SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 40-F
[ ] REGISTRATION STATEMENT PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

[X] ANNUAL REPORT PURSUANT TO SECTION 13(a) OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2021 Commission File Number 000-13727

Pan American Silver Corp.
(Exact name of Registrant as specified in its charter)

British Columbia	**1044**	**Not Applicable**
(Province or other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

1500 – 625 Howe Street
Vancouver, British Columbia
V6C 2T6
(604) 684-1175
(Address and telephone number of Registrant's principal executive offices)

CT Corporation
28 Liberty St.
New York, NY 10005
(212) 894-8940
(Name, address (including zip code) and telephone number (including area code) of agent for service in the United States)

Securities registered or to be registered pursuant to Section 12(b) of the Act.

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common Shares, No Par Value	PAAS	The Nasdaq Stock Market

Securities registered or to be registered pursuant to Section 12(g) of the Act.

Title of Each Class
Contingent Value Rights

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.
None

For annual reports, indicate by check mark the information filed with this Form:

[**X**] Annual information form [**X**] Audited annual financial statements

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by this annual report:

The Registrant had 210,457,524 Common Shares outstanding as at December 31, 2021.

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days.

Yes __X__ No __

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this Chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files).

Yes __X__ No __

Indicate by check mark whether the Registrant is an emerging growth company as defined in Rule 12b-2 of the Exchange Act.

Emerging growth company Yes _____ No __X__

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the Registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards* provided pursuant Section 13(a) of the Exchange Act.

Yes _____ No __X___

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Yes __X__ No _____

NOTE TO UNITED STATES INVESTORS CONCERNING
ESTIMATES OF MEASURED, INDICATED AND INFERRED MINERAL RESOURCES

Unless otherwise indicated, all reserve and resource estimates included in this Annual Report on Form 40-F have been prepared 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 classification system. 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 reserve and resource information included herein may not be comparable to similar information disclosed by U.S. companies. In particular, and without limiting the generality of the foregoing, this Annual Report on Form 40-F uses the terms "measured resources," "indicated resources" and "inferred resources." U.S. investors are advised that, while such terms are recognized and required by Canadian securities laws, the SEC does not recognize them. The requirements of NI 43-101 for the identification of "reserves" are also not the same as those of the SEC, and reserves reported by the Registrant in compliance with NI 43-101 may not qualify as "reserves" under SEC standards. Under U.S. standards, mineralization may not be classified as a "reserve" unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve determination is made. U.S. investors are cautioned not to assume that any part of a "measured resource" or "indicated resource" will ever be converted into a "reserve." U.S. investors should also understand that "inferred resources" have a great amount of uncertainty as to their existence and as to their economic and legal feasibility. It cannot be assumed that all or any part of "inferred resources" exist, are economically or legally mineable or will ever be upgraded to a higher category. Under Canadian rules, estimated "inferred resources" may not form the basis of feasibility or pre-feasibility studies except in rare cases. In addition, disclosure of "contained ounces" in a mineral resource is permitted disclosure under Canadian regulations. 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 in this Annual Report on Form 40-F may not be comparable with information made public by companies that report in accordance with U.S. standards.

The SEC has adopted amendments to its disclosure rules to modernize the mineral property disclosure requirements for issuers whose securities are registered with the SEC under the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act"). These amendments became effective February 25, 2019 (the "SEC Modernization Rules") with compliance required for the first fiscal year beginning on or after January 1, 2021. Under the SEC Modernization Rules, the historical property disclosure requirements for mining registrants included in Industry Guide 7 under the U.S. Securities Act of 1933, as amended, will be rescinded and replaced with disclosure requirements in subpart 1300 of SEC Regulation S-K. Following the transition period, as a foreign private issuer that is eligible to file reports with the SEC pursuant to the multi-jurisdictional disclosure system (the "MJDS"), the Registrant is not required to provide disclosure on its mineral properties under the SEC Modernization Rules and will continue to provide disclosure under NI 43-101. If the Registrant ceases to be a foreign private issuer or loses its eligibility to file its annual report on Form 40-F pursuant to the MJDS, then the Registrant will be subject to the SEC Modernization Rules, which differ from the requirements of NI 43-101.

As a result of the adoption of the SEC Modernization Rules, the SEC now recognizes estimates of “measured mineral resources”, “indicated mineral resources” and “inferred mineral resources.” In addition, the SEC has amended its definitions of “proven mineral reserves” and “probable mineral reserves” to be “substantially similar” to the corresponding standards under NI 43-101. While the SEC will now recognize “measured mineral resources”, “indicated mineral resources” and “inferred mineral resources”, U.S. investors should not assume that any part or all of the mineralization in these categories will ever be converted into a higher category of mineral resources or into mineral reserves. Mineralization described using these terms has a greater amount of uncertainty as to its existence and feasibility than mineralization that has been characterized as reserves. Accordingly, U.S. investors are cautioned not to assume that any measured mineral resources, indicated mineral resources, or inferred mineral resources that the Registrant reports are or will be economically or legally mineable. Further, “inferred mineral resources” have a greater amount of uncertainty as to their existence and as to whether they can be mined legally or economically. Therefore, U.S. investors are also cautioned not to assume that all or any part of the “inferred mineral resources” exist. Under Canadian securities laws, estimates of “inferred mineral resources” may not form the basis of feasibility or pre-feasibility studies, except in rare cases. While the above terms are “substantially similar” to the standards under NI 43-101, there are differences in the definitions under the SEC Modernization Rules. Accordingly, there is no assurance any mineral reserves or mineral resources that the Registrant may report as “proven mineral reserves”, “probable mineral reserves”, “measured mineral resources”, “indicated mineral resources” and “inferred mineral resources” under NI 43-101 would be the same had the Registrant prepared the reserve or resource estimates under the standards adopted under the SEC Modernization Rules..

A. Disclosure Controls and Procedures

Disclosure controls and procedures are defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as those controls and other procedures that are designed to ensure that information required to be disclosed by the Registrant in reports filed or submitted by it under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Rules 13a-15(e) and 15d-15(e) also provide that disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Registrant is accumulated and communicated to the Registrant's management as appropriate to allow timely decisions regarding required disclosure.

As of December 31, 2021, the end of the period covered by this Annual Report on Form 40-F, the Registrant carried out an evaluation, under the supervision and with the participation of the Registrant's management, including the Registrant's Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of the Registrant's disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that, as of December 31, 2021, the Registrant's disclosure controls and procedures were effective. See "Disclosure Controls and Procedures and Internal Control Over Financial Reporting" in Management's Discussion and Analysis for the fiscal year ended December 31, 2021, filed as Exhibit No. 1.2 to this Annual Report on Form 40-F.

B. Management's Annual Report on Internal Control Over Financial Reporting

See the section titled "Management's Report on Internal Control over Financial Reporting" in the Registrant's Audited Consolidated Financial Statements for the fiscal years ended December 31, 2021 and 2020, filed as Exhibit 1.3 to this Annual Report on Form 40-F.

C. Attestation Report of the Independent Registered Public Accounting Firm

The attestation report of Deloitte LLP, the Registrant's Independent Registered Public Accounting Firm, on management's assessment of the Registrant's internal control over financial reporting is included in the "Report of Independent Registered Public Accounting Firm" filed with the Registrant's Audited Consolidated Financial Statements for the fiscal years ended December 31, 2021 and 2020, filed as Exhibit 1.3 to this Annual Report on Form 40-F.

D. Changes in Internal Control Over Financial Reporting

There was no change in the Registrant's internal control over financial reporting that occurred during the period covered by this Annual Report on Form 40-F that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting.

E. Notice of Pension Fund Blackout Period

The Registrant was not required by Rule 104 of Regulation BTR to send any notice to any of its directors or executive officers during the fiscal year ended December 31, 2021.

F. Audit Committee Financial Expert

The Registrant's board of directors has determined that Michael Carroll and Jennifer Maki, each of whom are individuals serving on the Audit Committee of the Registrant's board of directors, are audit committee financial experts, as that term is defined in General Instruction B(8)(b) of Form 40-F and is independent under Rule 10A-3 under the Exchange Act and the rules and regulations of the Nasdaq Stock Market.

The Commission has indicated that the designation of a person as an audit committee financial expert does not make such person an "expert" for any purpose, impose any duties, obligations or liabilities on such person that are greater than those imposed on members of the audit committee and the board of directors who do not carry this designation or affect the duties, obligations or liability of any other member of the audit committee or board of directors.

G. Code of Ethical Conduct

The Registrant has adopted a global code of ethical conduct (the "Code") that applies to all directors, officers and employees. A copy of the Code may be obtained at www.panamericansilver.com. No waivers from the requirements of the Code were granted to any principal officer of the Registrant or any person performing similar functions during the year ended December 31, 2021.

H. Principal Accountant Fees and Services and Audit Committee Pre-Approval Policies

Information about fees billed for professional services rendered by the Registrant's principal accountant, Deloitte LLP (Vancouver, Canada, PCAOB ID No. 1208), and a description of the Registrant's pre-approval policies and procedures is included under the heading "External Auditor Service Fees" of the Registrant's Annual Information Form for the fiscal year ended December 31, 2021, filed as Exhibit 1.1 to this Annual Report on Form 40-F.

I. Off-Balance Sheet Arrangements

The Registrant is not a party to any off-balance sheet arrangements that have or are reasonably likely to 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 is material to investors.

J. Tabular Disclosure of Contractual Obligations

The required disclosure can be found under the heading "Commitments" of Management's Discussion and Analysis for the fiscal year ended December 31, 2021, filed as Exhibit 1.2 to this Annual Report on Form 40-F.

K. Nasdaq Stock Market Exemptions

On March 16, 2005, the Registrant informed the Nasdaq Stock Market that as permitted by Rule 4350(a)(1) of the Nasdaq Marketplace Rules, it intended to follow British Columbia practice with respect to quorum requirements in lieu of those required by Rule 4350(f) of the Nasdaq Marketplace Rules (which provides that a quorum for a shareholder meeting of a Nasdaq-listed company must be at least 33-1/3% of the outstanding common shares of the company). The Registrant's by-laws provide that the minimum quorum for a meeting of holders of Common Shares is two individuals who are shareholders, proxy holders or duly authorized representatives of corporate shareholders personally present and representing shares aggregating not less than 25% of the issued shares of the Registrant carrying the right to vote. The Registrant's quorum requirements are not prohibited by the requirements of the *Business Corporations Act* (British Columbia) and the Registrant intends to continue to comply with the requirements of the *Business Corporations Act* (British Columbia). The rules of the Toronto Stock Exchange, upon which the Common Shares are also listed, do not contain specific quorum requirements.

L. Identification of the Audit Committee

The Registrant has a separately designated standing Audit Committee established in accordance with Section 3(a)(58)(A) of the Exchange Act. The members of the Audit Committee are Michael Carroll, Neil de Gelder and Jennifer Maki. Michael Carroll, Neil de Gelder, and Jennifer Maki are independent as such term is defined under Rule 10A-3 under the Exchange Act and the rules and regulations of the Nasdaq Stock Market. Further information about the Registrant's Audit Committee can be found under the heading "Audit Committee" of the Registrant's Annual Information Form for the fiscal year ended December 31, 2021, filed as Exhibit 1.1 to this Annual Report on Form 40-F.

M. Mine Safety

The Registrant is not currently required to disclose the information required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

N. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

UNDERTAKING AND CONSENT TO SERVICE OF PROCESS

A. Undertaking

The Registrant undertakes to make available, in person or by telephone, representatives to respond to inquiries made by the Commission staff, and to furnish promptly, when requested to do so by the Commission staff, information relating to the securities in relation to which the obligation to file an annual report on Form 40-F arises; or transactions in said securities.

B. Consent to Service of Process

The Registrant has previously filed with the Commission a Form F-X in connection with its Common Shares. Any change to the name and address of the agent for service of process shall be communicated promptly to the Commission by an amendment to Form F-X.

EXHIBITS

The following exhibits are filed as part of this report:

Exhibit Number	Title
1.1	Annual Information Form for the fiscal year ended December 31, 2021.
1.2	Management's Discussion and Analysis for the fiscal year ended December 31, 2021.
1.3	Audited Consolidated Financial Statements for the fiscal years ended December 31, 2021 and 2020.
23.1	Consent of Deloitte LLP.
23.2	Consent of Martin Wafforn.
23.3	Consent of Michael Steinmann.
23.4	Consent of Americo Delgado.
23.5	Consent of Christopher Emerson.
23.6	Consent of Alain Mainville.
23.7	Consent of Eric Lachapelle.
23.8	Consent of Dave Felsher.
23.9	Consent of Tim Williams.
23.10	Consent of Carl E. Defilippi.
23.11	Consent of Charles V. Muerhoff.
23.12	Consent of M3 Engineering & Technology Corporation.
31.1	Certification of CEO pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of CFO pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of CEO and CFO pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	Interactive Data File (formatted as Inline XBRL).
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

Exhibits 1.1, 1.2 and 1.3 are incorporated by reference into the Registrant’s Registration Statements on Form S-8 (File Nos. 333-180494, 333-180495, 333-206162 and 333-229795).

SIGNATURE

Pursuant to the requirements of the Exchange Act, the Registrant certifies that it meets all of the requirements for filing on Form 40-F and has duly caused this annual report to be signed on its behalf by the undersigned, thereto duly authorized.

PAN AMERICAN SILVER CORP.

Dated: February 23, 2022

/s/ "Delaney Fisher"

By: Delaney Fisher

Title: Vice President, Associate General Counsel and Corporate Secretary



Annual Information Form

For the Year Ended December 31, 2021

February 23, 2022

1500-625 Howe Street
Vancouver, British Columbia
V6C 2T6

www.panamericansilver.com

PAN AMERICAN SILVER CORP.
ANNUAL INFORMATION FORM

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IMPORTANT INFORMATION ABOUT THIS DOCUMENT

This annual information form ("AIF") provides important information about Pan American Silver Corp. It describes our business, including our goals and strategy, our history, our operations and development projects, our mineral reserves and mineral resources, our approach to environmental, social and governance ("ESG") matters, the regulatory environment that we operate in, the risks we face, and the market for our products, among other things.

We have prepared this document to meet the requirements of Canadian securities laws, which are different from what US securities laws require.

Throughout this document, the term *Pan American* means Pan American Silver Corp. and the terms *we, us,* and *our* mean Pan American and its subsidiaries.

Reporting Currency and Financial Information

Unless we have specified otherwise, all references to dollar amounts or $ or USD are United States dollars. Any references to CAD or CAD$ are Canadian dollars.

All financial information presented in this AIF was prepared in accordance with international financial reporting standards ("IFRS") as issued by the International Accounting Standards Board.

Non-GAAP Measures

This AIF refers to various non-generally accepted accounting principles ("non-GAAP") measures, such as cash costs per ounce sold, net of by-product credits ("Cash Costs"), all-in sustaining costs per ounce sold ("AISC"), working capital, net cash, and total debt. Readers should refer to the section entitled "Alternative Performance (Non-GAAP) Measures" in our management's discussion and analysis for the year ended December 31, 2021 (the "2021 MD&A") for a detailed description and reconciliation of these non-GAAP measures. The 2021 MD&A is available under our SEDAR profile at www.sedar.com and on our website at www.panamericansilver.com.

Per Ounce Measures - Cash Costs and AISC

Cash Costs and AISC are non-GAAP financial measures that do not have any standardized meaning prescribed by IFRS and are therefore unlikely to be comparable to similar measures presented by other companies.

Pan American produces by-product metals incidentally to our silver and gold mining activities. We have adopted the practice of calculating a performance measure with the net cost of producing an ounce of silver and gold, our primary payable metals, after deducting revenues gained from incidental by-product production. 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 and gold industry. Cash costs per ounce is conceptually understood and widely reported in the mining industry.

We believe that AISC, also calculated net of by-products, is a comprehensive measure of the full cost of operating our business, given it includes the cost of replacing silver and gold ounces through exploration, the cost of ongoing capital investments (sustaining capital), general and administrative expenses, as well as other items that affect our consolidated cash flow.

Silver Segment Cash Costs and AISC are calculated net of credits for realized revenues from all metals other than silver ("silver segment by-product credits"), and are calculated per ounce of silver sold. Gold Segment Cash Costs and AISC are calculated net of credits for realized silver revenues ("gold segment by-product credits"), and are calculated per ounce of gold sold. Consolidated Cash Costs and AISC are based on total silver ounces sold and are net of by-product credits from all metals other than silver ("silver basis consolidated by-product credits").

Included in the Silver Segment for 2021 were the La Colorada, Huaron, Morococha, San Vicente, and Manantial Espejo (including COSE and Joaquin) mines, while the Gold Segment was comprised of the Dolores, Shahuindo, La Arena, Timmins West and Bell Creek mines. The Dolores mine was formerly included in the Silver Segment, but due to the mine's production profile, we have determined that the Dolores mine is better identified as a Gold Segment operation going forward. As such, beginning in 2021, we began to report Dolores Cash Costs and AISC, including recast comparative amounts, on a per ounce of gold basis and include it as part of its Gold Segment Cash Costs and AISC calculations.

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 IFRS and is therefore unlikely to be comparable to similar measures presented by other companies. Pan American and certain investors use this information to evaluate whether Pan American is able to meet its current obligations using its current assets.

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. Pan American and certain investors use this information to evaluate the financial debt leverage of Pan American.

Glossary of Terms

The glossary of terms under "Glossary of Terms" of this AIF contains definitions of certain scientific or technical terms used in this AIF that might be useful for your understanding.

Conversion Table

In this AIF, metric units are used with respect to mineral properties unless otherwise indicated. Conversion rates from imperial to metric units and from metric to units imperial are provided in the table set out below.

Imperial Measure = Metric Unit		Metric Unit = Imperial Measure	
2.47 acres	1 hectare	0.405 hectares	1 acre
3.28 feet	1 metre	0.305 metres	1 foot
0.621 miles	1 kilometre	1.609 kilometres	1 mile
0.032 ounces (troy)	1 gram	31.1 grams	1 ounce (troy)
1.102 tons (short)	1 tonne	0.907 tonnes	1 ton (short)
0.029 ounces (troy)/ton (short)	1 gram/tonne	34.28 grams/tonne	1 ounce (troy)/ton (short)
2205 pounds	1 tonne	0.454 kilograms	1 pound

Caution About Forward-Looking Information

This AIF includes statements and information about our expectations for the future. When we discuss our strategy, plans and future financial and operating performance, or other things that have not yet taken place, we are making statements considered to be forward-looking information or forward-looking statements under Canadian securities laws and the United States Private Securities Litigation Reform Act of 1995. We refer to such forward-looking information and forward-looking statements together in this AIF as forward-looking information.

Key things to understand about the forward-looking information in this AIF are:

- It typically includes words and phrases about the future, such as *believe*, *estimate*, *anticipate*, *expect*, *plan*, *intend*, *predict*, *goal*, *target*, *forecast*, *project*, *scheduled*, *potential*, *strategy* and *proposed* (see examples starting on page 4.
- It is based on a number of material assumptions, including, but not limited to, those we have listed below, that may prove to be incorrect.
- Actual results and events may be significantly different from what we currently expect, because of, among other things, the risks associated with our business. We list a number of these material risks below under

“Material Risks and Assumptions”. We recommend you also review other parts of this AIF, including "Risks Related to Our Business" starting on page 57, and our 2021 MD&A, which includes a discussion of other material risks that could cause our actual results to differ from our current expectations.

Forward-looking information is designed to help you understand management’s current views of our near and longer term prospects. It may not be appropriate for other purposes. We do not intend to update forward-looking information unless we are required to do so by applicable securities laws.

Examples of Forward-Looking Information in this AIF:

- the price of silver, gold and other metals and assumed foreign exchange rates;
- estimated production of silver, gold and other metals forecasted for 2022, as well as our estimated Cash Costs, AISC and expenditures (such as sustaining and project capital, care and maintenance expenditures, and general corporate and administrative expenditures) in 2022;
- the sufficiency of our liquid assets to satisfy our 2022 working capital requirements, fund currently planned capital expenditures (including both sustaining and project capital) for existing operations, and to discharge liabilities as they come due;
- the accuracy of mineral reserve and mineral resource estimates at the La Colorada, Dolores, Huaron, Shahuindo, Timmins West, and Bell Creek mines, as well as the Escobal mine and other projects and properties, including the Morococha mine;
- estimated production rates for silver and other payable metals we produce, timing of production and estimated cash and total costs of production;
- our anticipated operating cash flow and the estimated cost of and availability of funding for working capital requirements and capital replacement, improvement or remediation programs, care and maintenance programs, and for future construction and development projects;
- our ability to take advantage of further strategic opportunities as they are identified and become available;
- expectations with respect to the future anticipated impact of COVID-19 on our operations, assumptions related to the global supply of COVID-19 vaccines and the effectiveness and results of any vaccines, the lessening or increase in pandemic-related restrictions, the impacts on the global supply chain of goods and services resulted to COVID-19, and the anticipated rate and timing for the same;
- the ability of Pan American to continue with its operations, or to successfully maintain our operations on care and maintenance, should the situation related to COVID-19 not be as anticipated;
- the outcome of the International Labour Organization Convention No. 169 (“ILO 169”) consultation process in Guatemala with respect to the Escobal mine, the resolution of other matters ordered by the courts in Guatemala, and our anticipated engagement with local communities and the Xinka population;
- the Escobal and Morococha mines remaining on care and maintenance in 2022;
- our ability to successfully restart the Escobal mine if the ILO 169 consultation-related suspension ends;
- our ability to identify and realize any alternative opportunities for the Morococha mine and what impact such alternatives, if any, may have on our business;
- our ability to obtain necessary permits and licenses, including for current or future operations, project development and expansion;
- future successful development of the Navidad project, the La Colorada skarn and other development projects;
- the effect of the New Mining Law (as defined below) established by the Bolivian government on the current joint venture agreement relating to the San Vicente mine;
- the effects of laws, regulations and government policies affecting our operations, including, without limitation, expectations relating to or the effect of certain highly restrictive laws and regulations applicable to mining in the Province of Chubut, Argentina;
- the estimates of expected or anticipated economic returns from a mining project, as reflected in preliminary economic assessments, pre-feasibility, and feasibility studies or other reports prepared in relation to development of projects;
- estimated exploration expenditures to be incurred on our various silver exploration properties;
- compliance with environmental, health, safety and other regulations;

- our goal to continue to be a responsible company, committed to sustainable development and conducting our activities in an environmentally and socially responsible manner, including the development and implementation of policies and practices in support of these goals
- our plan to release climate-related goals in 2022 and the anticipated nature and effect of climate-related risks;
- our ability to manage physical and transition risks related to climate change and successfully adapt our business strategy to a low carbon global economy;
- the future results of, and impact on the Pan American, of class action claims in Canada and the United States relating to alleged misrepresentations by Tahoe Resources Inc. ("Tahoe");
- the pursuit of legal and commercial avenues to collect amounts owing to us under our contracts with Doe Run Peru and Republic Metals Corporation;
- estimated future closure, reclamation and remediation costs;
- our belief that we are well positioned to take advantage of strategic opportunities as they become available;
- forecast capital and non-operating spending;
- future income tax rates;
- future sales of the metals, concentrates or other products produced by us, the availability and location of refining facilities and sales counterparts, and any plans and expectations with respect to hedging;
- our ability to maintain relationships of trust with our stakeholders and community support for our activities;
- continued access to necessary infrastructure, including, without limitation, access to power, water, lands and roads to carry on activities as planned;
- that we will be, or will continue to be, the world's premier silver producer and one of the world's leading silver mining companies;
- our intention to acquire or discover silver resources that have the potential to be developed economically and to add meaningfully to our production profile while lowering consolidated units costs of production;
- our plans and expectations for our properties and operations, including, without limitation, production estimates, capital expenditures, exploration drilling and development, forecasts regarding investment activities, and other matters discussed under the heading "Outlook for 2022" and under the headings "Capital and Operating Costs" and "Exploration, Development, and Production" with respect to each of our material properties; and
- the results of investment and development activities at our material mineral properties.

Material Risks and Assumptions:

The forward-looking information in this AIF reflects our current views with respect to future events and is based upon a number of assumptions and estimates that, while considered reasonable by us, are inherently subject to significant business, economic, competitive, political, environmental, 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 forward-looking information in this AIF and documents incorporated by reference herein, and we have made assumptions 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);
- restrictions on mining in the jurisdictions in which we operate;
- laws and regulations governing our operation, exploration and development activities, including international laws and legal norms, such as those relating to Indigenous populations and human rights;
- our ability to obtain or renew the licenses and permits necessary for the operation and expansion of our existing operations and for the development, construction and commencement of new operations, including the license and export permits necessary to operate the Escobal mine which are currently suspended or have not been renewed;
- risks relating to our operations in Canada, Mexico, Peru, Bolivia, Argentina, Guatemala and other foreign jurisdictions where we may operate;
- the impact of pandemics such as COVID-19 on our operations, and our and governments' ability to curtail or control the spread of the virus through health protocols, vaccines, and other means, and to mitigate the multitude of negative effects caused by it;
- inherent risks associated with tailings facilities and heap leach operations, including failure or leakages;
- work stoppages or other impacts of roadblocks, civil unrest, riots, terrorism and other similar events;
- relations with and claims by Indigenous populations, local communities and non-governmental organizations;
- the speculative nature of mineral exploration and development;
- diminishing quantities or grades of mineral reserves as properties are mined;

- the inability to determine, with certainty, the production of metals or the price to be received before mineral reserves or mineral resources are actually mined;
- the inability to determine, with certainty, production and cost estimates;
- inadequate or unreliable infrastructure (such as roads, bridges, power sources and water supplies);
- environmental regulations and legislation;
- our ability to maintain or obtain surface rights or other access that are necessary for continuing and future operations and planned developments, including with respect to the Morococha and La Colorada mines;
- risks and hazards associated with the business of mineral exploration, development and mining (including environmental hazards, potential unintended releases of contaminants, industrial accidents, unusual or unexpected geological or structural formations, pressures, cave-ins and flooding);
- reclamation and ongoing post-closure monitoring and maintenance requirements;
- the effects of climate change, extreme weather events, water scarcity, and seismic events, and the effectiveness of strategies to deal with these issues, including risks and strategies related to the transition to a low-carbon global economy;
- risks relating to the creditworthiness and financial condition of our suppliers, refiners and other parties;
- fluctuations in currency markets (such as the Peruvian nuevo sol ("PEN"), Mexican peso ("MXN"), Argentine peso ("ARS"), the Bolivian boliviano ("BOB"), and the Guatemalan quetzal ("GTQ") versus the USD and CAD);
- the volatility of the metals markets, and its potential to impact our ability to meet our financial obligations;
- the inability to recruit and retain qualified personnel, or maintain positive relationships with our employees;
- disputes as to the validity of mining or exploration titles or claims or rights, which constitute most of our property holdings;
- our ability to complete and successfully integrate acquisitions;
- increased competition in the mining industry for properties and equipment;
- limited supply of materials and supply chain disruptions;
- the effectiveness of our internal control over financial reporting;
- claims and legal proceedings arising in the ordinary course of business activities, including the class action claims initiated against Tahoe; and
- those factors identified under the caption "Risks Related to our Business" in this AIF and the documents incorporated by reference herein, if any.

You should not attribute undue certainty to forward-looking information. Although we have 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 described. We do not intend to update forward-looking information to reflect changes in assumptions or changes in circumstances or any other events affecting such information, other than as required by applicable law.

Please see "Cautionary Note to U.S. Investors Concerning Estimates of Mineral Reserves and Mineral Resources" on page 7 of this AIF.

Scientific and Technical Information

Christopher Emerson, FAusIMM, our VP, Business Development and Geology, and Martin Wafforn, P. Eng., our Senior VP, Technical Services and Process Optimization, have reviewed and approved the scientific and technical information in this AIF. Scientific and technical disclosure in this AIF for our material properties is based on reports prepared in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("NI 43-101") (collectively, the "Technical Reports"). The Technical Reports have been filed on SEDAR at www.sedar.com. The technical information in this AIF has been updated with more current information where applicable, such updated information having been prepared under the supervision of, or reviewed by, Christopher Emerson and Martin Wafforn. Scientific and technical information relating to current and planned exploration programs set out in this AIF are prepared and/or designed and carried out under the supervision of, or were reviewed by, Christopher Emerson.

The Technical Reports are as follows:

- a report relating to the La Colorada mine entitled "Technical Report for the La Colorada Property, Zacatecas, Mexico", dated effective December 31, 2019, by M. Wafforn, C. Emerson and A. Delgado;
- a report relating to the Dolores mine entitled "Technical Report for the Dolores Property, Chihuahua, Mexico", dated effective December 31, 2016, by M. Wafforn, C. Emerson and A. Delgado;
- a report relating to the Huaron mine entitled "Technical Report for the Huaron Property, Pasco, Peru" dated effective June 30, 2014, by M. Steinmann, M. Wafforn and A. Delgado;
- a report relating to the Shahuindo mine entitled "Technical Report on the Shahuindo Mine, Cajabamba, Peru" dated effective January 1, 2016, by C. Defilippi, C. Muerhoff, and T. Williams;
- a report relating to the Timmins West mine entitled "National Instrument 43-101 Technical Report, Updated Mineral Resource and Mineral Reserve Estimate for the Timmins West Mine Property, Bristol Township, Timmins, Ontario, Canada" dated effective June 30, 2021, by A. Mainville, E. Lachapelle, and D. Felsher;
- a report relating to the Bell Creek mine entitled "National Instrument 43-101 Technical Report, Updated Mineral Resource and Mineral Reserve Estimate For the Bell Creek Mine Property, Hoyle Township, Timmins, Ontario, Canada" dated effective June 30, 2021, by A. Mainville, E. Lachapelle, and D. Felsher; and
- a report relating to the Escobal mine entitled "Escobal Mine Guatemala: NI 43-101 Feasibility Study, Southeastern Guatemala" dated effective November 5, 2014, by M3 Engineering & Technology Corp., with authors C. Huss, T. Drielick, D. Roth, P. Tietz, M. Blattman, and J. Caldwell.

Each of Michael Steinmann, P. Geo., Martin Wafforn, P. Eng., Christopher Emerson, FAusIMM, Americo Delgado, P.Eng., Alain Mainville, P.Geo., Eric Lachapelle, P.Eng., Dave Felsher, P.Eng.,Carl Defilippi, M.Sc., Charles Muerhoff, B.Sc., Tim Williams, M.Sc., Conrad Huss, P.Eng., Thomas Drielick, P.Eng., Daniel Roth, P.Eng., Paul Tietz, C.P.G., Matthew Blattman, P.Eng., and Jack Caldwell, P.Eng. is, or was in relation to the Technical Reports, a "Qualified Person" as defined in NI 43-101. A "Qualified Person" means an engineer or geoscientist with a university degree, or equivalent accreditation, in an area of geoscience, or engineering, relating to mineral exploration or mining, with at least five years of experience in mineral exploration, mine development or operation or mineral project assessment, or any combination of these, that is relevant to his or her professional degree or area of practice, has experience relevant to the subject matter of the mineral project, and is a member in good standing of a professional association.

Mineral reserve and mineral resource estimates in this AIF relating to the La Colorada, Dolores, Huaron, Shahuindo, and Escobal mines have been prepared by, or under the supervision of, Christopher Emerson and Martin Wafforn. Mineral reserve and mineral resource estimates in this AIF relating to the Timmins West and Bell Creek mines have been prepared by, or under the supervision of, Alain Mainville and Eric Lachapelle.

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

This AIF and the documents incorporated by reference herein have been prepared and disclosed in accordance with the requirements of Canadian securities laws that differ from the requirements of United States securities laws. Unless otherwise indicated, all mineral reserve and mineral resource estimates included in this AIF and the documents incorporated by reference herein have been disclosed in accordance with NI 43-101 and the Canadian Institute of Mining, Metallurgy and Petroleum - Definition Standards adopted by the CIM Council. NI 43-101 is an instrument developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects.

Canadian public disclosure standards, including NI 43-101, differ significantly from the requirements of the U.S. Securities and Exchange Commission (the "SEC"), and information with respect to mineralization and mineral reserves and mineral resources contained or incorporated by reference herein may not be comparable to similar information disclosed by U.S. companies. In particular, and without limiting the generality of the foregoing, these documents use the terms ''Measured Resources'', ''Indicated Resources'' and ''Inferred Resources''. U.S. investors are advised that, while such terms are recognized and required by Canadian securities laws, the SEC does not recognize them. The requirements of NI 43-101 for identification of ''reserves'' are not the same as those of the SEC, and reserves reported by Pan American in compliance with NI 43-101 may not qualify as ''reserves'' under SEC standards. Under U.S. standards, mineralization may not be classified as a ''reserve'' unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve

determination is made. **U.S. investors are cautioned not to assume that any part of a ''Measured Resource'' or ''Indicated Resource'' will ever be converted into a ''reserve''.** U.S. investors should also understand that ''Inferred Resources'' have a great amount of uncertainty as to their existence and as to their economic and legal feasibility. **It cannot be assumed that all or any part of ''Inferred Resources'' exist, are economically or legally mineable or will ever be upgraded to a higher category.** Under Canadian securities laws, ''Inferred Resources'' may not form the basis of feasibility or pre-feasibility studies except in certain cases. Disclosure of ''contained ounces'' in a mineral resource is a 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 in this AIF and the documents incorporated by reference herein may not be comparable with information made public by companies that report in accordance with U.S. standards.

The SEC has adopted amendments to its disclosure rules to modernize the mineral property disclosure requirements for issuers whose securities are registered with the SEC under the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act"). These amendments became effective February 25, 2019 (the "SEC Modernization Rules") with compliance required for the first fiscal year beginning on or after January 1, 2021. Under the SEC Modernization Rules, the historical property disclosure requirements for mining registrants included in Industry Guide 7 under the U.S. Securities Act of 1933, as amended, will be rescinded and replaced with disclosure requirements in subpart 1300 of SEC Regulation S-K. Following the transition period, as a foreign private issuer that is eligible to file reports with the SEC pursuant to the multi-jurisdictional disclosure system (the "MJDS"), Pan American is not required to provide disclosure on its mineral properties under the SEC Modernization Rules and will continue to provide disclosure under NI 43-101. If Pan American ceases to be a foreign private issuer or loses its eligibility to file its annual report on Form 40-F pursuant to the MJDS, then Pan American will be subject to the SEC Modernization Rules, which differ from the requirements of NI 43-101.

As a result of the adoption of the SEC Modernization Rules, the SEC now recognizes estimates of "measured mineral resources", "indicated mineral resources" and "inferred mineral resources." In addition, the SEC has amended its definitions of "proven mineral reserves" and "probable mineral reserves" to be "substantially similar" to the corresponding standards under NI 43-101. While the SEC will now recognize "measured mineral resources", "indicated mineral resources" and "inferred mineral resources", U.S. investors should not assume that any part or all of the mineralization in these categories will ever be converted into a higher category of mineral resources or into mineral reserves. Mineralization described using these terms has a greater amount of uncertainty as to its existence and feasibility than mineralization that has been characterized as reserves. Accordingly, U.S. investors are cautioned not to assume that any measured mineral resources, indicated mineral resources, or inferred mineral resources that Pan American reports are or will be economically or legally mineable. Further, "inferred mineral resources" have a greater amount of uncertainty as to their existence and as to whether they can be mined legally or economically. Therefore, U.S. investors are also cautioned not to assume that all or any part of the "inferred mineral resources" exist. Under Canadian securities laws, estimates of "inferred mineral resources" may not form the basis of feasibility or pre-feasibility studies, except in rare cases. While the above terms are "substantially similar" to the standards under NI 43-101, there are differences in the definitions under the SEC Modernization Rules. Accordingly, there is no assurance any mineral reserves or mineral resources that Pan American may report as "proven mineral reserves", "probable mineral reserves", "measured mineral resources", "indicated mineral resources" and "inferred mineral resources" under NI 43-101 would be the same had Pan American prepared the reserve or resource estimates under the standards adopted under the SEC Modernization Rules.

CORPORATE STRUCTURE

Incorporation

Pan American is the continuing corporation of Pan American Energy Corporation, which was incorporated under the *Company Act* (British Columbia) on March 7, 1979. Pan American underwent two name changes, the last occurring on April 11, 1995, when the present name of Pan American Silver Corp. was adopted. Amendments to the constating documents of Pan American to that date had been limited to name changes and capital alterations. In May 2006, we amended our memorandum and articles in connection with Pan American's required transition under the Business Corporations Act (British Columbia), and in January 2019, we obtained shareholder approval to increase our authorized share capital from 200,000,000 to 400,000,000 common shares without par value ("Common Shares").

Pan American's head office is situated at 1440 - 625 Howe Street, Vancouver, British Columbia, Canada, V6C 2T6 and our registered and records offices are situated at 1200 Waterfront Centre, 200 Burrard Street, Vancouver, British Columbia, Canada, V7X 1T2. Our website is www.panamericansilver.com.

Capital Structure

Pan American's authorized share capital consisted of 400,000,000 Common Shares as at December 31, 2021 and there were 210,457,524 Common Shares issued and outstanding as at that date. The holders of Common Shares are entitled to: (i) one vote per Common Share at all meetings of shareholders; (ii) receive dividends as and when declared by the directors of Pan American; and (iii) receive a pro rata share of the assets of Pan American available for distribution to the shareholders in the event of the liquidation, dissolution or winding-up of Pan American. There are no pre-emptive, conversion or redemption rights attached to the Common Shares.

In connection with Pan American's acquisition of Tahoe, Pan American issued 313,887,490 contingent value rights (each, a "CVR") to Tahoe shareholders. The CVRs are not entitled to any voting or dividend rights, and the CVRs do not represent any equity or ownership interest in Pan American or any of its affiliates. More details about the Tahoe transaction and the CVRs can be found below under the heading, "Business of Pan American".

Subsidiaries

A significant portion of our business is carried on through various subsidiaries. The table below lists our significant subsidiaries and their jurisdiction of organization, and the chart following shows the structure of our organization as it relates to the countries of our mines. Not all of our operating mines are material properties for the purposes of NI 43-101. This information is provided as at December 31, 2021.

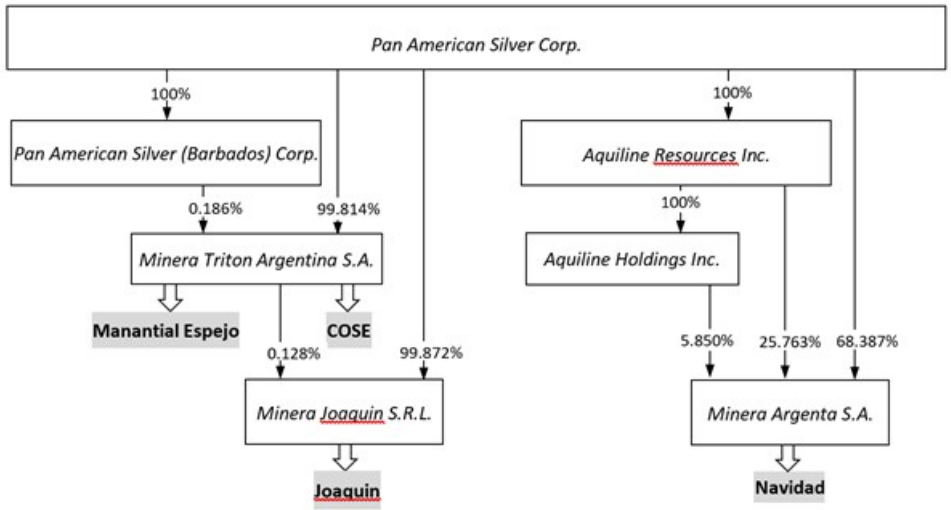
Name of Subsidiary	Jurisdiction
Tahoe Resources Ltd.	Alberta
0799714 B.C. Ltd.	British Columbia
Corner Bay Silver Inc. ("Corner Bay")	Canada
Lake Shore Gold Corp. ("Lake Shore")	Canada
Aquiline Resources Inc. ("Aquiline")	Ontario
Minefinders Corporation Ltd. ("Minefinders")	Ontario
Pan American Silver (Barbados) Corp.	Barbados
Aquiline Holdings Inc.	Barbados
PASCAP Insurance (Barbados) Ltd.	Barbados
Escobal Resources Holdings Ltd.	Barbados
Minera Triton Argentina S.A.	Argentina
Minera Argenta S.A.	Argentina
Minera Joaquín S.R.L.	Argentina
Pan American Silver (Bolivia) S.A. ("PASB")	Bolivia
Pan American Silver Guatemala, S.A. ("PASG", formerly Minera San Rafael S.A.)	Guatemala

Name of Subsidiary	Jurisdiction
PASMEX, S.A. de C.V.	Mexico
Plata Panamericana S.A. de C.V. (“Plata Panamericana”)	Mexico
Compañía Minera Dolores, S.A. de C.V. (“CMD”)	Mexico
Minera Minefinders S.A. de C.V.	Mexico
Pan American (Netherlands) B.V.	Netherlands
Pan American Silver (Peru) S.A.C.	Peru
Pan American Silver Huaron S.A. (“PAS Huaron”)	Peru
Compañía Minera Argentum S.A. (“Argentum”)	Peru
Tahoe Resources Peru S.A.C.	Peru
Shahuindo S.A.C.	Peru
La Arena S.A.	Peru

Corporate Organization by Material Mineral Property Location

The following charts depict the corporate organizational structure of our significant subsidiaries as they relate to the country of our material mineral properties as at December 31, 2021, and identify the main property asset interests (including non-material properties, as applicable) held by the respective entities[1].

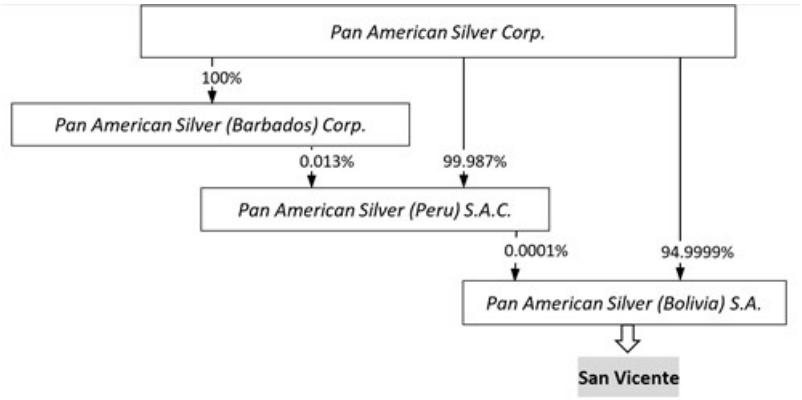
Argentina Properties



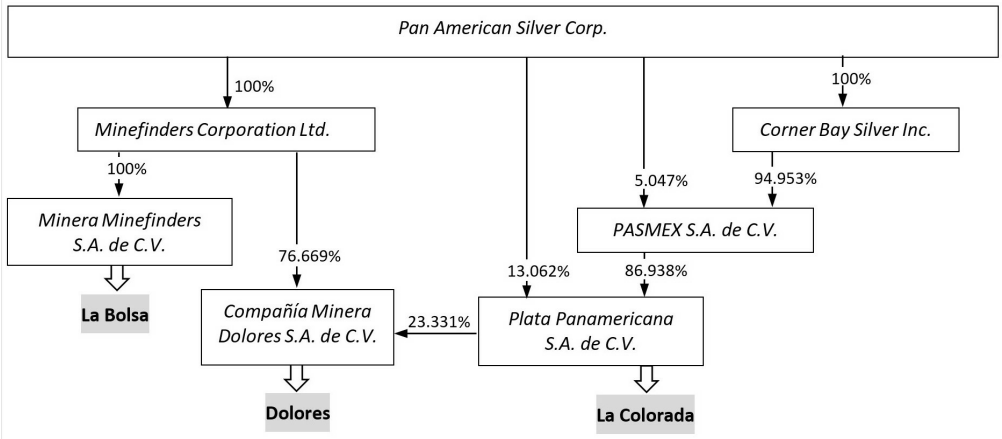
Canada Properties



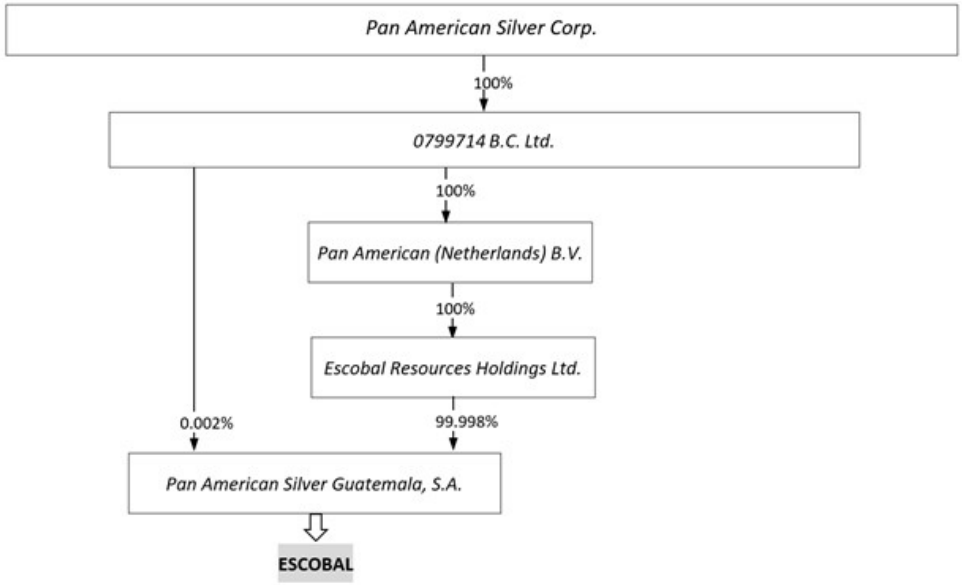
Bolivia Properties



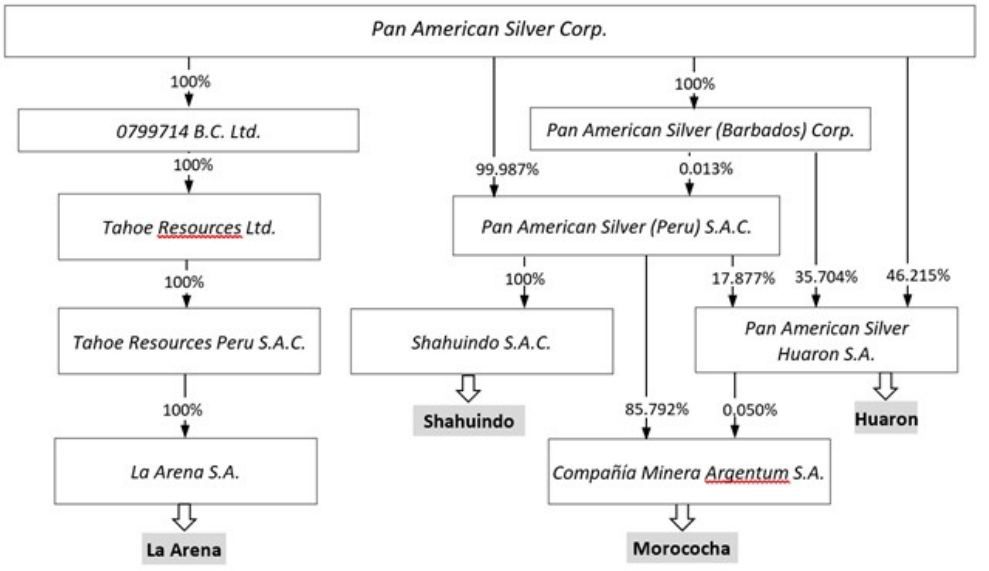
Mexico Properties



Guatemala Properties



Peru Properties



Note:

In some jurisdictions in which we operate, laws require that a company operating mineral properties must have more than one shareholder. For those jurisdictions, a nominal interest may be held by an individual or other affiliated entity and this may not be represented on the charts. Percentages shown indicate ownership of common shares and other voting interests and do not include holdings of investment shares in Peru or other non-voting shares. Percentages are rounded (in most cases, to a maximum of three decimal places). Minority interests of less than 0.001% are therefore not shown.

GENERAL DEVELOPMENT OF THE BUSINESS

Business of Pan American

We are principally engaged in the operation and development of, and exploration for, silver and gold producing properties and assets. Our principal products are silver and gold, although we also produce and sell zinc, lead, and copper. As at December 31, 2021, we operated mines and developed mining projects in Mexico, Peru, Canada, Argentina and Bolivia, and had control over non-producing silver assets in each of those jurisdictions, in addition to Guatemala and the United States.

On November 14, 2018, we entered into a definitive agreement for Pan American to acquire all of the outstanding shares of Tahoe pursuant to a plan of arrangement (the "Arrangement"). We completed the Arrangement on February 22, 2019. In aggregate, we paid $275 million in cash and issued 55,990,512 Common Shares to Tahoe shareholders under the Arrangement. In addition, Tahoe shareholders received an aggregate of 313,887,490 CVRs, each CVR having a term of ten years and being exchangeable for 0.0497 of a Common Share upon first commercial shipment of concentrate following restart of operations at the Escobal mine.

With the completion of the Tahoe transaction, we acquired four operating mines in Peru and Canada, as well as the Escobal mining property and facilities in Guatemala. The Escobal mine is currently not operating primarily as a result of the suspension of its mining license in July 2017, pending, among other things, the successful completion of an ILO 169 consultation process with Xinka Indigenous communities to be undertaken by Guatemala's Ministry of Energy and Mines. In addition to supporting the consultation process, we believe that it is important to engage with local communities and the Xinka people in an effort to build long-lasting, trusting relationships for the benefit of all stakeholders.

The following map depicts the location of our operating mines and certain of our exploration and non-operating projects as at December 31, 2021.



Corporate Strategy and Objectives

Our mission is to be the world's premier silver producer with a reputation for excellence in discovery, engineering, innovation and sustainable development. We will continue to strengthen our position as one of the world's leading primary silver mining companies by acquiring or discovering silver resources that have the potential to be developed economically and to add meaningfully to our production profile while, ideally, lowering consolidated unit costs of production.

The key objectives of our strategy are to:

Strategy Objective	Implementation
Increase production	Prior to 2020, our production had increased almost every year since 1995. In 2020, however, we experienced a significant decrease in the production of silver and a decline in gold production where, on average, our operations were placed on care and maintenance for approximately two months of the year due to governmental restrictions and health protocols related to COVID-19. The impacts of COVID-19 continued to be felt on our operations throughout 2021, although to a lesser extent than in 2020. In 2021, we produced 19.2 million ounces of silver, which was more than the 17.3 million ounces produced in 2020. Gold production also increased to 579,300 ounces, about 56,900 ounces more than the 522,400 ounces produced in 2020. Our long-term growth has been accomplished through a combination of acquisition, exploration, development and expansion efforts, with the acquisition of Tahoe in February 2019 contributing significantly to our production, particularly gold. In 2022, Pan American expects to produce between 19.0 and 20.5 million ounces of silver and between 550,000 and 605,000 thousand ounces of gold from its portfolio of assets.
Increase mineral reserves and mineral resources	Historically, we have achieved annual increases in our mineral reserves and mineral resources through exploration and acquisitions. In addition to mineral reserves and resources added through acquisitions, Pan American's history of replacing silver ounces mined at its operations reflects our ability to invest in mine and near-mine exploration programs throughout the silver price cycle and to the exploration potential of our asset portfolio. However, much like production, our ability to conduct exploration in 2020 and 2021 was hampered by COVID-19. Effective June 30, 2021, our proven and probable silver and gold mineral reserves were approximately 529 million and 4.2 million ounces, respectively, which was less than the 550 million ounces of silver and 5.2 million ounces of gold as at June 30, 2020. Similarly, our measured and indicated mineral resources (excluding mineral reserves) were approximately 818 million ounces of silver and 8.3 million ounces of gold effective the end of June 2021, which represents an increase of 13 million ouces of silver and a decrease of 1.1 million ounces of gold compared to our June 30, 2020, estimates. Please refer to the complete mineral resource and mineral reserve information under each of our material properties contained in this AIF, and to the "Reserves & Resources" page of our website at www.panamericansilver.com for additional information.
Continue to be a "Low Cost Producer"	In 2019, with the acquisition of Tahoe, we began reporting Cash Costs[1] and AISC[1] on both a Silver Segment and Gold Segment basis, as well as AISC on a consolidated silver[1] basis, in order to better reflect our assets' production profiles. For 2021, Silver Segment Cash Costs and AISC were $11.51 and $15.62 per silver ounce sold, respectively, and Gold Segment Cash Costs and AISC in 2021 were $899 and $1,214 per gold ounce sold, respectively. Consolidated silver basis AISC in 2021 was $1.44 per silver ounce sold.
Acquire additional silver properties	We actively investigate and evaluate strategic opportunities to acquire promising silver production, development and exploration properties in those jurisdictions where we are presently active, as well as elsewhere throughout the world. In February 2019, we acquired all of the issued and outstanding shares of Tahoe. Among other assets, Tahoe owned two mines in each of Peru and Canada, as well as the Escobal mine in Guatemala. Operations at the Escobal mine are currently suspended pending the completion of an ILO 169 consultation process and further engagement with local communities and Indigenous groups, as well as the renewal of certain other permits. In addition to the more recent acquisition of Tahoe, we acquired the Joaquin and COSE projects in 2017, the Dolores mine and the La Bolsa property by virtue of acquiring Minefinders in 2012, and the Navidad property pursuant to our acquisition of Aquiline in 2010. Please refer to the section of this AIF entitled "Risks Related to Our Business" starting on page 57 for more information about the risks relating to our business and our mining properties, particularly with respect to the Escobal mine, and to our website at www.panamericansilver.com for additional information.
Maintain strong financial performance from mining operations	In an effort to ensure we continue to have a strong and prosperous business, financial performance is monitored against targets for operating earnings and cash flow from operations, as well as against operating measures such as production and cash costs.

Strategy Objective	Implementation
Continue to be a responsible company, committed to sustainable development	We are committed to operating our business in accordance with the highest standards of governance and ethics, and the principles of sustainable development. We also place a high priority and particular emphasis on the health and safety of our personnel. We have operations in a number of countries and across diverse cultures that have the potential to both positively and negatively impact their host communities and nearby populations. Our goal is to minimize the negative impacts and maximize the benefits garnered to local populations, while at the same time achieving success from a business perspective. We conscientiously strive to operate within a framework of moral principles and values and to engage and interact regularly, and in an open and honest way, with governments, shareholders, employees and other stakeholders. We have adopted board-level corporate policies that formalize how we must conduct our business and interact with stakeholders and others. These policies include our: Global Code of Ethical Conduct, Global Anti-Corruption Policy, Environmental Policy, Social Sustainability Policy, Global Human Rights Policy, and Health and Safety Policy. We have also adopted a Supplier Code of Conduct setting out the expectations we have of our suppliers. We are implementing the Towards Sustainable Mining ("TSM") protocols and frameworks of the Mining Association of Canada ("MAC"), a world-class management standard designed to enhance our community engagement processes, drive industry-leading environmental practices and reinforce our commitment to the safety and health of our employees and surrounding communities. By implementing TSM at our operations within and outside of Canada, we are voluntarily exceeding MAC's membership requirements and setting a consistently high performance standard across all of our operating jurisdictions. As part of our commitment to driving global sustainable development and contributing to the United Nations Sustainable Development Goals, we became signatories of the United Nations Global Compact in 2020 and we formed a high-level and multidisciplinary group to guide the implementation and communication of our progress in the 10 principles established in the UN Global Compact. We are aware that our business is in many ways dependent on various stakeholders, and we view establishing relationships of mutual trust and respect as important. By building such relationships and conducting ourselves in a transparent manner, we can further the exchange of information, address specific concerns of stakeholders and work cooperatively and effectively towards achieving mutual goals. We report annually on our sustainability performance in accordance with the Global Reporting Initiative Standards and have begun to align our reporting with the Sustainability Accounting Standards Board ("SASB") and Taskforce on Climate-related Financial Disclosures ("TCFD") reporting frameworks. Our current TCFD disclosure for the year-ended 2020 has been incorporated into our 2020 Sustainability Report and is available on Pan American's website at www.panamericansilver.com, and future reports will similarly be posted to our website.

Note:

[1] Cash Costs and AISC are non-GAAP measures and do not have standardized meanings prescribed by IFRS. For additional information, please see "Non-GAAP Measures" on page 2 of this AIF.

Key Developments Over the Last Three Financial Years

Year	Key Developments
2021	• COVID-19 continued to have a significant impact on our mining activities. Most notably, the production rates of our operations and progress on capital projects was affected by the pandemic. The pandemic continued to cause difficulties and hardship in the communities in which we operate. • Produced 19.2 million ounces of silver and 579,300 ounces of gold. Despite ventilation issues at the La Colorada mine, it continued to lead our silver production with 5.2 million ounces of silver produced in 2021. Huaron and Manatial Espejo followed with 3.5 million and 3.2 million ounces respectively. Dolores led gold production with 160,100 ounces of gold produced, followed closely by the Shahuindo mine and the Timmins West and Bell Creek mines (combined) with 134,000 and 133,800 ounces of gold produced, respectively. • At the La Colorada mine, we successfully cleared a blockage that formed during the commissioning of a primary ventilation raise. This relieved the ventilation-driven constraints that have impacted operations since late 2019 and mine development, mining rates and throughput rates have increased as a result. Multi-year ventilation infrastructure projects are being undertaken in parallel to upgrading and expanding existing underground mine ventilation infrastructure to further improve overall mine ventilation performance and ensure the long-term reliability of this critical infrastructure. • Building on the exploration success of 2020 at the La Colorada mine, we successfully completed 72,500 metres of underground and surface drilling on the La Colorada skarn increasing the foot print of the mineralisation from 500x 600 metres to 1,400 meters x 650 metres. • As part of our commitment to ESG practices and responsibilities, in August 2021 we amended and extended our $500 million corporate credit facility into a sustainability-linked revolving credit facility (the "Facility"). The 4-year Facility features a pricing mechanism that allows for adjustments on drawn and undrawn balances based on third-party sustainability performance ratings, which aligns our ESG performance to our cost of capital. The Facility remains fully undrawn.
2020	• COVID-19 had a significant impact on the world for much of the year and took a toll on human life and well-being. This included the areas where we work, and the effects were felt by local communities and members of our workforce and their families. Most of our mines were also transitioned to care and maintenance for an average of two months during the year as a result of government restrictions and the implementation of protocols to keep our workforce safe and reduce the spread of the virus. Our Huaron and Morococha operations were suspended for approximately three additional months due to COVID. The Timmins operations in Canada remained in operation throughout 2020, operating at reduced rates to accommodate COVID-19 protocols. • Produced 17.3 million ounces of silver and 522,400 ounces of gold. Despite the production disruptions due to COVID-19, the La Colorada mine continued to lead our silver production with 5.0 million ounces of silver produced in 2020, with our Dolores mine producing approximately 3.8 million ounces. Timmins West and Bell Creek (combined) led in gold production, producing nearly 150,000 ounces of gold, followed closely by the Shahuindo mine which produced over 140,000 ounces. Our La Arena and Dolores mines each produced about 100,000 ounces of gold during 2020. • We repaid $275.0 million on the Facility and distributed approximately $46.2 million in dividends to shareholders during the year. • Continued exploration of the La Colorada skarn discovery and reported an inferred mineral resource estimate of 100.4 million tonnes with grades averaging 44 g/t silver, 0.20% copper, 1.77% lead and 4.29% zinc, and containing 141.0 million ounces of silver, 4.3 million tonnes of zinc, 1.8 million tonnes of lead, and 199 thousand tonnes of copper using a cut-off value of $60 per tonne after accounting for transportation, smelting and refining costs. • As part of our commitment to driving global sustainable development and contributing to the United Nations Sustainable Development Goals, we became signatories to the United Nations Global Compact in July 2020. We also made advances on our commitment to inclusion and diversity.
2019	• Completed the acquisition of Tahoe on February 22, 2019, whose assets included the Shahuindo and La Arena mines in Peru, the Timmins West and Bell Creek mines in Ontario, Canada, and the Escobal mine (currently suspended) in Guatemala. • Produced 25.9 million ounces of silver and 559,200 ounces of gold. The La Colorada mine continued to lead our silver production with 8.2 million ounces produced in 2019, and the Timmins West and Bell Creek (combined), Shahuindo, La Arena, and Dolores mines each produced over 100,000 ounces of gold during 2019. Reported 2019 production from the mines acquired through the Tahoe transaction does not include any production prior to February 22, 2019. • Reported proven and probable mineral reserves of 557 million ounces of silver and 5.1 million ounces of gold, as well as measured and indicated mineral resources of 797 million ounces of silver and 10.6 million ounces of gold, each as of June 30, 2019. • Reported an initial inferred mineral resource estimate for the La Colorada skarn discovery on December 11, 2019, of 72.5 million tonnes, averaging 44 grams per tonne silver, 0.17% copper, 2.02% lead and 4.40% zinc, assuming a cut-off value of $60 per tonne after accounting for transportation, smelting and refining costs. • Amended the Facility to extend the maturity to February 2023 and increase availability from $300 million to $500 million.

Outlook for 2022

In 2022, we expect to produce between 19.0 and 20.5 million ounces of silver and between 550,000 and 605,000 ounces of gold. In preparing this forecast, we have assumed, among other things, that operations will continue to be impacted by our comprehensive COVID-19 protocols to protect health and safety, which increase costs and restrict throughput levels, especially at our underground mines. The impact of COVID-19 on our operations is expected to diminish over the course of 2022, however this may improve or worsen relative to our assumptions, depending on further outbreaks, including those with respect to COVID-19 variants, how each jurisdiction manages potential outbreaks of COVID-19, and the supply and effectiveness of vaccines. The Escobal mine is assumed to remain on care and maintenance during 2022, as Guatemala's Ministry of Energy and Mines conducts the court-mandated ILO 169 consultation process. The 2022 production forecast also excludes the Morococha mine which is expected to be placed into care and maintenance in early 2022 because of the decision to decommission and dismantle the mine's processing plant in connection with the planned expansion of the Toromocho open pit copper mine by Minera Chinalco Peru ("MCP"). Please refer to the "Risks Related to Our Business" starting on page 57 for additional information regarding risks related to our Escobal and Morococha mines.

In 2022, we plan on incurring project capital expenditures of approximately $80.0 million to $95.0 million, relating mostly to the La Colorada skarn project for infill and exploration drilling, early stage engineering, completion of a technical report, and investment to advance longer-term infrastructure. The anticipated project capital expenditures also include approximately $12.0 million to $14.0 million relating to the construction of a paste fill plant for Bell Creek to improve backfill quality and availability, as well as for exploration of the Wetmore and Whitney projects in Ontario, Canada.

We expect to spend approximately $200.0 to $210.0 million on sustaining capital in 2022, largely on open pit pre-stripping, leach pads and tailings storage facilities, exploration, site infrastructure and mine equipment overhauls and replacements.

Exploration expenditures in 2022, including both amounts that will be expensed and capitalized, are expected to total approximately $42.0 million to $46.0 million, comprised of: (1) $12.0 million to $13.0 million for 95,000 metres of near-mine brownfield exploration drilling for reserve replacement, which is included in the forecast for 2022 sustaining capital expenditures; (2) $8.0 million to $9.0 million in regional greenfield exploration in Peru, Mexico and Canada and corporate overhead; and (3) $22.0 million to $24.0 million for 88,000 metres of project drilling on the La Colorada skarn discovery and the Wetmore project, which is included in the forecast for 2022 project capital expenditures.

In 2022, we also expect to spend $36.0 million to $38.5 million in care and maintenance expenditures, comprised of $21.0 million to $22.0 million related to the Escobal mine focused on safely completing the actions required by our approved environmental management plan and maintaining the condition of the mine during the government-led ILO 169 consultation process, $12.0 million to $13.0 million for the Morococha mine, as well as $3.0 million to $3.5 million for the Navidad project.

Annual corporate general and administrative expense, including share-based compensation, is forecast to be between $42.0 million and $46.0 million in 2022.

AISC is a non-GAAP measures and does not have a standardized meaning prescribed by Canadian accounting standards. For additional information, please see "Non-GAAP Measures" on page 2 of this AIF.

Please refer to the section of this AIF entitled "Risks Related to Our Business" starting on page 57 for more information about the risks relating to our business and our mining properties.

Principal Products and Operations

Our principal products and sources of sales are silver and gold doré and silver bearing zinc, lead, and copper concentrates. In 2021, the La Colorada, Dolores, Huaron, Morococha, Shahuindo, La Arena, Timmins West, Bell Creek, Manantial Espejo and San Vicente mines accounted for all of our production of concentrates and doré.

Consolidated production for the year ended December 31, 2021 was as follows:

	La Colorada	Huaron	Morococha[1]	San Vicente[2]	Manantial Espejo[3]	Dolores	Shahuindo	La Arena	Timmins[4]	Total[5]
Tonnes Milled[6]	572,500	940,300	617,500	356,300	657,100	7,774,400	13,149,300	10,855,200	1,593,100	36,515,600
Grade										
Silver - g/t	312	141	122	244	177	16	6	1		
Gold - g/t	0.25	0.16	0.24		1.75	0.95	0.47	0.36	2.70	
Zinc %	2.05	2.14	2.98	2.81						
Lead %	1.09	1.11	1.04	0.10						
Copper %		0.82	0.48	0.24						
Production										
Ounces Silver[6]	5,171,400	3,513,300	2,175,200	2,548,300	3,235,600	2,239,700	234,700	39,800	16,200	19,174,000
Ounces Gold[6]	2,700	1,100	1,100	300	33,800	160,100	134,000	112,400	133,800	579,300
Tonnes Zinc[7]	9,980	15,370	15,640	8,360						49,360
Tonnes Lead[7]	5,190	7,480	5,140	320						18,130
Tonnes Copper[7]		5,850	2,170	660						8,690

Notes:
1 Morococha data represents our 92.3% interest in mine production based on ownership of the operating entity.
2 San Vicente data represents our 95% interest in mine production based on ownership of the operating entity.
3 Manantial Espejo data includes production from the COSE and Joaquin mines.
4 Timmins refers to the Timmins West and Bell Creek mines.
5 Totals may not add due to rounding.
6 Rounded to the nearest hundred.
7 Rounded to the nearest ten.

Our approximate revenue by product category for the financial years ended December 31, 2021 and December 31, 2020 was as follows:

Product Revenue	2021	2020
	($000's)	($000's)
Silver and Gold Doré	1,177,388	1,047,601
Zinc Concentrate	119,059	65,033
Lead Concentrate	145,524	132,823
Copper Concentrate	133,025	50,081
Silver Concentrate	57,754	43,274
Total	**1,632,750**	**1,338,812**

Additional segmented information is set forth in Note 25 to Pan American's Audited Consolidated Financial Statements for the year ended December 31, 2021, and further information on individual mine performance and other metrics is presented in the 2021 MD&A under the heading "Individual Mine Performance".

Silver and Gold Doré

Our principal buyers of silver and gold doré produced from our La Colorada, Dolores, Manantial Espejo, Shahuindo, La Arena and Timmins mines, once refined, are international bullion banks and traders, except for the gold produced from La Colorada, which is sold to Maverix Metals Inc. ("Maverix") pursuant to the Maverix Gold Stream (as defined below) discussed on page 23 herein. Silver and gold doré is delivered to refineries in Canada, Mexico, Germany, Switzerland, and the United States, and subsequently transferred to the accounts of our buyers.

Zinc, Lead, Copper and Silver Concentrates

The majority of our concentrate production is sold to international concentrate traders and smelters. In 2021, lead concentrate production from the La Colorada mine was delivered to the buyers at the ports of Manzanillo, Mexico, Altimira, Mexico, and Antwerp, Belgium, and zinc concentrate production was delivered to a Torreon smelting facility in Mexico. In 2022, lead concentrate production from the La Colorada mine is expected to be delivered to the buyers at the ports of Manzanillo, Mexico, and Antwerp, Belgium, and zinc concentrate production is expected to be delivered to smelting facilities in Torreon and San Luis Potosi, Mexico. Concentrate production from the Huaron and Morococha mines is delivered to the buyers at the port of Callao, Peru, with the exception of a portion of the zinc concentrate which is delivered to the Cajamarquilla smelting facility in Peru. In 2021, silver concentrate production from the San Vicente mine was delivered to the buyers at the Altonorte smelting facility near Antofagasta, Chile, with the exception of a portion of the silver concentrate which was delivered at the port of Antofagasta, Chile, and zinc concentrate production was delivered to the buyers at the port of Arica, Chile. In 2022, silver concentrate production from the San Vicente mine is expected to be delivered to buyers at the port of Arica, Chile, and zinc concentrate production is expected to be delivered to buyers at the ports of Arica and Antofagasta, Chile. From these ports, the concentrates are shipped by the buyers to various international locations.

Please see the discussion under "Risks Relating to Our Business – Trading Activities and Credit Risk".

Employees and Contractors

At the end of 2021, we had approximately 7,100 employees and about 6,700 contractors. The majority of those employees and contractors were working at our operations in South and Central America, Mexico and Canada. Our Peruvian operations had the largest workforce with approximately 6,880 employees and contractors as of December 31, 2021, while our Mexican operations had approximately 3,960 total employees and contractors. Our Argentina and Bolivia operations had approximately 860 and 790 employees and contractors, respectively, and there were approximately 390 employees and contractors in Guatemala. In Canada, our operations had about 820 employees and contractors, and approximately 70 persons worked for Pan American's head office in Vancouver, British Columbia at year-end.

Protecting the health, safety and wellbeing of our employees, contractors, suppliers, and community partners where we operate is always a priority for us. Unfortunately, we experienced four fatal accidents at our operations in 2021. We are advancing several additional safety initiatives, including expanding training and the technical abilities of our workforce, focussing on the development of leadership skills, and raising even greater awareness and prioritization of safety. Please refer to the Sustainability page of our website at www.panamericansilver.com for further information on our health and safety programs.

Research and Development

While we conduct feasibility work and operational enhancement evaluations in order to improve production processes and exploration and mining operations, we do not, in the normal course, embark on any research and development activities in relation to products or services. Costs associated with this work would usually be expensed as incurred. As such, we did not incur any significant research and development costs during 2019, 2020 or 2021.

Working Capital and Liquidity Position

As at December 31, 2021, we had cash and cash equivalents and short-term investment balances of $335.3 million and working capital of $613.5 million. Total debt of $45.9 million was related to lease liabilities and construction loans.

On April 15, 2015, we entered into the Facility, a $300 million senior secured revolving line of credit available for general corporate purposes, including acquisitions, and originally had a four year term. In 2016, we amended the Facility to extend the term by an additional year. On February 1, 2019, the Facility was increased by $200 million to $500 million, and further extended to mature on February 1, 2023. In August 2021, the term of the Facility was again extended to mature on August 8, 2025, and a sustainability-linked pricing adjustment feature was added. The borrowing costs under the Facility are based on our leverage ratio subject to pricing adjustments based on sustainability performance ratings and scores at either (i) LIBOR plus 1.825% to 2.80% or; (ii) The Bank of Nova Scotia's Base Rate on U.S. dollar denominated commercial loans plus 0.825% to 1.80%. Undrawn amounts under the Sustainability-Linked Credit Facility are subject to a stand-by fee of 0.41% to 0.63% per annum, dependent on our leverage ratio and subject pricing adjustments based on sustainability performance ratings and scores. The outstanding balance on the Facility was zero as at December 31, 2021.

Our financial position at December 31, 2021, and the operating cash flows that are expected over the next twelve months lead management to believe that our liquid assets are sufficient to satisfy our 2022 working capital requirements, fund currently planned capital expenditures (including both sustaining and project capital) for existing operations, and to discharge liabilities as they come due. We also remain well positioned to take advantage of further strategic opportunities as they are identified and become available.

Environment, Social and Governance

Safe production, the environmentally sound development and operation of assets, and fostering positive long-term relationships with employees, shareholders, communities, and local governments are fundamental to our strategy.

We have implemented a number of policies relating to the environment and sustainability, including an Environmental Policy, a Social Sustainability Policy, a Health and Safety Policy, and an Inclusion and Diversity Policy in which we accept our corporate responsibility to practice environmental stewardship, community engagement and development, and provide a safe, healthy, respectful and open and inclusive workplace for our employees. We also joined the BlackNorth Initiative in June 2020 as part of our commitment to inclusion and diversity and to support the fight against racism. Our Global Code of Ethical Conduct, Global Anti-corruption Policy, and Supplier Code of Conduct, which are available on our website at www.panamericansilver.com, further formalize our commitment to operating ethically. Our directors, officers, executives, and senior management provide annual certifications in connection with the Global Code of Ethical Conduct and Global Anti-corruption Policy, and we provide related training across our organization. We comply with relevant industry standards, legislation and regulations in the countries where we carry on business.

Through our membership in the Mining Association of Canada, we continued to implement the Towards Sustainable Mining (“TSM”) performance system, a world class management standard designed to help mining companies responsibly drive sustainability performance and manage risk. In 2021, we achieved Level A for all TSM protocols at all operations, except for the Safety protocol at Huaron, San Vicente, La Colorada and Morococha where we had fatal accidents, and the Tailings Management protocol at Morococha, Huaron and Timmins due to management system improvements that are in progress.

During 2021, reviews of the environmental and social performance of our operations were led by our Senior Vice President of Corporate Affairs and Sustainability, our Vice President, Social Sustainability, Inclusion and Diversity, and our Vice President, Environment, and our reviews of our tailings facilities were led by our Vice President, Mineral Processing, Tailings and Dams. The reviews typically include in-person inspections of our mine sites and surrounding areas with key operations and sustainability team personnel, reviews of monitoring programs and operating procedures, and evaluation of the principal environmental and social issues related to each of these operations. In addition to periodic reviews, detailed environmental audits and sustainability audits are conducted at each operation approximately once every two years.

We conduct environmental audits to assess the mines’ facilities, operating procedures and control systems to ensure that procedures comply with regulations, are consistent with our corporate standards, and that potential risks are being managed. Due primarily to COVID-19 restrictions, an environmental audit was only undertaken at the La Colorada mine in 2020. The ability to complete the environmental audit program continued to be partially affected by pandemic-related travel restrictions in 2021, however the Timmins, Dolores, Escobal and San Vicente mine audits were completed. In intervening years between audits, the implementation of the corrective actions required by each audit is monitored and confirmed. The La Colorada, La Arena, Shahuindo, and Manantial Espejo mines’ corrective actions were found to be satisfactory in 2021.

