for Q4 2017, which are largely influenced by commodity prices and currency exchange rate assumptions, management is reducing its 2017 annual consolidated cash cost guidance to between \$4.50 and \$5.20 per ounce. This revised guidance is lower than both most recent guidance of \$5.50 to \$6.50 per ounce, as provided in the Q2 2017 MD&A, and the original guidance of \$6.45 to \$7.45 per ounce, provided in the January 12, 2017 press release.

The revised 2017 annual cash costs per mine are as follows:

	Revised 2017 Annual Cash Costs Forecast ⁽¹⁾ (\$ per ounce)
La Colorada	2.25 – 2.50
Dolores	(1.00) – 1.00
Alamo Dorado	17.73
Huaron	0.50 – 1.00
Morococha	(5.00) – (5.50)
San Vicente	11.75 – 12.25
Manantial Espejo	17.00 – 17.50
Consolidated Total	4.50 – 5.20

(1) Cash costs per ounce 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 cash cost calculation. The forecasts assume Q4 2017 metal prices of: \$16.90/ounce for silver; \$1,280/ounce for gold; \$3,300/tonne for zinc; \$2,500/tonne for lead; and \$6,550/tonne for copper. The assumed Q4 2017 foreign currency exchange rates, relative to \$1.00 USD, were: 20.00 for the Mexican peso, 3.30 for the Peruvian sol; 17.05 for the Argentine peso, and 7.00 of the Bolivian boliviano.

YTD 2017 consolidated AISCOS of \$10.77 were close to the low end of management's most recent 2017 annual forecast of \$10.50 to \$11.50. Based on the YTD 2017 AISCOS, and the expected results for the remainder of the year, management reaffirms the 2017 annual AISCOS guidance of \$10.50 - \$11.50.

Capital Expenditures

Total sustaining and project capital investment during YTD 2017 were as follows:

2017 Capital Investment		Actual ⁽²⁾
(in millions of USD)	Most Recent Annual Forecast ⁽¹⁾	Nine months ended September 30, 2017
La Colorada	11.5 – 12.0	10.2
Dolores	38.0 – 39.0	22.0
Alamo Dorado	—	—
Huaron	8.5 – 9.0	5.7
Morococha	11.0 – 11.5	9.3
San Vicente	7.5 – 10.5	6.2
Manantial Espejo	5.5 – 6.0	2.3
Sustaining Capital total ⁽²⁾	82.0 - 88.0	55.8
La Colorada project capital	6.0 – 6.5	6.3
Dolores project capital	56.5 – 59.5	40.9
Joaquin & COSE projects	11.0 – 12.5	0.6
Project Capital Total	73.5 - 78.5	47.8
Consolidated Total	155.5 – 166.5	103.6

(1) Annual guidance as provided in the Q2 2017 MD&A dated August 9, 2017.

(2) The sustaining capital amounts capitalized in YTD 2017 were \$2.8 million less than the \$58.6 million of YTD 2017 sustaining capital cash outflows, which are included in the YTD 2017 AISCOS calculation, shown in the "Alternative Performance (non-GAAP) Measures" section of this MD&A, and are different from the sustaining capital amounts in the tables included in the "Individual Mine Performance" section of this MD&A. These differences are due to the timing difference between the cash payment of capital investments compared to the period in which investments are capitalized.

Total sustaining capital investment for YTD 2017 was \$55.8 million, while project capital investment totaled \$47.8 million. Management continues to expect sustaining capital in 2017 of \$82.0 to \$88.0 million and project capital of \$73.5 to \$78.5 million.

PROJECT DEVELOPMENT UPDATE

The following table reflects the amounts spent at each of Pan American's major projects in Q3 2017 and YTD 2017 as compared to the corresponding periods of 2016.

Project Development Investment (thousands of USD)	Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
Dolores Projects ⁽¹⁾	14,040	22,409	40,904	44,779
La Colorada Projects ⁽²⁾	3,276	15,493	6,267	43,635
Joaquin and COSE projects ⁽³⁾	607	—	607	—
Total	17,923	37,902	47,778	88,414

(1) As a result of periodic changes in accounts payable balances, the amounts capitalized for the projects during the three and nine months ended September 30, 2017 were \$1.5 million and \$0.6 million more than the project cash outflows in those periods, respectively (2016: \$3.1 million more and \$4.0 million more, respectively)

(2) As a result of periodic changes in accounts payable balances, the amounts capitalized for the project during the three and nine months ended September 30, 2017 were \$1.3 million more and \$1.1 million more than the project cash outflows in those periods, respectively (2016: \$1.5 million more and \$1.1 million less, respectively)

(3) Amounts exclude: 2017 acquisition costs of the Joaquin and COSE assets which had cash components of \$15.0 million and \$7.5 million respectively; exploration expenditures included in Q3 2017 and YTD 2017 "Exploration and project development expense" of \$2.6 million and \$3.7 million, respectively; and a \$2.0 million prepaid deposit on mining equipment included in "Prepaid expenses and other current assets" as of September 30, 2017.

Dolores Projects

During Q3 2017, the Company invested \$14.0 million on the Dolores expansion projects, with efforts directed at:

- Ramping-up of the new pulp agglomeration plant, which started in August 2017. The plant processed a total of 120 thousand tonnes of high-grade ore during Q3 2017. Heap leach stacking rates have now reached the expanded capacity of 20,000 tonnes per day. In addition, development of the underground mine at Dolores remains on track for the initial stope ore mining to begin near the end of 2017.
- Continued development of the Dolores underground mine, including development of the mineralized structure, development of levels and footwall drifts, procurement of the initial underground mine mobile fleet, and installation of mine electrical and ventilation systems. The underground mine remains on track to commence stope production near the end of 2017. Initial production will focus predominantly on the narrower center zone to allow continued definition drilling and mine planning of the wider south zone that is continuing to extend down-dip.

La Colorada Projects

During Q3 2017, the Company invested \$3.3 million on projects at the La Colorada mine, which included continuing underground mine development in the Estrella vein and constructing a tailings neutralization plant. Mining and processing rates averaged 1,906 tonnes per day during Q3 2017, exceeding targeted design rates of 1,800 tonnes per day.

Joaquin and COSE Project Developments

At Joaquin, exploration and project development expenditures in Q3 2017 totaled \$2.1 million (YTD 2017: \$3.0 million) and were primarily related to completing a 7,000 metre infill diamond drill program. During Q3 2017 a surface land access agreement was reached. Studies were advanced to estimate the quantity of potentially economic material that could be trucked to the Manantial Espejo processing plant for treatment, with a preliminary economic assessment on the project expected by year-end 2017.

At COSE, the Company is proceeding with a \$23.9 million capital investment to construct an underground mine over the next 18 to 24 months, excluding the final \$7.5 million project acquisition payment due on the earlier of May 31, 2018 or the commencement of commercial production. Project development investments for COSE during the quarter included: \$0.6 million (YTD 2017: \$0.6 million) capitalized for new mining equipment; a further \$2.0 million in pre-payments for new mining equipment that will be used to develop the mine decline, which is expected to commence in Q4 2017; and, \$0.6 million (YTD 2017: \$0.7 million) expensed primarily for surface excavation.

OVERVIEW OF Q3 2017 FINANCIAL RESULTS

Selected Annual and Quarterly Information

The following tables set out selected quarterly results for the past eleven quarters as well as selected annual results for the past two years. The dominant factors affecting results in the quarters and years presented below are volatility of metal prices realized, and the timing of the sales of production, which varies with the timing of shipments. 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 (In thousands of USD, other than per share amounts)	Quarter Ended		
	March 31	June 30	Sept 30,
Revenue	\$ 198,687	\$ 201,319	\$ 190,791
Mine operating earnings	\$ 32,875	\$ 44,782	\$ 47,818
Earnings for the period attributable to equity holders	\$ 19,371	\$ 35,472	\$ 17,256
Basic earnings per share	\$ 0.13	\$ 0.23	\$ 0.11
Diluted earnings per share	\$ 0.13	\$ 0.23	\$ 0.11
Cash flow from operating activities	\$ 38,569	\$ 42,906	\$ 63,793
Cash dividends paid per share	\$ 0.025	\$ 0.025	\$ 0.025
<i>Other financial information</i>			
Total assets	\$ 1,901,269	\$ 1,921,813	\$ 1,908,822
Total long-term financial liabilities ⁽¹⁾	\$ 123,918	\$ 124,019	\$ 87,699
Total attributable shareholders' equity	\$ 1,422,940	\$ 1,454,876	\$ 1,468,291

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

2016 (In thousands of USD, other than per share amounts)	Quarter Ended				Year Ended
	March 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
<i>Other financial information</i>					
Total assets					\$ 1,898,141
Total long-term financial liabilities ⁽¹⁾					\$ 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.