We continuously work to ensure that all tailings storage facilities, dams, heap leach pads, and waste stockpiles are robustly designed, built, operated, maintained and closed in accordance with our internal standards, the TSM Tailings Management protocol, the Canadian Dam Association guidelines, and known global best practices in order to prevent any incidents or failures. Our tailings storage facilities and water dams are subject to routine inspections, audits, geotechnical and environmental monitoring, annual reviews, and independent reviews to continually improve systems and methods in order to minimize potential harm associated with these long-term facilities. During 2021, tailings management audits and followup reviews were also undertaken at the Morococha, Huaron, La Colorada, Timmins and Manantial Espejo mines. Dam safety reviews, or annual inspections in the case of heap leach facilities, were conducted in 2021 by the respective third-party engineers of record for all tailings storage facilities and heap leach pads. In addition, all operating tailings storage facilities have independent reviews conducted by third parties approximately every five years. In 2021, an independent review was carried out at Huaron, which was an update from its last review in 2015. All tailings storage facilities and heap leach pads are in satisfactory condition and monitoring results are normal.

Our Timmins, La Arena, Shahuindo, Huaron, Morococha, La Colorada, Dolores, and Escobal mines were all inspected by government agencies in 2021 and no material environmental issues were recorded.

In the financial year ended December 31, 2021, our environmental expenditures for concurrent reclamation were approximately $6.0 million. The closure and decommissioning liabilities for all sites other than Timmins West, Bell Creek, and Alamo Dorado were prepared using the standard reclamation cost estimator ("SRCE") methodology developed in the State of Nevada, USA, using quantity estimates and cost data obtained at each mine site. Estimates for Timmins West, Bell Creek and Alamo Dorado were developed by each site using direct estimation with site-specific closure plans, engineering estimates, local rates and contractor quotes. We currently estimate the aggregate present value of expenditures required for future closure and decommissioning costs in respect of the Huaron, Morococha, Shahuindo, La Arena, Alamo Dorado, La Colorada, Dolores, Timmins West, Bell Creek, Manantial Espejo, San Vicente, and Escobal mines, along with our development properties, to be approximately $242.9 million.

We have adopted formal policies, procedures, and industry best practices to manage our impacts and contribute to the social and economic development of local communities. Our social management framework provides a consistent methodology for measuring and tracking social impacts and sustainability performance across our mines, while offering the flexibility needed to tailor our approach to the circumstances of each operation. Our sustainability audits cover human rights, labour, security and social practices. The sustainability audit framework is based on the ISO 26000 guidance standard on social responsibility and is regularly updated to reflect international best practice and standards, such as the TSM Aboriginal and Community Outreach Protocol, the United Nations Guiding Principles on Business and Human Right, UNICEF Canada's Child Rights and Security Checklist, the Voluntary Principles on Security and Human Rights, and the International Labour Organisation's Guide for Enterprise Diagnostics. During 2020, we conducted a social audit of the Manantial Espejo operation in Argentina, and in 2021 we completed sustainability audits at the San Vicente, Huaron, Morococha, Shahuindo, La Arena, La Colorada and Dolores mines. The key observations and recommendations from the reviews are reported monthly to senior management and quarterly to Pan American's board of directors (the "Board of Directors") and its committees, and summary results are presented annually in our Sustainability Reports. In 2021, we established the Communities and Sustainable Development Committee ("CSD Committee") of the Board in order to increase our focus on ESG matters. Together, the CSD Committee and the Health, Safety, and Environment Committee oversee our ESG strategy.

In 2019, we adopted a new human rights policy that is based on the three pillars of the United Nations Guiding Principles on Business and Human Rights and the OECD Guidelines for Multinational Enterprises. This policy consolidates several of our existing objectives in the areas of environment, labour, diversity and social responsibility. It formalizes our approach to fostering a positive human rights culture throughout our organization and our work to prevent, minimize or mitigate adverse impacts from our activities on our employees, communities, and other external stakeholders. We also took additional steps to align with international human rights best practices and launched a gap assessment of our security practices against the requirements of the Voluntary Principles on Security and Human Rights and UNICEF's Child Rights and Security Checklist at two of our three operations with armed security forces: La Colorada in Mexico and Escobal in Guatemala. In 2020, we completed the final assessment at Dolores in Mexico. In 2021, we completed the implementation of the Voluntary Principles on Security and Human Rights at all of our mines except for Dolores, which is significantly advanced. The full implementation of the UNICEF Childs Rights and Security Checklist was completed for all operations by the end of 2021. In addition to this, we also implemented the World Gold Council's Conflict Free Standard at all of our sites in 2021.

We also recognize and respect the rights, cultures, heritage and interests of Indigenous peoples. We are committed to building and maintaining positive relationships with Indigenous groups through on-going engagement, and identification of mutually beneficial opportunities.

As part of our commitment to driving global sustainable development and contributing to the United Nations Sustainable Development Goals, in 2020, we became signatories to the United Nations Global Compact and established a working group to lead the implementation and develop our first Communications of Progress report, a membership requirement.

To further our sustainability performance and risk management processes, in 2020, we developed a set of ESG Performance Indicators, to measure and monitor the performance progress of the key environmental and social sustainability activities at our operations on a monthly basis. Our social performance indicators cover social risk management, grievance management and community investment. Additionally, we have developed social performance indicators focused on security and human rights standards that measure our progress on implementing the Voluntary Principles on Security and Human Rights, as well as indicators that measure the advancement of our programs focused on inclusion and diversity, bias, racism, and behavioural matters. Our environmental performance indicators cover environmental incidents, audits, water, energy and greenhouse gas emissions, and implementation of the TSM program.

We recognize that climate change is a threat to the global environment, society, our stakeholders and our business. We support the recommendations from the Financial Stability Board TCFD, and published our first TCFD-aligned report as part of our 2020 Sustainability Report. We expect to incorporate our climate-related goals into our 2021 Sustainability Report that will be released in 2022. Climate-related risks are expected to include, but are not necessarily limited to, those described in the “Risk and Uncertainties” section of the 2021 MD&A and in the “Risks Related to Our Business” section of this AIF. We will also continue to report on our emissions, targeted emission reductions, climate risks and other climate-related actions in our annual Sustainability Reports.

Other than specific environmental and social concerns discussed in more detail elsewhere in this AIF, we are not aware of any material environment or social related matter requiring significant capital or operating outlays in the immediate future. Closure and reclamation costs and actual costs may vary, perhaps materially, from estimates and investors are cautioned against attributing undue certainty to these estimates. The reclamation and closure costs estimate for each of the operating mines and development projects was updated to reflect the conditions as of December 31, 2021.

Our 2020 Sustainability Report was prepared in accordance with the Global Reporting Initiative (“GRI”) Standards: core option and GRI Mining & Metals Sector Disclosures. The report also took into consideration the SASB reporting framework, and includes detailed information on our environmental, social, socio-economic and health and safety programs and performance. Our 2020 Sustainability Report is available on our website at www.panamericansilver.com. Our 2021 Sustainability Report will be made available on our website once completed.

Please refer to our 2021 MD&A under the heading “Environmental, Social and Governance” for additional details on our ESG strategy and performance.

Operating and Development Properties

Pursuant to National Instrument 51-102 *Continuous Disclosure Obligations* (“NI 51-102”), we have identified the following properties and projects as being material as at December 31, 2021: the La Colorada mine, the Dolores mine, the Huaron mine, the Shahuindo mine, the Timmins West mine, and the Bell Creek mine. We have also identified the currently-suspended Escobal mine as a material property for 2021. We do not consider any of our other mines, development or investment properties to be material properties for the purposes of NI 51-102.

Certain statements in the following property summaries are based on and, in some cases, extracted directly from the relevant Technical Reports identified under the heading “Scientific and Technical Information” beginning on page 7.

Mineral Reserve and Mineral Resource Estimate Information

The process for estimating mineral reserves and mineral resources at our properties is described below in each property section. Pan American is exposed to many risks in conducting its business, both known and unknown, and there are numerous uncertainties inherent in estimating mineral reserves and mineral resources. Although we have no current expectation that our mineral reserve and mineral resource estimates will be materially negatively impacted by external factors such as metallurgical, safety, environmental, permitting, title, access, legal, taxation, availability of resources, and other factors disclosed in this AIF, changes in relation to such factors are not uncommon in the mining industry and there can be no assurance that these factors will not have a material impact. There are numerous uncertainties inherent in estimating mineral reserves and mineral resources. The political, economic, regulatory, judicial and social risks related to conducting business in foreign jurisdictions, and changes in metal and commodity prices, pose particular risk and uncertainty to us and could result in material impacts to our business and performance. In addition to external factors and risks, the accuracy of any mineral reserve and mineral resource estimate is, among other things, the function of the quality and quantity of available data and of engineering and geological interpretation and judgment. Results from drilling, testing, and production, as well as a material change in metal prices or a change in the planned mining method, subsequent to the date of the estimate, may justify revision of such estimates and may differ, perhaps materially, from current estimates, and investors are cautioned against attributing undue certainty to mineral reserves and mineral resources. Readers are encouraged to read the discussion under "Risks Relating to Our Business" beginning on page 57 in this AIF.

I. Operating Properties

A. Mexico

(i) La Colorada Mine

Project Description, Location, and Access

The La Colorada underground silver mine is located in Zacatecas State, Mexico, approximately 100 kilometres south of the city of Durango and 155 kilometres northwest of the city of Zacatecas. The mine is accessed primarily from the cities of Durango and Zacatecas by paved highway and all weather gravel roads.

Our wholly-owned subsidiary, Plata Panamericana, owns and operates the mine. The La Colorada property, including certain exploration concessions outside the mining area, is comprised of 56 mining claims totalling approximately 8,840 hectares. We pay an annual fee to maintain the claims in good standing, and to our knowledge, we have met all of the necessary obligations to retain the property.

We have control over or rights in respect of approximately 1,300 hectares of surface area covering the main workings. All of the La Colorada mineral reserves and mineral resources and all of the known mineralized zones, mine workings, the processing plant, effluent management and treatment systems, and tailings disposal areas are located within the mining claims controlled by us.

In 2016, as part of the transaction with Maverix, Maverix acquired a gold stream equivalent of one hundred percent (100%) of the payable gold production from the La Colorada mine, less a fixed price of USD$650 per ounce for the life of the mine (the "Maverix Gold Stream"). In 2021, the Maverix Gold Stream resulted in Maverix acquiring 2,239 ounces of gold (2020 – 3,608 ounces).

To the best of our knowledge, the La Colorada mine is not subject to any other royalties, overrides, back-in rights, payments, or other agreements and encumbrances, other than governmental taxes, fees and duties. Our Mexican operations are subject to governmental taxes, fees and duties, including: (i) a special mining duty ("SMD") of 7.5% applied to taxable earnings before interest, inflation, taxes, depreciation, and amortization; and (ii) a deductible extraordinary mining duty ("EMD") of 0.5% that is applied to the sale of gold, silver, and platinum.

In late December 2016, the Zacatecas state government also enacted a new set of ecological taxes which took effect on January 1, 2017 (the "Zacatecas Tax"). The Zacatecas Tax applied broadly across a number of industries in the State of Zacatecas that involve extraction, emissions to the air, soil or water, and deposits of residue or waste. The Zacatecas Tax primarily affects the La Colorada mine in respect of the materials placed in its tailings storage facility, with only about 5% of the tax relating to emissions. We paid approximately $4.5 million in respect of the Zacatecas Tax from January 2017 to April 2020. However, pursuant to a challenge of the Zacatecas Tax

constitutional grounds, in mid-2020, the Supreme Court of Mexico determined that the tax for the deposit or storage of waste rock was not within the jurisdiction of the State of Zacatecas and that Plata Panamericana was entitled to be reimbursed for payments previously made in respect of the La Colorada mine. In 2021, the State of Zacatecas allowed Plata Panamericana to begin applying the overpayment against other taxes and fees payable to the State, and as of December 31, 2021, Plata Panamericana had successfully applied approximately $235,000 of the original Zacatecas Tax paid.

In its 2020 decision on the Zacatecas Tax, the Court also ruled that the State of Zacatecas was still empowered to impose a tax for the prevention and control of air pollution generated by industrial establishments which are not within the federal competence, and therefore that portion of the tax on Plata Panamericana was upheld. As a result, between mid-2020 and mid-2021 (while Plata Panamericana was applying the previously-paid Zacatecas Tax payments against other taxes and fees payable), Plata Panamericana paid approximately $148,000 related to this component of the Zacatecas Tax.

In December 2020, the State of Zacatecas also modified the original tax on the disposal or storage of waste rock. Plata Panamericana does not currently believe that this tax will be applied to it since the waste rock is part of a waste management plan authorized by the SEMARNAT.

While there are no known significant factors or risks that we currently expect to be reasonably likely to affect access or title, or the right or ability to perform work on the La Colorada mine, certain community and land ownership rights have been asserted over a portion of our La Colorada surface lands. In addition to claims in the Agrarian Courts in Mexico, a process was initiated before the Secretariat of Agrarian, Territorial and Urban Development ("SEDATU") in Zacatecas to declare such lands as national property. While we are seeking to protect our rights, there could be a material adverse impact on La Colorada's future mining operations if we are unable to maintain access to those surface areas. Please refer to "Risks Related to Our Business" starting on page 57 for a general discussion of the risks relating to our operations.

History

The Dorado family operated mines at two locations on the property in 1925. From 1929 to 1955, Candelaria y Canoas S.A., a subsidiary of Fresnillo S.A., installed a flotation plant and worked the old dumps of two previous mines on the La Colorada property. From 1933 to the end of World War II, La Compañía de Industrias Peñoles also conducted mining operations on the property. From 1949 to 1993, Compañía de Minas Victoria Eugenia S.A. de C.V. ("Eugenia") operated a number of mines on the property. In 1994, Minas La Colorada S.A. de C.V. ("MLC") acquired the exploration and exploitation claims and surface rights of Eugenia. Until 1997, MLC conducted mining operations on three of the old mines on the property.

During these time periods, exploration was mainly in the form of development along the veins. Prior to our ownership, 131 diamond drill holes had been drilled. In 1997, we entered into an option agreement with MLC, during which time we conducted exploration and diamond drilling programs as part of our due diligence reviews.

We have been producing from La Colorada since 1998.

Geological Setting, Mineralization, and Deposit Types

The La Colorada mine is located in the Sierra Madre Occidental volcanic belt, at the contact between the Lower Volcanic Supergroup and the Upper Volcanic Supergroup. The oldest rocks exposed on the property are Cretaceous limestones of the Cuesta del Cura Formation and calcareous clastic rocks of the Indidura Formation. They are overlain by conglomerates of the early Tertiary Ahuichilla Formation. East to northeast striking faults form the dominant structures at the property and play a strong role in local mineralization.

Economic mineralization is found in veins, replacement mantos, and skarn. The majority of the mineral resources and mineral reserves are sourced from the NC vein series, the HW vein series, Veta 3, the Amolillo vein system, vein and manto mineralization at the Recompensa system, and the new undeveloped skarn deposit.

Most mineralized veins strike east to northeast and dip moderately to steeply to the south. Most of the mineralization of economic significance is located in quartz veins that average 1 metre to 2 metres wide, but may be significantly wider. Amolillo strikes over 1.5 km to the northeast and dips 60° to the southeast, for over 800 metres

down dip. The average vein width is 2.2 metres. The NC vein series lies around 700 m to the southeast of Amolillo. The most significant of these veins, NC2, strikes around 1.2 km to the northeast and dips 75° to the southeast, for over 1 km down dip. The average vein width is 1.9 metres. The HW series is the western continuation of the NC series, strikes east-west, and dips 50° to the south, for over 600 m down dip. The average vein width is 1.8 metres. Veta 3 runs parallel to the HW and NC series, strikes for over 900 m to the northeast, and dips 75° to the northwest, for around 400 m down dip. The average vein width is 1.7 metres.

Manto style mineralization is found near vein contacts where the primary host rock is limestone.

A significant skarn deposit was discovered in 2018 at depth and to the east of the NC2 vein. With increasing depth, mineralization styles progress from epithermal style veins, to manto style mineralization in calcareous sediments, skarn, magmatic hydrothermal breccia skarn, proximal skarn, epithermal veins overprinting porphyry, and copper-molybdenum-silver porphyry. Common minerals include galena and sphalerite, with quartz, carbonate, feldspar, pyroxene, and garnet. The deposit, as currently defined, comprises several zones of mineralization located between 600 metres to 1,900 metres below surface, over an area of approximately 1,400 metres by 650 metres.

Exploration

The mine had been working for several decades prior to any specific exploration work and most major structures became known through mine development. Prior to Pan American's ownership, 131 diamond drillholes for a total of 8,665 metres had been completed by MLC, and between September 1997 and March 1998, while the property was under option, Pan American conducted a geophysical survey comprising very low frequency radio and induced polarization.

Since Pan American acquired the La Colorada mine, staff and consulting structural geologists have carried out near mine surface and underground geological and structural mapping. Underground channel and raise sampling is conducted for grade control and mineral resource and reserve estimates as mining progresses.

Drilling

All drilling is by diamond drilling from surface and underground using industry standard drill machines and downhole survey tools. Drilling is conducted by both our employees and private drilling contractors under the supervision of the mine geology department. Near mine surface and underground diamond drilling exploration campaigns are ongoing on an annual basis for mineral resource and mineral reserve estimates.

Sampling, Analysis, and Data Verification

The drill core is cut in half with a diamond bladed saw and samples are selected with respect to geological features, at 2 metre lengths or less. Channel samples of approximately one metre in width are taken in ore development areas and stopes. The samples are maintained in secure facilities and are under the control of our employees or the independent laboratory at all times. We have no reason to believe that the validity and integrity of the samples has been compromised.

The drillhole samples are prepared by the internal La Colorada mine laboratory, which is operated by our employees, and by independent laboratories including SGS of Durango, Activation Laboratories Ltd ("Actlabs") of Zacatecas, and Bureau Veritas of Hermosillo. Both Actlabs and SGS used fire assay with gravimetric finish for gold and acid digestion with ICP finish for silver, lead, zinc, and copper. Bureau Veritas used fire assay with gravimetric finish for gold and acid digestion with ICP finish for silver, lead, zinc, and copper in their Vancouver, Canada laboratory. The La Colorada mine laboratory used fire assay with gravimetric finish for gold and silver, and acid digestion with atomic absorption ("AA") finish for lead, zinc, and copper.

The mine geology department conducts a quality assurance/quality control ("QAQC") program that is independent from the laboratory. The program includes the insertion of certified standards, blanks and duplicate samples. The results of the QAQC samples demonstrate acceptable accuracy and precision and that no significant contamination is occurring at the mine or external laboratories.

Mineral Processing and Metallurgical Testing

As part of normal plant operation procedures, metallurgical analysis and testing is undertaken as required. The majority of these analyses are to assess mill performance and metallurgical recovery. Metal recovery forecasts used in our mine plans are based on the historical performance of the plant operations and the tonnes and grade of material that is planned to be mined.

Mineral Resource and Mineral Reserve Estimates

Management estimates that mineral reserves at the La Colorada mine, effective June 30, 2021, are as follows:

La Colorada Mineral Reserves [1, 2, 3]

Reserve Category	Tonnes (Mt)	Grams of Silver per tonne	Grams of Gold per tonne	% Zinc	% Lead
Proven	3.9	350	0.25	2.09	1.17
Probable	6.2	289	0.19	2.06	1.18
TOTAL	10.0	312	0.21	2.07	1.18

Notes:

1 Estimated using a price of $18 per ounce of silver, $1,300 per ounce of gold, $2,450 per tonne of zinc and $2,000 per tonne of lead. Totals may not add due to rounding.

2 Mineral reserve estimates for La Colorada have been prepared under the supervision or were reviewed by Christopher Emerson, FAusIMM, and Martin Wafforn, P. Eng., as Qualified Persons as that term is defined in NI 43-101.

3 Lead and zinc grades shown are the average for the deposit. However, the base metals are only payable in the concentrates produced from the sulphide ores and not in the doré produced from the oxide ores.

Management estimates that mineral resources at the La Colorada mine, effective June 30, 2021, are as follows:

La Colorada Mineral Resources [1, 2, 3]

Resource Category	Tonnes (Mt)	Grams of Silver per tonne	Grams of Gold per tonne	% Copper	% Zinc	% Lead
Measured	1.3	185	0.15	0.00	1.42	0.82
Indicated	1.9	175	0.15	0.00	2.12	1.22
Inferred	8.4	190	0.15	0.00	2.48	1.29
Inferred skarn	100.4	44	0.00	0.20	4.29	1.77

Notes:

1 These mineral resources are in addition to mineral reserves. Estimated using a price of $18 per ounce of silver, $1,300 per ounce of gold, $2,450 per tonne of zinc and $2,000 per tonne of lead, except for the skarn deposit, where metal prices of $18.50 per ounce of silver, $6,500 per tonne of copper, $2,600 per tonne of zinc, and $2,200 per tonne of lead were used. At the skarn deposit, a cut-off value of $60 per tonne, which used metallurgical recoveries of 91% silver, 90% lead, 85% zinc, and 38% copper, was used to tabulate resources.

2 Mineral resource estimates for the La Colorada mine have been prepared under the supervision, or were reviewed by Christopher Emerson, FAusIMM, and Martin Wafforn, P. Eng., as Qualified Persons, as that term is defined in NI 43-101.

3 Lead and zinc grades shown are the average for the deposit. However, the base metals are only payable in the concentrates produced from the sulphide ores and not in the doré produced from the oxide ores.

Resource estimates were made for the veins using either two dimensional or three dimensional methods.

Following the two dimensional method, mineral resources are estimated using averaging of the channel and diamond drillhole samples. A long section is produced of each structure and divided into mineable panels. The volume of the panel is estimated from the average width of the vein or mineralization intersection of each drillhole or channel located within a 30 metre radius of the panel. The grade of each panel is estimated by the length weighted average of the sample grade of each intersection within a 30 metre radius of the panel.

Following the three dimensional method, three dimensional interpretations are made in each vein or mineralized structure around spatially continuous trends of drillhole and channel sample grades greater than the sub-marginal cut-off values for each vein. A similar interpretation is made of hangingwall and footwall dilution volumes expected to be mined with each structure. The wireframe interpretations are filled with blocks for the ordinary kriged estimate.

For both estimation methods, a long section is produced of each structure and divided into mineable panels. Average bulk density values are applied to each mining panel volume to estimate the tonnes of each panel. The volumes are depleted annually for mining in the previous year. Mineral resource confidence classifications are based on the proximity and density of sample information in each block, as well as the interpretation and the experience of the mine geologists. Planned dilution and loss is applied to the estimate and a value per tonne is calculated in each panel. Any panel with a value above the mineral resource cut-off is converted to mineral resources. Mineral resources that can be economically mined are converted to mineral reserves.

Mineral resources for the skarn were estimated using inverse distance grade interpolation into three dimensional blocks within mineralised envelopes defined using a mineralized cut-off grade.

The mineral resource estimate is depleted annually for mining in the previous year. Planned dilution and loss is applied to the block model and a value per tonne is applied to each block. Reserve and resource underground stope shapes were prepared on blocks above the economic cut-off. Mineral resources that can be economically mined are converted to mineral reserves.

Mineral reserve estimates are based on a number of assumptions that include metallurgical, taxation, and economic parameters. Increasing costs or increasing taxation could have a negative impact on the estimation of mineral reserves. There are currently no known factors that may have a material negative impact on the estimate of mineral reserves or mineral resources at the La Colorada mine.

Mining Operations

Underground mining currently takes place utilizing cut and fill and long hole open stoping methods. Ore is hoisted to the surface in a shaft, and when required, may also be hauled to the surface using the two mine access ramps present in both mines.

Processing and Recovery Operations

The operation produces both oxide and sulphide ore processed in two separate circuits with a total nominal plant capacity of 2,000 tpd. The oxide plant is a conventional cyanide leach process comprised of crushing, grinding, leaching, Merrill Crowe zinc precipitation, and on-site refining to produce doré. The sulphide plant has a conventional flotation process comprised of crushing, grinding, and selective lead and zinc froth flotation circuits to produce separate precious metal rich lead and zinc concentrates. In the oxide plant, metallurgical recoveries averaged 83.7% for silver and 52.8% for gold in 2021. In the sulphide plant, recoveries in 2021 averaged 91.6% for silver, 61.3% for gold, 83.4% for lead, and 85.0% for zinc.

During 2021, we processed 572.5 thousand tonnes, producing 5.2 million ounces of silver, 2.7 thousand ounces of gold, 10.0 thousand tonnes of zinc, and 5.2 thousand tonnes of lead.

All precious metal doré produced at the La Colorada mine is sent to one of two arm's length precious metals refineries for refining under fixed-term contracts. After refining, the silver is sold on the spot market to various bullion traders and banks, and the gold is sold to Maverix pursuant to the Maverix Gold Stream. All lead and zinc concentrates produced at the La Colorada mine are sold to arm's length smelters and concentrate traders under negotiated fixed-term contracts, which consider the presence of any deleterious elements. To date, we have not experienced difficulty with renewing existing or securing new contracts for the sale of the La Colorada doré or concentrates, however, there can be no certainty that we will always be able to do so or what terms will be available in the future. We regularly review the terms of smelting and refining agreements and the terms are considered to be within industry norms. Please see "Risks Related to our Business – Trading Activities and Credit Risk".

The revenues per type of concentrate and doré produced by the La Colorada mine for the past three years were as follows:

2021	Revenue[1, 2]	Quantity Sold
Silver and Gold in Doré	$18.5 million	892,231 ounces of silver 446 ounces of gold
Lead Concentrate[4]	$85.6 million	10,830 tonnes
Zinc Concentrate[4]	$26.0 million	17,135 tonnes
2020	**Revenue[1, 2]**	**Quantity Sold**
Silver and Gold in Doré	$5.1 million[3]	797,506 ounces of silver 437 ounces of gold
Lead Concentrate[4]	$101.5 million	16,358 tonnes
Zinc Concentrate[4]	$22.2 million	24,148 tonnes
2019	**Revenue[1, 2]**	**Quantity Sold**
Silver and Gold in Doré	$16.8 million	1,145,000 ounces of silver 680 ounces of gold
Lead Concentrate[4]	$121.4 million	20,986 tonnes
Zinc Concentrate[4]	$39.5 million	36,221 tonnes

Notes:
1 Consists of sales to arm's length customers.
2 Calculated as gross revenue plus export credit incentives (as applicable), less treatment and refining charges and export taxes.
3 Reduced by approximately $8.5 million in 2020 as a result of a non-cash adjustments, of which $5.3 million related to prior periods.
4 Lead concentrates contain payable silver and gold. Zinc concentrates contain payable silver.

Infrastructure, Permitting, and Compliance Activities

The mine workings, processing plant, tailings storage facilities, waste disposal areas, effluent management and treatment facilities, roads, and power and water lines have all been constructed and are located within the boundaries of the mining leases and surface rights controlled by us. To the best of our knowledge, all permits and licenses required to conduct our activities on the property have been obtained and are currently in good standing.

The La Colorada mine purchases electrical power from the Mexican national power utility and back up diesel power is also available. Water for the mining operation is supplied from the underground mine dewatering systems.

An environmental impact statement ("EIS") and risk assessment on the La Colorada property was first submitted to the Mexican environmental authorities in early March 1999 and has subsequently been maintained and updated, including a major permit modification for the La Colorada mine expansion in 2017.

The main environmental projects focus on the stability and revegetation of historic tailings facilities. There are no known environmental issues that could materially impact our ability to extract the mineral resources or mineral reserves.

Permitting activities related to the La Colorada skarn deposit commenced in 2020 and applications for twin decline ramps and a new 700m deep shaft to access the deposit were approved by the Mexican environmental authorities in 2021.

The La Colorada mine voluntarily participates in the Mexican Environmental Protection Authority's "Clean Industry" program, which involves independent verification of compliance with all environmental permits and the implementation of good practice environmental management procedures and practices. The La Colorada mine obtained its first certification in 2008 and is periodically re-certified.

A closure cost estimate for La Colorada prepared according to State of Nevada approved SRCE methodology is updated every year for unit costs and discount rates, and every other year for physical disturbance. Pan American

has estimated the present value of the final site reclamation costs for the La Colorada mine to be approximately $6.4 million effective December 31, 2021. See “Narrative Description of the Business – Environment, Community and Sustainability” for further disclosure regarding forward-looking statements related to reclamation costs.

Capital and Operating Costs

In 2021, total capital additions at La Colorada were approximately $65.5 million, with $39.5 million invested in expenditures related to the expansion activities, including exploration on the new skarn mineralization.

Capital investments for the La Colorada mine in 2022 are anticipated to total between $96.0 million to $110.0 million. In addition to sustaining capital investments of between $28.0 million and $29.0 million relating to mine deepening, underground ventilation infrastructure improvements, mine equipment replacement and refurbishments, tailing storage facility expansions and near-mine exploration, we also expect to invest between $68.0 million and $81.0 million in project capital spending relating to the skarn project for infill drilling, early stage engineering, metallurgical testing, completion of a preliminary economic assessment, and some investment to advance certain longer-term infrastructure items.

In 2021, direct operating costs at La Colorada were $74.9 million.

Exploration, Development, and Production

In 2022, we anticipate producing between 6.85 million and 7.10 million ounces of silver and between 2.8 thousand and 3.0 thousand ounces of gold from the La Colorada mine. We plan to undertake approximately 72,000 metres of exploration drilling at the La Colorada mine, including the skarn, in 2022.

(ii) Dolores Mine

Project Description, Location, and Access

The Dolores open pit and underground silver-gold mine is located in the state of Chihuahua, approximately 250 kilometres west of the city of Chihuahua. The main road access to the property is by maintained unpaved access road from Yepachic, Chihuahua. Access is also possible by light aircraft landing on a unpaved strip located about eight kilometres from the Dolores mine.

In 2012, Pan American acquired Minefinders and its wholly-owned subsidiary, CMD, that owns and operates the Dolores mine. The mine is comprised of three mineral concessions with an area of approximately 27,700 hectares. We make the required payments to maintain the concessions in good standing, and to our knowledge, we have met all of the necessary obligations to retain the property.

Many of the surface rights on the property are comprised in communal land registered with the National Agrarian Registry of Mexico (such communal land areas are referred to as “ejidos”). We have surface rights agreements with the local ejido community, Ejido Huizopa, and with several individual members of the Ejido Huizopa, dating from 2006, allowing us irrevocable access and the right to carry out exploration and mining activities for a term of 15 years with a right to extend for a further 15 years**.** These surface rights provide us with access to our mining operations, waste storage areas, heap leach pad areas, and other facilities.

All of the known mineralized zones, mineral resources and mineral reserves, mine workings, processing plant, effluent management and treatment systems, and heap leach pad areas relating to the Dolores mine are located within the boundaries of the concessions and surface rights.

An NSR royalty of 2% payable on all metal production, plus an additional NSR royalty of 1.25% on gold production, is payable to RG Mexico Inc., a subsidiary of Royal Gold Inc. These royalties are only on the portion of the deposit contained within one of the three concessions. To the best of our knowledge, the Dolores mine is not subject to any other royalties, overrides, back-in rights, payments or other agreements and encumbrances. Our Mexican operations are subject to governmental taxes, fees and duties, including the SMD and the EMD, as described in more detail under “La Colorada – Project Description, Location and Access”.

While there are no known significant factors or risks that we currently expect to be reasonably likely to affect access or title, or the right or ability to perform work on the property, including permitting and environmental liabilities, please refer to “Risks Related to Our Business” starting on page 57 for a general discussion of the risks relating to our operations.

History

Mining began in the region of the Dolores mine in the 1860s. A stamp mill began treating the Dolores ore from 1915 until early 1929, when it was destroyed by fire. Only sporadic production occurred from 1929 to 1931, after which there are no records of any historical production. Incomplete mining records from between 1922 and 1931 indicate that approximately 372,000 tonnes of ore containing over 116,000 ounces of gold and six million ounces of silver were produced from several underground mine operations, including the Dolores mine.

The property lay idle until 1993 when Minefinders began acquiring a land position in the district. Minefinders began a full exploration program in 1995 and commenced diamond drilling and reverse circulation drilling programmes in 1996. In July 1996, Minefinders granted Echo Bay Mines ("Echo Bay") an option in the property and Echo Bay commenced drilling, sampling, environmental data collection, and metallurgical testing. Minefinders bought back the option, including the technical information collected by Echo Bay, in 1997.

Following construction, Minefinders commenced mining in 2008. During the 2008 to 2011 period, Minefinders mined 25.5 million tonnes and stacked 18.3 million tonnes of ore on the leach pads, producing 210,660 ounces of gold and 6.2 million ounces of silver.

We have been producing from the Dolores mine since the acquisition of Minefinders in 2012.

Geological Setting, Mineralization, and Deposit Types

Dolores is located in the Sierra Madre Occidental volcanic belt, which comprises calc-alkaline batholiths and volcano sedimentary rocks of the Lower Volcanic Series and ignimbrites of the Upper Volcanic Series.

The San Francisco fault and its footwall host most of the mineralization at Dolores. The immediate footwall and hanging wall of the fault forms a 500 metre wide northwest-striking corridor of igneous intrusions.

Low sulphidation epithermal silver and gold mineralization is hosted in north-northwest trending hydrothermal breccias and sheeted vein zones in the order of 5 metres to 10 metres wide. Most high grade mineralization occurs along three major structures. Silver and gold mineralization identified on the surface lies over an area 4,000 metres long and up to 1,000 metres wide.

The highest grade mineralization occurs within the San Francisco Breccia, a well-defined and continuous hydrothermal breccia and stockwork zone that occurs in the immediate footwall of the San Francisco fault. The breccia trends further away from the fault towards the north until it joins a second major breccia zone known as the Alma Maria Breccia.

Hydrothermal breccias carry the highest silver and gold grades and pass outward into vein stock works. The veins are thin, rarely over 30 mm, and tend to occur as sheeted swarms. Economically mineable grades occur where the veins are sufficiently closely spaced.

Exploration

Minefinders carried out reconnaissance geological mapping, detailed mapping, and geophysical surveys including induced polarization surveys, resistivity surveys, and magnetic surveys. Minefinders also collected rock chip samples from the surface and underground, and followed up on promising targets with both reverse circulation and diamond drilling. Since we acquired the Dolores mine, we have continued with a program of near mine geological mapping and diamond drilling.

Drilling

All drilling is by diamond drilling from surface and underground using industry standard drill machines and downhole survey tools. Drilling is conducted by private drilling contractors under the supervision of the mine geology department. Near mine surface and underground diamond drilling exploration campaigns are ongoing as required for mineral resource and mineral reserve estimates.

Sampling, Analysis, and Data Verification

Reverse circulation drillholes were sampled from the length of each drill rod and diamond drillhole samples are selected according to geological features. Most drill core samples have been taken at 2 metre intervals. The samples are maintained in secure facilities and are under the control of our employees or the independent laboratory at all times. We have no reason to believe that the validity and integrity of the samples has been compromised.

Minefinders sent samples to Bondar Clegg, ALS Chemex, or Inspectorate laboratories for preparation and analysis. Silver assays were mostly prepared using a multi-acid digestion technique and AA spectrometry. Any assay overlimits were re-assayed using fire assay with gravimetric finish. Gold was analyzed using fire assay with AA finish and with gravimetric finish for any AA overlimits. Since acquiring the Dolores mine, we have sent samples to SGS Laboratories in Durango, Mexico. Samples are assayed for gold using fire assay with AA finish, and by fire assay with gravimetric finish for any AA overlimits. Silver is analysed by three acid digestion with ICP-AES finish for trace silver values, by three acid digest with AA finish for ICP-AES overlimits, and by fire assay with gravimetric finish for any AA overlimits.

The mine geology department conducts a QAQC program that is independent from the laboratory. The program includes the insertion of certified standards, blanks and duplicate samples. The results of the QAQC samples demonstrate acceptable accuracy and precision and that no significant contamination is occurring at the mine or external laboratories.

Mineral Processing and Metallurgical Testing

As part of normal mineral processing procedures, metallurgical analysis and testing is undertaken as required. The majority of these analyses are to assess leaching performance and metallurgical recovery. Metal recovery forecasts used in our mine plans are based on the recovery model, historical performance of the leaching operations and the tonnes, grade and type of material that is planned to be mined.

Mineral Resource and Mineral Reserve Estimates

Management estimates that mineral reserves for the Dolores mine, effective June 30, 2021, are as follows:

Dolores Mineral Reserves [1, 2]

Reserve Category	Tonnes (Mt)	Grams of Silver per tonne	Grams of Gold per tonne
Proven	20.8	22	0.74
Probable	6.2	28	0.78
TOTAL	26.9	24	0.75

Notes:

1 Estimated using a price of $18 per ounce of silver and $1,350 per ounce of gold. Totals may not add due to rounding.

2 Mineral reserve estimates for the Dolores mine were prepared under the supervision of, or were reviewed by, Christopher Emerson, FAusIMM, and Martin G. Wafforn, P.Eng., as Qualified Persons as that term is defined in NI 43-101.

Management estimates that mineral resources at Dolores, effective June 30, 2021, are as follows:

Dolores Mineral Resources [1, 2]			
Resource Category	**Tonnes (Mt)**	**Grams of Silver per tonne**	**Grams of Gold per tonne**
Measured	2.8	16	0.30
Indicated	0.8	22	0.62
Inferred	2.7	46	1.25

Notes:

1 These mineral resources are in addition to mineral reserves. Estimated using metal prices of $20.00 per ounce of silver and $1,600 per ounce of gold. Mineral Resources are reported within a final pit outline and above a mineral resource cut-off grade.

2 Mineral resource estimates for the Dolores mine were prepared under the supervision of, or were reviewed by, Christopher Emerson, FAusIMM, and Martin G. Wafforn, P.Eng., as Qualified Persons as that term is defined in NI 43-101.

Mineral resource estimates were prepared using kriging methods within three dimensional geological interpretations. The block model was classified for measured, indicated, and inferred confidence categories depending on the location of the block relative to the number of drillhole intersections available to estimate each block, as well as other factors affecting confidence in the estimate.

The mineral resource estimate is depleted annually for mining in the previous year. Planned dilution and loss is applied to the block model and a value per tonne is applied to each block. Reserve and resource pits and underground stope shapes were prepared on blocks above the mineral resource cut-off grade. Mineral resources that can be economically mined are converted to mineral reserves.

Mineral reserve estimates are based on a number of assumptions that include metallurgical, taxation and economic parameters. Increasing costs, lower metal prices or increasing taxation could have a negative impact on the estimated mineral reserves. There are currently no known factors that may have a material negative impact on the estimated mineral reserves or mineral resources at the Dolores mine.

Mining Operations

Mining at Dolores is by standard open pit methods using shovels, loaders, and haul trucks and by underground methods using sub level open stoping and ramp haulage to the surface.

Processing and Recovery Operations

The Dolores mine uses conventional cyanide heap leaching and Merrill-Crowe technology on the crushed ores to produce gold and silver doré. The high grade portion of the ore is processed through the pulp agglomeration treatment plant and is conveyed with the lower grade portion to the heap leach pads for leaching. The pulp agglomeration plant is comprised of crushing, grinding, particle size classification, filtration, agglomeration, and reagent facilities. The average combined plant throughput of the high grade and low grade portions has been 20,000 tpd. A combined plant throughput of over 21,000 tpd was achieved in 2021.

During 2021, we stacked 7.8 million tonnes on the leach pads and produced approximately 2.2 million ounces of silver and 160.1 thousand ounces of gold.

All production from Dolores is in the form of doré bars, which is refined at arm's length refineries prior to the sale of refined silver and gold to bullion banks and traders. Pan American currently has refining contracts in place with refineries in the USA and Mexico. We have not had any difficulty in securing contracts for the sale of Dolores doré, however, there can be no certainty that we will always be able to do so or what terms will be available at the time. Please see "Risks Related to Our Business – Trading Activities and Credit Risk".

Pan American's revenue from the doré produced by the Dolores mine was as follows:

2021	Revenue[1,2]	Quantity Sold
Silver and Gold in Doré	$342.6 million	2,309,100 ounces of silver 158,071 ounces of gold
2020	**Revenue[1,2]**	**Quantity Sold**
Silver and Gold in Doré	$250.2 million	4,063,450 ounces of silver 96,179 ounces of gold
2019	**Revenue[1,2]**	**Quantity Sold**
Silver and Gold in Doré	$248.7 million	4,924,110 ounces of silver 120,731 ounces of gold

Notes:
1 Consists of sales to arm's length customers.
2 Calculated as gross revenue plus export credit incentives (as applicable), less treatment and refining charges and export taxes.

Infrastructure, Permitting, and Compliance Activities

The mine workings, processing facilities, leach pads, waste disposal areas, effluent management and treatment facilities, roads, and power and water lines have all been constructed and are located within the boundaries of the mining leases and surface rights controlled by us. We constructed the power supply line to the mine, however, it is now owned and operated by the Mexican National power utility. To the best of our knowledge, all permits and licenses required to conduct our activities on the property have been obtained and are currently in good standing. We are required to apply for an extension of the period of our Environmental Impact permit by May 2022 and to adjust certain permit boundaries to cover mine components that are configured differently than what was contemplated in the original 2006 permit. We are in the process of applying for the mine extension and boundary adjustment, but there is no guarantee that the extension will be granted as requested and this could have an impact on mine operations.

Water for the operations is sourced from wells, pit and underground dewatering, and an onsite water storage dam, with a back-up system to supply water from the nearby Rio Tutuaca if required. Power is supplied from the Mexican national grid and backup generators are available when required.

A closure cost estimate for Dolores prepared according to State of Nevada approved SRCE methodology is updated every year. We have estimated the present value of reclamation costs for the Dolores property at December 31, 2021 to be approximately $73.0 million. See "Narrative Description of the Business – Environment, Community and Sustainability" for further disclosure regarding forward-looking statements related to reclamation costs.

Capital and Operating Costs

In 2021, total capital additions at the Dolores mine were approximately $40.6 million, primarily for capitalized pre-stripping and leach pad expansions.

Capital investments in 2022 are anticipated to total between $33.0 million to $34.0 million. The major components of these investments include open pit mine waste pre-stripping, heap leach pad expansions, and mine infrastructure and plant upgrades.

In 2021, direct operating costs at Dolores were $164.5 million.

Exploration, Development, and Production

In 2022, we anticipate producing between approximately 2.85 million and 3.15 million ounces of silver and between 157.5 thousand and 179.0 thousand ounces of gold from the Dolores mine. We plan to complete brownfield exploration in 2022, including 5,000 metres of drilling.

B. Peru

(i) Huaron Mine

Project Description, Location, and Access

Huaron is an underground silver mine located 320 kilometres northeast of Lima in the province of Pasco in Peru. The nearest town is Cerro de Pasco, and access from Lima is available by rail or paved highway.

Huaron is 100% owned and operated by PAS Huaron, a Peruvian entity which is approximately 99.94% held (99.8% including investment shares), directly or indirectly, by Pan American. The area of the PAS Huaron concessions spans approximately 29,344 hectares. The concessions owned by us give us exclusive right to explore, develop, exploit, and market all of the products from the Huaron mine. Mining concession titles have been granted by and are registered with the Institute of Geology, Mining, and Metallurgy of Peru, and we pay an annual fee to keep the licenses in good standing.

The known mineralized zones, mineral resources, mineral reserves, mine workings, processing plant, tailing storage facilities, effluent management and treatment systems, and waste rock storage facilities are located within our concessions.

To the best of our knowledge, the Huaron mine is not subject to any overrides, back-in rights, payments, or other agreements and encumbrances. Our Peruvian operations are subject to governmental taxes, fees and duties, including a mining royalty tax and a special mining tax ("SMT"). The royalty is applied on a company's operating income and is based on a sliding scale with marginal rates ranging from 1% to 12% with a minimum royalty rate of 1% of sales regardless of its profitability.

While there are no known significant factors or risks that we currently expect to be reasonably likely to affect access or title, or the right or ability to perform work on the property, including permitting and environmental liabilities, please refer to "Risks Related to Our Business" starting on page 57 for a general discussion of the risks relating to our operations.

History

The first underground mine, mill, and supporting villages were originally built in 1912 by a subsidiary of the French Penarroya Company and was sold to Mauricio Hochschild & Cia. Ltda. ("Hochschild") in 1987. In April 1998, a portion of the bed of the nearby Lake Naticocha collapsed and flooded the neighbouring Animon underground mine and then the Huaron mine through interconnected tunnels, causing its closure. The water level in the lake, which provided the source of floodwater, is currently maintained well below the level where it flooded into the old workings and we do not expect further flooding.

There is no available exploration data collected by previous operators other than diamond drilling. Channel samples were taken by the French Penarroya Company and by Hochschild, but no details on the nature and results of the samples are available, and none of the channel samples collected by previous owners are used in the estimation of mineral resources and mineral reserves.

Prior to our acquisition of the Huaron mine, approximately 22 million tonnes of silver-rich base metal sulphide ore was produced at the property and processed on site.

We have been producing from the Huaron mine since 2001.

Geological Setting, Mineralization, and Deposit Types

The Huaron mine is located within the Western Cordillera of the Andes Mountains and the regional geology is dominated by Machay Group limestones and Pocobamba continental sedimentary rocks. These groups have been deformed by the Huaron anticline, the dominant structural feature of the area. The limestones and sedimentary rocks are strongly folded and intruded by quartz monzonites and quartz monzonite dikes with associated fracturing. Following the intrusion of the dikes, the sedimentary rocks were further compressed and fractured, and the fractures were subsequently mineralized by hydrothermal fluids.

The main lithology in the area of Huaron is a sequence of continental redbeds which unconformably overlie massive marine limestones. North-south trending sub-vertical porphyritic quartz monzonite dykes crosscut the mine stratigraphy. The Huaron mine is located within an anticline with an axis striking approximately north-south and plunging gently to the north. There are two main fault systems. One system comprises north-south striking thrust faults, parallel to the axis of the anticline, and the other comprises east-west striking tensional faults.

The Huaron mine is a hydrothermal polymetallic deposit of silver, lead, zinc, and copper mineralization hosted within structures likely related to the intrusion of monzonite dikes, principally located within the Huaron anticline. Mineralization is encountered in veins parallel to the main fault systems, in replacement bodies known as “mantos” associated with the calcareous sections of the conglomerates and other favourable stratigraphic horizons, and as dissemination in the monzonitic intrusions at vein intersections.

The mineralized veins vary from a few centimetres to up to 10 metres wide, and may extend along strike for up to 1,800 metres. Vein orientations vary but generally trend east-west or north-south.

Exploration

Exploration work prior to Pan American’s ownership is unknown, but since we acquired the Huaron mine, exploration has comprised underground diamond drilling and channel sampling, which is used to estimate mineral resources and mineral reserves.

Drilling

All drilling is by diamond drilling from underground using industry standard drill machines and downhole survey tools. Drilling is conducted by private drilling contractors under the supervision of the mine geology department. Near mine underground diamond drilling exploration campaigns are ongoing on an annual basis for mineral resource and mineral reserve estimates.

Sampling, Analysis, and Data Verification

Diamond drillhole and underground channel samples vary between 0.1 metres and 1.5 metres in length. The samples are maintained in secure facilities and are under the control of our employees or the independent laboratory at all times. We have no reason to believe that the validity and integrity of the samples has been compromised.

Both the channel and the underground diamond drillhole samples are sent to the on-site laboratory, which is not certified by any standards association but is managed and operated by the international commercial laboratory firm, SGS. Assays for silver, zinc, lead, and copper are performed using acid digestion and AA finish.

The mine geology department conducts a QAQC program that is independent from the laboratory. The program includes the insertion of certified standards, blanks and duplicate samples. The results of the QAQC samples demonstrate acceptable accuracy and precision and that no significant contamination is occurring at the mine or external laboratories.

Mineral Processing and Metallurgical Testing

As part of normal plant operation procedures, metallurgical analysis and testing is undertaken as required. The majority of these analyses are to assess mill performance and metallurgical recovery. Metal recovery forecasts used in our mine plans are based on the historical performance of the plant operations and the tonnes and grade of material that is planned to be mined.

Mineral Resource and Mineral Reserve Estimates

Management estimates that mineral reserves at the Huaron mine, effective June 30, 2021, are as follows:

Huaron Mineral Reserves [1, 2]					
Reserve Category	Tonnes (Mt)	Grams of Silver per tonne	% Zinc	% Lead	% Copper
Proven	6.9	164	2.95	1.46	0.70
Probable	3.6	171	3.10	1.73	0.31
TOTAL	10.5	167	3.00	1.56	0.57

Notes:

1 Estimated using a price of $18 per ounce of silver, $2,450 per tonne of zinc, $2,000 per tonne of lead and $6,500 per tonne of copper. Totals may not add due to rounding.

2 Mineral reserve estimates for the Huaron mine were prepared under the supervision of, or were reviewed by, Christopher Emerson, FAusIMM, and Martin G. Wafforn, P.Eng., as Qualified Persons as that term is defined in NI 43-101.

Management estimates that mineral resources at the Huaron mine, effective June 30, 2021, are as follows:

Huaron Mineral Resources [1, 2]					
Resource Category	Tonnes (Mt)	Grams of Silver per tonne	% Zinc	% Lead	% Copper
Measured	1.9	162	3.11	1.63	0.21
Indicated	2.5	154	2.78	1.55	0.67
Inferred	5.8	153	2.73	1.51	0.43

Notes:

1 These mineral resources are in addition to mineral reserves. Estimated using a price of $18 per ounce of silver, $2,450 per tonne of zinc, $2,000 per tonne of lead and $6,500 per tonne of copper. Mineral resources are reported within scheduled mine shapes and above a mineral resource cut-off grade.

2 Mineral resource estimates for the Huaron mine were prepared under the supervision of, or were reviewed by, Christopher Emerson, FAusIMM, and Martin G. Wafforn, P.Eng., as Qualified Persons as that term is defined in NI 43-101.

Three dimensional interpretations are made in each vein or mineralized structure around spatially continuous trends of drillhole and channel sample grades greater than the sub-marginal cut-off values for each vein. A similar interpretation is made of hangingwall and footwall dilution volumes expected to be mined with each structure. The wireframe interpretations are filled with blocks for the ordinary kriged estimate.

A long section is produced of each structure and divided into mineable panels. Average bulk density values are applied to each mining panel volume to estimate the tonnes of each panel. The volumes are depleted annually for mining in the previous year. Mineral resource confidence classifications are based on the proximity and density of sample information in each block, as well as the interpretation and the experience of the mine geologists. Planned dilution and loss is applied to the estimate and a value per tonne is calculated in each panel. Any panel with a value above the mineral resource cut-off grade is converted to mineral resources. Mineral resources that can be economically mined are converted to mineral reserves.

Mineral reserve estimates are based on a number of assumptions that include metallurgical, taxation and economic parameters. Increasing costs or increasing taxation could have a negative impact on the estimation of mineral reserves. There are currently no known factors that may have a material negative impact on the estimate of mineral reserves or mineral resources.

Mining Operations

Mining is undertaken using primarily mechanized sub-level long hole stoping methods. Ore is brought to the surface using haul trucks, electric locomotives, or hoisted through a shaft.

Processing and Recovery Operations

The Huaron mine operates a 2,900 tpd nominal capacity mill using froth induced flotation technology to produce silver in copper, lead, and zinc concentrates. Metallurgical recoveries in 2021 averaged approximately 82.9% for silver, 22.5% for gold, 76.8% for zinc, 71.9% for lead, and 76.7% for copper.

In 2021, the mill processed approximately 0.94 million tonnes of ore producing approximately 3.5 million ounces of silver, 1.1 thousand ounces of gold, 15.4 thousand tonnes of zinc, 7.5 thousand tonnes of lead, and 5.9 thousand tonnes of copper.

The silver rich zinc, lead, and copper concentrates from the Huaron mine are sold under contracts with arm's length smelters and concentrate traders, which consider the presence of any deleterious elements. Huaron receives payment for an agreed percentage of the silver, gold, zinc, lead, or copper contained in the concentrates it sells after deduction of smelting and refining costs, based on average spot prices over defined 30-day periods that may differ from the month in which the concentrate was produced. Under these circumstances, we may, from time to time, fix the price for a portion of the payable base metal content during the month that the concentrates are produced. To date, we have been able to secure contracts for the sale of all Huaron concentrates produced, however, there can be no certainty that we will always be able to do so or what terms will be available at the time. Please see "Risks Related to Our Business – Trading Activities and Credit Risk".

The revenue per type of concentrate produced by the Huaron mine for the past three years were as follows:

2021	**Revenue[1, 2]**	**Quantity Sold (Tonnes)**
Zinc Concentrate[3]	$34.7 million	34,265
Lead Concentrate[3]	$33.2 million	15,106
Copper Concentrate[3]	$86.7 million	26,603
2020	**Revenue[1, 2]**	**Quantity Sold (Tonnes)**
Zinc Concentrate[3]	$22.0 million	24,182
Lead Concentrate[3]	$15.2 million	12,456
Copper Concentrate[3]	$34.9 million	14,537
2019		
Zinc Concentrate[3]	$32.0 million	40,059
Lead Concentrate[3]	$32.5 million	17,755
Copper Concentrate[3]	$52.7 million	25,428

Notes:
1 Consists of sales to arm's length customers.
2 Calculated as gross revenue plus export credit incentives (as applicable), less treatment and refining charges and export taxes.
3 Zinc and lead concentrates contain payable silver. Copper concentrates contain payable silver and gold.

Infrastructure, Permitting, and Compliance Activities

The Huaron mine workings, processing plant, tailings and waste disposal areas, effluent management and treatment facilities, roads, and power and water lines have all been constructed and are located within the boundaries of the mining leases and surface rights controlled by us. To the best of our knowledge, all permits and licenses required to conduct our activities on the property have been obtained and are currently in good standing.

We are authorized to source the water necessary for our operations from a nearby system of lakes. The primary source of power for the mine is the Peruvian national power grid.

The original closure plan for the Huaron mine was filed with the Peru Ministry of Energy and Mines in 2004 and updated in 2006. The closure plan is updated every five years or whenever new infrastructure or modifications are permitted.

The most significant environmental issue currently associated with the mine is relatively high sediment and metal concentrations in the waters discharged from the mine and the mine's tailings storage facilities. All waters are captured and treated in a treatment plant to achieve compliance with discharge limits.

An agreement signed in 2000 allows Volcan Compañia Minera S.A.'s ("Volcan") Chungar mine, which neighbours the Huaron mine, to discharge water from its mine dewatering into the Huaron drainage tunnel. The agreement also requires Volcan to contribute to the costs of tunnel maintenance and water treatment and discharge if its flows exceed a set limit, however provisions of the agreement that would enable accurate water quality and flow measurement between the mines were not implemented and no payments have been made. In 2014, an independent consultant engaged jointly by both companies concluded that the flow from the Chungar mine to the Huaron mine represents 19% of the total flow in the drainage tunnel and recommended the installation of a permanent monitoring system for ongoing verification. Since then, Volcan has improved its mine dewatering system and flows to the Huaron drainage tunnel fell to below the set limit, however we continue to negotiate the details of the joint monitoring and any responsibility for historic and future costs with Volcan. In 2021, we jointly engaged Golder Associates to continue the joint monitoring to support ongoing negotiations between us and Volcan.

A closure cost estimate for the Huaron mine prepared according to State of Nevada approved SRCE methodology is updated every year for unit costs and discount rates, and every other year for physical disturbance. The current present value of closure expenditures at Huaron as at December 31, 2021, is estimated at $11.9 million. See "Narrative Description of the Business – Environment, Community and Sustainability" for further disclosure regarding forward-looking statements related to reclamation costs.

Capital and Operating Costs

Capital additions at Huaron during 2021 totalled $10.9 million, primarily on equipment leases, near mine exploration, a tailings storage facility expansion, and equipment replacements and refurbishments.

We have forecast sustaining capital investments of between $16.0 million and $19.0 million for 2022, primarily related to the completion of a tailings storage facility expansion, mine equipment replacements and lease payments, mine deepening and infrastructure investments, and near-mine exploration.

In 2021, direct operating costs at the Huaron mine were $90.1 million.

Exploration, Development, and Production

In 2022, the Huaron mine is forecast to produce between approximately 3.70 and 3.95 million ounces of silver and 0.5 thousand ounces of gold. We plan to undertake 25,000 metres of exploration drilling in 2022.

(ii) Shahuindo Mine

Project Description, Location, and Access

The Shahuindo mine is an open pit gold mine located in northern Peru, 500 kilometres north-northwest of Lima. The project site can be accessed from Cajamarca via approximately 130 kilometres of paved highway, with unimproved roads accessing the site from the highway. There are daily commercial flights between Lima and Cajamarca.

The Shahuindo mine is 100% owned and operated by Pan American's wholly owned subsidiary, Shahuindo S.A.C. The area of the concession is approximately 7,339 hectares in 26 mineral titles. Shahuindo S.A.C. also controls the neighboring Vikingo and Vikingo I concession covering 1,858 hectares. We pay an annual fee to the Peruvian government to keep the concessions in good standing. To the best of our knowledge, all permits and licenses required to conduct our activities on the property have been obtained and are currently in good standing.

381 surface rights within the Shahuindo mine area cover approximately 2,559 hectares, which is sufficient to operate the mine.

To the best of our knowledge, the Shahuindo mine is not subject to any third-party overrides, back-in rights, payments, or other agreements and encumbrances. Our Peruvian operations are subject to governmental taxes, fees and duties, including the mining royalty tax and the SMT, as described under "Huaron – Project Description, Location and Access".

While there are no known significant factors or risks that we currently expect to be reasonably likely to affect access or title, or the right or ability to perform work on the property, including permitting and environmental

liabilities, other than as described above, please refer to “Risks Related to Our Business” starting on page 57 for a general discussion of the risks relating to our operations.

History

Legal rights to the mineral leases of the Shahuindo mine were in dispute between 1996 and 2009. Several Peruvian, Mexican and Canadian companies have been involved in numerous legal processes that were eventually settled in 2009 with 100% ownership being legally registered to Sulliden Shahuindo S.A.C., a wholly owned subsidiary of Sulliden Gold Ltd. (“Sulliden”). Rio Alto Gold (“Rio Alto”) acquired Sulliden in 2014, and in April 2015, Tahoe completed its acquisition of Rio Alto, thereby acquiring control of Sulliden Shahuindo S.A.C. (renamed Shahuindo S.A.C.). Pan American acquired Tahoe in February 2019.

Exploration and mining activities have taken place on the Shahuindo property since 1945. Between 1945 and 1989, Minera Algamarca S.A. (“Algamarca”) conducted mining and exploration work on the property. Between 1990 and 1998, former operators conducted geological mapping, drilling of approximately 200 holes, soil and rock geochemical sampling, and metallurgical testwork. Sulliden conducted a large surface drilling campaign of approximately 640 holes, geophysical surveys, geological mapping and trenching, soil and surface rock sampling, metallurgical testing, and economic analyses between 2002 and 2012. Rio Alto conducted a campaign of 246 holes between 2014 and 2015 and drilling was continued on the property by Tahoe. Mine construction commenced in 2014 and commercial production was achieved in 2016.

We have been producing from the Shahuindo mine since acquiring it in the Tahoe transaction in late February 2019.

Geological Setting, Mineralization, and Deposit Types

The Shahuindo mine is located in the Western Cordillera of the Andes, within a regional fold and thrust belt of predominantly sedimentary rocks. The principal zone of mineralization in the district occurs in a belt between two large amplitude, regional scale folds. Important structural elements include fold limbs and fold axial surfaces, fold-related fractures, faults and related extension fractures, breccia dikes and irregular bodies, and igneous intrusive contacts. Mineralization is hosted within the siliciclastic sandstone-dominant Farrat formation and the underlying sedimentary Carhuaz formation. These sedimentary rocks have been intruded by at least three felsic stocks which tend to be located along faults and axes of anticlinal structures.

Mineralization comprises an intermediate-sulfidation epithermal system, with high-sulfidation mineralization at depth and in the centre of hydrothermal breccias. Oxidation of mineralization extends to a depth of 150 metres below surface.

Exploration

Algamarca conducted exploration work on the Shahuindo property prior to 1990, but no records of that work are available. From 1990 to 1998, Alta Tecnología e Inversión Minera y Metalúrgica SA, Asarco LLC, and Southern Peru Copper Corp. explored the Shahuindo project area, completing mapping, geochemical sampling, and reverse circulation and diamond drilling. Val Dór Geofisica Peru conducted magnetic and induced polarization geophysical surveys between 2002 and 2012 on behalf of the prior owners of Shahuindo.

Most of the accessible underground adits located on the concession were sampled prior to 2012. Detailed soil sampling completed by Sulliden between 2003 and 2012 revealed a series of continuous, parallel gold anomalies in the central and northern areas of the concession. Base metal anomalies were found to the northwest and to the southeast of the concession.

Current exploration at the Shahuindo mine consists of surface geological mapping, geochemical sampling, and drilling.

Drilling

Drilling is by reverse circulation and diamond drilling from surface using industry standard drill machines and downhole survey tools. Drilling is conducted by private drilling contractors under the supervision of the mine geology

department. Near mine drilling exploration campaigns are ongoing on an annual basis for mineral resource and mineral reserve estimates.

Sampling, Analysis, and Data Verification

Limited information is available regarding sample preparation and analyses for the drill programs prior to Sulliden's drilling programs in 2003. That data accounts for a small proportion of the data used in the mineral resource and mineral reserve estimates, and many of the holes drilled prior to Sulliden have been twinned or offset with new drillholes.

From 2003 to 2012, Sulliden sampled diamond drillholes after being cut in half, at typically 1.5 metre intervals or according to geological contacts. Reverse circulation drillholes were sampled according to the length of the drill rod. Sulliden sent their samples to ALS in Lima for preparation and analysis using fire assay with AA finish. A QAQC program supervised by the geology department included the submission of certified standards, duplicates, and blanks to the laboratory.

From 2014 to present, the samples have been analyzed by CERTIMIN in Lima using fire assay with AA finish.

The mine geology department conducts a QAQC program that is independent from the laboratory. The program includes the insertion of certified standards, blanks and duplicate samples. The results of the QAQC samples demonstrate acceptable accuracy and precision and that no significant contamination is occurring at the mine or external laboratories.

The samples are maintained in secure facilities and are under the control of our employees or the independent laboratory at all times. We have no reason to believe that the validity and integrity of the samples has been compromised.

Mineral Processing and Metallurgical Testing

As part of normal plant operations and processing procedures, metallurgical analysis and testing is undertaken as required. The majority of these analyses are to assess leaching performance and metallurgical recovery. Metal recovery forecasts used in our mine plans are based on the recovery model, historical performance of the leaching operations and the tonnes, grade and type of material that is planned to be mined.

Mineral Resource and Mineral Reserve Estimates

Management estimates that mineral reserves at the Shahuindo mine, effective June 30, 2021, are as follows:

Shahuindo Mineral Reserves [1, 2]

Reserve Category	Tonnes (Mt)	Grams of Silver per tonne	Grams of Gold per tonne
Proven	54.6	8	0.54
Probable	49.8	6	0.41
TOTAL	104.4	7	0.48

Notes:

1 Estimated using a price of $18 per ounce of silver and $1,350 per ounce of gold. Totals may not add due to rounding.

2 Mineral reserve estimates for the Shahuindo mine were prepared under the supervision of, or were reviewed by, Christopher Emerson, FAusIMM, and Martin G. Wafforn, P.Eng., as Qualified Persons as that term is defined in NI 43-101.

Management estimates that mineral resources at the Shahuindo mine, effective June 30, 2021, are as follows:

Shahuindo Mineral Resources [1, 2]			
Resource Category	**Tonnes (Mt)**	**Grams of Silver per tonne**	**Grams of Gold per tonne [3]**
Measured	19.3	5	0.29
Indicated	24.2	4	0.28
Inferred	17.7	8	0.47

Notes:

1 These mineral resources are in addition to mineral reserves. Estimated using a price of $20.00 per ounce of silver and $1,600 per ounce of gold except for the Shahuindo Sulphide material which was estimated using a price of $15 per ounce of silver and $1,400 per ounce of gold. Mineral resources are reported within a final pit outline and above a mineral resource cut-off grade.

2 Mineral resource estimates for the Shahuindo mine were prepared under the supervision of, or were reviewed by, Christopher Emerson, FAusIMM, and Martin G. Wafforn, P.Eng., as Qualified Persons as that term is defined in NI 43-101.

3 Inferred resources include both oxide and sulphide.

Mineral resource estimates for the Shahuindo mine were prepared using an inverse distance interpolation method within three dimensional geological interpretations. The block model was classified into measured, indicated, and inferred confidence categories depending on the location of the block relative to the number of drillhole intersections available to estimate each block, as well as other factors affecting confidence in the estimate.

The mineral resource estimate was then depleted for previous mining and planned dilution and ore loss was applied. Reserve and resource pits were prepared on blocks above the economic cut-off. Mineral resources that can be economically mined are converted to mineral reserves.

Mineral reserve estimates are based on a number of assumptions that include metallurgical, taxation, and economic parameters. Increasing costs or increasing taxation could have a negative impact on the estimation of mineral reserves. There are currently no known factors that may have a material negative impact on the estimate of mineral reserves or mineral resources at Shahuindo.

Mining Operations

Mining at the Shahuindo mine is by standard open pit methods using shovels, loaders, and dump trucks.

Processing and Recovery Operations

The Shahuindo mine uses conventional cyanide heap leaching and a carbon-in-column adsorption-desorption-regeneration ("ADR") process to produce a precipitate that is smelted to gold and silver doré. Average throughput is 36,000 tpd. A 36,000 tpd crushing and agglomeration plant is also available but is currently not in use.

In 2021, a total of 13.1 million tonnes of ore were stacked on the pads. Metal production in 2021 was approximately 134.0 thousand ounces of gold and 0.2 million ounces of silver.

All production from the Shahuindo mine is in the form of doré bars, which is refined at arm's length refineries prior to the sale of refined silver and gold to bullion banks and traders. Pan American currently has refining contracts in place with refineries in the United States and Switzerland. We have not had any difficulty in securing contracts for the sale of Shahuindo doré, however, there can be no certainty that we will always be able to do so or what terms will be available at the time. Please see "Risks Related to Our Business – Trading Activities and Credit Risk".

The revenues per type of doré produced at the Shahuindo mine since our acquisition in February 2019 are as follows:

2021	**Revenue[2, 3]**	**Quantity Sold**
Silver and Gold in Doré	$255.8 million	224,876 ounces of silver 139,456 ounces of gold
2020	**Revenue[2, 3]**	**Quantity Sold**
Silver and Gold in Doré	$270.0 million	295,764 ounces of silver 150,775 ounces of gold
2019[1]		
Silver and Gold in Doré	$189.4 million	83,323 ounces of silver 133,298 ounces of gold

Notes:
1 Consists of production after February 22, 2019.
2 Consists of sales to arm's length customers.
3 Calculated as gross revenue plus export credit incentives (as applicable), less treatment and refining charges and export taxes.

Infrastructure, Permitting, and Compliance Activities

The Shahuindo mine's open pit, leach pads, waste rock dumps, ADR plant, ancillary facilities, roads, and power and water lines have all been constructed and are located within the boundaries of the mining concessions and surface lands owned by us. To the best of our knowledge, all permits and licenses required to conduct our activities on the property have been obtained and are currently in good standing.

The Shahuindo mine operates under an environmental impact assessment approved in 2013 and has been modified to accommodate mine expansion.

The primary source of power for the mine is the Peruvian national power grid. Water for the operation is obtained from water wells, stormwater collection ponds, and pit dewatering.

A closure cost estimate for the Shahuindo mine prepared according to State of Nevada approved SRCE methodology is updated every year. We have estimated the present value of reclamation costs for the Shahuindo property to be approximately $47.0 million at December 31, 2021. See "Narrative Description of the Business – Environment, Community and Sustainability" for further disclosure regarding forward-looking statements related to reclamation costs.

Capital and Operating Costs

In 2021, capital additions at the Shahuindo mine totalled $29.4 million, including $28.8 million of sustaining capital, consisting primarily of leach pad expansions, site infrastructure improvements, near-mine exploration, and payments for leased mining equipment and infrastructure.

The expected sustaining capital budget for 2022 at Shahuindo totals between $37.0 million and $38.0 million, the major components of which include leach pad expansions, site infrastructure improvements, near-mine exploration, payments for leased mining equipment, and repayments on construction loans related to leach pad and other infrastructure.

In 2021, direct operating costs at the Shahuindo mine were $114.4 million.

Exploration, Development, and Production

In 2022, we anticipate producing between 0.21 and 0.26 million ounces of silver and between 136.0 thousand and 150.8 thousand ounces of gold from the Shahuindo mine. We plan to undertake approximately 12,000 metres of exploration drilling at Shahuindo in 2022.

C. Canada

(i) Timmins West Mine

Project Description, Location, and Access

The Timmins West mine is an underground gold mine located approximately 19 kilometres southwest of the city of Timmins, Ontario. All season road access to the property is provided by provincial Highways 101 and 144.

The Timmins West mine property encompasses a total area of approximately 1,548 hectares, including the Timmins Deposit, Thunder Creek, and 144 Gap properties. Through our wholly-owned subsidiary, Lake Shore, we own a 100% interest in most of the Timmins West mine property, subject to underlying royalties.

Surrounding the Timmins West mine property is an additional 12,462 hectares of combined crown patents, 21-year term leases, and cell or boundary cell claims containing mining rights and/or surface rights. These properties are subject to various underlying royalties, most ranging from 1.5% to 3% NSRs, many with buy-back options at Lake Shore's discretion. These properties are 100% owned by Lake Shore, the exception to this is a 55% interest in seventy unpatented mining cell claims. Annual fees and assessment credits are filed on the claims to maintain them in good standing. To the best of our knowledge, all permits and licenses required to conduct our activities on the property have been obtained and are currently in good standing.

In February of 2012 Lake Shore and Franco-Nevada entered into a royalty agreement relating to production from the Timmins West mine. Pursuant to the terms of the royalty agreement, Franco-Nevada paid $35 million for a 2.25% NSR royalty on the sale of minerals from the Timmins West mine. The terms of the royalty agreement provide for, among other things, a right of first refusal in respect of any further royalties granted on the Timmins West mine, as well as a preferential processing right with respect to ore from the Timmins West mine being processed at the Bell Creek mill. The preferential processing right ceases to apply once $35 million in royalty payments are made under the royalty agreement. As at the end of 2021, approximately $30.6 million had been paid to Franco-Nevada pursuant to the terms of the royalty. As of the date of this AIF, the preferential processing right has not required any payment to be made with respect to any replacement material. In addition, Sandstorm Gold Ltd. holds a 1% NSR royalty over certain additional claims relating to the Thunder Creek and 144 Gap deposits.

The Timmins West mine is also subject to government taxes, fees and duties including a 10% Ontario Mining Tax, which is applied to profits from the extraction of mineral substances from mines within the province.

While there are no known significant factors or risks that we currently expect to be reasonably likely to affect access or title, or the right or ability to perform work on the property, including permitting and environmental liabilities, other than as described above, please refer to "Risks Related to Our Business" starting on page 57 for a general discussion of the risks relating to our operations.

History

Gold was discovered in 1911 on the property above what is currently the Timmins West mine, and two shallow shafts were sunk between 1911 and 1914. Shortly after, fire storms swept through large parts of the area and the surface plants at the local mines were destroyed. Orpit Mines Limited completed diamond drilling between 1938 and 1944, and Rusk Porcupine Mines excavated several pits and trenches.

Lake Shore began shaft sinking and mine development in 2008 and commercial production began in January of 2011 at the Timmins Deposit and in January of 2012 at the Thunder Creek Deposit. Subsequently, the Timmins and Thunder Creek Deposits were combined into a single operation called the Timmins West mine. The 144 Gap deposit was discovered later and currently accounts for the majority of the mine production and mineral reserve. Tahoe acquired the mine in 2016 with its acquisition of Lake Shore.

We have been producing from Timmins West since late February 2019, following our acquisition of Tahoe.

Geological Setting, Mineralization, and Deposit Types

Following the discovery of gold at Timmins West area, exploration conducted by a variety of previous operators included mapping, shaft sinking, pitting, trenching, diamond drilling, geophysics, metallurgical testwork,

and resource estimates. Following Lake Shore's acquisition of the property in 2003, exploration on the Timmins, Thunder Creek, and 144 Gap deposits has consisted primarily of diamond drilling, as well as mapping, surface sampling, and soil geochemical surveys.

Exploration

Exploration on the Timmins, Thunder Creek, and 144 Gap deposits by Lake Shore has consisted primarily of diamond drilling. Other exploration activities include basic geological and structural mapping, prospecting, outcrop stripping, lithogeochemical sampling, and mobile metal ion soil geochemical surveys. Geophysical surveys, including airborne magnetics and surface and downhole induced polarization surveys, were also completed, along with various research projects to help solidify the current level of geological understanding.

Drilling

Exploration drilling in the Timmins West mine area has taken place since 1938, but much of the historical drilling information is not possible to verify. None of the drill data collected prior to 1984 has been considered in the mineral resource and mineral reserve estimates.

Since 2003, all drilling has been by diamond drilling from surface and underground using industry standard drill machines and downhole survey tools. Drilling is conducted by private drilling contractors under the supervision of the geology department. Near mine diamond drilling exploration campaigns are ongoing on an annual basis for mineral resource and mineral reserve estimates.

Sampling, Analysis, and Data Verification

Surface and some underground exploration drill core is sampled following cutting with a diamond saw, while most of the underground drillholes are whole core sampled. The samples are maintained in secure facilities and are under the control of our employees or the independent laboratory at all times. We have no reason to believe that the validity and integrity of the samples has been compromised.

All samples are analyzed for gold at various independent commercial laboratories using fire assay with either AA or gravimetric finish.

A blind QAQC program supervised by the geology department includes the submission of certified standards, duplicates, and blanks to the laboratory. The results of the QAQC programs indicate that the sample assays are reliable for the estimation of mineral resources and mineral reserves.