2015 (In thousands of USD, other than per share amounts)	Quarter Ended				Year Ended
	March 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)	\$ (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)	\$ (0.44)	\$ (0.88)	\$ (1.49)
Diluted loss per share	\$ (0.13)	\$ (0.05)	\$ (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
<i>Other financial information</i>					
Total assets					\$ 1,715,037
Total long-term financial liabilities ⁽¹⁾					\$ 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: Q3 2017 vs. Q3 2016

Net earnings of \$17.8 million were recorded in Q3 2017 compared to \$43.4 million in Q3 2016, which corresponds to basic earnings per share of \$0.11 and \$0.28, respectively.

The following table highlights the key items driving the difference between quarter-over-quarter net earnings:

Net earnings, three months ended September 30, 2016 (in thousands of USD)		\$	43,440
Decreased revenue:			
Decreased realized metal prices		\$	(1,353)
Lower quantities of metal sold			(42,535)
Decreased direct selling costs			979
Increased positive settlement adjustments			54
Total decrease in revenue		\$	(42,855)
Increased cost of sales:			
Increased production costs offset by decreased royalty charges		\$	(3,025)
Decreased depreciation and amortization			5,203
Total decrease in cost of sales		\$	2,178
Decreased income tax expense			25,469
Increased net gain on asset sales, commodity contracts and derivatives			2,829
Decreased dilution gain, net of share of loss from associate			(6,265)
Increased exploration and project development expense			(3,212)
Decreased investment income, net of other expense			(2,763)
Increased foreign exchange loss			(573)
Increased general and administrative expense			(394)
Decreased interest and finance expense			(28)
Net earnings, three months ended September 30, 2017		\$	17,826

Revenue for Q3 2017 was \$190.8 million, a \$42.9 million decrease from \$233.6 million in Q3 2016. The decrease was driven by a net \$42.5 million sales volume variance, mainly from lower quantities of silver and gold sold. Quarter-over-quarter revenue was also affected by a net \$1.4 million negative price variance from lower realized silver and gold prices, partially offset by higher realized base metal prices and sales volumes, and a \$1.0 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 Metal Prices		Quantities of Metal Sold	
	Three months ended September 30,		Three months ended September 30,	
	2017	2016	2017	2016
Silver ⁽¹⁾ – koz	\$ 16.68	\$ 19.69	5,255	6,502
Gold ⁽¹⁾ – koz	\$ 1,277	\$ 1,335	35.2	53.3
Zinc ⁽¹⁾ – kt	\$ 2,974	\$ 2,284	11.6	11.2
Lead ⁽¹⁾ – kt	\$ 2,421	\$ 1,874	4.9	4.7
Copper ⁽¹⁾ – kt	\$ 6,351	\$ 4,763	3.6	2.6

(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 silver and gold prices decreased 15% and 4% quarter-over-quarter, respectively, partially offset by increased zinc, lead and copper realized prices of 30%, 29%, and 33%, respectively.

Silver sales volumes in Q3 2017 were 19% lower than in Q3 2016, largely as a result of production decreases at Alamo Dorado, San Vicente and Manantial Espejo, partially offset by increased production at La Colorada. Silver sales volumes were also impacted by the timing of sales in Q3 2017, as silver production exceeded the amount of silver sold, particularly at San Vicente and Manantial Espejo. The reverse occurred in Q3 2016, when silver sold exceeded silver produced due to timing differences. The quantity of gold sold in Q3 2017 was 34% lower than in Q3 2016, driven by lower production at Manantial Espejo, Dolores and Alamo Dorado. The timing of sales also impacted quarter-over-quarter gold sales volumes. In Q3 2017, gold production at both Dolores and Manantial Espejo exceeded sales volumes, while in Q3 2016, gold sales volumes were greater than production. Increased quarter-over-quarter base metal sales quantities were mainly the result of improved production at La Colorada for zinc and lead, and at Morococha and Huaron for copper.

Mine operating earnings of \$47.8 million in Q3 2017 were 46% lower than the \$88.5 million recorded in Q3 2016. The decline in quarterly mine operating earnings was almost entirely attributable to the previously discussed \$42.9 million decrease in revenue, slightly offset by a net \$2.2 million decrease in cost of sales.

Q3 2017 production costs of \$109.8 million were \$6.8 million higher than in Q3 2016. The quarter-over-quarter variance included a \$20.9 million difference in NRV inventory adjustments, which increased Q3 2017 production costs by \$1.3 million compared to the Q3 2016 NRV adjustments that decreased production costs by \$19.6 million. The current quarter's NRV adjustment related mainly to a \$2.8 million production cost increase adjustment at Dolores, while in Q3 2016 the NRV adjustments related primarily to Manantial Espejo and Dolores where production costs were reduced by \$12.0 million and \$7.7 million, respectively. Before NRV adjustments, quarter-over-quarter production costs decreased, mainly driven as a result of lower production and sales volumes at Manantial Espejo, San Vicente, and Alamo Dorado, as well as lower gold sales volumes at Dolores.

Depreciation and amortization ("D&A") expense of \$28.6 million in Q3 2017 was \$5.2 million lower than in Q3 2016, mainly the result of lower D&A at Dolores, San Vicente, Manantial Espejo and Morococha, offset by higher D&A at La Colorada. The La Colorada increase was attributable to the increased depreciable asset-base relating to the expansion project, and from increased metal production and sales volumes. The decreased D&A at Dolores and San Vicente was attributable to lower quarter-over-quarter sales volumes. The Manantial Espejo decrease was due to deferred stripping activities being fully depreciated in 2016, and from lower sales volumes in the current quarter. The lower Morococha D&A was on account of lower D&A rates in 2017, and lower sales volumes in Q3 2017.

Royalty costs of \$4.6 million in Q3 2017 were \$3.8 million lower than in Q3 2016 because of lower revenues, primarily at San Vicente.

General and Administrative ("G&A") expense was \$5.6 million in Q3 2017 compared to \$5.2 million in Q3 2016. The \$0.4 million increase was mainly driven by accrued bonuses in the current quarter. Share-based compensation was \$0.8 million in Q3 2017 compared to \$1.7 million in Q3 2016.

Exploration and project development expenses were \$7.5 million in Q3 2017 compared to \$4.3 million incurred in Q3 2016. The Q3 2017 expense included a \$1.9 million non-cash write-down of certain project development costs previously capitalized as part of La Colorada's sustaining capital. The remaining expenses recorded in each quarter related primarily 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 Q3 2017 compared to approximately \$1.9 million in Q3 2016.

Foreign exchange ("FX") losses in Q3 2017 were \$1.9 million compared to the \$1.3 million incurred in Q3 2016. Losses in Q3 2017 resulted primarily from an approximately 4% depreciation of the Argentine Peso ("ARS") during the quarter on ARS denominated monetary assets. The Q3 2016 losses primarily reflect approximately 4% devaluation of the Mexican Peso ("MXN"), and an approximately 3% devaluation of the ARS. ARS denominated monetary assets were larger during Q3 2017 than in Q3 2016.

Share of income from associate and dilution gain for Q3 2017 was \$0.4 million compared to \$6.6 million in Q3 2016, and related mainly to the Company's investment in Maverix Metals Inc. ("Maverix"), which is 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. During Q3 2017, as a result of Maverix issuing common shares, Pan American's ownership of Maverix was slightly diluted (approximately 0.4% on both a non-diluted and diluted basis) resulting in the recognition of a \$0.4 million dilution gain. The \$6.6 million gain recognized in Q3 2016 was attributable to the July 2016 closing of the Company's plan of arrangement with Maverix, whereby the Company distributed certain royalties and precious metals streams and payment agreements (the "Portfolio Assets") to Maverix. The Q3 2016 gain was recorded on the proportion of the Portfolio Assets distributed to owners of Maverix other than the Company.

Interest and finance expense for both Q3 2017 and Q3 2016 was \$2.5 million and consisted of accretion of the Company's closure liabilities and interest expense associated with the Credit Facility, and short-term loans and leases.

Income tax expense in Q3 2017 was \$10.5 million compared to \$36.0 million in Q3 2016. The \$25.5 million decrease was mainly due to the decrease in earnings before income taxes, and a lesser devaluation in the MXN Peso in Q3 2017 compared to the devaluation that occurred in Q3 2016. These factors resulted in an effective tax rate that varied from the comparable period, as shown in the following table:

Reconciliation of Effective Income Tax Rate	Three months ended September 30,	
	2017	2016
(In thousands of USD, except as noted)		
Earnings before taxes and non-controlling interest	\$ 28,320	\$ 79,403
Statutory Canadian income tax rate	26.00%	26.00%
Income tax expense based on above rates	\$ 7,363	\$ 20,645
Increase (decrease) due to:		
Non-deductible expenditures	811	1,593
Foreign tax rate differences	1,026	6,431
Change in net deferred tax assets not recognized:		
- Argentina exploration expenditures	463	673
- Other deferred tax assets	435	(6,572)
Non-taxable portion of net earnings of affiliates	(1,300)	(1,228)
Effect of other taxes paid (mining and withholding)	3,278	2,621
Effect of foreign exchange on tax expense	620	7,447
Non-taxable impact of foreign exchange	(400)	3,393
Effect of change in deferred tax resulting from prior asset purchase accounting under IAS 12	—	355
Other	(1,802)	605
Income tax expense	\$ 10,494	\$ 35,963
Effective income tax rate	37.06%	45.29%

- **Statement of Cash Flows: Q3 2017 vs. Q3 2016**

Cash flow from operations in Q3 2017 totaled \$63.8 million, \$38.6 million less than the \$102.3 million generated in Q3 2016. The decrease was largely the result of an approximately \$25.0 million decrease in cash from mine operating earnings, a \$7.1 million increase in taxes paid, and higher cash-based exploration expense. Working capital changes in Q3 2017 resulted in a \$6.9 million source of cash, comparable to the \$7.3 million source of cash in Q3 2016.