Mineral Processing and Metallurgical Testing

All ore produced from the Timmins West mine is processed at our Bell Creek mill. As part of normal plant operation procedures, metallurgical analysis and testing is undertaken. The majority of these analyses are to assess mill performance and metallurgical recovery. Metal recovery forecasts used in our mine plans are based on the historical performance of the plant operations and the tonnes and grade of material that is planned to be mined.

Mineral Resource and Mineral Reserve Estimates

Management estimates that mineral reserves at Timmins West, effective June 30, 2021, are as follows:

Timmins West Mineral Reserves [1, 2]

Reserve Category	Tonnes (Mt)	Grams of Gold per tonne
Proven	1.5	3.0
Probable	4.2	2.9
TOTAL	5.7	3.0

Notes:
1 Estimated using prices of $1,450 per ounce of gold. Totals may not add due to rounding.
2 Mineral reserve estimates for the Timmins West mine were prepared under the supervision of, or were reviewed by Alain Mainville, P.Geo, and Eric Lachapelle, P.Eng., as Qualified Persons as that term is defined in NI 43-101.

Management estimates that mineral resources at Timmins West, effective June 30, 2021, are as follows:

Timmins West Mineral Resources [1, 2]		
Resource Category	**Tonnes (Mt)**	**Grams of Gold per tonne**
Measured	0.3	3.7
Indicated	1.0	3.3
Inferred	0.2	4.4

Notes:
1 These mineral resources are in addition to mineral reserves. Estimated using prices of $1,450 per ounce of gold. Mineral resources are modelled to a minimum mining width and reported above economic cut-off grade.
2 Mineral resource estimates for the Timmins West mine were prepared under the supervision of, or were reviewed by Alain Mainville, P.Geo, and Eric Lachapelle, P.Eng., as Qualified Persons as that term is defined in NI 43-101.

Mineral resource estimates were prepared using inverse distance squared interpolation within three dimensional geological interpretations based on a nominal cutoff grade and a minimum mining width. The block model was classified into measured, indicated, and inferred confidence categories depending on the location of the block relative to the number of drillhole intersections available to estimate each block, as well as other factors affecting confidence in the estimate.

The mineral resource estimate was then depleted for previous mining and any inaccessible areas removed before reporting above an economic cut-off grade. Mineral resources that can be economically mined are converted to mineral reserves.

Mineral reserve estimates are based on a number of assumptions that include metallurgical, taxation, and economic parameters. Increasing costs or changes in taxation could have a negative impact on the estimation of mineral reserves. There are currently no known factors that may have a material negative impact on the estimate of mineral reserves or mineral resources at the Timmins West mine.

Mining Operations

The underground mining method utilized at the Thunder Creek, Timmins, and 144 Gap deposits at the Timmins West mine is by long hole stoping. Ore is transported to the surface by ramp and shaft.

Processing and Recovery Operations

All ore produced from the Timmins West mine is hauled via surface highway trucks to the Bell Creek mill for processing. Processing, metal production, and revenue are reported for the combined Timmins West and Bell Creek ore. Please see “Bell Creek – Processing and Recovery Operations”.

All production from the Timmins West mine is in the form of doré, which is refined at arm’s length refineries prior to the sale of refined silver and gold to bullion banks and traders. We have not had any difficulty in securing contracts for the sale of this doré, however, there can be no certainty that we will always be able to do so or what terms will be available at the time. Please see “Risks Related to our Business – Trading Activities and Credit Risk”.

Infrastructure, Permitting, and Compliance Activities

The mine workings, effluent management and treatment facilities, roads, and power and water lines have all been constructed and are located within the boundaries of the mining leases and surface rights controlled by us. To the best of our knowledge, all permits and licenses required to conduct our activities on the property have been obtained and are currently in good standing.

Power is sourced from the provincial power grid and water is sourced from surface and underground mine dewatering.

Consultation is being undertaken with regulatory agencies, the general public, the Métis Nation of Ontario, Wabun Tribal Council and the Indigenous communities of Flying Post First Nation and Mattagami First Nation, who are represented by Wabun Tribal Council. Consultation provides an opportunity to identify and address the impacts of our activities on external stakeholders, and to expedite the authorization process. The consultations have been held in order to comply with federal and the provincial requirements, including Ontario Regulation 240/00 and the Environmental Bill of Rights.

Lake Shore, the Mattagami First Nation, and the Flying Post First Nation, entered into an Impact and Benefits Agreement (“IBA”) in February 2011. The IBA outlines how the company and the Indigenous communities will work together in the following areas: education and training of Indigenous community members, employment, business

and contracting opportunities, financial considerations, and environmental matters. The IBA was subsequently amended in early 2019.

A closure cost estimate for Timmins West was prepared based on a government-approved closure plan, engineering estimates, local rates, and contractor quotes. The estimate is updated every year. Pan American has estimated the present value of reclamation costs for the Timmins West mine to be approximately $2.9 million effective December 31, 2021. See “Narrative Description of the Business – Environment, Community and Sustainability” for further disclosure regarding forward-looking statements related to reclamation costs.

Capital and Operating Costs

Capital and operating costs are reported for the combined Timmins West and Bell Creek mines. Please see “Bell Creek – Capital and Operating Costs”.

Exploration, Development, and Production

Exploration, development and production are reported for the combined Timmins West and Bell Creek mines. Please see “Bell Creek – Exploration, Development, and Production”.

(ii) Bell Creek Mine

Project Description, Location, and Access

The Bell Creek mine is an underground gold mine located approximately 14 kilometres northeast of Timmins, Ontario. Access to the property is via an all-weather asphalt and gravel road north of Ontario Provincial Highway 101.

The Bell Creek mine is 100% owned by our wholly-owned subsidiary, Lake Shore. The Bell Creek mine property is comprised of 2 crown leases, one privately leased patent, and 28 patents for a combined area of approximately 851 ha of mining and surface rights. These properties require annual land tenant taxes, mining land taxes, and municipal tax payments and remain in good standings as of this date. The private 20-year leased patent relates to an agreement signed in 2005 with an option to renew for an additional term, and subject to a 2% NSR royalty. To the best of our knowledge, all permits and licenses required to conduct our activities on the property have been obtained and are currently in good standing.

Surrounding the Bell Creek mine property is an additional 2646 ha of combined crown patents, 21-year term leases, and cell or boundary cell claims containing mining rights and/or surface rights. These properties are 100% owned by Lake Shore and are subject to various underlying royalties, most ranging from 1% to 3% NSRs, many with a buy-back options at Lake Shore’s discretion. Annual fees and assessment credits are filed on the claims to maintain

them in good standing. To the best of our knowledge, all permits and licenses required to conduct our activities on the property have been obtained and are currently in good standing.

In December 2007, Lake Shore acquired the Bell Creek mine from Goldcorp Inc. ("Goldcorp"), subject to a 2% NSR royalty payable to the Porcupine Joint Venture comprised of Goldcorp and Kinross Gold Corporation ("Kinross"). Kinross subsequently assigned its rights under the agreement to Goldcorp, and in July 2016, Tahoe acquired the royalty from Goldcorp. Various underlying royalty agreements affect some of the Bell Creek claims including two agreements with net profit interests that can be purchased outright.

Like the Timmins West mine, the Bell Creek mine is also subject to governmental taxes, fees and duties, including the 10% Ontario Mining Tax.

While there are no known significant factors or risks that we currently expect to be reasonably likely to affect access or title, or the right or ability to perform work on the property, including permitting and environmental liabilities, other than as described above, please refer to "Risks Related to Our Business" starting on page 57 for a general discussion of the risks relating to our operations.

History

Gold mineralization was first discovered on the Bell Creek property following trenching, drilling, and geophysical surveys between 1980 and 1984. The mine was built and operated by Canamax Resources Inc. between 1987 and 1990. Falconbridge Gold Mines Ltd. operated the mine between 1991 and 1992, followed by Kinross in 1993 and 1994 when mining operations ceased. The mine was kept on care and maintenance until 2001, when a decision was made to allow the underground workings to flood.

In 2002, the Porcupine Joint Venture, a joint venture between Placer Dome Canada Ltd. ("Placer") and Kinross, was formed and in 2005 the property was reactivated. Goldcorp acquired Placer's interest later that year and became the operator of the Porcupine Joint Venture. Lake Shore acquired the Bell Creek mine in December 2007.

Lake Shore declared commercial production in January 2012. In April 2016, Tahoe acquired the Bell Creek mine as part of its acquisition of Lake Shore, and Tahoe was subsequently acquired by Pan American in February 2019. We have been producing from the Bell Creek mine since our acquisition of Tahoe.

Geological Setting, Mineralization, and Deposit Types

The Bell Creek deposit is located in the Southern Abitibi Greenstone Belt, a complex of deformed, usually greenschist facies, volcanic dominated oceanic assemblages. Rocks in the Timmins region belong to volcanic and sedimentary assemblages within the Western Abitibi Subprovince of the Superior Province.

The Bell Creek property is underlain by carbonate altered, greenschist facies metavolcanics and metasedimentary rock units belonging to the Tisdale and Porcupine assemblages. The stratigraphy generally strikes east-west to west-northwest, and is steeply dipping and highly deformed.

Mesothermal shear hosted gold mineralization in the Bell Creek mine area occurs along selvages of quartz veins and wall rocks, in stylolitic fractures in quartz veins, in fine grained pyrite, and in association with amorphous carbon. High grade gold mineralization occurs within quartz veins contained in alteration zones.

Exploration

The nature of any surface exploration programs completed by owners of the Bell Creek mine property prior to Lake Shore is unknown, with the exception of diamond drilling and magnetometer surveys. All exploration conducted by Lake Shore and Tahoe on the property was comprised of surface and underground drilling. Lake Shore completed other exploration in the Bell Creek mine area using other methods, including airborne geophysical surveys in 2019.

Drilling

All drilling is by diamond drilling from surface and underground using industry standard drill machines and

downhole survey tools. Drilling is conducted by private drilling contractors under the supervision of the geology department. Near mine diamond drilling exploration campaigns are ongoing on an annual basis for mineral resource and mineral reserve estimates.

Sampling, Analysis, and Data Verification

Surface and some underground exploration drill core is sampled following cutting with a diamond saw, while most of the underground drillholes are whole core sampled. The samples are maintained in secure facilities and are under the control of our employees or the independent laboratory at all times. We have no reason to believe that the validity and integrity of the samples has been compromised.

All samples are analyzed for gold at various independent commercial laboratories using fire assay with either AA or gravimetric finish.

A blind QAQC program supervised by the geology department includes the submission of certified standards, duplicates, and blanks to the laboratory. The results of the QAQC programs indicate that the sample assays are reliable for the estimation of mineral resources and mineral reserves.

Mineral Processing and Metallurgical Testing

As part of normal plant operation procedures, metallurgical analysis and testing is undertaken as required. The majority of these analyses are to assess mill performance and metallurgical recovery. Metal recovery forecasts used in our mine plans are based on the historical performance of the plant operations and the tonnes and grade of material that is planned to be mined.

Mineral Resource and Mineral Reserve Estimates

Management estimates that mineral reserves at the Bell Creek mine, effective June 30, 2021, are as follows:

Bell Creek Mineral Reserves [1, 2]

Reserve Category	Tonnes (Mt)	Grams of Gold per tonne
Proven	2.4	3.0
Probable	2.7	2.9
TOTAL	5.1	3.0

Notes:

1 Estimated using prices of $1,450 per ounce of gold. Totals may not add due to rounding.

2 Mineral reserve estimates for the Bell Creek mine were prepared under the supervision of, or were reviewed by Alain Mainville, P.Geo, and Eric Lachapelle, P.Eng., as Qualified Persons as that term is defined in NI 43-101.

Management estimates that mineral resources at the Bell Creek mine, effective June 30, 2021, are as follows:

Bell Creek Mineral Resources [1, 2]

Resource Category	Tonnes (Mt)	Grams of Gold per tonne
Measured	2.4	3.4
Indicated	4.2	2.8
Inferred	3.8	3.1

Notes:

1 These mineral resources are in addition to mineral reserves. Estimated using prices of $1,450 per ounce of gold. Mineral resources are modelled to a minimum mining width and reported above economic cut-off grade.

2 Mineral resource estimates for the Bell Creek mine were prepared under the supervision of, or were reviewed by Alain Mainville, P.Geo, and Eric Lachapelle, P.Eng., as Qualified Persons as that term is defined in NI 43-101.

Mineral resource estimates were prepared using inverse distance squared interpolation methods within three dimensional geological interpretations based on a nominal cut-off grade and a minimum mining width. The

block model was classified into measured, indicated, and inferred confidence categories depending on the location of the block relative to the number of drillhole intersections available to estimate each block, as well as other factors affecting confidence in the estimate.

The mineral resource estimate was then depleted for previous mining and any inaccessible areas removed before reporting above an economic cut-off grade. Mineral resources that can be economically mined are converted to mineral reserves.

Mineral reserve estimates are based on a number of assumptions that include metallurgical, taxation, and economic parameters. Increasing costs or changes in taxation could have a negative impact on the estimation of mineral reserves. There are currently no known factors that may have a material negative impact on the estimate of mineral reserves or mineral resources at the Bell Creek mine.

Mining Operations

Underground mining takes place at the Bell Creek mine using long hole stoping methods. Ore is brought to the surface via ramp and by shaft.

Processing and Recovery Operations

Ore from the Bell Creek mine and the Timmins West mine is processed at the Bell Creek mill using grinding, gravity recovery, carbon in leach and carbon in pulp recovery to produce gold doré with minor amounts of silver. The plant has a capacity of approximately 5,400 tpd. Metallurgical recovery averaged approximately 97% for gold in 2021.

In 2021, we processed approximately 1.6 million tonnes of ore producing a combined 133.8 thousand ounces of gold and 16.2 thousand ounces of silver from the Timmins West and Bell Creek mines.

All production from the Bell Creek and Timmins West mines is in the form of doré, which is refined at arm's length refineries prior to the sale of refined silver and gold to bullion banks and traders. Currently, we have refining contracts in place with refineries in Canada. We have not had any difficulty in securing contracts for the sale of Bell Creek and Timmins West mine doré, however, there can be no certainty that we will always be able to do so or what terms will be available at the time. Please see "Risks Related to our Business – Trading Activities and Credit Risk".

Since February 2019, the revenue produced by the Bell Creek and Timmins West mines is as follows:

2021	**Revenue[1, 2]**	**Quantity Sold**
Silver and Gold in Doré	$238.5 million	16,268 ounces of silver 132,000 ounces of gold
2020	**Revenue[1, 2]**	**Quantity Sold**
Silver and Gold in Doré	$262.1 million	17,318 ounces of silver 148,130 ounces of gold
2019[3]		
Silver and Gold in Doré	$201.2 million	17,113 ounces of silver 143,300 ounces of gold

Notes:
1 Consists of sales to arm's length customers.
2 Calculated as gross revenue plus export credit incentives (as applicable), less treatment and refining charges and export taxes.
3 Consists of production after February 22, 2019.

Infrastructure, Permitting, and Compliance Activities

The mine workings, processing plant, tailings and waste disposal areas, effluent management and treatment facilities, roads, and power and water lines have all been constructed and are located within the boundaries of the mining leases and surface rights controlled by us. To the best of our knowledge, all permits and licenses required to conduct our activities on the property have been obtained and are currently in good standing.

Power is supplied from the provincial power grid and water is sourced from surface and underground dewatering.

Consultation is being undertaken with regulatory agencies, the general public, the Métis Nation of Ontario, Wabun Tribal Council and the Indigenous communities of Flying Post First Nation, Mattagami First Nation, and Matachewan First Nation, who are represented by Wabun Tribal Council, and the Wahgoshig First Nation. Consultation provides an opportunity to identify and address the impacts of LSG's activities on external stakeholders and to expedite the authorization process. The consultations have been held in order to comply with federal and provincial requirements, including Ontario Regulation 240/00 and the Environmental Bill of Rights.

An IBA was signed in September 2016 with the Mattagami, Wahgoshig, Matachewan and Flying Post First Nation communities in the Timmins area relating to the Bell Creek mine and surrounding properties. The IBA outlines how the company and the Indigenous communities will work together in the following areas: education/training of Indigenous community members, employment, business and contracting opportunities, financial considerations, and environmental matters.

A closure cost estimate for the Bell Creek mine was prepared based on a government-approved closure plan, engineering estimates, local rates, and contractor quotes. The estimate is updated every year. Pan American has estimated the present value of reclamation costs for the Bell Creek mine to be approximately $10.7 million effective December 31, 2021. See "Narrative Description of the Business – Environment, Community and Sustainability" for further disclosure regarding forward-looking statements related to reclamation costs.

Capital and Operating Costs

Capital additions at the Timmins West and Bell Creek mines during 2021 totalled $42.3 million, including $35.9 million of sustaining capital, consisting mainly of mine equipment refurbishments and replacements, mine infrastructure upgrades, tailings storage facility expansion, near-mine exploration, and lease payments for mining equipment, as well as $6.4 million primarily for exploration of the Wetmore property.

Sustaining capital investments in 2022 at the Timmins West and Bell Creek mines are anticipated to total between $38.0 million and $39.0 million, primarily related to tailings storage facility expansions, underground mine equipment replacements and refurbishments, mill upgrades, and near-mine exploration. We also expect to invest approximately $12.0 million to $14.0 million in project capital for construction of a paste fill plant for Bell Creek to improve backfill quality and availability for more effective ground support systems and increase resource recovery, in addition to exploration expenditures related to the Wetmore and Whitney projects.

In 2021, direct operating costs at the Timmins West and Bell Creek mines were $167.5 million.

Exploration, Development, and Production

In 2022, we anticipate producing 0.01 million ounces of silver and between 135.0 thousand and 143.0 thousand ounces of total gold from the Timmins West and Bell Creek mines. We plan to undertake approximately 71,000 metres of exploration drilling at the mines, including the Wetmore project and regional targets, in 2022.

II. Non-Operating and Development Properties

(i) Escobal Mine

Project Description, Location, and Access

The Escobal mine is an underground silver-gold-lead-zinc mine in Guatemala, approximately 40 kilometres east-southeast of Guatemala City and 2 kilometres east of the town of San Rafael Las Flores. Access to the Escobal mine is via 70 kilometres of paved highway from Guatemala City.

The Escobal mine is 100% owned by Pan American through its wholly-owned subsidiary, PASG, and comprises two mineral licenses covering approximately 29.2 km². These include the Escobal Exploitation License (the "Escobal mining license") covering 20 km². PASG also previously held the Juan Bosco Exploration License covering 9.2 km², which was not renewed and is no longer valid. The Escobal mining license is valid for 25 years from receipt of the license on April 3, 2013 and is renewable for an additional 25 years. Exploration licenses in Guatemala are granted for an initial period of three years, which can be extended for two additional two-year periods, for a total holding period of seven years; after which, application must be made for an exploitation license or new exploration concession.

Some communities and non-governmental organizations ("NGOs") have been vocal and active in their opposition to mining and exploration activities in Guatemala. In July 2017, the Escobal mining license was suspended as a result of a court proceeding initiated by an NGO in Guatemala, based upon the allegation that the Guatemala MEM violated the Xinka Indigenous people's right of consultation. After several decisions and appeals on the matter, a decision of the Constitutional Court of Guatemala was rendered on September 3, 2018, determining that the Escobal mining license would remain suspended until the State of Guatemala completes an ILO 169 consultation process led by MEM. The consultation process is proceeding, and normal operations at the Escobal mine remain suspended. Legal challenges to the consultation process have been filed with the Supreme Court of Justice of Guatemala (the "Supreme Court") by parties opposed to the Escobal mine and have, to date, been rejected by the Court, but the ultimate outcome of the various challenges remains uncertain. The process, timing, and outcome of the ILO 169 consultation also remains uncertain. The pre-consultation process commenced in the first half of 2021 and continued at various points throughout the year. In addition, in June 2017, PASG (at the time, known as Minera San Rafael, S.A. ("MSR")) filed its annual request to renew the Escobal mine's export credential with the Guatemala MEM. However, the Guatemala MEM did not renew the export credential because its renewal had become contingent on the Supreme Court's reinstatement of the Escobal mining license. The export credential therefore expired in August 2017 and has not been renewed.

In addition, since June 7, 2017, a group of protesters near the town of Casillas have blocked the primary highway that connects Guatemala City to San Rafael Las Flores and the Escobal mine. Mining operations were reduced between June 8, 2017 and June 19, 2017 to conserve fuel, and on July 5, 2017, were ceased following the Supreme Court's provisional decision to suspend the Escobal mining license while the case against the Guatemala MEM was heard on the merits. A second roadblock was initiated in 2018 near the community of Mataquescuintla. The attendance at both roadblocks was reduced during 2020 and access to the mine was less restricted. While we continue our efforts to regain trust and repair relationships, there is no guarantee that a positive resolution will be reached or that the roadblocks will be removed.

We make annual payments to the Guatemala MEM for each concession. Annual reports documenting exploration and operation activities have been filed with the Guatemala MEM, as required.

While Escobal is on care and maintenance, we continue to comply with Escobal's environmental management plan which was updated in 2020. As part of these requirements, we are following through on appropriate commitments made by Tahoe, responding to community requests for information and support, and satisfying our reporting obligations to the Government of Guatemala.

In Guatemala, there is a statutory one percent royalty on precious and base metal production. In addition, MSR (now PASG) paid an additional 4% NSR royalty on concentrates sold from the Escobal mine, primarily to nearby municipalities. Payments under the voluntary royalty were suspended in 2017 upon the Escobal license suspension, but some payments of these outstanding royalties have been made more recently.

In addition, MSR (now PASG) established a profit-sharing program that provides a 0.5% NSR royalty to an association of former landowners of the Escobal mine property. Ten percent of this royalty is to be deposited in a special fund, administered by the association's board of directors, and used for improvements in local communities.

Within the Escobal mining licence, PASG owns approximately 300 hectares for the area required for mining operations, processing plant and ancillary facilities, surface operations, and tailings and waste rock disposal. Our ownership of certain of these lands has been challenged in the Guatemalan Courts. Please refer to the "Risks Related to Our Business" for further discussion of this and related risks.

History

Activity at the Escobal property dates back to 1996 when Entre Mares, S.A., the Guatemalan subsidiary of Goldcorp, identified high grade gold values associated with surface quartz veins in the western portion of the Escobal vein. In late 2006, significant silver and gold grades were detected from surface sampling along an extensive alteration zone developed over the Escobal vein. Exploration drilling began on the property in 2007 and resource estimates were prepared in 2010.

In June 2010, Tahoe acquired 100% of the Escobal mine project and associated exploration concessions from Entre Mares, and the Escobal mine was then held by a wholly owned subsidiary of Tahoe, MSR (now PASG). Mine construction began in 2011, and commercial production began in 2013. The mine produced annually until its suspension in 2017. In February 2019, Pan American acquired Tahoe.

Geological Setting, Mineralization, and Deposit Types

The Guatemalan geological setting is comprised of two tectonic terrains juxtaposed across a major tectonic plate boundary. The northern half of Guatemala is on the North American plate, and the southern half is on the Caribbean plate with three major east-west trending faults forming the collision boundary. The Escobal property is situated on the Caribbean plate, south of the faults. The area is characterized by a series of volcanic units derived from multiple eruptive events.

The Escobal deposit is an intermediate sulfidation, fault related vein formed within sedimentary and volcanic rocks. The Escobal vein system hosts silver, gold, lead and zinc, with an associated epithermal suite of elements, within quartz and quartz-carbonate veins. Quartz veins and stockwork up to 50 metres wide, with up to 10% sulfides, form at the centre of the Escobal deposit and grade outward through silicification, quartz-sericite, argillic and propylitic alteration zones.

Precious and base metal mineralization has been identified over a 2,400 metre lateral distance and 1,200 metre vertical range in three zones oriented generally east-west, with variable dips.

Exploration

Exploration at the Escobal mine included surface prospecting, mapping, soil and rock geochemical sampling, geophysical surveys, and drilling.

Drilling

All drilling undertaken between 2007 and 2017 was by diamond drilling from surface and underground using industry standard drill machines and downhole survey tools. Drilling was conducted by both mine employees and private drilling contractors under the supervision of the mine geology department.

Sampling, Analysis, and Data Verification

The drill core was generally sampled at 1.0 metre to 1.5 metre lengths according to geological features, and cut with a saw. The samples are maintained in secure facilities and were under the control of our employees or the independent laboratory at all times. We have no reason to believe that the validity and integrity of the samples has been compromised. The samples were prepared by Bureau Veritas at their sample preparation facility in Guatemala City and analyzed at their Reno, Nevada USA facility. In late 2015, a portion of the underground stope definition core was analyzed at the on site laboratory.

Gold was assayed by fire assay with AA finish and silver was assayed by digestion with AA finish. Higher grade samples were completed using fire assay and gravimetric finish. Lead and zinc were analyzed by induced coupled polarization or by digestion with AA finish with high grade samples completed using titration methods.

A QAQC program supervised by the geology department included the submission of certified standards, duplicates, and blanks to the laboratory. The results of the QAQC programs indicate that the sample assays are reliable for the estimation of mineral resources and mineral reserves.

Mineral Processing and Metallurgical Testing

As part of normal plant operation procedures, metallurgical analysis and testing were undertaken as required. The majority of these analyses were to assess mill performance and metallurgical recovery. Metal recovery forecasts used in the mine plans are based on the historical performance of the plant operations and the tonnes and grade of material that is planned to be mined.

Mineral Resource and Mineral Reserve Estimates

Management estimates that mineral reserves at the Escobal mine, effective June 30, 2021, are as follows:

Escobal Mineral Reserves [1, 2]

Reserve Category	Tonnes (Mt)	Grams of Silver per tonne	Grams of gold per tonne	% Lead	% Zinc
Proven	2.5	486	0.42	1.02	1.75
Probable	22.1	316	0.34	0.77	1.25
TOTAL	24.7	334	0.35	0.79	1.30

Notes:

1 Estimated using prices of $20 per ounce of silver and $1,300 per ounce of gold. Totals may not add due to rounding.

2 Mineral reserve estimates for the Escobal mine were prepared under the supervision of, or were reviewed by Christopher Emerson, FAusIMM, and Martin G. Wafforn, P.Eng., as Qualified Persons as that term is defined in NI 43-101.

Management estimates that mineral resources at the Escobal mine, effective June 30, 2021, are as follows:

Escobal Mineral Resources [1, 2]

Resource Category	Tonnes (Mt)	Grams of Silver per tonne	Grams of gold per tonne	% Lead	% Zinc
Measured	2.3	251	0.23	0.31	0.59
Indicated	14.2	201	0.20	0.38	0.66
Inferred	1.9	180	0.90	0.22	0.42

Notes:

1 These mineral resources are in addition to mineral reserves. Estimated using prices of $20 per ounce of silver and $1,300 per ounce of gold. Mineral resources are reported within scheduled mine shapes and above a mineral resource cut-off grade.

2 Mineral resource estimates for the Escobal mine were prepared under the supervision of, or were reviewed by Christopher Emerson, FAusIMM, and Martin G. Wafforn, P.Eng., as Qualified Persons as that term is defined in NI 43-101.

Mineral resource estimates were prepared using inverse power of distance methods within geological interpretations created in plan and section. The block model was classified into measured, indicated, and inferred confidence categories depending on the location of the block relative to the number of drillhole intersections available to estimate each block, as well as other factors affecting confidence in the estimate.

The mineral resource estimate was then depleted for previous mining and planned dilution and loss was applied. Reserve and resource stope shapes were prepared on blocks above the economic cut-off. Mineral resources that can be economically mined are converted to mineral reserves.

Mineral reserve estimates are based on a number of assumptions that include metallurgical, taxation, and economic parameters. Increasing costs or increasing taxation could have a negative impact on the estimation of mineral reserves. Aside from the previously mentioned factors, there are currently no known factors that may have a material negative impact on the estimate of mineral reserves or mineral resources at Escobal.

Mining Operations

Underground mining at Escobal utilized long hole stoping methods, with ore brought to the surface by ramp.

No mining operations have been conducted at Escobal since the Escobal mining license suspension in 2017, and Escobal remains on care and maintenance. We are required to conduct certain activities in order to be in compliance with our environmental management plan, which includes limited community relations activities to respect any existing commitments and to respond to requests for information regarding our activities. The MEM and the Ministry of Environment have conducted a number of site inspections to verify the condition of the mine and facility, our activities, and compliance with the Court Order.

Processing and Recovery Operations

Prior to the suspension of mining operations, ore from the Escobal mine was processed in 4,500 tpd capacity plant using conventional lead-zinc differential flotation to produce silver and gold rich lead and zinc concentrates. No processing has taken place since the Escobal mining license suspension in 2017.

In 2016, the last full-year period in which there was production from the mine, the Escobal mine produced 22.5 thousand tonnes of lead concentrate and 27.6 thousand tonnes of zine concentrate, with total contained metal of 21.2 million ounces of silver, 10.7 thousand ounces of gold, 10.3 thousand tonnes of lead, and 17.4 thousand tonnes of zinc. Metallurgical recoveries for the lead concentrate were 80.6% silver, 54% gold, 87.2% lead, and 12.6% zinc, while recoveries for the zinc concentrate were 6.1% silver, 6.2% gold, 3.0% lead, and 78.6% zinc.

Infrastructure, Permitting, and Compliance Activities

The Escobal mine workings, processing plant, tailings and waste disposal areas, effluent management and treatment systems, ancillary facilities, roads and power lines have all been constructed and are located within the boundaries of the exploitation license and surface lands owned by us. When the mine was in operation, power was provided mainly by on-site diesel generation. Water is supplied from mine dewatering and water wells.

The Escobal mine operations were conducted under an EIS approved by the Ministry of Environment and Natural Resources and an exploitation license issued by the Guatemala MEM. The export of concentrates is licensed through the Guatemala MEM, with annual renewal requirements. Land use changes and vegetation clearing and reforestation are permitted through Guatemala's National Institute of Forests. Archeological clearances were issued by the Ministry of Culture and Sports. Other than an export credential which has not been renewed by the Guatemala MEM following its expiration in August 2017 and the suspension of the Escobal mine mining license, to the best of our knowledge, all other permits and licenses required to conduct its activities at the Escobal Mine have been obtained and are currently in good standing. See " Risks Related to Our Business".

PASG has implemented a comprehensive environmental management plan developed specifically for the conditions at the Escobal mine, which addresses operating, reporting, and mitigation procedures for surface and underground operations. An update to the environmental management plan was approved in 2020.

A closure cost estimate for the Escobal mine prepared according to State of Nevada approved SRCE methodology is updated every year for unit costs and discount rates, and every other year for physical disturbance if necessary. We have estimated the present value of reclamation costs for the Escobal mine to be approximately $7.7 million effective December 31, 2021. See "Narrative Description of the Business – Environment, Community and Sustainability" for further disclosure regarding forward-looking statements related to reclamation costs.

Capital and Operating Costs

During 2021, Escobal was in care and maintenance and incurred $23.1 million in holding costs. Capital additions at Escobal during 2021 totalled $0.8 million.

In 2022, we anticipate spending $21.0 and $22.0 million in care and maintenance costs for the Escobal mine.

Exploration, Development, and Production

In 2022, we do not anticipate any production from the Escobal mine as the operations remain suspended. We plan to continue with our property and infrastructure maintenance requirements, and have no plans to undertake any exploration work in 2022. All expenditures will be expensed as incurred.

III. Non-Material Properties and Interests

We own interests in other mineral properties in each of the jurisdictions in which we operate, including the La Arena and Morococha mines and the Pico Machay property in Peru, the San Vicente mine in Bolivia, the Manantial Espejo, Joaquin and COSE mines and the Navidad property in Argentina, and certain other interests in Mexico and Canada. Our Alamo Dorado mine in Mexico is in the post-reclamation phase and mining activity has ceased. Pan American does not consider these properties to be material properties for the purposes of NI 51-102 or NI 43-101.

Mineral Property Expenditures

The following table sets out our acquisition, exploration and development expenditures (rounded, in thousands) for the periods indicated:

		2021	2020	2019
Acquisition	COSE	$ -	$ -	$ -
	Joaquin	-	-	-
	Shahuindo[1]	-	-	437,275
	La Arena[1]	-	-	192,506
	Timmins[1]	-	-	378,889
	Escobal[1]	-	-	273,838
	TOTAL[2]	-	-	1,282,508
Development	Huaron[3]	$ 8,749	$ 2,359	$ 8,013
	Morococha[3]	6,163	6,563	10,703
	Alamo Dorado	-	-	-
	Dolores	38,928	43,236	47,722
	La Colorada	65,469	29,335	20,139
	Manantial Espejo	5,010	7,849	23,909
	Navidad	90	-	9
	San Vicente	5,340	4,877	4,938
	Shahuindo	24,652	20,330	31,329
	La Arena	45,130	37,300	47,557
	Timmins	41,520	20,081	10,346
	Escobal	778	4,807	-
	Other	1,649	1,818	125
	TOTAL[2]	$ 243,478	$ 178,555	$ 205,807
Exploration	Huaron	$ -	$ -	$ 13
	Morococha	686	138	327
	Alamo Dorado	-	-	-
	Dolores	225	338	1,105
	La Colorada	2,643	998	1,445
	Manantial Espejo	-	-	305
	Navidad	-	-	-
	San Vicente	-	-	-
	Shahuindo	828	(5)	787
	La Arena	-	-	358
	Timmins	3,628	3,418	2,259
	Other[4]	3,060	2,209	3,204
	TOTAL[2,5]	$ 11,071	$ 7,096	$ 9,803

Notes:

1 The figures shown relate to the net asset balances as at December 31, 2019.
2 Numbers may not add due to rounding.
3 Net of lease advances.
4 Includes spending on overhead corporate management charges, as well as other indirect exploration spending.
5 The amounts for 2019 exclude $1.9 million from non-cash project development write-downs.

Metals Trading

We take the view that our precious metals production should not be hedged, thereby allowing the maximum exposure to precious metal prices.

We have engaged in forward sales and hedging of base metals production from our mines over the past several years. The forward sales of base metals in 2019, 2020 and 2021 were as follows:

- During 2021, we had 1,500 tonnes of copper exercised at an average strike price of $8,775 per tonne, resulting in a realized loss of $1.1 million.
- During 2020, we did not hedge any base metal production.
- During 2019, we had 800 tonnes of copper exercised at an average strike price of $6,150 per tonne, resulting in a realized gain of $0.3 million. We had 3,600 tonnes of zinc exercised at a strike price of $2,600 per tonne, resulting in a realized gain of $0.9 million.

Please see the discussion below under “Risks Related to Our Business – Trading Activities and Credit Risk”.

RISKS RELATED TO OUR BUSINESS

The risk factors described below could materially affect Pan American's future operating results and could cause actual events and results to differ materially from those described in forward-looking statements and forward-looking information. Additional risks not presently known to us, or that we currently consider immaterial, may also impair our operations. Readers are strongly encouraged to review the following identified risks in detail.

Metal and Commodity Price Fluctuations

The majority of our revenue is derived from the sale of silver, gold, zinc, copper and lead, and therefore fluctuations in the prices of these metals significantly affects our operations and profitability. Our sales are directly dependent on metal prices, and metal prices have historically shown significant volatility and are beyond our control. The Board of Directors continually assesses Pan American's strategy towards our metal exposure, depending on market conditions.

The prices of silver and other metals are affected by numerous factors beyond our control, including:

- global and regional levels of supply and demand;
- sales by government holders and other third parties;
- metal stock levels maintained by producers and others;
- increased production due to new mine developments and improved mining and production methods;
- speculative activities;
- inventory carrying costs;
- availability, demand and costs of metal substitutes;
- international economic and political conditions;
- interest rates, inflation and currency values;
- increased demand for silver or other metals for new technologies; and
- reduced demand resulting from obsolescence of technologies and processes utilizing silver and other metals.

In addition to general global economic conditions that can have a severely damaging effect on our business in many ways, declining market prices for metals could materially adversely affect our operations and profitability. A decrease in the market price of silver, gold and other metals could affect the commercial viability of our mines and production at our mining properties. Lower prices could also adversely affect future exploration and our ability to develop mineral properties and mines, including the development of capital intensive projects such as Navidad and the La Colorada skarn project, all of which would have a material adverse impact on our financial condition, results of operations and future prospects. There can be no assurance that the market prices will remain at sustainable levels.

If market prices of gold and silver remain below levels used in Pan American's impairment testing and reserve prices for an extended period of time, Pan American may need to reassess its long-term price assumptions, and a significant decrease in the long-term price assumptions would be an indicator of potential impairment, requiring Pan American to perform an impairment assessment on related assets. Due to the sensitivity of the recoverable amounts to long term metal prices, as well as to other factors including changes to mine plans and cost escalations, any significant change in these key assumptions and inputs could result in impairment charges in future periods.

The Board of Directors continually assesses Pan American's strategy towards our metal exposure, depending on market conditions. From time to time, we mitigate the market price risk associated with our base metal production by committing some of our forecast base metal production to forward sales and options contracts. However, decisions relating to hedging may have material adverse effects on our financial performance, financial position, and results of operations. As at December 31, 2021, the Company had outstanding collars made up of put and call contracts for its exposure to zinc (3,600 tonnes) with settlement dates on those positions between January 2022 and December 2022. The outstanding contracts have respective weighted average floor and cap prices per tonne of $3,150 and $4,000. The Company recorded gains of $0.1 million and $0.1 million during the three and twelve months ended December 31, 2021, respectively. The Company did not have any zinc contracts outstanding during the comparable periods in 2020.

We take the view that our precious metals production should not be hedged, thereby allowing the maximum exposure to precious metal prices. However, in extreme circumstances, the Board of Directors may make exceptions to this approach. Such decisions could have material adverse effects upon our financial performance, financial position, and results of operations.

Certain commodities used by us in our operations may also be subject to strategic hedging programs. During 2020 and 2021, the Company entered into diesel swap contracts designed to fix or limit the Company's exposure to higher fuel prices. At December 31, 2021, the Company had outstanding positions on its diesel exposure with a notional amount of 3.6 million gallons, with a weighted average fixed price of $1.42 per gallon, expiring between January 2022 and December 2022. The Company recorded gains of $0.3 million and $9.4 million for the three and twelve months ended December 31, 2021, respectively (Q4 2020 and 2020: gains of $4.0 million and $4.7 million, respectively).

Please refer to the 2021 MD&A for more details, including a sensitivity analysis of the effect of certain metal prices on revenue and AISC.

Foreign Operations

In 2021, a significant portion of our production and revenues were derived from our operations in Peru, Mexico, Argentina and Bolivia. We also own the currently-suspended Escobal mine in Guatemala. As a result, we are exposed to a number of risks and uncertainties, including:

- expropriation, nationalization, and the cancellation, revocation, renegotiation, or forced modification of existing contracts, permits, licenses, approvals, or title, particularly without adequate compensation;
- changing political and fiscal regimes, sometimes unexpectedly or as a result of precipitous events, and economic and regulatory instability;
- unanticipated adverse changes to constitutional rights and protections, and other laws and policies, including those relating to mineral title, royalties and taxation;
- delays or inability to obtain or maintain necessary permits, licenses or approvals;
- opposition to mine development projects from governments, communities, and other groups, which may include frivolous or vexatious claims, misinformation, and the potential for violence and property damage;
- restrictions on foreign investment;
- limitations on repatriation of operating cash flows, including legal and practical restrictions to transfer funds from foreign jurisdictions;
- unreliable or undeveloped infrastructure;
- labour unrest and scarcity;
- human rights violations, including Indigenous rights claims;
- inability of governments or governmental bodies to complete, or properly complete, consultation processes and to comply with national and international laws, protocols, standards and/or norms;
- 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 restrictions on foreign exchange, currencies and repatriation;
- inability to obtain fair dispute resolution or judicial determinations because of bias, corruption or abuse of power;
- abuse of power of foreign governments who impose, or threaten to impose, fines, penalties or other similar mechanisms, without regard to the rule of law;
- difficulties enforcing judgments, particularly judgments obtained in Canada or the United States, with respect to assets located outside of those jurisdictions;
- difficulty understanding and complying with the regulatory and legal framework with respect to mineral properties, mines and mining operations, and permitting;

- violence and the prevalence of criminal activity, including organized crime, theft and illegal mining;
- civil unrest, terrorism and hostage taking;
- military repression and increased likelihood of international conflicts or aggression; and
- increased public health concerns, including the impact of COVID-19.

Certain of these risks and uncertainties are illustrated well by circumstances in Guatemala, Bolivia, Peru and Mexico.

Some communities and NGOs have been vocal and active in their opposition to mining and exploration activities in Guatemala. In July 2017, the Escobal mining license was suspended as a result of a court proceeding initiated by an NGO in Guatemala, based upon the allegation that the Guatemala MEM violated the Xinka Indigenous people's right of consultation. After several decisions and appeals on the matter, a decision of the Constitutional Court of Guatemala was rendered on September 3, 2018 (the "Court Order"), determining that the Escobal mining license would remain suspended until the State of Guatemala completes an ILO 169 consultation process led by MEM. The consultation process is proceeding, and normal operations at the Escobal mine remain suspended. Legal challenges to the consultation process have been filed with the Guatemalan Supreme Court by parties opposed to the Escobal mine and have, to date, been rejected by the Court, but the ultimate outcome of the various challenges remains uncertain. The pre-consultation process commenced in 2021, however the process, timing, and outcome of the ILO 169 consultation remains uncertain. In addition, in June 2017, PASG (at the time, known as MSR) filed its annual request to renew the Escobal mine's export credential with the Guatemala MEM. However, the Guatemala MEM did not renew the export credential because its renewal had become contingent on the Supreme Court's reinstatement of the Escobal mining license. The export credential therefore expired in August 2017 and has not been renewed.

In 2014, the Bolivian government enacted the New Mining Law. Among other things, the New Mining Law 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 such migration and possible renegotiation of key terms. The migration process has been delayed by COMIBOL and has not been completed. 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. 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.

Criminal activity and violence are also prevalent in some areas that we work in. For example, violence in Mexico is well documented and has, over time, been increasing. Conflicts between the drug cartels and violent confrontations with authorities are not uncommon. Operations at our Dolores mine were temporarily curtailed in 2018 as a result of such violence and the threat of violence on the access roads to the mine. Other criminal activity, such as kidnapping and extortion, is also an ongoing concern. Many incidents of crime and violence go unreported and efforts by police and other authorities to reduce criminal activity are challenged by a lack of resources, corruption and the pervasiveness of organized crime. Incidents of criminal activity have occasionally affected our employees and our contractors and their families, as well as the communities in the vicinity of our operations. Such incidents may prevent access to our mines or offices; halt or delay our operations and production; result in harm to employees, contractors, visitors or community members; increase employee absenteeism; create or increase tension in nearby communities; or otherwise adversely affect our ability to conduct business. We can provide no assurance that security incidents, in the future, will not have a material adverse effect on our operations.

Challenges also exist with respect to inconsistent application of the rule of law, and to sometimes unreliable and biased legal systems and judiciary. In April 2012, Pan American sold all of its interest in the Quiruvilca mine ("Quiruvilca") in Peru, which was previously owned by our subsidiary, Huaron. Since the 2012 sale, a substantial number of labour-related claims have been made by persons alleging to be former or then-current employees

working at the Quiruvilca mine. Notwithstanding that an overwhelming majority of these claims were made exclusively against the subsequent owners of Quiruvilca, that Huaron has not owned or been involved with Quiruvilca since 2012, and that Huaron was not afforded the opportunity to participate or challenge the assertions in court, the labour courts in Trujillo, Peru, have in many cases, imputed liability on Huaron. In some cases, the courts ordered seizure of monies from Huaron's local bank accounts and garnishment of funds due to Huaron from certain of its trading partners. In August 2018, the current owner of Quiruvilca declared bankruptcy, further exacerbating the situation. Huaron has challenged the basis of the labour court's decisions in Trujillo, and in the Commercial Court and Constitutional Courts of Peru. Pan American believes it has a strong legal position against liability for these claims and intends to continue to challenge them and seek to enforce certain contractual rights to indemnification. Many of these legal proceedings were delayed as a result of COVID-19 related court closures in Peru, but are expected to resume once the impacts of COVID-19 diminish. There can be no assurance that the outcome of the proceedings or any enforcement of our rights will be favorable to us or that it will not have a material adverse impact on our financial position. Huaron will likely be subject to further labour-related claims, and could also be subject to, directly or indirectly, claims by creditors of the current owner of Quiruvilca and claims relating to the now abandoned mine site, which in aggregate could be material.

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. We have begun the process of evaluating our operations against the World Gold Council Conflict-free Standard in an effort to gain more insights into potential risks related to security and corruption at our operations, but the success of this initiative remains uncertain. 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.

Governmental Regulation

Our operations, exploration, and development activities are subject to extensive laws and regulations in the jurisdictions in which we conduct our business, including with respect to:

- environmental protection, including greenhouse gas emissions, biodiversity, and water, soil and air quality;
- permitting;
- management and use of toxic substances and explosives;
- management and use of natural resources, including water and energy supplies;
- management of waste and wastewater;
- exploration, development, production, and post-closure reclamation of mines;
- imports and exports;
- transportation;
- price controls;
- taxation;
- mining royalties;
- labour standards, employee profit-sharing, and occupational health and safety, including mine safety and COVID-19 related regulations;
- community and Indigenous rights;
- human rights;
- social matters, including historic and cultural preservation, engagement and consultation, local hiring and procurement, development funds;
- anti-corruption and anti-money laundering; and
- data protection and privacy.

The costs associated with compliance with these and future laws and regulations can be substantial, and changes to existing laws and regulations (including the imposition of higher taxes and mining royalties) could cause additional expense, capital expenditures, restrictions on or suspensions of our operations and delays in the development of our properties. In addition, the regulatory and legal framework in some jurisdictions in which we operate are out-dated, unclear and at times, inconsistent. A failure to comply with these laws and regulations, including with respect to our past and current operations, and possibly even actions of parties from whom we acquired our mines or properties, could lead to, among other things, the imposition of substantial fines, penalties, sanctions, the revocation of licenses or approvals, expropriation, forced reduction or suspension of operations, and other civil, regulatory or criminal proceedings.

Many of the jurisdictions in which we operate also have certain laws or policies that impose restrictions on mining activities. For example, there are currently laws in the Province of Chubut, Argentina, which, among other things, prohibit open pit mining and the use of cyanide in mineral processing across the entire Province. As currently enacted, the laws in the Province of Chubut do not permit and would likely render any future construction and development of the Navidad property uneconomic or not possible at all. There is no guarantee that these restrictions on mining will be removed or that they will not become more restrictive, or that new constraints will not be imposed, including those that might have significant economic impacts on our operations and profitability.

Unanticipated or drastic changes in laws and regulations have affected our operations in the past. For example, under previous political regimes in Argentina, the government intensified the use of severe price, foreign exchange, and import controls in response to unfavourable domestic economic trends. These included informal restrictions on dividend, interest, and service payments abroad and limitations on the ability to convert ARS into USD, exposing us to additional risks of ARS devaluation and high domestic inflation. While some of these restrictions had begun to ease after the elections in 2015, the government introduced a new export duty in 2018 on silver and gold doré exported from Argentina. In 2021, we paid approximately $5.7 million in export duties (2020: $3.9 million). Following elections in 2019, the government in Argentina has begun reinstituting some of the previous unfavourable economic policies, such as strict currency controls.

As governments continue to struggle with deficits and concerns over the effects of depressed economies, the mining and metals sector has often been identified as a source of revenue. Taxation and royalties are often subject to change and are vulnerable to increases in both poor and good economic times, especially in many resource rich countries. The addition of new taxes, specifically those aimed at mining companies, could have a material impact on our operations and will directly affect profitability and our financial results. The economic impact of COVID-19 on the global and national economies, the resulting costs to governments, increased fiscal debt, interest rates, and inflation are also expected to result in further taxation pressures, the impacts of which could impact our financial performance.

In late December 2016, for example, the Zacatecas state government enacted a new set of ecological taxes which took effect on January 1, 2017. The Zacatecas Tax applied broadly across a number of industries in the State of Zacatecas that involve extraction, emissions to the air, soil or water, and deposits of residue or waste. The Zacatecas Tax primarily affected the La Colorada mine in respect of the materials placed in its tailings storage facility, with only about 5% of the tax relating to emissions. We paid approximately $4.5 million in respect of the Zacatecas Tax from January 2017 to April 2020. However, pursuant to a challenge of the Zacatecas Tax constitutional grounds, in mid-2020, the Supreme Court of Mexico determined that the tax for the deposit or storage of waste rock was not within the jurisdiction of the State of Zacatecas and that Plata Panamericana was entitled to be reimbursed for payments previously made in respect of the La Colorada mine. As part of this ruling, the Court also ruled that the State of Zacatecas was still empowered to impose a tax for the prevention and control of air pollution generated by industrial establishments, which are not within the federal competence, and therefore that portion of the tax on Plata was upheld and currently being paid by Plata Panamericana. Furthermore, in December 2020, the State of Zacatecas modified the original tax on the disposal or storage of waste rock. Plata Panamericana does not currently believe that this tax is payable in respect of La Colorada because of its SEMARNAT-approved waste management plan.

In April 2021, the Senate of Mexico approved the amendment of various articles of the Federal Labor Law, Social Security Law, Law of the National Workers' Housing Fund Institute, Federal Fiscal Code, Income Tax Law and the Value Added Tax Law. These new regulations significantly limit the ability of operating companies to subcontract and outsource labour to contractors and to employ related service providers. As a consequence of this new legislation, additional employee profit sharing costs, payroll taxes and benefits costs were imposed on our operations, the full impact of which is still being determined.

To manage the COVID-19 pandemic, governments in all of our operating jurisdictions have implemented various regulations, orders, protocols and guidelines, many of which have negatively affected our business and our employees, contractors and local communities. COVID-19 has also impacted governments and national economies, and in addition to impacts on labour, supplies, and services that are needed to conduct our business, this may also increase the likelihood of additional taxes, duties, royalties, or similar burdens being placed on mining operations in an effort to generate municipal, state and federal revenues and boost economies. Please refer to the more detailed discussion of the risks related to COVID-19 on our business under the heading, "Risks Related to our Business - COVID-19 and Other Pandemics" on page 68.

Permits

We are required to obtain and renew governmental permits for the operation and expansion of existing operations or for the development, construction, and commencement of new operations. Obtaining or renewing the necessary governmental permits can be costly and involve extended timelines. We may not be able to obtain or renew permits that are necessary to our operations, or the cost to obtain or renew permits may exceed our expected recovery from a given property once in production.

Failure to obtain or maintain the necessary permits, or to maintain compliance with any permits, can result in fines, penalties, or suspension or revocation of the permits. Our ability to obtain and renew permits is contingent upon certain variables, some of which are not within our control, including, introduction of new permitting legislation, the interpretation of applicable requirements implemented by the permitting authority, the need for public consultation hearings or approvals, and political or social pressure.

As previously discussed, in July 2017, the Escobal mining license was suspended as a result of a court proceeding initiated by an NGO in Guatemala. After several decisions and appeals on the matter, a decision of the Constitutional Court of Guatemala was rendered on September 3, 2018, that the Escobal mining license would remain suspended until the Guatemala MEM completes an ILO 169 consultation. The consultation process is proceeding and the mine remains suspended and on care and maintenance.

In addition, in June 2017, PASG (at the time known as MSR) filed its annual request to renew the export credential with the Guatemala MEM. However, the Guatemala MEM did not renew the credential because its renewal had become contingent on the Supreme Court's reinstatement of the Escobal mining license. The credential therefore expired in August 2017 and has not been renewed.

Any unexpected delays, failure to obtain or renew permits, failure to comply with the terms of the permit, or costs associated with the permitting process could impede or prevent the development or operation of a mine, which could have material adverse impacts on our operations and profitability.

Operational Risks

The ownership, operation, and development of a mine or mineral property involves significant risks and hazards which even the combination of experience, knowledge, and careful evaluation may not be able to overcome.

These risks include:

- environmental and health hazards;
- industrial and equipment accidents, explosions and third party accidents;
- the encountering of unusual or unexpected geological formations;
- ground falls and cave-ins;
- flooding;
- labour disruptions;
- mechanical equipment, machinery, and facility performance problems;
- seismic events;
- extreme temperature variations and air quality issues underground; and
- periodic interruptions due to inclement or hazardous weather conditions.

These risks could result in:

- damage to, or destruction of, mineral properties or production facilities;

- personal injury or death;
- environmental damage and liabilities;
- delayed production;
- labour disruptions;
- increased production costs;
- asset write downs;
- abandonment of assets;
- monetary losses;
- civil, regulatory or criminal proceedings, including fines and penalties, relating to health, safety and the environment;
- community unrest, protests, and legal proceedings at local or international levels;
- loss of social acceptance for our activities; and
- other liabilities.

Advancements in science and technology and in mine design, methods, equipment, and training have created the possibility of reducing some of these risks, but there can be no assurances that such occurrences will not take place and that they will not negatively impact us, our operations, and our personnel. For example, our La Colorada mine experienced ventilation failures in 2019 and 2020 that were partly the result of encountering increased heat and humidity loadings on the rock mass and ground support systems as the mine deepening and eastern extensions advanced. These failures resulted in a loss of forecast production in 2020 and 2021. Remediation work was undertaken to improve ventilation and underground conditions, including the commissioning of the refrigeration plant expected in mid-2022 and the concrete-lined ventilation shaft project, which is anticipated to be completed in mid-2023.

In addition to those other risks identified above, mining operations are also subject to ownership and operating risks relating to the valuable nature of the product being produced. Our Mexican operations have experienced armed robberies of doré within the past three years. We have instituted a number of additional security measures and a more frequent shipping schedule in response to these incidents. We have subsequently renewed our 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.

Liabilities that we incur may exceed the policy limits of our insurance coverage or may not be insurable, in which case we could incur significant costs that could adversely impact our business, operations, profitability, or value.

Title to Assets

The validity of mining or exploration titles or claims or rights, which constitute most of our property holdings, can be uncertain and may be contested. Our properties may be subject to prior unregistered liens, agreements or transfers, Indigenous land claims, or undetected title defects. In some cases, we do not own or hold rights to the mineral concessions we mine, including in Bolivia where the government has title to the concessions and our right to mine is contractual in nature. We have not conducted surveys of all the claims in which we hold direct or indirect interests and therefore, the precise area and location of such claims may be in doubt. No assurance can be given that applicable governments will not revoke or significantly alter the conditions of the applicable exploration and mining titles or claims, or that such exploration and mining titles or claims will not be challenged or impugned by third parties. We may be unable to operate our properties as expected, or to enforce our rights to our properties. Any defects in title to our properties, or the revocation of our rights to mine, could have a material adverse effect on our operations and financial condition.

For example, certain individuals have asserted community rights and land ownership over a portion of the La Colorada mine's surface lands in the Agrarian Courts of Mexico. They have also initiated a process before SEDATU in Zacatecas to declare such lands as national property. In 2019, we filed an amparo against such process and obtained an injunction to protect its ownership of these surface rights pending the outcome of the amparo and a further review by SEDATU. Our challenge was dismissed in October 2021, primarily on the basis that no final declaration of national lands had yet been made by SEDATU that would affect our property rights. We have appealled this dismissal and we will continue to oppose the SEDATU process. While we believe that we hold proper title to the surface lands in question, if we are unable to maintain, or maintain access to, those surface rights, there could be material adverse impacts on the La Colorada mine's future mining operations.

Similarly, in Guatemala, the land title system is not well developed and in many cases, relies on informal, hereditary or possessory rights. Such informal systems can create significant uncertainty in obtaining and maintaining ownership or rights of access, in defining precise locations or clear boundaries to properties, and substantiating rights if challenged. It is also difficult to establish the identity of parties who may have, or purport to have, an interest in such property. Many of the surface areas on which the Escobal mine is located are based on such informal rights. PASG is subject to a legal action by an individual claiming to own title to certain lands within the Escobal mine site that PASG had previously purchased. If we are unable to maintain existing lands and access, or to obtain new lands as required, there may be significant adverse impacts to the mine and its future operations.

We operate in countries with developing mining laws, and changes in such laws could materially impact our rights or interests to our properties. We are also subject to expropriation risk in a number of countries in which we operate, including the risk of expropriation or extinguishment of property rights based on a perceived lack of development or advancement. In Peru, for example, the recently elected government has raised the prospect of implementing changes to the Peru Constitution, imposing increased mining taxes and royalties, in addition to changes to mine closure requirements, and formalization of small-scale miners and artisanal miners, all which could materially impact our rights or interest to our properties. There is limited activity at our Navidad property, for example, as a result of legal restrictions relating to mining, and there is a risk that the federal or provincial governments in Argentina are dissatisfied with a lack of advancement. Expropriation, extinguishment of rights and other similar governmental actions would likely have a material adverse effect on our operations and profitability.

In many jurisdictions in which we operate, legal rights applicable to mining concessions are different and separate from legal rights applicable to surface lands. Accordingly, title holders of mining concessions in many jurisdictions must agree with surface land owners on compensation in respect of mining activities conducted on such land. We do not hold title to all of the surface lands at many of our operations and rely on contracts or other similar rights to conduct surface activities.

We do not own most of the surface rights to the areas that overlie our mining concessions comprising the Morococha mine, nor to the areas where administration and operations are taking place, but were used by us pursuant to a usufruct agreement. These surface rights have been the subject of various disputes over the many years of operation at the Morococha mine. In June 2010, we reached an agreement with MCP, a subsidiary of Aluminun Corporation of China, that clearly defined each party's long-term surface rights. Under the terms of the agreement, Argentum is required to shut-down and remove or relocate the core Morococha facilities and the parties were to exchange certain mineral concessions and access rights in order for both parties to proceed with their planned activities. Pursuant to the agreement, the transfer of lands and rights and certain payment obligations would occur over a period of time and were dependent on meeting certain milestones. During the course of the agreement, however, certain adjustments have been made by the parties with respect to the timing of achieving milestones, in some cases informally, and additional adjustments will be required going forward. The Morococha facilities had not been shut-down or removed or relocated within the time period originally established in the agreement, however Argentum and MCP have agreed to extend the time period to do so until early 2022, after which time it is anticipated that the Amistad processing plant will be dismantled and the mine will be placed into care and maintenance while alternative opportunities for the mine are considered. Although this June 2010 agreement, and recent extension, has diminished some of the risks associated with the Morococha land situation, there is no certainty that amended milestones can be agreed upon or achieved by the parties, that the other outstanding obligations in connection with the June 2010 agreement will be fulfilled or resolved, or that the shut-down of the processing plant and placement of the mine on care and maintenance for an undetermined period of time or other costs and activities associated with the commitments in the agreement will not render future operations at the Morococha mine untenable.

Environmental Legislation, Regulations, and Hazards

We are subject to environmental laws and regulation in the various jurisdictions in which we operate that impose requirements or restrictions on our activities, such as mine development, water management, use of hazardous substances, reclamation, and waste transportation, storage and disposal. Compliance with environmental laws and regulations may require significant costs and may cause material changes or delays in our operations. There is no assurance that we will be in full compliance with environmental legislation at all times. Failure to comply with applicable environmental legislation could lead to adverse consequences, including expropriation, suspension or forced cessation of operations, revocation of or restrictions on permits, fines and other penalties, civil or regulatory proceedings, and, in certain circumstances, criminal proceedings. Furthermore, any such failures could increase costs and extend timelines, requiring additional capital expenditures and remedial actions. These negative consequences could significantly impact our financial condition, operations, and cash flow.

Future environmental legislation could also require stricter standards and mandate increased enforcement, fines and penalties for non-compliance, more stringent environmental assessments of proposed projects and a heightened degree of responsibility for companies and their officers, directors and employees.

Environmental hazards may exist on our properties which are currently unknown to us. We may be liable for losses associated with such hazards, or may be forced to undertake extensive remedial cleanup action or to pay for governmental remedial cleanup actions, even in cases where such hazards have been caused by previous or existing owners or operators of the property, or by the past or present owners of adjacent properties, or by natural conditions. The costs of such cleanup actions may have a material adverse effect on our operations and profitability.

We are subject to environmental reclamation requirements to minimize long-term effects of mining exploitation and exploration disturbance by requiring the operating company to control possible deleterious elements and to re-establish, to some degree, pre-disturbance land forms and vegetation. These environmental reclamation requirements vary depending on the location of the property and the managing governmental agency. We are actively providing for and carrying out reclamation activities on our properties as required. Between 2017 and 2019, we completed the active closure and reclamation of the Alamo Dorado mine and have applied some of that experience to closure cost estimates for our other mines. We continue to implement post-closure improvements at Alamo Dorado and apply lessons learned to our other operations. Any significant environmental or social issues that may arise, however, or any changes to current mine closure regulations could lead to increased reclamation expenditures and have a material adverse effect on our financial resources.

Our operations at the Dolores, Shahuindo and La Arena mines involve heap leaching and this method of mineral processing may be employed in the future at other mines and projects. Heap leaching often employs sodium cyanide, a hazardous material, to leach metal-bearing ore and then collect the resulting metal-bearing solution. There is an inherent risk of unintended discharge of hazardous materials in the operation of leach pads. Should sodium cyanide escape from a leach pad and collection infrastructure or otherwise be detected in the downstream surface and ground water points, we could become subject to liability for remediation costs, which could be significant and may not be insured against. In addition, metal production could be delayed or halted to prevent further discharges and to allow for remediation. Such delays or cessations in production could be long-term or, in some cases, permanent, and any interference with production could result in a significant reduction in, or loss of, cash flow and value for us. While appropriate steps may be taken to prevent discharges of sodium cyanide and other hazardous materials into the ground water, surface water, and the downstream environment, there is inherent risk in the operation of leach pads and there can be no assurance that a release of hazardous materials would not occur.

We operate seven tailings storage facilities, have one closed filtered (dry) stack tailings facility at the Alamo Dorado mine, one filtered (dry) stack tailings facility at the Escobal mine, which is currently suspended, and operate a water dam at the Dolores mine. Between 2014 and 2021 we completed dam safety reviews by the Engineers of Record for all our operating tailings facilities. The reviews found that the storage facilities design, construction, operation, maintenance, and monitoring at the tailings and water storage facilities are generally in line with the Canadian Dam Safety Guidelines, TSM Tailings Protocol, and known best practices. We continue to implement the TSM Tailings Protocol and Canadian Dam Safety Guidelines at all of our sites. The development and update of guidelines and standards, such the Canadian Dam Association Technical Bulletin on Tailings Dam Breach Analyses and the Global Industry Standard for Tailings Management, may change requirements, costs, and ultimate capacity of our tailings facilities. Design of all of our tailings and water storage facilities includes detailed consideration of stability under static and dynamic (pseudostatic) seismic conditions to ensure exceedance of relevant safety factors. The design criteria is defined based on the dam classification resulting from the dam breach analyses, and in 2021 the dam breach analyses for the Morococha and Huaron mines were updated. While we believe that appropriate steps have been taken to prevent safety incidents, there are inherent risks involved with tailings facilities, including among other things, seismic activity, particularly in seismically active regions such as Peru and Guatemala, and the ability of field investigations completed prior to construction to detect weak foundation materials. There can be no assurance that a dam or other tailings facility safety incident will not occur and such an incident could have a material adverse effect on our operations and profitability.

Responsibility for the operation of a water treatment plant for the Kingsmill Tunnel and the tailings mitigation program at the Huascacocha tailings facility, near the Morococha mine, have been apportioned by Water Management Consultants Inc. in environmental studies among the Morococha mine and the mining companies operating neighbouring projects. The continued development of the Toromocho project by MCP may alleviate some of our funding requirements. There can be no guarantee, however, that our proportionate share of the costs of such environmental projects will not change and this may affect cash flow from the Morococha mine operations.

In addition to increasing regulatory requirements and operational risks, claims from local communities and NGOs with respect to real or alleged environmental incidents are becoming more common and may impact operations. In the case of legitimate claims, such actions could result in injunctions, suspensions, or other work stoppages, including revocation of permits, or significant fines or awards of damages. In other cases, we may be subject to frivolous or exaggerated claims made in an effort to obstruct or prevent mining operations or to affect our reputation. We have and continue to face such alleged claims in Guatemala related to the Escobal mine, as well as in Peru.

Community Action

The success of our business is, in many ways, dependent on maintaining positive and respectful relationships with communities in the areas where we work. There is an increasing level of public concern relating to the perceived effects of mining activities, particularly on communities and peoples impacted by such activities. Communities and NGOs have become more vocal and active with respect to the impact of mining activities on local communities. Some communities and NGOs have taken actions that could have a material adverse effect on our operations, such as setting up road closures and commencing lawsuits. In certain circumstances, such actions might ultimately result in the cessation of mining activities and the revocation of permits and licenses. These actions relate not only to current activities, but are often in respect of past activities by prior owners of mining properties. The manner with which we respond to civil disturbances and other activities can give rise to additional risks where those responses are perceived to be inconsistent with international standards, including those with respect to human rights.

On June 18, 2014, seven plaintiffs filed an action against Tahoe in the British Columbia Supreme Court alleging battery and negligence regarding a security incident that occurred at the Escobal mine on April 27, 2013. The plaintiffs sought compensatory and punitive damages. In April 2017, three of the seven plaintiffs settled their claims against Tahoe. On July 30, 2019, we settled, on behalf of Tahoe, the remaining four plaintiffs' claims and the British Columbia Supreme Court action was dismissed.

Since June 7, 2017, a group of protesters near the town of Casillas has blocked the primary highway that connects Guatemala City to San Rafael Las Flores and the Escobal mine that we recently acquired. Operations were reduced between June 8 and June 19, 2017 to conserve fuel, and on July 5, 2017, were ultimately ceased following the Supreme Court's provisional decision to suspend the Escobal mining license while the case against the Guatemala MEM was heard on the merits. A second roadblock was initiated in 2018 near the community of Mataquescuintla. The attendance at both roadblocks reduced during 2020 and access to the mine has been less restricted. However, while we continue our efforts to regain trust and repair relationships, there is no guarantee that a positive resolution will be reached or that the roadblocks will be permanently removed.

Artisanal, or informal, mining is associated with a number of negative impacts, including environmental degradation, human rights abuse and funding of conflict. Additionally, effective local government administration is often lacking in the locations where these miners operate informally or illegally. These activities are largely unregulated and work conditions are often unsafe and present health risks to the artisanal miners and local communities, which while unrelated to our operations, may have a material impact on them. Informal miners are active on land adjacent to our Shahuindo operation. These miners, represented by the Asociación de Mineral Artesanal San Blas ("AMASBA"), are in dialogue with the Peruvian government to formalize their operations. We support formalization and are collaborating with the government, local authorities and AMASBA in this regard.

Pan American is continuing with the implementation of TSM, a program designed to enhance our community engagement processes, drive world-class environmental practices and reinforce our commitment to the safety and health of our employees and surrounding communities. As part of TSM, we have implemented response mechanisms which help us manage our social risks by better understanding and responding to community questions or concerns around the perceived or actual impacts of our activities. While we are committed to operating in a responsible manner, there is no assurance that our efforts will be successful at mitigating adverse impacts to our operations, and we may suffer material consequences to our business, including among other things, delays and closures, increased costs, and significant reputational damage.

From time to time, individuals or communities may allege that our activities have impacted or are impacting their human rights. For example, we are currently in discussions with certain individuals regarding a 2015 relocation of worker housing at our La Colorada project. This is being done with the assistance of external relocation consultants and under the observations of the Office of the United Nations High Commissioner on Human Rights in Mexico.

In Canada, recent jurisprudence has permitted foreign claimants to bring legal actions in relation to alleged human rights violations and tort claims which may have occurred in their home country. This includes the adoption of international customary law principles as actionable torts in Canada. In addition, international bodies, such as the Inter-American Commission and the Inter-American Court of Human Rights, may adopt precautionary measures or make orders for member states in respect of human rights violations that could materially impact our operations. In 2019 we established a Global Human Rights Policy, which sets out our commitment to respect human rights. We also appointed a human rights officer. To align with international best practices, we have conducted a gap assessment of our security practices against the requirements of the Voluntary Principles on Security and Human Rights and UNICEF's Child Rights and Security Checklist at our three operations with armed security forces: La Colorada and Dolores in Mexico, and Escobal in Guatemala. As part of our commitment to driving global sustainable development and contributing to the United Nations Sustainable Development Goals, we became signatories to the United Nations Global Compact in July 2020. As a signatory, we will annually report our progress beginning in 2021 on embedding the United Nations Global Compact Principles into business operations. These initiatives were designed, in part, to further reduce the risks of alleged human rights violations. However, there is no assurance that claims of human rights violations will not be asserted against us and we may suffer material consequences to our business, including among other things, damages awards, delays and closures, increased costs, and significant reputational damage.

Developments Regarding Indigenous Peoples

Some of our operations are near areas presently or previously inhabited or used by Indigenous peoples, or have communities nearby. There are many national and international laws, regulations, conventions, codes and other instruments dealing with the rights of Indigenous peoples that impose obligations on governments and entities. Many of these are complex and interwoven in application, and are integrated and applied differently by governments, communities, Indigenous peoples, and other interest groups. These may include a mandate that government consult with Indigenous communities surrounding our projects and mines regarding actions affecting local stakeholders, prior to granting us mining rights, permits or approvals. Applicable conventions, such as the ILO Convention 169 which has been ratified by Argentina, Peru and Guatemala, is an example of such an international convention and one that is presently impacting our operations in Guatemala where the Escobal mine has been suspended pending completion of an ILO 169 consultation process.

The United Nations Declaration on the Rights of Indigenous Peoples ("UNDRIP") was negotiated over a 24-year period with Indigenous peoples, member states and UN experts and was adopted by the UN General Assembly in September 2007. Canada officially endorsed UNDRIP in 2016 and in June 2021, the *United Nations Declaration on the Rights of Indigenous Peoples Act* was enacted into law in Canada to align and harmonize Canadian laws with UNDRIP. The substantive impact of UNDRIP on each member states' obligations to Indigenous peoples, including in Canada, remains uncertain, particularly with respect to the principle of free, prior and informed consent. At minimum, UNDRIP and the UNDRIP Act are likely to result in more robust consultation processes with potentially affected Indigenous peoples where projects trigger their application. Such requirements under UNDRIP and the associated application under Canadian law could impact our operations and our ability to develop new operations.

In Canada, our Timmins West and Bell Creek operations engaged in consultation processes with local First Nations communities, and Lake Shore is a party to IBAs with certain local First Nation communities which outlines a framework for the ongoing relationship between the parties, including with respect to consultation.

New or amended laws, regulations and conventions respecting the rights of Indigenous peoples, including with respect to the acquisition and use of lands, may alter decades old arrangements or agreements made by prior owners of our mines and properties, or even those made by us in more recent years. There can be no guarantee that

we have entered into all agreements with Indigenous peoples in accordance with the laws and international standards and norms governing such relationships or that future laws and actions will not have a material adverse effect on our rights or ability to explore or mine, or on our financial position, cash flow, and results of operations. Furthermore, it is not uncommon for Indigenous peoples to challenge agreements or arrangements previously entered into for various reasons. Public opposition, including opposition by NGOs, to mining activities has also increased in recent years, in part due to the perceived effects of those activities on local communities and on Indigenous peoples. There has been an increase in resort to strategic litigation supported by NGOs and other interest groups in reference to laws, regulations and conventions respecting the rights of Indigenous peoples, which if targeted at our operations, could have a material impact on the future operations of our mines.

If we cannot maintain an agreement or positive relationship with Indigenous peoples in respect of our operations, there may be significant disruptions in our operations and activities, we may be subject to legal or administrative proceedings, and we may be precluded from operating, or from continuing to operate, in such areas. There could also be significant harm to our reputation. The risks associated with operating or conducting activities in or near areas presently or previously inhabited by Indigenous peoples could further impact our ability to acquire or advance development projects and complete, or realize benefits from, future acquisitions.

COVID-19 and Other Pandemics

Since the outbreak of the coronavirus (COVID-19) in late 2019, it has spread into areas where we have operations and where our offices are located. In 2020, government efforts to curtail the spread of COVID-19 resulted in the temporary suspensions of our operations in Mexico, Peru, Argentina and Bolivia, and we have reduced throughput at our operations in order to enhance physical distancing and protect our personnel and the community. The spread of COVID-19 has impacted our employees and contractors, not only as it relates to potential health concerns, but also in terms of limitations on movement, availability of food and other goods, and personal well-being, among others. Our suppliers and service providers have also been impacted.

While COVID-19 has already had significant, direct impacts on our operations, our business, our workforce, and our production, the extent to which COVID-19 will continue to impact our operations will depend on future developments which are highly uncertain and cannot be predicted with confidence. These future developments include, but are not limited to, the duration of any outbreak, new information that may emerge concerning the severity of COVID-19, including variants of the disease, and the actions taken to contain COVID-19 or treat it. The impact of governmental restrictions and health and safety protocols could improve or worsen relative to our assumptions, depending on how each jurisdiction manages potential outbreaks of COVID-19, the development and adequate supply of vaccines, and the effectiveness of such vaccines. We assume operations will continue to be impacted by comprehensive COVID-19 protocols in 2022, which would increase costs and restrict throughput levels, especially at our underground mines. Our ability to conduct exploration and development programs was also impacted in 2021 due to COVID-related restrictions, protocols and travel restrictions, and we anticipate that this impact will also be felt in 2022. Our ability to continue with our operations and activities, or to successfully maintain our operations on care and maintenance if so required, or to restart or ramp-up any such operations efficiently or economically, or at all, is unknown.

Moreover, the continued presence of, or spread, of COVID-19, and any future emergence and spread of COVID-19 mutations or other pathogens, globally would likely have material adverse effect on both global and regional economies, including those in which we operate, as we have seen already. Such effects would not only affect our business and results of operations, but also the operations of our suppliers, contractors and service providers, including smelter and refining service providers, and the demand for our production. COVID-19 could also negatively impact stock markets, including the trading price of our shares, adversely impact our ability to raise capital, cause continued interest rate volatility and movements that could make obtaining financing or refinancing our debt obligations more challenging or more expensive (if such financing is available at all), and result in any operations affected by coronavirus becoming subject to quarantine or shut down. Inflationary pressures relating to COVID-19 global financial support measures and current supply chain challenges are also having both direct and indirect impacts on our costs to operate, which could have a material impact on our financial results. Any of these developments, and others, could have a material adverse effect on our business and results of operations.

Exploration and Development Risks

The long-term operation of our business and its profitability is dependent, in part, on the cost and success of our exploration and development programs. Mineral exploration and development is highly speculative and involves significant risks. Few properties that are explored are ultimately developed into producing mines. There is no assurance that our mineral exploration and development programs will result in discoveries of economic quantities of mineralization that are necessary for a property to be brought into commercial production. The commercial viability of a mineral deposit, once discovered, is also dependent upon a number of factors, including, among other things, (i) the particular attributes of the deposit, such as size, grade, and metallurgy; (ii) interpretation of geological data; (iii) feasibility studies; (iv) proximity to infrastructure and availability of labour, power, and water; (v) metal prices; (vi) foreign currency exchange rates; and (vii) government regulations, including regulations relating to development, taxation, royalties, import and export, and environmental protection.

The actual operating results of our projects may differ materially from those we had anticipated due to these and other factors, many of which are beyond our control. There can be no assurance that our acquisition, exploration, and development programs will yield new mineral reserves to replace or expand current mineral reserves, or that they will result in additional production. Unsuccessful exploration or development programs could have a material adverse effect on our operations and profitability.

Imprecision in Mineral Reserve and Mineral Resource Estimates

Our mineral reserves and mineral resources are estimates. No assurances can be given that the estimated levels of mineral reserves or mineral resources are accurate, or that the estimates will result in material being produced or processed profitably. These estimates are expressions of judgment based on knowledge and experience, and are based on assumptions and interpretation of available geological, geochemical and operational data and information. Valid estimates made at a given time may significantly change when new information becomes available. It may take many years from the initial phase of drilling before production occurs, and during that time, the economic feasibility of our projects may change and may ultimately prove unreliable.

Fluctuations in the market price of silver, gold and other metals, as well as increased capital or production costs or reduced recovery rates, may render our mineral reserves uneconomic to develop for a particular project or result in a reduction of mineral reserves. No assurances can be given that any mineral resource estimate will ultimately be reclassified as proven or probable mineral reserves or that mineralization can be mined or processed profitably. Inferred mineral resources have a great amount of uncertainty as to their existence and as to their economic and legal feasibility. Mineral resource estimates may also be recalculated based on actual production experience. The evaluation of mineral reserves or mineral resources is influenced by economic and technological factors, which may change over time. If our mineral reserve or mineral resource figures are reduced in the future, this could have an adverse impact on Pan American's future cash flows, earnings, results of operations, and financial condition.

This AIF and the documents incorporated by reference herein have been prepared and disclosed in accordance with the requirements of Canadian securities laws that differ from the requirements of United States securities laws. Please refer to the section, "Cautionary Note to U.S. Investors Concerning Estimates of Mineral Reserves and Mineral Resources" on page 7.

Production and Cost Estimates

We prepare estimates of future production and future production costs for our operations. No assurance can be given that production and cost estimates will be achieved. These production and cost estimates are based on many factors and assumptions, including: the accuracy of mineral reserve estimates; ground conditions and physical characteristics of ores, such as hardness and the presence or absence of particular metallurgical characteristics; equipment and mechanical availability; labour availability and productivity; access to the mine; facilities and infrastructure; sufficient materials and supplies on hand; and the accuracy of estimated rates and costs of mining and processing, including the cost of human and physical resources required to carry out our activities. Failure to achieve production or cost estimates, or increases in costs, could have an adverse impact on our future cash flows, earnings, results of operations, and financial condition.

Actual production and costs may vary from estimates for a variety of reasons, including actual ore mined varying from estimates of grade, tonnage, dilution and metallurgical and other characteristics; short-term operating factors relating to the mineral reserves**,** such as the need for sequential development of orebodies and the processing of new or different ore grades; and risks and hazards associated with mining. In addition, there can be no assurance that silver recoveries or other metal recoveries in small scale laboratory tests will be duplicated in larger scale tests under on-site conditions or during production, or that the existing known and experienced recoveries will continue. Costs of production may also be affected by a variety of factors, including changing stripping ratios, ore grade metallurgy, labour costs and productivity, costs of supplies and services (such as, for example, fuel and power), general inflationary pressures, and currency exchange rates. Failure to achieve production estimates could have an adverse impact on our future cash flows, earnings, results of operations, and financial condition.

Infrastructure

Mining, processing, development, and exploration activities depend, to one degree or another, on adequate infrastructure. Reliable roads, bridges, power, and water supply are important determinants for capital and operating costs, and sufficient and functional processing equipment and facilities are critical to our operations. The lack of availability or the delay in the availability of any one or more of these items could prevent or delay the development of our projects, result in the failure to achieve the anticipated production volume, and increase the construction costs and ongoing operating costs associated with our projects and operations. Similarly, continued improvements or replacement of existing infrastructure may require high capital investments and involve significant delays. In addition, unusual weather phenomena, sabotage, government, or other interference in the maintenance or provision of such infrastructure could adversely affect our operations and profitability.

Replacement of Reserves

The La Colorada, Dolores, Huaron, Morococha, Shahuindo, La Arena, Timmins West, Bell Creek, San Vicente and Manantial Espejo (including COSE and Joaquin) mines accounted for all of our production in 2021. Current life-of-mine plans provide for a defined production life for mining at each of our mines. For example, active mining at the Alamo Dorado mine ended in 2017 and the mine was transitioned to a reclamation phase. There is no assurance that any of our green field or near mine exploration projects will be successful, and substantial expenditures are required to establish mineral reserves. If our mineral reserves are not replaced either by the development or discovery of additional mineral reserves and/or extension of the life-of-mine at our current operating mines or through the acquisition or development of additional producing mines, this could have an adverse impact on our future cash flows, earnings, results of operations, and financial condition, and this may be compounded by requirements to expend funds for reclamation and decommissioning.

Trading Activities and Credit Risk

The zinc, lead, and copper concentrates produced by us 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.

At December 31, 2021, we had receivable balances associated with buyers of its concentrates of $40.0 million (2020 - $35.1 million) and receivable balances associated with buyers of its doré of $nil (2020 - $nil million). The vast majority of our concentrate is sold to five well-known concentrate buyers.

Doré production is refined under long term agreements with fixed refining terms at five 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. For example, in November 2018, Republic, a refinery used by us, filed for bankruptcy. At the time of the bankruptcy, Republic had possession of approximately $4.9 million of our metal and we are pursuing a claim to collect damages. At December 31, 2021, we had approximately $52.3 million (2020 - $61.8 million) of value contained in precious metal inventory at refineries. We maintain insurance coverage against the loss of precious metals at our mine sites and in-transit to 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 our counterparties' credit risk 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 we operate. These advances represent a credit risk to us to the extent that suppliers do not deliver products or perform services as expected. As at December 31, 2021, we had made $11.2 million of supplier advances (2020 - $8.2 million), which are reflected in "Trade and other receivables" on Pan American'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 AIF, 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.

Taxation Risks

In addition to the risks relating to taxation discussed under the heading "Risks Related to Our Business – Governmental Regulation", we are also exposed to other tax related risks. In assessing the probability of realizing income tax assets recognized, we make 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 our 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 us from realizing the tax benefits from the deferred tax assets. We reassess unrecognized income tax assets at each reporting period.

Exchange Rate Risk

We report our financial statements in USD; however, we operate in jurisdictions that utilize other currencies. As a consequence, the financial results of our operations, as reported in USD, are subject to changes in the value of the USD relative to local currencies. Since our sales are denominated in USD and a portion of our operating costs and capital spending are in local currencies, we are negatively impacted by strengthening local currencies relative to the USD and positively impacted by the inverse.

From time to time, we mitigate part of this currency exposure by accumulating local currencies, entering into contracts designed to fix or limit our 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. Pan American held cash and short-term investments of $60.5 million in CAD, $1.2 million in MXN, $8.6 million in PEN, $12.5 million in ARS, $8.4 million in BOB, and $0.2 million in QTZ as at December 31, 2021. As at December 31, 2021, Pan American had outstanding positions on $36.0 million in foreign currency exposure of MXN purchases, $16.8 million of PEN purchases, and $48.0 million of CAD purchases. The MXN positions had weighted average USD put and call exchange rates of $20.50 and $26.08, respectively, expiring between January 2022 and December 2022. The PEN positions had a weighted average USD fixed exchange rate of $4.13, expiring between January 2022 and December 2022. The CAD positions had weighted average USD put and call exchange rates of $1.26 and $1.32, respectively, expiring between January 2022 and December 2022.

For the year ended December 31, 2021, we recorded losses of $0.2 million (2020 - gains of $1.6 million), losses of $3.7 million (2020 - losses of $2.2 million), and gains of $0.9 million (2020 - losses of $0.6 million) on MXN, PEN, and CAD derivative contracts, respectively.

Our 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 our income statement.

In addition to the foregoing, governmental restrictions and controls relating to exchange rates also impact our operations. In Argentina, for example, the government has at times established official exchanges rates that were significantly different than the unofficial exchange rates more readily utilized locally to determine prices and value. Our investments in Argentina are primarily funded from outside of the country, and therefore conversion of foreign currencies, like USD, at the official exchange rate has had the effect of reducing purchasing power and substantially increasing relative costs in an already high inflationary market. Maintaining monetary assets in ARS also exposes us to the risks of ARS devaluation and high domestic inflation.

Please refer to the 2021 MD&A for a detailed sensitivity analysis of the effect of changes in the exchange rates of certain currencies against the USD on anticipated cost of sales for 2022.

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.

We are required to use a portion of our cash flow to service principal and interest on debt, which will limit the cash flow available for other business opportunities. We also maintain and enter into intercompany credit arrangements with our subsidiaries in the normal course. Our ability to make scheduled principal payments, pay interest on or refinance our indebtedness depends on our future performance, our cash flows, and applicable interest rates, which directly impacts our costs of financeing, and which are subject to economic, financial, competitive and other factors beyond our control. Unexpected delays in production, the suspension of our mining licenses, or other operational problems could impact our ability to service the debt and make necessary capital expenditures when the debt becomes due. If we are unable to generate such cash flow to timely repay any debt outstanding, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to refinance our indebtedness will depend on the capital markets, applicable interest rates, and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations.

Limited Supplies and Supply Chain Disruptions

Our operations depend on an uninterrupted supply of reagents (including cyanide at some operations), production inputs, and other supplies and resources such as skilled personnel. Supply may be interrupted due to a shortage or the scarce nature of inputs, especially with regard to chemical reagents. Supply might also be interrupted due to transportation and logistics associated with the remote location of some of our operations, and government restrictions or regulations which delay importation of necessary items. COVID 19 has had a significant impact on global supply chains, which has impacted our ability to source supplies required for our operations and has increased the costs of those supplies. Any interruptions to the procurement and supply of reagents, production inputs and other supplies, or the availability of skilled personnel, as well as increasing rates of inflation, could have an adverse impact on our future cash flows, earnings, results of operations, and financial condition.

Competitive Conditions

The mining industry is very competitive, particularly with respect to properties that produce, or are capable of producing, silver, gold, and other metals. Mines have limited lives and, as a result, Pan American continually seeks to replace and expand mineral reserves through the acquisition of new properties. In addition, there is a limited supply of desirable mineral lands available in areas where we would consider conducting exploration and/or production activities. Because we face strong competition for new properties from other mining companies, some of which have greater financial resources than we do, we may be unable to acquire attractive new mining properties on terms that we consider acceptable.

Competition for resources is intense, particularly affecting the availability of manpower, drill rigs, mining equipment, and production equipment. Competition in the mining business for limited sources of capital could adversely impact our ability to acquire and develop suitable silver mines, silver developmental projects, silver producing companies, or properties having significant exploration potential. As a result, there can be no assurance that our acquisition and exploration programs will yield new mineral reserves to replace or expand current mineral reserves, or that we will able to maintain production levels in the future.

Our competitive position is largely determined by our costs compared to other producers throughout the world and our ability to maintain our financial integrity through the lows of the metal price cycles. Costs are governed to a large extent by the location, grade, and nature of mineral reserves as well as by operating and management skills. In contrast with diversified mining companies, we focus on silver production, development, and exploration, and are therefore subject to unique competitive advantages and disadvantages related to the price of silver and to a lesser extent, the price of gold and base metal by-products. If silver prices substantially increase, we will be in a relatively stronger competitive position than diversified mining companies that produce, develop, and explore for other minerals in addition to silver. Conversely, if silver prices substantially decrease, we may be at a competitive disadvantage to diversified mining companies.

Employee Recruitment, Retention and Human Error

Recruiting and retaining qualified personnel is critical to our success. We are dependent on the services of key executives including Pan American's President and Chief Executive Officer and other highly skilled and experienced executives and personnel focused on managing our interests. The number of persons skilled in acquisition, exploration, and development of mining properties is limited and competition for such persons is intense. As our business activity grows, we will require additional key financial, administrative, and mining personnel as well as additional operations staff. In addition, as a result of the implementation of COVID 19 related restrictions, technology, and the growth in work from home or hybrid employment arrangments, employees have become more mobile and available to a wider pool of employers and industries, presenting further challenges in retaining key personnel. There can be no assurance that we will be successful in attracting, training, and retaining qualified personnel as competition for persons with these skill sets increases. If we are not successful in attracting, training, and retaining qualified personnel, the efficiency of our operations could be impaired, which could have an adverse impact on Pan American's future cash flows, earnings, results of operations, and financial condition.

Even when efforts to attract and retain qualified personnel and consultants to manage our interests are successful, people are fallible and human error and mistakes could result in significant uninsured losses to us. These could include, but are not limited to, loss or forfeiture of mineral claims or other assets for non-payment of fees or taxes, erroneous or incomplete filings or non-fulfillment of other obligations, significant tax liabilities in connection with any tax planning effort we might undertake or mistakes in interpretation and implementation of tax laws and practices, and legal claims for errors or mistakes by our personnel.

Employee Relations

Our employees and contractors are free to pursue collective bargaining and unions have been established at many of our operations. Although we have reached agreements with our various unions and place significant emphasis on maintaining positive relationships with the unions and employees, we have experienced labour strikes and work stoppages in the past. Should they occur, some labour strikes and work stoppages have the potential to materially affect our operations and thereby adversely impact our future cash flows, earnings, production, and financial conditions.

Economic Dependence

We have 25 customers that account for 100% of our concentrate and silver and gold sales revenue. We had 7 customers that accounted for 21%, 13%, 12%, 11%, 9%, 7%, and 7% of total sales in 2021. The loss of certain of these customers or curtailment of purchases by such customers could have a material adverse effect on our results of operations, financial condition, and cash flows.

General Economic Conditions

General economic conditions may adversely affect our growth, profitability and ability to obtain financing. Events in global financial markets in the past several years have had a profound impact on the global economy, particularly with the injection of monetary support and the massive increase in government debt in response to the COVID-19 pandemic since early 2020. Many industries, including the silver and gold mining industry, have been and continue to be impacted by these market conditions. Some of the key impacts of the current financial market turmoil include contraction in credit markets resulting in a widening of credit risk, inflation and projected interest rate increases, currency devaluations, high volatility in global equity, commodity, foreign exchange and precious metal markets and a lack of market confidence and liquidity. A continued or worsened slowdown in the financial markets or other economic conditions, including but not limited to, consumer spending, employment rates, business conditions, inflation, fuel and energy costs, consumer debt levels, lack of available credit, the state of the financial markets, interest rates and tax rates, may adversely affect our growth, profitability and ability to obtain financing. A number of issues related to economic conditions could have a material adverse effect on our business, financial condition and results of operations, including:

- inflation, volatility and other pressures in credit markets could impact the cost and availability of financing and our overall liquidity;
- the volatility of silver, gold and other metal prices would impact our revenues, profits, losses and cash flow;
- recessionary pressures could adversely impact demand for our production;
- volatile energy, commodity and consumables prices and currency exchange rates could impact our production costs; and
- the devaluation and volatility of global stock markets could impact the valuation of our equity and other securities.

As noted, COVID-19 has had dramatic impacts on many countries and on the global economy. The ongoing efforts against the spread of COVID-19, including with respect to recent mutations, will likely continue to result in governmental restrictions that will impact economies around the world, reduce the availability of workforces, and drive up consumer costs for supplies and services. It is uncertain whether vaccines will be successful in combating the virus, and vaccines have not been made available or distributed adequately or equitably in some jurisdictions. The presence of COVID-19 and its continued spread will likely have ongoing negative impacts on our business and financial performance, and such impacts could be material.

Compliance

We are subject to complex laws and regulatory regimes that differ in the various jurisdictions in which we operate and are sometimes extra-jurisdictional in application. Ensuring that such laws and regulatory requirements are understood and followed by our personnel is difficult and we may inadvertently fail to comply with such laws and requirements or they may be contravened by our personnel. We have established programs, policies, controls, training, and monitoring to reduce and mitigate risks in certain areas, including anti-corruption compliance. In this respect, we have adopted a Global Code of Ethical Conduct and a Global Anti-Corruption Policy, developed a training program, implemented internal controls to identify potential risks, and taken other steps to reduce the risk of non-compliance with applicable anti-corruption laws, including in the United States and Canada. However, there is no guarantee such programs, policies, controls, training or monitoring will prevent violations of the law, particularly by individual employees or agents. Violations of such laws, particularly those relating to corruption, could lead to the imposition of substantial fines, penalties or other civil or criminal prosecution or sanctions, and could severely damage our reputation. Such fines, penalties, and sanctions, and any damage to our reputation, could have a material adverse effect on our business.

Climate Change

There is significant evidence of the effects of climate change on our planet and an intensifying focus on addressing these issues. We recognize that climate change is a global challenge that may have both favorable and adverse effects on our business in a range of possible ways. Mining and processing operations are energy intensive and result in a carbon footprint either directly or through the purchase of fossil-fuel based electricity. As such, we are impacted by current and emerging policy and regulation relating to greenhouse gas emission levels, energy efficiency, and reporting of climate-change related risks. While some of the costs associated with reducing emissions may be offset by increased energy efficiency, technological innovation, or the increased demand for our metals as part of technological innovations, the current regulatory trend may result in additional transition costs at some of our operations. Governments are introducing climate change legislation and treaties at the international, national, and local levels, and regulations relating to emission levels and energy efficiency are evolving and becoming more rigorous. Current laws and regulatory requirements are not consistent across the jurisdictions in which we operate, and regulatory uncertainty is likely to result in additional complexity and cost in our compliance efforts. Public perception of mining is, in some respects, negative and there is increasing pressure to curtail mining in many jurisdictions as a result, in part, of perceived adverse effects of mining on the environment and on local communities. Concerns around climate change may also affect the market price of our shares as institutional investors and others may divest interests in industries that are thought to have more environmental impacts. While we are committed to operating responsibly and reducing the negative effects of our operations on the environment, our ability to reduce emissions, energy and water usage by increasing efficiency and by adopting new innovation is constrained by technological advancement, operational factors and economics. Adoption of new technologies, the use of renewable energy, and infrastructure and operational changes necessary to reduce water usage may also increase our costs significantly. Concerns over climate change, and our ability to respond to regulatory requirements and societal pressures, may have significant impacts on our operations and on our reputation, and may even result in reduced demand for our products.

The physical risks of climate change could also adversely impact our operations. These risks include, among other things, extreme weather events, resource shortages, changes in rainfall and in storm patterns and intensities, water shortages, changing sea levels and extreme temperatures. Climate-related events such as mudslides, floods, droughts and fires can have significant impacts, directly and indirectly, on our operations and could result in damage to our facilities, disruptions in accessing our sites with labour and essential materials or in shipping products from our mines, risks to the safety and security of our personnel and to communities, shortages of required supplies such as fuel and chemicals, inability to source enough water to supply our operations, and the temporary or permanent cessation of one or more of our operations. There is no assurance that we will be able to anticipate, respond to, or manage the risks associated with physical climate change events and impacts, and this may result in material adverse consequences to our business and to our financial results.

Information and Cyber Security

The secure processing, maintenance and transmission of information and data is critical to our business. Furthermore, we and our third-party service providers collect and store sensitive data in the ordinary course of our business, including personal information of our employees, as well as proprietary and confidential business information relating to ourselves and in some cases, our customers, suppliers, investors and other stakeholders. With the increasing dependence and interdependence on electronic data communication and storage, including the use of cloud-based services and personal devices, we are exposed to evolving technological risks relating to this information and data. These risks include targeted attacks on our systems or on systems of third parties that we rely on, failure or non-availability of a key information technology systems, or a breach of security measures designed to protect our systems. While we employ security measures in respect of our information and data, including implementing systems to monitor and detect potential threats, the performance of periodic audits, and penetration testing, we cannot be certain that we will be successful in securing this information and data and there may be instances where we are exposed to malware, cyber-attacks or other unauthorized access or use of our information and data. Any data breach or other improper or unauthorized access or use of our information could have a material adverse effect on our business and could severely damage our reputation, compromise our network or systems and result in a loss or escape of sensitive information, a misappropriation of assets or incidents of fraud, disrupt our normal operations, and cause us to incur additional time and expense to remediate and improve our information systems. For example, in 2020, a silver concentrate customer, on the basis of a fraudulent email received referencing the concentrate delivery details from Bolivia and the precise payment amounts due, made payment for the concentrate shipment into an unknown bank account, impacting both the customer and payment to us. In addition, we could also be subject to legal and regulatory liability in connection with any such cyber-attack or breach, including potential breaches of laws relating to the protection of personal information.

Stakeholder Confidence

Our business and operations require us to develop and maintain strong and trusting relationships with key stakeholders, including local communities, Indigenous peoples, governments and other groups and institutions. Poor management of these relationships, inadequate attention to matters of importance to these stakeholders, and operating in a manner that is perceived as unethical or damaging to the environment or to people could result in an erosion of trust and confidence in us and have negative impacts on our business and our financial and operating results. It can also affect our reputation more broadly, including with shareholders, government bodies, NGOs and other interest groups, the media, and the general public. A loss of trust and confidence and negative public opinion could impact our ability to obtain permits, licenses and other approvals, impede our efforts to find growth opportunities, materially increase our costs and expenses, result in legal claims and challenges, decrease the price of our shares and create negative market sentiment, all of which could have material impacts on our business and profitability. Since 2020, the importance of ESG performance requirements, standards and reporting has increased significantly across all stakeholder groups. While the Company has in place numerous programs and commitments with respect to ESG, there is no assurance that the Company will be able to adequately address all ESG pressures and potential requirements to maintain stakeholder confidence.

Acquisitions and Integration

An element of our business strategy is to make selected acquisitions. For example, we completed the acquisition of Tahoe on February 22, 2019, and spent significant time and effort on integrating the Tahoe operations and workforce during the remainder of 2019 and into 2020. Over our history, we have also completed a number of other important acquisitions, including: the La Colorada mine in 1998; Corner Bay (the Alamo Dorado mine) in 2003; Argentum (the Morococha mine) in 2004; the remaining 50% interest in the Manantial Espejo project in 2006; an additional 40% interest in PASB in respect of the San Vicente mine in May 2007; Aquiline (the Navidad property) in 2010; Minefinders (the Dolores mine) in 2012; and in 2017, the Joaquin and COSE properties in Argentina. We expect to continue to evaluate acquisition opportunities on a regular basis and intend to pursue those opportunities that we believe are in our long-term best interests. The success of our acquisitions will depend upon a number of factors, including the adequacy, completeness, analysis and interpretation of information obtained during due diligence, our ability to effectively manage the integration and operations of entities once we complete an acquisition, and our ability, in some cases, to make improvements or advancements that we anticipated. The process of managing acquired businesses may involve unforeseen difficulties and risks, and may require a disproportionate amount of management resources and expenditures. There can be no assurance that we will be able to successfully manage the integration and operations of businesses we acquire, or that the anticipated benefits of our acquisitions will be realized.

In addition to acquisitions, we periodically enter into joint venture, option and similar arrangements which, among other things, also require an investment in time and capital, and are subject to risks associated with due diligence matters. We also occasionally make investments in other mining companies, such as our investments in Maverix and in New Pacific Metals Corp. Such arrangements may depend, in part, on other parties and may be speculative in nature. There is no guarantee that any of these arrangements will be successful or that we will recover any capital or other investments made in relation thereto.

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 IFRS. Management assesses the effectiveness of our internal control over financial reporting based on the criteria set forth in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. We also engage an independent registered public accounting firm to audit and provide independent opinions on the effectiveness of our internal control over financial reporting.

We may fail to achieve and maintain the adequacy of our internal control over financial reporting as such standards are modified, supplemented, or amended from time to time, and we may not be able to ensure that we can conclude on an ongoing basis that we have effective internal control over financial reporting. 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. No evaluation can provide complete assurance that our internal control over financial reporting will prevent or detect misstatements on a timely basis, or detect or uncover all failures of persons employed by us to disclose material information otherwise required to be reported. The effectiveness of our control and procedures could also be limited by simple errors or faulty judgments. In addition, as we continue to expand, the challenges involved in implementing appropriate internal control over financial reporting will increase and will require that we continue to improve our internal control over financial reporting.

Our failure to satisfy these requirements on a timely basis could result in the loss of investor confidence in the reliability of our financial statements, which in turn could harm our business and negatively impact the trading price of our shares or market value of our other securities. In addition, any failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm our operating results or cause us to fail to meet our reporting obligations. There can be no assurance that we will be able to remediate material weaknesses, if any, identified in future periods, or maintain all of the controls necessary for continued compliance, and there can be no assurance that we will be able to retain sufficient skilled finance and accounting personnel, especially in light of the increased demand for such personnel among publicly traded companies. Future acquisitions of companies may provide us with challenges in implementing the required processes, procedures and controls in our acquired operations. Acquired companies may not have disclosure controls and procedures or internal control over financial reporting that are as thorough or effective as those required by securities laws currently applicable to us.

Claims and Legal Proceedings

We are 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 are from current or ex-employees, or employees of former or current owners of our operations such as the Quiruvilca-related claims in Peru, which could in the aggregate, be of significant value, and include alleged improper dismissals, workplace illnesses, such as silicosis, and claims for additional profit-sharing and bonuses in prior years.

We may also become subject to class action lawsuits. For example, in mid-2017, Tahoe, which was acquired by us in late February 2019, and certain of its former directors and officers became the subject of three purported class action lawsuits filed in the United States that center primarily around alleged misrepresentations. These U.S. class action lawsuits were later consolidated into one class action suit that is ongoing in Nevada. In October 2018, Tahoe learned that a similar proposed class action lawsuit had been filed against Tahoe and its former chief executive officer in the Superior Court of Ontario. These lawsuits seek significant damages. We have disputed the allegations made in these suits, however the outcomes are not determinable at this time.

We may also be subject to proceedings in our commercial relationships. If we are unsuccessful in our defense of any such claims, we may be subject to significant losses.

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, or environmental or social damage, and such claimants may seek sizeable monetary damages against us and/or the return of surface or mineral rights or revocation of permits and licenses that are valuable to us and which may 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 against 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 us. 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.

DIVIDENDS

On February 15, 2010, Pan American's Board of Directors declared its first cash dividend, and has paid a quarterly dividend since that time. Over the past three years, we have declared the following dividends:

Year	Declaration Date	Amount per Common Share
2021	• November 9 • August 10 • May 12 • February 17	• $0.10 • $0.10 • $0.07 • $0.07
2020	• November 4 • August 5 • May 6 • February 19	• $0.07 • $0.05 • $0.05 • $0.05
2019	• November 6 • August 7 • May 8 • February 20	• $0.035 • $0.035 • $0.035 • $0.035

Each of the foregoing dividends was designated to be an eligible dividend for the purposes of the *Income Tax Act* (Canada). Beginning in 2022, we have established a dividend policy to enhance shareholder return when our liquidity position is strong. The quarterly dividend will have a base of $0.10 per common share and will be adjusted variably depending on our net cash position (cash and cash equivalents plus short term investments (other than equity securities) minus total debt) on the balance sheet for the previous quarter, as illustrated in the following table:

Net Cash (Millions)	Base Dividend Per Quarter (Per Common Share)	Variable Dividend Per Quarter (Per Common Share)	Total Dividend Per Quarter (Per Common Share)
Less than $100	$0.10	$0.00	$0.10
Greater than $100 and less than $200	$0.10	$0.01	$0.11
Greater than $200 and less than $300	$0.10	$0.02	$0.12
Greater than $300 and less than $400	$0.10	$0.06	$0.16
Greater than $400	$0.10	$0.08	$0.18

Notes:

Net cash and total debt are non-GAAP measures and do not have standardized meanings prescribed by IFRS. For additional information, please see "Non-GAAP Measures" on page 2 of this AIF.

The Board of Directors may, in the future, modify our dividend policy in its discretion. The Board will consider a variety of factors when making its dividend decisions, including availability and sources of cash, future anticipated funding needs, general and regional economic conditions, and expectations with respect to operational matters such as anticipated metals production and metals prices.

MARKET FOR SECURITIES

Pan American's Common Shares are listed and posted for trading on the Toronto Stock Exchange and The Nasdaq Stock Market ("Nasdaq") under the symbol "PAAS". The majority of trading of our Common Shares takes place on Nasdaq. The following table outlines the closing share price trading range and volume of shares traded by month in 2021:

Toronto Stock Exchange (CAD$)				Nasdaq Stock Market (USD$)			
Month	**High**	**Low**	**Volume**	**Month**	**High**	**Low**	**Volume**
January	$ 48.53	$ 36	12,923,400	January	$ 38.3	$ 28.12	74,492,935
February	$ 46.79	$ 40.24	10,967,400	February	$ 36.78	$ 31.5	80,654,564
March	$ 42.82	$ 37.04	9,911,200	March	$ 34.49	$ 29.34	60,055,328
April	$ 43.31	$ 39.08	8,348,000	April	$ 34.74	$ 31.33	37,741,539
May	$ 42.5	$ 36.27	11,388,800	May	$ 34.99	$ 29.82	59,170,149
June	$ 40.69	$ 34.73	11,914,900	June	$ 33.73	$ 28.15	56,588,633
July	$ 35.91	$ 33.3	6,649,500	July	$ 28.84	$ 26.19	38,760,998
August	$ 35.04	$ 30.66	8,899,100	August	$ 27.94	$ 23.93	41,401,648
September	$ 33.32	$ 29.29	8,799,000	September	$ 26.62	$ 22.96	37,533,104
October	$ 32.89	$ 29	8,274,000	October	$ 26.53	$ 23.03	35,267,666
November	$ 35.04	$ 31.33	9,731,300	November	$ 27.79	$ 25.13	37,557,463
December	$ 32.14	$ 28.33	8,600,700	December	$ 25.17	$ 22.09	47,064,834

DIRECTORS AND EXECUTIVE OFFICERS

The names of our directors and executive officers as at December 31, 2021, are set out below, as well as their municipalities of residence, positions with Pan American, and principal occupations for the past five years:

Name and Municipality of Residence	Position with Pan American	Principal Occupation During the Past Five Years
Michael Carroll[1,2] Walnut Creek, California, U.S.A.	Director since January 1, 2011	Corporate Director
Neil de Gelder, Q.C.[1,2,3] Vancouver, B.C. Canada	Director since July 3, 2012	Corporate Director; Exec. VP of Stern Partners, a private diversified investment firm, prior to January 1, 2021
Charles Jeannes[2,4,5] Reno, Nevada U.S.A.	Director since February 22, 2019	Corporate Director
Jennifer Maki[1,5] Toronto, ON Canada	Director since May 12, 2021	Corporate Director
Walter Segsworth[2, 3,4] West Vancouver, B.C. Canada	Director since May 12, 2009	Corporate Director

Kathleen Sendall [4,5] Calgary, Alberta Canada	Director since December 16, 2020	Corporate Director
Michael Steinmann [4,5] North Vancouver, B.C. Canada	Director (since January 1, 2016) and President and CEO	CEO of Pan American since January 1, 2016; President since February 18, 2015; prior to that, other senior management roles with Pan American since 2004
Gillian Winckler[3] Vancouver, B.C. Canada	Director since May 11, 2016 Board Chair since May 12, 2021	Corporate Director
Steven Busby Vancouver, B.C. Canada	COO	COO of Pan American since May 13, 2008; prior to that, other senior management roles with Pan American since 2003
Brent Bergeron North Vancouver, B.C. Canada	SVP, Corporate Affairs & Sustainability	SVP, Corporate Affairs & Sustainability since September 1, 2019; previously Executive VP, Corporate Affairs & Sustainability for Goldcorp Inc.
A. Robert Doyle North Vancouver, B.C. Canada	CFO	CFO of Pan American since January 2004
Christopher Emerson Vancouver, B.C. Canada	VP, Business Development and Geology	VP, Business Development & Geology of Pan American since August 10, 2015
George Greer Surrey, B.C. Canada	SVP, Project Development	SVP, Project Development of Pan American since January 1, 2012; prior to that, other senior management roles with Pan American since 2007
Christopher Lemon Vancouver, B.C. Canada	General Counsel	General Counsel of Pan American since August 2, 2017; previously General Counsel and Corporate Secretary of First Quantum Minerals Ltd.
Sean McAleer Guatemala City Guatemala	SVP and Managing Director, Guatemala	SVP and Managing Director, Guatemala since September 2019; prior to that, other senior management roles with Pan American since February 1, 2010

Notes:
1 Member of the Audit Committee.
2 Member of the Human Resources and Compensation Committee.
3 Member of the Nominating and Governance Committee.
4 Member of the Health, Safety and Environment Committee.
5 Member of Communities and Sustainable Development Committee.

The directors of Pan American are elected at each annual general meeting to hold office until the next annual general meeting or until their successors are elected or appointed. As at December 31, 2021, the Board of Directors consisted of eight directors, seven of whom, Michael Carroll, Neil de Gelder, Charles Jeannes, Jennifer Maki, Walter Segsworth, Kathleen Sendall and Gillian Winckler, qualify as unrelated directors who are independent of management. Mr. Steinmann is not independent due to his current management position with us. Jennifer Maki joined the Board of Pan American on May 12, 2021.

The Board of Directors has established five committees: the Audit Committee, the Human Resources and Compensation Committee, the Health, Safety, and Environment Committee, the Communities and Sustainable Development Committee, and the Nominating and Governance Committee. Detailed information regarding the duties and obligations of the Audit Committee is annexed as Appendix "A" to this AIF. The Board of Directors does not have an Executive Committee. The composition of the various committees as at December 31, 2021, is set forth in the preceding table.

As of the close of business on February 22, 2022, the directors and executive officers of Pan American named above as a group exercised control or direction or beneficially owned, directly or indirectly, 475,656 Common Shares, or approximately 0.23% of the issued and outstanding Common Shares of Pan American.

From May 2010 to April 2018, Ms. Sendall was a board member of CGG SA, a French company listed at the time on the New York Stock Exchange and Euronext Paris. On June 15, 2017, following the execution of legally binding agreements in support of the terms of the agreement-in-principle with its key financial creditors, CGG SA began legal processes to implement a comprehensive pre-arranged restructuring, with the opening of a Safeguard proceeding in France and Chapter 11 and Chapter 15 filings in the U.S. The restructuring plan was approved by both the Paris Commercial Court and the New York Bankruptcy Court. The implementation of the financial restructuring plan was finalized in February 2018.

Other than the above, none of Pan American's directors or executive officers:

(a) are, as at the date of this AIF, or have been, within 10 years before the date of this AIF, a director, chief executive officer or chief financial officer of any company (including Pan American) that,

  (i) was subject to cease trade order, an order similar to a cease trade order, or an order that denied the relevant company access to any exemption under securities legislation (collectively, an "Order") that was issued while the director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer; or

  (ii) was subject to an Order that was issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer;

(b) are, as at the date of this AIF, or has been within 10 years before the date of this AIF, a director or executive officer of any company (including Pan American) that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets; or

(c) have, within the 10 years before the date of this AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the director or executive officer.

In addition, none of Pan American's directors and executive officers has been subject to:

(d) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or

(e) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable shareholder in making an investment decision.

As of the date of this AIF, Pan American is not aware of any shareholder holding a sufficient number of securities of Pan American to affect materially the control of Pan American.

Audit Committee

As at December 31, 2021, the members of the Audit Committee were Michael Carroll (Chair), Neil de Gelder, and Jennifer Maki. The Board of Directors has determined based on the information provided by each director that all members of the Audit Committee meet the independence requirements set out in National Instrument 52-110 – *Audit Committees*, and as defined under Rule 10A-3 of the U.S. Securities Exchange Act of 1934, as amended, and the rules and regulations of the Nasdaq Stock Market. All members of the Audit Committee are financially literate and Michael Carroll, an individual serving on the audit committee of the Board of Directors, is an audit committee financial expert, as that term is defined in General Instruction B(8)(b) of Form 40-F.

The SEC has indicated that the designation of a person as an audit committee financial expert does not make such person an "expert" for any purpose, impose any duties, obligations or liabilities on such person that are greater than those imposed on members of the audit committee and the board of directors who do not carry this designation or affect the duties, obligations or liability of any other member of the audit committee or board of directors.

Relevant Education and Experience of Audit Committee Members

The relevant education and experience of each member of the Audit Committee that is relevant to the performance of the Audit Committee responsibilities are as follows:

Michael L. Carroll (Chair) is a Certified Public Accountant with over 30 years of financial management expertise, primarily with publicly traded mining companies and has previously served on the audit committee of another public company. Mr. Carroll's professional expertise includes equity and debt financing, mergers and acquisitions, strategic planning, IFRS, GAAP, international tax planning and regulatory reporting.

Neil de Gelder, Q.C., has over 25 years of experience as a lawyer specializing in corporate, mergers and acquisitions, and financing matters with a major Canadian law firm, frequently advising boards of publicly traded companies. He is a former Executive Director of the British Columbia Securities Commission, and is currently Vice-Chair of a private diversified investment firm based in Vancouver as well as being an independent director of, and Chair of the Audit Committee for, another publicly listed company. He is routinely involved in reviewing internal management financial reporting and external audited and unaudited financial statements. Mr. de Gelder has served on a wide variety of corporate, Crown, charitable, and community boards over the years, including serving on the audit committee of a B.C. venture capital fund.

Jennifer Maki is an accomplished mining executive and finance expert with strong leadership experience in public mining companies operating in complex international jurisdictions. She is the former Executive Director of Vale Base Metals and CEO of Vale Canada, and previously served as EVP and CFO of Vale Base Metals. Ms. Maki began her professional career in the mining group with PricewaterhouseCoopers. She is presently a Director and Chair of the Audit Committees at two other publicly listed companies. Ms. Maki is a CPA, Chartered Accountant, has a Bachelor of Commerce degree from Queen's University and holds the ICD.D designation from the Institute of Corporate Directors.

External Auditor Service Fees

Audit Fees

The aggregate fees billed by Deloitte LLP, an independent registered public accounting firm who is Pan American's auditor, for the fiscal years ended December 31, 2021 and 2020 for professional services rendered by Deloitte LLP for the audit of Pan American's annual consolidated financial statements or services that are normally provided by Deloitte LLP in connection with statutory and regulatory filings or engagements for such years were approximately $2,394,100 and $2,497,000, respectively.

Audit-Related Fees

The aggregate fees billed by Deloitte LLP for the fiscal years ended December 31, 2021 and 2020 for assurance and related services rendered by it that are reasonably related to the performance of the audit or review

of Pan American's consolidated financial statements, including fees for audit services not required to support the auditor's opinion on Pan American's consolidated financial statements, were approximately $243,400 and $34,400, respectively. The fees in both 2021 and 2020 also include amounts with respect to Pan American's Canadian Public Accountability Board fees that are remitted by Deloitte on behalf of Pan American.

Tax Fees

The aggregate fees billed by Deloitte LLP for the fiscal years ended December 31, 2021 and 2020 for professional services rendered by it for tax compliance, tax advice, tax planning, and other services were approximately $31,300 and $1,600, respectively. In 2021, such fees related primarily to the provision of services related to tax advisory and tax compliance matters.

Other Fees

The aggregate fees billed by Deloitte LLP for the fiscal years ended December 31, 2021 and 2020 for products and services provided by Deloitte LLP, other than those services reported in the preceding three paragraphs, were $0 and $0, respectively.

Audit Committee Pre-Approval Policies

All audit and non-audit services performed by the independent registered public accounting firm are pre-approved by the Audit Committee.

CONFLICTS OF INTEREST

To the best of our knowledge, and other than as disclosed in this AIF, there are no known existing or potential conflicts of interest between us and any of our directors or officers, except that certain officers and directors of Pan American are officers and directors of, or are associated with, other public or private companies. Such associations may give rise to conflicts of interest from time to time between their duties as an officer or director of Pan American and their duties as an officer or director or such other companies. The directors are aware of laws requiring them to act honestly and in good faith with a view to act in the best interests of Pan American and our shareholders and to disclose any conflicts of interest.

LEGAL PROCEEDINGS AND REGULATORY ACTIONS

A description of certain legal proceedings to which we are a party appear under the heading "Contingencies" in Note 28 to our Audited Consolidated Financial Statements for the year ended December 31, 2021, which are available under Pan American's SEDAR profile at www.sedar.com. We have not been subject to any regulatory penalties or sanctions during the financial year, nor entered into any settlement agreements relating to securities legislation.

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Other than as described below, to the best of our knowledge, no director or executive officer of Pan American, nor any person or company that beneficially owns, controls, directs, directly or indirectly, more than 10% of our Common Shares, nor any associate or affiliate of any of the foregoing persons, has or had a material interest in any transaction within the three most recently completed financial years or during the current financial year that has materially affected or is reasonably expected to materially affect Pan American.

TRANSFER AGENTS AND REGISTRAR

The transfer agent and registrar for our Common Shares is Computershare Investor Services Inc. at its principal office in Vancouver, British Columbia, and Computershare Trust Company, N. A. at its office in Denver, Colorado, U.S.A.

MATERIAL CONTRACTS

Except for contracts entered into in the ordinary course of business, no other material contracts have been entered into by Pan American during the financial year ended December 31, 2021 or before such time which are still in effect.

INTERESTS OF EXPERTS

Deloitte LLP, an independent registered public accounting firm, is the auditor of Pan American and is independent of Pan American within the meaning of the Rules of Professional Conduct of the Chartered Professional Accountants of British Columbia and within the meaning of the U.S. Securities Exchange Act of 1933, as amended, and the applicable rules and regulations thereunder adopted by the SEC and the Public Company Accounting Oversight Board (United States).

The Qualified Persons as defined by NI 43-101 who have prepared or supervised the preparation of Pan American's mineral reserve and mineral resource estimates effective June 30, 2021, and who supervised the preparation of and approved the scientific and technical information disclosed in this AIF, as described under the heading "Scientific and Technical Information" on page 7.

Michael Steinmann, P. Geo., Martin Wafforn, P. Eng., Chris Emerson, FAusIMM, Americo Delgado, P.Eng., Alain Mainville, P.Geo., Eric Lachapelle, P.Eng., Dave Felsher, P.Eng., Tim Williams, M.Sc., Carl Defilippi, M.Sc., Charles Muerhoff, B.Sc., Conrad Huss, P.Eng., Thomas Drielick, P.Eng., Daniel Roth, P.Eng., Paul Tietz, C.P.G., Matthew Blattman, P.Eng., Jack Caldwell, P.Eng., and M3 Engineering & Technology Corporation are the persons who have prepared or certified a statement, report, or valuation described in this AIF.

To the best of our knowledge, none of Messrs./Mmes. Steinmann, Wafforn, Emerson, Delgado, Mainville, Lachapelle, Felsher, Williams, Defilippi, Muerhoff, Tietz, Roth, Blattman, Drielick, Huss, Caldwell or M3 Engineering & Technology Corporation beneficially owns, directly or indirectly, 1% or more of any class of Pan American's outstanding securities.

EXCEPTIONS FROM NASDAQ CORPORATE GOVERNANCE REQUIREMENTS

Under Rule 4350(a) of Nasdaq Rules (the "Nasdaq Rules"), a foreign private issuer (as defined in Rule 12b-2 under the Exchange Act) may follow its home country practice in lieu of certain of the corporate governance requirements of the Nasdaq Rules.

Pursuant to Rule 4350(a), Pan American follows British Columbia practice with respect to quorum requirements in lieu of Nasdaq Rule 4350(f). Nasdaq Rule 4350(f) requires that the minimum quorum for a shareholder meeting is 33-1/3% of the outstanding common shares, whereas Pan American's articles provide that the minimum quorum for a meeting of the holders of our Common Shares is two individuals who are shareholders, proxy holders representing shareholders or duly authorized representatives of corporate shareholders personally present and representing shares aggregating not less than 25% of the issued Common Shares of Pan American carrying the right to vote at that meeting. In the event there is only one shareholder, the quorum is one person personally present and being, or representing by proxy, that shareholder, or in the case of a corporate shareholder, a duly authorized representative of that shareholder. Pan American's quorum requirement complies with the *Business Corporations Act* (British Columbia), which requires that unless the articles otherwise provide, two shareholders entitled to vote at a meeting of shareholders, whether in person or represented by proxy, constitute a quorum. Furthermore, the rules of the Toronto Stock Exchange, upon which our Common Shares are also listed, do not contain specific quorum requirements.

ADDITIONAL INFORMATION

Additional information, including directors' and officers' remuneration and indebtedness, principal holders of Pan American's securities, and securities authorized for issuance under equity compensation plans, is contained in our management information circular for the most recent annual meeting of shareholders. Additional financial information is also provided in our audited consolidated financial statements for the years ended December 31, 2021 and 2020, and management's discussion and analysis for the year ended December 31, 2021. The foregoing disclosure documents, along with additional information relating to Pan American, may be found on SEDAR at www.sedar.com, on the SEC website at www.sec.gov, or on our website at www.panamericansilver.com.

GLOSSARY OF TERMS

"mineral resource" - A mineral resource is a concentration or occurrence of solid material of economic interest in or on the earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a mineral resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.

"*inferred mineral resource*" – An inferred mineral resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An inferred mineral resource has a lower level of confidence than that applying to an indicated mineral resource and must not be converted to a mineral reserve. It is reasonably expected that the majority of inferred mineral resources could be upgraded to indicated mineral resources with continued exploration.

"*indicated mineral resource*" – An indicated mineral resource is that part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An indicated mineral resource has a lower level of confidence than that applying to a measured mineral resource and may only be converted to a probable mineral reserve.

"measured mineral resource" – A measured mineral resource is that part of a mineral resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of modifying factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A measured mineral resource has a higher level of confidence than that applying to either an indicated mineral resource or an inferred mineral resource. It may be converted to a proven mineral reserve or to a probable mineral reserve.

"*mineral reserve*" – A mineral reserve is the economically mineable part of a measured and/or indicated mineral resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at pre-feasibility or feasibility level as appropriate that include application of modifying factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. The reference point at which mineral reserves are defined, usually the point where the ore is delivered to the processing plant, must be stated. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported. The public disclosure of a mineral reserve must be demonstrated by a pre-feasibility study or feasibility study.

"probable mineral reserve" - A probable mineral reserve is the economically mineable part of an indicated, and in some circumstances, a measured mineral resource. The confidence in the modifying factors applying to a probable mineral reserve is lower than that applying to a proven mineral reserve.

"proven mineral reserve" - A proven mineral reserve is the economically mineable part of a measured mineral resource. A proven mineral reserve implies a high degree of confidence in the modifying factors.

APPENDIX "A"

AUDIT COMMITTEE CHARTER

PURPOSE

Senior management of Pan American Silver Corp. (the "**Company**"), as overseen by its Board of Directors (the "Board"), has primary responsibility for the Company's financial reporting, accounting systems and internal controls. The Audit Committee (the "**Committee**") is a standing committee of the Board established for the purposes of overseeing:

a. the quality and integrity of the Company's financial and accounting reporting processes and internal accounting and financial control systems;

b. the external auditor's qualifications and independence;

c. management's responsibility for assessing the effectiveness of internal controls; and

d. the Company's compliance with legal and regulatory requirements in connection with financial and accounting matters.

COMPOSITION AND OPERATION

The Committee shall be composed of at least three directors, all of whom shall be independent[1]. All members of the Committee shall, to the satisfaction of the Board, be Financially Literate and at least one member will be a Committee Financial Expert ("**Financially Literate**" and "**Committee Financial Expert**" are defined in the Definitions section of this Charter).

The members of the Committee shall be appointed by the Board annually, and the Board may at any time remove or replace any member of the Committee and may fill any vacancy with another Board member, as required.

The Board shall appoint a chair (the "**Chair**") from among the Committee members. If the Chair is not present at any meeting of the Committee, one of the other Committee members present at the meeting shall be chosen to preside as chairperson at the meeting.

A quorum at meetings of the Committee shall be a majority of members present in person or by telephone or other telecommunication device that permits all persons participating in the meeting to speak and hear one another.

The Committee will make every effort to meet at least four times per year, and shall conduct such additional meetings as required from time to time. Each member is entitled to request that an additional meeting be called. The external auditor may also request that the Chair call a meeting of the Committee to consider any matter that the auditor believes should be brought to the attention of the directors or the shareholders of the Company.

[1] A director's "independence" shall be determined in accordance with the securities laws, rules, regulations and guidelines of all applicable securities regulatory authorities, including without limitation the securities commissions in each of the provinces and territories of Canada and the U.S. Securities and Exchange Commission, and the stock exchanges on which the Company's securities are listed, including without limitation the Toronto Stock Exchange and Nasdaq (collectively, "Securities Laws").

The Committee shall fix its own procedures for meetings, keep records of its proceedings and report to the Board routinely at the next regularly scheduled Board meeting. Copies of meeting records will be made available to the external auditor as requested.

In camera sessions will be scheduled for each Committee meeting.

The Committee may act by unanimous written consent of its members. A resolution approved in writing by members of the Committee shall be valid and effective as if it had been passed at a duly called meeting.

RESPONSIBILITIES AND DUTIES

Overall Committee:

To fulfill its responsibilities and duties the Committee will:

a. oversee the relationship and maintain a direct line of communication with the Company's internal and external auditors and assess their respective performance;

b. assist the Board in the discharge of its responsibilities relating to the quality, acceptability and integrity of the Company's accounting policies and principles, reporting practices and internal controls;

c. review and recommend to the Board for approval the audited annual financial statements, with the report of the external auditor, and corresponding management's discussion and analysis prior to public dissemination and filing with securities regulatory authorities;

d. review and approve, or recommend to the Board for approval, the quarterly financial statements of the Company and corresponding management's discussion and analysis prior to public dissemination and filing with securities regulatory authorities;

e. review any other disclosure documents that contain material financial information about the Company requiring approval by the Board prior to public dissemination and filing with securities regulatory authorities, including, but not limited to, financial information in earnings press releases, annual reports, Form 40-F, annual information forms, information circulars, and prospectuses;

f. review with management any tax matters that could have a material effect on the Company's financial statements;

g. review and approve the Company's financial risk management programs, including any significant commodity, currency or interest rate hedging programs, or if deemed appropriate by the Committee, make recommendations to the Board with respect to such programs;

h. review proposed major financing activities of the Company and make recommendations to the Board with respect to the same;

i. assess policies and procedures for cash management and review investment strategies for the Company's cash balances;

j. review the Company's cash flow projections and liquidity forecasts; and

k. review this Charter periodically, but at least once per annum, and recommend to the Board any necessary amendments.

Public Filings, Policies and Procedures:

The Committee will:

a. satisfy itself that adequate procedures are in place for the review of the Company's disclosure of financial information extracted or derived from the Company's financial statements, other than the Company's financial statements, management's discussion and analysis, and earnings press releases, and periodically assess such disclosure controls and procedures, and management's evaluation thereof, to ensure that financial information is recorded, processed, summarized and reported within the time periods required by law;

b. review disclosures made to the Committee by the Chief Executive Officer and the Chief Financial Officer during their certification process for any significant deficiencies in the design or operation of internal controls or material weaknesses therein and any fraud involving management or other employees who have a significant role in internal controls;

c. review with management and the external auditor any correspondence with securities regulators or other regulatory or government agencies which raise material issues regarding the Company's financial reporting or accounting policies; and

d. review with management, the external auditors and the Company's legal counsel, any claim or other contingency, including tax assessments, that could have a material effect upon the financial position or operating results of the Company and the manner in which these matters have been disclosed in the financial statements.

External Auditors

The responsibilities and duties of the Committee as they relate to the external auditor are to:

a. consider and make recommendations to the Board with respect to the external auditor to be nominated for appointment, re-appointment, or removal by shareholders at each annual general meeting of the Company;

b. make recommendations to the Board with respect to the compensation of the external auditor, assess whether fees and any other compensation to be paid to the external auditor for audit or non-audit services are appropriate to enable an audit to be conducted and to maintain the independence of the external auditor;

c. review the performance of the external auditor and, where appropriate, recommend to the Board appropriate action with respect to the external auditor;

d. confirm the independence and effectiveness of the external auditor, which will require receipt from the external auditor of a formal written statement delineating all relationships between the auditor and the Company and any other factors that might affect the independence of the auditor;

e. actively engage in dialogue with the external auditor with respect to any disclosed relationships or services that may affect the independence and objectivity of the external auditor and take, or recommend that the Board take, appropriate actions to oversee the independence of the external auditor;

f. oversee the work of the external auditor engaged for the purpose of preparing or issuing an auditor's report or performing other audit, review or attest services for the Company, including the resolution of disagreements between management and the external auditor regarding financial reporting, including, review and, as applicable, approval of the following:

i. the external auditor's engagement letter and audit plans;

ii. the form and content of the quarterly and annual audit report, which should include, *inter alia*:

- a summary of the Company's internal controls findings resulting from the annual audit procedures;
- any material issues raised in the most recent meeting of the Committee; and
- any other related audit, review or attestation services performed for the Company by the external auditors;

iii. form and content of other reports of the auditors;

and the Committee shall report to the Board, as necessary, in respect of the above noted matters;

g. review and pre-approve all non-audit services provided to the Company or its subsidiaries by the external auditor prior to the commencement of such services, and in doing so, the Committee may delegate to one or more independent members of the Committee the authority to pre-approve any such non-audit services, provided that the decision of such member(s) on such non-audit services will be presented to the Committee at its next regularly scheduled meeting, and in all cases, pre-approval of non-audit services must satisfy the requirements set out in *National Instrument 52-110 – Audit Committees*;

h. monitor the relationship between management and the external auditor and resolve any disagreements between them regarding financial reporting;

i. engage the external auditor in discussions regarding any amendments to critical accounting policies and practices; alternative treatments of financial information within generally accepted accounting principles related to material items that have been discussed with management, including any potential ramifications and the preferred treatment by the independent auditor; and lastly, written communication between management and the independent auditor, including but not limited to, the management letter and schedules of adjusted and unadjusted differences, as applicable.

Internal Controls and Financial Reporting

The Committee will:

a. obtain reasonable assurance from discussions with (and/or reports from) management, and reports from external and internal auditors that the Company's financial and accounting systems are reliable and that the internal controls are operating effectively;

b. in consultation with the external auditor, the CEO, the CFO, and where necessary, other members of management, review the integrity of the Company's financial reporting process and the internal control structure;

c. review the acceptability of the Company's accounting principles and identify areas of concern and, where appropriate to do so, discuss with the external auditor;

d. request the auditors to undertake special examinations (e.g., review compliance with conflict of interest policies) when it deems necessary;

e. together with management, review control weaknesses identified by the external and internal auditors;

f. consider proposed appointees for the position of chief financial officer and, if deemed appropriate by the Committee, other key financial executives involved in financial reporting;

g. satisfy itself that CEO and CFO certifications pursuant to Securities Laws are prepared and filed and make inquiries and initiate discussion as necessary with management regarding the practices and procedures adopted to permit management's assurance on the underlying controls; and

h. during the annual audit process, consider if any significant matters regarding the Company's internal controls and procedures over financial reporting, including any significant deficiencies or material weaknesses in their design or operation, need to be discussed with the external auditor, and review whether internal control recommendations made by the auditor have been implemented by management.

Internal Audit

The Committee shall be responsible for reviewing:

a. activities, organization structure, and qualifications of the internal audit function;

b. the resources, budget, reporting relationships and planned activities of the internal audit function;

c. internal audit findings and the implementation of any accepted recommendations;

d. the internal audit procedures and recommending changes, if any; and

e. the adequacy of the line of communication between internal audit and the Committee, ensuring that it is maintained.

Ethical and Legal Compliance and Risk Management

The responsibilities and duties of the Committee as they relate to compliance and risk management are to:

a. satisfy itself as to the integrity of the CEO and other senior management and that the CEO and other senior management strive to create a culture of integrity throughout the Company;

b. review the adequacy, appropriateness and effectiveness of the Company's policies and business practices which impact on the financial integrity of the Company, including those relating to hedging, insurance, accounting, information security and systems, cash management and investment strategies, related-party transactions, financial controls and management reporting;

c. receive a report from management on tax issues and planning, including compliance with the Company's source deduction obligations and other remittances under applicable tax or other legislation;

d. receive a report on the annual policy attestation process for the Company's Global Code of Ethical Conduct, Global Anti-Corruption Policy, Gifts and Hospitality Guidelines, and any other relevant policies and guidelines (collectively, the "**Policies**");

e. review annually the adequacy and quality of the Company's financial and accounting staffing, including the need for and scope of internal audit reviews (if any);

f. receive reports from management and other Board committees, as and when appropriate, on the identification, assessment and management of risks;

g. in conjunction with any other committee designated by the Board from time to time, review major financial, audit and accounting related risks, including information security and cyber risks, and the policies, guidelines and mechanisms that management has put in place to govern the process of monitoring, controlling and reporting such risks;

h. oversee the establishment of procedures for:
   i. the receipt, retention and treatment of complaints received by the Company regarding accounting, internal controls, or auditing matters; and
   ii. the confidential, anonymous submission by employees of the Company of concerns regarding questionable accounting or auditing matters.

i. review any material complaints and concerns received regarding accounting, internal controls, or auditing matters or with respect to the Policies, and the investigation and resolution thereof, and, where appropriate to do so, provide all relevant information relating to such complaints and concerns to the Nominating and Governance Committee, taking into account the complainants' confidentiality concerns and the roles and responsibilities of each Committee;

j. review and approve the Company's hiring policies regarding partners, employees and former partners and employees of the present and former external auditor;

k. review and monitor the Company's compliance with applicable legal and regulatory requirements related to financial reporting and disclosure;

l. review all related-party transactions; and

m. review reports from management, internal and external auditors with respect to the Company's compliance with the laws and regulations having a material impact on financial reporting and disclosure.

AUTHORITY

The Committee shall have the authority to:

a. at the Company's expense, engage independent counsel and other advisors as it determines necessary to carry out its duties;

b. set and pay the compensation for any advisors engaged by the Committee; and

c. communicate directly with any such advisors and with the internal and external auditors.

The Committee shall have unrestricted access to all records, facilities, and personnel of the Company necessary to carry out its responsibilities and may meet separately with head of internal audit, the Chief Executive Officer, the Chief Financial Officer, the General Counsel and such other members of management as they may deem necessary.

The Committee shall be provided with the resources necessary to carry out its responsibilities.

At the invitation of the Chair, one or more officers or employees of the Company may, and if required by the Committee, shall, attend a meeting of the Committee.

The Committee may, upon approval by a majority of the members of the Committee, delegate certain of its duties and responsibilities to subcommittees of the Committee, which must report back to the full Committee.

DEFINITIONS

Capitalized terms used in this Charter and not otherwise defined have the meaning attributed to them below:

"**Financially Literate**" shall have the meaning as defined by Securities Laws, which includes, without limitation, the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected to be raised by the Company's financial statements.

"**Committee Financial Expert**" means a person who has the following attributes:

d. an understanding of generally accepted accounting principles and financial statements;

e. the ability to assess the general application of such principles in connection with the accounting for estimates, accruals and reserves;

f. experience preparing, auditing, analyzing or evaluating financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and level of complexity of issues that can reasonably be expected to be raised in the Company's financial statements, or experience actively supervising one or more persons engaged in such activities;

g. an understanding of internal controls and procedures for financial reporting; and

h. an understanding of audit committee functions; acquired through any one or more of the following:

   i. education and experience as a principal financial officer, principal accounting officer, controller, public accountant or auditor or experience in one or more positions that involve the performance of similar functions;

   ii. experience actively supervising a principal financial officer, principal accounting officer, controller, public accountant, auditor or person performing similar functions; or

   iii. experience overseeing or assessing the performance of companies or public accountants with respect to the preparation, auditing or evaluation of financial statements; or other relevant experience.



PAN AMERICAN
SILVER

Management's Discussion and Analysis

FOR THE YEAR ENDED DECEMBER 31, 2021

February 23, 2022

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

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, 2021 (the "2021 Financial Statements") and the related notes contained therein. All amounts in this MD&A and the 2021 Financial Statements are expressed in United States dollars ("USD"), unless identified otherwise. The Company reports its financial position, financial performance and cash flows in accordance with International Financial Reporting Standards ("IFRS"), as issued by the International Accounting Standards Board ("IASB"). Pan American's significant accounting policies are set out in Note 3 of the 2021 Financial Statements.

This MD&A refers to various non-Generally Accepted Accounting Principles ("non-GAAP") measures, such as "all-in sustaining costs per ounce sold", "cash costs per ounce sold", "adjusted earnings" and "basic adjusted earnings per share", "cash mine operating earnings", "total debt", "capital", and "working capital", 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, do not have standardized meanings under IFRS, and the methodology by which these measures are calculated may differ from similar measures reported by other companies. 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 ounce sold", "cash costs per ounce sold", "adjusted earnings" and "basic adjusted earnings per share", "cash mine operating earnings", "total debt", "capital", and "working capital" as well as details of the Company's by-product credits and a reconciliation, where appropriate, of these measures to the 2021 Financial Statements.

Any reference to "cash costs" in this MD&A should be understood to mean cash costs per ounce of silver or gold sold, net of by-product credits. Any reference to "AISC" in this MD&A should be understood to mean all-in sustaining costs per silver or gold 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 and gold mining and related activities, including exploration, mine development, extraction, processing, refining and reclamation. The Company owns and operates silver and gold mines located in Peru, Mexico, Argentina, Bolivia, and Canada. We also own the Escobal mine in Guatemala that is currently not operating. In addition, the Company is exploring for new silver deposits and opportunities throughout the Americas. The Company is listed on the Toronto Stock Exchange (Symbol: PAAS) and on the Nasdaq Global Select Market in New York (Symbol: PAAS).

Pan American's vision is to be the world's premier silver mining company, 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 our assets.
- Constantly replace and grow our mineral reserves and mineral resources through targeted near-mine exploration and global business development.
- Foster positive long-term relationships with our employees, shareholders, communities and 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 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.

2021 HIGHLIGHTS

Operations

Silver production of 19.2 million ounces

Consolidated 2021 silver production of 19.2 million ounces was 1.9 million ounces more than we produced in 2020, due to the impact of the coronavirus disease ("COVID-19") related mine suspensions in 2020. 2021 silver production was within the revised 2021 forecast provided in the Q3 2021 MD&A dated November 9, 2021 (the "Revised 2021 Forecast") range of 19.0 to 20.0 million ounces.

Gold production of 579.3 thousand ounces

Consolidated 2021 gold production of 579.3 thousand ounces was 56.8 thousand ounces more than we produced in 2020. This is largely the result of higher gold production at Dolores from mine sequencing in 2021, and the impact in 2020 of the COVID-19 related mine suspensions. The increase at Dolores was partially offset by lower production at Shahuindo and Timmins, as further described in the "Individual Mine Performance" section of this MD&A. 2021 gold production was within the Revised 2021 Forecast range of 560.0 to 588.0 thousand ounces.

Base metal production

Base metal production in 2021 was higher than in 2020, largely due to the impact of the COVID-19 related mine suspensions in 2020.

Zinc production in 2021 of 49.4 thousand tonnes was slightly below management's Revised 2021 Forecast production range of 49.8 to 53.6 thousand tonnes.

Lead production in 2021 of 18.1 thousand tonnes was slightly below management's Revised 2021 Forecast production range of 18.5 to 20.3 thousand tonnes.

Copper production in 2021 of 8.7 thousand tonnes was slightly below management's Revised 2021 Forecast production range of 8.9 to 9.2 thousand tonnes.

See the "Individual Mine Performance" section of this MD&A for further detail on operating performance.

Financial

Cash Flow

Cash flow from operations: totaled $392.1 million in 2021. This was $70.2 million less than the $462.3 million generated in 2020, as increased income taxes and changes in non-cash working capital changes more than offset the $81.1 million increase in cash mine operating earnings.

Non-cash working capital changes in 2021 resulted in a $71.1 million use of cash, primarily driven by an $82.9 million build-up in inventories. These working capital movements were in contrast to the $97.0 million source of cash in 2020, which was driven primarily by a $56.8 million build-up of accounts payables and accrued liabilities and a $54.8 million decrease in trade and other receivable balances.

Liquidity and working capital position

As at December 31, 2021, the Company had cash and short-term investment balances of $335.3 million, working capital of $613.5 million, and the full $500.0 million available under its sustainability-linked revolving credit facility (the "Sustainability-Linked Credit Facility"). Total debt of $45.9 million was related to lease liabilities and construction loans.

The Company's cash and short-term investment balances increased by $56.2 million in 2021, driven by a $116.4 million increase in cash and cash equivalents from accumulated operating cash flow, offset by a $60.2 million decrease in short-term investments from non-cash mark-to-market investment losses from our equity position in New Pacific Metals Corp. ("New Pacific"). Working capital increased by $118.3 million from December 31, 2020 as a result of the increased cash and cash equivalents.

Revenue, net earnings, and adjusted earnings

Revenue in 2021 of $1.63 billion was 22% higher than in 2020, reflecting higher metal prices and increased quantities produced and sold.

Net earnings of $98.6 million ($0.46 basic income per share) for 2021 compared to $176.5 million ($0.85 basic income per share) in 2020. The $77.9 million year-over-year decrease mainly reflects: (i) a $70.9 million increase in income tax expense; (ii) a $121.9 million decrease in investment income, largely from non-cash mark-to-market of the Company's equity investment in New Pacific; partially offset by (i) a $70.3 million decrease in care and maintenance costs, with no COVID-19 related mine suspensions in 2021, (ii) a $24.2 million increase in gains on sale of mineral properties, and (iii) a $21.2 million decrease in other expenses.

Adjusted earnings: in 2021 were $161.8 million, representing basic adjusted earnings per share of $0.77, which was $19.5 million, or $0.09 per share, lower than 2020 adjusted earnings of $181.2 million, and basic adjusted earnings per share of $0.86, respectively.

Adjusted earnings 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 the 2021 Financial Statements.

Cash costs per ounce sold

Silver Segment 2021 cash costs were $11.51 per silver ounce sold, slightly lower than the Revised 2021 Forecast range of $11.60 to $12.50 per silver ounce sold.

Gold Segment 2021 cash costs were $899 per gold ounce sold, which was within the range of $825 to $925 as provided in the original forecast in our Annual 2020 MD&A dated February 17, 2021 (the "2021 Original Forecast").

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 the 2021 Financial Statements.

All-in Sustaining Costs per ounce sold (“AISC”)

Silver Segment 2021 AISC were $15.62 per silver ounce sold, slightly lower than the Revised 2021 Forecast range of $15.75 to $16.75 per silver ounce sold.

Gold Segment 2021 AISC were $1,214 per gold ounce sold, which was within the Original 2021 Forecast range of $1,135 to $1,250 per gold ounce sold.

Consolidated 2021 AISC per silver ounce sold, including corporate administration, exploration, accretion, and by-product credits from the Gold Segment mines, were $1.44 per silver ounce sold, which was above the Revised 2021 Forecast range of $(4.50) to $0.00 per silver ounce sold.

AISC 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 the 2021 Financial Statements.

COVID-19 Impact

Pan American had anticipated that the impact of the COVID-19 pandemic on operations would diminish over the course of 2021, as vaccination rates increased across our operating jurisdictions; however, this expectation did not fully materialize, and the pandemic continued to be a significant factor throughout Latin America during 2021. Pan American maintained and enhanced the comprehensive protocols that we had implemented to protect health and safety at the onset of the pandemic. These protocols resulted in reduced workforce deployment levels, which affected production rates and progress on capital projects in 2021 compared to those originally assumed in the Company's guidance.

In 2020, Pan American's normal operations in Mexico, Peru, Argentina and Bolivia were suspended for an average duration of approximately two months during the first half of the year in order to comply with mandatory national quarantines imposed in response to the COVID-19 pandemic. The Huaron and Morococha operations in Peru were suspended for an additional approximately three months in the third quarter of 2020 (collectively “COVID-19

related mine suspension"). The Timmins operation in Canada was not suspended in 2020, however the operating capacities were reduced due to COVID-19 protocols.

Pan American has been supporting our local communities in many ways during the pandemic, including the donation of food and hygiene supplies, contributing to a new vaccination clinic in Peru, facilitating access to health care and education, and supporting employee mental health. We believe vaccination is critical to reducing the spread of the COVID-19 virus. Accordingly, we committed our support to UNICEF Canada's GiveAVax campaign, aimed at distributing two billion doses of COVID-19 vaccines to low and middle income countries by the end of 2021, as announced in our Q2 2021 MD&A.

Further disclosure on the impact from the COVID-19 pandemic can be found in the "Risks and Uncertainties" section of this MD&A.

ENVIRONMENTAL, SOCIAL, AND GOVERNANCE

Safe production, the environmentally sound development and operation of assets, and fostering positive long-term relationships with employees, shareholders, communities, and local governments are fundamental to our strategy.

Our corporate environmental, social and governance ("ESG") performance goals are set in collaboration with our operations teams. On an annual basis, these teams conduct an extensive process of setting ESG performance goals for their operation. We have also developed a set of Sustainability Performance Indicators (SPIs), to measure and monitor performance on key social and environmental activities at our operations. Health and safety indicators are also monitored. Our 2021 goals are described in the "Goals and Performance" section of the Company's 2020 Sustainability Report (the "2021 ESG Goals"), which is available on the Company's website at www.panamericansilver.com.

Through our membership in the Mining Association of Canada, we continue to implement the Towards Sustainable Mining ("TSM") performance system, a world class management standard designed to help mining companies responsibly drive sustainability performance and manage risk. In 2021, we achieved Level A for all TSM protocols at all operations, except for the Safety protocol at Huaron, San Vicente, La Colorada and Morococha where each operation had a fatal accident, and the Tailings Management protocol at Morococha, Huaron and Timmins due to management system improvements that are in progress to achieve Level A during 2022.

We will provide complete details of our performance against our 2021 ESG Goals in the Company's 2021 Sustainability Report, which will be available early in the second quarter of 2022.

Environment

In 2021, we had no significant environmental incidents at our operations. We're currently quantifying and assessing our 2021 annual ESG results versus our ESG 2021 goals, the results of which will be reported in the 2021 Sustainability Report. We currently expect to meet the majority of our annual environmental goals. The 2021 base case is our projected 2021 water use, energy use, GHG emissions, and waste generation, as calculated using our life of mine plans adjusted for annual production guidance. With regards to non-rock related waste compared to the 2021 base case, we do not expect to meet our target due to unforeseen waste generated from projects and pandemic-related activities.

Social

We did not meet our most important goal of zero fatalities, as Huaron, San Vicente, La Colorada and Morococha mines each experienced one fatality in 2021. We also fell short on our lost time injury frequency (LTIF) and lost time injury severity (LTIS) targets. The Company is committed to overcoming these safety performance shortfalls and attaining its vision of ensuring the health and safety of all Pan American employees and contractors. The Company will be advancing several additional safety initiatives to achieve this vision, which include: improving and developing our leadership skills; expanding the knowledge and technical abilities of our workforce; and reviewing the way that we identify, evaluate and manage risks in the workplace.

In 2021, we had no new social disputes at our operations, and we expect to meet the majority of our annual social goals. Despite resolving all high-risk grievances by the end of 2021, one medium-risk grievance remained open in Peru as of December 31, 2021. We continue to invest in social initiatives – education, health and economic development projects – with the intention to provide lasting benefits to host communities. In 2021, we also completed the first module of our "Building Respect Together" program, covering 100% of our workforce. This program is aimed at fostering a more respectful, safe and inclusive work environment at Pan American.

Governance

In 2021, we increased the representation of women on our Board of Directors to 38%, which constitutes three directors, one of whom is the Chair of the Board. Also, seven of our eight directors (88%), including the Chair of the Board, are independent.

In 2021, 100% of our directors, officers, executives, and senior management were re-certified in accordance to Pan American's Anti-Corruption Policy and the Code of Ethical Conduct, confirming they are familiar with our policies, acknowledging its contents, committing to fulfill them and to report any violation.

We also trained 480 critical employees from all jurisdictions in anti-corruption practices. The training course was launched in late 2021 and the employees completed it during December 2021 and January 2022.

Our annual incentive plan provides incentive compensation directly related to achieving short-term objectives, both corporate and operations specific, which are approved by the Board with 35% of the goals tied to ESG metrics.

For more information on our Corporate Governance practices and performance, please review our Annual Information Form and Management Information Circular available on the Company's website at www.panamericansilver.com.

2022 OPERATING OUTLOOK

These estimates form part of our "forward-looking statements and information" and are subject to the cautionary note associated with forward-looking statements and information at the end of this MD&A. We may revise forecasts during the year to reflect actual results to date and those anticipated for the remainder of the year. The 2022 production, cash costs and AISC outlooks for each mine are further discussed in the "2022 Mine Operation Forecasts" section of this MD&A.

The Company has initiated a strategic review of alternatives for the Morococha operation and, as such, has excluded it from the 2022 operating outlook.