Investing activities utilized \$44.9 million in Q3 2017, inclusive of \$12.5 million used on the net purchase of short-term investments. The balance of Q3 2017 investing activities consisted primarily of spending \$32.0 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, and \$2.5 million spent on acquiring Maverix shares when the Company exercised its anti-dilution rights in connection with a Maverix private placement in the quarter. In Q3 2016, investing activities utilized \$29.7 million inclusive of \$19.4 million generated on the net sale of short-term investments and \$48.5 million spent on mineral property, plant and equipment additions at the Company's various operations and projects.

Financing activities in Q3 2017 used \$43.7 million compared to \$13.0 million in Q3 2016. Cash used in Q3 2017 consisted of a \$36.2 million repayment of amounts previously drawn on the Credit Facility, \$3.8 million paid as dividends to shareholders, \$2.5 million in short-term debt repayments and \$1.3 million of lease repayments. In Q3 2016, \$1.9 million of dividends were paid, \$11.6 million was used for short-term debt repayment (net of proceeds), \$0.8 million of lease payments were made, and \$1.5 million in proceeds were generated on share issuances from the exercises of stock options.

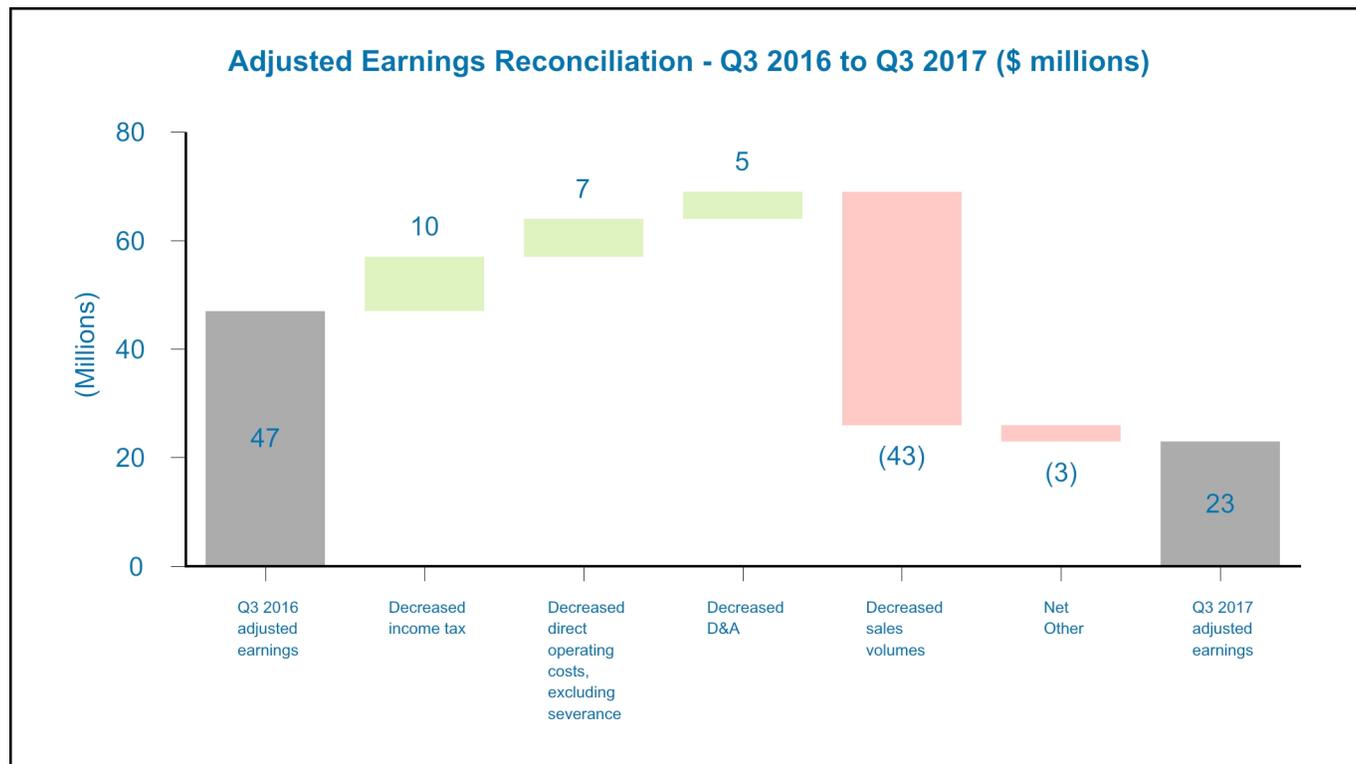
- **Q3 2017 and Q3 2016 Adjusted Earnings**

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 that 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 of "adjusted earnings" and "basic adjusted earnings per share", and a reconciliation of these third quarter measures to the Q3 2017 Financial Statements.

Adjusted Earnings in Q3 2017 was \$23.3 million, representing a basic adjusted earnings per share of \$0.15, which was \$23.3 million, or \$0.16 per share, lower than Q3 2016 adjusted earnings of \$46.7 million and basic adjusted earnings per share of \$0.31, respectively.

The following chart illustrates the key factors leading to the change in adjusted earnings from Q3 2016 to Q3 2017:



• **Income Statement: YTD 2017 vs. YTD 2016**

Net earnings of \$73.8 million were recorded in the nine months ended September 30, 2017 compared to \$79.5 million in the same period of 2016, which corresponds to basic earnings per share of \$0.47 and \$0.51, respectively.

The following table highlights the key items driving the difference between the net earnings for the nine month periods ended September 30, 2017 and 2016:

Net earnings, nine months ended September 30, 2016		\$	79,541
(in thousands of USD)			
Increased revenue:			
Increased realized metal prices	\$	50,169	
Lower quantities of metal sold		(44,160)	
Decreased direct selling costs		9,726	
Decreased positive settlement adjustments		(9,117)	
Total increase in revenue	\$		6,618
Increased cost of sales:			
Increased production costs offset by royalty charges	\$	(35,341)	
Decreased depreciation and amortization		4,275	
Total increase in cost of sales	\$		(31,066)
Decreased income tax expense			33,761
Increased foreign exchange gain			5,384
Increased investment income net of other expense			(142)
Decreased interest and finance expense			1,989
Decreased general and administrative expense			1,406
Decreased net gain on asset sales, commodity contracts and derivatives			(11,639)
Increased exploration and project development expense			(7,220)
Decreased dilution gain, net of share of loss from associate			(4,845)
Net earnings, nine months ended September 30, 2017	\$		73,787

Revenue for YTD 2017 was \$590.8 million, a \$6.6 million increase from the \$584.2 million of revenue recognized in YTD 2016. The major factor driving the difference was a \$50.2 million positive price variance largely offset by a \$44.2 million negative variance from lower quantities of metal sold. The price variance was attributable to higher realized base metal prices, partially offset by lower realized silver and gold prices. A 41% increase in zinc prices had the most significant impact on increasing revenue. The negative variance in sales quantities was driven mostly by the decline in gold and silver sales volumes. The \$9.1 million negative variance from settlement adjustments on concentrate shipments, which was mostly attributable to current period price declines, was more than offset by a \$9.7 million positive variance from decreased period-over-period selling costs, which resulted mostly 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 period:

	Realized Metal Prices		Quantities of Metal Sold	
	Nine months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
Silver ⁽¹⁾ – koz	\$ 17.12	17.25	17,552	18,061
Gold ⁽¹⁾ – koz	\$ 1,250	1,264	111.9	136.2
Zinc ⁽¹⁾ – kt	\$ 2,801	1,981	34.8	34.3
Lead ⁽¹⁾ – kt	\$ 2,309	1,787	15.5	13.7
Copper ⁽¹⁾ – kt	\$ 5,992	\$ 4,684	9.7	10.5

(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.

YTD 2017 gold and silver sales volumes were 18% and 3% lower, respectively, than during the same period of 2016. Lower gold sales volumes were driven by declined gold production at Manantial Espejo and Alamo Dorado. The decline in silver sales was largely due to the production decline at Alamo Dorado and San Vicente, partially offset by silver production increases at La Colorada. YTD 2017 copper sales were 8% lower than a year ago because of less production from Morococha. Period-over-period zinc and lead sales volumes increased 1% and 13% respectively. The consistent period-over-period zinc sales were the result of increased zinc production at La Colorada offsetting a decline in zinc production at San Vicente. The increased lead sales were from increased production at La Colorada, partially offset by lower production at Huaron.