2022 Silver and Gold Production, Cash Costs and AISC Forecasts:

	Silver Production (million ounces)	Gold Production (thousand ounces)	Cash Costs ($ per ounce)[1]	AISC ($ per ounce)[1]
Silver Segment:				
La Colorada	6.85 - 7.10	2.8 - 3.0	8.00 - 9.00	12.40 - 13.40
Huaron	3.70 - 3.95	0.5	1.80 - 4.50	7.80 - 9.90
San Vicente[2]	2.35 - 2.50	0.2	15.30 - 16.55	18.70 - 19.70
Manantial Espejo/COSE/Joaquin	3.00 - 3.50	20.0 - 25.0	21.00 - 24.00	22.00 - 24.80
Total	**15.90 - 17.05**	**23.5 - 28.7**	**10.70 - 12.20**	**14.50 - 16.00**
Gold Segment:				
Dolores	2.85 - 3.15	157.5 - 179.0	715 - 840	925 - 1,070
Shahuindo	0.21 - 0.26	136.0 - 150.8	910 - 995	1,170 - 1,275
La Arena	0.03	98.0 - 103.5	990 - 1,070	1,380 - 1,475
Timmins	0.01	135.0 - 143.0	1,340 - 1,415	1,615 - 1,695
Total	**3.10 - 3.45**	**526.5 - 576.3**	**970 - 1,070**	**1,240 - 1,365**
Total Production	**19.00 - 20.50**	**550.0 - 605.0**	n/a	n/a

(1) Cash costs and AISC are non-GAAP measures. Please refer to the “Alternative Performance (Non-GAAP) Measures” section of this MD&A for further information on these measures. The cash costs and AISC forecasts assume average metal prices of $22.50/oz for silver, $1,750/oz for gold, $3,000/tonne ($1.36/lb) for zinc, $2,200/tonne ($1.00/lb) for lead, and $9,200/tonne ($4.17/lb) for copper; and average annual exchange rates relative to 1 USD of 20.00 for the Mexican peso ("MXN"), 4.10 for the Peruvian sol ("PEN"), 122.17 for the Argentine peso ("ARS"), 7.00 for the Bolivian boliviano ("BOB"), and $1.25 for the Canadian dollar ("CAD").

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

The Company continues to face challenges and uncertainties related to the COVID-19 pandemic that have negatively impacted production and costs since the onset in early 2020. Pan American continues to monitor for the prevalence of COVID-19 in and around our operations, assist in vaccination distributions and deploy comprehensive protocols to protect the health and safety of our workforce and communities. Occasional outbreaks of COVID-19 have been observed at all our operations and the protocols we have implemented increase our operating costs, impact supply chain logistics and reduce workforce deployment, thereby decreasing production rates to varying degrees. The Company's overall workforce vaccination rate was determined to be more than 90% in early 2022, and we are expecting the impact of COVID-19 to gradually diminish in all operating jurisdictions over the course of the year. However, as experienced in 2020 and 2021, there is a high degree of uncertainty as to how the COVID-19 pandemic may impact operations. The impact of any restrictions could improve or worsen relative to our assumptions, depending on how each jurisdiction manages potential outbreaks of COVID-19, the supply and effectiveness of vaccines, and the impact from further mutations of the virus.

Silver production in 2022 is expected to be between 19.0 and 20.5 million ounces, which is between 1% lower and 7% higher than the 2021 consolidated production of 19.2 million ounces. Our 2022 Operating Outlook excludes production from Morococha, and assumes a gradual easing of operating restrictions and absenteeism related to

COVID-19, the continued ramp-up in mining rates at La Colorada following the improvements to mine ventilation, and higher expected silver grades from mine sequencing at Dolores.

Gold production in 2022 is expected to be between 550.0 thousand and 605.0 thousand ounces, which is consistent with 2021 production levels. Production is anticipated to increase at Dolores and Shahuindo as a result of improvements in irrigation efficiencies in the leach pads allowing for a higher ratio of ounces produced to stacked. These improvements will be offset by lower production at La Arena and Manantial Espejo, largely from lower grades due to mine sequencing.

Silver Segment cash costs for 2022 are forecast to be between $10.70 and $12.20 per ounce of silver sold, while Silver Segment AISC are forecast to be between $14.50 and $16.00 per ounce of silver sold, which are consistent with 2021 Silver Segment cash costs and AISC of $11.51 and $15.62, respectively. Cash costs and AISC are expected to benefit from improved throughput and production rates at La Colorada and the anticipated easing of COVID-19 related restrictions during the year. However, these improvements are expected to be largely offset by: inflationary pressures across the portfolio; the completion of mining activities at the high-grade COSE satellite deposit at Manantial Espejo, resulting in lower gold by-product credits in 2022; higher development rates at San Vicente; and the assumed placement of the Morococha operation into care and maintenance while strategic alternatives are evaluated, recognizing that Morococha had positively impacted 2021 Silver Segment cash costs and AISC by $0.30 and $0.34 per ounce, respectively.

Gold Segment cash costs for 2022 are forecast to be between $970 and $1,070 per payable ounce of gold, while Gold Segment AISC are forecast to be between $1,240 and $1,365 per ounce, which is an increase compared to 2021 Gold Segment cash costs and AISC of $899 and $1,214, respectively. This anticipated increase in the Gold Segment cash cost and AISC is primarily due to: (i) inflationary pressures across the portfolio; (ii) higher community and environmental spending; (iii) higher waste mining rates at Shahuindo; and, (iv) increased depth and greater requirements for ground support and backfill at Timmins.

2022 Consolidated Base Metal Production Forecasts:

	Zinc (kt)	Lead (kt)	Copper (kt)
Consolidated Production	**35.0 - 40.0**	**15.0 - 17.0**	**5.5 - 6.5**

Base metal production is expected to decrease for zinc, lead and copper in 2022 compared to 2021. The expected decreases are largely driven by the assumed period of care and maintenance at Morococha, which more than offsets the increased throughput and grades at La Colorada and Huaron.

2022 Capital Expenditure Forecasts

Pan American expects sustaining capital expenditure of between $200.0 million and $210.0 million in 2022, which is consistent with 2021 expenditures of $207.6 million. In addition, Pan American expects to invest between $80.0 million and $95.0 million in project capital primarily to advance the Skarn project at La Colorada and for the construction of a paste fill plant at the Bell Creek mine.

The following table details the forecast capital expenditures at the Company's operations and projects in 2022:

	2022 Forecast Total Capital Investment ($ millions)	2022 Forecast Sustaining Capital Expenditures ($ millions)	2022 Forecast Lease & Other Payments[1] ($ millions)
La Colorada	28.0 - 29.0	28.0 - 29.0	0.0
Huaron	16.0 - 19.0	14.0 - 17.0	2.0
San Vicente	7.0 - 8.0	7.0 - 8.0	0.0
Manantial Espejo	2.0 - 3.0	0.0 - 1.0	2.0
Dolores	33.0 - 34.0	30.5 - 31.5	2.5
Shahuindo	37.0 - 38.0	23.5 - 24.5	13.5
La Arena	39.0 - 40.0	35.5 - 36.5	3.5
Timmins	38.0 - 39.0	37.5 - 38.5	0.5
Sustaining Capital Total	**200.0 - 210.0**	**176.0 - 186.0**	**24.0**
La Colorada Projects	68.0 - 81.0		
Timmins Projects	12.0 - 14.0		
Project Capital Total	**80.0 - 95.0**		
Total Capital	**280.0 - 305.0**		

(1) Lease and other payments include debt repayments on construction loan facilities classified as "Debt" as per Note 17 of the Company's 2021 Financial Statements. These facilities are for constructions of pads and other infrastructure in which the Company only makes cash payments upon completion of construction activities and on a scheduled basis.

The forecast 2022 sustaining capital is primarily related to the following activities:

- La Colorada - an accelerated mine deepening project to advance development, supporting the transition to more mechanized mining using long-hole stoping with greater primary level development spacings, underground ventilation infrastructure improvements, mine equipment replacement and refurbishments, tailing storage facility expansions and near-mine exploration.
- Huaron - the completion of a tailings storage facility expansion, mine deepening and infrastructure investments, mine equipment replacements and lease payments, and near-mine exploration.
- San Vicente - the completion of a tailings storage facility expansion, a mine deepening project, equipment replacements, and near-mine exploration.
- Manantial Espejo - lease payments related to on-site electricity generation.
- Dolores - heap leach pad expansions, open pit mine waste pre-stripping, near mine exploration, and mine infrastructure and plant upgrades.
- Shahuindo - heap leach pad and waste rock storage facility expansions, including payments on construction loans used to finance these investments, other lease payments, land purchases, and near-mine exploration.
- La Arena - open pit mine waste pre-stripping, waste rock storage facility preparation and leach pad expansions, including payments on construction loans used to finance these investments, other lease payments, and near-mine exploration.
- Timmins - tailings storage facility expansions, mine equipment replacements and refurbishments, mill upgrades, and near-mine exploration.

Forecast 2022 project capital consists of:

- La Colorada - continued exploration and in-fill drilling on the Skarn project; advancing engineering work to determine optimal project design given the growing size of the Skarn deposit; and site infrastructure upgrades. The site infrastructure upgrades include commencing the development of a ramp in mid-2022 to eventually access the Skarn deposit, advancing construction of the concrete lined ventilation shaft, and completing and commissioning the refrigeration plant. This infrastructure is expected to benefit both the long-term development of the Skarn as well as the current vein-system operation.
- Timmins - construction of a paste fill plant for Bell Creek to improve backfill quality and availability for more effective ground support systems and to increase resource recovery, in addition to exploration expenditures related to the Wetmore and Whitney projects.

2022 General and Administrative Expense Forecast

Annual corporate general and administrative expense is forecast to be between $42.0 million and $46.0 million in 2022, which includes share-based compensation but excludes greenfield exploration and associated corporate overhead. The increase over the 2021 general and administrative expense of $34.9 million is related to increased travel, higher ESG related spending, inflation, and headcount. Further, 2021 general and administrative expenses were affected by reduced equity-based compensation due to 2021 share price performance which is not factored into the 2022 guidance.

2022 Care and Maintenance Forecast

Forecast care and maintenance expense for 2022 is comprised of $21.0 million to $22.0 million for the Escobal mine, $12.0 to $13.0 million for the Morococha mine (on an annual basis), and $3.0 million to $3.5 million for the Navidad project.

2022 Exploration Expenditures Forecast

Exploration expenditures in 2022, including amounts that will be expensed and capitalized, are expected to total between $42.0 million and $46.0 million, comprised of: (i) $12.0 million to $13.0 million for 95,000 metres of near-mine brownfield exploration drilling targeting reserve replacement, which is included in the forecast for 2022 sustaining capital expenditures for each mine; (ii) $8.0 million to $9.0 million in regional, greenfield exploration in Peru, Mexico and Canada and corporate overhead; and (iii) $22.0 million to $24.0 million for drilling the La Colorada Skarn and adjacent vein systems, as well as exploring the Wetmore and Whitney projects adjacent to the Bell Creek mine at Timmins, which is included in the forecast for 2022 project capital expenditures.

2022 Mine Operation Forecasts

Management's expectations for each mine’s 2022 operating performance, including production, cash costs, and AISC, are provided below:

La Colorada operation

Silver production is forecast to be between 6.85 and 7.10 million ounces in 2022, which is 32% to 37% more than the 5.17 million ounces produced in 2021. The expected increase is primarily the result of higher throughput rates and silver grades. The increase in throughput rates is driven by: (i) continued ramp-up in mining rates following improvements from the ventilation-driven disruptions in 2020 and much of 2021; (ii) continued progress on ventilation enhancements during 2022; and, (iii) the expectation of diminishing COVID-19 related operating restrictions throughout the year. As the mine deepens and advances east, we have encountered increased heat and humidity loadings that affect the rock mass and ground support systems, impacting mine ventilation. Further work to improve ventilation and underground conditions continues, including the commissioning of the refrigeration plant expected in mid-2022 and the concrete-lined ventilation shaft project, which is anticipated to be completed in mid-2023. Higher grades are expected to result from improved access to sulphide mineralization in the better ventilated Candelaria East section of the mine. This will allow for mine sequencing into higher grade areas. Zinc and lead production are also expected to benefit from access to Candelaria East, allowing increased throughput and grades in the sulphide plant.

Cash costs per silver ounce in 2022 are forecast to be between $8.00 and $9.00. This is between $1.76 and $2.76 lower than the $10.76 recorded in 2021, and is the result of higher silver and base metal production from higher throughput and grades. Increased production rates are expected to be partially offset by higher operating costs from: (i) inflationary pressures; (ii) increased energy consumption from new ventilation and cooling infrastructure in the mine, including increased booster fan capacity and the refrigeration plant that is expected to be periodically operated as needed beginning in early 2022; and (iii) the continued conversion to long-hole stoping, which requires accelerated development and ground support over the next two years but will result in improved efficiencies, throughput rates, and costs in the medium to long term.

AISC in 2022 is forecast to be between $12.40 and $13.40 per silver ounce, which is between $4.11 and $5.11 lower than the $17.51 recorded in 2021. This is driven by the same factors affecting cash costs in addition to lower sustaining capital per ounce in 2022, as higher sustaining capital is offset by higher forecasted silver production.

Huaron operation

Silver production is forecast to be between 3.70 and 3.95 million ounces in 2022, which is 5% to 12% higher than the 3.51 million ounces produced in 2021. The forecast reflects higher anticipated throughput, as the operating restrictions related to COVID-19 are expected to diminish during the year, as well as increased silver grades from mine sequencing. The higher throughput is similarly expected to result in an increase in base metal production, with increasing zinc and lead grades and decreasing copper grades expected due to mine sequencing.

Cash costs per silver ounce in 2022 are forecast to be between $1.80 and $4.50, which is consistent with 2021 cash costs of $3.95 per ounce. This reflects higher throughput and grade driven production increases across all metals, except copper, offset by higher operating costs and increased treatment and refining charges.

AISC for 2022 is forecast to be between $7.80 and $9.90 per silver ounce, which is $0.01 to $2.11 higher than the $7.79 per ounce recorded in 2021. The anticipated increase in AISC largely reflects higher sustaining capital per ounce, in part due to the deferral of approximately $3.0 million in sustaining capital from 2021 to 2022.

San Vicente operation

Silver production is forecast to be between 2.35 and 2.50 million ounces in 2022, which is 2% to 8% lower than 2021 production of 2.55 million ounces. The expected decrease reflects lower anticipated throughput due to increased mine development rates, partially offset by a modest increase in mined grades from improved dilution controls by deploying additional narrow vein mining techniques to the narrowing reserve base. Base metal production is expected to be lower for zinc and copper and higher for lead. The lower copper and higher lead production is driven by optimizing the current commercial contract conditions for the bulk concentrate, whereas zinc is expected to be lower due to lower throughput rates.

Cash costs per silver ounce in 2022 are forecast to be between $15.30 and $16.55, which is between $0.32 and $1.57 higher than the 2021 cash costs of $14.98 per ounce. The expected increase in 2022 costs largely reflects higher mine development rates to address the narrowing reserve vein widths, and lower silver production levels; which are only partially offset by improved concentrate treatment terms and lower royalty expense, largely from lower metal price assumptions.

AISC for 2022 is forecast to be between $18.70 and $19.70 per silver ounce; a $1.45 to $2.45 increase from the $17.25 per ounce recorded in 2021. The expected increase is due to the same factors affecting year-over-year cash costs as well as higher sustaining capital, which is partly due to the deferral of certain projects from 2021 into 2022.

Manantial Espejo operation

Silver production is forecast to be between 3.00 and 3.50 million ounces in 2022, which is consistent with the 3.24 million ounces produced in 2021. Gold production in 2022 is forecast to be between 20.0 and 25.0 thousand ounces, which is between 26% and 41% lower than the 33.8 thousand ounces produced in 2021. The expected decrease in gold production reflects a lower contribution from COSE, as the remaining reserves are expected to be lower grade and largely depleted by mid-2022. Further, the Company's low-grade stockpiles used to complement the underground ores mined is expected to be depleted by the end of 2022.

Cash costs per silver ounce in 2022 are forecast to be between $21.00 and $24.00; a $2.63 to $5.63 increase from the 2021 cash costs of $18.37. The expected increase is primarily the result of lower gold grades processed due to the completion of mining activities in the high-grade COSE deposit by mid-year, and a particularly challenging local inflationary environment.

AISC for 2022 is forecast to be between $22.00 and $24.80 per silver ounce; a $1.33 to $4.13 increase from the $20.67 per ounce reported in 2021. This is the result of the same factors affecting cash costs, partially offset by lower sustaining capital per ounce.

Dolores operation

Gold production in 2022 is forecast to be between 157.5 and 179.0 thousand ounces, which is between 2% lower and 12% higher than the 160.1 thousand ounces produced in 2021. Despite an expected 7% reduction in gold grades as a result of open pit mine sequencing, mid-point gold production guidance is expected to be above 2021 levels. This is because of a higher ratio of recovered ounces to stacked ounces from adjustments in leach sequencing to compensate for the delay in the construction of the Phase 1 south leach pad, which was completed in late 2021.

Silver production is forecast to be between 2.85 and 3.15 million ounces in 2022. This is 27% to 41% higher than the 2.24 million ounces produced in 2021, which is the result of open pit mine sequencing into higher silver grades.

Cash costs per gold ounce in 2022 are forecast to be between $715 and $840 per ounce, which is between $34 lower and $91 higher than the $749 per gold ounce reported in 2021. Cash costs per ounce are generally expected to increase from inflationary pressures on direct operating costs and lower expected gold grades stacked, which are expected to be partially offset by higher silver by-product credits.

AISC in 2022 is forecast to be between $925 and $1,070 per gold ounce, which is between $17 and $162 lower than the $1,087 per gold ounce recorded in 2021. The expected decrease is due to 2021 AISC being impacted by: a non-recurring inventory net realizable value ("NRV") write-down of $9.7 million; and lower sustaining capital per ounce, largely from reduced leach pad investments needed in 2022.

Shahuindo operation

Gold production is forecast to be between 136.0 and 150.8 thousand ounces in 2022, which amounts to an increase of between 1% and 13% from the 134.0 thousand ounces produced in 2021. The expected increase

reflects a higher ratio of recovered ounces to stacked ounces due to the expectation of obtaining adequate coarse ore for blending in 2022, which will allow for normalized irrigation rates.

Cash costs per gold ounce in 2022 are forecast to be between $910 and $995, which is $130 to $215 higher than the $780 per ounce recorded in 2021. The expected increase is due to: (i) a 23% increase in the open pit waste stripping ratio; (ii) inflationary pressures; (iii) higher community and environmental expenditures; and, (iv) an increase in leach reagents needed to bring extraction rates more in line with results demonstrated in laboratory column leach tests.

AISC in 2022 is forecast to be between $1,170 and $1,275 per gold ounce, which is $170 to $275 higher than the 2021 AISC of $1,000 per ounce. The increased amount reflects the increase in cash costs, as well as higher sustaining capital from increased loan re-payments relating to infrastructure investments. In 2021, the Company began using construction loan facilities to finance long-term investments in leach pad and waste storage facilities, recognizing the spending in these investments in the calculation of AISC as the payments on these loans are made.

La Arena operation

Gold production is forecast to be between 98.0 and 103.5 thousand ounces in 2022; a reduction of 8% to 13% from the 112.4 thousand ounces produced in 2021. This is primarily driven by mine sequencing and longer mine haul distances resulting in an expected reduction in mined ore tonnes and grades.

Cash costs per gold ounce in 2022 are forecast to be between $990 and $1,070, which is $229 to $309 higher than 2021 cash costs of $761 per ounce. The increase is a result of: (i) lower gold production; (ii) longer mine haul distances; (iii) inflationary pressures; (iv) increased environmental and community spending; and, (v) a normalization in expensed costs, as 2021 cash costs benefited from costs inventoried at a historically lower strip ratio. The higher strip ratio in 2021 and 2022 is due to the increase in mine life from exploration success, albeit at a higher strip ratio and lower grades than were experienced during 2019 and 2020.

AISC for 2022 is forecast to be between $1,380 and $1,475 per gold ounce, which is between $198 and $293 higher than the $1,182 per ounce reported in 2021. This is largely due to the increase in cash costs previously mentioned.

Timmins operation

Gold production is forecast to be between 135.0 and 143.0 thousand ounces in 2022; a 1% to 7% increase from the 133.8 thousand ounces produced in 2021. This primarily reflects an increase in anticipated throughput from higher mining rates in Bell Creek due to an expected reduction in COVID-19 related absenteeism, combined with improved stope cycles through accelerated and optimized cemented rock fill ("CRF") placement. The Company is evaluating the construction of a paste fill plant at the Bell Creek mine in 2022 to increase future resource recovery and eliminate the production rate bottleneck.

Cash costs per gold ounce in 2022 are forecast to be between $1,340 and $1,415, which is $21 to $96 higher than the 2021 cash costs of $1,319. The expected increase reflects inflationary pressures, increased ground support and CRF backfill, mine deepening, and the expectation of a stronger Canadian dollar currency exchange rate, partially offset by higher gold production.

AISC for 2022 is forecast to be between $1,615 and $1,695 per gold ounce, which is $4 lower to $76 higher than the 2021 AISC of $1,619 per ounce. This is the result of an expected increase in cash costs, offset by the higher gold production driving lower sustaining capital on a per ounce basis.

2021 OPERATING PERFORMANCE

Consolidated 2021 Operating Results

Silver and Gold Production

The following table provides silver and gold production at each of Pan American's operations for the three and twelve month periods ended December 31, 2021 and 2020. Each operation's production variances are further discussed in the "Individual Mine Performance" section of this MD&A.

	Silver Production (ounces '000s)				Gold Production (ounces '000s)			
	Three months ended December 31,		Year ended December 31,		Three months ended December 31,		Year ended December 31,	
	2021	2020	**2021**	2020	**2021**	2020	**2021**	2020
La Colorada	**1,584**	1,186	**5,171**	5,025	**0.8**	0.8	**2.7**	3.5
Huaron	**838**	892	**3,513**	2,148	**0.3**	0.3	**1.1**	0.5
Morococha[1]	**540**	527	**2,175**	1,173	**0.4**	0.2	**1.1**	0.6
San Vicente[2]	**641**	663	**2,548**	2,320	**0.1**	0.1	**0.3**	0.3
Manantial Espejo	**1,090**	742	**3,236**	2,547	**11.3**	8.0	**33.8**	23.4
Dolores	**507**	764	**2,240**	3,779	**40.1**	30.5	**160.1**	98.0
Shahuindo	**61**	83	**235**	268	**37.0**	33.6	**134.0**	142.4
La Arena	**11**	11	**40**	33	**32.6**	41.4	**112.4**	105.4
Timmins	**4**	4	**16**	18	**34.2**	38.1	**133.8**	148.4
Total [3]	**5,276**	4,872	**19,174**	**17,312**	**156.7**	**152.9**	**579.3**	**522.4**
Total Payable Production[4]	**4,937**	4,588	**17,858**	**16,392**	**155.9**	**152.2**	**576.4**	**520.5**

(1) Morococha data represents Pan American's 92.3% interest in the mine's production.
(2) San Vicente data represents Pan American's 95.0% interest in the mine's production.
(3) Totals may not add due to rounding.
(4) Payable production reflects sellable metal after deducting commercial contract metal payabilities.

Silver Production

Consolidated silver production in 2021 of 19.17 million ounces was 11% higher than the 17.31 million ounces produced in 2020. Production at all Silver Segment operations increased year-over-year, as 2021 did not experience the COVID-19 related mine suspensions that occurred in 2020, and production increased at La Colorada from improved ventilation conditions in the second half of 2021. These increases were partially offset by decreased silver production at Dolores in 2021 due to expected mine sequencing and delayed leach pad construction.

Consolidated silver production in Q4 2021 of 5.28 million ounces was 8% higher than the 4.87 million ounces produced in Q4 2020. This was primarily due to increased production at La Colorada and Manantial Espejo, partially offset by decreased silver production at Dolores from mine sequencing and delayed leach pad construction. The increase at La Colorada was both throughput and grade driven, with a ramp-up in production following ventilation improvements. At Manantial Espejo, production increased relative to Q4 2020, when operations were impacted by a temporary COVID-19 related mine suspension.

Gold Production

Consolidated gold production in 2021 of 579.3 thousand ounces was 11% above the 522.4 thousand ounces produced in 2020. The increase was driven by higher throughput at all mines, except Timmins, and especially at Dolores from higher gold grades due to mine sequencing, as expected. See the "2021 Highlights" and "Individual Mine Performance" sections of this MD&A for further detail.

Consolidated gold production in Q4 2021 of 156.7 thousand ounces was 3% higher than the 152.9 thousand ounces produced in Q4 2020. This was largely due to completing a delayed leach pad expansion at Dolores, higher stacking rates at Shahuindo, and higher production at Manantial Espejo. These increases offset lower production at La Arena due to mine sequencing, and at Timmins from lower throughput.

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

Base Metal Production

The following table provides the Company's base metal production for the three-month and twelve-month periods ended December 31, 2021 and 2020:

	Base Metal Production			
	Three months ended December 31,		Year ended December 31,	
	2021	2020	**2021**	2020
Zinc - kt	**11.2**	14.2	**49.4**	40.2
Lead - kt	**4.1**	5.4	**18.1**	15.7
Copper - kt	**2.4**	2.3	**8.7**	5.2

	Base Metal Payable Production			
	Three months ended December 31,		Year ended December 31,	
	2021	2020	**2021**	2020
Zinc - kt	**9.4**	11.9	**41.3**	33.7
Lead - kt	**3.9**	5.0	**17.0**	14.8
Copper - kt	**2.1**	1.9	**7.4**	4.4

Zinc, lead and copper production were 23%, 15% and 68% higher in 2021 relative to 2020, respectively. The increases were largely due to increased throughput, as 2021 did not experience the COVID-19 related mine suspensions that occurred in 2020, which more than offset mine sequencing into lower zinc and lead grades at La Colorada, Huaron, and Morococha.

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

Per Ounce Measures

The Company's operations have been divided into Silver and Gold Segments for the purposes of reporting cash costs and AISC, as set out in the table below. The quantification of both the current cash costs and AISC measures is described in detail, and where appropriate reconciled to the 2021 Financial Statements, in the "Alternative Performance (Non-GAAP) Measures" section of this MD&A.

The following table reflects the cash costs and AISC net of by-product credits at each of Pan American's operations for the three and twelve months ended December 31, 2021, as compared to the same periods in 2020:

	Cash Costs[1] ($ per ounce)				AISC[1] ($ per ounce)			
	Three months ended December 31,		Year ended December 31,		Three months ended December 31,		Year ended December 31,	
	2021	2020	**2021**	2020	**2021**	2020	**2021**	2020
La Colorada	11.64	7.07	10.76	6.99	15.93	11.78	17.51	10.80
Dolores[2]	—	(9.79)	—	(2.48)	—	(2.17)	—	6.17
Huaron	3.49	2.03	3.95	3.77	9.63	3.35	7.79	6.53
Morococha	4.57	11.85	9.63	11.40	7.98	18.29	13.49	18.38
San Vicente	10.87	17.67	14.98	15.54	14.59	20.89	17.25	17.94
Manantial Espejo	12.50	18.72	18.37	15.68	14.35	19.24	20.67	15.80
Silver Segment Consolidated[2]	**9.74**	**6.15**	**11.51**	**7.05**	**13.57**	**10.37**	**15.62**	**11.38**
Dolores[2]	931	—	749	—	1,959	—	1,087	—
Shahuindo	832	619	780	588	1,091	842	1,000	750
La Arena	819	556	761	721	1,197	873	1,182	1,109
Timmins	1,298	1,126	1,319	1,061	1,614	1,355	1,619	1,213
Gold Segment Consolidated[2]	**963**	**763**	**899**	**797**	**1,461**	**1,023**	**1,214**	**1,011**
Consolidated AISC per silver ounce sold					**7.87**	**(7.28)**	**1.44**	**(3.29)**
Consolidated AISC before NRV inventory adjustments					**3.60**	**(5.85)**	**0.94**	**(2.35)**

(1) Cash costs and AISC are non-GAAP measures. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed description of these measures and, where appropriate, a reconciliation of the measure to the 2021 Financial Statements.

(2) Due to the expected mine sequencing into a higher gold zone of the Dolores mine, the Company determined that the mine is better identified as a Gold Segment operation from 2021 onwards. Thus, as of Q1 2021, cash costs and AISC at Dolores are reported on a per ounce of gold basis and are included as part of the Gold Segment cash costs and AISC calculations. Dolores cash costs and AISC in the 2020 comparable period were reported on a per ounce of silver basis and included as part of the Silver Segment cash costs and AISC calculations, as previously reported. For comparison purposes, had Dolores been reported in the Gold Segment in 2020, Gold Segment cash costs and AISC for Q4 2020 would have been $759 and $1,018, respectively, and for the year ended December 31, 2020 would have been $802 and $1,046, respectively. Silver Segment cash costs and AISC for Q4 2020 would have been $10.33 and $13.65, respectively and for 2020 would have been $10.05 and $13.02, respectively.

Cash Costs

Silver Segment cash costs in 2021 were $11.51 per ounce, a $4.46 increase from the $7.05 per ounce reported in 2020. The increase was driven primarily from:

i. a $3.00 per ounce increase from reclassifying Dolores to the Gold Segment;

ii. a $1.60 per ounce increase from higher costs at La Colorada; and,

iii. a $0.72 per ounce increase from cost escalations at Manantial Espejo.

These increases were partially offset by an $0.87 per ounce decrease from higher by-product credits at Huaron and Morococha.

All operations experienced higher costs from COVID-19 operating protocols and inflation-driven wage, energy and consumable cost increases ("COVID and Inflationary Costs"). Each operation's variances are further discussed in the "Individual Mine Performance" section of this MD&A.

Gold Segment cash costs in 2021 were $899 per ounce, a $102 increase from the $797 per ounce reported in 2020. The increase was largely the result of increased costs per ounce at Shahuindo and Timmins, which were driven by lower gold grades mined and higher operating costs, as further described in the "Individual Mine Performance" section of this MD&A. This increase was partially offset by reclassifying Dolores to the Gold Segment, which benefited Gold Segment cash costs by $62 per ounce.

AISC

Silver Segment AISC in 2021 was $15.62 per ounce, a $4.24 increase from the $11.38 per ounce reported in 2020. This was due to the same factors that increased Silver Segment cash costs. A decrease in sustaining capital per ounce was offset by the impact of inventory NRV adjustments, which reduced costs by $16.2 million in 2020 but only by $1.0 million in 2021.

Gold Segment AISC in 2021 was $1,214 per ounce, a $203 increase from the $1,011 per ounce reported in 2020. The increase was primarily due to the same factors that increased Gold Segment cash costs, in addition to higher sustaining capital per ounce, largely the result of the deferral of certain projects from 2020 into 2021 due to COVID-19.

Consolidated silver basis AISC for 2021 was $1.44 per ounce, a $4.73 increase from the negative $3.29 per ounce reported in 2020. The increase was primarily from higher operating costs and capital spending per ounce, partially offset by higher by-product prices and quantities sold.

2021 Operating Results versus 2021 Forecast

The following table sets out the actual 2021 annual metal production, cash costs, AISC and capital expenditures compared to those forecast by management throughout the year. The 2021 original forecast was provided in our Annual 2020 MD&A dated February 17, 2021 (the "2021 Original Forecast"). Management subsequently revised the forecasts in its Q1 2021 MD&A and Q3 2021 MD&A (the "2021 May Revised Forecast" and "2021 November Revised Forecast", respectively). In the table below "NC" denotes no changes to the previously provided forecast.

	2021 Original Forecast	2021 May Revised Forecast	2021 November Revised Forecast	2021 Actual
Silver Production - Moz	22.50 - 24.00	20.50 - 22.00	19.00 - 20.00	19.2
Gold Production - koz	605.0 - 655.1	NC	560.0 - 588.0	579.3
Zinc Production - kt	60.7 - 64.5	55.5 - 60.5	49.8 - 53.6	49.4
Lead Production - kt	23.4 - 25.7	21.0 - 23.5	18.5 - 20.3	18.1
Copper Production - kt	7.1 - 8.0	8.5 - 9.0	8.9 - 9.2	8.7
Silver Segment Cash Costs ($ per ounce)	8.50 - 10.00	9.60 -11.60	11.60 - 12.50	11.51
Gold Segment Cash Costs ($ per ounce)	825 - 925	NC	NC	899
Silver Segment AISC ($ per ounce)	12.50 - 14.00	14.25 - 15.75	15.75 - 16.75	15.62
Gold Segment AISC ($ per ounce)	1,135 - 1,250	NC	NC	1,214
Consolidated Silver Basis AISC ($ per ounce)	(2.80) - 2.70	NC	(4.50) - 0.00	1.44
Sustaining Capital ($ millions)	245.0 - 260.0	230.0 - 245.0	217.5 - 226.0	207.6
Project Capital ($ millions)	55.0 - 60.0	NC	43.5 - 45.0	46.5

Silver and Gold Production versus the 2021 Original Forecast

	2021 Silver Production (million ounces)		2021 Gold Production (thousand ounces)	
	Forecast [1]	Actual	Forecast [1]	Actual
Silver Segment:				
La Colorada	7.16 - 7.44	5.17	4.0 - 4.2	2.7
Huaron	3.61 - 3.86	3.51	0.5	1.1
Morococha[2]	2.25 - 2.42	2.18	0.8 - 0.9	1.1
San Vicente[2]	3.23 - 3.37	2.55	0.5	0.3
Manantial Espejo	3.18 - 3.46	3.24	33.2 - 35.3	33.8
Silver Segment Total[3]	**19.43 - 20.55**	**16.65**	**39.0 - 41.4**	**39.0**
Gold Segment:				
Dolores	2.73 - 2.97	2.24	160.8 - 179.3	160.1
Shahuindo	0.29 - 0.43	0.23	153.9 - 165.0	134.0
La Arena	0.03	0.04	102.9 - 110.9	112.4
Timmins	0.02	0.02	148.4 - 158.5	133.8
Gold Segment Total[3]	**3.07 - 3.45**	**2.53**	**566.0 - 613.7**	**540.3**
Total[3]	**22.50 - 24.00**	**19.17**	**605.0 - 655.1**	**579.3**

(1) Forecast as per the 2021 Original Forecast.
(2) Production figures are only for Pan American's ownership share of Morococha (92.3%), and San Vicente (95.0%).
(3) Totals may not add due to rounding.

Silver Production

Consolidated 2021 silver production of 19.2 million ounces was affected by the ventilation constraints at La Colorada during the first half of the year, increased mining dilution at San Vicente, delays in leach pad construction at Dolores, and generally lower than anticipated workforce deployments at all mines due to COVID-19 operating protocols.

Gold Production

Consolidated 2021 gold production of 579.3 thousand ounces was affected by the COVID-19 operating protocols impacting workforce deployments, a delay in completing leach pad construction at Dolores, reduced leach irrigation and lower than expected grades at Shahuindo, and geotechnical challenges at Bell Creek.

Base Metal Production versus the 2021 Original Forecast

	2021 Zinc Production (thousand tonnes)		2021 Lead Production (thousand tonnes)		2021 Copper Production (thousand tonnes)	
	Forecast [1]	Actual	Forecast [1]	Actual	Forecast [1]	Actual
Consolidated	**60.7 - 64.5**	**49.4**	**23.4 - 25.7**	**18.1**	**7.1 - 8.0**	**8.7**

(1) Forecast as per the 2021 Original Forecast.

2021 zinc and lead production were below the low end of the 2021 Original Forecast, whereas copper production was above the high end of the 2021 Original Forecast, primarily due to mine sequence timing at Huaron and Morococha. Zinc and lead production were also affected by ventilation constraints at La Colorada.

Cash Costs and AISC versus the 2021 Original Forecast

The following table summarizes 2021 cash costs and AISC compared to the 2021 Original Forecast on a per ounce basis, net of by-product credits.

	2021 Cash Costs[1] ($ per ounce)		2021 AISC[1] ($ per ounce)	
	Forecast [2]	Actual	Forecast [2]	Actual
Silver Segment:				
La Colorada	4.00 - 5.00	10.76	8.50 - 9.50	17.51
Huaron	4.80 - 7.90	3.95	9.50 - 12.50	7.79
Morococha	10.00 - 14.20	9.63	13.50 - 17.50	13.49
San Vicente	12.30 - 13.50	14.98	16.75 - 17.75	17.25
Manantial Espejo	16.30 - 17.30	18.37	19.00 - 20.00	20.67
Total	**8.50 - 10.00**	**11.51**	**12.50 - 14.00**	**15.62**
Gold Segment:				
Dolores	665 - 820	749	850 - 1,000	1,087
Shahuindo	715 - 795	780	1,125 - 1,250	1,000
La Arena	870 - 940	761	1,275 - 1,400	1,182
Timmins	1,085 - 1,160	1,319	1,375 - 1,450	1,619
Total	**825 - 925**	**899**	**1,135 - 1,250**	**1,214**
Consolidated Silver Basis	**n/a**	**n/a**	**(2.80) - 2.70**	**1.44**

(1) Cash costs and AISC are non-GAAP measures. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed description of these calculations and a reconciliation of these measures to the 2021 Financial Statements. The cash costs and AISC forecasts assumed realized prices and exchange rates of $23.50/oz for silver, $1,825/oz for gold, $2,700/tonne ($1.22/lb) for zinc, $1,900/tonne ($0.86/lb) for lead, and $7,400/tonne ($3.36/lb) for copper; and average exchange rates relative to 1 USD of 20.00 for the MXN, 3.50 for the PEN, 96.67 for the ARS, 7.00 for the BOB, and 1.30 for the CAD.
(2) Forecast as per the 2021 Original Forecast.

Cash Costs

All operations were affected by higher than expected COVID and Inflationary Costs, while underground mines were also particularly affected by reduced workforce deployments which impacted production and unit cost rates.

Silver Segment cash costs of $11.51 per ounce were also affected by production shortfalls at La Colorada, San Vicente and Manantial Espejo.

Gold Segment cash costs of $899 per ounce were within the 2021 Original Forecast range, reflecting higher production at La Arena and the decision to capitalize a portion of the waste mining as deferred stripping at

Dolores, which was not originally contemplated and reduced cash costs. These factors offset increases from the geotechnical issues encountered at Timmins, and lower production at Shahuindo.

AISC

Silver Segment AISC of $15.62 per silver ounce was affected by the same factors driving cash costs.

Gold Segment AISC of $1,214 per gold ounce was within the 2021 Original Forecast range, as higher AISC at Dolores and Timmins were offset by lower AISC at Shahuindo and La Arena, due to the same factors affecting cash costs.

Consolidated AISC, calculated on a silver ounce basis, of $1.44 was within the 2021 Original Forecast range.

Capital Expenditures versus the 2021 Original Forecast

The following table summarizes the 2021 capital expenditures compared to the 2021 Original Forecast.

	2021 Capital Expenditure ($ millions)	
	Forecast [1]	Actual
La Colorada	27.0 - 29.5	26.1
Huaron	14.5 - 15.5	10.9
Morococha	6.0 - 7.0	7.0
San Vicente	13.5 - 14.5	5.3
Manantial Espejo	6.5 - 7.5	7.6
Dolores	26.0 - 30.0	40.6
Shahuindo	66.5 - 68.0	28.8
La Arena	44.5 - 45.0	45.5
Timmins	40.5 - 43.0	35.9
Sustaining Capital Sub-total	**245.0 - 260.0**	**207.6**
La Colorada Skarn	50.0 - 55.0	39.5
Timmins	5.0	6.4
Other	-	0.6
Project Capital Sub-total	**55.0 - 60.0**	**46.5**
Total Capital	**300.0 - 320.0**	**254.1**

(1) Forecast as per the 2021 Original Forecast.

Sustaining capital expenditures were $37.4 million less than the low end of the 2021 Original Forecast range, driven primarily by COVID-19 related delays in project execution and the timing of cash outflows, which were partially offset by unplanned waste mining capitalization at Dolores. At Shahuindo, the Company entered into construction loans to finance leach pads and other site infrastructure, which reduced cash outflows during the year relative to the 2021 Original Forecast. Project capital in 2021 was also below the 2021 Original Forecast range, primarily due to COVID-19 operating protocols.

Individual Mine Operation Performance

An analysis of performance at each operation in 2021 compared with 2020 follows. The project capital amounts invested in 2021 are further discussed in the "Project Development Update" section of this MD&A.

La Colorada operation

	Three months ended December 31		Year ended December 31	
	2021	2020	**2021**	2020
Tonnes milled - kt	**159.9**	139.6	**572.5**	559.1
Average silver grade – grams per tonne	**343**	295	**312**	308
Average zinc grade - %	**1.71**	2.62	**2.05**	2.80
Average lead grade - %	**0.95**	1.29	**1.09**	1.39
Production:				
Silver – koz	**1,584**	1,186	**5,171**	5,025
Gold – koz	**0.79**	0.77	**2.71**	3.47
Zinc – kt	**2.26**	3.13	**9.98**	13.58
Lead – kt	**1.22**	1.50	**5.19**	6.63
Payable Production:				
Silver – koz	**1,510**	1,116	**4,902**	4,700
Gold – koz	**0.65**	0.64	**2.21**	2.98
Zinc – kt	**1.93**	2.66	**8.49**	11.55
Lead – kt	**1.13**	1.41	**4.83**	6.20
Cash costs - $ per ounce(1)	**11.64**	7.07	**10.76**	6.99
Sustaining capital - $ thousands(2)	**6,410**	5,496	**26,069**	18,417
Care and maintenances costs - $ thousands	**—**	—	**—**	7,973
AISC - $ per ounce(1)	**15.93**	11.78	**17.51**	10.80
Payable silver sold - koz	**1,669**	1,291	**4,321**	5,254

(1) Cash costs and AISC are non-GAAP measures. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed reconciliation of these measures to cost of sales.
(2) Sustaining capital expenditures exclude $16.5 million and $39.5 million investing activity cash outflows for Q4 2021 and full year 2021, respectively (Q4 2020 and full year 2020: $1.9 million and $11.0 million, respectively) related to investment capital incurred on the La Colorada projects, as disclosed in the "Project Development Update" section of this MD&A.

2021 versus 2020

Production:

- Silver: 3% increase driven by higher throughput and grades. The improvement in throughput rates was largely driven by 2020 being impacted by the COVID-19-related mine suspension. Restoration of critical ventilation infrastructure also allowed mining rates and grades to ramp-up in the second half of 2021.
- By-products: 26% and 22% decrease in zinc and lead, respectively, as a result of restricted access to the sulphide ore in the Candelaria East zone of the mine. This led to lower base metal grades and a higher proportion of oxide ore in total throughput following efforts to mitigate the unexpected 2019 and 2020 ventilation infrastructure failures.

Cash Costs: were $3.77 higher than in 2020, reflecting an increase in operating costs per ounce due to: (i) investments in advancing a transition to a more mechanized long-hole stoping mining method, including accelerating underground advances, which will eventually enable primary level development spacing to increase; (ii) higher energy consumption from the installation of more ventilation fan capacity to address the higher heat and humidity conditions being encountered at depth and to the east; (iii) higher spending on ground support, including an increase in shotcrete, to address poor quality rock; and (iv) increased COVID and Inflationary Costs.

Sustaining Capital: increased spending in 2021 primarily related to restoring and upgrading ventilation infrastructure, mine equipment replacement and rehabilitation, underground infrastructure, tailings storage facility expansion, lease payments for equipment and offices, and near-mine exploration activities.

AISC: was $6.71 higher than in 2020, as a result of the factors affecting year-over-year cash costs, in addition to higher sustaining capital per ounce due to the higher investments in ventilation infrastructure.

Huaron operation

	Three months ended December 31		Year ended December 31	
	2021	2020	**2021**	**2020**
Tonnes milled - kt	**233.1**	230.5	**940.3**	555.6
Average silver grade – grams per tonne	**137**	143	**141**	144
Average zinc grade - %	**1.79**	2.58	**2.14**	2.58
Average lead grade - %	**1.02**	1.32	**1.11**	1.32
Average copper grade - %	**0.86**	0.94	**0.82**	0.88
Production:				
Silver – koz	**838**	892	**3,513**	2,148
Gold – koz	**0.27**	0.29	**1.09**	0.53
Zinc – kt	**3.06**	4.69	**15.37**	11.21
Lead – kt	**1.63**	2.33	**7.48**	5.59
Copper – kt	**1.55**	1.65	**5.85**	3.65
Payable Production:				
Silver – koz	**688**	796	**2,930**	1,870
Gold – koz	**0.03**	0.07	**0.13**	0.08
Zinc – kt	**2.51**	3.88	**12.63**	9.27
Lead – kt	**1.53**	2.19	**7.02**	5.24
Copper – kt	**1.35**	1.39	**4.94**	2.98
Cash costs - $ per ounce(1)	**3.49**	2.03	**3.95**	3.77
Sustaining capital - $ thousands	**3,991**	776	**10,897**	4,500
Care and maintenances costs - $ thousands	**—**	(11)	**—**	20,840
AISC - $ per ounce(1)	**9.63**	3.35	**7.79**	6.53
Payable silver sold – koz	**672**	697	**2,976**	1,843

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

2021 versus 2020

Production:

- Silver: 64% higher from increased throughput relative to the prior year, given the COVID-19 related mine suspensions in 2020.
- By-products: zinc, lead and copper production increased 37%, 34% and 60%, respectively, primarily due to the higher throughput, partially offset by lower base metal grades due to mine sequencing.

Cash Costs: $0.18 per ounce higher. Higher operating costs per ounce from COVID and Inflationary Costs and the deferral of mine development and other expenditures from 2020 into 2021 due to the COVID-19 related mine suspension in 2020, were largely offset by lower concentrate treatment charges from improved market conditions and higher by-product credits per ounce from higher base metal prices.

Sustaining Capital: higher spending in 2021 was primarily related to advancing certain projects that had been delayed or deferred in 2020 due to COVID-19, as well as spending on equipment leases, near mine exploration, equipment replacements and refurbishments, and a tailings storage facility expansion.

AISC: an increase of $1.26 per ounce due to the same factors affecting year-over-year cash costs and higher sustaining capital investments.

Morococha operation[1]

	Three months ended December 31		Year ended December 31	
	2021	2020	**2021**	2020
Tonnes milled – kt	**158.9**	141.4	**617.5**	328.6
Average silver grade – grams per tonne	**118**	129	**122**	126
Average zinc grade - %	**2.97**	3.30	**2.98**	3.43
Average lead grade - %	**1.02**	1.31	**1.04**	1.29
Average copper grade - %	**0.54**	0.47	**0.48**	0.43
Production:				
Silver – koz	**540**	527	**2,175**	1,173
Gold – koz	**0.35**	0.19	**1.11**	0.59
Zinc – kt	**3.93**	4.08	**15.64**	9.86
Lead – kt	**1.27**	1.51	**5.14**	3.46
Copper – kt	**0.67**	0.43	**2.17**	0.88
Payable Production:				
Silver – koz	**469**	457	**1,894**	1,011
Gold – koz	**0.18**	0.08	**0.53**	0.32
Zinc – kt	**3.31**	3.42	**13.19**	8.27
Lead – kt	**1.20**	1.43	**4.86**	3.28
Copper – kt	**0.63**	0.41	**2.04**	0.83
Cash costs - $ per ounce[2]	**4.57**	11.85	**9.63**	11.40
Sustaining capital - $ thousands[3]	**1,184**	3,219	**6,957**	7,259
Care and maintenances costs - $ thousands	**—**	(3)	**—**	20,023
AISC - $ per ounce[2]	**7.98**	18.29	**13.49**	18.38
Payable silver sold (100%) - koz	**491**	517	**2,059**	1,108

(1) Production figures are for Pan American's 92.3% share only, unless otherwise noted.
(2) Cash costs and AISC are non-GAAP measures. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed reconciliation of these measures to cost of sales.
(3) Sustaining capital expenditures exclude $nil million and $0.1 million investing activity cash outflows for Q4 2021 and full year 2021, respectively (Q4 2020 and full year 2020, $0.2 million and $1.0 million, respectively) related to investment capital incurred on the Morococha project, as disclosed in the "Project Development Update" section of this MD&A.

2021 versus 2020

Production:

- Silver: 85% higher from increased throughput relative to the prior year, given the COVID-19 related mine suspension in 2020.
- By-products: zinc, lead and copper increased by 59%, 49%, 146%, respectively, primarily due to the higher throughput. The lower zinc and lead grades and higher copper grades were the result of mine sequencing.

Cash Costs: $1.77 per ounce lower, due to lower concentrate treatment charges and higher by-product credits from increased base metal prices. These more than offset higher operating costs per ounce from COVID and Inflationary Costs and the disruptions from the mine suspensions affecting the timing of mine development and other expenditures in 2020.

Sustaining Capital: was consistent with the prior year, and primarily related to near-mine exploration, equipment replacements and refurbishments, equipment and office leases, and surface infrastructure.

AISC: decreased $4.89 per ounce, primarily driven by the same factors affecting year-over-year cash costs, in addition to lower sustaining capital per ounce from increased silver production rates.

San Vicente operation [1]

	Three months ended December 31		Year ended December 31	
	2021	2020	**2021**	2020
Tonnes milled – kt	**90.1**	93.0	**356.3**	285.1
Average silver grade – grams per tonne	**246**	237	**244**	276
Average zinc grade - %	**2.63**	2.88	**2.81**	2.34
Average lead grade - %	**0.03**	0.05	**0.10**	0.02
Average copper grade - %	**0.24**	0.24	**0.24**	0.27
Production:				
Silver – koz	**641**	663	**2,548**	2,320
Gold – koz	**0.06**	0.08	**0.28**	0.31
Zinc – kt	**1.93**	2.34	**8.36**	5.57
Lead – kt	**0.02**	0.04	**0.32**	0.05
Copper – kt	**0.18**	0.18	**0.66**	0.62
Payable Production:				
Silver – koz	**600**	617	**2,379**	2,180
Gold – koz	**—**	0.02	**0.04**	0.12
Zinc – kt	**1.61**	1.94	**6.97**	4.65
Lead – kt	**0.02**	0.03	**0.25**	0.05
Copper – kt	**0.15**	0.15	**0.41**	0.55
Cash costs - $ per ounce[2]	**10.87**	17.67	**14.98**	15.54
Sustaining capital - $ thousands	**2,469**	1,391	**5,340**	4,877
Care and maintenances costs - $ thousands	**—**	—	**—**	2,890
AISC - $ per ounce[2]	**14.59**	20.89	**17.25**	17.94
Payable silver sold (100%) - koz	**682**	453	**2,465**	2,153

(1) Production figures are for Pan American's 95.0% share only, unless otherwise noted.
(2) Cash costs and AISC are non-GAAP measures. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed reconciliation of these measures to cost of sales.

2021 versus 2020

Production:

- Silver: 10% higher from increased throughput relative to the prior year, given the COVID-19 related mine suspension in 2020, which more than offset the lower grades from increased mining dilution due to the narrowing vein structures at depth.
- By-products: zinc, lead and copper production increased by 50%, 483% and 6%, respectively, primarily due to the increase in throughput. In addition, zinc production benefited from higher grades from mine sequencing, whereas the significant increase in lead production was the result of commercial terms that resulted in higher lead payability.

Cash costs: decreased $0.56 per ounce due to higher by-product credits per ounce from higher base metal prices, grades and payabilities. These more than offset higher operating costs per ounce from the impact of COVID and Inflationary Costs, lower silver grades, and higher royalty costs per ounce from increased metal prices.

Sustaining Capital: higher in 2021, and primarily related to a tailings storage facility expansion, mine equipment replacements and rehabilitation, near-mine exploration, and mine site and camp infrastructure.

AISC: a $0.69 per ounce decrease due to the same factors affecting year-over-year cash costs.

Manantial Espejo operation

	Three months ended December 31		Year ended December 31	
	2021	2020	**2021**	2020
Tonnes milled - kt	**170.8**	149.3	**657.1**	604.7
Average silver grade – grams per tonne	**230**	166	**177**	146
Average gold grade – grams per tonne	**2.25**	1.78	**1.75**	1.30
Production:				
Silver – koz	**1,090**	742	**3,236**	2,547
Gold – koz	**11.35**	7.98	**33.76**	23.37
Payable Production:				
Silver – koz	**1,088**	741	**3,229**	2,542
Gold – koz	**11.32**	7.96	**33.69**	23.32
Cash costs - $ per ounce[1]	**12.50**	18.72	**18.37**	15.68
Sustaining capital - $ thousands[2]	**2,573**	732	**7,575**	3,264
Care and maintenances costs - $ thousands	**—**	—	**—**	5,617
AISC - $ per ounce[1]	**14.35**	19.24	**20.67**	15.80
Payable silver sold - koz	**1,007**	702	**3,062**	2,545

(1) Cash costs and AISC are non-GAAP measures. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed reconciliation of these measures to cost of sales.
(2) Sustaining capital expenditures for Q4 2020 and full year 2020 exclude $1.2 million and $7.5 million, respectively, related to the development of the Joaquin and COSE projects, as disclosed in the "Project Development Update" section of this MD&A.

2021 versus 2020

Production:

- Silver and Gold: 27% and 44% higher, respectively. The increased production is the result of higher throughput and grades from a greater contribution of underground ore from Manantial Espejo, COSE and Joaquin, given the COVID-19 related mine suspensions in 2020.

Cash costs: increased $2.69 per ounce from COVID and Inflationary Costs and higher mining and ore haulage costs from increased mining activities at COSE and Joaquin. The factors increasing costs were partially offset by increased silver and gold production.

Sustaining Capital: the increase over the prior year is largely driven by increased mine equipment refurbishment and the tailings facility storage expansion, which was initiated and completed in 2021. Both years also included near-mine exploration and lease payments for diesel generators.

AISC: increased $4.87 per ounce due to the same factors affecting year-over-year cash costs, in addition to higher sustaining capital per ounce and a decrease in cost-reducing NRV inventory write-ups.

Dolores operation

	Three months ended December 31		Year ended December 31	
	2021	2020	**2021**	2020
Tonnes placed - kt[1]	**2,057.0**	1,891.1	**7,774.4**	6,429.9
Waste tonnes mined - kt	**7,043.5**	6,074.8	**24,374.9**	25,227.4
Average silver grade – grams per tonne	**14**	21	**16**	29
Average gold grade – grams per tonne	**0.66**	0.76	**0.95**	0.64
Production:				
Silver – koz	**507**	764	**2,240**	3,779
Gold – koz	**40.1**	30.5	**160.1**	98.0
Payable Production:				
Silver – koz	**507**	762	**2,236**	3,773
Gold – koz	**40.1**	30.4	**159.8**	97.9
Cash costs - $ per ounce[2]	**931**	744	**749**	824
Sustaining capital - $ thousands	**12,097**	12,778	**40,566**	44,861
Care and maintenances costs - $ thousands	**—**	—	**—**	10,175
AISC - $ per ounce[2]	**1,959**	996	**1,087**	1,189
Payable gold sold - koz	**34.34**	29.00	**158.07**	96.18

(1) In 2021, the Company built up a high-grade stockpile of 353 thousand tonnes, representing $7.9 million in inventoried costs.
(2) Cash costs and AISC are non-GAAP measures. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed reconciliation of these measures to cost of sales. As previously described, beginning in 2021, Dolores cash costs and AISC are being reported on a per ounce of gold basis with silver considered as a by-product, rather than on a silver basis with gold considered as a by-product. In Q4 2020 and FY 2020, silver basis cash costs were reported as negative $9.79 and negative $2.48 per ounce, and silver basis AISC were reported as negative $2.17 and $6.17 per ounce, respectively.

2021 versus 2020

Production:

- Silver: the 41% decrease is largely the result of lower grades from mine sequencing into higher gold grade zones, as expected, partially offset by higher stacking rates relative to 2020, which was impacted by the COVID-19 related mine suspension. In 2021, silver inventories in the heap leach pad grew by 308 thousand ounces, representing $3.1 million in inventoried costs, largely due to the delay in completing the construction of leach pad 1 South.
- Gold: the 63% increase is primarily due to the increase in throughput and grades previously mentioned. In 2021, gold inventories in the heap leach pad grew by 32.3 thousand ounces, representing $26.4 million in inventoried costs, due to the delay in completing the construction of leach pad 1 South.

Cash Costs: decreased $75 per ounce; largely the result of increased gold grades and a lower waste mining strip ratio driving unit costs lower, partially offset by lower by-product credits from lower silver grades and higher operating costs. Higher operating costs were driven by: (i) the impact of COVID and Inflationary Costs, (ii) higher community spending, and (iii) a higher rate of lime application on the leach pad.

Sustaining Capital: reduced spending year-over-year, primarily due to less mine waste pre-stripping and mine equipment overhauls and replacements, partially offset by greater leach pad expansions.

AISC: decreased $102 per ounce due to the same factors decreasing cash costs, as well as higher gold production and lower sustaining capital. These were partially offset by NRV inventory cost adjustments, which added $9.7 million to costs in the current period, but reduced costs by $12.7 million in the previous period.

Shahuindo operation

	Three months ended December 31		Year ended December 31	
	2021	2020	**2021**	2020
Tonnes milled - kt[1]	**3,617.1**	2,697.3	**13,149.3**	10,603.4
Waste tonnes mined - kt	**3,641.8**	3,533.5	**16,717.4**	9,833.4
Average silver grade – grams per tonne	**6**	7	**6**	9
Average gold grade – grams per tonne	**0.43**	0.54	**0.47**	0.56
Production:				
Silver – koz	**60.54**	83.10	**234.69**	268.30
Gold – koz	**36.95**	33.60	**134.04**	142.38
Payable Production:				
Silver – koz	**60.08**	82.47	**232.93**	266.29
Gold – koz	**36.92**	33.57	**133.93**	142.26
Cash costs - $ per ounce[2]	**832**	619	**780**	588
Sustaining capital - $ thousands	**9,146**	6,963	**28,846**	22,749
Care and maintenances costs - $ thousands	**—**	—	**—**	3,855
AISC - $ per ounce[2]	**1,091**	842	**1,000**	750
Payable gold sold - koz	**39.53**	33.06	**139.46**	150.77

(1) In 2021, the Company built up a low-grade stockpile 2.0 million tonnes, representing $7.7 million in inventoried costs.
(2) Cash costs and AISC are non-GAAP measures. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed reconciliation of these measures to cost of sales.

2021 versus 2020

Production: Gold decreased 6% due to lower grades from mine sequencing and reduced leaching irrigation rates to prevent ponding of unexpectedly higher clay rich ores, which led to an increase of in-pad inventory. Those factors more than offset the higher throughput in 2021 relative to 2020 when the mine was impacted by the COVID-19 related mine suspension. Gold inventory in leach pad increased by 16.3 thousand ounces in 2021, representing $18.5 million in inventoried costs.

Cash Costs: increased $192 per ounce, primarily as a result of lower gold grades mined, an increase in the strip ratio, and the impact of COVID and Inflationary Costs.

Sustaining Capital: was comprised of leach pad expansions, site infrastructure improvements, near-mine exploration, payments for leased mining equipment, and repayments on construction loans related to leach pad and other infrastructure. The increase over the prior year is due to advancing certain projects that were delayed or deferred from 2020 due to COVID-19.

AISC: increased $250 per ounce, due to the same factors affecting year-over-year cash costs, in addition to higher sustaining capital expenditures per ounce.

La Arena operation

	Three months ended December 31		Year ended December 31	
	2021	2020	**2021**	2020
Tonnes milled - kt	**4,037.6**	4,132.2	**10,855.2**	10,079.3
Waste tonnes mined - kt	**5,372.8**	5,796.7	**27,007.5**	20,520.9
Average silver grade – grams per tonne	**—**	1	**1**	1
Average gold grade – grams per tonne	**0.35**	0.42	**0.36**	0.37
Production:				
Silver – koz	**11.11**	11.27	**39.75**	33.46
Gold – koz	**32.59**	41.40	**112.35**	105.37
Payable Production:				
Silver – koz	**11.08**	11.24	**39.63**	33.36
Gold – koz	**32.57**	41.37	**112.27**	105.29
Cash costs - $ per ounce(1)	**819**	556	**761**	721
Sustaining capital - $ thousands	**9,996**	13,030	**45,479**	37,324
Care and maintenances costs - $ thousands	**—**	—	**—**	3,712
AISC - $ per ounce(1)	**1,197**	873	**1,182**	1,109
Payable gold sold - koz	**26.87**	42.10	**109.43**	99.32

(1) Cash costs and AISC are non-GAAP measures. Please refer to the “Alternative Performance (Non-GAAP) Measures” section of this MD&A for a detailed reconciliation of these measures to cost of sales.

2021 versus 2020

Production: Gold increased 7% from higher mining rates and throughput relative to the prior year when the mine was impacted by the COVID-19 related mine suspension.

Cash Costs: increased $40 per ounce, primarily from a higher strip ratio and COVID and Inflationary Costs. The higher strip ratio is the result of mine life extensions, which have increased the mine waste strip ratio.

Sustaining Capital: primarily related to capitalized deferred stripping, waste storage facility expansions, leach pad expansions, and near-mine exploration. The increase over the prior year reflects higher spending on heap leach pad expansion and deferred stripping.

AISC: increased by $73 per ounce, due to the same factors affecting year-over-year cash costs, as well as an increase in sustaining capital per ounce.

Timmins' operation

	Three months ended December 31		Year ended December 31	
	2021	2020	**2021**	2020
Tonnes milled - kt	**391.4**	426.2	**1,593.1**	1,643.1
Average gold grade – grams per tonne	**2.83**	2.73	**2.70**	2.85
Production:				
Silver – koz	**4.03**	4.38	**16.16**	17.63
Gold – koz	**34.25**	38.09	**133.85**	148.40
Payable Production:				
Silver – koz	**3.99**	4.34	**16.00**	17.46
Gold – koz	**34.22**	38.06	**133.75**	148.29
Cash costs - $ per ounce[1]	**1,298**	1,126	**1,319**	1,061
Sustaining capital - $ thousands[2]	**8,415**	7,621	**35,894**	18,795
Care and maintenances costs - $ thousands	**—**	—	**—**	—
AISC - $ per ounce[1]	**1,614**	1,355	**1,619**	1,213
Payable gold sold - koz	**30.00**	37.20	**132.00**	148.13

(1) Cash costs and AISC are non-GAAP measures. Please refer to the "Alternative Performance (Non-GAAP) Measures" section of this MD&A for a detailed reconciliation of these measures to cost of sales.
(2) Sustaining capital expenditures exclude $0.2 million and $6.4 million investing activity cash outflows for Q4 2021 and full year 2021, respectively (Q4 2020 and full year 2020, $0.5 million and $2.0 million, respectively) related to investment capital incurred on the Timmins projects, as disclosed in the "Project Development Update" section of this MD&A.

2021 versus 2020

Production: Gold decreased 10% due to lower throughput from Bell Creek where mining rates have suffered from geotechnical challenges that require mining method adjustments and modifications to ground support systems in the deeper areas of the mine.

Cash Costs: increased $258 per ounce, primarily as a result of the lower grades and higher operating costs from COVID and Inflationary Costs and the appreciation of the Canadian dollar.

Sustaining Capital: was primarily comprised of mine equipment refurbishment and replacement, mine infrastructure upgrades, a tailings storage facility expansion, near-mine exploration, and lease payments for mining equipment. The increase over the prior year was largely driven by increased spending on expansion of the tailings storage facility and on equipment refurbishment and replacement.

AISC: increased by $406 per ounce due to the same factors impacting cash costs, as well as higher sustaining capital expenditures.

PROJECT DEVELOPMENT UPDATE

The following table reflects the amounts spent at each of Pan American's major projects in 2021 as compared to 2020.

Project Development Investment[1] (thousands of USD)	Three months ended December 31		Year ended December 31	
	2021	2020	2021	2020
La Colorada projects	**16,521**	1,909	**39,462**	10,971
Joaquin and COSE projects	**—**	1,198	**—**	7,525
Timmins projects	**244**	450	**6,403**	1,956
Other	**134**	196	**611**	1,093
Total	**16,899**	3,753	**46,476**	21,545

During 2021, the Company spent $46.5 million in 2021, largely to advance exploration and development studies for the La Colorada Skarn project, including the start of construction of the new concrete-lined ventilation shaft and refrigeration plant, and the Wetmore exploration project at Timmins.

OVERVIEW OF 2021 FINANCIAL RESULTS

Selected Annual and Quarterly Information

The following tables set out selected quarterly results for the past twelve quarters as well as selected annual results for the past three years. The dominant factors affecting results in the quarters and years presented below are the volatility of realized metal prices, and the volume and timing of sales, which varies with the timing of shipments, and which was also impacted by the COVID-19 related mine suspension. The fourth quarter of 2019 included impairment charges to the Manantial Espejo mine and the COSE and Joaquin projects.

2021 (In thousands of USD, other than per share amounts)	Quarter Ended March 31	June 30	Sept 30	Dec 31	Year Ended Dec 31
Revenue	$ 368,099	$ 382,132	$ 460,349	$ 422,170	**$ 1,632,750**
Mine operating earnings	$ 89,964	$ 103,048	$ 98,887	$ 76,039	**$ 367,938**
(Loss) earnings for the period attributable to equity holders	$ (7,798)	$ 70,939	$ 20,251	$ 14,036	**$ 97,428**
Basic (loss) earnings per share	$ (0.04)	$ 0.34	$ 0.10	$ 0.06	**$ 0.46**
Diluted (loss) earnings per share	$ (0.04)	$ 0.34	$ 0.10	$ 0.06	**$ 0.46**
Cash flow from operating activities	$ 29,850	$ 87,143	$ 157,017	$ 118,098	**$ 392,108**
Cash dividends paid per share	$ 0.070	$ 0.070	$ 0.100	$ 0.100	**$ 0.340**
Other financial information					
Total assets					**$ 3,518,584**
Total long-term financial liabilities[1]					**$ 297,600**
Total attributable shareholders' equity					**$ 2,631,554**

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

2020	Quarter Ended				Year Ended
(In thousands of USD, other than per share amounts)	March 31	June 30	Sept 30	Dec 31	Dec 31
Revenue	$ 358,428	$ 249,509	$ 300,414	$ 430,461	**$ 1,338,812**
Mine operating earnings	$ 50,058	$ 48,386	$ 124,561	$ 137,172	**$ 360,177**
(Loss) earnings for the period attributable to equity holders	$ (76,807)	$ 20,063	$ 65,741	$ 168,885	**$ 177,882**
Basic (loss) earnings per share	$ (0.37)	$ 0.10	$ 0.31	$ 0.80	**$ 0.85**
Diluted (loss) earnings per share	$ (0.37)	$ 0.10	$ 0.31	$ 0.80	**$ 0.85**
Cash flow from operating activities	$ 114,051	$ 62,750	$ 114,943	$ 170,571	**$ 462,315**
Cash dividends paid per share	$ 0.05	$ 0.05	$ 0.05	$ 0.070	**$ 0.220**
Other financial information					
Total assets					**$ 3,433,875**
Total long-term financial liabilities[1]					**$ 277,696**
Total attributable shareholders' equity					**$ 2,602,519**

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

2019	Quarter Ended				Year Ended
(In thousands of USD, other than per share amounts)	March 31[1]	June 30[1]	Sept 30[1]	Dec 31	Dec 31
Revenue[2]	$ 253,699	$ 340,494	$ 352,187	$ 404,379	**$ 1,350,759**
Mine operating earnings[2]	$ 15,770	$ 51,058	$ 63,850	$ 98,610	**$ 229,288**
Earnings for the period attributable to equity holders	$ 2,783	$ 18,371	$ 37,657	$ 51,927	**$ 110,738**
Basic earnings per share	$ 0.02	$ 0.09	$ 0.18	$ 0.26	**$ 0.55**
Diluted earnings per share	$ 0.02	$ 0.09	$ 0.18	$ 0.26	**$ 0.55**
Cash flow from operating activities	$ (12,911)	$ 83,518	$ 81,948	$ 129,473	**$ 282,028**
Cash dividends paid per share	$ 0.035	$ 0.035	$ 0.035	$ 0.035	**$ 0.14**
Other financial information					
Total assets					**$ 3,461,682**
Total long-term financial liabilities[3]					**$ 517,776**
Total attributable shareholders' equity					**$ 2,463,099**

(1) Amounts differ from those originally reported in the respective quarter due to: (i) the finalization of the purchase price allocation, which was retrospectively applied, the most significant change being the removal of the previously recorded $30.5 million bargain purchase gain; and, (ii) amounts presented retrospectively as if Timmins had not been classified as held for sale.

(2) Concurrent with the acquisition of Tahoe, the Company classified the Timmins mines as a discontinued operation held for sale and, in Q3 2019, reclassified to be a continuing operation. As a result, the previously recorded first and second quarters have been recast to present the Timmins mines as continuing operations.

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

Income Statement: 2021 versus 2020

Net earnings of $98.6 million were recorded in 2021 compared to $176.5 million in 2020, which corresponds to basic earnings per share of $0.46 and $0.85, respectively.

The following table highlights the difference between net earnings in 2021 compared with 2020:

Net earnings, year ended December 31, 2020			**$ 176,455**	**Note**
Increased revenue:				
Higher quantities of metal sold		139,496		
Increased realized metal prices	$	157,073		
Increased direct selling costs		(9,625)		
Decreased negative settlement adjustments		6,994		
Total increase in revenue			**$ 293,938**	**(1)**
Increased cost of sales:				
Increased production costs and increased royalty charges	$	(237,688)		**(2)**
Increased depreciation and amortization		(48,489)		**(6)**
Total increase in cost of sales			**$ (286,177)**	
Increased investment loss			(121,861)	**(3)**
Increased income tax expense			(70,872)	**(4)**
Decreased income from equity investees			(6,182)	
Increased foreign exchange loss			(5,793)	
Increased exploration and project development expense			(3,975)	
Decreased mine care and maintenance costs			70,325	**(5)**
Increased gains on sales of mineral properties, plant and equipment			24,245	**(7)**
Decreased other expense			21,180	**(8)**
Decreased interest and finance expense			3,906	
Increased gains on derivatives			1,850	
Decreased general and administrative expense			1,523	
Net earnings, year ended December 31, 2021			**$ 98,562**	

1. **Revenue** for 2021 was $1.63 billion, a $293.9 million increase from the $1.34 billion of revenue recognized in 2020. The revenue increase resulted from increased metal prices and volumes of metal quantities sold. The higher volumes sold largely reflects continuous operations in 2021 whereas 2020 operations were impacted by the COVID-19 related mine suspensions.

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

	Realized Metal Prices		Quantities of Metal Sold	
	Year ended December 31		Year ended December 31	
	2021	2020	2021	2020
Silver[(1)] – koz	**$ 25.00**	$ 20.60	**17,470**	17,317
Gold[(1)] – koz	**$ 1,792**	$ 1,758	**574.9**	519.7
Zinc[(1)] – kt	**$ 2,997**	$ 2,288	**42.7**	35.7
Lead[(1)] – kt	**$ 2,206**	$ 1,851	**17.0**	16.5
Copper[(1)] – kt	**$ 9,297**	$ 6,412	**7.8**	4.2

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

Realized prices for silver, gold, zinc, lead and copper, increased by 21%, 2% ,31%, 19% and 45%, respectively, in 2021 compared to 2020. Higher quantities of all metals were sold in 2021 compared to 2020, with year-over-year quantities of silver, gold, zinc, lead and copper increasing by 1%, 11%, 20%, 3%, and 83%, respectively.

Silver Segment and Gold Segment revenues in 2021 were $601.3 million and $1,031.4 million, respectively, compared to Silver Segment and Gold Segment revenues in 2020 of $380.4 million and $958.4 million, respectively, which included Dolores in the Gold Segment for both periods.

2. **Production and royalty costs** in 2021 were $961.9 million, $237.7 million higher than in 2020, largely due to a $228.8 million increase in production costs. The increase in production costs was largely driven by increased quantities of metal sold from all mines except La Colorada, the cost impact from COVID and Inflationary Costs on all operations, and NRV inventory adjustments. Silver Segment production costs, excluding NRV inventory adjustment impacts and Dolores costs in both years, increased by $147.7 million, which in addition to the factors noted above, reflected: (i) increased mining costs at Manantial Espejo from a full-year of operations at COSE and Joaquin; and (ii) higher operating costs at La Colorada, as described in the "Individual Mine Performance Section" of this MD&A. Gold Segment costs, excluding the NRV inventory adjustment impacts and including Dolores costs in both years, increased $81.2 million, which in addition to the factors noted above, mainly reflect increased waste mining strip ratios at both La Arena and Shahuindo. Additionally, there was a $24.9 million year-over-year cost increase from NRV adjustments, which increased costs by $8.7 million in 2021 compared to a $16.2 million decrease to costs in 2020. NRV adjustments in both years were related mainly to Dolores.
3. **Investment loss** of $59.7 million in 2021 was a $121.9 million change from 2020 when the Company's investments generated a $62.1 million gain. Investment income and losses in each period largely reflect fair value "mark-to-market" adjustments on certain of the Company's equity investments, the largest component of which being the Company's shares in New Pacific. The 2020 income also includes a gain on the sale of 10.4 million shares in the Company's equity investment in Maverix Metals Inc. ("Maverix").
4. **Income Tax Expense** was $146.4 million in 2021, a $70.9 million increase from 2020, in part due to increased earnings from operations. Despite the increase in earnings from operations, the earnings before income tax were comparable year-over-year due to unrealized mark-to-market adjustments on short term investments. These adjustments, which generated losses in 2021 and gains in 2020 did not result in corresponding tax benefits or expenses, respectively. Further, the 2020 expense was reduced by the recognition of previously unrecognized tax attributes related to the Timmins West, Bell Creek, and La Arena mines.
5. **Care and maintenance costs** were $31.8 million in 2021, a $70.3 million decrease from 2020, reflecting the COVID-19 related mine suspensions in 2020. Care and maintenance costs in 2021 related primarily to the Company's Escobal mine, where operations are currently suspended and the Navidad project.
6. **Depreciation and amortization** were $303.0 million in 2021, a $48.5 million increase from 2020, largely reflecting increased quantities of metal sold, as well as increased rates in particular at Dolores due to a decline in proven and probable mineral reserves and at La Arena due to increased depreciable capital base.
7. **Gains on sale of mineral properties, plant and equipment** were $32.2 million, a $24.2 million increase from 2020, largely from the sale of the Waterloo exploration property in 2021.
8. **Other expense** was $nil in 2021, which was a $21.2 million improvement over 2020. The 2020 expense mainly reflects a $6.1 million provision relating to certain value-added tax receivables in Guatemala; a $5.2 million increase to estimated closure and decommissioning liabilities for the Company's Alamo Dorado mine in Mexico, which went into reclamation at the end of 2017; commissions and transactions costs associated with the Company's sales of certain Maverix and New Pacific shares in 2020; and the settlement of certain claims by former contractors of the Company.

Statement of Cash Flows: 2021 versus 2020

Cash flow from operations in 2021 totaled $392.1 million, $70.2 million less than the $462.3 million generated in 2020. The decrease was largely driven by: (i) the impact of changes in non-cash working capital, which were a $71.1 million use of cash in 2021 compared to a $97.0 million source of cash in 2020; and (ii) a $47.6 million increase in income tax payments, largely from increased taxable earnings in 2021 in addition to March 2021 true-up payments driven by higher 2020 taxable income. These decreases were partially offset by an increase in cash mine operating earnings of $81.1 million. The increase in cash mine operating earnings was driven by stronger metal prices and higher volumes sold, which more than offset higher production costs.

The $71.1 million use of cash in non-cash working capital, largely reflecting an $82.9 million increase in inventory balances, mostly from the La Colorada concentrates shipping delays and in-heap inventory build-ups at Shahuindo and Dolores. These compared to the $97.0 million source of cash in 2020, which was driven primarily by a $56.8 million build-up of accounts payables and accrued liabilities and a $54.8 million decrease in trade and other receivable balances.

Investing activities utilized $186.7 million, primarily from $243.5 million spent on mineral properties, plant and equipment at the Company's mines and projects, which was partially offset by $45.8 million in proceeds from the sale of certain non-core exploration-stage mineral properties, primarily Waterloo and various royalties.

In 2020, $83.9 million of cash was used in investing activities and reflected $178.6 million spent on mineral properties, plant and equipment at the Company's mines and projects, and $15.6 million invested in the exercise of Maverix warrants, which was partially offset by $90.4 million received from the net sale of short-term investments, primarily in New Pacific, the partial disposition of the Company's interest in Maverix, and $22.5 million in proceeds from the sale of certain non-core exploration-stage mineral properties

Financing activities in 2021 used $85.9 million, primarily related to $71.5 million in dividend payments to shareholders and $12.4 million of lease repayments.

On August 10, 2021, the Company entered into an amendment agreement to amend and extend its $500.0 million credit facility, with a maturity date of February 1, 2023, (the "Credit Facility"), into the $500.0 million Sustainability-Linked Credit Facility, with a maturity date of August 8, 2025.

Financing activities in 2020 used $329.6 million, primarily related to the net repayment of $275.0 million on the Company's Credit Facility, which was fully repaid as at December 31, 2020, $46.2 million in shareholder dividend payments, and $13.1 million of lease repayments.

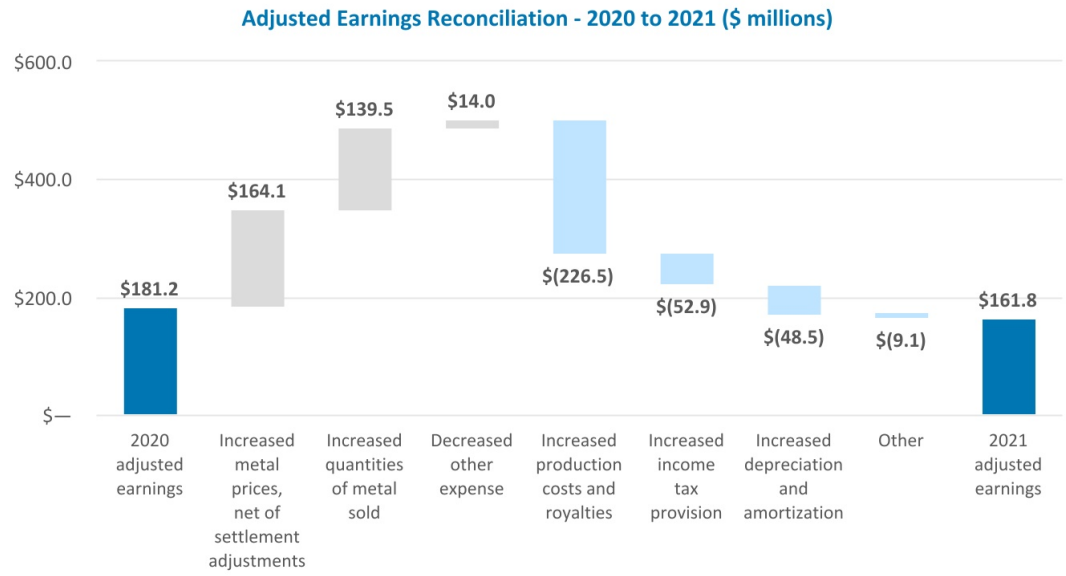
Adjusted Earnings: 2021 versus 2020

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, and a reconciliation of these measures to the 2021 Financial Statements.

Adjusted Earnings in 2021 were $161.8 million, representing a basic adjusted earnings per share of $0.77, which was $19.5 million, or $0.09 per share, lower than 2020 adjusted earnings of $181.2 million, and basic adjusted earnings per share of $0.86, respectively.

The following chart illustrates the key factors leading to the change in adjusted earnings from 2020 to 2021:



(1) Commencing in Q1 2021, gains and losses recognized in relation to certain equity investments owned by the Company, and included in Investment income (loss) in the Company's financial statements, are being excluded from adjusted earnings. This change was based on the increase in both the magnitude and volatility of these investments having a larger impact on the Company's net income in recent years, and Management's belief that these fair-market-values are neither under the control of Management nor representative of normal course operating results. The comparative period's adjusted earnings have been revised to conform to this change and thus differ from that previously reported.

Income Statement: Q4 2021 versus Q4 2020

Net earnings of $14.7 million was recorded in Q4 2021 compared to $169.0 million in Q4 2020, which corresponds to basic earnings per share of $0.07 and $0.80, respectively.

The following table highlights the key items driving the difference between the net earnings in Q4 2021 compared to the net earnings recorded in Q4 2020, some of which are further explained below:

Net earnings, three months ended December 31, 2020			**$ 169,018**	**Note**
Decreased revenue:				
Decreased realized metal prices		(2,428)		
Lower quantities of metal sold	$	(13,294)		
Decreased negative settlement adjustments		3,975		
Decreased direct selling costs		3,456		
Total decrease in revenue			**$ (8,291)**	**(1)**
Increased cost of sales:				
Increased production costs and decreased royalty charges	$	(54,165)		**(2)**
Decreased depreciation and amortization		1,323		
Total increase in cost of sales			**$ (52,842)**	
Increased income tax expense			(37,986)	**(3)**
Increased investment loss			(36,686)	**(4)**
Decreased income from equity investees			(12,051)	**(6)**
Decreased gains on sales of mineral properties, plant and equipment			(10,383)	**(7)**
Decreased gains on derivatives			(5,651)	**(8)**
Increased foreign exchange loss			(4,440)	
Increased exploration and project development expense			(2,985)	
Increased mine care and maintenance costs			(2,511)	
Decreased other expense			16,047	**(5)**
Decreased general and administrative expense			2,426	
Decreased interest and finance expense			999	
Net earnings, three months ended December 31, 2021			**$ 14,664**	

1. **Revenue** for Q4 2021 was $422.2 million, an $8.3 million decrease from the $430.5 million recognized in Q4 2020. The revenue decrease reflects $13.3 million from lower quantities of metal sold, driven largely by lower zinc and lead production due to mine sequencing and the timing of gold sales that led to an inventory build-up in Q4 2021, as well as $2.4 million in lower metal prices. These decreases offset the improvement in treatment and refining charges and the positive impact of concentrate final price settlement adjustments.

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

	Realized Metal Prices Three months ended December 31		Quantities of Metal Sold Three months ended December 31	
	2021	2020	**2021**	2020
Silver[(1)] – koz	**$ 23.33**	$ 24.72	**5,067**	4,732
Gold[(1)] – koz	**$ 1,792**	$ 1,874	**142.6**	148.1
Zinc[(1)] – kt	**$ 3,352**	$ 2,566	**9.9**	14.5
Lead[(1)] – kt	**$ 2,333**	$ 1,922	**4.1**	5.4
Copper[(1)] – kt	**$ 9,545**	$ 7,234	**2.1**	1.7

(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.

Decreased quarter-over-quarter realized silver and gold prices of 6% and 4%, were partially offset by increased zinc, lead and copper prices of 31%, 21%, and 32%.

Sales volumes decreased for gold, zinc and lead, by 4%, 32%, and 24%, respectively, whereas silver and copper quantities increased by 7% and 24%, respectively.

Silver Segment and Gold Segment revenues in Q4 2021 were $174.4 million and $247.7 million, respectively, compared to Q4 2020 Silver Segment and Gold Segment revenues of $138.1 million and $292.4 million, respectively, when including Dolores in the Gold Segment for both periods.

2. **Production and royalty costs** of $270.0 million in Q4 2021 were $54.2 million higher than those in Q4 2020, driven by a $56.7 million increase in production costs in Q4 2021 compared to Q4 2020. The higher production costs reflect COVID and Inflationary Costs and $28.4 million from the impact of NRV inventory adjustments, which increased costs by $21.7 million in Q4 2021, but decreased costs by $6.7 million in Q4 2020. The majority of the NRV adjustments in each period were related to inventories at the Dolores mine.
3. **Income tax expense** in Q4 2021 was $28.5 million compared to $9.5 million of income tax recovery in Q4 2020. The $38.0 million variance was largely attributable to the impact on 2020 income tax expense from: (i) the recognition of various unrecognized tax attributes, and (ii) changes in foreign exchange rates on foreign currency denominated deductible tax attributes, particularly in Mexico. These drove an income tax recovery in Q4 2020, and more than offset the lower income tax expense from the $116.4 million decrease in net income before tax from Q4 2020 to Q4 2021 .
4. **Investment loss** of $6.1 million in Q4 2021 compares with $30.6 million of investment income in Q4 2020. Investment gains and losses in both periods reflect fair value "mark-to-market" adjustments on the Company's equity investments, especially New Pacific.
5. **Other income** of $2.5 million in Q4 2021 resulted in a $16.0 million change relative to the $13.5 million other expense booked in Q4 2020. Q4 2021 other income reflects changes in supplies inventory provisions for our non-operating subsidiaries, while the Q4 2020 expense reflects a $6.1 million provision relating to certain value-added tax receivables in Guatemala and a $5.2 million increase to estimated closure and decommissioning liabilities for the Company's Alamo Dorado mine in Mexico, which went into reclamation at the end of 2017.
6. **Income from equity investees** was a $12.1 million decrease in Q4 2021 compared to Q4 2020. Income from equity investees in both periods primarily reflect the Company's share of income from Maverix.
7. **Gains on sale of mineral properties, plant and equipment** were a $10.4 million decrease in Q4 2021 compared with Q4 2020, and relate to the disposition of non-core exploration properties.
8. **Gains on derivatives** of $1.6 million in Q4 2021 compares with $7.3 million of gains on derivatives in Q4 2020. The decrease of $5.7 million is primarily related to a decrease in gains from the Company's diesel and MXN contracts in the current quarter.

Statement of Cash Flows: Q4 2021 versus Q4 2020

Cash flow from operations in Q4 2021 totaled $118.1 million, $52.5 million less than the $170.6 million generated in Q4 2020. This decrease was mainly attributable to a $28.2 million decrease in cash from changes in non-cash operating working capital and a $34.1 million decrease in cash mine operating earnings.

Working capital changes in Q4 2021 resulted in a $9.7 million use of cash, mainly reflecting an inventory build-up offset by a build-up in accounts payables and accrued liabilities. Changes in non-cash working capital in Q4 2020 resulted in an $18.6 million source of cash, comprised mainly of a build-up in accounts payables and accrued liabilities that offset an increase in inventories and trade and other receivables balances.

Investing activities utilized $66.3 million of cash in Q4 2021, comprised mostly of $70.1 million spent on mineral property, plant and equipment additions at the Company’s mines and projects, which was partially offset by cash

inflows from derivative contracts and non-core asset sales. In Q4 2020, investing activities utilized $40.1 million, largely reflecting spending of $53.6 million on mineral property, plant and equipment at the Company's mines and projects, partially offset by $12.0 million from the sale of non-core exploration assets.

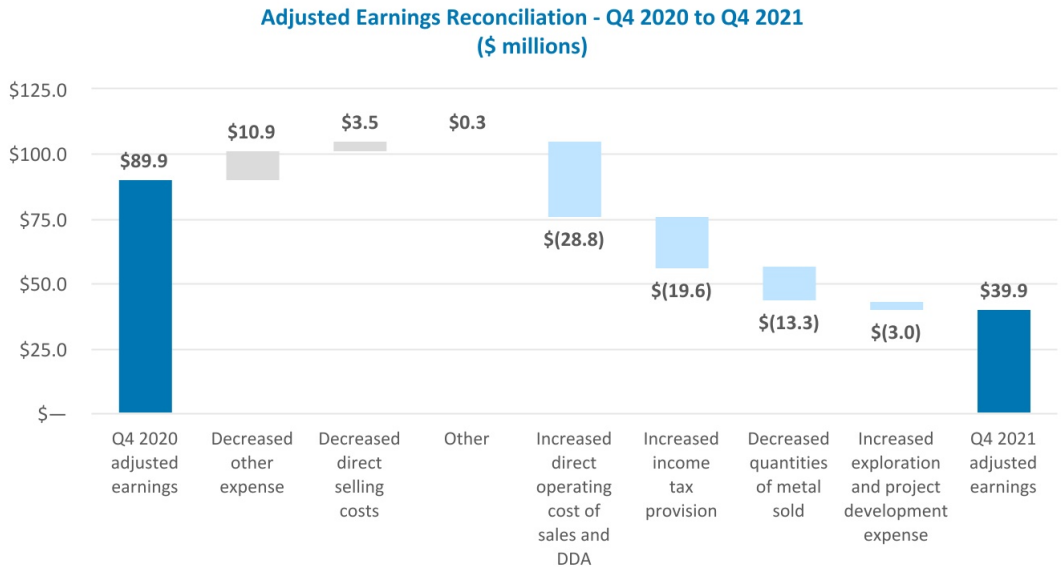
Financing activities in Q4 2021 used $25.1 million, largely related to $21.0 million of dividends paid to shareholders, $0.9 million of loan repayments, and $3.4 million of lease repayments. In Q4 2020, $113.5 million was used in financing activities, which consisted of $90.0 million of repayments on the Credit Facility, $14.7 million paid as dividends to shareholders, and $8.8 million of loan and lease repayments.

Adjusted Earnings: Q4 2021 versus Q4 2020

Please refer to the section of this MD&A entitled "Alternative Performance (Non-GAAP) Measures" for a detailed description of "adjusted earnings", and a reconciliation of these measures to the 2021 Financial Statements.

Adjusted Earnings in Q4 2021 was $39.9 million, representing a basic adjusted earnings per share of $0.19, which was $49.9 million, or $0.24 per share, lower than Q4 2020 adjusted earnings of $89.9 million, and $0.43 of basic adjusted earnings per share.

The following chart illustrates the key factors leading to the change in adjusted earnings from Q4 2020 to Q4 2021:



(1) Commencing in Q1 2021, gains and losses recognized in relation to certain equity investments owned by the Company, and included in Investment income (loss) in the Company's financial statements, are being excluded from adjusted earnings. This change was based on the increase in both the magnitude and volatility of these investments having a larger impact on the Company's net income in recent years, and Management's belief that these fair-market-values are neither under the control of Management nor representative of normal course operating results. The comparative period's adjusted earnings have been revised to conform to this change and thus differ from that previously reported.

LIQUIDITY AND CAPITAL POSITION

Liquidity and Capital Measures	December 31, 2021	September 30, 2021	December 31, 2020	Q4 2021 Change	2021 Change
Cash and cash equivalents ("Cash")	**283,550**	257,509	167,113	26,041	116,437
Short-term Investments	**51,723**	57,938	111,946	(6,215)	(60,223)
Cash and Short-term investments	**335,273**	315,447	279,059	19,826	56,214
Working Capital	**613,494**	618,761	495,168	(5,267)	118,326
Credit Facility committed amount	**500,000**	500,000	500,000	—	—
Credit Facility amounts drawn	**—**	—	—	—	—
Shareholders' equity	**2,636,008**	2,639,114	2,605,839	(3,106)	30,169
Total debt [(1)]	**45,861**	44,977	33,565	884	12,296
Capital [(2)]	**2,346,596**	2,368,644	2,360,345	(22,048)	(13,749)

(1) Total debt is a Non-GAAP measure calculated as the total of amounts drawn on the Credit Facility and Sustainability-Linked Credit Facility, finance lease liabilities and loans payable.
(2) The capital of the Company consists of items included in shareholders' equity and debt, net of cash and cash equivalents and short term investments.

Liquidity and Capital Resources

The Company's cash and short-term investments increased by $26.0 million and $116.4 million during Q4 2021 and the full year 2021, respectively. Operating cash flows of $118.1 million in Q4 2021, included $22.8 million in tax payments and a $9.7 million use of cash from working capital changes, and financed all of the Company's investing and financing activities in the quarter. The financing and investing activity cash outflows in the quarter included $70.1 million in payments for mineral property plant and equipment, $21.0 million in dividend payments, and $3.4 million of payments on equipment leases. The Company's equity investments classified as a short-term investment, including the Company's investment in New Pacific, decreased by $6.2 million in the quarter.

Annual operating cash flows in 2021 of $392.1 million included $71.1 million use of cash from working capital changes and $129.2 million in tax payments. Annual operating cash flows together with $45.8 million of proceeds from the sale of non-core mineral properties, including Waterloo, were sufficient to cover $243.5 million of investments in mineral property plant and equipment, dividend payments of $71.5 million, and lease payments of $12.4 million during the year. The Company's equity investments classified as a short-term investment, including the Company's investment in New Pacific, decreased by $60.2 million in 2021.

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

Working capital at December 31, 2021 of $613.5 million decreased by $5.3 million from September 30, 2021. The decrease was attributable to a $14.6 million increase in current liabilities, other than those relating to taxes, and a $14.3 million net increase in current tax liabilities, partially offset by the $19.8 million combined increase in cash and short-term investments described above, and a $3.8 million increase in other current assets other than those relating to taxes. Since December 31, 2020, working capital has increased by $118.3 million, primarily from: $56.2 million of cash and short-term investments, and an $89.8 million increase in other current assets other than those relating to taxes, which primarily reflected an increase in inventories, partially offset by a $21.3 million increase in current liabilities other than those relating to taxes, and a $6.3 million net increase in current tax liabilities.

As of December 31, 2021, the Company was in compliance with all financial covenants under the Sustainability-Linked Credit Facility, which as of the date of this MD&A and as at December 31, 2021 remained undrawn. The borrowing costs under the Sustainability-Linked Credit Facility are based on the Company's leverage ratio subject to pricing adjustments based on sustainability performance ratings and scores at either (i) LIBOR plus 1.825% to

2.80%; or (ii) The Bank of Nova Scotia's Base Rate on U.S. dollar denominated commercial loans plus 0.825% to 1.80%. Undrawn amounts under the Sustainability-Linked Credit Facility are subject to a stand-by fee of 0.41% to 0.63% per annum, dependent on the Company's leverage ratio and subject pricing adjustments based on sustainability performance ratings and scores. The Company's Sustainability-Linked Credit Facility matures on August 8, 2025.

The net cash generated from the sales of metal production provides our primary source of cash flows. We have not experienced payment delinquencies from our metal sales counterparties during the COVID-19 pandemic, nor do we currently expect to experience such delinquencies as the pandemic continues, though the impact of COVID-19 on the credit risk associated with our counterparties cannot be determined with any degree of certainty.

The Company may periodically experience restrictions on the ability of its subsidiaries to transfer funds to Pan American Silver Corp., primarily as a result of fiscal restrictions or regulatory changes in the jurisdictions where we operate. For example, Argentina has, at times, instituted unfavorable economic policies and strict currency controls, particularly on USD transactions. These restrictions on our ability to receive funds from our subsidiaries have not, and are not currently expected to, materially impact the Company's ability to meet its obligations.

The Company manages its capital structure and makes adjustments in light of changes in its economic environment and the risk characteristics of the Company's assets. To effectively manage the Company's capital requirements, Pan American utilizes a planning, budgeting and forecasting process to help determine the funds required to ensure the Company has the appropriate liquidity to meet its operating and growth objectives. The Company ensures that there are sufficient committed loan facilities to meet its short-term business requirements, taking into account its anticipated cash flows from operations and its holdings of cash and cash equivalents and short term investments.

The Company's financial position at December 31, 2021, 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 2022 working capital requirements, commitments, fund currently planned capital expenditures, and to discharge liabilities as they come due. The Company remains well positioned to take advantage of 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 due to a number of uncertainties, including those related to the COVID-19 business disruptions.

Commitments

In the normal course of business, the Company enters into contracts that give rise to commitments which are described in Note 8(e)(ii) of the 2021 Financial Statements, and in the Liquidity and Capital Position section of this MD&A, for future minimum payments. The following table summarizes the remaining contractual maturities of the Company's financial liabilities and operating and capital commitments on an undiscounted basis:

	Payments due by period 2021				
	Within 1 year	2 - 3 years	4- 5 years	After 5 years	Total
Accounts payable and accrued liabilities other than:	$ 275,629	$ —	$ —	$ —	$ 275,629
Severance accrual	26,695	404	33	4,450	31,582
Employee compensation	3,763	—	—	—	3,763
Total accounts payable and accrued liabilities	306,087	404	33	4,450	310,974
Income taxes payable	59,133	—	—	—	59,133
Loss on derivatives	351	—	—	—	351
Debt					
Repayment of principal	3,400	6,800	5,100	—	15,300
Interest and standby fees	2,613	4,867	1,432	—	8,912
Provisions [1][2]	2,738	2,553	—	—	5,291
Future employee compensation	3,352	9,058	—	—	12,410
Total contractual obligations [2]	**$ 377,674**	**$ 23,682**	**$ 6,565**	**$ 4,450**	**$ 412,371**

(1) Total litigation provision (Note 15).
(2) Amounts above do not include payments related to closure and decommissioning (current $5.3 million, long-term $237.6 million) discussed in Note 15, the $20.8 million deferred credit arising from the Navidad acquisition discussed in Note 18, and deferred tax liabilities of $184.8 million in Note 27.

Outstanding Share Amounts

As at December 31, 2021, the Company had approximately 0.28 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 $41.62 and a weighted average life of 3.8 years. Approximately 0.22 million of the stock options were vested and exercisable at December 31, 2021, with an average weighted exercise price of CAD $18.84 per share.

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

	Outstanding as at February 17, 2022
Common shares	210,457,524
Options	279,003
Total	**210,736,527**

As part of the consideration payable to Tahoe shareholders in connection with the acquisition of Tahoe, Tahoe shareholders received contingent consideration in the form of one contingent value right ("CVR") for each Tahoe share. Each CVR has a 10 year term and will be exchanged for 0.0497 of a Pan American share upon first commercial shipment of concentrate following restart of operations at the Escobal mine. The Company issued an aggregate of 313,887,490 CVRs.

CLOSURE AND DECOMMISSIONING COST PROVISION

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

The total inflated and undiscounted amount of estimated cash flows required to settle the Company's estimated future closure and decommissioning costs as of December 31, 2021 was $413.0 million (December 31, 2020 - $330.6 million) using inflation rates of between 1% and 5% (December 31, 2020 - between 0% and 4%). The inflated and discounted provision on the statement of financial position as at December 31, 2021, using discount rates between 1% and 9% (December 31, 2020 - between 0% and 8%), was $242.9 million (December 31, 2020 - $235.1 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 2047 or later if mine life is extended. Revisions made to the reclamation obligations in 2021 were primarily a result of increased site disturbance at the mines as well as revisions to the estimate based on periodic reviews of closure plans, actual expenditures incurred and concurrent closure activities completed. These obligations will be funded from operating cash flows, reclamation deposits and cash on hand.

The accretion of the discount charged in Q4 2021 and 2021 earnings as finance expense were $1.9 million and $7.5 million, respectively (Q4 2020 and 2020 - $2.1 million and $8.3 million, respectively). Reclamation expenditures incurred during Q4 2021 and 2021 were $1.7 million and $6.0 million, respectively (Q4 2020 and 2020 - $0.8 million and $2.5 million, respectively).

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. Related party transactions with Maverix have been disclosed in Note 12 of the 2021 Financial Statements.

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

ALTERNATIVE PERFORMANCE (NON-GAAP) MEASURES

Per Ounce Measures

Cash costs and AISC are non-GAAP financial measures that do not have any standardized meaning prescribed by IFRS and are therefore unlikely to be comparable to similar measures presented by other companies.

Pan American produces by-product metals incidentally to our silver and gold mining activities. We have adopted the practice of calculating a performance measure with the net cost of producing an ounce of silver and gold, our primary payable metals, after deducting revenues gained from incidental by-product production. 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.

Silver segment cash costs and AISC are calculated net of credits for realized revenues from all metals other than silver ("silver segment by-product credits"), and are calculated per ounce of silver sold. Gold segment cash costs and AISC are calculated net of credits for realized silver revenues ("gold segment by-product credits"), and are calculated per ounce of gold sold. Consolidated cash costs and AISC are based on total silver ounces sold and are net of by-product credits from all metals other than silver ("silver basis consolidated by-product credits").

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. Cash costs per ounce is conceptually understood and widely reported in the mining industry.

We believe that AISC, also calculated net of by-products, is a comprehensive measure of the full cost of operating our consolidated business, given that it includes the cost of replacing silver and gold 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.

Due to the expected mine sequencing into a higher gold zone of the mine plan at Dolores, the Company has determined that the mine is better identified as a Gold Segment operation from 2021 onwards. Thus as of Q1 2021, Dolores Cash Costs and AISC are reported on a per ounce of gold basis and are included as part of the Gold Segment Cash Costs and AISC calculations. 2020 Dolores Cash Costs and AISC are reported on a per ounce of silver basis and are included as part of the Silver Segment Cash Costs and AISC calculations, as previously reported.

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 applicable cost items, as reported in the consolidated financial statements for the respective periods.

Consolidated Cash Costs and AISC:

	Three months ended December 31, 2021				Three months ended December 31, 2020			
(In thousands of USD, except as noted)	**Silver Segment**	**Gold Segment**	**Corporate**	**Consolidated (silver basis)[1]**	Silver Segment	Gold Segment	Corporate	Consolidated (silver basis)[1]
Production Costs	**106,908**	**156,533**		**263,442**	**119,407**	**87,296**		**206,702**
Purchase price allocation inventory fair value adjustment	—	(55)		(55)		(712)		(712)
NRV inventory adjustments	814	(22,466)		(21,653)	6,742	—		6,742
On-site direct operating costs[3]	**107,722**	**134,012**		**241,734**	**126,148**	**86,583**		**212,732**
Royalties	2,204	4,345		6,548	7,222	1,902		9,123
Smelting, refining and direct selling charges[2]	18,604	43		18,647	22,074	29		22,103
Cash cost of sales before by-product credits[3]	**128,530**	**138,400**		**266,930**	**155,444**	**88,514**		**243,958**
Silver segment by-product credits[2]	(84,497)	—		—	(127,021)	—		—
Gold segment by-product credits[2]	—	(12,561)		—	—	(2,745)		—
Consolidated silver basis by-product credits[1,2]	—	—		(319,162)	—	—		(337,483)
Cash costs	**44,033**	**125,839**		**(52,232)**	**28,424**	**85,769**		**(93,524)**
NRV inventory adjustments	(814)	22,466		21,653	(6,742)	—		(6,742)
Sustaining capital	16,627	39,654		56,280	24,392	27,615		52,007
Exploration and project development	1,040	1,926	1,110	4,076	596	851	(356)	1,091
Reclamation cost accretion	494	1,129	240	1,864	1,225	749	87	2,061
General and administrative expense	—	—	8,255	8,255	—	—	10,679	10,679
All-in sustaining costs	**61,381**	**191,014**	**9,605**	**39,895**	**47,895**	**114,984**	**10,410**	**(34,428)**
Silver segment silver ounces sold (koz)	4,522	—		—	4,620	—		—
Gold segment gold ounces sold (koz)	—	131		—	—	112		—
Total silver ounces sold (koz)	—	—		5,067	—	—		4,732
Cash costs per ounce sold	**9.74**	**963**			**6.15**	**763**		
AISC per ounce sold	**13.57**	**1,461**		**7.87**	**10.37**	**1,023**		**(7.28)**
AISC per ounce sold (excluding NRV inventory adjustments)	**13.75**	**1,289**		**3.60**	**11.83**	**1,023**		**(5.85)**

	Year ended December 31, 2021				Year ended December 31, 2020			
(In thousands of USD, except as noted)	**Silver Segment**	**Gold Segment**	**Corporate**	**Consolidated (silver basis)[1]**	Silver Segment	Gold Segment[4]	Corporate	Consolidated (silver basis)[1]
Production Costs	**384,460**	**541,019**		**925,479**	**375,475**	**321,198**		**696,672**
Purchase price allocation inventory fair value adjustment		(604)		(604)		(3,463)		(3,463)
NRV inventory adjustments	992	(9,712)		(8,719)	16,175	—		16,175
On-site direct operating costs	**385,452**	**530,704**		**916,156**	**391,650**	**317,735**		**709,385**
Royalties	17,483	18,892		36,375	20,663	6,832		27,494
Smelting, refining and direct selling charges[2]	70,921	181		71,102	61,340	137		61,477
Cash cost of sales before by-product credits	**473,857**	**549,776**		**1,023,633**	**473,653**	**324,704**		**798,357**
Silver segment by-product credits[2]	(302,620)	—		—	(354,042)	—		—
Gold segment by-product credits[2]	—	(65,135)		—	—	(7,213)		—
Consolidated silver basis by-product credits[1,2]	—	—		(1,268,161)	—	—		(1,052,852)
Cash costs	**171,237**	**484,642**		**(244,528)**	**119,611**	**317,490**		**(254,495)**
NRV inventory adjustments	(992)	9,712		8,719	(16,175)	—		(16,175)
Sustaining capital	56,837	150,785		207,623	83,178	78,868		162,047
Exploration and project development	3,329	4,681	3,060	11,071	1,474	3,413	2,209	7,096
Reclamation cost accretion	2,008	4,516	946	7,470	4,898	2,996	365	8,260
General and administrative expense			34,852	34,852			36,375	36,375
All-in sustaining costs	**232,418**	**654,336**	**38,858**	**25,207**	**192,986**	**402,768**	**38,948**	**(56,893)**
Silver segment silver ounces sold (koz)	14,883	—		—	16,966	—		—
Gold segment gold ounces sold (koz)	—	539		—	—	398		—
Total silver ounces sold (koz)	—	—		17,470	—	—		17,317
Cash costs per ounce sold	**11.51**	**899**			**7.05**	**797**		
AISC per ounce sold	**15.62**	**1,214**		**1.44**	**11.38**	**1,011**		**(3.29)**
AISC per ounce sold (excluding NRV inventory adjustments)	**15.68**	**1,196**		**0.94**	**12.33**	**1,011**		**(2.35)**

(1) Consolidated silver basis calculated by treating all revenues from metals other than silver, including gold, as a by-product credit in cash costs. Consolidated silver basis by-product credits include all silver segment by-product credits, as well as gold revenues from the Gold Segment mines as by-products. Total silver ounces sold likewise includes silver ounces sold from Gold Segment operations.

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

Sustaining capital is included in AISC, while capital related to growth projects or acquisitions (referred to by the Company as project or investment capital) is not. Inclusion of only sustaining capital in the AISC measure reflects the capital costs associated with current ounces sold as opposed to project capital, which is expected to increase future production. The project capital excluded in the reconciliation below is further described in the "Project Development Update" section of this MD&A.

Reconciliation of payments for mineral properties, plant and equipment and sustaining capital	**Three months ended December 31,**		**Year ended December 31,**	
(in thousands of USD)	**2021**	2020	**2021**	2020
Payments for mineral properties, plant and equipment[1]	**70,146**	53,637	**243,478**	178,556
Add/(Subtract)				
Lease Payments[1]	**3,417**	3,180	**12,396**	13,101
Repayment of loans[2]	**850**	—	**1,700**	—
Investment (non-sustaining) capital	**(18,132)**	(4,807)	**(49,951)**	(29,610)
Sustaining Capital	**56,280**	52,007	**207,623**	162,047

(1) As presented on the consolidated statements of cash flows.
(2) As presented on the consolidated statements of cash flows. Related to repayments of construction loans for leach pad expansions in Peru.

Silver Segment Cash Costs and AISC by mine:

SILVER SEGMENT	Three Months Ended December 31, 2021					
(In thousands of USD, except as noted)	La Colorada	Huaron	Morococha	San Vicente	Manantial Espejo	Consolidated Silver Segment
Production Costs	27,142	21,913	18,720	11,567	27,566	106,908
NRV inventory adjustments	—	—	—	—	814	814
On-site direct operating costs	**27,142**	**21,913**	**18,720**	**11,567**	**28,380**	**107,722**
Royalties	68	—	—	1,119	1,017	2,204
Smelting, refining & direct selling costs	3,461	4,792	4,611	2,807	2,933	18,604
Cash costs before by-product credits	**30,671**	**26,705**	**23,331**	**15,493**	**32,329**	**128,530**
Silver segment by-product credits	(11,242)	(24,360)	(21,084)	(8,075)	(19,736)	(84,497)
Cash costs	**19,430**	**2,345**	**2,247**	**7,418**	**12,593**	**44,033**
NRV inventory adjustments	—	—	—	—	(814)	(814)
Sustaining capital	6,410	3,991	1,184	2,469	2,573	16,627
Exploration and project development	626	—	414	—	—	1,040
Reclamation cost accretion	113	139	75	65	102	494
All-in sustaining costs	**26,578**	**6,476**	**3,919**	**9,952**	**14,455**	**61,381**
Silver segment silver ounces sold (koz)	**1,669**	**672**	**491**	**682**	**1,007**	**4,522**
Cash cost per ounce sold	**11.64**	**3.49**	**4.57**	**10.87**	**12.50**	**9.74**
AISC per ounce sold	**15.93**	**9.63**	**7.98**	**14.59**	**14.35**	**13.57**
AISC per ounce sold (excluding NRV inventory adjustments)	**15.93**	**9.63**	**7.98**	**14.59**	**15.16**	**13.75**

SILVER SEGMENT	Three Months Ended December 31, 2020						
(In thousands of USD, except as noted)	La Colorada	Dolores	Huaron	Morococha	San Vicente	Manantial Espejo	Consolidated Silver Segment
Production Costs	22,069	36,235	16,402	17,207	6,455	21,038	119,407
NRV inventory adjustments	—	6,250	—	—	—	492	6,742
On-site direct operating costs	**22,069**	**42,485**	**16,402**	**17,207**	**6,455**	**21,530**	**126,148**
Royalties	185	2,603	57	—	3,647	730	7,222
Smelting, refining & direct selling costs	4,444	13	7,790	5,775	2,132	1,919	22,074
Cash costs before by-product credits	**26,698**	**45,101**	**24,249**	**22,982**	**12,234**	**24,180**	**155,444**
Silver segment by-product credits	(17,577)	(54,493)	(22,832)	(16,852)	(4,222)	(11,044)	(127,021)
Cash costs	**9,121**	**(9,392)**	**1,416**	**6,130**	**8,013**	**13,136**	**28,424**
NRV inventory adjustments	—	(6,250)	—	—	—	(492)	(6,742)
Sustaining capital	5,496	12,778	776	3,219	1,391	732	24,392
Exploration and project development	442	124	—	30	—	—	596
Reclamation cost accretion	143	660	144	84	71	123	1,225
All-in sustaining costs	**15,201**	**(2,079)**	**2,336**	**9,463**	**9,475**	**13,499**	**47,895**
Silver segment silver ounces sold (koz)	**1,291**	**959**	**697**	**517**	**453**	**702**	**4,620**
Cash cost per ounce sold	**7.07**	**(9.79)**	**2.03**	**11.85**	**17.67**	**18.72**	**6.15**
AISC per ounce sold	**11.78**	**(2.17)**	**3.35**	**18.29**	**20.89**	**19.24**	**10.37**
AISC per ounce sold (excluding NRV inventory adjustments)	**11.78**	**4.35**	**3.35**	**18.29**	**20.89**	**19.94**	**11.83**

SILVER SEGMENT	Year ended December 31, 2021					
(In thousands of USD, except as noted)	La Colorada	Huaron	Morococha	San Vicente	Manantial Espejo	Consolidated Silver Segment
Production Costs	74,874	90,126	75,182	40,404	103,874	384,460
NRV inventory adjustments	—	—	—	—	992	992
On-site direct operating costs	**74,874**	**90,126**	**75,182**	**40,404**	**104,866**	**385,452**
Royalties	319	—	—	14,165	3,000	17,483
Smelting, refining & direct selling costs	10,883	21,925	20,140	9,612	8,361	70,921
Cash costs before by-product credits	**86,075**	**112,051**	**95,322**	**64,181**	**116,227**	**473,857**
Silver segment by-product credits	(39,586)	(100,306)	(75,491)	(27,265)	(59,973)	(302,620)
Cash costs	**46,490**	**11,745**	**19,831**	**36,917**	**56,254**	**171,237**
NRV inventory adjustments	—	—	—	—	(992)	(992)
Sustaining capital	26,069	10,897	6,957	5,340	7,575	56,837
Exploration and project development	2,643	—	686	—	—	3,329
Reclamation cost accretion	452	557	298	261	439	2,008
All-in sustaining costs	**75,654**	**23,199**	**27,772**	**42,518**	**63,275**	**232,418**
Silver segment silver ounces sold (koz)	**4,321**	**2,976**	**2,059**	**2,465**	**3,062**	**14,883**
Cash cost per ounce sold	**10.76**	**3.95**	**9.63**	**14.98**	**18.37**	**11.51**
AISC per ounce sold	**17.51**	**7.79**	**13.49**	**17.25**	**20.67**	**15.62**
AISC per ounce sold (excluding NRV inventory adjustments)	**17.51**	**7.79**	**13.49**	**17.25**	**20.99**	**15.68**

SILVER SEGMENT[1]	Year ended December 31, 2020						
(In thousands of USD, except as noted)	La Colorada	Dolores	Huaron	Morococha	San Vicente	Manantial Espejo	Consolidated Silver Segment
Production Costs	69,073	138,670	39,572	35,768	25,940	66,451	375,475
NRV inventory adjustments	—	12,713	—	—	—	3,462	16,175
On-site direct operating costs	**69,073**	**151,384**	**39,572**	**35,768**	**25,940**	**69,913**	**391,650**
Royalties	593	8,286	42	—	9,812	1,930	20,663
Smelting, refining & direct selling costs	18,110	66	18,167	11,712	7,092	6,192	61,340
Cash costs before by-product credits	**87,776**	**159,736**	**57,781**	**47,480**	**42,844**	**78,036**	**473,653**
Silver segment by-product credits	(51,039)	(169,802)	(50,826)	(34,856)	(9,383)	(38,137)	(354,042)
Cash costs	**36,737**	**(10,066)**	**6,955**	**12,624**	**33,461**	**39,899**	**119,611**
NRV inventory adjustments	—	(12,713)	—	—	—	(3,462)	(16,175)
Sustaining capital	18,417	44,861	4,500	7,259	4,877	3,264	83,178
Exploration and project development	998	338	—	138	—	—	1,474
Reclamation cost accretion	570	2,640	576	336	285	491	4,898
All-in sustaining costs	**56,723**	**25,060**	**12,031**	**20,357**	**38,623**	**40,192**	**192,986**
Silver segment silver ounces sold (koz)	**5,254**	**4,063**	**1,843**	**1,108**	**2,153**	**2,545**	**16,966**
Cash cost per ounce sold	**6.99**	**(2.48)**	**3.77**	**11.40**	**15.54**	**15.68**	**7.05**
AISC per ounce sold	**10.80**	**6.17**	**6.53**	**18.38**	**17.94**	**15.80**	**11.38**
AISC per ounce sold (excluding NRV inventory adjustments)	**10.80**	**9.30**	**6.53**	**18.38**	**17.94**	**17.16**	**12.33**

Gold Segment Cash Costs and AISC by mine:

GOLD SEGMENT	Three Months Ended December 31, 2021				
(In thousands of USD, except as noted)	Dolores	Shahuindo	La Arena	Timmins	Total
Production Costs	62,850	34,233	22,204	37,245	156,533
Purchase Price Allocation Inventory Fair Value Adjustment	—	(55)	—	—	(55)
NRV inventory adjustments	(22,466)	—	—	—	(22,466)
On-site direct operating costs	**40,384**	**34,179**	**22,204**	**37,245**	**134,012**
Royalties	2,599	—	—	1,746	4,345
Smelting, refining & direct selling costs	7	—	—	36	43
Cash costs before by-product credits	**42,990**	**34,179**	**22,204**	**39,027**	**138,400**
Gold segment by-product credits	(11,001)	(1,276)	(190)	(94)	(12,561)
Cash costs	**31,989**	**32,902**	**22,014**	**38,933**	**125,839**
NRV inventory adjustments	22,466	—	—	—	22,466
Sustaining capital	12,097	9,146	9,996	8,415	39,654
Exploration and project development	36	828	—	1,062	1,926
Reclamation cost accretion	701	263	150	15	1,129
All-in sustaining costs	**67,289**	**43,139**	**32,160**	**48,425**	**191,014**
Gold segment gold ounces sold	**34,343**	**39,531**	**26,867**	**30,000**	**130,740**
Cash cost per ounce sold	**931**	**832**	**819**	**1,298**	**963**
AISC per ounce sold	**1,959**	**1,091**	**1,197**	**1,614**	**1,461**
AISC per ounce sold (excluding NRV inventory adjustments)	**1,305**	**1,091**	**1,197**	**1,614**	**1,289**

GOLD SEGMENT	Three Months Ended December 31, 2020			
(In thousands of USD, except as noted)	Shahuindo	La Arena	Timmins	Total
Production Costs	23,460	23,797	40,039	87,296
Purchase Price Allocation Inventory Fair Value Adjustment	(688)	(24)	—	(712)
NRV inventory adjustments	—	—	—	—
On-site direct operating costs	**22,772**	**23,772**	**40,039**	**86,583**
Royalties	—	—	1,902	1,902
Smelting, refining & direct selling costs	—	—	29	29
Cash costs before by-product credits	**22,772**	**23,772**	**41,970**	**88,514**
Gold segment by-product credits	(2,291)	(365)	(89)	(2,745)
Cash costs	**20,481**	**23,407**	**41,881**	**85,769**
NRV inventory adjustments	—	—	—	—
Sustaining capital	6,963	13,030	7,621	27,615
Exploration and project development	—	—	851	851
Reclamation cost accretion	404	295	51	749
All-in sustaining costs	**27,848**	**36,732**	**50,404**	**114,984**
Gold segment gold ounces sold	**33,063**	**42,096**	**37,200**	**112,359**
Cash cost per ounce sold	**619**	**556**	**1,126**	**763**
AISC per ounce sold	**842**	**873**	**1,355**	**1,023**
AISC per ounce sold (excluding NRV inventory adjustments)	**842**	**873**	**1,355**	**1,023**

GOLD SEGMENT	Year ended December 31, 2021				
(In thousands of USD, except as noted)	Dolores	Shahuindo	La Arena	Timmins	Total
Production Costs	174,219	115,009	84,243	167,549	541,019
Purchase Price Allocation Inventory Fair Value Adjustment		(598)	(6)	—	(604)
NRV inventory adjustments	(9,712)	—	—	—	(9,712)
On-site direct operating costs	**164,507**	**114,411**	**84,237**	**167,549**	**530,704**
Royalties	12,067	—	—	6,825	18,892
Smelting, refining & direct selling costs	40	—	—	141	181
Cash costs before by-product credits	**176,613**	**114,411**	**84,237**	**174,515**	**549,776**
Gold segment by-product credits	(58,154)	(5,643)	(927)	(411)	(65,135)
Cash costs	**118,460**	**108,768**	**83,310**	**174,104**	**484,642**
NRV inventory adjustments	9,712	—	—	—	9,712
Sustaining capital	40,566	28,846	45,479	35,894	150,785
Exploration and project development	225	828	—	3,628	4,681
Reclamation cost accretion	2,804	1,052	599	61	4,516
All-in sustaining costs	**171,766**	**139,494**	**129,389**	**213,688**	**654,336**
Gold segment gold ounces sold	**158,071**	**139,456**	**109,432**	**132,000**	**538,960**
Cash cost per ounce sold	**749**	**780**	**761**	**1,319**	**899**
AISC per ounce sold	**1,087**	**1,000**	**1,182**	**1,619**	**1,214**
AISC per ounce sold (excluding NRV inventory adjustments)	**1,025**	**1,000**	**1,182**	**1,619**	**1,196**

GOLD SEGMENT	Year ended December 31, 2020			
(In thousands of USD, except as noted)	Shahuindo	La Arena	Timmins	Total
Production Costs	97,941	72,676	150,581	321,198
Purchase Price Allocation Inventory Fair Value Adjustment	(3,125)	(336)	(1)	(3,463)
NRV inventory adjustments	—	—	—	—
On-site direct operating costs	**94,816**	**72,339**	**150,580**	**317,735**
Royalties	—	—	6,832	6,832
Smelting, refining & direct selling costs	—	—	137	137
Cash costs before by-product credits	**94,816**	**72,339**	**157,549**	**324,704**
Gold segment by-product credits	(6,120)	(743)	(350)	(7,213)
Cash costs	**88,695**	**71,596**	**157,199**	**317,490**
NRV inventory adjustments	—	—	—	—
Sustaining capital	22,749	37,324	18,795	78,868
Exploration and project development	(5)	—	3,418	3,413
Reclamation cost accretion	1,615	1,179	203	2,996
All-in sustaining costs	**113,055**	**110,098**	**179,615**	**402,768**
Gold segment gold ounces sold	**150,775**	**99,320**	**148,130**	**398,225**
Cash cost per ounce sold	**588**	**721**	**1,061**	**797**
AISC per ounce sold	**750**	**1,109**	**1,213**	**1,011**
AISC per ounce sold (excluding NRV inventory adjustments)	**750**	**1,109**	**1,213**	**1,011**

Adjusted Earnings and Basic Adjusted Earnings Per Share

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

The following table shows a reconciliation of adjusted earnings for the three and twelve months ended December 31, 2021 and 2020, to the net earnings for each period.

	Three Months Ended December 31		Year ended December 31	
(In thousands of USD, except as noted)	**2021**	2020[1]	**2021**	2020[1]
Net earnings for the period	**$ 14,664**	$ 169,018	**$ 98,562**	$ 176,455
Adjust for:				
Write-down of other assets	**—**	—	**—**	2,013
Unrealized foreign exchange losses	**1,643**	1,002	**6,703**	8,857
Heap inventory net realizable value charge (recovery)	**20,421**	(3,621)	**11,831**	662
Unrealized losses (gains) on derivatives	**662**	(6,712)	**3,764**	(6,175)
(Income) from equity investees	**(289)**	(12,340)	**(4,347)**	(10,529)
Loss (gain) on sale of assets	**551**	(9,832)	**(32,167)**	(7,922)
COVID 19 mine care and maintenance	**—**	—	**—**	75,097
Unrealized Investment loss (income)[1]	**6,083**	(30,603)	**59,722**	(62,139)
Closure and decommissioning liability	**—**	5,174	**—**	5,174
Effect of taxes on adjusting items	**(7,353)**	(30)	**3,377**	(18,848)
Effect of foreign exchange on taxes	**3,561**	(22,171)	**14,337**	18,598
Total adjustments	**$ 25,279**	$ (79,133)	**$ 63,220**	$ 4,788
Adjusted earnings for the period	**$ 39,943**	$ 89,885	**$ 161,782**	$ 181,243
Weighted average shares for the period	**210,348**	210,193	**210,298**	210,085
Adjusted earnings per share for the period	**$ 0.19**	$ 0.43	**$ 0.77**	$ 0.86

(1) Commencing in Q1 2021 gains and losses recognized in relation to certain equity investments owned by the Company, and included in Investment (loss) income in the Company's financial statements, are being excluded from adjusted earnings. This change was based on the increase in both the magnitude and volatility of these investments having a larger impact to the Company's net income in recent years, and Management's belief that these fair-market-values are neither under the control of Management nor representative of normal course operating results. The comparative period's adjusted earnings have been revised to conform to this change and thus differ from that previously reported.

Total Debt

Total debt is a non-GAAP measure calculated as the total current and non-current portions of long-term debt (including amounts drawn on the Sustainability-Linked Credit Facility), 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.

Capital

Capital is a non-GAAP measure and is calculated as total equity plus total debt less cash and cash equivalents and short term investments. 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 the enterprise value 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.

Cash Mine Operating Earnings

Cash mine operating earnings is a non-GAAP measure calculated as mine operating earnings excluding depreciation and amortization expense and NRV inventory adjustments included in production costs. Cash mine operating earnings 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 excludes these significant non-cash items to arrive at cash mine operating earnings for the purpose of analyzing and explaining periodic cash flow from operations and changes thereto.

Reconciliation of cash mine operating earnings	Three Months Ended December 31		Year ended December 31	
(in thousands of USD)	**2021**	2020	**2021**	2020
Mine operating earnings[1]	**$ 76,039**	$ 137,172	**$ 367,938**	$ 360,177
Add/(Subtract)				
Depreciation and amortization[1]	**76,141**	77,464	**302,958**	254,469
Net realizable value adjustment for inventories[2]	**21,652**	(6,741)	**8,719**	(16,175)
Cash mine operating earnings	**$ 173,832**	$ 207,895	**$ 679,615**	$ 598,471

(1) As presented on the consolidated statements of earnings and comprehensive earnings.
(2) As presented in Note 24 to the Company's 2021 Financial Statements.

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, gold, zinc, lead, and copper; trading and 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; risks relating to cyber security; the inherent risk of uncertainties in estimating mineral reserves and mineral resources; political, economic and social risks related to conducting business in jurisdictions such as Canada, Peru, Mexico, Argentina, Bolivia and Guatemala; environmental risks; risks related to its relations with employees and local communities where we operate, and risks relating to the spread of COVID-19, which has to date resulted in profound health and economic impacts globally and which presents future risks and uncertainties that are largely unknown at this time. Certain of these risks are described below, and are more fully described in Pan American's Annual Information Form (available on SEDAR at www.sedar.com) and Form 40-F filed with the SEC, and in the Financial Instruments and related risks section of the 2021 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.

Financial Instruments Risk Exposure

The Company is exposed to financial risks, including metal price risk, credit risk, interest rate risk, foreign currency exchange rate risk, and liquidity risk. The Company's exposures and management of each of those risks is described in the 2021 Financial Statements under Note 8 "Financial Instruments", along with the financial statement classification, the significant assumptions made in determining the fair value, and amounts of income, expenses, gains and losses associated with 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 following provides a description of the risks related to financial instruments and how management manages these risks:

Metal Price Fluctuations

The majority of our revenue is derived from the sale of silver, gold, zinc, copper and lead, and therefore fluctuations in the price of these metals significantly affect our operations and profitability. Our sales are directly dependent on metal prices, and metal prices have historically shown significant volatility and are beyond our control. The Board of Directors continually assesses Pan American's strategy towards our metal exposure, depending on market conditions. The table below illustrates the effect of changes in silver and gold prices on anticipated revenues for 2022, expressed in percentage terms. This analysis assumes that quantities of silver and gold produced and sold remain constant under all price scenarios presented.

2022 Revenue Metal Price Sensitivity

		Gold Price						
		$1,450	$1,550	$1,650	$1,750	$1,850	$1,950	$2,050
Silver Price	$19.50	85%	89%	93%	96%	100%	104%	108%
	$20.50	87%	90%	94%	98%	101%	105%	109%
	$21.50	88%	91%	95%	99%	103%	106%	110%
	$22.50	89%	93%	96%	**100%**	104%	107%	111%
	$23.50	90%	94%	97%	101%	105%	109%	112%
	$24.50	91%	95%	99%	102%	106%	110%	113%
	$25.50	92%	96%	100%	104%	107%	111%	115%

Since base metal and gold revenue are treated as a by-product credit for purposes of calculating Silver Segment cash costs and AISC per ounce of silver sold, and silver revenue is treated as a by-product credit for purposes of calculating Gold Segment cash costs and AISC per ounce of gold sold, these non-GAAP measures are highly sensitive to metal prices. The tables below illustrate this point by plotting the expected Silver Segment AISC per silver ounce according to our 2022 guidance against various price assumptions for the Silver Segment's two main by-product credits, zinc and gold, and plotting the expected Gold Segment AISC per gold ounce according to our 2022 guidance against various price assumptions for the Gold Segment's main by-product credit, Silver, expressed in percentage terms:

2022 Silver Segment AISC Metal Price Sensitivity

		Gold Price						
		$1,450	$1,550	$1,650	$1,750	$1,850	$1,950	$2,050
Zinc Price	$2,700	106%	105%	104%	103%	103%	102%	101%
	$2,800	105%	104%	103%	102%	101%	100%	99%
	$2,900	104%	103%	102%	101%	100%	99%	98%
	$3,000	103%	102%	101%	**100%**	99%	98%	97%
	$3,100	102%	101%	100%	99%	98%	97%	96%
	$3,200	101%	100%	99%	98%	97%	96%	95%
	$3,300	100%	99%	98%	97%	96%	95%	94%

2022 Gold Segment AISC Metal Price Sensitivity

		Silver Price						
		$19.50	$20.50	$21.50	$22.50	$23.50	$24.50	$25.50
Gold Price	$1,750	101%	101%	100%	**100%**	100%	99%	99%

The price of silver and other metals are affected by numerous factors beyond our control, including:

- global and regional levels of supply and demand;
- sales by government holders and other third parties;
- metal stock levels maintained by producers and others;
- increased production due to new mine developments and improved mining and production methods;
- speculative activities;
- inventory carrying costs;
- availability, demand and costs of metal substitutes;
- international economic and political conditions;
- interest rates, inflation and currency values;
- increased demand for silver or other metals for new technologies; and
- reduced demand resulting from obsolescence of technologies and processes utilizing silver and other metals.

In addition to general global economic conditions that can have a significant impact on our business in many ways, declining market prices for metals could materially adversely affect our operations and profitability. A decrease in the market price of silver, gold and other metals could affect the commercial viability of our mines and production at some of our mining properties. Lower prices could also adversely affect future exploration and our ability to develop mineral properties and mines, including the development of capital intensive projects such as Navidad, all of which would have a material adverse impact on our financial condition, results of operations and future prospects. There can be no assurance that the market prices will remain at sustainable levels.

If market prices of gold and silver remain below levels used in Pan American's impairment testing and reserve prices for an extended period of time, Pan American may need to reassess its long-term price assumptions, and a significant decrease in the long-term price assumptions would be an indicator of potential impairment, requiring Pan American to perform an impairment assessment on related assets. Due to the sensitivity of the recoverable amounts to long term metal prices, as well as to other factors including changes to mine plans and cost escalations, any significant change in these key assumptions and inputs could result in impairment charges in future periods.

The Board of Directors continually assesses Pan American's strategy towards our base metal exposure, depending on market conditions. From time to time, we mitigate the market price risk associated with our base metal production by committing some of our forecast base metal production to forward sales and options contracts. However, decisions relating to hedging may have material adverse effects on our financial performance, financial position, and results of operations.

During the year ended December 31, 2021, the Company entered into collars made up of put and call contracts for its exposure to copper but had no contracts outstanding as at December 31, 2021. The Company recorded losses of $0.2 million and $1.1 million in Q4 2021 and 2021, respectively, on copper contracts during the year ended December 31, 2021. The Company did not enter into copper contracts during the comparable periods in 2020. As

at December 31, 2021, the Company had outstanding collars made up of put and call contracts for its exposure to zinc (3,600 tonnes) with settlement dates on those positions between January 2022 and December 2022. The outstanding contracts have respective weighted average floor and cap prices per tonne of $3,150 and $4,000. The Company recorded gains of $0.1 million and $0.1 million during the three and twelve months ended December 31, 2021, respectively. The Company did not have any zinc contracts outstanding during the comparable periods in 2020.

During 2020, the Company entered into diesel swap contracts designed to fix or limit the Company's exposure to higher fuel prices. As at December 31, 2021, the Company had outstanding positions on its diesel exposure with a notional amount of 3.6 million gallons, with a weighted average fixed price of $1.42 per gallon, expiring between January 2022 and December 2022. The Company recorded gains of $0.3 million and $9.4 million for the three and twelve months endedDecember 31, 2021, respectively (Q4 2020 and 2020: gains of $4.0 million and $4.7 million, respectively).

We take the view that our precious metals production should not be hedged, thereby allowing the maximum exposure to precious metal prices. However, in extreme circumstances, the Board of Directors may make exceptions to this approach. Such decisions could have material adverse effects upon our financial performance, financial position, and results of operations.

Trading Activities and Credit Risk

The zinc, lead, and copper concentrates produced by us 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 our contractual 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.

As at December 31, 2021, we had receivable balances associated with buyers of our concentrates of $40.0 million (2020 - $35.1 million). The vast majority of our concentrate is sold to a limited number of concentrate buyers.

Doré production is refined under long term agreements with fixed refining terms at three separate refineries worldwide. We generally retain the risk and title to the precious metals throughout the process of refining and therefore are exposed to the risk that the refineries will not be able to perform in accordance with the refining contract and that we may not be able to fully recover our precious metals in such circumstances. As at December 31, 2021, we had approximately $52.3 million (2020 - $61.8 million) contained in precious metal inventory at refineries. We maintain insurance coverage against the loss of precious metals at our mine sites and in-transit to refineries. Risk is transferred to the refineries upon delivery.

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 our counterparties' credit risk 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 we operate. These advances represent a credit risk to us to the extent that suppliers do not deliver products or perform services as expected. As at December 31, 2021, we had made $11.2 million of supplier advances (2020 - $8.2 million), which are reflected in "Trade and other receivables" on the consolidated statements of financial position.

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.

Exchange Rate Risk

We report our financial statements in USD; however we operate in jurisdictions that utilize other currencies. As a consequence, the financial results of our operations, as reported in USD, are subject to changes in the value of the USD relative to local currencies. Since our sales are denominated in USD and a portion of our operating costs and capital spending are in local currencies, we are negatively impacted by strengthening local currencies relative to the USD and positively impacted by the inverse. From time to time, we mitigate part of this currency exposure by accumulating local currencies, entering into contracts designed to fix or limit our 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.

Pan American held cash and short-term investments of $60.5 million in CAD, $1.2 million inMXN, $8.6 million in PEN, $12.5 million in ARS, $8.4 million in BOB, and $0.2 million in Guatemalan quetzales as at December 31, 2021.

As at December 31, 2021, Pan American had outstanding positions on $36.0 million in foreign currency exposure of MXN purchases, $16.8 million of PEN purchases, and $48.0 million of CAD purchases. The MXN positions had weighted average USD put and call exchange rates of $20.50 and $26.08, respectively, expiring between January 2022 and December 2022. The PEN positions had a weighted average USD fixed exchange rate of $4.13, expiring between January 2022 and December 2022. The CAD positions had weighted average USD put and call exchange rates of $1.26 and $1.32, respectively, expiring between January 2022 and December 2022.

For the year ended December 31, 2021, the Company recorded losses of$0.2 million (2020 - gains of $1.6 million), losses of $3.7 million (2020 - losses of $2.2 million), and gains of $0.9 million (2020 - losses of $0.6 million) on MXN, PEN, and CAD derivative contracts, respectively.

The following table illustrates the effect of changes in the exchange rate of PEN and CAD against the USD on anticipated cost of sales for 2022, expressed in percentage terms:

2022 Cost of Sales Exchange Rate Sensitivity

		CAD/USD						
		$1.04	$1.11	$1.18	$1.25	$1.32	$1.39	$1.46
PEN/USD	$3.50	106%	105%	103%	102%	101%	101%	100%
	$3.70	105%	104%	103%	101%	101%	100%	99%
	$3.90	104%	103%	102%	101%	100%	99%	98%
	$4.10	104%	102%	101%	**100%**	99%	98%	97%
	$4.30	103%	102%	100%	99%	98%	98%	97%
	$4.50	102%	101%	100%	99%	98%	97%	96%
	$4.70	102%	100%	99%	98%	97%	96%	96%

Our 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 our 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 locally to determine prices and

value. Our investments in Argentina are primarily funded from outside of the country, and therefore conversion of foreign currencies, like USD, at the official exchange rate has had the effect of reducing purchasing power and substantially increasing relative costs in an already high inflationary market. Maintaining monetary assets in ARS also exposes us to the risks of ARS devaluation and high domestic inflation.

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.

We are required to use a portion of our cash flow to service principal and interest on debt, which will limit the cash flow available for other business opportunities. We also maintain and enter into intercompany credit arrangements with our subsidiaries in the normal course. Our ability to make scheduled principal payments, pay interest on or refinance our indebtedness depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Unexpected delays in production, the suspension of our mining licenses, or other operational problems could impact our ability to service the debt and make necessary capital expenditures when the debt becomes due. If we are unable to generate such cash flow to timely repay any debt outstanding, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to refinance our indebtedness will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations.

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. The nature, assessment and management of such claims are described in this section, and in Note 28 to the Company's 2021 Financial Statements. There were no significant changes to those risks or to the Company's management of exposure to those risks during the three months ended December 31, 2021.

In early May 2021, the Company’s subsidiary in Guatemala and the Ministry of Energy and Mines of Guatemala were served with legal proceedings that were originated in the Constitutional Court of Guatemala by a small group of residents and landowners, or alleged residents and landowners, from the La Cuchilla community near the Escobal mine claiming that prior mining activities damaged their lands. Currently, operations at Escobal are suspended pending the completion of the government-led ILO 169 consultation process. Nevertheless, the action seeks injunctive relief to prevent future mining activities at Escobal. While the Company believes the claims are procedurally and substantively flawed and without merit, the outcome of these proceedings cannot be determined at this time.

As reported in our Annual Information Form dated February 23, 2022, certain individuals have asserted community rights and land ownership over a portion of the La Colorada mine’s surface lands in the Agrarian Courts of Mexico. They have also initiated a process before the Secretariat of Agrarian, Territorial and Urban Development (“SEDATU”) in Zacatecas to declare such lands as national property. In 2019, we filed a legal challenge (amparo) against this process and obtained an injunction to protect our ownership of these surface rights pending the outcome of the challenge and a further review by SEDATU. Our challenge was dismissed on October 25, 2021, primarily on the basis that no final declaration of national lands had yet been made by SEDATU

that would affect our property rights. We have appealed this dismissal and we will continue to oppose the SEDATU process. While we believe that we hold proper title to the surface lands in question, if we are unable to maintain, or maintain access to, those surface rights, there could be material adverse impacts on the La Colorada mine's future mining operations.

COVID-19 and Other Pandemics

Since the outbreak of COVID-19 in late 2019, it has spread into areas where we have operations and where our offices are located. During 2020, Government efforts to curtail the spread of COVID-19 resulted in temporary suspensions of our operations in Mexico, Peru, Argentina and Bolivia, and we reduced throughput at our Timmins operation in Canada in order to enhance physical distancing and protect our personnel and the community. The spread of COVID-19 has impacted our employees and contractors, not only as it relates to potential health concerns, but also in terms of limitations on movement, availability of food and other goods, and personal well-being, among others. Our suppliers and service providers have also been impacted.

While COVID-19 has already had significant, direct impacts on our operations, our business, our workforce, and our production, the extent to which COVID-19 will continue to impact our operations will depend on future developments which are highly uncertain and cannot be predicted with confidence. These future developments include, but are not limited to, the duration of any outbreak, new information that may emerge concerning the severity of COVID-19 or its variants, and the actions taken to contain COVID-19 or treat it. The impact of governmental restrictions and health and safety protocols could improve or worsen relative to our assumptions, depending on how each jurisdiction manages potential outbreaks of COVID-19 and the efficacy of vaccines and other measures. We assume operations will continue to be impacted by comprehensive COVID-19 protocols in 2022, which would increase costs and restrict throughput levels, especially at our underground mines. Our ability to continue with our operations, or to successfully maintain our operations on care and maintenance if so required, or to restart or ramp-up any such operations efficiently or economically, or at all, is unknown. It is also uncertain, whether we will be able to maintain an adequate financial condition and have sufficient capital, or have access to capital through our Sustainability-Linked Credit Facility or otherwise, to sustain our business and operations.

Moreover, the continued presence of, or spread, of COVID-19 and its variants, and any future emergence and spread of similar pathogens, globally would likely have material adverse effect on both global and regional economies, including those in which we operate, as we have seen already. Such effects would not only affect our business and results of operations, but also the operations of our suppliers, contractors and service providers, including smelter and refining service providers, and the demand for our production. COVID-19 and the spread of similar pathogens could also negatively impact stock markets, including the trading price of our shares, adversely impact our ability to raise capital, cause continued interest rate volatility and movements that could make obtaining financing or refinancing our debt obligations more challenging or more expensive (if such financing is available at all), and result in any operations affected by coronavirus becoming subject to quarantine or shut down. Any of these developments, and others, could have a material adverse effect on our business and results of operations.

Climate Change

There is significant evidence of the effects of climate change on our planet and an intensifying focus on addressing these issues. The Company recognizes that climate change is a global challenge that may have both favorable and adverse effects on our business in a range of possible ways. Mining and processing operations are energy intensive and result in a carbon footprint either directly or through the purchase of fossil-fuel based electricity. As such, the Company is impacted by current and emerging policy and regulation relating to greenhouse gas emission levels, energy efficiency, and reporting of climate-change related risks. While some of the costs associated with reducing emissions may be offset by increased energy efficiency, technological innovation, or the increased demand for our metals as part of technological innovations, the current regulatory trend may result in additional transition costs at some of our operations. Governments are introducing climate change legislation and treaties at the international, national, and local levels, and regulations relating to emission levels and energy efficiency are evolving and becoming more rigorous. Current laws and regulatory requirements are not consistent across the jurisdictions in which we operate, and regulatory uncertainty is likely to result in additional complexity and cost in our compliance efforts. Public perception of mining is, in some respects, negative and there is increasing pressure to curtail mining in many jurisdictions as a result, in part, of perceived adverse effects of mining on the environment.

Concerns around climate change may also affect the market price of our shares as institutional investors and others may divest interests in industries that are thought to have more environmental impacts. While we are committed to operating responsibly and reducing the negative effects of our operations on the environment, our ability to reduce emissions, energy and water usage by increasing efficiency and by adopting new innovation is constrained by technological advancement, operational factors and economics. Adoption of new technologies, the use of renewable energy, and infrastructure and operational changes necessary to reduce water usage may also increase our costs significantly. Concerns over climate change, and our ability to respond to regulatory requirements and societal expectations, may have significant impacts on our operations and on our reputation, and may even result in reduced demand for our products.

The physical risks of climate change could also adversely impact our operations. These risks include, among other things, extreme weather events, resource shortages, changes in rainfall and in storm patterns and intensities, water shortages, changing sea levels and extreme temperatures. Climate-related events such as mudslides, floods, droughts and fires can have significant impacts, directly and indirectly, on our operations and could result in damage to our facilities, disruptions in accessing our sites with labour and essential materials or in shipping products from our mines, risks to the safety and security of our personnel and to communities, shortages of required supplies such as fuel and chemicals, inability to source enough water to supply our operations, and the temporary or permanent cessation of one or more of our operations. There is no assurance that we will be able to successfully anticipate, respond to, or manage the risks associated with physical climate change events and impacts, and this may result in material adverse consequences to our business and to our financial results.

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

In preparing financial statements in accordance with IFRS, management is required to make estimates and assumptions that affect the amounts reported in the consolidated financial statements. These critical accounting estimates represent management estimates and judgments that are uncertain, and any changes in these could materially impact the Company's financial statements. Management continuously reviews its estimates, judgments and assumptions using the most current information available. The significant judgments and key sources of estimation uncertainty in the application of accounting policies are described in Note 5 and Note 6 of the 2021 Financial Statements, respectively.

Readers should also refer to Note 3 of the 2021 Financial Statements, for the Company's summary of significant accounting policies.

CHANGES IN ACCOUNTING STANDARDS

Certain new accounting standards and interpretations have been published that are not mandatory for the current period and have not been early adopted.

Presentation of Financial Statements (Amendment to IAS 1)

The amendments to IAS 1, clarify the presentation of liabilities. The classification of liabilities as current or non-current is based on contractual rights that are in existence at the end of the reporting period and is affected by expectations about whether an entity will exercise its right to defer settlement. A liability not due over the next twelve months is classified as non-current even if management intends or expects to settle the liability within twelve months. The amendment also introduces a definition of 'settlement' to make clear that settlement refers to the transfer of cash, equity instruments, other assets, or services to the counterparty. The amendments are effective for annual reporting periods beginning on or after January 1, 2023. The implementation of this amendment is not expected to have a material impact on the Company.

Deferred Tax related to Assets and Liabilities arising from a Single Transaction (Amendments to IAS 12)

The amendment clarifies that the initial recognition exemption does not apply to transactions in which equal amounts of deductible and taxable temporary differences arise on initial recognition. The amendment is effective for annual reporting periods beginning on or after January 1, 2023. Early application is permitted. This amendment is not expected to have a material impact on the Company.

Property, Plant and Equipment - Proceeds before Intended Use (Amendments to IAS 16)

The amendment will prohibit the Company from deducting net proceeds from selling any items produced while bringing an item of property, plant and equipment to the location and condition necessary for it to be capable of operating in a manner intended by management. The amendment requires retrospective application and effective for annual reporting periods beginning on or after January 1, 2022, with earlier application permitted. This amendment is not expected to have a material impact on the Company upon adoption; however, the amendment may have impacts in future periods.

Disclosure of Accounting Policies (Amendments to IAS 1 and IFRS Practice Statement 2)

The amendments require that an entity discloses its material accounting policies, instead of its significant accounting policies. Further amendments explain how an entity can identify a material accounting policy. Examples of when an accounting policy is likely to be material are added. To support the amendment, the IASB has also developed guidance and examples to explain and demonstrate the application of the 'four-step materiality process' described in IFRS Practice Statement 2. The amendments are effective for annual reporting periods beginning on or after January 1, 2023. The Company is currently evaluating the impact of the amendment on its financial statements.

DISCLOSURE CONTROLS AND PROCEDURES AND INTERNAL CONTROL OVER FINANCIAL REPORTING

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

Disclosure controls and procedures ("DC&P")

Our Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO") are responsible for establishing and maintaining adequate DC&P. Under the supervision and with the participation of our CEO and CFO, we evaluated the effectiveness of the design and operation of our DC&P in accordance with requirements of National Instrument 52-109 of the Canadian Securities Commission ("NI 52-109") and the Sarbanes Oxley Act of 2002 (as adopted by the US Securities and Exchange Commission).

As of December 31, 2021, based on the evaluation, our CEO and CFO concluded that our DC&P were effective to ensure that information required to be disclosed by us in reports we file or submit is recorded, processed, summarized and reported within the time periods specified in securities legislation and is accumulated and communicated to our management, including our CEO and CFO.

Internal control over financial reporting ("ICFR")

Our CEO and CFO are responsible for establishing and maintaining adequate ICFR. Under the supervision and with the participation of our CEO and CFO, we evaluated the effectiveness of our ICFR as of December 31, 2021 based upon the Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on the evaluation, our CEO and CFO concluded that our ICFR was effective as of December 31, 2021. Management reviewed the results of management's evaluation with the Audit Committee of the Board.

The effectiveness of the Company's ICFR as of December 31, 2021 has been audited by Deloitte LLP, Independent Registered Public Accounting Firm as stated in their report immediately preceding the Company's audited consolidated financial statements for the year ended December 31, 2021.

Changes in ICFR

There has been no change in the Company's ICFR during the three and twelve month periods ended December 31, 2021 that has materially affected, or is reasonably likely to materially affect, its ICFR.

Inherent limitations of controls and procedures

All internal control systems, no matter how well designed, have inherent limitations. As a result, even systems determined to be effective may not prevent or detect misstatements on a timely basis, as systems can provide only reasonable assurance that the objectives of the control system are met. In addition, projections of any evaluation of the effectiveness of ICFR to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may change.

MINERAL RESERVES AND RESOURCES

Pan American Silver Corporation Mineral Reserves as of June 30, 2021[1,2]

Property	Location	Classification	Tonnes (Mt)	Ag (g/t)	Contained Ag (Moz)	Au (g/t)	Contained Au (koz)	Cu (%)	Pb (%)	Zn (%)
Silver Segment										
Huaron	Peru	Proven	6.9	164	36.6			0.70	1.46	2.95
		Probable	3.6	171	19.8			0.31	1.73	3.10
Morococha (92.3%)[3]	Peru	Proven	3.0	151	14.7			0.38	1.30	3.78
		Probable	3.5	155	17.4			0.31	1.36	3.72
La Colorada	Mexico	Proven	3.9	350	43.5	0.25	30.6		1.17	2.09
		Probable	6.2	289	57.3	0.19	38.2		1.18	2.06
Manantial Espejo	Argentina	Proven	0.3	280	2.5	2.56	23.10			
		Probable	0.2	337	1.8	3.28	17.20			
San Vicente (95%)[3]	Bolivia	Proven	1.0	364	11.8			0.38	0.26	3.84
		Probable	0.5	375	6.6			0.41	0.30	3.89
Joaquin	Argentina	Proven	0.1	497	1.6	0.19	0.60			
		Probable	0.3	533	6.0	0.36	4.00			
COSE	Argentina	Proven	—	860	0.7	20.56	17.4			
		Probable	—	185	0.1	11.32	3.7			
Escobal	Guatemala	Proven	2.5	486	39.5	0.42	34.20		1.02	1.75
		Probable	22.1	316	225.0	0.34	243.80		0.77	1.25
Total Silver Segment[4]			**54.2**	**278**	**484.9**	**0.36**	**412.9**	**0.47**	**1.07**	**2.15**
Gold Segment										
La Arena	Peru	Proven	24.8			0.39	314.1			
		Probable	21.9			0.27	193.3			
Dolores	Mexico	Proven	20.8	22.0	14.9	0.74	495.3			
		Probable	6.2	28.0	5.6	0.78	155.1			
Shahuindo	Peru	Proven	54.6	8	14.5	0.54	949.8			
		Probable	49.8	6	9.4	0.41	663.1			
Timmins	Canada	Proven	4.0			3.03	385.3			
		Probable	6.9			2.91	642.6			
Total Gold Segment[4]			**189.0**	**11**	**44.4**	**0.63**	**3,798.5**			
Total Gold and Silver Segments[4]		**Proven + Probable**	**243.2**	**89**	**529.3**	**0.58**	**4,211.5**	**0.47**	**1.07**	**2.15**

(1) See table below entitled "Metal price assumptions used to estimate mineral reserves and resources as at June 30, 2021".
(2) Mineral reserve estimates were prepared under the supervision of, or were reviewed by, Christopher Emerson, FAusIMM, Vice President Business Development and Geology and Martin G. Wafforn, P.Eng., Senior Vice President Technical Services and Process Optimization, each of whom are Qualified Persons as that term is defined in National Instrument 43-101 Standards of Disclosures of Mineral Projects ("NI 43-101").
(3) This information represents the portion of mineral reserves attributable to Pan American based on its ownership interest in the operating entity as indicated.
(4) Totals may not add up due to rounding. Total average grades of each element are with respect to those mines that produce the element.