Mine operating earnings of \$125.5 million in YTD 2017 were \$24.4 million lower than the \$149.9 million recorded during the comparable period in 2016. The 16% decrease was the result of a net \$31.1 million increase in cost of sales, partially offset by the previously discussed \$6.6 million increase in revenue.

YTD 2017 production costs of \$361.0 million were \$43.1 million higher than in YTD 2016. The variance was mostly driven by a net negative \$38.9 million period-over-period change in NRV inventory adjustments (at Manantial Espejo, Dolores and Alamo), which increased YTD 2017 costs by \$6.8 million and decreased YTD 2016 costs by \$32.1 million. The remaining increase in production costs was mainly attributable to period-over-period increases in production costs (before NRV adjustments) at La Colorada, Manantial Espejo, Morococha and Huaron, largely offset by decreases at Dolores and Alamo Dorado. Increased costs at La Colorada were from increased metal production and sales volumes; the increase at Manantial Espejo was the result of severance costs, inflation and increased silver sales volumes. Increased costs at Morococha and Huaron reflected unfavorable foreign currency exchange movements and increased direct operating costs. Decreased costs at Alamo Dorado were from lower production and sales volumes, and decreased costs at Dolores arose primarily from inventory buildups.

D&A of \$88.6 million in YTD 2017 was 5% less than the \$92.9 million in YTD 2016. The \$4.3 million decrease was mainly the result of D&A decreases at Manantial Espejo, Morococha, Alamo Dorado and San Vicente being partially offset by increased D&A at La Colorada and Dolores. The increase at La Colorada was driven by increased sales volumes and a higher depreciable asset base, while the Dolores increase was from an increased depreciable asset base. The decreased D&A at Manantial Espejo was due to deferred stripping activities being fully depreciated in 2016, and from lower sales volumes. The San Vicente decrease was from lower period-over-period sales volumes, and the decrease at Morococha was on account of lower D&A rates and silver sales volumes in 2017.

Royalty costs YTD 2017 were \$15.7 million, \$7.8 million lower than in YTD 2016 because of lower revenues, primarily at San Vicente.

G&A expense for YTD 2017 was \$16.7 million compared to \$18.1 million during the same period of 2016. The \$1.4 million decrease was primarily related to lower accrued bonuses for restricted share unit cash compensation that reference the Company's share price, and from lower share-based compensation of \$2.4 million in YTD 2017 compared to \$3.2 million in YTD 2016.

Exploration and project development expenses were \$15.5 million in YTD 2017 compared to \$8.3 million incurred in YTD 2016. The period-over-period increase is attributable to the \$1.9 million non-cash write-down of certain project development costs previously capitalized as part of La Colorada's sustaining capital, and from increased exploration activities including those related to the Joaquin and COSE projects. The expenses recorded in each period 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 \$2.4 million was spent in YTD 2017 compared to approximately \$3.0 million in YTD 2016.

Foreign exchange ("FX") gains for YTD 2017 were \$0.8 million compared to FX losses of \$4.6 million incurred in YTD 2016, primarily due to the effect of an appreciation in the MXN in 2017 compared to the 11% devaluation of the MXN in 2016 on the Company's monetary assets denominated in that currency. The FX losses for the nine-month period ended September 30, 2016 were driven primarily from the effect of the 11% devaluation of the MXN on treasury balances, and the effect of the 16% devaluation of the ARS on VAT receivables.

Gain on sale of mineral properties, plant and equipment in YTD 2017 was \$1.0 million compared to \$18.3 million in YTD 2016. No significant asset sales and related gains or losses occurred in 2017 compared to the gain recognized in YTD 2016 on the sale of 75% of the shares in Compania Minera Shalipayco S.A.C. ("Shalipayco") for \$15.0 million in cash and a one percent (1%) net smelter returns royalty with a fair value of \$3.3 million. Shalipayco is the owner of the Shalipayco zinc development project located in Peru.

Share of income from associate and dilution gain for YTD 2017 was \$1.8 million compared to \$6.6 million in YTD 2016 and related largely to the Company's Maverix investment. During 2017, a \$0.5 million loss was recognized for the Company's portion of Maverix's estimated losses. Further, as a result of Maverix issuing common shares to acquire certain assets, dilution gains totaling \$2.3 million were recognized in YTD 2017. The \$6.6 million gain recognized in YTD 2016 was attributable to the July 2016 closing of the Company's plan of arrangement with Maverix, whereby the Company distributed the Portfolio Assets to Maverix.

Interest and finance expense for YTD 2017 was \$4.8 million compared to \$6.8 million during YTD 2016. The 2017 expense 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 in YTD 2017 decreased to \$19.8 million compared to \$53.6 million in YTD 2016, primarily due to the decrease in earnings before taxes and the impact of foreign exchange rate fluctuations (mainly the appreciation of the MXN in YTD 2017 compared to the devaluation in the MXN in YTD 2016). These factors resulted in an effective tax rate that varied from the comparable period, as shown in the following table:

Reconciliation of Effective Income Tax Rate	Nine months ended September 30,	
	2017	2016
<i>(In thousands of USD, except as noted)</i>		
Earnings before taxes and non-controlling interest	\$ 93,613	\$ 133,128
Statutory Canadian income tax rate	26.00%	26.00%
Income tax expense based on above rates	\$ 24,339	\$ 34,613
Increase (decrease) due to:		
Non-deductible expenditures	3,153	3,983
Foreign tax rate differences	(966)	7,481
Change in net deferred tax assets not recognized:		
- Argentina exploration expenditures	1,561	1,344
- Other deferred tax assets	(2,298)	(6,473)
Non-taxable portion of net earnings of affiliates	(3,752)	(3,686)
Tax on sale of royalty	1,400	—
Effect of other taxes paid (mining and withholding)	10,417	5,815
Effect of foreign exchange on tax expense	(16,517)	5,698
Non-taxable impact of foreign exchange	7,562	2,568
Change in current tax expense estimated for prior years	(3,503)	—
Effect of change in deferred tax resulting from prior asset purchase accounting under IAS 12	—	672
Other	(1,570)	1,572
Income tax expense	\$ 19,826	\$ 53,587
Effective income tax rate	21.18%	40.25%

- **Statement of Cash Flows: YTD 2017 vs. YTD 2016**

Cash flow from operations in YTD 2017 totaled \$145.3 million, \$23.9 million less than the \$169.1 million generated in the same period of 2016. The decrease was largely the result of a \$35.4 million increase in taxes paid offset by an approximately \$10.2 million increase in cash from mine operating earnings from increased revenue and lower royalty costs, partially offset by increased production costs.

Working capital changes in YTD 2017 resulted in a \$3.5 million use of cash compared to a \$7.8 million use of cash in YTD 2016.

Investing activities utilized \$141.0 million in YTD 2017, inclusive of \$13.6 million used on the net purchase of short-term investments. The balance of YTD 2017 investing activities consisted primarily of spending \$105.8 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 located in the Santa Cruz province of southern Argentina. In YTD 2016, investing activities utilized \$73.4 million inclusive of \$60.1 million generated on the net sale of short-term investments, \$146.2 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 YTD 2017 used \$49.0 million compared to \$20.4 million in YTD 2016. Cash used in YTD 2017 consisted of a \$36.2 million Credit Facility repayment, \$11.5 million in shareholder dividends, and \$3.2 million of lease repayments. Approximately \$2.6 million in proceeds on share issuances from the exercise of stock options was received. In YTD 2016, \$5.7 million of dividends were paid, \$14.4 million was used for short-term debt repayment (net of proceeds), \$2.3 million of lease payments were made, and \$2.3 million in proceeds were generated on share issuances from the exercises of stock options.