Pan American Silver Corporation Measured and Indicated Mineral Resources as of June 30, 2021[1,2]

Property	Location	Classification	Tonnes (Mt)	Ag (g/t)	Contained Ag (Moz)	Au (g/t)	Contained Au (koz)	Cu (%)	Pb (%)	Zn (%)
Silver Segment										
Huaron	Peru	Measured	1.9	162	9.9			0.21	1.63	3.11
		Indicated	2.5	154	12.1			0.67	1.55	2.78
Morococha (92.3%)[3]	Peru	Measured	0.6	134	2.4			0.61	0.82	2.64
		Indicated	0.8	121	3.0			0.91	0.55	2.04
La Colorada	Mexico	Measured	1.3	185	7.6	0.15	6.00		0.82	1.42
		Indicated	1.9	175	10.6	0.15	9.00		1.22	2.12
Manantial Espejo	Argentina	Measured	0.2	185	1.4	1.85	14.40			
		Indicated	0.3	219	2.1	2.72	26.30			
COSE	Argentina	Measured	—	146	0.2	1.68	2.40			
		Indicated	—	218	0.1	5.55	1.40			
Joaquin	Argentina	Indicated	0.3	357	3.8	0.25	2.70			
San Vicente (95%)[3]	Bolivia	Measured	0.9	165	4.8			0.22	0.18	2.60
		Indicated	0.3	233	2.3			0.28	0.21	2.58
Navidad	Argentina	Measured	15.4	137	67.8			0.10	1.44	
		Indicated	139.8	126	564.5			0.04	0.79	
Escobal	Guatemala	Measured	2.3	251	18.6	0.23	16.70		0.31	0.59
		Indicated	14.2	201	91.6	0.20	93.00		0.38	0.66
Total Silver Segment[4]			**182.7**	**137**	**803.0**	**0.26**	**171.9**	**0.06**	**0.83**	**1.34**
Gold Segment										
Dolores	Mexico	Measured	2.8	16.00	1.50	0.3	27.2			
		Indicated	0.8	22.00	0.60	0.62	16.3			
La Bolsa	Mexico	Measured	10.8	10	3.5	0.70	242.8			
		Indicated	10.6	8	2.7	0.54	184.3			
Pico Machay	Peru	Measured	4.7			0.91	137.5			
		Indicated	5.9			0.67	127.1			
La Arena	Peru	Measured	1.6			0.32	16.2			
		Indicated	2.6			0.22	18.1			
Shahuindo	Peru	Measured	19.3	5.00	3.20	0.29	182.5			
		Indicated	24.2	4.00	3.50	0.28	218.6			
Timmins	Canada	Measured	2.7			3.46	296.0			
		Indicated	5.1			2.90	478.7			
La Arena II	Peru	Measured	154.2			0.25	1256.6	0.38		
		Indicated	556.6			0.23	4,061.0	0.37		
Whitney (79%)[3]	Canada	Measured	0.8			7.02	172.3			
		Indicated	1.8			6.77	387.5			
Gold River	Canada	Indicated	0.7			5.29	117.4			
Marlhill	Canada	Indicated	0.4			4.52	57.4			
Vogel	Canada	Indicated	2.2			1.75	125.0			
Total Gold Segment[4]			**807.8**	**7**	**14.9**	**0.31**	**8,122.4**	**0.37**		
Total Gold and Silver Segments[4]		**Measured + Indicated**	**990.5**	**101**	**817.9**	**0.31**	**8,294.3**	**0.31**	**0.83**	**1.34**

(1) See table below entitled "Metal price assumptions used to estimate mineral reserves and resources as at June 30, 2021".
(2) Mineral reserve estimates were prepared under the supervision of, or were reviewed by, Christopher Emerson, FAusIMM, Vice President Business Development and Geology and Martin G. Wafforn, P.Eng., Senior Vice President Technical Services and Process Optimization, each of whom are Qualified Persons as that term is defined in NI 43-101.
(3) This information represents the portion of mineral reserves attributable to Pan American based on its ownership interest in the operating entity as indicated.
(4) Totals may not add up due to rounding. Total average grades of each element are with respect to those mines that produce the element.

Pan American Silver Corporation Inferred Mineral Resources as of June 30, 2021[1,2]

Property	Location	Classification	Tonnes (Mt)	Ag (g/t)	Contained Ag (Moz)	Au (g/t)	Contained Au (koz)	Cu (%)	Pb (%)	Zn (%)
Silver Segment										
Huaron	Peru	Inferred	5.8	153	28.6			0.43	1.51	2.73
Morococha (92.3%)[3]	Peru	Inferred	4.8	143	21.9			0.39	1.09	3.29
La Colorada	Mexico	Inferred	8.4	190	51.1	0.2	40.9		1.29	2.48
La Colorada Skarn	Mexico	Inferred	100.4	44	141.0			0.20	1.77	4.29
Manantial Espejo	Argentina	Inferred	0.5	263	4.3	2.7	44.6			
San Vicente (95%)[3]	Bolivia	Inferred	2.6	292	24.6			0.26	0.29	2.49
Navidad	Argentina	Inferred	45.9	81	119.4			0.02	0.57	
Joaquin	Argentina	Inferred	0.2	317	1.9	0.3	1.6			
COSE	Argentina	Inferred	—	77	—	2.2	0.8			
Escobal	Guatemala	Inferred	1.9	180	10.7	0.9	53.7		0.22	0.42
Total Silver Segment[4]			**170.5**	**74**	**403.5**	**0.40**	**141.6**	**0.16**	**1.36**	**3.96**
Gold Segment										
Dolores	Mexico	Inferred	2.7	46	4.0	1.25	108.5			
La Bolsa	Mexico	Inferred	13.7	8	3.3	0.51	224.6			
Pico Machay	Peru	Inferred	23.9			0.58	445.7			
La Arena	Peru	Inferred	8.9			0.24	70.1			
Shahuindo	Peru	Inferred	17.7	8	4.5	0.47	268.2			
Shahuindo Sulphide	Peru	Inferred	97.4	14	45.1	0.74	2323.3			
Timmins	Canada	Inferred	3.9			3.12	395.9			
La Arena II	Peru	Inferred	71.0			0.21	486.7	0.2		
Whitney	Canada	Inferred	0.8			5.34	134.9			
Gold River	Canada	Inferred	5.3			6.06	1,027.4			
Vogel	Canada	Inferred	1.5			3.60	168.8			
Total Gold Segment[4]			**246.8**	**13**	**56.9**	**0.71**	**5,654**	**0.23**		
Total Gold and Silver Segments[4]		**Inferred**	**417.3**	**47**	**460.4**	**0.70**	**5,795.6**	**0.17**	**1.36**	**3.96**

(1) See table below entitled "Metal price assumptions used to estimate mineral reserves and resources as at June 30, 2021".
(2) Mineral reserve estimates were prepared under the supervision of, or were reviewed by, Christopher Emerson, FAusIMM, Vice President Business Development and Geology and Martin G. Wafforn, P.Eng., Senior Vice President Technical Services and Process Optimization, each of whom are Qualified Persons as that term is defined in NI 43-101.
(3) This information represents the portion of mineral reserves attributable to Pan American based on its ownership interest in the operating entity as indicated.
(4) Totals may not add up due to rounding. Total average grades of each element are with respect to those mines that produce the element.

Metal Price Assumptions Used to Estimate Mineral Reserves and Resources as of June 30, 2021						
Property	**Category**	**Ag US$/oz**	**Au US$/oz**	**Cu US$/t**	**Pb US$/t**	**Zn US$/t**
Huaron	All categories	18.00	1,300	6,500	2,000	2,450
Morococha	All categories	18.00	1,300	6,500	2,000	2,450
La Colorada	All categories	18.00	1,300	6,500	2,000	2,450
La Colorada Skarn	All categories	18.50		6,500	2,200	2,600
Dolores	Reserves	18.00	1,350			
	Resources	20.00	1,600			
La Bolsa	All categories	14.00	825			
Manantial Espejo	Reserves	18.00	1,400			
	Resources	20.00	1,600			
San Vicente	All categories	18.00	1,300	6,500	2,062	2,450
Navidad	All categories	12.52			1,100	
Pico Machay	All categories		700			
Joaquin	Reserves	18.00	1,450			
	Resources	20.00	1,600			
COSE	Reserves	18.00	1,450			
	Resources	20.00	1,600			
Escobal	All categories	20.00	1,300		2,204	2,424
Shahuindo	Reserves	18.00	1,350			
	Resources	20.00	1,600			
Shahuindo Sulphide	Inferred Resource	15.00	1,400			
La Arena	Reserves	18.00	1,450			
	Resources	20.00	1,600			
La Arena II	All categories		1,500	8,816		
Timmins	All categories		1,450			
Whitney	All categories		1,450			
Gold River	All categories		1,200			
Marlhill	All categories		1,125			
Vogel	Inside pit		1,150			
	Below pit		1,150			

General Notes Applicable to the Foregoing Tables:

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

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

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

See the Company's Annual Information Form dated February 23, 2022, available at www.sedar.com for further information on the Company's material mineral properties, including information concerning associated QA/QC and data verification matters, the key assumptions, parameters and methods used by the Company to estimate mineral reserves and mineral resources, and for a detailed description of known legal, political, environmental, and other risks that could materially affect the Company's business and the potential development of the Company's mineral reserves and resources.

Quantities of contained metal are shown before metallurgical recoveries.

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 February 23, 2022, 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”, “intents”, “plans”, “forecast”, “objective”, “guidance”, “outlook”, “potential”, “anticipated”, “budget”, and other similar words and expressions, identify forward-looking statements or information. These forward-looking statements or information relate to, among other things: future financial or operational performance and forecasts for 2022, including our estimated production of silver, gold and other metals forecasted and anticipated timing for the same, and our estimated cash costs, AISC, capital and exploration, mine operation, general and administrative, care and maintenance expenditures; future anticipated prices for gold, silver and other metals and assumed foreign exchange rates; expectations with respect to the future anticipated impact of COVID-19 on our operations, the lessening or increase in pandemic-related restrictions and protocols, and the anticipated timing for the same; the ability of Pan American to continue with its operations, or to successfully maintain our operations on care and maintenance, should the situation related to COVID-19 not be as anticipated; the impacts of inflation on Pan American and its operations; whether Pan American is able to maintain a strong financial condition and have sufficient capital, or have access to capital through the Sustainability-Linked Credit Facility or otherwise, to sustain our business and operations; the timing and outcome with respect to Pan American's environmental, social and governance activities, and Pan American's corporate social responsibility activities and our reporting in respect thereof; the duration and effect of the suspensions of operations of the Escobal mine, as well as the nature of and continuation of the constitutional court-mandated ILO 169 consultation process in Guatemala, and the timing and, if applicable, completion thereof; certain legal proceedings that were originated in the Constitutional Court of Guatemala relating to the Escobal mine; the SEDATU process with respect to a portion of the La Colorada mine’s surface lands; the timing and success of site infrastructure upgrades at the La Colorada mine; the ability of Pan American to successfully complete any capital projects, including with respect to Bell Creek, and the Wetmore and Whitney projects, the expected economic or operational results derived from those projects, and the impacts of any such projects on Pan American; the future results of our exploration activities, including with respect to the skarn exploration program at La Colorada; anticipated mineral reserves and mineral resources; and the Company’s plans and expectations for its properties and operations.

These forward-looking statements and information reflect the Company’s current views with respect to future events and are necessarily based upon a number of assumptions and estimates that, while considered reasonable by the Company, are inherently subject to significant operational, business, economic, competitive, political, regulatory, and social uncertainties and contingencies. These assumptions, some of which are described in the “Risks and Uncertainties” section of this MD&A, include: the world-wide economic and social impact of COVID-19 is managed and the duration and extent of the coronavirus pandemic is minimized or not long-term; the management of COVID-19 in each jurisdiction; the assumptions related to the global supply and availability of COVID-19 vaccines and the effectiveness and results of any vaccines; the presence and impact of COVID-19 on our workforce, suppliers and other essential resources and the effect those impacts have on our business; if necessary, continuation of operations following shutdowns or reductions in production, our ability to manage reduced operations efficiently and economically, including to maintain necessary staffing; our ability to implement environmental, social and governance activities; tonnage of ore to be mined and processed; ore grades and recoveries; prices for silver, gold and base metals remaining as estimated; currency exchange rates remaining as estimated; capital, decommissioning and reclamation estimates; our mineral reserve and mineral resource estimates and the assumptions upon which they are based; prices for energy inputs, labour, materials, supplies and services (including transportation); no labour-related disruptions at any of our operations; no unplanned delays or interruptions in scheduled production;protection of our interests against claims and legal proceedings; all necessary permits, licenses and regulatory approvals for our operations are received in a timely manner and can be maintained; and our ability to comply with environmental, health and safety laws, particularly given the potential for modifications and expansion of such laws. The foregoing list of assumptions is not exhaustive.

The Company cautions the reader that forward-looking statements and information involve known and unknown risks, uncertainties and other factors that may cause actual results and developments to differ materially from those expressed or implied by such forward-looking statements or information contained in this MD&A and the Company has made assumptions and estimates based on or related to many of these factors. Such factors include, without limitation: the duration and effects of the coronavirus and COVID-19 variants, and any other epidemics or pandemics on our operations and workforce, and their effects on global economies and society; fluctuations in silver, gold, and base metal prices; fluctuations in prices for energy inputs; fluctuations in currency markets (such as the PEN, MXN, ARS, BOL, GTQ and CAD versus the USD); risks related to the technological and operational nature of the Company’s business; changes in national and local government, legislation, taxation, controls or regulations and political, legal or economic developments in Canada, the United States, Mexico, Peru, Argentina, Bolivia, Guatemala or other countries where the Company may carry on business, some of which might prevent or cause the suspension or discontinuation of mining activities, including the risk of expropriation related to certain of our operations, particularly in Argentina and Bolivia and risks related to the constitutional court-mandated ILO 169 consultation process in Guatemala; 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 Company’s ability to secure our mine sites or maintain access to our mine sites due to criminal activity, violence, or civil and labour unrest; the speculative nature of mineral exploration and development, including the risk of obtaining or retaining necessary licenses and permits; challenges to, or difficulty in maintaining, the Company’s title to properties and continued ownership thereof; 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; the actual results of current exploration activities, conclusions of economic evaluations, and changes in project parameters to deal with unanticipated economic or other factors; increased competition in the mining industry for properties, equipment, qualified personnel, and their costs; having sufficient cash to pay obligations as they come due; and those factors identified under the caption “Risks Related to Pan American’s Business” in the Company’s most recent Form 40-F and Annual Information Form filed

with the United States Securities and Exchange Commission and Canadian provincial securities regulatory authorities, respectively. Although the Company has attempted to identify important factors that could cause actual results to differ materially, there may be other factors that cause results not to be as anticipated, estimated, described, or intended. Investors are cautioned against attributing undue certainty or reliance on forward-looking statements or information. Forward-looking statements and information are designed to help readers understand Management's current views of our near and longer term prospects and may not be appropriate for other purposes. The Company does not intend, and does not assume any obligation, to update or revise 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 Mineral 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 references to mineral reserve and mineral resource estimates included in the MD&A have been disclosed in accordance with NI 43-101 and the Canadian Institute of Mining, Metallurgy, and Petroleum Definition Standards. NI 43-101 is a rule developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. Canadian standards, including NI 43-101, differ significantly from the requirements of the SEC, and information concerning mineralization, deposits, mineral reserve and resource information contained or referred to herein may not be comparable to similar information disclosed by U.S. companies. In particular, and without limiting the generality of the foregoing, this MD&A uses the terms “measured resource”, “indicated resources” and “inferred resources”. U.S. investors are advised that, while such terms are recognized and required by Canadian Securities laws, the SEC does not recognize them. The requirements of NI 43-101 for identification of “reserves” are not the same as those of the SEC, and reserves reported by Pan American, in compliance with NI 43-101, may not qualify as “reserves” under SEC standards. Under U.S. standards, mineralization may not be classified as a “reserve” unless the determination has been made that the mineralization could be economically and legally produced for extracted at the time the reserve determination is made. **U.S. investors are cautioned not to assume that any part of a “measured resource” or “indicated resource” will ever be converted in to a “reserve”. U.S. investors should also understand that “inferred resources” have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of the “inferred resources” exist, are economically or legally mineable or will ever be upgraded to a higher category.** Under Canadian Securities laws, estimated “inferred resources” may not form the basis of feasibility or pre-feasibility studies, except in rare cases. Disclosure of “contained ounces” in a mineral resource is permitted disclosure under Canadian Securities laws. However, the SEC normally only permits issuers to report mineralization that does not constitute “reserves” by SEC standards as in place tonnage and grade, without reference to unit measures. Accordingly, information concerning mineral deposits set forth may not be comparable with information made public companies that report in accordance with U.S. standards.



PAN AMERICAN
SILVER

Consolidated Financial Statements and Notes

FOR THE YEARS ENDED DECEMBER 31, 2021 AND DECEMBER 31, 2020

Management's Responsibility For Financial Reporting

The accompanying consolidated financial statements of Pan American Silver Corp. ("Pan American" or the "Company") have been prepared by and are the responsibility of management and have been approved by the Board of Directors (the "Board").

These Consolidated Financial Statements were prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB") and include managements best estimates and judgements. Pan American has developed and maintains a system of internal controls designed to ensure the reliability of its financial information.

Deloitte LLP, an Independent Registered Public Accounting Firm, has audited these Consolidated Financial Statements. Their report outlines the scope of their examination and opinion on the consolidated financial statements.

"signed"
Michael Steinmann
Chief Executive Officer

"signed"
A. Robert Doyle
Chief Financial Officer

February 23, 2022

Management's Report on Internal Control over Financial Reporting

Management of Pan American is responsible for establishing and maintaining adequate internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting.

Pan American's management assessed the effectiveness of the Company's Internal control over financial reporting as of December 31, 2021, in accordance with the criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, management concluded that, as of December 31, 2021, Pan American's internal control over financial reporting was effective.

Deloitte LLP, an Independent Registered Public Accounting Firm, has audited the Company's Consolidated financial statements for the year ended December 31, 2021, and as stated in the Report of Independent Registered Public Accounting Firm, they have expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting as of December 31, 2021.

Report of Independent Registered Public Accounting Firm

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

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of financial position of Pan American Silver Corp. and subsidiaries (the "Company") as of December 31, 2021 and 2020, the related consolidated statements of earnings and comprehensive earnings, cash flows, and changes in equity, for each of the two years in the period ended December 31, 2021, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and its financial performance and its cash flows for each of the two years in the period ended December 31, 2021, in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 23, 2022, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Impairments - Assessment of Whether Indicators of Impairment or Impairment Reversal Exist within the Mineral Properties, Plant and Equipment - Refer to Note 5e to the financial statements

Critical Audit Matter Description

The Company’s determination of whether or not an indicator of impairment or impairment reversal exists at the cash generating unit level requires significant management judgment. Changes in metal price forecasts or discount rates, increases or decreases in estimated future costs of production, increases or decreases in estimated future capital costs, reductions or increases in the amount of recoverable mineral reserves and mineral resources and/or adverse or favorable political or regulatory developments can result in a write-down or write-up of the carrying amounts of the Company’s mineral properties, plant and equipment.

While there are several factors that are required to determine whether or not an indicator of impairment or impairment reversal exists, the judgments with the highest degree of subjectivity are future metal prices (for both silver and gold), discount rates and the Company's ability or expected timing to restart the Escobal mine. Auditing these estimates and factors required a high degree of subjectivity in applying audit procedures and in evaluating the results of those procedures. This resulted in an increased extent of audit effort, including the involvement of fair value specialists.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the future metal prices (for both silver and gold), discount rates and the Company's ability or expected timing to restart the Escobal mine considered in the assessment of indicators of impairment or impairment reversal included the following, among others:

- Evaluated the effectiveness of the Company's controls over management's assessment of indicators of impairment or impairment reversal.
- Performed independent research to assess if there have been any substantive local, political, or regulatory changes negatively impacting the ability or expected timing to restart the Escobal mine.
- With the assistance of fair value specialists:
    - Evaluated the future metal prices (silver and gold) by comparing management forecasts to third party forecasts, and
    - Evaluated the reasonableness of the change in discount rate by testing the source information underlying the determination of the discount rate.

/s/ Deloitte LLP

Chartered Professional Accountants

Vancouver, Canada
February 23, 2022

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

Report of Independent Registered Public Accounting Firm

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

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Pan American Silver Corp. and subsidiaries (the “Company") as of December 31, 2021, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control - Integrated Framework (2013) issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2021, of the Company and our report dated February 23, 2022, expressed an unqualified opinion on those financial statements.

Basis for Opinion

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

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

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

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

/s/ Deloitte LLP
Chartered Professional Accountants
Vancouver, Canada
February 23, 2022

	December 31, 2021	December 31, 2020
Assets		
Current assets		
Cash and cash equivalents (Note 24)	**$ 283,550**	$ 167,113
Short-term investments (Note 9)	**51,723**	111,946
Trade and other receivables	**128,150**	127,756
Income tax receivables	**20,282**	22,051
Inventories (Note 10)	**500,462**	406,191
Derivative assets (Note 8)	**3,995**	7,812
Prepaid expenses and other current assets	**13,007**	14,055
	1,001,169	856,924
Non-current assets		
Mineral properties, plant and equipment (Note 11)	**2,344,551**	2,415,006
Long-term inventories (Note 10)	**25,644**	24,355
Long-term refundable taxes	**8,711**	4,009
Deferred tax assets (Note 27)	**55,953**	57,850
Investment in associates (Note 12)	**78,657**	71,560
Goodwill and other assets (Note 13)	**3,899**	4,171
Total assets	**$ 3,518,584**	$ 3,433,875
Liabilities		
Current liabilities		
Accounts payable and accrued liabilities (Note 14)	**$ 306,087**	$ 281,938
Derivative liabilities (Note 8)	**351**	367
Provisions (Note 15)	**8,041**	12,066
Lease obligations (Note 16)	**10,663**	12,829
Debt (Note 17)	**3,400**	—
Income tax payables	**59,133**	54,556
	387,675	361,756
Non-current liabilities		
Long-term provisions (Note 15)	**240,111**	229,887
Deferred tax liabilities (Note 27)	**184,785**	175,311
Long-term lease obligations (Note 16)	**19,898**	20,736
Long-term debt (Note 17)	**11,900**	—
Deferred revenue (Note 12)	**12,516**	13,273
Other long-term liabilities (Note 18)	**25,691**	27,073
Total liabilities	**882,576**	828,036
Equity (Note 19)		
Issued capital	**3,136,214**	3,132,140
Reserves	**93,375**	93,409
Deficit	**(598,035)**	(623,030)
Total equity attributable to Company shareholders	**2,631,554**	2,602,519
Non-controlling interests	**4,454**	3,320
Total equity	**2,636,008**	2,605,839
Total liabilities and equity	**$ 3,518,584**	$ 3,433,875

Commitments and contingencies (Notes 8, 28); subsequent events (Note 30)
See accompanying notes to the consolidated financial statements
APPROVED BY THE BOARD ON FEBRUARY 23, 2022

"signed" Gillian Winckler, Director *"signed" Michael Steinmann, Director*

		2021		2020
Revenue (Note 25)	$	**1,632,750**	$	1,338,812
Cost of sales				
Production costs (Note 20)		**(925,479)**		(696,672)
Depreciation and amortization (Note 11)		**(302,958)**		(254,469)
Royalties		**(36,375)**		(27,494)
		(1,264,812)		(978,635)
Mine operating earnings (Note 25)		**367,938**		360,177
General and administrative		**(34,852)**		(36,375)
Exploration and project development		**(11,071)**		(7,096)
Mine care and maintenance (Note 21)		**(31,780)**		(102,105)
Foreign exchange losses		**(11,267)**		(5,474)
Gains on derivatives (Note 8c)		**5,393**		3,543
Gains on sale of mineral properties, plant and equipment (Note 11)		**32,167**		7,922
Income from equity investees (Note 12)		**4,347**		10,529
Other income (expense) (Note 26)		**36**		(21,144)
Earnings from operations		**320,911**		209,977
Investment (loss) income (Note 8b)		**(59,722)**		62,139
Interest and finance expense (Note 22)		**(16,198)**		(20,104)
Earnings before income taxes		**244,991**		252,012
Income tax expense (Note 27)		**(146,429)**		(75,557)
Net earnings and comprehensive earnings	$	**98,562**	$	176,455
Net earnings and comprehensive earnings attributable to:				
Equity holders of the Company		**97,428**		177,882
Non-controlling interests		**1,134**		(1,427)
	$	**98,562**	$	176,455
Earnings per share attributable to common shareholders (Note 23)				
Basic earnings per share	$	**0.46**	$	0.85
Diluted earnings per share	$	**0.46**	$	0.85
Weighted average shares outstanding (in 000's) Basic		**210,298**		210,085
Weighted average shares outstanding (in 000's) Diluted		**210,435**		210,295

See accompanying notes to the consolidated financial statements.

	2021	2020
Operating activities		
Net earnings for the year	**$ 98,562**	$ 176,455
Income tax expense (Note 27)	**146,429**	75,557
Depreciation and amortization (Note 11,21)	**302,958**	272,444
Unrealized investment loss (income)	**59,722**	(58,673)
Accretion on closure and decommissioning provision (Note 15)	**7,470**	8,260
Unrealized foreign exchange losses	**6,703**	8,857
Interest expense (Note 22)	**3,660**	9,216
Interest paid	**(5,234)**	(10,217)
Interest received	**172**	253
Income taxes paid	**(129,205)**	(81,636)
Other operating activities (Note 24)	**(28,060)**	(35,183)
Net change in non-cash working capital items (Note 24)	**(71,069)**	96,982
	$ 392,108	$ 462,315
Investing activities		
Payments for mineral properties, plant and equipment	**$ (243,478)**	$ (178,556)
Proceeds from sale of mineral properties, plant and equipment (Note 11)	**45,798**	22,474
Proceeds from short-term investments and other securities	**1,861**	90,384
Exercise of warrants (Note 12)	**—**	(15,626)
Net proceeds (payments) from derivatives	**9,157**	(2,594)
	$ (186,662)	$ (83,918)
Financing activities		
Proceeds from common shares issued	**$ 619**	$ 4,737
Distributions to non-controlling interests	**(933)**	—
Dividends paid	**(71,500)**	(46,223)
Proceeds from credit facility (Note 17)	**—**	80,000
Repayment of credit facility (Note 17)	**—**	(355,000)
Repayment of Loans (Note 17)	**(1,700)**	—
Payment of equipment leases	**(12,396)**	(13,101)
	$ (85,910)	$ (329,587)
Effects of exchange rate changes on cash and cash equivalents	**(3,099)**	(2,261)
Net increase in cash and cash equivalents	**116,437**	46,549
Cash and cash equivalents at the beginning of the year	**167,113**	120,564
Cash and cash equivalents at the end of the year	**$ 283,550**	$ 167,113

Supplemental cash flow information (Note 24).
See accompanying notes to the consolidated financial statements.

	Attributable to equity holders of the Company						
	Issued shares	Issued capital	Reserves	Deficit	Total	Non-controlling interests	Total equity
Balance, December 31, 2019	**209,835,558**	**$ 3,123,514**	**$ 94,274**	**$ (754,689)**	**$ 2,463,099**	**$ 4,747**	**$ 2,467,846**
Total comprehensive earnings							
Net earnings for the year	—	—	—	177,882	177,882	(1,427)	176,455
Shares issued on the exercise of stock options	329,379	5,800	(1,063)	—	4,737	—	4,737
Shares issued as compensation (Note 19)	93,730	2,826	—	—	2,826	—	2,826
Share-based compensation on option grants	—	—	198	—	198	—	198
Dividends paid	—	—	—	(46,223)	(46,223)	—	(46,223)
Balance, December 31, 2020	**210,258,667**	**$ 3,132,140**	**$ 93,409**	**$ (623,030)**	**$ 2,602,519**	**$ 3,320**	**$ 2,605,839**
Total comprehensive earnings							
Net earnings for the year	—	—	—	97,428	97,428	1,134	98,562
Shares issued on the exercise of stock options	65,780	762	(143)	—	619	—	619
Shares issued as compensation (Note 19)	133,077	3,312	—	—	3,312	—	3,312
Share-based compensation on option grants	—	—	109	—	109	—	109
Distributions by subsidiaries to non-controlling interests	—	—	—	(933)	(933)	—	(933)
Dividends paid	—	—	—	(71,500)	(71,500)	—	(71,500)
Balance, December 31, 2021	**210,457,524**	**$ 3,136,214**	**$ 93,375**	**$ (598,035)**	**$ 2,631,554**	**$ 4,454**	**$ 2,636,008**

See accompanying notes to the consolidated financial statements.

1. NATURE OF OPERATIONS

Pan American Silver Corp. is the ultimate parent company of its subsidiary group (collectively, the “Company”, or “Pan American”). Pan American is a British Columbia corporation domiciled in Canada, and its office is at Suite 1440 – 625 Howe Street, Vancouver, British Columbia, V6C 2T6.

The Company is engaged in the production and sale of silver, gold, zinc, lead and copper as well as other related activities, including exploration, extraction, processing, refining and reclamation. The Company’s major products are produced from mines in Canada, Peru, Mexico, Argentina and Bolivia. Additionally, the Company has project development activities in Canada, Peru, Mexico and Argentina, and exploration activities throughout South America, Canada and Mexico. As at December 31, 2021, the Company's Escobal mine in Guatemala continues to be on care and maintenance pending satisfactory completion of a consultation process led by the Ministry of Energy and Mines ("MEM") in Guatemala.

2. BASIS OF PREPARATION

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board (“IFRS”), effective as of December 31, 2021.

These consolidated financial statements were approved for issuance by the Board of Directors on February 23, 2022.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The significant accounting policies used in the preparation of these consolidated financial statements are as follows:

a) Presentation currency

The functional and presentation currency of the Company and each of its subsidiaries is the United States dollar ("USD").

b) Basis of measurement

These consolidated financial statements have been prepared on an historical cost basis, except for those assets and liabilities that are measured at revalued amounts or fair values at the end of each reporting period.

c) Basis of consolidation

The accounts of the Company and its subsidiaries, which are controlled by the Company, have been included in these consolidated financial statements. Control is achieved when the Company is exposed, or has rights, to variable returns from the investee and when the Company has the ability to affect those returns through its power over the investee. Subsidiaries are included in the consolidated financial results of the Company from the effective date of acquisition up to the effective date of disposition or loss of control. The principal subsidiaries of the Company and their geographic locations at December 31, 2021 were as follows:

Location	Subsidiary	Ownership Interest	Accounting	Operations and Development Projects Owned
Canada	Lake Shore Gold Corp.	100%	Consolidated	Bell Creek and Timmins West mines
Mexico	Plata Panamericana S.A. de C.V.	100%	Consolidated	La Colorada mine
	Compañía Minera Dolores S.A. de C.V.	100%	Consolidated	Dolores mine
Peru	Pan American Silver Huaron S.A.	100%	Consolidated	Huaron mine
	Compañía Minera Argentum S.A.	92%	Consolidated	Morococha mine
	Shahuindo S.A.C.	100%	Consolidated	Shahuindo mine
	La Arena S.A.	100%	Consolidated	La Arena mine
Bolivia	Pan American Silver (Bolivia) S.A.	95%	Consolidated	San Vicente mine
Guatemala	Pan American Silver Guatemala S.A.	100%	Consolidated	Escobal mine
Argentina	Minera Tritón Argentina S.A.	100%	Consolidated	Manantial Espejo & Cap-Oeste Sur Este mines
	Minera Joaquin S.R.L.	100%	Consolidated	Joaquin mine
	Minera Argenta S.A.	100%	Consolidated	Navidad project

d) Investments in associates

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

e) Business combinations

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

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

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

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Company reports provisional amounts for the items for which the accounting is incomplete. These provisional amounts are adjusted during the measurement period, or additional assets or liabilities are recognized, to reflect new information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognized at that date.

f) Revenue recognition

Revenue associated with the sale of commodities is recognized when control of the asset sold is transferred to the customer. Indicators of control transferring include an unconditional obligation to pay, legal title, physical possession, transfer of risk and rewards and customer acceptance. This generally occurs when the goods are delivered to a loading port, warehouse, vessel or metal account as contractually agreed with the buyer; at which point the buyer controls the goods. In cases where the Company is responsible for the cost of shipping and certain other services after the date on which control of the goods transfers to the customer, these other services are considered separate performance obligations and thus a portion of revenue earned under the contract is allocated and recognized as these performance obligations are satisfied.

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

Sales revenue is commonly subject to adjustments based on an inspection of the product by the customer. In such cases, sales revenue is initially recognized on a provisional basis using the Company's best estimate of contained metal, and adjusted subsequently. Revenues are recorded under these contracts at the time control passes to the buyer based on the expected settlement period. Revenue on provisionally priced sales is recognized based on estimates of the fair value of the consideration receivable based on forward market prices and estimated quantities. At each reporting date provisionally priced metal is marked to market based on the forward selling price for the quotational period stipulated in the contract. Variations between the price recorded at the date when control is transferred to the buyer and the actual final price set under the smelting contracts are caused by changes in metal prices resulting in the receivable being recorded at fair value through profit or loss ("FVTPL").

IFRS 15 - *Revenue from Contracts with Customers* ("IFRS 15") requires that variable consideration should only be recognized to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue recognized will not occur. The Company concluded that the adjustments relating to the final assay results for the quantity and quality of concentrate sold are not significant and do not constrain the recognition of revenue.

Refining and treatment charges under the sales contracts are netted against revenue for sales of metal concentrate.

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

g) Financial instruments

Measurement – initial recognition

Financial assets and financial liabilities are recognized in the Company's statement of financial position when the Company becomes a party to the contractual provisions of the instrument. On initial recognition, all financial assets and financial liabilities are recorded at fair value, net of attributable transaction costs, except for financial assets and liabilities classified as at FVTPL. Transaction costs of financial assets and liabilities classified as at FVTPL are expensed in the period in which they are incurred.

Subsequent measurement of financial assets and liabilities depends on the classifications of such assets and liabilities.

Classification of financial assets

Amortized cost:

Financial assets that meet the following conditions are measured subsequently at amortized cost:

(i) The financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows, and

(ii) The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

The amortized cost of a financial asset is the amount at which the financial asset is measured at initial recognition minus the principal repayments, plus the cumulative amortization using effective interest method of any difference between that initial amount and the maturity amount, adjusted for any loss allowance. Interest income is recognized using the effective interest method. Interest income is recognized in Investment (loss) income in the Consolidated Income Statements.

The Company's financial assets at amortized cost primarily include cash and cash equivalents, receivables not arising from sale of metal concentrates included in Trade and other receivables in the Consolidated Statement of Financial Position (Note 8(a)).

FVTPL:

By default, all other financial assets are measured subsequently at FVTPL.

The Company, at initial recognition, may also irrevocably designate a financial asset as measured at FVTPL if doing so eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise from measuring assets or liabilities or recognizing the gains and losses on them on different bases.

Financial assets measured at FVTPL are measured at fair value at the end of each reporting period, with any fair value gains or losses recognized in profit or loss to the extent they are not part of a designated hedging relationship. Fair value is determined in the manner described in Note 8(d)(ii). The Company's financial assets at FVTPL include its trade receivables from provisional concentrate sales, short-term investments in equity securities, and derivative assets not designated as hedging instruments.

Financial liabilities and equity

Debt and equity instruments are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

An equity instrument is any contract that evidences a residual interest in the assets of the Company after deducting all its liabilities. Equity instruments issued by the Company are recognized at the proceeds received, net of direct issue costs. Repurchase of the Company's own equity instruments is recognized and deducted directly in equity. No gain or loss is recognized in profit or loss on the purchase, sale, issue or cancellation of the Company's own equity instruments.

Classification of financial liabilities

Financial liabilities that are not contingent consideration of an acquirer in a business combination, held for trading or designated as at FVTPL, are measured at amortized cost using effective interest method.

Derivatives

When the Company enters into derivative contracts, these transactions are designed to reduce exposures related to assets and liabilities, firm commitments or anticipated transactions. The Company does not have derivative instruments that qualify as cash flow hedges and consequently all derivatives are recorded at fair value with changes in fair value recognized in net earnings.

h) Derivative Financial Instruments

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

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

i) Inventories

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

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

The Company uses several integrated steps to scientifically measure the metal content of the ore placed on the leach pads. The tonnage, grade, and ore type to be mined in a period was first estimated using the Mineral Reserve model. As the ore body is drilled in preparation for the blasting process, samples are taken of the drill

residue, which is assayed to determine their metal content and quantities of contained metal. The estimated recoverable ounces carried in the leach pad inventory are adjusted based on actual recoveries being experienced. Actual and estimated recoveries achieved are measured to the extent possible using various indicators including, but not limited to, individual cell recoveries, the use of leach curve recovery and trends in the levels of carried ounces depending on the circumstances or cumulative pad recoveries.

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

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

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

The estimate of both the ultimate recovery expected over time and the quantity of metal that may be extracted relative to the time the leach process occurs requires the use of estimates, which rely upon laboratory test work and estimated models of the leaching kinetics in the heap leach pads. Test work consists of leach columns of up to 400 days duration with 150 days being the average, from which the Company projects metal recoveries up to three years in the future. The quantities of metal contained in the ore are based upon actual weights and assay analysis. The rate at which the leach process extracts gold and silver from the crushed ore is based upon laboratory column tests and actual experience. The assumptions used by the Company to measure metal content during each stage of the inventory conversion process include estimated recovery rates based on laboratory testing and assaying. The Company periodically reviews its estimates compared to actual experience and revises its estimates when appropriate. The ultimate recovery will not be known until the leaching operations cease.

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

j) Mineral properties, plant and equipment (MPPE)

On initial acquisition, MPPE are valued at cost, being the purchase price and the directly attributable costs of acquisition or construction required to bring the asset to the location and condition necessary for the asset to be capable of operating in the manner intended by management. When provisions for closure and decommissioning are recognized, the corresponding cost is capitalized as part of the cost of the related assets, representing part of the cost of acquiring the future economic benefits of the operation. The capitalized cost of closure and decommissioning activities is recognized in MPPE and depreciated accordingly.

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

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

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

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

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

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

k) Operational mining properties and mine development

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

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

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

Major development expenditures on producing properties incurred to increase production or extend the life of the mine are capitalized while ongoing mining expenditures on producing properties are charged against

earnings as incurred. Gains or losses from sales or retirements of assets are included in gain or loss on sale of assets.

l) Depreciation of MPPE

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

i) Units of production basis

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

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

ii) Straight line basis

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

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

- Land – not depreciated
- Mobile equipment – 3 to 7 years
- Buildings and plant facilities – 25 to 50 years
- Mining properties and leases including capitalized evaluation and development expenditures – based on applicable reserves on a unit of production basis.
- Exploration and evaluation – not depreciated until mine goes into production
- Assets under construction – not depreciated until assets are ready for their intended use

m) Exploration and evaluation

Exploration expenditures are incurred in the search for economic mineral deposits or the process of obtaining more information about existing mineral deposits and typically include costs associated with drilling, sampling, mapping and other activity related to the search for ore.

Evaluation expenditures are incurred to establish the technical and commercial viability of mineral deposits and typically include costs associated with determining optimal methods of extraction and metallurgical and treatment processes, permitting, and preparing economic evaluations.

Exploration expenditures are expensed as incurred. Evaluation expenditures are capitalized when management determines there is a high degree of confidence that future economic benefits will flow to the Company. Acquired exploration and evaluation projects and acquired exploration rights are recognized as assets at their cost of acquisition or at fair value if purchased as part of a business combination.

Capitalized exploration and evaluation expenditures are reclassified to mineral properties, plant and equipment, in accordance with Note 3(j), once the technical feasibility and commercial viability are demonstrated.

n) Deferred stripping costs

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

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

o) Impairment (and reversals of impairment) of non-current assets

The Company reviews and tests the carrying amount of MPPE and intangible assets with finite lives when there is an indication of impairment or impairment reversal. Additionally, disposal groups held for sale are tested for impairment upon classification as a disposal group held for sale.

Impairment assessments on MPPE and intangible assets are conducted at the level of the CGU. The recoverable amount of a CGU is the higher of value in use ("VIU") and fair value less cost to sell. VIU is the net present value of expected future cash flows. Impairments are recognized for any excess of carrying value over the recoverable amount.

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

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

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

The discount rates applied to the future cash flow forecasts represent an estimate of the rate the market would apply having regard to the time value of money and the risks specific to the asset for which the future cash flow estimates have not been adjusted, including appropriate adjustments for the risk profile of the countries in which the individual CGU operate. The great majority of the Company's sales are based on prices denominated in USD. To the extent that the currencies of countries in which the Company produces commodities strengthen against the USD without commodity price offset, cash flows and, therefore, net present values are reduced.

Non-financial assets other than goodwill that have suffered impairment are tested for possible reversal of the impairment whenever events or changes in circumstances indicate that the impairment may have reversed.

p) Closure and decommissioning costs

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

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

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

q) Foreign currency translation

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

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

r) Share-based payments

The Company makes share-based awards, including restricted share units ("RSUs"), performance share units ("PSUs"), shares and options, to certain employees.

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

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

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

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

s) Leases

Lease Definition

At inception of a contract, the Company assesses whether the contract is, or contains, a lease. A contract is, or contains, a lease if it conveys the right to control the use of an identified asset for a period of time in exchange for consideration. An identified asset may be implicitly or explicitly specified in a contract, but must be physically distinct, and must not have the ability for substitution by a lessor. The Company has the right to control an identified asset if it obtains substantially all of its economic benefits and either pre-determines, or directs how and for what purpose the asset is used.

Measurement of ROU Assets and Lease Obligations

At lease commencement, the Company recognizes a ROU Asset and a lease obligation. The ROU Asset is initially measured at cost, which comprises the initial amount of the lease obligation adjusted for any lease payments made at, or before, the commencement date, plus any initial direct costs incurred, less any lease incentives received.

The ROU Asset is subsequently amortized on a straight-line basis over the shorter of the term of the lease, or the useful life of the asset determined on the same basis as the Company's property, plant and equipment. The ROU Asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease obligation.

The lease obligation is initially measured at the present value of lease payments remaining at the lease commencement date, discounted using the Company's incremental borrowing rate. Lease payments included in the measurement of the lease obligation, when applicable, may comprise fixed payments, variable payments that depend on an index or rate, amounts expected to be payable under a residual value guarantee and the exercise price under a purchase, extension or termination option that the Company is reasonably certain to exercise.

The lease obligation is subsequently measured at amortized cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the Company's estimate of the amount expected to be payable under a residual value guarantee, or if the Company changes its assessment of whether it will exercise a purchase, extension or termination option. When the lease obligation is remeasured, a corresponding adjustment is made to the carrying amount of the ROU Asset.

Recognition Exemptions

The Company has elected not to recognize ROU Assets and lease obligations for short-term leases that have a lease term of twelve months or less or for leases of low-value assets. Payments associated with these leases are recognized as an operating expense on a straight-line basis over the lease term within costs and expenses on the consolidated income statement.

t) Income taxes

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

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

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

The tax effect of certain temporary differences is not recognized, principally with respect to goodwill; temporary differences arising on the initial recognition of assets or liabilities (other than those arising in a business combination or in a manner that initially impacted accounting or taxable earnings); and temporary differences relating to investments in subsidiaries, jointly controlled entities and associates to the extent that the Company is able to control the reversal of the temporary difference and the temporary difference is not expected to reverse in the foreseeable future. The amount of deferred tax recognized is based on the expected manner and timing of realization or settlement of the carrying amount of assets and liabilities, with the exception of items that have a tax base solely derived under capital gains tax legislation, using tax rates enacted or substantively enacted at period end. To the extent that an item's tax base is solely derived from the amount deductible under capital gains tax legislation, deferred tax is determined as if such amounts are deductible in determining future assessable income.

The carrying amount of deferred income tax assets is reviewed at each statement of financial position date and reduced to the extent that it is no longer probable that sufficient taxable earnings will be available to

allow all or part of the deferred income tax asset to be utilized. To the extent that an asset not previously recognized fulfils the criteria for recognition, a deferred income tax asset is recorded.

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

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

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

u) Earnings (loss) per share

Basic earnings (loss) per share is calculated by dividing earnings attributable to ordinary equity holders of the parent entity by the weighted average number of ordinary shares outstanding during the period.

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

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

v) Borrowing costs and upfront costs

Borrowing costs that are directly attributable to the acquisition, construction or production of qualifying assets are capitalized. Qualifying assets are assets that require a substantial amount of time to prepare for their intended use, including mineral properties in the evaluation stage where there is a high likelihood of commercial exploitation. Qualifying assets also include significant expansion projects at the operating mines. Borrowing costs are considered an element of the historical cost of the qualifying asset. Capitalization ceases when the asset is substantially complete or if construction is interrupted for an extended period. Where the funds used to finance a qualifying asset form part of general borrowings, the amount capitalized is calculated using a weighted average of rates applicable to the relevant borrowings during the period. Where funds borrowed are directly attributable to a qualifying asset, the amount capitalized represents the borrowing costs specific to those borrowings. Where surplus funds available out of money borrowed specifically to finance a project are temporarily invested, the total borrowing cost is reduced by income generated from short-term investments of such funds.

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

4. CHANGES IN ACCOUNTING STANDARDS

Certain new accounting standards and interpretations have been published that are not mandatory for the current period and have not been early adopted.

Presentation of Financial Statements (Amendment to IAS 1)

The amendments to IAS 1, clarify the presentation of liabilities. The classification of liabilities as current or non-current is based on contractual rights that are in existence at the end of the reporting period and is affected by expectations about whether an entity will exercise its right to defer settlement. A liability not due over the next twelve months is classified as non-current even if management intends or expects to settle the liability within twelve months. The amendment also introduces a definition of 'settlement' to make clear that settlement refers to the transfer of cash, equity instruments, other assets, or services to the counterparty. The amendments are effective for annual reporting periods beginning on or after January 1, 2023. The implementation of this amendment is not expected to have a material impact on the Company.

Deferred Tax related to Assets and Liabilities arising from a Single Transaction (Amendments to IAS 12)

The amendment clarifies that the initial recognition exemption does not apply to transactions in which equal amounts of deductible and taxable temporary differences arise on initial recognition. The amendment is effective for annual reporting periods beginning on or after January 1, 2023. Early application is permitted. This amendment is not expected to have a material impact on the Company.

Property, Plant and Equipment - Proceeds before Intended Use (Amendments to IAS 16)

The amendment will prohibit the Company from deducting net proceeds from selling any items produced while bringing an item of property, plant and equipment to the location and condition necessary for it to be capable of operating in a manner intended by management. The amendment requires retrospective application and effective for annual reporting periods beginning on or after January 1, 2022, with earlier application permitted. This amendment is not expected to have a material impact on the Company upon adoption; however, the amendment may have impacts in future periods.

Disclosure of Accounting Policies (Amendments to IAS 1 and IFRS Practice Statement 2)

The amendments require that an entity discloses its material accounting policies, instead of its significant accounting policies. Further amendments explain how an entity can identify a material accounting policy. Examples of when an accounting policy is likely to be material are added. To support the amendment, the IASB has also developed guidance and examples to explain and demonstrate the application of the 'four-step materiality process' described in IFRS Practice Statement 2. The amendments are effective for annual reporting periods beginning on or after January 1, 2023. The Company is currently evaluating the impact of the amendment on its financial statements.

5. SIGNIFICANT JUDGMENTS IN APPLYING ACCOUNTING POLICIES

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

a) Capitalization of evaluation costs

The Company has determined that evaluation costs capitalized during the year relating to the operating mines and certain other exploration interests have potential future economic benefits and are potentially economically recoverable. In making this judgment, the Company has assessed various sources of information including but not limited to the geologic and metallurgic information, history of conversion of mineral deposits to proven and probable mineral reserves, scoping and feasibility studies, proximity to existing ore bodies, operating management expertise and required environmental, operating and other permits.

b) Functional currency

The functional currency for the Company and its subsidiaries is the currency of the primary economic environment in which each operates. The Company has determined that its functional currency and that of its subsidiaries is the USD. The determination of functional currency may require certain judgments to determine the primary economic environment. The Company reconsiders the functional currency used when there is a change in events and conditions which determined the primary economic environment.

c) Determination of significant influence of associates

Determination of whether the Company has significant influence with respect to its associates requires an assessment of whether the Company has power to participate in the financial and operating policy decisions of the investee but does not have control or joint control of those policies. The Company determined that it had significant influence over its investment in Maverix (Note 12), despite holding an ownership interest of less than 20%, after consideration for the relevant facts and circumstances including the Company's ability to nominate a member of the Maverix board of directors.

d) Deferral of stripping costs

In determining whether stripping costs incurred during the production phase of a mining property relate to mineral reserves that will be mined in a future period and therefore should be capitalized, the Company treats the costs of removal of the waste material during a mine's production phase as deferred, where it gives rise to future benefits. These capitalized costs are subsequently amortized on a unit of production basis over the reserves that directly benefit from the specific stripping activity. As at December 31, 2021, the carrying amount of Dolores and La Arena capitalized stripping costs was $23.5 million and $41.0 million, respectively (2020 - $40.7 million and $32.9 million, respectively).

e) Impairment, or impairment reversal, of mining interests

There is significant judgment involved in assessing whether any indications of impairment, or impairment reversal, exist for mining interests, with consideration given to both external and internal sources of information. Information the Company considers include changes in the market, economic and legal environment in which the Company operates that are not within its control that affect the recoverable amount of mining interests. Internal sources of information include the manner in which mineral property, plant and equipment are being used or are expected to be used and indications of the economic performance of the assets. Estimates include but are not limited to estimates of the discounted future after-tax cash flows expected to be derived from the Company's mining properties, costs to sell the mining properties and the appropriate discount rate. Changes in metal price forecasts, increases or decreases in estimated future costs of production, increases or decreases in estimated future capital costs, reductions or increases in the amount of recoverable mineral reserves and mineral resources and/or adverse or favorable current economics can result in a write-down or write-up of the carrying amounts of the Company's mining interests.

f) Coronavirus disease ("COVID-19") pandemic impact

In March 2020, the World Health Organization declared a global pandemic following the emergence and rapid spread of a novel strain of the coronavirus. Since the outbreak of COVID-19, it has spread to areas where we have operations and offices. The outbreak and subsequent Government measures intended to limit the pandemic had significant effects on commodity prices and capital markets. The spread of COVID-19 has impacted our employees and contractors, not only as it relates to potential health concerns, but also in terms of limitations on movement, availability of food and other goods, and personal well-being, among others. Our suppliers and service providers have also been impacted.

During 2020, Government efforts to curtail the spread of COVID-19 resulted in temporary suspensions of our operations in Mexico, Peru, Argentina and Bolivia (see Note 21), and we reduced throughput at our Timmins operation in Canada in order to enhance physical distancing and protect our personnel and the community. During 2021, there were no Government mandated suspensions but operations have continued to be impacted by COVID-19 protocols, which have increased costs and restricted throughput levels, especially at our underground mines.

The extent to which COVID-19 will continue to impact our operations will depend on future developments which are highly uncertain and cannot be predicted with confidence. These future developments include, but are not limited to, the continued presence of, or spread, of COVID-19, and any future emergence and spread of similar pathogens, the duration of the outbreak, new information that may emerge concerning the severity of COVID-19, and the actions taken to contain COVID-19 or treat it. The impact of governmental restrictions and health and safety protocols could improve or worsen relative to our assumptions, depending on how each jurisdiction manages potential outbreaks of COVID-19, the efficacy and availability of adequate supplies of vaccines, and the roll-out of vaccination programs in each jurisdiction.

As of December 31, 2021 and 2020, no operations were suspended as a result of COVID-19. Based on management analysis, the Company has concluded that the impacts to date including increased costs and deferral of production due to reduced throughput do not represent indicators of impairment for any of the Company's assets as at December 31, 2021 and 2020.

6. KEY SOURCES OF ESTIMATION UNCERTAINTY IN THE APPLICATION OF ACCOUNTING POLICIES

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

- *Revenue recognition:* Revenue from the sale of concentrate to independent smelters is recognized when control of the asset sold is transferred to the customer. The Company's concentrate sales contracts with third-party buyers, in general, provide for a provisional payment based upon provisional assays and quoted metal prices. Final settlement is based on applicable commodity prices set on specified quotational periods, typically ranging from one month prior to shipment, and can extend to three months after the shipment arrives at the smelter and is based on average market metal prices. Sales revenue is commonly subject to adjustments based on an inspection of the product by the customer. In such cases, sales revenue is initially recognized on a provisional basis using the Company's best estimate of contained metal, and adjusted subsequently. Revenues are recorded under these contracts at the time control passes to the buyer based on the expected settlement period. Revenue on provisionally priced sales is recognized based on estimates of the fair value of the consideration receivable based on forward market prices and estimated quantities. At each reporting date provisionally priced metal is marked to market based on the forward selling price for the quotational period stipulated in the contract. Variations between the price recorded at the date when control is transferred to the buyer and the actual final price set under the smelting contracts are caused by changes in metal prices resulting in the receivable being recorded at FVTPL. In a period of high price volatility, as experienced under current economic conditions, the effect of mark-to-market price adjustments related to the quantity of metal which remains to be settled with independent smelters could be significant. For changes in metal quantities upon receipt of new information and assay, the provisional sales quantities are adjusted.

- *Estimated recoverable ounces:* The carrying amounts of the Company's mining properties are depleted based on recoverable ounces. Changes to estimates of recoverable ounces and depletable costs including changes resulting from revisions to the Company's mine plans and changes in metal price forecasts can result in a change to future depletion rates.

- *Mineral reserve estimates:* The figures for mineral reserves and mineral resources are disclosed in accordance with National Instrument 43 - 101, "Standards of Disclosure for Mineral Projects", issued by the Canadian Securities Administrators and in accordance with "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines – adopted November 23, 2003", prepared by the Canadian Institute of Mining, Metallurgy and Petroleum Standing Committee on Reserve Definitions. There are numerous uncertainties inherent in estimating mineral reserves and mineral resources, including many factors beyond the Company's control. Such estimation is a subjective process, and the accuracy of any mineral reserve or mineral resource estimate is a function of the quantity and quality of available data and of the assumptions made and judgments used in engineering and geological interpretation. Differences between management's assumptions including economic assumptions such as metal prices and market conditions could have a material effect in the future on the Company's financial position and results of operation.

- *Valuation of Inventory:* In determining mine production costs recognized in the consolidated income statement, the Company makes estimates of quantities of ore stacked in stockpiles, placed on the heap leach pad and in process and the recoverable silver in this material to determine the average costs of finished goods sold during the period. Changes in these estimates can result in a change in mine operating costs of future periods and carrying amounts of inventories. Refer to Note 10 for details.

- *Depreciation and amortization rates for mineral properties, plant and equipment and mineral interests:* Depreciation and amortization expenses are allocated based on assumed asset lives and depreciation and amortization rates. Should the asset life or depreciation rate differ from the initial estimate, an adjustment

would be made in the consolidated income statement prospectively. A change in the mineral reserve estimate for assets depreciated using the units of production method would impact depreciation expense prospectively.

- *Estimation of decommissioning and reclamation costs and the timing of expenditures:* The cost estimates are updated annually during the life of a mine to reflect known developments, (e.g. revisions to cost estimates and to the estimated lives of operations), and are subject to review at regular intervals. Decommissioning, restoration and similar liabilities are estimated based on the Company's interpretation of current regulatory requirements, constructive obligations and are measured at the best estimate of expenditures required to settle the present obligation of decommissioning, restoration or similar liabilities that may occur upon decommissioning of the mine at the end of its productive life. The carrying amount is determined based on the net present value of estimated future cash expenditures for the settlement of decommissioning, restoration or similar liabilities that may occur upon decommissioning of the mine. Such estimates are subject to change based on changes in laws and regulations and negotiations with regulatory authorities. Refer to Note 15 for details on decommissioning and restoration costs.

- *Income taxes and recoverability of deferred tax assets:* In assessing the probability of realizing income tax assets recognized, the Company makes estimates related to expectations of future taxable income, applicable tax planning opportunities, expected timing of reversals of existing temporary differences and the likelihood that tax positions taken will be sustained upon examination by applicable tax authorities. In making its assessments, the Company gives additional weight to positive and negative evidence that can be objectively verified. Estimates of future taxable income are based on forecasted cash flows from operations and the application of existing tax laws in each jurisdiction. The Company considers relevant tax planning opportunities that are within the Company's control, are feasible and within management's ability to implement. Examination by applicable tax authorities is supported based on individual facts and circumstances of the relevant tax position examined in light of all available evidence. Where applicable tax laws and regulations are either unclear or subject to ongoing varying interpretations, it is reasonably possible that changes in these estimates can occur that materially affect the amounts of income tax assets recognized. Also, future changes in tax laws could limit the Company from realizing the tax benefits from the deferred tax assets. The Company reassesses unrecognized income tax assets at each reporting period.

- *Provisions and contingencies:* Due to the size, complexity and nature of the Company's operations, various legal and tax matters are outstanding from time to time. In the event the Company's estimates of the future resolution of these matters change, the Company will recognize the effects of the changes in its consolidated financial statements on the date such changes occur. Refer to Note 28 for further discussion on contingencies.

7. MANAGEMENT OF CAPITAL

The Company's objective when managing its capital is to maintain its ability to continue as a going concern while at the same time maximizing the growth of its business and providing returns to its shareholders. The Company's capital structure consists of shareholders' equity (comprising issued capital plus share option reserve plus deficit, plus investment revaluation reserve) with a balance of $2.6 billion as at December 31, 2021 (2020 - $2.6 billion). The Company manages its capital structure and makes adjustments based on changes to its economic environment and the risk characteristics of the Company's assets. The Company's capital requirements are effectively managed based on the Company having a thorough reporting, planning and forecasting process to help identify the funds required to ensure the Company is able to meet its operating and growth objectives.

The Company is not subject to externally imposed capital requirements and the Company's overall objective with respect to capital risk management remains unchanged from the year ended December 31, 2020.

8. FINANCIAL INSTRUMENTS

a) Financial assets and liabilities by categories:

December 31, 2021	Amortized cost	FVTPL	Total
Financial Assets:			
Cash and cash equivalents	$ 283,550	$ —	$ 283,550
Trade receivables from provisional concentrates sales[1]	—	40,020	40,020
Receivable not arising from sale of metal concentrates[1]	76,902	—	76,902
Short-term investments	—	51,723	51,723
Derivative assets	—	3,995	3,995
	$ 360,452	$ 95,738	$ 456,190
Financial Liabilities:			
Derivative liabilities	$ —	$ 351	$ 351
Debt	$ 15,300	$ —	$ 15,300

(1) Included in Trade and other receivables.

December 31, 2020	Amortized cost	FVTPL	Total
Financial Assets:			
Cash and cash equivalents	$ 167,113	$ —	$ 167,113
Trade receivables from provisional concentrates sales[1]	—	35,084	35,084
Receivable not arising from sale of metal concentrates[1]	84,486	—	84,486
Short-term investments	—	111,946	111,946
Derivative assets	—	7,812	7,812
	$ 251,599	$ 154,842	$ 406,441
Financial Liabilities:			
Derivative liabilities	$ —	$ 367	$ 367

(1) Included in Trade and other receivables.

b) Short-term investments in equity securities recorded at FVTPL

The Company's short-term investments in equity securities are recorded at FVTPL. The (losses) gains from short-term investments in equity securities for the year ended December 31, 2021 and 2020 were as follows:

	2021	2020
Unrealized (losses) gains on short-term investments, equity securities	**$ (60,355)**	$ 10,577
Realized gains on short-term investments, equity securities	**633**	51,562
	$ (59,722)	$ 62,139

c) Derivative instruments

The Company's derivatives are comprised of foreign currency and commodity contracts. The gains on derivatives for the year ended December 31, 2021 and 2020 were comprised of the following:

	2021	2020
Gains on derivatives		
Realized gains (losses) on derivatives	**$ 9,156**	$ (2,594)
Unrealized (losses) gains on derivatives	**(3,763)**	6,137
	$ 5,393	$ 3,543

d) Fair value information

i) Fair Value Measurement

The categories of the fair value hierarchy that reflect the inputs to valuation techniques used to measure fair value are as follows:

Level 1: Quoted prices in active markets for identical assets or liabilities;

Level 2: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly; and

Level 3: Inputs for the asset or liability based on unobservable market data

The levels in the fair value hierarchy into which the Company's financial assets and liabilities that are measured and recognized on the consolidated statements of financial position at fair value on a recurring basis were categorized as follows:

	At December 31, 2021		At December 31, 2020	
	Level 1	Level 2	Level 1	Level 2
Assets and Liabilities:				
Short-term investments	**$ 51,723**	**$ —**	$ 111,946	$ —
Trade receivables from provisional concentrate sales	**—**	**40,020**	—	35,084
Derivative assets	**—**	**3,995**	—	7,812
Derivative liabilities	**—**	**(351)**	—	(367)
	$ 51,723	**$ 43,664**	$ 111,946	$ 42,529

The methodology and assessment of inputs for determining the fair value of financial assets and liabilities as well as the levels of hierarchy for the Company's financial assets and liabilities measured at fair value remains unchanged from that at December 31, 2020.

ii) Valuation Techniques

Short-term investments

The Company's short-term investments and other investments are valued using quoted market prices in active markets and as such are classified within Level 1 of the fair value hierarchy and are primarily equity securities. The fair value of the investment securities is calculated as the quoted market price of the investment and in the case of equity securities, the quoted market price multiplied by the quantity of shares held by the Company.

Derivative assets and liabilities

The Company's derivative assets and liabilities were comprised of foreign currency and commodity contracts which are valued using observable market prices.

Trade Receivables from Provisional Concentrate Sales

A portion of the Company's trade receivables arose from provisional concentrate sales and are valued using quoted market prices based on the forward London Metal Exchange for copper, zinc and lead and the London Bullion Market Association P.M. fix for gold and silver.

e) Financial Instruments and related risks

The Company has exposure to risks of varying degrees of significance which could affect its ability to achieve its strategic objectives for growth and shareholder returns. The principle financial risks to which the Company is exposed are:

i) Credit risk
ii) Liquidity risk
iii) Market risk
    1. Currency risk
    2. Interest rate risk
    3. Price risk

The Company's Board of Directors has overall responsibility for the establishment and oversight of the Company's risk management framework and reviews the Company's policies on an ongoing basis.

i) Credit Risk

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

The Company has concentrate contracts to sell the zinc, lead, copper and silver concentrates produced by the Huaron, Morococha, San Vicente and La Colorada mines. Concentrate contracts are a common business practice in the mining industry. The terms of the concentrate contracts may require the Company to deliver concentrate that has a value greater than the payment received at the time of delivery, thereby introducing the Company to credit risk of the buyers of concentrates. Should any of these counterparties not honour purchase arrangements, or should any of them become insolvent, the Company may incur losses for products already shipped and be forced to sell its concentrates on the spot market or it may not have a market for its concentrates and therefore its future operating results may be materially adversely impacted. At December 31, 2021, the Company had receivable balances associated with buyers of its concentrates of $40.0 million (2020 - $35.1 million). The vast majority of the Company's concentrate is sold to five well-known concentrate buyers.

Doré production from La Colorada, Dolores, Manantial Espejo, Shahuindo, La Arena, Bell Creek and Timmins is refined under long-term agreements with fixed refining terms at five separate refineries worldwide. The Company generally retains the risk and title to the precious metals throughout the process of refining and therefore is exposed to the risk that the refineries will not be able to perform in accordance with the refining contract and that the Company may not be able to fully recover precious metals in such circumstances. At December 31, 2021, the Company had approximately $52.3 million (2020 - $61.8 million) of value contained in precious metal inventory at refineries. The Company maintains insurance coverage against the loss of precious metals at the Company's mine sites, in-transit to refineries and while at the refineries. Risk is transferred to the refineries upon delivery.

The Company maintains trading facilities with several banks and bullion dealers for the purposes of transacting the Company's metal sales. None of these facilities are subject to margin arrangements. The Company's trading activities can expose the Company to the credit risk of its counterparties to the extent that the trading positions have a positive mark-to-market value. However, the Company maintains an active credit management and monitoring program to minimize the risk of excessive credit risk concentration with any single counterparty.

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

Supplier advances for products and services yet to be provided are a common practice in some jurisdictions in which we operate. These advances represent a credit risk to us to the extent that suppliers

do not deliver products or perform services as expected. As at December 31, 2021, we had made $11.2 million of supplier advances (2020 - $8.2 million), which are reflected in "Trade and other receivables" on the consolidated statements of financial position.

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

Cash and cash equivalents, trade accounts receivable and other receivables that represent the maximum credit risk to the Company consist of the following:

	December 31, 2021	December 31, 2020
Cash and cash equivalents	**$ 283,550**	$ 167,113
Trade accounts receivable [1]	**40,020**	35,084
Supplier advances [1]	**11,228**	8,186
Employee loans [1]	**667**	552

(1) Included in Trade and other receivables.

The Company invests its cash and cash equivalents, which also has credit risk, with the objective of maintaining safety of principal and providing adequate liquidity to meet all current payment obligations.

ii) Liquidity Risk

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they come due. The Company manages its liquidity risk by continuously monitoring forecasted and actual cash flows. The Company has in place a rigorous planning and budgeting process to help determine the funds required to support the Company's normal operating requirements on an ongoing basis and its expansion plans. The Company strives to maintain sufficient liquidity to meet its short-term business requirements, taking into account its anticipated cash flows from operations, its holdings of cash and short-term investments, and its committed loan facilities.

In the normal course of business, the Company enters into contracts that give rise to commitments for future minimum payments. The following tables summarize the remaining contractual maturities of the Company's financial liabilities and operating and capital commitments on an undiscounted basis:

Payments due by period 2021					
	Within 1 year	2 - 3 years	4- 5 years	After 5 years	Total
Accounts payable and accrued liabilities other than:	$ 275,629	$ —	$ —	$ —	$ 275,629
Severance accrual	26,695	404	33	4,450	31,582
Employee compensation	3,763	—	—	—	3,763
Total accounts payable and accrued liabilities	306,087	404	33	4,450	310,974
Income taxes payable	59,133	—	—	—	59,133
Loss on derivatives	351	—	—	—	351
Debt					
Repayment of principal	3,400	6,800	5,100	—	15,300
Interest and standby fees	2,613	4,867	1,432	—	8,912
Provisions [1][2]	2,738	2,553	—	—	5,291
Future employee compensation	3,352	9,058	—	—	12,410
Total contractual obligations [2]	**$ 377,674**	**$ 23,682**	**$ 6,565**	**$ 4,450**	**$ 412,371**

(1) Total litigation provision (Note 15).
(2) Amounts above do not include payments related to closure and decommissioning (current $5.3 million, long-term $237.6 million) discussed in Note 15, the $20.8 million deferred credit arising from the Navidad acquisition discussed in Note 18, and deferred tax liabilities of $84.8 million in Note 27.

Payments due by period 2020					
	Within 1 year	2 - 3 years	4- 5 years	After 5 years	Total
Accounts payable and accrued liabilities other than:	$ 272,266	$ —	$ —	$ —	$ 272,266
Severance accrual	2,935	3,711	1,120	76	7,842
Employee compensation	6,737	—	—	—	6,737
Total accounts payable and accrued liabilities	281,938	3,711	1,120	76	286,845
Income taxes payable	54,556	—	—	—	54,556
Loss on derivatives	367	—	—	—	367
Debt					
Interest and standby fees	2,110	2,294	—	—	4,404
Provisions [1][2]	3,648	3,109	85	1	6,843
Future employee compensation	4,396	11,468	—	—	15,864
Total contractual obligations [2]	**$ 347,015**	**$ 20,582**	**$ 1,205**	**$ 77**	**$ 368,879**

(1) Total litigation provision (Note 15).
(2) Amounts above do not include payments related to closure and decommissioning (current $8.4 million, long-term $226.7 million) discussed in Note 15, the $20.8 million deferred credit arising from the Navidad acquisition discussed in Note 18, and deferred tax liabilities of $75.3 million in Note 27.

There was no significant change to the Company's exposure to liquidity risk during the year ended December 31, 2021.

iii) Market Risk

1. Currency Risk

The Company reports its financial statements in USD; however, the Company operates in jurisdictions that utilize other currencies. As a consequence, the financial results of the Company's operations as reported in USD are subject to changes in the value of the USD relative to local currencies. Since the Company's sales are denominated in USD and a portion of the Company's operating costs and capital spending are in local currencies, the Company is negatively impacted by strengthening local currencies relative to the USD and positively impacted by the inverse.

At December 31, 2021, the Company had outstanding positions on its foreign currency exposure of Mexican peso ("MXN"), Peruvian sol ("PEN") and Canadian dollar ("CAD") purchases. The Company recorded losses of $0.2 million, $3.7 million, and gains of $0.9 million, respectively, on MXN, PEN and CAD derivative contracts for the year ended December 31, 2021 (2020 - gains of $1.6 million, losses of $2.2 million, and losses of $0.6 million, respectively).

The Company's net earnings are affected by the revaluation of its monetary assets and monetary liabilities at each balance sheet date. The Company has reviewed its monetary assets and monetary liabilities and is exposed to foreign exchange risk through financial assets and liabilities and deferred income tax liabilities denominated in currencies other than USD, as shown in the table below. The Company estimates that a 10% change in the exchange rate of the foreign currencies in which its December 31, 2021 non-USD net monetary liabilities were denominated would result in an income before taxes change of about $23.0 million (2020 - $13.8 million).

The Company is exposed to currency risk through the following financial assets and liabilities, and deferred income tax assets and liabilities denominated in foreign currencies:

At December 31, 2021	Cash and short-term investments	Other current and non-current assets	Income taxes receivable (payable), current and non-current	Accounts payable and accrued liabilities and non-current liabilities	Deferred tax assets and liabilities
Canadian Dollar	**$ 60,507**	**$ 3,389**	**$ —**	**$ (27,448)**	**$ —**
Mexican Peso	**1,159**	**7,681**	**(14,930)**	**(25,985)**	**(64,584)**
Argentine Peso	**12,488**	**20,358**	**1,502**	**(19,525)**	**(13)**
Bolivian Boliviano	**8,397**	**499**	**(7,943)**	**(23,914)**	**(6,954)**
European Euro	**49**	**—**	**—**	**—**	**—**
Peruvian Sol	**8,585**	**17,295**	**(22,207)**	**(54,953)**	**(94,367)**
Guatemala quetzal	**169**	**539**	**(91)**	**(9,919)**	**—**
	$ 91,354	**$ 49,761**	**$ (43,669)**	**$ (161,744)**	**$ (165,918)**

At December 31, 2020	Cash and short-term investments	Other current and non-current assets	Income taxes receivable (payable), current and non-current[1]	Accounts payable and accrued liabilities and non-current liabilities	Deferred tax assets and liabilities[1]
Canadian Dollar	$ 117,956	$ 4,952	$ —	$ (24,310)	$ —
Mexican Peso	1,020	29,895	3,550	(45,050)	(73,017)
Argentine Peso	7,175	16,878	1,513	(14,543)	—
Bolivian Boliviano	571	218	(3,159)	(19,402)	(7,700)
European Euro	3	—	—	—	—
Peruvian Sol	13,917	26,257	(39,296)	(54,672)	(77,810)
Guatemala quetzal	453	677	—	(4,559)	—
	$ 141,095	$ 78,877	$ (37,392)	$ (162,536)	$ (158,527)

(1) Recast comparative to be consistent with current presentation.

2. Interest Rate Risk

Interest rate risk is the risk that the fair values and future cash flows of the Company will fluctuate because of changes in market interest rates. The average interest rate earned by the Company during the year ended December 31, 2021 on its cash and short-term investments was 0.7% (2020 - 0.9%). A 10% increase or decrease in the interest earned from financial institutions on cash and short-term investments would not result in a change in the Company's earnings before income taxes (2020 – $0.1 million).

On August 10, 2021 the Company entered into an amendment agreement to amend and extend its $500 million credit facility, with a maturity date of February 1, 2023 (the "Credit Facility"), into a $500 million sustainability-linked credit facility, with a maturity date of August 8, 2025 (the "Sustainability-Linked Credit Facility") (Note 17). There were no amounts drawn during the year ended December 31, 2021 on either the Sustainability-Linked Credit Facility or the Credit Facility. The amounts drawn on the Credit Facility incurred an average interest rate of 2.6% during the year ended December 31, 2020.

At December 31, 2021, the Company has $30.6 million in lease obligations (2020 - $33.6 million), that are subject to an annualized interest rate of 10.6% (2020 - 9.3%).

3. Price Risk

Metal price risk is the risk that changes in metal prices will affect the Company's income or the value of its related financial instruments. The Company derives its revenue from the sale of silver, gold, lead, copper, and zinc. The Company's sales are directly dependent on metal prices that have shown

significant volatility and are beyond the Company's control. Consistent with the Company's mission to provide equity investors with exposure to changes in precious metal prices, the Company's current policy is to not hedge the price of precious metal.

During the year ended December 31, 2021, the Company entered into collars made up of put and call contracts for its exposure to copper but had no contracts outstanding as at December 31, 2021. The Company recorded losses of $1.1 million on copper contracts during the year ended December 31, 2021. The Company did not enter into copper contracts during the year ended December 31, 2020.

As at December 31, 2021, the Company entered into collars made up of put and call contracts for its exposure to zinc but had no contracts outstanding as at December 31, 2021. The Company recorded gains of $0.1 million during the year ended December 31, 2021.

At December 31, 2021, the Company had outstanding positions of diesel swap contracts designated to fix or limit the Company's exposure to higher fuel prices (the "Diesel fuel swaps"). The Company recorded gains of $9.4 million on Diesel fuel swaps during the year ended December 31, 2021 (2020 - gains of $4.7 million).

A 10% increase in all metal prices as at December 31, 2021, would result in an increase of approximately $165.1 million (2020 – $138 million) in the Company's revenues. A 10% decrease in all metal prices as at the same period would result in a decrease of approximately $166.4 million (2020 - $138.2 million) in the Company's revenues. The Company also enters into provisional concentrate contracts to sell the zinc, lead and copper concentrates. We have provisionally priced sales for which price finalization, referenced to the relevant zinc, lead, copper and silver index, is outstanding at the balance sheet date. A 10% increase in metals prices on open positions of zinc, lead, copper and silver for provisional concentrate contracts for the year ended December 31, 2021 would result in an increase of approximately $7.2 million (2020 - $4.6 million) in the Company's before tax earnings, which would be reflected in 2021 results. A 10% decrease in metal prices for the same period would result in a decrease of approximately $7.2 million (2020 - $4.6 million) in the Company's before tax earnings.

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

9. SHORT-TERM INVESTMENTS

	December 31, 2021			December 31, 2020		
	Fair Value	**Cost**	**Accumulated unrealized holding gains**	Fair Value	Cost	Accumulated unrealized holding gains
Short-term investments	**$ 51,723**	**$ 20,419**	**$ 31,304**	$ 111,946	$ 20,419	$ 91,527

10. INVENTORIES

Inventories consist of:

	December 31, 2021	December 31, 2020
Concentrate	$ 30,647	$ 19,104
Stockpile	43,216	30,063
Heap leach and in process	286,266	219,334
Doré and finished	81,448	77,489
Materials and supplies	84,529	84,556
Total inventories	$ 526,106	$ 430,546
Less: current inventories	$ (500,462)	$ (406,191)
Non-current inventories[1]	$ 25,644	$ 24,355

(1) Inventories at Escobal mine, which include $18.3 million (2020 - $17.1 million) in supplies with the remainder attributable to metals, have been classified as non-current pending the restart of operations.

Total inventories held at net realizable value amounted to $203.7 million at December 31, 2021 (December 31, 2020 – $215.5 million). The Company recorded write-downs of $8.7 million for the year ended December 31, 2021 (2020 – recoveries of $16.2 million) which were included in cost of sales (Note 20).

A portion of the stockpile ore amounting to $4.5 million (2020 - $2.7 million) and a portion of the heap leach inventory amounting to $185.1 million (2020 - $147.0 million) are expected to be recovered or settled after more than twelve months.

11. MINERAL PROPERTIES, PLANT AND EQUIPMENT

Acquisition costs of investment and non-producing properties together with costs directly related to mine development expenditures are capitalized. Exploration expenditures on investment and non-producing properties are charged to expense in the period they are incurred.

Capitalization of evaluation expenditures commences when there is a high degree of confidence in the project's viability and hence it is probable that future economic benefits will flow to the Company. Evaluation expenditures, other than that acquired from the purchase of another mining company, are carried forward as an asset provided that such costs are expected to be recovered in full through successful development and exploration of the area of interest, or alternatively by its sale. Evaluation expenditures include delineation drilling, metallurgical evaluations, and geotechnical evaluations amongst others.

Mineral properties, plant and equipment consist of:

	Mining Properties				
	Depletable	Non-depletable			
	Reserves and Resources	Reserves and Resources	Exploration and Evaluation	Plant and Equipment	Total
Carrying value					
As at January 1, 2021					
Net of accumulated depreciation	$ 996,745	$ 307,080	$ 431,650	$ 679,531	$ 2,415,006
Additions	210,484	31,971	7,253	16,766	266,474
Disposals	(2,770)	—	(12,315)	(4,542)	(19,627)
Depreciation and amortization[1]	(166,116)	(770)	—	(136,072)	(302,958)
Depreciation charge captured in inventory	(21,249)	—	—	—	(21,249)
Transfers	90,571	(9,522)	(93)	(80,956)	—
Closure and decommissioning – changes in estimate (Note 15)	6,905				6,905
As at December 31, 2021	**$ 1,114,570**	**$ 328,759**	**$ 426,495**	**$ 474,727**	**$ 2,344,551**
Cost as at December 31, 2021	$ 3,140,594	$ 343,705	$ 839,427	$ 1,288,392	$ 5,612,118
Accumulated depreciation and impairments	**(2,026,024)**	**(14,946)**	**(412,932)**	**(813,665)**	**(3,267,567)**
Carrying value – December 31, 2021	**$ 1,114,570**	**$ 328,759**	**$ 426,495**	**$ 474,727**	**$ 2,344,551**

(1) Includes $nil of depreciation and amortization included in mine care and maintenance for the year ended December 31, 2021.

	Mining Properties				
	Depletable	Non-depletable			
	Reserves and Resources	Reserves and Resources	Exploration and Evaluation	Plant and Equipment	Total
Carrying value					
As at January 1, 2020					
Net of accumulated depreciation	$ 950,752	$ 331,549	$ 450,926	$ 771,674	$ 2,504,901
Additions	142,463	17,159	631	30,971	191,224
Disposals	(235)	(38)	(14,315)	(382)	(14,970)
Depreciation and amortization[1]	(125,277)	(1,059)	—	(146,108)	(272,444)
Depreciation charge captured in inventory	(29,618)	—	—	—	(29,618)
Transfers	22,747	(40,531)	(5,592)	23,376	—
Closure and decommissioning – changes in estimate (Note 15)	35,913	—	—	—	35,913
As at December 31, 2020	**$ 996,745**	**$ 307,080**	**$ 431,650**	**$ 679,531**	**$ 2,415,006**
Cost as at December 31, 2020	$ 2,753,136	$ 321,639	$ 844,487	$ 1,461,678	$ 5,380,940
Accumulated depreciation and impairments	**(1,756,391)**	**(14,559)**	**(412,837)**	**(782,147)**	**(2,965,934)**
Carrying value – December 31, 2020	**$ 996,745**	**$ 307,080**	**$ 431,650**	**$ 679,531**	**$ 2,415,006**

(1) Includes $18.0 million of depreciation and amortization included in mine care and maintenance for the year ended December 31, 2020.

	December 31, 2021			December 31, 2020		
	Cost	Accumulated Depreciation and Impairment	Carrying Value	Cost	Accumulated Depreciation and Impairment	Carrying Value
Producing properties:						
Huaron, Peru	**$ 224,700**	**$ (141,902)**	**$ 82,798**	$ 218,270	$ (135,932)	$ 82,338
Morococha, Peru	**277,105**	**(188,821)**	**88,284**	267,705	(175,844)	91,861
Shahuindo, Peru	**590,096**	**(132,727)**	**457,369**	546,643	(86,855)	459,788
La Arena, Peru	**208,306**	**(105,006)**	**103,300**	170,401	(66,313)	104,088
La Colorada, Mexico	**355,471**	**(185,684)**	**169,787**	308,378	(164,443)	143,935
Dolores, Mexico [1]	**1,738,040**	**(1,350,908)**	**387,132**	1,709,105	(1,228,492)	480,613
Manantial Espejo, Argentina [2]	**518,931**	**(500,244)**	**18,687**	513,626	(485,036)	28,590
San Vicente, Bolivia	**151,045**	**(110,829)**	**40,216**	144,790	(101,408)	43,382
Timmins, Canada	**335,488**	**(103,903)**	**231,585**	307,243	(75,902)	231,341
Other	**29,804**	**(19,664)**	**10,140**	28,653	(18,313)	10,340
	$ 4,428,986	**$ (2,839,688)**	**$ 1,589,298**	$ 4,214,814	$ (2,538,538)	$ 1,676,276
Non-Producing Properties:						
Land	**$ 6,373**	**$ (871)**	**$ 5,502**	$ 6,758	$ (1,254)	$ 5,504
Navidad, Argentina [3]	**566,577**	**(376,101)**	**190,476**	566,577	(376,101)	190,476
Escobal, Guatemala	**257,390**	**(1,842)**	**255,548**	259,198	(1,072)	258,126
Timmins, Canada	**63,018**	**—**	**63,018**	71,099	—	71,099
Shahuindo, Peru	**3,549**	**—**	**3,549**	6,079	—	6,079
La Arena, Peru	**117,005**	**—**	**117,005**	117,000	—	117,000
Minefinders, Mexico	**78,443**	**(36,975)**	**41,468**	80,239	(36,975)	43,264
La Colorada, Mexico	**55,370**	**—**	**55,370**	21,589	—	21,589
Morococha, Peru	**2,981**	**—**	**2,981**	5,054	—	5,054
Other	**32,426**	**(12,090)**	**20,336**	32,533	(11,994)	20,539
	$ 1,183,132	**$ (427,879)**	**$ 755,253**	$ 1,166,126	$ (427,396)	$ 738,730
Total	**$ 5,612,118**	**$ (3,267,567)**	**$ 2,344,551**	$ 5,380,940	$ (2,965,934)	$ 2,415,006

(1) Includes previously recorded impairment charges of $748.9 million at December 31, 2021 (2020 - $748.9 million).
(2) Includes previously recorded impairment charges of $173.3 million at December 31, 2021 (2020 - $173.3 million).
(3) Includes previously recorded impairment charges of $376.1 million at December 31, 2021 (2020 - $376.1 million).

Disposal

On June 28, 2021, the Company completed the sale of a portfolio of six precious metals royalties to Maverix and another counterparty for total consideration of $9.5 million in cash and 491,071 common shares in Maverix valued at $2.6 million (Note 12). As a result, the Company recorded a gain of $0.8 million during the year ended December 31, 2021 in gains on sale of mineral properties, plant and equipment.

On July 12, 2021, the Company completed the sale of 100% of its interest in the Waterloo silver-barite project for consideration of $33.5 million in cash and the retention of a 2% net smelter royalty on any future production of minerals from this project. The Company realized a gain on disposal of $32.5 million for the year ended December 31, 2021.

12. INVESTMENTS IN ASSOCIATES

The following table shows a continuity of the Company's investments in associates:

	2021	2020
Maverix investment, December 31, 2020	$ 71,560	$ 84,319
Acquisition (disposition) of shares in associate	2,616	(23,467)
Adjustment for change in ownership interest	(22)	1,489
Dividends	(1,220)	(1,310)
Dilution (losses) gains	(34)	9,160
Income from associate	4,510	1,369
Maverix investment, December 31, 2021	$ 77,410	$ 71,560
Other investment, December 31, 2021	1,247	—
Total investment in associates, December 31, 2021	$ 78,657	$ 71,560

Investment in Maverix:

On June 5, 2020, the Company completed a Secondary Offering pursuant to an underwriting agreement dated May 29, 2020 between Maverix, the Company, and a syndicate of underwriters (the "Secondary Offering"). As part of the Secondary Offering, the Company sold 10,350,000 common shares of Maverix at a price of $4.40 per common share for aggregate gross proceeds of $45.5 million and paid underwriting fees equal to 4% of the gross proceeds equal to $1.9 million.

Concurrent with the Secondary Offering, the Company acquired ownership or control of an additional 8,250,000 common shares of Maverix through the exercise of its remaining 8,250,000 common share purchase warrants in Maverix (the "Warrants"). 5,000,000 Warrants had an exercise price of $1.56 and 3,250,000 Warrants had an exercise price of $2.408. Maverix received gross proceeds of approximately $15.6 million. As a result, the Company de-recognized the remaining warrant liability representing in substance ownership of Maverix.

The Company's share of Maverix income or loss was recorded, based on its 17% interest during the year ended December 31, 2021 (26% from January 1, 2020 to June 5, 2020, 18% from June 6, 2020 to October 29, 2020, and 17% from October 30, 2020 to December 31, 2020), representing the Company's equity interest.

Deferred Revenue:

Deferred revenue relates to precious metal streams whereby the Company will sell 100% of the future gold production from La Colorada and 5% of the future gold production from La Bolsa, which is in the exploration stage, to Maverix for $650 and $450 per ounce, respectively (the "Streams").

The deferred revenue related to the Streams will be recognized as revenue by the Company as the gold ounces are delivered to Maverix. As at December 31, 2021, the deferred revenue liability was $12.5 million (December 31, 2020 - $13.3 million).

13. GOODWILL AND OTHER ASSETS

Other assets consist of:

	December 31, 2021	December 31, 2020
Goodwill	$ 2,775	$ 2,775
Other assets	1,124	1,396
	$ 3,899	$ 4,171

14. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

Accounts payable and accrued liabilities consist of:

	December 31, 2021	December 31, 2020
Trade accounts payable[1]	**$ 77,461**	$ 80,280
Royalty payables	**24,113**	18,166
Other accounts payable and accrued liabilities	**107,207**	94,600
Payroll and severance liabilities	**64,968**	56,715
Value added tax liabilities	**12,006**	11,208
Other tax payables	**20,332**	20,969
	$ 306,087	$ 281,938

(1) No interest is charged on the trade accounts payable ranging from 30 to 60 days from the invoice date. The Company has policies in place to ensure that all payables are paid within the credit terms.

15. PROVISIONS

	Closure and Decommissioning	Litigation	Total
December 31, 2019	$ 188,455	$ 6,929	$ 195,384
Revisions in estimates and obligations incurred	40,857	—	40,857
Charged (credited) to earnings:			
-new provisions	—	2,402	2,402
-change in estimate	—	(1,754)	(1,754)
-exchange gains on provisions	—	(569)	(569)
-utilized in the year	—	(165)	(165)
Reclamation expenditures	(2,462)	—	(2,462)
Accretion expense (Note 22)	8,260	—	8,260
December 31, 2020	$ 235,110	$ 6,843	$ 241,953
Revisions in estimates and obligations incurred	**6,278**	**—**	**6,278**
Charged (credited) to earnings:			
-new provisions	**—**	**6,376**	**6,376**
-change in estimate	**—**	**(1,801)**	**(1,801)**
-exchange gains on provisions	**—**	**(389)**	**(389)**
-utilized in the period	**—**	**(5,738)**	**(5,738)**
Reclamation expenditures	**(5,997)**	**—**	**(5,997)**
Accretion expense (Note 22)	**7,470**	**—**	**7,470**
December 31, 2021	**$ 242,861**	**$ 5,291**	**$ 248,152**

Maturity analysis of total provisions:	December 31, 2021	December 31, 2020
Current	**$ 8,041**	$ 12,066
Non-Current	**240,111**	229,887
	$ 248,152	$ 241,953

Closure and Decommissioning Cost Provision

The total inflated and undiscounted amount of estimated cash flows required to settle the Company's estimated future closure and decommissioning costs is $413.0 million (2020 - $330.6 million), which has been inflated using inflation rates of between 1% and 5% (2020 – between 0% and 4%). The total provision for closure and decommissioning cost is calculated using discount rates of between 1% and 9% (2020 - between 0% and 8%). Revisions made to the reclamation obligations in 2021 were primarily a result of increased site disturbance at the mines as well as revisions to the estimate based on periodic reviews of closure plans, actual expenditures incurred and concurrent closure activities completed. These obligations will be funded from operating cash flows, reclamation deposits and cash on hand.

The accretion expense charged to 2021 earnings as finance expense was $7.5 million (2020 - $8.3 million). Reclamation expenditures paid during the current year were $6.0 million (2020 - $2.5 million).

Litigation Provision

The litigation provision, as at December 31, 2021 and 2020, consists primarily of amounts accrued for labour claims at several of the Company's mine operations. The balance of $5.3 million at December 31, 2021 (2020 - $6.8 million) represents the Company's best estimate for all known and anticipated future obligations related to the above claims. The amount and timing of any expected payments are uncertain as their determination is outside the control of the Company.

16. LEASES

a. Right-of-use assets ("ROU")

The following table summarizes changes in ROU assets for the year ended December 31, 2021, which have been recorded in mineral properties, plant and equipment on the consolidated statements of financial position:

	December 31, 2021	December 31, 2020
Opening net book value	**$ 33,543**	$ 43,361
Additions	**9,924**	5,534
Depreciation	**(12,444)**	(14,244)
Other	**(1,527)**	(1,108)
Closing net book value	**$ 29,496**	$ 33,543

b. Lease obligations

The following table presents a reconciliation of the Company's undiscounted cash flows at December 31, 2021 and December 31, 2020 to their present value for the Company's lease obligations:

	December 31, 2021	December 31, 2020
Within one year	**$ 11,690**	$ 13,505
Between one and five years	**16,676**	17,902
Beyond five years	**16,934**	19,255
Total undiscounted lease obligations	**45,300**	50,662
Less future interest charges	**(14,739)**	(17,097)
Total discounted lease obligations	**$ 30,561**	$ 33,565
Less: current portion of lease obligations	**(10,663)**	(12,829)
Non-current portion of lease obligations	**$ 19,898**	$ 20,736

17. DEBT

	December 31, 2021	December 31, 2020
Loan	$ 15,300	$ —
Less: current Loan	$ (3,400)	$ —
Non-current Loan	$ 11,900	$ —

In June 2021, a wholly-owned Peruvian subsidiary of the Company entered into a Loan for the purpose of certain construction financing. The Loan is denominated in USD, has a five-year term with quarterly repayments and bears interest of 3.6% per annum.

On August 10, 2021, Pan American Silver Corp. entered into an amendment agreement to amend and extend the Credit Facility into the Sustainability-Linked Credit Facility. The Sustainability-Linked Credit Facility features a pricing mechanism allowing for pricing adjustments on drawn and undrawn balances based on sustainability performance ratings and scores published by MSCI and S&P Global. The Sustainability-Linked Credit Facility matures on August 8, 2025 and does not include a minimum tangible net worth financial covenant, which was a condition of the previous Credit Facility. In addition, the financial covenants continue to include the requirement for the Company to maintain: (i) a leverage ratio less than or equal to 3.5:1; and (ii) an interest coverage ratio more than or equal to 3.0:1. The Sustainability-Linked Credit Facility and Credit Facility were undrawn at December 31, 2021 and December 31, 2020, respectively. As of December 31, 2021, the Company was in compliance with all covenants required by the Sustainability-Linked Credit Facility.

The Sustainability-Linked Credit Facility can be drawn down at any time to finance the Company's working capital requirements, acquisitions, investments and for general corporate purposes. Subject to pricing adjustment based on sustainability performance ratings and scores, any amounts drawn under the Sustainability-Linked Credit Facility will incur interest at LIBOR plus 1.825% to 2.80%. Undrawn amounts are subject to a stand-by fee of 0.41% to 0.63% per annum, dependent on the Company's leverage ratio and sustainability performance ratings and scores.

The Company did not draw from these credit facilities during the year ended December 31, 2021 and incurred $2.1 million in standby charges on undrawn amounts. During the year ended December 31, 2020, the Company incurred $2.2 million in standby charges on undrawn amounts and $5.0 million in interest at an average interest rate of 2.6% on drawn amounts under these facilities.

18. OTHER LONG-TERM LIABILITIES

Other long term liabilities consist of:

	December 31, 2021	December 31, 2020
Deferred credit[1]	$ 20,788	$ 20,788
Other tax payables	16	54
Severance liabilities	4,887	6,231
	$ 25,691	$ 27,073

(1) Represents the obligation to deliver future silver production of Navidad pursuant to a silver stream contract.

19. SHARE CAPITAL AND EMPLOYEE COMPENSATION PLANS

a. Stock options and common shares issued as compensation ("Compensation Shares")

For the year ended December 31, 2021, the total share-based compensation expense relating to stock options and Compensation Shares was $5.1 million (2020 - $3.0 million) and is presented as a component of general and administrative expense.

- *Stock options*

  During the year ended December 31, 2021, the Company granted 53,115 (2020 – 7,605 stock options) stock options.

  During the year ended December 31, 2021, the Company issued 65,780 common shares in connection with the exercise of stock options (2020 – 329,379 common shares in connection with the exercise of 329,711 stock options).

- *Compensation shares*

  During the year ended December 31, 2021, the Company issued 9,646 common shares to Directors in lieu of Directors' fees of $0.3 million (2020 - 9,883 common shares in lieu of fees of $0.2 million).

The following table summarizes changes in stock options for the years ended December 31:

	Stock Options	
	Shares	Weighted Average Exercise Price CAD$
As at December 31, 2019	1,143,348	$ 33.84
Granted	7,605	$ 39.48
Exercised	(329,711)	$ 19.23
Expired	(482,438)	$ 53.41
Forfeited	(21,387)	$ 43.08
As at December 31, 2020	317,417	$ 18.78
Granted	53,115	30.70
Exercised	(65,780)	$ 11.77
Expired	(2,162)	41.62
Forfeited	(23,587)	$ 32.27
As at December 31, 2021	**279,003**	**$ 21.38**

The following table summarizes information about the Company's stock options outstanding at December 31, 2021:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices CAD$	Number Outstanding as at December 31, 2021	Weighted Average Remaining Contractual Life (years)	Weighted Average Exercise Price CAD$	Number Outstanding as at December 31, 2021	Weighted Average Exercise Price CAD$
$9.76 - $17.11	**48,458**	0.9	$ 11.59	**48,458**	$ 11.59
$17.12 - $24.46	**143,896**	3.4	$ 18.90	**143,896**	$ 18.90
$24.47 - $31.81	**74,720**	6.4	$ 29.50	**21,605**	$ 26.54
$31.82 - $41.62	**11,929**	3.9	$ 40.26	**8,128**	$ 40.62
	279,003	3.8	$ 21.38	**222,087**	$ 18.84

The following assumptions were used in the Black-Scholes option pricing model in determining the fair value of options granted during the years ended December 31:

	2021	2020
Expected life	**4.0**	4.0
Expected volatility	**44.0 %**	37.9 %
Expected dividend yield	**2.4 %**	1.1 %
Risk-free interest rate	**1.9 %**	0.8 %
Weighted average exercise price (CAD$)	**$ 30.70**	$ 39.45
Weighted average fair value (CAD$)	**$ 9.39**	$ 15.80

b. PSUs

PSUs are notional share units that mirror the market value of the Company's common shares. Each vested PSU entitles the participant to a cash payment equal to the value of an underlying share, less applicable taxes, at the end of the term, plus the cash equivalent of any dividends distributed by the Company during the three-year performance period. PSU grants will vest on the date that is three years from the date of grant subject to certain exceptions. Performance results at the end of the performance period relative to predetermined performance criteria and the application of the corresponding performance multiplier determine how many PSUs vest for each participant. The Board of Directors approved the issuance of 79,417 PSUs for 2021 with a share price of CAD $32.72 (2020 - 62,920 PSUs approved at a share price of CAD $39.51). Compensation expense for PSUs was $1.9 million for the year ended December 31, 2021 (2020 - $4.2 million) and is presented as a component of general and administrative expense.

At December 31, 2021, the following PSUs were outstanding:

PSU	Number Outstanding	Fair Value
As at December 31, 2019	**247,601**	**$ 5,896**
Granted	62,920	1,942
Paid out	(54,962)	(2,626)
Change in value	—	3,658
As at December 31, 2020	**255,559**	**$ 8,870**
Granted	79,417	2,049
Paid out	(117,328)	(4,539)
Forfeited	—	—
Change in value	—	(901)
As at December 31, 2021	**217,648**	**$ 5,479**

c. RSUs

Under the Company's RSU plan, selected employees are granted RSUs where each RSU has a value equivalent to one Pan American common share. At the time of settlement, the Board of Directors has the discretion to settle the RSUs with cash or common shares. The RSUs vest in three installments, the first 33.3% vest on the first anniversary date of the grant, the second 33.3% vest on the second anniversary date of the grant, and a further 33.3% vest on the third anniversary date of the grant. Additionally, RSU value is adjusted to reflect dividends paid on common shares over the vesting period.

Compensation expense for RSUs was $1.8 million for the year ended December 31, 2021 (2020 – $5.0 million) and is presented as a component of general and administrative expense.

At December 31, 2021, the following RSUs were outstanding:

RSU	Number Outstanding	Fair Value
As at December 31, 2019	**299,216**	**$ 7,107**
Granted	261,224	6,302
Paid out	(148,049)	(4,762)
Forfeited	(15,819)	(545)
Change in value	—	5,628
As at December 31, 2020	**396,572**	**$ 13,730**
Granted	240,366	5,818
Paid out	(197,320)	(4,829)
Forfeited	(13,218)	(329)
Change in value	—	(3,699)
As at December 31, 2021	**426,400**	**$ 10,691**

d. Issued share capital

The Company is authorized to issue 400,000,000 common shares without par value.

e. Dividends

The Company declared the following dividends for the years ended December 31, 2021 and 2020:

Declaration date	Record date	Dividend per common share
February 23, 2022 [1]	March 7, 2022	$ 0.12
November 9, 2021	November 22, 2021	$ 0.10
August 10, 2021	August 23, 2021	$ 0.10
May 12, 2021	May 25, 2021	$ 0.07
February 17, 2021	March 1, 2021	$ 0.07
November 4, 2020	November 16, 2020	$ 0.07
August 5, 2020	August 17, 2020	$ 0.05
May 6, 2020	May 19, 2020	$ 0.05
February 19, 2020	March 2, 2020	$ 0.05

(1) These dividends were declared subsequent to the year end and have not been recognized as distributions to owners during the period presented.

f. CVRs

As part of the acquisition of Tahoe Resources Inc ("Tahoe"), on February 22, 2019, the Company issued 313,887,490 Contingent Value Rights ("CVRs"), with a term of 10 years, which were convertible into 15,600,208 common shares upon the first commercial shipment of concentrate following the restart of operations at the Escobal mine. As of December 31, 2021 and 2020, there were 313,883,990 CVRs outstanding which were convertible into 15,600,034 common shares.

20. PRODUCTION COSTS

Production costs are comprised of the following:

	2021	2020
Materials and consumables	**$ 381,446**	$ 284,215
Salaries and employee benefits [1]	**317,081**	262,753
Contractors	**226,095**	125,242
Utilities	**48,675**	39,242
Other (recovery) expense	**34,165**	18,198
Changes in inventories [2]	**(81,983)**	(32,978)
	$ 925,479	$ 696,672

(1) Employee compensation and benefits expense is comprised of:

	2021	2020
Wages, salaries and bonuses	**$ 352,736**	$ 317,668
Share-based compensation	**5,128**	3,024
Total employee compensation and benefit expenses	**357,864**	320,692
Less: Expensed within Care and Maintenance expenses	**(4,310)**	(37,695)
Less: Expensed within General and Administrative expenses	**(31,230)**	(17,180)
Less: Expensed within Exploration expenses	**(5,243)**	(3,064)
Employee compensation and benefits expenses included in production costs	**$ 317,081**	$ 262,753

(2) Includes NRV adjustments to inventory to increase production costs by $8.7 million for the year ended December 31, 2021 (2020 - reduce by $16.2 million).

21. MINE CARE AND MAINTENANCE

	2021	2020
COVID-19 mine care and maintenance expenses[1]	**$ —**	$ 58,323
COVID-19 mine care and maintenance depreciation	**—**	17,975
Total COVID 19 mine care and maintenance	**—**	76,298
Mine care and maintenance expenses	**31,780**	25,807
	$ 31,780	$ 102,105

(1) As a result of the temporary suspension of mines due to COVID-19 (Note 5f).

22. INTEREST AND FINANCE EXPENSE

	2021	2020
Interest expense	**$ 3,660**	$ 9,216
Finance fees	**5,068**	2,628
Accretion expense (Note 15)	**7,470**	8,260
	$ 16,198	$ 20,104

23. EARNINGS PER SHARE

For the year ended December 31	2021			2020		
	Earnings [1] (Numerator)	Shares (000's) (Denominator)	Per-Share Amount	Earnings (Numerator)	Shares (000's) (Denominator)	Per-Share Amount
Net earnings	$ 97,428			$ 177,882		
Basic earnings per share	$ 97,428	210,298	$ 0.46	$ 177,882	210,085	$ 0.85
Effect of dilutive securities:						
Stock options	—	137		—	210	
Diluted earnings per share	$ 97,428	210,435	$ 0.46	$ 177,882	210,295	$ 0.85

(1) Net earnings attributable to equity holders of the Company.

Potentially dilutive securities excluded in the diluted earnings per share calculation for the year ended December 31, 2021 were 65,044 out-of-the-money options and CVRs potentially convertible into 15,600,034 common shares (2020 – 24,902 out-of-the-money options and CVRs potentially convertible into 15,600,034 common shares)

24. SUPPLEMENTAL CASH FLOW INFORMATION

The following tables summarize other adjustments for non-cash income statement items, changes in operating working capital items and significant non-cash items:

Other operating activities	2021	2020
Adjustments for non-cash income statement items:		
Net realizable value adjustment for inventories	$ 8,719	$ (16,175)
Gains on derivatives (Note 8c)	(5,393)	(3,543)
Share-based compensation expense	5,128	3,024
Income from equity investees (Note 12)	(4,347)	(10,529)
Gains on sale of mineral properties, plant and equipment (Note 11)	(32,167)	(7,922)
Gains on warrants	—	(38)
	$ (28,060)	$ (35,183)

The following tables summarize other adjustments for non-cash income statement items, changes in operating working capital items and significant non-cash items:

Changes in non-cash operating working capital items:	2021	2020
Trade and other receivables	$ (2,874)	$ 54,838
Inventories	(82,885)	(14,623)
Prepaid expenses	1,049	2,353
Accounts payable and accrued liabilities	18,086	56,816
Provisions	(4,445)	(2,402)
	$ (71,069)	$ 96,982

Cash and Cash Equivalents	December 31, 2021	December 31, 2020
Cash in banks	$ 283,550	$ 167,113

25. SEGMENTED INFORMATION

The Company reviews its segment reporting to ensure it reflects the operational structure of the Company and enables the Company's Chief Operating Decision Maker to review operating segment performance. We have determined that each producing mine and significant development property represents an operating segment. The Company has organized its reportable and operating segments by significant revenue streams and geographic regions.

Significant information relating to the Company's reportable operating segments is summarized in the table below:

For the year ended December 31, 2021

Segment/Country	Mine	Revenue	Production costs and royalties	Depreciation	Mine operating earnings	Capital expenditures[1]
Silver Segment:						
Mexico	La Colorada	**$ 130,112**	**$ 75,192**	**$ 20,505**	**$ 34,415**	**$ 65,532**
Peru	Huaron	**154,634**	**90,126**	**11,564**	**52,944**	**10,897**
	Morococha	**108,699**	**75,182**	**13,738**	**19,779**	**8,329**
Bolivia	San Vicente	**80,446**	**54,569**	**9,276**	**16,601**	**5,340**
Argentina	Manantial Espejo	**127,445**	**106,874**	**16,031**	**4,540**	**7,575**
Guatemala	Escobal	**—**	**—**	**—**	**—**	**778**
Total Silver Segment		**601,336**	**401,943**	**71,114**	**128,279**	**98,451**
Gold Segment:						
Mexico	Dolores[2]	**342,556**	**186,285**	**106,397**	**49,874**	**40,566**
Peru	Shahuindo	**255,771**	**115,009**	**42,600**	**98,162**	**27,678**
	La Arena	**194,582**	**84,243**	**41,362**	**68,977**	**45,479**
Canada	Timmins	**238,505**	**174,374**	**39,768**	**24,363**	**42,298**
Total Gold Segment		**1,031,414**	**559,911**	**230,127**	**241,376**	**156,021**
Other segment:						
Canada	Pas Corp	**—**	**—**	**407**	**(407)**	**332**
Argentina	Navidad	**—**	**—**	**—**	**—**	**90**
Other	Other	**—**	**—**	**1,310**	**(1,310)**	**980**
Total		**$ 1,632,750**	**$ 961,854**	**$ 302,958**	**$ 367,938**	**$ 255,874**

(1) Includes payments for mineral properties, plant and equipment and payment of equipment leases.
(2) The mine was reclassified to the Gold Segment in 2021 as a result of expected mine sequencing into a higher gold zone.

For the year ended December 31, 2020

Segment/Country	Mine	Revenue	Production costs and royalties	Depreciation	Mine operating earnings	Capital expenditures[1]
Silver Segment:						
Mexico	La Colorada	$ 128,824	$ 69,663	$ 19,608	$ 39,553	$ 29,388
Peru	Huaron	72,073	39,612	7,069	25,392	4,500
	Morococha	47,046	35,768	7,203	4,075	10,168
Bolivia	San Vicente	48,396	35,753	6,725	5,918	4,877
Argentina	Manantial Espejo	84,051	68,381	9,787	5,883	10,789
Guatemala	Escobal		—		—	4,807
Total Silver Segment		380,390	249,177	50,392	80,821	64,529
Gold Segment:						
Mexico	Dolores[2]	250,219	146,961	87,694	15,564	44,861
Peru	Shahuindo	270,043	97,940	40,562	131,541	23,335
	La Arena	176,028	72,676	27,683	75,669	37,324
Canada	Timmins	262,132	157,412	46,605	58,115	20,751
Total Gold Segment		958,422	474,989	202,544	280,889	126,271
Other segment:						
Canada	Pas Corp		—	491	(491)	297
Argentina	Navidad		—	—	—	—
Other	Other	—	—	1,042	(1,042)	560
Total		$ 1,338,812	$ 724,166	$ 254,469	$ 360,177	$ 191,657

(1) Includes payments for mineral properties, plant and equipment and payment of equipment leases.
(2) The mine has been represented in the Gold Segment to align with current year presentation.

A reconciliation of segment mine operating earnings to the Company's earnings before income taxes per the Consolidated Income Statements is as follows:

	2021	2020
Mine operating earnings	**$ 367,938**	$ 360,177
General and administrative	**(34,852)**	(36,375)
Exploration and project development	**(11,071)**	(7,096)
Mine care and maintenance	**(31,780)**	(102,105)
Foreign exchange losses	**(11,267)**	(5,474)
Gains on commodity and foreign currency contracts	**5,393**	3,543
Gains on sale of mineral properties, plant and equipment	**32,167**	7,922
Share of income from associate and dilution gain	**4,347**	10,529
Other income (expense)	**36**	(21,144)
Earnings from operations	**320,911**	209,977
Investment (loss) income	**(59,722)**	62,139
Interest and finance expense	**(16,198)**	(20,104)
Earnings before income taxes	**$ 244,991**	$ 252,012

At December 31, 2021 Segment/Country	Mine	Assets	Liabilities	Net assets
Silver Segment:				
Mexico	La Colorada	**$ 299,038**	**$ 52,934**	**$ 246,104**
Peru	Huaron	**117,514**	**59,975**	**57,539**
	Morococha	**124,607**	**40,494**	**84,113**
Bolivia	San Vicente	**88,924**	**53,264**	**35,660**
Argentina	Manantial Espejo	**71,012**	**29,017**	**41,995**
Guatemala	Escobal	**287,811**	**19,833**	**267,978**
Total Silver Segment		**988,906**	**255,517**	**733,389**
Gold Segment:				
Mexico	Dolores[1]	**750,220**	**193,638**	**556,582**
Peru	Shahuindo	**591,164**	**199,450**	**391,714**
	La Arena	**317,371**	**106,799**	**210,572**
Canada	Timmins	**419,106**	**62,196**	**356,910**
Total Gold Segment		**2,077,861**	**562,083**	**1,515,778**
Other segment:				
Canada	Pas Corp	**176,006**	**16,492**	**159,514**
Argentina	Navidad	**193,077**	**—**	**193,077**
	Other	**82,734**	**48,484**	**34,250**
Total		**$ 3,518,584**	**$ 882,576**	**$ 2,636,008**

(1) The mine was reclassified to the Gold Segment in 2021 as a result of expected mine sequencing into a higher gold zone.

At December 31, 2020				
Segment/Country	**Mine**	**Assets**	**Liabilities**	**Net assets**
Silver Segment:				
Mexico	La Colorada	$ 231,217	$ 48,971	$ 182,246
Peru	Huaron	113,177	40,663	72,514
	Morococha	121,004	34,906	86,098
Bolivia	San Vicente	83,668	40,536	43,132
Argentina	Manantial Espejo	75,113	26,950	48,163
Guatemala	Escobal	288,588	24,427	264,161
Total Silver Segment		912,767	216,453	696,314
Gold Segment:				
Mexico	Dolores[1]	752,873	169,444	583,429
Peru	Shahuindo	566,734	201,427	365,307
	La Arena	299,372	112,475	186,897
Canada	Timmins	414,396	60,482	353,914
Total Gold Segment		2,033,375	543,828	1,489,547
Other segment:				
Canada	Pas Corp	230,872	18,795	212,077
Argentina	Navidad	192,999	—	192,999
	Other	63,862	48,960	14,902
		$ 3,433,875	$ 828,036	$ 2,605,839

(1) The mine has been represented in the Gold Segment to align with current year presentation.

Product Revenue	**2021**	2020
Refined silver and gold	**$ 1,177,388**	$ 1,047,601
Zinc concentrate	**119,059**	65,033
Lead concentrate	**145,524**	132,823
Copper concentrate	**133,025**	50,081
Silver concentrate	**57,754**	43,274
Total	**$ 1,632,750**	$ 1,338,812

The Company has 25 customers that account for 100% of the concentrate and silver and gold sales revenue. The Company has 7 customers that accounted for 21%, 13%, 12%, 11%, 9%, 7%, and 7% of total sales in 2021, and 7 customers that accounted for 19%, 17%, 12%, 11%, 7%, 7%, and 5% of total sales in 2020. The loss of certain of these customers or curtailment of purchases by such customers could have a material adverse effect on the Company's financial performance, financial position, and cash flows.

26. OTHER EXPENSES

	2021	2020
Change in closure and decommissioning estimates[1]	**$ 246**	$ 5,230
Change in provisions	**1,323**	7,493
Commissions on investment dispositions	**—**	3,465
Other expense	**(1,605)**	4,956
Total	**$ (36)**	$ 21,144

(1) Relates to changes in estimates after the completion of mining activities.

27. INCOME TAXES

Components of Income Tax Expense

	2021	2020
Current tax expense (recovery)		
Recognized in profit or loss in current year	**$ 134,947**	$ 99,013
Adjustments recognized in the current year with respect to prior years	**147**	(658)
	135,094	98,355
Deferred tax expense (recovery)		
Deferred tax recovery recognized in the current year	**14,194**	14,667
Adjustments recognized in the current year with respect to prior years	**56**	433
Benefit from previously unrecognized losses, and other temporary differences	**508**	(42,379)
Decrease in deferred tax liabilities due to tax impact of NRV charge to inventory	**(3,423)**	4,481
	11,335	(22,798)
Income tax expense	**$ 146,429**	$ 75,557

Income tax expense differs from the amounts that would result from applying the Canadian federal and provincial income tax rates to earnings before income tax. These differences result from the items shown on the following table, which result in an effective tax rate that varies considerably from the comparable period. The factors which have affected the effective tax rate for the year ended December 31, 2021 and the comparable period of 2020 were foreign exchange fluctuations, mining taxes paid, and withholding taxes on payments from foreign subsidiaries.

The most significant factor impacting the effective tax rate was due to the changes in the recognition of deferred tax assets. The increase in the effective tax rate for 2021 was due to the mark-to-market losses on short-term investments, for which no tax benefit could be recognized; whereas in 2020, it was reduced due to the recognition of deferred tax benefits associated with deductible tax attributes in La Arena, Timmins West, and Bell Creek. The Company continues to expect that these and other factors will continue to cause volatility in effective tax rates in the future.

Reconciliation of Effective Income Tax Rate

	2021	2020
Earnings before taxes and non-controlling interest	**$ 244,991**	$ 252,012
Statutory Canadian income tax rate	**27.00 %**	27.00 %
Income tax expense based on above rates	**$ 66,148**	$ 68,043
Increase (decrease) due to:		
Non-deductible expenditures	**6,192**	9,915
Foreign tax rate differences	**15,969**	16,179
Change in net deferred tax assets not recognized	**20,574**	(64,765)
Non-taxable portion of net earnings of affiliates	**(1,304)**	—
Effect of other taxes paid (mining and withholding)	**25,846**	22,545
Effect of foreign exchange on tax expense	**14,337**	18,598
Non-taxable impact of foreign exchange	**(1,203)**	(3,000)
Change in non-deductible portion of reclamation liabilities	**2,380**	8,605
Other	**(2,510)**	(563)
Income tax expense	**$ 146,429**	$ 75,557

Deferred tax assets and liabilities

The following is the analysis of the deferred tax assets (liabilities) presented in the consolidated financial statements:

		2021		2020
Net deferred tax liabilities, beginning of year	$	**(117,461)**	$	(140,361)
Recognized in net earnings in the year		**(11,335)**		22,798
Other		**(36)**		102
Net deferred liabilities, end of year		**(128,832)**		(117,461)
Deferred tax assets		**55,953**		57,850
Deferred tax liabilities		**(184,785)**		(175,311)
Net deferred tax liabilities	$	**(128,832)**	$	(117,461)

Components of deferred tax assets and liabilities

The deferred tax assets (liabilities) are comprised of the various temporary differences, as detailed below:

		2021		2020
Deferred tax assets (liabilities) arising from:				
Closure and decommissioning costs	$	**27,742**	$	26,482
Tax losses, resource pools and mining tax credits		**92,928**		140,608
Deductible Mexican mining taxes		**4,682**		3,286
Accounts payable and accrued liabilities		**22,119**		17,737
Trade and other receivables		**29,163**		13,290
Provision for doubtful debts and inventory adjustments		**(28,153)**		(21,354)
Short-term investments		**(7,941)**		(15,649)
Mineral properties, plant, and equipment		**(245,126)**		(274,483)
Estimated sales provisions		**(30,466)**		(14,028)
Other temporary differences and provisions		**6,220**		6,650
Net deferred tax liabilities	$	**(128,832)**	$	(117,461)

At December 31, 2021, the net deferred tax liability above included the deferred tax asset of $92.9 million, which includes the benefits from tax losses ($26.4 million) and resource pools ($66.5 million). The decrease of $47.7 million in this deferred tax asset is mainly due to the unrealized losses on short-term investments. These unrealized mark-to-market losses in 2021 reduced the offsetting operating losses recognized, whereas in 2020, additional operating losses were recognized to offset the unrealized mark-to-market gains. The losses will begin to expire after the 2024 year end, if unused.

At December 31, 2020, the net deferred tax liability above included the deferred tax asset of $140.6 million, which includes the benefits from tax losses ($43.8 million) and resource pools ($96.8 million). The increase in this deferred tax asset is mainly due to the Timmins and Bell Creek mines - the assets added were related to previously unbenefitted deductible resource pools, partially offset by losses utilized against taxable income earned. The losses will begin to expire after the 2024 year end, if unused.

Unrecognized deductible temporary differences, unused tax losses and unused tax credits

Deductible temporary differences, unused tax losses and unused tax credits for which no deferred tax assets have been recognized are attributable to the following:

	2021	2020
Operating tax loss	**$ 366,351**	$ 284,626
Net capital tax loss	**35,801**	32,378
Resource pools and other tax credits[1]	**49,230**	48,773
Financing fees	**1,050**	2,003
Mineral properties, plant, and equipment[2]	**127,945**	107,124
Closure and decommissioning costs	**143,080**	136,728
Exploration and other expenses not currently deductible[2]	**33,837**	68,266
Intercompany debt	**17,956**	12,160
Doubtful debt and inventory	**24,624**	41,378
Payroll and vacation accruals	**6,168**	1,491
Other temporary differences	**6,154**	3,562
	$ 812,196	$ 738,489

(1) Includes tax credits which will begin to expire after 2027 year end, if unused.
(2) Recast comparative temporary differences to be consistent with current presentation.

Included in the above amounts are operating tax losses, which if not utilized will expire as follows:

At December 31, 2021

	Canada	US	Peru	Mexico	Barbados	Argentina	Total
2022	$ —	$ 529	$ 156	$ —	$ 15	$ 3	$ 703
2023	—	360	—	207	60	5	632
2024 – and after	330,799	11,399	593	2,092	168	19,965	365,016
Total tax losses	**$ 330,799**	**$ 12,288**	**$ 749**	**$ 2,299**	**$ 243**	**$ 19,973**	**366,351**

At December 31, 2020

	Canada	US	Peru	Mexico	Barbados	Argentina	Total
2021	$ —	$ 317	$ 26	$ —	$ 8	$ 1	$ 352
2022	—	529	—	—	12	3	544
2023 – and after	269,001	11,746	314	2,406	183	80	283,730
Total tax losses	**$ 269,001**	**$ 12,592**	**$ 340**	**$ 2,406**	**$ 203**	**$ 84**	**$ 284,626**

Taxable temporary differences associated with investment in subsidiaries

At December 31, 2021, taxable temporary differences of $282.0 million (2020 – $275.7 million) associated with the investments in subsidiaries have not been recognized as the Company is able to control the timing of the reversal of these differences which are not expected to reverse in the foreseeable future.

28. CONTINGENCIES

The following is a summary of the contingent matters and obligations relating to the Company as at December 31, 2021.

General

The Company is subject to various investigations, claims and legal and tax proceedings covering matters that arise in the ordinary course of business activities. Each of these matters is subject to various uncertainties and it is possible that some of these matters may be resolved unfavorably to the Company. Certain conditions may exist as of the date the financial statements are issued, which may result in a loss to the Company. In the opinion of management none of these matters are expected to have a material effect on the results of operations or financial conditions of the Company.

Environment

The Company's mining and exploration activities are subject to various laws and regulations governing the protection of the environment. These laws and regulations are continually changing and are generally becoming more restrictive. The Company conducts its operations so as to protect the public health and environment and believes its operations are in compliance with applicable laws and regulations in all material respects. The Company has made, and expects to make in the future, expenditures to comply with such laws and regulations, but cannot predict the full amount of such future expenditures.

Estimated future reclamation costs are based on the extent of work required and the associated costs are dependent on the requirements of relevant authorities and the Company's environmental policies. As of December 31, 2021, $242.9 million (2020 - $235.1 million) was accrued for reclamation costs relating to mineral properties (Note 15).

Tax

The Company operates in numerous countries around the world and accordingly it is subject to, and pays annual income taxes under the various income tax regimes in the countries in which it operates. Some of these tax regimes are defined by contractual agreements with the local government, and others are defined by the general corporate income tax laws of the country. The Company has historically filed, and continues to file, all required income tax returns and to pay the taxes reasonably determined to be due. The tax rules and regulations in many countries are highly complex and subject to interpretation. From time to time, the Company is subject to a review of its historic income tax filings and in connection with such reviews, disputes can arise with the taxing authorities over the interpretation or application of certain rules to the Company's business conducted within the country involved.

Title

The validity of our mining or exploration titles or claims or rights, which constitute most of our property holdings, can be uncertain and may be contested. Although the Company has taken steps to verify title to properties in which it has an interest, these procedures do not guarantee the Company's title. Property title may be subject to, among other things, unregistered prior agreements or transfers, indigenous land claims, or undetected title defects. In some cases, we do not own or hold rights to the mineral concessions we mine, and our rights may be contractual in nature. We have not conducted surveys of all the claims in which we hold direct or indirect interests and therefore, the precise area and location of such claims may be in doubt. The land title system is also not well developed in some countries and may rely on informal, hereditary or possessory rights. Such informal systems can create significant uncertainty in obtaining and maintaining ownership or rights of access, in defining precise locations or clear boundaries to properties, and substantiating rights if challenged. No assurance can be given that applicable governments will not revoke or significantly alter the conditions of the applicable exploration and mining titles or claims, or that such exploration and mining titles or claims will not be challenged or impugned by

third parties. Any defects in title to our properties, or the revocation of or challenges to our rights to mine, could have a material adverse effect on our operations and financial condition.

Legal Proceedings

We are 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 are from current or ex-employees, or employees of former or current owners of our operations, such as the Quiruvilca-related claims in Peru, which could, in the aggregate, be of significant value, and include alleged improper dismissals, workplace illnesses, such as silicosis, and claims for additional profit-sharing and bonuses in prior years.

We may become subject to class action lawsuits. For example, in mid-2017, Tahoe, which was acquired by us in late February 2019, and certain of its former directors and officers became the subject of three purported class action lawsuits filed in the United States that center primarily around alleged misrepresentations. These U.S. class action lawsuits were later consolidated into one class action suit that is ongoing. In October 2018, Tahoe learned that a similar proposed class action lawsuit had been filed in the Superior Court of Ontario. These lawsuits seek significant damages. Tahoe has disputed the allegations made in these suits, however the outcomes are not determinable at this time.

We may also be subject to proceedings in our commercial relationships. While we believe that we have defenses to such allegations, if we are unsuccessful in our defense of these claims, we may be subject to significant losses.

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, or environmental or social damage, and such claimants may seek sizeable monetary damages against us and/or the return of surface or mineral rights or revocation of permits and licenses that are valuable to us and which may 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 us. 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.

Country

Argentina

Unanticipated or drastic changes in laws and regulations have affected our operations in the past. For example, previous governments implemented severe price, foreign exchange, and import controls which included informal restrictions on dividend, interest, and service payments abroad and limitations on the ability to convert ARS into USD which exposed the Company to additional risks of ARS devaluation and high domestic inflation. The current government in Argentina maintains unfavorable economic policies, such as strict currency controls and the imposition of export duties.

The Company has suspended project development activities at Navidad as a result of uncertainty over the zoning, regulatory and tax laws. The Company remains committed to the development of Navidad and to contributing to the positive economic and social development of the province of Chubut upon the adoption of a favorable legislative framework.

Bolivia

On May 28, 2014, the Bolivian government enacted the New Mining Law. Among other things, 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. The Company currently has a joint venture agreement with COMIBOL (the "COMIBOL Joint Venture"), a Bolivian state mining company, relating to the San Vicente mine. As a result, we anticipate that the COMIBOL Joint Venture will be subject to such migration and possible renegotiation of key terms. The migration process has been delayed by COMIBOL and has not been completed.

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 COMIBOL Joint Venture, and the full impact may only be realized over time. We will take appropriate steps to protect and, if necessary, enforce our rights under the COMIBOL Joint Venture. There is, however, no guarantee that governmental actions, including possible expropriation or additional changes in the law, and the migration of the COMIBOL Joint Venture 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.

The Company's San Vicente mine, pursuant to the COMIBOL Joint Venture, is obligated to pay COMIBOL a participation fee of 37.5% of the operation’s cash flow. For the year ended December 31, 2021, the Company incurred approximately $7.7 million in COMIBOL royalties (2020 - incurred $5.8 million).

Guatemala

Some communities and non-governmental organizations ("NGOs") have been vocal and active in their opposition to mining and exploration activities in Guatemala. In July 2017, the Escobal mining license was suspended as a result of a court proceeding initiated by an NGO in Guatemala, based upon the allegation that the Guatemala MEM violated the Xinka indigenous people’s right of consultation. After several decisions and appeals on the matter, a decision of the Constitutional Court of Guatemala was rendered on September 3, 2018, determining that the Escobal mining license would remain suspended until the Guatemala MEM completes an ILO 169 consultation.

This consultation process for the Escobal mine in Guatemala has advanced in 2021 with pre-consultation meetings held in May, June and October. The process is being led by the Guatemala MEM with representatives of the Xinka indigenous people and PAS Guatemala, Pan American's subsidiary in Guatemala, as participants in the process.

Operations at the Escobal mine have been suspended, on care and maintenance, since July 2017, and the Constitutional Court of Guatemala has ordered the continued suspension of the mining license while the MEM conducts the ILO 169 consultation with the Xinka communities residing in the area of influence.

Legal challenges to the consultation process have been filed with the Guatemalan Supreme Court by parties opposed to the Escobal mine and the ultimate outcome of the various challenges remains uncertain. The process, timing, and outcome of the ILO 169 consultation also remains uncertain.

29. 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. All related party transactions for the year ended December 31, 2021 and 2020 have been disclosed in these consolidated financial statements. Transactions with Maverix, an associate of the Company, have been disclosed in Note 12 of these consolidated financial statements.

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

Remuneration of key management personnel

The remuneration of directors and other members of key management personnel during the year was as follows:

		2021		2020 [4]
Salaries and short-term benefits [1]	$	**18,592**	$	14,809
Post-employment benefits [2]		**1,130**		930
Share-based payments [3]		**640**		2,143
	$	**20,362**	$	17,882

(1) Includes annual salary and short-term incentives or bonuses earned in the year.
(2) Includes annual contributions to retirement savings plans made by the Company.
(3) Includes annual RSUs, PSUs, stock option and common share grants.
(4) Recast to provide consistency with current presentation.

30. SUBSEQUENT EVENTS

Subsequent to December 31, 2021, the Company made the decision to decommission and dismantle the mine's processing plant and place the Morococha mine on care and maintenance later in fiscal 2022 while strategic alternatives for Morococha are evaluated.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-180494, 333-180495, 333-206162 and 333-229795 on Form S-8, and to the use of our reports dated February 23, 2022, relating to the consolidated financial statements of Pan American Silver Corp. (the "Company") and the effectiveness of the Company's internal control over financial reporting in this Annual Report on Form 40-F for the year ended December 31, 2021.

/s/ Deloitte LLP
Chartered Professional Accountants
Vancouver, Canada
February 23, 2022

CONSENT OF MARTIN WAFFORN, P. ENG.

To: United States Securities and Exchange Commission

Re: Expert Consent for Annual Report on Form 40-F

Technical reports entitled:

1. "Technical Report for the La Colorada Property, Zacatecas, Mexico" dated effective December 31, 2019 relating to the La Colorada property;
2. "Technical Report for the Dolores Property, Chihuahua, Mexico" dated effective December 31, 2016 relating to the Dolores property; and
3. "Technical Report for the Huaron Property, Pasco, Peru" dated effective June 30, 2014 relating to the Huaron property

(collectively, the "**Technical Reports**") were prepared for Pan American Silver Corp. (the "**Corporation**") in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* by Martin Wafforn, P. Eng., in whole or in part, and filed with applicable securities regulatory authorities.

The undersigned does hereby consent to the inclusion of the written disclosure of the Technical Reports and the extracts from, or summary of, or references to the Technical Reports and other scientific and technical information attributed to the undersigned (the "**Technical Information**") by the Corporation in the annual information form of the Corporation, dated February 23, 2022 (the "**AIF**") and in the Annual Report on Form 40-F of the Corporation, dated February 23, 2022 (the "**40-F**"). The undersigned does also hereby consent to the reference to my name in the AIF and the 40-F.

The undersigned consents to the incorporation by reference in the Registration Statements on Form S-8 (File Nos., 333-180494, 333-180495, 333-206162 and 333-229795) of the references to my name and the above mentioned information in the AIF and 40-F.

The undersigned does hereby confirm that I have read the AIF and the 40-F and have no reason to believe that there are any misrepresentations in the information contained in the AIF or the 40-F that are (a) derived from the Technical Reports or the Technical Information; or (b) within my knowledge as a result of the services I performed in connection with the Technical Reports or the Technical Information.

Dated this 23rd day of February, 2022.

/s/ "*Martin Wafforn*"
Martin Wafforn, P. Eng.

CONSENT OF MICHAEL STEINMANN, P. GEO.

To: United States Securities and Exchange Commission

Re: Expert Consent for Annual Report on Form 40-F

Technical report entitled "Technical Report for the Huaron Property, Pasco, Peru" dated effective June 30, 2014 relating to the Huaron property (the "**Technical Report**") was prepared for Pan American Silver Corp. (the "**Corporation**") in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* by Michael Steinmann, P. Geo., in whole or in part, and filed with applicable securities regulatory authorities.

The undersigned does hereby consent to the inclusion of the written disclosure of the Technical Report and the extracts from, or summary of, or references to the Technical Report and other scientific and technical information attributed to the undersigned (the "**Technical Information**") by the Corporation in the annual information form of the Corporation, dated February 23, 2022 (the "**AIF**") and in the Annual Report on Form 40-F of the Corporation, dated February 23, 2022 (the "**40-F**"). The undersigned does also hereby consent to the reference to my name in the AIF and the 40-F.

The undersigned consents to the incorporation by reference in the Registration Statements on Form S-8 (File Nos. 333-180494, 333-180495, 333-206162 and 333-229795) of the references to my name and the above mentioned information in the AIF and 40-F.

The undersigned does hereby confirm that I have read the AIF and the 40-F and have no reason to believe that there are any misrepresentations in the information contained in the AIF or the 40-F that are (a) derived from the Technical Report or the Technical Information; or (b) within my knowledge as a result of the services I performed in connection with the Technical Report or the Technical Information.

Dated this 23rd day of February, 2022.

/s/ "Michael Steinmann"
Michael Steinmann, P. Geo.

CONSENT OF AMERICO DELGADO, P. ENG.

To: United States Securities and Exchange Commission

Re: Expert Consent for Annual Report on Form 40-F

Technical reports entitled:

1. "Technical Report for the La Colorada Property, Zacatecas, Mexico" dated effective December 31, 2019 relating to the La Colorada property;
2. "Technical Report for the Dolores Property, Chihuahua, Mexico" dated effective December 31, 2016 relating to the Dolores property; and
3. "Technical Report for the Huaron Property, Pasco, Peru" dated effective June 30, 2014 relating to the Huaron property

(collectively, the "**Technical Reports**") were prepared for Pan American Silver Corp. (the "**Corporation**") in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* by Americo Delgado, P. Eng., in whole or in part, and filed with applicable securities regulatory authorities.

The undersigned does hereby consent to the inclusion of the written disclosure of the Technical Reports and the extracts from, or summary of, or references to the Technical Reports and other scientific and technical information attributed to the undersigned (the "**Technical Information**") by the Corporation in the annual information form of the Corporation, dated February 23, 2022 (the "**AIF**") and in the Annual Report on Form 40-F of the Corporation, dated February 23, 2022 (the "**40-F**"). The undersigned does also hereby consent to the reference to my name in the AIF and the 40-F.

The undersigned consents to the incorporation by reference in the Registration Statements on Form S-8 (File Nos. 333-180494, 333-180495, 333-206162 and 333-229795) of the references to my name and the above mentioned information in the AIF and 40-F.

The undersigned does hereby confirm that I have read the AIF and the 40-F and have no reason to believe that there are any misrepresentations in the information contained in the AIF or the 40-F that are (a) derived from the Technical Reports or the Technical Information; or (b) within my knowledge as a result of the services I performed in connection with the Technical Reports or the Technical Information.

Dated this 23rd day of February, 2022.

/s/ "Americo Delgado"
Americo Delgado, P. Eng.

CONSENT OF CHRISTOPHER EMERSON, FAusIMM

To: United States Securities and Exchange Commission

Re: Expert Consent for Annual Report on Form 40-F

Technical Reports entitled:

1. "Technical Report for the La Colorada Property, Zacatecas, Mexico" dated effective December 31, 2019 relating to the La Colorada property; and
2. "Technical Report for the Dolores Property, Chihuahua, Mexico" and dated effective December 31, 2016 relating to the Dolores property

(collectively, the "**Technical Reports**") were prepared for Pan American Silver Corp. (the "**Corporation**") in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* by Christopher Emerson, FAusIMM, in whole or in part, and filed with applicable securities regulatory authorities.

The undersigned does hereby consent to the inclusion of the written disclosure of the Technical Reports and the extracts from, or summary of, or references to the Technical Report and other scientific and technical information attributed to the undersigned (the "**Technical Information**") by the Corporation in the annual information form of the Corporation, dated February 23, 2022 (the "**AIF**") and in the Annual Report on Form 40-F of the Corporation, dated February 22, 2022 (the "**40-F**"). The undersigned does also hereby consent to the reference to my name in the AIF and the 40-F.

The undersigned consents to the incorporation by reference in the Registration Statements on Form S-8 (File Nos. 333-180494, 333-180495, 333-206162 and 333-229795) of the references to my name and the above mentioned information in the AIF and 40-F.

The undersigned does hereby confirm that I have read the AIF and the 40-F and have no reason to believe that there are any misrepresentations in the information contained in the AIF or the 40-F that are (a) derived from the Technical Reports or the Technical Information; or (b) within my knowledge as a result of the services I performed in connection with the Technical Reports or the Technical Information.

Dated this 23rd day of February, 2022.

/s/ "Christopher Emerson"
Christopher Emerson, FAusIMM

CONSENT OF AL MAINVILLE, P. GEO.

To: United States Securities and Exchange Commission

Re: Expert Consent for Annual Report on Form 40-F

Technical reports entitled:

1. "National Instrument 43-101 Technical Report, Updated Mineral Resource and Mineral Reserve Estimate for the Bell Creek Mine Property, Hoyle Township, Timmins, Ontario, Canada; dated effective June 30, 2021 relating to the Bell Creek property; and
2. "National Instrument 43-101 Technical Report, Updated Mineral Resource and Mineral Reserve Estimate for Timmins West Mine, Report for the Timmins West Mine Property, Bristol Township, Timmins, Ontario, Canada" dated effective June 30, 2021 relating to the Timmins West property

(collectively, the "**Technical Reports**") were prepared for Pan American Silver Corp. (the "**Corporation**") in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* by Al Mainville, P. Geo., in whole or in part, and filed with applicable securities regulatory authorities.

The undersigned does hereby consent to the inclusion of the written disclosure of the Technical Reports and the extracts from, or summary of, or references to the Technical Reports and other scientific and technical information attributed to the undersigned (the "**Technical Information**") by the Corporation in the annual information form of the Corporation, dated February 23, 2022 (the "**AIF**") and in the Annual Report on Form 40-F of the Corporation, dated February 23, 2022 (the "**40-F**"). The undersigned does also hereby consent to the reference to my name in the AIF and the 40-F.

The undersigned consents to the incorporation by reference in the Registration Statements on Form S-8 (File Nos. 333-180494, 333-180495, 333-206162 and 333-229795) of the references to my name and the above mentioned information in the AIF and 40-F.

The undersigned does hereby confirm that I have read the AIF and the 40-F and have no reason to believe that there are any misrepresentations in the information contained in the AIF or the 40-F that are (a) derived from the Technical Reports or the Technical Information; or (b) within my knowledge as a result of the services I performed in connection with the Technical Reports or the Technical Information.

Dated this 23rd day of February, 2022.

/s/ "Al Mainville"
Al Mainville, P. Geo.

CONSENT OF ERIC LACHAPELLE, P. ENG.

To: United States Securities and Exchange Commission

Re: Expert Consent for Annual Report on Form 40-F

Technical reports entitled:

1. "National Instrument 43-101 Technical Report, Updated Mineral Resource and Mineral Reserve Estimate for the Bell Creek Mine Property, Hoyle Township, Timmins, Ontario, Canada" dated effective June 30, 2021 relating to the Bell Creek property; and
2. "National Instrument 43-101 Technical Report, Updated Mineral Resource and Mineral Reserve Estimate for Timmins West Mine, Report for the Timmins West Mine Property, Bristol Township, Timmins, Ontario, Canada" dated effective June 30, 2021 relating to the Timmins West property

(collectively, the "**Technical Reports**") were prepared for Pan American Silver Corp. (the "**Corporation**") in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* by Eric Lachapelle, P. Eng., in whole or in part, and filed with applicable securities regulatory authorities.

The undersigned does hereby consent to the inclusion of the written disclosure of the Technical Reports and the extracts from, or summary of, or references to the Technical Reports and other scientific and technical information attributed to the undersigned (the "**Technical Information**") by the Corporation in the annual information form of the Corporation, dated February 23, 2022 (the "**AIF**") and in the Annual Report on Form 40-F of the Corporation, dated February 23, 2022 (the "**40-F**"). The undersigned does also hereby consent to the reference to my name in the AIF and the 40-F.

The undersigned consents to the incorporation by reference in the Registration Statements on Form S-8 (File Nos. 333-180494, 333-180495, 333-206162 and 333-229795) of the references to my name and the above mentioned information in the AIF and 40-F.

The undersigned does hereby confirm that I have read the AIF and the 40-F and have no reason to believe that there are any misrepresentations in the information contained in the AIF or the 40-F that are (a) derived from the Technical Reports or the Technical Information; or (b) within my knowledge as a result of the services I performed in connection with the Technical Reports or the Technical Information.

Dated this 23rd day of February, 2022.

/s/ "Eric Lachapelle"
Eric Lachapelle, P. Eng.

CONSENT OF DAVE FELSHER, P. ENG.

To: United States Securities and Exchange Commission

Re: Expert Consent for Annual Report on Form 40-F

Technical reports entitled:

1. "National Instrument 43-101 Technical Report, Updated Mineral Resource and Mineral Reserve Estimate for the Bell Creek Mine Property, Hoyle Township, Timmins, Ontario, Canada" dated effective June 30, 2021 relating to the Bell Creek property; and
2. "National Instrument 43-101 Technical Report, Updated Mineral Resource and Mineral Reserve Estimate for Timmins West Mine, Report for the Timmins West Mine Property, Bristol Township, Timmins, Ontario, Canada" dated effective June 30, 2021 relating to the Timmins West property

(collectively, the "**Technical Reports**") were prepared for Pan American Silver Corp. (the "**Corporation**") in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* by Dave Felsher, P. Eng., in whole or in part, and filed with applicable securities regulatory authorities.

The undersigned does hereby consent to the inclusion of the written disclosure of the Technical Reports and the extracts from, or summary of, or references to the Technical Reports and other scientific and technical information attributed to the undersigned (the "**Technical Information**") by the Corporation in the annual information form of the Corporation, dated February 23, 2022 (the "**AIF**") and in the Annual Report on Form 40-F of the Corporation, dated February 23, 2022 (the "**40-F**"). The undersigned does also hereby consent to the reference to my name in the AIF and the 40-F.

The undersigned consents to the incorporation by reference in the Registration Statements on Form S-8 (File Nos. 333-180494, 333-180495, 333-206162 and 333-229795) of the references to my name and the above mentioned information in the AIF and 40-F.

The undersigned does hereby confirm that I have read the AIF and the 40-F and have no reason to believe that there are any misrepresentations in the information contained in the AIF or the 40-F that are (a) derived from the Technical Reports or the Technical Information; or (b) within my knowledge as a result of the services I performed in connection with the Technical Reports or the Technical Information.

Dated this 23rd day of February, 2022.

/s/ "Dave Felsher"
Dave Felsher, P. Eng.

Exhibit 23.8

CONSENT OF TIM WILLIAMS, FAusIMM

To: United States Securities and Exchange Commission

To: Pan American Silver Corp.

Re: Expert Consent for Annual Report on Form 40-F

A technical report titled "Technical Report on the Shahuindo Mine, Cajabamba, Peru" dated effective January 1, 2016 (the "**Technical Report**") was prepared in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* by Tim Williams, M.Sc., in whole or in part, and filed with applicable securities regulatory authorities.

The undersigned does hereby consent to the inclusion of the written disclosure of the Technical Report and the extracts from, or summary of, or references to the Technical Report and other scientific and technical information attributed to the undersigned (the "**Technical Information**") by Pan American Silver Corp. (the "**Corporation**") in the annual information form of the Corporation, dated February 23, 2022 (the "**AIF**") and in the Annual Report on Form 40-F of the Corporation, dated February 23, 2022 (the "**40-F**"). The undersigned does also hereby consent to the reference to my name in the AIF and the 40-F.

The undersigned consents to the incorporation by reference in the Registration Statements on Form S-8 (File Nos. 333-180494, 333-180495, 333-206162 and 333-229795) of the references to my name and the above mentioned information in the AIF and 40-F.

The undersigned does hereby confirm that I have read the AIF and the 40-F and have no reason to believe that there are any misrepresentations in the information contained in the AIF or the 40-F that are (a) derived from the Technical Report or the Technical Information; or (b) within my knowledge as a result of the services I performed in connection with the Technical Report or the Technical Information.

Dated this 23 day of February, 2022.

/s/ "Tim Williams"
Tim Williams, FAusIMM

CONSENT OF CARL E. DEFILIPPI, M.Sc., C.E.M.

To: United States Securities and Exchange Commission

To: Pan American Silver Corp.

Re: Expert Consent for Annual Report on Form 40-F

A technical report titled "Technical Report on the Shahuindo Mine, Cajabamba, Peru" dated effective January 1, 2016 (the "**Technical Report**") was prepared in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* by Carl E. Defilippi, M.Sc., C.E.M., in whole or in part, and filed with applicable securities regulatory authorities.

The undersigned does hereby consent to the inclusion of the written disclosure of the Technical Report and the extracts from, or summary of, or references to the Technical Report and other scientific and technical information attributed to the undersigned (the "**Technical Information**") by Pan American Silver Corp. (the "**Corporation**") in the annual information form of the Corporation, dated February 23, 2022 (the "**AIF**") and in the Annual Report on Form 40-F of the Corporation, dated February 23, 2022 (the "**40-F**"). The undersigned does also hereby consent to the reference to my name in the AIF and the 40-F.

The undersigned consents to the incorporation by reference in the Registration Statements on Form S-8 (File Nos. 333-180494, 333-180495, 333-206162 and 333-229795) of the references to my name and the above mentioned information in the AIF and 40-F.

The undersigned does hereby confirm that I have read the AIF and the 40-F and have no reason to believe that there are any misrepresentations in the information contained in the AIF or the 40-F that are (a) derived from the Technical Report or the Technical Information; or (b) within my knowledge as a result of the services I performed in connection with the Technical Report or the Technical Information.

Dated this 23 day of February, 2022.

/s/ "Carl E. Defilippi"
Carl E. Defilippi, M.Sc., C.E.M.

CONSENT OF CHARLES V. MUERHOFF, B.Sc.

To: United States Securities and Exchange Commission

To: Pan American Silver Corp.

Re: Expert Consent for Annual Report on Form 40-F

A technical report titled "Technical Report on the Shahuindo Mine, Cajabamba, Peru" dated effective January 1, 2016 (the "**Technical Report**") was prepared in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* by Charles V. Muerhoff, B.Sc., in whole or in part, and filed with applicable securities regulatory authorities.

The undersigned does hereby consent to the inclusion of the written disclosure of the Technical Report and the extracts from, or summary of, or references to the Technical Report and other scientific and technical information attributed to the undersigned (the "**Technical Information**") by Pan American Silver Corp. (the "**Corporation**") in the annual information form of the Corporation, dated February 23, 2022 (the "**AIF**") and in the Annual Report on Form 40-F of the Corporation, dated February 23, 2022 (the "**40-F**"). The undersigned does also hereby consent to the reference to my name in the AIF and the 40-F.

The undersigned consents to the incorporation by reference in the Registration Statements on Form S-8 (File Nos. 333-180494, 333-180495, 333-206162 and 333-229795) of the references to my name and the above mentioned information in the AIF and 40-F.

The undersigned does hereby confirm that I have read the AIF and the 40-F and have no reason to believe that there are any misrepresentations in the information contained in the AIF or the 40-F that are (a) derived from the Technical Report or the Technical Information; or (b) within my knowledge as a result of the services I performed in connection with the Technical Report or the Technical Information.

Dated this 23 day of February, 2022.

/s/ "Charles V. Muerhoff"
Charles V. Muerhoff, B.Sc.

CONSENT OF M3 Engineering & Technology Corporation

To: United States Securities and Exchange Commission

To: Pan American Silver Corp.

Re: Expert Consent for Annual Report on Form 40-F

A technical report titled "Escobal Mine Guatemala NI 43-101 Feasibility Study" and dated effective November 5, 2014 (the "**Technical Report**") was prepared in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* by M3 Engineering & Technology Corporation and filed with applicable securities regulatory authorities.

The undersigned does hereby consent to the inclusion of the written disclosure of the Technical Report and the extracts from, or summary of, or references to the Technical Report and other scientific and technical information attributed to the undersigned (the "**Technical Information**") by Pan American Silver Corp. (the "**Corporation**") in the annual information form of the Corporation, dated February 23, 2022 (the "**AIF**") and in the Annual Report on Form 40-F of the Corporation, dated February 23, 2022 (the "**40-F**"). The undersigned does also hereby consent to the reference to M3 Engineering & Technology Corporation in the AIF and the 40-F.

The undersigned consents to the incorporation by reference in the Registration Statements on Form S-8 (File Nos. 333-180494, 333-180495, 333-206162 and 333-229795) of the references to my name and the above mentioned information in the AIF and 40-F.

The undersigned does hereby confirm that I have read the AIF and the 40-F and have no reason to believe that there are any misrepresentations in the information contained in the AIF or the 40-F that are (a) derived from the Technical Report or the Technical Information; or (b) within my knowledge as a result of the services I performed in connection with the Technical Report or the Technical Information.

Dated this 23 day of February, 2022.

M3 Engineering & Technology Corporation

By: */s/ "Alberto Bennet"*
Name: Alberto Bennet, PE
Title: President

Certification
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Michael Steinmann, certify that:

1. I have reviewed this annual report on Form 40-F of Pan American Silver Corp.;

i. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the issuer as of, and for, the periods presented in this report;

4. The issuer's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the issuer and have:

   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c. Evaluated the effectiveness of the issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d. Disclosed in this report any change in the issuer's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the issuer's internal control over financial reporting; and

5. The issuer's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the issuer's auditors and the audit committee of the issuer's board of directors (or persons performing the equivalent functions):

   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the issuer's ability to record, process, summarize and report financial information; and

   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the issuer's internal control over financial reporting.

Dated: February 23, 2022

/s/ "Michael Steinmann"

By: Michael Steinmann

Title: President and Chief Executive Officer

Certification
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, A. Robert Doyle, certify that:

1. I have reviewed this annual report on Form 40-F of Pan American Silver Corp.;

i. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the issuer as of, and for, the periods presented in this report;

4. The issuer's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the issuer and have:

   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c. Evaluated the effectiveness of the issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d. Disclosed in this report any change in the issuer's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the issuer's internal control over financial reporting; and

5. The issuer's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the issuer's auditors and the audit committee of the issuer's board of directors (or persons performing the equivalent functions):

   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the issuer's ability to record, process, summarize and report financial information; and

   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the issuer's internal control over financial reporting.

Dated: February 23, 2022

/s/ "A. Robert Doyle"
By: A. Robert Doyle
Title: Chief Financial Officer

Certification of CEO and CFO
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Annual Report of Pan American Silver Corp. (the "Registrant") filed under cover of Form 40-F for the year ended December 31, 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), Michael Steinmann, as Chief Executive Officer of the Registrant, and A. Robert Doyle, as Chief Financial Officer of the Registrant, each hereby certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, to the best of his knowledge, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Registrant.

/s/ Michael Steinmann
By: Michael Steinmann
Title: President & Chief Executive Officer
February 23, 2022

/s/ A. Robert Doyle
By: A. Robert Doyle
Title: Chief Financial Officer
February 23, 2022

This certification accompanies the Report pursuant to § 906 of the Sarbanes-Oxley Act of 2002 and shall not, except to the extent required by the Sarbanes-Oxley Act of 2002, be deemed filed by the Registrant for purposes of §18 of the Securities Exchange Act of 1934, as amended.