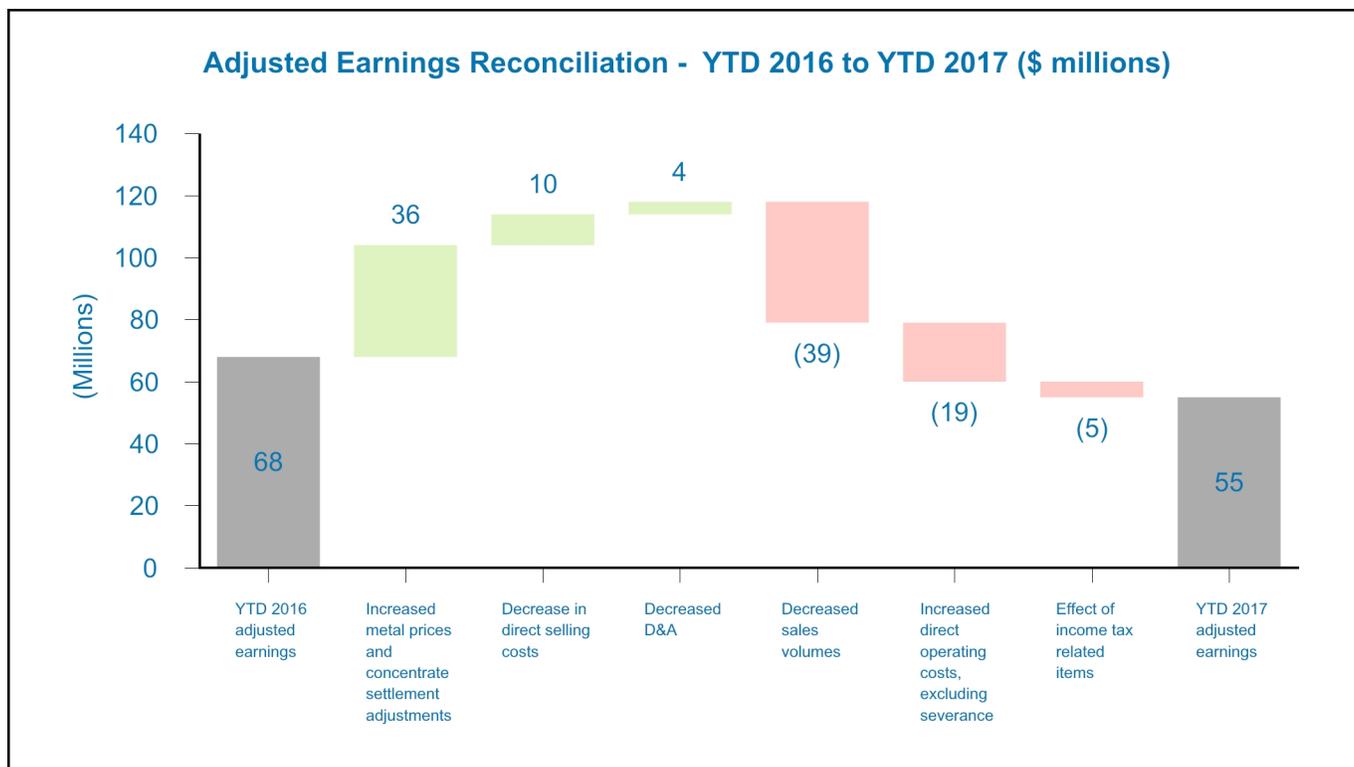
- **YTD 2017 and YTD 2016 Adjusted Earnings**

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 that 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 of "adjusted earnings" and "basic adjusted earnings per share", and a reconciliation of these 2017 year-to-date measures to the Q3 2017 Financial Statements.

Adjusted Earnings in YTD 2017 were \$54.6 million, representing a basic adjusted earnings per share of \$0.36, which was \$13.3 million, or \$0.09 per share, lower than YTD 2016 adjusted earnings of \$67.9 million, and basic adjusted earnings per share of \$0.45, respectively.

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



LIQUIDITY POSITION

The Company's cash and cash equivalents balance at September 30, 2017 was \$136.0 million, which was a decrease of \$24.9 million from the balance at June 30, 2017. The Company's short-term investments balance at September 30, 2017, was \$50.3 million, which was an increase of \$13.0 million from the balance at June 30, 2017. The net \$11.9 million draw on the Company's liquidity together with the operating cash flow generated in Q3 2017 were primarily used to: repay the \$36.2 million previously drawn on the Credit Facility; fund \$32.0 million of mineral properties, plant and equipment investments; pay shareholder dividends of \$3.8 million; and repay \$3.8 million of short-term debt and lease obligations.

Pan American's investment objectives for its cash balances are to preserve capital, provide liquidity and 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, 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 September 30, 2017 was \$409.7 million, a decrease of \$19.9 million from the June 30, 2017 working capital of \$429.6 million. The decrease in working capital was mainly attributable to the previously discussed \$11.9 million decrease in cash and short-term investments, a \$7.7 million decrease in trade and other accounts receivable, a \$4.9 million increase in current taxes payable, a \$5.8 million increase in accounts payable and accrued liabilities, offset by a \$12.1 million increase in inventories and a \$2.5 million decrease in current loans payable.

On April 15, 2015, the Company entered into the \$300.0 million, 4-year term Credit Facility and incurred 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 September 30, 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 loan 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 September 30, 2017, and at the date of this MD&A, the Credit Facility remained undrawn.

The Company's financial position at September 30, 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 2017 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 September 30, 2017, was \$1,468.3 million, an increase of \$72.0 million from December 31, 2016, primarily because of the \$72.1 million of net earnings attributable to shareholders for YTD 2017, together with \$8.7 million of equity value issued for the acquisition of mineral interests, offset by \$11.5 million in dividends paid. As of September 30, 2017, the Company had approximately 153.2 million common shares outstanding for a share capital balance of \$2,316.4 million (December 31, 2016, 152.3 million and \$2,304.0 million, respectively). The basic weighted average number of common shares outstanding were 153.2 million and 152.2 million for the quarters ended September 30, 2017, and 2016, respectively.

As at September 30, 2017, the Company had approximately 0.91 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 \$40.22 and a weighted average life of 40 months. Approximately 0.7 million of the stock options were vested and exercisable at September 30, 2017, with an average weighted exercise price of CAD \$20.03 per share.

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

	Outstanding as at November 8, 2017
Common shares	153,176,265
Options	909,667
Total	154,085,932

FINANCIAL INSTRUMENTS

A portion 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 \$5.9 million in CAD, \$10.9 million in MXN, \$2.4 million in PEN, \$8.0 million in ARS, and \$0.9 million in Bolivian bolivianos "BOB" at September 30, 2017. Risks relating to FX rates are discussed in the "Risks and Uncertainties" section of this MD&A.

At September 30, 2017, the Company had outstanding collars made up of put and call contracts on its foreign currency exposure of MXN purchases with a nominal value of \$18.0 million and settlement dates between October 2017 and December 2017. The positions have a weighted average floor of MXN 19.50 and an average cap of MXN 24.40. The Company recorded gains of \$0.3 million and \$4.6 million on the MXN forward contracts for Q3 2017 and 2017 YTD, respectively (Q3 2016 and 2016 YTD losses of \$0.4 million and \$0.7 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 September 30, 2017, the Company had outstanding collars made up of put and call contracts on its zinc exposure for 11,250 tonnes with settlement dates between October 2017 and June 2018. The outstanding contracts have a weighted average floor and cap of \$2,487 and \$3,540, respectively. The Company recorded losses of \$0.5 million and \$1.6 million in Q3 2017 and YTD 2017, respectively (Q3 2016 and YTD 2016 losses of \$1.8 million and \$3.2 million, respectively).

At September 30, 2017, the Company had outstanding collars made up of put and call contracts on its lead exposure for 3,600 tonnes with settlement dates between January 2018 and June 2018. The outstanding positions have a weighted average floor of \$2,200 and an average cap of \$2,500. The Company recorded losses of \$0.4 and \$0.5 million in Q3 2017 and YTD 2017, respectively (Q3 2016 and YTD 2016 losses of \$0.3 million and \$0.3 million, respectively).

At September 30, 2017, the Company had outstanding collars made up of put and call contracts on its copper exposure for 1,080 tonnes with settlement dates between January 2018 and June 2018. The contracts have a weighted average floor and cap of \$5,900 and \$6,960, respectively. The Company recorded losses of \$0.1 million and \$0.1 million in Q3 2017 and YTD 2017, respectively (Q3 2016 and YTD 2016 losses of \$nil and \$nil, respectively).

During 2015, the Company entered into diesel swap contracts designed to fix or limit the Company’s exposure to higher fuel prices that had a total initial notional value of \$25.5 million (the “Diesel Swaps”). All of the Diesel Swaps were settled by December 31, 2016. A total of \$1.6 million of the notional amounts of the Diesel Swaps remained outstanding as of September 30, 2016. In the three and nine months ended September 30, 2016, the Company recorded a loss of \$0.2 million and a \$1.0 million gain on the Diesel Swaps, respectively. There were no such gains or losses recorded in 2017.

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 or nine months ended September 30, 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 4 of the Q3 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 September 30, 2017 was \$119.3 million (December 31, 2016 - \$122.1 million) which has been inflated using inflation rates of between 1% and 23% (2016 - between 1% and 23%). The inflated and discounted provision on the statement of financial position as at September 30, 2017, using discount rates between 1% and 23% (December 31, 2016 - between 1% and 30%), was \$61.9 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 Q3 2017 were primarily a result of increased site disturbance from the ordinary course of operations at the mines, reclamation activities performed 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 concurrent 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 Q3 2017 and YTD 2017 earnings as finance expense were \$1.5 million and \$4.5 million, respectively (Q3 2016 and YTD 2016 - \$1.5 million and \$3.3 million, respectively). Reclamation expenditures incurred during Q3 2017 and YTD 2017 were \$0.9 million and \$4.1 million, respectively (Q3 2016 and YTD 2016 - \$1.4 million and \$3.4 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 September 30, 2017:

(In thousands of USD, except as noted)	Payments due by period				
	Total	Within 1 year ⁽¹⁾	2 - 3 years	4- 5 years	After 5 years
Current liabilities	\$ 126,861	\$ 126,861	\$ —	\$ —	\$ —
Credit facility	3,050	1,200	1,850	—	—
Loan obligation	—	—	—	—	—
Finance lease obligations ⁽²⁾	7,687	5,321	2,366	—	—
Severance accrual	5,123	1,164	2,148	760	1,051
Employee compensation ⁽³⁾	7,749	4,509	3,240	—	—
Loss on commodity contracts	871	871	—	—	—
Provisions ⁽⁴⁾	4,180	2,765	554	627	234
Income taxes payable	19,756	19,756	—	—	—
Total contractual obligations⁽⁴⁾	\$ 175,277	\$ 162,447	\$ 10,158	\$ 1,387	\$ 1,285

(1) Includes all current liabilities in the condensed interim consolidated statement of financial position at September 30, 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.

September 30, 2017		Future interest component	Within 1 year
Current portion of:			
Accounts payable and other liabilities	\$ 126,861	\$ —	\$ 126,861
Credit facility	—	1,200	1,200
Loan obligation	—	—	—
Current portion of finance lease	5,175	146	5,321
Current severance liability	1,164	—	1,164
Employee Compensation & RSU's	4,153	356	4,509
Unrealized loss on commodity contracts	871	—	871
Provisions ⁽⁴⁾	2,765	—	2,765
Income tax payable	19,756	—	19,756
Total contractual obligations within one year⁽⁴⁾	\$ 160,745	\$ 1,702	\$ 162,447

- (2) Includes lease obligations in the amount of \$7.7 million (December 31, 2016 - \$7.3 million) with a net present value of \$7.5 million (December 31, 2016 - \$7.1 million) discussed further in Note 13 of the Q2 2017 Financial Statements.
- (3) Includes RSU obligation in the amount of \$5.1 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 \$4.9 million, long-term \$57.0 million) discussed in Note 12 of the Q3 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 15 of the Q3 2017 Financial Statements, and deferred tax liabilities of \$157.1 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 \$nil and \$0.1 million for consulting services for the three and nine months ended September 30, 2016, respectively. There were no such payments in 2017. All related party transactions for the three and nine months ended September 30, 2017 and 2016 have been disclosed in the Q3 2017 Financial Statements. Related party transactions with Maverix have been disclosed in Note 9 of the Q3 2017 Financial Statements and in Note 12 of the 2016 Financial Statements. There are no ongoing contractual or other commitments associated with this arrangement or with another related party.

ALTERNATIVE PERFORMANCE (NON-GAAP) MEASURES

• AISCOS

AISCOS is a non-GAAP financial measure. AISCOS 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 AISCOS 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:

(In thousands of USD, except as noted)	Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
Direct operating costs	\$ 108,493	\$ 124,912	\$ 354,161	\$ 352,311
Inventory net realizable value ("NRV") adjustments A	1,336	(19,568)	6,812	(32,100)
Production costs	\$ 109,829	\$ 105,346	\$ 360,973	\$ 320,210
Royalties	4,550	8,351	15,701	23,466
Direct selling costs ⁽¹⁾	17,735	18,714	49,936	59,662
Less by-product credits ⁽¹⁾	(114,620)	(118,255)	(330,984)	(314,871)
Cash cost of sales net of by-products ⁽²⁾	\$ 17,494	\$ 14,156	\$ 95,626	\$ 88,467
Sustaining capital ⁽³⁾	\$ 15,424	\$ 16,055	\$ 58,642	\$ 64,418
Exploration and project development ⁽⁴⁾	5,630	4,316	13,588	8,266
Reclamation cost accretion	1,493	1,481	4,480	3,273
General and administrative expense	5,613	5,219	16,665	18,071
All-in sustaining costs ⁽²⁾ B	\$ 45,654	\$ 41,226	\$ 189,001	\$ 182,494
Payable ounces sold (in thousands) C	5,254.8	6,502.4	17,552.3	18,061.3
All-in sustaining cost per silver ounce sold, net of by-products B/C	\$ 8.69	\$ 6.34	\$ 10.77	\$ 10.10
All-in sustaining cost per silver ounce sold, net of by-products (excludes NRV inventory adjustments) (B-A)/C	\$ 8.43	\$ 9.35	\$ 10.38	\$ 11.88

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

(2) Totals may not add due to rounding.

(3) Please refer to the table below. Further, sustaining capital cash outflows included in this table were \$3.4 million less and \$2.8 million more than the \$18.8 million and \$55.8 million capitalized in Q3 and YTD 2017, respectively, as shown in the Capital Expenditures table included in the "2017 Operating Outlook" section of this MD&A. The difference is due to the timing difference between the cash payment of capital investments compared to the period in which investments are capitalized.

(4) The amounts for Q3 and YTD 2017 exclude \$1.9 million from non-cash project development write-downs.

As part of the AISCOS 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 (in thousands of USD)	Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
Payments for mineral properties, plant and equipment ⁽¹⁾	\$ 31,999	\$ 48,517	105,759	146,184
Add/(Subtract)				
Advances received for leases	745	704	3,615	3,938
Non-Sustaining capital (Dolores, La Colorada projects, and other)	(17,320)	(33,166)	(50,732)	(85,704)
Sustaining Capital ⁽²⁾	\$ 15,424	\$ 16,054	58,642	64,418

(1) As presented on the unaudited interim consolidated statements of cash flows.

(2) Totals may not add due to rounding.

Three months ended September 30, 2017									
(In thousands of USD, except as noted)	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo	PASCORP	Consolidated
Direct operating costs	15,821	27,402	2,150	20,035	16,165	7,255	19,664		108,493
NRV inventory adjustments	—	2,810	(1,268)	—	—	—	(205)		1,336
Production costs	15,821	30,212	881	20,035	16,165	7,255	19,458		109,829
Royalties	133	1,467	16	—	—	2,156	779		4,550
Direct selling costs	2,267	17	24	7,813	4,814	2,628	172		17,735
Less by-product credits	(16,371)	(29,068)	(427)	(27,439)	(24,738)	(2,722)	(13,856)		(114,620)
Cash cost of sales net of by-products⁽¹⁾	1,850	2,628	494	410	(3,759)	9,316	6,553		17,494
Sustaining capital	3,680	3,812	—	1,512	2,995	2,400	1,025		15,424
Exploration and project development	79	757	—	326	395	—	2,617	1,457	5,630
Reclamation cost accretion	112	297	89	162	105	56	619	54	1,493
General & administrative expense	—	—	—	—	—	—	—	5,613	5,613
All-in sustaining costs⁽¹⁾	5,721	7,493	583	2,409	(263)	11,773	10,814	7,124	45,654
Payable ounces sold (thousand)	1,642	933	91	818	576	632	562		5,255
All-in sustaining cost per silver ounce sold, net of by-products	\$ 3.48	\$ 8.03	\$ 6.38	\$ 2.94	\$ (0.46)	\$ 18.62	\$ 19.25		\$ 8.69
All-in sustaining cost per silver ounce sold, net of by-products (excludes NRV inventory adjustments)	3.48	5.02	20.25	2.94	(0.46)	18.62	19.61		8.43

(1) Totals may not add due to rounding.

Nine months ended September 30, 2017									
(In thousands of USD, except as noted)	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo	PASCORP	Consolidated
Direct operating costs	50,590	80,365	16,520	56,001	47,036	24,247	79,402		354,161
NRV inventory adjustments		2,749	(682)				4,745		6,812
Production costs	50,590	83,114	15,838	56,001	47,036	24,247	84,147	0	360,973
Royalties	370	4,534	79	—	—	8,216	2,502		15,701
Direct selling costs	8,169	62	231	19,579	13,757	7,357	781		49,936
Less by-product credits	(45,817)	(89,034)	(3,406)	(73,062)	(67,466)	(9,310)	(42,890)		(330,984)
Cash cost of sales net of by-products⁽¹⁾	13,312	(1,324)	12,742	2,518	(6,674)	30,510	44,539		95,626
Sustaining capital	11,394	22,768	—	6,719	9,266	6,207	2,288		58,642
Exploration and project development	179	1,880	—	1,285	1,086	—	3,652	5,506	13,588
Reclamation cost accretion	336	889	268	485	315	169	1,856	162	4,480
General & administrative expense	—	—	—	—	—	—	—	16,665	16,665
All-in sustaining costs⁽¹⁾	25,221	24,213	13,010	11,007	3,994	36,886	52,336	22,334	189,001
Payable ounces sold (thousand)	5,006	2,864	734	2,368	1,791	2,384	2,405		17,552
All-in sustaining cost per silver ounce sold, net of by-products	\$ 5.04	\$ 8.45	\$ 17.73	\$ 4.65	\$ 2.23	\$ 15.47	\$ 21.76		\$ 10.77
All-in sustaining cost per silver ounce sold, net of by-products (excludes NRV adjustments)	\$ 5.04	\$ 7.49	\$ 18.66	\$ 4.65	\$ 2.23	\$ 15.47	\$ 19.79		\$ 10.38

(1) Totals may not add due to rounding.

Three months ended September 30, 2016									
(In thousands of USD, except as noted)	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo	PASCORP	Consolidated
Direct operating costs	12,759	31,424	8,515	16,388	14,190	12,556	29,082		124,912
NRV inventory adjustments	—	(7,660)	106	—	—	—	(12,014)		(19,568)
Production costs	12,759	23,764	8,621	16,388	14,190	12,556	17,068		105,346
Royalties	115	1,874	53	—	—	5,058	1,251		8,351
Direct selling costs	3,252	31	48	7,629	6,090	4,790	(3,126)		18,714
Less by-product credits	(8,414)	(38,233)	(2,089)	(19,398)	(17,344)	(3,078)	(29,698)		(118,255)
Cash cost of sales net of by-products⁽¹⁾	7,712	(12,564)	6,633	4,619	2,936	19,326	(14,505)		14,156
Sustaining capital	1,190	7,342	—	3,252	2,363	1,576	331		16,055
Exploration and project development	25	643	(103)	168	438	—	—	3,145	4,316
Reclamation cost accretion	72	179	494	126	86	54	433	37	1,481
General & administrative expense	—	—	—	—	—	—	—	5,219	5,219
All-in sustaining costs⁽¹⁾	8,999	(4,400)	7,024	8,165	5,823	20,956	(13,741)	8,401	41,226
Payable ounces sold (thousand)	1,296	936	410	821	627	1,476	936		6,502
All-in sustaining cost per silver ounce sold, net of by-products	\$ 6.94	\$ (4.70)	\$ 17.13	\$ 9.94	\$ 9.29	\$ 14.20	\$ (14.67)		\$ 6.34
All-in sustaining cost per silver ounce sold, net of by-products (excludes NRV adjustments)	\$ 6.94	\$ 3.48	\$ 16.87	\$ 9.94	\$ 9.29	\$ 14.20	\$ (1.84)		\$ 9.35

(1) Totals may not add due to rounding.

Nine months ended September 30, 2016									
(In thousands of USD, except as noted)	La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo	PASCORP	Consolidated
Direct operating costs	36,318	92,435	32,905	49,928	43,298	24,906	72,520		352,311
NRV inventory adjustments		(16,084)	(1,051)				(14,965)		(32,100)
Production costs	36,318	76,351	31,854	49,928	43,298	24,906	57,555		320,210
Royalties	266	4,620	203	—	—	15,331	3,045		23,466
Direct selling costs	9,843	85	251	24,709	20,059	11,063	(6,347)		59,662
Less by-product credits	(22,499)	(90,943)	(11,547)	(56,548)	(56,375)	(10,402)	(66,558)		(314,871)
Cash cost of sales net of by-products⁽¹⁾	23,928	(9,887)	20,760	18,088	6,983	40,899	(12,304)		88,467
Sustaining capital	8,316	37,307	—	7,640	6,052	3,332	1,771		64,418
Exploration and project development	155	1,164	—	261	944	—	—	5,743	8,266
Reclamation cost accretion	215	536	312	378	259	163	1,298	111	3,273
General & administrative expense	—	—	—	—	—	—	—	18,071	18,071
All-in sustaining costs⁽¹⁾	32,614	29,119	21,073	26,367	14,238	44,394	(9,235)	23,924	182,494
Payable ounces sold (thousand)	3,925	2,944	1,681	2,475	1,851	2,932	2,254		18,061
All-in sustaining cost per silver ounce sold, net of by-products	\$ 8.31	\$ 9.89	\$ 12.54	\$ 10.66	\$ 7.69	\$ 15.14	\$ (4.10)		\$ 10.10
All-in sustaining cost per silver ounce sold, net of by-products (excludes NRV adjustments)	\$ 8.31	\$ 15.35	\$ 13.16	\$ 10.66	\$ 7.69	\$ 15.14	\$ 2.54		\$ 11.88

(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 (in thousands of U.S. dollars except as noted)	Three months ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
Production costs	\$ 109,829	\$ 103,003	\$ 360,973	\$ 317,867
Add/(Subtract)				
Royalties	4,550	8,351	15,701	23,466
Smelting, refining, and transportation charges	19,025	21,804	54,754	69,167
Worker's participation and voluntary payments	(1,351)	(1,155)	(3,693)	(2,520)
Change in inventories	7,004	(5,786)	(3,235)	(8,464)
Other	716	(1,744)	1,004	(6,018)
Non-controlling interests ⁽¹⁾	(210)	(919)	(1,062)	(2,547)
Inventory net realizable value ("NRV") adjustments	(1,336)	19,568	(6,812)	32,100
Cash Operating Costs before by-product credits ⁽²⁾	138,229	143,122	417,630	423,051
Less gold credit	(50,986)	(66,422)	(142,000)	(174,308)
Less zinc credit	(35,916)	(25,459)	(97,000)	(64,942)
Less lead credit	(11,613)	(8,711)	(34,261)	(24,664)
Less copper credit	(22,492)	(13,429)	(57,322)	(48,737)
Cash Operating Costs net of by-product credits ⁽²⁾	A 17,221	29,101	87,046	110,400
Payable Silver Production (koz)	B 5,520.7	5,953.4	17,272.0	17,893.2
Cash Costs per ounce net of by-product credits	A/B \$ 3.12	\$ 4.89	\$ 5.04	\$ 6.17

(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 September 30, 2017 ⁽¹⁾ (in thousands of USD except as noted)									
		La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo	Consolidated Total
Cash Costs before by-product credits	A	\$ 19,284	\$ 31,357	\$ —	\$ 27,120	\$ 19,274	\$ 13,237	\$ 25,798	\$ 136,070
Less gold credit	b1	(1,307)	(31,911)	—	—	(883)	(82)	(16,723)	(50,908)
Less zinc credit	b2	(9,853)	—	—	(12,143)	(10,423)	(2,493)	—	(34,912)
Less lead credit	b3	(5,155)	—	—	(4,437)	(1,645)	(227)	—	(11,463)
Less copper credit	b4	—	—	—	(10,291)	(10,664)	(612)	—	(21,567)
Sub-total by-product credits	B=(b1+ b2+ b3+ b4)	\$ (16,315)	\$ (31,911)	\$ —	\$ (26,871)	\$ (23,615)	\$ (3,414)	\$ (16,723)	\$ (118,850)
Cash Costs net of by-product credits	C=(A+B)	\$ 2,969	\$ (554)	\$ —	\$ 249	\$ (4,341)	\$ 9,823	\$ 9,075	\$ 17,220
Payable ounces of silver (thousand)	D	1,735	972	—	812	532	756	713	5,521
Cash cost per ounce net of by-products	C/D	\$ 1.71	\$ (0.57)	NA	\$ 0.31	\$ (8.16)	\$ 12.99	\$ 12.73	\$ 3.12

(1) Totals may not add due to rounding.

Nine months ended September 30, 2017 ⁽¹⁾ (in thousands of USD except as noted)									
		La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo	Consolidated Total
Cash Costs before by-product credits	A	\$ 56,700	87,754	\$ 12,530	\$ 75,149	\$ 55,809	\$ 39,987	\$ 83,926	\$ 411,854
Less gold credit	b1	(3,100)	(89,795)	(2,407)	(139)	(2,015)	(227)	(44,137)	(141,820)
Less zinc credit	b2	(26,630)	—	—	(33,785)	(27,197)	(6,755)	—	(94,366)
Less lead credit	b3	(13,761)	—	—	(14,281)	(5,212)	(541)	—	(33,796)
Less copper credit	b4	—	—	(46)	(24,388)	(28,730)	(1,664)	—	(54,828)
Sub-total by-product credits	B=(b1+ b2+ b3+ b4)	\$ (43,491)	\$ (89,795)	\$ (2,453)	\$ (72,593)	\$ (63,155)	\$ (9,188)	\$ (44,137)	\$ (324,810)
Cash Costs net of by-product credits	C=(A+B)	\$ 13,209	\$ (2,041)	\$ 10,077	\$ 2,555	\$ (7,345)	\$ 30,800	\$ 39,789	\$ 87,045
Payable ounces of silver (thousand)	D	4,932	2,971	592	2,343	1,612	2,350	2,472	17,272
Cash cost per ounce net of by-products	C/D	\$ 2.68	\$ (0.69)	\$ 17.03	\$ 1.09	\$ (4.56)	\$ 13.11	\$ 16.10	\$ 5.04

(1) Totals may not add due to rounding.

Three months ended September 30, 2016 ⁽¹⁾ (in thousands of USD except as noted)									
		La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo	Consolidated Total
Cash Costs before by-product credits	A	\$ 16,727	31,432	\$ 8,606	\$ 23,218	\$ 18,421	\$ 17,301	\$ 25,882	\$ 141,587
Less gold credit	b1	(773)	(36,167)	(1,799)	(1)	(132)	(86)	(27,450)	(66,408)
Less zinc credit	b2	(5,009)	—	—	(9,060)	(7,717)	(2,875)	—	(24,661)
Less lead credit	b3	(2,255)	—	—	(4,714)	(1,414)	(199)	—	(8,582)
Less copper credit	b4	—	—	(32)	(5,447)	(6,581)	(776)	—	(12,836)
Sub-total by-product credits	B=(b1+ b2+ b3+ b4)	\$ (8,037)	\$ (36,167)	\$ (1,831)	\$ (19,222)	\$ (15,844)	\$ (3,936)	\$ (27,450)	\$ (112,487)
Cash Costs net of by-product credits	C=(A+B)	\$ 8,690	\$ (4,735)	\$ 6,775	\$ 3,996	\$ 2,577	\$ 13,365	\$ (1,568)	\$ 29,101
Payable ounces of silver (thousand)	D	1,320	900	365	812	584	1,077	894	5,953
Cash cost per ounce net of by-products	C/D	\$ 6.58	\$ (5.26)	\$ 18.55	\$ 4.92	\$ 4.41	\$ 12.40	\$ (1.75)	\$ 4.89

(1) Totals may not add due to rounding.

Nine months ended September 30, 2016 ⁽¹⁾ (in thousands of USD except as noted)									
		La Colorada	Dolores	Alamo Dorado	Huaron	Morococha	San Vicente	Manantial Espejo	Consolidated Total
Cash Costs before by-product credits	A	\$ 48,939	94,695	\$ 29,187	\$ 70,518	\$ 56,090	\$ 47,824	\$ 71,129	\$ 418,382
Less gold credit	b1	(2,089)	(93,513)	(8,562)	(2)	(732)	(248)	(69,087)	(174,233)
Less zinc credit	b2	(12,834)	—	—	(23,581)	(19,480)	(7,044)	—	(62,939)
Less lead credit	b3	(6,974)	—	—	(12,962)	(3,723)	(659)	—	(24,318)
Less copper credit	b4	—	—	(131)	(18,991)	(25,852)	(1,517)	—	(46,491)
Sub-total by-product credits	B=(b1+ b2+ b3+ b4)	\$ (21,897)	\$ (93,513)	\$ (8,693)	\$ (55,536)	\$ (49,787)	\$ (9,468)	\$ (69,087)	\$ (307,981)
Cash Costs net of by-product credits	C=(A+B)	\$ 27,042	\$ 1,182	\$ 20,494	\$ 14,982	\$ 6,303	\$ 38,356	\$ 2,042	\$ 110,400
Payable ounces of silver (thousand)	D	3,942	2,935	1,447	2,419	1,647	3,149	2,353	17,893
Cash cost per ounce net of by-products	C/D	\$ 6.86	\$ 0.40	\$ 14.16	\$ 6.19	\$ 3.83	\$ 12.18	\$ 0.87	\$ 6.17

(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 that 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 nine months ended September 30, 2017 and 2016, to the net earnings for each period.

(In thousands of USD, except as noted)	Three Months Ended September 30,		Nine months ended September 30,	
	2017	2016	2017	2016
Net earnings for the period	\$ 17,826	\$ 43,440	\$ 73,787	\$ 79,541
Adjust for:				
Write-down of project development costs	1,898	—	1,898	—
Unrealized foreign exchange losses (gains)	373	131	(745)	1,620
Net realizable value adjustments to heap inventory	3,023	(7,089)	5,124	(7,491)
Unrealized losses (gains) on commodity contracts	2,168	1,710	(3,099)	414
Share of loss from associate and dilution (gain) loss, net ⁽¹⁾	(373)	538	(1,793)	538
Mine operation severance costs	—	—	3,509	—
Reversal of previously accrued tax liabilities	—	—	(2,793)	—
Gain on sale of assets	(651)	(6,891)	(985)	(24,943)
Adjust for effect of taxes relating to the above ⁽¹⁾	\$ (1,566)	\$ 7,373	\$ (3,773)	\$ 12,553
Adjust for effect of foreign exchange on taxes ⁽¹⁾	\$ 620	\$ 7,447	\$ (16,517)	\$ 5,698
Adjusted earnings for the period	\$ 23,318	\$ 46,659	\$ 54,613	\$ 67,930
Weighted average shares for the period	153,173	152,198	153,024	152,070
Adjusted earnings per share for the period	\$ 0.15	\$ 0.31	\$ 0.36	\$ 0.45

(1) The impact of unrealized foreign exchange rate changes on deferred income tax balances was added as a new adjusting item in Q4 2016, along with a modification in the quantification of the estimated effect of taxes. Also, "Share of (income) loss from associate and dilution (gain) loss, net" was added as an adjusting item in Q4 2016. For comparative purposes, Q3 2016 and YTD 2016 adjusted earnings have been recalculated and are different from those originally reported. The effect of these new adjusting items on Q3 2016 and YTD 2016 adjusted earnings were increases of \$9.7 million and \$7.6 million from those originally reported, respectively, resulting in adjusted earnings per share in both Q3 2016 and YTD 2016 being increased by \$0.07 and \$0.05, respectively.

- **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 2016 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 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, 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 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 forecasted 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 AISCOS, these non-GAAP measures are highly sensitive to base metal and gold prices.

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 both the 2016 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 \$8.2 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 September 30, 2017, we had receivable balances associated with buyers of our concentrates of \$53.5 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 September 30, 2017, we had approximately \$34.0 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 September 30, 2017, the Company had made \$15.0 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 in MD&A in the "Financial Instruments" section.

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 exchange 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.

Readers should also refer to Note 2 of the 2016 Financial Statements, for the Company's summary of significant accounting policies.

CHANGES IN ACCOUNTING STANDARDS

The accounting policies applied in the preparation of the Q1 2017 Financial Statements are consistent with those applied and disclosed in the Company's 2016 Financial Statements, except for the following: the Company has adopted the narrow scope amendments to IFRS 12 - Disclosure of Interests in Other Entities, IAS 7 - Statement of Cash Flows and IAS 12 - Income Taxes which are effective for annual periods beginning on or after January 1, 2017. The amendments did not have an impact on the Company's unaudited condensed interim 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. The Company is currently evaluating the impact the final standard and amendments on its consolidated financial statements.

IFRS 15, *Revenue from Contracts with Customers* ("IFRS 15") In May 2014, the IASB and the Financial Accounting Standards Board ("FASB") completed its joint project to clarify the principles for recognizing revenue and to develop a common revenue standard for IFRS and US GAAP. As a result of the joint project, the IASB issued IFRS 15, *Revenue from Contracts with Customers*, and will replace IAS 18, *Revenue*, IAS 11, *Construction Contracts*, and related interpretations on revenue. IFRS 15 establishes principles to address the nature, amount, timing and uncertainty of revenue and cash flows arising from an entity's contracts with customers. The standard is effective for annual periods beginning on or after January 1, 2018. The Company plans to apply IFRS 15 at the date it becomes effective. The Company is currently assessing what potential impact the application of IFRS 15 will have on its consolidated financial statements, the assessment has principally involved examining the Company's various doré and concentrate sales contracts to identify when the control of goods and services is transferred, and if any separate performance obligations exist that may affect the timing of when revenue would be recognized under IFRS 15. Based on this assessment to date the Company does not anticipate IFRS 15 to have a material impact on doré or concentrate sales, or the associated provisional pricing adjustments. Throughout the remainder of 2017 the Company will continue to prepare for the adoption of IFRS 15, and any related impact the adoption may have on internal controls.

IFRS 16, *Leases* ("IFRS 16") In January 2016, the IASB issued IFRS 16 - *Leases* which replaces IAS 17 - *Leases* and its associated interpretative guidance. IFRS 16 applies a control model to the identification of leases, distinguishing between a lease and a service contract on the basis of whether the customer controls the asset being leased. For those assets determined to meet the definition of a lease, IFRS 16 introduces significant changes to the accounting by lessees, 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 is currently evaluating the impact the final standard is expected to have on its consolidated financial statements.

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.

DISCLOSURE CONTROLS AND PROCEDURES

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. 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.

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 September 30, 2017 that has materially affected or is reasonably likely to materially affect, its internal control over financial reporting.

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 43-101.

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, 2017, filed at www.sedar.com 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”, “intends”, “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 economic 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 the anticipated financial and operating results of ongoing or future development and expansion plans, including the expansion projects at the Company’s Dolores and La Colorada mines, and the COSE and Joaquin 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 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 business, economic, competitive, political and social uncertainties and contingencies. Many factors, both known and unknown, could cause actual results, performance or achievements to be materially different from the results, performance or achievements that are or may be 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 spot and forward markets for silver, gold, base metals and certain other commodities (such as natural gas, fuel, oil and electricity); fluctuations in currency markets (such as the Peruvian sol, Mexican peso, Argentine peso, Bolivian boliviano and Canadian dollar versus the U.S. dollar); 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 in 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. Investors are cautioned against attributing undue certainty or reliance on forward-looking statements or information. 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. 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 Canadian National Instrument 43-101 - *Standards of Disclosure for Mineral Projects* ("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 United States Securities and Exchange Commission (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 in public companies that report in accordance with U.S. standards.